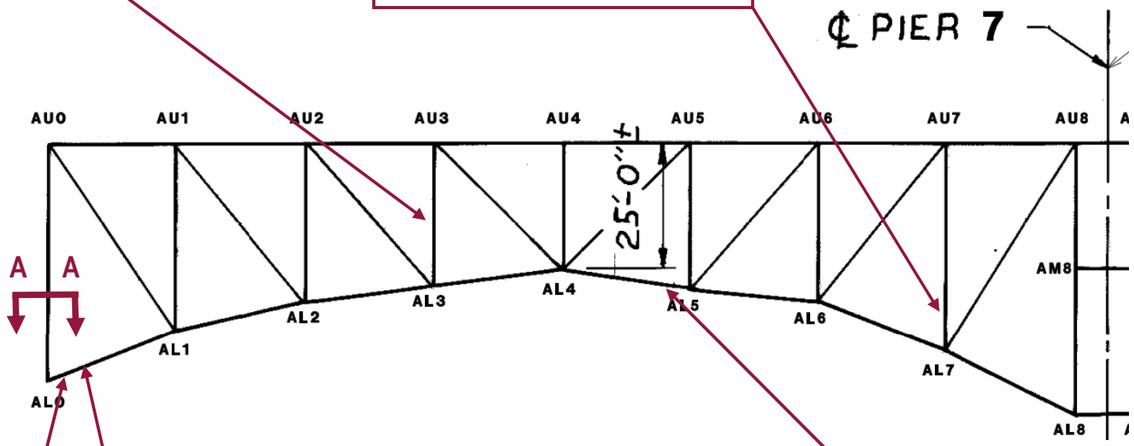
The sway strut between Truss A and Truss B at Panel Point 3 exhibits areas of 100% section loss to the web stiffeners and 1/4" pitting on the web 3" high with isolated holed through sections.

The south web plate of AL7-AU7 exhibits 1/4" pitting for the full width along the interface with gusset plate AL7S.

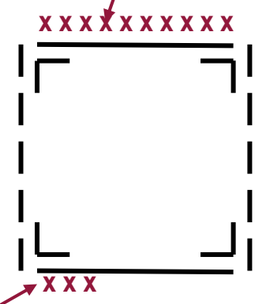


SPAN 6

TRUSS A

5/16" pitting x full width (north web plate)

5/16" pitting x 1/3 width (south web plate)



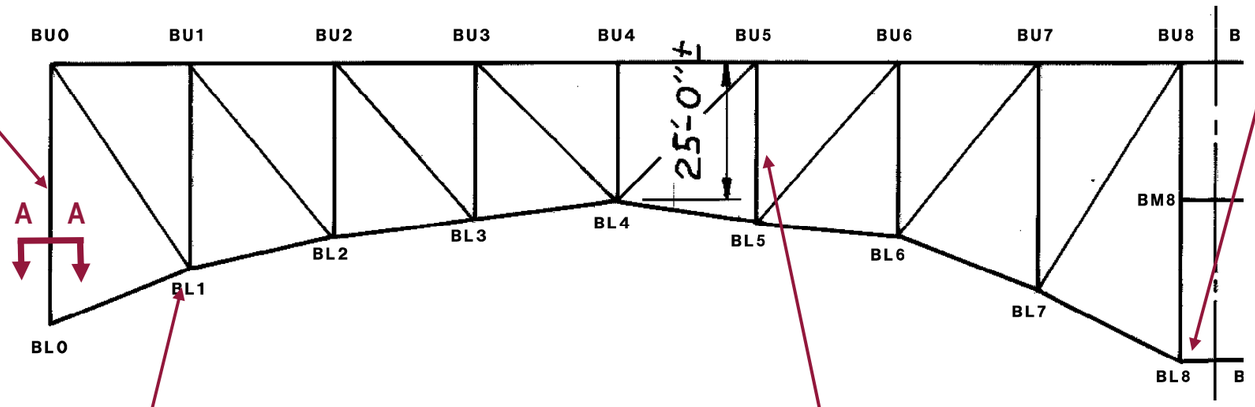
Section A-A

Gusset plate AL0N rivets above the lower chord exhibit section loss up to 100% on 17 of 25 rivet heads. 12 of 25 rivet heads exhibit at least 50% loss.

The south web plate of AL0-AL1 exhibits a 2" high by 6" long hole along the bottom flange angle. Note the bolted retrofit plate on the bottom flange outstanding leg at this location.

There is active corrosion on gusset plate AL5N along the top flange angle of AL4-AL5 with associated 1/16" pitting.

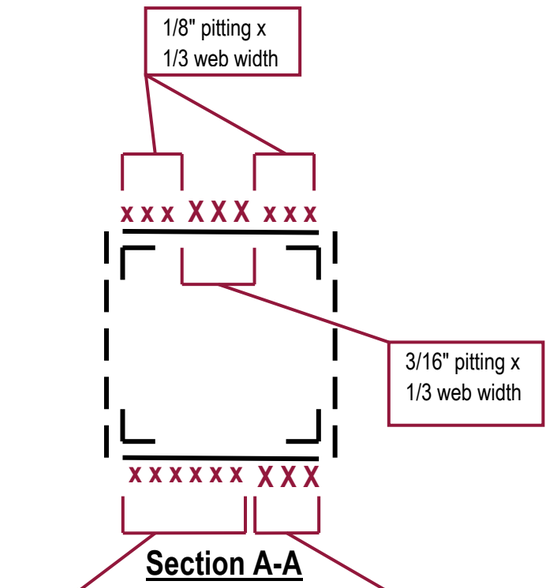
The north and south web plates of BL0-BU0 exhibit 1/8" to 1/4" deep pitting (see Section A-A).

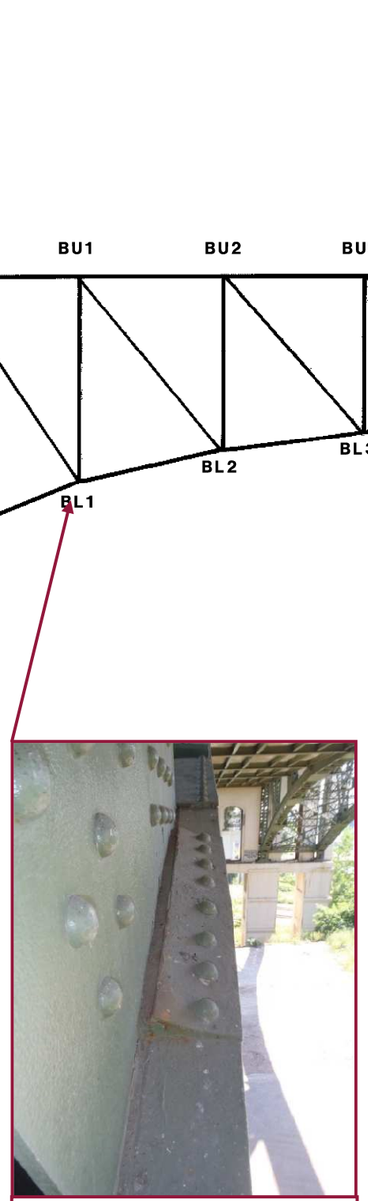


Advanced corrosion at the south web fill plate at BL8 has resulted in a 6" diameter hole.

SPAN 6

TRUSS B

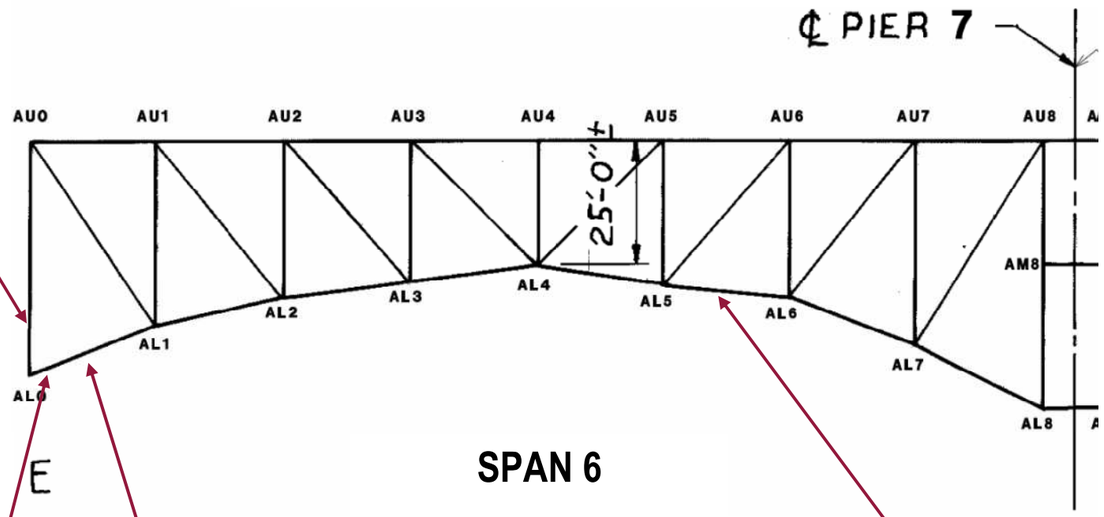




Heavy pack rust up to 1" has formed between the lower chord top flange and flange splice plate at BL1S.

The north web plate of vertical member BL5-BU5 exhibits 1/8" pitting around the sway brace connection.

The north web plate of CL0-CU0 exhibits heavy pitting throughout with areas with pits up to 3/8" deep.



SPAN 6

TRUSS C

The north top and bottom flange angles adjacent at CL0 exhibit up to 100% section loss as large as 1/2" diameter within the bounds of the gusset plate.

The north web plate of CL0-CL1 exhibits 6" tall, 1/4" deep pitting throughout the western half of the web.

CL5-CL6 exhibits typical minor section loss less than 1/16" throughout the interior faces of both web plates with isolated 1/8" pitting around the last 4 rivets adjacent to the lower batten plate at CL6.

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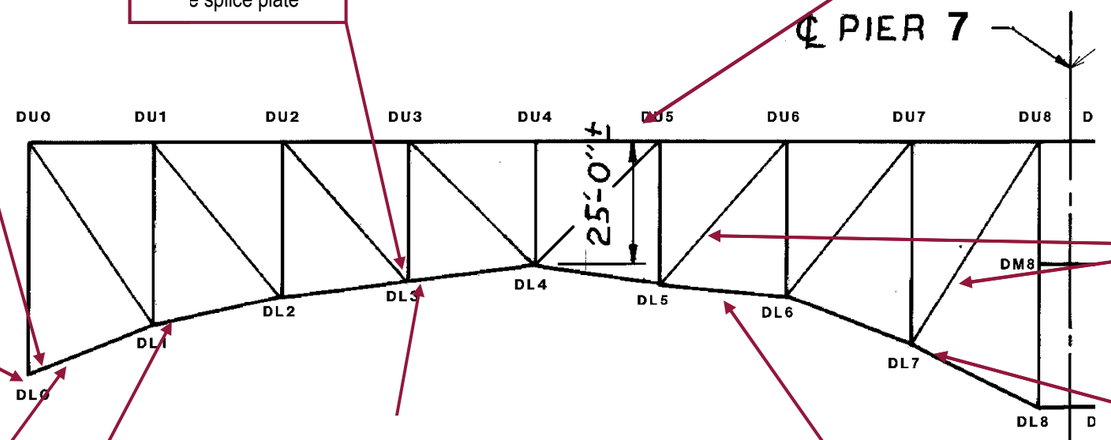

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1" Ø hole in the nc
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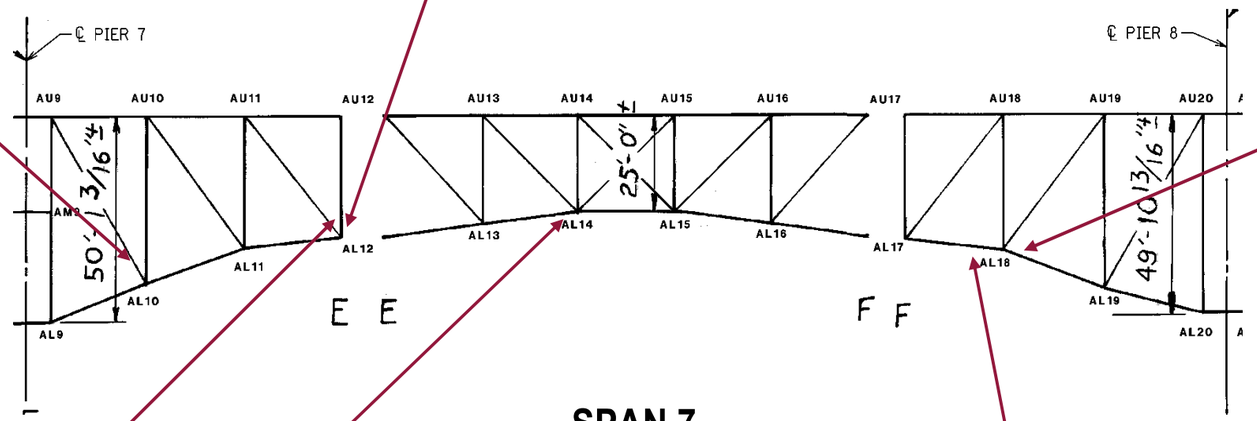
ate of DL1-DL2 exhibits a
section loss adjacent to
area of 1/4" pitting with a

welded plate retrofits on the north
ge outstanding leg of DL5-DL6.

The south face of the south gusset plate at AL12 exhibits widespread areas of 3/16" deep pitting, with one 2" diameter area with 5/16" loss below the bearing pin. The north gusset plate has a 6" diameter area along the west free edge with as little as 1/4" section remaining.

Pack rust up to 1" thick between diagonal member AU9-AL10 and the free edge of gusset plate AL10N, as well as 1/4" pitting on the north web plate of the member at this location.



6 of the first 12 rivet heads connecting the bottom flange angle of AL18-AL19 to the north web plate have at least 70% section.

SPAN 7

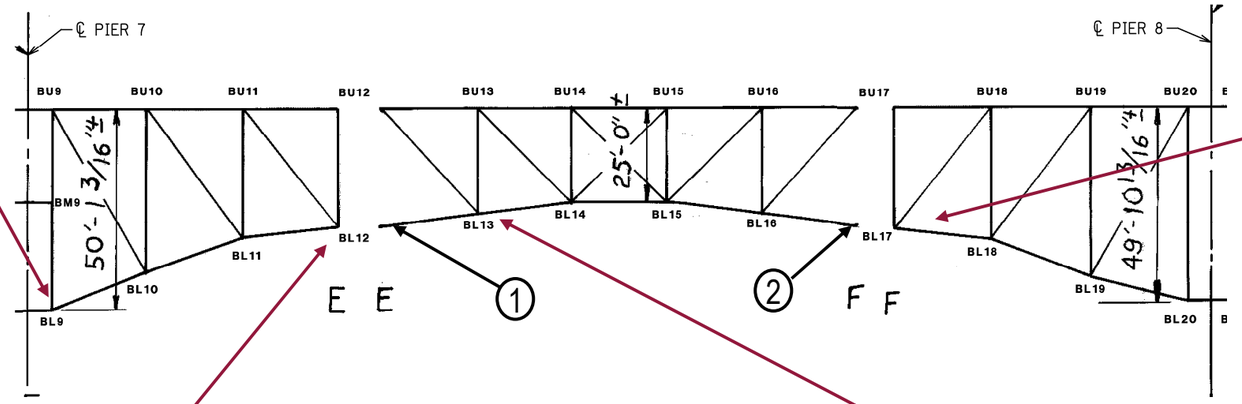
TRUSS A

The bearing pin at AL12 exhibits 3/16" deep loss along the circumference adjacent to the pin plates. Additionally, the innermost pin plates exhibit 1/8" deep pitting throughout the interior face adjacent to the pin.

At Panel Point AL14, pack rust is present up to 5/8" thick between the web plates of lower chord member AL13-AL14 and both gusset plates (AL14N shown). Pack rust has not been cleaned and sealed.

The north web plate of lower chord member AL17-AL18 exhibits 1/4" pitting on the interior face for half the height of the section.

The top flange splice plate at BL9 exhibits 1/8" pitting.

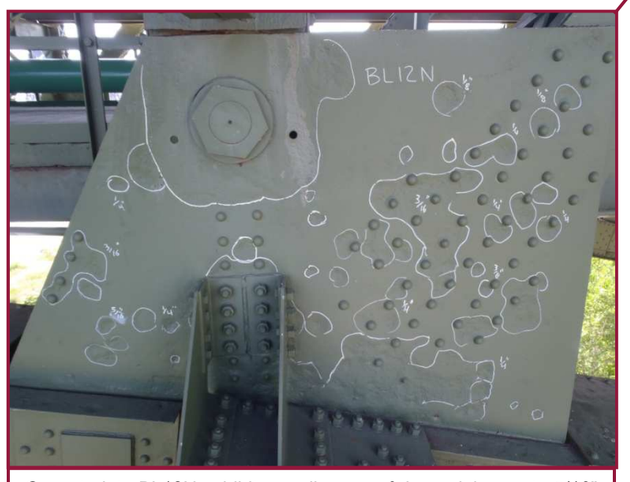


SPAN 7

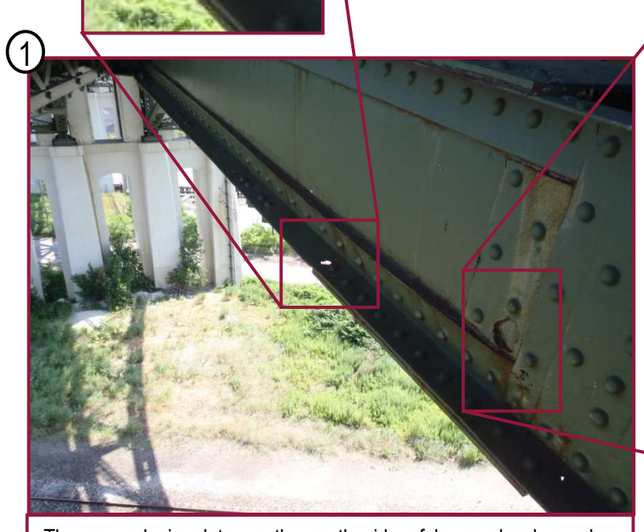
TRUSS B

BL17-BL18 exhibits a 6" diameter hole in the south bottom flange near BL17.

The south bottom flange angle at BL13 exhibits longitudinal cracking due to pack rust between the outstanding leg of the flange and the bottom lateral bracing connection plate. Arrest holes have been drilled and the bottom connection plate has been replaced at this location.



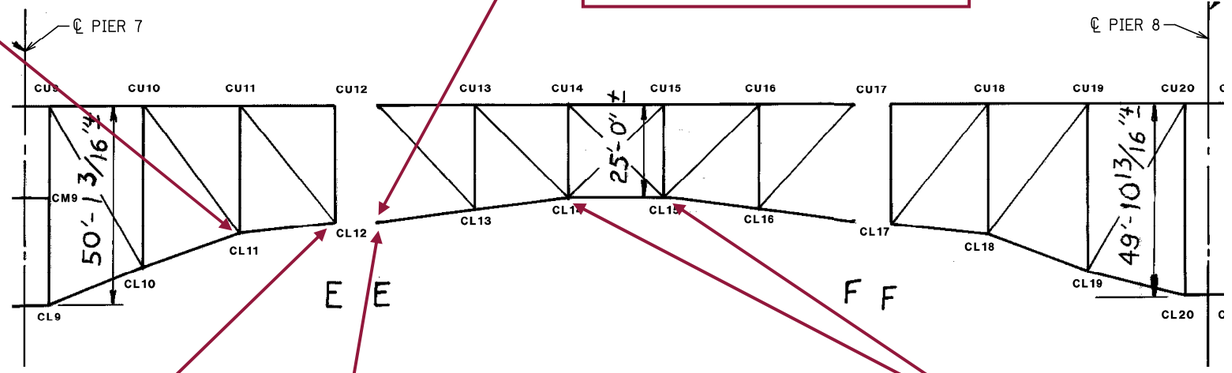
Gusset plate BL12N exhibits small areas of deep pitting up to 5/16" throughout. All locations exhibiting greater than 3/16" deep pitting are highlighted with field markings. The south plate at BL12 exhibits conditions similar to those shown.



The second pin plate on the north side of lower chord member BL12-BL13 at BL12 has a 3" diameter hole in the bottom corner. Similarly, the third pin plate has a 2" diameter hole in the bottom corner, and the fill plate has a 4" diameter hole at the bottom. 1/8" pitting is typical on the pin plates. A 1-1/2" diameter hole in the north bottom flange is present roughly 5' east of this location.

The pin diaphragm plate for lower chord BL16-BL17 at BL17 exhibits 3" diameter holed through sections at the east end. There are isolated holes up to 3/4" diameter in the top lower chord batten plate near this location, as well as minor pitting to top flange angles within the gusset plate bounds.

The bottom flange angle splice plate at CL11 is bowed out approximately 1-1/2" due to heavy pack rust.



At the lower chord sliding pin at CL12, heavy pack rust has forced the pin plates away from the end of the pin. The end of the pin is approximately 1" from flush with the keeper plate.

SPAN 7

TRUSS C

The internal diaphragm plate at CL12 exhibits heavy pitting with active corrosion around the rivet heads and along the edge of the plate at the gusset plate interfaces.

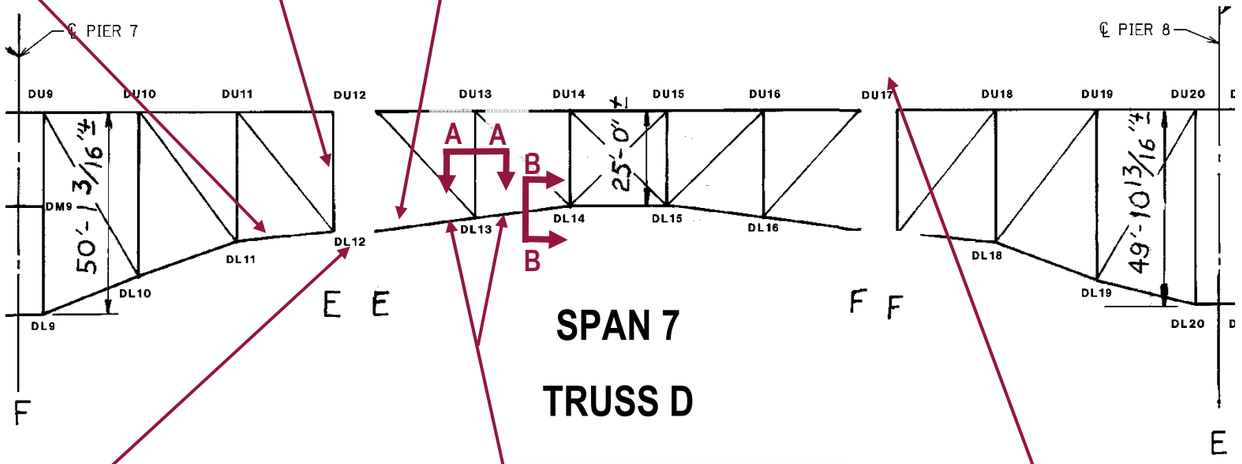
CL12-CL13 exhibits advanced section loss and heavy pack rust at the sliding pin location of gusset plate CL12. A thin internal fill plate has rusted away at this location, and built up member connections are becoming distressed due to the pack rust and subsequent distortion of the web members.

Utility deck Floorbeams 14 and 15 exhibit cracking at the top flange coping near Truss C, extending down into stress relief holes. These cracks are roughly 1-3/4" long and do not appear to have propagated beyond the stress relief holes (Floorbeam 14 shown).

DL11-DL12 has a welded retrofit plate on the outstanding leg of the north bottom flange. A similar plate is located on the south bottom flange at this location.

Isolated 1/4" pitting on north web plate of DL12-DU12.

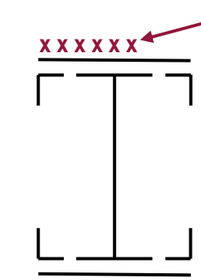
Pack rust is typical between web plates and flange angles and between flange angles and lacing channels. Isolated areas have reactivating rust.



Isolated pitting up to 1/4" deep on the lower chord top stay plates is typical throughout Span 7.

SPAN 7

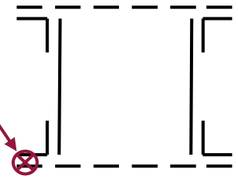
TRUSS D



1/4" deep pitting x 12" wide (adjacent to lower gusset plate)

Section A-A

3"Ø hole in the north angle leg of DL13-DL14



Section B-B

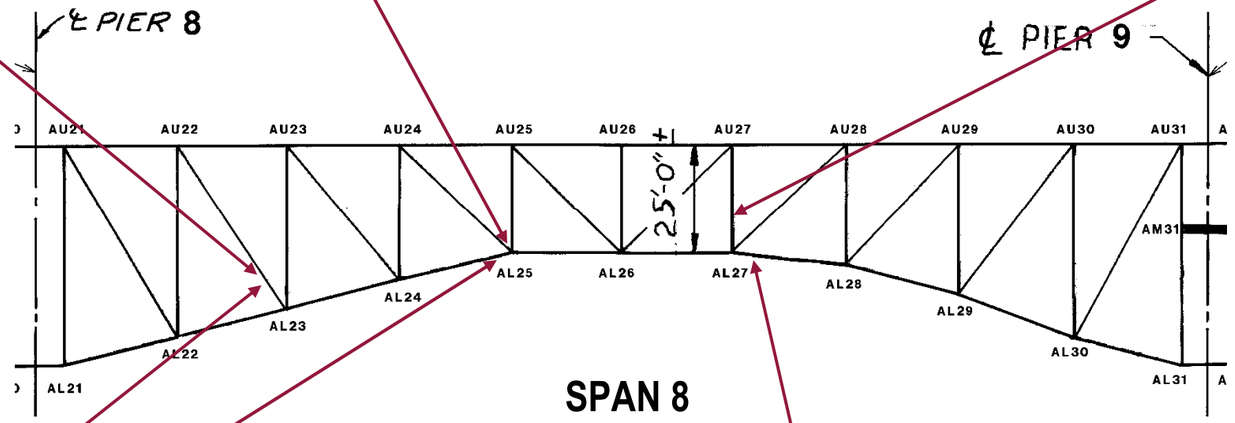
The sliding pins at gusset plate location DL12 are worn. The internal diaphragm between gusset plates above the pin appears to have buckled due to pack rust.

Note active corrosion and wear on north DL12-DL13 lower chord sliding pin at DL12.

Floorbeam 17 exhibits a lamellar tear approximately five feet long on the bottom of the top flange between Stringer 7 and the interior bearing stiffeners.

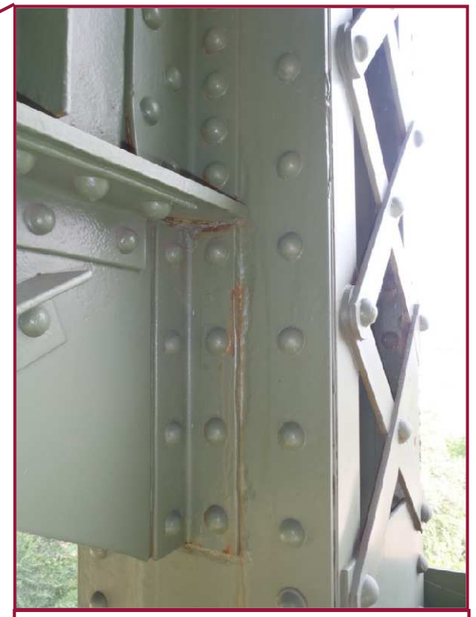
The south web plate of AL23-AU22 exhibits pitting up to 3/16" deep along the gusset plate interface.

1/2" diameter hole in the lower lateral bracing connection plate.



SPAN 8

TRUSS A



The north web plate of vertical member AL27-AU27 exhibits typical 1/8" pitting around the sway brace connection.

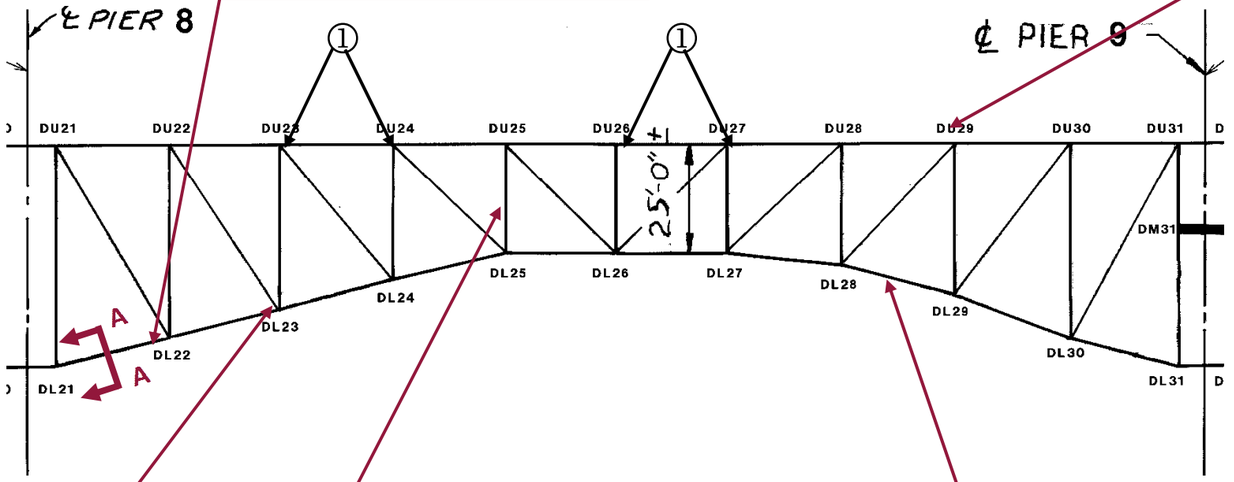
The lower batten plate of AL23-AU22 has been flame-cut to accommodate previous repair work done at this location.

The north and south web plates of chord member AL24-AL25 exhibit 3/16" pitting over the full height of the plate along the interface with Panel Point AL25 gusset plates, with an isolated 1" diameter hole in the south plate (south plate shown).

The south web splice plate at AL27 exhibits 1/4" pitting with reactivating rust and one 2" diameter hole along the lower flange. Additionally, the adjacent bottom flange exhibits pitting up to 1/4" deep and the rivet heads connecting the lateral bracing connection plate exhibit significant loss of section.

1 The floorbeams in Span 8 typically exhibit 1/16" deep pitting throughout the east face between Stringer 2 and Truss D, with up to 1/4" pitting found in isolated areas.

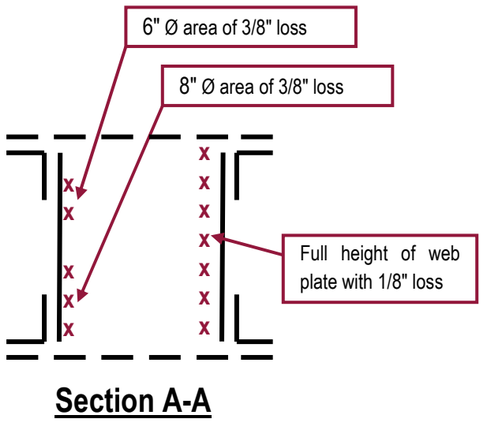
1/16" deep pitting is typical over the full height of the north web plate adjacent to gusset plates throughout Span 8. Pitting at DL22 is up to 1/8" deep at this location.



SPAN 8

TRUSS D

Upper chord member DL28-DL29 exhibits pitting up to 1/8" on the cover plate, lacing bars and top flange angles within the bounds of gusset plates at DL29. This area has active corrosion due to the presence of a deck subdrain.



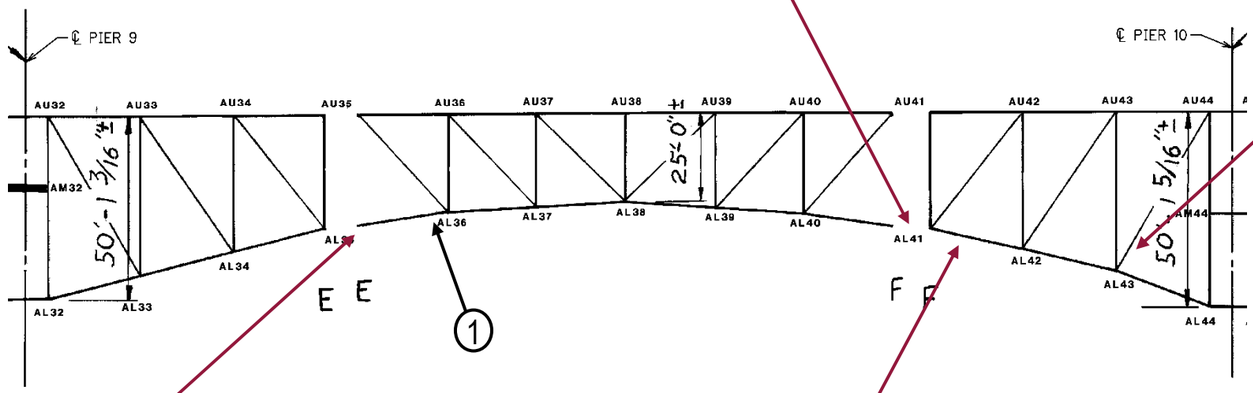
Section A-A

Heavy pitting is typical along the horizontal surfaces of members at DL23, including approximately 50% loss of 9 of the 20 rivet heads connecting the lower lateral bracing connection plate to the lower chord flange at this location (cleaned and painted).

The south web plate of vertical member DL25-DU25 exhibits isolated 1/4" pitting around the sway brace connection.

The lower chord members in Span 8 exhibit heavy impacted rust between web plates and flange angles.

The built-up strut at AL41 exhibits active surface corrosion throughout.



SPAN 9

TRUSS A

The south top flange angle of AL35-AL36 exhibits a 3" diameter hole above the pin location at AL35. The south web plate and pin plates exhibit isolated 1/8" pitting within the bounds of the gusset plate.

South elevation of lower chord pin location at AL35. Note isolated 1/8" pitting on web and pin plates.

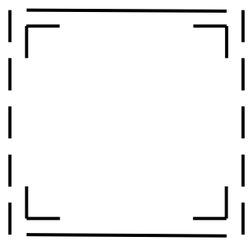
The south web plate of AL41-AL42 exhibits 1/4" deep pitting along the gusset plate interface. Section loss up to 1/4" is typical along several lower chord members in Span 9.

The south web plate of AL43-AU44 exhibits 1/4" deep pitting across the full height of the plate at the lower gusset plate interface.

1

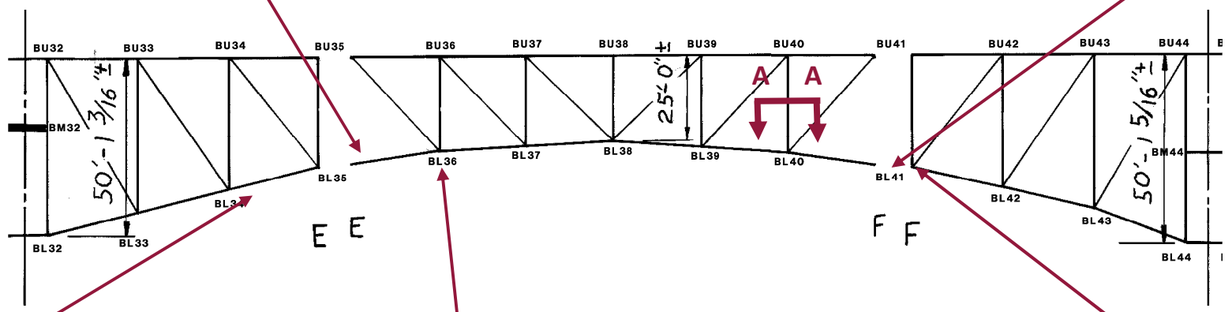
Cleaned and sealed pack rust up to 1" thick is present between lower chord member AL35-AL36 and gusset plate AL36S.

3/16" pitting adjacent to the strut connection



Section A-A

Heavy pitting of the north web plate along the bottom flange angle is typical for the lower half of BL35-BL36. The pitting on this member progressively worsens from west to east, with up to 5/16" deep pitting near BL36.



The lower sliding pin at BL41 exhibits loss up to 1/8" adjacent to the pin plates along the pin circumference. The pin at BL35 exhibits similar conditions in addition to minor corrosion throughout the surface of the pin.

SPAN 9

TRUSS B

Chord member BL34-BL35 exhibits impacted rust up to 1" thick between the web plates and vertical legs of top flange angles.

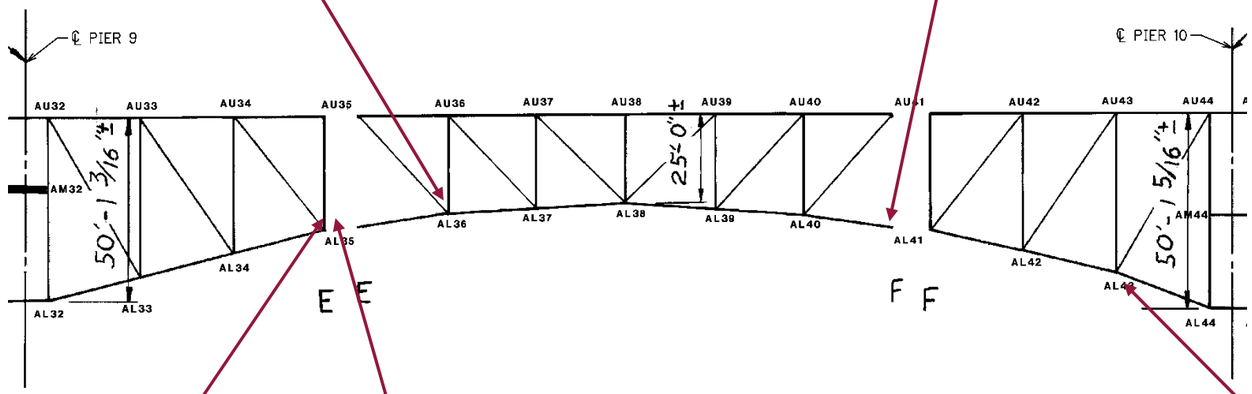
The utility deck floorbeam connection at BL36 exhibits a 1-3/4" long crack at the top cope which has not been arrested.

Plan view of utility deck floorbeam, showing out-of-plane deflection in the web at the crack location.

The strut between Truss A and Truss B at Panel Point 41 exhibits active surface rust throughout.

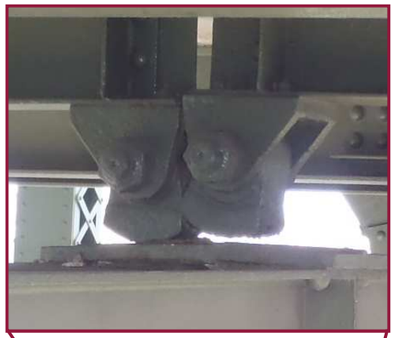
Crack in web of utility deck floorbeam measured 1-1/4" vertical and 1-3/4" horizontal. Crack has propagated 1/4" since the 2010 inspection.

3" diameter hole in the bottom cover plate.



SPAN 9

TRUSS C



Stringers 2 and 3 are not bearing at the utility deck Floorbeam 35 bearing plates. Stringers 1 and 4 have bearing retrofits, consisting of modified beam sections with welded vertical stiffeners. Note that pack rust between the top floorbeam flanges and the bearing plate has caused the plates to bow up.

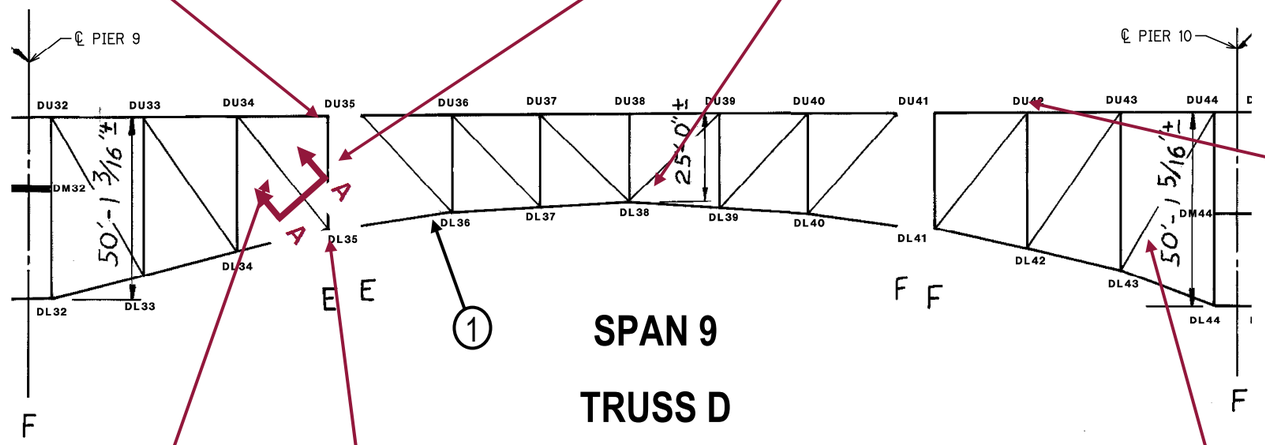
Gusset plate CL35S exhibits 1/8" deep pitting throughout areas of the south face, with small areas with up to 1/4" deep loss on the north face of the plate along the lower chord (Photo taken in 2010).

Gusset plate CL43S exhibits a bow up to 1/2" at the east free edge. The plate does not meet edge stiffness requirements of AASHTO 10.16.11.3.

Floorbeam 35 exhibits active corrosion of the bottom flange and adjacent web and vertical stiffener plates with up to 1/16" deep pitting. The joint trough at this location has failed with water and debris leaking onto the superstructure elements.

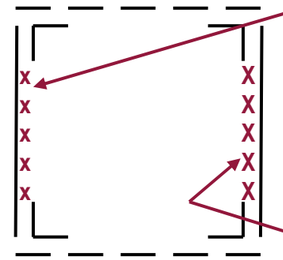
The bearing pin at DL35-UL35 exhibits pitting up to 1/4" deep along the circumference adjacent to the pin plates. This condition is common, though typically less severe, among the main bearing pins throughout the structure.

The top stay plates on the lower chord exhibit isolated pitting up to 1/8" deep throughout Span 9. Note: this condition is typical for both Trusses A & D throughout the entire structure.



SPAN 9

TRUSS D



Section A-A

Pitting up to 1/4" deep for half the web width

Pitting up to 3/8" deep

Between Truss D and Stringer 11, Floorbeam 42 exhibits a 1/4" diameter hole in the lower half of the web with 1/16" pitting typical in the surrounding area along the bottom flange.

The south web plate of DL35-DU34 exhibits 3/8" deep pitting on the interior face between the flange angle legs. This area is located approximately 1' above the lower gusset plate (see Section A-A).

Eight of the 16 rivet heads at the lower lateral bracing connection for DL35-CL35 exhibit significant loss at Truss D, with adjacent heavy pitting of the lower chord flange.

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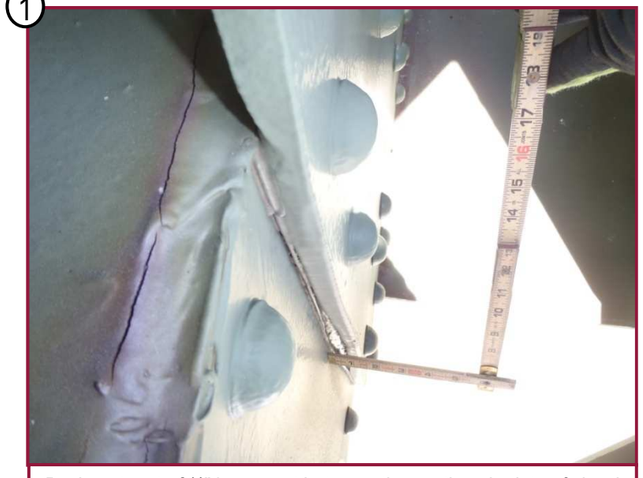
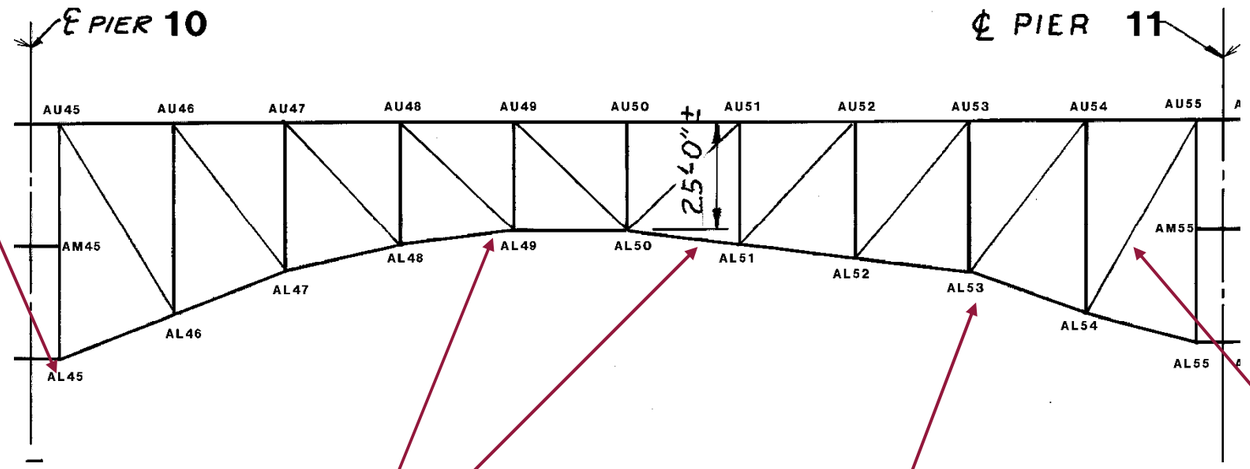


Pack rust up to 3/4" is present between the south web plate of chord member DL35-DL36 and gusset plate DL36S.

The north web plate of diagonal member DL43-DU44 exhibits 1/4" pitting with isolated 5/16" pitting along gusset plate DL43Nfor the full height of the section.

1/16" pitting was typical on the outstanding leg of bottom flange angles on lower chord truss members within the gusset plate bounds throughout Span 10.

The truss bearing at AL45 was filled with standing water at the time of inspection.



SPAN 10

TRUSS A

The south web plate of AL54-AU55 exhibits isolated areas of loss up to 3/8" deep by 6" diameter.

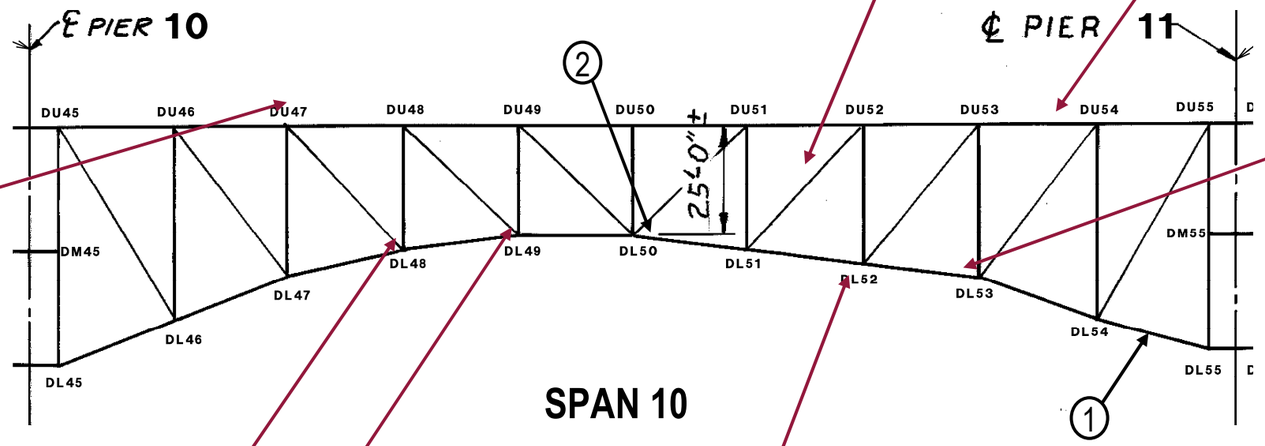
The south web plate of AL48-AL49 has heavy pitting up to 1/4" deep for approximately half the web height near AL49. Similar conditions are found at AL51.

The top flange splice at AL53 exhibits minor distortion due to impacted rust formation. Active rusting was noted adjacent to this location on the north gusset plate.

(1) Similar to other spans throughout the structure, the lower chord north web plates exhibit loss along the lower flange angles. Losses in Span 10 are typified by 1/16"-1/8" deep pitting occurring within the lower 2" of the web and along 1/3 to 1/2 the length of each bay. This condition is typical throughout the structure on Truss D. The adjacent flange angles exhibit similar pitting. One location in member DL54-DL55 exhibits advanced section loss with "pinholes" in the outstanding leg.

Pack rust up to 1/8" is typical (isolated up to 3/4") between the diagonal member web plates and the lower flange angles along the length of the members.

Between Floorbeams 53 and 54 an appurtenance (platform) is stitch welded to Stringer 1 and the interior face of the upper chord of Truss D.



SPAN 10

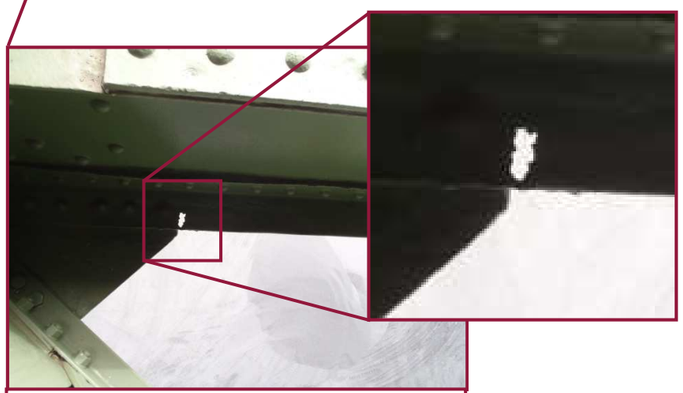
TRUSS D

Deck subdrain location on the west side of Floorbeam 47 with 1/16" pitting and active corrosion to the top chord cover plate, lacing bars and flange angles. Note stalactite formation.

The lower lateral bracing connection plates typically exhibit pitting between 1/16" and 1/8" deep, with localized pitting up to 1/4" deep. The adjacent bottom flange angles exhibit similar pitting. Light surface corrosion is typically forming at these locations.

At the flange splice plate at Panel Point DL49, 1/2" thick pack rust has developed and is deforming the flange angles. Reactivating pack rust at this detail is typical of lower chord splices throughout Span 10.

(2) DL50-DL51 exhibits up to 1/4" deep pitting over the full height of the north web at the interface with gusset plate DL50N. 1/8" pitting is typically found at similar locations throughout the lower panels in Span 10.



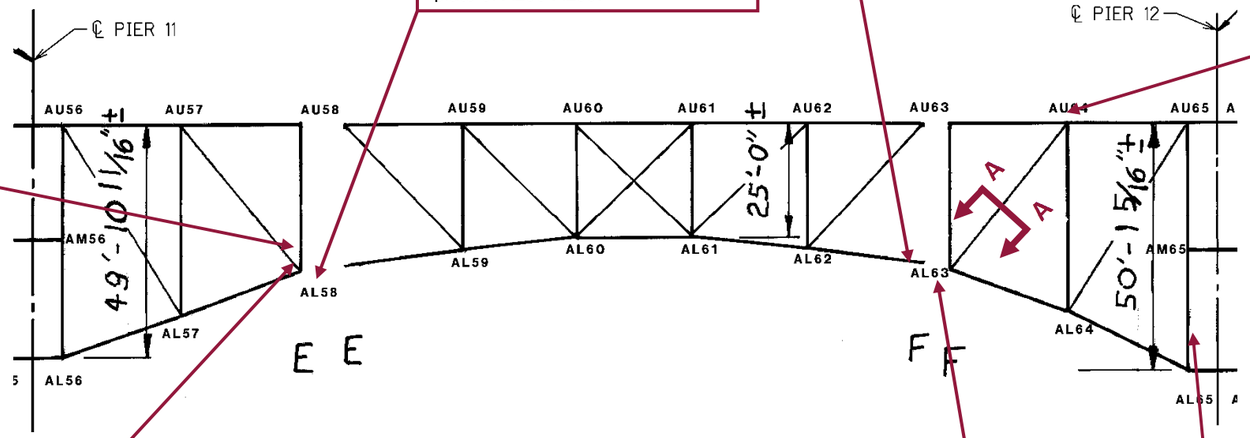
Member DL51-DL52 exhibits a 2" by 1" hole in the north bottom flange outstanding leg with 1/16" pitting on the vertical leg adjacent to Panel Point DL52.

The DL52-DL53 north web plate exhibits an area of 1/4" deep pitting 5" tall (cleaned and painted) along gusset plate DL53N.

Pitting up to 1/4" deep is present on both members at the interface of the south pin plates and the south web plate of AL58-AL59.

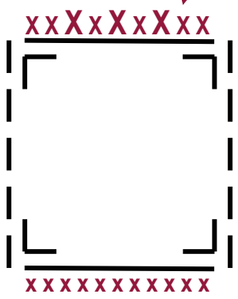
The lower sliding pin at AL63 is heavily corroded with rust scaling at the pin to pin plate interface. Rust is reactivating throughout these components.

Heavy corrosion is present throughout the interior of AL58-AU58 at the lower panel bearing pin.



Top chord member AU63-AU64 exhibits 100% section loss to the north top flange angle within the bounds of the gusset plate at AU64.

1/4" pitting x full web height, with 3 small areas with up to 5/16" loss



Section A-A

1/8" pitting x full web height

SPAN 11

TRUSS A

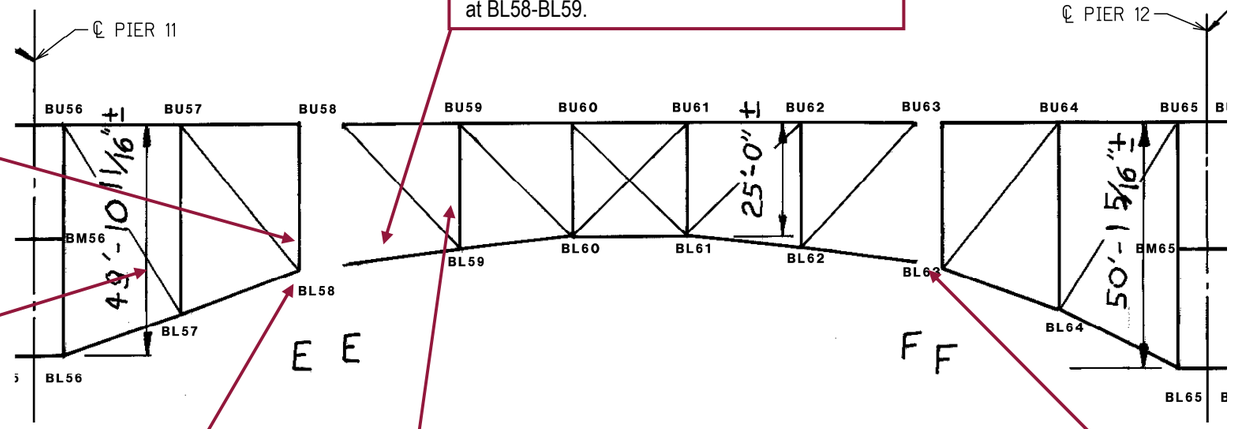
The web members at lower chord Panel Point AL58 exhibit active minor surface corrosion throughout.

The west face of members at Panel Point AL63 exhibit isolated paint peeling of the top coat, leaving only primer at these locations.

Vertical member AL65-AU65 exhibits pitting up to 3/16" on the south web plate adjacent to the lower chord gusset plate.

Pack rust up to 1-1/4" has formed between the north gusset plate and the vertical member near the lower vertical pin at BL58.

Localized heavy pitting up to 1/4" deep is present throughout the north face of the south web plate at BL58-BL59.



SPAN 11

TRUSS B

Diagonal member BL57-BU56 exhibits 1/4" section loss on the north web plate with associated pack rust at the lower chord gusset plate BL57N interface.

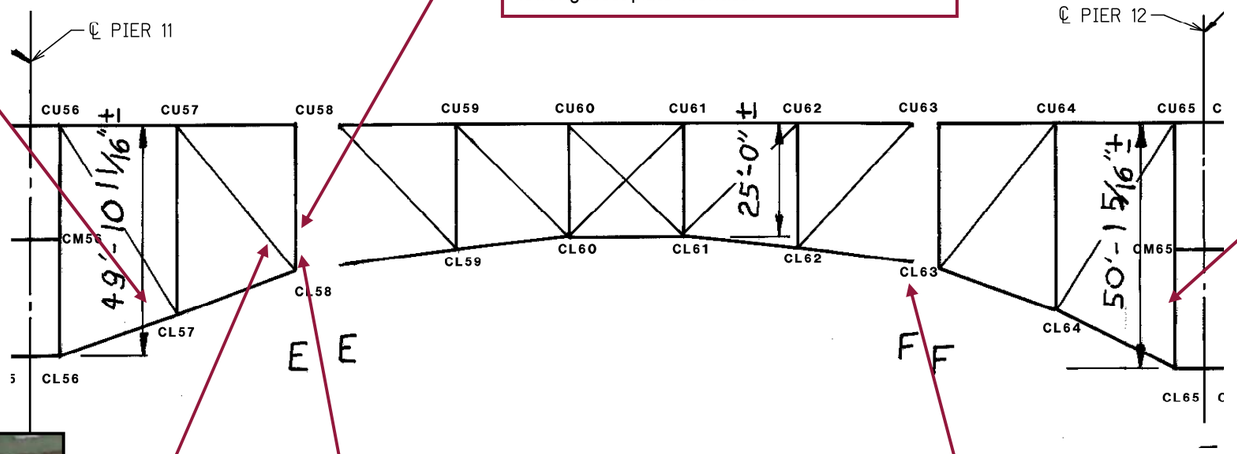
The north gusset plate at BL58 shows signs of abrasion with the lower chord at the sliding pin location, indicating movement of the suspended span. Swelling of the pin plates between rivets on the lower chord member was also noted at this location.

BL59-BU59 exhibits web pitting up to 1/8" surrounding the sway strut knee brace connection.

The sliding pin for member BL62-BL63 exhibits typical impacted rust at the north end of the pin at Panel Point BL63.

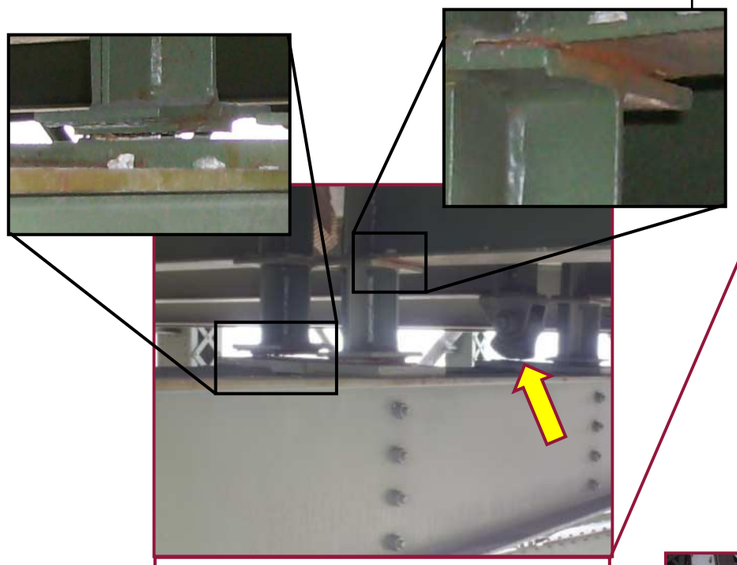
Pack rust at CL57S has caused distortion of the top flange and web splice plates. Approximately 1" thick pack rust is present between the localized areas at each plate.

1/8" deep pitting is typical (isolated locations up to 1/4" deep) along the full width of both the north and south web plates of CL58-CU58 above the lower gusset plate interface.



SPAN 11

TRUSS C



Isolated stringer bearings at utility deck Floorbeam 58 are not in contact with the bearing plates (left). Additionally the retrofitted bearing for Stringer 4 in the near span (between L58 and L59) exhibits a cracked bearing to stringer bottom flange weld and is producing abrasion dust (right).

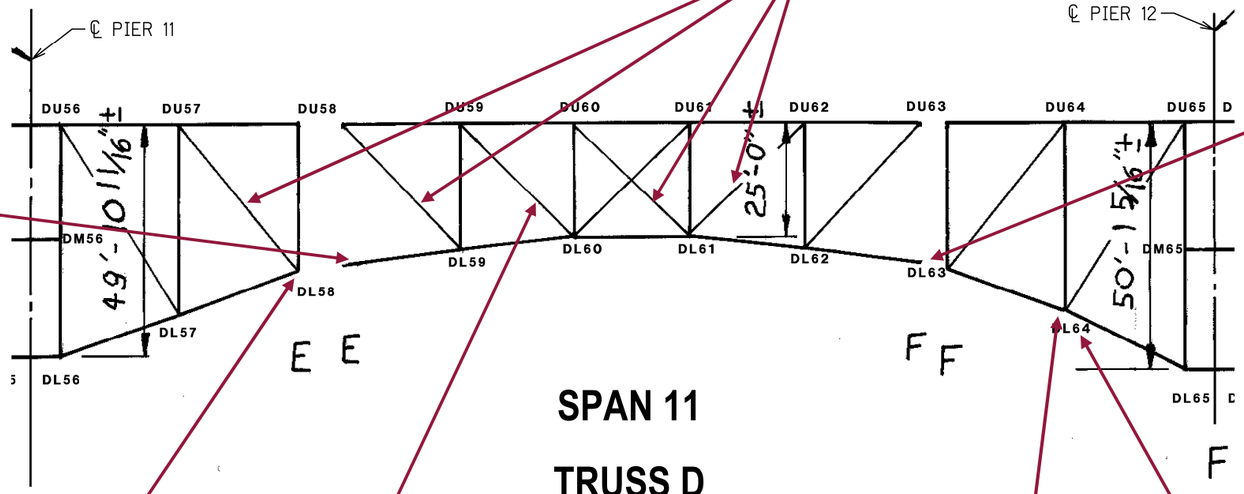
Impacted rust up to 2" thick is present between the vertical web plate and gusset plate CL58S. The pin at this location exhibits a protruding washer.

Pack rust up to 3/4" is present between the web plates and flange angles of vertical member CL65-CU65.

The sliding pin at CL63 exhibits pitting up to 1/4" deep along the pin circumference. The pin plates also exhibit heavy pitting, especially along the pin interface.

Similar to other spans throughout the structure, the lower chord north web plates exhibit losses along the lower flange angles. Losses in Span 11 are typified by 1/16"-1/8" deep pitting occurring within the lower 2" of the web and most of the length of each bay. The adjacent flange angles exhibit similar pitting.

Pack rust up to 3/4" is found between the diagonal member web plates and the lower flange angles along the length of the members.



DL58-DL59 exhibits pack rust measuring approximately 1.5" thick between the two outermost pin plates at DL58. Losses surrounding the pack rust are approximately 1/8" on each plate. Similar conditions were noted at DL63 with 1/2" thick pack rust.

The lower sliding pin at DL63 has a 4" diameter area exhibiting up to 5/16" deep pitting. This location has been cleaned and painted with no active corrosion.

SPAN 11

TRUSS D

The north gusset plate at DL58 exhibits up to 3/16" pitting, a condition typically found at the expansion locations throughout the structure (Photo taken 2010).

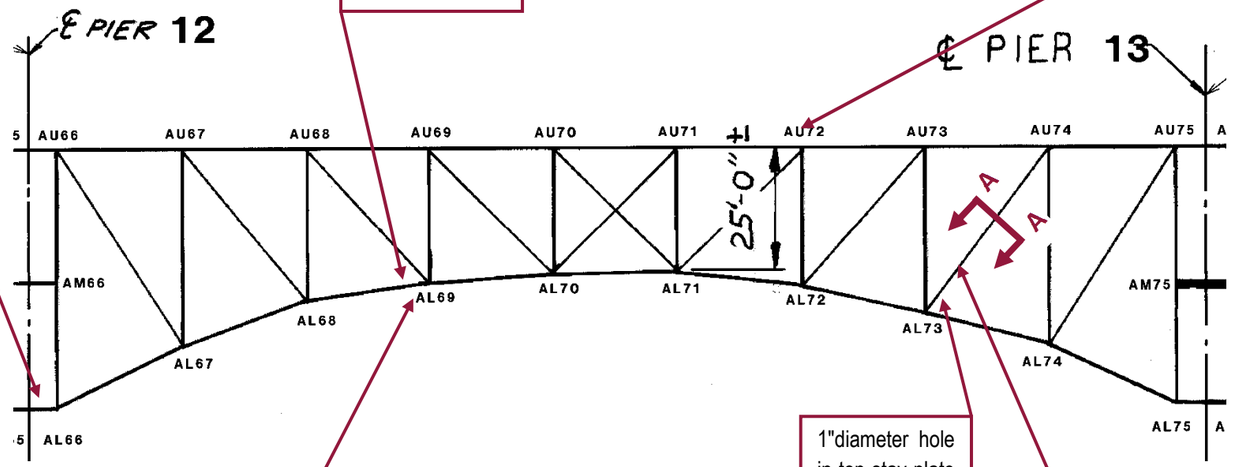
The north web plate of member DL60-DU59 exhibits 1/8" pitting (cleaned and painted) for the full height of the section along the interface with gusset plate DL60N.

Both gusset plates at DL64 are bowed approximately 3/16" out of plane to the north.

The lower half of the interior face of the DL64-DL65 north web plate exhibits pitting up to 5/16" deep adjacent to the DL64 gusset plate. This condition is typical for Truss D lower chord web plates at the panel interfaces throughout Span 11; however, pitting varies from 1/8" to the 5/16" depth at DL64.

Lower chord member AL65-AL66 exhibits pitting on the flange angles up to 1/8" with a 2" by 1/2" hole and up to 2" of impacted rust between the web and bottom flange angles.

2" diameter hole in top stay plate of lower chord



SPAN 12

TRUSS A

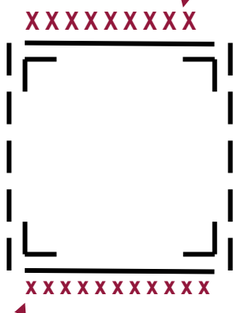
The top chord cover plate just east of Floorbeam 72 exhibits active corrosion due to the presence of a deck subdrain.

1"diameter hole in top stay plate of lower chord

The south face of the south gusset plate at AL69 exhibits heavy pitting along the lower chord interface and adjacent to isolated rivet heads.

Heavy pitting is present along the web of AL73-AU74 at the lower gusset plate interface (Section A-A).

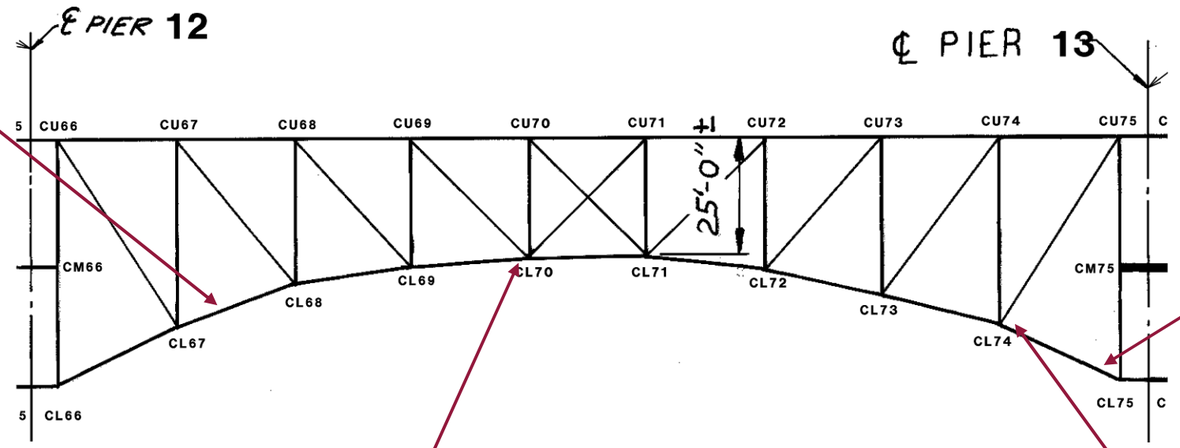
3/16" pitting x full web height



Section A-A

1/8" pitting x full web height

Pack rust is showing signs of reactivation between lower chord web plates and flange angles.

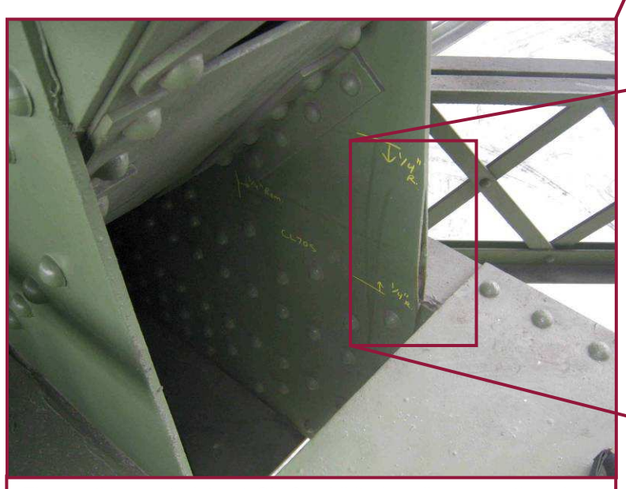


SPAN 12

TRUSS C

Isolated 3/16" pitting on the top stay plate

The top flange splice plate at CL74S is distorted due to pack rust.

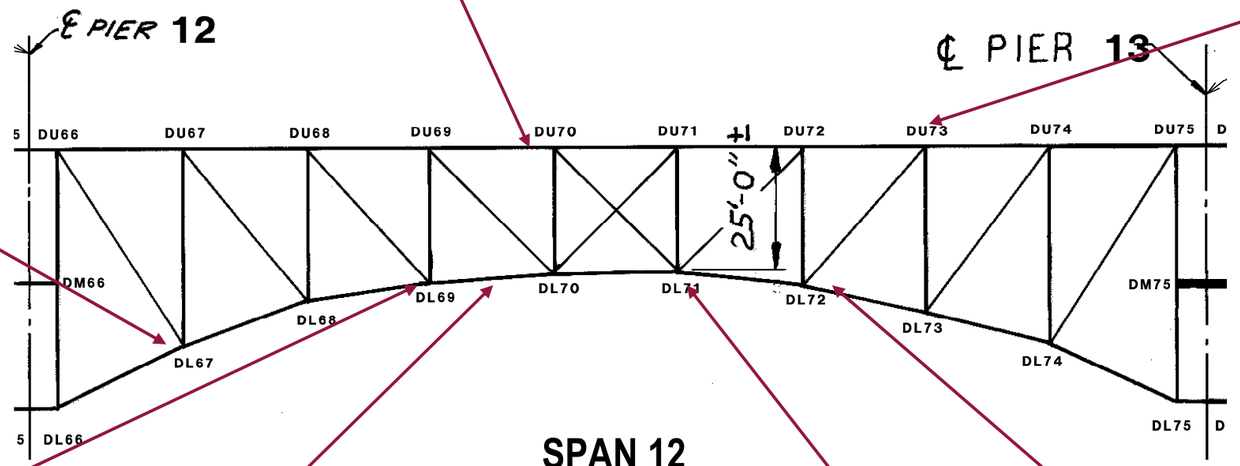


The south gusset plate at CL70 exhibits lamellar separation along the west free edge, with an effective remaining plate thickness of approximately 1/4" (Photo taken 2010). Limits of the separation have no increased since the 2010 inspection.

Detail view of lamellar tear taken in 2011.

Stringer 1 exhibits up to 1/4" pitting in the bottom half of the south face of the beam near the connection to Floorbeam 70.

The diagonal members throughout Span 12 typically exhibit 1/16" – 1/8" pitting along the gusset plate interfaces at the north web plates. This condition is typical throughout the structure.



The south fascia stringer just east of Floorbeam 73 has a weld retrofit along the bottom flange cope.

Pack rust between the gusset plates and web plates at DL67 has caused 1/2" bowing of the gusset plates.

SPAN 12

TRUSS D

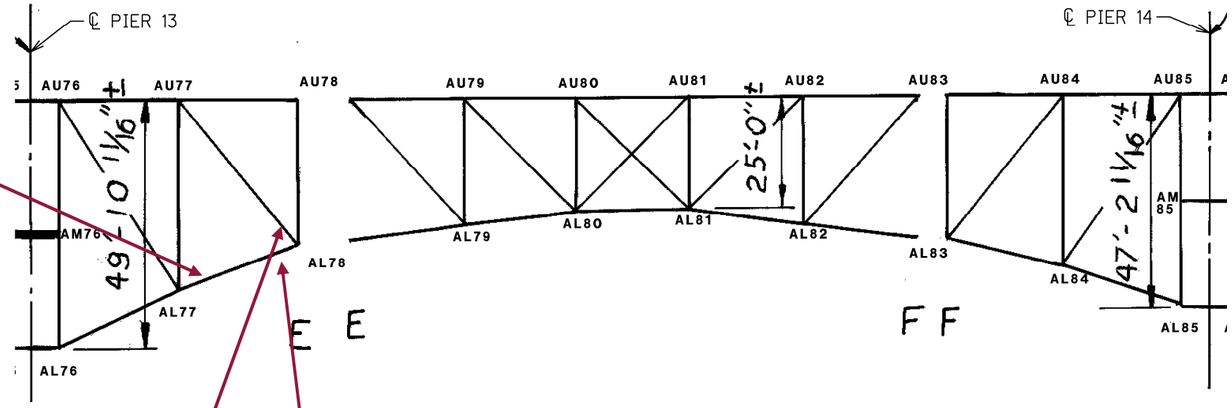
The lower chord, north web plate at DL69 exhibits pitting up to 1/4" deep along the gusset plate interface. This condition is common throughout Span 12; however, losses are typically less, consisting of 1/8" deep across the section. Also note the minor pitting along the interior face of the gusset plate adjacent to the lower chord.

The lower chord member DL69-DL70 exhibits pack rust up to 2" thick between the north web plate and the lower flange angle. Pitting up to 3/16" was noted on the north web plate along the flange angle.

Adjacent to the north gusset and above the bounds of the lower flange angle, the lower chord web plate at DL72 is perforated by a 1" diameter hole.

Both gusset plates at DL71 have misplaced drill/punch holes along the east free edge.

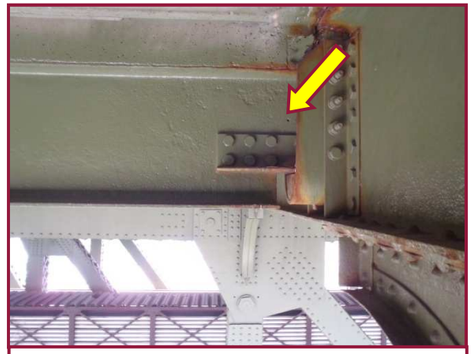
Similar to other spans throughout the structure, the lower chord north web plates exhibit losses along the lower flange angles. Losses in Span 11 are typified by 1/16"-1/8" deep pitting occurring within the lower 2" of the web and most of the length of each bay. The adjacent flange angles exhibit similar pitting.



SPAN 13

TRUSS A

The south web plate of member AL77-AL78 exhibits 1/4" pitting approximately 2" high along the bottom flange angle.



The Stringer 2 web just east of Floorbeam 83 exhibits pitting up to 1/8" throughout with isolated holed through sections.

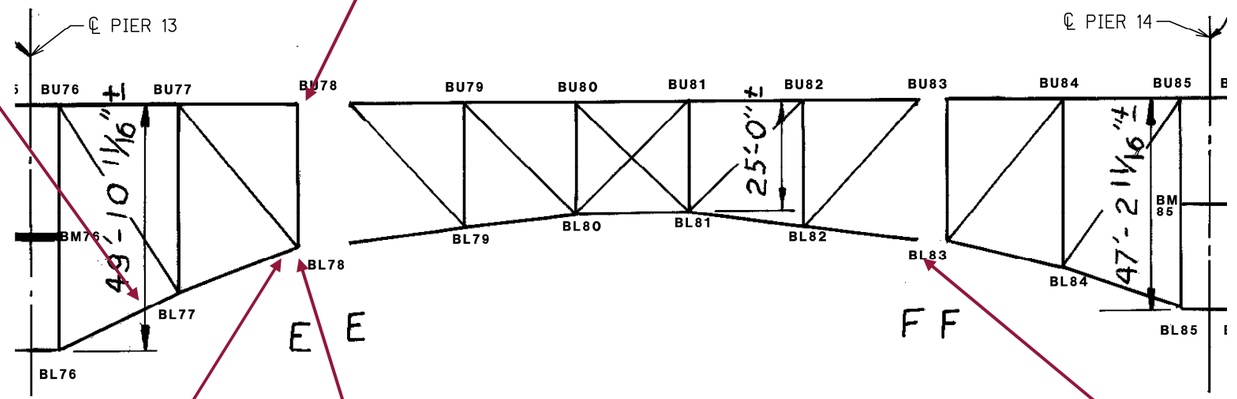
1/4" deep pitting is present across the width of the north web plate of AL78-AU77 adjacent to the lower gusset plate rivets. The south web plate exhibits pitting up to 1/8" deep.

The AL77-AL78 south web adjacent to gusset plate AL78S exhibits isolated pitting. Note the retrofit plates on the web and bottom flange.

The south web plate of member AL83-AU84 exhibits 1/8" pitting along the lower chord gusset plate and in isolated locations along the member.

Pack rust between the web plates and top flange angles exhibits signs of reactivation.

The utility deck Floorbeam 78 has received extensive web retrofits throughout the length of the member.



SPAN 13

TRUSS B

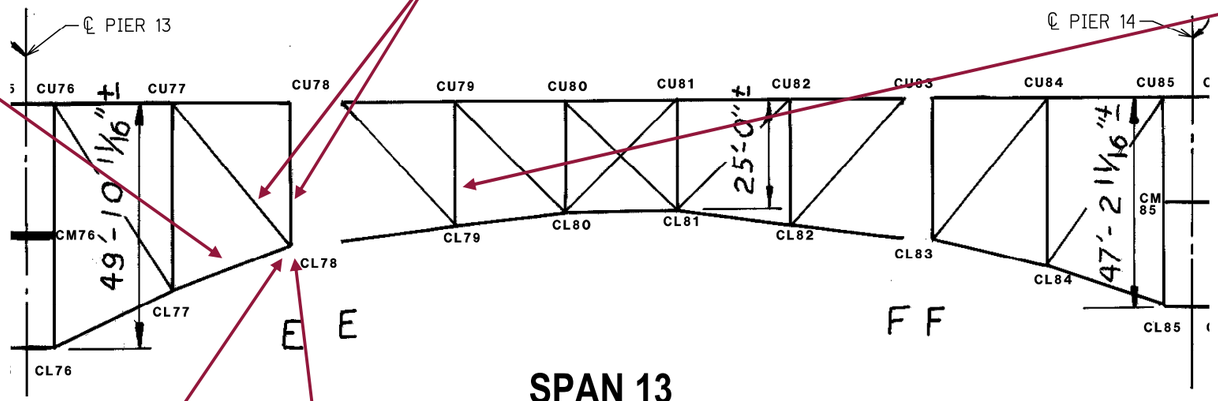
The south web plate of BL77-BL78 near BL78 is perforated, exhibiting a 2" diameter hole opposite the bottom flange angle. Adjacent 1/4" deep pitting is present at this location.

The internal pin plates at BL78 exhibit pack rust up to 1-1/2" thick at the plate corners with localized distortion.

Pack rust at BL83 has pushed the sliding pin plates outward such that 5/16" of the pin is no longer bearing.

The north web plates exhibit 1/8" deep pitting along the full width of the member at the gusset plate interface.

Pack rust between the bottom flange angle and south web of CL77-CL78 has distorted the vertical angle leg. The rust is reactivating, as indicated by rust staining. This condition is common among the lower chord members throughout Truss C.



SPAN 13

TRUSS C

The south web plate of member CL79-CU79 exhibits 1/8" pitting around the sway brace connection.

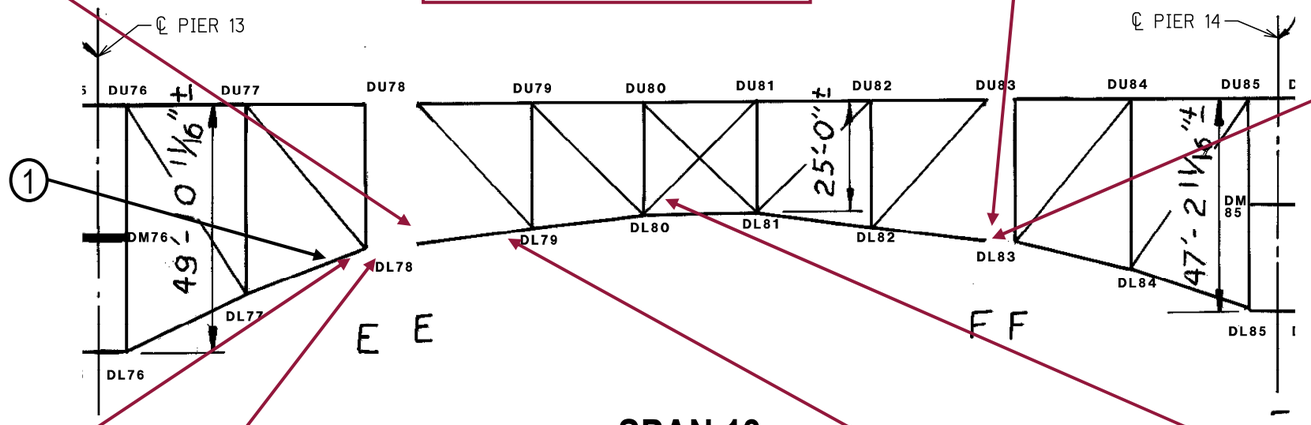
Impacted rust has accumulated between gusset plate CL78S and the vertical member web plate. The rubber washer around the pin is protruding at this location.

Several utility deck stringer bearings exhibit excessive rotation at Panel Point 78. Note the extensive retrofitting of the web and bottom flange of utility deck Floorbeam 78.

Both ends of the lower sliding pin in member DL78-DL79 exhibit section loss in the upper half of the circumference. Losses of 1/16"-1/8" are typical for the full circumference of the pin ends; however, an area exhibiting approximately 1/2" is shown at the north end of the pin.

The truss web members throughout Span 12 typically exhibit 1/16" – 1/8" pitting at the gusset plate interfaces over the full height of the north web plates. Isolated locations exhibit pitting from 3/16" up to 1/4".

① Isolated locations along the top flange angle of the lower chord exhibit pitting up to 1/4" deep on the outstanding leg.



The suspended span sliding pin at DL83 is misaligned with the north keeper plate due to 3/8" pack rust causing localized plate distortion.

SPAN 13

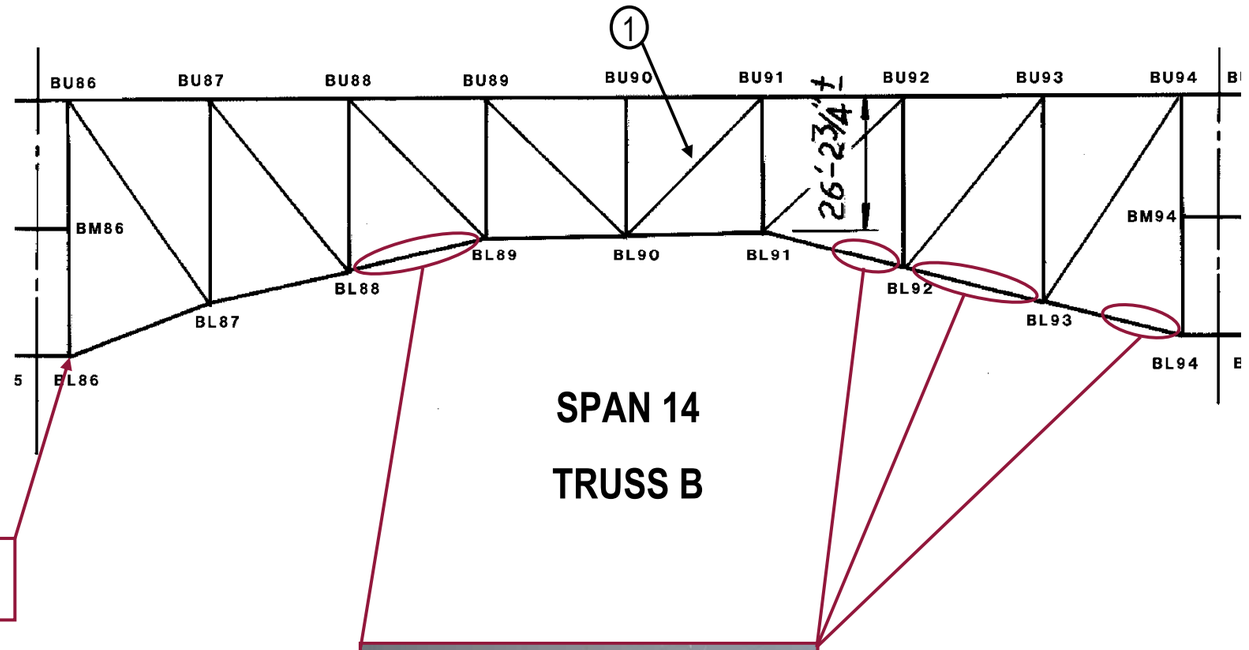
TRUSS D

The lower batten plate on the underside of diagonal member DL80-UL81 exhibits advanced corrosion with a 2" diameter hole and adjacent 1/4" pitting near the lacing connection.

The north web plate of DL77-DL78 exhibits 1/8", full height pitting near DL78. This condition is commonly found throughout Truss D and throughout Span 13; however, losses are typically less, measuring 1/16" on average. The web plate at DL85 exhibits pitting up to 3/16" deep in this area.

Heavy pitting (greater than or equal to 1/4" deep in isolated locations) of the lower gusset plates at the pin locations is typical with reactivating surface corrosion due to failing deck joints above (Photo taken 2010).

The north gusset plate at DL79 is bowed to the south approximately 1-3/16" along the interface with the lower chord web of DL78-D79 due to heavy pack rust accumulating between the two plates. Also note the 1/16"-1/8" loss of the web plate in this area.

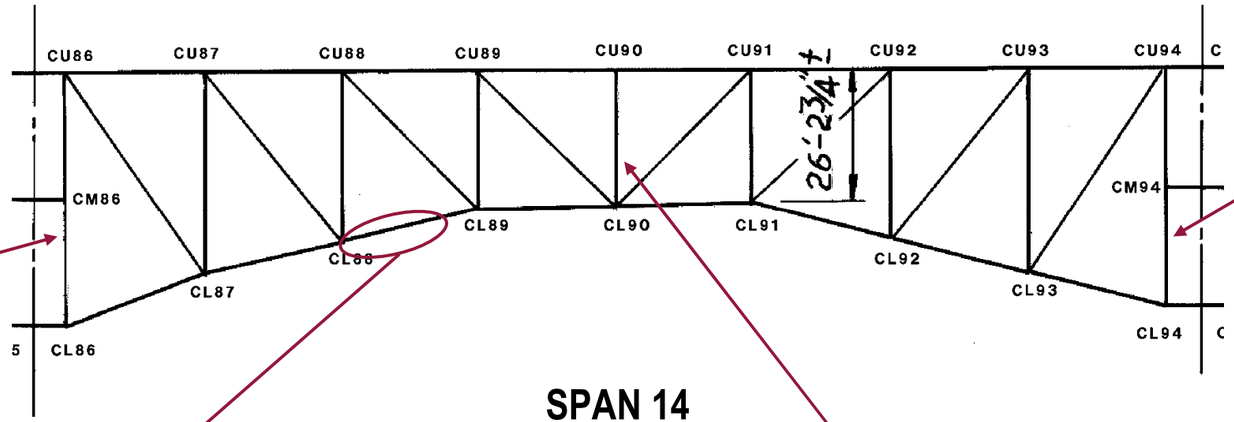


The south exterior lower chord splice plate is pushed out approximately 1" due to pack rust.

1/8" pitting of the north lower chord web plate along the length of the members at isolated locations (BL91-BL92 shown).

1

Member BL90-BU91 exhibits pack rust up to 1/2" thick between web plates and flange angles.



Vertical member CL86-CU86 exhibits pack rust up to 3/8" between the web plates and flange angles.

Vertical member CL94-CU94 exhibits pack rust up to 1/2" between the web plates and flange angles. Pack rust in this location shows signs of reactivation.

SPAN 14

TRUSS C

Vertical member CL90-CU90 exhibits 1/4" pitting around the top sway brace connection.

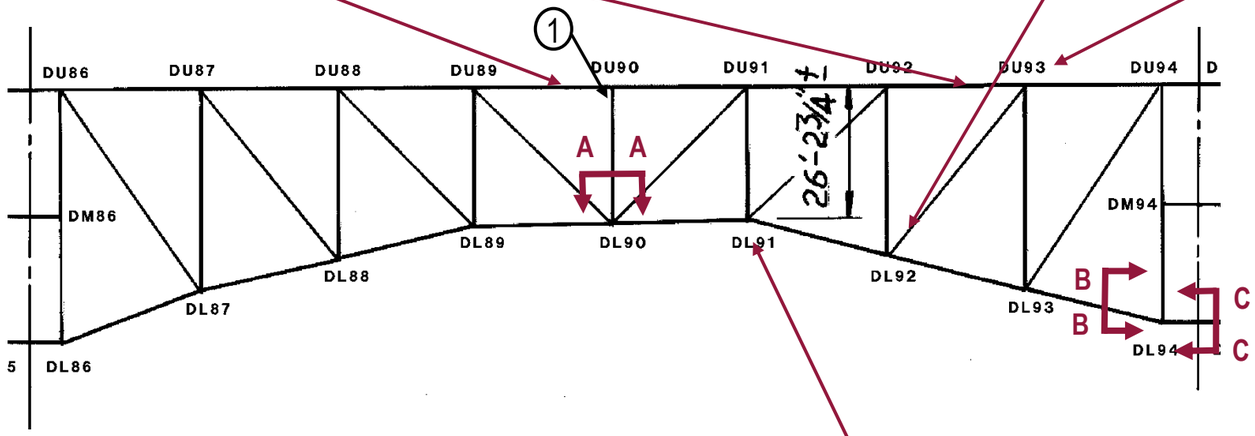
The lower chord south web plate exhibits pitting up to 3/16" deep pitting along the bottom flange angle in the lower half of the plate. The pitting extends approximately 3/4 of the length of CL88-CL89.

Between Floorbeams 89 and 90, the south face of Stringer 7 exhibits heavy pitting throughout the web. The pitting at this location was measured to be 1/8" deep on average with isolated locations up to 1/4" deep. Similar conditions are present between Floorbeams 92 and 93.

The upper batten plate at the base of the diagonal member exhibits 1/4" pitting throughout, with a 2" diameter perforation.

1 Floorbeams 90 and 93 in Span 14 exhibit pitting up to 1/8" deep at isolated locations on the west face of the web between Truss D and Stringer 7.

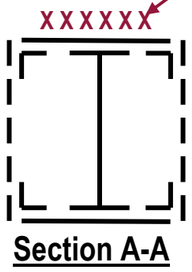
The upper chord of Truss D in Span 14 is in good condition overall with no significant deficiencies noted.



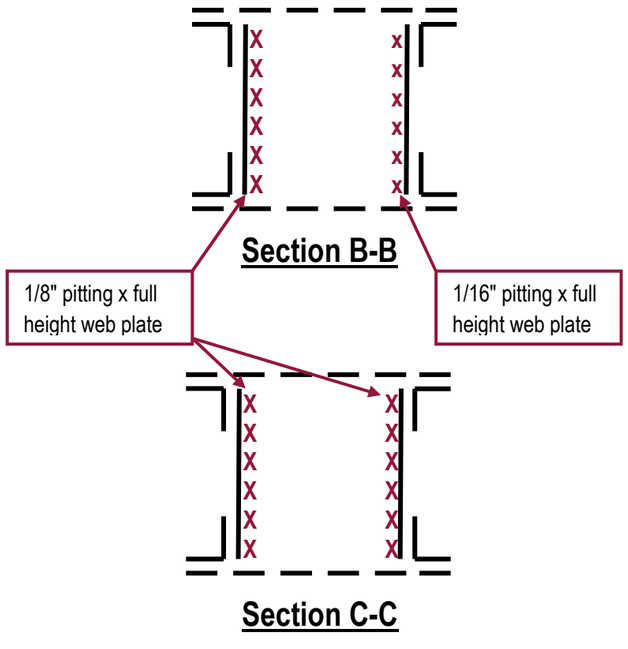
SPAN 14

TRUSS D

1/4" web pitting surrounding the strut bottom flange, extending the full width of the flange and 1" on both sides



Section A-A

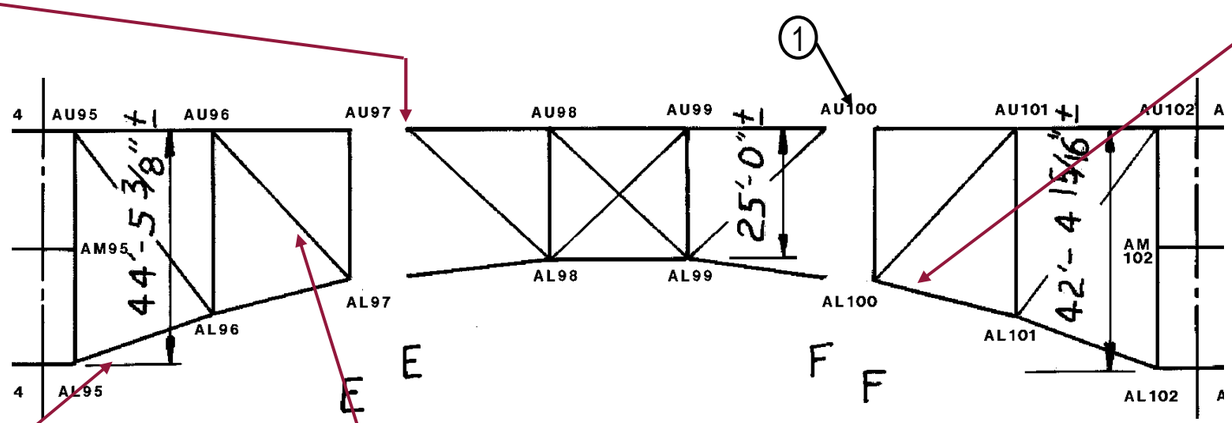


Section B-B

Section C-C

Gusset plate DL91 exhibits conditions typical of the exterior gusset plates throughout Span 14, Truss D, with activating rust along the interface at the lower chord and associated minor pitting (Photo taken 2010).

The west bottom flange of Floorbeam 97' at AU97 exhibits active laminate rust with 1/16" section loss.



SPAN 15

TRUSS A

The south bottom flange angle of member AL100-AL101 exhibits isolated holes with sections cut out of the outstanding legs.

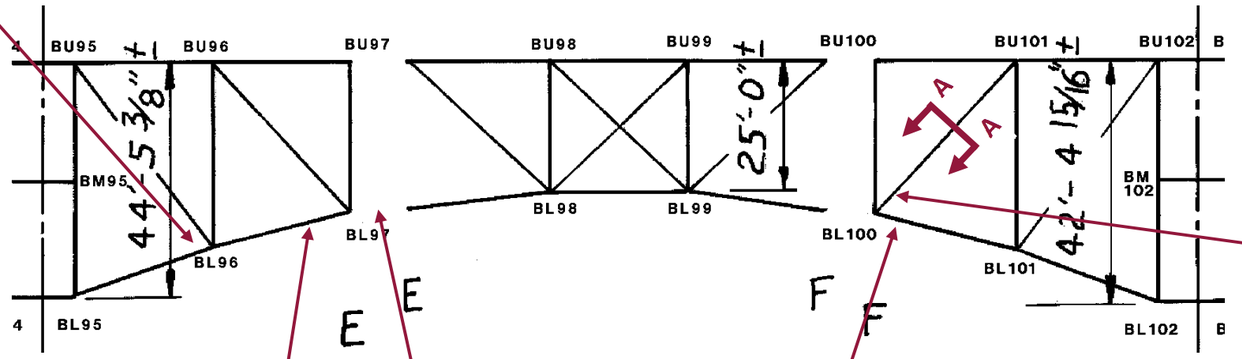
The south web plate of AL95-AL96 at AL95 exhibits 1/8" and 1/4" deep pitting along the top and bottom flanges, respectively. The bottom flange angle has 1/8" deep pitting on the vertical leg, with isolated pin holes measuring approximately 1/4" diameter.

The interior web plates of AU96-AL97 exhibit laminate rust with 1/8" loss on the interior, as well as isolated areas of 3/16" pitting on the interior and exterior faces of this member.

The exterior south web plate of AU96-AL97 exhibits areas of 3/16" pitting (cleaned and painted).

The bearing stiffeners on the east face of Floorbeam 100 adjacent to Truss A exhibit isolated locations of 100% section loss.

The north web plate of BL95-BL96 exhibits 3/16" deep pitting for the full height of the plate adjacent to BL96N. This location was covered by a thin fill plate which has since completely corroded outside the bounds of the gusset plate.



SPAN 15

TRUSS B

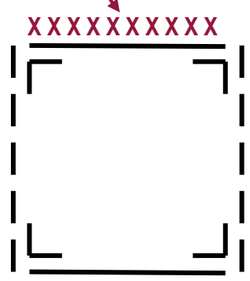
1" diameter hole in outstanding leg of bottom flange angle

The lateral connection members at BL100 exhibit 1/8" deep pitting throughout the horizontal faces. Pack rust has formed between the knee brace connection and the gusset plate, distorting the connection angles.

Isolated 1/16" pitting on the interior south web plate and similar pitting with pack rust up to 1/2" on the north web plates

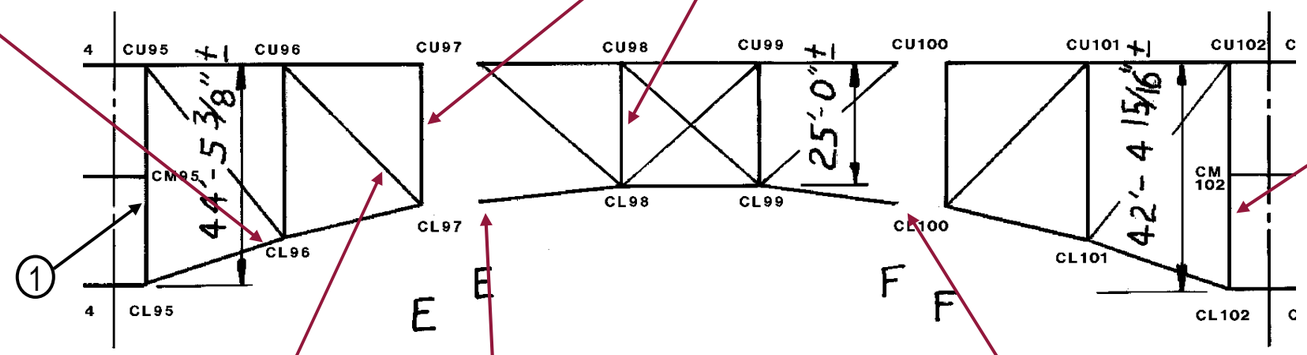
The south outermost pin plate at BL97 has been replaced with the welded plate shown. The end of the pin and the outer edge of the plate are 1/2" out of plane, resulting in a reduced pin bearing area.

1/4" deep pitting for the full height of the web



Section A-A

The south web plate of CL95-CL96 exhibits advanced section loss up to 3/8" across the full height of the plate at the interface with the south gusset at CL96.



SPAN 15

TRUSS C

Surface pitting of lacing bars up to 1/16" throughout vertical member

1 Pack rust up to 3/4" between web plates and flange angles

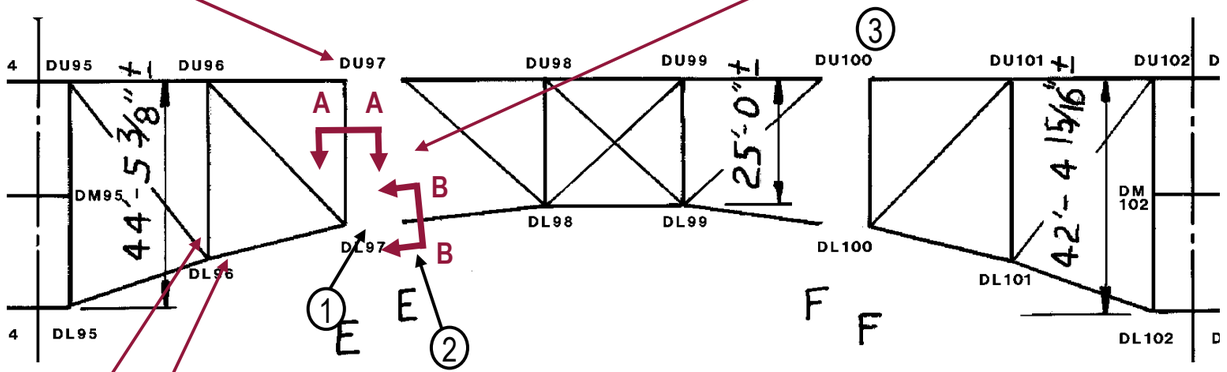
Diagonal member CL97-CU96 exhibits 3/16" pitting to the south web plate for half the height of the section adjacent to the lower chord gusset plate. The north web plate exhibits 1/16" pitting in the same location.

Isolated 1/4" pitting on the first and second pin plates in the suspended span

The lower chord sliding pin at CL100 is not bearing fully on the outermost pin plate due to impacted rust between the lower chord and gusset plate. The end of the pin and outer edge of the pin plate are misaligned by 1/4".

The upper vertical pin at DL97 has been retrofitted with a welded plate on the exterior face of the pin. The nut is not fully engaged and a gap is present. Minor pack rust is developing between the exterior web plates of the vertical near the pin.

The lower chord at DL97-DL98 exhibits distressed connections due to heavy pack rust, as well as heavy localized pitting up to 5/16" deep.



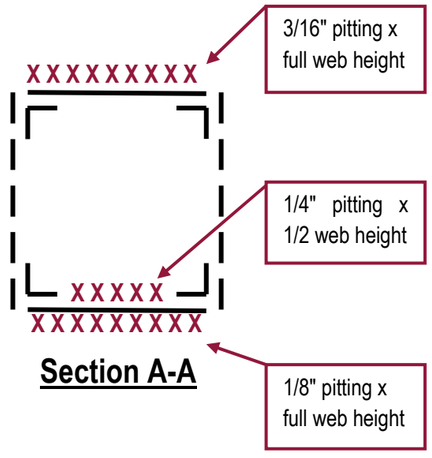
SPAN 15

TRUSS D

1

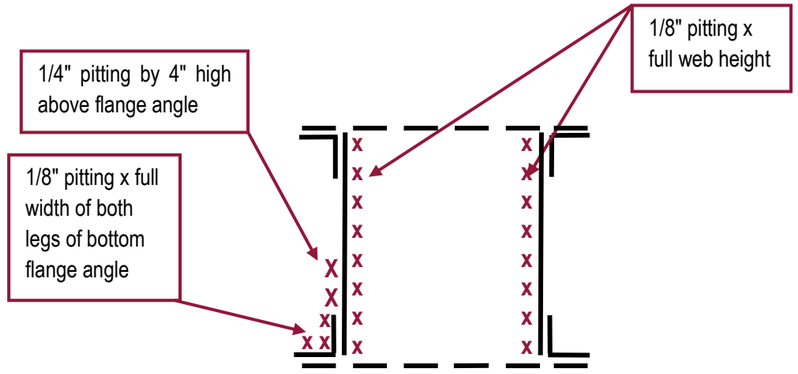
The lower chord pin and Panel Point DL97 exhibits laminate rust with section loss up to 1/2" at the north end along the top.

The fill plate between gusset plate DL96 and the north web plate of DL96-DL97 exhibits 100% section loss and the adjacent web plate has 1/4" pitting over the full height. The south web plate exhibits a similar condition with 1/8" pitting.



Section A-A

Three 1" diameter holes are present in the web of the sway strut between Truss D and Truss C at Panel Point 97.

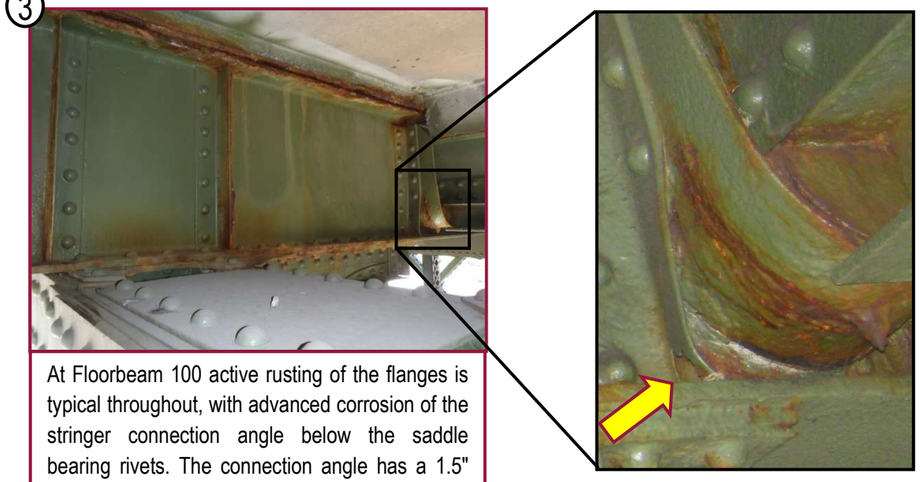


Section B-B

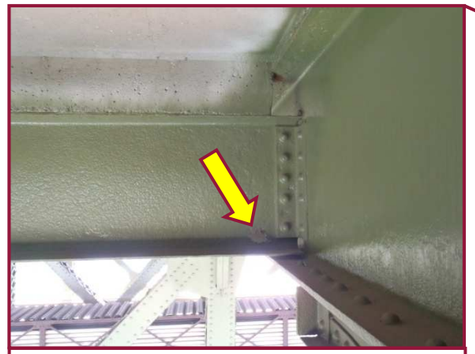
2

Lower chord member DL97-DL98 exhibits 1/4" deep web pitting 4" high above the north bottom flange, as well as 1/8" on both legs of the flange angle. The interior faces of both web plates also exhibit 1/8" pitting at this location. These losses are depicted in Section B-B.

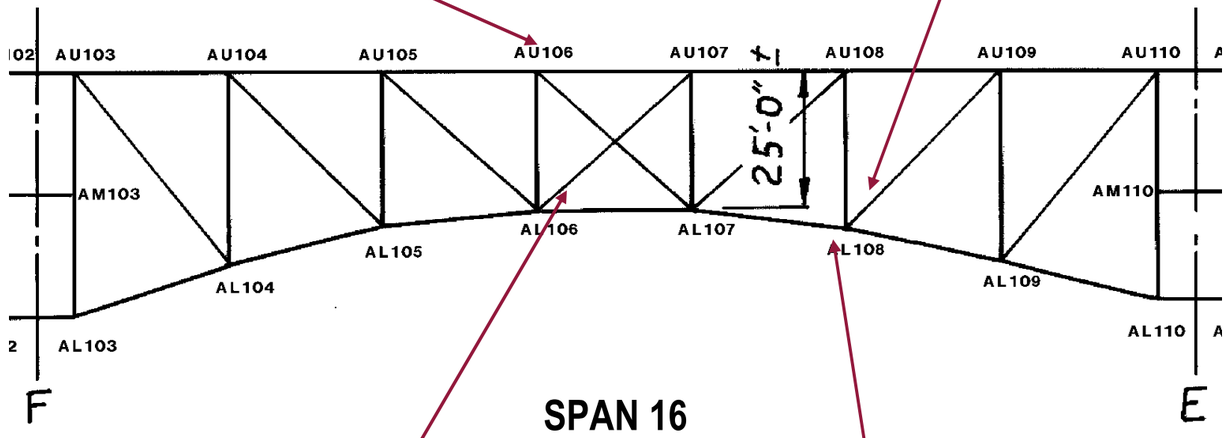
3



At Floorbeam 100 active rusting of the flanges is typical throughout, with advanced corrosion of the stringer connection angle below the saddle bearing rivets. The connection angle has a 1.5" diameter perforation at this location (right). Additionally, the saddle bearings typically exhibit minor pitting and reactivating rust; however, some locations exhibit pitting with minor loss of section.



Stringer 2 web exhibits a 4" diameter hole approximately 3" from the floorbeam connection with 1/16" pitting for the height of the web at this location.



SPAN 16

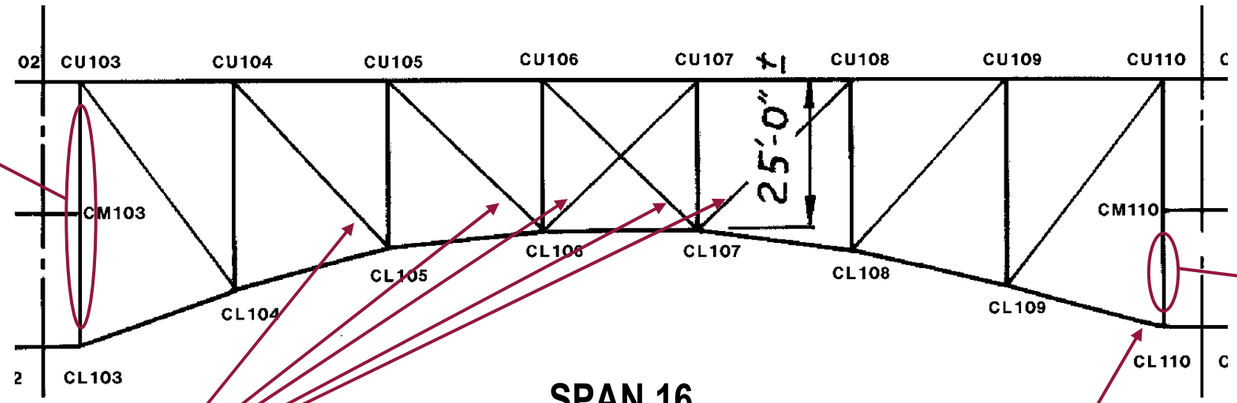
TRUSS A

1/2" diameter hole in diagonal member cover plate near the lower gusset plate

Top flange with isolated pinholes near lower gusset plate

2" diameter hole in outstanding leg of lower chord top flange angle

Pack rust up to 1/4" between web plates and flange angles



Pack rust up to 3/8" between web plates and flange angles

SPAN 16

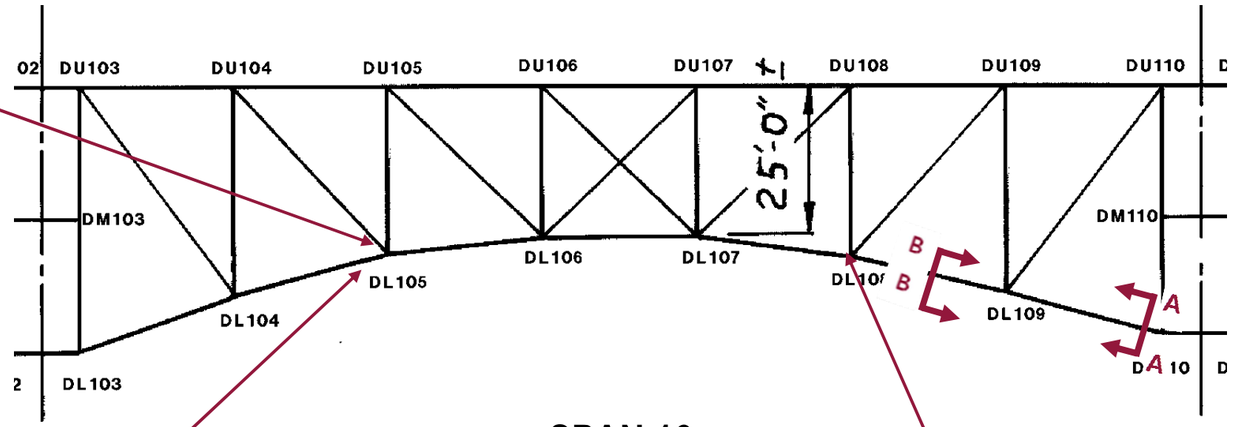
TRUSS C

1/8" pitting to top and bottom lateral bracing connection plates

Failures of the paint top coat were found on diagonal members near the lower gusset plate connections at CL105, CL106, and CL107 in Span 16 (CL106-CU107 shown).

Vertical stiffeners for the lower chord at DL105 exhibit advanced section loss with both outstanding legs having 100% loss in the lower 4". Pack rust has formed between the stiffener angle and the web fill plate at this location, and heavy pitting of the lateral bracing connection plate and the lateral bracing bottom flange angles.

The exterior of the Truss D upper chord is clean with paint intact and no significant deficiencies noted in Span 16.

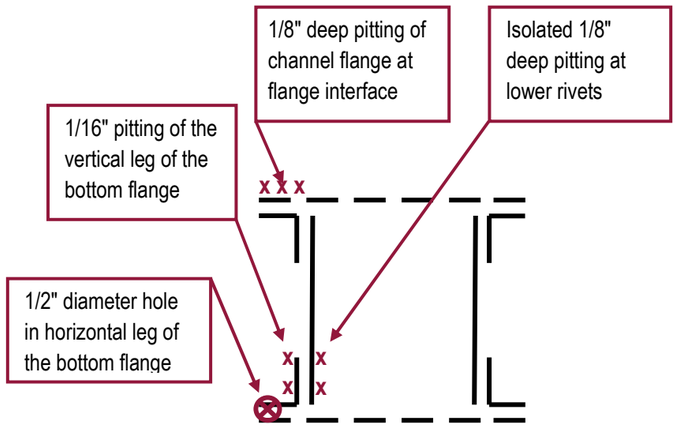


SPAN 16

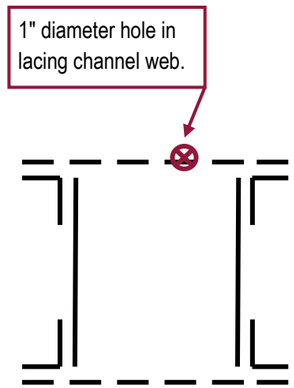
TRUSS D

The lower chord bottom flange at Panel Point DL108 exhibits 1/8" deep pitting with an estimated 25% loss of rivet heads at the lateral bracing gusset plate connection.

The north interior web plate of DL104-DL105 exhibits 1/16" pitting around the bottom row of rivets for the first 18" from gusset plate DL105N.



Section A-A



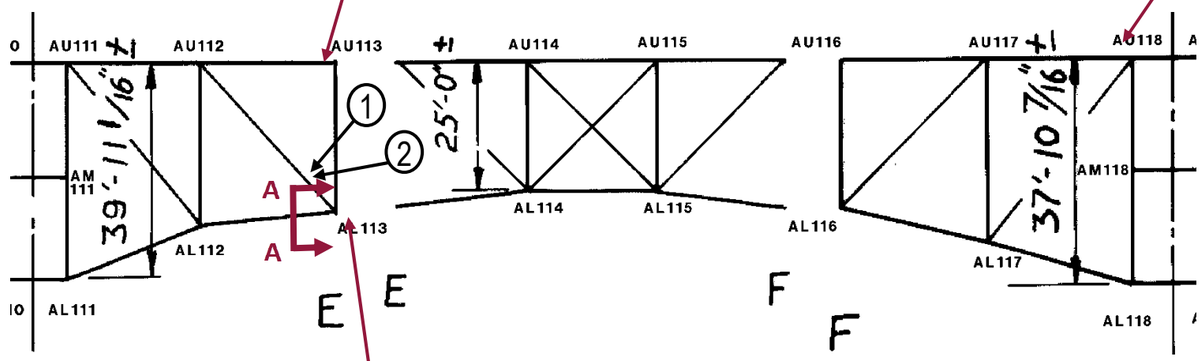
Section B-B

1

The south exterior web plate of AL113-AU112 exhibits 1/4" deep pitting 1" tall along the interface with the lower chord gusset plate.

The south gusset plate at AU113 exhibits pitting up to 1/4" deep adjacent to the bearing pin, as well as isolated minor pitting throughout the upper half of the interior face of the plate.

Stringer 2 between AU117 and AU118 exhibits advanced section loss with less than 1/8" section remaining for the full height of the web near AU118. A 4" diameter hole is present in the web at the flange.



SPAN 17

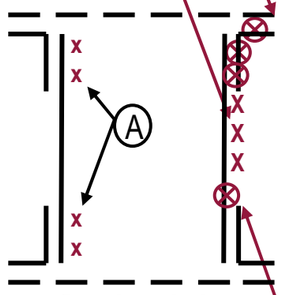
TRUSS A

Pitting with active surface rust to the interior south web plate adjacent to gusset plate AL113S

Lower chord member AL112-AL113 exhibits advanced section loss at several components of the built-up member at AL113. These losses are depicted in Section A-A. Note multiple retrofits at this location.

Flange angle with 100% loss of section

3/16" web pitting

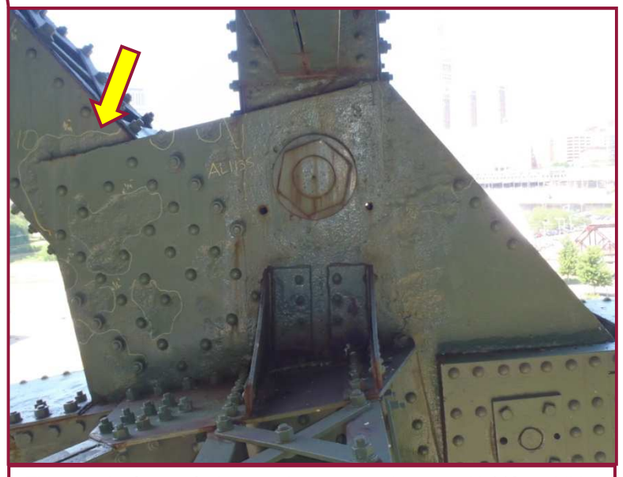


Section A-A

⊗ = Perforated Area

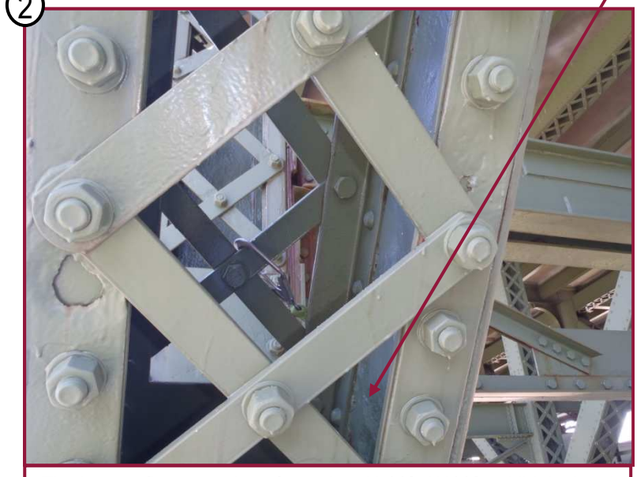
Web with 1/2" diameter holes near the bottom flange

A 1/8" web pitting around top and bottom flange rivets, interior face



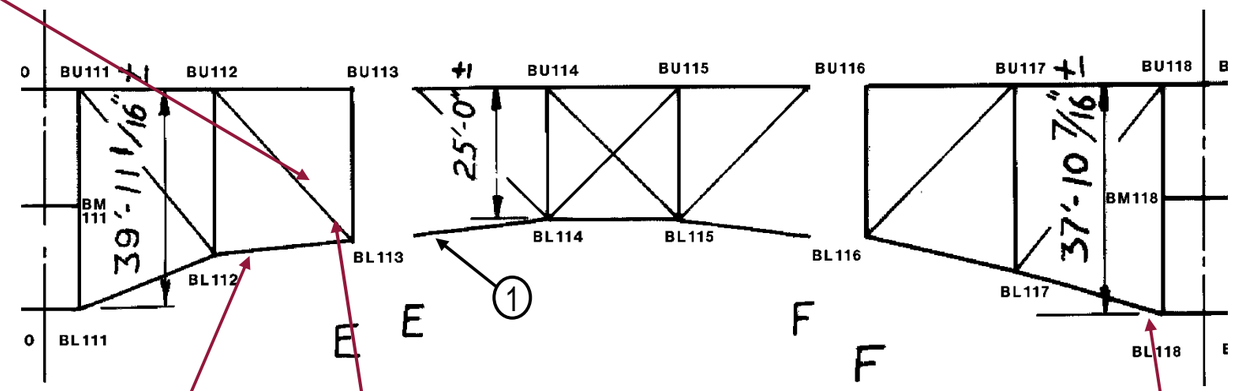
The south face of the south gusset plate at AL113 exhibits widespread heavy loss. The areas highlighted on the plate in yellow exhibit pitting of 1/4" deep or greater. The interior face of the south plate exhibits isolated areas with up to 1/4" loss. Additionally, note the 1/4" deep pitting along the full height of the web of the diagonal member AU112-AL113 near the gusset plate interface.

2



The bottom flange angles of member AL113-AU112 exhibit isolated holed through sections up to 2" diameter with new bolted plate retrofits on the inside of the member. The interior faces of both web plates exhibit 1/8" pitting throughout with isolated areas up to 5/16" for the first 3' from the bottom of the member.

The interior of BU112-BL113 exhibits failing paint throughout with minor active corrosion near BL113. The rivets connecting the diagonal member to the gusset plates are heavily pitted, with an estimated 50% loss of rivet head section.



SPAN 17

TRUSS B

1

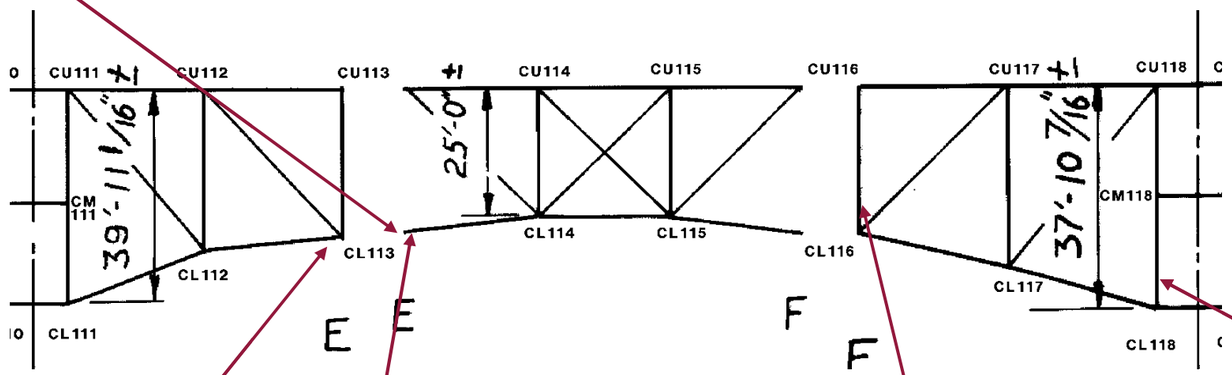
The interior face of the south web plate of BL113-BL114 exhibits full height pitting up to 1/4" deep at the interface with the BL113 gusset plate.

Up to 1/4" pitting on the north bottom flange angle near BL112

The north gusset plate at BL113 exhibits localized pitting up to 1/4" deep. The areas outlined on the plate are representative of typical losses at pinned gusset plates throughout the structure (Photo taken 2010).

1/4" pitting to top and bottom lower lateral bracing connection plates

hole in the
t the bottom



L118 is
to pack

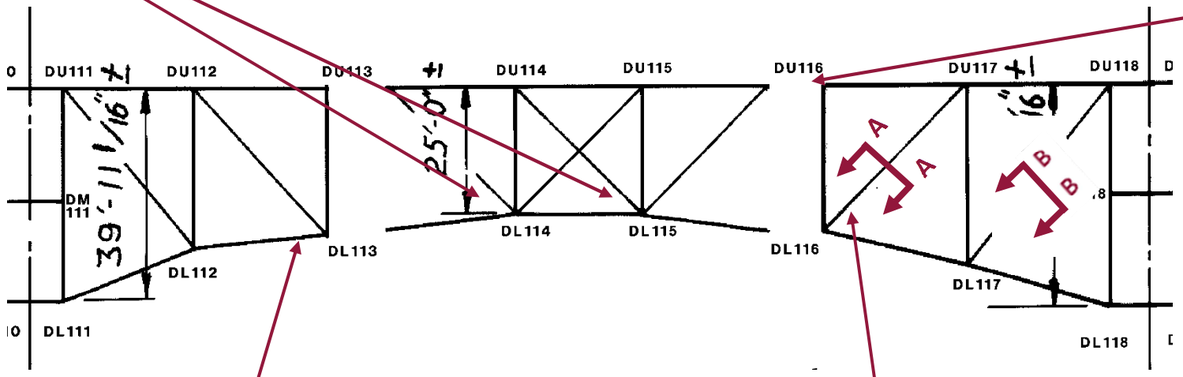
al web

4" diameter holed through section in
bottom cover plate

hibits heavy pitting throughout
reas isolated among the more
deepest pitting is found along
lower chord top flanges and
(Photo taken 2010).

DL114N and DL115N exhibit heavy pitting along the lower chord interface. The pitting is typically between 6" and 12" tall and extends the length of the plate.

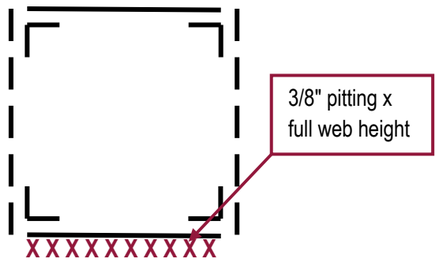
Locations of advanced section loss are isolated throughout Span 17, with isolated flange angles and lacing channels exhibiting small perforations.



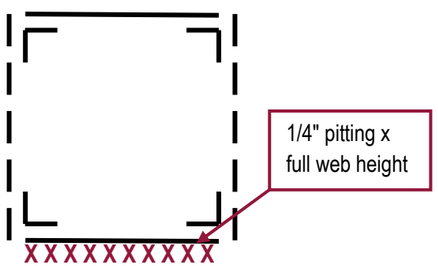
SPAN 17

TRUSS D

Gusset plate DU116S exhibits 1/4" pitting to the south face around the lower pin. Note the protruding rubber washer at this location.



Section A-A



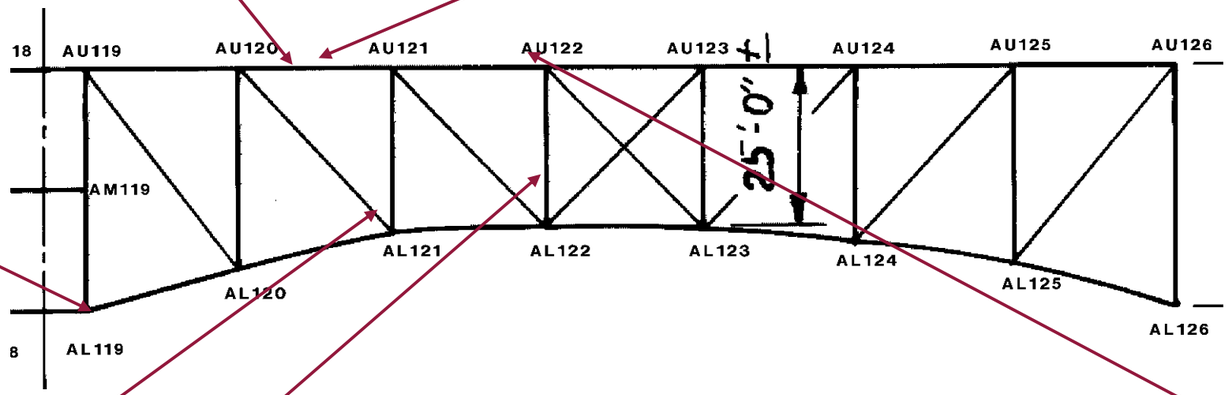
Section B-B

Member DL112-DL113 exhibits 3/8" pitting for half the height of the north web plate, with 1/8" deep pitting over the remaining height of the section. In addition, the outstanding leg of the bottom flange angle exhibits a 4" diameter hole.

The north web plate of member DL116-DU117 exhibits 3/8" pitting for the full height of the section along the lower chord gusset plate at Panel Point DL116 (see Section A-A).

Abandoned welded appurtenances are present at multiple locations along the north web of AU120-AU121.

The horizontal leg of the flange angle of AU120-AU121 exhibits advanced section loss with a large area completely corroded. Rust is beginning to reactivate in this area.



The north gusset plate at AL119 exhibits 1/4" deep pitting around the bearing plate above the pin, with one 3" diameter area with up to 3/8" pitting.

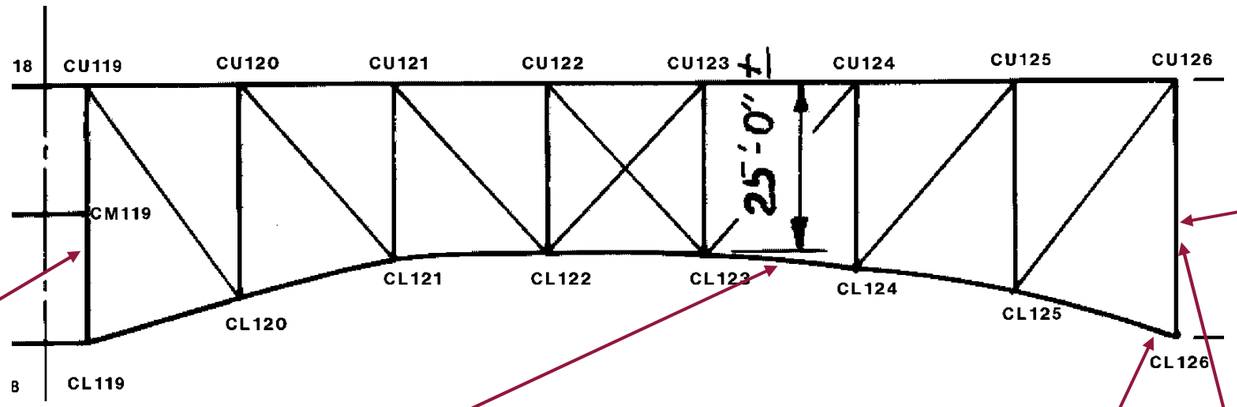
SPAN 18

TRUSS A

The top batten plate of AL121-AU120 exhibits heavy section loss (cleaned and painted) with isolated locations of paper thin section.

The south web plate of member AL122-AU122 exhibits 1/4" pitting on both sides of the sway brace connection and 3/16" pitting along the bottom of the connection. The north web plate exhibits 1/8" pitting along the full width of the section along the lower chord gusset plate.

The west side of Floorbeam 122 exhibits 1/4" pitting to the top flange and 25% section loss to the bottom flange.



Pack rust up to 1/2" between web plates and flange angles

Pack rust reactivating between web plates and flange angles with rust staining present

The internal stiffener plate at CL126-CU126 exhibits isolated areas of 1/4" deep pitting.

SPAN 18

TRUSS C

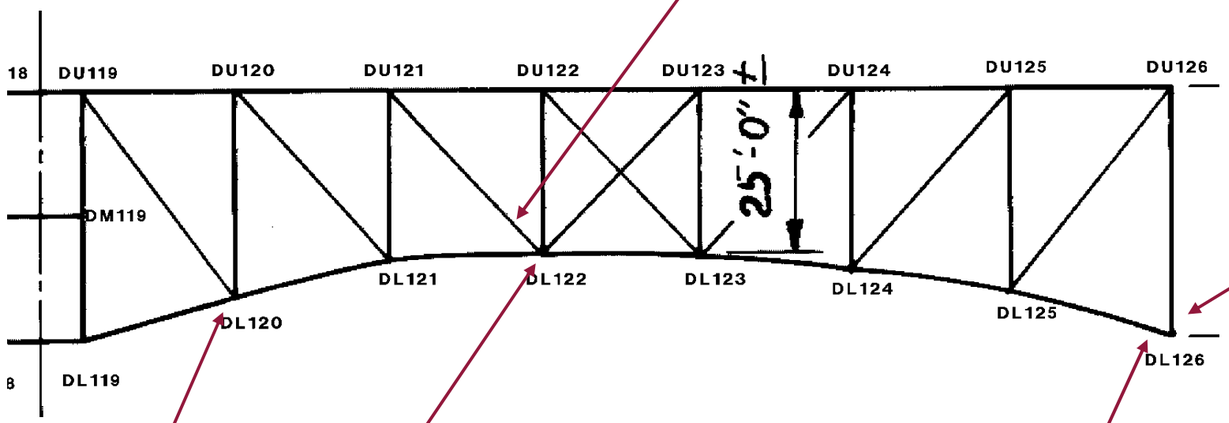
Both web plates of member CL125-CL126 exhibit full height 1/8" pitting along the interface with gusset plates at CL126 (north web plate shown).

The south web plate of vertical member CL126-CU126 exhibits up to 1/4" pitting below the sway strut connection.

The Truss D upper chord in Span 18 is typically clean with paint intact and no significant deficiencies.

Pack rust is reactivating between the web plates and flange angles on all lower chord members east of Panel Point DL121.

5" diameter area of pitting with 3/4" diameter hole in top batten plate



1" diameter hole in top batten plate

SPAN 18

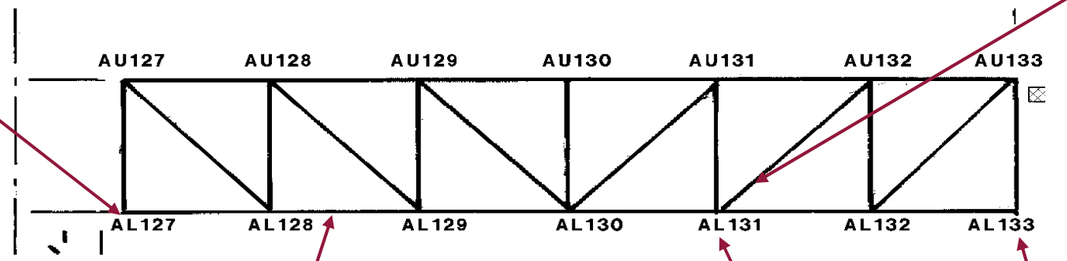
TRUSS D

Bottom corner of splice plate bent outward 3/4" due to pack rust

The north web plate of member DL119-DL120 exhibits 1/4" pitting over the bottom 1/4 of the height along the gusset plate interface. Pack rust has built up between this web plate and gusset plate DL120N.

Member DL125-DL126 exhibits 3/16" pitting for the full height of the south web plate along the interface of gusset plate DL126S.

The truss bearing at AL127 exhibits impacted rust up to 5/8" between the gusset plates and bearing casting (north side shown).



SPAN 20

TRUSS A

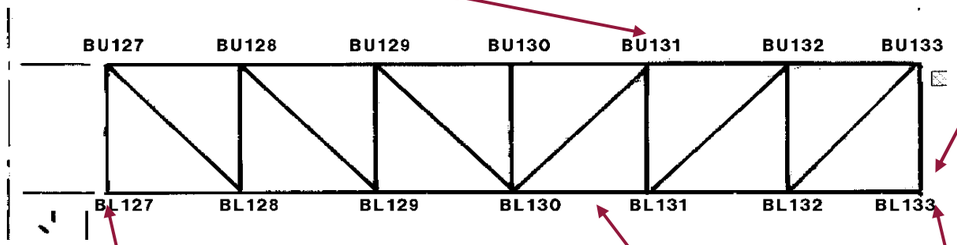
Member AL131-AU132 exhibits 1/4" pitting for the full width of the north top flange horizontal angle leg adjacent to the cover plate.

Abandoned bolted connections to the interior south web plate of AL128-AL129

The north face of gusset plate AL113S exhibits 1/4" pitting along the top of the diagonal 24" long by 5" high. This gusset plate also exhibits pitting up to 1/4" between the lower chord rivets. Also note the area of 100% section loss at the base of the diagonal member cover plate.

The bearing components at AL131 exhibit 1/8" pitting and activating surface rust throughout. The east side of the bearing contained standing water at the time of the inspection with moderate to heavy rusting in this area.

Floorbeam 131 bottom flange exhibits 1/16" pitting (cleaned and painted) for the full width.



SPAN 20

TRUSS B

The south web plate of member BL133-BU133 exhibits 1/16" pitting for the full width of the section with isolated 1/8" pitting (cleaned and painted) adjacent to the lower gusset plate.

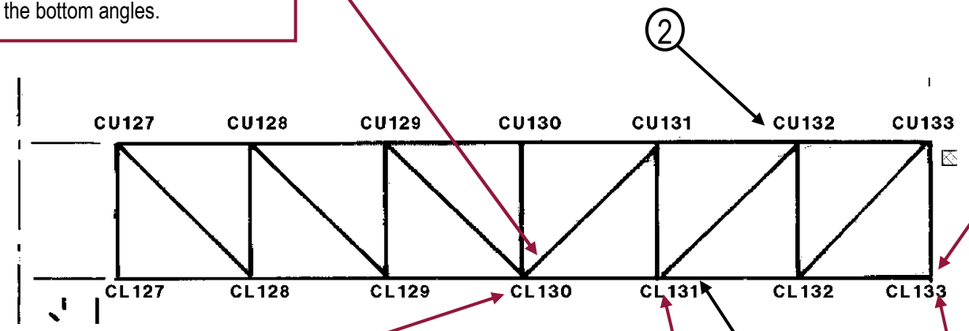
The truss bearing at BL127 exhibits impacted rust between gusset plate BL127N and the bearing casting.

Lower chord BL130-BL131 exhibits extensive areas of peeling paint.

The bearing components at BL133 exhibit 1/8" pitting on all surfaces, with isolated pitting up to 1/4". Additionally, surface rust is reactivating between built-up members.

The south web fill plate exhibits 100% section loss below the bounds of the splice plate as well as 1/8" pitting on the bottom angles.

The north top flange angle of CL131-CL132 exhibits a 3" diameter area of section loss up to 100%, including one 3" diameter hole, in the outstanding leg. Also note the heavy pack rust between the flange angle and lacing bar.



SPAN 20

TRUSS C

The lateral bracing connection plate/bottom cover plate at CL130 is bowed due to active pack rust up to 1" thick.

The bottom cover plate at CL133 exhibits a 12" long by 3" wide area with up to 100% section loss.

The lateral bracing connection plate/bottom cover plate at CL131 is perforated with a 4" diameter hole.

The fence support angle weld to the south gusset plate of CL133 is broken with no distress noted in the gusset plate base metal.

The Stringer 11 bottom flange exhibits pitting up to 1/8" between Panel Points CU131 and CU132.