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Ms. Cynthia T. Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, S.W.
Washington, D.C. 20423-0001

Re: ***The Illinois State Toll Highway Authority - Petition for Declaratory Order,***
Finance Docket No. 36075, EXPEDITED CONSIDERATION REQUESTED

Dear Ms. Brown:

Enclosed for filing in the above-referenced docket are the following:

- an original and ten (10) copies of The Illinois State Toll Highway Authority's Petition for Declaratory Order and associated exhibits;
- three disks, each with a copy of the enclosed filing in digital format;
- a check in the amount of $1,400.00 for the filing fee; and
- self-addressed envelopes for the return of twelve (12) file-stamped copies.

Please do not hesitate to contact me if there are any questions or issues. Thank you.

Sincerely,

David A. Goldberg
General Counsel
Assistant Attorney General

Enclosures

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BEFORE THE

SURFACE TRANSPORTATION BOARD

FINANCE DOCKET NO. 36075

THE ILLINOIS STATE TOLL HIGHWAY

AUTHORITY PETITION FOR DECLARATORY

ORDER

EXPEDITED CONSIDERATION REQUESTED

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A. Technical Report on Elgin O'Hare Western Access Interchange, CH2M

B. Analysis Potential Effects of Illinois State Toll Highway Authority's Elgin O'Hare Western Access Interchange Upon Canadian Pacific Rail Operations, R.L. Banks & Associates, 2016

C. Legal Descriptions and Plats for Temporary Construction Easements and Permanent Easements Upon CPR Property for Western Access Interchange

D. Declaration of Peter Josefchak, Freight Rail Leader, Stantec, attaching correspondence with Union Pacific Railroad

E. O'Hare Modernization Program, Final Environmental Impact Statement, Federal Aviation Administration, 2005, Executive Summary

F. O'Hare Modernization Program, Record of Decision, Federal Aviation Administration, 2005

G. Elgin O'Hare-West Bypass Study, Tier One Final Environmental Impact Statement, Executive Summary (FHWA & IDOT, 2010)

H. Elgin O'Hare-West Bypass Study, Tier Two Final Environmental Impact Statement, Sections 2 and 4 (FHWA & IDOT, 2012)

I. Elgin O'Hare-West Bypass Study, Tier Two Record of Decision (FHWA, FAA, IDOT & ISTHA, 2012)

J. Statements of Support by Public Officials

K. April 22, 2016 correspondence from Robert A. Johnson to Michael J. Woodward

L. August 8, 2016 Letter from Robert A. Johnson, Executive Vice President Operations of CPR to Manar Nashif, Senior Project Engineer, Illinois State Toll Highway Authority

M. December 28, 2007 Letter from IDOT to CPR and Minutes of December 10, 2008 Meeting between CPR, IDOT, and Consultants

N. Tollway Final Offer Letter to CPR, dated November 21, 2016

O. Tollway Offer Letter to CPR, dated April 7, 2016

P. *State of Texas, Dept of Transportation – Petition for Declaratory Order Regarding Highway Construction in Tarrant Cnty, TX*, FD 32589 (ICC Served Feb. 1, 1995)

Q. Declaration of Manar Nashif

R. *Soo Line Railroad Company v. Illinois State Toll Highway Authority*, Slip Op. 03/29/16, Case No. 1:15-cv-10328 N.D. Illinois

Pursuant to the authority vested in the Surface Transportation Board (the "Board") under 49 U.S.C. § 721 and 5 U.S.C. § 554(e), the Illinois State Toll Highway Authority (the "Tollway") files this Petition for a Declaratory Order to confirm that, under the specific circumstances of this Petition, the Tollway's state law eminent domain authority is not preempted by the Interstate Commerce Commission Termination Act. 49 U.S.C. § 10101, *et. seq*. ("ICCTA"). The Tollway needs to acquire permanent and temporary easements in order to construct five standard highway bridges over railroad tracks. As explained herein, the Tollway seeks expedited consideration of this Petition because the highway construction project at issue is currently under way and any delays could result in millions of dollars in additional cost to the public.

INTRODUCTION AND SUMMARY

Over the past twelve years, the Tollway, the Illinois Department of Transportation, the Federal Highway Administration, and the Federal Aviation Administration have pursued a multi-stage project to improve the transportation infrastructure near O'Hare International Airport ("O'Hare"). One part of that undertaking requires the Tollway to construct two new highways that will accommodate access to the west side of O'Hare and alleviate vehicle transportation gaps west of O'Hare. This Petition concerns the planned interchange between these two new highways, known as the Western Access Interchange. It will consist of five standard highway ramp bridges crossing over mainline freight rail tracks owned and operated by the Soo Line Railroad Company, d/b/a Canadian Pacific Railway, ("CPR") and the Union Pacific Railroad ("UPRR"). The Tollway already maintains 34 highway bridges across railroad lines elsewhere in Illinois. The Western Access Interchange bridges will be little different. They are designed to exceed all applicable vertical and horizontal clearances in order to avoid unreasonable interference with current or future CPR and UPRR railroad operations. Moreover,

each bridge will require only one support pier on railroad property. The piers will be placed on the shared property line between the CPR and UPRR rights-of-way and will leave ample room for future expansion of the railroads' operations.



Figure 1. Western Access Interchange.

The Western Access Interchange is the keystone of the Tollway's Elgin O'Hare Western Access Project (the "EOWA Project"), which has been designated a "Project of National and Regional Significance" by the U.S. Department of Transportation. In addition to improving Illinois's highway system, the $3.4 billion EOWA Project will create access to the western side of O'Hare, thereby supporting the $13.3 billion O'Hare Modernization Program. Without the Western Access Interchange, the EOWA Project does not work.

The Tollway consulted with UPRR and CPR during the design development phase for the Western Access Interchange, and accommodated specific UPRR requests concerning, *inter alia*, minimum vertical clearance and the possibility of a third UPRR mainline track. *See,* Exhibit D, Declaration of Peter Josefchak, Midwest Freight Rail Leader, Stantec. In July 2016,

the Tollway submitted to UPRR its Western Access Interchange design plans, showing plan view, elevation, typical section and railroad profile diagram, as well as project specifications, railroad coordination requirements, drainage plans, and construction phasing plans. *Id.* The UPRR reviewed the Tollway's plans and on July 13, 2016, approved the plans as conforming to UPRR specifications for bridges over railroad tracks. *Id.* UPRR then obtained bridge inventory numbers from the Federal Railroad Administration. *See* Exhibit A, Technical Report on Elgin O'Hare Western Access Interchange, CH2M, at 10, 11. The Tollway and UPRR are presently negotiating a purchase price for the Tollway's acquisition of the easements necessary for the Western Access Interchange bridges to cross UPRR's tracks. As a result, the Tollway does not anticipate it will be necessary to assert its eminent domain authority to acquire property rights from UPRR.

In contrast, the Tollway's attempts to negotiate a parallel grant of easements across CPR's tracks have failed. In April 2016, CPR broke off four years of negotiations, declaring that "CPR and Soo Line have no intention of selling any interest in this property." *See*, Exhibit K, April 22, 2016 correspondence from Robert A. Johnson to Michael J. Woodward. Most recently, on August 8, 2016, CPR sent to the Tollway a letter which states:

> As we stated previously, the Tollway's proposed expressway on and over our right of way at York and Thorndale would unreasonably interfere with current rail transportation and our capacity to expand and maintain rail transportation at that location in the future….CP and Soo Line have no intention to sell any interest in this property. Furthermore, we do not believe the Tollway has the authority to acquire this railroad operating property by eminent domain or condemnation, and will resist any effort to take it. We invite the Tollway, again, to develop another route for its roadway.
>
> *See* Exhibit L.

By refusing to permit the construction of highway bridges over its tracks, CPR is essentially preventing access to the western side of O'Hare because its tracks travel the majority

of O'Hare's western border. The need and proposed site for western access to O'Hare was identified as part of the O'Hare Modernization Program Environmental Impact Statement and associated O'Hare Airport Layout Plan in 2005 by the Federal Aviation Administration, the Illinois General Assembly, and the City of Chicago. The preferred location of the Western Access Interchange was then selected by the Federal Highway Administration's EOWA Project Tier One Final Environmental Impact Statement in 2010. During the past eleven years, CPR never indicated that it would completely refuse to allow access to the west side of O'Hare or that it objected to the location of the Western Access Interchange. Its eleventh hour suggestion that the Tollway "develop another route for its roadway" is simply unreasonable.

Because CPR is unwilling to voluntarily convey the easements necessary for bridges to be constructed over its tracks, the Tollway must exercise its eminent domain authority to take a combination of permanent and temporary easements. This Petition seeks a ruling by the STB that the Tollway's exercise of its eminent domain power in this case will not unreasonably interfere with railroad operations, and therefore is not preempted by the Interstate Commerce Commission Termination Act. *See,* 5 U.S.C. § 554(e), 49 U.S.C. § 721.

The Tollway requests that the STB consider this Petition on an expedited basis. The State of Illinois, the Federal Highway Administration, and the Federal Aviation Administration have already committed millions of dollars in planning and actual construction costs that depend upon the current location of the Western Access Interchange. Work on the interchange is set to begin in 2017. Furthermore, for almost 12 years, until mid-2016, CPR remained silent while multiple public agencies conducted hearings and studies that fixed the location and design of the Western Access Interchange. Based on that public analysis, the Tollway is now committed to this project. Any delays at this point will cost the public millions of dollars.

STATEMENT OF FACTS

I. Summary of the EOWA Project and the O'Hare Modernization Program

The Tollway's Western Access Interchange is central to two related transportation improvements: the O'Hare Modernization Program and the Elgin O'Hare Western Access Project. In June 2016, the Commissioner of the City of Chicago Department of Aviation explained that these two projects are "vital" for future competitiveness and connectivity and will "undoubtedly provide improved travel efficiency, reduced congestion, and enhanced access to O'Hare Airport and surrounding communities." *See,* Exhibit J, at 47-48.

The $13.3 billion O'Hare Modernization Program aims to increase the capacity of O'Hare by adding and extending runways, and eventually building another terminal in addition to other development projects, on the west side of the airfield. The EOWA Project adds new highway capacity to the metropolitan Chicago area and creates access to planned developments on the western side of O'Hare. The Western Access Interchange connects all of these projects together. The Technical Report of CH2M, the Tollway's Design Corridor Manager on the EOWA Project, attached as Exhibit A, explains these two projects in detail.

A. History of the EOWA Project from 2001 to 2012

Chicago O'Hare International Airport is one of the most important airports in the National Airspace System. *See,* Exhibit E, O'Hare Modernization Program Final Environmental Impact Statement, Federal Aviation Administration ("OMP Final EIS"), 2005, Executive Summary, at ES-9. In 2002, O'Hare was the world's busiest airport as measured by total operations, the second busiest in terms of enplaned passengers, and the fourth busiest international gateway in the nation in terms of total international enplaned passengers. *Id.* O'Hare also operates as a major cargo airport. *Id.*

Historically, however, O'Hare experiences more delays than any other airport in the country, which in turn affects the efficiency of the entire National Airspace System. *See id*.

In 2001, the City of Chicago announced the O'Hare Modernization Program ("OMP") to provide for a reconfiguration of the airfield, along with associated terminal and support facilities, and related land acquisition. *See* Exhibit F, O'Hare Modernization Program Record of Decision ("OMP Record of Decision"), 2005, at 1, 4. The FAA determined the OMP involved "major Federal actions, and in 2002 issued a Notice of Intent to prepare an Environmental Impact Statement." *Id*. at 4. The purpose of the EIS was "to investigate, analyze, and disclose the potential impacts of the proposed Federal actions and their reasonable alternatives." Exh. E, at ES-1.

In 2005, the FAA approved the O'Hare Master Plan Report and the Airport Layout Plan. These plans called for the decommissioning of three existing runways, the construction of four new runways, and the extension of two existing runways. The approved Airport Layout Plan also contemplates a new western terminal and a western airport roadway entrance near the current intersection of Thorndale Avenue and York Road. Finally, a 300 foot-wide corridor along the western edge of the O'Hare property, roughly parallel to York Road, was set aside for a new highway[1]:

[1] *See* Exh. A, at 5.

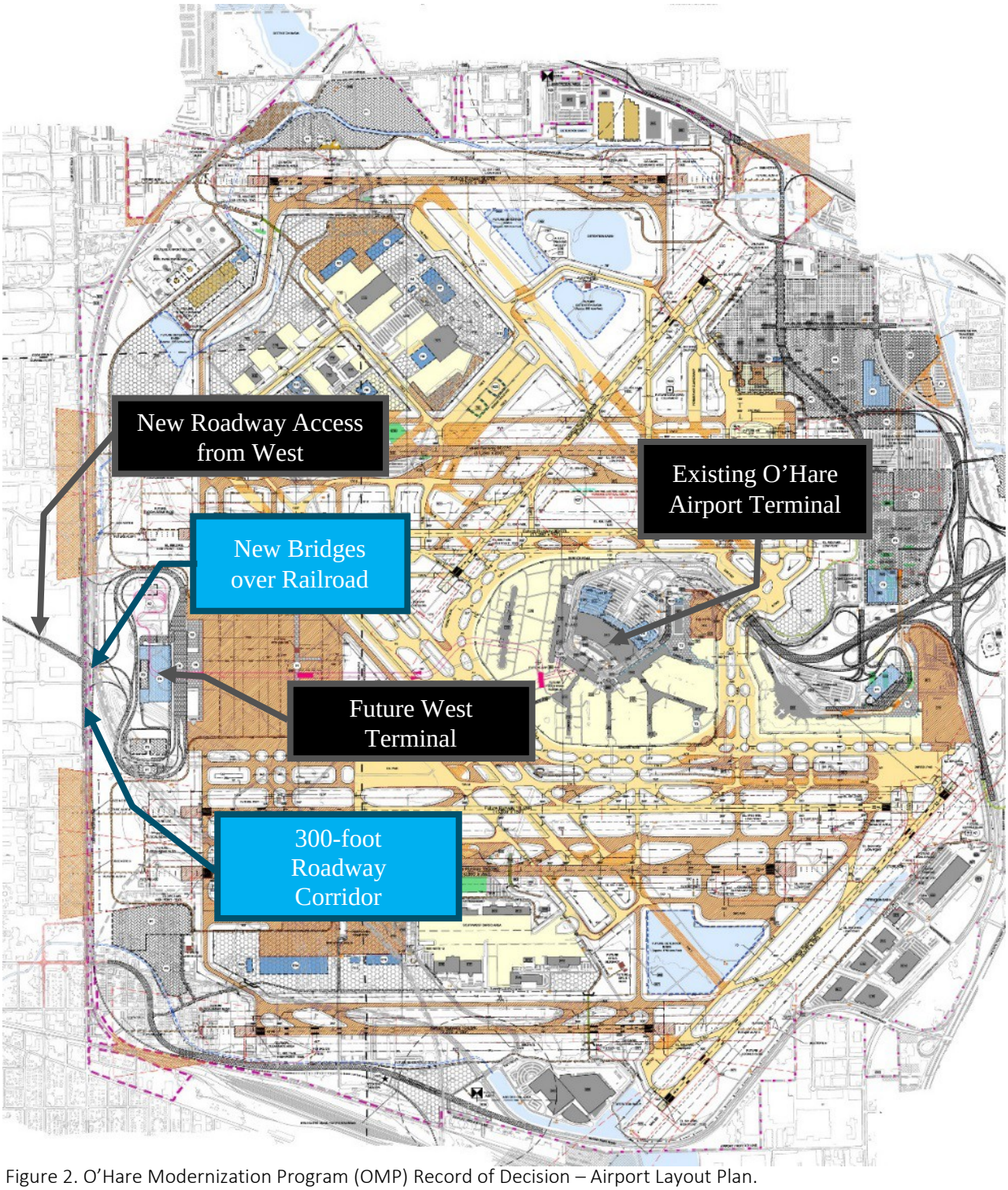


Figure 2. O'Hare Modernization Program (OMP) Record of Decision – Airport Layout Plan.

Following the FAA's action on O'Hare, the Federal Highway Administration ("FHWA") and the Illinois Department of Transportation ("IDOT") began the Elgin O'Hare-

West Bypass Study in 2007 to analyze transportation needs and issues in an 127 square mile area west of O'Hare:[2]



Figure 3. Elgin O'Hare-West Bypass Study Area.

This area is a transportation crossroads that includes O'Hare, a network of freeways and tollways, transit facilities, freight rail service, and intermodal transfer facilities. *See*, Exhibit G, Elgin O'Hare-West Bypass Study, Tier One Final Environmental Impact Statement ("Tier One Final EIS"), Executive Summary, at ES-1 (FHWA & IDOT, 2010)[3]. The area also contains the

[2] *See*, EOWB Tier One Final Environmental Impact Statement (FHWA, IDOT 2010), available at: http://apps.dot.illinois.gov/FileExplorer/FileManager/DownloadFile?path=Um9vdFxlbnZpcm9ubWVudFxlbGdpbi1vaGFyZSBmaW5hbCBlaXNcVGllciBPbmVcVGllciBPbmUgRmluYWwgRUlTXEVPV0JfUmVwb3J0LnBkZg. The Elgin O'Hare-West Bypass Project has been renamed the Elgin O'Hare Western Access Project.

[3] Complete Elgin O'Hare-West Bypass Study, Tier One Final Environmental Impact Statement (FHWA & IDOT,

second largest employment base in the Chicago metropolitan area. *Id.* Approximately 18% of all vehicle trips in the region occur in the study area. *Id.* Transportation infrastructure, however, had not kept pace with the travel demand, resulting in severe traffic congestion, traffic delays, and reduced travel efficiency. *Id.* As part of the 2005 *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) Federal Transportation Bill, the U.S. Congress identified the EOWA Project as a project of regional and national significance, one of only a dozen such projects nationwide. *Id.*

In 2010, the FHWA and IDOT issued the Tier One Final EIS for the EOWA Project, which identified the preferred locations for two new highways and a connecting interchange:

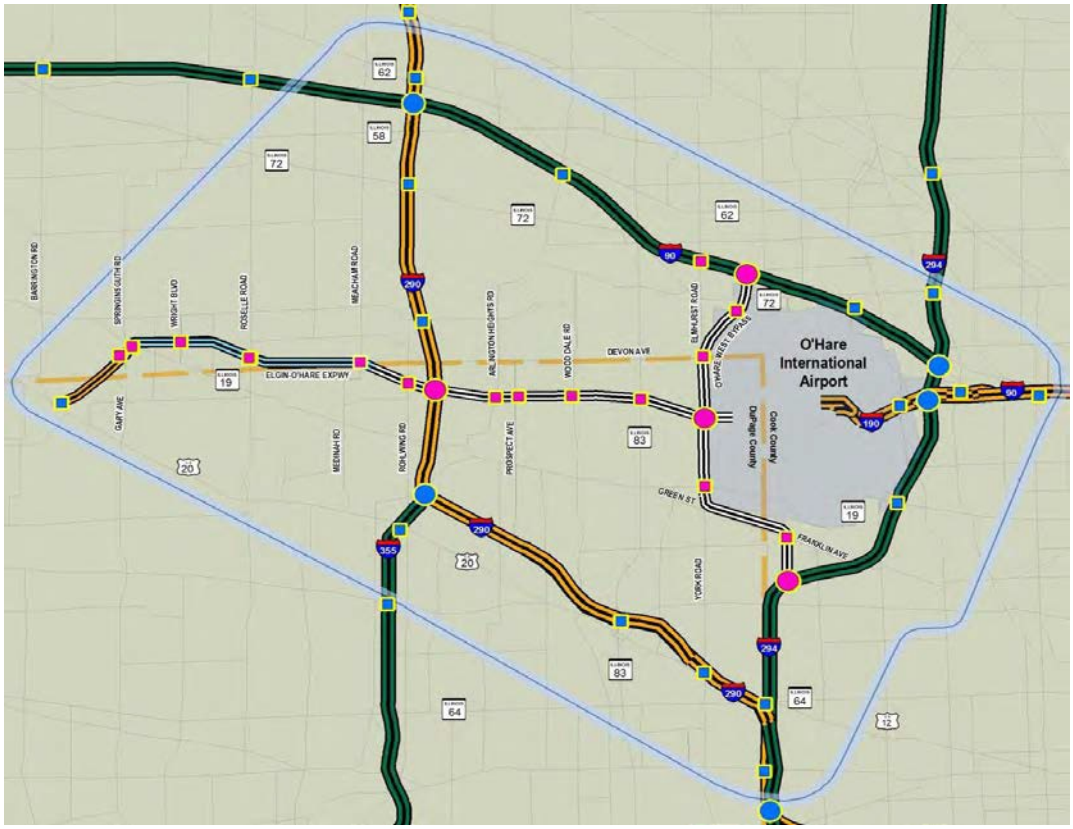


Figure 4. EOWA Tier One Final EIS Selected Alternative.

The preferred layout called for the extension of the existing Elgin-O'Hare expressway

2010) available at: http://apps.dot.illinois.gov/fileexplorer/?search=environment\Elgin-Ohare%20Final%20EIS.

to the western border of O'Hare (renaming the highway "IL 390"). The preferred layout also included a new Western Access Tollway, connecting I-90 with I-294, constructed along the western edge of O'Hare upon the 300-foot wide highway corridor set aside in the Airport Layout Plan and approved by the FAA in 2005. *See id.* at ES-6. Finally, the Tier One Final EIS fixed the location of the Western Access Interchange between these two new highways at the intersection of York Road and Thorndale Avenue, the approximate mid-point of the western O'Hare border. This location does not interfere with the new runways to be constructed at O'Hare. *See id.* at ES-5, -6.

The decision by the FHWA and IDOT in the Tier One EIS to locate the Western Access Interchange at the intersection of York Road and Thorndale Avenue was the result of a comprehensive evaluation process that took several years. FHWA and IDOT solicited input from stakeholders who identified transportation problems and locations where physical improvements were needed. *See* Exh. G, at ES-3. The agencies began with 15 concepts that were reviewed and winnowed down to seven roadway alternatives based upon a variety of factors:

> The seven remaining roadway alternatives were refined in terms of roadway layout, footprint or right-of-way requirements, access requirements, and incorporation of transit improvements into corridors shared by roadways and transit. The criteria used to compare the alternatives were expanded to include travel performance, design feasibility, construction and right-of-way costs, and environmental and socioeconomic impacts. The measured effects of each alternative (travel efficiency, travel times, acres affected, number of resources affected, residential and businesses displaced, and tax revenue loss) were analyzed using both quantitative and qualitative analyses supported by stakeholder input.
>
> *Id.*, at ES-3, -4.

When the FHWA and IDOT selected the preferred alternative, a draft EIS was issued in August 2009 and made available for public comment through October 2009. *Id.* at ES-4.

Notably, CPR did not comment on the location of the Western Access Interchange during the public comment period. During the entire Tier One study and comment period, CPR never expressed concern over the location of the Western Access Interchange, or the construction of bridges across its railroad tracks there.

Between 2010 and December 2012, the FHWA and IDOT were joined by the FAA and the Illinois Tollway as joint lead agencies in the consideration of the EOWA project, and worked together on a Tier Two environmental impact analysis. As stated in the Executive Summary of the Tier Two Final Environmental Impact Statement:

> "Tier Two expand[ed] on Tier One with detailed engineering and environmental studies that refine the project concept within the project corridor. While the location of the project is fixed by the Tier One decision, the range of alternatives in Tier Two are in the form of design refinements that lead to design choices within the project corridor (i.e., interchange types, tunnel versus bridge, drainage requirements, and transit, bicycle and pedestrian requirements), and facility type alternates (i.e., freeway, toll road, or combination of freeway and toll road)."
>
> Exhibit H, Tier Two Final Environmental Impact Statement ("Tier Two Final EIS"), 2012, at 2-2[4].

The FHWA, the FAA, the Illinois Tollway and IDOT conducted traffic studies, financial viability studies, considered environmental and property impacts, analyzed aviation and other transit constraints, and otherwise fully evaluated alternative designs for the highways and interchanges:

> Regulatory resource agencies, stakeholders, and affected members of the public have been included in the development of the project every step of the way. From identifying the project's Purpose and Need to identifying the Selected Alternative, the project team has conducted public outreach activities to obtain input on the transportation issues in the area, vet the potential impacts and benefits of the various alternatives with communities and stakeholders, and ensure

[4] Complete Elgin O'Hare-West Bypass Study, Tier Two Final Environmental Impact Statement (FHWA & IDOT, 2012) available at: http://apps.dot.illinois.gov/FileExplorer/FileManager/DownloadFile?path=Um9vdFxlbnZpcm9ubWVudFxlbGdpbi1vaGFyZSBmaW5hbCBlaXNcVGllciBUd29cVGllciBUd28gRmluYWwgRUlTXFRpZXIgVHdvIEZpbmFsIEVJUy5wZGY.

> environmental regulations are being addressed to the regulatory resource agencies' satisfaction.
>
> The extensive public outreach program was developed to adhere to regulations and guidance contained in NEPA, SAFETEA-LU, and Context Sensitive Solutions. A Corridor Planning Group and Task Force Groups were assembled to provide venues for project team members to work with community leaders and stakeholders on the development of project improvements that maximized benefits and minimized impacts to those affected by the project.

Exhibit I, Tier Two Record of Decision, Elgin O'Hare-West Bypass (FHWA, FAA, IDOT & ISTHA), 2012, p. 23.

In March 2012, the FHWA, FAA, IDOT and the Tollway released the Tier Two EIS draft and solicited public comments through May 2012. CPR again did not submit a written comment during the public comment period. During the Tier Two analysis, CPR was a member of one of the Task Force Groups organized to address the needs and interests specific to each section of the overall project. *See* Exh. H, at 4-3. As a result, CPR was fully aware from at least 2008 that the EOWA Project situated the Western Access Interchange at the intersection of York Road and Thorndale Avenue, and that it would cross CPR tracks in order to connect the new IL 390 highway with the new Western Access Tollway. At no time between 2008 and 2016 did CPR ever object to any aspect of the Western Access Interchange.

The Tier Two Final EIS and subsequent Tier Two Record of Decision selected a system of five bridges connecting the two new highways and creating roadway access to O'Hare as the optimal layout for the Western Access Interchange:

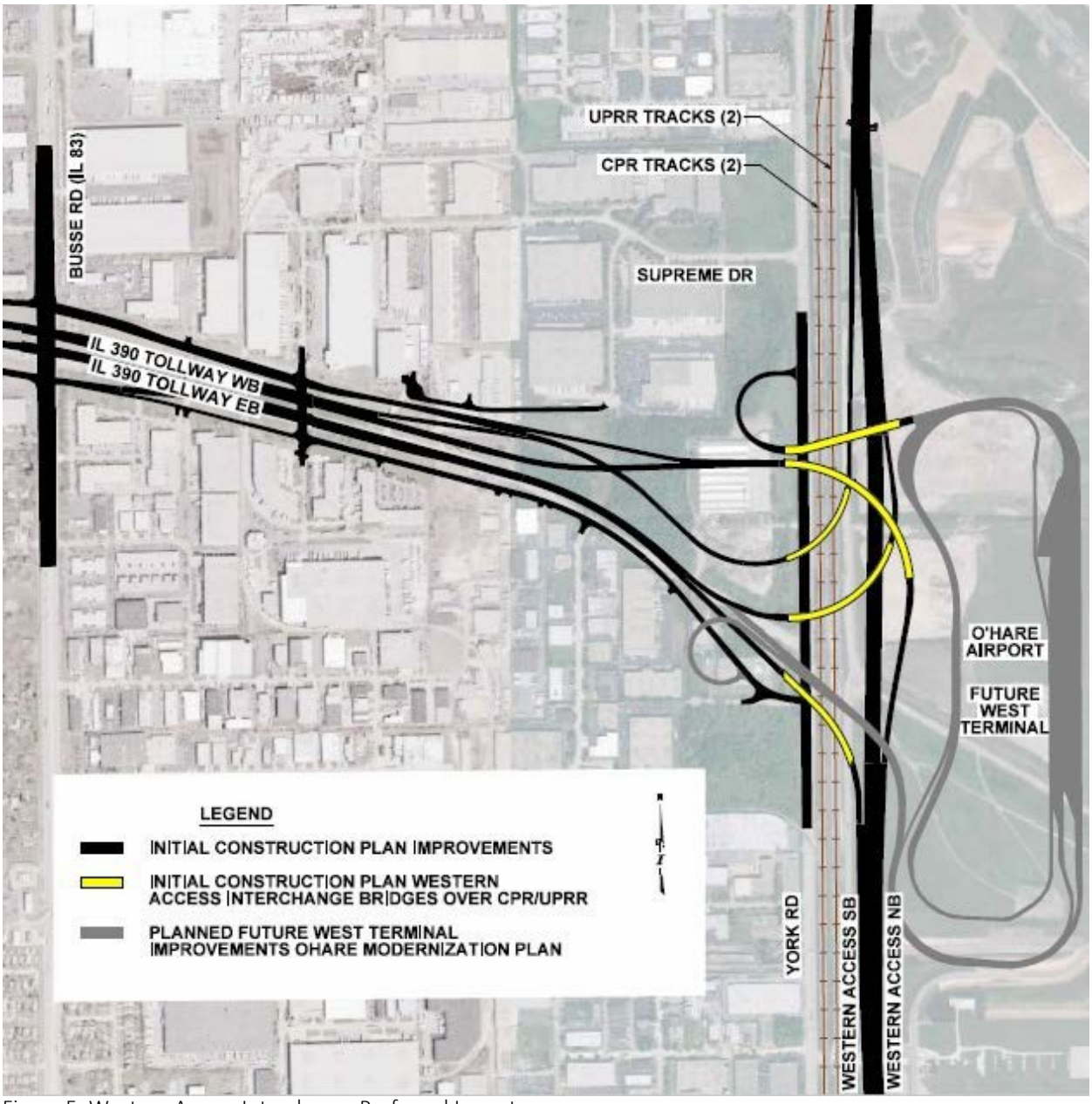


Figure 5. Western Access Interchange Preferred Layout.

Since the FHWA released the Tier Two Record of Decision, the EOWA Project has received public support from both Illinois Senators, (Hon. Mark Kirk and Hon. Dick Durbin), each of the United States Congressmen for the affected districts (Rep. Tammy Duckworth, Rep. Randy Hultgren, and Rep. Adam Kinzinger), Illinois Governor Bruce Rauner, both Illinois State Senators for the affected areas, all of the Illinois State Representatives for the affected areas, all of the area local governments, including the City of Chicago, the County of DuPage, the City of

Bensenville, and numerous other municipalities, the Northwest Municipal Conference, and dozens of local businesses. *See*, Exh. J.

B. Construction on the O'Hare Modernization Program and the EOWA Project

1. The O'Hare Modernization Program

The City of Chicago's work on the O'Hare Modernization Program began in 2005. To date, the City has acquired approximately 126 acres of land in neighboring Bensenville. As a result of these acquisitions, IDOT was able to reconfigure Illinois Route 19 (Irving Park Road), and UPRR shifted part of its mainline to the south. In 2008, a new runway on the north airfield and an extension of an existing runway on the south airfield opened. Two additional runways on the south airfield were opened in 2013 and 2015, and the south airport traffic control tower was also completed in 2015. In August 2016, construction commenced on an additional new runway, which will lead to decommissioning of an existing diagonal runway.

In July 2016, the City of Chicago announced the O'Hare 21 Terminal Area Plan. The plan will include development of the centerpiece of the terminal area, the O'Hare Central Facility, along with complimentary airfield development along the western side of O'Hare.

2. The EOWA Project

In 2012, the Tollway was designated as the implementing authority for the EOWA Project. The Tollway analyzed the full build-out condition of the entire EOWA Project, including the sequencing, budgeting, necessity, and timing for each of its various parts. In collaboration with its engineering firm, CH2M, the Tollway divided the $4.3 billion project into ten separate phases:



Figure 6. EOWA Projects and Status.

The Tollway has already completed Phase 1, which expanded and improved the preexisting Elgin O'Hare Expressway, and converted it to a toll highway. It is designated as IL 390. Beginning in 2013, the Tollway commenced work on Phase 2, which extends the new IL 390 from IL 53 to IL 83, approximately 2 miles west of O'Hare. At the same time, the Tollway completed Phase 3 to the north, which involved reconstruction of the interchange on I-90 at Elmhurst Road.

The Tollway recently began work on Phase 4, which includes the extension of IL 390 from IL 83 to the western border of O'Hare, and the construction of the initial north and south legs of the Western Access Tollway. The Western Access Interchange is located at the heart of Phase 4 (shaded brown on Fig. 6). Contracts for the construction work on the Western Access Interchange are scheduled to be awarded in 2017. As explained below in support of the Tollway's request for expedited consideration, any delays in this schedule will cause millions of dollars in

additional costs to the public.

Prior to 2016, CPR never objected to the location or design of the Western Access Interchange. Instead, its concerns with the EOWA Project had focused on work depicted in Phases 9 and 10 (shaded green and orange above) which involve CPR's Bensenville Yard. In November 2015, after several years of discussion regarding the Tollway's desire for the Western Access Tollway to cross Bensenville Yard, CPR filed a lawsuit in the United States District Court for the Northern District of Illinois seeking a declaration that the Tollway must petition the Board for permission to construct this phase of the EOWA Project. *See*, *Soo Line Railroad Company, d/b/a Canadian Pacific v. Illinois State Toll Highway Authority*, Case No. 1:15-cv-10328, N.D. Illinois. The federal District Court dismissed CPR's complaint as premature because the Tollway's plans regarding Bensenville Yard are continuing to evolve, making it impossible to determine "the extent to which railroad transportation would be prevented or unduly interfered with by a hypothetical condemnation. *Soo Line Railroad Company v. Illinois State Toll Highway Authority*, Slip Op., 3/29/16, p. 8. (Exhibit R.) CPR's appeal of the dismissal is currently pending before the United States Court of Appeals for the Seventh Circuit.

As reflected in Figure 6, during Phase 9 of the EOWA Project, the Tollway contemplates an extension of the new Western Access Tollway from Illinois Route 19 (Irving Park Road) to the junction of I-294 and Franklin/Green Street. The preliminary layout for this leg of the EOWA Project includes a portion of the Western Access Tollway passing under existing railroad tracks and then crossing above vacant land within Bensenville Yard. As the District Court found, this phase remains aspirational. The Tollway only recently awarded engineering contracts to advance the conceptual layout plans to the 30% design stage, in part to determine

feasibility[5]. If the Tollway were to determine Phase 9 is viable from an economic, engineering and political standpoint, work would not begin on this phase until 2020 at the earliest. In the meantime, the Tollway's current construction plans call for the Western Access Tollway to terminate at Irving Park Road, *north* of Bensenville Yard.

Phase 10 of the full build-out EOWA Project, shaded in orange on Figure 6, also is in the very preliminary stages. Currently, UPRR right of way and railroad tracks bisect the Bensenville Yard. CPR maintains two sets of tracks passing under UPRR's bridge. The Tollway has included in the full buildout EOWA Project an extra phase that would extend Taft Avenue from its current termination at Green Street to Irving Park Road by constructing a bridge over the Bensenville Yard. The preliminary layout for this extension contemplates a bridge running adjacent to UPRR's right of way, with a single span passing over CPR's set of tracks in the center of Bensenville Yard and a separate single span passing over the CPR and adjoining Metra tracks along the north side of Bensenville Yard. As with Phase 9, however, the Tollway has only developed preliminary layout plans. This extension, which is not strictly necessary to the core purpose of the EOWA Project, has not been finally approved. Work on this phase is not even contemplated until 2021.

In its brief filed with United States Appellate Court for the Seventh Circuit, CPR complained about Tollway land acquisition work that is part of Phase 7[6]. In Phase 7, the Tollway plans to construct new ingress and egress to the Tri-State Tollway (I-294) with exit and entrance ramps at Green Street which is south of the Bensenville Yard. Phase 7 is an

[5] *See* Tollway Reply Memorandum in Further Support of Defendant's Motion to Dismiss for Lack of Subject Matter Jurisdiction, at 2, available at: https://ecf.ilnd.uscourts.gov/cgi-bin/show_multidocs.pl?caseid=318223&arr_de_seq_nums=63&magic_num=&pdf_header=1&hdr=&pdf_toggle_possible=1&caseid=318223&zipit=&magic_num=&arr_de_seq_nums=63&got_warning=&create_roa=&create_appendix=&bates_format=&dkt=&got_receipt=1

[6] CPR Seventh Circuit Appellate Brief available at: https://ecf.ca7.uscourts.gov/cmecf/servlet/TransportRoom.

independent project from Phases 9 and 10. The Phase 7 portion of the EOWA Project is focused on exit/entrance ramps to the Tri-State Tollway and provides valuable utility for the local businesses in Bensenville and Franklin Park, south of CPR's Bensenville Yard. Work on Phase 7 is not expected to be complete until 2025.

II. The Western Access Interchange

A. Location and Required Easements

The CPR's and the UPRR's two lengths of double track mainline are bordered on the west side by York Road and on the east side by O'Hare. The CPR tracks (depicted in black in Figure 7, below) begin at the Bryn Mawr junction near Devon Avenue and extend approximately 1.8 miles south to Bensenville Yard. North of the Bryn Mawr junction, CPR operates on the UPRR main line. At the western entrance to the Bensenville Yard, CPR operates on METRA Milwaukee District trackage. The Western Access Interchange will cross CPR's tracks at the current intersection of York Road and Thorndale Avenue.

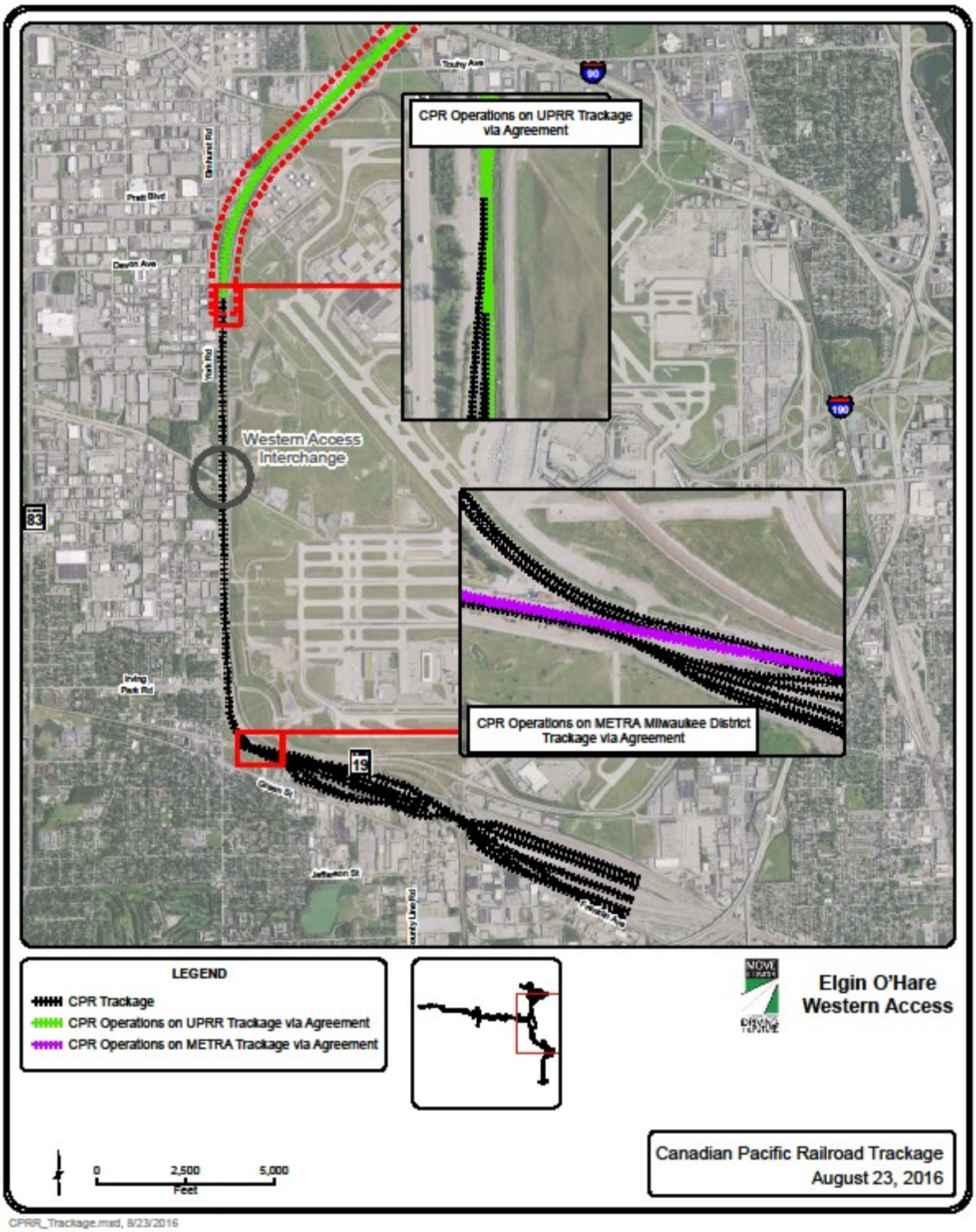


Figure 7. Canadian Pacific Railroad Trackage.

In order to construct and maintain the Western Access Interchange, the Tollway must acquire a combination of permanent and temporary construction easements. First, the Tollway requires five permanent easements in the locations of the bridges. The easements will grant the Tollway aerial rights for its bridges to cross above the CPR property. The easements will also provide for the placement of the support piers (one for each bridge) on the property line between the CPR and UPRR rights-of-way. Finally, the permanent easements will grant the Tollway limited future rights to access CPR property to perform routine maintenance or repairs. All future maintenance and repair work will be subject to railroad coordination and industry standard safety and scheduling requirements.

The Tollway also requires five, 5-year temporary construction easements on CPR property. Currently, a maintenance road jointly owned by CPR and UPRR runs between the two railroad rights-of-way. The service road is accessed by an existing at-grade crossing north of the proposed location of the Western Access Interchange. The Tollway seeks a temporary easement to improve and use this crossing and the service road to access the bridge locations with its construction equipment and materials. The Tollway seeks a temporary easement at the southern end of the Western Access Interchange area for the purpose of constructing a second, temporary, at-grade crossing to provide additional access. Finally, the Tollway seeks temporary construction easements for the areas between the bridge locations so it can store equipment and perform the construction work necessary to erect the bridges.

The Tollway has extensive experience constructing grade-separated railroad crossings on its highway system. Construction contract documents governing the Tollway's contractor's work will include plans and specifications. The construction documents will be prepared in

accordance with Tollway standards and design criteria (Tollway, March 2016a and 2016b[7]), which include specific requirements governing the Tollway's contractor's work on railroad property as well as interaction with the railroads. The terms impose the customary restrictions regarding coordination and scheduling with the railroad, flagging, permitting, insurance, the placement and storage of equipment and materials, and other industry standard safety requirements for work near active railroad tracks. The Tollway intends to impose these and any other reasonable requirements requested by the railroads as a condition for use of the temporary easements and performance of the work by its contractors.

[7] Tollway, March 2016a, Illinois Tollway Roadway Design Criteria Manual, https://www.illinoistollway.com/documents/20184/111199/RoadwayDesignCriteria_03312016/a860383f-87d4-47cf-ab59-4a1793a89e44?version=1.1; Tollway, March 2016b, Illinois Tollway Structure Design Manual, https://www.illinoistollway.com/documents/20184/111199/Structure+Design+Manual+032016.pdf/e1cae7d5-947d- 4d02-8b98-2c29e88463bb?version=1.1.

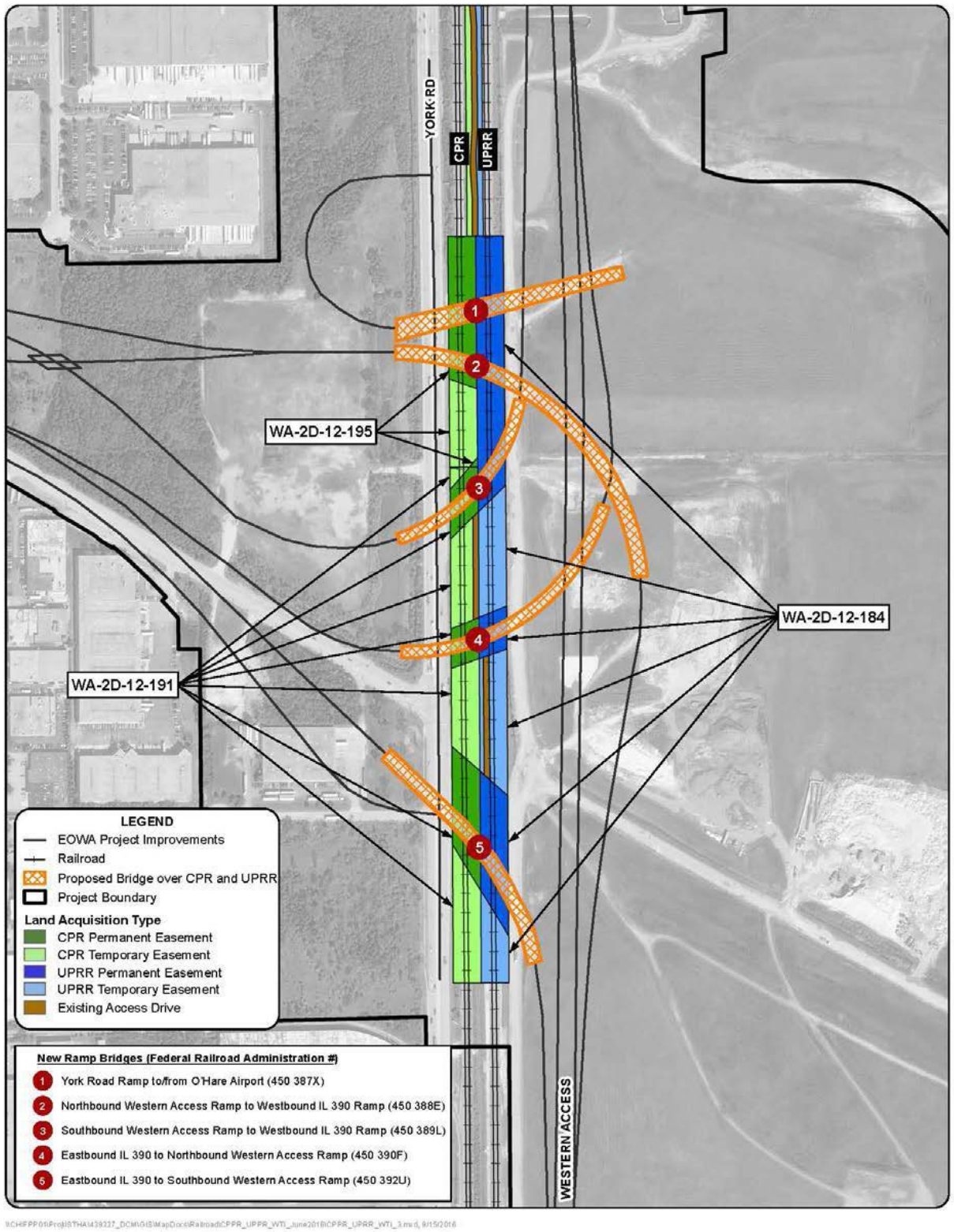


Figure 8. Temporary and Permanent Easements at Western Access Interchange.



Figure 9. Temporary and Permanent Easement Locations.

The legal descriptions and plats for the easements the Tollway seeks to acquire from CPR are attached as Exhibit C.

B. Bridge Design Specifications

As explained in the CH2M Technical Report attached as Exhibit A, the Western Access Interchange will cross over both the CPR and UPRR tracks at five bridge locations – four system flyover bridges and one service road bridge. The design of this three level interchange was constrained by O'Hare operations and CPR's and UPRR's two adjoining freight rail corridors. The five bridges were designed to avoid O'Hare's runway protection zones and accommodate current and future rail capacity. Figure 10 below graphically illustrates a typical ramp bridge in relation to CPR and UPRR features:



Figure 10. Northbound Ramp to Westbound IL 390 Ramp Bridge over CPR and UPRR.

During the design process, the Tollway utilized several railroad and industry standards (*See* Exh. A, at 16):

- Canadian Pacific Railway – CP Rail Track Standards: Sections 4.0 and 7.0 (CPR, 2000a and 2000b)

- Canadian Pacific Railway – Protection of Structures Adjacent to Railroad Tracks (CPR, 2001)
- Canadian Pacific Railway – Minimum Safety Requirements for Contractors working on railway Property in the U.S (CPR, 2007a)
- UPRR Guidelines for Railroad Grade Separation Projects (UPRR-BNSF, 2016c)
- UPRR Guidelines for Temporary Shoring (UPRR, 2004)
- American Railway Engineering and Maintenance-of-Way Association (AREMA) (AREMA, 2016)

The AREMA Manual recommends a minimum vertical clearance for any highway bridge crossing a railroad line of 23 feet above the top of rail, and minimum horizontal clearances of eight feet from track centerline. (AREMA, 2016). However, UPRR advised the Tollway that the minimum vertical clearance should be at least 23 feet 4 inches above the highest track. As a result, throughout the Western Access Interchange, bridge vertical clearances within railroad property range from a minimum of 23 feet 4 inches to approximately 41 feet. *See*, Appendix B of Exh. A, "Type, Size and Location Bridge Drawings."

Each of the five proposed bridges will require a single support pier within the railroad right- of-way. The CPR and UPRR rights-of-way measure approximately 350 feet across. The Tollway's design minimizes any potential imposition on the railroads by placing the piers on the property line between the two railroad properties. No pier will be within the 25-foot minimum horizontal clearance specified by UPRR and AREMA. Depending on their location, these piers will be either a multi-column pier parallel to the railroad property line or a large single column hammerhead pier. *See*, Appendix B of Exh. A, "Type, Size and Location Bridge Drawings."

In addition to maintaining sufficient minimum vertical and horizontal clearances for current operations, the Tollway's design of a single support pier preserves the potential for future expansion. Currently, the railroads' rights-of-way are wide enough for additional tracks. This possibility is preserved, although as explained below and for reasons unrelated to the Tollway's

improvements, the addition of extra track lines in this area by CPR does not appear likely.

Finally, no drainage from the project, including from the completed bridges, will be allowed to enter CPR's or UPRR's rights-of-way. The Tollway will construct drainage improvements, including re-grading and culvert installation, throughout both CPR and UPRR rights-of-way to accommodate pier and bridge construction activities. The Tollway's standard snow removal procedures do not allow for snow to be thrown from the bridge. Instead, it retains displaced snow on the Tollway's bridges. For example, the Tollway's I-294 bridges span a distance of more than 1,500 feet over the eastern side of CPR's Bensenville Yard. Following its snow removal procedures and practices, the Tollway has demonstrated its ability to remove snow without impacting operations below. Finally, the single pier design will not impact CPR's or UPRR's ability to remove snow from its own tracks.

C. Construction Schedule and Sequencing

The Western Access Interchange is scheduled to be constructed as part of the extension of the IL 390 Tollway from IL 83 to IL 19. Construction of this section of the EOWA Project began in 2016 and under the current schedule is anticipated to be completed in 2019. The contracts for the Western Access Interchange construction work are scheduled to be awarded in 2017 and the work is scheduled to be completed in 2019.

As explained in CH2M's Technical Report, each stage of the work on the Western Access Interchange will require flagging and coordination with the railroads, but none of the work except for the girder erection will cause track outages. During the girder erection, steel girders will be lifted, placed on the piers and temporary shoring towers, secured, and bolted to adjacent girders and structural members. Depending on the particular bridge girder configuration, outages can affect one to three tracks, and could, at times, require joint CPR and

UPRR outages. The actual number and duration of outages will be the result of contractor and railroad coordination.

Based on similar project experience, the Tollway requires the contractor to contact the railroad and schedule bridge girder erection operations to comply with railroad allowances for track outage durations and dates. Typical outages are expected to range from four to eight hours each, with a single longer outage of up to 14 hours needed once for each of the five bridges. CH2M estimates the entire project will require 31 temporary track outage occurrences over a six month period.

After CPR declared it would not allow any highway bridges to cross its tracks, the Tollway retained the transportation consulting firm of R.L. Banks & Associates to analyze CPR's operations and the potential effect of the Western Access Interchange. The R.L. Banks report is attached as Exhibit B. It concludes that the track outages required to place the steel girders can be managed to cause only minimal temporary inconvenience to CPR.

The two CPR mainlines at issue extend from CPR's Bensenville Yard to a junction at Bryn Mawr Avenue, where the CPR lines connect to UPRR's lines. From Bryn Mawr, CPR trains operate over approximately 10.1 miles of the UPRR Milwaukee Subdivision, under a trackage rights agreement with UPRR. At the A-20 Interlocking near Techny, the UPRR lines connect with a CPR-owned connection to the CPR C&M Subdivision.

R.L. Banks estimated CPR's traffic volume on the tracks because this information is not made public by the CPR. To assist in its CPR traffic analysis, R.L. Banks commissioned video surveillance of the tracks under the proposed Western Access Interchange. The video surveillance suggests that the CPR operates approximately 12 trains per day on these lines[8]. The trains

[8] R.L. Banks Report, p. 12.

primarily transport intermodal containers, oil, and ethanol. It also appears the CPR's operations on these tracks are significantly impacted by the at-grade crossing of the METRA tracks. Approximately one-half of the observed southbound trains were required to hold at Tower B-17 before proceeding onto the METRA commuter tracks. In addition, CPR does not appear to operate any trains on these tracks during rush hour, between 6:00 a.m. and 9:20 a.m., when METRA runs multiple commuter trains. CPR's use of the segment is also significantly reduced during the afternoon rush hour between 4:00 p.m. and 8:00 p.m.

R.L. Banks also analyzed CPR's traffic type on the tracks. CPR trains use this route to connect between Chicago and Milwaukee, the Twin Cities, the Dakotas and points in Canada for freight and intermodal transport. Trains leaving the Bensenville Yard will encounter the Tollway's construction area at the very beginning of their trips. If departures are properly timed around the scheduled construction outages, the trains will clear the area without any incurring delays. Moreover, as the total travel time for these trains ranges from 79 to 104 hours, even delays of up to eight hours could easily be recovered over the course of such lengthy trips.

Finally, R.L. Banks analyzed CPR's ability to accommodate the construction of the Marquette Interchange in Milwaukee between 2004 and 2008. That project involved the demolition and reconstruction of *seven* highway overpasses over CPR's C&M subdivision – the same subdivision CPR trains connect to at Techny. As a result of its investigation and analysis, R.L. Banks concluded that CPR will at worst experience slight scheduled delays during the construction of the Western Access Interchange, which can be accommodated without unreasonable interference with the railroad's operations. After the bridges are constructed, CPR will not experience any delays.

III. The Tollway's Outreach to CPR

A. Negotiations Regarding The Western Access Interchange

Access to the western side of O'Hare has been a publicly recognized priority since at least 2003-04, when the FAA, the State of Illinois, and the City of Chicago embarked on the O'Hare Modernization Program. In 2003, the Illinois General Assembly passed the O'Hare Modernization Act, which recognized:

> Public roadway access through the existing western boundary of O'Hare to passenger terminal and parking facilities located inside the boundary of O'Hare and reasonably accessible to that western access is an essential element of the O'Hare Modernization Program. That western access to O'Hare is needed to realize the full economic opportunities created by the O'Hare Modernization Program and to improve ground transportation in the O'Hare area.

620 ILCS 65/5(a).

The Illinois Department of Transportation ("IDOT"), which was the initial lead agency on the EOWA Project, began consulting with CPR as early as 2007 during the Tier One EIS process. *See, e.g.*, Exhibit M, December 28, 2007 Letter from IDOT to CPR and Minutes of December 10, 2008 Meeting between CPR, IDOT, and Consultants. The Tollway subsequently continued the open communications and negotiations with CPR first initiated by IDOT. Between 2009 and 2012, during the Tier One and Tier Two EIS processes, CPR representatives specifically reviewed the location of the new corridors, including the location of the interchanges and highway bridges across the railroad tracks. During this extended public process CPR never objected to constructing bridges at the Western Access Interchange. CPR never indicated it would block all efforts to provide public access to the western side of O'Hare.

The Tollway has made several offers to purchase from CPR the property rights necessary for the Western Access Interchange. In November 2015, the Tollway made a preliminary offer of $2,300,000 for the easements. In April 2016, the Tollway increased its offer to $2,320,000.

Most recently, in November 2016, the Tollway made a final offer for the necessary easements in the amount of $3,290,000. *See*, Exhibit N.

B. CPR's Attempt to Link the Western Access Interchange to the Bensenville Yard.

In June 2016, for the first time CPR objected to the Western Access Interchange and announced that it would not convey any property rights to the Tollway for this project. CPR has not even attempted to articulate why it believes that the Western Access Interchange itself would unreasonably interfere with its railroad operations. This is because the CPR's objection is based entirely on its concern that constructing the Western Access Interchange at the location planned since 2004 will make it "inevitable" that the Tollway will later seek to cross CPR's Bensenville Yard and connect the Western Access Tollway with I-294 (Tri-State Tollway).

CPR's concerns about the design of a later-stage phase at a different location provide no basis to invoke federal preemption over western access to O'Hare, which can only be accomplished by crossing over CPR and UPR tracks on the western edge of the airport. While the Tollway's ultimate goal is to connect the Western Access Tollway to I-294, the current plan is for the Western Access Tollway to stop at IL 19, (Irving Park Road) north of the Bensenville Yard. The phases involving the crossing of the Bensenville Yard are the last two phases of the entire EOWA undertaking. They are identified on Figure 6 as "Phase 9 – Western Access Tollway from IL 19 to Franklin Ave./Green St. 2020-2025;" and "Phase 10 – Taft Avenue Extension (South Access) 2021-2025." If the additional work in projects 9 and 10 prove financially, politically or technically unfeasible, the direct connection to I-294 may be reconsidered. However, if and when the Tollway elects to pursue this work and CPR refuses to cooperate, the Tollway will return to the Board with a subsequent petition related to the Bensenville Yard issues. The Tollway will not initiate condemnation proceedings to acquire

property rights within Bensenville Yard without prior review by the Board.

CPR's objections to Phases 9 and 10 in this proceeding also would be premature. As previously explained, the Tollway's plans for these phases have not developed past the conceptual layout stage. It would be impossible to determine whether the phases would unreasonably interfere with railroad operations because the Tollway cannot yet explain to the Board with sufficient specificity what it intends to construct, what railroad operations would be impacted, how the construction would be sequenced, or how long the project would take to complete. If the Board were to include an analysis of the contemplated Bensenville Yard crossing into this proceeding, the entire EOWA Project, which has purposefully been segmented into phases for efficiency and budgetary reasons, would grind to a halt while the Tollway performs extensive investigation of CPR operations within Bensenville Yard, determines the least impactful design, and produces engineering plans of sufficient detail for the Board to consider.

Indeed, CPR's attempt to link these two distinct phases is a transparent attempt to leverage the time pressure the Tollway has for the Western Access Interchange, which CPR created by failing to object to the proposed bridges until the last minute. Construction on that portion of IL 390 between IL 83 and the western edge of O'Hare has already begun and construction on the interchange itself is ready to begin by summer 2017. As has been planned, known and obvious for many years, crossing over railroad rights-of-way on the western edge of O'Hare in order to connect two new Tollways and augment access to the western side of O'Hare is at the very heart of the EOWA Project and an important part of the O'Hare Modernization Program. The STB should reject any attempt by CPR to conflate the Western Access Interchange with other potential elements of the EOWA Project and the O'Hare Modernization Program.

LEGAL ARGUMENT

I. The Tollway's Acquisition of CPR Property Rights and the Construction of the Highway Bridges Will Not Unreasonably Interfere With Railroad Transportation.

Pursuant to sections 5 U.S.C. § 554(e) and 49 U.S.C. § 721, the Board has the discretion to issue a declaratory order to terminate a controversy or remove uncertainty. The CPR maintains the Tollway's eminent domain power is preempted by ICCTA, while the Tollway asserts its authority is not preempted. A declaration by the Board in favor of the Tollway would terminate the present controversy, remove uncertainty, and enable the Tollway to proceed with this vital transportation project.

"The Federal preemption provision contained in 49 U.S.C. § 10501(b), as broadened by the Interstate Commerce Commission Termination Act of 1995, Pub. L. No. 104-88, 109 Stat. 803 (1995) ("ICCTA"), protects railroad operations that are subject to the Board's jurisdiction from state or local laws or regulations that would prevent or unreasonably interfere with those operations." *Lincoln Lumber Co. v. City of Lincoln*, 2007 WL 2299735, at *2, FD 34915 (STB served Aug. 10, 2007). A state agency's exercise of eminent domain authority over railroad property can be a form of regulation that could be preempted under 49 U.S.C. §10501. *Lincoln Lumber Co. v. City of Lincoln*, 2007 WL 2299735, at *2. However, condemnation through eminent domain proceedings is not categorically preempted. Rather, "acquisition by eminent domain … would not implicate the Section 10501(b) preemption unless it would prevent or unreasonably interfere with railroad operations." *Id.* In fact, acquiring railroad property for routine, non-conflicting crossings of railroad tracks like the Western Access Interchange is typically not preempted. *See Eastern Alabama Railway LLC – Pet. For Declaratory Order*, FD 35583, Slip op. at 4-5 (STB served March 9, 2012) ("This is not to say, however, that all eminent

domain against railroad property are impermissible. Rather, routine, non-conflicting uses, such as non-exclusive easements for at grade road crossings, wire crossings, sewer crossing, etc., are not preempted so long as they would not impede rail operations or pose undue safety risks.") (citing, *Maumee & W. R.R.& RMW Ventures, LLC – Pet. For Declaratory Order,* FD 34354, slip op. at 2 (STB served Mar. 3, 2004). For example, in *Franks Inv. Co. v. Union Pac. R.R.*, 593 F.3d 404, 415 (5th Cir. 2010), the plaintiff filed an action for a possessory interest in four at grade crossings. The Court of Appeals found the suit was not preempted:

> We conclude that the district court decided only that all railroad crossings affect rail transportation. Certainly at one level that is true. We have held, though, that more is required before preemption applies…. There is no evidence in the record to permit a finding that the four crossings created any unusual interference with the railroad. These were typical crossings and a typical dispute. It is not one that is federally preempted.

Franks Inv. Co., 593 F.3d at 415.

A. The Western Access Interchange Will Not Unreasonably Interfere with Railroad Transportation.

Highways cross railroad tracks at thousands of locations throughout the United States. The Tollway alone maintains 34 bridges over railroad facilities. The Western Access Interchange provides for vertical and horizontal clearances around CPR property that exceed all applicable standards and will allow for unimpeded, continued railroad operation by CPR. In addition, the Tollway's plans minimize the encroachment on the surface of CPR's property so as to eliminate any risk of interference with future expansion. These highway bridges will not unreasonably interfere with CPR's railroad operations.

Significantly, UPRR operates two lines parallel to CPR's tracks. Early in the process UPRR expressed a willingness to work with the Tollway and already obtained Federal Railroad Administration bridge identification numbers for the five bridges that will make up the Western

Access Interchange. The Tollway and UPRR remain in active negotiations regarding the sale by UPRR of the property interests the Tollway requires.

The Tollway's rail transportation consulting expert, R.L. Banks, analyzed CPR's operations on these tracks and concluded the Western Access Interchange will not unreasonably interfere with CPR's railroad operations. R.L. Banks determined the Tollway's bridges will have no effect on CPR's current operations because the clearance envelopes for the bridges are large enough to accommodate all current CPR operations, including double-stacked intermodal carriers. *Id.* In other words, these are typical highway bridges over railroad tracks.

R.L. Banks concluded the use of a single support pier straddling the property line between CPR and UPRR will leave ample room for CPR to add tracks or expand its operations in this area even though it is highly unlikely CPR will ever add more track in this area. CPR's two mainlines end at the A-20 Interlocking, where CPR's tracks connect to UPRR double track mainline, so CPR cannot add a third line extending beyond the interlocking. This limitation is unrelated to the Tollway's planned improvements. An additional track in the area of the Western Access Interchange essentially would be limited to storage purposes.

R.L. Banks also analyzed the Tollway's construction sequencing plans and compared them with CPR's operations. It concluded that any disruptions or delays CPR may encounter during construction of the Western Access Interchange would be typical for an overpass construction project, and could be readily managed by following industry standards and by maintaining open communication and coordination. The Tollway will comply with appropriate industry standards and cooperate with CPR. *Cf., Eastern Alabama Railway*, s*upra,* slip op. at 5-6 (construction of utility crossing found not to unreasonably interfere with railroad operations because utility board committed to following appropriate industry standards and cooperate with

railroad in scheduling its work).

Finally, R.L. Banks concluded that after the project is complete, the Tollway's need to periodically maintain or repair the bridges will not interfere with CPR operations. First, routine maintenance inures to CPR's benefit because it will protect the tracks. Second, bridge repair work will not require track outages. At most, this work will require schedule coordination, flagging and other standard safety precautions which the Tollway commits to follow. In short, R.L. Banks has concluded neither the construction work nor the completed Western Access Interchange will unreasonably interfere with railroad transportation. In fact, in R.L. Bank's opinion, once the Western Access Interchange is complete, there will be no effect whatsoever – zero – on CPR's operations.

B. The Western Access Interchange Will Provide Significant Public Benefits That Outweigh The *De Minimis* Imposition On CPR During Construction.

In determining whether building the interchange causes interference with railroad operations that is "unreasonable," the Board should also weigh the mere temporary inconvenience caused by construction against the broad public benefits that federal, state and local governments have long recognized the EOWA Project will deliver.

Once the construction is complete, there will be no effect on CPR. No tracks will be lost or moved; no operations will be restricted. In fact, all of its potential for current or future operations will be preserved. The EOWA Project, on the other hand, will reduce congestion and spur economic development for millions of people. The FHWA and IDOT Tier One Final EIS found that 86% of the interstate highways and major arterials in the EOWA Project area are congested. Exh. G, at ES-2. By 2030, that figure will grow to 91% without the EOWA Project. *Id.* This congestion spills over to secondary roads, with 92% of primary arterials and 90% of minor arterials congested by 2030. *Id*. The EOWA Project will improve travel in and throughout the area by

improving regional travel, decreasing congestion on secondary roads, improving average speeds throughout the system, and improving travel times to freeway connections and various destinations. *Id* at ES-8.

The CPR's attempt to prevent access to the western side of O'Hare by objecting to the Western Access Interchange would thwart an essential part of the O'Hare Modernization Program. As the FAA determined in the OMP Final EIS, "Western access to O'Hare is needed to realize the full economic opportunities created by the OMP and to improve ground transportation in the O'Hare area." Exh. E, at ES-8

C. The Board Should Declare the Tollway's Eminent Domain Powers are Not Preempted.

The EOWA Project and the O'Hare Modernization Program are national-priority public works projects. The Tollway's request here is analogous to the petition by the Texas Department of Transportation ("TXDOT") in *State of Texas, Dep't of Transportation – Petition for Declaratory Order Regarding Highway Construction in Tarrant Cnty., TX*, FD 32589 (ICC served Feb. 1, 1995). In that case, TXDOT constructed a significant project to modernize and expand Interstate Highways 30 and 35W, the main highway arteries serving the Dallas/Fort Worth area. The project required the acquisition of property belonging to the Fort Worth and Western Railroad Company ("FWWR"), and the relocation of track to an adjacent parcel which TXDOT sought to compel the FWWR to use. When the FWWR refused, TXDOT initiated a condemnation proceeding, which was stayed pending the resolution by the former Interstate Commerce Commission of TXDOT's petition for a declaratory order.

TXDOT's petition was addressed under the law prior to ICCTA, but the findings of the Interstate Commerce Commission remain instructive. The Commission ruled that TXDOT's efforts to condemn FWWR property and compel the relocation of railroad tracks was not

preempted. Analyzing the question of track relocation, the Commission explained, "In the past…we have found an absence of jurisdiction where the proposed relocation is to operate in the same manner as the existing line, no shippers are involved, and no new competitive territory is reached." *Id.*, at 2. Similarly, the Tollway's Western Access Interchange will not affect CPR's operations.

After concluding that TXDOT had shown with reasonable certainty its plan would not interfere with railroad transportation, the Commission found the TXDOT plan did not require its approval, holding:

> This highway renovation is intended to alleviate major congestion and safety concerns in the Dallas/Fort Worth area. Thus, it will promote public health and safety. These goals are consistent with the objectives of the rail transportation policy (RTP) of 49 U.S.C. 10101a. Under the RTP, transportation facilities are to be operated without detriment to public health and safety and we must cooperate with the States on Transportation matters. 49 U.S.C. 10101a(8) and (9).[9]
>
> …
>
> This agency's primary jurisdiction over railroads preempts state laws that could operate to unreasonably burden interstate commerce. State laws that do not impose such a burden are not preempted. TXDOT's proposal, which serves an important public interest, would not adversely affect the rail service offered by FWWR or otherwise unreasonably interfere with the carrier, inasmuch as service will not be interrupted and no costs will be imposed on FWWR. As long as that is the situation, we see no basis upon which to preempt TXDOT's exercise of its condemnation authority.
>
> *Id.*, at 3-5. (A copy of the ICC Decision is attached as Exhibit P.)

Arguably, TXDOT's project was more intrusive on railroad operations than the Tollway's Western Access Interchange. TXDOT sought to take railroad property and require the FWWR to relocate railroad lines to an adjacent parcel. In contrast, the Tollway only seeks aerial easements for bridges to pass over CPR's tracks and *de minimis* surface easements for the

[9] *See* 49 USC § 10101(8), for similar post-ICCTA statutory language.

support piers. The Tollway has made every effort to design the Western Access Interchange to accommodate the CPR and minimize any imposition on the railroad.

The Tollway attempted to engage CPR at everystep of the design development process. It offered to compensate CPR for all of the necessary easements. Yet, CPR categorically refuses to cooperate with the Tollway's need for the Western Access Interchange. CPR's attempt to control western access to O'Hare and restrict highway improvements violates the rail transportation policy set forth in 49 U.S.C. § 10101a to operate rail transportation facilities without detriment to public health and safety.

II. Request For Expedited Consideration.

The Western Access Interchange is scheduled to be constructed as part of the IL 390: IL 83 to IL 19 Project. *See* Exhibit Q, Declaration of Manar Nashif, at ¶ 5. Construction on this phase of the EOWA Project began in 2016 and the Tollway anticipates completing the work in 2019. Construction on other sections of the EOWA Project has been completed while construction of some sections are either underway or to yet to begin. For example, the Tollway has already demolished an oasis pavilion on I-90 to the north in preparation for the construction of the Western Access Tollway interchange with I-90.

The schedule for the Western Access Interchange calls for bridge contracts to be awarded in July 2017, with construction on the Western Access Interchange bridges to begin in early fall 2017. Under Illinois state law, if the Tollway is forced to acquire the necessary easements from CPR through condemnation it must first seek permission to file an eminent domain proceeding from the Illinois Commerce Commission. 735 ILCS 30/10-5-10(g). In the Tollway's experience, this proceeding could take approximately three to four months. Even with quick-take authority, the subsequent eminent domain proceeding will likely take ninety days before the Tollway

obtains title to the easements. Therefore, in order to commence construction by October 2017 and avoid significantly costly delays, the Tollway requests the Board rule on this Petition before the end of March 2017.

Filed as Exhibit Q is the Declaration of Manar Nashif, Senior Project Engineer with the Tollway and Deputy Program Manager for the EOWA Project. Mr. Nashif explains that the Tollway's budget for the Western Access Interchange is $62,547,425. Exh. Q, ¶ 12. Using the industry standard 4% inflation factor, Mr. Nashif opines that any delays in the schedule will cause approximately $200,000 per month in additional construction costs to the Tollway. Mr. Nashif points out that the Western Access Interchange is the connection point between the EOWA Project and the O'Hare Modernization Program, and the necessary connection point between new IL 390 and the north leg of the Western Access Tollway. *Id.* ¶ 18. Billions of dollars have been invested by the State of Illinois and the federal government on these two projects. Any delays in the construction of the Western Access Interchange will cause a ripple effect on the schedules for these projects as well. For these reasons, the Tollway requests that its petition be set for expedited consideration. In support of its request for expedited consideration, the Tollway proposes that the Board set the following schedule:

STB — CP's reply due	December 13, 2016
STB — STB initiates declaratory order proceeding	January 12, 2017
STB — Period for public comment	January 12, 2017 – February 12, 2017
STB — Ruling from STB	March 2017

CONCLUSION

For the foregoing reasons, the Illinois State Toll Highway Authority seeks a declaratory order as follows:

(1) Declaring that the Tollway's plans to construct and maintain the Western Access Interchange will not unreasonably interfere with railroad transportation or CPR's ability to conduct interstate commerce;

(2) Declaring that the Tollway may proceed with a state condemnation action against CPR asserting the Tollway's eminent domain authority to take the temporary and permanent easements identified in Exhibit C;

(3) Declaring that the Tollway may proceed with the construction of the Western Access Interchange upon acquisition of the necessary easements without further involvement or oversight by the Surface Transportation Board; and

(4) Declaring any other rights and obligations of the parties necessary to resolve the dispute between the Tollway and CPR.

The Illinois Tollway request expedited consideration of this Petition in accordance with the proposed schedule set forth herein to enable it to commence work on this phase of EOWA Project and to meet construction schedules.

Respectfully Submitted,

The Illinois State Toll Highway Authority,
By: Lisa Madigan
Attorney General of the State of Illinois

By: _____
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Assistant Attorney General
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CERTIFICATE OF SERVICE

I certify that I have this 22nd day of November, 2016 served copies of **The Illinois State Toll Highway Authority's Petition for Declaratory Order, Expedited Consideration Requested**, upon all parties of record in this proceeding, by FedEx Overnight Delivery:

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#48273729 v1

TECHNICAL REPORT

Western Access Interchange
Ramp Bridges over Canadian Pacific Railway and Union Pacific Railroad

Prepared for
Illinois Tollway

September 15, 2016

ch2m

VERIFICATION

I, Aaron Chanowitz, PE, declare under penalty of perjury that I have read the foregoing report titled "Western Access Interchange Ramp Bridges over Canadian Pacific Railway and Union Pacific Railroad," that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

AARON CHANOWITZ, PE
[Print name]

I, Lidia Piecky, PE, declare under penalty of perjury that I have read the foregoing report titled "Western Access Interchange Ramp Bridges over Canadian Pacific Railway and Union Pacific Railroad," that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

LIDIA PIECKY, PE
[Print name]

Sworn to and subscribed
before me this 15th day of September, 2016

Rebecca J Belvisi

OFFICIAL SEAL
REBECCA J BELVISI
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires Nov 28, 2020

Western Access Interchange
Ramp Bridges over Canadian Pacific Railway and Union Pacific Railroad

1. Introduction

The Elgin O'Hare Western Access (EOWA) (previously known as Elgin O'Hare – West Bypass) project includes construction of new roadway ramp bridges over the Canadian Pacific Railway (CPR) and Union Pacific Railroad (UPRR) mainline. These new bridges are required as part of the EOWA's Illinois Route 390 (IL 390) Tollway from IL 83 to IL 19 Project, which includes construction of the new Western Access Interchange.

Technical Report Purpose

This *Western Access Interchange Ramp Bridges over Canadian Pacific Railway and Union Pacific Railroad Technical Report* provides a summary of the EOWA Project Background (Section 2) and Implementation Status (Section 3), and describes the Proposed Design Features (Section 4) and Proposed Specifications and Construction Staging (Section 5) for the new roadway ramp bridges over the CPR and UPRR mainline.

Introduction and EOWA Project Roles of CH2M, Stanley Consultants, and Stantec Consulting Services

CH2M is a global engineering firm that provides consulting, design, construction, and operation services for corporations, and federal, state, and local governments. The firm has been in business for over 70 years working with transportation and government agencies to plan, design, and implement major highway, rail, and airport transportation programs and projects across the U.S. and in Illinois.

In 2012, CH2M was selected as the Illinois Tollway's Design Corridor Manager for the EOWA project. CH2M is coordinating and facilitating the overall EOWA design phase activities for the project, including the following: program management and controls; technical delivery support including integrating corridor-wide design requirements into individual design sections; permitting and agreement support; land acquisition support; and external coordination support.

The Illinois Tollway's Design Section Engineers are responsible for preparing design plans, specifications, and estimates within their assigned "design section." Stanley Consultants and Stantec Consulting Services are the Design Section Engineers responsible for developing the design and preparing Contract Plans and specifications for the five new roadway bridges over the CPR and UPRR in the Western Access Interchange area.

Stanley Consultants is a global consulting engineering firm with over 100 years of experience in providing a wide-range of services including planning, engineering and design, environmental, intelligent transportation systems, traffic engineering and construction management. Their extensive portfolio includes the completion of many diverse projects for primary and secondary highways and bridges, urban streets, and arterials. Stanley Consultants is the designer for four of the proposed flyover ramp bridges, which cross over the CPR and UPRR.

Stantec Consulting Services has been in business for over 60 years and provides consulting services in planning, engineering, and project economics for infrastructure and facilities projects including roadways/bridges, airports, transit/rail, and other disciplines. Furthermore, Stantec Consulting Services

offers a full-range of bridge engineering services from planning and conceptual design to engineering and construction. Stantec Consulting Services is the designer for the fifth bridge, a service ramp bridge, which crosses over the CPR and UPRR.

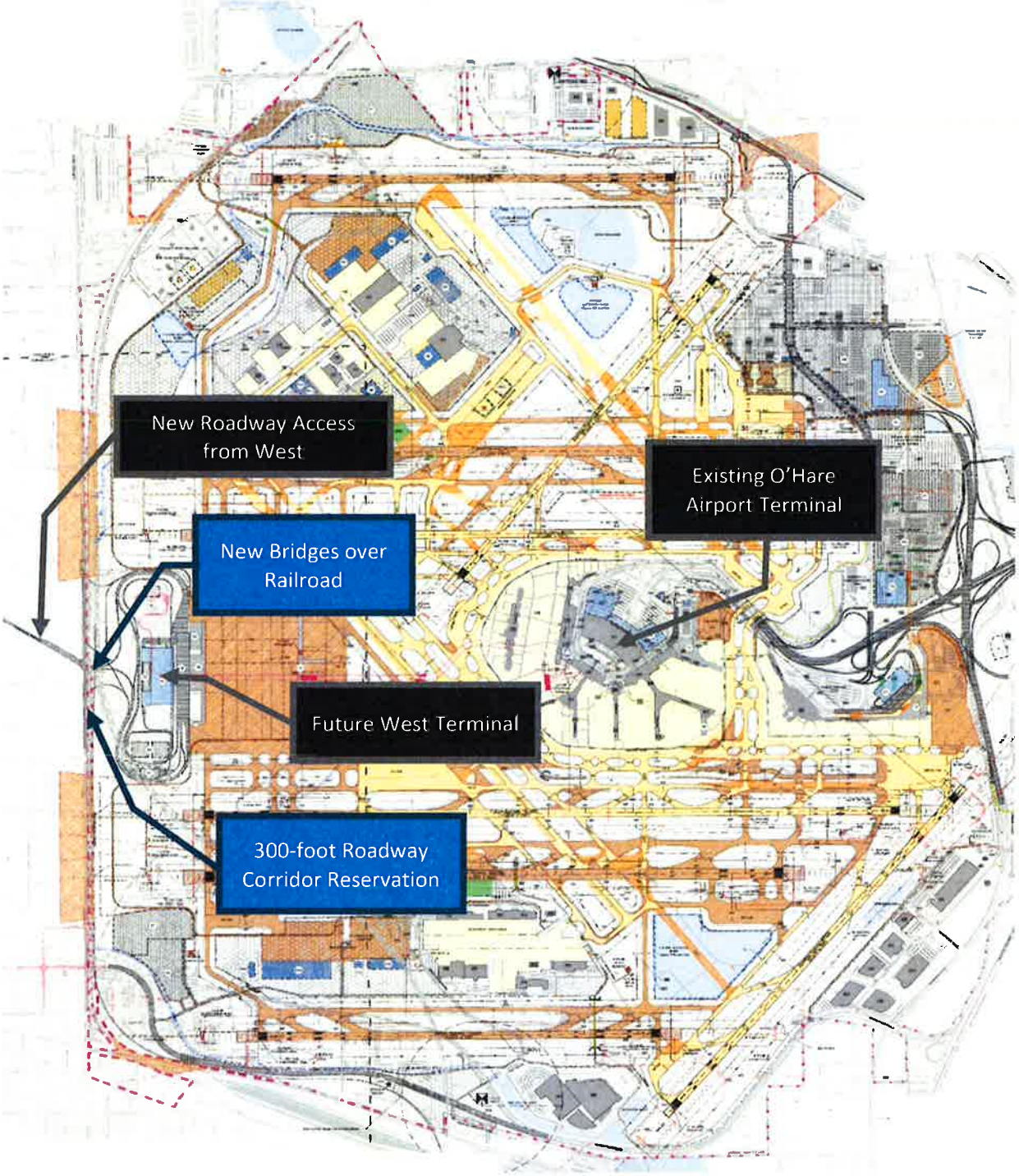
Illinois Tollway – Introduction

The Illinois Tollway is a revenue bond-financed administrative agency of the State of Illinois. The Toll Highway Act, passed by the State of Illinois in 1967 and amended in 1968, established the Illinois State Toll Highway Authority. The Act granted the agency the authority to construct, operate, regulate, and maintain a system of toll highways in the State of Illinois. The Illinois Tollway currently maintains and operates a 292-mile system of toll highways. The system currently includes 67 grade-separated railroad crossings, with 11 railroads crossings over the Illinois Tollway and 56 railroad tracks crossing under the Illinois Tollway. These crossings consist of nine railroad bridges over the Illinois Tollway and 34 roadway bridge locations over railroad facilities. The roadway bridge locations include multiple roadway bridges (each carrying a direction of traffic), roadway bridges over single railroad tracks, and roadway bridges crossing multiple railroad companies. For example, the I-294 (Tri-State Tollway) Mile Long Bridge crosses over four railroad companies – Canadian National Railroad, Burlington Northern Santa Fe Railroad, Amtrak, and Metra (operating on approximately 12 separate railroad tracks).

2. EOWA Project Background

In 2005, the O'Hare Modernization Program (OMP) Environmental Impact Statement (EIS) and associated O'Hare Airport Layout Plan were approved by the Federal Aviation Administration (FAA), the Illinois General Assembly, and the City of Chicago. The Airport Layout Plan and OMP EIS identified the following: a transportation corridor that is approximately 300 feet wide on the west side of O'Hare Airport parallel to CPR and UPRR tracks, a CPR and UPRR crossing to accommodate a future O'Hare Airport western access roadway; and a new West Terminal at O'Hare Airport. See Figure 1 for the Selected Alternative from the OMP Record of Decision.

Figure 1. O'Hare Modernization Program (OMP) Record of Decision – Airport Layout Plan



The OMP was ratified with the Illinois General Assembly's adoption of the O'Hare Modernization Act. Among other things, the O'Hare Modernization Act demonstrated clear support for the O'Hare Airport expansion plan, as well as a new roadway along the west side of O'Hare Airport and a new West Terminal. After garnering the support of key stakeholders, the U.S. Department of Transportation issued a Record of Decision for the OMP.

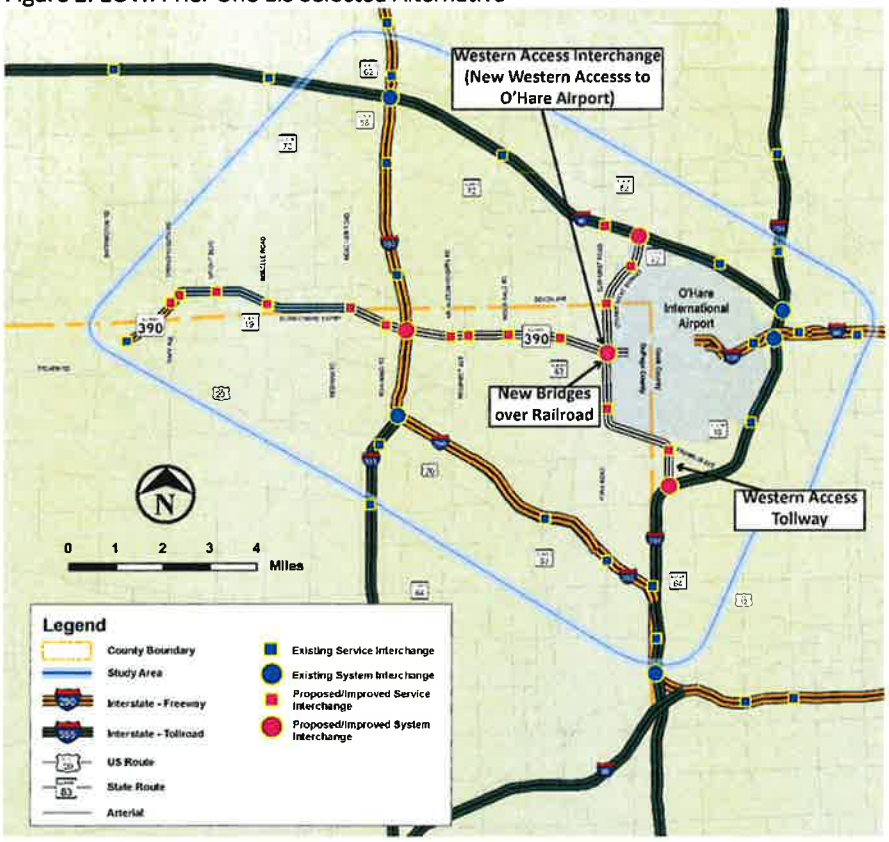
Construction of the OMP began in 2005, shortly after issuance of the OMP Record of Decision. Construction of substantial portions of the OMP have since been completed, including three of the four new runways proposed in the OMP EIS (Runways 9L/27R, 10C/28C, and 10R/28L), and one of the two extensions (Runway 10L/28R).

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users[1] identified the EOWA project as one of national and regional significance and included federal funding for the Illinois Department of Transportation (IDOT) to advance the project through the EIS process concurrent with the advancement of the OMP.

In 2007, the Federal Highway Administration (FHWA) and IDOT began conducting planning studies for the EOWA project as a two-tiered EIS. Tier One focused on evaluating a broad-range of transportation system alternatives (e.g., types of facilities and location; determining the preferred type and location of transportation system improvements), while Tier Two included conducting more preliminary engineering and environmental studies and refining proposed improvement features. The EIS process concluded with approval of the Selected Alternative as a new toll road facility that satisfies the project's Purpose and Need and sets forth the location of design improvements and right-of-way needs. Key outcomes and decisions of the tiered EIS process are described as follows.

In June 2010, the EOWA Tier One Final EIS and Record of Decision were signed by FHWA and IDOT. The Tier One Selected Alternative includes two major new roadway components – widening, upgrading, and constructing a new easterly extension of the Elgin O'Hare Expressway (now known as the IL 390 Tollway) and constructing a new West Bypass (now known as the Western Access Tollway) (see Figure 2).

Figure 2. EOWA Tier One EIS Selected Alternative



[1] Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users of 2005, Pub. L. No. 109-59. 119 Stat. 1144 (2005).

The Western Access Tollway extends along the western edge of O'Hare Airport from a junction with I-90 east of Elmhurst Road to a junction with I-294 near Grand Avenue. Between approximately Devon Avenue and IL 19, the Western Access Tollway is located on O'Hare Airport property within the dedicated 300-foot roadway corridor identified in the OMP EIS. Near the current intersection of Thorndale Avenue and York Road, the Tier One Selected Alternative also includes new west access to O'Hare Airport (see Figure 2). The only viable method to provide new west access to O'Hare Airport is via new bridges crossing over the CPR and UPRR.

The need for a second roadway access to one of the worlds' busiest airports was confirmed through the findings described in Section 5 of the Transportation System Performance Report (IDOT, 2009)[2] and stakeholder input. These studies also confirmed the need for new IL 390 Tollway and Western Access Tollway as key components of the Tier One EIS Selected Alternative. The Tier One Selected Alternative satisfies the Purpose and Need of the project by improving regional and local travel by reducing congestion, improving travel efficiency, improving access to O'Hare Airport from the west, and improving modal opportunities and connections.

Over 130 meetings were conducted with stakeholder groups, communities, transportation service providers, freight railroads, federal and state resource agencies, business owners, and the general public during Tier One studies. The overwhelming majority of stakeholders supported the Selected Alternative. In addition, the Tier One Final EIS was distributed to CPR,[3] and no objection to the location of the Western Access Interchange was received.

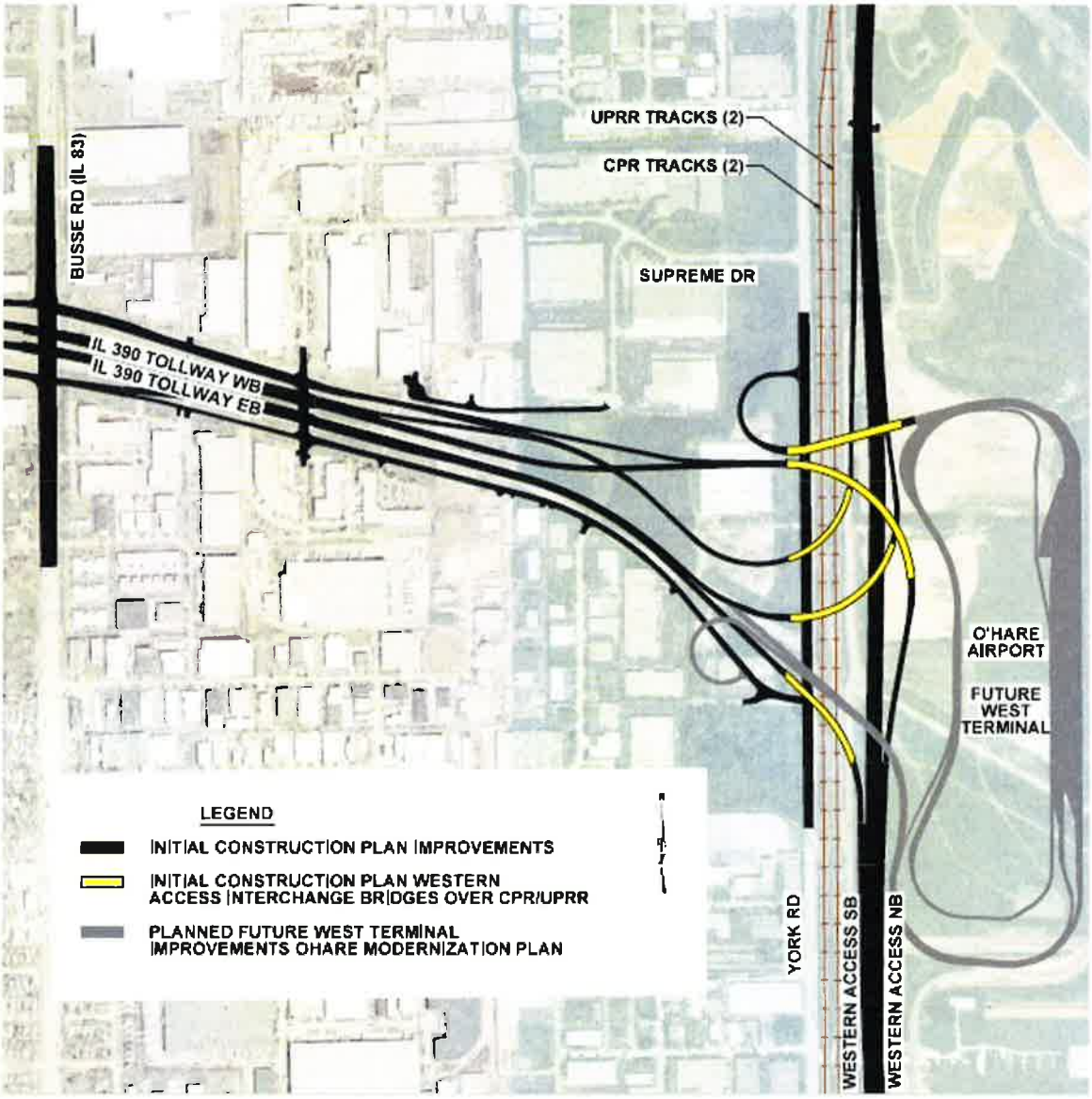
The Tier Two EIS and associated preliminary engineering studies were subsequently initiated. Preliminary engineering and alternative studies determined the optimal layout and established the construction footprint. This allowed for the evaluation of environmental impacts and mitigation requirements. Tier Two studies also identified a phased plan for the Selected Alternative, whereby the Illinois Tollway would first construct the Initial Construction Plan, a scaled-down version of the overall Selected Alternative, and pursue remaining improvements in the future based on needs and priorities. The EOWA Tier Two EIS and Record of Decision was signed by the FHWA, FAA, IDOT, and Illinois Tollway in December 2012, approving the IL 390 Tollway and Western Access Tollway as the Selected Alternative to be implemented by the Illinois Tollway.

At the Western Access Interchange, the Tier Two Selected Alternative includes construction of a series of ramp bridges over York Road, CPR, and UPRR. These ramp bridges accommodate traffic movements between the IL 390 Tollway, the Western Access Tollway, and the future O'Hare Airport West Terminal (see Figure 3).

[2] All reference citations are located at the end of this report.

[3] See the distribution list in Appendix J of the *Elgin O'Hare – West Bypass Tier One Final Environmental Impact Statement* (FHWA and IDOT, 2009).

Figure 3. Western Access Interchange – Selected Interchange Layout and Phased Implementation Plan



Note: This figure illustrates the proposed Western Access Interchange improvements as identified in the EOWA Tier Two EIS, including the Initial Construction Plan to be constructed by the Illinois Tollway and future improvements to be constructed as part of an O'Hare Airport West Terminal development.

The Tier Two Selected Alternative at the Western Access Interchange was identified based on findings in the Interchange Type Study (IDOT, 2010 and 2012a). All interchange alternatives that were considered, required construction of five ramp bridges over the CPR and UPRR to link the IL 390 Tollway with the Western Access Tollway.[4] As described previously, the only viable method to provide new western access to O'Hare Airport is via new bridges crossing over the CPR and UPRR. The Western Access Interchange bridges will be typical highway bridges that cross over railroad facilities, consistent with other highway bridges that cross over railroad facilities in Illinois and throughout the United States.

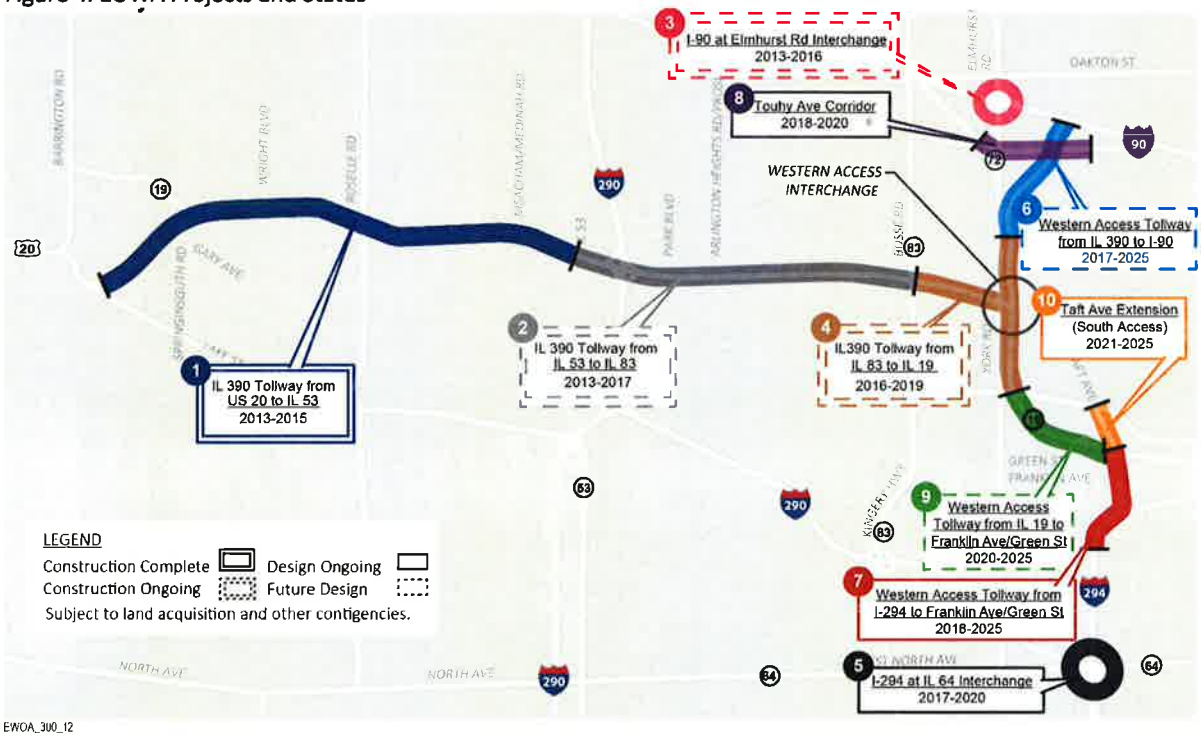
[4] A sixth bridge will be required in the future when the O'Hare Airport West Terminal is built; the location is depicted in gray in Figure 3. The Illinois Tollway is not proposing to construct the sixth bridge at this time.

3. EOWA Implementation Status

In 2012, the Illinois Tollway initiated implementation of the EOWA project via the Illinois Tollway's *Move Illinois* Program.

The EOWA project is being implemented through a phased approach that allows timely completion and opening of usable sections. Each usable section, or "project," is operationally independent in that it will provide direct transportation benefits to area motorists. The location, implementation status, and schedule for each independent EOWA project is illustrated in Figure 4.

Figure 4. EOWA Projects and Status



The sequence and schedule for implementation of the EOWA was determined based on project readiness, traffic considerations, funding and cash flow considerations, and the timing of adjoining transportation system improvements. In general, the implementation plan focuses first on construction of the IL 390 Tollway followed by construction of the Western Access Tollway and summarized as follows:

1. *IL 390: US 20 to IL 53 Project* – Widen, improve, and initiate tolling on existing IL 390 (completed Summer 2016)
2. *IL 390: IL 53 to IL 83 Project* – Construct the new easterly extension of the IL 390 Tollway to a temporary terminus at IL 83 (construction started in 2013 and to be completed in 2017)
3. *I-90 at Elmhurst Road Interchange Project* – Expand and improve the I-90 Tollway at Elmhurst Road Interchange (construction started in 2013 and to be completed in 2016)
4. *IL 390: IL 83 to IL 19 Project* – Complete construction of the IL 390 Tollway and construct the new IL 390 and Western Access Interchange to a southerly terminus at IL 19 (construction started in 2016 and to be completed in 2019)
5. *I-294 at IL 64 Interchange Project* – Expand and improve the I-294 Tollway at IL 64 interchange (construction targeted to start in 2017 and to be completed in 2020)

6. *Western Access Tollway: IL 390 to I-90 Project* – Construct the Western Access Tollway connecting the IL 390 Tollway with the existing I-90 Tollway (construction targeted to start in 2017 and to be completed by 2025)
7. *Western Access Tollway: I-294 to Franklin Avenue/Green Street Project* – Construct the Western Access Tollway providing access from the I-294 Tollway to Franklin/Green (construction targeted to start in 2018 and to be completed by 2025)
8. *Touhy Avenue Project* – Construct the Touhy Avenue Corridor improvement (construction targeted to start in 2018 and to be completed in 2020)
9. *Western Access Tollway: IL 19 to Franklin Avenue/Green Street Project* – Construct the Western Access Tollway between IL 19 and Franklin/Green, completing the Tollway connection between the IL 390 Tollway and the existing I-294 Tollway (construction targeted to start in 2020 and to be completed by 2025)
10. *Taft Avenue Extension Project* – Construct the Taft Avenue Extension providing access to the O'Hare South Cargo area (construction targeted to start in 2021 and to be completed by 2025)

The new ramp bridges over the CPR and UPRR are a part of the IL 390 Tollway: IL 83 to IL 19 Project (Project 4, as noted in Figure 4). Early construction work for this project was initiated in June 2016. Construction of the ramp bridges over CPR and UPRR is scheduled to begin in Fall 2017. A description of the construction sequence and schedule for this project is presented in Section 5 of this report.

4. Proposed Design Features for Western Access Interchange and Ramp Bridges

The Western Access Interchange area design was developed on the basis of the proposed interchange location and layout identified as part of the EOWA Tier Two EIS. As discussed in Section 2, the EIS findings showed that the location and layout of the Western Access Interchange ramp bridges over CPR and UPRR was the only viable method for providing western access to the world's second busiest airport. In addition, the design complies with applicable design criteria and requirements for adjoining airport and freight rail facilities and operations. This section summarizes the Western Access Interchange layout including design criteria used in the design development process, identifies acquisition required from CPR and UPRR, and describes the ramp bridge structure design accommodations for CPR and UPRR operations.

Interchange Location and Layout

In the Western Access Interchange area, the EOWA project proposes to construct an interchange crossing over both the CPR and UPRR at five ramp bridge locations that include four system ramp flyover bridges and one service ramp bridge (see Figure 5). The Western Access Interchange will connect the IL 390 Tollway with the Western Access Tollway and provide access to O'Hare Airport property. In general, the Western Access Interchange lies between Foster Avenue to the south and Supreme Drive to the north. The Western Access Interchange ramp bridges include:

- York Road Ramp to/from O'Hare Airport (Tollway Structure Number 1668, Federal Railroad Administration Crossing Inventory Number 450 387X)[5]

[5] Tollway structure numbers are assigned to all Illinois Tollway-owned bridges. IDOT structure numbers are assigned to all highway bridges in the State of Illinois. Federal Railroad Administration crossing inventory numbers for the referenced bridges were requested and obtained by the UPRR from Federal Railroad Association in May 2016.

- Northbound Ramp to Westbound IL 390 (Tollway Structure Number 1653, IDOT Structure Number 022-9507, Federal Railroad Administration Crossing Inventory Number 450 388E)
- Southbound Ramp to Westbound IL 390 (Tollway Structure Number 1650, IDOT Structure Number 022-9506, Federal Railroad Administration Crossing Inventory Number 450 389L)
- Eastbound Ramp North to I-90 (Tollway Structure Number 1652, IDOT Structure Number 022-9508, Federal Railroad Administration Crossing Inventory Number 450 390F)
- Eastbound Ramp South to IL 19 (Tollway Structure Number 1651, IDOT Structure Number 022-9505, Federal Railroad Administration Crossing Inventory Number 450 392U)

Figure 5. Western Access Interchange Five Ramp Bridges over CPR and UPRR



Interchange Design Criteria and Factors Governing Western Access Interchange Design

The location, layout, and design of each proposed ramp bridge at the Western Access Interchange will comply with design standards including vertical and horizontal clearance requirements; will provide for freight operations (including double-stack intermodal containers), and will not reduce the potential for future track expansion within CPR and UPRR rights-of-way. Figure 6 graphically illustrates a typical ramp bridge in relation to CPR and UPRR features.

Figure 6. Northbound Ramp to Westbound IL 390 Ramp Bridge over CPR and UPRR



The overall interchange design has been developed on the basis of Illinois Tollway and FHWA/IDOT requirements and design criteria (Illinois Tollway, 2016a and 2016b; IDOT, 2012b). Design requirements related to the EOWA projects' interface with adjoining existing infrastructure have been addressed in the design development process, including Federal Aviation Administration (FAA) requirements (FAA, 2012) related to O'Hare Airport features and operations as well as requirements related to adjoining freight rail facilities and operations.

The Western Access Interchange design addresses numerous design complexities including:

- The interchange is constrained by limited rights-of-way west and east of the western boundary of O'Hare Airport.
- A series of directional connections is required to accommodate all movements between the two new toll road corridors.
- Major existing and proposed air and freight rail transportation facilities constrain location and design options for roadway improvements in this area. The three level interchange spans over two adjoining freight rail corridors, with the directional system ramps aligned between runways to the north and south. The interchange footprint is controlled vertically and horizontally by the O'Hare Airport airspace constraints adjacent to existing and planned runways.
- Two freight rail corridors bound the east side of York Road. These include the CPR and UPRR lines, which traverse beneath the proposed interchange ramps, constraining pier placement possibilities and controlling the design characteristics for the new ramp bridges spanning over the CPR and UPRR corridors.
- Future dedicated transit corridors must be preserved running both east/west and to/from the north of the proposed West Terminal.
- The area west of the proposed West Terminal along existing Thorndale Avenue is floodplain. Embankment and tunneling options are not practical since they would change the floodplain properties, requiring mitigation and complicated structural elements to be constructed.

- Runway safety and airspace constraints affected the selection of design geometrics, and necessitated the use of multilevel system interchange layouts, including multiple new structures (e.g., bridges, retaining walls).
- The FAA does not permit construction of permanent facilities that will encroach into the runway protection zones (RPZ) and glide plane surfaces adjacent to the runways. Coordination with the FAA was required to confirm design feasibility related to airspace requirements.
- The O'Hare Airport Master Plan Update (2005) set aside a dedicated 300-foot transportation corridor on the west side of O'Hare Airport. From approximately north of Devon Avenue to south of IL 19, the Western Access Tollway was to be sited within this 300-foot corridor.

Providing adequate clearance over and adjacent to railroads is a key consideration in bridge design. According to Chapter 28 in AREMA, legal clearance requirements for railroads in the State of Illinois is 23 feet vertical and 8 feet horizontal (AREMA, 2016). The UPRR addresses required clearances in the document, *Guidelines for Railroad Grade Separation Projects*, which states that vertical clearance requirements are 23 feet 4 inches above the highest track (UPRR-BNSF, 2016a). This document addresses horizontal clearance requirements by stating that the railroad requires all piers and abutments to be located outside the railroad right-of-way limits (UPRR-BNSF, 2016b). Where it is impractical, abutments and piers shall be located more than 25 feet perpendicular from centerline of existing or future track (UPRR-BNSF, 2016c).

The CPR addresses clearance requirements in the document, *Requirements for the Design of Steel and Concrete Bridges Carrying Railway Traffic in the United States*, which states that railway clearances shall be in accordance with the latest edition of AREMA Chapter 28 (CPR, 2006). A CPR Clearance Diagram presents a minimum required horizontal clearance from centerline of track to face of abutment or pier as 18 feet where no maintenance road is required, and 26 feet from centerline of track to face of pier or abutment where a maintenance road is required.[6] Consistent with AREMA, this CPR clearance diagram presents the minimum required vertical clearance above top of rail as 23 feet.

To simplify the design, the EOWA project adopted a minimum vertical clearance design criteria of 23 feet 4 inches as the project-wide standard for the Western Access Interchange ramp bridge clearance over the CPR and UPRR. This minimum meets UPRR requirements and exceeds CPR requirements. Bridge pier locations are designed to meet or exceed UPRR and CPR horizontal clearance criteria.

CPR and UPRR Land Acquisition Requirements

Land acquisition requirements for the Western Access Interchange, including the new ramp bridges over CPR and UPRR, were completed based on design plans prepared by the Design Section Engineers. Permanent easement and temporary easement acquisition is required from CPR (Parcels WA-2D-12-191 and WA-2D-12-195) and from UPRR (Parcel WA-2D-12-184). Land acquisition requirements are depicted in Figures 7 and 8 and include the following:

- Permanent easements are required for the five ramp bridges and include rights for bridge construction, location (aerial rights for bridge spanning over railroad property plus ground rights for one set of bridge piers at the CPR/UPRR property line), maintenance, and repair.

[6] Based on CPR drawing that is entitled "Clearance Diagram Structure Over or Beside Railway Tracks."

- Temporary easements are required adjacent to the permanent easement locations for various construction activities, and include rights for the following: construction and use of a temporary at-grade railroad crossing to provide Illinois Tollway and Contractor access from the south; use of the existing Railroad Haul Road and at-grade crossing to provide Illinois Tollway and Contractor access from the north; various construction activities related to the new ramp bridge construction.

Final plats and legal descriptions for the required CPR acquisitions are included in Appendix A.

In order for the Illinois Tollway to maintain the bridges and access the areas below the bridges to conduct inspections, it is expected that the Illinois Tollway will enter into a typical construction and maintenance agreement with each of the railroads, as is customarily done for highway bridges over railroads.

Figure 7. Land Acquisition Parcels

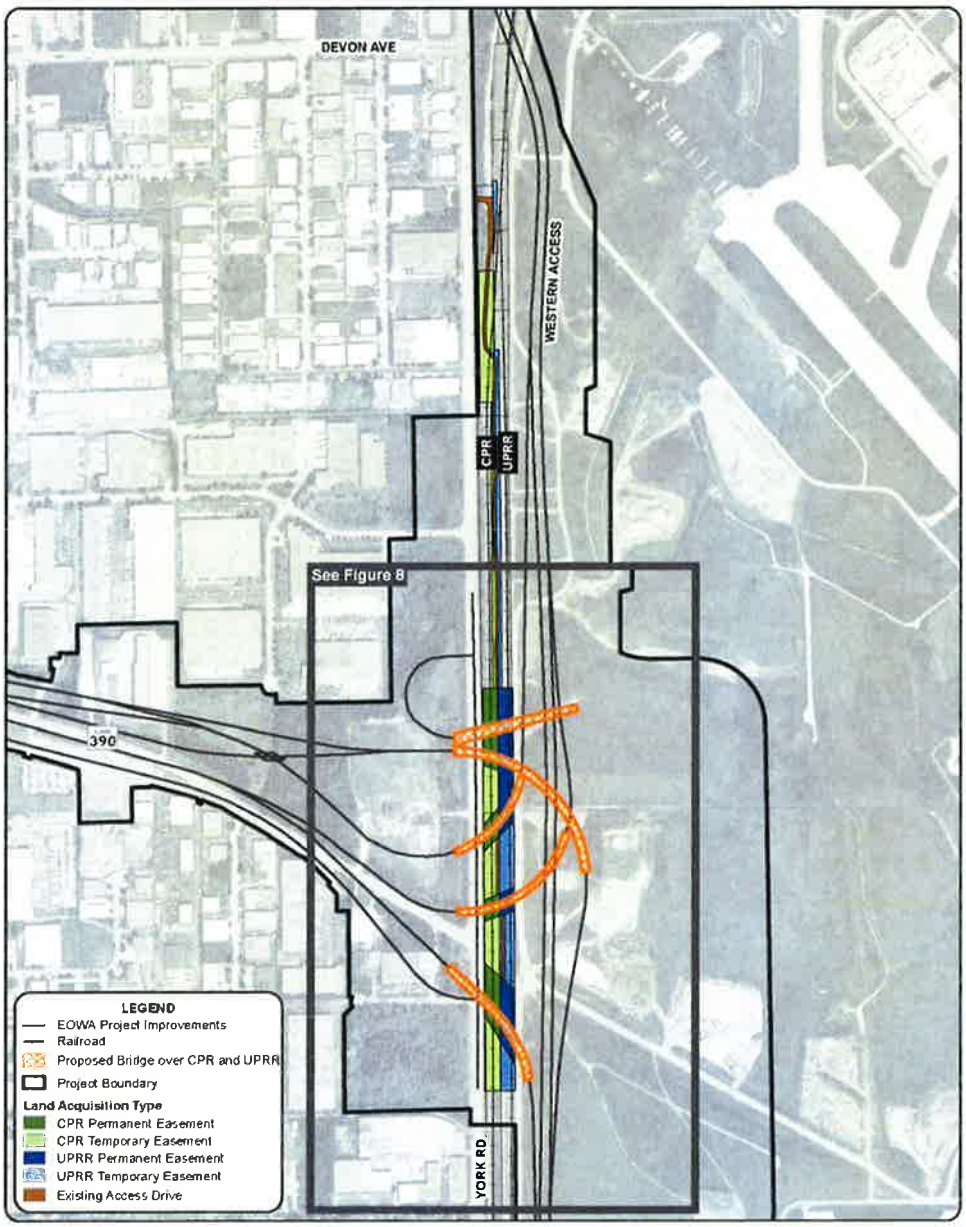
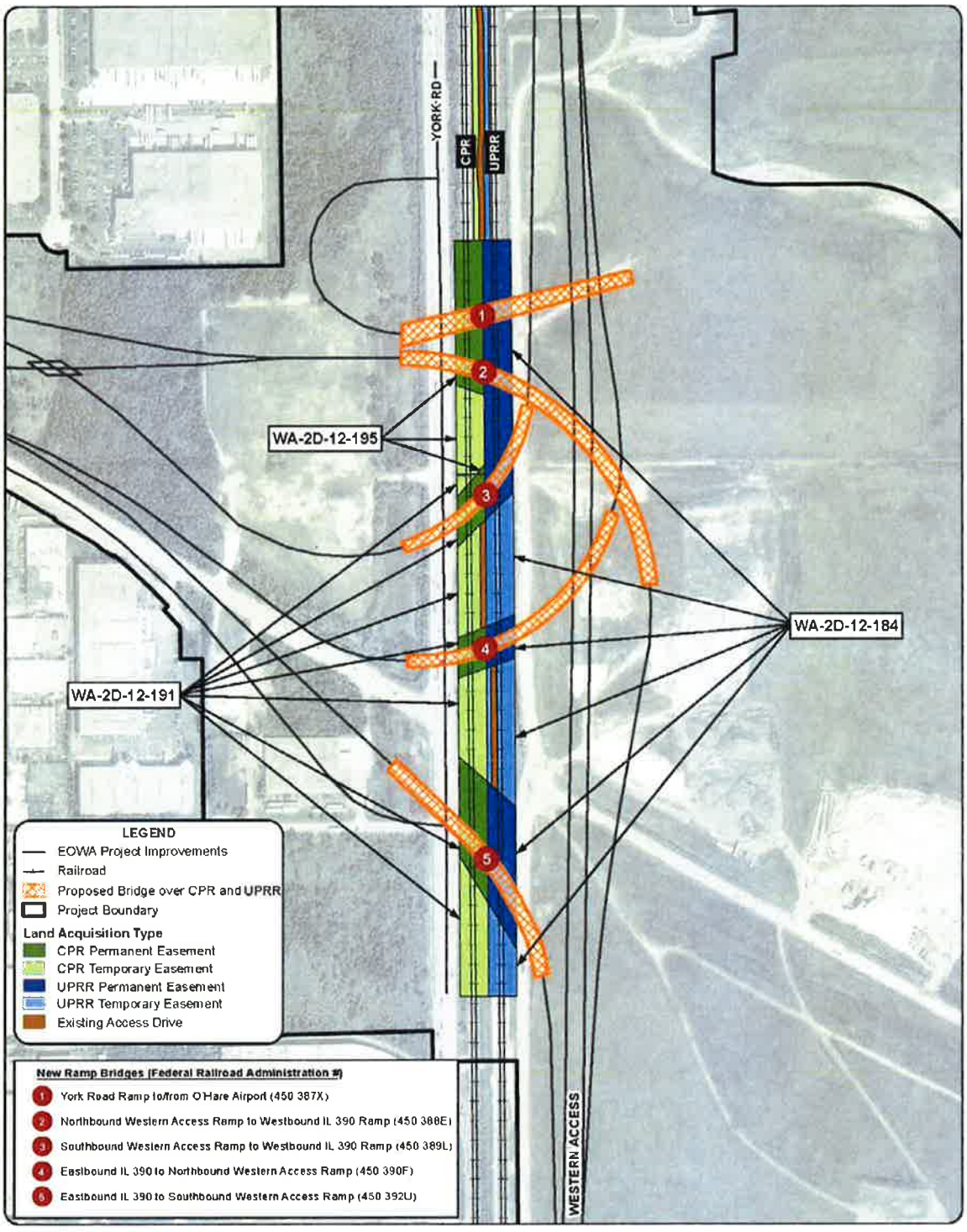


Figure 8. Land Acquisition Parcels (Zoomed into Inset)



Structure Design Accommodations for Freight Rail Operations

The design features of the five Western Access Interchange ramp bridges over the CPR and UPRR mainline have been developed to accommodate current and future freight capacity. Proposed bridge types and layouts are the result of alternative structure type studies. Optimal structural layouts were identified (Stanley Consultants, 2015; Stantec Consulting Services, 2016) to accommodate complex site constraints and features. Design standards referenced for the development of the five ramp bridges include:

- Canadian Pacific Railway – CP Rail Track Standards: Sections 4.0 and 7.0 (CPR, 2000a and 2000b)
- Canadian Pacific Railway – Protection of Structures Adjacent to Railroad Tracks (CPR, 2001)
- Canadian Pacific Railway – Minimum Safety Requirements for Contractors Working on Railway Property in the U.S (CPR, 2007a)
- UPRR Guidelines for Railroad Grade Separation Projects (UPRR-BNSF, 2016d)
- UPRR Guidelines for Temporary Shoring (UPRR, 2004)
- American Railway Engineering and Maintenance-of-Way Association (AREMA) (AREMA, 2016)

All five proposed bridges will require a support pier to be placed within railroad right-of-way due to the combined 200+ foot width of the combined CPR and UPRR rights-of way, skewed bridge alignments, and air space limitations from O'Hare Airport. It was determined that resulting impacts on the railroads could be minimized by placing the piers along and straddling the property line between the two railroad properties. These piers are currently proposed to include two types of piers, either a multi-column pier parallel to the railroad property line meeting the requirements of the railroads or a large single column (greater than 30 square feet in cross-section area) hammerhead pier with the underside of the hammerhead cap at least 23 feet 4 inches from the top of the rail to the bottom of the steel beam/pier cap (see Appendix B, Sheet Numbers TSL-2, SA-3, SB-3, SC-3, SD-3).

At locations throughout the Western Access Interchange, the ramp profile curvatures over the railroad right-of-way will provide vertical clearance, which meets or exceeds the required minimum vertical clearance as described above. Bridge clearances within railroad property will range from a minimum of 23 feet 4 inches to approximately 41 feet. This vertical clearance across the railroad right-of-way along with proposed pier locations preserves the opportunity for both CPR and UPRR to realign or expand tracks in the future. Aside from the pier located on the property line between CPR and UPRR, all other permanent pier and bridge elements will be either outside railroad property or at least 23 feet 4 inches above the highest track.

Structures will have crashwall protection (also known as Pier Protection) if required by CPR (CPR, 2006) and UPRR (UPRR-BNSF, 2016e) standards. Piers located on the railroad property line will have caisson construction in order to minimize the footprint of their foundation system within railroad property. For piers outside railroad right-of-way, the pier foundations will not intrude onto railroad property.

During the structure type study for the five ramp bridges, alternative structure types were considered for the new bridges that will cross the railroads. A multi-girder steel plate girder bridge type was selected as the optimal structure type for each bridge since it could be most rapidly erected over the tracks (see Appendix B, Sheet Numbers TSL-1, SA-1, SB-1, SC-1, SD-1). In addition, it will require the shortest duration of encroachment by the Contractor on railroad property. The ongoing final bridge design effort will include studies of detailed design refinements and construction activities including: provision of a recommended girder erection sequence, identification of field splice locations to minimize potential impacts to railroad operations, consideration of accelerated bridge construction techniques, and other considerations.

5. Proposed Specifications and Construction Staging for Western Access Interchange and Ramp Bridges

Specifications for Construction with CPR and UPRR Right-of-Way

The proposed Illinois Tollway bridges over the CPR and UPRR will be constructed by a Construction Contractor, authorized by an agreement with the Illinois Tollway. Construction contract documents governing the Contractor's work will include plans and specifications. Construction documents will be prepared in accordance with Illinois Tollway Standards and design criteria (Illinois Tollway, 2016a and 2016b), which include specific requirements governing Contractor work on railroad property as well as Contractor interaction with the railroads. Contractor requirements will be further tailored to fulfill specific requirements of each involved railroad and typically include the following requirements that the Illinois Tollway has successfully employed in similar projects:

- The Contractor must coordinate all activities within railroad right-of-way with each respective railroad.
- The Contractor must obtain right-of-entry permit(s) from each railroad and secure flagger services prior to entering or performing work on railroad property. The Contractor is required to pay all railroad right-of-entry fees and all costs associated with flagging.
- The Contractor must employ means or methods needed to keep tracks open for trains during construction and pay for these activities. Any required closure durations are to be minimized, coordinated in advance with the railroads, and limited to activities (e.g., beam erection) that cannot be otherwise performed.
- The Contractor must obtain Railroad Protective Liability insurance prior to beginning work on railroad property.
- The Contractor must obtain other insurance coverages and include the railroads, its agents, and employees as additional insureds. Otherwise, the Contractor must provide a separate owner's protection policy of equal limits of coverage. Required insurance coverages include: Commercial General Liability, Business Automobile Liability, Workers' Compensation, Excess/Umbrella Liability, Builder's Risk Insurance, and Contractor's Pollution Liability.
- The Contractor is prohibited from crossing railroad tracks in locations other than at those that are specified in the plans. These crossings would typically be coordinated between the railroads and the Illinois Tollway prior to award of the construction contract.
- The Contractor is prohibited from placing materials, equipment, or staff within railroad construction clearance zones as identified within the plans, specifications, and special provisions. Construction clearance zones would be defined to comply with railroad standard requirements.
- The Contractor must contact designated CPR and UPRR staff to obtain access permits and secure flagging services prior to construction.
- The Contractor must obtain railroad approval of all proposed work operations within the CPR and UPRR property prior to starting work.
- The Contractor must obtain all necessary permits required for performing work on railroad right-of-way prior to starting work.
- The Contractor must adhere to all applicable railroad safety and operation requirements during performance of work on railroad property.

- The Contractor must coordinate work with all utilities located on railroad property.
- In order to facilitate a track outage for the girder erection operations, exclusive track occupancy must be requested by the Contractor and agreed upon by the railroad who controls train movement. During exclusive track occupancy, absolutely no trains are permitted to travel through the specified section of track, defined as working limits, as that activity may foul or have the potential to foul the tracks. A specific period of time will be established for each exclusive track occupancy request that is agreed upon. During that time, the train dispatcher will withhold authority of trains to operate within the working limits of the track. An engineer-in-charge, employed by the railroad, will be onsite during each period of exclusive track occupancy. Authority for restored train operation will not be provided until confirmed by the engineer-in-charge.

The Illinois Tollway has successfully employed a similar approach for constructing bridges over class I railroads, which complied with railroad standards and protected railroad interests. This includes two nearby locations where the Illinois Tollway recently completed or is completing construction of bridges carrying the I-90 Jane Addams Memorial Tollway over the UPRR near Des Plaines, IL, and construction of bridges carrying the I-90 Jane Addams Memorial Tollway over the UPRR near Elgin, IL. The recently constructed bridges over the UPRR near Des Plaines, IL are located only about three miles from the proposed bridges and cross the same UPRR line as the Western Access Interchange ramp bridges.

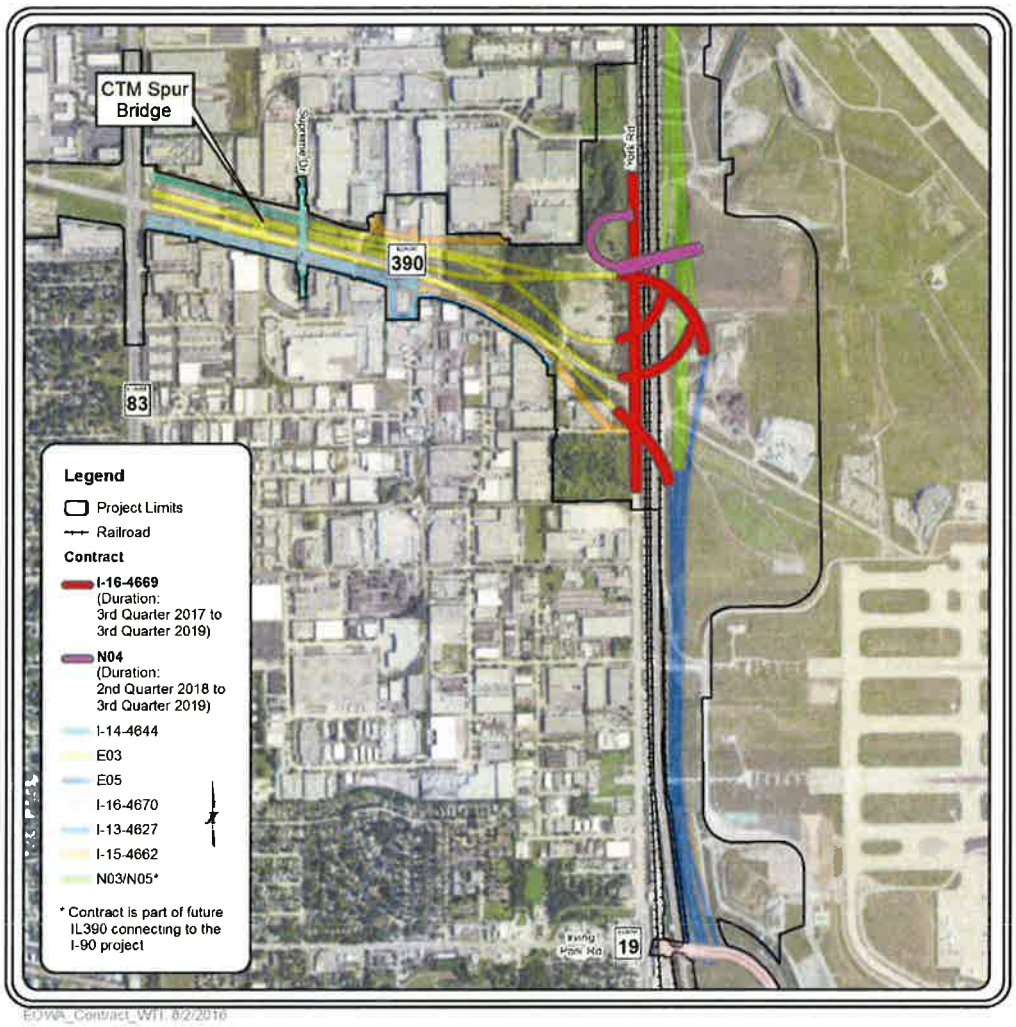
IL 390: IL 83 to IL 19 Project Construction Schedule

As described in Section 3, the EOWA is being implemented via a phased approach that delivers the project in usable segments and, therefore, provides benefits to drivers. The five proposed ramp bridges over the CPR and UPRR will be constructed as part of the EOWA's IL 390: IL 83 to IL 19 Project, which will complete construction of the IL 390 Tollway and construction of the Western Access Interchange (see Figure 5).

Construction of the IL 390: IL 83 to IL 19 Project began in 2016 and is anticipated to be completed in 2019. This project will be built via multiple construction contracts (see Figure 9). Advance construction (Contract I-14-4644) began in 2015, including the ongoing construction of the new at-grade frontage road crossings of the Chicago Terminal Railroad industrial track.[7] Major roadway and bridge construction for the IL 390: IL 83 to IL 19 Project is scheduled to begin in 2017. Two upcoming contracts include construction of the new ramp bridges over CPR and UPRR (Contracts I-16-4669 and N04). Contract I-16-4669 is scheduled to be awarded in July 2017, and Contract N04 is scheduled to be awarded in March 2018. One additional upcoming Contract (E03), which includes construction of the IL 390 Tollway crossing over the Chicago Terminal Railroad industrial track (Contract E03), also directly involves the CPR.

[7] CPR owns the industrial track that is currently being leased by Chicago Terminal Railroad for operations. Required agreements for construction and track crossings (at-grade and overhead) were pursued and executed directly with Chicago Terminal Railroad as the operator of the track, but the Illinois Commerce Commission Final Order issued in January 13, 2016 included CPR as a respondent. CPR provided no comment or objection to the project in a letter to the Illinois Commerce Commission dated July 27, 2015.

Figure 9. EOWA: IL 390 from IL 83 to IL 19 Project Construction Contracts



Construction Staging Plan for New Ramp Bridges over CPR and UPRR

The proposed Western Access Interchange ramp bridges (see Exhibits 1 and 2) will be typical concrete and steel highway bridges over railroads, similar to many other highway bridges built over railroads throughout Illinois and across the United States. These bridges will be built as part of Illinois Tollway Construction Contracts I-16-4669 and N04. Construction contract durations will be two to three years.

Construction of the bridges will include the following construction stages:

- Stage I: Contractor Access and Preparation Work on Railroad Property
- Stage II: Abutment and Pier Construction
- Stage III: Girder Shoring Tower Erection
- Stage IV: Girder Erection
- Stage V: Bridge Deck and Bridge Approach Construction
- Stage VI: Site Restoration

Each construction stage is described in the following subsections, which includes the description of the work that will be performed, work duration, scheduling, and potential effect to freight operations.

Both CPR and UPRR have reduced requirements for clearance during construction. According to the document, *Minimum Safety Requirements for Contractors Working on Railway Property in U.S.*, CPR requires that no temporary structure, materials, or equipment shall be permitted closer than 12 feet to the nearest rail of any track (i.e., 14 feet 4 3/8 inches from track centerline) without prior approval during construction (CPR, 2007b). A CPR clearance diagram presents this dimension as the minimum horizontal construction clearance, and also shows 22 feet as the minimum vertical clearance (above the top of rail) required during construction.[8]

In the document, *Guidelines for Railroad Grade Separation Projects*, UPRR provides information on clearances required during construction (UPRR-BNSF, 2016f). Section 4.4.1.2 shows that a minimum temporary horizontal clearance of 15 feet 0 inch is to be maintained during construction (measured perpendicular from the centerline of the nearest track) (UPRR-BNSF, 2016g). In addition, section 4.4.1.1 states that a temporary vertical clearance of 21 feet 6 inches is to be maintained during construction (measured above top of high rail) (UPRR-BNSF, 2016h).

Stage I: Contractor Access and Preparation Work on Railroad Property

Stage I Work Description

In Construction Stage I, construction site access will be installed and the construction work area will be prepared to enable subsequent construction operations (see Exhibit 1).

- *Contractor Access to Railroad Property between CPR and UPRR Tracks.* In order to construct the Western Access Interchange ramp bridges, the Contractor will need to access railroad property between the CPR and UPRR tracks. Due to the very limited width between these two sets of tracks, two points of access will be required to reach the construction area, including one from the south and one from the north.
  - Access from the south will be accomplished by installing a new temporary crossing of the CPR tracks at the southern end of the proposed temporary construction easement (Parcel WA-2D-12-191.05T). This temporary crossing will enable construction access from York Road to the construction site and railroad service road. It will be located between Sievert Court and Foster Avenue.
  - Access from the north will be accomplished by first entering railroad right-of-way from York Road at the existing entrance located south of Devon Avenue, traveling southward along the railroad access road, crossing the CPR tracks at the existing track crossing to reach the area between the CPR and UPRR tracks, and finally continuing southward along the access road until reaching the construction site (Parcel WA-2D-12-195.T2).
- *Temporary Access Road Relocation and Site Improvements within Railroad Property.* The existing railroad access road that runs parallel to the tracks near the center of the CPR and UPRR right-of-way will need to be shifted through parts of the construction zone since it will conflict with construction operations. This temporary shifted roadway will enable the railroad and the Contractor to access this area during construction.

  Construction of each ramp bridge will require construction of a single pier for each bridge within the railroad right of-way. Each pier will be located on the CPR and UPRR property line. A flat area will be graded next to each pier location to enable drilling operations. Additionally, a flat area of approximately 35 feet by 35 feet square will be graded near each pier to enable crane setup and operations. For curved girder bridges, crane setups are typically located on the side towards the bridge's radial center.

[8] Based on CPR drawing that is entitled "Clearance Diagram Structure Over or Beside Railway Tracks."

To accommodate access road modifications, earthwork modifications, and enable pier and other bridge construction operations, temporary drainage improvements will be made to the construction area. This includes the installation of open and closed (pipe) drainage systems and regrading (as needed) to drain stormwater during construction. When construction is concluded, temporary closed drainage systems will be removed, and affected ditches will be regraded to restore railroad drainage to the original (or as close as possible) configuration. Drainage improvements will be made on both CPR and UPRR rights-of-way.

No added stormwater drainage will be allowed to enter the railroad during construction. In addition, no drainage from the project (post-construction), including from the bridges described above, will be allowed to enter CPR's or UPRR's right-of-way. Impact to the railroads will be minimized during and post-construction. Drainage standards will be maintained (UPRR-BNSF, 2016i).

Stage I Work Duration, Scheduling, and Potential Effect to Freight Operations

- *Contractor Access to Railroad Property between CPR and UPRR Tracks.* Construction of the southern temporary railroad crossing of the CPR tracks will include grading/upgrading approach roadways and installing vehicle-traversable crossing surfaces between and immediately adjacent to the tracks. Railroad crossings are typically installed by the railroad's workforce with flagging and track outages as required by the railroad. No additional track outages are expected to be required by the Contractor for installing access road improvements.

  Access from the north will utilize the existing track crossings, and no new temporary crossings are proposed north of the construction area. Minor improvements to the access road and existing track crossing will be made as needed.

  During this and all subsequent construction stages, it is anticipated that the Contractor will coordinate with each railroad in advance to allow for railroad protective flagging services to be provided as required by each railroad.

  Work in this stage will take approximately one month per entrance and will be performed on a schedule that is agreed upon between the Contractor and the railroads.

- *Temporary Access Road Relocation and Site Improvements within Railroad Property.* Drainage improvements will require earth grading modifications away from the tracks. It is anticipated that railroad protective flagging will be required when the Contractor is on railroad property making improvements to the access road.

  Temporary relocation of the existing access road will be performed during the beginning of the project's first year of construction. This work is estimated to take one to two months and will be performed on a schedule that is agreed upon between the Contractor and the railroads. The proposed temporary shift in the location of the access road and adjacent ditches will provide adequate horizontal clearance from the tracks and will not impact railroad operations.

No other construction activities would require placing any personnel, equipment, or materials within fouling distance of a track that would affect the railroad's operations during this stage. The Federal Railroad Administration considers the fouling distance to be the proximity to a track where impact would be possible by a moving train or other on-track equipment, or in any case within four feet of the nearest rail.

Stage II: Abutment and Pier Construction

Stage II Work Description

For each bridge, construction of a pier that is centered on the common property line between the CPR and UPRR will require the Contractor to work on railroad property.

Foundations for these piers will be drilled shaft foundations and should, therefore, only require minimal, if any, soil retention systems within the railroad right-of-way in order to minimize the footprint of pier foundation operations.

In addition to the piers centered on the common property line, bridge piers will be constructed on both sides of the railroads' rights-of-way. These nearby pier columns and foundation elements will be located outside the railroad rights-of-way; however, pier caps may overhang railroad right-of-way. At locations where pier caps overhang railroad right-of-way, the lowest section of the pier cap (similar to bridge girders) will be constructed above a horizontal plane that is 23 feet 4 inches above the existing top rail of each railroad across the full right-of-way width of each railroad.

To enable pier construction, temporary shoring towers will be required within railroad property to support formwork for constructing pier caps. Piers located on the common property line between CPR and UPRR will require temporary shoring towers within the railroad right-of-way. Additionally, piers that flank either side of the railroad right-of-way may have pier cap shoring towers that are temporarily situated within the railroad right-of-way.

Stage II Work Duration, Scheduling, and Potential Effect to Freight Operations

During bridge pier construction, it is anticipated that the Contractor will occasionally need to operate within 25 feet of the nearest railroad track. However, the Contractor will not need to infringe on the railroad's minimum construction clearance envelopes, except to cross the CPR's tracks. This includes installation of temporary soil retention systems and temporary shoring towers needed to construct piers.

Railroad protective flagging will be required whenever the Contractor is on railroad property. Pier construction operations, including the temporary shoring towers needed to construct the pier caps, will not be performed within either railroad's minimum construction clearance envelope. Despite these factors, either railroad may require protective flaggers to be present any time a Contractor extends work operations into railroad right-of-way.

Construction activities to be performed during this stage will not require fouling of the tracks; therefore, these activities will not affect the railroad's operations.

Pier construction in and immediately adjacent to the railroad right-of-way will begin during the first year of construction and is expected to continue into the second year. Pier construction within railroad right-of-way cannot start until Stage I work is complete although pier construction for piers flanking the railroad could potentially start concurrent with Stage I work. Shoring towers required for pier cap formwork will need to be in place for several weeks. In addition, the shoring tower footprint will be no more than a few feet greater than the pier cap footprint. Stage II work operations will be performed on a schedule that is agreed upon between the Contractor and the railroads.

Stage III: Girder Shoring Tower Erection

Stage III Work Description

In this stage, temporary girder shoring towers will be erected on railroad right-of-way. These temporary shoring towers will be required to safely erect bridge girders over railroad property in Stage IV. The temporary shoring will be designed and constructed per railroad guidelines for each railroad.

Stage III Work Duration, Scheduling, and Potential Effect to Freight Operations

Shoring tower systems on railroad property will be situated outside of the railroad's minimum construction clearance envelope. Railroad protective flagging will be required any time the Contractor is on railroad property constructing temporary shoring towers.

None of the shoring tower erection activities to be performed during this stage will require fouling of the tracks and, therefore, will not affect the railroad's operations.

The erection of shoring towers within railroad right-of-way could start immediately following the completion of Stage II Pier Construction. Shoring towers for erection of the bridge girders may need to be in position for several weeks depending on the Contractor's girder erection scheme. Stage III work operations will be performed on a schedule that is agreed upon between the Contractor and the railroads.

Stage IV: Girder Erection

Stage IV Work Description

In Stage IV, girders will be lifted, placed on piers and temporary shoring towers, secured, and bolted to adjacent girders and structural members. Girder erection will likely require two large cranes to be positioned on railroad property for each overhead girder lifting operation or "pick," with one crane on the outside of the tracks and the other crane located between the CPR and UPRR tracks. The crane located between the tracks will be transported to this location using one of the available site access locations described previously. Due to the length of the girders, girders will likely be delivered to the site using one access location, and unloaded delivery trucks will use the other access location as an exit to avoid having to turn around or back up in the confined area between the railroad tracks.

Either fixed boom crawler cranes or hydraulic (rubber tired) cranes with telescoping booms can be used by the Contractor to lift the girders into place. One advantage of a crawler crane is that it can carry very large loads and "walk" into position with a load. However, it is likely that hydraulic cranes will be used since crawler cranes take several days to assemble and disassemble, have fixed boom lengths that require high boom extensions, and are more expensive to rent. The hydraulic crane set-up requires a relatively flat area of about 35 feet by 35 feet square with outriggers fully extended onto timber mats, using the flat graded area described previously. Once set into position, telescoping booms allow for flexibility in pick locations and potentially faster and more precise girder erection operations.

In preparation for each lifting operation, the recommended staging areas for storing girders will be positioned as close as possible to the final girder's erected position in order to enable the crane(s) to set all girders that are intended to be erected within a given track outage operation. Once the girders are ready for erection for an upcoming lifting operation, they can all be lifted and swung into position without requiring additional crane setup positions.

Stage IV Work Duration, Scheduling, and Potential Effect to Freight Operations

Erecting bridge girders for all five structures will require railroad outages, and the Contractor will need to obtain exclusive track occupancy. Depending on the particular bridge girder configuration, outages can affect one to three tracks, and could, at times, require joint CPR and UPRR outages. The actual number and duration of outages will be based on Contractor and railroad coordination. Based on similar

projects, it is expected that the Contractor will contact the railroad and schedule bridge girder erection operations to comply with railroad allowances for track outage durations and dates. If the railroads prefer shorter outages, typical outages are expected to range from four to eight hours each, with a single longer outage of up to 14 hours needed for each bridge. If the railroads prefer a fewer number of outages and longer outages are acceptable, a maximum outage time of 14 hours is anticipated. Outages beyond 14 hours would not be effective because additional time would be needed to reposition the crane and crane mats, and to ready and level the crane in the new position.

In order to safely place bridge girders, outages will be required and are expected to consist of single track outages, dual track outages, concurrent (both CPR and UPRR) single track outages, and dual CPR track outages concurrent with a single UPRR track outage. Based on the above estimate of four to eight hours per typical outage, with up to 14-hour outages needed per bridge, it is estimated that approximately 31 track outage occurrences will be required during a six month period (see Table 2).

Table 2
Estimated CPR and UPRR Track Outages for Beam Erection

Outage by Railroad and Number of Tracks Affected	Estimated Number of Outages Required [a]	Concurrent Outages Anticipated
CPR Single Track Outage	10	4 outages concurrent with UPRR single track outage
CPR Dual Track Outage	9	5 outages concurrent with UPRR single track outage
UPRR Single Track Outage	14	5 outages concurrent with dual CPR track outage
UPRR Dual Track Outage	7	None

[a] Total exceeds 31 due to double counting of concurrent outages.

The track outage time assumes each bridge will be erected separately. Outage times will vary depending on a number of factors including individual girder lengths, the number of girders being lifted, the location from pick points, and the number of diaphragm connections. The minimum time for any outage is anticipated to be four hours.

All track outage time periods will be prescribed by available CPR and UPRR outage windows based on network operations and seasonal constraints. Therefore, the Contractor will need to adjust the girder erection schedule to coincide with the schedule provided by CPR and UPRR. It is expected that CPR outage windows will be scheduled around reductions/outage periods caused by Metra morning and evening rush hour trains crossing CPR tracks to the south of this location. This scheduling approach will reduce the effective durations of CPR track outages since CPR train movements to and from the south are limited during the rush hour time periods.

During erection of each girder section over the tracks, the two cranes erecting the girder segment will remain outside of each railroad's minimum construction clearance envelope; however, the cranes may need to be within 25 feet of the tracks. Even though the two cranes and the steel girder section being erected will remain outside of the distance that would cause fouling of any track, track outages pre-approved by the railroad will be required between the time each girder lift is initiated until the erection operation is completed and the cranes can safety release the girder.

Crane booms will extend over the tracks only during beam erection operations. Cranes will not need to cross the tracks when lifting and setting girders. During construction, Contractors will follow the necessary CPR (CPR, 2007c) and UPRR (UPRR, 2013) crane procedures.

For each bridge, girder erection will be performed only after construction of the supporting piers is completed and all pier shoring removed. The erection sequence will be submitted to both the CPR and

UPRR by the Contractor for approval in accordance with required time limitations prior to performing any erection activities.

Stage V: Bridge Deck and Bridge Approach Construction

Stage V Work Description

Following girder erection operations for a single bridge, a protective shield will be secured between and above the bottom flanges of the girders and outside both fascia girders. The purpose of this protective shield in combination with mandated Occupational Safety and Health Administration (OSHA) fall protection is to prevent any material, tools, equipment, or personnel from falling below the bottom of the beam line during deck and parapet construction operations. Installation of the protective shield over the railroad spans will require railroad protective flagging. In addition, depending on railroad agreements, it is possible that deck operations over the railroad right-of-way will require railroad protective flagging regardless of the presence of the protective shield.

The placement of protective shield over the railroad spans may commence once all girders for the bridge unit (expansion joint to expansion joint) have been fully erected and secured to their supporting pier and abutment units. Once the protective shield is in place the deck will be formed; the deck rebar, expansion joints, and barrier steel placed; and the deck will be poured. Following the deck pouring and curing operations, the bridge parapets will be placed. Appropriate railroad fencing will then be installed on top of the parapets and all protective shielding removed. This stage will include the completion of any approach earthwork required to allow access to the bridge deck.

Stage V Work Duration, Scheduling, and Potential Effect to Freight Operations

The Contractor will be required to come to an agreement with each railroad on appropriate preventative measures to allow deck pouring operations to be uninhibited by train traffic. This will allow the Contractor to perform the deck pour operations in a manner that complies with bridge performance requirements. Railroad protective flagging will likely require the Contractor to cease all work operations over the railroad span(s) whenever a train is in near vicinity, in accordance with each railroad's specified requirements. None of the construction activities to be performed during this stage will require fouling of the tracks and, therefore, will not affect the railroad's operations.

The Stage V work will take several months for each bridge. This work for the Eastbound Ramp South to IL 19 (Tollway Structure Number 1651, IDOT 022-9505, Federal Railroad Administration Crossing Inventory 450 392U) and Northbound Ramp to Westbound IL 390 (Tollway Structure Number 1653, IDOT 022-9507, Federal Railroad Administration 450 388E) will have to be completed within approximately two years from the start of the contract in order to allow adjacent contracts tying into the south and west in order to finish roadway construction up to the approach slabs of these flyover bridges. Superstructure work on the remaining three structures will be completed approximately two and a half years after the contract has been started.

Stage VI: Site Restoration

Stage VI Work Description

After the bridges have been completed, railroad property will be restored to the final proposed condition. Where a temporary access road had been constructed in Stage I, the temporary access road will be removed and replaced with a permanent access road. The permanent access road will be constructed in a location that is as close as possible to the existing/pre-construction location. The railroad access road between the north and south entrances will be repaired as needed to correct wear caused by Contractor use during construction. Temporary drainage features, installed to enable construction activities, will be removed, and ditches and other affected areas will be regraded to their final locations. Areas disturbed during construction will be seeded and stabilized.

Stage VI Work Duration, Scheduling, and Potential Effect to Freight Operations

Work in this stage will take approximately two months and will be performed on a schedule that is agreed on between the Contractor and the railroads.

No construction activities during this stage would require placing personnel, equipment, or materials within fouling distance of a track that would affect the railroad's operations. The permanent access road constructed in this stage will provide more than 25 feet of clearance to the tracks and will not impact railroad operations.

Following completion of construction, the bridges will be operated, inspected, and maintained by the Illinois Tollway. Illinois Tollway bridges are inspected biannually, and repairs will be made as deemed necessary. The Illinois Tollway will coordinate inspections and repairs with the railroads. Flaggers will be provided and insurance will be obtained as needed to comply with railroad requirements. Inspections of bridge areas that must be accessed from below the bridge will be conducted during time periods approved by the railroads.

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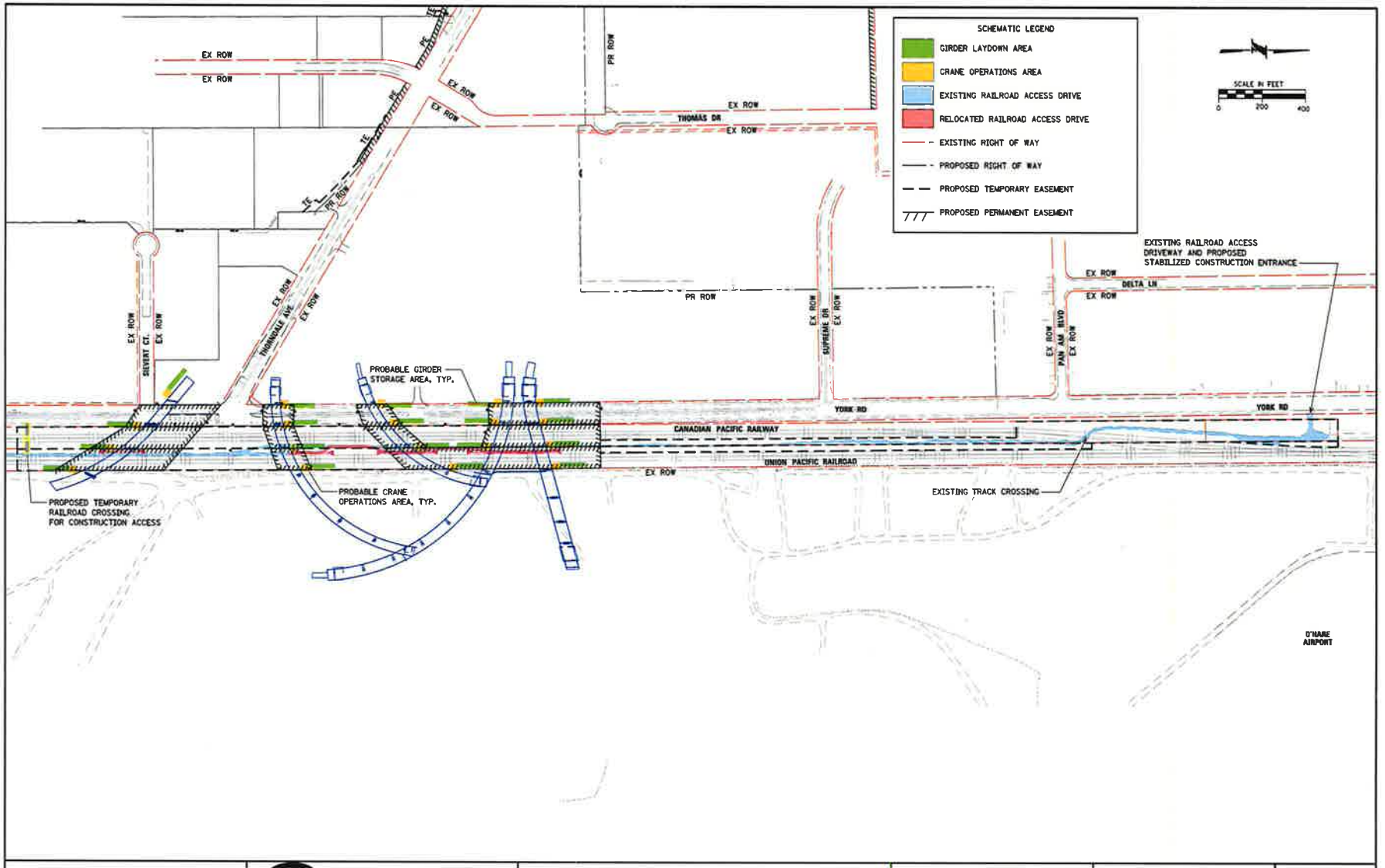
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Exhibits



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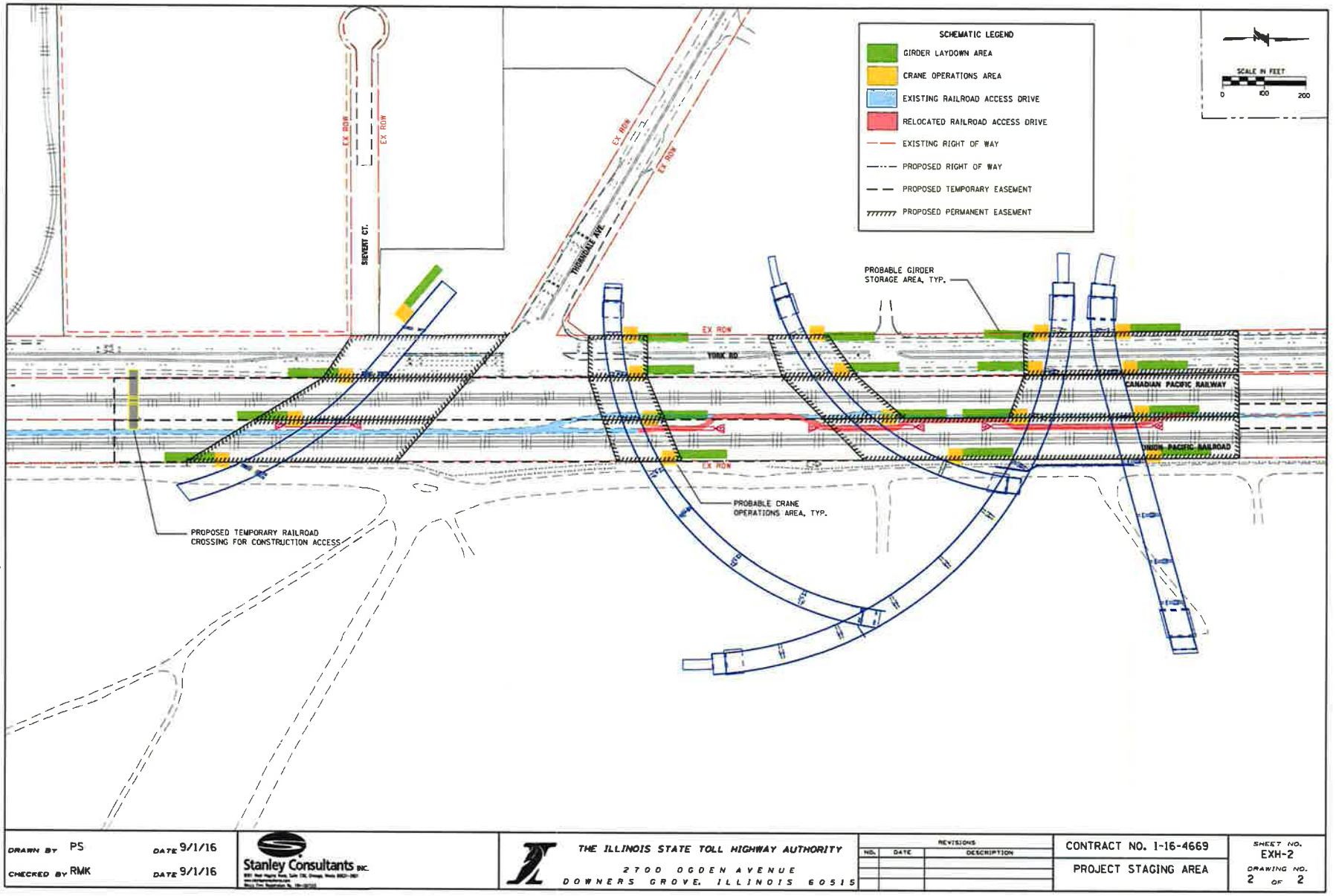
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CONTRACT NO. I-16-4669

PROJECT SCHEMATIC

SHEET NO. EXH-1

DRAWING NO. 1 OF 2



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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. 1-16-4669	SHEET NO. EXH-2
PROJECT STAGING AREA	DRAWING NO. 2 OF 2

APPENDIX A

Parcel Plats

PARCEL PLAT

ELGIN – O'HARE EXPRESSWAY

NORTHWEST QUARTER OF SECTION 12, TWP. 40 NORTH, RANGE 11 EAST, 3RD P.M.

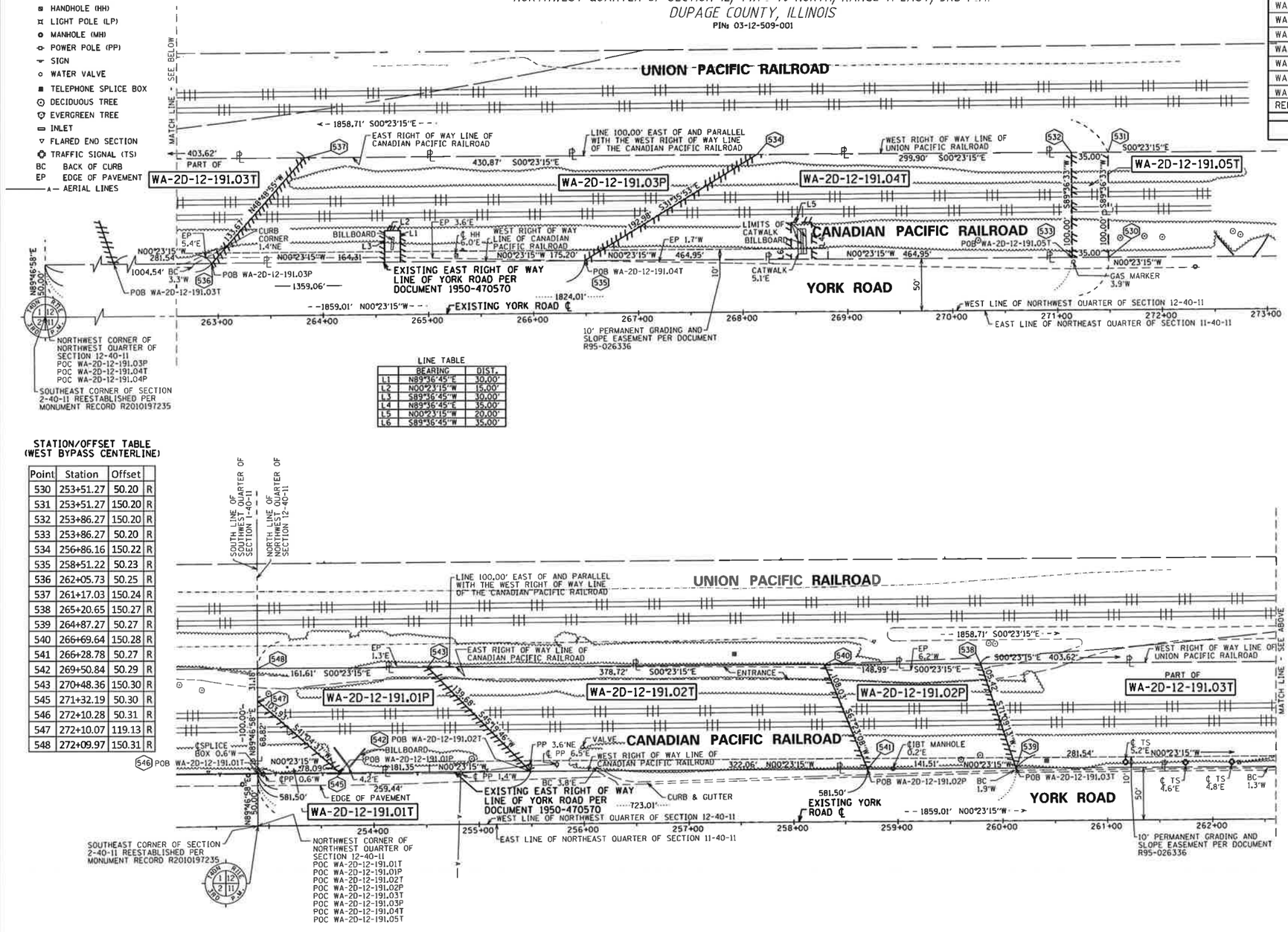
DUPAGE COUNTY, ILLINOIS

PIN: 03-12-509-001

PARCEL	AREA ACRES	AREA SQ.FT.	TYPE OF TAKE FEE	PERM. ESMT.	TEMP. ESMT.	PURPOSE
TOTAL HOLDING	4.267 ±	185,885 ±				
WA-2D-12-191.01T	0.062 ±	2,687 ±			X	CONSTR.
WA-2D-12-191.01P	0.422 ±	18,365 ±		X		BRIDGE/RAMP
WA-2D-12-191.02T	0.804 ±	35,039 ±			X	CONSTR.
WA-2D-12-191.02P	0.333 ±	14,525 ±		X		BRIDGE/RAMP
WA-2D-12-191.03T	0.786 ±	34,258 ±			X	CONSTR.
WA-2D-12-191.03P	0.891 ±	38,819 ±		X		BRIDGE/RAMP
WA-2D-12-191.04T	0.862 ±	37,542 ±			X	CONSTR.
WA-2D-12-191.05T	0.080 ±	3,500 ±		X		BRIDGE/RAMP
REMAINDER	4.267 ±	185,885 ±				

TOPO LEGEND

- HYDRANT
- GUY WIRE
- GUARD POST
- HANDHOLE (HH)
- LIGHT POLE (LP)
- MANHOLE (MH)
- POWER POLE (PP)
- SIGN
- WATER VALVE
- TELEPHONE SPLICE BOX
- DECIDUOUS TREE
- EVERGREEN TREE
- INLET
- FLARED END SECTION
- TRAFFIC SIGNAL (TS)
- BC BACK OF CURB
- EP EDGE OF PAVEMENT
- A AERIAL LINES



LINE TABLE

	BEARING	DIST.
L1	N89°36'45"E	30.00'
L2	N00°23'15"W	15.00'
L3	S89°36'45"W	30.00'
L4	N89°36'45"E	35.00'
L5	N00°23'15"W	20.00'
L6	S89°36'45"W	35.00'

STATION/OFFSET TABLE
(WEST BYPASS CENTERLINE)

Point	Station	Offset	
530	253+51.27	50.20	R
531	253+51.27	150.20	R
532	253+86.27	150.20	R
533	253+86.27	50.20	R
534	256+86.16	150.22	R
535	258+51.22	50.23	R
536	262+05.73	50.25	R
537	261+17.03	150.24	R
538	265+20.65	150.27	R
539	264+87.27	50.27	R
540	266+69.64	150.28	R
541	266+28.78	50.27	R
542	269+50.84	50.29	R
543	270+48.36	150.30	R
545	271+32.19	50.30	R
546	272+10.28	50.31	R
547	272+10.07	119.13	R
548	272+09.97	150.31	R

LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- CENTER OF SECTION
- EXISTING CENTERLINE
- EXISTING PUBLIC RIGHT OF WAY LINE
- PREVIOUS RIGHT OF WAY LINE
- EXISTING ISTHA PERMANENT EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY
- PROPOSED RIGHT OF WAY AND ACCESS CONTROL LINE
- PROPOSED ISTHA TEMPORARY EASEMENT LINE
- PROPOSED ISTHA PERMANENT EASEMENT LINE
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- PLATTED LOT LINE
- PROPERTY (DEED) LINE
- APPARENT PROPERTY LINE
- FENCE LINE
- 123.45' MEASURED DIMENSION
- [123.45'] CALCULATED DIMENSION
- (123.45') RECORD DATA
- ● FOUND IRON PIPE (IP) OR IRON ROD (IR)
- ○ SET ⅝ INCH IRON ROD WITH RED "ISTHA R.O.W." CAP
- △ FOUND PERMANENT SURVEY MARKER
- ⊠ FOUND CONCRETE RIGHT-OF-WAY MARKER
- ┼ CUT CROSS FOUND OR SET
- SAME OWNERSHIP
- T-9A-1 EXISTING ISTHA PARCEL NUMBER
- T-9A-05-001 PROPOSED ISTHA PARCEL NUMBER

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT I, REBECCA Y. POPECK, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED THE PARCEL PLAT SHOWN HEREON, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY.

FIELD WORK COMPLETED ON DECEMBER 18, 2014.

DATED AT ROSEMONT, ILLINOIS THIS 16th DAY OF AUGUST, 2016.

REBECCA Y. POPECK
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-3642
LICENSE EXPIRATION DATE: 11/30/2016

REBECCA Y. POPECK 3642 PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS ROSEMONT, ILLINOIS

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

ALL DIMENSIONS ARE MEASURED UNLESS OTHERWISE SPECIFIED

BEARINGS AND DISTANCES SHOWN HEREON REFERENCE THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, ADJUSTMENT - 2007 (CORS). ALL MEASURED AND CALCULATED VALUES ARE "GRID" NOT "GROUND". TO OBTAIN GROUND DISTANCES, DIVIDE GRID DISTANCES SHOWN, BY THE COMBINATION FACTOR OF 0.99998917358.

AREAS SHOWN ON THIS PLAT ARE GROUND. TO CONVERT AN AREA SHOWN ON THIS PLAT TO AN EQUIVALENT AREA AS MEASURED USING THE GRID BASED DISTANCES, MULTIPLY THE GROUND AREA BY THE SQUARE OF THE COMBINATION FACTOR (CF²)

1" = 50'
0 25 50 75 100

CAD DRAFTING BY:	CCG
CALCULATIONS BY:	RYP
CHECKED BY:	RYP
APPROVED BY:	RYP

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
Illinois Professional Design Firm No. 184-001157

Illinois Tollway

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS NO.	DATE	DESCRIPTION
1	05/19/2015	BILLBOARD CUTOUTS
2	08/16/2016	CONVERT 191.04P TO 191.05T
3		

ELGIN – O'HARE EXPRESSWAY
STA. 253+51 TO STA. 272+10
DUPAGE COUNTY, ILLINOIS
PARCEL WA-2D-12-191
OWNER: SOO LINE RAILROAD COMPANY, A MINNESOTA CORPORATION A SUBDIARY OF, AND DOING BUSINESS AS CANADIAN PACIFIC RAILWAY

CONTRACT NO. I-12-4058
DRAWING NO. 1 OF 2

PARCEL PLAT

ELGIN - O'HARE EXPRESSWAY

NORTHWEST QUARTER OF SECTION 12, TWP. 40 NORTH, RANGE 11 EAST, 3RD P.M.
DUPAGE COUNTY, ILLINOIS
PIN: 03-12-509-001

PROPERTY DESCRIPTION:

WA-2D-12-191.01T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570 AND ALSO BEING THE POINT OF BEGINNING;

THENCE CONTINUING NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, 68.82 FEET; THENCE SOUTH 41 DEGREES 04 MINUTES 37 SECONDS WEST, 103.93 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE, 78.09 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.01P

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 78.09 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 41 DEGREES 04 MINUTES 37 SECONDS EAST, 103.93 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD TO A POINT TO SAID NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG SAID NORTH LINE, 31.18 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 161.61 FEET; THENCE SOUTH 45 DEGREES 19 MINUTES 46 SECONDS WEST, 139.68 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE, 181.35 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.02T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 259.44 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 45 DEGREES 19 MINUTES 46 SECONDS EAST, 139.68 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 378.72 FEET; THENCE SOUTH 67 DEGREES 23 MINUTES 08 SECONDS WEST, 108.03 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 322.06 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.02P

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 581.50 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 67 DEGREES 23 MINUTES 08 SECONDS EAST, 108.03 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 148.99 FEET; THENCE SOUTH 71 DEGREES 09 MINUTES 13 SECONDS WEST, 105.42 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 141.51 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

PROPERTY DESCRIPTION (CONTINUED):

WA-2D-12-191.03T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 723.01 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 71 DEGREES 09 MINUTES 13 SECONDS EAST, 105.42 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 403.62 FEET; THENCE NORTH 48 DEGREES 48 MINUTES 55 SECONDS WEST, 133.67 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 281.54 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.03P

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 1004.54 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 48 DEGREES 48 MINUTES 55 SECONDS EAST, 133.67 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 430.87 FEET; THENCE NORTH 31 DEGREES 35 MINUTES 53 SECONDS WEST, 192.98 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 175.20 FEET; THENCE NORTH 89 DEGREES 36 MINUTES 45 SECONDS EAST, PERPENDICULAR TO THE LAST COURSE, 30.00 FEET; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG A LINE PARALLEL TO THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 15.00 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 45 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 30.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 164.31 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.04T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 1359.06 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 31 DEGREES 35 MINUTES 53 SECONDS EAST, 192.98 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 299.90 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 32 SECONDS WEST, 100.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 248.06 FEET; THENCE NORTH 89 DEGREES 36 MINUTES 45 SECONDS EAST, PERPENDICULAR TO THE LAST COURSE, 35.00 FEET; NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 20.00 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 45 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 35.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 196.89 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.05T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 1824.01 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 89 DEGREES 36 MINUTES 32 SECONDS EAST, 100.00 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 35.00 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 33 SECONDS WEST, 100.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 35.00 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

CAD DRAFTING BY:	CCG
CALCULATIONS BY:	RYP
CHECKED BY:	RYP
APPROVED BY:	RYP

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
Illinois Professional Design Firm No. 184-001157

Illinois Tollway

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION
1	05/19/2015	BILLBOARD CUTOUTS
2	08/16/2016	CONVERT 191.04P TO 191.05T
3		

ELGIN - O'HARE EXPRESSWAY
STA. 253+51 TO STA. 272+10
DUPAGE COUNTY, ILLINOIS
PARCEL WA-2D-12-191
OWNER: SOO LINE RAILROAD COMPANY, A MINNESOTA CORPORATION A SUBDIARY OF, AND DOING BUSINESS AS CANADIAN PACIFIC RAILWAY

CONTRACT NO. I-12-4058
DRAWING NO. 2 OF 2

PARCEL PLAT

ELGIN - O'HARE EXPRESSWAY

WEST HALF OF SECTION 1, TWP. 40 NORTH, RANGE 11 EAST, 3RD P.M.
DUPAGE COUNTY, ILLINOIS
PIN: 03-01-509-002, 03-01-509-001

TOPO LEGEND

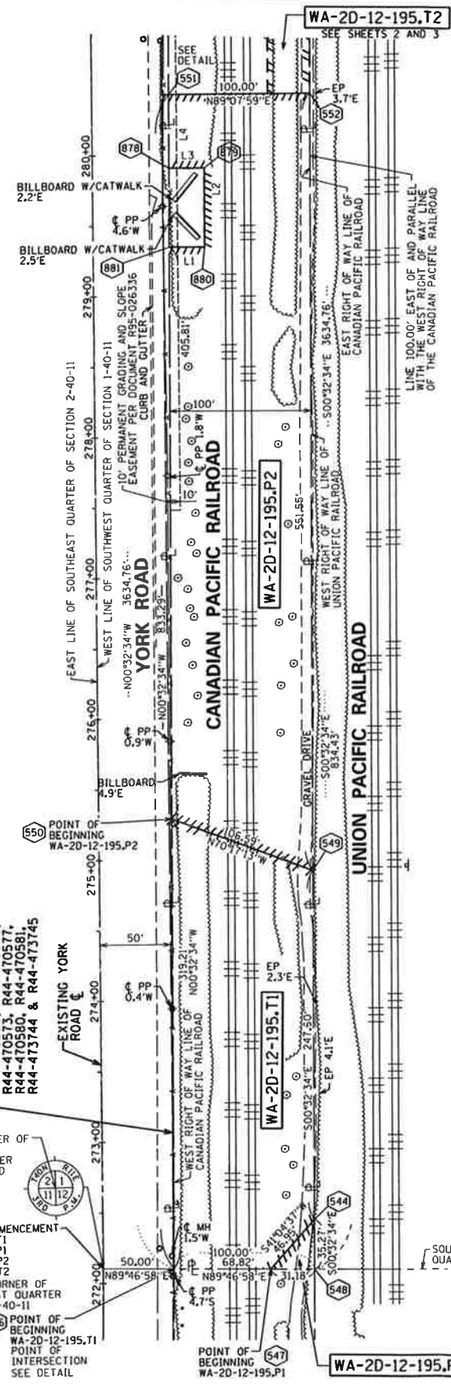
- HYDRANT
- GUY WIRE
- GUARD POST
- HANDHOLE (HH)
- LIGHT POLE (LP)
- MANHOLE (MH)
- POWER POLE (PP)
- SIGN
- WATER VALVE
- TELEPHONE SPLICE BOX
- DECIDUOUS TREE
- EVERGREEN TREE
- FLARED END SECTION
- TRAFFIC SIGNAL
- TELEPHONE SPLICE BOX
- INLET
- RAILROAD
- —A— OVERHEAD LINE

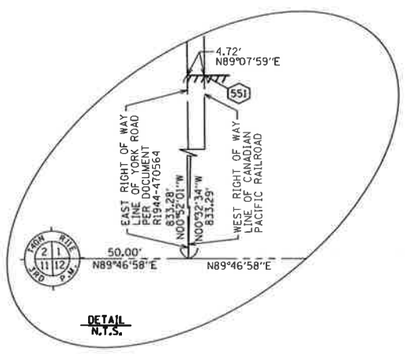
STATION/OFFSET TABLE (YORK ROAD CENTERLINE)

Point	Station	Offset	
544	272+44.02	150.49	R
546	272+10.28	50.31	R
547	272+10.07	119.13	R
548	272+09.97	150.31	R
549	274+91.62	151.84	R
550	275+29.07	52.05	R
551	280+43.15	54.86	R
552	280+43.17	154.86	R
878	279+90.87	54.57	R
879	279+90.74	79.57	R
880	279.+34.74	79.27	R
881	279+34.87	54.27	R

LINE TABLE

	BEARING	DIST.
L1	N89°27'26"E	25.00'
L2	N00°32'34"W	56.00'
L3	S89°27'26"W	25.00'
L4	N00°32'34"W	52.28'





PROPERTY DESCRIPTION:

WA-2D-12-195.T1

THAT PART OF THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER OF SECTION 1; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A SOUTH LINE OF SAID SOUTHWEST QUARTER OF SECTION 1, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID SOUTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER R1944-470564 AND ALSO BEING THE POINT OF BEGINNING;

THENCE CONTINUING NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 319.21 FEET; THENCE SOUTH 70 DEGREES 17 MINUTES 13 SECONDS EAST, 106.59 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 32 MINUTES 34 SECONDS EAST ALONG SAID COMMON RIGHT OF WAY LINE, 247.60 FEET; THENCE SOUTH 41 DEGREES 04 MINUTES 37 SECONDS WEST, 46.95 FEET TO THE SOUTH LINE OF SAID SOUTHWEST QUARTER OF SECTION 1; THENCE SOUTH 89 DEGREES 46 MINUTES 58 SECONDS WEST, ALONG SAID SOUTH LINE, 68.82 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-195.P1

THAT PART OF THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER OF SECTION 1; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A SOUTH LINE OF SAID SOUTHWEST QUARTER OF SECTION 1, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID SOUTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER R1944-470564 ; THENCE CONTINUING NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG SAID SOUTH LINE, 68.82 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 41 DEGREES 04 MINUTES 37 SECONDS EAST, 46.95 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 32 MINUTES 34 SECONDS EAST ALONG SAID COMMON RIGHT OF WAY LINE, 35.27 FEET TO THE SOUTH LINE OF SAID SECTION 1; THENCE SOUTH 89 DEGREES 46 MINUTES 58 SECONDS WEST, ALONG SAID SOUTH LINE, 31.18 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-195.P2

THAT PART OF THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER OF SECTION 1; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A SOUTH LINE OF SAID SOUTHWEST QUARTER OF SECTION 1, 50.00 FEET TO A POINT OF INTERSECTION OF SAID SOUTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER R1944-470564 ; THENCE NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 319.21 FEET TO THE POINT OF BEGINNING;

THENCE CONTINUING NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 405.81 FEET; THENCE NORTH 89 DEGREES 27 MINUTES 26 SECONDS EAST, PERPENDICULAR TO THE LAST LINE, 25.00 FEET; THENCE NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST, ALONG A LINE PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 56.00 FEET; THENCE SOUTH 89 DEGREES 27 MINUTES 26 SECONDS WEST, PERPENDICULAR TO THE LAST LINE, 25.00 FEET; THENCE CONTINUING NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 52.28 FEET; THENCE NORTH 89 DEGREES 07 MINUTES 59 SECONDS EAST, 100.00 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 32 MINUTES 34 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 551.55 FEET; THENCE NORTH 70 DEGREES 17 MINUTES 13 SECONDS WEST, 106.59 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

PARCEL	AREA ACRES	AREA SQ.FT.	TYPE OF TAKE FEE	PERM. ESMT.	TEMP. ESMT.	PURPOSE
TOTAL HOLDING	8.348 ±	363,619 ±				
WA-2D-12-195.T1	0.678 ±	29,554 ±			X	CONSTR.
WA-2D-12-195.P1	0.013 ±	550 ±		X		BRIDGE/RAMP
WA-2D-12-195.P2	1.191 ±	51,882 ±		X		BRIDGE/RAMP
WA-2D-12-195.T2	3.341 ±	145,528 ±			X	ACCESS
REMAINDER	8.348 ±	363,619 ±				

LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- CENTER OF SECTION
- EXISTING CENTERLINE
- EXISTING PUBLIC RIGHT OF WAY LINE
- PREVIOUS RIGHT OF WAY LINE
- EXISTING ISTHA PERMANENT EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY
- PROPOSED RIGHT OF WAY AND ACCESS CONTROL LINE
- PROPOSED ISTHA TEMPORARY EASEMENT LINE
- PROPOSED ISTHA PERMANENT EASEMENT LINE
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- PLATTED LOT LINE
- PROPERTY (DEED) LINE
- APPARENT PROPERTY LINE
- FENCE LINE
- MEASURED DIMENSION
- CALCULATED DIMENSION
- RECORD DATA
- FOUND IRON PIPE (IP) OR IRON ROD (IR)
- SET ⅝ INCH IRON ROD WITH RED "ISTHA R.O.W." CAP
- FOUND PERMANENT SURVEY MARKER
- FOUND CONCRETE RIGHT-OF-WAY MARKER
- CUT CROSS FOUND OR SET
- SAME OWNERSHIP
- T-9A-1 EXISTING ISTHA PARCEL NUMBER
- T-9A-05-001 PROPOSED ISTHA PARCEL NUMBER

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT I, REBECCA Y. POPECK, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED THE PARCEL PLAT SHOWN HEREON, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY.

FIELD WORK COMPLETED ON DECEMBER 18, 2014.

DATED AT ROSEMONT, ILLINOIS THIS 23rd DAY OF AUGUST, 2016.

REBECCA Y. POPECK
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-3642
LICENSE EXPIRATION DATE: 11/30/2016

REBECCA Y. POPECK 3642 PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS ROSEMONT, ILLINOIS

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

ALL DIMENSIONS ARE MEASURED UNLESS OTHERWISE SPECIFIED

BEARINGS AND DISTANCES SHOWN HEREON REFERENCE THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, ADJUSTMENT - 2007 (CORS). ALL MEASURED AND CALCULATED VALUES ARE "GRID" NOT "GROUND". TO OBTAIN GROUND DISTANCES, DIVIDE GRID DISTANCES SHOWN, BY THE COMBINATION FACTOR OF 0.99998917358.

AREAS SHOWN ON THIS PLAT ARE GROUND. TO CONVERT AN AREA SHOWN ON THIS PLAT TO AN EQUIVALENT AREA AS MEASURED USING THE GRID BASED DISTANCES, MULTIPLY THE GROUND AREA BY THE SQUARE OF THE COMBINATION FACTOR (CF²)

1" = 50'
0 25 50 75 100

CAD DRAFTING BY:	CCG
CALCULATIONS BY:	RYP
CHECKED BY:	GP
APPROVED BY:	RYP

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
Illinois Professional Design Firm No. 184-001157

Illinois Tollway

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS NO.	DATE	DESCRIPTION
1	08/23/2016	ADD PARCEL 195.T2. REVISE 195.P2
2		
3		

ELGIN - O'HARE EXPRESSWAY
STA. 272+10 TO STA. 314+45
DUPAGE COUNTY, ILLINOIS
PARCEL WA-2D-12-195
OWNER: SOO LINE RAILROAD COMPANY, A MINNESOTA CORPORATION DOING BUSINESS AS CANADIAN PACIFIC RAILWAY WHICH ACQUIRED TITLE AS CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY

CONTRACT NO. I-12-4058
DRAWING NO. 1 OF 3

PARCEL PLAT

ELGIN – O'HARE EXPRESSWAY

WEST HALF OF SECTION 1, TWP. 40 NORTH, RANGE 11 EAST, 3RD P.M.

DUPAGE COUNTY, ILLINOIS

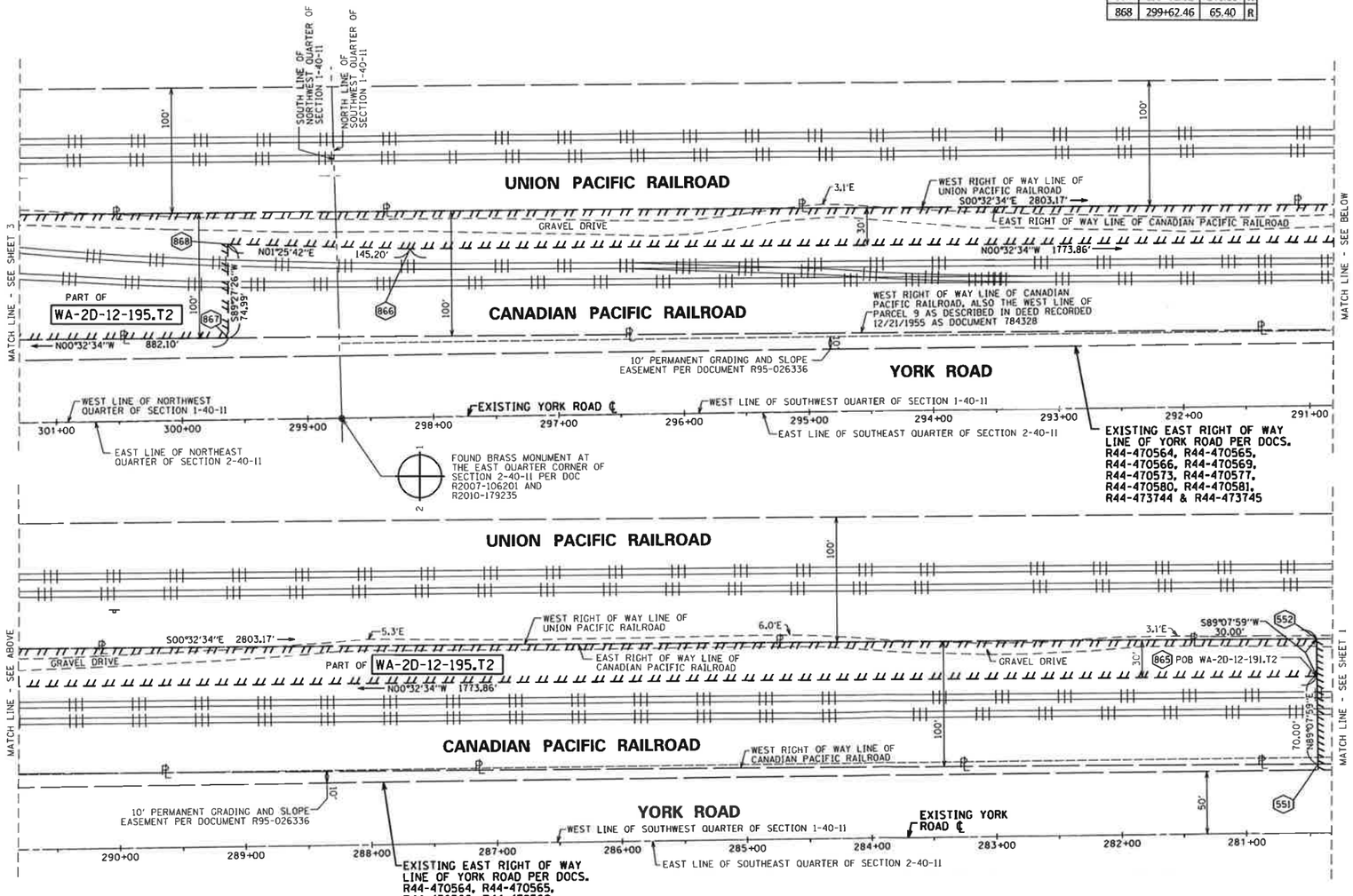
PIN: 03-01-509-002, 03-01-509-001

TOPO LEGEND

- HYDRANT
- GUY WIRE
- GUARD POST
- HANDHOLE (HH)
- LIGHT POLE (LP)
- MANHOLE (MH)
- POWER POLE (PP)
- SIGN
- WATER VALVE

STATION/OFFSET TABLE (YORK ROAD CENTERLINE)

Point	Station	Offset	
551	280+43.15	54.86	R
552	280+43.17	154.86	R
865	280+43.16	124.86	R
866	298+16.99	134.57	R
867	299+62.02	140.39	R
868	299+62.46	65.40	R



	AREA		TYPE OF TAKE			
PARCEL	ACRES	SQ.FT.	FEE	PERM. ESMT.	TEMP. ESMT.	PURPOSE
TOTAL HOLDING	8.348 ±	363,619 ±				
WA-2D-12-195.T1	0.678 ±	29,554 ±			X	CONSTR.
WA-2D-12-195.P1	0.013 ±	550 ±		X		BRIDGE/RAMP
WA-2D-12-195.P2	1.191 ±	51,882 ±		X		BRIDGE/RAMP
WA-2D-12-195.T2	3.341 ±	145,528 ±			X	ACCESS
REMAINDER	8.348 ±	363,619 ±				

LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- CENTER OF SECTION
- EXISTING CENTERLINE
- EXISTING PUBLIC RIGHT OF WAY LINE
- PREVIOUS RIGHT OF WAY LINE
- EXISTING ISTHA PERMANENT EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY
- PROPOSED RIGHT OF WAY AND ACCESS CONTROL LINE
- PROPOSED ISTHA TEMPORARY EASEMENT LINE
- PROPOSED ISTHA PERMANENT EASEMENT LINE
- SECTION LINE
- QUARTER SECTION LINE
- PLATTED LOT LINE
- PROPERTY (DEED) LINE
- APPARENT PROPERTY LINE
- FENCE LINE
- 123.45' MEASURED DIMENSION
- [123.45'] CALCULATED DIMENSION
- (123.45') RECORD DATA
- FOUND IRON PIPE (IP) OR IRON ROD (IR)
- SET ⅝ INCH IRON ROD WITH RED "ISTHA R.O.W." CAP
- FOUND PERMANENT SURVEY MARKER
- FOUND CONCRETE RIGHT-OF-WAY MARKER
- CUT CROSS FOUND OR SET
- SAME OWNERSHIP
- T-9A-1 EXISTING ISTHA PARCEL NUMBER
- T-9A-05-001 PROPOSED ISTHA PARCEL NUMBER

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT I, REBECCA Y. POPECK, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED THE PARCEL PLAT SHOWN HEREON, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY.

FIELD WORK COMPLETED ON DECEMBER 18, 2014.

DATED AT ROSEMONT, ILLINOIS THIS 23rd DAY OF AUGUST, 2016.

REBECCA Y. POPECK
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-3642
LICENSE EXPIRATION DATE: 11/30/2016

REBECCA Y. POPECK 2642 PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS ROSEMONT, ILLINOIS

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

ALL DIMENSIONS ARE MEASURED UNLESS OTHERWISE SPECIFIED

BEARINGS AND DISTANCES SHOWN HEREON REFERENCE THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, ADJUSTMENT – 2007 (CORS). ALL MEASURED AND CALCULATED VALUES ARE "GRID" NOT "GROUND". TO OBTAIN GROUND DISTANCES, DIVIDE GRID DISTANCES SHOWN, BY THE COMBINATION FACTOR OF 0.99998917358.

AREAS SHOWN ON THIS PLAT ARE GROUND. TO CONVERT AN AREA SHOWN ON THIS PLAT TO AN EQUIVALENT AREA AS MEASURED USING THE GRID BASED DISTANCES, MULTIPLY THE GROUND AREA BY THE SQUARE OF THE COMBINATION FACTOR (CF²)

LIMITS OF GRAVEL DRIVEWAY AND RAILROAD TRACKS SHOWN HEREON WITHIN PARCEL WA-2D-12-195.T2 WERE COLLECTED WITH LIDAR BY QUANTUM SPATIAL IN JANUARY, 2014. THIS INFORMATION WAS NOT FIELD VERIFIED BY GROUND SURVEY BY SPACECO, INC; OTHER IMPROVEMENTS MAY EXIST WITHIN PARCEL WA-2D-12-195.T2.

1" = 50'
0 25 50 75 100

CAD DRAFTING BY:	CCG
CALCULATIONS BY:	RYP
CHECKED BY:	RYP
APPROVED BY:	RYP

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
Illinois Professional Design Firm No. 184-001157

Illinois Tollway

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION
1	08/23/2016	ADD PARCEL 195.T2, REVISE 195.P2
2		
3		

ELGIN – O'HARE EXPRESSWAY
STA. 272+10 TO STA. 314+45
DUPAGE COUNTY, ILLINOIS
PARCEL WA-2D-12-195
OWNER: SOO LINE RAILROAD COMPANY, A MINNESOTA CORPORATION DOING BUSINESS AS CANADIAN PACIFIC RAILWAY WHICH ACQUIRED TITLE AS CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY

CONTRACT NO. I-12-4058

DRAWING NO. 2 OF 3

PARCEL PLAT

ELGIN – O'HARE EXPRESSWAY

WEST HALF OF SECTION 1, TWP. 40 NORTH, RANGE 11 EAST, 3RD P.M.

DUPAGE COUNTY, ILLINOIS

PINs 03-01-509-002, 03-01-509-001

TOPO LEGEND

- HYDRANT
- GUY WIRE
- GUARD POST
- HANDHOLE (HH)
- LIGHT POLE (LP)
- MANHOLE (MH)
- POWER POLE (PP)
- SIGN
- WATER VALVE

STATION/OFFSET TABLE (YORK ROAD CENTERLINE)

Point	Station	Offset	
869	308+44.55	70.55	R
870	308+46.23	170.57	R
877	308+43.36	0.00	

PARCEL	AREA ACRES	AREA SQ.FT.	TYPE OF TAKE FEE	PERM. ESMT.	TEMP. ESMT.	PURPOSE
TOTAL HOLDING	8.348 ±	363,619 ±				
WA-2D-12-195.T1	0.678 ±	29,554 ±			X	CONSTR.
WA-2D-12-195.P1	0.013 ±	550 ±		X		BRIDGE/RAMP
WA-2D-12-195.P2	1.191 ±	51,882 ±		X		BRIDGE/RAMP
WA-2D-12-195.T2	3.341 ±	145,528 ±			X	ACCESS
REMAINDER	8.348 ±	363,619 ±				

LEGEND

SECTION CORNER

QUARTER SECTION CORNER

CENTER OF SECTION

EXISTING CENTERLINE
EXISTING PUBLIC RIGHT OF WAY LINE
PREVIOUS RIGHT OF WAY LINE
EXISTING ISTHA PERMANENT EASEMENT LINE
PROPOSED CENTERLINE
PROPOSED RIGHT OF WAY
PROPOSED RIGHT OF WAY AND ACCESS CONTROL LINE
PROPOSED ISTHA TEMPORARY EASEMENT LINE
PROPOSED ISTHA PERMANENT EASEMENT LINE
SECTION LINE
QUARTER SECTION LINE
QUARTER QUARTER SECTION LINE
PLATTED LOT LINE
PROPERTY (DEED) LINE
APPARENT PROPERTY LINE
FENCE LINE
MEASURED DIMENSION
CALCULATED DIMENSION
RECORD DATA
FOUND IRON PIPE (IP) OR IRON ROD (IR)
SET ⅝ INCH IRON ROD WITH RED "ISTHA R.O.W." CAP
FOUND PERMANENT SURVEY MARKER
FOUND CONCRETE RIGHT-OF-WAY MARKER
CUT CROSS FOUND OR SET

123.45'
[123.45']
(123.45')

SAME OWNERSHIP

T-9A-1 EXISTING ISTHA PARCEL NUMBER

T-9A-05-001 PROPOSED ISTHA PARCEL NUMBER

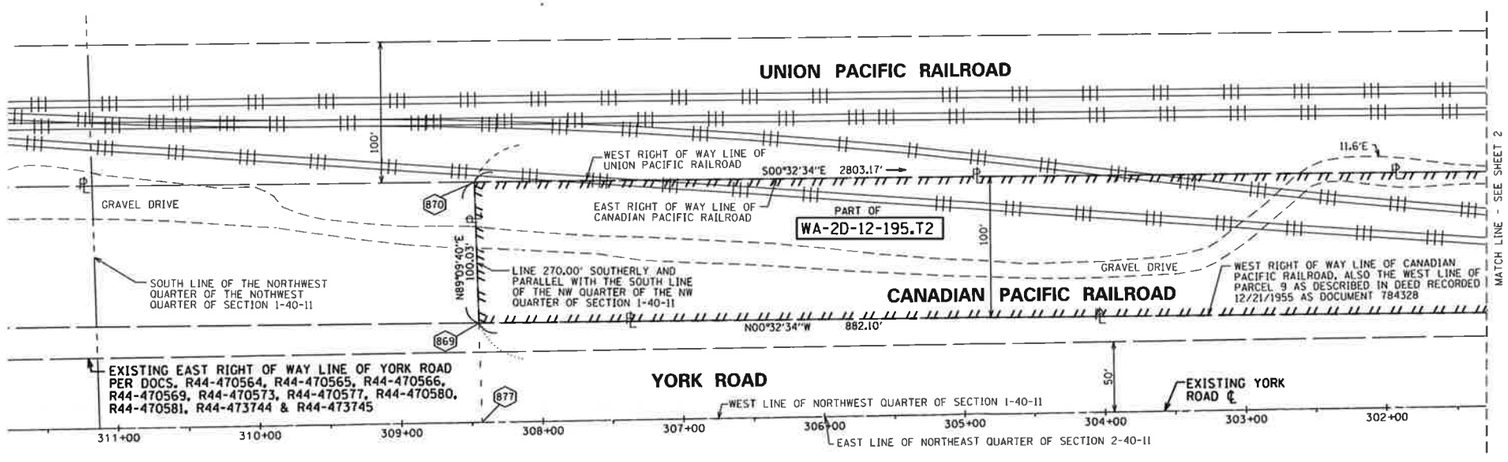
PROPERTY DESCRIPTION:

WA-2D-12-195.T2

THAT PART OF THE WEST HALF OF SECTION 1, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER OF SECTION 1; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A SOUTH LINE OF SAID SOUTHWEST QUARTER OF SECTION 1, 50.00 FEET TO A POINT OF INTERSECTION OF SAID SOUTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER R1944-470564 ; THENCE NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST, ALONG SAID LAST DESCRIBED LINE, 833.29 FEET; THENCE NORTH 89 DEGREES 07 MINUTES 59 SECONDS EAST, 70.00 FEET TO A POINT ON A LINE 30.00 FEET WEST OF AND PARALLEL WITH THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD, SAID POINT ALSO BEING THE POINT OF BEGINNING;

THENCE NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST, ALONG SAID PARALLEL LINE, 1773.86 FEET; THENCE NORTH 01 DEGREES 25 MINUTES 42 SECONDS EAST, 145.20 FEET; THENCE SOUTH 89 DEGREES 27 MINUTES 26 SECONDS WEST, 74.99 FEET TO A POINT ON THE WEST RIGHT OF WAY LINE OF THE CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST, ALONG SAID WEST LINE, 882.10 FEET TO A POINT ON A LINE 270.00 FEET SOUTHERLY AND PARALLEL WITH THE SOUTH LINE OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 1; THENCE NORTH 89 DEGREES 09 MINUTES 40 SECONDS EAST, ALONG SAID PARALLEL LINE, 100.03 TO A POINT ON THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING ON THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 32 MINUTES 34 SECONDS EAST, ALONG SAID LAST DESCRIBED LINE, 2803.17 FEET; THENCE SOUTH 89 DEGREES 07 MINUTES 59 SECONDS WEST, 30.00 FEET TO THE POINT OF BEGINNING, IN DUPAGE COUNTY, ILLINOIS.



STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT I, REBECCA Y. POPECK, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED THE PARCEL PLAT SHOWN HEREON, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY.

FIELD WORK COMPLETED ON DECEMBER 18, 2014.

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REBECCA Y. POPECK
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-3642
LICENSE EXPIRATION DATE: 11/30/2016

REBECCA Y. POPECK 3642 PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS ROSEMONT, ILLINOIS

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BEARINGS AND DISTANCES SHOWN HEREON REFERENCE THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, ADJUSTMENT – 2007 (CORS). ALL MEASURED AND CALCULATED VALUES ARE "GRID" NOT "GROUND". TO OBTAIN GROUND DISTANCES, DIVIDE GRID DISTANCES SHOWN, BY THE COMBINATION FACTOR OF 0.99998917358.

AREAS SHOWN ON THIS PLAT ARE GROUND. TO CONVERT AN AREA SHOWN ON THIS PLAT TO AN EQUIVALENT AREA AS MEASURED USING THE GRID BASED DISTANCES, MULTIPLY THE GROUND AREA BY THE SQUARE OF THE COMBINATION FACTOR ('CF')

LIMITS OF GRAVEL DRIVEWAY AND RAILROAD TRACKS SHOWN HEREON WITHIN PARCEL WA-2D-12-195.T2 WERE COLLECTED WITH LIDAR BY QUANTUM SPATIAL IN JANUARY, 2014. THIS INFORMATION WAS NOT FIELD VERIFIED BY GROUND SURVEY BY SPACECO, INC. OTHER IMPROVEMENTS MAY EXIST WITHIN PARCEL WA-2D-12-195.T2.

1" = 50'
0 25 50 75 100

CAD DRAFTING BY:	RYP
CALCULATIONS BY:	RYP
CHECKED BY:	RYP
APPROVED BY:	RYP

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
Illinois Professional Design Firm No. 184-001157

Illinois Tollway

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS NO.	DATE	DESCRIPTION
1	08/23/2016	ADD PARCEL 195.T2. REVISE 195.P2
2		
3		

ELGIN – O'HARE EXPRESSWAY
STA. 272+10 TO STA. 314+45
DUPAGE COUNTY, ILLINOIS

PARCEL WA-2D-12-195
OWNER: SOO LINE RAILROAD COMPANY, A MINNESOTA CORPORATION DOING BUSINESS AS CANADIAN PACIFIC RAILWAY WHICH ACQUIRED TITLE AS CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY

CONTRACT NO. I-12-4058

DRAWING NO. 3 OF 3

APPENDIX B

Type, Size, and Location Bridge Drawings

Preface

Type, Size and Location (TS&L) plans previously submitted to CPR 06/15/2016 and UPRR 07/06/2016 are provided with updates to the clearance envelope and minimum clearance requirements.

1. York Road Ramp to/from O'Hare Airport (Tollway SN 1668, FRA 450 387X)
2. Northbound Ramp to Westbound IL 390 (Tollway SN 1653, IDOT 022-9507, FRA 450 388E)
3. Southbound Ramp to Westbound IL 390 (Tollway SN 1650, IDOT 022-9506, FRA 450 389L)
4. Eastbound Ramp North to I-90 (Tollway SN 1652, IDOT 022-9508, FRA 450 390F)
5. Eastbound Ramp South to IL 19 (Tollway SN 1651, IDOT 022-9505, FRA 450 392U)

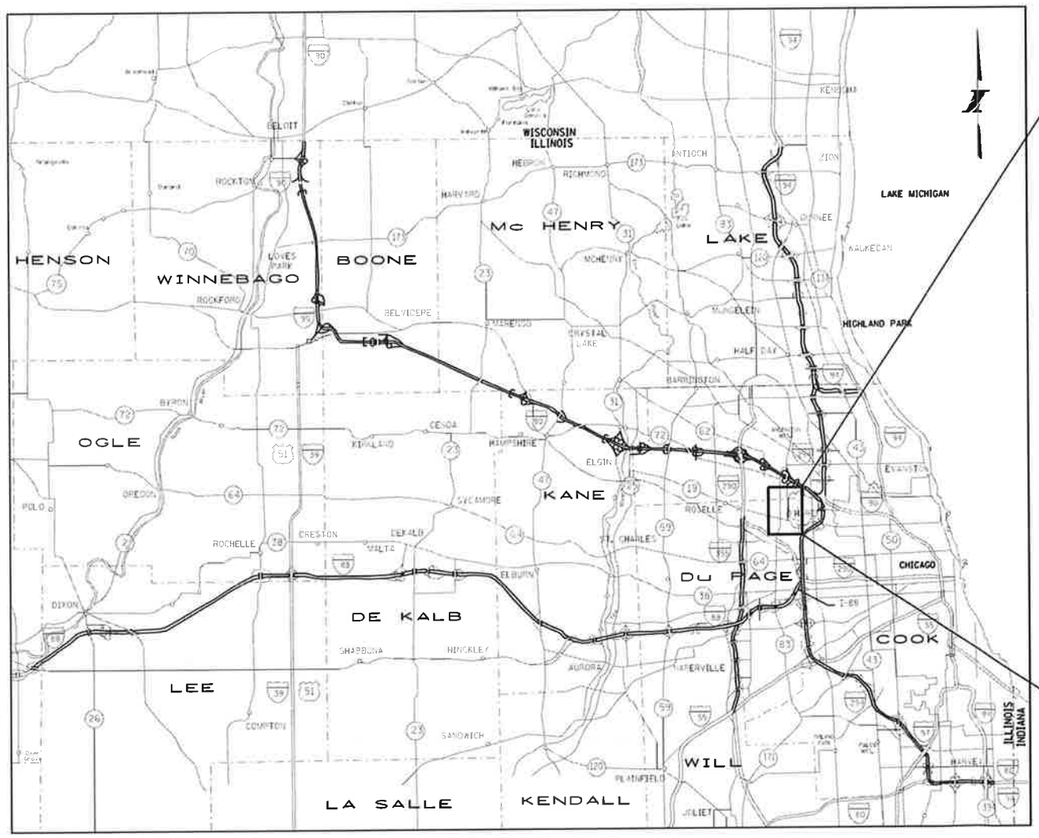
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

CONTRACT I–XX–XXXX

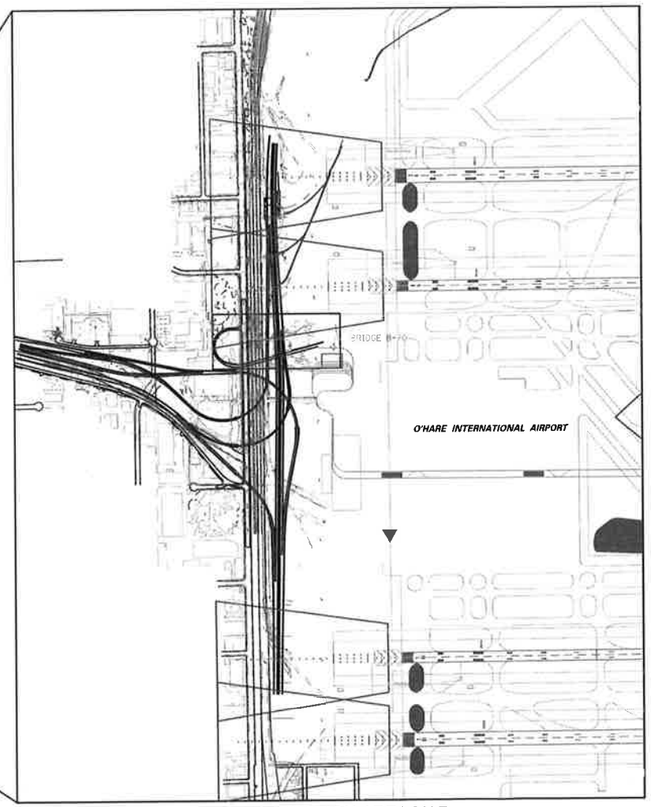
ELGIN O'HARE WESTERN ACCESS TOLLWAY

BRIDGE B–70 TYPE, SIZE AND LOCATION

FRA STRUCTURE NO. 450 387X



LOCATION MAP



CONSTRUCTION AREA MAP

SHEET NO.
GEN-1

Benchmark: Railroad spike in east face of utility pole. Located approximately 42' west of York Rd. and approximately 44' south of Beeline Dr., Sta. 279+64, Offset 48' Lt., Elev. = 664.86 (NAVD 88)

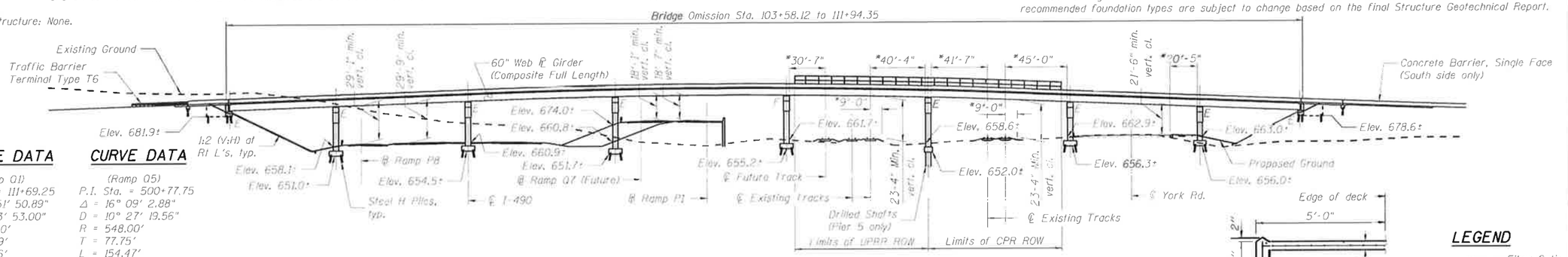
Proposed Structure: The proposed structure is an 8-span straight and curved steel plate girder bridge with an overall length of 837'-3" measured from back-to-back of abutments along ℄ Ramp Q1, and an out-to-out width of 57'-2". The substructure consists of concrete hammerhead piers and stub abutments supported on steel piles or concrete drilled shafts.

Existing Structure: None.

NOTES:

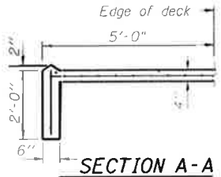
No freefall deck drains will be permitted in spans over railroads or within 10 feet of cross arms of a railroad pole line.

Soil boring information is unavailable at this time, but will be available for final design. The recommended foundation types are subject to change based on the final Structure Geotechnical Report.



ELEVATION

*Measured at Rt. L's to track ℄ or roadway

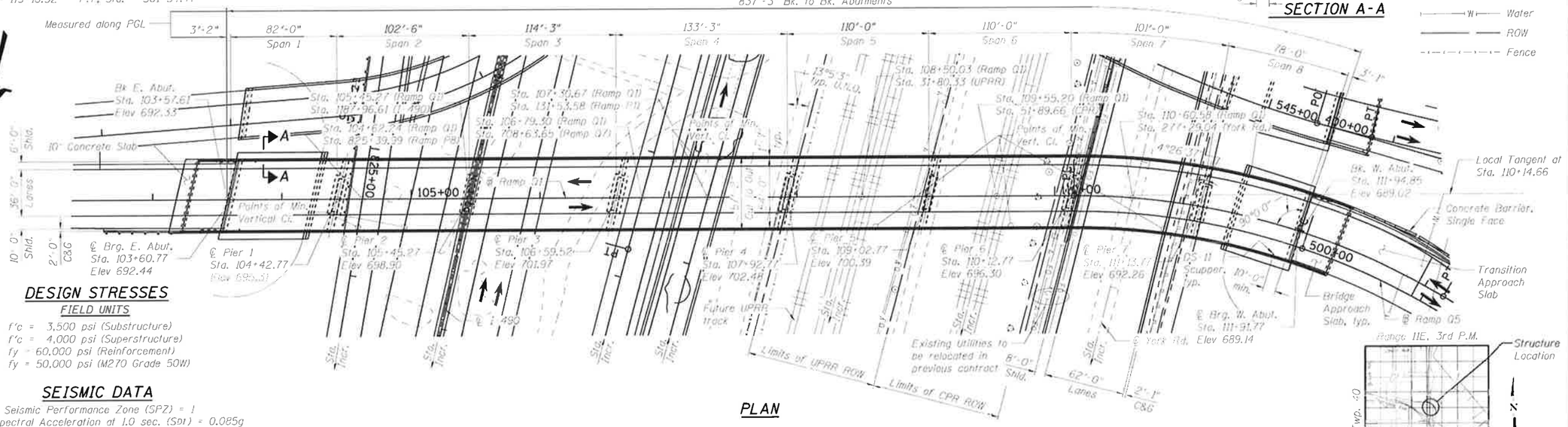


SECTION A-A

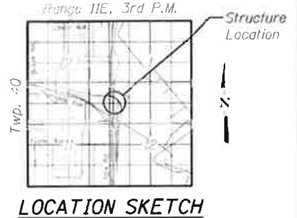
LEGEND

- FO — Fiber Optic
- A — Aerial Line
- G — Gas
- W — Water
- ROW
- Fence

837'-3" Bk. to Bk. Abutments



PLAN



LOCATION SKETCH

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Substructure)
f'c = 4,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.085g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.148g
Soil Site Class = D

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2016 Interims
2015 Illinois State Toll Highway Authority Structure Design Manual
2012 Illinois Department of Transportation Bridge Manual
2015 Illinois State Toll Highway Authority Geotechnical Engineer's Manual

LIVE LOAD DEFLECTION CRITERIA

Span Length/800

CONSTRUCTION SPECIFICATIONS

Tollway Supplemental Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Issued March 2015.
Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Adopted April 1, 2016.
Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions Adopted April 1, 2016.

LOADING HL-93 AND IL-120

Allow 50 lbs/sq. ft. for future wearing surface.

CURVE DATA

(Ramp Q1)

P.I. Sta. = 111+69.25
Δ = 30° 51' 50.89"
D = 10° 13' 53.00"
R = 560.00'
T = 154.59'
L = 301.66'
E = 20.95'
e = 6.0%
P.C. Sta. = 110+14.66
P.T. Sta. = 113+16.32

CURVE DATA

(Ramp Q5)

P.I. Sta. = 500+77.75
Δ = 16° 09' 2.88"
D = 10° 27' 19.56"
R = 548.00'
T = 77.75'
L = 154.47'
E = 5.49'
e = 6.0%
P.C. Sta. = 500+00.00
P.T. Sta. = 501+54.47

HIGHWAY CLASSIFICATION

Elgin O'Hare Western Access Tollway Ramp P1
Functional Class: Non-Interstate Expressway Ramp
ADT: 15,400 (2030)
ADTT: 1,232 (2030)
DHV: 1,160 (One-Way)
Design Speed: 45 m.p.h.
Posted Speed: 40 m.p.h.

F.A.U. Rte. 2678 - York Rd.
Functional Class: Minor Arterial
ADT: 24,500 (2012); 25,625 (2030)
ADTT: 3,185 (2012); 3,331 (2030)
DHV: 2,050 (Two-Way)
Design Speed: 50 m.p.h.
Posted Speed: 45 m.p.h.

Elgin O'Hare Western Access Tollway Ramp P8
Functional Class: Non-Interstate Expressway Ramp
ADT: 13,300 (2030)
ADTT: 1,064 (2030)
DHV: 1,050 (One-Way)
Design Speed: 45 m.p.h.
Posted Speed: 40 m.p.h.

Elgin O'Hare Western Access Tollway Ramp Q7
Functional Class: Non-Interstate Expressway Ramp
ADT: 12,500 (2030)
ADTT: 1,050 (2030)
DHV: 1,000 (One-Way)
Design Speed: 50 m.p.h.
Posted Speed: 45 m.p.h.

Elgin O'Hare Western Access Tollway Ramp Q1
Functional Class: Non-Interstate Expressway Ramp
ADT: 25,100 (2030)
ADTT: 2,000 (2030)
DHV: 2,260 (One-Way)
Design Speed: 45 m.p.h.
Posted Speed: 40 m.p.h.

Route: Interstate I-490 Western Access
Functional Class: Interstate
ADT: 42,500 (2030)
ADTT: 3,400 (2030)
DHV: 3,210 (Two-Way)
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.

GENERAL PLAN
IL-390 RAMP Q1 OVER YORK RD., CPR, & UPRR
DUPAGE COUNTY
STATION 110+14.66
STRUCTURE NO. B-70

DRAWN BY BPS DATE 5/19/2016
CHECKED BY BHS DATE 5/19/2016

Stantec

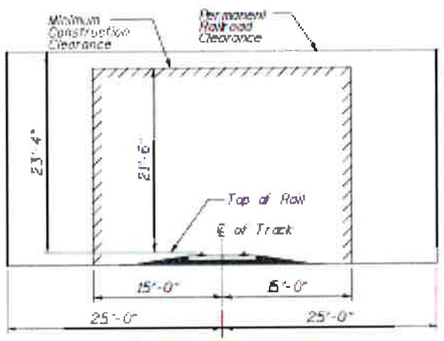
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

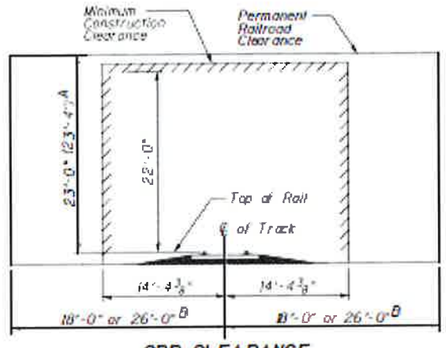
CONTRACT NO. I-13-4614

BRIDGE NO. B-70
GENERAL PLAN & ELEVATION

SHEET NO. TSL-1



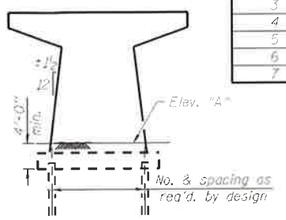
UPRR CLEARANCE ENVELOPE
(Dimensions Perp. to Railroad)



CPR CLEARANCE ENVELOPE
(Dimensions Perp. to Railroad)

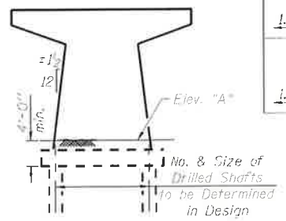
A - 23'-0" Aremo/COFR Required
23'-4" Project Specific Required

B - 18'-0" Where No Maintenance Road is Required
26'-0" Where Maintenance Road is Required



Pier No.	Elev. "A"
1	658.1
2	660.9
3	660.8
4	661.7
5	658.6
6	662.9
7	663.0

PIER SKETCH
(Piers 1-4 and 6-7)

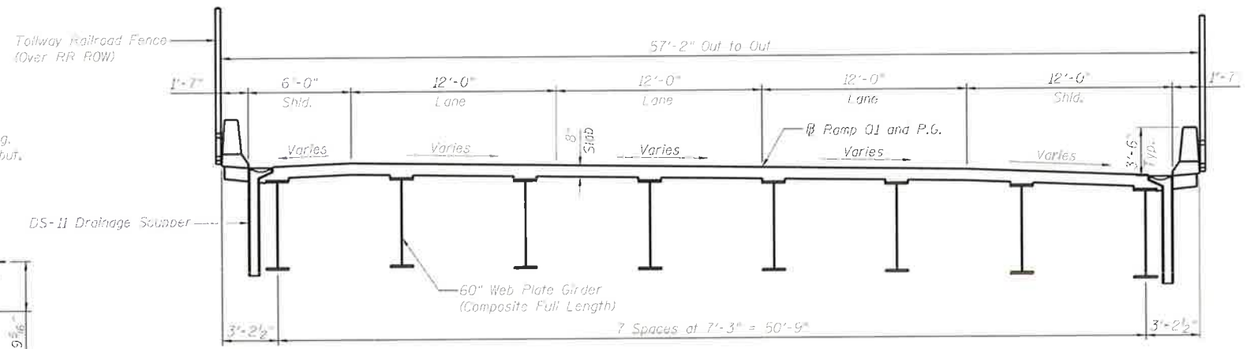


PIER SKETCH
(Pier 5)



CROSS SLOPE TRANSITIONS RAMP Q1
(Looking ℄ Upstation)
(Dimensions at Rt Angles to ℄ Ramp Q1)

OFFSET SKETCH



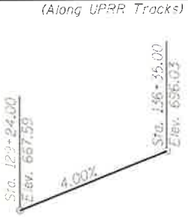
CROSS SECTION
(Looking Upstation)



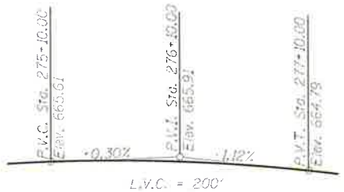
TOP OF RAIL ELEVATIONS
(Along UPRR Tracks)



TOP OF RAIL ELEVATIONS
(Along CPR Tracks)



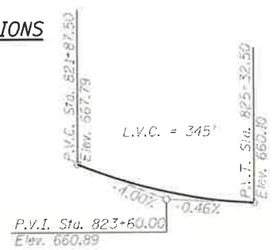
PROFILE GRADE
(Along ℄ Ramp P1)



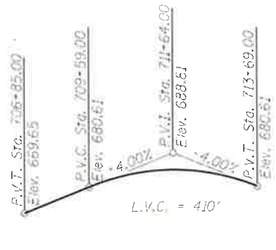
PROFILE GRADE
(Along ℄ York Rd.)



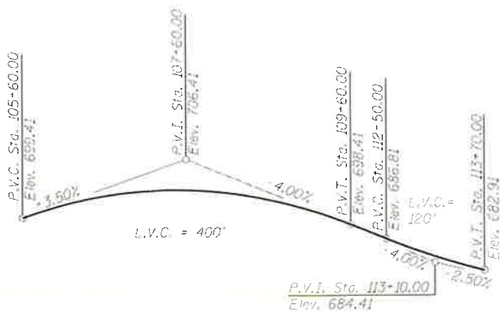
PROFILE GRADE
(Along ℄ I-490)



PROFILE GRADE
(Along ℄ Ramp P8)



PROFILE GRADE
(Along ℄ Ramp Q7)



PROFILE GRADE
(Along ℄ Ramp Q1)

DRAWN BY BPS	DATE 5/19/2016	Stantec	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY BHS	DATE 5/19/2016		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-13-4614

BRIDGE NO. B-70
GENERAL DETAILS

SHEET NO.
TSL-2

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PLOT DATE = 5/20/2016
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FILE NAME = ...

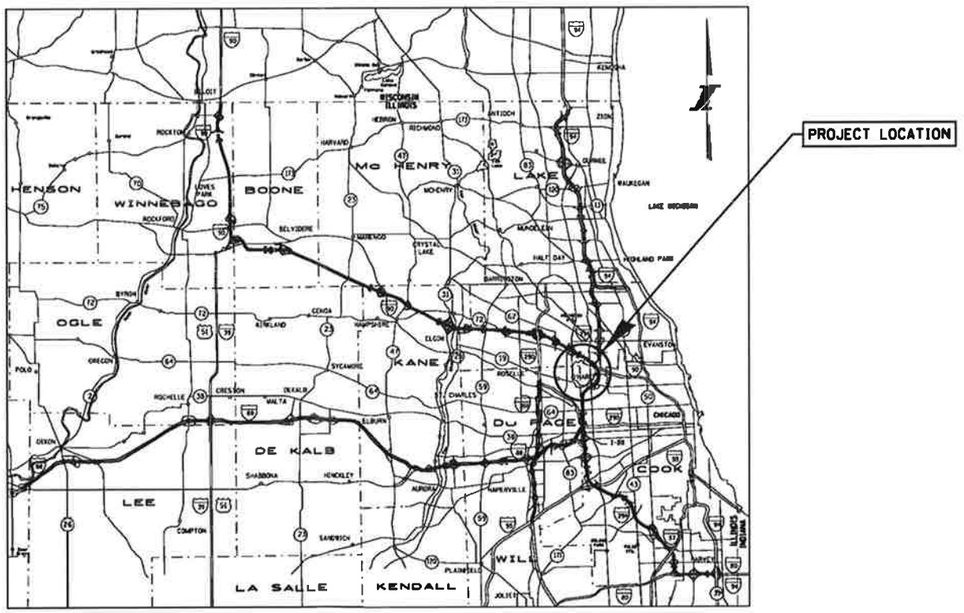
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I–13–4622
TOLLWAY CONSTRUCTION CONTRACT I–16–4669

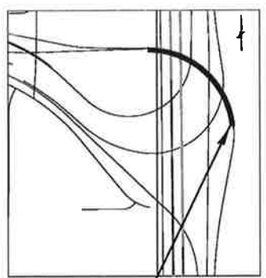
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

FRA STRUCTURE NO. 450 388E
TOLLWAY STRUCTURE NO. 1653
IDOT STRUCTURE NO. 022–9507

RAMP P5 OVER UPRR – MILWAUKEE SUBDIVISION (M.P. 6.46)
BENSENVILLE, IL – DUPAGE COUNTY



LOCATION MAP



RAMP P5 BRIDGE CONSTRUCTION
SN 450 388E (FRA)
SN 1653 (TOLLWAY)
SN 022-9507 (IDOT)

Stanley Consultants INC.
6501 West Higgins Road, Suite 330, Chicago, Illinois 60631-3881
Illinois Firm Registration No. 184-001533

Globetrotters® Engineering Corporation

URS
303 E. WACKER DR.
SUITE 1400
CHICAGO IL. 60601
TEL (312)373-7700
FAX (312)373-6800

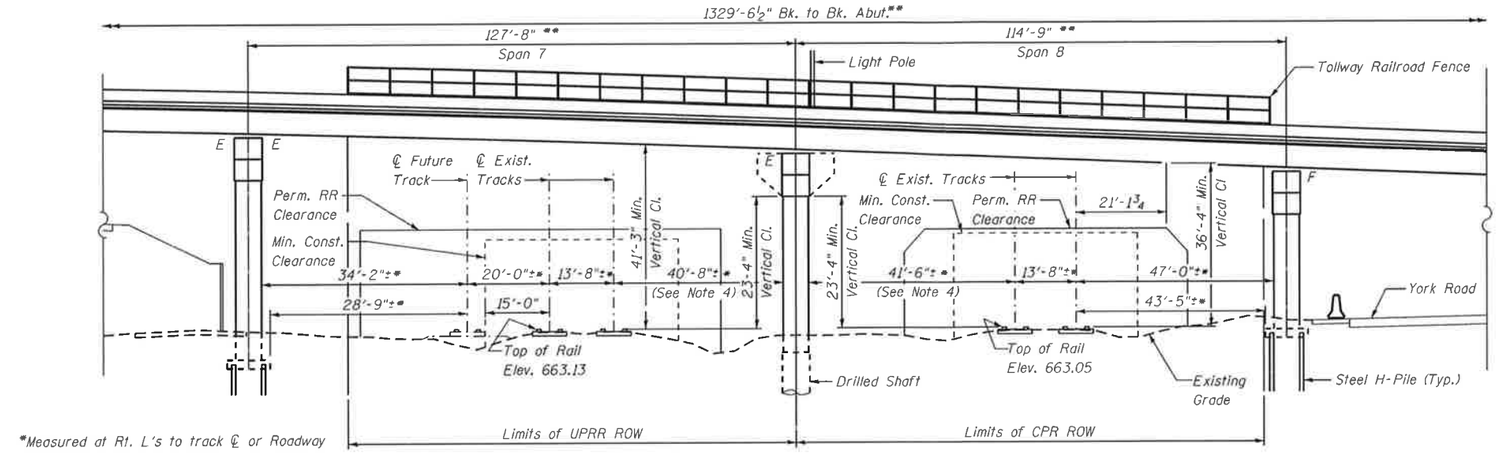
SHEET NO.
GEN-2

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Benchmark: Railroad spike in east face of utility pole. Located approximately 42' west of York Rd. and approximately 44' south of Beeline Dr., Sta. 279+64, Offset 48' Lt, Elev.. = 664.86 (NAVD 88)

Proposed Structure: The proposed structure is a 10-span curved steel plate girder bridge with on overall length of 1329'-6½" from back-to-back of abutments and an out-to-out width of 51'-2". The superstructure rests on single column concrete piers and stub abutments supported on steel piles or concrete drilled shafts.

Existing Structure: None

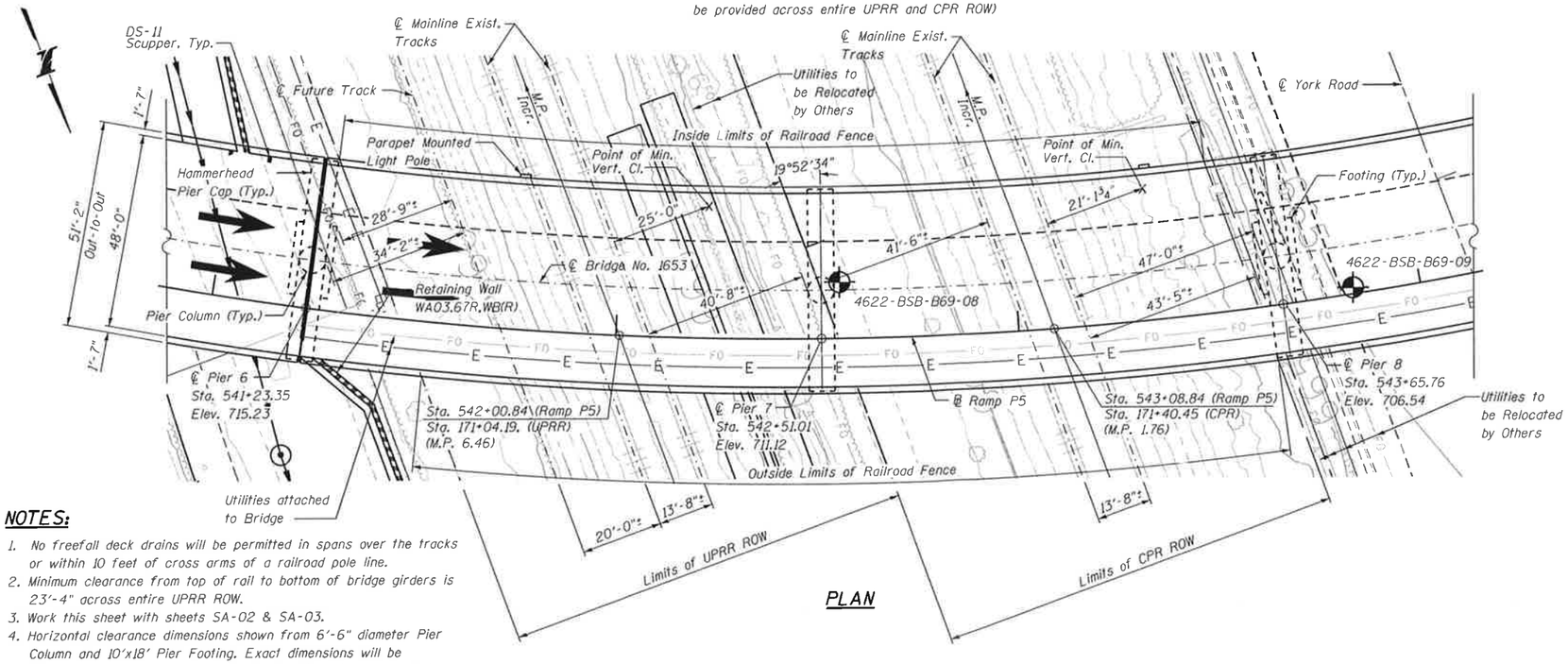


*Measured at Rt. L's to track ℄ or Roadway

**Measured Along ℄ Ramp P5

ELEVATION

(Minimum vertical clearance of 23'-4" will be provided across entire UPRR and CPR ROW)



PLAN

NOTES:

1. No freefall deck drains will be permitted in spans over the tracks or within 10 feet of cross arms of a railroad pole line.
2. Minimum clearance from top of rail to bottom of bridge girders is 23'-4" across entire UPRR ROW.
3. Work this sheet with sheets SA-02 & SA-03.
4. Horizontal clearance dimensions shown from 6'-6" diameter Pier Column and 10'x18' Pier Footing. Exact dimensions will be determined in final design and horizontal dimensions corrected as required.

CONSTRUCTION SPECIFICATIONS

Tollway Supplemental Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Issued April 1, 2016.

Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Adopted April 1, 2016.

Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions Adopted April 1, 2016. Illinois Department of Transportation Guide Bridge Special Provisions (GBSP's).

DESIGN CRITERIA

LOADING HL-93 AND IL-120

Allow 50/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition, with 2016 Interims.
2016 Illinois State Toll Highway Authority Structure Design Manual
2012 Illinois Department of Transportation Bridge Manual
2016 Tollway Geotechnical Engineers Manual

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Substructure)
f'c = 4,000 psi (Class BS-Parapets)
f'c = 4,000 psi (Performance Mix-Bridge Deck, Approach Slabs and Diaphragms)
fy = 50,000 psi (Structural Steel-M270 Grade 50)
fy = 60,000 psi (Reinforcement)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.085 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.148 g
Soil Site Class = D

LIVE LOAD DEFLECTION CRITERIA

Span Length /800

LEGEND

- BSB-B69-08 — Soil Borings
- E — Existing Electric
- FO — Existing Fiber Optic
- G — Existing Gas
- A — Existing Aerial
- Proposed Storm Sewer
- ROW

GENERAL PLAN AND ELEVATION
UPRR-MILWAUKEE SUBDIVISION (M.P. 6.46)
CPR-C&M SUBDIVISION (M.P. 1.76)
BENSENVILLE, IL
DuPAGE COUNTY
IL-390 RAMP P5 OVER UPRR AND CPR
41°58'49"N, 87°56'20"W

DRAWN BY RTT/PS	DATE 06/14/16	Stanley Consultants INC. 8501 West Higgins Road, Suite 730, Chicago, Illinois 60631-2801 www.stanleyconsultants.com Illinois Firm Registration No. 184-001533	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY DSE	DATE 06/14/16		

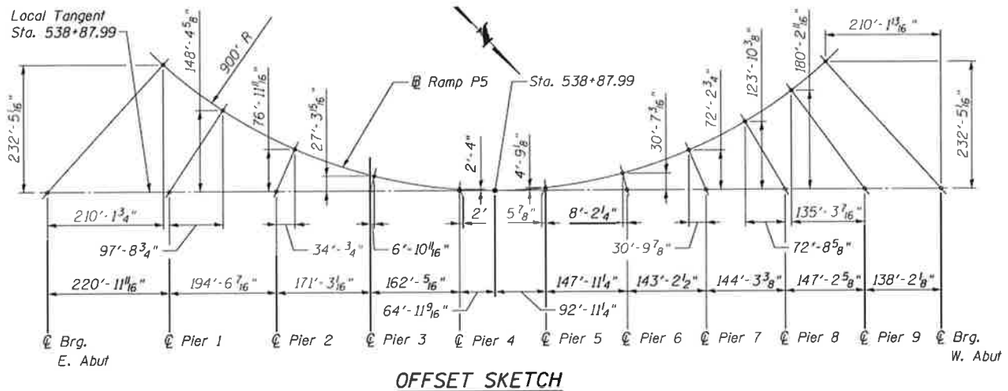
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 388E (FRA)
1653(TOLLWAY),022-9507(IDOT)
GENERAL PLAN AND ELEVATION

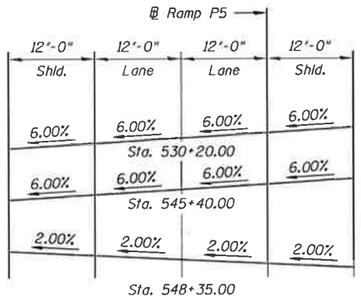
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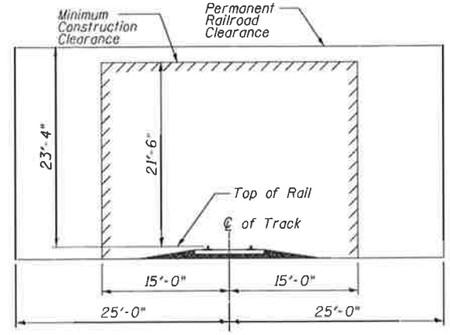
OFFSET SKETCH

(All Abutments and Piers are radial to ℄ Ramp P5)



CROSS SLOPE TRANSITIONS RAMP P5

(Looking ℄ Upstation)
(Dimensions at Rt Angles to ℄ Ramp P5)



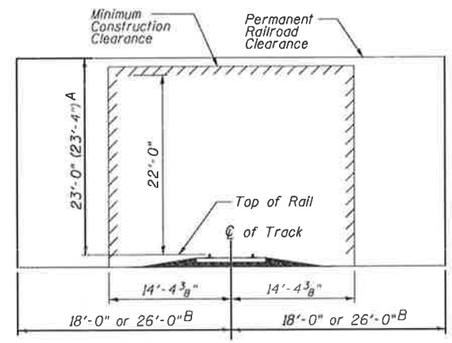
UPRR CLEARANCE ENVELOPE

(Dimensions Perp. to Railroad)

CURVE DATA
(Ramp P1)
P.I. Sta. = 148+78.89
Δ = 132° 32′ 30.73" (Rt)
D = 8° 48′ 53.05"
R = 650.00′
T = 1,478.70′
L = 1,503.64′
E = 965.26′
P.C. Sta. = 134+00.19
P.T. Sta. = 149+03.83

CURVE DATA
(Ramp P5)
P.I. Sta. = 540+92.99
Δ = 102° 16′ 32.70" (Lt)
D = 6° 21′ 58.31"
R = 900.00′
T = 1,116.89′
L = 1,606.54′
E = 534.38′
P.C. Sta. = 529+76.10
P.T. Sta. = 545+82.64

CURVE DATA
(Ramp P8)
P.I. Sta. = 803+42.30
Δ = 35° 45′ 18.17" (Lt)
D = 5° 04′ 13.52"
R = 1,130.00′
T = 364.49′
L = 705.17′
E = 57.33′
P.C. Sta. = 799+77.81
P.T. Sta. = 806+82.98

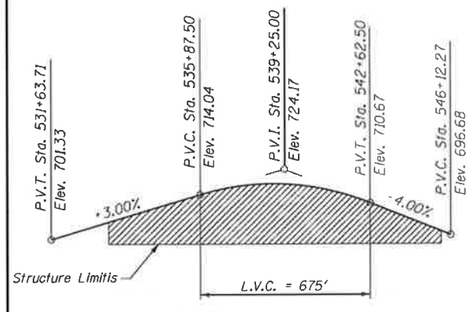


CPR CLEARANCE ENVELOPE

(Dimensions Perp. to Railroad)

A - 23'-0" Arema/CPR Required
23'-4" Project Specific Required

B - 18'-0" Where No Maintenance Road is Required
26'-0" Where Maintenance Road is Required



PROFILE GRADE

(Along ℄ Ramp P5)



TOP OF RAIL ELEVATIONS CPR TRACKS

(High Tracks)



TOP OF RAIL ELEVATIONS UPRR TRACKS

(High Tracks)

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9/14/2016
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DRAWN BY RTT/PS DATE 07/25/16
CHECKED BY DSE DATE 07/25/16

Stanley Consultants INC.
8501 West Higgins Road, Suite 730, Chicago, Illinois 60631-7801
www.stanleyconsultants.com
Illinois Firm Registration No. 184-001533

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

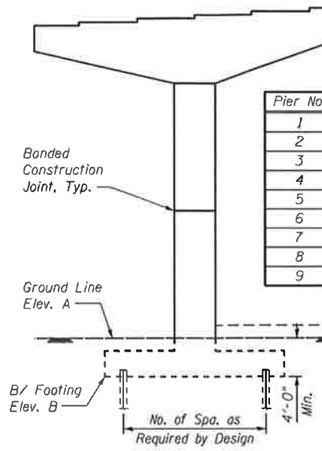
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669
BRIDGE NO. 450 388E (FRA) 1653(TOLLWAY), 022-9507(IDOT)
DETAILS 1

SHEET NO. SA-02

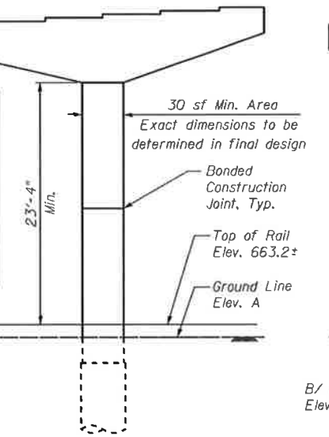
CONSTRUCTION NOTES

1. Any shoring system that impacts the Railroad's operation and/or supports the Railroad's embankment shall be designed and constructed per Railroad Guidelines for Temporary Shoring.
2. All demolition within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall comply with the Railroad's Demolition requirements.
3. Erection over the Railroad right-of-way shall be designed to cause no interruption to all Railroad operations, expect upon mutual agreed upon track outages to allow girder erection. Prior to the release of Railroad traffic, components erected over Railroad tracks must be supported by falsework or permanent substructure, must be secured and stable and must not be supported by cranes or other construction equipment.
4. The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad prior to construction.
5. The proposed grade separation project shall not change the quantity and/or characteristics of the flow in the Railroad ditches and/or drainage structures.
6. The contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad prior to beginning any grading on the project site.
7. For Railroad coordination please refer to the Railroad's Coordination Requirements as part of the Specifications or Special Provisions of the project.
8. Temporary Construction Clearances, including falsework clearances, shall comply with Minimum Construction Clearance Envelopes shown on Sheet 2.
9. All permanent clearances shall be verified before project closeout.
10. Call the following number at least 48 hours prior to commencing work to determine location of fiber optics: UPRR "Call Before You Dig", 1-800-336-9193



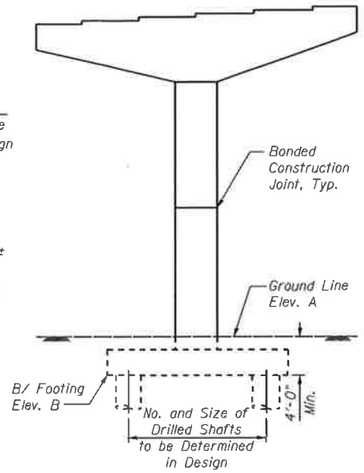
Pier No.	Elev. "A"	Elev. "B"
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2	665.8	661.6±
3	660.7	655.8±
4	664.9	660.1±
5	664.7	655.9±
6	662.7	654.1±
7	661.5	-
8	664.8	660.6±
9	663.9	659.8±

PIER SKETCH
(Piers 1-6 & 8)

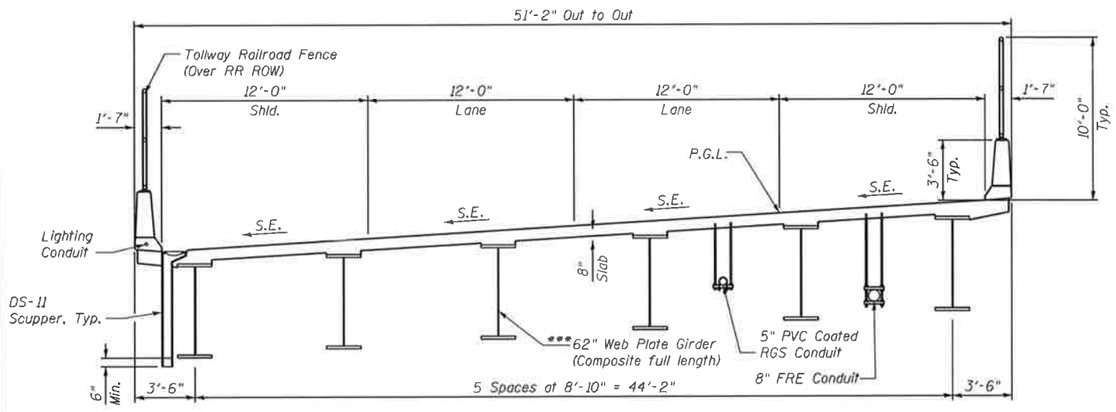


PIER SKETCH
(Pier 7)

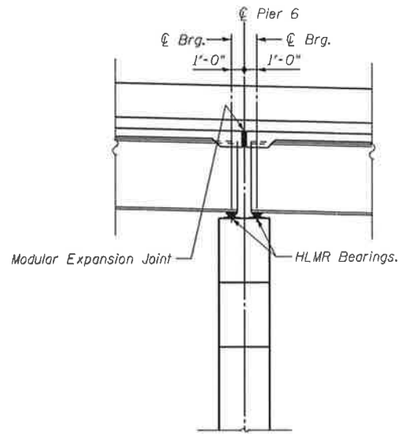
Note: Pier dimensions to be determined during final design



PIER SKETCH
(Pier 9)



TYPICAL SECTION
(Looking Upstation)
*** Subject to refinement during final design



SECTION THRU EXPANSION PIER

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6/28/2016

DRAWN BY RTT/PS	DATE 06/24/16	Stanley Consultants INC. 8501 West Higgins Road, Suite 730, Chicago, Illinois 60631-2801 www.stanleyconsultants.com Illinois Firm Registration No. 184-001333	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY DSE	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 388E (FRA) 1653(TOLLWAY),022-9507(IDOT) DETAILS 2

SHEET NO. SA-03

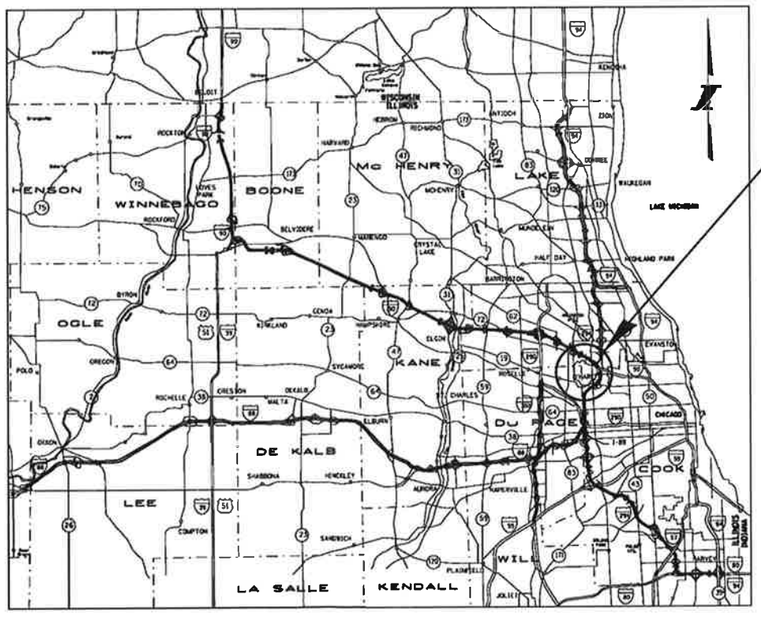
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I–13–4622
TOLLWAY CONSTRUCTION CONTRACT I–16–4669

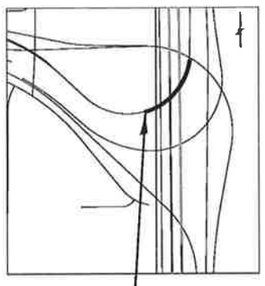
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

FRA STRUCTURE NO. 450 389L
TOLLWAY STRUCTURE NO. 1650
IDOT STRUCTURE NO. 022–9506

RAMP P1 OVER UPRR – MILWAUKEE SUBDIVISION (M.P. 6.44)
BENSENVILLE, IL – DUPAGE COUNTY



LOCATION MAP



RAMP P1 BRIDGE CONSTRUCTION
SN 450 389L (FRA)
SN 1650 (TOLLWAY)
SN 022-9506 (IDOT)

Stanley Consultants INC.
8501 West Higgins Road, Suite 730, Chicago, Illinois 60631-2801
www.stanleyconsultants.com
Illinois Firm Registration No. 184-001533

Globetrotters® Engineering Corporation

URS
303 E. WACKER DR.
SUITE 1400
CHICAGO IL, 60601
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FAX (312)-373-6800

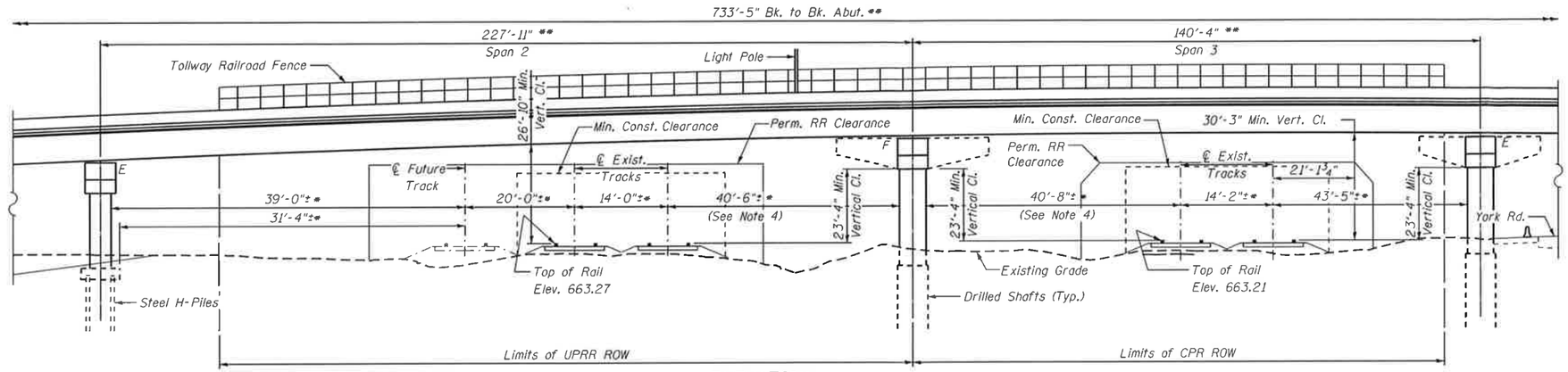
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GEN-3

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Benchmark: Railroad Spike in east face of utility pole. Located approximately 42' west of York Rd. and approximately 44' south of Beeline Dr., Sta. 279+64, Elev = 664.86 (NAVD 88)

Existing Structure: None

Proposed Structure: S.N. B-67 is a 5-span ramp structure conveying traffic from SB I-490 over York Road, Canadian Pacific Railway and Union Pacific Railroad to WB Elgin O'Hare (I-390). The superstructure consists of 86" web, welded continuous plate girders supporting a composite reinforced concrete deck. The substructure consists of a closed east abutment, a stub west abutment, and 4 single-column hammerhead piers. The abutments and pier 1 are founded on driven steel H-piles, and Piers 2, 3 and 4 are founded on drilled shafts.

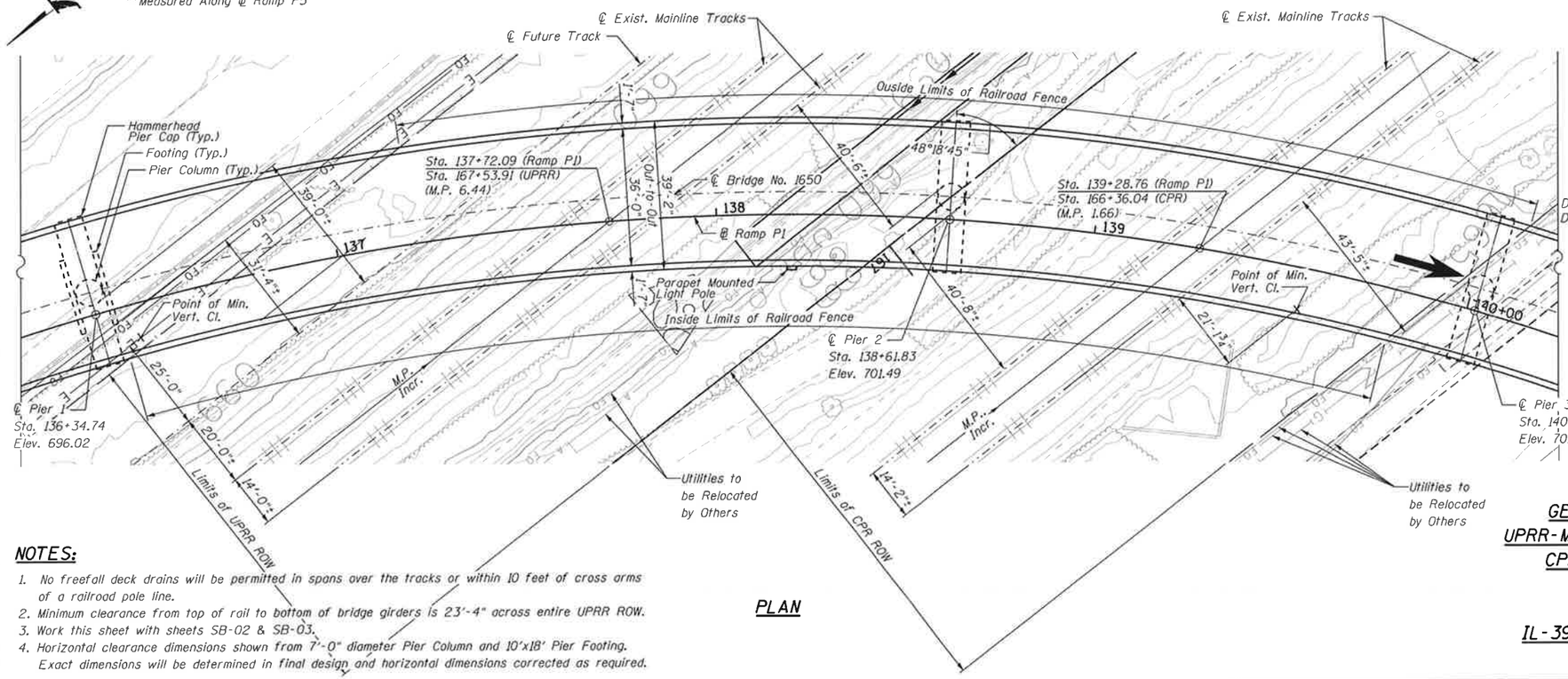


ELEVATION

(Minimum vertical clearance of 23'-4" will be provided across entire UPRR and CPR ROW)

*Measured at Rt. L's to track ℄ or Roadway

**Measured Along ℄ Ramp P5



PLAN

NOTES:

1. No freefall deck drains will be permitted in spans over the tracks or within 10 feet of cross arms of a railroad pole line.
2. Minimum clearance from top of rail to bottom of bridge girders is 23'-4" across entire UPRR ROW.
3. Work this sheet with sheets SB-02 & SB-03.
4. Horizontal clearance dimensions shown from 7'-0" diameter Pier Column and 10'x18' Pier Footing. Exact dimensions will be determined in final design and horizontal dimensions corrected as required.

CONSTRUCTION SPECIFICATIONS

Tollway Supplemental Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Issued April 1, 2016.

Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Adopted April 1, 2016.

Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions Adopted April 1, 2016. Illinois Department of Transportation Guide Bridge Special Provisions (GBSP's).

DESIGN CRITERIA

LOADING HL-93 AND IL-120

Allow 50/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition, with 2016 Interims.
2016 Illinois State Toll Highway Authority Structure Design Manual
2012 Illinois Department of Transportation Bridge Manual
2016 Tollway Geotechnical Engineers Manual

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Substructure)
f'c = 4,000 psi (Class BS-Parapets)
f'c = 4,000 psi (Performance Mix-Bridge Deck, Approach Slabs and Diaphragms)
fy = 50,000 psi (Structural Steel-M270 Grade 50)
fy = 60,000 psi (Reinforcement)

PIERS 2 AND 3

f'c = 6,000 psi (Pier Caps)
f'c = 4,000 psi (Column)
fpu = 270,000 psi (0.6" ϕ Low Lax Strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.085 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.148 g
Soil Site Class = D

LIVE LOAD DEFLECTION CRITERIA

Span Length /800

LEGEND

- Soil Borings
- E — Existing Electric
- FO — Existing Fiber Optic
- G — Existing Gas
- A — Existing Aerial Line
- Proposed Storm Sewer
- ROW

GENERAL PLAN AND ELEVATION
UPRR-MILWAUKEE SUBDIVISION (M.P. 6.44)
CPR-C&M SUBDIVISION (M.P. 1.66)
BENSENVILLE, IL
DuPAGE COUNTY
IL-390 RAMP P1 OVER UPRR AND CPR
41°58'45"N, 87°56'21"W

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CHECKED BY DSE	DATE 06/14/16		

REVISIONS

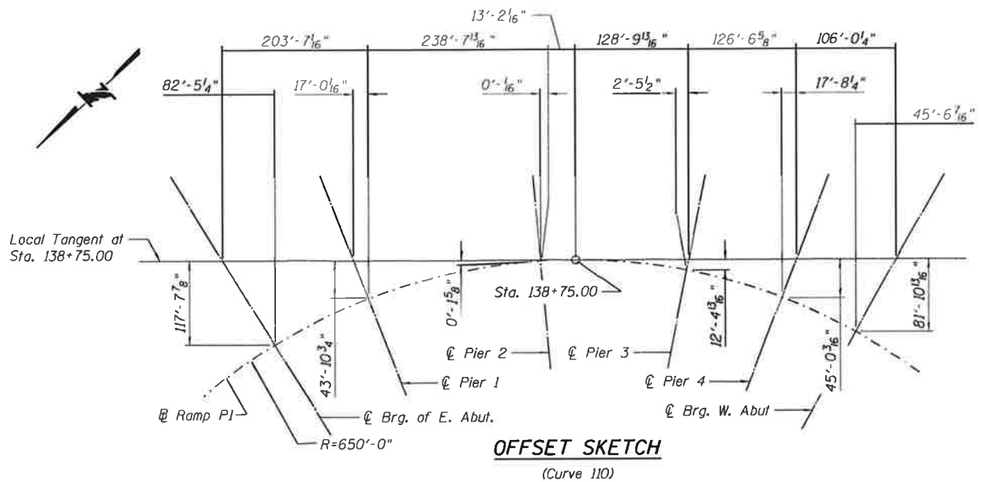
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 389L
1650(TOLLWAY),022-9506(IDOT)
GENERAL PLAN AND ELEVATION

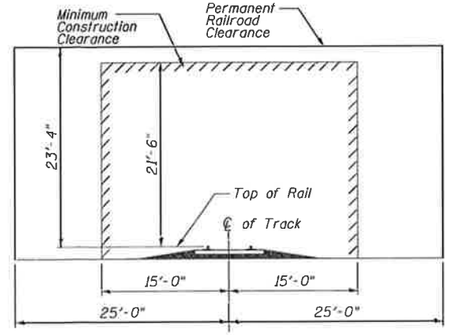
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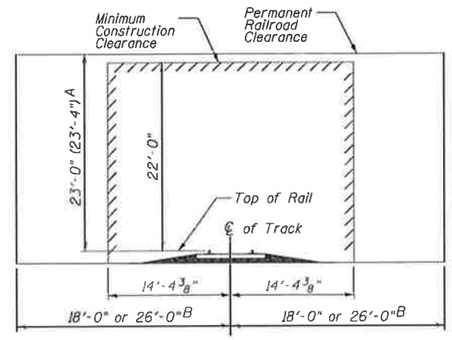
OFFSET SKETCH

(Curve 110)



UPRR CLEARANCE ENVELOPE

(Dimensions Perp. to Railroad)

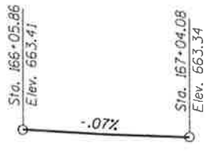


CPR CLEARANCE ENVELOPE

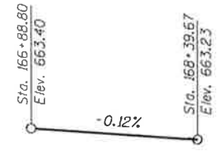
(Dimensions Perp. to Railroad)

A - 23'-0" Arema/CPR Required
23'-4" Project Specific Required

B - 18'-0" Where No Maintenance Road is Required
26' 0" Where Maintenance Road is Required



TOP OF RAIL ELEVATIONS
CPR TRACKS
(High Tracks)



TOP OF RAIL ELEVATIONS
UPRR TRACKS
(High Tracks)

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CHECKED BY DSE DATE 07/25/16

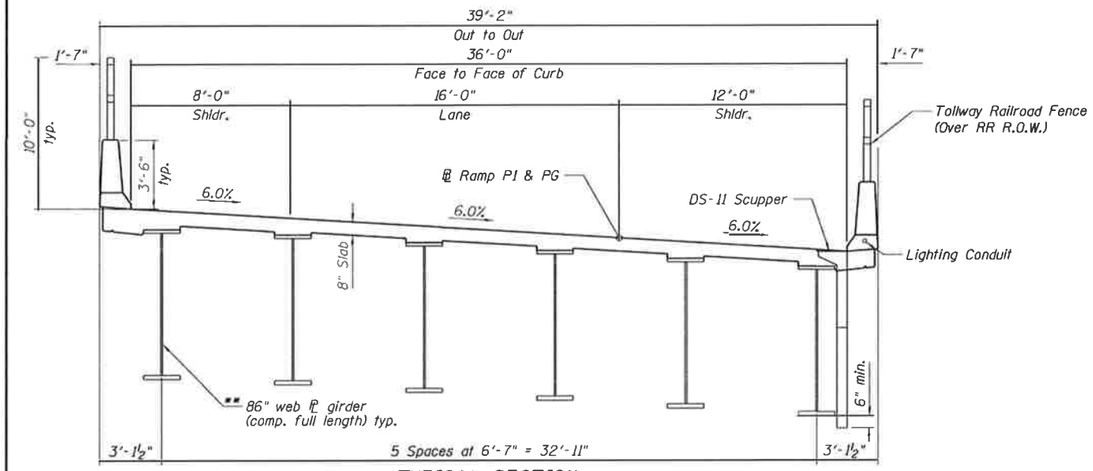
Stanley Consultants INC.
8501 West Higgins Road, Suite 730, Chicago, Illinois 60631-2801
www.stanleyconsultants.com
Illinois Firm Registration No. 184-001533

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

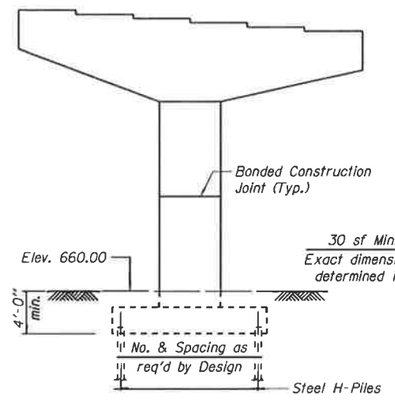
CONTRACT NO. I-16-4669
BRIDGE NO. 450 389L
1650(TOLLWAY),022-9506(IDOT)
DETAILS 1

SHEET NO.
SB-02

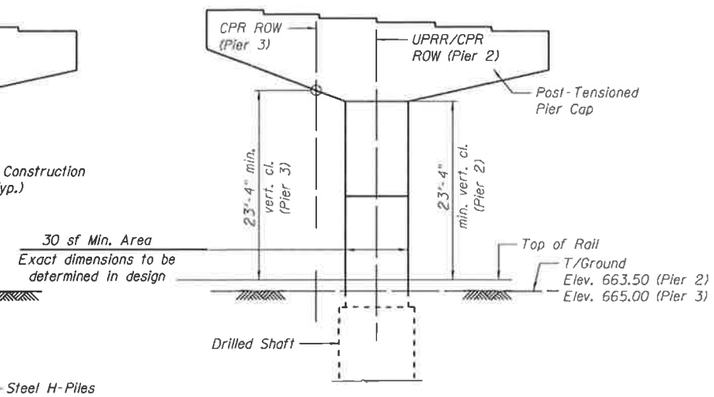


** Subject to refinement during final design

TYPICAL SECTION
(Looking South)

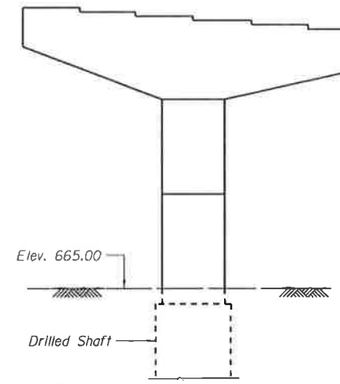


PIER 1 SKETCH
(Looking south)



PIERS 2 AND 3 SKETCH
(Looking south)

Note: Pier dimensions to be determined during final design



PIER 4 SKETCH
(Looking west)

CONSTRUCTION NOTES

1. Any shoring system that impacts the Railroad's operation and/or supports the Railroad's embankment shall be designed and constructed per Railroad Guidelines for Temporary Shoring.
2. All demolition within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall comply with the Railroad's Demolition requirements.
3. Erection over the Railroad right-of-way shall be designed to cause no interruption to all Railroad operations, expect upon mutual agreed upon track outages to allow girder erection. Prior to the release of Railroad traffic, components erected over Railroad tracks must be supported by falsework or permanent substructure, must be secured and stable and must not be supported by cranes or other construction equipment.
4. The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad prior to construction.
5. The proposed grade separation project shall not change the quantity and/or characteristics of the flow in the Railroad ditches and/or drainage structures.
6. The contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad prior to beginning any grading on the project site.
7. For Railroad coordination please refer to the Railroad's Coordination Requirements as part of the Specifications or Special Provisions of the project.
8. Temporary Construction Clearances, including falsework clearances, shall comply with Minimum Construction Clearance Envelopes shown on Sheet 2.
9. All permanent clearances shall be verified before project closeout.
10. Call the following number at least 48 hours prior to commencing work to determine location of fiber optics: UPRR "Call Before You Dig", 1-800-336-9193

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CHECKED BY DSE	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 389L
1650(TOLLWAY),022-9506(IDOT)
DETAILS 2

SHEET NO.
SB-03

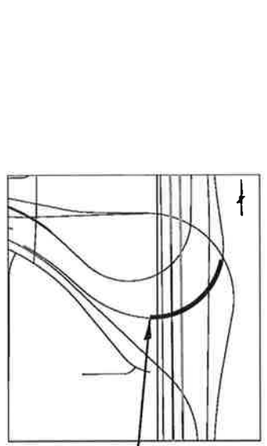
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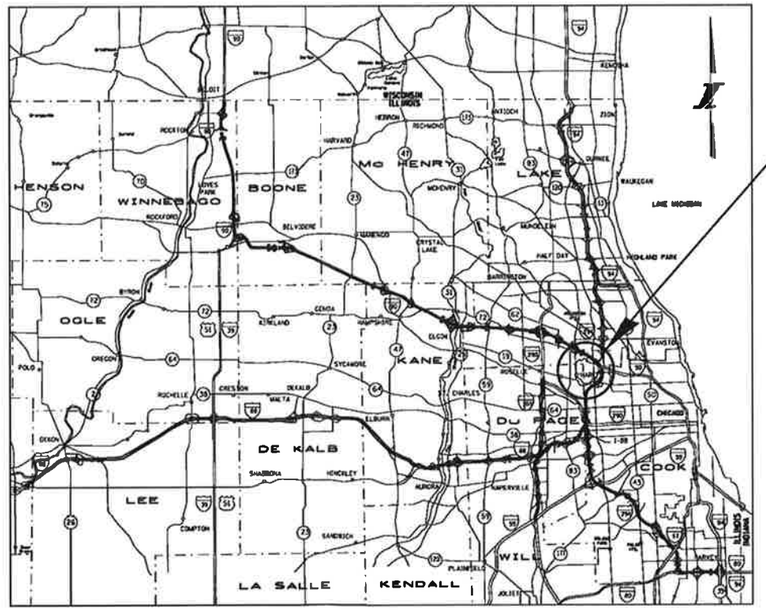
TOLLWAY DESIGN CONTRACT I–13–4622
TOLLWAY CONSTRUCTION CONTRACT I–16–4669

ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

FRA STRUCTURE NO. 450 390F
TOLLWAY STRUCTURE NO. 1652
IDOT STRUCTURE NO. 022–9508

RAMP P8 OVER UPRR – MILWAUKEE SUBDIVISION (M.P. 6.42)
BENSENVILLE, IL – DUPAGE COUNTY





LOCATION MAP

Stanley Consultants INC.
8001 West Higgins Road, Suite 730, Chicago, Illinois 60631-2801
www.stanleyconsultants.com
Illinois Firm Registration No. 184-001553

Globetrotters® Engineering Corporation

URS
303 E. WACKER DR.
SUITE 1400
CHICAGO IL 60601
TEL (312)-373-7700
FAX (312)-373-6800

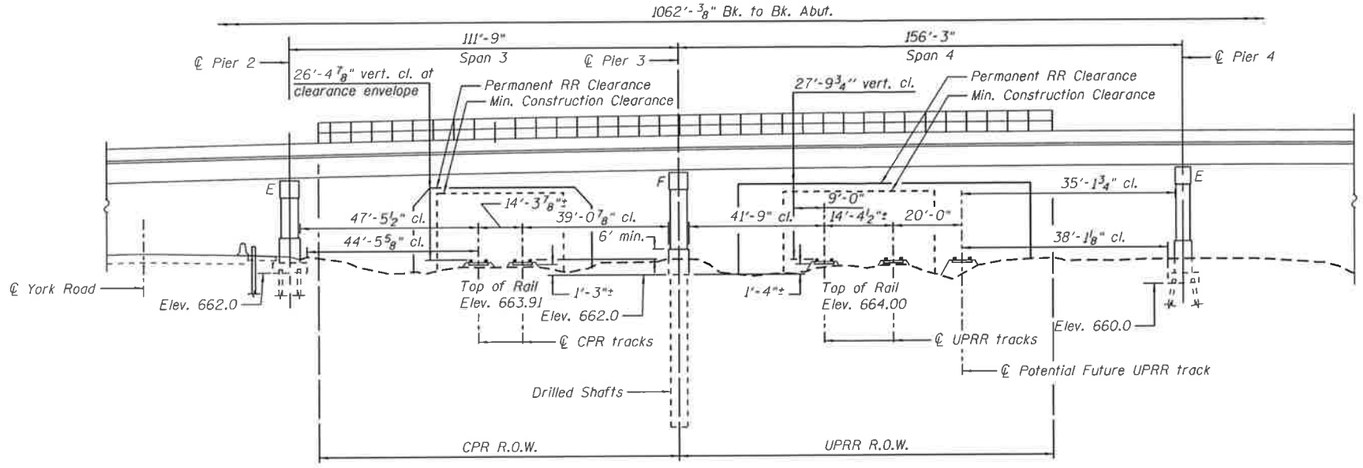
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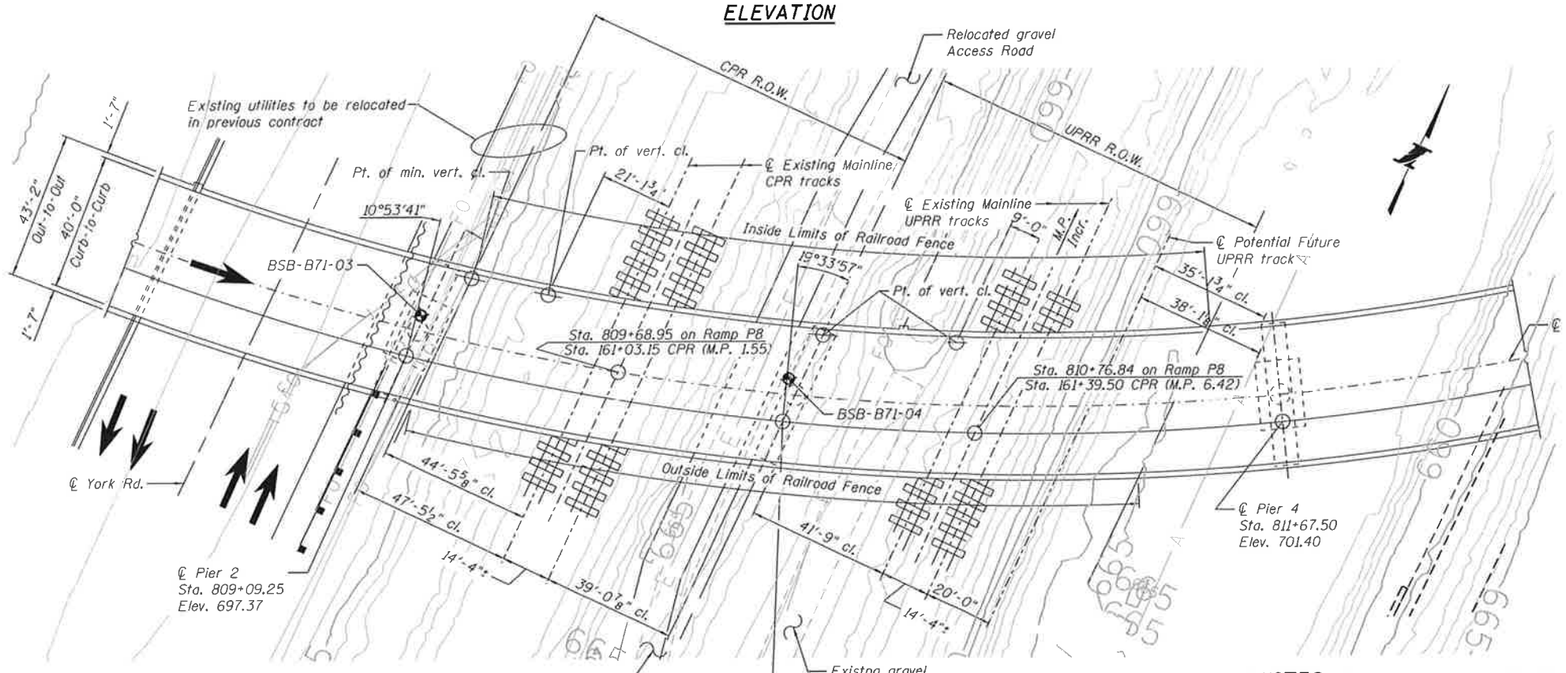
Benchmark: Railroad spike in east face of utility pole. Located approximately 42' west of York Rd. and approximately 44' south of Beeline Dr., Sta. 279+64, Elevation=664.86 (NAVD 88)

Existing Structure: None

Proposed Structure: The proposed structure is an 8-span ramp structure from EB Elgin O'Hare (I-390) over York Road, Canadian Pacific Railway, and Union Pacific Railroad, future ramps Q6 and Q7, and I-490 to NB I-490. The superstructure consists of 60" web welded continuous plate girders supporting a reinforced concrete deck. Superstructure is supported by pile-supported stub abutments, multi-column piers supported by drilled shafts at Pier 3 (located on railroad R.O.W.) and by steel H-Piles elsewhere.



ELEVATION



PLAN

CONSTRUCTION NOTES

1. All demolition within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall comply with the Railroad's Demolition requirements.
2. Erection over the Railrad right-of-way shall be designed to cause no interruption to all Railroad operations, except upon mutual agreed upon track outages to allow girder erection. Prior to the release of Railroad traffic, components erected over Railroad tracks must be supported by falsework or permanent substructure, must be secured and stable and must not be supported by cranes or other construction equipment.
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4. The proposed grade separation project shall not change the quantity and/or characteristics of the flow in the Railroad ditches and/or drainage structures.
5. The contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad prior to beginning any grading on the project site.
6. For Railroad coordination please refer to the Railroad's Coordination Requirements as part of the Specifications or Special Provisions of the project.
7. Temporary Construction Clearances, including falsework clearances, shall comply with Minimum Construction Clearance Envelopes shown on Sheet 2.
8. All permanent clearances shall be verified before project closeout.
9. Call the following number at least 48 hours prior to commencing work to determine location of fiber optics: UPRR "Call Before You Dig", 1-800-336-9193.

LEGEND

- Soil Borings
- E — Existing Electric
- FO — Existing Fiber Optic
- G — Existing Gas
- A — Existing Aerial Line

NOTES

1. Minimum clearance from top of rail to bottom of bridge girders is 23'-4" across entire RR R.O.W. for CPR and UPRR.

GENERAL PLAN AND ELEVATION
UPRR - MILWAUKEE SUBDIVISION (M.P. 6.42)
CPR - C&M SUBDIVISION (M.P. 1.55)
BENSENVILLE, IL
DUPAGE COUNTY
IL-390 RAMP P8 OVER
YORK RD, CPR, UPRR, & I-490
41°58'40"N, 87°56'20"W

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DRAWN BY	KMP	DATE	06/24/16
CHECKED BY	AMK	DATE	06/24/16

URS
303 E. WACKER DR.
SUITE 1400
CHICAGO IL, 60601
TEL (312)-373-7700
FAX (312)-373-6800

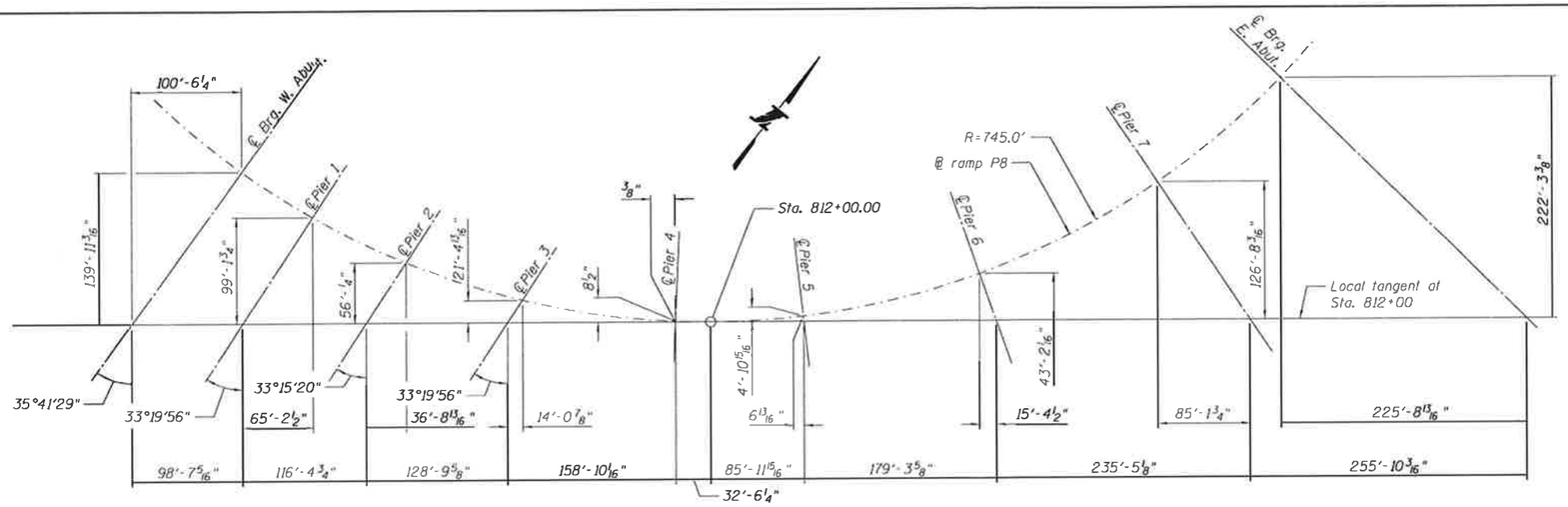
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 390F (FRA) 1652(TOLLWAY), 022-9508(IDOT) GENERAL PLAN AND ELEVATION

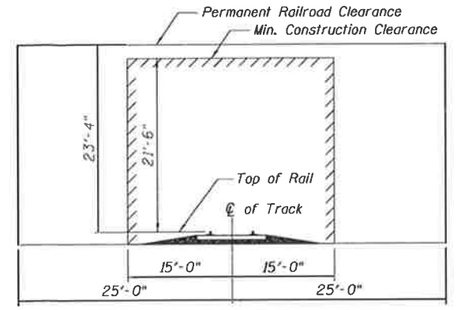
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OFFSET SKETCH

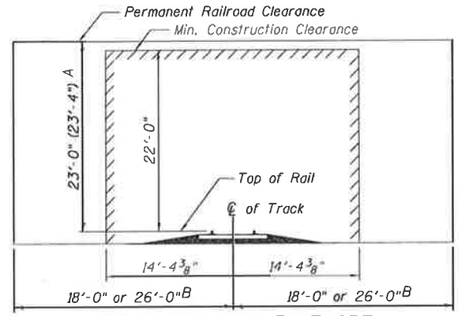
(Curve 127)

Substructures are radial to ℄ ramp P8 unless otherwise noted with an angular dimension



UPRR CLEARANCE ENVELOPE

(Normal to Railroad)



CPR CLEARANCE ENVELOPE

(Normal to Railroad)

A- 23'-0" Arema/CPR Required
23'-4" Project Specific Required

B- 18'-0" Where No Maintenance Road is Required
26'-0" Where Maintenance Road is Required

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2016 Interims.
2016 Illinois State Toll Highway Authority Structure Design Manual
2012 Illinois Department of Transportation Bridge Manual
2016 Tollway Geotechnical Engineers Manual

HIGHWAY CLASSIFICATION

Route: Elgin O'Hare Western Access Tollway Ramp P8
Functional Class: Non-Interstate Expressway Ramp
ADT (Future) : 13,300 (2030)
ADTT (Future) : 1,064 (2030)
DHV (Future) : 1,050 (2030)
Design Speed: 45 m.p.h.
Posted Speed: 40 m.p.h.

CONSTRUCTION SPECIFICATIONS

Tollway Supplemental Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Issued April 1, 2016.

Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Adopted April 1, 2016.

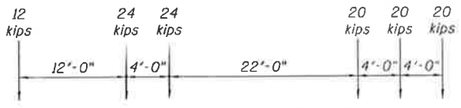
Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions Adopted April 1, 2016

Illinois Department of Transportation Guide Bridge Special Provisions (GBSP'S)

DESIGN CRITERIA

LOADING HL-93 AND IL-120

Allow 50#/sq. ft. for future wearing surface.



IL-120 DESIGN TRUCK

LIVE LOADING DEFLECTION CRITERIA

Span Length/800

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.085g
Design Spectral Acceleration at 0.2 sec. (SD2) =0.148g
Soil Site Class = D

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Class SI-Substructure and Concrete Pad)
f'c = 4,000 psi (Class BS-Parapets)
f'c = 4,000 psi (Performance Mix-Bridge Deck, Approach Slabs, and Diaphragms)
fy = 50,000 psi (Structural Steel-M270 Grade 50)
fy = 60,000 psi (Reinforcement)

CURVE DATA

(Curve 127)

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T = 955.94
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E = 466.96
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P.T. Sta. = 820+37.07
S.E. = 6.0%

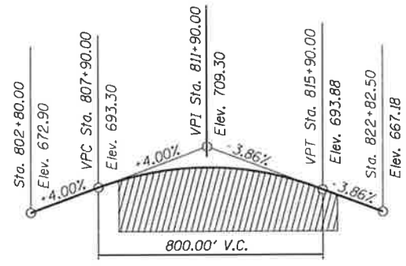


TOP OF RAIL ELEVATIONS - CPR

(High Track)

TOP OF RAIL ELEVATIONS - UPRR

(High Track)



PROFILE GRADE RAMP P8

Along ℄ Roadway

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9/14/2016

DRAWN BY	KMP	DATE	06/24/16
CHECKED BY	AMK	DATE	06/24/16

URS
303 E. WACKER DR.
SUITE 1400
CHICAGO IL. 60601
TEL (312)-373-7700
FAX (312)-373-6800

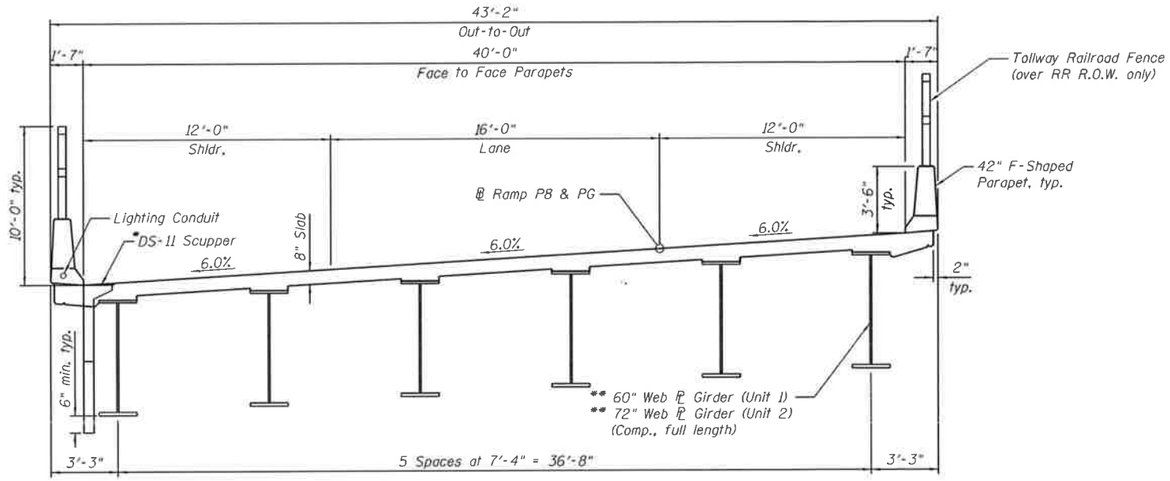
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

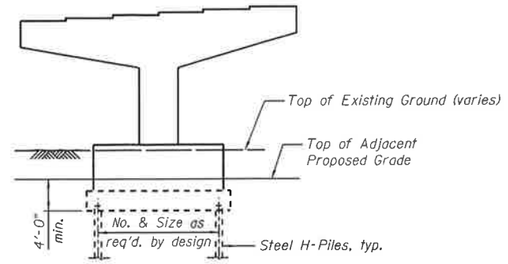
BRIDGE NO. 450 390F (FRA)
1652(TOLLWAY), 022-9508(IDOT)
DETAILS 1

SHEET NO.
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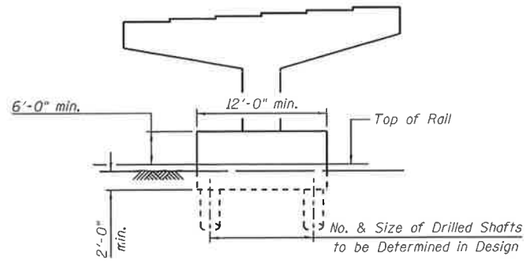


TYPICAL SECTION
(Looking East)

* Scuppers not located in spans over RR
** Subject to refinement during final design



PIERS 2 & 4 SKETCH
(Looking East)



PIER 3 SKETCH
(Looking East)

NOTES:
Pier dimensions to be determined during final design.

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E04_EOWA_PDF.pltcfg
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6/28/2016
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DRAWN BY	KMP	DATE	06/24/16
CHECKED BY	AMK	DATE	06/24/16

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303 E. WACKER DR.
SUITE 1400
CHICAGO IL. 60601
TEL (312)-373-7700
FAX (312)-373-6800

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 390F (FRA)
1652(TOLLWAY), 022-9508(IDOT)
GENERAL DETAILS

SHEET NO.
SC-03

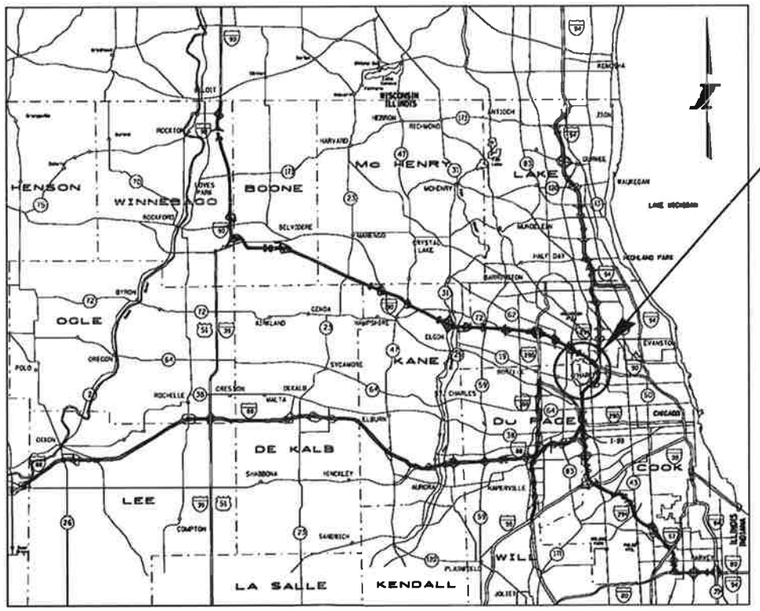
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I–13–4622
TOLLWAY CONSTRUCTION CONTRACT I–16–4669

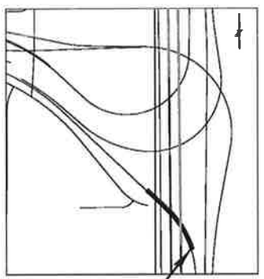
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

FRA STRUCTURE NO. 450 392U
TOLLWAY STRUCTURE NO. 1651
IDOT STRUCTURE NO. 022–9505

RAMP P2 OVER UPRR – MILWAUKEE SUBDIVISION (M.P. 6.39)
BENSENVILLE, IL – DUPAGE COUNTY



LOCATION MAP



RAMP P2 BRIDGE CONSTRUCTION
SN 450 392U (FRA)
SN 1651 (TOLLWAY)
SN 022-9505 (IDOT)

Stanley Consultants INC.
8501 West Higgins Road, Suite 730, Chicago, Illinois 60631-2801
Illinois Firm Registration No. 184-001533

Globetrotters® Engineering Corporation

URS
303 E. WACKER DR.
SUITE 1400
CHICAGO IL 60601
TEL (312) 373-7700
FAX (312) 373-6800

SHEET NO.
GEN-5

4669_RR_SCI.tbl
E04_EOWA_PDF.pltcfg
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Benchmark: Railroad spike in east face of utility pole. Located approximately 42' west of York Rd. and approximately 44' south of Beeline Dr., Sta. 279+64, Offset 48' Lt., Elev. = 664.86 (NAVD 88)

Proposed Structure: The proposed structure is a 5-span curved steel plate girder bridge with an overall length of 807'-2 7/8" from back-to-back of abutments and an out-to-out width of 45'-2". The superstructure rests on concrete multi-column piers and stub abutments supported on steel piles or concrete drilled shafts.

Existing Structure: None

CONSTRUCTION NOTES

1. Any shoring system that impacts the Railroad's operation and/or supports the Railroad's embankment shall be designed and constructed per Railroad Guidelines for Temporary Shoring.
2. All demolition within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall comply with the Railroad's Demolition requirements.
3. Erection over the Railroad right-of-way shall be designed to cause no interruption to all Railroad operations, except upon mutual agreed upon track outages to allow girder erection. Prior to the release of Railroad traffic, components erected over Railroad tracks must be supported by falsework or permanent substructure, must be secured and stable and must not be supported by cranes or other construction equipment.
4. The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad prior to construction.
5. The proposed grade separation project shall not change the quantity and/or characteristics of the flow in the Railroad ditches and/or drainage structures.
6. The contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad prior to beginning any grading on the project site.
7. For Railroad coordination please refer to the Railroad's Coordination Requirements as part of the Specifications or Special Provisions of the project.
8. Temporary Construction Clearances, including falsework clearances, shall comply with Minimum Construction Clearance Envelopes shown on Sheet 2.
9. All permanent clearances shall be verified before project closeout.
10. Call the following number at least 48 hours prior to commencing work to determine location of fiber optics: UPRR "Call Before You Dig", 1-800-336-9193

CURVE DATA

P.I. Sta. = 235+37.80
Δ = 45°05'23" (Rt)
D = 5°43'46"
R = 1,000.00'
T = 415.13'
L = 786.96'
E = 82.74'
P.C. Sta. = 231+22.66
P.T. Sta. = 239+09.63

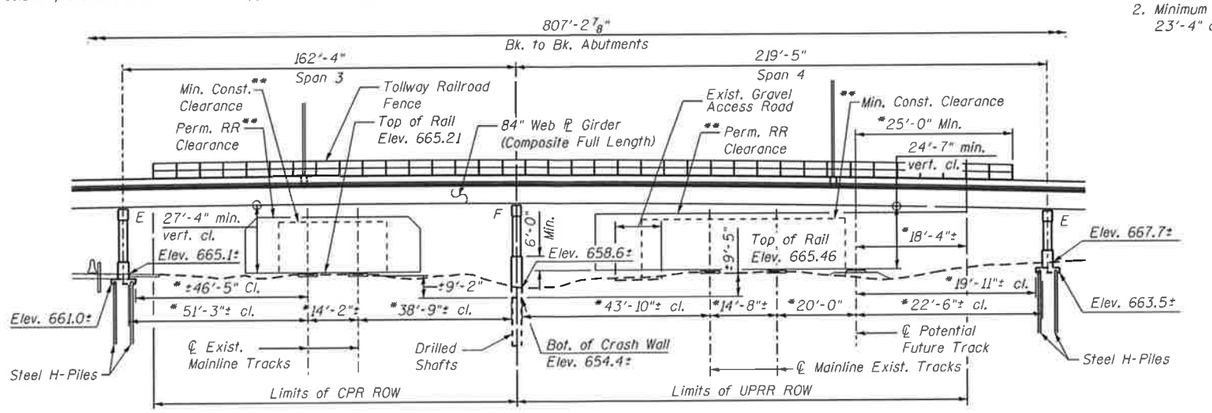
CONSTRUCTION SPECIFICATIONS

Tollway Supplemental Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Issued April 1, 2016.

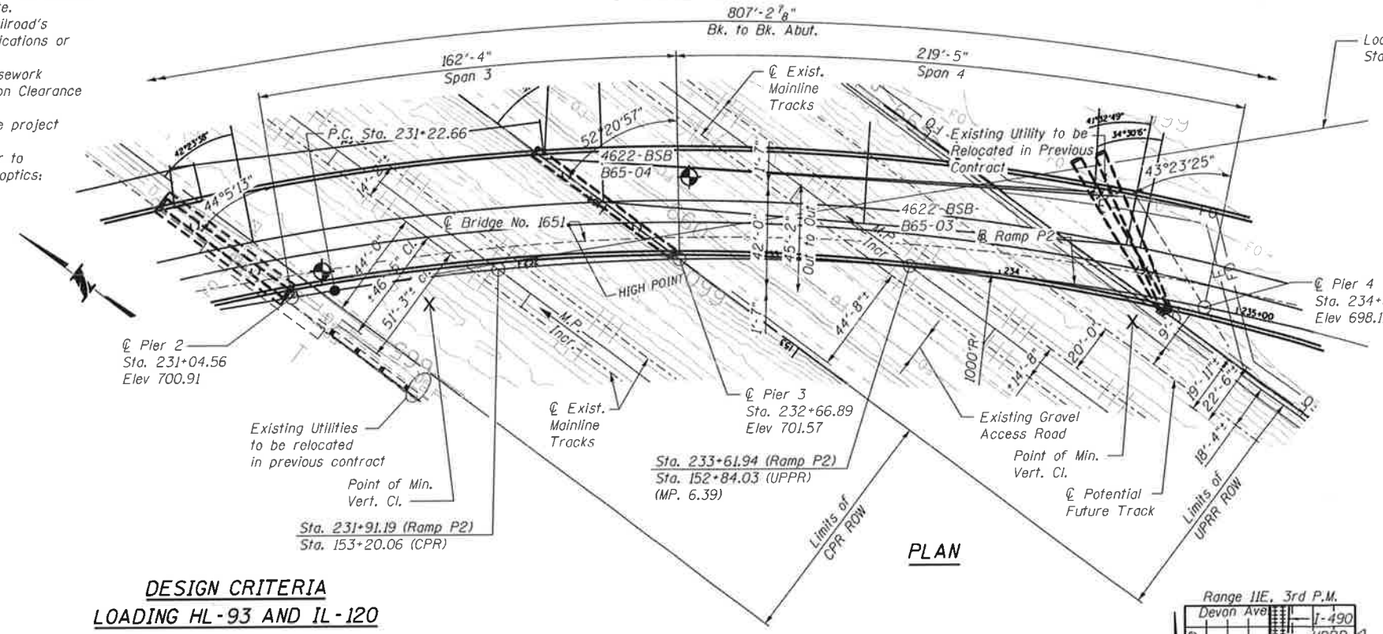
Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Adopted April 1, 2016.

Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions Adopted April 1, 2016.

Illinois Department of Transportation Guide Bridge Special Provisions (GBSP's).



ELEVATION



PLAN

NOTES:

1. No freefall deck dains will be perimitted in spans over the tracks or within 10 feet of cross arms of a railroad pole lines.
2. Minimum clearance from top of rail to bottom of bridge girders is 23'-4" across entire RR ROW for CPR and UPRR.

LEGEND

- 4622-BSB-B65-01 — Soil Borings
- E — Electric
- FO — Fiber Optic
- G — Gas
- Proposed Storm Sewer
- Proposed Manhole
- ROW
- Future Roadway
- Steel Plate Beam Guardrail

* Measured at Rt. L's to track ℄ or Roadway.
** See Sheet SD-2 for Details on Minimum Construction Clearance Envelope.

HIGHWAY CLASSIFICATION

Elgin O'Hare Western Access Tollway Ramp P2
Functional Class: Non-Interstate Expressway Ramp
ADT: 14,900 (2030)
DHV: 1,620 (One-Way)
ADTT: 1,192 (2030)
Design Speed: 50 mph
Posted Speed: 45 mph

F.A.U. Rte. 2678 - York Rd.
Functional Class: Minor Arterial
ADT: 24,500 (2012), 25,625 (2030)
DHV: 1,885 (Two-Way, 2012)
DHV: 2,050 (Two-Way, 2030)
ADTT: 3,185 (2012), 3,331 (2030)
Design Speed: 50 mph
Posted Speed: 45 mph

DESIGN CRITERIA

LOADING HL-93 AND IL-120

Allow 50/sq. ft. for future wearing surface.

LIVE LOAD DEFLECTION CRITERIA

Span Length /800

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.085 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.148 g
Soil Site Class = D

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition, with 2015 Interims.
2015 Illinois State Toll Highway Authority Structure Design Manual
2012 Illinois Department of Transportation Bridge Manual
2015 Tollway Geotechnical Engineers Manual

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Substructure)
f'c = 4,000 psi (Class BS-Parapets)
f'c = 4,000 psi (Performance Mix-Bridge Deck, Approach Slabs, and Diaphragms)
fy = 50,000 psi (Structural Steel-M270 Grade 50)
fy = 60,000 psi (Reinforcement)



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
UPRR-MILWAUKEE SUBDIVISION (M.P. 6.39)
CPR-C&M SUBDIVISION
BENSENVILLE, IL
DuPAGE COUNTY
IL-390 RAMP P2 OVER CPR, & UPRR
41°58'31"N, 87°56'20"W

DRAWN BY	KMP	DATE	06/24/16
CHECKED BY	AMK	DATE	06/24/16

URS
303 E. WACKER DR.
SUITE 1400
CHICAGO IL. 60601
TEL (312)-373-7700
FAX (312)-373-6800

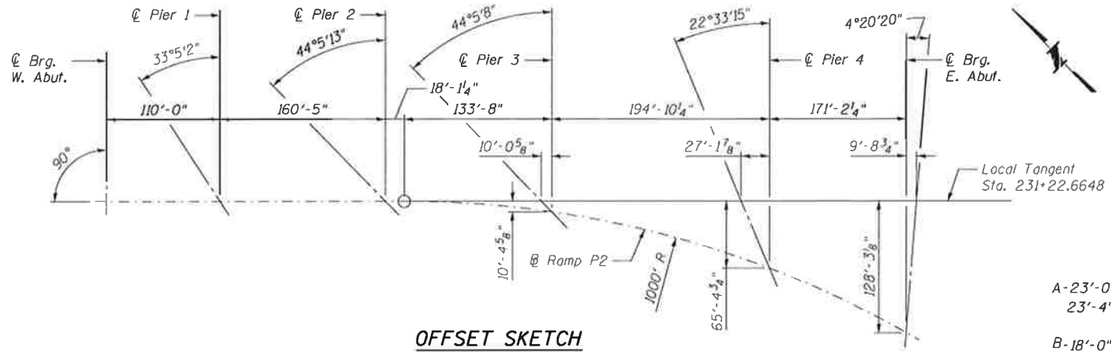
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669
BRIDGE NO. 450 392U (FRA)
1651(TOLLWAY), 022-9505(IDOT)
GENERAL PLAN AND ELEVATION

SHEET NO. SD-01

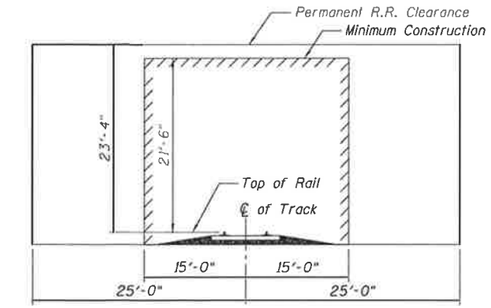
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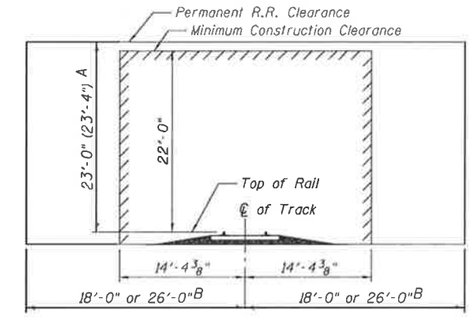
OFFSET SKETCH

A-23'-0" Arema/CPR Required
23'-4" Project Specific Required

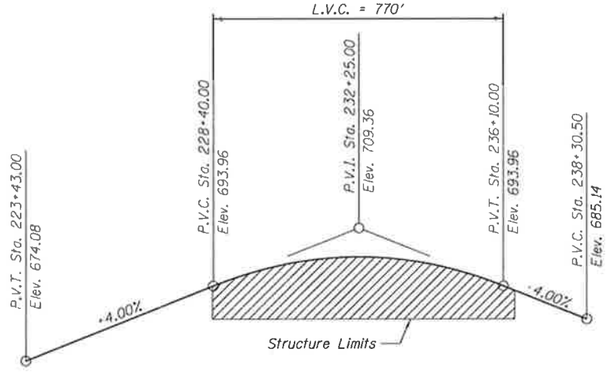
B-18'-0" Where No Maintenance Road is Required
26'-0" Where Maintenance Road is Required



UPRR CLEARANCE ENVELOPE
(Normal to Railroad)



CPR CLEARANCE ENVELOPE
(Normal to Railroad)



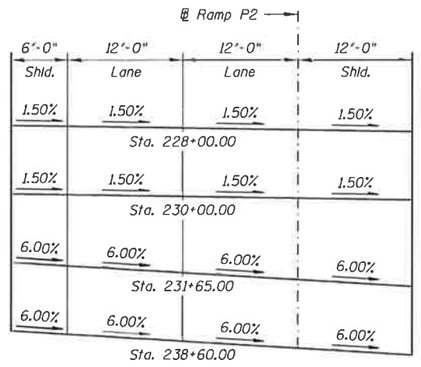
PROFILE GRADE
(Along ℄ Ramp P2)



TOP OF RAIL ELEVATIONS-UPRR
(High Track)



TOP OF RAIL ELEVATIONS-CPR
(High Track)



CROSS SLOPE TRANSITIONS
RAMP P2
(Looking ℄ Upstation)
(Dimensions at Rt Angles to ℄ Ramp P2)

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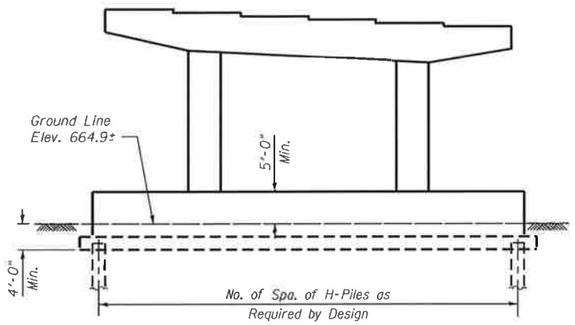
URS
303 E. WACKER DR.
SUITE 1400
CHICAGO IL. 60601
TEL (312)-373-7700
FAX (312)-373-6800

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
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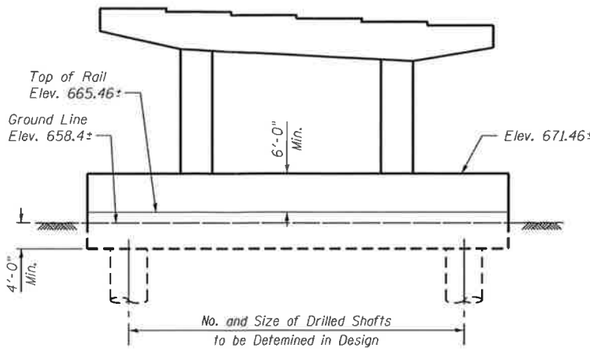
CONTRACT NO. I-16-4669
BRIDGE NO. 450 392U (FRA)
1651(TOLLWAY), 022-9505(IDOT)
DETAILS 1

SHEET NO.
SD-02



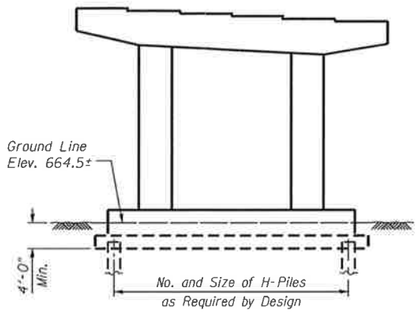
PIER 2 SKETCH

Pier dimensions to be determined during final design.



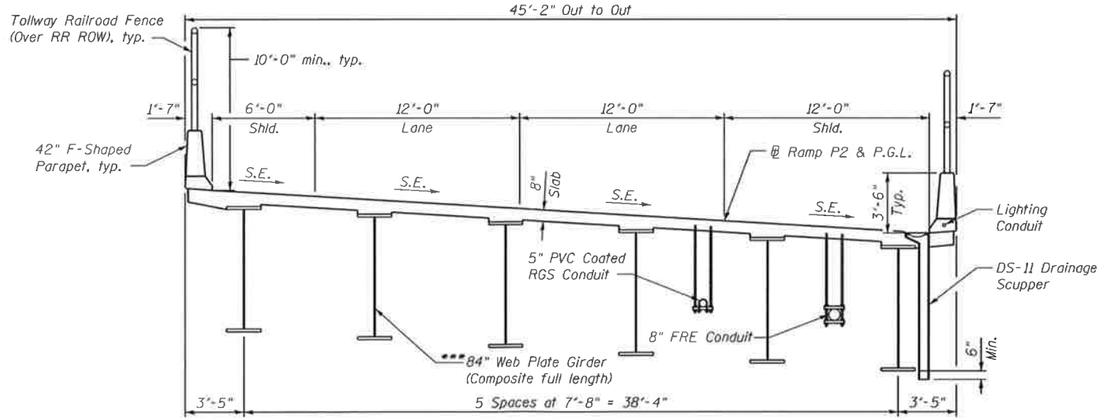
PIER 3 SKETCH

Pier dimensions to be determined during final design.



PIER 4 SKETCH

Pier dimensions to be determined during final design.



TYPICAL SECTION

(Looking Upstation)

***Subject to refinement during final design

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6/28/2016
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DRAWN BY PSK	DATE 06/24/16	URS 303 E. WACKER DR. SUITE 1400 CHICAGO IL, 60601 TEL (312)-373-7700 FAX (312)-373-6800	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY AMK	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 392U (FRA)
1651(TOLLWAY), 022-9505(IDOT)
DETAILS 2

SHEET NO. SD-03

Impacts of Illinois State Toll Highway Authority Elgin O'Hare Western Access Project Construction and Operation upon Canadian Pacific Rail Operations in the Vicinity of York Road and Thorndale Avenue in Bensenville, Illinois

October 3, 2016

Executive Summary

R.L. Banks & Associates, Inc. ("RLBA") was retained by the Illinois State Toll Highway Authority ("Tollway") to examine the permanent and construction-related impacts of the Tollway's plans for constructing the Western Access Interchange, a system of five highway bridges that will connect the new IL-390 Tollway with the new Western Access Tollway, as part of the Tollway's overall Elgin-O'Hare Western Access Project (the "EOWA Project"). To connect the two new highways, bridges will need to cross over the double track Canadian Pacific Railway, Ltd. ("CPR") C&M Subdivision[1] and the parallel double track Union Pacific Railroad ("UPRR") Milwaukee Subdivision just west of O'Hare International Airport. The impacted rail lines are two CPR main tracks that run north-south through the subject location. The rail lines extend between Tower B-17 interlocking ("Tower B-17") at the west end of Bensenville Yard to the south and a connection to the UPRR Milwaukee Subdivision tracks just north of the construction area at a location known as Bryn Mawr. The subject rail lines are part of the CPR route between Chicago and Milwaukee, extending to Minneapolis/St. Paul and Canada.

[1] RLBA has seen the subject segment of track listed as being attributed to both the C&M Subdivision and the Elgin Subdivision of CPR. For sake of clarity, RLBA refers to the subject segment as a portion of the C&M Subdivision hereinafter.

Following a detailed review of Tollway engineering drawings of the proposed overpasses,[2] interviews and discussions with leading engineers from the Tollway and its selected engineering consultants,[3] and performing twelve days of video train surveillance of CPR train operations in the region,[4] in our professional opinion:

1) The bridges are typical of highway bridges that cross railroad tracks at thousands of locations throughout the United States. They are designed to meet or exceed all applicable vertical and horizontal clearance requirements. The support piers for the bridges have been designed to be minimal in size in order to minimize impact upon railroad property. As a result, the Western Access Interchange will have no impact on CPR's current or future railroad operations.
2) The Tollway has stipulated that it will coordinate all construction work on the Western Access Interchange with the railroads and impose upon its contractors all industry standard requirements related to safety and scheduling for work on railroad property. In addition, the Tollway intends to require its contractors to coordinate with the railroads to schedule any work that would require track outages, which will be infrequent and represent a small portion of the overall work. As a result, during construction, CPR may experience minimal, temporary construction-related inconvenience and train delays. Any delays would be in line with: 1) the way in which railroads have cooperated countless times in the past with public sector bodies seeking to build overpasses and 2) the way in which railroads manage the interface between their own construction and maintenance activities and train operations.

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[2] See Appendix 1 – List of documents reviewed by RLBA in preparing this Statement
[3] See Appendix 2 – List of personnel interviewed by RLBA in preparing this Statement
[4] A detailed account of train surveillance protocol and findings may be found in section 1.2.1

3) After the Western Access Interchange is complete, the Tollway will require periodic access to CPR property to facilitate performing routine upkeep, maintenance, and repair work on the bridges. The Tollway intends to seek an industry standard long term maintenance agreement with CPR that would provide such access. Terms that are typical in such industry standard agreements include provisions for notice, coordination, flagging, permitting, insurance, and scheduling, as well as other industry standard requirements. The Tollway has indicated that it will agree to any and all reasonable, industry standard provisions.

4) The Tollway's acquisition of temporary and permanent easements across CPR property in order to construct, maintain and operate the Western Access Interchange will not unreasonably interfere with railroad transportation or interstate commerce.

Statement of Consultants' Experience and Qualifications

RLBA is a professional consulting firm that focuses on the rail transportation industry in North America. Founded in 1956, RLBA is a multidisciplinary firm providing economic, engineering and operational counsel to freight railroad, passenger railroad and governmental organizations. RLBA features more than 60 years of experience in providing expert economic, analytical, valuation and litigation support services to a nationwide group of clients representing every principal segment of the economy. The four RLBA consultants who authored this statement are former Class I railroad operating, infrastructure engineering, commercial and strategic planning professionals who, combined, offer more than 150 years' experience in the North American rail industry.

Walter H. Schuchmann is a railroad operations and safety expert with more than 38 years' experience in the industry. Mr. Schuchmann served in various positions with Norfolk Southern Railway ("NS") and its predecessor, Norfolk and Western Railroad, including as an Assistant Trainmaster in Chicago where he had the responsibility to supervise commuter, intermodal and merchandise operations. Since joining RLBA, Mr. Schuchmann has been responsible for undertaking dozens of operational studies on behalf of freight railroads and shippers, in addition to having advised counsel and prepared testimony in legal proceedings on the same subject matter. Mr. Schuchmann's resume is included in this statement within Appendix 3.

Ralph Lee Meadows, Jr., P.E. is a seasoned railroad infrastructure engineer with more than 44 years' experience in the industry. His Class I railroad career included a variety of positions with NS, culminating in nearly 20 years serving in four consecutive roles as Division Engineer on

four busy NS divisions, with a cumulative responsibility to maintain more than 7,000 miles of track on the railroad. Following retirement from NS, Mr. Meadows has been involved in dozens of engagements concerning railroad infrastructure construction, maintenance, inspection, appraisal and feasibility. Mr. Meadows' resume is included in this statement within Appendix 3.

John W. McLaughlin is a railroad commercial and operations expert offering more than 37 years' transportation experience, of which 18 years were spent with Conrail. His Conrail career featured supervisory, analytical and service design responsibilities in operations as well as being the primary 24/7 contact on service issues of major intermodal customers. Since joining RLBA, Mr. McLaughlin has served as an expert railroad capacity and operations analyst on behalf of multiple clients before the Surface Transportation Board. Mr. McLaughlin's resume is included in this statement within Appendix 3.

Stephen M. Sullivan offers 38 years of transportation experience, including 25 years working in various roles for Conrail, followed by 13 years' experience serving as Executive Director of the American Short Line and Regional Railroad Association ("ASLRRA"), after which he joined RLBA in 2013. While with Conrail, Mr. Sullivan served in various positions in the arena of strategic and commercial planning, including serving as Director of Corporate Strategy and as an operations expert during the $12 billion merger of Conrail with NS and CSX Transportation ("CSX"). This role entailed leading managers in areas of financial analysis, asset management, and budgeting. Other roles at Conrail included serving as Director of Planning and Strategy, Manager of Strategic Planning, Manager of Capital Planning, and Manager of Industrial Development. Mr. Sullivan's resume is included in this statement within Appendix 3.

1. Background

1.1. Geography and Configuration

The proposed Western Access Interchange will cross over a portion of a short segment of CPR's double track C&M Subdivision extending approximately 1.8 miles between Tower B-17 to the south, at the west end of Bensenville Yard, and the signals protecting a junction at which CPR connects with the Union Pacific Railroad ("UPRR") known as Bryn Mawr, just north of the proposed Western Access Interchange construction site. (See Figures 1 and 2.) Along the entirety of this corridor, the CPR double-track mainline is adjacent to a parallel UPRR double-track mainline, with which the CPR connects at Bryn Mawr. The parallel UPRR tracks are a portion of its Milwaukee Subdivision mainline, connecting its large Proviso Yard with lines extending between Chicago, Milwaukee, the Twin Cities and beyond. The two railroad mainlines are sandwiched between a parallel arterial road, York Road to the west and the O'Hare airport complex to the east.

North of Bryn Mawr, CPR trains operate over approximately 10.1 miles of the UPRR Milwaukee Subdivision between Bryn Mawr and Shermer under a trackage rights agreement with UPRR. At Shermer, the UPRR connects to a CPR-owned connection that provides access to the remainder of the CPR C&M Subdivision[5] at a point known as Tower A-20 / Techny, allowing CPR trains to access tracks extending between Chicago and Milwaukee, the Twin Cities, the Dakotas and points in Canada.

[5] The C&M Subdivision encompasses a combination of track infrastructure that CPR owns and track over which it operates via trackage rights or other agreement that is owned by Metra. From Tower A-20 to Rondout, a distance of approximately 12 miles, CPR trains operating between Bensenville and Milwaukee, the Twin Cities, the Dakotas and points in Canada operate over tracks owned by Metra.

South of the proposed Western Access Interchange, the subject CPR line connects with Bensenville Yard, which is CPR's principal Chicago yard. To operate between the subject corridor and Bensenville yard, the double track mainline crosses the double track Metra Milwaukee District at-grade via Tower B-17. CPR also has trackage rights on the Metra Milwaukee District West Line west of Bensenville, which CPR considers a part of its Elgin Subdivision, which connects with CPR's own trackage extending to Kansas City and Mason City, Iowa. In addition to the subject line extending between Bensenville and Milwaukee, CPR owns a line extending east through Franklin Park interlocking to Galewood Yard. This line provides connections with numerous other railroads.

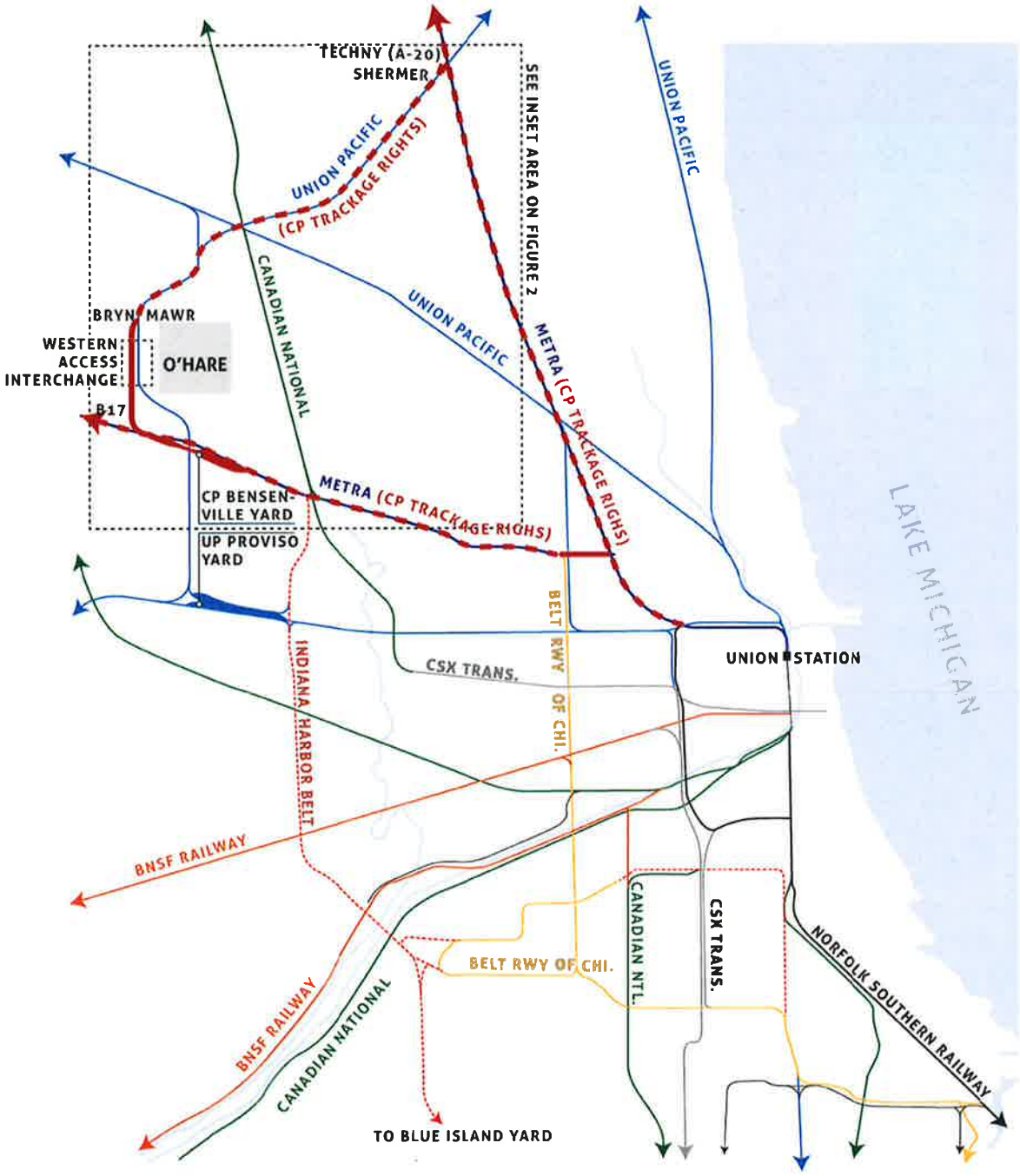
At a point slightly south of the proposed Western Access Interchange area, a spur diverges from the westerly CPR main track and crosses York Road just north of Foster Avenue. This spur enables access to several rail-served customers. The tracks within the industrial area are operated by the Chicago Terminal Railway ("CTR"), a subsidiary of Iowa Pacific Holdings. CTR and CPR interchange cars in CPR's Bensenville Yard.

Movement on the CPR tracks is governed by signal indication and Centralized Traffic Control (CTC). Maximum allowable freight train speed is believed to be 40 mph.[6]

[6] Chicago Regional Environmental Efficiency (CREATE) Program Final Feasibility Plan (Amendment 1), 11/9/2009, p.71 indicates project GS16 (Irving Park Road Grade Separation in the subject rail corridor) as allowing speeds of 70 mph (passenger) and 40mph (freight).

Figure 1

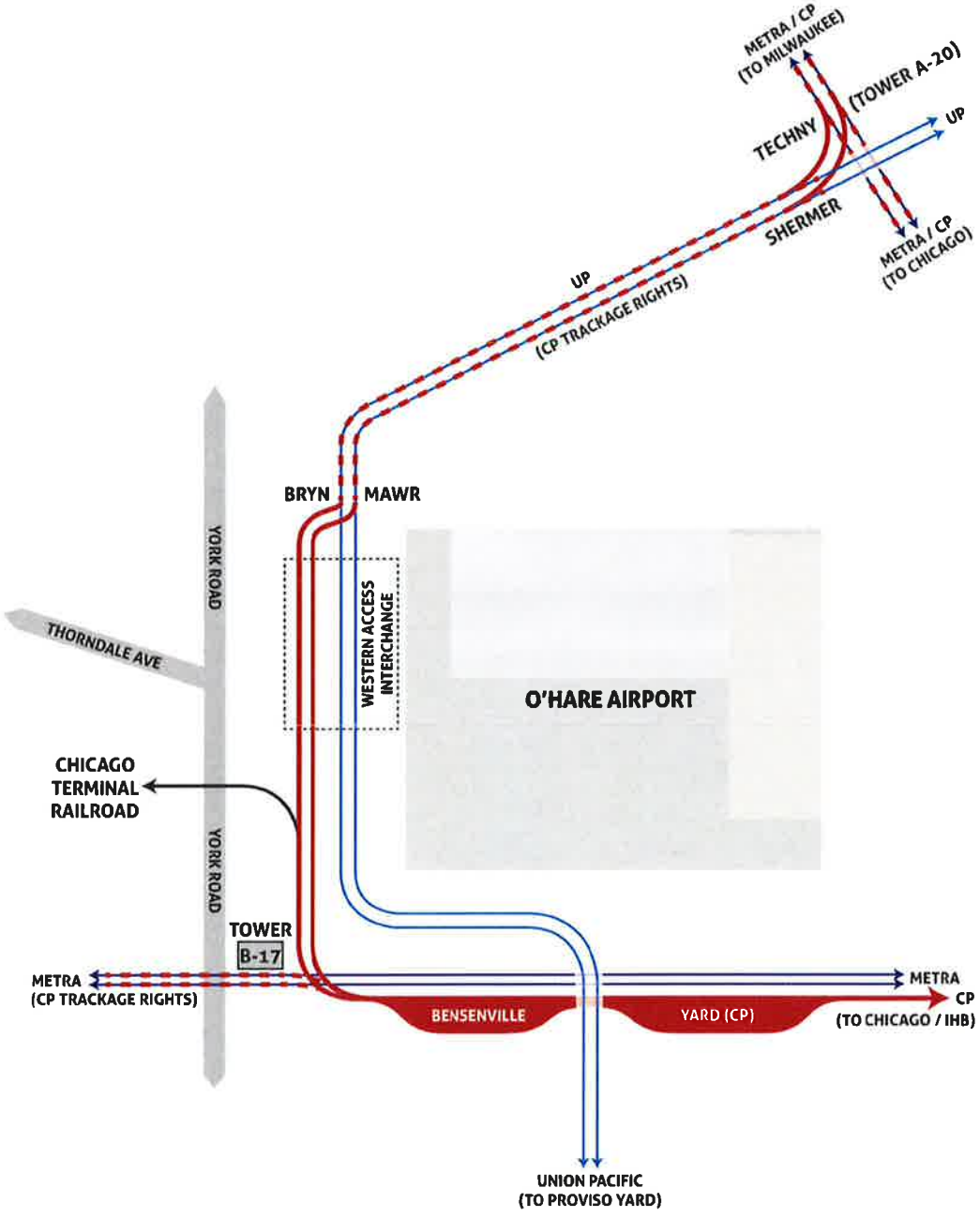
Overview Map of Chicago Area Rail Lines



Not all lines shown, not necessarily to scale
Source: RLBA

Figure 2

Detailed Map of Bensenville-Techny Rail Lines



Not all lines shown, not necessarily to scale
Source: RLBA

1.2 Operations

RLBA investigated the volume of CPR train traffic in the affected area. According to *Chicago: America's Railroad Capital* (Voyageur Press 2014), "Bensenville has five pairs of daily manifest trains: two east, two north and one west. Four dedicated intermodal services connect Chicago Montreal, Quebec and Vancouver, British Columbia. In addition, crude oil and ethanol trains are common." Of these, the two pairs of north manifest trains, the Vancouver intermodal trains and likely some of the crude oil and ethanol trains would likely use the subject rail corridor.

Given the lack of publicly available data on CPR operations and traffic on the subject lines, RLBA commissioned video surveillance of the area in order to estimate probable traffic volume on CPR's tracks.

1.2.1 Train Count Based on Video Observations

In June 2016, RLBA commissioned a video record of train movements near Tower B-17 over a twelve day period. RLBA documented train activity in the vicinity of the west end of CPR's Bensenville Yard and Tower B-17 from June 9 through June 20, by deploying a security-grade video camera on the property of the Bensenville Police Station with the knowledge and cooperation of the Village of Bensenville. The camera was aimed so it captured all activity on the tracks at the west end of Bensenville Yard, on the adjacent Metra tracks and on the CPR main tracks which diverge to the north of Tower B-17. The camera operated continuously during this period and was equipped with infrared night-vision technology. RLBA periodically

monitored live video from the camera via an internet connection to check image quality and camera aim. Aim was adjusted as required.

RLBA reviewed the archived video in its entirety to capture all train activity, day and night, passing before the camera. RLBA recorded train activity by inputting train characteristics in a spreadsheet for each date of activity. The characteristics recorded by RLBA are as follows: 1) track location; 2) direction; 3) arrival date and time; 4) pass date and time; 5) lead locomotive type and railroad; 6) train type and car count and 7) any other applicable notes. During daytime hours, no issues arose in documenting the above characteristics. However, during nighttime hours, lead locomotive type and railroad as well as train type in some instances were unobservable. Despite this, RLBA was still able to estimate whether the train was on CPR or Metra tracks by noting if the train was passing before or behind the lights of Tower B-17. In addition, a car count estimate in most cases was discerned from breaks in the light from Tower B-17 reflecting off of rail cars as well as the light from objects behind the train shining through gaps between cars.

While observing train characteristics, RLBA also estimated average train speed for certain train types. It is important to note that a number of trains stopped, sometimes multiple times, at some point while they were passing the reference point. As a result, some average speed calculations may be significantly lower due to these stoppages. That said, hold times were not included in the elapsed time calculation of stopped trains.

1.2.1.1 Results of Video Observations

Over the twelve days of video observations, CPR operated 140 trains on the tracks north of Tower B-17 in the location of the Western Access Interchange. (See Table 1 below.) This represents an average of 11.7 trains per day over the subject CPR corridor.

Table 1

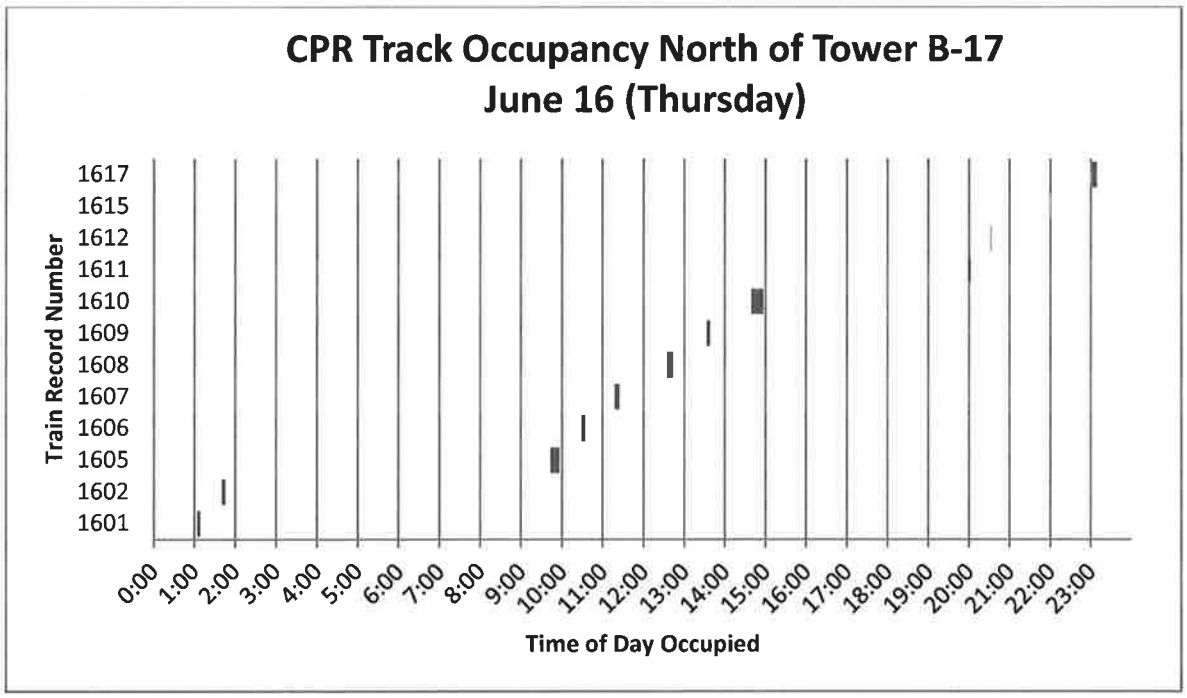
CPR Track Occupancy North of Tower B-17

June 2016

Day (Date)	Number of Trains
Thursday (9)	10
Friday (10)	11
Saturday (11)	12
Sunday (12)	9
Monday (13)	14
Tuesday (14)	14
Wednesday (15)	13
Thursday (16)	13
Friday (17)	11
Saturday (18)	10
Sunday (19)	12
Monday (20)	11

CPR track occupancy on a typical, representative day of the data collection period is shown in Figure 3 below. Thursday, June 16, 2016, is deemed typical because it was a weekday rather than a weekend day and because the number of trains operated on that day (twelve trains) is consistent with the observed average of 11.7 trains per day. The width of the red bars representing track occupancy in the figure depicts the duration of the occupancy, so the wider the red bar, the longer the occupancy. The longest occupancy observed on this representative day was 18 minutes in length, commencing at 14:39.

Figure 3



Source: RLBA

Track occupancy graphs similar to Figure 3 for each of the twelve days of the video data collection period are presented in Appendix 4.

The track occupancy figures document that CPR operated no trains over the segment between 5:45 AM and 9:25 AM on the twelve weekdays in the sample and a total of only four total trains between 5:00 PM and 8:00 PM over the twelve days. This corresponds with METRA's peak period operations (refer to Section 1.2.3) as well as the overall low volume of CPR train traffic over the segment.

1.2.2 Train Count Based on FRA Grade Crossing Database

RLBA also examined the Federal Railroad Administration ("FRA") grade crossing database statistics for the CPR lines which handle Bensenville-Milwaukee traffic. Because there are no at-grade crossings on the line between Bensenville Yard and the junction with UPRR at Bryn Mawr, RLBA examined crossing data at several locations north and south of Techny/A-20 where trains to/from Bensenville join CPR's route between downtown Chicago and Milwaukee (See Figure 1). Subtracting the CPR train count on the line to downtown south of Techny from the train count north of Techny gives an indication of the Bensenville-Milwaukee train count. That examination revealed the following:

Table 2

FRA Train Counts North and South of Techny

Crossing Traffic							
	County	**City**	**Street**	**As of**	**Day Trains**	**Night Trains**	**Total**
North of Techny	Lake	Lake Forest	Conway Rd.	4/18/2016	63	27	90
	Lake	Bannockburn	Half Day Rd.	4/18/2016	63	27	90
	Lake	Deerfield	Osterman Ave.	3/31/2014	69	27	96
	Cook	Northbrook	Shermer Rd.	4/18/2016	69	27	96
						Average	**93**
Techny/A-20							
South of Techny	Cook	Glenview	Chestnut Ave.	4/18/2016	59	23	82
	Cook	Glenview	Glenview Rd.	4/18/2016	39	43	82
	Cook	Morton Grove	Beckwith Rd.	4/18/2016	59	23	82
	Cook	Chicago	Devon Ave.	3/31/2014	59	23	82
						Average	**82**
Source: FRA Grade Crossing Inventory Database							

Subtracting the average of 82 trains per day south of Techny from the 93 trains per day north of Techny indicates that an average of 11 trains per day use the Techny-Bensenville route including

the CPR segment south of Bryn Mawr where the proposed construction site is located. This 11 train per day average tends to verify the 11.9 trains per day RLBA observed from its video monitoring activities.

1.2.3 Metra Operations through Tower B-17

South of the proposed construction location of the Western Access Interchange, the CPR tracks cross at grade the Metra Milwaukee District at Tower B-17. Metra operates 55 commuter trains on this line on each weekday with a concentrated "rush hour" morning period between 6:00 AM and 9:20 AM hosting 17 trains and an evening rush hour between 4:40 PM and 8:00 PM consisting of 15 trains.[7] CPR's use of its tracks crossing the Metra line and extending through the proposed construction location is greatly constrained by the close interval between Metra trains through Tower B-17 during the aforementioned concentrated time periods. On average during these rush hour times, a Metra train occupies Tower B-17 trackage once every twelve-and-a-half minutes, significantly impeding the ability of CPR to operate freight trains into and out of Bensenville Yard via its mainline to the North during rush hour.

2. Permanent Impacts on CPR Infrastructure

2.1 Overview

The Tollway's proposed Western Access Interchange will consist of five highway ramp bridges that will cross over CPR tracks near the existing intersection of York Road and Thorndale Avenue in Bensenville, Illinois. These overpasses constitute the essential link between the new IL-390 Tollway and the new Western Access Tollway. Together with several other projects, this

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[7] *Metra Milwaukee District West Line Public Timetable, Effective April 13, 2014*

work is part of the Tollway's Elgin O'Hare Western Access Project (the "EOWA Project"). RLBA has reviewed the technical report of the Tollway's Design Corridor Manager, CH2M in order to understand the design specifications for the Western Access Interchange Interchange and interviewed CH2M engineers involved in this project. (See Western Access Interchange Ramp Bridges over Canadian Pacific Railway and Union Pacific Railroad, prepared for Illinois Tollway by CH2M, September 15, 2016.)

The Western Access Interchange will affect a corridor of approximately 2,200 lineal feet along the CPR and UPRR rights-of-way. The only point of physical contact between the Western Access Interchange bridges and the CPR right-of-way will be the base of one steel-reinforced concrete pier per each of the five overpasses.[8] These piers have been designed to be of minimal size and are proposed to be placed astride the property line between the CPR and UPRR rights-of-way (refer to Figure 4). The remaining support piers for each bridge will be located outside of CPR and UPRR property.

Based upon a review of various industry standards and input from the UPRR, a minimum vertical clearance of 23 feet 4 inches above top-of-rail was established for the entire Western Access Interchange. In fact, all five bridges will greatly exceed this minimum clearance, with some being 41feet above the top-of-rail.[9]

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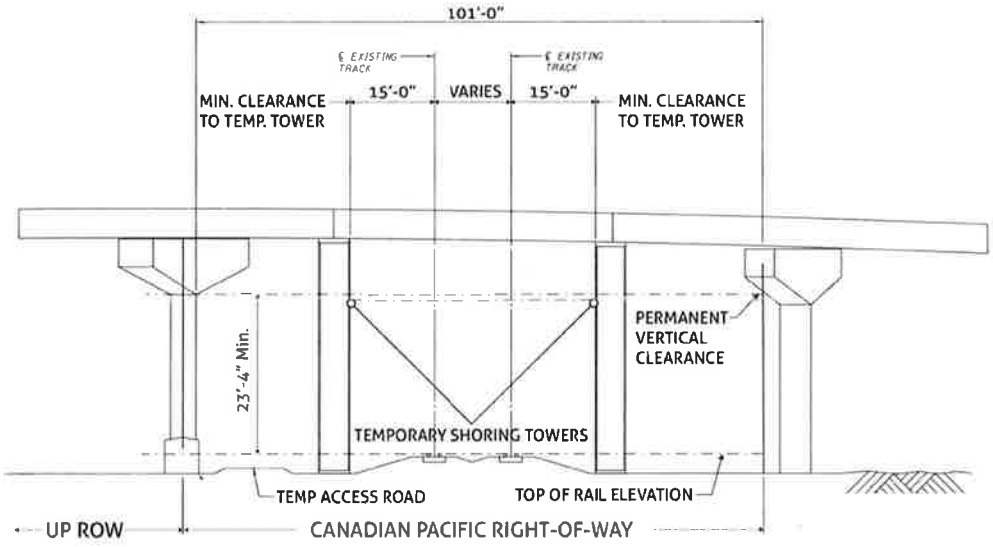
[8] "Western Access Interchange Ramp Bridges over Canadian Pacific Railway and Union Pacific Railroad." CH2M Report Prepared for Illinois Tollway. September 15, 2016. p.16
[9] Ibid.

2.2 Permanent Impacts

The Western Access Interchange will affect CPR property in only two ways: 1) the addition of five support piers on the property line between CPR and UPRR property, and 2) a permanent easement providing an aerial right to cross above the CPR property and right to access the property in the future (with the coordination of CPR) to maintain the bridges. In RLBA's professional opinion, neither of these impacts is out of the ordinary nor would serve to impede the ability of CPR to conduct railroad transportation.

Figure 4

Overview of Single Overpass Span Showing Dimensioning



Not necessarily to scale

Source: Stanley Consultants, Inc.; RLBA

2.2.1 The Addition of Five Support Piers Will Have No Operational Impact on CPR.

The only permanent physical change to CPR physical infrastructure would be the addition of five concrete piers centered along the property line between the CPR and UPRR rights-of-way. These piers would not impede the ability of CPR to conduct railroad transportation because they would not physically constrain CPR's ability to operate trains over or conduct maintenance of its existing two tracks, nor would they constrain CPR from adding track in the future, if conditions warranted.

In RLBA's opinion, it is unlikely that CPR will add tracks in this area. As described, the CPR tracks between Bryn Mawr and Tower B-17 form the connection between Bensenville Yard and the UPRR tracks used by CPR. This segment is only about 1.8 miles long between signals and, other than the connection with the Chicago Terminal Railroad, there are no sidings, spurs, or diverging tracks.

These CPR tracks are used by trains moving between Bensenville and the UPRR tracks. On occasion, trains are held on these tracks. Northbound trains sometimes hold before entering the UPRR tracks. Southbound trains sometimes hold before entering Bensenville Yard, either because of CPR activities in the yard or because Metra train operations on the Metra main tracks. (See Section 1.2.3 for more information about Metra operation.) However, given that Bensenville Yard is immediately to the south, these tracks are not used to store trains long-term. Thus, in light of the relatively low volume and short hold times observed on these tracks, RLBA does not believe CPR would construct additional tracks in this area.

That said, in the unlikely event that CPR should opt to invest in constructing additional track infrastructure along the 1.8 mile segment, the Tollway's design protects CPR's ability to add tracks on either side of its existing double track mainline. The placement of a single support pier for each bridge on the property line between CPR and UPRR property preserves almost the entire right-of-way width, providing sufficient width to add more tracks.

2.2.2 The Tollway's Proposed Permanent Easements for Operation and Maintenance of the Bridges Will Not Interfere With CPR's Current or Future Operations.

The Tollway's acquisition of a permanent easement over the subject CPR corridor to construct and maintain the five overhead spans associated with the Western Access Interchange will not interfere with CPR's current or future operations. The bridges have been engineered to ensure a minimum "...horizontal plane that is 23 feet 4 inches above the existing top of rail of each railroad across the full right-of-way width of each railroad," in conformance with AREMA recommended standards and UPRR's design criteria.[10] The 23 feet 4 inch minimum applies to the underside of the hammerhead piers. As a result, at the point where the bridges pass over CPR tracks, the vertical clearances, "...will range from a minimum of 23 feet 4 inches to approximately 41 feet.[11]" By complying with these industry standards, the Tollway's design preserves CPR's ability to operate its tracks without interference. In addition, because the clearance would be provided by the bridges across the entirety of the CPR right-of-way, any future addition of tracks would not be impeded.

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[10] "Western Access Interchange Ramp Bridges over Canadian Pacific Railway and Union Pacific Railroad." CH2M Report Prepared for Illinois Tollway. September 15, 2016. p.22
[11] Ibid. p.16

Once the Western Access Interchange is completed, the Tollway will need periodic access to CPR property in order to inspect, maintain and repair the bridges. The Tollway has that it will enter into any reasonable, industry standard agreement with CPR in order to perform these functions. The Tollway anticipates the agreement will provide for coordination, scheduling, permitting, insurance, flagging and other required safety issues. Similar agreements between public roadway authorities and railroads are common throughout the nation's rail transportation system and they do not unreasonably interfere with railroad operations.

2.3 Findings

The erection of a highway overpass over a railroad is a routine activity in the U.S. transportation industry, and something that CPR has hosted many times in the recent past.[12] According to data provided by the Tollway,[13] there are 67 grade separated highway rail crossings on its nearly 300 mile-long system. Of these, the Tollway Authority crosses over the CPR in five locations, manifest in ten highway overpass structures (Tollway Bridge Numbers: 391/392, 396/397, 349,350, 383/384 and 1615/1616). These structures were erected with no impact to CPR's ability to conduct railroad transportation.

In our professional opinion, the Tollway has designed the Western Access Interchange with significant consideration given to minimizing permanent impact on the CPR. We believe that

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[12] A June 2014 press release described completion of construction of three highway overpasses on the Roberts Bank Rail Corridor in Vancouver, BC. CPR uses the corridor and was described as a "partner" and presumably a co-funder of the three projects for which the federal government contributed less than one third of the total cost. http://www.portvancouver.com/news-and-media/news/three-new-overpasses-improve-traffic-and-expand-capacity-of-roberts-bank-rail-corridor/?doing_wp_cron=1468343391.0855269432067871093750, accessed July 12, 2016.

[13] Pregmon, Matt. "Illinois Tollway Railroad Bridge Information." Email to Manar Nashif, P.E. July 28, 2016.

the addition of five support piers situated half-way upon the CPR right-of-way line and the existence of five bridges crossing over the CPR tracks at heights that exceed the recommended standard will cause no permanent impact on the ability of the CPR to conduct railroad transportation or grow its business.

3. Temporary Construction-Related Issues

3.1 Overview

The proposed construction of the Western Access Interchange will create minor, temporary construction-related inconveniences but no unreasonable interference with CPR's ability to conduct railroad transportation. Railroads host the construction of highway overpasses quite frequently, and the Tollway's proposed Western Access Interchange construction phasing is consistent with industry accepted practices.

3.2 Construction Activities

RLBA has reviewed the technical report of CH2M, the Tollway's Design Corridor Manager, which outlines the construction sequencing and the terms of the Tollway's anticipated agreements with its contractors. The Tollway will require its contractors to abide by all reasonable industry standard safety precautions and accepted practices for coordination of work with the CPR.[14] At no time during the construction would the contractor be able to access the site without the proper protection of a CPR flagman.

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[14] "Western Access Interchange Ramp Bridges Over Canadian Pacific Railway and Union Pacific Railroad." CH2M Report Prepared for Illinois Tollway. September 15, 2016. p.17

A flagman is an employee of the railroad, assigned to protect contractors or others performing work on or near a railroad right-of-way. A railroad's operating rules prescribe the roles and responsibilities of a flagman and how the flagman is to perform his/her flagging responsibilities. Protection is provided by a flagman or flagmen because a flagman is responsible for ensuring that no contractor employees foul a railroad's track without permission of the flagman. If an event occurs that would interfere with the safe passage of trains, such as a contractor employee fouling a track, the flagman is responsible for immediately taking action to stop trains by radio communication to trains and the Dispatcher or control operator.

Railroad flagmen are either transportation employees, such as conductors, or maintenance-of-way employees (some railroads use both classifications of employees as flagmen). Qualifications require flagmen to be knowledgeable about the physical characteristics and train operations of the area of railroad where flag protection is being provided. Flagmen will communicate with train dispatchers or control operators prior to each day's work about train operations and other issues affecting train movements through the work area. Trains are notified of the affected daily work area through Bulletin Order and verbal authority from the train dispatcher or control operator. Flagmen work in close and constant coordination with train dispatchers/control operators, trains, and contractors

The construction of the Western Access Interchange will occur in six stages:

Stage I: Contractor Access and Preparation Work on Railroad Property

Stage II: Abutment and Pier Construction

Stage III: Girder Shoring Tower Erection

Stage IV: Girder Erection

Stage V: Bridge Deck and Bridge Approach Construction

Stage VI: Site Restoration

The Tollway will not require any track outages during the construction of the bridges with the exception of Stage IV – Girder Erection – and none of the other stages of construction will require track outages or interfere with CPR's operations.[15] The contractors will be required to coordinate their access to the property with CPR and work under the protection of CPR flagmen, but the work will occur outside the industry standard minimum horizontal clearances governing construction activities near active rail lines, or not cause fouling of the tracks.

3.2.1 Overpass Construction – Steel Bridge Beams Placement

According to the CH2M Technical Report, the placement of the steel girders will require 31 track outages during the six month period anticipated for Stage IV. The outages will last approximately 4 to 14 hours, depending upon CPR's schedule and input.[16] If planned appropriately, the Tollway's contractor and CPR could feasibly devise a method to have some of the beam placement work coincide with the observed weekday windows created by Metra traffic through Tower B-17. As noted in section 1.2.1, according to detailed RLBA train observations, CPR runs few-to-no trains through Tower B-17 during both a morning period and a late afternoon period (See Figure 3). By piggybacking on these windows, the need for CPR to hold

[15] Creation of a southern grade crossing and improvements to the existing northern grade crossing will need to be undertaken to accommodate heavy construction equipment, as outlined in Stage I. This work is typically handled by the railroad, which may choose at its own discretion to temporarily halt train traffic.

[16] "Western Access Interchange Ramp Bridges Over Canadian Pacific Railway and Union Pacific Railroad." CH2M Report Prepared for Illinois Tollway. September 15, 2016. p.24

trains out of this work area could be minimized so that it would have an even more negligible impact upon CPR operations.

In other locations, CPR has proven its ability to tolerate contractors placing large beams over its railroad. This includes not only the ten spans that the Tollway maintains over CPR tracks (which were built over CPR or its predecessor railroads), but also other large, high profile projects completed recently elsewhere on the CPR network.

A prime example of CPR accommodating highway overpass construction is the massive Marquette Interchange reconstruction project that was undertaken between 2004 and 2008 in Downtown Milwaukee, Wisconsin. The Marquette Interchange project involved constructing seven spans over CPR's C&M subdivision – the same subdivision as the subject segment of track over which the Western Access Interchange bridges are planned to be built – and an additional two spans over the parallel lead to CPR's Muskego Yard.[17] The work also included demolition and removal of then in-use overpasses the then new spans were replacing. According to CPR reports, this work was undertaken at a time when CPR carloads were slightly higher than they were last year (2007: 2.65M carloads;[18] 2015: 2.63M carloads).[19]

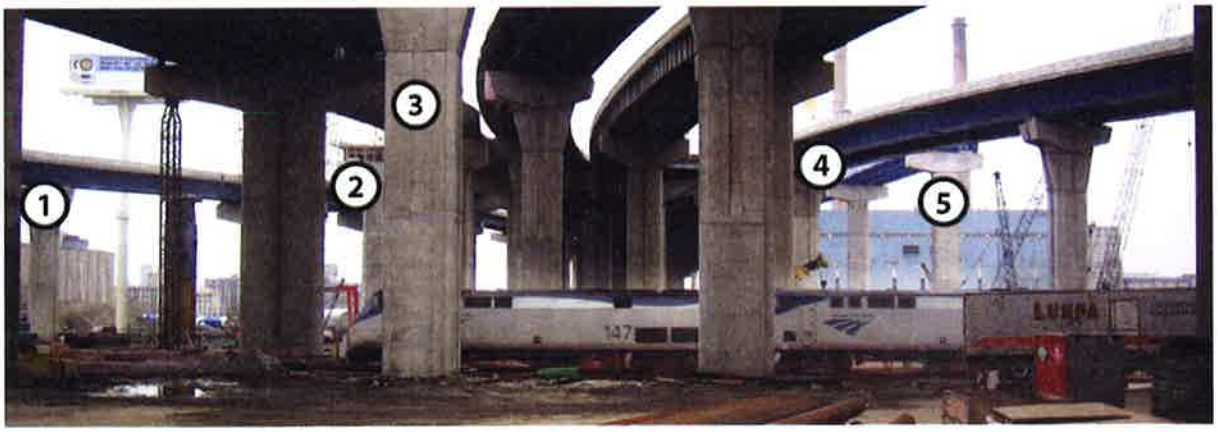
Figure 6 shows an image from January 5, 2007, depicting an Amtrak train operating in the direction of Chicago on the CPR C&M Subdivision beneath the then-ongoing Marquette Interchange overpass construction. The five numbers in Figure 6 outline five of the seven total

[17] Marquette Interchange Reconstruction, Presentation of Mike Paddock, PE, PS, outlining project limits – determined overpass count via satellite imagery – see Figure 7.
[18] Canadian Pacific Railway 2008 Annual Report, p.11
[19] Canadian Pacific Railway 2015 Annual Report, p. 62

new overpasses constructed between 2004 and 2008 over the CPR C&M Subdivision. Figure 7 shows all nine overpasses constructed over CPR as part of the Marquette Interchange Project. From this success story, it is more than apparent that CPR is able to conduct railroad transportation during and after construction of highway overpasses.

Figure 6

Train on CPR Tracks Operating Beneath Marquette Interchange During Construction



Source: RLBA-added numbering, Flickr User: Jeramey Jannene, accessed 8/4/2016, Creative Commons License 2.0; https://www.flickr.com/photos/compujeramey/373435863/

Figure 7

Aerial Image of Marquette Interchange Showing Nine Overpasses

Constructed Over CPR Tracks Between 2004 and 2008



Source: RLBA, Google Earth – aerial image date: 6/18/2015

Based upon the CH2M summary of the Tollway's proposed construction sequence of the Western Access Interchange project, our estimate of CPR traffic on these tracks, the apparent windows during which no CPR trains operate on these tracks each weekday, and CPR's experience with the Marquette Interchange project, we believe that CPR will not experience unreasonable interference with its operations or ability to conduct railroad transportation during the construction of the Western Access Interchange.

3.3 Railroad Industry Experience with Track Outages

A variety of scheduled and unscheduled outages cause delays to train operations on a daily basis throughout the industry, yet "the show goes on" because railroads have learned to develop operating plans that accommodate modest outages (such as the delays that will occur from the Tollway's construction activities here).

3.3.1 Unscheduled Outages

Delays resulting from unscheduled outages are common in railroad operations. They may result from unplanned but necessary maintenance activities (repairing broken rails, fixing signal malfunctions, etc.), locomotive or railcar failures, crossing accidents, police or fire activity, snow, landslides and a variety of other causes. Many of these delays are in the range of one to two hours. Railroad operating plans are developed recognizing that such modest delays will happen and that the plan must have sufficient buffers, robustness and flexibility to withstand inevitable modest delays without resorting to extreme contingency measures.

More serious delays such as derailments, landslides or bridge damage can lead to outages ranging in duration from several hours to several days. Railroads respond first by altering train departures and using alternate routes in close proximity over their own tracks if available. In more extreme instances, say outages which are expected to exceed 24 hours, railroads respond by routing traffic more widely over their own networks if possible, "detouring" trains over tracks of other railroads and holding some traffic until the outage is resolved. The key point is that

railroads know how to maintain the most efficient-possible operations under a variety of outage scenarios.

3.3.2Scheduled Outages

Another category of delays is those resulting from scheduled maintenance work such as rail or tie replacement, grade crossing upgrades, bridge construction or repair or public events or construction activities adjacent to the rights-of-way. It is not uncommon for scheduled outages related to right-of-way maintenance or improvement to last for a full eight to ten hour work window, perhaps with an interruption to let a priority train pass through but often with no train movements at all. Longer outages are often associated with bridge construction or replacement. Tie replacement gangs and rail replacement gangs comprise significant numbers of workers and expensive machinery. It is costly for these gangs to suspend work and "button up" the track (make it safe for use) in order to let trains pass. As a result, railroads often adjust train operations to permit the track crews to work uninterrupted in order to maximize the efficiency and minimize the cost of performing the maintenance activity. This is done daily with no unreasonable interference with conducting railroad transportation.

Obviously, scheduled outages (such as for placement of Tollway Overpass beams) are far easier to deal with than unscheduled outages. Because these are planned events, there is the opportunity to minimize the impact on rail operations. This may be done by scheduling the event to minimize impact upon train operations, or modifying train operations in light of the planned activity or a combination of both. Each of these approaches to outage management is common in the rail industry.

4. Findings

The Tollway's proposed acquisition of temporary construction easements and permanent easements across CPR property in order to construct, operate and maintain the Western Access Interchange will not unreasonably interfere with CPR's ability to conduct railroad transportation.

The addition of support piers and the overhead easement for the highway bridges would create no appreciable permanent impacts upon CPR's operations and would not limit its ability to add trackage in the vicinity of the interchange in the unlikely event that CPR would elect to do so. Future train operations would not be impacted in any way.

During construction, most planned, scheduled outages arranged with CPR concurrence would be shorter than many outages resulting from CPR's own construction and maintenance activities system wide. These types of projects are commonplace in North America, and the U.S. railroad industry is used to cooperating and accommodating public sector overpass projects.

As is outlined in detail in this statement, we are confident that industry best practices support the reality that neither the slight permanent changes to CPR-owned right-of-way nor the temporary construction-related outages would unreasonably interfere with the carrying out of railroad transportation currently on the subject CPR corridor.

Verification

I, Walter H. Schuchmann, verify under penalty of perjury that I have read the foregoing report titled: "Impacts of Illinois State Toll Highway Authority Elgin O'Hare Western Access Project Construction and Operation upon Canadian Pacific Rail Operations in the Vicinity of York Road and Thorndale Avenue in Bensenville, Illinois," that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Exccuted on October 3, 2016

Walter H. Schuchmann

I, Ralph Lee Meadows, Jr., verify under penalty of perjury that I have read the foregoing report titled: "Impacts of Illinois State Toll Highway Authority Elgin O'Hare Western Access Project Construction and Operation upon Canadian Pacific Rail Operations in the Vicinity of York Road and Thorndale Avenue in Bensenville, Illinois," that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on October 3, 2016

Ralph Lee Meadows, Jr.

I, John W. McLaughlin, verify under penalty of perjury that I have read the foregoing report titled: "Impacts of Illinois State Toll Highway Authority Elgin O'Hare Western Access Project Construction and Operation upon Canadian Pacific Rail Operations in the Vicinity of York Road and Thorndale Avenue in Bensenville, Illinois," that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on October 3, 2016

John W. McLaughlin

I, Stephen M. Sullivan, verify under penalty of perjury that I have read the foregoing report titled: "Impacts of Illinois State Toll Highway Authority Elgin O'Hare Western Access Project Construction and Operation upon Canadian Pacific Rail Operations in the Vicinity of York Road and Thorndale Avenue in Bensenville, Illinois," that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on October 3, 2016

Stephen M. Sullivan

Impacts of Illinois State Toll Highway Authority Elgin O'Hare Western Access Project Construction and Operation upon Canadian Pacific Rail Operations in the Vicinity of York Road and Thorndale Avenue in Bensenville, Illinois

Report of R.L. Banks & Associates, Inc.

Appendix 1

Documents RLBA Reviewed in Preparing this Report

The following are a list of documents reviewed by the four experts from R.L. Banks & Associates, Inc. (RLBA) in the formulation of the subject report.

Document Description	Document Author
Metra Milwaukee Division West Schedule	Metra
List of Projects of Regional and National Significance	Federal Highway Administration
Track Chart of Milwaukee Division	Union Pacific Railroad
Village of Bensenville Comprehensive Plan	Village of Bensenville, Illinois
Open House Presentation for Western Access Project	Tollway
Contractor Constraints and Design Considerations	Stanley Consultants Inc, URS (AECOM)
STB Docket EP 724-3 Filing - US Rail Service Issues	Canadian Pacific Railway, Ltd. (Robert Johnson)
Western Access Interchange Ramp Bridges over Canadian Pacific Railway and Union Pacific Railroad	CH2M on behalf of Illinois Tollway
Final Concept Plans Elgin O'Hare West Bypass	CH2M on behalf of Illinois Tollway
FRA Grade Crossing Inventories	Federal Railroad Administration
Elevation of Highway Overpass Design	Stanley Consultants, Inc.
Bridge No. 16XX (B-65) General Plan and Elevation	Stanley Consultants, Inc.
Bridge No. 16XX (B-65) Details	Stanley Consultants, Inc.
Bridge No. 16XX (B-69) General Plan and Elevation	Stanley Consultants, Inc.
Bridge No. 16XX (B-69) Details 1	Stanley Consultants, Inc.
Bridge No. 16XX (B-69) Details 2	Stanley Consultants, Inc.
Bridge No. 16XX (B-67) General Plan and Elevation	URS (AECOM)
Bridge No. 16XX (B-67) General Data	URS (AECOM)
Bridge No. 16XX (B-67) General Details	URS (AECOM)
Bridge No. 16XX (B-71) General Plan and Elevation	URS (AECOM)
Bridge No. 16XX (B-71) General Data	URS (AECOM)
Bridge No. 16XX (B-71) General Details	URS (AECOM)
Contract No. I-13-4622 Recom. Contract Packaging	Stanley Consultants, Inc.
Railroad Access Road During Construction (1 of 3)	Stanley Consultants, Inc.
Railroad Access Road During Construction (2 of 3)	Stanley Consultants, Inc.
Railroad Access Road During Construction (3 of 3)	Stanley Consultants, Inc.
Parcel WA-2D-12-191 (1 of 2)	Spaceco, Inc.
Parcel WA-2D-12-191 (2 of 2)	Spaceco, Inc.
Parcel WA-2D-12-195 (1 of 1)	Spaceco, Inc.
Marquette Interchange Reconstruction Project Presentation	Mike Paddock, PE, PS
CREATE Final Feasibility Plan (Amendment 1)	CREATE Program
CREATE Final Preliminary Screening (Amendment 1)	CREATE Program

Document Description	Document Author
2008 Annual Report	CPR
2015 Annual Report	CPR
(Intermodal)Transit Schedule Ramp to Ramp	CPR
C&M Subdivision Employee Timetable No. 6, Oct 1, 2007	CPR
Grade Crossing Inventory: Conway Road (Lake Forest)	Federal Railroad Administration Grade Crossing Database
Grade Crossing Inventory: Half Day Road (Bannockburn)	Federal Railroad Administration Grade Crossing Database
Grade Crossing Inventory: Osterman Avenue (Deerfield)	Federal Railroad Administration Grade Crossing Database
Grade Crossing Inventory: Sherman Road (Northbrook)	Federal Railroad Administration Grade Crossing Database
Grade Crossing Inventory: Chestnut Avenue (Glenview)	Federal Railroad Administration Grade Crossing Database
Grade Crossing Inventory: Glenview Road (Glenview)	Federal Railroad Administration Grade Crossing Database
Grade Crossing Inventory: Beckwith Road (Morton Grove)	Federal Railroad Administration Grade Crossing Database
Grade Crossing Inventory: Devon Avenue (Chicago)	Federal Railroad Administration Grade Crossing Database

Impacts of Illinois State Toll Highway Authority Elgin O'Hare Western Access Project Construction and Operation upon Canadian Pacific Rail Operations in the Vicinity of York Road and Thorndale Avenue in Bensenville, Illinois

Report of R.L. Banks & Associates, Inc.

Appendix 2

Individuals RLBA Consulted in Formulating its Report

The following are people contacted by the four experts from R.L. Banks & Associates, Inc. (RLBA) in the formulation of the subject Verified Statement.

Person	Title	Organization
Paul A. Lundberg	President	Great Western Partners LLC
Lidia Pilecky, P.E.	Vice President	CH2M
Ben Ostermann, P.E.	Transportation/Traffic Engineer	CH2M
Larry Martin	Vice President/ Senior Project Manager	American Surveying & Engineering, P.C.
Paul E. Bobby, P.E.	Senior Associate	STV Inc.
Manar Nashif, P.E.	Senior Project Engineer	Illinois State Toll Highway Authority
Rocco J. Zucchero	Deputy Chief of Engineering for Planning	Illinois State Toll Highway Authority
Robert M. Koss, P.E., P.T.O.E.	Chicago Operations Group Manager	Stanley Consultants, Inc.
Donald E. Yedder, P.E., S.E.	Senior Manager, Structures	AECOM
Don Schultz	Emergency Management Director	Village of Bensenville

Impacts of Illinois State Toll Highway Authority Elgin O'Hare Western Access Project Construction and Operation upon Canadian Pacific Rail Operations in the Vicinity of York Road and Thorndale Avenue in Bensenville, Illinois

Report of R.L. Banks & Associates, Inc.

Appendix 3

Resumes of RLBA Experts

Walter H. Schuchmann
Vice President, Operations Planning

Education
MBA, Beta Gamma Sigma business honorary society, Indiana University, 1979
BS Industrial Management, Beta Gamma Sigma business honorary society, Purdue University, 1972

Professional Certifications and Affiliations
Certified Member, American Society of Transportation and Logistics; American Association of Railroad Superintendents; National Defense Transportation Association

Years of Transportation Experience
38

Qualifications
With RLBA since 1988, Mr. Schuchmann has led and/or participated in analyzing operations and viability of numerous railroads on behalf of carriers, government agencies and major financial institutions. He has participated in coal and bulk commodity transportation studies, stand-alone cost development and rail service, switching and rate studies. Mr. Schuchmann has contributed to evaluations of applicable intermodal technologies and existing and potential intermodal services, as well as intermodal terminal configuration and operations and waste-by-rail movements. He also has advised counsel and prepared testimony in legal proceedings in which railroad safety procedures and violations were at issue.

Relevant Project Experience

- ***North Texas Tollway Authority (NTTA)*** Supported NTTA, the toll road operator in the Dallas-Ft. Worth metropolitan area, in its negotiations with Union Pacific concerning the construction of the Southwest Parkway in Ft. Worth, which would be built over Davidson Yard, UP's largest yard in Texas. Reviewed operational impacts of track outages associated with eight phases of construction activity. Drafted agreement language, participated in negotiations with UP and commented on draft written and oral communications between NTTA and UP.

- ***Gainesville Regional Utilities (FL)*** Analyzed potential rail operations, arrangements and resources in support of GRU's plan to introduce railroad competition at its power plant through construction of a new rail line largely along former CSX right-of-way. Examined service, equipment utilization and cycle time provisions as part of CSX and Norfolk Southern contract negotiations.

- ***Waste Management of Kentucky (WMI)*** Participated in the firm's review of expense claims totaling $6.6 million submitted to it by CSX Transportation (CSX) in conjunction with a derailment attributed to a WMI truck striking a CSX bridge abutment. He focused on train re-routes, increased car hire expense and work train and other transportation charges. When RLBA found that the claim was overstated by an amount between $1.4 and 2.4 million, WMI settled for approximately 75 percent of the amount sought.

- ***Western Fuels Association/Basin Electric*** Simulated a 200 mile plus railroad network mirroring Burlington Northern Santa Fe (BNSF) lines linking Powder River Basin origins and Basin's Laramie River generating facility near Moba, UT, using Berkley Simulation Software's Rail Traffic Controller to assess the capacity of a hypothesized railroad network to handle current and future additional business volumes in support of a stand-alone railroad rate case dispute. Tested inputs and design of the model, participated in developing track configuration and operating plan, sponsored testimony before the STB on the validity of results produced by the model, and evaluated and critiqued BNSF reply testimony and presented rebuttal evidence.

- ***AEP Texas North Company (AEP)*** Simulated a 1,200 mile railroad network mirroring Burlington Northern Santa Fe (BNSF) lines linking Powder River Basin origins and AEP's Okla Union generating facility in Vernon, TX, using Berkley Simulation Software's Rail Traffic Controller to assess the capacity of a hypothesized railroad network to handle current and future additional business volumes in support of a stand-alone railroad rate case dispute brought by a subsidiary of the nation's largest electric utility. Tested inputs and design of the model, developed alternatives to be considered by other consultants, sponsored testimony before the STB on the validity of results produced by the model, evaluated and critiqued BNSF reply testimony and presented rebuttal evidence.

- ***Kansas City Power & Light*** Created a Rail Traffic Controller simulation network and participated in conceptualizing a hypothetical stand-alone railroad focusing on coal movements between Powder River Basin mines and the Montrose Generating Station in Ladue, MO as part of a Surface Transportation Board Stand Alone Cost proceeding.

- ***PYCO Industries*** Analyzed potential rail service, arrangements and resources in support of PYCO Industries' feeder line application before the Surface Transportation Board to acquire South Plains Switching, Ltd. Co. property in three, alternative, rail asset and rail service scenarios, after an on-site visit of plant and rail operations and interview of primary customers.

- ***State of Washington*** Conducted operational analyses of alternative BNSF routes including Stampede Pass, Stevens Pass and the Columbia River Gorge to determine appropriate compensation to the State associated with the Army's taking of potentially reactivated railroad property.

- ***Riverside County Transportation Commission (RCTC)*** Testified on behalf of RCTC in connection with a dispute between the Commission and BNSF concerning the parties' alternative interpretations of signed agreements governing RCTC's right to run additional commuter trains in exchange for making capital improvements. Specifically, presented testimony to refute claims made by a BNSF witness that additional trains could not be accommodated on the improved infrastructure. In addition, conducted operational analysis in support of testimony that presented the damages to RCTC as a result of not being allowed to operate its desired number of trains in terms of: 1) denied access to commuter trains actually operated beyond the limits of the disputed segment and 2) capital improvements funded by RCTC to permit operation of the disputed trains.

- ***The Oregon International Port of Coos Bay*** A Rail America subsidiary, Central Oregon and Pacific Railroad Inc. (CORP), embargoed and subsequently sought to abandon freight service to the Port due to a tunnel collapse, forcing all rail shippers west of the collapse to haul their freight to Eugene or Portland by truck before it is transloaded into railcars. Those additional costs and the belief that CORP had not acted in good faith caused the Port to investigate the replacement of CORP by another short line railroad through a Feeder Line Application to the Surface Transportation Board to acquire the rail line. Developed operating plan to facilitate short line service startup. Assisted the Port in negotiating the establishment and retention of a viable short line

contract operator through the development of a Request For Proposals to solicit short line operators.

- ***Intermountain Power Agency of Utah*** Evaluated railroad operations and equipment issues in monitoring contract adherence by the agency's railroad transportation suppliers and prepared materials in connection with an arbitration hearing.

- ***Gainesville Regional Utilities (FL)*** Analyzed potential rail operations, arrangements and resources in support of GRU's plan to introduce railroad competition at its power plant through construction of a new rail line largely along former CSX right-of-way. Examined service, equipment utilization and cycle time provisions as part of CSX and Norfolk Southern contract negotiations.

- ***State of New York and New York City Economic Development Corporation*** Assessed the feasibility of operating trains of a to-be-designated carrier on Conrail, Amtrak and Metro-North lines to provide competitive rail access to the east side of the Hudson River, based upon field inspection and review of merger documents. Submitted testimony to the Surface Transportation Board.

- ***State of Washington*** Conducted operational analyses of alternative BNSF routes including Stampede Pass, Stevens Pass and the Columbia River Gorge to determine appropriate compensation to the State associated with the Army's taking of potentially reactivated railroad property.

- ***Gunderson, Inc.*** Examined rail intermodal equipment, fleet operations and equipment charges in conjunction with client's opposition to anti trust immunity sought by Trailer Train Company.

- ***Department of Justice*** Examined the roles and activities of intermodal terminal employees in connection with an investigation of employment tax liability.

- ***Maryland Mass Transit Administration (MTA)*** Led a team that analyzed the Federal Railroad Administration's asserted jurisdiction over Baltimore's Central Light Rail Line due to a track segment shared with freight operations and the potential costs of complying with extant and proposed federal rules. Also researched the waivers requested by (and largely granted to) then proposed Utah and New Jersey systems as well as actions taken by San Diego's light rail system.

- ***Private Client*** Advised legal counsel of a private institution, which owns railroad station grounds and structure in preparation of its defense in a lawsuit involving a fatality at the station. Specific topics addressed included roles and responsibilities among railroad companies and property owners in general and analysis of instant contractual and other specific relationships, and prevailing industry safety practices.

Prior to joining RLBA, Mr. Schuchmann served as an operating and safety officer with Norfolk Southern Railway (NS) stationed in the busy coal-originating Pocahontas Division, at Chicago Terminal and on the Fort Wayne and Eastern Divisions. He participated in NS's first applications of Voice Block Authority to control train movements. At Chicago, he supervised commuter, intermodal, coal and merchandise freight operations and recommended and participated in changes in traffic blocking, crew and track utilization, clerical assignments and other operational matters He developed the operating plan and recommended track and signal modifications for main line trackage leased from the Chicago and Western Indiana Railroad. At several locations, he was responsible for service to local shippers as well as road and terminal operations.

Lee Meadows, Jr., P.E.
Director, Transportation Engineering

Education
Bluefield State College Bluefield, WV AS Civil Engineering Technology May 1970
Bluefield State College Bluefield, WV BS Civil Engineering Technology May 1972
Oregon State University Corvallis, OR Graduate Study
Wayne State University Detroit, MI MS Civil Construction Management December 1980

Professional Registrations and Affiliations
Registered Professional Civil Engineer
AREMA

Years of Transportation Experience
44

Qualifications
Mr. Meadows recently joined RLBA after more than three decades of experience with Norfolk Southern Corporation and its predecessor the Norfolk And Western Railway, during which he held positions with increasing responsibility within the Engineering Department spanning management and engineering of railroad track structure, bridge and building inspection, condition assessment, maintenance, rehabilitation, design and construction as well as railroad operations.

Areas of Expertise

- ***Track and Structure Planning, Rehabilitation, Engineering and Maintenance*** Planned, scheduled and supervised numerous, large track projects such as tie renewals, rail installation, track resurfacing, shoulder cleaning and undercutting operations, structure upgrading and grade/sub-grade stabilization. Supervised numerous bridge and culvert rehabilitation projects including complete renewals, extensive tunnel repairs and tunnel portal reconfigurations. Was responsible for creating capital and operating budgets and working within them. Managed tasks at all levels of engineering responsibility including third party contract work on many projects. Has extensive experience in emergency response and repair.

- ***Design*** Participated in the design of intermodal terminal facilities in Detroit, MI, as well as the track redesign for eliminating the westbound hump at Norfolk Southern's Conway dual hump yard near Pittsburgh, PA.

- ***Grade Crossings and Other Safety Issues*** Grade crossing committee member on the various divisions while serving as a Division Engineer. The committees sought to eliminate redundant grade crossings, reducing exposure to collisions. Helped facilitate a training conference for division personnel annually for engineering supervisors addressing the effect of excessive heat and drastic temperature changes that traditionally occur in the summer.

- ***Operations*** Experience with switching and yard operations, train performance, customer service, FRA rules, regulations and labor agreements.

- ***Tunnels*** During the years from 1986 to 1997 while working on the Pocahontas Division, Mr. Meadows was involved in the removal and replacement of the track in the majority of the 99 tunnels located on that division. At the height of this work, we averaged replacing 2.5 miles of track in tunnels for each of four consecutive years between Bluefield, WV and Williamson, WV, the primary work zone for the Heartland Project. Every tunnel in this corridor was worked with the exception of Elkhorn Tunnel. Through the years, the team Mr. Meadows oversaw made adjustments from learned experiences and were able to meet the demands of operating trains within planned delay parameters whether on single or double track locations.

Relevant Project Experience

- ***Oklahoma DOT*** Performed a Track Asset Net Liquidation Valuation of the Oklahoma Department of Transportation-owned Stillwater Subdivision extending 30.2 miles between Stillwater and Pawnee, Oklahoma. Work included performing an on-site inspection and survey of track assets and the formulation of a rail asset valuation. The final deliverable was the calculation of a Net Liquidated Value and delivery of a final written track asset report.

- ***New England Central Railroad (Genessee & Wyoming, Inc.)*** Prepared a Verified Statement and presented its findings before the Surface Transportation Board outlining the steps taken in providing net liquidation valuations of the New England Central Railroad (NECR) rail and land assets. Specifically, performed appraisals of the following three segments of the NECR, totaling 72.8 miles: 1) a 48.8-mile segment between Windsor and Brattleboro, VT; 2) a 10.6-mile segment between Brattleboro, VT and East Northfield, MA and 3) a 13.4-mile segment between Windsor and White River Junction, VT. In the VIP, examined both rail assets and fixed infrastructure, providing a "value in place" estimate of rail and other track materials, ballast, bridges and tunnels, signals and highway crossings.

- ***Canadian Pacific Ltd*** Assisted on a study to provide potential buyers of the 660 miles long portion constituting of the West End of the former DME Railroad to be spun off by CP. Areas of study included: 1) estimating the infrastructure capital and maintenance costs over the next decade necessary to keep the railroad in a steady state condition; 2) ascertaining the number of employees needed to maintain the physical plant of the new railroad and 3) providing opinions on changes to make the operation more efficient if operated as an independent railroad. Undertook an on-site inspection of nearly the entire DM&E West End from which engineering maintenance costs were developed.

- ***Natchez Railway, LLC*** Physically inspected and made net liquidation value determinations of 74.05 miles of Natchez Railway track assets on main and side tracks between Natchez and Brookhaven, Mississippi.

- ***City of Cincinnati*** Physically inspected and made net liquidation value determinations of 3.89 miles of Norfolk Southern track assets on main tracks in the vicinity of Cincinnati, Ohio.

- ***Grenada Railway, LLC*** Physically inspected and made net liquidation value determinations of 85 miles of certain Grenada Railway track assets on main and side tracks between Canton and Grenada, Mississippi.

- ***Grenada Railway, LLC*** Physically inspected and made net liquidation value determinations of the 11-mile Water Valley Branch of Grenada Railway between W.V. Junction and Bruce Junction, Mississippi.

- ***Alameda County Transportation Commission*** Using Desktop methods made net liquidation value determinations of certain Union Pacific Railroad track assets on main and side tracks between Niles Junction

and Melrose, California. The 23.30 miles valued were segmented as follows: 1) Segment G, between Niles Junction and Industrial Parkway, 6.56 main track miles and 2) North Segment, between Industrial Parkway and Melrose, 13.56 main track miles.

- ***Carmeuse*** Designed horizontal and vertical alignment, provide contract documents for a dual loop track for outbound shipments of aggregate limestone and lime and inbound shipments of coke and non-processed lime for a quarry in northern Virginia.

- ***First Energy*** Surveyed and designed track expansion to accommodate 130-car unit coal trains unloading at a power generating station in mid West Virginia.

- ***United Coal Company*** Surveyed, designed, permitting and contract documents for a new ten-mile railroad to be constructed on an abandoned railroad right-of-way for outbound shipments of 130 car coal trains for a coal company in central West Virginia.

- ***United Coal Company*** Surveyed, designed, permitted, prepared contract documents and procured material for sidetrack construction for loading 120 car unit coal trains for a coal company in southern Virginia.

- ***Rosebud Mining Company*** Managed the design, permitting, material procurement, and construction with hired forces of a ten-mile branch rail line on a former railway right-of-way for shipment of 130-car unit coal trains for a coal company in western PA.

- ***United Coal Company*** Designed, provided contract documents, and procured material for sidetrack construction for shipping 100-car unit coal trains for a coal company in southern West Virginia.

- ***SunCoke Energy*** Designed track layout for new coke facility for inbound 130-car unit coal trains and for outbound 90-car coke trains in Ohio.

- ***Vulcan Materials*** Surveyed, designed, provided contract documents, and procured material for track facilities for outbound shipments from a granite quarry in eastern Virginia.

- ***Warrenton Terminal*** Surveyed, designed, provided contract documents, and procured material for track facilities for rail/barge facility in southern, Ohio.

- ***Michigan Paving and Materials Company*** Performed volumetric surveys for annual inventory of aggregates for a major asphalt producer in Michigan.

Prior Work Experience

Norfolk Southern Corporation

- ***Division Engineer*** Responsible for the track, bridge, and structure maintenance for 2,500 miles of railroad featuring high density freight, coal traffic and intermodal loading tracks and facilities. Pittsburgh, PA March 2000.

- ***Assistant Division Engineer*** Assisted in the integration of the Conrail acquisition. Pittsburgh, PA June 1999.

- ***General Division Engineer*** Responsible for the mechanized gangs that performed tie replacement, rail renewal, and track surfacing. Bluefield, WV June 1998.

- ***Division Engineer*** Responsible for track, bridge, and structure maintenance for 2,000 miles of track in the coal region of VA, WV, & KY. Bluefield, WV August 1995.

- ***Division Engineer*** Responsible for track, bridge, and structure maintenance for 1,500 miles of railway in KY, IN, OH, & TN. Somerset, KY October 1993.

- ***Assistant Division Engineer*** Internal company structure change to reduce levels in management. Bluefield, WV February 1989.

- ***Division Engineer*** Responsible for track maintenance of 1,000 miles of track in coal region of VA & WV. Developed methodology for removing deteriorated track in tunnels and replacing with new components while operating under traffic on high density coal routes. Bluefield, WV January 1986.

- ***Division Engineer-Maintenance*** Responsible for track maintenance 1200 miles of track for coal and freight traffic. Brewster, OH May 1984.

- ***Assistant Division Engineer-Maintenance*** Change in location to facilitate division of PA Division. Brewster, OH November 1983.

- ***Assistant Division Engineer-Maintenance*** Assisted Division Engineer program and execute routine maintenance of trackage in PA & OH. Bellevue, OH June 1983.

Norfolk & Western Railway

- ***Division Engineer-Construction & Maintenance*** Track, building, bridges, & dock maintenance responsibilities for Detroit Terminal. Detroit, MI January 1982.

- ***Terminal Engineer*** Managed railway construction projects for Detroit Terminal. Most notable rehab of Bascule Bridge. Detroit, MI December 1976.

- ***Assistant to Regional Engineer Projects*** Railway site representative on public improvement projects. Primarily the Port Authority busway adjacent to RR trackage in Pittsburgh, PA. Cleveland, OH November 1975.

- ***Inspector*** Performed railroad track construction and right-of-way surveys. Roanoke, VA December 1972.

John W. McLaughlin

Director, Market and Network Solutions

Education
BS, Transportation Management, Indiana University School of Business, 1979

Years of Transportation Experience
37

Qualifications
Mr. McLaughlin joined RLBA in 2007 after eighteen years at a Class 1 railroad and ten years subsequently at a Less-Than-Truckload (LTL) motor carrier. His railroad career featured analytical, supervisory and service design responsibilities in operations, being the primary 24/7 contact on service issues of major intermodal customers, and development and implementation of price, service and communications plans for market expansions. During his motor carrier career Mr. McLaughlin organized and led strategic, revenue development and sales support initiatives such as market share analysis and directing development of the carrier's website. Since joining RLBA he has provided analysis and recommendations to public agencies regarding the initiation or expansion of commuter and intercity passenger rail services in Michigan and New York. He has also provided expert railroad capacity and operations analysis to clients engaged in proceedings before the Surface Transportation Board.

Relevant Project Experience

- ***Twin Cities & Western Railroad*** Evaluated the threat of potential traffic diversion that would result from acquisition of a competing regional railroad by a Class I railroad. Interviewed customers of the client railroad and reported on the likelihood that they would divert traffic from client. Calculated the potential operating margin advantage of the competitor as a metric for the magnitude of the diversion threat, on a lane and commodity-specific basis. Tested the competitor's train counts and capacity calculations on a key main line, and provided a verified statement as part of client's filing with the Surface Transportation Board.

- ***Consumers Energy*** Led RLBA engagement to simulate a 150 mile plus railroad network mirroring various CSX Transportation lines linking a connection with BNSF Railway in Chicago, IL to Consumer Energy's J.H. Campbell Generating Complex in West Olive, MI. Using Berkley Simulation Software's Rail Traffic Controller®, assessed the capacity of a hypothesized railroad network to handle current and future additional business volumes in support of a stand-alone railroad rate case dispute. Tested inputs and design of the model, participated in developing track configuration and operating plan and provided analysis of the model's output.

- ***Village of Barrington*** Tested current and forecasted train volumes submitted by Canadian National Railway in a control application, and created an independent forecast of train volumes, in support of client's filing with the Surface Transportation Board. Created the forecasts using the Freight Analysis Framework (FAF2.2) Database of the USDOT's Federal Highway Administration. Lead firm's review of the Class 1 railroad's work papers, development of discovery questions, and assessment of the resulting discovery documents.

- ***Gulf Coast Rail District (GCRD)*** Manager of a study to provide freight rail bypass development and planning assistance in Fort Bend County, Texas. GCRD retained RLBA and its team to: 1) investigate three prospective rail bypass corridors and determine the possible public and private sector impacts; 2) develop and map an

inventory of major environmental and land-use constraints posed by the territory to be traversed; 3) compile a detailed inventory of roadway grade crossings on current and prospective rail corridors to determine impacts on roadway traffic and associated cost and quality-of-life impacts; 4) assign costs to each alternative; 5) develop a detailed benefit - cost analysis with respect to railroad improvements, community impacts, construction cost; and 6) facilitate community involvement during advisory committee meetings.

- ***Lone Star Rail District*** Reviewed the availability and quality of data required to evaluate a business plan associated with the acquisition of the Austin – San Antonio Rail Corridor from Union Pacific Railroad and instituting regional passenger rail services, which included calculating the amounts of capital, operating and maintenance costs directly associated with the proposed passenger operation. The product of the study was a listing of data needed to make the business case and recommendations as to how such data should be obtained and developed.

- ***Arizona Electric Power Cooperative*** Led an RLBA team that simulated a 2,200 mile plus railroad network mirroring Burlington Northern Santa Fe (BNSF) and Union Pacific lines linking Powder River Basin origins and AEPCO's Apache generating facility near Cochise, AZ. Using Berkley Simulation Software's Rail Traffic Controller®, RLBA assessed the capacity of a hypothesized railroad network to handle current and future additional business volumes in support of a stand-alone railroad rate case dispute. Mr. McLaughlin tested inputs and design of the model, participated in developing track configuration and operating plan and provided analysis of the model's output.

- ***Seminole Electric Cooperative*** Entered and tested inputs and design of the model and developed alternatives to be considered by other consultants in connection with RLBA simulation of a 2,000 mile plus railroad network mirroring CSX lines linking various coal origins with Seminole Electric's generating station at Palatka, FL. Using Berkley Simulation Software's Rail Traffic Controller®, RLBA assessed the capacity of a hypothesized railroad network to handle current and future additional business volumes in support of a stand-alone railroad rate case dispute.

- ***Confidential Client*** Supported a railroad line capacity analysis to determine the most feasible way of increasing coal transportation analysis throughput and improving a coal transportation customer's financial position. Analyzed strategic alternatives, examined route capacity and bottlenecks impeding the increased movement of coal. The RLBA team determined corridor capacity by producing operating statistics such as train times, train delay time and number of re-crews. RLBA used a rail profile and curvature files provided by the client to construct a digital simulations and model of the requested rail system to generate extremely realistic time, fuel consumption and capacity estimations.

- ***Lake States Railway Company And Saginaw Bay Southern Railway*** Led RLBA's market analysis techniques to evaluate past and future revenues on the lines as part of its determination of the going concern value of the combined enterprises. Through interviews with railroad officials and analysis of financial records, understanding of customers' shipping demands and comprehension of operating procedures on the railroads, forecasted future market growth on the railroads.

- ***The Oregon International Port of Coos Bay*** Rail America subsidiary, Central Oregon and Pacific Railroad Inc. (CORP), embargoed and subsequently sought to abandon freight service to the Port due to a tunnel collapse, forcing all rail shippers west of the collapse to haul their freight to Eugene or Portland by truck before it is transloaded into railcars. Those additional costs and the belief that CORP had not acted in good faith caused the Port to investigate the replacement of CORP by another short line railroad through a Feeder Line

Application to the Surface Transportation Board to acquire the rail line. Interviewed representatives of several major shippers on the line to ascertain: 1) historical rail traffic volumes and shipper requirements so as to develop future railroad freight traffic projections; 2) determine how much more it was costing shippers to ship by a combination of a truck and rail than an all-rail haul and 3) how volume might change in the future.

- ***US Magnesium*** Assisted in determining the road property investment (RPI) replacement costs of tunnels, culverts and ballast, utilizing publicly available historical data and standardized formulas as well as costs furnished by the Surface Transportation Board. RPI costs were associated with a Stand Alone Railroad hypothesized along an approximately 1,000-mile corridor in support of a Simplified Stand Alone Case (SAC) extending between just west of Salt Lake City, UT and the Los Angeles Basin area. Checked other portions of the network model to ensure accuracy and reasonableness.

- ***Kansas City Truck And Intermodal Study*** The Mid-America Regional Council retained RLBA to assist it in understanding the nature of the rail intermodal business and the truck traffic which flows into and out of the six intermodal terminals in the Kansas City Region as part of an inter-regional truck study. Mr. McLaughlin developed survey plans and methodologies to comprehend truck movements in and out of the area intermodal terminals, analyzed the data and compiled the results. He also employed RLBA's proprietary intermodal terminal model to estimate the capacity of those six terminals.

- ***Los Angeles County Sanitation Districts*** Updated and evaluated costs and equipment issues associated with the operation of the two proposed intermodal terminals that are to be part of LACSD's waste-by-rail project. Organized and built a basic intermodal terminal costing model that created workload metrics which were used to solicit cost estimates from third-party terminal operating companies and then calculated operating costs in cost per ton from those estimates. Recommended changes in rail car specifications and order quantities, developed costs and background information for lease and purchase options of terminal operating equipment.

Prior to joining RLBA, Mr. McLaughlin, as Senior Business Development Analyst, Conrail Intermodal Service Group, managed intermodal penetration of the truckload motor carrier market from zero to a $50 million line of business in five years. Developed and implemented price, service and communications plans for market expansions that generated $11 million of new revenue. Also in the Intermodal Service Group he held the position of Service Manager assisting in the restructuring of the train network to accommodate double stack technology. In addition to intermodal, Mr. McLaughlin held multiple positions of increasing responsibility in the transportation department at Conrail culminating in Senior Operations Improvement Analyst. He was also the Director of Market Research at JEVIC Transportation.

Stephen M. Sullivan
Managing Director

Education
BA, Economics, College of William and Mary, 1977

Professional Development and Certifications
Corporate Finance, the Wharton School, University of Pennsylvania
Executive Management, Penn State University
Project Management, Drexel University
Modal Analysis, University of Texas – Texas Research Development Foundation
Economic Development, Ohio State University

Years of Transportation Experience
38

Qualifications
Since joining RLBA in 2013, he has utilized his extensive railroad operations knowledge and experience on a variety of simulation, ligation support and strategic planning projects. Other initiatives include working with industry leaders to develop a CBR risk mitigation seminar (in planning) and continued analysis on the changing regulations affecting the shipment of crude oil in tank cars. Prior to joining RLBA in 2013, Mr. Sullivan served for thirteen years as Vice President and Executive Director of the American Short Line & Regional Railroad Association (ASLRRA), a trade association comprised of 950 private and public sector railroad companies and their suppliers headquartered in Washington, DC. Mr. Sullivan directed initiatives and staff strategic alliances, financial management, administration, industrial safety and security, technology development/deployment, training, legislative and regulatory matters.

Prior to working at the ASLRRA, Mr. Sullivan held various operations, planning and corporate strategy management positions at Conrail, Inc., formerly a $7 billion corporation and premier Northeast and Midwest freight railroad, headquartered in Philadelphia, PA. While Director of Corporate Strategy at Conrail, Mr. Sullivan acted as operations and geography expert throughout a $12 billion merger, leading managers in areas of financial analysis, asset management, technology application and budgeting. Mr. Sullivan also held many other titles at Conrail, including Director of Planning and Strategy, Manager of Strategic Planning, Manager of Commercial Planning, Manager of Industrial Development, District Superintendent of Operations and Supervisor of Rules and Operating Practices.

Relevant Work Experience

- ***Delaware and Hudson Railway Company*** Provided expert witness testimony on behalf of Delaware and Hudson Rail Company and Canadian Pacific Railway Company (CP) before the Surface Transportation Board on the matter of tariff rate issues regarding the movement of empty railcars to and from shop facilities. The written testimony delivered to CP consisted of an extensive analysis of the issue, background on related incidents, an explanation of car movement rules, a definition of what is considered revenue car movement versus non-revenue car movement and a recommendation containing RLBA's conclusion on the matter.

- ***Mahoney, Silverman & Cross, LLC*** Provided litigation support relating to Mahoney, Silverman & Cross, LLC's (MSC) client's interest in reactivating a private at-grade railroad crossing a BNSF Railway (BNSF) right-of-way south of Lorenzo, Illinois. MSC sought RLBA's expertise due to the fact that MSC's client's farm land is bisected by a BNSF mainline commonly referred to as the "Transcon", which is amongst the busiest and most essential routes over which BNSF operates, resulting in very difficult legal tactics enacted by BNSF. Mr. Sullivan conducted on-site right-of-way, operational safety analyses and grade crossing research as necessary as well as providing the affirmative testimony and deposition of an experienced RLBA operations expert.

- ***Maryland Transit Administration*** Reviewed property records, researched past railroad operations and performed an on-site visit to the right-of-way involved in a litigation matter with the goal of evaluating the impact on current rail operations of encroachment on the right-of-way which was the basis of the MTA litigation. Mr. Sullivan provided a detailed expert Verified Statement and testimony in Circuit Court.

- ***Foulston Siefkin LLP*** Determined the feasibility of constructing a permanent grade crossing over Wichita Terminal Association (WTA) tracks to allow the commercial development of the client's 'landlocked' property. Mr. Sullivan authored a Verified Statement submitted before the Surface Transportation Board commenting on the minimal impact of the grade crossing on WTA's interchange operations with BNSF Railway. Drawing upon observations during the inspection and a review of WTA's records, Mr. Sullivan determined that with minor alterations, rail service could continue with minimal negative effect to railroad operations or safety.

- ***Total Petrochemical Inc.*** Provided expert litigation assistance supporting the company's stand-alone rate case against CSX Transportation. Mr. Sullivan assisted in the evaluation and construction of methodologies rebutting CSX's reply evidence pertaining to yard dwell times and drafted text presented to the Surface Transportation Board discussing various assumptions made by CSX to increase dwell times artificially and thus, associated cost, on a hypothetical stand-alone Total Petrochemical Railway.

- ***Confidential Client*** Conducted theoretical and practical capacity analysis of a rail line in the western hemisphere. Determined corridor capacity by producing operating statistics such as train times, train delay time and number of re-crews. Assisted in using a rail profile and curvature files provided by the client to construct a digital simulation and model of the requested rail system to generate extremely realistic time, fuel consumption and capacity estimations. Simulated numerous scenarios with the RTC software to determine capacity limitations on the railroad in the current state as well as assessing capacity improvements gained by the theoretical installation of advanced signaling, added block capacity and increasing trackage.

- ***San Diego Metropolitan Transit System*** Mr. Sullivan, along with additional RLBA staff, spent a week on site in San Diego to both meet with Pacific Imperial Railroad (PIR), Baja California Railroad (BJRR) and San Diego Metropolitan Transit System (MTS) managements, as well as to physically inspect the currently dormant MTS-owned "Desert Line." After considering the information gathered, Mr. Sullivan used his collective and extensive knowledge of the railroad industry and the circumstances on the ground in the subject territory to produce recommendations jointly to PIR, BJRR and MTS as to how the Desert Line could be operated as a shortline freight railroad more successfully that was proposed.

- ***Kansas City Southern*** Analyzed the operational impacts to Kansas City Southern (KCS) that might result from the potential introduction of BNSF direct service into a jointly-owned (KCS and UP) and operated segment of railroad, known as the Rosebluff Lead, in the greater Lake Charles, LA area, particularly as it concerned the movement of crude-by-rail into the CITGO Lake Charles Manufacturing Complex. Prepared a Verified Statement to be submitted to the Surface Transportation Board describing the significant negative impacts on

the safety and fluidity of existing operations that would flow from granting BNSF's request to obtain Terminal Trackage Rights.

Prior Work Experience

Conrail, Inc.

- Director, Corporate Strategy – Operations and geography expert re $12B merger, leading managers in areas of financial analysis, asset management, technology application and budgeting. Championed a cross-departmental strategic geographic plan of business growth, with the applied goal of maximizing the return on newly acquired and surplus assets.

- Director, Planning and Strategy – Directed the asset management staff's deployment of TQM and continuous improvement processes, championing and applying a strategic GIS to capital investment analysis, operations optimizations and market/asset development. Provided corporate strategy consulting to NJDOT re its 25 year strategic transportation plan.

- Manager, Strategic Planning – Developed a $500M corporate asset strategy and facilitated the resulting reorganization that more efficiently employed cross-functional business processes.

- Manager, Capital Planning – Directed the $100M commercial capital plan, negotiating across department leadership to achieve internal consensus.

- As Manager of Commercial Planning, through close interaction with marketing managers, developed and validated strategic industrial development projects across all lines of business.

- As Manager of Industrial Development, implemented new business projects, coordinating resources across multiple departments to attract new customers within budgets and timelines.

- As District Superintendent of Operations, based in Toledo, Ohio but overseeing northwest Ohio and southwest Michigan, developed and directed changes to operations and workforce alignment, resulting in improved on-time performance while lowering operating costs.

- As Supervisor of Rules and Operating Practices, based in Toledo, Ohio and Detroit, directed the training of operating employees and applying of rules and practices on Conrail's largest division. Supervised 120+ employees.

- As Terminal Trainmaster, based in Toledo, Ohio and Detroit, supervised operations at a major hump yard (Stanley Yard in Toledo, OH) handling automotive and industrial commodities.

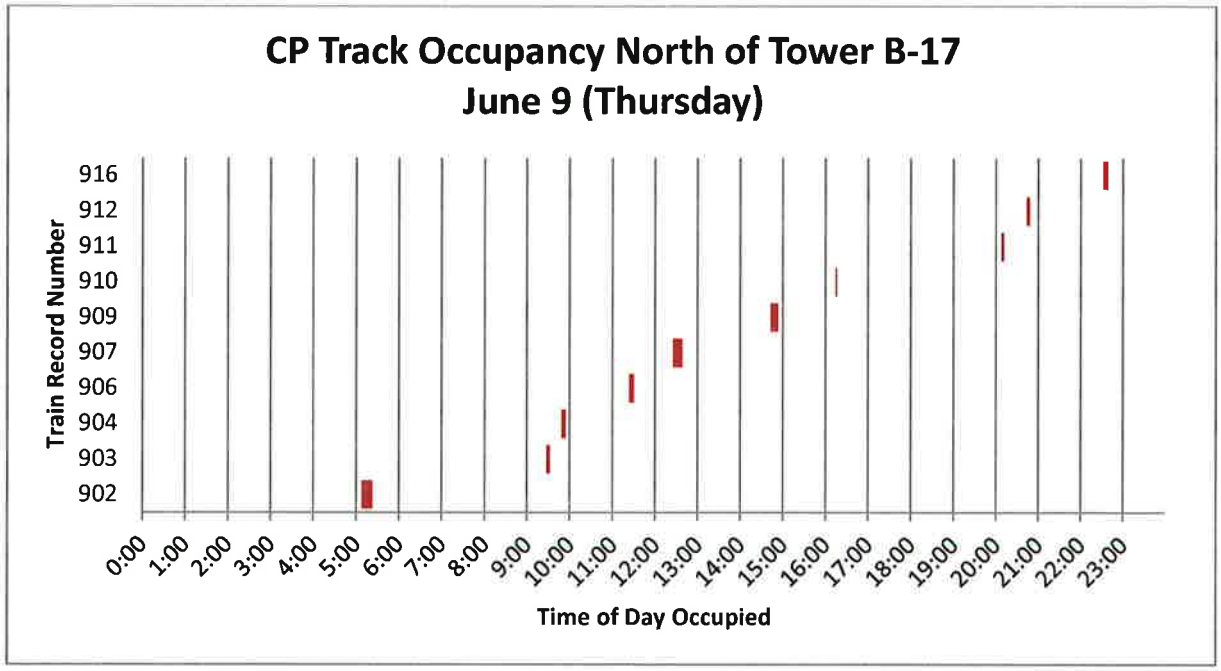
- As Conductor and Brakeman, performed freight and passenger train service in New York City.

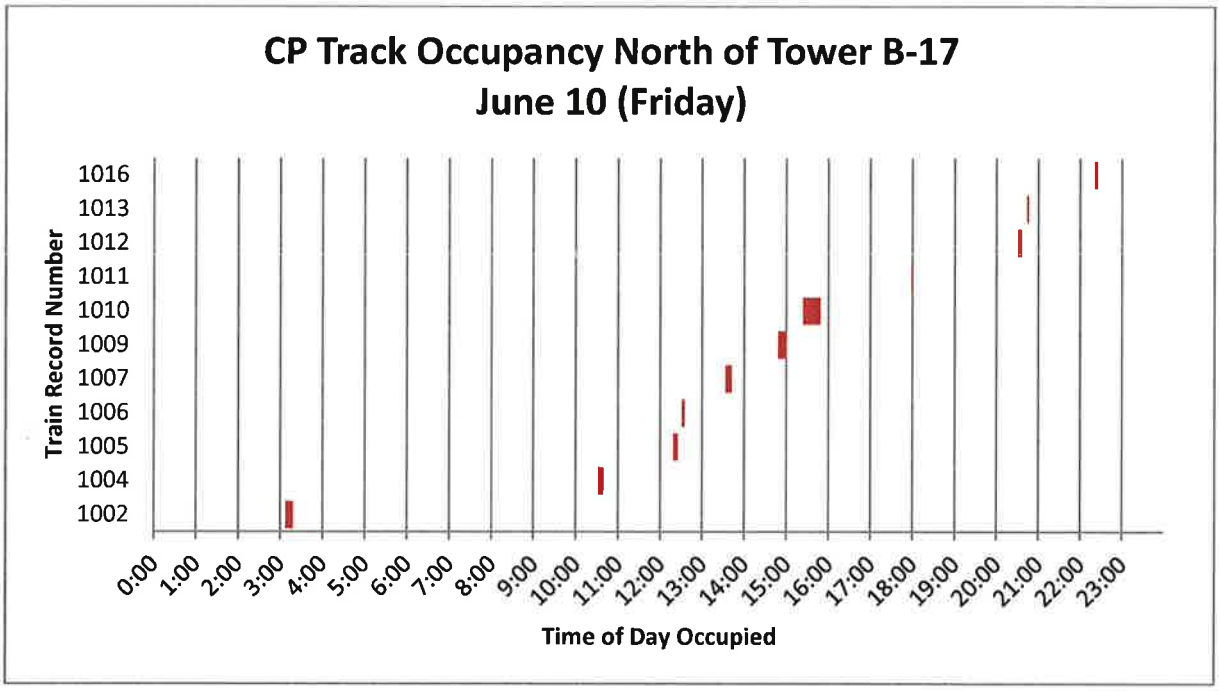
Impacts of Illinois State Toll Highway Authority Elgin O'Hare Western Access Project Construction and Operation upon Canadian Pacific Rail Operations in the Vicinity of York Road and Thorndale Avenue in Bensenville, Illinois

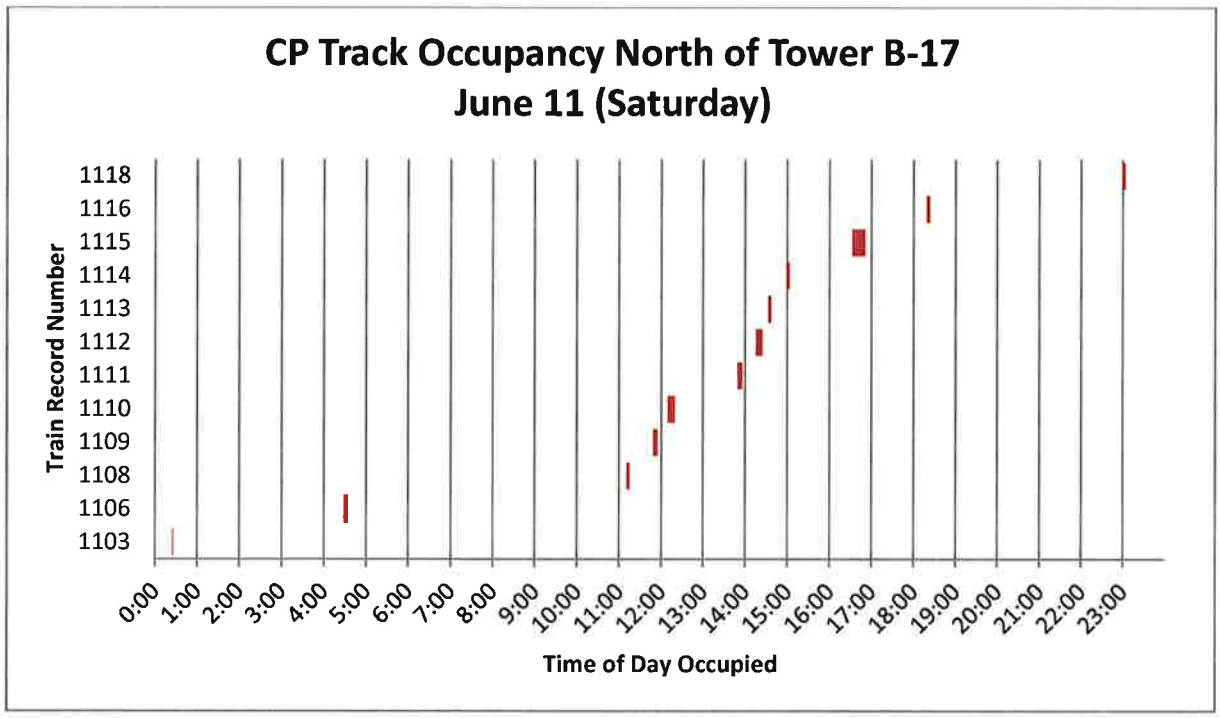
Report of R.L. Banks & Associates, Inc.

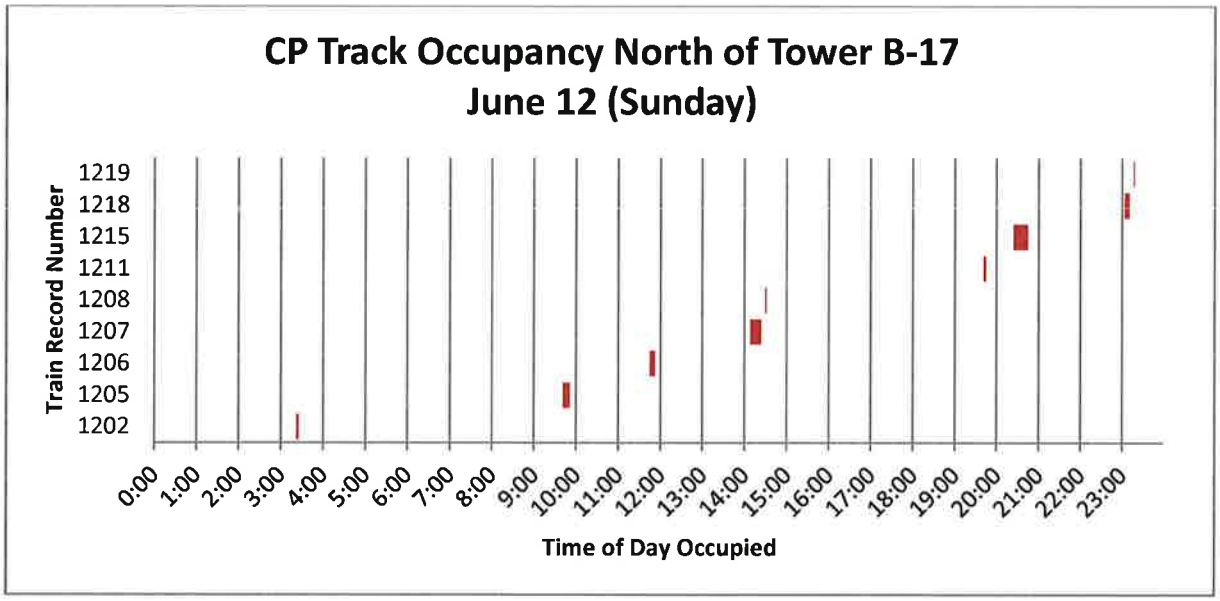
Appendix 4

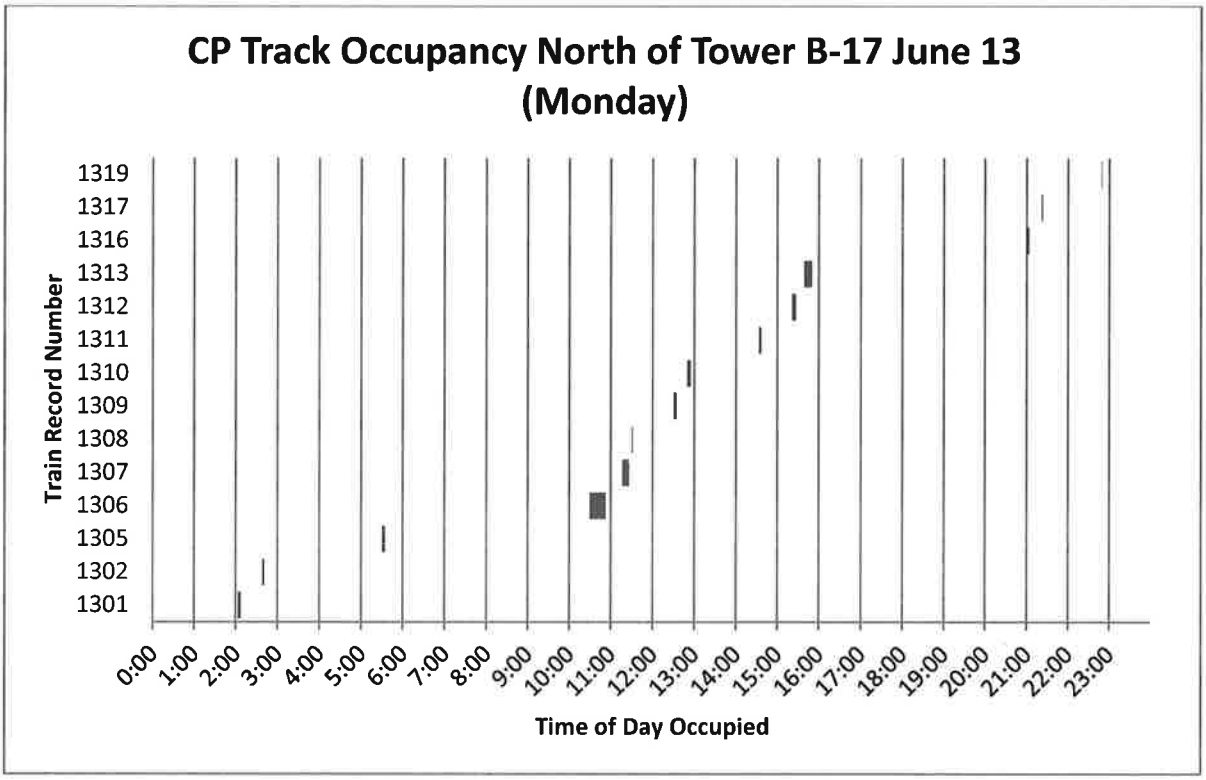
Track Occupancy Diagrams

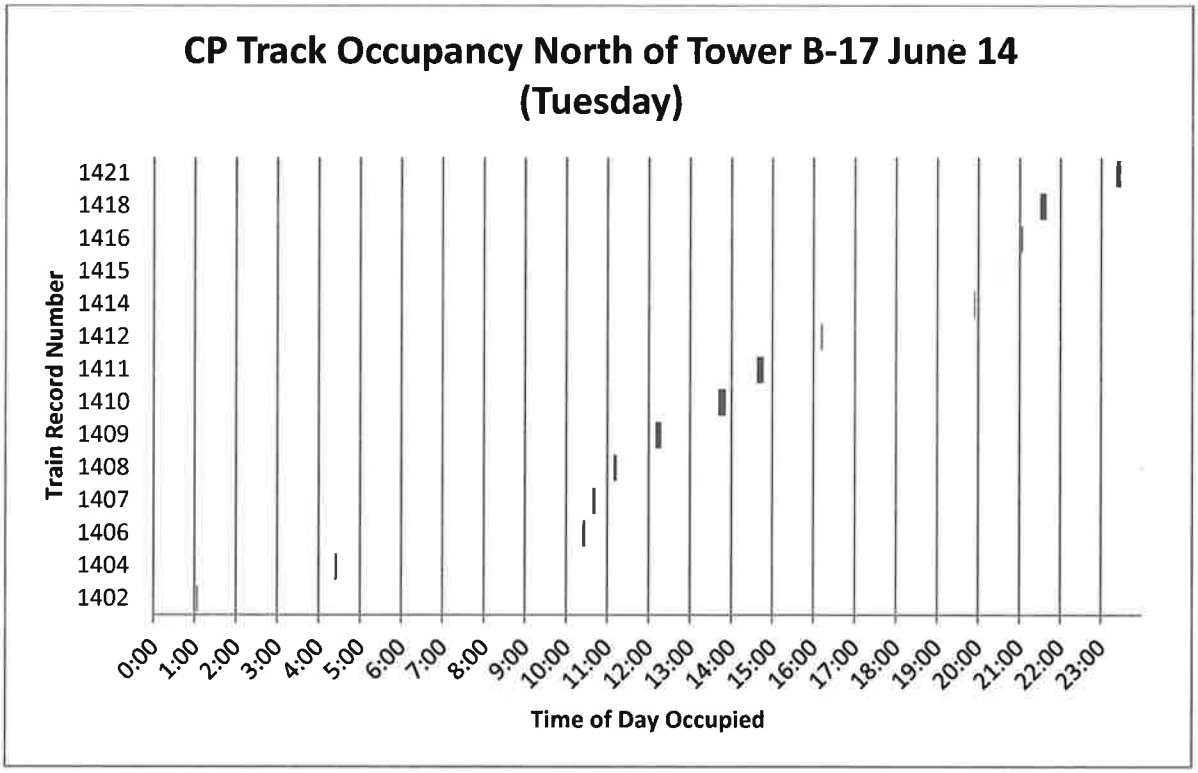

CP Track Occupancy North of Tower B-17
June 9 (Thursday)
Train Record Number
916
912
911
910
909
907
906
904
903
902
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day Occupied

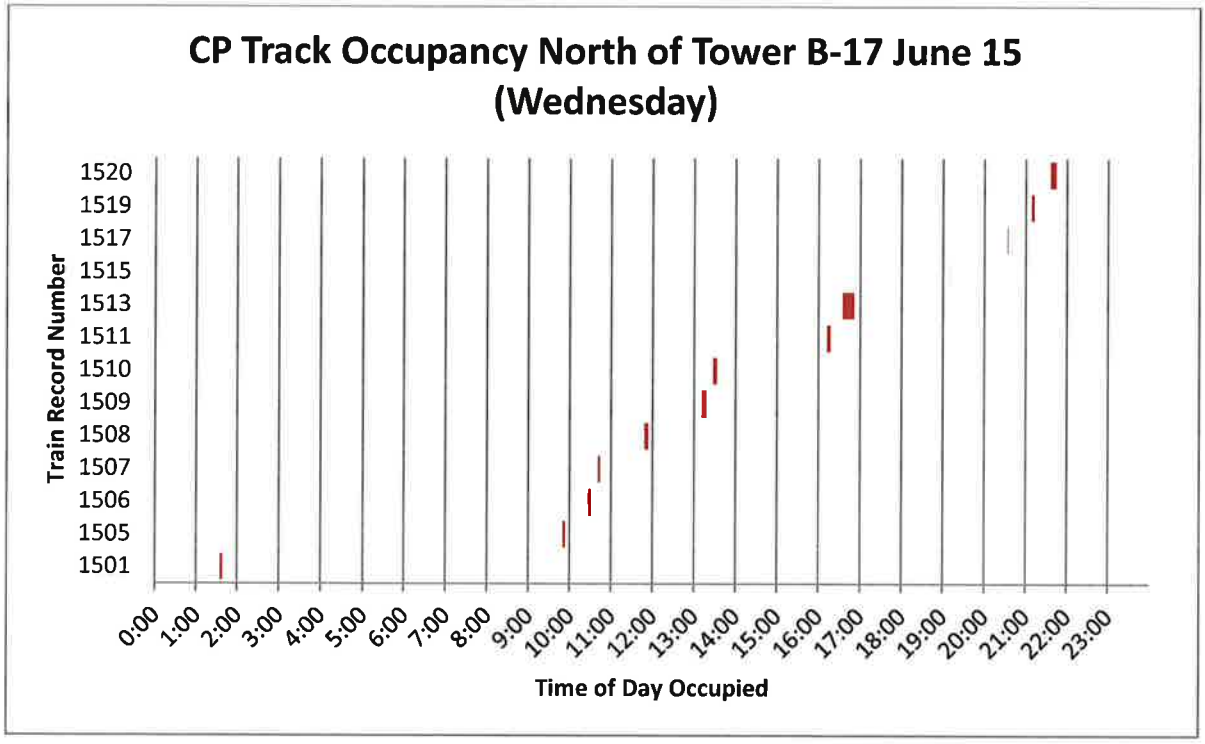

CP Track Occupancy North of Tower B-17
June 10 (Friday)
Train Record Number
1016
1013
1012
1011
1010
1009
1007
1006
1005
1004
1002
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day Occupied

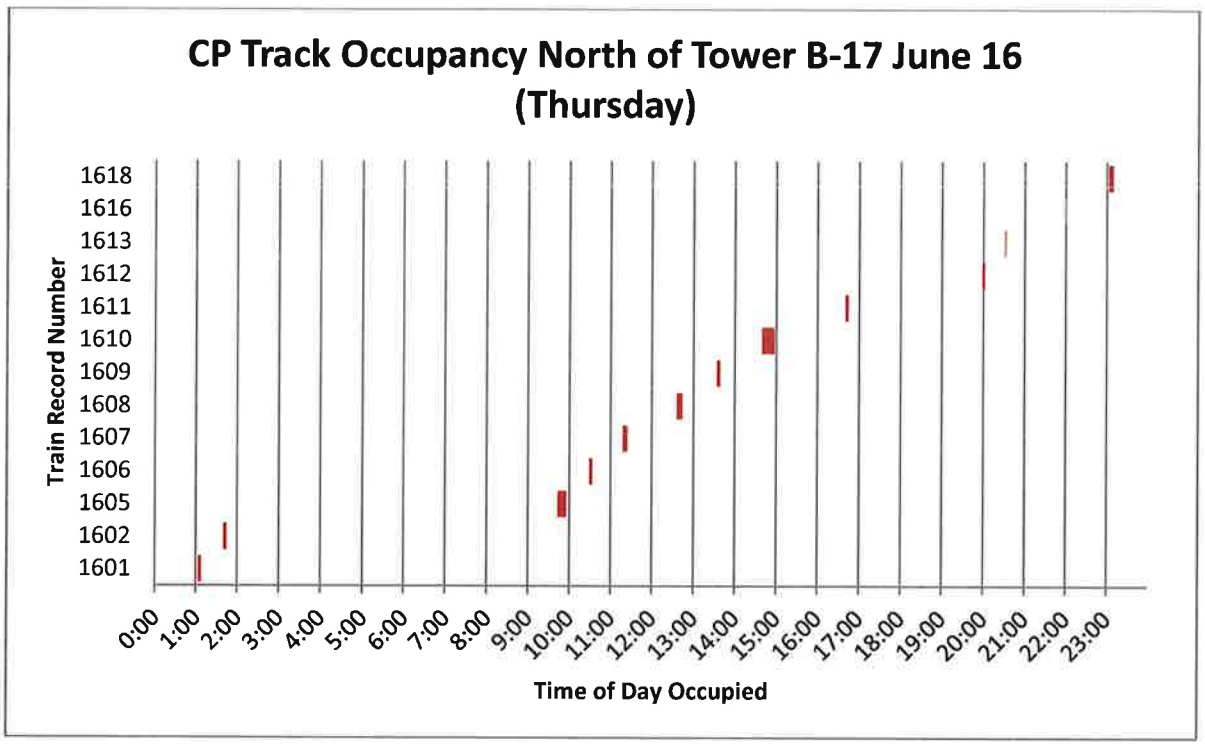

CP Track Occupancy North of Tower B-17
June 11 (Saturday)
Train Record Number
1118
1116
1115
1114
1113
1112
1111
1110
1109
1108
1106
1103
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day Occupied

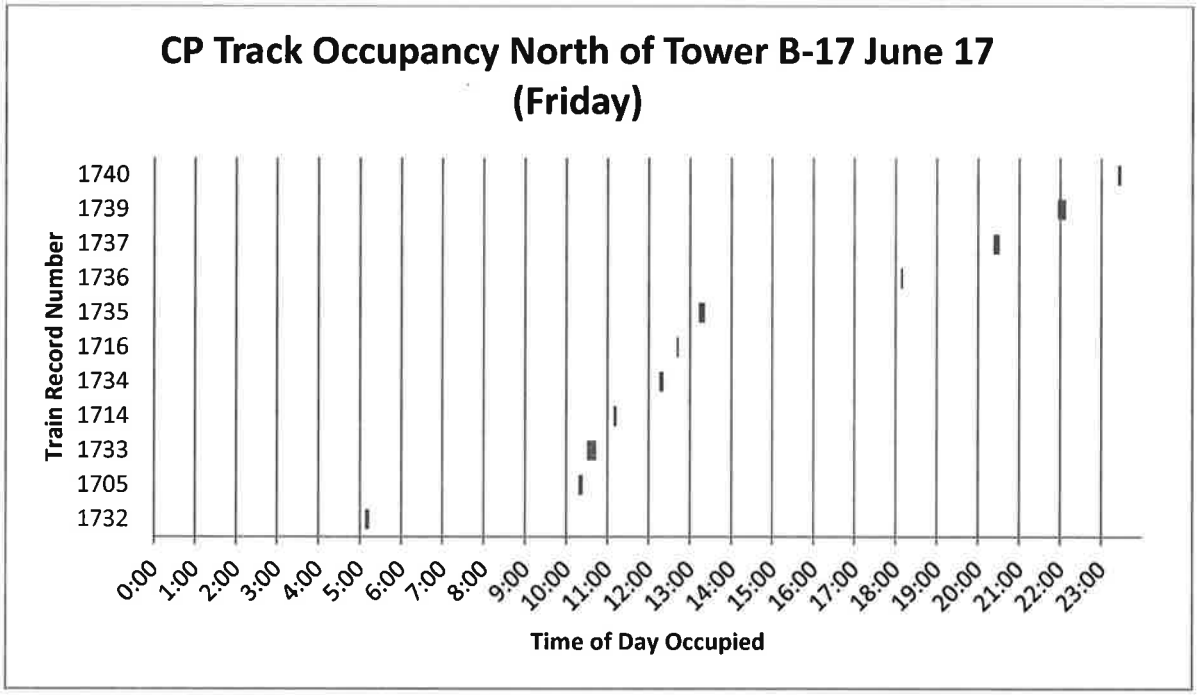

CP Track Occupancy North of Tower B-17
June 12 (Sunday)
Train Record Number
1219
1218
1215
1211
1208
1207
1206
1205
1202
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day Occupied

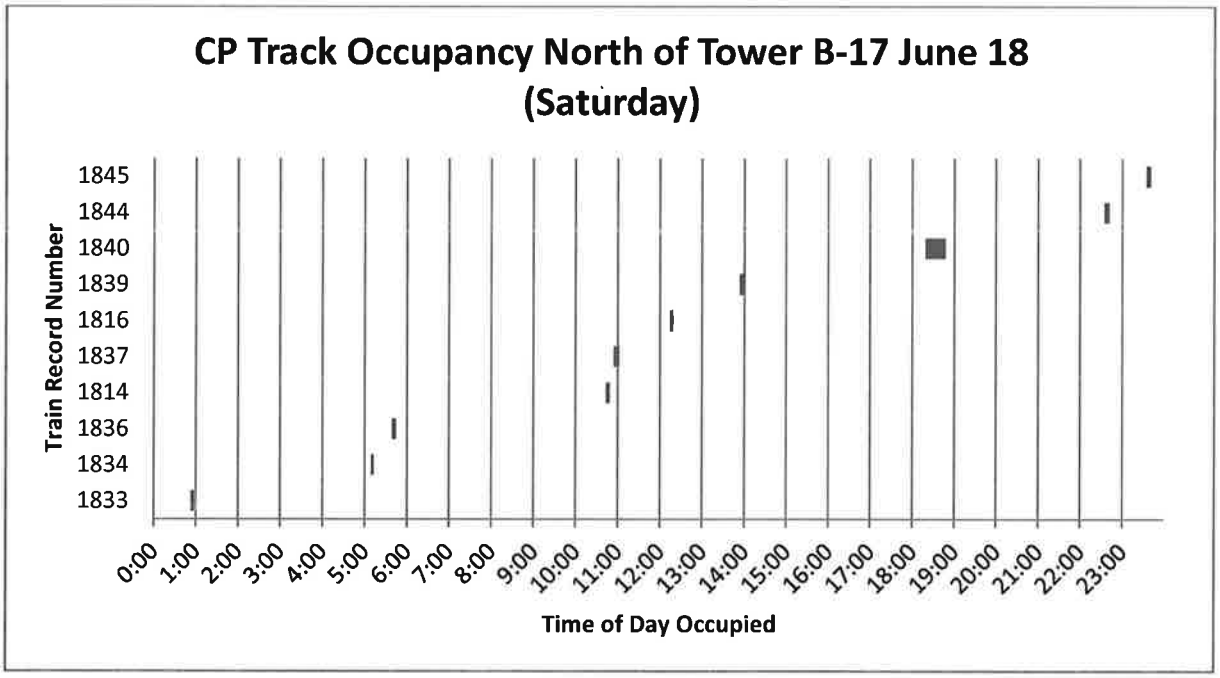

CP Track Occupancy North of Tower B-17 June 13
(Monday)
Train Record Number
1319
1317
1316
1313
1312
1311
1310
1309
1308
1307
1306
1305
1302
1301
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day Occupied

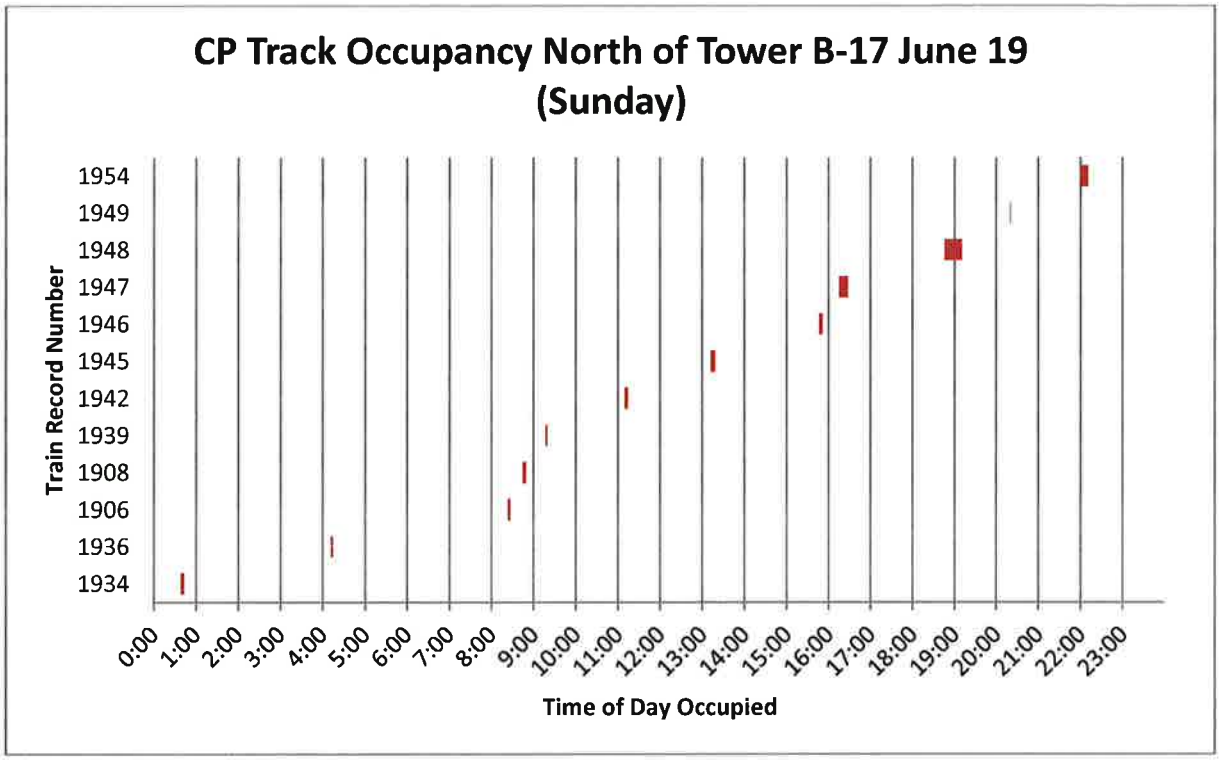

CP Track Occupancy North of Tower B-17 June 14
(Tuesday)
Train Record Number
1421
1418
1416
1415
1414
1412
1411
1410
1409
1408
1407
1406
1404
1402
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day Occupied

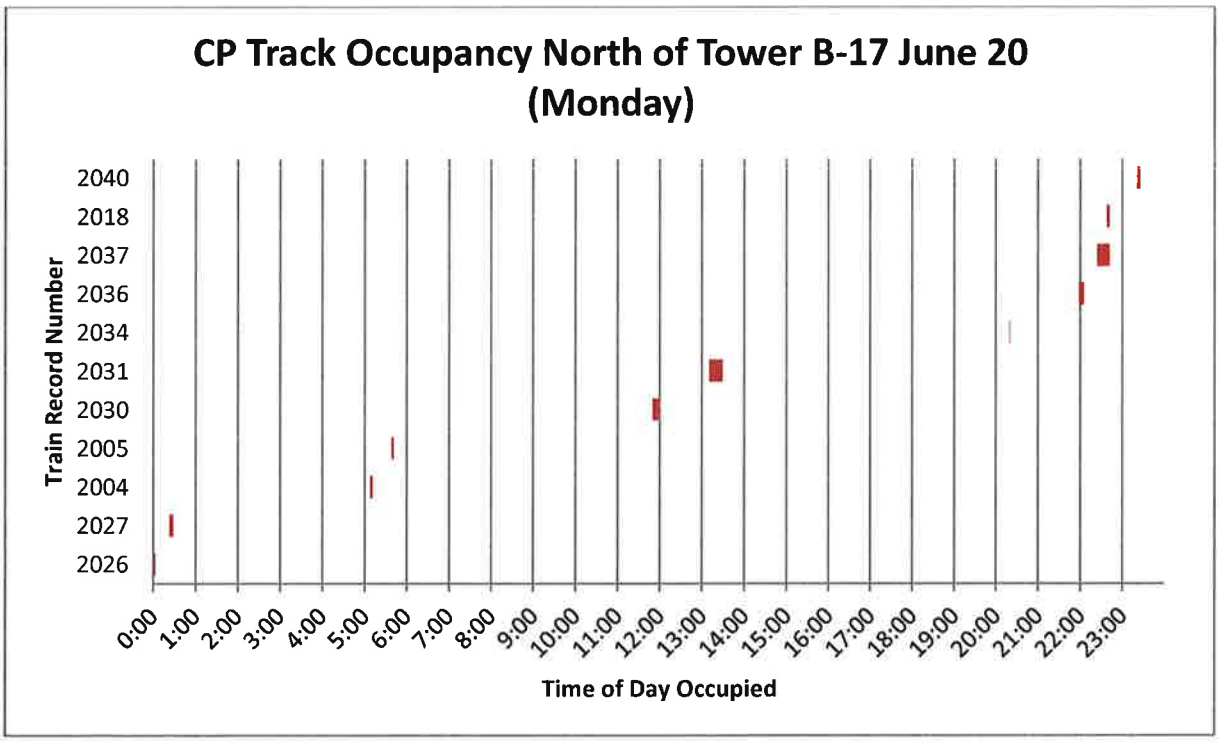

CP Track Occupancy North of Tower B-17 June 15 (Wednesday)
Train Record Number
1520
1519
1517
1515
1513
1511
1510
1509
1508
1507
1506
1505
1501
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
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16:00
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18:00
19:00
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21:00
22:00
23:00
Time of Day Occupied


CP Track Occupancy North of Tower B-17 June 16 (Thursday)
Train Record Number
1618
1616
1613
1612
1611
1610
1609
1608
1607
1606
1605
1602
1601
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
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10:00
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14:00
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16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day Occupied


CP Track Occupancy North of Tower B-17 June 17
(Friday)
Train Record Number
1740
1739
1737
1736
1735
1716
1734
1714
1733
1705
1732
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
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16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day Occupied


CP Track Occupancy North of Tower B-17 June 18
(Saturday)
Train Record Number
1845
1844
1840
1839
1816
1837
1814
1836
1834
1833
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day Occupied


CP Track Occupancy North of Tower B-17 June 19 (Sunday)
Train Record Number
1954
1949
1948
1947
1946
1945
1942
1939
1908
1906
1936
1934
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time of Day Occupied


CP Track Occupancy North of Tower B-17 June 20 (Monday)
Train Record Number
2040
2018
2037
2036
2034
2031
2030
2005
2004
2027
2026
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
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21:00
22:00
23:00
Time of Day Occupied

PARCEL PLAT

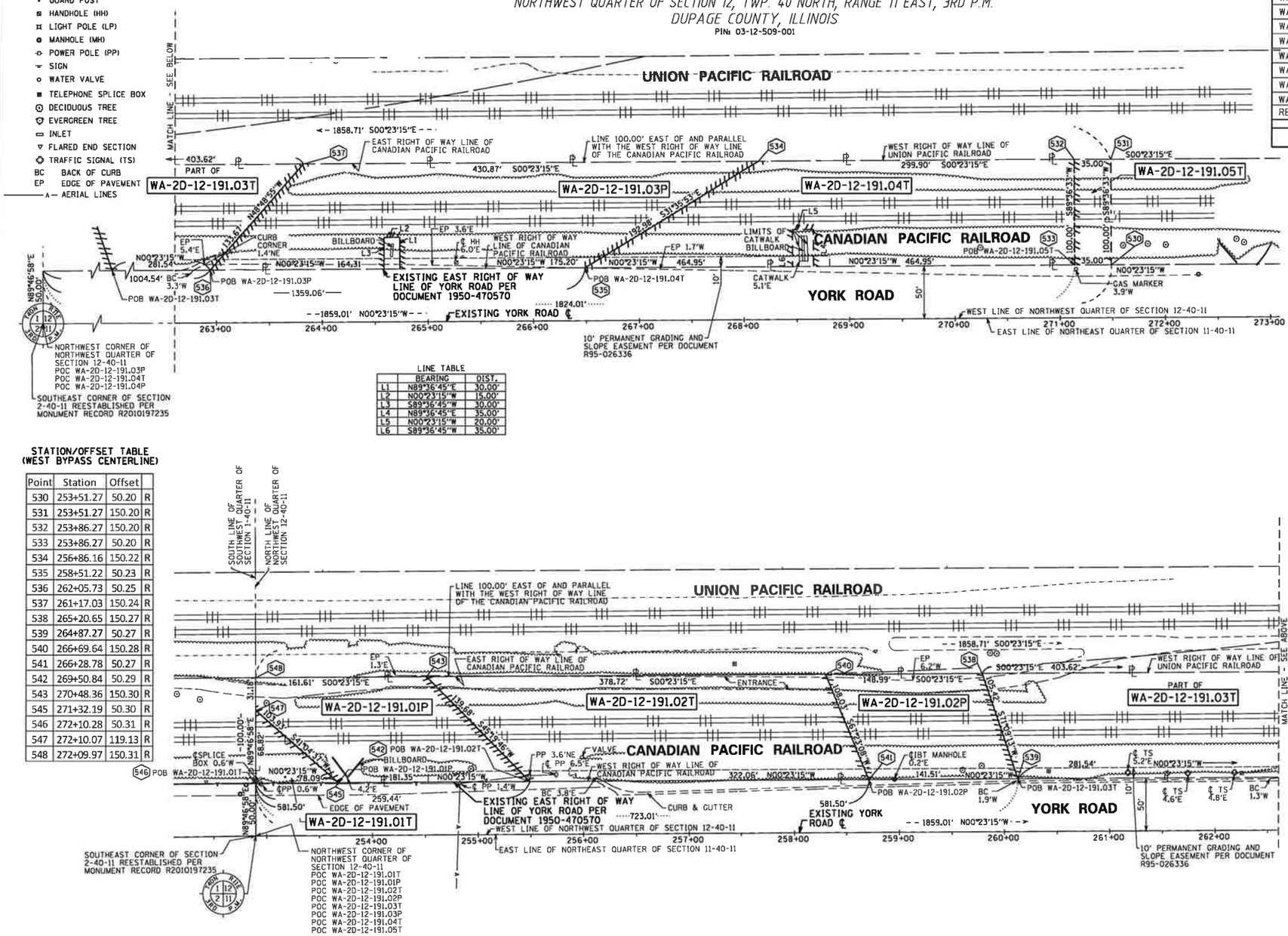
ELGIN - O'HARE EXPRESSWAY

NORTHWEST QUARTER OF SECTION 12, TWP. 40 NORTH, RANGE 11 EAST, 3RD P.M.
DUPAGE COUNTY, ILLINOIS
PIN: 03-12-509-001

PARCEL	AREA ACRES	AREA SQ.FT.	TYPE OF TAKE FEE	PERM. ESMT.	TEMP. ESMT.	PURPOSE
TOTAL HOLDING	4.267 ±	185,885 ±				
WA-2D-12-191.01T	0.062 ±	2,687 ±			X	CONSTR.
WA-2D-12-191.01P	0.422 ±	18,365 ±		X		BRIDGE/RAMP
WA-2D-12-191.02T	0.804 ±	35,039 ±			X	CONSTR.
WA-2D-12-191.02P	0.333 ±	14,525 ±		X		BRIDGE/RAMP
WA-2D-12-191.03T	0.786 ±	34,258 ±			X	CONSTR.
WA-2D-12-191.03P	0.891 ±	38,819 ±		X		BRIDGE/RAMP
WA-2D-12-191.04T	0.862 ±	37,542 ±			X	CONSTR.
WA-2D-12-191.05T	0.080 ±	3,500 ±		X		BRIDGE/RAMP
REMAINDER	4.267 ±	185,885 ±				

TOPO LEGEND

- HYDRANT
- GUY WIRE
- GUARD POST
- HANDHOLE (HH)
- LIGHT POLE (LP)
- MANHOLE (MH)
- POWER POLE (PP)
- SIGN
- WATER VALVE
- TELEPHONE SPLICE BOX
- DECIDUOUS TREE
- EVERGREEN TREE
- INLET
- FLARED END SECTION
- TRAFFIC SIGNAL (TS)
- BC BACK OF CURB
- EP EDGE OF PAVEMENT
- A AERIAL LINES



LINE TABLE

	BEARING	DIST.
L1	N89°36'45"E	30.00'
L2	N00°23'15"W	15.00'
L3	S89°36'45"W	30.00'
L4	N89°36'45"E	35.00'
L5	N00°23'15"W	20.00'
L6	S89°36'45"W	35.00'

STATION/OFFSET TABLE (WEST BYPASS CENTERLINE)

Point	Station	Offset	
530	253+51.27	50.20	R
531	253+51.27	150.20	R
532	253+86.27	150.20	R
533	253+86.27	50.20	R
534	256+86.16	150.22	R
535	258+51.22	50.23	R
536	262+05.73	50.25	R
537	261+17.03	150.24	R
538	265+20.65	150.27	R
539	264+87.27	50.27	R
540	266+69.64	150.28	R
541	266+28.78	50.27	R
542	269+50.84	50.29	R
543	270+48.36	150.30	R
545	271+32.19	50.30	R
546	272+10.28	50.31	R
547	272+10.07	119.13	R
548	272+09.97	150.31	R

LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- CENTER OF SECTION
- EXISTING CENTERLINE
- EXISTING PUBLIC RIGHT OF WAY LINE
- PREVIOUS RIGHT OF WAY LINE
- EXISTING ISTHA PERMANENT EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY
- PROPOSED RIGHT OF WAY AND ACCESS CONTROL LINE
- PROPOSED ISTHA TEMPORARY EASEMENT LINE
- PROPOSED ISTHA PERMANENT EASEMENT LINE
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- PLATTED LOT LINE
- PROPERTY (DEED) LINE
- APPARENT PROPERTY LINE
- FENCE LINE
- 123.45' MEASURED DIMENSION
- (123.45') CALCULATED DIMENSION
- (123.45') RECORD DATA
- ● FOUND IRON PIPE (IP) OR IRON ROD (IR)
- ○ SET ⅝ INCH IRON ROD WITH RED "ISTHA R.O.W." CAP
- △ FOUND PERMANENT SURVEY MARKER
- ⊠ FOUND CONCRETE RIGHT-OF-WAY MARKER
- ┼ CUT CROSS FOUND OR SET
- SAME OWNERSHIP
- T-9A-1 EXISTING ISTHA PARCEL NUMBER
- T-9A-05-001 PROPOSED ISTHA PARCEL NUMBER

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT I, REBECCA Y. POPECK, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED THE PARCEL PLAT SHOWN HEREON, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY.

FIELD WORK COMPLETED ON DECEMBER 18, 2014.

DATED AT ROSEMONT, ILLINOIS THIS 16th DAY OF AUGUST, 2016.

REBECCA Y. POPECK
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-3642
LICENSE EXPIRATION DATE: 11/30/2016

REBECCA Y. POPECK 3642 PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS ROSEMONT, ILLINOIS

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

ALL DIMENSIONS ARE MEASURED UNLESS OTHERWISE SPECIFIED

BEARINGS AND DISTANCES SHOWN HEREON REFERENCE THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, ADJUSTMENT - 2007 (CORS). ALL MEASURED AND CALCULATED VALUES ARE "GRID" NOT "GROUND". TO OBTAIN GROUND DISTANCES, DIVIDE GRID DISTANCES SHOWN, BY THE COMBINATION FACTOR OF 0.99998917358.

AREAS SHOWN ON THIS PLAT ARE GROUND. TO CONVERT AN AREA SHOWN ON THIS PLAT TO AN EQUIVALENT AREA AS MEASURED USING THE GRID BASED DISTANCES, MULTIPLY THE GROUND AREA BY THE SQUARE OF THE COMBINATION FACTOR (CF²)

1" = 50'
0 25 50 75 100

CAD DRAFTING BY:	CCG
CALCULATIONS BY:	RYP
CHECKED BY:	RYP
APPROVED BY:	RYP

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
Illinois Professional Design Firm No. 184-001157

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS NO.	DATE	DESCRIPTION
1	05/19/2015	BILLBOARD CUTOUTS
2	08/16/2016	CONVERT 191.04P TO 191.05T
3		

ELGIN - O'HARE EXPRESSWAY
STA. 253+51 TO STA. 272+10
DUPAGE COUNTY, ILLINOIS
PARCEL WA-2D-12-191
OWNER: SOO LINE RAILROAD COMPANY, A MINNESOTA CORPORATION A SUBSIDIARY OF, AND DOING BUSINESS AS CANADIAN PACIFIC RAILWAY

CONTRACT NO. I-12-4058
DRAWING NO. 1 OF 2

PARCEL PLAT

ELGIN - O'HARE EXPRESSWAY

NORTHWEST QUARTER OF SECTION 12, TWP. 40 NORTH, RANGE 11 EAST, 3RD P.M.

DUPAGE COUNTY, ILLINOIS

PIN: 03-12-509-001

PROPERTY DESCRIPTION:

WA-2D-12-191.01T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570 AND ALSO BEING THE POINT OF BEGINNING;

THENCE CONTINUING NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, 68.82 FEET; THENCE SOUTH 41 DEGREES 04 MINUTES 37 SECONDS WEST, 103.93 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE, 78.09 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.01P

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 78.09 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 41 DEGREES 04 MINUTES 37 SECONDS EAST, 103.93 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD TO A POINT TO SAID NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG SAID NORTH LINE, 31.18 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 161.61 FEET; THENCE SOUTH 45 DEGREES 19 MINUTES 46 SECONDS WEST, 139.68 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE, 181.35 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.02T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 259.44 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 45 DEGREES 19 MINUTES 46 SECONDS EAST, 139.68 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 378.72 FEET; THENCE SOUTH 67 DEGREES 23 MINUTES 08 SECONDS WEST, 108.03 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 322.06 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.02P

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 581.50 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 67 DEGREES 23 MINUTES 08 SECONDS EAST, 108.03 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 148.99 FEET; THENCE SOUTH 71 DEGREES 09 MINUTES 13 SECONDS WEST, 105.42 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 141.51 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

PROPERTY DESCRIPTION (CONTINUED):

WA-2D-12-191.03T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 723.01 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 71 DEGREES 09 MINUTES 13 SECONDS EAST, 105.42 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 403.62 FEET; THENCE NORTH 48 DEGREES 48 MINUTES 55 SECONDS WEST, 133.67 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 281.54 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.03P

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 1004.54 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 48 DEGREES 48 MINUTES 55 SECONDS EAST, 133.67 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 430.87 FEET; THENCE NORTH 31 DEGREES 35 MINUTES 53 SECONDS WEST, 192.98 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 175.20 FEET; THENCE NORTH 89 DEGREES 36 MINUTES 45 SECONDS EAST, PERPENDICULAR TO THE LAST COURSE, 30.00 FEET; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG A LINE PARALLEL TO THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 15.00 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 45 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 30.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 164.31 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.04T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 1359.06 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 31 DEGREES 35 MINUTES 53 SECONDS EAST, 192.98 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 299.90 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 32 SECONDS WEST, 100.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 248.06 FEET; THENCE NORTH 89 DEGREES 36 MINUTES 45 SECONDS EAST, PERPENDICULAR TO THE LAST COURSE, 35.00 FEET; NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 20.00 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 45 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 35.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 196.89 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.05T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 1824.01 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 89 DEGREES 36 MINUTES 32 SECONDS EAST, 100.00 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 35.00 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 33 SECONDS WEST, 100.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 35.00 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

CAD DRAFTING BY:	CCG
CALCULATIONS BY:	RYP
CHECKED BY:	RYP
APPROVED BY:	RYP

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
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Phone: (847) 696-4040 Fax: (847) 696-4065
Illinois Professional Design Firm No. 184-001157

Illinois Tollway

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION
1	05/19/2015	BILLBOARD CUTOUTS
2	08/16/2016	CONVERT 191.04P TO 191.05T
3		

ELGIN - O'HARE EXPRESSWAY
STA. 253+51 TO STA. 272+10
DUPAGE COUNTY, ILLINOIS
PARCEL WA-2D-12-191
OWNER: SOO LINE RAILROAD COMPANY, A MINNESOTA CORPORATION A SUBSIDIARY OF, AND DOING BUSINESS AS CANADIAN PACIFIC RAILWAY

CONTRACT NO.
I-12-4058

DRAWING NO.
2 OF 2

PROPERTY DESCRIPTION:

WA-2D-12-191.01T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
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THENCE CONTINUING NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, 68.82 FEET; THENCE SOUTH 41 DEGREES 04 MINUTES 37 SECONDS WEST, 103.93 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE, 78.09 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.01P

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
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THENCE NORTH 41 DEGREES 04 MINUTES 37 SECONDS EAST, 103.93 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD TO A POINT TO SAID NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG SAID NORTH LINE, 31.18 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 161.61 FEET; THENCE SOUTH 45 DEGREES 19 MINUTES 46 SECONDS WEST, 139.68 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE, 181.35 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.02T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
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THENCE NORTH 45 DEGREES 19 MINUTES 46 SECONDS EAST, 139.68 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 378.72 FEET; THENCE SOUTH 67 DEGREES 23 MINUTES 08 SECONDS WEST, 108.03 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 322.06 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.02P

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
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THENCE NORTH 67 DEGREES 23 MINUTES 08 SECONDS EAST, 108.03 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 148.99 FEET; THENCE SOUTH 71 DEGREES 09 MINUTES 13 SECONDS WEST, 105.42 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 141.51 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.03T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 723.01 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 71 DEGREES 09 MINUTES 13 SECONDS EAST, 105.42 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 403.62 FEET; THENCE NORTH 48 DEGREES 48 MINUTES 55 SECONDS WEST, 133.67 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 281.54 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.03P

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 1004.54 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 48 DEGREES 48 MINUTES 55 SECONDS EAST, 133.67 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 430.87 FEET; THENCE NORTH 31 DEGREES 35 MINUTES 53 SECONDS WEST, 192.98 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 175.20 FEET; THENCE NORTH 89 DEGREES 36 MINUTES 45 SECONDS EAST, PERPENDICULAR TO THE LAST COURSE, 30.00 FEET; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG A LINE PARALLEL TO THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 15.00 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 45 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 30.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 164.31 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.04T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 1359.06 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 31 DEGREES 35 MINUTES 53 SECONDS EAST, 192.98 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 299.90 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 32 SECONDS WEST, 100.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 248.06 FEET; THENCE NORTH 89 DEGREES 36 MINUTES 45 SECONDS EAST, PERPENDICULAR TO THE LAST COURSE, 35.00 FEET; NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 20.00 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 45 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 35.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 196.89 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-191.05T

THAT PART OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER OF SECTION 12; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A NORTH LINE OF SAID NORTHWEST QUARTER OF SECTION 12, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID NORTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER 1950-470570; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID WEST RIGHT OF WAY LINE, 1824.01 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 89 DEGREES 36 MINUTES 32 SECONDS EAST, 100.00 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 23 MINUTES 15 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 35.00 FEET; THENCE SOUTH 89 DEGREES 36 MINUTES 33 SECONDS WEST, 100.00 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD; THENCE NORTH 00 DEGREES 23 MINUTES 15 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 35.00 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

PROPERTY DESCRIPTION:

WA-2D-12-195.T1

THAT PART OF THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER OF SECTION 1; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A SOUTH LINE OF SAID SOUTHWEST QUARTER OF SECTION 1, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID SOUTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER R1944-470564 AND ALSO BEING THE POINT OF BEGINNING;

THENCE CONTINUING NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 319.21 FEET; THENCE SOUTH 70 DEGREES 17 MINUTES 13 SECONDS EAST, 106.59 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING

A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 32 MINUTES 34 SECONDS EAST ALONG SAID COMMON RIGHT OF WAY LINE, 247.60 FEET; THENCE SOUTH 41 DEGREES 04 MINUTES 37 SECONDS WEST, 46.95 FEET TO THE SOUTH LINE OF SAID SOUTHWEST QUARTER OF SECTION 1; THENCE SOUTH 89 DEGREES 46 MINUTES 58 SECONDS WEST, ALONG SAID SOUTH LINE, 68.82 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-195.P1

THAT PART OF THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER OF SECTION 1; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A SOUTH LINE OF SAID SOUTHWEST QUARTER OF SECTION 1, A DISTANCE OF 50.00 FEET TO A POINT OF INTERSECTION OF SAID SOUTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER R1944-470564 ; THENCE CONTINUING NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG SAID SOUTH LINE, 68.82 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 41 DEGREES 04 MINUTES 37 SECONDS EAST, 46.95 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 32 MINUTES 34 SECONDS EAST ALONG SAID COMMON RIGHT OF WAY LINE, 35.27 FEET TO THE SOUTH LINE OF SAID SECTION 1; THENCE SOUTH 89 DEGREES 46 MINUTES 58 SECONDS WEST, ALONG SAID SOUTH LINE, 31.18 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

WA-2D-12-195.P2

THAT PART OF THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP 40 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER OF SECTION 1; THENCE NORTH 89 DEGREES 46 MINUTES 58 SECONDS EAST, ALONG A SOUTH LINE OF SAID SOUTHWEST QUARTER OF SECTION 1, 50.00 FEET TO A POINT OF INTERSECTION OF SAID SOUTH LINE WITH THE WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING A POINT OF THE EAST RIGHT OF WAY LINE OF YORK ROAD PER DOCUMENT NUMBER R1944-470564 ; THENCE NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 319.21 FEET TO THE POINT OF BEGINNING;

THENCE CONTINUING NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST, ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 405.81 FEET; THENCE NORTH 89 DEGREES 27 MINUTES 26 SECONDS EAST, PERPENDICULAR TO THE LAST LINE, 25.00 FEET; THENCE NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST, ALONG A LINE PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 56.00 FEET; THENCE SOUTH 89 DEGREES 27 MINUTES 26 SECONDS WEST, PERPENDICULAR TO THE LAST LINE, 25.00 FEET; THENCE CONTINUING NORTH 00 DEGREES 32 MINUTES 34 SECONDS WEST ALONG SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, 52.28 FEET; THENCE NORTH 89 DEGREES 07 MINUTES 59 SECONDS EAST, 100.00 FEET TO THE EAST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, BEING A LINE 100 FEET EAST OF AND PARALLEL TO SAID WEST RIGHT OF WAY LINE OF CANADIAN PACIFIC RAILROAD, ALSO BEING THE WEST RIGHT OF WAY LINE OF UNION PACIFIC RAILROAD; THENCE SOUTH 00 DEGREES 32 MINUTES 34 SECONDS EAST, ALONG SAID COMMON RIGHT OF WAY LINE, 551.55 FEET; THENCE NORTH 70 DEGREES 17 MINUTES 13 SECONDS WEST, 106.59 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

BEFORE THE

SURFACE TRANSPORTATION BOARD

STB DOCKET NO. 36075

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

PETITION FOR DECLARATORY ORDER

EXPEDITED CONSIDERATION REQUESTED

VERIFIED STATEMENT OF PETER JOSEFCHAK

Midwest Freight Rail Leader

Stantec

1. I am employed as a Midwest Freight Rail Leader with Stantec. I have held that position since 2013.

2. Stantec has a Design-Upon-Request ("DUR") contract (I-13-4614) for the Illinois State Toll Highway Authority's Elgin-O'Hare Western Access ("EOWA") Project.

3. As a designer under a DUR contract with the Illinois State Toll Highway Authority ("Tollway"), the Stantec Scope of Services may include preparation of contract plans and engineering studies and other technical services as directed by the Tollway.

4. As a Freight Rail Leader with Stantec, I am responsible for coordinating EOWA Project activities between Union Pacific Railroad ("UPRR") and the Tollway.

5. At a meeting on March 3, 2016 held at the UPRR's Chicago office between representatives of Stantec, the Tollway, the UPRR, Hanson, Inc., STV, Inc., and HDR Engineering, Inc., I was designated as the representative and point of contact for the Tollway and Stantec in communications with the UPRR. At that meeting, John N. Venice was designated to be the representative and point of contact for the UPRR. Mr. Venice and I were tasked with facilitating communications between the Tollway and UPRR regarding engineering plans and submittals, engineering recommendations for the EOWA Project.

6. Attached as Exhibit D-1 is a true and correct print out of a string of email correspondence commencing on July 6, 2016 between John N. Venice of the UPRR and me, including all enclosures, regarding "APPROVED – : Proposed new overhead structure – I-390 (Illinois Tollway) – Elk Grove Village, IL MP 6.46 Milwaukee Subdivision – DOT # 450 388E (pending) [EXTERNAL]."

7. Attached as Exhibit D-2 is a true and correct print out of a string of email correspondence commencing on July 6, 2016 between Mr. Venice of the UPRR and me, together

with all enclosures, regarding "APPROVED – Proposed new overhead structure – I-390 – Elk Grove Village, Illinois – MP 6.44 Milwaukee Subdivision – DOT # 450 389L (pending) [EXTERNAL]."

8. Attached as Exhibit D-3 is a true and correct print out of email correspondence between Mr. Venice of the UPRR and me, including all enclosures, regarding "APPROVED - Proposed new overhead structure – I-390 (Illinois Tollway) – Elk Grove Village, IL – MP 6.39 Milwaukee Subdivision – DOT # 450 392U (pending) [EXTERNAL]."

9. Attached as Exhibit D-4 is a true and correct print out of email correspondence between Mr. Venice of the UPRR and me, including all enclosures, regarding "APPROVED - Proposed new overhead structure – I-390 (Illinois Tollway) – Elk Grove Village, IL – MP 6.42 Milwaukee Subdivision – DOT # 450 390F (pending) [EXTERNAL]."

VERIFICATION

I, Peter Josefchak, verify under penalty of perjury that the foregoing is true and correct. Executed on 31 Oct 2016 (date)



Peter Josefchak

#48347086_v3

VERIFIED STATEMENT OF PETER JOSEFCHAK

Midwest Freight Rail Leader

Stantec

EXHIBIT D-1

From: Peter.Josefchak@stantec.com
Sent: Wednesday, July 13, 2016 2:34 PM
To: Aaron.Chanowitz@ch2m.com; Benjamin.Ostermann@CH2M.com
Cc: l.martin@americansurvey.com; Sarah.Archer@CH2M.com; Marilynn.Vanella@ch2m.com; mnashif@getipass.com
Subject: Fwd: APPROVED - : Proposed new overhead structure - I-390 (Illinois Tollway) - Elk Grove Village, IL - MP 6.46 Milwaukee Subdivision - DOT # 450 388E (pending) [EXTERNAL]

See approval from UPRR below. One down 3 to go. Stay tuned. Thanks for the effort to split them out as you did. So far so good.

Sent from Peter's iPhone

Begin forwarded message:

> **From:** "John N. Venice" <JNVENICE@UP.COM>
> **Date:** July 13, 2016 at 14:28:32 CDT
> **To:** <Peter.Josefchak@stantec.com>
> **Subject: APPROVED - : Proposed new overhead structure - I-390 (Illinois Tollway) - Elk Grove Village, IL - MP 6.46 Milwaukee Subdivision - DOT # 450 388E (pending)**
>
> Grade Separation: Public (proposed overhead structure)
> I-390
> Elk Grove Village, IL
> MP 6.46 Milwaukee Subdivision
> DOT # 450 388E (pending)
>
> Hi Peter-
>
> this submittal is APPROVED.
>
> From: "Josefchak, Peter" <Peter.Josefchak@stantec.com>
> To: "jnvenice@up.com" <jnvenice@up.com>
> Date: 07/06/2016 10:09 AM
> Subject: FW: (FRA 450 388E) EOWA Tollway Design Contract I-13-4622; Construction Contract I-16-4669 Proposed Overhead Structure – New Construction Tollway Structure Number 1653 (Ramp P5) over UPRR and CPR - UPRR 30% Design Submittal
>
> ---
>
> This email originated from outside of the company. Please use discretion if opening attachments or clicking on links.
>
> ---
>
> Here is 3 of 4 showing referenced structure number in header.
>
> Peter Josefchak
> Freight Rail Leader
> Stantec

135 South LaSalle Street Suite 3100 Chicago IL 60603-4139
Phone: (312) 262-2285
Cell: (312) 369-9326
Peter.Josefchak@stantec.com

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: Marilynn.Vanella@ch2m.com [mailto:Marilynn.Vanella@ch2m.com]
Sent: Tuesday, July 05, 2016 6:50 PM
To: Josefchak, Peter
Cc: Aaron.Chanowitz@ch2m.com; Jason.Moller@CH2M.com; mnashif@getipass.com
Subject: RE: EOWA Tollway Design Contract I-13-4622; Construction Contract I-16-4669 Proposed Overhead Structure – New Construction Tollway Structure Number 1653 (Ramp P5) over UPRR and CPR - UPRR 30% Design Submittal

Transmittal 3 of 4

Peter –

On behalf of the Tollway/Manar Nashif and in accordance with the *Union Pacific Railroad – BNSF Guidelines For Railroad Grade Separation Projects*, please find attached the electronic copies (in PDF format) of the following documents for the above referenced new overhead structure for UPRR review and comment via Tollway Transmittal Letter.

1. Design Plans showing plan view, elevation view, typical section and railroad profile diagram. Applicable notes per UPRR Guidelines Plan No. 711100, sheet 3 have been included on the plans.
2. Project specifications including railroad coordination requirements.
3. Drainage Report and Plan.
4. Construction phasing plans showing required phasing, construction procedures, controlling dimensions and elevations.

There are four structures in total, each packaged separately. Should you have any questions or need further information, please contact Manar Nashif directly at (630) 241-6800 ext 3841 or via e mail at mnashif@getipass.com

Respectfully,

Marilynn Vanella
Program Controls Coordinator
D1 773 458 2814

CH2M Team
8735 West Higgins Road
Suite 400
Chicago, IL 60631
mvanella@ch2m.com
www.ch2m.com

[attachment "LT_Tollway_MN_4669-30Percent-DesignPlans-SN1653-RampP5_UPRR_07052016.pdf" deleted by John N. Venice/UPC] [attachment "DW_Stanley_SE_UPRR 30 Pct Submittal_Plans_FRA Structure 450 388E (Ramp

P5)_06282016.pdf" deleted by John N. Venice/UPC] [attachment "SP_Stanley_RK_UPRR 30 Pct Submittal_Specifications_FRA Structure 450 388E (Ramp P5)_06242016.pdf" deleted by John N. Venice/UPC] [attachment "RP_Stanley_KF_UPRR 30 Pct Submittal_Drainage Report_FRA Structure 450 388E (Ramp P5)_06242016.pdf" deleted by John N. Venice/UPC]

**

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**

July 5, 2016

Mr. John Venice
Manager Special Projects
Union Pacific Railroad
101 North Wacker Drive
Chicago, IL 60606

Re: Tollway Design Contract I-13-4622; Construction Contract I-16-4669
Elgin O'Hare Western Access (EOWA) Project
Proposed Overhead Structure – New Construction
Tollway Structure Number 1653 (Ramp P5) over UPRR and CPR
UPRR-Milwaukee Subdidivison (M.P. 6.46)
Bensenville, Il – DuPage County
30% Design Submittal

Dear Mr. Venice:

The Illinois Tollway is continuing with design development for the Elgin O'Hare Western Access (EOWA). The EOWA Project includes the construction of a new, all electronic Tollway around the western border of O'Hare International Airport (O'Hare) linking the Jane Addams Memorial Tollway (I-90) and the Tri-State Tollway (I-294), as well as the extending Illinois Route 390 (formerly the Elgin O'Hare Expressway) east along Thorndale Avenue to O'Hare Airport and rehabilitating and widening of the existing Illinois Route 390.

In accordance with the *Union Pacific Railroad – BNSF Guidelines For Railroad Grade Separation Projects,* hereinafter referred to as "UPRR Guidelines", enclosed herewith, for your review and comment, are electronic copies (in PDF format) of the following for the above referenced new overhead structure:

1. Design Plans showing plan view, elevation view, typical section and railroad profile diagram. Applicable notes per UPRR Guidelines Plan No. 711100, sheet 3 have been included on the plans.
2. Project specifications including railroad coordination requirements.
3. Drainage Report and Plan.
4. Construction phasing plans showing required phasing, construction procedures, controlling dimensions and elevations.

The Tollway understands and confirms the following:

- The executed Construction and Maintenance Agreement shall be provided to the Tollway's Construction Contractor and the Contractor will be required to comply with the terms and conditions in conjunction with the construction of the structure.
- The proposed overhead structure is being designed such that construction and maintenance of the structure will cause no interruption to Railroad operations during and after construction.
- The construction of the structure cannot begin until the UPRR has approved the 100% submittal for the structure, the Contractor has secured a right of entry agreement and the Tollway and UPRR have executed a Construction and Maintenance Agreement. The Contractor will be required to carry Railroad Protective Liability Insurance in accordance with UPRR requirements.
- The Tollway will own and maintain the structure crossing over UPRR in its entirety.
- The Tollway is proposing an overhead structure in order to not cause an impact to Railroad Operations.
- Temporary shoring, as necessary, will be required to be in accordance with UPRR Railroad Guidelines for Temporary Shoring.
- Erection over the Railroad right of way will be planned to cause no interruption to Railroad Operations.
- The Tollway will coordinate with all utility companies and make arrangements with utility companies for installation, relocation or protection of their respective facilities in conjunction with the project construction.

In accordance with the UPRR Guidelines, the Tollway respectfully requests your response 4 weeks after the submittal is received by the appropriate reviewing parties. Thank you for your assistance.

If you have any technical questions regarding the contents of the submittal, please contact Peter Josefchak at (312) 262-2285 or via email at peter.josefchak@stantec.com. Peter is part of the Design Section Engineering Team for the EOWA Project. If you have any other questions or need further information, please contact me at (630) 241-6800 ext 3841 or via email at mnashif@getipass.com. We appreciate your cooperation and look forward to working with you as we move forward with the project.

Sincerely,

Manar Nashif, P.E.
Senior Project Engineer

CC: Rocco Zucchero – Tollway, Lidia Pilecky – CH2M, Aaron Chanowitz – CH2M, Jason Moller – CH2M, Peter Josefchak – Stantec, Paul Bobby - STV

02.4622.07.07
LT_Tollway_MN_4669-30percent-Plans- SN1653-RampP5-UPRR_07052016

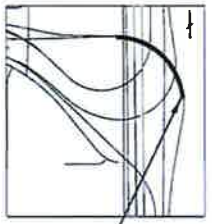
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I–13–4622
TOLLWAY CONSTRUCTION CONTRACT I–16–4669

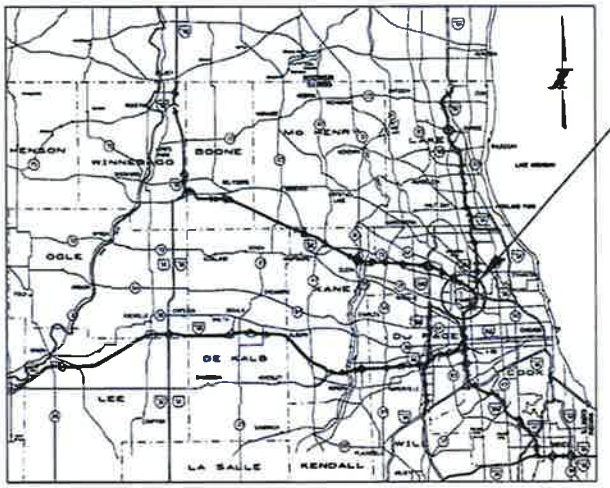
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

FRA STRUCTURE NO. 450 388E
TOLLWAY STRUCTURE NO. 1653
IDOT STRUCTURE NO. 022–9507

RAMP P5 OVER UPRR – MILWAUKEE SUBDIVISION (M.P. 6.46)
BENSENVILLE, IL – DUPAGE COUNTY



RAMP P5 BRIDGE CONSTRUCTION
SN 450 388E (FRA)
SN 1653 (TOLLWAY)
SN 022-9507 (IDOT)



LOCATION MAP

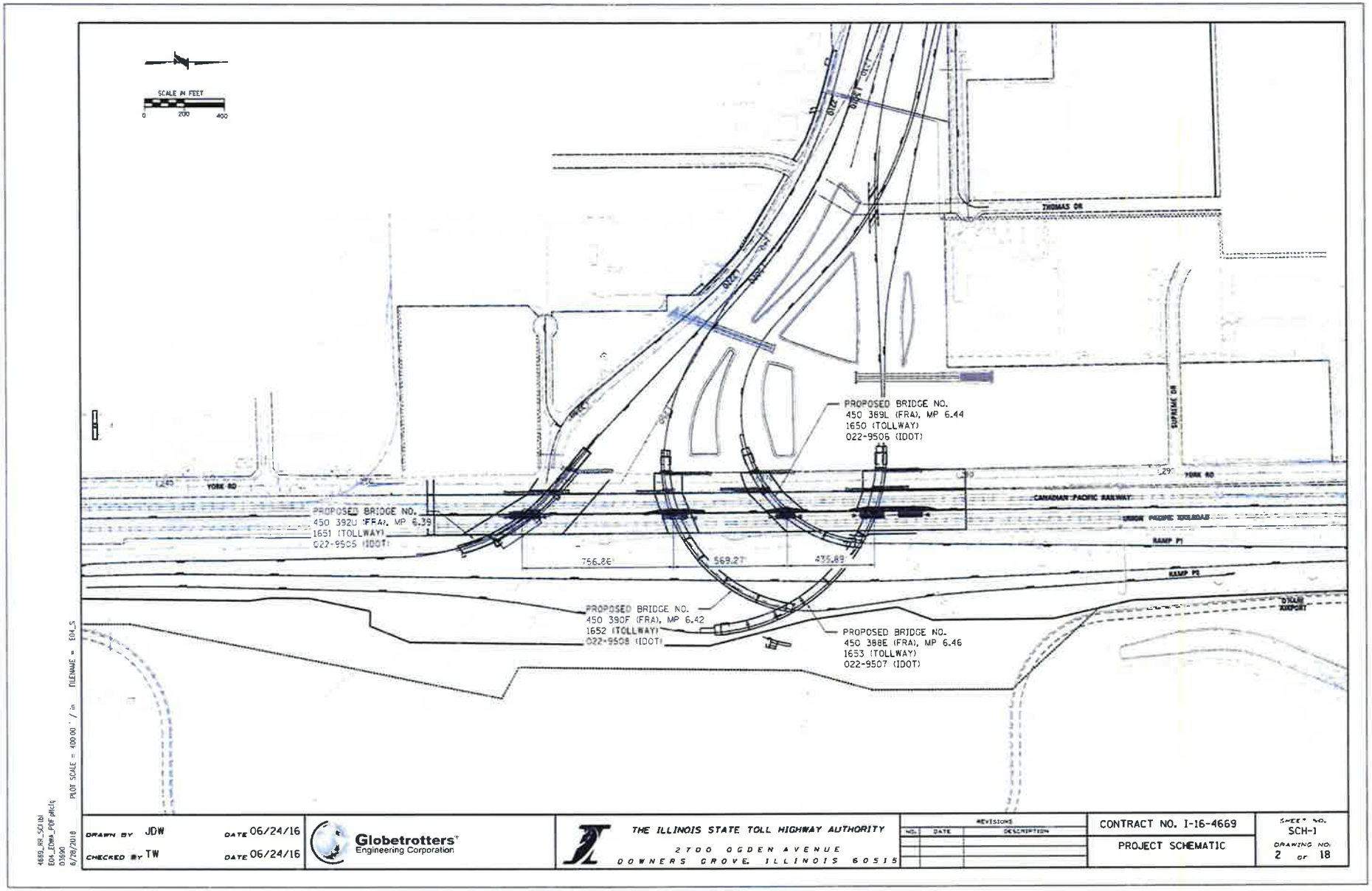
INDEX OF DRAWINGS:

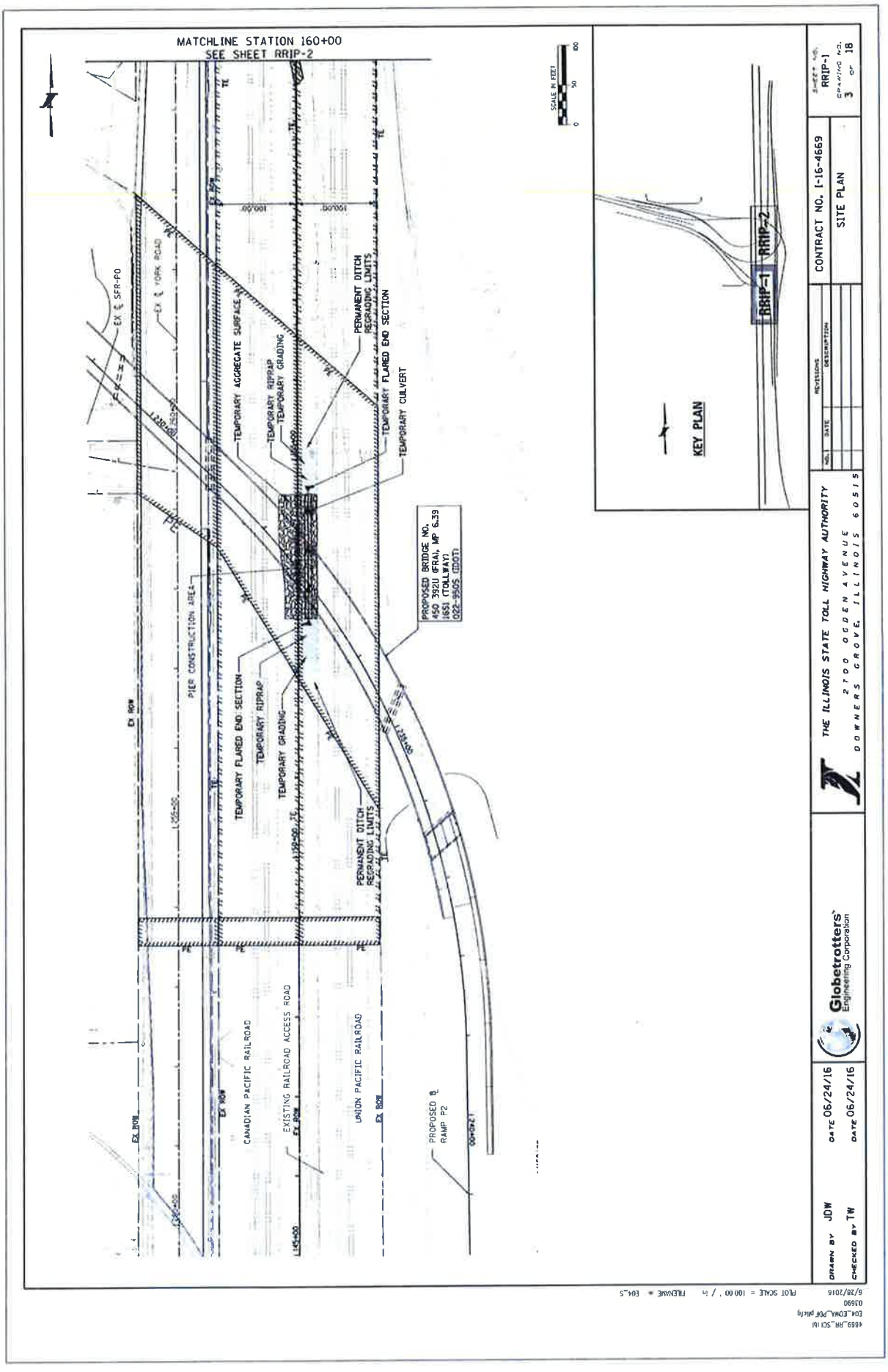
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2	SCH-1	PROJECT SCHEMATIC
3-4	MRP-1 - MRP-2	SITE PLAN
5	SA-01	GENERAL PLAN AND ELEVATION
6-7	SA-02 - SA-03	DETAILS
8-10	RPGD-01 - RPGO-03	RAILROAD PROFILE GRADE DIAGRAM
11-16	PM-01 - PM-06	CONSTRUCTION PHASING PLANS
17	XSC-1	CROSS SECTIONS TEMPORARY IMPROVEMENTS
18	XSC-2	CROSS SECTIONS PERMANENT IMPROVEMENTS

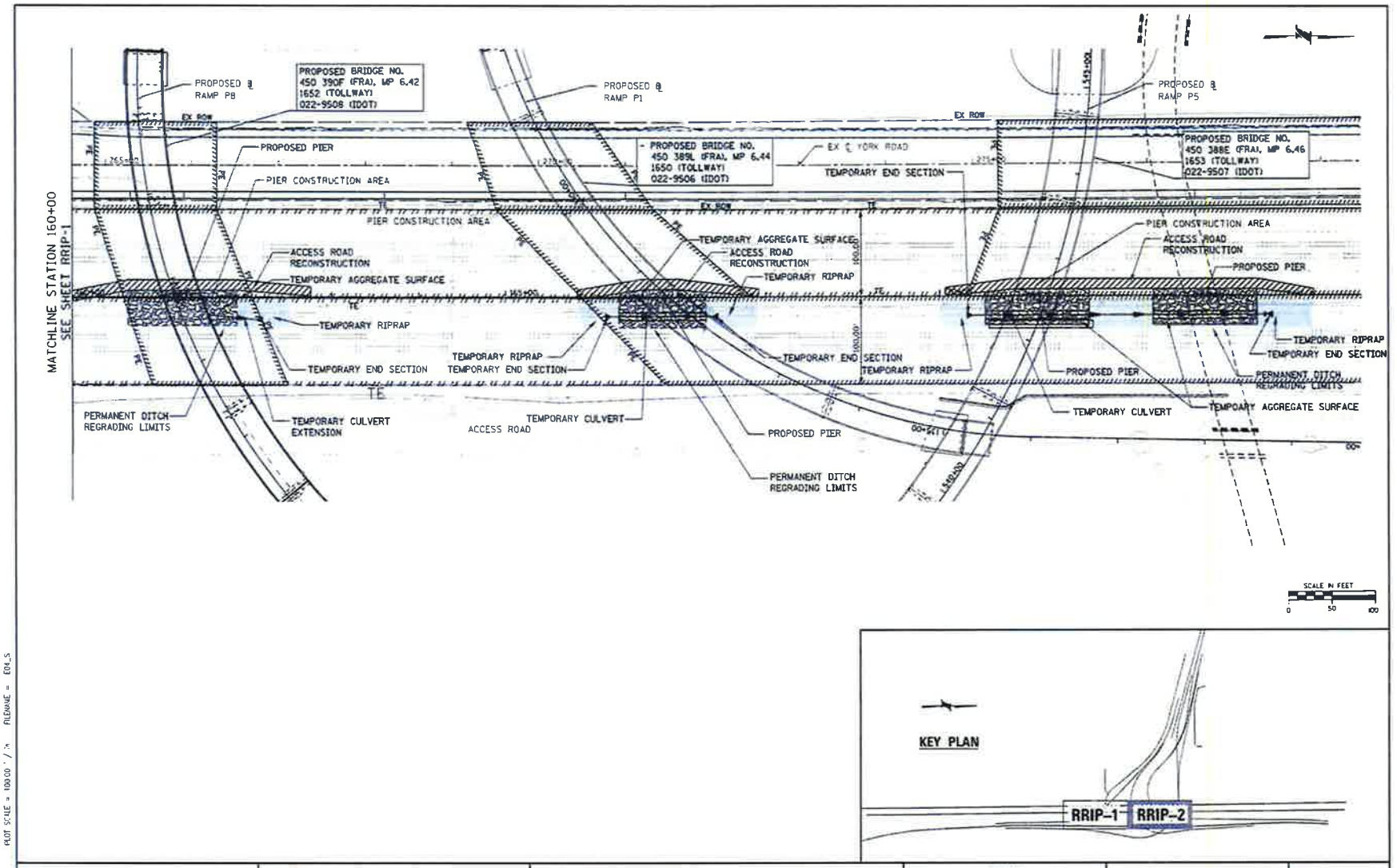
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JUNE 24, 2016

Stanley Consultants Inc.
Globetrotters Engineering Corporation
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6/28/2016
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450 392U (FRA), MP 6.39
1651 (TOLLWAY)
022-9505 (IDOT)
PROPOSED BRIDGE NO.
450 389L (FRA), MP 6.44
1650 (TOLLWAY)
022-9506 (IDOT)
PROPOSED BRIDGE NO.
450 390F (FRA), MP 6.42
1652 (TOLLWAY)
022-9508 (IDOT)
PROPOSED BRIDGE NO.
450 388E (FRA), MP 6.46
1653 (TOLLWAY)
022-9507 (IDOT)
YORK RD
THOMAS DR
SUMMIT DR
CANADIAN PACIFIC RAILWAY
UNION PACIFIC RAILROAD
RAMP P1
RAMP P2
DIGITAL AIRPORT
756.86'
569.27'
435.89'
1249'
1299'
DRAWN BY JDW
DATE 06/24/16
CHECKED BY TW
DATE 06/24/16
Globetrotters
Engineering Corporation
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
PROJECT SCHEMATIC
SHEET NO.
SCH-1
DRAWING NO.
2 OF 18
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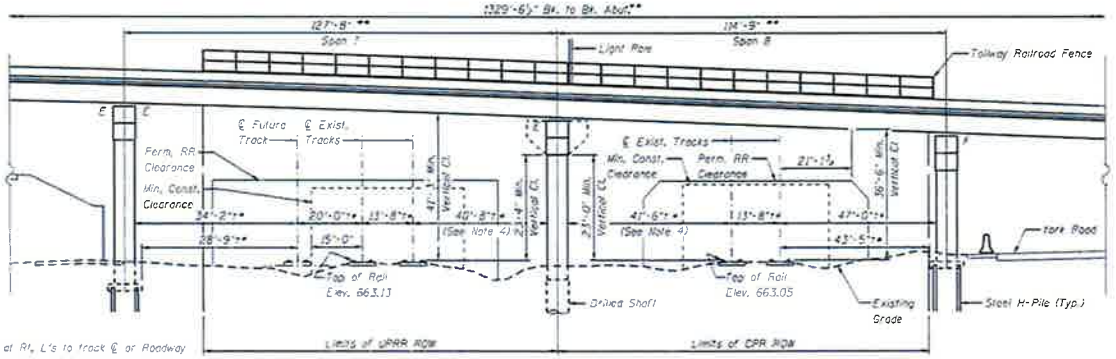

MATCHLINE STATION 160+00
SEE SHEET RRIP-2
EX & SFR-PO
EX & YORK ROAD
TEMPORARY AGGREGATE SURFACE
TEMPORARY RIPRAP
TEMPORARY GRADING
PERMANENT DITCH REGRADING LIMITS
TEMPORARY FLARED END SECTION
TEMPORARY CULVERT
PROPOSED BRIDGE NO. 450 3920 (FRA), MP 6.39 16S1 (TOLLWAY) 022-9505 (IDOT)
PIER CONSTRUCTION AREA
TEMPORARY FLARED END SECTION
TEMPORARY RIPRAP
TEMPORARY GRADING
PERMANENT DITCH REGRADING LIMITS
EX ROW
CANADIAN PACIFIC RAILROAD
EXISTING RAILROAD ACCESS ROAD
UNION PACIFIC RAILROAD
PROPOSED ℄ RAMP P2
SCALE IN FEET
0
50
100
KEY PLAN
RRIP-1
RRIP-2
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. | DATE | DESCRIPTION
CONTRACT NO. I-16-4669
SITE PLAN
SHEET NO. RRIP-1
DRAWING NO. 3 OF 18
DRAWN BY JDW
DATE 06/24/16
CHECKED BY TW
DATE 06/24/16
Globetrotters Engineering Corporation
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6/28/2016
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PROPOSED ℄ RAMP P8
PROPOSED BRIDGE NO. 450 390F (FRA), MP 6.42 1652 (TOLLWAY) 022-9508 (IDOT)
PROPOSED ℄ RAMP P1
PROPOSED ℄ RAMP P5
EX ROW
PROPOSED BRIDGE NO. 450 389L (FRA), MP 6.44 1650 (TOLLWAY) 022-9506 (IDOT)
EX ℄ YORK ROAD
PROPOSED BRIDGE NO. 450 388E (FRA), MP 6.46 1653 (TOLLWAY) 022-9507 (IDOT)
TEMPORARY END SECTION
PROPOSED PIER
PIER CONSTRUCTION AREA
ACCESS ROAD RECONSTRUCTION
TEMPORARY AGGREGATE SURFACE
TEMPORARY RIPRAP
MATCHLINE STATION 160+00 SEE SHEET RRIP-1
PERMANENT DITCH REGRADING LIMITS
TEMPORARY CULVERT EXTENSION
TEMPORARY CULVERT
ACCESS ROAD
SCALE IN FEET
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50
100
KEY PLAN
RRIP-1
RRIP-2
DRAWN BY JDW
DATE 06/24/16
CHECKED BY TW
DATE 06/24/16
Globetrotters Engineering Corporation
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
SITE PLAN
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Benchmark: Railroad spike in east face of utility pole, Located approximately 42' west of York Rd. and approximately 44' south of Beeline Dr., Sta. 272+64, Offset 48' Lt. Elev.. = 664.86 (NAVD 88)

Proposed Structure: The proposed structure is a 10-span curved steel plate girder bridge with an overall length of 1329'-5½" from back-to-back of abutments and an out-to-out width of 51'-2". The superstructure rests on single column concrete piers and stub abutments supported on steel piles or concrete drilled shafts.

Existing Structure: None

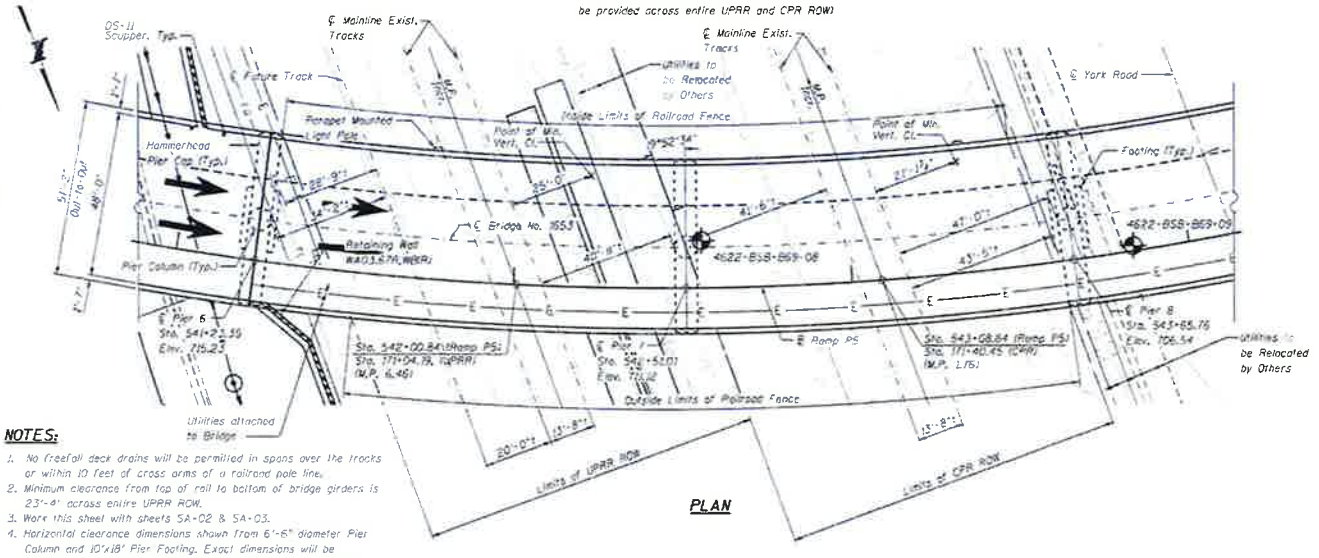


*Measured at Rt. & Lt's to track ℄ or Roadway

**Measured Along ℄ Ramp P5

ELEVATION

(Minimum vertical clearance of 23'-4" will be provided across entire UPRR and CPR ROW)



PLAN

NOTES:

1. No freefall deck drains will be permitted in spans over the tracks or within 10 feet of cross arms of a railroad pole line.
2. Minimum clearance from top of rail to bottom of bridge girders is 23'-4" across entire UPRR ROW.
3. Work this sheet with sheets SA-02 & SA-03.
4. Horizontal clearance dimensions shown from 6'-6" diameter Pier Column and 10'x18' Pier Footing. Exact dimensions will be determined in final design and horizontal dimensions corrected as required.

CONSTRUCTION SPECIFICATIONS

Tollway Supplemental Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Issued April 1, 2016.

Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Adopted April 1, 2016.

Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions Adopted April 1, 2016. Illinois Department of Transportation Guide Bridge Special Provisions (GBSP's).

DESIGN CRITERIA

LOADING HL-93 AND IL-120

Allow 30/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition, with 2016 Interims.
2016 Illinois State Toll Highway Authority Structure Design Manual
2012 Illinois Department of Transportation Bridge Manual
2016 Tollway Geotechnical Engineers Manual

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Substructure)
f'c = 4,000 psi (Class BS-Parapets)
f'c = 4,000 psi (Performance Mix-Bridge Deck, Approach Slabs and Diaphragms)
fy = 50,000 psi (Structural Steel-M270 Grade 50)
fy = 60,000 psi (Reinforcement)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.085 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.148 g
Soil Site Class = D

LIVE LOAD DEFLECTION CRITERIA

Span Length /800

LEGEND

- BSB-B69-08 — Soil Borings
- E — Existing Electric
- FO — Existing Fiber Optic
- G — Existing Gas
- Existing Aerial
- Proposed Storm Sewer
- ROW

GENERAL PLAN AND ELEVATION
UPRR-MILWAUKEE SUBDIVISION (M.P. 6.46)
CPR-C&M SUBDIVISION (M.P. 1.76)
BENSENVILLE, IL
DuPAGE COUNTY
IL-390 RAMP P5 OVER UPRR AND CPR
41°58'49"N, 87°56'20"W

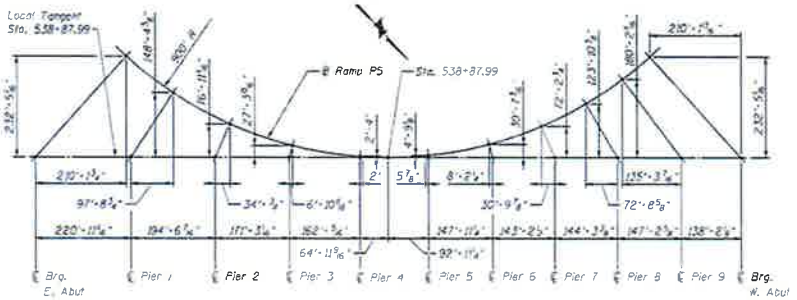
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CHECKED BY DSE	DATE 06/24/16	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515

NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669
BRIDGE NO. 450 388E (FRA) 1653(TOLLWAY), 022-9507(IDOT)
GENERAL PLAN AND ELEVATION

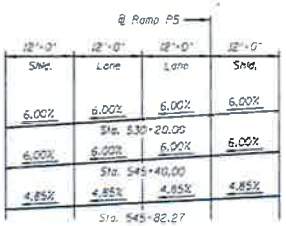
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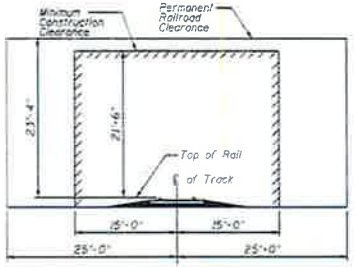
OFFSET SKETCH

(All Abutments and Piers are radial to ℄ Ramp P5)



CROSS SLOPE TRANSITIONS
RAMP P5

(Looking @ Upstation)
(Dimensions at Rt Angles to ℄ Ramp P5)



UPRR CLEARANCE
ENVELOPE

(Dimensions Perp. to Railroad)

CURVE DATA
(Ramp P1)

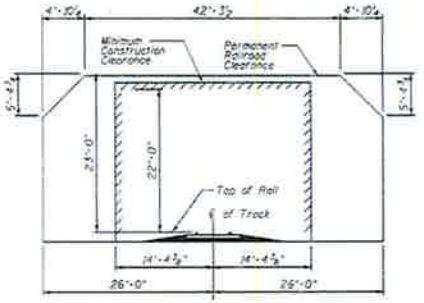
P.I. Sta. = 148+78.89
Δ = 132° 32' 30.73" (Rt)
D = 8° 48' 53.05"
R = 650.00'
T = 1,472.70'
L = 1,503.64'
E = 965.26'
P.C. Sta. = 134+00.19
P.T. Sta. = 149+03.83

CURVE DATA
(Ramp P5)

P.I. Sta. = 540+92.99
Δ = 102° 16' 32.70" (Lt)
D = 6° 21' 58.31"
R = 900.00'
T = 1,116.89'
L = 1,606.54'
E = 534.38'
P.C. Sta. = 529+76.10
P.T. Sta. = 545+82.64

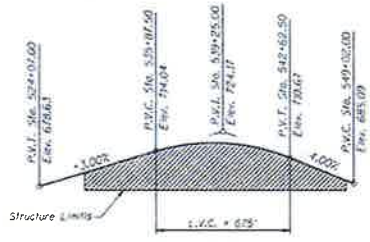
CURVE DATA
(Ramp P8)

P.I. Sta. = 803+42.30
Δ = 35° 45' 18.17" (Lt)
D = 5° 04' 13.52"
R = 1,130.00'
T = 364.49'
L = 705.17'
E = 57.33'
P.C. Sta. = 799+77.81
P.T. Sta. = 806+82.98



CPR CLEARANCE
ENVELOPE

(Dimensions Perp. to Railroad)



PROFILE GRADE

(Along ℄ Ramp P5)



TOP OF RAIL ELEVATIONS
CPR TRACKS

(High Tracks)



TOP OF RAIL ELEVATIONS
UPRR TRACKS

(High Tracks)

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DATE	06/24/16

Stanley Consultants INC.

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 388E (FRA)
1653(TOLLWAY),022-9507(IDOT)
DETAILS 1

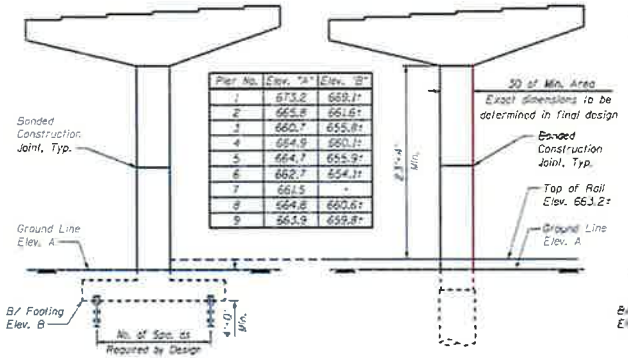
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Exh. D - Page 17

CONSTRUCTION NOTES

1. Any shoring system that impacts the Railroad's operation and/or supports the Railroad's embankment shall be designed and constructed per Railroad Guidelines for Temporary Shoring.
2. All demolition within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall comply with the Railroad's Demolition requirements.
3. Erection over the Railroad right-of-way shall be designed to cause no interruption to all Railroad operations, except upon mutual agreed upon track outages to allow girder erection. Prior to the release of Railroad traffic, components erected over Railroad tracks must be supported by falsework or permanent substructure, must be secured and stable and must not be supported by cranes or other construction equipment.
4. The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad prior to construction.
5. The proposed grade separation project shall not change the quantity and/or characteristics of the flow in the Railroad ditches and/or drainage structures.
6. The contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad prior to beginning any grading on the project site.
7. For Railroad coordination please refer to the Railroad's Coordination Requirements as part of the Specifications or Special Provisions of the project.
8. Temporary Construction Clearances, including falsework clearances, shall comply with Minimum Construction Clearance Envelopes shown on Sheet 2.
9. All permanent clearances shall be verified before project closeout.
10. Call the following number at least 48 hours prior to commencing work to determine location of fiber optics:
    UPRR "Call Before You Dig", 1-800-336-9193

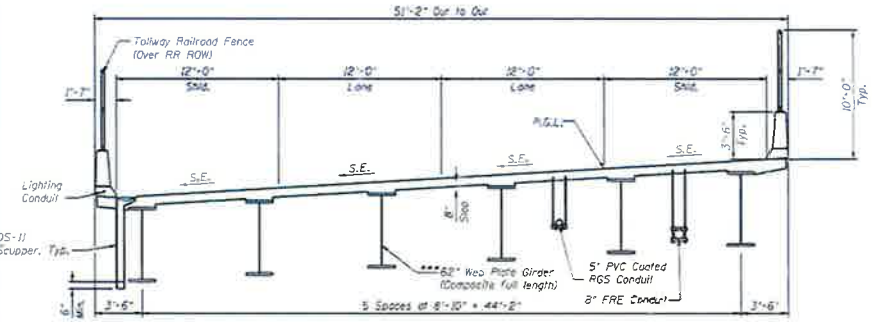


PIER SKETCH
(Piers 1-6 & 8)

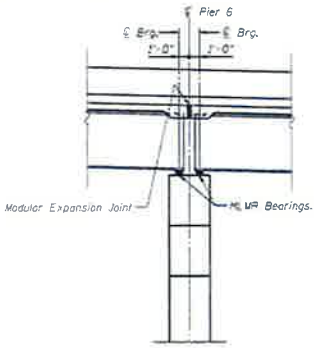
PIER SKETCH
(Pier 7)

PIER SKETCH
(Pier 9)

Note: Pier dimensions to be determined during final design



TYPICAL SECTION
(Looking Upstation)
***Subject to refinement during final design



SECTION THRU EXPANSION PIER

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CHECKED BY DSE	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

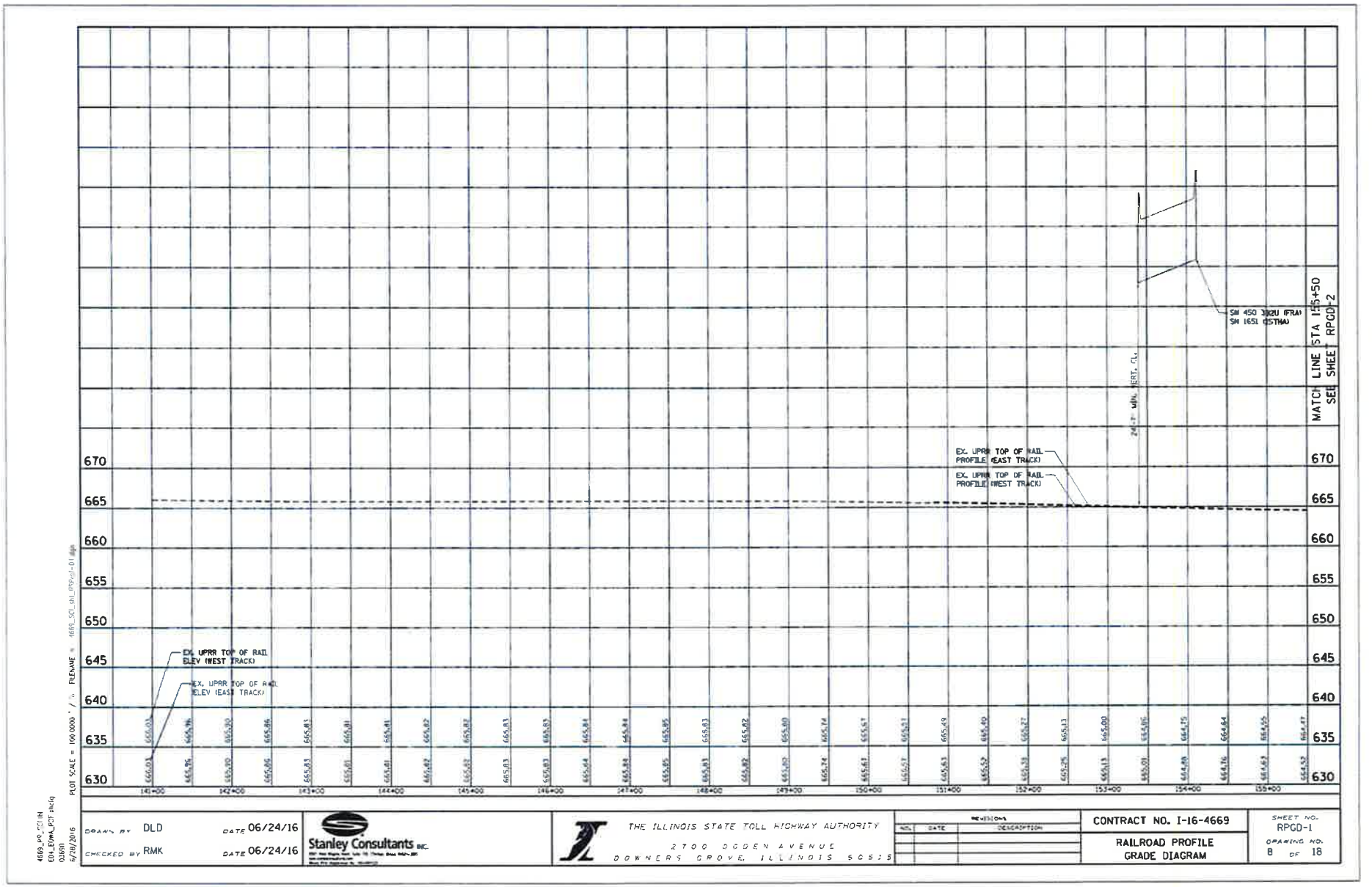
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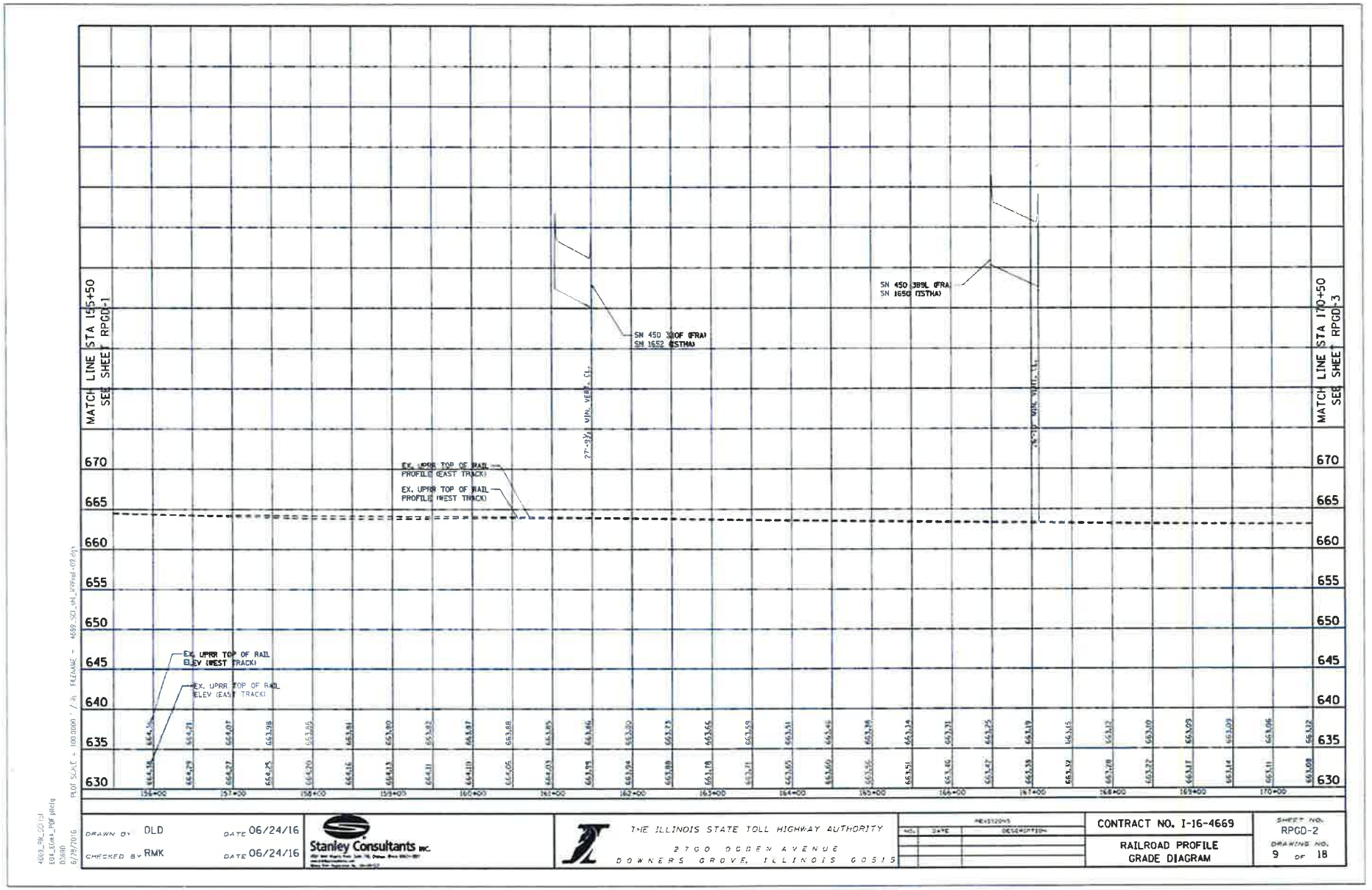
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DETAILS 2

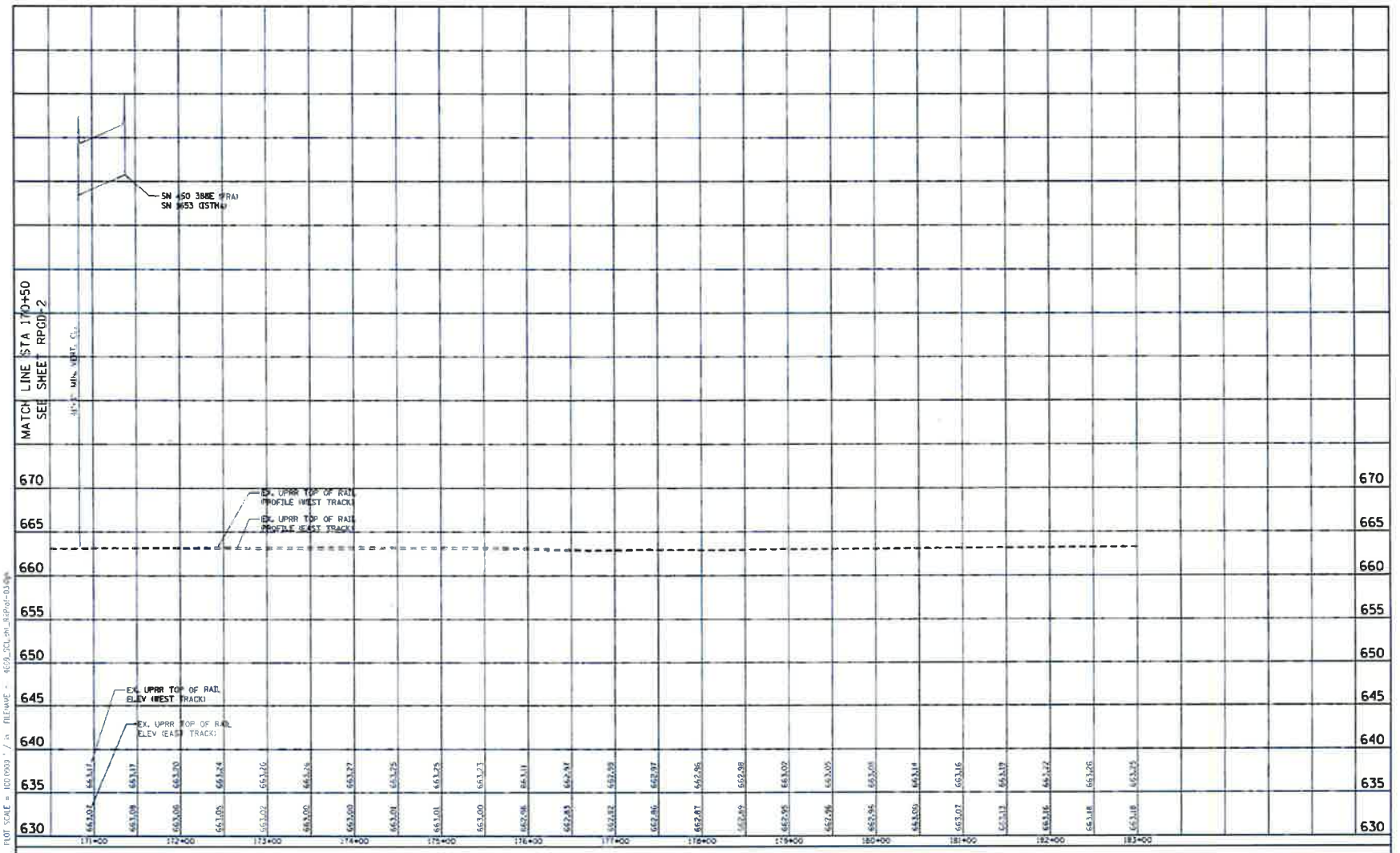
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Exh. D - Page 18


EX. UPRR TOP OF RAIL ELEV (WEST TRACK)
EX. UPRR TOP OF RAIL ELEV (EAST TRACK)
EX. UPRR TOP OF RAIL PROFILE (EAST TRACK)
EX. UPRR TOP OF RAIL PROFILE (WEST TRACK)
24'-3" MIN. VERT. CL.
SM 450 3(R2U (FRA)
SM 1651 (25THA)
MATCH LINE STA 145+50
SEE SHEET RPGD-2
670
665
660
655
650
645
640
635
630
141+00
142+00
143+00
144+00
145+00
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DATE 06/24/16
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DATE 06/24/16
Stanley Consultants INC.
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
RAILROAD PROFILE
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MATCH LINE STA 155+50
SEE SHEET RPGD-1
MATCH LINE STA 170+50
SEE SHEET RPGD-3
SN 450 389L (FRA)
SN 1650 (ISTHA)
SN 450 390F (FRA)
SN 1652 (ISTHA)
27'-3" MIN. VERT. CL.
16'-10" MIN. VERT. CL.
EX. UPRR TOP OF RAIL PROFILE (EAST TRACK)
EX. UPRR TOP OF RAIL PROFILE (WEST TRACK)
EX. UPRR TOP OF RAIL ELEV (WEST TRACK)
EX. UPRR TOP OF RAIL ELEV (EAST TRACK)
670
665
660
655
650
645
640
635
630
155+00
156+00
157+00
158+00
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DATE 06/24/16
Stanley Consultants INC.
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
RAILROAD PROFILE
GRADE DIAGRAM
SHEET NO.
RPGD-2
DRAWING NO.
9 OF 18



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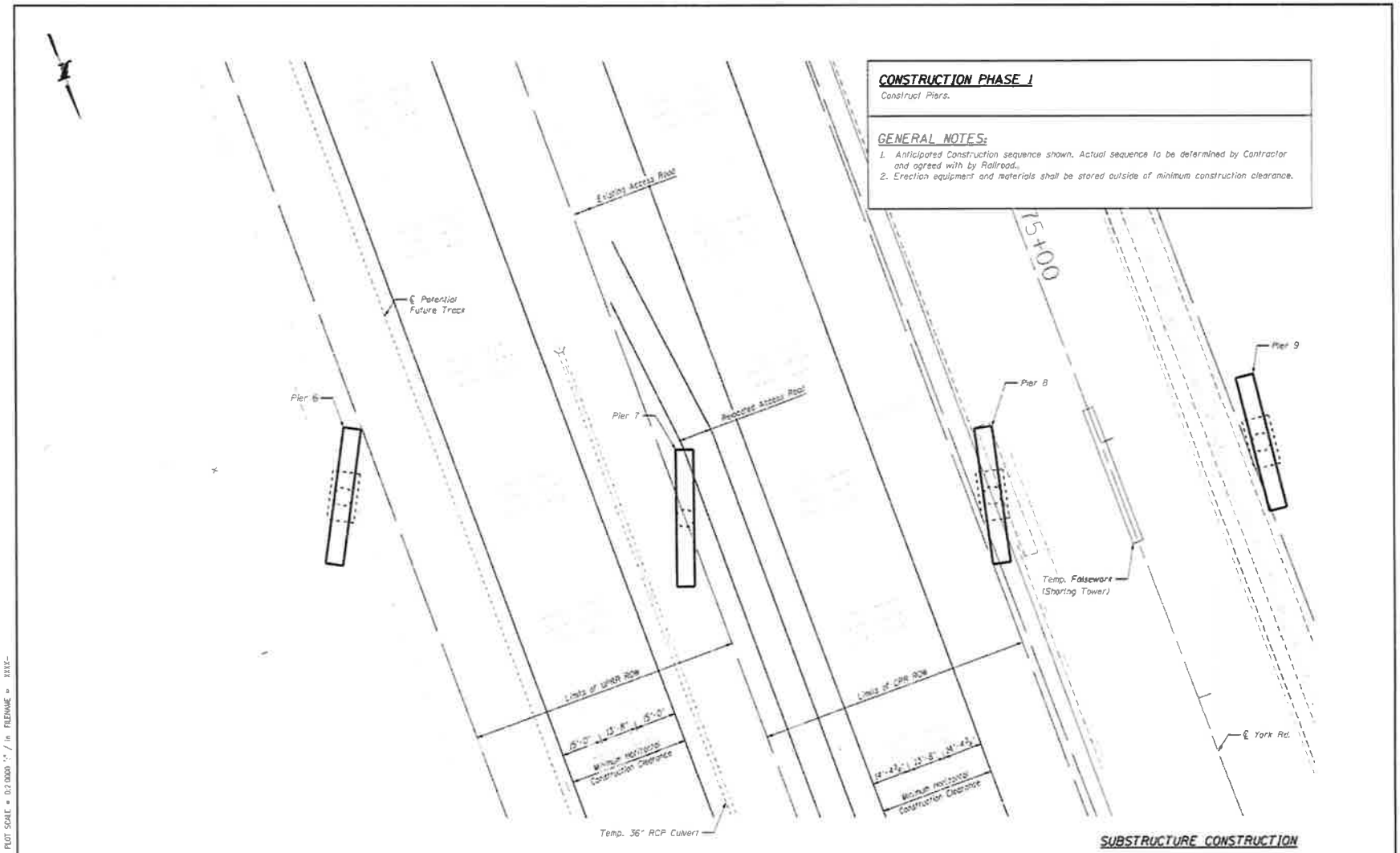
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CHECKED BY RMK	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

RAILROAD PROFILE
GRADE DIAGRAM

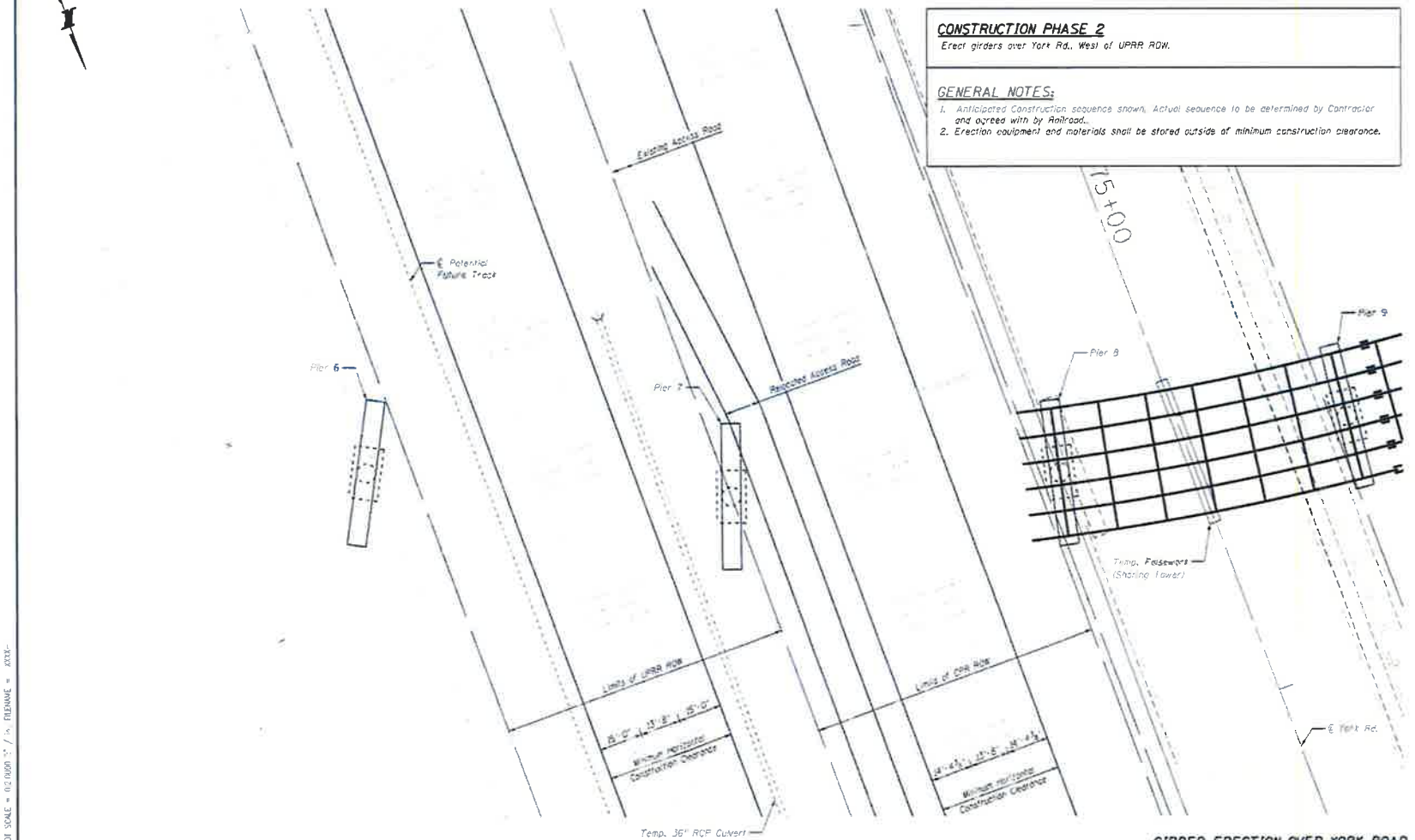
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CHECKED BY DSE	DATE 06/24/16				BRIDGE NO. 450 388E (FRA) 1653(TOLLWAY),022-9507(IDOT) CONSTRUCTION PHASE 1

SHEET NO. PH-01
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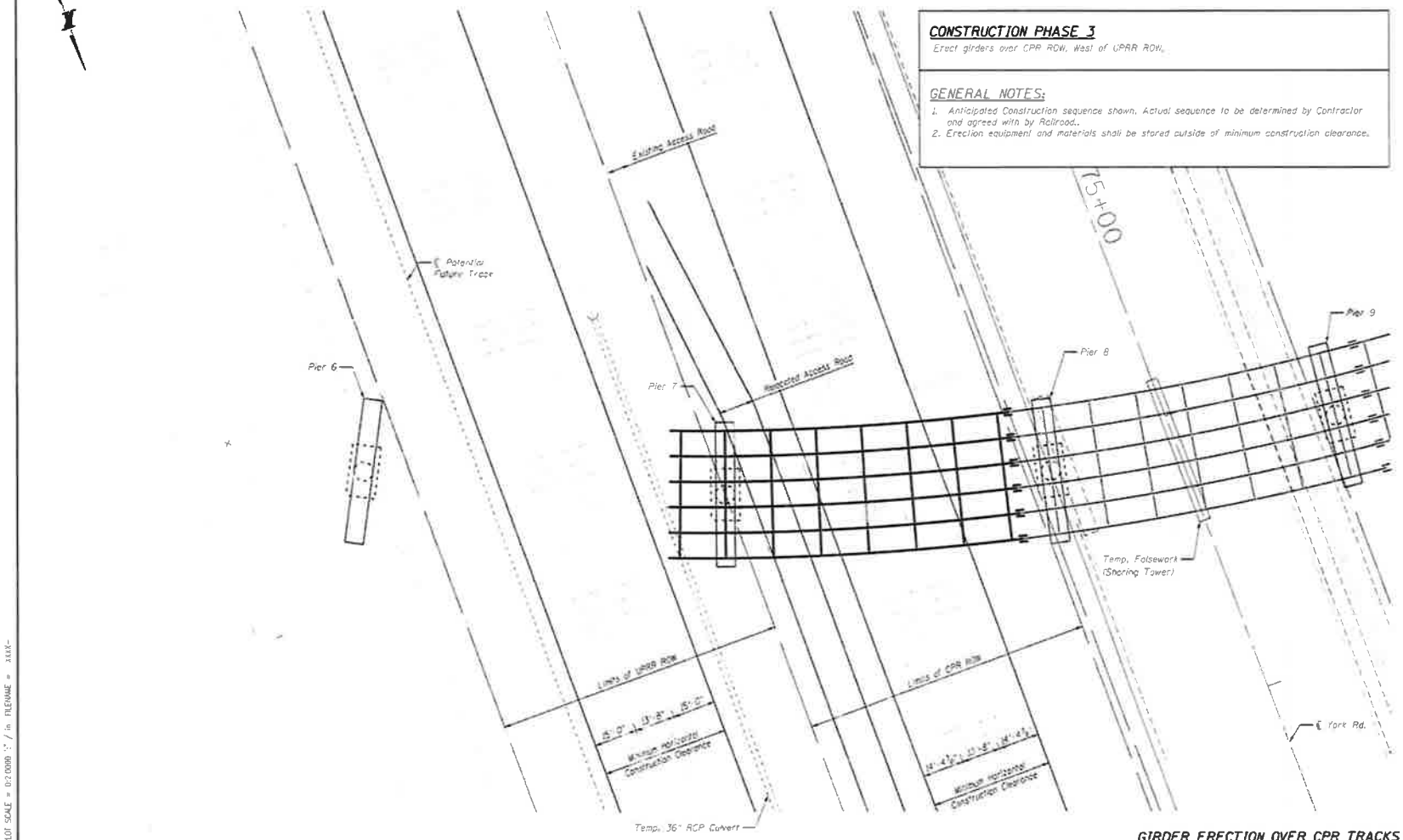


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NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669	SHEET NO. PH-02
BRIDGE NO. 450 388E (FRA) 1653(TOLLWAY), 022-9507(IDOT) CONSTRUCTION PHASE 2	DRAWING NO. 12 OF 18



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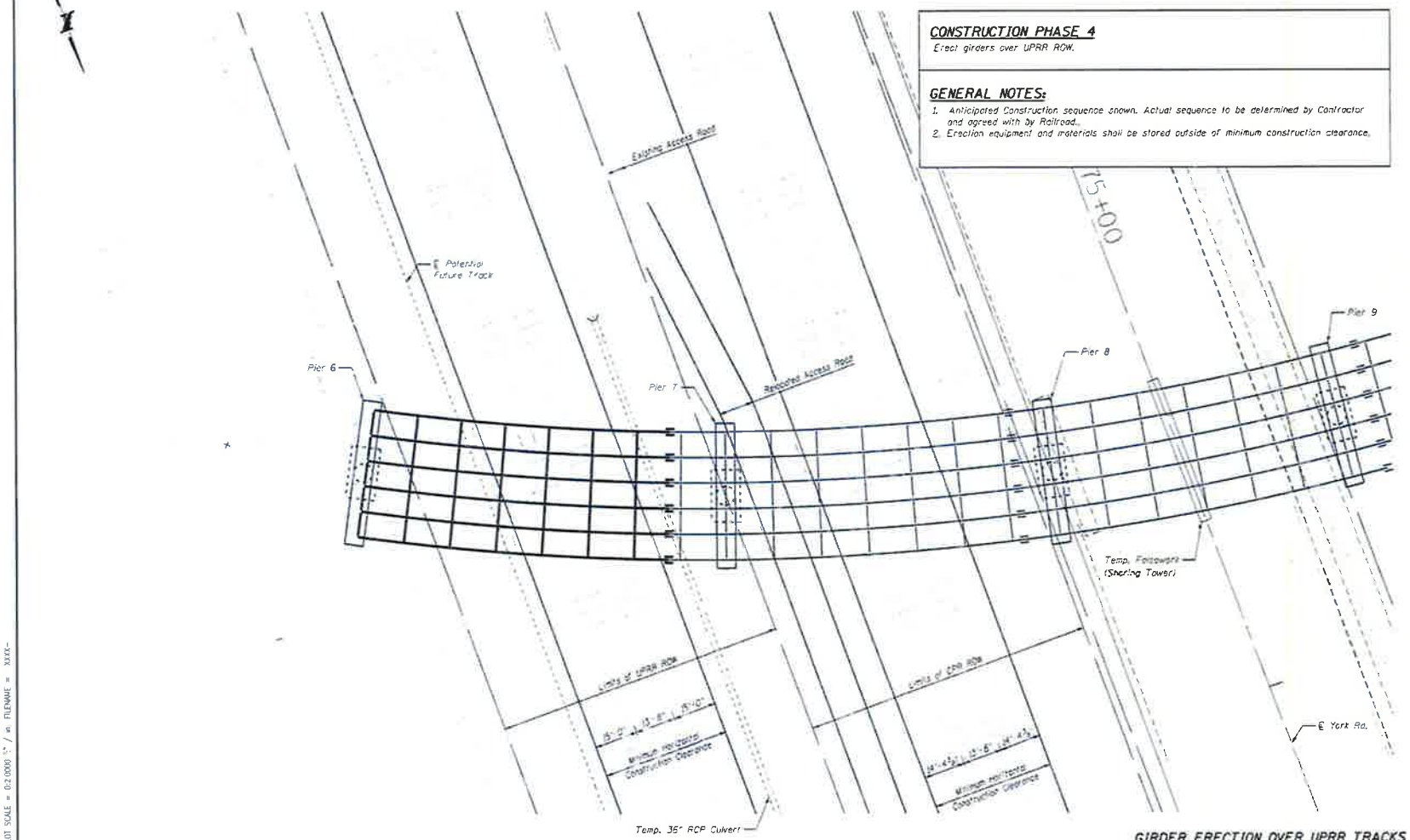
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SHEET NO. PH-03

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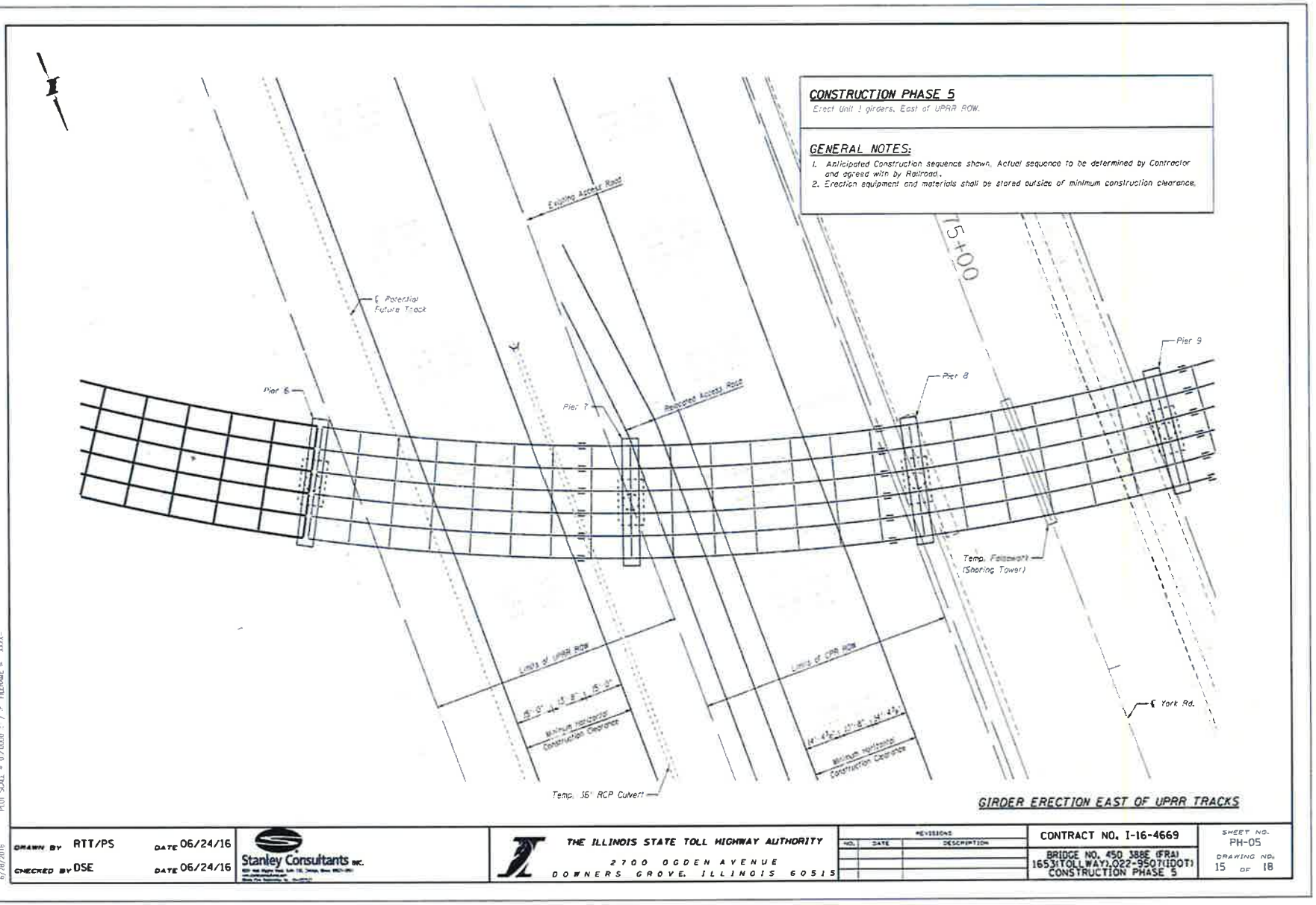


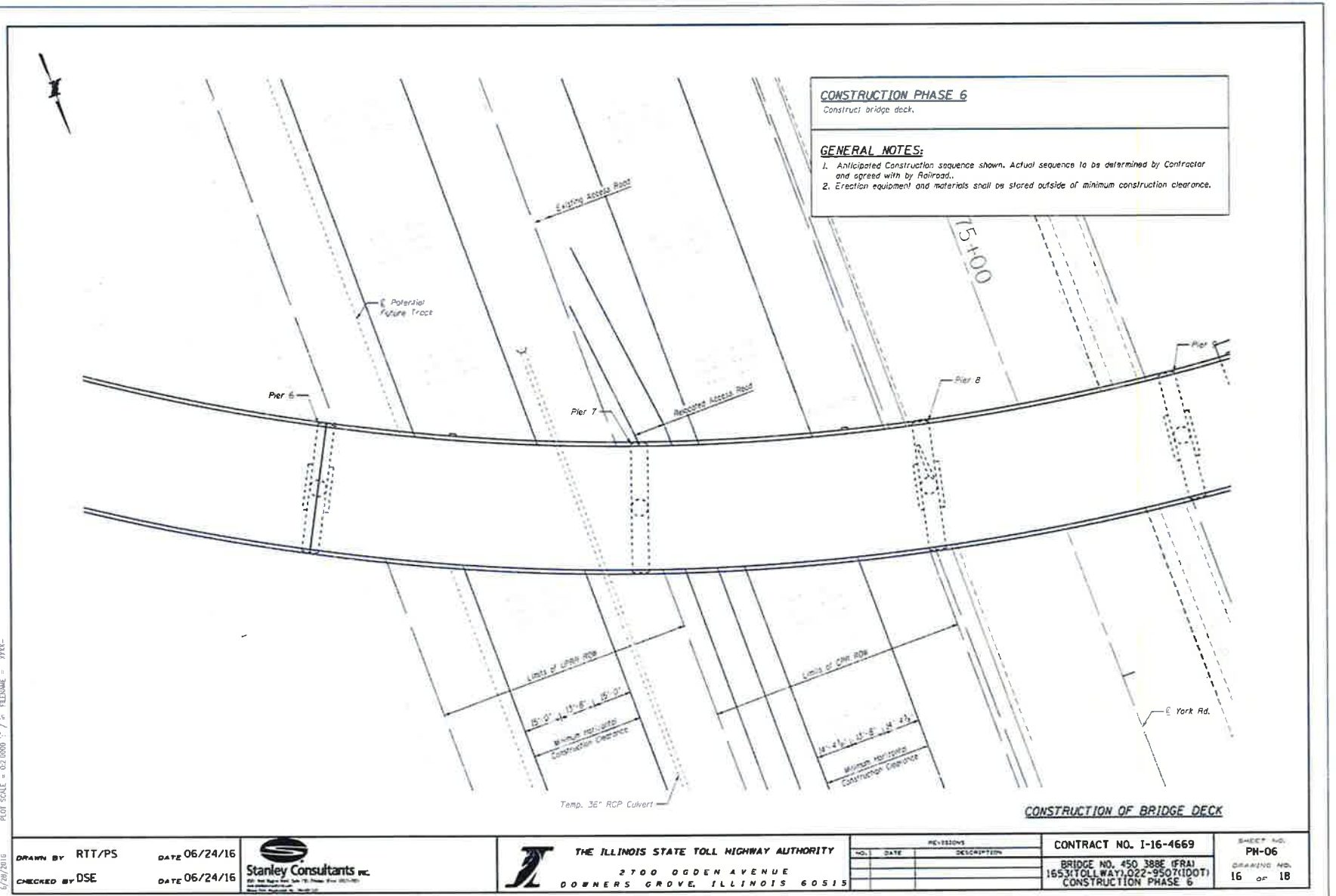
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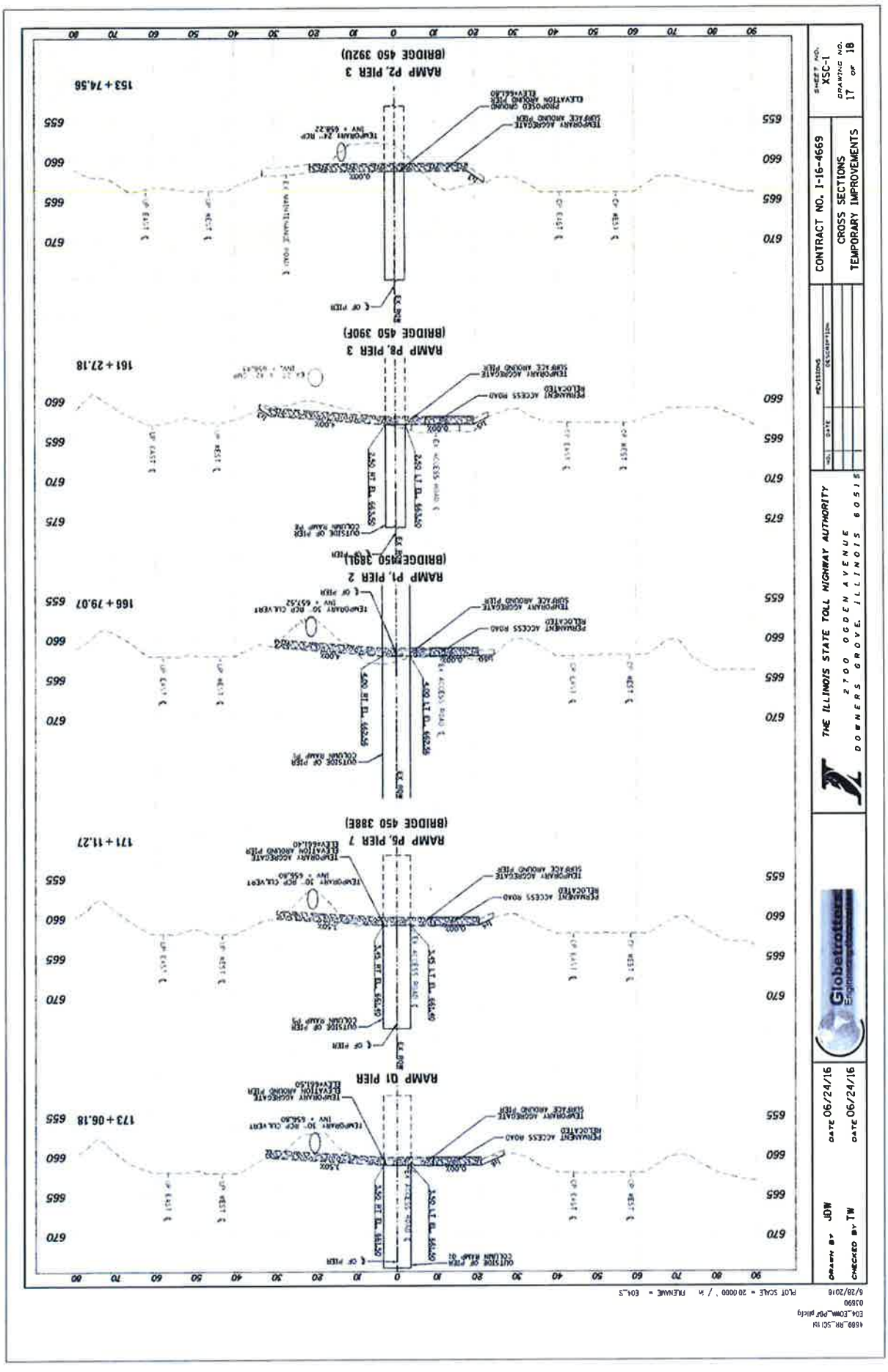
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CHECKED BY DSE	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669	SHEET NO. PH-04
BRIDGE NO. 450 388E (FRA) 1653X(TOLLWAY),022-9507(IDOT) CONSTRUCTION PHASE 4	DRAWING NO. 14 OF 18


CONSTRUCTION PHASE 5
Erect Unit 1 girders, East of UPRR ROW.
GENERAL NOTES:
1. Anticipated Construction sequence shown. Actual sequence to be determined by Contractor and agreed with by Railroad.
2. Erection equipment and materials shall be stored outside of minimum construction clearance.
Existing Access Road
℄ Potential Future Track
Pier 6
Pier 7
Proposed Access Road
Pier 8
Pier 9
15+00
Temp. Falsework (Shoring Tower)
Limits of UPRR ROW
25'-0"
Minimum Horizontal Construction Clearance
Limits of CPR ROW
14'-4½"
Minimum Horizontal Construction Clearance
℄ York Rd.
Temp. 36" RCP Culvert
GIRDER ERECTION EAST OF UPRR TRACKS
DRAWN BY RTT/PS
DATE 06/24/16
CHECKED BY DSE
DATE 06/24/16
Stanley Consultants INC.
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
BRIDGE NO. 450 388E (FRA) 1653(TOLLWAY),022-9507(IDOT) CONSTRUCTION PHASE 5
SHEET NO. PH-05
DRAWING NO. 15 OF 18
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CONSTRUCTION PHASE 6
Construct bridge deck.
GENERAL NOTES:
1. Anticipated Construction sequence shown. Actual sequence to be determined by Contractor and agreed with by Railroad..
2. Erection equipment and materials shall be stored outside of minimum construction clearance.
Existing Access Road
℄ Potential Future Tract
Pier 6
Pier 7
Relocated Access Road
Pier 8
Pier 9
75+00
℄ York Rd.
Limits of UPRR ROW
15'-0"
13'-6"
15'-0"
Minimum Horizontal Construction Clearance
Limits of CNR ROW
14'-6"
13'-6"
14'-6"
Minimum Horizontal Construction Clearance
Temp. 36" RCP Culvert
CONSTRUCTION OF BRIDGE DECK
DRAWN BY RTT/PS
DATE 06/24/16
CHECKED BY DSE
DATE 06/24/16
Stanley Consultants INC.
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. | DATE | DESCRIPTION
CONTRACT NO. I-16-4669
BRIDGE NO. 450 388E (FRA) 1653(TOLLWAY), 022-9507(IDOT) CONSTRUCTION PHASE 6
SHEET NO. PH-06
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RAMP P2, PIER 3
(BRIDGE 450 392U)
153+74.56
RAMP P8, PIER 3
(BRIDGE 450 390F)
161+27.18
RAMP P1, PIER 2
(BRIDGE 450 389L)
166+79.07
RAMP P6, PIER 7
(BRIDGE 450 388E)
171+11.27
RAMP Q1 PIER
173+06.18
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
CONTRACT NO. I-16-4669
CROSS SECTIONS
TEMPORARY IMPROVEMENTS
SHEET NO. XSC-1
DRAWING NO. 17 OF 18
DRAWN BY JDW
DATE 06/24/16
CHECKED BY TW
DATE 06/24/16
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RAMP P2, PIER 3
(BRIDGE 450 392U)
153 + 74.56
RAMP P8, PIER 3
(BRIDGE 450 390F)
161 + 27.18
RAMP P1, PIER 2
(BRIDGE 450 389L)
166 + 79.07
RAMP P5, PIER 7
(BRIDGE 450 388E)
171 + 11.27
RAMP Q1 PIER
173 + 06.18
PERMANENT ACCESS ROAD RELOCATED
PROPOSED GROUND ELEVATION AROUND PIER
OUTSIDE OF PIER COLUMN RAMP P1
OUTSIDE OF PIER COLUMN RAMP P5
OUTSIDE OF PIER COLUMN RAMP P8
OUTSIDE OF PIER COLUMN RAMP Q1
PROPOSED PIER SECTION SIDE SLOPE OF DITCH
655
660
665
670
675
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
CONTRACT NO. I-16-4669
CROSS SECTIONS
PERMANENT IMPROVEMENTS
SHEET NO. XSC-2
DRAWING NO. 18 OF 18
REVISIONS
NO. DATE DESCRIPTION
DRAWN BY JDW DATE 06/24/16
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I-13-4622;
TOLLWAY CONSTRUCTION CONTRACT I-16-4669

ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT

PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

BRIDGE NO. 450 388E (FRA), 1653 (TOLLWAY), 022-9507 (IDOT) (RAMP P5) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.46)

BENSENVILLE, IL – DUPAGE COUNTY

PROJECT SPECIFICATIONS

30% SUBMITTAL

June 24, 2016

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
PROJECT SPECIFICATIONS
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION
BRIDGE NO. 450 388E (FRA), 1653 (TOLLWAY), 022-9507 (IDOT) (RAMP P5) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.46)
BENSENVILLE, IL – DUPAGE COUNTY

S.P. 101 LOCATION AND SCOPE OF WORK

The improvements to be constructed under this contract shall be performed along IL 390 at Western Access located at milepost 17.0 along IL 390 and milepost 3.2 to milepost 3.8 along the Western Access in DuPage County, Illinois.

The work under this contract includes, but is not limited to:

1.) Construction of Ramp P1, P2, P5 and P8 Bridges
2.) Earthwork and grading for construction of the bridges carrying ramps P1, P2, P5 and P8 over existing York Road, Canadian Pacific Railroad and Union Pacific Railroad
3.) Erosion and sediment control
4.) All other appurtenant and miscellaneous construction shown on the plans and within these special provisions.

All applicable provisions of the IDOT Standard Specifications adopted April 1, 2016, herein after referred to as the Standard Specifications, IDOT Supplemental Specifications and Recurring Special provisions adopted April 1, 2016, Tollway Supplemental Specifications to said Standard Specifications issued April 1, 2016, and all Tollway Construction Bulletins in effect at the time of bidding, shall govern this work except as herein amended.

S.P. 106.8 COORDINATION WITH RAILROADS

The Contractor shall coordinate activities with the Union Pacific Railroad (UPRR) and the Canadian Pacific Railway (CPR). Each railroad operates on two separate pairs of mainline tracks that will be spanned by each of proposed Bridges 1650, 1651, 1652 and 1653.

The following coordination regarding railroad insurance, flagging and right of entry requirements for each railroad shall be adhered to by the Contractor:

- A right of entry (ROE) permit and flagging must be obtained prior to performing any bridge related work on railroad property. Right of entry fee is estimate to be $550 for each railroad and can be obtained through each of their websites (40-50 days in advance).
- All costs associated with flagging for the entire project shall be paid for by the Contractor prior to the start of work.
- Trains cannot be delayed or rerouted due to construction. Any means or methods needed to keep all track open for trains during construction shall be paid for by the Contractor.
- Railroad protective liability insurance must be obtained by the Contractor prior to performing any bridge work on the properties of the railroads. See S.P. 107.3 for additional information.
- No temporary crossing of any tracks will be allowed other than the one shown in the plans for accessing railroad property between the tracks of the UPRR and the CPR.
- The Contractor shall not place any materials, equipment or staff within the construction clearance zones for each railroad as shown in the plans.
- The following UPRR staff should be contacted regarding the required access permits and flagging associated with construction of Bridges 1650, 1651, 1652 and 1653 over that railroad.
    - John Venice (main railroad contact): 312-777-2043
    - (jnvenice@up.com)
- The following CPR staff should be contacted regarding the required access permits and flagging associated with construction of Bridges 1650, 1651, 1652 and 1653 over that railroad.
    - Dan Sabatka (main railroad contact): 651-495-9521
    - daniel_sabatka@cpr.ca

All construction access locations must be approved by the Engineer, affected agencies and respective railroads prior to starting any sub-structure work on railroad properties. The Contractor shall be responsible for obtaining all necessary permits to perform the work on Bridges 1650, 1651, 1652 and 1653. The Contractor shall be responsible for verifying the accuracy of these requirements and determining required fees by checking the following railroad websites:

- http://wwww.up.com/real_estage/tempuse/index.htm

All applicable safety and operational requirements associated with this work shall be adhered to by the Contractors. The Contractor is advised to review the following links regarding grade separation guidelines:

- http://www.uprr.com/aboutup/operations/specs/index.shtml

All utilities on property of the railroads near the construction of the bridges shall be coordinated by the Contractor.

S.P. 107 INSURANCE

This provision supplements Article 107.27 of the Tollway Supplemental Specifications.

J. ADDITIONAL INSURED PROTECTION

The work under this contract includes work upon, above, adjacent to and/or along the right-of-way and facilities of the FAA, Illinois Department of Transportation (IDOT), the Village of Bensenville, Counties of Cook and DuPage, the Union Pacific Railroad and the Canadian Pacify Railway. The Contractor's Insurance coverage, required by and in conformance with Article 107.27(j), shall include the agencies specified herein, its agents and employees as additional insureds, or provide a separate owner's protection policy of equal limits of coverage for each agency.

S.P. 107.3 RAILROAD PROTECTIVE LIABILITY INSURANCE

The work under this contract include work upon, above, adjacent to and/or along the right-of-way and facilities of the Union Pacific Railroad (UPRR) and the Canadian Pacific Railway (CPR). Each of the railroads require railroad protective liability insurance be in place prior to the Contact beginning work.

The Contractor shall confirm requirements on the UPRR website and with the following UPRR contact:

Attn John Venice
Manager Special Projects - Industry and Public Projects
Union Pacific Railroad
101 North Wacker Drive, Suite 1920
Chicago, IL 60606
312-777-2043
jnvenice@up.com

The Contractor shall confirm requirements on the CPR website and with the following CPR contact:

Attn Dan Sabatka
CP Rail
PW US-East
7550 Ogdendale Rd SE
Calgary, Alberta T2C 4X9
Canada
651-495-9521
daniel_sabatka@cpr.ca

S.P. 107.3.1 RAILROAD PROTECTIVE LIABILITY INSURANCE - UPRR

Requirements:

The Railroad Protective Liability Program for new bridge construction, structural repair to bridges, widening of bridges and bridge demolition requires the completion of the Bridge - Large Project Application to obtain a quote. See the UPRR website for additional information and current application forms: http://www.up.com/real_estate/rrinsurance/liability_insurance/index.htm).

With the Railroad Protective Liability Program made available by the Union Pacific Railroad through a national broker, the Contractor completes a single-page application, sends a check, and the Railroad Protective Liability coverage is in place. The UPRR considers this program a time saver in obtaining Railroad Protective Liability insurance.

For Railroad Protective Liability Insurance (RPLI) application requests, the Contractor may be asked by their insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and safety reasons, Union Pacific Railroad employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

S.P. 107.3.2 RAILROAD PROTECTIVE LIABILITY INSURANCE - CPR

Requirements:

The Railroad Protective Liability Program for new bridge construction, structural repair to bridges, widening of bridges and bridge demolition requires the completion of the Bridge - Large Project Application to obtain a quote. See the CPR website for additional information and current application forms.

With the Railroad Protective Liability Program made available by the Canadian Pacific Railway through a national broker, the Contractor completes a single-page application, sends a check, and the Railroad Protective Liability coverage is in place. The CPR considers this program a time saver in obtaining Railroad Protective Liability insurance.

For Railroad Protective Liability Insurance (RPLI) application requests, the Contractor may be asked by their insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and

safety reasons, Canadian Pacific Railway employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

RAILROAD BRIDGE FENCE (Tollway)

Effective: April 29, 2014
Revised: November 7, 2014

Description. The work shall consist of constructing a chain link fence to the outside face of a parapet or barrier on structures over railroads as shown in the plans. This work shall include the preparation of all shop drawings, provide materials, labor and equipment necessary to fabricate, furnish and install chain link fence and post attachment components as described in this special provision.

Materials. Material shall be according to the following.

Chain Link Fence Components:
(a) Posts: Posts shall be according to ASTM F 1083, Galvanized Steel Pipe, 3" Nominal Pipe Size (NPS), Schedule 40, 3.5" Outside Diameter, 0.216" Wall Thickness
(b) Chain Link Fabric: Fabric shall be according to ASTM A 392, 2" mesh with twisted top and knuckled bottom selvage, Zinc Coated Steel, 0.148" coated wire diameter, class 2 coating.
(c) Tie Wires: Tie wires shall be according to ASTM F 626, Zinc Coated Steel Wire, No. 9 gauge
(d) Brace Bands: Bracing bands shall be according to ASTM F 626, No. 12 gauge (min. thickness) x ¾" (min. width) Steel Bands (Beveled or Heavy)
(e) Tension Bars: Tension bars shall be according to ASTM F 626, 3/16" (min. thickness) x ¾" (min. width) x 5' 10" (min. height) Steel Bars
(f) Tension Bands: Tension bands shall be according to ASTM F 626, No. 14 gauge (min. thickness) x ¾" (min. width) Steel Bands
(g) Miscellaneous Fence Components: Miscellaneous fence components shall be according to ASTM F 626, Zinc Coated Steel – includes post or loop caps, combination rail ends, clamps and all other miscellaneous fittings and hardware
(h) Nuts and Bolts: Nuts and bolts shall be according to ASTM A 307, 3/8" diameter x 4 ¼" Hex Headed Bolts for Pipe Clamp Connections to the Posts.
(i) Washers: Washers shall be according to ASTM F 436, Flat.
(j) Tension Wire: Tension wire shall be according to ASTM A 824 and A 817, Type II Zinc Coated Steel Wire – No. 7 gauge, Class 4 Coating
(k) Hog Rings: Hog rings shall be according to ASTM F 626, Zinc Coated Steel Wire – No. 12 gauge
(l) Brace Rails: Brace rails shall be according to ASTM F 1083, Galvanized Steel Pipe – 1 1/4" NPS, Schedule 40, 1.660" Outside Diameter, 0.140" Wall Thickness.

Post Attachment Components:
(m) Pipe Clamps: Pipe clamps shall be according to ASTM A 36 or A 709 Grade 36, ¼" Steel Plate
(n) Shim Plates: Shim plates shall be according to ASTM F 626, Zinc Coated Steel – ¼" Thickness, 3" x 9 ½", with 3/4" diameter holes.
(o) Adhesive Anchor Rods: Adhesive anchor roads shall be according to ASTM F 1554 Grade 36, fully threaded headless Anchor Rods – 5/8" diameter x 6 ½".
(p) Neoprene Pads: Neoprene pads shall be in accordance with Article 1052.02(a) of the Standard Specifications.
(q) Chemical Adhesive Resin System: The chemical adhesive resin system shall consist of a two part, fast-setting resin and filler/hardener. The system shall meet the requirements of the Illinois Test Procedure for Chemical Adhesives and be listed on the IDOT approved list for Chemical Adhesives.

Hot-dip galvanize all chain link fence components not otherwise indicated as being coated, and all post attachment components ,except neoprene pads, in accordance with Section 1006 of the Standard Specifications.

General. The Contractor shall furnish and install the chain link fence according to the lines, grades, and dimensions shown on the plans and approved shop drawings. Work shall be accomplished according to Sections 509 and 664 of the Standard Specifications except as modified here-in:

Article 509.05 (c) Delete paragraph 1, third sentence; "Stretcher bars shall be used on all four sides of each panel".

Shop Drawings. The Contractor shall submit shop drawings in accordance with the provisions of Article 105.04 of the Tollway Supplemental Specifications for all chain link fence and post attachment components.

No materials detailed in the Plans and/or described in the Special Provision, or covered by the shops drawings shall be delivered to the site of the work until the shop drawings have been approved.

Construction Procedures. All construction and installation methods and procedures for chain link fence components and post attachment components shall be in strict accordance with the Plans, the manufacturer's recommendations, the approved shop drawings and as directed by the Engineer.

Any chain link fence component and post attachment component which, in the judgment of the Engineer, is not furnished and installed in accordance with the Plans, the Special Provision, the approved shop drawings, or the manufacturer's specifications shall be subject to rejection. Any such installation which is rejected shall be removed and replaced with material acceptable to the Engineer. The costs for any such adjustments shall be the responsibility of the Contractor.

Installation Procedures. The fence posts shall be installed plumb. Shims shall be used as required to achieve plumb and clearance for 6" of chain link fabric. Shims at bottom clamp to be omitted if clearance and plumb are otherwise provided. Total thickness of shims will be determined in the field.

Adhesive Bonded Anchors and Dowels shall comply with and be installed in accordance with Section 509 of the Standard Specifications.

Welding shall be accomplished only after written permission of the Engineer. All welding shall be in accordance with the American Welding Society Structural Welding Code (Steel) ANSI/AWS D1.1, current edition. Weld metal shall be E60XX or E70XX. Non Destructive Testing of welds is not required.

Protective electrical grounding shall be in accordance with Article 664.11 of the Standard Specifications.

Thread bottom tension wire through the bottom mesh loops. Tighten the bottom rail tension wire around the end posts. Tighten the brace rail tension wire around the end posts and first interior posts. Bottom tension wire shall utilize a separate tension band. Brace rail tension wire shall either



use a separate tension band or wrap around the post. Draw the wire tight and wrap it around itself a minimum of three loops next to the posts.

Method of Measurement. This work will be measured for payment in feet, along the top of the fence from center to center of the end posts.

Basis of Payment. This work will be paid for at the contract unit price per foot for RAILROAD BRIDGE FENCE.

Pay Item Number	Designation	Unit of Measure
JI664100	RAILROAD BRIDGE FENCE	FOOT

ALLOWANCE FOR RAILROAD FLAGGING (Illinois Tollway)

Effective: April 1, 2016

Description. This Special Provision establishes a budgetary allowance for flagging services required and provided by the railroad as a result of work being performed by the Contractor on the Illinois Tollway system. This work shall be performed in accordance with Section 107.12 of the Illinois Tollway Supplemental Specifications, except the Railroad will bill the Contractor directly for this work.

General Requirements. The Contractor shall pay all costs of Railroad Flagging services required and provided by the Railroad for all work performed under the contract. These costs shall be considered separate from the contract unit prices bid for the various items of work involved. Upon written order of the Engineer, the Contractor shall pay the costs of providing flaggers as specified with the exception of flaggers required for transporting material or equipment across the tracks. The Contractor will be reimbursed for the actual amounts paid.

Adequate notification shall be made to the Railroad to schedule the Flagger. The Contractor shall make every effort to notify the Railroad in advance if previously requested flagger(s) will not be needed for any reason.

The Railroad may have specific work rules that govern their use of flaggers. The Contractor shall coordinate with the appropriate Railroad contact to obtain information about specific Railroad work rules and how they may impact the cost of flagging services.

Method of Measurement. This work will not be measured for payment.

Basis of Payment. Payment for this work will be made as specified in Illinois Tollway Supplemental Specifications Article 109.04 using a force account basis. Railroad flagging bills shall be submitted to the Engineer on a monthly basis. Payment for this work shall not exceed the costs incurred by the Contractor and approved by the Engineer.

Any costs incurred for flagging protection provided by the Railroad at the Contractor's request for those days when the Contractor does not work shall be borne by the Contractor.

Pay Item Number	Designation	Unit of Measure
JT154102	ALLOWANCE FOR RAILROAD FLAGGING	UNIT

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I-13-4622; TOLLWAY CONSTRUCTION CONTRACT I-16-4669

ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT

PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

BRIDGE NO. 450 388E (FRA), 1653 (TOLLWAY), 022-9507 (IDOT) (RAMP P5) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.46)

BENSENVILLE, IL – DUPAGE COUNTY

DRAINAGE REPORT

30% SUBMITTAL

June 24, 2016

EXECUTIVE SUMMARY

Project Overview

The Elgin O'Hare Western Access Tollway project is located at the intersection of existing Thorndale Road at York Road in Bensenville, Illinois. Refer to the Location Map (see Exhibit A). The proposed interchange would connect new Tollways designated as IL-390 and I-490. Five new Tollway bridges would be constructed over the existing railroad tracks located along the east side of York Road. The proposed bridge crossings are located between Federal Railroad Administration (FRA) Mile Post 6.27 and 6.61 of the Union Pacific Railroad.

Drainage Design

The drainage design is in accordance with the Guidelines for Railroad Grade Separation Projects by the Union Pacific Railroad-BNSF Railway, May 2016. The proposed bridge piers include a pier situated on the property line between the Canadian Pacific Railroad (CPRR) and the Union Pacific Railroad (UPRR). Existing railroad access roads located between the existing tracks would be used to access the project area with access from York Road using the existing access location and track crossing near Station 188+00 and a new track crossing and York Road access at Station 131+00. The existing ditch and culverts would be maintained except for some temporary work and permanent modifications near the proposed piers. The tributary areas and design flows are the same for the existing and proposed conditions.

A temporary, flat granular platform would be provided at each pier to allow construction access. Since these would block existing ditch flow temporary culverts are proposed to maintain flow across these granular platforms. Both the granular platforms and temporary culverts would be removed at the end of construction.

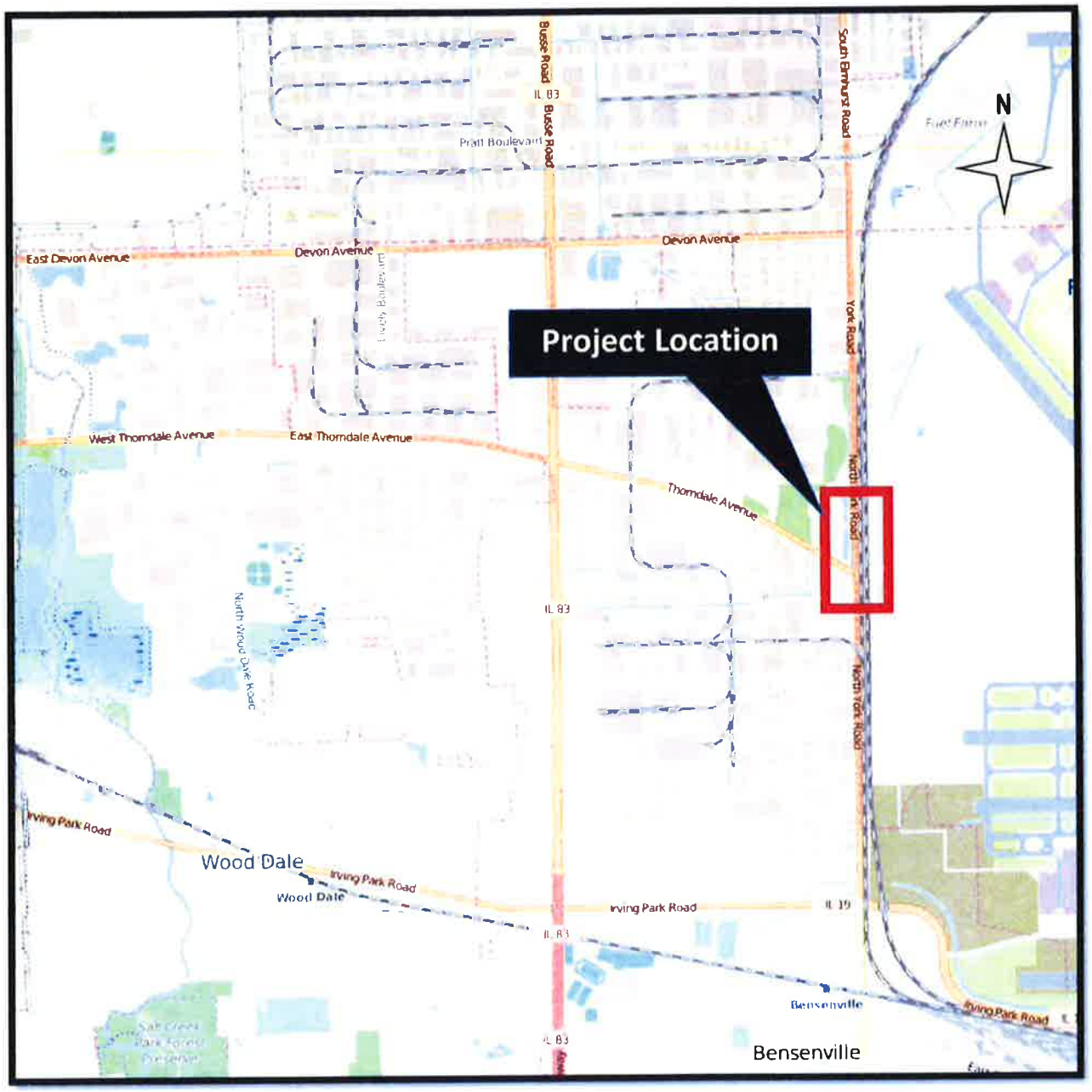
The temporary culverts are sized to meet the railroad guidelines with the hydraulic grade line not exceeding the Low Chord, defined as the crown of the pipe, based on a 50 year design storm, and providing freeboard to the Subgrade elevation, defined as 2'-3" below the base of rail elevation, based on a 100 year design storm. The top of rail elevations are based on topographic survey, with subgrade elevations based on 7-5/16-inch rail heights.

Ditches along the proposed piers will be graded using a 10' minimum bottom with 2:1 side slopes with the flowline a minimum of 3' below the Subgrade elevation, based on a 100 year design storm. Outside the pier construction areas the existing ditches and access roads would be maintained.

Design flows were determined based on delineating the areas tributary to the culverts, the time of concentration, and using the rational method with applicable runoff coefficients. These calculations are included hereinafter.

Recommendations

The drainage design for the final and temporary conditions for the interchange design meet the Railroad Guidelines. No adverse drainage impacts would be realized due to the improvement. The ditch between the railroad tracks would be maintained with some regrading to accommodate shifting sections of the access roads and the pier construction.



Drainage Report

UPRR / CPRR Ditch

PROJECT LOCATION MAP

Not to Scale Date: 6/3/2016

Exhibit A

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Executive Summary

Exhibit A – Location Map

1. **Proposed Pier Crossing: FRA Structure 450 388E (MP 6.46), Sta: 171+11.27**
   Drainage Design Criteria
   Drainage Calculations Summary Table
   Time of Concentration Calculation
   Design Peak Flow Calculation
   Temporary Condition Culvert HY-8 Sizing
   Proposed Condition Ditch Flow-Depth Calculation

2. **Appendix**
   Exhibit – Site Plan (RRIP-1, RRIP-2)
   Exhibit – Railroad Drainage Areas (RR-1, RR-2, RR-3)
   Rational Method Runoff Coefficients
   Rational Method Overland Flow Manning's coefficients
   Rational Method Open Channel Flow Manning's coefficients
   Bulletin 70 Climatic Sections in Illinois
   Bulletin 70 Rainfall Intensity vs. Duration (Figure 4-102c)

1

Proposed Pier Crossing:
FRA Structure 450 388E (MP 6.46)
Sta: 171+11.27

DRAINAGE DESIGN CRITERIA	
All design in accordance with the Union Pacific Railroad – BNSF Railway: *Guidelines for Railroad Grade Separation Projects*, May 2016	
Design Storm	50-year storm frequency (crown of culverts) 100-year storm frequency (freeboard to railroad subgrade)
Design Freeboard	Subgrade event (100-yr) energy grade line below the adjacent subgrade elevation (Subgrade is defined as 2'-3" below base of rail)
Ditch Design	Flat Bottom, 10' Bottom Width 2:1 side slopes Flowline a minimum 3' below the subgrade elevation
Culvert Design	Low chord event (50-yr) water surface elevation no higher than crown of culvert, HW/D ≤ 1.0 Subgrade event (100-yr) water surface elevation no higher than adjacent subgrade elevation, and HW/D ≤ 1.5
Design Velocity	Check for non-eroding velocities or provide erosion protection
Rainfall Data	ISWS Bulletin 70
Runoff Coefficients	TR-55 c = 0.95 for pavements (hard surfaces) c = 0.60 for granular surfaces c = 0.30 for grass surfaces
Design Flows	Rational Method

Computed: R Delves 6/02/2016
Revised: R.Delves 6/22/2016
Checked: J. Hopson 6/22/2016
Approved:

Railroad Property Drainage Calculations
Summary Table

Union Pacific Railroad															
Description						Tributary Flow		Low Chord		Subgrade					
FRA Structure #	FRA M.P. Designation	Tollway Structure #	IDOT Structure #	Station	Culvert Diameter (in)	Q_{50yr} (cfs)	Q_{100yr} (cfs)	50yr headwater (ft)	50yr within crown of culvert?	100yr headwater (ft)	Bottom of Rail Elevation	Subgrade Elev.	Pr Culvert Invert	HW/D ≤ 1.5	Proposed 100yr Cover ≥ Subgrade Elevation?
450 388E	M.P. 6.46	1653	022-9507	171+11.27	30	12.96	15.16	658.85	Yes	659.12	662.46	660.21	656.74	0.95	1.09 Yes

Union Pacific Railroad													
Description					Ditch Characteristics			Tributary Flow		Subgrade			
FRA Structure #	FRA M.P. Designation	Tollway Structure #	IDOT Structure #	Station	Proposed Ditch Bottom (ft)	Proposed Ditch Side Slope X:X	Proposed Ditch Side Slope X:X	Q_{50yr} (cfs)	Q_{100yr} (cfs)	Proposed Ditch Elevations	Proposed 100-yr Ditch Normal Depth	Subgrade Elev. (ft)	Proposed flowline Cover ≥ 3'?
450 388E	M.P. 6.46	1653	022-9507	171+11.27	10	2:1	2:1	12.96	15.16	656.82	0.95	660.21	3.39 Yes

Note:
Base of Rail Elevation = Surveyed Top of Rail Elevation - Rail Height taken as 7 + 5/16"
Subgrade Elevation = Base of Rail Elevation - 2' - 3"
HW = Maximum headwater
D = Diameter

Time of Concentration (T_c) or travel time (T_t)

Project	Calc'd By:	Date
Elgin O'Hare Western Access	Joe Hopson	2/3/16
Location	**Checked By:**	**Date**
FRA Structure 450 392U (MP 6.39), Sta: 153+74.66	Ryan Delves	6/3/16

Check one: ☑ Present ☐ Developed

Check one: ☑ T_c ☐ T_t through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

		Segment ID	AB				
1.	Surface description (table 3-1)		Pervious				
2.	Manning's roughness coefficient, n (table 3-1)		0.15				
3.	Flow lengh, L (total L < 300 ft)	ft	40				
4.	Two-year 24-hour rainfall, P_2	in	2.900				
5.	Land slope, s	ft/ft	0.104				
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t hr	0.043	+		=	0.043

Shallow concentrated flow

		Segment ID	BC				
7.	Surface description (paved or unpaved)		Unpaved				
8.	Flow length, L	ft	2401				
9.	Watercourse slope, s	ft/ft	0.0017				
10.	Average velocity, V (figure 3-1)	ft/s	0.67				
11.	$Tt = \frac{L}{3600\,V}$	Compute T_t hr	1.000	+		=	1.000

Channel flow

		Segment ID					
12.	Cross sectional flow area, a	ft^2					
13.	Wetted perimeter, pw	ft					
14.	Hydraulic radius, $r = \frac{a}{pw}$	Compute r ft					
15.	Channel slope, s	ft/ft					
16.	Manning's roughness coefficient, n						
17.	$V = \frac{1.49\, r^{2/3} s^{1/2}}{n}$	Compute V ft/s					
18.	Flow length, L	ft					
19.	$Tt = \frac{L}{3600\,V}$	Compute T_t hr		+		=	0.000
20.	Watershed or subarea Tc or Tt (add Tt in steps 6, 11, and 19)	hr					1.043

Time of Concentration (T_c) or travel time (T_t)

Project	Calc'd By:	Date
Elgin O'Hare Western Access	Joe Hopson	2/3/16
Location	**Checked By:**	**Date**
FRA Structure 450 390F (MP 6.42), Sta: 161+27.18	Ryan Delves	6/3/16

Check one: ☑ Present ☐ Developed

Check one: ☑ T_c ☐ T_t through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

		Segment ID				
1.	Surface description (table 3-1)					
2.	Manning's roughness coefficient, n (table 3-1)					
3.	Flow lengh, L (total L < 300 ft) ft					
4.	Two-year 24-hour rainfall, P_2 in					
5.	Land slope, s ft/ft					
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t hr		+		=	

Shallow concentrated flow

		Segment ID				
7.	Surface description (paved or unpaved)					
8.	Flow length, L ft					
9.	Watercourse slope, s ft/ft					
10.	Average velocity, V (figure 3-1) ft/s					
11.	$Tt = \frac{L}{3600\,V}$ Compute T_t hr		+		=	

Channel flow

		Segment ID				
12.	Cross sectional flow area, a ft^2	AB		**ADD FROM PREVIOUS TC**		
13.	Wetted perimeter, pw ft	2.07				
14.	Hydraulic radius, $r = \frac{a}{pw}$ Compute r ft	8.34		Assume 0.5' depth		
15.	Channel slope, s ft/ft	0.25				
16.	Manning's roughness coefficient, n	0.001				
17.	$V = \frac{1.49\,r^{2/3} s^{1/2}}{n}$ Compute V ft/s	0.03				
18.	Flow length, L ft	0.45				
19.	$Tt = \frac{L}{3600\,V}$ Compute T_t hr	770				
20.	Watershed or subarea Tc or Tt (add Tt in steps 6, 11, and 19) hr	0.48	+		=	0.478
						0.478

Time of Concentration (T_c) or travel time (T_t)

Project	Calc'd By:	Date
Elgin O'Hare Western Access	Joe Hopson	2/3/16
Location	**Checked By:**	**Date**
FRA Structure 450 389L (MP 6.44), Sta: 166+79.07	Ryan Delves	6/3/16

Check one: ☑ Present ☐ Developed

Check one: ☑ T_c ☐ T_t through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

		Segment ID					
1.	Surface description (table 3-1)						
2.	Manning's roughness coefficient, n (table 3-1)						
3.	Flow lengh, L (total L < 300 ft) ft						
4.	Two-year 24-hour rainfall, P_2 in						
5.	Land slope, s ft/ft						
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t hr		+		=		

Shallow concentrated flow

		Segment ID					
7.	Surface description (paved or unpaved)						
8.	Flow length, L ft						
9.	Watercourse slope, s ft/ft						
10.	Average velocity, V (figure 3-1) ft/s						
11.	$Tt = \frac{L}{3600\,V}$ Compute T_t hr		+		=		

Channel flow

		Segment ID	AB				
12.	Cross sectional flow area, a ft^2		2.67			**ADD FROM PREVIOUS TC**	
13.	Wetted perimeter, pw ft		5.70			Assume 1' depth	
14.	Hydraulic radius, $r = \frac{a}{pw}$ Compute r ft		0.47				
15.	Channel slope, s ft/ft		0.000				
16.	Manning's roughness coefficient, n		0.03				
17.	$V = \frac{1.49\, r^{2/3} s^{1/2}}{n}$ Compute V ft/s		0.49				
18.	Flow length, L ft		551				
19.	$Tt = \frac{L}{3600\,V}$ Compute T_t hr		0.31	+		=	0.310
20.	Watershed or subarea Tc or Tt (add Tt in steps 6, 11, and 19) hr						0.310

Time of Concentration (T_c) or travel time (T_t)

Project	Calc'd By:	Date
Elgin O'Hare Western Access	Joe Hopson	2/3/16
Location	**Checked By:**	**Date**
FRA Structure 450 388E (MP 6.46), Sta: 171+11.27	Ryan Delves	6/3/16

Check one: ☑ Present ☐ Developed

Check one: ☑ T_c ☐ T_t through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

		Segment ID					
1.	Surface description (table 3-1)						
2.	Manning's roughness coefficient, n (table 3-1)						
3.	Flow lengh, L (total L < 300 ft) ft						
4.	Two-year 24-hour rainfall, P_2 in						
5.	Land slope, s ft/ft						
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t hr		+		=		

Shallow concentrated flow

		Segment ID					
7.	Surface description (paved or unpaved)						
8.	Flow length, L ft						
9.	Watercourse slope, s ft/ft						
10.	Average velocity, V (figure 3-1) ft/s						
11.	$Tt = \frac{L}{3600\,V}$ Compute T_t hr		+		=		

Channel flow

		Segment ID	AB				
12.	Cross sectional flow area, a ft^2		2.67			**ADD FROM PREVIOUS TC**	
13.	Wetted perimeter, pw ft		5.70			Assume 1' depth	
14.	Hydraulic radius, $r = \frac{a}{pw}$ Compute r ft		0.47				
15.	Channel slope, s ft/ft		0.002				
16.	Manning's roughness coefficient, n		0.03				
17.	$V = \frac{1.49\, r^{2/3} s^{1/2}}{n}$ Compute V ft/s		1.30				
18.	Flow length, L ft		432				
19.	$Tt = \frac{L}{3600\,V}$ Compute T_t hr		0.09	+		=	0.092
20.	Watershed or subarea Tc or Tt (add Tt in steps 6, 11, and 19) hr						0.092

Stanley Consultants INC.

Job No. 25250
Subject Flow Computations

Computed J. Hopson Date 06/01/16
Checked R. Delves Date 06/03/16
Approved Date

Sheet No. ____ of ____

Design Peak Flow Computations
Proposed Culvert Tributary Area
FRA Structure 450 388E (MP 6.46)

Alignment: HAUL-GBLP-000
Sta: 171+11.27

Description	**Area	*$C_{coefficient}$	C*A
	12.65	0.51	6.45

*Coefficients from IDOT table 4-102a

A_{TOTAL} = 12.65 Ac (Acreage total from above)

$C_{composite}$ = ΣC*A/ΣA
$C_{composite}$ = 6.4515 / 12.65
$C_{composite}$ = 0.51

Tc = 115.38 min (See attached)

*I_{50} = 2.01 in/hr
*I_{100} = 2.35 in/hr
*(See attached rainfall intensity vs duration Figure 4-102c)

$Q_{50\ Year}$ Design Flow

$Q_{50} = (C)*(i_{50})*(A)$

C = 0.51 (From calculation above)
i_{50} = 2.01 in/hr (Use T_c noted above)
A = 12.65 acres (As described above)

Q_{50} = 12.95 cfs ***50 - year*** (From formula above)

$Q_{50\ Year}$ Check

$Q_{100} = (C)*(i_{100})*(A)$

C = 0.51 (From calculation above)
i_{100} = 2.35 in/hr (Use T_c noted above)
A = 12.65 acres (As described above)

Q_{100} = 15.15 cfs ***100- year*** (From formula above)

HY-8 Culvert Analysis Report

Temporary Culvert FRA Structure 450 388E (MP 6.46)
Sta: 171+11.27

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 12.96 cfs

Design Flow: 12.96 cfs

Maximum Flow: 15.16 cfs

Table 1 - Summary of Culvert Flows at Crossing: FRA Structure 450 388E (MP 6.46)

Headwater Elevation (ft)	Total Discharge (cfs)	FRA Structure 450 388E (MP 6.46) Discharge (cfs)	Roadway Discharge (cfs)	Iterations
658.85	12.96	12.96	0.00	1
658.92	13.18	13.18	0.00	1
658.94	13.40	13.40	0.00	1
658.97	13.62	13.62	0.00	1
658.99	13.84	13.84	0.00	1
659.01	14.06	14.06	0.00	1
659.03	14.28	14.28	0.00	1
659.05	14.50	14.50	0.00	1
659.08	14.72	14.72	0.00	1
659.10	14.94	14.94	0.00	1
659.12	15.16	15.16	0.00	1
661.50	27.26	27.26	0.00	Overtopping

Rating Curve Plot for Crossing: FRA Structure 450 388E (MP 6.46)

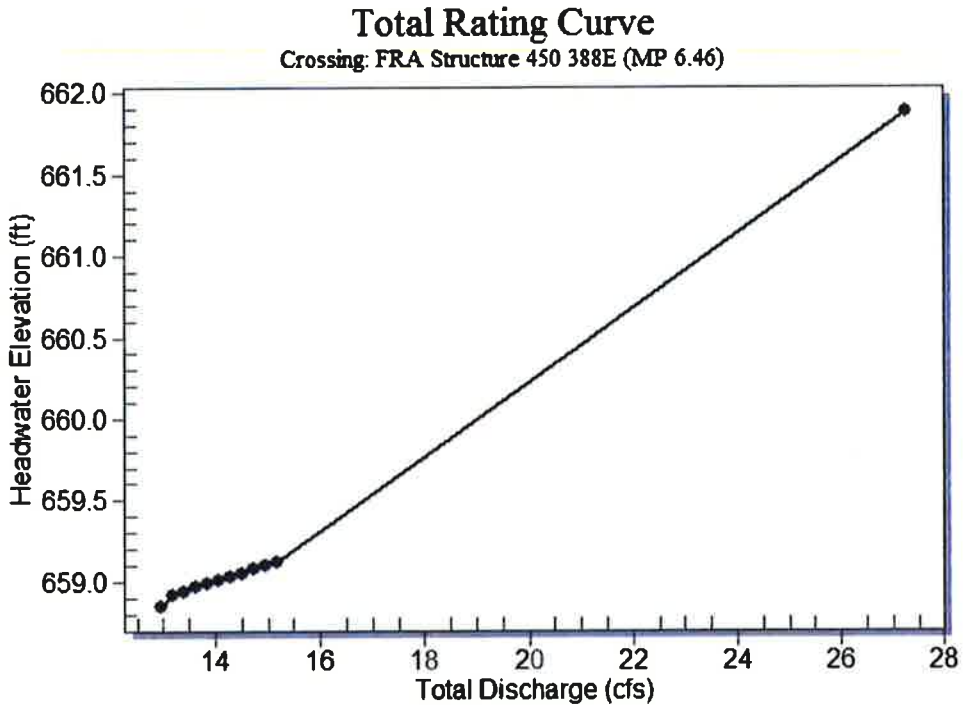


Table 2 - Culvert Summary Table: FRA Structure 450 388E (MP 6.46)

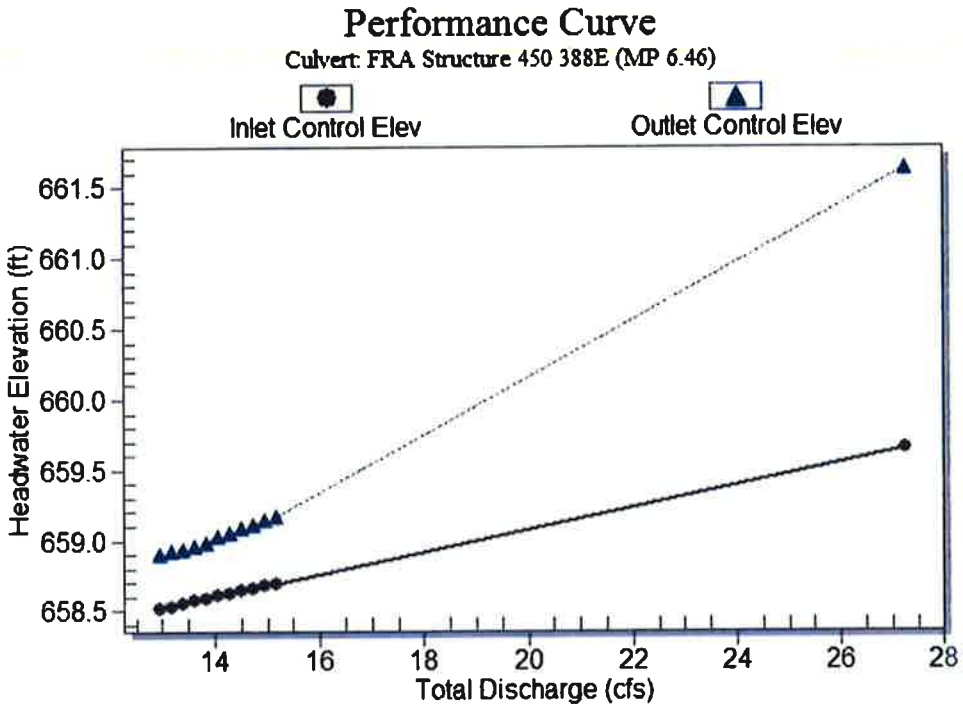
Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
12.96	12.96	658.85	1.775	2.158	3-M1t	1.887	1.210	1.938	1.938	3.174	1.453
13.18	13.18	658.92	1.793	2.180	3-M1t	1.916	1.221	1.950	1.950	3.208	1.459
13.40	13.40	658.94	1.811	2.202	3-M1t	1.946	1.231	1.962	1.962	3.242	1.465
13.62	13.62	658.97	1.829	2.225	3-M2t	1.976	1.242	1.974	1.974	3.276	1.471
13.84	13.84	658.99	1.847	2.246	3-M2t	2.005	1.252	1.986	1.986	3.310	1.478
14.06	14.06	659.01	1.865	2.284	3-M2t	2.035	1.262	2.029	2.029	3.294	1.435
14.28	14.28	659.03	1.883	2.316	3-M2t	2.077	1.272	2.059	2.059	3.301	1.412
14.50	14.50	659.05	1.900	2.346	3-M2t	2.126	1.282	2.084	2.084	3.316	1.395
14.72	14.72	659.08	1.918	2.375	3-M2t	2.176	1.292	2.105	2.105	3.336	1.383
14.94	14.94	659.10	1.935	2.402	3-M2t	2.225	1.302	2.125	2.125	3.360	1.373
15.16	15.16	659.12	1.953	2.429	3-M2t	2.464	1.311	2.143	2.143	3.385	1.366

Straight Culvert

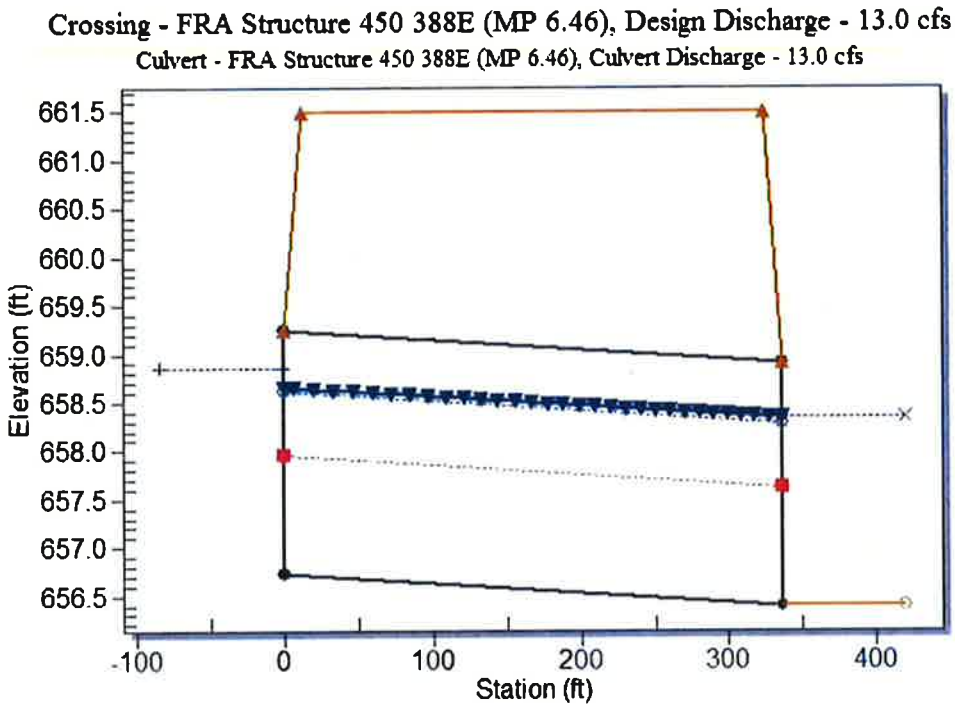
Inlet Elevation (Invert): 656.74 ft, Outlet Elevation (Invert): 656.40 ft

Culvert Length: 336.00 ft, Culvert Slope: 0.0010

Culvert Performance Curve Plot: FRA Structure 450 388E (MP 6.46)



Water Surface Profile Plot for Culvert: FRA Structure 450 388E (MP 6.46)



Site Data - FRA Structure 450 388E (MP 6.46)

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 656.74 ft
Outlet Station: 336.00 ft
Outlet Elevation: 656.40 ft
Number of Barrels: 1

Culvert Data Summary - FRA Structure 450 388E (MP 6.46)

Barrel Shape: Circular
Barrel Diameter: 2.50 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: Square Edge with Headwall
Inlet Depression: NONE

Table 3 - Downstream Channel Rating Curve (Crossing: FRA Structure 450 388E

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s)	Shear (psf)	Froude Number
12.96	658.34	1.94	1.45	0.12	0.26
13.18	658.35	1.95	1.46	0.12	0.26
13.40	658.36	1.96	1.47	0.12	0.26
13.62	658.37	1.97	1.47	0.12	0.26
13.84	658.39	1.99	1.48	0.12	0.26
14.06	658.43	2.03	1.44	0.13	0.26
14.28	658.46	2.06	1.41	0.13	0.26
14.50	658.48	2.08	1.40	0.13	0.26
14.72	658.51	2.11	1.38	0.13	0.26
14.94	658.52	2.12	1.37	0.13	0.26
15.16	658.54	2.14	1.37	0.13	0.26

Tailwater Channel Data - FRA Structure 450 388E (MP 6.46)

Tailwater Channel Option: Irregular Channel

Channel Slope: 0.0010

User Defined Channel Cross-Section:

Coord No.	Station (ft)	Elevation (ft)	Manning's n
1	-15.00	661.24	0.0300
2	-10.00	660.54	0.0300
3	-5.00	658.33	0.0300
4	0.00	656.40	0.0300
5	5.00	658.72	0.0300
6	10.00	658.39	0.0300
7	15.00	661.31	0.0000

Roadway Data for Crossing: FRA Structure 450 388E (MP 6.46)

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 41.00 ft

Crest Elevation: 661.50 ft

Roadway Surface: Paved

Roadway Top Width: 312.00 ft

Proposed Condition Ditch Flow-Depth Calculation

FRA Structure 450 388E (MP 6.46)

Sta: 171+11.27

FRA Structure 450 388E (MP 6.46) Sta: 171+11.27

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.030	
Channel Slope	0.00100	ft/ft
Left Side Slope	2.00	ft/ft (H:V)
Right Side Slope	2.00	ft/ft (H:V)
Bottom Width	10.00	ft
Discharge	15.16	ft^3/s

Results

Normal Depth	0.95	ft
Flow Area	11.30	ft^2
Wetted Perimeter	14.25	ft
Hydraulic Radius	0.79	ft
Top Width	13.80	ft
Critical Depth	0.40	ft
Critical Slope	0.01858	ft/ft
Velocity	1.34	ft/s
Velocity Head	0.03	ft
Specific Energy	0.98	ft
Froude Number	0.26	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

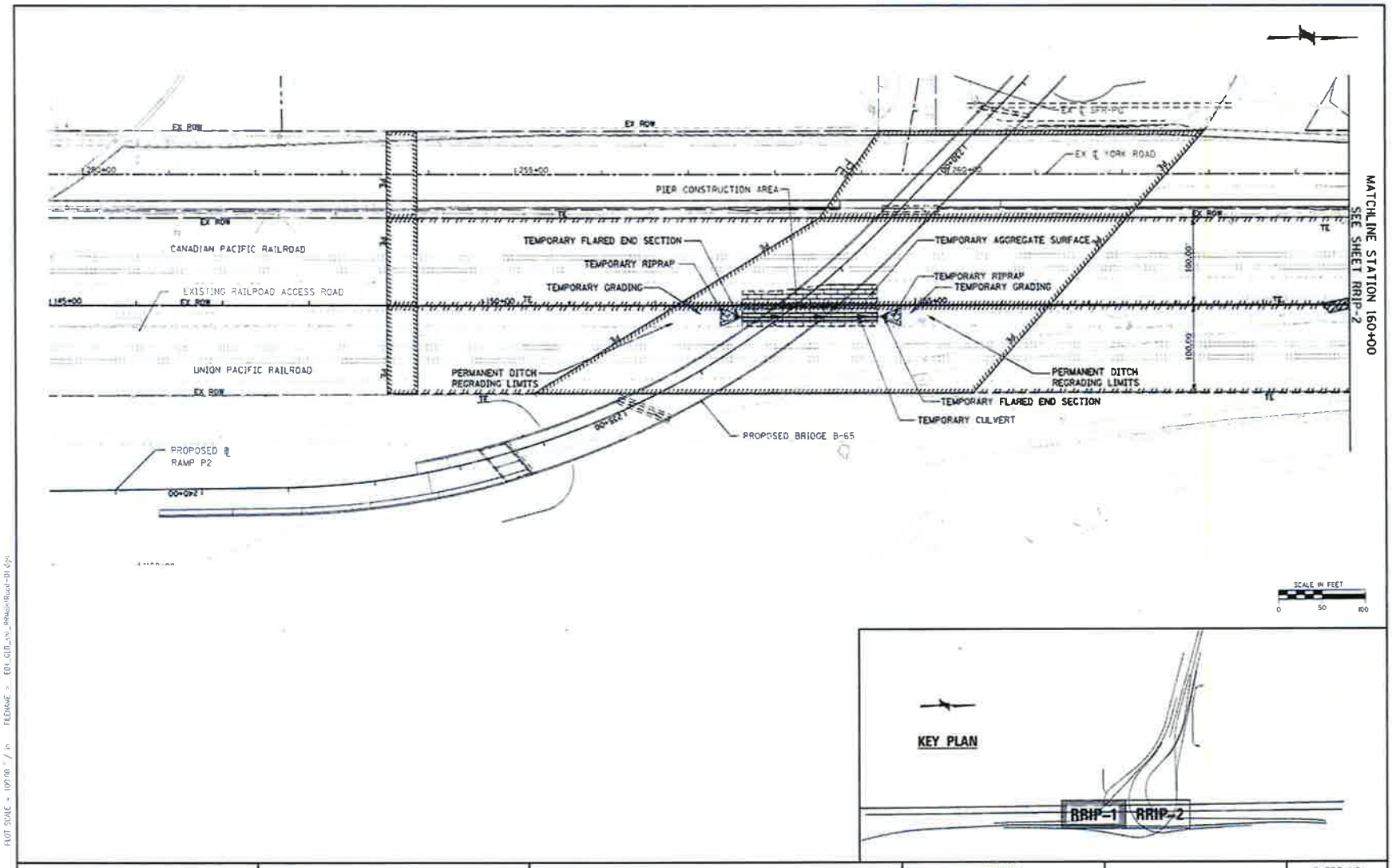
GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.95	ft
Critical Depth	0.40	ft
Channel Slope	0.00100	ft/ft



2

Appendix



4699_RR_SC1.tif
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03690
6/21/2016
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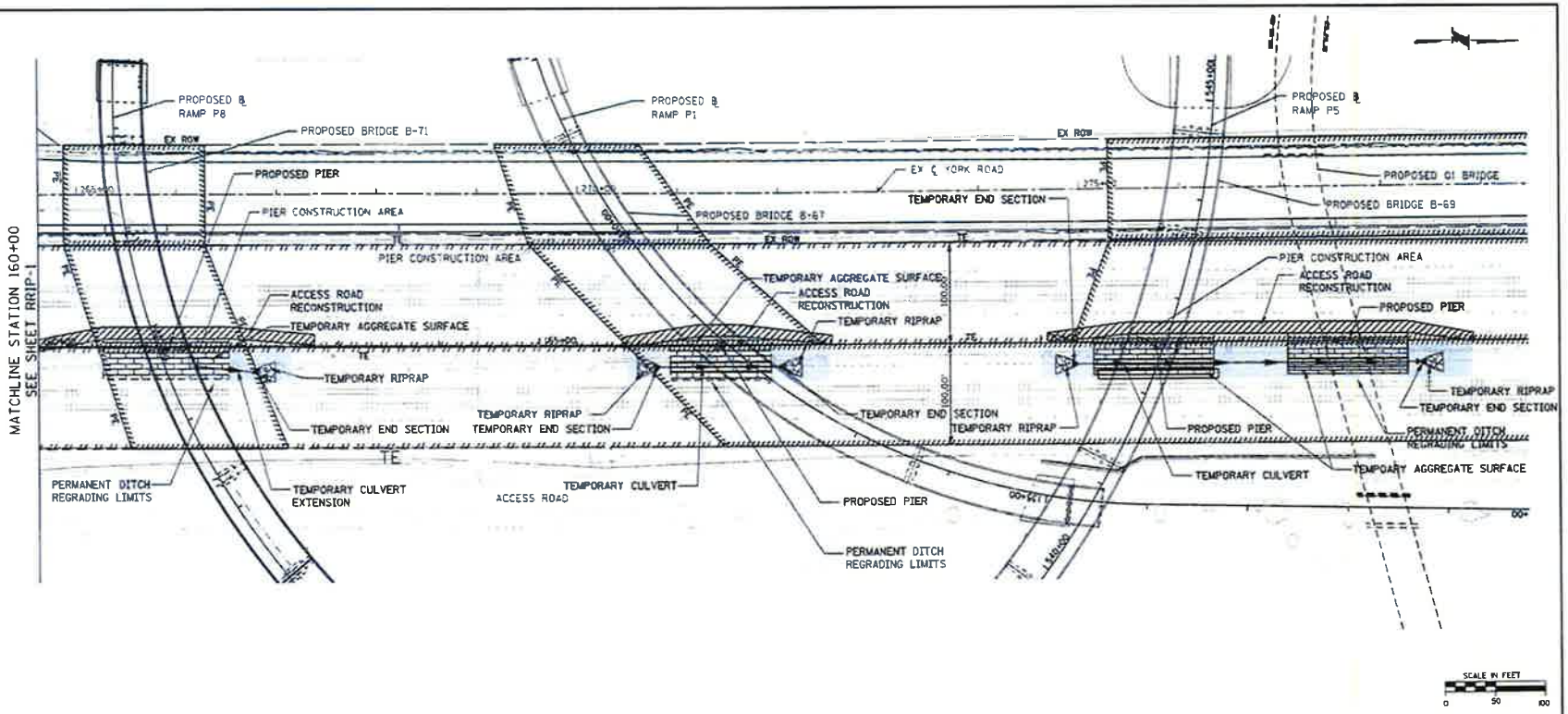
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CHECKED BY TW	DATE 06/23/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

SITE PLAN

SHEET NO. RRIP-1
DRAWING NO. 1 OF 2



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03690
6/13/2016
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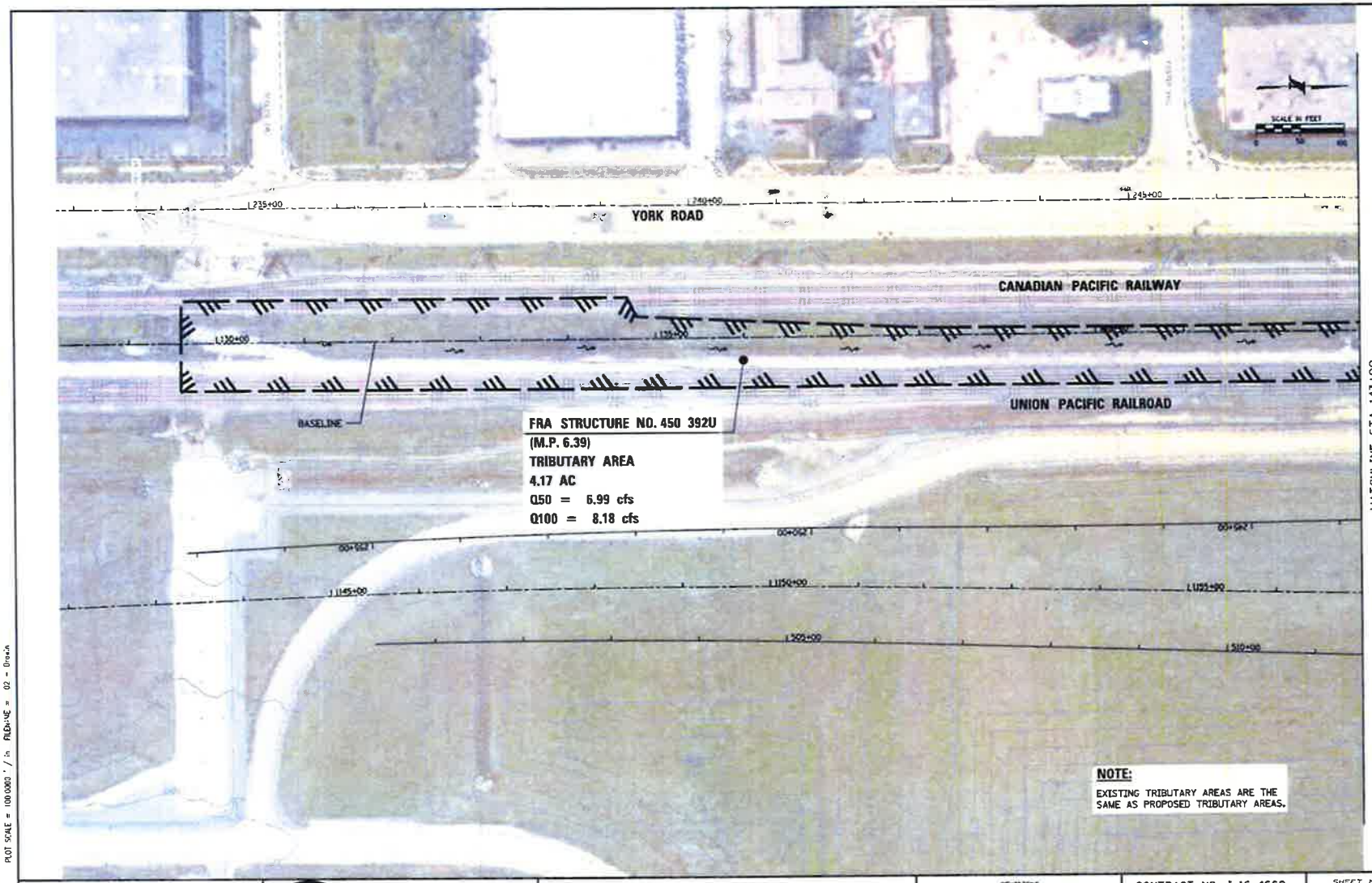
DRAWN BY JDW	DATE 06/23/16	Globetrotters Engineering Corporation	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY TW	DATE 06/23/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. 1-16-4669

SITE PLAN

SHEET NO. RRIP-2
DRAWING NO. 2 OF 2



DRAWN BY TWK DATE 06-02-16
CHECKED BY KGF DATE 06-02-16

Stanley Consultants INC.

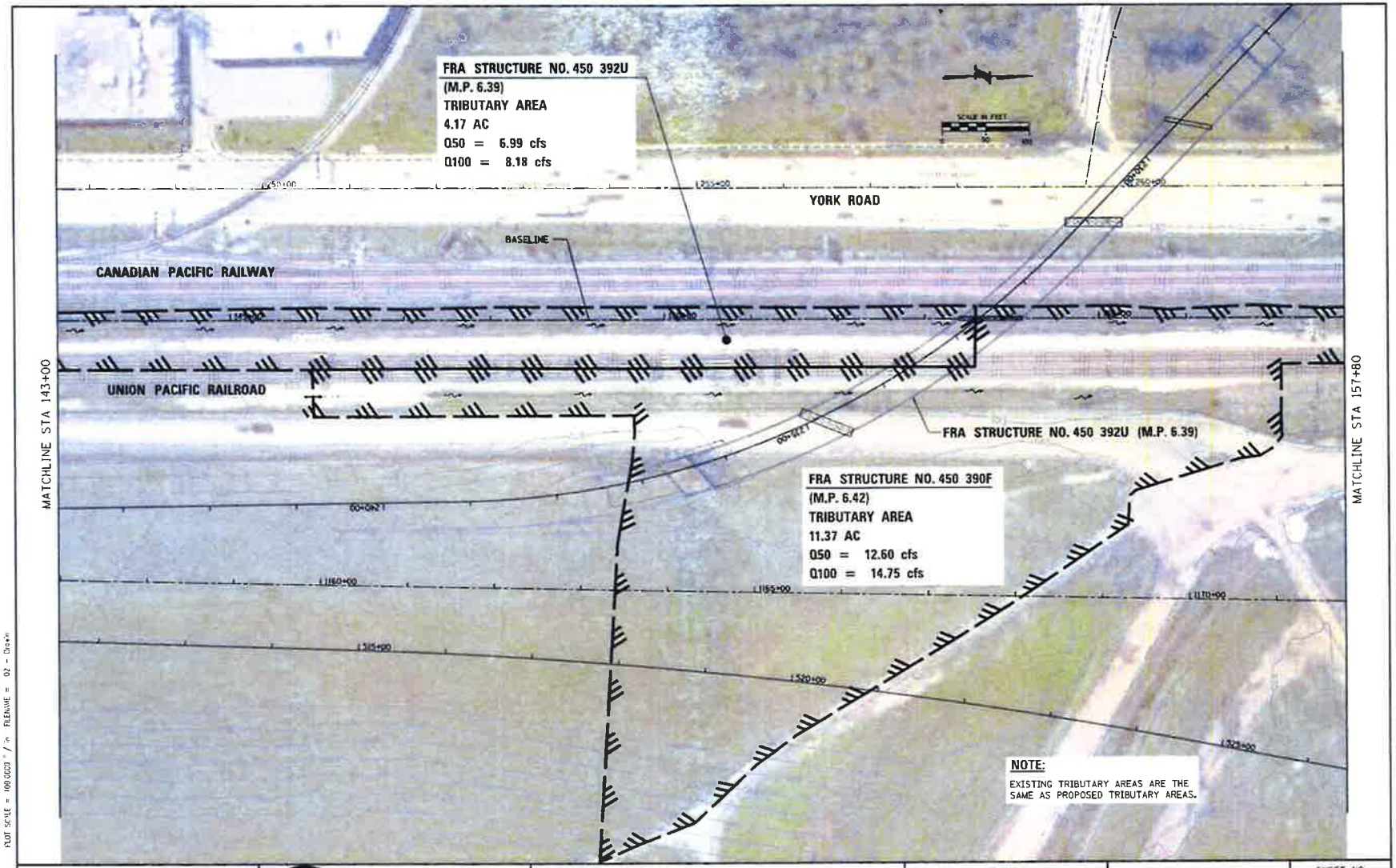
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

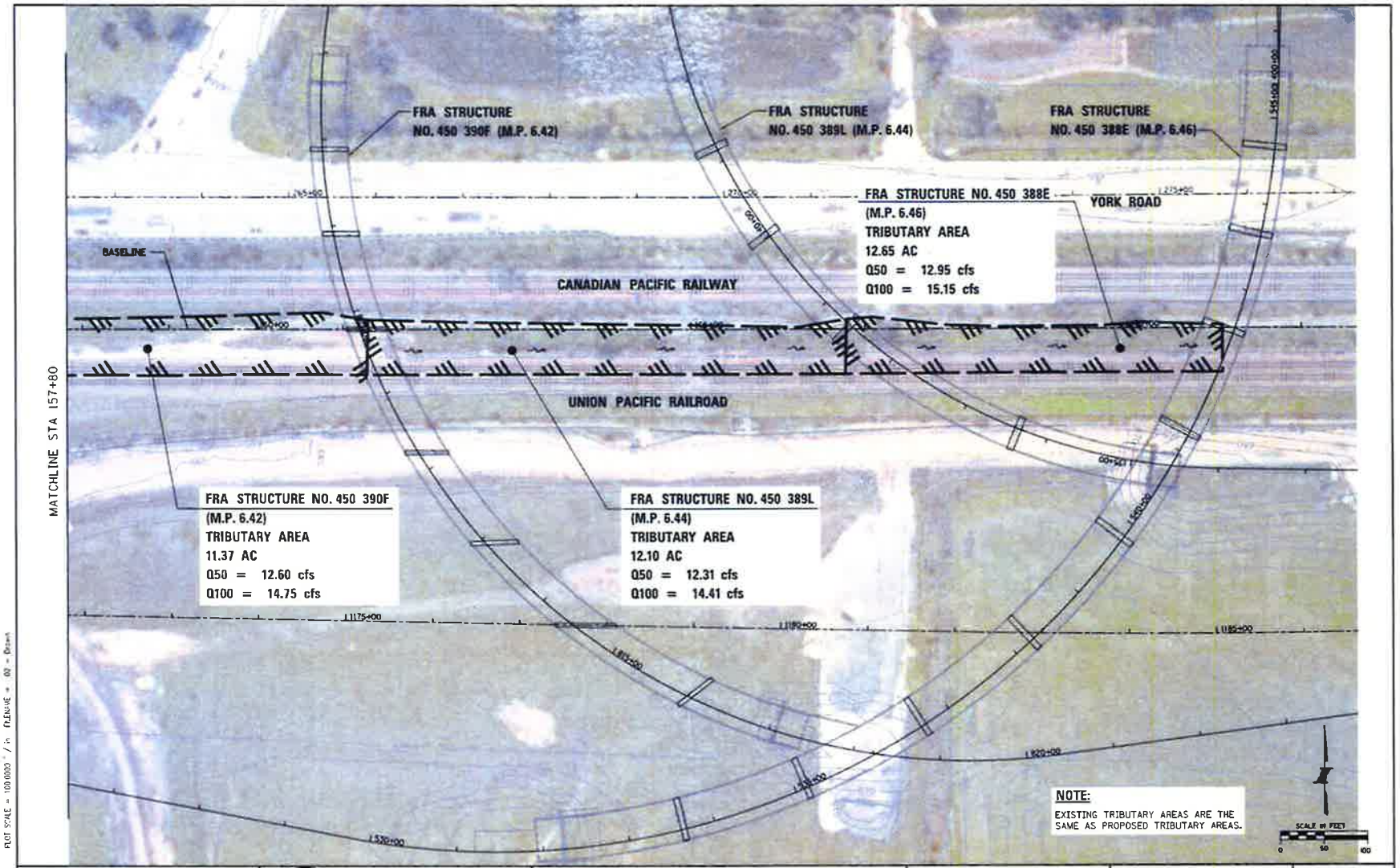
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669
RAILROAD DRAINAGE AREAS

SHEET NO. RR-1
DRAWING NO. 1 OF 3

4622_E04_SC101
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03690
6/21/2016
PLOT SCALE = 100.0000 ' / in PLOTTED BY = 02 - Draft


FRA STRUCTURE NO. 450 392U
(M.P. 6.39)
TRIBUTARY AREA
4.17 AC
Q50 = 6.99 cfs
Q100 = 8.18 cfs
YORK ROAD
BASELINE
CANADIAN PACIFIC RAILWAY
UNION PACIFIC RAILROAD
MATCHLINE STA 143+00
MATCHLINE STA 157+80
FRA STRUCTURE NO. 450 392U (M.P. 6.39)
FRA STRUCTURE NO. 450 390F
(M.P. 6.42)
TRIBUTARY AREA
11.37 AC
Q50 = 12.60 cfs
Q100 = 14.75 cfs
NOTE:
EXISTING TRIBUTARY AREAS ARE THE SAME AS PROPOSED TRIBUTARY AREAS.
DRAWN BY TWK DATE 06-02-16
CHECKED BY KGF DATE 06-02-16
Stanley Consultants INC.
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
RAILROAD DRAINAGE AREAS
SHEET NO. RR-2
DRAWING NO. 2 OF 3



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E04_ILCWA_PDF.ctb
03590
6/23/2016 PLOT SCALE = 100.0000 ' / in FILENAME = 02 - Drawi

DRAWN BY TWK	DATE 06-02-16	Stanley Consultants INC.	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY KGF	DATE 06-02-16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

RAILROAD DRAINAGE AREAS

SHEET NO. RR-3

DRAWING NO. 3 OF 3

RUNOFF COEFFICIENTS

VALUES OF C - Runoff / Rainfall			RUNOFF COEFFICIENT *C*	
TYPE OF DRAINAGE AREA SURFACES			MIN.	MAX.
ROOFS, slag to metal			0.75	0.95
PAVEMENTS	Asphalt		0.70	0.95
	Concrete		0.80	0.95
	Gravel, from clean and loose to clayey and compact		0.25	0.70
R. R. YARDS			0.20	0.40
EARTH SURFACES	Sand, from uniform grain size, no fines to well graded, some clay or silt	Bare	0.15	0.50
		Light Vegetation	0.10	0.40
		Dense Vegetation	0.05	0.30
	Loam, from sandy or gravelly to clayey	Bare	0.20	0.60
		Light Vegetation	0.10	0.45
		Dense Vegetation	0.05	0.35
	Gravel, from clean gravel and gravel sand mixtures, no silt or clay to high clay or silt content	Bare	0.25	0.65
		Light Vegetation	0.15	0.50
		Dense Vegetation	0.10	0.40
	Clay, from coarse sandy or silty to pure colloidal clays	Bare	0.30	0.75
		Light Vegetation	0.20	0.60
		Dense Vegetation	0.15	0.50
COMPOSITE AREAS	City, business areas		0.70	0.95
	City, dense residential areas, vary as to soil & vegetation		0.50	0.65
	Suburban residential areas, vary as to soil & vegetation		0.35	0.55
	Rural districts, vary as to soil & vegetation		0.10	0.25
	Parks, Golf Courses, etc., vary as to soil & vegetation		0.10	0.35
LAWNS	Sandy soil, flat 2%		0.05	0.10
	Sandy soil, average 2% to 7%		0.10	0.15
	Sandy soil, steep, 7%		0.15	0.20
	Heavy soil, flat 2%		0.13	0.17
	Heavy soil, average, 2% to 7%		0.18	0.22
	Heavy soil, steep 7%		0.25	0.35

Note: Values of C for earth surfaces are further varied by degree of saturation, compaction, surface irregularity and slope, by character of subsoil, and by presence of frost or glazed snow or ice.

Table 4-102a

OVERLAND FLOW MANNING'S n VALUES
(For use with Kinematic Wave Equation)
(Used to Calculate ONLY t_{OF})

	Recommended Value	Range of Values
Concrete	.011	.01 - .013
Asphalt	.012	.01 - .015
Bare sand[a]	.010	.010 - .016
Graveled surface[a]	.012	.012 - .030
Bare clay-loam (eroded)[a]	.012	.012 - .033
Fallow (no residue)[b]	.05	.006 - .16
Chisel plow (E1/4 tons/acre residue)	.07	.006 - .17
Chisel plow (1/4 - 1 tons/acre residue)	.18	.07 - .34
Chisel plow (1 - 3 tons/acre residue)	.30	.19 - .47
Chisel plow (F3 tons/acre residue)	.40	.34 - .46
Disk/Harrow (1/4 tons acre residue)	.08	.008 - .41
Disk/Harrow (1/4 - 1 tons/acre residue)	.16	.10 - .25
Disk/Harrow (1 - 3 tons/acre residue)	.25	.14 - .53
Disk/Harrow (3 tons/acre residue)	.30	-- --
No till (1/4 tons/acre residue)	.04	.03 - .07
No till (1/4 - 1 tons/acre residue)	.07	.01 - .13
No till (1 - 3 tons/acre residue)	.30	.16 - .47
Plow (Fall)	.06	.02 - .10
Coulter	.10	.05 - .13
Range (natural)	.13	.01 - .32
Range (clipped)	.08	.02 - .24
Grass (bluegrass sod)	.45	.39 - .63
Short grass prairie[a]	.15	.10 - .20
Dense grass [c]	.24	.17 - .30
Bermudagrass[c]	.41	.30 - .48
Woods	.45	-- --

All values are from Engman (1983), unless noted otherwise.

[a]Woolhiser (1975).

[b]Fallow has been idle for one year and is fairly smooth.

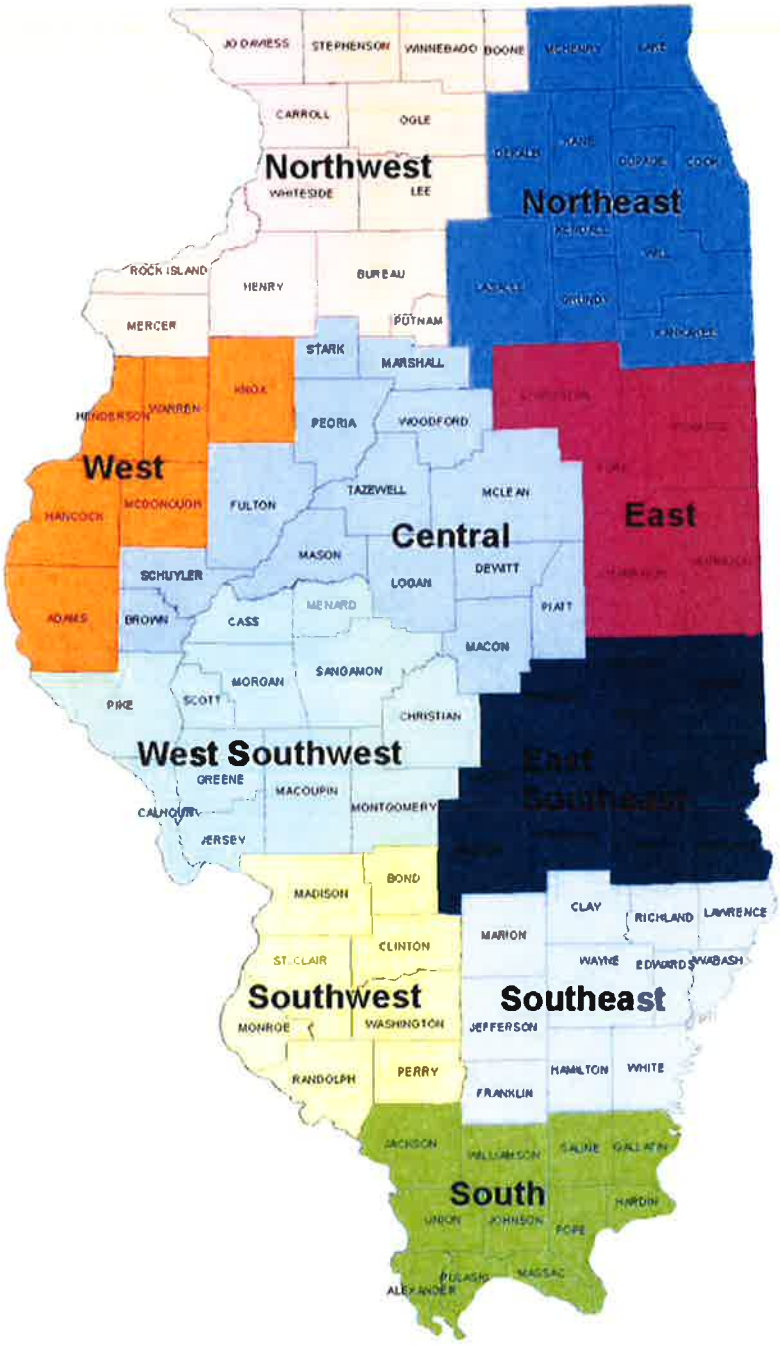
[c]Palmer (1946). Weeping lovegrass, bluegrass, buffalo grass, blue gramma grass, native grass mix (OK), alfalfa, lespedeza.

Note: These values were determined specifically for overland flow conditions and is not appropriate for conventional open channel flow calculations. See Chapter 5 of this manual for open channel flow procedures.

Table 4-102b

Type of Channel and Description	Minimum	Normal	Maximum
1. Manmade			
a. Earth, straight and uniform			
1. Clean, recently completed	0.016	0.018	0.020
2. Clean, after weathering	0.018	0.022	0.025
3. Gravel, uniform section, clean	0.022	0.025	0.030
4. With short grass, few weeds	0.022	0.027	0.033
b. Earth, winding and sluggish			
1. No vegetation	0.023	0.025	0.030
2. Grass, some weeds	0.025	0.030	0.033
3. Dense weeds or aquatic plants in deep channels	0.030	0.035	0.040
4. Earth bottom and rubble sides	0.028	0.030	0.035
5. Stony bottom and weedy banks	0.025	0.035	0.040
6. Cobble bottom and clean sides	0.030	0.040	0.050
c. Dragline-excavated or dredged			
1. No vegetation	0.025	0.028	0.033
2. Light brush on banks	0.035	0.050	0.060
d. Rock cuts			
1. Smooth and uniform	0.025	0.035	0.040
2. Jagged and irregular	0.035	0.040	0.050
e. Channels not maintained, weeds and brush Uncut			
1. Dense weeds, high as flow depth	0.050	0.080	0.120
2. Clean bottom, brush on sides	0.040	0.050	0.080
3. Same, highest stage of flow	0.045	0.070	0.110
4. Dense brush, high stage	0.080	0.100	0.140
2. Flood plains			
a. Pasture, no brush			
1. Short grass	0.025	0.030	0.035
2. High grass	0.030	0.035	0.050
b. Cultivated areas			
1. No crop	0.020	0.030	0.040
2. Mature row crops	0.025	0.035	0.045
3. Mature field crops	0.030	0.040	0.050
c. Brush			
1. Scattered brush, heavy weeds	0.035	0.050	0.070
2. Light brush and trees, in winter	0.035	0.050	0.060
3. Light brush and trees, in summer	0.040	0.060	0.080
4. Medium to dense brush, in winter	0.045	0.070	0.110
5. Medium to dense brush, in summer	0.070	0.100	0.160
d. Trees			
1. Dense willows, summer, straight	0.110	0.150	0.200
2. Cleared land with tree stumps, no sprouts	0.030	0.040	0.050
3. Same as above, but with heavy growth of sprouts	0.050	0.060	0.080
4. Heavy stand of timber, a few down trees, little undergrowth, flood stage below branches	0.080	0.100	0.120

CLIMATIC SECTIONS IN ILLINOIS



(Bulletin 70[5] pg. 17, Figure 7)
Figure 4-102a

RAINFALL INTENSITY vs. DURATION

NORTHEAST ILLINOIS

I.S.W.S. BULLETIN-70

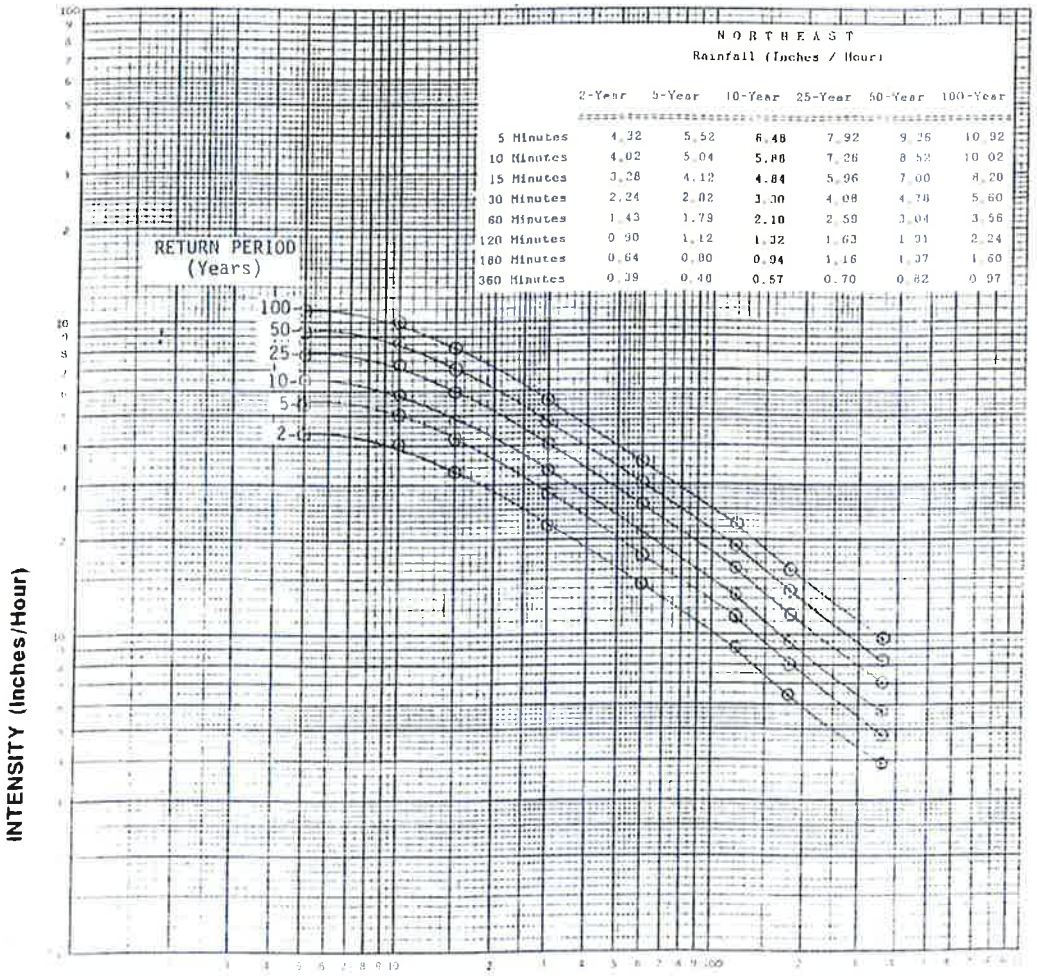


Figure 4-102c

VERIFIED STATEMENT OF PETER JOSEFCHAK

Midwest Freight Rail Leader

Stantec

EXHIBIT D-2

From: Peter.Josefchak@stantec.com
Sent: Wednesday, July 13, 2016 2:35 PM
To: Aaron.Chanowitz@ch2m.com; Benjamin.Ostermann@CH2M.com; Sarah.Archer@CH2M.com; l.martin@americansurvey.com; mnashif@getipass.com; Marilynn.Vanella@ch2m.com
Subject: Fwd: APPROVED - Proposed new overhead structure - I -390 - Elk Grove Village, Illinois - MP 6.44 Milwaukee Subdivision - DOT # 450 389L (pending) [EXTERNAL]

Second one.

Sent from Peter's iPhone

Begin forwarded message:

From: "John N. Venice" <JNVENICE@UP.COM>
Date: July 13, 2016 at 14:32:49 CDT
To: <Peter.Josefchak@stantec.com>
Subject: APPROVED - Proposed new overhead structure - I -390 - Elk Grove Village, Illinois - MP 6.44 Milwaukee Subdivision - DOT # 450 389L (pending)

Grade Separation: Public (proposed)
I-390
Elk Grove Village, IL
MP 6.44 Milwaukee Subdivision
DOT # 450 389L (pending)

Hello Peter-

this submittal is APPROVED

---- Forwarded by John N. Venice/UPC on 07/06/2016 09:28 AM -----

From: "Josefchak, Peter" <Peter.Josefchak@stantec.com>
To: "jnvenice@up.com" <jnvenice@up.com>
Date: 07/06/2016 09:17 AM
Subject: FW: EOWA Tollway Design Contract I-13-4622; Construction Contract I-16-4669 Proposed Overhead Structure – New Construction Tollway Structure Number 1650 (Ramp P1) over UPRR and CPR - UPRR Submittal

This email originated from outside of the company. Please use discretion if opening attachments or clicking on links.

John: I will be sending you four separate emails- each a standalone submittal for the structures needing UPRR review on behalf of the Tollway. These are in lieu of the previous submittal that did not present unique structures. Let me know that you have received this email and I will send the other three. Just want to make sure it gets to your inbox intact. Also, after they have been

looked at, please let me know that these are acceptable for your review. Thanks (be well...be safe)

Peter Josefchak
Freight Rail Leader
Stantec
135 South LaSalle Street Suite 3100 Chicago IL 60603-4139
Phone: (312) 262-2285
Cell: (312) 369-9326
Peter.Josefchak@stantec.com

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Please consider the environment before printing this email.

From: Marilynn.Vanella@ch2m.com [mailto:Marilynn.Vanella@ch2m.com]
Sent: Tuesday, July 05, 2016 6:42 PM
To: Josefchak, Peter
Cc: Aaron.Chanowitz@ch2m.com; Jason.Moller@CH2M.com; mnashif@getipass.com
Subject: EOWA Tollway Design Contract I-13-4622; Construction Contract I-16-4669 Proposed Overhead Structure – New Construction Tollway Structure Number 1650 (Ramp P1) over UPRR and CPR - UPRR Submittal

Transmittal 1 of 4

Peter –

On behalf of the Tollway/Manar Nashif and in accordance with the *Union Pacific Railroad – BNSF Guidelines For Railroad Grade Separation Projects*, please find attached the electronic copies (in PDF format) of the following documents for the above referenced new overhead structure for UPRR review and comment via Tollway Transmittal Letter.

1. Design Plans showing plan view, elevation view, typical section and railroad profile diagram. Applicable notes per UPRR Guidelines Plan No. 711100, sheet 3 have been included on the plans.
2. Project specifications including railroad coordination requirements.
3. Drainage Report and Plan.
4. Construction phasing plans showing required phasing, construction procedures, controlling dimensions and elevations.

There are four structures in total, each packaged separately. Should you have any questions or need further information, please contact Manar Nashif directly at (630) 241-6800 ext 3841 or via e mail at mnashif@getipass.com

Respectfully,

Marilynn Vanella
Program Controls Coordinator
D1 773 458 2814

CH2M Team
8735 West Higgins Road
Suite 400
Chicago, IL 60631
mvanella@ch2m.com
www.ch2m.com

[attachment "LT_Tollway_MN_4669-30Percent-DesignPlans-SN1650-RampP1_UPRR_07052016.pdf" deleted by John N. Venice/UPC] [attachment "DW_Stanley_SE_UPRR 30 Pct Submittal_Plans_FRA Structure 450 389L (Ramp P1)_06282016.pdf" deleted by John N. Venice/UPC] [attachment "SP_Stanley_RK_UPRR 30 Pct Submittal_Specifications_FRA Structure 450 389L (Ramp P1)_06242016.pdf" deleted by John N. Venice/UPC] [attachment "RP_Stanley_KF_UPRR 30 Pct Submittal_Drainage Report_FRA Structure 450 389L (Ramp P1)_06242016.pdf" deleted by John N. Venice/UPC]

**

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**

July 5, 2016

Mr. John Venice
Manager Special Projects
Union Pacific Railroad
101 North Wacker Drive
Chicago, IL 60606

Re: Tollway Design Contract I-13-4622; Construction Contract I-16-4669
Elgin O'Hare Western Access (EOWA) Project
Proposed Overhead Structure – New Construction
Tollway Structure Number 1650 (Ramp P1) over UPRR and CPR
Chicago & Milwaukee Subdivision (M.P. 6.44)
Bensenville, Il – DuPage County
30% Design Submittal

Dear Mr. Venice:

The Illinois Tollway is continuing with design development for the Elgin O'Hare Western Access (EOWA). The EOWA Project includes the construction of a new, all electronic Tollway around the western border of O'Hare International Airport (O'Hare) linking the Jane Addams Memorial Tollway (I-90) and the Tri-State Tollway (I-294), as well as the extending Illinois Route 390 (formerly the Elgin O'Hare Expressway) east along Thorndale Avenue to O'Hare Airport and rehabilitating and widening of the existing Illinois Route 390.

In accordance with the *Union Pacific Railroad – BNSF Guidelines For Railroad Grade Separation Projects,* hereinafter referred to as "UPRR Guidelines", enclosed herewith, for your review and comment, are electronic copies (in PDF format) of the following for the above referenced new overhead structure:

1. Design Plans showing plan view, elevation view, typical section and railroad profile diagram. Applicable notes per UPRR Guidelines Plan No. 711100, sheet 3 have been included on the plans.
2. Project specifications including railroad coordination requirements.
3. Drainage Report and Plan.
4. Construction phasing plans showing required phasing, construction procedures, controlling dimensions and elevations.

The Tollway understands and confirms the following:

- The executed Construction and Maintenance Agreement shall be provided to the Tollway's Construction Contractor and the Contractor will be required to comply with the terms and conditions in conjunction with the construction of the structure.
- The proposed overhead structure is being designed such that construction and maintenance of the structure will cause no interruption to Railroad operations during and after construction.
- The construction of the structure cannot begin until the UPRR has approved the 100% submittal for the structure, the Contractor has secured a right of entry agreement and the Tollway and UPRR have executed a Construction and Maintenance Agreement. The Contractor will be required to carry Railroad Protective Liability Insurance in accordance with UPRR requirements.
- The Tollway will own and maintain the structure crossing over UPRR in its entirety.
- The Tollway is proposing an overhead structure in order to not cause an impact to Railroad Operations.
- Temporary shoring, as necessary, will be required to be in accordance with UPRR Railroad Guidelines for Temporary Shoring.
- Erection over the Railroad right of way will be planned to cause no interruption to Railroad Operations.
- The Tollway will coordinate with all utility companies and make arrangements with utility companies for installation, relocation or protection of their respective facilities in conjunction with the project construction.

In accordance with the UPRR Guidelines, the Tollway respectfully requests your response 4 weeks after the submittal is received by the appropriate reviewing parties. Thank you for your assistance.

If you have any technical questions regarding the contents of the submittal, please contact Peter Josefchak at (312) 262-2285 or via email at peter.josefchak@stantec.com. Peter is part of the Design Section Engineering Team for the EOWA Project. If you have any other questions or need further information, please contact me at (630) 241-6800 ext 3841 or via email at mnashif@getipass.com. We appreciate your cooperation and look forward to working with you as we move forward with the project.

Sincerely,

Manar Nashif, P.E.
Senior Project Engineer

CC: Rocco Zucchero – Tollway, Lidia Pilecky – CH2M, Aaron Chanowitz – CH2M, Jason Moller – CH2M, Peter Josefchak – Stantec, Paul Bobby - STV

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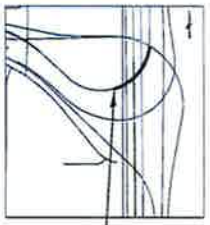
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I–13–4622
TOLLWAY CONSTRUCTION CONTRACT I–16–4669

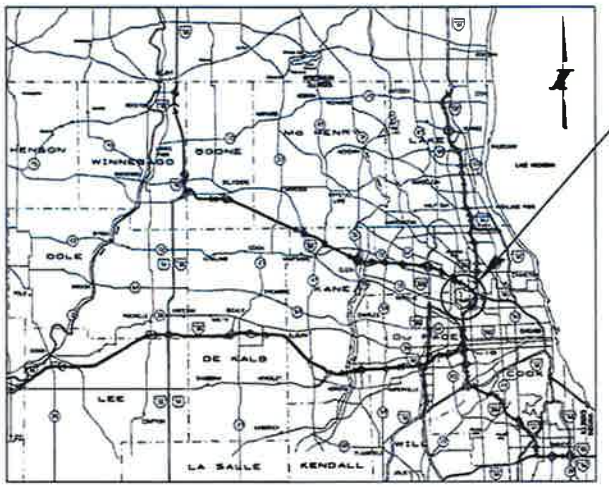
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

FRA STRUCTURE NO. 450 389L
TOLLWAY STRUCTURE NO. 1650
IDOT STRUCTURE NO. 022–9506

RAMP P1 OVER UPRR – MILWAUKEE SUBDIVISION (M.P. 6.44)
BENSENVILLE, IL – DUPAGE COUNTY



RAMP P1 BRIDGE CONSTRUCTION
SN 450 389L (FRA)
SN 1650 (TOLLWAY)
SN 022-9506 (IDOT)



LOCATION MAP

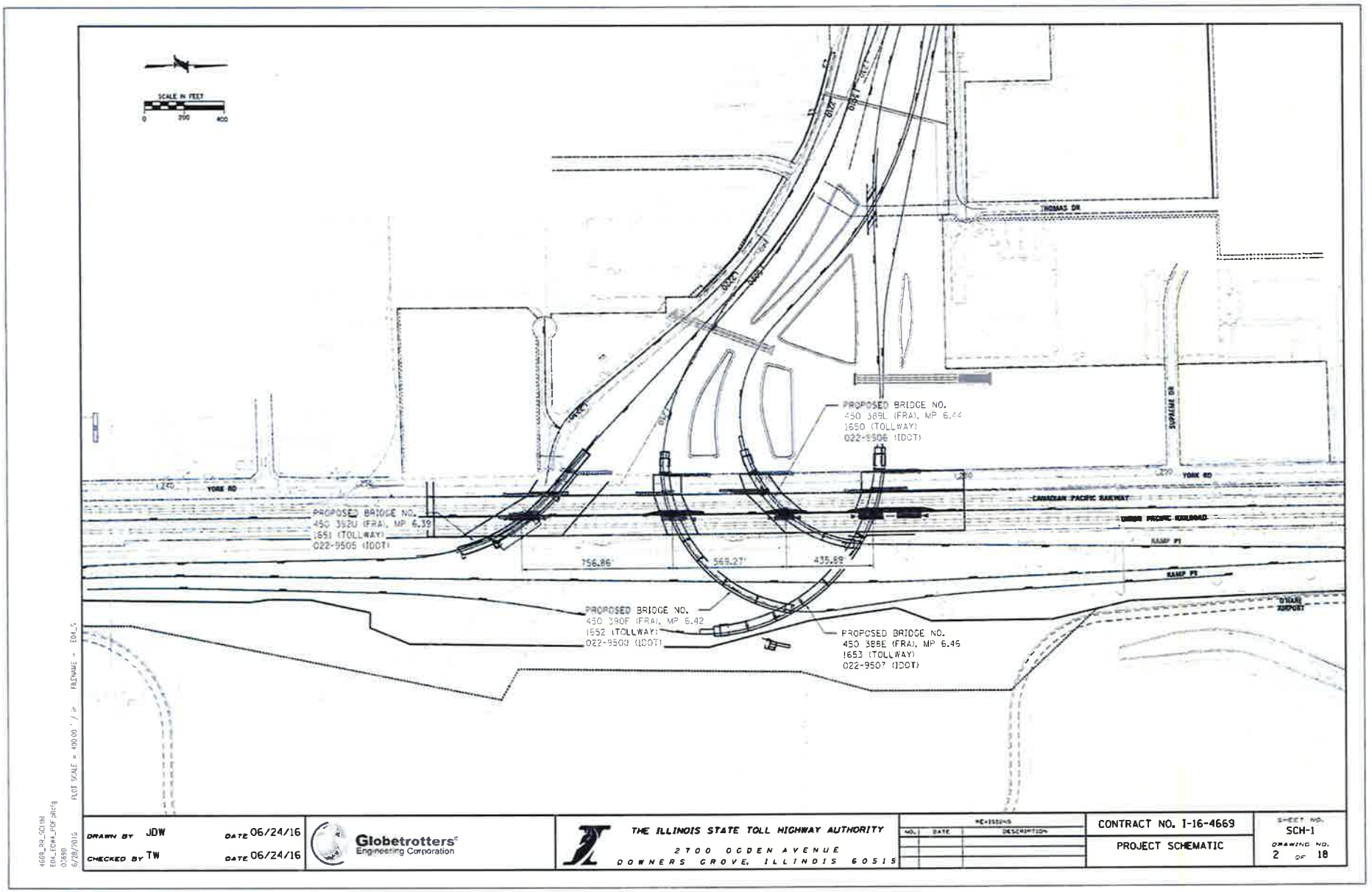
INDEX OF DRAWINGS:

DRAWING NO.	SHEET NO.	DESCRIPTION
2	SCH-1	PROJECT SCHEMATIC
3-4	RMP-1 - RMP-2	SITE PLAN
5	SB-01	GENERAL PLAN AND ELEVATION
6-7	SB-02 - SB-03	DETAILS
8-10	RPGD-01 - RPGD-03	RAILROAD PROFILE GRADE DIAGRAM
11-16	PH-01 - PH-06	CONSTRUCTION PHASING PLANS
17	XSC-1	CROSS SECTIONS TEMPORARY IMPROVEMENTS
18	XSC-2	CROSS SECTIONS PERMANENT IMPROVEMENTS

30% SUBMITTAL
JUNE 24, 2016

Stanley Consultants Inc.
Globetrotters Engineering Corporation
URS

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CHECKED BY TW	DATE 06/24/16		

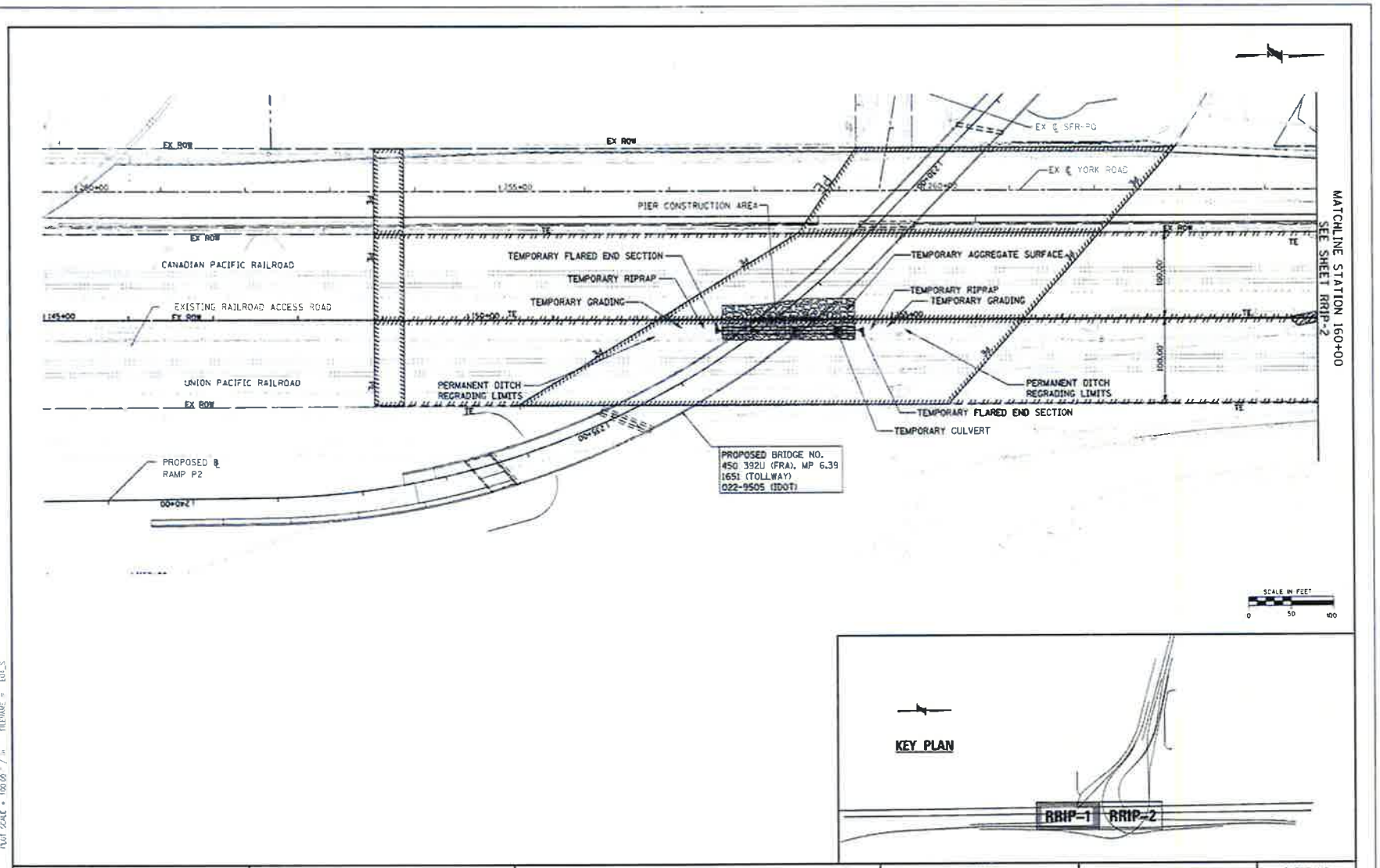
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

PROJECT SCHEMATIC

SHEET NO. SCH-1

DRAWING NO. 2 OF 18



DRAWN BY JDW DATE 06/24/16
CHECKED BY TW DATE 06/24/16

Globetrotters Engineering Corporation

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

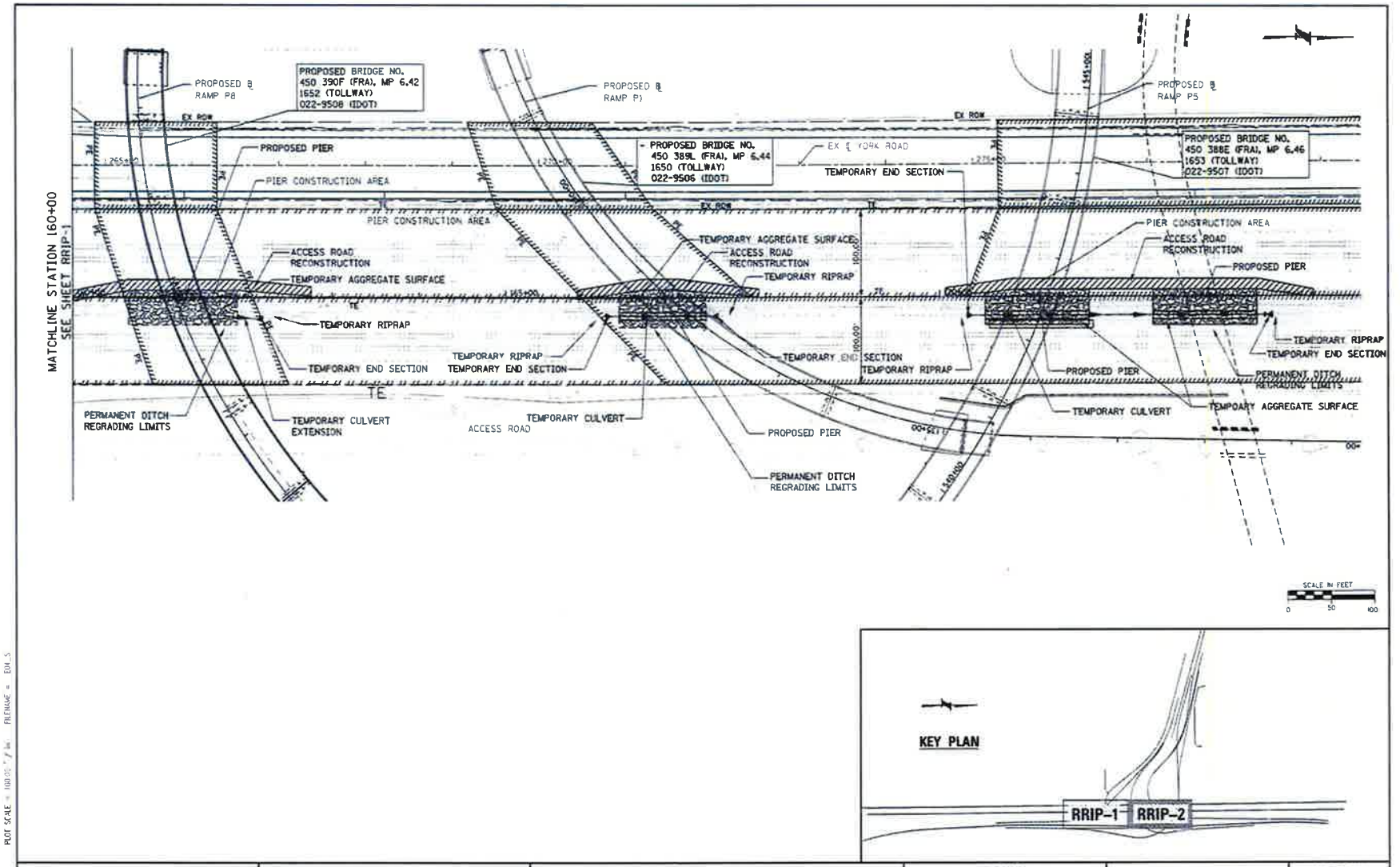
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

SITE PLAN

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DRAWING NO. 3 OF 18

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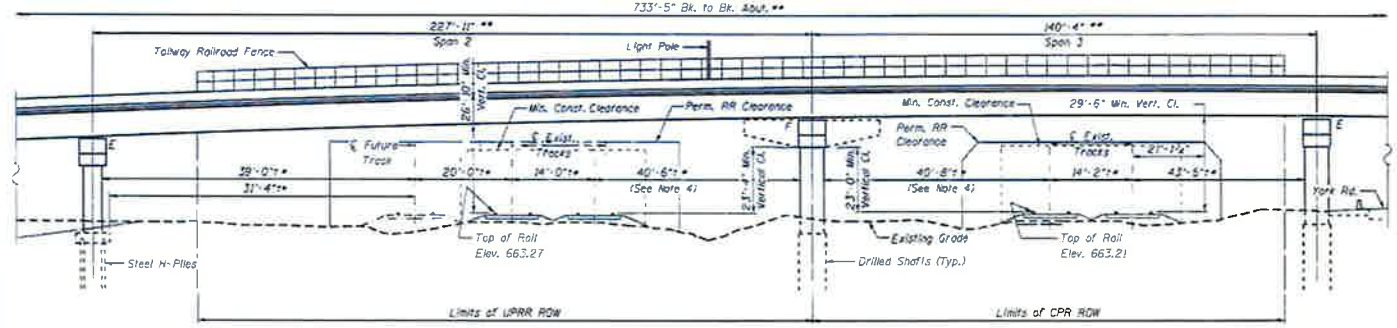
DRAWN BY JDW	DATE 06/24/16	Globetrotters Engineering Corporation	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. / DATE / DESCRIPTION	CONTRACT NO. I-16-4669 SITE PLAN	SHEET NO. RRIP-2 DRAWING NO. 4 OF 18
CHECKED BY TW	DATE 06/24/16					

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Benchmark: Railroad Spike in east face of utility pole. Located approximately 42' west of York Rd. and approximately 44' south of Beeline Dr., Sta. 279+64, Elev = 664.86 (NAVD 88)

Existing Structure: None

Proposed Structure: The proposed structure is a 5-span ramp structure conveying traffic from SB I-490 over York Road, Canadian Pacific Railway and Union Pacific Railroad to WB Elgin O'Hare (I-350). The superstructure consists of 86" web, welded continuous plate girders supporting a composite reinforced concrete deck. The substructure consists of a closed east abutment, a stub west abutment, and 4 single-column hammerhead piers. The abutments and pier 1 are founded on driven steel H-piles, and Piers 2, 3 and 4 are founded on drilled shafts.

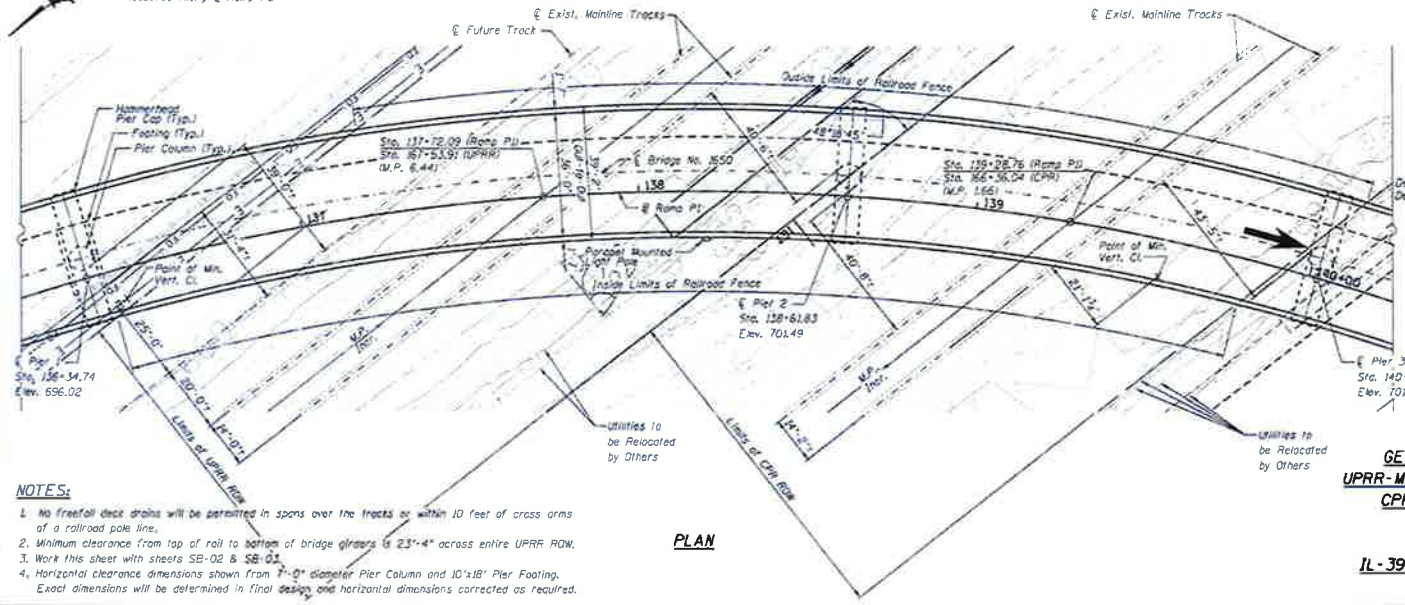


ELEVATION

(Minimum vertical clearance of 23'-4" will be provided across entire UPRR and CPR ROW)

*Measured at Rt. L's to track ℄ or Roadway

**Measured Along ℄ Ramp P5



PLAN

NOTES:

1. No freefall deck drains will be permitted in spans over the tracks or within 10 feet of cross arms of a railroad pole line.
2. Minimum clearance from top of rail to bottom of bridge girders is 23'-4" across entire UPRR ROW.
3. Work this sheet with sheets SB-02 & SB-03.
4. Horizontal clearance dimensions shown from 7'-0" diameter Pier Column and 10'x18' Pier Footing. Exact dimensions will be determined in final design and horizontal dimensions corrected as required.

CONSTRUCTION SPECIFICATIONS

Tollway Supplemental Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Issued April 1, 2016.

Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Adopted April 1, 2016.

Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions Adopted April 1, 2016. Illinois Department of Transportation Guide Bridge Special Provisions (GBSP's).

DESIGN CRITERIA

LOADING HL-93 AND IL-120

Allow 50/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition, with 2016 Interims.
2016 Illinois State Toll Highway Authority Structure Design Manual
2012 Illinois Department of Transportation Bridge Manual
2015 Tollway Geotechnical Engineers Manual

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Substructure)
f'c = 4,000 psi (Class BS-Parapets)
f'c = 4,000 psi (Performance Mix-Bridge Deck, Approach Slabs and Diaphragms)
fy = 50,000 psi (Structural Steel-M270 Grade 50)
fy = 60,000 psi (Reinforcement)

PIERS 2 AND 3

f'c = 6,000 psi (Pier Caps)
f'c = 4,000 psi (Column)
fpu = 270,000 psi (0.6" ϕ Low Lax Strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.085 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.148 g
Soil Site Class = D

LIVE LOAD DEFLECTION CRITERIA

Span Length /800

LEGEND

- Soil Borings
- Existing Electric
- Existing Fiber Optic
- Existing Gas
- Existing Aerial Line
- Proposed Storm Sewer
- ROW

GENERAL PLAN AND ELEVATION
UPRR-MILWAUKEE SUBDIVISION (M.P. 6.44)
CPR-C&M SUBDIVISION (M.P. 1.66)
BENSENVILLE, IL
DuPAGE COUNTY
IL-390 RAMP P1 OVER UPRR AND CPR
41°58'45"N, 87°56'21"W

DRAWN BY RTT/PS	DATE 06/24/16	Stanley Consultants INC.	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY DSE	DATE 06/24/16		

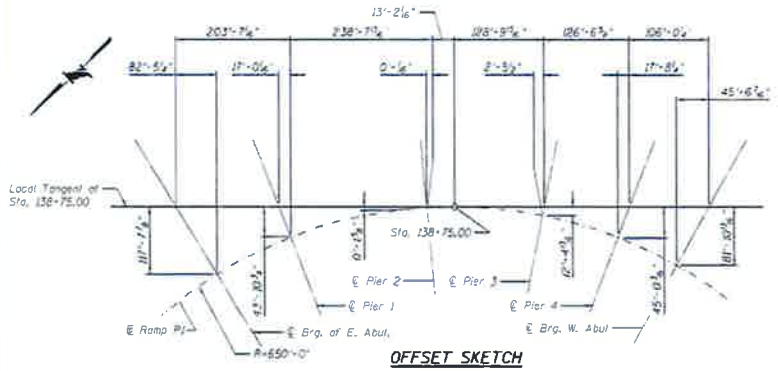
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 389L
1650(TOLLWAY),022-9506(IDOT)
GENERAL PLAN AND ELEVATION

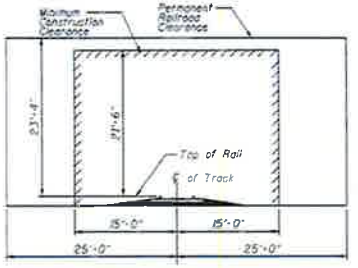
SHEET NO. SB-01
DRAWING NO. 5 OF 18

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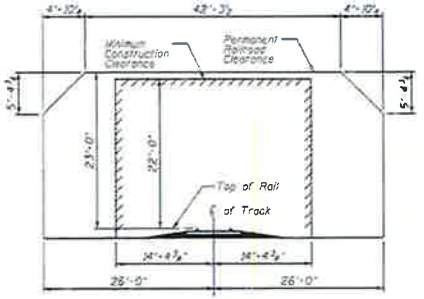
OFFSET SKETCH

(Curve 110)



UPRR CLEARANCE ENVELOPE

(Dimensions Perp. to Railroad)



CPR CLEARANCE ENVELOPE

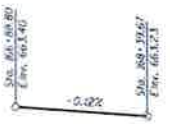
(Dimensions Perp. to Railroad)



TOP OF RAIL ELEVATIONS

CPR TRACKS

(High Tracks)



TOP OF RAIL ELEVATIONS

UPRR TRACKS

(High Tracks)

DRAWN BY RTT/PS	DATE 06/24/16	Stanley Consultants INC.	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY DSE	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

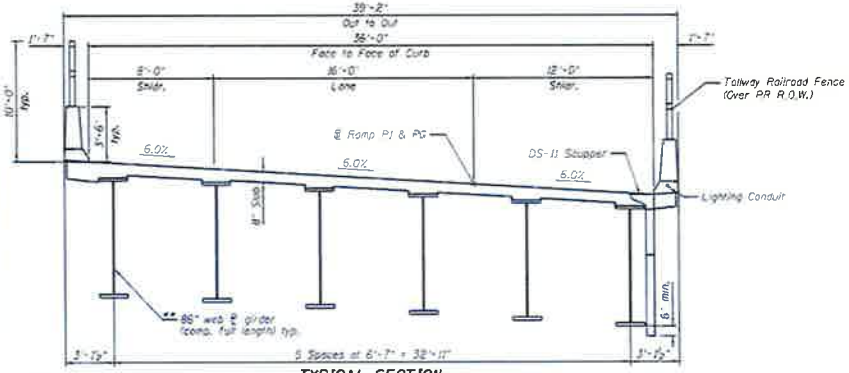
CONTRACT NO. I-16-4669

BRIDGE NO. 450 389L
1650(TOLLWAY).022-9506(IDOT)
DETAILS 1

SHEET NO. SB-02

DRAWING NO. 6 OF 18

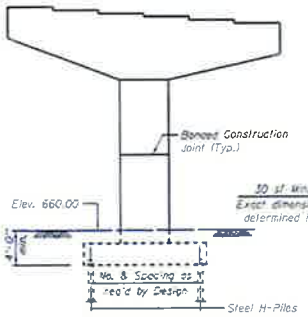
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6/28/2016
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** Subject to refinement during final design

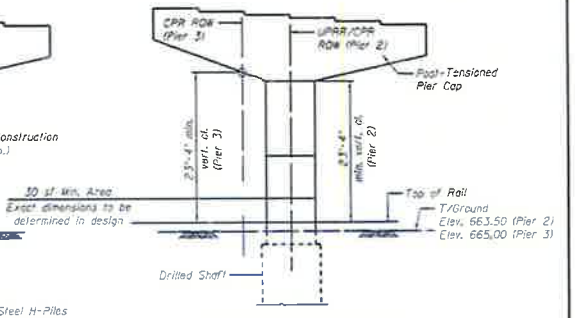
TYPICAL SECTION

(Looking South)



PIER 1 SKETCH

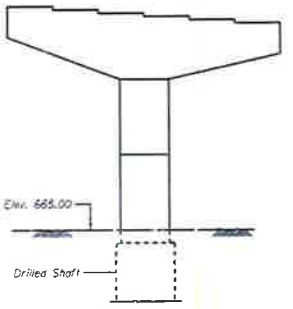
(Looking south)



PIERS 2 AND 3 SKETCH

(Looking south)

Note: Pier dimensions to be determined during final design



PIER 4 SKETCH

(Looking west)

CONSTRUCTION NOTES

1. Any shoring system that impacts the Railroad's operation and/or supports the Railroad's embankment shall be designed and constructed per Railroad Guidelines for Temporary Shoring.
2. All demolition within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall comply with the Railroad's Demolition requirements.
3. Erection over the Railroad right-of-way shall be designed to cause no interruption to all Railroad operations, except upon mutual agreed upon track outages to allow girder erection. Prior to the release of Railroad traffic, components erected over Railroad tracks must be supported by falsework or permanent substructure, must be secured and stable and must not be supported by cranes or other construction equipment.
4. The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad prior to construction.
5. The proposed grade separation project shall not change the quantity and/or characteristics of the flow in the Railroad ditches and/or drainage structures.
6. The contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad prior to beginning any grading on the project site.
7. For Railroad coordination please refer to the Railroad's Coordination Requirements as part of the Specifications or Special Provisions of the project.
8. Temporary Construction Clearances, including falsework clearances, shall comply with Minimum Construction Clearance Envelopes shown on Sheet 2.
9. All permanent clearances shall be verified before project closeout.
10. Call the following number at least 48 hours prior to commencing work to determine location of fiber optics:
    UPRR "Call Before You Dig", 1-800-336-9193

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6/28/2016
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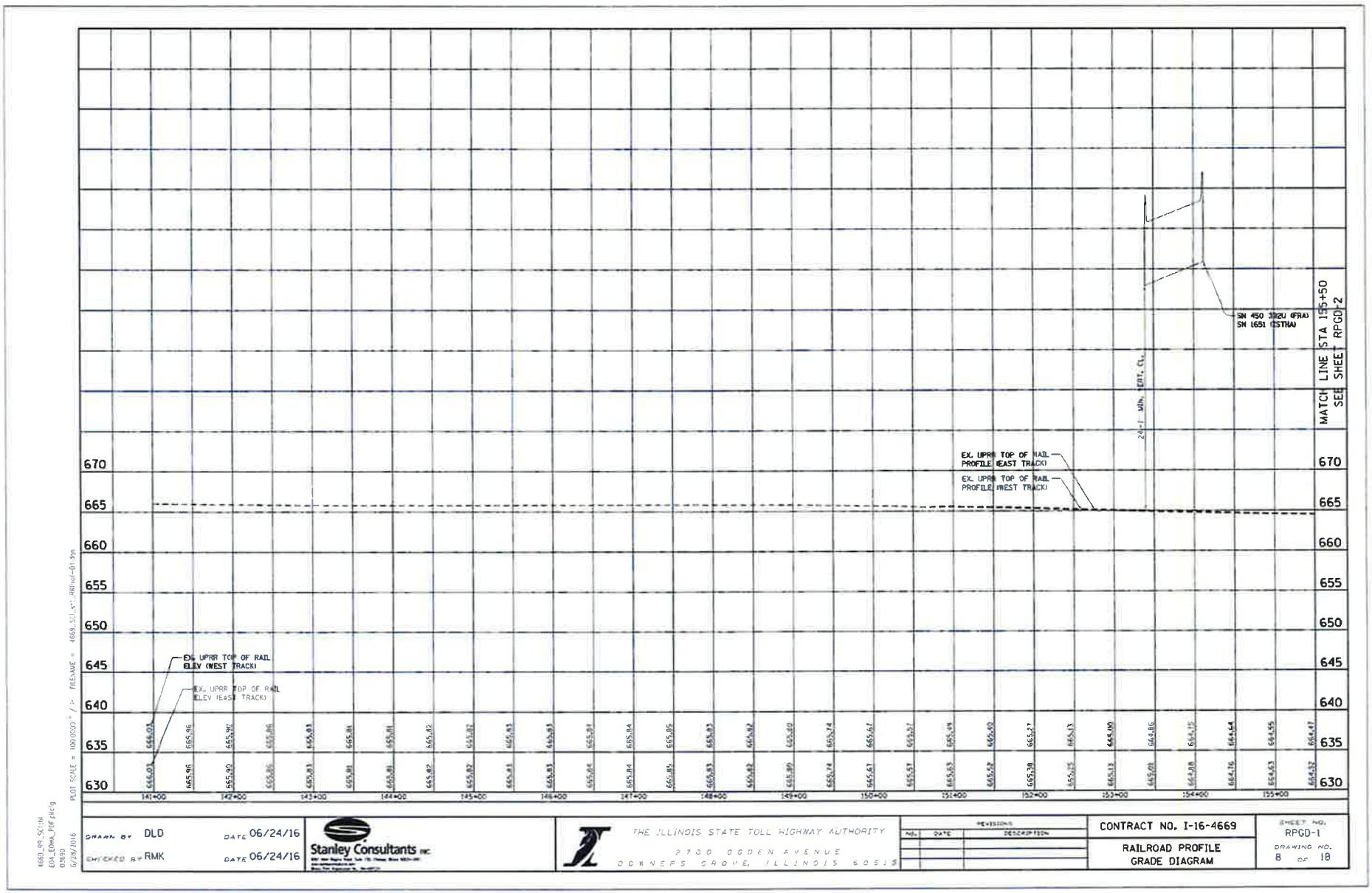
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CHECKED BY DSE	DATE 06/24/16		

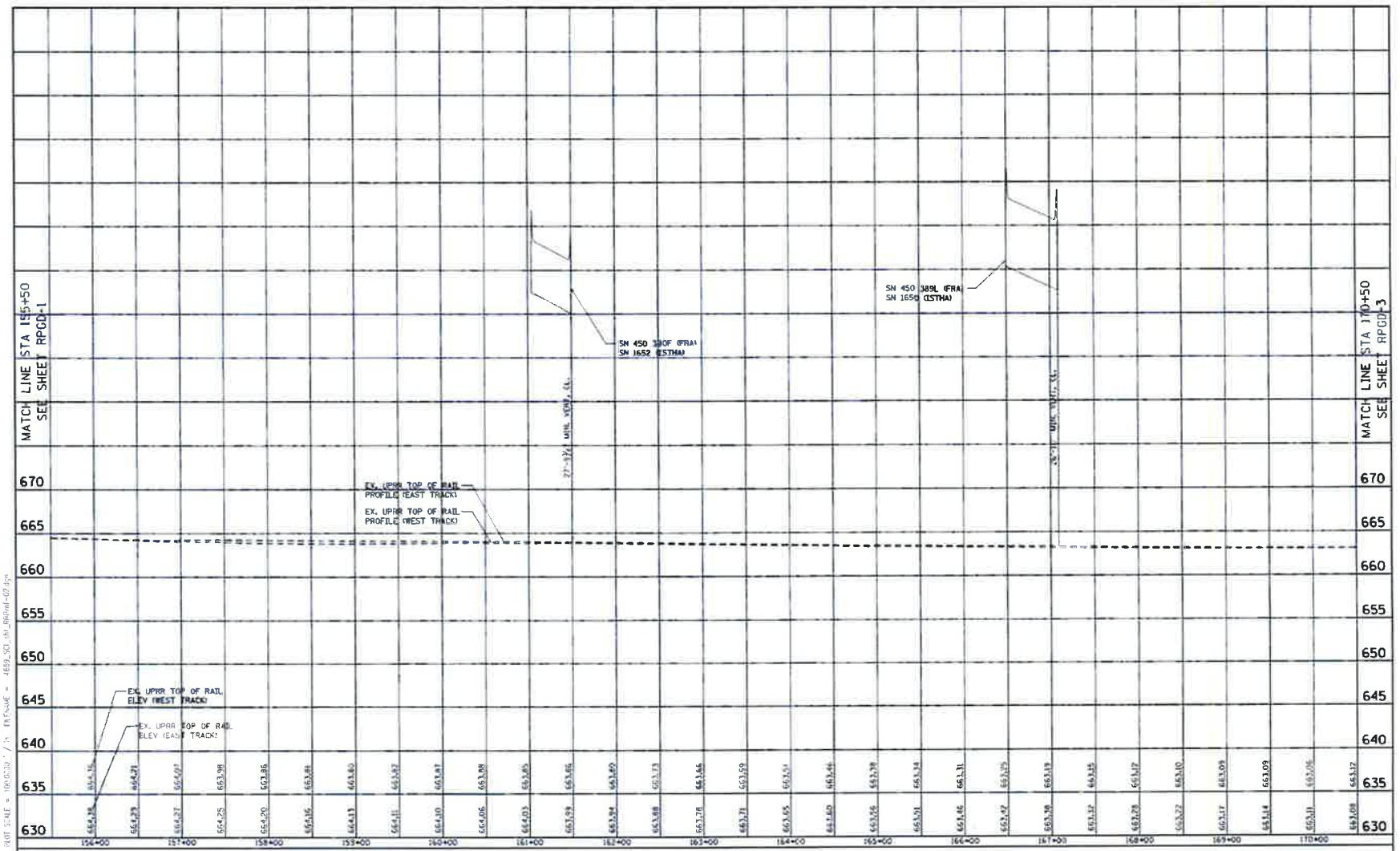
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 389L
1650(TOLLWAY)1,022-9506(100T)
DETAILS 2

SHEET NO. SB-03
DRAWING NO. 7 OF 18


EX. UPRR TOP OF RAIL ELEV (WEST TRACK)
EX. UPRR TOP OF RAIL ELEV (EAST TRACK)
EX. UPRR TOP OF RAIL PROFILE (EAST TRACK)
EX. UPRR TOP OF RAIL PROFILE (WEST TRACK)
24'-1" MIN. CENT. CL.
SN 450 3702U (FRA)
SN 1651 (ISTHA)
MATCH LINE STA 155+50
SEE SHEET RPGD-2
670
665
660
655
650
645
640
635
630
141+00
142+00
143+00
144+00
145+00
146+00
147+00
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149+00
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154+00
155+00
DRAWN BY DLD
DATE 06/24/16
CHECKED BY RMK
DATE 06/24/16
Stanley Consultants INC
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
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GRADE DIAGRAM
SHEET NO. RPGD-1
DRAWING NO. 8 OF 18
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6/29/2016



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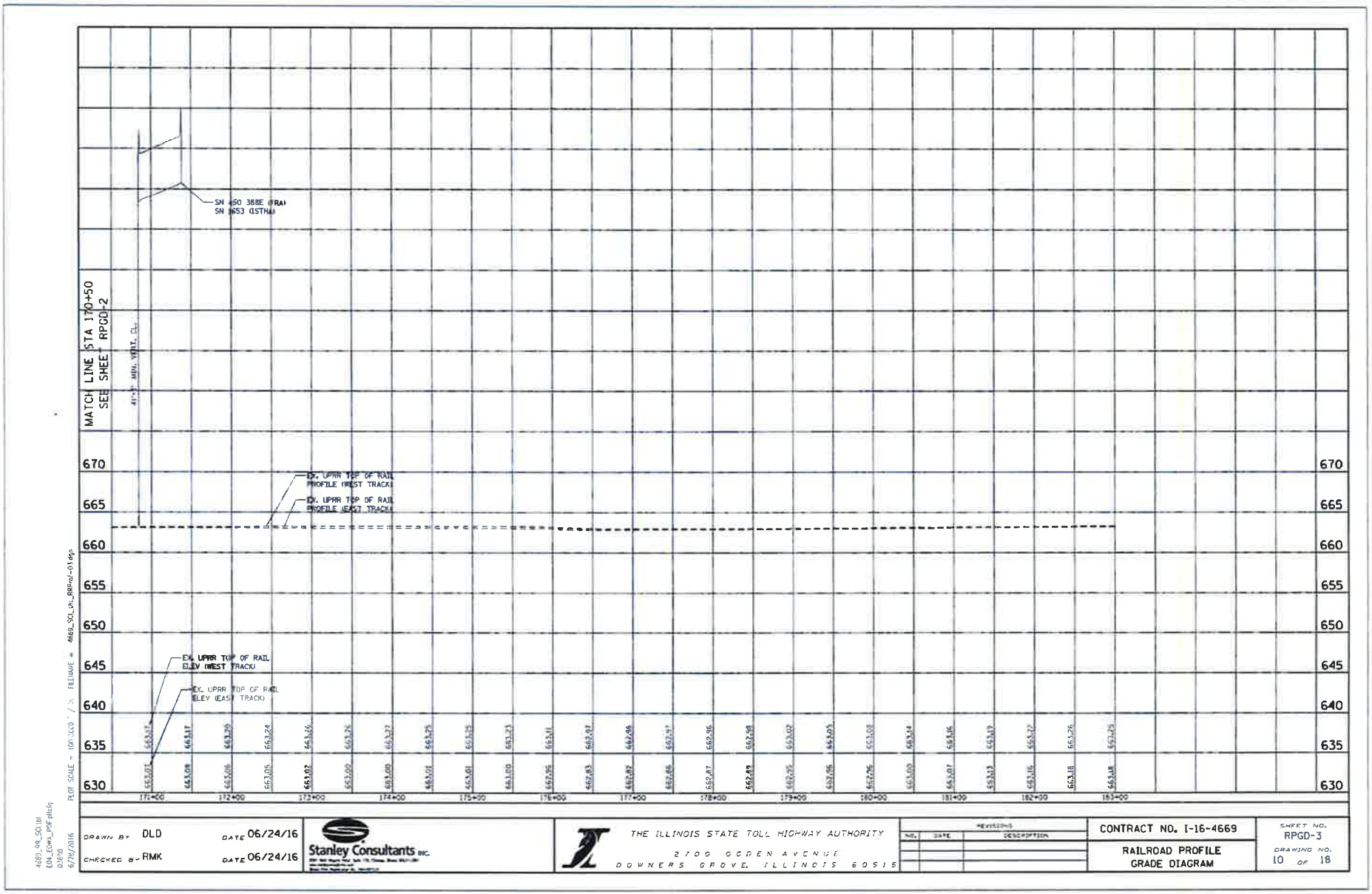
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CHECKED BY RMK	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

RAILROAD PROFILE
GRADE DIAGRAM

SHEET NO. RPGD-2
DRAWING NO. 9 OF 18



DRAWN BY DLD DATE 06/24/16
CHECKED BY RMK DATE 06/24/16

Stanley Consultants INC.

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

NO.	DATE	DESCRIPTION

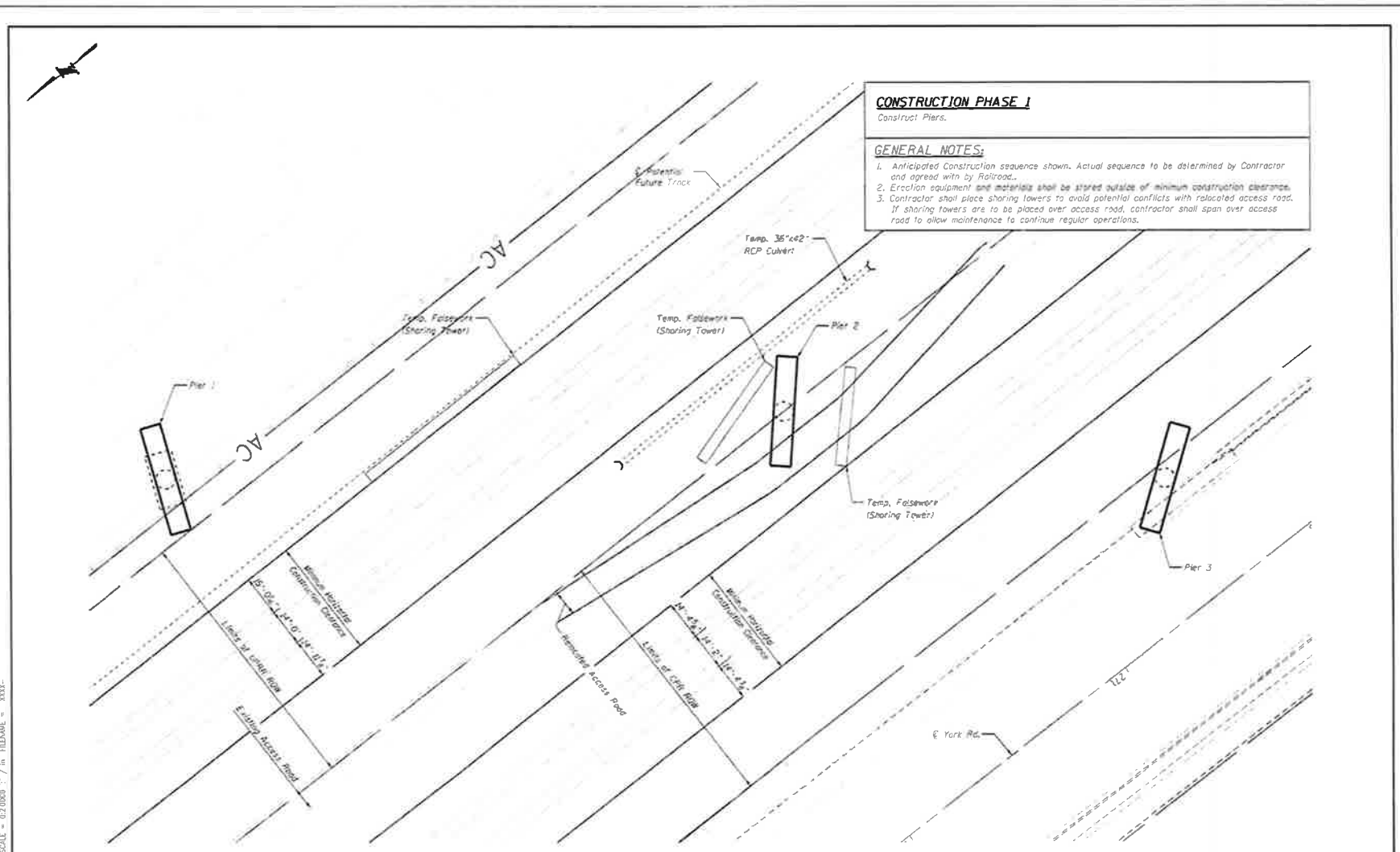
CONTRACT NO. I-16-4669

RAILROAD PROFILE
GRADE DIAGRAM

SHEET NO. RPGD-3
DRAWING NO. 10 OF 18

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6/28/2016
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Exh. D - Page 89



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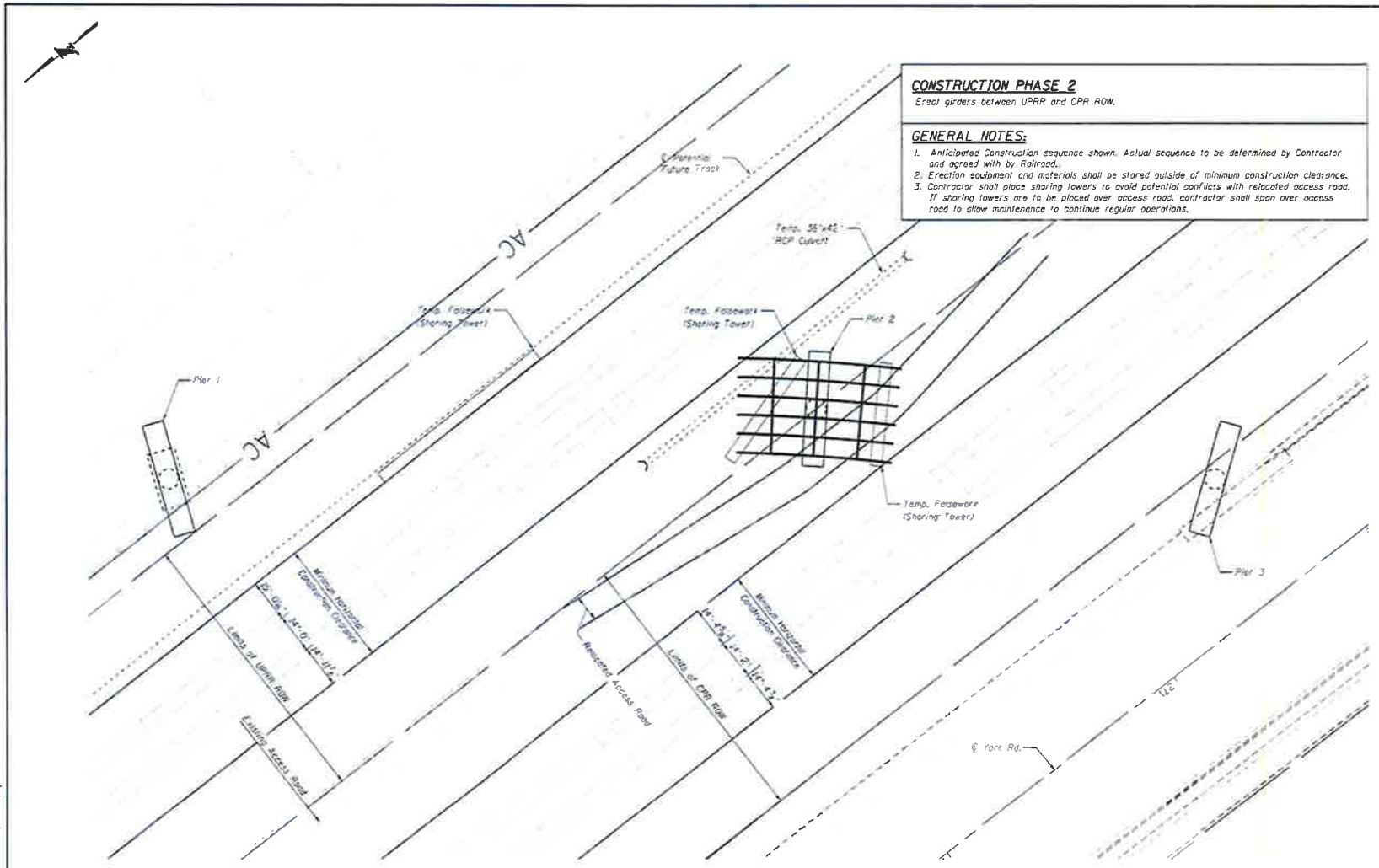
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CHECKED BY DSE	DATE 06/24/16		

NO.	DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 38%
1650(TOLLWAY),022-9506(IDOT)
CONSTRUCTION PHASE 1

SHEET NO. PH-01
DRAWING NO. 11 OF 18



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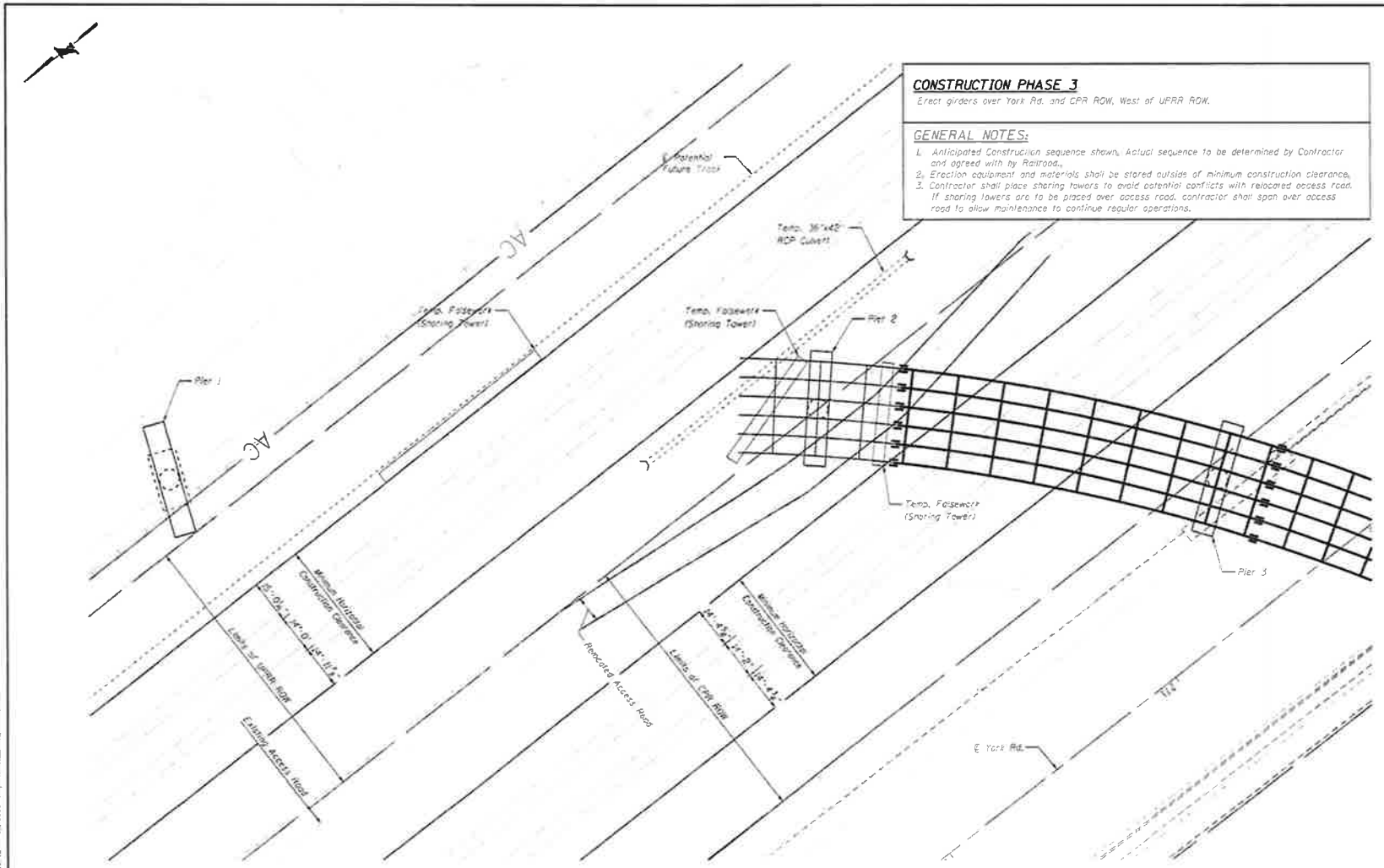
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CHECKED BY DSE	DATE 06/24/16		

REVISIONS NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 389L
1650(TOLLWAY),022-9506(IDOT)
CONSTRUCTION PHASE 2

SHEET NO. PH-02
DRAWING NO. 12 OF 18



GIRDER ERECTION OVER YORK ROAD AND CPR TRACKS

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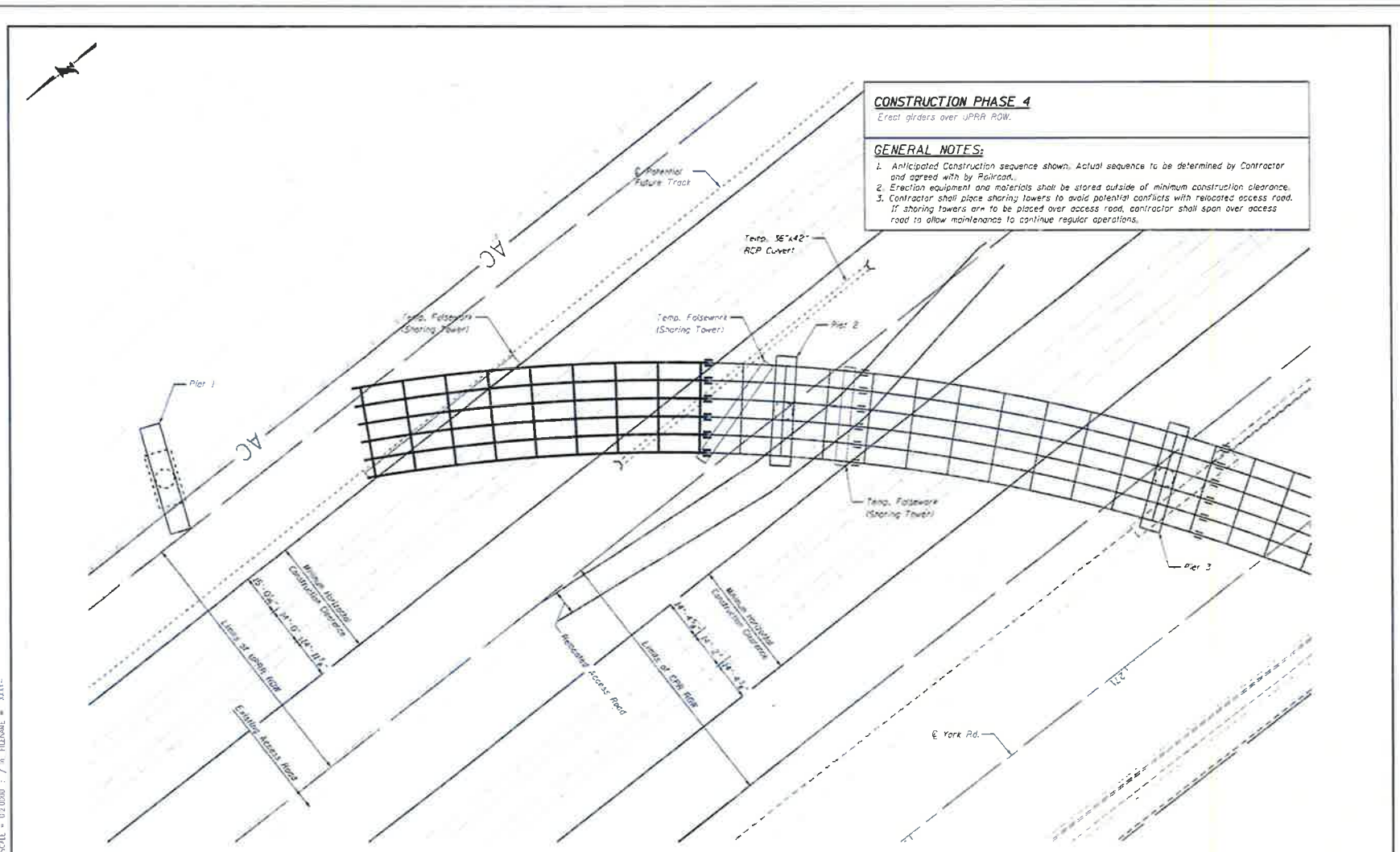
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REVISIONS NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

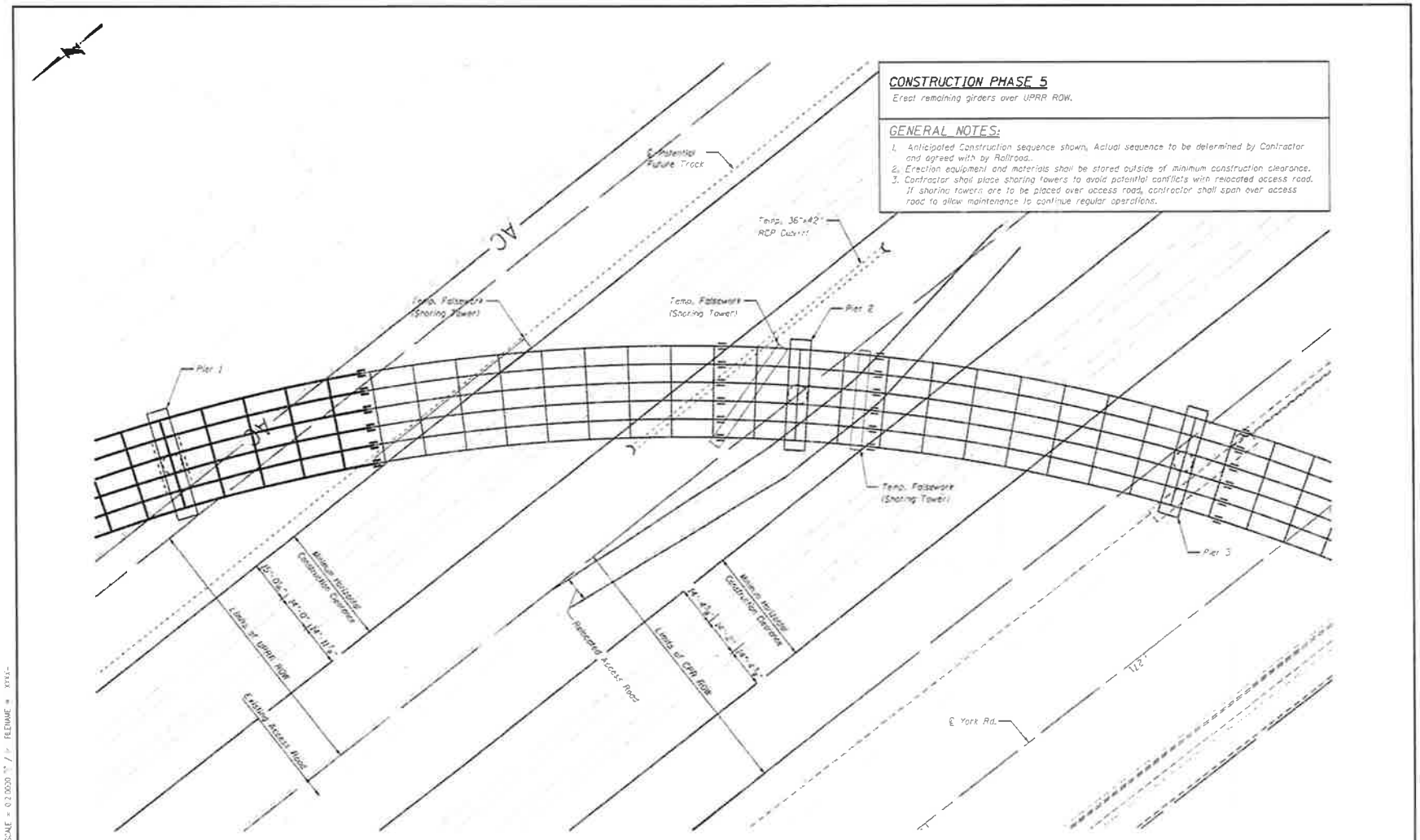
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1650(TOLLWAY),022-9506(IDOT)
CONSTRUCTION PHASE 3

SHEET NO. PH-03
DRAWING NO. 13 OF 18



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Stanley Consultants INC.

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

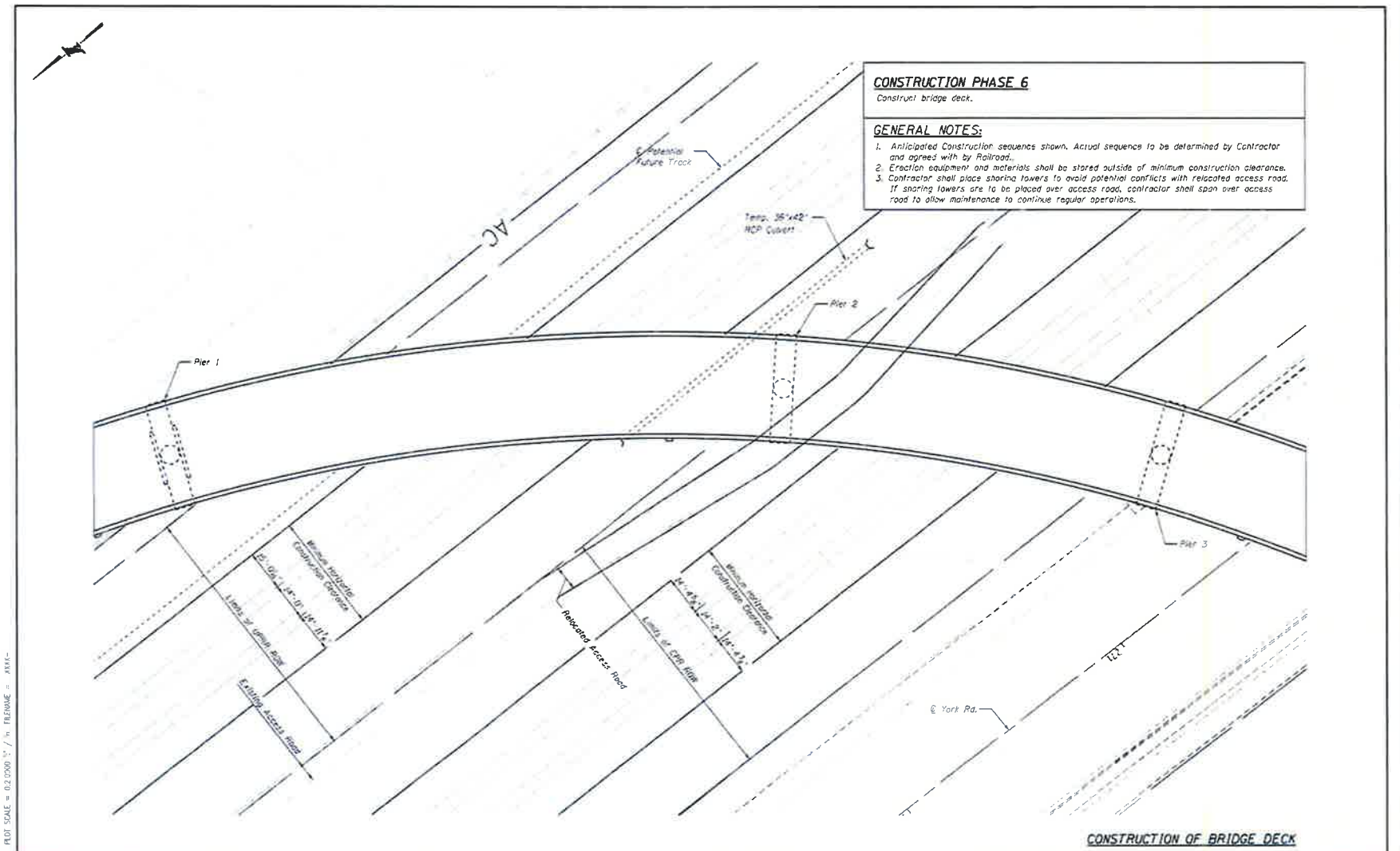
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CONTRACT NO. I-16-4669

BRIDGE NO. 450 38RL
1650(TOLLWAY),022-9506(IDOT)
CONSTRUCTION PHASE 5

SHEET NO. PH-05
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CHECKED BY DSE	DATE 06/24/16				BRIDGE NO. 450 389L 1650(TOLLWAY),022-9506(IDOT) CONSTRUCTION PHASE 6	DRAWING NO. 16 OF 18

RAMP P2, PIER 3
(BRIDGE 450 392U)
153 + 74.58
RAMP P8, PIER 3
(BRIDGE 450 390F)
161 + 27.18
RAMP P1, PIER 2
(BRIDGE 450 389L)
166 + 79.07
RAMP P6, PIER 7
(BRIDGE 450 388E)
171 + 11.27
RAMP Q1 PIER
173 + 06.18
CONTRACT NO. I-16-4669
CROSS SECTIONS
TEMPORARY IMPROVEMENTS
SHEET NO. XSC-1
DRAWING NO. 17 OF 18
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
Globetrotters Engineering
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6/28/2016
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05690

RAMP P2, PIER 3
(BRIDGE 450 392U)
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RAMP P8, PIER 3
(BRIDGE 450 390F)
161 + 27.18
RAMP P1, PIER 2
(BRIDGE 450 389L)
166 + 79.07
RAMP P5, PIER 7
(BRIDGE 450 388E)
171 + 11.27
RAMP Q1 PIER
173 + 06.18
PERMANENT ACCESS ROAD RELOCATED
PROPOSED GROUND ELEVATION AROUND PIER = 661.40
655
660
665
670
675
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
CONTRACT NO. I-16-4669
CROSS SECTIONS
PERMANENT IMPROVEMENTS
SHEET NO. XSC-2
DRAWING NO. 18 OF 18
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DATE 06/24/16
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DATE 06/24/16
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03690

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I-13-4622; TOLLWAY CONSTRUCTION CONTRACT I-16-4669

ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT

PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

BRIDGE NO. 450 389L (FRA), 1650 (TOLLWAY), 022-9506 (IDOT) (RAMP P1) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.44)

BENSENVILLE, IL – DUPAGE COUNTY

PROJECT SPECIFICATIONS

30% SUBMITTAL

June 24, 2016

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
PROJECT SPECIFICATIONS
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION
BRIDGE NO. 450 389L (FRA), 1650 (TOLLWAY), 022-9506 (IDOT) (RAMP P1) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.44)
BENSENVILLE, IL – DUPAGE COUNTY

S.P. 101 LOCATION AND SCOPE OF WORK

The improvements to be constructed under this contract shall be performed along IL 390 at Western Access located at milepost 17.0 along IL 390 and milepost 3.2 to milepost 3.8 along the Western Access in DuPage County, Illinois.

The work under this contract includes, but is not limited to:

1.) Construction of Ramp P1, P2, P5 and P8 Bridges
2.) Earthwork and grading for construction of the bridges carrying ramps P1, P2, P5 and P8 over existing York Road, Canadian Pacific Railroad and Union Pacific Railroad
3.) Erosion and sediment control
4.) All other appurtenant and miscellaneous construction shown on the plans and within these special provisions.

All applicable provisions of the IDOT Standard Specifications adopted April 1, 2016, herein after referred to as the Standard Specifications, IDOT Supplemental Specifications and Recurring Special provisions adopted April 1, 2016, Tollway Supplemental Specifications to said Standard Specifications issued April 1, 2016, and all Tollway Construction Bulletins in effect at the time of bidding, shall govern this work except as herein amended.

S.P. 106.8 COORDINATION WITH RAILROADS

The Contractor shall coordinate activities with the Union Pacific Railroad (UPRR) and the Canadian Pacific Railway (CPR). Each railroad operates on two separate pairs of mainline tracks that will be spanned by each of proposed Bridges 1650, 1651, 1652 and 1653.

The following coordination regarding railroad insurance, flagging and right of entry requirements for each railroad shall be adhered to by the Contractor:

- A right of entry (ROE) permit and flagging must be obtained prior to performing any bridge related work on railroad property. Right of entry fee is estimate to be $550 for each railroad and can be obtained through each of their websites (40-50 days in advance).
- All costs associated with flagging for the entire project shall be paid for by the Contractor prior to the start of work.
- Trains cannot be delayed or rerouted due to construction. Any means or methods needed to keep all track open for trains during construction shall be paid for by the Contractor.
- Railroad protective liability insurance must be obtained by the Contractor prior to performing any bridge work on the properties of the railroads. See S.P. 107.3 for additional information.
- No temporary crossing of any tracks will be allowed other than the one shown in the plans for accessing railroad property between the tracks of the UPRR and the CPR.
- The Contractor shall not place any materials, equipment or staff within the construction clearance zones for each railroad as shown in the plans.
- The following UPRR staff should be contacted regarding the required access permits and flagging associated with construction of Bridges 1650, 1651, 1652 and 1653 over that railroad.

    - John Venice (main railroad contact): 312-777-2043
    - (jnvenice@up.com)

- The following CPR staff should be contacted regarding the required access permits and flagging associated with construction of Bridges 1650, 1651, 1652 and 1653 over that railroad.

    - Dan Sabatka (main railroad contact): 651-495-9521
    - daniel_sabatka@cpr.ca

All construction access locations must be approved by the Engineer, affected agencies and respective railroads prior to starting any sub-structure work on railroad properties. The Contractor shall be responsible for obtaining all necessary permits to perform the work on Bridges 1650, 1651, 1652 and 1653. The Contractor shall be responsible for verifying the accuracy of these requirements and determining required fees by checking the following railroad websites:

- http://wwww.up.com/real_estage/tempuse/index.htm

All applicable safety and operational requirements associated with this work shall be adhered to by the Contractors. The Contractor is advised to review the following links regarding grade separation guidelines:

- http://www.uprr.com/aboutup/operations/specs/index.shtml

All utilities on property of the railroads near the construction of the bridges shall be coordinated by the Contractor.

S.P. 107 INSURANCE

This provision supplements Article 107.27 of the Tollway Supplemental Specifications.

J. ADDITIONAL INSURED PROTECTION

The work under this contract includes work upon, above, adjacent to and/or along the right-of-way and facilities of the FAA, Illinois Department of Transportation (IDOT), the Village of Bensenville, Counties of Cook and DuPage, the Union Pacific Railroad and the Canadian Pacify Railway. The Contractor's Insurance coverage, required by and in conformance with Article 107.27(j), shall include the agencies specified herein, its agents and employees as additional insureds, or provide a separate owner's protection policy of equal limits of coverage for each agency.

S.P. 107.3 RAILROAD PROTECTIVE LIABILITY INSURANCE

The work under this contract include work upon, above, adjacent to and/or along the right-of-way and facilities of the Union Pacific Railroad (UPRR) and the Canadian Pacific Railway (CPR). Each of the railroads require railroad protective liability insurance be in place prior to the Contact beginning work.

The Contractor shall confirm requirements on the UPRR website and with the following UPRR contact:

Attn John Venice
Manager Special Projects - Industry and Public Projects
Union Pacific Railroad
101 North Wacker Drive, Suite 1920
Chicago, IL 60606
312-777-2043
jnvenice@up.com

The Contractor shall confirm requirements on the CPR website and with the following CPR contact:

Attn Dan Sabatka
CP Rail
PW US-East
7550 Ogdendale Rd SE
Calgary, Alberta T2C 4X9
Canada
651-495-9521
daniel_sabatka@cpr.ca

S.P. 107.3.1 RAILROAD PROTECTIVE LIABILITY INSURANCE - UPRR

Requirements:

The Railroad Protective Liability Program for new bridge construction, structural repair to bridges, widening of bridges and bridge demolition requires the completion of the Bridge - Large Project Application to obtain a quote. See the UPRR website for additional information and current application forms: http://www.up.com/real_estate/rrinsurance/liability_insurance/index.htm).

With the Railroad Protective Liability Program made available by the Union Pacific Railroad through a national broker, the Contractor completes a single-page application, sends a check, and the Railroad Protective Liability coverage is in place. The UPRR considers this program a time saver in obtaining Railroad Protective Liability insurance.

For Railroad Protective Liability Insurance (RPLI) application requests, the Contractor may be asked by their insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and safety reasons, Union Pacific Railroad employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

S.P. 107.3.2 RAILROAD PROTECTIVE LIABILITY INSURANCE - CPR

Requirements:

The Railroad Protective Liability Program for new bridge construction, structural repair to bridges, widening of bridges and bridge demolition requires the completion of the Bridge - Large Project Application to obtain a quote. See the CPR website for additional information and current application forms.

With the Railroad Protective Liability Program made available by the Canadian Pacific Railway through a national broker, the Contractor completes a single-page application, sends a check, and the Railroad Protective Liability coverage is in place. The CPR considers this program a time saver in obtaining Railroad Protective Liability insurance.

For Railroad Protective Liability Insurance (RPLI) application requests, the Contractor may be asked by their insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and

safety reasons, Canadian Pacific Railway employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

RAILROAD BRIDGE FENCE (Tollway)

Effective: April 29, 2014
Revised: November 7, 2014

Description. The work shall consist of constructing a chain link fence to the outside face of a parapet or barrier on structures over railroads as shown in the plans. This work shall include the preparation of all shop drawings, provide materials, labor and equipment necessary to fabricate, furnish and install chain link fence and post attachment components as described in this special provision.

Materials. Material shall be according to the following.

Chain Link Fence Components:

(a) Posts: Posts shall be according to ASTM F 1083, Galvanized Steel Pipe, 3" Nominal Pipe Size (NPS), Schedule 40, 3.5" Outside Diameter, 0.216" Wall Thickness

(b) Chain Link Fabric: Fabric shall be according to ASTM A 392, 2" mesh with twisted top and knuckled bottom selvage, Zinc Coated Steel, 0.148" coated wire diameter, class 2 coating.

(c) Tie Wires: Tie wires shall be according to ASTM F 626, Zinc Coated Steel Wire, No. 9 gauge

(d) Brace Bands: Bracing bands shall be according to ASTM F 626, No. 12 gauge (min. thickness) x ¾" (min. width) Steel Bands (Beveled or Heavy)

(e) Tension Bars: Tension bars shall be according to ASTM F 626, 3/16" (min. thickness) x ¾" (min. width) x 5' 10" (min. height) Steel Bars

(f) Tension Bands: Tension bands shall be according to ASTM F 626, No. 14 gauge (min. thickness) x ¾" (min. width) Steel Bands

(g) Miscellaneous Fence Components: Miscellaneous fence components shall be according to ASTM F 626, Zinc Coated Steel – includes post or loop caps, combination rail ends, clamps and all other miscellaneous fittings and hardware

(h) Nuts and Bolts: Nuts and bolts shall be according to ASTM A 307, 3/8" diameter x 4 ¼" Hex Headed Bolts for Pipe Clamp Connections to the Posts.

(i) Washers: Washers shall be according to ASTM F 436, Flat.

(j) Tension Wire: Tension wire shall be according to ASTM A 824 and A 817, Type II Zinc Coated Steel Wire – No. 7 gauge, Class 4 Coating

(k) Hog Rings: Hog rings shall be according to ASTM F 626, Zinc Coated Steel Wire – No. 12 gauge

(l) Brace Rails: Brace rails shall be according to ASTM F 1083, Galvanized Steel Pipe – 1 1/4" NPS, Schedule 40, 1.660" Outside Diameter, 0.140" Wall Thickness.

Post Attachment Components:

(m) Pipe Clamps: Pipe clamps shall be according to ASTM A 36 or A 709 Grade 36, ¼" Steel Plate

(n) Shim Plates: Shim plates shall be according to ASTM F 626, Zinc Coated Steel – ¼" Thickness, 3" x 9 ½", with 3/4" diameter holes.

(o) Adhesive Anchor Rods: Adhesive anchor roads shall be according to ASTM F 1554 Grade 36, fully threaded headless Anchor Rods – 5/8" diameter x 6 ½".

(p) Neoprene Pads: Neoprene pads shall be in accordance with Article 1052.02(a) of the Standard Specifications.

(q) Chemical Adhesive Resin System: The chemical adhesive resin system shall consist of a two part, fast-setting resin and filler/hardener. The system shall meet the requirements of the Illinois Test Procedure for Chemical Adhesives and be listed on the IDOT approved list for Chemical Adhesives.

Hot-dip galvanize all chain link fence components not otherwise indicated as being coated, and all post attachment components ,except neoprene pads, in accordance with Section 1006 of the Standard Specifications.

General. The Contractor shall furnish and install the chain link fence according to the lines, grades, and dimensions shown on the plans and approved shop drawings. Work shall be accomplished according to Sections 509 and 664 of the Standard Specifications except as modified here-in:

Article 509.05 (c) Delete paragraph 1, third sentence; "Stretcher bars shall be used on all four sides of each panel".

Shop Drawings. The Contractor shall submit shop drawings in accordance with the provisions of Article 105.04 of the Tollway Supplemental Specifications for all chain link fence and post attachment components.

No materials detailed in the Plans and/or described in the Special Provision, or covered by the shops drawings shall be delivered to the site of the work until the shop drawings have been approved.

Construction Procedures. All construction and installation methods and procedures for chain link fence components and post attachment components shall be in strict accordance with the Plans, the manufacturer's recommendations, the approved shop drawings and as directed by the Engineer.

Any chain link fence component and post attachment component which, in the judgment of the Engineer, is not furnished and installed in accordance with the Plans, the Special Provision, the approved shop drawings, or the manufacturer's specifications shall be subject to rejection. Any such installation which is rejected shall be removed and replaced with material acceptable to the Engineer. The costs for any such adjustments shall be the responsibility of the Contractor.

Installation Procedures. The fence posts shall be installed plumb. Shims shall be used as required to achieve plumb and clearance for 6" of chain link fabric. Shims at bottom clamp to be omitted if clearance and plumb are otherwise provided. Total thickness of shims will be determined in the field.

Adhesive Bonded Anchors and Dowels shall comply with and be installed in accordance with Section 509 of the Standard Specifications.

Welding shall be accomplished only after written permission of the Engineer. All welding shall be in accordance with the American Welding Society Structural Welding Code (Steel) ANSI/AWS D1.1, current edition. Weld metal shall be E60XX or E70XX. Non Destructive Testing of welds is not required.

Protective electrical grounding shall be in accordance with Article 664.11 of the Standard Specifications.

Thread bottom tension wire through the bottom mesh loops. Tighten the bottom rail tension wire around the end posts. Tighten the brace rail tension wire around the end posts and first interior posts. Bottom tension wire shall utilize a separate tension band. Brace rail tension wire shall either

use a separate tension band or wrap around the post. Draw the wire tight and wrap it around itself a minimum of three loops next to the posts.

Method of Measurement. This work will be measured for payment in feet, along the top of the fence from center to center of the end posts.

Basis of Payment. This work will be paid for at the contract unit price per foot for RAILROAD BRIDGE FENCE.

Pay Item Number	Designation	Unit of Measure
JI664100	RAILROAD BRIDGE FENCE	FOOT

ALLOWANCE FOR RAILROAD FLAGGING (Illinois Tollway)

Effective: April 1, 2016

Description. This Special Provision establishes a budgetary allowance for flagging services required and provided by the railroad as a result of work being performed by the Contractor on the Illinois Tollway system. This work shall be performed in accordance with Section 107.12 of the Illinois Tollway Supplemental Specifications, except the Railroad will bill the Contractor directly for this work.

General Requirements. The Contractor shall pay all costs of Railroad Flagging services required and provided by the Railroad for all work performed under the contract. These costs shall be considered separate from the contract unit prices bid for the various items of work involved. Upon written order of the Engineer, the Contractor shall pay the costs of providing flaggers as specified with the exception of flaggers required for transporting material or equipment across the tracks. The Contractor will be reimbursed for the actual amounts paid.

Adequate notification shall be made to the Railroad to schedule the Flagger. The Contractor shall make every effort to notify the Railroad in advance if previously requested flagger(s) will not be needed for any reason.

The Railroad may have specific work rules that govern their use of flaggers. The Contractor shall coordinate with the appropriate Railroad contact to obtain information about specific Railroad work rules and how they may impact the cost of flagging services.

Method of Measurement. This work will not be measured for payment.

Basis of Payment. Payment for this work will be made as specified in Illinois Tollway Supplemental Specifications Article 109.04 using a force account basis. Railroad flagging bills shall be submitted to the Engineer on a monthly basis. Payment for this work shall not exceed the costs incurred by the Contractor and approved by the Engineer.

Any costs incurred for flagging protection provided by the Railroad at the Contractor's request for those days when the Contractor does not work shall be borne by the Contractor.

Pay Item Number	Designation	Unit of Measure
JT154102	ALLOWANCE FOR RAILROAD FLAGGING	UNIT

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I-13-4622; TOLLWAY CONSTRUCTION CONTRACT I-16-4669

ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT

PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

BRIDGE NO. 450 389L (FRA), 1650 (TOLLWAY), 022-9506 (IDOT) (RAMP P1) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.44)

BENSENVILLE, IL – DUPAGE COUNTY

DRAINAGE REPORT

30% SUBMITTAL

June 24, 2016

EXECUTIVE SUMMARY

Project Overview

The Elgin O'Hare Western Access Tollway project is located at the intersection of existing Thorndale Road at York Road in Bensenville, Illinois. Refer to the Location Map (see Exhibit A). The proposed interchange would connect new Tollways designated as IL-390 and I-490. Five new Tollway bridges would be constructed over the existing railroad tracks located along the east side of York Road. The proposed bridge crossings are located between Federal Railroad Administration (FRA) Mile Post 6.27 and 6.61 of the Union Pacific Railroad.

Drainage Design

The drainage design is in accordance with the Guidelines for Railroad Grade Separation Projects by the Union Pacific Railroad-BNSF Railway, May 2016. The proposed bridge piers include a pier situated on the property line between the Canadian Pacific Railroad (CPRR) and the Union Pacific Railroad (UPRR). Existing railroad access roads located between the existing tracks would be used to access the project area with access from York Road using the existing access location and track crossing near Station 188+00 and a new track crossing and York Road access at Station 131+00. The existing ditch and culverts would be maintained except for some temporary work and permanent modifications near the proposed piers. The tributary areas and design flows are the same for the existing and proposed conditions.

A temporary, flat granular platform would be provided at each pier to allow construction access. Since these would block existing ditch flow temporary culverts are proposed to maintain flow across these granular platforms. Both the granular platforms and temporary culverts would be removed at the end of construction.

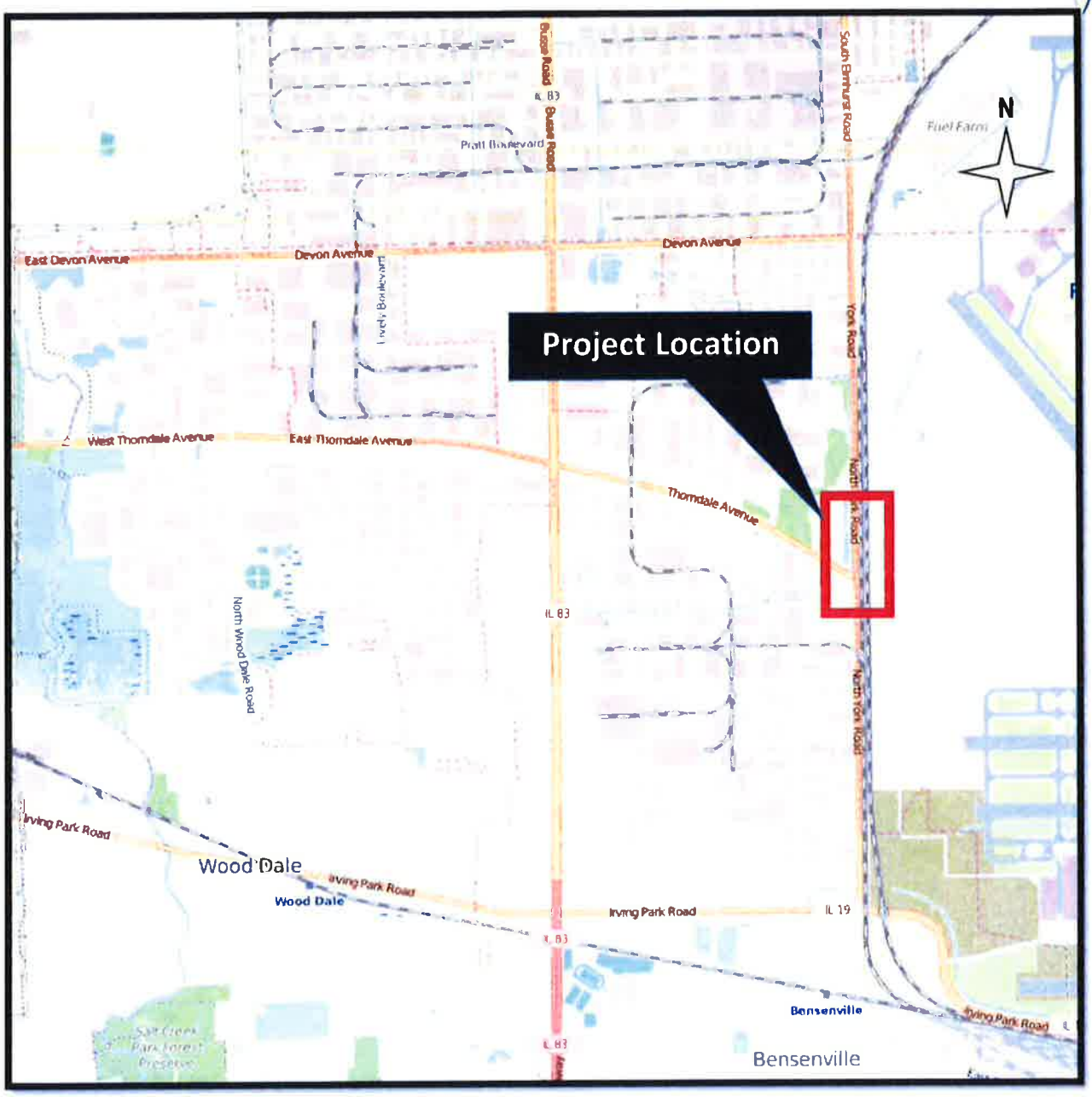
The temporary culverts are sized to meet the railroad guidelines with the hydraulic grade line not exceeding the Low Chord, defined as the crown of the pipe, based on a 50 year design storm, and providing freeboard to the Subgrade elevation, defined as 2'-3" below the base of rail elevation, based on a 100 year design storm. The top of rail elevations are based on topographic survey, with subgrade elevations based on 7-5/16-inch rail heights.

Ditches along the proposed piers will be graded using a 10' minimum bottom with 2:1 side slopes with the flowline. Outside the pier construction areas the existing ditches and access roads would be maintained. The existing ditch flowline elevation for Bridge No. 450 389L (FRA) does not meet the railroad guidelines for having the flowline elevation a minimum of 3 ft below the subgrade elevation. The proposed ditch flowline would match the existing ditch flowline elevations and cannot be lowered due to the very flat longitudinal ditch grades. However, the proposed ditch would have a wider bottom and greater flow area that would increase the ditch capacity and improve drainage for this railroad ditch.

Design flows were determined based on delineating the areas tributary to the culverts, the time of concentration, and using the rational method with applicable runoff coefficients. These calculations are included hereinafter.

Recommendations

The drainage design for the final and temporary conditions for the interchange design meet the Railroad Guidelines. No adverse drainage impacts would be realized due to the improvement. The ditch between the railroad tracks would be maintained with some regrading to accommodate shifting sections of the access roads and the pier construction.



Drainage Report

UPRR / CPRR Ditch

PROJECT LOCATION MAP

Not to Scale Date: 6/3/2016

Exhibit A

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Executive Summary

Exhibit A – Location Map

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   Drainage Calculations Summary Table
   Time of Concentration Calculation
   Design Peak Flow Calculation
   Temporary Condition Culvert HY-8 Sizing
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2. **Appendix**
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   Exhibit – Railroad Drainage Areas (RR-1, RR-2, RR-3)
   Rational Method Runoff Coefficients
   Rational Method Overland Flow Manning's coefficients
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   Bulletin 70 Rainfall Intensity vs. Duration (Figure 4-102c)

1

Proposed Pier Crossing:
FRA Structure 450 389L (MP 6.44)
Sta: 166+79.07

DRAINAGE DESIGN CRITERIA	
All design in accordance with the Union Pacific Railroad – BNSF Railway: *Guidelines for Railroad Grade Separation Projects*, May 2016	
Design Storm	50-year storm frequency (crown of culverts) 100-year storm frequency (freeboard to railroad subgrade)
Design Freeboard	Subgrade event (100-yr) energy grade line below the adjacent subgrade elevation (Subgrade is defined as 2'-3" below base of rail)
Ditch Design	Flat Bottom, 10' Bottom Width 2:1 side slopes Flowline a minimum 3' below the subgrade elevation
Culvert Design	Low chord event (50-yr) water surface elevation no higher than crown of culvert, HW/D ≤ 1.0 Subgrade event (100-yr) water surface elevation no higher than adjacent subgrade elevation, and HW/D ≤ 1.5
Design Velocity	Check for non-eroding velocities or provide erosion protection
Rainfall Data	ISWS Bulletin 70
Runoff Coefficients	TR-55 c = 0.95 for pavements (hard surfaces) c = 0.60 for granular surfaces c = 0.30 for grass surfaces
Design Flows	Rational Method

Computed: R.Delves 6/02/2016
Revised: R.Delves 6/22/2016
Checked: J. Hopson 6/22/2016
Approved:

Railroad Property Drainage Calculations
Summary Table

Union Pacific Railroad															
Description						Tributary Flow		Low Chord		Subgrade					
FRA Structure #	FRA M.P. Designation	Tollway Structure #	IDOT Structure #	Station	Culvert Diameter (in)	Q_{50yr} (cfs)	Q_{100yr} (cfs)	50yr headwater (ft)	50yr within crown of culvert?	100yr headwater (ft)	Bottom of Rail Elevation	Subgrade Elev.	Pr Culvert Invert	HW/D ≤ 1.5	Proposed 100yr Cover ≥ Subgrade Elevation?
450 389L	M.P. 6.44	1650	022-9506	166+79.07	30	12.31	14.41	659.62	Yes	659.89	662.57	660.32	657.66	0.89	0.43 Yes

Union Pacific Railroad													
Description					Ditch Characteristics			Tributary Flow		Subgrade			
FRA Structure #	FRA M.P. Designation	Tollway Structure #	IDOT Structure #	Station	Proposed Ditch Bottom (ft)	Proposed Ditch Side Slope X:X	Proposed Ditch Side Slope X:X	Q_{50yr} (cfs)	Q_{100yr} (cfs)	Proposed Ditch Elevations	Proposed 100-yr Ditch Normal Depth	Subgrade Elev. (ft)	Proposed flowline Cover ≥ 3'?
450 389L	M.P. 6.44	1650	022-9506	166+79.07	10	2:1	2:1	12.31	14.41	657.69	0.92	660.32	2.63 No

Note:
Base of Rail Elevation = Surveyed Top of Rail Elevation - Rail Height taken as 7 - 5/16"
Subgrade Elevation = Base of Rail Elevation - 2' - 3"
HW = Maximum headwater
D = Diameter

Time of Concentration (T_c) or travel time (T_t)

Project	Calc'd By:	Date
Elgin O'Hare Western Access	Joe Hopson	2/3/16
Location	**Checked By:**	**Date**
FRA Structure 450 392U (MP 6.39), Sta: 153+74.66	Ryan Delves	6/3/16

Check one: ☑ Present ☐ Developed

Check one: ☑ T_c ☐ T_t through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

		Segment ID	AB				
1.	Surface description (table 3-1)		Pervious				
2.	Manning's roughness coefficient, n (table 3-1)		0.15				
3.	Flow lengh, L (total L < 300 ft)	ft	40				
4.	Two-year 24-hour rainfall, P_2	in	2.900				
5.	Land slope, s	ft/ft	0.104				
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t hr	0.043	+		=	0.043

Shallow concentrated flow

		Segment ID	BC				
7.	Surface description (paved or unpaved)		Unpaved				
8.	Flow length, L	ft	2401				
9.	Watercourse slope, s	ft/ft	0.0017				
10.	Average velocity, V (figure 3-1)	ft/s	0.67				
11.	$Tt = \frac{L}{3600\,V}$	Compute T_t hr	1.000	+		=	1.000

Channel flow

		Segment ID					
12.	Cross sectional flow area, a	ft^2					
13.	Wetted perimeter, pw	ft					
14.	Hydraulic radius, $r = \frac{a}{pw}$	Compute r ft					
15.	Channel slope, s	ft/ft					
16.	Manning's roughness coefficient, n						
17.	$V = \frac{1.49\, r^{2/3} s^{1/2}}{n}$	Compute V ft/s					
18.	Flow length, L	ft					
19.	$Tt = \frac{L}{3600\,V}$	Compute T_t hr		+		=	0.000
20.	Watershed or subarea Tc or Tt (add Tt in steps 6, 11, and 19)	hr					1.043

Time of Concentration (T_c) or travel time (T_t)

Project	Calc'd By:	Date
Elgin O'Hare Western Access	Joe Hopson	2/3/16
Location	**Checked By:**	**Date**
FRA Structure 450 390F (MP 6.42), Sta: 161+27.18	Ryan Delves	6/3/16

Check one: ☑ Present ☐ Developed

Check one: ☑ T_c ☐ T_t through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

		Segment ID					
1.	Surface description (table 3-1)						
2.	Manning's roughness coefficient, n (table 3-1)						
3.	Flow lengh, L (total L < 300 ft) ft						
4.	Two-year 24-hour rainfall, P_2 in						
5.	Land slope, s ft/ft						
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t hr		+		=		

Shallow concentrated flow

		Segment ID					
7.	Surface description (paved or unpaved)						
8.	Flow length, L ft						
9.	Watercourse slope, s ft/ft						
10.	Average velocity, V (figure 3-1) ft/s						
11.	$Tt = \frac{L}{3600\,V}$ Compute T_t hr		+		=		

Channel flow

		Segment ID	AB				
12.	Cross sectional flow area, a ft^2		2.07		**ADD FROM PREVIOUS TC**		
13.	Wetted perimeter, pw ft		8.34		Assume 0.5' depth		
14.	Hydraulic radius, $r = \frac{a}{pw}$ Compute r ft		0.25				
15.	Channel slope, s ft/ft		0.001				
16.	Manning's roughness coefficient, n		0.03				
17.	$V = \frac{1.49\, r^{2/3} s^{1/2}}{n}$ Compute V ft/s		0.45				
18.	Flow length, L ft		770				
19.	$Tt = \frac{L}{3600\,V}$ Compute T_t hr		0.48	+		=	0.478
20.	Watershed or subarea Tc or Tt (add Tt in steps 6, 11, and 19) hr						0.478

Time of Concentration (T_c) or travel time (T_t)

Project	Calc'd By:	Date
Elgin O'Hare Western Access	Joe Hopson	2/3/16
Location	**Checked By:**	**Date**
FRA Structure 450 389L (MP 6.44), Sta: 166+79.07	Ryan Delves	6/3/16

Check one: ☑ Present ☐ Developed

Check one: ☑ T_c ☐ T_t through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

		Segment ID					
1.	Surface description (table 3-1)						
2.	Manning's roughness coefficient, n (table 3-1)						
3.	Flow lengh, L (total L < 300 ft) ft						
4.	Two-year 24-hour rainfall, P_2 in						
5.	Land slope, s ft/ft						
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,s^{0.4}}$	Compute T_t hr		+		=	

Shallow concentrated flow

		Segment ID					
7.	Surface description (paved or unpaved)						
8.	Flow length, L ft						
9.	Watercourse slope, s ft/ft						
10.	Average velocity, V (figure 3-1) ft/s						
11.	$Tt = \frac{L}{3600\,V}$	Compute T_t hr		+		=	

Channel flow

		Segment ID	AB					
12.	Cross sectional flow area, a ft^2		2.67		**ADD FROM PREVIOUS TC**			
13.	Wetted perimeter, pw ft		5.70		Assume 1' depth			
14.	Hydraulic radius, $r = \frac{a}{pw}$	Compute r ft	0.47					
15.	Channel slope, s ft/ft		0.000					
16.	Manning's roughness coefficient, n		0.03					
17.	$V = \frac{1.49\,r^{4/3}s^{1/2}}{n}$	Compute V ft/s	0.49					
18.	Flow length, L ft		551					
19.	$Tt = \frac{L}{3600\,V}$	Compute T_t hr	0.31	+		=	0.310	
20.	Watershed or subarea Tc or Tt (add Tt in steps 6, 11, and 19) hr						0.310	

Stanley Consultants INC.

Job No. 25250
Subject Flow Computations

Computed J. Hopson Date 06/01/16
Checked R. Delves Date 06/03/16
Approved _____ Date _____

Sheet No. _____ of _____

Design Peak Flow Computations
Proposed Culvert Tributary Area
FRA Structure 450 389L (MP 6.44)

Alignment: HAUL-GBLP-000
Sta: 166+79.07

Description	**Area	*$C_{coefficient}$	C*A
	12.10	0.49	5.93

*Coefficients from IDOT table 4-102a

A_{TOTAL} = 12.10 Ac (Acreage total from above)

$C_{composite}$ = ΣC*A/ΣA
$C_{composite}$ = 5.929 / 12.1
$C_{composite}$ = 0.49

Tc = 109.86 min (See attached)

*i_{50} = 2.08 in/hr
*i_{100} = 2.43 in/hr
*(See attached rainfall intensity vs duration Figure 4-102c)

$Q_{50\ Year}$ Design Flow

$Q_{50} = (C)*(I_{50})*(A)$

C = 0.49 (From calculation above)
I_{50} = 2.08 in/hr (Use T_c noted above)
A = 12.10 acres (As described above)

Q_{50} = 12.31 cfs ***50 - year*** (From formula above)

$Q_{100\ Year}$ Check

$Q_{100} = (C)*(i_{100})*(A)$

C = 0.49 (From calculation above)
i_{100} = 2.43 in/hr (Use T_c noted above)
A = 12.10 acres (As described above)

Q_{100} = 14.41 cfs ***100- year*** (From formula above)

HY-8 Culvert Analysis Report

Temporary Culvert FRA Structure 450 389L (MP 6.44)
Sta: 166+79.07

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 12.31 cfs

Design Flow: 12.31 cfs

Maximum Flow: 14.41 cfs

Table 1 - Summary of Culvert Flows at Crossing: FRA Structure 450 389L (MP 6.44)

Headwater Elevation (ft)	Total Discharge (cfs)	FRA Structure 450 389L (MP 6.44) Discharge (cfs)	Roadway Discharge (cfs)	Iterations
659.62	12.31	12.31	0.00	1
659.72	12.52	12.52	0.00	1
659.74	12.73	12.73	0.00	1
659.76	12.94	12.94	0.00	1
659.78	13.15	13.15	0.00	1
659.80	13.36	13.36	0.00	1
659.82	13.57	13.57	0.00	1
659.83	13.78	13.78	0.00	1
659.85	13.99	13.99	0.00	1
659.87	14.20	14.20	0.00	1
659.89	14.41	14.41	0.00	1
662.50	35.66	35.66	0.00	Overtopping

Rating Curve Plot for Crossing: FRA Structure 450 389L (MP 6.44)

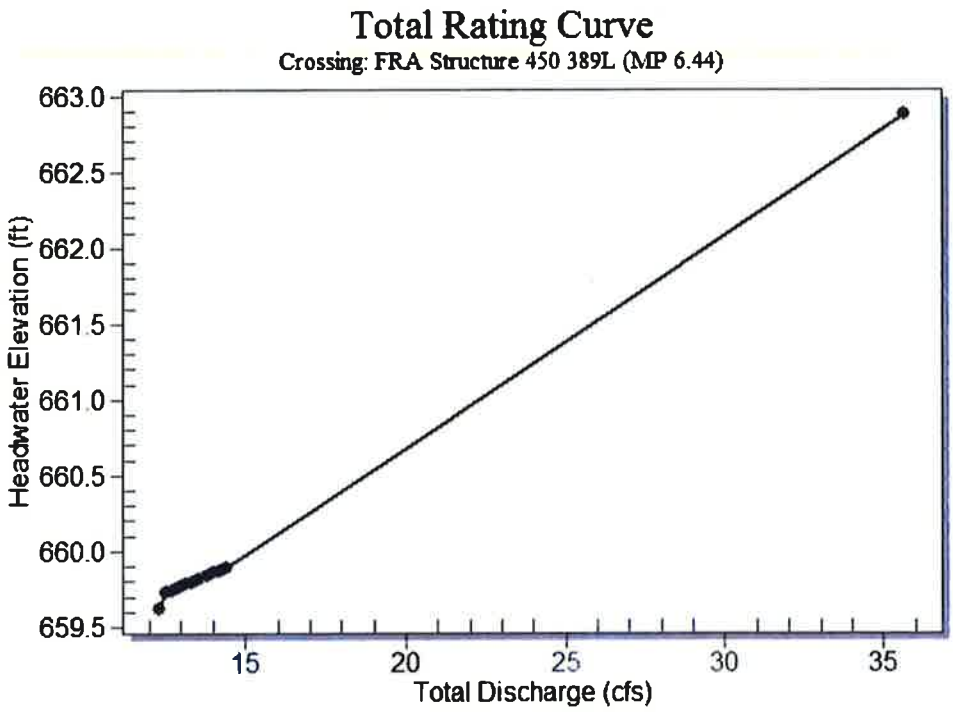


Table 2 - Culvert Summary Table: FRA Structure 450 389L (MP 6.44)

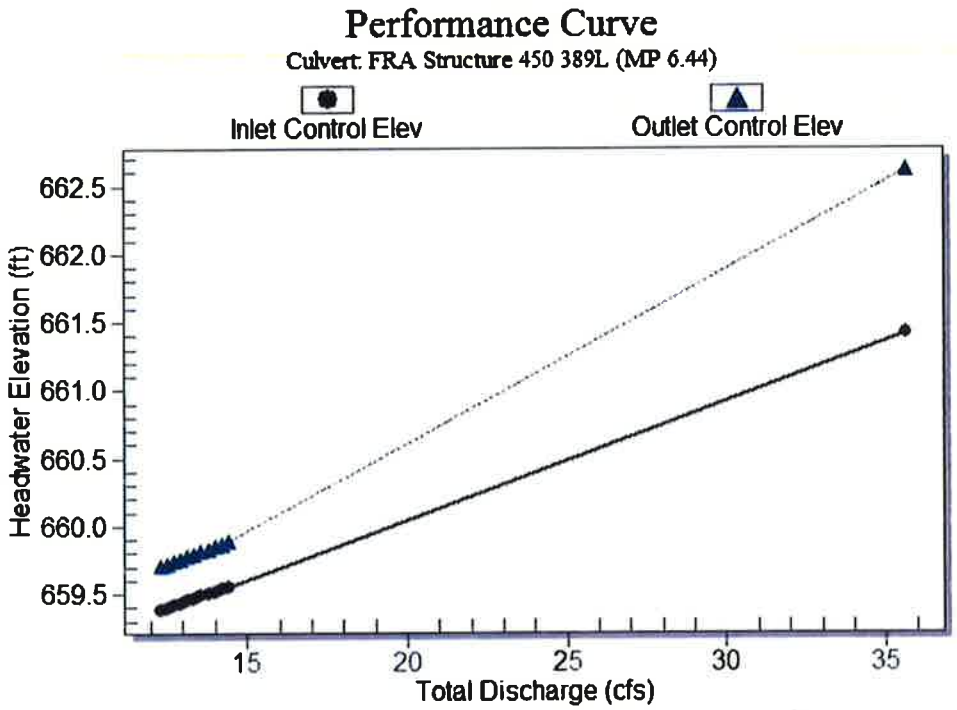
Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
12.31	12.31	659.62	1.720	2.046	3-M2t	1.847	1.178	1.789	1.789	3.276	1.422
12.52	12.52	659.72	1.738	2.064	3-M2t	1.876	1.188	1.800	1.800	3.309	1.429
12.73	12.73	659.74	1.755	2.082	3-M2t	1.905	1.199	1.812	1.812	3.341	1.435
12.94	12.94	659.76	1.773	2.101	3-M2t	1.934	1.209	1.823	1.823	3.374	1.441
13.15	13.15	659.78	1.790	2.119	3-M2t	1.963	1.219	1.834	1.834	3.406	1.448
13.36	13.36	659.80	1.808	2.137	3-M2t	1.992	1.229	1.846	1.846	3.439	1.454
13.57	13.57	659.82	1.825	2.155	3-M2t	2.021	1.239	1.857	1.857	3.471	1.460
13.78	13.78	659.83	1.842	2.173	3-M2t	2.053	1.249	1.868	1.868	3.504	1.466
13.99	13.99	659.85	1.859	2.191	3-M2t	2.101	1.259	1.879	1.879	3.536	1.472
14.20	14.20	659.87	1.876	2.209	3-M2t	2.150	1.269	1.889	1.889	3.568	1.478
14.41	14.41	659.89	1.893	2.227	3-M2t	2.198	1.278	1.900	1.900	3.600	1.484

Straight Culvert

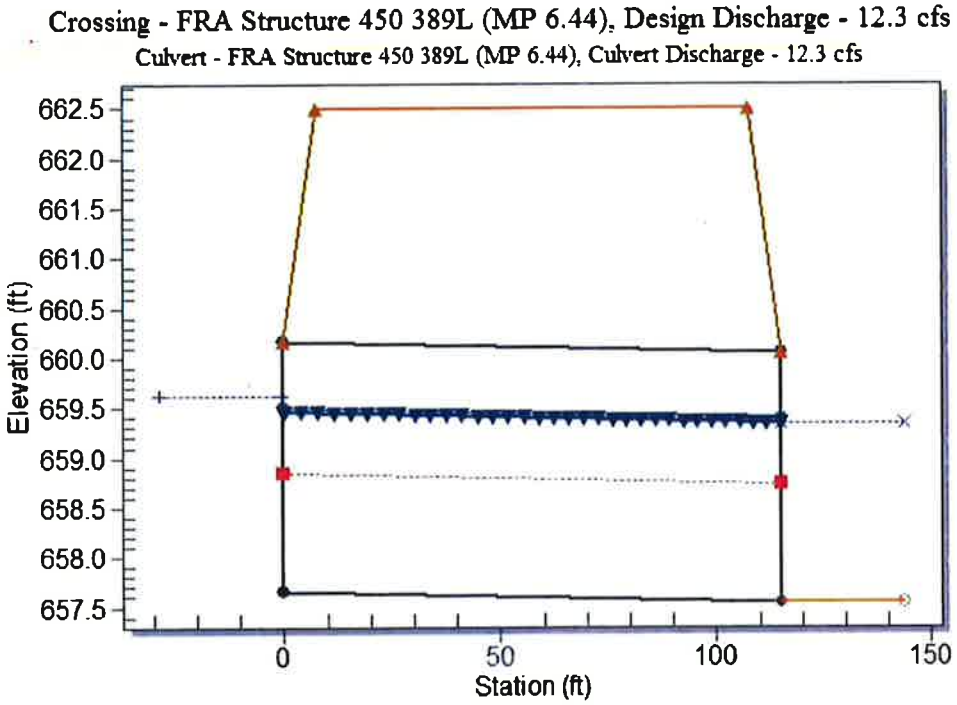
Inlet Elevation (invert): 657.66 ft, Outlet Elevation (invert): 657.55 ft

Culvert Length: 115.00 ft, Culvert Slope: 0.0010

Culvert Performance Curve Plot: FRA Structure 450 389L (MP 6.44)



Water Surface Profile Plot for Culvert: FRA Structure 450 389L (MP 6.44)



Site Data - FRA Structure 450 389L (MP 6.44)

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 657.66 ft
Outlet Station: 115.00 ft
Outlet Elevation: 657.55 ft
Number of Barrels: 1

Culvert Data Summary - FRA Structure 450 389L (MP 6.44)

Barrel Shape: Circular
Barrel Diameter: 2.50 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: Square Edge with Headwall
Inlet Depression: NONE

Table 3 - Downstream Channel Rating Curve (Crossing: FRA Structure 450 389L

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s)	Shear (psf)	Froude Number
12.31	659.34	1.79	1.42	0.11	0.26
12.52	659.35	1.80	1.43	0.11	0.26
12.73	659.36	1.81	1.44	0.11	0.26
12.94	659.37	1.82	1.44	0.11	0.26
13.15	659.38	1.83	1.45	0.11	0.26
13.36	659.40	1.85	1.45	0.12	0.26
13.57	659.41	1.86	1.46	0.12	0.26
13.78	659.42	1.87	1.47	0.12	0.26
13.99	659.43	1.88	1.47	0.12	0.26
14.20	659.44	1.89	1.48	0.12	0.26
14.41	659.45	1.90	1.48	0.12	0.26

Tailwater Channel Data - FRA Structure 450 389L (MP 6.44)

Tailwater Channel Option: Irregular Channel

Channel Slope: 0.0010

User Defined Channel Cross-Section:

Coord No.	Station (ft)	Elevation (ft)	Manning's n
1	-15.00	662.51	0.0300
2	-10.00	660.68	0.0300
3	-5.00	658.83	0.0300
4	0.00	657.55	0.0300
5	5.00	660.67	0.0300
6	10.00	661.54	0.0300
7	15.00	661.73	0.0000

Roadway Data for Crossing: FRA Structure 450 389L (MP 6.44)

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 43.00 ft

Crest Elevation: 662.50 ft

Roadway Surface: Paved

Roadway Top Width: 100.00 ft

Proposed Condition Ditch Flow-Depth Calculation

FRA Structure 450 389L (MP 6.44)

Sta: 166+79.07

FRA Structure 450 389L (MP 6.44) Sta: 166+79.07

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.030	
Channel Slope	0.00100	ft/ft
Left Side Slope	2.00	ft/ft (H:V)
Right Side Slope	2.00	ft/ft (H:V)
Bottom Width	10.00	ft
Discharge	14.41	ft^3/s

Results

Normal Depth	0.92	ft
Flow Area	10.92	ft^2
Wetted Perimeter	14.12	ft
Hydraulic Radius	0.77	ft
Top Width	13.69	ft
Critical Depth	0.39	ft
Critical Slope	0.01876	ft/ft
Velocity	1.32	ft/s
Velocity Head	0.03	ft
Specific Energy	0.95	ft
Froude Number	0.26	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

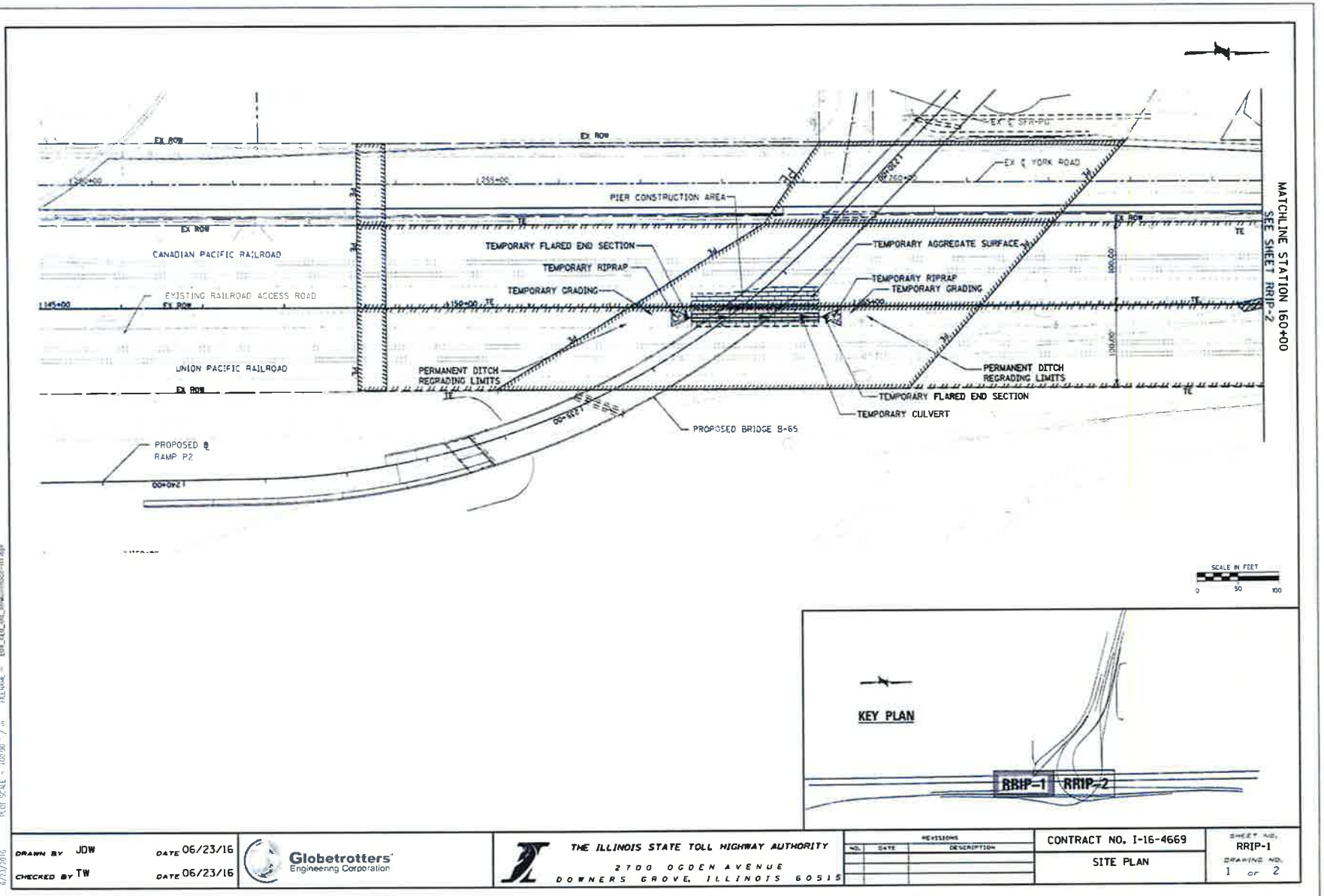
GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.92	ft
Critical Depth	0.39	ft
Channel Slope	0.00100	ft/ft



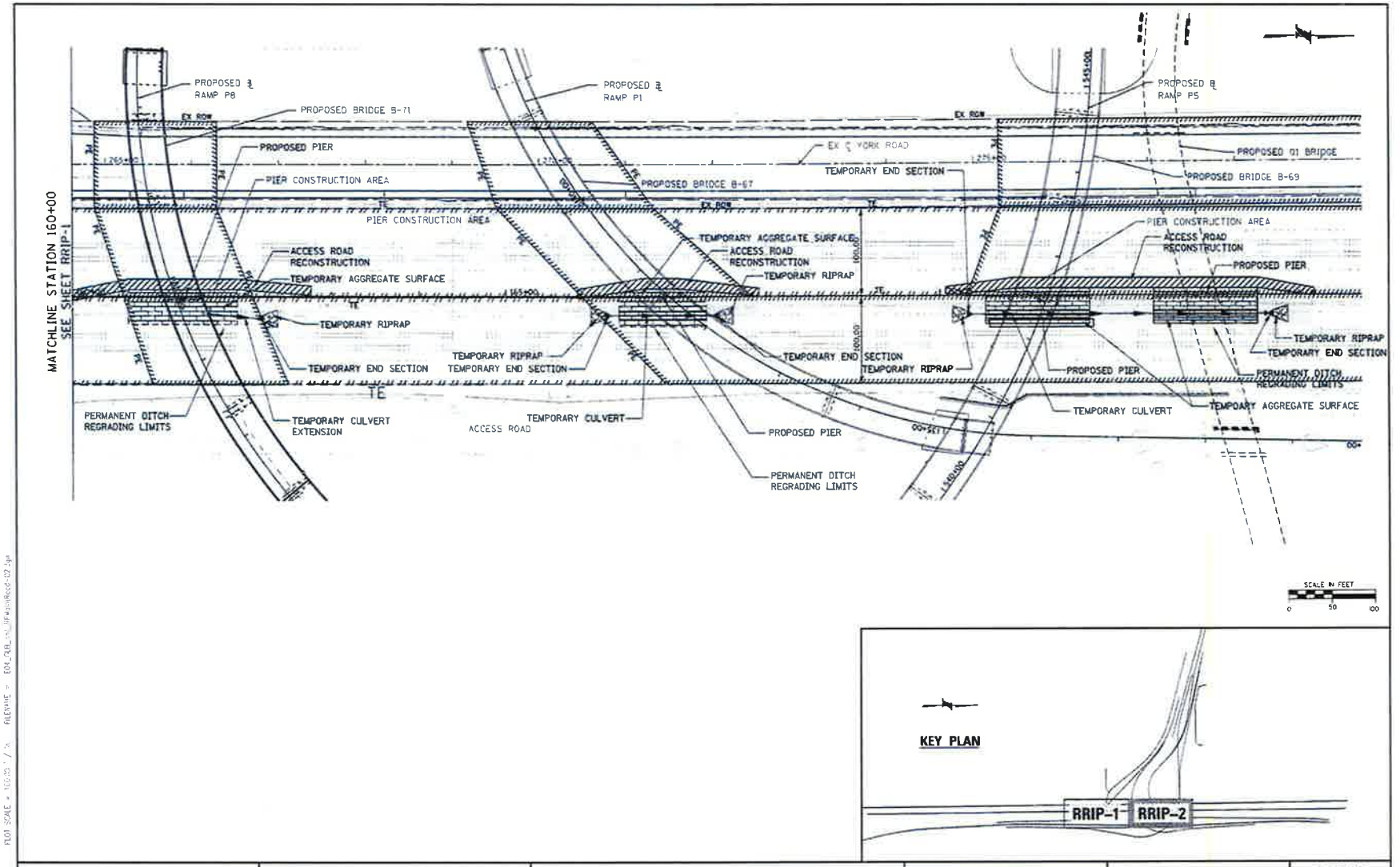
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Appendix



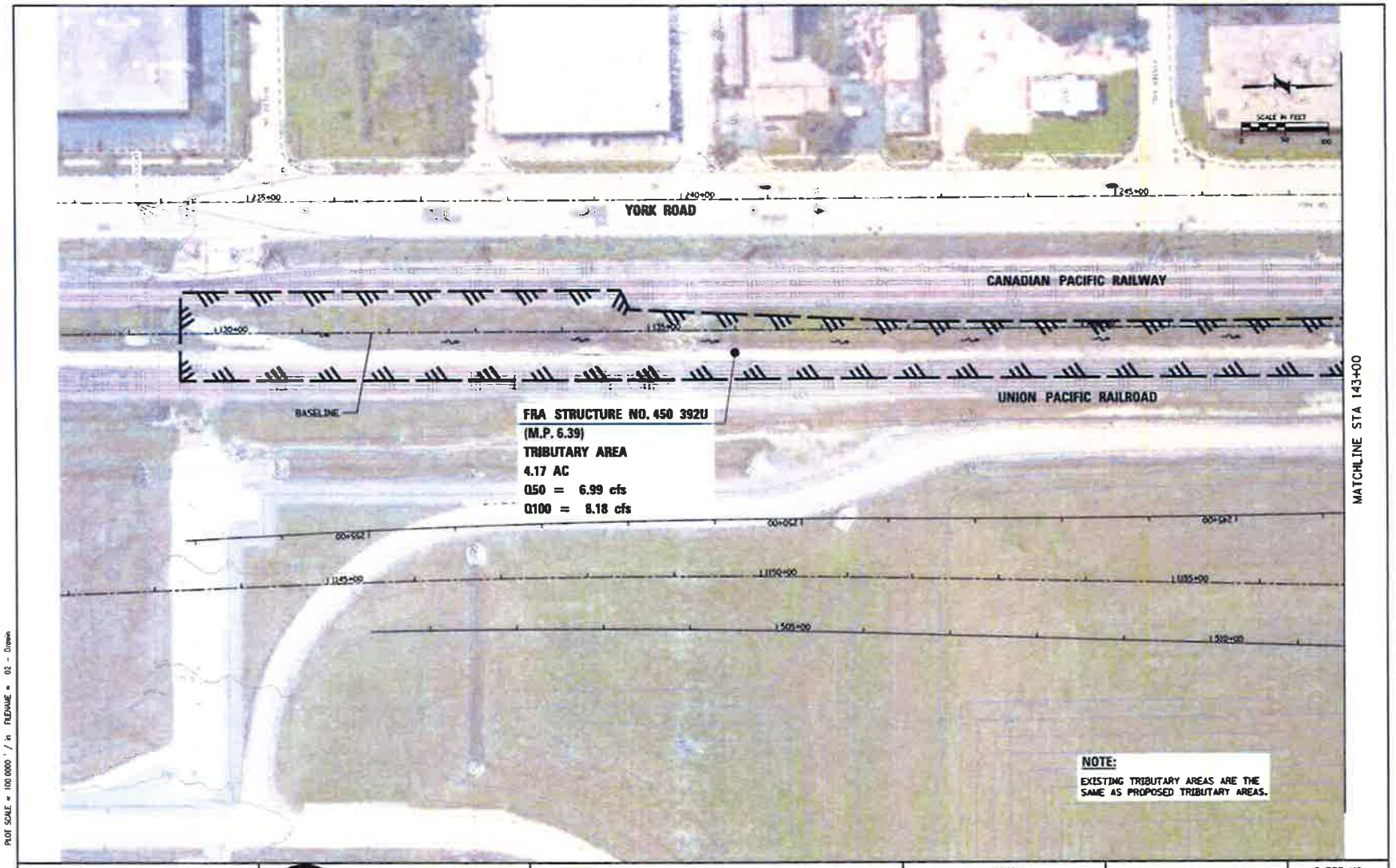
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CHECKED BY TW	DATE 06/23/16					

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6/23/2016
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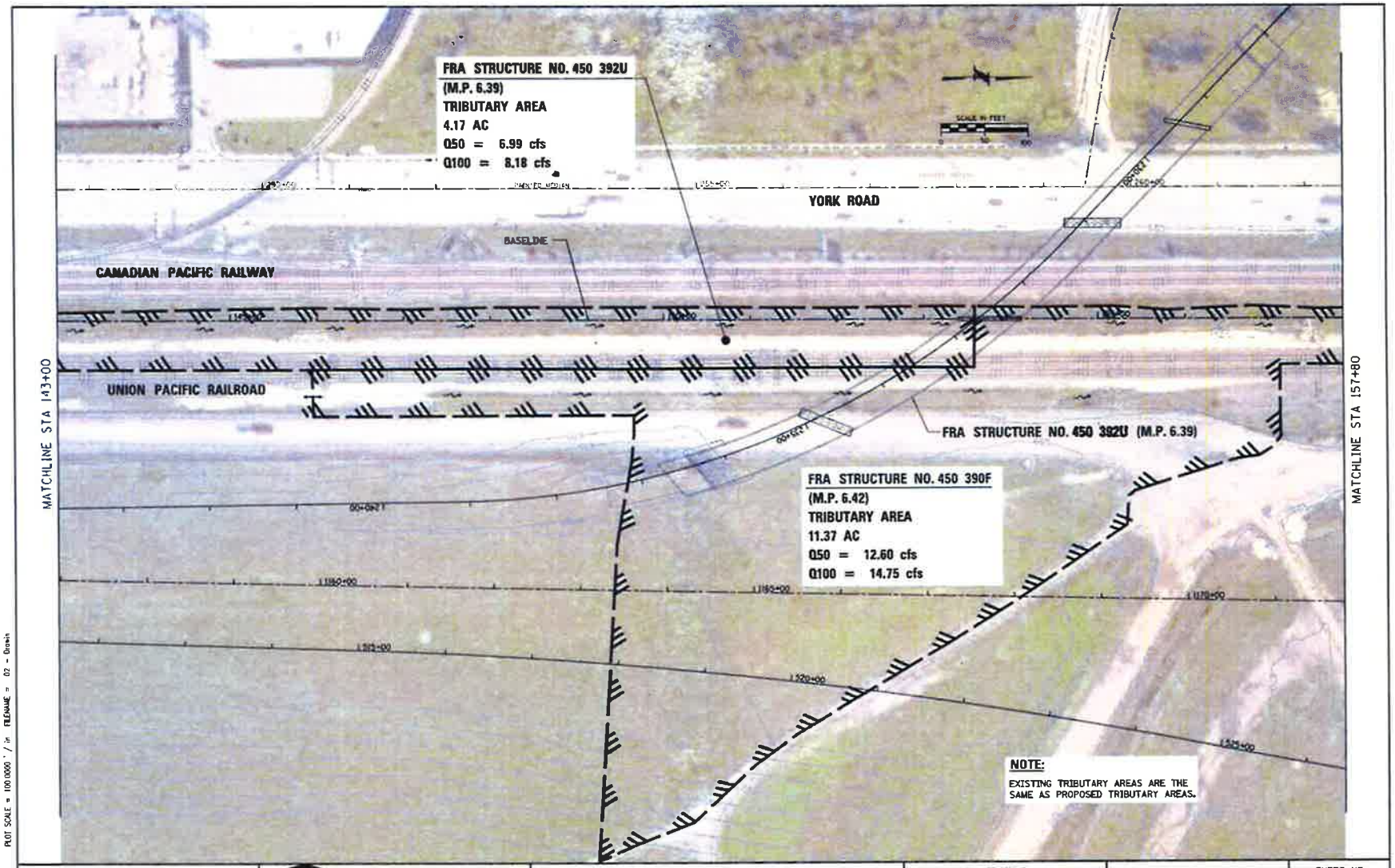
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					SHEET NO. RRIP-2
					DRAWING NO. 2 OF 2

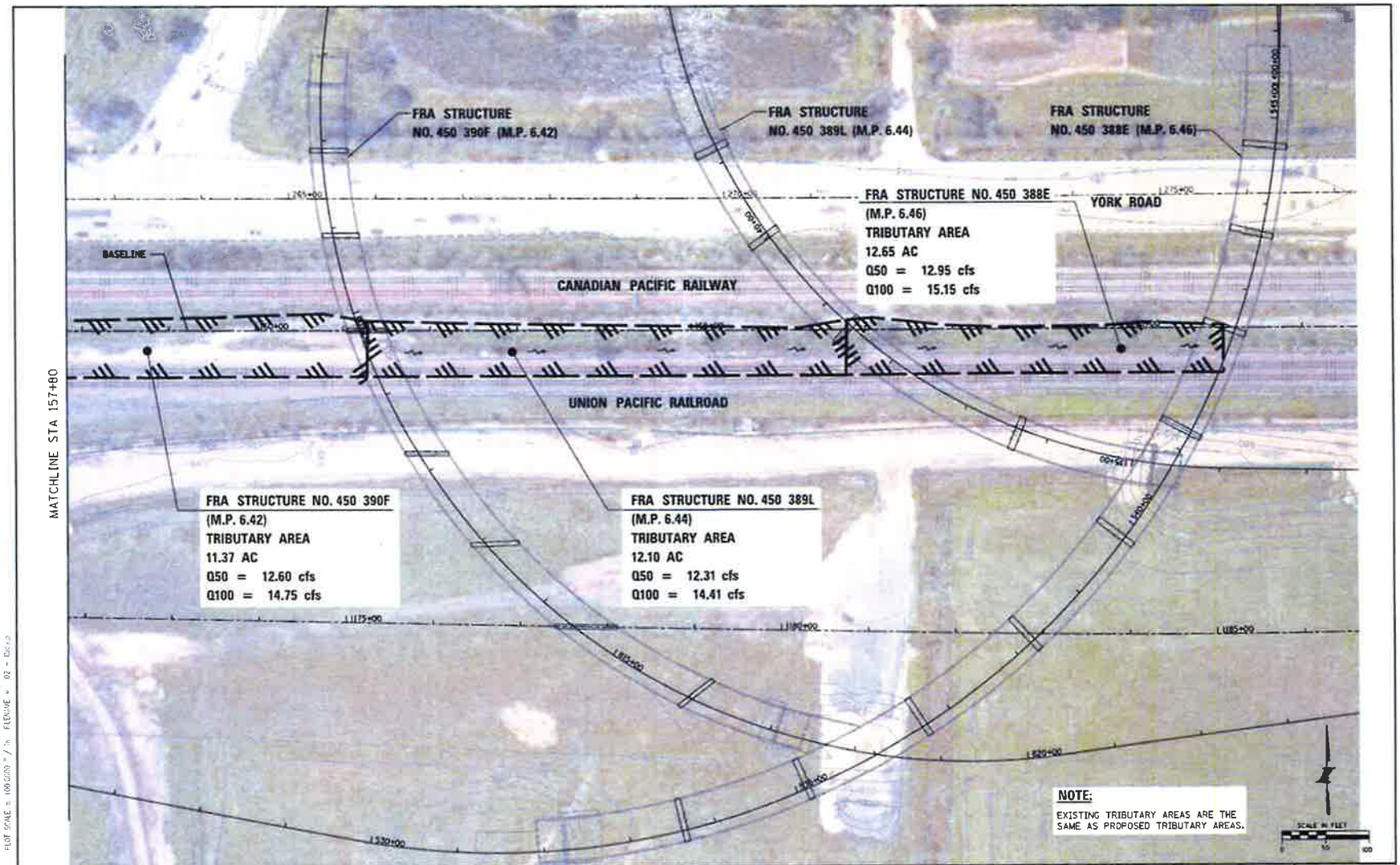
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CHECKED BY KGF	DATE 06-02-16					


FRA STRUCTURE NO. 450 392U
(M.P. 6.39)
TRIBUTARY AREA
4.17 AC
Q50 = 6.99 cfs
Q100 = 8.18 cfs
YORK ROAD
BASELINE
CANADIAN PACIFIC RAILWAY
UNION PACIFIC RAILROAD
MATCHLINE STA 143+00
MATCHLINE STA 157+80
FRA STRUCTURE NO. 450 392U (M.P. 6.39)
FRA STRUCTURE NO. 450 390F
(M.P. 6.42)
TRIBUTARY AREA
11.37 AC
Q50 = 12.60 cfs
Q100 = 14.75 cfs
NOTE:
EXISTING TRIBUTARY AREAS ARE THE SAME AS PROPOSED TRIBUTARY AREAS.
DRAWN BY TWK DATE 06-02-16
CHECKED BY KGF DATE 06-02-16
Stanley Consultants INC.
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
RAILROAD DRAINAGE AREAS
SHEET NO. RR-2
DRAWING NO. 2 OF 3
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DRAWN BY TWK DATE 06-02-16
CHECKED BY KGF DATE 06-02-16

Stanley Consultants INC.

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

RAILROAD DRAINAGE AREAS

SHEET NO. RR-3
DRAWING NO. 3 OF 3

RUNOFF COEFFICIENTS

VALUES OF C - Runoff / Rainfall			RUNOFF COEFFICIENT C	
TYPE OF DRAINAGE AREA SURFACES			MIN.	MAX.
ROOFS, slag to metal			0.75	0.95
PAVEMENTS	Asphalt		0.70	0.95
	Concrete		0.80	0.95
	Gravel, from clean and loose to clayey and compact		0.25	0.70
R. R. YARDS			0.20	0.40
EARTH SURFACES	Sand, from uniform grain size, no fines to well graded, some clay or silt	Bare	0.15	0.50
		Light Vegetation	0.10	0.40
		Dense Vegetation	0.05	0.30
	Loam, from sandy or gravelly to clayey	Bare	0.20	0.60
		Light Vegetation	0.10	0.45
		Dense Vegetation	0.05	0.35
	Gravel, from clean gravel and gravel sand mixtures, no silt or clay to high clay or silt content	Bare	0.25	0.65
		Light Vegetation	0.15	0.50
		Dense Vegetation	0.10	0.40
	Clay, from coarse sandy or silty to pure colloidal clays	Bare	0.30	0.75
		Light Vegetation	0.20	0.60
		Dense Vegetation	0.15	0.50
COMPOSITE AREAS	City, business areas		0.70	0.95
	City, dense residential areas, vary as to soil & vegetation		0.50	0.65
	Suburban residential areas, vary as to soil & vegetation		0.35	0.55
	Rural districts, vary as to soil & vegetation		0.10	0.25
	Parks, Golf Courses, etc., vary as to soil & vegetation		0.10	0.35
LAWNS	Sandy soil, flat 2%		0.05	0.10
	Sandy soil, average 2% to 7%		0.10	0.15
	Sandy soil, steep, 7%		0.15	0.20
	Heavy soil, flat 2%		0.13	0.17
	Heavy soil, average, 2% to 7%		0.18	0.22
	Heavy soil, steep 7%		0.25	0.35

Note: Values of C for earth surfaces are further varied by degree of saturation, compaction, surface irregularity and slope, by character of subsoil, and by presence of frost or glazed snow or ice.

Table 4-102a

OVERLAND FLOW MANNING'S n VALUES
(For use with Kinematic Wave Equation)
(*Used to Calculate ONLY* t_{OF})

	Recommended Value	Range of Values
Concrete	.011	.01 - .013
Asphalt	.012	.01 - .015
Bare sand[a]	.010	.010 - .016
Graveled surface[a]	.012	.012 - .030
Bare clay-loam (eroded)[a]	.012	.012 - .033
Fallow (no residue)[b]	.05	.006 - .16
Chisel plow (E1/4 tons/acre residue)	.07	.006 - .17
Chisel plow (1/4 - 1 tons/acre residue)	.18	.07 - .34
Chisel plow (1 - 3 tons/acre residue)	.30	.19 - .47
Chisel plow (F3 tons/acre residue)	.40	.34 - .46
Disk/Harrow (1/4 tons acre residue)	.08	.008 - .41
Disk/Harrow (1/4 - 1 tons/acre residue)	.16	.10 - .25
Disk/Harrow (1 - 3 tons/acre residue)	.25	.14 - .53
Disk/Harrow (3 tons/acre residue)	.30	-- --
No till (1/4 tons/acre residue)	.04	.03 - .07
No till (1/4 - 1 tons/acre residue)	.07	.01 - .13
No till (1 - 3 tons/acre residue)	.30	.16 - .47
Plow (Fall)	.06	.02 - .10
Coulter	.10	.05 - .13
Range (natural)	.13	.01 - .32
Range (clipped)	.08	.02 - .24
Grass (bluegrass sod)	.45	.39 - .63
Short grass prairie[a]	.15	.10 - .20
Dense grass [c]	.24	.17 - .30
Bermudagrass[c]	.41	.30 - .48
Woods	.45	-- --

All values are from Engman (1983), unless noted otherwise.

[a]Woolhiser (1975).

[b]Fallow has been idle for one year and is fairly smooth.

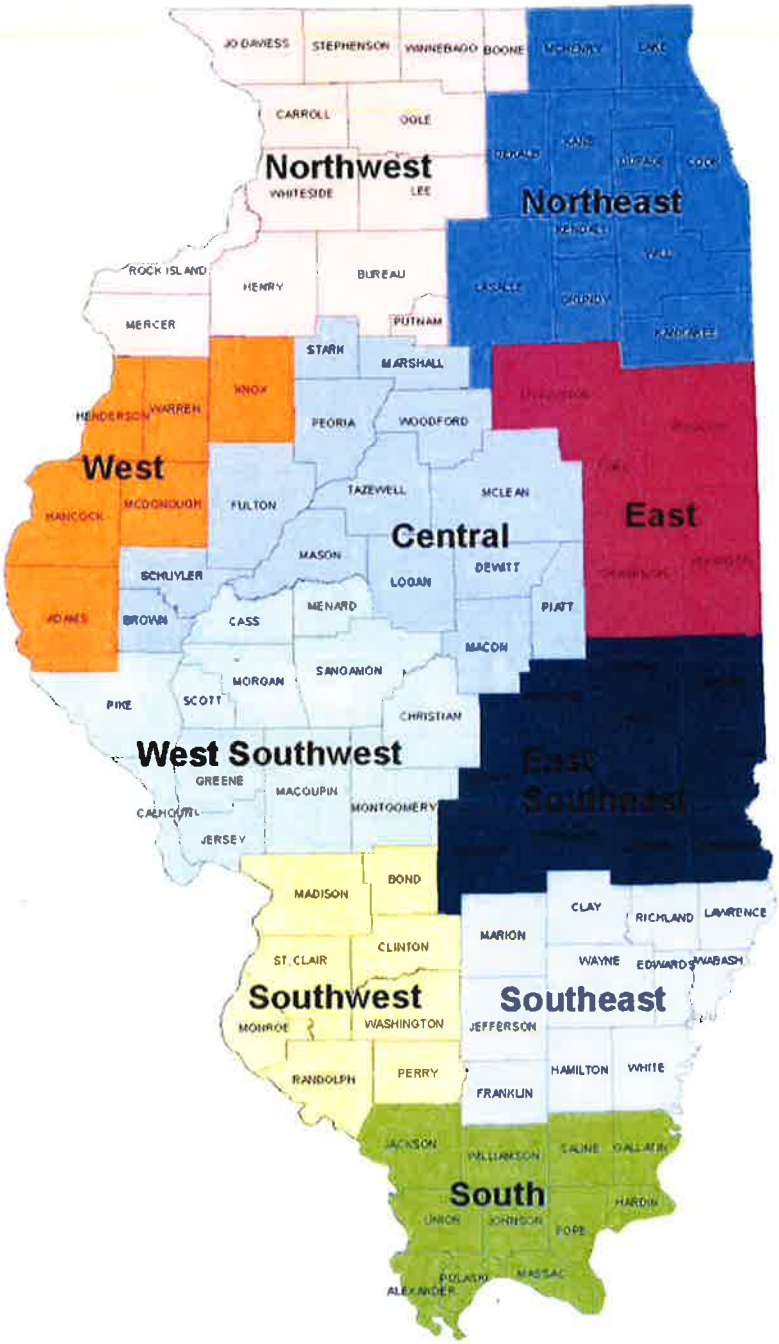
[c]Palmer (1946). Weeping lovegrass, bluegrass, buffalo grass, blue gramma grass, native grass mix (OK), alfalfa, lespedeza.

Note: These values were determined specifically for overland flow conditions and is not appropriate for conventional open channel flow calculations. See Chapter 5 of this manual for open channel flow procedures.

Table 4-102b

Type of Channel and Description	Minimum	Normal	Maximum
1. Manmade			
a. Earth, straight and uniform			
1. Clean, recently completed	0.016	0.018	0.020
2. Clean, after weathering	0.018	0.022	0.025
3. Gravel, uniform section, clean	0 022	0.025	0.030
4. With short grass, few weeds	0.022	0.027	0.033
b. Earth, winding and sluggish			
1. No vegetation	0.023	0.025	0.030
2. Grass, some weeds	0 025	0.030	0.033
3. Dense weeds or aquatic plants in deep channels	0 030	0.035	0.040
4. Earth bottom and rubble sides	0 028	0.030	0.035
5. Stony bottom and weedy banks	0.025	0.035	0.040
6. Cobble bottom and clean sides	0.030	0.040	0.050
c. Dragline-excavated or dredged			
1. No vegetation	0.025	0.028	0.033
2. Light brush on banks	0.035	0.050	0.060
d. Rock cuts			
1. Smooth and uniform	0.025	0.035	0.040
2. Jagged and irregular	0.035	0.040	0.050
e. Channels not maintained, weeds and brush Uncut			
1. Dense weeds, high as flow depth	0.050	0.080	0.120
2. Clean bottom, brush on sides	0.040	0.050	0.080
3. Same, highest stage of flow	0.045	0.070	0.110
4. Dense brush, high stage	0.080	0.100	0.140
2. Flood plains			
a. Pasture, no brush			
1. Short grass	0.025	0.030	0.035
2. High grass	0.030	0.035	0.050
b. Cultivated areas			
1. No crop	0.020	0.030	0.040
2. Mature row crops	0.025	0.035	0.045
3. Mature field crops	0.030	0.040	0.050
c. Brush			
1. Scattered brush, heavy weeds	0.035	0.050	0.070
2. Light brush and trees, in winter	0 035	0.050	0.060
3. Light brush and trees, in summer	0.040	0.060	0.080
4. Medium to dense brush, in winter	0.045	0.070	0.110
5. Medium to dense brush, in summer	0.070	0.100	0.160
d. Trees			
1. Dense willows, summer, straight	0.110	0.150	0 200
2. Cleared land with tree stumps, no sprouts	0.030	0 040	0.050
3. Same as above, but with heavy growth of sprouts	0.050	0.060	0.080
4. Heavy stand of timber, a few down trees, little undergrowth, flood stage below branches	0.080	0.100	0.120

CLIMATIC SECTIONS IN ILLINOIS

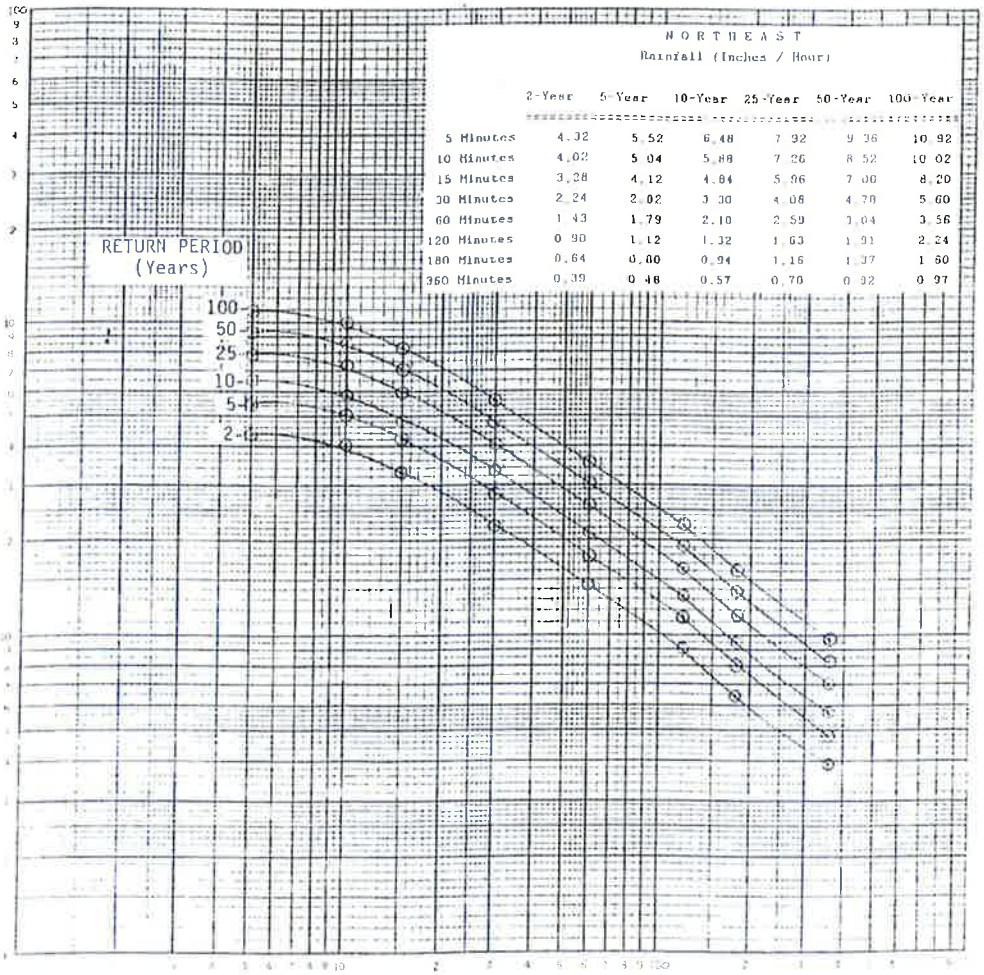


(Bulletin 70[5] pg. 17, Figure 7)
Figure 4-102a

RAINFALL INTENSITY vs. DURATION

NORTHEAST ILLINOIS

I.S.W.S. BULLETIN-70



INTENSITY (Inches/Hour)

DURATION (Minutes)

Figure 4-102c

VERIFIED STATEMENT OF PETER JOSEFCHAK

Midwest Freight Rail Leader

Stantec

EXHIBIT D-3

From:	Peter.Josefchak@stantec.com
Sent:	Wednesday, July 13, 2016 2:44 PM
To:	Aaron.Chanowitz@ch2m.com; Benjamin.Ostermann@CH2M.com; Sarah.Archer@CH2M.com; l.martin@americansurvey.com; mnashif@getipass.com; Marilynn.Vanella@ch2m.com
Subject:	Fwd: APPROVED - Proposed new overhead structure - I-390 (Illinois Tollway) - Elk Grove Village, IL - MP 6.39 Milwaukee Subdivision - DOT # 450 392U (pending) [EXTERNAL]

Approved also. Tried to send with attachment but wouldn't go. I'll do that in morning.

Sent from Peter's iPhone

Begin forwarded message:

From: "John N. Venice" <JNVENICE@UP.COM>
To: "Josefchak, Peter" <Peter.Josefchak@stantec.com>
Subject: APPROVED - Proposed new overhead structure - I-390 (Illinois Tollway) - Elk Grove Village, IL - MP 6.39 Milwaukee Subdivision - DOT # 450 392U (pending)

Grade Separation: Public (proposed overhead structure)
I-390
Elk Grove Village, IL
MP 6.39 Milwaukee Subdivision
DOT # 450 392U (pending)

Hello Peter-

this submittal is APPROVED

From: Marilynn.Vanella@ch2m.com [mailto:Marilynn.Vanella@ch2m.com]
Sent: Wednesday, July 06, 2016 8:57 AM
To: Josefchak, Peter
Subject: EOWA Tollway Design Contract I-13-4622; Construction Contract I-16-4669 Proposed Overhead Structure – New Construction Tollway Structure Number 1651 (Ramp P2) over UPRR and CPR - UPRR 30% Design Submittal

Transmittal 2 of 4

Peter –

On behalf of the Tollway/Manar Nashif and in accordance with the *Union Pacific Railroad – BNSF Guidelines For Railroad Grade Separation Projects*, please find attached the electronic copies (in PDF format) of the following documents for the above referenced new overhead structure for UPRR review and comment via Tollway Transmittal Letter.

1. Design Plans showing plan view, elevation view, typical section and railroad profile diagram. Applicable notes per UPRR Guidelines Plan No. 711100, sheet 3 have been included on the plans.
2. Project specifications including railroad coordination requirements.
3. Drainage Report and Plan.

4. Construction phasing plans showing required phasing, construction procedures, controlling dimensions and elevations.

There are four structures in total, each packaged separately. Should you have any questions or need further information, please contact Manar Nashif directly at (630) 241-6800 ext 3841 or via e mail at mnashif@getipass.com

Respectfully,

Marilynn Vanella
Program Controls Coordinator
D1 773 458 2814

CH2M Team
8735 West Higgins Road
Suite 400
Chicago, IL 60631
mvanella@ch2m.com
www.ch2m.com

**

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**

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July 5, 2016

Mr. John Venice
Manager Special Projects
Union Pacific Railroad
101 North Wacker Drive
Chicago, IL 60606

Re: Tollway Design Contract I-13-4622; Construction Contract I-16-4669
Elgin O'Hare Western Access (EOWA) Project
Proposed Overhead Structure – New Construction
Tollway Structure Number 1651 (Ramp P2) over UPRR and CPR
UPRR-Milwaukee Subdivision (M.P. 6.39)
Bensenville, Il – DuPage County
30% Design Submittal

Dear Mr. Venice:

The Illinois Tollway is continuing with design development for the Elgin O'Hare Western Access (EOWA). The EOWA Project includes the construction of a new, all electronic Tollway around the western border of O'Hare International Airport (O'Hare) linking the Jane Addams Memorial Tollway (I-90) and the Tri-State Tollway (I-294), as well as the extending Illinois Route 390 (formerly the Elgin O'Hare Expressway) east along Thorndale Avenue to O'Hare Airport and rehabilitating and widening of the existing Illinois Route 390.

In accordance with the *Union Pacific Railroad – BNSF Guidelines For Railroad Grade Separation Projects,* hereinafter referred to as "UPRR Guidelines", enclosed herewith, for your review and comment, are electronic copies (in PDF format) of the following for the above referenced new overhead structure:

1. Design Plans showing plan view, elevation view, typical section and railroad profile diagram. Applicable notes per UPRR Guidelines Plan No. 711100, sheet 3 have been included on the plans.
2. Project specifications including railroad coordination requirements.
3. Drainage Report and Plan.
4. Construction phasing plans showing required phasing, construction procedures, controlling dimensions and elevations.

The Tollway understands and confirms the following:

- The executed Construction and Maintenance Agreement shall be provided to the Tollway's Construction Contractor and the Contractor will be required to comply with the terms and conditions in conjunction with the construction of the structure.
- The proposed overhead structure is being designed such that construction and maintenance of the structure will cause no interruption to Railroad operations during and after construction.
- The construction of the structure cannot begin until the UPRR has approved the 100% submittal for the structure, the Contractor has secured a right of entry agreement and the Tollway and UPRR have executed a Construction and Maintenance Agreement. The Contractor will be required to carry Railroad Protective Liability Insurance in accordance with UPRR requirements.
- The Tollway will own and maintain the structure crossing over UPRR in its entirety.
- The Tollway is proposing an overhead structure in order to not cause an impact to Railroad Operations.
- Temporary shoring, as necessary, will be required to be in accordance with UPRR Railroad Guidelines for Temporary Shoring.
- Erection over the Railroad right of way will be planned to cause no interruption to Railroad Operations.
- The Tollway will coordinate with all utility companies and make arrangements with utility companies for installation, relocation or protection of their respective facilities in conjunction with the project construction.

In accordance with the UPRR Guidelines, the Tollway respectfully requests your response 4 weeks after the submittal is received by the appropriate reviewing parties. Thank you for your assistance.

If you have any technical questions regarding the contents of the submittal, please contact Peter Josefchak at (312) 262-2285 or via email at peter.josefchak@stantec.com. Peter is part of the Design Section Engineering Team for the EOWA Project. If you have any other questions or need further information, please contact me at (630) 241-6800 ext 3841 or via email at mnashif@getipass.com. We appreciate your cooperation and look forward to working with you as we move forward with the project.

Sincerely,

Manar Nashif, P.E.
Senior Project Engineer

CC: Rocco Zucchero – Tollway, Lidia Pilecky – CH2M, Aaron Chanowitz – CH2M, Jason Moller – CH2M, Peter Josefchak – Stantec, Paul Bobby - STV

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LT_Tollway_MN_4669-30percent-Plans-SN1651-RampP2-UPRR_07052016

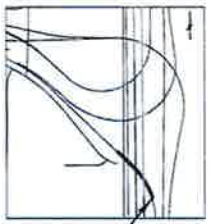
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TOLLWAY DESIGN CONTRACT I–13–4622
TOLLWAY CONSTRUCTION CONTRACT I–16–4669

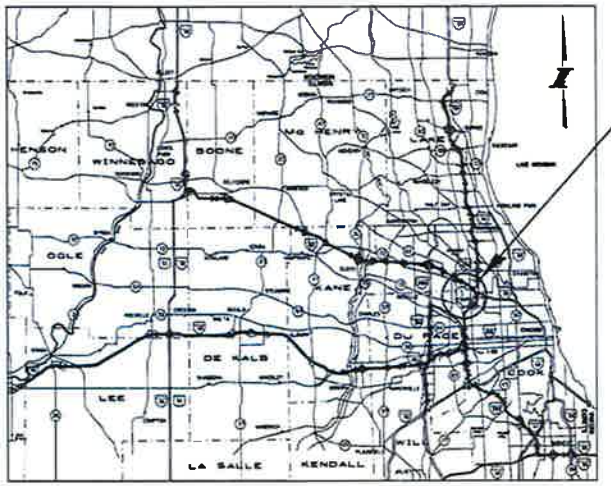
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

FRA STRUCTURE NO. 450 392U
TOLLWAY STRUCTURE NO. 1651
IDOT STRUCTURE NO. 022–9505

RAMP P2 OVER UPRR – MILWAUKEE SUBDIVISION (M.P. 6.39)
BENSENVILLE, IL – DUPAGE COUNTY



RAMP P2 BRIDGE CONSTRUCTION
SN 450 392U (FRA)
SN 1651 (TOLLWAY)
SN 022-9505 (IDOT)



LOCATION MAP

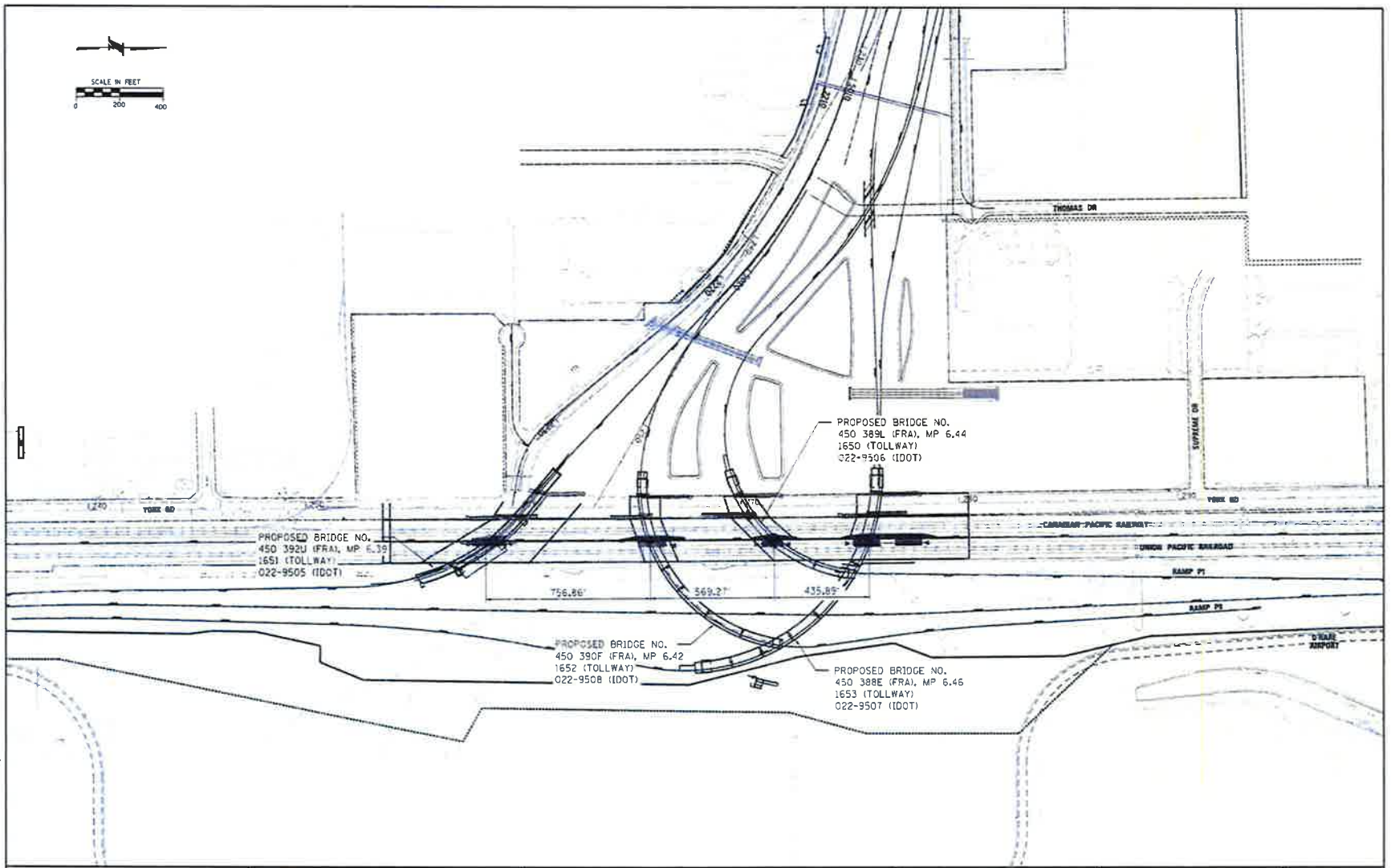
INDEX OF DRAWINGS:

DRAWING NO.	SHEET NO.	DESCRIPTION
2	SCH-1	PROJECT SCHEMATIC
3-4	RRIP-1 - RRIP-2	SITE PLAN
5	SD-01	GENERAL PLAN AND ELEVATION
6-9	SD-02 - SD-03	DETAILS
8-10	RPGD-01 - RPGD-03	RAILROAD PROFILE GRADE DIAGRAM
11-16	PH-01 - PH-06	CONSTRUCTION PHASING PLANS
17	XSC-1	CROSS SECTIONS TEMPORARY IMPROVEMENTS
18	XSC-2	CROSS SECTIONS PERMANENT IMPROVEMENTS

30% SUBMITTAL
JUNE 24, 2016

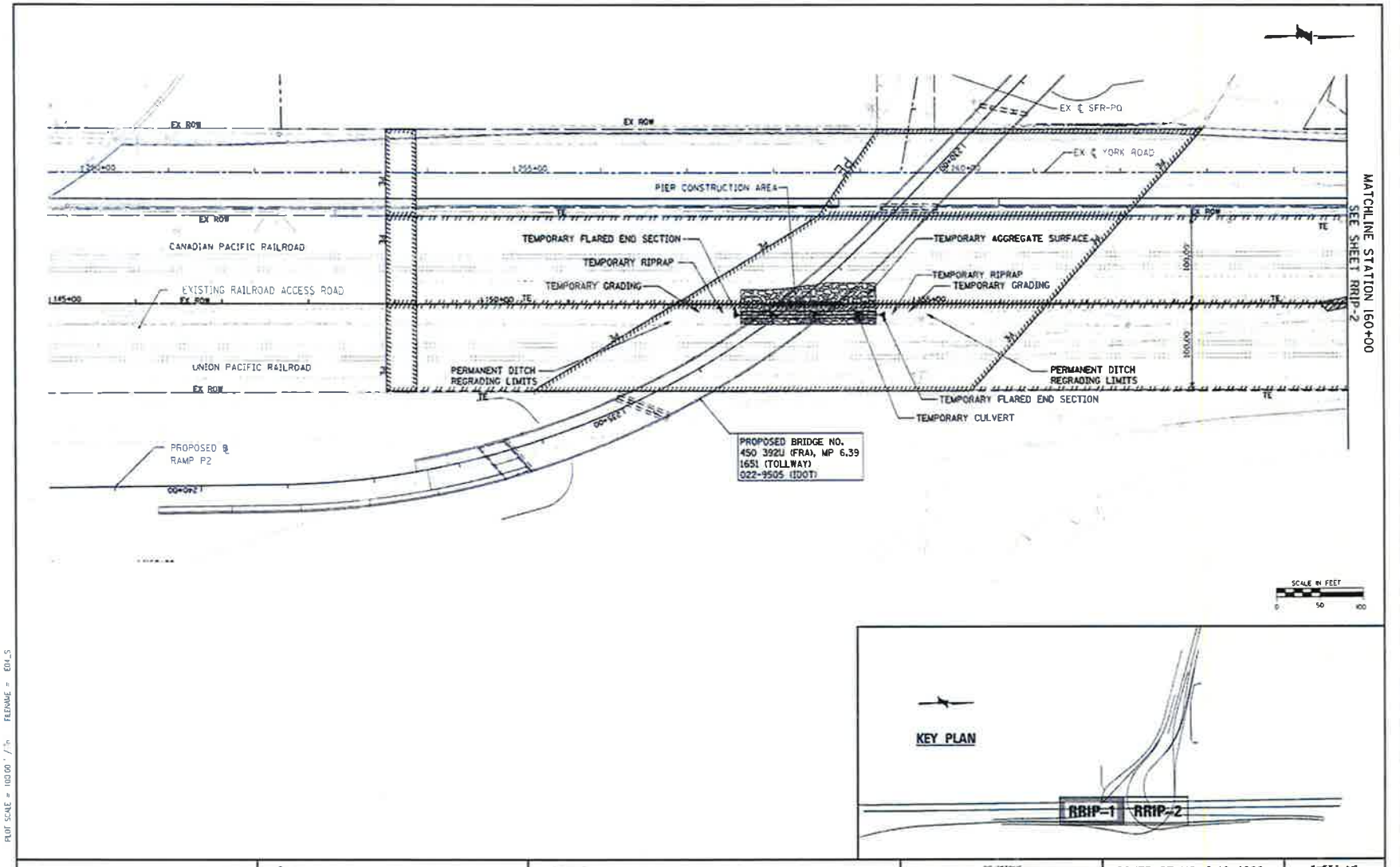
Stanley Consultants INC.
Globetrotters Engineering Corporation
URS

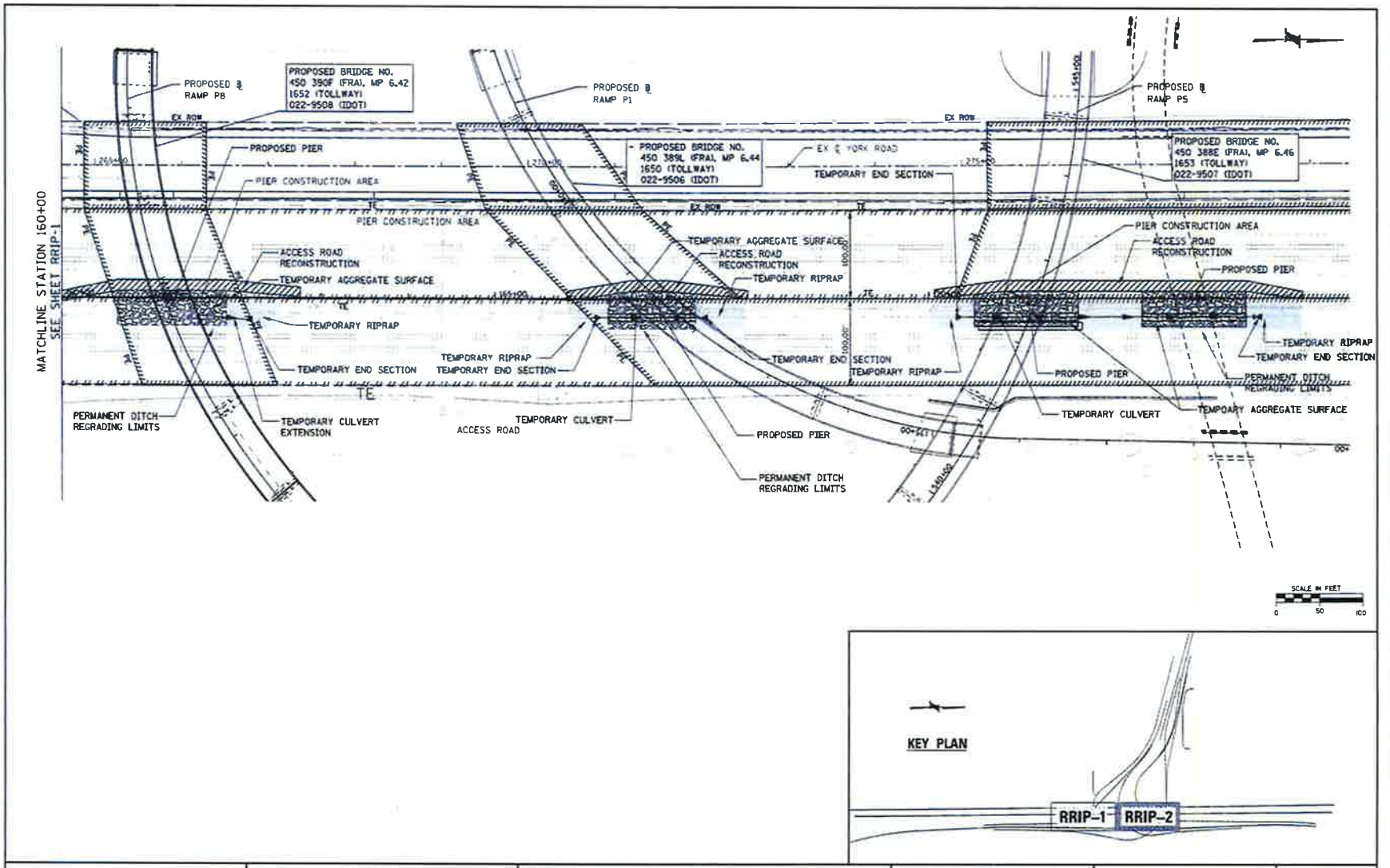
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CHECKED BY TW	DATE 06/24/16					


EX ROW
EX ℄ SFR-PQ
EX ℄ YORK ROAD
PIER CONSTRUCTION AREA
CANADIAN PACIFIC RAILROAD
EXISTING RAILROAD ACCESS ROAD
UNION PACIFIC RAILROAD
TEMPORARY FLARED END SECTION
TEMPORARY RIPRAP
TEMPORARY GRADING
TEMPORARY AGGREGATE SURFACE
PERMANENT DITCH REGRADING LIMITS
TEMPORARY CULVERT
PROPOSED BRIDGE NO. 450 392U (FRA), MP 6.39 1651 (TOLLWAY) 022-9505 (IDOT)
PROPOSED ℄ RAMP P2
MATCHLINE STATION 160+00
SEE SHEET RRIP-2
SCALE IN FEET
0
50
100
KEY PLAN
RRIP-1
RRIP-2
DRAWN BY JDW
DATE 06/24/16
CHECKED BY TW
DATE 06/24/16
Globetrotters Engineering Corporation
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
SITE PLAN
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DRAWN BY JDW	DATE 06/24/16	Globetrotters Engineering Corporation	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. DATE DESCRIPTION	CONTRACT NO. I-16-4669
CHECKED BY TW	DATE 06/24/16				SITE PLAN

SHEET NO. RRIP-2
DRAWING NO. 4 OF 18

Benchmark: Railroad spike in east face of utility pole. Located approximately 42' west of York Rd. and approximately 44' south of Beeline Dr. Sta. 279+24. Offset 48' Lt. Elev. = 664.86 (NAVD 88)

Proposed Structure: The proposed structure is a 5-span curved steel plate girder bridge with an overall length of 807'-2 7/8" from back-to-back of coutments and an out-to-out width of 45'-2". The superstructure rests on concrete multi-column piers and stub abutments supported on steel piles or concrete drilled shafts.

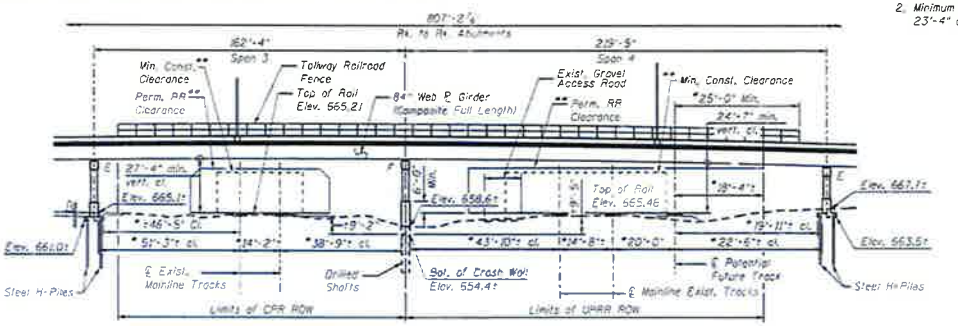
Existing Structure: None

CONSTRUCTION NOTES

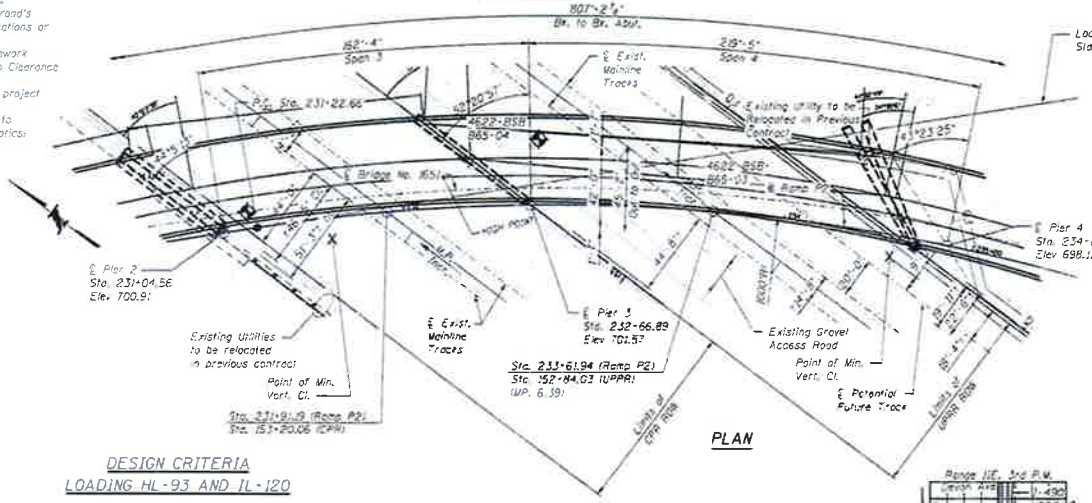
1. Any shoring system that impacts the Railroad's operation and/or supports the Railroad's embankment shall be designed and constructed per Railroad Guidelines for Temporary Shoring.
2. All demolition within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall comply with the Railroad's Demolition requirements.
3. Erection over the Railroad right-of-way shall be designed to cause no interruption to all Railroad operations, except upon mutual agreed upon track outages to allow girder erection. Prior to the release of Railroad traffic, components erected over Railroad tracks must be supported by falsework or permanent substructure, must be secured and stable and must not be supported by cranes or other construction equipment.
4. The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad prior to construction.
5. The proposed grade separation project shall not change the quantity and/or characteristics of the flow in the Railroad ditches and/or drainage structures.
6. The contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad prior to beginning any grading on the project site.
7. For Railroad coordination please refer to the Railroad's Coordination Requirements as part of the Specifications or Special Provisions of the project.
8. Temporary Construction Clearances, including falsework clearances, shall comply with Minimum Construction Clearance Envelopes shown on Sheet 2.
9. All permanent clearances shall be verified before project closeout.
10. Call the following number at least 48 hours prior to commencing work to determine location of fiber optics: UPRR "Call Before You Dig", 1-800-336-9193

NOTES:

1. No freefall deck drains will be permitted in spans over the tracks or within 10 feet of cross arms of a railroad pole lines.
2. Minimum clearance from top of rail to bottom of bridge girders is 23'-4" across entire RR ROW for CPR and UPRR.



ELEVATION



PLAN

* Measured at P.I. L's to track ℄ or Roadway.
** See Sheet SD-2 for Details on Minimum Construction Clearance Envelope.

LEGEND

- 4622-BSB-B65-01 — Soil Borings
- Electric
- Fiber Optic
- Gas
- Proposed Storm Sewer
- Proposed Manhole
- ROW
- Future Roadway
- Steel Piles
- Beam Guardrail

CURVE DATA

P.I. Sta. = 235+37.80
Δ = 45°05'23" (Rt)
D = 5°43'46"
R = 1,000.00'
T = 415.13'
L = 786.96'
E = 82.74'
P.C. Sta. = 231+22.66
P.T. Sta. = 239+09.63

HIGHWAY CLASSIFICATION

Elgin O'Hare Western Access Tollway Ramp P2
Functional Class: Non-Interstate Expressway Ramp
ADT: 14,900 (2030)
DHV: 1,220 (One-Way)
AADTT: 1,192 (2030)
Design Speed: 50 mph
Posted Speed: 45 mph

F.A.U. Rte. 2678 - York Rd.
Functional Class: Minor Arterial
ADT: 24,500 (2012), 25,625 (2030)
DHV: 1,885 (Two-Way, 2012)
DHV: 2,050 (Two-Way, 2030)
AADTT: 3,185 (2012), 3,331 (2030)
Design Speed: 50 mph
Posted Speed: 45 mph

CONSTRUCTION SPECIFICATIONS

Tollway Supplemental Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Issued April 1, 2016.

Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Adopted April 1, 2016.

Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions Adopted April 1, 2016.

Illinois Department of Transportation Guide Bridge Special Provisions (GBSP's).

DESIGN CRITERIA

LOADING HL-93 AND IL-120

Allow 50/sq. ft. for future wearing surface.

LIVE LOAD DEFLECTION CRITERIA

Span Length /800

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S D1) = 0.085 g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.148 g
Soil Site Class = D

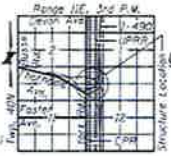
DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition, with 2015 Interims.
2015 Illinois State Toll Highway Authority Structure Design Manual
2012 Illinois Department of Transportation Bridge Manual
2015 Tollway Geotechnical Engineers Manual

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Substructure)
f'c = 4,000 psi (Class BS-Parapets)
f'c = 4,000 psi (Performance Mix-Bridge Deck, Approach Slabs, and Diaphragms)
fy = 50,000 psi (Structural Steel-M270 Grade 50)
fy = 60,000 psi (Reinforcement)



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
UPRR-MILWAUKEE SUBDIVISION (M.P. 6.39)
CPR-C&M SUBDIVISION
BENSENVILLE, IL
DuPAGE COUNTY
IL-390 RAMP P2 OVER CPR, & UPRR
41°58'31"N, 87°56'20"W

DRAWN BY KMP	DATE 06/24/16	URS 303 E. WACKER DR. SUITE 900 CHICAGO IL 60601 TEL (312) 373-7700 FAX (312) 373-6800	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY AMK	DATE 06/24/16		

NO.	DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-16-4669

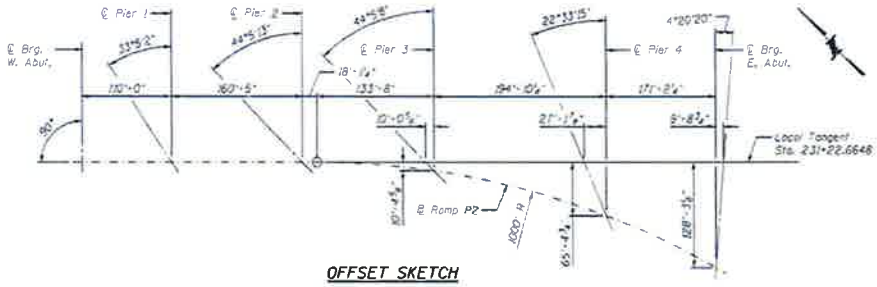
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SHEET NO. SD-01

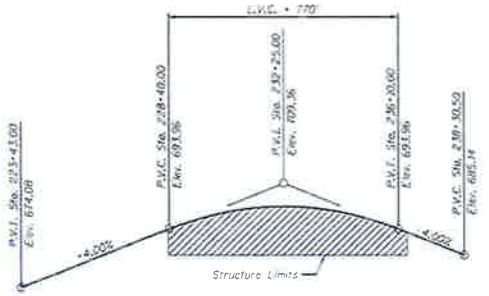
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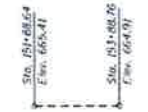
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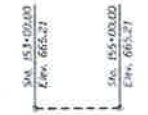
OFFSET SKETCH



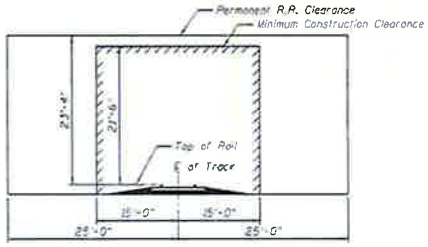
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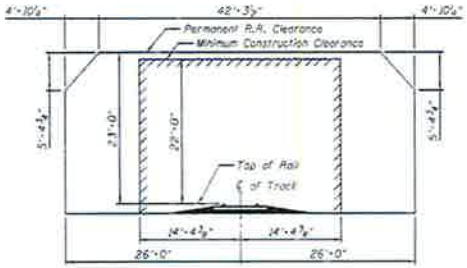
TOP OF RAIL ELEVATIONS-UPRR
(High Track)



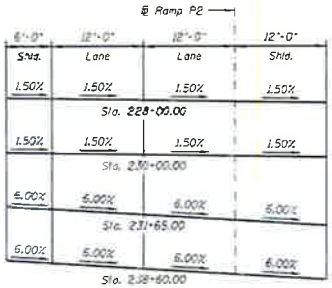
TOP OF RAIL ELEVATIONS-CPR
(High Track)



UPRR CLEARANCE ENVELOPE
(Normal to Railroad)



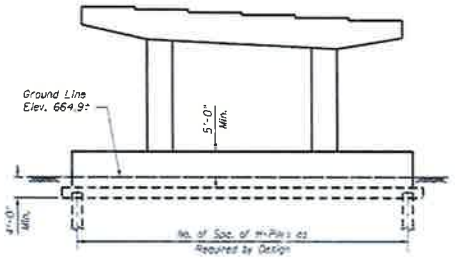
CPR CLEARANCE ENVELOPE
(Normal to Railroad)



CROSS SLOPE TRANSITIONS
RAMP P2
(Looking @ Upstation)
(Dimensions at Rt Angles to ℄ Ramp P2)

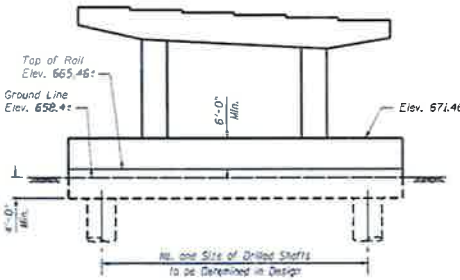
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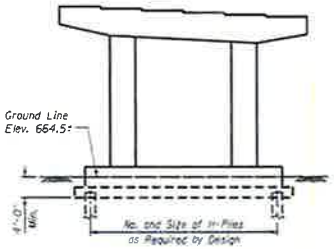
PIER 2 SKETCH

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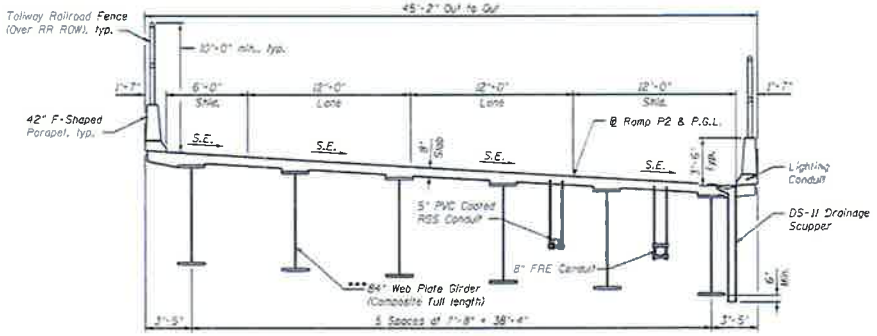
PIER 3 SKETCH

Pier dimensions to be determined during final design.



PIER 4 SKETCH

Pier dimensions to be determined during final design.



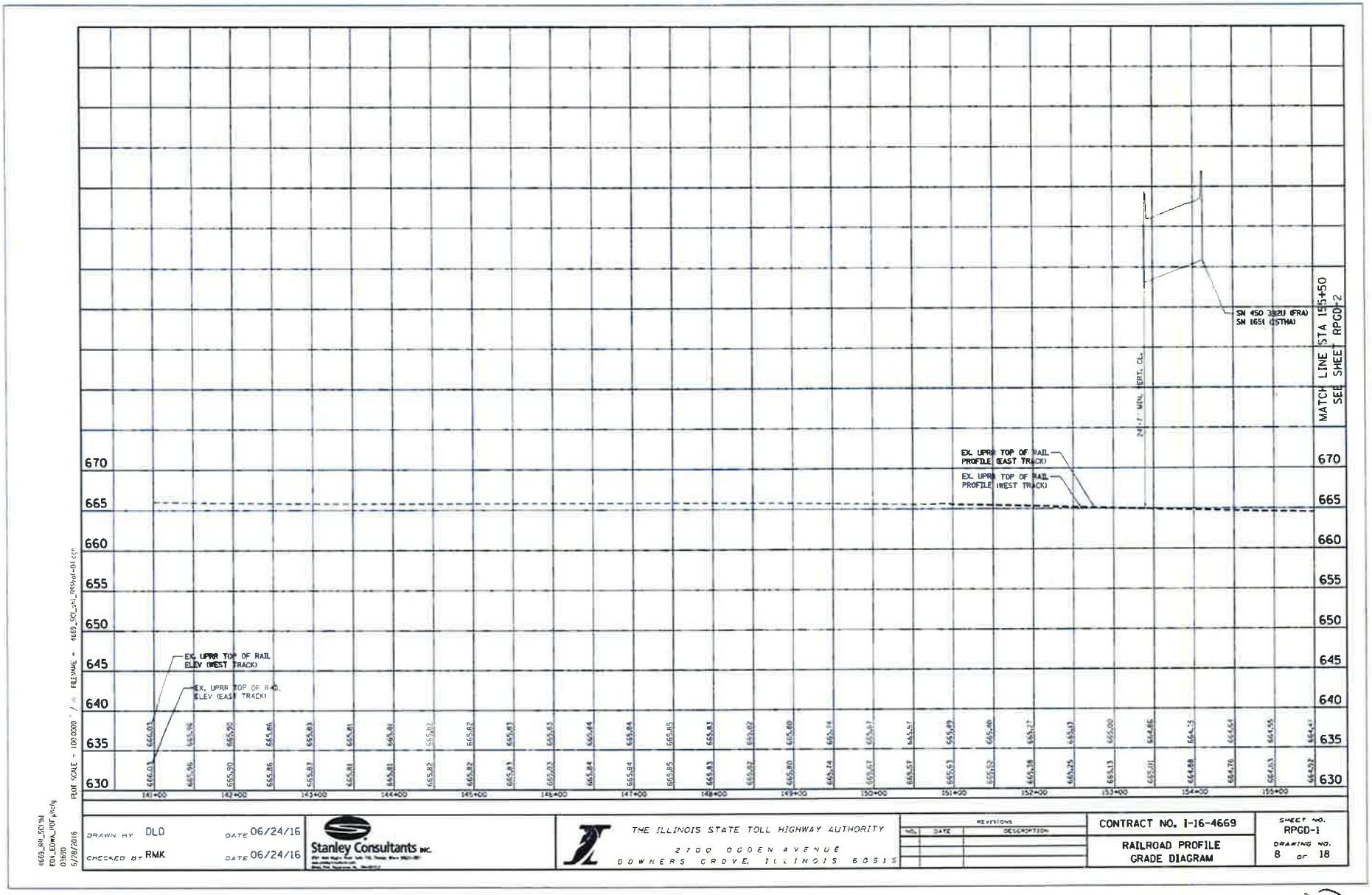
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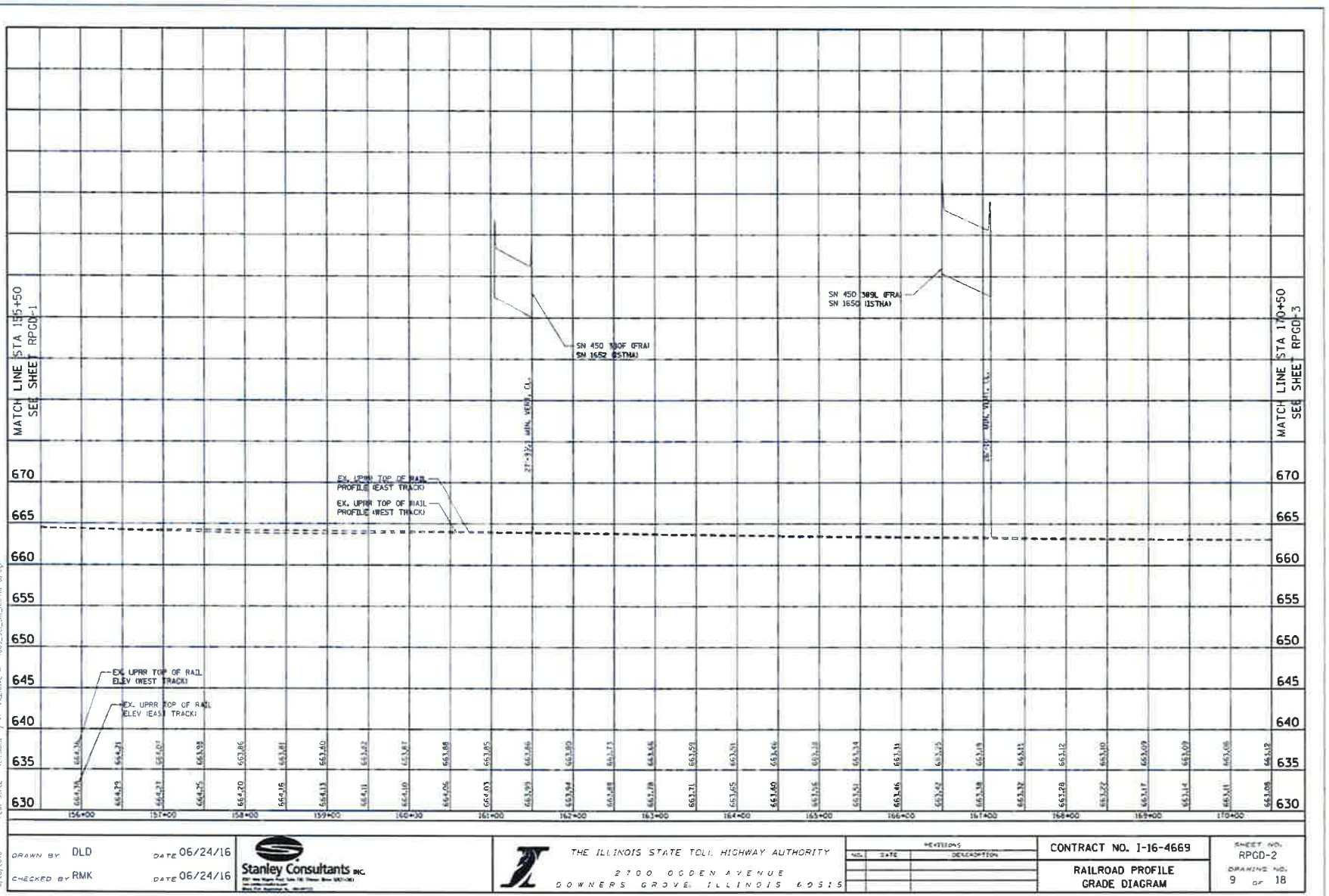
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***Subject to refinement during final design

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EX. UPRR TOP OF RAIL ELEV (WEST TRACK)
EX. UPRR TOP OF RAIL ELEV (EAST TRACK)
EX. UPRR TOP OF RAIL PROFILE (EAST TRACK)
EX. UPRR TOP OF RAIL PROFILE (WEST TRACK)
24'-1" MIN. VERT. CL.
SN 450 382U (FRA)
SN 1651 (ISTHA)
MATCH LINE STA 155+50
SEE SHEET RPGD-2
670
665
660
655
650
645
640
635
630
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DATE 06/24/16
CHECKED BY RMK
DATE 06/24/16
Stanley Consultants INC.
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
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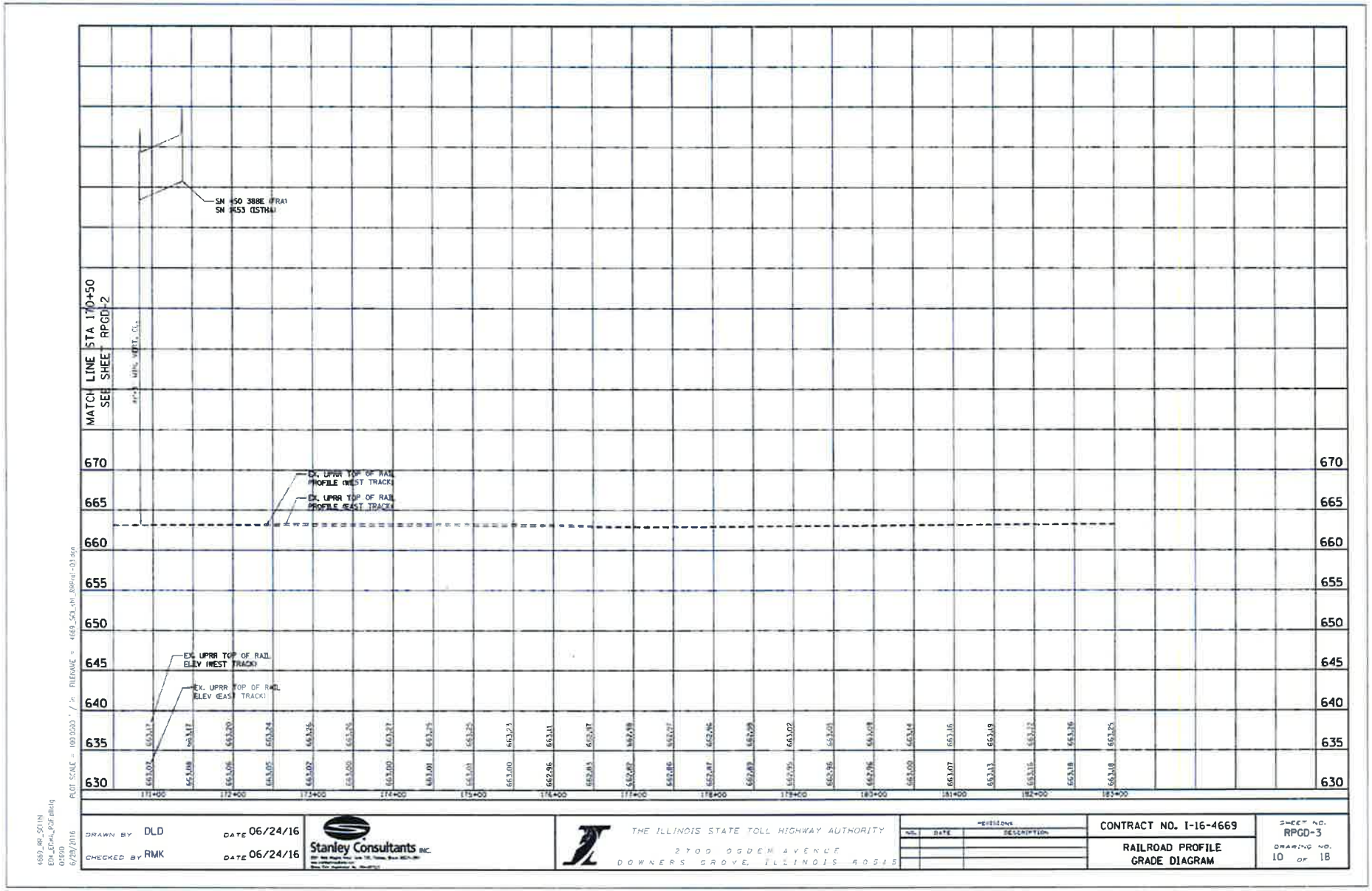
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NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

RAILROAD PROFILE
GRADE DIAGRAM

SHEET NO. RPGD-2
DRAWING NO. 9 OF 18

Exh. D - Page 154



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6/28/2016

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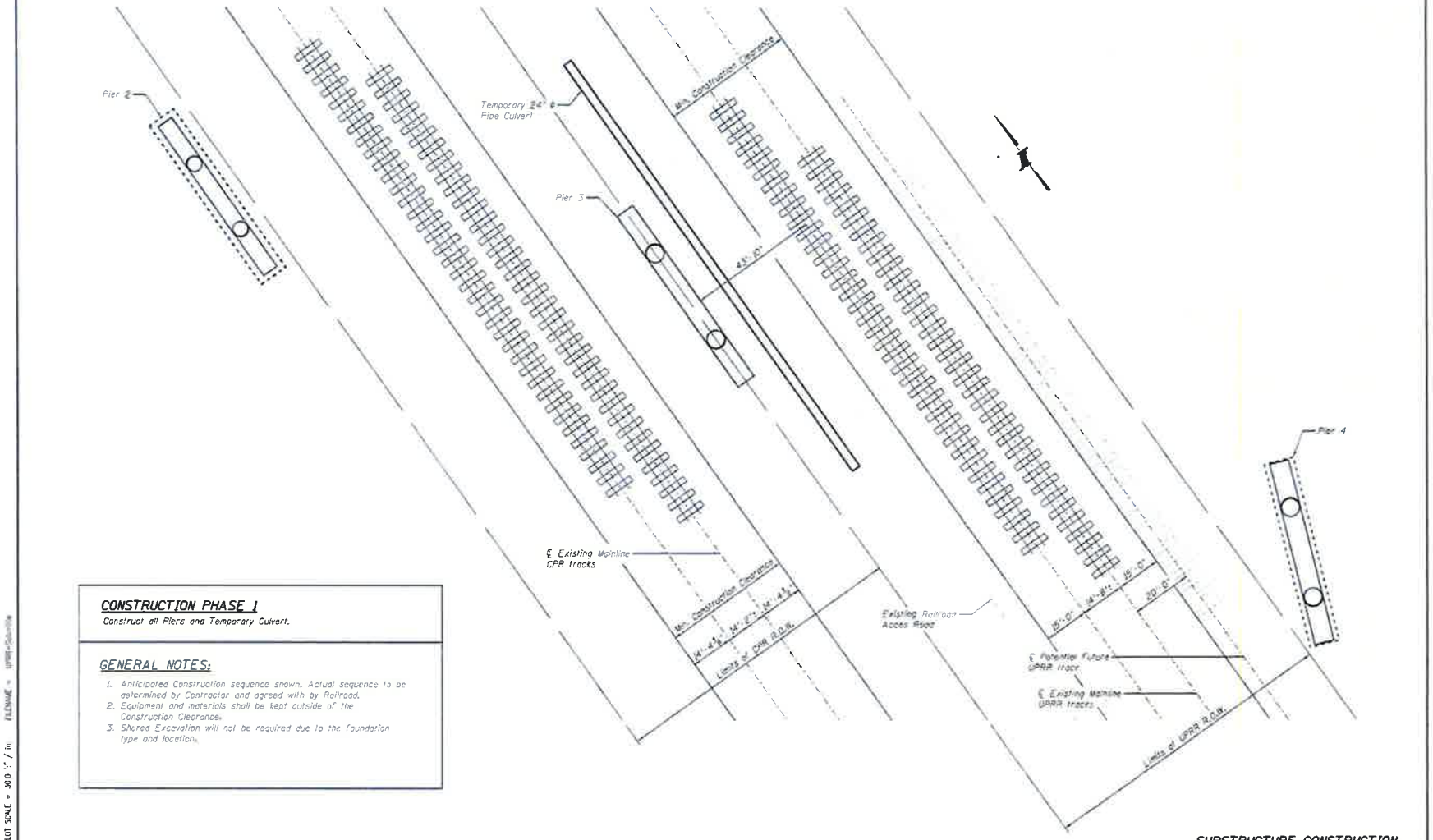
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CHECKED BY RMK	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

RAILROAD PROFILE
GRADE DIAGRAM

SHEET NO. RPGD-3
DRAWING NO. 10 OF 18



CONSTRUCTION PHASE 1

Construct all Piers and Temporary Culvert.

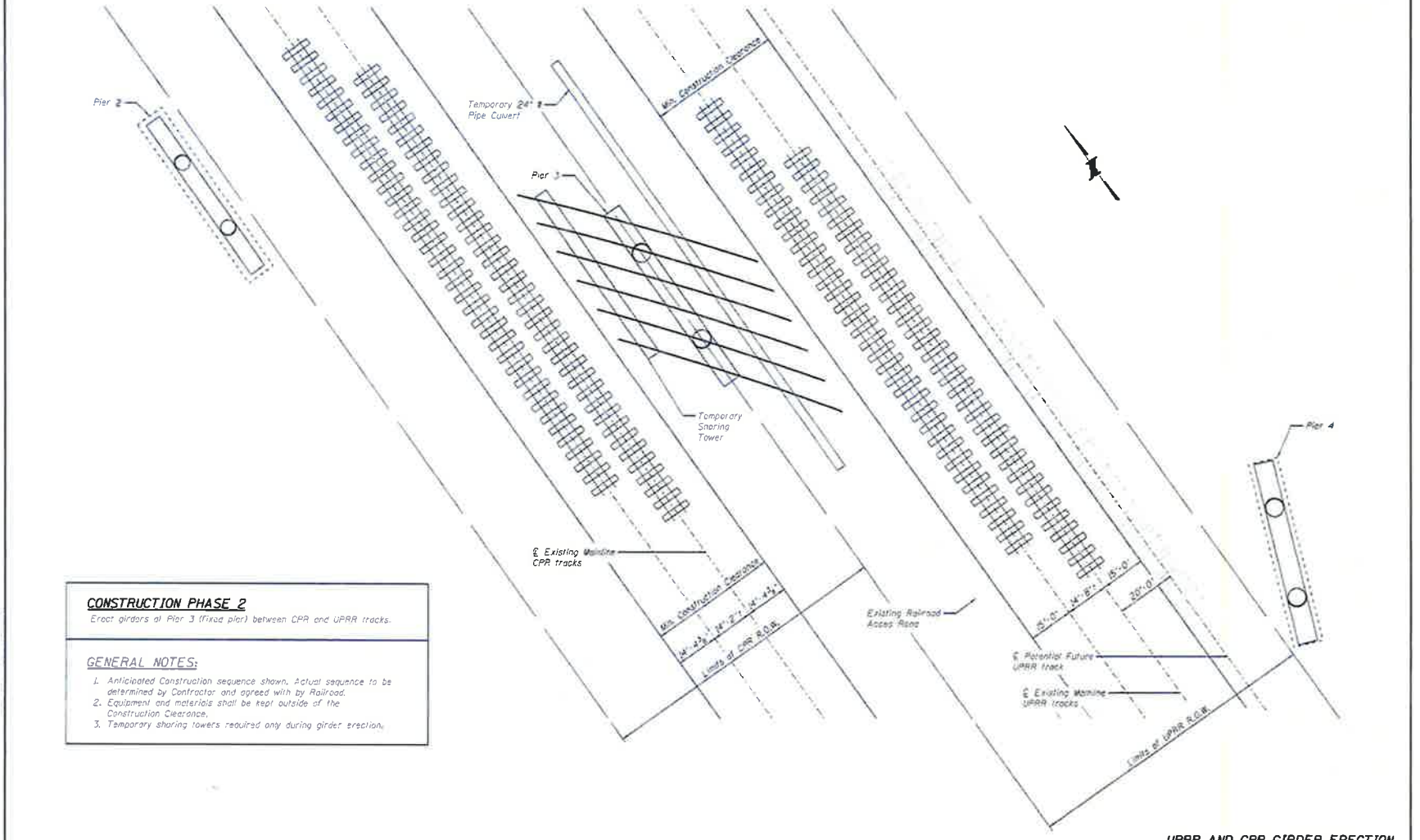
GENERAL NOTES:

1. Anticipated Construction sequence shown. Actual sequence to be determined by Contractor and agreed with by Railroad.
2. Equipment and materials shall be kept outside of the Construction Clearance.
3. Shored Excavation will not be required due to the foundation type and location.

SUBSTRUCTURE CONSTRUCTION

DRAWN BY PSK	DATE 06/24/16	URS	303 E. WACKER DR. SUITE 1400 CHICAGO IL, 60601 TEL (312)-373-7700 FAX (312)-373-6800	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. / DATE / DESCRIPTION	CONTRACT NO. I-16-4669	SHEET NO. PH-01
CHECKED BY AMK	DATE 06/24/16					BRIDGE NO. 450 392U (FRA) 165I(TOLLWAY), 022-9505(IDOT) CONSTRUCTION PHASE 1	DRAWING NO. 11 OF 18

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CONSTRUCTION PHASE 2

Erect girders at Pier 3 (fixed pier) between CPR and UPRR tracks.

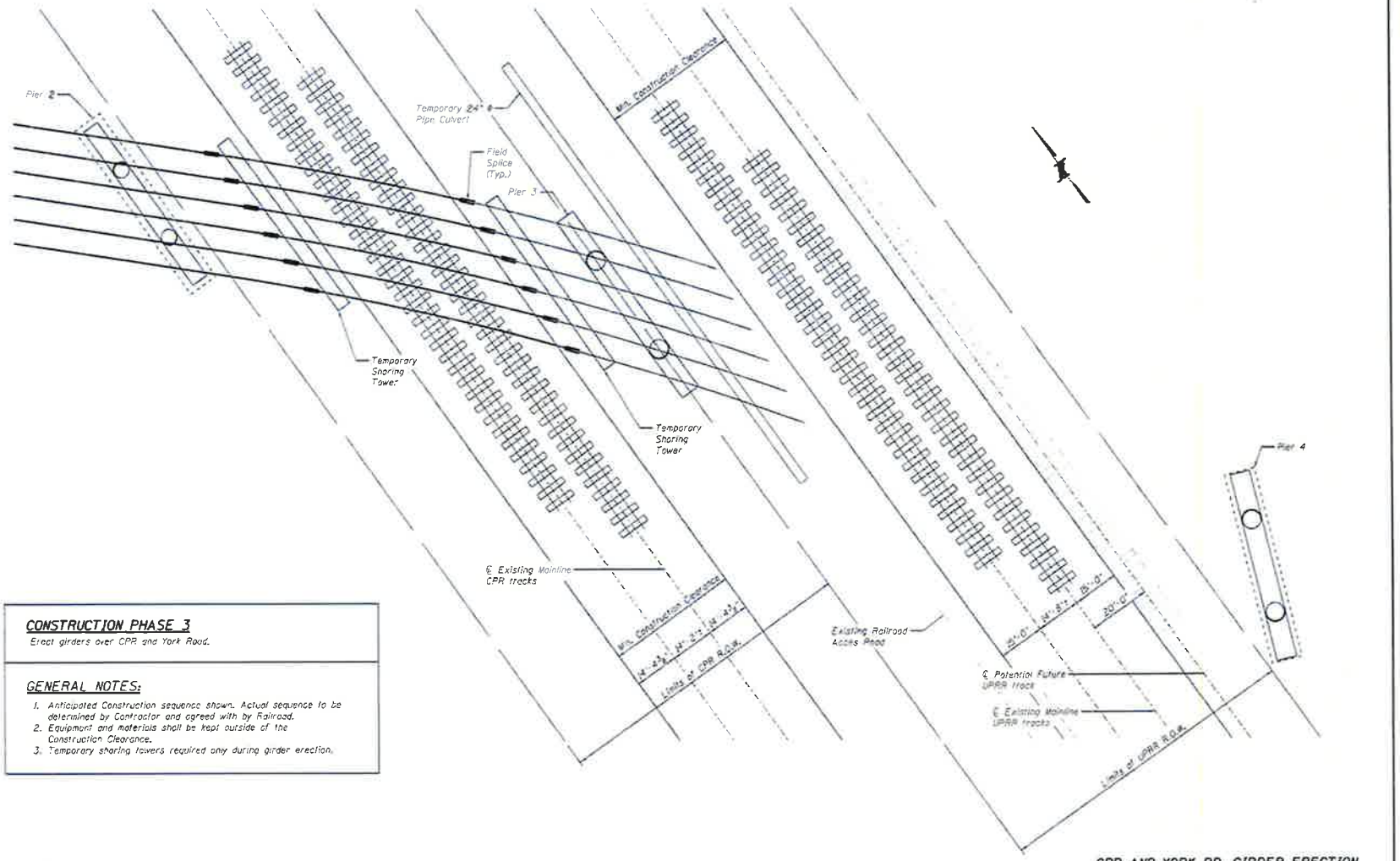
GENERAL NOTES:

1. Anticipated Construction sequence shown. Actual sequence to be determined by Contractor and agreed with by Railroad.
2. Equipment and materials shall be kept outside of the Construction Clearance.
3. Temporary shoring towers required only during girder erection.

UPRR AND CPR GIRDER ERECTION

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CHECKED BY AMK	DATE 06/24/16					BRIDGE NO. 450 392U (FRA) 165)(TOLLWAY), 022-9505(IDOT) CONSTRUCTION PHASE 2	DRAWING NO. 12 OF 18



CONSTRUCTION PHASE 3

Erect girders over CPR and York Road.

GENERAL NOTES:

1. Anticipated Construction sequence shown. Actual sequence to be determined by Contractor and agreed with by Railroad.
2. Equipment and materials shall be kept outside of the Construction Clearance.
3. Temporary shoring towers required only during girder erection.

CPR AND YORK RD. GIRDER ERECTION

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CHECKED BY AMK	DATE 06/24/16		

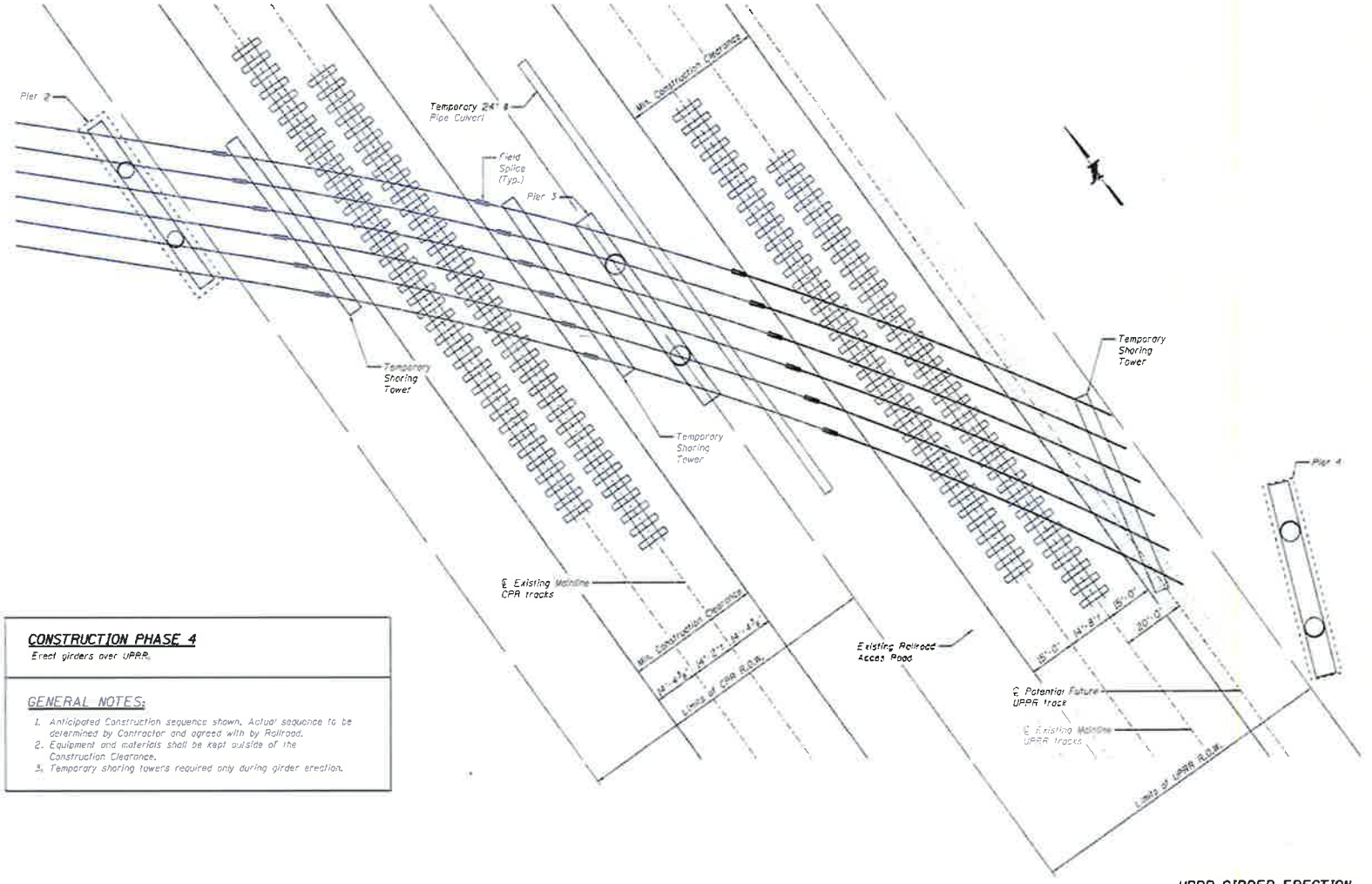
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 392U (FRA) 165I(TOLLWAY), 022-9505(IDOT) CONSTRUCTION PHASE 3

SHEET NO. PH-03

DRAWING NO. 13 OF 18



CONSTRUCTION PHASE 4

Erect girders over UPRR.

GENERAL NOTES:

1. Anticipated Construction sequence shown. Actual sequence to be determined by Contractor and agreed with by Railroad.
2. Equipment and materials shall be kept outside of the Construction Clearance.
3. Temporary shoring towers required only during girder erection.

UPRR GIRDER ERECTION

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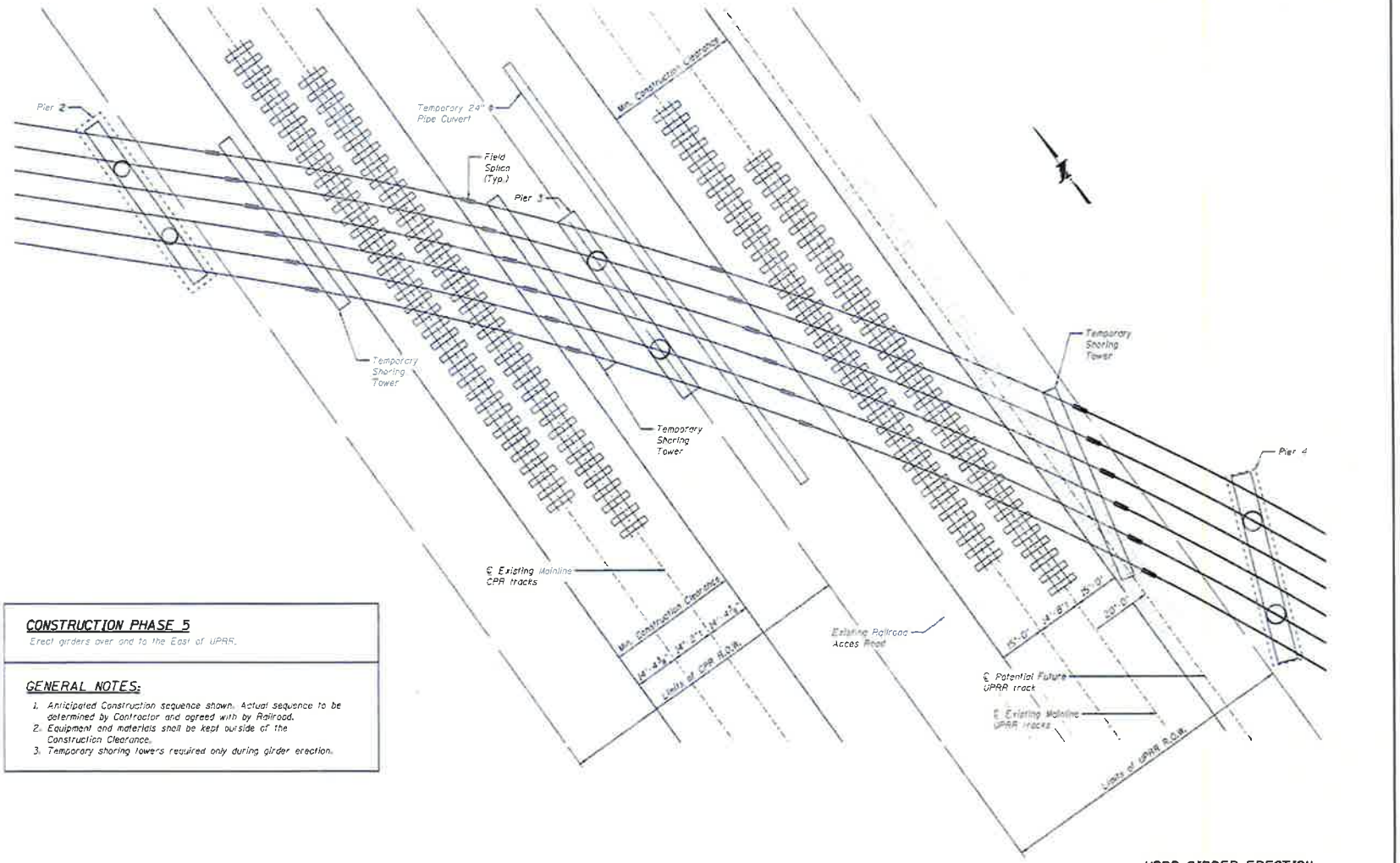
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CHECKED BY AMK	DATE 06/24/16		

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669
BRIDGE NO. 450 392U (FRA) 165I(TOLLWAY), 022-9505(IDOT)
CONSTRUCTION PHASE 4

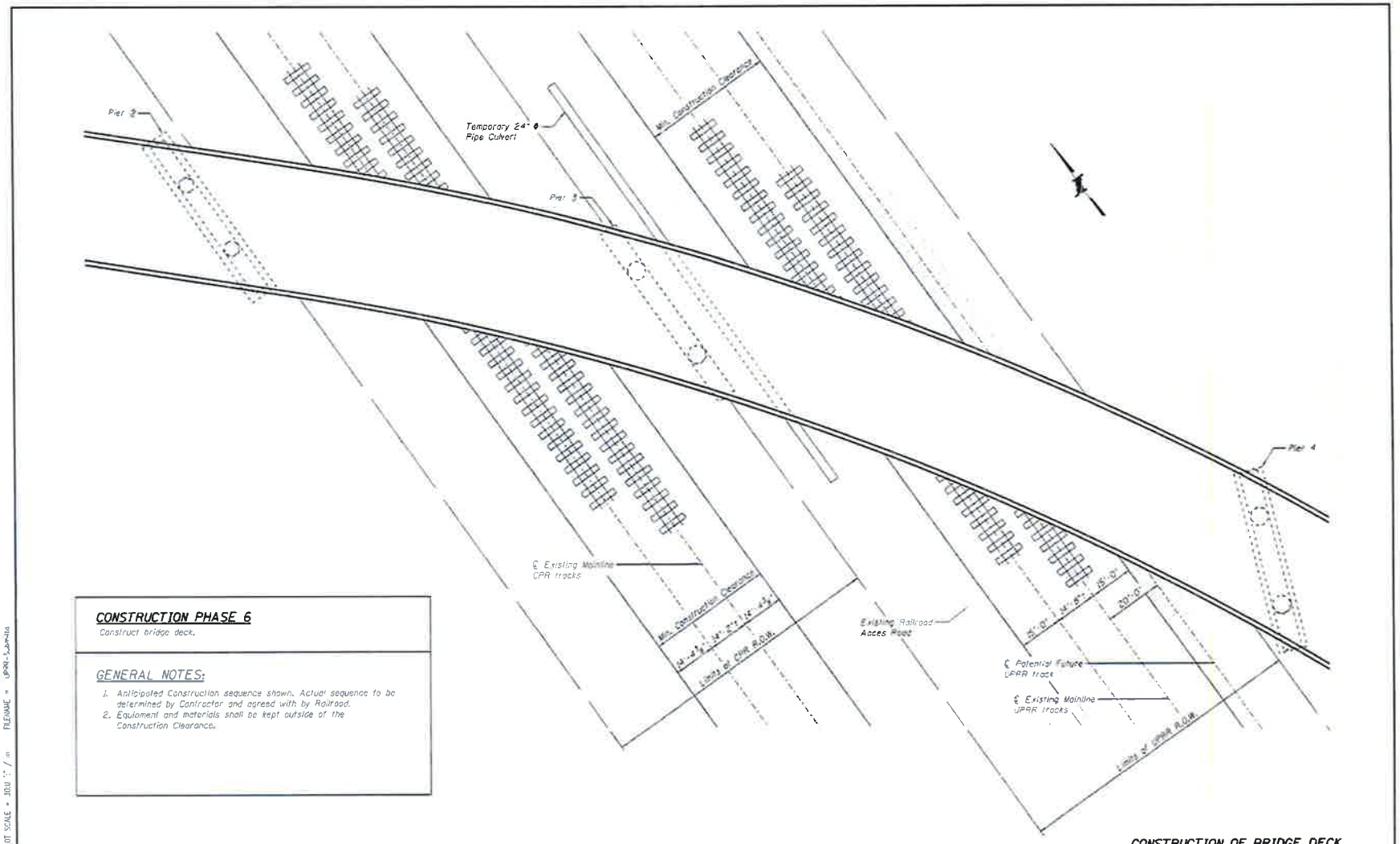
SHEET NO. PH-04
DRAWING NO. 14 OF 18



UPRR GIRDER ERECTION

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CHECKED BY AMK DATE 06/24/16					

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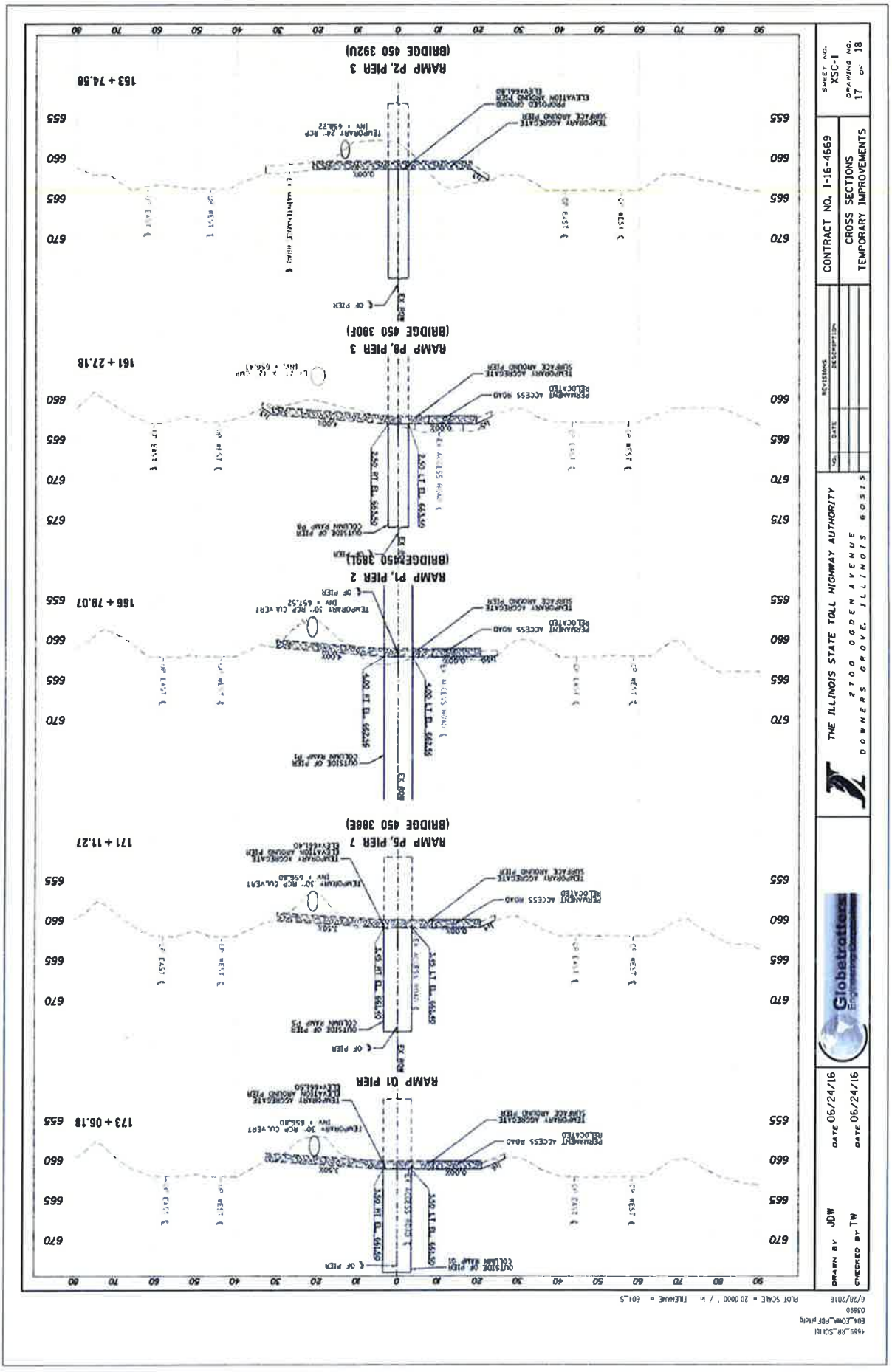
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CHECKED BY AMK	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669
BRIDGE NO. 450 392U (FRA) 165(TOLLWAY), 022-9505(IDOT)
CONSTRUCTION PHASE 6

SHEET NO. PH-06
DRAWING NO. 16 OF 18


RAMP P2, PIER 3
(BRIDGE 450 392U)
153 + 74.58
RAMP P8, PIER 3
(BRIDGE 450 390F)
161 + 27.18
RAMP P1, PIER 2
(BRIDGE 450 390L)
166 + 79.07
RAMP P6, PIER 7
(BRIDGE 450 388E)
171 + 11.27
RAMP D1 PIER
173 + 06.18
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
CONTRACT NO. I-16-4669
CROSS SECTIONS
TEMPORARY IMPROVEMENTS
SHEET NO. XSC-1
DRAWING NO. 17 OF 18
DRAWN BY JDW
DATE 06/24/16
CHECKED BY TW
DATE 06/24/16
Globetrotters Engineering
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RAMP P2, PIER 3
(BRIDGE 450 392U)
153+74.56
RAMP P8, PIER 3
(BRIDGE 450 390F)
161+27.18
RAMP P1, PIER 2
(BRIDGE 450 389U)
166+79.07
RAMP P5, PIER 7
(BRIDGE 450 388E)
171+11.27
RAMP Q1 PIER
173+06.18
PERMANENT ACCESS ROAD RELOCATED
PROPOSED GROUND ELEVATION AROUND PIER
CONTRACT NO. I-16-4669
CROSS SECTIONS
PERMANENT IMPROVEMENTS
SHEET NO. XSC-2
DRAWING NO. 18 OF 18
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
DRAWN BY JDW
DATE 06/24/16
CHECKED BY TW
DATE 06/24/16
Globetrotters Engineering
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I-13-4622; TOLLWAY CONSTRUCTION CONTRACT I-16-4669

ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT

PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

BRIDGE NO. 450 392U (FRA),1651 (TOLLWAY), 022-9505 (IDOT) (RAMP P2) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.39)

BENSENVILLE, IL – DUPAGE COUNTY

PROJECT SPECIFICATIONS

30% SUBMITTAL

June 24, 2016

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
PROJECT SPECIFICATIONS
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION
BRIDGE NO. 450 392U (FRA),1651 (TOLLWAY), 022-9505 (IDOT) (RAMP P2) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.39)
BENSENVILLE, IL – DUPAGE COUNTY

S.P. 101 LOCATION AND SCOPE OF WORK

The improvements to be constructed under this contract shall be performed along IL 390 at Western Access located at milepost 17.0 along IL 390 and milepost 3.2 to milepost 3.8 along the Western Access in DuPage County, Illinois.

The work under this contract includes, but is not limited to:

1.) Construction of Ramp P1, P2, P5 and P8 Bridges
2.) Earthwork and grading for construction of the bridges carrying ramps P1, P2, P5 and P8 over existing York Road, Canadian Pacific Railroad and Union Pacific Railroad
3.) Erosion and sediment control
4.) All other appurtenant and miscellaneous construction shown on the plans and within these special provisions.

All applicable provisions of the IDOT Standard Specifications adopted April 1, 2016, herein after referred to as the Standard Specifications, IDOT Supplemental Specifications and Recurring Special provisions adopted April 1, 2016, Tollway Supplemental Specifications to said Standard Specifications issued April 1, 2016, and all Tollway Construction Bulletins in effect at the time of bidding, shall govern this work except as herein amended.

S.P. 106.8 COORDINATION WITH RAILROADS

The Contractor shall coordinate activities with the Union Pacific Railroad (UPRR) and the Canadian Pacific Railway (CPR). Each railroad operates on two separate pairs of mainline tracks that will be spanned by each of proposed Bridges 1650, 1651, 1652 and 1653.

The following coordination regarding railroad insurance, flagging and right of entry requirements for each railroad shall be adhered to by the Contractor:

- A right of entry (ROE) permit and flagging must be obtained prior to performing any bridge related work on railroad property. Right of entry fee is estimate to be $550 for each railroad and can be obtained through each of their websites (40-50 days in advance).
- All costs associated with flagging for the entire project shall be paid for by the Contractor prior to the start of work.
- Trains cannot be delayed or rerouted due to construction. Any means or methods needed to keep all track open for trains during construction shall be paid for by the Contractor.
- Railroad protective liability insurance must be obtained by the Contractor prior to performing any bridge work on the properties of the railroads. See S.P. 107.3 for additional information.
- No temporary crossing of any tracks will be allowed other than the one shown in the plans for accessing railroad property between the tracks of the UPRR and the CPR.
- The Contractor shall not place any materials, equipment or staff within the construction clearance zones for each railroad as shown in the plans.
- The following UPRR staff should be contacted regarding the required access permits and flagging associated with construction of Bridges 1650, 1651, 1652 and 1653 over that railroad.
    - John Venice (main railroad contact): 312-777-2043
    - (jnvenice@up.com)
- The following CPR staff should be contacted regarding the required access permits and flagging associated with construction of Bridges 1650, 1651, 1652 and 1653 over that railroad.
    - Dan Sabatka (main railroad contact): 651-495-9521
    - daniel_sabatka@cpr.ca

All construction access locations must be approved by the Engineer, affected agencies and respective railroads prior to starting any sub-structure work on railroad properties. The Contractor shall be responsible for obtaining all necessary permits to perform the work on Bridges 1650, 1651, 1652 and 1653. The Contractor shall be responsible for verifying the accuracy of these requirements and determining required fees by checking the following railroad websites:

- http://wwww.up.com/real_estage/tempuse/index.htm

All applicable safety and operational requirements associated with this work shall be adhered to by the Contractors. The Contractor is advised to review the following links regarding grade separation guidelines:

- http://www.uprr.com/aboutup/operations/specs/index.shtml

All utilities on property of the railroads near the construction of the bridges shall be coordinated by the Contractor.

S.P. 107 INSURANCE

This provision supplements Article 107.27 of the Tollway Supplemental Specifications.

J. ADDITIONAL INSURED PROTECTION

The work under this contract includes work upon, above, adjacent to and/or along the right-of-way and facilities of the FAA, Illinois Department of Transportation (IDOT), the Village of Bensenville, Counties of Cook and DuPage, the Union Pacific Railroad and the Canadian Pacify Railway. The Contractor's Insurance coverage, required by and in conformance with Article 107.27(j), shall include the agencies specified herein, its agents and employees as additional insureds, or provide a separate owner's protection policy of equal limits of coverage for each agency.

S.P. 107.3 RAILROAD PROTECTIVE LIABILITY INSURANCE

The work under this contract include work upon, above, adjacent to and/or along the right-of-way and facilities of the Union Pacific Railroad (UPRR) and the Canadian Pacific Railway (CPR). Each of the railroads require railroad protective liability insurance be in place prior to the Contact beginning work.

The Contractor shall confirm requirements on the UPRR website and with the following UPRR contact:

Attn John Venice
Manager Special Projects - Industry and Public Projects
Union Pacific Railroad
101 North Wacker Drive, Suite 1920
Chicago, IL 60606
312-777-2043
jnvenice@up.com

The Contractor shall confirm requirements on the CPR website and with the following CPR contact:

Attn Dan Sabatka
CP Rail
PW US-East
7550 Ogdendale Rd SE
Calgary, Alberta T2C 4X9
Canada
651-495-9521
daniel_sabatka@cpr.ca

S.P. 107.3.1 RAILROAD PROTECTIVE LIABILITY INSURANCE - UPRR

Requirements:

The Railroad Protective Liability Program for new bridge construction, structural repair to bridges, widening of bridges and bridge demolition requires the completion of the Bridge - Large Project Application to obtain a quote. See the UPRR website for additional information and current application forms: http://www.up.com/real_estate/rrinsurance/liability_insurance/index.htm).

With the Railroad Protective Liability Program made available by the Union Pacific Railroad through a national broker, the Contractor completes a single-page application, sends a check, and the Railroad Protective Liability coverage is in place. The UPRR considers this program a time saver in obtaining Railroad Protective Liability insurance.

For Railroad Protective Liability Insurance (RPLI) application requests, the Contractor may be asked by their insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and safety reasons, Union Pacific Railroad employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

S.P. 107.3.2 RAILROAD PROTECTIVE LIABILITY INSURANCE - CPR

Requirements:

The Railroad Protective Liability Program for new bridge construction, structural repair to bridges, widening of bridges and bridge demolition requires the completion of the Bridge - Large Project Application to obtain a quote. See the CPR website for additional information and current application forms.

With the Railroad Protective Liability Program made available by the Canadian Pacific Railway through a national broker, the Contractor completes a single-page application, sends a check, and the Railroad Protective Liability coverage is in place. The CPR considers this program a time saver in obtaining Railroad Protective Liability insurance.

For Railroad Protective Liability Insurance (RPLI) application requests, the Contractor may be asked by their insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and

safety reasons, Canadian Pacific Railway employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

RAILROAD BRIDGE FENCE (Tollway)

Effective: April 29, 2014
Revised: November 7, 2014

Description. The work shall consist of constructing a chain link fence to the outside face of a parapet or barrier on structures over railroads as shown in the plans. This work shall include the preparation of all shop drawings, provide materials, labor and equipment necessary to fabricate, furnish and install chain link fence and post attachment components as described in this special provision.

Materials. Material shall be according to the following.

Chain Link Fence Components:

(a) Posts: Posts shall be according to ASTM F 1083, Galvanized Steel Pipe, 3" Nominal Pipe Size (NPS), Schedule 40, 3.5" Outside Diameter, 0.216" Wall Thickness

(b) Chain Link Fabric: Fabric shall be according to ASTM A 392, 2" mesh with twisted top and knuckled bottom selvage, Zinc Coated Steel, 0.148" coated wire diameter, class 2 coating.

(c) Tie Wires: Tie wires shall be according to ASTM F 626, Zinc Coated Steel Wire, No. 9 gauge

(d) Brace Bands: Bracing bands shall be according to ASTM F 626, No. 12 gauge (min. thickness) x ¾" (min. width) Steel Bands (Beveled or Heavy)

(e) Tension Bars: Tension bars shall be according to ASTM F 626, 3/16" (min. thickness) x ¾" (min. width) x 5' 10" (min. height) Steel Bars

(f) Tension Bands: Tension bands shall be according to ASTM F 626, No. 14 gauge (min. thickness) x ¾" (min. width) Steel Bands

(g) Miscellaneous Fence Components: Miscellaneous fence components shall be according to ASTM F 626, Zinc Coated Steel – includes post or loop caps, combination rail ends, clamps and all other miscellaneous fittings and hardware

(h) Nuts and Bolts: Nuts and bolts shall be according to ASTM A 307, 3/8" diameter x 4 ¼" Hex Headed Bolts for Pipe Clamp Connections to the Posts.

(i) Washers: Washers shall be according to ASTM F 436, Flat.

(j) Tension Wire: Tension wire shall be according to ASTM A 824 and A 817, Type II Zinc Coated Steel Wire – No. 7 gauge, Class 4 Coating

(k) Hog Rings: Hog rings shall be according to ASTM F 626, Zinc Coated Steel Wire – No. 12 gauge

(l) Brace Rails: Brace rails shall be according to ASTM F 1083, Galvanized Steel Pipe – 1 1/4" NPS, Schedule 40, 1.660" Outside Diameter, 0.140" Wall Thickness.

Post Attachment Components:

(m) Pipe Clamps: Pipe clamps shall be according to ASTM A 36 or A 709 Grade 36, ¼" Steel Plate

(n) Shim Plates: Shim plates shall be according to ASTM F 626, Zinc Coated Steel – ¼" Thickness, 3" x 9 ½", with 3/4" diameter holes.

(o) Adhesive Anchor Rods: Adhesive anchor roads shall be according to ASTM F 1554 Grade 36, fully threaded headless Anchor Rods – 5/8" diameter x 6 ½".

(p) Neoprene Pads: Neoprene pads shall be in accordance with Article 1052.02(a) of the Standard Specifications.

(q) Chemical Adhesive Resin System: The chemical adhesive resin system shall consist of a two part, fast-setting resin and filler/hardener. The system shall meet the requirements of the Illinois Test Procedure for Chemical Adhesives and be listed on the IDOT approved list for Chemical Adhesives.

Hot-dip galvanize all chain link fence components not otherwise indicated as being coated, and all post attachment components ,except neoprene pads, in accordance with Section 1006 of the Standard Specifications.

General. The Contractor shall furnish and install the chain link fence according to the lines, grades, and dimensions shown on the plans and approved shop drawings. Work shall be accomplished according to Sections 509 and 664 of the Standard Specifications except as modified here-in:

Article 509.05 (c) Delete paragraph 1, third sentence; "Stretcher bars shall be used on all four sides of each panel".

Shop Drawings. The Contractor shall submit shop drawings in accordance with the provisions of Article 105.04 of the Tollway Supplemental Specifications for all chain link fence and post attachment components.

No materials detailed in the Plans and/or described in the Special Provision, or covered by the shops drawings shall be delivered to the site of the work until the shop drawings have been approved.

Construction Procedures. All construction and installation methods and procedures for chain link fence components and post attachment components shall be in strict accordance with the Plans, the manufacturer's recommendations, the approved shop drawings and as directed by the Engineer.

Any chain link fence component and post attachment component which, in the judgment of the Engineer, is not furnished and installed in accordance with the Plans, the Special Provision, the approved shop drawings, or the manufacturer's specifications shall be subject to rejection. Any such installation which is rejected shall be removed and replaced with material acceptable to the Engineer. The costs for any such adjustments shall be the responsibility of the Contractor.

Installation Procedures. The fence posts shall be installed plumb. Shims shall be used as required to achieve plumb and clearance for 6" of chain link fabric. Shims at bottom clamp to be omitted if clearance and plumb are otherwise provided. Total thickness of shims will be determined in the field.

Adhesive Bonded Anchors and Dowels shall comply with and be installed in accordance with Section 509 of the Standard Specifications.

Welding shall be accomplished only after written permission of the Engineer. All welding shall be in accordance with the American Welding Society Structural Welding Code (Steel) ANSI/AWS D1.1, current edition. Weld metal shall be E60XX or E70XX. Non Destructive Testing of welds is not required.

Protective electrical grounding shall be in accordance with Article 664.11 of the Standard Specifications.

Thread bottom tension wire through the bottom mesh loops. Tighten the bottom rail tension wire around the end posts. Tighten the brace rail tension wire around the end posts and first interior posts. Bottom tension wire shall utilize a separate tension band. Brace rail tension wire shall either



use a separate tension band or wrap around the post. Draw the wire tight and wrap it around itself a minimum of three loops next to the posts.

Method of Measurement. This work will be measured for payment in feet, along the top of the fence from center to center of the end posts.

Basis of Payment. This work will be paid for at the contract unit price per foot for RAILROAD BRIDGE FENCE.

Pay Item Number	Designation	Unit of Measure
JI664100	RAILROAD BRIDGE FENCE	FOOT

ALLOWANCE FOR RAILROAD FLAGGING (Illinois Tollway)

Effective: April 1, 2016

Description. This Special Provision establishes a budgetary allowance for flagging services required and provided by the railroad as a result of work being performed by the Contractor on the Illinois Tollway system. This work shall be performed in accordance with Section 107.12 of the Illinois Tollway Supplemental Specifications, except the Railroad will bill the Contractor directly for this work.

General Requirements. The Contractor shall pay all costs of Railroad Flagging services required and provided by the Railroad for all work performed under the contract. These costs shall be considered separate from the contract unit prices bid for the various items of work involved. Upon written order of the Engineer, the Contractor shall pay the costs of providing flaggers as specified with the exception of flaggers required for transporting material or equipment across the tracks. The Contractor will be reimbursed for the actual amounts paid.

Adequate notification shall be made to the Railroad to schedule the Flagger. The Contractor shall make every effort to notify the Railroad in advance if previously requested flagger(s) will not be needed for any reason.

The Railroad may have specific work rules that govern their use of flaggers. The Contractor shall coordinate with the appropriate Railroad contact to obtain information about specific Railroad work rules and how they may impact the cost of flagging services.

Method of Measurement. This work will not be measured for payment.

Basis of Payment. Payment for this work will be made as specified in Illinois Tollway Supplemental Specifications Article 109.04 using a force account basis. Railroad flagging bills shall be submitted to the Engineer on a monthly basis. Payment for this work shall not exceed the costs incurred by the Contractor and approved by the Engineer.

Any costs incurred for flagging protection provided by the Railroad at the Contractor's request for those days when the Contractor does not work shall be borne by the Contractor.

Pay Item Number	Designation	Unit of Measure
JT154102	ALLOWANCE FOR RAILROAD FLAGGING	UNIT

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I-13-4622; TOLLWAY CONSTRUCTION CONTRACT I-16-4669

ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT

PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

BRIDGE NO. 450 392U (FRA),1651 (TOLLWAY), 022-9505 (IDOT) (RAMP P2) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.39)

BENSENVILLE, IL – DUPAGE COUNTY

DRAINAGE REPORT

30% SUBMITTAL

June 24, 2016

EXECUTIVE SUMMARY

Project Overview

The Elgin O'Hare Western Access Tollway project is located at the intersection of existing Thorndale Road at York Road in Bensenville, Illinois. Refer to the Location Map (see Exhibit A). The proposed interchange would connect new Tollways designated as IL-390 and I-490. Five new Tollway bridges would be constructed over the existing railroad tracks located along the east side of York Road. The proposed bridge crossings are located between Federal Railroad Administration (FRA) Mile Post 6.27 and 6.61 of the Union Pacific Railroad.

Drainage Design

The drainage design is in accordance with the Guidelines for Railroad Grade Separation Projects by the Union Pacific Railroad-BNSF Railway, May 2016. The proposed bridge piers include a pier situated on the property line between the Canadian Pacific Railroad (CPRR) and the Union Pacific Railroad (UPRR). Existing railroad access roads located between the existing tracks would be used to access the project area with access from York Road using the existing access location and track crossing near Station 188+00 and a new track crossing and York Road access at Station 131+00. The existing ditch and culverts would be maintained except for some temporary work and permanent modifications near the proposed piers. The tributary areas and design flows are the same for the existing and proposed conditions.

A temporary, flat granular platform would be provided at each pier to allow construction access. Since these would block existing ditch flow temporary culverts are proposed to maintain flow across these granular platforms. Both the granular platforms and temporary culverts would be removed at the end of construction.

The temporary culverts are sized to meet the railroad guidelines with the hydraulic grade line not exceeding the Low Chord, defined as the crown of the pipe, based on a 50 year design storm, and providing freeboard to the Subgrade elevation, defined as 2'-3" below the base of rail elevation, based on a 100 year design storm. The top of rail elevations are based on topographic survey, with subgrade elevations based on 7-5/16-inch rail heights.

Ditches along the proposed piers will be graded using a 10' minimum bottom with 2:1 side slopes with the flowline a minimum of 3' below the Subgrade elevation, based on a 100 year design storm. Outside the pier construction areas the existing ditches and access roads would be maintained.

Design flows were determined based on delineating the areas tributary to the culverts, the time of concentration, and using the rational method with applicable runoff coefficients. These calculations are included hereinafter.

Recommendations

The drainage design for the final and temporary conditions for the interchange design meet the Railroad Guidelines. No adverse drainage impacts would be realized due to the improvement. The ditch between the railroad tracks would be maintained with some regrading to accommodate shifting sections of the access roads and the pier construction.



Drainage Report

UPRR / CPRR Ditch

PROJECT LOCATION MAP

Not to Scale Date: 6/3/2016

Exhibit A

TABLE OF CONTENTS

Executive Summary

Exhibit A – Location Map

1. **Proposed Pier Crossing: FRA Structure 450 392U (MP 6.39), Sta: 153+74.66**
   Drainage Design Criteria
   Drainage Calculations Summary Table
   Time of Concentration Calculation
   Design Peak Flow Calculation
   Temporary Condition Culvert HY-8 Sizing
   Proposed Condition Ditch Flow-Depth Calculation

2. **Appendix**
   Exhibit – Site Plan (RRIP-1, RRIP-2)
   Exhibit – Railroad Drainage Areas (RR-1, RR-2, RR-3)
   Rational Method Runoff Coefficients
   Rational Method Overland Flow Manning's coefficients
   Rational Method Open Channel Flow Manning's coefficients
   Bulletin 70 Climatic Sections in Illinois
   Bulletin 70 Rainfall Intensity vs. Duration (Figure 4-102c)



1

Proposed Pier Crossing:

FRA Structure 450 392U (MP 6.39)

Sta: 153+74.66

DRAINAGE DESIGN CRITERIA	
All design in accordance with the Union Pacific Railroad – BNSF Railway: *Guidelines for Railroad Grade Separation Projects*, May 2016	
Design Storm	50-year storm frequency (crown of culverts) 100-year storm frequency (freeboard to railroad subgrade)
Design Freeboard	Subgrade event (100-yr) energy grade line below the adjacent subgrade elevation (Subgrade is defined as 2'-3" below base of rail)
Ditch Design	Flat Bottom, 10' Bottom Width 2:1 side slopes Flowline a minimum 3' below the subgrade elevation
Culvert Design	Low chord event (50-yr) water surface elevation no higher than crown of culvert, HW/D ≤ 1.0 Subgrade event (100-yr) water surface elevation no higher than adjacent subgrade elevation, and HW/D ≤ 1.5
Design Velocity	Check for non-eroding velocities or provide erosion protection
Rainfall Data	ISWS Bulletin 70
Runoff Coefficients	TR-55 c = 0.95 for pavements (hard surfaces) c = 0.60 for granular surfaces c = 0.30 for grass surfaces
Design Flows	Rational Method

Computed: R.Delves 6/02/2016
Revised: R.Delves 6/22/2016
Checked: J. Hopson 6/22/2016
Approved:

Railroad Property Drainage Calculations
Summary Table

Union Pacific Railroad															
Description						Tributary Flow		Low Chord		Subgrade					
FRA Structure #	FRA M.P. Designation	Tollway Structure #	IDOT Structure #	Station	Culvert Diameter (in)	Q_{50yr} (cfs)	Q_{100yr} (cfs)	50yr headwater (ft)	50yr within crown of culvert?	100yr headwater (ft)	Bottom of Rail Elevation	Subgrade Elev.	Pr Culvert Invert	HW/D ≤ 1.5	Proposed 100yr Cover ≥ Subgrade Elevation?
450 392U	M.P. 6.39	1651	022-9505	153+74.66	24	6.99	8.18	659.79	Yes	659.94	664.15	661.90	658.26	0.84	1.96 Yes

Union Pacific Railroad													
Description					Ditch Characteristics			Tributary Flow		Subgrade			
FRA Structure #	FRA M.P. Designation	Tollway Structure #	IDOT Structure #	Station	Proposed Ditch Bottom (ft)	Proposed Ditch Side Slope X:X	Proposed Ditch Side Slope X:X	Q_{50yr} (cfs)	Q_{100yr} (cfs)	Proposed Ditch Elevations	Proposed 100-yr Ditch Normal Depth	Subgrade Elev. (ft)	Proposed flowline Cover ≥ 3'?
450 392U	M.P. 6.39	1651	022-9505	153+74.66	10	Vertical	2:1	6.99	8.18	658.16	0.69	661.9	3.74 Yes

Note:
Base of Rail Elevation = Surveyed Top of Rail Elevation - Rail Height taken as 7 - 5/16"
Subgrade Elevation = Base of Rail Elevation - 2' - 3"
HW = Maximum headwater
D = Diameter

Time of Concentration (T_c) or travel time (T_t)

Project	Calc'd By:	Date
Elgin O'Hare Western Access	Joe Hopson	2/3/16
Location	**Checked By:**	**Date**
FRA Structure 450 392U (MP 6.39), Sta: 153+74.66	Ryan Delves	6/3/16

Check one: ☑ Present ☐ Developed

Check one: ☑ T_c ☐ T_t through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

		Segment ID	AB				
1.	Surface description (table 3-1)		Pervious				
2.	Manning's roughness coefficient, n (table 3-1)		0.15				
3.	Flow lengh, L (total L < 300 ft)	ft	40				
4.	Two-year 24-hour rainfall, P_2	in	2.900				
5.	Land slope, s	ft/ft	0.104				
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t hr	0.043	+		=	0.043

Shallow concentrated flow

		Segment ID	BC				
7.	Surface description (paved or unpaved)		Unpaved				
8.	Flow length, L	ft	2401				
9.	Watercourse slope, s	ft/ft	0.0017				
10.	Average velocity, V (figure 3-1)	ft/s	0.67				
11.	$Tt = \frac{L}{3600\,V}$	Compute T_t hr	1.000	+		=	1.000

Channel flow

		Segment ID					
12.	Cross sectional flow area, a	ft^2					
13.	Wetted perimeter, pw	ft					
14.	Hydraulic radius, $r = \frac{a}{pw}$	Compute r ft					
15.	Channel slope, s	ft/ft					
16.	Manning's roughness coefficient, n						
17.	$V = \frac{1.49\, r^{2/3} s^{1/2}}{n}$	Compute V ft/s					
18.	Flow length, L	ft					
19.	$Tt = \frac{L}{3600\,V}$	Compute T_t hr		+		=	0.000
20.	Watershed or subarea Tc or Tt (add Tt in steps 6, 11, and 19)	hr					1.043

Stanley Consultants INC.

Job No. 25250
Subject Flow Computations

Computed J. Hopson Date 06/01/16
Checked R. Devles Date 06/03/16
Approved _____ Date _____

Sheet No. _____ of _____

Design Peak Flow Computations
Proposed Culvert Tributary Area
FRA Structure 450 392U (MP 6.39)

Alignment: HAUL-GBLP-000
Sta: 153+74.66

Description	**Area	*$C_{coefficient}$	C*A
	4.17	0.55	2.29

*Coefficients from IDOT table 4-102a

A_{TOTAL} = 4.17 Ac (Acreage total from above)

$C_{composite}$ = ΣC*A/ΣA
$C_{composite}$ = 2.2935 / 4.17
$C_{composite}$ = 0.55

Tc = 62.58 min (See attached)

*i_{50} = 3.05 in/hr
*i_{100} = 3.57 in/hr
*(See attached rainfall intensity vs duration Figure 4-102c)

$Q_{50\ Year}$ Design Flow

$Q_{50} = (C)*(i_{50})*(A)$

C = 0.55 (From calculation above)
i_{50} = 3.05 in/hr (Use T_c noted above)
A = 4.17 acres (As described above)

Q_{50} = 6.99 cfs ***50 - year*** (From formula above)

$Q_{100\ Year}$ Check

$Q_{100} = (C)*(i_{100})*(A)$

C = 0.55 (From calculation above)
i_{100} = 3.57 in/hr (Use T_c noted above)
A = 4.17 acres (As described above)

Q_{100} = 8.18 cfs ***100- year*** (From formula above)

HY-8 Culvert Analysis Report

Temporary Culvert FRA Structure 450 392U (MP 6.39)
Sta: 153+74.66

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 6.99 cfs

Design Flow: 6.99 cfs

Maximum Flow: 8.18 cfs

Table 1 - Summary of Culvert Flows at Crossing: FRA Structure 450 392U (MP 6.39)

Headwater Elevation (ft)	Total Discharge (cfs)	FRA Structure 450 392U (MP 6.39) Discharge (cfs)	Roadway Discharge (cfs)	Iterations
659.79	6.99	6.99	0.00	1
659.81	7.11	7.11	0.00	1
659.82	7.23	7.23	0.00	1
659.84	7.35	7.35	0.00	1
659.85	7.47	7.47	0.00	1
659.87	7.59	7.59	0.00	1
659.88	7.70	7.70	0.00	1
659.90	7.82	7.82	0.00	1
659.91	7.94	7.94	0.00	1
659.93	8.06	8.06	0.00	1
659.94	8.18	8.18	0.00	1
663.00	24.49	24.49	0.00	Overtopping

Rating Curve Plot for Crossing: FRA Structure 450 392U (MP 6.39)

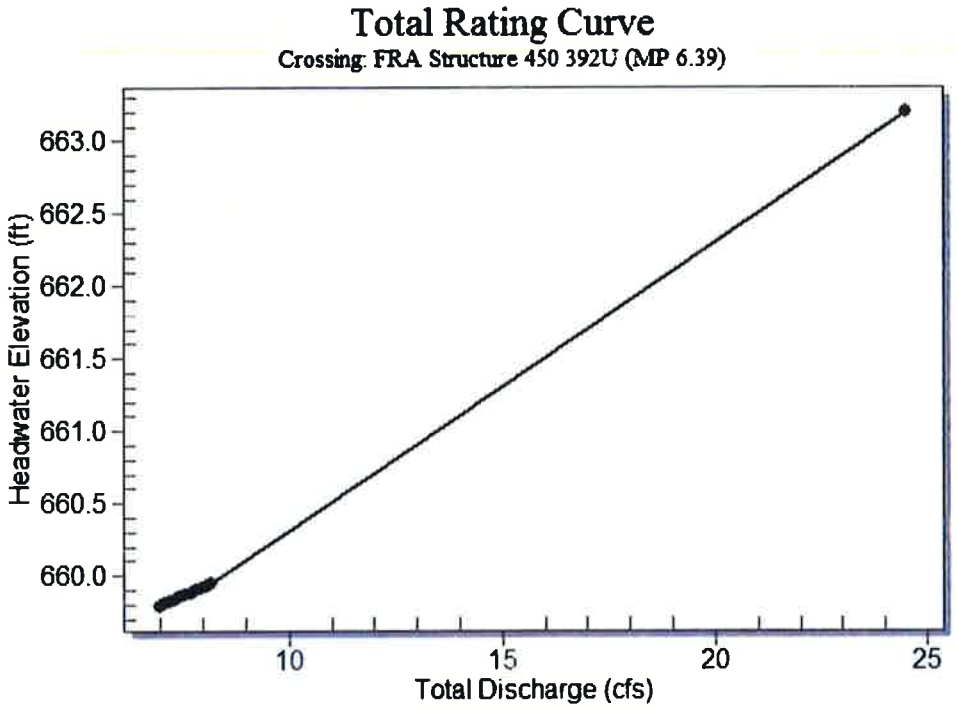


Table 2 - Culvert Summary Table: FRA Structure 450 392U (MP 6.39)

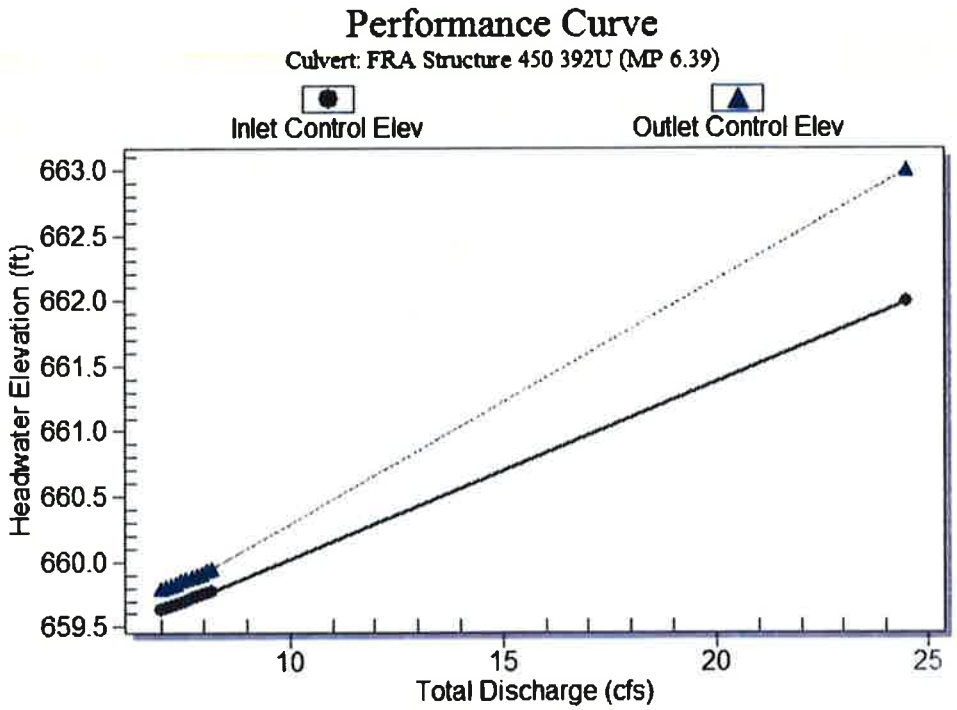
Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
6.99	6.99	659.79	1.369	1.533	2-M2c	1.487	0.938	0.938	0.736	4.829	1.032
7.11	7.11	659.81	1.383	1.548	2-M2c	1.510	0.947	0.947	0.742	4.855	1.038
7.23	7.23	659.82	1.397	1.563	2-M2c	1.533	0.955	0.955	0.748	4.881	1.044
7.35	7.35	659.84	1.411	1.578	2-M2c	1.557	0.963	0.963	0.754	4.908	1.050
7.47	7.47	659.85	1.425	1.593	2-M2c	1.580	0.971	0.971	0.760	4.934	1.056
7.59	7.59	659.87	1.439	1.608	2-M2c	1.603	0.979	0.979	0.766	4.960	1.061
7.70	7.70	659.88	1.453	1.623	2-M2c	1.627	0.987	0.987	0.772	4.986	1.067
7.82	7.82	659.90	1.466	1.638	2-M2c	1.650	0.995	0.995	0.778	5.011	1.072
7.94	7.94	659.91	1.480	1.653	2-M2c	1.698	1.003	1.003	0.784	5.039	1.078
8.06	8.06	659.93	1.493	1.667	2-M2c	1.737	1.010	1.010	0.790	5.064	1.083
8.18	8.18	659.94	1.507	1.682	2-M2c	1.776	1.018	1.018	0.795	5.090	1.088

Straight Culvert

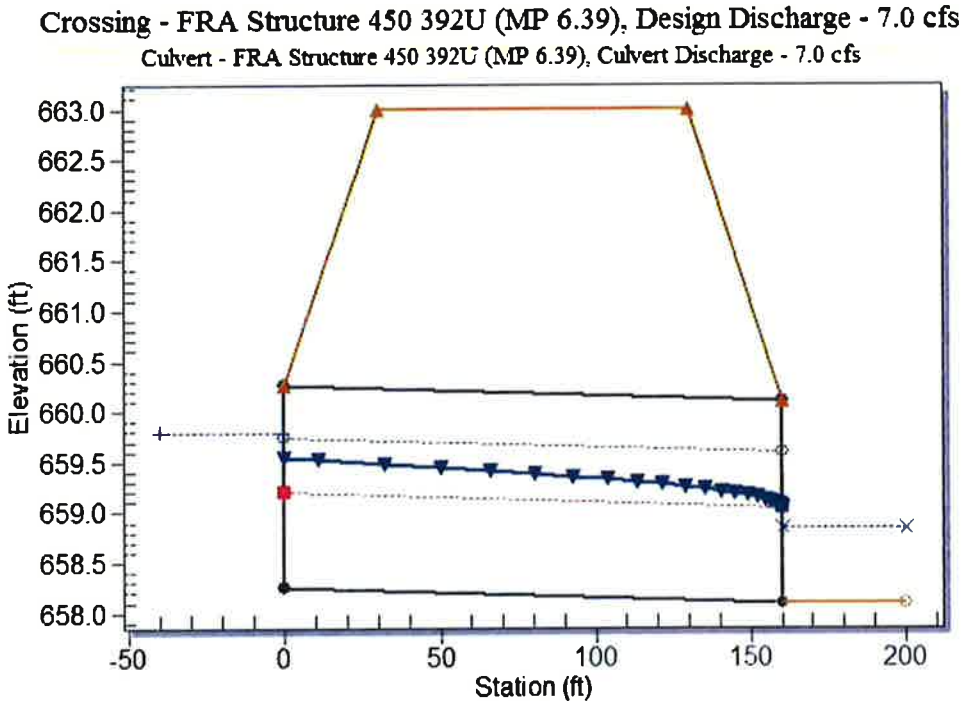
Inlet Elevation (invert): 658.26 ft, Outlet Elevation (invert): 658.10 ft

Culvert Length: 160.00 ft, Culvert Slope: 0.0010

Culvert Performance Curve Plot: FRA Structure 450 392U (MP 6.39)



Water Surface Profile Plot for Culvert: FRA Structure 450 392U (MP 6.39)



Site Data - FRA Structure 450 392U (MP 6.39)

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 658.26 ft
Outlet Station: 160.00 ft
Outlet Elevation: 658.10 ft
Number of Barrels: 1

Culvert Data Summary - FRA Structure 450 392U (MP 6.39)

Barrel Shape: Circular
Barrel Diameter: 2.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: Square Edge with Headwall
Inlet Depression: NONE

Table 3 - Downstream Channel Rating Curve (Crossing: FRA Structure 450 392U

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s)	Shear (psf)	Froude Number
6.99	658.84	0.74	1.03	0.05	0.25
7.11	658.84	0.74	1.04	0.05	0.25
7.23	658.85	0.75	1.04	0.05	0.25
7.35	658.85	0.75	1.05	0.05	0.25
7.47	658.86	0.76	1.06	0.05	0.25
7.59	658.87	0.77	1.06	0.05	0.25
7.70	658.87	0.77	1.07	0.05	0.25
7.82	658.88	0.78	1.07	0.05	0.25
7.94	658.88	0.78	1.08	0.05	0.25
8.06	658.89	0.79	1.08	0.05	0.25
8.18	658.90	0.80	1.09	0.05	0.25

Tailwater Channel Data - FRA Structure 450 392U (MP 6.39)

Tailwater Channel Option: Irregular Channel

Channel Slope: 0.0010

User Defined Channel Cross-Section:

Coord No.	Station (ft)	Elevation (ft)	Manning's n
1	-10.00	660.82	0.0300
2	-5.00	658.28	0.0300
3	0.00	658.10	0.0300
4	5.00	658.40	0.0300
5	10.00	660.03	0.0000

Roadway Data for Crossing: FRA Structure 450 392U (MP 6.39)

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 100.00 ft

Crest Elevation: 663.00 ft

Roadway Surface: Paved

Roadway Top Width: 100.00 ft

Proposed Condition Ditch Flow-Depth Calculation

FRA Structure 450 392U (MP 6.39)

Sta: 153+74.66

FRA Structure 450 392U (MP 6.39) Sta: 153+74.66

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.030	
Channel Slope	0.00100	ft/ft
Left Side Slope	0.00	ft/ft (H:V)
Right Side Slope	2.00	ft/ft (H:V)
Bottom Width	10.00	ft
Discharge	8.18	ft^3/s

Results

Normal Depth	0.69	ft
Flow Area	7.34	ft^2
Wetted Perimeter	12.22	ft
Hydraulic Radius	0.60	ft
Top Width	11.37	ft
Critical Depth	0.27	ft
Critical Slope	0.02127	ft/ft
Velocity	1.12	ft/s
Velocity Head	0.02	ft
Specific Energy	0.71	ft
Froude Number	0.24	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

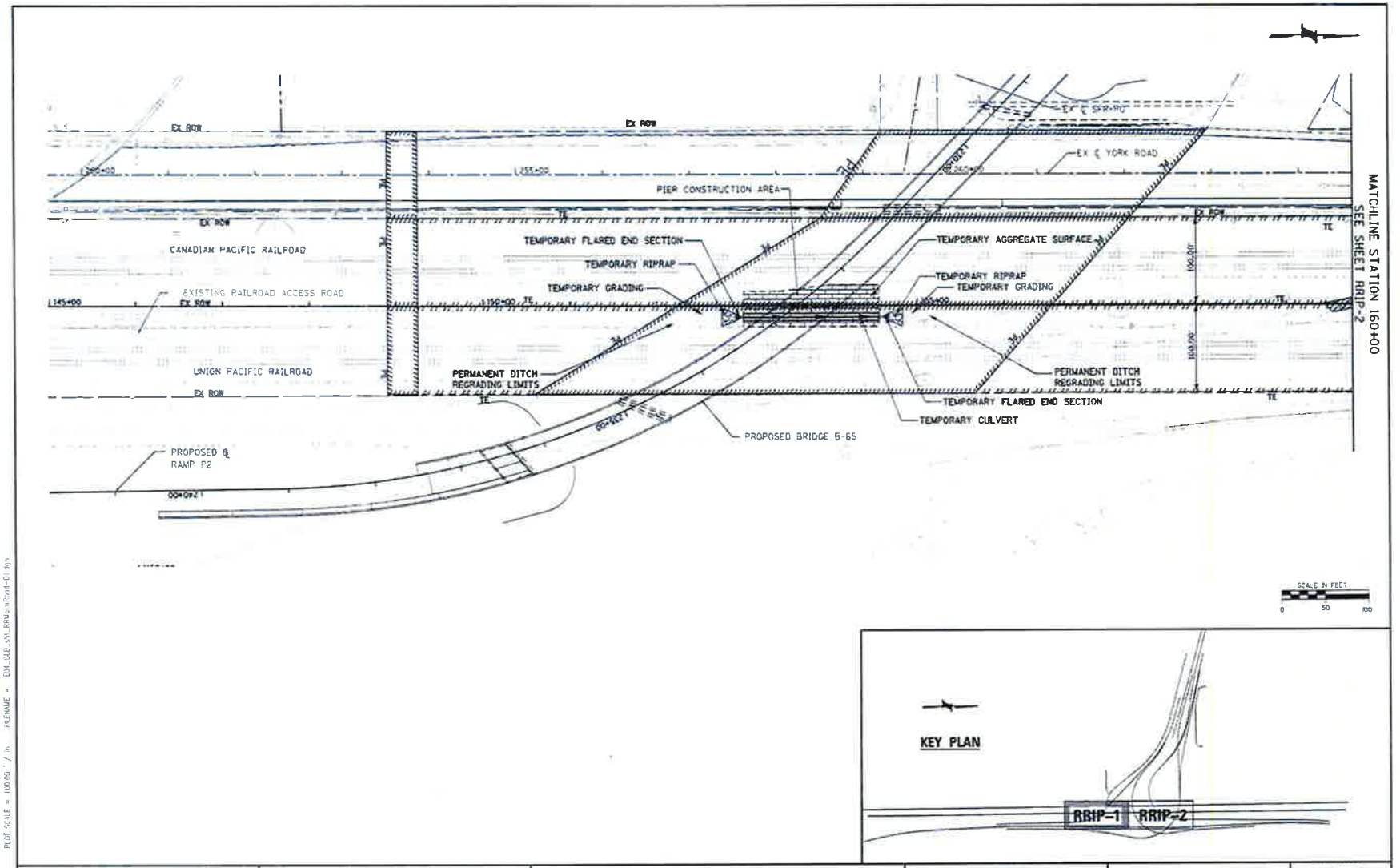
GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.69	ft
Critical Depth	0.27	ft
Channel Slope	0.00100	ft/ft



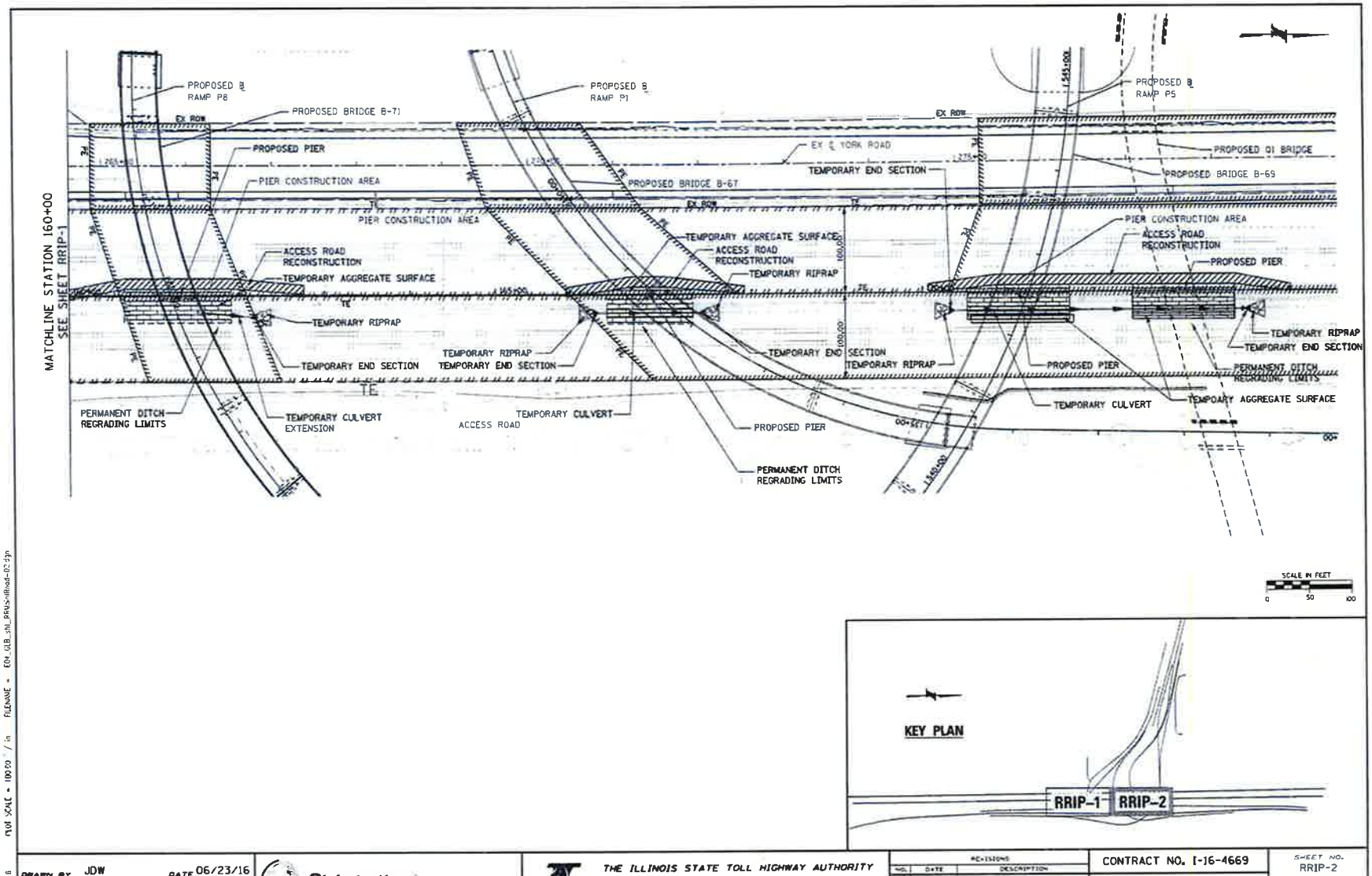
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Appendix



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CHECKED BY TW	DATE 06/23/16					



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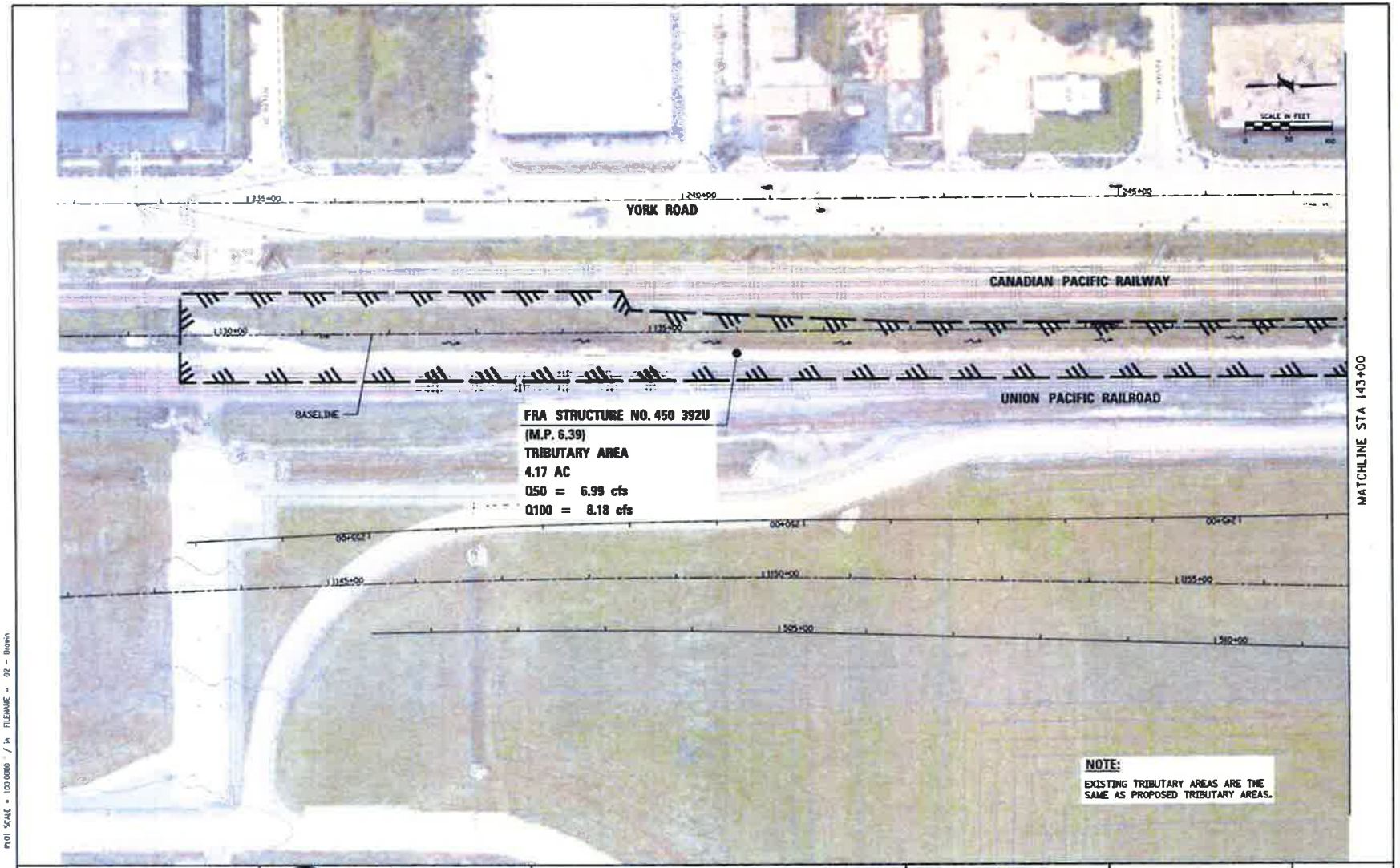
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CHECKED BY TW	DATE 06/23/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

SITE PLAN

SHEET NO. RRIP-2
DRAWING NO. 2 OF 2



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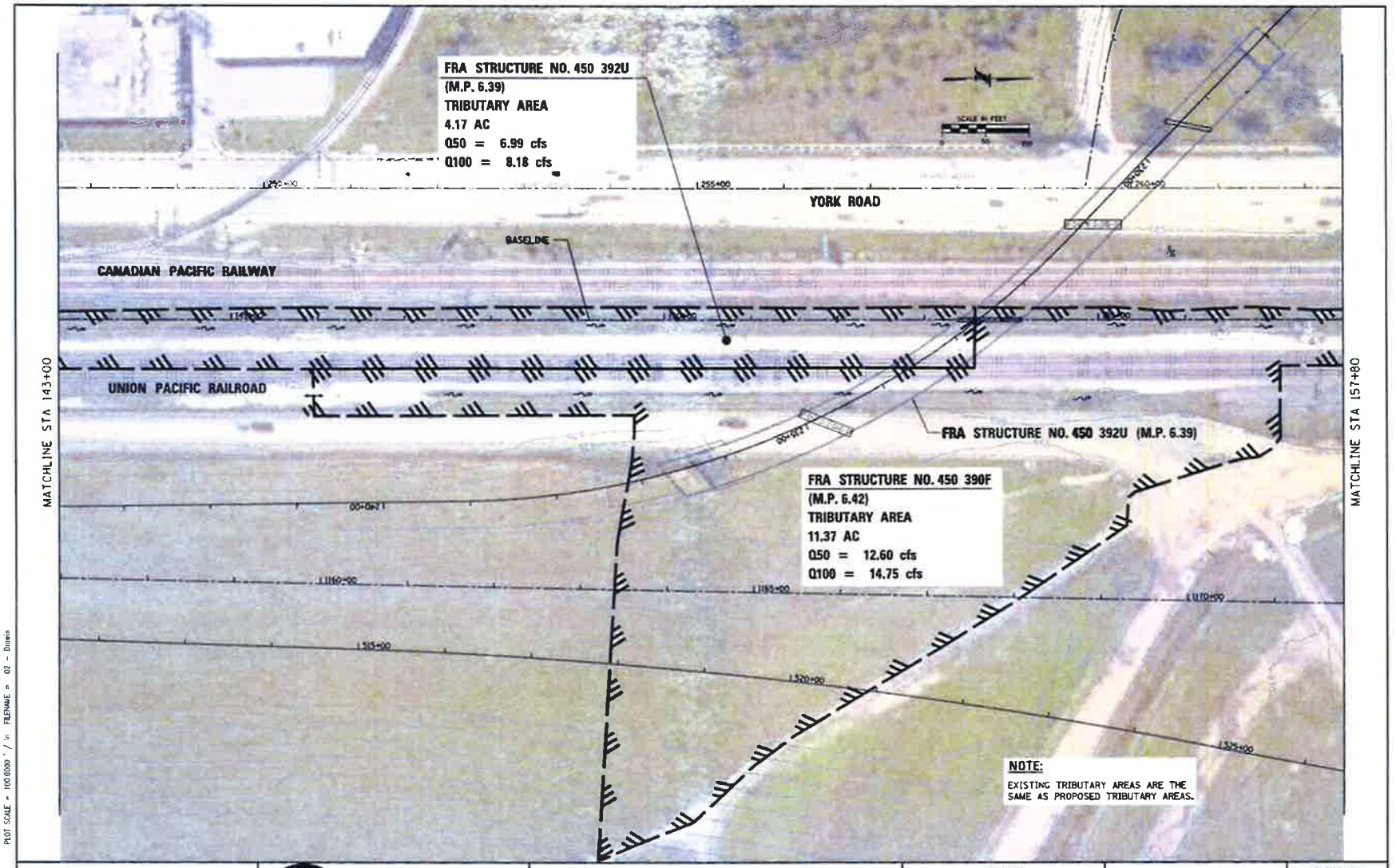
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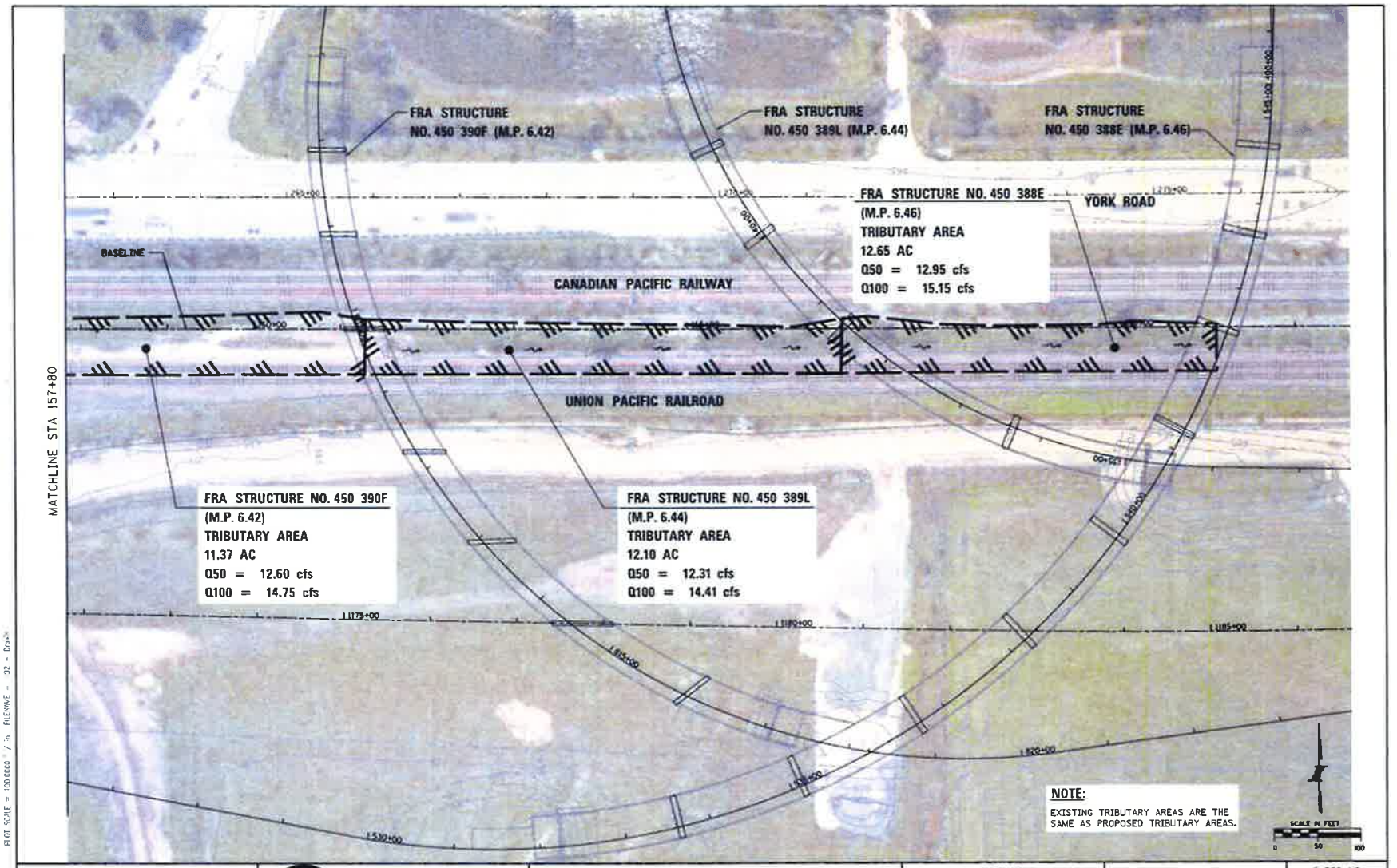
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RAILROAD DRAINAGE AREAS

SHEET NO. RR-1

DRAWING NO. 1 OF 3


FRA STRUCTURE NO. 450 392U
(M.P. 6.39)
TRIBUTARY AREA
4.17 AC
Q50 = 6.99 cfs
Q100 = 8.18 cfs
YORK ROAD
BASELINE
CANADIAN PACIFIC RAILWAY
UNION PACIFIC RAILROAD
MATCHLINE STA 143+00
MATCHLINE STA 157+80
FRA STRUCTURE NO. 450 392U (M.P. 6.39)
FRA STRUCTURE NO. 450 390F
(M.P. 6.42)
TRIBUTARY AREA
11.37 AC
Q50 = 12.60 cfs
Q100 = 14.75 cfs
NOTE:
EXISTING TRIBUTARY AREAS ARE THE SAME AS PROPOSED TRIBUTARY AREAS.
DRAWN BY TWK DATE 06-02-16
CHECKED BY KGF DATE 06-02-16
Stanley Consultants INC.
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
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Stanley Consultants INC.

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

RAILROAD DRAINAGE AREAS

SHEET NO. RR-3

DRAWING NO. 3 OF 3

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RUNOFF COEFFICIENTS

VALUES OF C - Runoff / Rainfall			RUNOFF COEFFICIENT *C*	
TYPE OF DRAINAGE AREA SURFACES			MIN.	MAX.
ROOFS, slag to metal			0.75	0.95
PAVEMENTS	Asphalt		0.70	0.95
	Concrete		0.80	0.95
	Gravel, from clean and loose to clayey and compact		0.25	0.70
R. R. YARDS			0.20	0.40
EARTH SURFACES	Sand, from uniform grain size, no fines to well graded, some clay or silt	Bare	0.15	0.50
		Light Vegetation	0.10	0.40
		Dense Vegetation	0.05	0.30
	Loam, from sandy or gravelly to clayey	Bare	0.20	0.60
		Light Vegetation	0.10	0.45
		Dense Vegetation	0.05	0.35
	Gravel, from clean gravel and gravel sand mixtures, no silt or clay to high clay or silt content	Bare	0.25	0.65
		Light Vegetation	0.15	0.50
		Dense Vegetation	0.10	0.40
	Clay, from coarse sandy or silty to pure colloidal clays	Bare	0.30	0.75
		Light Vegetation	0.20	0.60
		Dense Vegetation	0.15	0.50
COMPOSITE AREAS	City, business areas		0.70	0.95
	City, dense residential areas, vary as to soil & vegetation		0.50	0.65
	Suburban residential areas, vary as to soil & vegetation		0.35	0.55
	Rural districts, vary as to soil & vegetation		0.10	0.25
	Parks, Golf Courses, etc., vary as to soil & vegetation		0.10	0.35
LAWNS	Sandy soil, flat 2%		0.05	0.10
	Sandy soil, average 2% to 7%		0.10	0.15
	Sandy soil, steep, 7%		0.15	0.20
	Heavy soil, flat 2%		0.13	0.17
	Heavy soil, average, 2% to 7%		0.18	0.22
	Heavy soil, steep 7%		0.25	0.35

Note: Values of C for earth surfaces are further varied by degree of saturation, compaction, surface irregularity and slope, by character of subsoil, and by presence of frost or glazed snow or ice.

Table 4-102a

OVERLAND FLOW MANNING'S n VALUES
(For use with Kinematic Wave Equation)
(*Used to Calculate ONLY* t_{OF})

	Recommended Value	Range of Values
Concrete	.011	.01 - .013
Asphalt	.012	.01 - .015
Bare sand[a]	.010	.010 - .016
Graveled surface[a]	.012	.012 - .030
Bare clay-loam (eroded)[a]	.012	.012 - .033
Fallow (no residue)[b]	.05	.006 - .16
Chisel plow (E1/4 tons/acre residue)	.07	.006 - .17
Chisel plow (1/4 - 1 tons/acre residue)	.18	.07 - .34
Chisel plow (1 - 3 tons/acre residue)	.30	.19 - .47
Chisel plow (F3 tons/acre residue)	.40	.34 - .46
Disk/Harrow (1/4 tons acre residue)	.08	.008 - .41
Disk/Harrow (1/4 - 1 tons/acre residue)	.16	.10 - .25
Disk/Harrow (1 - 3 tons/acre residue)	.25	.14 - .53
Disk/Harrow (3 tons/acre residue)	.30	-- --
No till (1/4 tons/acre residue)	.04	.03 - .07
No till (1/4 - 1 tons/acre residue)	.07	.01 - .13
No till (1 - 3 tons/acre residue)	.30	.16 - .47
Plow (Fall)	.06	.02 - .10
Coulter	.10	.05 - .13
Range (natural)	.13	.01 - .32
Range (clipped)	.08	.02 - .24
Grass (bluegrass sod)	.45	.39 - .63
Short grass prairie[a]	.15	.10 - .20
Dense grass [c]	.24	.17 - .30
Bermudagrass[c]	.41	.30 - .48
Woods	.45	-- --

All values are from Engman (1983), unless noted otherwise.

[a]Woolhiser (1975).

[b]Fallow has been idle for one year and is fairly smooth.

[c]Palmer (1946). Weeping lovegrass, bluegrass, buffalo grass, blue gramma grass, native grass mix (OK), alfalfa, lespedeza.

Note: These values were determined specifically for overland flow conditions and is not appropriate for conventional open channel flow calculations. See Chapter 5 of this manual for open channel flow procedures.

Table 4-102b

Type of Channel and Description	Minimum	Normal	Maximum
1. Manmade			
a. Earth, straight and uniform			
1. Clean, recently completed	0.016	0.018	0.020
2. Clean, after weathering	0.018	0.022	0.025
3. Gravel, uniform section, clean	0.022	0.025	0.030
4. With short grass, few weeds	0.022	0.027	0.033
b. Earth, winding and sluggish			
1. No vegetation	0.023	0.025	0.030
2. Grass, some weeds	0.025	0.030	0.033
3. Dense weeds or aquatic plants in deep channels	0.030	0.035	0.040
4. Earth bottom and rubble sides	0.028	0.030	0.035
5. Stony bottom and weedy banks	0.025	0.035	0.040
6. Cobble bottom and clean sides	0.030	0.040	0.050
c. Dragline-excavated or dredged			
1. No vegetation	0.025	0.028	0.033
2. Light brush on banks	0.035	0.050	0.060
d. Rock cuts			
1. Smooth and uniform	0.025	0.035	0.040
2. Jagged and irregular	0.035	0.040	0.050
e. Channels not maintained, weeds and brush Uncut			
1. Dense weeds, high as flow depth	0.050	0.080	0.120
2. Clean bottom, brush on sides	0.040	0.050	0.080
3. Same, highest stage of flow	0.045	0.070	0.110
4. Dense brush, high stage	0.080	0.100	0.140
2. Flood plains			
a. Pasture, no brush			
1. Short grass	0.025	0.030	0.035
2. High grass	0.030	0.035	0.050
b. Cultivated areas			
1. No crop	0.020	0.030	0.040
2. Mature row crops	0.025	0.035	0.045
3. Mature field crops	0.030	0.040	0.050
c. Brush			
1. Scattered brush, heavy weeds	0.035	0.050	0.070
2. Light brush and trees, in winter	0.035	0.050	0.060
3. Light brush and trees, in summer	0.040	0.060	0.080
4. Medium to dense brush, in winter	0.045	0.070	0.110
5. Medium to dense brush, in summer	0.070	0.100	0.160
d. Trees			
1. Dense willows, summer, straight	0.110	0.150	0.200
2. Cleared land with tree stumps, no sprouts	0.030	0.040	0.050
3. Same as above, but with heavy growth of sprouts	0.050	0.060	0.080
4. Heavy stand of timber, a few down trees, little undergrowth, flood stage below branches	0.080	0.100	0.120

CLIMATIC SECTIONS IN ILLINOIS

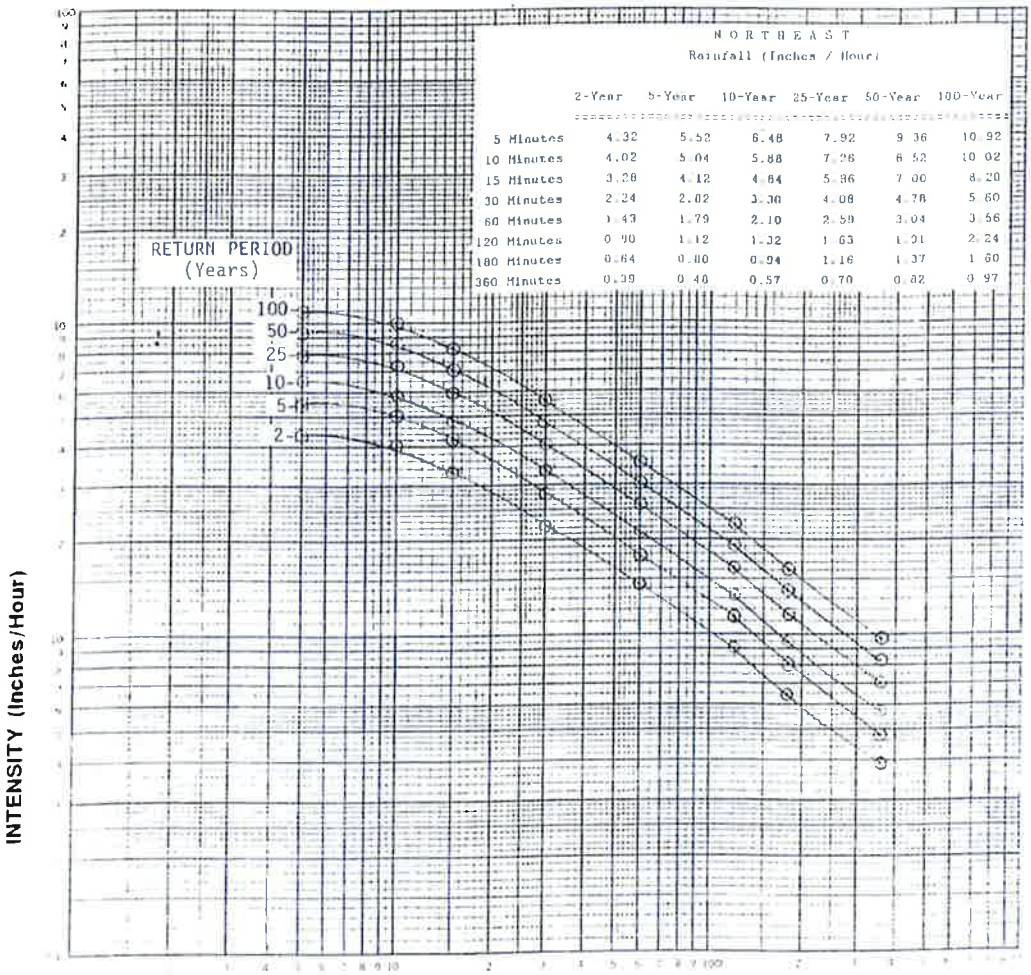


(Bulletin 70[5] pg. 17, Figure 7)
Figure 4-102a

RAINFALL INTENSITY vs. DURATION

NORTHEAST ILLINOIS

I.S.W.S. BULLETIN-70



DURATION (Minutes)

Figure 4-102c



VERIFIED STATEMENT OF PETER JOSEFCHAK

Midwest Freight Rail Leader

Stantec

EXHIBIT D-4



From: Peter.Josefchak@stantec.com
Sent: Wednesday, July 13, 2016 2:39 PM
To: Aaron.Chanowitz@ch2m.com; Benjamin.Ostermann@CH2M.com; Sarah.Archer@CH2M.com; l.martin@americansurvey.com; mnashif@getipass.com; Marilynn.Vanella@ch2m.com
Subject: Fwd: APPROVED - Proposed new overhead structure - I-390 (Illinois Tollway) - Elk Grove Village, IL - MP 6.42 Milwaukee Subdivision - DOT # 450 390F (pending) [EXTERNAL]

Fourth one

Sent from Peter's iPhone

Begin forwarded message:

> **From:** "John N. Venice" <JNVENICE@UP.COM>
> **To:** "Josefchak, Peter" <Peter.Josefchak@stantec.com>
> **Subject: APPROVED - Proposed new overhead structure - I-390 (Illinois Tollway) - Elk Grove Village, IL - MP 6.42 Milwaukee Subdivision - DOT # 450 390F (pending)**

From: Josefchak, Peter
Sent: Wednesday, July 06, 2016 10:09 AM
To: jnvenice@up.com
Subject: FW: (FRA 450 390F) EOWA Tollway Design Contract I-13-4622; Construction Contract I-16-4669 Proposed Overhead Structure – New Construction Tollway Structure Number 1652 (Ramp P8) over UPRR and CPR - UPRR 30% Design Submittal

Here is 4 of 4 showing referenced structure number in header.

Peter Josefchak
Freight Rail Leader
Stantec
135 South LaSalle Street Suite 3100 Chicago IL 60603-4139
Phone: (312) 262-2285
Cell: (312) 369-9326
Peter.Josefchak@stantec.com



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Please consider the environment before printing this email.

From: Marilynn.Vanella@ch2m.com [mailto:Marilynn.Vanella@ch2m.com]
Sent: Tuesday, July 05, 2016 6:52 PM
To: Josefchak, Peter

Cc: Aaron.Chanowitz@ch2m.com; Jason.Moller@CH2M.com; mnashif@getipass.com
Subject: EOWA Tollway Design Contract I-13-4622; Construction Contract I-16-4669 Proposed Overhead Structure – New Construction Tollway Structure Number 1652 (Ramp P8) over UPRR and CPR - UPRR 30% Design Submittal

Transmittal 4 of 4

Peter –

On behalf of the Tollway/Manar Nashif and in accordance with the *Union Pacific Railroad – BNSF Guidelines For Railroad Grade Separation Projects*, please find attached the electronic copies (in PDF format) of the following documents for the above referenced new overhead structure for UPRR review and comment via Tollway Transmittal Letter.

1. Design Plans showing plan view, elevation view, typical section and railroad profile diagram. Applicable notes per UPRR Guidelines Plan No. 711100, sheet 3 have been included on the plans.
2. Project specifications including railroad coordination requirements.
3. Drainage Report and Plan.
4. Construction phasing plans showing required phasing, construction procedures, controlling dimensions and elevations.

There are four structures in total, each packaged separately. Should you have any questions or need further information, please contact Manar Nashif directly at (630) 241-6800 ext 3841 or via e mail at mnashif@getipass.com

Respectfully,

Marilynn Vanella
Program Controls Coordinator
D 1 773 458 2814

CH2M Team
8735 West Higgins Road
Suite 400
Chicago, IL 60631
mvanella@ch2m.com
www.ch2m.com

July 5, 2016

Mr. John Venice
Manager Special Projects
Union Pacific Railroad
101 North Wacker Drive
Chicago, IL 60606

Re: Tollway Design Contract I-13-4622; Construction Contract I-16-4669
Elgin O'Hare Western Access (EOWA) Project
Proposed Overhead Structure – New Construction
Tollway Structure Number 1652 (Ramp P8) over UPRR and CPR
UPRR-Milwaukee Subdidivison (M.P. 6.42)
Bensenville, Il – DuPage County
30% Design Submittal

Dear Mr. Venice:

The Illinois Tollway is continuing with design development for the Elgin O'Hare Western Access (EOWA). The EOWA Project includes the construction of a new, all electronic Tollway around the western border of O'Hare International Airport (O'Hare) linking the Jane Addams Memorial Tollway (I-90) and the Tri-State Tollway (I-294), as well as the extending Illinois Route 390 (formerly the Elgin O'Hare Expressway) east along Thorndale Avenue to O'Hare Airport and rehabilitating and widening of the existing Illinois Route 390.

In accordance with the *Union Pacific Railroad – BNSF Guidelines For Railroad Grade Separation Projects,* hereinafter referred to as "UPRR Guidelines", enclosed herewith, for your review and comment, are electronic copies (in PDF format) of the following for the above referenced new overhead structure:

1. Design Plans showing plan view, elevation view, typical section and railroad profile diagram. Applicable notes per UPRR Guidelines Plan No. 711100, sheet 3 have been included on the plans.
2. Project specifications including railroad coordination requirements.
3. Drainage Report and Plan.
4. Construction phasing plans showing required phasing, construction procedures, controlling dimensions and elevations.

The Tollway understands and confirms the following:

- The executed Construction and Maintenance Agreement shall be provided to the Tollway's Construction Contractor and the Contractor will be required to comply with the terms and conditions in conjunction with the construction of the structure.
- The proposed overhead structure is being designed such that construction and maintenance of the structure will cause no interruption to Railroad operations during and after construction.
- The construction of the structure cannot begin until the UPRR has approved the 100% submittal for the structure, the Contractor has secured a right of entry agreement and the Tollway and UPRR have executed a Construction and Maintenance Agreement. The Contractor will be required to carry Railroad Protective Liability Insurance in accordance with UPRR requirements.
- The Tollway will own and maintain the structure crossing over UPRR in its entirety.
- The Tollway is proposing an overhead structure in order to not cause an impact to Railroad Operations.
- Temporary shoring, as necessary, will be required to be in accordance with UPRR Railroad Guidelines for Temporary Shoring.
- Erection over the Railroad right of way will be planned to cause no interruption to Railroad Operations.
- The Tollway will coordinate with all utility companies and make arrangements with utility companies for installation, relocation or protection of their respective facilities in conjunction with the project construction.

In accordance with the UPRR Guidelines, the Tollway respectfully requests your response 4 weeks after the submittal is received by the appropriate reviewing parties. Thank you for your assistance.

If you have any technical questions regarding the contents of the submittal, please contact Peter Josefchak at (312) 262-2285 or via email at peter.josefchak@stantec.com. Peter is part of the Design Section Engineering Team for the EOWA Project. If you have any other questions or need further information, please contact me at (630) 241-6800 ext 3841 or via email at mnashif@getipass.com. We appreciate your cooperation and look forward to working with you as we move forward with the project.

Sincerely,

Manar Nashif, P.E.
Senior Project Engineer

CC: Rocco Zucchero – Tollway, Lidia Pilecky – CH2M, Aaron Chanowitz – CH2M, Jason Moller – CH2M, Peter Josefchak – Stantec, Paul Bobby - STV

02.4622.07.07
LT_Tollway_MN_4669-30percent-Plans- SN1652-RampP8-UPRR_07052016

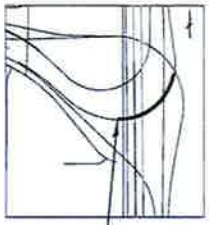
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I–13–4622
TOLLWAY CONSTRUCTION CONTRACT I–16–4669

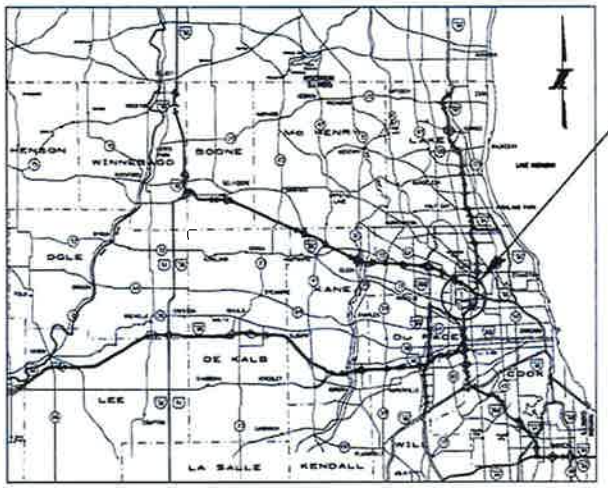
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

FRA STRUCTURE NO. 450 390F
TOLLWAY STRUCTURE NO. 1652
IDOT STRUCTURE NO. 022–9508

RAMP P8 OVER UPRR – MILWAUKEE SUBDIVISION (M.P. 6.42)
BENSENVILLE, IL – DUPAGE COUNTY



RAMP P8 BRIDGE CONSTRUCTION
SN 450 390F (FRA)
SN 1652 (TOLLWAY)
SN 022-9508 (IDOT)



LOCATION MAP

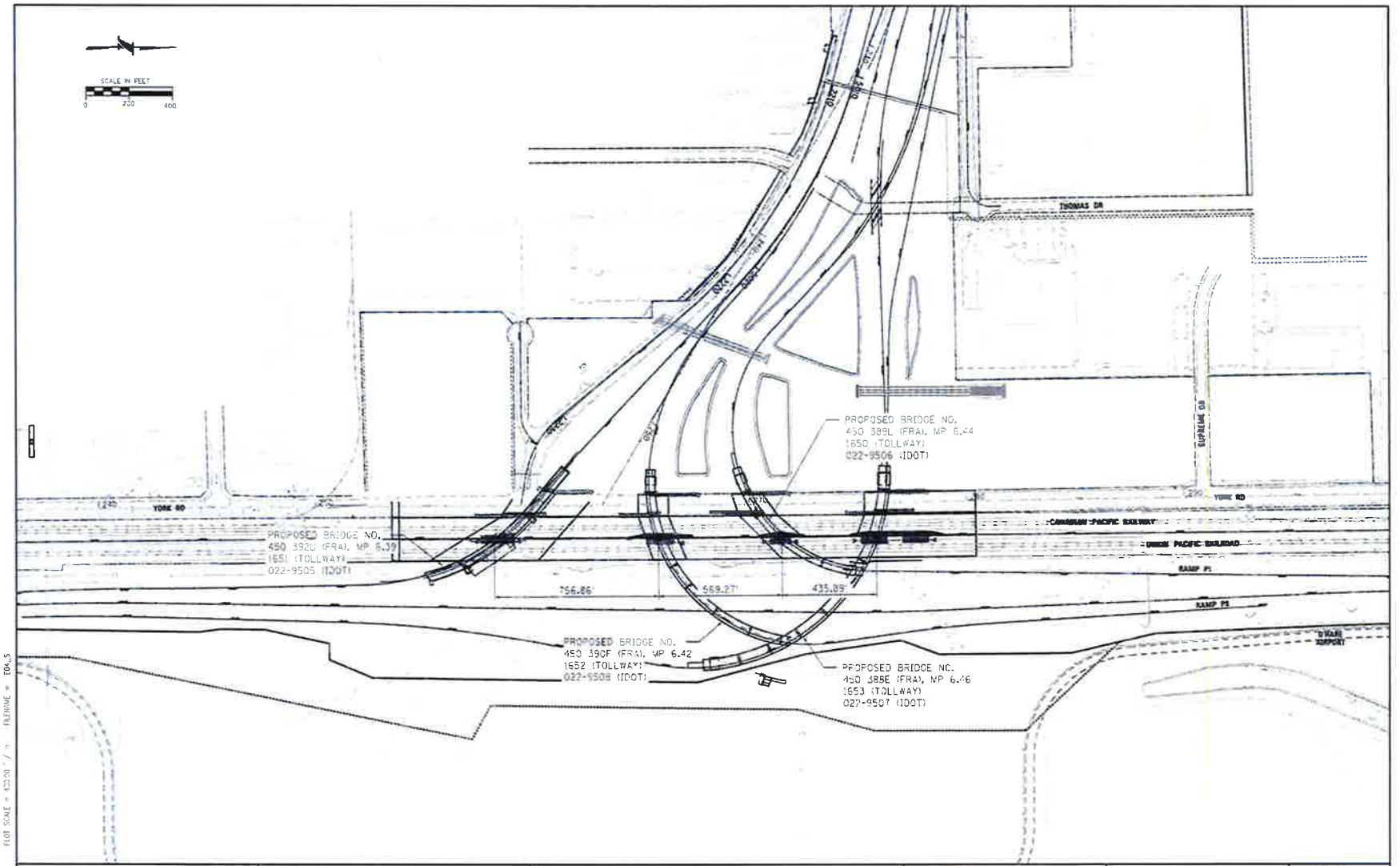
INDEX OF DRAWINGS:

DRAWING NO.	SHEET NO.	DESCRIPTION
2	SCH-1	PROJECT SCHEMATIC
3-4	RRIP-1 - RRIP-2	SITE PLAN
5	SC-01	GENERAL PLAN AND ELEVATION
6-7	SC-02 - SC-03	DETAILS
8-10	RPGD-01 - RPGD-03	RAILROAD PROFILE GRADE DIAGRAM
11-15	PH-01 - PH-05	CONSTRUCTION PHASING PLANS
16	XSC-1	CROSS SECTIONS TEMPORARY IMPROVEMENTS
17	XSC-2	CROSS SECTIONS PERMANENT IMPROVEMENTS

30% SUBMITTAL
JUNE 24, 2016

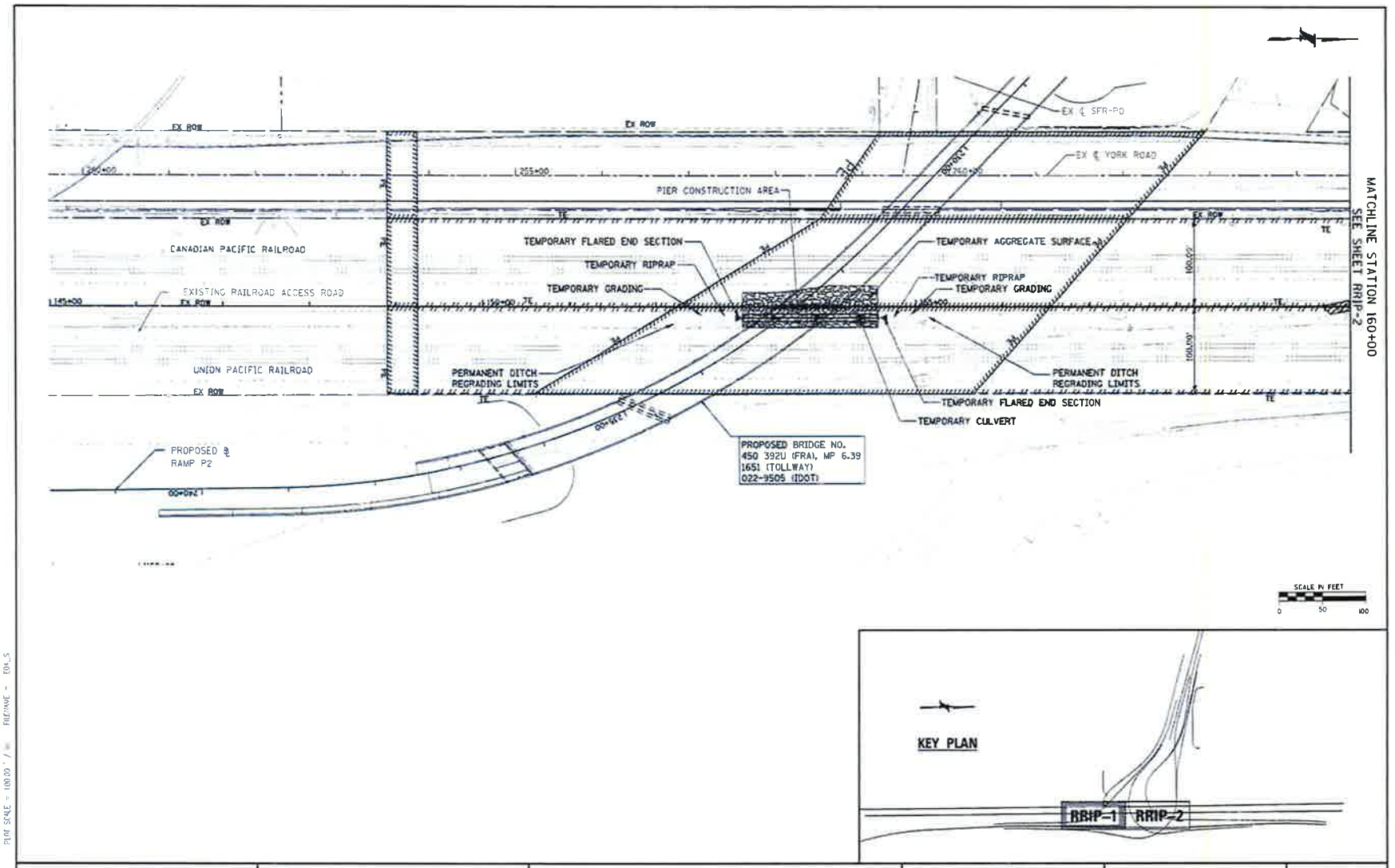
Stanley Consultants Inc.
Globetrotters Engineering Corporation
URS

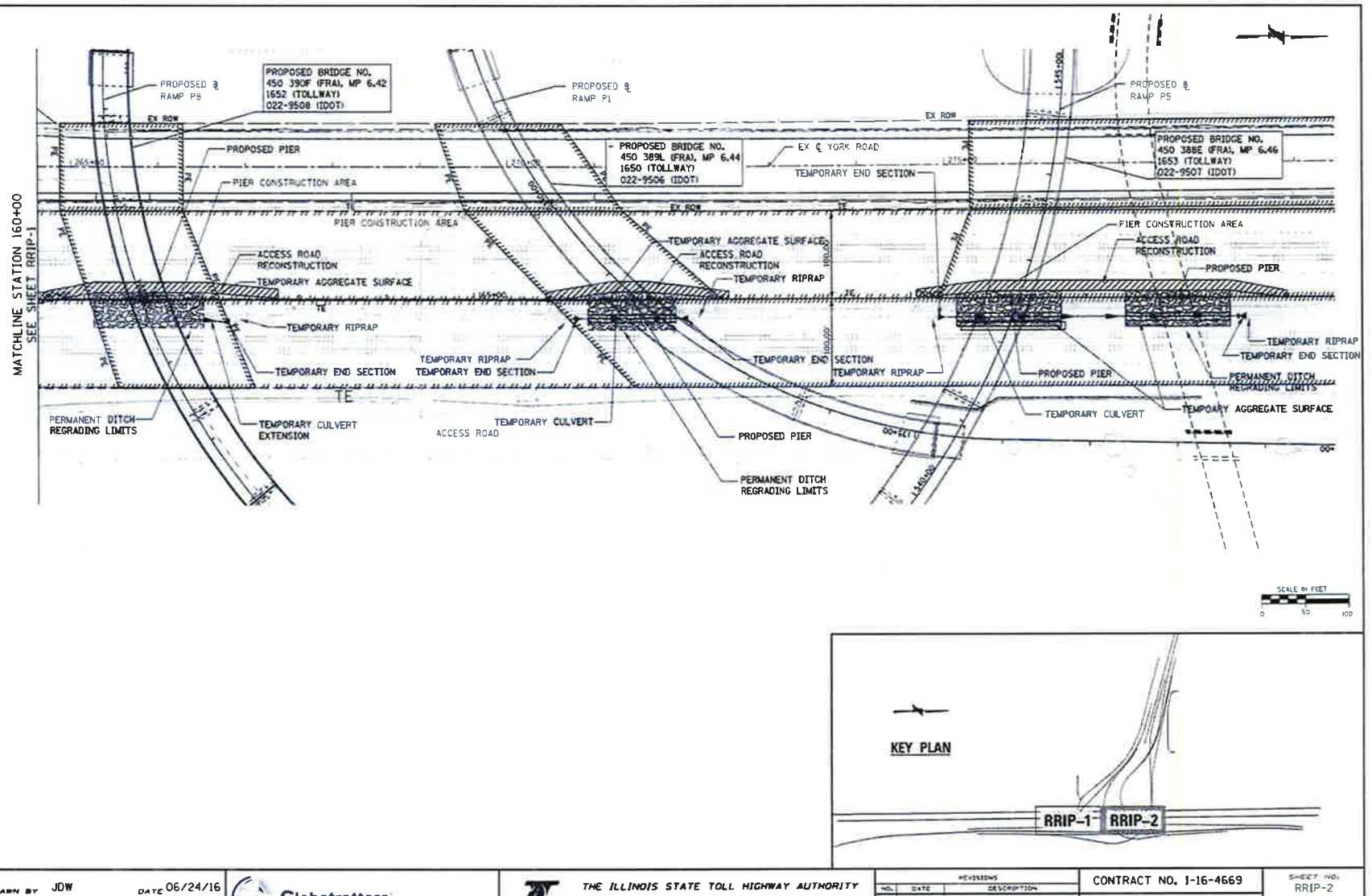
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CHECKED BY TW	DATE 06/24/16					


EX ROW
EX ℄ SFR-PD
EX ℄ YORK ROAD
PIER CONSTRUCTION AREA
CANADIAN PACIFIC RAILROAD
EXISTING RAILROAD ACCESS ROAD
UNION PACIFIC RAILROAD
TEMPORARY FLARED END SECTION
TEMPORARY RIPRAP
TEMPORARY GRADING
TEMPORARY AGGREGATE SURFACE
PERMANENT DITCH REGRADING LIMITS
TEMPORARY CULVERT
PROPOSED BRIDGE NO. 450 392U (FRA), MP 6.39 1651 (TOLLWAY) 022-9505 (IDOT)
PROPOSED ℄ RAMP P2
MATCHLINE STATION 160+00
SEE SHEET RRIP-2
SCALE IN FEET
0
50
100
KEY PLAN
RRIP-1
RRIP-2
DRAWN BY JDW
DATE 06/24/16
CHECKED BY TW
DATE 06/24/16
Globetrotters Engineering Corporation
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
SITE PLAN
SHEET NO. RRIP-1
DRAWING NO. 3 OF 17



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DRAWN BY JDW	DATE 06/24/16	Globetrotters Engineering Corporation	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY TW	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

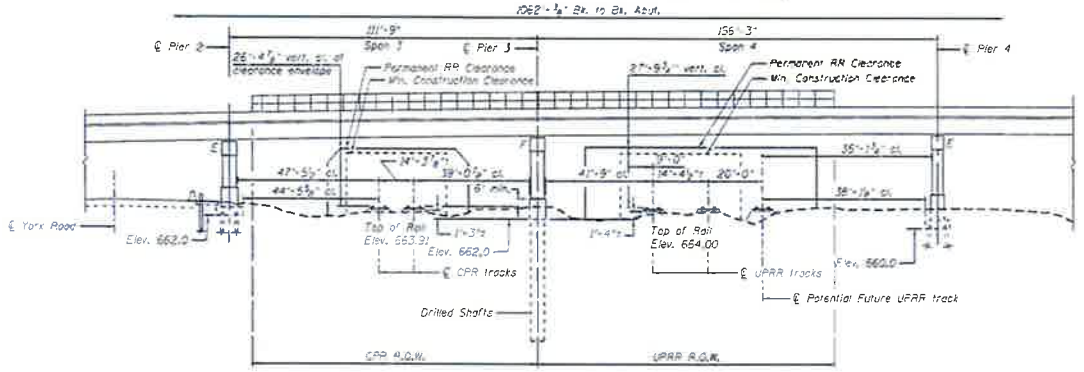
SITE PLAN

SHEET NO. RRIP-2
DRAWING NO. 4 OF 17

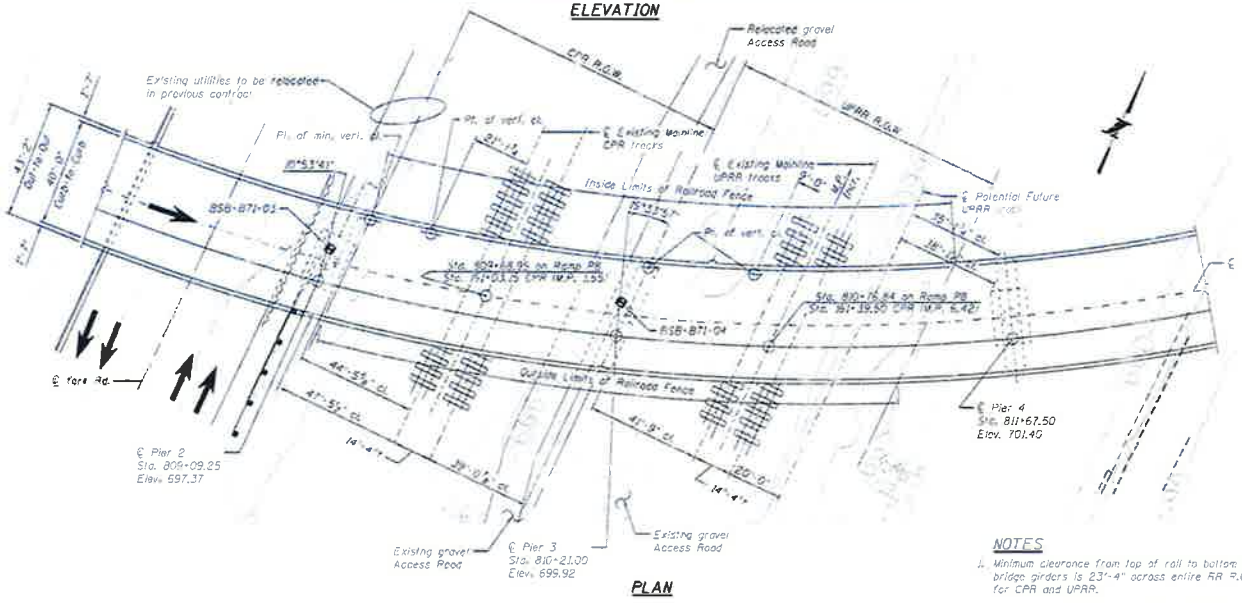
Benchmark: Railroad spike in east face of utility pole. Located approximately 42' west of York Rd. and approximately 44' south of Beeline Dr., Sta. 279+64, Elevation=664.66 (NAVD 88)

Existing Structure: None

Proposed Structure: The proposed structure is an 8-span ramp structure from EB Elgin O'Hare (I-390) over York Road, Canadian Pacific Railway, and Union Pacific Railroad. Future ramps OS and OT, and I-490 to NB I-490. The superstructure consists of 60" web welded continuous plate girders supporting a reinforced concrete deck. Superstructure is supported by pile-supported stub abutments, multi-column piers supported by drilled shafts at Pier 3 (located on railroad R.O.W.) and by steel H-Piles elsewhere.



ELEVATION



PLAN

CONSTRUCTION NOTES

1. All demolition within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall comply with the Railroad's Demolition requirements.
2. Erection over the Railroad right-of-way shall be designed to cause no interruption to all Railroad operations, except upon mutual agreed upon track outages to allow girder erection. Prior to the release of Railroad traffic, components erected over Railroad tracks must be supported by falsework or permanent substructure, must be secured and stable and must not be supported by cranes or other construction equipment.
3. The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad prior to construction.
4. The proposed grade separation project shall not change the quantity and/or characteristics of the flow in the Railroad ditches and/or drainage structures.
5. The contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad prior to beginning any grading on the project site.
6. For Railroad coordination please refer to the Railroad's Coordination Requirements as part of the Specifications or Special Provisions of the project.
7. Temporary Construction Clearances, including falsework clearances, shall comply with Minimum Construction Clearance Envelopes shown on Sheet 2.
8. All permanent clearances shall be verified before project closeout.
9. Call the following number at least 48 hours prior to commencing work to determine location of fiber optics: UPRR "Call Before You Dig", 1-800-336-9193.

LEGEND

- Soil Borings
- Existing Electric
- Existing Fiber Optic
- Existing Gas
- Existing Aerial Line

NOTES

1. Minimum clearance from top of rail to bottom of bridge girders is 23'-4" across entire RR R.O.W. for CPR and UPRR.

GENERAL PLAN AND ELEVATION
UPRR - MILWAUKEE SUBDIVISION (M.P. 6.42)
CPR - C&M SUBDIVISION (M.P. 1.55)
BENSENVILLE, IL
DUPAGE COUNTY
IL-390 RAMP P8 OVER
YORK RD, CPR, UPRR, & I-490
41°58'40"N, 87°56'20"W

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CHECKED BY	AMK	DATE	06/24/16

URS — 303 E. WACKER DR. SUITE 1100 CHICAGO IL 60601 TEL 1(312)-373-7700 FAX 1(312)-373-6800

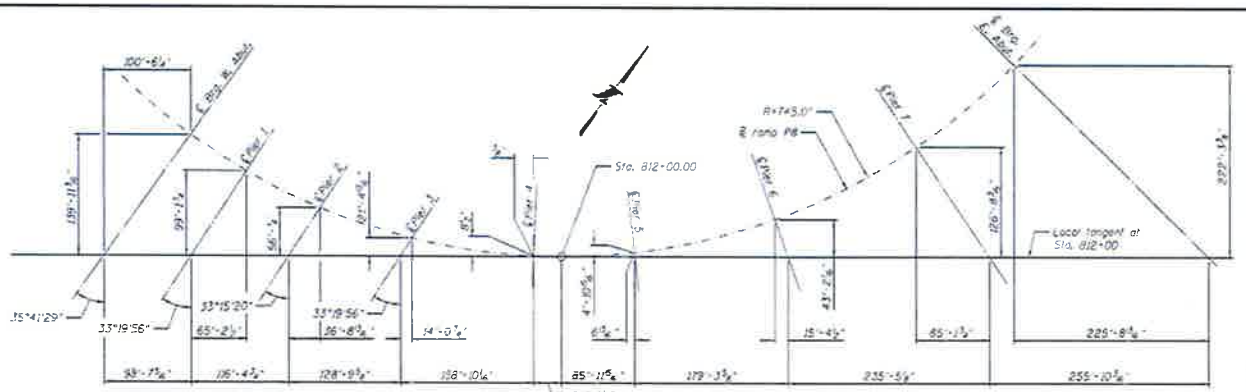
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

BRIDGE NO. 450 390F (FRA) (1652)(TOLLWAY), 022-9508(IDOT)
GENERAL PLAN AND ELEVATION

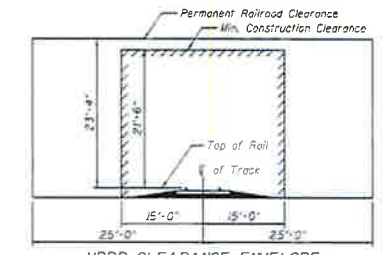
SHEET NO. SC-01
DRAWING NO. 5 OF 17



OFFSET SKETCH

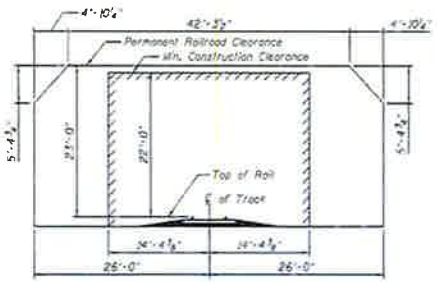
(Curve 127)

Substructures are radial to ℄ ramp PB unless otherwise noted with an angular dimension



UPRR CLEARANCE ENVELOPE

(Normal to Railroad)



CPR CLEARANCE ENVELOPE

(Normal to Railroad)

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2016 Interims.
2016 Illinois State Toll Highway Authority Structure Design Manual
2012 Illinois Department of Transportation Bridge Manual
2016 Tollway Geotechnical Engineers Manual

HIGHWAY CLASSIFICATION

Route: Elgin O'Hare Western Access Tollway Ramp PB
Functional Class: Non-Interstate Expressway Ramp
ADT (Future) : 13,300 (2030)
ADTT (Future) : 1,064 (2030)
DHV (Future) : 1,050 (2030)
Design Speed: 45 m.p.h.
Posted Speed: 40 m.p.h.

CONSTRUCTION SPECIFICATIONS

Tollway Supplemental Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Issued April 1, 2016.

Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Adopted April 1, 2016.

Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions Adopted April 1, 2016

Illinois Department of Transportation Guide Bridge Special Provisions (GBSP'S)

DESIGN CRITERIA

LOADING HL-93 AND IL-120

Allow 50#/sq. ft. for future wearing surface.



IL-120 DESIGN TRUCK

LIVE LOADING DEFLECTION CRITERIA

Span Length/800

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.085g
Design Spectral Acceleration at 0.2 sec. (SDS) =0.148g
Soil Site Class = D

DESIGN STRESSES

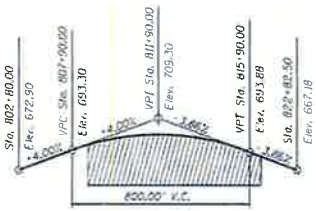
FIELD UNITS

f'c = 3,500 psi (Class SI-Substructure and Concrete Fad)
f'c = 4,000 psi (Class BS-Parapets)
f'c = 4,000 psi (Performance Mix-Bridge Deck, Approach Slabs, and Diaphragms)
fy = 50,000 psi (Structural Steel-M270 Grade 50)
fy = 60,000 psi (Reinforcement)

CURVE DATA

(Curve 127)

P.I. Sta. = 816+38.92
Δ = 104°08'19.75"
D = 7°41'26.55"
R = 745.00
T = 955.94
L = 1,354.09
E = 466.96
P.C. Sta. = 805+82.98
P.T. Sta. = 820+37.07
S.E. = 6.0%



PROFILE GRADE RAMP P8

Along ℄ Roadway



TOP OF RAIL ELEVATIONS - CPR

(High Track)



TOP OF RAIL ELEVATIONS - UPRR

(High Track)

DRAWN BY	KMP	DATE	06/24/16
CHECKED BY	AMK	DATE	06/24/16

URS
303 E. WACKER DR.
SUITE 1400
CHICAGO IL. 60601
TEL (312)-373-7700
FAX (312)-373-6800

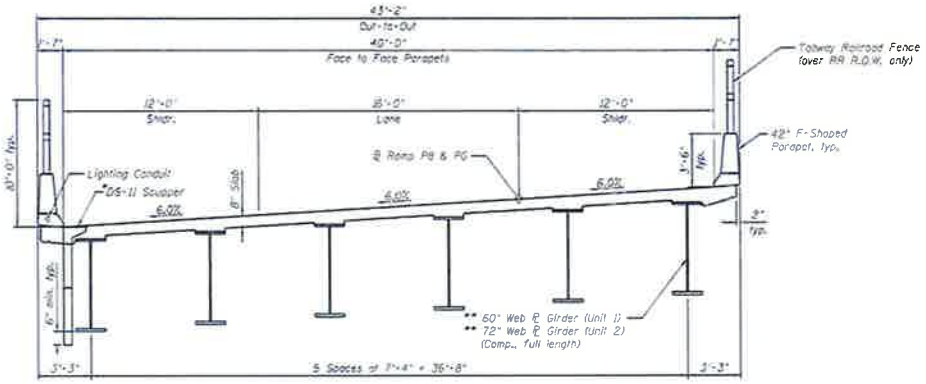
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669
BRIDGE NO. 450 390F (FRA) 1652(TOLLWAY), 022-9508(IDOT)
DETAILS 1

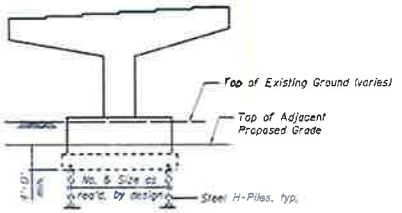
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DRAWING NO. 6 OF 17

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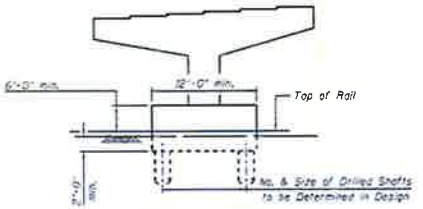


TYPICAL SECTION
(Looking East)

* Scuppers not located in spans over RR
** Subject to refinement during final design



PIERS 2 & 4 SKETCH
(Looking East)



PIER 3 SKETCH
(Looking East)

NOTES:
Pier dimensions to be determined during final design.

4669_DRG_SC1.tbl
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DRAWN BY	KMP	DATE	06/24/16
CHECKED BY	AMK	DATE	06/24/16

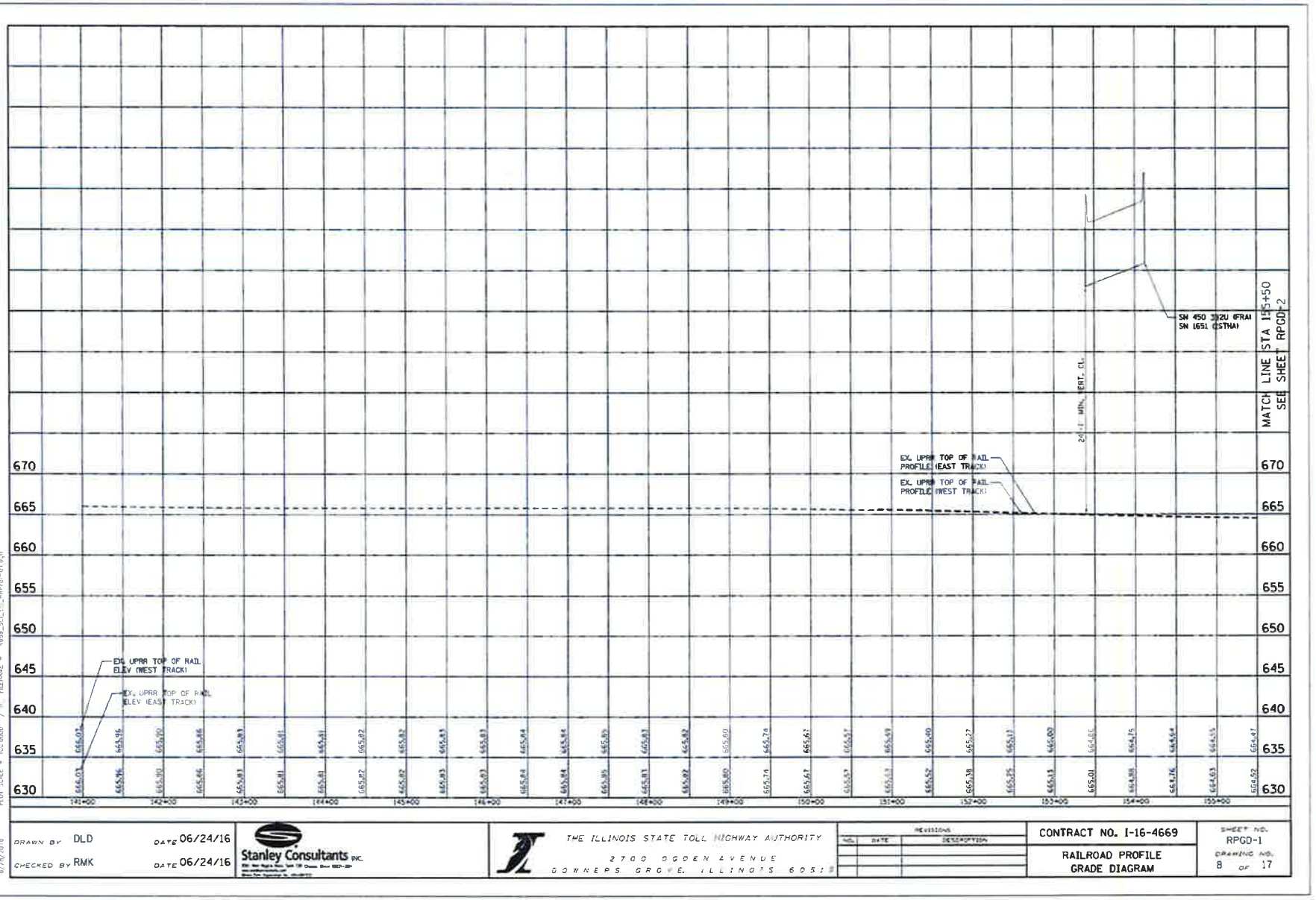
URS
303 E. WACKER DR.
SUITE 1100
CHICAGO IL. 60601
TEL (312)-373-7700
FAX (312)-373-6800

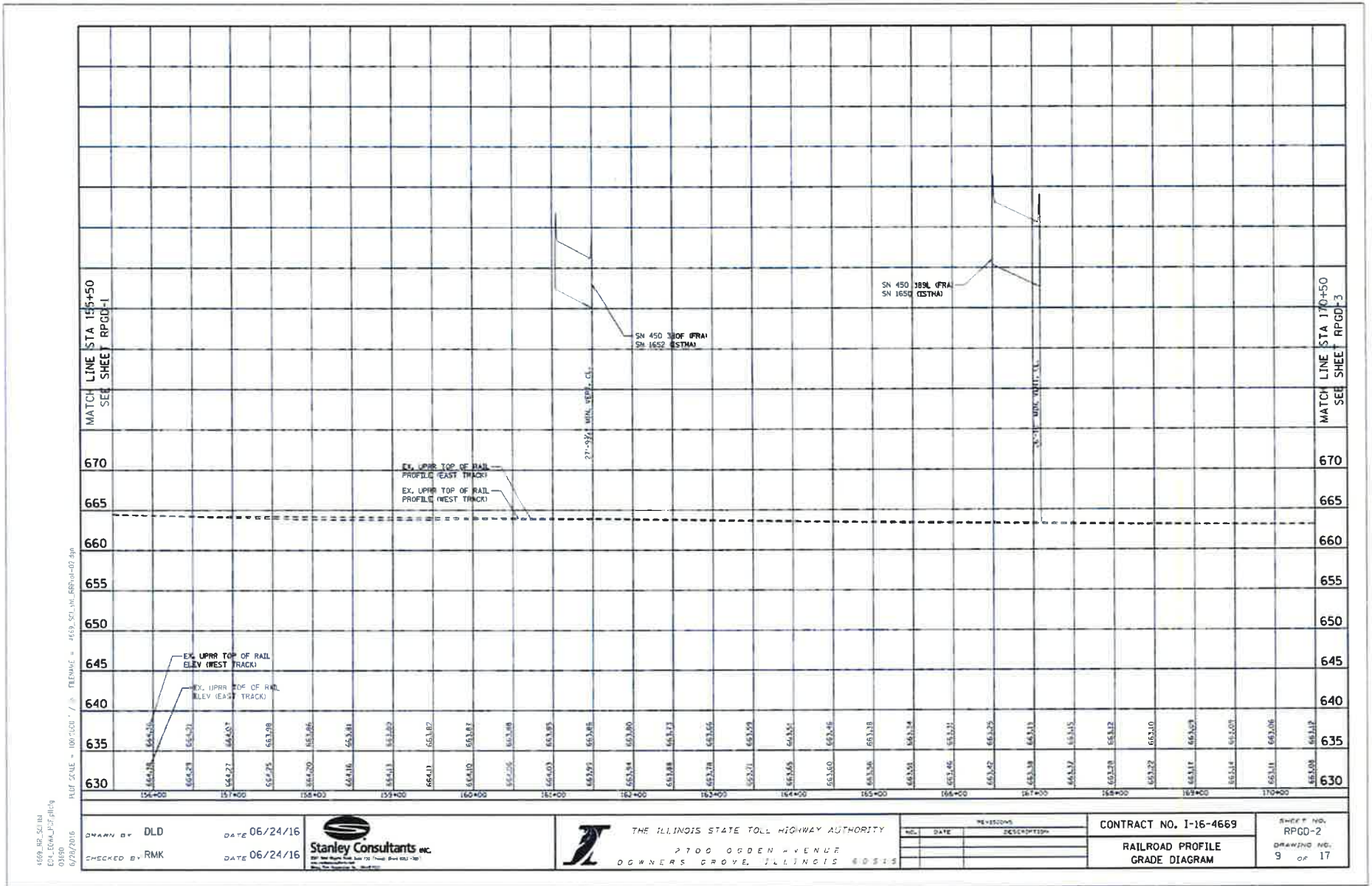
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669
BRIDGE NO. 450 390F (FRA) 1652(TOLLWAY), 022-9508(IDOT)
GENERAL DETAILS

SHEET NO. SC-03
DRAWING NO. 7 OF 17


EX. UPRR TOP OF RAIL ELEV (WEST TRACK)
EX. UPRR TOP OF RAIL ELEV (EAST TRACK)
EX. UPRR TOP OF RAIL PROFILE (EAST TRACK)
EX. UPRR TOP OF RAIL PROFILE (WEST TRACK)
24'-1" MIN. TENT. CL.
SN 450 3012U (FRA)
SN 1651 (STHA)
MATCH LINE STA 155+50
SEE SHEET RPGD-2
670
665
660
655
650
645
640
635
630
141+00
142+00
143+00
144+00
145+00
146+00
147+00
148+00
149+00
150+00
151+00
152+00
153+00
154+00
155+00
DRAWN BY DLD
DATE 06/24/16
CHECKED BY RMK
DATE 06/24/16
Stanley Consultants INC.
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
RAILROAD PROFILE
GRADE DIAGRAM
SHEET NO.
RPGD-1
DRAWING NO.
8 OF 17
4669_DR_SD1st
E04_EOWA_PRF.pltg
03650
6/28/2016
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4669_RR_Sht1bl
EO4_EDMA_JP_SF_plt.cfg
03690
6/28/2016

HOR SCALE = 100'/INCH / VERT SCALE = 10'/INCH FILENAME = 4669_SCI_sht_RRProf-02.dgn

DRAWN BY DLD DATE 06/24/16
CHECKED BY RMK DATE 06/24/16

Stanley Consultants inc.

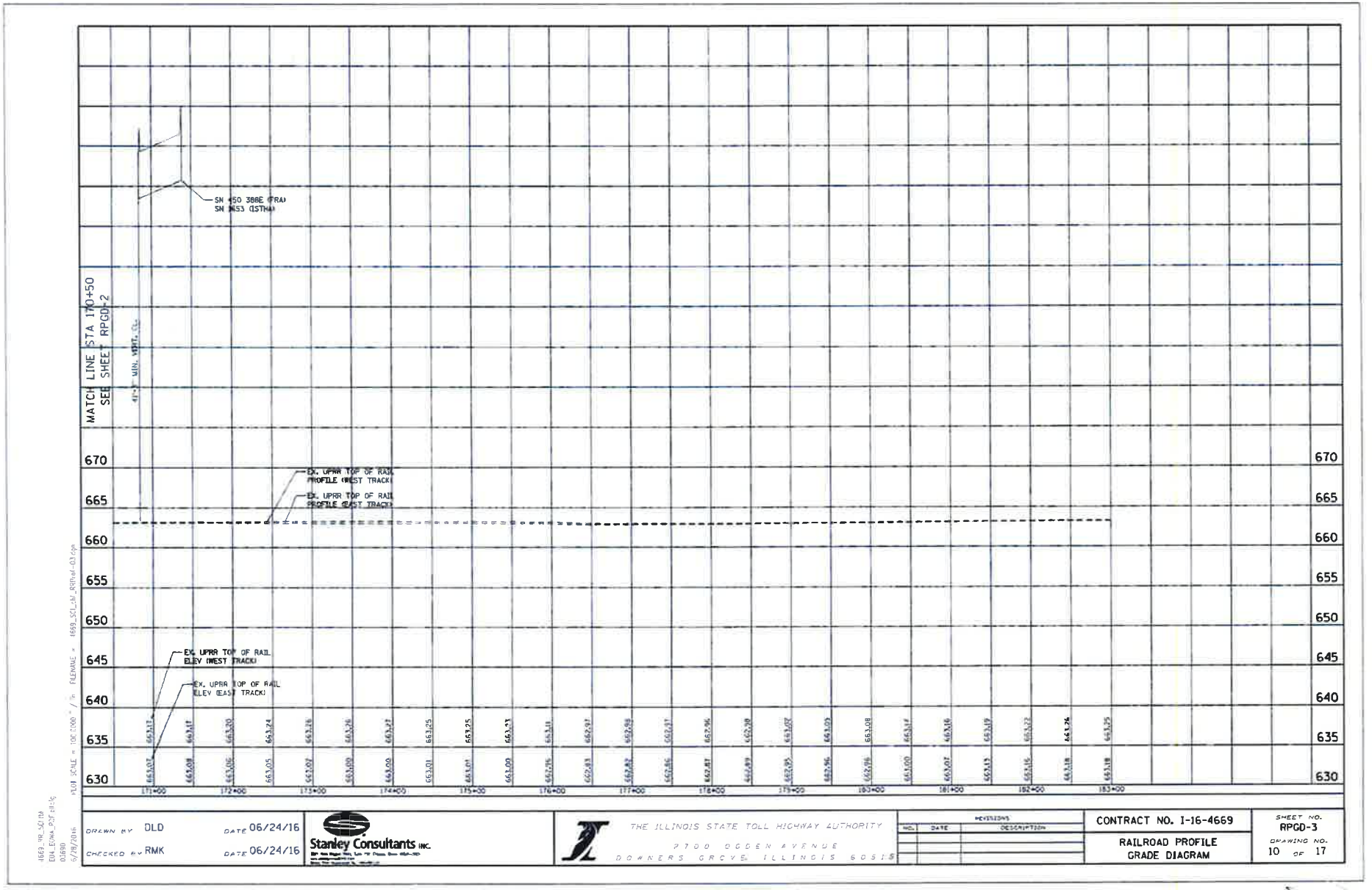
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

RAILROAD PROFILE
GRADE DIAGRAM

SHEET NO. RPGD-2
DRAWING NO. 9 OF 17



DRAWN BY DLD DATE 06/24/16

CHECKED BY RMK DATE 06/24/16

Stanley Consultants INC.

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

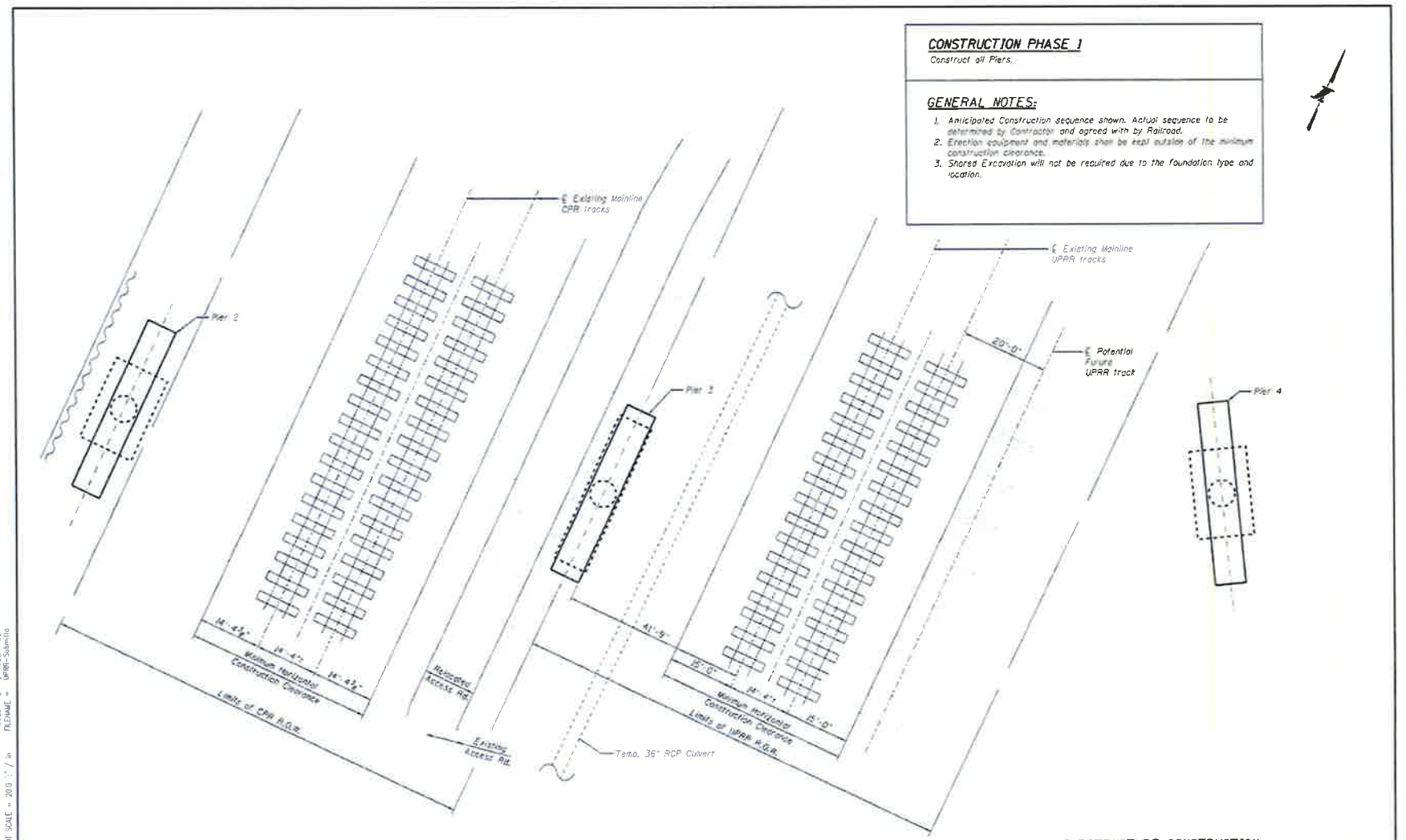
CONTRACT NO. I-16-4669

RAILROAD PROFILE
GRADE DIAGRAM

SHEET NO. RPGD-3

DRAWING NO. 10 OF 17

Exh. D - Page 220


CONSTRUCTION PHASE 1
Construct all Piers.
GENERAL NOTES:
1. Anticipated Construction sequence shown. Actual sequence to be determined by Contractor and agreed with by Railroad.
2. Erection equipment and materials shall be kept outside of the minimum construction clearance.
3. Shored Excavation will not be required due to the foundation type and location.
℄ Existing Mainline CPR tracks
℄ Existing Mainline UPRR tracks
Pier 2
Pier 3
Pier 4
20'-0"
℄ Potential Future UPRR track
14'-4½"
14'-4"
14'-4½"
Minimum Horizontal Construction Clearance
Limit of CPR R.O.W.
Relocated Access Rd.
Existing Access Rd.
41'-5"
15'-0"
34'-4"
15'-0"
Minimum Horizontal Construction Clearance
Limit of UPRR R.O.W.
Temp. 36" RCP Culvert
SUBSTRUCTURE CONSTRUCTION
DRAWN BY KMP DATE 06/24/16
CHECKED BY AMK DATE 06/24/16
URS
303 E. WACKER DR. SUITE 1400 CHICAGO IL 60601 TEL (312)-373-7700 FAX (312)-373-6800
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-16-4669
BRIDGE NO. 450 390F (FRA) 1652(TOLLWAY), 022-9508(IDOT)
CONSTRUCTION PHASE 1
SHEET NO. PH-01
DRAWING NO. 11 OF 17
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6/28/2016
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MODELNAME = $MODELNAME$
FILENAME = UPRR-Submitta

CONSTRUCTION PHASE 2

Erect girders at Pier 3 (fixed pier) between CPR & UPRR tracks.

GENERAL NOTES:

1. Anticipated Construction sequence shown. Actual sequence to be determined by Contractor and agreed with by Railroad.
2. Erection equipment and materials shall be kept outside of the minimum construction clearance.
3. Temporary shoring towers required only during girder erection.



GIRDER ERECTION AT PIER 3 BETWEEN CPR & UPRR TRACKS

DRAWN BY: KMP	DATE 06/24/16	URS 303 E. WACKER DR. SUITE 1400 CHICAGO, IL. 60601 TEL (312)-373-7700 FAX (312)-373-6800	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY: AMK	DATE 06/24/16		

REVISIONS		
NO.	DATE	DESCRIPTION

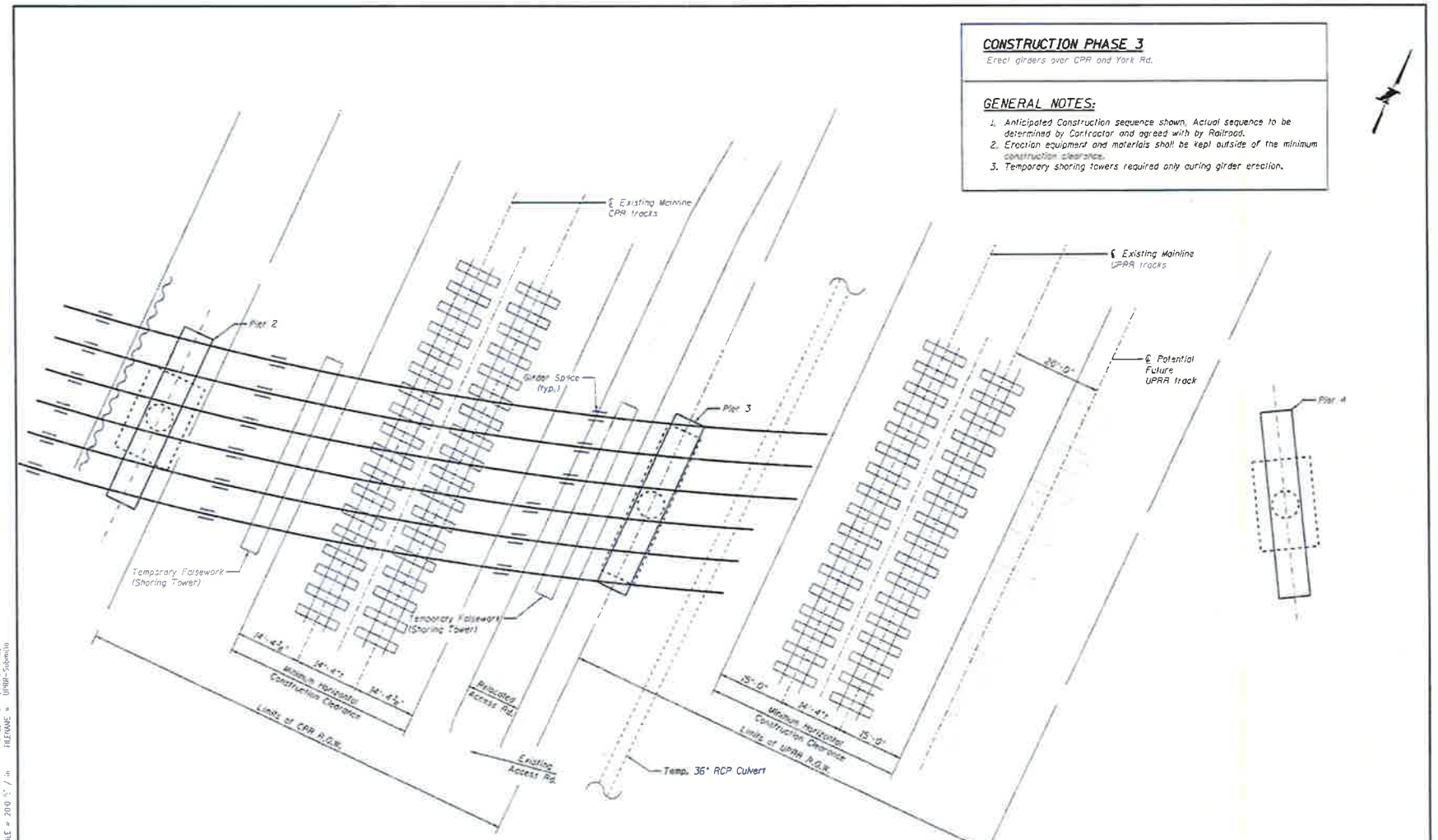
CONTRACT NO. I-XX-XXXX

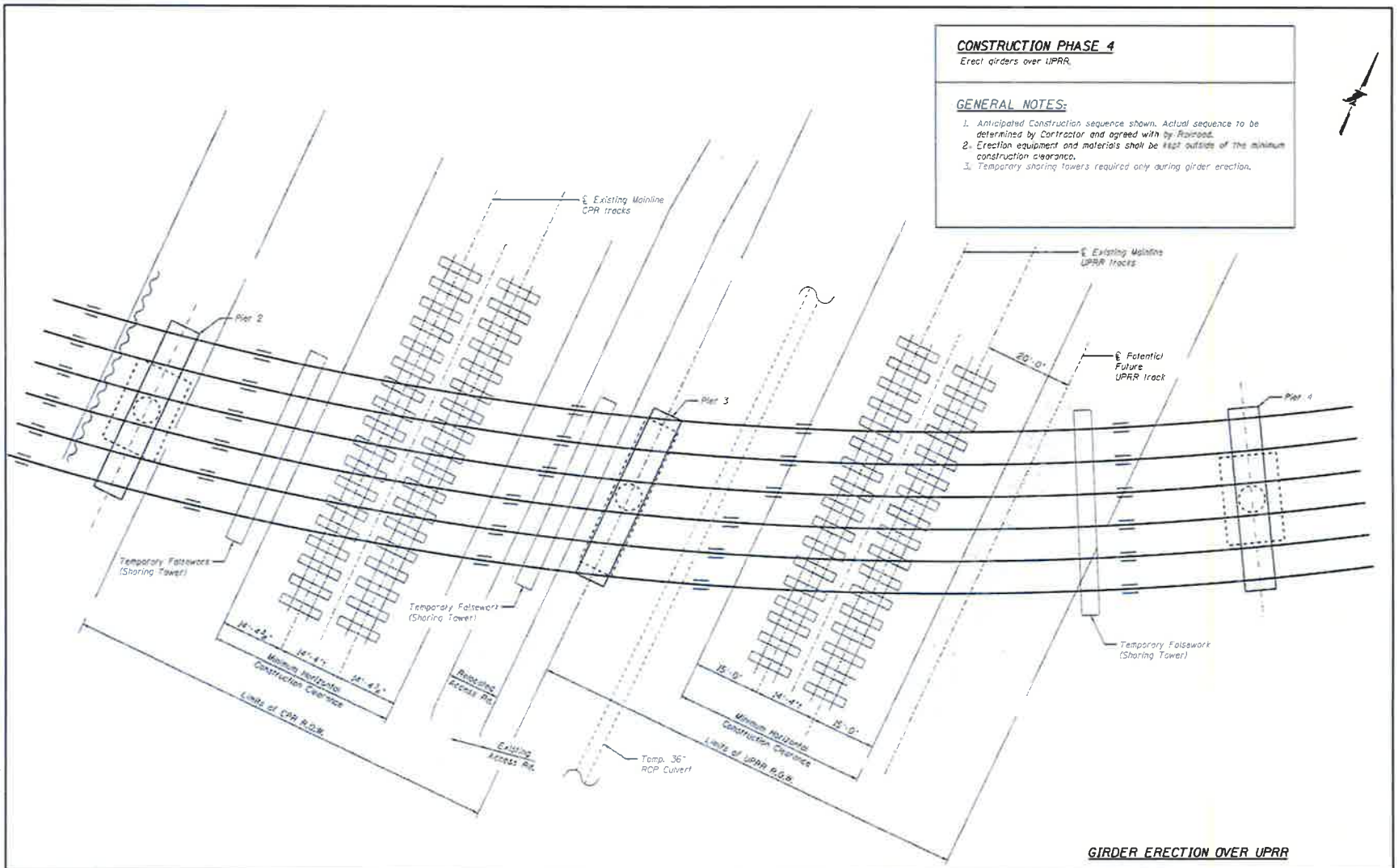
BRIDGE NO. 450 390F (FRA) 1652(TOLLWAY), 022-9508(IDOT) CONSTRUCTION PHASE 2

SHEET NO. PH-02

DRAWING NO. 12 OF 281

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6/28/2016
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CONSTRUCTION PHASE 3
Erect girders over CPR and York Rd.
GENERAL NOTES:
1. Anticipated Construction sequence shown. Actual sequence to be determined by Contractor and agreed with by Railroad.
2. Erection equipment and materials shall be kept outside of the minimum construction clearance.
3. Temporary shoring towers required only during girder erection.
℄ Existing Mainline CPR tracks
℄ Existing Mainline UPRR tracks
Pier 2
Pier 3
Pier 4
Girder Space (typ.)
℄ Potential Future UPRR track
25'-0"
Temporary Falsework (Shoring Tower)
Temporary Falsework (Shoring Tower)
14'-4½"
14'-4½"
14'-4½"
Minimum Horizontal Construction Clearance
Limits of CPR R.O.W.
Relocated Access Rd.
Existing Access Rd.
Temp. 36" RCP Culvert
15'-0"
14'-4"
15'-0"
Minimum Horizontal Construction Clearance
Limits of UPRR R.O.W.
GIRDER ERECTION OVER CPR AND YORK RD.
DRAWN BY KMP DATE 06/24/16
CHECKED BY AMK DATE 06/24/16
URS
303 E. WACKER DR. SUITE 1400 CHICAGO IL, 60601 TEL (312)-373-7700 FAX (312)-373-6800
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
REVISIONS
NO. DATE DESCRIPTION
CONTRACT NO. I-XX-XXXX
BRIDGE NO. 450 390F (FRA) 1652(TOLLWAY), 022-9508(IDOT)
CONSTRUCTION PHASE 3
SHEET NO. PH-03
DRAWING NO. 13 OF 281
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DRAWN BY	RMP	DATE	06/24/16
CHECKED BY	MMK	DATE	06/24/16

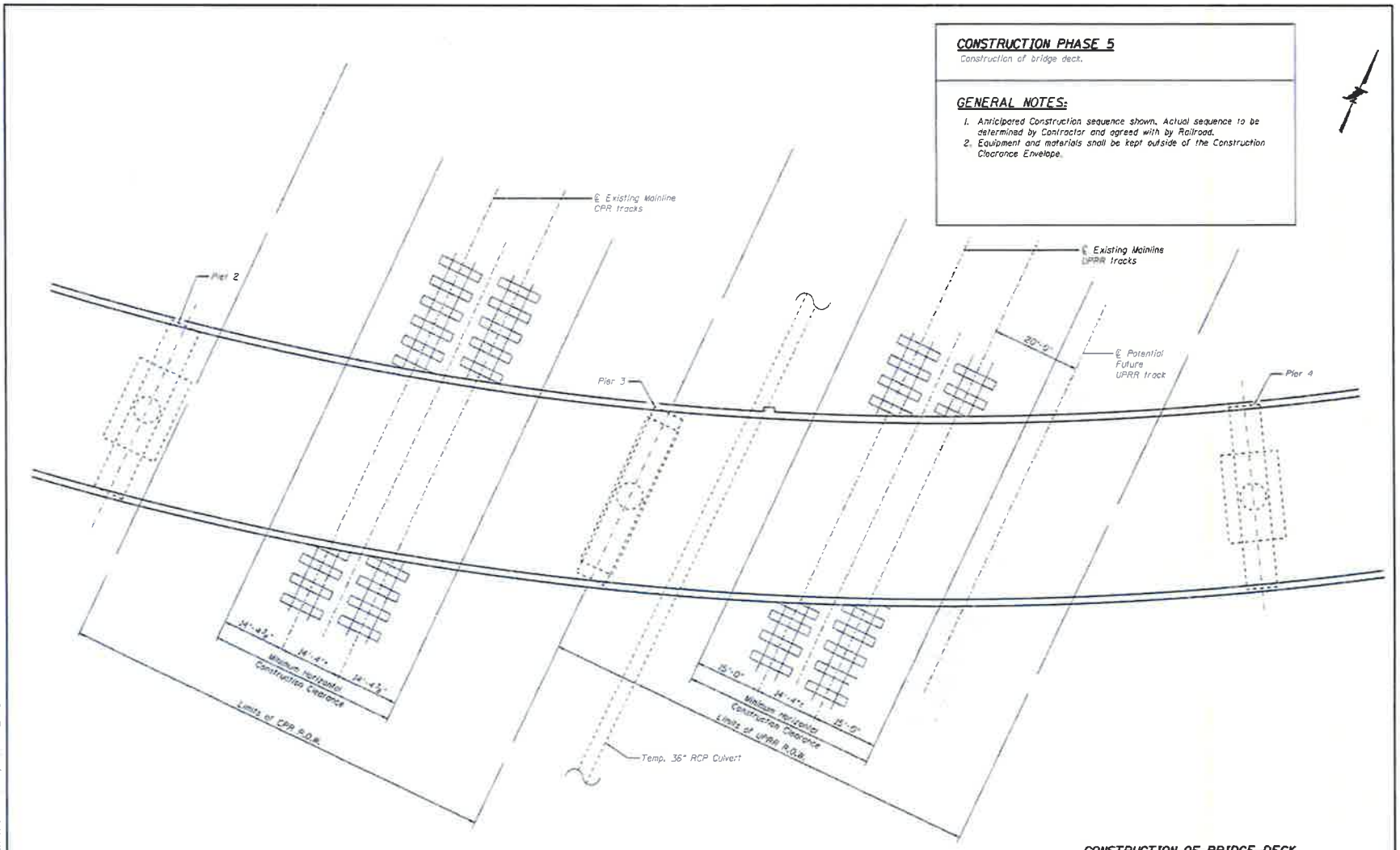
URS
303 E. WACKER DR.
SUITE 1100
CHICAGO IL 60601
TEL (312)-373-7700
FAX (312)-373-6800

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-XX-XXXX
BRIDGE NO. 450 390F (FRA) 1652(TOLLWAY), 022-9508(IDOT)
CONSTRUCTION PHASE 4

SHEET NO.
PH-04
DRAWING NO.
14 OF 281



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DRAWN BY	KMP	DATE	06/24/16
CHECKED BY	AUK	DATE	06/24/16

URS
303 E. WACKER DR.
SUITE 1400
CHICAGO IL. 60601
TEL (312)-373-7700
FAX (312)-373-6800

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-XX-XXXX
BRIDGE NO. 450 390F (FRA) 1652(TOLLWAY), 022-9508(IDOT)
CONSTRUCTION PHASE 5

SHEET NO. PH-05
DRAWING NO. 15 OF 281

RAMP P2, PIER 3
(BRIDGE 450 392U)
153 + 74.56
RAMP P8, PIER 3
(BRIDGE 450 390F)
161 + 27.18
RAMP P1, PIER 2
(BRIDGE 450 389L)
166 + 79.07
RAMP P5, PIER 7
(BRIDGE 450 388E)
171 + 11.27
RAMP Q1 PIER
173 + 06.18
TEMPORARY ACCESS ROAD
PERMANENT ACCESS ROAD
RELOCATED
TEMPORARY ACCESS TO SURFACE AROUND PIER
TEMPORARY 30' RCP CULVERT
COLUMN RAMP P1
COLUMN RAMP P5
COLUMN RAMP Q1
OUTSIDE OF PIER
CL PIER
655
660
665
670
675
CONTRACT NO. I-16-4669
CROSS SECTIONS
TEMPORARY IMPROVEMENTS
SHEET NO. XSC-1
DRAWING NO. 16 OF 17
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515
DRAWN BY JDW DATE 06/24/16
CHECKED BY TW DATE 06/24/16
Globetrotters Engineering
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

NO.	DATE	REVISIONS DESCRIPTION

CONTRACT NO. I-16-4669

CROSS SECTIONS
PERMANENT IMPROVEMENTS

SHEET NO. XSC-2
DRAWING NO. 17 OF 17

Globetrotters Engineering Corp.

DRAWN BY JDW DATE 06/24/16
CHECKED BY TW DATE 06/24/16

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6/28/2016 PLOT SCALE = 20.0000 ' / in. FILENAME = E04_S

Exh. D - Page 227

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I-13-4622; TOLLWAY CONSTRUCTION CONTRACT I-16-4669

ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT

PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

BRIDGE NO. 450 390F (FRA), 1652 (TOLLWAY), 022-9508 (IDOT) (RAMP P8) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.42)

BENSENVILLE, IL – DUPAGE COUNTY

PROJECT SPECIFICATIONS

30% SUBMITTAL

June 24, 2016

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
PROJECT SPECIFICATIONS
ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT
PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION
BRIDGE NO. 450 390F (FRA), 1652 (TOLLWAY), 022-9508 (IDOT) (RAMP P8) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.42)
BENSENVILLE, IL – DUPAGE COUNTY

S.P. 101 LOCATION AND SCOPE OF WORK

The improvements to be constructed under this contract shall be performed along IL 390 at Western Access located at milepost 17.0 along IL 390 and milepost 3.2 to milepost 3.8 along the Western Access in DuPage County, Illinois.

The work under this contract includes, but is not limited to:

1.) Construction of Ramp P1, P2, P5 and P8 Bridges
2.) Earthwork and grading for construction of the bridges carrying ramps P1, P2, P5 and P8 over existing York Road, Canadian Pacific Railroad and Union Pacific Railroad
3.) Erosion and sediment control
4.) All other appurtenant and miscellaneous construction shown on the plans and within these special provisions.

All applicable provisions of the IDOT Standard Specifications adopted April 1, 2016, herein after referred to as the Standard Specifications, IDOT Supplemental Specifications and Recurring Special provisions adopted April 1, 2016, Tollway Supplemental Specifications to said Standard Specifications issued April 1, 2016, and all Tollway Construction Bulletins in effect at the time of bidding, shall govern this work except as herein amended.

S.P. 106.8 COORDINATION WITH RAILROADS

The Contractor shall coordinate activities with the Union Pacific Railroad (UPRR) and the Canadian Pacific Railway (CPR). Each railroad operates on two separate pairs of mainline tracks that will be spanned by each of proposed Bridges 1650, 1651, 1652 and 1653.

The following coordination regarding railroad insurance, flagging and right of entry requirements for each railroad shall be adhered to by the Contractor:

- A right of entry (ROE) permit and flagging must be obtained prior to performing any bridge related work on railroad property. Right of entry fee is estimate to be $550 for each railroad and can be obtained through each of their websites (40-50 days in advance).
- All costs associated with flagging for the entire project shall be paid for by the Contractor prior to the start of work.
- Trains cannot be delayed or rerouted due to construction. Any means or methods needed to keep all track open for trains during construction shall be paid for by the Contractor.
- Railroad protective liability insurance must be obtained by the Contractor prior to performing any bridge work on the properties of the railroads. See S.P. 107.3 for additional information.
- No temporary crossing of any tracks will be allowed other than the one shown in the plans for accessing railroad property between the tracks of the UPRR and the CPR.
- The Contractor shall not place any materials, equipment or staff within the construction clearance zones for each railroad as shown in the plans.
- The following UPRR staff should be contacted regarding the required access permits and flagging associated with construction of Bridges 1650, 1651, 1652 and 1653 over that railroad.

    - John Venice (main railroad contact): 312-777-2043
    - (jnvenice@up.com)

- The following CPR staff should be contacted regarding the required access permits and flagging associated with construction of Bridges 1650, 1651, 1652 and 1653 over that railroad.

    - Dan Sabatka (main railroad contact): 651-495-9521
    - daniel_sabatka@cpr.ca

All construction access locations must be approved by the Engineer, affected agencies and respective railroads prior to starting any sub-structure work on railroad properties. The Contractor shall be responsible for obtaining all necessary permits to perform the work on Bridges 1650, 1651, 1652 and 1653. The Contractor shall be responsible for verifying the accuracy of these requirements and determining required fees by checking the following railroad websites:

- http://wwww.up.com/real_estage/tempuse/index.htm

All applicable safety and operational requirements associated with this work shall be adhered to by the Contractors. The Contractor is advised to review the following links regarding grade separation guidelines:

- http://www.uprr.com/aboutup/operations/specs/index.shtml

All utilities on property of the railroads near the construction of the bridges shall be coordinated by the Contractor.

S.P. 107 INSURANCE

This provision supplements Article 107.27 of the Tollway Supplemental Specifications.

J. ADDITIONAL INSURED PROTECTION

The work under this contract includes work upon, above, adjacent to and/or along the right-of-way and facilities of the FAA, Illinois Department of Transportation (IDOT), the Village of Bensenville, Counties of Cook and DuPage, the Union Pacific Railroad and the Canadian Pacify Railway. The Contractor's Insurance coverage, required by and in conformance with Article 107.27(j), shall include the agencies specified herein, its agents and employees as additional insureds, or provide a separate owner's protection policy of equal limits of coverage for each agency.

S.P. 107.3 RAILROAD PROTECTIVE LIABILITY INSURANCE

The work under this contract include work upon, above, adjacent to and/or along the right-of-way and facilities of the Union Pacific Railroad (UPRR) and the Canadian Pacific Railway (CPR). Each of the railroads require railroad protective liability insurance be in place prior to the Contact beginning work.

The Contractor shall confirm requirements on the UPRR website and with the following UPRR contact:

Attn John Venice
Manager Special Projects - Industry and Public Projects
Union Pacific Railroad
101 North Wacker Drive, Suite 1920
Chicago, IL 60606
312-777-2043
jnvenice@up.com

The Contractor shall confirm requirements on the CPR website and with the following CPR contact:

Attn Dan Sabatka
CP Rail
PW US-East
7550 Ogdendale Rd SE
Calgary, Alberta T2C 4X9
Canada
651-495-9521
daniel_sabatka@cpr.ca

S.P. 107.3.1 RAILROAD PROTECTIVE LIABILITY INSURANCE - UPRR

Requirements:

The Railroad Protective Liability Program for new bridge construction, structural repair to bridges, widening of bridges and bridge demolition requires the completion of the Bridge - Large Project Application to obtain a quote. See the UPRR website for additional information and current application forms: http://www.up.com/real_estate/rrinsurance/liability_insurance/index.htm).

With the Railroad Protective Liability Program made available by the Union Pacific Railroad through a national broker, the Contractor completes a single-page application, sends a check, and the Railroad Protective Liability coverage is in place. The UPRR considers this program a time saver in obtaining Railroad Protective Liability insurance.

For Railroad Protective Liability Insurance (RPLI) application requests, the Contractor may be asked by their insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and safety reasons, Union Pacific Railroad employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

S.P. 107.3.2 RAILROAD PROTECTIVE LIABILITY INSURANCE - CPR

Requirements:

The Railroad Protective Liability Program for new bridge construction, structural repair to bridges, widening of bridges and bridge demolition requires the completion of the Bridge - Large Project Application to obtain a quote. See the CPR website for additional information and current application forms.

With the Railroad Protective Liability Program made available by the Canadian Pacific Railway through a national broker, the Contractor completes a single-page application, sends a check, and the Railroad Protective Liability coverage is in place. The CPR considers this program a time saver in obtaining Railroad Protective Liability insurance.

For Railroad Protective Liability Insurance (RPLI) application requests, the Contractor may be asked by their insurance carrier to provide train movement information. Due to the circumstances of September 11, 2001, for security and

safety reasons, Canadian Pacific Railway employees no longer supply train information to parties outside the Railroad. The major insurance companies are aware of this situation.

RAILROAD BRIDGE FENCE (Tollway)

Effective: April 29, 2014
Revised: November 7, 2014

Description. The work shall consist of constructing a chain link fence to the outside face of a parapet or barrier on structures over railroads as shown in the plans. This work shall include the preparation of all shop drawings, provide materials, labor and equipment necessary to fabricate, furnish and install chain link fence and post attachment components as described in this special provision.

Materials. Material shall be according to the following.

Chain Link Fence Components:

(a) Posts: Posts shall be according to ASTM F 1083, Galvanized Steel Pipe, 3" Nominal Pipe Size (NPS), Schedule 40, 3.5" Outside Diameter, 0.216" Wall Thickness
(b) Chain Link Fabric: Fabric shall be according to ASTM A 392, 2" mesh with twisted top and knuckled bottom selvage, Zinc Coated Steel, 0.148" coated wire diameter, class 2 coating.
(c) Tie Wires: Tie wires shall be according to ASTM F 626, Zinc Coated Steel Wire, No. 9 gauge
(d) Brace Bands: Bracing bands shall be according to ASTM F 626, No. 12 gauge (min. thickness) x ¾" (min. width) Steel Bands (Beveled or Heavy)
(e) Tension Bars: Tension bars shall be according to ASTM F 626, 3/16" (min. thickness) x ¾" (min. width) x 5' 10" (min. height) Steel Bars
(f) Tension Bands: Tension bands shall be according to ASTM F 626, No. 14 gauge (min. thickness) x ¾" (min. width) Steel Bands
(g) Miscellaneous Fence Components: Miscellaneous fence components shall be according to ASTM F 626, Zinc Coated Steel – includes post or loop caps, combination rail ends, clamps and all other miscellaneous fittings and hardware
(h) Nuts and Bolts: Nuts and bolts shall be according to ASTM A 307, 3/8" diameter x 4 ¼" Hex Headed Bolts for Pipe Clamp Connections to the Posts.
(i) Washers: Washers shall be according to ASTM F 436, Flat.
(j) Tension Wire: Tension wire shall be according to ASTM A 824 and A 817, Type II Zinc Coated Steel Wire – No. 7 gauge, Class 4 Coating
(k) Hog Rings: Hog rings shall be according to ASTM F 626, Zinc Coated Steel Wire – No. 12 gauge
(l) Brace Rails: Brace rails shall be according to ASTM F 1083, Galvanized Steel Pipe – 1 1/4" NPS, Schedule 40, 1.660" Outside Diameter, 0.140" Wall Thickness.

Post Attachment Components:

(m) Pipe Clamps: Pipe clamps shall be according to ASTM A 36 or A 709 Grade 36, ¼" Steel Plate
(n) Shim Plates: Shim plates shall be according to ASTM F 626, Zinc Coated Steel – ¼" Thickness, 3" x 9 ½", with 3/4" diameter holes.
(o) Adhesive Anchor Rods: Adhesive anchor roads shall be according to ASTM F 1554 Grade 36, fully threaded headless Anchor Rods – 5/8" diameter x 6 ½".
(p) Neoprene Pads: Neoprene pads shall be in accordance with Article 1052.02(a) of the Standard Specifications.
(q) Chemical Adhesive Resin System: The chemical adhesive resin system shall consist of a two part, fast-setting resin and filler/hardener. The system shall meet the requirements of the Illinois Test Procedure for Chemical Adhesives and be listed on the IDOT approved list for Chemical Adhesives.



Hot-dip galvanize all chain link fence components not otherwise indicated as being coated, and all post attachment components ,except neoprene pads, in accordance with Section 1006 of the Standard Specifications.

General. The Contractor shall furnish and install the chain link fence according to the lines, grades, and dimensions shown on the plans and approved shop drawings. Work shall be accomplished according to Sections 509 and 664 of the Standard Specifications except as modified here-in:

Article 509.05 (c) Delete paragraph 1, third sentence; "Stretcher bars shall be used on all four sides of each panel".

Shop Drawings. The Contractor shall submit shop drawings in accordance with the provisions of Article 105.04 of the Tollway Supplemental Specifications for all chain link fence and post attachment components.

No materials detailed in the Plans and/or described in the Special Provision, or covered by the shops drawings shall be delivered to the site of the work until the shop drawings have been approved.

Construction Procedures. All construction and installation methods and procedures for chain link fence components and post attachment components shall be in strict accordance with the Plans, the manufacturer's recommendations, the approved shop drawings and as directed by the Engineer.

Any chain link fence component and post attachment component which, in the judgment of the Engineer, is not furnished and installed in accordance with the Plans, the Special Provision, the approved shop drawings, or the manufacturer's specifications shall be subject to rejection. Any such installation which is rejected shall be removed and replaced with material acceptable to the Engineer. The costs for any such adjustments shall be the responsibility of the Contractor.

Installation Procedures. The fence posts shall be installed plumb. Shims shall be used as required to achieve plumb and clearance for 6" of chain link fabric. Shims at bottom clamp to be omitted if clearance and plumb are otherwise provided. Total thickness of shims will be determined in the field.

Adhesive Bonded Anchors and Dowels shall comply with and be installed in accordance with Section 509 of the Standard Specifications.

Welding shall be accomplished only after written permission of the Engineer. All welding shall be in accordance with the American Welding Society Structural Welding Code (Steel) ANSI/AWS D1.1, current edition. Weld metal shall be E60XX or E70XX. Non Destructive Testing of welds is not required.

Protective electrical grounding shall be in accordance with Article 664.11 of the Standard Specifications.

Thread bottom tension wire through the bottom mesh loops. Tighten the bottom rail tension wire around the end posts. Tighten the brace rail tension wire around the end posts and first interior posts. Bottom tension wire shall utilize a separate tension band. Brace rail tension wire shall either

use a separate tension band or wrap around the post. Draw the wire tight and wrap it around itself a minimum of three loops next to the posts.

Method of Measurement. This work will be measured for payment in feet, along the top of the fence from center to center of the end posts.

Basis of Payment. This work will be paid for at the contract unit price per foot for RAILROAD BRIDGE FENCE.

Pay Item Number	Designation	Unit of Measure
JI664100	RAILROAD BRIDGE FENCE	FOOT



ALLOWANCE FOR RAILROAD FLAGGING (Illinois Tollway)

Effective: April 1, 2016

Description. This Special Provision establishes a budgetary allowance for flagging services required and provided by the railroad as a result of work being performed by the Contractor on the Illinois Tollway system. This work shall be performed in accordance with Section 107.12 of the Illinois Tollway Supplemental Specifications, except the Railroad will bill the Contractor directly for this work.

General Requirements. The Contractor shall pay all costs of Railroad Flagging services required and provided by the Railroad for all work performed under the contract. These costs shall be considered separate from the contract unit prices bid for the various items of work involved. Upon written order of the Engineer, the Contractor shall pay the costs of providing flaggers as specified with the exception of flaggers required for transporting material or equipment across the tracks. The Contractor will be reimbursed for the actual amounts paid.

Adequate notification shall be made to the Railroad to schedule the Flagger. The Contractor shall make every effort to notify the Railroad in advance if previously requested flagger(s) will not be needed for any reason.

The Railroad may have specific work rules that govern their use of flaggers. The Contractor shall coordinate with the appropriate Railroad contact to obtain information about specific Railroad work rules and how they may impact the cost of flagging services.

Method of Measurement. This work will not be measured for payment.

Basis of Payment. Payment for this work will be made as specified in Illinois Tollway Supplemental Specifications Article 109.04 using a force account basis. Railroad flagging bills shall be submitted to the Engineer on a monthly basis. Payment for this work shall not exceed the costs incurred by the Contractor and approved by the Engineer.

Any costs incurred for flagging protection provided by the Railroad at the Contractor's request for those days when the Contractor does not work shall be borne by the Contractor.

Pay Item Number	Designation	Unit of Measure
JT154102	ALLOWANCE FOR RAILROAD FLAGGING	UNIT

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TOLLWAY DESIGN CONTRACT I-13-4622; TOLLWAY CONSTRUCTION CONTRACT I-16-4669

ELGIN O'HARE WESTERN ACCESS (EOWA) PROJECT

PROPOSED OVERHEAD STRUCTURE – NEW CONSTRUCTION

BRIDGE NO. 450 390F (FRA), 1652 (TOLLWAY), 022-9508 (IDOT) (RAMP P8) OVER UPRR-MILWAUKEE SUBDIVISION (M.P 6.42)

BENSENVILLE, IL – DUPAGE COUNTY

DRAINAGE REPORT

30% SUBMITTAL

June 24, 2016

EXECUTIVE SUMMARY

Project Overview

The Elgin O'Hare Western Access Tollway project is located at the intersection of existing Thorndale Road at York Road in Bensenville, Illinois. Refer to the Location Map (see Exhibit A). The proposed interchange would connect new Tollways designated as IL-390 and I-490. Five new Tollway bridges would be constructed over the existing railroad tracks located along the east side of York Road. The proposed bridge crossings are located between Federal Railroad Administration (FRA) Mile Post 6.27 and 6.61 of the Union Pacific Railroad.

Drainage Design

The drainage design is in accordance with the Guidelines for Railroad Grade Separation Projects by the Union Pacific Railroad-BNSF Railway, May 2016. The proposed bridge piers include a pier situated on the property line between the Canadian Pacific Railroad (CPRR) and the Union Pacific Railroad (UPRR). Existing railroad access roads located between the existing tracks would be used to access the project area with access from York Road using the existing access location and track crossing near Station 188+00 and a new track crossing and York Road access at Station 131+00. The existing ditch and culverts would be maintained except for some temporary work and permanent modifications near the proposed piers. The tributary areas and design flows are the same for the existing and proposed conditions.

A temporary, flat granular platform would be provided at each pier to allow construction access. Since these would block existing ditch flow temporary culverts are proposed to maintain flow across these granular platforms. Both the granular platforms and temporary culverts would be removed at the end of construction.

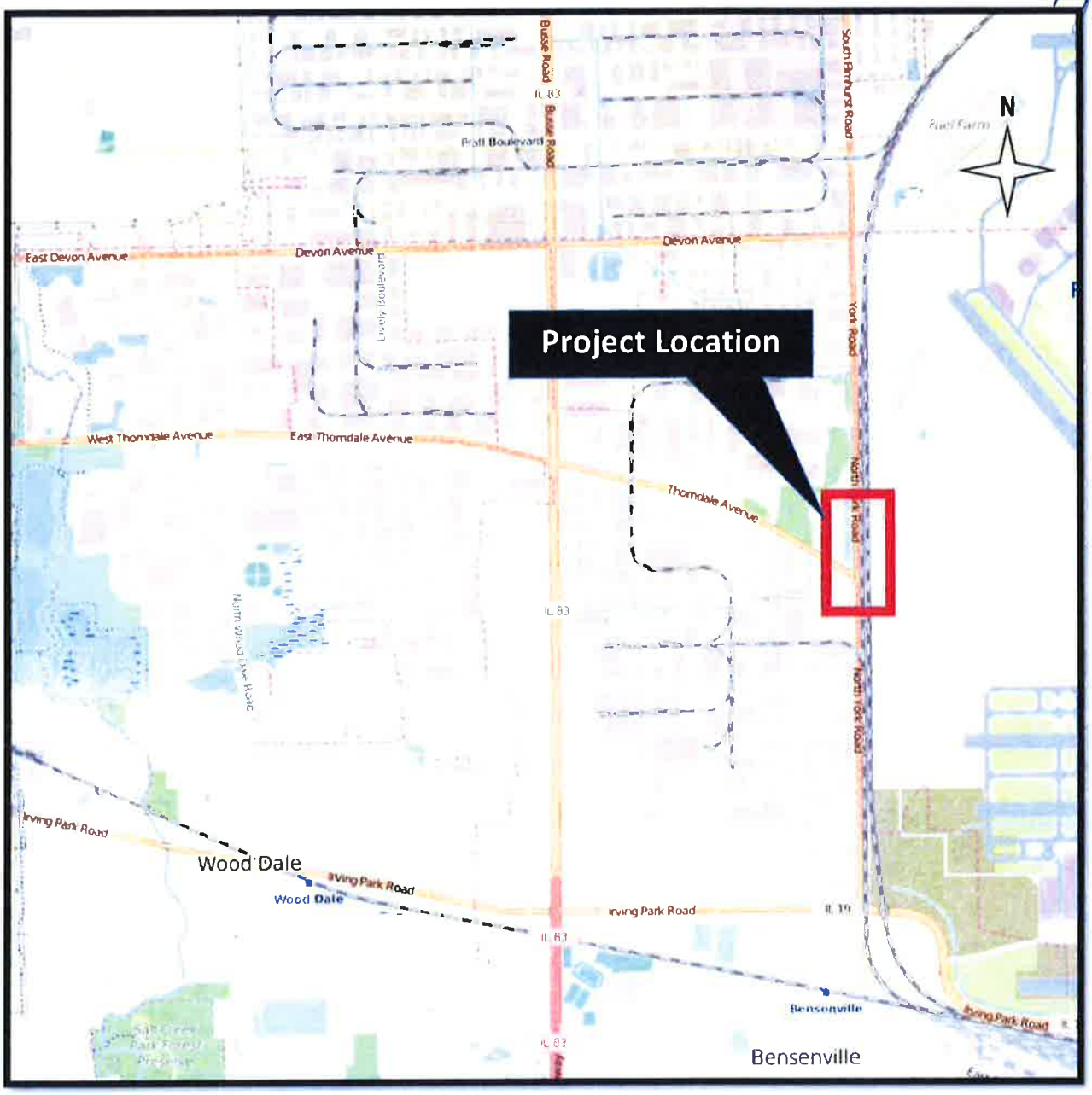
The temporary culverts are sized to meet the railroad guidelines with the hydraulic grade line not exceeding the Low Chord, defined as the crown of the pipe, based on a 50 year design storm, and providing freeboard to the Subgrade elevation, defined as 2'-3" below the base of rail elevation, based on a 100 year design storm. The top of rail elevations are based on topographic survey, with subgrade elevations based on 7-5/16-inch rail heights.

Ditches along the proposed piers will be graded using a 10' minimum bottom with 2:1 side slopes with the flowline a minimum of 3' below the Subgrade elevation, based on a 100 year design storm. Outside the pier construction areas the existing ditches and access roads would be maintained.

Design flows were determined based on delineating the areas tributary to the culverts, the time of concentration, and using the rational method with applicable runoff coefficients. These calculations are included hereinafter.

Recommendations

The drainage design for the final and temporary conditions for the interchange design meet the Railroad Guidelines. No adverse drainage impacts would be realized due to the improvement. The ditch between the railroad tracks would be maintained with some regrading to accommodate shifting sections of the access roads and the pier construction.



Drainage Report

UPRR / CPRR Ditch

PROJECT LOCATION MAP

Not to Scale Date: 6/3/2016

Exhibit A

TABLE OF CONTENTS

Executive Summary

Exhibit A – Location Map

1. **Proposed Pier Crossing: FRA Structure 450 390F (MP 6.42), Sta: 161+27.18**
   Drainage Design Criteria
   Drainage Calculations Summary Table
   Time of Concentration Calculation
   Design Peak Flow Calculation
   Existing Culvert HY-8 Sizing

2. **Appendix**
   Exhibit – Site Plan (RRIP-1, RRIP-2)
   Exhibit – Railroad Drainage Areas (RR-1, RR-2, RR-3)
   Rational Method Runoff Coefficients
   Rational Method Overland Flow Manning's coefficients
   Rational Method Open Channel Flow Manning's coefficients
   Bulletin 70 Climatic Sections in Illinois
   Bulletin 70 Rainfall Intensity vs. Duration (Figure 4-102c)

1

Proposed Pier Crossing:

FRA Structure 450 390F (MP 6.42)

Sta: 161+27.18

DRAINAGE DESIGN CRITERIA	
All design in accordance with the Union Pacific Railroad – BNSF Railway: *Guidelines for Railroad Grade Separation Projects*, May 2016	
Design Storm	50-year storm frequency (crown of culverts) 100-year storm frequency (freeboard to railroad subgrade)
Design Freeboard	Subgrade event (100-yr) energy grade line below the adjacent subgrade elevation (Subgrade is defined as 2'-3" below base of rail)
Ditch Design	Flat Bottom, 10' Bottom Width 2:1 side slopes Flowline a minimum 3' below the subgrade elevation
Culvert Design	Low chord event (50-yr) water surface elevation no higher than crown of culvert, HW/D ≤ 1.0 Subgrade event (100-yr) water surface elevation no higher than adjacent subgrade elevation, and HW/D ≤ 1.5
Design Velocity	Check for non-eroding velocities or provide erosion protection
Rainfall Data	ISWS Bulletin 70
Runoff Coefficients	TR-55 c = 0.95 for pavements (hard surfaces) c = 0.60 for granular surfaces c = 0.30 for grass surfaces
Design Flows	Rational Method

Computed: R.Delves 6/02/2016
Revised: R.Delves 6/22/2016
Checked: J. Hopson 6/22/2016
Approved:

Railroad Property Drainage Calculations
Summary Table

Union Pacific Railroad															
Description						Tributary Flow		Low Chord		Subgrade					
FRA Structure #	FRA M.P. Designation	Tollway Structure #	IDOT Structure #	Station	Culvert Diameter (in)	Q_{50yr} (cfs)	Q_{100yr} (cfs)	50yr headwater (ft)	50yr within crown of culvert?	100yr headwater (ft)	Bottom of Rail Elevation	Subgrade Elev.	Ex Culvert Invert	HW/D ≤ 1.5	Proposed 100yr Cover ≥ Subgrade Elevation?
450 390F	M.P. 6.42	1652	022-9508	161+27.18	29 x 45 Elliptical	12.60	14.75	659.81	Yes	660.01	663.22	660.97	656.86	-	0.96 Yes

Union Pacific Railroad													
Description					Ditch Characteristics			Tributary Flow		Subgrade			
FRA Structure #	FRA M.P. Designation	Tollway Structure #	IDOT Structure #	Station	Proposed Ditch Bottom (ft)	Proposed Ditch Side Slope X:X	Proposed Ditch Side Slope X:X	Q_{50yr} (cfs)	Q_{100yr} (cfs)	Proposed Ditch Elevations	Proposed 100-yr Ditch Normal Depth	Subgrade Elev. (ft)	Proposed flowline Cover ≥ 3'?
450 390F	M.P. 6.42	1652	022-9508	161+27.18	-	-	-	12.60	14.75	-	-	-	-

Note:
Base of Rail Elevation = Surveyed Top of Rail Elevation - Rail Height taken as 7 - 5/16"
Subgrade Elevation = Base of Rail Elevation - 2' - 3"
HW = Maximum headwater
D = Diameter

Time of Concentration (T_c) or travel time (T_t)

Project	Calc'd By:	Date
Elgin O'Hare Western Access	Joe Hopson	2/3/16
Location	**Checked By:**	**Date**
FRA Structure 450 392U (MP 6.39), Sta: 153+74.66	Ryan Delves	6/3/16

Check one: ☑ Present ☐ Developed

Check one: ☑ T_c ☐ T_t through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

		Segment ID	AB			
1.	Surface description (table 3-1)		Pervious			
2.	Manning's roughness coefficient, n (table 3-1)		0.15			
3.	Flow lengh, L (total L < 300 ft)	ft	40			
4.	Two-year 24-hour rainfall, P_2	in	2.900			
5.	Land slope, s	ft/ft	0.104			
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t hr	0.043	+		= 0.043

Shallow concentrated flow

		Segment ID	BC			
7.	Surface description (paved or unpaved)		Unpaved			
8.	Flow length, L	ft	2401			
9.	Watercourse slope, s	ft/ft	0.0017			
10.	Average velocity, V (figure 3-1)	ft/s	0.67			
11.	$Tt = \frac{L}{3600\,V}$	Compute T_t hr	1.000	+		= 1.000

Channel flow

		Segment ID				
12.	Cross sectional flow area, a	ft^2				
13.	Wetted perimeter, pw	ft				
14.	Hydraulic radius, $r = \frac{a}{pw}$	Compute r ft				
15.	Channel slope, s	ft/ft				
16.	Manning's roughness coefficient, n					
17.	$V = \frac{1.49\, r^{2/3} s^{1/2}}{n}$	Compute V ft/s				
18.	Flow length, L	ft				
19.	$Tt = \frac{L}{3600\,V}$	Compute T_t hr		+		= 0.000
20.	Watershed or subarea Tc or Tt (add Tt in steps 6, 11, and 19)	hr				1.043

Time of Concentration (T_c) or travel time (T_t)

Project	Calc'd By:	Date
Elgin O'Hare Western Access	Joe Hopson	2/3/16
Location	**Checked By:**	**Date**
FRA Structure 450 390F (MP 6.42), Sta: 161+27.18	Ryan Delves	6/3/16

Check one: ☑ Present ☐ Developed

Check one: ☑ T_c ☐ T_t through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

		Segment ID				
1.	Surface description (table 3-1)					
2.	Manning's roughness coefficient, n (table 3-1)					
3.	Flow lengh, L (total L < 300 ft) ft					
4.	Two-year 24-hour rainfall, P_2 in					
5.	Land slope, s ft/ft					
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t hr		+		=	

Shallow concentrated flow

		Segment ID				
7.	Surface description (paved or unpaved)					
8.	Flow length, L ft					
9.	Watercourse slope, s ft/ft					
10.	Average velocity, V (figure 3-1) ft/s					
11.	$Tt = \frac{L}{3600\,V}$ Compute T_t hr		+		=	

Channel flow

		Segment ID	AB			
12.	Cross sectional flow area, a ft^2		2.07			**ADD FROM PREVIOUS TC**
13.	Wetted perimeter, pw ft		8.34			Assume 0.5' depth
14.	Hydraulic radius, $r = \frac{a}{pw}$ Compute r ft		0.25			
15.	Channel slope, s ft/ft		0.001			
16.	Manning's roughness coefficient, n		0.03			
17.	$V = \frac{1.49\, r^{2/3} s^{1/2}}{n}$ Compute V ft/s		0.45			
18.	Flow length, L ft		770			
19.	$Tt = \frac{L}{3600\,V}$ Compute T_t hr		0.48	+	=	0.478
20.	Watershed or subarea Tc or Tt (add Tt in steps 6, 11, and 19) hr					0.478

Stanley Consultants INC.

Job No. 25250
Subject Flow Computations

Computed J. Hopson Date 06/01/16
Checked R. Delves Date 06/03/16
Approved _____ Date _____

Sheet No. _____ of _____

Design Peak Flow Computations
Proposed Culvert Tributary Area
FRA Structure 450 390F (MP 6.42)

Alignment: HAUL-GBLP-000
Sta: 161+27.18

Description	**Area	*$C_{coefficient}$	C*A
	11.37	0.47	5.34

*Coefficients from IDOT table 4-102a

A_{TOTAL} = 11.37 Ac (Acreage total from above)

$C_{composite}$ = ΣC*A/ΣA
$C_{composite}$ = 5.3439 / 11.37
$C_{composite}$ = 0.47

Tc = 91.26 min (See attached)

*i_{50} = 2.36 in/hr
*i_{100} = 2.76 in/hr
*(See attached rainfall intensity vs duration Figure 4-102c)

$Q_{50\ Year}$ Design Flow

$Q_{50} = (C)*(I_{50})*(A)$

C = 0.47 (From calculation above)
i_{50} = 2.36 in/hr (Use T_c noted above)
A = 11.37 acres (As described above)

Q_{50} = 12.60 cfs ***50 - year*** (From formula above)

$Q_{100\ Year}$ Check

$Q_{100} = (C)*(i_{100})*(A)$

C = 0.47 (From calculation above)
i_{100} = 2.76 in/hr (Use T_c noted above)
A = 11.37 acres (As described above)

Q_{100} = 14.75 cfs ***100- year*** (From formula above)

HY-8 Culvert Analysis Report

Existing Culvert (Plus Proposed Extension)
FRA Structure 450 390F (MP 6.42)
Sta: 161+27.18



Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 12.6 cfs

Design Flow: 12.6 cfs

Maximum Flow: 14.75 cfs

Table 1 - Summary of Culvert Flows at Crossing: FRA Structure 450 390F (MP 6.42)

Headwater Elevation (ft)	Total Discharge (cfs)	FRA Structure 450 390F (MP 6.42) Discharge (cfs)	Roadway Discharge (cfs)	Iterations
659.81	12.60	12.60	0.00	1
659.83	12.82	12.82	0.00	1
659.85	13.03	13.03	0.00	1
659.87	13.24	13.24	0.00	1
659.89	13.46	13.46	0.00	1
659.91	13.68	13.68	0.00	1
659.93	13.89	13.89	0.00	1
659.95	14.11	14.11	0.00	1
659.97	14.32	14.32	0.00	1
659.99	14.54	14.54	0.00	1
660.01	14.75	14.75	0.00	1
664.00	56.10	56.10	0.00	Overtopping

Rating Curve Plot for Crossing: FRA Structure 450 390F (MP 6.42)

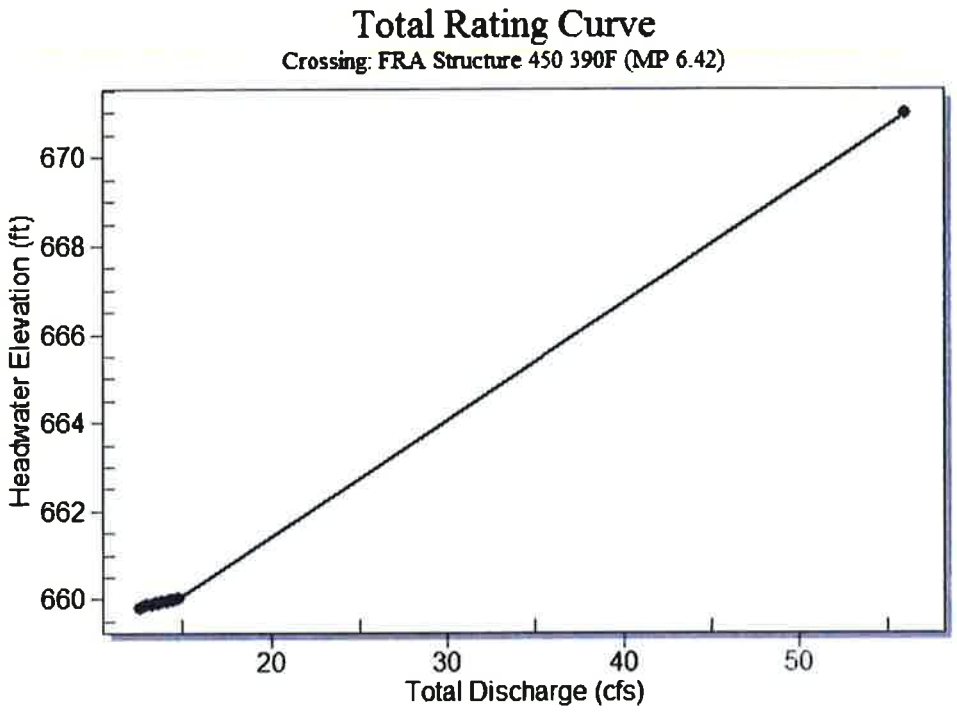


Table 2 - Culvert Summary Table: FRA Structure 450 390F (MP 6.42)

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
12.60	12.60	659.81	1.694	1.952	3-M1t	1.726	1.004	1.194	1.384	4.807	1.302
12.82	12.82	659.83	1.710	1.972	3-M1t	1.726	1.004	1.203	1.393	4.836	1.308
13.03	13.03	659.85	1.726	1.992	3-M1t	1.726	1.004	1.213	1.403	4.866	1.314
13.24	13.24	659.87	1.742	2.012	3-M1t	1.726	1.004	1.222	1.412	4.895	1.320
13.46	13.46	659.89	1.759	2.030	3-M2t	1.726	1.004	1.232	1.422	4.924	1.326
13.68	13.68	659.91	1.775	2.050	3-M2t	1.726	1.004	1.241	1.431	4.953	1.331
13.89	13.89	659.93	1.791	2.070	3-M2t	1.726	1.004	1.250	1.440	4.981	1.337
14.11	14.11	659.95	1.807	2.089	3-M2t	1.726	1.004	1.259	1.449	5.010	1.343
14.32	14.32	659.97	1.822	2.108	3-M2t	1.726	1.004	1.268	1.458	5.038	1.348
14.54	14.54	659.99	1.838	2.129	3-M2t	1.726	1.004	1.277	1.467	5.066	1.353
14.75	14.75	660.01	1.854	2.149	3-M2t	1.726	1.004	1.286	1.476	5.094	1.359

Single Broken-back Culvert

Inlet Elevation (invert): 657.86 ft,

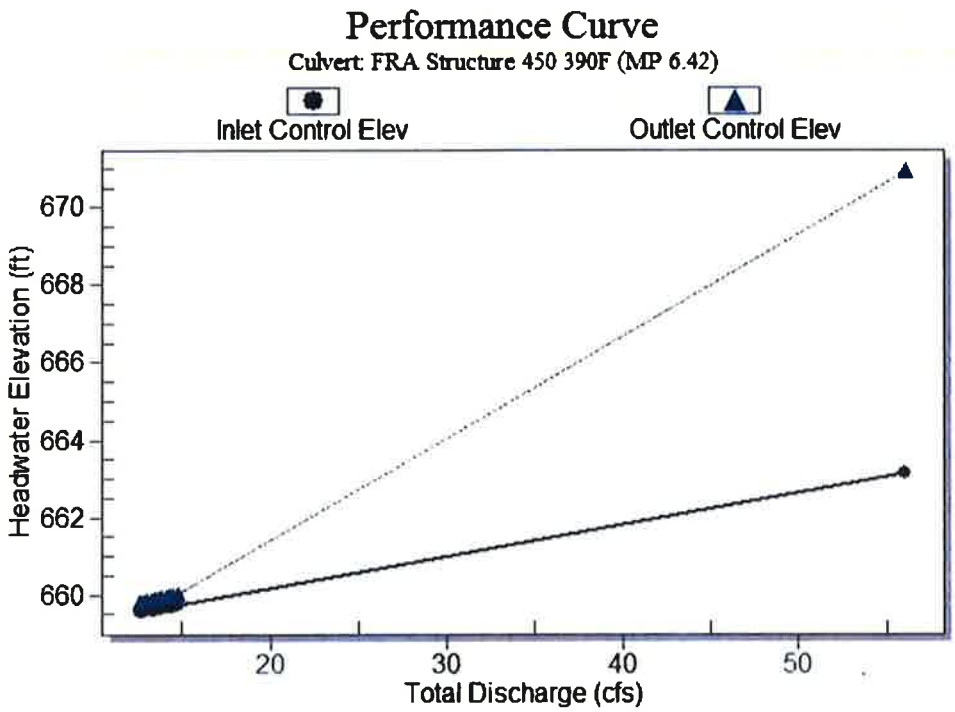
Break Elevation (invert): 656.40 ft,

Culvert Length: 477.00 ft,

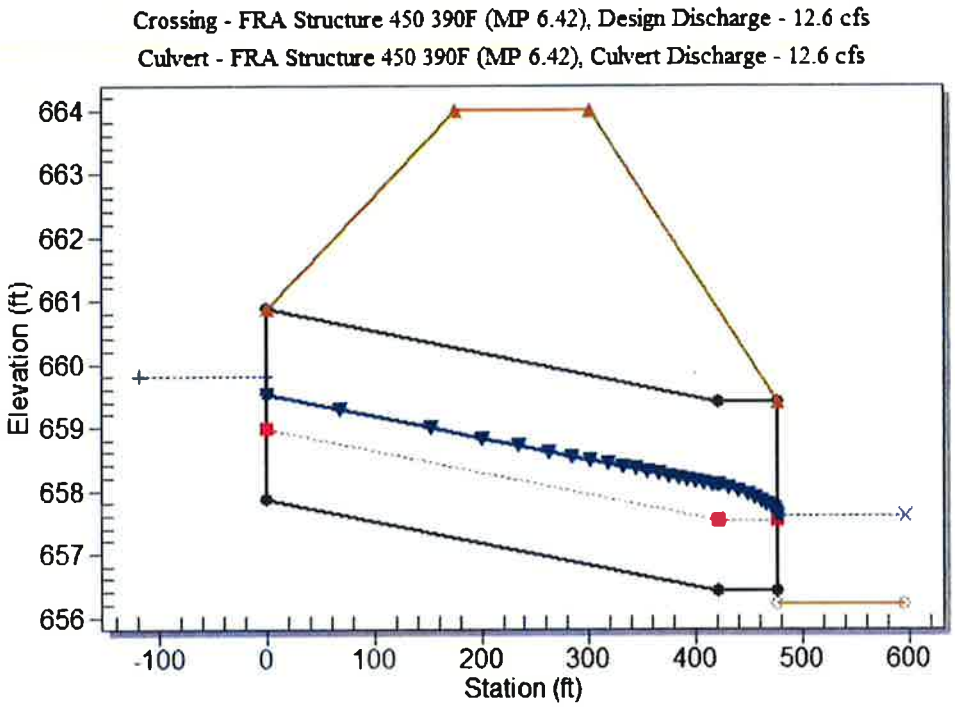
Upper Culvert Section Slope: 0.0035

Steep Culvert Section Slope: 0.0000

Culvert Performance Curve Plot: FRA Structure 450 390F (MP 6.42)



Water Surface Profile Plot for Culvert: FRA Structure 450 390F (MP 6.42)



Site Data - FRA Structure 450 390F (MP 6.42)

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 657.86 ft
Break Station: 421.00 ft
Break Elevation: 656.40 ft
Outlet Station: 477.00 ft
Outlet Elevation: 656.40 ft
Number of Barrels: 1

Culvert Data Summary - FRA Structure 450 390F (MP 6.42)

Barrel Shape: Circular
Barrel Diameter: 3.00 ft
Upper Section Material: Corrugated Steel
Lower Section Material: Corrugated Steel
Embedment: 0.00 in
Upper Section Manning's n: 0.0240
Lower Section Manning's n: 0.0240

Culvert Type: Single Broken-back

Inlet Configuration: Thin Edge Projecting

Inlet Depression: NONE

Table 3 - Downstream Channel Rating Curve (Crossing: FRA Structure 450 390F

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s)	Shear (psf)	Froude Number
12.60	657.59	1.38	1.30	0.09	0.26
12.82	657.60	1.39	1.31	0.09	0.26
13.03	657.61	1.40	1.31	0.09	0.26
13.24	657.62	1.41	1.32	0.09	0.26
13.46	657.63	1.42	1.33	0.09	0.26
13.68	657.64	1.43	1.33	0.09	0.26
13.89	657.65	1.44	1.34	0.09	0.26
14.11	657.66	1.45	1.34	0.09	0.26
14.32	657.67	1.46	1.35	0.09	0.26
14.54	657.68	1.47	1.35	0.09	0.26
14.75	657.69	1.48	1.36	0.09	0.26

Tailwater Channel Data - FRA Structure 450 390F (MP 6.42)

Tailwater Channel Option: Irregular Channel

Channel Slope: 0.0010

User Defined Channel Cross-Section:

Coord No.	Station (ft)	Elevation (ft)	Manning's n
1	-20.00	661.14	0.0300
2	-15.00	659.16	0.0300
3	-10.00	658.06	0.0300
4	-5.00	656.79	0.0300
5	0.00	656.21	0.0300
6	5.00	657.84	0.0300
7	10.00	659.98	0.0300
8	15.00	661.63	0.0300
9	20.00	662.09	0.0000

Roadway Data for Crossing: FRA Structure 450 390F (MP 6.42)

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 40.00 ft

Crest Elevation: 664.00 ft

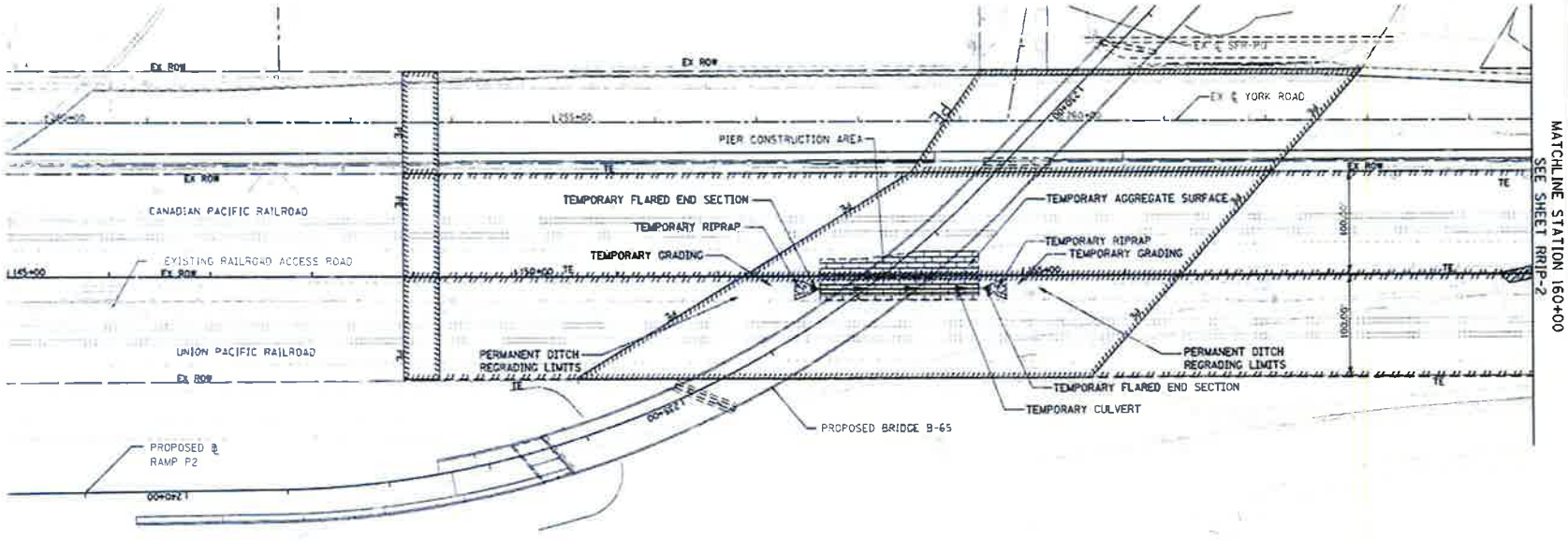
Roadway Surface: Paved

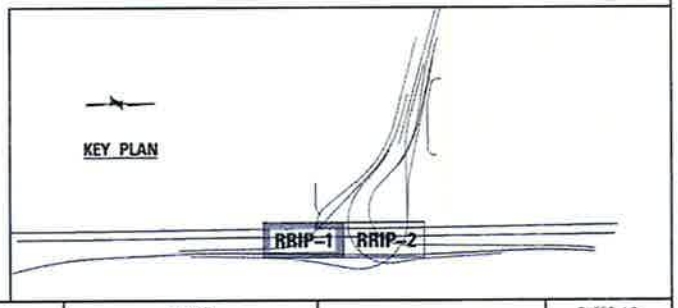
Roadway Top Width: 126.00 ft



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Appendix





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NO.	DATE	REVISIONS DESCRIPTION

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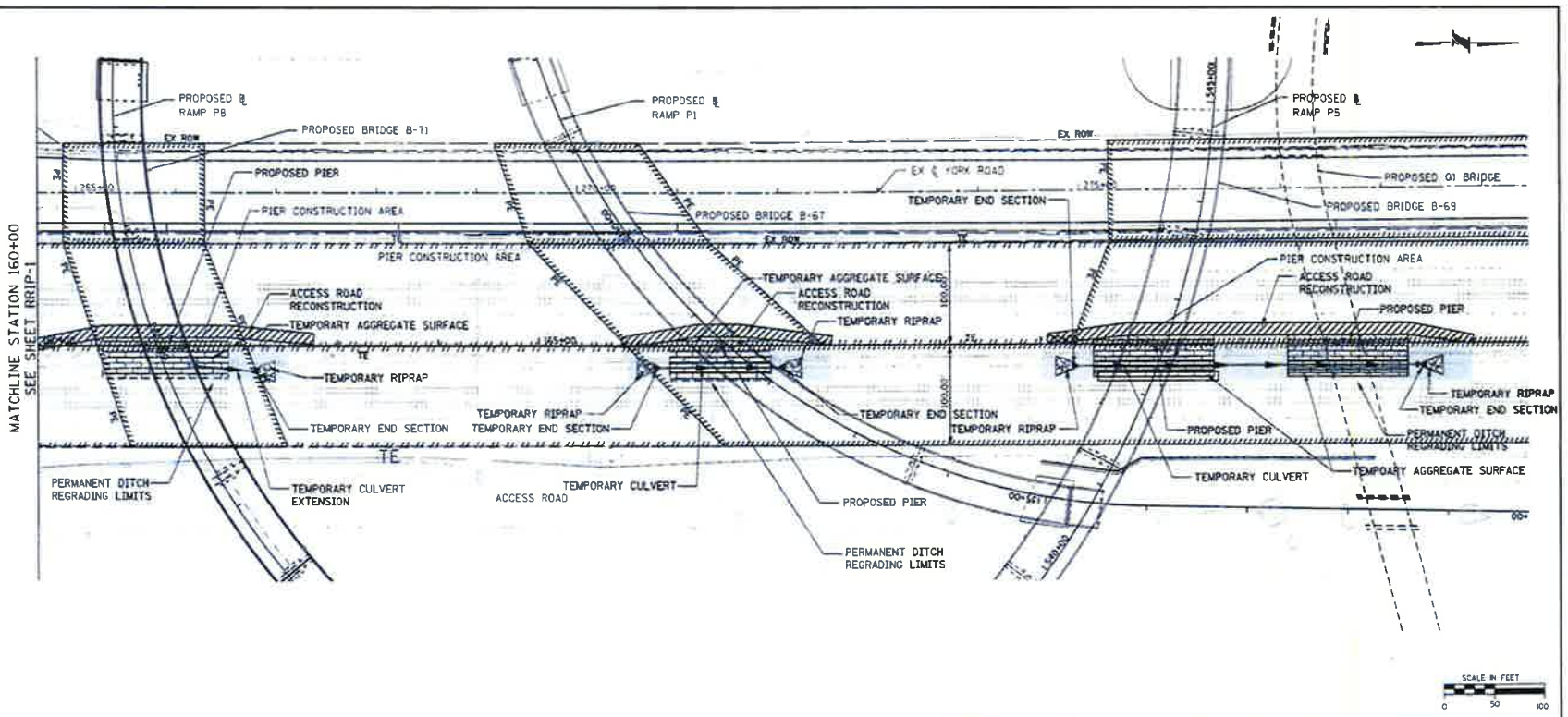
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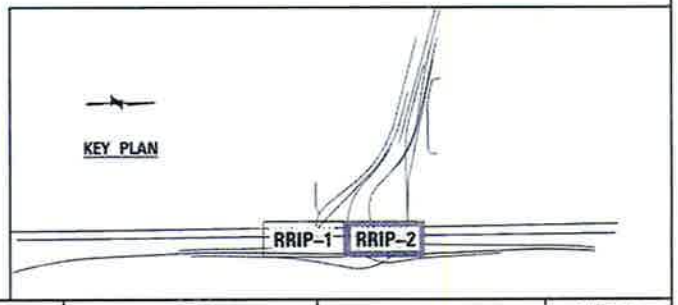
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CHECKED BY TW	DATE 06/23/16		

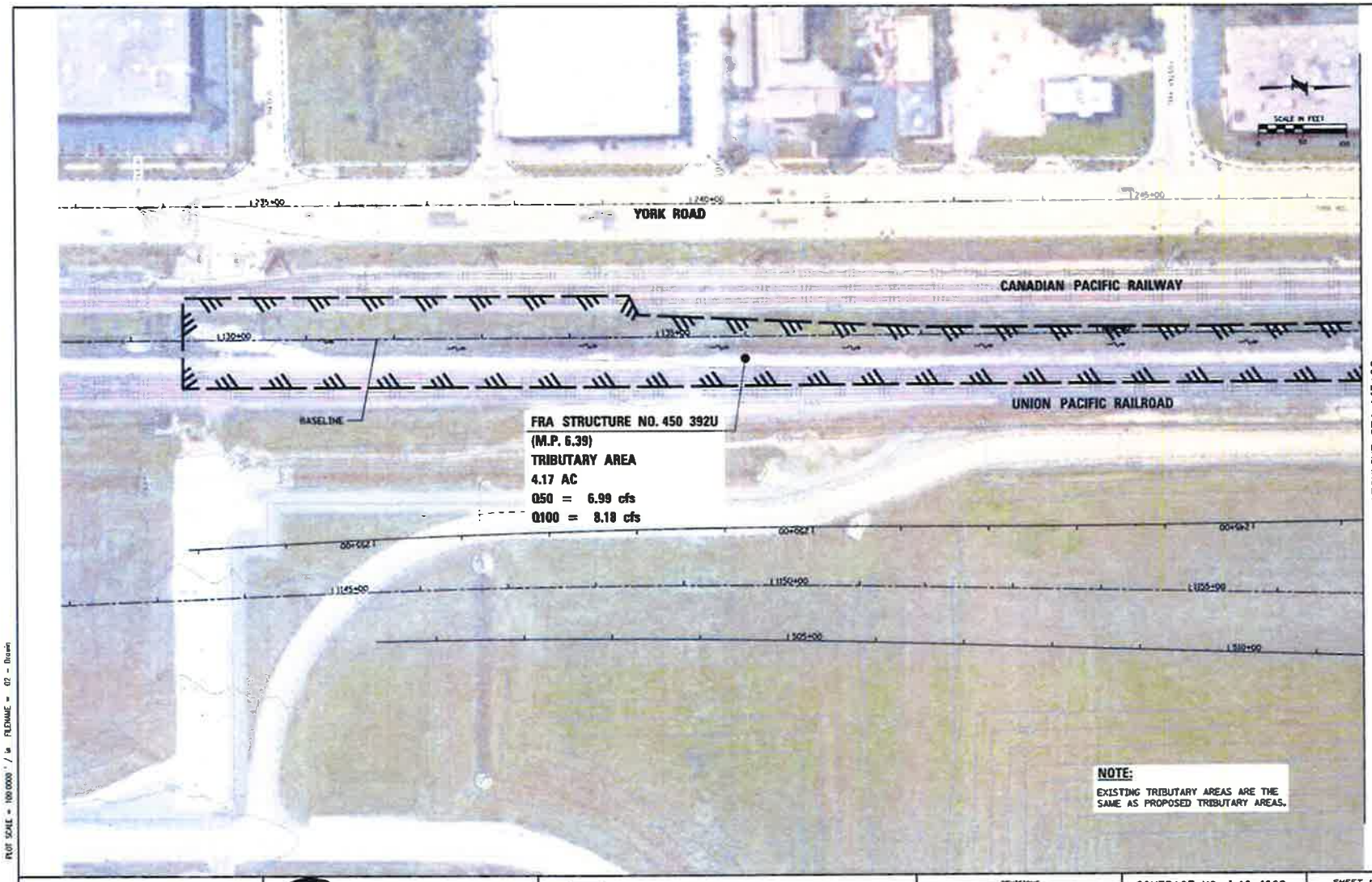
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

SITE PLAN

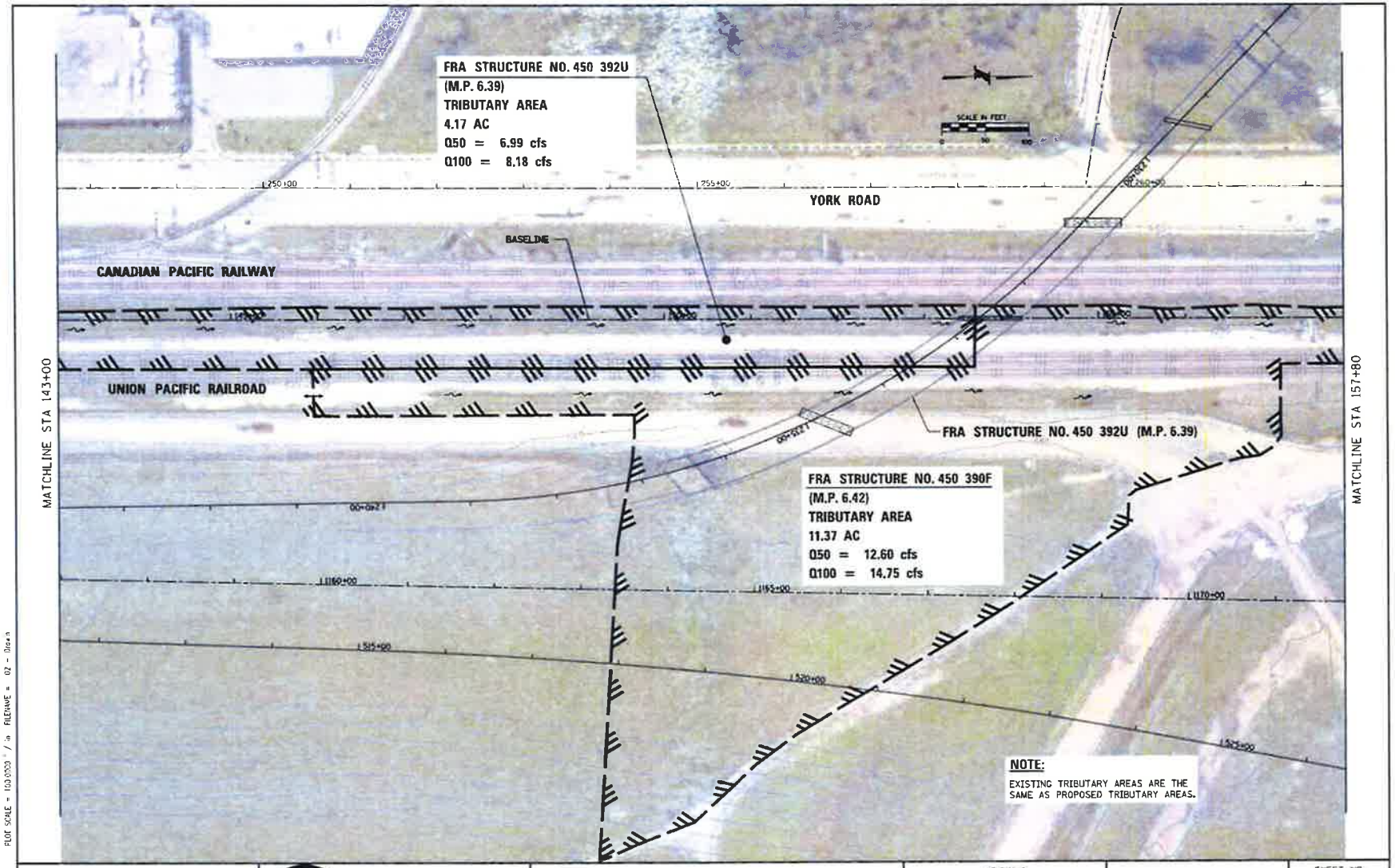
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DRAWING NO. 2 OF 2



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DRAWN BY TWK	DATE 06-02-16	Stanley Consultants INC.	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. / DATE / DESCRIPTION	CONTRACT NO. I-16-4669 RAILROAD DRAINAGE AREAS	SHEET NO. RR-1 DRAWING NO. 1 OF 3
CHECKED BY KGF	DATE 06-02-16					



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Stanley Consultants INC.

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS
NO. | DATE | DESCRIPTION

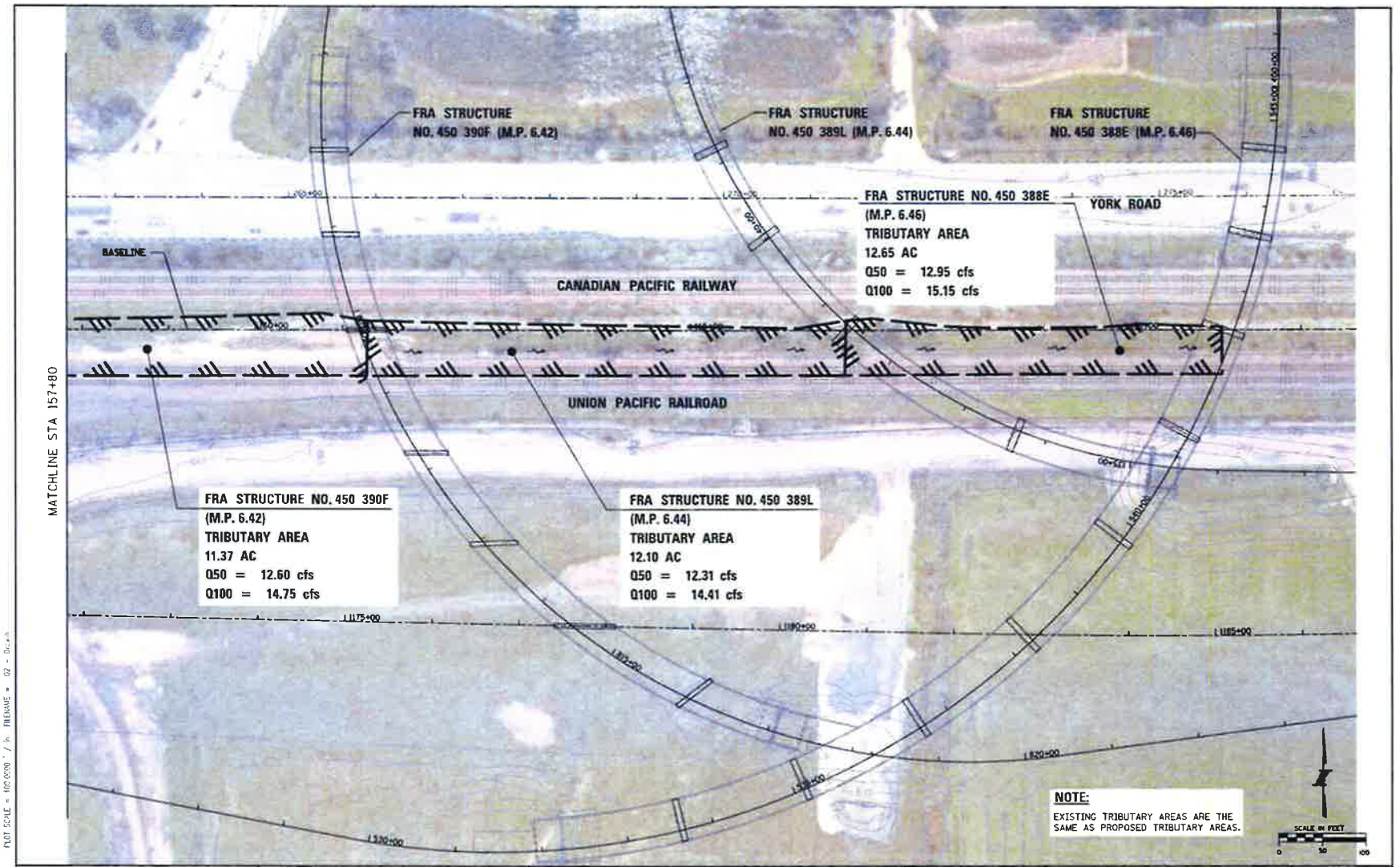
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RAILROAD DRAINAGE AREAS

SHEET NO. RR-2
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Exh. D - Page 262



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Stanley Consultants INC.

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-16-4669

RAILROAD DRAINAGE AREAS

SHEET NO. RR-3

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RUNOFF COEFFICIENTS

VALUES OF C - Runoff / Rainfall			RUNOFF COEFFICIENT *C*	
TYPE OF DRAINAGE AREA SURFACES			MIN.	MAX.
ROOFS, slag to metal			0.75	0.95
PAVEMENTS	Asphalt		0.70	0.95
	Concrete		0.80	0.95
	Gravel, from clean and loose to clayey and compact		0.25	0.70
R. R. YARDS			0.20	0.40
EARTH SURFACES	Sand, from uniform grain size, no fines to well graded, some clay or silt	Bare	0.15	0.50
		Light Vegetation	0.10	0.40
		Dense Vegetation	0.05	0.30
	Loam, from sandy or gravelly to clayey	Bare	0.20	0.60
		Light Vegetation	0.10	0.45
		Dense Vegetation	0.05	0.35
	Gravel, from clean gravel and gravel sand mixtures, no silt or clay to high clay or silt content	Bare	0.25	0.65
		Light Vegetation	0.15	0.50
		Dense Vegetation	0.10	0.40
	Clay, from coarse sandy or silty to pure colloidal clays	Bare	0.30	0.75
		Light Vegetation	0.20	0.60
		Dense Vegetation	0.15	0.50
COMPOSITE AREAS	City, business areas		0.70	0.95
	City, dense residential areas, vary as to soil & vegetation		0.50	0.65
	Suburban residential areas, vary as to soil & vegetation		0.35	0.55
	Rural districts, vary as to soil & vegetation		0.10	0.25
	Parks, Golf Courses, etc., vary as to soil & vegetation		0.10	0.35
LAWNS	Sandy soil, flat 2%		0.05	0.10
	Sandy soil, average 2% to 7%		0.10	0.15
	Sandy soil, steep, 7%		0.15	0.20
	Heavy soil, flat 2%		0.13	0.17
	Heavy soil, average, 2% to 7%		0.18	0.22
	Heavy soil, steep 7%		0.25	0.35

Note: Values of C for earth surfaces are further varied by degree of saturation, compaction, surface irregularity and slope, by character of subsoil, and by presence of frost or glazed snow or ice.

Table 4-102a

OVERLAND FLOW MANNING'S n VALUES
(For use with Kinematic Wave Equation)
(*Used to Calculate ONLY t_{OF}*)

	Recommended Value	Range of Values
Concrete	.011	.01 - .013
Asphalt	.012	.01 - .015
Bare sand[a]	.010	.010 - .016
Graveled surface[a]	.012	.012 - .030
Bare clay-loam (eroded)[a]	.012	.012 - .033
Fallow (no residue)[b]	.05	.006 - .16
Chisel plow (E1/4 tons/acre residue)	.07	.006 - .17
Chisel plow (1/4 - 1 tons/acre residue)	.18	.07 - .34
Chisel plow (1 - 3 tons/acre residue)	.30	.19 - .47
Chisel plow (F3 tons/acre residue)	.40	.34 - .46
Disk/Harrow (1/4 tons acre residue)	.08	.008 - .41
Disk/Harrow (1/4 - 1 tons/acre residue)	.16	.10 - .25
Disk/Harrow (1 - 3 tons/acre residue)	.25	.14 - .53
Disk/Harrow (3 tons/acre residue)	.30	-- --
No till (1/4 tons/acre residue)	.04	.03 - .07
No till (1/4 - 1 tons/acre residue)	.07	.01 - .13
No till (1 - 3 tons/acre residue)	.30	.16 - .47
Plow (Fall)	.06	.02 - .10
Coulter	.10	.05 - .13
Range (natural)	.13	.01 - .32
Range (clipped)	.08	.02 - .24
Grass (bluegrass sod)	.45	.39 - .63
Short grass prairie[a]	.15	.10 - .20
Dense grass [c]	.24	.17 - .30
Bermudagrass[c]	.41	.30 - .48
Woods	.45	-- --

All values are from Engman (1983), unless noted otherwise.

[a]Woolhiser (1975).

[b]Fallow has been idle for one year and is fairly smooth.

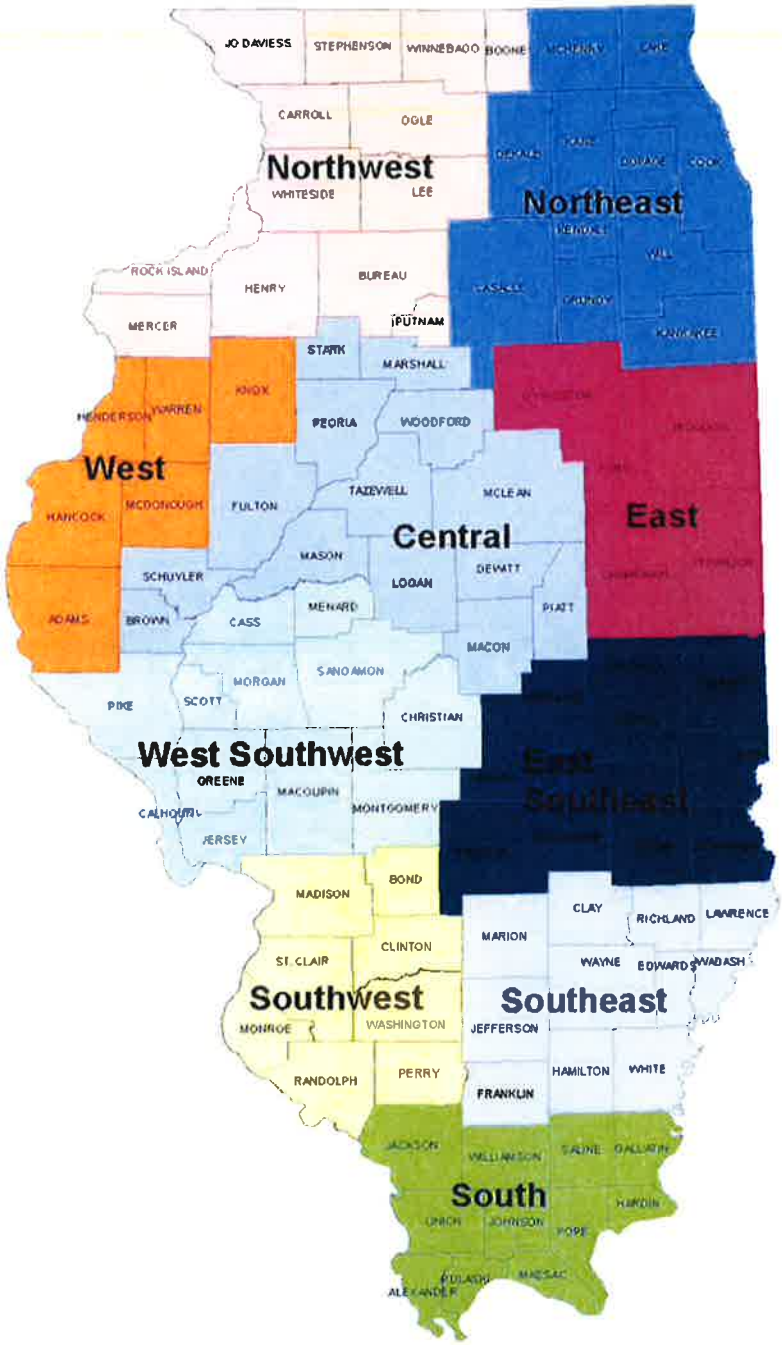
[c]Palmer (1946). Weeping lovegrass, bluegrass, buffalo grass, blue gramma grass, native grass mix (OK), alfalfa, lespedeza.

Note: These values were determined specifically for overland flow conditions and is not appropriate for conventional open channel flow calculations. See Chapter 5 of this manual for open channel flow procedures.

Table 4-102b

Type of Channel and Description	Minimum	Normal	Maximum
1. Manmade			
a. Earth, straight and uniform			
1. Clean, recently completed	0.016	0.018	0.020
2. Clean, after weathering	0.018	0.022	0.025
3. Gravel, uniform section, clean	0.022	0.025	0.030
4. With short grass, few weeds	0.022	0.027	0.033
b. Earth, winding and sluggish			
1. No vegetation	0.023	0.025	0.030
2. Grass, some weeds	0.025	0.030	0.033
3. Dense weeds or aquatic plants in deep channels	0.030	0.035	0.040
4. Earth bottom and rubble sides	0.028	0.030	0.035
5. Stony bottom and weedy banks	0.025	0.035	0.040
6. Cobble bottom and clean sides	0.030	0.040	0.050
c. Dragline-excavated or dredged			
1. No vegetation	0.025	0.028	0.033
2. Light brush on banks	0.035	0.050	0.060
d. Rock cuts			
1. Smooth and uniform	0.025	0.035	0.040
2. Jagged and irregular	0.035	0.040	0.050
e. Channels not maintained, weeds and brush Uncut			
1. Dense weeds, high as flow depth	0.050	0.080	0.120
2. Clean bottom, brush on sides	0.040	0.050	0.080
3. Same, highest stage of flow	0.045	0.070	0.110
4. Dense brush, high stage	0.080	0.100	0.140
2. Flood plains			
a. Pasture, no brush			
1. Short grass	0.025	0.030	0.035
2. High grass	0.030	0.035	0.050
b. Cultivated areas			
1. No crop	0.020	0.030	0.040
2. Mature row crops	0.025	0.035	0.045
3. Mature field crops	0.030	0.040	0.050
c. Brush			
1. Scattered brush, heavy weeds	0.035	0.050	0.070
2. Light brush and trees, in winter	0.035	0.050	0.060
3. Light brush and trees, in summer	0.040	0.060	0.080
4. Medium to dense brush, in winter	0.045	0.070	0.110
5. Medium to dense brush, in summer	0.070	0.100	0.160
d. Trees			
1. Dense willows, summer, straight	0.110	0.150	0.200
2. Cleared land with tree stumps, no sprouts	0.030	0.040	0.050
3. Same as above, but with heavy growth of sprouts	0.050	0.060	0.080
4. Heavy stand of timber, a few down trees, little undergrowth, flood stage below branches	0.080	0.100	0.120

CLIMATIC SECTIONS IN ILLINOIS

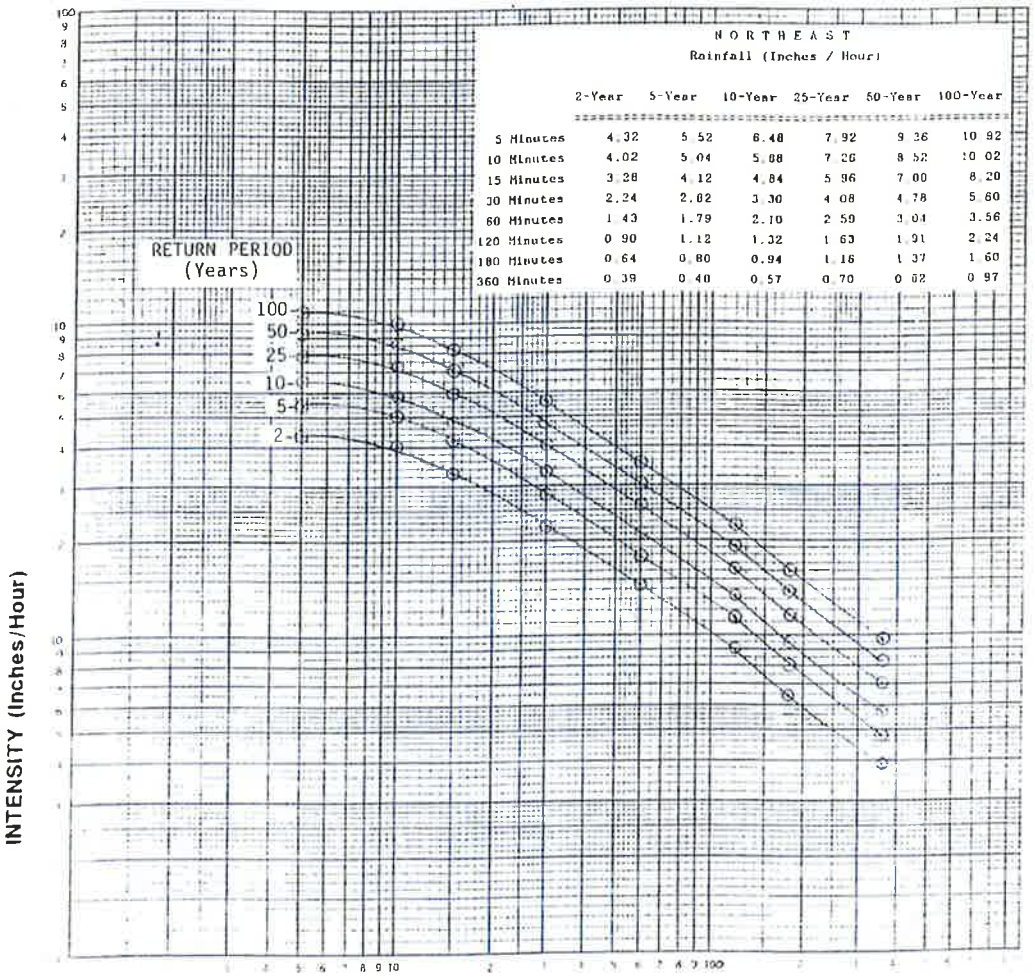


(Bulletin 70[5] pg. 17, Figure 7)
Figure 4-102a

RAINFALL INTENSITY vs. DURATION

NORTHEAST ILLINOIS

I.S.W.S. BULLETIN-70



NORTHEAST
Rainfall (Inches / Hour)

	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
5 Minutes	4.32	5.52	6.48	7.92	9.36	10.92
10 Minutes	4.02	5.04	5.88	7.26	8.52	10.02
15 Minutes	3.28	4.12	4.84	5.96	7.00	8.20
30 Minutes	2.24	2.82	3.30	4.08	4.78	5.60
60 Minutes	1.43	1.79	2.10	2.59	3.04	3.56
120 Minutes	0.90	1.12	1.32	1.63	1.91	2.24
180 Minutes	0.64	0.80	0.94	1.16	1.37	1.60
360 Minutes	0.39	0.40	0.57	0.70	0.82	0.97

Figure 4-102c

EXECUTIVE SUMMARY

The Federal Aviation Administration (FAA or Agency) is considering Federal actions requested to support a proposal by the City of Chicago (City) to modernize Chicago O'Hare International Airport (O'Hare or Airport). The City seeks FAA approval to amend its Airport Layout Plan (ALP) and seeks Federal funding for improvements to address existing and future delay and capacity problems. The FAA has prepared this Environmental Impact Statement (EIS) to take a hard look at and disclose potential environmental impacts of the City's proposal and reasonable alternatives pursuant to the National Environmental Policy Act (NEPA) and other applicable Federal environmental laws.

I. BACKGROUND

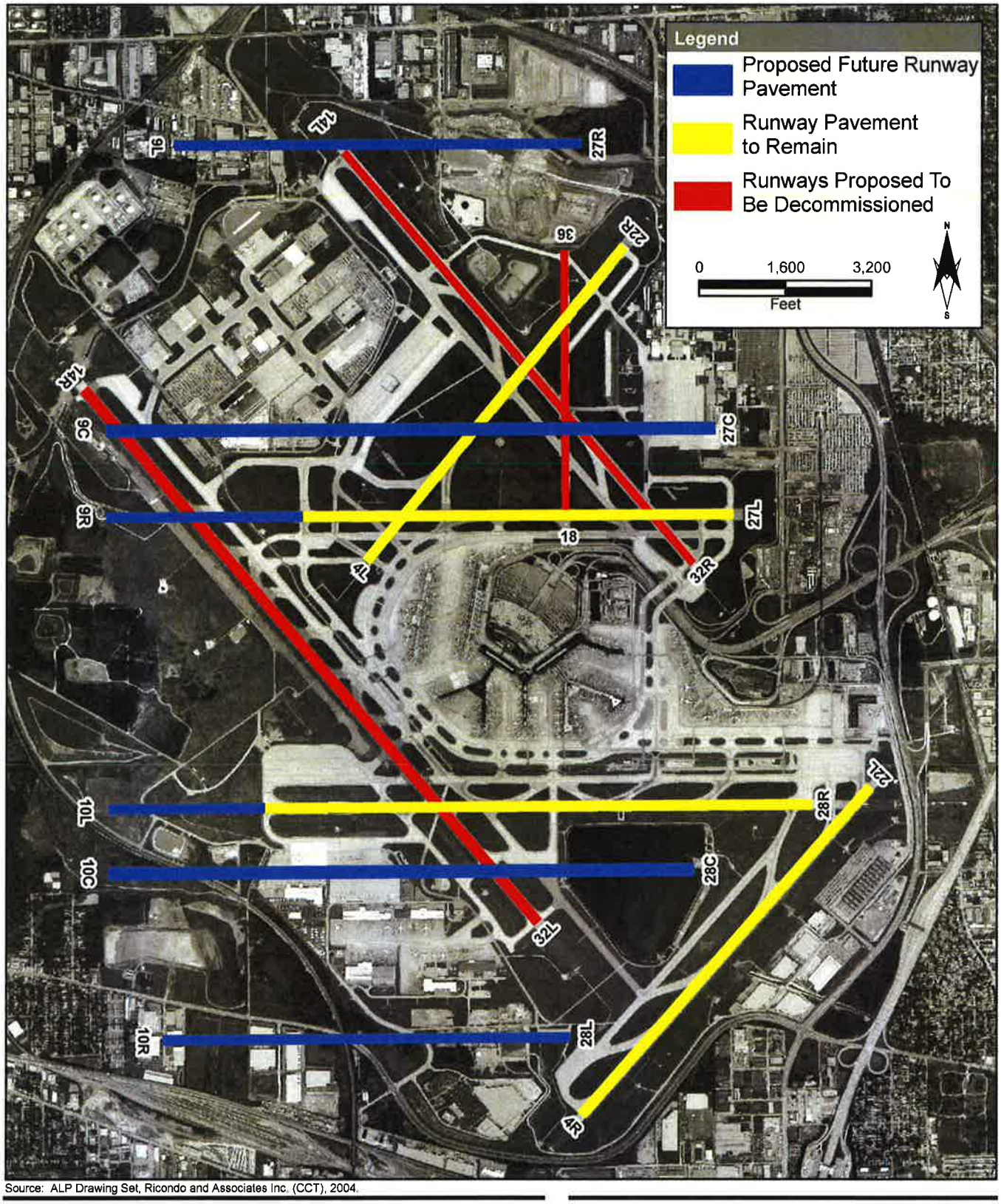
The City's proposal, referred to as the O'Hare Modernization Program (OMP), provides for reconfiguration of the airfield as shown in **Exhibit 1,** along with associated terminal and support facilities, and related land acquisition. The FAA determined that the proposed action involves major Federal actions requiring preparation of an EIS. On July 17, 2002, the FAA issued a Notice of Intent to prepare an EIS and conduct the scoping, including public meetings. As a result, the FAA gained insight at the start of this process from other Federal agencies, as well as state and local jurisdictions, advocacy groups and the general public, as to issues of importance for consideration in this EIS.

A Draft EIS was issued for agency and public comment on January 21, 2005. In response to requests for an extension of the comment period, the FAA extended the deadline for comments to April 6, 2005, for a total of 75 days. All comments received on the Draft EIS have been reviewed and considered. The FAA's detailed responses are provided in the Final EIS in **Appendix U, Response to Comments**. In addition, the EIS has been revised to incorporate additional information and/or to expand or further clarify the analyses for a number of topics including, among others, alternatives, Section 4(f)/6(f), air quality, environmental justice, and mitigation. One specific addition to the Final EIS was the identification of Alternative C, the City's OMP, as the Agency's Preferred Alternative. A more detailed description of the changes between the Draft EIS and the Final EIS is included in **Section I.E.** of this Executive Summary. This Final EIS will serve as the basis for the FAA to issue its Record of Decision (ROD).

A. Purpose of Preparing the EIS

The purpose of preparing an EIS is to investigate, analyze, and disclose the potential impacts of proposed Federal actions and their reasonable alternatives. The EIS serves to document and disclose to agency decision-makers as well as the public the environmental consequences of the proposed action and reasonable alternatives. The EIS aids the FAA in making informed decisions and taking actions that protect and may enhance the environment.

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Source: ALP Drawing Set, Ricondo and Associates Inc. (CCT), 2004.

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

Existing and Proposed Future Runways (Sponsor's Proposal)

▶ **Exhibit 1**

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B. Proposed Federal Actions

The Federal actions associated with the proposed development are:

- Approval of an Airport Layout Plan (ALP) depicting the proposed project,
- Eligibility for Federal funding under the Airport Improvement Program (AIP) and to impose and expend passenger facility charges (PFCs),
- Establishment of air traffic control and airspace management procedures designed to affect the safe and efficient movement of air traffic to and from the proposed runways, as well as in the airspace surrounding the airport,
- Establishment of flight procedure modifications,
- Certifications as to the safety of instrumentation, procedures, and airfield operations, and
- Installation and/or relocation of navigational aids associated with the proposed new and relocated runways.

C. Responsibility for Preparing the EIS

FAA is responsible for the preparation and content of this EIS. The FAA is also responsible for reviewing and verifying the accuracy of any environmental information provided by outside entities. The FAA selected a Third Party Contractor (TPC) to prepare this EIS. The FAA also utilized its TPC to independently evaluate environmental information submitted by the City (Airport Sponsor) or other entities that would become a part of the environmental analysis for this EIS.

D. Agency Coordination and Public Involvement

The FAA has committed to public involvement and agency input throughout this EIS process. The FAA *Community Involvement Policy Statement*, dated April 17, 1995, clearly affirms:

> The Federal Aviation Administration (FAA) is committed to complete, open, and effective participation in agency actions. The agency regards community involvement as an essential element in the development of programs and decisions that affect the public.

Additionally, *Chapter 2, Paragraph 208b. of FAA Order 1050.1E* states:

> At the earliest appropriate stage of the action and early in the process of preparing NEPA documentation, the responsible FAA official, or when applicable, the project proponent, must provide pertinent information to the affected community and agencies and consider the affected communities' opinions (40 CFR 1501.2). The extent of early coordination will depend on the complexity, sensitivity, degree of Federal involvement, and anticipated environmental impacts of the proposed action.

In Chapter 7, paragraph 74 of *FAA Order 5050.4A*, as a part of public involvement, the lead agency is encouraged to invite Federal or state agencies that have "jurisdiction by law in areas that may be affected by airport development" to serve as cooperating agencies. These agencies may have expertise in a given area, or assure that the proper permits, licenses, or other requirements are met throughout the development of the EIS.

In an effort to meet and exceed this guidance, the FAA developed and implemented a comprehensive and proactive public involvement program. The facets of the program included:

- Public and Agency Scoping;
- Agency Coordination including initiatives with Cooperating Agencies;
- Public Outreach Program including extensive Environmental Justice Outreach;
- Public Hearings at three separate locations, over three days;
- Utilization of the World Wide Web including the development and implementation of two public websites updated throughout the EIS process: the O'Hare Modernization EIS Website at www.ompeis.net, as well as the O'Hare Modernization Program Document Library file sharing site at: www.agl.faa.gov/OMP/. In order to provide early access to key information prior to release of the Draft EIS, the FAA began posting modeling data and other EIS-related documentation in July 2004. Through November 2004, FAA has posted over 7.5 millions pages related to O'Hare.

The FAA acknowledges and appreciates the significant role played by the following agencies in this EIS process by serving as cooperating agencies: United States Environmental Protection Agency (USEPA), Illinois Environmental Protection Agency (IEPA), United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (FWS), and Federal Highway Administration (FHWA). FAA also acknowledges and is thankful to the Illinois Department of Transportation (IDOT) and Illinois Department of Natural Resources (IDNR) for their participation in a cooperative fashion even though they did not accept "formal" cooperating agency status. In addition to formal cooperating agency contacts, FAA worked closely with numerous other Federal, state and local agencies throughout the EIS process, including Northeastern Illinois Planning Commission (NIPC), United States Department of Agriculture (USDA), Department of Interior (DOI), National Park Service (NPS), Advisory Council on Historic Preservation (ACHP), Illinois Historic Preservation Agency (IHPA), Illinois State Toll Highway Authority (ISTHA), Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), Regional Transportation Authority (RTA), and Chicago Area Transportation Study (CATS). These extensive contacts benefited the FAA by giving a substantial amount of information and perspective on the proposed development from the viewpoint of the other agencies. These meetings also were intended to enhance the ability of those entities to comment meaningfully, both during the development of the Draft EIS, in the formal comment period thereafter, and in the preparation of the Final EIS.

Simultaneously with preparation, distribution, and review of this EIS, the U.S Army Corps of Engineers (USACE) is reviewing and processing a Section 404 permit application and pre-discharge notification per the requirements of the Clean Water Act, as submitted by the City of Chicago Department of Aviation (DOA). Similarly, the Illinois Environmental Protection Agency (IEPA) is reviewing anti-degradation (Water Quality Standards) and Section 401 (Water Quality Certification) information pertaining to potential project-related wetland impacts. In furtherance of this goal, the public hearings that were conducted for the Draft EIS were hosted by FAA, the USACE, and the IEPA for purposes of meeting these agencies' requirements.

On February 22, 23, and 24, 2005, the FAA conducted three separate public hearings, at three different locations in the vicinity of O'Hare, to solicit comment on the Draft Environmental Impact Statement. The locations were selected based on their proximity to the impacted areas, their availability, and the ability of the facility to accommodate large numbers of individuals.

The FAA estimates that approximately 1,500 people attended the public hearings over the three-day period. Of the approximately 1,500 attending, nearly 400 individuals provided testimony during the three public hearing sessions. The Draft EIS comment period was originally scheduled for January 21, 2005 to March 23, 2005, providing a 60 day comment period. In response to requests for an extension of the comment period, the FAA extended the deadline for comments to April 6, 2005, for a total of 75 days. Public hearing testimony was transcribed and is included in **Appendix U, Response to Comments**.

In addition to public hearing testimony, the FAA received comments in the following formats: written, private testimony, email, and voice mail. Overall, the FAA received approximately 3000 pages of comments on the Draft EIS and related documentation (Draft General Conformity Determination and Draft Section 4(f)/6(f) Evaluation). The comment documents on the Draft EIS and the FAA's detailed responses appear in **Appendix U**. The comments and responses on the Draft General Conformity Determination are included in **Appendix J,** and the comments and responses on the Section 4(f)/6(f) Evaluation are included in **Appendix L**. Of the 3000 pages of comments, approximately one-third were submitted by the entities that represent the two communities (Bensenville and Elk Grove Village) and the Cemetery Associations that oppose the proposed action. Every comment has been considered and addressed in the Final EIS.

Most of the comments focused on Alternative C, the City's proposed OMP. The main themes from those supporting OMP (Alternative C) were economic growth and the benefits to the area's commerce, sustaining the region's prominence as a transportation hub, the employment opportunities of OMP (Alternative C), and that an improved O'Hare would generate improved efficiency/reduced delays. Those speaking in support were primarily business leaders, business associations, members of labor organizations, airline employees, others employed in the aviation industry, and local elected officials.

The main themes from those opposed to OMP (Alternative C) were concerns about how the project would be funded, relocation of the cemeteries, and support for use of other airports, congestion management, and/or building a south suburban airport rather than expanding O'Hare. Those in opposition included elected officials and local residents of affected suburbs.

In addition, there were comments related to environmental impacts including, among others, air quality, noise, Section 4(f)/6(f), and surface transportation.

E. Changes Between the Draft EIS and Final EIS

The FAA has provided additional information and updated and/or refined analysis in the Final EIS in response to comments on the Draft EIS, Draft Section 4(f) and Section 6(f) Evaluation, and Draft General Conformity Determination. Additionally, the FAA expanded the text and added new graphics throughout the Final EIS to enhance the analysis in several important areas. More specifically, the Final EIS contains updated information in the following sections:

Sections 3.6 and 3.7, of Chapter 3, Alternatives

- Additional graphics and supporting text were added in Chapter 3 to the initial screening evaluation to further develop the FAA's analysis of regional airports.
- **Section 3.6** was added to **Chapter 3** to evaluate commenter-generated proposals, that upon review by the FAA were determine to be derivatives of alternatives in the Draft EIS. Additionally, **Section 3.6** provides an evaluation of derivatives to Alternative C developed by the FAA.
- **Section 3.7** was added to **Chapter 3** for the identification of the Preferred Alternative.

Section 5.6, Air Quality, of Chapter 5, Environmental Consequences

- This section was updated to provide additional airport operations' emissions inventory information and dispersion modeling for particulate matter 2.5 microns or less in size.
- Information has also been added to this section concerning the FAA's evaluation of general conformity requirements under the Clean Air Act, including a discussion of the Draft General Conformity Determination published on May 18, 2005 for public review and comment. The comments received and the Final General Conformity Determination has been issued with and attached to the Final EIS in **Appendix J**.

Section 5.8, Section 4(f) and Section 6(f) Resources, of Chapter 5, Environmental Consequences

- **Section 5.8** was updated to include information about the coordination under and in compliance with Department of Transportation Section 4(f) and Land Water Conservation Act Section 6(f). It discusses the Draft Evaluation issued for comment on May 20, 2005. Comments received and the Final Section 4(f) and Section 6(f) Evaluation has been issued with and attached to the Final EIS in **Appendix L**.

Section 5.21, Environmental Justice, Subsections 5.21.4 through 5.21.11, of Chapter 5, Environmental Consequences

- **Section 5.21.4** was updated to include the results of an analysis performed to determine if there was a statistically significant difference among the proportions of minority populations and low-income households in the "impact" areas when compared to the larger general study areas. This analysis was performed because the results for the comparison analyses for indirect noise impacts in the Draft EIS were so close (i.e., within 10 percent).
- The sections after **Section 5.21.4** were added to provide an analysis of indirect impacts on environmental justice communities for the following resource categories:
  - surface transportation
  - air quality
  - wetlands
  - Section 4(f) and Section 6(f) resources

Section 5.22, Other Issues Relating to Cemetery Acquisition, of Chapter 5, Environmental Consequences

- This section was added to **Chapter 5** to address commenter assertions that the FAA's approval of any proposal requiring relocation of these cemeteries would violate these commenters' First Amendment rights to free exercise of religion as well as rights deriving from the Religious Freedom Restoration Act.

Section 5.23, Issues Relating to Due Process Claims and Formal Adjudicative Processes, of Chapter 5, Environmental Consequences

- This section was added to **Chapter 5** to address commenter assertions that the FAA has violated these commenters' due process rights and that the FAA decisions related to any proposed O'Hare modernization require formal adjudication.

Chapter 7, Mitigation

- This chapter was revised to include further detailed information on alternative mitigation measures, including those for which the City of Chicago would have implementation responsibility if a Build Alternative would be selected in the ROD.

These changes are discussed in more detail in relevant sections of this Executive Summary.

F. National Context

The FAA fulfills its NEPA obligations in the context of a number of statutory, regulatory, and policy directives, including both the FAA's Operational Evolution Plan and Flight Plan. One of the goals of the Flight Plan is to "work with local government and airspace users to provide capacity in the United States airspace system that meets projected demand in an environmentally sound manner."

As stated by the Administrator of the FAA, Jane F. Garvey, before the Committee on Commerce, Science, and Transportation on June 15, 2001 regarding airport capacity in the Chicago area,

> It is important to note the Federal Government's role in this endeavor. In a deregulated domestic aviation industry, the Federal government no longer controls where, how and when airlines provide their services. Nor are we the driving force in airport capacity development. What drives those considerations now is the market, and local and regional decision making, in partnership with the aviation industry, in response to that market demand. Certainly, we at the Federal level will provide any support and assistance that we can, and will do our part in continuing to modernize the air traffic control system and implementing ATC efficiencies wherever possible. However, the Federal government cannot and should not solve State and local planning challenges. In Chicago, past efforts to deal with airport capacity limitations in the region failed because of lack of consensus. That appears to be changing. It is a very positive development that the City and State appear to be coming together to reach consensus for both short and long-term measures to deal with the predicted growth in operations at the region's airports. We stand ready to assist in any way that we can.

G. O'Hare Modernization Act

Due to the importance of O'Hare to the State of Illinois, specific O'Hare Airport-related legislation was passed. The O'Hare Modernization Act (OMA), which related to the proposed

expansion of O'Hare, was adopted by the Illinois legislature and signed into law by the Governor on August 6, 2003.

The OMA states:

> Section 5. Findings and purposes.
>
> (a) The Illinois General Assembly finds and determines:
>
> (1) The reliability and efficiency of the State and national air transportation systems significantly depend on the efficiency of the Chicago O'Hare International Airport. O'Hare has an essential role in air transportation for the State of Illinois. The reliability and efficiency of air transportation for residents and businesses in Illinois and other States depend on efficient air traffic operations at O'Hare.
>
> (2) O'Hare cannot efficiently perform its role in the State and national air transportation systems unless it is reconfigured with multiple parallel runways.
>
> (3) The O'Hare Modernization Program will enhance the economic welfare of the State of Illinois and its residents by creating thousands of jobs and business opportunities.
>
> (4) O'Hare provides, and will continue to provide, unique air transportation functions that cannot be replaced by any other airport in Illinois...
>
> (5) Public roadway access through the existing western boundary of O'Hare to passenger terminal and parking facilities located inside the boundary of O'Hare and reasonably accessible to that western access is an essential element of the O'Hare Modernization Program. That western access to O'Hare is needed to realize the full economic opportunities created by the O'Hare Modernization Program and to improve ground transportation in the O'Hare area. It is important to the State that the western access be constructed not later than the time existing runway 14R-32L is removed from service.
>
> (6) For the reasons stated in paragraphs (1), (2), (3), (4), and (5), it is essential that the O'Hare Modernization Program be completed efficiently and without unnecessary delay.
>
> (7) For the reasons stated in paragraphs (1), (2), (3), (4), and (5), it is essential that acquisition of property as required for the O'Hare Modernization Program be completed as expeditiously as practicable.
>
> (8) The General Assembly recognizes that the planning, construction, and use of O'Hare and the planning, construction, and use of the O'Hare Modernization Program will be subject to intensive regulatory scrutiny by the United States and that no purpose would be served by duplicative or redundant regulation of the safety and impacts of the airport or the O'Hare Modernization Program...
>
> (b) It is the intent of the General Assembly that all agencies of this State and its subdivisions shall facilitate the efficient and expeditious completion of the O'Hare Modernization Program to the extent not specifically prohibited by law, and that legal impediments to the completion of the project be eliminated.

II. O'HARE INTERNATIONAL AIRPORT

A. Background

O'Hare International Airport is one of the most important airports in the National Airspace System (NAS). It provides vital origin and destination service to the nation's third largest metropolitan area, as well as serving as an important connecting hub for two of the world's largest airlines – American and United. Moreover, it provides substantial and growing international service. In 2002, O'Hare was the world's busiest airport as measured by total operations, the second busiest in terms of enplaned passengers, and the fourth busiest international gateway in the nation in terms of total international enplaned passengers. O'Hare also operates as a major cargo airport.

As of October 2004, 47 scheduled passenger airlines regularly served O'Hare - 10 U.S. flag air carriers, 27 foreign-flag air carriers, and 10 regional/commuter carriers. In addition, 23 carriers provided scheduled cargo service at O'Hare. O'Hare provides nonstop service to 127 domestic and 48 international destinations.

The current airfield layout along with the City's proposed airfield redesign is shown in **Exhibit 1.**

B. Historical Delays at O'Hare

The physical and operational characteristics of O'Hare contribute to high levels of congestion and delay that are expected to become more severe over the forecast period. Working with the City and the air carriers, as members of the 1991 and 2001 O'Hare Delay Task Force, the FAA developed and implemented many of the Task Force recommendations to reduce delays. However, delays persisted. In 2003, O'Hare experienced more delays than any other airport in the country. Congestion and delay at O'Hare in turn affects the efficiency of the entire National Airspace System (NAS). As shown in **Table 1,** O'Hare had the greatest share of minutes of delay for the top delayed airports in the NAS, with 27.5 percent in 2002 and 31.4 percent in 2003. O'Hare operations were delayed a total of 2,875,328 minutes in 2002 and 3,840,493 minutes in 2003. In 2002, 53,156 operations at O'Hare were significantly delayed (i.e. more than 15 minutes); in 2003, 69,185 operations were significantly delayed.

TABLE 1
AIRPORT DELAYS AT THE TOP DELAYED AIRPORTS
AS MEASURED IN TOTAL MINUTES OF DELAY

2002					2003				
Facility	Total Operations	Total Delays	Total Delay Time (Min)	% of Delays of Top 5 Airports	Facility	Total Operations	Total Delays	Total Delay Time (Min)	% of Delays of Top 5 Airports
ORD	922,787	53,156	2,875,328	27.5%	ORD	931,422	69,185	3,840,493	31.4%
ATL	890,923	29,821	1,307,943	12.5%	ATL	911,788	37,520	1,542,601	12.6%
LGA	367,656	12,635	773,267	7.4%	EWR	410,661	24,649	1,443,001	11.8%
EWR	411,239	13,836	770,931	7.4%	LGA	379,369	17,898	952,656	7.8%
PHL	467,717	16,425	645,867	6.2%	PHL	445,974	13,627	603,221	4.9%

Source: FAA OPSNET, November 2004.

C. FAA Orders Approving Limited Operations at O'Hare

Over the years, there has been some effort to address delay issues at O'Hare (and other airports of critical significance to the NAS) through the imposition of controls on operations during certain hours.

Beginning in 1969, the FAA adopted a High Density Rule (HDR) that established limits on the number of takeoffs and landings during certain hours at five airports, including O'Hare. In 1984, the FAA amended the HDR to increase the hours in which limitations at O'Hare would apply and to increase the number of takeoffs and landings permitted at that airport. In 2000, Congress adopted legislation intended to phase out the HDR while preserving the FAA's authority over safety and the movement of air traffic.

In January 2004, the FAA issued the first of three sequential orders addressing delays by limiting operations at O'Hare on a temporary basis. The following developments led to the issuance of the first order:

- In November and December of 2003, arriving passengers at O'Hare experienced a total of 1.7 million minutes (over 28,000 hours) of delay.
- During the same two months, 39 percent of the flights at O'Hare were delayed, with an average of 492 flights per day delayed an average of 57 minutes each.
- The percentage of on-time arrivals declined from 85 percent in October 2003, to 62 percent and 65 percent in November and December, respectively.

By mid-summer 2004, the delays became so critical that the U.S. Secretary of Transportation convened a meeting with the O'Hare carriers to discuss the need for additional flight reductions at O'Hare. The severe congestion and delays at O'Hare during peak periods coupled with airline over scheduling led the Federal government to issue a second order memorializing a voluntary agreement among the air carriers serving O'Hare to reduce service during certain hours.

An agreement was reached among all parties on August 18, 2004 which culminated in the issuance of a third Order on scheduled arrivals at O'Hare, limiting them to 88 per hour during most hours of the day and implementing the agreement among the carriers.

In adopting the most recent Order, the Agency said that its action was not intended to evaluate or to prescribe any particular long-term avenue for increasing capacity and reducing delays at O'Hare. The FAA reserves the authority to take further interim action, if necessary, when the present Order expires. Independently of the scheduling reduction Order, the FAA noted that it is preparing this EIS evaluating the City of Chicago's proposal and reasonable alternatives for reducing delays and thereby enhancing capacity.

Subsequent to the issuance of the Draft EIS, on March 25, 2005, the FAA issued a Notice of Proposed Rulemaking (NPRM) to extend the limitation of flight schedules:

> The FAA is proposing this rule to address persistent flight delays related to over-scheduling at O'Hare International Airport (O'Hare). This proposed rule is intended as an interim measure, because the FAA anticipates that the rule would yield to longer term solutions to traffic congestion at the airport. Such solutions include an application by the City of Chicago that, if approved, would modernize the airport and reduce levels of delay, both in the medium term and long term. For this reason, the proposed rule includes provisions allowing for the limits it imposes to be gradually relaxed and in any event would sunset in 2008.

D. O'Hare's Impact on the National Airspace System (NAS)

The historic factors that have combined to make Chicago a key transportation hub in the nineteenth century, and the twentieth century aviation market forces that have consistently made O'Hare one of the world's busiest and most congested airports, are expected to continue. Both the current and forecast aviation demand in the Chicago market signal an urgent need for significant action to reduce congestion and delay.

It is important to note that the operational efficiency at O'Hare has a significant ripple effect on delays throughout the entire NAS, not just in Chicago. For example, aircraft traveling through a congested O'Hare environment that experience delays will then produce further delays elsewhere in the system as those aircraft reach other airports. In addition to missed connections, rescheduled flights, and cancelled flights due to such delays, O'Hare congestion also causes high altitude congestion as aircraft traveling on the same jet routes bound to and departing from O'Hare are slowed in response to delayed operations at O'Hare. Because of O'Hare's significant role in the NAS and because of Chicago's historic role as a transportation hub, reducing or minimizing present and projected future delays at O'Hare is essential to meeting the aeronautical needs of the Chicago region and thereby enhancing the capacity of the NAS.

In light of the projected aeronautical needs of the Chicago region and the additional adverse impact of further delays upon both the Chicago region and the NAS, a solution to O'Hare's present and future problems must be found. Moreover, any solution can only be realized within the limited powers of the FAA in the context of a deregulated airline environment.

III. FORECASTS

Forecasts provide information for conducting technical analysis in the EIS, including noise modeling, air quality modeling, demand-capacity analysis, and socioeconomic analysis. This EIS utilizes the FAA's 2002 Terminal Area Forecast (TAF), the most recent demand forecast available when the technical analysis began. The TAF is prepared by FAA staff using industry-standard methodology—including statistical analysis of historical trends, review of recent trends in airline service, and assumptions regarding future airline developments. The FAA TAF represents the official FAA outlook for each major airport, and is the standard by which any independently-developed airport forecast is measured. The 2001 TAF was used by the City in formulating its Master Plan, and when the FAA commenced this EIS in 2002, it relied upon a more recent version of the TAF.

Table 2 is a summary of the 2002 FAA TAF for O'Hare, for the period from 2002 to 2018. As shown, total enplaned passengers are forecast to increase from 31,710,512 in 2002 to 50,372,000 in 2018, at an average annual rate of 2.9 percent. Also as shown, total aircraft operations are forecast to increase from 922,787 in 2002 to 1,194,000 in 2018, at an average annual rate of 1.5 percent.

TABLE 2
2002 TAF FOR O'HARE – CALENDAR YEARS (CY)

	CY 2002	CY 2003	CY 2007	CY 2009	CY 2013	CY 2018	AAGR(a) 2003-2018
Enplaned passengers	31,710,512	32,609,000	36,943,000	39,149,000	43,912,000	50,372,000	2.9%
Average annual change	n/a	2.8%	3.2%	2.9%	2.9%	2.8%	n/a
Aircraft Operations	922,787	960,500	1,026,300	1,057,200	1,120,600	1,194,000	1.5%
Average annual change	n/a	4.1%	1.7%	1.5%	1.5%	1.3%	n/a

Note: (a) AAGR – Average annual growth rate.
(b) n/a = not applicable.
Source: 2002 FAA Terminal Area Forecast, published in March 2003.

This forecast represents a reasonable representation of potential future activity levels for the purposes of this EIS. However, all forecasts are subject to uncertainty regarding future events, and it is possible that there will be future developments that would result in actual aviation activity somewhat different from that which was forecast.

Subsequent to the initiation of the Draft EIS, the FAA issued the 2003 and 2004 TAF. To address variations in forecasts and other unanticipated events, the FAA has developed **Appendix R, Alternate Considerations**. **Appendix R** identifies and considers a range of potential alternate outcomes with regard to aviation activity at O'Hare, and identifies the possible alternate environmental impacts that could occur under these conditions.

IV. PURPOSE AND NEED

The regulations implementing NEPA indicate that environmental impact statements "shall briefly specify the underlying purpose and need to which the agency is responding in

proposing the alternatives including the proposed action." The O'Hare Modernization EIS defines the purpose and need for the proposed action as:

"To address the projected needs of the Chicago region by reducing delays at O'Hare, thereby enhancing capacity of the NAS, and ensuring that future terminal facilities and supporting infrastructure can efficiently accommodate airport users."

Continuing the role held by Midway Airport before Midway was eclipsed by the jet-age, O'Hare plays a vital role in the NAS by providing an extensive network of domestic and international air service to and from one of the nation's largest metropolitan areas, and also by serving as a central connecting point in the nation's air transportation network. O'Hare is uniquely suited to this role by virtue of its large local market, which is expected to increase in the future. This large local market, coupled with O'Hare's central location in the NAS, provides opportunities for connecting service to many destinations. Consequently, O'Hare has consistently ranked as one of the busiest airports in the United States. Under the current airport configuration, playing this role comes at the cost of high levels of aircraft delay. Continued growth in O'Hare traffic in the years ahead would have additional adverse impacts on the air transportation needs of the Chicago region and upon the efficiency of the NAS.

Delays at O'Hare have a direct impact on the entire NAS, in part because approximately 51 percent of the total passengers traveling through O'Hare currently connect to and from other airports. Additionally, O'Hare affects the NAS because the airfield lacks adequate runway capacity or gate availability to handle both the current and forecast levels of activity. O'Hare operations also directly affect the networks of 47 domestic and international passenger airlines providing service to 127 domestic and 48 international airports. In 2002, the City estimated that delays at O'Hare cost the airlines and other commercial operators nearly $225 million in aircraft direct operating costs. Similarly in 2007, the City projects that delays are expected to cost O'Hare's aircraft operators over $674 million in aircraft direct operating costs annually. Because delays at O'Hare result in delay throughout the NAS, other airports, airlines and passengers incur additional costs not reflected in the figures above.

For an airport such as O'Hare, where the historic percentage of connecting passengers has been 50 percent or more, delays at O'Hare result in delays throughout the NAS because of the high number of operations and passengers served by O'Hare, see discussion above in **Section II.D., O'Hare's Impact on the National Airspace System** of this **Executive Summary.**

To meet the needs of airlines, passengers, air cargo operators, and other Airport users, the capacity of terminal and support facilities should be in balance with the capacity of the airfield. Thus, this component of purpose and need simply reflects the FAA's recognition that any undertaking to enhance the airside capacity at an already congested location also needs additional non-airfield capacity, including terminals, gates, and associated infrastructure. The 21 gates and 5 hard stands in Terminal 5 today are the only nonexclusive gates at O'Hare. Consequently, new entrant carriers must either use these gates or sublease gates from an incumbent carrier. Gates at the other terminals (Terminals 1, 2, and 3) already average 7 to 11 turns per day, which is above the national industry average for gate utilization. It should be

noted that the FAA has not rejected the use of other airports, or any specific airport, as an alternative based on failure to provide adequate terminal facilities at O'Hare.

V. ALTERNATIVES ANALYSIS

A. Range of Alternatives Considered

The FAA recognizes that the portion of the EIS dealing with alternatives is "the heart of the environmental impact statement" (Council on Environmental Quality (CEQ) Regulations). Accordingly, this EIS examines a wide range of alternatives from non-airfield development to several variations of airfield configuration. Because of the magnitude and complexity of the project and its national implications, the FAA conducted both initial and secondary screening to ensure that a reasonable range of alternatives would be studied in detail.

The initial screening assessed whether each potential alternative met the purpose and need as stated in the EIS. Thereafter, secondary screening examined the feasibility and prudence of alternatives that met the initial screening criteria. In total, 15 individual alternatives were considered prior to initial screening.

The types of alternatives considered in the EIS included the following:

- No Action (i.e. Alternative A),
- Other modes of travel or communication,
- Use of other airports, including regional airports and other mid-continent airports,
- Congestion management,
- Airspace improvements,
- New air traffic control and navigation technologies,
- Eight different O'Hare Development Alternatives, and
- A Blended Alternative combining component parts of other alternatives with limited airfield development (created after initial screening for consideration in secondary screening).

Non-Airfield Alternatives are identified in **Table 3**. O'Hare Development Alternatives are identified in **Table 4**.

B. Initial Screening

In its initial screening of alternatives, the FAA evaluated the potential of each alternative to satisfy each component of the purpose and need of the proposed action. For example, the Agency carefully assessed the potential of other airports, including Rockford, Gary, Milwaukee, and the proposed South Suburban, as well as other mid-continent airports, to determine whether expanded use of those facilities was likely to alleviate present and future delay at O'Hare. In addition, expanded use of these airports was also considered in conjunction with certain non-airfield alternatives. At the conclusion of the initial screening process five O'Hare

Development Alternatives (Alternatives C, D, E, F and G) plus the No Action (Alternative A) remained. These alternatives were carried forward for secondary screening.

As a result of initial screening, several alternatives that did not involve construction at O'Hare were rejected for a variety of reasons. For example, FAA evaluated the Airspace-Only Improvement Alternative, (no airfield development combined with airspace modifications to enhance the flow of traffic to and from O'Hare). Implementing such improvements (e.g. new arrival routes) in the O'Hare airspace could reduce or eliminate the need for physical improvements to the airfield only if the capacity of the current runway system was greater than the capacity of the corresponding enhanced airspace. Today, the current runway system is the primary constraint on operations at O'Hare. In other words, improving the airspace at O'Hare without also making improvements in the runway capacity would be akin to adding new entrance ramps to an already congested highway without also adding new lanes. Therefore, the Airspace-Only Improvement Alternative would not, by itself, meet purpose and need.

Similarly, the FAA evaluated an alternative involving the use of other airports in the Chicago region. The conclusions of this evaluation were:

- It is possible that the capacity at other existing and potential regional airports could be used to satisfy some of the local origin-destination passenger demand forecast for O'Hare,
- It is not likely that any of the other regional airports would be used as a significant connecting hub or international gateway during the forecast period,
- The continued role of O'Hare as a major national connecting hub and international gateway is dependent on the airline service of local origin-destination traffic. Therefore, there is a limit to the amount of local traffic that could be diverted while still maintaining the roles of O'Hare as a hub and gateway,
- The practical limit of potential diversion of demand from O'Hare is estimated to be far less than the likely availability of capacity at other regional airports, and
- Any material diversion of demand from O'Hare would require airline strategic decisions which cannot be predicted or relied upon.

In view of these conclusions, coupled with the fact that neither the FAA nor the City has the power to prescribe where carriers may operate, it was determined that the use of other regional airports would not, by itself, be sufficient to satisfy purpose and need. The use of other regional airports was included as part of the Blended Alternative.

Although the use of other airports, by itself, would not meet the initial screening criteria, a Blended Alternative combining use of the non-airfield alternatives (including use of other airports, demand management, other modes of transportation, airspace improvements, and new technology) with less extensive development (Alternative B) at O'Hare was created. The FAA examined the possibility that this Blended Alternative might meet the purpose and need for the proposed action. The Blended Alternative was carried forward to secondary screening. Initial screening results are summarized in **Tables 3** and **4.**

TABLE 3 INITIAL SCREENING - NON-AIRFIELD ALTERNATIVES

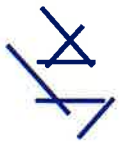
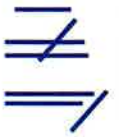
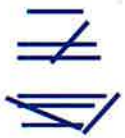
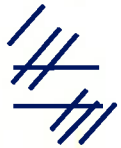
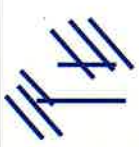
	Alternative	No Action	Other Modes of Travel or Communication	Use of Other Airports		Congestion Management	Airspace Improvements	New Air Traffic Control and Aircraft Navigation Technologies
				Regional Airports	Mid-Continent Airports			
1. Address the projected needs of the Chicago region by reducing delays at O'Hare, and thereby enhancing capacity of the NAS.								
1a	Reduce delays, especially under adverse weather conditions							
1b	Efficiently accommodate existing and future aviation operating needs							
2. Ensure that existing and future terminal facilities and supporting infrastructure can efficiently accommodate airport users.								
2a	Provide adequate terminal, gate, and apron areas							
2b	Provide sufficient supporting infrastructure							
Conclusion - Ability to meet initial screening criteria as an individual alternative.		Retain as required by NEPA	Eliminate (a)	Eliminate (a)	Eliminate	Eliminate (a)	Eliminate	Eliminate (a)

Note: (a) This alternative will be evaluated further as part of the blended alternative discussed in the EIS.

Legend:

- Alternative clearly has the potential to meet or exceed criterion.
- Alternative may have the potential to partially meet criterion.
- Alternative clearly does not have the potential to meet criterion by itself.

TABLE 4 INITIAL SCREENING - O'HARE DEVELOPMENT ALTERNATIVES

Runway Layout for Each Alternative									
Alternative	**A (No Action)**	**B**	**C (Sponsor's Proposal)**	**D**	**E**	**F**	**G**	**H**	**I**
1. Address the projected needs of the Chicago region by reducing delays at O'Hare, and thereby enhancing capacity of the NAS.									
1a Reduce delays, especially under adverse weather conditions									
1b Efficiently accommodate existing and future aviation operating needs									
2. Ensure that existing and future terminal facilities and supporting infrastructure can efficiently accommodate airport users.									
2a Provide adequate terminal, gate, and apron areas									
2b Provide sufficient supporting infrastructure									
Conclusion - Ability to meet initial screening criteria as an individual alternative.	Retain as required by NEPA	Eliminate (a)	Retain for Secondary Screening	Retain for Secondary Screening	Retain for Secondary Screening	Retain for Secondary Screening	Retain for Secondary Screening	Eliminate	Eliminate

Note: (a) This alternative will be evaluated further as part of the blended alternative discussed in the EIS.

Legend:

- Alternative clearly has the potential to meet or exceed criterion.
- Alternative may have the potential to partially meet criterion.
- Alternative clearly does not, by itself, have the potential to meet criterion.

C. Secondary Screening

This section describes the criteria drawn from the applicable environmental statutes and regulations that are used in this section to evaluate the alternatives retained as a result of the initial screening process. For example, several criteria are found in FAA Order 5050.4A (Paragraph 83b). In pertinent part that Order provides:

> [These acts] require a finding that "no feasible and prudent alternative" exists. The terms "feasible" and "prudent" are separate criteria and refer to sound engineering principles and sound judgment, respectively. A construction alternative, for example, may be feasible if, as a matter of sound engineering principles, it can be built. It may not be prudent, however, because of safety, policy, environmental, social, or economic consequences. As outlined in FAA Order 5050.4A, the environmental documentation must show that no feasible and prudent alternative exists when all factors (safety, national policy, efficiency, economic, social, and environmental) are considered.

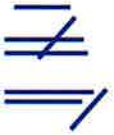
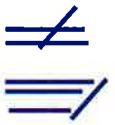
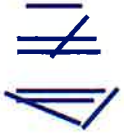
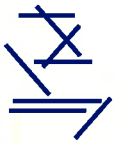
The discussion of secondary screening was expanded to better describe how the FAA has applied the criteria used in conducting secondary screening for this particular airport improvement proposal.

- Pursuant to NEPA, the FAA must take a "hard look" at all "reasonable" alternatives, which involves a study of those alternatives "that are practical or feasible from the technical and economic standpoint and using common sense."
- Because the proposed action involves the application for a permit from the U.S. Army Corps of Engineers to fill waters of the U.S., issuance of the 401 Water Quality Certification from the Illinois EPA, and required FAA findings regarding wetlands and floodplains, the FAA must also comply with the alternative analysis of the Clean Water Act, requiring a finding that no practicable alternative exists that would avoid or further minimize impacts to the resources at issue.
- Further, the proposed action implicates Section 4(f) of Department of Transportation Act and Section 6(f) of the Land and Water Conservation Act (See **Appendix L**) because there is proposed use of properties protected by those statutes.
- As a result, the FAA must conduct alternatives analyses as required by those statutes.

The Council on Environmental Quality (CEQ) and the FAA's environmental policies and procedures require the EIS to serve as the platform for satisfying not only NEPA, but all these other environmental statutes as well. Because the concepts of reasonableness, practicability, and prudence are so similar, it would make little sense to conduct separate sets of analyses for these retained alternatives under each of the statutes identified above. Therefore, the FAA has integrated into the secondary screening a common-sense understanding of these similar concepts.

By definition, each of the retained alternatives appears feasible as a matter of sound engineering principles, is capable of being implemented, and could be operated safely. The examination of whether the retained alternatives are "reasonable" in the secondary screening analysis involves issues of practicality and prudence. Accordingly, the retained alternatives are evaluated relative to one another with respect to environmental, social, efficiency, economic, and national policy factors as shown in **Table 5**.

TABLE 5
SUMMARY OF SECONDARY SCREENING

Alternative	C	D	E	F	G	Blended Alternative
Runway Layout for Each Alternative						
1. ENVIRONMENTAL- Identify clearly superior and/or inferior alternatives with respect to environmental factors.						
No alternative is clearly inferior or superior with respect to environmental factors. Therefore, no alternatives were eliminated on the basis of environmental factors.						
2. OPERATIONAL EFFICIENCY - Identify clearly superior and/or inferior alternatives with respect to operational efficiency.						
Delay Reduction						
3. ECONOMIC - Identify clearly superior and/or inferior alternatives with respect to economic factors.						
A. Delay Costs						
B. Local Tax Base						
C. Development Costs						
4. NATIONAL POLICY - Identify clearly superior and/or inferior alternatives with respect to implementation factors.						
Implementation Factors						
5. CONCLUSION						
Retain for Detailed Evaluation	YES	YES	NO	NO	YES	NO

Legend:



Alternative is better than other alternatives in the specific category.

Alternative is between other alternatives in the specific category.

Alternative is worse than other alternatives in the specific category.

D. Evaluation of Commenter and FAA Developed Derivatives

In the course of reviewing comments on the Draft EIS, FAA was presented with suggestions and requests regarding the alternatives presented in the Draft EIS that could be considered for the purpose of avoiding or mitigating some of the impacts associated with proposed Build Alternatives.

Although in many cases these suggestions or requests have been described by commenters as "new alternatives", FAA has reviewed these proposals and believes that they are properly characterized as "variants" or "derivatives" to the alternatives that were presented in the Draft EIS. A document titled "The Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," in the Federal Register on March 23, 1981, Question 29b specifically deals with the issue of how an agency must respond to a comment raised on the Draft EIS concerning a specific alternative or alternative(s) not previously considered. Below are two scenarios discussed in this document which supports the agency's approach to the further evaluation of "variants" or "derivatives."

> A second possibility is that an agency may receive a comment indicating that a particular alternative, while reasonable, should be modified somewhat, for example, to achieve certain mitigation benefits, or for other reasons. If the modification is reasonable, the agency should include a discussion of it in the final EIS....
>
> A third slightly different possibility is that a comment on a draft EIS will raise an alternative which is a minor variation of one of the alternatives discussed in the draft EIS, but this variation was not given any consideration by the agency. In such a case, the agency should develop and evaluate the new alternative, if it is reasonable, in the final EIS. If it is qualitatively within the spectrum of alternatives that were discussed in the draft, a supplemental draft will not be needed....

The derivative alternatives can generally be categorized as follows: (1) commenter developed derivatives of the "No Build" or "Limited Build" alternatives, and (2) FAA developed derivatives of Alternative C (Preferred Alternative). For greater details on comments received as part of the formal EIS process, please see **Appendix U, Response to Comments,** of this FEIS.

Section 3.6, Evaluation of Derivatives of the Final EIS evaluates the commenter developed derivatives in relation to the FAA's screening criteria utilized in the EIS. FAA representatives evaluated these eight derivatives relative to the purpose and need. Based on its evaluation, FAA has determined that none of the commenter derivatives meet purpose and need. Therefore, these derivatives were not retained for secondary screening.

As a result of comments made on the Draft EIS, the Agency directed its staff to develop derivatives of Alternative C that would avoid or minimize potential impacts to the cemeteries (St. Johannes and Rest Haven). FAA representatives from within the Great Lakes Region (Airports, Air Traffic, CAMPO, TPC, and Runway Safety Officer) evaluated the FAA developed five derivatives in comparison to Alternative C. Based on its evaluation, FAA determined that none of the five FAA derivatives was a less restrictive alternative capable of performing as well as Alternative C. Similarly, none of the five derivatives would avoid or minimize impacts to the cemeteries while also performing as well as Alternative C. See **Chapter 3, Alternatives, Section 3.6** for greater detail.

VI. SIMULATION MODELING

As a foundation for the majority of analysis work to be accomplished under the EIS process, FAA employed state-of-the-art computer simulation modeling tools and methodology. Based on the forecast, computer simulation allows the FAA to evaluate multiple airspace, airfield, and operational scenarios in a variety of contexts and assess how each would perform. Based on forecast flight schedules, this model takes each aircraft traveling to and from O'Hare through its hypothetical trip in conjunction with all other aircraft in the region's airspace arriving at or departing from O'Hare and aircraft movement on the airfield. In other words, this model simulates flights using O'Hare from departure at another airport to when the engines are turned off at the gate at O'Hare. Then the model calculates the appropriate time between flights at that gate and provides a departure time based upon both ground traffic at O'Hare and other aircraft demanding the same airspace. This simulation modeling, utilizing the commercially-available Total Airspace and Airport Modeller (TAAM) software, provided insight into the operational capabilities of the airfield alternatives being studied, and provided a basis for assessment of environmental consequences associated with each alternative as well as the operational performance.

An unprecedented series of TAAM simulation analyses were conducted by the City of Chicago's Consultant Team (CCT) with direction, oversight, review and approval by the FAA and FAA's Third Party Contractor (TPC). TAAM simulation experiments were conducted for the No Action Alternative and Build Alternatives C, D, and G. The purpose of this effort was to provide insight as to how the various airfield alternatives performed when compared to one another. In addition, the model outputs provide input data to the noise and air quality assessment models.

The FAA and TPC participated in an intensive, nine month review process during this simulation effort. The objective of this process was to ensure that TAAM input assumptions, modeling methodologies, and output data conformed to industry best modeling practices and accurately reflected air traffic control rules and procedures. In total, the FAA invested over 2,000 hours reviewing assumptions, draft results, animations, and final results. The FAA review was conducted by an Air Traffic Work Group consisting of: FAA Management and National Air Traffic Controller Association (NATCA) representatives from O'Hare Tower, the Chicago Terminal Radar Approach Control Facility (TRACON), and the Chicago Center (ZAU); FAA Airports Division; and the FAA's TPC.

Table 6 presents the average annual delay in minutes per operation that would be realized for the No Action Alternative and the Build Alternatives C, D, and G. Of the alternatives evaluated, Alternative C performs the best from a purely "delay and travel time" perspective. Alternative G performs second best followed by Alternative D. The No Action Alternative performs the worst in terms of average annual delays and is not able to accommodate the forecast passengers or operations.

Because the TAAM represents state of the art simulation, the FAA utilized it to model the various airfield alternatives and evaluated their resultant operational capabilities and delay characteristics, which are presented in **Table 6**. Under the constrained No Action alternative

where forecast operations are projected to be capped at 974,000 per year, the FAA nevertheless projects increases in annual enplanements because the Agency assumes that with such constraints carriers would use larger capacity aircraft. Importantly, even with operations constrained and larger aircraft, annual average delay is projected to be 17.1 minutes per operation in 2018 under the No Action Alternative.

TABLE 6
FORECAST AND TAAM SIMULATION SUMMARY

Year	Forecast Annual Operations	Forecast Annual Enplanements	Forecast Peak Month Average Day Operations	No Action Alternative A Average Annual Delay (a)	Alternative C Average Annual Delay (a)	Alternative D Average Annual Delay (a)	Alternative G Average Annual Delay (a)
	Unconstrained – With Project						
2007	1,026,300	36,943,000	2,898	n/a	15.5	15.5	15.5
2009	1,057,200	39,149,000	2,987	n/a	10.3	10.3	10.3
2013	1,120,600	43,912,000	3,169	n/a	5.0	8.2	5.6
2018	1,194,000	50,372,000	3,374	n/a	5.8	10.5	6.9
	Constrained – No Action (Alternative A)						
2007	974,000	36,219,500	2,750	16.2	n/a	n/a	n/a
2009	974,000	37,717,500	2,750	15.9	n/a	n/a	n/a
2013	974,000	40,908,500	2,750	17.2	n/a	n/a	n/a
2018	974,000	44,972,500	2,750	17.1	n/a	n/a	n/a

Note: (a) Average annual delays are shown in minutes per operation.
(b) n/a = not applicable.
Source: **Appendix D, Simulation Modeling.**

VII. ENVIRONMENTAL CONSEQUENCES

A. Introduction

In this EIS, as in others prepared by the FAA, the document presents "the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public." This section briefly discusses the environmental consequences for the four alternatives retained for detailed consideration, namely Alternative A (No Action), Alternative C (City's Proposal), Alternative D, and Alternative G. The analyses of environmental impacts in this section primarily address material differences among the alternatives in certain key impact categories and are presented for the following conditions:

- Baseline – represents conditions in 2002
- Construction Phase I – First major construction phase complete (2007)
- Construction Phase II – Second major construction phase complete (2009)

- Build Out – Construction completed and operational (2013)
- Build Out + 5 – Five years beyond build out (2018)

For this executive summary, the potential environmental impacts under the Build Out + 5 phase are presented since this represents the Agency's best judgment of all reasonably foreseeable environmental impacts associated with the proposed Build Alternatives.

B. Noise and Compatible Land Use Assessment

In the Aviation Safety and Noise Abatement Act of 1979 (ASNA), Congress mandated that the FAA develop a uniform methodology for measuring aviation noise and land use compatibility. The FAA incorporated the recommendations of the USEPA and Federal Interagency Committee on Urban Noise (FICUN), in promulgating the regulations of 14 CFR Part 150, where the FAA selected the yearly average day-night noise level (DNL) of 65 decibels (dB) as the level at which most land uses are compatible with aviation noise. DNL is a cumulative sound level that provides a measure of the total sound energy during a specified time period. DNL essentially averages the sound levels at a location over a 24-hour period, with a 10-decibel (dB) weighting penalty added to all sounds occurring during nighttime hours (between 10:00 PM and 6:59:59 AM). The 10 dB penalty represents the added intrusiveness of noise that occurs during sleeping hours because ambient sound levels during nighttime hours are typically about 10 dB lower than during daytime hours.

Estimates of noise effects resulting from aircraft operations can be interpreted in terms of the probable effect on human activities characteristic of specific land uses. Land uses are generally considered compatible with noise levels less than DNL 65, but only certain uses are compatible with noise levels at or above DNL 65. For purposes of NEPA, FAA has determined that a significant noise impact would occur if analysis shows that the proposed action will cause noise-sensitive areas to experience an increase in noise of DNL 1.5 dB or more at or above DNL 65 dB noise exposure when compared to the no action alternative for the same timeframe. Land uses considered sensitive to noise levels of DNL 65 and greater generally include residential housing, schools, places of worship, hospitals, and nursing homes. There is one eligible school, Socrates St. Sava Academy in Chicago, which would be within the 65 DNL Build Out + 5 noise contours for Alternatives C, D, and G that is currently eligible and has also requested sound insulation, but has not been completed. Funding has been approved and this school is scheduled to be sound insulated by the end of the summer 2005. For further information on places of worship, hospitals, and nursing homes see **Section 5.2** of the FEIS.

Alternative C

Exhibit 2 depicts the potential change in noise exposure associated with Alternative C compared to Alternative A (No Action Alternative) in the Build Out phase. There would be a total of 5,619 residences (16,218 people) newly exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action – area noted on **Exhibit 2** in red), of which 1,102 have been sound insulated by the City of Chicago. There would be approximately 1,368 additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area, outside of the area defined above, of which 439

housing units have been sound insulated. The total number of currently non-insulated residences within the areas defined above is 5,446 residences (15,212 people).

Alternative D

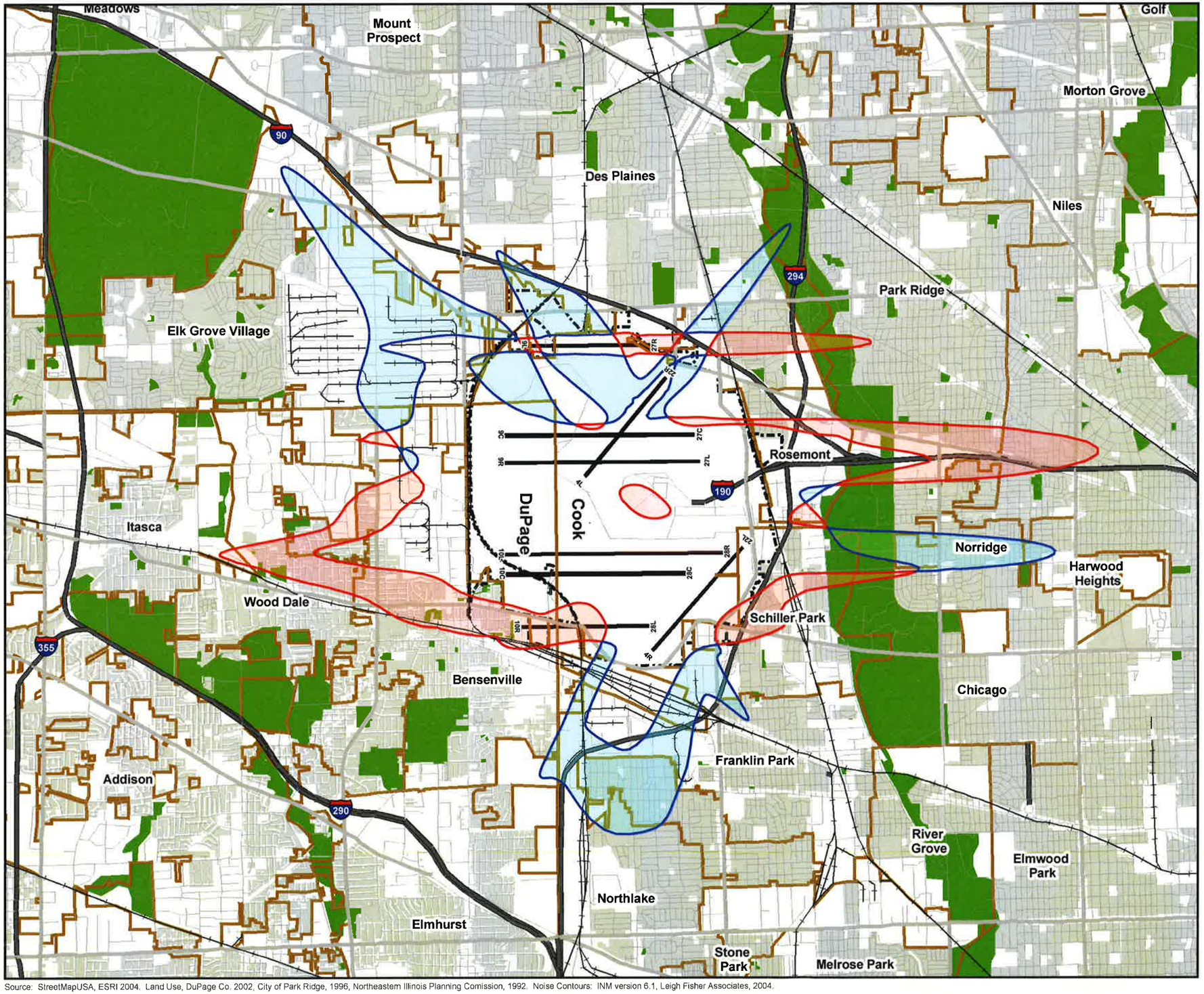
Exhibit 3 depicts the potential change in noise exposure associated with Alternative D compared to Alternative A (No Action Alternative) in the Build Out phase. There would be a total of 5,766 residences (16,299 people) newly exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action – area noted on **Exhibit 3** in red), of which 1,123 have been sound insulated by the City of Chicago. There are approximately 1,677 additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area, outside of the area defined in the sentence above, of which 496 housing units have been sound insulated. The total number of currently non-insulated residences within the areas defined above is 5,824 residences (16,074 people).

Alternative G

Exhibit 4 depicts the potential change in noise exposure associated with Alternative G compared to Alternative A (No Action Alternative) in the Build Out phase. There would be a total of 5,240 residences (15,098 people) newly exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action – area noted on **Exhibit 4** in red), of which 1,101 have been sound insulated by the City of Chicago. There are approximately 1,419 additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area, outside of the area defined in the sentence above, of which 438 housing units have been sound insulated. The total number of currently non-insulated residences within the areas defined in the paragraphs above is 5,120 residences (14,325 people).

Comparison of 1982 Baseline 65 DNL Contour to 2002 Baseline 65 DNL Contour

For comparison purposes, the FAA presents information from its O'Hare 1984 Final EIS regarding an earlier airport improvement project. The 1984 Final EIS identified 94,000 noise-affected homes in its 1982 Baseline 65 DNL contour. In contrast, the estimated number of homes exposed to the 2002 Baseline 65 DNL is less than 8,400 homes. What is more, even with an increase in operations at O'Hare from 591,807 in 1982 to 922,787 in 2002, the housing units within the 65 DNL contour during that same period diminished by over 90%. See **Exhibit 5** for a representation of the 2002 Baseline contour compared to the 1982 Baseline contour. Thus, even though this EIS projects, at most, a slight increase in affected residences (within the 65 DNL Build Alternative contours) when compared to the 2002 Baseline contour, this small overall increment should be viewed in the historic context of meaningful noise reduction in the communities surrounding O'Hare.



Source: StreetMapUSA, ESRI 2004. Land Use, DuPage Co. 2002, City of Park Ridge, 1996, Northeastern Illinois Planning Comission, 1992. Noise Contours: INM version 6.1, Leigh Fisher Associates, 2004.

Meadows
Mount Prospect
Golf
Morton Grove
Des Plaines
Niles
Park Ridge
Elk Grove Village
Rosemont
DuPage
Cook
Itasca
Norridge
Harwood Heights
Wood Dale
Schiller Park
Bensenville
Chicago
Addison
Franklin Park
River Grove
Elmwood Park
Northlake
Elmhurst
Stone Park
Melrose Park

Source: StreetMapUSA, ESRI 2004. Land Use, DuPage Co. 2002, City of Park Ridge, 1996, Northeastern Illinois Planning Comission, 1992. Noise Contours: INM version 6.1, Leigh Fisher Associates, 2004.

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

- Rail Roads
- Freeways
- Secondary Roads
- Local Streets
- Municipal Boundary
- Airport Property
- Noise Sensitive Land Use
- Parks and Forest Preserves
- Areas Newly Exposed to 65 DNL
- Areas No Longer Exposed to 65 DNL

Note: Refer to Table 5.2-1 in section 5.2 of the FEIS for types of Noise Sensitive Land Uses.

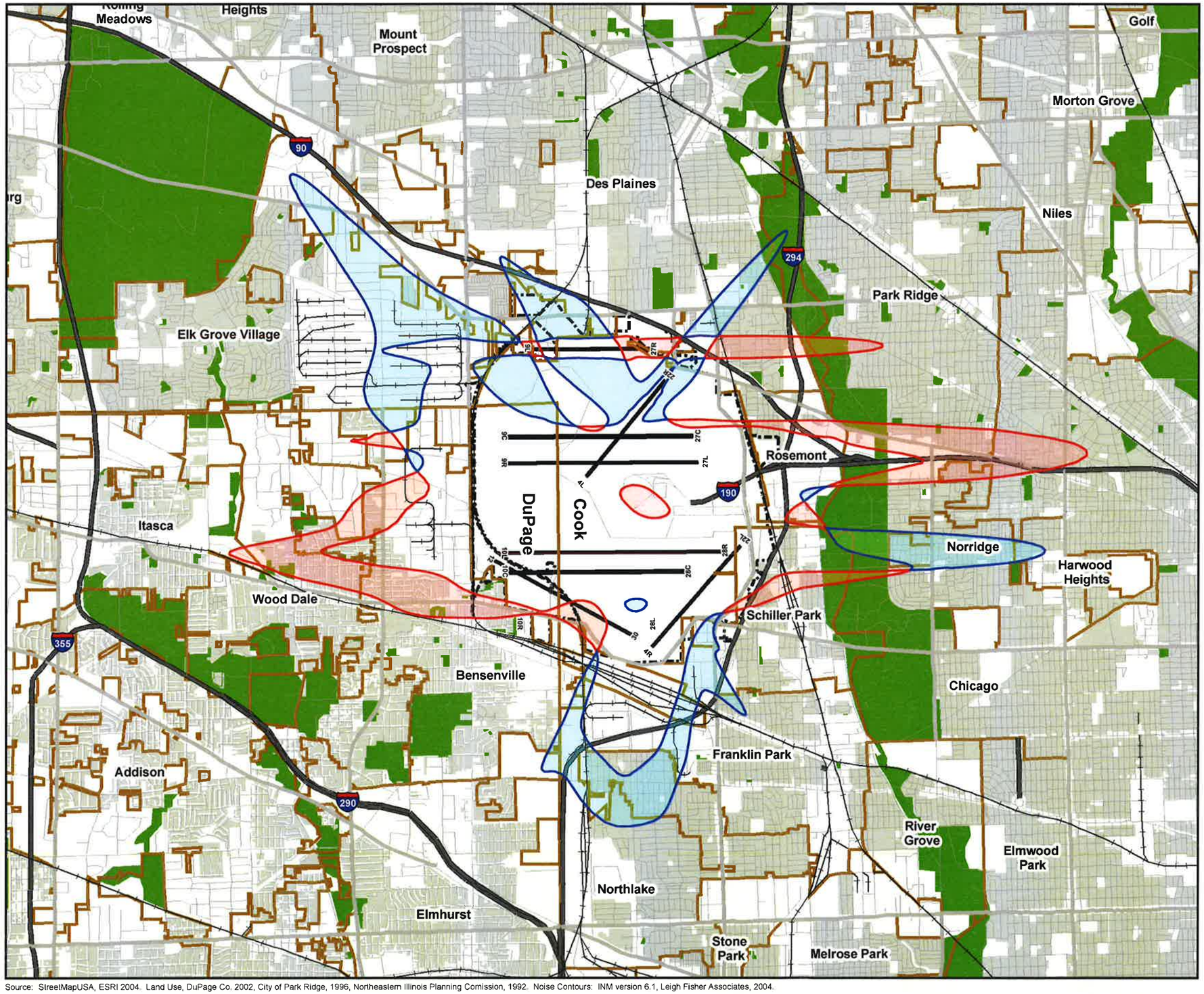
Population	16,299	10,802
Housing Units	5,766	3,971

0 1 2 Miles

N S

Potential Change in Noise Exposure Alternative D Build Out Compared to Alternative A (No Action)

▶ **Exhibit 3**



Source: StreetMapUSA, ESRI 2004. Land Use, DuPage Co. 2002, City of Park Ridge, 1996, Northeastern Illinois Planning Comission, 1992. Noise Contours: INM version 6.1, Leigh Fisher Associates, 2004.

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

- Rail Roads
- Freeways
- Secondary Roads
- Local Streets
- Municipal Boundary
- Airport Property
- Noise Sensitive Land Use
- Parks and Forest Preserves
- Areas Newly Exposed to 65 DNL
- Areas No Longer Exposed to 65 DNL

Note: Refer to Table 5.2-1 in section 5.2 of the FEIS for types of Noise Sensitive Land Uses.

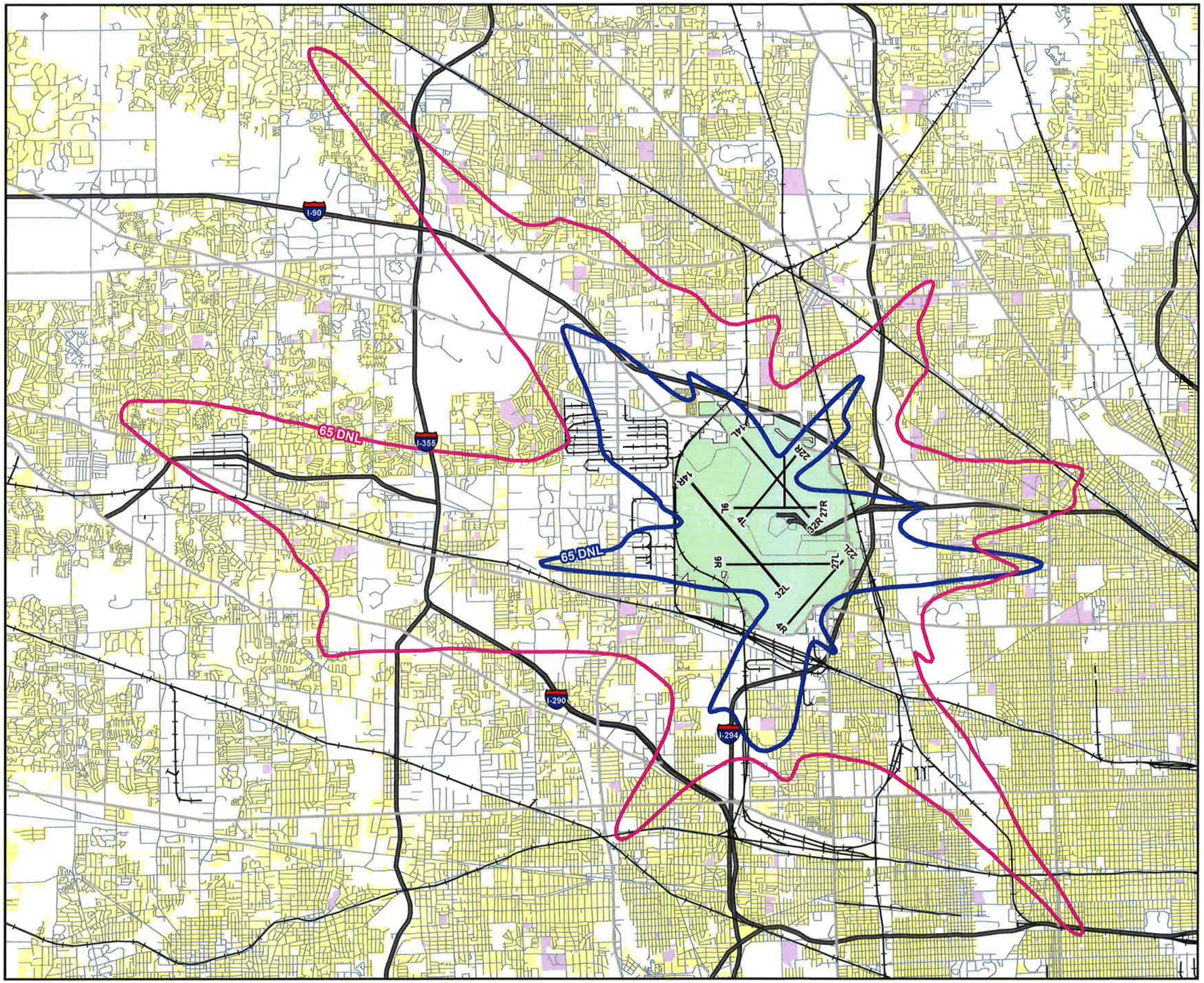
Population	15,098	10,265
Housing Units	5,240	3,810

0 1 2 Miles

N S

Potential Change in Noise Exposure Alternative G Build Out Compared to Alternative A (No Action)

▶ Exhibit 4



Source: StreetMapUSA, ESRI 2004. INM version 6.1, Leigh Fisher Associates, 2004. 1984 65 DNL: Landrum and Brown Inc. 1984.

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

- 1982 65 DNL*
- 2002 65 DNL
- Rail Roads
- Freeways
- Secondary Roads
- Local Streets
- Existing Airport Property
- Compatible Land Use
- Residential
- Public, Hospitals, Institutional

*Note: Contour from 1984 Final E.I.S.

0 1 2 Miles

N S

Noise Contours, 2002 Baseline 65 DNL Compared to 1982 65 DNL

▶ **Exhibit 5**

C. Surface Transportation

This section includes the following subsections:

- EIS Considerations
- Other Considerations

EIS Considerations

Traffic congestion is already present within the surface transportation study area. This situation is expected to become worse with the No Action Alternative (Alternative A) for each of the four future years of analysis. When comparing the Build Alternatives to the No Action Alternative (Alternative A) for each of the construction phases analyzed, there is a pattern of increasing congestion at a number of intersections and directional roadway segments. Under the Build Alternatives for Construction Phase I and Phase II, when compared to the No Action Alternative (Alternative A), no intersections are expected to deteriorate such that they would exceed the threshold of significance, and only one directional roadway segment is expected to deteriorate such that it exceeds the threshold of significance. Under the Build Alternatives for the Build Out + 5 phase, when compared to the No Action Alternative, there are 10 intersections and 13 directional roadway segments that are expected to deteriorate such that they would exceed the threshold of significance.

Other Considerations

During the development of this EIS, assumptions were made regarding surface transportation improvements that would be in place for each of the construction phase years, based on the Transportation Improvement Plan (TIP) for the Chicago metropolitan area. It is recognized that regional transportation planning is an ongoing and fluid process, and that implementation of any of the Build Alternatives would be expected to facilitate advancement of that planning. It is anticipated that a number of the adverse impacts that have been identified in this EIS could be reduced as a result of some of the surface transportation initiatives that are under consideration. However, impacts of the following projects will not be known unless and until sufficient plans and project information become available. Some of these projects that are known to be in the early stages of planning at this point are listed below:

- West O'Hare Bypass
- York Road / Irving Park Road / UPRR / CNRR – Grade Separation
- Elgin-O'Hare Expressway – East Extension
- Metra STAR Line
- CTA Blue Line – O'Hare Express
- DuPage County "J" Route Bus Rapid Transit

D. Air Quality

This section includes the following subsections:

- Regional Air Quality Conditions
- Emission Inventories
- Dispersion Modeling
- Clean Air Act Conformity
- Supplemental Air Quality Analyses

Regional Air Quality Conditions

O'Hare International Airport is located within Cook and DuPage counties. These counties are included in an area that is currently designated as "moderate" non-attainment for the eight-hour ozone National Ambient Air Quality Standard (NAAQS) and non-attainment for particulate matter 2.5 microns or less in size. Both counties are designated attainment for carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. Finally, O'Hare International Airport is located within an attainment area for particulate matter 10 microns or less in size.

Following requirements in the Clean Air Act, the mandated attainment date for the one-hour ozone NAAQS was November 15, 2007. However, recent rules regarding the eight-hour ozone NAAQS specify that the one-hour standard was revoked on June 15, 2005. The mandated attainment date for the eight-hour ozone NAAQS is June 15, 2010.

At the time the air quality analysis was performed for the Draft EIS, the USEPA had not yet designated this or any other area of the U.S. with respect to the status of attainment for the NAAQS for particulate matter 2.5 microns or less in size. Subsequent to the analysis, on December 17, 2004, the USEPA designated Cook and DuPage counties, along with four surrounding counties, and partial areas within two additional counties, as non-attainment for this pollutant. Based on the USEPA's scheduled timeline to have all areas of the country attain the standards for particulate matter 2.5 microns or less in size, States will submit their plans to the USEPA to attain the standard on or before April of 2008.

Because O'Hare is located within Illinois, the discussion and assessment of precursors to the air pollutant ozone has, for the most part, been limited to the Illinois portion of the eight-hour ozone non-attainment areas (referred to as the Chicago non-attainment area). Notably, representatives of the IEPA and representatives of the Indiana Department of Environmental Management (IDEM) serve together in the Lake Michigan Air Directors Consortium to assess air quality conditions within the eight-hour ozone non-attainment area.

Emission Inventories

Before the scoping process, FAA met with USEPA and IEPA representatives to discuss their concerns and to develop a comprehensive scope of work reflected in the EIS methodologies for the air quality assessment. Thereafter, FAA developed, in conjunction with these agencies, specific air quality protocols to be used for air quality assessment purposes. FAA's protocols contained analytical methodologies which were subsequently modified based on further

coordination with USEPA and IEPA. In the Final EIS, FAA provides additional airport operations' emissions inventory information for particulate matter 2.5 microns or less in size.

Airport Operations

Emission inventories provide an indication of increases and decreases in air pollutant or pollutant precursor emissions by providing an estimate of total emissions from sources with and without project implementation.

The emission inventories in the EIS air quality assessment were prepared using the FAA's Emissions and Dispersion Modeling System (EDMS Version 4.12). EDMS generates an emission inventory of carbon monoxide, volatile organic compounds, nitrogen oxides, sulfur oxides, and particulate matter with a diameter of 10 microns or less in size. The EDMS, and supplemental methodologies, were also used to prepare emissions inventories of particulate matter 2.5 microns or less in size.

The following main categories of sources were evaluated: aircraft, ground support equipment, auxiliary power units, motor vehicles on roadways (both on Airport and within a defined study area off Airport property) and at curbsides and parking facilities located on Airport property, fuel storage facilities, Airport-related fire training activities, and on Airport stationary sources (boilers, generators, etc.). The changes in emissions that would affect air quality are shown in **Table 7**. The analysis to determine the affect of the changes on local air quality conditions (in the vicinity of the Airport) are discussed in **Dispersion Modeling.**

Construction Operations

Air quality impacts that would result from construction activities would be temporary (occurring over a period of ten years). When considering the total predicted air pollutant concentrations that were compared to the National Ambient Air Quality Standards (NAAQS), the level of dispersed air pollutants that would result from construction would be minimal when compared to the level of dispersed air pollutants from all other airport-related sources (aircraft, ground support equipment, passenger-related motor vehicles, etc.). Notably, the results of the dispersion analysis indicate that there would be no exceedances of the NAAQS with or without the proposed improvements.

TABLE 7
CHANGES IN AIRPORT-RELATED EMISSION INVENTORIES
BUILD ALTERNATIVES RELATIVE TO ALTERNATIVE A – BUILD OUT + 5

		Estimated Tons in Build Out + 5 (e,f)					
Alternative(a)	Source Category	Carbon Monoxide	Volatile Organic Compounds	Nitrogen Oxides	Sulfur Oxides	Particulate Matter 10 microns or less	Particulate Matter 2.5 microns or less
A	Total	21,844	1,055	6,210	438	112	94
C	Total	26,119	1,324	7,290	564	127	107
	Increase/Decrease(b)	**+4,274**	**+268**	**+1,081**	**+125**	**+15**	**+13**
D(c)	Total	26,605	1,367	7,408	589	128	109
	Increase/Decrease(b)	**+4,761**	**+311**	**+1,199**	**+151**	**+17**	**+15**
G(c)	Total	26,085	1,321	7,382	562	127	107
	Increase/Decrease(b)	**+4,241**	**+265**	**+1,073**	**+124**	**+15**	**+13**

Notes:
(a) Alternative A = No Action, Alternative C, D, and G are Build Alternatives.
(b) When compared to Alternative A (No Action).
(c) From an air quality/air pollutant perspective, the only difference in estimated emissions between Alternatives C, D or G would be those resulting from the operation of aircraft.
(e) Numbers reflect numerical rounding.
(f) Estimated emissions and changes in emissions with the Delayed Construction Schedule.
Source: Environmental Science Associates, Inc. [TPC] analysis, 2004/2005.

Dispersion Modeling

Dispersion modeling provides predicted concentrations of ambient pollutant levels that can be compared directly to the NAAQS. For the purpose of the assessment, two "scales" of dispersion analyses were performed—macroscale (large) and microscale (very small). The macroscale analysis evaluates pollutant concentrations on and in the vicinity of the Airport and the microscale analysis evaluates pollutant concentrations immediately adjacent to intersections/interchanges within the study area. The macroscale and microscale dispersion modeling was performed for ground level emissions only. The dispersion analysis does not include emissions due to sequencing/vectoring delay because these emissions would occur above the atmospheric mixing height. Emissions above this height do not have a discernable effect on ground level concentrations of pollutants. In the Final EIS, FAA provides dispersion analysis for particulate matter 2.5 microns or less in size.

Macroscale Analysis

The macroscale analysis was used to evaluate the change in ambient pollutant concentrations at various locations on Airport property and in areas adjacent to the Airport. On Airport, the locations included terminal curbsides, the bus center, and parking areas. Off Airport, specific locations were selected either because they are considered sensitive to changes in ambient pollutant concentrations (i.e., residences) or because they were locations where the highest predicted concentrations of any of the air pollutants are expected to occur (intersections, near the end of runways).

The dispersion analysis was performed using the FAA's EDMS. The EDMS uses as its base, emission inventory data and site-specific meteorological data. EDMS provides dispersion analysis for the air pollutants nitrogen dioxide, carbon monoxide, particulate matter with a size diameter of 10 microns or less, and sulfur dioxide. The model is not designed to perform dispersion analysis for ozone or currently capable of performing dispersion analysis of particulate matter 2.5 microns or less in size. In addition to the sources within the defined study area, conservative background concentrations were "added" to computer predicted levels of each pollutant. These background levels were selected by the IEPA for the purpose of this EIS.

Based on the results of the analysis, ambient concentrations of nitrogen dioxide, carbon monoxide, particulate matter 10 microns or less in size, and sulfur dioxide would not exceed the NAAQS as shown in **Table 8**.

TABLE 8
MAXIMUM MACROSCALE DISPERSION MODELING RESULTS – BUILD OUT +5

	Maximum Predicted Pollutant Concentrations (µg/m³)(a,d)									
	Nitrogen Dioxide	Carbon Monoxide		Particulate Matter 10 microns or less		Particulate Matter 2.5 microns or less		Sulfur Dioxide		
Alternative (b)	Annual	1-Hour	8-Hour	24-Hour	Annual	24-Hour	Annual	3-Hour	24-Hour	Annual
NAAQS Values (c)	**100**	**40,000**	**10,000**	**150**	**50**	**65**	**15**	**1,300**	**365**	**80**
A	84	34,687	8,237	64	31	39	14	303	96	13
C	84	28,767	8,338	64	31	39	14	290	99	13
D	84	29,517	8,265	64	31	39	14	291	99	13
G	83	29,352	8,302	64	31	39	14	290	99	13

Notes: (a) Includes Background concentrations.
(b) Alternative A = No Action, Alternative C, D, and G are Build Alternatives.
(c) NAAQS = National Ambient Air Quality Standards.
(d) Maximum results with the Delayed Construction Schedule.
Source: Environmental Science Associates, Inc. [TPC] analysis, 2004/2005.

Microscale Analysis

EDMS does not include algorithms that consider both the free flow and congested motor vehicle operating conditions on levels of carbon monoxide. Therefore, a second type of dispersion analysis, a microscale analysis, was performed to evaluate the change in carbon monoxide emissions in the vicinity of the intersections and/or interchanges affected by the proposed improvements. The microscale analysis was performed using the USEPA's MOBILE6.2 motor vehicle emission rate model and CAL3QHC roadway/intersection dispersion model. The CAL3QHC (Version 2.0) model is currently the most accurate tool for identifying potential carbon monoxide concentrations due to mobile source emissions at congested locations.

The roadway intersection analysis evaluated effects of the alternatives at ten intersections in the vicinity of the Airport. The intersections included both existing intersections and proposed/ improved intersections that would be constructed if the project is approved. The selection of

intersections was based on the analysis methodology described in the USEPA's *Guideline for Modeling Carbon Monoxide from Roadway Intersections.*

Based on the results of the analysis, ambient concentrations of carbon monoxide would not exceed the NAAQS in the vicinity of any of the evaluated intersections as shown in **Table 9**.

TABLE 9
MAXIMUM MICROSCALE DISPERSION MODELING RESULTS – BUILD OUT + 5

Phase	Alternative	Intersection No.	Intersection	Carbon Monoxide Concentrations (ppm) (a,d) One Hour(b)	Eight Hour(c)
Build Out+5	A (No Action)	10	Mannheim Road and Zemke Road	11.9	7.6
	C	20	Mannheim Road and Irving Park Road	10.9	7.0
	D	20	Mannheim Road and Irving Park Road	10.9	7.0
	G	20	Mannheim Road and Irving Park Road	10.9	7.0

Notes: (a) ppm= parts per million.
(b) Includes background concentration of 4.5 ppm.
(c) Includes background concentration of 2.9 ppm.
(d) Maximum results occur with the Original/Compressed Construction Schedules.
Source: Environmental Science Associates, Inc. [TPC] analysis, 2004.

Clean Air Act Conformity

Under Section 176(c) of the Clean Air Act, 42 U.S.C. § 7506(c) (also known as Conformity), Federal agencies, such as the FAA, are prohibited from engaging in, supporting in any way, providing financial assistance for, licensing or permitting, or approving any activity in a non-attainment or maintenance area that does not conform to an approved State Implementation Plan (SIP).

To implement the provisions of Section 176(c) of the Clean Air Act, the USEPA has adopted guidance for demonstrating conformity. Within non-attainment areas, Federal actions related to transportation (highway) plans, programs, and projects that are developed, funded, or approved under U.S.C. Title 23 or the Federal Transit Act, must meet the procedures and criteria of 40 CFR Part 51, Subpart T. Non-highway related actions must also demonstrate conformity. These conformity demonstrations must meet the procedures and criteria of 40 CFR Part 51, Subpart W. The IEPA has adopted these "general conformity rules" (Title 35, IL Administrative Code, Part 255).

Under the general conformity rules (40 CFR Part 93 Subpart B), a project does not require a conformity determination if the project is exempt, presumed to conform, or if the increase in emissions due to a proposed Federal action is less than the *de minimis* thresholds outlined in Title 35 Illinois (IL) Administrative Code Part 255 and 40 CFR Part 93 Subpart B and if the action-related emissions are not regionally significant (if the action-related emissions are less than 10 percent of the emissions in the SIP).

USEPA's general conformity rule defines a "conforming" project as one that: 1) conforms to the SIP's overall objective of eliminating or reducing the severity and number of air quality violations in a state and achieving expeditious attainment of the NAAQS; 2) does not cause or contribute to new NAAQS violations in the area; 3) does not increase the frequency or severity

of existing NAAQS violations in the area; and 4) does not delay the state's timely attainment of the NAAQS or impede required progress toward attainment.

Based on the results of the general conformity evaluation, the total direct and indirect project-related emissions of volatile organic compounds and nitrogen oxides were determined to be either:

- Accounted for in the emission projections incorporated into the Chicago 1-hour ozone attainment demonstration SIP (the applicable SIP), or
- Could reasonably be accounted for in established emission totals and or excess regional emission estimates.

For these reasons, the FAA, in consultation with the IEPA, has determined that the emissions associated with the proposed O'Hare Modernization Program improvements conform to the applicable SIP, and thus to the Clean Air Act, regardless of construction schedule, construction scenario, or alternative.

The FAA published the Draft General Conformity Determination on May 18, 2005 for review/ comment from the public and reviewing agencies. A total of nine comment letters were received on the Draft General Conformity Determination. The Final General Conformity Determination is incorporated by reference in the Final EIS, and is issued with the Final EIS in **Appendix J**.

Supplemental Air Quality Analyses

In recent years, public and agency interest has increased regarding the contribution of airports to hazardous air pollutants (HAPs). HAPs are gaseous organic and inorganic chemicals and particulate matter that are either known or suspected to cause cancer (to be carcinogenic) or known or suspected to cause other serious health effects (non-carcinogenic).

The FAA developed the HAPs Protocol for this EIS in coordination with USEPA and IEPA. While the effects on human health from HAPs were raised in Scoping, the FAA, USEPA, and IEPA concur that at this time it is not appropriate to conduct a human health risk assessment for the HAPs discussed in **Appendix I**, and that the influence of the proposed airport development on the health of those living in the vicinity of O'Hare cannot currently be quantified in a meaningful way. Collectively, the agencies believe that, given the absence of HAP emissions data and the limitations of HAP speciation profiles for commercial jet aircraft engines, an accurate emissions inventory (the first step in a sound human health risk assessment) cannot be accomplished. A review of available regional emission estimates and the results of the evaluation indicate that, on a regional basis, the sources within the O'Hare study area emit from 1 to 3 percent of the regional emissions of the HAPs determined to be of most interest with respect to Airport-related activities. Because the sources included in the O'Hare evaluation include both motor vehicle traffic related to the Airport and background traffic, these estimates should be considered conservative. However, it should also be noted that, due to the uncertainties and limitations associated with airport-related HAP studies at the present time, the contribution of aircraft emissions is uncertain.

Given the lack of national ambient air quality standards for concentrations of HAPs and, also, given the uncertainties and limitation associated with airport-related data, information in this EIS regarding HAP emissions is provided in this EIS for disclosure purposes only.

E. Social Impacts

This section evaluates potential social impacts, with a primary focus on impacts which would result from the potential relocation of homes and businesses. **Table 10** summarizes the social impacts associated with each alternative under consideration.

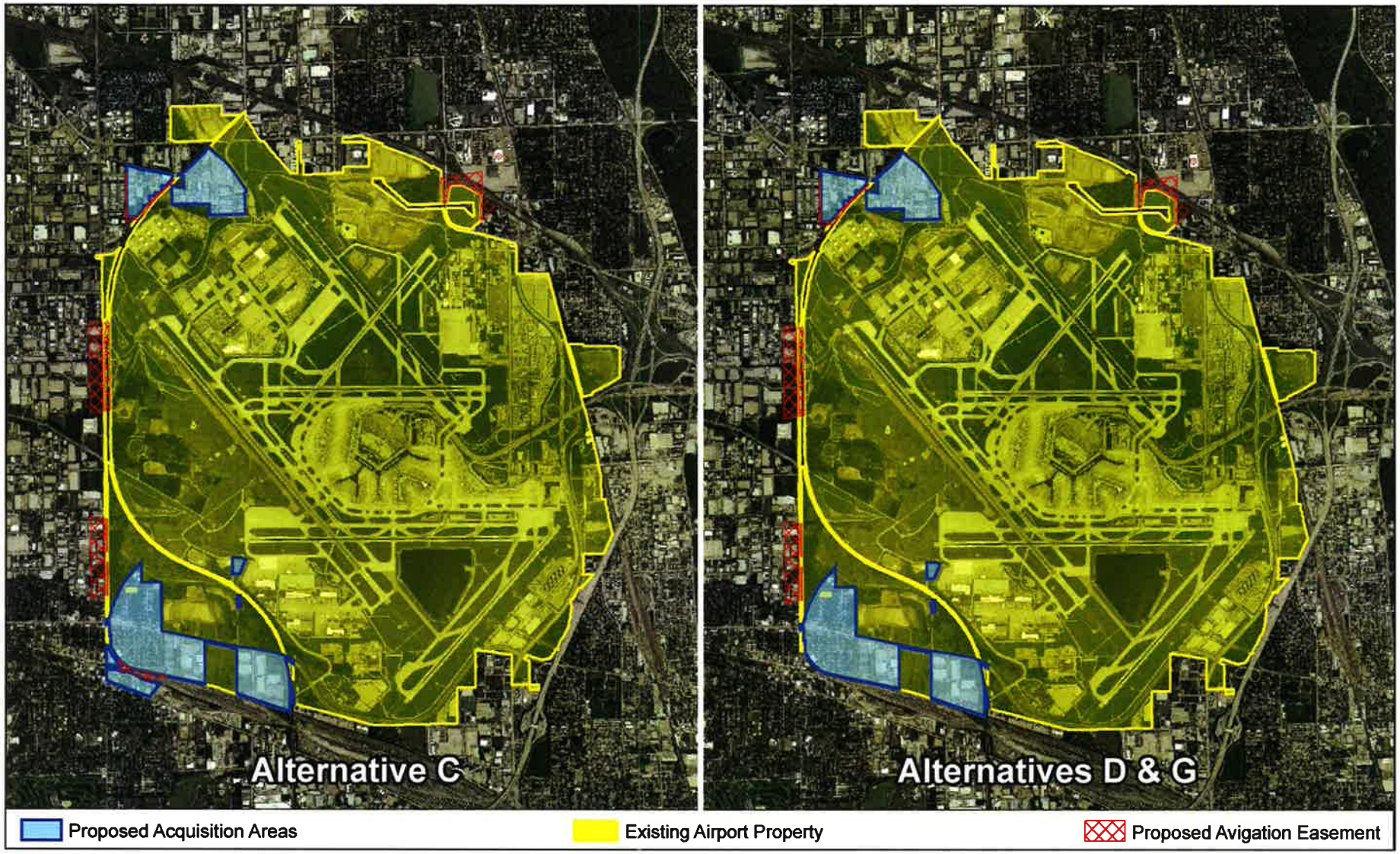
TABLE 10
SUMMARY OF PROPOSED LAND ACQUISITION RELATED IMPACTS
BUILD OUT+5 (2018)

Impacts	Alternative A	Alternative C	Alternatives D or G
Housing Units (Residential)	0	539	522
Businesses (Non-Residential)	0	197	164
Total Estimated Acres Acquisition Area	0	440	413
Population in Acquisition Areas	0	2,631	2,553
Minority Population in the Acquisition Area (by race)	0	1,575	1,479
Minority Population in the Acquisition Area (by ethnicity) (b)	0	1,599	1,524
Estimated Tax Loss - School Districts and Colleges	0	$3,152,694	$3,020,632
Estimated Tax Loss - Other Taxing Bodies	0	$2,511,076	$2,275,305
Total Estimated Tax Loss (1 year only) (a)	0	$5,663,770	$5,295,937

Note: (a) Estimated Tax Loss based on 2002 Cook and DuPage Counties Tax Bills;
(b) Minority population by ethnicity only includes persons of Hispanic ethnicity.
Source: TPC Analysis.

The analysis of social impacts focused primarily on proposed land acquisition and relocation associated with the Build Alternatives C, D, and G. Up to 539 homes and 197 businesses would be acquired if any of the Build Alternatives were to be implemented. The direct impacts of relocation require mitigation in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). Owners, tenants, and businesses in the proposed acquisition areas would be relocated pursuant to the Uniform Act and FAA's Advisory Circular AC150/5100-17 *Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects*. The Uniform Act will be followed by the City of Chicago with compliance assured by FAA. In addition, although not specifically required under the Uniform Act, the City of Chicago has committed to providing advisory services to those immediately adjacent to the acquisition area. The proposed land acquisition areas for Alternatives C, D and G are depicted on **Exhibit 6.**

The employment forecast for the Build Alternatives (in 2018) indicates that there would be approximately 49,000 more permanent jobs related to O'Hare than there are in Alternative A.



Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

Proposed Land Acquisition

▶ Exhibit 6

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F. Environmental Justice

EPA guidance states it is important to "encourage and facilitate more active participation by low-income communities and minority communities in its NEPA process." In response, the FAA committed to a particularized, highly focused outreach program designed to ensure that this affected population received the full measure of all possible information about the proposed project and their rights related to potential acquisition/relocation. This goal was accomplished through careful identification of target audiences and aggressive community outreach beyond the traditional forums. The environmental justice outreach process for this EIS provided information to the affected population and afforded significant opportunity for interaction with Federal officials. On May 23, 2004, the FAA held its first environmental justice public meeting. A second environmental justice outreach meeting was held on August 29, 2004 at St. Alexis Church in Bensenville, and the third environmental justice outreach meeting was held on March 6, 2005, also at St. Alexis Church. In addition, over 30 small-group meetings were held at various businesses and residences located in the acquisition area.

FAA considered direct and indirect impacts for environmental resource categories where there were potentially significant impacts under NEPA: acquisition, noise, surface transportation, air quality (as requested by commenters, including USEPA), wetlands, and Section 4(f) and Section 6(f) impacts.

Direct Impacts

As noted in the EIS, within the population to be acquired under the Build Alternatives, there are a disproportionate number of minority (by race and ethnicity) populations. In addition, businesses could be negatively impacted by the loss of minority residents. Other than the residents and the businesses previously mentioned, there may also be some environmental justice impacts to certain community resources that would remain following acquisition. For instance, schools or other social service agencies may conduct programs which teach English as a second language because of the large minority population present in the acquisition area. If this large minority population moves beyond the limits of the present school district boundary, programs may be affected. Class size and demographics could be affected which could cause a reduction in staff.

Indirect Impacts for Noise

The total number and percentage of minority populations and low-income households within the 65 DNL and higher noise contours for each Build Alternative were compared to the total number and percentage of these groups within this contour under the No Action Alternative. The minority population and low-income households affected within the 65 DNL and higher noise contours for each Build Alternative in Build Out + 5 were also compared to the 2000 U.S. Census baseline minority population and low-income households of the Comparison (Comp.) Areas for 65+ DNL to determine if the minority population and low-income households affected by each of the Build Alternatives was "meaningfully greater" than that in the Comp. Areas for 65+ DNL. Where a greater number or higher percentage of the minority or low-income population would experience 65 DNL and higher noise levels under any of the Build

Alternatives than under the No Action Alternative (Alternative A), there could be a disproportionately high and adverse impact. Additionally, if a meaningfully greater percentage of minority or low-income populations would experience 65 DNL and higher noise levels under any of the Build Alternatives as compared to the 2000 U.S. Census baseline minority and low-income population of the Comp. Areas for 65+ DNL, there could be a disproportionately high and adverse impact.

The minority populations and low-income households in areas that would newly experience DNL 1.5 db or greater increases in noise at or above 65 DNL noise levels for each Build Alternative were examined to determine whether significant noise impacts would be predominately borne by minority population and low-income households in any area. Additionally, the minority population and low-income households in areas that would newly experience DNL 1.5 dB or greater increases in noise at or above 65 DNL noise levels for each Build Alternative was examined, and was compared to the 2000 U.S. Census baseline minority and low-income population of the respective Comp. Area for DNL 1.5 dB for each Build Alternative to determine if there was a "meaningfully greater" percentage of minority or low-income populations that would experience a significant noise increase.

Because the results of the comparison analyses presented in the Draft EIS were so close (i.e., within ten percent), and in the absence of specific CEQ guidance related to the definition of "meaningfully greater," FAA decided to conduct a statistical analysis. A statistical analysis was performed to determine if there was a statistically significant difference among the proportions of minority populations and low-income households in the "impact" areas when compared to the larger general study areas described previously. For the purposes of this EIS, FAA is treating differences in proportions of populations that are statistically significant as "meaningfully greater" differences.

The analyses of potential noise impacts for the Build Alternatives led to the preliminary conclusions that there are disproportionately high and adverse noise impacts on minority (by race and ethnicity) populations and low-income households. In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures to the affected minority and low-income populations may be taken into account. This final determination will be made in the FAA's ROD.

Indirect Impacts for Surface Transportation

The analyses for the Build Alternatives led to the preliminary conclusions that there are disproportionately high and adverse noise impacts on minority (by ethnicity) populations and low-income households. Within environmental justice areas, there are a total of two deficient intersections (Bessie Coleman Drive & Higgins Road and York Road & Irving Park Road Ramp) with any of the Build Alternatives when compared to the No Action Alternative (Alternative A) in Build Out and Build Out + 5. In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures to the affected minority and low-income populations may be taken into account. This final determination will be made in the FAA's ROD.

Indirect Impacts for Other Environmental Resources

The FAA has reviewed additional impact categories, including; air quality, wetlands, Section 4(f) and Section 6(f) resources. There are no disproportionate impacts to minority and/or low-income communities associated with these environmental resources. The FAA also reviewed the other impact categories as contained in **Chapter 5, Environmental Consequences** of the Final EIS and has not found any additional environmental justice impacts.

G. Water Quality

Under the No Action Alternative (Alternative A) and each of the Build Alternatives, the FAA concludes that no significant impacts related to water quality would occur. Compared to the No Action Alternative (Alternative A), the potential for water quality impacts under Alternatives C, D, or G would be greater due to the increase in impervious surface area, additional airside areas using deicing chemicals, and substantial construction activity. However, the increase in potential water quality impacts would not be significant because, in addition to the efforts to reduce contamination to surface water from deicing chemicals, adequate stormwater facilities, designed to manage, contain, and convey the calculated increases in stormwater, would be designed and constructed as part of each of the Build Alternatives.

H. Historic, DOT Section 4(f), and Section 6(f) Properties

There are a total of four historic properties under Alternatives C, D and G that are proposed for acquisition and/or removal or relocation. These include St. Johannes Cemetery, Rest Haven Cemetery, Schwerdtfeger Farmstead, and Gas Service Station. One of the four properties, Rest Haven Cemetery, may not need to be relocated, but may still be acquired. An additional historic property, the Green Street School, at present, is shown for acquisition in order to conservatively assess the impacts. However, this property would not be demolished.

Historic properties of national, state, or local significance are protected under Section 4(f) of the U.S. Department of Transportation Act of 1966. Section 4(f) lands include public parks, recreation areas, or wildlife and waterfowl refuges of national, state, or local significance and land from an historic site of national, state, or local significance. Land and Water Conservation (LAWCON) Section 6(f) refers to lands that are purchased with LAWCON funds for public recreation purposes. The proposed Build Alternatives would all adversely affect Section 4(f) and Section 6(f) properties.

A total of three parks (part of *Silver Creek/DuPage County Forest Preserve, Schuster Park,* and *Bretman Park*) would be acquired under all of the Build Alternatives. *Schuster Park* is the only 6(f) property located within the project area and is proposed for acquisition under all of the Build Alternatives.

Local municipalities in the area of potential effect were also provided an opportunity to provide information concerning formally identified local landmarks. Sources identified 134 sites of local historical importance within the project area that could be affected by the proposed Build Alternatives. Based on the analysis conducted for the Section 4(f) and 6(f) Evaluation, none of these sites would be directly affected by the Build Alternatives, but were considered relative to

indirect/potential constructive use impacts. A review was conducted of the indirect impacts of the alternatives on these lands, and noise was identified as the only potential indirect impact. **Appendix L** identified locally important historic sites that would exceed the FAA's noise compatibility guidelines with the proposed Build Alternatives. These incompatible noise levels are not anticipated to substantially impair the use of these properties. Sound insulation would occur as the noise level would not be compatible with residential uses. Sound insulation would not be needed due to the property having local historic importance. With any Build Alternative, if selected, sound insulation following the Secretary of Interior's *Standards for the Treatment of Historic Buildings* (U.S. Department of Interior, National Park Service, 1995) and FAA guidelines would avoid adverse impacts to these sites.

A Draft Section 4(f) and 6(f) Evaluation (Evaluation) was submitted for public and agency review on May 20, 2005. A 45-day comment period was provided on the Draft Evaluation, which ended on July 5, 2005. A total of 13 comment letters were submitted on the Draft Section 4(f) and 6(f) Evaluation which are incorporated into the Final Evaluation and responded to by FAA. The Final Section 4(f) and 6(f) Evaluation is included in the Final EIS as **Appendix L**.

I. Biotic Communities/Threatened and Endangered Species

The Illinois Department of Natural Resources (IDNR) and the U.S. Fish and Wildlife Service (FWS) were consulted regarding the presence of biotic communities at the Airport and reviewed and concurred with the protocols and findings of the related surveys conducted for this project. The FWS and the IDNR concur with the determination that no threatened or endangered species currently exist in the construction impact area.

The Build Alternatives include similar proposed land acquisition and would result in the potential disturbance of all biotic communities within the construction impact area. However, given that these biotic communities are not exceptional, and are fragmented, the FAA concludes that no significant impacts would occur. In addition, these biotic communities contain common, highly adaptive urban species that will continue to exist in the vicinity of the Airport. The impacts of each Build Alternative would be similar.

J. Wetlands

Simultaneously with preparation, distribution, and review of this EIS, the U.S Army Corps of Engineers (USACE) is reviewing and processing a Section 404 permit application and pre-discharge notification per the requirements of the Clean Water Act, as submitted by the City of Chicago Department of Aviation (DOA). Similarly, the Illinois Environmental Protection Agency (IEPA) is reviewing anti-degradation (Water Quality Standards) and Section 401 (Water Quality Certification) information pertaining to potential project-related wetland impacts. In accordance with a Memorandum of Agreement (MOA) signed by FAA, the USACE, and the IEPA, all three of these decision-making agencies will use the information developed during this EIS process to reach decisions on project alternatives and related matters as nearly simultaneously as possible. In furtherance of this goal, the public hearings conducted for this EIS were hosted by FAA, the USACE, and the IEPA for purposes of meeting these agencies' decision-making requirements.

Approximately 154 acres of wetlands (both jurisdictional and non-jurisdictional) and other non-wetland Waters of the United States (WUS) would be impacted by any of the Build Alternatives. The wetlands at the Airport include many small, individual sites providing relatively few beneficial wetlands functions and values. These wetlands and WUS have been adversely affected by past human activities, including clearing, grading, and other developmental actions. The impacts of past disturbances range from modification of plant communities, to creation of new wetland areas, primarily caused by man-made grading changes that blocked original drainage ways or which created isolated depressions.

The guidelines associated with the Section 404 permit process indicate that satisfactory mitigation must be provided if jurisdictional wetlands impacts could occur as a result of project implementation. The City's proposed Conceptual Wetlands Mitigation Plan, which has been refined in response to comments from the Interagency Mitigation Review Team (MRT) during the Section 404 application review process, is intended to provide compensatory mitigation for wetlands and non-wetland WUS removed from O'Hare. The MRT consists of the USACE, USEPA, IEPA, and the USFWS. The overall intent is to provide compensatory mitigation, which greatly improves the quality of the provided resources with respect to wildlife utilization, while also offering additional value to interested publics by providing access that is not possible at the Airport. A total of 447.4 acres of compensatory mitigation is proposed as outlined in **Table 11**.

TABLE 11
PROPOSED WETLAND AND NON-WETLAND WUS MITIGATION CREDITS

Water Resource Type	Classification	Impact (acres)	Mitigation Ratio	Mitigation Credits	Mitigation Category(a)
USACE Jurisdictional Wetlands (DuPage County)	Jurisdictional	11.3	1.5 : 1.0	17.0	I
USACE Jurisdictional Wetlands (Cook County)	Jurisdictional	15.4	1.5 : 1.0	23.1	II
WUS - Creeks/Ditches (Cook County) (b)(c)	WUS	23.0	5.0 : 1.0	115.0	IV
WUS - Creeks/Ditches (Cook County) (c)	WUS	3.0	1.5 : 1.0	4.5	IV
Isolated Wetlands (DuPage County)	Isolated	24.9	1.5 : 1.0	37.4	I
Isolated Wetlands (Cook County)	Isolated	14.5	1.0 : 1.0 (d)	14.5	III
Isolated – Critical Classification (DuPage County)	Isolated	10.7	3.0 : 1.0	32.1	I
In-Channel Wetlands (SW120 and SW121) (e)	Jurisdictional	24.8	5.0 : 1.0	124.0	IV
USEPA – Forested (DuPage County) (f)	Jurisdictional	22.2	3.0 : 1.0	66.6	I
USFWS – Forested (Cook County) (g)	Jurisdictional	4.4	3.0 : 1.0	13.2	II
Total		**154.2**	**N/A**	**447.4 (h)**	**N/A**

Notes:
(a) Refer to **Section 5.12.4.3, Mitigation Categories**, for a description of the proposed approaches to meet mitigation requirements.
(b) Includes 1.0 acre of WUS in the potential southwest acquisition area.
(c) Mitigation ratios for specific creeks and ditched were reviewed by USACE.
(d) FAA concurrence from Michael MacMullen (FAA) to Carol Wilinski (DOA), dated January 16, 2002, for the 1.0: 1.0 mitigation ratio for the non-jurisdictional (isolated) wetlands associated with the O'Hare Express North Project.
(e) The USACE has indicated that mitigated Wetland SW120 and Wetland SW121 should be treated as WUS, as these wetlands provide conveyance for WUS (i.e., Bensenville Ditch).
(f) In comments provided by USEPA on the DRAFT EIS, USEPA indicated that wetlands NW28 and SW15 should be mitigated at a higher ratio of 3:1.
(g) In comments provided by USFWS on the DRAFT EIS, wetlands SE63, NE01, NE05, NE10, NE58, NW37B, NE08, SE64, and SW25 should be mitigated at a higher ratio of 3:1.
(h) 447.4 acres of credit are proposed.

Source: City of Chicago Department of Aviation Individual Permit Application to U.S. Army Corps of Engineers, November 2004 (Revised June 23, 2005).

K. Floodplains

Under the No Action Alternative (Alternative A) and each Build Alternative, the FAA concludes that no significant encroachment on floodplains would occur as defined in EO 11988. Each Build Alternative includes similar increases in impervious surfaces and runoff and would result in an encroachment. The FAA has considered whether there are practicable alternatives to this encroachment. The proposed detention basins would reduce the size of the floodplains on the Airport and would ensure that no significant encroachment impacts to the existing floodplains would occur. The increase in runoff from the Airport would be accommodated without having an adverse effect on floodplains, on stream habitat, or on streambank erosion.

L. Wild and Scenic Rivers

Each Build Alternative includes similar increases in impervious surfaces and runoff. Because Alternatives C, D, or G would include the expansion of detention basins at the Airport, these alternatives would not affect the free flowing condition of the Des Plaines River and, given the use of best management practices in operating the airport, would not affect any of the natural, cultural, or recreational values of the river. Therefore, no impacts to wild and scenic rivers or rivers on the NRI would occur under these alternatives.

M. Energy Supply and Natural Resources

Energy demands are expected to increase in the future regardless of whether or not proposed Build Alternatives would be implemented. Energy demands associated with airport facilities would only increase if additional airport facilities are undertaken, but increases in aircraft fuel consumption would increase as activity increases and/or delay levels increase. Contacts with local energy and natural resource suppliers have indicated the ability to meet the projected demands with the Build Alternatives.

N. Light Emissions

Light emission impacts are localized based on the existing or potential location of individual facilities. However, because the lighting would be directed upward, or would be buffered from surrounding residential areas by existing industrial, commercial, and transportation sources, the FAA concludes that no significant project-related light emission impacts would be expected.

O. Solid and Hazardous Waste

The FAA concludes that no significant impacts related to solid and hazardous waste would occur under the Build Alternatives since no problems are anticipated with respect to meeting the applicable local, state, Tribal, or Federal laws and regulations. Each Build Alternative maintains the same amount of enplaned passengers. Therefore, since the amount of generated solid waste is directly related to the number of enplaned passengers, the amount of solid waste generated for each Build Alternative would be the same. In general, with the exception of construction, demolition and land clearing waste, it is anticipated that there would be an increase in the level of solid waste generated by the Airport with the Build Alternatives when compared to the No Action Alternative. Though the handling of hazardous waste is forecast to increase proportionately with the growth of enplaned passengers, best management practices

regarding handling and transporting hazardous materials would be utilized to ensure environmental safety.

P. Construction Impacts

The preparation of any EIS requires that certain assumptions (e.g. forecast, construction schedule, development plan) must be made early in the process to provide a framework for the environmental analysis. In this case, those assumptions were established in late summer/early fall of 2002. These assumptions helped to form the basis for identifying and selecting the various alternatives to be considered. These assumptions further enabled computer simulation models to be formatted and run to analyze the potential impacts of the alternatives on numerous environmental categories required for consideration under NEPA. As stated above, the analyses of environmental impacts in this EIS are presented for the following conditions:

- Baseline – represents conditions in 2002
- Construction Phase I – First major construction phase complete (2007)
- Construction Phase II – Second major construction phase complete (2009)
- Build Out – Construction completed and operational (2013)
- Build Out + 5 – Five years beyond Build Out (2018)

Throughout 2002 and most of 2003, the expectation of the FAA was that the entire NEPA process could be completed, and a ROD could be issued, sometime in the middle of 2004 (consistent with the City's original EIS schedule) As a result, initially the EIS analyses were prepared using specific "years of analysis," (i.e. 2007, 2009, 2013 and 2018). This assignment of years of analysis was necessary to allow technical experts to begin the work (e.g. running models) of disclosing potential impacts in compliance with NEPA. However, by early 2004, it became clear to the Agency that the City's proposed EIS/ROD schedule was incompatible with the time required to achieve the quality of work the Agency has always devoted to such projects. Accordingly, the years of analysis were revised to reflect major phases (i.e. Construction Phase I, Construction Phase II, Build Out, and Build Out + 5), rather than specific years. In addition, and in an effort to assist the FAA with adequate disclosure of the best estimate of the revised construction timetable, the City of Chicago submitted a letter in December 2004 confirming revised construction timetables.

The changes in presentation (i.e., major phases, construction schedules) described below were made to allow flexibility given the uncertainties that abound regarding construction implementation, and to acknowledge that commencing construction in 2004 was not feasible. There are other uncertainties that can also affect construction, including, for example, weather conditions, length of construction season, etc.

Therefore, in an effort to provide this flexibility and bound the potential timeframe under which construction could commence or be completed, the following potential construction schedule scenarios were considered:

- **Original Schedule** – The original construction schedule submitted to the FAA by the City called for construction to begin in mid-2004. For reasons already identified, it is now evident that this schedule was unduly optimistic.
- **Compressed Schedule** – This construction schedule would compress the construction that was to occur in the Original Schedule between July 2004 (Year 1 of the Original Schedule) and September 2007 (Year 4 of the Original schedule), into the time period of September 2005 (Year 1 of the Compressed Schedule) to September 2007 (Year 3 of the Compressed Schedule). Unlike the Original Schedule, the City's proposed Runway 9R/27L would be fully operational in October 2007 (Year 3 of the Compressed Schedule) instead of January 2007 (Year 4 of the Original Schedule). All other future years of analysis would remain the same as those assessed in the original schedule.
- **Delayed Schedule** – This construction schedule is the same as the original construction schedule, but delayed by 14 months. Instead of construction beginning in July 2004 (Year 1 of the Original Schedule), it would begin in September 2005 (Year 1 of the Delayed Schedule). For all other future years of analysis, there would be a one-year delay (i.e. 2008, 2010, 2014, and 2019 are analyzed instead of 2007, 2009, 2013, and 2018). However, reference will continue to be made to the construction start year for each potential construction schedule (i.e. Year 1, Year 2, or Construction Phase I, Construction phase II, Build Out, and Build Out +5).)

The analysis using these above schedules provides disclosure of the maximum potential impacts. The years of analysis from the Original Schedule (i.e. 2007, 2009, 2013, and 2018) form the basis of all presentation comparisons relative to the appropriate impact categories. Representative years beyond those originally considered will also be analyzed to determine the potential impacts that could be realized. The focus of this effort will be primarily on surface transportation, noise, and air quality impact assessments. Changes in gating assignments or the fleet mix of aircraft as a result of the potential construction schedules listed above are expected to be minimal. Therefore, the assumptions used for the original construction schedule were retained.

Q. Cumulative Impacts

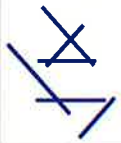
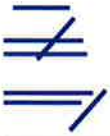
A review of past, present, and reasonably foreseeable conditions indicates that O'Hare exerts both positive and negative impacts on the local environs, which have changed over time. Over time, these impacts have decreased relative to environmental conditions such as aircraft noise, emissions of carbon monoxide, volatile organic compounds, and particulate matter. Impacts from surface transportation levels and congestion, natural resource consumption, air emissions of nitrogen oxides and sulfur oxides, and solid waste/hazardous waste generation have increased as activity levels have increased. For example, in its study of cumulative noise effects, the FAA has studied aircraft noise, construction noise, highway noise and railroad noise in the O'Hare area. No significant cumulative noise increases were found. With respect to air quality, the agency reviewed emissions reasonably foreseeable from the various Build Alternatives, as well as emissions from construction, and vehicular emissions at O'Hare including surrounding surface roads. Again, no significant cumulative increases were identified.

A number of past, and present non-airport projects have occurred in the area, and others are expected to occur in the future. It is anticipated that changes will continue in the Airport vicinity due to continued increases in population and economic activity in the airport environs and in the Chicago region, the third largest metropolitan area in the U.S. Much of the Airport environs are already surrounded by intensive transportation, residential, and commercial uses. There will be other forms of development, the dimension of which would not be known until plans are approved, which can not be measured at this point in time. Given the existing extent of development in the region generally, the incremental effect of the Build Alternatives is minor, at best, as reflected in this EIS. Some intensification of development would be expected in the areas, resulting in additional pressures on the social fabric and natural resources of the area. Such effects are dependent on ultimate design, land use plans, and other considerations. However, until specific project plans are known, it is not possible to quantify the specific cumulative effects from the proposed Build Alternatives and these other regional projects.

R. Summary Comparison of Alternatives

Table 12 on the following page compares Alternatives A (No Action), C, D and G (Build Alternatives) in terms of environmental impacts, operational efficiency, economic factors, and national policy. The City of Chicago's proposal is Alternative C.

TABLE 12
SUMMARY COMPARISON OF RETAINED ALTERNATIVES

Runway Layout for Each Alternative					
Alternatives		**A**	**C**	**D**	**G**
1. Environmental Impacts					
Wetland impacts	Jurisdictional & non-jurisdictional, including non-wetland Waters of the United States (acres)	23.5	154.2	154.2	154.2
Floodplain impacts	Increase in impervious surfaces area (acres)	0	1,000	823	1,126
DOT Section 4(f)/6(f) Parkland impacts	Parkland properties to be acquired	0	3	3	3
Section 106 impacts	Properties to be acquired and removed	0	4	4	4
Acquisition and relocation impacts	Area of proposed land acquisition (acres)	0	440	413	413
	Population of proposed land acquisition area	0	2,631	2,553	2,553
	Housing Units	0	539	522	522
	Businesses	0	197	164	164
65+ DNL noise impacts (Build Out)	Area (acres)	12,427	11,263	11,187	11,216
	Housing Units	5,199	6,754	7,392	6,572
	Population	14,512	19,577	21,154	19,135
Environmental justice impacts	Minority residents in proposed acquisition area by race	0	1,575	1,479	1,479
	Minority residents in proposed acquisition area by ethnicity	0	1,599	1,524	1,524
Air Quality Impacts	Compliance with NAAQS	Exceedance of CO at 1 location	No exceedances	No exceedances	No exceedances
2. Operational Efficiency Factors					
2018 average annual delay	(minutes per operation)	17.1	5.8	10.5	6.9
2018 annual operations served	(operations)	974,000	1,194,000	1,194,000	1,194,000
3. Economic Impact Factors					
Delay cost	Delay cost to the airlines in 2018 (millions) based on $25 per minute of delay	$416.4	$173.1	$313.4	$206.0
Local tax base	Tax base loss of parcels acquired (millions)	$0	$5.7	$5.3	$5.3
Relative development costs	Relative construction cost	Less than C, D or G	More than A, D, less than G	More than A, less than C, G	More than A, C and D
4. National Policy Factors					
Implementation factors	Regulatory – Does authority exist to implement?	Yes	Yes	Yes	Yes
	Sponsor – Is there a sponsor able to fund?	Yes	Yes	Yes	Yes
	Service Provider – Will adequate service be initiated?	Yes	Yes	Yes	Yes

Notes: Surface transportation effects are included in **Sections VII-C, Surface Transportation** of this **Executive Summary.**
n/a = not applicable

Source: TPC Analysis, **Chapter 5, Environmental Consequences.**

VIII. MITIGATION SUMMARY

Chapter 7, Mitigation Summary, of the Final EIS presents a summary of the proposed mitigation measures, or other impact reduction measures, that could be implemented by the City of Chicago, with oversight by the FAA, to avoid or minimize the potential environmental impacts associated with the Build Alternatives, including Alternative C, the Preferred Alternative. The Preferred Alternative was identified in **Chapter 3, Alternatives**, of the Final EIS and is summarized in **Section XI** of this **Executive Summary**. The proposed mitigation measures for the Build Alternatives were developed based on detailed analyses of the impacts identified in **Chapter 5, Environmental Consequences**, and comments received from the public and agencies on the Draft EIS.

The following is a list, by environmental resource category, of the types of proposed mitigation and other reduction measures that are identified in **Chapter 5** of the Final **EIS**.

- Noise and Compatible Land Use
  - Sound insulation for eligible residences and schools
- Surface Transportation
  - Intersection capacity improvements (i.e., additional lanes)
  - Establishment of escrow accounts to contribute to mitigation costs
  - Cooperative planning with all jurisdictional agencies
  - Availability of adjacent Airport-owned right-of-way to facilitate future improvements
- Social Impacts
  - O'Hare Land Acquisition Relocation Plan
  - Uniform Relocation Assistance and Real Property Acquisition Policies Act
  - Advisory Services
- Air Quality
  - Use Best Management Practices
  - Use OMP Sustainable Design procedures
  - Airport vehicle, construction equipment, and aircraft emission reduction measures
- DOT Section 4(f)/6(f) Lands
  - Acquisition at fair market value
  - MOA or Agreement outlining proposed mitigation
- Historical, Architectural, Archaeological, and Cultural Resources
  - MOA or Agreement outlining proposed mitigation

- Wetlands
  - USACE Section 404 Individual Permit when issued
  - IEPA Section 401 Water Quality Certification
- Construction Impacts
  - Use Best Management Practices
  - Use OMP Sustainable Design procedures
  - Construction Outreach Program for O'Hare Modernization
  - Erosion and Sedimentation Control Plan
- Environmental Justice
  - O'Hare Land Acquisition Relocation Plan
  - Uniform Relocation Assistance and Real Property Acquisition Policies Act
  - Sound insulation for eligible residences
  - Public Outreach Activities

If a Build Alternative is selected in the Record of Decision, the FAA will identify those mitigation measures that the City would be required to implement as a condition of project approval.

IX. OTHER ISSUES

As submitted by the City of Chicago, the proposed Airport Layout Plan for the OMP called for the use of two cemeteries, St. Johannes and Rest Haven. At the time of this submission, the City intended to use its land acquisition authority to obtain title to these properties and to relocate the bodies of those buried in the cemeteries to another nearby existing cemetery if the FAA approved the OMP. These acquisitions would be necessary to construct Runway 10C/28C and establish an international air cargo facility in the southwestern quadrant of O'Hare.

Those who oppose the relocation of graves from St. Johannes and Rest Haven Cemeteries have asserted that the FAA's approval of any proposal that would require relocation of these cemeteries would violate their First Amendment right to free exercise of religion as well as the Religious Freedom Restoration Act. FAA has carefully studied these claims in the Final EIS and has identified a proposed resolution to these legal issues. In doing so, the FAA proposes to find that Rest Haven Cemetery, unlike St. Johannes, may not need to be relocated. A final decision on these legal issues will be made in the ROD after opportunity for comment. For further information see **Section 5.22, Other Issues Relating to Cemetery Acquisition**.

In addition, the Cemetery Associations, the Village of Bensenville, and Elk Grove Village have asserted that their due process rights have been violated and that FAA decisions related to any proposed O'Hare modernization require formal adjudication. FAA has carefully studied these claims and proposes to find that these claims have no merit. A final decision on these legal

issues will be made in the ROD after opportunity for comment. For further information see **Section 5.23, Issues Relating to Due Process Claims and Formal Adjudicative Processes.**

X. MASTER PLAN

The O'Hare International Airport Master Plan (Master Plan) prepared by the City of Chicago Department of Aviation provides the backdrop and foundation for its request that the FAA approve what has become Alternative C in this EIS. It is not the function of this EIS to provide in-depth review of the Master Plan. However, reference to that document is helpful to address implementation schedules, cost estimates, and preliminary funding, to the extent required under NEPA.

A. Master Plan Implementation Schedule

In February 2004, the City submitted the Master Plan. This submittal to the FAA included a three-volume set of documents that set forth the detailed project components for the implementation of the O'Hare Modernization Program and a proposed Airport Layout Plan (ALP) set of drawings. In Volume 2 of the Master Plan, the City specifically provided information on the anticipated project timing, estimated cost, and financial feasibility of the projects described therein.

In response to comments, the FAA has broadened the discussion in this Final EIS of the financial feasibility, which includes an analysis of the City's estimated costs for this proposal. This analysis is not intended to prejudge the outcome of any separate process involving the City on other matters, for example the Letter of Intent application or requests for PFC authorization. **Table 13** outlines the major components of the Alternative C and their proposed first full year of operation.

TABLE 13
MASTER PLAN PRELIMINARY IMPLEMENTATION SCHEDULE

Master Plan Project Component	First Full Year of Operation
O'Hare Modernization Program (OMP) Runway Components	
Construction of Future Runway 9L/27R	2007
Extension of Existing Runway 9R/27L (Future Runway 10L/28R)	2009
Construction of Future Runway 10C/28C	2009
Extension of Existing Runway 9L/27R (Future Runway 9R/27L)	2013
Construction of Future Runway 9C/27C	2013
Construction of Future Runway 10R/28L	2013
World Gateway Program (WGP) Terminal Components	
Concourse K	2009
Terminal 4	2013
Terminal 6	2013
West Terminal Complex Components	
Satellite Concourse	2009
Terminal Building/Concourse	2013
West Terminal Ground Access	2013

Source: O'Hare International Airport Master Plan, City of Chicago, February 2004.

B. Master Plan Cost Estimate

Listed in **Table 14** is a summary of the project costs estimated by the City associated with the City's O'Hare Modernization Program as presented in Volume 2 of the Master Plan. The total costs in **Table 14** are in billions of dollars, rounded to the nearest million and escalated to 2004 dollars from the original costs presented in the City's Master Plan. The Draft EIS cost estimate was based upon a uniform cost escalator of 2.4%. For the Final EIS, the FAA has utilized escalation indicators which are appropriate for the specific types of construction work. These industry specific escalators were utilized based on whether the construction was Heavy Construction or Building Square Foot Cost for historical cost indexes for the City of Chicago. In addition, the Capital Improvement Projects (CIP) costs associated with the Subsequent Years (2008-2022) were also adjusted to 2004 dollars to make the entire **Table 14** reflective of 2004. The Master Plan indicated that the proposed costs are consistent when compared to costs of other airport improvement programs. See **Appendix A, Background, Attachment A-1**.

TABLE 14
ESTIMATED COSTS IN BILLIONS OF DOLLARS (f)

Project Description	Original Cost Estimate(a)	Estimate Year(b)	Type of Work(c)	Escalation Multiplier(d)	Estimated Cost in 2004 Dollars
O'Hare Modernization Program (OMP)					
Program Wide Requirements	0.909	2001	BSF	1.1324	1.029
Other Program Costs	0.321	2001	BSF	1.1324	0.364
Airfield	3.211	2001	HC	1.1446	3.675
West Terminal	1.727	2001	BSF	1.1324	1.956
On-Airport Circulation	0.432	2001	HC	1.1446	0.495
Subtotal	6.600				7.519
Capital Improvement Projects (CIP)					
Five-Year (2003-2007)	1.386	2003-2007	HC	1.0000	1.386
Subsequent Years (2008-2022)	2.742	2008-2022	HC	0.8012(e)	2.197
Subtotal	4.128				3.583
World Gateway Program (WGP)					
Airport-wide, Airfield and Airside	0.244	1999	HC	1.2319	0.301
Terminal 2 FIS Facilities	0.079	1999	BSF	1.2028	0.095
Terminal 4	0.968	1999	BSF	1.2028	1.164
Terminal 6	1.353	1999	BSF	1.2028	1.628
Subtotal	2.644	1999			3.188
Total Costs					**$14.290**

Notes:
(a) Total costs are in billions of dollars, rounded to the nearest million.
(b) Estimates were prepared/published by the City of Chicago and are based on construction costs for the year listed.
(c) HC = Heavy Construction Cost Index ; BSF = Building Square Foot Cost Index
(d) Escalation multipliers were developed using RS Means Square Foot Costs from 1999, 2001, 2004, and Heavy Construction Cost Data from 1999, 2001, 2004 for historical cost indexes for the City of Chicago.
(e) The O'Hare International Airport Master Plan (page VII-24) notes that this amount is in escalated dollar values for subsequent years (2008-2022). A 2 percent construction escalation factor was used to determine this multiplier.
(f) The FAA conservatively assumed a 2 percent escalation factor for the subsequent years (2008-2022) in the CIP which would equate to 15 years of projects at approximately $146 million per year. The resulting 15 year total for the CIP would be $2.197 billion in 2004 dollars. The difference between the CIP costs presented in the City's Master Plan and the dollars presented for this same line item on Table 1-11 is approximately $545 million. If a 4 percent escalation factor had been applied as the City used in WGP, the resulting value for CIP (2008-2022) in 2004 dollars would have been approximately $1.756 billion. FAA has chosen a more conservative approach.

Source: Original Cost Estimate: O'Hare International Airport Master Plan, City of Chicago, February 2004.
Escalation Multipliers: R.S. Means Square Foot Costs, 1999, 2001, 2004, and Heavy Construction Cost Data, 1999, 2001, 2004, except as noted in footnote (e).

C. Master Plan Funding Detail

The City of Chicago has developed a financial plan for OMP that includes consideration of investments required for OMP and anticipated for other capital improvements. In particular, the City has considered the required funding and sources of funding for (1) O'Hare Modernization Program, (2) World Gateway Program, and (3) other Capital Improvement Program projects.

The amount of funding required for the combined OMP, WGP, and CIP projects at O'Hare is large—a total of about $14.29 billion in escalated dollars, as presented above in **Table 14**. However, O'Hare is one of the largest airports in the United States, and one of the major connecting hubs for the national transportation system. Therefore, it is not considered unusual or unreasonable that required investments would be significant in order to accommodate future growth in activity.

D. Sources of Funding

The City has identified four funding sources to carry out the projects set forth in the O'Hare International Airport Master Plan. These funding sources are listed below:

- Federal grants-in-aid under the Airport Improvement Program (AIP)
- Passenger facility charges (PFCs)
- General airport revenue bonds (GARBs)
- Third-party financing

In presenting these funding sources, the City's Master Plan indicated that,

> The actual amount of funding available from certain [...] sources will depend primarily on future levels of aviation activity at the Airport, future federal reauthorizations, and future airline approvals.

Table 15 shows the best estimate of funding by source.

TABLE 15
ESTIMATED SOURCES OF FUNDS

	Sources of Funds (Percentages)						
	FAA AIP Grants		Passenger Facility Charge				
Program	Entitlement	Discretionary (a)	Pay-As-You-Go	Bond Funds	Airport Revenue Bonds	Third-Party Financing (b)	Total (c)
OMP	1%	8%	2%	20%	59%	10%	100%
CIP	0%	6%	11%	30%	54%	0%	100%
WGP	0%	0%	0%	0%	78%	22%	100%

Notes: (a) Includes discretionary LOI funds, discretionary noise funds, and assumed funding for safety and security projects.
(b) Assumes that 33.3 percent of terminal project costs are eligible for third-party financing resulting in 10 percent of OMP total project cost and 22 percent of WGP total project cost.
(c) Totals may not add due to rounding.
Source: O'Hare International Airport Master Plan, Section VII, February 2004.

The City's financing plan for OMP and related capital investments includes a significant amount of borrowing in the form of airport revenue bonds, as is typical for large hub airports. Thus, an important consideration in evaluating the financing plan is the anticipated "reaction" or "acceptance" of the financial community; e.g., the ability to obtain an investment-grade bond rating and attract investors in bonds and insurers of bonds.

The City of Chicago has initiated planning and design work associated with the $2.9 Billion Phase 1 of the OMP. Significant projects associated with Phase 1 include:

- New Runway 9L/27R
- New Runway 10C/28C
- Runway 10L Extension
- South Detention Basin Relocation
- Union Pacific Railroad Relocation

As noted above, the City has to-date only issued bonds for preliminary phases of OMP. It is typical that large, long-term capital programs are implemented and financed in phases. It is not necessary, and not financially prudent, to borrow money significantly in advance of the need for such money for construction — to do so would result in undue interest costs. Thus, the City has developed a financial plan that assumes issuance of bonds in phases consistent with the need to have funds available to finance construction. The financial community will evaluate each proposed new series of bonds at the time these bonds are required to be issued, and in the context of the then-current set of circumstances.

On the basis of the information presented herein, the review of the City's financial plan, and an understanding of airport financing in general, FAA has no reason to believe that the City's financial plan cannot be implemented as generally presented in the Master Plan. Further, FAA has no reason to believe that the resulting costs to airport users (most significantly, major airlines serving O'Hare) will significantly adversely affect the ability to finance the capital projects and realize the projected aviation demand, particularly in the context of future investments that will be required at other large hub airports in the United States. All projections and forecasts are subject to uncertainty, and future events may result in changes or adjustments to the FAA conclusions.

In response to comments on the Draft EIS, FAA has reviewed additional cost-related information applicable to the project. For purposes of this review under NEPA, the FAA has concluded that the estimated costs of the project are reasonable. FAA has also concluded that it is reasonable to assume that, based upon the impact O'Hare has on the Chicago region, as well as the NAS, and the benefits to the regional economy, there will be sufficient funds to complete the proposal, if approved. In addition, FAA believes that with a project of this magnitude and importance, the availability of projected funding sources is sufficiently reasonable and capable of being obtained. Accordingly, the FAA has decided it is both appropriate and necessary under NEPA to subject the Sponsor's full build proposal and alternatives thereto to this environmental analysis because the entirety of the proposed action is reasonably foreseeable.

This determination is made without prejudice to evaluation of the City's pending Letter of Intent request, which is a separate process from this environmental analysis.

XI. SELECTION OF A PREFERRED ALTERNATIVE

The Final EIS by regulation is required to identify a "preferred alternative". The FAA in its consideration of alternatives, in addition to the relevant environmental statutes, has been mindful of its statutory charter to encourage the development of civil aeronautics and safety of air commerce in the United States (49 U.S.C. §40104). FAA has also considered the congressional policy declaration that airport construction and improvement projects that increase the capacity of facilities to accommodate passenger and cargo traffic be undertaken to the maximum feasible extent so that safety and efficiency increase and delays decrease [49 U.S.C. §47101(a) (7)]. As defined in CEQ's 40 Questions and Answers about the NEPA Regulations, "The 'agency's preferred alternative' is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors." In identifying a preferred alternative, the FAA has examined financial feasibility and has conducted concurrent with this EIS, an examination of religious liberty claims concerning the proposed relocation of cemeteries.

A. Environmental Consequences

Three build alternatives, in addition to the No Action Alternative, were retained for detailed study in the EIS. **Table 12** (on page 47 of this Executive Summary) presents a side-by-side comparison of the alternatives in terms of environmental, economic, and operational impacts. A review of **Table 12** shows that Alternatives C, D, and G have the same impacts in four categories (wetlands, DOT Section 4(f)/6(f), historic properties, and air quality). **Table 12** also shows that Alternative C has environmental impacts that are slightly greater in several other impact categories than Alternatives D and G. For example the population impacted by the 65+ DNL noise contour in 2018 for Alternative C is 24,103 persons, which is 566 persons greater than for Alternative D, and 796 persons greater than for Alternative G. Alternative G has fewer noise impacts but greater floodplain impacts than the other build alternatives. With regard to land acquisition, Alternative C would require the relocation of approximately 539 housing units and 197 businesses, while Alternatives D and G would require the relocation of approximately 522 housing units and 164 businesses.

B. Delay Reduction

Alternative C is more effective and efficient than the other Build Alternatives in meeting the purpose and need identified in this EIS. Alternative C provides the greatest reduction in average annual delay. Adoption of Alternative C would provide the greatest benefits, not only to the Chicago region, but also to the NAS. All of the Build Alternatives fully satisfy the purpose and need of ensuring that existing and future terminal facilities and supporting infrastructure (access, landside, and related ancillary facilities) can efficiently accommodate airport users.

As discussed in the EIS, O'Hare affects the NAS because the airfield lacks adequate runway capacity and gate availability to handle both current and forecast levels of activity for O'Hare. In addition, delays at O'Hare have a direct impact on the NAS, in part because approximately 51% of the total passengers traveling through O'Hare currently connect to and from other airports.

The three Build Alternatives C, D, and G provide for 1,194,000 annual operations served in 2018. The resulting average annual delay in 2018 is 5.8 minutes per operation for Alternative C, (City's OMP), 10.5 minutes per operation for Alternative D, and 6.9 minutes per operation for Alternative G. Notably, when comparing Alternative C to Alternative D, there is an 81 percent increase in the average annual delay with Alternative D. When comparing Alternative C to Alternative G, there is a 19 percent increase in the average annual delay with Alternative G.

In contrast with the Build Alternatives, the No Action Alternative is projected to serve 974,000 annual operations (constrained) in 2018 at an average annual delay 17.1 minutes per operation. This is approximately 200,000 less operations at a significantly higher level of delay than any of the Build Alternatives and does not meet the purpose and need.

C. Public Involvement

The FAA did not identify a preferred alternative in the Draft EIS, believing that this decision could best be made after consideration of all comments and subsequent analysis that post-dated the Draft EIS. **Section I-D** of the Executive Summary identifies the extensive outreach conducted by the FAA to maximize public involvement in the Agency's evaluation of O'Hare modernization. Further, the Agency's careful scrutiny of the comments received on the Draft EIS, and the responses crafted to those comments (see **Appendix U**) provided additional insight into the identification of the preferred alternative.

D. Identification of Preferred Alternative

In consideration of the substantial similarity between the environmental impacts for Build Alternatives C, D, and G, the FAA has identified the alternative that best fulfills its statutory mission and responsibilities as the "Preferred Alternative." Given the clear superiority of Alternative C in terms of the average annual delay reduction, the FAA has identified Alternative C, the Sponsor's proposed O'Hare Modernization Program, as the Preferred Alternative. This identification of Alternative C as the Preferred Alternative fully satisfies all of the FAA's environmental obligations associated with consideration of the proposed OMP.

XII. NEXT STEPS IN THE EIS PROCESS

The FAA has not yet reached a decision on the implementation of any alternative, including the Preferred Alternative. However, the FAA expects to publish a Record of Decision (ROD) in September 2005. The ROD provides the FAA decision-maker's basis for the decision and the mitigation requirements to implement the project. The agency uses information in the Final EIS to prepare the ROD.

Specific sections of the Final EIS have been updated and/or refined for purposes of the Final EIS, in part, because of response to comments on the Draft EIS, Draft Section 4(f) and Section 6(f) Evaluation, and Draft General Conformity Determination.

The FAA will accept comments on the updated and/or refined information of the Final EIS in the sections identified below until 5:00 p.m. Central Standard Time, Tuesday, September 6, 2005:

- Sections 3.6 and 3.7, of Chapter 3, Alternatives
- Section 5.6, Air Quality, of Chapter 5, Environmental Consequences
- Subsections 5.21.4 through 5.21.11, of Section 5.21, Environmental Justice, of Chapter 5, Environmental Consequences
- Section 5.8, Section 4(f) and Section 6(f) Resources, of Chapter 5, Environmental Consequences
- Section 5.22, Other Issues Relating to Cemetery Acquisition, of Chapter 5, Environmental Consequences
- Section 5.23, Issues Relating to Due Process Claims and Formal Adjudicative Processes, of Chapter 5, Environmental Consequences
- Chapter 7, Mitigation

Please send your written comments to:

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RECORD OF DECISION
FOR
O'HARE MODERNIZATION

AT
CHICAGO O'HARE INTERNATIONAL AIRPORT
CHICAGO, ILLINOIS

September 2005

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGION
DES PLAINES, ILLINOIS

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1. INTRODUCTION

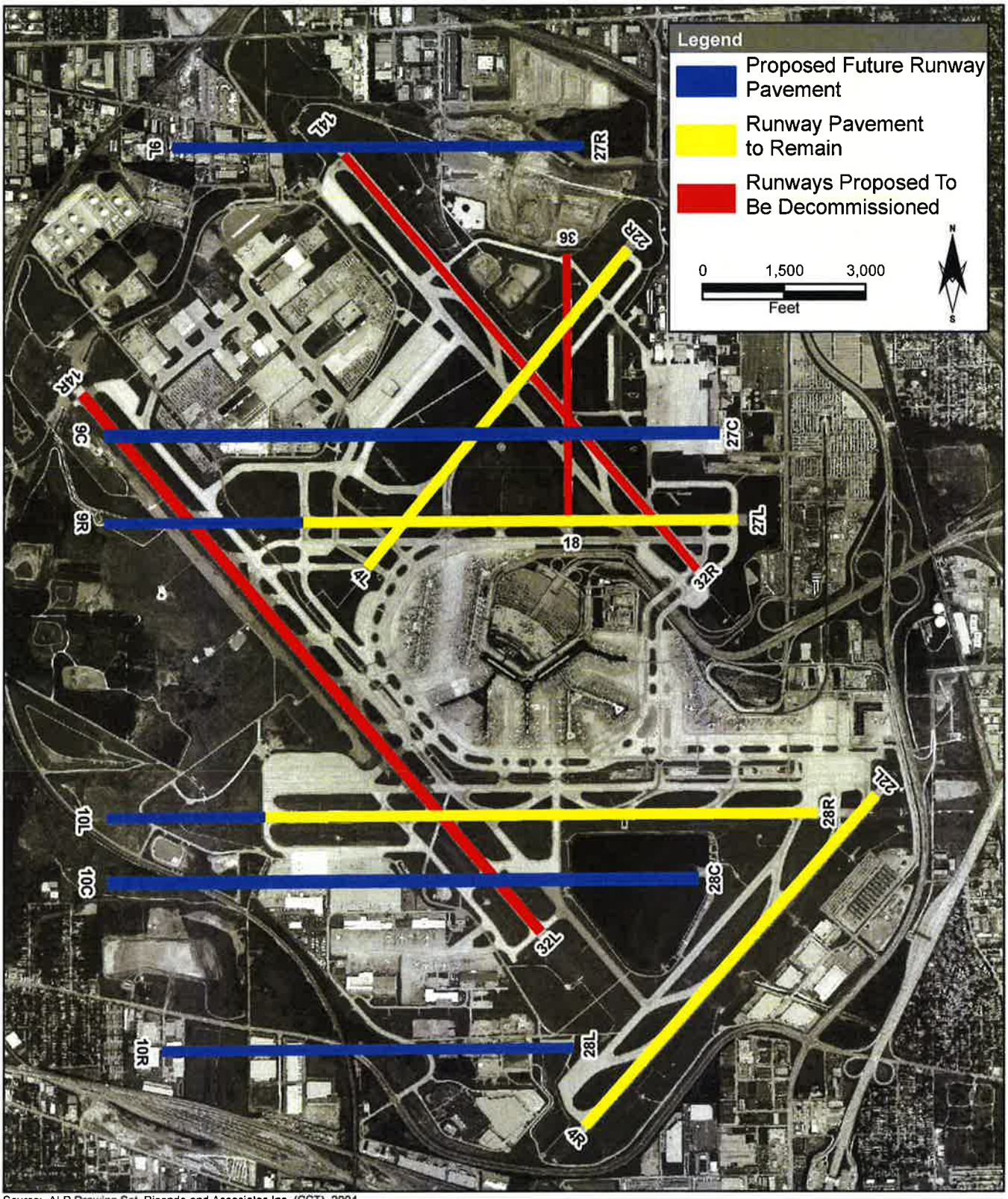
This Record of Decision (ROD) provides final agency determinations and approvals for those Federal actions by the Federal Aviation Administration (FAA or Agency) necessary for proposed improvement of O'Hare International Airport (ORD or Airport).

FAA identifies its preferred alternative in a Final EIS and designates the selected alternative in its ROD. The FAA identified Alternative C, the City's proposed O'Hare Modernization Program (OMP), as its Preferred Alternative in the Final EIS. The FAA's specific decision and order selecting Alternative C to be implemented at ORD, required by 40 CFR 1505.2, is described in detail in Section 13 of this ROD. Alternative C provides for reconfiguration of the airfield as shown in **Exhibit 1,** along with associated terminal and support facilities, and related land acquisition.

In addition to the FAA's extensive analysis of potential environmental impacts, the Final EIS, including the response to comments, also addresses financial issues implicated by the Agency's duties under NEPA and related environmental statutes. The FAA has taken into account project cost estimates and proposed funding sources outlined in the City's Airport Master Plan. The FAA has also conducted its review of the OMP financial plan to the extent that such review aided in the performance of the Agency's NEPA duties in general and its review of alternatives in particular. The FAA's selection of Alternative C signifies that the projects meet FAA standards for approval of the Airport Layout Plan and other agency actions identified in this ROD. It does not, however, signify an FAA commitment to provide a specific level of financial support, which is a future decision that will be made in accordance with other FAA policy and procedures. Further discussion regarding the relationship between this ROD and FAA decisions involving financial support for the OMP appears at Section 10.1.1 of this document.

This ROD completes the FAA's thorough and careful environmental decision-making process, including FAA's public disclosure and review by the FAA decisionmaker of the analysis of impacts described in the July 2005 O'Hare Modernization Final Environmental Impact Statement (Final EIS). This ROD has been prepared and issued by the FAA in compliance with the National Environmental Policy Act of 1969 (NEPA) [42 U.S.C. Section 4321, et seq.], the implementing regulations of the Council on Environmental Quality (CEQ) [40 CFR Parts 1500-1508] and FAA directives [Order 1050.1E and Order 5050.4A]. The ROD is also used to demonstrate and document FAA's compliance with the procedural and substantive requirements and environmental, programmatic, and related statutes and regulations that apply to FAA decisions and actions on proposed airport expansion projects.

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Source: ALP Drawing Set, Ricondo and Associates Inc. (CCT), 2004.

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

Existing and Proposed Future Runways (Sponsor's Proposal)

▶ Exhibit 1

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The Cooperating Agencies for this EIS are: the United States Army Corps of Engineers (USACE) (due to the need for a Section 404 permit issuance decision), the United States Environmental Protection Agency (USEPA) (due to air quality, wetlands and environmental justice matters), the United States Fish and Wildlife Service (USFWS)(due to wildlife impact and wildlife habitat matters), the Federal Highway Administration (FHWA)(due to potential impacts on the area's interstates), and the Illinois Environmental Protection Agency (IEPA) (due to air quality matters and the need for a Section 401 Water Quality Certification issuance decision).

During preparation of the Draft and Final EIS, the FAA worked closely with the Cooperating Agencies. In addition, the FAA coordinated with other Federal, state, and local entities throughout the EIS process, including the, Department of Interior (DOI), National Park Service (NPS), Advisory Council on Historic Preservation (ACHP), Illinois Department of Natural Resources (IDNR), Illinois Historic Preservation Agency (IHPA), Illinois Department of Transportation (IDOT), Illinois State Toll Highway Authority (ISTHA), Northeastern Illinois Planning Commission (NIPC), Chicago Area Transportation Study (CATS), local municipalities, other interest groups, and the public to facilitate early consideration of key issues and an understanding of the proposed actions.

The FAA is responsible for the preparation and content of the EIS and the ROD. The FAA is also responsible for reviewing and verifying the accuracy of any environmental information provided by outside entities. CEQ regulation 40 CFR 1506.5 permits the FAA to receive and use information related to the EIS. In keeping with its oversight responsibility, FAA has consistently exercised control over the scope, content and development of the EIS. FAA selected a Third Party Contractor (TPC) to assist in the preparation of this EIS. The Agency also utilized its own resources, as well as the resources of the TPC, to independently evaluate any environmental information and other submissions provided by the City of Chicago Department of Aviation (DOA) or other entities. In addition, FAA has utilized environmental information submitted by the local agency for development of this EIS, only as permitted under 40 CFR 1506.5(a). The local agency in this case was the DOA.

FAA is responsible for the accuracy of all information within the EIS and ROD. The FAA/TPC independently and extensively reviewed the DOA-provided environmental information utilized in the EIS. FAA believes that its degree of supervision exercised over the TPC, and FAA involvement in the preparation/review of the EIS and ROD is consistent with CEQ regulations and its own Orders, and fully demonstrates the integrity and objectivity of the EIS and ROD.

This ROD also contains the FAA's decision concerning religious liberty claims and assertions of entitlement to formal adjudicatory process that have been presented to it by those opposed to the acquisition and relocation of two religious cemeteries, St. Johannes and Rest Haven.

2. BACKGROUND

Against the backdrop of aviation delays throughout the country, the Senate Commerce, Energy, and Transportation Committee held hearings in Chicago during the summer of 2001 to discuss the effect of delays at O'Hare on the national airspace and how redevelopment of O'Hare could potentially alleviate these delays. At the time these hearings were held, the Committee strongly

encouraged the City of Chicago and the State of Illinois to reach agreement on airport expansion before September 1, 2001, or according to congressional leaders, run the risk of Congressional intervention.

On June 29, 2001, the Mayor of Chicago announced a concept to enhance the capacity and efficiency of O'Hare and reduce delay, which later evolved into the OMP. The resulting airfield would resemble those at Hartsfield-Jackson Atlanta International and Dallas/Fort Worth International airports, where recent advances in air traffic control technology for parallel runway operations have been incorporated.

The essence of the O'Hare Modernization is to correct the inherent inefficiencies created by the original "runway triangle" built when O'Hare was Orchard Place, and the Douglas Aircraft Company was making propeller aircraft for World War Two. The three original runways (Runways 4L/22R, 14L/32R, and 9L/27R) lie north of the present terminals. Because these runways and the flight paths of aircraft that use them intersect with each other, the ability to use any one runway is dependent upon the aircraft using the other two. For that reason, all of them are considered "dependent runways." As one example, O'Hare controllers need to arrange sufficient spacing between aircraft landing on Runway 9L to accommodate those departing on Runway 4L. Half a century ago, such runway architecture was acceptable, if not necessary, to insure that those venerable but primitive aircraft could always land and take off into the wind. However, dependent runways create a severe penalty in the ability to move a large amount of traffic. That penalty can become even greater in bad weather. Today's modern aircraft are less dependent on wind conditions. Thus, new runway architecture, as demonstrated at Atlanta, Dallas/Fort Worth, and Denver, feature parallel, non-intersecting, "independent runways" which permit constant streams of landings or take offs for each runway, regardless of what activity may be occurring on another parallel runway. The City of Chicago's proposal with its six parallel runways, breaks the O'Hare "runway triangle" and allows for far more operations in all weather conditions without compromising safety.

On December 5, 2001, the Mayor and the Governor announced that they had virtually reached agreement on the major components of a long-range conceptual plan to address delay and airfield congestion at O'Hare. After discussions with the City of Chicago regarding a forthcoming more-detailed plan, the FAA issued a Notice of Intent to Prepare an EIS and to Conduct Environmental Scoping for Improvements to the O'Hare International Airport in July 2002. Throughout 2002, the City of Chicago refined the conceptual plan and submitted an initial draft Airport Layout Plan (ALP) in December 2002 to the FAA for review.[1] The ALP, which consists of a much more detailed representation of the proposal, is shown in **Exhibit 2.**

Due to the importance of O'Hare to the State of Illinois, specific O'Hare Airport-related legislation was passed. The O'Hare Modernization Act (OMA), which related to the proposed expansion of O'Hare, was adopted by the Illinois legislature and signed into law by the Governor on August 6, 2003.

---

[1] The Draft ALP was resubmitted in October 2003 following FAA review and comment and again in September 2005 following further FAA review and comment. **Exhibit 2** shows the September 2005 ALP. The environmental consequences of the September 2005 ALP are not different from those evaluated in the previous versions of the ALP.

The OMA states:

> Section 5. Findings and purposes.
>
> (a) The Illinois General Assembly finds and determines:
>
> (1) The reliability and efficiency of the State and national air transportation systems significantly depend on the efficiency of the Chicago O'Hare International Airport. O'Hare has an essential role in air transportation for the State of Illinois. The reliability and efficiency of air transportation for residents and businesses in Illinois and other States depend on efficient air traffic operations at O'Hare.
>
> (2) O'Hare cannot efficiently perform its role in the State and national air transportation systems unless it is reconfigured with multiple parallel runways.
>
> (3) The O'Hare Modernization Program will enhance the economic welfare of the State of Illinois and its residents by creating thousands of jobs and business opportunities.
>
> (4) O'Hare provides, and will continue to provide, unique air transportation functions that cannot be replaced by any other airport in Illinois...
>
> (5) Public roadway access through the existing western boundary of O'Hare to passenger terminal and parking facilities located inside the boundary of O'Hare and reasonably accessible to that western access is an essential element of the O'Hare Modernization Program. That western access to O'Hare is needed to realize the full economic opportunities created by the O'Hare Modernization Program and to improve ground transportation in the O'Hare area. It is important to the State that the western access be constructed not later than the time existing runway 14R-32L is removed from service.
>
> (6) For the reasons stated in paragraphs (1), (2), (3), (4), and (5), it is essential that the O'Hare Modernization Program be completed efficiently and without unnecessary delay.
>
> (7) For the reasons stated in paragraphs (1), (2), (3), (4), and (5), it is essential that acquisition of property as required for the O'Hare Modernization Program be completed as expeditiously as practicable.
>
> (8) The General Assembly recognizes that the planning, construction, and use of O'Hare and the planning, construction, and use of the O'Hare Modernization Program will be subject to intensive regulatory scrutiny by the United States and that no purpose would be served by duplicative or redundant regulation of the safety and impacts of the airport or the O'Hare Modernization Program...
>
> (b) It is the intent of the General Assembly that all agencies of this State and its subdivisions shall facilitate the efficient and expeditious completion of the O'Hare Modernization Program to the extent not specifically prohibited by law, and that legal impediments to the completion of the project be eliminated.

In both 2003 and 2004, O'Hare International Airport (ORD) was the busiest airport in the world in terms of operations, and second busiest in terms of enplaned passengers. In 2004, ORD served approximately 35,952,198 enplaned passengers and 992,471 aircraft operations at an annual average delay of approximately 18 minutes per operation; from 2003, there was approximately a 9 percent increase in enplaned passengers, and a 6 percent increase in aircraft operations. The FAA forecasts that the demand for air travel at ORD will continue to grow and that ORD will serve approximately 1.2 million aircraft operations and 50 million enplaned passengers in 2018 – the final year of analysis within the EIS. Further, FAA notes that the

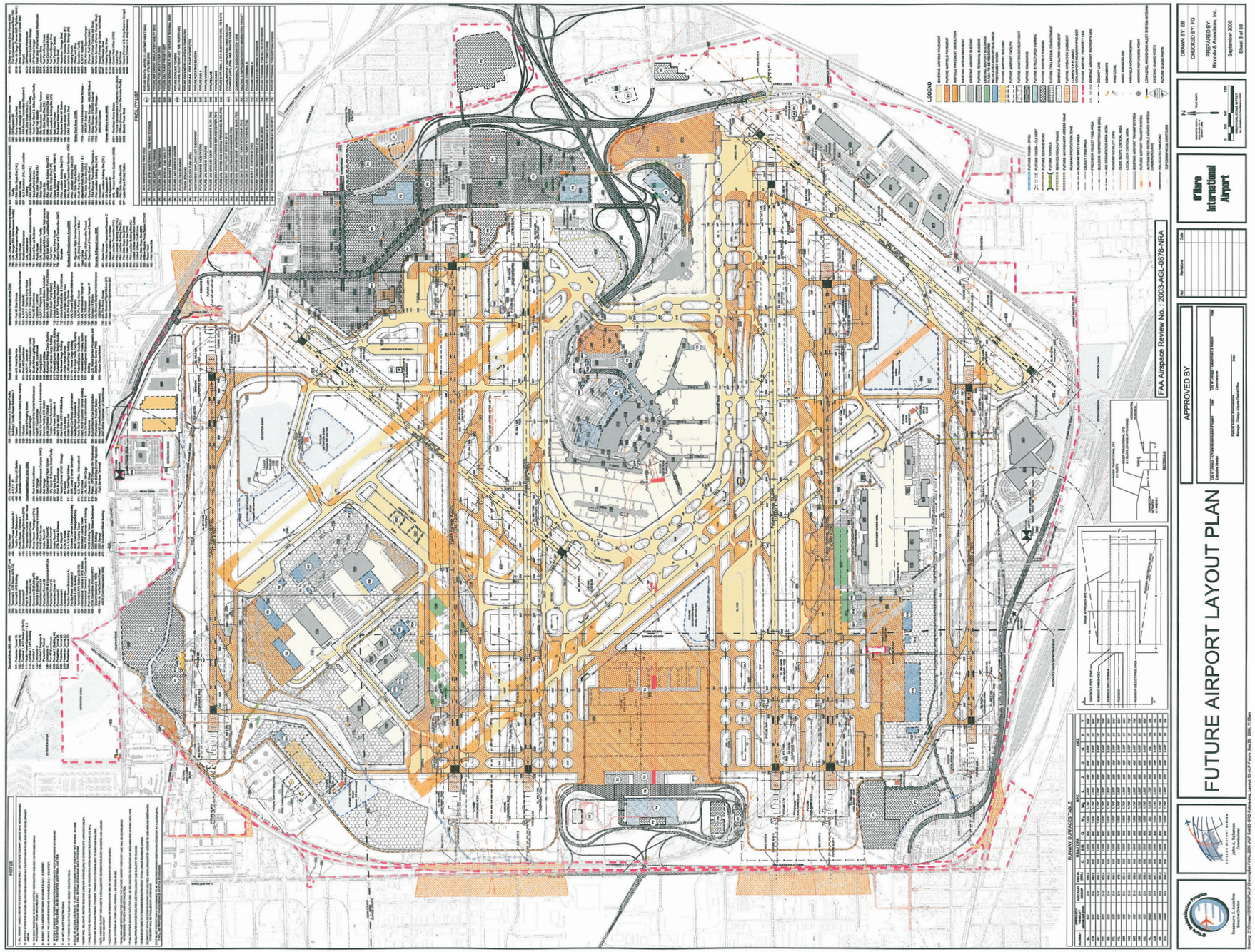
airport has been ranked first worldwide in total operations in 39 of the last 42 years, and first worldwide in total passengers in 36 of the last 42 years.

ORD is owned and operated by the City of Chicago (Sponsor). Designated by the FAA as a large hub airport, ORD, as of October 2004, serves 47 scheduled passenger airlines -- 10 U.S. flag air carriers, 27 foreign-flag air carriers, and 10 regional/commuter carriers. In addition, 23 carriers provided scheduled cargo service at ORD. ORD provides nonstop service to 127 domestic and 48 international destinations. The Airport plays a vital role in the overall air transportation and economic system of the greater Chicago Market Area. O'Hare also plays an important role in the National Airspace System (NAS) as a dual airline hub, a major mid-continent market for nearly every major airline, and a key international gateway. Because of these characteristics, O'Hare is one of the busiest airports in the world in terms of aircraft operations and enplaned passengers.

In the EIS, the FAA has identified ORD as a major contributor to delays throughout the NAS. The FAA has determined that a capacity and delay problem exists at ORD, and that one of the major causes of the delay is inadequate all-weather airfield capacity due to the airfield's current configuration (see Chapter 2 of the Final EIS). In 2002, the airfield at O'Hare consisted of six (6) primary air carrier runways configured as three (3) parallel sets, and one (1) commuter/general aviation runway. The three sets of parallel runways are oriented in southwest-northeast, east-west, and northwest-southeast directions, with the commuter/general aviation runway oriented in a north-south direction. The runways in each of the parallel sets are separated by at least 5,450 feet, allowing dual-independent instrument flight rule (IFR) approaches to each set. Runway 18/36, the north-south commuter/general aviation runway, was decommissioned on December 4, 2003 and converted to a taxiway.

The Sponsor's proposed airfield projects (i.e., Alternative C) include the realignment of three runways, and the construction of one new runway. For FAA purposes, realignment involves decommissioning of existing runways and construction of replacement runways. The four replacement runways include Runway 9L/27R, 9C/27C, 10C/28C, and 10R/28L. The three existing runways to be decommissioned include 18/36, 14L/32R and 14R/32L. In addition, two existing runways (Runway 9L/27R and 9R/27L), whose future designations would be 9R/27L and 10L/28R, respectively, would be extended. Further, existing Runways 4L/22R and 4R/22L would remain for additional operational flexibility. This airfield layout results in a total of eight runways, including six parallel runways in an east - west orientation and two crosswind runways.[2]

[2] The Federal Register description of the proposed airfield differs from the description herein. Although there is no change in the actual projects described, the FAA clarifies the term realignment of runways to include decommissioning and construction of replacement runways.



Chicago

O'Hare

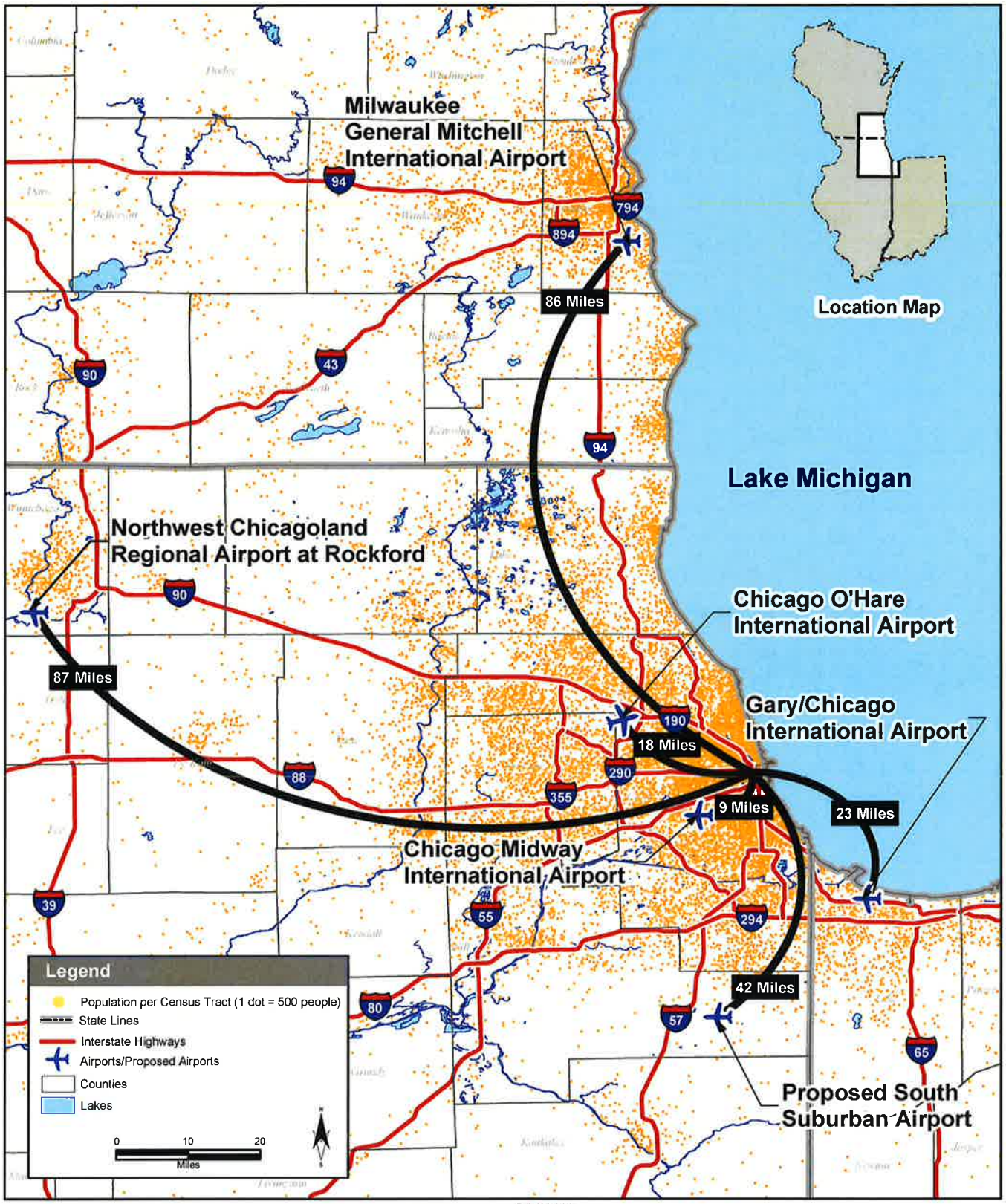
International

Airport

O'Hare Modernization Environmental Impact Statement

Proposed Future Airport Layout Plan

▶ **Exhibit 2**



Source: StreetMap USA 2000, ESRI Data and Maps "United States" CD #3, Census 2000 Tracts and Summary File 1

Chicago O'Hare International Airport

Modernization Program
Environmental Impact Statement

Regional Airports with Population Density & Interstate Network

▶ **Exhibit 3**

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3. PROPOSED FEDERAL ACTIONS AND APPROVALS

Section 1.1 of the Final EIS identifies the FAA actions to support the proposed development project. The necessary FAA actions, determinations, and approvals are summarized below.

- Approval of an Airport Layout Plan (ALP) depicting the proposed project (see **Exhibit 2** depicting the ALP and Section 5 of this ROD for a description of the proposed project),
- Determinations under 49 U.S.C. Sections 47106 and 47107 relating to eligibility of the proposed project for Federal funding under the Airport Improvement Program (AIP) and under 49 USC 40117, as implemented by 14 CFR 158.25(c), to impose and expend passenger facility charges (PFCs) for the proposed project,[3]
- Establishment of air traffic control and airspace management procedures designed to affect the safe and efficient movement of air traffic to and from the proposed runways as well as in the airspace surrounding the airport,
- Establishment of flight procedure modifications,
- Certifications as to the safety of instrumentation, procedures, airfield operations, and
- Installation and/or relocation of navigational aids associated with the proposed new and relocated runways.

In addition to these FAA actions, the U.S. Army Corps of Engineers is responsible for reaching a permit issuance decision for the proposed project under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, and associated determinations must be made by the IEPA as follows:

- Water quality certification under Section 401 of the Clean Water Act,
- National Pollutant Discharge Elimination System permit for storm-water and wastewater discharges into navigable waters under Section 402 of the Federal Water Pollution Control Act, 33 U.S.C. §1342.

4. FORECASTS

By definition, forecasts are projections of future estimated activity rather than goals or targets to be achieved. The FAA updates its forecasts annually using the most recent information available and the application of reasonable scientific, industry-accepted methodology. Although short-term forecasts (up to five years) may not exactly match actual experience from year to year, in most cases the differences are relatively small. Longer-term forecasts beyond a five-year period, however, are typically less certain due to the dynamic, fluid nature of aviation activities. This is especially true in today's aviation environment that is highly sensitive to even slight market shifts, competitive factors, national economic trends, and strategic decisions by

[3] Certain requirements for AIP funding overlap with environmental review requirements for approval of the ALP and so are addressed as part of the Final EIS and ROD for the ALP. These determinations are a prerequisite to funding but do not complete the determinations that are necessary for funding. The decisions to approve AIP and PFC funding are completed in separate processes.

airline management. For the EIS, the FAA utilized the published 2002 Terminal Area Forecast (TAF).[4] The FAA TAF represents the official FAA outlook for each airport and is the industry standard. An airport environmental impact statement typically uses the TAF or a specifically developed forecast for the individual airport by the airport sponsor. Where the sponsor's forecast is used, the FAA requires that forecast be consistent with the TAF for that airport.

For over 30 years, the FAA has developed an annual TAF consisting of projected traffic forecasts for all airports with air traffic control towers. The TAF is prepared by FAA staff using industry-standard methodology—including statistical analysis of historical trends, review of recent trends in airline service, and assumptions regarding future airline developments. The FAA relies upon these forecasts in defining its long-range spending and staffing needs. In addition, numerous Federal, state, and local government agencies use the TAF for various types of aviation planning tasks. As the TAF only projects total operations and enplanements within larger categories of aviation activity types, additional detailed information is needed concerning aircraft fleet mix, lengths of flights, day/night split of aircraft operations, and peak day and peak hour passengers and operations. For the EIS, more detailed information was developed for use in conducting the detailed environmental analysis. Specifically, the breakdown of the TAF projections into more specific categories was conducted using historical O'Hare data. The detailed forecast results and the assumptions used to develop them are included in Appendix B of the Final EIS.

In addition, the FAA's TAF does not always reflect existing facility constraints since the TAF assumes an unconstrained demand. Plans for major infrastructure development are based on forecasts of future demand, or in the case of O'Hare, immediate need. Nevertheless, such forecasts frequently change during the planning process. It is not possible or feasible to continually redirect the planning process in response to constantly evolving economic conditions. Rather, the planning process must be flexible enough to accommodate changing conditions.

The 2001 TAF was used by the City in formulating its Master Plan. The following year, the FAA decided that its EIS should utilize the FAA's 2002 TAF, the most recent demand forecast available when the technical analysis began. The FAA began the modeling analysis for the Draft EIS in October 2003 and released that document for public comment in January 2005. During that time new TAFs for 2003 and 2004 have been published, and their existence is noted in both the EIS and in response to comments. The FAA's EIS continues to rely upon the 2002 version of the TAF for three reasons: first, the FAA believes it represents an accurate depiction of aviation activity at the time this work began; second, no EIS on a project this massive could ever be completed if the agency had to start anew every year when a new TAF appeared; and third, the FAA has taken those more recent forecasts into account in the EIS. To address variations in forecasts and other unanticipated events, the FAA conducted an analysis contained within Appendix R of the EIS. Appendix R identifies and considers a range of potential alternate outcomes with regard to aviation activity at O'Hare that encompasses both

[4] Terminal Area Forecast Summary - Fiscal Years 2002-2020, FAA, April 2003.

the 2003 and 2004 TAF projections, and identifies the possible alternate environmental impacts that could occur under these conditions.

Table 1 is a summary of the 2002 FAA TAF for O'Hare, for the period from 2002 to 2018. As shown, total enplaned passengers are forecast to increase from 31,710,512 in 2002 to 50,372,000 in 2018, at an average annual rate of 2.9 percent. Also as shown, total aircraft operations are forecast to increase from 922,787 in 2002 to 1,194,000 in 2018, at an average annual rate of 1.5 percent.

CEQ Regulations implementing NEPA require that an EIS utilize a scope of analysis sufficient to adequately characterize foreseeable impacts (40 CFR 1508.25). In this regard, FAA EISs customarily utilize an impact horizon extending beyond the project completion year. Furthermore, CEQ guidance related to cumulative impact assessment requires use of an impact assessment horizon sufficient to represent the "reasonably foreseeable future." In recognition of the CEQ requirements, FAA Order 1050.1E, Appendix A, paragraph 14.4(g)(2) calls for a horizon of 5 to 10 years, post build out. In the case of this EIS, the "Build Out + 5" horizon appears to be a well justified representation of the reasonably foreseeable future since the project will take a lengthy time to complete, and the ability to predict future events declines over time. Additionally, FAA also notes that in previous discussions with USEPA involving the FAA's preparation of an EIS for a fourth runway at the Miami International Airport, USEPA and FAA agreed that utilization of a Build Out + 5 impact evaluation horizon would be an appropriate planning horizon for NEPA purposes. For this EIS, the FAA considered using a Build Out + 10 impact horizon that was tied to a TAF forecast extending that far into the future. However, the FAA determined to proceed with a planning horizon in this EIS as it had in Miami recognizing that TAF forecasts tend to be less and less accurate in the "out years," and concluding that NEPA's command of "reasonable foreseeability" dictated a more conservative approach. Thus, even though the FAA uses other horizons for other purposes, the Agency finds that the Build Out + 5 approach is the most responsible manner of resolving the question of an appropriate impact horizon (for NEPA and Section 106 purposes) in its O'Hare Modernization EIS. When the FAA informed USEPA, as part of the ongoing consultation between those agencies, that this EIS would adopt Build Out + 5 as the outermost year of analysis thereafter, the USEPA raised no objections. Indeed, in USEPA's comment on the Final EIS, it commended the FAA's EIS for a number of reasons including the adoption of a fifteen year planning horizon for environmental analysis. Finally, the USEPA also concurred that it had no problems or concerns regarding the use of a Build Out + 5 as the outermost year of environmental analysis within the context of the O'Hare Modernization EIS.[5]

[5] Email from Sherry Kampke, USEPA to Michael MacMullen, FAA, September 22, 2005.

TABLE 1
2002 TAF FOR O'HARE – CALENDAR YEARS (CY)

	CY 2002	CY 2003	CY 2007	CY 2009	CY 2013	CY 2018	AAGR(a) 2003-2018
Enplaned passengers	31,710,512	32,609,000	36,943,000	39,149,000	43,912,000	50,372,000	2.9%
Average annual change	n/a	2.8%	3.2%	2.9%	2.9%	2.8%	n/a
Aircraft Operations	922,787	960,500	1,026,300	1,057,200	1,120,600	1,194,000	1.5%
Average annual change	n/a	4.1%	1.7%	1.5%	1.5%	1.3%	n/a

Note: (a) AAGR – Average annual growth rate.
(b) n/a = not applicable.
Source: 2002 FAA Terminal Area Forecast, published in March 2003.

5. PURPOSE AND NEED

CEQ Regulations implementing NEPA require that the Federal agency preparing an EIS include in that document a statement identifying underlying purpose and need to which an agency is responding in proposing alternatives, including the proposed action (40 CFR §1502.13). Airport capacity improvements in this country, including those that have the potential to confer significant benefits upon the overall National Airspace System (NAS), are initiated by and remain as the ultimate responsibility of an individual airport sponsor. Nevertheless, in the fulfillment of its NEPA obligations for airport improvement proposals, the FAA makes its own determination of the purpose and need for the proposed action while also being particularly mindful of the sponsor's overall goals.

From a historic perspective, as nationwide air traffic has increased, traffic and attendant delays at O'Hare have increased as well. In response, the FAA has undertaken national and regional initiatives to address the need to increase capacity and reduce delay in the Chicago region and in the NAS. These initiatives[6] include:

- 1991 O'Hare Delay Task Force – co-chaired by the FAA and the City of Chicago;
- 2001 O'Hare Delay Task Force – also co-chaired by the FAA and the City of Chicago;
- National Airspace Redesign efforts in the Chicago terminal airspace;
- FAA's Operational Evolution Plan; and
- FAA's orders Limiting Scheduled Operations at O'Hare.

FAA Orders limiting scheduling at O'Hare were adopted on January 21, 2004, April 21, 2004, and August 18, 2004. In adopting the most recent Order, the Agency said that its action was not intended to evaluate or to prescribe any particular long-term avenue for increasing capacity and reducing delays at O'Hare. The FAA reserves the authority to take further interim action, if necessary, when the present Order expires. Independently of the scheduling reduction Order,

[6] Each of these initiatives is discussed in detail in Section 2.2 of the Final EIS.

the FAA noted that it is preparing the EIS evaluating the City of Chicago's proposal and reasonable alternatives for reducing delays and thereby enhancing capacity.

Subsequent to the issuance of the Draft EIS, on March 25, 2005, the FAA issued a Notice of Proposed Rulemaking (NPRM) to extend the limitation of flight schedules:

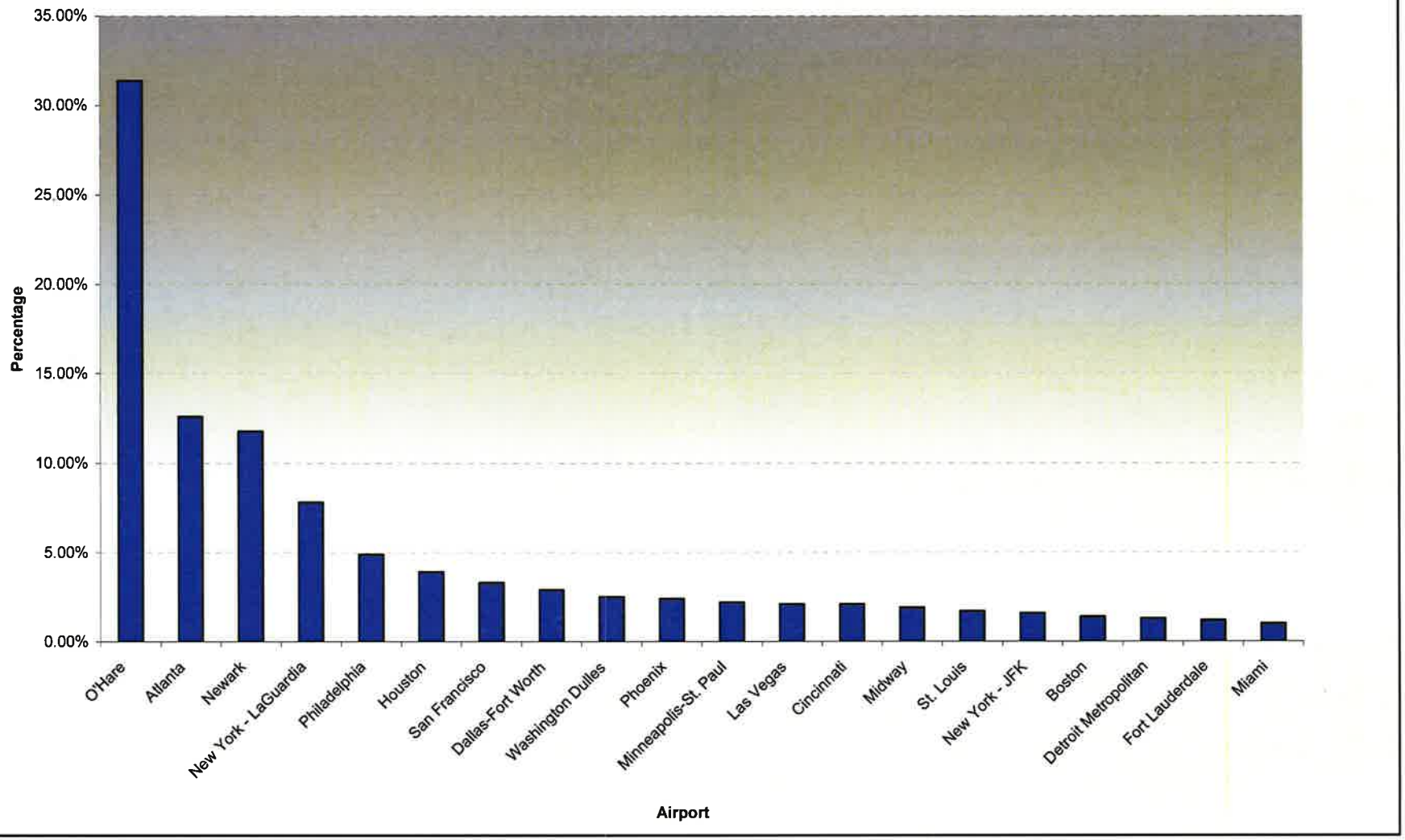
> The FAA is proposing this rule to address persistent flight delays related to over-scheduling at O'Hare International Airport (O'Hare). This proposed rule is intended as an interim measure, because the FAA anticipates that the rule would yield to longer term solutions to traffic congestion at the airport. Such solutions include an application by the City of Chicago that, if approved, would modernize the airport and reduce levels of delay, both in the medium term and long term. For this reason, the proposed rule includes provisions allowing for the limits it imposes to be gradually relaxed and in any event would sunset in 2008.

At the time of adoption of this ROD, the NPRM was still under consideration by the FAA.

It is not surprising that the FAA has devoted so much attention to events and issues at O'Hare. Continuing the role held by Midway Airport before Midway was eclipsed by the jet-age, O'Hare plays a vital role in the NAS by providing an extensive network of domestic and international air service to and from one of the nation's largest metropolitan areas, and also by serving as a central connecting point in the nation's air transportation network. O'Hare is uniquely suited to this role by virtue of its large local market, which is expected to increase in the future. This large local market, coupled with O'Hare's central location in the NAS, provides opportunities for connecting service to many destinations. Consequently, O'Hare has consistently ranked as one of the busiest airports in the United States. Under the current airport configuration, playing this role comes at the cost of high levels of aircraft delay. Continued growth in O'Hare traffic in the years ahead would have additional adverse impacts on the air transportation needs of the Chicago region and upon the efficiency of the NAS.

O'Hare is ranked as one of the most delayed–prone airports in the country. **Exhibit 4** shows that O'Hare's share of delays is at least twice those experienced by Atlanta or Newark, the next most delayed airports. Delays at O'Hare have a direct impact on the entire NAS, in part because approximately 51 percent of the total passengers traveling through O'Hare currently connect to and from other airports. Additionally, O'Hare affects the NAS because the airfield lacks adequate runway capacity or gate availability to handle both the current and forecast levels of activity. O'Hare operations also directly affect the networks of 47 domestic and international passenger airlines providing service to 127 domestic and 48 international airports. In light of the significant role that O'Hare plays for connecting traffic, this level of delay clearly impacts many other airports and propagates further delays and inefficiencies throughout the NAS.

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Source: FAA OPSNET; Crawford, Murphy and Tilly, Inc. [TPC], December 2004.

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The average annual all-weather (all conditions) delay per operation is a convenient way to describe airport efficiency because it is a single number. Using that single number can, however, obscure the impact that may occur when adverse weather requires instrument flight rules (IFR) operations. At most airports, good weather conditions that permit use of visual flight rules (VFR), occur a majority of the time. Because airlines typically schedule operations for the prevalent weather conditions, and are not able to modify schedules in response to varying weather conditions, aircraft delay is especially severe when the IFR capacity of an airport is substantially lower than its VFR capacity. As a result, total NAS aircraft delay is clearly influenced by IFR operations at key airports. When an airport is a major airline connecting hub or when the airport contains multiple hubbing operations, the adverse weather (IFR) delays at the airport affect the entire NAS.

At O'Hare, the adverse weather (IFR) arrival acceptance rate[7] does not meet the current arrival demand. This IFR acceptance rate is partially limited by the intersecting or converging nature of the existing runway system. While the overall average annual delays were modeled using the Total Airport and Airspace Modeller (TAAM) to be 9.3 minutes per operation in 2002, adverse weather (IFR) delays averaged about 50.1 minutes per operation.[8] In contrast, good weather (VFR) delays were modeled using TAAM and averaged about 7.1 minutes per operation.[9] This discrepancy between the airfield's good and adverse weather performance has a dramatic effect on the NAS.

To meet the needs of airlines, passengers, air cargo operators, and other Airport users, the capacity of terminal and support facilities should be in balance with the capacity of the airfield. Thus, this component of purpose and need simply reflects the FAA's recognition that any undertaking to enhance the airside capacity at an already congested location also needs additional non-airfield capacity, including terminals, gates, and associated infrastructure. The 21 gates and 5 hard stands in Terminal 5 today are the only nonexclusive gates at O'Hare. Consequently, new entrant carriers must either use these gates or sublease gates from an incumbent carrier. Gates at the other terminals (Terminals 1, 2, and 3) already average 7 to 11 turns per day, which is above the national industry average for gate utilization.

The market forces that have consistently made O'Hare one of the world's busiest and most congested airports are expected to continue. Both the current and forecast aviation demand in the Chicago market signal the need for immediate action to reduce congestion and delay at O'Hare. O'Hare has consistently been a major contributor to the problems related to delays within the NAS. The FAA has concluded, as explained in the EIS, that the projected needs of the Chicago region cannot be met without improvements at O'Hare. As discussed in Section 3.2.2.2 of the Final EIS, the FAA continues to respond to sponsor requests and support the development of other airports in the region, including Gary/Chicago International Airport, Greater Rockford Airport, Milwaukee General Mitchell International Airport, Chicago Midway International Airport, as well as the proposed South Suburban Airport. Although

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7 Acceptance rate is the number of operations a runway or runway system can handle in a one-hour period.
8 See Section 6.4 of this Record of Decision for further information on the TAAM modeling.
9 Ricondo and Associates, Inc. [CCT] Preliminary Draft TAAM Simulation Data for Noise and Air Quality Analysis – [Existing Airfield 2002], January 2004.

improvements at the region's airports would collectively enhance the efficiency of the NAS, O'Hare has consistently been the number one problem related to delays within the NAS in the United States today.

Accordingly, the proposed Federal action, which was the subject of the EIS, encompasses the following purposes:

- Address the projected needs of the Chicago region by reducing delays at O'Hare, and thereby enhancing capacity of the NAS.
- Ensure that existing and future terminal facilities and supporting infrastructure (access, landside, and related ancillary facilities) can efficiently accommodate airport users.

6. ALTERNATIVES ANALYSIS

The FAA conducted its analysis of alternatives and has applied the relevant environmental statutes mindful of its statutory objectives. As generally noted in Sections 3.3.1.4 and 3.7 of the Final EIS, the FAA has a statutory charter to encourage the development of civil aeronautics and safety of air commerce in the United States (49 U.S.C. §40104). Congress has also declared as a matter of policy that the FAA should undertake airport construction and improvement projects that increase the capacity of facilities to accommodate passenger and cargo traffic to the maximum feasible extent so that safety and efficiency increase and delays decrease [49 U.S.C. §47101(a)(7)].

While the FAA does not have the authority to control or direct the actions and decisions of the City of Chicago relative to planning for this project, the FAA does have the authority to withhold project approval, including determinations required to establish eligibility for Federal funding and the other Federal actions discussed in this ROD. It was from this perspective that the various alternatives were considered in terms of evaluating and comparing their impacts to that proposed by the City of Chicago, or whether Chicago's proposal would cause impacts warranting disapproval of the Federal actions discussed in this ROD, including eligibility for Federal funding.

As summarized here and discussed in more detail in the Final EIS, the FAA evaluated a broad range of alternatives including non-airfield and O'Hare development alternatives to meet the purpose and needs set forth in Chapter 2 of the Final EIS. Because of the magnitude and complexity of the project and its national implications, the FAA conducted both initial and secondary screening to ensure that a reasonable range of alternatives would be studied in detail.

The initial screening assessed whether 15 potential alternatives met the purpose and need as stated in the EIS. Thereafter, secondary screening examined the feasibility and prudence of alternatives that met the initial screening criteria as well as a "blended" alternative created after initial screening.

The types of alternatives considered in the EIS included the following:

- No Action (i.e. Alternative A),
- Other modes of travel or communication,

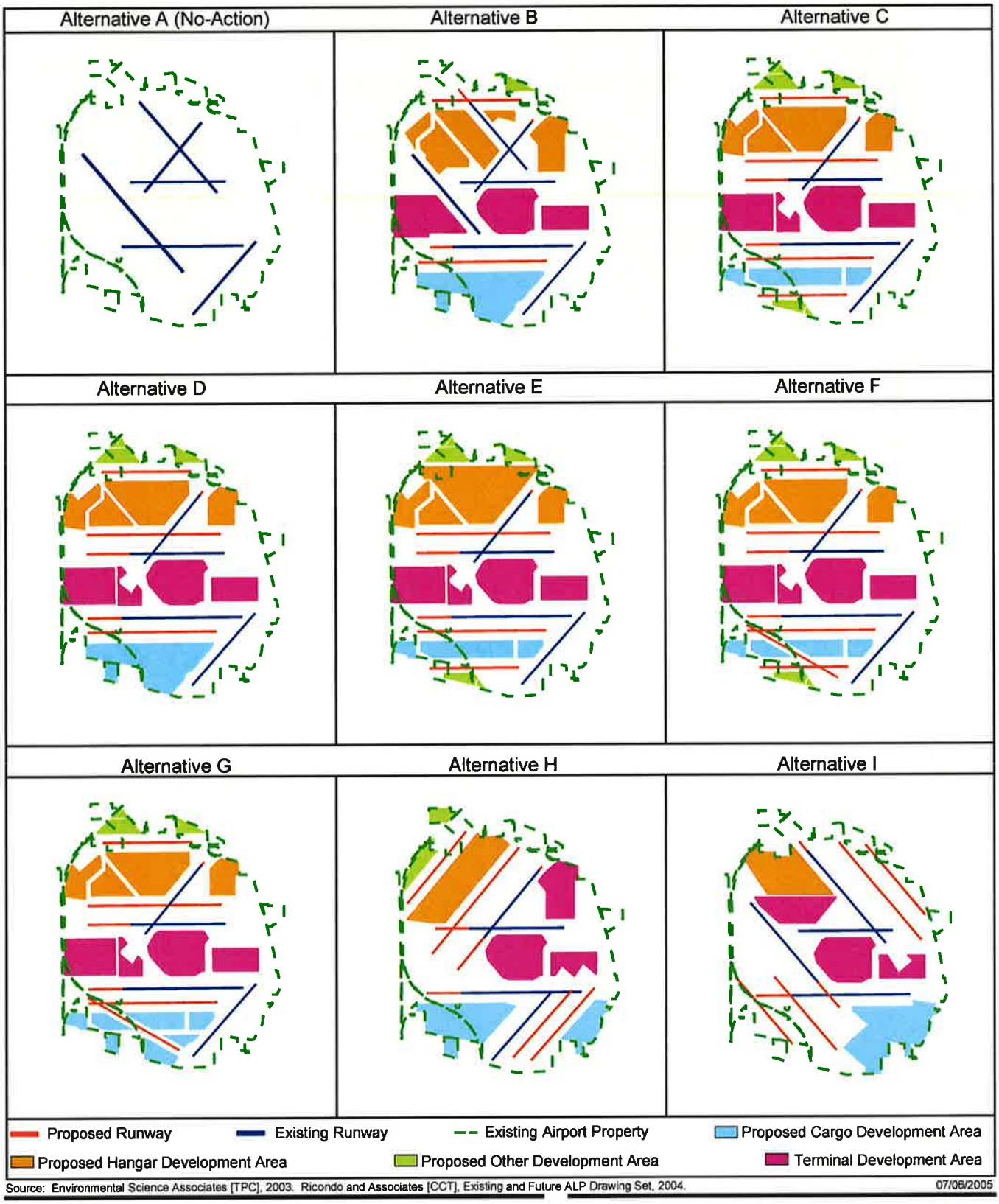
- Use of other airports, including regional airports and other mid-continent airports,
- Congestion management,
- Airspace improvements,
- New air traffic control and navigation technologies,
- Eight different O'Hare Development Alternatives, and
- A Blended Alternative combining component parts of other alternatives with limited airfield development (created after initial screening for consideration in secondary screening).

6.1 Initial Screening

In its initial screening of alternatives, the FAA evaluated the potential of each alternative to satisfy each component of the purpose and need of the proposed action. A total of 15 alternatives were considered, consisting of: the No Action Alternative, eight O'Hare Development alternatives (shown in **Exhibit 5**), and six Non-Airfield alternatives. For example, the Agency carefully assessed the potential of other airports, including Rockford, Gary/Chicago, Milwaukee, and the proposed South Suburban, as well as other mid-continent airports, to determine whether expanded use of those facilities was likely to alleviate present and future delay at O'Hare. In addition, expanded use of these airports was also considered in conjunction with certain non-airfield alternatives.

At the conclusion of the initial screening process five O'Hare Development Alternatives (Alternatives C, D, E, F and G) plus the No Action Alternative (Alternative A) remained (see **Table 3**). These alternatives were carried forward for secondary screening, see Section 3.2 of the EIS.

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Source: Environmental Science Associates [TPC], 2003. Ricondo and Associates [CCT], Existing and Future ALP Drawing Set, 2004. 07/06/2005

Chicago O'Hare International Airport

O'Hare Build Alternatives Key

O'Hare Modernization Environmental Impact Statement

▶ Exhibit 5

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In the following subsections, the FAA includes detail regarding its careful consideration of the use of other airports, including both regional and other mid-continent hubs, as well as the use of congestion management would not meet the initial screening criteria.

6.1.1 Use of Other Regional Airports

There are a number of other regional airports that could accommodate additional commercial passenger service: Chicago Midway International, Gary/Chicago International, Greater Rockford Airport, Milwaukee General Mitchell International, and the proposed South Suburban Airport. O'Hare's location, along with other regional airports, is shown in **Exhibit 3**, with the population density surrounding each of these airports. The use of these regional airports could potentially relieve demand at O'Hare and reduce the urgency or need for certain airport improvements. Appendix C, Section C.1.2, of the Final EIS includes a brief overview of existing regional airports and the status of planning initiatives underway for the proposed South Suburban Airport.

Based upon the analysis presented in the Final EIS, Appendix C, Section C.1.2, forecast aircraft operations at both Midway and Milwaukee are anticipated to exceed their practical airfield capacity by 2018 unless capacity-enhancing improvements are undertaken.[10] While Rockford and Gary/Chicago each have capacity that could be available to support future commercial activity, these facilities presently have surplus capacity and to date have had little to no impact on commercial activities at O'Hare. Additionally, the South Suburban Airport could provide additional capacity if built.

Appendix C, Section C.1.1, of the Final EIS presents information on multiple-airport regions throughout the nation and provides an analysis for development of airline service at other regional airports, which could reduce the need to accommodate forecast aviation demand at O'Hare. In evaluating the use of other airports as an alternative to enhancing capacity at O'Hare, it is helpful to consider how multiple airport systems have evolved in the nation. There are many regional aviation markets throughout the nation that support multiple commercial passenger airports. In 2002, 10 of the 15 largest air travel markets in the United States were served by more than one airport and seven (7) were served by three (3) or more secondary airports. Exhibits 3-2 through Exhibit 3-6 of the Final EIS depict the top five market areas in the United States, showing the population densities and each of the airports serving these market areas. Multiple airport systems can be reasonably expected to share in the service of local originating passenger demand. In terms of local originating passengers, as of 2002, the Chicago area was the third largest air travel market in the nation, following New York and Los Angeles.

Currently in the Chicago market, O'Hare International, Midway International, and General Mitchell International Airport in Milwaukee, each accommodate at least 10 percent of regional demand. There is no current example in the United States for a region to be served by more than three airports each with a significant (10 percent or greater) market share. From this data,

[10] MKE is in the process of updating its Airport Master Plan, which will address the type and extent of facilities required to meet future demand. The implementation of planned improvements could substantially increase the airport's capacity.

it is not reasonable to conclude that the Chicago area could be served by more than three airports, with each having 10 percent or more of the regional demand.

Additional conclusions from this analysis are: (1) it is possible that the capacity at other existing and potential regional airports could be used to satisfy some of the local origin-destination passenger demand forecast for O'Hare, (2) it is not likely that any of the other regional airports would be used as a significant connecting hub or international gateway during the forecast period, (3) the continued role of O'Hare as a major national connecting hub and international gateway is dependent on the airline service of local origin-destination demand at O'Hare, so there is a limit to the amount of local demand that could be diverted while still maintaining the roles of O'Hare as a hub and gateway, (4) the practical limit of potential diversion of demand from O'Hare is estimated to be far less than the likely availability of capacity at other regional airports, and (5) any material diversion of demand from O'Hare would require airline strategic decisions which cannot be predicted or relied upon. As a result, it was determined that the use of other regional airports would not, by itself, be sufficient to satisfy purpose and need. Although the use of other regional airports would not be sufficient to satisfy purpose and need, the FAA continues to respond to sponsor requests and support the development of other airports in the region, including Gary/Chicago International Airport, Greater Rockford Airport, Milwaukee General Mitchell International Airport, Chicago Midway International Airport, as well as the proposed South Suburban Airport.

6.1.2 Use of Other Mid-Continent Hubs

Other mid-continent airports could potentially be used to accommodate connecting passengers forecast for O'Hare. Significant reductions in connecting passenger traffic at O'Hare would likely reduce the level of air service for local passengers at O'Hare. The current connecting hub operations at O'Hare enable a range and frequency of service that is convenient for local passengers. With connecting passengers available to "fill" the airplanes, airlines can provide a greater offering of nonstop service to multiple destinations than would otherwise be the case. If connecting passengers were diverted to other hubs, it is likely that there would be a reduction in the frequency and range of nonstop service. This reduction in the frequency and range of service would likely be most pronounced for smaller domestic markets and for international markets, which rely significantly on connecting passenger flows. This would result in diminished service to local Chicago passengers.

Over time, as bilateral agreements for international air service have been liberalized to more closely resemble the domestic deregulated environment, international service is an increasingly important component of air service at O'Hare. International traffic at O'Hare has grown at a faster rate than domestic traffic. As shown on **Table 2,** O'Hare is currently one of the top five international gateway airports in the nation.

TABLE 2
TOP 20 US AIRPORTS – INTERNATIONAL ENPLANEMENTS

	ACI International Enplanements – CY 2002		
Rank	Airport	International Enplanements – CY 2002	(Rounded)
1	John F. Kennedy International	7,605,216	7,605,000
2	Los Angeles International	7,435,442	7,435,000
3	Miami International	7,170,124	7,170,000
4	O'Hare International	4,358,579	4,359,000
5	San Francisco International	3,650,692	3,651,000
6	Newark Liberty International	3,546,775	3,547,000
7	Hartsfield-Jackson Atlanta International	2,863,505	2,864,000
8	Houston-Intercontinental	2,855,102	2,855,000
9	Dallas/Fort Worth International	2,241,281	2,241,000
10	Honolulu International	2,125,931	2,126,000
11	Washington-Dulles	2,017,724	2,018,000
12	Boston-Logan	1,811,884	1,812,000
13	Philadelphia International	1,594,735	1,595,000
14	Detroit Metropolitan	1,340,945	1,341,000
15	Orlando International	772,182	772,000
16	Minneapolis-Saint Paul International	741,123	741,000
17	Seattle-Tacoma International	703,516	704,000
18	Fort Lauderdale - Hollywood International	602,777	603,000
19	Phoenix Sky Harbor International	601,550	602,000
20	Charlotte Douglas International	516,843	517,000

Source: Airports Council International, December 2004.

Because the Chicago region is such a strong origin and destination market, it is likely to remain as a primary hub, essential to the operations of each of the hubbing carriers. Therefore, when combined with the presence of both domestic and international connecting traffic, it is unreasonable to expect a significant shift in traffic to other mid-continent airports.

Furthermore, neither the FAA nor the City of Chicago can direct how airlines conduct their network operations.[11] Consequently, implementation of this alternative would require new authority to provide control over airline service patterns at O'Hare and possibly other airports, which is (1) in direct conflict with the deregulation of the airline industry that occurred in 1978 and (2) beyond the capability of the FAA.

Particularly in light of the recent business decision by American Airlines to downsize their St. Louis hub operations in favor of expanded hub operations at O'Hare, FAA believes it is not reasonable to expect (1) one or both hubbing carriers to voluntarily shift enough connecting traffic to one or more alternative mid-continent airports to avoid the need for improvements at O'Hare or (2) that the Federal government would mandate such a shift. Therefore, the use of other mid-continent hub airports alternative does not meet the purpose and need.

[11] Suburban O'Hare Commission v. Dole, 787 F.2d 186,192 (7th Cir. 1986) and Citizens Against Burlington, 938 F.2d 190 (D.C. Cir. 1991).

6.1.3 Congestion Management

The FAA evaluated congestion management, including both administrative- and market-based options, as an alternative to meet the purpose and need. To address the purpose and need, congestion management measures would need to be designed to enable O'Hare and/or other airports to accommodate all forecast originating and connecting passenger activity.

With respect to the administrative options available to implement the congestion management concept, as explained in Section 2.2.4 of the Final EIS, the FAA issued a Notice of Proposed Rulemaking (NPRM) on March 25, 2005, to extend the limitation of flight schedules as a temporary congestion management measure.[12] The NPRM makes clear, however, that the use of arrival caps as a method of reducing flight delays is not preferable to the long-term goal of increasing airport capacity through infrastructure enhancements. This same point has also been made by the two hubbing carriers, American and United Airlines.[13] Even if this were to occur, congestion management is not an effective tool to address the future needs of the Chicago region.

The NPRM specifically stated:

> The FAA is proposing this rule to address persistent flight delays related to over-scheduling at O'Hare International Airport (O'Hare). This proposed rule is intended as an interim measure, because the FAA anticipates that the rule would yield to longer term solutions to traffic congestion at the airport. Such solutions include an application by the City of Chicago that, if approved, would modernize the airport and reduce levels of delay, both in the medium term and long term. For this reason, the proposed rule includes provisions allowing for the limits it imposes to be gradually relaxed and in any event would sunset in 2008.

As noted above, the NPRM makes clear, however, that the use of arrival caps as a method of reducing flight delays is not preferable to the long term goal of increasing airport capacity through infrastructure enhancements. As stated:

> Although arrival caps are being proposed in this rule, imposing caps on the use of airport capacity does not meet aviation demand; rather, such caps artificially limit operations during certain hours to achieve the benefit of delay reduction. The FAA's preferred approach to reducing delay and congestion is to increase airport infrastructure so that capacity meets demand. Because a timely increase to airport capacity is not always feasible, alternative measures may be necessary to address congestion that adversely affects the efficiency of the national airspace system.

Further, the FAA has stated earlier in the Final EIS for the Runway 17-35 Extension Project at Philadelphia,

> As a matter of policy, [the Office of the Secretary of Transportation] and FAA disfavor administrative approaches to demand management as an artificial constraint on the demand for air transportation. For example, such approaches bar air carriers from offering air travelers as much service as they would like. Administrative approaches should only be employed where

[12] Notice of Proposed Rulemaking: Congestion, Delay Reduction and Operating Limitations at Chicago O'Hare International Airport, Federal Register, Vol. 70, No. 57, Friday March 25, 2005.

[13] United Airlines and American Airlines comments on the NPRM can be found in Appendix A, Attachments A-7 and A-8 of the Final EIS.

> absolutely necessary and as an interim, stop-gap measure, until an acceptable solution to delay can be implemented.[14]

Title 49 U.S.C. §47101(a)(9) provides that as a matter of congressional policy, artificial restrictions on airport capacity are not in the public interest and should be imposed by the FAA to alleviate air traffic delays only after other reasonably available and less burdensome alternatives have been tried. Accordingly, it remains the FAA's position that administrative rules that cap operations may be suitable interim actions where improvements are physically impractical, or not yet implemented.

With respect to market-based approaches to congestion management, Appendix E, Section E.1.2.3 of the EIS, presents an analysis of alternatives and their applicability to O'Hare. The conclusions of this analysis are: (1) there is virtually no potential to accommodate unconstrained demand at O'Hare through peak-spreading, (2) there is likely to be potential to provide incentives for the use of larger aircraft and thereby accommodate more passenger demand with fewer aircraft operations, although this is limited by the current and projected fleet composition of airlines, and (3) congestion management alone is not likely to result in accommodation of unconstrained passenger demand without other improvements or actions. Thus, this alternative would not, by itself, meet purpose and need.

6.2 Secondary Screening

The secondary screening criteria were drawn from the applicable environmental statutes and regulations that are used in this section to evaluate the alternatives retained as a result of the initial screening process. For example, several criteria are found in FAA Order 5050.4A *(Paragraph 83b)*. In pertinent part that Order provides:

> [These acts] require a finding that "no feasible and prudent alternative" exists. The terms "feasible" and "prudent" are separate criteria and refer to sound engineering principles and sound judgment, respectively. A construction alternative, for example, may be feasible if, as a matter of sound engineering principles, it can be built. It may not be prudent, however, because of safety, policy, environmental, social, or economic consequences. As outlined in FAA Order 5050.4A, the environmental documentation must show that no feasible and prudent alternative exists when all factors (safety, national policy, efficiency, economic, social, and environmental) are considered.

The FAA applied the secondary criteria with the following in mind:

- Pursuant to NEPA, the FAA must take a "hard look" at all "reasonable" alternatives, which involves a study of those alternatives "that are practical or feasible from the technical and economic standpoint and using common sense."
- Because the proposed action involves the application for a permit from the U.S. Army Corps of Engineers to fill waters of the U.S., issuance of the 401 Water Quality Certification from the IEPA, and required FAA findings regarding wetlands and floodplains, the FAA must also comply with the alternative analysis of the Clean Water Act, requiring a finding that no practicable alternative exists that would avoid or further minimize impacts to the resources at issue.

[14] Philadelphia Final Environmental Impact Statement, Chapter 3, page 3-22, February 18, 2005.

- Further, the proposed action implicates Section 4(f) of Department of Transportation Act and Section 6(f) of the Land and Water Conservation Act (See Appendix L of the Final EIS) because there is proposed use of properties protected by those statutes, including historic properties.
- As a result, the FAA must conduct alternatives analyses as required by those statutes.

The Council on Environmental Quality (CEQ) and the FAA's environmental policies and procedures require the EIS to serve as the platform for satisfying not only NEPA, but all these other environmental statutes as well. Because the concepts of reasonableness, practicability, and prudence are so similar, the FAA chose not to conduct separate sets of analyses for these retained alternatives under each of the statutes identified above. Instead, the Agency integrated these three similar concepts into one consolidated, common-sense, secondary screening process.

By definition, each of the retained alternatives appeared feasible as a matter of sound engineering principles, capable of being implemented, and operated safely. The examination of whether the retained alternatives were "reasonable" in the secondary screening analysis involved issues of practicality and prudence. This examination also involved measuring alternatives against the purpose and need for the proposed action. Accordingly, the retained alternatives were evaluated relative to one another with respect to environmental, social, efficiency, economic, and national policy factors. At the conclusion of the secondary screening process three alternatives (Alternatives C, D, and G) plus the No Action Alternative (Alternative A) remained. **Table 3** provides a summary of the findings of the secondary screening process. For more information on FAA's careful consideration of each of these alternatives, including the basis of the conclusions reached in secondary screening, see Section 3.3.2 of the EIS.

In the following subsection, the FAA describes why the Blended Alternative, which included the use of other regional airports, as well as the use of congestion management, would not meet the secondary screening criteria.

Blended Alternative

Following initial screening, the FAA created a Blended Alternative combining use of the non-airfield alternatives (including use of other airports, congestion management, other modes of transportation, airspace improvements, and new technology) with less extensive development (Alternative B). The FAA examined the possibility that this Blended Alternative might meet the purpose and need for the proposed action.

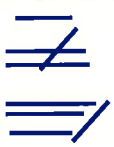
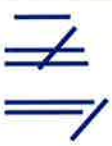
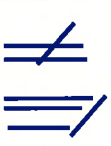
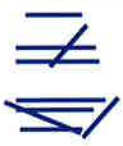
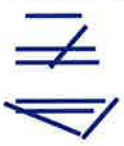
The Blended Alternative would have environmental impacts that are substantially equal to other alternatives and as noted previously appears to be feasible from an engineering standpoint. Based on professional judgment, the Blended Alternative would perform worst, in terms of delay reduction, of all the alternatives considered in secondary screening. Therefore, in terms of delay costs, this alternative would yield the least dollar savings to passengers and airlines.

The Blended Alternative consists of several speculative technological, and infrastructure developments that are combined with a fundamental restructuring of current marketplace management of aviation demand. While it is conceivable that this series of events could occur

and adequately address the needs for this project, there are many hurdles that must be overcome including the fact that most are not within the control of the FAA to implement. These hurdles were independently discussed in the initial screening of each of the components used in the Blended Alternative in Section 3.1.2 of the EIS.

The Blended Alternative only has the potential to meet the purpose and need requirements if each of the identified components is implemented and achieves optimal performance. The implementation of the many components lies with multiple entities, and each of those entities must address numerous secondary effects in implementing each of the components. These secondary effects include cost, difficulty in coordinating multiple entities, unwillingness of public to accept congestion management, uncertainty of federal policy changes relative to congestion management, uncertainty in development and acceptance of new technology, etc. There is such little margin of error in the Blended Alternative that an adverse secondary effect, and/or a failure to achieve optimal implementation, in just one of the components could completely undermine this alternative. It is unreasonable to expect so many unproven technologies and concepts that are overseen by a disparate range of entities to perfectly come together and represent a prudent alternative. Therefore, as described in Section 3.3.2.6 of the EIS, further consideration of the Blended Alternative was not prudent or reasonable, and it was eliminated from further consideration.

TABLE 3
SUMMARY OF SECONDARY SCREENING

Alternative	C Sponsor's Proposal	D	E	F	G	Blended Alternative
Runway Layout for Each Alternative						
1. ENVIRONMENTAL- Identify clearly superior and/or inferior alternatives with respect to environmental factors.						
No alternative is clearly inferior or superior with respect to environmental factors. Therefore, no alternatives were eliminated on the basis of environmental factors.						
2. OPERATIONAL EFFICIENCY - Identify clearly superior and/or inferior alternatives with respect to operational efficiency.						
Delay Reduction						
3. ECONOMIC - Identify clearly superior and/or inferior alternatives with respect to economic factors.						
A. Delay Costs						
B. Local Tax Base						
C. Development Costs						
4. NATIONAL POLICY - Identify clearly superior and/or inferior alternatives with respect to implementation factors.						
Implementation Factors						
5. CONCLUSION						
Retain for Detailed Evaluation	YES	YES	NO	NO	YES	NO

Legend:



Alternative is better than other alternatives in the specific category.

Alternative is between other alternatives in the specific category.

Alternative is worse than other alternatives in the specific category.

6.3 Description of Alternatives Retained for Detailed Consideration

Each of the alternatives which were retained for detailed consideration in Chapter 5 of the EIS following the secondary screening process are described in the subsections below.

Alternative A (The No Action Alternative) - In accordance with CEQ Regulations, Section 1502.14, the No Action Alternative was retained for detailed consideration. Under Alternative A, the FAA assumed some limited development at O'Hare would continue without the proposed action. For purposes of defining the No Action Alternative, improvements which would be reasonably foreseeable without the O'Hare Modernization and which would not require additional FAA reviews or approvals pursuant to NEPA are included in the No Action Alternative.

Major improvement projects included as part of Alternative A are described in Appendix E, Section E.6.1 of the EIS. Most Alternative A improvements are intended to replace and/or rehabilitate airport infrastructure to maintain operations throughout the planning period. However, a few of the projects associated with Alternative A would enhance the operational capabilities of the existing airfield.

The airfield layout consists of three pairs of parallel runways (e.g., six total runways) oriented in the 9/27, 14/32, and 4/22 directions. The lengths and widths of these runways are provided in Table 3-6 of the EIS, and are identical to the existing runway lengths and widths. The airport's terminal facilities would remain in their existing locations. The terminal complex would consist of the Airport's existing gates, which are distributed among four terminals. Customs and immigration services facilities to process passengers arriving from abroad would remain located in Terminal 5, requiring all international arrivals to disembark their passengers at Terminal 5.

Ground access to the terminal complex would remain and would be provided via the existing I-190 corridor. Ground access to other major airport development areas—including the cargo complex on the south side of the airfield, the general aviation and air cargo facilities located on the former Air Force site on the northeast corner of the airfield, and airline maintenance complex located on the northwest corner of the airfield—would remain the same as it is today.

Aside from committed airfield and support facility improvements on and around the former Air Force facility, aviation support, air cargo, and general aviation facilities would remain in their current locations without substantial modification or expansion.

Based on the Total Airspace and Airport Modeller (TAAM) simulation results, Alternative A would neither reduce existing delays nor accommodate anticipated growth in aviation activity at the Airport at acceptable levels of delay.

Alternative C - This airfield reconfiguration would result in two sets of parallel runways. The first set would consist of six parallel runways in the 9/27 orientation, and the second set would consist of two parallel runways in the 4/22 orientation. Runways 14L/32R and 14R/32L would be decommissioned. The airfield layout of Alternative C can be seen in **Exhibit 1** in Section 2 of this ROD. Alternative C was the FAA's Preferred Alternative in the Final EIS, and the O'Hare Modernization Program proposed by the City of Chicago. Alternative C is the Selected Alternative in this ROD.

Existing Runway 9L/27R would be renamed Runway 9R/27L, and existing Runway 9R/27L would be renamed Runway 10L/28R. Both of these existing runways would be extended. Existing Runway 9L/27R/future Runway 9R/27L would be extended from 7,967 feet to 11,260 feet, and existing Runway 9R/27L/future Runway 10L/28R would be extended from 10,144 feet to 13,000 feet.

The existing airport terminal complex would be expanded with the construction of Terminals 4 and 6, and the expansion of Concourse K. In addition, a new 60-gate terminal complex—including both landside and airside facilities—would be constructed on the west side of the airfield. This new west terminal would be supported by its own access roadway system, parking facilities, and passenger processing facilities. The west terminal would be connected to

the existing terminal complex via an underground people mover system that would permit ticketed, screened passengers to travel between the new west terminal and Terminal 1. The new west terminal would incorporate its own U.S. Customs and Immigration Services facilities to process international travelers.

Land areas would be reserved for the expansion of airline support, airport support, and air cargo facilities. In addition, facilities for new storm water detention, wastewater treatment, and utilities would be provided. To accommodate new runways and supporting development, the City of Chicago would acquire approximately 135.8 acres of land northwest of the existing Airport boundary and approximately 304.2 acres of land to the southwest of the Airport.

Based on TAAM simulation results, average annual delay in 2018 is estimated at 5.8 minutes per operation for Alternative C. The delay reduction achieved by Alternative C is greater than the delay reduction of Alternatives A, D and G. A detailed description of the operational and delay characteristics of Alternative C is provided in Appendix E, Section E.6.2 of the EIS, Alternative C.

Alternative D – As presented on Exhibit 3-4 of the EIS, the current six-runway airfield at the Airport would be reconfigured in accordance with the O'Hare Modernization Program proposed by the City of Chicago with the exception that the 7,500-foot long Runway 10R/28L would not be constructed. Ultimately, this airfield reconfiguration effort would result in two sets of parallel runways. The first set would consist of five parallel runways in the 9/27 orientation, whereas the second set would consist of two parallel runways in the 4/22 orientation. The existing 14/32 parallel runway system, consisting of Runways 14L/32R and 14R/32L would be decommissioned. A basic diagram of the Alternative D airfield can be seen in **Table 3** in the previous section. For Alternative D, the terminal and landside improvements would be the same as Alternative C.

Based on TAAM simulation results, average annual delay in 2018 is estimated at 10.5 minutes per operation for Alternative D. The delay reduction achieved by Alternative D is less than the delay reduction of Alternatives C and G but significantly more than that of Alternative A. A detailed description of the operational and delay characteristics of Alternative D is provided in Appendix E, Section E.6.3, of the EIS.

Alternative G - As presented on Exhibit 3-5 of the EIS, the current six-runway airfield at the Airport would be reconfigured in accordance with the O'Hare Modernization Program proposed by the City of Chicago with the exception that the 7,500-foot long Runway 10R/28L would not be constructed. In place of this distant south parallel runway, a 9,946-foot long runway would be constructed on the southwest quadrant of the airfield with a 12/30 orientation. Ultimately, this airfield reconfiguration effort would result in two sets of parallel runways plus new Runway 12/30. The first set would consist of five parallel runways in the 9/27 orientation, whereas the second set would consist of two parallel runways in the 4/22 orientation. The existing 14/32 parallel runway system, consisting of Runways 14L/32R and 14R/32L would be decommissioned. A basic diagram of the Alternative G airfield can be seen in **Table 3** in the previous section. For Alternative G, the terminal and landside improvements would be the same as Alternative C.

Based on TAAM simulation results, under Alternative G, average annual delay in 2018 is estimated at 6.9 minutes per operation. The delay reduction achieved by Alternative G is significantly greater than the delay reduction of Alternatives A and D but less than that of Alternative C. A detailed description of the operational and delay characteristics of Alternative G is provided in Appendix E, Section E.6.4, of the EIS.

6.4 Simulation Modeling of Alternatives A, C, D and G

As a foundation for the majority of analysis work to be accomplished under the EIS process, FAA employed state-of-the-art computer simulation modeling tools and methodology. Based on the forecast, computer simulation allows the FAA to evaluate multiple airspace, airfield, and operational scenarios in a variety of contexts and assess how each would perform. Based on forecast flight schedules, this model takes each aircraft traveling to and from O'Hare through its hypothetical trip in conjunction with all other aircraft in the region's airspace arriving at or departing from O'Hare and aircraft movement on the airfield. In other words, this model simulates flights using O'Hare from departure at another airport to when the engines are turned off at the gate at O'Hare. Then the model calculates the appropriate time between flights at that gate and provides a departure time based upon both ground traffic at O'Hare and other aircraft demanding the same airspace. This simulation modeling, utilizing the commercially-available TAAM software, provided insight into the operational capabilities of the airfield alternatives being studied, and provided a basis for assessment of environmental consequences associated with each alternative as well as the operational performance.

An unprecedented series of TAAM simulation analyses were conducted by the City of Chicago's Consultant Team (CCT) with direction, oversight, review, and approval by the FAA and FAA's Third Party Contractor (TPC). TAAM simulation experiments were conducted for the No Action Alternative and Build Alternatives C, D, and G. The purpose of this effort was to provide insight as to how the various airfield alternatives performed when compared to one another. In addition, the model outputs provide input data to the noise and air quality assessment models.

The FAA and TPC participated in an intensive, nine month review process during this simulation effort. The objective of this process was to ensure that TAAM input assumptions, modeling methodologies, and output data conformed to industry best modeling practices and accurately reflected air traffic control rules and procedures. In total, the FAA invested over 2,000 hours reviewing assumptions, draft results, animations, and final results. The FAA review was conducted by an Air Traffic Work Group consisting of: FAA Management and National Air Traffic Controller Association (NATCA) representatives from O'Hare Tower, the Chicago Terminal Radar Approach Control Facility (TRACON), and the Chicago Center (ZAU); FAA Airports Division; and the FAA's TPC.

6.5 Evaluation of Commenter and FAA-developed Derivatives

In the course of reviewing comments on the Draft EIS, FAA was presented with suggestions and requests regarding the alternatives presented in the Draft EIS that could be considered for the purpose of avoiding or mitigating impacts. These impacts primarily dealt with the acquisition of property associated with proposed Build Alternatives.

Commenter Derivatives

Although in many cases these suggestions or requests have been described by commenters as "new alternatives", FAA reviewed these proposals and believes that they are properly characterized as "variants" or "derivatives" to the alternatives that were presented in the Draft EIS. A document titled "The Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," in the Federal Register on March 23, 1981, Question 29b specifically deals with the issue of how an agency must respond to a comment raised on the Draft EIS concerning a specific alternative or alternative(s) not previously considered. Below are two scenarios discussed in this document which supports the agency's approach to the further evaluation of "variants" or "derivatives."

> A second possibility is that an agency may receive a comment indicating that a particular alternative, while reasonable, should be modified somewhat, for example, to achieve certain mitigation benefits, or for other reasons. If the modification is reasonable, the agency should include a discussion of it in the final EIS....
>
> A third slightly different possibility is that a comment on a draft EIS will raise an alternative which is a minor variation of one of the alternatives discussed in the draft EIS, but this variation was not given any consideration by the agency. In such a case, the agency should develop and evaluate the new alternative, if it is reasonable, in the final EIS. If it is qualitatively within the spectrum of alternatives that were discussed in the draft, a supplemental draft will not be needed....

The commenter's derivative alternatives can be categorized as derivatives of the "No Build" or "Limited Build" alternatives. Derivative alternatives were submitted to the FAA that included variations of the no build or limited build alternatives. The commenter's derivatives are discussed in Section 3.6 of the Final EIS and in this ROD at Section 11.1.2. In large measure, these suggestions and requests shared two common characteristics. First, they retained the existing runway triangle on the north side of the airfield, and second, they adopted key portions of the FAA's proposed runway geometry on the airfield's south side, as presented in Alternatives C and D. Accordingly, the FAA was able to rely upon its extensive experience in air traffic control at O'Hare, as well as the detailed TAAM modeling conducted for the EIS secondary screening to assess the potential effectiveness of these proposals.

FAA representatives evaluated these eight derivatives relative to the purpose and need. Based on its evaluation, FAA determined that none of the commenter derivatives meet purpose and need, therefore, these derivatives did not warrant further consideration.

FAA Developed-Derivatives

As a result of comments made on the Draft EIS, the Agency directed its staff to develop derivatives of Alternative C, the preferred alternative, that would avoid or minimize potential impacts to St. Johannes Cemetery. These derivatives included among others, the elimination, relocation, or shortening of proposed Runway 10C/28C, which under Alternative C (and other alternatives retained for secondary screening) would pass directly over St. Johannes Cemetery. FAA representatives from within the Great Lakes Region (Airports, Air Traffic, Chicago Area Modernization Program Office, Third Party Contractor, and Runway Safety Officer) evaluated the FAA-developed five derivatives in comparison to Alternative C. Again, because of the great similarity between Alternative C and the FAA-developed derivatives, the Agency was able to

rely upon the TAAM modeling for Alternative C to assess the potential effectiveness of these proposals. Based on its evaluation, FAA determined that none of the five FAA derivatives was a less restrictive alternative capable of performing as well as Alternative C. Similarly, none of the five derivatives would avoid or minimize impacts to St. Johannes Cemetery while also performing as well as Alternative C. For further information on the FAA's careful evaluation of these five derivatives, including a basis for this conclusion, please see Section 3.6 of the Final EIS.

7. AGENCY PREFERRED AND ENVIRONMENTALLY PREFERRED ALTERNATIVES

Agency's Preferred Alternative

The FAA identified Alternative C, the City's proposed O'Hare Modernization Program, as the agency's preferred alternative in the Final EIS, for reasons summarized briefly below and discussed in more detail in Section 3.7 of the Final EIS.

Table 4 presents a side-by-side comparison of the alternatives in terms of environmental, economic, and operational impacts. As shown in **Table 4**, all of the Build Alternatives (Alternatives C, D, and G) have substantially similar environmental impacts and would fully satisfy the purpose and need of ensuring that existing and future terminal facilities and supporting infrastructure (access, landside, and related ancillary facilities) can efficiently accommodate airport users. Yet, Alternative C is clearly superior in terms of reducing average annual delays. It is more effective and efficient than any of the other build alternatives in meeting the purpose and need of reducing delays at O'Hare, thereby reducing delays in the National Airspace System. In consideration of the substantial similarity between the environmental impacts for the Build Alternatives, the FAA identified the alternative that best fulfills its statutory mission and responsibilities as its preferred alternative.

In terms of environmental consequences, Alternatives C, D, and G would have the same wetland, DOT Section 4(f)/6(f), historic property, and air quality impacts. Alternative C would have slightly greater noise, land acquisition/relocation, and environmental justice impacts than Alternatives D and G, but fewer floodplain impacts than Alternative G.

In terms of delay reduction benefits, while serving 1,194,000 annual operations in 2018, Alternative C (City's OMP) would have an average annual delay of 5.8 minutes per operation, Alternative D would have 10.5 minutes of delay per operation, and Alternative G would have 6.9 minutes of delay per operation. Notably, when comparing Alternative C to Alternative D, there is an 81 percent increase in the average annual delay with Alternative D. When comparing Alternative C to Alternative G, there is a 19 percent increase in the average annual delay with Alternative G. Alternative C provides the greatest benefits in reducing delays in the Chicago region and consequently in the NAS. As discussed in the EIS, O'Hare affects the NAS because the airfield lacks adequate runway capacity and gate availability to handle both current and forecast levels of activity for O'Hare. In addition, delays at O'Hare have a direct impact on the NAS, in part because approximately 51 percent of the total passengers traveling through O'Hare currently connect to and from other airports.

In contrast with the Build Alternatives, the No Action Alternative is projected to serve 974,000 annual operations (constrained) in 2018 at an average annual delay 17.1 minutes per operation.[15] This is approximately 200,000 less operations at a significantly higher level of delay than any of the Build Alternatives and does not meet the purpose and need.

Environmentally Preferred Alternative

In accordance with 40 CFR 1505.2(b), the environmentally preferred alternative should be identified in the ROD. Although this ROD finds that the proposed project will include all reasonable steps to minimize harm from significant adverse environmental impacts, the FAA recognizes that the No Action Alternative would impose the least environmental impacts. Therefore, the No Action Alternative is the environmentally preferred alternative. Notably, the No Action Alternative would avoid the impacts of land acquisition and relocation of St. Johannes Cemetery, houses, and businesses; impacts on properties protected under DOT Section 4(f), and impacts on wetlands. From a NEPA perspective applying this provision, the environmentally preferred alternative is often found to be the No Action Alternative; that is true in this case as well.

Selected Alternative

Under the No Action Alternative, additional runways and infrastructure would not be developed at O'Hare now or in the near future. Adoption of the alternative would not meet the purpose and need. It would fail to alleviate the current and forecast delays at O'Hare which are documented in the Final EIS. Accordingly, although it is the environmentally preferred alternative, for the reasons discussed in Section 6 of this ROD, it is concluded that adoption of the No Action Alternative is not in the public interest.

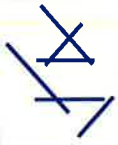
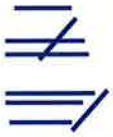
All of the factors that led the FAA to identify Alternative C as the preferred alternative equally support a decision to select it and approve the related Federal actions necessary for its implementation at O'Hare. In addition, the FAA selects Alternative C for the following reasons. First, Alternative C is consistent with the FAA's statutory and policy obligations, specifically (1) the FAA's legal obligation to plan the kind of airport development necessary to provide a safe, efficient, and integrated system of public-use airports adequate to anticipate and meet the needs of civil aeronautics (49 U.S.C. §47103), and (2) the Congressional declaration of policy that artificial restrictions on airport capacity are not in the public interest and should be imposed to alleviate air traffic delays only after other reasonably available and less burdensome alternatives have been tried [49 U.S.C. §47101(a)(9)].

Second, in making this selection, the Agency was fully aware of the environmental consequences and the benefits as described throughout the Final EIS and this ROD. Additionally, the Agency gave full consideration to all comments regarding the Draft and Final EIS, the Draft and Final Section 4(f) and Section 6(f) Evaluation, and the Draft and Final General Conformity Determination. For example, when comparing Alternative C to Alternative G

[15] The constrained forecast was developed for the evaluation of the No Action Alternative because the existing airport (constrained) is not capable of serving the same number of operations as an improved airfield (unconstrained). For a complete description of the constrained forecast, please see Section B.5 of Appendix B in the FEIS.

(which was demonstrated to be the next most effective in reducing delay after Alternative C), the FAA has calculated that Alternative C produces delay savings immediately commencing with the full build out. These savings total approximately $150 million over a five-year time period after full build out, and would not be realized by any other alternative. Such delay savings would be even greater when Alternative C is compared with those of any other alternative. In addition, the FAA notes that Alternative C is the only alternative that has the potential, should the technology/procedures be approved of immediately implementing four independent arrival streams under all weather.

TABLE 4
SUMMARY COMPARISON OF RETAINED ALTERNATIVES

Runway Layout for Each Alternative					
Alternatives		**A**	**C**	**D**	**G**
1. Environmental Impacts					
Wetland impacts	Jurisdictional & non-jurisdictional, including non-wetland Waters of the United States (acres)	23.5	154.2	154.2	154.2
Floodplain impacts	Increase in impervious surfaces area (acres)	0	1,000	823	1,126
DOT Section 4(f)/6(f) Parkland impacts	Parkland properties to be acquired	0	3	3	3
Section 106 impacts	NRHP-eligible properties with adverse effects	0	3	3	3
Acquisition and relocation impacts	Area of proposed land acquisition (acres)	0	440	413	413
	Population of proposed land acquisition area	0	2,631	2,553	2,553
	Housing Units	0	539	522	522
	Businesses	0	197	164	164
65+ DNL noise impacts (Build Out)	Area (acres)	12,427	11,263	11,187	11,216
	Housing Units	5,199	6,754	7,392	6,572
	Population	14,512	19,577	21,154	19,135
Environmental justice impacts	Minority residents in proposed acquisition area by race	0	1,575	1,479	1,479
	Minority residents in proposed acquisition area by ethnicity	0	1,599	1,524	1,524
Air Quality Impacts	Compliance with NAAQS	Exceedance of CO at 1 location	No exceedances	No exceedances	No exceedances
2. Operational Efficiency Factors					
2018 average annual delay	(minutes per operation)	17.1	5.8	10.5	6.9
2018 annual operations served	(operations)	974,000	1,194,000	1,194,000	1,194,000
3. Economic Impact Factors					
Delay cost	Delay cost to the airlines in 2018 (millions) based on $25 per minute of delay	$416.4	$173.1	$313.4	$206.0
Local tax base	Tax base loss of parcels acquired (millions)	$0	$5.7	$5.3	$5.3
Relative development costs	Relative construction cost	Less than C, D or G	More than A, D, less than G	More than A, less than C, G	More than A, C and D
4. National Policy Factors					
Implementation factors	Regulatory – Does authority exist to implement?	Yes	Yes	Yes	Yes
	Sponsor – Is there a sponsor able to fund?	Yes	Yes	Yes	Yes
	Service Provider – Will adequate service be initiated?	Yes	Yes	Yes	Yes

Notes: Surface transportation effects are included in Sections 5.3, of the EIS.
n/a = not applicable
Source: TPC Analysis, Chapter 5, Environmental Consequences, of the Final EIS.

8. PUBLIC OUTREACH AND AGENCY COORDINATION

The FAA has committed to public involvement and agency input throughout this EIS process. The FAA *Community Involvement Policy Statement*, dated April 17, 1995, clearly affirms:

> The Federal Aviation Administration (FAA) is committed to complete, open, and effective participation in agency actions. The agency regards community involvement as an essential element in the development of programs and decisions that affect the public.

Additionally, Chapter 2, Paragraph 208b. of FAA Order 1050.1E states:

> At the earliest appropriate stage of the action and early in the process of preparing NEPA documentation, the responsible FAA official, or when applicable, the project proponent, must provide pertinent information to the affected community and agencies and consider the affected communities' opinions (40 CFR 1501.2). The extent of early coordination will depend on the complexity, sensitivity, degree of Federal involvement, and anticipated environmental impacts of the proposed action.

In Chapter 7, paragraph 74 of FAA Order 5050.4A, as a part of public involvement, the lead agency is encouraged to invite Federal or state agencies that have "jurisdiction by law in areas that may be affected by airport development" to serve as cooperating agencies. These agencies may have expertise in a given area, or assure that the proper permits, licenses, or other requirements are met throughout the development of the EIS.

In an effort to meet and exceed this guidance, the FAA developed and implemented a comprehensive and proactive public involvement program. The facets of the program included:

- Public and Agency Scoping.
- Agency Coordination including initiatives with Cooperating Agencies.
- Public Outreach Program including extensive Environmental Justice Outreach.
- Public Hearings at three separate locations, over three days.
- Utilization of the World Wide Web including the development and implementation of two public websites updated throughout the EIS process: the O'Hare Modernization EIS Website at www.ompeis.net, as well as the O'Hare Modernization Program Document Library file sharing site at: www.agl.faa.gov/OMP/. In order to provide early access to key information prior to release of the Draft EIS, the FAA began posting modeling data and other EIS-related documentation in July 2004 (over six months prior to the issuance of the Draft EIS). Through November 2004, FAA posted over 7.5 millions pages related to O'Hare.
- In order to facilitate additional public disclosure and involvement, FAA posted on its website (www.agl.faa.gov/OMP) the Draft and Final EIS, Draft Section 4(f) and Section 6(f) Evaluation, and Draft General Conformity Determination. In addition, these documents were also delivered in hard copy and CD versions to 33 local libraries.
- The FAA has provided computer support for the use of all FAA web-posted documents and in addition has also provided electronic copies of the web-posted documents upon

request. User website access issues predominately resulted from individual user computer settings that did not allow their internet settings to allow automatic detection of settings and allow active File Transfer Protocol (FTP) access. These settings can be modified to allow access of the FAA material by individual computer users, or if in a corporate environment, system administrators, if they choose to do so. Where individuals or entities chose not to change the settings, the FAA advised them of other website access locations (e.g. including libraries and FedEx/Kinko's). In all instances when requested, FAA provided CD versions of the materials. FAA staff has verified website access from libraries, FedEx/Kinko's locations, and their own homes.

8.1 Public Involvement

From the outset, the public has been provided opportunity for input, and their concerns have been considered by FAA throughout the process. Both the City of Chicago and the FAA have been forthcoming with the communities about the project through extensive opportunities for public involvement. The interests of communities have been considered throughout the decision-making process regarding the project.

Because of the Airport's impact on the surrounding communities, the FAA has conducted open public meetings to inform the public of the expansion plans. The FAA has received numerous public comments throughout the EIS process. All of these comments have been reviewed to ensure that the needs and concerns of the public were considered and addressed. Based on the extensive opportunities for public participation, the FAA is satisfied that full consideration has been given to the public's views on airport expansion plans.

The public involvement program included the following:

- From Scoping, and throughout the NEPA process, the FAA has received extensive communication from interested parties.
- The FAA held two agency scoping meetings, one on August 19, 2002 at the Illinois Department of Transportation in Springfield, Illinois, and on August 20, 2002 at the Metcalfe Federal Building in Chicago. Federal, state, and local agencies, including representatives of the Suburban O'Hare Commission were in attendance.
- The FAA held two public scoping meetings, one on August 21, 2002 at the Fountain Blue Banquet Hall in Des Plaines and the August 22, 2002 at Avalon Banquets in Elk Grove Village.
- The FAA held a general informational Mayor's meeting on August 29, 2002. Ninety mayors in the Chicago Metropolitan area were invited to attend.
- Representatives from the FAA have briefed the O'Hare Noise Compatibility Commission (ONCC) on five occasions, February 2, 2003, June 4, 2004, January 25, 2005, May 6, 2005 and June 3, 2005. ONCC is an organization that is dedicated to reducing aircraft noise in the communities around O'Hare International Airport. Its membership includes 22 municipalities, Cook County, and 14 school districts that represent nearly 40 surrounding communities.

- Briefings and presentations by FAA were given to other municipal, community, and professional organizations, including: the Airport Consultants Council, the Transportation Research Board, the DuPage County Board, the Union League of Chicago, the Mount Prospect Rotary Club, the Transport Chicago Conference, the Illinois Society of Professional Engineers, and the American Association of Airport Executives.
- A public outreach meeting conducted by FAA to introduce the preliminary Purpose and Need was held March 19, 2003 at the Sheraton Four Points Hotel in Schiller Park.
- A public website dedicated to the EIS was launched April 25, 2003. The website address is http://www.ompeis.net.
- In June of 2003, the FAA published their Public Outreach Program for the Environmental Impact Statement.
- An FAA Alternatives working session was conducted on October 17, 2003, which included members of local governments to discuss alternatives. The session was held at the Fountain Blue Banquet Hall in Des Plaines.
- Three FAA Environmental Justice public workshops were held May 23, 2004, August 29, 2004 and March 6, 2005.
- On September 29, 2004, the FAA published a Federal Register Notice that announced the early release of EIS related documents. The documents that were posted included the Total Airspace and Airport Modeler (TAAM) simulation results and the Surface Transportation modeling results.
- A Federal Register Notice for the Availability of the Draft EIS was published on January 21, 2005. A subsequent notice was issued by the U.S. Environmental Protection Agency and published on January 28, 2005.
- The Draft EIS was distributed to local libraries, city halls, cooperating agencies, and other interested parties. The FAA requested that the Draft EIS be made available for review from January 14, 2005 through at least March 23, 2005.
- The EIS modeling data and documents referenced in the Draft and Final EIS were delivered to five geographically dispersed local libraries (Mount Prospect, Park Ridge, Elk Grove Village, Bensenville, and Des Plaines) to even further facilitate public involvement and disclosure. The documents referenced in the Draft and Final EIS were also posted to the web at www.agl.faa.gov/OMP/DEIS and www.agl.faa.gov/OMP/FEIS, respectively.
- Three FAA public workshops/public hearings were held to receive comments on the Draft EIS on February 22 (Avalon Banquets – Elk Grove Village), February 23 (Waterford Conference Center – Elmhurst) and February 24, 2005 (White Eagle Banquets – Niles) more than 30 days after the Draft EIS was released for review. Approximately 1,500 people attended the three events and approximately 300 people provided testimony over the course of the three hearings.

- The Draft EIS was available for 60 days, which is a period that extends beyond the minimum 45 days required by CEQ regulations. The comment period for the Draft EIS began on January 21, 2005 was extended 14 days, for a total of 74 days, and ended on April 6, 2005.
- Approximately 1,000 comment documents were received from the public and agencies in response to the Draft EIS. The comments were reviewed and considered by the FAA in the preparation of the Final EIS. Comments received were responded to in the Final EIS (Appendix U, Response to Comments of the Final EIS).
- The Final EIS was distributed to local libraries, city halls, and many of the principal commenters on the Draft EIS. The Final EIS was approved by the FAA on July 25, 2005 released to the public on July 28, 2005, and FAA's Notice of Availability (NOA) was listed in the Federal Register on July 29, 2005. The comment period on the Final EIS began with the USEPA's NOA in the Federal Register August 5, 2005.
- Comments were solicited on portions of the Final EIS. The FAA received approximately 500 pages of comments on the Final EIS and related documentation (Final General Conformity Determination and Final Section 4(f)/6(f) Evaluation). Of the 500 pages of comments, approximately one-half were submitted by the entities that represent the two communities (Bensenville and Elk Grove Village) and the Cemetery Associations that oppose the proposed action. All comments received were carefully evaluated and considered by the FAA. Comments received on the Final EIS are addressed in **Appendix A** of this ROD
- The FAA has conducted two formal Section 106 consultations on August 18 and August 30 of 2005. A court reporter was present at both meetings to document the discussions.

The FAA provided extensive opportunities for the public to comment throughout the EIS process. In addition to public hearing testimony, the FAA received comments in the following formats: written, private testimony, email, and voice mail. Overall, the FAA received approximately 3,500 pages of comments on the Draft EIS and Final EIS and related documentation (Draft General Conformity Determination and Draft Section 4(f)/6(f) Evaluation). Every comment has been considered and addressed in the Final EIS and/or this ROD. Most of the comments focused on Alternative C, the City's proposed OMP. The main themes from those supporting OMP (Alternative C) were economic growth and the benefits to the area's commerce, sustaining the region's prominence as a transportation hub, the employment opportunities of OMP (Alternative C), and that an improved O'Hare would generate improved efficiency/reduced delays. Those speaking in support were primarily business leaders, business associations, members of labor organizations, airline employees, others employed in the aviation industry, and local elected officials.

The main themes from those opposed to OMP (Alternative C) were: concerns about how the project would be funded, relocation of the cemeteries, and support for use of other airports, congestion management, and/or building a south suburban airport rather than expanding O'Hare. Those in opposition included elected officials and local residents of affected suburbs.

In addition, there were comments related to environmental impacts including, among others, air quality, noise, Section 4(f)/6(f), and surface transportation.

Throughout the development of the EIS and this ROD, FAA has had frequent and repeated contact with legal representatives for the Village of Bensenville, Elk Grove Village, St. John's Church of Christ, and Rest Haven Cemetery Association. FAA has engaged the representatives on a variety of fronts, including correspondence, telephone calls, conference calls, at public meetings, and in consultations both at the Great Lakes Region and at FAA Headquarters. FAA believes that the legal representatives' positions have been clearly heard and fairly addressed throughout the EIS process. This, in part, is based on FAA's thorough consideration and response to the over 1,300 pages of comments filed on the Draft and Final EIS, Draft General Conformity Determination and Draft Section 4(f) and 6(f) Evaluation.

In addition, the Agency has received broad Freedom of Information Act (FOIA) requests from these same legal representatives. These requests included information related to the City's proposed OMP, World Gateway Program, and other FAA documents. Beginning in December 2003, the FAA began the process of providing and/or making available over 15,000 documents (comprising over 8 million pages) for a fee of $3,000. The Agency continues to respond to the latest FOIA requests including those filed in June 2005. In addition, the Agency responded by letter dated April 29, 2004 to earlier FOIA requests (dated November 19, 2003 and February 26, 2004), which are now the subject to an FAA administrative appeal.

The FAA has made available all documents regarding the EIS process as required by CEQ regulations. The legal representatives have requested, through the FOIA process, categories of documents that are unrelated to this EIS. These documents were prepared by the Agency for planning purposes unrelated to this EIS. The Agency completely disagrees with the legal representative's assertions that FAA has hidden documents required to be provided under CEQ regulations. Indeed, this assertion has even less merit than the challenge twenty years ago by these same opponents to the methodology and conclusions employed by the FAA in assessing the last improvement of Chicago O'Hare.[16]

8.2 Environmental Justice Outreach

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low Income Populations,* and FAA Order 1050.1E, require FAA to identify and address potential disproportionately high and adverse impacts on minority and low income populations.

A qualitative assessment of the project area, interaction with community residents, and quantitative analysis of census data guided outreach efforts for the Environmental Justice impact assessment. Using information about the community, outreach team members were chosen to reflect the primary cultural make-up of area residents. The multi-cultural, multi-lingual team included both men and women to accommodate cultural sensitivities in order to maximize communication between the team and community residents.

[16] SOC v. Dole, 787 Fed. 2nd 186, 197 (Seventh Cir. 1986).

Both Federal and state environmental justice policies stress that early and ongoing public outreach is a vital component of the environmental justice process. These activities establish trust and open dialogue with community members. The strategy utilized for effective public participation included the following activities:

- A survey was conducted by the FAA's contractor to assess community awareness of the EIS process. These paper surveys asked questions concerning family size, ethnic background, languages spoken in the home, years of residence, annual household income, employed household members, place of employment, schools attended by children, place of worship, primary businesses frequented, and owner/renter status. These two-page surveys were distributed in the proposed acquisition area to approximately 300 residences and businesses. The surveys were prepared in English and Spanish. Copies of the survey and survey results are included in Appendix P of the EIS.
- Over 30 small-group meetings conducted by FAA's contractor were held at various businesses and residences located in the acquisition area. These meetings ranged in size from 2 to over 30 residents. Residents offered to host these meetings at their homes, and some meetings were held in the Hamilton Townhome Association Office. These meetings were conducted in the evening to enable the greatest number of residents to attend.
- On May 23, 2004, the FAA held its first environmental justice public outreach session. The session was publicized through flyers posted in local businesses within and adjacent to the proposed acquisition area. These flyers, in English and Spanish, were also made available to residents within the acquisition area. In addition, personal letters were mailed to key stakeholders and announcements were made during mass at St. Alexis Church located in Bensenville, Illinois. Over 110 residents living in and around the acquisition area attended the meeting. This session was held at the Cascade Banquet Hall, a location identified by community members as local, convenient, and accessible. After this meeting, attendees demonstrated their commitment to the process by participating in small-group meetings and recruiting other residents to participate.
- On August 29, 2004, a second environmental justice outreach session was held at St. Alexis Church in Bensenville. The session was publicized through flyers posted in local businesses within and adjacent to the proposed acquisition area. These flyers, in English and Spanish, were also made available to residents within the proposed acquisition area. In addition, personal letters were mailed to key stakeholders and flyers were distributed to parishioners at St. Alexis Church. Approximately, ninety residents attended to obtain information and ask questions of FAA officials. Detailed documents regarding the outreach can be found in Appendix P of the EIS.
- The third environmental justice outreach session was also held at the St. Alexis Church in Bensenville, Illinois on March 6, 2005 to discuss the preliminary environmental findings within the Draft EIS. Approximately 60 people were present. Several of the presentation boards that were used at the public hearings were set up at the outreach

session for use in an open house format, where citizens could talk one-on-one with representatives of the FAA and its contractor. As with the first and second environmental justice outreach sessions, Spanish-English translators were in attendance to interpret the presentation material and discuss issues raised at the meeting.

- Collaboration with individuals, institutions, and organizations in the acquisition area was conducted to educate the public about potential environmental impacts and enhance public involvement.
- All meetings were conducted in both English and Spanish and all appropriate documents were translated into Spanish. Upon requests by the community, some documents were also translated into Hindi and Urdu. The translation of these documents into the appropriate languages helped residents obtain current and detailed information on the EIS process, including the various alternatives being assessed.
- All comments received at the environmental outreach sessions, including comments regarding property acquisition, have been responded to by the FAA and included in Appendix U of the Final EIS.
- After the ROD is published another meeting will be hosted by the FAA and the City of Chicago to answer questions regarding EJ, the project, and property acquisition.

8.3 Agency Coordination

The FAA gratefully acknowledges and very much appreciates the significant roles played by the following agencies in this EIS process by serving as cooperating agencies: United States Environmental Protection Agency (USEPA), Illinois Environmental Protection Agency (IEPA), United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (USFWS), and Federal Highway Administration (FHWA). An Interagency Coordination Agreement was signed between the FAA, USACE and IEPA in May 2004. FAA also acknowledges and is thankful to the Illinois Department of Transportation (IDOT) and Illinois Department of Natural Resources (IDNR) for their participation in a cooperative fashion even though they did not accept "formal" cooperating agency status. In addition to formal cooperating agency contacts, FAA worked closely and cooperatively with numerous other Federal, state and local agencies throughout the EIS process, including Northeastern Illinois Planning Commission (NIPC), United States Department of Agriculture (USDA), Department of Interior (DOI), National Park Service (NPS), Advisory Council on Historic Preservation (ACHP), Illinois Historic Preservation Agency (IHPA), Illinois State Toll Highway Authority (ISTHA), Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), Regional Transportation Authority (RTA), and Chicago Area Transportation Study (CATS). These extensive contacts greatly benefited the FAA by giving a substantial amount of information and perspective on the proposed development from the viewpoint of the other agencies. These meetings also were intended to enhance the ability of those entities to comment meaningfully, both during the development of the Draft EIS, in the formal comment period thereafter, and in the preparation of the Final EIS.

Simultaneously with preparation, distribution, and review of this EIS and completion of this ROD, the USACE is reviewing and processing a Section 404 permit application and pre-discharge notification per the requirements of the Clean Water Act, as submitted by the City of Chicago DOA. Similarly, IEPA is reviewing anti-degradation (Water Quality Standards) and Section 401 (Water Quality Certification) information pertaining to potential project-related wetland impacts. In furtherance of this goal, the public hearings that were conducted for the Draft EIS were hosted by FAA, the USACE, and the IEPA for purposes of meeting these agencies' requirements.

In its Draft EIS comment letter dated February 25, 2005 (pages U.2-7 and U.2-8 in Appendix U of the Final EIS), the USACE accepted FAA's purpose and need and evaluation of alternatives when it concurred that "there are no less damaging alternatives to construct this project". In its letter dated March 28, 2005 (pages U.2-9 and U.2-10 in Appendix U of the Final EIS), the Fish and Wildlife Service provided mitigation commentary, but it interposed no objections to FAA's purpose and need and evaluation of alternatives. In its letter dated April 6, 2005 (pages U.2-11 through U.2-27 in Appendix U of the Final EIS), the USEPA accepted FAA's purpose and need, agreed with FAA's retention of three Build Alternatives for detailed evaluation, provided technical comments on various impact categories, and focused on the need for appropriate mitigation. In its Draft EIS comment letter dated April 6, 2005 (page U.2-28 of the Final EIS), the FHWA requested that the Final EIS include additional analysis to indicate whether or not increased traffic volumes would be generated by the project and it raised no objections to FAA's purpose and need and evaluation of alternatives. In its Draft EIS comment letter dated April 6, 2005 (page U.3-5 through U.3-8 of the Final EIS) the IEPA provided technical air quality comments, noted the need for satisfactory wetlands mitigation to be identified, and raised no objections of any kind. As described earlier in Section 4 of this ROD, USEPA commended the FAA's EIS for a number of reasons including the adoption of a fifteen year planning horizon for environmental analysis. In comments filed by Federal, state and local entities, no governmental body, other than the Village of Bensenville and Elk Grove Village, has expressed significant concerns about the quality of the EIS or this proposed action. **Table 5** lists many of the meetings conducted with other agencies/entities throughout the course of the EIS process.

TABLE 5
AGENCY COORDINATION MEETINGS

Date	Participants	Location	Purpose
October 2, 2002	FAA, USEPA, City of Chicago	Chicago, IL	Air quality impact analysis
November 4, 2002	FAA, USEPA, City of Chicago	Chicago, IL	Air quality impact analysis
November 7, 2002	FAA, FHWA, IDOT, ISTHA, City of Chicago	Springfield, IL	Surface transportation impact analysis, western access
November 7, 2002	FAA, IHPA, City of Chicago	Springfield, IL	Cultural resources impact analysis
November 8, 2002	FAA, IDNR, City of Chicago	Springfield, IL	Natural resources impact analysis
November 8, 2002	FAA, IEPA, City of Chicago	Springfield, IL	Air quality impact analysis
December 18, 2002	FAA, USDA, City of Chicago	Des Plaines, IL	Wildlife attractant issues, water resource impact analysis, on-airport detention facilities
February 28, 2003	FAA, USEPA, City of Chicago	Chicago, IL	Air quality impact analysis
April 10, 2003	FAA, IDOT	Des Plaines, IL	Surface transportation impact analysis, western access
April 25, 2003	FAA, CATS	Des Plaines, IL	Surface transportation impact analysis
January 29, 2004	FAA, USACE	Chicago, IL	Section 404 coordination
March 4, 2004	FAA, IDOT	Des Plaines, IL	Surface transportation impact analysis
March 5, 2004	FAA, USACE, IEPA	Springfield, IL	Section 404 coordination
March 11, 2004	FAA, MWRDGC	Chicago, IL	Stormwater runoff impact analysis
March 19, 2004	FAA, USACE	Chicago, IL	Section 404 mitigation concepts
March 23, 2004	FAA, ISTHA	Downers Grove, IL	Surface transportation impact analysis
April 21, 2004	FAA, DuPage Department of Transportation	Wheaton, IL	Surface transportation impact analysis
May 11, 2004	FAA, USEPA, IEPA, City of Chicago	Chicago, IL	Transportation Analysis coordination
May 16, 2004	FAA, USEPA, IEPA, City of Chicago	Chicago, IL	HAPS Protocol Discussion
May 27, 2004	FAA, USACE, IEPA, USEPA, FWS, FHWA	Chicago, IL	Purpose & Need, Alternatives discussions with Cooperating Agencies
June 2, 2004	FAA, City of Chicago	Des Plaines, IL	Potential City of Chicago wetlands mitigation sites
June 23, 2004	FAA, IEPA	Springfield, IL	Section 404 coordination
September 29, 2004	FAA, IEPA	Springfield, IL	Section 404, 401 and Air Quality coordination
October 6, 2004	FAA, USEPA	Des Plaines, IL	Overall impact analysis
October 20, 2004	FAA, IEPA, USEPA	Springfield, IL	Wetland and air quality impact analyses
October 21, 2004	FAA, IDNR, and City of Chicago	Springfield, IL	Wetland and biotic communities impact analyses
October 22, 2004	FAA, USACE, City of Chicago	Chicago, IL	Wetland and Waters of the US impact analyses
November 5, 2004	FAA, USEPA, USACE, FWS, IEPA	Des Plaines, IL	Overall impact analysis
February 23, 2005	FAA, Bensenville Park District	Bensenville, IL	Section 4(f)/6(f)
March 24, 2005	FAA, Bensenville Park District	Bensenville, IL	Section 4(f)/6(f)
August 18, 2005	FAA, IHPA, Bensenville, Elk Grove, City of Chicago, and Cemetery Representatives	Des Plaines, IL	Section 106 Process
August 30, 2005	FAA, ACHP, IHPA, Bensenville, Elk Grove, City of Chicago, and Cemetery Representatives	Des Plaines, IL	Section 106 Process

9. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A detailed environmental analysis of the potential environmental impacts resulting from the implementation of the project alternatives was accomplished as part of the EIS. Five separate years of analysis were examined as follows:

- Baseline – Represents conditions in the year the EIS was initiated (2002)
- Construction Phase I – This represents the anticipated year (2007) that the first major phase of the proposed action is anticipated to be completed and operational.
- Construction Phase II – This represents the anticipated year (2009) that the second major phase of development would become operational.
- Build Out – This is the anticipated year (2013) that all components of the alternatives are anticipated to be completed and operational.
- Build Out + 5 – This is a future year (2018) representing five years beyond the completion of all components (Build Out) of the proposed action and other proposed projects.

The EIS presents a detailed examination of the impacts for all alternatives for each year of analysis. The impacts of the Preferred Alternative and the No Action Alternative, and the associated mitigation measures and other impact reduction measures, are discussed in this section of the ROD. **Table 4** in Section 7.2 of this ROD presents a side-by-side comparison of the three build alternatives, in addition to the No Action Alternative, in terms of environmental, economic, and operational impacts.

In accordance with 40 CFR 1505.3, the FAA will take appropriate steps, as described in this ROD, through Federal funding grant assurances and conditions, and airport layout plan approvals, to ensure that the following mitigation measures, and other impact reduction measures as described herein, are implemented for the selected alternative. The FAA will monitor the implementation of these mitigation measures. The approvals contained in this ROD are specifically conditioned upon full implementation of these mitigation measures.

The primary responsibility for implementation of the mitigation measures lies with the City of Chicago. The FAA will have oversight responsibility and conditions this approval upon implementation of that mitigation. Mitigation measures for those impact categories where mitigation measures are necessary to avoid or minimize significant environmental impacts, for which the City of Chicago has agreed to implement, as well as identified or adopted monitoring and enforcement programs, are summarized below. The FAA finds that these measures constitute all reasonable steps to minimize harm and take all practical means to avoid or minimize environmental harm from the selected alternative and proposed Federal Action.

9.1 Noise and Compatible Land Use

In the Aviation Safety and Noise Abatement Act of 1979 (ASNA), Congress mandated that the FAA develop a uniform methodology for measuring aviation noise and land use compatibility. The FAA incorporated the recommendations of the USEPA and Federal Interagency Committee on Urban Noise (FICUN), in promulgating the regulations of 14 CFR Part 150, where the FAA selected the yearly average day-night noise level (DNL) of 65 decibels (dB) as the level at which

most land uses are compatible with aviation noise. DNL is a cumulative sound level that provides a measure of the total sound energy during a specified time period. DNL essentially averages the sound levels at a location over a 24-hour period, with a 10-decibel (dB) weighting penalty added to all sounds occurring during nighttime hours (between 10:00 PM and 6:59:59 AM). The 10 dB penalty represents the added intrusiveness of noise that occurs during sleeping hours because ambient sound levels during nighttime hours are typically about 10 dB lower than during daytime hours.

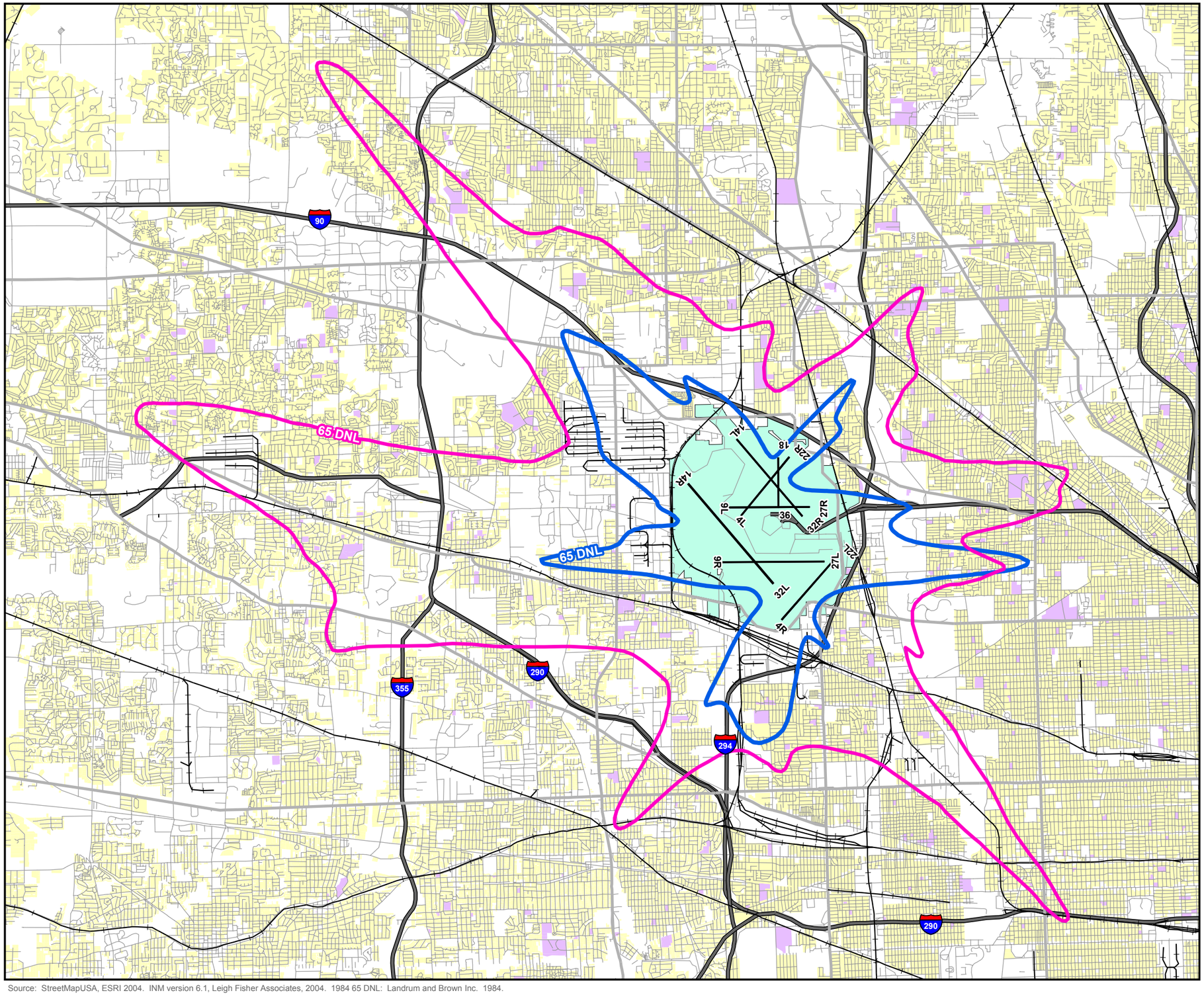
Estimates of noise effects resulting from aircraft operations can be interpreted in terms of the probable effect on human activities characteristic of specific land uses. Land uses are generally considered compatible with noise levels less than DNL 65, but only certain uses are compatible with noise levels at or above DNL 65. For purposes of NEPA, FAA has determined that a significant noise impact would occur if analysis shows that the proposed action will cause noise-sensitive areas to experience an increase in noise of DNL 1.5 dB or more at or above DNL 65 dB noise exposure when compared to the no action alternative for the same timeframe. Land uses considered sensitive to noise levels of DNL 65 and greater generally include residential housing, schools, places of worship, hospitals, and nursing homes.

FAA's commercially available Integrated Noise Model (INM), Version 6.1, was used to generate aircraft noise exposure contours and evaluate effects of the proposed project. In addition to the required DNL metric used for aircraft operations during the evaluation of each of the build alternatives for each year of analysis, supplemental noise metrics were used and are presented in Appendix F of the EIS, including:

- Maximum Sound Level (Lmax)
- Sound Exposure Level (SEL)
- Equivalent Sound Level (Leq)

For comparison purposes, the FAA presents information from its O'Hare 1984 Final EIS regarding an earlier airport improvement project. The 1984 Final EIS identified 94,720 noise-affected homes in its 1982 Baseline 65 DNL contour. In contrast, the estimated number of homes exposed to the 2002 Baseline 65 DNL is approximately 8,108 homes. What is more, even with an increase in operations at O'Hare from 591,807 in 1982 to 922,787 in 2002, the housing units within the 65 DNL contour during that same period diminished by over 90 percent. See **Exhibit 6** for a representation of the 2002 Baseline contour compared to the 1982 Baseline contour. Thus, even though the EIS projects, at most, a slight increase in affected residences (within the 65 DNL Build Alternative contours) when compared to the 2002 Baseline contour, this small overall increment should be viewed in the historic context of meaningful noise reduction in the communities surrounding O'Hare.

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Source: StreetMapUSA, ESRI 2004. INM version 6.1, Leigh Fisher Associates, 2004. 1984 65 DNL: Landrum and Brown Inc. 1984.

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

- 1982 65 DNL*
- 2002 65 DNL
- Rail Roads
- Freeways
- Secondary Roads
- Local Streets
- Existing Airport Property
- Compatible Land Use
- Residential
- Public, Hospitals, Institutional

*Note: Contour from 1984 E.I.S.

0 1 2 Miles

N S

Noise Contours, 2002 Baseline 65 DNL Compared to 1982 65 DNL

▶ **Exhibit 6**

Exhibit 5.2-3 of the Final EIS depicts the potential change in noise exposure associated with Alternative C compared to Alternative A (No Action Alternative) in the Build Out phase. There would be a total of 5,619 residences (16,218 people) newly exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action – area noted on Exhibit 5.2-3 in red), of which 1,102 have been sound insulated by the City of Chicago. In addition, there would be approximately 1,368 additional residences with a 1.5 dB or greater increase within the 65 DNL and greater noise contour area, outside of the area defined above, of which 435 housing units have previously been sound insulated. There would be a total of 5,446 currently non-insulated residences (15,212 people) within the Build Out areas defined above.

In addition to the Build Out 65 DNL and greater noise contour area discussed above, there would be a total of 1,647 residences (4,179 people) exposed to the 65 DNL and greater noise contour area at Build Out + 5 (but outside of the Build Out 65 DNL and greater noise contour for No Action and outside of the Build Out 65 DNL and greater noise contour for Alternative C), of which 77 have been sound insulated by the City of Chicago. There would also be approximately 6 additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for Build Out + 5, outside of the area defined in the paragraph above, of which no housing units have been sound insulated.

In addition, 11 public parks, 3 historic properties, 6 places of worship, 1 hospital, 2 libraries, 1 university, and 8 schools (7 insulated) would be exposed to DNL 65 and greater in the Build Out phase.

In 1996, the City initiated the formation of the O'Hare Noise Compatibility Commission (ONCC) to oversee noise mitigation efforts around O'Hare. The Commission is comprised of representatives of various communities and public school districts located within the O'Hare area. The ONCC participates in the planning of noise relief projects to be implemented in the O'Hare area, oversees the operation of O'Hare's noise monitoring system, and advises the City on O'Hare-related noise issues.

Over the past 9 years, the ONCC, in coordination with the City of Chicago, has directed the sound-proofing of 5,925 homes and 115 schools within the O'Hare area (many of which are outside the project-related area) at a cost of approximately $189 million. In addition, the ONCC monitors the application of the Fly Quiet Program by producing quarterly reports which can be accessed at www.oharenoise.org.

There is one school, Socrates St. Sava Academy in Chicago, which would be within the 65 DNL Build Out + 5 noise contour for Alternative C that is currently eligible and has also requested sound insulation, but has not been completed. Funding has been approved and this school is scheduled to be sound insulated by the end of the summer 2006. For further information on places of worship, hospitals, and nursing homes, see Section 5.2 of the Final EIS.

In June 1997, the City, in cooperation with the ONCC, user airlines, and the FAA, implemented the Fly Quiet Program at O'Hare. The program consists of a series of voluntary noise abatement flight and operating procedures designed to reduce the impact of aircraft noise during the nighttime hours (10 PM to 6:59:59 AM). The three main elements of the Fly Quiet

Program are (1) preferential runway use, (2) arrival and departure flight procedures, and (3) ground run-up procedures.

Significant noise impacts are anticipated to be reduced with specific noise abatement techniques. Such techniques will include the following:

- All eligible residences and schools within the Build Out 65 DNL and greater noise contour for Alternative C, but outside of the Build Out 65 DNL and greater noise contour for No Action, will be insulated by the City of Chicago by the time Build Out occurs. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for Alternative C will be insulated by the time Build Out occurs.
- After Build Out occurs, the City of Chicago will produce a 65 DNL noise contour based on the operational characteristics of the Build Out configuration, but with forecasted operational levels five years in the future from when Build Out occurs, thus creating a new contour referred to as Build Out +5 Forecast Contour (BO +5 F). The City will then insulate all eligible residences and schools within the BO +5 F 65 DNL and greater noise contour, but outside of the No Action (Alternative A) Build Out +5 65 DNL and greater noise contour presented in the Final EIS, by the time Build Out +5 would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for Alternative C will be insulated by the time Build Out +5 would occur.
- At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the ONCC and requested of the FAA by the City of Chicago. It is FAA's understanding that it is the City Chicago's intent to continue the existing Fly Quiet Program, except as affected by runway decommissioning. The Fly Quiet Program will be modified by ONCC in the future only if needed; such modification would be done in consultation with the FAA and the City of Chicago Department of Aviation. Modification requiring FAA action would be subsequent to its prior approval, and any necessary environmental review.
- Continuation of the ONCC to oversee noise mitigation efforts around O'Hare.
- Continued use of the ground run-up enclosure during engine run-up testing.

In addition to the above noise abatement measures, other forms of mitigation will include the voluntary continuation of the following programs:

- **School Sound Insulation Program (SSIP)** – The City will continue the existing voluntary SSIP, providing impacted schools with noise attenuating windows, additional roofing and ceiling insulation, improved doors, and related measures to reduce the transmission of aircraft noise into schools.
- **Residential Sound Insulation Program (RSIP)** - The City will continue the existing voluntary RSIP, which will provide sound insulation for eligible residences which are

subject to a significant noise impact, or which would become incompatible, as a result of Alternative C (DNL 1.5 db increase within the 65 DNL or greater contour, or newly within the 65 DNL or greater noise contour), to reduce the transmission of outside noise into the homes.

High Altitude Airspace Assessment

Beyond the immediate noise environment of O'Hare itself, air traffic and airspace analyses conducted for this EIS indicate some traffic arriving and departing other airports in the vicinity would be affected by the Build Alternatives. Specifically, implementation of the Build Alternatives would result in changes to aircraft operations in five geographical areas, as follows:

- General Mitchell International Airport (MKE) Eastbound Departure Corridor from Milwaukee, Wisconsin
- Midway Airport (MDW) arrivals Southeast from the Brickyard VORTAC (VHP) between 6,000 and 24,000 feet MSL
- South Bend Airport (SBN) flight tracks while O'Hare (ORD) is in west flow
- Rockford Airport (RFD) flight tracks while ORD is in east flow
- DuPage Airport (DPA) westbound departures while ORD is in east flow

FAA Order 1050.1E indicates that

> for air traffic airspace actions where the study area is larger than the immediate vicinity of an airport, incorporates more than one airport, or includes actions above 3,000 feet AGL, noise modeling will be conducted using NIRS... Noise contours will not be prepared for the NIRS, however, NIRS will be used to produce change-of-exposure tables and maps at population centroids using the following criteria:
>
> - DNL 60-65 dB ±3 dB
> - DNL 45-60 dB ±5 dB

An evaluation of potential noise impacts caused by changes to aircraft operations in Alternative A (No Action Alternative) and Alternative C in the Build Out + 5 phase was prepared for this EIS. For this EIS, Alternative C was analyzed to represent the Build Alternatives (Alternatives C, D, and G), as the same airspace changes would be required for all Build Alternatives. The changes listed above would not cause noise levels in Alternative C to exceed FAA's criteria for significant noise impacts. The effect of the changes on total noise exposure is expected to be minimal because the number of affected aircraft operations is small, and most of the changes occur where aircraft are at altitudes above 3,000 feet.

In addition to there being no significant noise impact, the airspace analysis indicates that no noise impact is expected with respect to a DNL 5 dB increases at values above DNL 45 dB or DNL 3 dB increases at values above DNL 60 dB.

A complete summary of the airspace noise analysis is included in Appendix F of the Final EIS.

9.2 Surface Transportation

Traffic congestion is already present within the surface transportation study area. This situation is expected to become worse with the No Action Alternative (Alternative A) for each of the four future years of analysis. When comparing Alternative C, the preferred alternative, to the No Action Alternative (Alternative A) for each of the construction phases analyzed, there is a pattern of increasing congestion at a number of intersections and directional roadway segments.

Under Alternative C for the Build Out + 5 phase, when compared to the No Action Alternative, there are 10 intersections and 13 directional roadway segments that are expected to deteriorate such that they would exceed the threshold of significance as shown in Table 5.3-14 and Table 5.3-15 in Section 5.3 of the Final EIS. These thresholds are defined using levels of service (LOS) and volume-to-capacity (V/C) ratios. For the EIS, LOS was used to measure the performance of intersections, and V/C was used to measure the performance of roadway links.

The following outlines mitigation measures that will be implemented for Alternative C impacts in the Build Out + 5 phase. The mitigation measures will contribute to the improvement of the LOS and V/C ratio for each significantly impacted intersection and roadway segment, respectively.

Intersection of Bessie Coleman Drive and Lot E North (Location 23) – This intersection, which is expected to operate at LOS E in the Build Out + 5 phase without mitigation, will be further evaluated by the City. The ultimate re-design and improvement of the intersection will produce a LOS of D or better, and will be incorporated as part of the proposed projects in Alternative C during Construction Phase I. The improvements could include additional turn lanes, adjustments to total cycle length, additional through lanes, or other modifications, as required to produce LOS D or better.

Intersection of Irving Park Road and Main Cargo Road (Location 21) – As compared to the No Action Alternative, this intersection is expected to deteriorate from LOS B to E in the Build Out + 5 phase without mitigation. Improvements that enhance capacity and improve the LOS of this intersection to LOS D or better could potentially require the acquisition of additional right-of-way (ROW) by IDOT, the jurisdictional agency of Irving Park Road. Adjacent land that may need to be acquired for the additional ROW is currently owned by the Airport. The City has committed to participate in cooperative planning with IDOT to address and implement future improvements to this intersection required to improve the intersection to LOS D or better. The improvements could include additional turn lanes or through lanes on Irving Park Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate these future improvements to the intersection and Irving Park Road. The City will make this land available to IDOT for potential acquisition at the time required by IDOT for construction of the improvements.

Intersection of Bessie Coleman Drive and Higgins Road (Location 6) – This intersection is expected to operate at LOS F in the Build Out + 5 phase without mitigation. Improvements that enhance capacity and improve the LOS of this intersection to LOS D or better could potentially require the acquisition of additional ROW by IDOT, the jurisdictional agency of Higgins Road. Adjacent land that may need to be acquired for the additional ROW is currently owned by the

Airport. The City has committed to participate in cooperative planning with IDOT to address future improvements to this intersection required to improve the intersection LOS, which may include additional through lanes or turn lanes on Higgins Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate these future improvements to the intersection and Higgins Road. The City will make this land available to IDOT for potential acquisition upon issuance of this ROD, or at the time required by IDOT for construction of the improvements.

Intersection of York Road and Irving Park Road Ramp (Location 37) – This intersection is expected to deteriorate from LOS D to F in the Build Out + 5 phase without mitigation. There is an existing Intergovernmental Agreement between the City of Chicago, IDOT, ISTHA, and DuPage County for Preliminary Phase I engineering services related to the proposed relocation of this intersection. As part of these preliminary engineering services which are currently underway, an intersection design study (IDS) will be completed which will be reviewed by the City, IDOT, ISTHA, and DuPage County to ensure that, upon implementation of the improvements, the relocated intersection would operate at LOS of D or better.

All other significantly impacted intersections and roadway segments (Build Out + 5) - In addition to the four intersections listed above, the City has reviewed the feasibility of providing mitigation for the project-related impacts to the significantly impacted intersections and roadway segments. As part of this effort, the City will (1) participate in cooperative planning with the entities having jurisdictional responsibilities for the individual facilities to develop and evaluate potential mitigation measures and support long-range planning efforts, and (2) contribute to the agencies having jurisdictional responsibility a prorated share of the project-related mitigation costs, if requested, including the total costs of property acquisition, and the total costs of planning, designing, permitting, and constructing the required improvements at each of the significantly impacted roadway segments and intersections. The prorated contribution will be based on the increase in project-related traffic at each location for the Build Out + 5 phase as shown in **Table 6**.

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TABLE 6
ESTIMATED MITIGATION COSTS OF SIGNIFICANTLY IMPACTED INTERSECTIONS AND ROADWAY SEGMENTS (BUILD OUT + 5)

Responsible Agency	Intersection ID	Intersection	Estimated Length (miles)	Estimated Total Mitigation Costs (2005 Dollars)	Airport Share of Total Traffic (%)			Airport Projected Share of Mitigation Costs (2005 Dollars)
					No Action Alternative	Alternative C	Increase	
Significantly Impacted Intersections								
City of Chicago	6	Bessie Coleman & Higgins Road	N / A	$1,000,000 (a, d)	N / A	29	29	$290,000
City of Chicago	23	Bessie Coleman & Lot E North	N / A	$1,000,000 (a, d)	N / A	93	93	$930,000
Village of Rosemont	16	Balmoral Avenue & Des Plaines River Road	N / A	$1,000,000 (a, d)	25	14	---	---
IDOT	19	Mannheim Road & Montrose Avenue	N / A	$1,000,000 (a, d)	33	39	6	$60,000
IDOT	21	Irving Park Road & Main Cargo Road	N / A	$1,000,000 (a, d)	33	45	12	$120,000
IDOT	34	Irving Park Road & Prospect Avenue	N / A	$1,000,000 (a, d)	1	3	2	$20,000
IDOT / DuPage County	37	York Road & Irving Park Road Ramp	N / A	$1,000,000 (a, d)	8	39	31	$310,000
IDOT	39	Irving Park Road & Wood Dale Road	N / A	$1,000,000 (a, d)	1	3	2	$20,000
Village of Bensenville	24	York Road & Green Street	N / A	$1,000,000 (a, d)	6	27	21	$210,000
DuPage County	26	Thorndale Road & Busse Road	N / A	$1,000,000 (a, d)	2	32	30	$300,000
Total (Intersections)				**$10,000,000**				**2,260,000**

Responsible Agency	Reference ID	Roadway Link	Between	Direction (two-way link)	Estimated Length (miles)	Estimated Total Mitigation Costs (2005 Dollars)	Airport Share of Total Traffic (%)			Airport Projected Share of Mitigation Costs (2005 Dollars)
							No Action Alternative	Alternative C	Increase	
Significantly Impacted Roadway Segments										
IDOT	G	Mannheim Road	Montrose Avenue and Irving Park Road	NB	0.8	$4,000,000 (b, d)	32	41	9	$360,000
IDOT	AC	Irving Park Road	Mannheim Road and Main Cargo Road / Taft Road	WB	1.5	$7,500,000 (b, d)	29	40	11	$825,000
IDOT	AD	Elmhurst Road	Touhy Avenue and I-90	NB	0.7	$1,750,000 (b, d)	24	34	10	$175,000
				SB	0.7	$1,750,000 (b, d)	13	24	11	$192,500
IDOT	AF	Elmhurst Road	North of Thorndale Avenue	NB	1.3	$3,250,000 (b, d)	2	28	26	$845,000
				SB	1.3	$3,250,000 (b, d)	5	46	41	$1,332,500
IDOT	AI	Busse Road	I-290 and Irving Park Road	SB	2.4	$12,000,000 (b, d)	1	11	10	$1,200,000
IDOT	BG	Ramp from WB I-190 to SB I-294	---	N / A	N / A	$10,000,000 (c, d)	13	14	1	$100,000
IDOT	BP	Ramp from SB Mannheim to EB I-190	---	N / A	N / A	$10,000,000 (c, d)	50	44	---	---
DuPage County	AK	Thorndale Avenue	Wood Dale Road and Prospect Avenue	EB	0.9	$4,500,000 (b, d)	2	37	35	$1,575,000
DuPage County	BK	Thorndale Avenue	Arlington Heights Road and I-290	EB	1.0	$5,000,000 (b, d)	2	33	31	$1,550,000
DuPage County	AG	York Road	Irving Park Road and Thorndale Avenue	SB	1.1	$5,500,000 (b, d)	4	41	37	$2,035,000
Village of Bensenville	AH	York Road	I-290 and Irving Park Road	NB	3.1	$15,500,000 (b, d)	6	27	21	$3,255,000
Total (Roadway Segments)						**$84,000,000**				**$13,445,000**
Total (Intersections and Roadway Segments)						**$94,000,000**				**$15,705,000**

Notes: (a) Assumes total project costs (planning, design, permitting, and construction) of $1,000,000 per intersection.
(b) Assumes total project costs (planning, design, permitting, and construction) of $5,000,000 per lane mile of urban street improvements (two-sided widening with in-kind replacement costs).
(c) Assumes total project costs (planning, design, permitting, and construction) of $10,000,000.
(d) All estimated costs are in 2005 dollars, and exclude the costs of potential property acquisition or major utility relocations.

Source: TPC Analysis, May 2005.

The City will contribute its prorated share of the project mitigation costs (including the costs of property acquisition, and the costs of project planning, designing, permitting and construction) to the entities having jurisdictional responsibility within 6 months of each of the following events:

- Execution of property acquisition contract(s) to acquire non-Airport right-of-way (ROW) needed to implement the required improvements to any of the significantly impacted intersections and roadway segments.
- Award of planning study contracts, such as IDOT Phase I studies, or equivalent efforts, to outside parties (e.g., contractors, consultants, or persons other than employees of the entity having jurisdictional responsibility) to conduct planning studies and other pre-design work directly related to any of the significantly impacted intersections and roadway segments, either singularly or as a group.
- Award of contracts for engineering design services to outside parties directly related to the preparation of design and construction documents for any of the required improvements to the significantly impacted intersections and roadway segments.
- Award of contracts to outside parties directly related to the preparation of environmental studies, and obtaining local, State, or Federal permits required to initiate construction of any the required improvements to the significantly impacted intersections and roadway segments.
- Award of construction contracts directly related to the construction of any portion of the required improvements to the significantly impacted intersections and roadway segments.

The City's cost commitment for the events listed above would expire at Build Out + 5. At present, it is the FAA's expectation that the City of Chicago's share of the costs of these intersection and roadway improvements will not exceed $15.7 million, excluding the cost of associated land acquisition. However, regardless of the ultimate cost of the improvements, this is an obligation that the City of Chicago must meet, if requested by the entities having jurisdictional responsibility.

In addition, it is anticipated that a number of the identified adverse impacts could be reduced as a result of other surface transportation initiatives that are under consideration by others. Because these projects are in the early stages of planning and have their own independent utility, they are not included as part of the EIS surface transportation modeling and analysis. If and when those surface transportation initiatives come to fruition, it may be possible that implementation of those projects could reduce projected significant adverse impacts. Under such circumstances, the City may seek FAA approval to revise its mitigation obligations described above. These projects include the following:

- West O'Hare Bypass
- York Road/Irving Park Road/UPRR/CNRR – Grade Separation
- Elgin-O'Hare Expressway – East Extension

- Metra STAR Line
- CTA Blue Line – O'Hare Express
- DuPage County "J" Route Bus Rapid Transit

For further information on these projects, see Section 5.3.5 of the Final EIS.

9.3 Air Quality

This section includes the following subsections:

- Regional Air Quality Conditions
- Emission Inventories
- Dispersion Modeling
- Clean Air Act Conformity
- Supplemental Air Quality Analyses
- Emission Reduction Measures

Regional Air Quality Conditions

O'Hare is located within Cook and DuPage counties. These counties are included in an area that is currently designated as "moderate" non-attainment for the 8-hour ozone National Ambient Air Quality Standard (NAAQS) and non-attainment for particulate matter 2.5 microns or less in size. Both counties are designated attainment for carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. O'Hare International Airport is, however, located within an attainment area for particulate matter 10 microns or less in size.

At the time the air quality analysis was performed for the Draft EIS, the USEPA had not yet designated this or any other area of the U.S. with respect to the status of attainment for the NAAQS for particulate matter 2.5 microns or less in size. Subsequent to the analysis, on December 17, 2004, the USEPA designated Cook and DuPage counties as non-attainment for this pollutant. Based on the USEPA's scheduled timeline to have all areas of the country attain the standards for particulate matter 2.5 microns or less in size, States will submit their plans to the USEPA to attain the standard on or before April of 2008.

Because O'Hare is located within Illinois, the discussion and assessment of precursors to the air pollutant ozone has, for the most part, been limited to the Illinois portion of the 8-hour ozone non-attainment areas (referred to as the Chicago non-attainment area). Notably, representatives of the IEPA and representatives of the Indiana Department of Environmental Management (IDEM) serve together in the Lake Michigan Air Directors Consortium to assess air quality conditions within the 8-hour ozone non-attainment area.

Emission Inventories

Before the scoping process, FAA met with USEPA and IEPA representatives to discuss their concerns and to develop a comprehensive scope of work reflected in the EIS methodologies for the air quality assessment. Thereafter, FAA developed, in conjunction with these agencies, specific air quality protocols to be used for air quality assessment purposes. FAA's protocols contained analytical methodologies which were subsequently modified based on further coordination with USEPA and IEPA. In Section 5.6.3 of the Final EIS, FAA provides additional airport operations' emissions inventory information for particulate matter 2.5 microns or less in size.

Airport Operations

The emission inventories in the EIS air quality assessment were prepared using the FAA's Emissions and Dispersion Modeling System (EDMS Version 4.12). EDMS generates an emission inventory of carbon monoxide, volatile organic compounds, nitrogen oxides, sulfur oxides, and particulate matter with a diameter of 10 microns or less in size. The EDMS, and supplemental methodologies, were also used to prepare emissions inventories of particulate matter 2.5 microns or less in size.

The following main categories of sources were evaluated: aircraft, ground support equipment, auxiliary power units, motor vehicles on roadways (both on Airport and within a defined study area off Airport property) and at curbsides and parking facilities located on Airport property, fuel storage facilities, Airport-related fire training activities, and on Airport stationary sources (boilers, generators, etc.). The changes in emissions that would affect air quality are shown in **Table 7**. The analysis to determine the affect of the changes on local air quality conditions (in the vicinity of the Airport) are discussed in Dispersion Modeling, in this section of the ROD.

Construction Operations

Air quality impacts that would result from construction activities would be temporary (occurring over a period of ten years). When considering the total predicted air pollutant concentrations that were compared to the NAAQS, the level of dispersed air pollutants that would result from construction would be minimal when compared to the level of dispersed air pollutants from all other airport-related sources (aircraft, ground support equipment, passenger-related motor vehicles, etc.). Notably, the results of the dispersion analysis indicate that there would be no exceedances of the NAAQS with or without the proposed improvements.

TABLE 7
CHANGES IN AIRPORT-RELATED EMISSION INVENTORIES
ALTERNATIVE C RELATIVE TO ALTERNATIVE A – BUILD OUT + 5

		Estimated Tons in Build Out + 5 (b,c)					
Alternative(a)	Source Category	Carbon Monoxide	Volatile Organic Compounds	Nitrogen Oxides	Sulfur Oxides	Particulate Matter 10 microns or less	Particulate Matter 2.5 microns or less
A	Total	21,844	1,055	6,210	438	112	94
C	Total	26,119	1,324	7,290	564	127	107
	Increase/Decrease(a)	**+4,274**	**+268**	**+1,081**	**+125**	**+15**	**+13**

Notes: (a) When compared to Alternative A (No Action).
(b) Numbers reflect numerical rounding.
(c) Estimated emissions and changes in emissions with the Delayed Construction Schedule.
Source: Environmental Science Associates, Inc. [TPC] analysis, 2004/2005.

Dispersion Modeling

Dispersion modeling provides predicted concentrations of ambient pollutant levels that can be compared directly to the NAAQS. For the purpose of the assessment, two "scales" of dispersion analyses were performed—macroscale (large) and microscale (very small). The macroscale analysis evaluates pollutant concentrations on and in the vicinity of the Airport and the microscale analysis evaluates pollutant concentrations immediately adjacent to intersections/interchanges within the study area. The macroscale and microscale dispersion modeling was performed for ground level emissions only. The dispersion analysis does not include emissions due to sequencing/vectoring delay because these emissions would occur above the atmospheric mixing height. Emissions above this height do not have a discernable effect on ground level concentrations of pollutants. In the Final EIS, FAA provides dispersion analysis for particulate matter 2.5 microns or less in size.

Macroscale Analysis

The macroscale analysis was used to evaluate the change in ambient pollutant concentrations at various locations on Airport property and in areas adjacent to the Airport. On Airport, the locations included terminal curbsides, the bus center, and parking areas. Off Airport, specific locations were selected either because they are considered sensitive to changes in ambient pollutant concentrations (i.e., residences) or because they were locations where the highest predicted concentrations of any of the air pollutants are expected to occur (intersections, near the end of runways).

The dispersion analysis was performed using the FAA's EDMS. The EDMS uses as its base, emission inventory data and site-specific meteorological data. EDMS provides dispersion analysis for the air pollutants nitrogen dioxide, carbon monoxide, particulate matter with a size diameter of 10 microns or less, and sulfur dioxide. The model is not designed to perform dispersion analysis for ozone or currently capable of performing dispersion analysis of particulate matter 2.5 microns or less in size. In addition to the sources within the defined study area, conservative background concentrations were "added" to computer predicted levels

of each pollutant. These background levels were selected by the IEPA for the purpose of the EIS.

Based on the results of the analysis, ambient concentrations of nitrogen dioxide, carbon monoxide, particulate matter 10 microns or less in size, and sulfur dioxide would not exceed the NAAQS as shown in **Table 8**.

TABLE 8
MAXIMUM MACROSCALE DISPERSION MODELING RESULTS (BUILD OUT +5)

	Maximum Predicted Pollutant Concentrations (µg/m³)(a,c)									
	Nitrogen Dioxide	Carbon Monoxide		Particulate Matter 10 microns or less		Particulate Matter 2.5 microns or less		Sulfur Dioxide		
Alternative	Annual	1-Hour	8-Hour	24-Hour	Annual	24-Hour	Annual	3-Hour	24-Hour	Annual
NAAQS Values (b)	**100**	**40,000**	**10,000**	**150**	**50**	**65**	**15**	**1,300**	**365**	**80**
A	84	34,687	8,237	64	31	39	14	303	96	13
C	84	28,767	8,338	64	31	39	14	290	99	13

Notes: (a) Includes background concentrations.
(b) NAAQS = National Ambient Air Quality Standards.
(c) Maximum results with the Delayed Construction Schedule.
Source: Environmental Science Associates, Inc. [TPC] analysis, 2004/2005.

FAA's EDMS, and supplemental methodologies, were used to prepare the emission inventories of particulate matter 2.5 microns or less in size. In May of 2005, in response to comments by the public and by reviewing agencies, the FAA reviewed and amended their procedures to estimate emissions of particulate matter from aircraft and concluded, based on measurement tests that have been conducted to date, that the particle size distribution at the exit plane of today's modern aircraft engines is below 2.5 microns in size. Therefore, the aircraft-related particulate matter were estimated as particulate matter 2.5 microns or less in size, as well as particulate matter 10 microns or less in size. FAA's dispersion analysis for matter 2.5 microns or less in size indicates no exceedances of the applicable NAAQS for any year of analysis or any alternative evaluated.

Microscale Analysis

EDMS does not include algorithms that consider both the free flow and congested motor vehicle operating conditions on levels of carbon monoxide. Therefore, a second type of dispersion analysis, a microscale analysis, was performed to evaluate the change in carbon monoxide emissions in the vicinity of the intersections and/or interchanges affected by the proposed improvements. The microscale analysis was performed using the USEPA's MOBILE6.2 motor vehicle emission rate model and CAL3QHC roadway/intersection dispersion model. The CAL3QHC (Version 2.0) model is currently the most accurate tool for identifying potential carbon monoxide concentrations due to mobile source emissions at congested locations.

The roadway intersection analysis evaluated effects of the alternatives at ten intersections in the vicinity of the Airport. The intersections included both existing intersections and proposed/ improved intersections that would be constructed if the project is approved. The selection of

intersections was based on the analysis methodology described in the USEPA's *Guideline for Modeling Carbon Monoxide from Roadway Intersections*.

Based on the results of the analysis, ambient concentrations of carbon monoxide would not exceed the NAAQS in the vicinity of any of the evaluated intersections as shown in **Table 9**.

TABLE 9
MAXIMUM MICROSCALE DISPERSION MODELING RESULTS – BUILD OUT + 5

Phase	Alternative	Intersection No.	Intersection	Carbon Monoxide Concentrations (ppm) (a,d) 1-Hour(b)	8-Hour(c)
NAAQS Values (e)				35	9
Build Out+5	A (No Action)	10	Mannheim Road and Zemke Road	11.9	7.6
	C	20	Mannheim Road and Irving Park Road	10.9	7.0

Notes: (a) ppm= parts per million.
(b) Includes background concentration of 4.5 ppm.
(c) Includes background concentration of 2.9 ppm.
(d) Maximum results occur with the Original/Compressed Construction Schedules.
(e) NAAQS = National Ambient Air Quality Standards.
Source: Environmental Science Associates, Inc. [TPC] analysis, 2004.

Clean Air Act Conformity

Under Section 176(c) of the Clean Air Act, 42 U.S.C. § 7506(c) (also known as Conformity), Federal agencies, such as the FAA, are prohibited from engaging in, supporting in any way, providing financial assistance for, licensing or permitting, or approving any activity in a non-attainment or maintenance area that does not conform to an approved State Implementation Plan (SIP).

To implement the provisions of Section 176(c) of the Clean Air Act, the USEPA has adopted guidance for demonstrating conformity. Within non-attainment areas, Federal actions related to transportation (highway) plans, programs, and projects that are developed, funded, or approved under U.S.C. Title 23 or the Federal Transit Act, must meet the procedures and criteria of 40 CFR Part 51, Subpart T. Non-highway related actions must also demonstrate conformity. These conformity demonstrations must meet the procedures and criteria of 40 CFR Part 51, Subpart W. The IEPA has adopted these "general conformity rules" (Title 35, IL Administrative Code, Part 255).

Under the general conformity rules (40 CFR Part 93 Subpart B), a project does not require a conformity determination if the project is exempt, presumed to conform, or if the increase in emissions due to a proposed Federal action is less than the *de minimis* thresholds outlined in Title 35 Illinois (IL) Administrative Code Part 255 and 40 CFR Part 93 Subpart B and if the action-related emissions are not regionally significant (if the action-related emissions are less than 10 percent of the emissions in the SIP).

USEPA's general conformity rule defines a "conforming" project as one that: 1) conforms to the SIP's overall objective of eliminating or reducing the severity and number of air quality violations in a state and achieving expeditious attainment of the NAAQS; 2) does not cause or

contribute to new NAAQS violations in the area; 3) does not increase the frequency or severity of existing NAAQS violations in the area; and 4) does not delay the state's timely attainment of the NAAQS or impede required progress toward attainment.

Based on the results of the general conformity determination, the total direct and indirect project-related emissions of volatile organic compounds and nitrogen oxides (these compounds are the precursors to ozone) were determined to be either:

- Accounted for in the emission projections incorporated into the Chicago 1-hour ozone attainment demonstration SIP (the applicable SIP), or
- Could reasonably be accounted for in established emission totals and or excess regional emission estimates.

For these reasons, the FAA, in consultation with the IEPA and USEPA, has determined that the VOC and NO_x emissions associated with all of the Build Alternatives and construction schedules for the proposed O'Hare Modernization Program improvements conform to the applicable SIP, and thus to the Clean Air Act. IEPA's letter dated July 13, 2005 (Final EIS page J-345) provides that agency's concurrence with FAA's findings that the "airport's emissions are accounted for in the 1-hour ozone attainment demonstration SIP for the Chicago region." FAA's full response to USEPA's comments on the Draft General Conformity Determination is found on page J-356 in Appendix J of the Final EIS.

Supplemental Air Quality Analysis

In recent years, public and agency interest has increased regarding the contribution of airports to hazardous air pollutants (HAPs). HAPs are gaseous organic and inorganic chemicals and particulate matter that are either known or suspected to cause cancer (to be carcinogenic) or known or suspected to cause other serious health effects (non-carcinogenic).

The FAA developed the HAPs Protocol for the EIS in coordination with USEPA and IEPA. While the effects on human health from HAPs were raised in Scoping, the FAA, USEPA, and IEPA concur that at this time it is not appropriate to conduct a human health risk assessment for the HAPs discussed in Appendix I of the Final EIS, and that the influence of the proposed airport development on the health of those living in the vicinity of O'Hare cannot currently be quantified in a meaningful way. Collectively, the agencies believe that the use of existing human health risk assessment protocols would not be scientifically sound nor defensible given the limitations of the existing modeling tools and critical input data. Specifically, the computer models typically used in human health risk assessment protocols are unable to accurately represent chemical reactivity during transport of airborne pollutants, and the assumptions prescribed for HAPs exposure from stationary sources are not directly transferable to mobile sources. Furthermore, critical data concerning the absence of HAP emissions data and the limitations of HAP speciation profiles for all types of aircraft engines (i.e., commercial jets, military, general aviation, and air taxi) do not exist.

After stating, among other things, that "there are no federal standards regarding exposure to [toxic air pollutants]", and "the data that would be necessary to make conclusive statements regarding certain health risks associated with [toxic air pollutants] are not available...", the

FAA presented the results of a human health risk assessment (HHRA) prepared by the City of Los Angeles in its recent LAX Final EIS for proposed master plan improvements at Los Angeles International Airport. The FAA explained why the HHRA results were being presented in the LAX Final EIS as follows: "...however to the extent that fulfillment of the purposes of Executive Order 12898 [on Environmental Justice] would be furthered by such an analysis, presented below are the results of the [Los Angeles World Airports] Human Health Risk Assessment, which was prepared in compliance with CEQA and based upon CEQA thresholds of significance and provides a qualitative comparisons [sic] of potential health risks."[17] The FAA's conclusions concerning health risk assessments under NEPA in the LAX Final EIS are consistent with those reached in the EIS and ROD for the proposed modernization projects at O'Hare.

Given the lack of national ambient air quality standards for concentrations of HAPs and, also, given the uncertainties and limitation associated with airport-related data, information in this EIS regarding HAP emissions is provided in this EIS for disclosure purposes only.

In a recently initiated effort to better understand the potential effect of airport operations on HAPs, FAA, USEPA, and other Federal and state agencies are launching several new aircraft emission studies. For example, in August 2005, at Oakland International Airport, FAA, USEPA, the National Aeronautic & Space Administration, the California Air Resources Board (CARB), and Southwest Airlines were scheduled to initiate a study of aircraft jet engine emissions. This comprehensive study is expected to provide important new information on both criteria and air toxicant emissions. Additionally, starting in September 2005 at Los Angeles International Airport, CARB and UCLA will examine ambient pollutant levels in and around the Airport. This study will consider emissions from a variety of sources, including aircraft. If these studies are completed in a scientifically acceptable manner, the FAA may be able to better address these topics in future environmental studies for airport improvement projects.

Emission Reduction Measures

Alternative C will not have the potential to cause or contribute to a violation of the NAAQS, therefore no mitigation is required. However, through discussions with the USEPA, IEPA, and other agencies and organizations, several potential emission reduction measures have been identified. The measures would reduce pollutant emissions, including those associated with HAPs, resulting from both the operation and construction of the Airport. The measures (listed below) will be implemented by the City of Chicago for incorporation into the proposed improvements at O'Hare and throughout construction.

- Continue the use of Best Management Practices (BMP) as outlined in the City's BMP Manual, and in Section 5.6.5 of the Final EIS;
- Provide Fuel Hydrant System access at all future gates to eliminate tanker fuel trucks;
- Provide Pre-Conditioned Air (PCA) at all future constructed gates;
- Encourage provision of PCA at all existing gates;
- Continue the use of aircraft idling time reduction at gates;

[17] LAX Final EIS, Volume A, page A.2-88.

- Encourage retrofitting existing Ground Service Equipment (GSE) or replacing/converting GSE to electric power or alternate fuels to the extent practicable and feasible;
- Provide 400 Hz power and electrify connections at all future gates for aircraft use;
- Continue to encourage the use of 400 Hz power and electrified connections at all existing gates for aircraft use;
- Incorporate energy-efficient features into the specifications for new and existing buildings;
- Require that contractors limit the time that construction-related vehicles idle, to the extent practicable and feasible;
- Implement diesel idling restrictions for delivery vehicles;
- Use newer, cleaner, and more fuel efficient engines, or best available retrofit technology, in lieu of older diesel engines during construction to the extent practicable and feasible;
- Use ultra low sulfur diesel fuel for off-road diesel equipment as soon as possible and prior to the year 2010 (use of this fuel is Federally mandated in the year 2010 for off-road equipment);
- Use ultra low sulfur diesel fuel for on-road diesel equipment as soon as possible and prior to the year 2006 (use of this fuel is Federally mandated in the year 2006 for on-road equipment);
- Use best available retrofit technology as approved by USEPA and/or CARB for off-road diesel equipment during construction to the extent practicable and feasible;
- Continue the use of Stage II vapor recovery for refueling (GSE and aircraft);
- Encourage the use of alternate fuel and best available retrofit technology as approved by USEPA and/or CARB for internal bus/shuttle transport and for ground support equipment (GSE);
- Provide a centralized and consolidated rental car facility with connection to the Airport Transit System (ATS);
- Extend the existing ATS to new and existing facilities;
- Lower construction haul trips offsite (and overall emissions) by utilizing onsite material and balancing earthwork and excavation to the maximum extent possible;
- The City, working in cooperation and consultation with IEPA, will pay to IEPA the costs associated with that Agency's purchase and installation of three (3) HAPs-capable air quality monitors in the O'Hare environs. The proposed air quality monitors will be located off airport property in areas acceptable to IEPA, and in areas that would minimize or eliminate the need for property acquisition (such as at locations of existing FAA-owned navigational aids that are proposed to be abandoned as part of the proposed projects);

- Implement components of the City's OMP Sustainable Design Manual during design, planning, and construction, which includes the following:
    - Use of active/passive solar energy where practicable and feasible.
    - Use of green building design and other Sustainable Design goals with energy efficiency features for new and existing buildings and lighting systems.
    - Use of low volatile organic compound emission paints and solvents during construction of OMP-related buildings and terminals.
- Provide preferred parking for public and employees traveling to/from the Airport in alternatively fueled vehicles or hybrids, in vanpools/carpools, and for rental car fleets using alternatively fueled vehicles.

As previously stated, the emission reduction measures would also reduce pollutant emissions associated with HAPs. Additionally, the emission inventories/dispersion analysis presented and discussed in the Final EIS for Construction Phase I, Construction Phase II, and Build Out, conservatively assumes that 9.4 million cubic yards (MCY) of material would be removed from O'Hare property to construct the proposed improvements. Two potential additional scenarios, a 0.0 MCY scenario and a 5.4 MCY scenario, are also being considered by the City. Each of these scenarios would reduce the level of construction-related HAP emissions (the majority of the reduction being diesel particulate matter) associated with the proposed improvements. The reduction in HAP emissions would be primarily due to a lesser need for haul trucks to remove the material from the Airport. Over the entire construction period, the level of HAP emissions could potentially be reduced from 11 percent to 32 percent of those presented in the Final EIS through the implementation of the 5.4 or 0.0 MCY scenarios, respectively.

Additional detail related to these emission reduction measures, and the estimates of resultant reductions in emissions, is provided in Section 5.6.5 of the Final EIS and Section I.9.2 in Appendix I of the Final EIS.

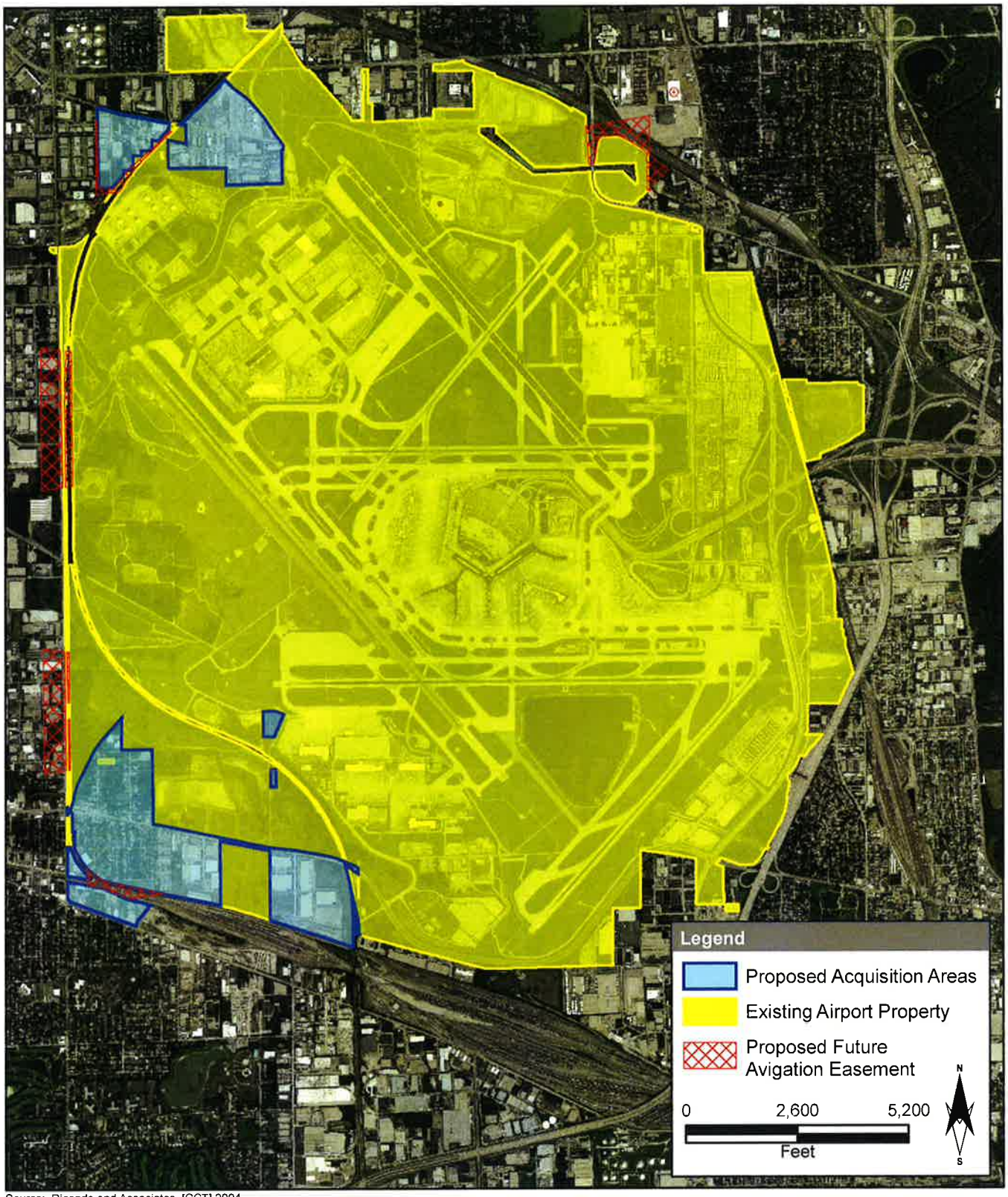
9.4 Social/Secondary (Induced) Impacts

Under Alternative C, 539 homes and 197 businesses would be acquired. The residences and businesses in the acquisition area need to be acquired because they are located in the footprint of the project development area, which includes areas required for construction of the proposed project, and for Runway Protection Zones (RPZ), which require specific areas to be kept free of any obstacles that would hinder approach or departure activities at the end of a runway. **Exhibit 7** through **Exhibit 10** depict the proposed land acquisition details associated with Alternative C, and illustrates the acquisition area for each community (Elk Grove, Bensenville, and Des Plaines) in relation to the entire community. The direct impacts of relocation require mitigation in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). Owners, tenants, and businesses in the proposed acquisition areas would be relocated pursuant to the Uniform Act and FAA's Advisory Circular AC150/5100-17 *Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects*. The Uniform Act will be followed by the City of Chicago with compliance assured by FAA. In

addition, although not specifically required under the Uniform Act, the City of Chicago has committed to providing advisory services to those immediately adjacent to the acquisition area.

In addition, the employment forecast for the Preferred Alternative (in 2018) indicates that there would be approximately 49,000 more permanent jobs related to O'Hare than there are under the No Action Alternative (Alternative A).

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Source: Ricondo and Associates, [CCT] 2004.

Chicago O'Hare International Airport

O'Hare Modernization
Environmental Impact Statement

Alternative C Land Acquisition

▶ Exhibit 7

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Source: Land Acquisition Database, Ricond & Associates, 2004. Community Boundaries, U.S. Census Bureau, 2000. Proposed Future Airport Property, Ricondo & Associates, 2003.

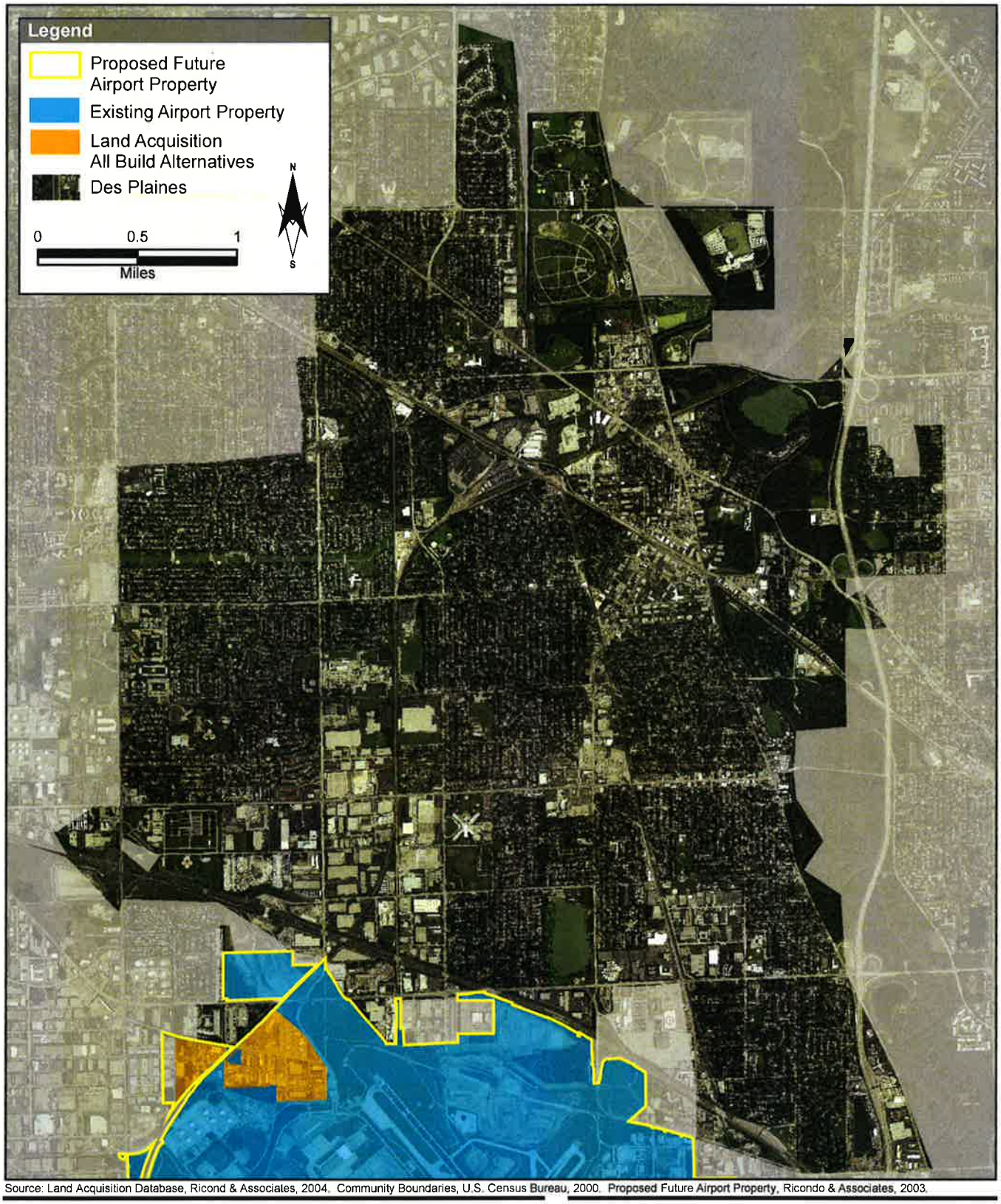
Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

Proposed Land Acquisition Elk Grove

▶ Exhibit 8

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Source: Land Acquisition Database, Ricond & Associates, 2004. Community Boundaries, U.S. Census Bureau, 2000. Proposed Future Airport Property, Ricondo & Associates, 2003.

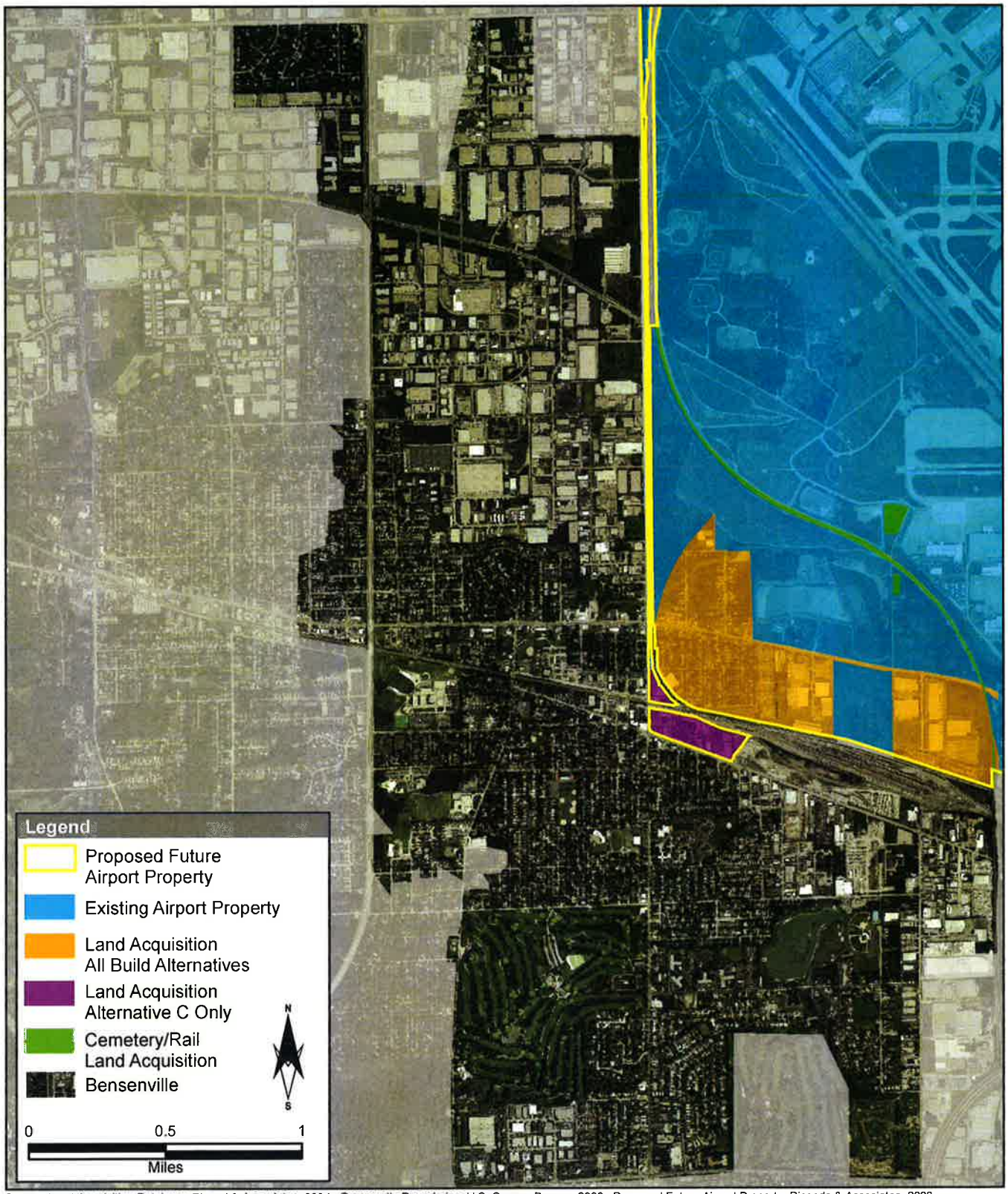
Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

Proposed Land Acquisition Des Plaines

▶ Exhibit 9

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Source: Land Acquisition Database, Ricond & Associates, 2004. Community Boundaries, U.S. Census Bureau, 2000. Proposed Future Airport Property, Ricondo & Associates, 2003.

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

Proposed Land Acquisition Bensenville

▶ Exhibit 10

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Residential Relocations and Business Acquisitions

A Draft Relocation Plan was prepared by the City of Chicago to assist displaced residents and businesses in relocating to new properties outside the proposed acquisition areas. This Relocation Plan was prepared in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), 49 CFR Part 24, and the FAA Advisory Circular/150/5100-17, dated September 7, 2001, and will be implemented.

As stated in the Relocation Plan, the following are the purposes of this plan:

- To inventory the characteristics and needs of the residences and businesses to be displaced;
- To investigate methods for minimizing the disruptions to households and businesses caused by their relocation;
- To inventory and demonstrate that an adequate number of properties similar to those being acquired by the airport currently exists within reasonable distances from the project area; and,
- To assure that all eligible property owners and tenants located within the project area will enjoy the full benefit of all protections and guarantees provided by Federal and state laws and regulations.

FAA is aware of the residents' concerns that the sale price established for their existing property (fair market value) would be insufficient to provide for purchase of comparable property in a new location. Provisions within the Uniform Act provide a mechanism to address these concerns.

Any impacted owner, tenant, or business in the proposed acquisition area will be afforded all appropriate rights established under the Uniform Act and FAA's Advisory Circular (AC) 150/5100-17. The Uniform Act will be implemented by the City of Chicago's O'Hare Land Acquisition Program with compliance assured by FAA.

In addition, because a large number of Spanish-speaking residents are within the acquisition areas, the City's Land Acquisition Consultant will provide a Spanish translator (translators for other languages will be provided if needed), with knowledge of 49 CFR Part 24 requirements, throughout the land acquisition process.

In addition to the above described mitigation measures, although not specifically required under the Uniform Act, the City of Chicago has committed to providing advisory services to those businesses immediately adjacent to the acquisition area.

Cemetery Impact

As a result of impacts to the St. Johannes and Rest Haven Cemeteries, a Memorandum of Agreement (MOA), has been developed for Section 106 purposes which outlines the steps that will be taken to mitigate the adverse impacts to these resources. The St. Johannes Cemetery Relocation Protocol is included as Attachment A to the MOA. The MOA is included in **Appendix B** to this ROD. With regard to other cemetery issues, including the FAA's process to

resolve the adverse impacts and the Religious Freedom Restoration Act (RFRA), see Section 9.7 and Section 11 of this ROD.

Property Tax Loss

The total taxes that will be lost to the school districts and community colleges for one year will be approximately $3,150,000 for Alternative C. Based on Section 21, Reimbursement for tax base losses of the O'Hare Modernization Act, tax loss reimbursement is outlined as follows:

> (a) Whenever the City acquires parcels of property within any school district or community college district for the O'Hare Modernization Program, the City shall, for the following taxable year and for each of the 5 taxable years thereafter, pay to that district the amount of the total property tax liability of the acquired parcels to the district for the 2002 taxable year, increased or decreased each year by the percentage change of the district's total tax extension for the current taxable year from the total tax extension for the prior taxable year; provided that no annual increase shall exceed the lesser of 5% or the annual increase in the Consumer Price Index. Funds payable by the City under this Section shall be paid exclusively from non-tax revenues generated at airports owned by the City, and shall not exceed the amount of those funds that can be paid for that purpose under 49 U.S.C. 47107 (1)(2).
>
> (b) Notwithstanding any other provision of this Section: (i) no funds shall be payable by the City under this Section with respect to any taxable year succeeding the 2009 taxable year; (ii) in no event shall such funds be payable on or after January 1, 2010; (iii) in no event shall the total funds paid by the City pursuant to this Section to all districts for all taxable years exceed $20,000,000; and (iv) any amounts payable to a district by the City with respect to any parcel of property for any taxable year shall be reduced by the amount of taxes actually paid to the district for that taxable year with respect to that parcel or any leasehold interest therein.

Temporary Construction Jobs

Construction employment, associated with airport development, is usually brief in duration and unlikely to cause long-term changes in regional growth. Therefore, the increase in construction jobs was not evaluated for potential secondary (induced) impacts.

Children's Environmental Health and Safety Risks

Pursuant to Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, Federal agencies are directed, as appropriate and consistent with the agency's mission, to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. Agencies are encouraged to participate in implementation of this Order by ensuring that their policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

In regard to potential children's health impacts, the FAA has undertaken an air quality analysis of project-related particulate matter emissions of 2.5 microns per cubic meter or less (PM2.5) which is presented in Section 5.6 of the Final EIS. This analysis indicates that Alternative C will increase PM2.5 emissions. The increased emissions will not result in violations of or delay attainment of the NAAQS. The NAAQS for PM2.5, as promulgated by the USEPA, are health-based standards designed to address concerns associated with sensitive populations, including children, the elderly, and those with asthma. As the NAAQS are health-based standards, Alternative C is not expected to cause adverse health effects on residents in Cook and DuPage

Counties, including children. Additionally, since the science and methodology for completing a valid project level analysis of health impacts is lacking, it would be speculative to extrapolate environmental health and safety risks for children from the hazardous air pollutant (HAPS) emissions data. For a discussion of project-related hazardous air pollutants and potential health effect, see Section 5.6 and Appendix I of the Final EIS.

There is a growing body of literature that demonstrates the effects of high noise levels on learning. The FAA, the City of Chicago, and the ONCC have been engaged for a long period of time in sound insulating schools within areas exposed to high aircraft noise levels around O'Hare. Through these efforts, 62 schools within the project area have been sound insulated as of June 2005. There is one eligible school, Socrates St. Sava Academy in Chicago, which would be within the 65 DNL Build Out + 5 noise contours for Alternatives C, D, and G that is currently eligible and has also requested sound insulation, but has not been sound insulated. Funding has been approved and this school is scheduled to be sound insulated by the end of the summer 2006.

The Final EIS has not identified any other project-related environmental health risks or safety risks that may disproportionately affect children.

9.5 Environmental Justice

As stated by Executive Order 12898 (EO 12898), Federal agencies must address potential environmental justice impacts. NEPA requires Federal agencies to identify measures to mitigate adverse effects of Federally funded, licensed, or approved projects. Additionally, other Federal laws, such as the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act) and Title VI of the Civil Rights Act, require Federal agencies to take steps to alleviate impacts from Federally-approved projects. DOT Order 5610.2, *Environmental Justice in Minority Populations and Low-Income Populations*, establishes how DOT and its operating administrations will integrate EO 12898. The DOT Order requires FAA to determine if activities for which it is responsible will have an adverse effect on minority and low-income populations, and whether that adverse impact will be disproportionately high. Further, DOT Order 5610.2 states:

> In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account...

Accordingly, this section identifies impacts on environmental justice populations and required mitigation measures.

In the event there are disproportionately high and adverse effects on minority populations and low-income households, the DOT Order states that the activity will only be carried out if:

> further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effect are not practicable. In determining whether a mitigation measure or an alternative is 'practicable,' the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects will be taken into account.

EPA guidance states it is important to "encourage and facilitate more active participation by low-income communities and minority communities in its NEPA process." In response, the FAA committed to a particularized, highly focused outreach program designed to ensure that this affected population received the full measure of all possible information about the proposed project and their rights related to potential acquisition/relocation. This goal was accomplished through careful identification of target audiences and aggressive community outreach beyond the traditional forums. The environmental justice outreach process for the EIS provided information to the affected population and afforded significant opportunity for interaction with Federal officials. On May 23, 2004, the FAA held its first environmental justice public meeting. A second environmental justice outreach meeting was held on August 29, 2004 at St. Alexis Church in Bensenville, and the third environmental justice outreach meeting was held on March 6, 2005, also at St. Alexis Church. In addition, over 30 small-group meetings were held at various businesses and residences located in the acquisition area.

FAA considered direct and indirect impacts for environmental resource categories where there were potentially significant impacts under NEPA: acquisition, noise, surface transportation, air quality (as requested by commenters, including USEPA), wetlands, and Section 4(f) and Section 6(f) impacts.

Direct Impacts

Within the population to be acquired under Alternative C, there are a disproportionate number of minority (by race and ethnicity) populations. In addition, businesses could be negatively impacted by the loss of minority residents. Other than the residents and the businesses previously mentioned, there may also be some environmental justice impacts to certain community resources that would remain following acquisition. For instance, schools or other social service agencies may conduct programs which teach English as a second language because of the large minority population present in the acquisition area. If this large minority population moves beyond the limits of the present school district boundary, programs may be affected. Class size and demographics could be affected which could cause a reduction in staff.

Such acquisition and relocation will require full compliance with the Uniform Act. The Uniform Act is a Federal statute that regulates the acquisition and relocation process and protects the interests of residents and business owners affected by the potential acquisitions. The Uniform Act requires that homeowners, business owners, and renters are provided with the following:

- Training in the acquisition process and an explanation of residents' rights, relative to the proceedings. (This training will be conducted in the language most familiar to the residents).
- Help in identifying comparable residential housing and commercial properties. (Housing must be safe, decent, sanitary and comparable to their present homes and lifestyles).
- Payment of applicable relocation assistance and moving expenses, as well as guidance on determining the property's fair market value.

Under Alternative C, the Uniform Act will be implemented by the City of Chicago's O'Hare Land Acquisition Program with compliance assured by the FAA. The City established a Land Acquisition Program office in July 2002, and it currently provides information through a website, written material, and a telephone hotline. In addition, the City of Chicago, under the supervision of the FAA, has developed a Draft Relocation Plan for the OMP.

The FAA also entered into discussions with the City of Chicago regarding the provision of appropriate assistance to businesses adjacent to the acquisition area. Although not specifically required under the Uniform Act, the City has committed to providing advisory services to those who request such services.

In addition, because a large number of Spanish-speaking residents are within the acquisition areas, the City's Land Acquisition Consultant will provide a Spanish translator (and other languages as needed), with knowledge of 49 CFR Part 24 requirements, throughout the land acquisition process.

Taking into account these mitigation measures, the FAA has made the determination that there would not be a disproportionately high and adverse effect to the minority (by race and ethnicity) populations that would be relocated as a result of the proposed action.

Noise Impacts

The analyses of potential noise impacts for Alternative C led to the preliminary conclusions in the Final EIS that there are disproportionately high and adverse noise impacts on minority (by race and ethnicity) populations and low-income households. In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures to the affected minority and low-income populations have been taken into account. As noted in Section 9.1 of the ROD, mitigation for noise impacts will occur. The specific noise abatement techniques are discussed further in Section 9.1.

The noise impact area to be mitigated (specified in Section 9.1) includes the area with noise impacts on minority (by race and ethnicity) populations and low-income households noted above. Therefore, after taking into account these mitigation measures, the FAA has made the determination that there would be no disproportionately high and adverse noise effect on minority (by race and ethnicity) populations and low-income households.

Surface Transportation Impacts

The analyses for the Build Alternatives led to the preliminary conclusions that there are disproportionately high and adverse surface transportation impacts on minority (by ethnicity) populations and low-income households. Within environmental justice areas, there are a total of two deficient intersections (Bessie Coleman Drive & Higgins Road and York Road & Irving Park Road Ramp) with Alternative C when compared to the No Action Alternative (Alternative A) in Build Out and Build Out + 5.

In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures to the affected minority and low-income populations have been taken into account. As noted in Section 9.2 of the ROD,

mitigation for surface transportation impacts will occur for these two intersections. The specific surface transportation mitigation for these two intersections is discussed further in Section 9.2.

After taking into account these mitigation measures, the FAA has made the determination that there would be no disproportionately high and adverse noise effect on minority (by ethnicity) populations and low-income households.

Impacts for Other Resource Categories

There are no disproportionately high and adverse impacts for air quality, wetlands, and Section 4(f) and Section 6(f) impacts.

9.6 Water Quality

Under Alternative C, the FAA concludes that no significant impacts related to water quality would occur. Compared to the No Action Alternative (Alternative A), the potential for water quality impacts under the Alternative C would be greater due to the increase in impervious surface area, additional airside areas using deicing chemicals, and substantial construction activity. However, the increase in potential water quality impacts would not be significant because, in addition to the efforts to reduce contamination to surface water from deicing chemicals, adequate stormwater facilities, designed to manage, contain, and convey the calculated increases in stormwater, would be designed and constructed as part of the proposed projects under Alternative C.

9.7 Historic, DOT Section 4(f), and Section 6(f) Properties

The selected alternative would trigger the application of 49 U.S.C. Section 303(c), commonly known as Section 4(f) of the Department of Transportation Act with regard to properties protected under that act. The selected alternative would constitute a "use" of three properties eligible for the National Register of Historic Places (NRHP): HP-7 (St. Johannes/John's Cemetery), HP-5 (Gas Service Station), and HP-6 (Rest Haven Cemetery). St. Johannes Cemetery would be acquired and relocated and the Gas Service Station would be acquired and demolished or relocated. The FAA has determined that the change in setting surrounding the Rest Haven Cemetery due to the selected alternative would constitute a use.

The selected alternative would also result in use of one locally important historic property: HP-10 (Schwerdtfeger Farmstead). Acquisition and removal or relocation is an actual, physical taking within the meaning of Section 4(f). The Schwerdtfeger Farmstead would be demolished.

The impacts of the selected alternative would not constitute a use to one other NRHP eligible property: HP-4 (Green Street School). Green Street School was originally proposed for acquisition and demolition under the selected alternative only. However, during the preparation of the Final EIS, FAA identified that a minor modification to the Green Street School chimney may obviate the need to remove the Green Street School. The chimney would penetrate the Terminal Instrument Procedures (TERPS) Surfaces of proposed Runway 10R/28L and would need to be lowered by 9.1 feet. The FAA has determined that the lowering of this chimney could be done in accordance with Secretary of Interior's *Standards for the Treatment of Historic Buildings* (U.S. Department of Interior, National Park Service, 1995) and would not constitute an adverse impact to the historic nature of the structure.

Historic properties of national, state, or local significance are protected under Section 4(f) of the U.S. Department of Transportation Act of 1966. Section 4(f) lands include publicly owned public parks, recreation areas, or wildlife and waterfowl refuges of national, state, or local significance and land from an historic site of national, state, or local significance. Land and Water Conservation (LAWCON) Section 6(f) refers to lands that are purchased with LAWCON funds for public recreation purposes. The selected alternative would adversely affect Section 4(f) and Section 6(f) properties.

Some of the properties protected by Section 4(f) and/or Section 6(f) include three parks (part of *Silver Creek/DuPage County Forest Preserve, Schuster Park,* and *Bretman Park*) that would be acquired under Alternative C. Impacts on these resources are discussed below

Local municipalities in the area of potential effect were also provided an opportunity to provide information concerning formally identified local landmarks for purposes of Section 4(f) evaluation. Sources identified 134 sites of local historical importance within the project area that could be affected by the proposed Build Alternatives.

Each of the historic, Section 4(f), and Section 6(f) properties described above are located in the southwest acquisition area. The impacts to these properties are necessary to accommodate the development of proposed Runways 10R/28L and 10C/28C, as well as the runway protection zones for these runways. The southwest acquisition area would also be used to relocate the Union Pacific Railroad and Irving Park Road.

A Draft Section 4(f) and 6(f) Evaluation (Evaluation) was submitted for public and agency review on May 20, 2005. A 45-day comment period was provided on the Draft Evaluation, which ended on July 5, 2005. A total of 13 comment letters were submitted on the Draft Section 4(f) and 6(f) Evaluation which are incorporated into the Final Evaluation and responded to by FAA. The Final Section 4(f) and 6(f) Evaluation is included in Appendix L of the Final EIS.

Direct Effects

The following section outlines the mitigation measures for impacts to each of the historic resources and 4(f)/6(f) lands that will be acquired.

Schuster Park (Bensenville Park District)(Section 6(f) Property)

The selected alternative will directly affect one park and recreation area (Schuster Park). Schuster Park will be acquired and converted to a non-recreational use by the City of Chicago. As Schuster Park is protected by Section 6(f) as well as Section 4(f), the loss of this park will be mitigated by acquisition at the fair market value and by provision of reasonably equivalent replacement property. Pursuant to the requirements of Section 6(f), any conversion of this property should be in accord with the existing comprehensive statewide outdoor recreation plan.

The FAA has coordinated with the Bensenville Park District, the Illinois Department of Natural Resources (IDNR) and the National Park Service (NPS) concerning the impact to Schuster Park to develop specific mitigation measures tailored to address the unique requirements of this property, as well as meet the requirements of Section 4(f) and Section 6(f). To address the direct acquisition of Schuster Park, a 4(f)/6(f) property, the FAA, in consultation with the Bensenville Park District, IDNR, and NPS, have developed the following mitigation measures:

- Replacement in-kind of the recreational resource. The replacement of the recreational resources would occur in consultation with the Bensenville Park District to ensure that the recreational uses meet local needs, or
- Other options for securing replacement property as identified in working with the Bensenville Park District, IDNR, and the NPS.

Based on the location of this park, its assets, and size, this park appears to be a neighborhood park. The residences in close proximity to the park, whose occupants are likely the primary users of this park, would be acquired under Alternative C. Schuster Park is a part of a system of parks within the Bensenville Park District boundaries and appears to provide facilities and a level of service similar to that of other parks within the Village of Bensenville and general vicinity. Therefore, the location of the replacement property would not necessarily need to be located in close proximity to the current park location. The impacts to this park would require mitigation under Section 4(f) as well as under Section 6(f). A specific mitigation plan will be developed in cooperation with the Bensenville Park District, IDNR, NPS, and the FAA.

As described above, mitigation for Section 6(f) impacts will consist of replacement of the converted Section 6(f) land with land of equal or greater value and usefulness by the IDNR. Prior to the time of conversion, appraisals will be conducted by the City and prepared in accordance with uniform Federal appraisal standards and requirements to assure acquisition of Schuster Park at its fair market value. This activity will commence when the property acquisition program is implemented. Thereafter, provision of the reasonably equivalent replacement property will occur within one year of Schuster Park's conversion.

The Villages of Bensenville and Elk Grove Village have notified the FAA that they do not concur with the DOT Section 303(c)/DOI Section 6(f) process, because they believe that the alternative selected does not safeguard parklands. Council for the Villages commented on this issue after release of the Draft EIS, and council's position has not changed since that time. FAA's responses to the Villages' comments on this issue can be found in Appendix U of the Final EIS, pages U.4-481 through U.4-486, and U.4-874 through U.4-888.

FAA environmental documents must provide evidence that replacement of converted Section 6(f) lands to the satisfaction of the Sectary of the Interior will be accomplished. Through its grant agreements, the FAA will require the City to fulfill mitigation requirements under FAA's property acquisition order (FAA Order 5100.37B). Through its grant agreements with the National Park Service, IDNR is required to comply with mitigation requirements of the Final EIS as related to provision of reasonably equivalent replacement property.

Bretman Park (Village of Bensenville)

Based on the location of this park, its assets, and size, this park appears to be a neighborhood park. The residences in close proximity to the park, whose occupants are likely the primary users of this park, would be acquired under Alternative C. Bretman Park is a part of a system of parks within the Village of Bensenville and appears to provide facilities and a level of service similar to that of other parks within the Village of Bensenville and general vicinity. Mitigation for this Section 4(f) property will include acquisition of Bretman Park at the fair market value.

Silver Creek (DuPage County Forest Preserve District)

The FAA has coordinated with the DuPage County Forest Preserve District concerning the impacted Section 4(f) property to develop specific mitigation measures tailored to address the unique requirements of each property as well as meet the requirements of Section 4(f). At a meeting with the District, they indicated that there is an Intergovernmental Agreement with the Village of Bensenville that limits acquisition of this property to the condemnation process. It is through this condemnation process that the fair market value of the Silver Creek property would be determined. In consultation with the Forest Preserve District, it was discussed that the fair market value established as a result of a condemnation process would be adequate mitigation for the potential loss of the Silver Creek property.

St. Johannes Cemetery (St. John's Church of Christ)

Shortly after the release of the Final EIS, the Keeper of the NRHP made a Final Determination of Eligibility for St. Johannes Cemetery, and in so doing, determined that it is eligible for the NRHP.[18] As a result of impacts to this Cemetery from the selected alternative, the FAA began a consultation process to resolve adverse effects to the Cemetery. The FAA held two meetings with consulting parties (legal representatives for the St. John's Church of Christ, Rest Haven Cemetery Association, the Village of Bensenville, and Elk Grove Village), the City of Chicago, and the Illinois Historic Preservation Agency (SHPO). The Advisory Council on Historic Preservation (ACHP) also attended the second meeting.

Through the consultation process a draft Memorandum of Agreement (MOA) was developed which outlines the steps that will be taken to mitigate the adverse impacts. The legal representatives for the consulting parties sent a letter to the FAA on September 9, 2005 submitting objections to the FAA's draft MOA and the preceding consultation process.[19] The MOA was then slightly modified by the FAA, City of Chicago, SHPO, and the ACHP to generate a final document. The MOA was signed by the FAA, ACHP, SHPO, and City of Chicago and describes the steps that will be taken to mitigate the adverse effects. These mitigation requirements are a condition of this ROD. The MOA is included in **Appendix B** of this ROD.

[18] Determination of Eligibility Reconsideration Letter, John W. Roberts, National Register of Historic Places, August 2, 2005.

[19] Letter from Douglas P. Wheeler, of Hogan & Hartson, to Amy B. Hanson, of the FAA, September 9, 2005.

Rest Haven Cemetery (Rest Haven Cemetery Association)

During the same process to resolve adverse effects for St. Johannes Cemetery discussed above, the FAA included Rest Haven Cemetery in the consultation process, because the Keeper of the NRHP had not yet determined whether Rest Haven Cemetery was eligible for the NRHP. FAA assumed for the consultation process that the Cemetery was eligible up to the time that the Keeper would make a determination. The Keeper of the NRHP determined that Rest Haven Cemetery is eligible for the NRHP on September 9, 2005.[20] Due to the determination of eligibility from the Keeper, mitigation provisions for Rest Haven Cemetery remained in the MOA and are a condition of this ROD. As noted above, the final signed MOA is included in **Appendix B** of this ROD

Gas Service Station (Village of Bensenville)

To address the project-related impacts (acquisition and relocation or demolition) at this NRHP eligible site, this property was included in the consultation and MOA process discussed above. Mitigation requirements for the Gas Service Station are included in the MOA and are a condition of this ROD. As noted above, the final signed MOA is included in **Appendix B** of this ROD.

Schwerdtfeger Farmstead (City of Chicago)

Shortly after the release of the Final EIS, the FAA revised its Determination of Eligibility to the SHPO for the Schwerdtfeger Farmstead, and in so doing, determined that it was not eligible for the NRHP.[21] The SHPO provided concurrence with the FAA's determination.[22] Though it was determined to be not eligible, it was assumed for purposes of the analysis in the Final EIS to be a Section 4(f) resource. As a result of impacts to this property from the selected alternative (demolition), the FAA developed a Memorandum of Understanding (MOU) with the City of Chicago to mitigate the adverse effects. The MOU is included in **Appendix B** of this ROD.

Indirect Effects

The following sites could experience potential indirect or constructive use impacts under Alternative C:

Locomotive Museum in Veteran's Park (Bensenville Park District)

Based on the uses of this facility, no mitigation appears to be warranted at this site since there would not be a substantial impairment (or constructive use) of this resource.

Additional Locally Important Sites

Sources identified 134 sites of local historical importance within the project area that could be affected by the proposed Build Alternatives. Based on the analysis conducted for the Section 4(f) and 6(f) Evaluation, none of these sites would be directly affected by Alternative C, but were considered relative to indirect/potential constructive use impacts. A review was conducted of the indirect impacts of the alternatives on these lands, and noise was identified as

[20] Determination of Eligibility, Patrick Andrus, National Register of Historic Places, September 9, 2005.
[21] Letter from FAA to IHPA regarding the Schwerdtfeger Farmstead, August 10, 2005.
[22] Concurrence from IHPA on FAA's Determination of Eligibility, September 9, 2005.

the only potential indirect impact. Section 5.8 and Appendix L of the Final EIS identified locally important historic sites that would experience noise levels above the FAA's noise compatibility guidelines with Alternative C. Of those 134 sites, 39 residences were within the 65 DNL contour for Build Out and Build Out + 5 for the selected alternative. These sites are identified in **Table 10** and **Table 11** below. These sites were assumed for purposes of the analysis in the Final EIS to be historic properties protected under Section 4(f).

The incompatible noise levels for residential use at these sites with the selected alternative are not anticipated to substantially impair the use of these properties by adversely impacting the historic values associated with these sites. These 39 residences would be sound insulated so that they would be compatible with the residential uses of the properties. These 39 residences would not be sound insulated to protect any historic values associated with the site. However, if any of these sites are valued for historic architectural properties, sound insulation has the potential to affect this value. With the selected alternative, the completion of the sound insulation for these 39 properties would follow the Secretary of Interior's *Standards for the Treatment of Historic Buildings* and FAA guidelines. Accordingly, there would be no Section 4(f) "use" of these sites due to noise impacts or any resulting sound insulation.

As a condition of this ROD for these properties:

- The City of Chicago will insulate the locally important historic properties, eligible for insulation, listed in **Table 10** by the time Build Out occurs.
- After Build Out occurs, the City of Chicago will produce a 65 DNL noise contour based on the operational characteristics of the Build Out configuration, but with forecasted operational levels five years in the future from when Build Out occurs, thus creating a new contour referred to as Build Out + 5 Forecast Contour (BO +5 F). The City will then determine if the locally important historic properties listed in **Table 11** will be within the BO +5 F Contour.
    - If the locally important historic properties listed in **Table 11** will be within the BO +5 F Contour, the City of Chicago will then insulate all locally important historic properties, eligible for insulation, within the BO +5 F 65 DNL and greater noise contour by the time Build Out +5 would occur.
    - If the locally important historic properties listed in **Table 11** will not be within the BO +5 F Contour, the City of Chicago will not be required to insulate them.

The sound insulation procedures are identified in the Memorandum of Understanding for Standards and Procedures for Sound Insulation of Locally Important Historic Properties for the Proposed O'Hare Modernization included in **Appendix B** of this ROD.

TABLE 10
LOCALLY IMPORTANT HISTORIC PROPERTIES WITHIN THE ALTERNATIVE C BUILD OUT 65 DNL AND GREATER CONTOUR

Map-ID	Name	Function	Address	City	Source
LS-480	21 Siemer's Home	Domestic; single dwelling	4262 N. Ruby St.	Schiller Park	Local Municipal Landmark
LS-482	20 Corner Store	Domestic; single dwelling	4851 Michigan	Schiller Park	Local Municipal Landmark
LS-502	Private Home (1918)	Domestic	138 S. Mason	Bensenville	Local Municipal Landmark
LS-503	Private Home (1911)	Domestic	141 S. Mason	Bensenville	Local Municipal Landmark
LS-504	Private Home (1906)	Domestic	145 S. Mason	Bensenville	Local Municipal Landmark
LS-505	Private Home (1903)	Domestic	146 S. Mason	Bensenville	Local Municipal Landmark
LS-506	Private Home (1919)	Domestic	158 S. Mason	Bensenville	Local Municipal Landmark
LS-507	Private Home (1924)	Domestic	166 S. Mason	Bensenville	Local Municipal Landmark
LS-508	Private Home (1925)	Domestic	169 S. Mason	Bensenville	Local Municipal Landmark
LS-509	Private Home (1921)	Domestic	172 S. Mason	Bensenville	Local Municipal Landmark
LS-510	Private Home (1900)	Domestic	173 S. Mason	Bensenville	Local Municipal Landmark
LS-511	Private Home (1920)	Domestic	175 S. Mason	Bensenville	Local Municipal Landmark
LS-512	Private Home (1921)	Domestic	180 S. Mason	Bensenville	Local Municipal Landmark
LS-521	Private Home (1922)	Domestic	143 S. Addison	Bensenville	Local Municipal Landmark
LS-522	Private Home (1922)	Domestic	150 S. Addison	Bensenville	Local Municipal Landmark
LS-523	Private Home (1924)	Domestic	168 S. Addison	Bensenville	Local Municipal Landmark
LS-525	Private Home (1925)	Domestic	201 S. Addison	Bensenville	Local Municipal Landmark
LS-524	Private Home (1922)	Domestic	169 S. Addison	Bensenville	Local Municipal Landmark
LS-540	Private Home (1866)	Domestic	4N030 Church Road	Bensenville	Local Municipal Landmark
LS-541	Private Home (1904)	Domestic	14 S. York	Bensenville	Local Municipal Landmark

TABLE 11
LOCALLY IMPORTANT HISTORIC PROPERTIES WITHIN THE ALTERNATIVE C BUILD OUT + 5 65 DNL AND GREATER CONTOUR, BUT OUTSIDE OF THE BUILD OUT 65 DNL AND GREATER CONTOUR

Map-ID	Name	Function	Address	City	Source
LS-59	Residence	Domestic; single dwelling	164 S. Center	Bensenville	IHPA Sprague Survey
LS-75	Residence	Domestic; single dwelling	165 S. York Road	Bensenville	IHPA Sprague Survey
LS-487	Residence	Domestic; single dwelling	262 N. Hemlock	Wood Dale	IHPA Sprague Survey
LS-515	Private Home (1919)	Domestic	301 W. Green	Bensenville	Local Municipal Landmark
LS-516	Private Home (1923)	Domestic	309 W. Green	Bensenville	Local Municipal Landmark
LS-517	Private Home (1923)	Domestic	313 W. Green	Bensenville	Local Municipal Landmark
LS-518	Private Home (1919)	Domestic	317 W. Green	Bensenville	Local Municipal Landmark
LS-519	Private Home (1907)	Domestic	507 W. Green	Bensenville	Local Municipal Landmark
LS-520	Private Home (1872)	Domestic	517 W. Green	Bensenville	Local Municipal Landmark
LS-530	Private Home (1900)	Domestic	145 S. Center	Bensenville	Local Municipal Landmark
LS-531	Private Home (1925)	Domestic	155 S. Center	Bensenville	Local Municipal Landmark
LS-532	Private Home (1894)	Domestic	156 S. Center	Bensenville	Local Municipal Landmark
LS-533	Private Home (1900)	Domestic	160 S. Center	Bensenville	Local Municipal Landmark
LS-534	Private Home (1903)	Domestic	168 S. Center	Bensenville	Local Municipal Landmark
LS-535	Private Home (1919)	Domestic	181 S. Center	Bensenville	Local Municipal Landmark
LS-542	Private Home (1907)	Domestic	158 S. York	Bensenville	Local Municipal Landmark
LS-547	Private Home (1870)	Domestic	120 E. Lincoln	Bensenville	Local Municipal Landmark
LS-548	Private Home (1910)	Domestic	131 E. Lincoln	Bensenville	Local Municipal Landmark
LS-549	Private Home (1924)	Domestic	176 S. Walnut	Bensenville	Local Municipal Landmark

9.8 Biotic Communities/Threatened and Endangered Species

The Illinois Department of Natural Resources (IDNR) and the U.S. Fish and Wildlife Service (USFWS) were consulted regarding the presence of biotic communities at the Airport and reviewed and concurred with the protocols and findings of the related surveys conducted for this project. The USFWS and the IDNR concur with the determination that no threatened or endangered species currently exist in the construction impact area.

Alternative C includes proposed land acquisition and would result in the potential disturbance of all biotic communities within the construction impact area. However, given that these biotic communities are not exceptional, and are fragmented, the FAA concludes that no significant impacts would occur. In addition, these biotic communities contain common, highly adaptive urban species that will continue to exist in the vicinity of the Airport.

9.9 Wetlands

A thorough evaluation of on- and off-Airport alternatives is provided in the EIS. Within both the EIS and the Section 404 permit application contexts, alternatives evaluated in detail must be determined to be practicable, in terms of satisfying project purpose and need criteria. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. Thus, an alternative recommended for implementation must be determined to be practicable or feasible in terms of safety design, engineering considerations, environmental consequences, economics, and other applicable factors, if any. Both the EIS and the Section 404 processes are structured so as to ensure that environmental information is disclosed to the public and agencies before decisions are made regarding project approval.

Simultaneously with preparation, distribution, and review of the Final EIS, the U.S Army Corps of Engineers (USACE) reviewed and processed a Section 404 permit application and pre-discharge notification per the requirements of the Clean Water Act, as submitted by the City of Chicago Department of Aviation (DOA). Similarly, the Illinois Environmental Protection Agency (IEPA) reviewed anti-degradation (Water Quality Standards) and Section 401 (Water Quality Certification) information pertaining to potential project-related wetland impacts. In accordance with a Memorandum of Agreement (MOA) signed by FAA, the USACE, and the IEPA, all three of these decision-making agencies will use the information developed during this EIS process to reach decisions on project alternatives and related matters as nearly simultaneously as possible. In furtherance of this goal, the public hearings conducted for the EIS were hosted by FAA, the USACE, and the IEPA for purposes of meeting these agencies' decision-making requirements.

Approximately 154.2 acres of wetlands (both jurisdictional and non-jurisdictional) and other non-wetland Waters of the United States (WUS) will be impacted by Alternative C. The wetlands at the Airport include many small, individual sites providing relatively few beneficial wetlands functions and values. These wetlands and non-wetland WUS have been adversely affected by past human activities, including clearing, grading, and other developmental actions. The impacts of past disturbances range from modification of plant communities, to creation of

new wetland areas, primarily caused by man-made grading changes that blocked original drainage ways or which created isolated depressions.

The guidelines associated with the Section 404 permit process indicate that satisfactory mitigation must be provided if jurisdictional wetlands impacts could occur as a result of project implementation. The City's proposed Conceptual Wetlands Mitigation Plan, which has been refined in response to comments from the Interagency Mitigation Review Team (MRT) during the Section 404 application review process, is intended to provide compensatory mitigation for jurisdictional and non-jurisdictional wetlands and non-wetland WUS removed from O'Hare. The MRT consists of the USACE, USEPA, IEPA, and the USFWS. The overall intent is to provide compensatory mitigation, which greatly improves the quality of the provided resources with respect to wildlife utilization, while also offering additional value to interested publics by providing access that is not possible at the Airport. A total of 447.4 acres of compensatory mitigation is to be provided as outlined in **Table 12**. FAA approves the City's proposed Conceptual Wetlands Mitigation Plan.

TABLE 12
PROPOSED WETLAND AND NON-WETLAND WUS MITIGATION CREDITS

Water Resource Type	Classification	Impact (acres)	Mitigation Ratio	Mitigation Credits	Mitigation Category(a)
USACE Jurisdictional Wetlands (DuPage County)	Jurisdictional	11.3	1.5 : 1.0	17.0	I
USACE Jurisdictional Wetlands (Cook County)	Jurisdictional	15.4	1.5 : 1.0	23.1	II
WUS - Creeks/Ditches (Cook County) (b)(c)	WUS	23.0	5.0 : 1.0	115.0	IV
WUS - Creeks/Ditches (Cook County) (c)	WUS	3.0	1.5 : 1.0	4.5	IV
Isolated Wetlands (DuPage County)	Isolated	24.9	1.5 : 1.0	37.4	I
Isolated Wetlands (Cook County)	Isolated	14.5	1.0 : 1.0 (d)	14.5	III
Isolated – Critical Classification (DuPage County)	Isolated	10.7	3.0 : 1.0	32.1	I
In-Channel Wetlands (SW120 and SW121) (e)	Jurisdictional	24.8	5.0 : 1.0	124.0	IV
USEPA – Forested (DuPage County) (f)	Jurisdictional	22.2	3.0 : 1.0	66.6	I
USFWS – Forested (Cook County) (g)	Jurisdictional	4.4	3.0 : 1.0	13.2	II
Total		**154.2**	N/A	**447.4 (h)**	N/A

Notes:
(a) Refer to Section 5.12.4.3 of the Final EIS for a description of the proposed approaches to meet mitigation requirements.
(b) Includes 1.0 acre of WUS in the potential southwest acquisition area.
(c) Mitigation ratios for specific creeks and ditched were reviewed by USACE.
(d) FAA concurrence from Michael MacMullen (FAA) to Carol Wilinski (DOA), dated January 16, 2002, for the 1.0: 1.0 mitigation ratio for the non-jurisdictional (isolated) wetlands associated with the O'Hare Express North Project.
(e) The USACE has indicated that mitigated Wetland SW120 and Wetland SW121 should be treated as WUS, as these wetlands provide conveyance for WUS (i.e., Bensenville Ditch).
(f) In comments provided by USEPA on the Draft EIS, USEPA indicated that wetlands NW28 and SW15 should be mitigated at a higher ratio of 3:1.
(g) In comments provided by USFWS on the Draft EIS, wetlands SE63, NE01, NE05, NE10, NE58, NW37B, NE08, SE64, and SW25 should be mitigated at a higher ratio of 3:1.
(h) 447.4 acres of credit are proposed.

Source: City of Chicago Department of Aviation Individual Permit Application to U.S. Army Corps of Engineers, November 2004 (Revised June 23, 2005).

9.10 Floodplains

Under Alternative C, the FAA concludes that no significant encroachment on floodplains would occur. Executive Order 11988, together with the applicable DOT order, establishes a policy to avoid supporting construction within a 100-year floodplain where practicable, and where

avoidance is not practicable, to ensure that the construction design minimizes potential harm to or within the floodplain. Consistent with the policy, implementation of Alternative C would encroach, although the encroachment would not be significant, upon the floodplains of the North and South Airfields by construction within the floodplains and relocation of the floodplains. The FAA has considered whether there are practicable alternatives to this encroachment. Because the floodplains are coincident with WUS, the review of practicable alternatives conducted on behalf of wetlands and non-wetland WUS is also applicable to the review of practicable alternatives to avoid the floodplain encroachment. FAA determined for WUS that there were no practicable alternatives to siting in these areas. See Finding 12.6 in this ROD, and Section 5.12 of the Final EIS for further information.

The City of Chicago's proposed drainage improvements would be sized to accommodate the increase in runoff from the North Airfield that would occur under Alternative C. In addition, Alternative C would include the development of detention basins on the South Airfield that would accommodate the increase in runoff that would occur as a result of increases in impervious surfaces. These improvements, as described in Section 5.13.3.2 of the Final EIS, would reduce the size of the floodplains on the Airport and would ensure that no significant encroachment impacts to the existing floodplains would occur. The increase in runoff from the Airport would be accommodated without having an adverse effect on floodplains, on stream habitat, or on streambank erosion. Further, Alternative C conforms to all applicable state and/or local floodplain protection standards (Executive Order 11988).

9.11 Wild and Scenic Rivers

Because Alternative C would include the expansion of detention basins at the Airport, this alternative would not affect the free flowing condition of the Des Plaines River and, given the use of best management practices in operating the airport, would not affect any of the natural, cultural, or recreational values of the river. Therefore, no impacts to wild and scenic rivers or rivers on the Nationwide Rivers Inventory (NRI) would occur under Alternative C.

9.12 Energy Supply and Natural Resources

Energy demands are expected to increase in the future whether or not Alternative C is implemented. Energy demands associated with airport facilities would only increase if additional airport facilities are undertaken, but increases in aircraft fuel consumption would increase as activity increases and/or delay levels increase. Contacts with local energy and natural resource suppliers have indicated the ability to meet the projected demands with Alternative C.

9.13 Light Emissions

Light emission impacts are localized based on the existing or potential location of individual facilities. However, because the lighting would be directed upward, or would be buffered from surrounding residential areas by existing industrial, commercial, and transportation sources, the FAA concludes that no significant project-related light emission impacts would be expected.

9.14 Solid and Hazardous Waste

The FAA concludes that no significant impacts related to solid and hazardous waste would occur under Alternative C since no problems are anticipated with respect to meeting the applicable local, state, Tribal, or Federal laws and regulations. In general, in addition to construction, demolition and land clearing waste, it is anticipated that there would be an increase in the level of solid waste generated by the Airport with Alternative C when compared to the No Action Alternative. Though the handling of hazardous waste is forecast to increase proportionately with the growth of enplaned passengers, best management practices regarding handling and transporting hazardous materials would be utilized to ensure environmental safety.

9.15 Construction Impacts

For large airport improvement projects, it is typical for the construction to be phased in over several years. It is not atypical, nor inherently unsafe, for a major airport construction project to coexist with regular aircraft operations. However, construction in an area of active aircraft operations can present many risks. Section 5.20.4.7 of the Final EIS describes how airfield construction will take precautions to maximize safety and attempt to minimize operational disruptions.

Additionally, the Transportation Security Administration (TSA) was involved in the ALP review process commenting specifically on security issues. The City of Chicago, in consultation with the TSA, will develop and implement procedures to ensure that the airfield remains secure during construction operations.

Temporary construction impacts resulting from building runways, taxiways, roads, terminal improvements, and other activities related to Alternative C may include air, water, and noise pollution, and disposal of construction debris. Surface transportation traffic patterns, both on and off the airport, may be altered during construction, in addition to other social and socioeconomic impacts. Additionally, airfield construction will alter normal aircraft taxi patterns and runway usage.

The City of Chicago has developed a program of construction environmental impact mitigation to eliminate or reduce construction impacts with Alternative C, which includes the incorporation of FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports,* pertaining to the reduction of construction impacts. Although three potential construction scenarios (Original, Compressed, and Delayed Construction Schedule) were considered in evaluating the potential impacts from construction (see Section 5.20.3, Construction Plan, of the Final EIS), the required mitigation measures were identical. There are three main entities responsible for construction impact mitigation; the City, the City's Project Designer, and the City's Contractor.

City of Chicago

The City of Chicago Department of Aviation (DOA) has established operational requirements for the mitigation of construction impacts on past and current projects. The City of Chicago will ensure that these operational requirements will be conveyed to the City's Project Designers for

inclusion in bidding and contract documents. In addition, the DOA has prepared an OMP Best Management Practices Manual, and an OMP Sustainable Design Manual. These two manuals provide procedures that will become requirements for construction impact mitigation as appropriate for each individual project, and are both included in Appendix Q of the Final EIS. The DOA will also review bidding documents for environmental protection requirements and monitor construction to assure compliance.

Additional construction impact mitigation measures committed to by the City of Chicago, such as the City of Chicago's Construction Outreach Program, the requirement of airfield construction phasing plans for construction within the Aircraft Operations Area (AOA), and adherence to the City's General Storm Water Permit for Small Municipal Separate Storm Sewer Systems (MS4 permit), is provided in Section 7.9 of the Final EIS.

City's Project Designer

The Project Designer will include applicable Best Practices and Sustainable Design procedures in all bidding and contract documents, as well as all requirements of local, State and Federal ordinances, regulations and permits. The Project Designer will include in project specifications, where applicable, the provisions of FAA Advisory Circular 150/5370-10A *Standards for Specifying Construction of Airports* that pertain to the reduction of construction impacts. FAA AC 150/5370-10A requires the Contractor to submit:

- Schedules for accomplishing erosion control work
- Plan for erosion and dust control on haul roads and at borrow pits
- Plan for disposal of waste materials

In addition, the Project Designer will require the Contractor to submit, prior to construction and implementation, the following plans for the City of Chicago's review and approval:

- Construction and Demolition Waste Management Plan
- Recycling and Salvage Plan
- Pollution Prevention Plan
- Hazardous Waste Disposal Plan
- Spill Prevention and Mitigation Plan
- Air Pollution Control Plan
- Fuel and Lubricants Control Plan

City's Contractor

The City Contractors will be responsible for compliance with all permits and all contractual environmental requirements for both the Contractor operations and all work by subcontractors.

9.16 Cumulative Impacts

The FAA conducted a thorough and extensive analysis regarding cumulative impacts. As defined by CEQ guidance,[23] the consideration of cumulative effects must consider the past, present, and reasonably foreseeable projects. Such projects include actions undertaken at the Airport by the City of Chicago or other parties (such as FAA or CTA), as well as notable actions that affect the airport area, including development undertaken in the Airport environs. Chapter 6 of the Final EIS identifies hundreds of past, present, and reasonably foreseeable future projects.

The cumulative impacts analysis contained in Chapter 6 of the Final EIS included the review of past, present, and reasonably foreseeable conditions within the land use study area as shown on Exhibit 4.2.1 in the Final EIS, and in the surrounding airport environs. This review indicates that O'Hare exerts both positive and negative impacts on the local environs, which have changed over time. Over time, these impacts have decreased relative to environmental conditions such as aircraft noise, emissions of carbon monoxide, volatile organic compounds, and particulate matter. Impacts from surface transportation levels and congestion, natural resource consumption, air emissions of nitrogen oxides and sulfur oxides, and solid waste/hazardous waste generation have increased as activity levels have increased. For example, in its study of cumulative noise effects, the FAA has studied aircraft noise, construction noise, highway noise and railroad noise in the O'Hare area. No significant cumulative noise increases were found. With respect to air quality, the agency reviewed emissions reasonably foreseeable from the various Build Alternatives, as well as emissions from construction, and vehicular emissions at O'Hare including surrounding surface roads. Again, no significant cumulative increases were identified.

In addition, a number of past, and present non-airport projects have occurred in the area, and others are expected to occur in the future. It is anticipated that changes will continue in the Airport vicinity due to continued increases in population and economic activity in the airport environs and in the Chicago region, the third largest metropolitan area in the U.S. Much of the Airport environs are already surrounded by intensive transportation, residential, and commercial uses. There will be other forms of development, the dimension of which would not be known until plans are approved, which can not be measured at this point in time. Given the existing extent of development in the region generally, the incremental effect of the Preferred Alternative is minor, at best, as reflected in this EIS. Some intensification of development would be expected in the areas, resulting in additional pressures on the social fabric and natural resources of the area. Such effects are dependent on ultimate design, land use plans, and other considerations. However, until specific project plans are known, it is not possible to quantify the specific cumulative effects from Alternative C and these other regional projects.

[23] Considering Cumulative Effects Under the National Environmental Policy Act, Council on Environmental Quality, January 1997. Guidance on the Consideration of Past Actions in Cumulative Effects Analysis, Council on Environmental Quality, June 24, 2005.

10. COMMENTS ON THE FINAL EIS

The FAA has carefully assessed and considered comment letters received on the Final EIS in making its decision. **Appendix A** of this ROD provides copies of each letter received on the Final EIS with detailed responses to comments on major issues raised by the commenting agencies and citizen groups.

10.1 Planning Issues

10.1.1 Financial Feasibility

In light of the many comments the FAA has received regarding the financial feasibility of the OMP, any discussion of this subject in this ROD must include an identification of what is appropriate for this document to address, what is beyond the scope of this particular FAA decision, and what the FAA should consider in addressing any application for Federal funding. In the preceding sections of this ROD, the FAA has examined the usual array of matters that it must consider whenever it reviews a proposed ALP for a major airport improvement project. These matters include the environmental determinations under a host of Federal statutes. These measures include the environmental aspects of 49 U.S.C. 47106 and 47107 relating to the eligibility of the proposed project for Federal funding under the Airport Improvement Act, and under 49 U.S.C. 40117 relating to eligibility to impose and expend passenger facility charges for the proposed project. Such determinations, however, do not by themselves empower the FAA to approve airport funding grants or authorize the City of Chicago to collect those PFCs. Instead, as the FAA has reiterated in the Final EIS and elsewhere, the findings contained in this ROD provide the clearances for other, separate, FAA administrative processes. It is well established that the FAA is not required to undertake a formal cost-benefit analysis as part of an EIS. Moreover, there are occasions when there are no pending requests for AIP funding during the time that the FAA completes its EIS and issues its ROD. In other circumstances, the environmental analysis necessary for ALP approval and the economic scrutiny required for AIP funding are conducted on two separate but generally concurrent tracks. In either event, the FAA's environmental review process for approval of an ALP normally includes an examination of financial feasibility within the context of its review of alternatives.

Here, late in the EIS process, the City of Chicago did file a request for AIP funding. A decision by the FAA on that application is expected soon. However, the happenstance of overlapping ALP and AIP decisions cannot be seized upon to convert this environmental review into a thorough analysis of projected benefits and costs that is inherent in an application for Federal funds. Instead, the FAA has treated allegations of financial infeasibility of the OMP that were presented to it as part of the ALP review process as it would any other comment relating to its environmental obligations. These claims were reviewed, examined by experts in this subject, and placed in the context of the FAA's duties for this particular decision.

In Section 1.7 of the Final EIS, the FAA described the plan adopted by the City of Chicago to finance the OMP. In its responses to comments, particularly those of the Campbell-Hill consulting firm, the FAA engaged its own team of experts and consultants to determine the merit of these comments. This examination was conducted as part of the EIS process for this ROD and was wholly separate from any scrutiny the FAA might engage in as part of its

separate duty to consider the City's application for funding. In addition, the FAA conducted a sensitivity analysis of the City's finance plan to better inform its ALP decision.

On the basis of this information, FAA has no reason to believe that the City's financial plan can not be implemented. Further, FAA has no reason to believe that the resulting costs to airport users (most significantly, major airlines serving O'Hare) will significantly adversely affect the ability to finance the capital projects and realize the projected aviation demand, particularly in the context of future investments that will be required at other large hub airports in the United States. All projections and forecasts are subject to uncertainty, and future events may result in changes or adjustments to the FAA conclusions.

FAA has carefully considered comments related to financial feasibility, including concerns regarding airline financial support for OMP. FAA has concluded, based on review and analysis of data, that the increased airline user charges expected to result from OMP implementation, while important, are likely to be reasonable in the context of the benefits of the investment; such user charges (e.g., landing fees and terminal rents) represent a relatively small share of airline operating costs compared to other costs such as labor and fuel; there is a logical economic basis for the airline support for OMP that has been evidenced. FAA has also reviewed additional cost-related information applicable to the project. For purposes of this review under NEPA, the FAA has concluded that the estimated costs of the project are reasonable. FAA has also concluded that it is reasonable to assume that, based upon the impact O'Hare has on the Chicago region, as well as the NAS, and the benefits to the regional economy, there will be sufficient funds to complete the proposal, if approved. In addition, FAA believes that with a project of this magnitude and importance, the availability of projected funding sources is sufficiently reasonable and capable of being obtained. Moreover, the FAA notes that the $300 million request for Federal funding is a small percentage of the cost of either Phase I or the full build project. Accordingly, the FAA decided, in the Final EIS, that it was both appropriate and necessary under NEPA to subject the Sponsor's full build proposal and alternatives thereto to this environmental analysis because the entirety of the proposed action is reasonably foreseeable. By examining financial feasibility of the proposed action, the FAA assured that its consideration of alternatives was not compromised by any misunderstanding over financial feasibility. This determination was made without prejudice to evaluation of the City's pending Letter of Intent (LOI) request, which is a separate process from this environmental analysis.

The FAA believes that this examination of financial feasibility in a ROD approving an ALP satisfies its obligations under NEPA. The Final EIS, the FAA's responses to comments, and this administrative record, provide the complete grounds for the FAA's findings here on the financial feasibility issue. At the same time, the FAA is mindful of the ongoing consideration of the application for AIP funds, and is able to state, without prejudice to the outcome of that proceeding, that there is no present information in that pending application that would warrant a different outcome in this matter.

10.1.2 FAA Planning Horizons

Airport planning and development includes the use of a number of different timeframes. The FAA's consideration of the OMP has included the use of the 2002 Terminal Area Forecast (TAF) with a planning horizon that extends to 2020. In reviewing the Benefit Cost Analysis to

consider funding applications under the Airways Improvement Act, the FAA applied guidance that calls for an applicant to use economic modeling that includes projections to 2028. In the FAA's discussion of environmental impacts contained in the Environmental Impact Statement, the FAA evaluates such impacts out to the year 2018. In addition, the City in its Master Plan, included forecasts and analysis that extended some 20 years beyond the projected completion of the OMP.

The FAA has received several comments suggestion that it should use a uniform planning horizon in general, and that its selection of 2018 as the final year of analysis for this EIS is especially inappropriate because such a shortened span distorts the potential benefits and detriments of the proposed action.

The FAA disagrees with this criticism. Because there are so many different types of functions assigned to the FAA, the agency has the responsibility and discretion to select the tools that will best enable it to fulfill each of those different missions. Just as one uses a different setting on a telescope to view objects at differing distances, the FAA has selected different horizons to satisfy its different statutory objectives.

Terminal Area Forecasts are used for staffing and facility planning purposes. The FAA uses the short-term projections of the TAF to make staffing and personnel planning decisions. The longer range TAF projections inform the agency's decisions on facility planning, requests for budget authority and appropriations, and future strategic initiatives in order to satisfy its statutory obligations under the Federal Aviation Act.

Similarly, the FAA benefit cost guidance provides that a sponsor include an evaluation period that includes projections generally 20 years beyond the completion of construction for major airport infrastructure projects.

This extended cost-benefit horizon reflects the projected useful life of structures and facilities for which funding is sought, in order to properly identify not only the evident costs, but all of the benefits that might flow from approval of such a grant. In some cases, that calculus includes a range of sensitivity tests to insure that these dollars are properly allocated.

With respect to the preparation of master plans, the FAA guidance calls upon a sponsor to include levels of annual activity for 5, 10, and 20 year horizons. On some occasions, as was true here, a sponsor may elect to extend the master plan forecast horizon beyond the 20-year period suggested in FAA guidance.

In contrast, the FAA's obligations under the National Environmental Policy Act (NEPA) require it to identify "reasonably foreseeable" environmental impacts in preparing Environmental Impact Statements. The agency's analysis of such impacts is critical to its ability to accurately evaluate alternatives and to prudently select among them as part of the NEPA process. To accurately identify and properly assess such impacts here, the FAA has used a period of time that extends five years beyond the completion of the proposed action. Its experience in applying NEPA led the FAA to adopt that planning horizon for the OMP because events beyond that period of time are not "reasonably foreseeable." For example, it is highly unlikely that the authors dealing with the proposed O'Hare improvements in the 1984 O'Hare EIS could

have accurately projected the 90 percent reduction in exposure of 65 DNL contours that occurred in the time between that EIS and this proposed action (see **Exhibit 6** of this ROD).

The FAA selection of this planning horizon for NEPA has been ratified as reflected in the concurrence by the USEPA in this airport improvement EIS.

10.1.3 1984 O'Hare International Airport Record of Decision

The FAA's 1984 ROD was issued as a basis for FAA's approval of an Airport Layout Plan which was developed by the City of Chicago as part of the Master Plan Study for O'Hare International Airport. The 1984 ROD includes the following under the Alternatives section:

> c. Development of New Airport. Development of a new major air carrier airport was considered several times in the past, as well as in the recently completed Master Plan Study. This alternative was not selected because of difficulties in finding a suitable site, the extremely high costs of acquisition and development of a new site, and the long lead time to make it operational. Development of another air carrier to serve the Chicago Metropolitan Area will be studied again as part of a State System Plan to be prepared by the Illinois Department of Transportation under a series of grants to be funded by the FAA's Airport Improvement Program. The initial grant was issued in September 1984.[24]

It should also be noted that in 1982, Chicago entered into an Intergovernmental Agreement with suburban communities and the Suburban O'Hare Committee (SOC) whereby it agreed that it would not place new O'Hare runways in service during the period ending June 30, 1995.

Subsequent to, and in accordance with, the FAA's 1984 Record of Decision (ROD), several FAA grants were issued for state system planning which studied Chicago regional aviation capacity issues and the needs for a supplemental air carrier airport. This satisfied all FAA's 1984 ROD requirements. While the State System Plan did not conclude that O'Hare's runways should not be expanded, it did recommend a new south suburban airport. In any event, previous state system plan coverage on the topic of O'Hare has been superseded by the State's 2003 passage of the O'Hare Modernization Act, which provided statewide special emphasis for development of the O'Hare Modernization Program.

10.1.4 Department of Transportation – Office of Inspector General

On July 21, 2005, the Department of Transportation – Office of Inspector General (OIG) issued a report regarding the FAA's review of the City of Chicago's O'Hare Modernization Program. This report documented an inquiry of the OIG that came about in response to a request from Representative Henry J. Hyde and former Senator Peter G. Fitzgerald. In the report, the OIG raised concerns that the FAA be vigilant with respect to 1) the Agency's progress on the implementation of ORD-related airspace changes, and 2) the Agency's review of the cost estimate and financial feasibility of the OMP. The FAA whole-heartedly agreed with the OIG that these two concerns were indeed legitimate subjects of discussion. FAA has chosen to accept and plans to implement the OIG recommendations with respect to these two concerns.

In addition, the OIG made certain factual determinations, among others, stating that, "[a]dministrative responses are not a desirable long-term solution to capacity constraints at

[24] FAA Record of Decision, Chicago O'Hare International Airport Master Plan, November 14, 1984.

O'Hare because prolonged regulatory intervention can restrict demand and inhibit competition," and "there is no question that capacity constraints exist at O'Hare and that these constraints affect the efficiency of the entire National Airspace System". The FAA agrees with the OIG on these two points.

11. OTHER ISSUES

11.1 Religious Freedom Restoration Act and First Amendment Issues

St. Johannes Cemetery and Rest Haven Cemetery are two religious cemeteries affected by the proposed Airport Layout Plan for O'Hare Modernization. Sections 5.8.7.4 and 5.8.7.5 of the Final EIS contain detailed descriptions of St. Johannes and Rest Haven Cemeteries. In earlier sections of this ROD, the FAA described its decisions and findings under Section 4(f) of the Department of Transportation Act, 49 U.S.C. §303(c), and Section 106 of the Historic Preservation Act, 16 U.S.C. §470f for these two properties. Here, the FAA addresses and resolves the religious liberty claims related to these cemeteries that have been asserted under the First Amendment of the U.S. Constitution and the Religious Freedom Restoration Act (RFRA) because of the FAA's many actions involving O'Hare modernization.

When the FAA began to examine the City of Chicago's proposal for O'Hare Modernization, it was the FAA's hope that the difficult and sensitive issues involving potential cemetery relocation could be resolved in a collaborative and consensual manner. The agency recognizes that any proposal to relocate a cemetery can provoke intense concerns. The FAA also notes that within the recent past, airport improvement projects at Toronto, Atlanta, Dulles and elsewhere have affected historic cemeteries, and at each of those airports, cemetery relocation/access issues were resolved without recourse to litigation. In fact, an O'Hare improvement project in the 1960's resulted in the relocation of graves from Wilmer's Old Settlers Cemetery to the Rest Haven site. However, through extensive correspondence, a succession of meetings, and pending litigation, the FAA clearly understands that there remains strong opposition by the religious objectors to relocation of graves from St. Johannes Cemetery and preservation of Rest Haven Cemetery as proposed in the Final EIS.[25]

Section 5.22 of the Final EIS presents the FAA's identification of these religious-liberty bases legal issues, and contains the agency's proposed resolution. Also, by letter of July 27, 2005, the FAA advised the parties advancing these religious liberty claims of the agency's contemplated resolution of these matters. The FAA invited written comments on the proposed resolution so that the FAA could make a final decision in this document. As part of this process, the FAA made available to the public the background documents and studies it had utilized in addressing these religious liberty issues. In resolving these matters, the FAA has considered with the greatest care all of the comments submitted to it on this subject.

[25] Those opposing the City of Chicago's contemplated acquisition and relocation of St. Johannes and Rest Haven Cemeteries have indentified themselves in correspondence with the FAA as the "religious objectors." The agency will adopt that term in addressing the issues they have presented to it.

11.1.1 Identification of the Claims

The religious objectors assert that RFRA precludes the FAA from approving any revision to an ALP that involves cemetery acquisition. They claim that such approvals by the FAA will substantially burden their free exercise of religion in three distinct, but related ways. First, the religious objectors assert that some of their members wish to be buried at St. Johannes or Rest Haven Cemetery, and that acquisition and relocation of these cemeteries would preclude them from being buried in these sacred, consecrated grounds. Second, they claim that acquisition and relocation would impair the practices of families and friends of those buried at these cemeteries that include visiting the sites, tending to the graves and engaging in meditation and reflection. Third, the religious objectors believe that neither cemetery should be disturbed because the ultimate salvation of those who are buried at St. Johannes or Rest Haven Cemetery will be impaired by the removal and relocation of their remains. The religious objectors declare that each of these claims constitutes a substantial burden on the free exercise of religion as practiced by them. They further assert that there is no compelling governmental interest in approving an ALP that requires cemetery acquisition and relocation, and that the FAA cannot demonstrate that the City's plan is the least restrictive alternative available to the decision makers.

The religious objectors also assert that the Free Exercise Clause of the First Amendment to the U. S. Constitution prohibits the FAA from approving any ALP that would allow the City of Chicago to acquire the two cemeteries and relocate the graves they contain. The religious objectors assert that the FAA is unable to demonstrate a compelling need to authorize such action, and that the agency has failed to establish that no alternatives to acquisition and relocation exist. These objectors assert that they are entitled to have the FAA apply the "compelling governmental interest test" in resolving their Free Exercise claims.

11.1.2 Resolution of Religious Freedom Restoration Act Claims

Both in the letter of July 27, 2005, to the religious objectors, and in Section 5.22 of the Final EIS, the FAA described its proposed resolution of these claims after first stating that its analysis of these issues presumed the applicability of RFRA to this situation. The FAA has adopted that presumption in this ROD, even though there is limited judicial guidance on the scope of this act in a permitting or funding context. Accordingly, the FAA first examines if the challenged governmental conduct imposes a "substantial burden" upon the free exercise of religion. The FAA then proceeds to decide if there is a "compelling governmental interest" that has caused this "substantial burden," and finally, it examines whether there is a "less restrictive alternative" to the proposed Federal action.

Application of the "substantial burden" factor

The FAA has identified three related but separate assertions of "substantial burden" to the free exercise of religion as practiced by the religious objectors. They are: (1) a desire by relatives or friends of those buried at St. Johannes or Rest Haven cemeteries to have the opportunity also to be buried at that site when they die; (2) a desire to visit St. Johannes or Rest Haven cemeteries to care for graves and for reflection, mediation, and worship; and (3) an insistence that these

cemeteries not be acquired by the City of Chicago and the bodies buried therein relocated to another cemetery.

In applying the substantial burden test to these three claims, the FAA finds limited documentation for two of their three claims. The religious objectors have provided scant evidence that they will be substantially burdened if they cannot be buried at either St. Johannes Cemetery or at Rest Haven Cemetery. Similarly, there is little evidence in support of a substantial burden imposed upon their religious practices involving their desires to continue to visit either of these sites, to tend to graves and to engage in meditation and reflection. In contrast, the FAA does find that the religious objectors have provided sufficient documentation for the religious grounds underlying their opposition to the reinterment of those buried at the two cemeteries. The statements from religious objectors examined by the FAA are replete with references to Scripture, Church creeds, and other recognized religious beliefs with respect to burial and reinterment. The FAA accepts these statements as genuine expressions of religious faith. The agency finds that the religious practices of these individuals are likely to be substantially burdened if these cemeteries are acquired by the City and the bodies buried there are relocated to another site. Because the FAA finds that approval of Alternative C, which calls for acquisition and relocation of St. Johannes Cemetery, is likely to substantially burden the exercise of religion as described above, the FAA concludes that it is not necessary to resolve whether the other two claims also present a substantial burden. Accordingly, the agency addresses the next aspect of RFRA, namely whether its approval of Alternative C advances a compelling governmental interest.

Application of the "compelling governmental interest" factor

The FAA finds that there is a compelling governmental interest in taking immediate Federal action that addresses the aviation needs of the Chicago region by reducing delays at O'Hare, thereby enhancing capacity of the National Airspace System (NAS), and ensuring that future terminal facilities and supporting infrastructure can efficiently accommodate airport users. As described in greater detail in earlier sections of this decision, O'Hare is one of the most delayed airports in the country. In 2003, O'Hare operations were delayed a total of 3,840,493 minutes, significantly delaying some 69,185 operations. Air traffic at O'Hare is projected to increase in the future from some 31 million passengers and 922,787 operations in 2002 to some 50 million passengers and 1,194,000 operations by 2018.

O'Hare also plays a vital role in the NAS by providing an extensive network of domestic and international air service to and from one of the nation's largest metropolitan areas, and also by serving as a central connecting point in the nation's air transportation network. For airports such as O'Hare, where there is a high historic percentage of connecting passengers, delays at O'Hare provoke delays throughout the nation, as passengers and aircraft travel to and from the 127 domestic and 48 international destinations directly served by O'Hare. These delays have serious economic consequences. The value to the Chicago region, to the millions of passengers who use O'Hare, and to the NAS of reducing present and projected delays at O'Hare is both substantial and compelling.

The FAA recognizes that some airport improvement projects are more important than others, just as some airports have a greater impact upon local, regional, and national concerns. The

O'Hare International Airport is special because of its role both locally and in the NAS. In the environmental analysis for this project, the FAA identified Alternative C as the "Preferred Alternative" because it provides a clearly superior method of meeting the goals of this project. As demonstrated earlier in this ROD, the difference in delay reduction between Alternative C and Alternative G, especially when measured by the amount of traffic expected by 2018, is truly substantial. Thus, for all the reasons contained in both Chapters 2 and 3 of the EIS, the FAA concludes that the implementation of Alternative C, now the selected alternative, is in the compelling governmental interest when applying RFRA to this project.

This finding of compelling governmental interest is reinforced by Congressional directives to the FAA, mandating it to promote aeronautical development and to support airport operators willing and able to expand their facilities. As improved, O'Hare will be capable of handling an additional amount of traffic with a level of delay approximately equal to today equivalent to the total operations today of Boston Logan International Airport or Miami International Airport. These improvements will benefit the Chicago region, millions of air travelers, and the NAS.

Similarly, the role of a large international airport must include adequate air cargo facilities, as more and more industries move to "just-in-time" production. Air cargo tonnage at O'Hare, carried in freight aircraft and the bellies of passenger aircraft, has increase by over 13 percent between 2001 and 2004, and is projected to increase 58 percent between 2000 and 2018. For these reasons, as well as those contained in the section of this decision describing the Purpose and Need of the proposed project, the FAA finds there is a compelling governmental interest in approving the selected alternative in so far as it also depicts the most efficient and effective means for providing international air cargo services at O'Hare.

In comments to the FAA, the religious objectors have argued that the improvements at O'Hare, at best, will alleviate congestion and delay for ten to fifteen years. At that point, they assert, the airport will be in the same predicament it is currently experiencing. For this reason, they contend that there is no compelling governmental interest in taking religious cemeteries when there are other alternatives that could spare these properties.

The FAA respectfully disagrees. Like many improvement projects, such as a highway for vehicular traffic, a dam for hydropower, or a facility for sewerage treatment, there is the possibility that there will come a time when the continued growth of our economy and society will require further improvements in roads, electric generation, and new treatment plants to supplement those that are needed today. Those more distant future needs do not render unnecessary today's actions. Between now and some point in the future when O'Hare delays may again require a response, the selected alternative will enable an increase in operations to 1,194,000 annually with an average annual delay of 5.8 minutes per operation. That delay level is approximately one-third of the delays experienced today. This reduction in delay is also accompanied by a concurrent increase in approximately 220,000 additional annual operations and nearly 11 million annual total passengers. In addition, the FAA believes that if approximately 1.4 million operations were to occur, the Airport would have between 13 and 16 minutes of average annual delay which is similar to the delays experienced today. Of course, the Airport would be handling nearly 40 percent more operations than today. It has never been the policy of the FAA to forego such benefits of airport improvement over the reasonably

foreseeable future because at some point in the more distant future other solutions may be required for the challenges of tomorrow. Moreover, the religious objectors would have us forego these benefits without also acknowledging that there must a point where, in their estimation, the benefits to the traveling public do outweigh the costs to them.

Therefore, the FAA concludes that there is a compelling governmental need to address the immediate and projected needs at O'Hare and thereby reduce delays in the NAS in as comprehensive a manner as possible. The religious objectors do not take into account the travelers and others that will benefit from reduced delays and increased capacity. The approach urged by the religious objectors would convert RFRA's balancing test into a veto, improperly elevating religious interests above all other interests.

Application of the "least restrictive alternative" factor

Having found that there is a compelling governmental interest in taking action that would accomplish the goals of the proposed airport improvement project, as defined by the statement of purpose and need in the EIS, the FAA turns to the final factor of "least restrictive alternative." To address this RFRA factor, the FAA has engaged in a balancing test to measure the competing values of substantially improving one of the nation's most important and congested airports against the religious liberties of those whose practices would be substantially burdened by such improvements. To proceed with these improvements as proposed, the FAA must find that the limitations on free exercise of religion that may result from this action are no greater than that required to protect the governmental interest involved. To conduct this analysis, the FAA has reexamined its earlier study of alternatives, as described in Chapter 3 and Appendix E of the EIS. These alternatives included differing runway configurations, varying numbers of runways, and other alternatives that did not include new runway construction at O'Hare, such as the use of other airports, various air traffic control techniques, other means of transportation, and congestion management. To satisfy the applicable environmental statutes, these alternatives earlier had been given the "hard look" required by NEPA, were studied for "feasibility and prudence" under Section 4(f) of the Department of Transportation Act, and had been measured under the agency's own statutory criteria in 49 U.S.C. § 47106. For RFRA purposes, these alternatives were further studied as part of the process to identify the "least restrictive alternative" of advancing the compelling governmental interest in improving O'Hare.

Beyond its reexamination of these alternatives, the FAA also carefully examined submissions provided by the religious objectors as part of the Section 4(f)/6(f) process. In these submissions, commenters presented the FAA with some eight variations of existing alternatives that offered the prospect of avoiding or mitigating the impacts to the cemeteries. Moreover, recognizing that all of the alternatives it had retained for secondary screening contained Runway 10C/28C which would pass directly over St. Johannes Cemetery, the FAA also directed its staff to produce an additional analysis of possible runway alignments that might avoid St. Johannes Cemetery altogether. The FAA's analysis of these derivatives is contained in Chapter 3 of the Final EIS at pages 3-61 through 3-85. Finally, the FAA also directed its staff to review the comments it had received on the tentative resolution of these issues. That analysis is set forth in **Appendix A** to this ROD.

Rest Haven Cemetery

At the outset of the EIS process, the City submitted to the FAA a proposed revision to its ALP that called for the construction of Runway 10C/28C in an area that would require relocation of existing air cargo facilities. To make way for this vital runway and related airport development, the City proposed to relocate these air cargo facilities to the Rest Haven site. In part, this was because the most efficient means of providing air cargo services at any large airport is to cluster those cargo facilities. Indeed, the failure to cluster cargo facilities in the original pre-construction ALP for the New Denver Airport led to such protests by airport users that the City of Denver quickly sought and obtained FAA approval of a revised ALP, centralizing all cargo facilities in order to ensure the viability of that airport. If air cargo facilities at O'Hare are to be co-located, the southwest quadrant of the airport is the only site available in order to avoid additional land acquisition for this aspect of the project. Alternative C, as considered by the FAA in the EIS, represented the optimum arrangement for future air cargo facilities at O'Hare.

However, when the FAA conducted its initial RFRA analysis for Rest Haven Cemetery, it tentatively found that Alternative C, as presented in its original format, is not the least restrictive alternative for purposes of RFRA. In balancing the interests of the Rest Haven religious objectors with the compelling interest in adoption of Alternative C, the FAA found it would be possible to relocate those cargo facilities within the space available for repositioning the cargo buildings and still leave Rest Haven Cemetery undisturbed, without compromising the compelling governmental interest in adopting Alternative C. Here, after further review and examination of the comments it has received, the FAA finds that it is vital to the overall improvement project that air cargo facilities be clustered in a common area, and that this corner of the airport is the only place within its presently proposed bounds that such facilities could be located effectively. Despite the comments of the O'Hare Air Cargo Managers Association, the FAA believes there is a measure of flexibility in the design and location of these buildings sufficient to accommodate the religious liberty interests without impeding the air cargo component of the compelling interest in Alternative C. Thus, the FAA adopts as final, the balancing it struck for Rest Haven Cemetery in its proposed disposition of this matter. Accordingly, the FAA is approving the selected alternative with an ALP that depicts cargo building repositioning, but also shows that Rest Haven Cemetery will remain in private ownership, complete with an access road provided by the City of Chicago, to allow continued access to its grounds. As such, the cemetery will remain available for future burials, and for visitation and care of the graves by members of the public. Under this arrangement, there will be no basis for mandatory reinterment of bodies at Rest Haven Cemetery. As a result, there will be no substantial burden upon religious liberties at Rest Haven Cemetery.

The FAA notes that the visual setting at Rest Haven Cemetery may be somewhat altered because it will be surrounded by the bustling 24-hour a day activity of an international air cargo facility. Also, the adjacent railroad tracks will be relocated to a distance much farther away from the site. Overall, the setting and surrounding environment at Rest Haven will be comparable to and no worse than that at St. Johannes Cemetery today, where the religious objectors assert a continued entitlement to the same types of activities that are sought to be protected at Rest Haven Cemetery. Indeed, noise exposure at Rest Haven is projected to be

lower than that presently experienced at St. Johannes. Rest Haven will be farther away from active runways than St. Johannes is today. Moreover, the Rest Haven surroundings, including potential blast fences that could protect visitors, will be obscured by decorative grasses, thereby mitigating visual intrusions. The FAA also finds that its application of RFRA to this cemetery in this manner, along with the mitigation provided pursuant to Section 106 of the National Historic Preservation Act, provides the full measure of relief sought by the religious objectors under this statute.

St. Johannes Cemetery

As the FAA stated in this ROD, the essence of any successful plan to provide significant delay reduction at O'Hare involves correcting the existing "runway triangle" and realigning the airfield in sets of parallel runways that can handle more traffic, safely and efficiently in all weather conditions. At an absolute minimum, there are two air traffic/air safety concepts that must be understood in order to appreciate how the selected alternative substantially improves O'Hare's efficiency and ability to handle more traffic with less delay.

- "Dependent Runways" means that the use of any one runway is dependent upon the use of another runway because they intersect, or the operation of one causes impacts such as wake turbulence on another runway. Dependent runways, by definition, are far less efficient than independent runways which allow constant streams of arrival or departure traffic, unimpeded by operations on another nearby runway.
- "Runway Protection Zones" are trapezoidal areas extending behind and out from the end of a runway where the movement of aircraft and other objects are prohibited for safety reasons. For example, in its current layout, the use of Runway 32R for arrivals precludes the FAA from using one of the two aircraft taxi bridges crossing the road to the airport because that taxiway bridge is located within the RPZ for that runway. Staggering the touchdown areas for parallel runways can create RPZ problems precluding aircraft on one of those runways from traveling behind and entering the RPZ of the other runway.

In its earlier, proposed findings for RFRA, the FAA tentatively concluded that the goals of this project can not be achieved without Runway 10C/28C because that runway is such an integral component of any viable ALP that meets the purpose and need of the project. Every alternative retained for secondary screening in the EIS contains this parallel runway at the same place on the ALP. Every alternative retained for secondary screening would require the acquisition and relocation of St. Johannes Cemetery because that runway is projected to be constructed directly over the cemetery.

In its application of the "least restrictive alternative" component, the FAA exercised its decades of expertise in aviation standards, air safety, and its experience in controlling air traffic at O'Hare. By definition, the FAA will not allow any runway configuration to be operated in an unsafe manner. However, some runway alignments allow greater efficiencies in the movement of aircraft both in the air and on the ground. Other combinations of runways produce the potential for unsafe conditions, which then requires the FAA to reduce the volume of traffic to or from those runways to a level that insures safety will not be compromised. Some

combinations of runways give controllers a measure of operational flexibility in directing constant streams of arrivals and departures in all weather conditions.

The FAA requested its staff to address the comments it received in response to the proposed findings contained in the Final EIS and the letter of July 27, 2005, sent to the religious objectors. That report appears as **Appendix A** to this ROD, and provides additional details of the agency's assessment of these derivatives in an operational context. As demonstrated in greater detail in that Appendix, airport layout plans are "dynamic" in the sense that a change in one runway often has consequences for other runways, nearby taxiways, and the overall ability to handle greater levels of traffic. Having considered all these materials, the FAA makes the following findings under RFRA with respect to St. Johannes.

- The FAA finds that Alternative A, the No Action Alternative, does not warrant consideration under RFRA. This alternative was included in the EIS analysis pursuant to the FAA's obligations under the NEPA. As the no-action alternative, this option would preserve both cemeteries, but would also fail to provide any meaningful relief for present or future delay conditions at the airport. This alternative would not advance the compelling governmental interest as described in the purpose and need for the proposed action. Selection of Alternative A as the "least restrictive alternative" would ignore the balancing scheme for competing values that Congress established in RFRA, in favor of a process that would elevate individual religious liberty concerns above all others in society.
- With regard to the two other alternatives retained for secondary screening in the EIS but not adopted as the Preferred Alternative, the FAA finds that neither warrants selection under RFRA as the least restrictive alternative. In the EIS, Alternative D was not selected as the Preferred Alternative because at 10.5 minutes of delay reduction, it provided considerably less improvement to O'Hare than the 5.8 minutes of delay reduction attributable to Alternative C. Despite its comparatively limited contribution to delay reduction, Alternative D's impact on St. Johannes Cemetery would be the same as the Preferred Alternative because it, too, calls for Runway 10C/28C to be located directly over that cemetery. Applying RFRA, Alternative D imposes the same substantial burden upon the religious objectors while failing to advance the compelling government interest nearly as well as Alternative C. In contrast, Alternative G would produce 6.9 minutes of delay reduction, but its impacts on both cemeteries would be greater.[26] Alternative G calls for Runway 12/30 to pass directly over Rest Haven Cemetery, and for Runway 10C/28C to be located directly over St. Johannes Cemetery. Thus, for RFRA purposes, Alternative G is the most intrusive of the alternatives retained in the Final EIS for secondary screening and does not meet the compelling governmental interest as well as Alternative C.

[26] As shown in the Final EIS, at page 3-86, there are significant differences in delay reduction among the three build alternatives. When comparing Alternative C to Alternative D, there is an 81 percent increase in average annual delay with Alternative D. When comparing Alternative C to Alternative G, there is a 19 percent increase in the average annual delay with Alternative G. These differences are especially compelling when evaluated against the backdrop of some 1,194,000 projected operations in 2018.

- Derivative H, submitted by the religious objectors, called for adoption of the No Action Alternative, combined with the use of other airports and adoption of a level of congestion management techniques at O'Hare to achieve an annual average delay of 9.3 minutes per operation. Derivative I called for the same approach to achieve delay levels that would be consistent with an FAA goal set in a Notice of Proposed Rulemaking. Derivative J presented the same approach, using congestion management to achieve delay levels of 4, 6, or 8 minutes per operation. The FAA finds that no-action, combined with congestion management, and the use of other airports to achieve pre-established levels of delay would not meet the purpose and need of the project. Instead, these derivatives would result in the accommodation of significantly lower level of annual operations than the unconstrained demand forecast by the FAA, and would not advance the compelling governmental interest identified earlier.
- Derivative K is essentially the EIS Alternative B, coupled with the use of other airports and adoption of congestion management techniques. In this regard, it is similar to the Blended Alternative which is discussed in Section 3.3.2.6 of the Final EIS, but Derivative K lacks some of the non-airfield alternatives considered in the Blended Alternative. In its NEPA review, the FAA concluded that the Blended Alternative was too speculative in its ultimate potential to meaningfully reduce delay. The FAA also found that congestion management techniques may be suitable as interim measures where airport improvements to reduce delay are not physically possible, or not yet implemented, but are not appropriate for airports where improvements can be made and airport operators are willing to undertake them. The FAA finds that Derivative K does not offer any long-term relief to present and future O'Hare delay problems. Because this derivative could not advance the compelling governmental interest identified earlier, it does not qualify as the "least restrictive alternative."
- Derivative L-1 proposes shortening Runway 10C/28C to 8,000 feet to avoid St. Johannes Cemetery. Even so, the Runway Protection Zone for Runway 10C would intrude into the cemetery, preventing public assembly. Also, this derivative would place severe operating constraints on the airfield any time weather conditions presented a ceiling below 4,500 feet and less than 7 miles of visibility, thereby limiting arrival capacity to between 76 to 80 arrivals per hour which is today's IFR rate at O'Hare. In response to the FAA's tentative conclusion that this derivative would provide modest delay benefits but would not accommodate anticipated growth in aviation activity at acceptable levels of delay, the religious objectors have responded by asserting that Derivative L-1 would perform better than Alternative B, which is the OMP at Phase One. The accuracy of such a prediction is not important, since Phase I is an interim step in a much larger improvement plan designed to service the forecast aviation demand during the planning horizon. As such, this alternative does not satisfy the compelling governmental interest.
- Derivative L-2, like L-1, preserves the Runway Triangle on the north side of the airfield, with all the associated limitations relating to those dependent runways. It also removes Runway 10C/28C. In addition, this derivative retains two runways scheduled for closure (Runway 14L/32R and Runway 14R/32L), thereby exacerbating the existing

interactions between arrivals and departures to the extent that this derivative actually performs worse than the current runway alignment. In comparison with the selected alternative, Derivative L-2 posits the same number of runways, but the L-2 alignment does not work nearly as well as the selected alternative because so many of the L-2 runways are dependent upon the use of other nearby or intersecting runways. Because of the number of runway dependencies in Derivative L-2, the capacity of the airport, when weather includes a ceiling below 4,500 feet and 7 miles of visibility, is reduced to between 76-80 arrivals per hour, far less than the 120 arrivals possible under the selected alternative. The FAA has been presented with no comments or analysis that would cause it to reexamine its earlier proposed determination that this derivative is likely to yield less delay reduction than Alternative B, a runway alignment found not capable of meeting the purpose and need of the project.

- Derivative M was submitted to the FAA in the form of a transcript of a newscast in which it was asserted that a single new runway on the airport's south end would accomplish the benefits of the OMP at a fraction of the costs. The FAA evaluated this derivative twice, initially at 4,300 feet south of existing Runway 9R/27L, and then, in Derivative N, at 5,000 feet south of that existing runway. For both, the FAA finds that there is no improvement to the existing runway layout on the north side of the airfield, and that the presence of a single new runway would preclude the FAA from conducting triple simultaneous approaches in instrument conditions, both in east and west flow operations. Moreover, in response to FAA safety concerns, the religious objectors suggest Derivative M could work if its proposed runway were shortened by 1,000 feet, limited to arrivals only, or if additional land were acquired in Bensenville. The FAA finds that Derivative M, if operated in a manner that complied with all FAA safety standards, would require operational limitations that restrict the airfield's arrival capacity to a level equivalent to today's conditions. Derivative N, if operated according to FAA standards, performs more poorly than Alternatives B, C, D and G. In good weather, it would be impossible to operate Derivative N to accommodate quadruple arrival streams, as is possible under the selected alternative. Also, overlapping Runway Safety Areas for two runways would make them dependent upon each other, further limiting their efficiency. Accordingly, neither of these Derivatives is capable of accomplishing the compelling governmental interest, and do not warrant further consideration as less restrictive alternatives.
- Derivative C-1 was created by the FAA to study the operation of O'Hare, with the selected alternative, but without Runway 10C/28C which passes directly over St. Johannes Cemetery. This runway is intended to be used as an arrival runway in all operating conditions. Its removal prevents four arrival streams of traffic in good weather. Because such conditions prevail more than 50 percent of the time, the loss of that fourth stream of arrivals means that forecast operations would be handled at a greater level of delay than the selected alternative. Contrary to the comments of the religious objectors, the selected alternative was modeled in the EIS with quadruple approaches in good weather as one of the operating assumptions. In addition, to optimize C-1's productivity in a west flow configuration, Runway 28R must be

converted from a departure to an arrival runway, and all departure traffic on the south half of the airport shifted to Runway 28L. To handle many of these additional west flow departures, Runway 28L would need to be extended by least 1,000 feet, requiring additional land acquisition in Bensenville. A failure to extend this southernmost runway would cause an imbalance in operating the airport, as pilots would demand the use of longer runways for departure that are available on the north side of the airfield. In comments, the religious objectors assert that Runway 10R/28L would not need to be extended because it could serve as a full-time arrival runway. However, shifting the use of Runway 10R/28L from a departure to an arrival function also produces the same imbalance and inefficiencies that the selected alternative was designed to remediate. Not only would this result in greater congestion on those two runways on the north side of the airfield, but such practices would also cause further delay because of the air traffic complications involved in routing those aircraft from a departure runway intended for other destinations as described in greater detail in **Appendix A**, specifically, see the FAA's response to Mr. Fleming's affidavit in Section A.2. In addition, the absence of Runway 10C/28C during the construction of the OMP would pose significant delay issues. In sum, the loss of this critical, full-time runway would preclude O'Hare from achieving a level of delay reduction necessary to achieving the compelling governmental interest in this undertaking.

- Derivatives C-2 and C-3 contemplated shortening Runway 10C/28C to 7,500 and 6,000 feet, respectively, to spare St. Johannes Cemetery. Here, unlike Alternative C-1, there would be the full complement and alignment of runways contemplated by the selected alternative. In its earlier proposed assessment of these alternatives, the FAA tentatively made a number of findings, including a change in the way that aircraft would be able to taxi from Runways 10C and 10R to the terminal. Because the threshold of Runway 10C would be relocated to the east, it will no longer be possible to have arrival traffic on Runway 10C and Runway 10 R cross the departure Runway 10L at the point contemplated in the selected alternative. Under the selected alternative, arrivals from Runway10C cross Runway 10L behind that point where aircraft would utilize an intersection departure from Runway 10L Instead, aircraft using these runways under Derivative C-2 would cross departure Runway 10L midfield, creating the same type of "runway dependency" that the OMP was designed to remediate. The religious objectors ignore this, asserting it does not matter where a runway crossing occurs. The FAA disagrees. Under Derivatives C-2 and C-3, the constant stream of departures from Runway 10L/28R would need to be interrupted by traffic crossing to and from the other southern runways, creating potential safety problems that would need to be addressed by restricting the use of Runway 10L for departures. These restrictions would operate to lower the potential rate of departures from Runway 10L to allow for safe runway crossings of arrival traffic. Similarly, the religious objectors do not comprehend the FAA's safety concerns with wake turbulence associated with the proposed staggered thresholds of Runways 10L and 10C under these derivatives. The selected alternative deals with wake turbulence by aligning the thresholds of these two runways even with each other. In that manner, an aircraft arriving on Runway 10C touches down long

before a departing aircraft on Runway 10L is airborne. Derivatives C-2 and C-3 move these landing and departing events to a position on the respective runways where landing and departures would take place within the same space. The religious objectors tacitly acknowledge this concern by suggesting that wake turbulence could be "mitigated" rather than eliminated, and also by suggesting that the airport be operated by assigning runways to aircraft based on size rather than arrival or departure points. This latter suggestion would create a crazy-quilt dilemma for arrival control. Normally, aircraft are "lined up" for a specific runway some 40 miles from the airport at an initial approach point. Different runways have different approach points, and each runway has its own stream of arrival traffic. The commenter would have aircraft vectored into other approach streams coming from other arrival points, based solely on aircraft size, in order to avoid wake turbulence issues on landing. Such mitigation would seriously compromise the ability of this runway alignment to operate as designed and contemplated in the selected alternative. The FAA finds that because of the operational restrictions required to safely utilize Derivatives C-2 and C-3, they could not achieve a level of delay reduction close to that provided by the Selected Alternative and therefore, neither qualifies as the least restrictive alternative.

- Derivatives C-4 and C-5 were designed by the FAA to avoid St. Johannes Cemetery by shifting Runway 10C/28C to the south by 350 or 450 feet respectively, and shortening it to no more than 10,300 feet. Under FAA standards for the placement of objects at airports, there is only a small spot available in the south half of the airport where a new air traffic control tower could be located without violating those safety standards. This tower is necessary to allow use of the southernmost runway. Derivatives C-4 and C-5 move Runway 10C/28C into the protected space for this new tower, and would require the FAA to require greater separation between aircraft using the two southernmost runways, thereby compromising the efficiency and capacity of these runways during poor weather. In addition, the FAA's earlier expressed concern that these Derivatives created wake turbulence issues for departures on Runway 22L and arrivals on Runway 28C remains valid. Supporters of these derivatives have responded by arguing that such conditions could only occur 45 percent of the time, and that pilots could vary the power settings used on takeoff to mitigate such concerns. Such responses demonstrate an unfamiliarity with the real-world situation of operating a major airport in both a safe and efficient manner. The cumulative limitations imposed by the restrictions that would be necessary to operate these derivatives safely would result in an ability to handle considerably less traffic than the selected alternative, and therefore, neither of them qualifies for consideration as the least restrictive alternative.
- To gain greater insight in cemetery relocation issues, the FAA requested information from the Tennessee Valley Authority (TVA), a Federal agency that has had substantial experience in cemetery relocation because of the many hydro-power facilities it has constructed in areas where there have been public, private, family and religious cemeteries. Since 1933, TVA has relocated some 555 cemeteries, flooded some 516 others, and has relocated over 30,000 graves. The FAA learned that in some cases, survivors of the deceased requested TVA to simply flood the gravesites rather than

relocate the bodies of the deceased. Accordingly, the FAA examined whether it might be possible, as a matter of engineering, to leave the bodies at St. Johannes Cemetery in place while constructing Runway 10C/28C on the surface of the ground. In this concept, access and future use would not be available, but there would be no need for reinterment. However, the agency has concluded that the depth of excavation needed for runway construction, along with the ancillary activities such as electrical cabling for airfield runway lighting and storm sewer pipes for airfield drainage, presented a substantial likelihood that the graves could be disturbed. Therefore, the FAA finds that this option is not viable as the least restrictive alternative.

In summary, the FAA finds that the derivatives discussed in this ROD are feasible, in the sense that they could be constructed and implemented. To one degree or another, adoption of any of them could avoid the need to acquire and relocate St. Johannes Cemetery. At the same time, none of the derivatives presented to or created by the FAA performs nearly as well as the selected alternative in terms of its ability to reduce delay and meet the long-term forecast demand at the airport. The interests of the religious objectors must be balanced against the interests of the traveling public, the airlines, the larger Chicago region and the National Airspace System, in which O'Hare plays such an important role. During the environmental review process, Alternative C became the Preferred Alternative and then was adopted in this ROD as the selected alternative because it clearly performs so much better than any other alternative. After examining all of the alternatives and derivatives as described above, the FAA finds that it would be contrary to its obligations under both the Federal Aviation Act and RFRA to allow the interests of the religious objectors to outweigh the compelling interests of traveling public, the nation, and others in realizing the unique benefits only provided by the selected alternative. Accordingly, the FAA concludes that, on balance, there are no less restrictive alternatives that could adequately satisfy the compelling governmental interest in proceeding with the most robust and effective approach to meeting the purpose and need of this project at this major airport.

11.1.3 Resolution of the First Amendment Claim

In the Final EIS, Table 3-11 shows that all of the "build alternatives" retained for secondary screening are likely to result in the acquisition by the City of between 413-440 acres that are needed for O'Hare improvements. These acquisitions are intended to expand the airport's perimeter, and are driven by proposed runway alignments rather than the present uses for these sites. Only a small percentage of this acreage involves the two cemeteries. All of the "build alternatives" call for the construction of Runway 10C/28C, directly over the location of St. Johannes Cemetery. Similarly, all of these alternatives also call for the relocation of existing air cargo facilities to the far southwestern quadrant of the airport where Rest Haven Cemetery is located. Accordingly, the FAA finds that the City's acquisition plans are not directed at the cemeteries themselves, or at those whose religious beliefs call for the preservation of these two properties. Instead, the FAA's approval of the ALP, through the selected alternative, and the City's potential land acquisition and relocation activities, are governmental actions that are wholly neutral in nature and of general applicability. Because it is clear to the FAA that the present use of the lands slated for acquisition did not enter the calculus of designing the OMP

or deciding what properties required acquisition to accomplish the OMP, this action is unlike some governmental actions in other contexts where actions targeted directly at certain religious practices or establishments may present First Amendment Free Exercise issues. In essence, these cemeteries were initially slated for acquisition and relocation simply because of where they are - not because of what they are. For these reasons, the FAA finds that there is no violation of the Free Exercise Clause, because there are legitimate governmental reasons to proceed with this project.

Moreover, the FAA rejects the proposition that in resolving this Free Exercise Claim, it must apply the "compelling governmental interest" test which would require stricter scrutiny of the proposed action alleged to infringe upon protected religious liberties. Such strict scrutiny is appropriate if the purpose of governmental action is to infringe upon or restrict religious practices. This more demanding test has already been applied in the FAA's application of RFRA to this situation. For First Amendment purposes, the proposed governmental conduct is neutral in nature and of general applicability. Therefore, the FAA finds that this conduct is justified by the legitimate governmental interest in proceeding with this airport improvement project, despite any incidental effect of burdening a particular religious practice or belief. The FAA also declines the invitation of the religious objectors to pass upon the constitutionality of the O'Hare Modernization Act adopted by the State of Illinois. It is not the role of the FAA to make such judicial determinations. This act, as adopted by the State of Illinois, does not impact the FAA's analysis of these First Amendment claims.

11.2 Issues Relating to Due Process Claims and Formal Adjudicative Processes

As the FAA discussed in Section 5.23 of the Final EIS, the religious objectors have asserted an entitlement to have their RFRA and First Amendment claims resolved through a formal, adjudicatory process. The asserted legal basis for such an entitlement, however, is somewhat opaque. The objectors recognize such formal processes are appropriate when the FAA is applying a provision of Title 49 of the United States Code that calls for agency determinations to be made "on the record after opportunity for agency hearing." They also recognize that no such statutory provision is implicated in the FAA's consideration of the OMP. Moreover, it is beyond question that here, the FAA has applied the same type of informal, agency decision making that it has always used for the many airport improvement projects it has examined over the past several decades. Nevertheless, the objectors apparently believe that determinations of "compelling governmental interest" and "least restrictive alternative" are themselves adjudicatory matters suitable for resolution only by judicial or administrative tribunals. The FAA rejects this contention.

Integrating RFRA and First Amendment concerns into the statutory scheme of environmental review for airport improvement projects, the FAA examined carefully all of the submissions of the religious objectors, including the pleadings and affidavits of plaintiffs in the pending federal court case involving these matters. To make determinations of "substantial burden," "compelling governmental interest" and "least restrictive alternative," the FAA applied its expertise in aviation safety, air traffic procedures, airport layout, and the public interest in efficient air transportation. The FAA then published its proposed determination in the Final EIS and in a letter to the religious objectors, and invited public comments. Notably, the comments

the FAA received on its proposed resolution simply reasserted that the agency cannot render a decision on contested issues of fact or law relating to these religious liberty claims. The FAA is aware of no requirement that would obligate it, or any other Federal agency when presented with similar claims, to conduct a formal adjudicative process. Surely, administrative law judges do not "ride circuit" on the Federal prison system to decide every RFRA claim inmates present to their wardens. Instead, these claims are appropriately resolved through informal agency determinations, and the administrative records produced through those processes are then available for judicial scrutiny. Here, the findings the FAA has made in this ROD can be challenged by a member of the public with legal standing to file a petition for review in an appropriate federal court where the FAA's determinations will be subject to review under a substantial evidence or arbitrary and capricious test.

12. AGENCY FINDINGS

In accordance with applicable law, the FAA makes the following determinations for this project, based upon the appropriate information and data contained in the Final EIS and the EIS record.

12.1 The project is consistent with existing plans of public agencies for development of the area surrounding the airport [49 U.S.C. 47106(a)(1)] and Executive Order 12372.

The determination prescribed by this statutory provision is a precondition to agency approval of airport project funding applications. It has been the long-standing policy of the FAA to rely heavily upon actions of metropolitan planning organizations (MPOs) to satisfy the project consistency requirement of 49 U.S.C. 47106 (a) (1) [see, e.g., SOC v. Dole, 787 F.2d 186, 199 (7th Cir., 1986)]. Furthermore, both the legislative history and consistent agency interpretations of this statutory provision make it clear that reasonable, rather than absolute consistency with these plans is all that is required.

Under the provisions of both Federal and state law, the Chicago Area Transportation Study Policy Committee (CATS) has been designated as the MPO for surface transportation for the northeastern Illinois region. CATS provided a transportation conformity letter to the FAA on April 11, 2005[27] stating "[w]e concur that all of the projects requiring a conformity determination and which could be conformed given fiscal constraints at the time of the conformity analysis were conformed." CATS is also responsible for the Regional Transportation Plan (RTP). The Northern Illinois Planning Commission (NIPC) is the comprehensive land use planning agency for the northeastern Illinois region. In this capacity, it provides the official population and employment growth forecasts as key inputs into the RTP. NIPC submitted a letter to the FAA on June 30, 2005[28] that stated that the Draft EIS document was "consistent with NIPC plans and policies."

CATS and NIPC have recently merged into one 15-member board, appointed by elected officials in the seven-county region, with one-third of the seats filled by the City of Chicago, a third filled by suburban Cook County, and the remainder filled by DuPage, Lake, McHenry,

[27] Letter from Donald Kopec, CATS, to Michael MacMullen, FAA, April 11, 2005.
[28] Letter from Ron Thomas, NIPC, to Barry Cooper, FAA, June 30, 2005.

Will, Kane, and Kendall counties. The MPO is primarily responsible, in cooperation with the state, for carrying out the urban transportation planning process in the region.

The FAA finds that the project is consistent with the existing plans of public agencies authorized by the state in the area in which the airport is located to plan for the development of the area surrounding the airport, and will contribute to the purposes of the 49 U.S.C. 47101 et seq. The FAA is satisfied that it has fully complied with 49 U.S.C. 47106(a)(1).

The proposed expansion is also consistent with comprehensive plans that have been adopted by jurisdictions in the vicinity of the airport as described in Section 5.2 of the Final EIS. The FAA has also reviewed and considered the substantial documentation in the EIS record demonstrating that throughout the environmental process the City of Chicago has shown concern for the impact of the proposed development actions on surrounding communities.

In making its determination under 49 U.S.C. 47106(a)(1), the FAA has considered the fact that local governments have been represented by the MPO and have participated, through MPO executive committees and task forces, as members of that organization in its decision to authorize the projects at O'Hare. The FAA has also recognized the fact that none of these jurisdictions has regulatory authority over airport operations, since long-established doctrines of Federal preemption preclude these communities from regulating aircraft operations conducted at O'Hare.

12.2 The interest of the communities in or near where the project may be located was given fair consideration [49 U.S.C. 47106(b)(2)].

The determination prescribed by this statutory provision is a precondition to agency approval of airport development project funding applications. The regional planning process over the past decade and the environmental process for this project-specific EIS, which began in 2002 and extended to this point of decision, provided numerous opportunities for the expression of and response to issues put forward by communities in and near the project location. Nearby communities and their residents have had the opportunity to express their views during the Draft EIS public comment period, at public hearings, as well as during the review period following public issuance of the Final EIS. The FAA's consideration of these community views is set forth in Final EIS Appendices S, T and U of the Final EIS, and in **Appendix A** of this ROD. Thus, the FAA has determined that throughout the environmental process, beginning at its earliest planning stages, fair consideration was given to the interest of communities in or near the project location.

12.3 Effect on Natural Resources [49 U.S.C. Section 47106(c)(1)(B)].

Under this statutory provision, the FAA may approve funding of an airport development project involving the location of a new runway or major runway extension having a significant adverse effect on natural resources, only after determining that no possible and prudent alternative to the project exists and that every reasonable step has been taken to minimize the adverse effect.

The FAA finds that the selected alternative would have significant adverse impacts in the categories of noise and compatible land use, Section 4(f) properties (parks and historic

properties), Section 6(f) properties, wetlands, social impacts, surface transportation, without mitigation described in Section 9 of this ROD. However, given that all the build alternatives would have substantially similar effects and that Alternative C is clearly superior in terms of reducing average annual delays, the FAA finds that no possible and prudent alternative exists to the project (see Section 7 of this ROD). Finally, the FAA has determined that all reasonable steps have been taken to minimize any significant adverse effects on natural resources through mitigation.

The FAA has decided to condition approval of the proposed alternative upon the mitigation measures described in the Final EIS and in Section 9 of this ROD. This condition will be enforced through a special assurance included in future Federal airport grants to the City of Chicago.

12.4 Appropriate action, including the adoption of zoning laws, has been or will be taken to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations [49 U.S.C. Section 47107(a)(10)].

On September 27, 2005, the City of Chicago provided written assurance that appropriate action, including the adoption of zoning laws, has been or will be taken to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations.

12.5 Clean Air Act, Section 176(c)(1) Conformity Determination Regarding Chicago O'Hare International Airport Master Plan Update Development Actions [42 U.S.C. Section 7506(c)].

The determination prescribed by this statutory provision is a precondition for Federal Agency support or approval of airport development projects. The USEPA regulations generally governing the conformity determination process are found at 40 CFR Part 93, Subpart B, Sections 93.154 through 93.159, 40 CFR Part 50, and 40 CFR Part 51, Appendix W.

O'Hare is located within Cook and DuPage Counties. Cook and DuPage counties are designated attainment for carbon monoxide, nitrogen dioxide, and sulfur dioxide. With the exception of an area within Lyons Township (south of O'Hare) that is designated moderate non-attainment, both counties are also designated attainment for particulate matter 10 microns or less in size. Finally, both counties are currently designated moderate non-attainment for the 8-hour ozone NAAQS, and non-attainment for the annual standard for particulate matter 2.5 microns or less in size.

Because the State of Illinois has not yet submitted (nor are they required to) plans that demonstrate the area will attain the annual standard for particulate matter 2.5 microns or less in size, the FAA was required to determine that the project would be consistent with the purpose of the existing Illinois State Implementation Plan (SIP) for ozone (the applicable SIP).

The FAA published a Draft General Conformity Determination in May of 2005. Responses to comments on the Draft document are provided in Appendix J, Section J-5, of the Final EIS. The Final General Conformity Determination is provided in Appendix J, Section J-2, of the Final EIS.

The following summarizes the methodologies used to evaluate the applicability of the General Conformity Rules to FAA's proposed actions, to evaluate total direct and indirect project-related emissions of volatile organic compounds and nitrogen oxides (precursors to the air pollutant ozone) from the sources subject to the General Conformity Rules, and the results of the FAA's final conformity evaluation.

- **Applicability** –Net (project-related) emission levels of volatile organic compounds and nitrogen oxides were compared to de minimis levels published in the General Conformity Rules. At the request of the USEPA, the de minimis level for the 8-hour ozone NAAQS was used (100 tons of either volatile organic compounds or nitrogen oxides). Notably, the de minimis level for the 1-hour ozone NAAQS was also considered (25 tons of either volatile organic compounds or nitrogen oxides). Based on the results of the comparison, it was determined that the General Conformity Rules are applicable to emissions from the proposed improvements.
- **Aircraft, Ground Support Equipment/Auxiliary Power Units** - To evaluate if project-related aircraft, ground support equipment, and auxiliary power unit emissions could be reasonably accounted for in the IEPA's SIP-based projections, emission levels with the proposed improvements at O'Hare were compared to the IEPA projected levels for the attainment year (2007). Because the project-related emission estimates when added to the emissions estimates that would occur without the project were lower than the SIP-based projections, the FAA, in consultation with the IEPA, determined that project-related emissions can reasonably be accounted for in the 1-hour ozone attainment demonstration SIP.
- **Construction Activity** – The 1-hour SIP does not identify specific or individual projects with respect to emissions resulting from any regional construction activity. Based on the results of a comparison of O'Hare –related emissions to IEPA's SIP-based project emissions, the greatest level of construction-related volatile organic compound and nitrogen oxide emissions would represent approximately 2 and 5 percent of the IEPA's regional emissions, respectively. Because the O'Hare-related construction emissions would represent a relatively small percentage of the IEPA's regional projections, the FAA, in consultation with the IEPA, determined that it is reasonable to assume that the O'Hare-related construction emissions can be accounted for in the inventories for the 1-hour ozone attainment demonstration SIP regardless of year, construction schedule, construction scenario, or alternative.
- **Motor Vehicles** – The improvements to O'Hare would increase motor vehicle activity and motor vehicle-related emissions as a result of the forecast increase in aircraft operations with the improvements. When the greatest project-related motor vehicle emissions of volatile organic compounds and nitrogen oxides were compared to Chicago Area Transportation Study (CATS) projected emissions, project-related emissions would account for approximately 0.06 percent of the volatile organic compound or nitrogen oxide emissions. Because the emissions represent such a small portion of the regional emissions, the FAA, in consultation with the IEPA, determined

that the motor vehicle emissions can reasonably be accounted for in established emission totals.

Notably, the IEPA concurred with the FAA's determination that the improvements to O'Hare conform to the applicable State Implementation Plan. This correspondence is included on pages J-345 and J-346 in Appendix J, Attachment J-3, of the Final EIS.

12.6 For this project, involving new construction that will directly affect wetlands, there is no practicable alternative to such construction. The proposed action includes all practicable measures to minimize harm to wetlands that may result from such use (Executive Order 11990, as amended).

This executive order requires all Federal agencies to avoid providing assistance for new construction located in wetlands, unless there is no practicable alternative to such construction, and all practicable measures to minimize harm to wetlands are included in the action.

Section 5.12 of the Final EIS documents that the preferred alternative will directly affect 154.2 of jurisdictional and non-jurisdictional wetlands and non-wetland WUS at O'Hare. The FAA has concluded that no practicable alternative exists to development of the preferred alternative because the other alternatives either fail to meet the purpose and need or they result in the same adverse impacts on wetlands as shown in Chapter 3 and Section 5.12 of the EIS.

The wetlands at the airport include many small, individual sites providing relatively few beneficial wetlands functions and values. These wetlands and WUS have been adversely affected by past human activities, including clearing, grading, and other developmental actions. The impacts of past disturbances range from modification of plant communities to creation of new wetland areas, primarily caused by man-made grading changes that blocked original drainage ways or which created isolated depressions.

The guidelines associated with the Section 404 permit process indicate that satisfactory mitigation must be provided if jurisdictional wetlands impacts could occur as a result of project implementation. The proposed conceptual wetland mitigation plan is intended to provide compensatory mitigation for wetlands and WUS removed from O'Hare. The overall intent is to greatly improve the quality of wetlands resources with regard to a variety of functions and values including wildlife support, while offering additional value to the interested public by providing access that was not possible at the Airport.

The FAA finds that there is no practicable alternative to the proposed development's attenuation of the 154.2 acres of wetlands and WUS located on the airport. Compared to the No Action Alternative (Alternative A), the likely impacts to wetlands (both jurisdictional and non-jurisdictional) under Alternatives C, D, or G would be significantly greater due to placement of permanent structures, placement of construction-related equipment, site grading activities, and the placement of construction spoil materials. As compared to Alternatives C and G, Alternative D might theoretically result in the loss of about 7.65 fewer acres of wetlands. However, these 7.65 acres of wetlands would reasonably be expected to dry up over time because these wetlands would be disconnected from their underlying hydrology. Therefore, it is likely that all Build Alternatives would result in the loss of 154.2 acres of wetlands and non-wetland WUS.

As noted in Section 5.12, of the Final EIS, the USACE has worked with the FAA to ensure that all practicable measures will be taken to minimize harm to wetlands, impacted through development of the selected alternative. Using Best Management Practices (BMPs) during construction and developing a wetland compensatory mitigation site will accomplish this. Following issuance of this ROD, the USACE, in consultation with the IEPA, will complete its processing of a Section 404 permit and Section 401 certification, required for the City of Chicago to proceed with development impacting wetlands. The project approvals in this ROD and this wetlands determination are expressly conditioned upon permit approval and conditions to be outlined by the USACE, and upon the City of Chicago accomplishing the wetlands mitigation measures identified in the Final EIS and any USACE permit approval.

Although it is generally preferable to attempt to mitigate wetland loss through replacement wetlands in the same watershed, this is not the case where such replacement would create man-made wetlands in the vicinity of airport aircraft movement areas. FAA Advisory Circular 150/5300-33A, *Hazardous Wildlife Attractants On or Near Airports* , dated July 27, 2004, states the FAA's policy that wetland mitigation projects located within 10,000 feet of airports serving turbine-powered aircraft (such as Chicago O'Hare), present a safety hazard as attractants of wildlife that significantly increase the risk of bird/aircraft strikes.

The safety standards set forth in this FAA policy statement are recommended for the operators of all public-use airports. Furthermore, for airport sponsors who are the recipients of Federal grant funding, adherence to safety standards set forth in FAA advisory circulars is a requirement of standard grant assurances, as acknowledged in section 4-3(a) of FAA Advisory Circular 150/5200-33A.

This recent agency policy guidance supports the Final EIS determination that the replacement wetlands for the Chicago O'Hare development actions should not be located in the vicinity of the airport. Given the potential hazard associated with the creation of wildlife attractions within 10,000 feet of jet runways, the FAA, USACE, and IEPA agreed that it is prudent to permit the City of Chicago to replace these impacted wetlands outside of the airport's immediate watershed. The replacement wetlands are located in the same USGS hydrologic unit.

As detailed in Section 7.8 of the Final EIS, a wetland mitigation program has been developed to offset the impacts of the project and to recognize other long-term biological problems. The mitigation plan calls for replacing the filled wetlands. A total of 447.4 acres of compensatory mitigation is proposed. Several candidate wetland mitigation sites have been examined. Final mitigation requirements will be determined during the Section 404 permit application and review process in consultation with the USACE.

12.7 This project does not involve a significant encroachment of a floodplain. Consistent with the policy in Executive Order 11988 and DOT Order 5650.2, for this project, involving an encroachment on a floodplain, there is no practicable alternative to the selected development of the preferred alternative.

The FAA has concluded that the selected alternative would not involve a significant encroachment on a floodplain as defined in DOT Order 5650.2, which implements Executive Order 11988. These Orders establish a policy to avoid supporting construction within a 100-

year floodplain where practicable, and where avoidance is not practicable, to ensure that the construction design minimizes potential harm to or within the floodplain.

Consistent with this policy, implementation of the selected alternative would encroach, although the encroachment would not be significant, upon the floodplains of the North and South Airfields by construction within the floodplains and relocation of the floodplains. The FAA has considered whether there are practicable alternatives to this encroachment. See Section 5.12 of the Final EIS and Section 12.6 of this ROD for further information. Further, the selected alternative conforms to all applicable state and/or local floodplain protection standards (Executive Order 11988).

Assuming completion of the drainage improvements and acceptance of the Conditional Letter of Map Revision (CLOMR) by the Federal Emergency Management Agency (FEMA), and the construction of the detention basins on the South Airfield, none of the projects included in the preferred alternative would significantly encroach on any of the floodplains that exist in the Airport vicinity. Therefore, no significant encroachment on floodplains as defined in DOT Order 5650.2 would occur under the selected alternative. Thus, FAA concludes that there would be no significant impacts on floodplains.

12.8 Relocation assistance will be provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. Section 4601 et seq.)

These statutory provisions, imposed by Title II of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, require that state or local agencies, undertaking Federally-assisted projects which cause the involuntarily displacement of persons or businesses, must make relocation benefits available to those persons impacted.

As detailed in the Section 5.4 of the Final EIS, the preferred alternative will displace approximately 539 housing units (2,631 residents) and 197 businesses. The FAA will require the City of Chicago to provide fair and reasonable relocation payments and assistance payments pursuant to the provision of the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Comparable decent, safe, and sanitary replacement properties are available on the open market.

12.9 For actions that include the use of lands subject to Section 4(f) of the DOT Act including significant historic sites, there is no prudent and feasible alternative to using that land, and the project includes all possible planning to minimize harm resulting from the use [49 U.S.C. Section 303(c)].

The selected alternative would trigger the application of 49 U.S.C. Section 303(c), commonly known as Section 4(f) of the Department of Transportation Act, with regard to properties protected under that act. The selected alternative would constitute a "use" of three properties eligible for the National Register of Historic Places (NRHP): HP-7 (St. Johannes/John's Cemetery), HP-5 (Gas Service Station), and HP-6 (Rest Haven Cemetery). St. Johannes Cemetery would be acquired and relocated, and the Gas Service Station would be acquired and demolished or relocated. The FAA has determined that the change in setting surrounding the Rest Haven Cemetery due to the selected alternative would constitute a use.

The selected alternative would also result in use of one locally important historic property: HP-10 (Schwerdtfeger Farmstead). Acquisition and removal or relocation is an actual, physical taking within the meaning of Section 4(f). The Schwerdtfeger Farmstead would be demolished.

The impacts of the selected alternative would not constitute a use to one other NRHP eligible property: HP-4 (Green Street School). The FAA has determined that the lowering of the chimney on the Green Street School by 9.1 feet could be done in accordance with Secretary of Interior's *Standards for the Treatment of Historic Buildings* (U.S. Department of Interior, National Park Service, 1995) and would not constitute an adverse impact to the historic nature of the structure.

FAA identified and evaluated locally important sites and determined that there would neither be direct nor indirect use of such properties. As stated in Section 9.7 of this ROD, the completion of sound insulation of these locally important historic properties listed in Table 5.8-1 of the Final EIS, following the Secretary of Interior's *Standards for the Treatment of Historic Buildings* and FAA guidelines, would not constitute a use of these sites.

As also stated in Section 9.7 of this ROD, a total of three parks (part of *Silver Creek/DuPage County Forest Preserve, Schuster Park,* and *Bretman Park*) would be acquired under Alternative C. *Schuster Park* is a Section 6(f) property and mitigation will be provided pursuant to the requirements of Section 6(f).

In terms of avoidance, review of the alternatives evaluation prepared in Chapter 3 of the Final EIS indicated that there are no prudent and feasible alternatives to the acquisition and relocation or removal of these Section 4(f) and Section 6(f) resources, including historic properties. Therefore, in the adoption of Alternative C as the selected alternative, the FAA finds that there is no prudent and feasible alternative to using that land, and the project includes all possible planning to minimize harm resulting from the use. Based upon the mitigation in Section 9 of this ROD, the FAA concludes that there has been all possible planning to minimize any harm resulting from the actual and constructive use of the Section 4(f) resources.

Through the EIS and the Section 4(f)/6(f) process, in consultation with National Park Service and interested parties, the FAA has evaluated alternatives to minimize the use of these properties. The FAA has coordinated with the public and agencies having jurisdiction concerning the impacted properties to determine site significance and to evaluate feasible mitigation measures to meet Section 4(f) requirements. The agencies involved in the coordination were the DOI/NPS, the City of Chicago, and the municipalities of Addison, Arlington Heights, Bensenville, Chicago (portions), Des Plaines, Elk Grove Village, Elmhurst, Franklin Park, Harwood Heights, Itasca, Mount Prospect, Norridge, Northlake, Park Ridge, River Grove, Rolling Meadows, Rosemont, Schaumburg, Schiller Park, Wood Dale, as well as portions of unincorporated DuPage and Cook Counties. In addition, the Agency consulted with the Advisory Council on Historic Preservation, the State Historic Preservation Officer, the City of Chicago, and Consulting Parties regarding impacts to properties eligible for listing on the National Register of Historic Places. A Memorandum of Agreement (MOA) resulting from those consultations appears in **Appendix B** of this ROD.

12.10 There are no disproportionately high or adverse human health or environmental effects from the project on minority or low-income populations (Executive Order 12898).

12.10.1 Direct Impacts

Environmental justice concerns were addressed in Section 5.21 of the Final EIS, and it was preliminarily determined in the Final EIS that there may be minorities that would be disproportionately affected by displacements occurring as a result of the selected alternative.

Taking into account mitigation measures described in Section 9.5 of this ROD, the FAA has determined that the selected alternative will not have a disproportionately high and adverse effect to the minority (by race and ethnicity) populations that would be relocated as a result of the proposed action. Even though the FAA has determined that the selected alternative will not cause a disproportionate high and adverse effect on minority (by race and ethnicity) populations, the FAA has considered whether or not there are practicable alternatives to the relocation of the minority populations and finds that there are no practicable alternatives (See Section 6 of this ROD). FAA has also evaluated the mitigation measures to the project as described in Section 9 of this ROD, and finds that appropriate measures have been incorporated into the mitigation for the proposed project.

12.10.2 Noise and Surface Transportation Impacts

Noise

It was preliminarily determined by the FAA in the Final EIS that there may be minority populations and low-income households that would be disproportionately affected noise impacts occurring as a result of the selected alternative.

Taking into account mitigation measures described in Section 9.5 of this ROD, the FAA has determined that the selected alternative will not have a disproportionately high and adverse effect to the minority (by race and ethnicity) populations and low-income households affected by noise impacts occurring as a result of the selected alternative. Even though the FAA has determined that the selected alternative will not cause a disproportionate high and adverse effect on minority populations or low-income households, the FAA has considered whether or not there are practicable alternatives to the noise impacts to the minority populations and low-income households and finds that there are no practicable alternatives (See Section 6 of this ROD). FAA has also evaluated the mitigation measures to the project as described in Section 9 of this ROD and finds that appropriate measures have been incorporated into the mitigation for the proposed project.

Surface Transportation

It was preliminarily determined by the FAA in the Final EIS that there may be minority populations and low-income households that would be disproportionately affected surface transportation impacts occurring as a result of the selected alternative.

Taking into account mitigation measures described in Section 9.5 of this ROD, the FAA has determined that the selected alternative will not have a disproportionately high and adverse effect to the minority (by ethnicity) populations and low income households affected by surface

transportation impacts occurring as a result of the selected alternative. Even though the FAA has determined that the selected alternative will not cause a disproportionate high and adverse effect on minority (by ethnicity) populations or low-income households, the FAA has considered whether or not there are practicable alternatives to the surface transportation impacts on minority (by ethnicity) populations and low-income households and finds that there are no practicable alternatives (see Section 6 of this ROD). FAA has also evaluated the mitigation measures to the project as described in Section 9 of this ROD and finds that appropriate measures have been incorporated into the mitigation for the proposed project.

12.11 The City of Chicago has certified that it has made available to and has provided upon request to the metropolitan planning organization (MPO) in the area in which the airport is located a copy of the proposed ALP amendment depicting the proposed action and any airport master plan describing or depicting the project [49 U.S.C. Section 47106(c)(1)(A)(iii)].

The City of Chicago has certified by letter dated September 27, 2005, that it provided to the Chicago Area Transportation Study Transportation Policy Committee (CATS), a copy of the proposed Airport Layout Plan depicting the project (including, specifically, runway and major runway extensions) and a copy of the Airport Master Plan, in which the OMP (including, specifically, runway and major runway extensions) are described or depicted.

12.12 The City of Chicago has certified that it provided an opportunity for a public hearing to consider economic, social, and environmental effects of the location and the location's consistency with the objectives of any planning that the community has carried out [49 U.S.C. Section 47106(c)(1)(A)(i)].

The City of Chicago has certified by letter dated, September 27, 2005, that it provided for an opportunity of public hearing on September 6, 2005 to consider the economic, social, and environmental effects of the OMP (including, specifically, runways and major runway extensions), and the consistency of the OMP (including, specifically, runways and major runway extensions) with the objectives of any planning that the community has carried out.

12.13 The City of Chicago has certified that the airport management board has voting representation from the communities in which the project is located or has advised communities that they have the right to petition the Secretary about the proposed project [49 U.S.C. Section 47106(c)(1)(A)(ii)].

The City of Chicago has certified by letter dated, September 27, 2005, that the OMP will be located in Chicago, Des Plaines, Elk Grove Village, Bensenville and Schiller Park, Illinois, and in unincorporated portions of Cook and DuPage Counties, Illinois. The airport management board is the City Council of the City of Chicago which has voting representation from the communities in Chicago in which the project is located. The City of Chicago certifies that each of the other communities in which the project will be located was advised by letter that they have the right to petition the Secretary about the OMP (including, specifically, runways and major runway extensions).

12.14 The FAA has given this proposal the independent and objective evaluation required by the Council on Environmental Quality (40 C.F.R. Section 1506.5).

As the Final EIS outlined, a lengthy process led to the ultimate identification of the selected alternative, disclosure of potential impacts, and selection of appropriate mitigation measures. This process began with the FAA's competitive selection of an independent EIS contractor, continuing throughout the preparation of the Draft EIS and Final EIS, and culminating in this ROD. The FAA provided input, advice, and expertise throughout the planning and technical analysis, along with administrative direction and legal review of the project. From its inception, the FAA has taken a strong leadership role in the environmental evaluation of this project and has maintained its objectivity.

12.15 Religious Freedom Restoration Act and First Amendment Findings

In applying the provisions of RFRA to this proposed action, the FAA finds that its approval of the selected alternative is likely to substantially burden the free exercise of religion because St. Johannes Cemetery is slated for acquisition and relocation in order to construct Runway 10C/28C. The FAA also finds that there is a compelling government interest in proceeding with the selected alternative and that there is no less restrictive alternative that would avoid St. Johannes Cemetery.

Approval of the selected alternative had the potential to substantially burden the free exercise of religion with respect to Rest Haven Cemetery as well. However, the FAA has identified and adopted a less restrictive alternative that can satisfy the compelling governmental interest with respect to this property by not requiring acquisition or relocation. Accordingly, Rest Haven Cemetery will remain in private ownership with public access and with mitigation for the change in its setting provided pursuant to the National Historic Preservation Act.

The FAA further finds that the First Amendment claims advanced by the religious objectors do not preclude it from adopting Alternative C as the selected alternative.

12.16 Findings Relating to Due Process Claims and Formal Adjudicative Processes

The FAA concludes that its application of NEPA, other environmental and aeronautical statutes, RFRA, and First Amendment claims constitute informal agency decision-making. The FAA has provided for public hearings, opportunities to comment on both Draft and Final EISs, as well as on proposed Section 4(f) and 6(f) determinations, Draft General Conformity Determination, and consultation as provided under the National Historic Preservation Act. The FAA has also arranged for meetings, teleconferences, and other opportunities to obtain the views of project opponents. In addition, the FAA has invited comments on its proposed resolution of religious liberty claims. As demonstrated in the Final EIS, the many responses to comments, and this ROD, the FAA clearly took all comments into account. Under these circumstances, and given the nature of this proposed action, the FAA believes it has provided the public with the full measure of due process that is required by law.

13. DECISION AND ORDER

In Section 3.7 of the Final EIS, the FAA has identified Alternative C (the City of Chicago's proposed O'Hare Modernization Program) as the FAA's Preferred Alternative. FAA must now select one of the following choices:

- Approve agency actions necessary to implement the proposed project, or
- Disapprove agency actions to implement the proposed project.

Approval would signify that applicable federal requirements relating to airport development and planning have been met and would permit the City of Chicago to proceed with the proposed development and possibly receive federal funding and/or approval to impose and use Passenger Facility Charge (PFC) funds for eligible items. Not approving these agency actions would prevent the City of Chicago from proceeding with implementation of Alternative C.

Decision: I have carefully considered the FAA's goals and objectives in relation to various aeronautical aspects of the proposed development actions discussed in the Final EIS. The review included: the purpose and need that this project would serve, the alternative means of achieving the purpose and need, the environmental impacts of these alternatives, and the mitigation necessary to preserve and enhance the human, cultural, and natural environment.

Under the authority delegated to me by the Administrator of the FAA, I find that the project in the ROD is reasonably supported. I, therefore, direct that action be taken to carry out the following agency actions discussed in Section 3 of this ROD, including:

A. Unconditional approval of the revised Airport Layout Plan (ALP) for the projects summarized in Chapter 3 of the Final EIS, which constitute the proposed development.

B. Eligibility for Federal grant-in-aid funds and/or PFC, including the following elements:

    - Land Acquisition
    - Site Preparation
    - Runway, Taxiway, and Runway Safety Area Construction
    - Terminal and Other Landside Development
    - Installation of Navigational Aids
    - Environmental Mitigation
    - Noise Mitigation Projects

C. Determination and actions, through the aeronautical study process of any off-airport obstacles that might be obstructions to the navigable airspace under the standards and criteria of 14 CFR Part 77 and evaluate the appropriateness of proposals for on-airport development from an airspace utilization and safety perspective based on aeronautical studies conducted pursuant to the processes under the standards and criteria of 14 CFR Part 157.

D. Development of air traffic control and airspace management procedures to establish and maintain safe and efficient handling and movement of air traffic into and out of the

airport under 49 U.S.C. §§ 40103, 40113, and 40120; development and approval of revision to Standard Instrument Approach Procedures (SIAP), Standard Instrument Departures (SID) and Standard Approach Routes (STAR) procedures for the reconfigured runways (14 CFR Part 97).

E. Determinations that the proposed new airfield alignment, including runways and taxiways, conform to FAA design criteria. Approval of protocols for maintaining coordination among sponsor offices, construction personnel, and appropriate FAA program offices, ensuring safety during construction.

F. Determinations that air quality impacts associated with the proposed project conform to the State Implementation Plan under Section 176(c)(1) of the Clean Air Act, as amended [42 U.S.C.§ 7506(c)(1)], and 40 CFR Part 93.

G. Review and subsequent approval of an amended Airport Certification Manual for ORD (per 14 CFR Part 139).

H. Review and subsequent approval of amended air carrier operations specifications for service at ORD.

Recommend:

Jeri Alles 9-29-05

Jeri Alles Date

Manager, Airports Division, Great Lakes Region

Approved:

9/29/05

Christopher R. Blum Date

Regional Administrator, Great Lakes Region

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RIGHT OF APPEAL

This ROD presents the Federal Aviation Administration's final decision and approvals for the actions identified, including those taken under the provisions of 49 U.S.C. Subtitle VII, Parts A and B. This decision constitutes a final order of the Administrator subject to review by the Courts of Appeals of the United States in accordance with the provisions of 49 U.S.C. Section 46110. Any party seeking to stay the implementation of this ROD must file an application with the FAA prior to seeking judicial relief, as provided in Rule 18(a), Federal Rules of Appellate Procedure.

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Executive Summary

Introduction

The Federal Highway Administration (FHWA) and Illinois Department of Transportation (IDOT) have identified a preferred alternative for the Elgin O'Hare - West Bypass (EO-WB) project as described in this Final Environmental Impact Statement (Final EIS). The Preferred Alternative emerged after an evaluation and screening process of many alternatives that considered their ability to satisfy the project's purpose and need, provide measured improvement in travel, limit adverse effects on the area's environmental and socioeconomic resources, and address critical needs of communities most affected by the project.

Study Area



The EO-WB study area is bounded roughly by I-90 on the north, I-294 on the east, I-290 on the south, and the Elgin O'Hare Expressway on the west. This area is characterized as a transportation crossroads that includes O'Hare International Airport, a network of freeways and tollways, transit facilities (including Metra rail lines and Pace bus service), freight rail service, and multimodal transfer facilities. It also contains the second largest employment base in the Chicago metropolitan area. Given its geographic position as a transportation and employment hub, 18 percent of all vehicle trips in the region occur in the EO-WB study area. This sizeable travel demand, however, has been outpacing the capacity of the transportation infrastructure resulting in severe traffic congestion, traffic delays, and reduced travel efficiency. In fact, as part of the 2005 *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) Federal Transportation Bill, the U.S. Congress identified the EO-WB as a project of regional and national significance, one of only a dozen such projects nationwide.

Highway transportation planning has long focused on providing travel mobility in the study area. The Elgin O'Hare Corridor was first introduced as a proposed highway facility in 1967. Following environmental studies and engineering plans by IDOT in the late 1980's and 1990's, the first phase of the Elgin-O'Hare Expressway between Hanover Park and Itasca was completed in 1993. The Illinois State Toll Highway Authority (ISTHA) first studied the O'Hare West Bypass in 1987, and again in 1996. More recently, a proposal for western access to the O'Hare International Airport was adopted as part of O'Hare's Future Airport Layout Plan in 2005. In conjunction with the airport's plan, DuPage County

prepared a long-term vision study for the West O'Hare Corridor examining both land development potential and transportation needs including the extension of the Elgin O'Hare Expressway and the development of the O'Hare West Bypass. As mentioned above, funding was included in the 2005 SAFETEA-LU for this project to initiate project development. IDOT's Highway Improvement Program for fiscal years 2010 to 2015 reflects allocations for planning, engineering and land acquisition monies to support the development of the EO-WB. Long-term transportation investments in the region are also identified in the Chicago Metropolitan Agency for Planning's (CMAP) Regional Transportation Plan (RTP) for 2030. The EO-WB has been included in the 2030 RTP for the region, and will be included in the 2040 plan as the preferred alternative identified in this document. Overall, a long history of local, regional, state and federal involvement has occurred in an effort to advance the EO-WB toward implementation.

The EO-WB study was launched to identify an innovative solution to the transportation problems experienced in the study area. IDOT and FHWA identified several key objectives for the study:

- Provide for extensive stakeholder outreach to seek input to solutions that fit into and reflect their surroundings
- Identify the major transportation problems and issues
- Evaluate a broad-range of multimodal transportation solutions that lead to a preferred transportation system concept for the study area

A technical analysis of the transportation issues resulted in the following findings (see the EO-WB's *Transportation System Performance Report* [FHWA and IDOT, 2009] for details):

2030 Baseline Congestion



- Eighteen percent of all travel in the region enters, leaves, or passes through the study area. By 2030, that amount will grow to 19 percent.
- Roughly 86 percent of the area's interstate highways and major arterials are congested. That will grow to 91 percent by 2030.
- Congestion on major roads will spill over to secondary roads, with 92 percent of primary arterials and 90 percent of minor arterials congested by 2030.
- Travel times to interstate connections are longest in 40 percent of the study area, and much of the area consists of densely developed commercial and industrial uses that rely upon superior access to major transportation facilities.

- Travel times from the proposed O'Hare West Terminal to locations west and northwest are among the longest in the study area. Future travel demand with the construction of the new west terminal will warrant improved access compatible with a world class airport.
- Approximately four percent of all trips in the study area are made by transit, estimated to increase to five percent by 2030. More is needed to reduce dependence upon the automobile in the study area.

These findings, coupled with input obtained from stakeholders (see *Stakeholder Problem Definition* [FHWA and IDOT, 2008] for details), resulted in the development of the project's purpose and need, as follows:

- Improve regional and local travel by reducing congestion
- Improve travel efficiency
- Improve access to O'Hare Airport from the west
- Improve modal opportunities and connections

These four basic needs served as the foundation upon which the range of reasonable transportation alternatives were developed and the measures by which to comparatively evaluate their performance and identify a preferred alternative.

Process Leading to the Preferred Alternative

The Preferred Alternative emerged out of an alternatives development and evaluation process that was both comprehensive and structured. A broad range of alternatives was screened using appropriate technical data and stakeholder perspectives to distinguish alternatives that warranted further consideration. The process began with stakeholders identifying the transportation problems and locations where physical improvements were needed. Using that information, the project team assembled working concepts for roadway and transit system alternatives. Both roadway and transit concepts were screened in several cycles of evaluation using travel performance, environmental and social critieria, and costs. Existing and available geographical information systems (GIS) data was used to evaluate the alternatives' impacts to socioeconomic and environmental features in Tier One with detailed field studies to be conducted during Tier Two as agreed to by FHWA, IDOT, and regulatory resource agency groups early in the study process. (See Section 5.2.1 for a summary of the agency scoping meetings at which this topic was discussed).

The initial roadway analysis began with 15 concepts that were screened to 10 based on whether they satisfied purpose and need. A subsequent screening step examined the environmental and socioeconomic effects of the remaining alternatives and determined that three additional alternatives should be dismissed because of high socioeconomic impacts, leaving seven remaining roadway alternatives under consideration. The seven remaining roadway alternatives were refined in terms of roadway layout, footprint or right-of-way requirements, access requirements, and incorporation of transit improvements into corridors shared by roadways and transit. The criteria used to compare the alternatives were expanded to include travel performance, design feasibility, construction and right-of-way costs, and

environmental and socioeconomic impacts. The measured effects of each alternative (travel efficiency, travel times, acres affected, number of resources affected, residential and businesses displaced, and tax revenue loss) were analyzed using both quantitative and qualitative analyses supported by stakeholder input. The combination of these evaluation methodologies yielded justification to drop five of the seven alternatives, leaving only Alternatives 203 and 402 as the build alternatives to be considered in the Draft EIS. Parallel to this process was an analysis of options for connecting the O'Hare West Bypass element of the project to I-90 on the north and I-294 on the south. After completing this evaluation, North Bypass Connection Option D was selected as the preferred corridor for the northern portion of the O'Hare West Bypass alignment, and South Bypass Connection Options A and D were selected as corridors for the southern portion of the O'Hare West Bypass alignment warranting further consideration in the Draft EIS.

The evaluation of transit alternatives followed a path similar as the roadway alternative evaluation process, with more than 20 transit improvement corridors proposed initially, screened to 15 at the end of the process. The final transit corridors were refined in length and location, type of service, station locations, transit center locations, parking requirements, etc. The set of transit improvements associated with either roadway alternative is similar except for the STAR Line extending from I-90 to the proposed O'Hare West Terminal. Under Alternative 203, the north leg of the O'Hare West Bypass is freeway and the STAR Line would share the corridor. However, Alternative 402 provides an arterial improvement north of Thorndale Avenue but it cannot accommodate the STAR Line as well because of the limited width of the improvements. As such, the transit agency would have to implement an alignment for the STAR Line separately.

The roadway and transit improvements are supported by a common set of bicycle and pedestrian improvements. These improvements focus on filling the gaps in bicycle trail and pedestrian paths to provide better non-motorized connections to transit stations, park and ride facilities, community activity centers, regional trail systems, and employment areas.

The Draft EIS, completed in August 2009, presented a side-by-side comparison of Alternatives 203 and 402, South Bypass Connection Options A and D, and the No-Action (Baseline) Alternative to assist decision-makers in selecting a preferred system transportation concept for the study area. The document was available for public comment through October 26, 2009. A public hearing was held during the public comment period on October 8, 2009 to present the build alternatives to the public, obtain input on the alternatives, and answer questions. During the comment period, over 70 comments were received, most of which expressed a preference for Alternative 203 and/or Option D. In addition, four local governmental entities submitted resolutions passed in favor of either Alternative 203 or Option D.

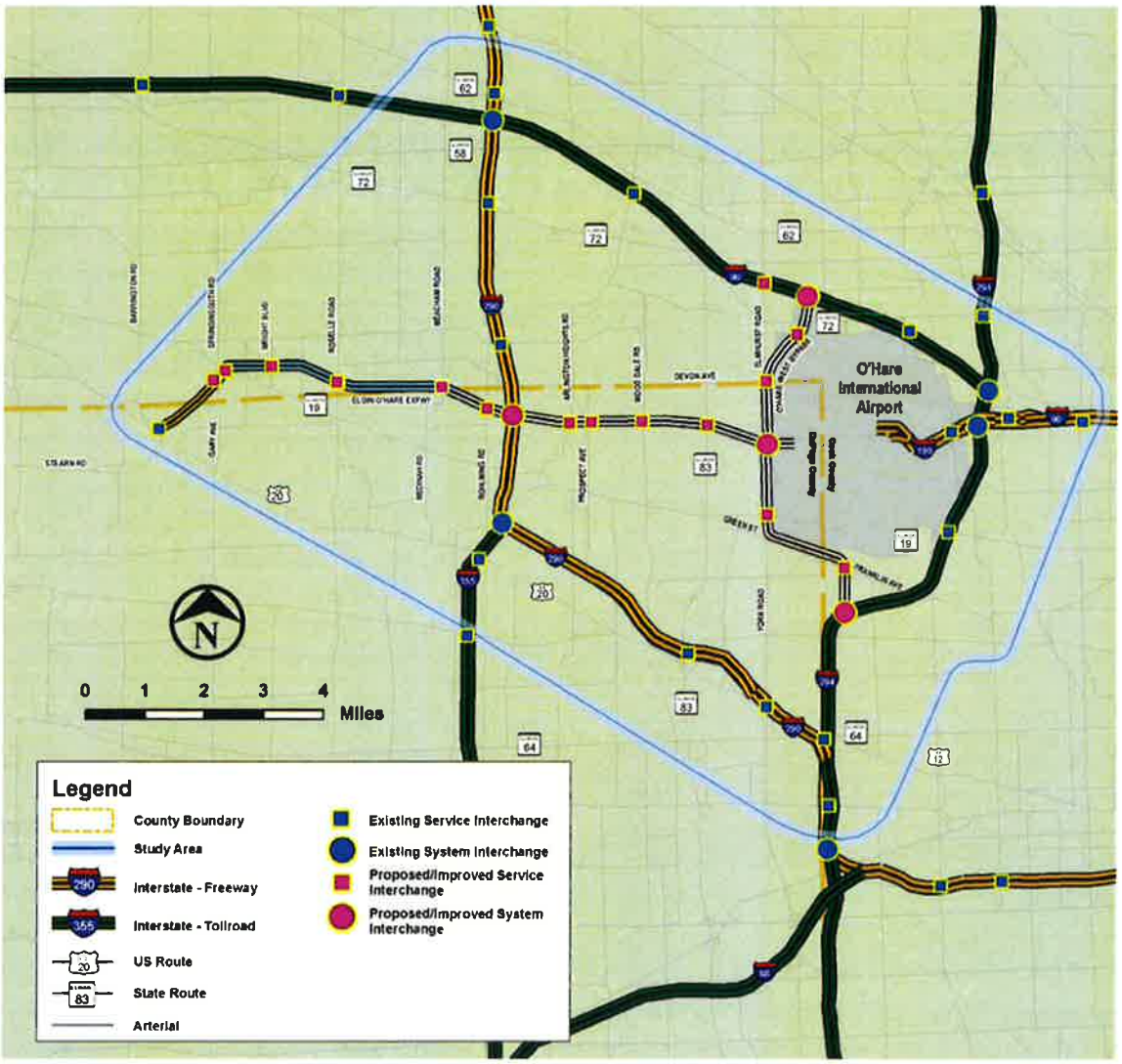
After considering each alternative's transportation benefits and reviewing input received from area residents, communities and stakeholders, IDOT and FHWA identified Alternative 203 with Option D as the Preferred Alternative. Alternative 203 offers slightly better travel performance, whereas Alternative 402 has less socio-economic impacts; both alternatives were comparable in terms of environmental impacts. An examination of economic benefit showed that Alternative 203 provides an additional one billion dollars in value added, and a greater potential for job creation in the region. The clear distinction between the alternatives was found in the overwhelming public and regulatory/resource agency support for

Alternative 203 and Option D. Five municipal entities passed resolutions supporting Alternative 203 and/or Option D and two-thirds of the comments from individuals received during the Draft EIS supported Alternative 203 and/or Option D. Further, regulatory/resource agencies unanimously concurred with Alternative 203 with Option D as the Preferred Alternative.

Description of the Preferred Alternative (Alternative 203 with Option D)

Alternative 203 consists of upgrading and extending the Elgin O'Hare Expressway between IL 19/Gary Avenue to the O'Hare West Bypass for about 10 miles. Between IL 19/Gary Avenue and I-290, the expressway would be widened and upgraded along the existing alignment. East of I-290, extending to the West Bypass and the proposed O'Hare West Terminal, Thorndale Road would be upgraded to a new full-access control freeway. The mainline facility would be three to four basic lanes in each direction, with additional

Preferred Alternative (Alternative 203 with Option D)



auxiliary lanes between high volume interchanges. A 70-foot median would accommodate potential dedicated transit service in the future. To accommodate local traffic circulation, frontage roads would be provided extensively throughout the corridor. Service interchanges would provide access at IL 19, Springinsguth Road, Wright Boulevard, Roselle Road, Meacham Road, Rohlwing Road, Park Boulevard, Arlington Heights Road/Prospect Avenue, Wood Dale Road, and IL 83. Access to other intersecting roadways would be provided by a frontage road system. A full-access system interchange would be provided at I-290. In many cases, crossroad improvements at interchange locations would extend several hundred feet north and south to accommodate increased traffic movements.

Alternative 203 also includes the O'Hare West Bypass, a freeway section that would extend from I-90 at the current location of the Des Plaines Oasis, south along the western edge of O'Hare Airport to the Bensenville Yard. The bypass would then tunnel under and extend east along the north side of Green Street/Franklin Avenue before turning south to connect with I-294.

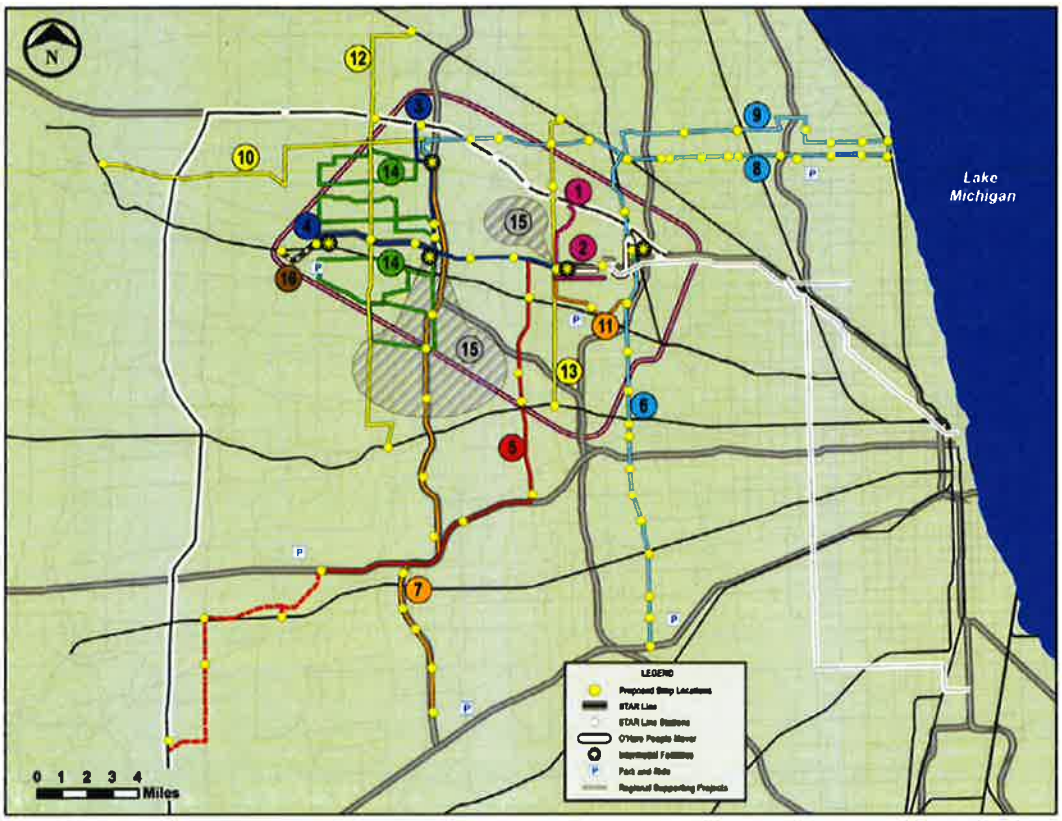
South Bypass Connection Option D was identified as the preferred alignment for connecting to I-294 beginning at the tunnel under the Bensenville Yard. The freeway generally would extend southeast along the north edge of Green Street, then cross the Union Pacific Railroad (UPRR) and proceed south, paralleling the east side of the railroad, to a new system connection with I-294 near Grand Avenue. A new bridge that reconnects Taft Road across the Bensenville Yard, linking Franklin Avenue and IL 19 would be constructed, and a full-access system interchange would be provided at I-294. Part of I-294, extending roughly from Grand Avenue south to North Avenue, would be improved to accommodate system ramp connections and lane balance requirements.

The overall length of the O'Hare West Bypass is 6.2 miles. The freeway would consist of four basic lanes in each direction with additional auxiliary lanes at interchanges, and a 70-foot median would accommodate transit service north of Thorndale Avenue. System interchanges are proposed at I-90, the Elgin O'Hare Expressway, and I-294. Service interchanges are proposed at IL 72, Devon/Pratt, the proposed O'Hare West Terminal, IL 19, and Green Street/Franklin Street.

Transit Improvements

New transit opportunities and connections in the study area are regarded an important objective, and consequently are a component of the project purpose and need. The set of proposed transit improvements has 16 elements (see figure). These elements consist of corridors providing commuter rail service, rail or bus rapid transit (BRT), express bus, local bus, and shuttles (to be built by others). Other facets include new stations, intermodal facilities or transit centers, and park and ride facilities. Improvements include a transit corridor along the J-Line west corridor from the proposed O'Hare West Terminal station to the Schaumburg Metra Milwaukee District West (MDW) station. This transit improvement would be either BRT or rail, and would be located in the median of the proposed roadway improvement. This particular improvement would link residents to jobs in the study area and to downtown Chicago.

Transit Improvements



Corridor Name (Mode)

1. Star Line Spur (Commuter Rail)
2. Blue Line Extension to West Terminal (Heavy Rail)
3. J-Line Northwest to Woodfield (Rail or Bus Rapid Transit)
4. J-Line West to Schaumburg MD-W Metra (Rail or Bus Rapid Transit)
5. J-Line South to Naperville and Aurora (Bus Rapid Transit to Naperville; Link Service From Naperville to Aurora)
6. Mannheim (Arterial Rapid Transit)
7. I-355 (Express Bus)
8. Dempster (Arterial Rapid Transit)
9. Golf East (Arterial Rapid Transit)
10. Golf West (Local Bus)
11. Irving Park (Express Shuttle Bus)
12. Roselle Road (Local Bus)
13. York Road Shuttle (Local Bus)
- Circulators (Local Circulators)
15. Employment Shuttle Zones
16. Shuttle Bus Service** (between Schaumburg Metra Station and Hanover Park Metra Station)

**As part of Tier Two Studies, an evaluation to extend the "J-Line West Transit Corridor" west to the Hanover Park Metra Station will be conducted.

Another proposed transit improvement is the J-Line northwest that would extend from the Elgin O'Hare corridor north along IL 53 to the Woodfield Mall area. An element of the J-Line would be an express bus service extending south along IL 83 and then in a westerly direction to a terminus at the proposed STAR Line station in Aurora. Other elements of the transit plan include extending the Chicago Transit Authority (CTA) Blue Line service from O'Hare's terminal core to the proposed O'Hare West Terminal, and the STAR Line rail service from the O'Hare West Terminal to the I-90 corridor where the service would be extended west. Express bus service is proposed on I-355, Golf Road, Dempster Street, Irving Park Road, and Mannheim Road. Shuttle bus service is proposed between the Schaumburg Metra Station and Hanover Park Metra Station. Extending the J-Line as a higher capacity transit service to the Hanover Park Metra Station will be evaluated in Tier Two. Circulator bus routes and shuttles are planned to develop better connections to stations and employment and activity centers. Rail and BRT stations have been added at key locations, as well as park and ride facilities to provide convenience to the system. The sum of these

improvements is aimed at providing an alternative to the automobile for area residents and workers.

Supporting Improvements

Other supporting transportation improvements were considered in the development of a comprehensive transportation solution for the study area. In particular, non-motorized transportation is an important aspect of the plan that would benefit home to work trips, recreational opportunities, and linkages to transit facilities, activity centers, and employment centers. Each of these improvements would be common to the Preferred Alternative. The types of recommended strategies include bicycle and pedestrian improvements, including new bicycle trails and pedestrian paths that would provide better connections to transit stations, transportation centers, park and ride facilities, community activity centers, regional trail systems, and employment areas.

Effects of the Preferred Alternative

Travel Performance

The Preferred Alternative would improve travel in and through the study area in terms of improving regional travel, decreasing congestion on secondary roads, improving average speed throughout the system, and improving travel times to freeway connections and various destinations (see Table S-1).

TABLE S-1
Systemwide Travel Performance for Alternative 203

Percent Increase in Regional Travel Efficiency in Study Area	10%	Manages a higher number of vehicles more efficiently on the system
Percent Decrease in Congested VMT on Secondary Roadways (P.M. Peak)	15.2%	Keeps longer trips on major roads, thus relieves minor roads
Percent Increase in Network Speeds on Principal Arterials (P.M. Peak)	8%	Improves efficiency of local travel
Improve O'Hare West Access—Travel Time Savings from the Study Area West to O'Hare	49%	Enhances access to planned O'Hare West Terminal
Improve Accessibility—Percent Increase in Trips within Five Minutes to Interstate/Freeway facilities	50%	Improves access to freeway connection
Percent Increase in Transit Trips	37%	Addresses top stakeholder priority of increasing public transit facilities

Economic Effects

Alternative 203 is expected to stimulate the local and regional economies (see Table S-2). Transportation investment would flow through all areas of the economy that would provide stimulus far exceeding the original investment, which is known as the multiplier effect.

The "multiplier effect" is the phenomenon that the initial project costs, or investment, lead to the re-spending of those dollars in the region. Jobs would be created not only in the transportation construction industry, but also in service sectors that support construction workers, such as medical facilities, laundries, restaurants, and other services. Investments in transportation infrastructure are expected to spur private investment in the redevelopment of older or obsolete structures and the modernization of industrial parks, which would sustain long-term employment opportunities.

TABLE S-2
Economic Impacts from Construction of Alternative 203

Construction costs total	$3.0 B
Construction costs per year[a]	$1.0 B
Total value added per year[b]	$1.6 B
Total value added[b]	**$4.8 B**
Direct jobs created per year[c]	9,200
Total jobs created per year[d]	**21,600**

[a] Assumes a three-year construction schedule.
[b] This value is the measure of the contribution of economic activity by an industry to the region using the IMPLAN model.
[c] These are jobs related to construction of the transportation improvement.
[d] Includes all jobs created by the means of direct, indirect, and induced employment.

The annual construction cost during the three-year construction period is $1.0 billion. This expenditure would result in 9,200 jobs created for the duration of construction and 21,600 jobs created when considering the multiplier effects in other industries. The value added to the regional economy from the construction of Alternative 203 is estimated to be $1.6 billion per year, or almost $5 billion over the construction period.

Environmental and Social Effects

The study is highly developed and urbanized; therefore, most environmental resources have been disturbed and are of relatively lower quality. Commercial and industrial development is abundant, thus total avoidance of these resources is not possible. However, with the use of existing public rights-of-way, airport property, and avoidance and minimization practices, resource impacts are reduced to the greatest extent possible based upon the current level of design and characterization of those resources. Further analysis and reduction of impacts are expected to occur in the Tier Two EIS process. The environmental and social effects of Alternative 203 with Option D are shown in Table S-3.

TABLE S-3
Summary of Environmental and Social Effects of Alternative 203 with Option D

Resource	Effect
Natural Resources	
Wetland impacts (acre)[a]	39.1
Stream crossings (total number)	22
Surface waters impacts (acre)[a]	18.1
Floodplain encroachments (acre)	24.7
Threatened and endangered species impacted	0
Noise	
Noise-sensitive residential areas	47

TABLE S-3
Summary of Environmental and Social Effects of Alternative 203 with Option D

Resource	Effect
Noise-sensitive, non-residential receptors (churches, schools, parks)	29
Cultural Resources and Section 4(f) Resources	
Cultural resources impacted	0
Acres of Section 4(f) resources impacted (number)[b]	0.95 (3)
Acres of non-Section 4(f) special lands impacted (number)	2.0 (1)
Socioeconomics	
Residential displacements	11
Commercial structure displacements	12
Industrial structure displacements	28
Employees displaced	1,277
Tax revenue loss	$4.47M

[a] Totals include impacts to potentially jurisdictional areas, such as stormwater facilities. Subject to regulatory review, several manmade stormwater facilities may be exempt from regulation.
[b] One property purchased with OSLAD funds may be affected.

Public Involvement

Public involvement has been a cornerstone of the study process, and has been critical for developing consensus on a Preferred Alternative. The extensive stakeholder and public outreach framework, consistent with IDOT's Context Sensitive Solution (CSS) policy, has accompanied the technical work over the course of the planning process (see the *Stakeholder Involvement Plan (SIP)* [FHWA and IDOT, 2009] for details). The object of CSS is an interdisciplinary approach that seeks effective, multimodal transportation solutions by working with stakeholders to develop cost-effective solutions that fit into and reflect the project's surroundings. During the course of the study, dozens of meetings were held with communities, transportation providers, special districts, state and federal agencies, and the general public. Input was requested about transportation problems, the improvements needed, valued community resources that should be considered, the criteria and data that should be used to evaluate alternatives, the alternatives considered, and the process for evaluating alternatives. The alternative that emerged as the preferred set of improvements for the EO-WB study directly reflect the application of the CSS process and the valued input of the many stakeholders involved.

The public outreach program included the following major elements:

- Project working groups that essentially met monthly. A key element was the "workshop" format, which involved stakeholders literally drawing on study area maps to define the transportation issues and to facilitate development and evaluation of alternatives.
- Open house public meetings in November 2007 (transportation needs), September 2008 (initial alternatives), March 2009 (refined alternatives and expanded study area), and October 2009 (Draft EIS) yielded invaluable insights regarding stakeholder issues and priorities. Regular newsletters (six issues distributed prior to of the Draft EIS) provided detailed information on project activities and progress, and an opportunity for public comment (approximately 1,000 newsletters distributed).
- A Web site (www.elginohare-westbypass.org) provided study information, summaries of meeting minutes, reports, and an opportunity for the public to send comments and feedback to the project team. The website remains active and current.
- Speakers bureau events, based on the requests from individuals and groups, as a venue for putting the project message and information to the public.
- Extensive media coverage.

Stakeholder involvement helped develop the foundation upon which the study rests—the purpose of and need for the transportation improvements proposed within the study area. Stakeholders identified transportation problems and provided suggestions regarding potential types and locations of improvements, information that served as a starting point for developing the initial roadway and transit alternatives. Later stakeholders assisted in developing criteria used to evaluate and compare alternatives.

Transportation providers and other agencies provided valuable input regarding the development and evaluation of roadway, transit proposals, and refinements in the transportation concept that would avoid conflicts with their respective plans and operations. Planning and regulatory/resource agencies also have been integral to the process. The regulatory and resource agencies partnered with the project sponsors from the beginning to guide the project through the NEPA/404 Merger process, and the analysis techniques used to measure natural and socioeconomic impacts. For additional details regarding the EO-WB public involvement activities, refer to Section 5, *Coordination*.

Financing Strategies

Historically, transportation infrastructure projects have been funded with a combination of federal and state monies. In an era of increasing infrastructure needs across the country and constrained public funding, other funding mechanisms are being considered. With an estimated cost of $3.6 billion, the preferred alternative for the EO-WB may likely be a candidate for a combination of funding strategies including federal and state monies, tolls, grants, bonds, and public-private partnerships. An important part of the work in the Tier Two process will be to develop a financial plan. This plan will identify reliable sources of funding and required and anticipated cash flow based on project sequencing. Ultimately, the financial plan will be linked to the development of a detailed implementation plan, per

Section 6002 guidance, establishing the proposed sequence for implementing highway projects with operational independence based on funding and schedules.

Summary

This Final EIS identifies the Preferred Alternative that is the outcome of Tier One of the EO-WB study. The selection of Alternative 203 with South Connection Option D was based upon a rigorous evaluation of many alternatives considering travel performance and cost, impacts and benefits to environmental and social resources, and considerable public input.

The Preferred Alternative best suits the needs of the communities and stakeholders most affected by the proposed action as demonstrated by its ability to:

- Best satisfy the objectives of the project's purpose and need.
- Limit impacts on natural and social resources in the area.
- Provide improved travel efficiency for local and long distance trips in ways that are most compatible with existing and planned community land use patterns.

The Final EIS is organized in the traditional format as described in the FHWA *Technical Advisory T6640.8A* (October 30, 1987). It builds on the Draft EIS text with modifications that identify the selection of the Preferred Alternative, update the information presented in the Draft EIS, and describe activities that have occurred since publication of the Draft EIS.

A 30-day waiting period will begin when the Notice of Availability for this Final EIS is published in the Federal Register. After the 30-day waiting period has concluded and all comments on the Final EIS have been satisfactorily resolved, FHWA will issue a Record of Decision (ROD) to identify the Selected Alternative. IDOT will make the ROD publicly available after it is issued by FHWA.

Following the ROD, the FHWA and IDOT will commence with Tier Two of the process, which will advance detailed engineering and environmental studies for the selected alternative. Coordination with affected communities, agencies and other stakeholders will continue throughout this phase of project development. There will be a focus on roadway design and design considerations that further minimize environmental and social effects, and mitigation measures for those unavoidable social and environmental effects.

SECTION 2

Alternatives/Preferred Alternative

This section describes the alternative development process that led to the identification of the Preferred Alternative. The evaluation of alternatives in Tier Two has determined the Build Alternative to be preferred. This alternative received concurrence by the Illinois NEPA/404 Merger group on September 6, 2012.

The content of this section is structured to provide a complete understanding of the alternative development process spanning both Tier One and Tier Two of the EO-WB study, and the process used to develop, evaluate, screen, refine, and ultimately select the Preferred Alternative.

Where, Tier One defined the project corridor (location) and project type (multimodal concept), Tier Two builds on the Tier One decision with a process that defines the project's design features that fit within that corridor. Tier Two design requirements have been based on an update of the planning horizon from 2030 to 2040 with the mainline facility operating as a toll road. The decisions in Tier Two that are required to advance the project include: decisions on the design features that best satisfy the needs of the project (i.e., mainline requirements, interchange type, tunnel versus bridge, transit requirements, drainage requirements, etc.); a decision on the facility type alternate that is most financially viable (i.e., freeway, toll road, or combination of freeway and toll road); and the sequence in which improvements are constructed including the development of an ICP.

As presented in the March 2012 Tier Two Draft EIS, the alternatives analysis concluded with two overall alternatives (Build Alternative and No-Build Alternative) and alternates at the interchange of Elmhurst Road and I-90 and the intersection at IL 72 and Elmhurst Road. The Tier Two Draft EIS was distributed for public comment on March 30, 2012 and comments were accepted until May 14, 2012. Based on the receipt of agency and public comments on the Tier Two Draft EIS, the general scope of the remaining project alternatives and alternates did not materially change. Public, agency, and community comments, however, did result in several suggested design refinements of the Build Alternative and the alternates considered at the intersection of IL 72 and Elmhurst Road. In all cases, the suggestions were considered and revisions were made (see subsection 2.2). Considering the input from the agencies, public, and the prior studies of transportation performance, cost, and environmental impacts, the Preferred Alternative and alternates at the interchange and intersection locations have been identified in this Tier Two Final EIS.

The process for the development of alternatives was guided by several principles that included:

- The Build Alternative will be the optimal arrangement of design features resulting from a thorough study of many design alternates.
- The No-Build Alternative will serve as the baseline 2040 transportation condition for comparing the travel performance of the Build Alternative.

Exh. H – Page 1

- The base year for the existing roadway travel performance is 2010.
- The project design year is 2040, which is consistent with the CMAP's *GO TO 2040 Comprehensive Regional Plan* (CMAP, 2010). Thus, all travel forecasts conform to the 2040 time period, as do the facility design requirements.
- The development of alternatives was guided by the project's purpose and need to improve local and regional travel, improve travel efficiency, provide improved access to O'Hare Airport from the west, and improve modal opportunities and connections.
- The technical analyses would rely on detailed environmental studies; detailed engineering and roadway geometry; detailed analysis of facility and interchange types; engineering considerations of transit, drainage, and bicycle and pedestrian facilities; detailed travel modeling; and traffic operations analyses.

This section provides an overview of the process used to develop and evaluate alternatives in Tier Two. The section continues with a description of the alternatives carried forward in the Tier Two Draft EIS for additional study, a discussion of the design refinements since the distribution of the Tier Two Draft EIS, an analysis comparing the Build Alternative to the No-Build Alternative and a comparison of the alternates at the Elmhurst Road and I-90 interchange and the IL 72 and Elmhurst Road intersection. This section concludes with the identification of the Preferred Alternative and alternates and a strategy for implementation.

2.1 Alternatives Development Process

The alternatives development process for the EO-WB project has spanned both Tier One and Tier Two. The Tier One study process focused on "big picture" questions, including "what is the project" and "where is the project," while taking into account the full-range of environmental impacts. The *Elgin O'Hare – West Bypass Project Tier One ROD* approved the preferred type of improvement (a multimodal concept comprised of roadway, transit, and bicycle and pedestrian elements) and the preferred project corridor (location) (FHWA, 2010). With respect to the preferred project corridor, in Tier One, a conceptual plan of the project was developed with sufficient detail to define the project corridor with relative precision. The *Elgin O'Hare – West Bypass Project Tier One ROD* also enabled the early acquisition of needed right-of-way.

Tier Two expands on Tier One with detailed engineering and environmental studies that refine the project concept within the preferred project corridor. While the location of the project is fixed by the Tier One decision, the range of alternatives in Tier Two are in the form of design refinements that lead to design choices within the project corridor (i.e., interchange types; tunnel versus bridge; drainage requirements, and transit, bicycle, and pedestrian requirements), and facility type alternates (i.e., freeway, toll road, or combination of freeway and toll road). When assembled, the complete Build Alternative optimizes travel operations, is cost-effective, and minimizes or avoids natural and human resources to the greatest extent possible.

In order to give context to the alternative refinement process in Tier Two, a brief summary of Tier One is provided. Tier One included a robust evaluation of transportation strategies. In Tier One, there were 15 roadway system strategies developed and evaluated. Each of

these strategies went through a rigorous evaluation process of travel performance, engineering, environmental, and cost considerations. The Tier One process concluded with a ROD that identified Alternative 203D (see Exhibit 2-1) as the selected alternative, which was unanimous amongst stakeholders. The selected alternative established both the location and the type of improvement for the EO-WB project, which included expressway-type roadway improvements and companion elements (transit, bicycle and pedestrian facilities) (see the EO-WB Tier One Final EIS for full details of the alternative analysis).

The selected alternative in Tier One was fully supported by the communities and exhibited the best travel performance characteristics, while having relatively low impacts to environmental and natural resources compared to other alternatives. One of the principal reasons for the support of Alternative 203D was the bypass's location on the western edge of O'Hare Airport, a location that occupies largely undeveloped properties between airfield infrastructure and dense industrial development just outside the airport boundary. A bypass at any other location would cause severe disruption to nearby communities (e.g., high displacement of residential and commercial properties, the loss of tax base and employment, highway development that would be out of scale with existing development, and the creation of a barrier that would have effectively divided communities). The City of Chicago Department of Aviation (CDA) also supported this location wherein the *O'Hare Airport Master Plan Update* (CDA, 2005) set aside a 300-foot corridor on the western edge of the airport. The vision for the corridor preservation on the western edge of the airport was fortuitous, for any other location, particularly to the west of the airport, would have resulted in an unworkable project.

The selected corridor that emerged from Tier One was well-defined, and consists of an east-west component known as the Elgin O'Hare corridor and a north-south component known as the West Bypass corridor. The use of conceptual engineering for roadway and transit features provided corridor limits that closely approximate the right-of-way needs of the project. Although, this level of definition is not common for Tier One, the greater level of detail was warranted by the urban character of the area and, in particular, special land uses such as O'Hare Airport.

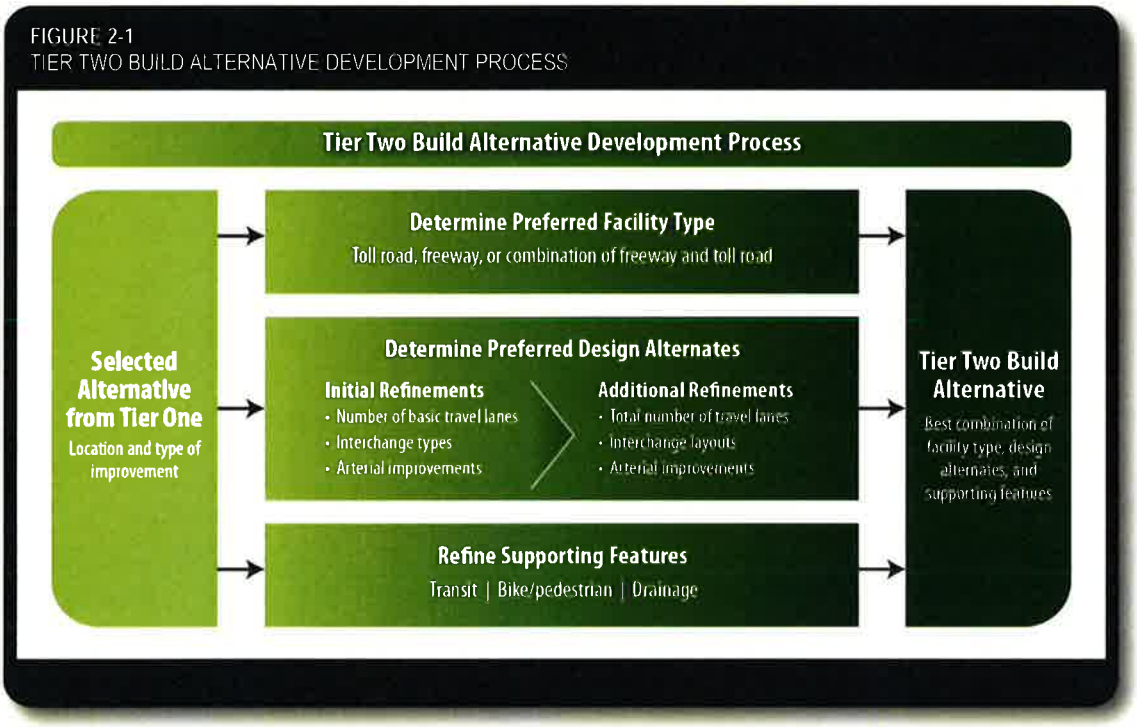
Tier Two of the EO-WB project process started with the project footprint from Tier One, and the process continued with greater engineering detail of the roadway, transit, bicycle and pedestrian facilities, and drainage requirements (see Figure 2-1). Tier Two finalizes the design details of the project (mainline lane requirements, interchange types, arterial improvements, drainage, etc.), and the means by which it would be operated (freeway or toll road). Tier Two outcomes include:

- Determine the most fiscally practicable facility type (i.e., freeway, toll road, or a combination of freeway and toll road).
- Determine the optimal arrangement of design features (i.e., mainline requirements, interchange alternates, arterial improvements, transit, bicycle/pedestrian requirements, and drainage facilities), while reducing environmental and socioeconomic impacts.
- Determine a construction sequencing plan.

The decisions that come from these analyses will be assembled to form a complete Build Alternative that represents the facility type (i.e., freeway, toll road, or combination of

freeway and toll road); the design features (i.e., mainline requirements, interchange location and type, integration of transit, etc.) that optimize roadway geometry, travel and operational performance, environmental considerations, and cost; and a planned sequence of construction that adheres to the requirements for an operationally independent project with logical termini.

FIGURE 2-1
TIER TWO BUILD ALTERNATIVE DEVELOPMENT PROCESS



2.1.1 Facility Type Alternates

An early decision in the Tier Two alternative development process was a determination of the "facility type" (i.e., freeway, toll road, or a combination of freeway and toll road). The consideration of various freeway versus toll road scenarios was prompted by changing conditions in traditional federal and state funding. Declines in federal funds for new projects, particularly those like the EO-WB project that is projected to cost billions of dollars, have led to an increasing reliance on tolling to finance the construction and long-term maintenance of new projects.

In the examination of facility types, nine alternates were developed (ranging from all roadway elements being non-tolled to all roadway elements being tolled) and seven combinations with both freeway and toll road elements (see Exhibit 2-2). Evaluation of these facility type alternates was initially based on financial viability and travel performance. The evaluation of travel performance was similar for all alternates; therefore, it was not a discerning factor. Among the findings, alternates with tolled sections did not cause a substantial diversion of traffic from mainline facilities to arterials streets; thus, tolled facilities satisfies the project's purpose and need pertaining to reducing congestion and improving travel efficiency. The analysis showed the percentage of traffic diverting from tolled facilities (Alternates 2 to 9) was small, ranging from one to five percent. Thus, financial viability was the primary factor used for the initial screening of the alternates, and

in ultimately selecting a facility type as a feature of the Build Alternative. The results of the facility type alternates are summarized below and are contained in Appendix C.

- Alternate 1 (all-freeway alternate): The availability of public funding to finance an all-freeway alternate at a cost of greater than $3 billion is unachievable. **This alternate was dismissed from further consideration.**
- Alternates 2, 3, 4, and 7 (alternates as a full toll road or combination of freeway and toll roads): These alternates were initially viewed as viable since the toll revenue generated from these configurations would support relatively higher bonding capacity, while reducing the required level of public funding. **These alternates were retained for further consideration.**
- Alternates 5, 6, 8, and 9 (alternates with a combination of freeway and toll roads): These alternates yielded a relatively low total revenue; therefore, each alternate showed a major shortfall in potential bonding capacity combined with a large public funding need that is likely unachievable. **These alternates were dismissed from further consideration.**

In further analysis of Alternates 2, 3, 4, and 7, the all-toll road alternate (Alternate 2) was considered the only alternate that would be financially and operationally viable. Three of the four remaining alternates include sections of freeways that attract short distance trips thereby impairing long distance travel continuity on the system. Other factors that affected the facility type decision included long-term maintenance of the facility. The maintenance of freeways is challenged by declining federal and state resources; therefore, funding to restore and rehabilitate a roadway is a large future cost that would be best addressed with a user-based system of finance. A re-examination of the project's purpose and need showed that Alternate 2 would maintain the integrity and intent of the four basic project purposes. The combination of improved travel continuity, the provision of regular long-term maintenance, and meeting the project's purpose and need resulted in the selection of Alternate 2 as the preferred overall facility type alternate.

In November 2010, Governor Quinn formed the EO-WB Advisory Council, which joined the ongoing study process. As directed by the Governor, the Council evaluated four topics including financing, sustainability, work force diversity, and economic impact. Based on an exhaustive evaluation of funding sources, the Council, in their final report (June 2011), recommended that the Elgin O'Hare and West Bypass corridors be operated as toll roads with the Illinois Tollway named as the implementing agency. In later actions (September 2011), the Illinois Tollway Board of Directors enacted a toll increase across the system to fund the Tollway's future capital improvement program, *Move Illinois: The Illinois Tollway Driving the Future,* which includes the EO-WB project (Illinois Tollway, 2011).

The EO-WB project has been proposed as a system of mainline and off-system (arterial) improvements. The proposed tolling concept for the project would consist of tolling the mainline facilities, while the off-system improvements (arterials) associated with the project would not be tolled.

The recommendation of the toll road has no material effect on the facility design other than the inclusion of electronic tolling facilities. For this facility, tolling would be a fully automated toll collection system where typical toll plazas and manual collection facilities

would not be present. Although the design standards for federally-funded interstate routes vary slightly with toll road design standards in Illinois, the difference would cause no change to the outside dimension of the right-of-way; therefore, the environmental impacts would not change with the tolling alternate.

2.1.2 Design Alternates

Tier Two considered the optimal arrangement of design features within the project corridor that provide cost effective travel performance while reducing environmental and socioeconomic impacts. The process, leading to an overall design solution and the refinement of the project footprint, considered many aspects (see Figure 2-1) including the mainline lane requirements, interchange types, arterial improvements, drainage requirements, and other factors (i.e., transit facilities, bicycle and pedestrian facilities). Design alternates were evaluated using the following practices:

- Regular meetings with stakeholders were conducted to review design alternates.
- Application of sustainable practices were included that represents a transportation corridor of the 21st century.
- Application of measures that further avoid and minimize environmental and socioeconomic impacts (applied in every aspect of the engineering process) were included to reduce impacts on wetlands; floodplains; water resources; residential, commercial and industrial properties; and unique land use.

2.1.2.1 Mainline Roadway Requirements

The starting point of the process included establishing the mainline travel requirements. The key data required for this determination was future traffic forecasts. A Build Alternative travel forecast was developed for the year 2040 and assumed a tolled facility. Detailed forecasts (ADT and peak hour volumes) were developed for the project corridor. From this information, the number of basic lane requirements was determined for the roadways based on the *Highway Capacity Manual* (Transportation Research Board, 2010), and American Association of State Highway and Transportation Officials (AASHTO) standards. The mainline requirements include three basic lanes in each direction for the Elgin O'Hare corridor, and two basic lanes in each direction for the West Bypass corridor (see Exhibit 2-3).

The roadway cross-section is inclusive of other features including the addition of auxiliary travel lanes that would be dependent on the location and types of interchanges (see subsection 2.1.2.2). Another prominent feature includes a transit reservation in the Elgin O'Hare corridor for the future development of either bus rapid transit (BRT) or rail transit (including stations). Also, the Elgin O'Hare corridor includes frontage roads and bicycle/pedestrian facilities that further define the footprint of the project. The West Bypass corridor would be inclusive of basic and auxiliary travel lanes only. Transition lanes extending to and from the system interchanges would also be added to the mainline to manage merging and diverging traffic movements at these locations.

2.1.2.2 Interchange Types

Interchange types optimize the movement of traffic to and from the mainline. There are two types of interchanges associated with the project, system interchanges and local access

interchanges. System interchanges provide for the movement of traffic from one fully access-controlled roadway to the next. Local access interchanges provide access from the fully access-controlled roadway to the local road system.

System interchanges are provided when two fully access-controlled facilities connect. For the EO-WB project, there are four locations where this occurs including:

- Elgin O'Hare corridor and I-290
- Elgin O'Hare and West Bypass corridors
- West Bypass corridor and I-90
- West Bypass corridor and I-294

The location of the local access interchanges was determined in Tier One. The locations were determined based on prevailing policy (i.e., crossing state routes are served by an interchange), traffic demands to and from an area, and stakeholder input. Other factors control the location of local access interchanges such as spacing between interchanges (the standard practice is a minimum one-mile spacing, which minimizes weaving conflicts on the mainline caused by on/off vehicle movement). There are 16 locations proposed for local service interchange improvements including:

- Improving existing interchanges along the Elgin-O'Hare Expressway (at Gary Avenue, Springinsguth Road/Irving Park Road [IL 19], Wright Boulevard, Roselle Road, and Meacham Road).
- Providing new interchanges along the proposed extension of the Elgin-O'Hare Expressway (at Rohlwing Road, Park Boulevard, Prospect Avenue/Arlington Heights Road, Wood Dale Road, and IL 83), and along the proposed West Bypass corridor (at Irving Park Road [IL 19], County Line Road/Franklin Avenue/Green Street, Pratt Boulevard/Devon Avenue, and Touhy Avenue).
- Adding ramps to existing partial interchanges at I-90 (at Elmhurst Road) and I-294 (at North Avenue).

The examination of the interchange alternates was grouped into nine geographic areas (see Exhibit 2-4A). In some areas, more than one interchange was grouped together at these locations; these interchanges are closely spaced where the operation of one affects the other. At each of the nine locations, different interchange alternates were examined, ranging from two or three to as many as seven.

The interchange alternates ranged from simple to more complex. The more complicated interchange types eliminated conflicting movements and better managed traffic. The evaluation and comparison of interchange alternates considered several different factors including geometric design (does it meet standards), LOS (does it provide an acceptable level of travel performance), impacts on environmental and social resources, cost, and constructability (can it be built).

The project's Geometric Working Group (GWG)[1] met regularly throughout the development process and provided guidance leading to the recommended alternates at each

[1] Geometric experts from the consulting industry, Illinois Tollway, IDOT, and FHWA (see Section 4).

location. Further, opportunities for community and stakeholder comment were provided throughout the process and offered valuable insights that helped shape the final interchange types.

Exhibits 2-4B to 2-4L depict the alternates considered for each geographic area, the preferred interchange alternate(s), and a comparison of key factors that assisted in the selection. The preferred alternates provided good traffic operations at a reasonable cost. In most cases, the environmental impacts were the same or similar, but in all cases where there was a difference, the alternate having the least environmental impacts was identified as the preferred. The footprints of the alternates vary only slightly from one to another in the nine locations. Design judgment was used in many instances to avoid resources or building impacts by slightly shifting the alignment, or using measures like retaining walls to minimize encroachment. Factors that were most influential in the evaluation of interchange types were traffic and operations performance.

In eight of the nine geographic areas, one alternate for each area has been recommended. For one geographic area, Area 8 (Elmhurst Road and I-90), two alternates remain under consideration. The alternates in Area 8 were presented in the Tier Two Draft EIS, and a preferred alternate has been identified in this document. For added details on the interchange type studies refer to the *Interchange Type Study Report,* dated December 2010 (IDOT, 2010a), and the *Interchange Type Study Report Addendum* dated December 2011 (IDOT, 2011a).

Once decisions about the interchange types were made, the mainline lane requirements could be finalized. The interchange types combined with the updated 2040 travel forecast were used to determine the added lane requirements such as auxiliary lanes between interchanges and transition lanes from interchanges extending onto the mainline section. Decisions were also made about the use of collector-distributor roads, where interchanges were too close and weaving movements needed to be better managed.

2.1.2.3 Drainage Facilities

Northeast Illinois has a long history of rigorous water resource and stormwater regulation. Adherence to drainage and water resource regulation requires land for implementation; thus, the right-of-way requirements for implementation of stormwater conveyance and detention, compensatory storage for displaced floodplains, and the use of best management practices have been accounted for in the refinement of the project footprint (see subsection 2.3.2.7).

2.1.2.4 Other Transportation Components

The engineering refinements in the project corridor have also required consideration of the other transportation and infrastructure needs that will be co-located in the project corridor. The space requirements for these facilities have been evaluated during the development of the Tier Two project footprint and have included crossing and connecting roads, transit facilities, bicycle and pedestrian facilities, and congestion management strategies. Each of the facility requirements are discussed in the following subsections.

Crossing and Connecting Roadway Improvements

A traffic analysis was conducted to study the effects of future traffic on the off-system routes in the vicinity of the proposed project. The travel forecasts for the project area showed that most of the arterial system would require no change in capacity improvements. Arterials in the immediate vicinity of the project, however, would require some capacity improvements to accommodate increased travel in close proximity to the interchanges, and along some sections of arterials. The extent of the improvements typically requires added travel lanes, turning lanes, and updated traffic signals. Added travel lanes commonly extend from the interchange areas for varying distances to accommodate the high traffic volumes at the interchange areas, which are then efficiently transitioned to the existing lane configuration. The added lane capacity was determined with the use of an ADT threshold criterion. The criteria are shown below for two conditions (see Appendix D):

- When existing arterial conditions are one lane in each direction, an ADT of greater than 9,500 would require added travel lanes.
- When existing arterial conditions are two lanes in each direction, an ADT of greater than 18,500 would require added travel lanes.

Table 2-1 lists the crossing and connecting road improvements, and the improvements are shown in Exhibit 2-5. Arterial improvements along Elmhurst Road and Touhy Avenue are more lengthy examples of capacity improvements that are warranted by the effects of the proposed project. Several intersection improvements are among the arterial improvements including IL 19/Barrington Road, IL 19/Wise Road, and IL 72/Elmhurst Road. The intersection improvements include additional left and right turning movements that enhance capacity (see subsection 2.3.2.3 for details). All of the arterial improvements have been included in the overall project footprint, accounted for in the project's right-of-way needs and costs, and evaluated for potential impacts to the environment discussed in Section 3.

TABLE 2-1
Local Cross Roads

Arterial	Existing Condition	Length of Improvements (feet)[a]	Improvement Description	Crossing Feature	Crossroad Over/ Under Highway
West Irving Park Road (IL 19)/ Barrington Road	4 through lanes with turn lanes	2,250 feet	Additional turn lanes at Barrington Road	NA	NA
West Irving Park Road (IL 19)/Wise Rd.	4 through lanes with turn lanes	1,350 feet	Additional turn lanes at Wise Road	NA	NA
Gary Avenue	1 lane eastbound and westbound ramps	1,360 feet	Lane added to both eastbound and westbound ramp	Elgin-O'Hare Expressway	Under
Springinsguth Road	4 through lanes interchange with turn lanes	1,800 feet	Grading and pavement improvements	Elgin-O'Hare Expressway	Under

TABLE 2-1
Local Cross Roads

Arterial	Existing Condition	Length of Improvements (feet)[a]	Improvement Description	Crossing Feature	Crossroad Over/ Under Highway
West Irving Park Road (IL 19)	4 through lanes with auxiliary and turn lanes	2,800 feet	Additional turn lanes at Springinsguth Road and frontage roads	Elgin-O'Hare Expressway	Under
Rodenburg Road	4 through lanes with turn lanes	1,400 feet	Grading and pavement improvements	Elgin-O'Hare Expressway	Under
Wright Boulevard	4 through lanes with turn lanes	900 feet	Grading and pavement improvements	Elgin-O'Hare Expressway	Under
Mitchell Boulevard	2 through lanes	600 feet	Grading and pavement improvements	Elgin-O'Hare Expressway	Under
Roselle Road	4 through lanes with auxiliary and turn lanes	1,300 feet	Reconfigured frontage road intersections and dual southbound left turn lanes at frontage road	Elgin-O'Hare Expressway	Over
Meacham Road/Medinah Road	4 through lanes with turn lanes	1,800 feet	Auxiliary lane added both northbound and southbound	Elgin-O'Hare Expressway	Under
IL 53 (Rohlwing Road)	4 through lanes with turn lanes; at-grade intersection	2,800 feet	New service interchange and frontage road intersections with auxiliary and turn lanes	Elgin-O'Hare Expressway	Over
Devon Avenue	4 through lanes	1,000 feet	Grading and pavement improvements	I-290	Over
Park Boulevard	2 lanes south and 4 lanes north of Thorndale Avenue; at-grade intersection with Thorndale Avenue	5,600 feet	Moved alignment and road extended to connect to Pierce Road; new turn lanes	Elgin-O'Hare Expressway	Under
Arlington Heights Road	2 through lanes with turn lanes; at-grade intersection	2,400 feet	Partial service interchange and frontage road intersections with turn lanes	Elgin-O'Hare Expressway	Under
Prospect Avenue	4 through lanes with turn lanes; at-grade intersection	2,400 feet	Partial service interchange and new frontage road intersections with auxiliary and turn lanes	Elgin-O'Hare Expressway	Under
Mittel Boulevard	2 through lanes with turn lanes; at-grade intersection	1,600 feet	Frontage road intersections with auxiliary lanes	Elgin-O'Hare Expressway	Under
Wood Dale Road	4 through lanes with turn lanes; at-grade intersection	2,300 feet	Full service interchange with auxiliary and turn lanes added	Elgin-O'Hare Expressway	Over
Lively Boulevard	2 lanes; offset at-grade intersection with Thorndale Avenue	700 feet	Extended under Elgin-O'Hare Expressway to eastbound frontage road	Elgin-O'Hare Expressway	Under

TABLE 2-1
Local Cross Roads

Arterial	Existing Condition	Length of Improvements (feet)[a]	Improvement Description	Crossing Feature	Crossroad Over/ Under Highway
IL 83 (Busse Road)	6 through lanes with turn lanes; at-grade intersection	3,100 feet	Full service interchange with auxiliary and turn lanes added	Elgin-O'Hare Expressway	Under
Supreme Drive	2 through lanes with turn lanes; at-grade intersection	900 feet	Frontage road intersections with turn lanes	Elgin-O'Hare Expressway	Under
York Road	4 through lanes with turn lanes	4,000 feet	Frontage road intersections and West Terminal access with turn lanes and median improvements	NA	NA
North Avenue	Existing Northwest Avenue intersection	2,100 feet	Reconfigured connector to Northwest Avenue and Lake Street	NA	NA
County Line Road (south of Grand Avenue)	2 through lanes; no access to/from I-294 between Grand Avenue and W Lake Street	3,500 feet	Moved alignment with southbound exit ramp from I-294	NA	NA
Northwest Avenue	2 through lanes	7,100 feet	Moved alignment	NA	NA
Grand Avenue	4 through lanes with turn lanes	1,200 feet	Grading and pavement improvements	I-294	Under
Franklin Avenue/Green Street	4 lanes west of County Line Road and 2 lanes to the east with turn lanes	6,900 feet	Split full service interchange with 4 lanes and additional turn lanes	NA	NA
Taft Avenue	2 through lanes; ends at Irving Park Road (IL 19) intersection (does not cross Bensenville Yard)	4,000 feet	New 4 lane Taft Avenue connector to Franklin Avenue	NA	NA
County Line Road (at Franklin Avenue)	2 through lanes with turn lanes; ends at Franklin Avenue intersection	700 feet	Intersection improvements with Franklin Avenue and new West Bypass corridor ramps	NA	NA
Irving Park Road (IL 19)	4 through lanes	2,100 feet	Full service interchange with additional turn lanes; roadway re-aligned with 6 through lanes	West Bypass	Under
Elmhurst Road (from Devon Avenue to Pratt Boulevard)	4 through lanes with turn lanes	3,400 feet	Partial service interchange with turn lanes	NA	NA
Touhy Avenue	6 through lanes	7,300 feet	Partial service interchange with turn lanes	West Bypass	Over

TABLE 2-1
Local Cross Roads

Arterial	Existing Condition	Length of Improvements (feet)[a]	Improvement Description	Crossing Feature	Crossroad Over/ Under Highway
Mount Prospect Road	4 through lanes with turn lanes; skewed intersection at Touhy Avenue	2,400 feet	Roadway re-aligned; improved Touhy Avenue intersection with turn lanes	NA	NA
Oakton Street	4 through lanes with turn lanes	1,400 feet	Additional auxiliary lane	NA	NA
Elmhurst Road (from Oakton Street to Touhy Avenue)	4 through lanes; partial cloverleaf interchange; 6 lanes through intersection at Elmhurst Road and Touhy Avenue	10, 950 feet	6 through lanes; diverging diamond interchange; intersection improvement at Elmhurst Road and Touhy Avenue	I-90	Over

Note: NA=Not Applicable

[a] Length of Improvement is total length of both sides of the mainline.

Transit Facilities

In Tier Two, transit improvements have focused on feasible service routes that would be co-located in the project corridor. Transit service has been considered along the Elgin O'Hare corridor, I-90 corridor, and the north leg of the West Bypass corridor that links I-90 service with the proposed West Terminal. The center piece of the transit plan is a new east-west dedicated transit corridor co-located in the Elgin O'Hare corridor right-of-way. The transit right-of-way would be sized to accommodate either BRT or rail. Transit stations are provided at regular intervals with station access and parking. The project footprint for the Elgin O'Hare corridor has been sized to include the transit reservation. Additionally, roadway features, such as crossing road bridges would also be sized to accommodate the future development of transit. The development of the transit service would be the responsibility of others (i.e., transit providers), and the timing of construction would be dependent on the availability of funds. The transit provider would be required to lay pavement or track depending upon the mode, build stations, build transit structures, pedestrian access and parking, signage, and signal controls for rail.

Several transit-related design decisions were evaluated in Tier Two. Among these include the location of transit along the Elgin O'Hare corridor, the I-90 corridor in the vicinity of the connection to the West Bypass corridor, the north leg of the West Bypass corridor, a re-examination of station locations, and extensions of transit service from the Elgin O'Hare corridor.

- **Location of Transit Service.** In the Elgin O'Hare corridor, three placement options for transit were considered: in the roadway median, to the side of the mainline, or along the frontage road system. The advantages and disadvantages of these locations are highlighted in Table 2-2.

TABLE 2-2
Transit Corridor Pros and Cons Analysis [a]

Evaluation Criteria	Transit Corridor Location Options		
	Frontage Roads	Median (from Tier One)	Along the Side
Level of Transit Service	Con - Transit operates in mixed traffic, therefore, increases travel time. Gaps in the frontage road system challenge the feasibility of this approach.	Pro - Transit operates efficiently in dedicated right-of-way and avoids conflicting traffic.	Pro - Transit operates efficiently in dedicated ROW and avoids conflicting traffic.
Right-of-way Costs	Pro - No right-of-way costs other than stations and transit parking.	Pro - Right-of-way provided within the roadway footprint except for transit parking.	Pro - Right-of-way provided within the roadway footprint except for transit parking.
Level of Pedestrian Access	Con - Non-pedestrian friendly access to stations or stops.	Pro - Pedestrian bridges would provide safe and comfortable access for pedestrians from points both north and south of the expressway.	Pro - Pedestrian bridges similar to those of the median alignment would be provided; however, longer walks would be required for pedestrians accessing platform from the opposite side of roadway.
Parking Availability	Neutral - The availability of space for parking is not affected by the alignment choice.		
Connections With Other Transit Services	Neutral - While there are small differences these differences are not important enough to allow for meaningful comparison between the alternatives.		
Modal Flexibility	Con - This alignment is not appropriate for any of the rail technologies, which require dedicated right-of-way.	Pro - This alternative would allow for any of the transit modes that are being considered (BRT, light rapid transit [LRT], Heavy-rail Rapid Transit [HRT], and Diesel Multiple Unit [DMU]).	Pro - This alternative would allow for any of the transit modes that are being considered (BRT, LRT, HRT, and DMU).

[a] *Source:* Vlecides-Schroeder Associates, Inc., 2010.

The analysis concluded with a determination that the median location would be best in the Elgin O'Hare corridor because it ensures the highest potential level of service with a fully dedicated transitway. Other factors that contributed to this conclusion included equity in access from both the north and south. The median location is also beneficial to the roadway design by maintaining roadway symmetry that minimizes alignment issues and avoids conflicts with crossing roads.

In Tier Two, the location of transit service along the north leg of the West Bypass corridor extending to the proposed West Terminal was re-examined. In further analysis, it was determined that transit service be moved from a median location to the east side of the roadway to reduce overall roadway costs. The roadway alignment and its cross-

section were configured to provide sufficient space for a transit facility (either BRT or rail transit) directly east of the north leg of the West Bypass corridor alignment.

Consistent with the vision of the I-90 Transit Task Force and Corridor Planning Group, the EO-WB project considered the eventuality of a long-term transit facility in the I-90 corridor. Compliant with prior studies, transit is planned for a median location along I-90.

- **Right-of-Way Requirement for Transit Service.** Right-of-way requirements for transit have been based on prior studies in the project area sponsored and endorsed by Metra (regional commuter rail provider) (Metra, 2003). The findings of this work show that a minimum requirement of 35 feet (STAR Line criteria) would satisfy the requirements of transit needs (see Exhibit 2-6). At transit station locations, the right-of-way would be expanded to a minimum of 58 feet (see Exhibit 2-6). The Illinois Tollway will advance work for the rehabilitation of I-90 and the EO-WB project, with a requirement that right-of-way for transit will be provided consistent with the Star Line criteria (35 feet as a minimum). It is anticipated that some flexibility will be needed in the final dimension based on roadway geometric constraints, but as a minimum, all bus and rail options would be accommodated.

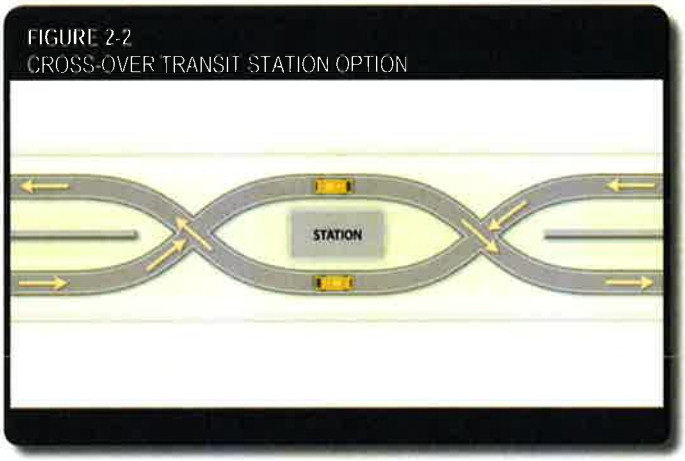
- **Transit Station Locations.** Transit stations were identified in Tier One at six locations: West Terminal, near Wood Dale Road, Hamilton Lakes' Development, IL 53, Roselle Road, and near Schaumburg Metra station. Transit station locations were reviewed and refined in Tier Two resulting in changes at three locations. Station relocations at the Wood Dale Road and Hamilton Lakes' Development locations involved a minor shift to the west, and the station location at IL 53 required consideration of additional design alternates. In the case of the Hamilton Lakes' Development station, the shift was more proximate to the center of activity, provided improved passenger access, and was closer to parking planned for the area. For the Wood Dale Road station, the shift to the west improved access to planned parking. In both cases, pedestrian access would be provided from both sides of the project corridor.

  The IL 53 station was originally sited to accommodate a service area to the south and the transfer of patrons coming from the west that desire to use the service routed north along IL 53 to Woodfield Mall. The original configuration included both a station and dedicated bus ramps from the median to access IL 53. The combined width of these facilities would measure over 150 feet. The sizable median dimension for station and ramps challenged cost-effective roadway design solutions in this area. The process of refining the roadway section in the vicinity found that a median width of about 100 feet would be preferable. The narrower median would accommodate either a station or the dedicated ramps to IL 53, but not both. Coordination with Regional Transportation Authority (RTA) followed to determine the best course of action. Four alternates were examined and presented to the RTA for consideration: Alternate 1 with no station and no ramps, Alternate 2 with station only, Alternate 3 with ramps only, and Alternate 4 with station and ramps (CH2M HILL, 2011). Both Alternates 2 and 3 could be provided within the 100-foot median. In both cases, the transfer from the west to the north would occur at the Hamilton Lakes' Development station causing minor out-of-direction travel. Under Alternate 2, buses would access IL 53 by leaving the median at Park Boulevard

and utilize the mixed travel lanes to exit the mainline at IL 53. The return movement from the IL 53 service would be accomplished via the on-ramp at IL 53 and merging to the median. In discussions with the RTA, it was concluded that a median width of about 100 feet would provide a workable area for future transit infrastructure. Further, the agency preferred to defer the decision regarding either Alternate 2 (a station) or Alternate 3 (ramps) at IL 53, and revisit that decision at a later date when both a transit provider and funding for transit service are identified in the Elgin O'Hare corridor. Parking would be provided at stations and would range from 220 to 630 parking spaces (Vlecides-Schroeder Associates, Inc., 2010). The parking area requirements and locations have been included in the project footprint; therefore, the potential impacts to the environment have been considered as part of this analysis (see Exhibit 2-7).

At all station locations, the option to accommodate buses with doors on right-side only, doors on left-side only, or buses equipped with both left and right-side doors will be preserved. The conventional door arrangement for buses is right-side only; thus, for stations located in the median, a counterflow arrangement would be required at the stations for passenger entrance and exit. In this case, for buses with right-side doors only, buses would cross-over in advance of the station (see Figure 2-2). The median right-of-way would be sufficient to allow for this design solution. Buses equipped with left-side doors are unconventional, but would function in the Elgin O'Hare corridor without the need for the counterflow arrangement. However, buses equipped with left-side doors only would not function well when buses would exit the median to serve the north-south service along IL 53 to and from the Woodfield Mall area. Alternatively, buses equipped with both left- and right-side doors would function well on both the median route and the IL 53 route; however, two-sided door buses are costly and would reduce the overall capacity of the bus. As of October 2012, a decision on the actual bus configuration has been deferred to a future transit provider; therefore, the options discussed above will remain open.

FIGURE 2-2
CROSS-OVER TRANSIT STATION OPTION



- **Extended Transit Service.** Refinements in Tier Two also examined extending transit service from Schaumburg to Hanover Park, and express bus service from the proposed West Terminal complex to the Rosemont Chicago Transit Authority (CTA) station. Service to the west and east of the project limits was also considered.

  On the west, a study investigated the extension of BRT and rail service to the Hanover Park Metra station from the Schaumburg Metra station (a distance of two miles). Over 10 alternate routes were examined between Hanover Park and Schaumburg for both BRT and rail options. Two alternate routes were suited to both BRT and rail service, and

the others would be exclusively BRT routes. The cost of the extended service was sizable, ranging from about $43 million to over $50 million, for the basic infrastructure (not including rolling stock). The travel time provided by the service would be approximately four minutes or represent about a four-minute savings over alternate modes (i.e., shuttle bus in mixed traffic) (Vlecides-Schroeder Associates, Inc., 2010).

In examining these routes, environmental issues were prominent along the more favored route (i.e., the transit corridor adjacent to Metra's existing Milwaukee District West railroad). Based on field work completed during the summer of 2011, there are several wetlands, prairie areas, and one river crossing (West Branch DuPage River) located within the transit alternative study corridor.

As described above, several factors have caused the service (BRT/rail) from Schaumburg to Hanover Park to be deferred from further consideration. Among the reasons include the high cost of transit service for a relatively small savings in travel time, and impacts to high quality wetlands, prairies, threatened/endangered species, and the West Branch DuPage River. This action does not preclude reconsideration of this service at a later date. In lieu of BRT or rail service, bus shuttle service would be used to connect the Schaumburg Metra station to the Hanover Park Metra station.

On the east, express bus service was studied from the proposed West Terminal to the Rosemont CTA Blue Line station. This service is viewed as interim until such time that transit is extended across the airfield to the proposed West Terminal. As an interim service, it would provide connectivity for commuter and work trips between the project area and downtown Chicago and airport-related businesses. Alternative routes were examined around both the north and south ends of the O'Hare Airport. Routes to the north were found to be slower and provided less reliable service due to numerous signals and more out-of-direction travel. The route to the south was favored because of shorter travel times and the reliability of travel speeds. This route would use the south leg of the West Bypass corridor to Irving Park Road (IL 19), travel east on Irving Park Road (IL 19) to Mannheim Road, north on Mannheim Road to Balmoral Avenue, and then to the Rosemont CTA Blue Line station. The service would operate as express bus service between the proposed West Terminal and the Rosemont CTA Blue Line station with travel frequencies of every 15 minutes during peak period. No special infrastructure requirements are anticipated for this service.

The bus service to both Hanover Park and to the Rosemont CTA Blue Line station are described further in subsection 2.3.2.8.

Bicycle and Pedestrian Facilities

Bicycle and pedestrian accommodations are an integral part of a multimodal project. The nonmotorized transportation needs and appropriate accommodations were analyzed as part of the Tier One and Tier Two process. The analysis of bicycle and pedestrian requirements are in conformance with IDOT's Complete Street's Policy, and were fully coordinated with community interests and bicycle organizations. The overall philosophy for this component of the project is to provide new east-west facilities to improve connectivity in that direction and with other existing north-south bicycle and pedestrian facilities in the area (see subsection 2.3.2.8). Because there is an abundance of north-south facilities, special care was given to maintaining the existing connectivity across the Elgin O'Hare corridor.

New bicycle and pedestrian facilities are planned along non-access-controlled facilities such as frontage and arterial roads. For the east-west corridor, a bicycle and pedestrian trail is proposed adjacent to the frontage road system, and would rely on local trail systems when it is absent. Existing north-south trails that cross the Elgin O'Hare corridor would be accommodated into the new crossing road facility design to maintain trail continuity. At locations where a state route crosses the Elgin O'Hare corridor, bicycle and pedestrian facilities would be provided at the crossing either over or under the mainline. These bicycle and pedestrian improvements would be developed in conjunction with the arterial improvements at these locations. The shared use path would have a 10-foot cross-section and would be located on one side of the crossing road. The connection from the crossing to the nearest local and community path would be the responsibility of local jurisdiction.

The EO-WB project has preserved the space for planned bicycle and pedestrian facilities. Details regarding cost, maintenance, and jurisdictional responsibilities for proposed pedestrian and bicycle facilities within the Tier Two Build Alternative will be determined during future final design and in coordination with local jurisdictions.

Congestion Management Process Strategies

The proposed project would include strategies designed to add efficiencies to travel and reduce single-occupancy vehicles. The strategies that aid travel efficiency can be added to the system without causing the need for additional right-of-way. Two types of strategies are proposed, transportation system management (TSM) and travel demand management (TDM) strategies. The TSM strategies are aimed at improving the operating efficiency of the system and include variable message signage, traffic incident management, signal pre-emption for emergency vehicle or buses, photo enforcement cameras, interconnected traffic signals on arterial streets, etc. The TDM strategies are aimed at changing driver behavior in order to reduce traffic and congestion, and to improve air quality. These strategies include toll pricing strategies, high occupancy vehicle lanes, more transit opportunities, better connectivity to all transit modes, and parking facilities that serve transit users as well as carpools and vanpools.

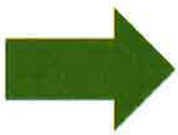
2.1.2.5 Summary

The evaluation of all of the design factors culminated in the Tier Two Draft EIS with the best arrangement of facility type (toll road) and design features that together form a complete Build Alternative.

At two locations, more than one design alternate remained at the Draft EIS stage of the NEPA process:

- Two interchange alternates remain at the Elmhurst Road and I-90 interchange.
- Four intersection alternates remain at the IL 72 and Elmhurst Road intersection.

The comments received on the Tier Two Draft EIS included suggestions for several design refinements. In consideration of those suggestions, several revisions occurred and have now been included in the Build Alternative. The project footprint reflects these changes, and the environmental impacts detailed in this Tier Two Final EIS have been appropriately updated. The design refinements are described in the following subsection, and a detailed description of the alternatives follow.



SECTION 4

Agency Coordination and Public Involvement

This section describes the regulatory requirements associated with NEPA, SAFETEA-LU, and Context Sensitive Solutions (CSS), as well as the communication strategies that have been developed consistent with those requirements. Also described are the public and agency outreach activities that have been conducted throughout the project.

Tier Two of the EO-WB project has been a continuation of the extensive agency coordination and public involvement process that was prevalent throughout Tier One. Given the scope and scale of the project and the numerous stakeholders that are affected by the project, IDOT has organized a public and agency outreach program that seeks valued input and works toward a consensus solution that balances the many factors influencing this project. In Tier One, coordination with stakeholders, community leaders, and regulatory agencies led to decisions about the type and location of transportation improvements that satisfied the needs of the area.

As the EO-WB project has advanced to Tier Two, the focus has been on the design details; therefore, stakeholders, community leaders, and regulatory agencies have been providing their views on topics such as interchange configurations, lane requirements, access, drainage provisions, and noise impact mitigation. Every step of the Tier Two process for the EO-WB project continues to be vetted with community leaders, regulatory agency representatives, and the public at large. In Tier Two, project team members have conducted more than 200 meetings with community leaders, local agencies, area businesses, and regulatory agencies. Governor Pat Quinn, recognizing the project's national and regional importance, convened an Advisory Committee in late 2010 to investigate and recommend approaches to implement the project.

4.1 Public and Agency Coordination Requirements and Communication Strategy

4.1.1 Legal Requirements

The NEPA, SAFETEA-LU, and CSS each contain objectives and requirements for public and agency outreach for federally sponsored highway projects.

- NEPA has formal communication requirements with those most affected by the proposed project. Among these is the requirement to identify regulatory agencies with jurisdiction or special expertise in an environmental resource and invite them to participate as "cooperating agencies." Such agencies are asked to provide input on the project early and regularly during the NEPA approval process. The Council on Environmental Quality (CEQ) also mandates that the lead agency "scope" or solicit concerns from federal, state, local, and tribal agencies, as well as any interest groups, early in the process. Finally, CEQ requires that comments be solicited from agencies and the public on the Draft EIS. Illinois developed a NEPA/404 Merger Agreement, which assembles IDOT, FHWA, and regulatory resource agencies on a consistent basis to obtain input at key project milestones, including Purpose and Need, Alternatives to be Considered, and Preferred Alternative. This ensures that the

agencies' input is incorporated into the project's process early and often, minimizing the possibility for issues to arise later in the process and causing a delay in the project schedule.

- SAFETEA-LU includes a set of agency and public involvement measures that increases the required level of public participation. Specifically, SAFETEA-LU adds "participating agency" as a category for agencies. Agencies or organizations that have a specific interest in the outcome of the project will be allowed to serve as a participating agency, which provides them access to project information as it is developed. SAFETEA-LU also requires that the public be involved in the development of the purpose and need, as well as in the determination of the reasonable alternatives to be considered in the Draft EIS. According to SAFETEA-LU, lead agencies are required to develop and make available a coordination plan that structures public and agency participation during the environmental review process.
- CSS is a strategy for developing a transportation solution that improves safety and mobility and that reflects the project's surroundings or "context." The emphasis of CSS is the development of projects that fit within their environment and result in a community asset. At the heart of CSS is public outreach, designed to seek from stakeholders the project needs and the solutions that best satisfy those needs without community disruption. In Tier Two, CSS has been used effectively to assess a range of creative design measures that result in a project that fits within its environment.

4.1.2 Objectives

This project seeks not only to develop the optimal transportation solution for the needs of the project area but also to create a transportation solution consensus. Interaction with community representatives, resource agencies, members of the public, and other stakeholders is critical to achieving these goals.

4.1.3 Outreach Methods

The core of the EO-WB project's outreach program is a structured hierarchy of meetings. These include one-on-one meetings with communities and agencies, working group meetings with transportation engineers and planners, public meetings, Governor's Advisory Council, and project management team (PMT) meetings. The value of each of these types of meetings is the opportunity to conduct in-depth conversations about particular issues important to the attendees. Other aspects of the outreach program include the project newsletters, public meetings, and the project website.

4.1.3.1 Outreach Groups

Several outreach groups were formed to assist in developing the proposed EO-WB project. The following subsections briefly describe each of these outreach groups.

Project Organization

The project is being guided by a management team (PMT), which consists of the lead agencies and consultant team. The PMT establishes technical direction, renders policy decisions, establishes the overall project schedule, reviews deliverables, and more. Per CSS, a Project Study Group (PSG) was assembled for this project (see Figure 4-1). Its primary responsibilities are to facilitate project development and make recommendations to the PMT. It consists of four discipline-focused working groups—Geometrics Working Group (GWG), Environmental

Working Group (EWG), Drainage Working Group (DWG) and Transit Working Group (TWG). These groups consist of FHWA, IDOT, and project consultants, as well as representatives from discipline-related organizations (e.g., Illinois Tollway, Regional Transportation Authority [RTA]).

External working groups were assembled to contribute to specific aspects of the project. They include the Corridor Planning Group (CPG), Task Forces, and a CAAT. In addition, Governor Quinn has created the Elgin O'Hare – West Bypass Advisory Council (see Figure 4-2).

FIGURE 4-1
PROJECT STUDY GROUP ORGANIZATION CHART

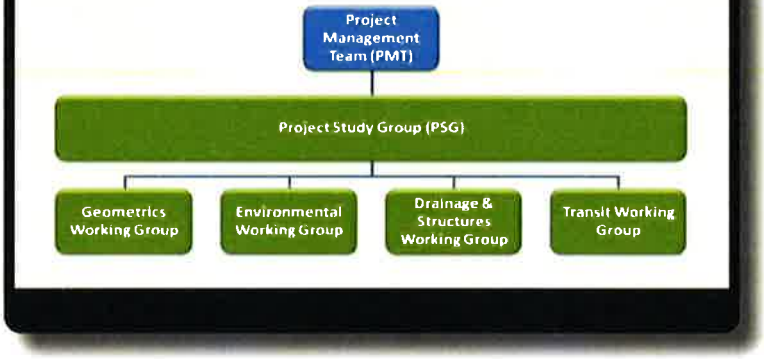
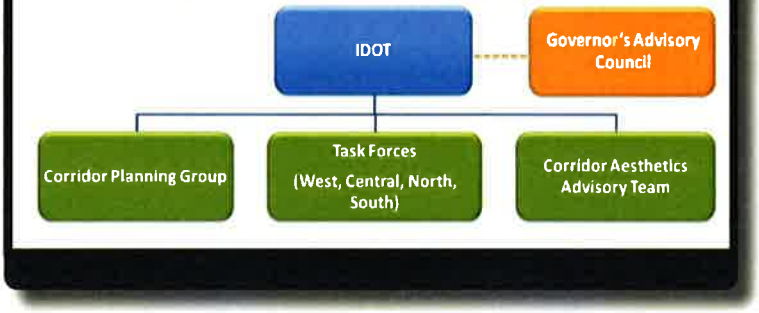


FIGURE 4-2
EXTERNAL WORKING GROUP STRUCTURE



Corridor Planning Group

The CPG membership consists of representatives from each of the 27 communities and two counties in the project area. The CPG, which represents the views of all the stakeholder communities, was assembled to obtain input and consensus on key decision points throughout the study process. The membership of the CPG is presented in the Appendix A of the *Stakeholder Involvement Plan*.

Task Force Groups

The Task Force Group membership includes representatives of municipalities, counties, and other governmental organizations in the project area. Members may also include representatives from other organizations with an interest in topics being discussed at meetings (e.g., CP railroad, CMAP, Chicagoland Bicycle Federation). During meetings, attendees are organized into four geographic groups (west, central, north, and south) to better address the needs and interests specific to each section of the project corridor.

Corridor Aesthetics Advisory Team

This team consists of project team members and representatives from communities immediately adjacent to the proposed facility. The team is tasked primarily with developing a set of aesthetic design guidelines to apply to the proposed improvements. The CAAT membership is presented in Appendix A of the *Stakeholder Involvement Plan*.

Governor's Advisory Council

The Governor's Advisory Council is an organization of representatives from public and nongovernmental agencies, including IDOT, Illinois Tollway, Illinois Finance Authority, CDA, RTA, DuPage County Board of Commissioners, DuPage Mayors and Managers Conference,

West Central Municipal Conference, and Northwest Municipal Conference. Its mission is to advise the governor and make recommendations that would advance the project, including financing, economic impact, sustainable practices, and workforce diversity. The Governor's Advisory Council comprises four topic-related groups—Project Financing, Sustainability, Economic Impact, and Diversity. Project team members acted in an ex officio role that involved attending meetings and providing project-specific information as requested.

Speakers' Bureaus

Project team members are attending functions conducted by local community groups to apprise them of project updates or to discuss a project-related topic that is of particular interest to the organization. Attending these functions has provided the project team with an understanding of issues relating to active local organizations.

NEPA/404 Merger Process

The NEPA/404 merger process consists of representatives from federal and state regulatory resource agencies meeting at major project milestones to discuss the project. The goal of the NEPA/404 Merger Group is to involve regulatory resource agencies early and at key project milestones to minimize the potential for unforeseen issues that may arise during the later stages of the NEPA and Section 404 permitting processes. The major topics of the meetings include scoping, project updates, and concurrence on the project's purpose and need, alternatives to be carried forward, and preferred alternative.

4.1.3.2 Outreach Tools

In addition to regularly scheduled meetings with stakeholders, the project team utilized other methods for disseminating information and obtaining input.

Newsletters

Newsletters are distributed at key milestones during the project to notify area residents and stakeholders of recent project decisions and upcoming activities. A mailing list is maintained and updated regularly so that information is being sent to those requesting it.

Website

The project website (www.elginohare-westbypass.org) began service on September 7, 2007 and continues to be updated and maintained with current information. General project information, project documents, and meeting materials are available for viewing and downloading. Viewers are able to access information, such as the project's purpose and need, alternatives screening process, and newsletters. An events calendar with dates of all of the public outreach meetings is maintained and displayed on the website. A page is provided for those who wish to submit comments. Responses to comments are provided and entered into the project record.

Public Information Meetings

Public information meetings (PIMs) have been held at project milestones, and the public is encouraged to attend. These meetings help to maintain public awareness of project developments and alternatives that are being evaluated while providing a forum for general public input, including concerns and comments regarding project alternatives. Attendees are apprised of project activities through various public informational techniques, such as project boards, handouts, and presentations that summarize the project work and findings. The meetings are advertised in newsletters, on the website, by flyers, and in public notices placed in area newspapers. Opportunities for the public to provide written (comment forms) and verbal

comments (through a court reporter) are available at the meetings. Spanish translation is provided, as appropriate.

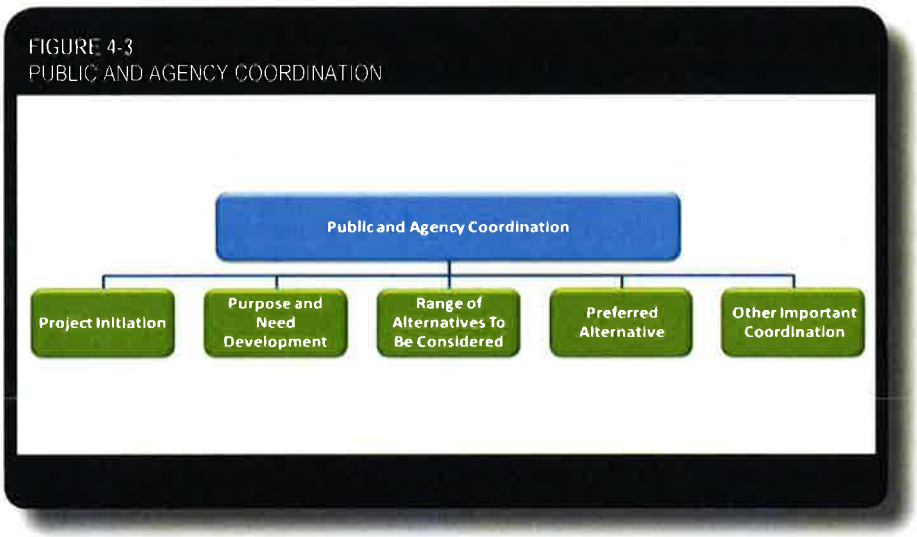
Community Meetings

Reaching consensus on project alternatives and design requires continuous communication with communities affected by the proposed improvements. Meeting with the officials of these communities before and after project decisions are reached ensures that preferences of the communities are considered during the decisionmaking process. Community meetings are conducted to coincide with project milestones, such as elimination or selection of project alternatives and PIMs.

4.2 Public and Agency Coordination

The remainder of this chapter describes the public and agency coordination that occurred at each milestone of the project including project initiation, solidification of the project's purpose and need, identification of the alternatives to be considered in this document, and finally, the identification of the Preferred Alternative. The coordination that has occurred with regulatory (and other) agencies, which ensures that the project not only complies with regulatory policies but also minimizes environmental and social impacts, is described (see Figure 4-3).

FIGURE 4-3
PUBLIC AND AGENCY COORDINATION



4.2.1 Project Initiation

A number of activities required by NEPA, SAFETEA-LU, and CSS occurred at the outset of Tier Two to begin the project process, including notification of project startup, identification of cooperating and participating agencies, data gathering, the establishment of guidelines for project operations, and scoping. Such activities occurred at several different venues, including project working group meetings, NEPA/404 merger meetings, and public outreach events.

4.2.1.1 Project Initiation Requirements

Stakeholder Involvement Plan

As mentioned, SAFETEA-LU requires the development of a coordination plan that establishes the public outreach and involvement structure of the project. As such, a rigorous *Stakeholder Involvement Plan* was developed. The *Stakeholder Involvement Plan* ensures that all legal requirements are satisfied; it documents how agencies, stakeholders, and other members of the public are incorporated into the project's process; and it reflects the unique coordination and

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communication needs of the project. The *Stakeholder Involvement Plan* identifies stakeholders, along with lead, cooperating, and participating agencies, and their project roles. The *Stakeholder Involvement Plan* defines the methods of how stakeholder input would be obtained and utilized. Finally, the *Stakeholder Involvement Plan* describes the multiple tools used to reach out to stakeholders to keep them informed of the project activities and to obtain their input.

Timeframe Agreement

A timeframe agreement, consisting of a schedule for project-related activities, has been developed for Tier Two per SAFETEA-LU. It was adopted by FHWA and IDOT on June 8, 2010, and was updated, as necessary. It identifies the dates that milestones are expected to be completed and identifies the actual dates that the milestones were completed.

Notice of Intent

The CEQ requires that a Notice of Intent (NOI) to prepare an EIS be published in the Federal Register. The NOI contains information regarding the proposed action and potential alternatives for improvements, the planned scoping process, and contact information for the project. The NOI for the EO-WB project was published in the Federal Register on June 8, 2011 and December 20, 2011.

Identification of Lead, Cooperating, and Participating Agencies

The FHWA and IDOT are typically joint lead agencies for transportation projects in Illinois, and this project is no exception. However, because a portion of the proposed improvements (i.e., a portion of the West Bypass corridor) is on O'Hare Airport property, and because the project requires adherence to a number of aviation requirements and regulations, FAA has been added as a joint lead agency. A MOU between FHWA, IDOT, and FAA regarding joint leadership was signed on May 6, 2011 (see Appendix B). In the fall of 2011, the Illinois Tollway also joined as a joint lead agency, following the agency's passage of a funding package to finance the Elgin-O'Hare Expressway and West Bypass corridors as toll roads, in addition to financing other projects in their system. NEPA and CEQ require lead agencies to invite other agencies with regulatory jurisdiction or expertise in an environmental resource relevant to the project as cooperating agencies. These agencies provide early and regular input on the project, including relevant information required to develop the EIS and timely comments on the project's environmental documentation. They also provide input on the project's purpose and need, alternatives screening analysis (including selection of the Build Alternative), and the preferred alternative. Invitation letters to cooperating agencies were mailed on July 8, 2011 (see Appendix B). The FTA and USEPA agreed to participate as cooperating agencies in Tier Two.

Agencies without jurisdiction or special expertise, but with an interest in the project, were invited to be participating agencies, per SAFETEA-LU. Invitation letters to these agencies were mailed on July 8, 2011. Agencies that accepted the invitation are listed in Appendix A of the *Stakeholder Involvement Plan*. Participating agencies are expected to provide timely comments on the project's purpose and need, study methodologies, range of alternatives, environmental impact analyses, and the preferred alternative.

Scoping

Scoping is a process that CEQ requires in implementing NEPA. Regulatory agencies and stakeholders are asked to describe important issues that relate to the project, as well as other issues that do not require detailed analysis. It can be a formal or informal process. For the EO-WB project, scoping took place at several venues—CPG meeting, NEPA/404 Merger Group

meeting, and PIM Number 1 (see subsection 4.2.1.2). Scoping activities that occurred at these meetings are described in the following subsections.

4.2.1.2 Project Initiation Activities

A number of activities occurred to kickoff Tier Two of the EO-WB project. These activities ranged from internal project team meetings to meetings with regulatory resource agencies and area communities. These are described below.

Project Team Meetings

- **Project Management Team Meetings.** The PMT provided the foundation from which the project would develop. The scope of Tier Two engineering, environmental, and public involvement activities were determined by the PMT. The timeframes agreement, *Stakeholder Involvement Plan*, and cooperating and participating agencies to be invited were solidified. Strategies for validating the project's purpose and need, screening the project alternatives, and identifying the build alternative(s) were determined at PMT meetings. The determination to add FAA and the Illinois Tollway as joint lead agencies was made by the PMT.
- **Project Study Group (Working Group) Meetings.** The GWG, TWG, DWG, and EWG were assembled at the outset of the project to design solutions for achieving the project's purpose and need and ensuring that those solutions meet regulatory requirements while they minimize environmental and socioeconomic impacts. The GWG was charged with developing roadway alternatives for both the ICP and 2040 Build Alternative. In the development of both, the GWG worked closely with the TWG and DWG to incorporate the transit facilities that the TWG recommended and the drainage solutions that the DWG identified into the GWG's proposed design. The EWG communicated regularly with the other working groups to ensure that the proposed roadway, transit, and drainage features of the project minimized impacts to sensitive resources, complied with environmental regulations, and optimized the opportunities for mitigation.

Agency and Public Involvement Meetings

The project team also met with regulatory resource agencies and members of the public to initiate Tier Two of the EO-WB project. These are identified in Table 4-1 and are described below.

TABLE 4-1
Stakeholder Opportunities: Project Initiation

• One-on-one Community Meetings: November and December 2009; January, March, April, May, June, October, and November 2010	• NEPA/404 merger meeting: September 2010
• Illinois Tollway: February, March, May, July, and October 2010 and January 2011	• Newsletter Number 9: September 2010
• FAA: June, July, and November 2010	• PIM: September 2010
• Speakers' Bureaus: June and November 2010; February, September, and November 2011	• Regulatory Resource Agencies: December 2010
• Project CPG/Task Force Meeting: August 2010	

- **Regulatory Resource Agency Coordination.** On September 9, 2010, members from the EO-WB project team attended the NEPA/404 merger meeting to present an overview of Tier Two and conduct scoping. Because the USACE was not in attendance at the September 9, 2010, NEPA/404 merger meeting, a separate meeting was held on December 17, 2010, to conduct scoping with USACE representatives. Representatives of USEPA and USFWS were in attendance also. The following were identified at the meetings as important topics to address in Tier Two:
  - Evaluating the possibility of reducing air emissions during construction by using locally sourced materials (e.g., spoil from the OMP).
  - Using the MOVES model to evaluate $PM_{2.5}$ emissions if it is decided that a hot-spot quantitative analysis should be conducted.
  - Evaluating greenhouse gas effects.
  - Evaluating noise impacts in environmental justice areas.
  - Seeking to improve water quality at all creeks in the project corridor.
  - Incorporating water quality and quantity best management practices.
  - Considering various mitigation options that satisfy the regulatory agencies.
  - Evaluating green infrastructure practices and using recycled materials.

Other Agency Meetings

Project team members met or corresponded with agencies that have an interest in the project as part of initiating Tier Two. At these meetings, information was gathered so that the project engineers could consider sensitive resources during the alternatives development and refinement stages.

- **Federal Aviation Administration.** The FAA became involved in the project because improvements are proposed near and on O'Hare Airport property, which is regulated by the FAA. Restrictions related to airspace, navigational aids, and the conversion of airport property to surface transportation uses were all potential actions requiring FAA approvals. Therefore, the FAA agreed to join Tier Two as a joint lead agency with the agreement that their actions and the impact of those actions be fully disclosed in the EIS being prepared for the EO-WB project.
- **Illinois Tollway.** The Illinois Tollway has been involved in both Tier One and Tier Two of the process for the EO-WB project. In the early stages of the project, the Illinois Tollway's interest was to ensure congruence between the proposed improvements and the existing tollway facilities. Data that were shared included existing and projected traffic numbers, as well as ongoing and planned projects along the tollway facilities within the project corridor. These data were used to determine the scope and limits of project-related work along tollway facilities. Illinois Tollway staff was also a member of the EWG, DWG, and GWG and attended meetings and provided input on Illinois Tollway requirements with regard to environmental processes and design components. Additionally, the evaluation of funding sources concluded that tolling was the only viable solution for project implementation. As such, the Illinois Tollway agreed to implement the project and joined as a lead agency in 2011.

Public and Stakeholder Outreach Activities

- **Corridor Planning Group and Task Force Meeting.** A newsletter was issued in September 2010 announcing the start of Tier Two, and outlining the public involvement activities that lay ahead. The CPG and Task Forces had been assembled for the first time a month earlier to initiate their involvement in Tier Two. In their working session they addressed the following topics:
  - Local roadway design improvements under consideration.
  - Financing strategies and the potential effects of tolling the roadway versus keeping it a freeway.
  - Transit station locations, parking, and access along the existing Elgin O'Hare corridor.

- **Community Meetings.** During the project initiation stage, 19 community meetings were held during the six months between November 2009 and April 2010 to introduce the scope and schedule for Tier Two, a recap of Tier One, the alternative development approach in Tier Two, and the travel forecasting required to support the sizing and extent of the improvements. Some of the highlights of these meetings included:
  - Briefing the communities on the *Tier One ROD*, and how that decision affects work in Tier Two, particularly the development of alternatives.
  - Briefing on Tier Two scope and schedule, consisting of detailed engineering and environmental studies that would advance the project to the next stage to include final design and construction. Tier Two would be completed by the end of 2012, and deliverables would consist of a Tier Two Final EIS and ROD, a design study report, financial plan, project management plan, location drainage report, and an Access Justification Report for I-290.
  - An overview of the traffic forecasting to support Tier Two. Traffic forecasting would be completed through 2040 for both the No-Build Alternative and Build Alternative. The approach supporting the forecasting included a unique approach to population and employment forecasts for the area built on a market-based real estate assessment, wherein the development potential of the area was evaluated with and without transportation improvements.
  - An overview of the alternative development process was presented, emphasizing that for this phase of work, alternatives were in the form of design refinements, including mainline sizing, interchange alternates, and preservation of transit in the corridor.
  - An interchange study for North Avenue/I-294 that was conducted separately by the City of Northlake, which was integrated into the EO-WB project process. The objective of early meetings was to exchange information on preliminary engineering concepts in the locale of North Avenue, share traffic forecast data, establish a schedule for deliverables, and identify other data input critical to preparation of timely deliverables.

- **Public Information Meeting.** The PIM Number 1 in Tier Two was held in Itasca, Illinois, on September 21, 2010 and was attended by 158 people. Display materials included:
  - Tier One corridor location decision.
  - Comparison of level of detail between Tier One and Tier Two.
  - Tier Two Alternative development process.
  - Interchange locations.
  - Financing options and funding sources.
  - Transit facilities and station locations.

- Bicycle and pedestrian facilities.
- Aesthetic design considerations.

The meeting produced 17 written comments, consisting of general support for the project, questions about bicycle and transit accommodations, questions about interchange access, possible diversion of traffic to arterial routes from a tolled facility, personal property impacts, local drainage issues, and informational requests (i.e., exhibit materials, maps). The comment period remained open until October 12, 2010, and yielded two more comments.

- **Website.** The updated project website was launched November 11, 2010 with Tier Two information. Information for users to view or download included an overview of Tier Two, with schedule and objectives, and with exhibits showing preliminary engineering activities (interchange alternates at the nine interchange areas), environmental constraints, and preliminary options for financing and construction sequencing.
- **Speakers' Bureau.** An overview of Tier Two was provided at the meetings of the Chicago Society of American Military Engineers Post on June 16, 2010; NAI Hiffman – Association of Industrial Real Estate Brokers on November 9, 2010; the Transportation and Highway Engineering conference at the University of Illinois on February 22, 2011; the Naperville Chamber of Commerce on September 19, 2011; the Roadbuilders' Association on September 21, 2011; and the Illinois Section of American Society of Civil Engineers on November 10, 2011.

4.2.2 Purpose and Need Development

The purpose and need that was developed in Tier One was revisited in Tier Two after it was determined that the project's planning horizon would be updated from 2030 to 2040 to be consistent with the newly adopted regional transportation plan, *GO TO 2040 Comprehensive Regional Plan* (CMAP, 2010). The expectation was that the purpose and need statements (e.g., improve regional and local travel, improve travel efficiency) from Tier One would remain valid in Tier Two, but the updated travel analysis stemming from new 2040 travel forecasts would be used to update the detailed technical discussion in the document. During several public involvement events and regulatory resource agency meetings, the public, stakeholders, resource agencies, and community representatives were informed that the purpose and need statement was being updated to 2040. These meetings included: PIM Number 1 in September 2010, the second CPG and Task Force meeting in November 2010, a meeting with resource agencies in December 2010, community meetings in January 2011, and the NEPA/404 merger meeting in February 2011. Recipients of Newsletter Number 10, which was distributed in March 2011, were apprised that the project's purpose and need statement was being updated to reflect 2040 forecasts and were invited to the April 2011 PIM.

In early 2011, the 2040 traffic analysis was completed, the PMT and joint lead agencies reassessed the project's purpose and need statement, and (ultimately) the purpose and need statement was validated for Tier Two. The Purpose and Need, along with the updated traffic analysis, were presented for public review and comment at the April 2011 PIM. An exhibit describing the project's transportation needs was displayed alongside traffic analysis results, which influence the project's needs. The exhibit highlighted traffic analysis results that had changed between the 2030 and 2040 analyses. The 2040 traffic analysis results were presented to the CPG, Task Force, and communities in July 2011.

Regulatory resource agencies had a preview of the updated purpose and need statement at the February and June 2011 NEPA/404 merger meetings. Concurrence was granted at the September 2011 NEPA/404 merger meeting.

4.2.3 Identification of the Range of Alternatives to be Considered

Development and evaluation of project alternatives were the products of much coordination and input from technical working groups and the public. This process started with the development of a strategy or methodology for the development of alternatives. The result of this work concluded that the process in Tier Two would be very different from Tier One. Whereas, the location of the proposed improvements was established in Tier One, the work in Tier Two focused on the refinement of design features within the preferred project corridor with the objective of assembling the least impactive, most cost-effective, and travel-efficient project elements that would be part of the complete Build Alternative. Thus, Tier Two was a detailed examination of design alternates for the facility type (i.e., freeway, toll road, or a combination), interchange types, mainline requirements, transit requirements, and drainage. Stakeholder participation was integral to this process as it advanced through each element of design.

4.2.3.1 Approach to Project Refinements

The methodology for developing the design features of the proposed project was primarily the work of the technical project team. The technical team conceived the overall approach and used the GWG as its principal sounding board. Once the concept was developed, various groups provided input, including comments from working groups (i.e., EWG, DWG), the communities via the one-on-one meetings, agencies, CPG, public meeting venues, newsletters, and the website. The stakeholders universally supported the proposed methodology. The opportunities for stakeholders to provide input on the methodology for developing and evaluating project alternatives are listed in Table 4-2.

TABLE 4-2
Stakeholder Opportunities: Project Refinements

• Community One-on-One Meetings: March – June 2010	• PIM: September 2010
• CPG/Task Force Meeting: August 2010	• NEPA/404 Merger Meeting: February 2011
• Newsletter Number 9: September 2010	

4.2.3.2 Development of the Facility Type Alternates

The examination of facility type alternates was used to evaluate funding options. Developing the facility as a freeway, toll road, or combination were considered. In the consideration of each, numerous funding options were evaluated, ranging from traditional public monies (e.g., federal highway funds, state funding) to user fees to public-private partnership options. The assessment of funding options quickly arrived at the conclusion that for a project of this magnitude, public monies would be severely constrained in the current economic climate and the foreseeable future. Alternatively, user fees were examined with the project implemented as a new element of the Illinois Tollway system or developed as a public-private partnership, wherein a private concern would construct and operate the facility. Stakeholders were fully informed of the funding options for the project. Facility-type options were presented for public input and comments several times (see Table 4-3).

TABLE 4-3
Stakeholder Opportunities: Development of Facility Type Alternates

• CPG/Task Force Meetings: August 2010 – September 2011	• Community One-on-One Meetings: November 2010 – July 2011
• NEPA/404 Merger Meetings: September 2010, February 2011, June 2011, September 2011	• Newsletter Number 10: March 2011
• PIMs: September 2010 and April 2011	• PIM: April 2011
• Finance Working Group: September 2011 – November 2011	

Stakeholders were provided with frequent opportunities to supply input on the selection of a preferred facility type alternate. Acknowledging that public monies were limited, stakeholders agreed that user fees would generate the funding necessary to develop the project in the most expeditious timeframe. The final recommendation from the Governor's Advisory Council identified the Illinois Tollway as the preferred implementer. In September 2011, the Illinois Tollway Board of Directors enacted a system toll increase that would finance their 15-year capital improvement program, *Move Illinois: The Illinois Tollway Driving the Future*, which includes the EO-WB project (Illinois Tollway, 2011). The program would provide $3.1 billion (estimated funding at the mid-point of construction) in funding for the project. The project budget identifies an additional $300 million to be contributed by others. The Council's finance working group reconvened in September 2011, under the guidance of DuPage County, to assess the funding options for the monies to be contributed by others.

In October 2011, Elk Grove Village presented a proposal to the finance working group that included deferring the north leg of the West Bypass corridor from the Illinois Tollway's capital improvement program in order to reduce the overall cost of the project to eliminate the need for $300 million in funding from other sources. In response to the proposal, the Illinois Tollway and IDOT assessed the ramifications of deferring the north leg of the West Bypass corridor including the effects on the overall scope of the project, the project's purpose and need, the Illinois Tollway cost share policy, and funding needed to complete the north leg of the West Bypass corridor at a future date. On November 30, 2011, the Illinois Tollway presented a summary of their analysis of the proposal, specifically that the preferred course of action would be to maintain the originally conceived ICP. Work has resumed by the finance working group in search of funding sources for the $300 million.

4.2.3.3 Development of the Interchange Type Alternates

The development of the interchange alternates prompted the most stakeholder involvement. Stakeholders provided their input regarding interchange type alternates on frequent occasions (see Table 4-4). Access was considered a priority by all communities; therefore, the configuration of the interchanges to provide the optimal access was of critical interest. The consideration of interchange alternates was grouped into nine areas (see Exhibit 2-4A). In some cases, an area included only one interchange, while other areas included several related interchange locations. The technical arm of the team developed up to seven alternates in each of the nine areas. These alternates were further reviewed by the GWG for compliance with standards, constructability, and operational characteristics. The EWG examined the alternates in

terms of their impacts on environmental resources, and slight adjustments in the configuration of alternates were made in many cases to avoid loss of resource or to reduce impacts to commercial and industrial properties.

TABLE 4-4
Stakeholder Opportunities: Development of Interchange Type Alternates

• Community One-on-One Meetings: March 2010 – December 2011	• Newsletter Number 9: September 2010
• OMP: March – October 2010	• PIMs: September 2010 and April 2011
• CPG/Task Force Meetings: August 2010 – September 2011	• Regulatory Resource Agencies: July, September, and October 2011
• NEPA/404 Merger Meetings: September 2010, February 2011, June 2011, September 2011	

Once the working groups were satisfied with the range of alternates, the stakeholders were engaged. Project team members met with the communities affected by the interchange alternatives in each of the nine areas to present the various interchange forms and discuss the advantages and disadvantages of each. The affected communities provided their reaction as to how well the interchange alternates addressed their community interests. In general, the villages of Roselle and Schaumburg supported alternates that provided good service, limited impacts to adjacent properties, and were compatible with transit operations. The Village of Itasca expressed support for maximizing access between I-290 and the Elgin-O'Hare Expressway and surrounding development. Optimizing access to planned redevelopment of aging properties was of great interest to the Village of Wood Dale. Bensenville supported geometric features that provided improved access to existing businesses. Franklin Park expressed support for maximizing access to the industrial businesses while reducing displacements. Elk Grove Village expressed interest in providing the greatest access to area businesses with the least impact on local roadway operations. The design team, after receiving input from the communities, improved the interchange designs to better address the needs of the communities. As such, the input from the communities was central to many of the decisions that were made regarding the interchange alternates carried forward in the process.

4.2.3.4 Agency Concurrence

In the summer of 2011, agreement was reached on the recommended alternates for the various design features. These recommended features were brought together to form the Build Alternative. At that time, concurrence on the alternates to be carried forward was requested from the regulatory resource agencies in the NEPA/404 Merger Group. The project team briefed the merger agencies on the process of developing alternates on two occasions (February 15, 2011 and June 28, 2011).

On September 8, 2011, formal concurrence was sought. The agencies deferred concurrence pending further information regarding the use of best management practices for water quality enhancement and regarding details concerning the interchange alternates. Specific information regarding available right-of-way also was requested to determine if the Build Alternative would provide for sufficient space to incorporate best management practices. Following the September

8 meeting, five separate discussions/meetings were conducted with the USACE, USEPA, and USFWS. During the series of meetings, the agencies were presented with detailed mapping of the proposed project, interchange alternates, the right-of-way, and an assessment of potential locations for best management practices.

It was generally agreed that the analysis of interchange alternates was complete, and that the incorporation of best management practices could be accomplished with the recommended alternates. It was further agreed that best management practices would be described as an element of the proposed improvement, and that the potential locations for best management practices be discussed in the Draft EIS, and a more specific concept for the location, type, and scale of best management practices be prepared for inclusion in the Final EIS. Overall, the agencies were satisfied that the alternative development process was appropriate to Tier Two, and concurrence was solicited from FHWA via correspondence. Concurrence was granted by all parties in October 2011 for the alternates (Build and No-Build Alternatives) to be carried forward (see Appendix B).

4.2.3.5 Development of Aesthetic Features

A unique component of the development process for the alternates is the definition of an overall concept for integrating aesthetic features into the EO-WB project improvement plan. To address these requirements, the proposed project created the CAAT, made up of representatives of each of the communities immediately adjacent to the planned improvements, as well as members of groups and agencies with an interest in the overall aesthetics of the corridor.

A series of four workshops were conducted. The first workshop focused on corridor character. CAAT members identified several key words to describe the existing conditions or the future vision for each section of the corridor. Some words, such as "gateway" and "multimodal," were common to all sections. However, for the most part, the descriptors in the west and central sections were more rustic, including "quaint" and "prairie," while the north and south sections were more urban or industrial in nature such as "efficient," "aviation," and "economic engine."

The group selected an overall theme for the project to discuss at the second meeting. The preference was for a signature gateway theme. "Gateways to the Future" was chosen and featured a simple continuous palette of landscape and hardscape throughout the corridor with customized elements highlighting each community. The third meeting focused on specific design elements, ranging from low-cost to signature elements that could be implemented within the corridor. The final meeting included endorsement of a set of design guidelines that, in addition to defining specific applications and areas of enhancement, highlights the following project objectives:

- Aesthetics should be scalable and appropriate for the multiple users in these corridors.
- Aesthetics should highlight and support new functions and improved efficiency of the corridors.
- Aesthetics should highlight improved areas of accessibility.
- Sustainable best management practices should be considered in selecting aesthetic treatments.

4.2.3.6 Development of Other Roadway Features

The development of the Build Alternative considered several other features that would have an impact on the project footprint or right-of-way requirements. Among these were the transit, drainage, best management practices, and bicycle/pedestrian elements. Transit has been a widely accepted element of the overall project, and there has been strong support for its inclusion from the early stages of Tier One.

In Tier Two, the focus has been on the details of transit including its right-of-way needs, station location, and parking. A technical analysis of the space requirements for right-of-way was conducted and accepted by the TWG. In regular meetings with the transit providers, it was concurred that a median width of 60 feet would be sufficient for either BRT or LRT, and the right-of-way would be expanded to 90 feet at station locations. The station locations were of great interest to the communities, and their comments and opinions about station locations were requested at a meeting with each community. Two adjustments in station location were affected by these comments – the Hamilton Lakes' Development station and the Wood Dale station. Additionally, the Village of Hanover Park requested extending transit service to its community from the Schaumburg station. An examination of six alternates identified one that has been recommended for inclusion in the overall transit solution. Companion to the station location input, communities offered ideas about preferred locations for station parking (see Exhibit 2-7 for station locations).

The bicycle and pedestrian element of the plan drew interest from all affected communities. In the development of the plan, all affected communities were engaged with the particulars of the plan, and each provided its input on local bicycle and pedestrian needs, linkages to activity centers, and local bikeways. The final plan provides predominately east-west bicycle facilities with other elements serving north-south travel.

Drainage is an issue important to all areas in northeastern Illinois. Whereas, many communities already experience flooding issues, the management of stormwater from a large transportation facility was of concern. IDOT clarified that the implementation of roadway drainage would take into consideration IDOT and Illinois Tollway criteria, and ordinances of DuPage and Cook counties. Several communities suggested that IDOT should consider drainage solutions that address the roadway needs, as well as existing community needs. The existing needs for several communities are being examined further, including Village of Franklin Park, City of Wood Dale, Bloomingdale Township, and Village of Itasca, as well as CDA.

Stakeholder opportunities for the development of other roadway features, such as transit, drainage, and bicycle/ pedestrian accommodations, are listed in Table 4-5.

TABLE 4-5
Stakeholder Opportunities: Development of Other Roadway Features

• RTA: October 2009 – November 2011	• PIMs: September 2010 and April 2011
• Community One-on-One Meetings: March 2010 – July 2011	• NEPA/404 Merger Meetings: September 2010, February 2011, June 2011, September 2011
• OMP: May – October 2010; December 2011	• Active Alliance: November 2010 and October 2011
• MWRDGC: June – October 2010; September 2011	• CPG/Task Force Meetings: August 2010 – March 2011

4.2.4 Identification of the Preferred Alternative

The Preferred Alternative was identified after extensive coordination with community leaders and regulatory resource agencies, and receiving input from affected residents and business owners. The Tier Two Draft EIS, which presented alternatives under consideration, was distributed to libraries, community leaders, stakeholders, and regulatory resource agencies for review and comment. A Public Hearing was held to provide the opportunity for area residents and other stakeholders to view the Tier Two Draft EIS and engineering drawings, and also to ask questions to the project team members. Meetings were held with community leaders to gain input on the design details of the Build Alternative. Consultation occurred regularly with regulatory resource agencies regarding environmental and socioeconomic impacts of the project and appropriate mitigation measures. Coordination activities are described in the following subsections.

4.2.4.1 Tier Two Draft EIS and Public Hearing Comments

The Tier Two Draft EIS was published and distributed for public review and comment in March 2012. The Notice of Availability was published in the Federal Register on March 30, 2012, signaling the beginning of the comment period. The comment period continued until May 14, 2012. During that time, a Public Hearing was held on April 18, 2012 to encourage input and comments on the proposed plan.

Comments were received from various sources including regulatory resource agencies, interest groups, special districts, municipalities, and the public, as summarized below.

The regulatory resource agency comments stressed the importance of implementing effective best management practices for reducing impacts to water quality and wetlands while honoring the FAA's requirements for reducing the wildlife attractants near airports. Other agency comments included consideration of fish and wildlife passage at greenways/stream crossings, and an interest in wetland and waters mitigation.

Interest groups/authorities commented on a variety of issues including: potential chloride pollution and practices to reduce chloride impact to receiving waters; bicycle and pedestrian compliance with Complete Streets Policy; concerns about an exit ramp location on I-294 that would impact the Maywood Sportsmen's Club; preserving fire department access to hydrants; providing emergency vehicle turn-a-rounds; impacts to the Touhy Flood Control Reservoirs; and approval of a construction sequencing plan by the owning agency.

The general public comments were specific to private property impacts, noise barrier locations, design issues, and requests for information (e.g., maps).

Each of the comments received during the comment period were reviewed. Detailed responses have been written and sent to everyone that commented during the Tier Two Draft EIS comment period. Appendix B contains a copy of the comments and the responses that were prepared by IDOT.

4.2.4.2 Coordination with Communities and Other Stakeholders

The municipalities have been engaged in the project throughout the development process, and have contributed to a solution that is compatible with their individual needs and the needs of the project as a whole. Since the circulation of the Tier Two Draft EIS, the communities were asked to review the engineering drawings for those portions of the project that affect their

community. Individual meetings were conducted with all of the affected communities between April and July of 2012. Most of the communities suggested design changes that would affect details of the project, but did not affect the overall concept. Among the major comments were shifting the location of an off-ramp along I-294, provision of a continuous frontage road between IL 83 and York Road, and an improved circulation pattern in the Hamilton Lakes' Development. Recommendations for further refinements of the intersection options at IL 72 and Elmhurst Road were also received from communities, including Elk Grove Village. Project team members worked with community representatives to develop an intersection improvement that met the traffic needs of the area without major disruption to surrounding commercial and industrial properties. In late July 2012, a meeting was held with stakeholders to review the final design details of the preferred intersection type. At that meeting, it was agreed that the Quadrant Bypass (Old Higgins Road) Alternate is the preferred alternate (see Appendix B for concurrence letter from Elk Grove Village).

In June 2012, IDOT hosted the last CPG meeting. The presentation summarized the Public Hearing comments, status of the Tier Two Final EIS, project sequencing during implementation, and transition to the Local Advisory Committee under the leadership of the Illinois Tollway.

4.2.4.3 Agency Concurrence

A project update was presented to the NEPA/404 merger group in June 2012. A comparison of the No-Build and Build Alternatives was provided, in addition to a comparison of the interchange alternates at the Elmhurst Road and I-90 interchange and intersection alternates at the IL 72 and Elmhurst Road intersection. Concurrence of the Preferred Alternative and alternates was requested and received at the September 6, 2012 NEPA/404 Merger Meeting. The Build Alternative is the Preferred Alternative, the diverging diamond (Alternate 4) is the preferred alternate at the Elmhurst Road and I-90 interchange location, and the Quadrant Bypass (Old Higgins Road) Alternate is the preferred alternate at the IL 72 and Elmhurst Road intersection location.

4.2.5 Other Coordination

Coordination with regulatory/resource and public safety agencies was required to ensure that the improvements are compliant with environmental regulations and minimize environmental and social impacts. The following topics required additional coordination with the agencies to ensure that these stipulations were satisfied.

4.2.5.1 Bird Survey

The USFWS, INHS, IDOT, and the project team met on March 4, 2010, to discuss the potential need for a bird survey as part of Tier Two environmental studies. This meeting was held in response to the Tier One Draft EIS comment letter from USFWS and a subsequent meeting on December 1, 2009, to discuss the letter. The purpose of the bird survey would be to determine which species (particularly migratory birds, or rare and declining species) could be affected by noise as a result of the proposed EO-WB project improvements. Five potential bird survey sites were discussed with USFWS at the meeting. These sites were identified by the project team prior to the meeting, based on an aerial review and a field visit by INHS, IDOT, and consultant staff.

The urban nature of the project corridor, existing noise generators, and existing and projected traffic volumes were also discussed with USFWS at the meeting. USFWS requested that

additional information regarding the traffic volumes be provided for its review. In an e-mail dated March 31, 2010, USFWS stated that bird surveys were not necessary to determine the potential noise impacts on birds. This determination was based on the high volume of traffic in the existing condition and the relatively long distance between the project corridor and habitat areas of concern.

4.2.5.2 Mitigation

Mitigation of natural resource impacts has been discussed with the cognizant resource agencies for an extended period of time (see Table 4-6). The primary issues have included the use of best management practices for enhancing the quality of roadway runoff before reaching local receiving waters, reduction of chlorides being discharges to local waterways, consideration of fish and wildlife passage at stream crossings, restoration of displaced wetland/waters, application of practices that would reduce air pollutants during construction, and compliance with the FAA's Wildlife Advisory Circular. Repeated meetings on these topics have resulted in mitigation measures that will benefit the environment for the long-term (see subsection 3.21). At the agency meeting in July 2012, concurrence was reached on all of the major mitigation strategies and the manner they would be presented in the Tier Two Final EIS.

TABLE 4-6
Summary of Meetings/Discussions Regarding Wetland Mitigation and/or Water Quality Best Management Practices

• USACE, USEPA, USFWS: December 17, 2010	• USEPA: September 14, 2011
• CPG/Task Force Meeting: January 25, 2011	• FAA, USACE, USFWS: September 21, 2011
• FAA: March 21, 2011	• USACE, USEPA, USFWS: October 12, 2011
• IDNR: May 13, 2011	• USACE, USEPA, USFWS: January 30, 2012
• FAA, USACE, USEPA, USFWS: July 15, 2011	• FAA, USACE, USEPA, USFWS: March 7, 2012
• USACE, USEPA, IEPA, IDNR, USDA, USFWS, FAA: July 23, 2012	

4.2.5.3 Air Quality Analysis

Several agencies have been consulted to develop the methodology for the air quality impact analysis. IDOT and FHWA had multiple telephone calls and meetings with USEPA, IEPA, and CMAP to determine the methodology for the $PM_{2.5}$ quantitative hot-spot analysis and methodology for the MSAT analysis. It was determined that MOVES would be used for the air quality analysis for both $PM_{2.5}$ and MSAT. The local methodology and analysis results were discussed at Tier Two interagency consultation meetings, which were attended by FHWA, USEPA, IDOT, IEPA, FTA, and CMAP.

4.2.5.4 Section 4(f)

The proposed improvements would require temporary involvement with four Section 4(f) resources: the Salt Creek Golf Course, two Schaumburg Bicycle Paths, and the Salt Creek Greenway Trail. A temporary easement would be required at the golf course entrance to blend the profile of the driveway and the improved Prospect Avenue. Safety or logistical reasons may require the temporary rerouting of the three bicycle facilities during construction. The Wood

Dale Park District is the owner with jurisdiction over the golf course, the Village of Schaumburg is the owner with jurisdiction over the two Schaumburg Bicycle Paths, and the City of Wood Dale is the owner with jurisdiction over the Salt Creek Greenway Trail where it crosses the project corridor. In the summer of 2011, the proposed improvements and how they would temporarily affect the resources were discussed with the owners with jurisdiction. Bicycle facility detours that may be temporarily required were determined during these conversations. Subsequently, written concurrence was obtained from the owners with jurisdiction that the temporary involvement with the resources would not adversely impact the function of the resources (see Appendix B).

4.2.5.5 O'Hare Airport

Coordination has occurred with CDA and OMP personnel regarding project activities that involve O'Hare Airport property and OMP projects. As a portion of the West Bypass corridor will be located on O'Hare Airport property, discussions have been held with CDA chief counsel regarding the requirements involved in using airport property for roadway improvements under FAA's Land Use Release policy. In January 2012, it was determined that any conversations regarding the use of airport property for the roadway would be deferred until after the Tier Two ROD is completed. Meetings have also occurred with CDA and OMP staff in order to relay project status, discuss compatibility of the EO-WB project with planned airport projects, review advancing design work for the EO-WB project, and exchange information helpful to the analysis and design of the EO-WB project.

4.2.5.6 Emergency Response

Fire and police personnel from local departments along the project corridor were consulted to determine how emergency responders utilize the existing facility and the ways in which the proposed improvements would impact emergency response during and after construction. Emergency response facilities located in the communities were identified, such as the number and location of police and fire stations, fire districts, service areas (if more than one station exists). Emergency responder's activities and standards for response time were discussed. Routes used through the communities and primary routes to frequently accessed hospitals during emergency responses were identified. Any restrictions for travel on limited-access facilities were discussed.

The consensus was that emergency response within the project area will benefit from the completed EO-WB project. However, many challenges were noted and discussed, including the provision of local access before, during, and after construction, as well as availability of alternative routes before, during, and after construction.

Emergency response personnel also provided input with regard to activities that have potential to minimize impacts to emergency response activities and expressed the need for additional coordination as the project moves forward. These methods are described in subsection 3.5.4.

Tier Two
Record of Decision

Elgin O'Hare – West Bypass Cook and DuPage Counties, Illinois

December 2012

U.S. Department of Transportation
Federal Highway Administration
and
Federal Aviation Administration

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Appendix

A Tier Two Final EIS Comment Letters

1. Decision

The Federal Highway Administration (FHWA), Federal Aviation Administration (FAA), Illinois Department of Transportation (IDOT), and the Illinois State Toll Highway Authority (Illinois Tollway) are joint lead agencies in the consideration of the Elgin O'Hare – West Bypass (EO-WB) project. The EO-WB project was advanced as a tiered Environmental Impact Statement (EIS). The Record of Decision (ROD) for Tier One selected the type and location of the transportation improvement (signed June 17, 2010); the ROD for Tier Two approves the Build Alternative as the Selected Alternative. This ROD for Tier Two constitutes the selection of the Build Alternative and other federal decisions companion to the project's Tier Two process, and are described as follows:

- Selection of the Build Alternative as the Selected Alternative has been based on its ability to best achieve the objectives of the project's Purpose and Need including:
  - Improved regional and local travel by reducing congestion,
  - Improved travel efficiency,
  - Improved access to O'Hare Airport from the west, and
  - Improved modal opportunities and connections.

  Other factors important to the selection of the Build Alternative have been financial viability, environmental compatibility with surrounding natural and community resources, and accepted levels of traffic operations on I-290 with the project-related access modifications at the I-290/Thorndale Avenue interchange.

- Selection of two design alternates that are elements of the Build Alternative, which provide the best operational performance, reduced environmental impact, cost-effectiveness, and community acceptance include:
  - Diverging diamond interchange type at I-90 and Elmhurst Road, and
  - Quadrant Bypass (Old Higgins Road) alternate at the intersection of Elmhurst Road and Touhy Avenue.

- The FAA has determined that the Build Alternative is compatible with Chicago O'Hare International Airport (O'Hare Airport) and its future modernization plans. The FAA will continue to review design plans to determine if the Build Alternative is compatible with FAA airspace regulations and FAA Advisory Circular (AC) No. 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports* (dated August 28, 2007). The FAA will continue to review the use of airport property for a portion of the project (a non-aviation use) to determine if it conforms to requirements that would qualify the property for land use release under the regulations pertaining to the release of airport properties, and that an applicable Land Use Release and a revised Airport Layout Plan depicting the proposed location of the highway would be filed for FAA approval following this ROD.

Tier One concluded with a ROD that selected the project corridor and type of improvement. Since then, the Tier Two process has given detail to the transportation improvement that would be located in the selected corridor. The selected Build Alternative, as described in Section 2, that has emerged from the Tier Two studies is a new toll road facility that is comprised of many design elements including the mainline roadway, interchanges, improvements at crossing roads, bridge structures, drainage facilities, tolling infrastructure, and accommodations for future transit and bicycle/pedestrian facilities. For each project

element, design alternates were considered that led to the development of a single build alternative that provides the best balance of operational performance, reduced environmental impact, cost-effectiveness, and concurrence amongst stakeholders and communities.

The EO-WB project is a major project, as defined by FHWA, and as such includes the preparation of a financial plan that identifies the sources and timing of project funding and a project management plan that lays out the time-phased development of the project. The implementing agency for the roadway component of the project will be the Illinois Tollway and is funded under the agency's capital improvement program, *Move Illinois: The Illinois Tollway Driving the Future.* The plan for implementation spans from 2013 to 2025. Other aspects of the project, including transit infrastructure and bicycle and pedestrian facilities, will be implemented by others as funding is identified.

The State of Illinois has determined that the Build Alternative will be implemented as a toll road. Implementation of the project as a toll road will require compliance with the Federal Tolling Program, where existing sections of the project (Elgin-O'Hare Expressway) have been developed with federal aid highway funds. On July 6, 2012, P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21), was signed into law, and Section 1512(a) of MAP-21 amends the statutory language of 23 U.S.C. 129(a) regarding requirements for converting federal aid highways to tolled facilities. Although not a statutory requirement under MAP-21, FHWA, IDOT, and the Illinois Tollway will enter into a Memorandum of Understanding (MOU) describing the federal aid facilities to be converted, and outlining how the federal requirements will be met. Whereas revised guidance on the Federal Tolling Program is currently in process, further coordination between FHWA, IDOT, and the Illinois Tollway is required to finalize the terms of the MOU.

Regulatory agencies including the U.S. Army Corps of Engineers (USACE), U.S. Environmental Protection Agency (USEPA), U.S. Department of Agriculture (USDA), Illinois Environmental Protection Agency (IEPA), Illinois Department of Natural Resources (IDNR), U.S. Fish and Wildlife Service (USFWS), Illinois Department of Agriculture (IDOA), and the Transportation Safety Administration (TSA) have been closely involved with the process from inception. Project mitigation summarized in this document reflects the guidance and input from these agencies. The working relationship with these agencies over the term of the project has produced mitigation strategies that will be beneficial to the environment, compliant with the regulations, and concurred by the agencies.

This ROD complies with the regulations of NEPA (40 CFR 1505.2) and FHWA requirements (23 CFR 771), and concludes the Tier Two Final EIS process of the EO-WB project. The remainder of this document describes the Selected Alternative, alternatives considered, the basis for selection, mitigation commitments, the responses to comments received on the Tier Two Final EIS, and findings compliant with environmental laws, executive orders and regulations.

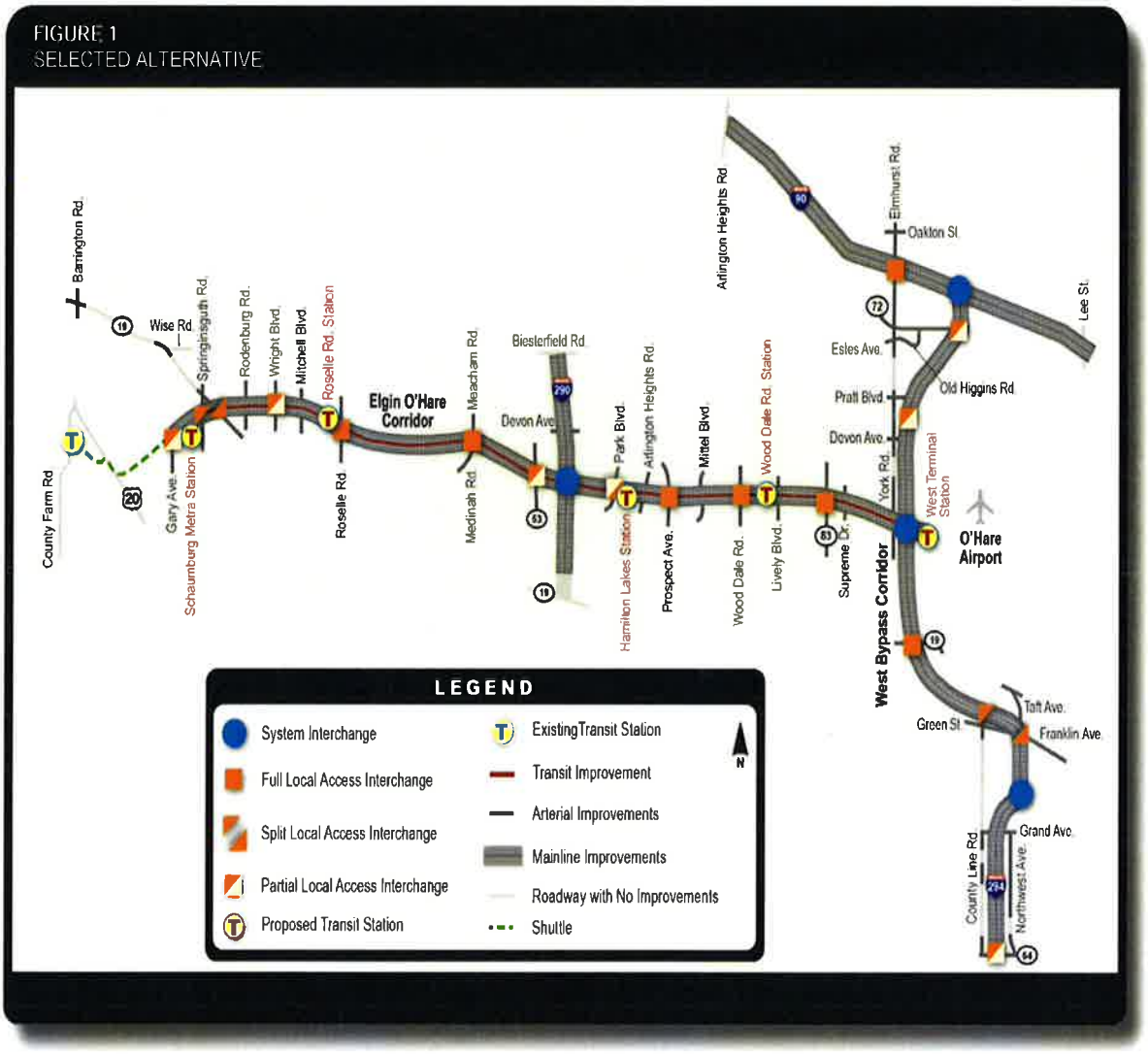
2. Description of the Selected Alternative

The Preferred Alternative presented in the Tier Two Final EIS has been identified as the Selected Alternative. The selection was based on an analysis of environmental and

socioeconomic considerations, design and traffic operations, as well as input provided from the public and agencies.

The project would be developed as a fully access-controlled highway that would be tolled. It consists of 16 miles of new toll road, about nine miles of improvements to existing toll roads (i.e., I-294 and I-90) and freeway (i.e., I-290), and 16 miles of supporting arterial improvements (see Figure 1). The project has two main components, the east-west component known as the Elgin O'Hare corridor, and the north-south component known as the West Bypass corridor.

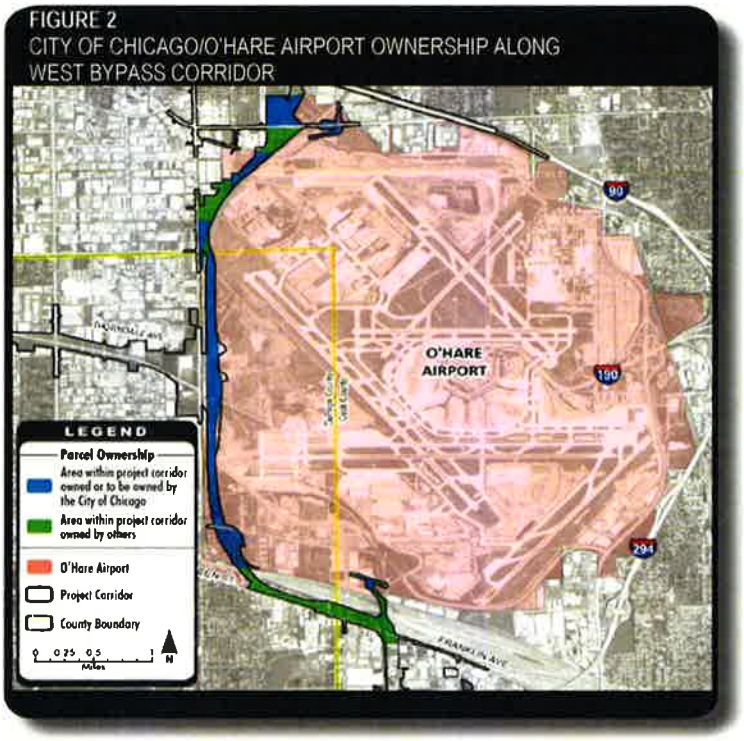
FIGURE 1
SELECTED ALTERNATIVE



The Elgin O'Hare corridor is about 10 miles in length, extending from Gary Avenue on the west to the western edge of O'Hare Airport on the east. The West Bypass corridor would extend from I-90 near the Elmhurst Road interchange on the north to I-294 on the south, a distance of about 6.2 miles. Approximately 3.6 miles of the West Bypass corridor would be located on about 195 acres of O'Hare Airport (City of Chicago) property.

Figure 2 depicts the location of the project corridor on O'Hare Airport property. Lane additions would be required on I-90, I-290, and I-294 extending from the system interchange for purpose of transitioning the merging and diverging traffic. The Elgin O'Hare corridor would have three basic lanes in each direction with added auxiliary lanes, and the West Bypass corridor would have two basic lanes in each direction with added auxiliary lanes in high traffic areas. The following describes other project attributes.

FIGURE 2
CITY OF CHICAGO/O'HARE AIRPORT OWNERSHIP ALONG WEST BYPASS CORRIDOR



2.1 System Interchanges

System interchanges would be required at four locations: Elgin O'Hare corridor and I-290, Elgin O'Hare corridor and West Bypass corridor, West Bypass corridor and I-90, and West Bypass corridor and I-294.

2.1.1 Elgin O'Hare Corridor and I-290

The interchange would provide for movements in all directions, with flyover ramps in two directions and loop ramps in two directions. Where direct access to and from major roadways and developments is not accommodated by the interchange, frontage roads have been provided and motorists could use adjacent local access interchanges.

2.1.2 Elgin O'Hare Corridor and West Bypass Corridor

The selected interchange form would consist of a compact, three-level system interchange that provides movements for eastbound traffic on the Elgin O'Hare corridor to the West Bypass corridor either northbound or southbound, and directly to the proposed West Terminal of O'Hare Airport. Ramps would be provided for both north to west movement and south to west movement through the interchange, as well as movements exiting the proposed West Terminal area in all directions (east, south, and north). In addition, traffic on York Road would have access to the toll road system in this locale via a connection from York Road to IL 83 using frontage roads. Other access points to the toll road system in this vicinity include the interchange at Irving Park Road (IL 19) and the West Bypass corridor, and the interchange at Pratt Boulevard and Devon Avenue.

2.1.3 West Bypass Corridor and I-90

The system interchange between the West Bypass corridor and I-90 would primarily occupy the space currently utilized for a toll road oasis. The interchange has been designed in a Trumpet form and provides movement in three directions (east, west, and south). Lane additions are required along I-90 to the west and east in order to manage weaving movements to and from the interchange area.

2.1.4 West Bypass Corridor and I-294

The interchange at the West Bypass corridor and I-294 would be in the form of a Y-type interchange. Ramps to and from the south would be provided. The combination of weaving movements to and from the new system interchange on I-294, and improved access at North Avenue to and from I-294 requires added travel lanes along 2.2 miles of I-294.

2.2 Local Access Interchanges

Local access interchanges would be provided at 16 locations including existing and new interchanges, and would provide access to major arterial corridors from the mainline facility.

2.3 Arterial Improvements

Thirty-one arterial improvements are proposed to accommodate increased travel in close proximity to the interchanges and along some sections of arterials. The extent of the improvements typically requires added travel lanes, turning lanes, and updated traffic signals.

Arterials requiring capacity improvements include Taft Avenue, Touhy Avenue, Elmhurst Road, York Road, Franklin Avenue/Green Street, Irving Park Road (IL 19), and several others. Other arterial improvements include intersection upgrades at Irving Park Road (IL 19) and Barrington Road in Hanover Park, Irving Park Road (IL 19) and Wise Road in Hanover Park, and IL 72 and Elmhurst Road in Elk Grove Village. The intersection at Irving Park Road (IL 19) and Barrington Road would be upgraded with capacity improvements that would benefit movements in all directions. At Irving Park Road (IL 19) and Wise Road, a dual left-turn would be provided for eastbound Irving Park Road (IL 19) traffic to Wise Road. Other improvements include right-turn lanes. The IL 72 and Elmhurst Road intersection would be modified as a quadrant bypass using Old Higgins Road.

2.4 Frontage Roads

Frontage roads are planned along the Elgin O'Hare corridor to maintain access to developed and developable lands along the mainline. On the west end of the Elgin O'Hare corridor, the existing frontage roads between Gary Avenue and Wright Boulevard would be retained. New frontage roads would be provided in areas where access is required between Meacham Road and York Road.

2.5 Drainage

Stormwater detention facilities, compensatory floodplain storage, and other best management practices would be constructed to compensate for the increased impervious surface, loss of floodplain, and enhance the water quality of roadway runoff.

2.6 Other Transportation Components of the Build Alternative

2.6.1 Transit Facilities

Planned transit service includes dedicated transit service (e.g., Bus Rapid Transit [BRT] or rail options), bus express service, and bus shuttle service. Where transit features are co-located with planned roadway improvements, right-of-way would be provided. Transit infrastructure would be provided by others when funding is available.

The main transit feature is the preservation of space in the median of the Elgin O'Hare corridor from the western edge of O'Hare Airport to Schaumburg. The transit dedicated service would accommodate either BRT or rail options. Five stations are planned in the median along the route including the proposed West Terminal at O'Hare Airport, near Wood Dale Road, Hamilton Lakes' office development, Roselle Road, and near the Schaumburg Metra station. At each of the transit stations, accommodations for parking and bicycle and pedestrian access would be provided.

The north leg of the West Bypass corridor has been located to provide sufficient space for a transit facility to be placed along the east side of the roadway to connect the proposed West Terminal at O'Hare Airport to eventual proposed commuter transit service along I-90. Proposed bus services would complement the major transit features including:

1. Bus express service connecting the proposed West Terminal with the Rosemont CTA Blue Line station that is routed around the southern edge of O'Hare Airport;
2. Bus express service extended from the median in the Elgin O'Hare corridor at IL 53 to the Woodfield Mall on the north; and
3. Bus shuttle service from the Schaumburg Metra station to Hanover Park Metra station. The shuttle service would travel in mixed traffic along the Elgin-O'Hare Expressway to Lake Street and to the Hanover Park Metra station via Lake Street.

2.6.2 Bicycle and Pedestrian Facilities

The EO-WB project has developed a plan for bicycle and pedestrian improvements that comprise facilities co-located in the project corridor and facilities that are logical extensions that link other local and regional trails. Where the project involves existing bicycle facilities and state routes, facilities would be restored. New elements of the bicycle and pedestrian plan would be subject to interagency agreements that address jurisdictional responsibility, local cost sharing for construction, and long-term maintenance of the improvements.

2.6.3 Congestion Management Process Strategies

Congestion management strategies in the form of Transportation System Management (TSM) and Transportation Demand Management (TDM) have been considered for the EO-WB project. A complete menu of strategies has been identified as possible techniques that would be applicable to the project. The implementing agency would provide space and opportunity for future transit facilities, and, as a tolling agency, would implement an Intelligent Transportation System (ITS) system that would have the ability to alternatively manage traffic in the future. As the project advances, the implementing agency would evaluate the TSM and TDM opportunities from the menu of strategies. Throughout the development of the project, flexibility has been maintained to accommodate most congestion management strategies.

3. Other Alternatives Considered

The project corridor location was determined in Tier One, the focus in Tier Two was on the design details that would be located in the selected corridor. During Tier Two, many design alternates for the basic elements of the project were examined including interchange types, drainage, transit, mainline lane requirements, bicycle and pedestrian improvements, and congestion management. For example, up to seven alternates were examined at each interchange location based on operational characteristics, environmental effects, cost, and constructability. The consideration of alternates was applied to each element of the project, and led to a single Build Alternative that represented the best combination of design elements that provided the best performance, reduced environmental impact, and was cost-effective. In addition to the Build Alternative, the No-Build Alternative was considered in the analysis and served as a base line for comparison. The Tier Two Draft EIS concluded with three decisions to be finalized in this Tier Two Final EIS, which include:

- Identification of the Preferred Alternative – Build versus No-Build Alternative.
- Identification of the preferred interchange design alternate at Elmhurst Road and I-90.
- Identification of the preferred intersection design alternate at IL 72 and Elmhurst Road.

The following subsection includes a comparison of the Build versus No-Build Alternative and the interchange and intersection alternates. The FAA will continue to review the use of airport property for a portion of the project (a non-aviation use) to determine if it conforms to requirements that would qualify the property for land use release under the regulations pertaining to the land use release of airport properties for a non-aviation use. This section concludes with the identification of the environmentally preferred alternative.

3.1 Build versus No-Build Alternative

Two project alternatives were carried forward in the Tier Two Draft EIS for detailed analysis. The analysis of the No-Build and Build Alternatives showed that the project's Purpose and Need are best satisfied with the Build Alternative. For each of the four Purpose and Need statements, the Build Alternative satisfies the intent. The No-Build Alternative, on the other hand, does not satisfy any of the Purpose and Need objectives. The following discussion summarizes the findings and describes how the Build Alternative achieves improved regional and local travel by reducing congestion, improved travel efficiency, improved access to O'Hare Airport from the west, and improved modal opportunities and

connections. In each case, the Build Alternative has been developed with each of these purposes as a goal.

As determined in the overall analysis, the proposed Build Alternative also provides economic benefits compared to the No-Build Alternative. The economic benefits include: 2,000 to 3,000 construction jobs annually for the duration of construction period; over 4,700 acres of new development influenced by better access and transportation; over 40,000 permanent new jobs associated with the new development; over $700 million in federal and state tax revenue from construction dollar spending; and about $17 million annually in new property and business tax revenue directed to the local communities in the area.

In a comparison of improved travel efficiency, the Build Alternative would provide considerable travel benefits and enhance travel performance for the study area compared to the No-Build Alternative. The proposed Build Alternative would produce the desired travel characteristics – more traffic on access-controlled facilities and less traffic on the secondary roads. The proposed improvements decrease travel (i.e., vehicle miles of travel [VMT]) on primary and secondary roads by almost 18 percent and shift longer trips to access-controlled facilities – the right type of trip on the right type of facility. These traffic shifts reduce travel delays by 24 percent on the primary and secondary arterial roadway system, increasing the overall travel efficiency. Similar to secondary roads, collector roads would also experience a substantial reduction in vehicles hours of delay of 21.6 percent.

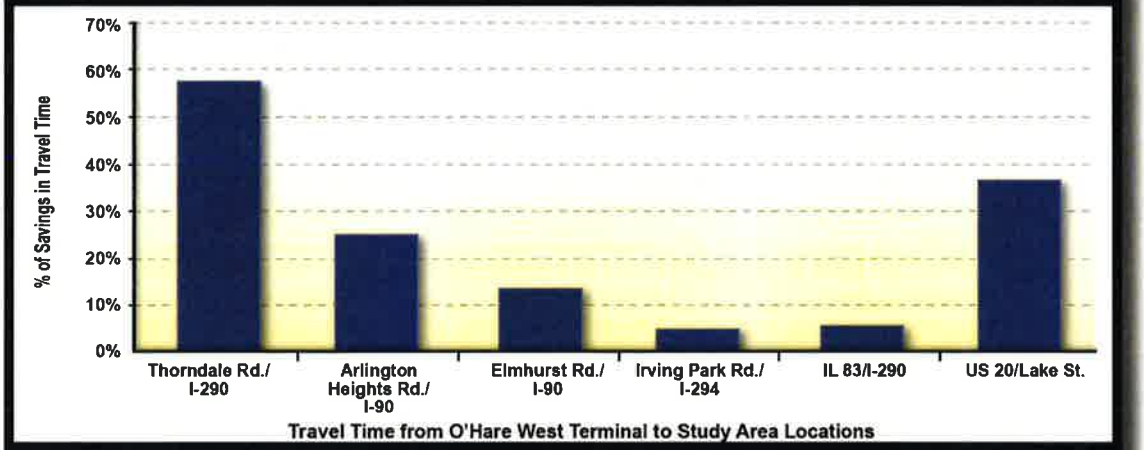
The increase in VMT on the access-controlled facility and the relative change in congested VMT can be better explained using the data in Table 1. As shown in Table 1, when the percent of congested VMT is examined for each alternative, the Build Alternative clearly shows that even with substantially more travel on access-controlled facilities, congested VMT is almost five percent less than the No-Build Alternative. Additionally, when the percent of congested VMT is compared to the Build and No-Build Alternatives across all the roadway types (i.e., access-controlled highway, primary, secondary, etc.), the results are similar showing the Build Alternative to be about three percent less. Overall, this demonstrates that for the Build Alternative, VMT can increase on access-controlled facilities, and still show a relative reduction in the percent of congested VMT when compared to the No-Build Alternative.

TABLE 1
Comparison of Percent of Daily Congested Vehicle Miles of Travel for No-Build and Build Alternatives

	2040 No-Build Alternative			2040 Build Alternative		
Roadway Type	Total VMT	Congested VMT	% Congested VMT	Total VMT	Congested VMT	% Congested VMT
Access-controlled Highway	10,929,925	6,848,343	62.7%	14,152,761	8,186,322	57.8%
Primary and Secondary Arterial	5,898,311	3,900,928	66.1%	4,844,766	3,278,133	67.7%
Collector	1,187,405	677,490	57.1%	1,176,151	721,141	61.3%
Total	18,015,641	11,426,761	63.4%	20,173,679	12,185,596	60.4%

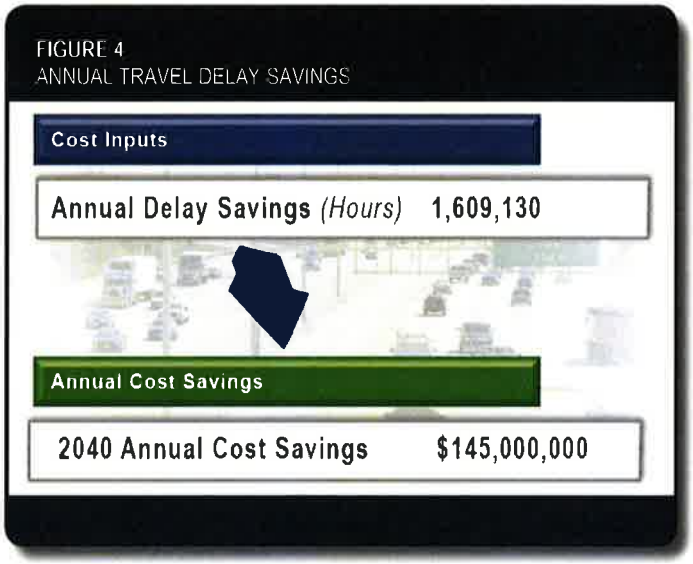
With the reduction in congested VMT, travel times to various destinations would improve markedly with the Build Alternative. In the examination of six trip pairs in the project area, the cumulative travel time savings totaled to about 28 percent (see Figure 3). A detailed analysis of the travel times shows that the largest time savings are trips from the west and northwest, which support improved access to O'Hare Airport from the west. Transit is an important element of the Build Alternative including provisions for dedicated transit with connectivity to other transit lines/services, and express and shuttle bus services.

FIGURE 3
TRAVEL TIME SAVINGS



Comparatively, the No-Build Alternative would have few alternative transportation options for people traveling within, into, or out of the project area. The reduction in delay and travel time has an associated economic benefit that can be measured in dollars saved. The annual delay savings of constructing the EO-WB project are estimated to be over $145 million by the year 2040 (see Figure 4).

FIGURE 4
ANNUAL TRAVEL DELAY SAVINGS



As shown in the analysis described, the No-Build Alternative does not provide the benefits that stakeholders carefully defined at the beginning of this process. As such, the No-Build Alternative is not consistent with the project's Purpose and Need.

3.1.1 Comparison of Design Alternates

The Build Alternative is defined as a set of design elements consisting of mainline pavement, frontage road, interchange, arterial, drainage, structural (bridges/retaining walls), transit, and bicycle and pedestrian improvements. An extensive process was applied to determine the design elements throughout the project corridor. In two locations, the final determination of the elements was not determined in the Tier Two Draft EIS. These include the interchange type at the Elmhurst Road and I-90 interchange and the intersection type at the IL 72 and Elmhurst Road intersection. In determining the preferred alternates at each location, impacts to environmental and socioeconomic resources are being considered along with travel performance, ability to implement mitigation measures (e.g., water quality best management practices), and stakeholder input. A comparison of these factors is provided in the following subsections.

3.1.2 Elmhurst Road and I-90 Interchange

In the Tier Two Draft EIS, four interchange types were initially considered. During the evaluation process, two alternates were dismissed from further consideration due to environmental, cost, and travel performance factors. Two interchange types remained under consideration at the Elmhurst Road and I-90 interchange location, which included Alternate 3 (a traditional diamond configuration), and Alternate 4 (a diverging diamond configuration). In comparing the two alternates, as shown in Table 2, Alternate 4 is selected. Whereas, Alternate 3 is slightly less costly and has slightly fewer environmental resource impacts, Alternate 4 provides enhanced operational characteristics and easier construction sequencing, which would benefit maintenance of traffic during construction. In addition, both alternates provide opportunities for implementing best management practices.

TABLE 2
Comparison of Interchange Alternates at Elmhurst Road and I-90

	Alternate 3 (Traditional Diamond)	Alternate 4 (Diverging Diamond)
Driver Expectation	Good	Moderate
Traffic and Operations Evaluation Rating	Moderate	Good
Construction Sequencing and Maintenance of Traffic	Moderate	Good
Cost	Lower	Low
Wetland Impacts (acre)	0.0	0.01
Impact to Higgins Creek (acre)	0.03	0.11
Impact to Higgins Creek Tributary A (acre)	0.07	0.07
100-year Floodplain Impacts (acre-feet)	13.5	14.2
Regulatory Floodway Impacts (acre-feet)	6.1	7.0
Tree Impacts (number)	124	124

TABLE 2
Comparison of Interchange Alternates at Elmhurst Road and I-90

	Alternate 3 (Traditional Diamond)	Alternate 4 (Diverging Diamond)
Opportunity for Implementing best management practices	Good	Good

Note: Green shading represents good performance or least impact, yellow shading represents moderate performance or average impact, and red shading represents poor performance or most impact.

During the evaluation of interchange types at the I-90 and Elmhurst Road interchange, numerous meetings have been held with Des Plaines, Elk Grove Village, and Mount Prospect. The non-traditional aspects of Alternative 4 (diverging diamond) were initially a concern to the surrounding communities. As more information was shared about this interchange type and its advantages, community leaders became more accepting of the concept. Specific input suggested that the design of an interchange and its bridges over I-90 preserve flexibility for future interchange modifications.

3.1.3 IL 72 and Elmhurst Road Intersection

The Tier Two Draft EIS considered four intersection types at the IL 72 and Elmhurst Road intersection. Since the close of the public comment period on May 14, 2012, the intersection type at this location has been the subject of further analysis and stakeholder input. In the evaluation process, two alternates were dismissed, while additional attention was given to the following alternates: Quadrant Bypass at Old Higgins Road and Quadrant Bypass at Greenleaf Avenue. Each alternate was refined to include design measures to improve overall traffic performance and adjustments were made to reduce environmental issues identified during earlier studies.

The evaluation of the two remaining intersection alternates concluded that the Quadrant Bypass (Old Higgins Road) Alternate is the preferred alternate, and documented in the Tier Two Final EIS. This alternate provides an acceptable level of traffic performance for all critical movements, and comparatively exhibits fewer impacts including less right-of-way requirements, fewer displaced business parking spaces, less disruption to business property ingress and egress, and fewer natural resource impacts (see Table 3). Additionally, this alternate, unlike the Quadrant Bypass (Greenleaf Avenue) Alternate, would not involve O'Hare Airport's Runway 9L-27R RPZ. The Quadrant Bypass (Greenleaf Avenue) Alternate would require properties in the RPZ for replacement of business parking, which would require FAA approval for the release of the property for non-aviation uses. Therefore, the Quadrant Bypass (Old Higgins Road) Alternate is the best overall alternate.

TABLE 3
Comparison of Intersection Alternates at IL 72 and Elmhurst Road

	Quadrant Bypass (Old Higgins Road) Alternate	Quadrant Bypass (Greenleaf Avenue) Alternate
Business Displacements (number)	1 [a]	0

TABLE 3
Comparison of Intersection Alternates at IL 72 and Elmhurst Road

	Quadrant Bypass (Old Higgins Road) Alternate	Quadrant Bypass (Greenleaf Avenue) Alternate
Residential Displacements (number)	0	0
Business Parking Displacements (number)	9	93
Driveway Closures/Restrictions	6	8
Wetland Impacts (acres)	0.26	0.26
Tree Impacts (number)	112	120

[a] Building is vacant.

3.2 Summary

The Build Alternative compared to the No-Build Alternative satisfies the project's Purpose and Need. The Build Alternative provides the needed efficiencies and improved operational characteristics that would maintain and enhance transportation in an area known as a regional hub and its role as an economic center in the region. While enhancing mobility in the project area, the Build Alternative has been developed to be sensitive and compatible with the local community values and land use patterns of the surrounding communities including O'Hare Airport, and for these reasons is the Selected Alternative.

The final set of design features that comprise the Build Alternative was determined through a deliberate process of evaluating many design alternates against evaluation criteria that included environmental considerations, travel and operational performance, constructability, and cost considerations. Through this process, the Build Alternative achieves improved travel, while minimizing and avoiding impacts to the important natural resources in the area. It has also been determined that the investment in the Build Alternative would provide benefit to the local economy, both during the period of construction and in the long-term, with redevelopment opportunities that would be attracted to the area.

With respect to O'Hare Airport, a portion of the proposed project would be located on airport property. In consideration of location, many corridors were examined, and only those solutions that located the West Bypass corridor on airport property provided the best solution. Whereas, the O'Hare Airport's Master Plan reserves a corridor on the west side of the airport for such a transportation project, the rationale for the use of airport property is further demonstrated by achieving community objectives that include needed travel improvements while maintaining community cohesion. The West Bypass corridor is located in the only open space available for a sizable transportation facility that is neither out of scale nor incompatible with surrounding uses. Compatibility of the project with the airport environs will be enforced by the City of Chicago, FAA, and USDA in the enforcement of airspace regulations, land use release regulations, navigational aid (NAVAID) requirements and regulation, and adherence to the FAA AC 150/5200-33B, *Hazardous Wildlife Attractants on or near Airports*.

The selected alternates at the Elmhurst Road and I-90 interchange and the IL 72 and Elmhurst Road intersection are the diverging diamond (Alternate 4) and the Quadrant Bypass (Old Higgins Road) Alternate, respectively. In response to comments received from the Tier Two Draft EIS Public Hearing, the remaining alternates at these location received further analysis and input from stakeholders that resulted in concurrence by the local stakeholders (i.e., Elk Grove Village) and the NEPA/404 Merger Group. Each of the selected alternates provide the operational performance required at these locations, while the environmental impact of each has been reduced to be fractional, and impacts on adjacent businesses and residences are minor.

The combined attributes of the Build Alternative and the preferred alternates at the interchange and intersection locations confirm the Selected Alternative and alternates are the environmentally preferred alternative.

4. Section 4(f)

Significant publicly-owned parks, recreational areas, wildlife and waterfowl refuges, and historic sites of national, state, or local significance, are afforded special protection under 23 CFR 774, *Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4[f])*. Involvement with such resources requires FHWA approval except, as specified under 23 CFR 774.13(d), when involvement is temporary and the scope of the work is minor, there are no permanent adverse impacts or interference with the resource's protected activities, the land is fully restored, and the resource's owner with jurisdiction agrees that these conditions are met.

The Selected Alternative would involve only four Section 4(f) properties, on a temporary basis: the Salt Creek Golf Club, Schaumburg bicycle paths along Springinsguth Road and Wright Boulevard, and the Salt Creek Greenway Trail. A temporary easement would be required to resurface the entrance to blend the profile of the entrance with the improved roadway along where the golf club is located. The proposed improvements would also require temporary relocation of the Schaumburg bicycle paths along Springinsguth Road and Wright Boulevard, as well as the Salt Creek Greenway Trail. The temporary involvement with each of these resources meets the conditions identified under 23 CFR 774.13(d). Concurrence has been provided by the resources' respective owners with jurisdiction.

The Tier Two Final EIS demonstrated that involvement with each of the four resources met the conditions contained in 23 CFR 774.13(d). Therefore, this project does not use any land from Section 4(f) resources, and a Section 4(f) approval is not required.

5. Measures to Minimize Harm

Tier Two considered the best arrangement of design features within the project corridor that provide cost-effective travel performance while reducing environmental and socioeconomic impacts. The design features included mainline lane requirements, interchange types, arterial improvements, drainage requirements, and other factors (i.e., transit facilities, bicycle and pedestrian facilities, etc.). Impacts were avoided and minimized, where practicable and feasible, through the use of alignment shifts, retaining walls or steep sideslopes, and other methods. The practice of avoiding and minimizing impacts was

performed at each cycle of project development including the corridor selection, and the consideration of each design alternate that make up the Build Alternative. A history of reducing impacts has been documented as the project progressed. The philosophy of taking every opportunity to reduce impact on natural and social resources will be exercised throughout the design, construction, and operating phases of the project. The impact reducing practices will be further enhanced as the project advances with the application of sustainable practice in each phase of the project.

Mitigation is required for unavoidable impacts to natural and human resources. The project does not directly impact cultural, historical, or threatened and endangered species; therefore, no mitigation is required for those resources. For resource impacts that require mitigation, the project will adhere to all applicable federal and state laws and regulations.

The following describes the primary mitigation measures and commitments (organized by their respective discipline).

5.1 Stormwater and Water Quality Best Practices

- Stormwater from the roadway will be managed to avoid local flooding, degradation of water quality in nearby water resources, and aircraft safety issues for nearby airports. Stormwater volume will be managed by a system of conveyance, detention, and infiltration in accordance with Illinois Tollway, IDOT, and county drainage and stormwater policies. As practical and feasible, surface runoff from bridge decks and roadways will be designed to drain to ditches or detention ponds via scuppers and storm sewers, prior to discharge to off-site drainageways. Best management practices will be implemented in conjunction with the project's drainage conveyance and detention system to minimize the transport of pollutants to surface waters. Additional stormwater best management practices will be installed, where necessary, to protect wetlands and surface waters. Areas to be evaluated closely include the proposed system interchange at I-290 and improvements near Salt Creek.
- The proposed improvements will comply with FAA AC No. 150/5200-33B, *Hazardous Wildlife Attractants on or near Airports* (dated August 28, 2007), to the extent practicable, as determined by the FAA and USDA. The 60 percent engineering plans will be submitted to FAA and the USDA for review and approval of the design features within the limits prescribed by the AC.
- A wetland buffer will be incorporated into the plan near wetland Sites 84 and 125. Native plant species that meet FAA wildlife hazard safety requirements will be followed when designing seed mixes for the wetland buffers.
- Compliance with soil erosion and sediment control requirements will consider the use of the Kane-DuPage and North Cook County Soil and Water Conservation Districts (SWCD) (via agreements) for soil erosion and sediment control plan review and site inspection during construction.
- Stormwater management strategies that benefit both the roadway and community needs will be considered.

- The Illinois Tollway will review their winter maintenance/deicing practices and sponsor a chloride water quality initiative on a watershed basis by partnering with local municipalities.

5.2 Wetlands, Surface Waters, and Riparian Mitigation

- Impacted waters of the U.S. and wetlands will be mitigated at prescribed ratios at locations within the Des Plaines watershed agreeable to federal and state agencies.
- Wetland/waters mitigation will be implemented off-site, but within the Des Plaines watershed. All sites being considered represent new acquisition. A final decision regarding wetland mitigation approach and site selection will be completed during the Section 404 permitting process and Interagency Wetland Policy Act review. The mitigation sites will be conveyed (if necessary) to a land steward (e.g., a forest preserve district, IDNR, etc.) for long-term maintenance.
- Acquisition of wetland/waters mitigation sites will be accomplished by one of two methods: 1) an intergovernmental agreement (IGA) (between the Illinois Tollway and land steward) that specifies a partnership, wherein the steward acquires the needed property and the Illinois Tollway develops the build-out of the mitigation; or 2) the Illinois Tollway both acquires and develops the property and conveys to the long-term property steward.
- Disturbance of streamside/riparian vegetation will be minimized to the extent practicable. Coordination with the DuPage River Salt Creek Workgroup is taking place to investigate local sites within the Salt Creek Watershed that could provide riparian or waters mitigation.

5.2.1 Fish and Wildlife Passage

- Where practicable and feasible, terrestrial wildlife crossings will be considered for inclusion in final design within riparian corridors/stream crossings and greenways.
- New culverts at waterways and/or wetlands will be designed to accommodate anticipated high-water flows and not to impede low-water flows to minimize the negative effects to the aquatic ecosystem.
- New culverts located on intermittent or perennial waters of the U.S. will be designed to accommodate fish passage. Existing culverts will be retained and in some cases extended in accordance with appropriate design criteria.
- The bottom of new culverts greater than 48 inches in diameter or height associated with waters of the U.S. will be buried below streambed elevations to maintain a more natural condition, when feasible. Bottomless culverts will be considered in final design, when feasible based on size of the span, geometry, skew, potential environmental impact associated with its installation, and cost.

5.3 Noise

- The determination of proposed noise barriers has been in compliance with FHWA and IDOT policy on selecting feasible and reasonable locations for barriers. Noise barriers that are likely to be implemented include B2, C1, C2, C3, C4, D1, D3, E1, E2, E3, and E6.

Based on the voting by benefited receptors, noise barrier E4 has been dismissed from further consideration. The implementation of the noise barriers will be carried forward into future phases of the project. The final design aspects of the barriers (e.g., length, height, types of materials, etc.) will be determined in final design. Public involvement venues will be used to update the public on final design details for the noise barriers and the implementation schedule.

5.4 Air Quality

- The control of air pollution during construction will be compliant with the Illinois Tollway's Supplemental Specifications (Section 107.37), and/or IDOT specifications.

5.5 Traffic and Access Management

- Traffic access will be enhanced by a frontage road system along the east-west corridor at locations noted in the preliminary plans to maintain local access. Maintenance of traffic plans will be developed to sustain traffic flow during construction. Plans will be developed to ensure safe travel and quick response for school system buses and emergency services.
- Efforts will be made to conduct construction activities affecting the Salt Creek Golf Course between November 1 to April 1, thereby, avoiding heavy use periods.

5.6 Sustainability

- Sustainable practices and principles will be applied to the EO-WB project that align with the objectives of the Illinois Tollway.

5.7 Special Use

- Construction of the West Bypass corridor will be coordinated closely with special uses including O'Hare Airport, Canadian Pacific railroad's Bensenville Yard, and Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) Touhy flood control reservoir per Memorandum of Agreement (MOA) developed between the Illinois Tollway and each agency, including the FAA for O'Hare Airport.

5.8 Aviation

- The FAA's 7460 (airspace compliance) analysis will be performed at the completion of the 60 percent engineering plans for roadway improvements that are located near or on airport property. A 7460 submittal will be prepared for FAA review and evaluation. Based on the recommendations from those reviews, aspects of the improvements will be adjusted to maintain compliance with airspace regulations.
- Glideslope antenna analyses will be completed to determine any potential conflicts with signal transmission from the antenna to arriving aircraft. Based on the recommendation of the analysis, roadway design features will be adjusted to avoid signal conflicts.
- Conformance with the FAA Wildlife AC will be monitored by the USDA through an IGA between the Illinois Tollway, City of Chicago, and the USDA. The FAA and USDA will receive 60 percent design plans and will review new open water features of the

project and landscape features for compliance. The USDA will advise the Illinois Tollway of any design refinements related to minimizing bird and wildlife attraction.

5.9 Residential and Business Relocation

- Relocation of businesses and residences will be performed in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and the land acquisition policies of IDOT and the Illinois Tollway, as applicable. An assessment shows that adequate housing and commercial properties can be found within the project area; therefore, relocation of residents and businesses within the project area will be given priority.

5.10 Alternative Transportation Modes

- Preservation of space for transit improvements in the Elgin O'Hare corridor, north leg of the West Bypass corridor, and the I-90 corridor will be provided.
- The EO-WB has reserved space for bicycle and pedestrian facilities along some sections of the proposed roadway improvement. Where the project corridor crosses existing bicycle or state routes, restoration of the facilities will be provided, while new elements of the bicycle and pedestrian plan will be subject to interagency agreements that address jurisdictional responsibility, cost sharing, and long-term maintenance.

5.11 Aesthetics

- The aesthetic design guidelines developed by the Corridor Aesthetics Advisory Team (CAAT) will be applied to the extent possible.

5.12 Tree Replacement

- Tree and vegetation replacement will be guided by IDOT and Illinois Tollway manuals. Planting replacement trees will take into account FAA's concern for aircraft safety pertaining to birds and other wildlife.
- Adverse impacts to wooded areas will be reduced and minimized by implementing a tree protection and preservation plan. Efforts will be made to preserve specimen trees, as practical and feasible.
- No varieties of ash trees (*Fraxinus* spp.) will be planted in the project corridor to mitigate for tree loss as part of this project. The removal and disposition of ash trees will comply with USDA/IDOA quarantine restrictions (7 CFR 301.53, as amended).

5.13 Special Waste

- Special waste encountered during construction will be managed to avoid unintended migration of contaminants and protect against potential worker exposures. Impacted material will be screened and characterized on a case-by-case basis and remediation methods determined. To the extent possible, on-site management will occur, and unsuitable materials will be disposed at a licensed facility.

6. Monitoring and Enforcement

Coordination with regulatory agencies has occurred for the duration of the tiered process. During the course of the process, regulatory agencies have apprised the project sponsors of regulatory and mitigation requirements. Strategies for specific mitigation, such as the wide spread use of best management practices for enhancement of water quality, restoration of impacted wetlands and waters, and adherence to the FAA's AC No. 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*, have all received extensive consideration, discussion, and input from the agencies. The framework for the major regulatory permits including the Section 404 permit, 401 Water Quality Certification, and NPDES permit have been structured in coordination with the agencies. Resource issues regulated by these permits have been addressed in the development of project wide plans for drainage, soil erosion and sedimentation control (SESC), best management practices for enhancing water quality, mitigation site plans for restoration of wetlands and open waters, and grading. These plans established the overall framework for compliance of the resource issues and fully respond to the requirements and applicable regulation, and the underlying agency objectives. Whereas, implementation of the Initial Construction Plan (ICP) will span approximately twelve years, the regulatory permits have been structured with enforcement actions that also span the duration of construction. Preliminary terms and conditions have been identified in coordination with the agencies that address the compliance requirements, and the principal conditions include:

- In connection with the USACE Section 404 permit, 60 percent complete engineering plans will be submitted to the USACE for review of each construction package of the project where a resource is impacted. The USACE will review the plans for compliance with agency requirements, in particular, drainage and best management practices requirements, stormwater and water quality management, soil erosion control plans, the extent of wetlands, and water impacts. The agency's review comments will be addressed by the Design Engineer of Record and included in the 95 percent complete engineering plans. The 95 percent plans will be resubmitted to the USACE for approval and implementation. The outcome of these agency reviews and approval will be contained in construction documents for which construction contractors and construction managers will be responsible.
- SESC will be managed by the Illinois Tollway. It is anticipated that the Illinois Tollway will retain certified SESC personnel to conduct regular field inspections and reporting for implementation of SESC practices. Any corrective action from the site inspections will be noted and conveyed to the appropriate party with the expectation that those actions will be implemented by the time of the next inspection. The Illinois Tollway has commenced conversation with the respective SWCDs (North Cook and Kane-DuPage) concerning the review of SESC plans and general oversight. Engineering plans (60 percent complete) for soil erosion control will be submitted to the SWCD for review and approval. Agency comments will be addressed in the 95 percent complete plans. It is anticipated that the SWCDs will conduct quarterly site visits with the objective of reviewing current practices, noting required changes to the basic approaches, and suggesting the use of the latest cutting-edge practices in SESC.

- The FAA and USDA have requested enforcement of the FAA's AC No. 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*, in the interest of aircraft operating safety. In compliance with that request, the implementing agency will submit 60 percent complete engineering plans to the FAA and USDA for review of open water and landscape features of the project. Plans will be submitted for each construction package as the project advances over its twelve-year construction schedule. The FAA and USDA will examine aspects of the plans that provide for the wildlife management of open detention basins or compensatory storage areas that do not drain within 48 hours within five miles of O'Hare Airport or 10,000 feet from the Schaumburg Airport. The FAA and USDA will comment on provisions for bird and animal control at these locations including netting, bird wires, landscape material, etc. Landscaping along the roadway will also receive agency attention, in particular as it relates to plant material that is accepted by the FAA and USDA.
- Aircraft NAVAIDs requiring modification or relocation by the construction of the roadway will be reviewed and approved by the FAA. Specific engineering plans related to NAVAID facilities will be submitted to the FAA for review and approval. Plans will be submitted at 60 percent complete, and agency comments will be fully addressed by the Design Engineer of Record and resubmitted at 95 percent complete for approval by the agency. Modification of NAVAID facilities will require re-certification, which will be conducted by the FAA. Corrective action noted in the certification process will be completed immediately.
- The IEPA Water Quality Certification will be enforced through actions of the Illinois Tollway, IEPA, USACE, and the SWCDs. The Illinois Tollway has adopted environmental enhancement practices to protect natural and human resources, and rigorous compliance with state and federal environmental regulation. As part of this project, the Illinois Tollway will implement the use of best management practices and chloride reduction strategies to enhance the water quality of streams and water bodies affected by the project. Concepts for each of these strategies have been developed and will be advanced through permit processes in coordination with responsible parties that include the IEPA, USACE, SWCDs, and DuPage River Salt Creek Workgroup (local advocacy group for environmental protection of waters in the vicinity of the project). These partnerships will lead to the implementation of water quality strategies and practices necessary to comply with in-stream water quality standards of the State of Illinois.
- Water quality conditions will be monitored post construction to measure improvements in surrounding waterways and water bodies stemming from best management practices and salt reducing practices. The overall monitoring approach and its objectives will be developed in coordination with key agencies such as IEPA, USACE, USWFS, IDNR, and the DuPage River Salt Creek Workgroup.

7. Agency Findings

The following findings establish the project's adherence to applicable laws intended to protect sensitive environmental and socioeconomic resources.

7.1 Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended

Relocation assistance will be administered in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and the land acquisition policies of IDOT and the Illinois Tollway, as applicable.

It is anticipated that no more than seven residences and 46 businesses will be displaced by the proposed improvements. Relocation assistance to displaced residents (homeowners and renters) and businesses will be administered as applicable and without discrimination. Property purchases are subject to a process based on fair market value.

7.2 Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

The EO-WB project does not result in disproportionately high or adverse human health or environmental effects on minority or low-income populations (Executive Order 12898). The robust public involvement process undertaken for this project has been inclusive of all populations. No person, because of income, race, color, religion, national origin, sex, age, or handicap, has been excluded from participating in, denied benefits of, or was subject to discrimination during this project. The project's 400 meetings with local communities and the public at-large provided early and frequent opportunities for community officials to notify the project team of any population within their communities that might require alternative outreach efforts to ensure project-related communications reach those community members. Notices to the public of upcoming public involvement activities provided members of the community the opportunity to request interpreters and other similar accommodations. A Spanish translator was available to attendees at public information meetings and hearings. All public meetings were accessible to handicapped individuals.

The proposed action will not exert disproportionately high or adverse impacts to low-income populations. The average median family income (in 2009 inflation-adjusted dollars) in the project corridor is greater than Cook County and the State of Illinois, but less that DuPage County. It is, however, well above the 2012 Department of Health and Human Services poverty guideline. Further, there are no block groups with a median family income level below the 2012 poverty guideline.

Minority populations would not incur disproportionately high or adverse impacts as a result of the displacements caused by the proposed improvements. The residential displacements occur in locations that have substantially higher white residents than non-white residents. Further, because the number of residential displacements is small (seven), there would be no impact on the demographic diversity of the area. Ample replacement housing is located in the vicinity of the displaced residences. Business displacements caused by the Build Alternative occur in only one Census block with residents; this Census block has a higher non-white and Asian population than the state and county averages. All other business displacements occur in Census blocks with no residential population.

Sensitive noise receptors were evaluated in Census blocks with comparatively higher and lower minority populations, and impacts were identified in both places. Noise barriers will

be implemented based on need, and would benefit both higher and lower minority populations. No minority population is expected to incur disproportionately high or adverse noise impacts.

7.3 Section 106 of the National Historic Preservation Act of 1966

No cultural resources subject to the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended, or of Section 4(f) of the Department of Transportation Act of 1966 were found in the project corridor. Coordination with Tribal governments with an interest in the project area was conducted. Each of the eight Tribal governments was invited to be a participating agency and Section 106 consulting party. The sole respondent, the Peoria Tribe of Indians of Oklahoma, indicated they are unaware of any link between Indian Religious Sites and the proposed project and have no objection to construction of the proposed project. Tribal agencies that did not respond are considered to have declined the invitation to be NEPA participating agencies, according to SAFETEA-LU Section 6002. However, they will be contacted immediately if human remains are uncovered during construction.

7.4 Executive Order 11988, *Floodplain Management*

The EO-WB project would not involve a significant encroachment of a floodplain; however encroachments of floodplains would result from construction associated with the project. Minimization measures were incorporated into the proposed design and compensatory storage will be provided to mitigate for fill in floodplains or relocation of waterways.

7.5 Section 176(c) of the Clean Air Act Amendments of 1990

The EO-WB project conforms to state air implementation plans as required by Section 176(c) of the Clean Air Act Amendments of 1990. The EO-WB project is located within DuPage County and Cook County, both of which are nonattainment for the 1997 8-hour ozone and 1997 annual $PM_{2.5}$ standards.

Since this project is located in nonattainment areas for transportation-related criteria pollutants, the transportation conformity requirements of the Clean Air Act apply. To meet the transportation conformity requirements, the EO-WB project was included in the fiscally-constrained and conformed part of the Chicago Metropolitan Agency for Planning's *GO TO 2040 Comprehensive Regional Plan*. On March 8, 2012, the FHWA and the Federal Transit Administration (FTA) determined that the *GO TO 2040 Comprehensive Regional Plan* and the Transportation Improvement Program conform to the State Implementation Plan and the transportation-related requirements of the 1990 Clean Air Act Amendments.

A quantitative $PM_{2.5}$ hot-spot analysis was performed for this project, and it was determined that the project would not cause, contribute to, or delay timely attainment of the annual $PM_{2.5}$ NAAQS.

7.6 Executive Order 11990, *Protection of Wetlands*

Executive Order 11990 requires federal agencies to avoid new construction in wetlands, if a practicable avoidance alternative exists. Where wetlands cannot be avoided, the proposed action must include all practicable measures to minimize harm to wetlands. There is no

practicable alternative to the proposed construction in wetlands and the proposed action includes all practicable measures to minimize harm to wetlands.

The alternatives development process for the EO-WB project spanned the Tier One and Tier Two evaluations. The *EO-WB Tier One ROD* approved the preferred improvement and project corridor (location). The corridor that emerged from Tier One was well-defined, and its location was fixed by the *EO-WB Tier One ROD*. The project corridor was fully supported by local communities and exhibited the best travel performance characteristics, while having relatively low impacts compared to other alternative strategies. Avoidance and minimization of wetland impacts (along with other environmental and socioeconomic issues) were important factors in the development of the project corridor and screening of alternatives. In general, alternatives with notable wetland impacts, such as those that overlapped with mapped threatened and endangered species sites or that were located in special lands (e.g., forest preserves) were dismissed in Tier One. Alternatives that involved potentially higher-quality wetland areas were also eliminated from consideration, or potential impacts were minimized.

Tier Two considered the optimal arrangement of design features within the project corridor that provide cost-effective travel performance while reducing environmental and socioeconomic impacts. The design features included mainline lane requirements, interchange types, arterial improvements, drainage requirements, and other factors (i.e., transit facilities, bicycle and pedestrian facilities, etc.).

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands, and that the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.

Prior to construction, all necessary wetland permits and approvals (e.g., Section 404 CWA) will be obtained. Because this project occurs on new alignment, it is being processed as a Standard Review Action, in accordance with the IDOT Wetlands Action Plan, and coordinated with IDNR. Wetland Impact Evaluation forms were submitted to IDNR for review. On August 8, 2012, IDNR concurred with the impacts to wetlands.

7.7 Federal Aviation Administration Advisory Circular Number 150/5200-33B, *Hazardous Wildlife Attractants on or near Airports*

FAA AC 150/5200-33B, *Hazardous Wildlife Attractants on or near Airports*, provides guidance on identifying incompatible land uses and minimizing or eliminating hazardous wildlife attractants in the vicinity of airports. Hazardous wildlife attractants could include solid waste landfills, open water stormwater management facilities, wetlands, woodlands, and landscaped areas. This AC applies to both O'Hare Airport and the Schaumburg Regional Airport in the project area. For O'Hare Airport, the effect of the regulation extends five miles from the airport boundary, and in the case of the Schaumburg Regional Airport, it extends 10,000 feet. As required by FAA, the proposed EO-WB project improvements will implement the AC. Extensive coordination is expected with the FAA and USDA to achieve compliance with the hazardous wildlife attractant AC.

7.8 Endangered Species Act of 1973

Impacts to threatened and endangered species are not anticipated as a result of this project. Based on coordination with USFWS and IDNR, field surveys, and database reviews, no federal- or state-listed species or critical habitats were found to be located in the project corridor, and therefore, impacted by the proposed improvements.

7.9 Section 4(f)

The EO-WB project does not require Section 4(f) approval. The proposed action involves four Section 4(f) properties: the Salt Creek Golf Club, Schaumburg bicycle paths along Springinsguth Road and Wright Boulevard, and the Salt Creek Greenway Trail. However, as demonstrated in the Tier Two Final EIS, involvement with each of these resources will be temporary and meets the exception conditions contained in Section 774.13(d) of 23 CFR 774, *Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4[f])*. Therefore, Section 4(f) approval is not required.

8. Public Involvement

Regulatory resource agencies, stakeholders, and affected members of the public have been included in the development of the project every step of the way. From identifying the project's Purpose and Need to identifying the Selected Alternative, the project team has conducted public outreach activities to obtain input on the transportation issues in the area, vet the potential impacts and benefits of the various alternatives with communities and stakeholders, and ensure environmental regulations are being addressed to the regulatory resource agencies' satisfaction.

The extensive public outreach program was developed to adhere to regulations and guidance contained in NEPA, SAFETEA-LU, and Context Sensitive Solutions. A Corridor Planning Group and Task Force Groups were assembled to provide venues for project team members to work with community leaders and stakeholders on the development of project improvements that maximized benefits and minimized impacts to those affected by the project. Project team members also participated in the NEPA/404 Merger process at which regulatory resource agencies were involved early and at key project milestones to minimize the potential for unforeseen issues to arise in the later stages of the NEPA and Section 404 permitting process.

Newsletters were distributed at key milestones to notify residents and stakeholders of recent project decisions and upcoming activities. A project website was maintained and updated regularly with general project information, project documents, and meeting materials. Public Information Meetings were held to maintain public awareness of project developments and alternatives under consideration. The public was encouraged to attend, provide input, and ask questions. A Public Hearing was held after the Tier Two Draft EIS was distributed to help facilitate public review of the document and elicit comments. These activities are described in the Tier Two Final EIS.

8.1 Comments on the Tier Two Final EIS

A Notice of Availability for the Tier Two Final EIS was published in the Federal Register on November 9, 2012. The 30-day wait period ended December 10, 2012. During the Final EIS

wait period, a comment letter was received from the IEPA and the USEPA (see Appendix A). The IEPA indicated that they had no objections to the project, and also noted that the implementation of the project would require compliance with agency permits and regulations (i.e., construction site NPDES permit(s), and compliance with the management of special and hazardous wastes, and the Section 401 Water Quality Certification). The Illinois Tollway, as the implementing agency, will coordinate fully with the IEPA in the acquisition of necessary permits and compliance with applicable agency regulations.

The letter received from USEPA commended the EO-WB project for the alternative development process, stakeholder involvement, and the environmental documentation and the well-coordinated mitigation plan. A specific comment indicated that the parties responsible for various aspects of mitigation needed clarification. The following is a response to this comment.

The Illinois Tollway will be the implementing agency for the EO-WB project. As such, the Illinois Tollway will oversee the implementation of the planned mitigation measures. As appropriate, the Illinois Tollway will be responsible for providing follow-up maintenance to mitigation measures that are incorporated into their rights-of-way, including stormwater quality/quantity Post Construction Best Management Practices (PCBMPs). PCBMPs located within the project's rights-of-way retained by the Illinois Tollway will be maintained by the agency. Aspects of the project will be conveyed to local jurisdictions for long-term maintenance and ownership (i.e., arterial improvements, frontage roads, etc.), and in these cases, the local jurisdiction will be responsible for PCBMPs associated with any of these facilities. Interagency agreements will be developed in each of these cases to ensure the long-term maintenance and management of PCBMPs conveyed to local jurisdictions. Maintenance and monitoring of these measures will follow state and federal regulatory requirements and standard practices/policies. Further, FAA requirements will necessitate that mitigation for some resource impacts are provided offsite including wetland/waters of the U.S. mitigation.

Specific information regarding the wetland and waters mitigation will be determined during Clean Water Act (Section 404 and Section 401) and Interagency Wetlands Policy Act (IWPA) permitting. At this time, the Illinois Tollway intends to enter into an agreement with the Lake County Forest Preserves to complete wetland and waters mitigation on property recently acquired by the Lake County Forest Preserves. The proposed mitigation would be completed within the new Pine Dunes Forest Preserve located in northern Lake County. The Pine Dunes Forest Preserve covers 315 acres and can provide wetland and waters mitigation for impacts associated with the proposed EO-WB project. The process for preparation and approval of an IGA has been initiated and would be expected to be competed and approved in March 2013.

Under the terms of the IGA, the Illinois Tollway will be responsible for design, construction, and at least five years of maintenance and monitoring of the mitigation and associated buffer areas in accordance with the requirements of the IWPA and Section 401 and 404 permits. In addition to completion of mitigation at the Pine Dunes Forest Preserve, the Illinois Tollway has also agreed to provide a paved site access, parking area (approximately 20 spaces), restroom, and construction of a roughly 1.5-mile long crushed stone multi-purpose path, in return for use of their property as a mitigation site.

The goals of the mitigation site will be established, monitored, and maintained in accordance with the requirements of the USACE, IEPA, and IDNR. The performance standards applied to the long-term success of wetlands and waters restoration will follow those described in the Chicago District Permittee Responsible Mitigation Requirements (revised October 2009). These goals and performance standards (e.g., how success will be measured) for the mitigation area and associated buffers are detailed within this document which can be found on the USACE Chicago District website at http://155.79.114.199/co-r/mitgr.htm.

As mentioned above, it is expected that the Illinois Tollway will maintain and monitor the mitigation areas for five years or until sign-off/approval by the USACE and IDNR. Once sign-off is obtained, responsibility for the long-term/perpetual maintenance and monitoring of the site will be the responsibility of the Lake County Forest Preserves.

If additional or alternative wetland/waters mitigation sites are determined to be necessary through the permitting process, it is anticipated that a similar review/approval process would occur, and an IGA would be arranged with an appropriate land steward regarding establishment, maintenance, and monitoring (both short and long-term) of the mitigation site(s).

9. Approval

Based on the analysis and evaluation contained in the Tier Two Final EIS, after careful consideration of all the identified social, economic, and environmental factors and input received from other agencies, organizations, and the public; and the factors and mitigation measures outlined in this document, it is the decision of FHWA and FAA to approve the Preferred Alternative as the Selected Alternative.

12/12/2012
Date

Norman R. Stoner, P.E.
Division Administrator
Federal Highway Administration

12/11/12
Date

Barry Cooper
Regional Administrator
Federal Aviation Administration

Appendix A
Tier Two Final EIS Comment Letters

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 0 5 2012

REPLY TO THE ATTENTION OF: E-19J

Norman Stoner, P.E.
Division Administrator
Federal Highway Administration
3250 Executive Park Drive
Springfield, Illinois 62703

Re: **Comments on the Tier 2 Final Environmental Impact Statement for the Elgin O'Hare-West Bypass, Cook and DuPage Counties, IL, CEQ# 20120353**

Dear Mr. Stoner:

In accordance with U.S. Environmental Protection Agency (EPA) responsibilities under the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act (CAA), we have reviewed the Tier 2 Final Environmental Impact Statement (FEIS) for Elgin O'Hare – West Bypass Project. Our comments on the Draft EIS for this project included diesel emissions, wetland impacts and mitigation proposals, stream and floodplain crossings, water quality and riparian buffers, best management practices (BMP) for stormwater run-off, and mitigation. We recognize and commend the responses to these concerns throughout the FEIS. The following comments follow up on our points regarding alternatives, environmental impacts and mitigation measures.

ALTERNATIVES

On September 6, 2012, we concurred with the Preferred Alternative for this project following extensive meetings and conversations regarding BMP designs and surface water impacts. We commend the many solutions engineered into the final alternative to minimize the impacts of this project.

ENVIRONMENTAL IMPACTS

Air Quality

The NEPA process for this project is concluding just as some new standards and methods are coming into effect for 2.5 microns or less particulate matter (PM2.5) determinations. Since the project has been determined to conform with the current State Implementation Plan (SIP), the emissions anticipated from this roadway are adequately accounted for. Should changes in the

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project arise, we would recommend the new modeling and standards effective December 20, 2012, including EPA approved dispersion models, be used to reassess this conformity determination.

We continue to encourage the use of all available best management practices to reduce local temporary construction dust and construction equipment emissions.

Wetlands, Streams and Floodplains

We commend the Federal Highway Administration (FHWA) and the Illinois Department of Transportation (IDOT) for alignment adjustments made to reduce impacts to wetlands, streams and floodplains. EPA will continue to coordinate with the transportation and resource agencies on this project in identifying optimal wetland and stream mitigation sites for permitting. EPA supports combining stream restoration on sites selected for wetland mitigation when appropriate quality mitigation can be included. When considering such mitigation sites, please note our preference for restoration versus creation or upgrading a resource. Our DEIS comments noted the need to adequately mitigate for stream impacts, specifically where wider right-of-way will necessitate extending culvert lengths. As we have stated at meetings, we would also support replacing culverts with three-sided/arched natural bottom structures to reestablish a more natural watercourse under the roadway. We will continue to work with the project on these issues during permitting. We acknowledge that the FEIS notes that project roadways will not be overtopped by a 100-year flood event.

We note the FEIS provides a helpful discussion and commitment regarding riparian buffer functions that need to be retained when this project impacts what little remains of this resource along the project streams.

Stormwater Runoff

As anticipated in our DEIS comments, we participated in development of a BMP plan for this project. We agree that a high quality working plan has been achieved in the Appendix E mapping. We understand further details will be incorporated as final design / engineering proceeds, but the framework provided addresses our previous concerns regarding stormwater runoff.

MITIGATION OF IMPACTS

We have been extensively involved in discussions of potential mitigation of wetlands, streams and stormwater run-off and appreciate the solutions that are under consideration for the project's associated impacts.

We repeat our recommendation that decision makers and the public would be well served by having a complete table of all project impacts and their associated mitigation measures. Tables ES-1,2 and 3, and Table 3-56 provide the reader with a clear understanding of what varied impacts this project will have upon the project area. We commend the FEIS for identifying those

areas where additional work since the DEIS has further minimized many of those impacts. However, the FEIS does not clearly link impacts with planned mitigation measures. The FEIS does not clearly identify, given that this project is planned as a public private partnership, specifically, who will implement the mitigation measures; who will remain responsible for follow-up maintenance where appropriate; what the goals of some mitigation plans are; and how success will be measured.

We appreciate the opportunity to review this document. If you have any questions, or wish to discuss our comments further, please contact me or Norm West of my staff at (312)-353-5692 or at west.norman@epa.gov.

Sincerely,

Kenneth A. Westlake
Chief, NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Cc: John Fortmann, Illinois Department of Transportation, Region 1
Kristi Lafleur, Illinois Tollway
Shawn Cirton, U.S. Fish and Wildlife Service
Kathy Chernich, U.S. Army Corps of Engineers

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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PAT QUINN, GOVERNOR JOHN J. KIM, INTERIM DIRECTOR

NOV 16 2012

BUREAU OF PROGRAMMING
RECEIVED
NOV 19 2012
DISTRICT #1

Mr. Ron Krall, Project Manager
Illinois Department of Transportation
201 West Center Court
Schaumburg, IL 60196

RE: Elgin-O'Hare West Bypass Tier Two Final EIS

Dear Mr. Krall:

Thank you for the opportunity to review and comment on the final Tier Two Environmental Impact Statement for the Elgin-O'Hare West Bypass project.

The Agency does not have any objections to the project: however, a construction site activity stormwater NPDES permit is required if one or more acres are disturbed with this project. Please contact Al Keller at 217-782-0610 with any questions.

In addition, solid and hazardous waste must be properly disposed of or recycled.

Sincerely,

Lisa Bonnett

Lisa Bonnett
Deputy Director

TAMMY DUCKWORTH
8TH DISTRICT, ILLINOIS

COMMITTEE ON ARMED SERVICES
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

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Congress of the United States
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September 23, 2016

The Honorable Daniel R. Elliott III
Chairman
United States Surface Transportation Board
395 E Street, S.W.
Washington, D.C. 20423-0001

The Honorable Ann D. Begeman
Vice Chairman
United States Surface Transportation Board
395 E Street, S.W.
Washington, D.C. 20423-0001

The Honorable Deb Miller
United States Surface Transportation Board
395 E Street, S.W.
Washington, D.C. 20423-0001

Dear Chairman Elliott and Surface Transportation Board Members:

I write to express serious concern over Canadian Pacific (CP) Railway's refusal to negotiate with the Illinois Tollway Authority in developing a solution that will enable the completion of the Elgin-O'Hare Western Access (EOWA) Project. Through their misleading actions and current legal tactics to impede further construction of EOWA, CP threatens an important transportation infrastructure initiative that will provide our local and regional economy with critical upgrades necessary to remain competitive.

Since 2007, CP had been actively working in good faith with the Illinois Tollway and local public officials in the discussion and design of EOWA. During this time, CP led the Tollway to believe that they would sell portions of their land needed to complete key aspects of EOWA for $114 million, including the north-south corridor to link I-294 and I-90 and provide western access to the airport. Only after construction had begun and more than $1.5 billion, including $140 million in federal funding, was invested in the project, CP unexpectedly reneged on the deal.

CP's actions have endangered a vital infrastructure project that will provide improvements to freight access and connectivity for Illinois' second largest employment center, providing direct access to O'Hare Airport and linking I-90 with I-294. The design plans show EOWA running through what is currently the "Bensenville Yard." In CP's letter to the Surface Transportation Board, it stipulates that building an expressway through this railyard "would significantly impact existing rail operations, severely limit our ability to reconfigure the remaining track and facilities, and would permanently prevent future use and capacity." The enclosed photos show that the parts of the Yard included in the project's design are used for storage and little else. Although CP has been involved in the design and development process of

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EOWA for almost a decade, CP has only recently expressed their concern with this project's impacts on their rail operations.

Elgin-O'Hare Western Access will stimulate the regional economy and serve national transportation priorities by connecting one of Chicagoland's largest industrial and manufacturing areas with O'Hare Airport. The north-south corridor linking I-90 and I-294 will provide direct access for goods and passengers traveling to-and-from the airport, creating additional thruway capacity, reducing travel times and lowering fuel costs for both businesses and individuals. Additionally, the Illinois Governor's Advisory Council estimates that approximately 65,000 permanent jobs will be created as a result of the EOWA by 2040, nearly 70 percent of which would be located in communities west of O'Hare.[1] As a testament to the anticipated impacts of EOWA, the U.S. Department of Transportation designated it as a *Project of National and Regional Significance* due to its effects on the regional economy and the execution of other national priorities—one of only 26 projects to receive this coveted title.

Recognizing these important economic benefits to my district and the region, in combination with its importance to national transportation priorities, I wish to express my full support for Elgin O'Hare Western Access. I urge the Surface Transportation Board to consider intervening in this matter to ensure the project's completion as per the originally understood plans between CP and the Tollway.

Sincerely,

Tammy Duckworth

Tammy Duckworth
Ranking Member, Subcommittee on Transportation and Public Assets
U.S. House of Representatives Committee on Oversight and Government Reform

[1] Office of the Governor, *Elgin O'Hare West Bypass Advisory Council: Final Report to Governor Pat Quinn*, State of Illinois (June 30, 2011) (online at http://www.illinoistollway.com/documents/10157/4362305/EOWB+Advisory+Council+Final+Report.pdf) (accessed on August 22, 2016).

United States Senate

July 13, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Dear Members of the Illinois Tollway Board:

I write in support of the Elgin O'Hare Western Access (EOWA) Project, which is critical to meeting the growing transportation needs of the area west of O'Hare International Airport and the future economic competitiveness of northeast Illinois.

The EOWA project is distinguished as one of only 26 *Projects of National and Regional Significance* designated by the U.S. Department of Transportation, as well as, a new project included in GO TO 2040, Chicago's regional comprehensive transportation plan. The project includes the reconstruction and widening of existing Illinois Route 390 (formerly known as the Elgin O'Hare Expressway), extending the expressway east to O'Hare Airport, and constructing a new expressway on the west side of O'Hare to connect I-90 with I-294. With its close proximity to O'Hare, one of the busiest airports in the world, and significant freight, intermodal, and manufacturing sectors, this project is crucial for relieving congestion, decreasing travel times and improving mobility for motorists and the movement of freight throughout the area.

For more than a decade, community leaders and transportation planners have come together to make the EOWA a reality. Completion of the project will provide new western access to O'Hare Airport, increase capacity on nearby roadways, accommodating three times as many vehicles per day as the roads carry today, and provide new multi-modal connections which will strengthen the region's connection to the global market. Further, the EOWA will provide increased economic development opportunities for neighboring local communities and create jobs.

For these reasons, I join local officials throughout the region in support of moving forward to complete the Elgin O'Hare Western Access Project. Thank you for your commitment to this effort and I look forward to working with you to advance the project, which is vital to strengthening the economic future of communities surrounding O'Hare, the Chicago region and the State of Illinois.

Sincerely,

Mark Kirk
U.S. Senator

RANDY HULTGREN
MEMBER OF CONGRESS
14TH DISTRICT, ILLINOIS

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Congress of the United States
House of Representatives

Washington, DC 20515–1314
June 16, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the 14th Congressional District of Illinois, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through

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the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

I support the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to the Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is counterproductive, which is why I support the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. I ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Randy Hultgren

Randy Hultgren

Member of Congress

TAMMY DUCKWORTH
8th District, Illinois

COMMITTEE ON ARMED SERVICES
COMMITTEE ON OVERSIGHT
AND GOVERNMENT REFORM

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Congress of the United States
House of Representatives
Washington, DC 20515–1308

July 22, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

I write in support of the Elgin O'Hare Western Access (EOWA) Project, which will connect vital economic areas within the 8th Congressional district to major roadways and O'Hare Airport. It is time to revitalize the region's aging transportation infrastructure to reflect its current needs—improving economic conditions so that our businesses can remain competitive, reducing local traffic congestion and improving access for residents. The Illinois Tollway has made significant progress since construction began in 2013 and over $3 billion combined local, state and federal funds have been committed to its timely completion.

The EOWA is an example of true collaboration in regional transportation infrastructure. The Elgin O'Hare Advisory Council—a group consisting of local government leadership, impacted business and labor stakeholders, and regional planning and transportation experts—agreed to a major transportation overhaul to enhance the region's economic competitiveness in 2011. In support of this goal, EOWA will provide improvements to freight access and connectivity for Illinois' second largest employment center, providing direct access to O'Hare Airport and linking I-90 with I-294.

The economic benefits are significant. The Illinois Governor's Advisory Council estimates that approximately 65,000 permanent jobs will be created as a result of the EOWA by 2040, nearly 70 percent of which would be located in communities west of O'Hare[1]. As a testament to the anticipated impacts of EOWA, the U.S. Department of Transportation designated it as a *Project of National and Regional Significance* due to its effects on the regional economy and the execution of other national priorities—one of only 26 projects to receive this coveted title.

[1] "Elgin O'Hare West Bypass Advisory Council: Final Report to Governor Pat Quinn," *Office of the Governor, State of Illinois*, (30 June 2011), found at:
http://www.illinoistollway.com/documents/10157/4362305/EOWB+Advisory+Council+Final+Report.pdf.

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In addition, Elgin O'Hare Western Access will stimulate the regional economy and serve national transportation priorities by connecting one of Chicagoland's largest industrial and manufacturing areas with O'Hare Airport. The north-south corridor linking I-90 and I-294 will provide direct access for freight and passengers travelling to-and-from the airport, creating additional thruway capacity, reducing travel times and lowering fuel costs for both businesses and individuals.

Recognizing these important economic benefits to my district and the region, in combination with its importance to national transportation priorities, I wish to express my full support for the EOWA and the Tollway's tireless efforts in seeing this multi-year project come to fruition without further interruption from Canadian Pacific Railway. I thank you for the Tollway's commitment to improving the region's transportation system and hope that we are able to soon realize the impacts of your efforts as we work together to improve our state and nation.

Sincerely,

Tammy Duckworth

Tammy Duckworth
Member of Congress

ADAM KINZINGER
16TH DISTRICT, ILLINOIS

DEPUTY REPUBLICAN WHIP

COMMITTEE ON
ENERGY & COMMERCE

COMMITTEE ON
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Congress of the United States
House of Representatives
Washington, DC 20515-1602

June 16, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to Illinois 16th Congressional District, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois

ADAM KINZINGER
16TH DISTRICT, ILLINOIS

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Congress of the United States
House of Representatives
Washington, DC 20515-1602

Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

I wish to add my support to the Illinois Tollway's effort to proceed with the completion of the EOWA Project. This project will strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Adam Kinzinger
Representative in Congress
16th District, Illinois

Illinois State Senate

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Napoleon B. Harris III

Senator
15th Legislative District

June 23, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to Legislative 15th District, the Chicago region, and the entire state of Illinois is unsurpassed, which is why I am providing this letter to fully commit my support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in GO TO 2040, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

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The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth to my Legislative 15th District.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' O'Hare Modernization Act identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the OMP Environmental Impact Statement (EIS).

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents.

That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

I appreciate and support the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why I support the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. I ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Napoleon B. Harris III
State Senator

ILLINOIS STATE SENATE

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CHRIS NYBO
STATE SENATOR • 24TH DISTRICT

MINORITY SPOKESMAN
FINANCIAL INSTITUTIONS

MEMBER:
- FINANCIAL INSTITUTIONS
- ENERGY & PUBLIC UTILITIES
- REVENUE
- JUDICIARY
- TRANSPORTATION
- CRIMINAL LAW
- SPECIAL COMMITTEE ON OVERSIGHT OF MEDICAID MANAGED CARE

June 16, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to State Senate District 24, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare, linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS).*

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In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion-dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why Senate District 24 supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Chris Nybo
State Senate

District Office:
127 S. 1st Street, Suite 204
Geneva, Illinois 60134
630.457.5460

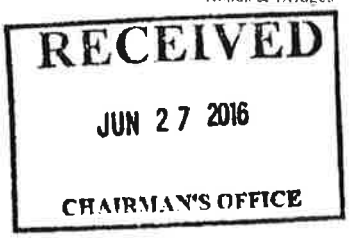
Springfield Office:
211-N Stratton Building
Springfield, Illinois 62706
217.782.5453



Steven A. Andersson
STATE REPRESENTATIVE • 65TH DISTRICT

Committees:
- Appropriations - General Services
- Cities & Villages
- Judiciary - Civil
- Museums, Arts & Cultural Enhancements
- Renewable Energy & Sustainability
- Small Business Empowerment & Workforce Development
- Transportation: Regulation, Roads & Bridges

June 20, 2016



Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to District 65, the Chicago region, and the entire state of Illinois is unsurpassed, and I am providing this letter to fully commit my support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

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In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent

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District Office:
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Springfield Office:
211 N. Stratton Building
Springfield, Illinois 62706
217.782.5467

Page 2
Elgin O'Hare Western Access Project Support

Committees:
• Appropriations - General Services
• Cities & Villages
• Judiciary - Civil
• Museums, Arts & Cultural Enhancements
• Renewable Energy & Sustainability
• Small Business Empowerment & Workforce Development
• Transportation: Regulation, Government Oversight

Steven A. Andersson
STATE REPRESENTATIVE • 65TH DISTRICT

Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

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I appreciate and support the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why I support the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. I ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Best regards,

Steven A. Andersson
District 65

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ILLINOIS HOUSE OF REPRESENTATIVES

COMMITTEES
CONSUMER PROTECTION
ECONOMIC DEVELOPMENT & ENERGY
ENERGY
INSURANCE
JUDICIARY - CIVIL
LABOR & COMMERCE COMMITTEE
RESTORATIVE JUSTICE

PETER BREEN

STATE REPRESENTATIVE · 48TH DISTRICT

June 21, 2016

Illinois Tollway Board of Directors
Illinois State Tollway Highway Authority
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: **Elgin O'Hare Western Access Project Support**

Dear Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to House District 48, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

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In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision were completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and

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Public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 58,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our House District 48 supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Peter Breen
State Representative 48th District

DISTRICT OFFICE:
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FAX: 815.282.0085

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217.782.1139 (FAX)

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COMMITTEES:
- SPOKESPERSON:
  PUBLIC SAFETY APPROPRIATIONS
  & JUDICIARY - CRIMINAL

MEMBER:
- LABOR & COMMERCE
- PUBLIC UTILITIES
- INTERMODAL INFRASTRUCTURE
- TOLLWAY OVERSIGHT

JOHN M. CABELLO
STATE REPRESENTATIVE · 68TH DISTRICT

June 17, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the 68th District, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in it's entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

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In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

I appreciate and support the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why the 68th District supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility

and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Best regards,

JOHN M. CABELLO
STATE REPRESENTATIVE
68TH DISTRICT
JMC/ce

COMMITTEES:
CHAIRPERSON
- APPROPRIATIONS - GENERAL SERVICES
VICE CHAIRPERSON
- ELEMENTARY & SECONDARY EDUCATION
MEMBER:
- ACCOUNTABILITY & ADMINISTRATIVE REVIEW
- BUSINESS GROWTH & INCENTIVES
- MASS TRANSIT
- PUBLIC UTILITIES
- STATE GOVERNMENT ADMINISTRATION
APPOINTED TO:
- LEGISLATIVE AUDIT COMMISSION
- HIGHER EDUCATION PERFORMANCE FUNDING STEERING COMMITTEE

ILLINOIS HOUSE OF REPRESENTATIVES
FRED CRESPO
STATE REPRESENTATIVE - 44TH DISTRICT

CAPITOL OFFICE:
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FAX: 217/557-4622

DISTRICT OFFICE:
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STREAMWOOD, IL 60107
PHONE: 630/372-3340
FAX: 630/372-3342

June 22, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to District 44, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in it's entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

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Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our District (44) supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,



Fred Crespo
State Representative
44th District

CAPITOL OFFICE:

ROOM M115 STATE CAPITOL
SPRINGFIELD, ILLINOIS 62706
PHONE: 217/782-5145

DISTRICT OFFICES:

10400 SOUTH WESTERN AVE.
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ORLAND HILLS, ILLINOIS 60487
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ILLINOIS STATE SENATE
BILL CUNNINGHAM
STATE SENATOR · 18TH DISTRICT
WWW.SENATORBILLCUNNINGHAM.COM

June 29, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the Chicago region and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in it's entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute

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Chicago, in that it will enhance the competitiveness and productivity of existing and new business while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why I supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian

Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,



State Senator

District 18

DISTRICT OFFICE:
135 FREMONT ST.
WEST CHICAGO, IL 60185
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June 21, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

MIKE FORTNER
STATE REPRESENTATIVE
49TH DISTRICT

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the 49th Representative District, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

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Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on

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determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

My office supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to the 49th District and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why we support the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Mike Fortner
State Representative

BENSENVILLE

12 S. Center St.
Bensenville, IL 60106

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Fax: 630.594-1105

www.bensenville.il.us

VILLAGE BOARD

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Evan K. Summers

May 25, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

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The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

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Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

BENSENVILLE

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VILLAGE BOARD

President
Frank Soto

Board of Trustees
Rosa Carmona
Frank DeSimone
Annie Jaworska
Martin J. Crandell
Henry Wesseler

Village Clerk
Ilsa Rivera-Trujillo

Village Manager
Evan K. Summers

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier-One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why the Village of Bensenville supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

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VILLAGE BOARD

President
Frank Soto

Board of Trustees
Rosa Carmona
Frank DeSimone
Annie Jaworska
Martin O'Connell
Henry Wesseler

Village Clerk
Ilsa Rivera-Trujillo

Village Manager
Evan K. Summers

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Frank Soto
Village President
Village of Bensenville

DANIEL J. CRONIN

COUNTY BOARD CHAIRMAN

DuPage County

(630) 407-6060

June 1, 2016

RECEIVED
JUN 13 2016
CHAIRMAN'S OFFICE

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to DuPage County, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With its proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have eroded due to inadequate transportation system connectivity, aging infrastructure, and outdated development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance competitiveness and productivity of existing and new businesses while facilitating long-term economic vitality. In 2015, Northeastern Illinois was designated as one of 12 select communities in the country under the national Investing in Manufacturing Communities Partnership. DuPage County and the Tollway recognize this corridor as playing an integral role in northeastern Illinois' Metal Manufacturing Consortium. This corridor contains a high percentage of the Consortium's 3700 manufacturers. The Consortium lists improving the regional supply chain, addressing regional gaps in workforce and training and increasing heavy machinery production and exports as initiatives. The Elgin O'Hare facility will surely strengthen this sector of the regional economy.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990s. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

JTK ADMINISTRATION BLDG • 421 N. COUNTY FARM ROAD • WHEATON, IL 60187

DANIEL J. CRONIN

COUNTY BOARD CHAIRMAN

DuPage County

(630) 407-6060

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision, which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan, which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report, which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund over 90% of the $3.4 billion dollar project. Likewise, DuPage County and Cook County have supported this project through collaborative funding arrangements and in-kind investments. This partnership has resulted in almost $150 Million in local and federal funding of the project to date. Such a local commitment could not have been possible but for the decade-long collaborative engagement and stakeholder consensus.

DuPage County appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear -- the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why DuPage County supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Dan Cronin
Chairman
DuPage County

JTK ADMINISTRATION BLDG • 421 N. COUNTY FARM ROAD • WHEATON, IL 60187

Mayor
CRAIG B. JOHNSON

Village Clerk
JUDITH M. KEEGAN

Village Manager
RAYMOND R. RUMMEL



Village Trustees
NANCY J. CZARNIK
PATTON L. FEICHTER
JEFFREY C. FRANKE
SAMUEL L. LISSNER
JAMES P. PETRI
CHRIS PROCHNO

June 3, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Dear Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport and the region as a whole.

The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to Elk Grove Village, the Chicagoland region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Tollway's efforts to complete the planned EOWA Project, in its entirety.

As you know, the EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*.

This project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago.

Construction of the EOWA Project has been underway by the Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's.

In 2007, IDOT and the FHA began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012.

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901 WELLINGTON AVENUE • ELK GROVE VILLAGE, ILLINOIS • 60007-3499
TELEPHONE (847) 439-3900 • FAX (847) 357-4044 • TDD (847) 357-4088
www.elkgrove.org

The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for the region. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

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Elk Grove Village appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our community and the entire Chicago region. The project will position us to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable. This is why Elk Grove Village supports the Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion.

We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Craig B. Johnson, Mayor
Elk Grove Village

C: Board of Trustees
Village Manager

CITY OF ELMHURST

209 NORTH YORK STREET
ELMHURST, ILLINOIS 60126-2759
(630) 530-3000
www.elmhurst.org

STEVEN M. MORLEY
MAYOR
PATTY SPENCER
CITY CLERK
ELAINE LIBOVICZ
CITY TREASURER
JAMES A. GRABOWSKI
CITY MANAGER

June 10, 2016

RECEIVED
JUN 13 2016
CHAIRMAN'S OFFICE

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the City of Elmhurst, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety. We also offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses

while facilitating long-term economic growth and provide much needed relief of traffic congestion for us.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

The City of Elmhurst appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest

level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after more than a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our city supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Steven M. Morley
Mayor
City of Elmhurst

VILLAGE OF FRANKLIN PARK

9500 W Belmont Avenue
Franklin Park, Illinois 60131

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June 2nd, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the Village of Franklin Park, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west

side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

The Village of Franklin Park is directly impacted by this project as the south leg of the EOWA system will be constructed through our O'Hare Industrial Corridor. The project includes a new interchange connecting Franklin Avenue to Interstate 294 and Illinois Route 390, along with the Taft Avenue connector, which will provide direct access from Franklin Avenue to the south cargo area of O'Hare Airport via Irving Park Road. These improvements will significantly improve local access through Franklin Park and the region. In order to accommodate for these improvements, ten businesses in the Village of Franklin Park were displaced, including long-time manufacturing companies. The required takings of these properties have already begun in Franklin Park and all but one of the businesses has already relocated in anticipation of construction of this portion of the project this summer. The Village has worked diligently with the Illinois Tollway and its constituents from the inception of this project. We are committed to doing whatever necessary to continue to move this project forward for the benefit of our residents, businesses and all individuals that will utilize this improved transportation system for travel and commerce.

Within the Village of Franklin Park's O'Hare Industrial Corridor, three major industrial developments are currently underway. One of the major contributing factors to these investments taking place was the EOWA Project and the improved access it will bring to this area. Panattoni Development Company recently purchased the former Castle Metals property on Wolf Road and demolished the building to pave the way for a new 490,000 square foot industrial development. Molto Capital has begun construction of a 360,000 square foot industrial development on the former Centrella Grocers property and Pritzker Realty Group is developing the former MacLean-Fogg site off Addison into a 190,000 square foot industrial development. These facilities expect to have access to the interest system through the

proposed improvements planned for the EOWA Project. We are also talking with other industrial developers who are interested in redeveloping sites in Franklin Park. It's paramount that the EOWA Project be completed as originally planned to accommodate for these and future economic development projects.

The Village of Franklin park appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to the entire Chicago region with the least amount of overall impact. The project will position local communities, including Franklin Park to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why the Village of Franklin Park supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Respectfully Submitted,

Barrett Pedersen
Mayor
Village of Franklin Park

Arlene A. Juracek
Mayor



Phone: 847/392-6000
Fax: 847/392-6022

Village of Mount Prospect

OFFICE OF THE MAYOR
50 South Emerson Mount Prospect, Illinois 60056
www.mountprospect.org

June 7, 2016

Illinois Tollway Board of Directors
2700 Ogden Avenue
Downers Grove, Illinois 60515

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the Village of Mount Prospect, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth. An attractive business feature of Mount Prospect is its proximity to the tollway. The EOWA project will enhance transportation access to our freight businesses and other businesses that rely on a robust transportation system.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why the Village of Mount Prospect supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

ARLENE A. JURACEK
Mayor

MICHAEL J. CASSADY
Village Manager

CITY OF NORTHLAKE

"50 Years of Friendliness"

JEFFREY T. SHERWIN
MAYOR

NANCY PAULETO
CLERK

FRED J. PAUL
TREASURER

ALDERMEN 1ST WARD
PAUL T. STRAUBE, SR.
PENNY FELDMANN

ALDERMEN 2ND WARD
THOMAS PADILLA
JAIME CONTRERAS

ALDERMEN 3RD WARD
MARK WERBA
EDWARD GONZALEZ

ALDERMEN 4TH WARD
FRANCINE PATTI
RICH GROCHOWSKI

June 8, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to City of Northlake, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in it's entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete

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development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth of the inner ring suburban communities of Western Cook County and Eastern DuPage County.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and

supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our City of Northlake supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Jeffrey T. Sherwin
Mayor

CHICAGO DEPARTMENT OF AVIATION

CITY OF CHICAGO

June 13, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Letter of Support for Elgin O'Hare Western Access Project (EOWA)

Dear Members of the Tollway Board:

The Chicago Department of Aviation (CDA) is expressing our vigorous support of the Elgin O'Hare Western Access Project (EOWA) as a vital project for the future competitiveness and connectivity of the area west of Chicago O'Hare International Airport and for the region as a whole. It will undoubtedly provide improved travel efficiency, reduced congestion, and enhanced access to O'Hare Airport and surrounding communities. CDA, like many other regional stakeholders, advocates the Tollway's efforts to complete EOWA in its entirety, and we stand ready to offer assistance as needed to ensure that all involved agencies understand its significant need, widespread support, and considerable benefits.

As you probably know, EOWA is distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in GOTO 2040, the Chicago region's comprehensive long range plan. EOWA includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway) and constructing a new easterly extension east along Thorndale Avenue to O'Hare as well as a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, Interstate highways, and major freight and intermodal systems, EOWA will improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

EOWA includes one of the world's largest industrial hinterlands, providing the second largest employment center in the Chicago region. We need to keep the area's aging transportation and infrastructure strong if we are to continue to stay competitive for decades to come. The Urban Land Institute calls EOWA a "game changer," as it will enhance the productivity of existing businesses while facilitating new economic development. O'Hare Airport contributes approximately $50 billion to our local economy, one of the most powerful economic machines in the world. Moreover, we are investing billions more in new on-airport airport development to

keep this machine healthy and competitive long into the future, most notably under the O'Hare Modernization Program (OMP). EOWA absolutely complements all of our hard work over the past several years on the airfield. In fact, the O'Hare Modernization Act passed by the State of Illinois in 2003 identified the concept of EOWA as an integral component of OMP. Two years later, the Federal Aviation Administration (FAA) references the EOWA corridor in OMP's Environmental Impact Statement (EIS). This was followed by the EIS process conducted by the Illinois Department of Transportation (IDOT) and the Federal Highway Administration (FHA), whereby all affected communities and stakeholders (including CDA) expressed unanimous support to proceed with EOWA.

Now we are most pleased to see progress on the implementation of EOWA by the Tollway in its entirety, as defined by the EIS. The Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaboration and support into action and construction. CDA believes any consideration of changes to EOWA, including the north-south bypass corridors, would compromise over a decade of collaborative engagement and stakeholder consensus. The current plan provides the most optimum benefits with the least amount of overall impacts. Unraveling any aspect of the current plan that has taken years of careful and thoughtful planning is unacceptable. CDA supports the Tollway's effort to proceed with the completion of EOWA as is, and we urgently ask that you do so. We will assist as best we can ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand this need. Thank you for your time and commitment to the future of O'Hare Airport, the Chicago region, and the State of Illinois.

Sincerely,

Ginger S. Evans

Ginger S. Evans
Commissioner

Village of Roselle
Tradition Meets Tomorrow

Gayle A. Smolinski *Mayor*
Patty Burns *Village Clerk*

May 26, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the Village of Roselle, the Chicago region, and the entire State of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth such as redevelopment opportunities near the Roselle Road Interchange.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on

determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

The Village of Roselle appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to the Village of Roselle and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why the Village of Roselle supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Gayle A. Smolinski

Gayle A. Smolinski, Mayor

Village of Roselle

VILLAGE OF SCHAUMBURG

PROGRESS THROUGH THOUGHTFUL PLANNING

Al Larson
Village President

June 1, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. As one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, the EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position through improved mobility and freight connectivity in an increasingly global economy. This project is of significant importance to the Village of Schaumburg, the Chicago region, and the entire state of Illinois, which is why I am providing this letter to fully commit Schaumburg's support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The project area includes one of the world's largest concentrations of industrial businesses and is the second largest employment center in the Chicago region. However, due to inadequate transportation service, aging infrastructure and outdated and obsolete development the area is at risk for decline and lack of investment. The EOWA Project will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

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Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this vital infrastructure project. The Village of Schaumburg, along with other local agencies, DuPage County, and Cook County remains fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

The Village of Schaumburg appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to my community and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why the Village of Schaumburg supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. I ask that you continue to be an advocate for the completion of this vital and beneficial project.

Thank you for your time and commitment to this vital transportation project, which will have significant positive impacts on the area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

VILLAGE OF SCHAUMBURG

Al Larson

Al Larson
Village President

AL/cs

Chicago Metropolitan Agency for Planning

233 South Wacker Drive
Suite 800
Chicago, IL 60606

312-454-0400
www.cmap.illinois.gov

June 13, 2016

Via e-mail: chairschillerstrom@gettpass.com
and First Class, U.S. Mail

Chairman and Members of the Board of Directors
Illinois State Toll Highway Authority
2700 Ogden Avenue
Downers Grove, Illinois 60515

Board Members
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Carolyn Schofield
Peter Silvestri
Peter Skosey
Thomas Weisner

Non-voting Members
Sean McCarthy
Brian Oszakiewski
Leanne Redden

Executive Director
Joseph C. Szabo

Dear Chairman Schillerstrom and Members of the Board:

The Elgin O'Hare Western Access (EOWA) project is a vitally important transportation investment for the Chicago region. It is one of only three new highways recommended in GO TO 2040, the region's comprehensive plan. The EOWA provides critical support to the most significant cluster of freight and manufacturing employment in the region, and it has significant benefits for workers and employers alike. It yields the highest increase in access to jobs by automobile of any of the projects evaluated in GO TO 2040, with almost 22,000 new jobs accessible within a 45-minute commute. Because it would improve access to markets and reduce travel costs, CMAP estimated the EOWA would yield about $600 million annually in new business output by 2040 – the second highest of the projects recommended in the plan -- with a significant portion accruing to the freight industry. To realize these benefits, however, the project needs to be built as originally designed, including adding an expressway leg around the western side of O'Hare from I-90 to I-294.

Many agencies have contributed to the completion of this project, which has been decades in the making. It is clearly a priority for the communities around O'Hare in DuPage and Cook Counties, which worked intensively through the Environmental Impact Statement (EIS) development process to arrive at consensus on project design. Through the Congestion Mitigation and Air Quality Improvement (CMAQ) program, CMAP has allocated nearly $70 million to the project. The benefits of these investments will be diminished if the scope of the project is reduced.

CMAP supports the Illinois Tollway's commitment to proceed with the EOWA as planned and will assist as needed to ensure that the Canadian

Pacific Railroad and the Surface Transportation Board understand the importance of this project as well.

Sincerely,

Joseph C. Szabo
Executive Director

JCS/stk

NORTHWEST MUNICIPAL CONFERENCE
1600 East Golf Road, Suite 0700
Des Plaines, Illinois 60016
(847) 296-9200 • Fax (847) 296-9207
www.nwmc-cog.org

NWMC

A Regional Association of Illinois
Municipalities and Townships
Representing a Population of Over One Million

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Mark L. Fowler

July 6, 2016

RECEIVED
JUL 11 2016
CHAIRMAN'S OFFICE

Illinois Tollway Board of Directors
Illinois State Toll Highway Authority
2700 Ogden Avenue
Downers Grove, IL 60515

Members of the Tollway Board,

The Elgin O'Hare Western Access (EOWA) project is vital to the economic future and transportation needs of the communities west of O'Hare International Airport (O'Hare) and the greater Chicago region. The benefits of improved mobility, reduced congestion and enhanced access to global markets via O'Hare that this project will provide cannot be overstated. This project has long been a priority of the Northwest Municipal Conference (NWMC) and the Conference wishes to reaffirm its support for this important project.

Over the last decade, this project has been thoroughly vetted through the Tier One and Tier Two Environmental Impact Statements (EIS), extensive outreach and input from involved agencies, municipalities and citizens. This plan, including the proposed location of the new north-south corridor connecting I-90 and I-294, received broad support from this diverse group of stakeholders.

The Northwest Municipal Conference remains fully committed to supporting the Illinois Tollway's efforts to continue the design and construction of the EOWA as defined in the EIS, including the north-south corridor connecting I-90 and I-294. Any changes to the location of that north-south corridor would compromise years of collaborative engagement and stakeholder outreach. All parties formally adopted the recommendations outlined in the Governor's Advisory Council Report.

Allowing a project with such travel and economic benefits to unravel would be unacceptable. The Northwest Municipal Conference supports the Illinois Tollway's efforts to proceed with the completion of the EOWA as planned. We ask that you continue to advocate for the completion of this vital project.

Sincerely,

Matthew J. Bogusz
President, Northwest Municipal Conference and
Mayor, City of Des Plaines

550 West Algonquin Road, Arlington Heights, Illinois 60005-4412 (847) 364-8130 www.pacebus.com

May 20, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:
The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to Pace, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in GO TO 2040, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' O'Hare Modernization Act identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the OMP Environmental Impact Statement (EIS).

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred

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Executive Director

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Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our agency supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,



Richard Kwasneski
Chairman, Pace Board of Directors

MEMBER COMMUNITIES
Bellwood
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Berwyn
Broadview
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Cicero
Countryside
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Forest Park
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Richard F. Pellegrino

WCMC
WEST CENTRAL MUNICIPAL CONFERENCE

June 9, 2016

RECEIVED
JUN 13 2016
CHAIRMAN'S OFFICE

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to West Central Municipal Conference, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In

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Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Richard F. Pellegrino

Executive Director

West Central Municipal Conference

CITY OF WOOD DALE

RECEIVED
JUN 13 2016
CHAIRMAN'S OFFICE

June 9, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

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Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our community supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Annunziato Pulice

Annunziato Pulice
Mayor

ILLINOIS HOUSE OF REPRESENTATIVES

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SONYA M. HARPER
STATE REPRESENTATIVE
6th DISTRICT

June 22, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the 6th State Legislative District, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the

area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS).*

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any

consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest

level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why I support the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Sonya M. Harper

Sonya M. Harper
State Representative, 6th District

Illinois House of Representatives

800 West Central Road
Mount Prospect, IL 60056
224-764-2440 / 224-635-2010
RepHarris@yahoo.com

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217-782-3739

DAVID HARRIS
State Representative

RECEIVED
JUL 11 2016
CHAIRMAN'S OFFICE

7 July 2016

Board of Directors
Illinois State Toll Highway Authority
2700 Ogden Avenue
Downers Grove, IL 60515

Dear Members of the ISTHA Board:

I am writing today to express my support for the Elgin-O'Hare Western Access (EOWA) project.

The EOWA project will provide increased mobility benefits throughout the suburban area surrounding O'Hare Airport. It will lead to enhanced access to the airport; it will reduce congestion; and it will increase overall travel efficiency in the region.

It is notable that the EOWA project has been designated as one of only 26 projects in the nation to receive the distinction of being a Project of National and Regional Significance by the US Department of Transportation. Further, the Chicago Metropolitan Agency of Planning has included the EOWA project in its "Go to 2040" regional plan meant to help the seven counties and 284 municipalities in the area plan together for sustainable prosperity.

The EOWA project should improve mobility and enhance freight connectivity in the region, and that will add to the Chicago area's strong reputation in a globally competitive environment. It will benefit both existing businesses and encourage new businesses to locate here.

I know that the ISTHA has made major commitments of planning, time, and finances to complete the project. I know that local units of government are in strong support of the EOWA project as they recognize the economic benefits full completion of the project will bring.

I lend my voice to the others that have expressed support for the project as defined in the Environmental Impact Statement. Feel free to contact me whenever I might be of further assistance.

Sincerely,

DAVID HARRIS
State Representative

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STATE OF ILLINOIS
FRANCES ANN HURLEY
STATE REPRESENTATIVE
35TH DISTRICT

COMMITTEES
- APPROPRIATIONS GENERAL SERVICE
- CITIES & VILLAGES
- HEALTH CARE LICENSES
- PUBLIC SAFETY POLICE & FIRE
- TRANSPORTATION, REGULATION, ROADS

July 12, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

I am writing you today to show support for the Elgin O'Hare Western Access Project. The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy.

The importance of the project to the 35th District, the Chicago region, and the entire state of Illinois is unsurpassed which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in it's entirety. I commit to offer assistance as needed to ensure that all involved agencies understand the significant need, support and benefits that come from a project of this magnitude. I urge you to continue your support for the Elgin O'Hare Western Access Project, as the project fufills multiple objectives and will transform the Chicago region for all users.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Frances A Hurley

Frances Ann Hurley
State Representative, 35th District

RECYCLED PAPER • SOYBEAN INKS

STATE OF ILLINOIS
HOUSE OF REPRESENTATIVES

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MICHAEL P. McAULIFFE
STATE REPRESENTATIVE
20TH DISTRICT

COMMITTEES:
APPROPRIATIONS - PUBLIC SAFETY
HEALTH CARE AVAILABILITY ACCESS
HEALTH CARE LICENSES - SPOKESMAN
MUSEUMS, ARTS & CULTURAL ENHANCEMENT - SPOKESMAN
PUBLIC UTILITIES
TOURISM & CONVENTIONS
VETERANS' AFFAIRS - SPOKESMAN

June 24, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the 20th House Legislative District, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

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Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our the 20th House Legislative District supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Michael P. McAuliffe
State Representative – 20th District

ILLINOIS HOUSE OF REPRESENTATIVES

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ELAINE NEKRITZ
STATE REPRESENTATIVE
57TH DISTRICT

ASSISTANT MAJORITY LEADER
COMMITTEES:
CHAIRPERSON
• JUDICIARY - CIVIL
• PERSONNEL & PENSIONS
MEMBER
• APPROPRIATIONS - PUBLIC SAFETY
• PUBLIC UTILITIES
• SPECIAL NEEDS SERVICES

June 20, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to my district, the Chicago region, and the entire state of Illinois is immense, which is why I am providing this letter to commit my support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on

the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

I appreciate and support the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus

is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.
Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why I support the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. I ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Elaine Nekritz
State Representative, 57th District

HOUSE OF REPRESENTATIVES

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ROBERT W. PRITCHARD
STATE REPRESENTATIVE · 70TH DISTRICT

June 16, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the 70th legislative district, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining

100% RECYCLED PAPER - SOYBEAN INKS

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Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why I support the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Robert W. Pritchard

Robert W. Pritchard

Date: May 25 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to Franklin Park, IL, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness of Plating International as well as the productivity of our employees while facilitating long-term economic growth in this area.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined

the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

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Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our Co Plating International Inc supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Title President

Plating International Inc.

MOLTO
PROPERTIES

June 20, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to Molto Properties, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The airport and surrounding area includes one of the world's largest industrial submarkets and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the accessibility, competitiveness and ability to attract new businesses while facilitating long-term economic growth. Molto Properties plans to continue investing and developing in the O'Hare submarket. This project will not only benefit us, but our future users as well, providing additional direct access points to the O'Hare airport, enhancing multi-modal connections and improving traffic efficiency and congestion.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier

One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4-billion-dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our organization supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Mark Saturno

Senior Principal
Molto Properties

SLOAN

May 31, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to SLOAN, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

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Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the

10500 Seymour Avenue Franklin Park, IL 60131-1259 | 847-671-4300 | Fax 847-671-6944 | www.sloanvalve.com

subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

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Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our organization supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Kirk Allen
President & Chief Executive Officer
SLOAN

SURE WAY TOOL

5/26/2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to Sureway Tool & Engineering, Inc., Franklin Park, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare, linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth for Sureway by providing easier access to a customer base that is growing in the area, reducing delivery times, reducing energy consumption, allowing quicker access to air freight industries, decreasing congestion and reduced travel times to and from the airport for our customers.

2959 Hart Drive, Franklin Park, IL 60131 p 847 801 3010 f 847.288 0155 www.surewaytool.com

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

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Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

2959 Hart Drive, Franklin Park, IL 60131 p 847.801.3010 f 847.288.0155 www.surewaytool.com

SUREWAYTOOL
& ENGINEERING COMPANY

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why we at Sureway Tool & Engineering support the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Tim Berger

Director of Operations

Sureway Tool & Engineering

2959 Hart Drive, Franklin Park, IL 60131 p 847.801.3010 f 847.288.0155 www.surewaytool.com

RCM INDUSTRIES, INC.
3021 CULLERTON DRIVE
FRANKLIN PARK, ILLINOIS 60131
PHONE: (847) 455-1950 FAX: (847) 455-1529

CASTING · MACHINING · FINISHING

WWW.RCMINDUSTRIES.COM

May 25, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to Aallied Die Casting Co. of Illinois, RCM Industries, Inc., the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

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INDUSTRIES, INC.
3021 CULLERTON DRIVE
FRANKLIN PARK, ILLINOIS 60131
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RCM INDUSTRIES, INC.
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FRANKLIN PARK, ILLINOIS 60131
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PHONE: (847) 455-1950 FAX: (847) 455-1529
WWW.RCMINDUSTRIES.COM

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why Aallied Die Casting Co. of Illinois and RCM Industries, Inc. support the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Scott M. Torphy
Vice President of Administration
RCM Industries, Inc./Aallied Die Casting Co. of Illinois

CHICAGO HARDWARE & FIXTURE COMPANY

9100 Parklane Avenue
Franklin Park, Illinois 60131
847.455.6609
Fax: 847.455.0012

May 26, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to Chicago Hardware & Fixture Company, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined

the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our Chicago Hardware & Fixture Company supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Thomas Herbstritt, Jr.

T. Herbstritt Jr.

President

Chicago Hardware & Fixture Company

HAMILTON PARTNERS

June 7, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to Hamilton Lakes Property Owners Association, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in it's entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

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Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

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improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

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Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why The Hamilton Lakes Property Owners Association supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Ronald C. Lunt

Hamilton Lakes Property Owners Association

DISTRICT OFFICE
2355 W. York St., Ste. 1
Blue Island, Illinois 60406
708-396-2822 Suburban
773-291-1288 Chicago
708-396-2898 Fax

SPRINGFIELD OFFICE
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Springfield, Illinois 62706
217-558-1000
217-558-1091 Fax
email: robertbobrita@aol.com

ILLINOIS HOUSE OF REPRESENTATIVES



Robert A. Rita
STATE REPRESENTATIVE • 28TH DISTRICT

COMMITTEES
Chairman:
- Business & Occupational Licenses
- Busines Regulation Subcommittee
- Tollway Oversight Review Committee

Member:
- Appropriations - Public Safety
- Consumer Protection
- Consumer Health Sub-Committee
- Executive
- Mass Transit

June 21, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to State Representative Robert A. Rita., the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in it's entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

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will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth (insert information about any specific benefits).

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' O'Hare Modernization Act identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the OMP Environmental Impact Statement (EIS).

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

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Unravelling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our State Representative Robert A. Rita supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,



Robert A. Rita
28th District State Representative
Illinois House of Representative

District Office
1500 Carlemont Drive, Suite D
Crystal Lake, IL 60014
Phone: 815-459-6453
Fax: 815-356-0643
mike@mikefryan.com

Springfield Office:
203-N Stratton Building
Springfield, IL 62706
Phone: 217-782-9432
Fax: 217-782-1141



Michael W. Fryon
State Representative • 66th District

Committees:
Executive
Judiciary – Juvenile & Family Law
Labor & Commerce
Revenue & Finance
SAR

June 22, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to District 66, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in it's entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth. Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

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Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our district appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our district supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Michael W. Tryon
State Representative
District 66

ILLINOIS HOUSE OF REPRESENTATIVES
STATE OF ILLINOIS

Grant E. Wehrli
STATE REPRESENTATIVE · 41ST DISTRICT

55 S. MAIN ST., SUITE 383
NAPERVILLE, ILLINOIS 60540
(630) 696-4160

228-N STRATTON BUILDING
SPRINGFIELD, ILLINOIS 62706
(217) 782-6507

July 11, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

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Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth. Western access to O'Hare is important to DuPage county.

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

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Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why the 41st District supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that

the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,



Grant Wehrli

State Representative

41st District

ILLINOIS HOUSE OF REPRESENTATIVES

DISTRICT OFFICE
[illegible] ROOSEVELT ROAD
WESTCHESTER, ILLINOIS 60154
PHONE: [illegible]
FAX: [illegible]

HOUSE COMMITTEES
APPROPRIATIONS
ELEMENTARY & SECONDARY EDUCATION
APPROPRIATIONS
HIGHER EDUCATION
ELEMENTARY & SECONDARY EDUCATION: SCHOOL CURRICULUM & POLICIES COMMITTEE
HIGHER EDUCATION
JUDICIARY - CRIMINAL
LABOR & COMMERCE COMMITTEE

SPRINGFIELD OFFICE
[illegible] STRATTON BUILDING
SPRINGFIELD, ILLINOIS 62706
PHONE: 217-[illegible]
FAX: 217-[illegible]

EMANUEL "CHRIS" WELCH
STATE REPRESENTATIVE • [illegible] DISTRICT

June 29, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to (organization/community/district), the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

The EOWA Project is uniquely distinguished as one of only 26 projects nationwide to be designated by the U.S. Department of Transportation as a Project of National and Regional Significance, and locally as one of only a few new projects included in *GO TO 2040*, the Chicago region's comprehensive long range plan. The Project includes the rehabilitation and widening of Illinois Route 390 (formerly the Elgin O'Hare Expressway), constructing a new easterly extension east along Thorndale Avenue to O'Hare, and constructing a new north-south corridor around the western border of O'Hare linking I-90 and I-294. With unparalleled proximity to O'Hare Airport, interstate highways, and major freight and intermodal systems, the EOWA Project will dramatically improve mobility and freight connectivity in the region and will enhance the area's global competitiveness.

The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute Chicago, in that it will enhance the competitiveness and productivity of existing and new businesses while facilitating long-term economic growth (insert information about any specific benefits).

Construction of the EOWA Project has been underway by the Illinois Tollway since 2012, but the plan and leadership support for the project goes back to the 1990's. In 2003, Illinois' *O'Hare Modernization Act* identified

new western access as an integral component of the O'Hare Modernization Program (OMP). In 2005, the Federal Aviation Administration (FAA) approved a 300-foot corridor along the west side of the airport for the new western access corridor as part of the *OMP Environmental Impact Statement (EIS)*.

In 2007, the Illinois Department of Transportation and Federal Highway Administration began the EOWA Phase I effort via a tiered Environmental Impact Statement (EIS) process. Tier One focused on determining the preferred type and location of transportation system improvements, and the subsequent Tier Two efforts included more detailed engineering and environmental studies and refined the proposed improvement features. The projects' Tier One EIS and Record of Decision was completed in June 2010, followed by the Tier Two EIS and Record of Decision which was completed in December 2012. Through the process of extensive stakeholder outreach and public engagement, a transportation solution was identified and supported by all involved agencies and communities along the corridor and their respective constituents. That unprecedented support was illustrated in a record 38,000 letters in favor of the plan which included the proposed location of the new north-south corridor extending from I-90 to I-294. The project's broad support by local governments and significance were also ratified when state and regional transportation agencies; elected officials; planning, labor, business and public finance groups; and other community leaders reached unanimous bipartisan consensus on key recommendations to move the project forward in order to enhance economic opportunities for all stakeholders. All parties formally adopted recommendations outlined in the Governor's Advisory Council report which subsequently led to a financial plan to deliver this project.

Implementation of the EOWA Project has been made possible by the Illinois Tollway's commitment to deliver and fund the project. The Illinois Tollway's commitment to fund over 90% of the $3.4 billion dollar project has turned the years of collaborative stakeholder engagement and support into implementation of this "game-changer" infrastructure project. The ongoing construction of the Illinois Route 390 corridor is already supporting an economic transformation of the area. Area officials including local agencies, DuPage County, and Cook County remain fully committed to support the Illinois Tollway's efforts to continue design and construction of the entire EOWA Project as defined in the EIS, including the planned location and design characteristics of the new north-south corridor linking I-90 and I-294. Any consideration of changes to the location of the new north-south corridor would compromise over a decade of collaborative engagement and stakeholder consensus.

Our agency appreciates and supports the Illinois Tollway's efforts to pursue all actions associated with the EOWA Project as envisioned in the EIS and supported by the Governor's Advisory Council. The EOWA Project, in its entirety, provides the greatest level of benefit to our agency and the entire Chicago region with the least amount of overall impact. The project will position local communities to take full advantage of economic development opportunities that will create jobs and stimulate the local and regional economies. So after over a decade of collaborative engagement, the consensus is clear – the EOWA Project must be completed as defined in the EIS and anything short would be detrimental to the future of the region.

Unraveling a project that has been years in the making and provides such tremendous travel and economic benefits is unacceptable, which is why our (organization/community/district) supports the Illinois Tollway's effort to proceed with the completion of the EOWA Project as planned and will assist as needed to ensure that the Canadian Pacific Railroad and the Surface Transportation Board understand the need to complete implementation of the project in order to strengthen economic development, improve freight mobility and access, and relieve congestion. We ask that you continue to be an advocate for the completion of this vital and beneficial Project.

Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Emanuel "Chris" Welch
State Representative, 7th District

ILLINOIS HOUSE OF REPRESENTATIVES

DISTRICT OFFICE:
112 N. WOLF ROAD
NORTHLAKE, ILLINOIS 60164
TEL: 708-562-6970
FAX: 708-562-6974

SPRINGFIELD OFFICE:
264-S STRATTON BUILDING
SPRINGFIELD, ILLINOIS 62706
TEL: 217-782-3374
FAX: 217-524-0448

KATHLEEN WILLIS
STATE REPRESENTATIVE
77TH DISTRICT

RECEIVED
JUN 27 2016
CHAIRMAN'S OFFICE

June 20, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

Members of the Tollway Board:

The Elgin O'Hare Western Access (EOWA) Project is essential to the economic future, competitiveness, and transportation needs of the area west of O'Hare International Airport (O'Hare) and the region as a whole. The EOWA Project will not only provide vital mobility benefits of improved travel efficiency, reduced congestion, and enhanced access, it will fundamentally shift the region's competitive position in an increasingly global economy. The importance of the project to the 77th District, the Chicago region, and the entire state of Illinois is unsurpassed, which is why we are providing this letter to fully commit our support of the Illinois Tollway's efforts to complete the planned EOWA Project, in its entirety, and offer assistance as needed to ensure that all involved agencies understand the significant need, support and considerable benefits that come from a project of this magnitude.

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The project area includes one of the world's largest industrial developments and is the second largest employment center in the Chicago region. However, conditions in the area have been on the decline due to inadequate transportation service, aging infrastructure, and outdated and obsolete development. The EOWA Project is truly a major infrastructure "game changer," as coined by the Urban Land Institute

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KATHLEEN WILLIS
STATE REPRESENTATIVE
77TH DISTRICT

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Sincerely,

Kathleen Willis

Kathleen Willis

State Representative • 77th District

RECYCLED PAPER • SOYBEAN INKS

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Riverside, IL 60546
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(708) 442-6501 Fax



COMMITTEES:
Health Care Licenses - Chair
Judiciary-Criminal
Personnel & Pensions
Revenue & Finance - Vice Chair

MICHAEL J. ZALEWSKI
STATE REPRESENTATIVE
23RD DISTRICT

RECEIVED
JUN 27 2016
CHAIRMAN'S OFFICE

June 20, 2016

Illinois Tollway Board of Directors
Illinois Tollway
2700 Ogden Avenue
Downers Grove, Illinois 60515

Re: Elgin O'Hare Western Access Project Support

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RECYCLED PAPER • SOYBEAN INKS

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Thank you for your time and commitment to the future of area communities on the west side of O'Hare, the Chicago region, and the State of Illinois.

Sincerely,

Michael J. Zalewski

State Representative – 23rd District

Robert A. Johnson
Executive Vice President
Operations

120 South 6th Street
Minneapolis, MN 55402
USA

612-904-5959 (o)
612-760-1533 (c)
robert_johnson@cpr.ca

April 22, 2016

Michael J. Woodward
Land Acquisition Manager
Illinois State Toll Highway Authority
2700 Ogden Avenue
Downers Grove, IL 60515

Re: Elgin O'Hare Expressway, Your letter of April 7, 2016 to Daniel Sabatka

Dear Mr. Woodward:

I am writing in response to your 60 day letter to Dan Sabatka, dated April 7, 2016, and the Tollway's stated intention of acquiring by agreement, or eminent domain taking, a total of 6.181 acres of our railroad operating right of way for Tollway use as part of the Elgin O'Hare Expressway. The general location of this property is just east of the intersection of Thorndale Avenue and York Road, and is described more fully in the attachments to the letter.

The April 7 letter states that it is the Tollway's understanding that Canadian Pacific Railway (CP) has no objection to selling this real estate. On the contrary, CP and its US operating subsidiary, Soo Line Railroad Company, object strenuously to any sale or the taking of any interest in this property because, among other reasons, such would unreasonably interfere with current rail transportation, take away future capacity for rail transportation, and would irretrievably place the alignment of the Tollway's expressway on a path through Bensenville Yard.

CP and Soo Line have no intention to sell any interest in this property, and will not sell now or in the future. We also do not believe the Tollway has the authority to acquire this railroad operating property by eminent domain or condemnation, and will resist any effort to take it. We invite the Tollway, again, to develop another route for its roadway.

Sincerely,

Robert A. Johnson

cc: Charles Webster
Dan Sabatka

Robert A Johnson
Executive Vice-President
Operations

7550 Ogden Dale Road SE
Calgary Alberta
Canada T2C 4X9

T 403 319 3600
C 403 801 1431
robert_johnson@cpr.ca

August 8, 2016

Manar Nashif, P.E.
Senior Project Engineer
Illinois State Toll Highway Authority
2700 Ogden Avenue
Downers Grove, IL 60515

Re: Elgin O'Hare Expressway, DuPage County, Soo Line Railroad Company d/b/a Canadian Pacific; Illinois Tollway Parcel Numbers WA-2D-12-191.01T, 191.01P, 191.02T, 191.02P, 191.03T, 191.03P, 191.04T, 191.04P; WA-2D-12-195.T, 195.01P & 195.02P;
Your letter of July 29, 2016 to Daniel Sabatka

Dear Mr. Nashif:

I am writing in response to your letter to Dan Sabatka, dated July 29, 2016.

By way of background, the Illinois State Toll Highway Authority (Tollway) sent Canadian Pacific (CP) a 60 day letter, dated April 7, 2016, stating the Tollway's intention of acquiring by agreement, or eminent domain taking, a total of 6.181 acres of our railroad operating right of way for Tollway use as part of the Elgin O'Hare Expressway. The general location of this property is just east of the intersection of Thorndale Avenue and York Road. The purpose of the Tollway's intended acquisition is to build an expressway across our right of way and tracks.

CP and its US operating subsidiary, Soo Line Railroad Company, responded on April 22, 2016, and objected strenuously to any sale or the taking of any interest in this rail operating property because, among other reasons, it would unreasonably interfere with current rail transportation, take away future capacity for rail transportation, and would irretrievably place the alignment of the Tollway's expressway on a path through Bensenville Yard. In May, we asked for the Tollway's engineering plans relating to the crossing of our right of way, as those engineering plans should have been supplied with the Tollway's April letter. We received those plan drawings in late June.

Now on July 29 the Tollway asks for our concurrence and comments regarding its plans to cross and place bridge piers on our right of way. As we stated previously, the Tollway's proposed expressway on and over our right of way at York and Thorndale would unreasonably interfere with current rail transportation and our capacity to expand and maintain rail transportation at that location in the future. Additionally, once the Tollway crosses York Road at Thorndale Avenue, the alignment of the expressway is locked on a path through Bensenville Yard. The York/Thorndale interchange is not an isolated project. It is part of the overall planned route through the Yard.

CP and Soo Line have no intention to sell any interest in this property. Furthermore, we do not believe the Tollway has the authority to acquire this railroad operating property by eminent domain or condemnation, and will resist any effort to take it. We invite the Tollway, again, to develop another route for its roadway.

Sincerely,



Robert A. Johnson
Executive Vice President, Operations

cc: Honorable Bruce Rauner, Governor of the State of Illinois
Honorable Daniel R. Elliott, III, Chairman, United States Surface Transportation Board
Honorable Robert Schillerstrom, Chairman, Illinois State Toll Highway Authority
Keith Creel, President and Chief Operating Officer, Canadian Pacific

STV

December 28, 2007

Ray Strelesky
Canadian Pacific Railway
501 Marquette
Minneapolis, MN 55402

Reference: Request for CP Performance Data in the Elgin O'Hare Western Bypass Study Area

Dear Mr. Strelesky;

As part of Illinois Department of Transportation, job number P-91-443-06, Elgin O'Hare Extension/Western O'Hare Bypass Tier I EIS project, STV Incorporated is one of the team members of a group of consulting firms lead by CH2M Hill who have been retained by IDOT to conduct the initial phase of Tier I EIS. STV's primary responsibility on the project is railroad coordination and to facilitate the communication of information from the railroads in the study area to the project team.

The study area boundaries are Roselle Road to the west, Northwest Highway to the north, Cumberland Avenue to the east, and St. Charles Road to the south. The Canadian Pacific has two major facilities within the study area – Bensenville Yard and Schiller Park Yard.

One of the first activities of this initial phase of the Tier I EIS is to collect performance data for the transportation systems (highway, transit, commuter rail, and freight rail) within the study area to better understand the existing operations and performance of these transportation systems. STV on behalf of the project team would like to request from the Canadian Pacific any available performance data for CP freight operations within this study area.

Thank you in advance for your cooperation and participation in this study. Please feel free to contact me directly to discuss any questions or concerns at (312) 553-8422.

Sincerely,

Paul E. Bobby, P.E.
Midwest Track Manager

AN EMPLOYEE-OWNED COMPANY PROVIDING QUALITY SERVICE SINCE 1912 | 200 WEST MONROE STREET, SUITE 1650
CHICAGO, ILLINOIS 60606-5015
(312) 553-0655 FAX: (312) 553-0661

FINAL MEETING SUMMARY **CH2MHILL**

MEETING SUBJECT:	Elgin O'Hare - West Bypass CP Railroad Conference Meeting	**RECORDER:**	CH2M HILL/Lisa Sagami
MEETING DATE & TIME:	December 10, 2008, 10:00 AM	**PREPARATION DATE:**	December 15, 2008
MEETING LOCATION:	Conference Meeting		
ISSUE STATUS:	☐ Draft for Review ☒ Final		

ATTENDEE NAME	ORGANIZATION	E-MAIL
Nate Schutte	Canadian Pacific Railway	nate_schutte@cpr.ca
Pete Harmet	IDOT	pete.harmet@illinois.gov
Larry Wilson	IDOT	larry.wilson@illinois.gov
Ron Krall	SEC Group, Inc.	ronald.krall@illinois.gov
Pat Pechnick	SEC Group, Inc.	ppechnick@secgroupinc.com
Patrick Bryant	STV Group, Inc.	
Jean-Alix Peralte	STV Group, Inc.	peraltj@stvinc.com
Joanne Schroeder	VSA	jschroeder@vlecides-schroeder.com
Lidia Pilecky	CH2M HILL	lpilecky@ch2m.com
Larry Martin	CH2M HILL	lmartin@ch2m.com
Cheng Soong	CH2M HILL	csoong@ch2m.com
Lisa Sagami	CH2M HILL	lsagami@ch2m.com

A conference meeting was held between representatives of IDOT, the Elgin O'Hare – West Bypass project team, and the Canadian Pacific Railroad. The purpose of the meeting was to obtain input regarding impacts of the O'Hare Bypass South Alignment Options on freight rail operations, particularly on the Bensenville Yard. An exhibit depicting the alignment options was distributed to meeting participants. CH2M HILL provided a general description of alignment options A through G, including the potential refinement of options A through D west of the UP crossing of the Bensenville Yard.

The following is a list of the issues, concerns, and comments raised during the meeting.

- CP understood the rationale for realigning A-D in the vicinity of Green Street to provide a 300' frontage for commercial development. The displacement of the turntable and machine shop was not a major issue if they are relocated or replaced in kind.
- CP indicated that operations at the east end of the Bensenville Yard are most important and that any construction within the yard could cause major disruptions to their operations and to the region's freight movement. Much of the regions' freight passes through this area.
- CP agreed that Option F which crosses the freight yard three times should be considered a fatal flaw. The ability to maintain freight operations in this scenario is not a feasible or a reasonable assumption. Further the volume of rail traffic entering the east end of the yard and the management of rail traffic to construct the SB ramp to I-294 would be unworkable.
- CP agreed that Option E which crosses the freight yard twice should also be considered a fatal flaw for the same reasons as those stated above. Further Option E interrupts the nerve center of the operation (the hump yard operation) which would cause intermittent shut down of the hump

during construction. Cars would have to be flat switched and reduce the capacity of the yard by more than 50%. This is an unacceptable condition.

- CP noted that Option G crosses the yard in at least two locations which would cause a major reduction in the yards capacity because of temporary track and signal modification in numerous locations. Further, CP noted that elevated sections of this alignment would require extensive staging, further disrupting their operations.
- CP offered that any roadway which straddles the UP tracks (such as with Option C) would be very disruptive to freight operations along this heavily used corridor; however, they deferred to the UP RR for their input.
- All options will impact the west end of the yard which will require the relocation of the turntable. CP expressed that while the turntable is still used, relocation is a feasible option. Relocation or replacement of the affected shop building would be required as well.
- CP stated that construction of the tunnel construction at the west end of the yard appears to be feasible if constructed in stages.
- CP noted that any option that spans across the freight yard, especially long spans, will severely limit options for potential reconfiguration of the Bensenville Yard.

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November 21, 2016

By Certified Mail
Daniel Sabatka, P.E.
Director, Engineering Works
Southern Region
Canadian Pacific Railroad
1010 Shop Road
St. Paul, MN 55106

Re:	Revised Offer to Purchase Property
Project:	Elgin-O'Hare Western Access
County:	Du Page County
Interest to be Acquired:	Permanent and Temporary Easements
Parcels:	WA-2D-12-191.01P and 191.01T
	WA-2D-12-191.02P and 191.02T
	WA-2D-12-191.03P and 191.03T
	WA-2D-12-191.04T
	WA-2D-12-191.05T
	WA-2D-12-195.T1
	WA-2D-12-195.T2
	WA-2D-12-195.P1
	WA-2D-12-195.P2

Dear Mr. Sabatka:

The Illinois State Toll Highway Authority ("Tollway") is engaged in the Elgin-O'Hare Western Access project ("EOWA") as part of its Move Illinois Capital Improvement Program. The project involves extending the Elgin-O'Hare Expressway east along former Thorndale Avenue to O'Hare Airport where it will interconnect with a new north-south tollway to be constructed along the western boundary of O'Hare Airport.

An integral part of this project is the construction of five highway bridges to connect the new Elgin-O'Hare Tollway to O'Hare Airport and to the new north-south tollway along the western boundary of O'Hare Airport. These ramps will cross over railroad tracks which lie between York Road and the western boundary of O'Hare Airport.

In order to construct and maintain the necessary ramps, the Tollway must acquire both permanent easements and temporary easements to the following parcels:

WA-2D-12-191.01P and 191.01T
WA-2D-12-191.02P and 191.02T
WA-2D-12-191.03P and 191.03T
WA-2D-12-191.04T
WA-2D-12-191.05T
WA-2D-12-195.T1
WA-2D-12-195.T2
WA-2D-12-195.P1
WA-2D-12-195.P2

Legal descriptions and plats depicting these parcels are enclosed. The required permanent easements will be surface and aerial in nature and will be used to construct bridge piers and five overhead ramps. The permanent easements will also be used for bridge and ramp maintenance and operations, and related tollway uses. The temporary construction easements will be used for construction purposes over a five-year period. On June 15, 2016, the Tollway sent to you its current engineering plans for these bridges in response to your request dated May 20, 2016.

The proposed permanent easement agreements and temporary construction easement agreements are enclosed. The Illinois Toll Highway Authority Act grants the Tollway the right to acquire property for these toll highway purposes. (605 ILCS 10/9 and 10/9.5).

Based on the enclosed title reports, it is our understanding these parcels are owned by: Soo Line Railroad Company, a Minnesota corporation, doing business as Canadian Pacific Railway. We are sending this offer to you because we have previously communicated with you as the person designated to receive offers. We are also sending copies of this offer to the Soo Line Railroad's registered agent, CT Corporation System, to Robert Johnson, the Canadian Pacific's Executive Vice-President, Operations, and to Charles Webster, an attorney for the Canadian Pacific.

The Tollway previously communicated to you an offer of $2,320,000.00 for the permanent easements and temporary easements sought to be acquired at that time. In a letter dated April 22, 2016 from Mr. Johnson to Michael Woodward, Land Acquisition Manager for the Tollway, Mr. Johnson stated: "CP and Soo Line have no intention to sell any interest in this property, and will not sell now or in the future." The Tollway construes this letter to be a rejection of the Tollway's previous offer.

After April 22, 2016, the Tollway needed to increase the size of the proposed temporary construction easements in order to provide more access for its contractors to construct the bridges. The Tollway also slightly reduced the size of the proposed permanent easements. These changes require the Tollway to make this revised offer.

The Tollway now offers the sum of $3,290,000.00 to purchase the permanent easements for bridge pier and ramp construction, maintenance, and related tollway purposes, and to purchase the temporary construction easements. The easements must be free and clear of all liens,

encumbrances and claims. This offer is based on the value established by an independent appraiser, which was reviewed by an independent review appraiser, and approved by the Tollway. Copies of the appraisal and review appraisal are enclosed. Also enclosed is a summary statement of the offer.

Please review this revised offer of $3,290,000.00. Rocco Zucchero is the Tollway representative designated to conduct negotiations for the acquisition of these property rights. Mr. Zucchero's telephone number is 630/241-6800 ext. 3909, his email address is rzucchero@getipass.com, and his mailing address is:

Rocco Zucchero
Deputy Chief of Engineering for Planning
Illinois State Toll Highway Authority
2700 Ogden Avenue
Downers Grove, IL 60515

Mr. Zucchero will answer any questions you have and will provide any additional information you seek, including information about the Tollway's authority and procedures in acquiring property, and about a property owner's general rights under these procedures. However, Mr. Zucchero cannot provide specific legal advice or specific legal referrals.

Enclosed are contracts to convey the permanent easements and the temporary construction easements. If you wish to accept this offer, please execute these contracts and send them to Mr. Zucchero. The actual documents of conveyance, which are entitled "Permanent Easement Agreement" and "Temporary Easement Agreement," are also enclosed.

The Tollway looks forward to reaching an amicable agreement to acquire these permanent easements and temporary construction easements. The Tollway asks you to reconsider the position expressed in the letter from Mr. Johnson dated April 22, 2016. Again, if you have any questions or need any additional information, please contact Mr. Zucchero.

Very truly yours,

Michael J. Woodward
Land Acquisition Manager
Illinois State Toll Highway Authority

cc: Robert Johnson (w/encl.)
CT Corporation System (w/encl.)
Charles Webster (w/encl.)
Rocco Zucchero

Enclosures:

- 49CFR 24.102
- Basis For Offer To Purchase
- Contract For Sale Of Permanent Easement
- Contract For Sale Of Temporary Easement
- Permanent Easement Agreement
- Temporary Easement Agreement
- Appraisal
- Legal Descriptions
- Plats
- Title Reports
- W-9 Form

Certified Mail - Return Receipt Requested - Certified No. 7014 1820 0001 4438 7758

April 7, 2016

By Certified Mail
Daniel Sabatka, P.E.
Director, Engineering Works -
Southern Region
Canadian Pacific Railroad
1010 Shop Road
St. Paul, MN 55106

Re: Prop. Owner:	Soo Line Railroad Company, a Minnesota corporation, a subsidiary of, and doing business as, Canadian Pacific Railway
Parcel Numbers:	WA-2D-12-191.01T, 191.01P, 191.02T, 191.02P, 191.03T, 191.03P, 191.04T, 191.04P; WA-2D-12-195.T, 195.01P & 195.02P
Project:	Elgin O'Hare Expressway
County:	DuPage
PIN#:	03-12-509-001, 03-01-509-002
Interests to be Acquired:	Permanent and Temporary Easements outside of the Bensenville Yard

Dear Mr. Sabatka:

As you are aware, the Illinois State Toll Highway Authority (Tollway) is advancing the Elgin O'Hare Western Access (EOWA) project as part of our Move Illinois Capital Improvement Program. You should be generally aware that the project includes extending the Elgin O'Hare Expressway east along Thorndale Avenue to O'Hare and rehabilitating and widening the existing Elgin O'Hare Expressway. The Tollway requires the parcels referenced herein for the construction of ramps that are planned to cross over the Union Pacific and Canadian Pacific railroad tracks on the west side of O'Hare airport. The referenced parcels are all situated outside of the Bensenville Yard, and as such, the Tollway's understanding is that there is no objection from the Canadian Pacific Railway with respect to selling these requested real estate interests.

Enclosed for your review are the title commitment, legal descriptions, and plats of survey. The Illinois Tollway has assigned Parcel Numbers WA-2D-12-191.01T, 191.01P, 191.02T, 191.02P, 191.03T, 191.03P, 191.04T, 191.04P; WA-2D-12-195.T, 195.01P & 195.02P to the properties.

The required parcels consist of permanent and temporary easements. The amount of compensation the Tollway is offering to purchase the property interests is Two Million Three Hundred Twenty Thousand Dollars ($2,320,000.00). The offer amount is based on the enclosed appraisal prepared by an independent appraiser and reviewed by a review appraiser.

The Tollway anticipates reaching an amicable agreement with the Canadian Pacific Railway specific to the above referenced parcels. The Tollway is, however, required by law to provide this certified letter, which gives at least 60 days to consider this offer before the Tollway may file a court petition to initiate

an eminent domain action. The Tollway intends to continue to work to reach a negotiated agreement. However, in the absence of a negotiated agreement, the Tollway would intend to initiate an eminent domain proceeding. Please note that the preceding sentence is a technical requirement of the Eminent Domain Act.

Please review this offer. Be advised that the Tollway will consider any additional materials that you may provide to assist in determining the value of the property. After you have had an opportunity to review and consider the offer, please contact the Tollway's Negotiator, Mark D. Mathewson, (312) 676-2907.

Should you have any questions regarding this offer or the documents enclosed with this letter, please contact me at 630-241-6800 Ext. 3950.

Very truly yours,

Michael J. Woodward
Land Acquisition Manager
Illinois State Toll Highway Authority

cc: Charles Webster
Attorney at Law
Canadian Pacific Railway
11306 Franklin Avenue
Franklin Park, IL 60131

Enclosures:
49CFR 24.102
Appraisal
Basis for Compensation
Legal Description
Plat
Sales Contract/Disclosure of Ownership
Title Commitment
W-9 Form

Certified Mail - Return Receipt Requested - Certified No. 7014 · 1820 · 0001 · 4438 · 8113

Illinois State Toll Highway

Offer to Purchase/Permanent Easements and 5 Year Temporary Easements
Basis for Computing Total Approved Compensation

April 7, 2016

Daniel Sabatka, P.E.
Director, Engineering Works - Southern Region
Soo Line Railroad Company, a Minnesota Corporation a subsidiary of, and doing business as, Canadian Pacific Railway
1010 Shop Road
St. Paul, MN 55106

RE: Offer to Purchase Basis for Computing Total Compensation
Project 4014
Parcel Number: WA-2D-12-191; WA-2D-12-195

Dear Mr. Sabatka:

The Illinois State Toll Highway Authority (Tollway) offers the sum of $2,320,000.00 to purchase the real estate or interests in real estate, free and clear of any and all claims, liens and encumbrances (605 ILCS 10/9/10 (a) and (b)). The real estate is shown and legally described in the attached plat of survey, legal description, and title commitment.

The Tollway has assigned Parcel No's. WA-2D-12-191.01T, 191.01P, 191.02T, 191.02P, 191.03T, 191.03P, 191.04T, 191.04P; WA-2D-12-195.T, 195.01P & 195.02P

to this real estate which is being acquired for public improvements and in conjunction with the Project 4014.

The following summary information and calculations is for the amount offered for the real estate.

1. Existing property description

Total Area	**6.181 Acres**
Highest & best use as appraised:	Commercial/Industrial use, including railroad operations.
Area to be acquired is:	☐Vacant / ☐Improved

2. Land/ Right-of-Way to be acquired:

Existing Right of Way (when applicable)	**0.00 Acres**
New Fee Simple interest(s) to be acquired	**0.00 Acres**
New Permanent Easement(s) to be acquired	**2.93 Acres**
New Temporary Easement(s) to be acquired	**3.192 Acres**
Access Control	☐Yes / ☑No

3. Value of Improvements or fixtures to be acquired (if any)
Description: **None / Not Applicable**
Fair Market Value for Fixtures **$0.00**

4. Compensation valuations for Interests in Land to be Acquired:
A. FEE SIMPLE including access control if any:

Access Control	☐ Yes / ☑ No
Value of Fee Simple Interest to be acquired	**$0.00**
Damage to the remaining property, if any	**$0.00**
Total Compensation for interests to be acquired:	**$0.00**

B. PERMANENT EASEMENT(S):
Value of Permanent Easement(s) to be acquired **$1,380,000.00**

C. TEMPORARY EASEMENT(S)
Value of Temporary Easement(s) to be acquired **$940,000.00**

5. Value of signs removed from property (if any)
Value of signs removed **$0.00**
Identification/ Description: **None / Not Applicable**

6. TOTAL COMPENSATION OFFERED FOR ACQUISITION OF ALL INTERESTS **$2,320,000.00**

This is the fair market value pursuant to an appraisal prepared and reviewed and includes items from line number 3, 4 A-C, and 5.

7. Personal Property not being acquired that is located on the area to be acquired:

If you should have any questions regarding this offer and computation, contact your Negotiator, Mark Mathewson at (312)676-2900. I can be reached at 630-241-6800 Ext. 3950 or at the address on this letterhead. Please refer to the Illinois Tollway Parcel Number(s) **WA-2D-12-191 or WA-2D-12-195** to allow easy identification of this property.

Very truly yours,
Illinois State Toll Highway Authority by:

Michael J. Woodward
Land Acquisition Manager

N-17
rev 2/27/13

1995 WL 44836 (I.C.C.)

SURFACE TRANSPORTATION BOARD (S.T.B.)

THE STATE OF TEXAS, DEPARTMENT OF TRANSPORTATION—PETITION FOR DECLARATORY ORDER REGARDING HIGHWAY CONSTRUCTION IN TARRANT COUNTY, TX

Decided: February 1, 1995
Service Date: February 7, 1995

INTERSTATE COMMERCE COMMISSION DECISION

Finance Docket No. 32589

***1** By the Commission, Chairman McDonald, Vice Chairman Morgan, and Commissioners Simmons and Owen.

This declaratory order proceeding was instituted at the request of the State of Texas Department of Transportation (TXDOT) to determine whether the acquisition of certain properties and the relocation of certain track of the Fort Worth & Western Railroad Company (FWWR) constitutes either an acquisition or an abandonment/discontinuance of operations for which prior Commission approval is required under 49 U.S.C. 10901 or 10903, respectively. The proceeding was instituted under 5 U.S.C. 554(e) and 49 U.S.C. 10321, which authorizes us in our sound discretion to issue declaratory and interpretive orders to terminate a controversy or remove uncertainty. On October 21, 1994, a procedural schedule was issued. In accordance with that schedule, FWWR replied on November 14, 1994, and TXDOT filed a rebuttal on November 21, 1994. We find the proposed acquisitions and relocation not subject to our jurisdiction.

BACKGROUND

This proceeding arises from TXDOT's plans to modernize and expand Interstate Highways 30 and 35W. These main highway arteries are located near downtown Fort Worth, TX, and serve the Dallas/Fort Worth area. They were constructed in the late 1950s and early 1960s. Since that time, the Dallas/Fort Worth metropolitan area's population has grown from 1.85 million to over 4 million, and the highways now experience severe traffic congestion. The condition of the highways has also deteriorated significantly, and the highways' interchanges do not include modern safety features. TXDOT's plan is designed to accommodate the increased traffic and improve safety.

TXDOT states that, since the early 1970s, it has recognized the need for these highway improvements. The current plan has taken years to prepare and has been the subject of public input, court proceedings, and an environmental impact statement. TXDOT has successfully negotiated with hundreds of landowners to acquire the many rights-of-way needed to complete the project. The dispute with FWWR is the only remaining obstacle to implementing the plan.

The disagreement with FWWR relates to two parcels TXDOT seeks to acquire from FWWR.[1] The first, a 1.289–acre parcel (identified as Parcel 34A, Part 1), contains two parallel tracks that FWWR uses for storage and for interchange with the Union Pacific Railroad Company (UP). TXDOT plans to acquire fee simple title to the property and will use it to bring the highway to grade level in this area. To permit this improvement, the plan requires FWWR to relocate its track. TXDOT proposes that FWWR acquire an adjacent 4.7–acre parcel for this purpose. This would result in relocating FWWR's entry to its storage track from its main track approximately 250 feet to the southwest of its current location. TXDOT's proposal allows 1 year from the service date of this decision for FWWR to acquire the replacement parcel and to design and construct replacement track. TXDOT has offered FWWR $1.4 million in compensation.

***2** TXDOT also plans to acquire title in fee simple to a second, 2.125–acre parcel (identified as Parcel 34A, Part 2). FWWR would retain an easement to conduct rail operations on the parcel. This arrangement would allow TXDOT to replace an overpass connecting city streets north and south of Interstate 30, construct two ramps connecting city streets to Interstate 30, and elevate a portion of Interstate 30 over FWWR's tracks.

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FWWR is a class III switching and terminal railroad. It operates about 10 miles of track, acquired from the Burlington. Northern Railroad Company in 1988, and serves 16 shippers in the Fort Worth area. FWWR argues that under the proposed relocation plan TXDOT could compel it to vacate its existing track before the replacement track is completed. Thus, it argues that TXDOT will be empowered to close its interchange with UP and that this creates the potential for an unlawful abandonment. As to the second parcel, FWWR argues that TXDOT has not submitted enough information concerning the retained easement for us to find that the proposal is not subject to our jurisdiction.

Following their failure to reach an agreement, TXDOT on August 4, 1993, began a condemnation proceeding against FWWR in the 48th Judicial District Court of Tarrant County, TX. FWWR then moved to dismiss that proceeding, arguing that the property is subject to our jurisdiction and that our prior approval is required for both the proposed acquisition and abandonment. The court placed the condemnation proceeding in abeyance to give us the opportunity to rule on whether we have jurisdiction over the proposed acquisition and relocation.

TXDOT seeks expedited action because the seven involved construction contracts are sequenced and delays in awarding them will be costly and will postpone the project's completion. Two contracts have already been awarded, but four cannot be awarded until this declaratory order is served. TXDOT asserts that further delay in awarding contracts for the segments owned by FWWR could cost motorists approximately $14,000 a day. Citing safety concerns with regard to existing highways, it also argues that prompt construction is necessary to improve highway safety and thus to protect the public interest.

DISCUSSION AND CONCLUSIONS

Relocation: Parcel 34A, Part 1. In the past, we have held that carrier actions replacing existing track with substitute track constructed nearby is not within the reach of 49 U.S.C. 10901 and 10903 if there is no effect on: (1) service to shippers; (2) the carrier's territory or traffic; (3) competition; or (4) the carrier's revenue or operating expenses. See Denver & R.G.W.R.Co.—Jt. Proj.—Relocation over BN, 4 I.C.C.2d 95, 97–99 (1987) (Denver Relocation). Thus, we have found an absence of jurisdiction where the proposed relocation is to operate in the same manner as the existing line, no shippers are involved, and no new competitive territory is reached.

In City of Detroit v. Canadian National Ry. Co., et al., 9 I.C.C.2d 1208, 1218 (1993), pet. for review pending sub nom. Detroit/Wayne County Port Authority v. ICC, No. 94–1068 (D.C.Cir. filed Feb. 1, 1994), we expressed concerned that the approach suggested in Denver Relocation may have construed our jurisdiction too broadly to the extent that it focused on anything more than whether a railroad project extended into new territory not previously served by the carrier. See Texas & P. Ry. Co. v. Gulf, C. & S.F. Ry. Co., 270 U.S. 266 (1925) (T & P). Nevertheless, the parties have addressed this case under the framework set up in Denver Relocation. FWWR argues that the Denver Relocation exception to our jurisdiction does not apply here (presumably, FWRR would also argue that this project does not fall within T & P) because TXDOT has not shown with certainty that the replacement track will be constructed. Under TXDOT'S plan, FWWR asserts that it must acquire the replacement property on its own using eminent domain powers and construct the replacement track. The plan gives TXDOT the right to force FWWR off the existing track if the relocation is not completed after what it characterizes as a "reasonable time." FWWR argues that this power to force it off the track would cause a cessation of common carrier service and would constitute an adverse abandonment.

***3** In addition, FWWR contends that this proposal cannot be characterized as a relocation because the replacement property has not yet been acquired. FWWR argues that even though it may have the statutory power to condemn the adjacent property, TXDOT cannot compel it to exercise that power. Thus, FWWR argues, it cannot be shown with certainty that the replacement property will be acquired. Finally, FWWR contends that TXDOT has not demonstrated that use of the replacement parcel is feasible or that the State is actually committed to pay $1.4 million compensation.

We disagree. We find that TXDOT has shown with reasonable certainty that the replacement track will be available in a timely fashion and that its plan will not result in an abandonment. The TXDOT proposal allows FWWR 1 year from the date we issue this declaratory order in which to replace its existing track. TXDOT submitted unrefuted evidence to show that the condemnation proceedings should be completed within 60 to 90 days (see petitioner's rebuttal, Naylor V.S. at 2) and that the land should be cleared and replacement track laid in another 60 to 90 days (see petitioner's rebuttal Richards V.S.). TXDOT's proposal gives FWWR 6 additional months to complete construction of the replacement track. This appears

reasonable to us. FWWR has not demonstrated otherwise, except to argue that it does not own the replacement parcel and cannot be compelled to acquire it. Thus, we find that as to this first land parcel, TXDOT's plan constitutes a reasonable approach to assuring that the existing track may be replaced without disrupting FWWR's common carrier service.

In support of the feasibility of constructing the replacement track, TXDOT submitted the statement of Mr. Hoy Richards, an independent railroad construction consultant. Based on an on-site inspection of FWWR's existing facility and a review of the construction specifications, Mr. Richards concluded that construction of the replacement track is feasible. Also, TXDOT retained an independent real estate appraiser who calculated that $1.4 million would fully compensate FWWR for the cost of obtaining the land and constructing the replacement track. The Executive Director of TXDOT, William Burnett, testified that the compensation had been offered to FWWR. FWWR submitted evidence of such discussions on compensation in its reply (see exhibits I and J).

FWWR does not argue or demonstrate that the proposed project, if completed in a timely fashion, would interrupt or even hinder the performance of its common carrier service. It has presented no evidence of harm that would result from the plan if the replacement track is completed as proposed.

This highway renovation is intended to alleviate major congestion and safety concerns in the Dallas/Fort Worth area. Thus, it will promote public health and safety. These goals are consistent with the objectives of the rail transportation policy (RTP) of 49 U.S.C. 10101a. Under the RTP, transportation facilities are to be operated without detriment to public health and safety and we must cooperate with the States on transportation matters. 49 U.S.C. 10101a(8) and (9). We conclude that the project involving Parcel 34A, Part 1, as contemplated by TXDOT—although proposed by an entity other than the railroad—does not involve an extension of rail line or construction of an additional line, and, accordingly, that it is not at this time subject to our jurisdiction. If in fact the project cannot be completed in a timely fashion and TXDOT takes action that would have the effect of forcing an abandonment, FWWR may seek relief by protesting the abandonment at the Commission. At this time, however, FWWR's concerns are entirely speculative.

***4** This agency's primary jurisdiction over railroads preempts state laws that could operate to unreasonably burden interstate commerce. State laws that do not impose such a burden are not preempted. TXDOT's proposal, which serves an important public interest, would not adversely affect the rail service offered by FWWR or otherwise unreasonably interfere with the carrier, inasmuch as service will not be interrupted and no costs will be imposed on FWWR. As long as that is the situation, we see no basis upon which to preempt TXDOT's exercise of its condemnation authority.

Acquisition: Parcel 34A, Part 2. TXDOT seeks to acquire Parcel 34A, Part 2, for three basic reasons: (1) to replace an overpass connecting city streets north and south of Interstate 30; (2) to construct two ramps connecting city streets to Interstate 30; and (3) to elevate a portion of Interstate 30 over FWWR's tracks. The acquisition is limited to the land and does not include the track or any other rail property. FWWR will retain an easement "to operate, construct and maintain railroad facilities" on the property, so long as it "is used for railroad facilities." (Petition for Condemnation, exhibit H to Petition for Declaratory Order).

TXDOT contends that the acquisition comes under the exception to our jurisdiction set forth in Maine, DOT—Acq. Exemption, Me. Central R. Co., 2 I.C.C.2d 835 (1991) (state of Maine).[2] TXDOT presented a verified statement from Mr. John Terry, its design engineer responsible for supervising work on highway projects including the one at issue. Mr. Terry described in detail the proposed construction of the overpass, ramps and elevated highway over portions of FWWR track, and he explained how these structures will not interfere with FWWR's operations. TXDOT's Executive Director Burnett also describes the project and the State's mandate to ensure the best possible transportation system.

In response, FWWR argues that we do not have enough information about the acquisition of Parcel 34A, Part 2, to make State of Maine findings. It contends that evidence presented by TXDOT's experts cannot be relied upon, and thus, the plan presents a significant possibility that the transaction could interfere with FWWR's ability to meet its common carrier obligation.

This transaction does not implicate State of Maine. It involves only the sale of underlying real estate (including right-of-way) and the retention of an easement providing FWWR permanent, unconditional, unrestricted access to the line along with the right to operate and maintain it. The TXDOT proposal relates only to highway renovation. It has nothing to do with rail

trackage or rail service, and it will not affect FWWR's track or its operations. Thus, under the circumstances as described by TXDOT, this transaction is not subject to our jurisdiction.

In summary, we find that the plan proposed by TXDOT appears reasonable and, if followed with reasonable diligence, should not result in an abandonment, discontinuance, or other action for which our approval is required.

***5** This action will not significantly affect either the quality of the human environment or conservation of energy resources.

It is ordered:

1. The petition for issuance of a declaratory order is granted, and this proceeding is discontinued.

2. This decision is effective on its service date.

3. A copy of this decision will be mailed to the court:
Judge Hollman

48th District Court of Tarrant County

Fort Worth, TX 76102

Vernon A. Williams

Secretary

Footnotes

1 FWWR does not appear to oppose the temporary, 5–year easement TXDOT seeks over a 0.028–acre parcel for construction of storm drains. In any event, it has not alleged that the proposed easement would interfere with the railroad's ability to carry out its common carrier obligations.

2 In State of Maine and the line of cases that follow it, we recognized an exception to our jurisdiction over acquisitions under 49 U.S.C. 10901. In that decision, we determined that the sale of rail track and underlying right-of-way, in and of itself, would neither impose common carrier status on the acquiring entity nor make the acquisition subject to our jurisdiction.

1995 WL 44836 (I.C.C.)

End of Document

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BEFORE THE

SURFACE TRANSPORTATION BOARD

STB DOCKET NO. 36075

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

PETITION FOR DECLARATORY ORDER

EXPEDITED CONSIDERATION REQUESTED

VERIFIED STATEMENT OF MANAR NASHIF

Senior Project Engineer

Illinois State Toll Highway Authority

1. I am employed as a Senior Project Engineer with the Illinois State Toll Highway Authority ("Tollway"). In that capacity, I have been given the responsibility of Deputy Program Manager for the Elgin O'Hare Western Access Project (the "EOWA Project").

2. The EOWA Project is a $3.4 billion project that is part of the ISTHA's "Move Illinois Capital Improvement Program." The United States Department of Transportation has determined it is one of twenty-five projects of regional and national significance.

3. The plan for the EOWA Project generally consists of two parts: the Elgin-O'Hare expressway to the western border of O'Hare International Airport (renaming the highway "IL 390") from Lake Street to York Road, and a new Western Access Tollway running along the western border of O'Hare International Airport, connecting the Jane Addams Tollway (I-90) on the north with the Tri-State Tollway (I-294) on the south. These are generally referred to as the IL 390 Tollway and the Western Access Tollway, respectively.

4. The bridges crossing over York Road, CPR and UPRR tracks, connecting IL 390 to the Western Access Tollway are referred to as the "Western Access Interchange."

5. The EOWA Project is being constructed in Phases. The Western Access Interchange is currently scheduled to be constructed as part of the IL 390: IL 83 to IL 19 Phase—Phase 4 as indicated in the attached Exhibit Q-1. Construction on this phase began in 2016 and under the current schedule is anticipated to be completed in 2019.

6. Construction on other sections of the EOWA Project has been completed while construction of other sections are either underway or to yet to begin. The Tollway has already demolished an oasis pavilion on I-90 to the north in preparation for the construction of the interchange that will connect the Western Access Tollway with I-90.

7. The Tollway has completed Phase 1 improvements as indicated in the attached Exhibit Q-1, which also appears as Figure 6 in the STB Petition. Phase 1 construction included rehabilitating and widening IL 390 from Irving Park Road (IL 19) to Meacham Road/Medinah Road (in the Villages of Schaumburg and Roselle), repairing and upgrading IL 390 (in the Villages of Hanover Park and Schaumburg) between U.S. Route 20 (Lake Street) and Irving Park Road and reconstructing IL 390 (in the Village of Itasca and Elk Grove Village) between Meacham Road/Medinah Road and IL 53 (Rohlwing Road). The construction of the extension of the IL 390 between IL 53 and IL 83 is currently underway and is expected to be completed in 2017.

8. The Tollway has also commenced construction in preparation for the ramps (which include the bridges proposed to cross over the CPR and UPRR tracks) for the Western Access Interchange. This construction prepares the area to the west of York Road for future work, and includes building demolition, clearing activities (tree removal, rough grading, etc.), and drainage improvements (excavating for detention ponds, etc.).

9. An earthwork contract to perform grading east of the railroad tracks, on airport property, also in preparation for the construction of ramps for the Western Access Interchange, is scheduled to be awarded in February 2017 with earthwork construction planned to commence in March 2017.

10. The remaining contracts for the IL 390: IL 83 to IL 19 Project construction work are currently scheduled to be awarded in 2017 and 2018 and the work is currently scheduled to be completed in 2019. The Tollway has commenced with design for the remaining contracts which is approximately 60% complete and which will continue through fall 2017. Upon completion of the design in 2017, the Tollway will advertise the contracts for bid. The

remaining contracts for the IL 390: IL 83 to IL 19 Phase of the EOWA Project are currently scheduled to be advertised for bid beginning in May 2017 with the last contract currently scheduled to be advertised for bid in October 2017.

11. As the Deputy Program Manager for the EOWA Project, I am responsible for overseeing the development and management of the budget and schedules for the EOWA Project.

12. The Tollway has budgeted $62,547,425 for the base cost for the construction of the Western Access Interchange.

13. The Tollway has estimated that construction costs for the EOWA Project will increase 4% per year.

14. A 4% increase is the standard industry calculation or estimation for yearly escalation in costs. The 4% is inflation of costs for labor and materials.

15. Assuming a 4% yearly escalation is applied to the budgeted base construction cost, delay to the start of the construction of the IL 390: IL 83 to IL 19 Project would likely cause approximately $200,000 in additional expense to the Tollway per month.

16. Assuming a 4% yearly escalation, delays to construction of one year or more would cost the Tollway approximately $2,500,000 in additional expense.

17. Nearly $1.7 billion has been invested in the EOWA implementation to date, including $1.5 billion by Tollway with the remainder by Federal Highway Administration, State of Illinois (Illinois Department of Transportation), and others.

18. The plans being prepared for the Western Access Interchange include, not only constructing the bridges that are necessary for carrying traffic for the IL 390: IL 83 to IL 19

phase of the EOWA project, but also for carrying traffic from IL 390 north to I-90 that is planned to be constructed subsequent to the IL 390: IL 83 to IL 19 project.

19. Without expedited consideration by STB, the overall EOWA is at risk of shutdown resulting in cost escalation and economic impacts.

20. For this reason, the Tollway requests that its petition be set for expedited consideration.

SNOW REMOVAL

21. The Tollway's standard snow removal procedures do not require that snow be deposited on areas below Tollway's bridges. For example, the Tollway's I-294 bridges span a distance of more than 1,500 feet over the eastern side of CPR's Bensenville Yard, where the Tollway has demonstrated its ability to remove snow without impacting operations below.

22. While there are no formal or published standards for snow removal, the Tollway follows the industry standard for snow removal from public highways.

23. The Tollway intends to enter into construction and maintenance agreements with CPR for the Western Access Interchange bridge locations. If necessary, the agreements could include required procedures for snow removal along each bridge crossing.

24. The Tollway's designs for the bridges of the Western Access Interchange include 42-inch high parapet walls located along the sides of the bridges that will prevent snow or ice from being pushed from the bridge onto the areas below.

25. The construction of a bridge pier between the CPR and UPRR tracks will not impact CPR's or UPRR's ability to remove snow from its own tracks.

VERIFICATION

I, Manar Nashif, verify under penalty of perjury that the foregoing is true and correct. Executed on 11/16/16 (date).

Manar Nashif

VERIFIED STATEMENT OF MANAR NASHIF

Senior Project Engineer

Illinois State Toll Highway Authority

EXHIBIT Q-1


3
I-90 at Elmhurst Rd Interchange
2013-2016
8
Touhy Ave Corridor
2018-2020
WESTERN ACCESS INTERCHANGE
6
Western Access Tollway from IL 390 to I-90
2017-2025
10
Taft Ave Extension
(South Access)
2021-2025
2
IL 390 Tollway from IL 53 to IL 83
2013-2017
4
IL390 Tollway from IL 83 to IL 19
2016-2019
1
IL 390 Tollway from US 20 to IL 53
2013-2015
9
Western Access Tollway from IL 19 to Franklin Ave/Green St
2020-2025
7
Western Access Tollway from I-294 to Franklin Ave/Green St
2018-2025
5
I-294 at IL 64 Interchange
2017-2020
LEGEND
Construction Complete
Construction Ongoing
Design Ongoing
Future Design
Subject to land acquisition and other contigencies.
BARRINGTON RD
WRIGHT BLVD
ROSELLE RD
MEACHAM/MEDINAH RD
PARK BLVD
ARLINGTON HEIGHTS RD/PROSPECT
BLISSE RD
ELMHURST RD
OAKTON ST
YORK RD
KINGERY HWY
NORTH AVE
GARY AVE
LAKE ST
GREEN ST
FRANKLIN AVE
TAFT AVE
20
19
290
53
83
72
90
294
64
EWOA_300_12

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

SOO LINE RAILROAD COMPANY,	)	
	)	
Plaintiff,	)	
	)	
vs.	)	**Case No. 15 C 10328**
	)	
ILLINOIS STATE TOLL HIGHWAY AUTHORITY,	)	
	)	
Defendant.	)	

MEMORANDUM OPINION AND ORDER

MATTHEW F. KENNELLY, District Judge:

Plaintiff Soo Line Railroad Company, doing business under the name of its parent company, Canadian Pacific Railway Company, has sued the Illinois State Toll Highway Authority (Authority). Canadian Pacific seeks preliminary and permanent injunctions prohibiting the Authority from condemning Canadian Pacific's right of way, property, and rail facilities located in Bensenville, Illinois. It contends that the Interstate Commerce Commission Termination Act (ICCTA), 49 U.S.C. § 10101, preempts the Illinois Toll Highway Act and the Illinois Eminent Domain Act insofar as they permit the Authority to condemn Canadian Pacific's property. Canadian Pacific also requests a declaratory judgment, pursuant to 42 U.S.C. § 1983, to the effect that any action the Authority might take to condemn or otherwise take possession of the Bensenville property is a violation of Canadian Pacific's constitutional rights. The Authority has moved to dismiss for lack of subject matter jurisdiction under Federal Rule of Civil Procedure 12(b)(1). For the reasons stated below, the Court grants the Authority's

motion.

Background

For present purposes, the Court accepts as true the allegations contained in Canadian Pacific's complaint. *See Lee v. City of Chicago*, 330 F.3d 456, 468 (7th Cir. 2003). The Court may also properly consider "documents that are attached to the complaint, documents that are central to the complaint and are referred to in it, and information that is properly subject to judicial notice." *Williamson v. Curran*, 714 F.3d 432, 436 (7th Cir. 2013).

Canadian Pacific is a rail carrier that operates a rail transportation network from Vancouver, British Columbia, to gateway terminals in Chicago, Toronto, Montreal, and Albany, New York. It provides rail and intermodal transportation to destinations throughout North America, including connections to ports and other rail carriers. Like other rail carriers of its size, Canadian Pacific has been classified as a Class I rail carrier by the Surface Transportation Board of the United States Department of Transportation. Because Chicago is a crucial hub for the North American rail network, Canadian Pacific and six of the other seven Class I rail carriers meet regularly at the Greater Chicago Terminal, where they interchange as much as a quarter of all of the nation's rail volume every day.

Canadian Pacific's only Chicago-area switching terminal is located at the company's rail facility in Bensenville, Illinois. Canadian Pacific's Bensenville Yard spans approximately 320 acres and consists of roughly 74 miles of rail capacity spread over 119 tracks in six separate rail operation yards used for switching and intermodal traffic. The Yard also contains repair facilities, administrative buildings, a control tower, and a

turntable and tracks, which are used to reposition locomotives. On average, the Yard handles over 2,200 freight rail cars per day. According to Canadian Pacific, a significant amount of its business depends upon its continued use of the Bensenville Yard.

In 2010, the State of Illinois established an advisory council to explore the possibility of expanding the Elgin-O'Hare Expressway to connect it with Interstate-294. In June 2011, the advisory council recommended going ahead with the project, at which point the Authority started exploring options for the proposed project, which it titled the Elgin O'Hare Western Access (EOWA) project. In various proposals and plan maps that the Authority has generated over the last four-and-a-half years, it has consistently indicated that its plan would include a right of way running through the Bensenville Yard where Canadian Pacific's tracks and locomotive turntable are currently located. In its most recent proposed plans, the Authority has indicated that the project will require it to use roughly thirty-six acres of land contained in the Bensenville Yard property.

The wheels began to turn on the EOWA project a few years ago, and construction is already underway on various portions of the project. In April 2015, the Authority sent Canadian Pacific a letter captioned "Notice to Owner – Appraisal." *See* Def.'s Ex. 1, dkt. no. 17-1, at 2. In that letter, the Authority notified Canadian Pacific that Bensenville Yard was located "within the project area" for EOWA; Canadian Pacific's property "may be needed for construction of the EOWA improvements"; and the Authority would be sending a professional real estate appraiser to determine the property's fair market value. *Id.*

In July 2015, the Authority filed a petition with the Illinois Commerce Commission seeking approval to modify grade crossings owned by Canadian Pacific in another area

outside of the Bensenville Yard. During a hearing related to that petition in early August 2015, a representative of the Authority testified that EOWA would pass through the Bensenville Yard.

Finally, in September 2015, the Authority served Canadian Pacific with a letter captioned "Notice of Intent to Acquire with Railyard Modifications," in which the Authority indicated its continued interest in purchasing or otherwise acquiring a portion of the Bensenville Yard. Pl.'s Ex. F, dkt. no. 1-6, at 1. The Authority noted that it had "undertaken an extensive effort to address the current and future rail yard plans noted by the Canadian Pacific Railroad," and had accordingly "refashion[ed] some of the parcels after modifying [its] roadway design to ensure that only the land essential for the construction will be purchased." *Id.* In the letter, the Authority also stated that it wanted to meet with Canadian Pacific "to share [its] updated EOWA design plans, including the scaled back real estate take, and also to present [its] purchase offer." *Id.* Canadian Pacific insists that no portion of the Bensenville Yard is, or has ever been, for sale.

Canadian Pacific sued the Authority in November 2015. In its complaint, Canadian Pacific claims that the Authority intends to exercise the eminent domain power it was given under the Illinois Toll Highway Act, 605 ILCS 10/1, and the Illinois Eminent Domain Act, 735 ILCS 30/1-1-1, to circumvent Canadian Pacific's refusal to sell its property. As a regulated Class I rail carrier, Canadian Pacific contends that to the extent these laws authorize the Authority to take the property by eminent domain, they are preempted by the Interstate Commerce Commission Termination Act (ICCTA), 49 U.S.C. § 10101. Canadian Pacific seeks a declaratory judgment to that effect. It also seeks a declaratory judgment that such exercise of eminent domain "would constitute

an impermissible deprivation of Plaintiff's rights under the United States Constitution, Art. I § 8, in violation [of] 28 U.S.C. § 1983." Compl., dkt. no. 1, at 10. Lastly, Canadian Pacific requests an injunction prohibiting the Authority "from taking any further action seeking to condemn Plaintiff's right of way, property and rail facilities." *Id.* at 11. The Authority has moved to dismiss Canadian Pacific's complaint on the ground that there is no justiciable dispute between the parties.

Discussion

The ICCTA confers upon the Surface Transportation Board exclusive jurisdiction over the regulation of railroad transportation. *See* 49 U.S.C. § 10501(b). Railroad "transportation," according to the statute, includes railroad property, facilities, and equipment "related to the movement of passengers or property, or both, by rail, regardless of ownership or an agreement concerning use." 49 U.S.C. § 10102(9). As the Seventh Circuit has observed, "Congress's intent in the Act to preempt state and local regulation of railroad transportation has been recognized as broad and sweeping." *Union Pac. R.R. Co. v. Chicago Transit Auth.*, 647 F.3d 675, 678 (7th Cir. 2011). Preemption under the ICCTA can be categorical or "as applied." *Id.* at 679. When a plaintiff mounts an "as applied" preemption challenge under the ICCTA, a court must determine "whether the condemnation of railroad property 'would prevent or unduly interfere' with railroad transportation." *Id.* at 680 (quoting *Norfolk S. Ry. Co.—Petition for Declaratory Order*, STB Finance Dkt. No. 35196, 2010 WL 691256, at *3 (S.T.B. Feb. 26, 2010)).

The Authority does not dispute that the ICCTA may preempt certain exercises of state-conferred authority to condemn property. But it seeks dismissal of Canadian

Pacific's complaint pursuant to Federal Rule of Civil Procedure 12(b)(1) on the ground that no ripe justiciable dispute currently exists between the parties. Ripeness is a justiciability doctrine "drawn both from Article III limitations on judicial power and from prudential reasons for refusing to exercise jurisdiction." *Nat'l Park Hosp. Ass'n v. Dep't of Interior*, 538 U.S. 803, 807–08 (2003) (internal quotation marks omitted) (quoting *Reno v. Catholic Soc. Servs., Inc.*, 509 U.S. 43, 57, n.18 (1993)). Ripeness "is peculiarly a question of timing," a doctrine that forbids plaintiffs from asserting injuries that "may depend on so many future events that a judicial opinion would be advice about remote contingencies." *Meridian Sec. Ins. Co. v. Sadowski*, 441 F.3d 536, 538 (7th Cir. 2006) (internal citations and quotation marks omitted). "[W]hen it implicates the possibility of this Court issuing an advisory opinion," ripeness "is a question of subject matter jurisdiction under the case-or-controversy requirement." *Wisconsin Cent., Ltd. v. Shannon*, 539 F.3d 751, 759 (7th Cir. 2008).

The Authority argues that this dispute is not ripe because the injuries Canadian Pacific anticipates sustaining are indefinite, remote, and not certain to accrue. First, the Authority notes that Canadian Pacific has not contended that the ICCTA categorically preempts Illinois's Toll Highway Act or Eminent Domain Act. Because Canadian Pacific has mounted only an "as applied" challenge, the Court can find preemption only to the extent the particular authority exercised under these laws in fact interferes with interstate rail operations. The Authority says that because it has taken none of the steps necessary to commence a condemnation action, the Court can have no way of knowing whether its actions will cause such interference.

Canadian Pacific, for its part, agrees that the ICCTA leaves room for states to

regulate and otherwise impact the ways Surface Transportation Board-regulated railway entities make use of their properties—in other words, Canadian Pacific indeed does not claim the ICCTA categorically preempts either of the Illinois statutes at issue. But Canadian Pacific argues that actual interference is imminent and certain. It points out that each and every proposed plan the Authority has come up with envisions purchasing or condemning more than thirty-five acres of land contained within the Bensenville Yard, even though Canadian Pacific has repeatedly told the Authority that the land is not for sale. Canadian Pacific also cites the fact that construction is well underway elsewhere, making this "an immediate problem for the Tollway itself as it must either convince the Court that its present plan does not somehow interfere with railroad operations, or it must figure out how it is going to build the south leg of the new toll road." Pl.'s Mem., dkt. no. 19, at 10.

In *Rock Energy Cooperative v. Village of Rockton*, 614 F.3d 745 (7th Cir. 2010), the Seventh Circuit confronted a substantially similar case. There, a local government ordinance conferred upon the Village of Rockton authority to acquire assets for local utilities by purchase or condemnation. *Id.* at 746. The Village threatened condemnation in letters to the owners of these assets, but it did not commence condemnation proceedings. *Id.* at 747. It did, however, file suit in state court to enforce an agreement in which the plaintiff had agreed to "explore the feasibility of [the Village's] acquiring the local utility assets" from the plaintiff. *Id.* at 746. Although the Seventh Circuit acknowledged that "it is typically no bar to ripeness if the government has only threatened enforcement, rather than actually brought a lawsuit," *id.* at 748, it nonetheless concluded that "the chance of future eminent-domain proceedings in [that]

case [was] too remote to support the [plaintiff's] claim." *Id.* at 749.

The same is true in this case. As the Authority points out, it has taken none of the steps that state law would require it to take were it in fact prepared to commence eminent-domain proceedings. Even in the most recent letter from the Authority to Canadian Pacific, the Authority did not indicate that it had commenced any action to condemn Canadian Pacific's property, nor did it suggest that it intended to do so soon. Rather, the Authority reiterated that it was interested in engaging in additional discussions with Canadian Pacific about the possible purchase of the land. Canadian Pacific contends that it has repeatedly and unequivocally told the Authority that its land is not for sale and that these refusals to deal distinguish this case from *Rock Energy*, in which the plaintiff had indicated some interest in negotiating with the locality. But Canadian Pacific's refusal to negotiate a purchase price does not render the potentiality of eventual condemnation proceedings imminent, nor does Canadian Pacific's belief that speedy judicial resolution is in the best interest of the Authority and its EOWA project.

The Authority's plans for the EOWA project continue to evolve, and it appears to still be interested in purchasing some portion of the Bensenville Yard from Canadian Pacific. Because the Court cannot determine the extent to which railroad transportation would be prevented or unduly interfered with by a hypothetical condemnation of the land the Authority wishes to acquire, any adjudication of this dispute would amount to an advisory opinion. This, the Constitution does not permit. *See* U.S. Const. Art. III § 1.

Conclusion

For the foregoing reasons, the Court grants defendant's motion to dismiss [dkt.

no. 13] and directs the Clerk to enter judgment dismissing the case for lack of subject matter jurisdiction.

MATTHEW F. KENNELLY
United States District Judge

Date: March 29, 2016