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**COMMENT TO THE STB BY MICHAEL A. TRUJILLO 1/17/2010**

ENTERED  
Office of Proceedings

**28 West 5<sup>th</sup> Avenue, Antonito, Colorado**

MAR 07 2011

Part of  
Public Record

My name is Michael A. Trujillo, and I would like to start by welcoming everybody. I understand that this is a novel issue and the Federal STB has chosen to come to Conejos to conduct this meeting. We appreciate this.

My comment addresses the safety of the railroad. We are constantly hearing about how safe the railroad is. However, a 2 mile walk from where the proposed transfer site is will indicate that this is not necessarily true.

I will speak particularly to the condition of the bridges, the irrigation ditch bridges, the materials used for construction, the culverts, railroad crossings, maintenance and wetlands.

I have submitted photos and captions for each photo, depicting various areas of concern on the rail from a particular location- this being a former agricultural loading site belonging to the Middlemist Group and recently purchased by the SL&RG. I chose this as the starting point in my display of photos, because this is where the journey begins.

I have contended the following based on my personal observation and in my photos.

**BRIDGES**

- 1) Heavy timber construction appears to be the consistency of the construction of the bridges. This fact alone gives what is called a "Type 5" Building distinction, which basically speaks to its ability to lend easily to a possible fire- possibly by an "Act of God" (lightning) , a deliberate act of sabotage, a terrorist act or some instance of spontaneous combustion. Creosote is a wood preservative and antiseptic. However, Creosote is also highly combustible. One could conclude that in the past history of the RR that some structural fires (bridges) did occur. Heavy timber carries a loading distinction, when isolated and can be determined by engaging any structural code book. Collectively, the loading distinction increases. Not one RR bridge even figures to state this distinction. Consequently, none of the bridges, except CDOT's bridges carry any maximum loading information.
- 2) Structural steel throughout, most notably riveted steel "I" beams have not been sanded, primed, or painted as can be clearly seen in some of the submitted photos. Fasteners, most commonly 9/16' diameter bolts and nuts have oxidized to the point to make

maintenance difficult. Concrete is minimally used. And when it is, generally at areas, such as the San Antonio Bridge at the previous Middlemist Group Agricultural Loading Site (Previously Proposed Trans loading Site For Nuclear Waste) it is used for the purpose of replacing material that failed at one point in time. One great fissure at the Basalt rock at the San Antonio River RR crossing depicts this view, particularly at the bottom south view. Furthermore, "Catwalks" not apparently incorporated for structural purposes; nevertheless, have a safety feature in that vertical risers have been constructed with long top horizontal members to possibly keep workmen or innocent passers-by from falling into the river. Two cases, depicted in photos, suggest that several wood members are missing, such as at the San Antonio River RR Bridge or are absent such as at the RR Steel Trussed Bridge, over the Conejos River, and no such structures occur at the Conejos river Overspill Bridge.

- 3) At least one of the bridges, in particular the one situated at Conejos county Road G.5 (about 35 feet due North) and CO HWY 285, is undersized. Photo of this bridge depicts severe stress on both horizontal and vertical members. Furthermore, the heavy timber's base support system comes into contact with the irrigation bed, and when the ditch is charged is submerged in water. Clearly, rotting can be seen at this particular bridge.

#### **RAILROAD TIES**

- 1) The consistency of the condition of the 8" x 8" railroad ties is that they are at best in poor condition (some ties carry a different dimension). Why do I say this? For starters, several of the photos depict various cracks on the soft wood material. Creosote, a known wood preservative appears to have leached out of several ties, and many ties are secured with metal stays that appear to be too far to the edge in that several of the cracks originate at these locations. This seems to suggest that pre-boring did not occur to help alleviate the dilemmas of this major structural defect. While it can be argued that cracks are commonplace, then what is the reasoning for replacing any at all?

#### **CULVERTS**

- 1) The use of Corrugated Steel Culverts is a major safety issue. Several submitted photos depict the absence of screens or any other apparatus, which would serve to keep the units free of debris. This distinction carries major importance if there is a measured amount of water that must reach a particular destination from a particular point. The culverts depicted in photos carry no load bearing or design specification. Except for a visual by workmen, there is no way of knowing where they are located.

## **RAILROAD CROSSINGS**

- 1) **Railroad Crossings are a major safety issue. Photos depict the absence of safety devices that would warn of an on-coming train. Audio devices are absent. There are no lights that could warn of an on-coming train during dark hours, or any type of mechanical device between the tracks to buffer or actually cater to public crossing. The Town of Antonito crossings are a source of complaints to town administrators by citizens on a weekly basis.**

## **MAINTENANCE**

- 1) **There is apparent poor maintenance throughout. The area 30 feet North of N 37 degrees 03' 52" W 160 degrees 00' 25" show four (4) photos of Perlite Sand piled perilously on the track. Records have been recorded of various citizens' complaints regarding this catastrophe. Clean up requests fall on deaf ears. The obvious reasons for maintaining track cannot be overemphasized not to mention that Perlite blows unpredictably into neighbors' residences. Over at CO HWY 285 and Conejos County Road "J" a felled sign is indicated in a photo. While this photo may draw some chuckles, the apparent lax maintenance can be seen.**
- 2) **The attempt to repair one segment of the railroad shows possible used material and no apparent suggested engineering design.**

## **WETLANDS**

- 1) **From the Lujan Bridge onward due north, the terrain takes on a "wetlands" appearance in the form of abundant Willows and some Cattails. These plants are the first telltale signs that a "wetland" exists. This is the area where previous derailments have occurred. What is the maximum load bearing for this soil?**

**One can only conclude that we are attempting to move nuclear waste on an early 19<sup>th</sup> century rail that has not been properly up kept in the initial two miles that take it and its proposed nuclear waste over two major bridges and six irrigation ditches. Please see also in my submittal that the record indicates that in the last four years the incidents on this line are due to maintenance failure.**

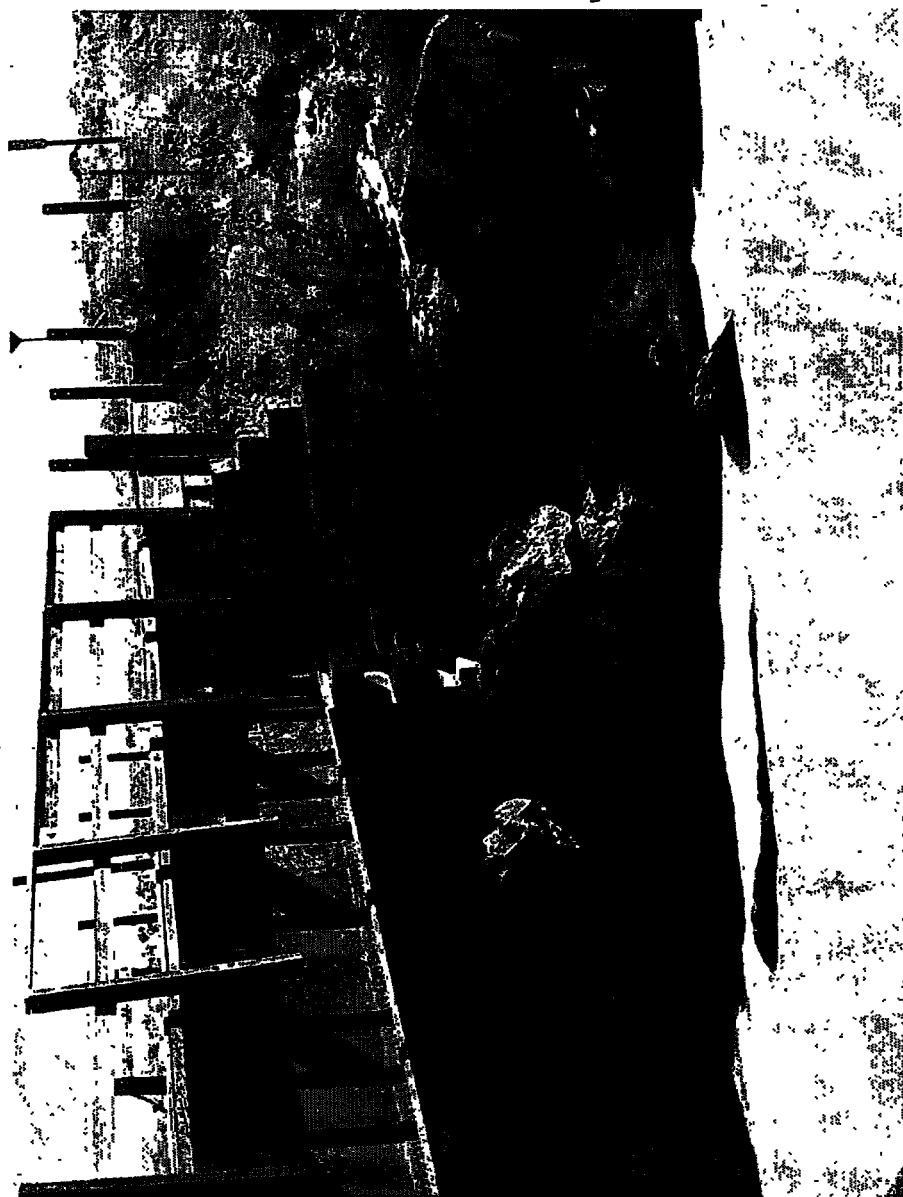
**I thank you for your attention.**

# BRIDGES

SAN ANTONIO BRIDGE  
*Irreversible Bridge Part 1*



San Antonio Bridge (west perspective) situated North 37 degrees , 03 minutes ,52 seconds, West 160degrees , 00minutes, 25 seconds. Bridge runs North and South and rests at each riverbank on a combination of basalt and bedrock. In some cases, concrete pads have been added to stabilize apparent previous failures of both the basalt and the bedrock. No loading capacity of bridge is noted in any area. Elevation: 7910ft above sea level.



This photo shows a 3 foot times 16 inches times 8 inch thick concrete pad at the south base of the San Antonio Bridge. Creosote-treated soft wood material rests on concrete pad and also rests on bedrock, which possible was subjected to overbearing weight at one point in time .



Photo shows the North end of the San Antonio Bridge. Large 4 inch x 16 inch soft wood timbers tie the bridge to the San Antonio riverbank. Large rocks (basalt) measuring 1 foot x 18 inches x 3 feet act as a retaining wall as well as a support system to two 4 foot x 10 inch riveted steel "I" beams which span horizontally 54 feet x 16 feet. Bearing walls deviate away from the vertical as such to cause alarm.



North and South perspective of the San Antonio River Bridge base, reflect the positioning of the 8 inch concrete pads in more detail. 8 inch x 8 inch soft wood rest on top of the concrete pads and wedges have been driven to apparently tighten the bond between the "I" beams and the soft wood material.



Bottom of the San Antonio river bridge indicates the support group resting on top of the "I" beams. Beams are spaced one foot apart and railroad ties are spaced 8 inches apart. Stress fractures are indicated in this photo. It is assumed that loading ability is substantially altered due to stress fractures in the soft wood, which is also Creosote. Railroad tie spacing allows for polluting the river.



Base of the San Antonio River Bridge shows large river rock reflecting stress cracks or cracks created by other means. 8 inch x 8 inch railroad ties arranged in a staggered pattern rest on the concrete pad here on the south bottom end to apparently help alleviate the stress on the load-bearing rocks. It is assumed that the protruding rocks bear on bedrock. Support material precariously placed and placed very near to rock edges that protrude into the San Antonio river.



## **Top view of the San Antonio Bridge**

This photo suggest that two spikes are allotted per each tie plate. Many circumstances indicate protruding spikes, misaligned tie plates and no indication that ties were pre-bored to receive single and/or not double spikes. Consequently several stress fractures are indicated in this photo—some to the extent that they currently serve no functional purpose.



San Antonio Bridge, at the track top, reflects various railroad ties which obviously have to be replaced.



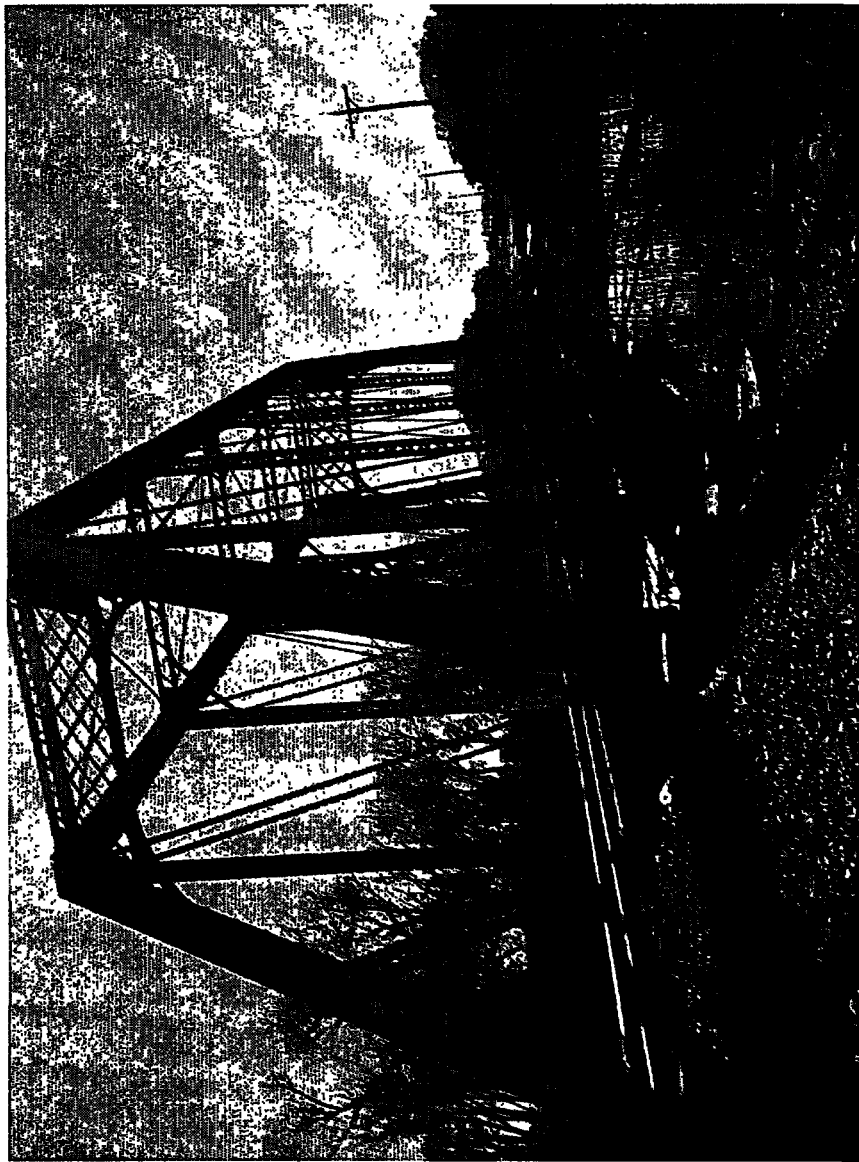
This photo of the top of the San Antonio Bridge shows at least one tie that obviously has to be replaced. The mere fact that it is misaligned, lacks spikes, lacks tie plate, and is not consistent with the given 8 inch spacing, may give a hint as to whether or not it should be replaced. Also, it should be noted that the San Antonio River is vulnerable to any aspect of the operation of the railroad, as static "green water" can be noted below.



## **Top view of the San Antonio Bridge**

Catwalks are indicated on either side of the rail head and are 3 feet wide by 54 linear feet long. While the catwalks may carry no functional value, they reflect the lax maintenance and the current condition of the bridge.

# THE CONEJOS BRIDGE



## THE CONEJOS BRIDGE

### NO DATE OF CONSTRUCTION NO WEIGHT CAPACITY

The most telling feature in this photo is the lack of any literature to suggest what the loading capacity is on the Trussed RR Bridge situated at N 37 degrees 06'05" W 105 degrees 00'24". Elevation here is 7857 feet above sea level. The bridge is 10' wide at the top by approximately 60' long. A bridge of similar design approximately 8 miles East on COHWY 142 was discontinued by the State of Colorado back in the 70s because of some loading malfunctions. A significant event that currently occurs is the situation of the bottom cord running well over 130 feet on either side of the river resting on what could be Basalt or Granite. In either case, it appears that the weight of the bridge alone plus that of superimposed loads could possibly alter the structural integrity of the bearing soil and loading points. Oxidation of metal appears to be in abundance, and for the sake of argument does not appear to be primed an/or painted for a substantial period of time.. Various railroad ties are in the state of requiring at least some maintenance or repair.



### **Bearing Points Trussed Bridge Over Conejos River**

This photo reveals the bearing point of the north end of RR bridge . A retaining wall type scenarios presented here with Basalt Rock appearing to bear much of he weight. Separations are noted throughout, due possibly to age, expansion, and contraction. Stress fractures noted.

*Irrigation Bridge  
Part 2*



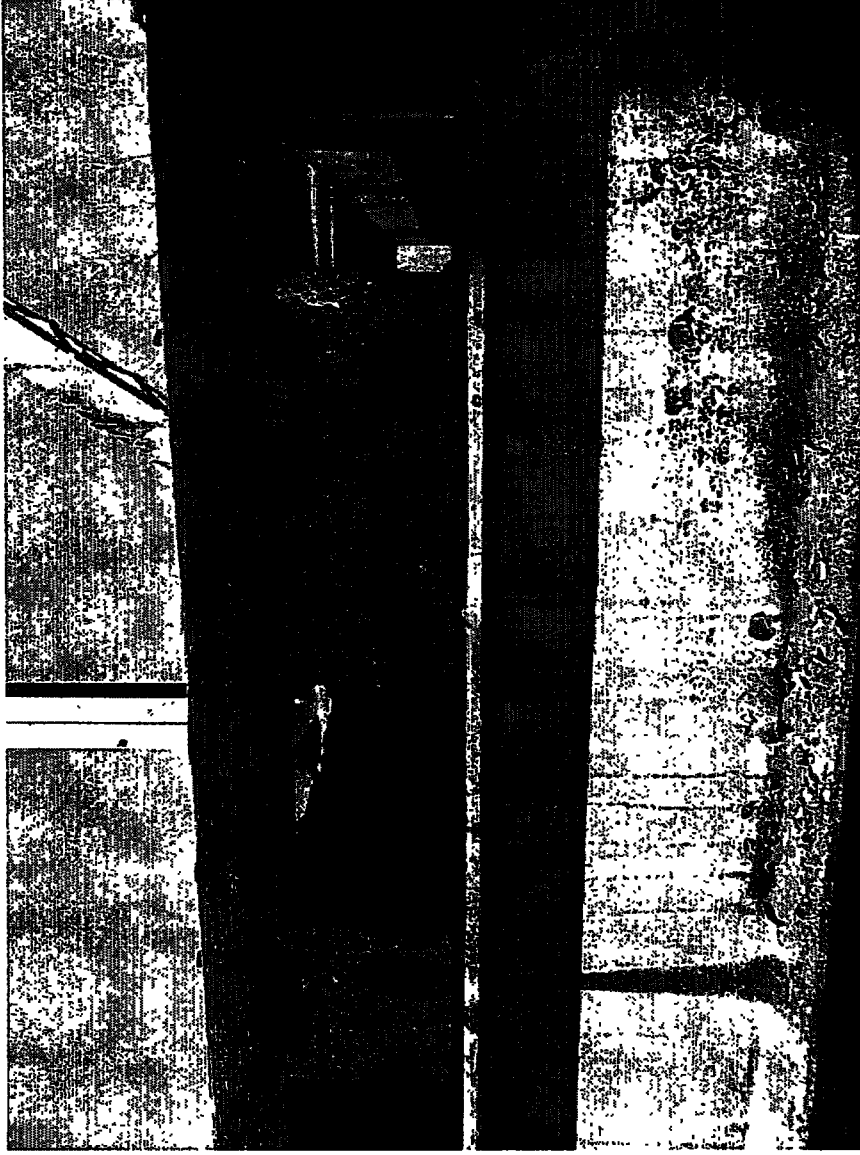
30" x 10" riveted steel girder system shows an abundance of oxidation. Several racking metal framing components in place are designed to move and appear to be locked. No literature exists to suggest that this particular bridge was ever inspected by any authority and carries no loading capacity.



Photo near duplicate of the previous reflecting ice building up at each end of the support system and reflecting water pressure points acting on support system when water is flowing.



This photo suggests that the weight of the bridge carries over to pads of basalt. Adjacent to the basalt and the horizontal "I" beam member, a significant 'expansion' area is noted. The question is, how much settlement has occurred throughout the years, and what is the soil bearing underneath?



This photo shows clearly a heavy timber severely fractured. The theory here is the adjacent timbers located to either side would receive a loading transference.



Oxidation is the order of the day in this photo. At what point will maintenance occur/



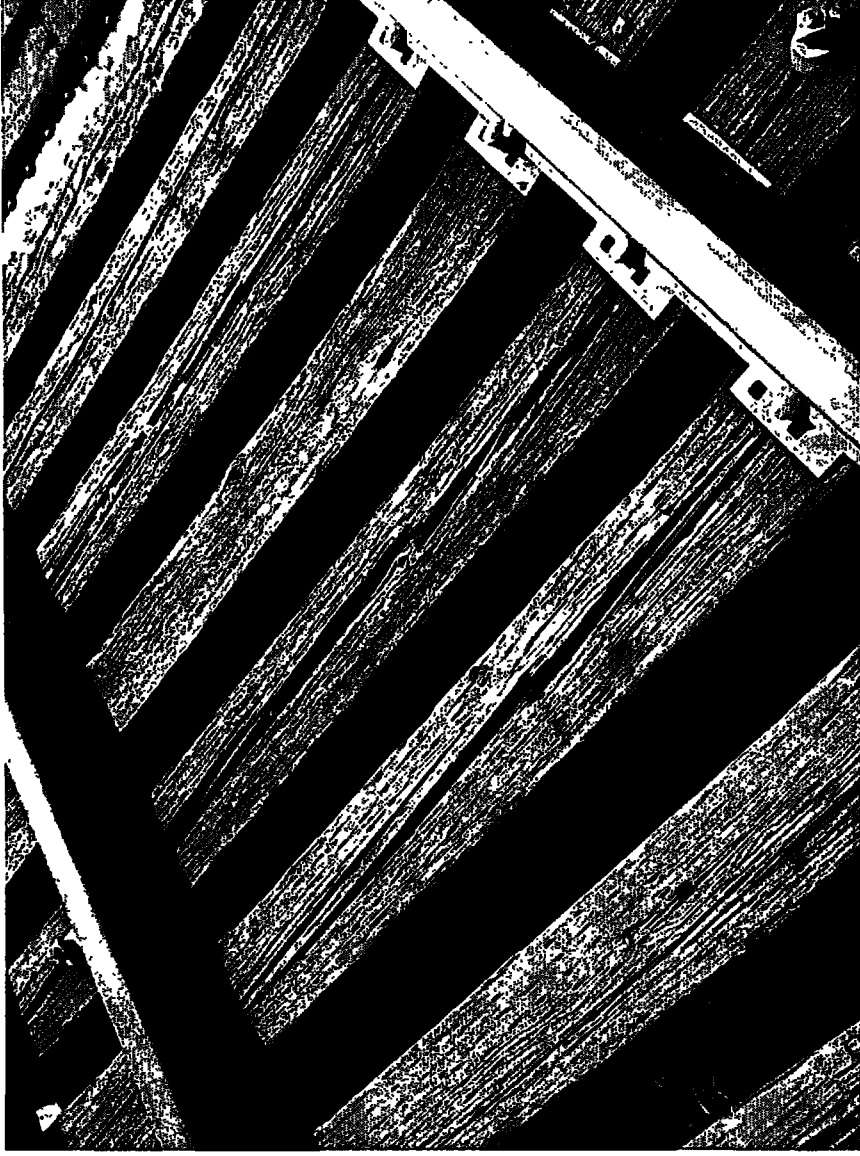
This photo clearly illustrates discoloration at all steel components. It is safe to assume that the structure has not recently been sanded, primed, and painted for a substantial period of time.



Several railroad spikes are disassociated from ties and the plates, as can be seen in this photo.



This photo notes web members that are bent revealing possible racking stress points. Note that there has been very little or no maintenance at all in terms of sanding, priming, and painting.



Top of RR Trussed Bridge over the Conejos River reflects various rail ties which could stand to be replaced. Note that one spike on each tie plate anchors the rail to the RR tie. Many instances suggest that the spikes may not have been slightly under-bored in order to prevent the tracks shown in the photo.



A series of railroad ties indicate approximately 8" spacing, thereby exposing the Conejos River to any material which may 'drop through'.



Here a 'catwalk' adjacent to a ledger (the outer perimeter of the bridge edges, which run perpendicular to the railroad ties) show bolts, which serve as structural fasteners, and possible create an adverse situation. Future maintenance would require the disassociation of fasteners from timber and railroad tie members, thereby making for a tedious process. This photo suggests some structural defects, most notably cracks in the ties.



*Navigation Bridge Part 2*

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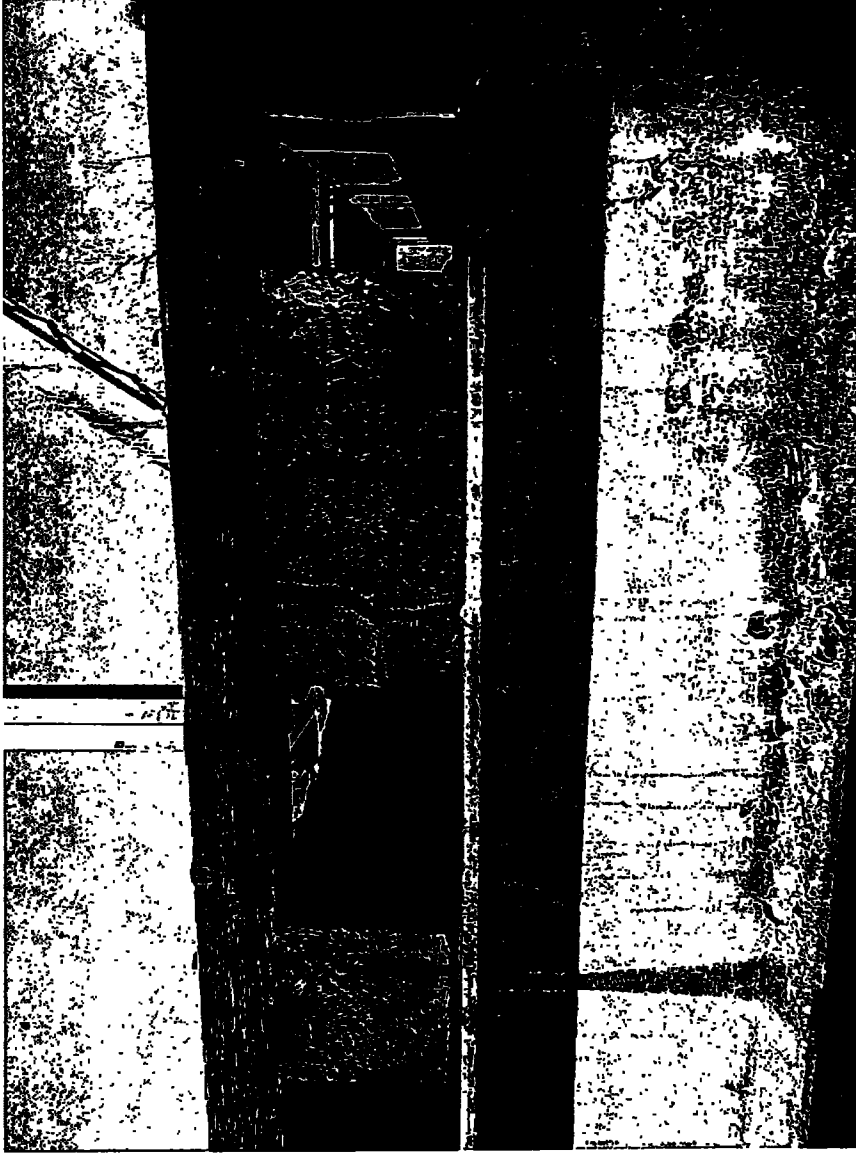
RR Trussed Bride, Conejos River Bridge, an East-facing view reflects different hues possible due to minimal maintenance of sanding, priming or painting.



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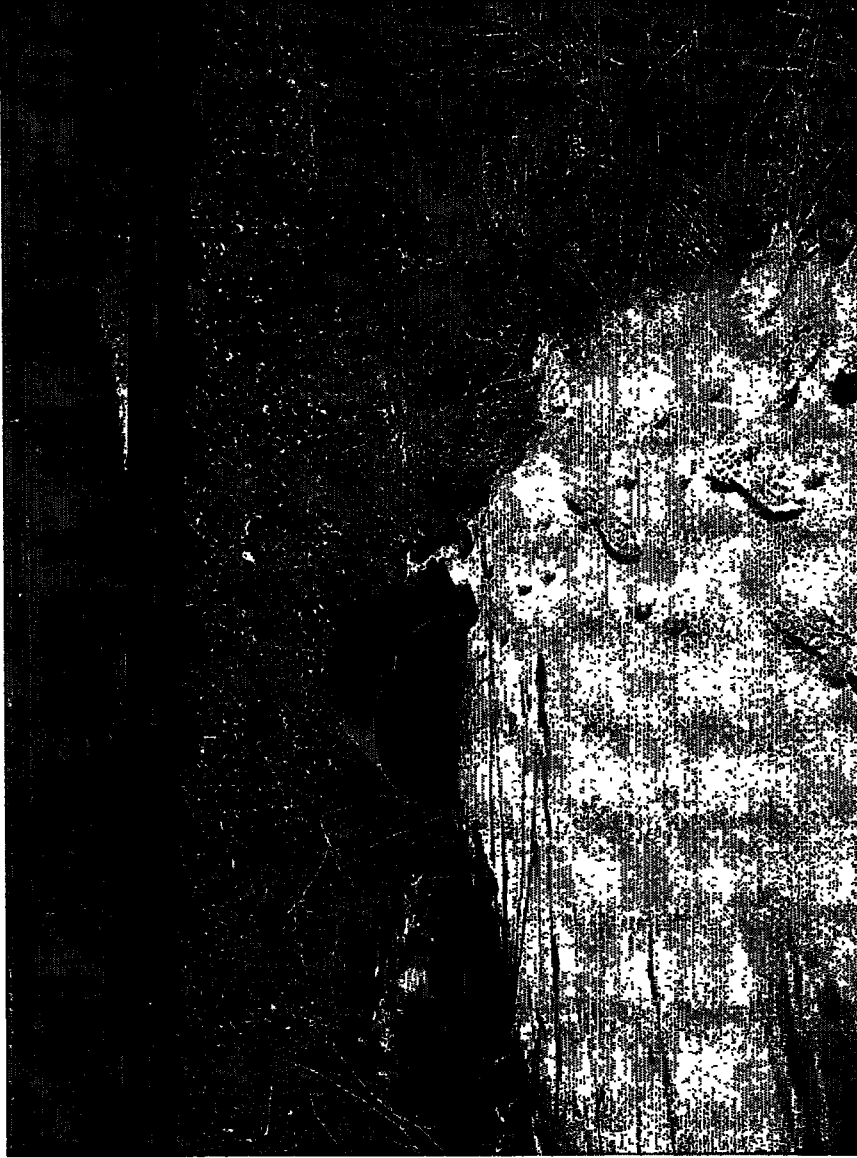
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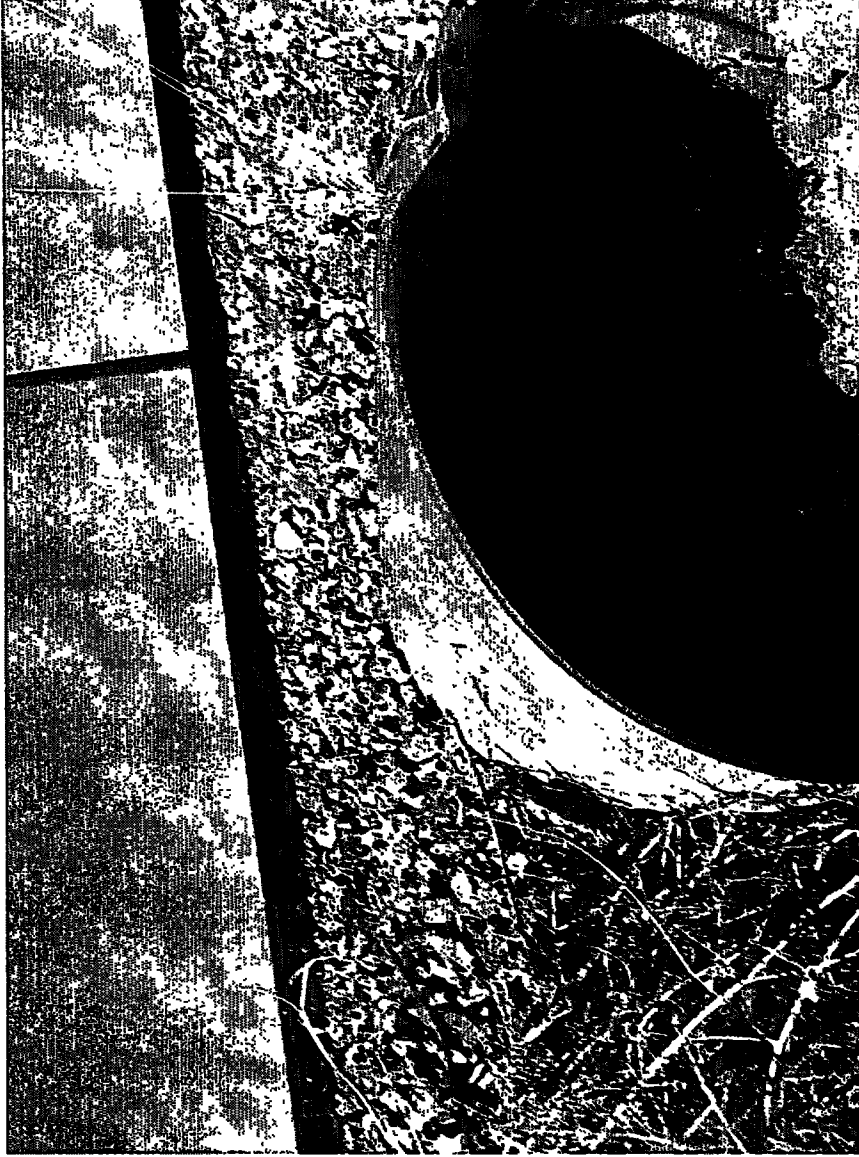


San Antonio Bridge, at the track top, reflects various railroad ties which obviously have to be replaced.

# **CULVERTS AND RAILROAD CROSSINGS**



This culvert carries no particular loading distinction, and it is safe to assume that the culvert is damaged. This is situated at N37 degrees 05'29" W 106 degrees 00'33". Colorado SH 285 bears approximately 50 yards to the west and Conejos County Road G.5 is approximately 300 yards to the south. Elevation here is 7928. There exists no steel jacket within this interior of the culvert to compensate for additional loading design. Culvert dimensions are 27" wide by 22" high. An irrigation ditch exists approximately 20 yards from the east inlet/outlet and is assumed to be a storm water scenario.



Culvert of dimensions 27" wide by 22" high. A problem with flow line noted in that standing ice is indicated in this photo.



This culvert carries no particular loading distinction, and it is safe to assume that the culvert is damaged due to signs of rust and shape distortion.



One of several corrugated culverts. This one is situated at N05'29" W306 degrees 00'33". Damage can be seen on the lip to this particular culvert, and an ice dam has been created. Difficult is the task of cleaning out and maintaining such units. It is safe to assume that ice and debris has not been cleaned here.



Ankon irrigation ditch culvert. According to Carlos Garcia, resident adjacent to this area, the irrigation ditch is rarely charged. However, there remains the question as to the structural integrity of this unit. A theory in the area questions the wisdom of culverts minus loading. Why not merely plug it off and compact disturbed soil and filling to at least 95% compaction? The San Luis Valley is located within an Alpine Desert with annual moisture accumulation of 7". It is generally expected that elaborate storm drain systems do not have to be developed. Evaporation can cure the storm water potential problem. Therefore, the potential for another derailment is reduced.

**THE NEXT SEVEN SLIDES ARE OF AN  
ATTEMPT TO FIX SOME OF THE  
PROBLEMS THAT EXISTED DUE TO  
DAMAGE OF CULVERTS UNDER THE  
TRACK.**



## **New Construction and/or Renovation**

Bearing here is N37degrees05'39" W106 degrees00'39". Colorado Highway 285 is approximately 300 yards to the West and Conejos County Road G.5 is approximately 500 yards to the south. While the work is recent and 'new' much of the construction material is used and old. No indication of loading is to be found anywhere in the vicinity. Despite the 'new' work, at least two RR ties in this photo show severe stress breaks.



Still part of the renovation site. This photo suggests that the retaining walls deviate from the vertical. While this is possibly a loading design, it must be questioned then what the design criteria is—what is it? This is possibly a storm water discharge culvert. Precariously placed on Creosote treated timbers, very little regard given to the fact that the timbers are used and will obviously be submerged in water this coming spring.



Again precariously placed storm water discharge culvert. Little regard given to the fact that these Creosote treated timbers will obviously be submerged in water this coming spring. In the meantime note that the walls and support systems deviate from the vertical. Metal stacks are expected to stabilize horizontally placed timbers which possibly act as a retaining wall to shore up existing disturbed soil and some ballast material.



Metal stacks are expected to stabilize horizontally placed timbers which possibly act as a retaining wall to shore up existing disturbed soil and some ballast material.









## **RR Construction Debris**

Spent RR ties are strewn through out the area of N37degrees05'37" approximately 40 yards east of Colorado Highway 285.



## **RR Construction Debris**

Approximately 30 years north of previous photo. An assortment of old railroad spikes and other assorted debris laden track, when it would appear wise to dispose of in a safe, sanitary, and decent fashion.







A consistent problem at all areas where public roads and private accesses, easements,, etc. is the obvious marriage of rails with top soil, gravel, and some ballast material. The elevation here is 7928 feet above sea level. It is assumed that 8" x8" rail ties are buried somewhere within the crossing area. Here at N37 degrees 00'31" is a precarious situation in many respects. For starters, there exist no lighting devices or mechanical apparatus to suggest that this is a crossing at Conejos County Road G.5 and perpendicular to Colorado State Highway 285 bearing approximately 60 yards to the west;. The proximity of the rails to the edge of CR G.5 suggest that the edges of the road adjacent to the rails are subjected to moisture and no compensation has been made to shore up County Road G.5 in this area.



The consistency throughout the system appears to be stressed out railroad ties. This photo suggests that at least three RR ties are fractured to the extent that they should be replaced.



Another perspective of how perlite is allowed to accumulate on rails.  
Will this be the case with radioactive debris?

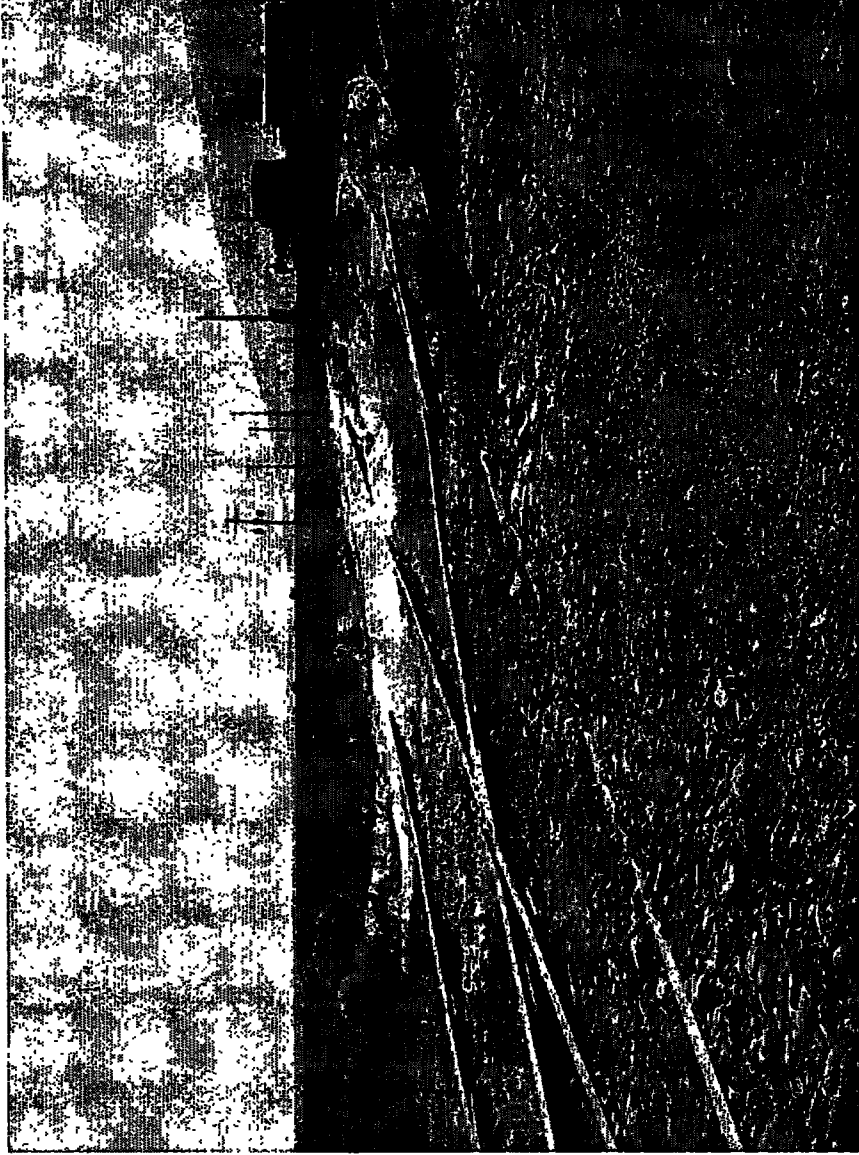


## **Perlite Exceeds Height Limitations**

This photo suggests that railroad ties are buried in Perlite. Common sense would dictate to keep the rails free of Perlite and other debris or obstruction which could be a potential cause for derailment which is not an uncommon RR occurrence. It is one matter for the railroad ties to be embedded, but what about the transporting mechanism—the rail itself.



In some cases, Perlite is dumped in order to clean out rail cars and left abandoned. High regional winds in this area carry, routinely, the Perlite in an Easterly direction. Citizens downwind complain of the accumulation of perlite in their homes. No scientific evidence exists to suggest that Perlite may cause cancer. However, the incidences of cancer in the area are above the national norm.



## Perlite spill

Area south of Antonito and north of the San Antonio Bridge.. N37degrees,03'52" west 160 degrees00'25"1/4<sup>th</sup> mile north of Conejos county road 14. The elevation at this point is 7900feet above sea level. Railroad authorities are constantly engaged regarding these spills but do not attempt to participate to cure such a dilemma. The problem is further compounded by the fact that the San Antonio River Bridge is constructed such that railroad ties are spread 8" apart and run parallel to the river.