CITY OF CHICAGO - DEPARTMENT OF TRANSPORTATION
BRIDGE INVENTORY REPORT

Structure No. 016-6043

106th Street
over
the Calumet River

Inspection Date: August 12, 2021

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

EXECUTIVE SUMMARY

On August 12th and September 7th, 2021, CBIT performed a routine, fracture critical, and element level inspections 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 poor condition (overall condition rating = 4)
- Substructure is in fair condition (overall condition rating = 5)

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 poor overall condition, which corresponds to an NBIS and IDOT general condition rating of 4.

Condition Rating History

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

GENERAL STRUCTURE INFORMATION

Structure: 106th Street over the Calumet River

Structure No.: 016-6043

Bridge Description: The structure is a double-leaf, trunnion type bascule bridge built in 1928. The structure has an overall length of approximately 350 feet and a deck width of approximately 62 feet.

Year Built: 1928, Reconstructed 1998

ADT: 2018 – 6,250 (9% trucks)

Inspection Date/Duration: 08/12/21 – 2 inspectors @ 8 hrs. = 16 hrs. (Bucket Boat)
09/07/21 – 2 inspectors @ 9 hrs. = 18 hrs. (Topside & Bridge Houses)
34 hrs. (Total)

Temp./Weather Condition: 78°F / Sunny (08/12/21)
80°F / Cloudy/Rainy (09/07/21)

Required Inspections:

Type	Frequency	Previous Date
Routine	24 months	08/08/19
Element Level	24 months	09/09/19
Fracture Critical	12 months	08/25/20
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. The remaining portions of the bridge were visually inspected from the ground and from the bridge pit utilizing a ladder or safe climbing techniques where necessary. Since this bridge opens for marine traffic upon request, maintaining radio contact with the bridge operator while onsite is required. The bridge houses require keys to access.

Traffic Control: None

Firm – Inspectors Present: (no initials) Collins Engineers, Inc. – Richard Raffin, Joshua Simpson, Paul Hansen

Remarks: The movable leaves of the bridge are operable.

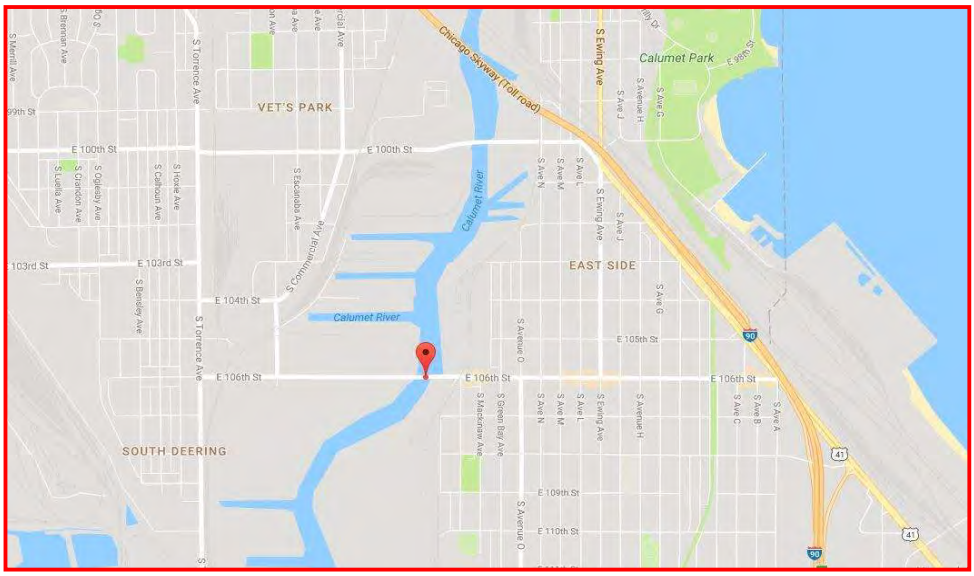
Terminology:

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 the movable span, the open steel grating wearing surface exhibited minor corrosion.
- The concrete-filled portions of the deck have minor deterioration of the concrete and an exposed grid with coating loss and minor surface corrosion (see Photograph 2).
- The concrete wearing surface in west fixed spans exhibited partial depth asphalt patching (see Photograph 3).
- The east fixed spans exhibited approximately (20) spalls less than 1 inch in diameter.
- East fixed span has 11-foot by 11-foot area of wide map cracking, spalling, and failure of the deck overlay (see Photograph 4)
- The pavement markings are not visible.

1. Overall top of deck, looking southeast

2. Typical movable wearing surface, looking south

3. West fixed span wearing surface, looking northeast

4. East fixed span wearing surface, looking southwest

Parapets / Bridge Railings

- The steel bridge railings in the moveable span have scattered areas of minor to moderate corrosion and initial section loss (see Photograph 5).
- The railing bases in the moveable spans have heavy corrosion and moderate section loss at the connection to the sidewalk bracket (see Photograph 6).
- The stone parapets in the fixed spans, exhibited isolated cracked, deteriorated stones, deteriorated joint mortar, and exposed embedded anchor bolts.
- At the southeast parapet there is an area of unsound concrete patch.

5. North steel rail, looking north

6. Typical railing base, looking southeast

Curbs

- In the moveable span the steel curbs exhibit minor surface corrosion.
- Span 2 north curb spalled and deteriorated full length of span (see Photograph 7).
- In the fixed spans, the concrete curbs have hairline to narrow cracks, small spalls, and deteriorated metal plates.
- A section of the northwest and southwest curbs has been repaired.

7. Curb in Span 2, looking north

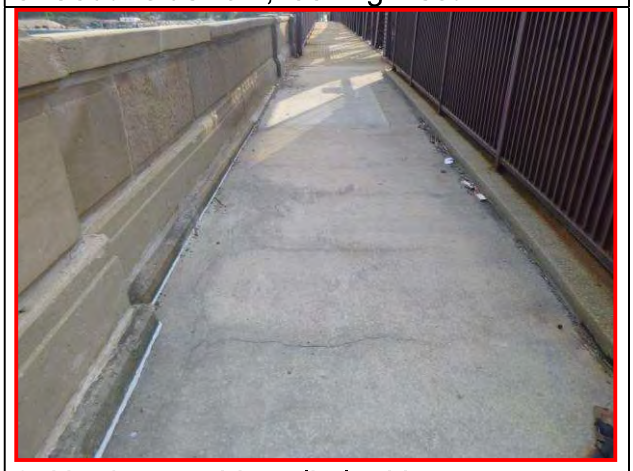
Median

- There is no median on the structure.

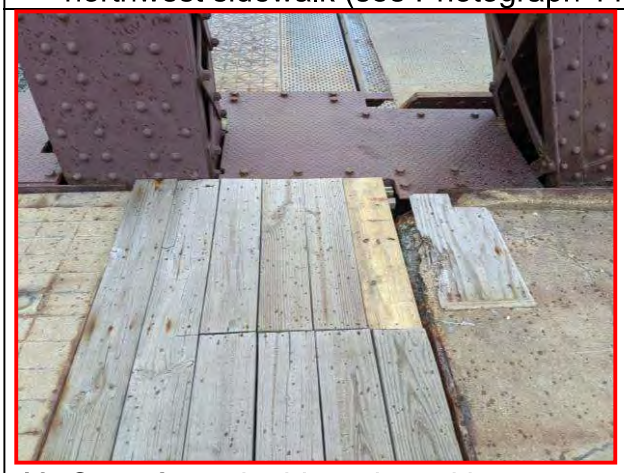
Sidewalks

- The sidewalks in the movable span exhibit minor concrete surface section loss, minor to moderate corrosion of the steel grid, and a small hole in the concrete fill in the south sidewalk near the west end (see Photograph 8).
- Most sections of the sidewalk in the movable span are bowed with a vertical differential up to 1-inch.
- The northwest and southwest fixed span sidewalks have sections of full depth replacement.
- The sidewalks in the fixed spans have surface spalls, delaminations, patches, and hairline to narrow transverse, longitudinal, and diagonal cracks (see Photograph 9).
- There are two spalls along the interface of the fixed sidewalk and the moveable span at the northeast, southeast, and southwest sidewalks both corners have timber planks covering a portion of the spall (see Photograph 10).
- The southwest and southeast sidewalk exhibit areas of delamination, transverse and longitudinal hairline to narrow cracking, and spalling.
- A steel plate is covering an access hatch in the northwest sidewalk (see Photograph 11).

8. South sidewalk, looking west



9. Northwest sidewalk, looking east



10. Span 2 south sidewalk, looking west

11. Steel plate in the northwest sidewalk, looking west

Drain System

- There are no drains on the structure.

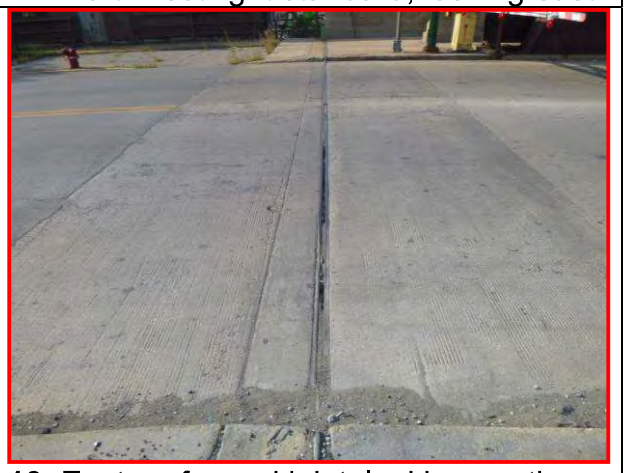
Light Standards

- The light standards exhibit moderate corrosion near the bases, deteriorated or missing grout pads, missing hand hole covers with exposed wiring, and missing anchor bolt covers (see Photograph 12).
- In Span 1, the south light standard has a missing luminaire cover, and the north light standard luminaire cover is heavily corroded. In Span 5, all the light standards are missing luminaire covers.
- The southwest light standard exhibits one under engaged anchor rod nut.

12. Northwest light standard, looking east

Expansion Joints / Breaks

- The west expansion joint has a few torn, bulging, and depressed sections.
- The east expansion joint has a couple missing gland sections, adding up to about 20-feet in length (see Photograph 13).
- The center and rear breaks have faded paint (see Photograph 14).
- At the north sidewalk, the center break is ¼-inch low on the east side.



13. East preformed joint, looking south

14. Center break, looking south

Deck Soffit

- In the east fixed spans, the underside of the deck has hairline longitudinal and transverse cracks with efflorescence (see Photograph 15).
- In the west fixed spans, the underside of the deck has isolated hairline longitudinal and transverse cracks with efflorescence.
- The sidewalk soffits in Spans 2 and 4 have scattered hairline cracks, some with efflorescence, and areas of poor consolidation which have resulted in exposed rebar. The soffits have delaminations, and timber formwork left in place.
- Various fillets in the fixed spans are chipped or broken.
- In the movable span, the open steel grating exhibits minor corrosion and a few isolated missing deck-to-stringer connection bolts.
- In the movable span, the deck pans in the deck and sidewalk have heavy corrosion, section loss, and scattered corrosion holes (see Photograph 16).

15. Span 1 soffit, looking east

16. Span 3 soffit, looking east

Approaches

- The west approach has been recently repaired (see Photograph 17).
- The east approach has been recently repaved.
- The north and south sidewalks at the bridge approaches have wide cracks, large spalls, and vegetation growing in the cracks.

17. West approach, looking southwest

- The southwest approach sidewalk has a large area of concrete missing (see Photograph 18).

18. Edge of the southwest approach sidewalk, looking east

Approach Guardrails

- Approach railings typically exhibit minor surface corrosion (see Photograph 19).

19. Guardrail at the southeast sidewalk, looking southeast

Fences

- A chain-link fence is present in the northeast approach. The fence exhibits a 3 SF hole in the mesh, has detached barbed wire, and the mesh is detached from several posts (see Photograph 20).
- Northeast truss access fence exhibits impact damage on the northeast corner.

20. Northeast approach fence, looking northeast

Utilities

- There are no utilities attached to the deck.

Signage

- The signage at the center break is fading (see Photograph 21).

21. Tow zone sign, looking south

Other

- Life rings are in place at the bridge houses (see Photograph 22).

22. West bridge house life ring, looking southeast

II. SUPERSTRUCTURE

- The superstructure is in poor overall condition which corresponds to a NBIS and IDOT condition rating of 4. (Note – this condition rating is governed by the Fracture Critical rating.)

23. Overall underside of the movable superstructure framing, looking southwest

24. Overall underside of the fixed superstructure framing, looking east

Bearings

- The live load bearings have heavy debris surrounding the base, heavy corrosion, and moderate to heavy section loss. On the southwest live load bearing, there are two 1-inch diameter corrosion holes in the lower casting.
- The southeast live load bearing is misaligned 1½-inch to the west and ¼-inch to the south. The northeast live load bearing is misaligned 1-inch to the north and 1-inch to the west. The northwest live load bearing is misaligned up to 1½-inch to the east (see Photograph 25).
- The southwest live load bearings have an ⅛-inch gap between the upper and lower castings.
- The bearings at the abutments have heavy debris accumulation, surface corrosion, and minor section loss (see Photograph 26).
- Stringer 4 at the West Abutment has a missing sole plate bolt.
- The trunnion bearings exhibit moderate to heavy corrosion, moderate pitting, and moderate section loss of the anchor bolts (see Photograph 27).
- The secondary live load bearings have minor to heavy corrosion and minor section loss. There is up to a ¼-inch gap between the bumper and anchor shoe at the anchor columns.
- The southeast anchor shoe is also out of alignment with the bumper by approximately 1-inch to the north.
- The trunnion girder bearings have heavy corrosion and moderate to heavy section loss.

25. NW live load bearing, looking southeast

26. East Abutment bearing, looking northeast

27. Southwest trunnion bearing, looking north

Stringers

- In Spans 1 and 5, the stringer ends exhibit corrosion and minor section loss on the bottom flange. The webs have minor corrosion near the bottom flange (see Photograph 28).
- In Spans 2 and 4, the roadway stringers have no notable defects.
- In the fixed spans, there are catwalk hangers attached to the stringers.
- The sidewalk stringers in the fixed spans have minor corrosion with isolated locations of heavy corrosion.
- In Span 4, there is a north sidewalk stringer missing all 8 bolts in the south half of the bottom flange splice (see Photograph 29).
- In the movable span, the roadway and sidewalk stringers typically have minor surface corrosion and peeling paint in the bottom flange.
- At the rear breaks, the stringer ends have minor to moderate corrosion with minor section loss.
- A missing bolt was noted at the stringer to Floorbeam 10-10W connection.
- A missing bolt was noted at stringer to diagonal 6-9W connection.
- The bottom flange of the north sidewalk stringers on the east leaf have welded utility attachments.

28. Span 5 stringer ends, looking west

29. North sidewalk stringer in Span 4, looking south

Girders

- The trunnion girders have heavy corrosion and section loss below the bottom chord of the trusses and near the trunnion girder support column (see Photograph 30).
- In Span 4, the northwest trunnion girder has corrosion holes near the column connection.
- The middle portion of the trunnion girders have minor corrosion and section loss, primarily in the flanges.

30. SW trunnion girder at river pier, looking east

- Northeast trunnion girder has cut holes with sharp edges in the web even with the trunnion bearing (see Photograph 31).
- The bearing stiffeners at the trunnion girder bearings typically have pack rust between the stiffener angles and heavy section loss.

31. NE trunnion girder, looking southwest

Floorbeams

- The movable span floorbeams typically exhibit minor to moderate corrosion on the top and bottom flanges, minor to moderate flaking along the bottom flanges, and heavy debris on the east face of the west leaf and west face of the east leaf (see Photograph 32).
- The sidewalk brackets in the movable span have minor debris on the bottom flange at the connections to the trusses.
- Floorbeam 14-14E exhibits moderate to heavy corrosion, moderate pitting along the bottom flange and section loss on the vertical stiffeners along the bottom of the web plate and bottom flange, particularly on the west face. In the bottom of the web, there are (3) corrosion holes in the southern half of the floorbeam that are up to 6-inches in length (see Photographs 33).

32. Typical floorbeam, looking southeast

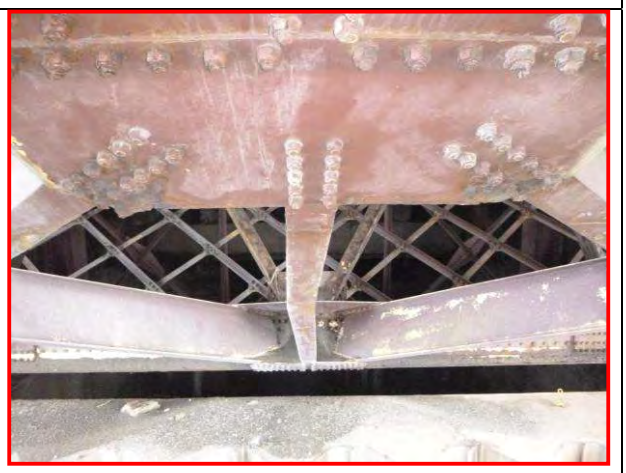
33. Floorbeam 14-14E, looking east

- Floorbeams 16-16E and 16-16W have moderate to heavy corrosion and minor to moderate section loss in the top chord, verticals, and diagonals. The bottom chord has been replaced and has peeling paint and isolated locations of heavy corrosion in the top flange and web (see Photograph 34).
- Floorbeams 18-18E and 18-18W, the trunnion cross girders, have heavy corrosion and moderate section loss on the bottom chord angles.
- In Span 4, there is graffiti on the east face of Floorbeam 18-18W.
- Floorbeam 8-8W has one missing bolt at the south truss connection.
- The web stiffeners on Floorbeams 0-0 under the center breaks have minor corrosion along the welds.
- Floorbeams 21-21 could not be inspected at an arm's reach but were visible when the bridge was in the open position.

34. Floorbeam 16-16E, looking southeast

Lateral Bracing

- The diaphragms in the fixed spans exhibit minor to moderate corrosion along the top and bottom flanges.
- In the movable span, the lateral bracing typically exhibits scattered areas of peeling paint and minor surface corrosion.
- Impact damage was noted at lateral bracing between Floorbeams 12E and 14E (see Photograph 35).



35. Lateral bracing between Floorbeam 12E and 14E, looking east

- Impact damage was noted at lateral bracing between Floorbeams 14W and 16W (see Photograph 36).
- In Panel 1, the center lateral bracing member is bent.
- In Panel 5, north lateral bracing member exhibits minor out of plane bending.
- The lattice trusses have no notable defects.
- The lateral bracing to bottom chord connection plates typically exhibits moderate to heavy corrosion, pitting and flaking (see Photograph 37).

36. Lateral bracing betweeen Floorbeam 14W and 16W

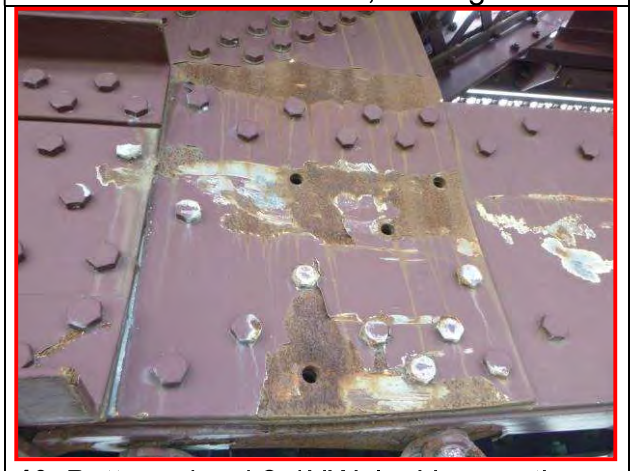
37. Lateral brace connection plate, looking southwest

Trusses

- The bottom chords 16-20 and 20-22 typically exhibit moderate to heavy corrosion with heavy section loss along the bottom flange and inner faces and diaphragm. The bottom chords have broken and corroded lacing bars.
- Lacing bars are disconnected in all vertical members 16-17 (see Photograph 38).
- A 10-foot long area along the bottom chord 2-4 NW is bent 3-inches out-of-plane. Five missing bolts and deformation up to approximately 3-inches out of plane are present in the outside web, gusset plates, and lattice bars (see Photographs 39 and 40). At other scattered locations, the bottom chord has impact damage.
- Many of the bascule bottom chords and lower gusset plates over the river are new. Isolated members exhibit minor to moderate corrosion with scattered section loss of the lacing bars and diaphragm plates. The trusses have isolated locations of minor section loss in the bottom chord.

38. Lacing bars 16-17 SW, looking northeast

39. Bottom chord 2-4NW, looking south



40. Bottom chord 2-4NW, looking south

- The truss diagonal members have areas of flaking paint, minor to moderate corrosion, corrosion holes, and moderate pitting near the bottom chord gusset plates, as well as areas of heavier corrosion and minor section loss along the deck interface (see Photograph 41). There is also minor to heavy section loss along some of the lacing bars.
- The truss vertical members typically exhibit minor to moderate corrosion, flaking paint along the flanges, plate repairs, and heavy debris on the east face of the west leaf and west face of the east leaf (see Photograph 42).
- The top chord truss members have localized areas of moderate corrosion, pack rust, heavy pitting, and flaking paint (see Photograph 43). The corrosion was typically worse between Panel Points 5 and 13. There are also several missing bolts or rivets, welded attachments (some welds are cracked), and minor section loss in the batten plates.

41. Diagonal 12-15SW, looking northwest

42. Vertical 14-15NW, looking northwest

43. Typical above deck truss member condition, looking northeast

- At multiple locations the top chord flanges and the vertical member flanges have impact damage with deformations up to 3/8-inch (see Photograph 44).
- Truss cover plates typically exhibit deformation, minor pitting, corrosion, and section loss (see Photograph 45).
- The top chord lacing bars between Panel Points 1 and 5 of all trusses have scattered deformations up to ½-inch out of plane.
- The truss gusset plates typically have minor corrosion and minor to moderate pitting (see Photograph 46).
- The gusset plates in the bridge house have moderate to heavy corrosion and section loss along the interface with the bottom chord, particularly Node 16 in the northeast and southeast truss which have an 18-inch long area of heavy section loss and holes.
- The northeast truss exterior gusset at Panel Point 14 is warped and has five missing rivets.
- At Panel Point 14NW and 8NE, there is one missing bolt at the lower lateral brace connection.

44. Vertical 8-9NW, looking west

45. Northeast truss cover plate, looking west

46. Gusset plate 16A NW, looking southwest

- The curved plates beyond truss member 19-23 have large cracks and/or corrosion holes. The southwest truss has a 24½-inch horizontal crack. The northwest truss has a 23-inch horizontal crack and a 33-inch vertical crack. The northeast truss has 6-inch, 4-inch, and 1-inch diameter holes (see Photograph 47 thru 49).

47. Northwest curved truss member, looking east

48. Southwest curved truss member, looking east

49. Northeast curved truss member, looking west

Counterweights

- The counterweight steel framing exhibits heavy corrosion and section loss along the steel plates, and several stiffener angles have moderate to heavy section loss (see Photograph 50).

50. East counterweight framing, looking northwest

- The exposed concrete surfaces of the counterweight box exhibit medium to wide cracks and heavy spalling at the upper and lower corners of the box (see Photograph 51).

51. West counterweight box concrete, looking northwest

Bridge Houses

- The bridge houses have missing or spalled brick, loose concrete, and wide vertical cracks (see Photographs 52 and 53).
- The northeast and southeast enclosure walls have broken glass block windows.
- Various railing posts have broken from the base or lost all bearing area.
- The bridge house railings have heavy corrosion, section loss, and missing toe guards. Some of the handrails are fractured or missing.

52. West bridge house, looking west

53. East bridge house, looking east

Utilities

- The top chords of the south trusses have attached lights and conduit (see Photograph 54).

54. Lights and conduit attached to the top truss, looking south

Other

- The navigational lights below the center break are in place and functioning (see Photograph 55).
- Impact damage was observed on the north catwalks below the center break.

55. North navigation light, looking south

III. SUBSTRUCTURE

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

Abutments / Wingwalls

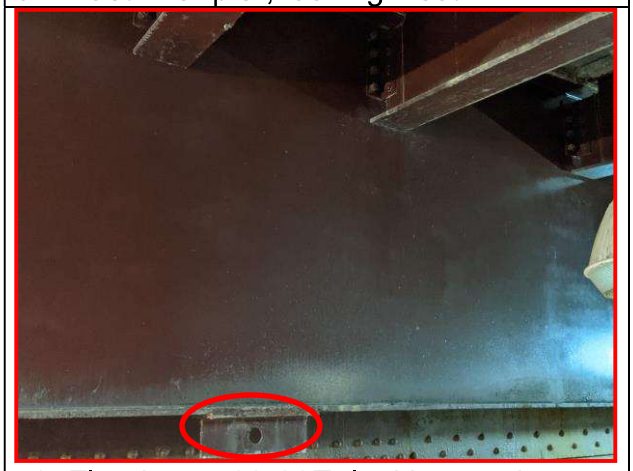
- The East and West Abutments exhibit hairline vertical cracks with efflorescence spaced approximately 3-foot on center along the stem wall, with the fixed span formwork left in place.
- The abutment bearing seats have heavy debris accumulation.
- The East Abutment backwall has hairline vertical cracks at approximately 5-foot to 10-foot on center.
- The West Abutment backwall concrete is poorly formed, sections of the backwall have failed, and the concrete appears to have been overpoured in sections (see Photograph 56).

56. West Abutment backwall, looking west

Piers

- The east face of the east river pier and the west face of the west river pier exhibit several areas of heavy spalling, hairline to narrow vertical cracks, water, and delaminations (see Photograph 57).
- The east face of the east river pier has a 2-foot by 3-foot spall with exposed and corroded rebar near the northeast trunnion girder bearing.
- The west face of the west river pier has several spalls measuring up to 1-foot high by 6-foot long and a large spall measuring approximately 4-foot by 20-foot near the midpoint of the pier. Collectively, the spalls add up to approximately a third of the wall area.
- The pier bearing seats typically exhibit areas of deterioration. The southwest live load bearing seat has minor bearing area loss due to spalling along the west face of the west river pier.
- The river side of the river piers has been repaired and only has scattered hairline vertical cracks.
- In Span 2, the floorbeam spanning the trunnion girder columns (Floorbeam 23-23E) has a field welded attachment on the bottom flange near mid-span (see Photograph 58).

57. East river pier, looking west



58. Floorbeam 23-23E, looking northwest

Columns

- The trunnion girder support columns have heavy corrosion and section loss along the bases as well as moderate section loss of the anchor bolts, and narrow cracks in the concrete pedestal (see Photograph 59).
- The north and south faces of the northeast and southeast trunnion girder support columns have moderate to heavy flaking

59. NE trunnion girder column, looking northeast

- The northwest trunnion girder support column exhibits heavy corrosion and section loss and, spalled concrete on the concrete pedestal located directly below the casting (see Photograph 60).
- The anchor columns have areas of heavy corrosion, moderate to heavy section loss near the base, rivet head loss, and repair plates on the inside faces and the inside half of the north and south faces.
- The steel sidewalk columns have corrosion and minor section loss at the base and in the anchor bolt nuts, and minor spalls with exposed reinforcement along the concrete pedestals. The sidewalk columns are newer rolled steel members.
- The northeast concrete encased column in the east bridge house has a wide crack.

60. NW trunnion girder column, looking north

Counterweight Pits

- The pit walls have large concrete spalls with exposed, corroded reinforcement steel along the top of the pit side-walls of both bridge pits and several hairline to medium cracks with efflorescence (see Photograph 61). The spalls have been repaired under the machinery.
- The pit backwalls typically have several hairline to medium vertical and horizontal cracks with widespread efflorescence.
- An area of heavy spalling measuring approximately 20-foot wide by 5-foot high with exposed corroded reinforcing steel is present near the top of the east pit backwall (see Photograph 62).
- Both bridge pits have approximately 1-foot of water and debris present on the pit floor.

61. East face of west pit wall, looking east

62. East pit backwall, looking southeast

Fender System • The timber fender system is in place and functioning. • The dolphins are in place and functioning, but a few of the dolphins have minor corrosion with scattered areas of heavy corrosion (see Photograph 63).	 **63.** Northeast dolphin, looking east
Utilities • On the West Abutment, there are conduits attached to the stem wall (see Photograph 64).	 **64.** West Abutment wall, looking northwest
Other • The red navigational lights above the river piers are in place and functioning. • On the northeast, southwest, and southeast dolphins, and cages are bent (see Photograph 65).	 **65.** Southeast light cages, looking southeast

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 rate a 1 (failed).

Superstructure

- The trunnion girders, bridge house truss members, various truss diagonals, and Floorbeams 14-14 and 16-16 have a failed paint system and varying degrees of corrosion (see Photograph 66).
- The remaining superstructure members have peeling paint and minor deterioration.

66. Southwest truss diagonal and gusset plate, looking north

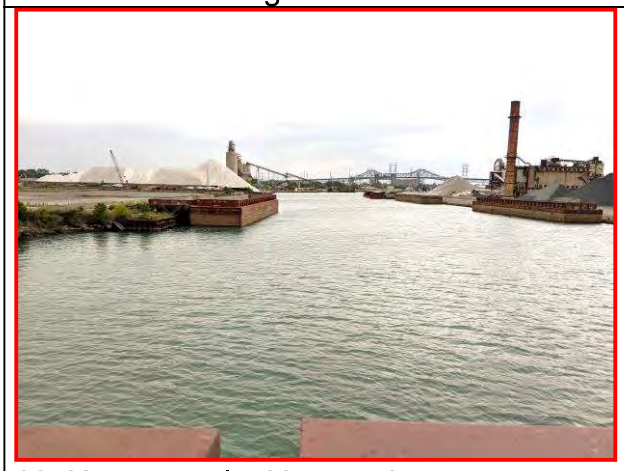
Substructure

- The painted substructure members (steel columns) typically exhibit scattered areas of flaking paint, and the exposed steel has areas of heavy deterioration especially near the bases (see Photograph 67).

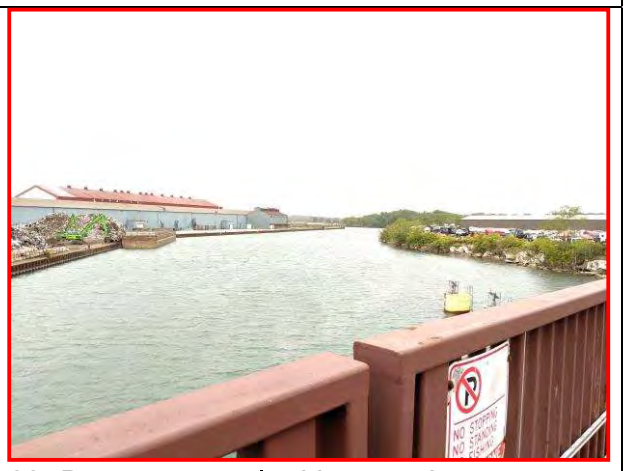
67. Northwest trunnion girder column base, looking north

V. CHANNEL

- The channel is in satisfactory condition which corresponds to a NBIS and IDOT general condition rating of 6.



68. Upstream, looking north



69. Downstream, looking southwest

VI. UNDERWATER INVESTIGATION

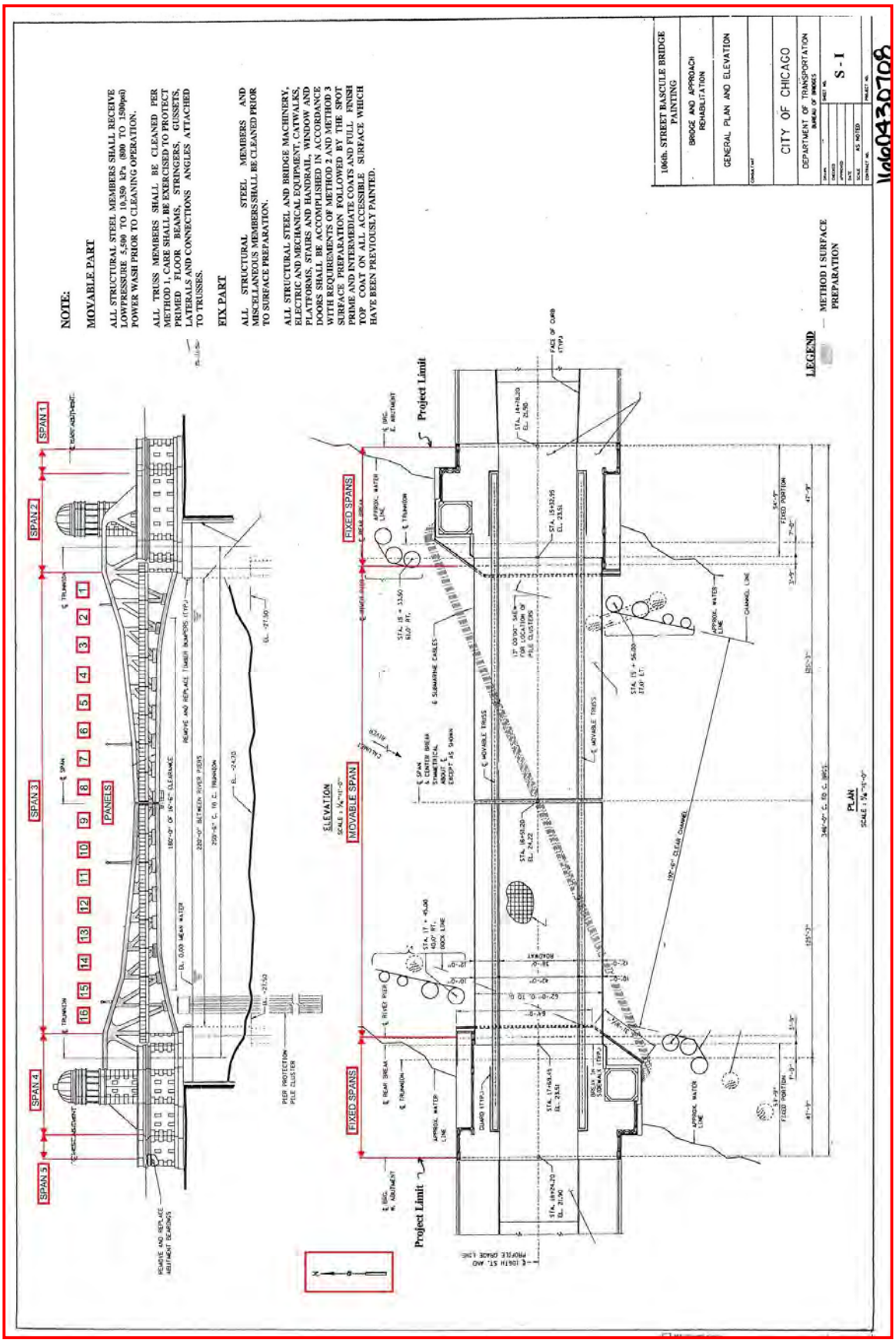
- The underwater investigation was conducted by Collins Engineers, Inc. on December 4, 2017. Based on the underwater inspection, the affected elements are rated fair and given a NBIS and IDOT general condition rating of 5. Please refer to the underwater inspection report for specific inspection findings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

VII. MECHANICAL INSPECTION

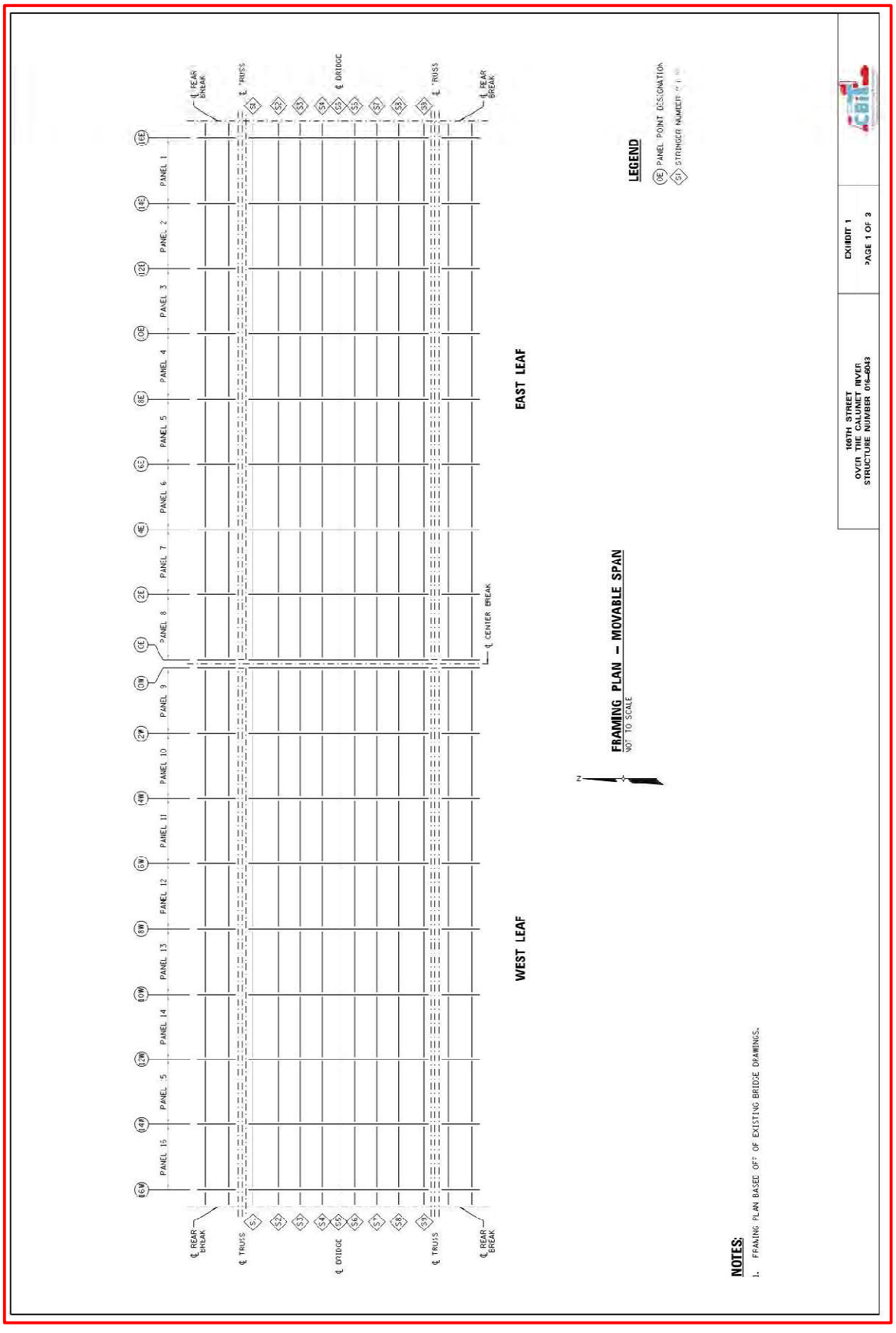
- The mechanical inspection was conducted by HNTB Corporation on October 5-6, 2016. Please refer to the mechanical bridge inspection report for specific inspection findings regarding the mechanical bridge elements.

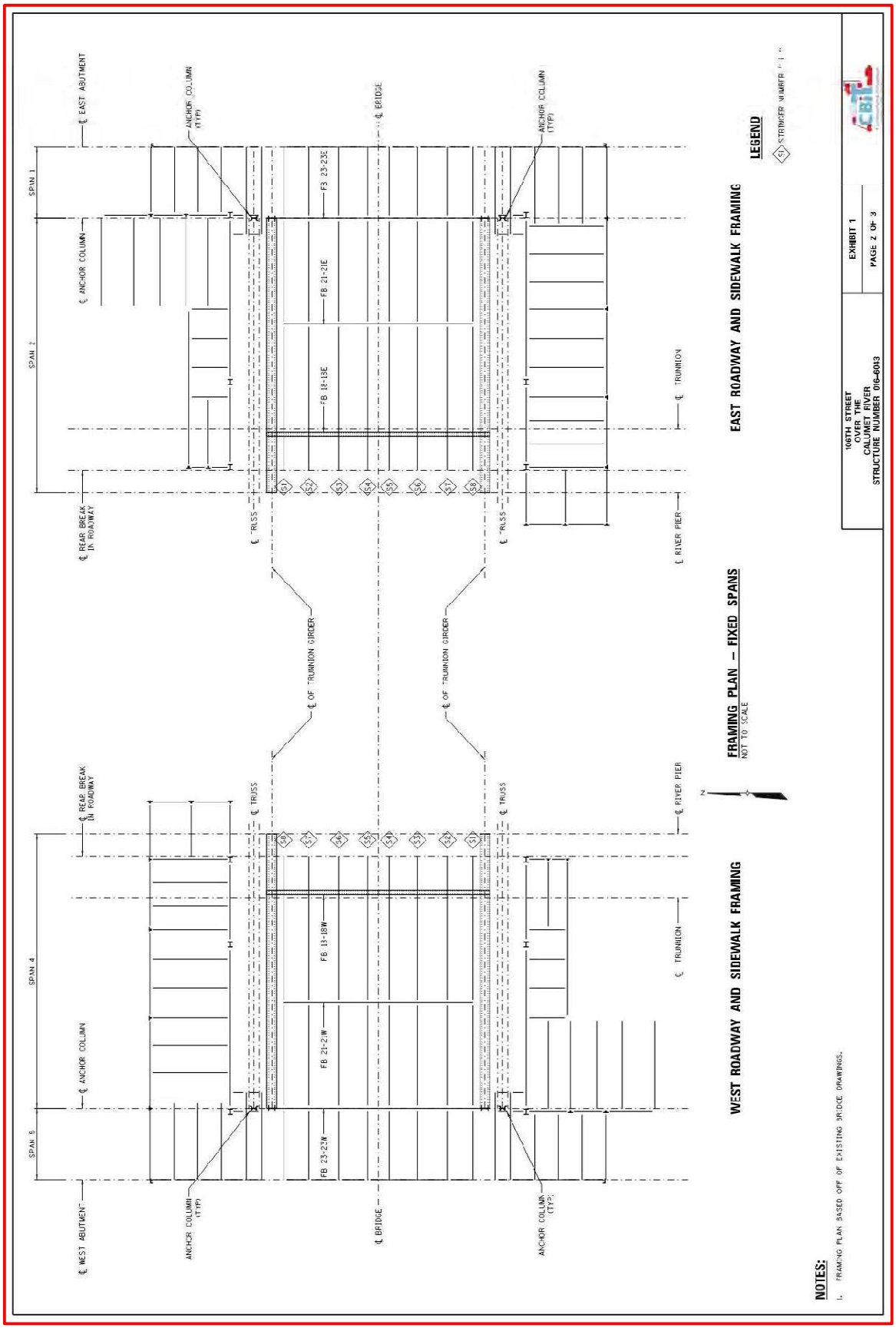
VIII. ELECTRICAL INSPECTION

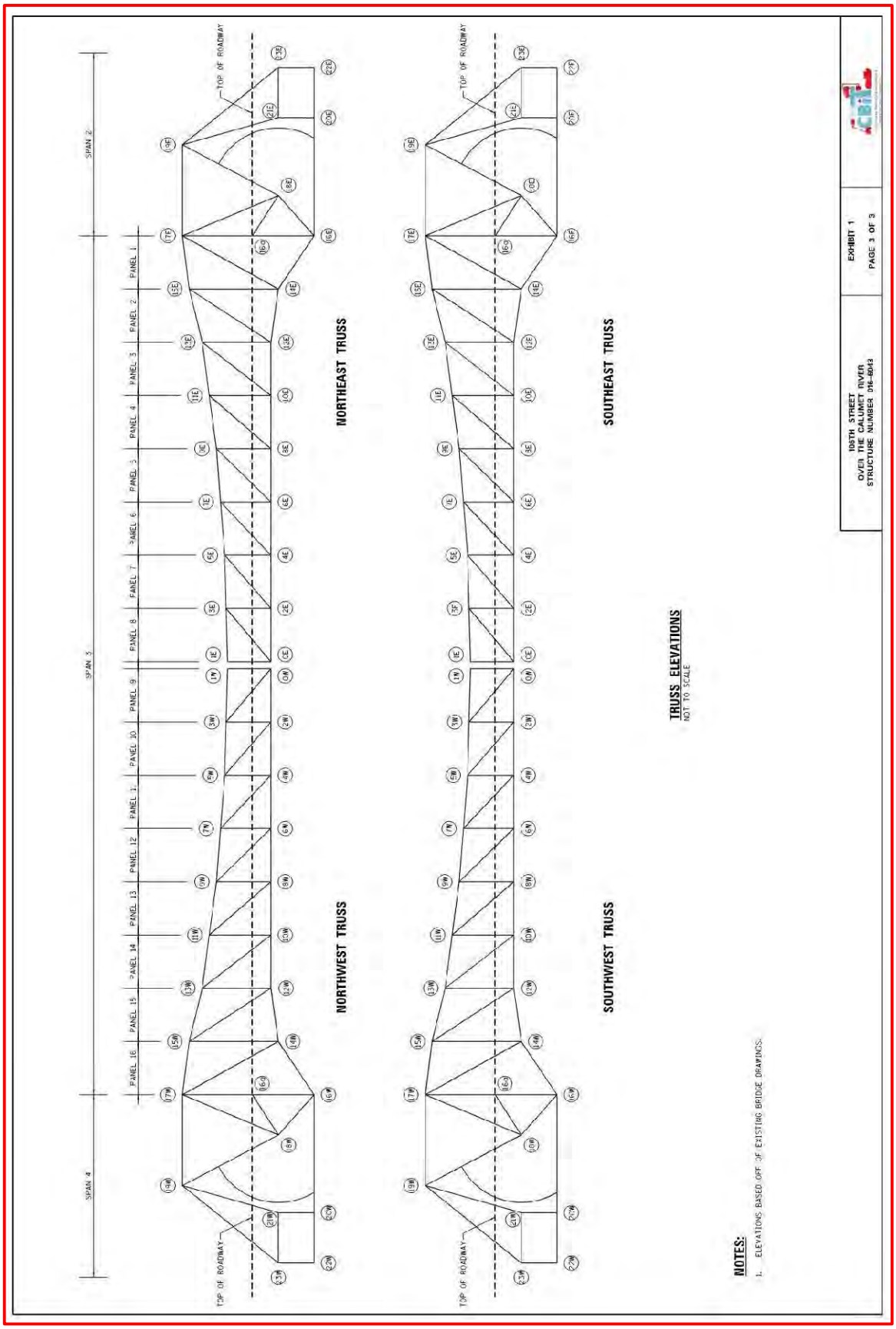
- The electrical inspection was conducted by HNTB Corporation on October 5-6, 2016. Please refer to the electrical bridge inspection report for specific inspection findings regarding the electrical bridge elements.



General Plan and Elevation


EAST LEAF
WEST LEAF
PANEL 1
PANEL 2
PANEL 3
PANEL 4
PANEL 5
PANEL 6
PANEL 7
PANEL 8
PANEL 9
PANEL 10
PANEL 11
PANEL 12
PANEL 13
PANEL 14
PANEL 15
℄ REAR BREAK
℄ TRUSS
℄ BRIDGE
℄ CENTER BREAK
LEGEND
(PE) PANEL POINT DESIGNATION
(S1) STRINGER NUMBER
FRAMING PLAN – MOVABLE SPAN
NOT TO SCALE
N
NOTES:
1. FRAMING PLAN BASED OFF OF EXISTING BRIDGE DRAWINGS.
106TH STREET
OVER THE CALUMET RIVER
STRUCTURE NUMBER 016-6043
EXHIBIT 1
PAGE 1 OF 3


℄ EAST ABUTMENT
ANCHOR COLUMN (TYP)
℄ BRIDGE
ANCHOR COLUMN (TYP)
SPAN 1
SPAN 2
℄ ANCHOR COLUMN
FB 23-23E
FB 21-21E
FB 18-18E
℄ TRUNNION
℄ REAR BREAK IN ROADWAY
℄ TRUSS
℄ RIVER PIER
℄ OF TRUNNION GIRDER
EAST ROADWAY AND SIDEWALK FRAMING
LEGEND
STRINGER NUMBER
FRAMING PLAN – FIXED SPANS
NOT TO SCALE
N
SPAN 4
SPAN 5
℄ WEST ABUTMENT
FB 23-23W
FB 21-21W
FB 18-18W
WEST ROADWAY AND SIDEWALK FRAMING
106TH STREET OVER THE CALUMET RIVER STRUCTURE NUMBER 016-6013
EXHIBIT 1
PAGE 2 OF 3
NOTES:
1. FRAMING PLAN BASED OFF OF EXISTING BRIDGE DRAWINGS.


TOP OF ROADWAY
NORTHEAST TRUSS
NORTHWEST TRUSS
SOUTHEAST TRUSS
SOUTHWEST TRUSS
TRUSS ELEVATIONS
NOT TO SCALE
NOTES:
1. ELEVATIONS BASED OFF OF EXISTING BRIDGE DRAWINGS.
106TH STREET
OVER THE CALUMET RIVER
STRUCTURE NUMBER 016-6043
EXHIBIT 1
PAGE 3 OF 3

Illinois Department of Transportation

Routine Inspection Report

SN:	016-6043	**District:**	1	**Spans:**	1	**Appr. Spans:**	4	**Skew:**	0	**ADT:**	6250	**Truck Pct:**	9
ADT Un:		**Maint. Co:**	COOK	**Twsp:**	HYDE PARK (CHICAGO)			**Status:**	OPEN - NO RESTRICT				
Facility Carried:	106TH ST					**Feature Crossed:**	CALUMET RIVER						
Location	3228 E 106TH STREET			**Municipality:**	CHICAGO			**Team/Sub:**	/			**Insp/Rte:**	
Bridge Name:	106TH 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:	8 / 12 /2021	90C – Temp. (ºF)	78	90B1 – In-Depth	☒
Is Delinquent:	☐	Reason:			
90A – Agency Program Manager:	Jurca, V.			90A3 – Consultant Program Manager:	Bendok, M.
90A1 – Team Leader:	Raffin, R.	90A2 – Inspector:	Hansen, P.		

90B – Inspection Remarks:

Previous Inspection: Joint Openings: E. Abut. = 1 1/8"; W. Abut = 1" (Measured at S. Gutterline) The trunnion girder cols. have heavy corr. & SL along the bases. The E. trunnion girder cols. N. & S. faces of cols. have mod. to heavy flaking. The anchor cols. have heavy corr. & mod. to heavy SL near the base of cols. FB 14-14E has mod. to heavy corr., mod. pitting along the bottom flange, & 3 corr. holes in the southern half of the floorbeam up to 6" in length. FBs 16-16 have mod. to heavy corr. & minor to mod. SL

Resources

Time to Inspect (H:M):	16:30	17:00	Traffic Control:		N	Boat:		N	Waders:		N	Snooper:		N	
Ladder:		Y	Manlift:	M	N	Bucket Truck:		N	Other:	Barge			Bucket Boat		

Inspector's Appraisals

	Prev	New	Comments
58 – Deck Condition:	6	5	E. fixed spans exhibit wide map cracking in the deck surface positioned directly above stalactitic leaching map cracking in the soffit
59 – Superstructure Cond:	4	4	Rating governed by the FC rating from 08/12/2021
60 – Substructure Cond:	5	5	Trunnion girder cols. exhibit heavy corrosion and section loss up to 10% along base. Anchor columns exhibit heavy corrosion and section loss near the base.
62 – Culvert Condition:	N	N	
61 – Channel Condition:	6	6	Banks are beginning to slump.
71 – Waterway Adequacy:	8	8	
72 – Approach Rdw Align:	8	8	
111 – Pier Navig Protection:	2	2	

90B – Inspector Remarks:

The trunnion girder columns exhibit heavy corrosion and section loss along the bases. The anchor columns exhibit moderate to heavy corrosion and section loss near the base of the columns. FB 14-14E and FB 12-12E exhibit moderate to heavy corrosion, moderate pitting in the bottom flange, and 3 corrosion holes in the southern half of the floorbeam up to 6" in length. FBs 16-16 have moderate to heavy corrosion and minor to moderate section loss in the top chord, verticals and diagonals; the bottom chords exhibit heavy corrosion. The truss bottom chords in the bridge houses have moderate to heavy corrosion and section loss. The truss diagonals below the deck exhibit minor to moderate corrosion, section loss, and corrosion holes. There is a 10' long area along the bottom chord member 2-4NW that is bent 3" out-of-plane. The curved plates beyond member 19-23 in the SW, NW, and NE trusses have cracks up to 33" long and holes up to 6" in diameter.

Routine Inspection Report

Structure Number: 0166043

Additional Inspection Data

	Prev	New
36A – Bridge Railing Adequacy:	2	2

Rail Types:

Approach Guardrail Adequacy:	Prev	New	36B – Transitions:	Prev	New	36C – Guardrail:	Prev	New	36D – Ends:	Prev	New
				2	2		2	2		2	2

	Prev	New	
108A – Wearing Surface Type:	P	P	If "L-Other" Describe:
108B – Type of Membrane:	F	F	If "E-Other" Describe:
108C – Deck Protection:	J	J	If "I-Other" Describe:
108D – Total Deck Thickness (in):	5.0	5.0	

	Prev	New
59A – Paint Date (Mo/Yr):	07/2008	07 /2008
59B – Paint Type:	I	I — — — — — — —

Color: Fascia - ____: Inter. - ____: Railing - ____.

59C – Utilities Attached:	9NN	9 N N

If "B-Other" Describe: _____

Weight Limit Posting:	Prev	New
70A2 – Single Unit Vehicles:		Ton
70B2 – Combination Type 3S-1 (3 or 4 axles):		Ton
70C2 – Combination Type 3S-2 (5 or more axles):		Ton
70D2 – One Truck at a Time:	0	

Joint Openings (In.) E. Abut= 1 1/4" (measured at N. Curb); W. Abut = 3/4" (measured at N. Curb)

90B – Inspector Remarks Continued:

	Signature	Date
Inspection Team Leader:	Richard Ruffin	9 / 29 /21
Consultant Program Manager:	Mark Bondok	10 / 12 /21
Agency Program Manager:	Vanita Mikail Jones	10 / 14 /2021

Illinois Department of Transportation

Element Level Inspection Report

SN:	016-6043	**District:**	1	**Spans:**	1	**Appr. Spans:**	4	**Skew:**	0	**ADT:**	6250	**Truck Pct:**	9
ADT Un:		**Maint. Co:**	COOK	**Twsp:**	HYDE PARK (CHICAGO)			**Status:**	OPEN - NO RESTRICT				
Facility Carried:	106TH ST					**Feature Crossed:**	CALUMET RIVER						
Location	3228 E 106TH STREET			**Municipality:**	CHICAGO			**Team/Sub:**	/			**Insp/Rte:**	
Bridge Name:	106TH 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:	8/12/2021					90C – Temp. (°F)	78						
Is Delinquent:	☐	Reason:											
90E – Agency Program Manager:	Jurca, V.					90E3 – Consultant Program Manager:	Bendok, M.						
90E1 – Team Leader:	Raffin, R.					90E2 – Inspector:	Hansen, P.						

Resources

Time to Inspect (H:M):	16:30	17:00	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	3	7456	SF	5647	1584	75	150
	Remarks: E. fixed spans have map cracking in the deck surface positioned directly above stalactitic leaching map cracking in the soffit							
28	Steel Deck Open Grid	3	3711	SF	0	3711	0	0
	Remarks:							
29	Steel Deck Concrete Filled Grid	3	5058	SF	0	5058	0	0
	Remarks:							
8058	Sidewalk (SF)	3	7578	SF	2802	1382	3394	0
	Remarks: There are spalls at the interfaces of the fixed and movable sidewalks. The movable span sidewalk is bowed up to 1".							
102	Lead Painted Steel Closed Web/Box Girder	3	4288	SF	0	976	3312	0
	Remarks: The trunnion girders have heavy corr. & section loss below the bottom chord of the truss & near the trunnion girder support col.							
113	Lead Painted Steel Stringer	3	32355	SF	28457	3680	196	22
	Remarks: The stringers have minor corrosion and flaking on the bottom flange.							
8121	Lead Painted Steel Bottom Chord Through Truss	3	9699	SF	6202	689	1711	1097
	Remarks: The members in the bridge house have mod. to heavy corr. with heavy SL along the bottom flange.							
8126	Lead Painted Steel Thru Truss Excluding Bottom Cho	3	29548	SF	5498	14249	4482	5319
	Remarks: Diagonal & vertical members have minor to mod. corr. & SL. There are scattered areas of heavy corr. & mod. to heavy SL.							
152	Lead Painted Steel Floor Beam	3	12250	SF	10257	1928	28	37
	Remarks: FB 14-14E has 3 corr. holes in the S. half of the FB up to 6" in length. FBs 16-16 have mod. to heavy corr. & minor to mod. SL.							
162	Lead Painted Gusset Plate	3	200	EA	72	72	14	42
	Remarks: The bridge house gusset plates have heavy corrosion & section loss especially gusset plates 16 & 22 in the NE & SE trusses.							
8178	Lead Painted Steel Stringer Ends Including Diaphra	3	74	EA	8	44	19	3
	Remarks: The stringer ends have minor to mod. corr. & section loss.							
8191	Lead Painted Steel Floor Beam Below Deck Joints	3	1169	SF	811	358	0	0
	Remarks:							
202	Lead Painted Steel Column or Pile Extension	1	3340	SF	1511	935	727	167
	Remarks: The trunnion girder support cols. have heavy corr. & SL along the bases. NW trunnion girder support col. has lost bearing area.							
210	Reinforced Conc Pier Wall	1	5522	SF	2975	58	2212	277
	Remarks: The pier walls have large spalls up to 80 SF on the counterweight pit side.							
215	Reinforced Conc Abutment	1	7945	SF	1033	5175	1737	0
	Remarks: Abuts. have HL vert. cracks with efflorescence & heavy debris. The west backwall appears to be poorly formed & overpoured.							
231	Lead Painted Steel Pier or Abutment Cap	1	1082	SF	748	334	0	0
	Remarks:							
234	Reinforced Conc Pier or Abutment Cap	1	288	LF	178	75	5	30
	Remarks: SW pier bearing seat has a spall w/ exp. rebar & minor brg. area loss. W. river pier has a 20' long spall on the west face.							
302	Preformed Joint Seal	3	160	LF	0	60	75	25
	Remarks: The E. exp. jt. has multiple missing gland sections, adding up to about 20'. The W. exp. jt. has a few torn sections.							

304	Open Expansion Joint		3	186	LF	0	186	0	0
	Remarks								
310	Elastomeric Bearing		3	36	EA	0	20	13	3
	Remarks	The abutment bearings have heavy debris, heavy corrosion, and minor section loss.							
313	Fixed Bearing		3	16	EA	0	0	0	16
	Remarks	The live load brgs., trunnion brgs., & secondary live load brgs. have mod. to heavy corr. & minor to heavy section loss							
8323	Approach Pavement		3	2	EA	2	0	0	0
	Remarks	~~The west approach has a deep spall at the south curb. The east approach has rutting & potholes in the westbound lane.~~							
330	Metal Bridge Railing		3	474	LF	0	355	119	0
	Remarks	The metal railings have minor to mod. corr. & initial section loss with a few corr. holes up to 3" by 2" in the railing bases.							
333	Miscellaneous- Bridge Railing		3	246	LF	0	246	0	0
	Remarks								
8402	Steel Bottom Chord Through Truss		3	13	LF	0	6	7	0
	Remarks	Bottom chord 2-4 NW is bent approximately 3" out-of-plane.							
8403	Steel Through Truss Excluding Bottom Chord		3	11	LF	0	11	0	0
	Remarks								

	Signature	Date
Inspection Team Leader:		9 / 29 / 21
Consultant Program Manager:		10 / 12 / 21
Agency Program Manager:		10 / 14 / 2021

Illinois Department of Transportation

Fracture Critical Inspection Report

SN:	016-6043	**District:**	1	**Spans:**	1	**Appr. Spans:**	4	**Skew:**	0	**ADT:**	6250	**Truck Pct:**	9
ADT Un:		**Maint. Co:**	COOK	**Twsp:**	HYDE PARK (CHICAGO)			**Status:**	OPEN - NO RESTRICT				
Facility Carried:	106TH ST					**Feature Crossed:**	CALUMET RIVER						
Location	3228 E 106TH STREET			**Municipality:**	CHICAGO			**Team/Sub:**	/	**Insp/Rte:**			
Bridge Name:	106TH 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 / 12 /2021	93A4 – Temp. (ºF):	78
Is Delinquent: ☐	Reason:		
90A – Agency Program Manager:	Jurca, V.	90A3 – Consultant Program Manager:	Bendok, M.
93A3 – Team Leader:	Raffin, R.	93A5 – Inspector:	Hansen, P.

Resources

Time to Inspect (H:M):	12:0	12:00	Traffic Control:		N	Boat:	B	N	Waders:		N	Snooper:		N	
Ladder:	L	Y	Manlift:		N	Bucket Truck:		N	Other:	Barge			Bucket Boat		

Inspector's Appraisals

92A1 – Type: X1 If "X4-Other" Description:

93A1 – Rating: Prev 4 New: 4 FC Method: Prev V New: MP ☐ DP ☐ UT ☐ V ☒

93A2 – Remarks: The NE and SE trusses have up to an 18" long area of section loss in the gusset plate at node 16. Diagonals have areas of minor to moderate corrosion and flaking. Diagonals have minor pitting near gusset plate connection. The verticals have minor to moderate corrosion. A 10' long area along bottom chord member 2-4NW is 3" out of plane. There are various other locations with impact damage and bent flanges.

92A1 – Type: X2 If "X4-Other" Description:

93A1 – Rating: Prev 5 New: 5 FC Method: Prev V New: MP ☐ DP ☐ UT ☐ V ☒

93A2 – Remarks: FB 14-14E has moderate to have corrosion, moderate pitting along the bottom flange and corrosion holes in the south half of the web up to 6". FB 16-16 have moderate to heavy corrosion and minor section loss in the top chord, vertical and diagonal angles. Bottom chord and gusset connection has debris build up. FBs 18-18 exhibit heavy corrosion and up to 10% section loss on the bottom chord angles. All movable span FBs exhibit minor to moderate corrosion with up to 10% section loss and debris on the east face of the west leaf and west face of the east leaf.

92A1 – Type: X3 If "X4-Other" Description:

93A1 – Rating: Prev 5 New: 5 FC Method: Prev V New: MP ☐ DP ☐ UT ☐ V ☒

93A2 – Remarks: Trunnion girders exhibit heavy corrosion and and up to 10% section loss below the bottom chord of the truss and near the trunnion girder support column. Span 4, NW trunnion girder exhibits corrosion holes near the column connection. There are sharp angle cutouts in the web of the trunnion girder near the trunnion bearings. Trunnion girders exhibit minor corrosion and up to 10% section loss.

92A1 – Type: E1 If "X4-Other" Description:

93A1 – Rating: Prev 7 New: 7 FC Method: Prev V New: MP ☐ DP ☐ UT ☐ V ☒

93A2 – Remarks: Pier caps are in good condition. East pier cap has a welded attachment at midspan.

	Signature	Date
Inspection Team Leader:		9 / 29 / 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- Eyebar & 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- Continous 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: 6/28/2021

Structure Number: 016-6043

District:	1	**Maintenance County:**	COOK	**Municipality:**	CHICAGO	**Bridge Status:**	OPEN - NO RESTRICT
		Maintenance Township:	HYDE PARK (CHICAGO)			**Status Date:**	4/1/1999
Key Route On:	FEDERAL-AID URBAN 1576	**Sta:**	0.6900	**Seg:**	**Spur/Alt:** Main Route	**Sufficiency Rating:**	62.7
Key Rt Under:		**Sta:**		**Seg:**	**Spur/Alt:**	**HBP Eligible:**	Yes

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

Item No. / Name	Existing Values	Revisions
(7) Facility Carried:	106TH ST	
(6) Feature Crossed:	CALUMET RIVER	
(9) Location:	3228 E 106TH STREET	
(7A) Bridge Name:	106TH STREET BRIDGE	
(3B) Maintenance County:	016	
(3B1) Maintenance Township:	60	
(21) Maintenance Resp:	40	
Other Resp:		
Other Sec Resp:		
(42) Service On/Under:	1 5	
Other Service On:		
Other Service Under:		
(22A) Reporting Agency:	4	
Other Reporting Agcy:		
(20) Toll Facility:	0	
(35) Structure Flared:	0	
(31) Design Load:	02	
(31A) Struct Steel Weight (Lbs.):	2376000	
(60A/B) Substr Matrl:	53	
(8A1) Bridge Remarks (Existing):		

BRIDGE WAS REHABILITATED IN 1998.

Item No. / Name	Existing Values		Revisions
(101) Parallel Designation:		N	
Parallel SN:			
(8E) Replaced By Struct Number:			-
(8D) Replaces Structure Number:			-
(49) Structure Length (Ft.):		350.0	.
(112) AASHTO Bridge Length (Ft.):		99.9	.
(51) Bridge Roadway Width (Ft.):		38.0	.
(32) Approach Roadway Width (Ft.):		38.0	.
(52) Deck Width (Ft.):		62.0	.
(107/A) Deck Type/Thickness (In.):	H	5.0	/ .
Other Deck Type:			
(48) Length of Longest Span (Ft.):		250.5	.
(45/6) Nbr Spans Main/Approach:	1	4	/
(43A/B) Main Span Material/Type:	3	16	/
Other Span Material:			
Other Span Type:			
(44AN/BN) Near Appr Span Matrl/Type #1:	3	02	/
(44AN/BN) Near Appr Span Matrl/Type #2:			/
(44AF/BF) Far Appr Span Matrl/Type #1:	3	02	/
(44AF/BF) Far Appr Span Matrl/Type #2:			/
Bridge Remarks (Revised):			

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

Item No. / Name	Existing Values	Revisions
(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):	180	
(50A) Sidewalk Width On - Right (Ft):	8.5	.
(50B) Sidewalk Width On - Left (Ft):	8.5	.
(50C) Sidewalks Under Structure:	0	
(36E) Guardrails On - Right:	0	
Other Guardrail Right:		
(36F) Guardrails On - Left:	0	
Other Guardrail Left:		
(8C) RR Crossing Numbers:		
(55B1) RR Lateral Underclearance (Ft.):	0.0	.
(54B3) RR Vert Underclearance (Ft. - In.):	0 - 0	-

Item No. / Name	Existing Values	Revisions
(202) Traffic Permits Rte Sec Nbr:		
(8B) Multi-Level Structure Number:		
(62A) Culvert Cells (Count):	0	
(62B) Culvert Cell Width (Ft.):	0.00	.
(62C) Culvert Cell Height (Ft.):	0.00	.
(62D) Culvert Opening Area (Sq. Ft.):	0.0	.
(62E) Culvert Fill Depth (Ft.):	0.0	.
(16) Latitude:	41.70274000	
(17) Longitude:	87.54557291	
(98A) Border Bridge State Number:		
(98B) BorderBridge Adj State (% Resp):	0	
(99) Border Bridge Number Existing:		
Border Bridge Remarks (Existing):		

Illinois Department of Transportation
Structures Information Management System
Key Route Turnaround Report (S-111)

Date: 6/28/2021

Structure Number: 016-6043

District: 1 **Maintenance County:** COOK **Municipality:** CHICAGO
Maintenance Township: HYDE PARK (CHICAGO)
Facility Carried: 106TH ST **Bridge Name:** 106TH STREET BRIDGE **Sufficiency Rating:** 62.7
Feature Crossed: CALUMET RIVER **Location:** 3228 E 106TH STREET **HBP Eligible:** Yes
Bridge Remarks: BRIDGE WAS REHABILITATED IN 1998.
Bridge Status: OPEN - NO RESTRICT **Bridge Status Date:** 4/1/1999
Status Remarks BRIDGE WAS REHABILITATED IN 1998.

KEY ROUTE ON

Item No. / Name	Value	Revision
(1A, B, C) Key Route Number:	9 1576	
(1D) Appurtenance Type:	0	
(1E) Key Route Segment:		
(1F) Appurtenance Number:	00000	
(1G) Key Route Station:	0.6900	
(1H) Dir Of Inventory:		
(3A) Inventory County:	016	
(3A1) Inv Township/Rd Dist:	60	
(4) Municipality:	1051	
(25) Urban Area:	1051	
(26) Functional Class:	4	
(104) National Hwy System:	3	
(30) Estimated AADT Year:	2018	
(29) Estimated AADT:	6250	
(28) Number Of Lanes:	2	
(102) One Or Two Way Traffic:	2	
(109) Estimated % Trucks:	9	
(115) Future AADT Year:	2032	
(114) Future AADT:	7880	
(110) Desig Natl Truck Rte:	0	
(19) Bypass Length:	2	

Key Rte On Remarks:

KEY ROUTE UNDER

Item No. / Name	Value	Revision
(1A, B, C) Key Route Number:		
(1D) Appurtenance Type:		
(1E) Key Route Segment:		
(1F) Appurtenance Number:		
(1G) Key Route Station:		
(1H) Dir Of Inventory:		
(3A) Inventory County:		
(3A1) Inv Township/Rd Dist:		
(4) Municipality:		
(25) Urban Area:		
(26) Functional Class:		
(104) National Hwy System:		
(30) Estimated AADT Year:		
(29) Estimated AADT:		
(28) Number Of Lanes:		
(102) One Or Two Way Traffic:		
(109) Estimated % Trucks:		
(115) Future AADT Year:		
(114) Future AADT:		
(110) Desig Natl Truck Rte:		
(19) Bypass Length:		

Key Rte Under Remarks:

CLEARANCE INFORMATION

KEY ROUTE ON

	South Or East Value	South Or East Revision	North Or West Value	North Or West Revision
(47) Max Rdwy Width (Ft.):	38.0			
(47A/B) Horizontal (Ft.):	38.0		0.0	
(53A/B) Min Vert (Ft.-In.):	9911		0000	
(10A/B) 10 Ft Vert (Ft.-In.):	9911		0000	

KEY ROUTE UNDER

	South Or East Value	South Or East Revision	North Or West Value	North Or West Revision
(47) Max Rdwy Width (Ft.):				
(47A/B) Horizontal (Ft.):				
(54B1/2) Min Vert (Ft.-In.):				
(10A/B) 10 Ft Vert (Ft.-In.):				
(55B/56) Min Lateral (Ft.):				

MARKED ROUTE INFORMATION

KEY ROUTE ON

	Route #1 Value	Route #1 Revision	Route #2 Value	Route #2 Revision	Route #3 Value	Route #3 Revision
(5B) Kind:	8					
(5C) Desig:	1		1		1	
(5D) Number:						

KEY ROUTE UNDER

	Route #1 Value	Route #1 Revision	Route #2 Value	Route #2 Revision	Route #3 Value	Route #3 Revision
(5B) Kind:						
(5C) Desig:						
(5D) Number:						

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

Date: 6/28/2021

Structure Number: 016-6043

District: 1
Municipality: CHICAGO
Facility Carried: 106TH ST
Feature Crossed: CALUMET RIVER
(21) Maintenance Resp: MUNICIPALITY
Other Resp:
(22A) Reporting Agency: MUNICIPALITY
Other Reporting Agcy:
(41) Bridge Status: 1 (OPEN - NO RESTRICT)
(41A) Status Date: 4/1/1999
(41B) Status Remarks: BRIDGE WAS REHABILITATED IN 1998.

Maintenance County: COOK
Maint Township: HYDE PARK (CHICAGO)
Bridge Name: 106TH STREET BRIDGE
Location: 3228 E 106TH STREET
UNKNOWN
Other Sec Resp:

Construction Information

Item No. / Name	Existing Values Original	Reconstruction
(27/27A) Year/Type:	1928	1998
(27B) Route:		FAU1576
(27C) Section:	106TH STREET 1415	96-E6005-00-BR
(27D) Station:		16+51.20
(27E) Contract :		
(27F) Project:	00000000000	E-6-005
(27G) Built By:	CITY	CITY

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

****

Item No. / Name	Existing Values	Revisions
(101) Parallel Designation:	N	
Parallel SN:		
(35) Structure Flared:	0	
(31) Design Load:	02	
(31A) Struct Steel Weight (Lbs.):	2376000	
(60A/B) Substr Matrl:	53	
(8A1) Bridge Remarks (Existing):	BRIDGE WAS REHABILITATED IN 1998.	
Bridge Remarks (Revised):		
Border Bridge Remarks:		

Item No. / Name	Existing Values	Revisions
(49) Structure Length (Ft.):	350.0	
(112) AASHTO Bridge Length (Ft.):	99.9	
(51) Bridge Roadway Width (Ft.):	38.0	
(32) Approach Roadway Width (Ft.):	38.0	
(52) Deck Width (Ft.):	62.0	
(48) Length of Longest Span (Ft.):	250.5	
(107/A) Deck Type/Thickness (In.):	H 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 Matrl/Type #1:	3 02	
(44AN/BN) Near Appr Span Matrl/Type #2:		
(44AF/BF) Far Appr Span Matrl/Type #1:	3 02	
(44AF/BF) Far Appr Span Matrl/Type #2:		

****

Item No. / Name	Existing Values	Revisions
(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):	180	
(50A) Sidewalk Width On - Right (Ft):	8.5	
(50B) Sidewalk Width On - Left (Ft):	8.5	
(50C) Sidewalks Under Structure:	0	

Item No. / Name	Existing Values	Revisions
(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: 6/28/2021

****

Key Route On

Item No. / Name	Existing Values	Revisions
(28) Number Of Lanes:	2	___
(102) One Or Two Way Traffic:	2	___

	South Or East		North Or West	
	Value	Revisions	Value	Revisions
(47) Max Rdwy Width (Ft.):	38.0	_____. ___		
(47A/B) Horizontal (Ft.):	38.0	_____. ___	0.0	_____. ___

KR On Remarks:

Key Route Under

Item No. / Name	Existing Values	Revisions
(28) Number Of Lanes:		___
(102) One Or Two Way Traffic:		___

	South Or East		North Or West	
	Value	Revisions	Value	Revisions
(47) Max Rdwy Width (Ft.):		_____. ___		
(47A/B) Horizontal (Ft.):		_____. ___		_____. ___
(55B/56) Min Lateral:		_____. ___		_____. ___

KR Under Remarks:

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

Structure Number: 016-6043 **District: 1**

Inventory Data

Facility Carried:	106TH ST	**Bridge Name:**	106TH STREET BRIDGE	**Sufficiency Rating:**	62.7	**Structure Length:**	350.0
Feature Crossed:	CALUMET RIVER	**Location:**	3228 E 106TH STREET	**HBP Eligible:**	Yes	**AASHTO Bridge Length:**	99.9
Bridge Remarks:	BRIDGE WAS REHABILITATED IN 1998.			**Replaced By:**		**Length of Long Span:**	250.5
Bridge Status:	1 OPEN - NO RESTRICT	**StatusDate:**	4/1/1999	**Replaces:**		**Bridge Roadway Width:**	38.0
Status Remarks:	BRIDGE WAS REHABILITATED IN 1998.			**Last Update Date:**	03/30/2021	**Appr Roadway Width:**	38.0
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:**	8.5
Service On/Under:	1 HIGHWAY	/	5 WATERWAY	**Skew Direction:**	None	**Sidewalk Width Left:**	8.5
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:**	180
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:**	2,376,000	**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:**	1.140 (41)	**Load Rating Date:**	03/03/2016
Toll Facility Indicator:	0 No Toll			**Operating Rating:**	1.570 (56)		
Latitude:	41.70274000	**Longitude:**	87.54557291	**Design Load:**	02 HS20		
Deck Structure Type:	H CON FILL STEEL GRAT			**Deck Structure Thickness:**	5.0	**SD:** Y	**FO:** N
Sidewalks Under Structure:	0 None						

Railroad Crossing Info

Crossing 1 Nbr:	
Crossing 1 Nbr:	
RR Lateral Underclear:	0.0
RR Vertical Underclear:	0 Ft 0 In

Key Route On Data

Key Route Nbr:	FEDERAL-AID URBAN 1576	**Station:**	0.6900		
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 / 6250		
Functional Class:	4 MINOR ARTERIAL	**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:	99 Ft 11 In	00 Ft 00 In	**Future AADT Yr/Cnt:**	2032 / 7880	
10 Ft Vertical:	99 Ft 11 In	00 Ft 00 In	**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:			
South/East	**North/West**		
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	8 Other	
Route #2:	1 Mainline		
Route #3:	1 Mainline		

*** Marked Route Under Data ***

	Designation	Kind	Number
Route #1:			
Route #2:			
Route #3:			

Structure Number: 016-6043 **District: 1**

Data Related to Inspection Information

***Inspection Intervals ***

Routine NBIS: 24 MOS Underwater: 60 MOS
Fracture Critical: 12 MOS Special: N

*** Maximum Allowable Posting Limits ***

One Truck At A Time: 0
Single Unit Vehicles: Tons
Combination Type 3S-1: Tons
Combination Type 3S-2: Tons

Bridge Posting Level: 5 No Posting Required

Inspection/Appraisal Information

Inspection Date: 08/08/2019 Inspection Temperature: 78 Deg. F

Deck:	6	SATISFACTORY CONDITION - MINOR DETERIORATION
Superstructure:	4	POOR CONDITION - ADVANCED DETERIORATION
Substructure:	5	FAIR CONDITION - MINOR SECTION LOSS, CRACKS
Culvert:	N	NOT APPLICABLE
Channel and Protection:	6	SATISFACTORY CONDITION - MINOR DETERIORATION
Structural Evaluation:	4	MINIMUM ADEQUACY TO BE LEFT IN PLACE
Deck Geometry:	5	BETTER THAN ADEQUATE TO BE LEFT IN PLACE
Underclearance-Vert/Lat.:	N	NOT APPLICABLE
Waterway Adequacy:	8	EQUAL TO PRESENT DESIRABLE CRITERIA
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:	2	IN PLACE AND FUNCTIONING

Insp by (Name): Soehrman, Denise M
Insp by (Name): Kenny, W. K.

Utilities Attached:	9	ELECTRIC
	N	N/A
	N	N/A
Deck Wearing Surf:	P	GRATING
Deck Membrane:	F	NONE
Deck Protection:	J	NONE

Total Deck Thick: 5.0
Last Paint Date: 07/2008

** Actual Posted Limits **

Single Unit Vehicles: Tons
Combination Type 3S-1: Tons
Combination Type 3S-2: Tons
One Truck At A Time: 0

Last Paint Type: I ALUM EPOXY MASTIC

Inspection Remarks:
Joint Openings: E. Abut. = 1 1/8"; W. Abut = 1" (Measured at S. Gutterline) Th e trunnion girder cols. have heavy corr. & SL along the bases. The E. trunnion girder cols. N. & S. faces of cols. have mod. to heavy flaking. The anchor cols

Underwater Inspection/Appraisal Information

Inspection Date: 12/04/2017
Temperature: 30
Inspection Method: DDPPS Diver Diver Probe Probe Sonar
Inspected By: DilworthB
Inspected By: JANULIS, L
Appraisal Rating: 5 FAIR CONDITION

Inspection Remarks:
CONCRETE REPAIRS HAVE BEEN MADE AT BOTH RIVER PIERS, BETWEEN THE BRIDGE FASCIAS , AND WERE IN GOOD CONDITION. SEVERAL AREAS OF CONCRETE DETERIORATION WERE STIL L PRESENT AT BOTH RIVER PIERS, CONSISTING OF SCALING AND AND CORNER SPALLING/SE

Scour Critical Information

Rating: 8 CALCULATED SCOUR ABOVE FOOTING
Evaluation Method: B Rational Analysis
Analysis Date: 08/22/1997
Analysis By: COLLINS ENGINEERS

Miscellaneous

Fracture Critical Members: Yes
Microfilm Data Recorded: No

Construction Information

	Original	Reconstructed
Year:	1928	1998
Route:		FAU1576
Sta:		16+51.20
Section Nbr:	106TH STREET 1415 C.S.	96-E6005-00-BR
Contract Nbr:		
Fed Aid Pr #:	00000000000000	E-6-005
Built By:	4 CITY	4 CITY

Proposed Improvement

Cost Estimate Year: 2000 Length: 349
Type of Work: 35 REHABILITATION DUE TO GENERAL DETERIORATION
Done By: 1 Contract
Remarks:

*** Costs in Dollars ***

Bridge Cost:	637
Roadway Cost:	64
Total Project Cost:	956

Illinois Department of Transportation
Structures Information Management System
Structure Summary Report

Structure Number: 016-6043 **District:** 1

Inventory Data

Facility Carried:	106TH ST	**Bridge Name:**	106TH STREET BRIDGE	**Sufficiency Rating:**	61.7	**Structure Length:**	350.0
Feature Crossed:	CALUMET RIVER	**Location:**	3228 E 106TH STREET	**HBP Eligible:**	Yes	**AASHTO Bridge Length:**	99.9
Bridge Remarks:	BRIDGE WAS REHABILITATED IN 1998.			**Replaced By:**	-	**Length of Long Span:**	250.5
Bridge Status:	1 OPEN - NO RESTRICT	**Status Date:**	4/1/1999 12:00:00 AM	**Replaces:**	-	**Bridge Roadway Width:**	38.0
Status Remarks:	BRIDGE WAS REHABILITATED IN 1998.			**Last Update Date:**	03/30/2021	**Appr Roadway Width:**	38.0
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:**	8.5
Service On/Under:	1 HIGHWAY		5 / WATERWAY	**Skew Direction:**	N None	**Sidewalk Width Left:**	8.5
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:**	180
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**	2376000	**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:**	1.140(41)	**Load Rating Date:**	03/03/2016
Toll Facility Indicator:	0 No Toll			**Operating Rating:**	1.570(56)	**Railroad Crossing Info**	
Latitude:	41.70274000 **S**	**Longitude:**	87.54557291 **S**	**Design Load:**	02 HS20	**Crossing 1 Nbr:**	
Deck Structure Type:	H CON FILL STEEL GRAT			**Deck Structure Thickness:**	5 **SD:** Y **FO:** N	**Crossing 1 Nbr:**	
Sidewalks Under Structure:	0 None					**RR Lateral Underclear:**	0.0
						RR Vertical Underclear:	0 **Ft** 0 **In**

Key Route On Data

Key Route Nbr:	FEDERAL-AID URBAN 1576	**Station:**	0.6900		
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 / 6250		
Functional Class:	4 MINOR ARTERIAL	**Est Truck Percentage:**	9		
**** CLEARANCES ****	**South/East** **North/West**	**Number Of Lanes:**	2	**South/East**	**North/West**
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 / 7880		
		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	8	Other	
Route #2:	1	Mainline			
Route #3:	1	Mainline			

*** Marked Route Under Data ***

Designation	Kind	Number

Structure Number: 016-6043 **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

Inspection Date: 08/12/2021 **Inspection Temperature:** 78Deg. F

Deck:	5	FAIR CONDITION - MINOR SECTION LOSS, CRACKS					**Single Unit Vehicles:**	Tons
Superstructure:	4	POOR CONDITION - ADVANCED DETERIORATION					**Combination Type 3S-1:**	Tons
Substructure:	5	FAIR CONDITION - MINOR SECTION LOSS, CRACKS					**Combination Type 3S-2:**	Tons
Culvert:	N	NOT APPLICABLE					**One Truck At A Time:**	0
Channel and Protection:	6	SATISFACTORY CONDITION - MINOR DETERIORATION	**Deck Wearing Surf:**	P	GRATING		**Last Paint Type:**	I
Structural Evaluation:	4	MINIMUM ADEQUACY TO BE LEFT IN PLACE	**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:	8	EQUAL TO PRESENT DESIRABLE CRITERIA	**Last Paint Date:**	07/2008				
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:	2	IN PLACE AND FUNCTIONING						

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

Rating: 8 CALCULATED SCOUR ABOVE FOOTING **Evaluation Method:** B Rational Analysis

Analysis Date: 08/22/1997

Miscellaneous

Microfilm Data Recorded: No

Construction Information

Year:	1928	Original	1998	Reconstructed	
Route:		**Sta:**	FAU1576	**Sta:**	16+51.20
Section Nbr:		106TH STREET 1415 C.S.		96-E6005-00-BR	
Contract Nbr:					
Fed Aid Pr#:		00000000000000		E-6-005	
Built By:	4	CITY	4	CITY	