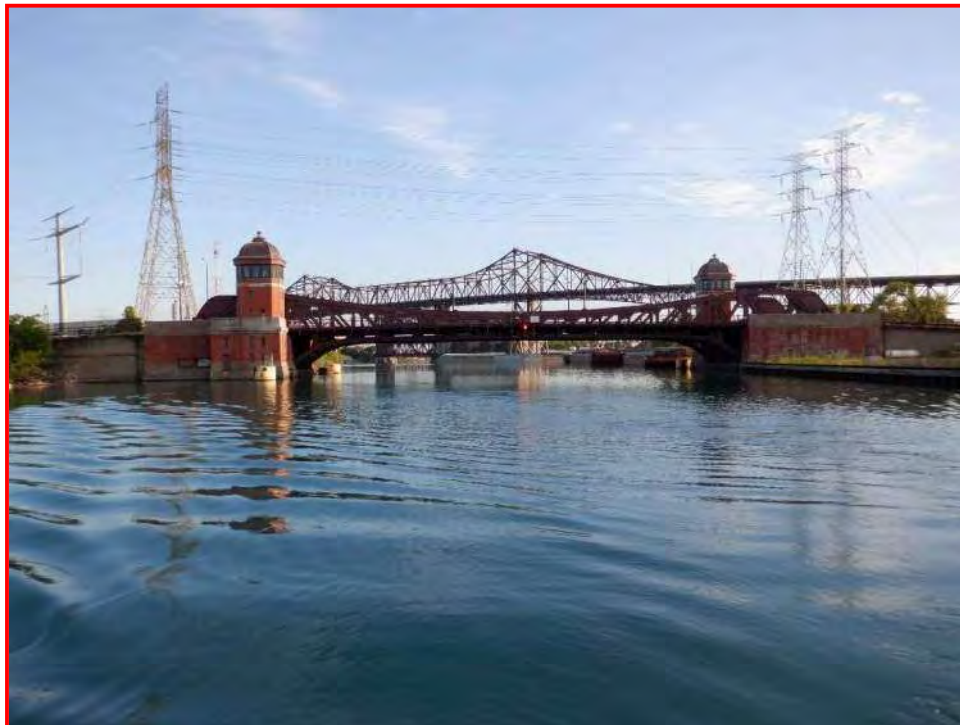


**CITY OF CHICAGO - DEPARTMENT OF TRANSPORTATION
BRIDGE INVENTORY REPORT**

Structure No. 016-6042

**100th Street
over
the Calumet River**

Inspection Date: August 16, 2021



A Joint Venture Teaming of Alfred Benesch &
Company and Collins Engineers, Inc.

EXECUTIVE SUMMARY

On August 16 and 31, 2021, CBIT performed a routine, fracture critical, and element level inspection of this structure in accordance with NBIS, FHWA, IDOT, and CDOT guidelines. The findings from this inspection indicate the following general ratings for this structure:

- Deck is in fair condition (overall condition rating = 5)
- Superstructure is in serious condition (overall condition rating = 3)
- Substructure is in poor condition (overall condition rating = 4)

These overall condition ratings correspond to the rating terminology defined by both NBIS and IDOT guidelines. According to the Illinois Highway Information System Structure Information and Procedure Manual, the structural evaluation of a bridge is generally coded no higher than the lower of the deck’s overall condition rating, the superstructure’s overall condition rating, or the substructure’s overall condition rating. Consequently, this structure is in serious overall condition, which corresponds to an NBIS and IDOT general condition rating of 3.

Condition Rating History

	2011	2013	2015	2017	2019
Deck	7	6	4	4	4
Superstructure	5	4	4	4	4
Substructure	5	4	4	4	4

GENERAL STRUCTURE INFORMATION

Structure: 100th Street over the Calumet River

Structure No.: 016-6042

Bridge Description: The structure is a double-leaf, trunnion type through truss bascule bridge supported on closed abutments. The system supports an open and concrete-filled steel grating deck in the movable span and a CIP concrete deck in the fixed spans. The bridge has an overall length of 326.4' back-to-back of abutments, roadway width of 38.0', and a deck width of 62.0'. The movable leaves of the bridge are operable.

Year Built: 1927, Reconstruction 1992

ADT: 2018 – 4,000 (9% trucks)

Inspection Date/Duration: 8/16/21 - 2 inspectors @ 8.5 hrs. = 17 hrs. (movable span)
8/31/21 - 2 inspectors @ 7.75 hrs. = 15.5 hrs. (fixed spans & t/deck)
32.5 hrs. (total)

Temp./Weather Condition: 64°F / Clear (8/16/21)
69°F / Clear (8/31/21)

Required Inspections:

Type	Frequency	Previous Date
Routine	24 months	08/05/19
Element Level	24 months	08/05/19
Fracture Critical	12 months	08/14/20
Special	N/A	-
Underwater	60 months	12/04/17

Bridge Status: The bridge is open to traffic with no restrictions.

Additional Information: See Master Structure Report (S-107) at the end of this report for additional structure information.

Access & Equipment: The underside of the movable span was inspected from a bucket boat with a 65' reach; an 80' manlift on a 110' x 35' barge could also be used. The remaining portions of the bridge were visually inspected from the ground and from within the counterweight pits with a 15 ft. ladder where necessary. The bridge houses require the CDOT keys to access. Since this bridge opens for marine traffic upon request, maintaining radio contact with the operator while on site is required.

Traffic Control: None.

Firm – Inspectors Present: Alfred Benesch & Co. – Denise Soehrman and Kirby Kenny
(no initials)

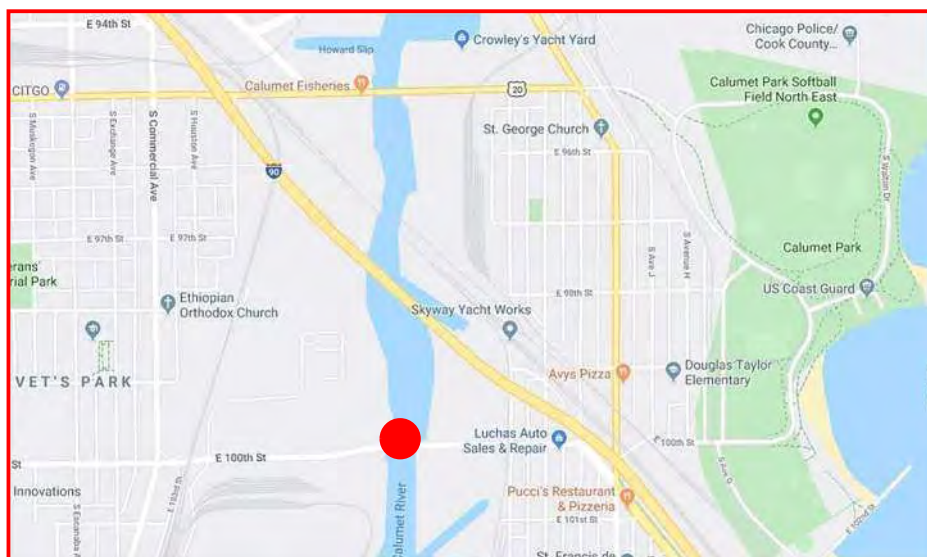
Remarks: None.

Terminology: For the purpose of this report, the spans are numbered from east to west, and the stringers are numbered from north to south.

Section loss described in this report ranges as follows:

- Minor up to 10%
- Moderate > 10% up to 30%
- Heavy > 30%

Location Map:



INVENTORY INFORMATION

I. DECK

- The deck is in fair overall condition corresponding to a NBIS and IDOT condition rating of 5.

Wearing Surface

- In Span 3, the concrete-filled steel grating at the center and rear breaks typically exhibit heavy corrosion, scaling and pop-outs.
- The three panels on either side of the center break are heaved (see Photographs 2 and 3).
- In Span 3, approximately 60% of the open grating panels have been replaced since the last inspection. The remaining open panels have minor corrosion.



1. Overall top of deck, looking east



2. East leaf near the center break in Span 3, looking south



3. West leaf near the center break, looking southeast

- In the fixed spans, the concrete wearing surface has numerous spalls up to 6 SF, some with failing asphalt patches, scattered narrow to medium transverse and longitudinal cracking, and hairline to narrow map cracking (see Photograph 4).
- Pavement markings are faded throughout and have missing sections in Span 3.



4. Spans 4 and 5 top of deck, looking south

Parapets / Bridge Railings

- In Span 3, several of the bridge railing supports are partially or fully cracked through the web section (see Photograph 5).
- The bridge railing has paint peeling scattered throughout.
- The stone parapets in the fixed spans have hairline to narrow vertical cracks and slightly deteriorated stones and joint filler material (see Photograph 6).
- The northeast approach bridge railing has been removed and replaced with fencing since the last inspection.



5. Bridge railing, looking west



6. Stone parapets, looking north

Curbs

- In the movable span, the steel plate curbs have isolated spots of minor scrapes and corrosion.
- In the fixed spans, the steel curb plates exhibit heavy corrosion and section loss with several detached or missing steel plate sections and spalled concrete behind the plates (see Photograph 7). At the northeast corner, the curb plate is wavy.



7. North curb plate in Span 4, looking north

Median

- There is no median on the structure.

Sidewalks

- At the time of inspection, the north sidewalk was closed to pedestrians.
- In the movable span, the top surface of the sidewalks exhibits spalls and heavy rust staining within the concrete filled deck and moderate to heavy corrosion in the steel grating.
- The top surface of the north movable span sidewalk is sloped to the north. A few panels in the south movable span sidewalk are bowed (see Photograph 8).
- The underside of the movable span sidewalk exhibits moderate corrosion and minor section loss of the steel grating (see Photograph 9).
- In the fixed spans, the sidewalks have several narrow to wide transverse and longitudinal cracks, small spalls, and pop outs in the top surface.



8. South sidewalk in Span 3, looking west



9. North sidewalk soffit in Span 3, looking southeast

- At the east rear break, the first north fixed span sidewalk panel is broken, and there is up to a 2½” wide gap and ¼” vertical differential between the fixed sidewalk panel and the movable span (see Photograph 10).
- There are a couple of temporary plywood repairs in the sidewalks.
- The heaving at the northwest approach sidewalk has been repaired (see Photographs 11 and 12).
- Away from the repair area noted above, there is up to a 3” vertical differential between the northwest sidewalk and the northwest approach sidewalk (see Photograph 12).
- The northeast approach sidewalk has been replaced since the last inspection (see Photograph 13).
- The southeast approach sidewalk has a vertical differential at the East Expansion Joint.



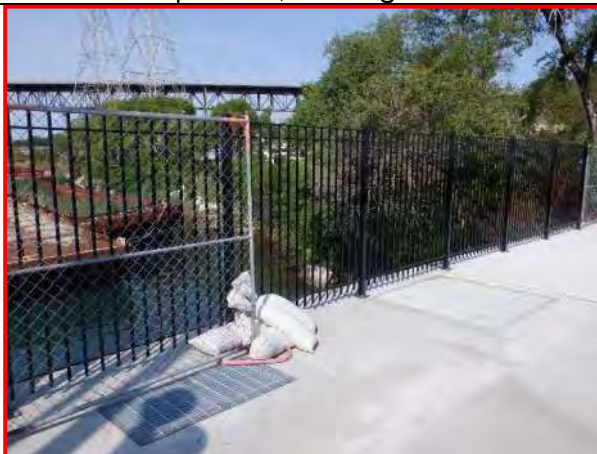
10. Span 2 north sidewalk, looking northeast



11. Northwest approach sidewalk during the 2019 inspection, looking west



12. Northwest approach sidewalk, looking east



13. Northeast approach sidewalk, looking northeast

Drain System

- There are no drains on the structure.

Light Standards

- The light standards typically have moderate corrosion, peeling paint, missing anchor bolt covers, and loose or missing hand hole covers with exposed wiring.
- In Span 5, the south light standard has a dent in the pole near the base and a 10" long crack at the base (see Photographs 14 and 15).
- Span 3, the light standard on the east end of the Southwest Truss is not in place and there are exposed wires.



14. South light standard in Span 5, looking south



15. South light standard in Span 5, looking south

Expansion / Relief Joints / Breaks

- The West Abutment Expansion Joint has moderate corrosion in the bike lanes, a wavy seal, 3' of tears, and debris accumulation.
- The west rear break weldment is sloping downward toward the opening (see Photograph 16).



16. West rear break, looking southeast

- The bridge side of the East Abutment Expansion Joint is 1½” higher than the approach slab side at the south gutterline. The vertical differential decreases to nearly level at the north gutterline (see Photograph 17 & 18).
- The East Abutment Expansion Joint has tears, a 2’ length of broken rail, moderate corrosion, and gouges.
- The center break has an insufficient gap. In the eastbound lanes, the west leaf is 1½” higher than the east leaf and the steel open grating is another 1” higher than the west plate of the center break (see Photographs 19 & 20). In September, after this inspection was completed, construction began to replace the center break weldments.



17. East Expansion Joint, looking south



18. East Expansion Joint, looking northwest



19. Center break, looking south



20. Vertical differential at center break, looking west

- In the south sidewalk at the center break, the west leaf is resting on top of the east leaf (see Photograph 21).
- At the rear breaks, the fixed spans are between $\frac{1}{8}$ " to $\frac{1}{4}$ " lower than the movable span. The east break weldment is cracked along the centerline of roadway (see Photograph 22).
- The northwest longitudinal sidewalk joint is failing (see Photograph 23).



21. South sidewalk at the center break, looking northwest



22. East rear break, looking south



23. Northwest sidewalk joint, looking east

Deck Soffit

- In Span 3, the open steel grating has minor corrosion (see Photograph 24).

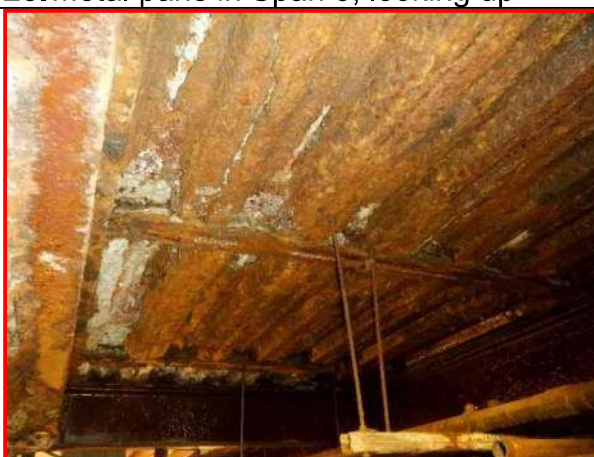


24. Open grating in Span 3, looking up

- The metal pans in the filled steel grating portions typically exhibit moderate to heavy corrosion, moderate to heavy section loss, and corrosion holes. Where the concrete is visible through the corrosion holes, it is typically spalled (see Photograph 25).
- In the fixed spans under the roadway, the deck soffit has scattered hairline leaching longitudinal and transverse cracks.
- In the fixed spans under the sidewalk, there is heavy delaminations/spalls up to 50 SF with exposed rebar, heavy scaling, and the remaining stay-in-place forms have corrosion holes (see Photographs 26 & 27). The south sidewalks have more deterioration.
- At the east rear break, the edge of the fixed span soffit is spalled (see Photograph 28).



25. Metal pans in Span 3, looking up



26. Northeast sidewalk soffit in the fixed spans, looking west



27. Span 1 sidewalk soffit, looking up



28. Span 2 deck soffit, looking west

- In Spans 2 and 4 (between Floorbeam 21-21 and Anchor Column Floorbeam), there is timber formwork left in place along the deck soffit (see Photograph 29).



29. Span 4 deck soffit, looking northeast

Approaches

- The approach slabs exhibit scattered hairline to narrow longitudinal and transverse cracks (see Photograph 30).
- The approach pavements have large areas of missing bituminous material, wide longitudinal cracks, spalls along the relief joint, and map cracking along the shoulders.
- The approach sidewalks are heavily deteriorated and have differential settlements between panels (see Photographs 31).



30. West Approach, looking southwest



31. Southeast Approach sidewalk, looking east

Approach Guardrails

- In the northeast corner the guardrail has been replaced since the last inspection (see Photograph 32).
- The northwest approach guardrail has minor corrosion in the base plates.



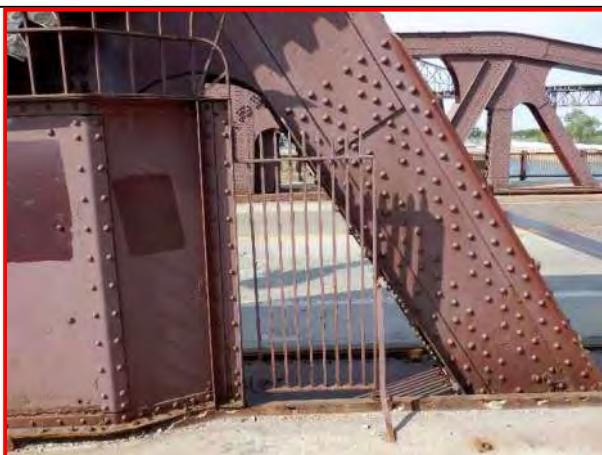
32. Northeast guardrail, looking east

Fences




- Fencing is present at all four corners of the bridge directly adjacent to the fixed span stone parapets. Except for the new fencing in the northeast corner, the fencing typically has minor to moderate corrosion and minor section loss (see Photograph 33).
- The fencing in the northeast corner was replaced since the last inspection.
- The fence at the northwest corner of the bridge has a few loose base posts near the west end of the stone parapet.
- There is fencing around the rear arms of the truss. The fencing in the southwest corner is disconnected at the base and from the truss guard (see Photograph 34). The fence in the northeast corner has a few bent bars.



33. Northwest approach fence, looking northeast



34. Fence around the southwest truss, looking north

<p><i>Utilities</i></p> <ul style="list-style-type: none">• There are utility conduits attached to the deck soffit.	 <p>35. Span 4 utilities, looking northwest</p>
<p><i>Signage</i></p> <ul style="list-style-type: none">• In Span 3, the north street sign on the bridge railing is slightly bent (see Photograph 36).• The other signs have no notable deficiencies.	 <p>36. Span 3 bridge sign, looking southeast</p>
<p><i>Other</i></p> <ul style="list-style-type: none">• The life preservers are in place on both bridge houses (see Photograph 37).• The truss guards have several corrosion holes, torch cut holes, and minor to moderate corrosion and section loss.	 <p>37. Life preserver box at the northeast bridge house, looking west</p>

II. SUPERSTRUCTURE

- The superstructure is in serious overall condition which corresponds to a NBIS and IDOT condition rating of 3. (Note – this condition rating is governed by the Fracture Critical rating.)



38. Overall underside of the movable span, looking southwest

Bearings

- The roadway bearings at the abutments typically exhibit moderate to heavy pitting and minor corrosion (see Photograph 39).
- The sidewalk bearings at the abutments have heavy corrosion and pitting.
- Several abutment bearings are laterally out-of-alignment with the stringers by up to 1 inch, and the anchor bolts and nuts exhibit heavy section loss.
- In Span 1 at the East Abutment, Stringers S3, S4, and S6 are not in contact with the bearing resulting in a gap up to 1" between the stringer and the bearing (see Photograph 40).
- The trunnion bearings exhibit moderate to heavy corrosion with minor section loss.
- The live load bearings have moderate corrosion, and the anchor bolts exhibit moderate section loss.



39. Typical West Abutment Bearing, looking west



40. Span 1 Stringer S6 bearing, looking east

- The northwest and southwest live load bearings are shifted slightly east (see Photograph 41).
- The live load and trunnion girder bearings have bearing area loss, see Piers section for more details.
- The secondary live load bearings at the anchor columns have moderate to heavy corrosion and minor section loss (see Photograph 42).
- The secondary live load bearings have up to a 1/8" gap between the anchor column and the shoes.
- The trunnion girder bearings on the river pier have moderate to heavy corrosion with minor section loss.



41. Northwest live load bearing, looking north



42. Typical secondary live load bearing, looking east

Stringers

- In Spans 2 and 4, the roadway stringers have isolated areas of minor corrosion and section loss particularly near the rear breaks. The two fascia stringers in Span 4 have heavy corrosion and section loss.
- The sidewalk stringer ends at the abutments typically have heavy corrosion, section loss, and corrosion holes (see Photograph 43).



43. Span 5 north sidewalk stringer, looking southwest

- In the fixed spans, the sidewalk stringers are deteriorated with moderate to heavy corrosion, heavy section loss, and crumbling encasement (see Photograph 44).
- The two southern sidewalk stringers in Span 1 have multiple puncture holes/tears in the web.
- There is heavy corrosion and almost 100% section loss at the connection between the double channel section sidewalk stringer near the anchor column and the sidewalk floorbeam in Span 5 (see Photograph 45).
- The fixed span curb stringers have a few corrosion holes and locations with slight gaps between the deck and stringers.
- In the movable span, the roadway and sidewalk stringers typically exhibit paint peeling, moderate to heavy corrosion, and minor flaking.
- In the movable span, the curb stringer to truss connections exhibit moderate to heavy corrosion and section loss (see Photograph 46).
- The top flange angles at the curb stringers in the movable spans have heavy corrosion and section loss, are missing or loose, and have cracked welds (see Photograph 47).
- There are tack welds to the sidewalk stringers for conduit supports.



44. Span 4 sidewalk stringers, looking northwest



45. Connection between sidewalk stringer and floorbeam in Span 5, looking south



46. Span 3 curb stringer, looking west



47. Top flange angle at the curb stringer, looking up

Girders

- The trunnion girders exhibit moderate corrosion and minor section loss in the bottom flanges and isolated minor corrosion and section loss in the web. The top cover plates have heavy pitting and minor corrosion along the outside edges and between the trunnion and river pier (see Photograph 48).
- The bearing stiffeners at the river pier exhibit corrosion and moderate section loss (see Photograph 49).



48. Northeast Trunnion Girder, looking north



49. Southwest Trunnion Girder end, looking southwest

Floorbeams

- Floorbeams 16-16 exhibit scattered areas of paint peeling.
- Floorbeams 21-21 have localized minor deformation in several locations in the top flanges over the counterweight pits (see Photograph 50).
- In the fixed spans, the sidewalk floorbeams exhibit moderate to heavy corrosion with heavy section loss.

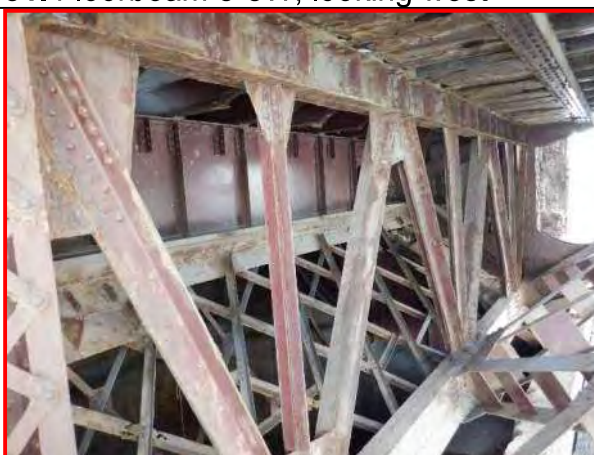


50. Floorbeam 21-21W, looking west

- In the movable span, the floorbeams exhibit minor to moderate corrosion with isolated spots of heavy corrosion, minor section loss and flaking, and debris accumulation along the bottom flange (see Photograph 51).
- Floorbeams 14-14E and 14-14W have moderate to heavy corrosion and minor to moderate section loss. There are missing bolts at the stringer to floorbeam connections and local flange bending in the top flange angle of Floorbeam 14-14W (see Photograph 52).
- The steel plate above Floorbeam 14-14E and 14-14W has numerous areas of heavy section loss, large corrosion holes, and moderate to heavy corrosion.
- Floorbeam 2-2W has 2 loose bolts on the bottom connection plate to the South Truss.
- Floorbeam 0-0E has 2 web cracks and Floorbeam 0-0W has 5 web cracks under the full-height stiffeners. Since the inspection, arrest holes have been drilled at all crack ends (see Photographs 53 & 54). Both Floorbeams' webs are distorted surrounding the stiffeners and cracks.



51. Floorbeam 8-8W, looking west



52. Floorbeam 14-14W, looking northwest



53. FB 0-0W crack, looking west



54. FB 0-0E crack, looking east

- Floorbeam 0-0W has heavy section loss in the bottom 1' of the web (see Photographs 55 & 56).
- In the movable span, the sidewalk brackets exhibit minor corrosion and areas of section loss in the flanges and webs. The deterioration is primarily in the southern brackets as most northern brackets are newer. The southern sidewalk bracket at 12-12E has a 9"x3" corrosion hole in the web (see Photograph 57).



55. FB 0-0W, looking northwest



56. FB 0-0W, looking southwest



57. Southern sidewalk bracket 12-12E, looking east

Lateral Bracing / Diaphragms

- The bottom lateral bracing in Panel 1 of the moveable span has multiple areas of bent flanges (see Photograph 58).

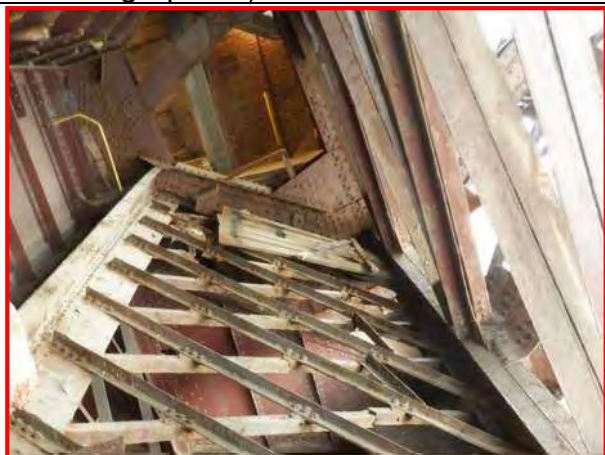


58. Span 3 Panel 1 lateral bracing, looking north

- The lateral bracing in Panels 2 through 14 have some areas of heavy corrosion, paint peeling, minor section loss, and vibrate under live load (see Photograph 59).
- At southwest Panel Point 12, the lateral brace connection has 2 missing bolts.
- The lattice trusses, 14-16W and 14-16E, have multiple fractured members and members with heavy section loss. The west lattice truss has a deteriorated wooden work platform (see Photographs 60).
- The diaphragms at the abutments typically have moderate to heavy corrosion and heavy section loss (see Photograph 61).



59. Typical lateral brace condition, looking north



60. Span 4, lattice truss, looking north



61. Span 5 sidewalk diaphragm, looking west

Trusses

- There are bent and torn bottom chord flanges at the following locations: southeast, northeast, and southwest members 12-14, northeast and northwest members 2-4 and southwest member 0-2 (see Photograph 62).
- The bottom chords from Panel Point 4 to 14 exhibit moderate corrosion, minor to moderate section loss, and isolated corrosion holes along both flanges and intermittently along the web plates. Broken bottom lacing bars are also present at several locations.



62. Northeast Truss Member 12-14, looking south

- The bottom chords from Panel Point 0 to 4 exhibit heavier deterioration and isolated large corrosion holes up to 18” (see Photograph 63).
- The outside face of Southwest Truss Member 0-2 has been repaired since the previous inspection (see Photograph 64). The inside face was not repaired.
- Northeast Truss Member 2-4 exhibits up to approximately 18 percent loss of the net section.
- The bottom flange of Northwest Truss Member 2-4 has heavy section loss for 5’ with 2’ of 100% section loss and is bent and torn for 2’ near Panel Point 4. The web has heavy pitting at the flange interfaces (see Photograph 65).
- The bottom chord batten plates along member 12-14 at both leaves exhibit moderate to heavy corrosion and areas of heavy section loss and corrosion holes.
- The rear arm truss members over the counterweight pits have scattered locations of moderate corrosion and section loss. The lacing bars are heavily corroded, and many are broken or missing.
- Bottom chord members 14-20 have heavy corrosion and section loss near the front of the counterweight (see Photograph 66).



63. Northwest Truss Member 0-2, looking southeast



64. Southwest Truss Member 0-2, looking north



65. Northwest Truss Member 2-4, looking east



66. Bottom chord southwest truss, looking east

- The top chords have minor to moderate section loss throughout as well as several areas of corrosion holes and pack-rust along the web plates and the batten plates (see Photograph 67).
- Members 17-18 have a corrosion hole on the cover plate above the roadway.
- The truss diagonals and verticals exhibit minor to moderate corrosion, rivet head loss, pack-rust, and scattered heavy section loss and corrosion holes, primarily at and below the deck level (see Photographs 68 & 69).
- The truss vertical and diagonal members have several bent flanges.
- Along the vertical and diagonal members of the southwest truss, there is a welded railing attachment with several cracked and broken welds (see Photograph 70).



67. Top chord corrosion hole, looking south



68. Typical diagonal member, looking northwest



69. Typical Vertical Truss Member, looking northwest



70. Weld on vertical member of southwest truss, looking north

- The gusset plates exhibit minor corrosion and moderate to heavy section loss with isolated corrosion holes (see Photograph 71). The inside gusset plates tend to have heavier section loss.
- At Panel Point 0, the gusset plates exhibit heavy deterioration, primarily along the top of the bottom chord. Table 1 below summarizes the section loss along the top of the bottom chord for both the inside gusset plate (I.P.) and outside gusset plate (O.P.) at each Panel Point 0 (see Photographs 72-74).



71. Typical gusset plate, looking north



72. Northwest inside face gusset plate at Panel Point 0, looking southeast



73. Northeast outside face gusset plate at Panel Point 0, looking south



74. Southeast outside face gusset plate at Panel Point 0, looking north

Table 1. Section Loss along Top of Bottom Chord at Panel Point 0 Gusset Plates

Location	Total Length (in.)	Length of 100% Section Loss (in.)	Length of Partial Section Loss (in.)	Section Loss per GP	Section Loss per Panel Point
NE Truss I.P.	55.5	26	0	47%	42%
NE Truss O.P.	55.5	20	0	36%	
SE Truss I.P.	55.5	20	0	36%	27%
SE Truss O.P.	55.5	9	47	18%	
NW Truss I.P.	55.5	* 55.5	0	* 100%	* 52%
NW Truss O.P.	55.5	2	0	4%	
SW Truss I.P.	55.5	19	37	44%	50%
SW Truss O.P.	55.5	20	36	55%	

* Plating repair in-progress in September/October 2021

Counterweights

- The rear of the counterweight box has minor corrosion, minor section loss, and areas of corrosion holes along the stiffeners. The edges have worse deterioration (see Photograph 75).
- The bottom framing has areas of heavy corrosion and section loss, flaking, and areas of corrosion holes predominately at the corners (see Photograph 76).



75. Rear East Counterweight Box, looking northwest



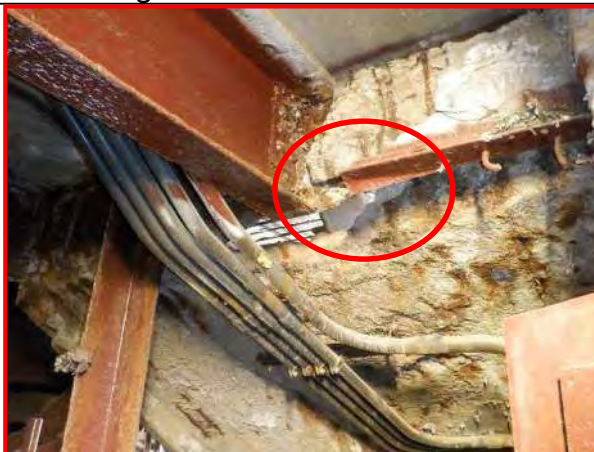
76. East counterweight box, looking south

Bridge Houses

- The brick enclosure walls have mortar joint cracks, missing bricks, and broken pieces (see Photograph 77).
- In the southeast corner of the west bridge house, there is a large hole in the roof (see Photograph 78).



77. North enclosure wall at West River Pier, looking west



78. Southeast corner of the West Bridge House roof, looking east

Utilities

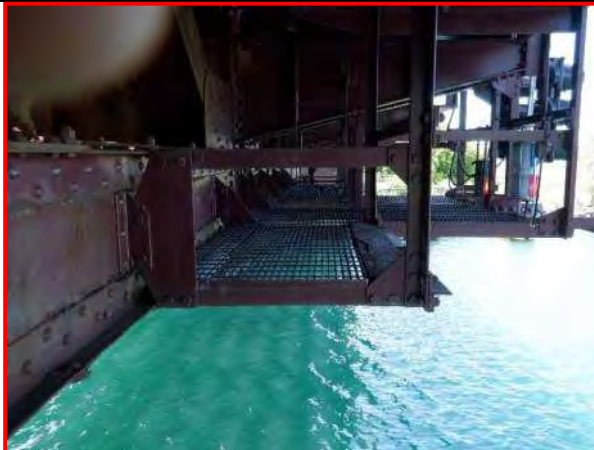
- There are conduits attached to the bottom flange of stringers within the fixed spans, truss members, and floorbeams (see Photograph 79).
- There are several conduits and lights attached to the enclosure walls within.



79. Span 1 conduits, looking south

Other

- The catwalks below the sidewalks at the center break have no notable defects (see Photograph 80).
- In Panel 8, the steel plate catwalk near Floorbeam 2-2W is heavily corroded with areas of corrosion holes up to 3' long by 2' wide (see Photograph 81).
- The navigation lights attached to the catwalks at the center break are in place and were functioning during the time of inspection.



80. Typical catwalk at the center break, looking west



81. Catwalk steel plate near Floorbeam 2-2W, looking north and up

III. SUBSTRUCTURE

- The substructure is in poor overall condition corresponding to a NBIS and IDOT condition rating of 4.

Abutments

- The abutments exhibit hairline to narrow vertical and horizontal cracks with efflorescence and leakage along the stem. The West Abutment stem has approximately 160 SF of spalls and delaminations with exposed rebar (see Photograph 82). The East Abutment stem has delaminations in 50% of the scattered patched areas.
- The abutment backwalls have delaminations/spalls with exposed rebar up to 20 SF. In the north corner of the West Abutment, there is a 6 SF area of missing backwall (see Photograph 83).
- On both abutments, the roadway bearing seats and backwalls have staining and minor debris accumulations.
- The bearing seats and backwalls below the sidewalks exhibit concrete spalling and hairline to narrow vertical cracks.



82. West Abutment elevation, looking southwest



83. West Abutment backwall, looking west

Piers

- The river side of the river piers have heavy scaling and large spalls.
- At both river piers, there are spalls below the live load and trunnion girder bearings measuring up to 8' long by 2' high by 1' deep with exposed rebar and moderate loss of bearing area (see Photograph 84).



84. West River Pier inside face at the south trunnion girder bearing, looking east

- Near the midpoint of the West River Pier on the counterweight pit side, there is a 2' wide by full-height by up to 2' deep spall with exposed rebar (see Photograph 85).
- The counterweight pit side of the East River Pier has spalls that are 3' wide by full-height, 2' high by full-width, and a 7' wide by 3' high spall (see Photograph 86).
- The anchor column floorbeams typically have minor pitting, several drilled holes with gouges adjacent, and heavy section loss and holes in the stiffeners. At the ends, the anchor column floorbeams have heavy corrosion and minor section loss (see Photograph 87).
- In the East Anchor Column Floorbeam, there is a puncture in the web with a small tear at the Stringer 3 connection (see Photograph 88).



85. West River Pier counterweight pit face, looking east



86. East River Pier counterweight pit face, looking west



87. West Anchor Column Floorbeam, looking east



88. East Anchor Column Floorbeam, looking northwest

Columns

- The anchor columns have moderate to heavy corrosion and minor to moderate section loss with isolated spots of heavy section loss typically concentrated at the bases and flanges (see Photograph 89).
- The sidewalk columns have concrete encasement that ranges from being delaminated to complete missing. The exposed steel has heavy corrosion and moderate to heavy section loss (see Photograph 90).



89. Southwest Anchor Column, looking south



90. Sidewalk column near the Southwest Anchor Column, looking southeast

Counterweight Pits

- The north and south pit walls have narrow to medium horizontal and vertical cracks with efflorescence, rust staining below the truss bottom chords, and areas of spalling with exposed rebar (see Photograph 91).
- The stairs leading down to the counterweight pits have spalls with exposed reinforcement on some of the steps and missing tread plates.
- During the time of inspection, there was no standing water and moderate debris in the counterweight pits.



91. East Counterweight Pit South Wall, looking southwest

Fender System

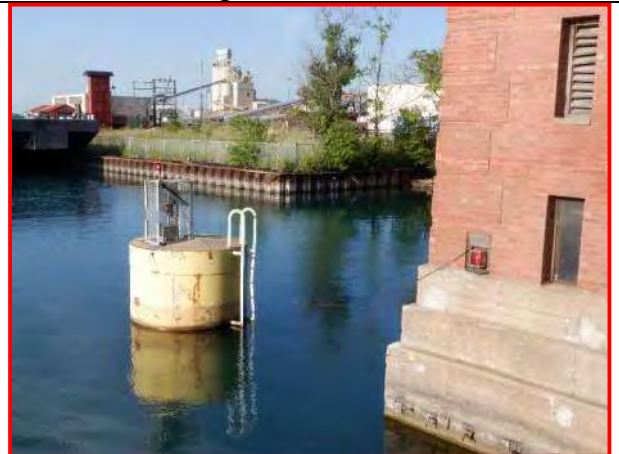
- The timber fender system is missing in the southern half of the West River Pier and in several sections of the East River Pier (see Photograph 92).
- There are dolphins in place at all corners of the structure apart from the southeast corner. The dolphins have minor corrosion.



92. Timber fenders missing on East River Pier, looking east

Other

- There are conduits and lights attached to the face of the abutments.
- The red navigation lights on the river piers and dolphins are in place and functioning (see Photograph 93).
- The attached light cage is bent on the northwest corner dolphin (see Photograph 94).



93. Red navigation light at the West River Pier and dolphin, looking southwest



94. Light cage on the northwest dolphin, looking west

IV. STEEL PROTECTIVE COAT SYSTEM

- On a scale of 5 to 1 (5 being new; 1 being failed), the paint system for this structure is rated a 2 (poor).

Superstructure

- The paint system has extensive deterioration along the movable span floorbeams and stringers.



95. Superstructure paint system, looking north

Substructure

- The paint system on the anchor and sidewalk columns has isolated areas of moderate to heavy deterioration.



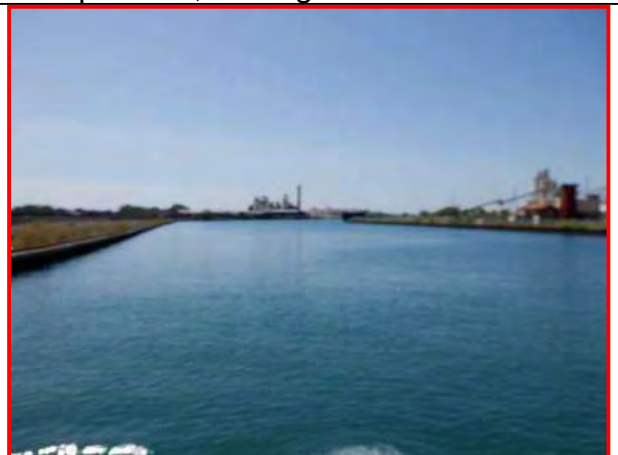
96. Sidewalk column paint system, looking north

V. CHANNEL

- The channel is in good condition which corresponds to a NBIS and IDOT general condition rating of 7.



97. Upstream, looking north



98. Downstream, looking south

VI. UNDERWATER INVESTIGATION

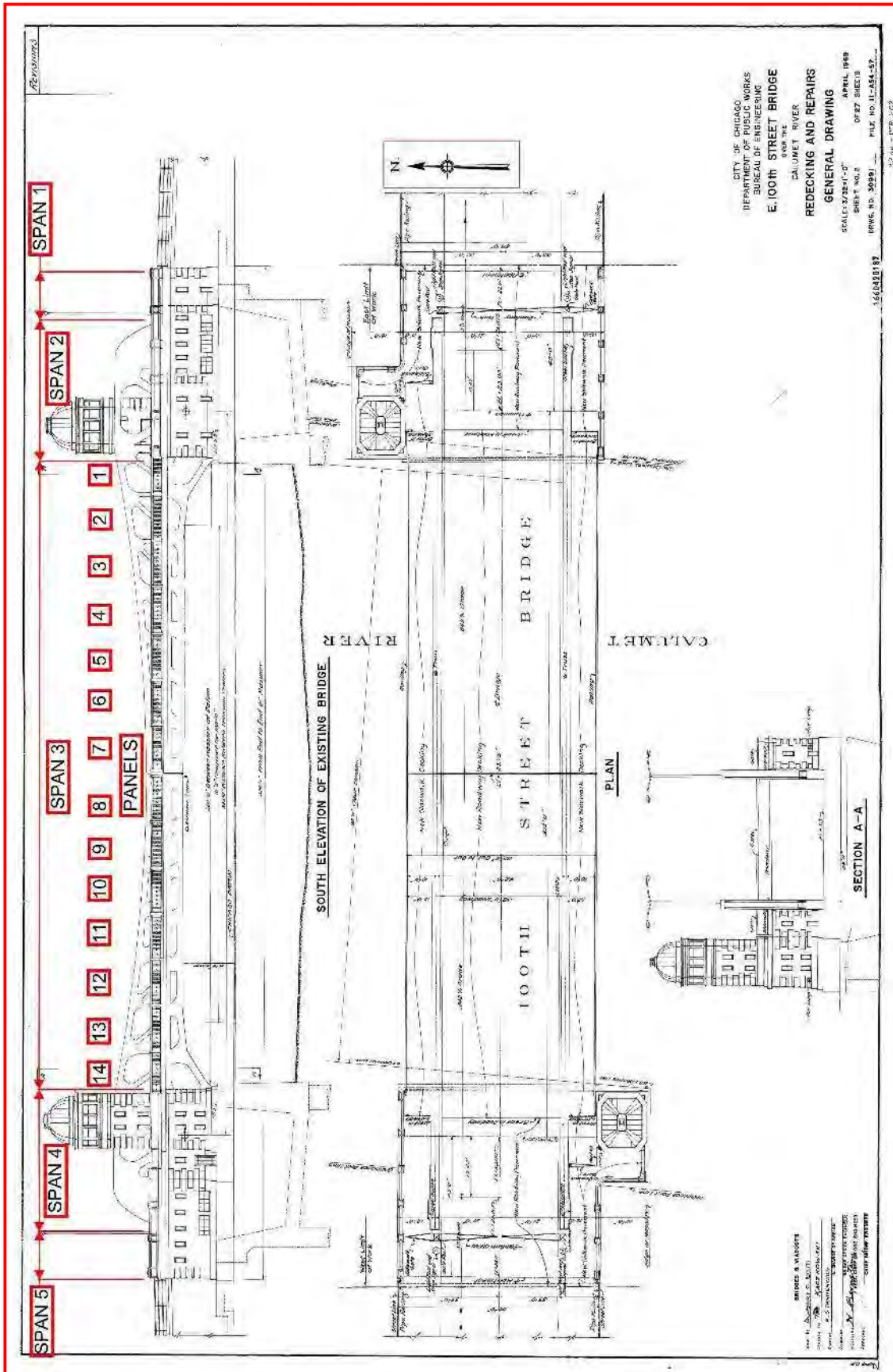
- The underwater investigation was conducted by Collins Engineers, Inc. on December 4, 2017. Based on the underwater inspection, the affected elements are rated fair and given a NBIS and IDOT general condition rating of 5. Please refer to the underwater inspection report for specific inspection findings regarding the underwater bridge elements.

VII. MECHANICAL INSPECTION

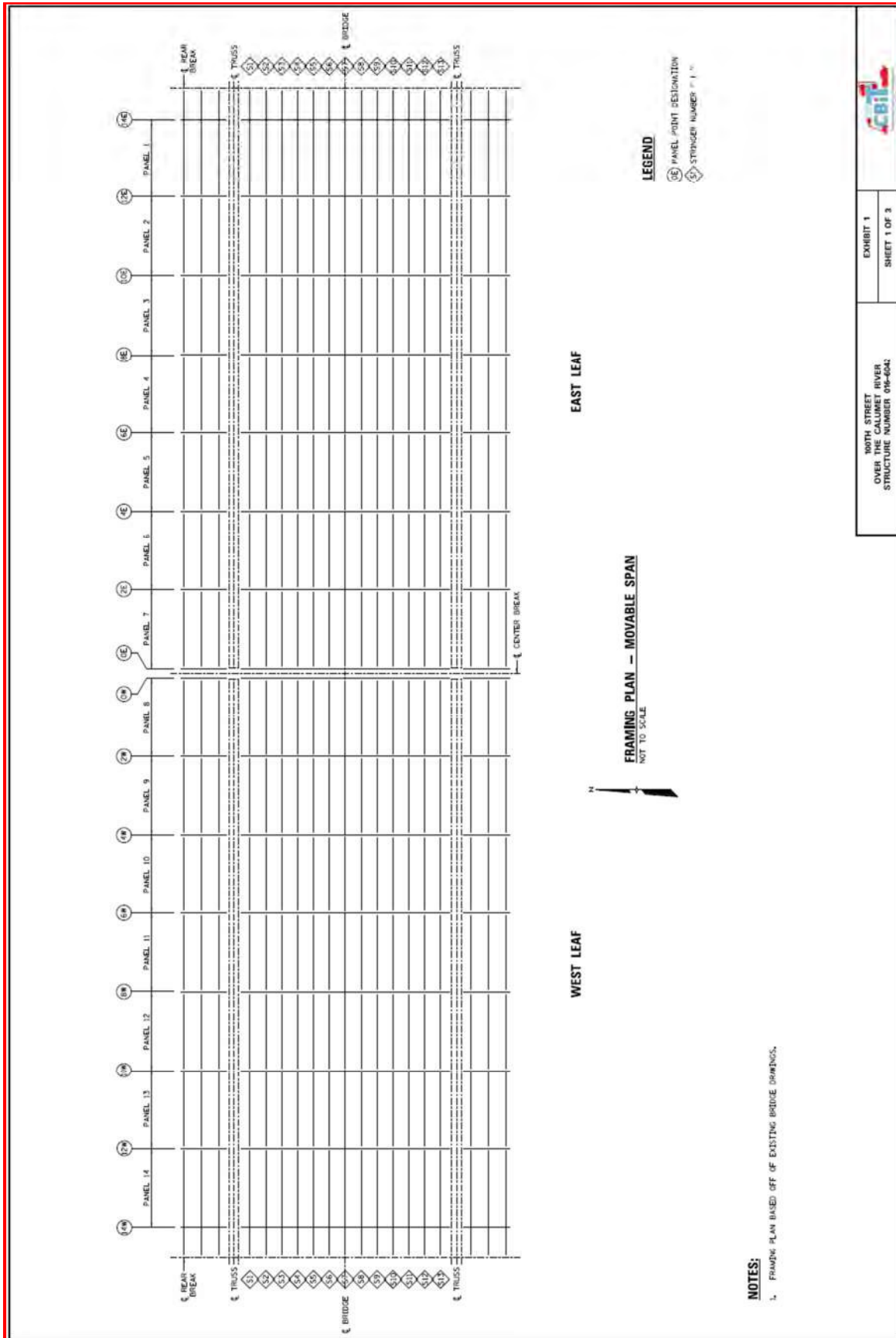
- The mechanical inspection was conducted by AAA on November 2018. Please refer to the mechanical bridge inspection report for specific inspection findings regarding the mechanical bridge elements.

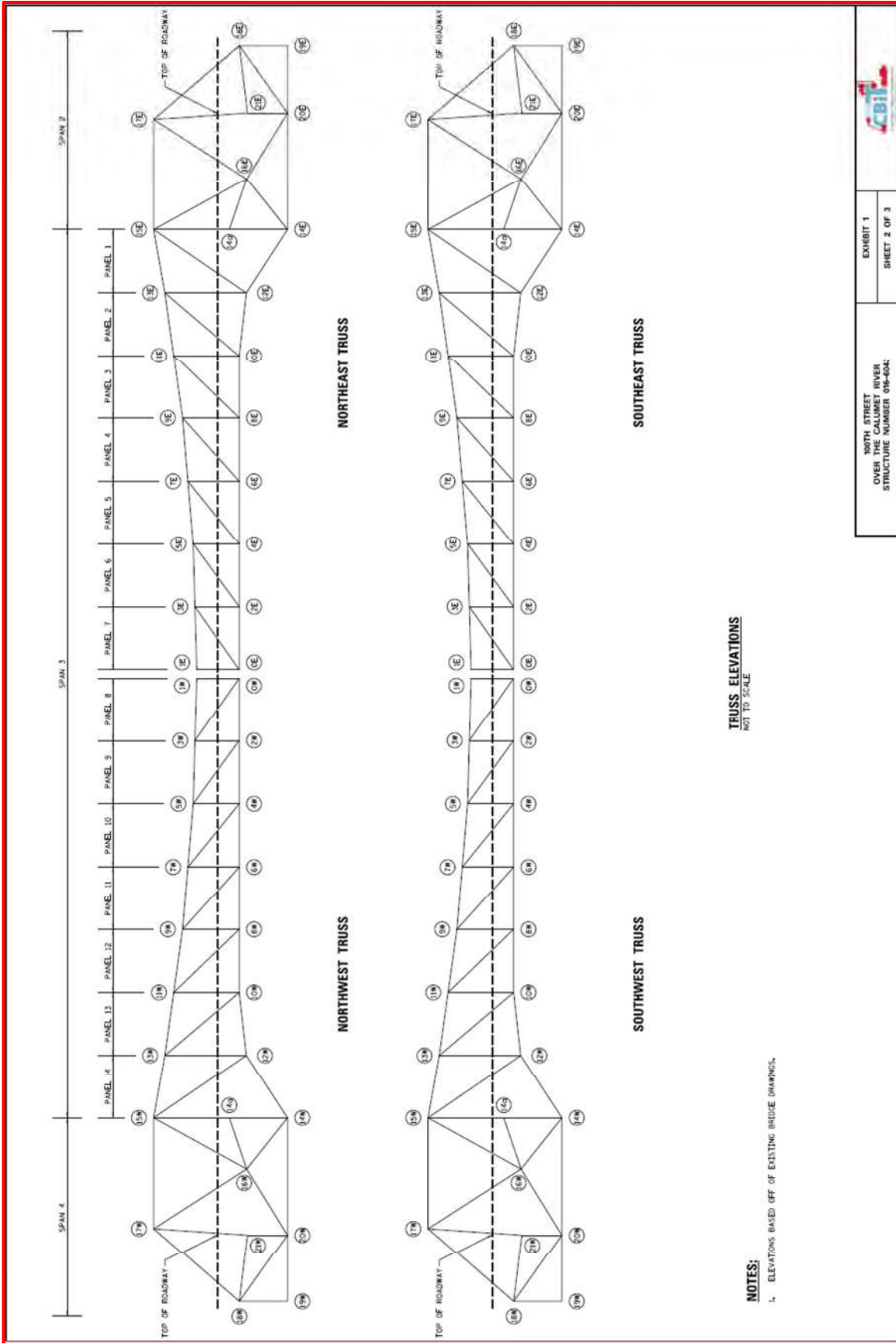
VIII. ELECTRICAL INSPECTION

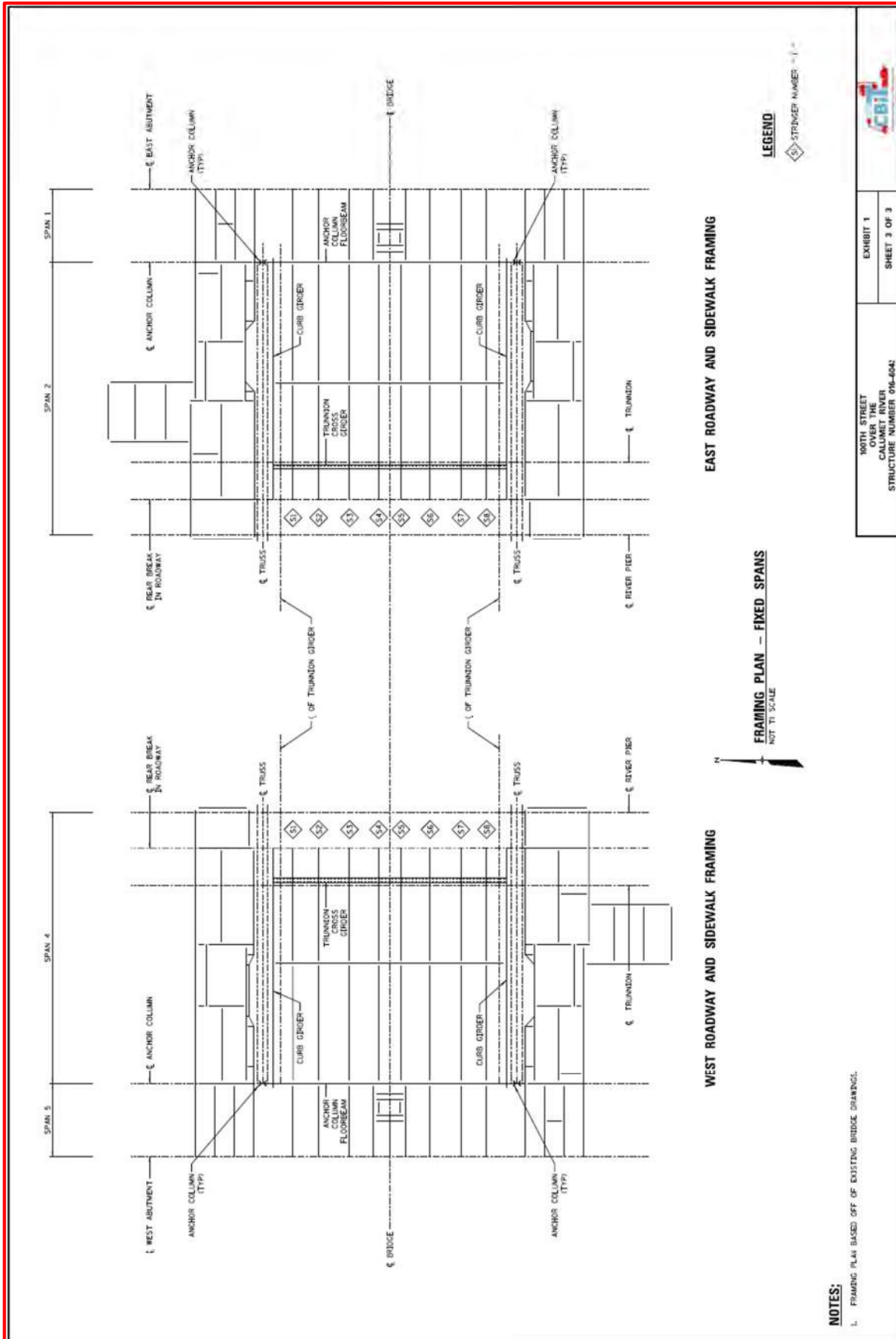
- The electrical inspection was conducted by AAA on November 2018. Please refer to the electrical bridge inspection report for specific inspection findings regarding the electrical bridge elements.



General Plan & Elevation









SN: 016-6042	District: 1	Spans: 1	Appr. Spans: 4	Skew: 0	ADT: 4000	Truck Pct: 9
ADT Un:	Maint. Co: COOK	Twsp: HYDE PARK (CHICAGO)	Status: OPEN - NO RESTRICT			
Facility Carried: 100TH ST	Feature Crossed: CALUMET RIVER					
Location: 3300 E 100TH STREET	Municipality: CHICAGO	Team/Sub: /	Insp/Rte:			
Bridge Name: 100TH STREET BRIDGE	Material & Type: STEEL/MOVEABLE - BASCULE					
Insp. Intervals Routine: 24	Fracture Critical: 12	Underwater: 60	Special: N/A	Element Level: 24		
90 – Inspection Date: 08/ 16 / 21	90C – Temp. (°F): 64	90B1 – In-Depth	<input checked="" type="checkbox"/>			
Is Delinquent: <input type="checkbox"/>	Reason:					
90A – Agency Program Manager: Jurca, V.	90A3 – Consultant Program Manager: Bendok, M.					
90A1 – Team Leader: Soehrman, D.	90A2 – Inspector: Kenny, K.					

90B – Inspection Remarks:

Previous Inspection	Joint Openings (In.) W. Abut., 1 3/8"; E. Abut., 2" (measured @ N. shoulder) Deck, up to 50% of the concrete-filled grid deck and deck soffit is spalled and has scaling w/mod. corr. on grid. Several repair plates in the steel grid. Superstructure, truss chords and gusset plates have mod. to heavy corr. & SL less than 30%. Span 3 stringers and floorbeams have min. to mod. corr. throughout with flaking and mod. SL. Substructure, river pier walls have spalls with exposed and corroded reinf. under
---------------------	--

Resources

Time to Inspect (H:M): 11:15	16:15	Traffic Control: <input type="checkbox"/>	N	Boat: <input type="checkbox"/>	N	Waders: <input type="checkbox"/>	N	Snooper: <input type="checkbox"/>	N
Ladder: <input type="checkbox"/>	Y	Manlift: M	N	Bucket Truck: <input type="checkbox"/>	N	Other: Barge	Bucket Boat		

Inspector's Appraisals

	Prev	New	Comments
58 – Deck Condition:	4	5	Filled steel grid has spalled concrete. Three panels on either side of the center break are heaved.
59 – Superstructure Cond:	4	3	Rating governed by the Fracture Critical Inspection Report.
60 – Substructure Cond:	4	4	Both river piers have 16SF by 1' deep spalls under the LL & trunnion girder bearings w/ mod. loss of bearing area.
62 – Culvert Condition:	N	N	
61 – Channel Condition:	7	7	
71 – Waterway Adequacy:	9	9	
72 – Approach Rdw Align:	8	8	
111 – Pier Navig Protection:	3	3	Timber fenders are missing in several sections. Dolphins have minor corr.

90B – Inspector Remarks:

Filled steel grating has mod. spalled concrete; the open steel grating has minor corr. The three panels on either side of the center break are heaved.

Superstructure rating governed by Fracture Critical Appraisal rating from inspection performed on 8/16/21, see FC1 remarks for further information.

Both river piers have 8' long by 2' high by 1' deep spalls under the LL & trunnion girder bearings w/ mod. loss of bearing area. Near the center of the river piers on the counterweight pit side, there are full height up to 2' deep spalls w/ exp. rebar.






SN: 016-6042	District: 1	Spans: 1	Appr. Spans: 4	Skew: 0	ADT: 4000	Truck Pct: 9
ADT Un:	Maint. Co: COOK	Twsp: HYDE PARK (CHICAGO)	Status: OPEN - NO RESTRICT			
Facility Carried: 100TH ST	Feature Crossed: CALUMET RIVER					
Location: 3300 E 100TH STREET	Municipality: CHICAGO	Team/Sub: /	Insp/Rte:			
Bridge Name: 100TH STREET BRIDGE	Material & Type: STEEL/MOVEABLE - BASCULE					
Insp. Intervals Routine: 24	Fracture Critical: 12	Underwater: 60	Special: N/A	Element Level: 24		
93D - Inspection Date: 08/16/21	90C - Temp. (°F): 64					
Is Delinquent: <input type="checkbox"/>	Reason:					
90E - Agency Program Manager: Jurca, V.	90E3 - Consultant Program Manager: Bendok, M.					
90E1 - Team Leader: Soehrman, D.	90E2 - Inspector: Kenny, K.					

Resources

Time to Inspect (H:M): 11:15 16:15	Traffic Control: N	Boat: N	Waders: N	Snooper: N
Ladder: Y	Manlift: M N	Bucket Truck: N	Other: Barge	Bucket Boat

Inspector's Appraisals

Element	Element Description	Env	Quantity	Unit	CS1	CS2	CS3	CS4
12	Concrete Deck Bare	2	6509	SF	4829	1503	177	0
	Remarks	Spalled soffit with exposed and corroded reinforcement at west end Span 2.						
28	Steel Deck Open Grid	2	6637	SF	3982	2655	0	0
	Remarks	Approximately 60% of the steel grating has been replaced since the last inspection.						
29	Steel Deck Concrete Filled Grid	2	1656	SF	0	662	911	83
	Remarks	3 panels on each side of the center break are heaved. Spalled concrete in grid & minor to mod. corr. of steel grid.						
8058	Sidewalk (SF)	2	6376	SF	2044	2304	1964	64
	Remarks	The panel just E. of the E. break in the N. sidewalk is broken. Movable, areas of spalled conc. & steel grid w/ minor to mod. corr.						
102	Lead Painted Steel Closed Web/Box Girder	2	4711	SF	2825	1178	472	236
	Remarks	Moderate to heavy areas of corrosion with minor to moderate SL at long. girder ends on river pier.						
113	Lead Painted Steel Stringer	2	32666	SF	10289	12250	9800	327
	Remarks	Span 3 stringers have minor to mod. corr. with min. to mod. SL throughout. Isolated areas of heavy corr. and SL.						
8121	Lead Painted Steel Bottom Chord Through Truss	2	9374	SF	4217	1875	2344	938
	Remarks	Minor to mod. corr. along webs with minor to mod. SL.						
8126	Lead Painted Steel Thru Truss Excluding Bottom Cho	2	26845	SF	16642	6712	2685	806
	Remarks	Areas of moderate corrosion with moderate section loss and several isolated corrosion holes.						
152	Lead Painted Steel Floor Beam	2	9471	SF	4695	1934	2605	237
	Remarks	Span 3 floorbeams have minor to mod. corr. with minor to mod. SL throughout. Isolated areas of heavy corr. and SL.						
162	Lead Painted Gusset Plate	2	184	EA	36	118	20	10
	Remarks	Gusset Plates 0 at all trusses have up to 50% SL. Typ. GPs have mod. to heavy SL & isolated areas of corr. holes.						
8178	Lead Painted Steel Stringer Ends Including Diaphra	2	86	EA	4	40	26	16
	Remarks	Sidewalk stringer ends at abutments have mod. to heavy corr. & SL. Roadway stringer ends have minor to mod. corr. & SL.						
8191	Lead Painted Steel Floor Beam Below Deck Joints	2	2029	SF	0	1052	863	114
	Remarks	FBs 0-0 have heavy corr. & SL in the bottom 1' of the web w/ 6 horiz. cracks.						
202	Lead Painted Steel Column or Pile Extension	1	4605	SF	2070	1152	1152	231
	Remarks	Minor to mod. corr. at base of anchor columns. Sidewalk columns have heavy corr. & SL where encasement has spalled.						
210	Reinforced Conc Pier Wall	1	5524	SF	4652	37	563	272
	Remarks	Deep spalls with exposed and corroded reinforcement in the river piers.						
215	Reinforced Conc Abutment	1	6328	SF	4429	1266	633	0
	Remarks	Spalls with exposed and corroded reinforcement in both abuts. & counterweight pit walls.						
231	Lead Painted Steel Pier or Abutment Cap	1	1440	SF	1357	82	0	1
	Remarks	Small tear & puncture in E. anchor column floorbeam at stringer 3 connection.						
234	Reinforced Conc Pier or Abutment Cap	1	222	LF	124	16	33	49
	Remarks	Deep spalls with exposed and corroded reinforcement in the river pier caps.						
302	Preformed Joint Seal	2	76	LF	0	35	0	41
	Remarks	E. Exp. Jt. has a 1.5" vertical differential btwn rails. Exp. Joints have tears, broken rails, & mod. corr. in the shoulders.						

304	Open Expansion Joint	2	186	LF	0	123	0	63
	Remarks	Center break has no gap leading to heaving in the adjacent roadway panels. E. rear break is broken in the middle.						
311	Movable Discontinuous Brg.	2	32	EA	9	4	8	11
	Remarks	Several sidewalk abut. bearings have heavy corr. & SL. Roadway bearings S3, S4, & S6 at E. Abut. have a 1" gap with the stringers						
313	Fixed Bearing	2	16	EA	0	0	16	0
	Remarks	Moderate corrosion and section loss on several bearings.						
321	Reinforced Concrete Approach Slab	2	1873	SF	1785	88	0	0
	Remarks							
8323	Approach Pavement	2	2	EA	0	2	0	0
	Remarks							
330	Metal Bridge Railing	2	439	LF	0	432	0	7
	Remarks	3 railing post supports are fully cracked through the web. 4 railing post supports are partial cracked.						
331	Concrete Bridge Railing	2	243	LF	121	122	0	0
	Remarks							
8402	Steel Bottom Chord Through Truss	2	9	LF	0	6	3	0
	Remarks	Bent bottom flange in members NE & SE 12-14, NE & NW 2-4, SE 2-4 & SE 4-6						
		Signature						Date
Inspection Team Leader:							09/ 25 / 2021	
Consultant Program Manager:							10 / 12 / 21	
Agency Program Manager:							10 / 14 / 2021	
8403	Steel Through Truss Excluding Bottom Chord	2	5	LF	0	5	0	0
	Remarks	Bent flanges in members NW 6-7, NE 10-11, SE 4-5, & SE 10-11						



SN:	016-6042	District:	1	Spans:	1	Appr. Spans:	4	Skew:	0	ADT:	4000	Truck Pct:	9
ADT Un:		Maint. Co:	COOK	Twsp:	HYDE PARK (CHICAGO)			Status:	OPEN - NO RESTRICT				
Facility Carried:	100TH ST				Feature Crossed:	CALUMET RIVER							
Location:	3300 E 100TH STREET			Municipality:	CHICAGO		Team/Sub:	/		Insp/Rte:			
Bridge Name:	100TH STREET BRIDGE			Material & Type:	STEEL/MOVEABLE - BASCULE								
Insp. Intervals Routine:	24	Fracture Critical:	12	Underwater:	60	Special:	N/A		Element Level:	24			

93A – Inspection Date:	08 / 16 / 21	93A4 – Temp. (°F):	64		
Is Delinquent:	<input type="checkbox"/>	Reason:			
90A – Agency Program Manager:	Jurca, V.		90A3 – Consultant Program Manager:	Bendok, M.	
93A3 – Team Leader:	Soehrman, D.		93A5 – Inspector:	Kenny, K.	

Resources

Time to Inspect (H:M):	8:15	15:15	Traffic Control:		N	Boat:		N	Waders:		N	Snooper:		N
Ladder:		Y	Manlift:		N	Bucket Truck:		N	Other:	Bucket Boat		Bucket Boat		




Inspector's Appraisals

92A1 – Type:	X1	If "X4-Other" Description:												
93A1 – Rating:	Prev: 3	New: 3	FC Method:	Prev: V	New:	MP	DP	UT	V	<input checked="" type="checkbox"/>				
93A2 – Remarks:	Several of the gusset plates exhibit mod. to heavy SL & corr. holes, particularly along the bottom chord. The heaviest SL occurs at nodes 0 where the SL is up to approx 50%. Bottom chord members 0-4 have mod. to heavy SL, particularly along the bottom flange & flange/web plate interface. The diagonal & vertical members have minor to mod. corr. & scattered heavy SL & corr. holes, particularly at & below deck level. The top chord has minor to mod. SL & isolated corr. holes. There are field welded attachments throughout.													

92A1 – Type:	X2	If "X4-Other" Description:												
93A1 – Rating:	Prev: 6	New: 5	FC Method:	Prev: V	New:	MP	DP	UT	V	<input checked="" type="checkbox"/>				
93A2 – Remarks:	Floorbeams 0-0W & 0-0E have heavy SL in the bottom 1' of the web & horizontal cracks under 7 of the stiffeners; the cracks have been arrested. The movable floorbeams exhibit minor to mod. corr. & minor SL throughout, scattered areas of minor corr. holes, & debris accumulation along the bottom flange. There is distortion of the top flange for the entire length of Floorbeam 21-21W & in isolated locations in the Floorbeam 21-21E.													

92A1 – Type:	X3	If "X4-Other" Description:												
93A1 – Rating:	Prev: 6	New: 6	FC Method:	Prev: V	New:	MP	DP	UT	V	<input checked="" type="checkbox"/>				
93A2 – Remarks:	The trunnion girders exhibit mod. corr. & minor section loss & along the flanges, top cover plate, & isolated locations in the web. The stiffeners exhibit mod. SL at each bearing location, as well as at scattered locations along the trunnion girders.													

92A1 – Type:	E2	If "X4-Other" Description:												
93A1 – Rating:	Prev: 6	New: 6	FC Method:	Prev: V	New:	MP	DP	UT	V	<input checked="" type="checkbox"/>				
93A2 – Remarks:	The anchor column floorbeams have minor pitting with heavy corr. & minor section loss at the corners. The anchor column floorbeams have several drilled holes w/ gouges adjacent. The stiffeners have heavy corr. & SL w/ isolated corr. holes at the bottom. The east face of the west anchor column floorbeam & the west face of the east anchor column floorbeam were not visible at the time of inspection.													

	Signature	Date
Inspection Team Leader:		09 / 25 / 21
Consultant Program Manager:		10 / 12 / 21
Agency Program Manager:		10 / 14 / 2021

Two Girder

- A1- Suspension Link & Pin
- A2- Suspension Single Pin
- A3- Tension Flanges Riveted/
Bolted Plate Girders
- A4- Bearing Seat of Suspended
Spans
- A5- Tension Flange of Rolled
Beam
- A6- Tension Flange of Welded
Plate Girders
- A7- Tension Flanges of Lattice
Truss Web Girders

Truss System

- B1- Eyebars & Pin Tension Members
- B2- Simple Span Welded Truss
Tension Members
- B3- Hanger Link & Pin of Suspended
Trusses
- B4- Single element Tension Members
- B5- Simple Span riveted/Bolted
Tension Members
- B6- Continuous Truss System-Welded,
Riveted or Bolted Tension Members

Cable Stayed & Suspension

- C1- Suspension Bridge-Cables
- C2- Cable Stayed-Cables

Tied Arches

- D1- Welded Box Ties
- D2- Riveted/Bolted Box Ties
- D3- Stiffened Girders

Framed Steel Substructure

- E1- Welded or Rolled Pier Cap
- E2- Riveted or Bolted Pier Cap
- E3- Welded or Rolled Pier Column
- E4- Riveted or Rolled Pier Column

Box Beams

- F1- Single Welded Box
- F2- Single Riveted/Bolted Box
- F3- Double Box Beam-Welded,
Riveted or Bolted

Other Types

- X1- Bascule
- X2- Floorbeams supporting other
steel members or spacing > 15 ft.
- X3- Cross Frames or Transfer
Beams
- X4- Other

**Illinois Department of Transportation
Structures Information Management System
Inventory Turnaround Report (S-105)**

Date: 8/13/2021

Structure Number: 016-6042

District: 1 Maintenance County: COOK Municipality: CHICAGO Bridge Status: OPEN - NO RESTRICT
 Maintenance Township: HYDE PARK (CHICAGO) Status Date: 4/1/1988
 Key Route On: FEDERAL-AID URBAN 1570 Sta: 1.5300 Seg: Spur/Alt: Main Route Sufficiency Rating: 55
 Key Rt Under: Sta: Seg: Spur/Alt: HBP Eligible: Yes

***** Screen 1 *****

Item No. / Name	Existing Values	Revisions	Item No. / Name	Existing Values	Revisions
(7) Facility Carried: 100TH ST			(101) Parallel Designation:	N	
(6) Feature Crossed: CALUMET RIVER			Parallel SN:		
(9) Location: 3300 E 100TH STREET			(8E) Replaced By Struct Number:		
(7A) Bridge Name: 100TH STREET BRIDGE			(8D) Replaces Structure Number:		
(3B) Maintenance County: 016			(49) Structure Length (Ft.):	326.4	
(3B1) Maintenance Township: 60			(112) AASHTO Bridge Length (Ft.):	99.9	
(21) Maintenance Resp: 40			(51) Bridge Roadway Width (Ft.):	38.0	
Other Resp:			(32) Approach Roadway Width (Ft.):	42.0	
Other Sec Resp:			(52) Deck Width (Ft.):	62.0	
(42) Service On/Under: 1.5			(107A) Deck Type/Thickness (In.):	G 5.0	
Other Service On:			Other Deck Type:		
Other Service Under:			(48) Length of Longest Span (Ft.):	233.5	
(22A) Reporting Agency: 4			(45/6) Nbr Spans Main/Approach:	1 4	
Other Reporting Agcy:			(43A/B) Main Span Material/Type:	3 16	
(20) Toll Facility: 0			Other Span Material:		
(35) Structure Flared: 0			Other Span Type:		
(31) Design Load: 02			(44AN/BN) Near Appr Span Matrl/Type #1:	3 02	
(31A) Struct Steel Weight (Lbs.): 0			(44AN/BN) Near Appr Span Matrl/Type #2:		
(60A/B) Substr Matrl: 53			(44AF/BF) Far Appr Span Matrl/Type #1:	3 02	
(8A1) Bridge Remarks (Existing):			(44AF/BF) Far Appr Span Matrl/Type #2:		
			Bridge Remarks (Revised):		

***** Screen 2 *****

Item No. / Name	Existing Values	Revisions	Item No. / Name	Existing Values	Revisions
(34A) Skew Dir/Angle (DEG): N / 0			(202) Traffic Permits Rte Sec Nbr:		
(33) Bridge Median Type: 0			(8B) Multi-Level Structure Number:		
(33A) Bridge Median Width (Ft): 0			(62A) Culvert Cells (Count):	0	
(38) Navigation Control: 1			(62B) Culvert Cell Width (Ft.):	0.00	
(39) Navigation Vert Clear (Ft): 16			(62C) Culvert Cell Height (Ft.):	0.00	
(40) Navigation Horiz Clea (Ft): 160			(62D) Culvert Opening Area (Sq. Ft.):	0.0	
(50A) Sidewalk Width On - Right (Ft): 8.4			(62E) Culvert Fill Depth (Ft.):	0.0	
(50B) Sidewalk Width On - Left (Ft): 8.4			(16) Latitude:	41.71381998	
(50C) Sidewalks Under Structure: 0			(17) Longitude:	87.54305397	
(36E) Guardrails On - Right: 0			(98A) Border Bridge State Number:		
Other Guardrail Right:			(98B) BorderBridge Adj State (% Resp):	0	
(36F) Guardrails On - Left: 0			(99) Border Bridge Number Existing:		
Other Guardrail Left:			Border Bridge Remarks (Existing):		
(8C) RR Crossing Numbers:					
(55B1) RR Lateral Underclearance (Ft.): 0.0					
(54B3) RR Vert Underclearance (Ft. - In.): 0 - 0					

**Illinois Department of Transportation
Structures Information Management System
Inspector's Inventory Report (S-114)**

Date: 8/13/2021

Structure Number: 016-6042

District: 1
Municipality: CHICAGO
Facility Carried: 100TH ST
Feature Crossed: CALUMET RIVER
(21) Maintenance Resp: MUNICIPALITY
Other Resp:
(22A) Reporting Agency: MUNICIPALITY
Other Reporting Agcy:

Maintenance County: COOK
Maint Township: HYDE PARK (CHICAGO)
Bridge Name: 100TH STREET BRIDGE
Location: 3300 E 100TH STREET
UNKNOWN
Other Sec Resp:

<u>Item No. / Name</u>	<u>Construction Information</u>	
	<u>Original</u>	<u>Existing Values</u>
(27/27A) Year/Type:	1927	1992
(27B) Route:		FAU 157
(27C) Section:		
(27D) Station:		
(27E) Contract :		
(27F) Project:	000000000000	
(27G) Built By:	CITY	CITY

(41) Bridge Status: 1 (OPEN - NO RESTRICT)
(41A) Status Date: 4/1/1988
(41B) Status Remarks:

(42) Service On/Under: 1 HIGHWAY 5 WATERWAY
Other Service On: Other Service Under:

<u>Item No. / Name</u>	<u>Existing Values</u>	<u>Revisions</u>
(101) Parallel Designation:	N	___
Parallel SN:		___
(35) Structure Flared:	0	___
(31) Design Load:	02	___
(31A) Struct Steel Weight (Lbs.):	0	3,400,000
(60A/B) Substr Matr:	53	___
(8A1) Bridge Remarks (Existing):		___
Bridge Remarks (Revised):		___

Border Bridge Remarks:

<u>Item No. / Name</u>	<u>Existing Values</u>	<u>Revisions</u>
(49) Structure Length (Ft.):	326.4	___
(112) AASHTO Bridge Length (Ft.):	99.9	___
(51) Bridge Roadway Width (Ft.):	38.0	___
(32) Approach Roadway Width (Ft.):	42.0	___
(52) Deck Width (Ft.):	62.0	___
(48) Length of Longest Span (Ft.):	233.5	___
(107/A) Deck Type/Thickness (In.):	G 5.0	___ / ___
Other Deck Type:		___ / ___
(45/6) Nbr Spans Main/Approach:	1 4	___ / ___
(43A/B) Main Span Material/Type:	3 16	___ / ___
Other Span Material:		___ / ___
(44AN/BN) Near Appr Span Matr/Type #1:	3 02	___ / ___
(44AN/BN) Near Appr Span Matr/Type #2:		___ / ___
(44AF/BF) Far Appr Span Matr/Type #1:	3 02	___ / ___
(44AF/BF) Far Appr Span Matr/Type #2:		___ / ___

<u>Item No. / Name</u>	<u>Existing Values</u>	<u>Revisions</u>
(34A) Skew Dir/Angle (DEG):	N / 0	___ / ___
(33) Bridge Median Type:	0	___
(33A) Bridge Median Width (Ft):	0	___
(38) Navigation Control:	1	___
(39) Navigation Vert Clear (Ft):	16	___
(40) Navigation Horiz Clea (Ft):	160	___
(50A) Sidewalk Width On - Right (Ft):	8.4	___
(50B) Sidewalk Width On - Left (Ft):	8.4	___
(50C) Sidewalks Under Structure:	0	___

<u>Item No. / Name</u>	<u>Existing Values</u>	<u>Revisions</u>
(36E) Guardrails On - Right:	0	___
(36F) Guardrails On - Left:	0	___
(55B1) RR Lateral Underclearance (Ft.):	0.0	___
(54B3) RR Vert Underclearance (Ft. - In.):	0 - 0	___
(62A) Culvert Cells (Count):	0	___
(62B) Culvert Cell Width (Ft.):	0.00	___
(62C) Culvert Cell Height (Ft.):	0.00	___
(62D) Culvert Cell Opening Area (Sq. Ft.):	0.0	___
(62E) Culvert Fill Depth (Ft.):	0.0	___

**Illinois Department of Transportation
Structures Information Management System
Inspector's Inventory Report (S-114)**

Date: 8/13/2021

<u>Key Route On</u>			<u>Key Route Under</u>		
<u>Item No. / Name</u>	<u>Existing Values</u>	<u>Revisions</u>	<u>Item No. / Name</u>	<u>Existing Values</u>	<u>Revisions</u>
(28) Number Of Lanes:	2	___	(28) Number Of Lanes:		___
(102) One Or Two Way Traffic:	2	___	(102) One Or Two Way Traffic:		___
	<u>South Or East</u>			<u>South Or East</u>	
	<u>Value</u> <u>Revisions</u>	<u>North Or West</u>		<u>Value</u> <u>Revisions</u>	<u>North Or West</u>
(47) Max Rdwy Width (Ft.):	38.0 ___	<u>Value</u> <u>Revisions</u>	(47) Max Rdwy Width (Ft.):	___	___
(47A/B) Horizontal (Ft.):	38.0 ___	0.0 ___	(47A/B) Horizontal (Ft.):	___	___
			(55B/56) Min Lateral:	___	___
KR On Remarks:			KR Under Remarks:		

**Illinois Department of Transportation
Structures Information Management System
Master Structure Report (S-107)**

Date: 8/13/2021

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Structure Number: 016-6042 District: 1

Inventory Data

Facility Carried:	100TH ST	Bridge Name:	100TH STREET BRIDGE	Sufficiency Rating:	55.0	Structure Length:	326.4
Feature Crossed:	CALUMET RIVER	Location:	3300 E 100TH STREET	HBP Eligible:	Yes	AASHTO Bridge Length:	99.9
Bridge Remarks:				Replaced By:		Length of Long Span:	233.5
Bridge Status:	1 OPEN - NO RESTRICT	StatusDate:	4/1/1988	Replaces:		Bridge Roadway Width:	38.0
Status Remarks:				Last Update Date:	03/30/2021	Appr Roadway Width:	42.0
Maint County:	016 COOK	Maint Township:	60 HYDE PARK (CHICAGO)	Parallel Structure:	None	Deck Width:	62.0
Maint Responsibility:	40 MUNICIPALITY		UNKNOWN	Multi-Level Structure Nbr:		Sidewalk Width Right:	8.4
Service On/Under:	1 HIGHWAY / 5 WATERWAY			Skew Direction:	None	Sidewalk Width Left:	8.4
Reporting Agency:	4 MUNICIPALITY			Skew Angle:	0 D	Navigation Control:	1 Yes
Main Span Matl/Type:	3 STEEL / 16 MOVEABLE - BASCULE			Structure Flared:	No	Navigation Horiz Clear:	160
Nbr Of Main Spans:	1	Nbr Of Approach Spans:	4	Historical Significance:	No	Navigation Vert Clear:	16
Approaches				Border Bridge State:		Culvert Fill Depth:	0.0
Near #1 Matl/Type:	3 STEEL / 02 STRINGER/MULTI-BEAM/GIRDER			Bdr State SN:		Number Culvert Cells:	0
Near #2 Matl/Type:				Bdr State % Responsibility:	0	Culvert Opening Area:	0.0
Far #1 Matl/Type:	3 STEEL / 02 STRINGER/MULTI-BEAM/GIRDER			Structural Steel Wt:	0	Culvert Cell Height:	0.00
Far #2 Matl/Type:				Substructure Material:	53	Culvert Cell Width:	0.00
Median Width/Type:	0 Ft / 0 None			Rated By:	3 Consultant	Rate Method:	6 LOAD FACTOR (LF) REP
Guardrail Type L/R:	0 None / 0 None	Inventory Rating:	1.020 (36)	Load Rating Date:	03/04/2016	***Railroad Crossing Info***	
Toll Facility Indicator:	0 No Toll	Operating Rating:	1.410 (50)	Crossing 1 Nbr:		Crossing 1 Nbr:	
Latitude:	41.71381998	Longitude:	87.54305397	Design Load:	02 HS20	RR Lateral Underclear:	0.0
Deck Structure Type:	G OPEN STEEL GRATING	Deck Structure Thickness:	5.0	SD:	Y	FO:	N
Sidewalks Under Structure:	0 None			RR Vertical Underclear:	0 Ft 0 In		

Key Route On Data

Key Route Nbr:	FEDERAL-AID URBAN	1570	Station:	1.5300
Appurtenances:	Main Route	00000	Segment:	
Inventory County:	016 COOK		Linked:	Y
Township/Road Dist:	60 HYDE PARK (CHICAGO)		Natl. Hwy System:	On NHS
Municipality:	1051 CHICAGO		Inventory Direction:	
Urban Area:	1051		Curr AADT Yr/Count:	2018 / 4000
Functional Class:	5 MAJOR COLLECTOR		Est Truck Percentage:	9 %
** CLEARANCES **	South/East	North/West	Number Of Lanes:	2
Max Rdwy Width:	38.0		One Or Two Way:	2 Two-Way
Horizontal:	38.0	0.0	Bypass Length:	2
Min Vertical:	99Ft 11In	00Ft 00In	Future AADT Yr/Cnt:	2032 / 14317
10 Ft Vertical:	99Ft 11In	00Ft 00In	Designated Truck Rte:	NONE
Lateral:			Special Systems:	No

Key Route Under Data

Station:	
Segment:	
Linked:	
Natl. Hwy System:	
Inventory Direction:	
Curr AADT Yr/Count:	/
Est Truck Percentage:	%
Number Of Lanes:	
One Or Two Way:	
Bypass Length:	
Future AADT Yr/Cnt:	/
Designated Truck Rte:	
Special Systems:	

*** Marked Route On Data ***

Route #	Designation	Kind	Number
Route #1:	1 Mainline	8 Other	
Route #2:	1 Mainline		
Route #3:	1 Mainline		

*** Marked Route Under Data ***

Route #	Designation	Kind	Number

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Structures Information Management System
Master Structure Report (S-107)**

Date: 8/13/2021

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Structure Number: 016-6042 District: 1

Data Related to Inspection Information

Inspection Intervals
 Routine NBIS: MOS Underwater: MOS
 Fracture Critical: MOS Special:
 *** Maximum Allowable Posting Limits ***
 One Truck At A Time: Tons
 Single Unit Vehicles: Tons
 Combination Type 3S-1: Tons
 Combination Type 3S-2: Tons
 Bridge Posting Level: No Posting Required

Inspection/Appraisal Information

Inspection Date:	<input type="text" value="08/05/2019"/>	Inspection Temperature:	<input type="text" value="73"/> Deg. F.	Insp by (Name):	<input type="text" value="Vaicik, Stephen"/>	** Actual Posted Limits **	
Deck:	<input type="text" value="4"/>	POOR CONDITION - ADVANCED DETERIORATION	Insp by (Name):	<input type="text" value="Moreno, Brian"/>	Single Unit Vehicles:	<input type="text" value=""/> Tons	
Superstructure:	<input type="text" value="4"/>	POOR CONDITION - ADVANCED DETERIORATION	Utilities Attached:	<input type="text" value="9"/>	ELECTRIC	Combination Type 3S-1:	<input type="text" value=""/> Tons
Substructure:	<input type="text" value="4"/>	POOR CONDITION - ADVANCED DETERIORATION		<input type="text" value="N"/>	N/A	Combination Type 3S-2:	<input type="text" value=""/> Tons
Culvert:	<input type="text" value="N"/>	NOT APPLICABLE		<input type="text" value="N"/>	N/A	One Truck At A Time:	<input type="text" value="0"/>
Channel and Protection:	<input type="text" value="7"/>	GOOD CONDITION - SOME MINOR PROBLEMS	Deck Wearing Surf:	<input type="text" value="P"/>	GRATING	Last Paint Type:	
Structural Evaluation:	<input type="text" value="4"/>	MINIMUM ADEQUACY TO BE LEFT IN PLACE	Deck Membrane:	<input type="text" value="F"/>	NONE	<input type="text" value="I"/>	ALUM EPOXY MASTIC
Deck Geometry:	<input type="text" value="5"/>	BETTER THAN ADEQUATE TO BE LEFT IN PLACE	Deck Protection:	<input type="text" value="J"/>	NONE	<input type="text" value=""/>	
Underclearance-Vert/Lat.:	<input type="text" value="N"/>	NOT APPLICABLE	Total Deck Thick:	<input type="text" value="5.0"/>		<input type="text" value=""/>	
Waterway Adequacy:	<input type="text" value="9"/>	SUPERIOR TO PRESENT DESIRABLE CRITERIA	Last Paint Date:	<input type="text" value="10/2008"/>		<input type="text" value=""/>	
Approach Roadway Align:	<input type="text" value="8"/>	EQUAL TO PRESENT DESIRABLE CRITERIA	Inspection Remarks:	Joint Openings (In.) W. Abut., 1 3/8"; E. Abut., 2" (measured @ N. shoulder) Deck, up to 50% of the concrete-filled grid deck and deck soffit is spalled and has scaling w/mod. corr. on grid. Several repair plates in the steel grid. Super			
Bridge Railing Appraisal:	<input type="text" value="2"/>	Doesn't Meet Standards					
Approach Guardrail:	<input type="text" value="222"/>	Not Acceptable Not Acceptable Not Acceptable					
Pier Navig Protection:	<input type="text" value="3"/>	IN PLACE BUT IN A DETERIORATED CONDITION					

Underwater Inspection/Appraisal Information

Inspection Date:
 Temperature: Inspection Method: Diver Diver Probe Sonar
 Inspected By: Inspected By: Appraisal Rating: FAIR CONDITION
 Inspection Remarks: SCALING AND SECTION LOSS AT BOTH RIVER PIERS WITH UP TO 9 INCHES OF PENETRATION. MISSING TIMBER FENDERS AT BOTH RIVER PIERS. VERTICAL CRACKING AT BOTH RIVER PIERS UP TO 1/2 INCH WIDE.

Scour Critical Information

Rating: CALCULATED SCOUR ABOVE FOOTING Evaluation Method: Rational Analysis
 Analysis Date: Analysis By:

Miscellaneous

Fracture Critical Members: Yes
 Microfilm Data Recorded: No

Construction Information

Year:	<input type="text" value="1927"/> Original	<input type="text" value="1992"/> Reconstructed
Route:	<input type="text" value=""/> Sta: <input type="text" value=""/>	<input type="text" value="FAU 157"/> Sta: <input type="text" value=""/>
Section Nbr:	<input type="text" value=""/>	
Contract Nbr:	<input type="text" value=""/>	
Fed Aid Pr #:	<input type="text" value="0000000000000000"/>	
Built By:	<input type="text" value="4"/> CITY	<input type="text" value="4"/> CITY

Proposed Improvement

Cost Estimate Year:	<input type="text" value="2000"/>	Length:	<input type="text" value="360"/>	*** Costs in Dollars ***
Type of Work:	<input type="text" value="31"/> REPLACEMENT DUE TO SUBSTANDARD CAPACITY OR GEOMETRICS	Bridge Cost:	<input type="text" value="1,093"/>	
Done By:	<input type="text" value="1"/> Contract	Roadway Cost:	<input type="text" value="109"/>	
Remarks:	<input type="text" value=""/>		Total Project Cost:	<input type="text" value="1,640"/>

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Structures Information Management System
Structure Summary Report**

Date: 05/03/2022

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Structure Number: 016-6042

District: 1

Inventory Data

Facility Carried:	100TH ST	Bridge Name:	100TH STREET BRIDGE	Sufficiency Rating:	47.6	Structure Length:	326.4
Feature Crossed:	CALUMET RIVER	Location:	3300 E 100TH STREET	HBP Eligible:	Yes	AASHTO Bridge Length:	99.9
Bridge Remarks:		Status Date:	4/1/1988 12:00:00 AM	Replaced By:	-	Length of Long Span:	233.5
Bridge Status:	1 OPEN - NO RESTRICT			Replaces:	-	Bridge Roadway Width:	38.0
Status Remarks:		Last Update Date:	10/18/2021	Appr Roadway Width:			42.0
Maint County:	016 COOK	Maint Township:	60 HYDE PARK (CHICAGO)	Parallel Structure:	None	Deck Width:	62.0
Maint Responsibility:	40 MUNICIPALITY		UNKNOWN	Multi-Level Structure Nbr:		Sidewalk Width Right:	8.4
Service On/Under:	1 HIGHWAY		5 / WATERWAY	Skew Direction:	N None	Sidewalk Width Left:	8.4
Reporting Agency:	4 MUNICIPALITY			Skew Angle:	0 D	Navigation Control:	1 Yes
Main Span Matl/Type:	3 STEEL		/ 16 MOVEABLE - BASCULE	Structure Flared:	No	Navigation Horiz Clear:	160
Nbr Of Main Spans:	1	Nbr Of Approach Spans:	4	Historical Significance:	No	Navigation Vert Clear:	16
Approaches				Border Bridge State:		Culvert Fill Depth:	0.0
Near #1 Matl/Type:	3 STEEL		/ 02 STRINGER/MULTI-BEAM/GIRDER	Bdr State SN:		Number Culvert Cells:	0
Near #2 Matl/Type:			/	Bdr State % Responsibility:	0	Culvert Opening Area:	0.0
Far #1 Matl/Type:	3 STEEL		/ 02 STRINGER/MULTI-BEAM/GIRDER	Structural Steel Wt	3400000	Culvert Cell Height:	0.00
Far #2 Matl/Type:			/	Substructure Material:	53	Culvert Cell Width:	0.00
Median Width/Type:	0 Ft. / 0 None			Rated By:	3 Consultant	Rate Method:	6 LOAD FACTOR (LF) REPORTED BY RATING FACTOR (RF)
Guardrail Type L/R:	0None / 0 None	Inventory Rating:	1.020(36)	Load Rating Date:	03/04/2016	Railroad Crossing Info	
Toll Facility Indicator:	0 No Toll	Operating Rating:	1.410(50)			Crossing 1 Nbr:	
Latitude:	41.71381998	S Longitude:	87.54305397	S Design Load:	02 HS20	Crossing 1 Nbr:	
Deck Structure Type:	G OPEN STEEL GRATING	Deck Structure Thickness:	5 SD: Y FO: Y			RR Lateral Underclear: 0.0	
Sidewalks Under Structure:	0 None					RR Vertical Underclear:	0 Ft 0 In

Key Route On Data

Key Route Nbr:	FEDERAL-AID URBAN	1570	Station:	1.5300
Appurtenances	Main Route	00000	Segment:	
Inventory County:	016 COOK		Linked:	Y
Township/Road Dist	60 HYDE PARK (CHICAGO)		Natl. Hwy System:	On NHS
Municipality	1051 CHICAGO		Inventory Direction:	
Urban Area:	1051 1051		Curr AADT Yr/Count:	2018 / 4000
Functional Class:	5 MAJOR COLLECTOR		Est Truck Percentage:	9
** CLEARANCES **	South/East	North/West	Number Of Lanes:	2
Max Rdwy Width:	38.0		One Or Two Way:	2 Two-Way
Horizontal:	38.0	0.0	Bypass Length:	2
			Future AADT Yr/Cnt:	2032 / 14317
			Designated Truck Rte:	NONE
Lateral:			Special Systems:	No

Key Route Under Data

Station:	
Segment:	
Linked:	
Natl. Hwy System:	
Inventory Direction:	
Curr AADT Yr/Count:	/
Est Truck Percentage:	
Number Of Lanes:	
One Or Two Way:	
Bypass Length:	
Future AADT Yr/Cnt:	/
Designated Truck Rte:	
Special Systems:	

***** Marked Route On Data *****

	Designation	Kind	Number
Route #1:	1 Mainline		
Route #2:	1 Mainline		
Route #3:	1 Mainline		
		8 Other	

***** Marked Route Under Data *****

Designation	Kind	Number
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Structures Information Management System
Structure Summary Report**

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Structure Number: 016-6042

District: 1

Data Related to Inspection Information

*** Inspection Intervals ***

*** Maximum Allowable Posting Limits ***

Bridge Posting Level:

Routine NBIS:	24 MOS	Underwater:	60 MOS	One Truck At A Time:	0	Combination Type 3S-1:	Tons	5	No Posting Required
		Special:	N	Single Unit Vehicles:	Tons	Combination Type 3S-2:	Tons		

Inspection/Appraisal Information

** Actual Posted Limits **

Inspection Date:	08/16/2021	Inspection Temperature:	64Deg. F						
Deck:	5	FAIR CONDITION - MINOR SECTION LOSS, CRACKS				Single Unit Vehicles:	Tons		
Superstructure:	3	SERIOUS CONDITION - SIGNIFICANT SECTION LOSS				Combination Type 3S-1:	Tons		
Substructure:	4	POOR CONDITION - ADVANCED DETERIORATION				Combination Type 3S-2:	Tons		
Culvert:	N	NOT APPLICABLE				One Truck At A Time:	0		
Channel and Protection:	7	GOOD CONDITION - SOME MINOR PROBLEMS		Deck Wearing Surf:	P GRATING	Last Paint Type:		I	
Structural Evaluation:	3	INTOLERABLE - HIGH PRIORITY FOR CORRECTION		Deck Membrane:	F NONE	ALUM EPOXY MASTIC			
Deck Geometry:	5	BETTER THAN ADEQUATE TO BE LEFT IN PLACE		Deck Protection:	J NONE				
Underclearance-Vert/Lat.:	N	NOT APPLICABLE		Total Deck Thick:	5.0				
Waterway Adequacy:	9	SUPERIOR TO PRESENT DESIRABLE CRITERIA		Last Paint Date:	10/2008				
Approach Roadway Align:	8	EQUAL TO PRESENT DESIRABLE CRITERIA							
Bridge Railing Appraisal:	2	Doesn't Meet Standards							
Approach Guardrail:	222	Not Acceptable	Not Acceptable	Not Acceptable					
Pier Navig Protection:	3	IN PLACE BUT IN A DETERIORATED CONDITION							

Underwater Inspection/Appraisal Information

Inspection Date:	12/04/2017							
Temperature:	30	Inspection Method:	DDPPS	Diver	Diver	Probe	Probe	Sonar
					Appraisal Rating:	5	FAIR CONDITION	

Scour Critical Information

Miscellaneous

Rating:	8	CALCULATED SCOUR ABOVE FOOTING	Evaluation Method:	B	Rational Analysis		
Analysis Date:	09/11/1997					Microfilm Data Recorded:	No

Construction Information

Year:	1927	Original	1992	Reconstructed
Route:		Sta:	FAU 157	Sta:
Section Nbr:				
Contract Nbr:				
Fed Aid Pr#:	00000000000000			
Built By:	4	CITY	4	CITY