

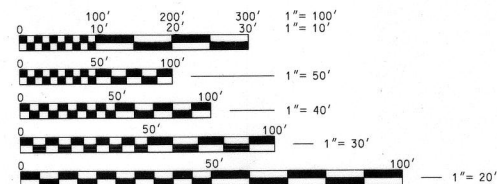
PROJECT MAP

END IMPROVEMENT
LAKEFRONT TRAIL
STA. 199+26

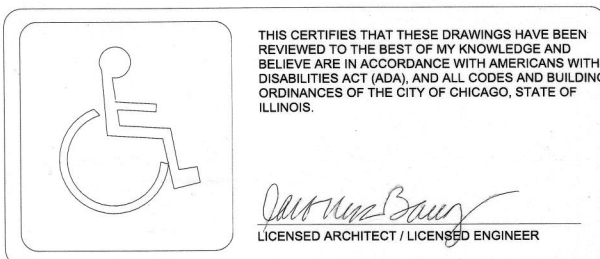
BEGIN IMPROVEMENT
LAKEFRONT TRAIL
STA. 194+16

TRAFFIC DATA

ADT (CURRENT) = 108,400
ADT (2032) = 114,433
DESIGN YEAR = 2032



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED SIZE PLANS, THE ABOVE SCALES MAY NOT BE USED.



CITY OF CHICAGO
RAHM EMANUEL, MAYOR

DEPARTMENT OF TRANSPORTATION
REBEKAH SCHEINFELD, COMMISSIONER

DIVISION OF ENGINEERING
DANIEL BURKE, P.E., S.E., DEPUTY COMMISSIONER

CONTRACT PLANS FOR
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER
FROM WACKER DRIVE TO ILLINOIS STREET

FAP ROUTE NO. 0341
SPECIFICATION NO. 409567
C.D.O.T. PROJECT NO. E-6-650
FEDERAL PROJECT NO. W46U(596)
STATE JOB NO. C-88-004-17
SECTION NO. 09-E0534-00-BR/CDOT

NET LENGTH OF IMPROVEMENT: 510 FEET
(0.10 MILES)

ISSUED BY:
DEPARTMENT OF PROCUREMENT SERVICES
JAMIE L. RHEE, CHIEF PROCUREMENT OFFICER



Jamal Grainawi
JAMAL GRAINAWI, S.E., P.E.
WSP USA INC.
LICENSE NO.: 081-005161
EXPIRES: November 30, 2018
DATE: July 18, 2017
SHEETS MS-1 THRU MS-13,
MS-18 THRU MS-28, MS-40
& MS-41, MS-46 THRU MS-106
& MS-111 THRU MS-113



Moussa A. Issa
MOUSSA A. ISSA, S.E., P.E.
HBM ENGINEERING GROUP, LLC
LICENSE NO.: 081-005738
EXPIRES: November 30, 2018
DATE: 08/08/2017
SHEETS MS-14 THRU MS-17, MS-29
THRU MS-39, MS-42 THRU MS-45,
MS-107 THRU MS-110, S1-1 THRU S1-5,
S2-1 THRU S2-18, S3-1 THRU S3-14



Carol Ross Barney
CAROL ROSS BARNEY, AIA
ROSS BARNEY ARCHITECTS
LICENSE NO.: 001-008045
EXPIRES: November 30, 2018
DATE: 8/2/2017
SHEETS A-1 THRU A-7.2



Lee S. Austin
LEE S. AUSTIN, P.E.
BLOOM COMPANIES
LICENSE NO.: 062-033859
EXPIRES: November 30, 2019
DATE: 6-3-17
SHEETS C-1 THRU C-6



Robert P. Israel
ROBERT P. ISRAEL, P.E.
EJM ENGINEERING, INC.
LICENSE NO.: 062-044817
EXPIRES: November 30, 2019
DATE: 8/13/2017
SHEETS MOT-1 THRU MOT-14,
TEMP-1 THRU TEMP-2,
SD-1 THRU SD-7, PMK-1 THRU PMK-4



Michael Blumenthal
MICHAEL BLUMENTHAL, P.E.
AAA ENGINEERING
LICENSE NO.: 062-033875
EXPIRES: November 30, 2019
DATE: 8/9/2017
SHEETS E-1 THRU E-92



Mohammed K. Rashed
MOHAMMED K. RASHED, P.E.
EJM ENGINEERING, INC.
LICENSE NO.: 062-053645
EXPIRES: November 30, 2019
DATE: 8/05/2017
SHEETS LT-1 THRU LT-8



Michael Elza
MICHAEL ELZA, P.E.
WSP USA INC.
LICENSE NO.: 062-055956
EXPIRES: November 30, 2019
DATE: July 17, 2017
SHEETS M-1 THRU M-19

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DATE: November 29 2017
APPROVED: *Miss Nest*
PROJECT MANAGER
APPROVED: *Lee D. Benitez*
CHIEF BRIDGE ENGINEER
APPROVED: *Paul Beuk*
DEPUTY COMMISSIONER, DIVISION OF ENGINEERING
APPROVED: *W. Scheinfeld*
COMMISSIONER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DATE: FEBRUARY 2 2018
PASSED: *Christopher Holt*
DISTRICT 1 ENGINEER OF LOCAL ROADS & STREETS
RELEASING FOR BID BASED ON
LIMITED REVIEW: February 2 2018
Anthony J. Dunphy
REGION 1 ENGINEER

CITY OF CHICAGO
PARK DISTRICT
DATE: November 29 2017
APPROVED: *Kathleen Gleason*

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MOVABLE STRUCTURE - SN 016-6030

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MOVABLE STRUCTURE - SN 016-6030

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MOVABLE STRUCTURE - SN 016-6030

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USER NAME = lopezgonzalez
DESIGNED - IJL
CHECKED - JIG
PLOT SCALE = N.T.S.
DRAWN - IJL
PLOT DATE = 6/26/2017
CHECKED - JIG

REVISED -
REVISED -
REVISED -
REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

INDEX OF SHEETS - SHEET 1 OF 2

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ELECTRICAL

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- S3-8 Deck Cross Sections
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- S3-10 Deck Cross Sections and Details (Sheet 2 of 2)
- S3-11 Expansion Joint Details
- S3-12 East Railing Sections and Details
- S3-13 North Anchor Column Bent Modification
- S3-14 Bent 12 Modification

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USER NAME =	lopezgonzalez	DESIGNED -	IJL	REVISED -	
		CHECKED -	JIG	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	IJL	REVISED -	
PLOT DATE =	6/29/2017	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

INDEX OF SHEETS - SHEET 2 OF 2

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	G-2
CDOT PROJECT NO. E-6-650			3 OF 411

GENERAL NOTES

- The Lakefront Trail or Lakefront Bicycle Trail will be referred to as "Path" or "Sidewalk" interchangeably. To conform to existing plans and conventions for the bascule bridge, "Sidewalk" will be used when referring to a particular structural component, such as "Sidewalk Stringer."
- Due to the possibility of undocumented modifications and changes to the structure, it is the Contractor's responsibility to verify the correctness of all reference drawings. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in the scope of the work. However, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
- All construction materials and construction activities used on this contract must conform to the Standard Specifications for Road and Bridge Construction adopted April 1, 2016 by the Illinois Department of Transportation, specified supplemental specifications and recurring special provisions, dated January 1, 2018, Applicable Guide Bridge Special Provisions and project detail specifications except as modified herein.
- The Contractor should expect that due to the nature of this rehabilitation project, the exact extent of repair work cannot always be accurately determined prior to commencement of work. Pre-bid visits and access to the site may be required and can be arranged through the Chicago Department of Procurement Services to Chicago Department of Transportation, Division of Engineering process.
- All available existing plans will be provided to the Contractor in electronic format and will be available at City Hall on the day of Bid Advertisement. The Contract Plans reference the applicable existing plan file that is usually located in the top right hand corner of these contract documents.
- The Contractor must protect and carefully preserve all permanent survey monuments, benchmarks or property markers which are encountered during the course of his/her work. If it is necessary to remove any such monument or marker, the Commissioner must be notified prior to removal. The Contractor must protect and carefully preserve all property markers and monuments until the Commissioner, an authorized surveyor, or agent has witnessed or otherwise referenced their location. Any such monument or marker which has been disturbed by the Contractor must be reset by a registered Professional Land Surveyor to the satisfaction of the Commissioner and at no additional expense to the City.
- The Contractor must take all necessary safety precautions to protect abutting property, pedestrians, and river and vehicular traffic. The Contractor must take precautions to protect the public from falling debris. The Contractor must submit plans for pedestrian, river, and vehicular protection to the Commissioner for approval prior to beginning the work.
- The Contractor must call Digger (Chicago Utility Alert Network) at 312-744-7000 to have the location of existing underground utilities staked, 48 hours before starting foundation work.
- The Contractor is responsible for the protection of all underground and overhead utilities within the project limits whether or not the utilities are shown on the plans. The Contractor must investigate the work zone to identify locations of signs, poles or other structures which would impact the proposed work locations. Costs associated with protection of existing utilities is included in the cost of "Mobilization". Any utility that is damaged during construction must be repaired or replaced by the Contractor at his/her own expense to the satisfaction of the Commissioner.
- The private utility companies or their contractors will perform the required adjustments to their utilities. The Contractor is responsible for coordinating with each utility company.

GENERAL NOTES (CONTINUED)

- When artificial lighting is used in night operations the contractor shall exercise the utmost precautions in preventing adverse visibility to the motoring public, marine traffic on the river, and adjoining commercial and residential areas.
- The Contractor shall hire a qualified environmental firm to carry out sampling and analysis of all excavated river sediments. All river sediments excavated (spoil material excavated, dredged or otherwise produced) must not be returned to the waterway but must be deposited in a self-contained area in compliance with all State statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by the Illinois EPA. The river sediment's potential contaminants of concern are unknown and shall be analyzed accordingly with the special provisions. Cost of sampling, analysis, and processing of excavated river sediments included in the cost of "Submarine Cable Assembly."
- The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location: Longnose Sucker and Peregrine Falcon. The City of Chicago and CDOT are committed to check for these protected resources during spring and prior to construction. The Falcon utilizes bridges in the Chicago area for nesting. If nesting birds are present, the City of Chicago and CDOT are committed to monitor these sites where such activities are present and construction will be prohibited at these sites from March through June.
- The Contractor shall implement protective measures so as to prevent any debris from falling into the Chicago River. If any debris falls into the waterway, the Contractor shall remove it from the river to the Commissioner's satisfaction, and at no additional cost to the City.
- All temporary items within the waterway must be completely removed.
- Any spoil material or disturbed soil shall be re-used within the project limits, except as noted for river sediments excavated during submarine cable dredging. Findings from a locally performed PESA confirmed that thorium contamination issues as well as other potential sources of contamination from the historical land uses at DuSable Park are expected. During construction soil will be characterized and environmental protocols followed accordingly. CDOT has coordinated with the EPA and a Health and Safety Plan has been developed for the project.
- All elevations shown on the plans are referenced to the Chicago City Datum: 579.48 feet above mean sea level, 1929 adjustment.
- Do not scale from plans.
- For additional General Notes see sheets MOT-1 (maintenance of traffic), MS-3 (movable structure), A-0.0 (architectural), E-2 (electrical), LT-1 (lighting), and S1-1, S2-2 & S3-2 (structural).

CONSTRUCTION NOTES

- The Contractor must obtain all necessary permits prior to commencing construction. The costs are included in the cost of "Mobilization."
- The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for temporary construction activity placed in the water. Cofferdams or other construction methods that disturb the riverbed are prohibited. This shall include the placement of material for run arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR LM2017001 Floodway Construction permit number allowing permanent construction as shown in the contract plans.
- A USCG Permit is not required; however, the Contractor must provide notification to the Coast Guard prior to initiating mobilization/construction activities. As built plans must also be submitted to the Ninth Coast Guard District office at the conclusion of the project.

CONSTRUCTION NOTES (CONTINUED)

- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two adjusting shims of the dimensions of the bottom of the plate shall be provided for each bearing in elastomeric bearing, two adjusting shims shall be provided for each bearing placed as detailed. The final number and thickness of shim plates must be determined in the field. The cost of the shim plates is included in the cost of Furnishing and Erecting Structural Steel pay items.
- No construction joint except those shown on the plans will be allowed unless ordered or approved by the Commissioner.
- The Contractor shall complete all construction operations (movable part) detailed in the contract plans and specifications while the bascule bridge leaves are in the closed position unless permission is obtained from the Commissioner.
- One leaf of the bascule bridge shall be operable at all times during construction to accommodate River Traffic on the Chicago River. The Contractor shall provide 48-hr notice to the Commissioner of any bridge movements. The Contractor shall provide a temporary center lock as required during Electrical and Mechanical work to ensure that the bridge is operational and stable. (See special provisions.)
- The Contractor shall be responsible for the stability of the bascule bridge in all phases of construction. Prior to replacement of steel members detailed on the structural drawings, the Contractor shall submit a construction procedure showing each step of the removal and replacement process. The Contractor shall also submit calculations showing that all members will remain stable and not become overstressed during any step of the removal and replacement process. The construction procedure and calculations shall be signed and sealed by a Licensed Structural Engineer in the State of Illinois.
- The Contractor shall utilize the required construction procedures to ensure that all structural members are square during the installation of the lateral bracing for the roadway stringers, sidewalk stringers, floorbeams and sidewalk.
- The Contractor is responsible for proper alignment of the two leaves in order to engage the center lock assembly and allow for proper fit throughout construction. The alignment is necessary to ensure that the centerline of the top chord members of each leaf confirm to the design grades and align within a tolerance of 1/8" ± at the center of the structure. Necessary adjustments can be made at the anchor columns by the use of shim plates to ensure that the top chords of each leaf are aligned.
- The angle of revolution for "Normal Operating Opening" for the bascule bridge is 55 degrees from the truss for normal lifts. The completed rehabilitated bridge shall have a maximum angle of revolution for "Fully Opened (Maintenance Opening)" of 72.75 degrees from the truss. See sheet MS-4 for additional information.
- The Contractor is responsible for traffic control on local roads and city streets near the project site. See sheets MOT-1 thru MOT-14 for details. The Contractor shall coordinate construction staging and traffic control operations with adjoining or overlapping construction contracts, including barricade placement necessary to provide a uniform detour pattern prior to and throughout the duration of the project. (See special provisions.)

PROJECT COMMITMENTS

- Strict adherence by the Contractor to best management practices for erosion and sedimentation control should be used to minimize the possibility of any adverse impacts to the Chicago River, Lake Michigan, and the vicinity listed species (see Detailed Specifications).

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PLOT SCALE =	N.T.S.	DRAWN -	PJL	REVISED -	
PLOT DATE =	1/31/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

GENERAL NOTES - SHEET 1 OF 2

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	G-3
CDOT PROJECT NO. E-6-650			4 OF 411

STEEL FABRICATION NOTES

- Domestic Steel Act: All iron and steel products, which are to be incorporated into state projects shall be domestically manufactured or produced and fabricated. The Contractor shall obtain from the iron or steel producer and/or fabricator, in addition to the mill analysis, a certification that all iron or steel materials meet these domestic source requirements. The application of all coatings, epoxy, galvanizing, painting, etc., to metal products shall be domestically applied.
- All structural steel is to be AASHTO M270, (ASTM A709 Grade 50) unless otherwise noted.
- Fasteners are to be 7/8" diameter high strength bolts, AASHTO M164 (ASTM A325), Type I mechanically galvanized, unless noted otherwise. Open holes are to be 15/16" diameter, unless otherwise noted, and except as required by the existing details.
- All contact surfaces on new and existing steel, including connection bolts, nut or washer contact areas, are to be free of scale, burrs, dirt, other foreign materials, oil, previously applied paint, lacquer, or other coatings that would prevent solid seating of the connected parts.
- Field welding is not allowed except when approved by the Commissioner.
- Field splices shall be as shown on the plans or otherwise approved in writing by the Commissioner.
- Fabrication drawings shall show the weight of all parts.
- Rolled shaped members shall be fabricated with natural camber up.
- Main truss connections are to be considered slip-critical in accordance with AASHTO criteria. Contact surfaces of bolted parts must meet the requirements of Class A as designated in AASHTO Criteria.
- The Fabricator shall note that bolts are used in place of original rivets. It is anticipated that this change may cause some interferences and erection conflicts for bolt installation. The Contractor and the Fabricator shall review the drawings for such conflicts in detail and bring them to the attention of the Commissioner for resolution prior to fabrication. Likewise, the Contractor shall verify the fit and clearance of all new components that connect to existing or replaced sections of the Primary Truss members. Where interferences occur, the Contractor shall use clipped washers, trim the edge of interfering member or install countersunk bolts as possible mitigating solutions. All modifications must be approved by the Commissioner prior to implementation.
- At locations where rivets are to be replaced with high strength bolts, the bolts shall be oriented so that the head of the bolt is placed on the outside exposed surface of the member.
- Bolts, washers and nuts are not included in the estimated weight of structural steel, but are considered part of the member to be provided. The cost of these items are included in the cost of Furnishing and Erecting Structural Steel pay items.
- It is the Contractor's responsibility to take measurements of the existing structure wherever new steel is to be installed or connected into the existing material prior to ordering or fabricating new steel. The Contractor is responsible for the proper fitting and assembly of all parts of this work. The Contractor's shop drawings must indicate which dimensions were obtained by actual field measurements.
- The location and diameter of holes in new connecting material must match holes in the existing structure. Holes in existing structure may be enlarged only with the permission of Commissioner and in accordance with the specifications. Holes may be sub-drilled or sub-punched in new material where holes in existing material are to be matched. Field reaming of holes in new material that are sub-punched or sub-drilled and are to match existing holes is acceptable, provided the sub-hole is fully contained in the outline of the reamed hole. Final holes must be round and may not be oversized.
- Bolt and rivet spacings and sizes must be verified in the field by the Contractor prior to ordering material for fabrication.

REMOVAL OF EXISTING STRUCTURAL STEEL

- The Contractor must perform all work with care such that all materials which are to remain in place will not be damaged. If the Contractor damages any materials which are to remain in place, the damaged materials must be repaired or replaced in a manner satisfactory to the Commissioner at no additional expense to the City.
- Flame cutting of existing Structural Steel members which are to remain in place is not allowed.
- Existing rivets are to be removed and replaced with high strength bolts by mechanical methods. Flame cutting for the purpose of removing existing rivets will not be allowed.
- Existing rivets are to be removed one rivet at a time and replaced with a high strength bolt before removing the next rivet.
- Although plans designate existing holes as containing rivets, some rivets may have been replaced with H.S. Bolts under previous repair contracts. Where these locations require rivet removal and replacement with H.S. Bolts, replace existing H.S. Bolts with new H.S. Bolts.
- Where existing Structural Steel to remain has been cut or new holes have been drilled, the edges must be dressed to a smooth, uniform surface with no notches or gouges.
- Removal of existing bridge Structural Steel shall be done in a manner and sequence consistent with the rehabilitation of the bridge.
- The existing Structural Steel coating on the bridge, including the existing dolphins, is assumed to contain Lead. The Contractor shall take appropriate precautions to deal with the presence of Lead on this project. (See special provisions.)
- Asbestos is assumed to be present in the interior and exterior of the bridge houses and the access stairs. Should similar material be found in currently unexposed areas of the building, it should assumed to be Asbestos Containing Material and treated accordingly. The Contractor shall take appropriate precautions to deal with the presence of Asbestos on this project. (See special provisions.)

HOT-MIX ASPHALT - MIX REQUIREMENTS

PAY ITEM	DESCRIPTION	MIX TYPE	PERCENT AIR VOID @Ndes	LIFT THICKNESS	UNIT WT LB/SY/IN
40600535	LEVELING BINDER (HAND METHOD), N70	IL 9.5 MM	4 PERCENT @70 GYR	0.75" TO 2.25"	112

- The "AC Type" for Polymerized HMA mixes shall be "SBS/SBR PG 76-22" and for Non-Polymerized HMA the "AC Type" shall be "PG 64-22" unless modified by District One Special Provisions.
- For use of recycled materials see Special Provisions.

CONCRETE AND REINFORCEMENT

- All concrete shall be high performance concrete (HPC), see special provisions.
- Reinforcement bars shall be new, deformed, epoxy coated bars conforming to the requirements of AASHTO M31 M42, or M53, Grade 60.
- All construction joints shall be bonded according to IDOT Standard Specification for Road and Bridge Construction Article 503.09, unless otherwise noted.
- Reinforcement bars must conform to the requirements of ASTM A706 Gr. 60. See Special Provisions.
- All reinforcing bars shall be epoxy coated unless otherwise noted.
- Horizontal and vertical construction joints shown or noted on the plans are recommended. Any deviation from those shown must have approval of the Commissioner.
- All exposed edges of concrete must be chamfered 3/4" unless other members are erected flush with them.
- All exposed concrete surfaces must be treated with Silicone Sealer. Linseed Oil or other surface treatments are not acceptable.
- Concrete cover for reinforcement: Except as otherwise noted or shown on the drawings, reinforcement shall have a minimum concrete cover as follows:
 - Bottom of foundations 3"
 - Backfilled surfaces 2 1/2"
 - Surfaces in contact with water 2 1/2"
 - Interior surfaces (not exposed to water) 2"
 - Exterior walls and slabs (above ground surface) 2"

FOUNDATION NOTES

- Reinforcement bars shall be new, deformed, epoxy coated bars conforming to the requirements of AASHTO M31 M42, or M53, Grade 60.
- Anchor rods shall conform to ASTM F1554 Grade 105 with supplementary requirement S4. Top ends of anchor rods shall be ground flat at 90 degrees to rod axis, final surface roughness shall not exceed 125 micro-inch.
- Anchor rod washers shall conform to ASTM F436.
- Anchor rod nuts shall conform to ASTM A563, Grade DH with supplementary requirements S1 and S2.
- Anchor rod template and temporary support members shall conform to AASHTO M270, Grade 50.
- Anchor rods and hardware shall be hot-dip galvanized full length.
- The elevation and location of anchors rods is critical. Use survey techniques to verify the elevations, location, and orientation of anchor bolt groups prior to placement of foundation concrete. Anchor rod positioning shall be consistent with as-built shop fit steel structure.
- The work for the proposed micropiles requires a City of Chicago Geotechnical Review. The Contractor shall coordinate with the City and obtain the necessary permits to satisfy the Deep Foundation Geotechnical Review.

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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

GENERAL NOTES - SHEET 2 OF 2

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	G-4
CDOT PROJECT NO. E-6-650			5 OF 411

NO.	CODE NUMBER	DESCRIPTION	UNIT	QUANTITY
1	67100100	MOBILIZATION	L SUM	1
2	CDOT6700010	ENGINEER'S FIELD OFFICE	CAL MO	15
3	*****	SOIL EROSION AND SEDIMENT CONTROL	L SUM	1
4	Z0076600	TRAINEES	HOURL	2,000
5	*****	HAZARDOUS MATERIALS ABATEMENT	ALLOWANCE	50,000
6	72000100	SIGN PANEL - TYPE I	SQ FT	5
7	40600535	LEVELING BINDER (HAND METHOD), N70	TON	20
8	70106800	CHANGEABLE MESSAGE SIGN	CAL MO	48
9	70300510	PAVEMENT MARKING TAPE, TYPE III - LETTERS AND SYMBOLS	SQ FT	285
10	70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	5,921
11	70300540	PAVEMENT MARKING TAPE, TYPE III 6"	FOOT	380
12	70300570	PAVEMENT MARKING TAPE, TYPE III 24"	FOOT	52
13	70400100	TEMPORARY CONCRETE BARRIER	FOOT	425
14	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	340
15	70500625	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2
16	70500690	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 11	EACH	1
17	70600255	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	3
18	70600322	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	3
19	*****	TEMPORARY INFORMATION SIGNING	SQ FT	63
20	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	152
21	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1,536
22	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	40
23	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	1,005
24	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	118
25	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	238
26	78008200	POLYUREA PAVEMENT MARKING TYPE I - LETTERS AND SYMBOLS	SQ FT	180
27	78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	1,500
28	78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	120
29	78008240	POLYUREA PAVEMENT MARKING TYPE I - LINE 8"	FOOT	1,200
30	78008250	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	FOOT	80
31	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	11
32	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	2,063
33	*****	DETOUR TRAFFIC SIGNAL MODIFICATIONS AND MAINTENANCE	EACH	6
34	*****	FURNISH AND INSTALL PROJECT SIGN, TYPE A	EACH	1
35	*****	FURNISH AND INSTALL PROJECT SIGN, TYPE B	EACH	1
36	*****	FURNISH AND INSTALL PROJECT SIGN, BANNER	EACH	1
37	*****	GUARDRAIL (SPECIAL)	FOOT	280
38	*****	REMOVE, STORE, REINSTALL EXISTING SIGN	EACH	4
39	*****	TEMPORARY RAILING	FOOT	275
40	*****	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
41	*****	TRAFFIC CONTROL AND PROTECTION	L SUM	1
42	CDOT6640010	TEMPORARY CHAIN LINK FENCE WITH SCREENING, 6'	FOOT	100
43	CDOT6640030	RELOCATE TEMPORARY CHAIN LINK FENCE WITH SCREENING	FOOT	100
44		NOT USED		
45	50102400	CONCRETE REMOVAL	CU YD	115.6
46	50157300	PROTECTIVE SHIELD	SQ YD	3,750
47	50300260	BRIDGE DECK GROOVING	SQ YD	209
48	50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	23,250
49	50500505	STUD SHEAR CONNECTORS	EACH	102
50	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	55,710
51	50901720	BICYCLE RAILING	FOOT	13
52	50901750	PARAPET RAILING	FOOT	4
53	52000050	PREFORMED JOINT SEAL 4"	FOOT	40
54	52000110	PREFORMED JOINT STRIP SEAL	FOOT	77
55	52100520	ANCHOR BOLTS, 1"	EACH	48
56	59000200	EPOXY CRACK INJECTION	FOOT	63
57	CDOT5030020	HIGH PERFORMANCE CONCRETE STRUCTURES	CU YD	184.3
58	CDOT5030030	HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES	CU YD	168.4
59	CDOT5870010	PROTECTIVE CONCRETE SEALER	SQ YD	1,031
60	X0321963	MICRO-PILES	EACH	15
61	X0323433	MICROPILE PROOF LOAD TEST	EACH	2
62	X0325391	EXPANDED POLYSTYRENE FILL	CU YD	24.8
63	X0326519	STEEL RAILING REMOVAL	FOOT	589
64		NOT USED		
65	X0326537	TIMBER BUMPERS	FOOT	124
66	X0327644	TEMPORARY BRIDGE	L SUM	1
67	X5010110	REMOVAL OF EXISTING FILLED GRID DECK	L SUM	1
68	X5030221	CONCRETE ENCASEMENT	CU YD	54.6

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Phone: (312) 878-8500 Fax: (312) 878-9600



WSP USA Inc.
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USER NAME = lopezgonzalez	DESIGNED - JA	REVISED -
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SUMMARY OF QUANTITIES
SHEET 1 OF 3**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	G-5
CDOT PROJECT NO. E-6-650			6 of 411

NO.	CODE NUMBER	DESCRIPTION	UNIT	QUANTITY
69	Z0001903	STRUCTURAL STEEL REMOVAL	POUND	456,500
70	Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1
71	Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1
72	Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1
73	Z0007122	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	45
74	Z0007124	STEEL RAILING (SPECIAL)	FOOT	119
75	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	190
76	Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	199
77	Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	263
78	Z0018900	DRILL AND GROUT DOWEL BARS	EACH	167
79	*****	BALANCING OF BRIDGE AND ALTERATION OF COUNTERWEIGHTS	L SUM	1
80	*****	BALANCING OF HINGED SIDEWALK	L SUM	1
81	*****	BRIDGE OPERATION AND MAINTENANCE	L SUM	1
82	*****	CABLE RAIL SYSTEM	FOOT	31
83	*****	CLEANING AND PAINTING EXISTING STEEL STRUCTURES AS DIRECTED BY THE COMMISSIONER	SQ FT	2,000
84	*****	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION NO. 1	L SUM	1
85	*****	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION NO. 2	L SUM	1
86	*****	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION NO. 3	L SUM	1
87	*****	COUNTERWEIGHT MATERIAL, HINGED SIDEWALK	L SUM	1
88	*****	DOLPHINS	EACH	2
89	*****	FURNISHING AND ERECTING 5" CONCRETE FILLED GRATING	SQ FT	10,712
90	*****	FURNISHING AND ERECTING 5" OPEN GRID DECK	SQ FT	15,236
91	*****	FURNISHING AND ERECTING FRP GRATING	SQ FT	7,834
92	*****	FURNISHING AND ERECTING STRUCTURAL STEEL, FIELD DISCOVERED CONDITIONS REPAIRED AS DIRECTED BY THE COMMISSIONER	POUND	10,000
93	*****	FURNISHING AND ERECTING STRUCTURAL STEEL, BRIDGE HOUSE	L SUM	1
94	*****	FURNISHING AND ERECTING STRUCTURAL STEEL, HINGED SIDEWALK	L SUM	1
95	*****	FURNISHING AND ERECTING STRUCTURAL STEEL, MOVABLE PART	L SUM	1
96	*****	REMOVAL OF DETERIORATED CONNECTORS AND REPLACEMENT WITH HIGH STRENGTH BOLTS	EACH	1,000
97	*****	REMOVAL OF EXISTING STRUCTURES, HINGED SIDEWALK	L SUM	1
98	*****	REPLACEMENT OF HEEL LOCK SUPPORT	L SUM	1
99	*****	SHOP ASSEMBLY OF FABRICATED STEEL FOR INSPECTION	L SUM	1
100	*****	SHORING TOWERS	L SUM	1
101	*****	STAINLESS STEEL GUARD RAILS	FOOT	62
102	*****	STRUCTURAL STEEL REPAIRS	POUND	34,789
103	*****	TIMBER FENDERS IN PLACE	FOOT	112
104		NOT USED		
105		NOT USED		
106		NOT USED		
107		NOT USED		
108	*****	REMOVE EXISTING LIMESTONE WALL CLADDING FOR PATHWAY	SQ FT	2,510
109	*****	REMOVE EXISTING ROOF DRAIN COVER	EACH	4
110	*****	REMOVE EXISTING DOOR, FRAME AND HARDWARE AND DISCARD	EACH	32
111	*****	REMOVE STAIR RISERS	SQ FT	20
112	*****	REMOVE CONCRETE STAIRS	SQ FT	384
113	*****	REMOVE EXISTING ROOF HATCH	EACH	4
114	*****	REMOVE EXISTING BRIDGE RAILING	FOOT	463
115	*****	REMOVE STEEL GATES	EACH	4
116	*****	REMOVE CHAIN LINK GATES	EACH	2
117	*****	REMOVE EXISTING CHAIN LINK FENCE	SQ FT	210
118	*****	REMOVE STEEL BAR FENCE	SQ FT	310
119	*****	REMOVE STONE RAIL BALUSTERS AND SUPPORTS	FOOT	360
120	*****	REMOVE EXISTING WALLS AND RAILINGS	FOOT	105
121	*****	REMOVE EXISTING MASONRY	SQ FT	100
122	*****	WALL TYPE - CMU WALL	SQ FT	800
123	*****	CLEAN DECORATIVE PLAQUES	EACH	3
124	*****	CLEAN DECORATIVE FASCIA	SQ FT	352
125	*****	LIMESTONE WALL CLADDING	SQ FT	2,800
126	*****	CLEAN AND TUCKPOINTING LIMESTONE	SQ FT	33,200
127	*****	INTERIOR WALL PAINTING	SQ FT	28,540
128	*****	INTERIOR FLOOR TILE	SQ FT	650
129	*****	GLAZED TILE REPAIR	SQ FT	200
130	*****	CHAIN LINK FENCE	SQ FT	264
131	*****	EXTERIOR LIMESTONE WALL REPAIR	SQ FT	386
132	*****	PAINT STAIR RAILINGS	FOOT	557
133	*****	PAINT CONCRETE FLOORS AND STAIRS	SQ FT	11,920
134	*****	CONCRETE STAIRS	SQ FT	384
135	*****	REFINISHED EXISTING STEEL GATES	EACH	8

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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SUMMARY OF QUANTITIES
SHEET 2 OF 3**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	G-6
CDOT PROJECT NO. E-6-650			7 of 411

NO.	CODE NUMBER	DESCRIPTION	UNIT	QUANTITY
136	*****	WINDOW SEALANT	FOOT	816
137	*****	ROOF HATCH	EACH	4
138	*****	ROOF DRAIN COVERS	EACH	4
139	*****	RE-POLISH TERRAZZO FLOOR	SQ FT	1,500
140	*****	NEW STEEL GATES	EACH	13
141	*****	INTERIOR DOORS	EACH	21
142	*****	EXTERIOR DOORS	EACH	12
143	*****	GALVANIZED STEEL (CHAINLINK) ACCESS GATE & HARDWARE	EACH	5
144	*****	ALUM. GUARDRAIL SYSTEM	FOOT	483
145	*****	SOAP DISPENSER	EACH	2
146	*****	PLUMBING FIXTURES	EACH	6
147	*****	18" GRAB BAR	EACH	2
148	*****	42" GRAB BAR	EACH	2
149	*****	MIRROR	EACH	2
150	*****	TOILET TISSUE AND PAPER TOWEL DISPENSERS	EACH	4
151	*****	WASTE RECEPTACLE	EACH	2
152	*****	NEW STEEL BAR FENCE	SQ FT	365
153	*****	ABRASIVE STEEL NOSING	EACH	64
154	*****	PIPE INSULATION	EACH	2
155	*****	NEW STONE BALLUSTERS	FOOT	360
156	*****	CEMENT PLASTER CEILING	SQ FT	525
157	*****	NOT USED		
158	*****	STEEL PLATE EDGING	SQ FT	145
159	*****	SAND BLAST CONCRETE WALLS	SQ FT	3,510
160	*****	RUB RAILING	FOOT	456
161	*****	SOUTH BRIDGE LEAF MACHINERY REHABILITATION	L SUM	1
162	*****	NORTH BRIDGE LEAF MACHINERY REHABILITATION	L SUM	1
163	*****	PERFORMANCE BASED CENTER LOCK REPLACEMENT	L SUM	1
164	*****	SOUTH REAR LOCK ASSEMBLY REHABILITATION	L SUM	1
165	*****	NORTH REAR LOCK ASSEMBLY REHABILITATION	L SUM	1
166	*****	FURNISH AND INSTALL TRUNNION SUPPORTS	EACH	8
167	*****	FURNISH AND INSTALL TRUNNION ASSEMBLY	EACH	4
168	*****	FURNISH AND INSTALL SPAN LOCK ASSEMBLY	EACH	4
169	*****	FURNISH AND INSTALL LINK ARM ASSEMBLY	EACH	2
170	*****	NOT USED		
171	*****	BASCULE BRIDGE RECTIFIERS	L SUM	1
172	*****	BASCULE BRIDGE TRAFFIC GATE WITH STRAIGHT ARM, REMOVE AND REPLACE	EACH	8
173	*****	BASCULE BRIDGE TRAFFIC GATE WITH FOLDING ARM, REMOVE AND REPLACE	EACH	6
174	*****	BASCULE BRIDGE PEDESTRIAN GATE, REMOVE AND REPLACE; ADD NEW GATE ON THE EAST SIDE FOR BIKERS	EACH	4
175	*****	BASCULE BRIDGE VEHICULAR TRAFFIC WARNING SIGNAL, REMOVE AND REPLACE	EACH	12
176	*****	BASCULE BRIDGE PEDESTRIAN TRAFFIC WARNING SIGNAL, REMOVE AND REPLACE	EACH	4
177	*****	NAVIGATION LIGHTS, REMOVE AND REPLACE	EACH	4
178	*****	PIER LIGHTS, REMOVE AND REPLACE	EACH	4
179	*****	SUBMARINE CABLE ASSEMBLY	L SUM	1
180	*****	HUBBELL DC CONTROL SYSTEM	L SUM	1
181	*****	ELECTRICAL WORK IN BASCULE BRIDGE	L SUM	1
182	*****	REMOVAL OF EXISTING BRIDGE EQUIPMENT, SALVAGE	L SUM	1
183	*****	TEMPORARY LIGHTING, POWER AND CONTROL	L SUM	1
184	*****	MISCELLANEOUS ELECTRICAL REHABILITATION	ALLOWANCE	200,000
185	*****	HUBBELL FACTORY TESTING	ALLOWANCE	6,500
186	*****	CORE DRILLED HOLE IN WALL FOR 3/4" DIAMETER RGS CONDUIT	EACH	2
187	*****	ELECTRIC CABLE IN CONDUIT, 1/C #10	FOOT	1,690
188	*****	ELECTRIC CABLE IN CONDUIT, 1/C #8	FOOT	105
189	*****	ELECTRIC CABLE IN CONDUIT, 1/C #6	FOOT	210
190	*****	GALVANIZED STEEL CONDUIT ATTACHED TO STRUCTURE 3/4"	FOOT	410
191	*****	GALVANIZED STEEL CONDUIT EMBEDDED OR ATTACHED TO STRUCTURE 2"	FOOT	75
192	*****	INTERCEPT EXISTING CONDUIT	EACH	6
193	*****	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE	EACH	3
194	*****	LUMINAIRE, LED, VIADUCT	EACH	11
195	*****	LUMINAIRE, LED, DOWNLIGHT	EACH	8
196	*****	LUMINAIRE, CPD, LED, BIKE PATH	EACH	2
197	*****	POLE, ANCHOR BASE, CPD, 19' CONCRETE, BIKE PATH	EACH	2
198	*****	MAINTAIN LIGHTING SYSTEM	L SUM	1
199	*****	POLE, ANCHOR BASE, RELOCATE COMPLETE	EACH	2
200	*****	REMOVE BEACON LUMINAIRE	EACH	32
201	*****	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1,665
202	*****	REMOVE VIADUCT LUMINAIRE	EACH	26

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DIVISION OF ENGINEERING

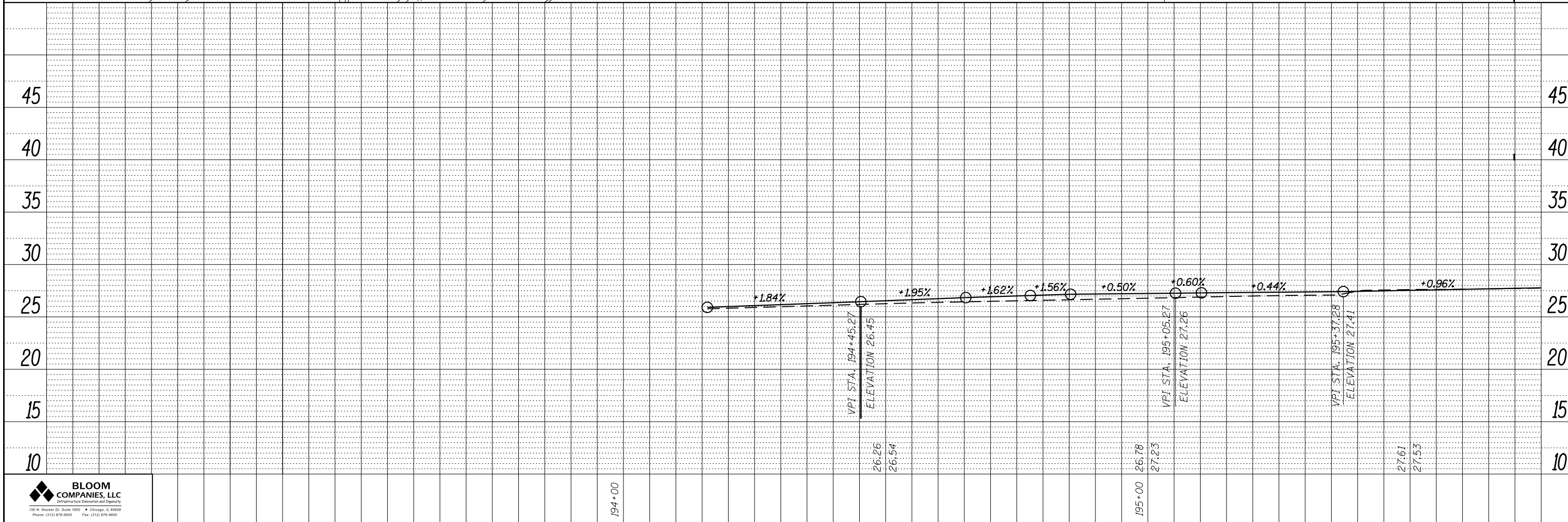
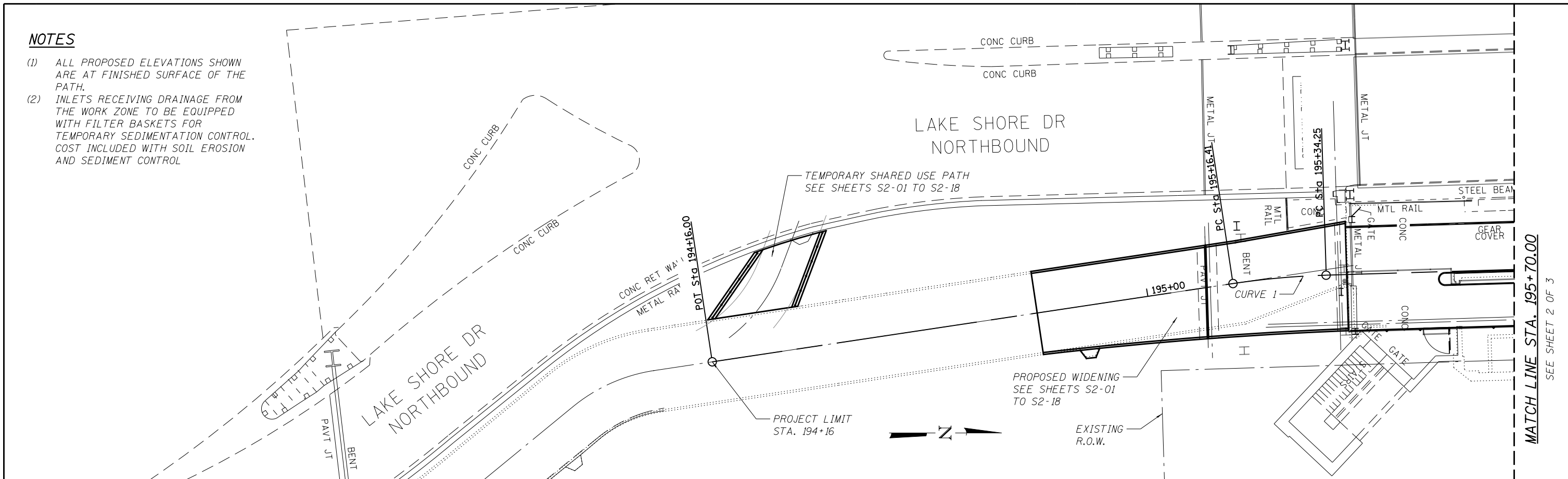
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SUMMARY OF QUANTITIES
SHEET 3 OF 3**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	G-7
CDOT PROJECT NO. E-6-650			8 of 411

NOTES

- (1) ALL PROPOSED ELEVATIONS SHOWN ARE AT FINISHED SURFACE OF THE PATH.
- (2) INLETS RECEIVING DRAINAGE FROM THE WORK ZONE TO BE EQUIPPED WITH FILTER BASKETS FOR TEMPORARY SEDIMENTATION CONTROL. COST INCLUDED WITH SOIL EROSION AND SEDIMENT CONTROL



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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

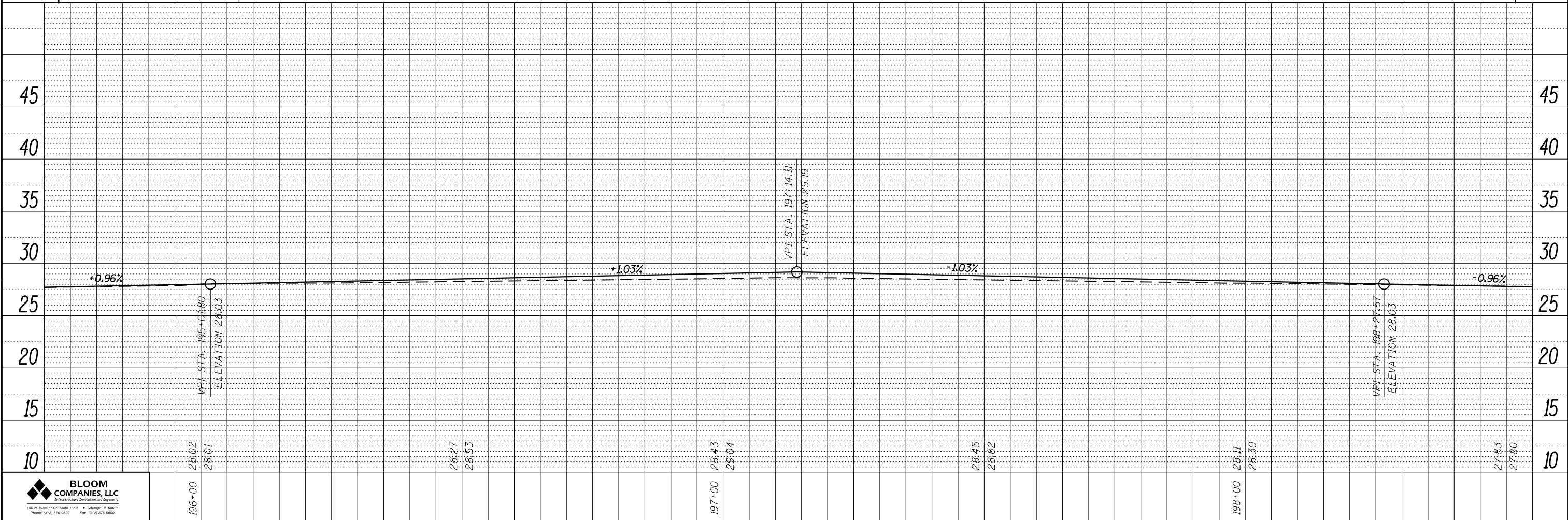
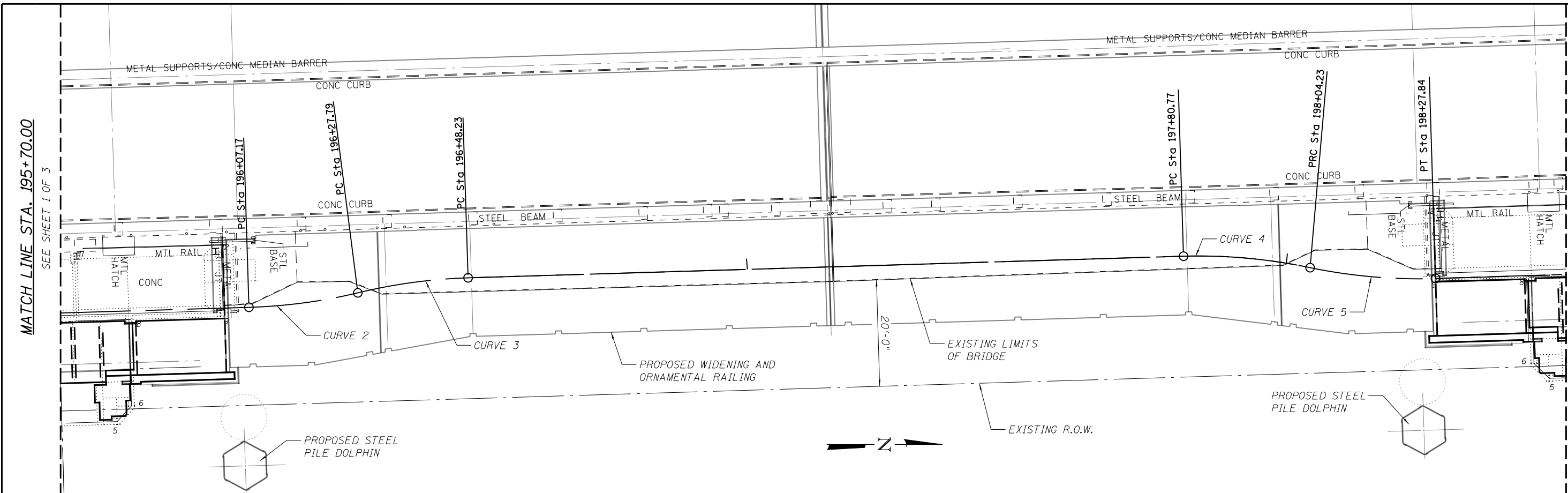
PLAN AND PROFILE I

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	C-1
CDOT PROJECT NO. E-6-650			9 OF 411

MATCH LINE STA. 195+70.00
SEE SHEET 2 OF 3

MATCH LINE STA. 195+70.00

MATCH LINE STA. 198+50.00



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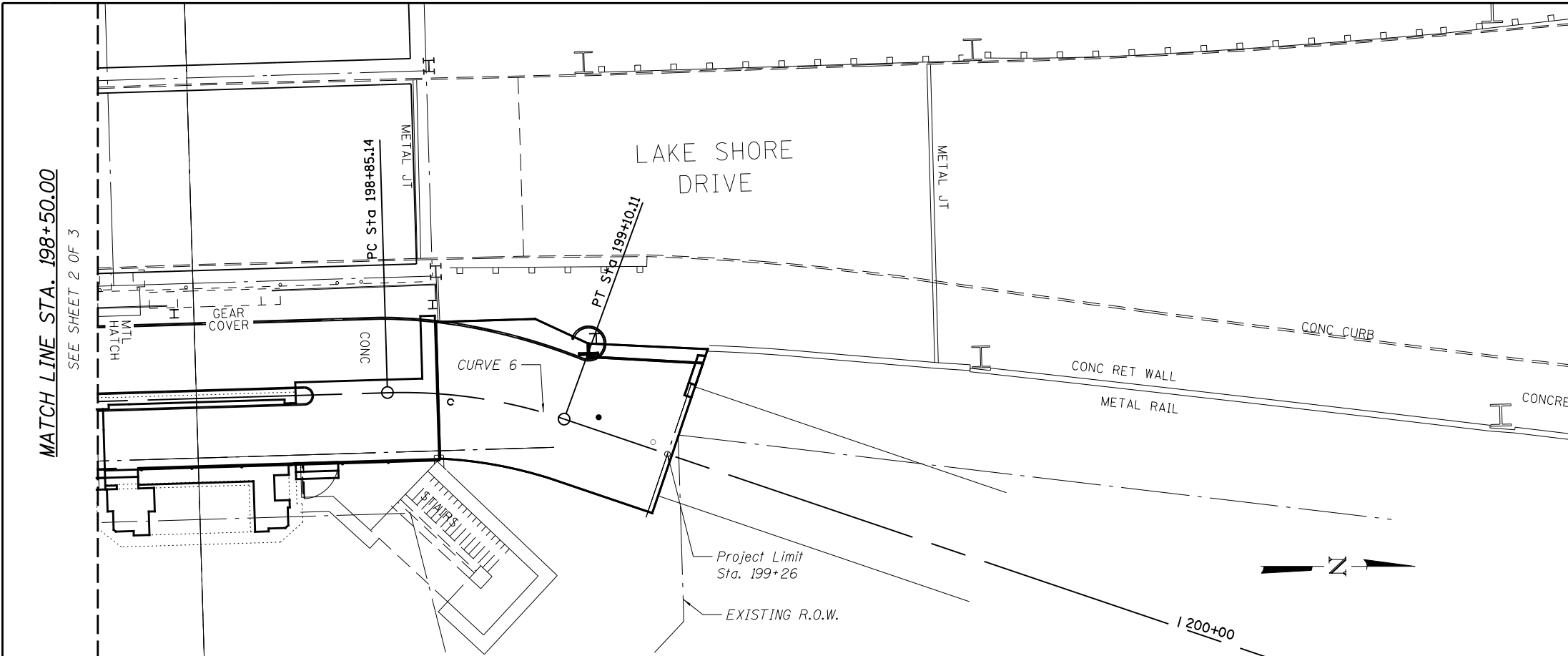
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PLAN AND PROFILE II

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	C-2
CDOT PROJECT NO. E-6-650			10 OF 411



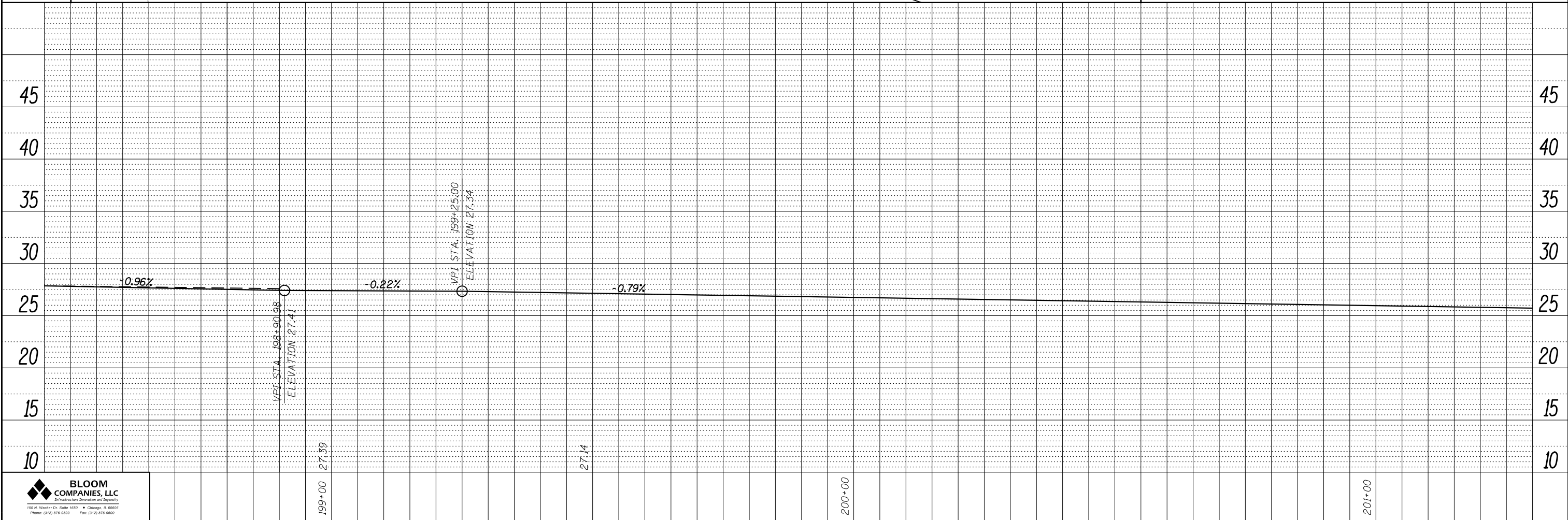
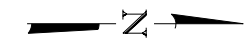
PROPOSED CURVE DATA

PROP. CURVE 1	PROP. CURVE 2	PROP. CURVE 3
PI STA. = 195+25.34	PI STA. = 196+17.52	PI STA. = 196+38.04
$\Delta = 6\ 48\ 51''$ (RT)	$\Delta = 11\ 48\ 34''$ (LT)	$\Delta = 11\ 42\ 39''$ (RT)
D = 38 11' 50"	D = 57 17' 45"	D = 57 17' 45"
R = 150.00'	R = 100.00'	R = 100.00'
T = 8.93'	T = 10.34'	T = 10.26'
L = 17.84''	L = 20.61''	L = 20.44''
E = 0.27'	E = 0.53'	E = 0.52'
e = -----	e = -----	e = -----
T.R. = -----	T.R. = -----	T.R. = -----
S.E. RUN = -----	S.E. RUN = -----	S.E. RUN = -----
P.C. STA. = 195+16.41	P.C. STA. = 196+07.17	P.C. STA. = 196+27.79
P.T. STA. = 165+34.25	P.T. STA. = 196+27.79	P.T. STA. = 166+48.23

PROP. CURVE 4	PROP. CURVE 5	PROP. CURVE 6
PI STA. = 197+92.55	PI STA. = 198+16.09	PI STA. = 198+97.76
$\Delta = 13\ 26\ 33''$ (RT)	$\Delta = 13\ 31\ 39''$ (LT)	$\Delta = 20\ 26\ 35''$ (RT)
D = 57 17' 45"	D = 57 17' 45"	D = 81 51' 04"
R = 100.00'	R = 100.00'	R = 70.00'
T = 11.78'	T = 11.86'	T = 12.62'
L = 23.46''	L = 23.61''	L = 24.98''
E = 0.69'	E = 0.70'	E = 1.13'
e = -----	e = -----	e = -----
T.R. = -----	T.R. = -----	T.R. = -----
S.E. RUN = -----	S.E. RUN = -----	S.E. RUN = -----
P.C. STA. = 197+80.77	P.C. STA. = 198+04.23	P.C. STA. = 198+85.14
P.T. STA. = 198+04.23	P.T. STA. = 198+27.84	P.T. STA. = 199+10.11

MATCH LINE STA. 198+50.00
SEE SHEET 2 OF 3

Project Limit
Sta. 199+26
EXISTING R.O.W.



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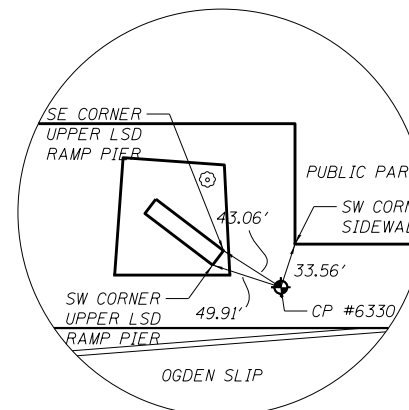
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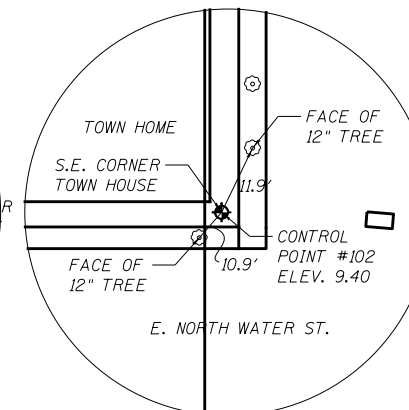
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

PLAN AND PROFILE III

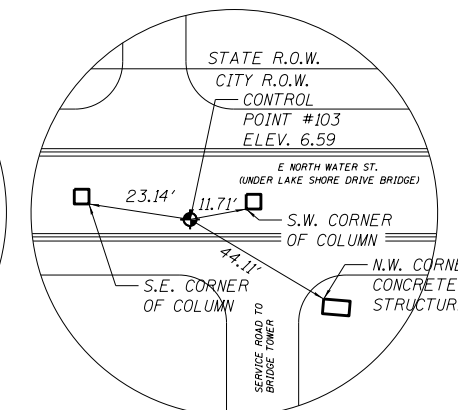
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	C-3
CDOT PROJECT NO. E-6-650			11 OF 411



CONTROL POINT #6330



CONTROL POINT #102



CONTROL POINT #103

CP #6330, SET "X"
N: 1903550.01
E: 1180260.57
ELEV. 6.61

CP #102, SET "X"
N: 1903189.54
E: 1179741.04
ELEV. 9.40

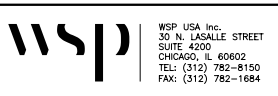
CP #103, SET "X"
N: 1902491.32
E: 118766.98
ELEV. 6.59

BENCHMARKS

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
92	1903142.6976	1179852.5385	10.8100	CP2-SPIKE - Set Spike, Ground level in CHI Spire site
93	1903239.8688	1180194.7417	13.4901	CP3-CRS Ground level chisel "cross" found 330' north of N.E. tower
94	1902935.8875	1180145.3150	27.5044	CP4-CRS - Second level found chisel "cross" in conc on Pedestrian ramp 40' north of N.E. tower
95	1902934.8872	1180147.6045	48.1903	CP5-CRS - Third level found chisel "cross" in roof deck, 55' north of N.E. tower
96	1902558.4520	1180154.6116	27.4664	CP6-CRS - Second level found chisel "cross" in pavt on Pedestrian ramp 51' south of S.E. tower
97	1902570.6699	1180422.6542	5.5432	CP7-PKN - Ground level Set PK nail in pavt 330' east of S.E. tower
98	1902364.3898	1180233.9351	23.8738	CP8-CRS - Second level found chisel "cross" in pavt on Pedestrian ramp 226' south of S.E. tower
99	1902427.0925	1180133.7895	25.4260	CP9-CRS - Second level found chisel "cross" in conc median, east intersection of E. Wacker Dr.
100	1903145.4177	1180128.0900	26.5537	CP10-CRS - Second level found chisel "cross" in conc median, north bound LSD, 242' north of N.E. tower
101	1903183.6100	1179602.7700	9.3500	CP101 - Ground level chisel "X" conc terrace E. North Water Street 150' west of CHI Spire site
102	1903189.5400	1179741.0400	9.4000	CP102 - Ground level chisel "X" conc sidewalk E. North Water Street 14' west of CHI Spire site
103	1903159.5773	1180113.4268	6.6105	CP103 - Ground level chisel "X" conc median betw. 2 east LSD bridge columns on E. North Water St.
104	1903159.1600	1179171.0600	7.5500	CP104 - Ground level chisel "X" in pavt of N.E. corner E. North Water Street and N. McClurg Ct.
111	1902580.7418	1180161.4913	48.2626	CP11-MON - Third level found monument in conc pavt, 51' south of S.E. tower
112	1902964.5542	1180176.2877	7.4809	CP112 - Ground level set PK nail in pavt 57' north of N.E. tower
113	1902570.7465	1180260.6242	5.5373	CP113 - Ground level set PK nail in Conc pavt 60' east of S.E. tower
114	1902625.7226	1180043.7166	48.7482	CP14 - Third level set PK nail in conc pavt, 49' north of S.W. tower
330	1903550.0100	1180260.5700	6.6100	CP6330 - Ground Level chisel "X" Concrete dockwall 643' north of N.E. tower
332	1903531.6300	1179967.6100	5.2400	CP6332 - Ground Level chisel "X" Concrete dockwall 642' north of N.W. tower



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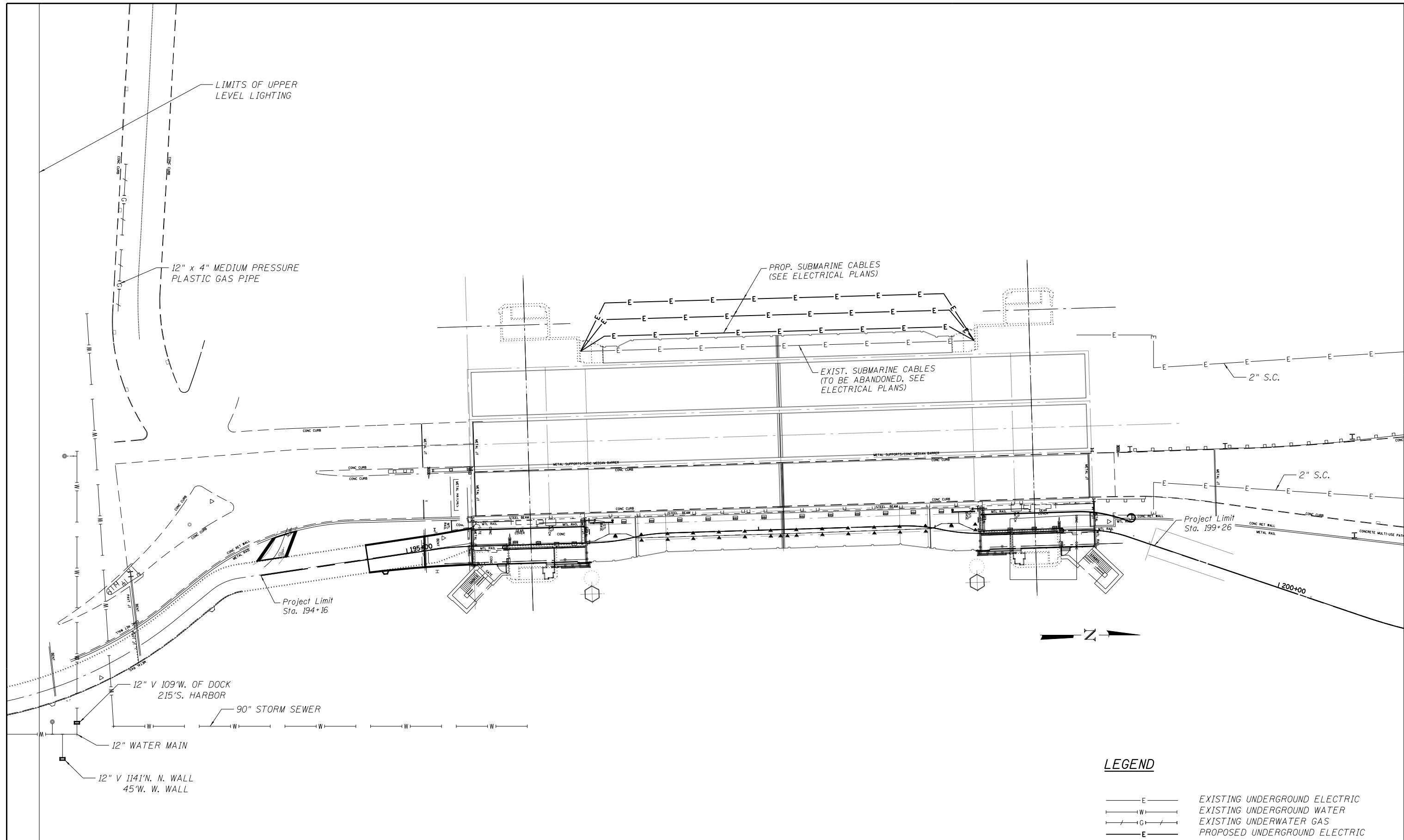
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

ALIGNMENT TIES

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	C-4
CDOT PROJECT NO. E-6-650			12 of 411



LEGEND

- E — EXISTING UNDERGROUND ELECTRIC
- W — EXISTING UNDERGROUND WATER
- G — EXISTING UNDERWATER GAS
- E — PROPOSED UNDERGROUND ELECTRIC

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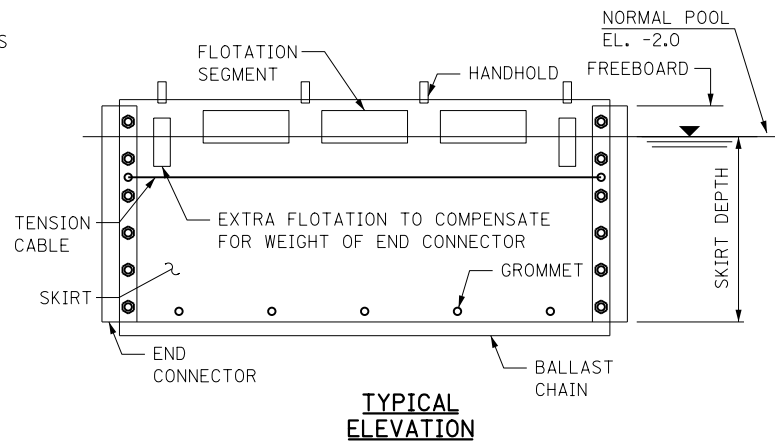
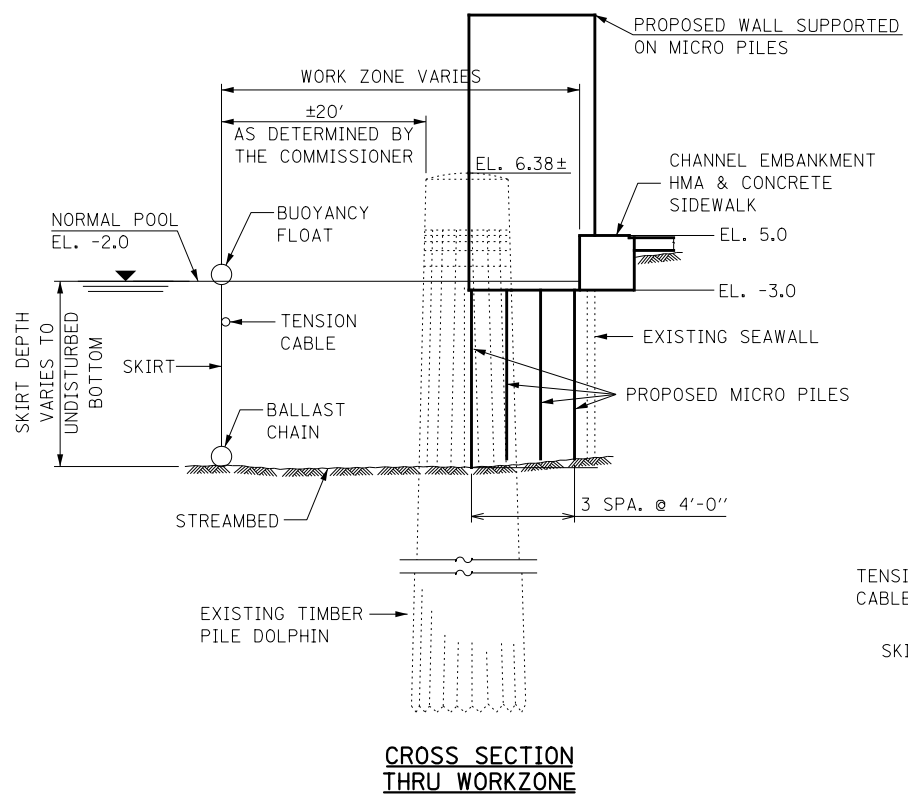
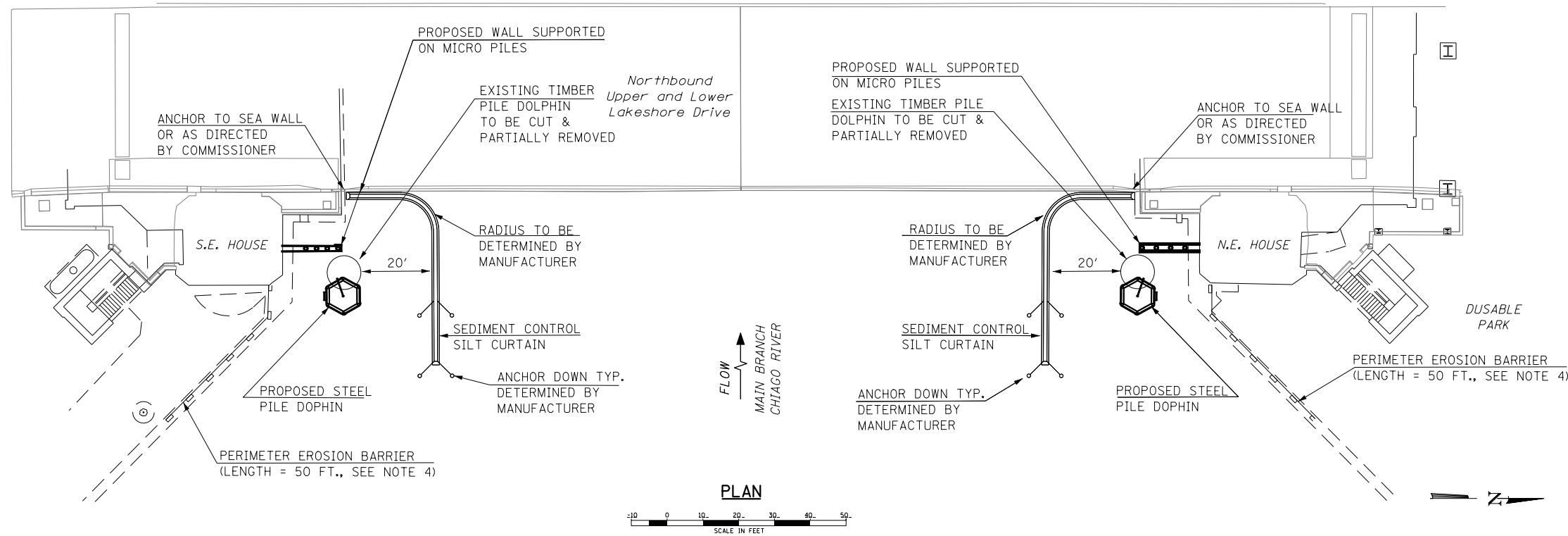
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CITY OF CHICAGO
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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

UTILITIES

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	C-5
CDOT PROJECT NO. E-6-650			13 of 411



LEGEND
 PERIMETER EROSION BARRIER (SEE NOTE 4)

- NOTES:**
1. THE CONTRACTOR SHALL INSTALL A FLOATING BOOM AROUND THE WORK BARGE AREA IN THE EVENT OF OIL AND/OR FUEL LEAKAGE FROM CONSTRUCTION EQUIPMENT AND TO ACCUMULATE EXCESS BROKEN TIMBER PILE PIECES DURING THE DOLPHIN REMOVAL ACTIVITIES. THIS COST SHALL BE INCLUDED IN "SOIL EROSION AND SEDIMENT CONTROL."
 2. ANCHOR CURTAIN TO MAINTAIN STATIONARY LOCATION THROUGHOUT CONSTRUCTION.
 3. SEE SPECIAL PROVISIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 4. SEE STANDARD 280001 FOR PERIMETER EROSION BARRIER DETAILS, COST INCLUDED IN "SOIL EROSION AND SEDIMENT CONTROL."

SEDIMENT CONTROL SILT CURTAIN DETAILS (NTS)

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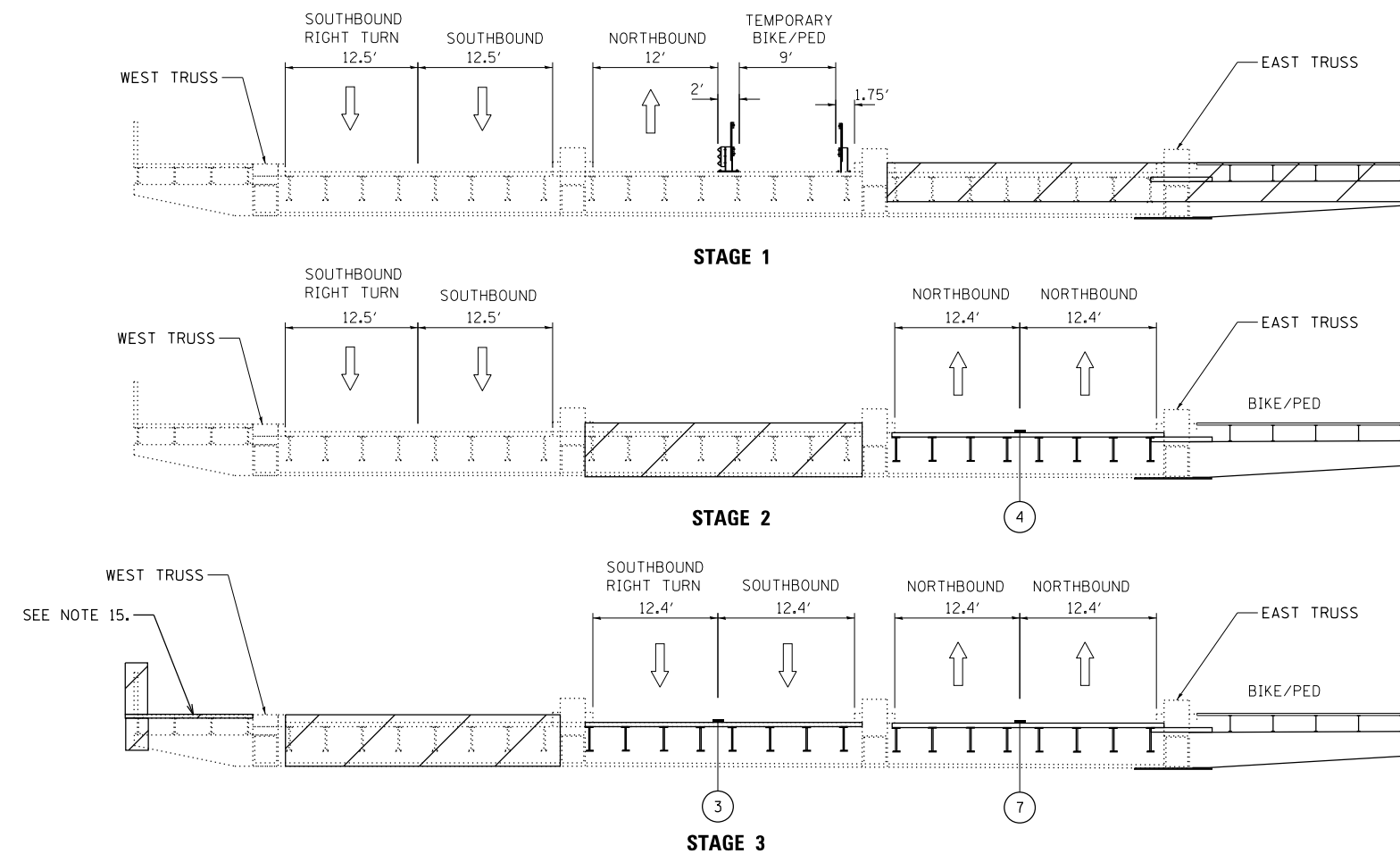
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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

SEDIMENT AND EROSION CONTROL

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	C-6
CDOT PROJECT NO. E-6-650			14 OF 411

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STAGING DESCRIPTION

PRESTAGE:
 CLOSE NORTHBOUND AND SOUTHBOUND INSIDE LANES DURING OFF PEAK CLOSURE HOURS AS INDICATED IN MOT-2 NOTE 1.
 INSTALL MEDIAN CROSSOVERS.
 CLOSE NORTHBOUND OUTSIDE LANE DURING OFF PEAK CLOSURE HOURS AS INDICATED IN MOT-2 NOTE 1.
 INSTALL BRIDGE CROSSOVERS.
 CLOSE LANES AS SHOWN IN PRESTAGE PLAN DURING OFF PEAK CLOSURE HOURS AS INDICATED IN MOT-2 NOTE 1.
 INSTALL TEMPORARY PAVEMENT ON MEDIAN.
 MOVE TRAFFIC SIGNAL POLE.
 MODIFY MANHOLE FRAME AND LID.

STAGE 1:
 MOVE ONE NORTHBOUND LANE AND BIKE/PED PATH TO CENTER PORTION OF THE BRIDGE.
 CONSTRUCT EAST PORTION OF THE BRIDGE AND MODIFICATIONS TO EAST TOWERS AND PED/BIKE PATH.

STAGE 2:
 MAINTAIN TWO NORTHBOUND LANES AND ONE SOUTHBOUND LANE, AND ONE SOUTHBOUND RIGHT TURN LANE.
 SHIFT BIKE/PED TO NEW BIKE/PED LOCATION.
 CONSTRUCT CENTRAL PORTION OF THE BRIDGE.

STAGE 3:
 MAINTAIN TWO NORTHBOUND LANES.
 MOVE SOUTHBOUND LANES TO CENTER PORTION OF THE BRIDGE.
 INSTALL PEDESTRIAN DETOUR AFTER CLOSING SW BRIDGE HOUSE. (SEE PEDESTRIAN DETOUR DETAIL IN THIS SHEET.)
 CONSTRUCT WEST PORTION OF THE BRIDGE.

POST-CONSTRUCTION:
 REMOVE TEMPORARY PAVEMENT AND INSTALL MEDIAN AT SOUTH END.
 REINSTALL TRAFFIC SIGNAL POLE AT ORIGINAL LOCATION.
 INSTALL SIGNING AND PAVEMENT MARKING.
 COMPLETE PUNCH LIST ITEMS.

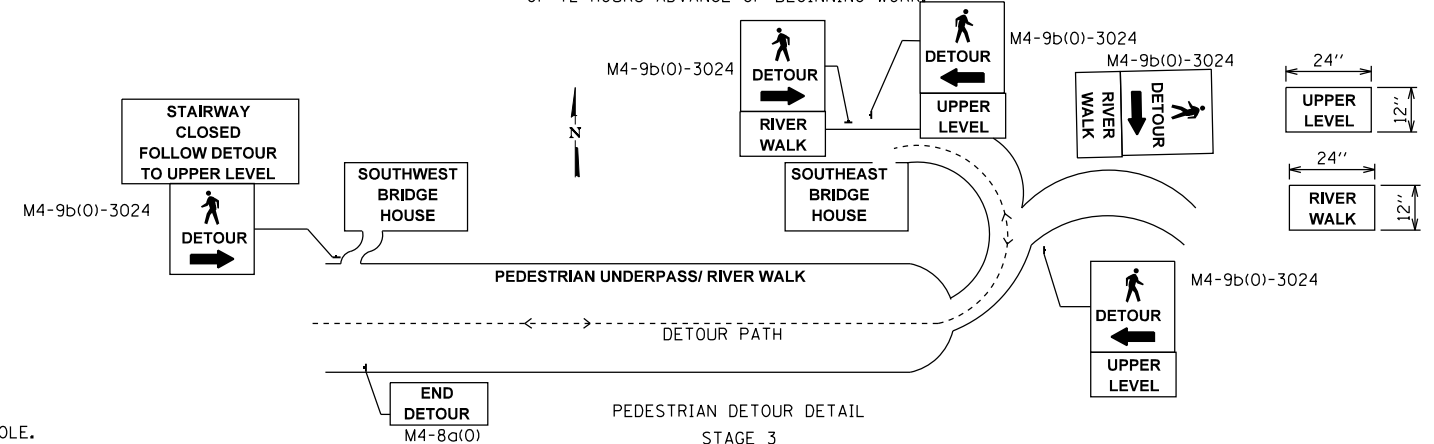
UPPER LEVEL TRAFFIC
 CLOSE OUTSIDE LANE OFF PEAK HOUR TO REMOVE AND INSTALL LIGHT POLE.

LEGEND

- TRAFFIC DIRECTION
- TEMPORARY RAILING
- GUARDRAIL (SPECIAL)
- WORK ZONE
- SOLID WHITE LINE, 4" 2' SKIP 6" DASH
- SOLID WHITE LINE, 4" 6' SKIP 12' DASH
- PAVEMENT MARKING FROM PREVIOUS STAGE

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT, WHEN WORK COMMENCES, THE CONTRACTOR SHALL ASSUME THE MAINTENANCE OF ANY PAVEMENT, DRAINAGE FACILITIES, TRAFFIC CONTROL SIGNS, TRAFFIC SIGNALS, LIGHTING, PAVEMENT MARKINGS, AND OTHER APPURTENANCES OF ROADWAYS WITHIN THE LIMITS OF THE CONTRACT WHICH ARE USED BY THE PUBLIC DURING CONSTRUCTION. SNOW AND ICE CONTROL DURING THE CONSTRUCTION PERIOD WILL BE MAINTAINED BY THE CITY.
2. THE CONTRACTOR SHALL RETAIN THIS MAINTENANCE RESPONSIBILITY UNTIL THE CITY ASSUMES THE MAINTENANCE.
3. ALL TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE INSTALLED AT THE DIRECTION AND UNDER THE SUPERVISION OF THE ENGINEER. SEVEN (7) DAYS NOTICE SHALL BE GIVEN TO THE ENGINEER BEFORE INSTALLATION OF TEMPORARY SIGNS.
4. THE CONTRACTOR SHALL COORDINATE THE MAINTENANCE OF TRAFFIC WITH LANE CLOSURES OF CONCURRENT PROJECTS.
5. CHANGABLE MESSAGE SIGN, ONE EACH, SHALL BE PLACED AT NORTHBOUND AND SOUTHBOUND LAKESHORE DRIVE, LOWER WACKER DRIVE AS DIRECTED BY THE ENGINEER. ALL CHANGABLE MESSAGE SIGNS SHALL BE INSTALLED TWO WEEKS PRIOR TO ANY CONSTRUCTION ACTIVITY.
6. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE AND MAINTAIN ACCESS TO ALL PRIVATE AND COMMERCIAL PROPERTY WITHIN THE WORK AREAS DURING THE CONSTRUCTION PERIOD.
7. DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ADJACENT TRAFFIC LANES OPEN TO TRAFFIC FROM DEBRIS BEING BLOWN OR OTHERWISE REMOVED FROM THE CONSTRUCTION AREAS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR KEEPING DEBRIS OFF THE ADJACENT TRAVELED LANE SURFACE AND PEDESTRIAN/ BIKE PATH.
8. THE CONTRACTOR'S VEHICLES SHALL ALWAYS MOVE WITH, AND NOT AGAINST OR ACROSS, THE FLOW OF TRAFFIC. THESE VEHICLES SHALL ENTER AND LEAVE WORK AREAS IN A MANNER THAT WILL NOT BE HAZARDOUS TO OR INTERFERE WITH NORMAL TRAFFIC AND SHALL NOT STOP OR PARK EXCEPT WITHIN DESIGNATED WORK AREAS. PERSONAL VEHICLES SHALL NOT BE PERMITTED TO PARK WITHIN THE RIGHT-OF-WAY EXCEPT IN SPECIFIC AREAS DESIGNATED BY THE COMMISSIONER.
9. THE CONTRACTOR SHALL WALK THROUGH THE JOB BEFORE CONSTRUCTION ALONG WITH AUTHORIZED REPRESENTATIVE OF THE CITY OF CHICAGO TO CONFIRM THE COUNT OF STREET SIGNS. CONTRACTOR SHALL NOTIFY THE CITY OF CHICAGO AT LEAST 48 HOURS PRIOR TO SCHEDULE THE WALK THROUGH.
10. ALL CONSTRUCTION SIGNS, BARRICADES, LIGHT AND FLAGGER SHALL BE PROVIDED BY THE CONTRACTOR.
11. ADDITIONAL TRAFFIC CONTROL SIGNS MAY BE REQUIRED AS DIRECTED BY THE COMMISSIONER. THE COST SHALL BE CONSIDERED INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION.
12. ALL SIGNS SHALL MEET MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES STANDARDS AND SHALL MEET WITH APPROVAL OF THE COMMISSIONER, REGARDING LOCATION, TYPE, SIZE, NUMBER, AND DURATION, OR AS DIRECTED BY THE ENGINEER.
13. ALL SIDEWALK CLOSURES SHALL FOLLOW CDOT STANDARD CROSSWALK AND SIDEWALK CLOSURE SHEET A-6-11. THE CONTRACTOR SHALL INSTALL TEMPORARY ADA RAMP WHEN EXISTING RAMP CANNOT BE USED. THIS SHALL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION.
14. AT LEAST ONE SIDEWALK SHALL BE OPEN AT ALL TIMES. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE EXISTING BIKE PATH UNTIL CROSSOVER BRIDGE IS CONSTRUCTED.
15. PEDESTRIAN TRAFFIC WILL BE DETOURED THROUGH SOUTHWEST BRIDGE HOUSE DURING STAGE 3 CONSTRUCTION. CONTRACTOR SHALL PLACE SIGNS AS DIRECTED BY COMMISSIONER FOR THE PEDESTRIAN DETOUR. SEE PEDESTRIAN DETOUR DETAIL.
16. ALL DETOUR SIGNS SHALL BE COVERED OR REMOVED AT THE END OF STAGE 1
17. THE SUGGESTED TRAFFIC CONTROL MAY BE ALTERED WITH APPROVAL OF ENGINEER.
18. ALL WORK DESCRIBED IN GENERAL NOTES SHALL BE INCIDENTAL TO TRAFFIC CONTROL AND PROTECTION UNLESS STATED OTHERWISE.
19. CONTRACTOR SHALL CONTACT THE IDOT D1 TRAFFIC CONTROL SUPERVISOR AT (847)-705-4470 A MINIMUM OF 72 HOURS ADVANCE OF BEGINNING WORK.



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EJM EJM ENGINEERING, INC.
 41 South Wells Street Suite 1000
 Chicago, Illinois 60607

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USER NAME =	CSloczynski	DESIGNED	CS	REVISED	-
CHECKED	SA	CHECKED	SA	REVISED	-
PLOT SCALE =	N.T.S.	DRAWN	CS	REVISED	-
PLOT DATE =	6/23/2017	CHECKED	RI	REVISED	-

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**MAINTENANCE OF TRAFFIC
 GENERAL NOTES, TYPICAL SECTIONS
 AND STAGING DESCRIPTION**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-1
CDOT PROJECT NO. E-6-650			15 OF 411

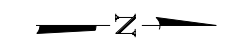
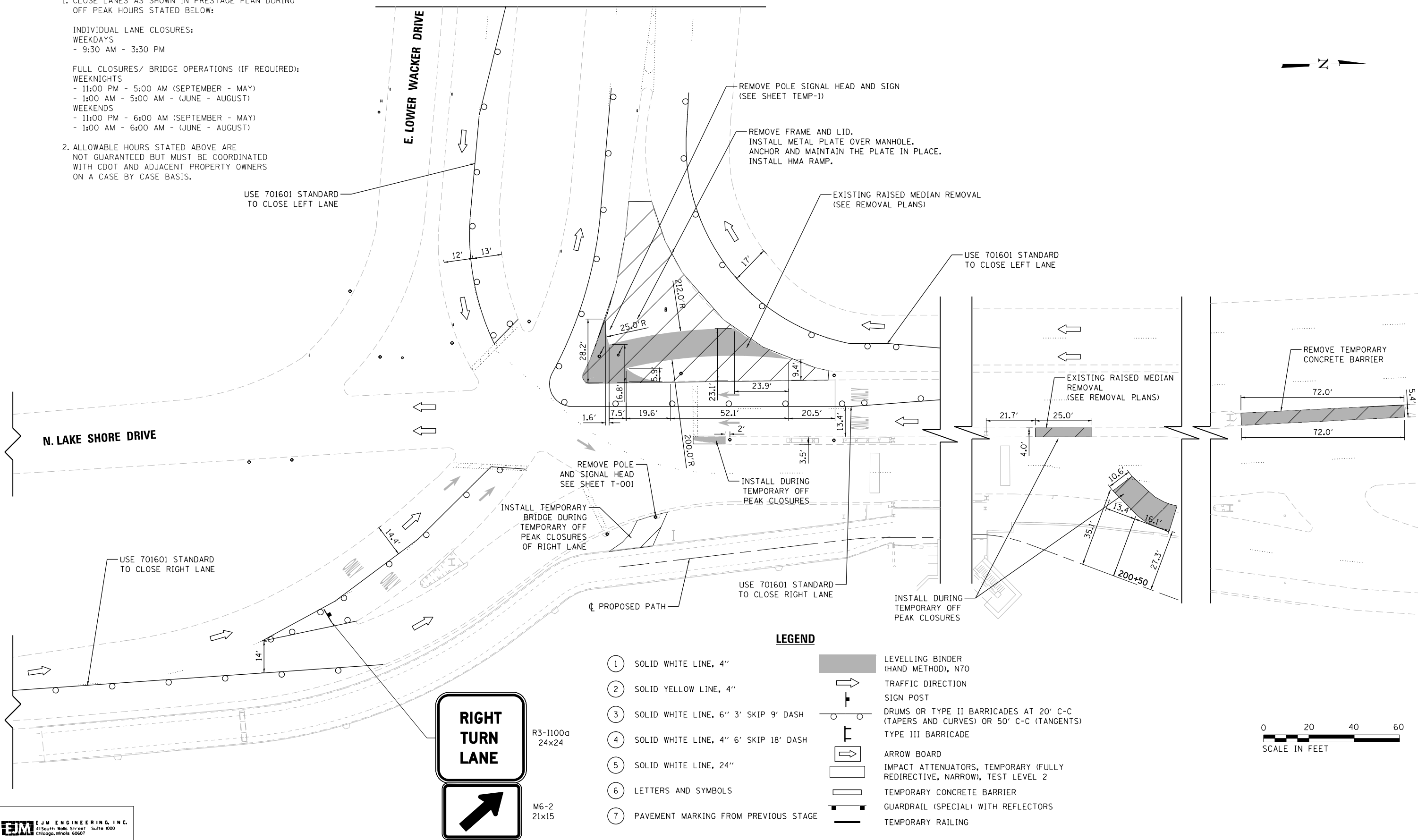
NOTES:

1. CLOSE LANES AS SHOWN IN PRESTAGE PLAN DURING OFF PEAK HOURS STATED BELOW:

INDIVIDUAL LANE CLOSURES:
WEEKDAYS
- 9:30 AM - 3:30 PM

FULL CLOSURES/ BRIDGE OPERATIONS (IF REQUIRED):
WEEKNIGHTS
- 11:00 PM - 5:00 AM (SEPTEMBER - MAY)
- 1:00 AM - 5:00 AM - (JUNE - AUGUST)
WEEKENDS
- 11:00 PM - 6:00 AM (SEPTEMBER - MAY)
- 1:00 AM - 6:00 AM - (JUNE - AUGUST)

2. ALLOWABLE HOURS STATED ABOVE ARE NOT GUARANTEED BUT MUST BE COORDINATED WITH CDOT AND ADJACENT PROPERTY OWNERS ON A CASE BY CASE BASIS.



LEGEND

- ① SOLID WHITE LINE, 4"
 - ② SOLID YELLOW LINE, 4"
 - ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
 - ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
 - ⑤ SOLID WHITE LINE, 24"
 - ⑥ LETTERS AND SYMBOLS
 - ⑦ PAVEMENT MARKING FROM PREVIOUS STAGE
- LEVELLING BINDER (HAND METHOD), N70
 - TRAFFIC DIRECTION
 - SIGN POST
 - DRUMS OR TYPE II BARRICADES AT 20' C-C (TAPERS AND CURVES) OR 50' C-C (TANGENTS)
 - TYPE III BARRICADE
 - ARROW BOARD
 - IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
 - TEMPORARY CONCRETE BARRIER
 - GUARDRAIL (SPECIAL) WITH REFLECTORS
 - TEMPORARY RAILING



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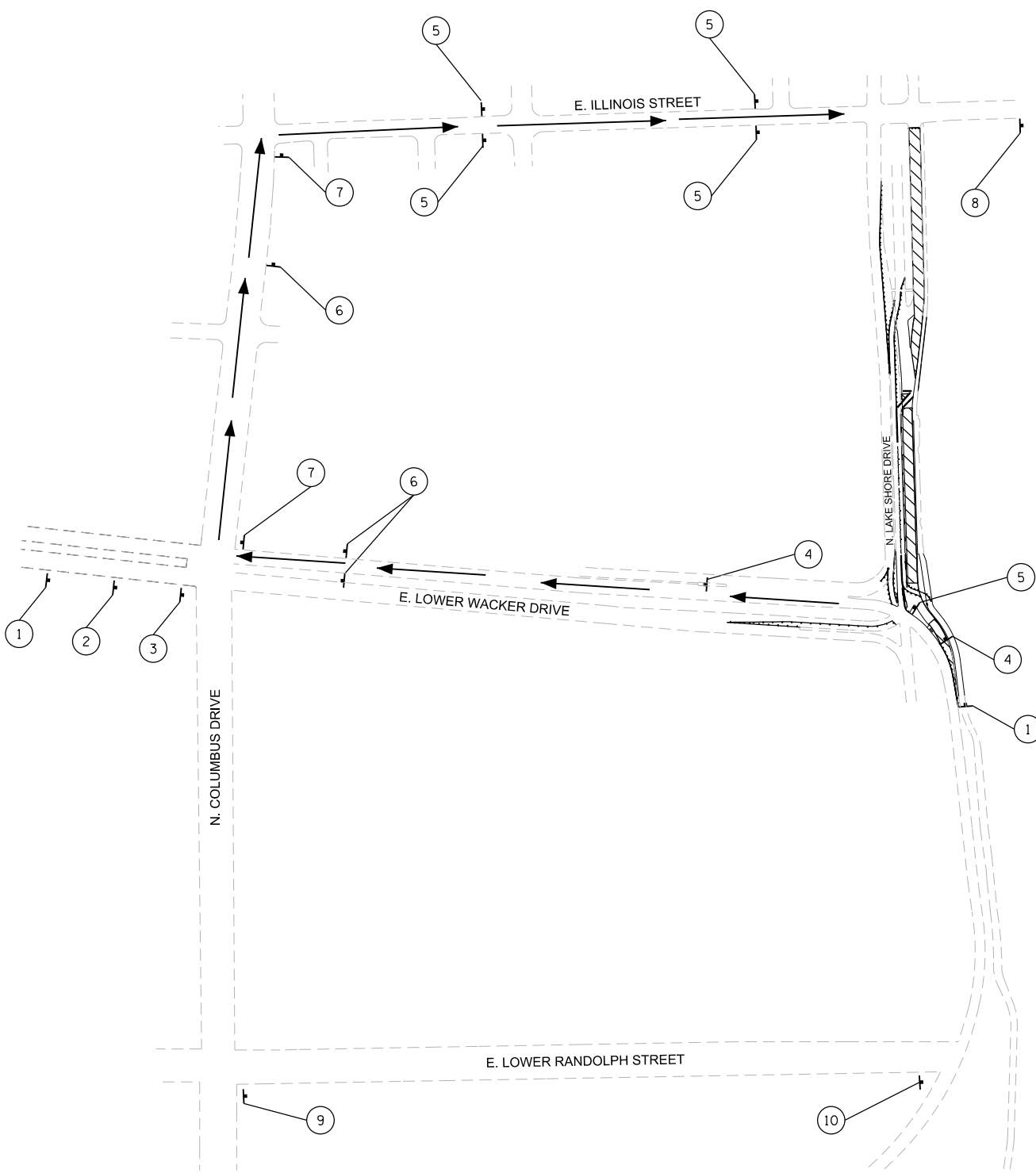
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

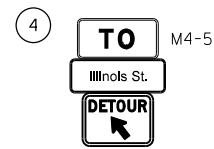
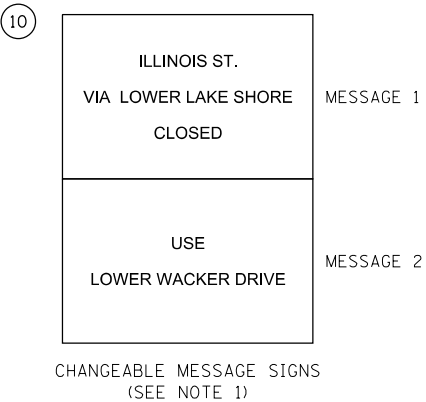
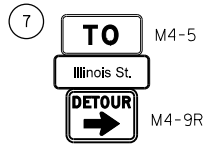
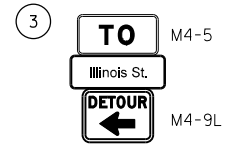
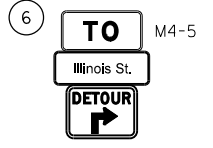
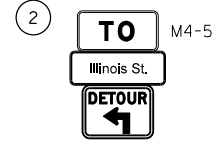
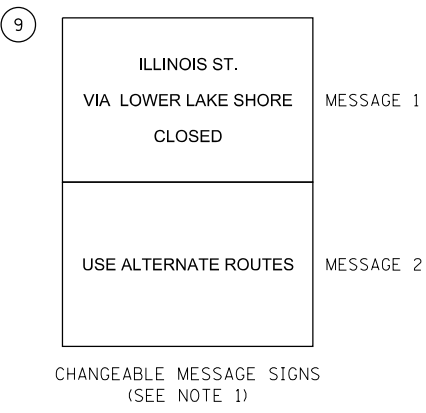
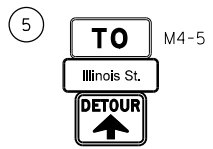
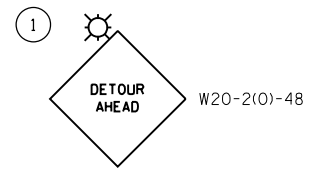
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**PRESTAGE MAINTENANCE OF TRAFFIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-2
CDOT PROJECT NO. E-6-650			16 OF 411



DETOUR SIGNS LEGEND



NOTE:
1. THE CONTRACTOR SHALL CHANGE/ABBREVIATE THE MESSAGE AND/OR LOCATION OF THE CHANGEABLE MESSAGE SIGN AS DIRECTED BY THE ENGINEER.

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EJM EJM ENGINEERING, INC.
41 South Wells Street Suite 1000
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TEL: (312) 782-8150
FAX: (312) 782-1684

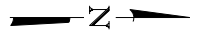
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PLOT DATE =	6/23/2017	CHECKED	RI	REVISIONS	-

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

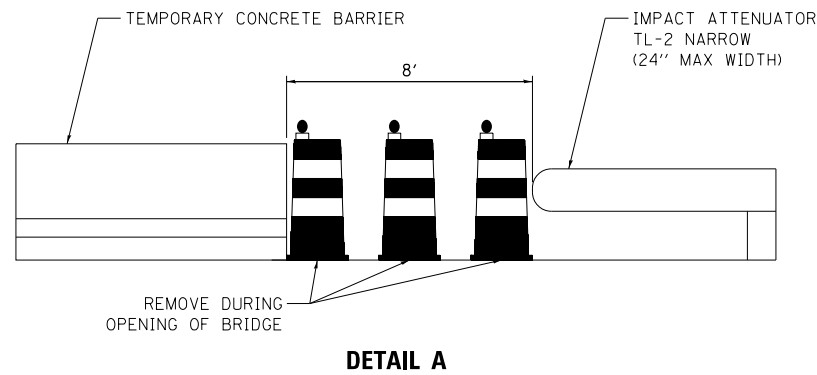
**MAINTENANCE OF TRAFFIC
STAGE 1 DETOUR
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-3
CDOT PROJECT NO. E-6-650			17 OF 411



NOTES:

1. THE PEDESTRIAN RAILING SHALL NOT BE INSTALLED WITHIN 5' FROM THE JOINT. THE GAP SHALL BE COVERED BY TEMPORARY PLYWOOD BOARD THAT CAN BE REMOVED DURING BRIDGE OPENING.
2. TEXT ON VARIABLE MESSAGE SIGN FOR STAGE 1 DETOUR SHALL BE AS DIRECTED BY ENGINEER.
3. THIS SIGN SHALL BE TAKEN DOWN WHEN WORKERS ARE NOT PRESENT.

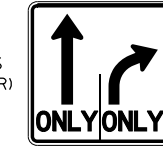


MATCHLINE
SEE MOT-5

E. LOWER WACKER DRIVE

END CONSTRUCTION
G20-1105 (0)
36x18

(MOUNT ON TRUSS AS DIRECTED BY ENGINEER)



MOUNT ON COLUMN

MOUNT ON SIGNAL POST

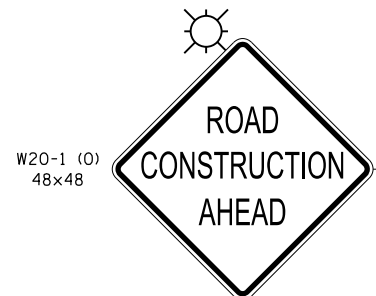
TEMPORARY TRAFFIC SIGNAL POST INSTALLED IN PRESTAGE

TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE II

SEE DETAIL A FOR GAP IN GUARDRAIL

TEMP. BIKE/PED PATH

SEE NOTE 1 BEGIN FRP/PLATE 195+98



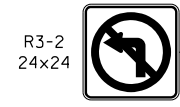
N. LAKE SHORE DRIVE

W20-1 (0)
48x48

CHANGEABLE MESSAGE SIGN

AT NORTHBOUND LAKE SHORE DRIVE AND EXIT RAMP TO RANDOLPH ST (SEE NOTE 2)

W21-1 (0)
48x48
(SEE NOTE 3)



PROPOSED CL PATH

MATCHLINE
SEE MOT-6

LEGEND

- ① SOLID WHITE LINE, 4"
- ② SOLID YELLOW LINE, 4"
- ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
- ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
- ⑤ SOLID WHITE LINE, 24"
- ⑥ LETTERS AND SYMBOLS
- ⑦ PAVEMENT MARKING FROM PREVIOUS STAGE
- LEVELLING BINDER (HAND METHOD), N70
- TRAFFIC DIRECTION SIGN POST
- DRUMS OR TYPE II BARRICADES AT 20' C-C (TAPERS AND CURVES) OR 50' C-C (TANGENTS) TYPE III BARRICADE
- ARROW BOARD
- IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
- TEMPORARY CONCRETE BARRIER
- GUARDRAIL (SPECIAL) WITH REFLECTORS
- TEMPORARY RAILING



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EJM EJM ENGINEERING, INC.
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CHICAGO, IL 60602
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FAX: (312) 782-1884

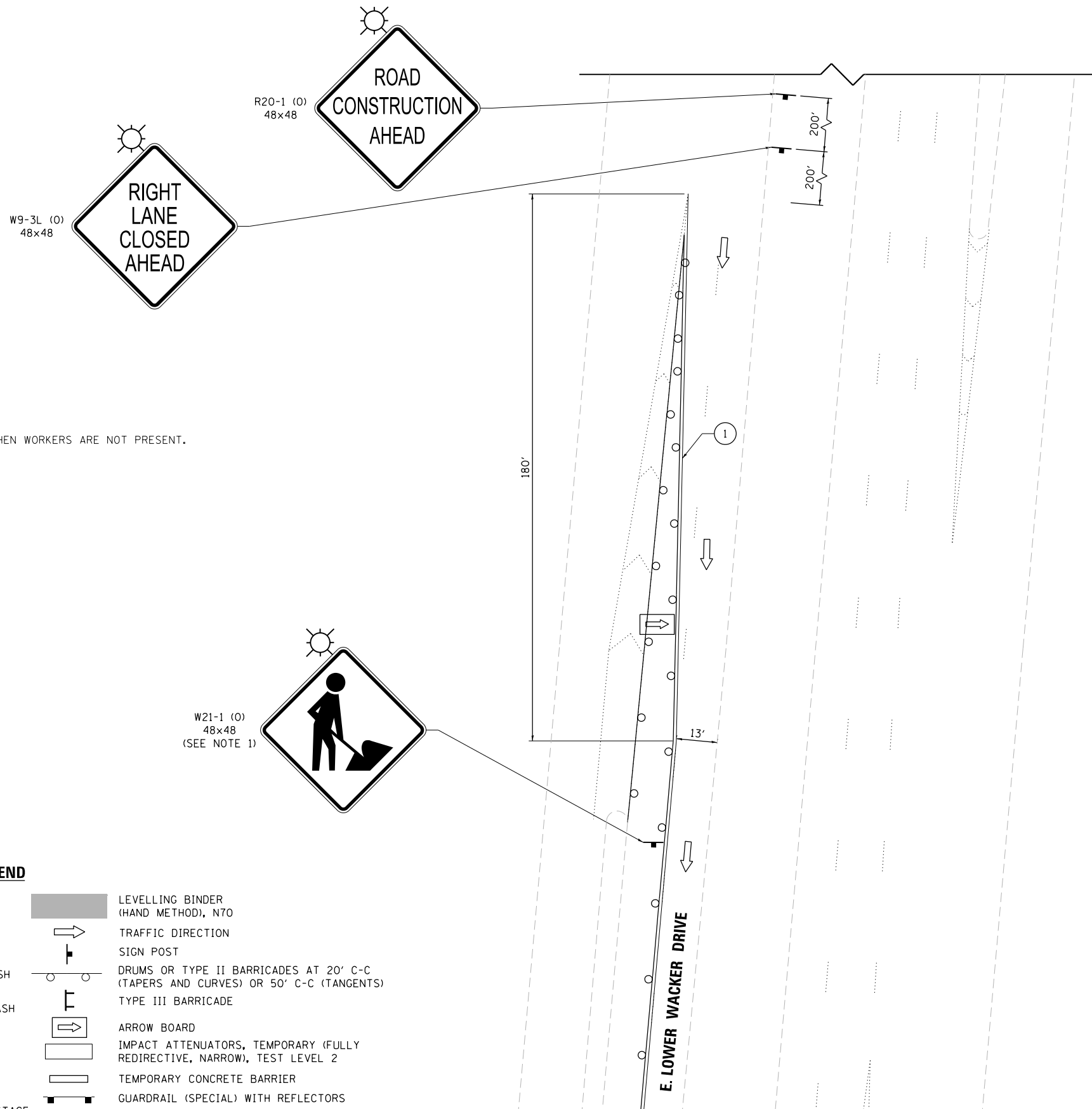
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PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/7/2017	CHECKED RI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

STAGE I MAINTENANCE OF TRAFFIC

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-4
CDOT PROJECT NO. E-6-650			18 OF 411



NOTES:
 1. THIS SIGN SHALL BE TAKEN DOWN WHEN WORKERS ARE NOT PRESENT.

LEGEND

- ① SOLID WHITE LINE, 4"
 - ② SOLID YELLOW LINE, 4"
 - ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
 - ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
 - ⑤ SOLID WHITE LINE, 24"
 - ⑥ LETTERS AND SYMBOLS
 - ⑦ PAVEMENT MARKING FROM PREVIOUS STAGE
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 - TRAFFIC DIRECTION
 - SIGN POST
 - DRUMS OR TYPE II BARRICADES AT 20' C-C (TAPERS AND CURVES) OR 50' C-C (TANGENTS)
 - TYPE III BARRICADE
 - ARROW BOARD
 - IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
 - TEMPORARY CONCRETE BARRIER
 - GUARDRAIL (SPECIAL) WITH REFLECTORS
 - TEMPORARY RAILING

MATCHLINE
SEE MOT-4

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 41 South Wells Street Suite 1000
 Chicago, Illinois 60607

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USER NAME = sadhikar1	DESIGNED CS	REVISED -
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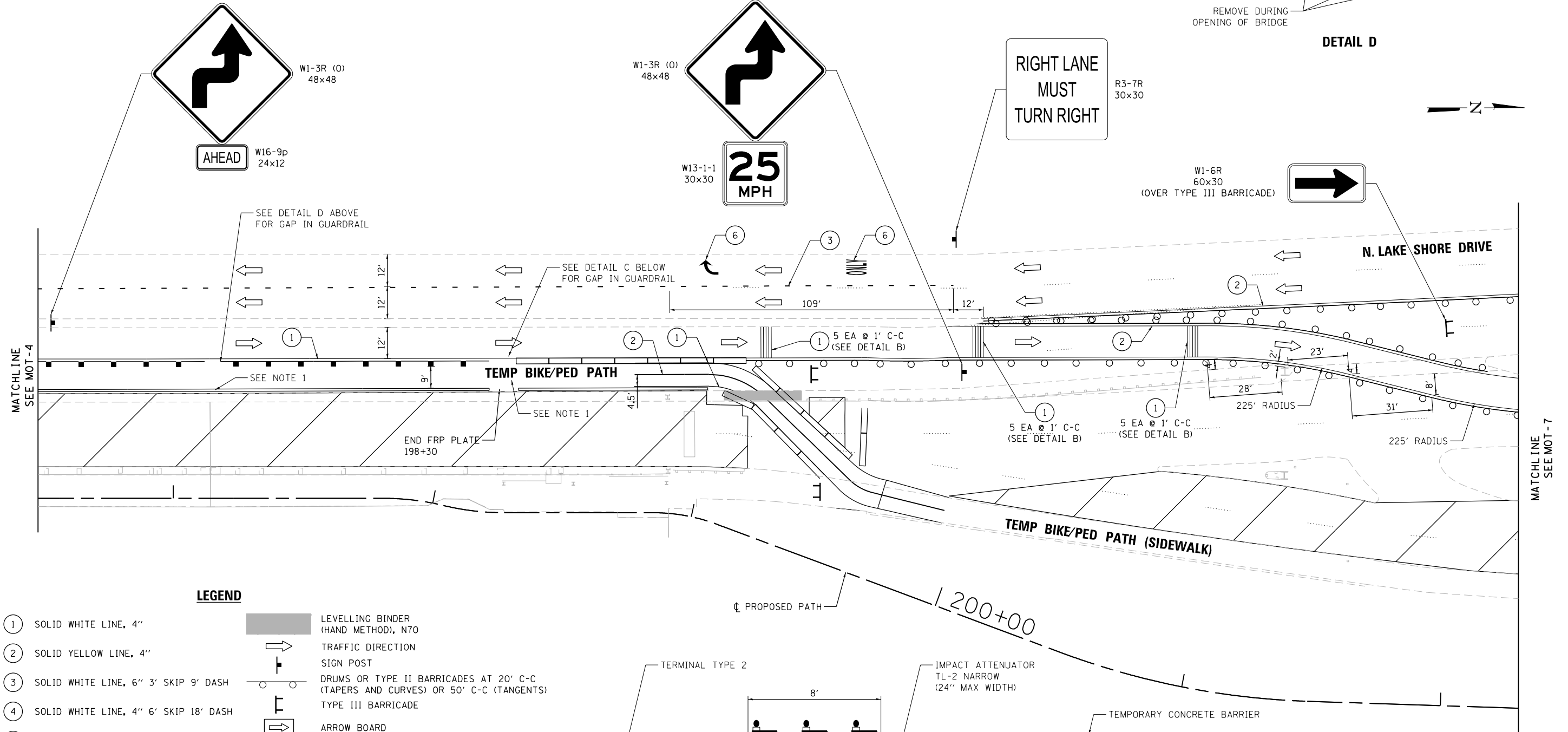
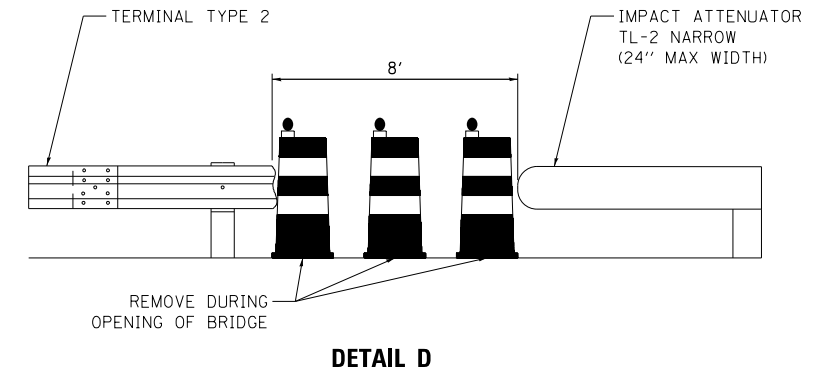
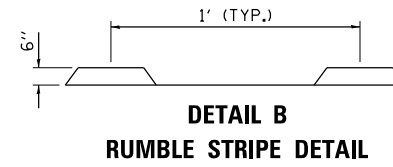
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

STAGE I MAINTENANCE OF TRAFFIC

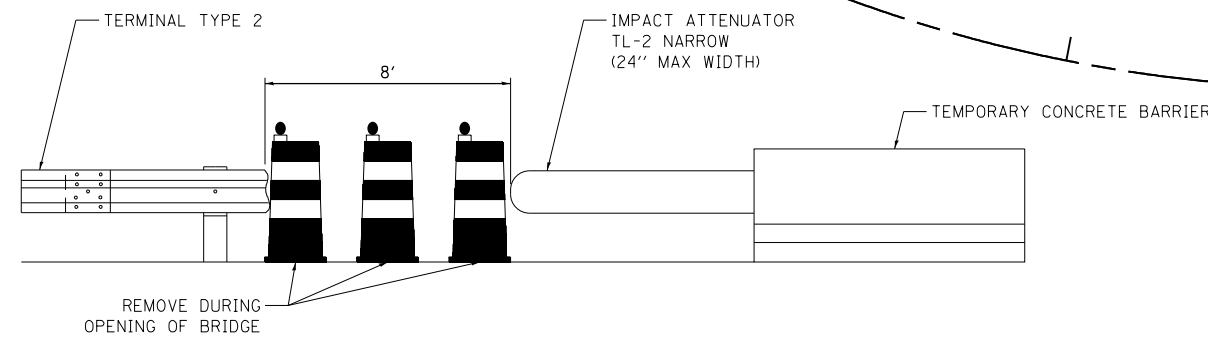
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-5
CDOT PROJECT NO. E-6-650			19 OF 411

NOTES:
 1. THE PEDESTRIAN RAILING SHALL NOT BE INSTALLED WITHIN 5' FROM THE JOINT. THE GAP SHALL BE COVERED BY TEMPORARY PLYWOOD BOARD THAT MUST BE REMOVED DURING BRIDGE OPENINGS.

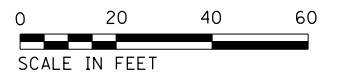


LEGEND

- ① SOLID WHITE LINE, 4"
 - ② SOLID YELLOW LINE, 4"
 - ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
 - ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
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 - ⑥ LETTERS AND SYMBOLS
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- LEVELLING BINDER (HAND METHOD), N70
 - TRAFFIC DIRECTION
 - SIGN POST
 - DRUMS OR TYPE II BARRICADES AT 20' C-C (TAPERS AND CURVES) OR 50' C-C (TANGENTS)
 - TYPE III BARRICADE
 - ARROW BOARD
 - IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
 - TEMPORARY CONCRETE BARRIER
 - GUARDRAIL (SPECIAL) WITH REFLECTORS
 - TEMPORARY RAILING



DETAIL C



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USER NAME = sadhikar1	DESIGNED CS	REVISED -
CHECKED SA	REVISIONS -	
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/7/2017	CHECKED RI	REVISED -

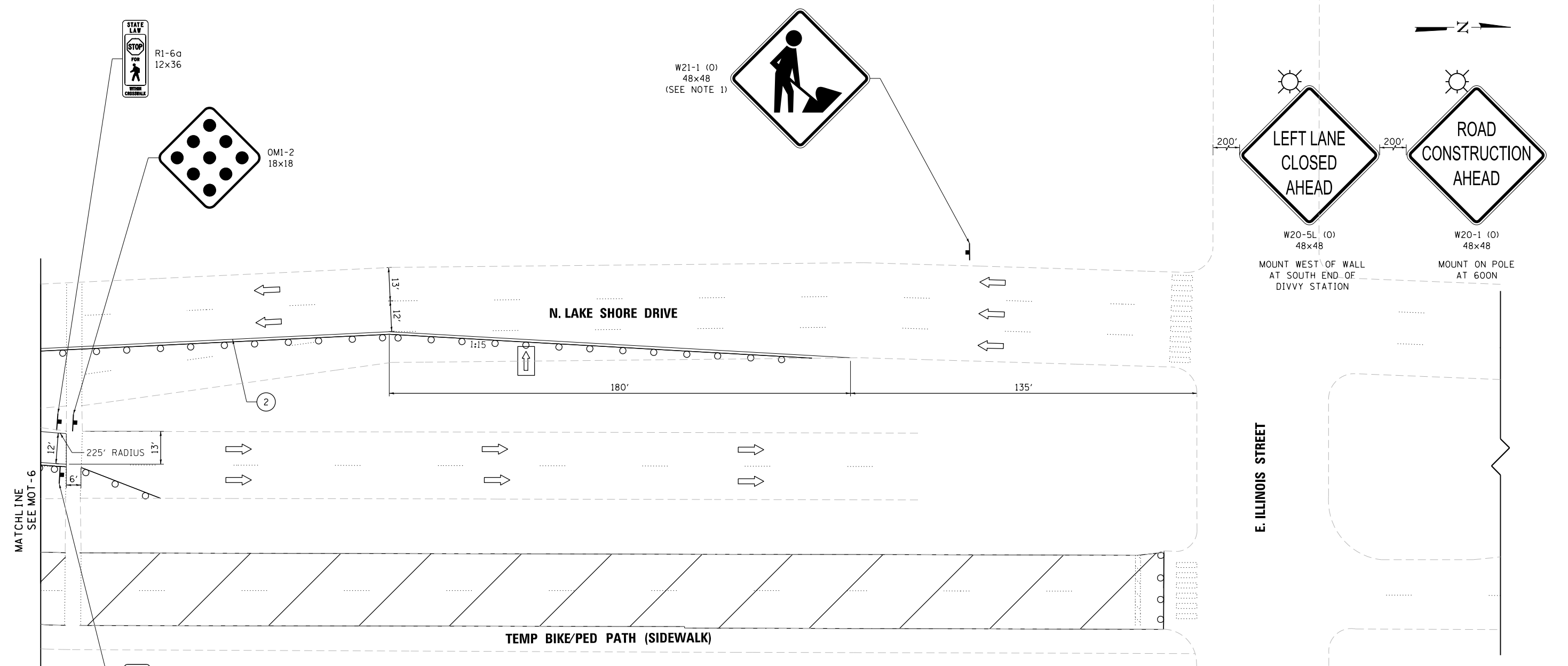
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

STAGE I MAINTENANCE OF TRAFFIC

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-6
CDOT PROJECT NO. E-6-650			20 OF 411

NOTES:
 1. THIS SIGN SHALL BE TAKEN DOWN WHEN WORKERS ARE NOT PRESENT.



- LEGEND**
- ① SOLID WHITE LINE, 4"
 - ② SOLID YELLOW LINE, 4"
 - ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
 - ④ SOLID WHITE LINE, 4" 6' SKIP 18" DASH
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 - TYPE III BARRICADE
 - ARROW BOARD
 - IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
 - TEMPORARY CONCRETE BARRIER
 - GUARDRAIL (SPECIAL) WITH REFLECTORS
 - TEMPORARY RAILING

EJM ENGINEERING, INC.
 41 South Wells Street Suite 1000
 Chicago, Illinois 60607

wsp
 WSP USA Inc.
 30 N. LA SALLE STREET
 SUITE 4200
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1684

USER NAME = sadhikar1	DESIGNED CS	REVISED -
CHECKED SA	REVISOR SA	REVISED -
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/7/2017	CHECKED RI	REVISED -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

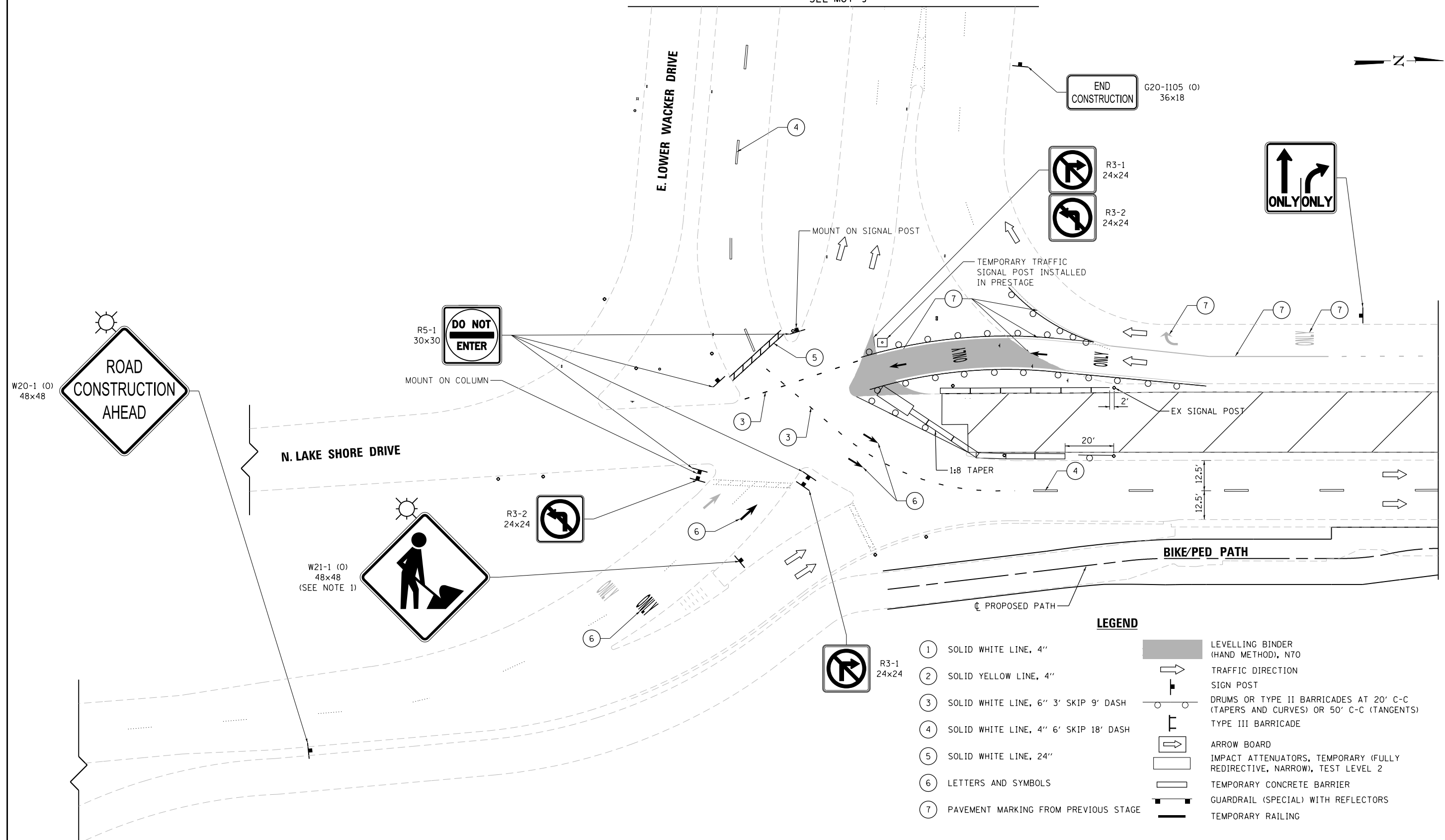
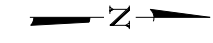
STAGE I MAINTENANCE OF TRAFFIC

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-7
CDOT PROJECT NO. E-6-650			21 OF 411

...0166030-E0534-M006-MOT1.dgn
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NOTES:
 1. THIS SIGN SHALL BE TAKEN DOWN WHEN WORKERS ARE NOT PRESENT.

MATCHLINE
 SEE MOT-9



MATCHLINE
 SEE MOT-10

LEGEND

- ① SOLID WHITE LINE, 4"
- ② SOLID YELLOW LINE, 4"
- ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
- ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
- ⑤ SOLID WHITE LINE, 24"
- ⑥ LETTERS AND SYMBOLS
- ⑦ PAVEMENT MARKING FROM PREVIOUS STAGE
- LEVELLING BINDER (HAND METHOD), N70
- TRAFFIC DIRECTION
- ⊥ SIGN POST
- DRUMS OR TYPE II BARRICADES AT 20' C-C (TAPERS AND CURVES) OR 50' C-C (TANGENTS)
- ⊥ TYPE III BARRICADE
- ARROW BOARD
- ▭ IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
- ▭ TEMPORARY CONCRETE BARRIER
- ▬ GUARDRAIL (SPECIAL) WITH REFLECTORS
- ▬ TEMPORARY RAILING



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USER NAME = sadhikar1	DESIGNED CS	REVISED -
CHECKED SA	REVISIED -	
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/7/2017	CHECKED RI	REVISED -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

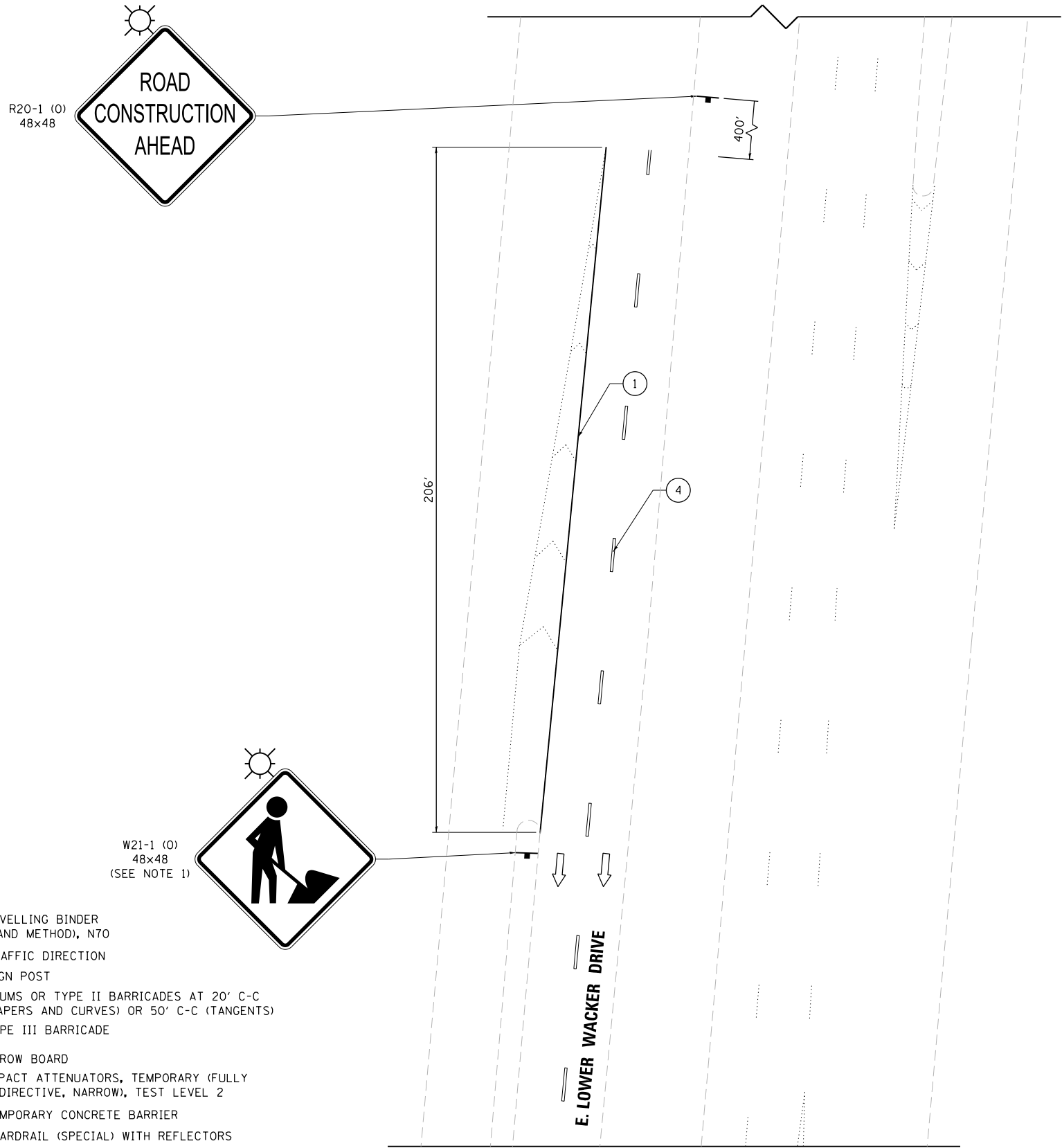
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

STAGE II MAINTENANCE OF TRAFFIC

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-8
CDOT PROJECT NO. E-6-650			22 OF 411

...0166030-E0534-M007-MOT2.dgn
 3:01:06 PM

NOTES:
 1. THIS SIGN SHALL BE TAKEN DOWN WHEN WORKERS ARE NOT PRESENT.



LEGEND

- ① SOLID WHITE LINE, 4"
 - ② SOLID YELLOW LINE, 4"
 - ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
 - ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
 - ⑤ SOLID WHITE LINE, 24"
 - ⑥ LETTERS AND SYMBOLS
 - ⑦ PAVEMENT MARKING FROM PREVIOUS STAGE
- LEVELLING BINDER (HAND METHOD), N70
 - ➔ TRAFFIC DIRECTION
 - ⊥ SIGN POST
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 - ⊥ TYPE III BARRICADE
 - ➔ ARROW BOARD
 - ▭ IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
 - ▭ TEMPORARY CONCRETE BARRIER
 - ⊥ GUARDRAIL (SPECIAL) WITH REFLECTORS
 - TEMPORARY RAILING

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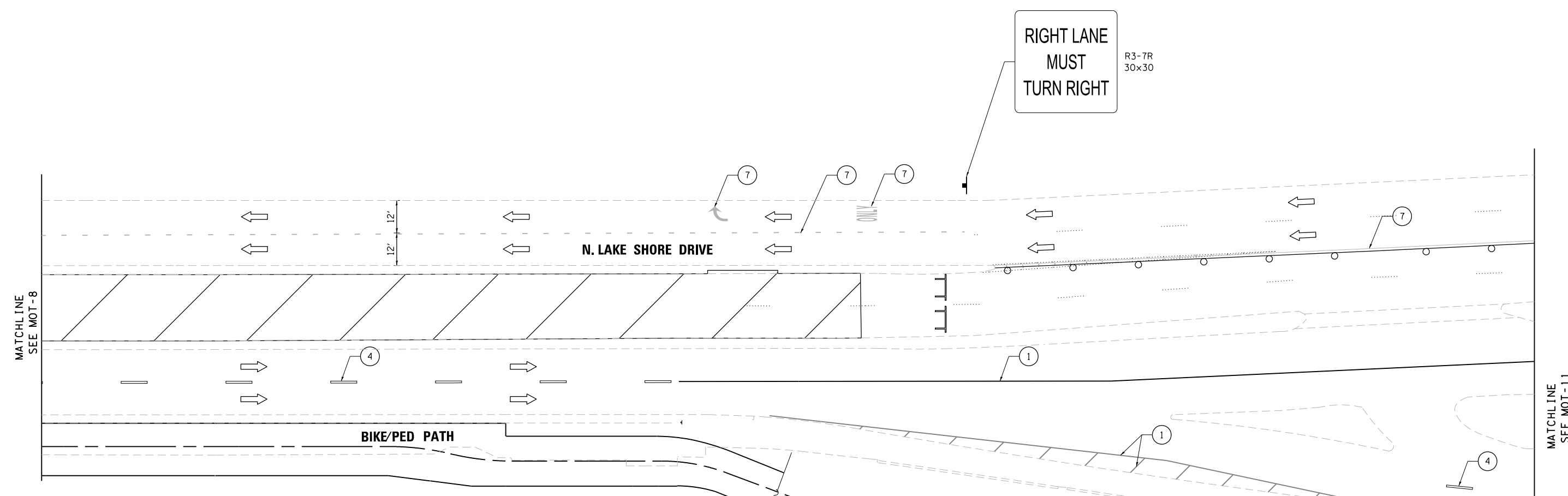
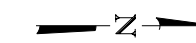
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	CHECKED SA	REVISED -
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/7/2017	CHECKED RI	REVISED -

CITY OF CHICAGO
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 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

STAGE II MAINTENANCE OF TRAFFIC

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-9
CDOT PROJECT NO. E-6-650			23 OF 411



LEGEND

- ① SOLID WHITE LINE, 4"
 - ② SOLID YELLOW LINE, 4"
 - ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
 - ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
 - ⑤ SOLID WHITE LINE, 24"
 - ⑥ LETTERS AND SYMBOLS
 - ⑦ PAVEMENT MARKING FROM PREVIOUS STAGE
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 - TRAFFIC DIRECTION
 - SIGN POST
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 - TYPE III BARRICADE
 - ARROW BOARD
 - IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
 - TEMPORARY CONCRETE BARRIER
 - GUARDRAIL (SPECIAL) WITH REFLECTORS
 - TEMPORARY RAILING



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USER NAME = sadhikar1	DESIGNED CS	REVISED -
CHECKED SA	REVISIED -	
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/7/2017	CHECKED RI	REVISED -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

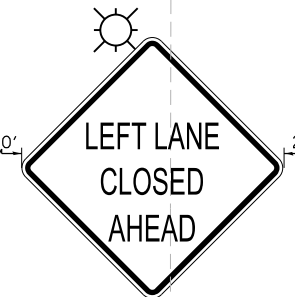
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STAGE II MAINTENANCE OF TRAFFIC

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-10
CDOT PROJECT NO. E-6-650			24 OF 411

NOTES:
 1. THIS SIGN SHALL BE TAKEN DOWN WHEN WORKERS ARE NOT PRESENT.

W21-1 (0)
 48x48
 (SEE NOTE 1)



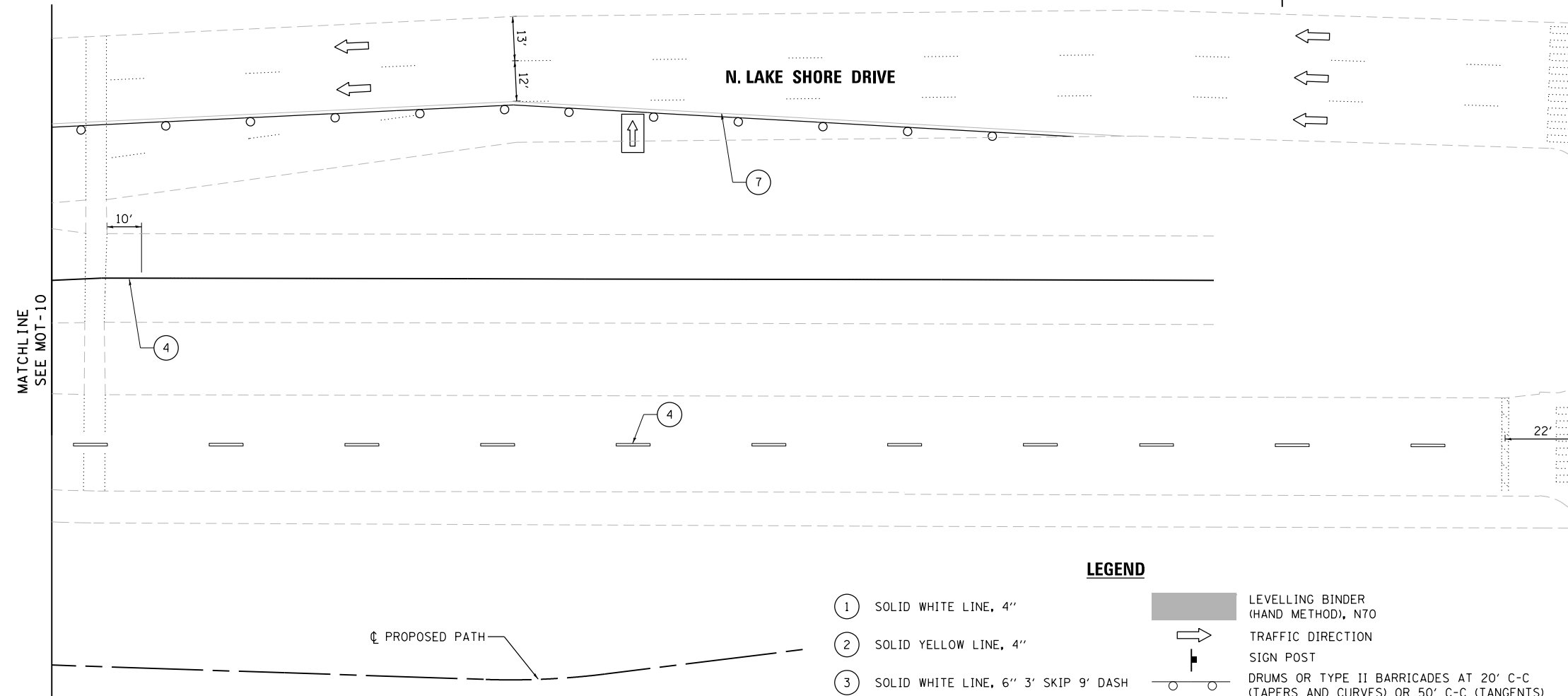
W20-5L (0)
 48x48

MOUNT WEST OF WALL
 AT SOUTH END OF
 DIVVY STATION



W20-1 (0)
 48x48

MOUNT ON POLE
 AT 600'



E. ILLINOIS STREET



LEGEND

- ① SOLID WHITE LINE, 4"
 - ② SOLID YELLOW LINE, 4"
 - ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
 - ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
 - ⑤ SOLID WHITE LINE, 24"
 - ⑥ LETTERS AND SYMBOLS
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 - TYPE III BARRICADE
 - ARROW BOARD
 - IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
 - TEMPORARY CONCRETE BARRIER
 - GUARDRAIL (SPECIAL) WITH REFLECTORS
 - TEMPORARY RAILING

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USER NAME = sadhikar1	DESIGNED CS	REVISED -
CHECKED SA	REVISIED -	
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/7/2017	CHECKED RI	REVISED -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

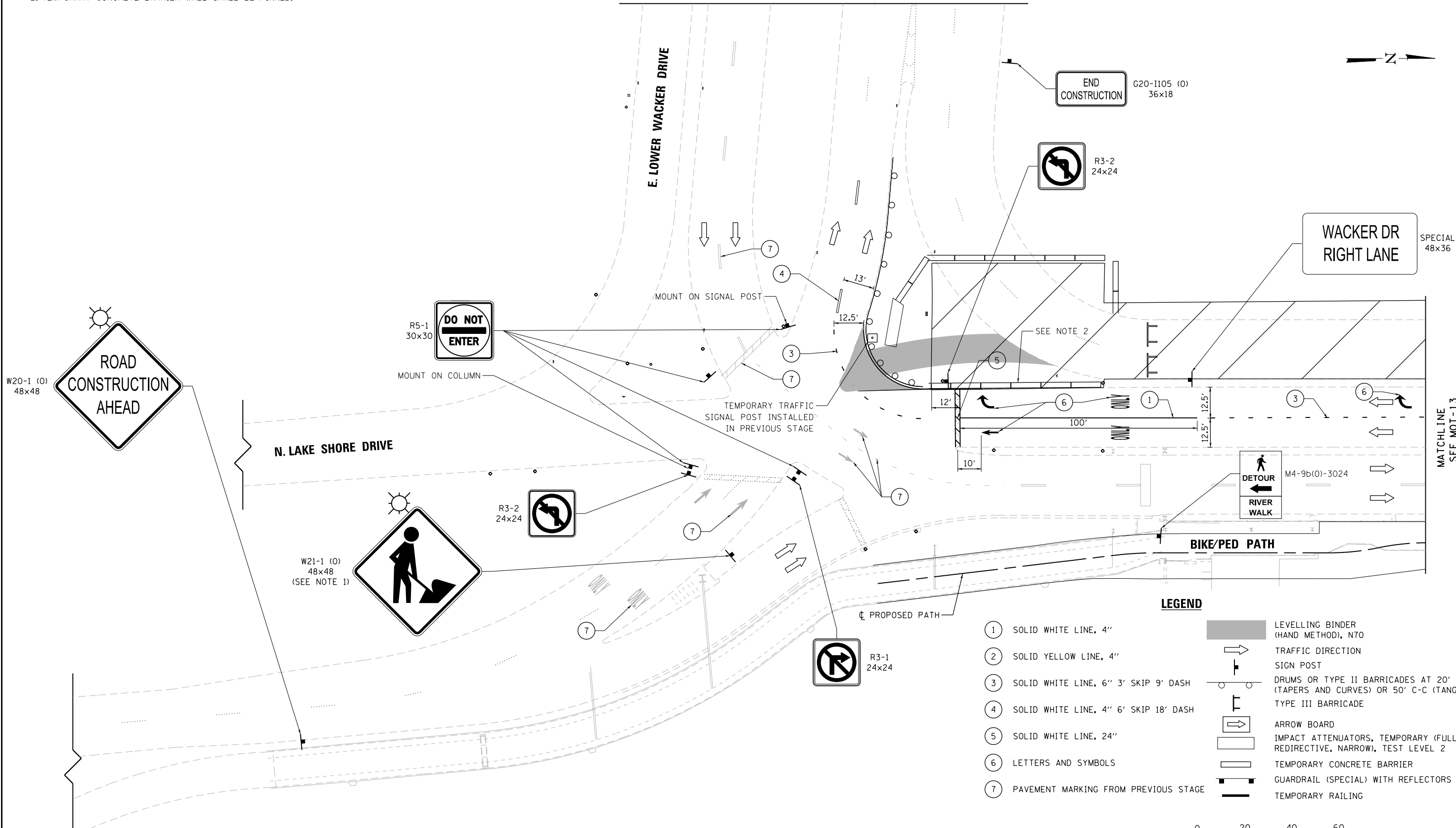
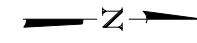
STAGE II MAINTENANCE OF TRAFFIC

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-11
CDOT PROJECT NO. E-6-650			25 OF 411

NOTES:

1. THIS SIGN SHALL BE TAKEN DOWN WHEN WORKERS ARE NOT PRESENT.
2. TEMPORARY CONCRETE BARRIER WALL SHALL BE PINNED.

MATCHLINE
SEE MOT-9
STAGE 2



LEGEND

- ① SOLID WHITE LINE, 4"
 - ② SOLID YELLOW LINE, 4"
 - ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
 - ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
 - ⑤ SOLID WHITE LINE, 24"
 - ⑥ LETTERS AND SYMBOLS
 - ⑦ PAVEMENT MARKING FROM PREVIOUS STAGE
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 - ARROW BOARD
 - IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
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 - GUARDRAIL (SPECIAL) WITH REFLECTORS
 - TEMPORARY RAILING



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USER NAME = sadhikar1	DESIGNED CS	REVISED -
CHECKED SA	REVISIED -	
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/7/2017	CHECKED RI	REVISED -

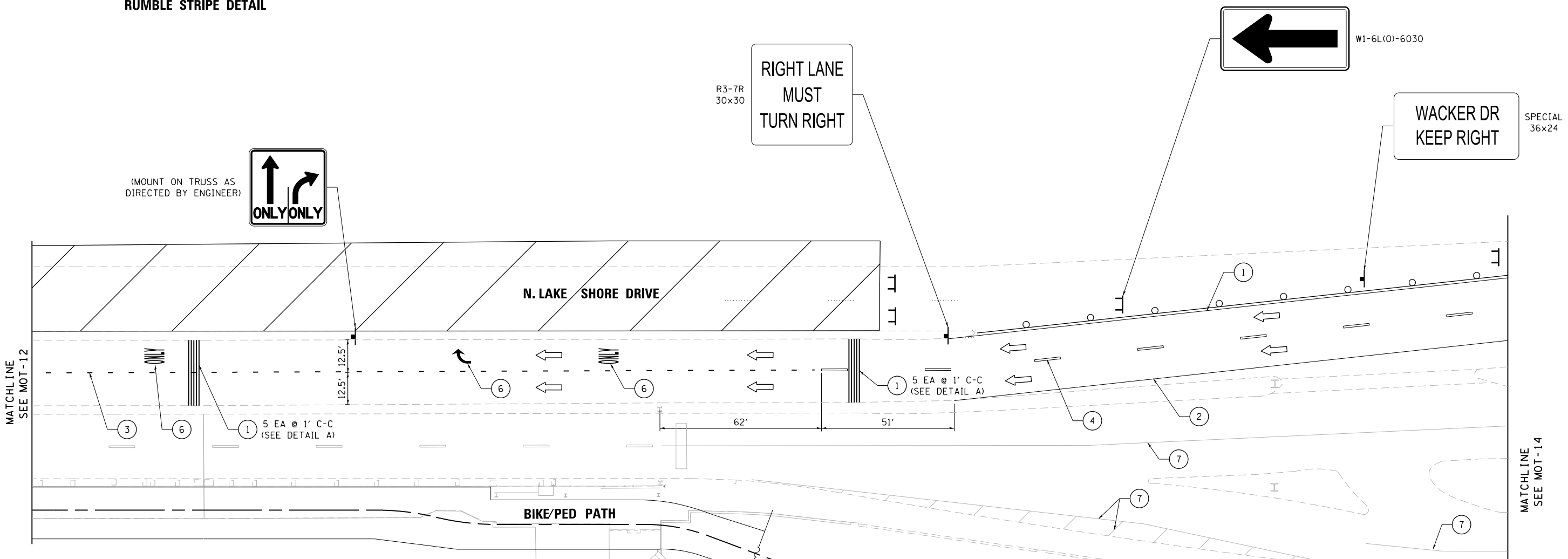
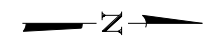
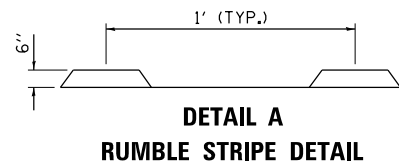
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

STAGE III MAINTENANCE OF TRAFFIC

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-12
CDOT PROJECT NO. E-6-650			26 OF 411

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LEGEND

- ① SOLID WHITE LINE, 4"
 - ② SOLID YELLOW LINE, 4"
 - ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
 - ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
 - ⑤ SOLID WHITE LINE, 24"
 - ⑥ LETTERS AND SYMBOLS
 - ⑦ PAVEMENT MARKING FROM PREVIOUS STAGE
- LEVELLING BINDER (HAND METHOD), N70
 - TRAFFIC DIRECTION
 - SIGN POST
 - DRUMS OR TYPE II BARRICADES AT 20' C-C (TAPERS AND CURVES) OR 50' C-C (TANGENTS)
 - TYPE III BARRICADE
 - ARROW BOARD
 - IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
 - TEMPORARY CONCRETE BARRIER
 - GUARDRAIL (SPECIAL) WITH REFLECTORS
 - TEMPORARY RAILING



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CHICAGO, IL 60602
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USER NAME = sadhikar1	DESIGNED CS	REVISED -
CHECKED SA	REVISOR SA	REVISED -
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/7/2017	CHECKED RI	REVISED -

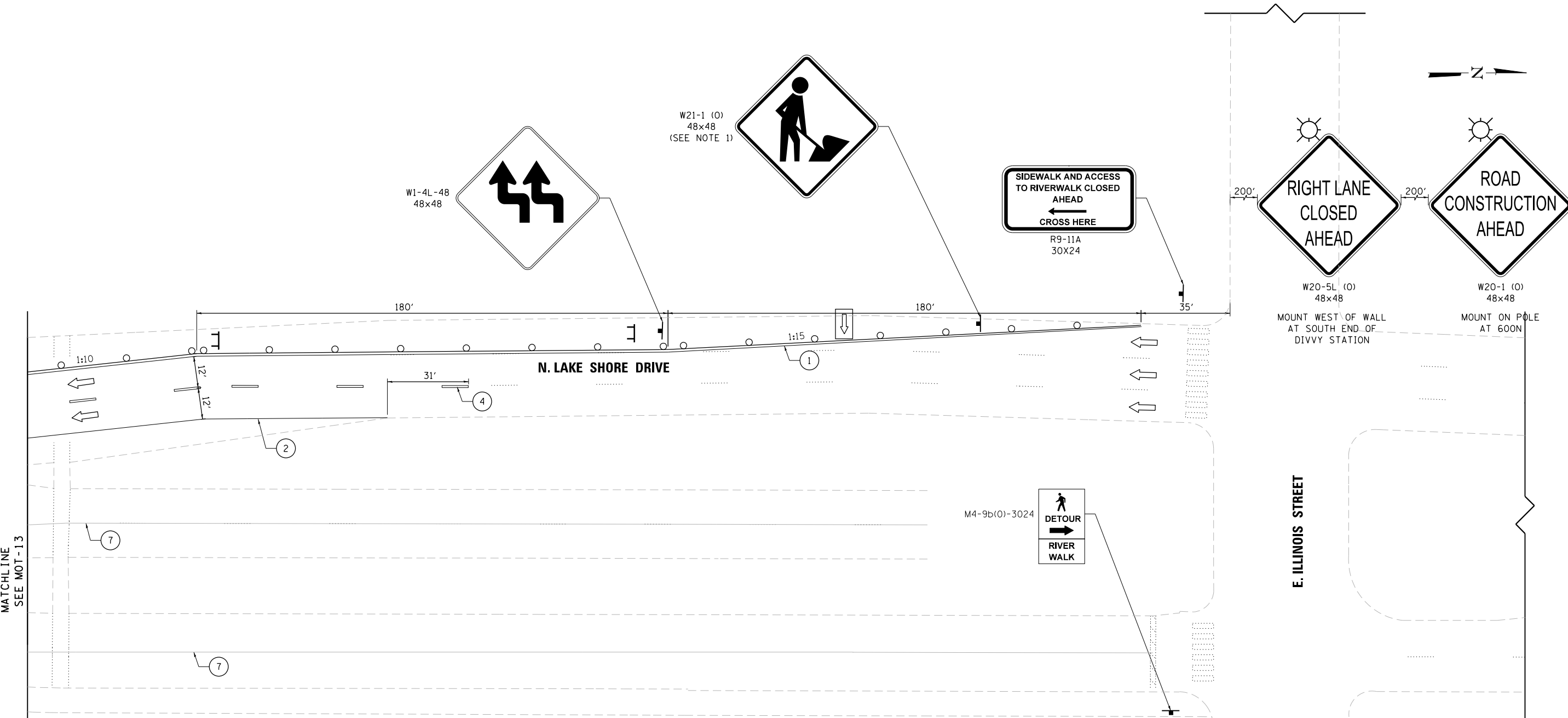
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STAGE III MAINTENANCE OF TRAFFIC

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-13
CDOT PROJECT NO. E-6-650			27 OF 411

NOTES:
 1. THIS SIGN SHALL BE TAKEN DOWN WHEN WORKERS ARE NOT PRESENT.

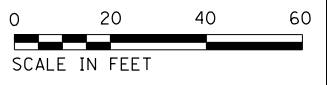


MATCHLINE
SEE MOT-13

☉ PATH

LEGEND

- ① SOLID WHITE LINE, 4"
 - ② SOLID YELLOW LINE, 4"
 - ③ SOLID WHITE LINE, 6" 3' SKIP 9' DASH
 - ④ SOLID WHITE LINE, 4" 6' SKIP 18' DASH
 - ⑤ SOLID WHITE LINE, 24"
 - ⑥ LETTERS AND SYMBOLS
 - ⑦ PAVEMENT MARKING FROM PREVIOUS STAGE
- [Symbol] LEVELLING BINDER (HAND METHOD), N70
 - [Symbol] TRAFFIC DIRECTION
 - [Symbol] SIGN POST
 - [Symbol] DRUMS OR TYPE II BARRICADES AT 20' C-C (TAPERS AND CURVES) OR 50' C-C (TANGENTS)
 - [Symbol] TYPE III BARRICADE
 - [Symbol] ARROW BOARD
 - [Symbol] IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2
 - [Symbol] TEMPORARY CONCRETE BARRIER
 - [Symbol] GUARDRAIL (SPECIAL) WITH REFLECTORS
 - [Symbol] TEMPORARY RAILING



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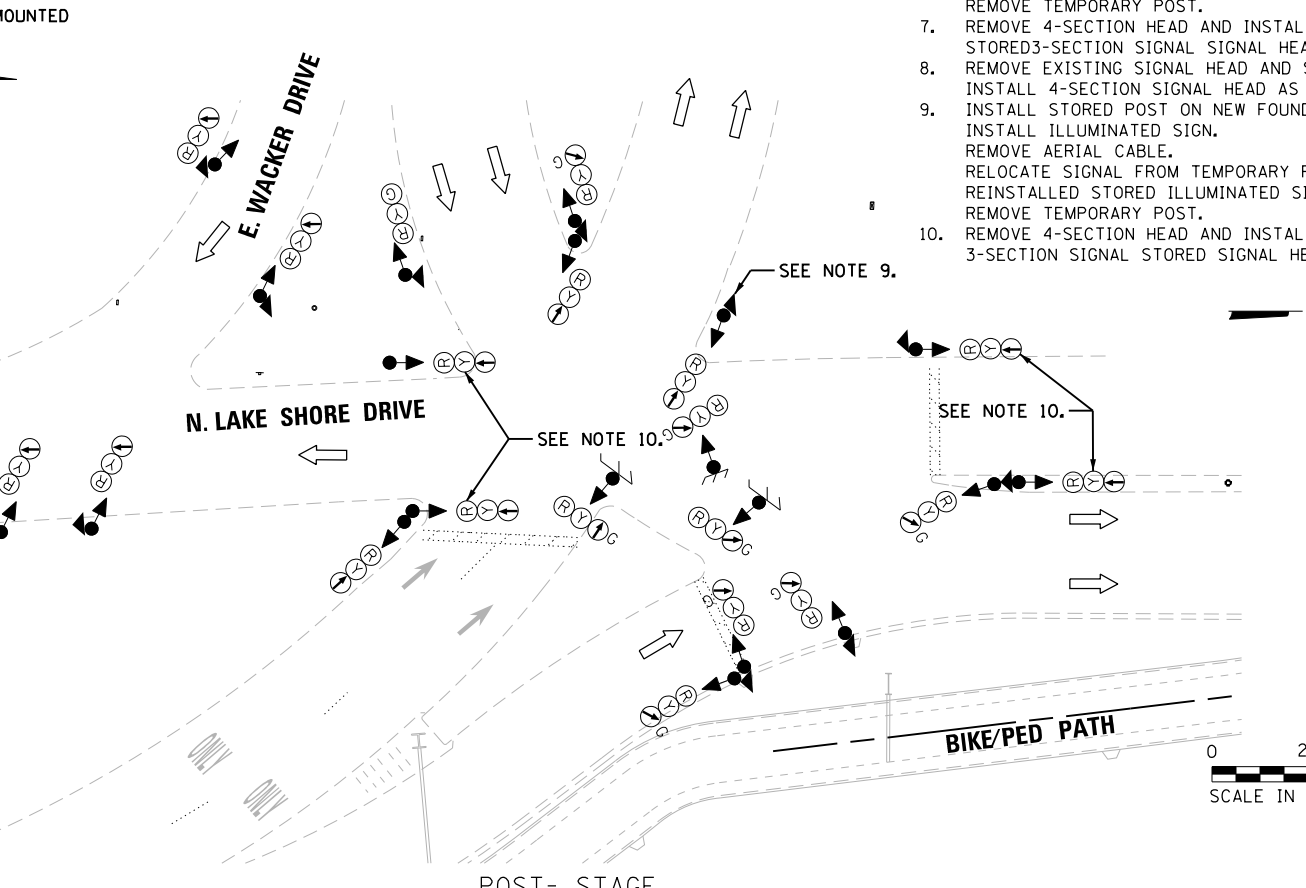
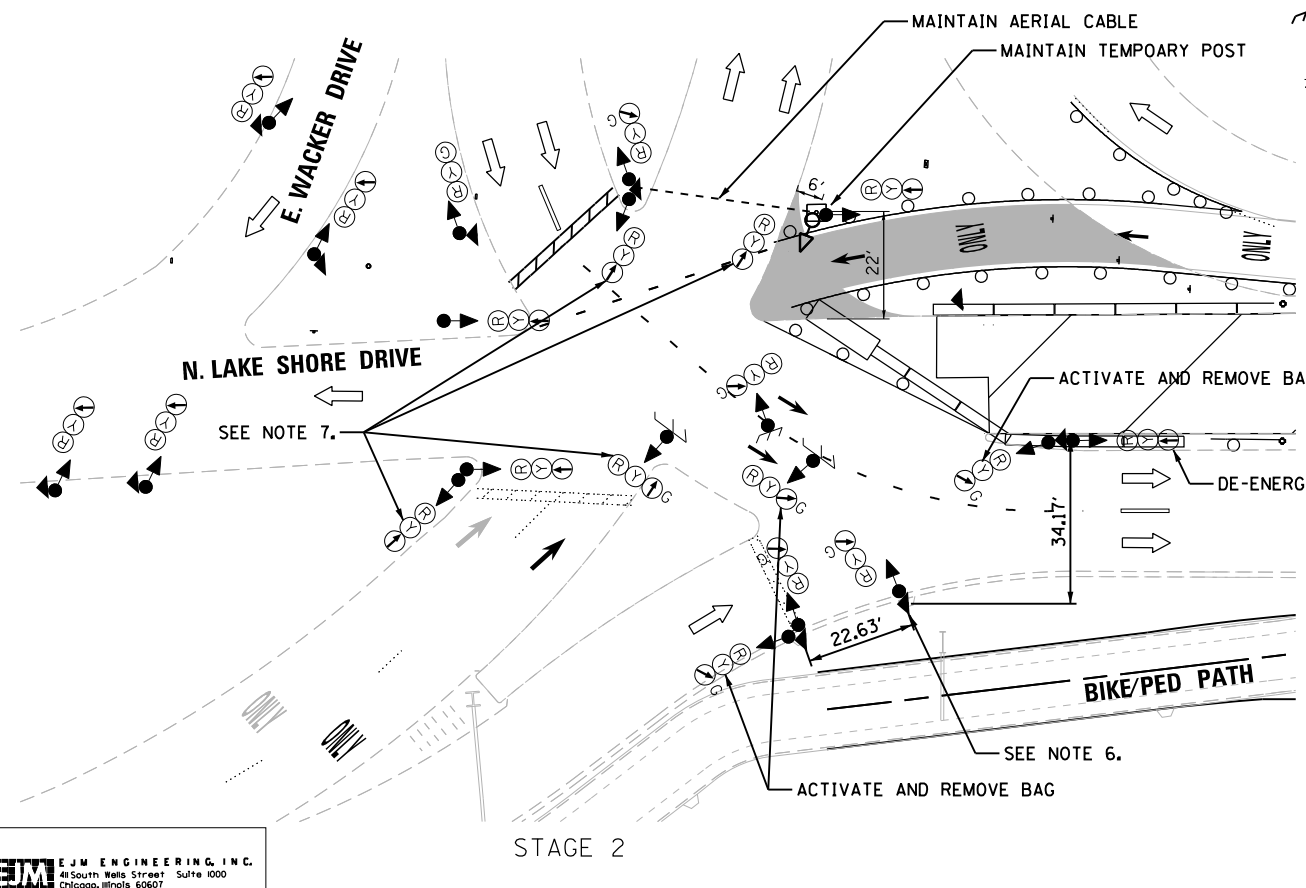
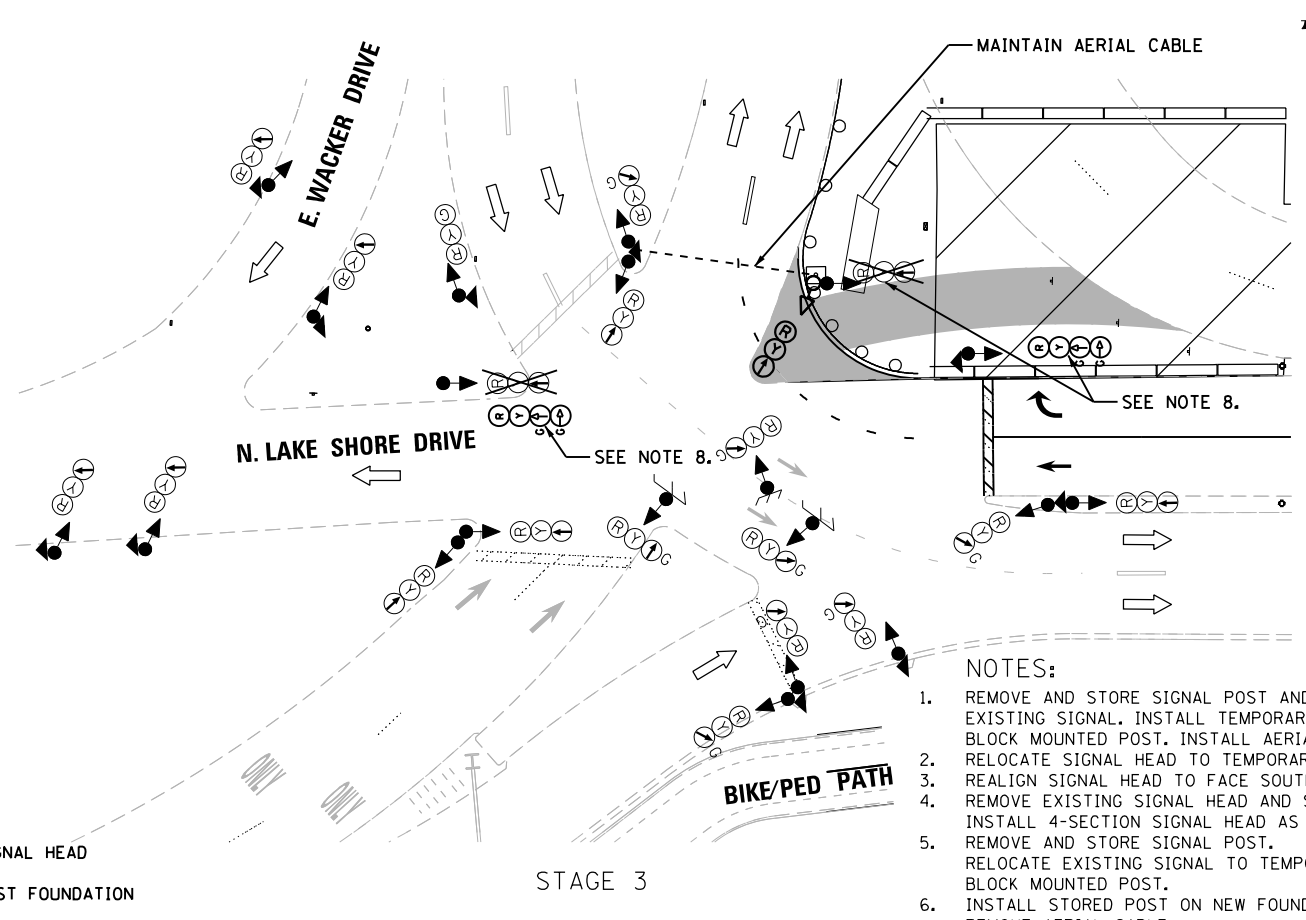
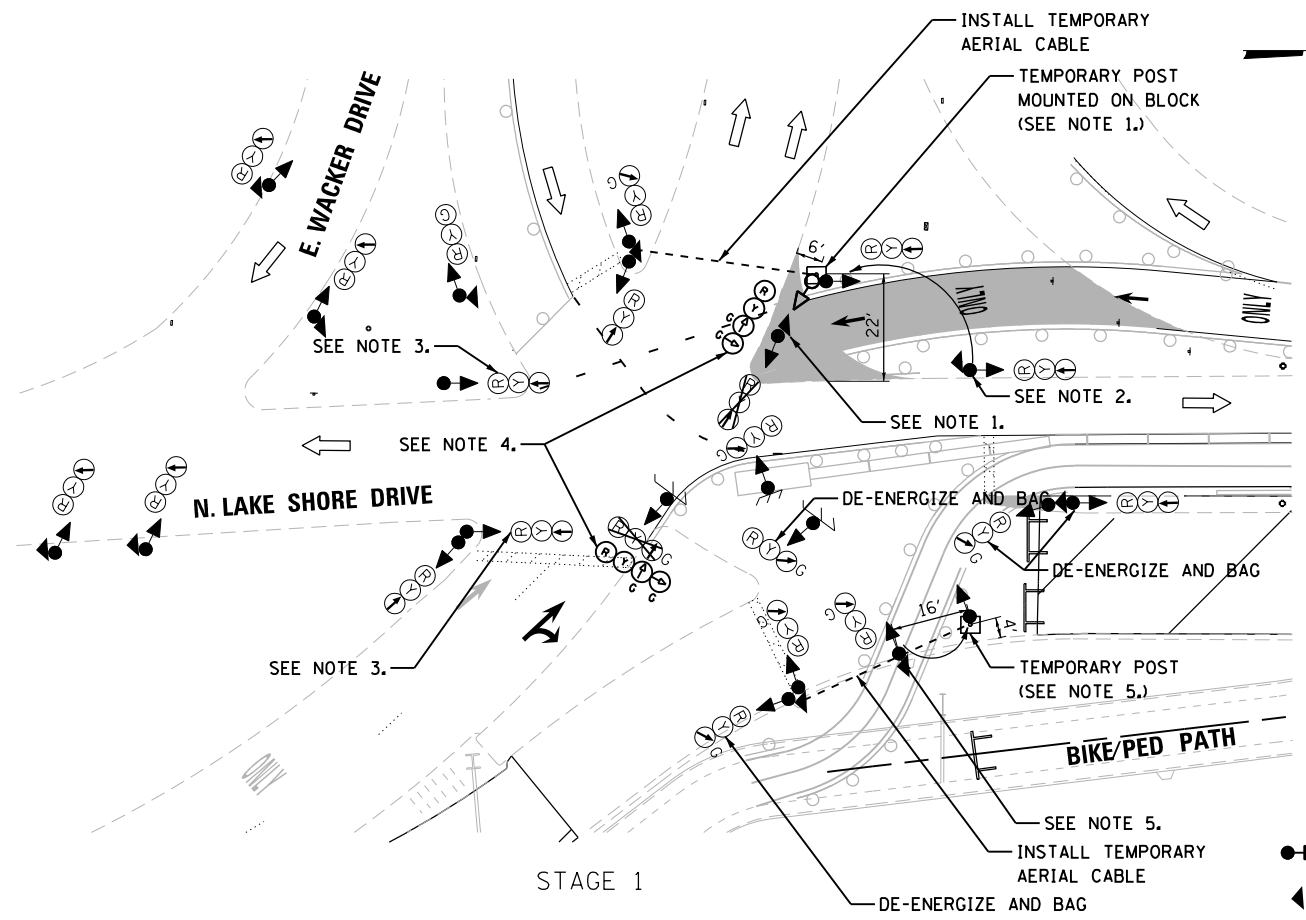
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	CHECKED SA	REVISED -
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/7/2017	CHECKED RI	REVISED -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

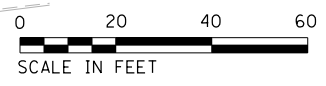
STAGE III MAINTENANCE OF TRAFFIC

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MOT-14
CDOT PROJECT NO. E-6-650			28 OF 411



- LEGEND:**
- EXISTING SIGNAL HEAD
 - ▲ EXISTING POST FOUNDATION
 - PROPOSED SIGNAL HEAD
 - ↗ STRUCTURE MOUNTED

- NOTES:**
1. REMOVE AND STORE SIGNAL POST AND ILLUMINATED SIGN. EXISTING SIGNAL. INSTALL TEMPORARY BLOCK MOUNTED POST. INSTALL AERIAL CABLE.
 2. RELOCATE SIGNAL HEAD TO TEMPORARY BLOCK MOUNTED POST.
 3. REALIGN SIGNAL HEAD TO FACE SOUTHBOUND TRAFFIC.
 4. REMOVE EXISTING SIGNAL HEAD AND STORE. INSTALL 4-SECTION SIGNAL HEAD AS SHOWN.
 5. REMOVE AND STORE SIGNAL POST. RELOCATE EXISTING SIGNAL TO TEMPORARY BLOCK MOUNTED POST.
 6. INSTALL STORED POST ON NEW FOUNDATION. REMOVE AERIAL CABLE. RELOCATE SIGNAL FROM TEMPORARY POST. REMOVE TEMPORARY POST.
 7. REMOVE 4-SECTION HEAD AND INSTALL STORED 3-SECTION SIGNAL HEAD.
 8. REMOVE EXISTING SIGNAL HEAD AND STORE. INSTALL 4-SECTION SIGNAL HEAD AS SHOWN.
 9. INSTALL STORED POST ON NEW FOUNDATION. INSTALL ILLUMINATED SIGN. REMOVE AERIAL CABLE. RELOCATE SIGNAL FROM TEMPORARY POST. REINSTALL STORED ILLUMINATED SIGN. REMOVE TEMPORARY POST.
 10. REMOVE 4-SECTION HEAD AND INSTALL 3-SECTION SIGNAL STORED SIGNAL HEAD.



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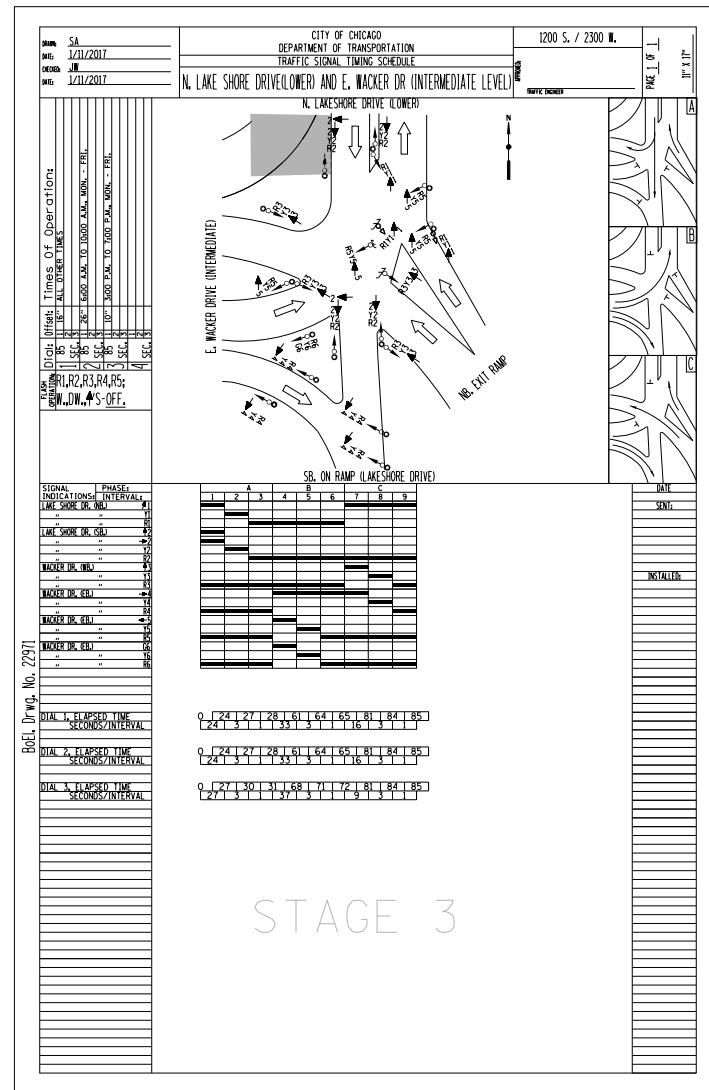
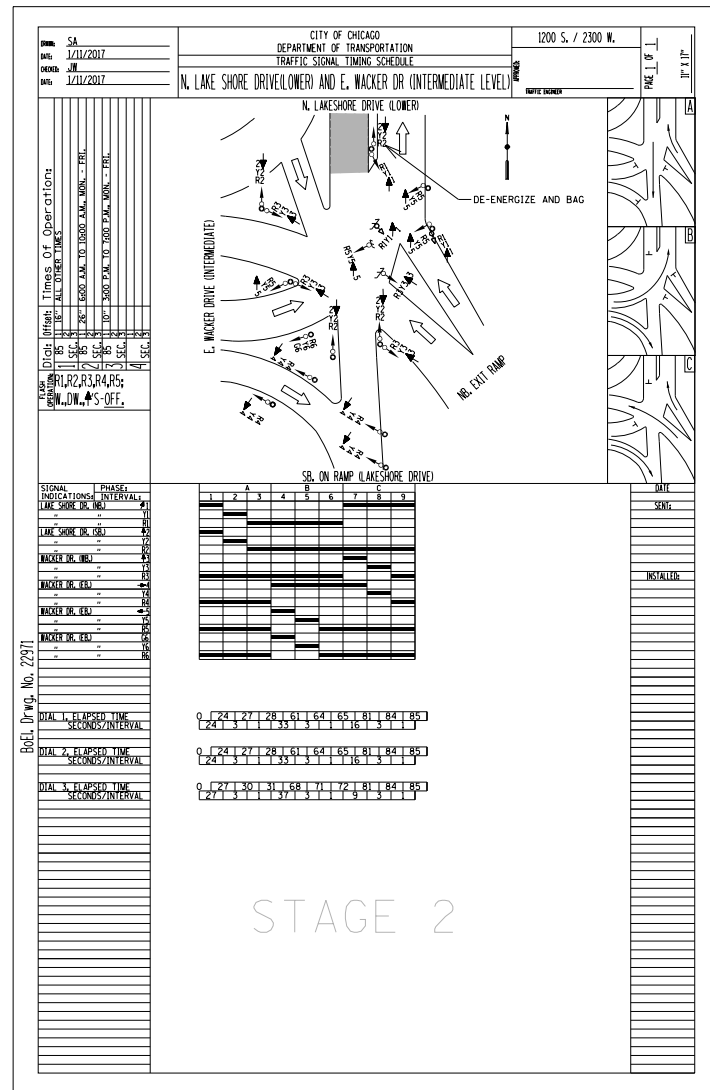
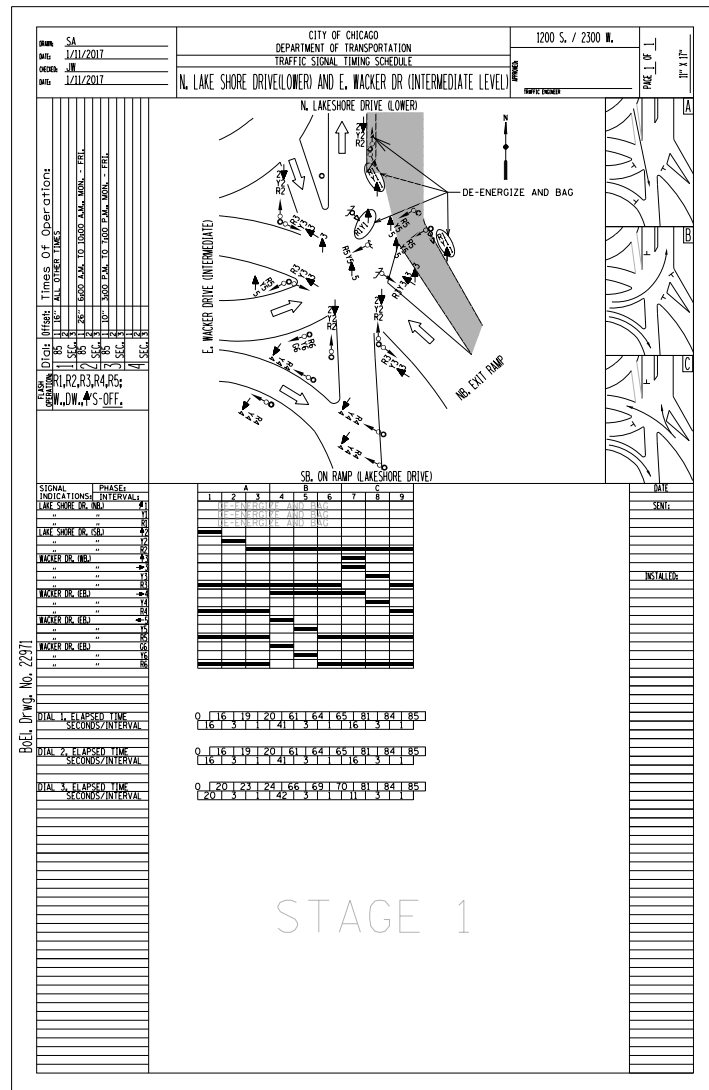
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CHECKED	SA	REVISIONS	-	REVISOR	-
PLOT SCALE =	N.T.S.	DRAWN	CS	REVISIONS	-
PLOT DATE =	6/23/2017	CHECKED	RI	REVISIONS	-

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

TEMPORARY SIGNAL
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	TEMP-1
CDOT PROJECT NO. E-6-650			29 OF 411



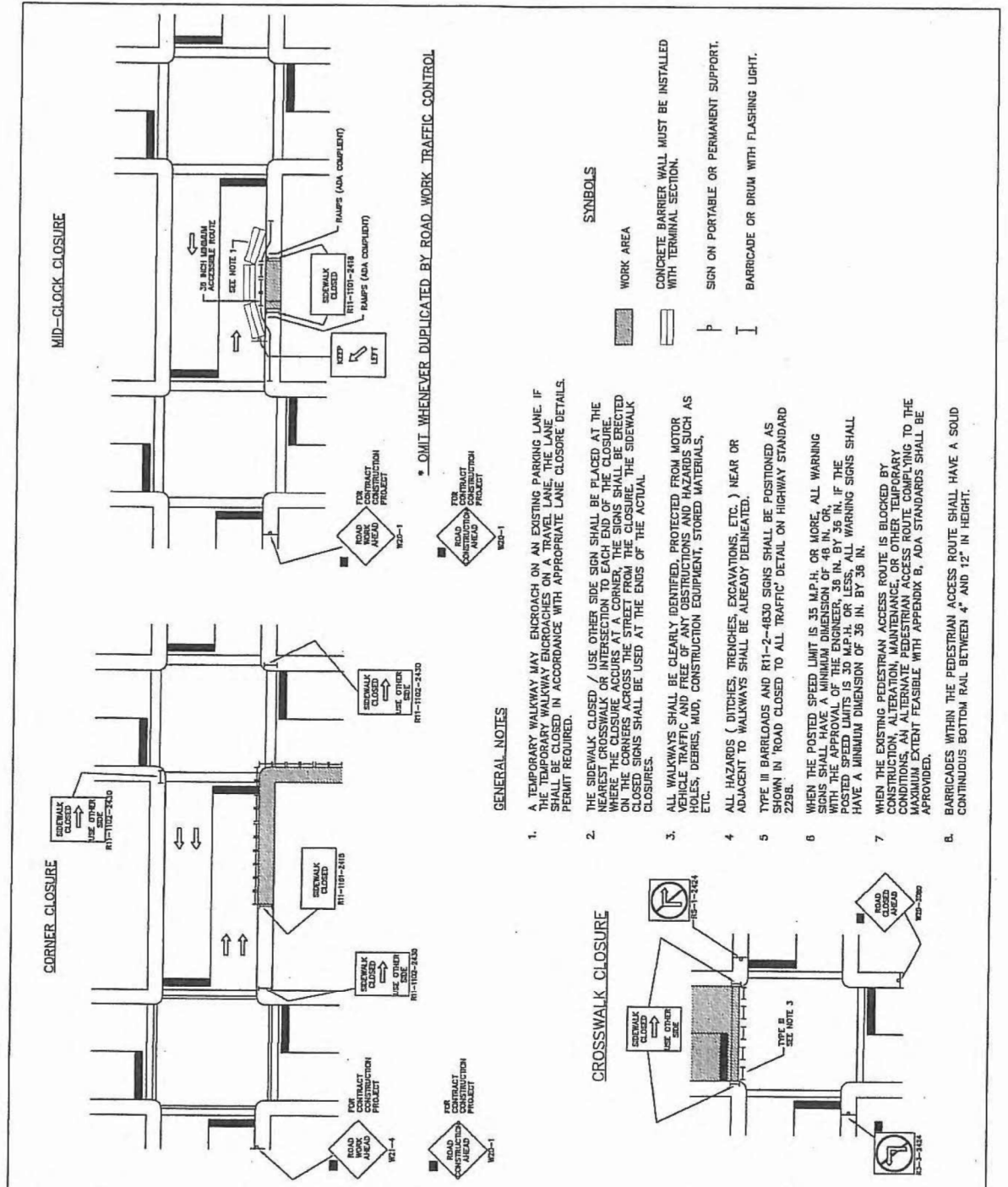
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PLOT SCALE =	N.T.S.	CHECKED	SA	REVISED	-
PLOT DATE =	6/23/2017	DRAWN	CS	REVISED	-
		CHECKED	RI	REVISED	-

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**TEMPORARY SIGNAL TIMING SHEET
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	TEMP-2
CDOT PROJECT NO. E-6-650			30 OF 411



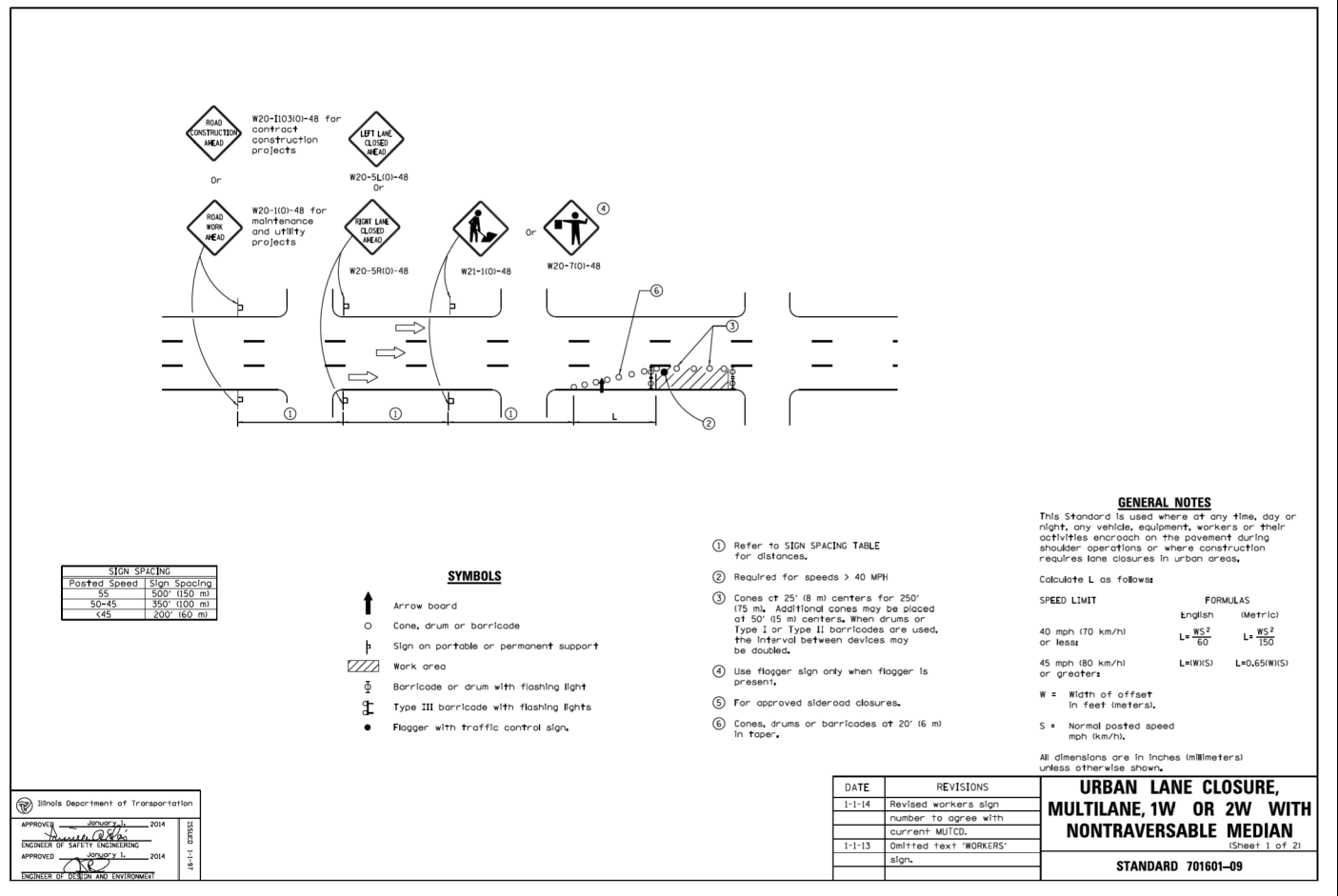
• OMIT WHENEVER DUPLICATED BY ROAD WORK TRAFFIC CONTROL

- GENERAL NOTES**
1. A TEMPORARY WALKWAY MAY ENCRoACH ON AN EXISTING PARKING LANE. IF THE TEMPORARY WALKWAY ENCRoACHES ON A TRAVEL LANE, THE LANE SHALL BE CLOSED IN ACCORDANCE WITH APPROPRIATE LANE CLOSURE DETAILS PERMIT REQUIRED.
 2. THE SIDEWALK CLOSED / USE OTHER SIDE SIGN SHALL BE PLACED AT THE NEAREST CROSSWALK OR INTERSECTION TO EACH END OF THE CLOSURE. WHERE THE CLOSURE OCCURS AT A CORNER, THE SIGNS SHALL BE ERECTED ON THE CORNERS ACROSS THE STREET FROM THE CLOSURE. THE SIDEWALK CLOSED SIGNS SHALL BE USED AT THE ENDS OF THE ACTUAL CLOSURE.
 3. ALL WALKWAYS SHALL BE CLEARLY IDENTIFIED, PROTECTED FROM MOTOR VEHICLE TRAFFIC AND FREE OF ANY OBSTRUCTIONS AND HAZARDS SUCH AS HOLES, DEBRIS, MUD, CONSTRUCTION EQUIPMENT, STORED MATERIALS, ETC.
 4. ALL HAZARDS (DITCHES, TRENCHES, EXCAVATIONS, ETC.) NEAR OR ADJACENT TO WALKWAYS SHALL BE ALREADY DELINEATED.
 5. TYPE III BARRIADGES AND R11-2-4800 SIGNS SHALL BE POSITIONED AS SHOWN IN ROAD CLOSED TO ALL TRAFFIC DETAIL ON HIGHWAY STANDARD 228B.
 6. WHEN THE POSTED SPEED LIMIT IS 35 M.P.H. OR MORE, ALL WARNING SIGNS SHALL HAVE A MINIMUM DIMENSION OF 48 IN. OR, WHEN THE POSTED SPEED LIMIT IS 30 M.P.H. OR LESS, ALL WARNING SIGNS SHALL HAVE A MINIMUM DIMENSION OF 36 IN. BY 36 IN.
 7. WHEN THE EXISTING PEDESTRIAN ACCESS ROUTE IS BLOCKED BY THE CLOSURE, AN ALTERNATE ROUTE FOR PEDESTRIAN ACCESS TO THE MAXIMUM EXTENT FEASIBLE WITH APPENDIX B, A.M.A. STANDARDS SHALL BE PROVIDED.
 8. BARRIADGES WITHIN THE PEDESTRIAN ACCESS ROUTE SHALL HAVE A SOLID CONTINUOUS BOTTOM RAIL BETWEEN 4" AND 12" IN HEIGHT.

SYMBOLS

- WORK AREA
- CONCRETE BARRIER WALL MUST BE INSTALLED WITH TERMINAL SECTION.
- SIGN ON PORTABLE OR PERMANENT SUPPORT.
- BARRIADGE OR DRUM WITH FLASHING LIGHT.

<p>CHICAGO DEPARTMENT OF TRANSPORTATION</p>	DATE	REVISION	CITY OF CHICAGO		
			CROSSWALK AND SIDEWALK CLOSURE		
	DATE	SHEET	DRAWN BY		
	01/23/07	A-6-11	CDOT		



GENERAL NOTES

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement during shoulder operations or where construction requires lane closures in urban areas.

Calculate L as follows:

SPEED LIMIT	FORMULAS
40 mph (70 km/h) or less	English: $L = \frac{WS^2}{60}$ Metric: $L = \frac{WS^2}{150}$
45 mph (80 km/h) or greater	English: $L = (WS)$ Metric: $L = 0.65(WHS)$

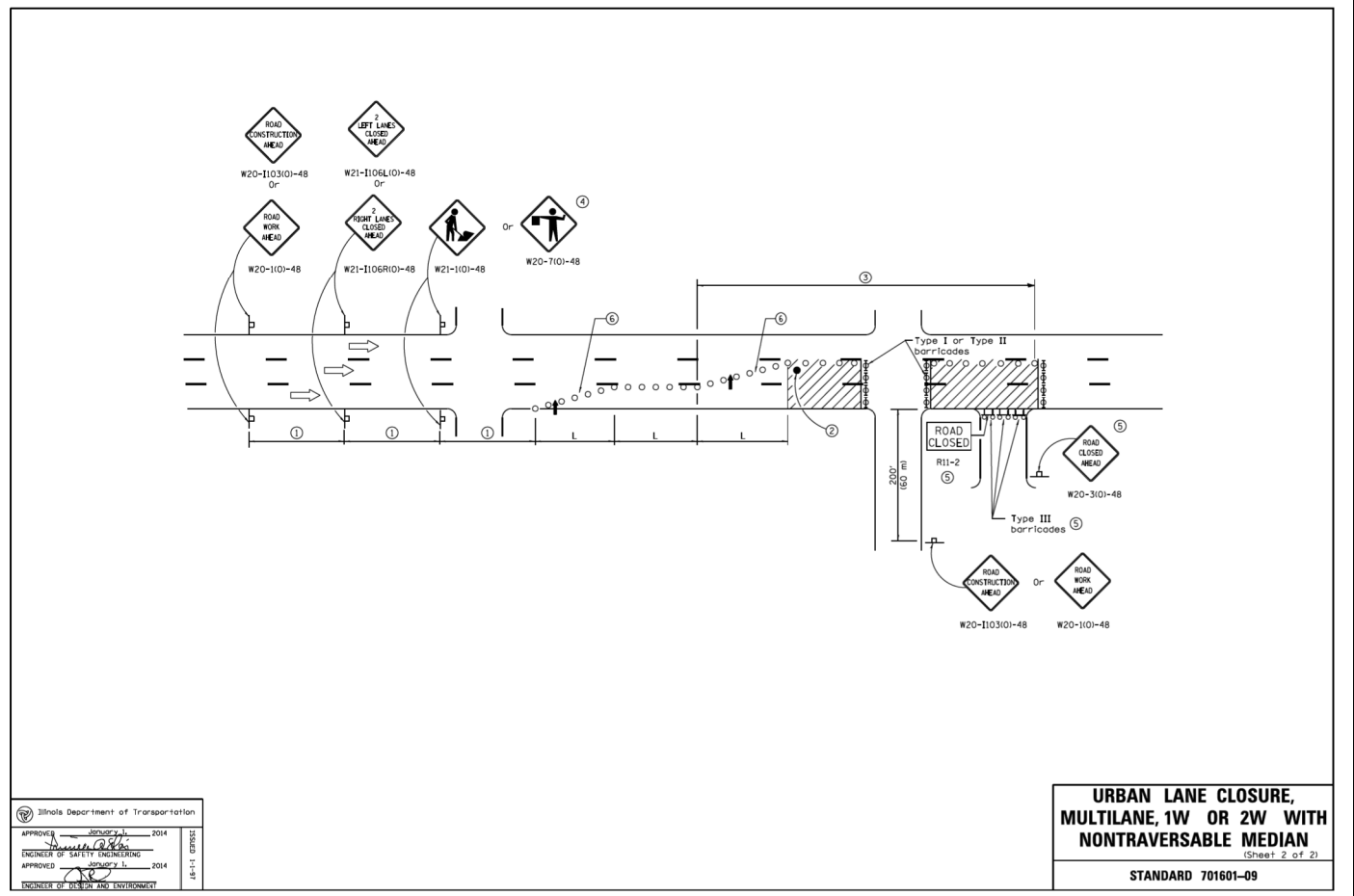
W = Width of offset in feet (meters).
S = Normal posted speed mph (km/h).

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-14	Revised workers sign number to agree with current MUTCD.
1-1-13	Omitted text 'WORKERS' sign.

URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
(Sheet 1 of 2)

STANDARD 701601-09



URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
(Sheet 2 of 2)

STANDARD 701601-09

...0166030-E0534-MOTStd.dgn 4:08:26 PM

EJM ENGINEERING, INC.
41 South Wabash Street Suite 1000
Chicago, Illinois 60607

wsp
WSP USA Inc.
30 N. LASALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

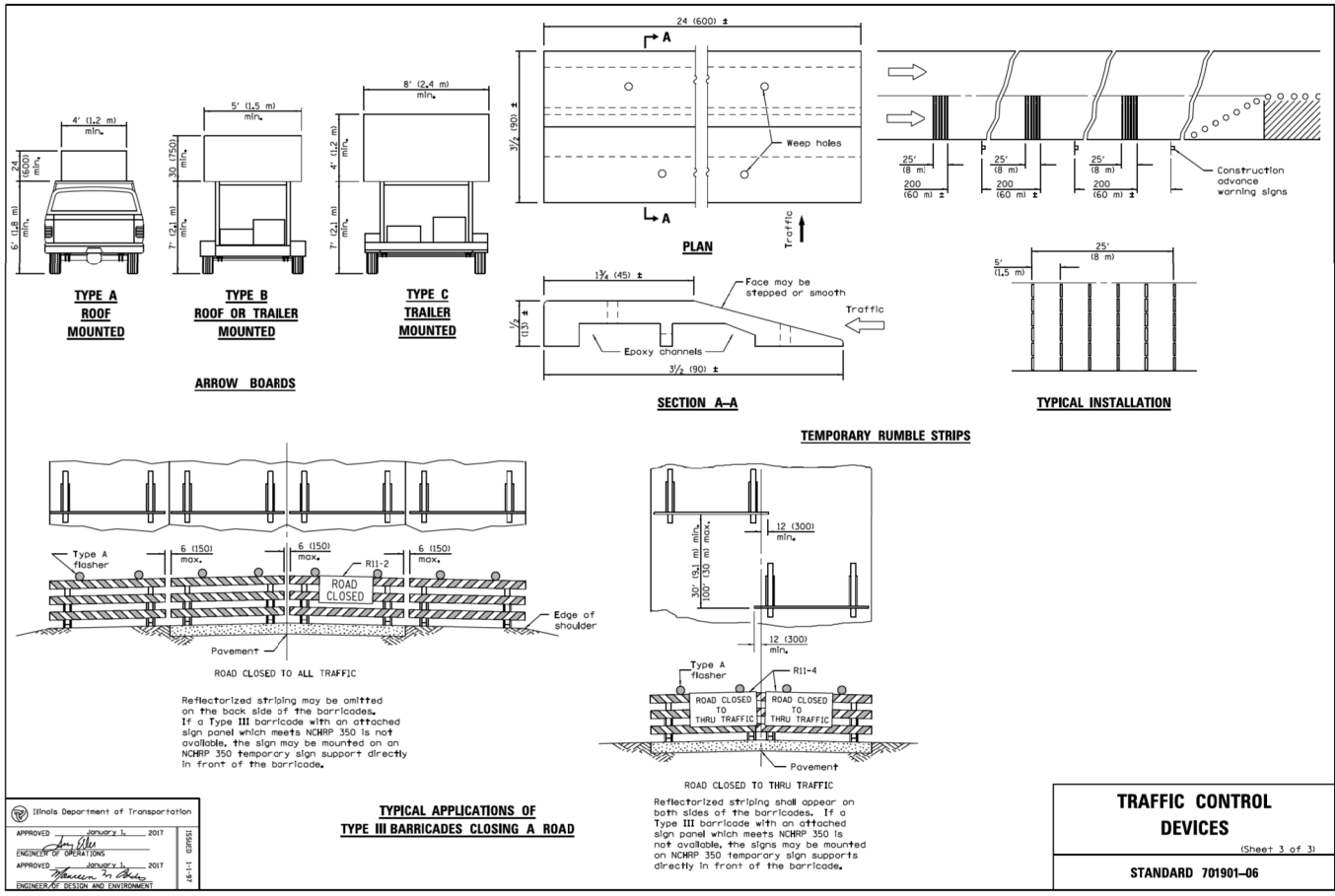
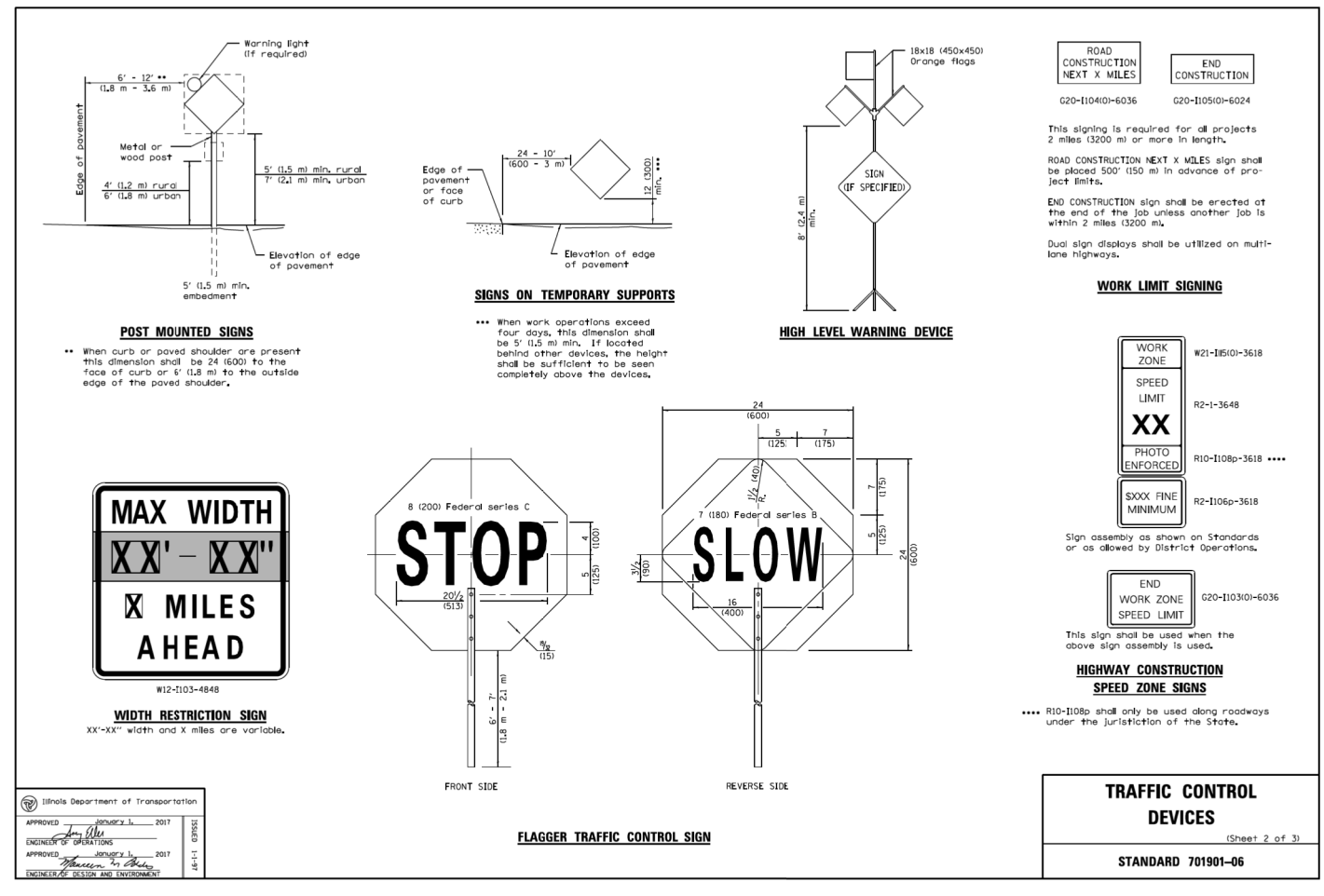
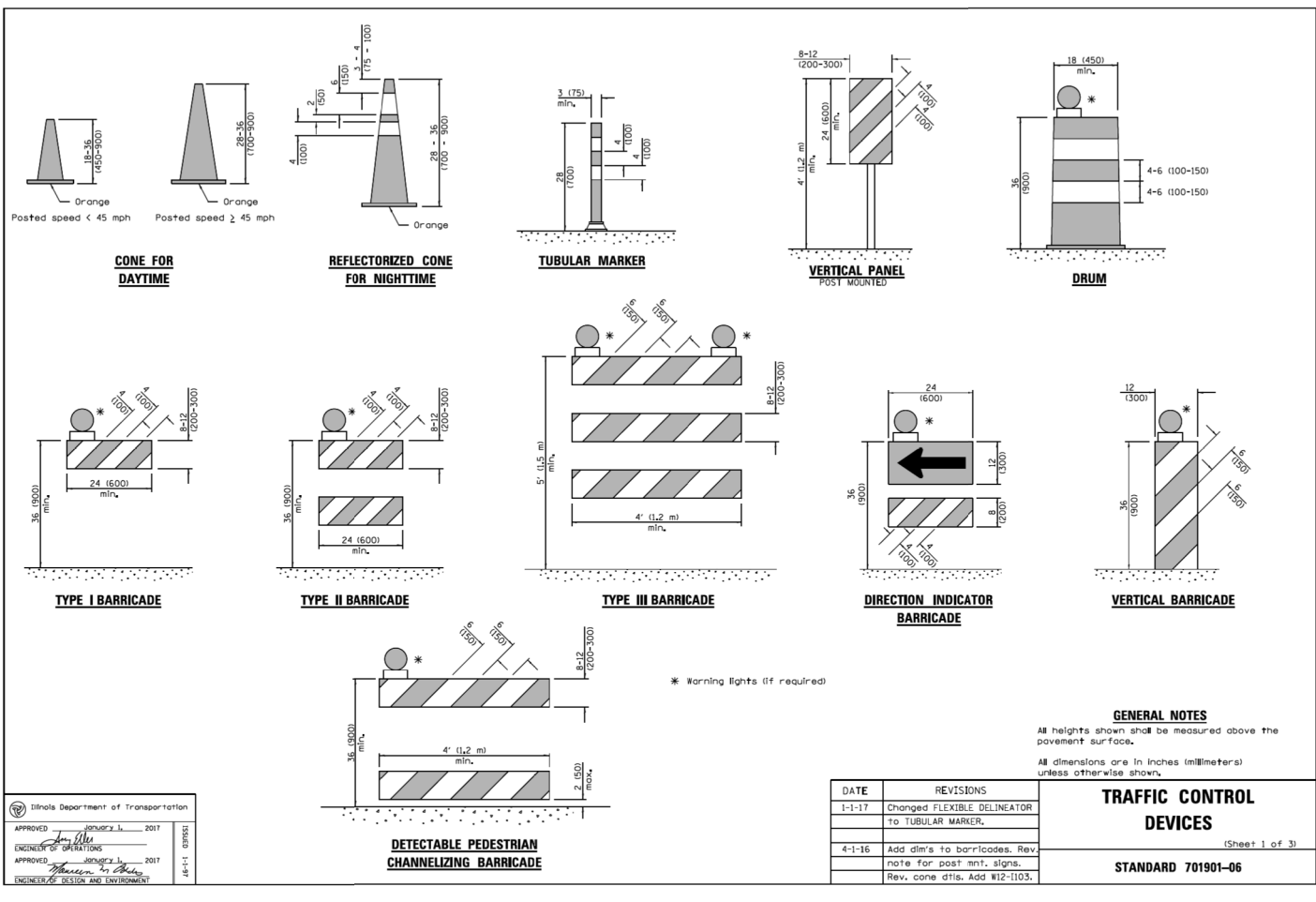
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PLOT DATE =	6/23/2017	CHECKED	RI	REVISED	-

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STANDARD DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	SD-1
CDOT PROJECT NO. E-6-650			31 OF 411



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EJM ENGINEERING, INC.
41 South Wells Street Suite 1000
Chicago, Illinois 60607

WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
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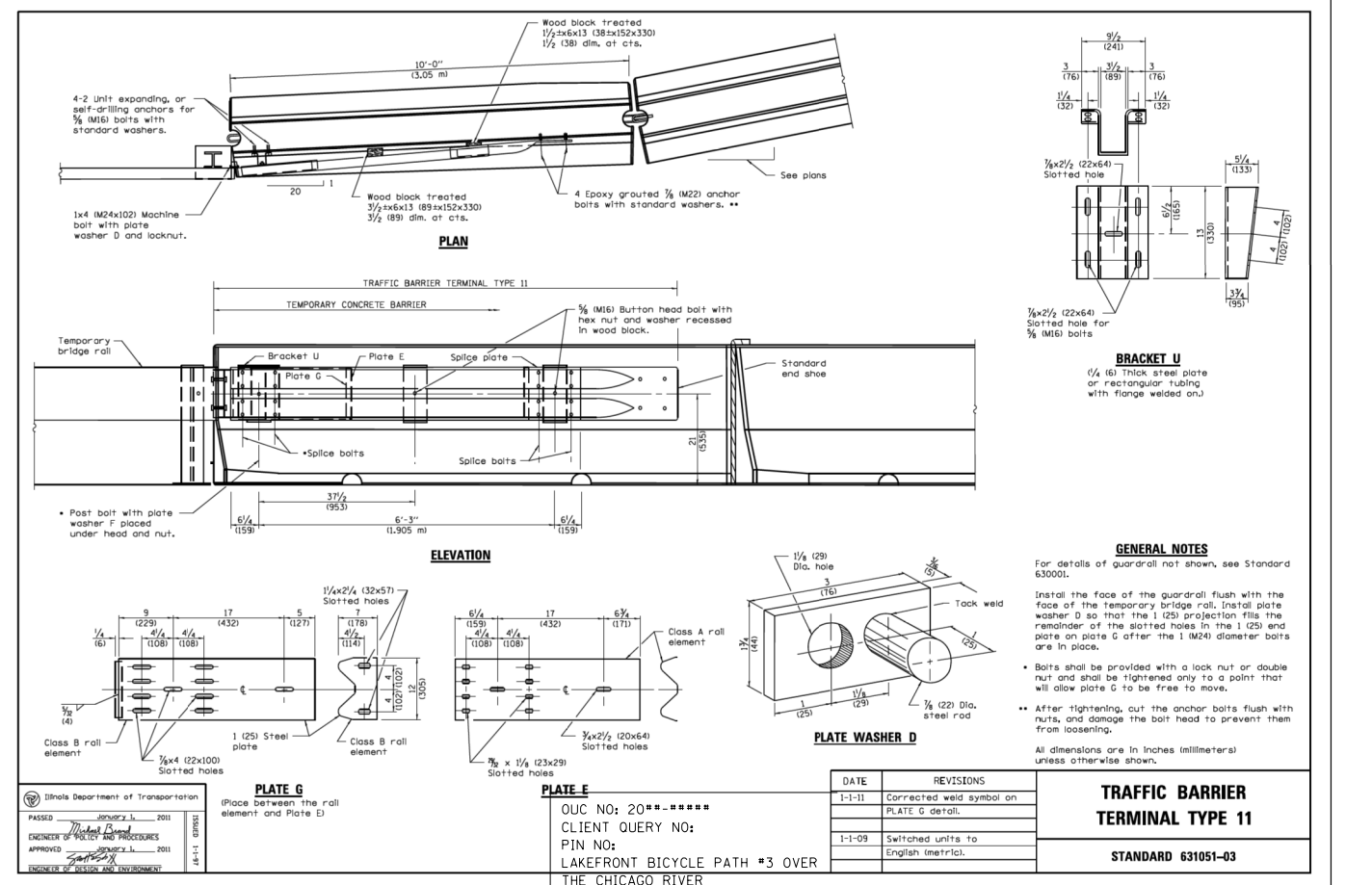
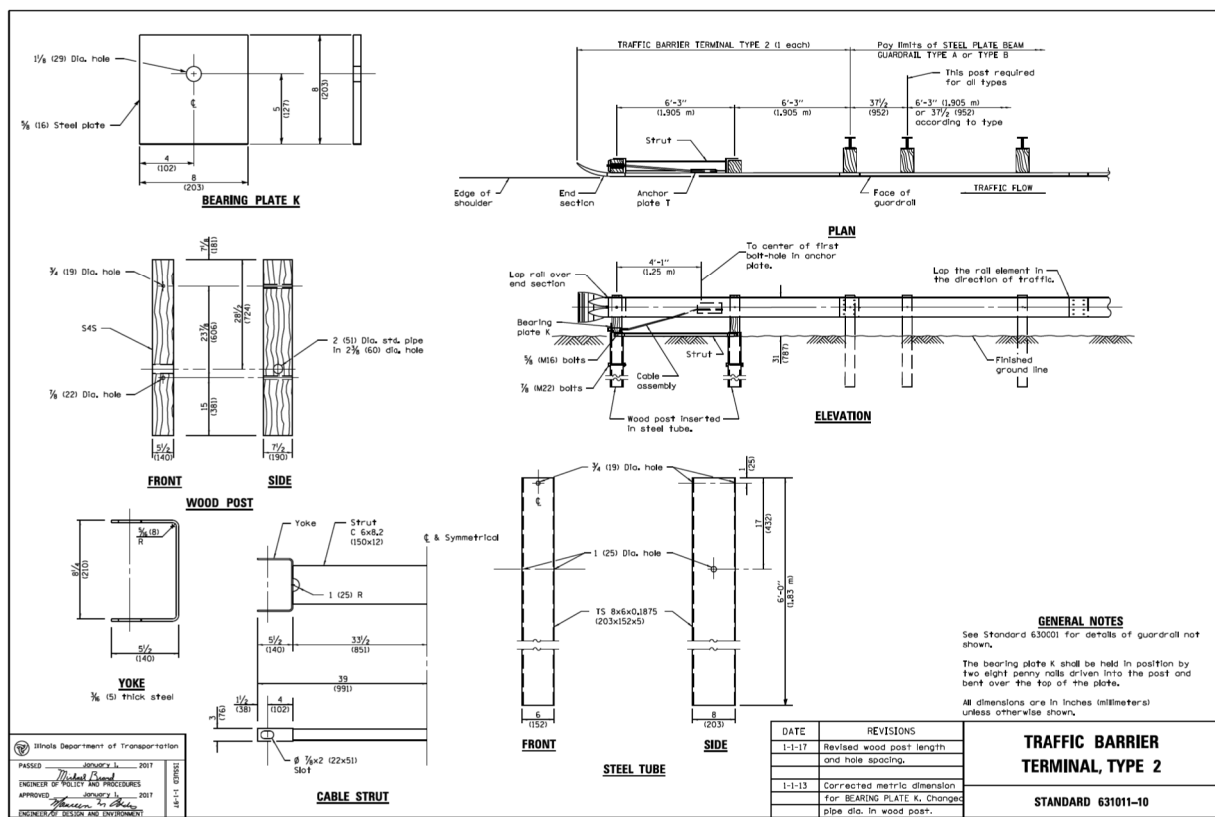
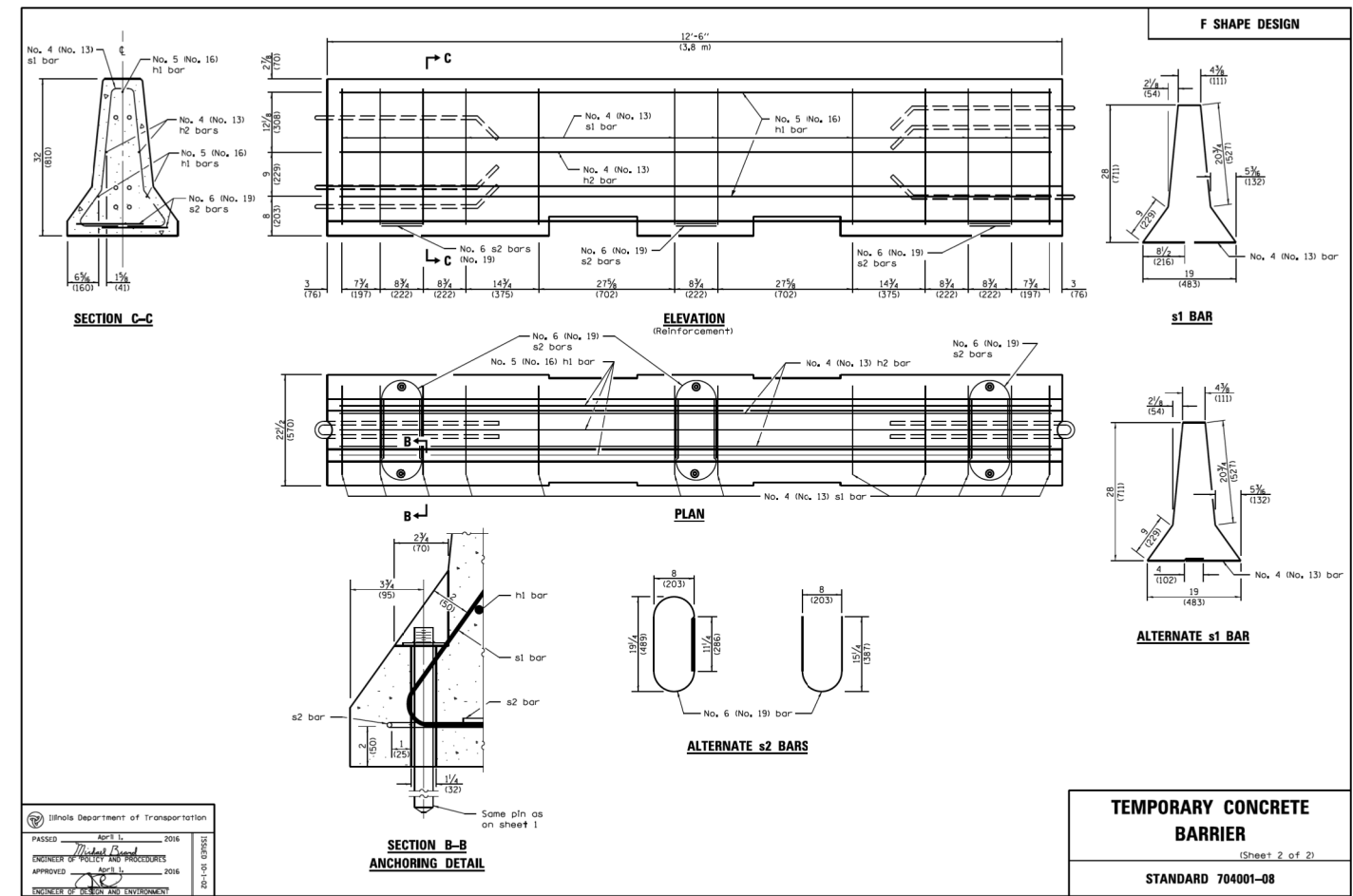
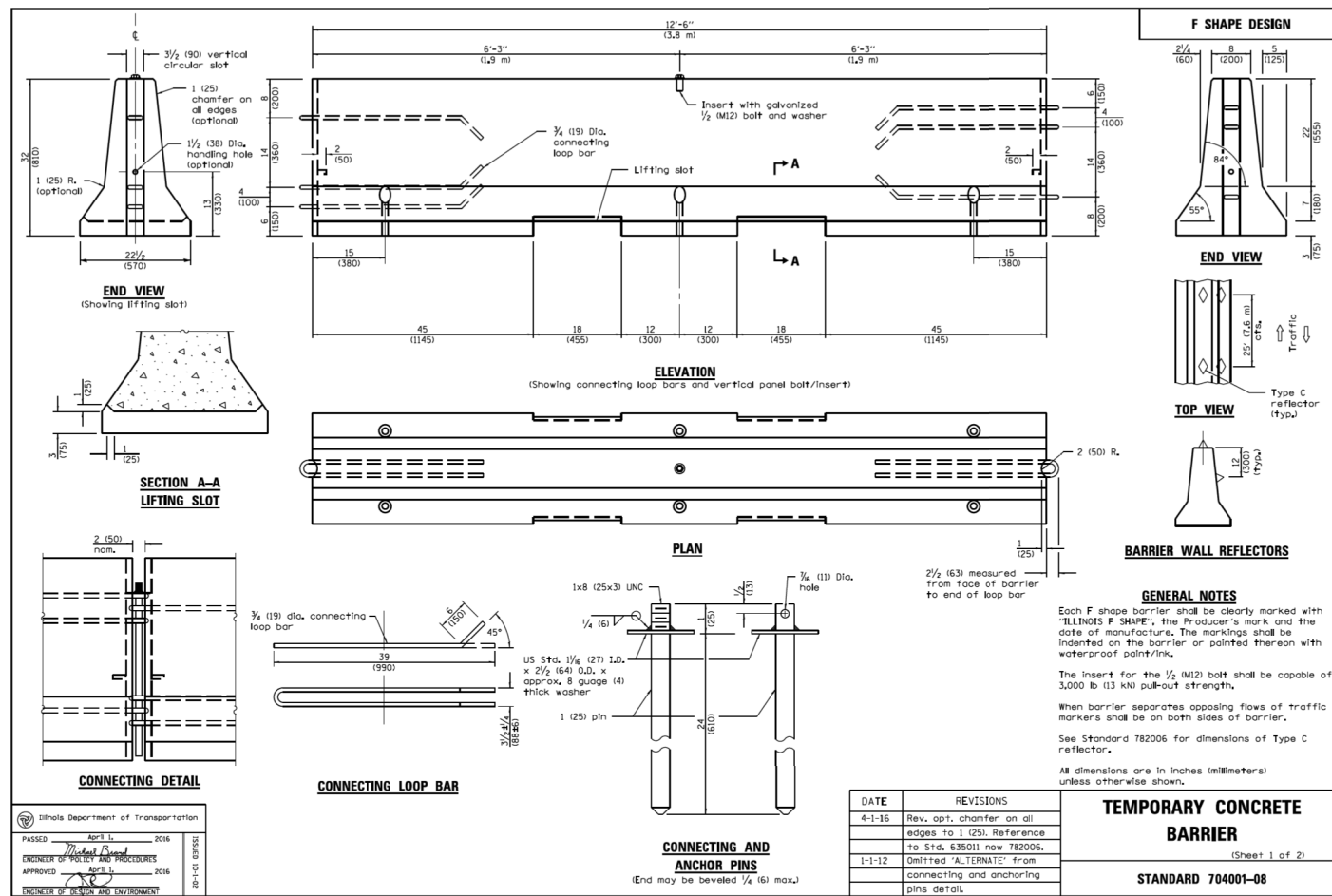
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STANDARD DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	SD-2
CDOT PROJECT NO. E-6-650			32 OF 411



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EJM ENGINEERING, INC.
41 South Wels Street Suite 1000
Chicago, Illinois 60607

WSP USA Inc.
30 N. LASALLE STREET
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CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

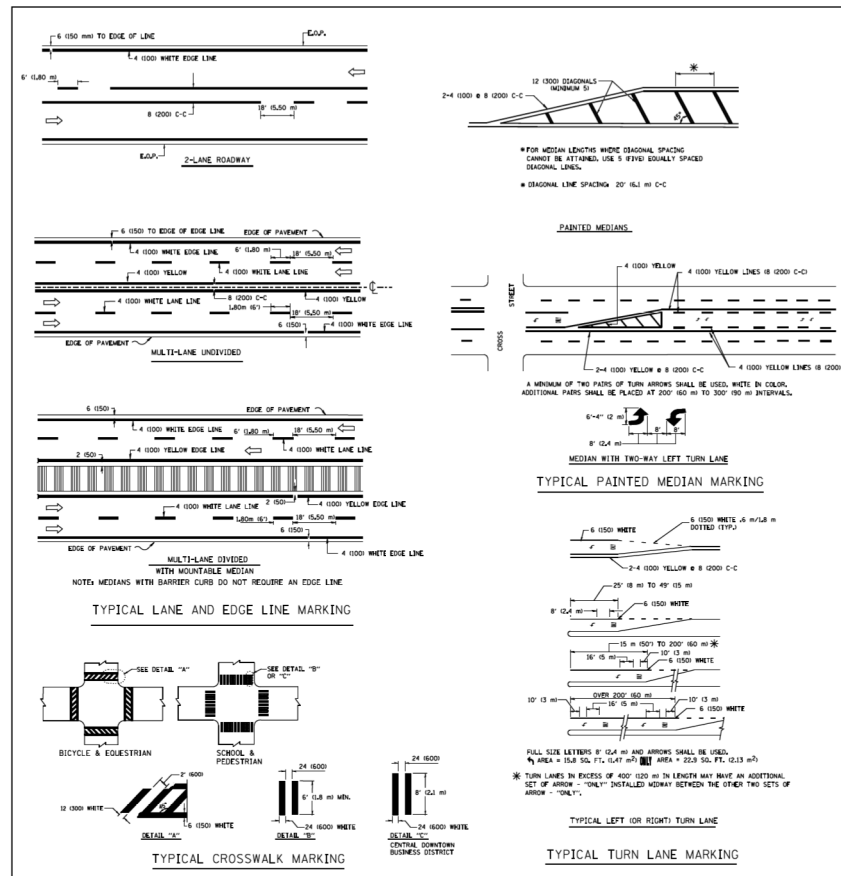
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

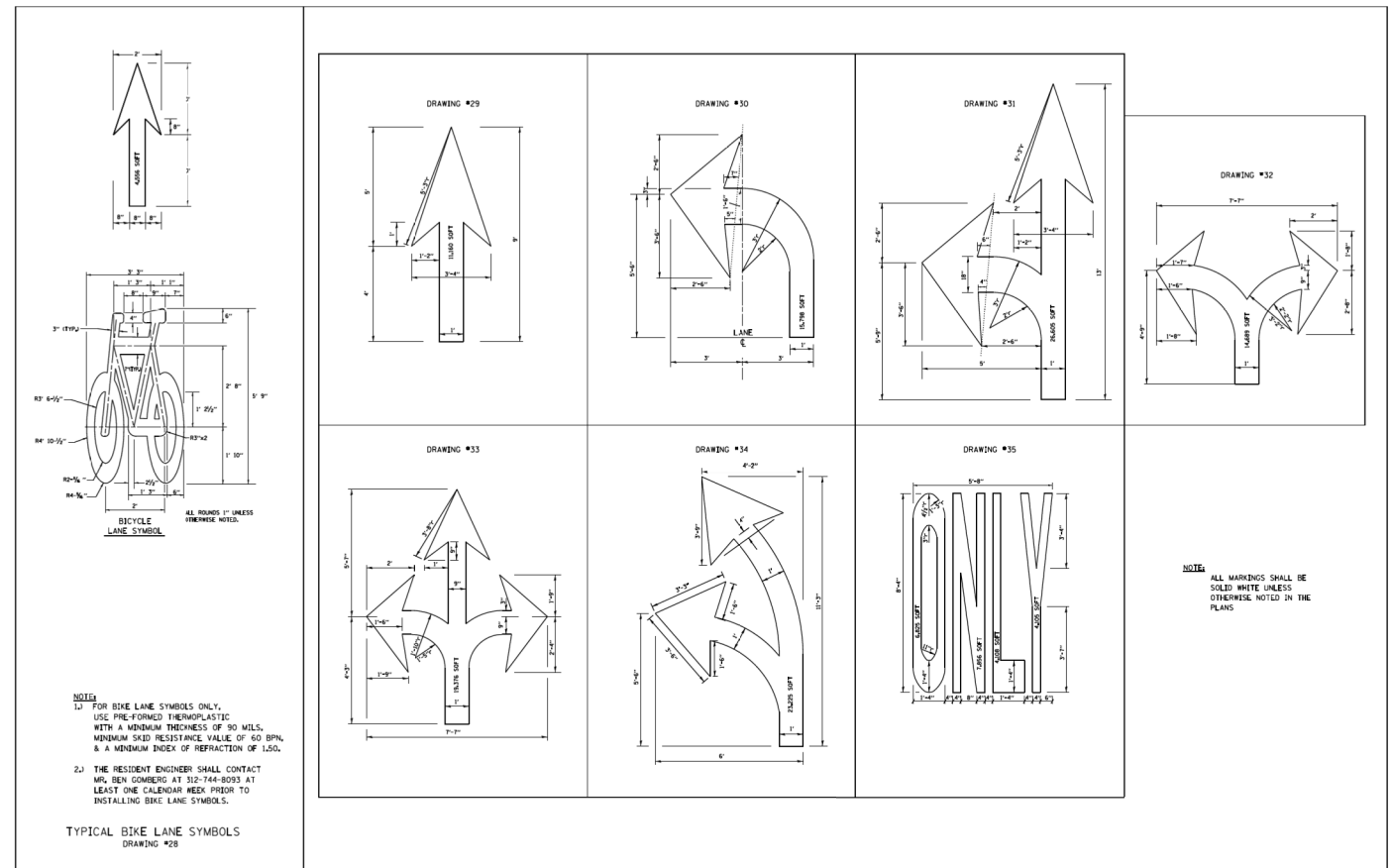
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STANDARD DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	SD-3
CDOT PROJECT NO. E-6-650			33 OF 411

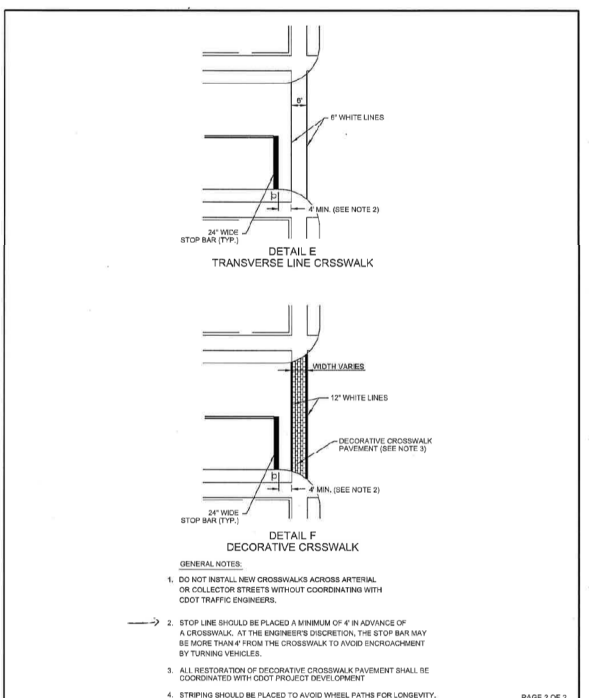


TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTRAL LINE ON 2 LANE ROADWAY	4 000	S&P-GASH	YELLOW	6' 000 ON LINE WITH 10' 000 ON SPACE
CENTRAL LINE ON MULTI-LANE UNDIVIDED ROADWAY	2 4 000	SOLID	YELLOW	8 000 C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 000	SOLID	YELLOW	8 000 C-C
LANE LINES	4 000	S&P-GASH	WHITE	6' 000 ON LINE WITH 10' 000 ON SPACE
DOTTED LINES EXTENSIONS OF CENTER LINE OR TURN LANE MARKINGS	4 000	S&P-GASH	WHITE	6' 000 ON LINE WITH 10' 000 ON SPACE
TURN LANE MARKINGS	6 000	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 4 000	S&P-GASH AND SOLID	YELLOW	6' 000 ON LINE WITH 10' 000 ON SPACE FOR S&P-GASH, 8 000 C-C BETWEEN SOLID LINE AND S&P-GASH LINE
CROSSWALK LINES	12 000	SOLID	WHITE	SEE TYPICAL CROSSWALK MARKING DETAILS
STOP LINES	24 000	SOLID	WHITE	SEE TYPICAL CROSSWALK MARKING DETAILS
PAINTED MEDIANS	2 4 000	SOLID	YELLOW	8 000 C-C FOR THE DOUBLE LINE
ISLAND MARKING	8 000	SOLID	WHITE	SEE TYPICAL ISLAND MARKING DETAIL
HARBOR CROSSING	24 000	SOLID	WHITE	SEE STATE STANDARD T80001

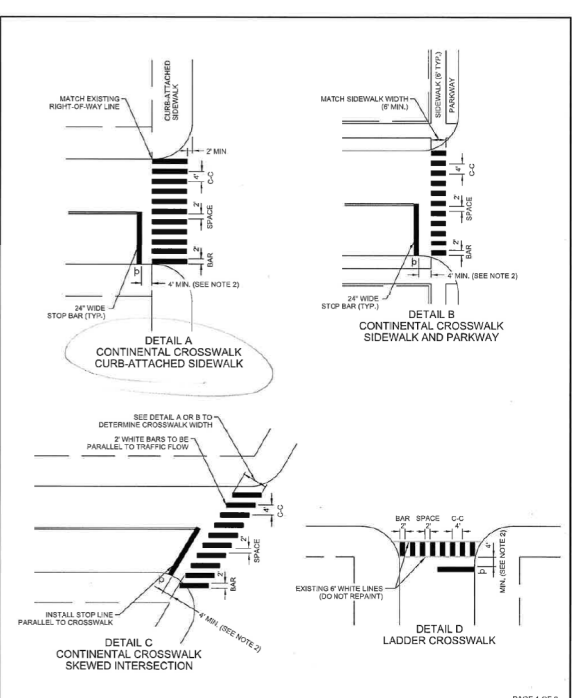


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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CS	CS	1	TYPICAL PAVEMENT MARKINGS	AS SHOWN	1	3

FILE NAME	USER NAME	DESIGNED	REVISION	CITY OF CHICAGO	SCALE	SHEET NO.	TOTAL SHEETS
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CS	CS	1	TYPICAL PAVEMENT MARKINGS	AS SHOWN	2	3



DATE	REVISION	CITY OF CHICAGO
1/1/2014	REVISION 1	CROSSWALK MARKING DETAIL
DATE	SHEET	DRAWN BY
06/25/12	A-7-1B	CDOT



DATE	REVISION	CITY OF CHICAGO
1/1/2014	REVISION 1	CROSSWALK MARKING DETAIL
DATE	SHEET	DRAWN BY
06/25/12	A-7-1A	CDOT

EJM ENGINEERING, INC.
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FAX: (312) 782-1884

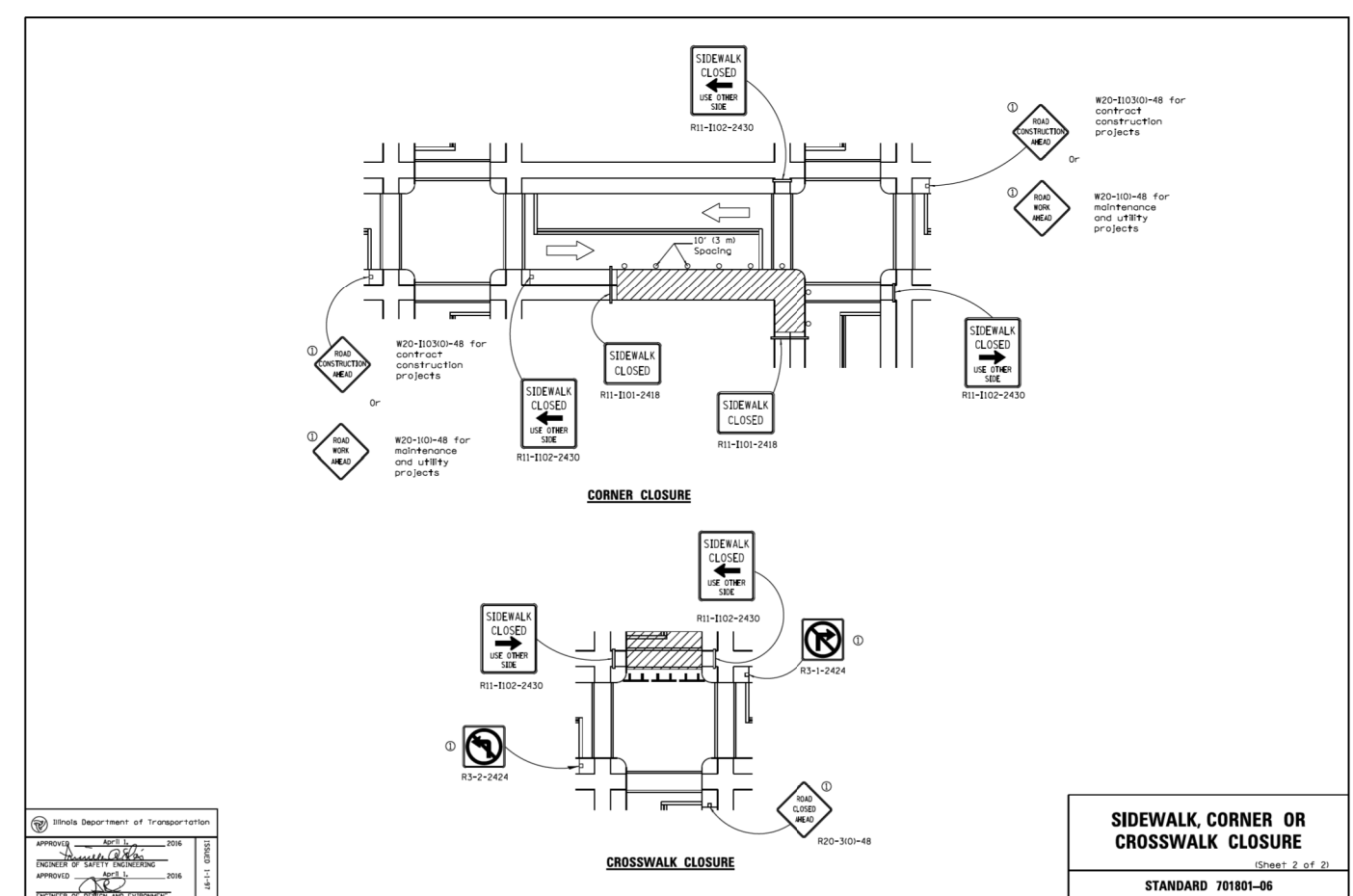
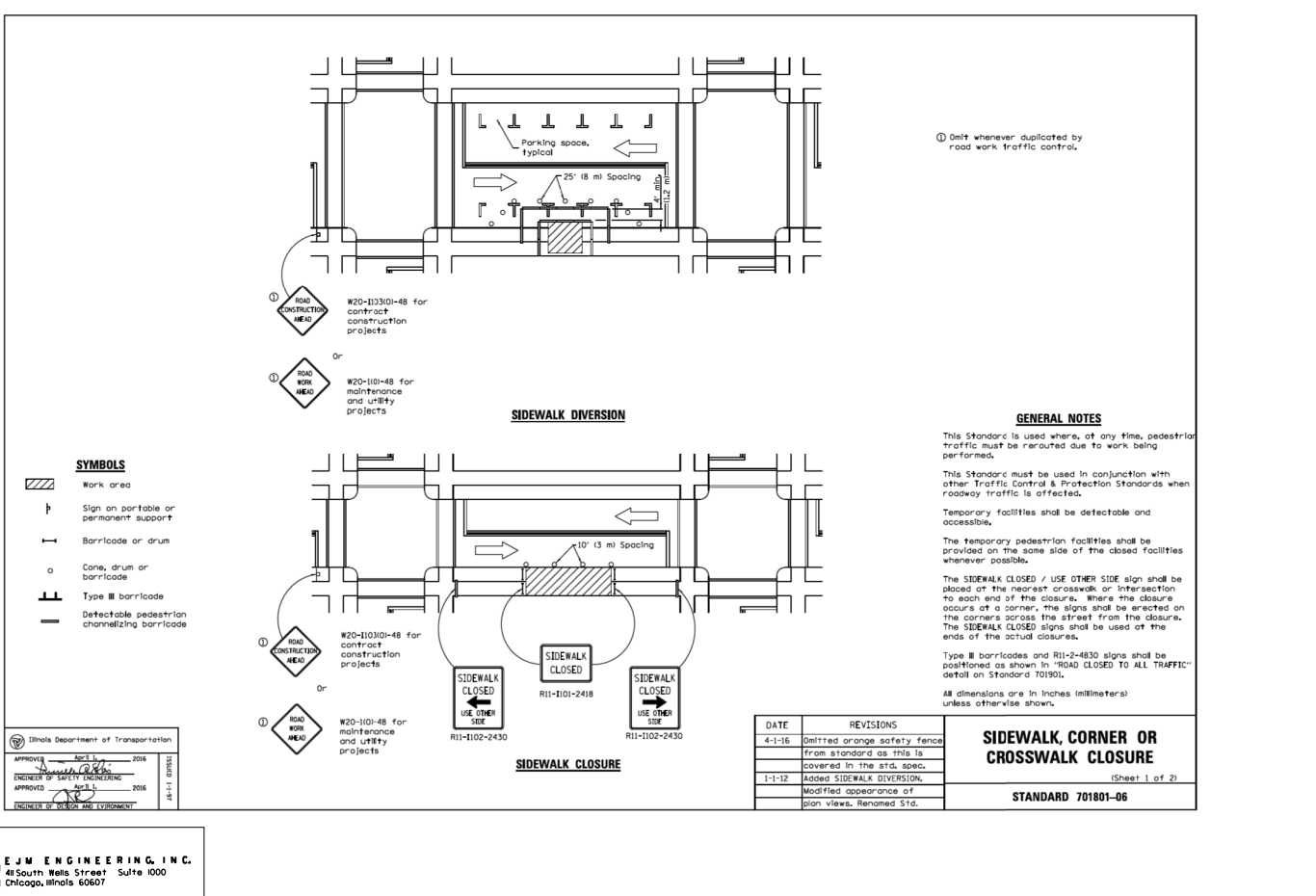
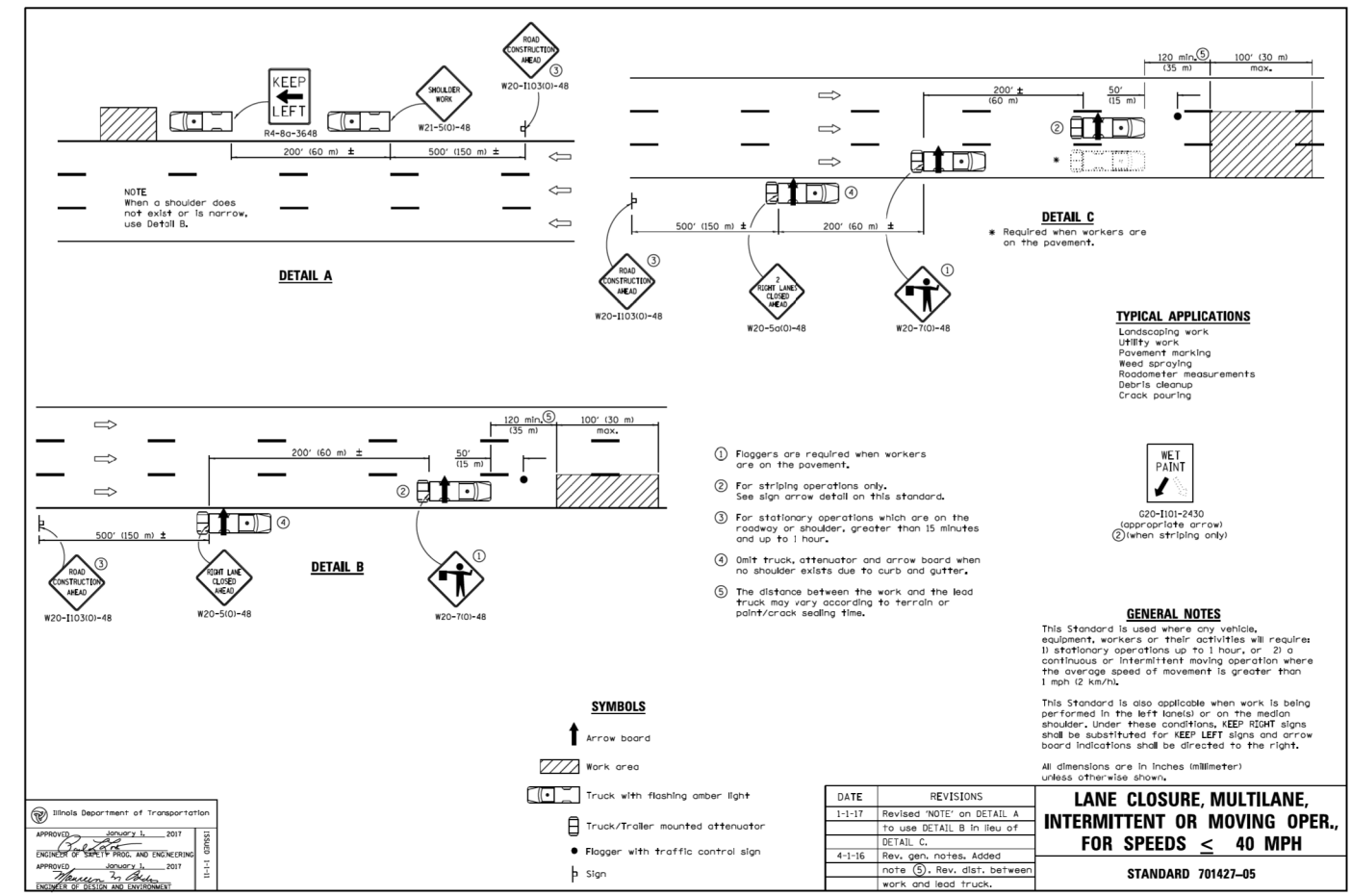
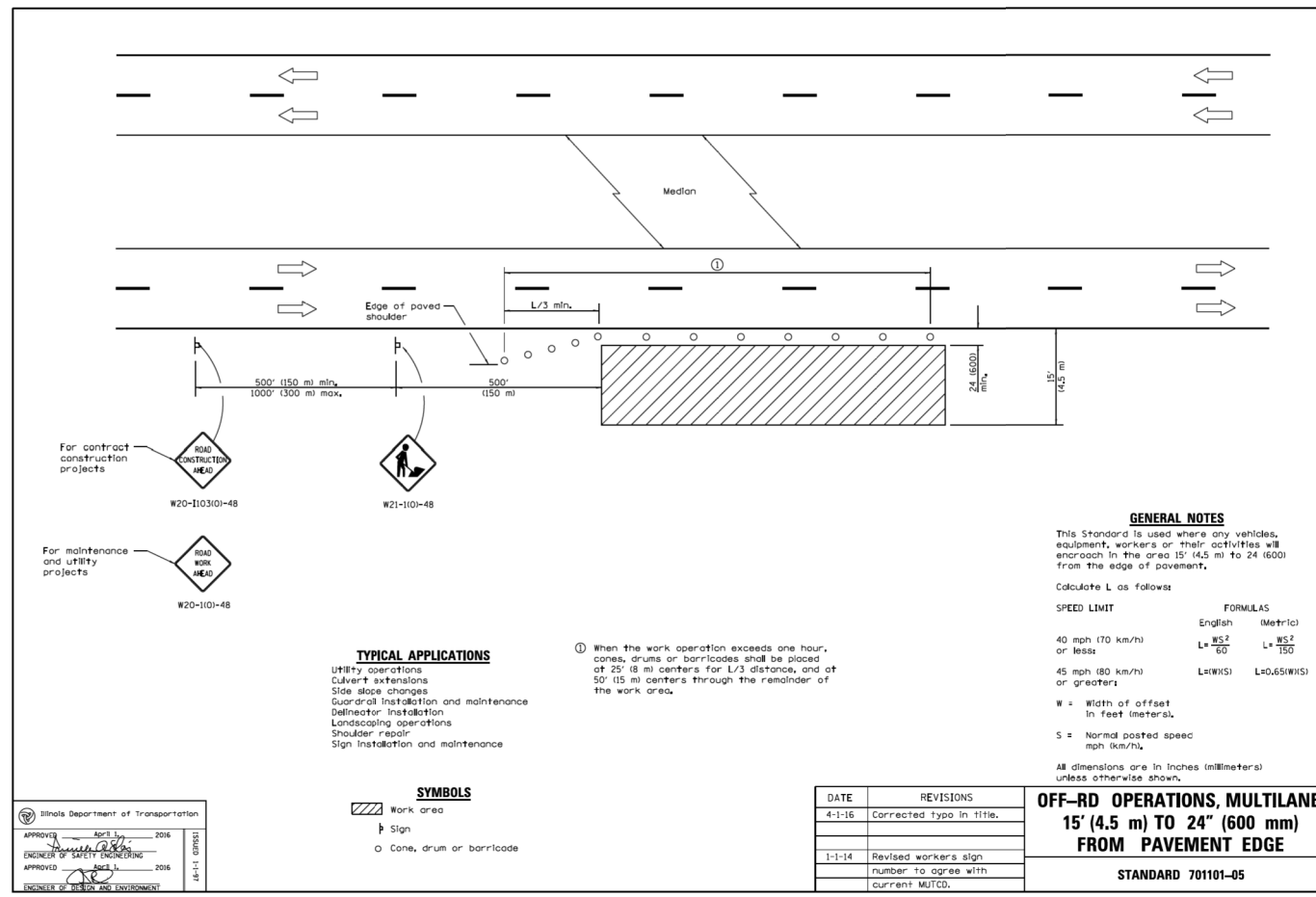
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SA	SA	-
DRAWN	DRAWN	REVISION
CS	CS	-
CHECKED	CHECKED	REVISION
RI	RI	-

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STANDARD DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	SD-4
CDOT PROJECT NO. E-6-650			34 OF 411



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EJM ENGINEERING, INC.
41 South Wells Street Suite 1000
Chicago, Illinois 60607

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30 N. LASALLE STREET
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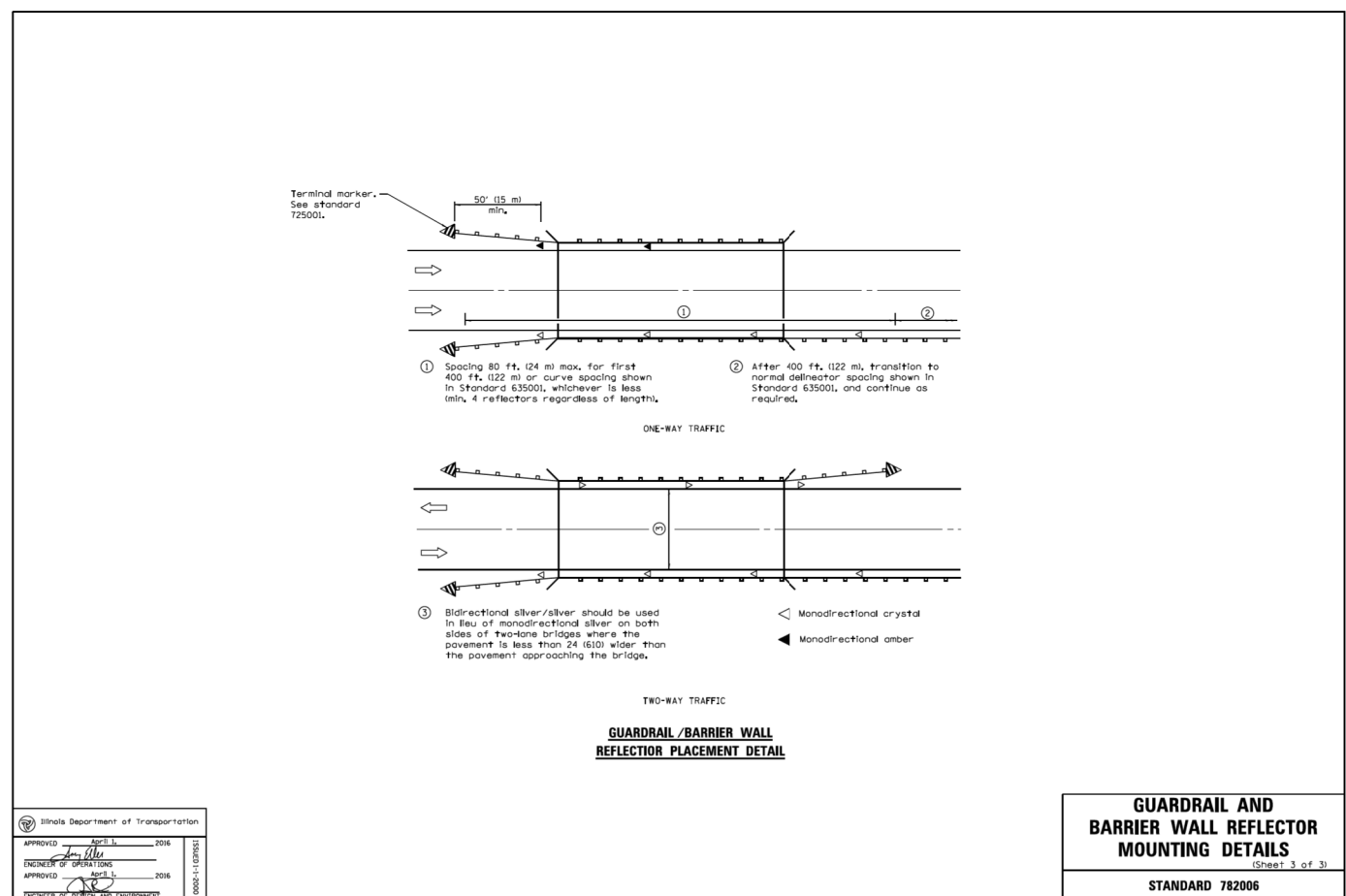
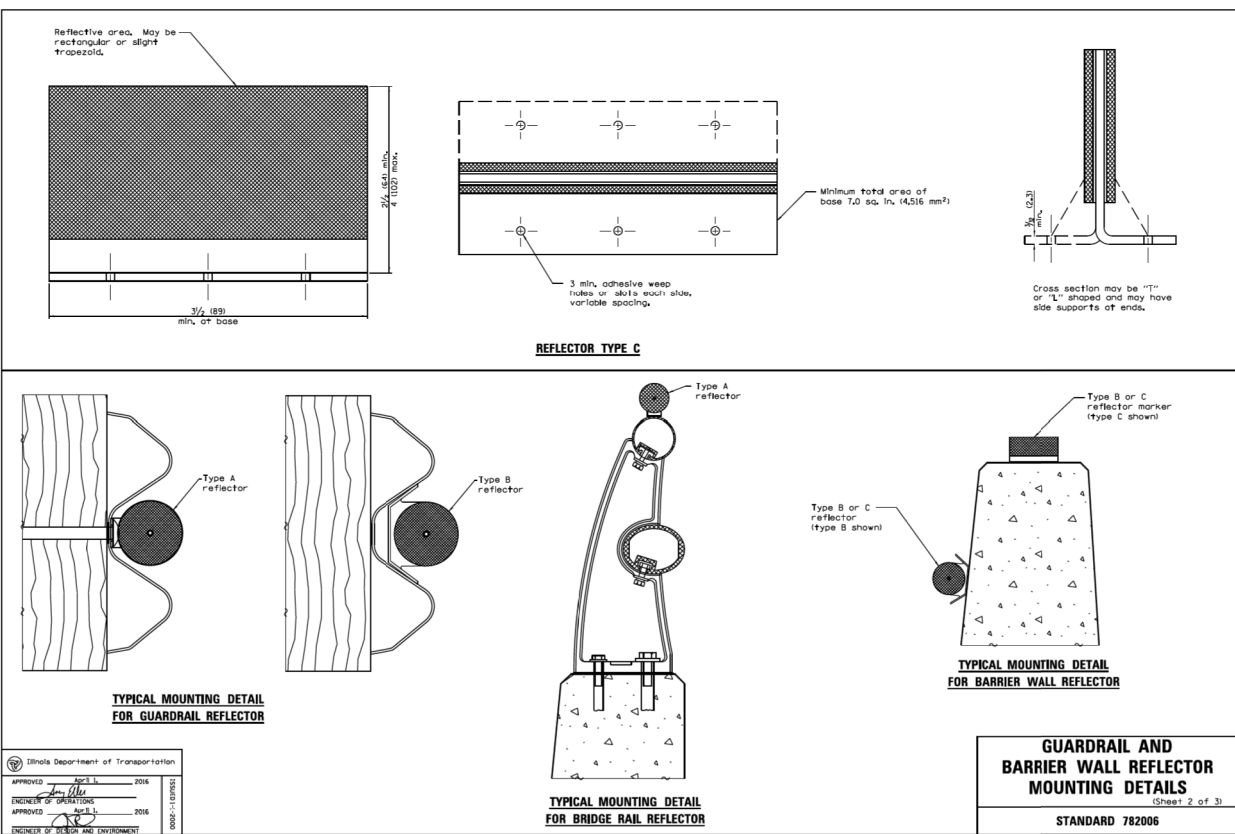
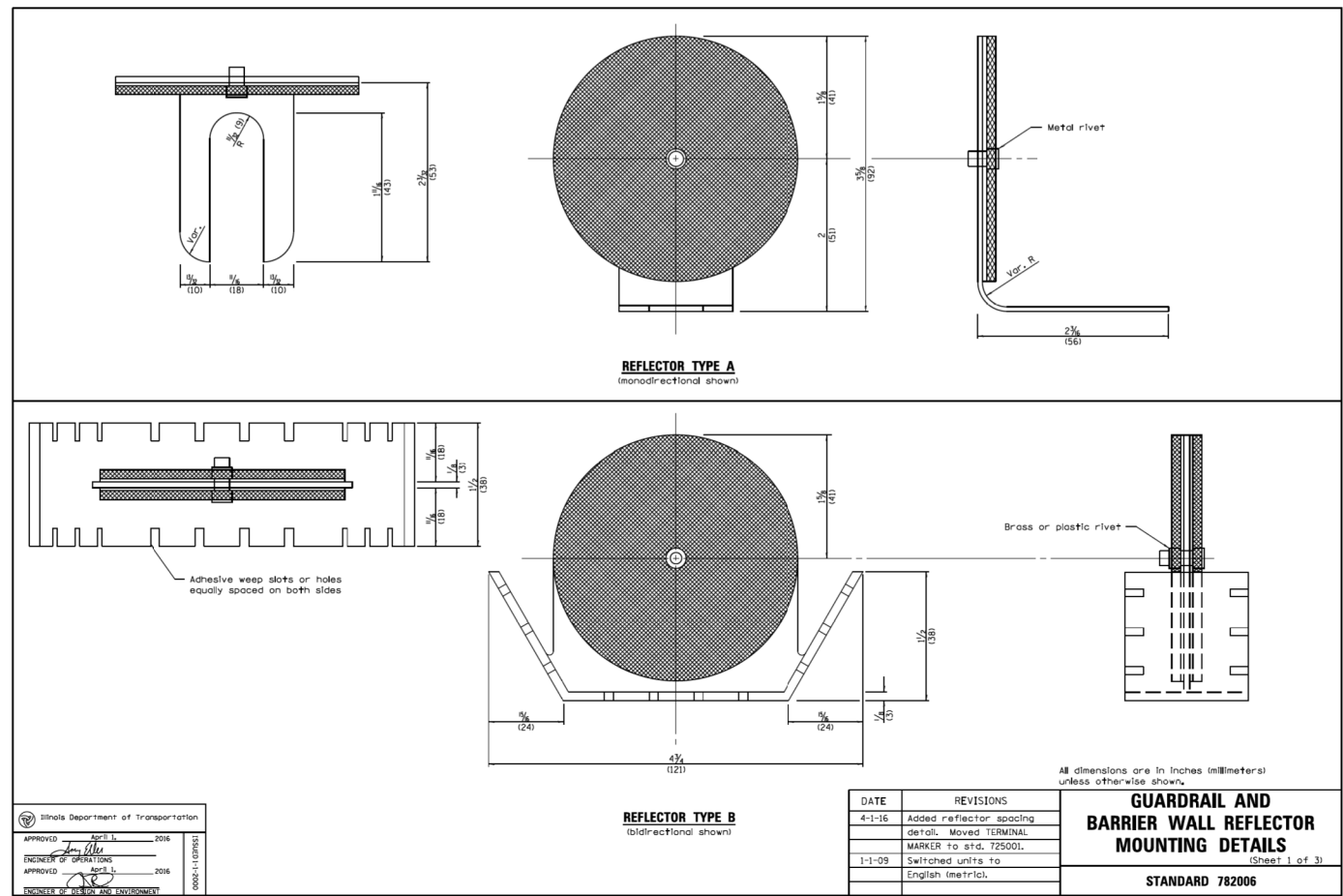
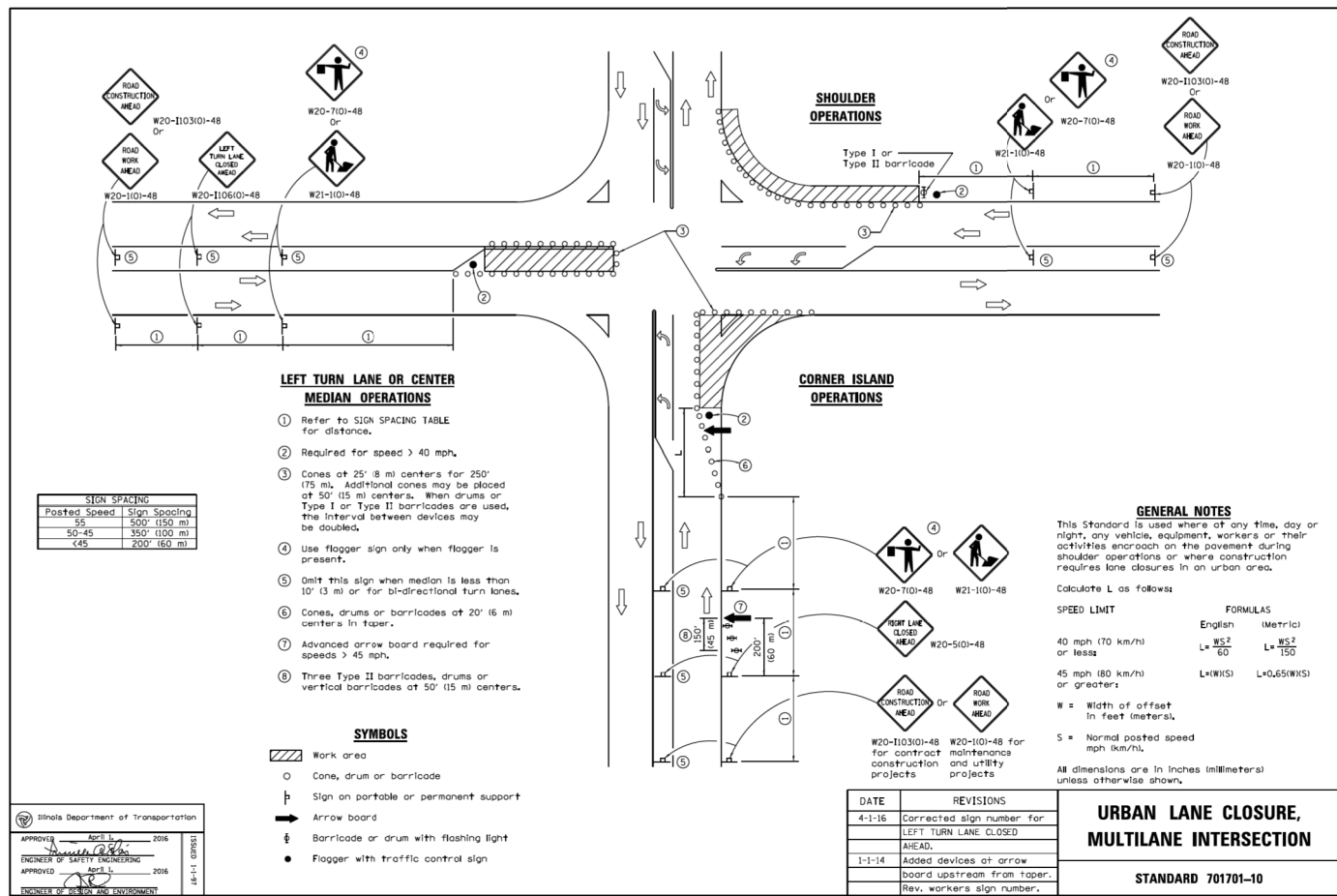
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STANDARD DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	SD-5
CDOT PROJECT NO.	E-6-650	35	OF 411



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EJM ENGINEERING, INC.
45 South Wells Street Suite 1000
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30 N. LASALLE STREET
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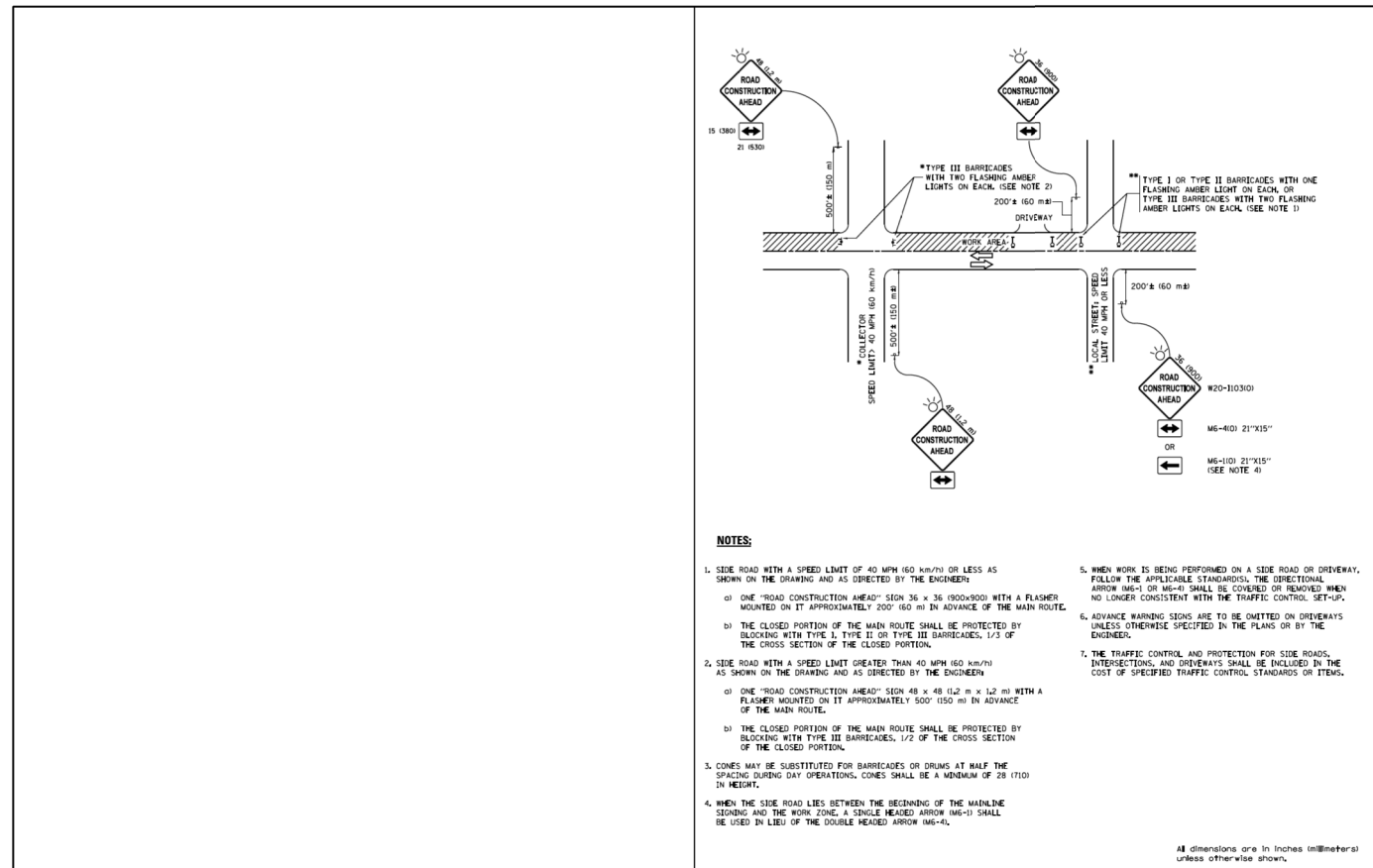
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CHECKED	SA	REVISIONS	-		
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

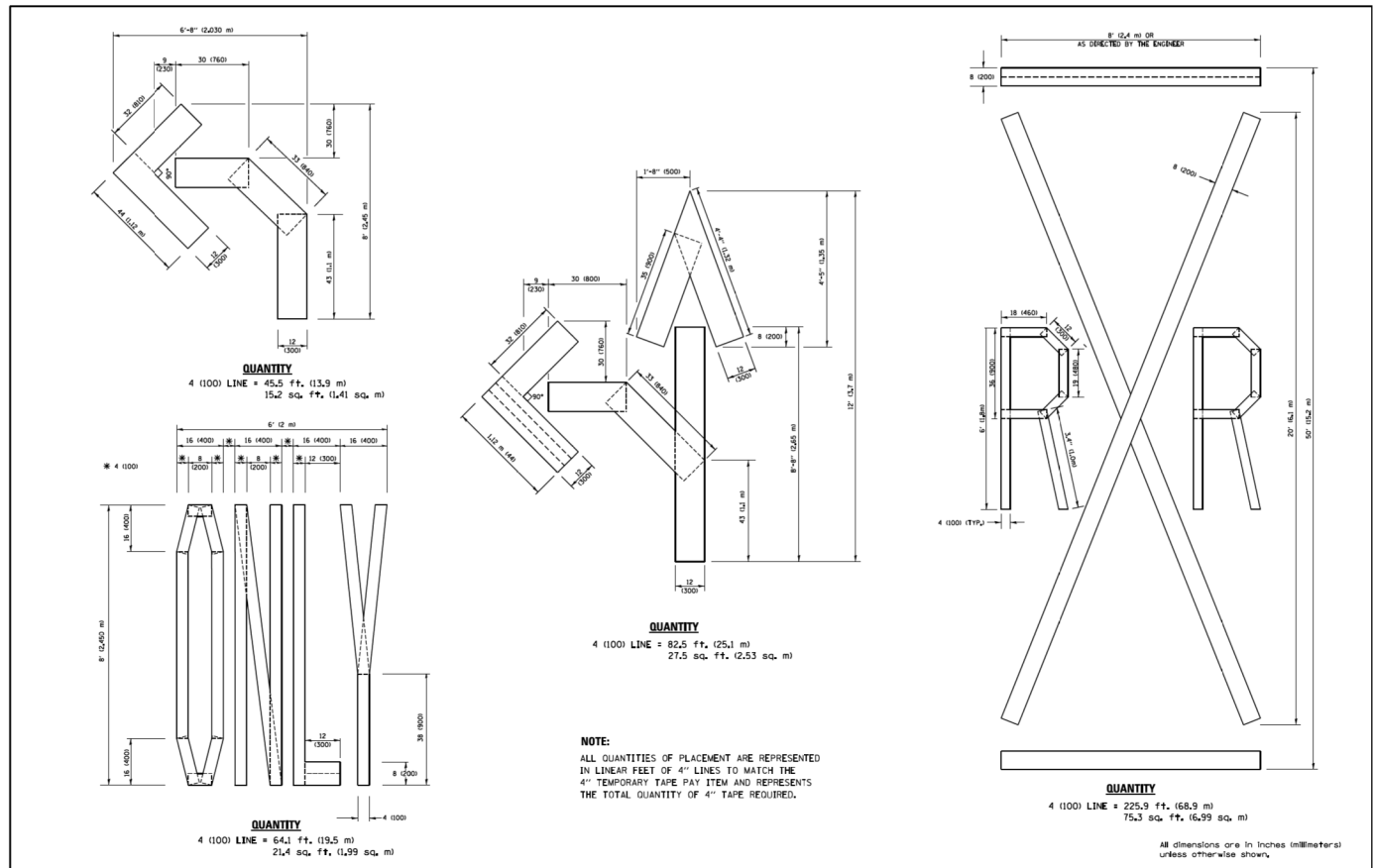
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STANDARD DETAILS
(STRUCTURE NO. 016-6030)

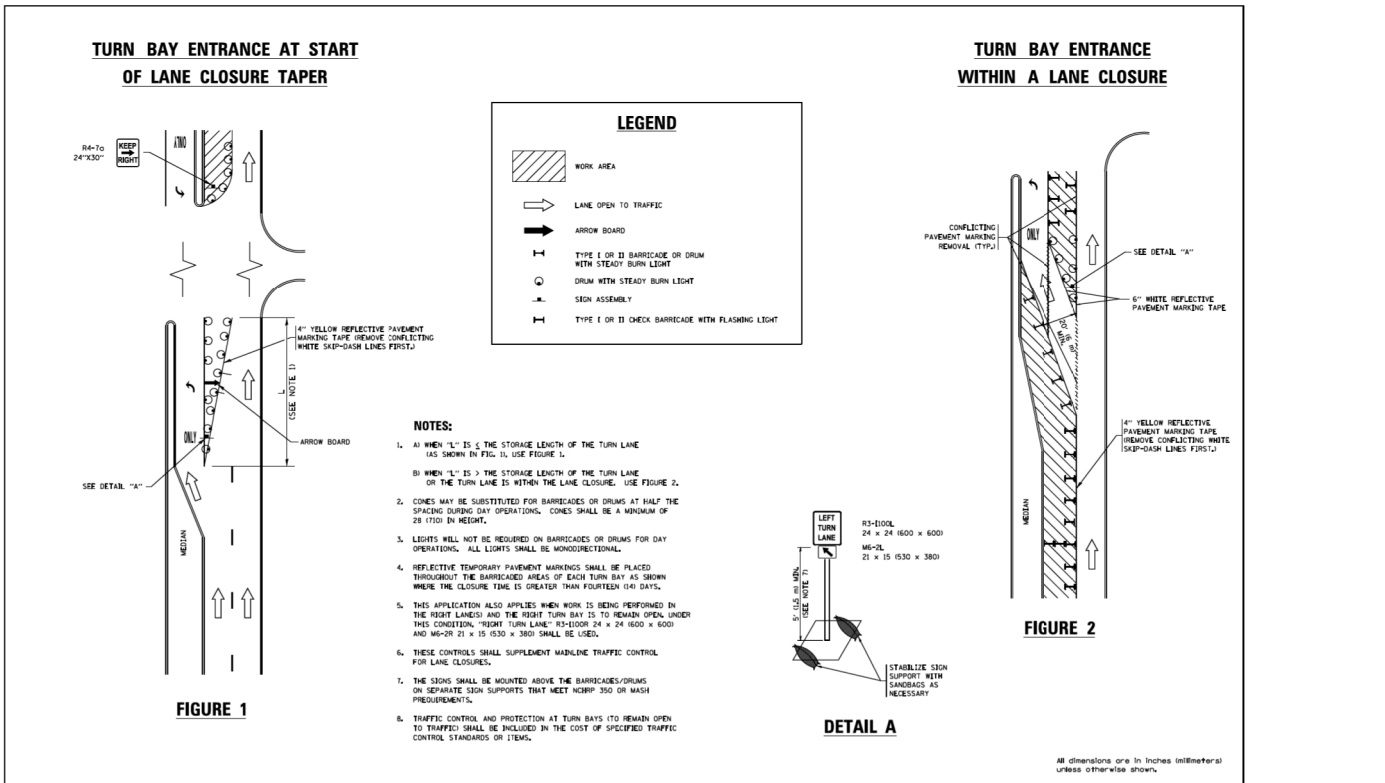
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0341	09-E0534-00-BR/CDOT	COOK	SD-6
CDOT PROJECT NO. E-6-650			36 OF 411



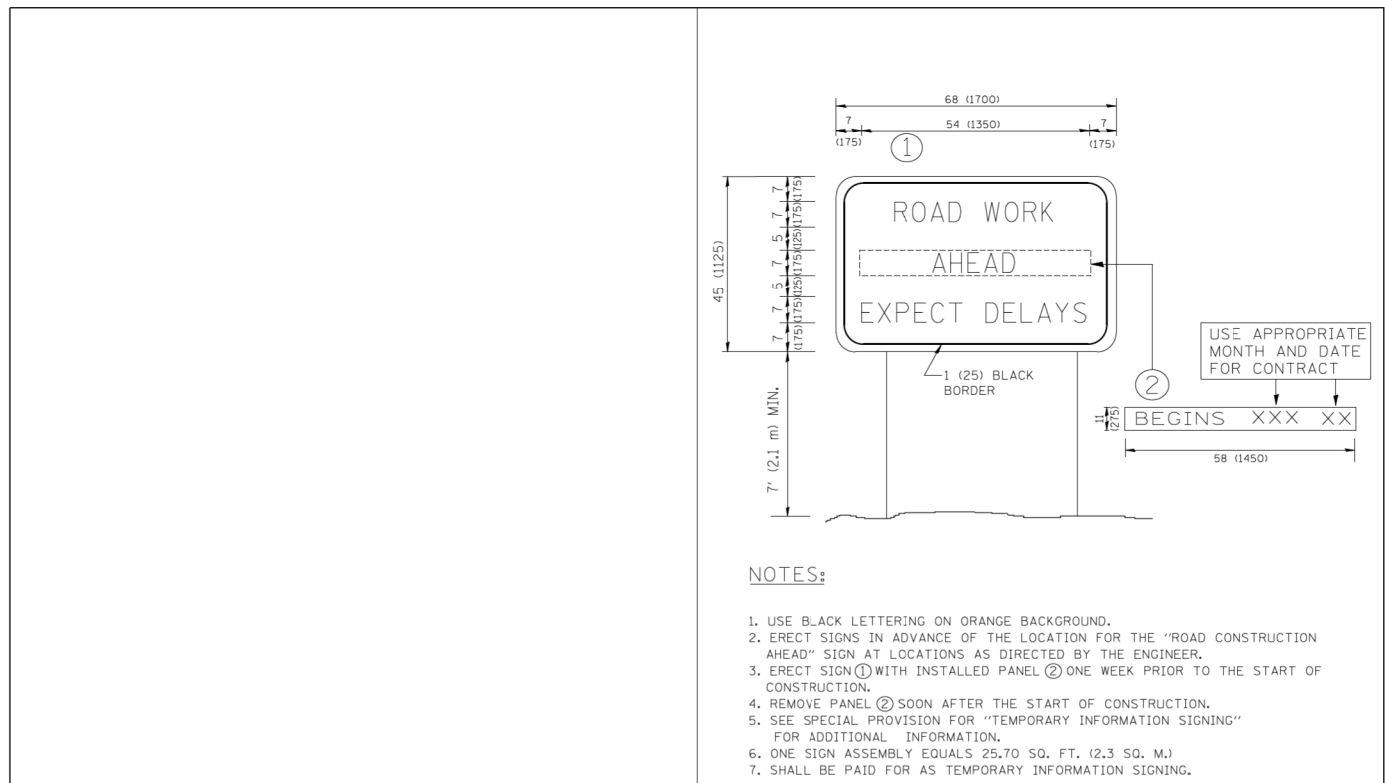
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FILE NAME: ...	USER NAME: ...	DESIGNED: ...	REVISIONS: ...	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS	SHEET NO. 1 OF 1 SHEETS	SCALE: NONE	SECTION: ...	COUNTY: ...	TOTAL SHEETS: ...
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EJM EJM ENGINEERING, INC.
41 South Wells Street Suite 1000
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USER NAME = sadhikari	DESIGNED CS	REVISIONS -
PLLOT SCALE = N.T.S.	CHECKED SA	REVISIONS -
PLLOT DATE = 8/7/2017	DRAWN CS	REVISIONS -
	CHECKED RI	REVISIONS -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

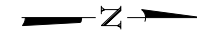
STANDARD DETAILS

F.A.P. RTE. 0341	SECTION 09-E0534-00-BR/CDOT	COUNTY COOK	SHEET NO. SD-7
CDOT PROJECT NO. E-6-650			37 OF 411

LEGEND

- ① THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE)
- ② THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW)
- ③ THERMOPLASTIC PAVEMENT MARKING - LINE 4" (6' DASH-18' SKIP WHITE)
- ④ THERMOPLASTIC PAVEMENT MARKING - LINE 6" (2' DASH-6' SKIP WHITE)
- ④g THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE)
- ⑤ THERMOPLASTIC PAVEMENT MARKING - LINE 8" (WHITE)
- ⑥ THERMOPLASTIC PAVEMENT MARKING - LINE 12" (WHITE)
- ⑦ THERMOPLASTIC PAVEMENT MARKING - LINE 24" (WHITE)
- ⑧ THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS
- ⑨ POLYUREA PAVEMENT MARKING TYPE I - LINE 4" (6' SKIP-18' DASH WHITE)
- ⑩ POLYUREA PAVEMENT MARKING TYPE I - LINE 4" (YELLOW)
- ⑪ POLYUREA PAVEMENT MARKING TYPE I - LINE 8" (WHITE)
- ⑪g POLYUREA PAVEMENT MARKING TYPE I - LINE 6" (2' DASH - 6' SKIP WHITE)
- ⑫ POLYUREA PAVEMENT MARKING TYPE I - LINE 12" (WHITE)
- ⑬ POLYUREA PAVEMENT MARKING TYPE I - LINE 4" (WHITE)
- SIGN POST

MATCHLINE
SEE PMK-2



EXISTING TO REMAIN

N. LAKE SHORE DRIVE

E. LOWER WACKER DRIVE

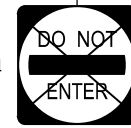
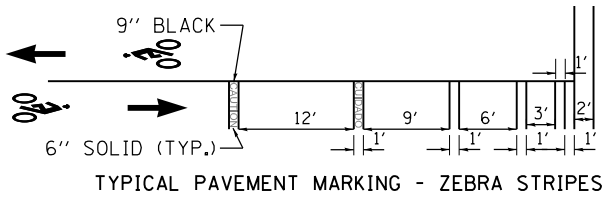
REMOVE,
STORE,
REINSTALL

W1-8R

POLYUREA

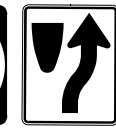
MATCHLINE
SEE PMK-3

BKE/PED PATH



R5-1

REMOVE



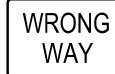
R4-8
24X30

SPECIAL



M6-2R

REMOVE,
STORE,
REINSTALL



R5-1a

EXISTING TO REMAIN

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EJM ENGINEERING, INC.
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FAX: (312) 782-1884

USER NAME = sadhikar1	DESIGNED CS	REVISED -
	CHECKED SA	REVISED -
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 1/23/2018	CHECKED RI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

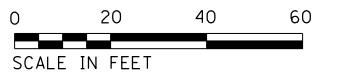
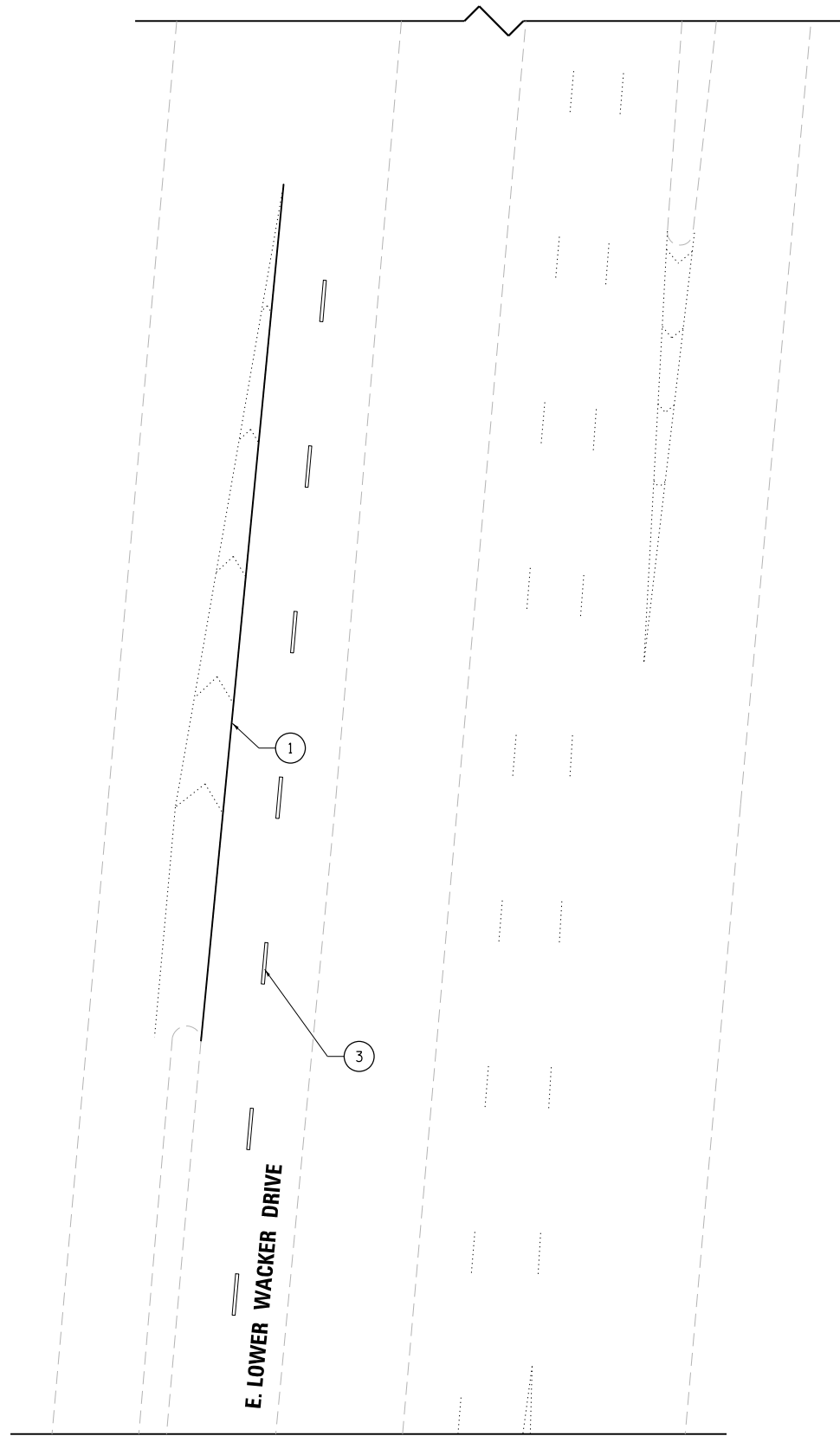
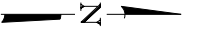
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PAVEMENT MARKING AND SIGNING PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	PMK-1
CDOT PROJECT NO. E-6-650			38 OF 411

LEGEND

- ① THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE)
- ② THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW)
- ③ THERMOPLASTIC PAVEMENT MARKING - LINE 4" (6' SKIP-18' DASH WHITE)
- ④ THERMOPLASTIC PAVEMENT MARKING - LINE 6" (2' SKIP-6' DASH WHITE)
- ⑤ THERMOPLASTIC PAVEMENT MARKING - LINE 8" (WHITE)
- ⑥ THERMOPLASTIC PAVEMENT MARKING - LINE 12" (WHITE)
- ⑦ THERMOPLASTIC PAVEMENT MARKING - LINE 24" (WHITE)
- ⑧ THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS
- ⑨ POLYUREA PAVEMENT MARKING TYPE I - LINE 4" (6' SKIP-18' DASH WHITE)
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- ⑫ POLYUREA PAVEMENT MARKING TYPE I - LINE 12" (WHITE)
- ⑬ POLYUREA PAVEMENT MARKING TYPE I - LINE 4" (WHITE)
- SIGN POST



MATCHLINE
SEE PMK - 1

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EJM EJM ENGINEERING, INC.
41 South Wells Street Suite 1000
Chicago, Illinois 60607

wsp WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

USER NAME =	CStoczynski	DESIGNED	CS	REVISED	-
CHECKED	SA	REVISIONS		REVISED	-
PLOT SCALE =	N.T.S.	DRAWN	CS	REVISED	-
PLOT DATE =	6/23/2017	CHECKED	RI	REVISED	-

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

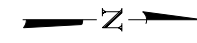
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PAVEMENT MARKING AND SIGNING PLAN
(STRUCTURE NO. 016-6030)

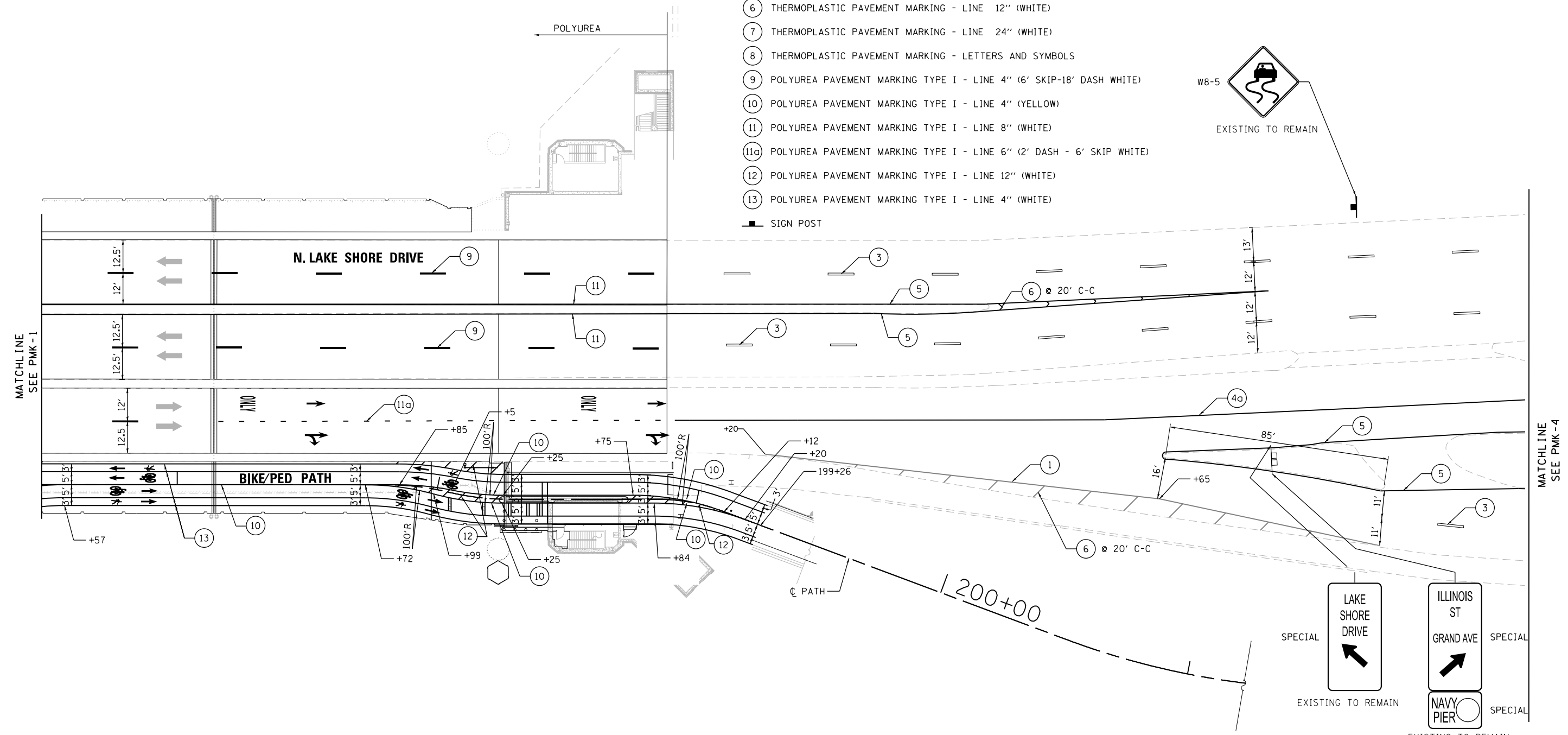
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	PMK-2
CDOT PROJECT NO. E-6-650			39 OF 411

LEGEND

- ① THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE)
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- SIGN POST

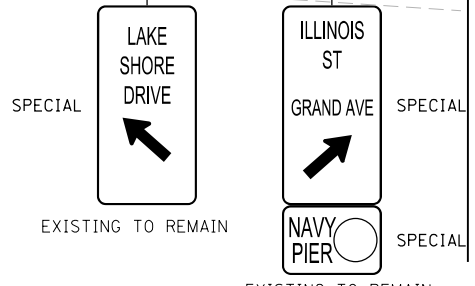


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EXISTING TO REMAIN



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SEE PMK-1

MATCHLINE
SEE PMK-4



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EJM ENGINEERING, INC.
41 South Wabash Street Suite 1000
Chicago, Illinois 60607

wsp WSP USA Inc.
30 N. LASALLE STREET
SUITE 4000
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USER NAME = sadhikari	DESIGNED CS	REVISED -
CHECKED SA	REVISIED -	
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 1/23/2018	CHECKED RI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

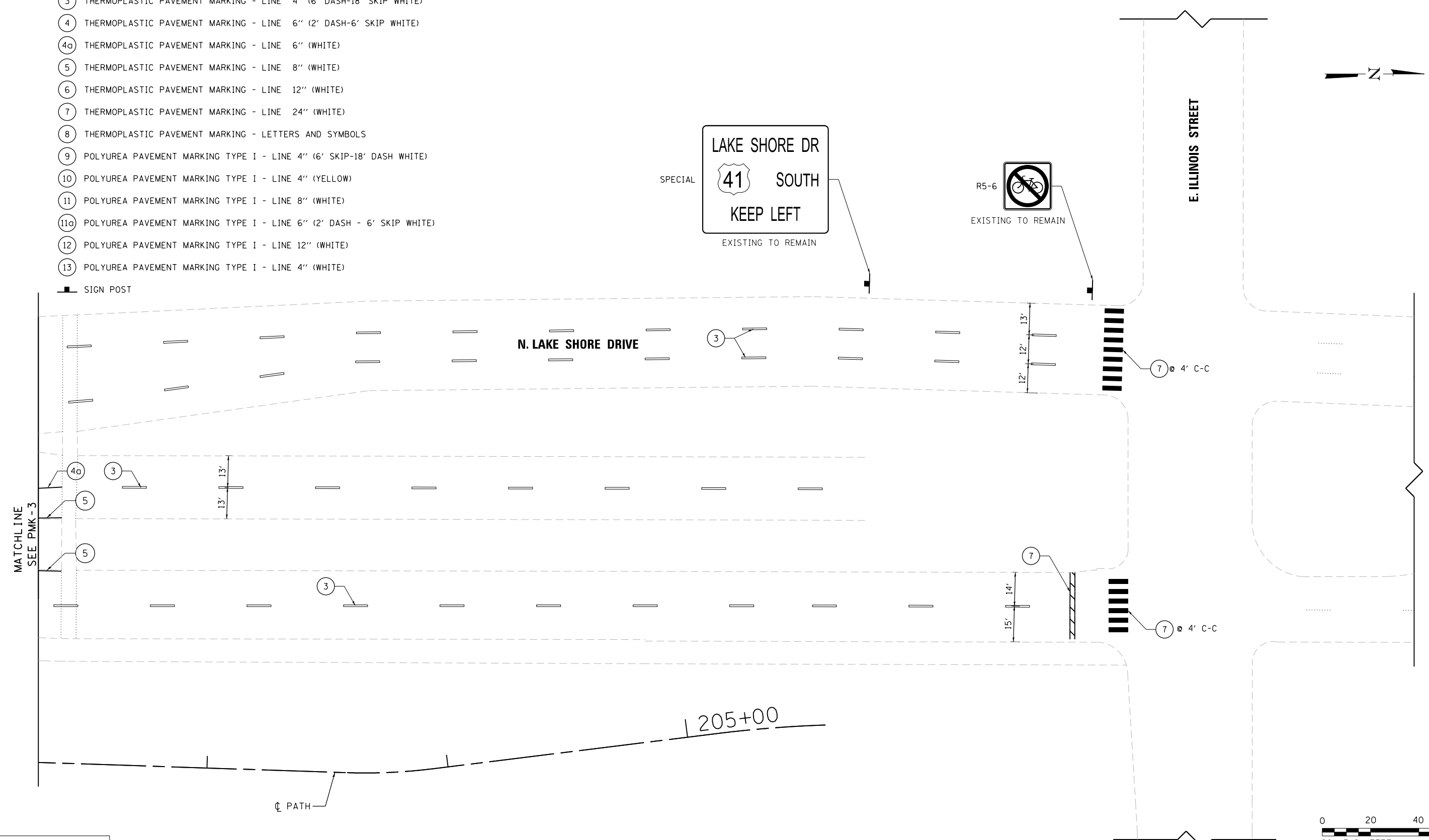
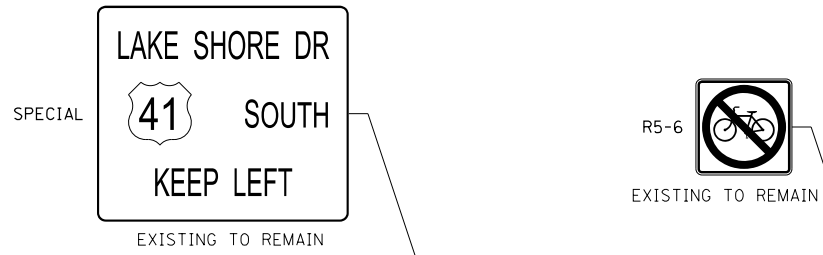
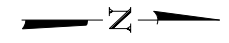
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PAVEMENT MARKING AND SIGNING PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	PMK-3
CDOT PROJECT NO. E-6-650			40 OF 411

LEGEND

- ① THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE)
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- ⑬ POLYUREA PAVEMENT MARKING TYPE I - LINE 4" (WHITE)
- SIGN POST



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EJM EJM ENGINEERING, INC.
 41 South Wells Street Suite 1000
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wsp WSP USA Inc.
 30 N. LASALLE STREET
 SUITE 4200
 CHICAGO, IL 60602
 TEL: (312) 782-8150
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USER NAME = sadhikar1	DESIGNED CS	REVISED -
CHECKED SA	REVISIONS	REVISED -
PLOT SCALE = N.T.S.	DRAWN CS	REVISED -
PLOT DATE = 8/10/2017	CHECKED RI	REVISED -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

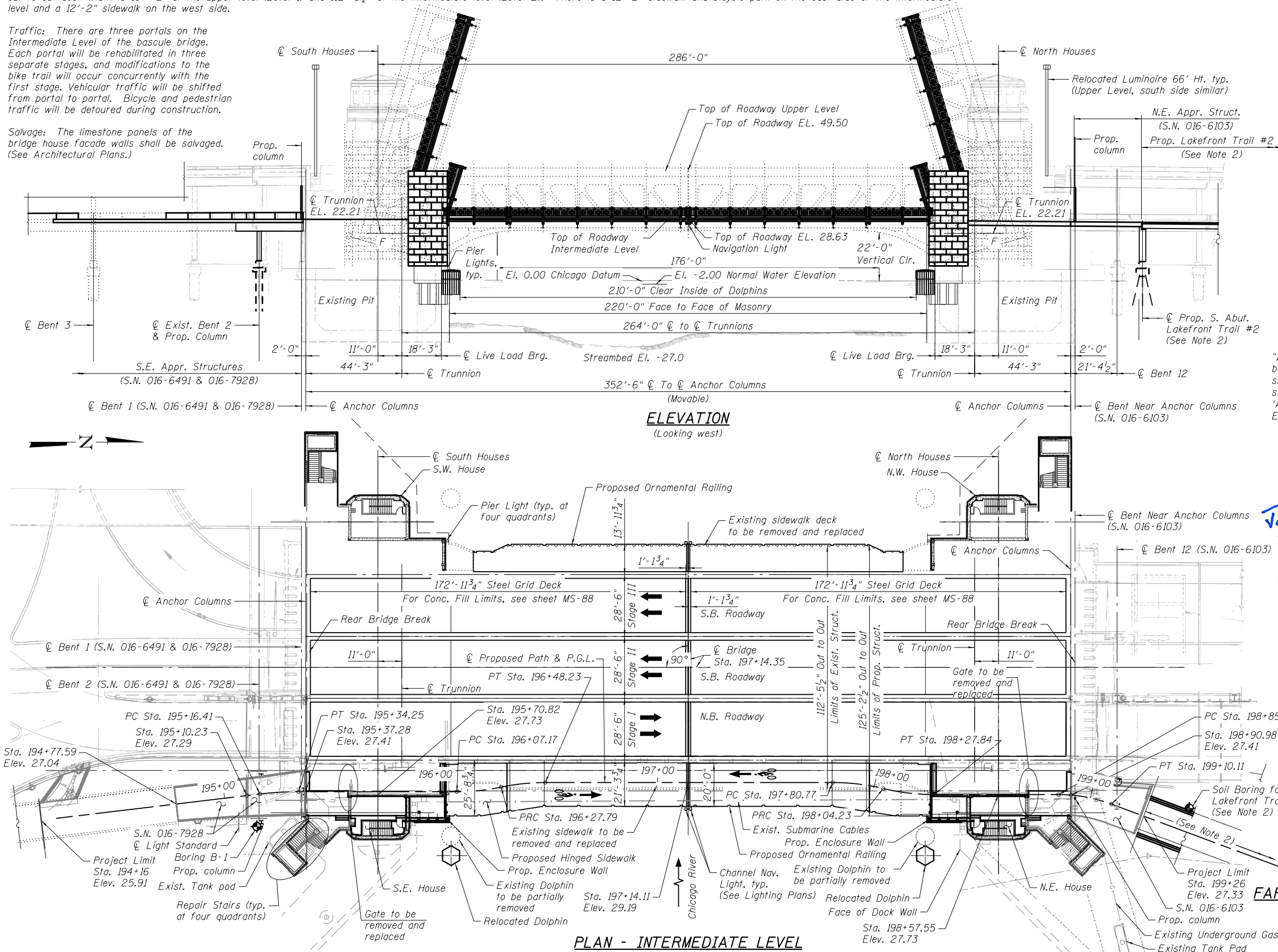
PAVEMENT MARKING AND SIGNING PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	PMK-4
CDOT PROJECT NO. E-6-650			41 OF 411

Bench Mark: Elev. 27.50' CP4-CRS - Second level, found chisel "cross" in concrete on pedestrian ramp 40' north of N.E. Bridge Tower.
 Existing Structures: Lake Shore Drive Bascule Bridge over the Main Branch of the Chicago River (S.N. 016-6030) was constructed in 1937. Deteriorated members were repaired in 1969. The roadway deck was repaired in 1982 under Section No. 2121.12 C.S. The west sidewalk was repaired in 1983 under a separate project. Under another project in 1983, Section No. 2121.10 C.S., a sidewalk was added to the intermediate level of the bridge and the roadway was widened at the upper level. Construction occurred in 1987. The bridge length is approximately 352'-6" from centerline to centerline of anchor columns. The out to out deck width is 107'-2" at the upper level (Level 1) and 112'-5 1/2" at the intermediate level (Level 2). There is a 12'-2" sidewalk and bicycle path on the east side of the intermediate level and a 12'-2" sidewalk on the west side.

Traffic: There are three portals on the Intermediate Level of the bascule bridge. Each portal will be rehabilitated in three separate stages, and modifications to the bike trail will occur concurrently with the first stage. Vehicular traffic will be shifted from portal to portal. Bicycle and pedestrian traffic will be detoured during construction.

Salvage: The limestone panels of the bridge house facade walls shall be salvaged. (See Architectural Plans.)



DESIGN SPECIFICATIONS

- 2014 AASHTO LRFD Design Specification 7th Ed. with 2016 Interims (Proposed Intermediate Level framing, brackets, hinged sidewalk and support framing)
- 2007 AASHTO LRFD Movable Highway Bridge Design Specifications 2nd Ed. with 2008 Interims (Proposed hinged sidewalk)
- 2002 AASHTO 17th Ed. (Exist. Structure Rehabilitation)
- 1998 AASHTO Standard Specifications for Movable Highway Bridges with Interim Revisions through 1995 (Exist. Structure Rehabilitation)
- 1997 AASHTO Guide Specifications for Design of Pedestrian Bridges

LOADING HS20-44 (ROADWAY)

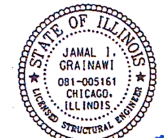
No allowance for future wearing surface

LOADING (PATH)

Uniform live load for 100 psf

- Notes:
- All elevations shown are based on the Chicago City Datum.
 - Work shall be coordinated with adjacent contracts (see special provisions).
 - For Design Stresses, Seismic Data, Index of Sheets and Total Bill of Material, see sheet MS-2.
 - For Scope of Work and General Notes, see sheet MS-3.
 - For Waterway Information, Clearance Diagram and Profile Grades, see sheet MS-4.

"I certify that to the best of my knowledge, information and belief, this design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of the structure and complies with the requirements of the 'AASHTO Standard Specifications for Highway Bridges, 17th Edition' and 'AASHTO LRFD Design Specification, 7th Edition.'"



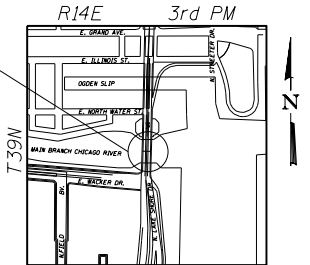
Jamal Grainawi Date 04/18/18



Moussa A. Issa Date 04/18/18

JAMAL GRAINAWI, S.E.
 II. Lic. No. 081-005161
 Expires 11-30-2018
 Applies to MS-1 thru MS-13, MS-18 thru MS-28, MS-40 thru MS-41, MS-46 thru MS-106 & MS-111 thru MS-113

MOUSSA A. ISSA, S.E.
 II. Lic. No. 081-005738
 Expires 11-30-2018
 Applies to MS-14 thru MS-17, MS-29 thru MS-39, MS-42 thru MS-45 & MS-107 thru MS-110



LOCATION SKETCH

**GENERAL PLAN AND ELEVATION
 LAKE SHORE DRIVE OVER THE
 MAIN BRANCH OF THE CHICAGO RIVER
 PUBLIC WATER
 FAP RTE. 0341-SEC. 09-E0534-00-BR/CDOT
 COOK COUNTY
 STATION 197+14.35
 S.N. 016-6030**

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USER NAME = lopezgonzalez	DESIGNED - PJJ	REVISED -
PLOT SCALE = N.T.S.	CHECKED - IJL	REVISED -
PLOT DATE = 6/27/2017	DRAWN - JCM/PJJ	REVISED -
	CHECKED - JIG	REVISED -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-1
CDOT PROJECT NO. E-6-650			42 OF 411

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 MS-3 General Data II
 MS-4 General Data III
 MS-5 Stage I: Removal Details
 MS-6 Stage I: Construction Details
 MS-7 Stage II: Removal Details
 MS-8 Stage II: Construction Details
 MS-9 Stage III: Removal Details
 MS-10 Stage III: Construction Details
Fixed Part:
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 MS-12 House Removal Details II
 MS-13 House Removal Details III
 MS-14 House Removal Details IV
 MS-15 House Removal Details V
 MS-16 Dock Level South Houses Wall Repairs
 MS-17 Dock Level North Houses Wall Repairs
 MS-18 House Foundation Plan
 MS-19 House General Plan - Dock Level
 MS-20 House Elevations & Sections
 MS-21 House Slab Details - Dock Level
 MS-22 House Walls Details I
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 MS-27 House Steel Details II
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 MS-29 Intermediate Level House General Work Plan
 MS-30 Intermediate Level House Repair Plan
 MS-31 Intermediate Level House Wall Openings
 MS-32 Intermediate Level South Houses Wall Repairs
 MS-33 Intermediate Level North Houses Wall Repairs
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 MS-44 Upper Level N. Parapet Repair Elevations and Details
 MS-45 Upper Level N. Parapets Replacement Sections and Details
 MS-46 Upper Level Light Pole Support Details
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 MS-48 Cross Sections
 MS-49 Steel Details I
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 MS-51 Steel Details III
 MS-52 Steel Details IV
 MS-53 Steel Details V
 MS-54 Steel Details VI
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 MS-57 Framing Plan - Intermediate Level N. Leaf
 MS-58 Sidewalk Partial Plan - Intermediate Level
 MS-59 Sidewalk Bracing Plan - Intermediate Level
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 MS-61 Sidewalk Bracket at Panel Pt. 2, 4, 6 & 8
 MS-62 Sidewalk Bracket at Panel Pt. 10
 MS-63 Sidewalk Bracket at Panel Pt. 12
 MS-64 Bracket Conn. at Panel Pt. 0 & 2 N. Leaf
 MS-65 Bracket Conn. at Panel Pt. 0 & 2 S. Leaf
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 MS-73 Floorbeam 0-OS Details II
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 MS-79 Floorbeam Repair Details II
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 MS-92 Sidewalk FRP Deck Plan Intermediate Level
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 MS-94 Sidewalk FRP Deck Details II Intermediate Level
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 MS-96 West Sidewalk Railing Modification
 MS-97 Balance Calculation I
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 MS-100 Existing Heel Lock Support Removal Details
 MS-101 Plan of Heel Lock Support
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 MS-105 Heel Lock Support Details IV
 MS-106 Heel Lock Support Details V
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 MS-108 North Pit Wall Repairs
 MS-109 South Pit Plan Repairs
 MS-110 South Pit Wall Repairs
 MS-111 Dolphin Plan and Details
 MS-112 Fender System Details
 MS-113 Boring Logs

TOTAL BILL OF MATERIAL

CODE NO.	ITEM	UNIT	TOTAL
50102400	CONCRETE REMOVAL	CU YD	46.0
50157300	PROTECTIVE SHIELD	SQ YD	3,418
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	26,970
50901720	BICYCLE RAILING	FOOT	13
52000050	PREFORMED JOINT SEAL 4"	FOOT	40
52100520	ANCHOR BOLTS, 1"	EACH	48
59000200	EPOXY CRACK INJECTION	FOOT	63
CDOT5030020	HIGH PERFORMANCE CONCRETE STRUCTURES	CU YD	184.3
CDOT5030030	HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES	CU YD	70.7
CDOT5870010	PROTECTIVE CONCRETE SEALER	SQ YD	462
X0321963	MICRO-PILES	EACH	14
X0323433	MICROPILE PROOF LOAD TEST	EACH	2
X0325391	EXPANDED POLYSTYRENE FILL	CU YD	24.8
X0326519	STEEL RAILING REMOVAL	FOOT	427
X0326537	TIMBER BUMPERS	FOOT	124
X5010110	REMOVAL OF EXISTING FILLED GRID DECK	L SUM	1
X5030221	CONCRETE ENCASEMENT	CU YD	54.6
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	448,340
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	190
Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	199
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	37
*****	BALANCING OF BRIDGE AND ALTERATION OF COUNTERWEIGHTS	L SUM	1
*****	BALANCING OF HINGED SIDEWALK	L SUM	1
*****	BRIDGE OPERATION AND MAINTENANCE	L SUM	1
*****	CLEANING AND PAINTING EXISTING STEEL STRUCTURES AS DIRECTED BY THE COMMISSIONER	SQ FT	2,000
*****	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION NO. 1	L SUM	1
*****	COUNTERWEIGHT MATERIAL, HINGED SIDEWALK	L SUM	1
*****	DOLPHINS	EACH	2
*****	FURNISHING AND ERECTING 5" CONCRETE FILLED GRATING	SQ FT	10,712
*****	FURNISHING AND ERECTING 5" OPEN GRID DECK	SQ FT	15,236
*****	FURNISHING AND ERECTING FRP GRATING	SQ FT	7,834
*****	FURNISHING AND ERECTING STRUCTURAL STEEL, FIELD DISCOVERED CONDITIONS REPAIRED AS DIRECTED BY THE COMMISSIONER	POUND	10,000
*****	FURNISHING AND ERECTING STRUCTURAL STEEL, BRIDGE HOUSE	L SUM	1
*****	FURNISHING AND ERECTING STRUCTURAL STEEL, HINGED SIDEWALK	L SUM	1
*****	FURNISHING AND ERECTING STRUCTURAL STEEL, MOVABLE PART	L SUM	1
*****	REMOVAL OF DETERIORATED CONNECTORS AND REPLACEMENT WITH HIGH STRENGTH BOLTS	EACH	1,000
*****	REMOVAL OF EXISTING STRUCTURES, HINGED SIDEWALK	L SUM	1
*****	REPLACEMENT OF HEEL LOCK SUPPORT	L SUM	1
*****	SHOP ASSEMBLY OF FABRICATED STEEL FOR INSPECTION	L SUM	1
*****	SHORING TOWERS	L SUM	1
*****	STRUCTURAL STEEL REPAIRS	POUND	34,789
*****	TIMBER FENDERS IN PLACE	FOOT	112

DESIGN STRESSES

FIELD UNITS (New Construction)
 f'c = 3,500 psi
 f'c = 5,000 psi (superstructure concrete)
 fy = 60,000 psi (reinforcement)
 fy = 50,000 psi (AASHTO M270, Gr. 50)
 fy = 46,000 psi (AASHTO A500, Gr. B)

FIELD UNITS (Existing Construction)
 f'c = 3,500 psi
 fy = 60,000 psi (reinforcement)
 fy = 50,000 psi (AASHTO M223, Gr. 50)
 fy = 36,000 psi (carbon steel)
 fy = 45,000 psi (silicon steel)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Horizontal Bedrock Acceleration Coefficient (A) = 0.025g
 Site Coefficient (S) = 1.0

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WSP
 WSP USA Inc.
 30 N. LASALLE STREET
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 CHICAGO, IL 60602
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USER NAME = lopezgonzalez	DESIGNED - PJL	REVISED -
	CHECKED - JIG	REVISED -
PLOT SCALE = N.T.S.	DRAWN - PJL	REVISED -
PLOT DATE = 7/12/2017	CHECKED - JIG	REVISED -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**GENERAL DATA I
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-2
CDOT PROJECT NO. E-6-650			43 OF 411

SCOPE OF WORK

1. Remove and replace open steel and concrete filled grid deck in intermediate level.
2. Repair parapets with epoxy injections and concrete repairs on upper level and intermediate level.
3. Remove and replace railings on east and west sides of intermediate level of the movable span with a replica of the ornamental (historic) railing.
4. Remove existing 2" concrete filled metal deck and replace with FRP deck at east and west sidewalks.
5. Remove and replace east sidewalk brackets, stringers, lateral bracing, and connections.
6. Remove and replace hinged sidewalk, link arm and select supporting fixed superstructure elements. Balance hinged sidewalk (see special provisions).
7. Fill landings adjacent to bridge houses to accommodate proposed bike path alignment.
8. Relocate existing light standards at south of northeast bridge house and north of southeast bridge house on fixed portion of upper level.
9. Repair bridge house and enclosure walls.
10. Clean and paint the following elements:
 - 1) Truss connections and repaired areas, bottom chords over counterweight pit;
 - 2) Floorbeams, brackets, stringers, lateral bracing, and all connections at Intermediate Level;
 - 3) Live load bearings.
11. Remove and replace selected bottom gusset plates within movable span.
12. Balance bridge (see special provisions).
13. Remove and replace selected stringers in intermediate level of the movable span.
14. Repair concrete encasement at the northwest floorbeams and southwest fascia beams in upper level.
15. Remove and replace or repair select floorbeams in intermediate level of the movable span.
16. Remove and replace select lateral bracing and connections to the floorbeams from Floorbeam 0-0 to 14-14.
17. Perform truss repair or strengthening to selected elements.
18. Perform repairs to anchor columns by removing and replacing deteriorated rivets and adjust the gap at anchor columns to maximum of 1/4".

SCOPE OF WORK (CONT.)

19. Remove and replace all intermediate level center breaks and supporting brackets except at west sidewalk.
20. De-water counterweight pits as required to perform substructure repairs. The cost is incidental to the repair work. Note: Any de-watering performed must be in compliance with all environmental regulations including those of MWRD.
21. Rehabilitate timber bumpers in the counterweight pits.
22. Partially remove and replace existing southeast and northeast dolphins. Clean and paint steel caps of southwest and northwest dolphins.
23. Secure loose sections and replace deteriorated sections of the timber fender system to the river piers. Remove and replace timber fender system at S.E. and N.E. relocated enclosure walls.
24. Remove fencing, lighting, and timber walkway impacted by relocated bridge house enclosure wall.
25. Repair select columns in the fixed spans.
26. Perform repairs to reinforced concrete sidewalks.
27. Perform structural concrete repairs and epoxy inject cracks of substructure elements.
28. Repair broken posts at southeast and southwest bridge house stairwells (see Arch. Plans).
29. Relocate electrical equipment and replace exposed electrical motor control equipment with enclosed modern equipment conforming to National Electrical Code requirements (see Elec. Plans).
30. Modify decorative bridge lighting and clean and paint light standards attached to upper level framing (see Lighting Plans).
31. Repair red navigation light and damaged junction box at river pier near southeast bridge house (see Lighting Plans).
32. Repair non-functioning light fixtures attached to the bottom of the stringers in fixed Spans 1 & 3 of upper level (see Lighting Plans).
33. Rehabilitate machinery brake and replace heavily corroded fasteners throughout the drive system (see Mech. Plans).
34. For additional scope, see respective disciplines drawings and special provisions.

LEGEND

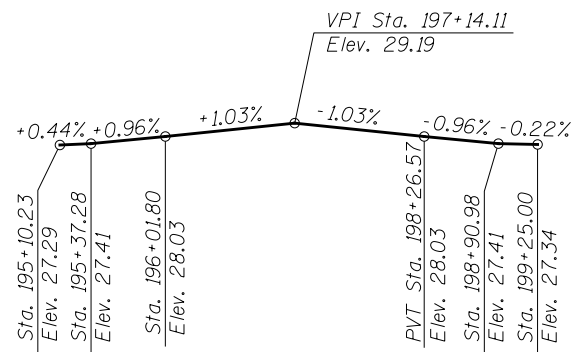
- R&R Remove & replace
- Truss Panel Point (PP) designation
- ⊙ Exist. fastener to remain
- Hole to match existing location
- New hole
- N.E. Northeast
- S.E. Southeast

GENERAL NOTES

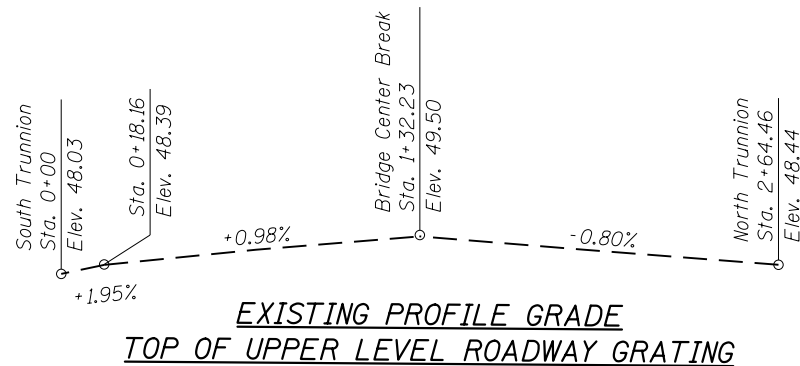
1. Calculated weight of Structural Steel = 45,270 lbs. (Bridge House)
= 84,340 lbs. (Hinged Sidewalk)
= 478,520 lbs. (Movable Part)
2. All structural steel shall be AASHTO M270 Grade 50, unless otherwise noted.
3. Fasteners shall be ASTM A325 Type 1, hot dipped galvanized bolts. Bolts 7/8" φ, holes 15/16" φ, unless otherwise noted.
4. All structural steel tubes shall be ASTM A500 Grade B or C. Steel tube sections noted as NTR and the stiffening ribs at the base plate for the link arm post shall have a minimum longitudinal Charpy V-notch (CVN) energy of 15 lb.-ft. at 40°F (Zone 2) before galvanizing. All steel tubes shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. All welds on tube sections to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code and the Standard Specifications.
5. No field welding is permitted except as specified in the contract documents.
6. Reinforcement bars designated (E) shall be epoxy coated.
7. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
8. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8" (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
9. Protective Concrete Sealer shall be applied to the designated areas of the walls and seats at the hinged sidewalk rear break.
10. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
11. All new and existing steel shall be cleaned and painted utilizing Paint System 1 - Oz/E/U. The color of the final finish coat shall match Sherwin Williams Standard Glossy Color SW2717 (Bordeaux). Cost included in the cost of "Cleaning and Painting Structural Steel Location No. 1."
12. All new structural steel shall be shop primed, and faying surfaces shall be cleaned to base metal prior to erection.
13. The existing structural steel shall be cleaned per near white blast cleaning, SSPC-SP10, and painted as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures."
14. The existing structural steel in areas that will be in contact with new steel shall be cleaned and painted as specified in the Special Provision for "Cleaning and Painting Contact Surface Areas of Existing Steel Structures."
15. As determined by the Commissioner, inaccessible areas shall be omitted from cleaning and painting.
16. All motors and machinery shall be properly protected from cleaning and painting work. No painting may be performed until protection has been approved by the Engineer.
17. All temporary items within the waterway must be removed.
18. All elevations refer to Chicago City Datum.

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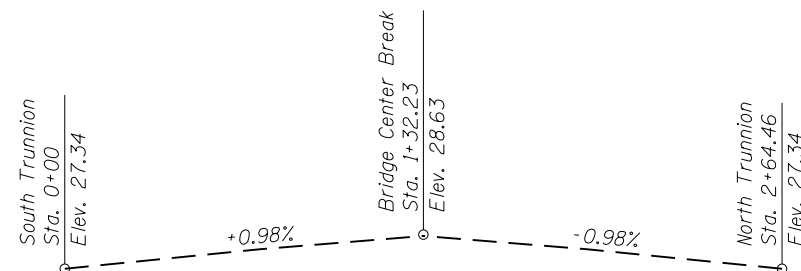
 WSP USA Inc. 30 N. LASALLE STREET SUITE 4000 CHICAGO, IL 60602 TEL: (312) 782-8150 FAX: (312) 782-1884	USER NAME = lopezgonzalez	DESIGNED - PJL	REVISED -	CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING	LAKEFRONT BICYCLE TRAIL #3 OVER THE CHICAGO RIVER	GENERAL DATA II (STRUCTURE NO. 016-6030)	F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
	PLOT SCALE = N.T.S.	DRAWN - PJL	REVISED -				0341	09-E0534-00-BR/CDOT	COOK	MS-3
	PLOT DATE = 1/22/2018	CHECKED - JIG	REVISED -				CDOT PROJECT NO. E-6-650		44 OF 411	



PROFILE GRADE
(Along ϕ Proposed Path)



EXISTING PROFILE GRADE
TOP OF UPPER LEVEL ROADWAY GRATING



EXISTING PROFILE GRADE
TOP OF INTERMEDIATE LEVEL ROADWAY GRATING

WATERWAY INFORMATION

Drainage Area = -		Low Beam Elevation: 601.69 (22.21 CCD)							
Flood	Freq. Yr	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
Design	50	-	Exist.	Prop.	577.48*	Exist.	Prop.	Exist.	Prop.
Base	100	-	-	-	583.61**	-	-	-	-
Overtopping	>500	-	-	-	***	-	-	-	-
Max. Calc.	-	-	-	-	-	-	-	-	-

Note: The Chicago River has no natural flow and flow frequencies. It is an artificial channel with flows controlled by the MWRDGC. Frequencies are shown for illustration purposes only of normal design.

- * Normal Elevation
- ** Record elevation on 8/16/97
- *** Cannot overtop

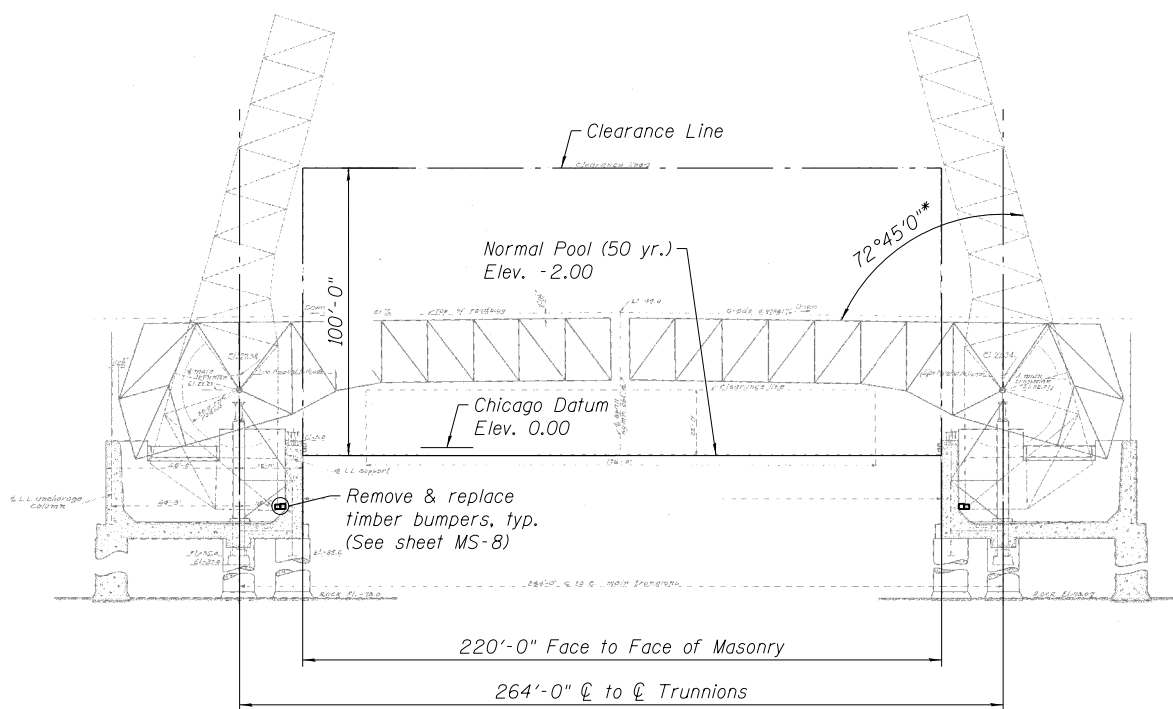
Geometry of existing substructure will not be modified.
The waterway opening clear width will not be altered.

Conversion between USGS sea level datum and CCD datum. CCD = +579.48 feet above sea level

DESIGN SCOUR (Q₁₀₀ & Q₅₀₀) ELEVATION TABLE

Design Scour Elevation (USGS/CCD)	S. Pier	N. Pier
	556.5/-23*	555.5/-24*

*Actual Low River Bed Elevation at Pier Location



CLEARANCE DIAGRAM
(OPEN POSITION)
(See General Plan & Elevation for Closed Position)

* Maximum angle of opening shall be limited to 72°45'0" to maintain adequate clearance between the railing of the Proposed Path and the House.

The original maximum angle of opening was 73°30'0" corresponding to a clearance of 100 ft. above Chicago Datum.

The proposed maximum angle of opening maintains 100 ft. clearance above Normal Pool.

REFERENCE DRAWINGS

Drawing
Line (Clearance) Diagram

Sheet No.
1660300740

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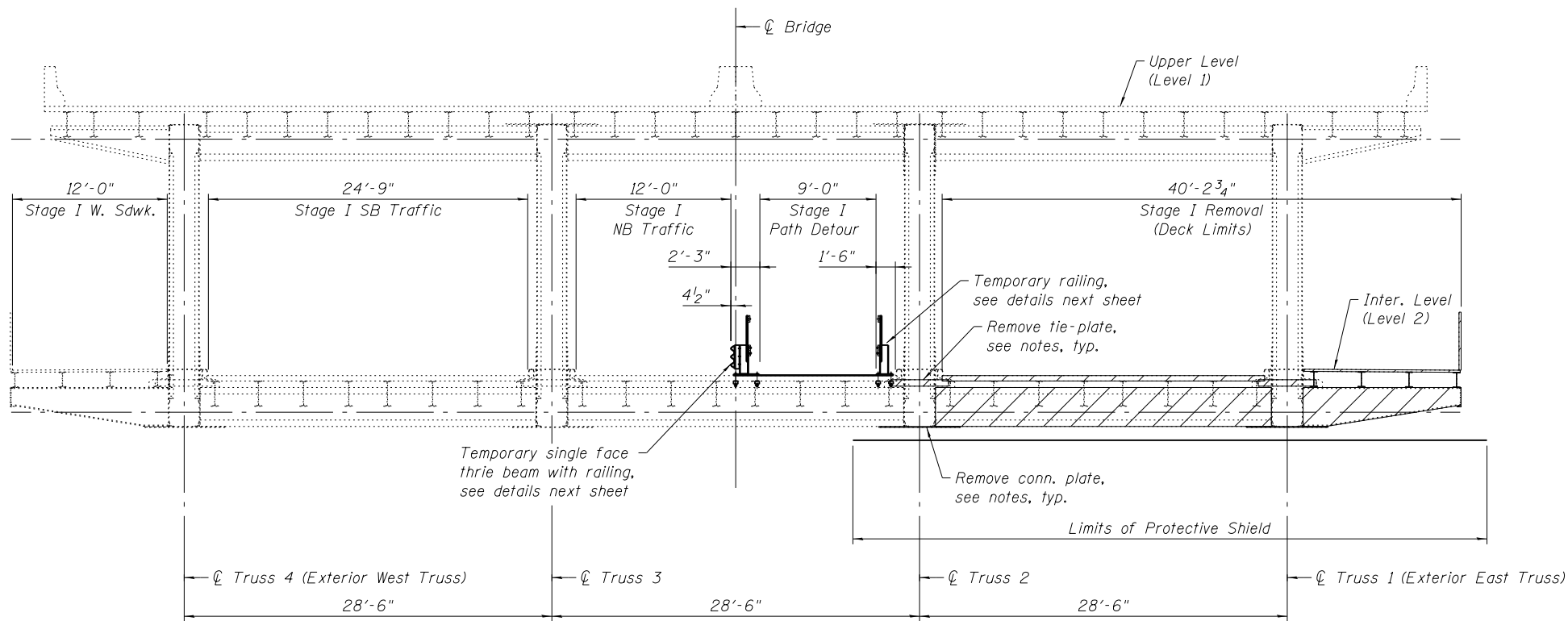
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CITY OF CHICAGO
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DIVISION OF ENGINEERING

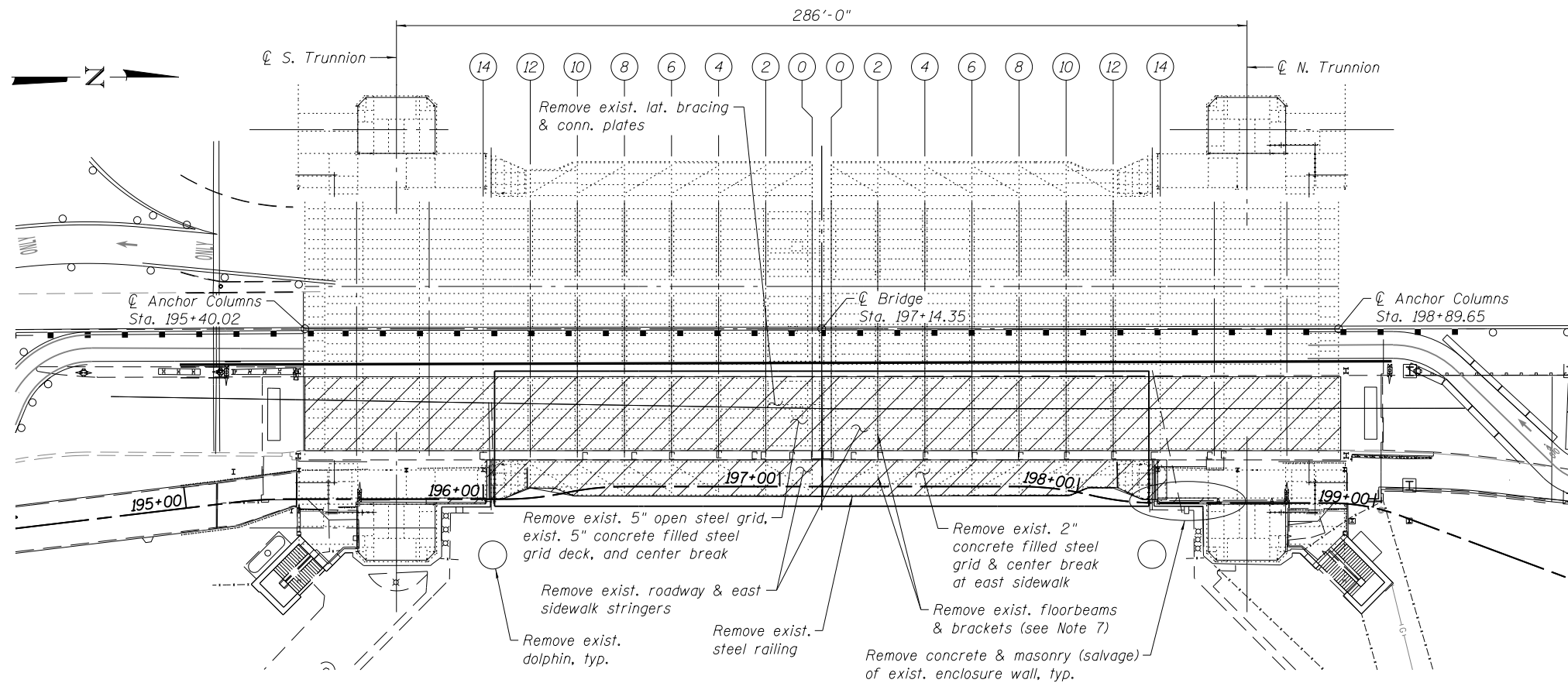
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

GENERAL DATA III
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-4
CDOT PROJECT NO. E-6-650			45 OF 411



STAGE I REMOVAL - MOVABLE SPAN
(Looking north)



STAGE I REMOVAL PLAN - INTERMEDIATE LEVEL

STAGE I TRAFFIC

1. Install Temporary Single Face Thrie Beam with Railing and Temporary Railing to locate Stage I Northbound Traffic and Path Detour.

STAGE I REMOVAL NOTES

1. Remove existing southeast and northeast dolphins.
2. Remove exist. steel railing at east sidewalk.
3. Remove existing 5" open deck grating & existing 5" concrete filled deck grating at roadway, existing 2" concrete filled deck grating at the east sidewalk, & remove center breaks.
4. Remove roadway and sidewalk stringers and connections from Floorbeam 12-12S to Floorbeam 12-12N.
5. Remove center lock machinery. Prior to removal of center lock machinery a temporary center lock shall be installed (see Mechanical plans and specifications).
6. Remove lateral bracing, connection plates, & center break machinery support beams.
7. Beginning at center break (Floorbeam 0-0), remove floorbeam and sidewalk bracket using the suggested sequence:
 - 1) Disconnect bottom connection plates (if not already removed with lateral bracing)
 - 2) Disconnect upper tie plates at each end
 - 3) Disconnect floorbeam angle connections
 - 4) Remove floorbeam and sidewalk bracket
 - 5) See the following sheet for erection sequence prior to repeating removal sequence at subsequent floorbeams.
8. Remove concrete & limestone panel of existing enclosure wall. Salvage limestone panels. For Concrete Removal details, see exist. bridge house removal sheets. For limestone panel removal, see Arch. Plans.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Filled Grid Deck	L. Sum	1
Protective Shield	Sq. Ft.	3,541

Quantity shown includes S. and N. leaves.

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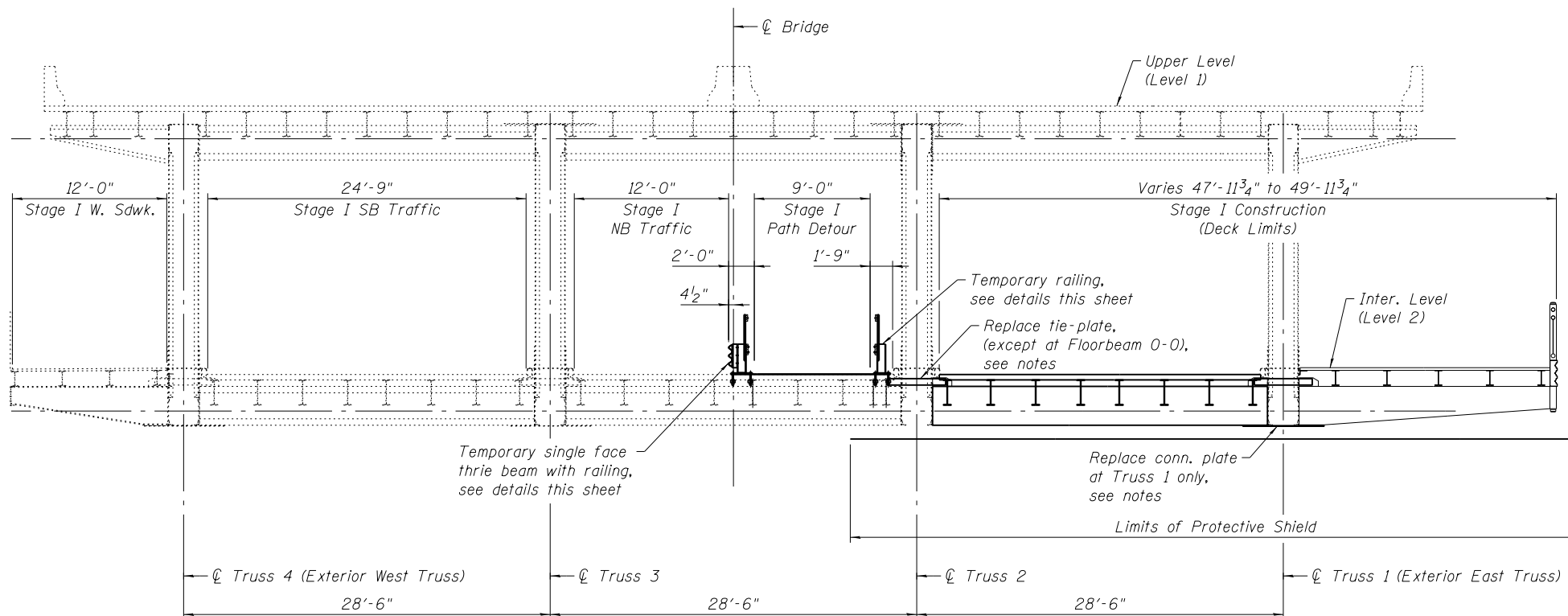
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STAGE I
REMOVAL DETAILS
(STRUCTURE NO. 016-6030)

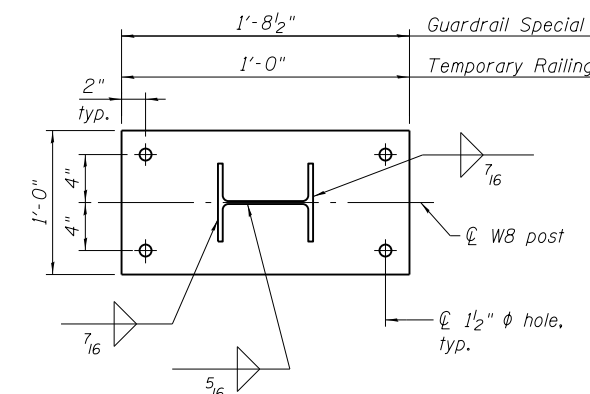
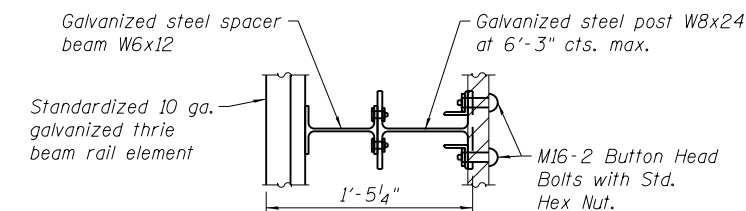
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-5
CDOT PROJECT NO. E-6-650			46 OF 411



STAGE I CONSTRUCTION - MOVABLE SPAN
(Looking north)

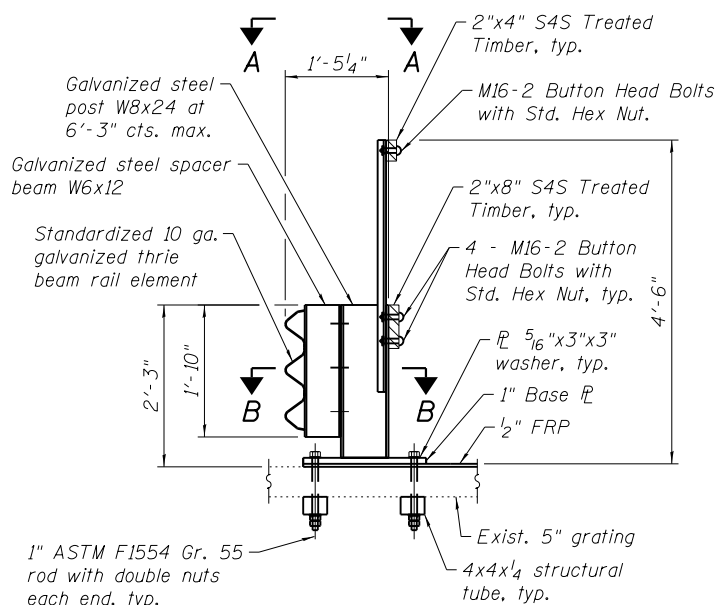
STAGE I CONSTRUCTION NOTES

- Beginning at center break (Floorbeam 0-0), erect floorbeam and sidewalk bracket using the suggested sequence:
 - Erect floorbeam and bracket and connection angles.
 - Connect upper tie plate at Truss 1 only for Floorbeam 0-0. Connect both upper tie plates at remainder of Floorbeams.
 - Connect bottom connection plate at Truss 1.
 - Once all the connections to the floorbeam and bracket are made at Truss 1 proceed to next floorbeam towards the rear and repeat removal and erection sequence.
- Install lateral bracing, connection plates, & center break machinery support beams.
- Install center lock machinery (see Mechanical plans and specifications).
- Erect roadway and sidewalk stringers, center break brackets, & connections from Floorbeam 10-10S to Floorbeam 10-10N.
- Perform bridge repairs to Truss 1 & 2. Clean & paint structure from Truss 1 to 2 and at east sidewalk.
- Install 5" open deck grating & 5" concrete filled deck grating at roadway, 2¹/₂" FRP deck at the east sidewalk, & install center breaks.
- Install ornamental railing at east sidewalk.
- Install southeast and northeast dolphins.
- Construct enclosure wall and deck. For details, see exist. bridge house removal sheets.

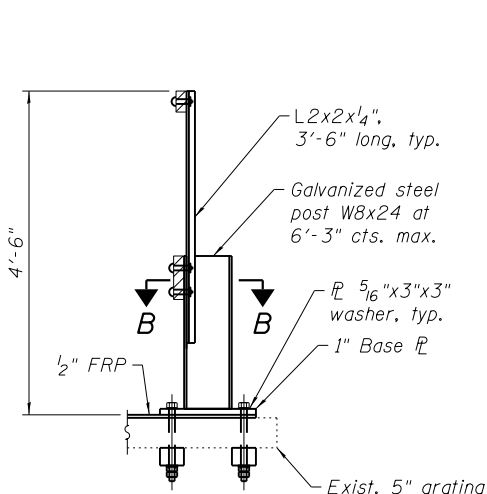


NOTES

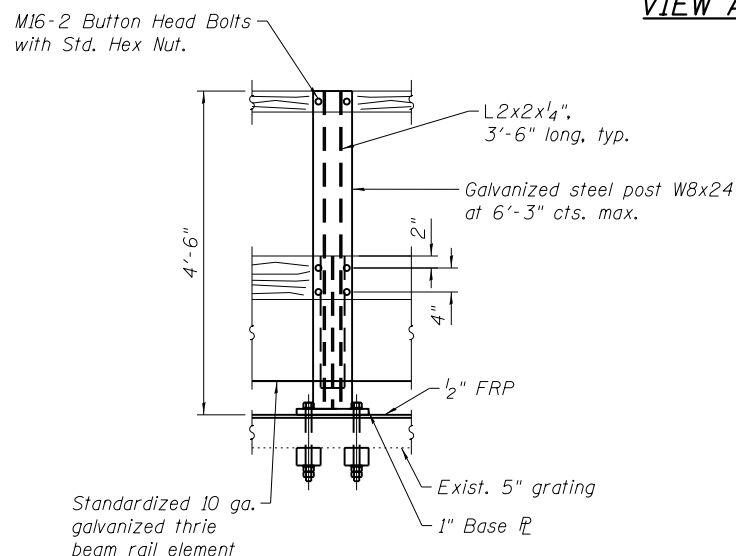
- Use of long-slotted holes in the longer direction of the base plate will be allowed.
- Cost of beam guide rail, including end sections and attachment type shall be included in the cost for Guardrail Special and Temporary Railing.
- FRP plates, treated timber railings, steel angles and attachment hardware shall be included in the cost of Guardrail Special and Temporary Railing.
- Under no circumstance shall the contractor be allowed to cut the main, cross or supplement bars in the existing grid deck. The Contractor shall be allowed to cut existing grid deck transverse bars for installation of anchor bolts. Cutting of main bars in existing grid deck and drilling/cutting into existing channel purlins shall only be permitted with Engineer's approval. Modify post locations and standard bolt hole locations in rail elements as required to meet the above criteria. Contractor shall be responsible for coordinating post spacing and anchor bolt/stud locations with steel grid and orthotropic deck shop drawings, steel barrier post spacing shall not exceed 6'-3".
- For limits of Guardrail Special and Temporary Railing see MOT Plans.



GUARDRAIL SPECIAL DETAIL
(at West)



TEMPORARY RAILING DETAIL
(at East)



ELEVATION

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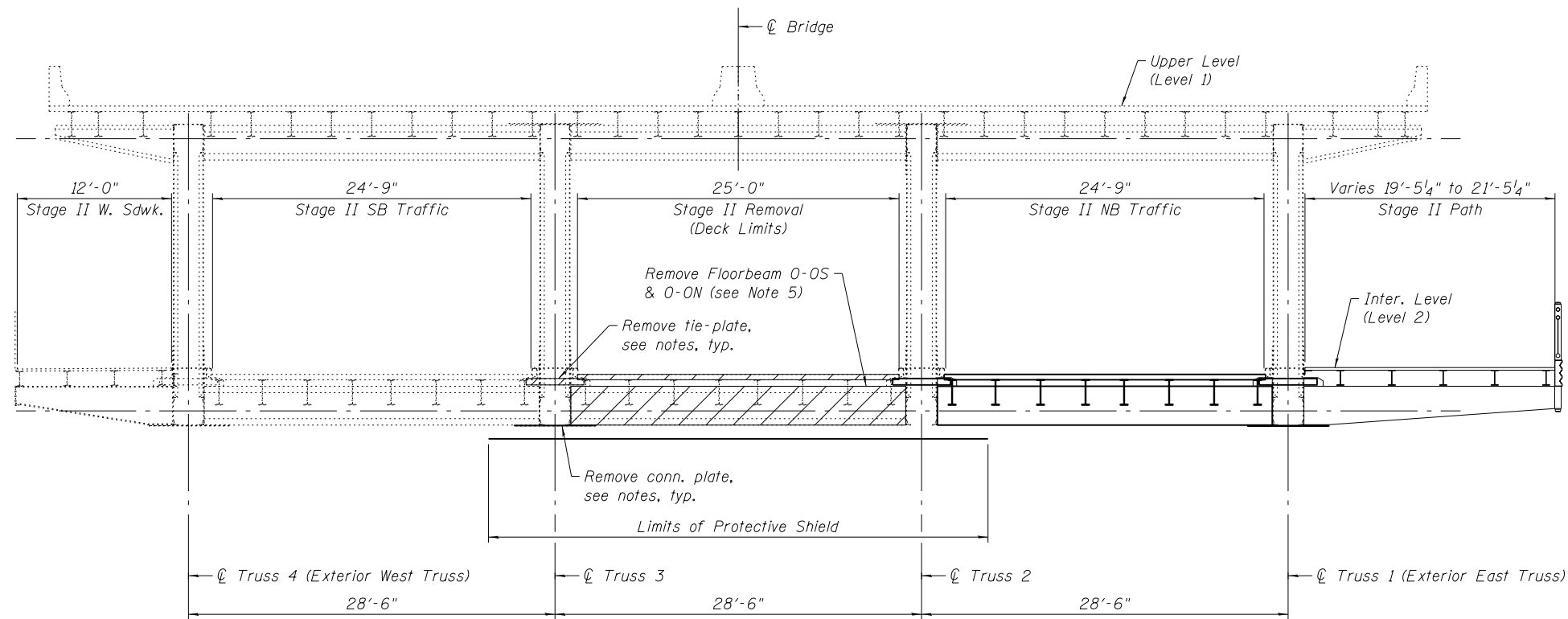
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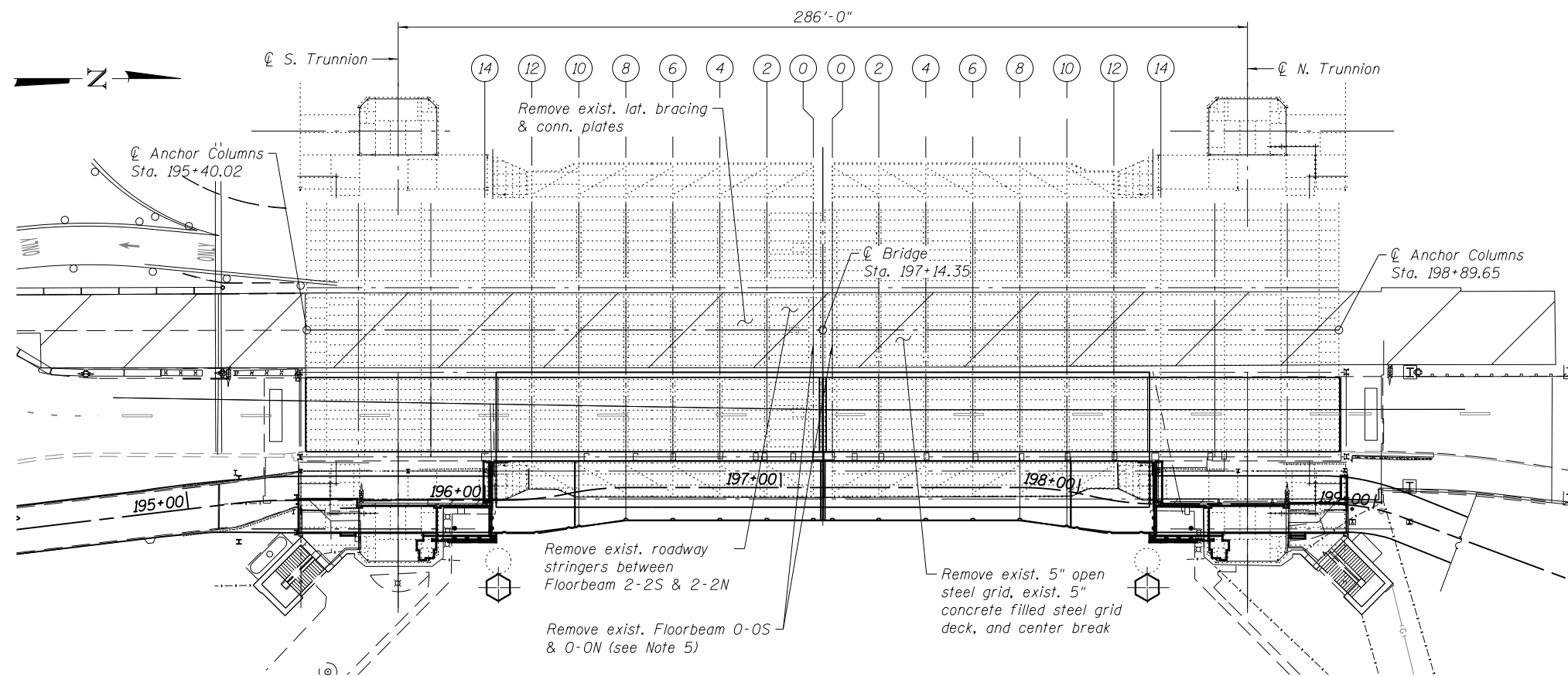
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STAGE I
CONSTRUCTION DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-6
CDOT PROJECT NO. E-6-650			47 OF 411



STAGE II REMOVAL - MOVABLE SPAN
(Looking north)



STAGE II REMOVAL PLAN - INTERMEDIATE LEVEL

STAGE II TRAFFIC

1. Restore bicycle and pedestrian access to path. Shift NB traffic to between Truss 1 & 2.

STAGE II REMOVAL NOTES

1. Remove existing 5" open deck grating & existing 5" concrete filled deck grating at roadway & remove center breaks.
2. Remove roadway stringers and connections from Floorbeam 2-2S to Floorbeam 2-2N.
3. Replace center lock machinery. Prior to removal of center lock machinery a temporary center lock shall be installed (see Mechanical plans and specifications).
4. Remove lateral bracing, connection plates, & center break machinery support beams.
5. Remove Floorbeam 0-0S and using the suggested sequence:
 - 1) Disconnect bottom connection plates (if not already removed with lateral bracing)
 - 2) Disconnect upper tie plates at Truss 3
 - 3) Disconnect floorbeam angle connections
 - 4) Remove floorbeam
 - 5) See the following sheet for erection sequence prior to repeating removal sequence at Floorbeam 0-0N.

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WSP USA Inc.
30 N. LASALLE STREET
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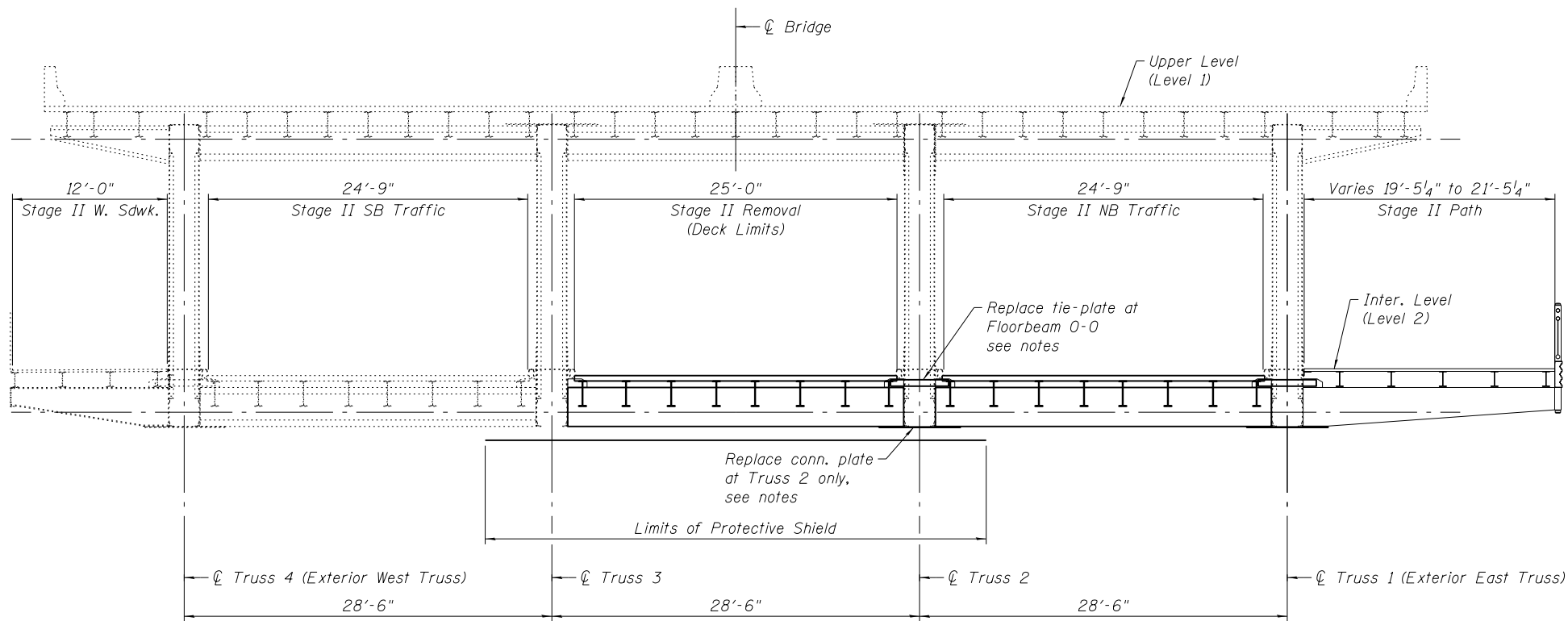
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STAGE II
REMOVAL DETAILS
(STRUCTURE NO. 016-6030)

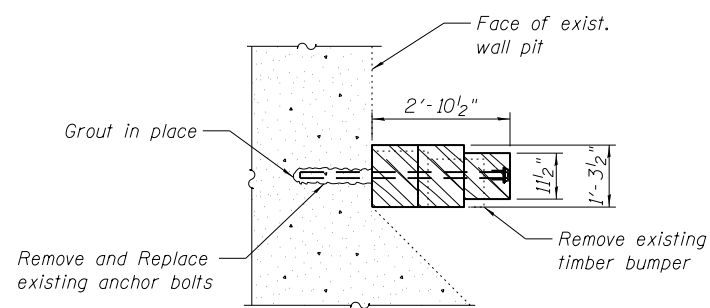
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0341	09-E0534-00-BR/CDOT	COOK	MS-7
CDOT PROJECT NO. E-6-650			48 OF 411



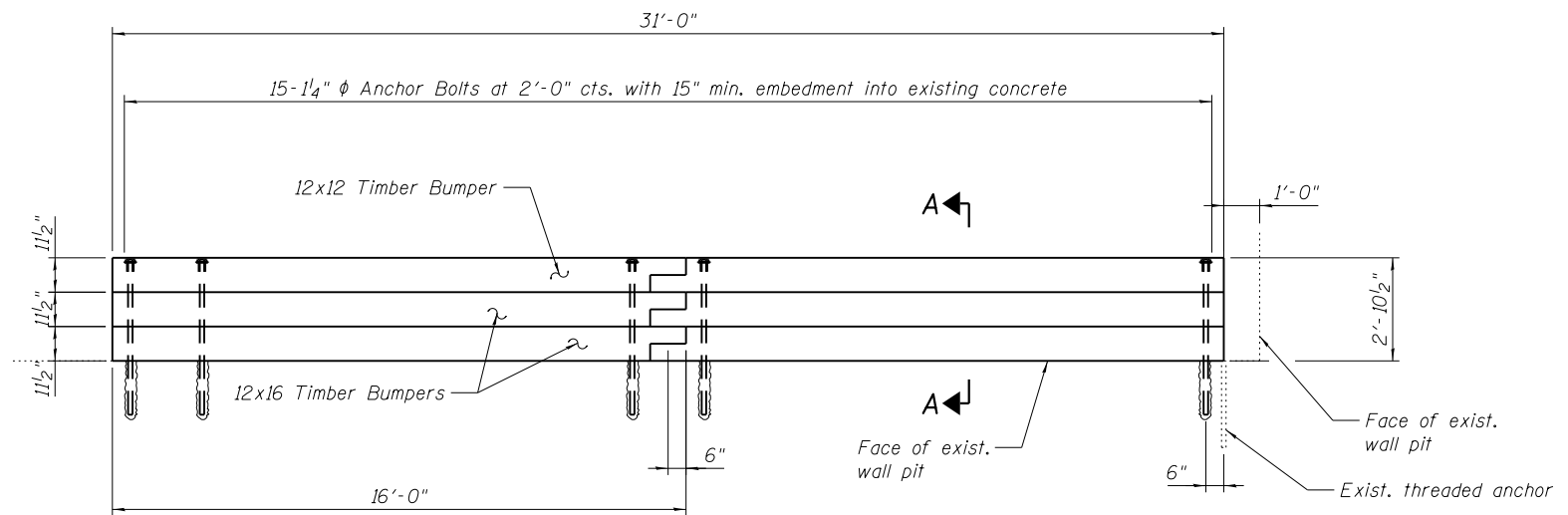
STAGE II CONSTRUCTION - MOVABLE SPAN
(Looking north)

STAGE II CONSTRUCTION NOTES

- Erect Floorbeam 0-0S using the following sequence:
1) Erect floorbeam and connection angles.
2) Connect upper tie plate at Truss 2 only.
3) Connect bottom connection plate at Truss 2.
5) Proceed to Floorbeam 0-0N repeat removal and erection sequence.
- Install lateral bracing, connection plates, & center break machinery support beams.
- Install center lock machinery (see Mechanical plans and specifications).
- Erect roadway stringers, center break brackets, & connections from Floorbeam 2-2S to Floorbeam 2-2N.
- Perform bridge repairs to Truss 3. Clean & paint structure from Truss 2 to 3.
- Install 5" open deck grating & 5" concrete filled deck grating at roadway & install center breaks.
- Timber Bumper shall be Structural Timber in accordance with Section 1007.03 of the IDOT Standard Specifications. The Contractor shall verify the dimensions of Timber Bumpers in the field.
- Remove existing anchor bolts and replace with new 1 1/4" dia. anchor bolts, grout in place. Grouting of anchors shall be done in accordance with Art. 584 of IDOT Std. Specs. This work shall be included in the pay item Timber Bumpers.



SECTION A-A



BUMPER REHABILITATION
(4 Req'd)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Timber Bumpers	Foot	124

Quantity shown includes S. and N. leaves.

REFERENCE DRAWINGS

Drawing
Main Pier - Masonry Layout
Details for Miscellaneous Materials

Sheet No.
1660300695
1660300708

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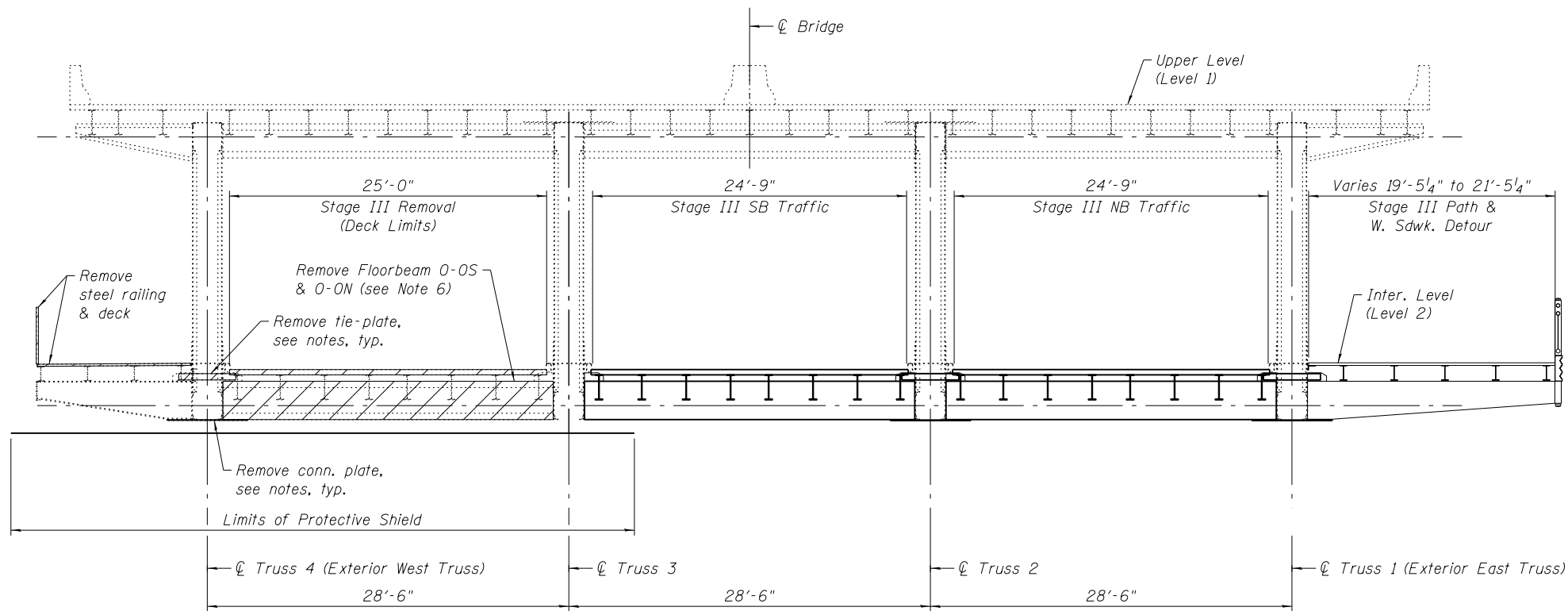
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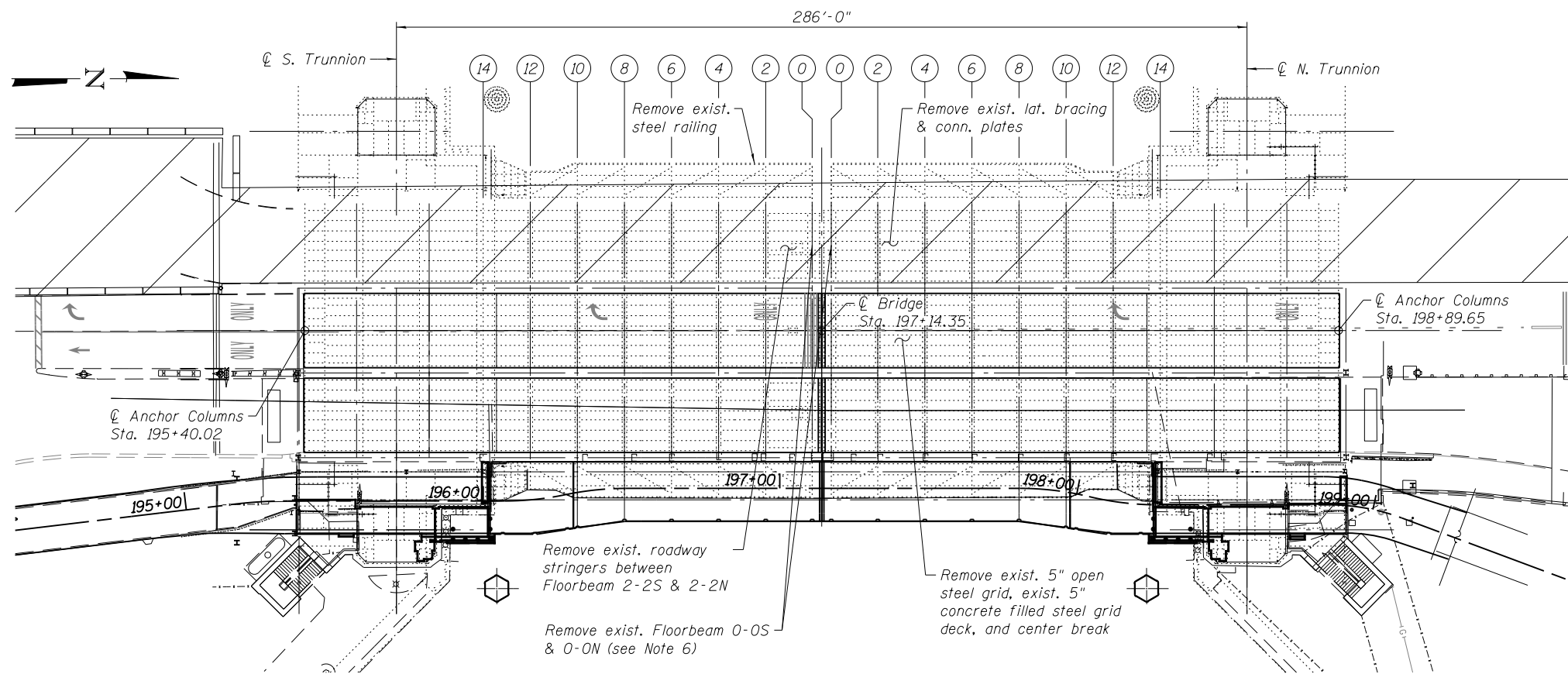
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STAGE II
CONSTRUCTION DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-8
CDOT PROJECT NO. E-6-650			49 OF 411



STAGE III REMOVAL - MOVABLE SPAN
(Looking north)



STAGE III REMOVAL PLAN - INTERMEDIATE LEVEL

STAGE III TRAFFIC

1. West sidewalk to be closed and detoured while the FRP deck and ornamental railing are installed and while Floorbeam 0-0S & 0-0N is replaced.
2. S.W. House exterior stairway rehabilitation shall be completed and stairway open to public prior to begin Stage III work.

STAGE III REMOVAL NOTES

1. Remove existing 5" open deck grating & existing 5" concrete filled deck grating at roadway & remove center breaks.
2. Remove existing west sidewalk deck and railing between Floorbeam 12-12S & 12-12N.
3. Remove roadway stringers and connections from Floorbeam 2-2S to Floorbeam 2-2N.
4. Remove center lock machinery. Prior to removal of center lock machinery a temporary center lock shall be installed (see Mechanical plans and specifications).
5. Remove lateral bracing, connection plates, & center break machinery support beams.
6. Remove Floorbeam 0-0S and using the suggested sequence:
 - 1) Disconnect bottom connection plates (if not already removed with lateral bracing)
 - 2) Disconnect upper tie plates at Truss 4. Temporarily support sidewalk bracket.
 - 3) Disconnect floorbeam angle connections
 - 4) Remove floorbeam and sidewalk bracket
 - 5) See the following sheet for erection sequence prior to repeating removal sequence at Floorbeam 0-0N.

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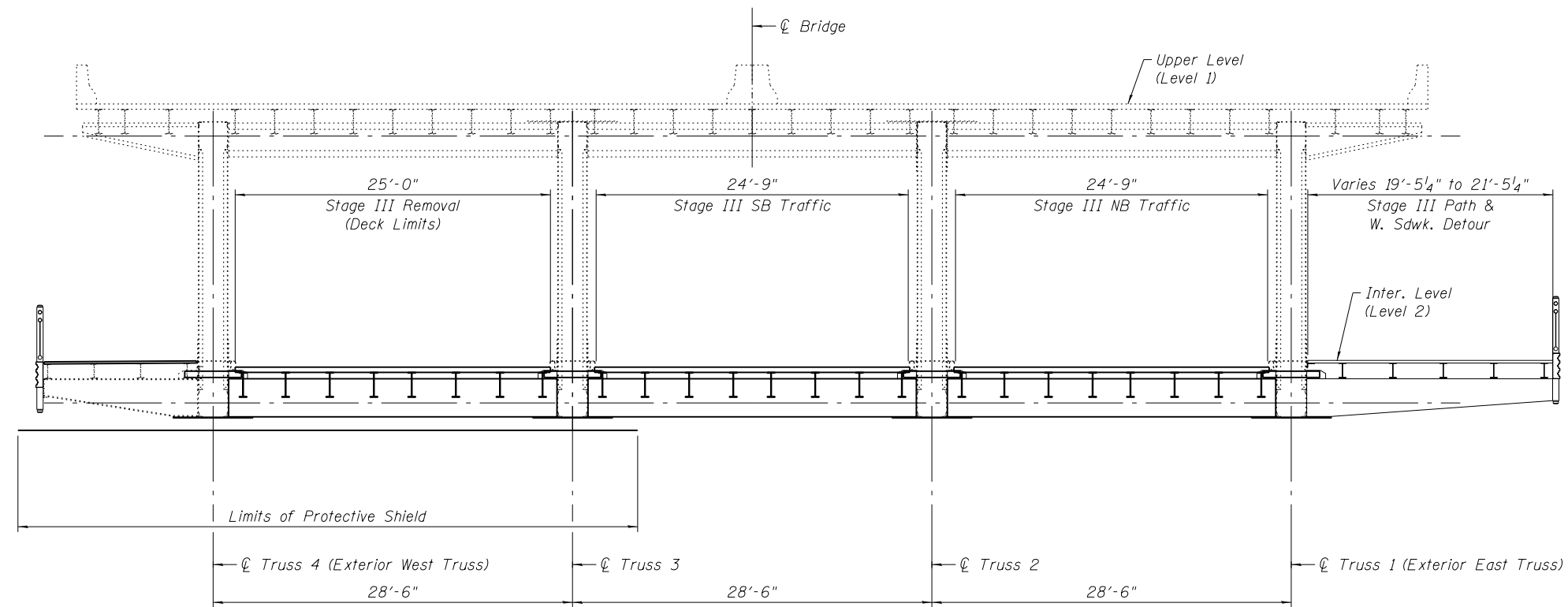
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DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STAGE III
REMOVAL DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-9
CDOT PROJECT NO. E-6-650			50 OF 411



STAGE III CONSTRUCTION - MOVABLE SPAN
(Looking north)

STAGE III CONSTRUCTION NOTES

1. Erect Floorbeam 0-0S using the following suggested sequence:
 - 1) Erect floorbeam and connection angles.
 - 2) Connect upper tie plates at Truss 3 & 4. Remove temporary support at west sidewalk.
 - 3) Connect bottom connection plate at Truss 3 & 4.
 - 5) Proceed to Floorbeam 0-0N repeat removal and erection sequence.
2. Install lateral bracing, connection plates, & center break machinery support beams.
3. Install center lock machinery (see Mechanical plans and specifications).
4. Erect roadway stringers, center break brackets, & connections from Floorbeam 2-2S to Floorbeam 2-2N.
5. Perform bridge repairs to Truss 4. Clean & paint structure from Truss 3 to 4 & at west sidewalk.
6. Install 5" open deck grating & 5" concrete filled deck grating at roadway, 2 1/2" FRP deck at the west sidewalk & install center breaks.
7. Install ornamental railing at west sidewalk.

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wsp
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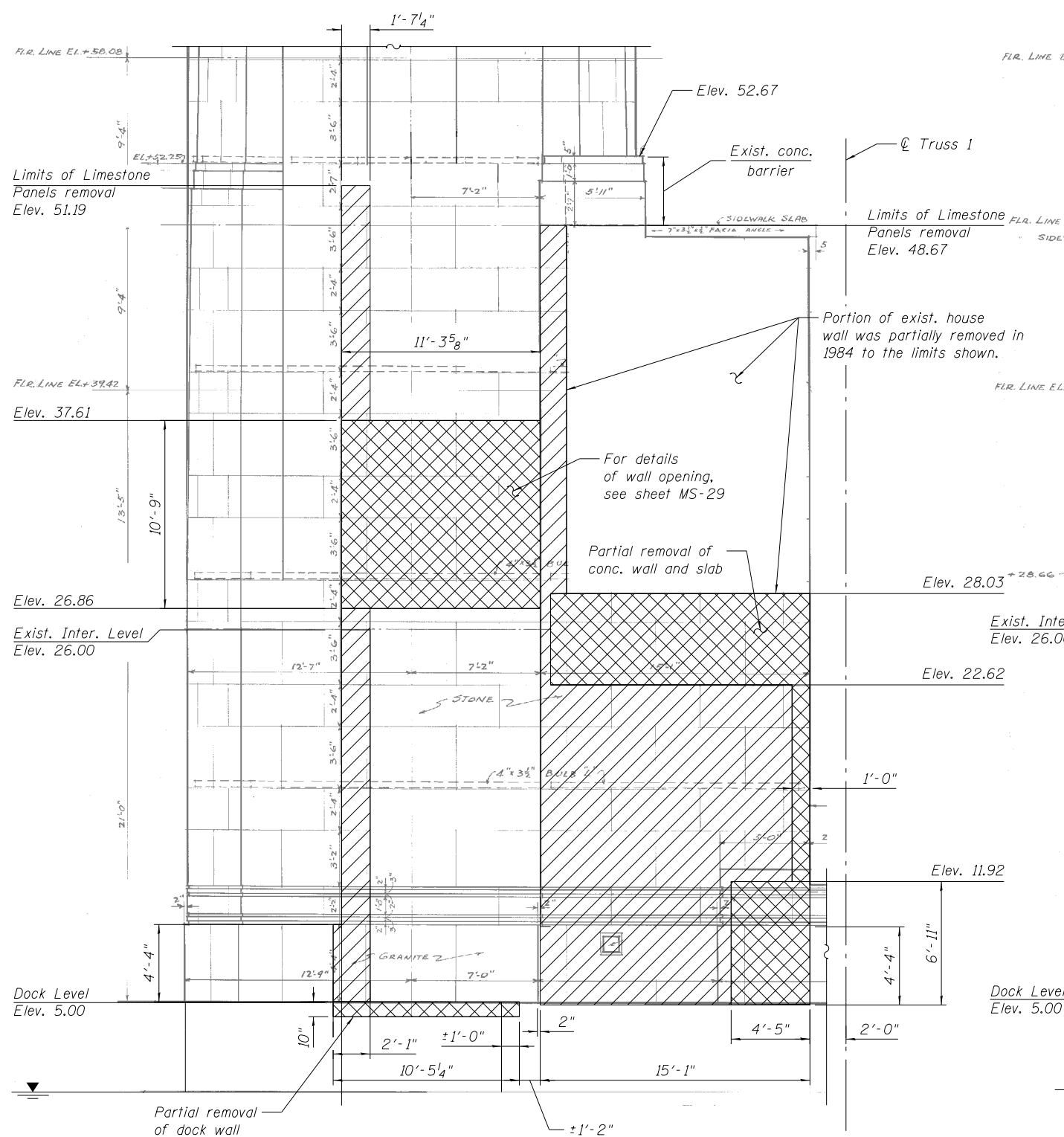
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

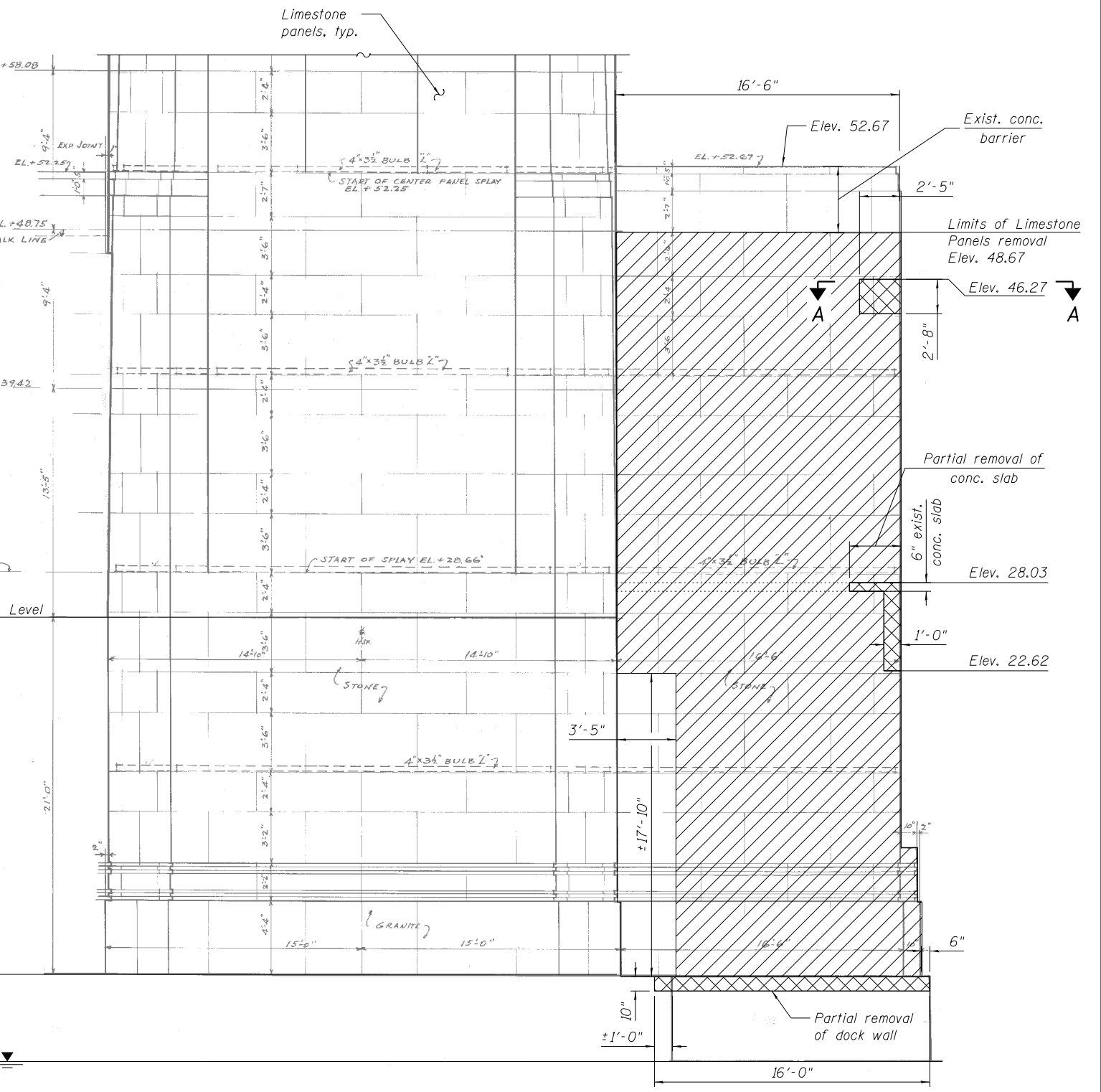
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**STAGE III
CONSTRUCTION DETAILS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-10
CDOT PROJECT NO. E-6-650			51 OF 411



REMOVAL ELEVATION - RIVER VIEW
 (Looking south at S.E. House, N.E. House opposite hand)



REMOVAL ELEVATION - DOCK VIEW
 (Looking west at S.E. House, N.E. House opposite hand)

REFERENCE DRAWINGS

Drawing
 Elevation of Houses
 Elevation of Houses
 Upper Level Transverse Sections, N.E. House

Sheet No.
 1660300869
 1660300870
 1660300152

LEGEND

-  Limestone Panel Removal
-  Concrete Removal (See Note 2)

Notes:

1. The Contractor shall saw cut and remove hatched areas of existing limestone blocks as shown to permit construction of new enclosure wall. Any additional removal of existing limestone blocks to facilitate construction of new wall shall be done with extreme care and shall be safely stored to avoid damage. Upon construction of new wall, the blocks shall be reinstalled and anchored in their original position.
2. Concrete removal may require the removal of limestone panels.
3. For Section A-A, see sheet MS-13.

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USER NAME = lopezgonzalez
 DESIGNED - MI
 CHECKED - P.JL
 PLOT SCALE = N.T.S.
 DRAWN - MI
 CHECKED - JIG
 PLOT DATE = 1/22/2018

DESIGNED - MI
 CHECKED - P.JL
 DRAWN - MI
 CHECKED - JIG

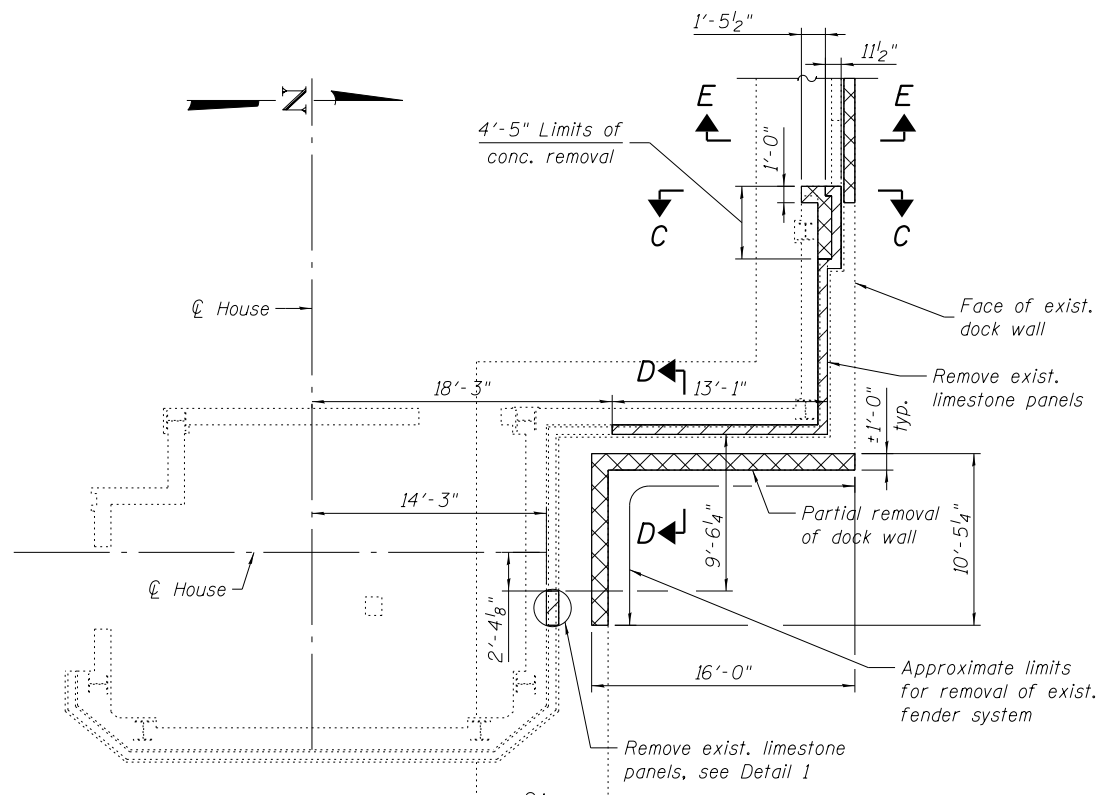
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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

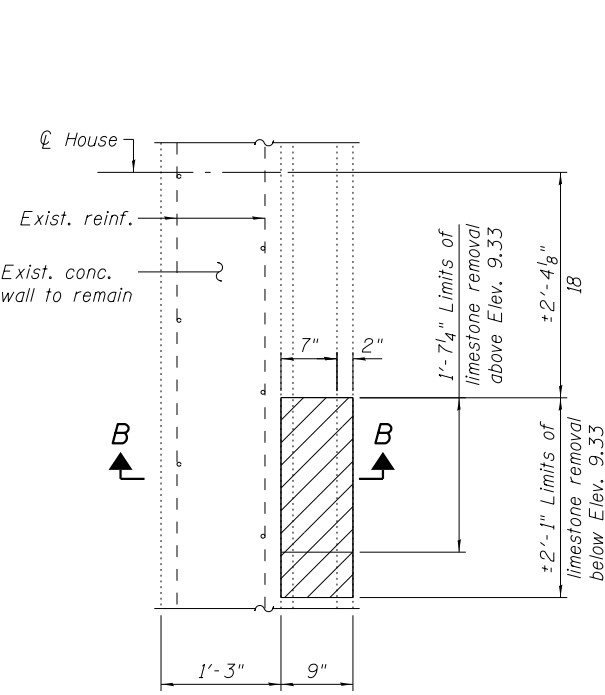
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART:
HOUSE REMOVAL DETAILS I
(STRUCTURE NO. 016-6030)

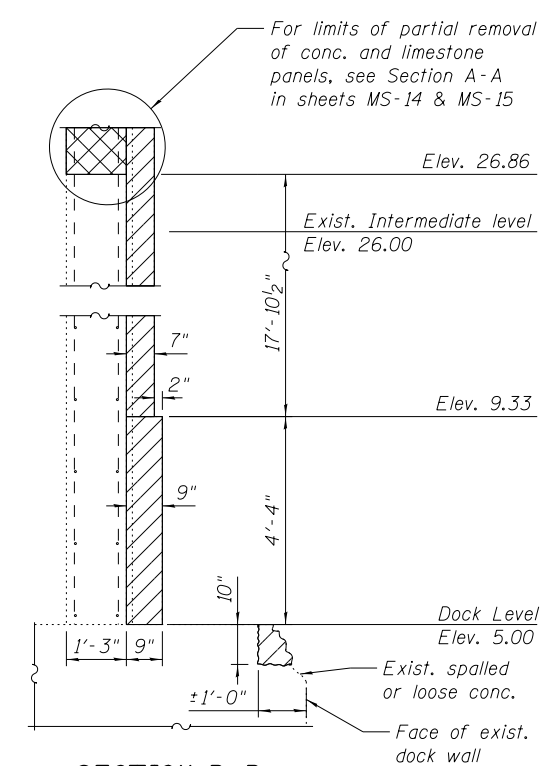
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0341	09-E0534-00-BR/CDOT	COOK	MS-11
CDOT PROJECT NO. E-6-650			52 OF 411



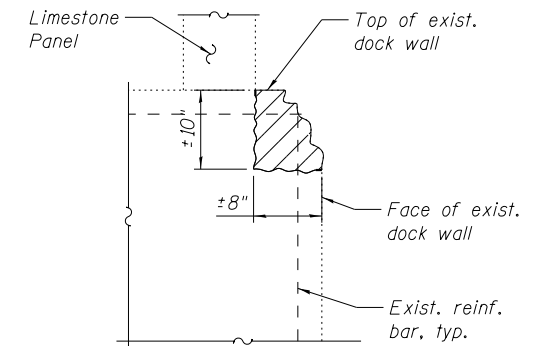
REMOVAL PLAN - HOUSE AT DOCK LEVEL
(Showing S.E. House, N.E. House opposite hand)



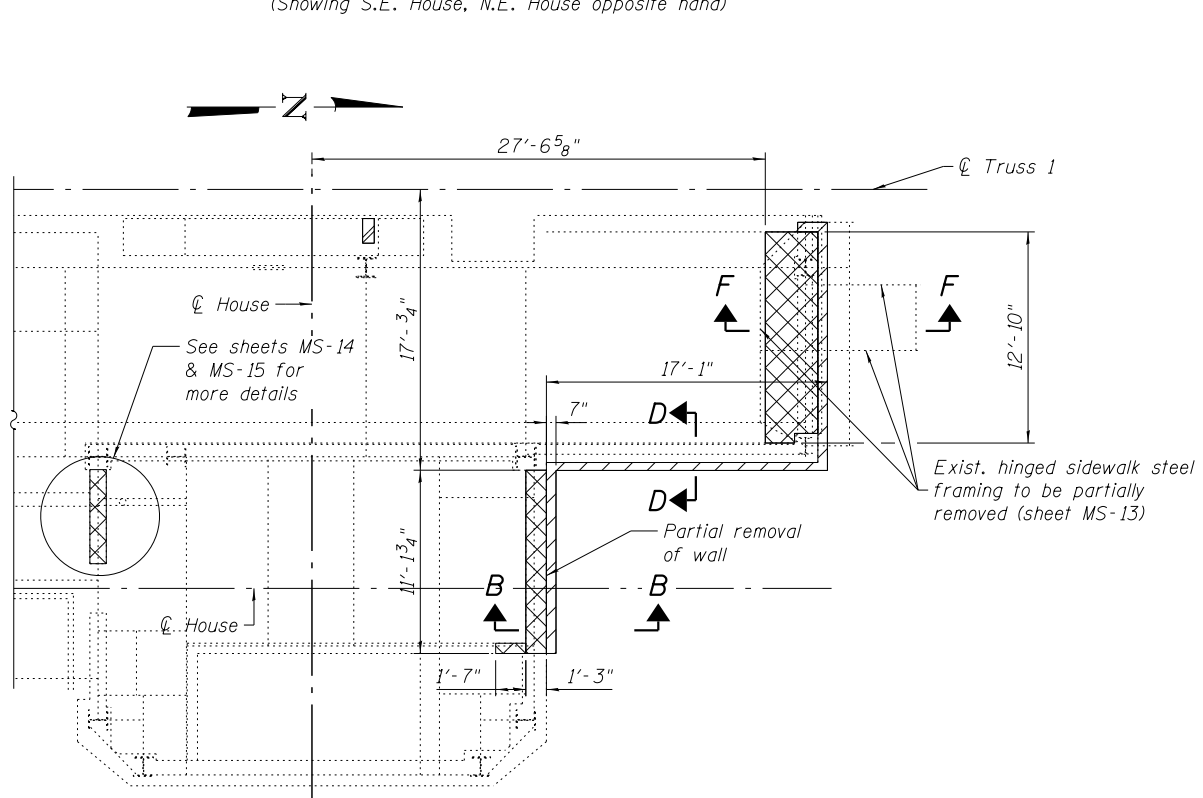
DETAIL 1
PARTIAL REMOVAL PLAN



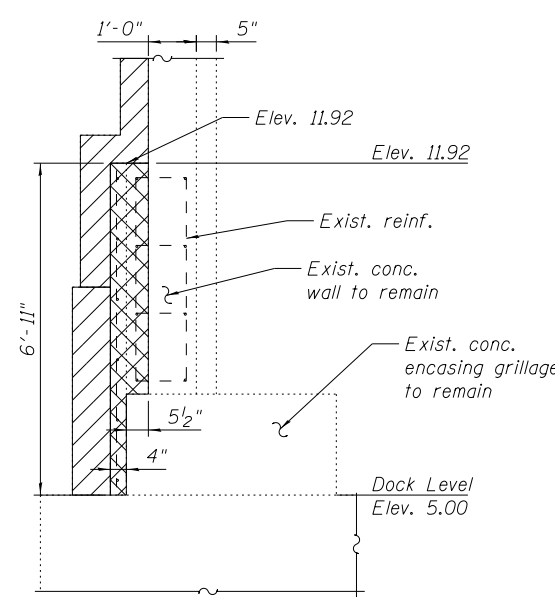
SECTION B-B



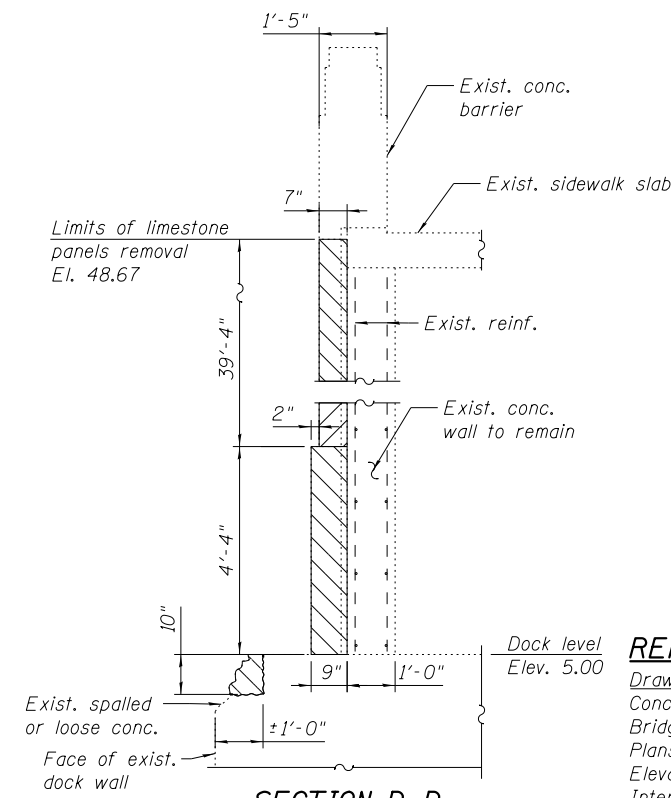
SECTION E-E



REMOVAL PLAN - HOUSE AT INTERMEDIATE LEVEL
(Showing S.E. House, N.E. House opposite hand)



SECTION C-C



SECTION D-D

LEGEND

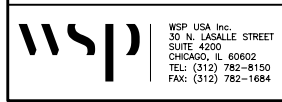
- Limestone Panel Removal
- Concrete Removal
- Structural Steel Removal

REFERENCE DRAWINGS

Drawing	Sheet No.
Concrete Removal Upper Level	1660300137
Bridge Houses Concrete Details	1660300811
Plans of S.E. House	1660300853
Elevation of Houses	1660300870
Intermediate Level, Protection Fence	1660300163

- Notes:
- For steel framing removal and Section F-F, see sheet MS-13.

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WSP USA Inc.
30 N. LASALLE STREET
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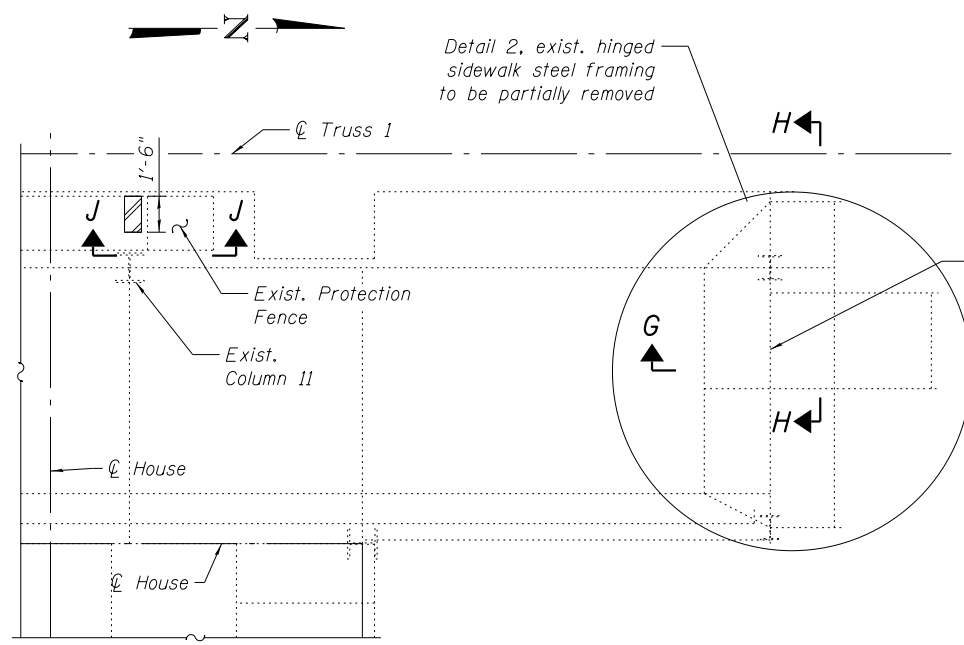
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

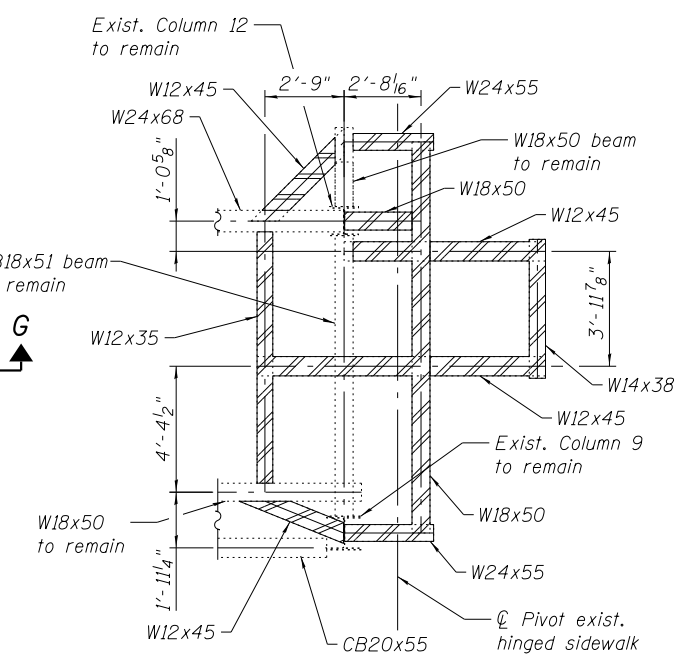
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART:
HOUSE REMOVAL DETAILS II
(STRUCTURE NO. 016-6030)

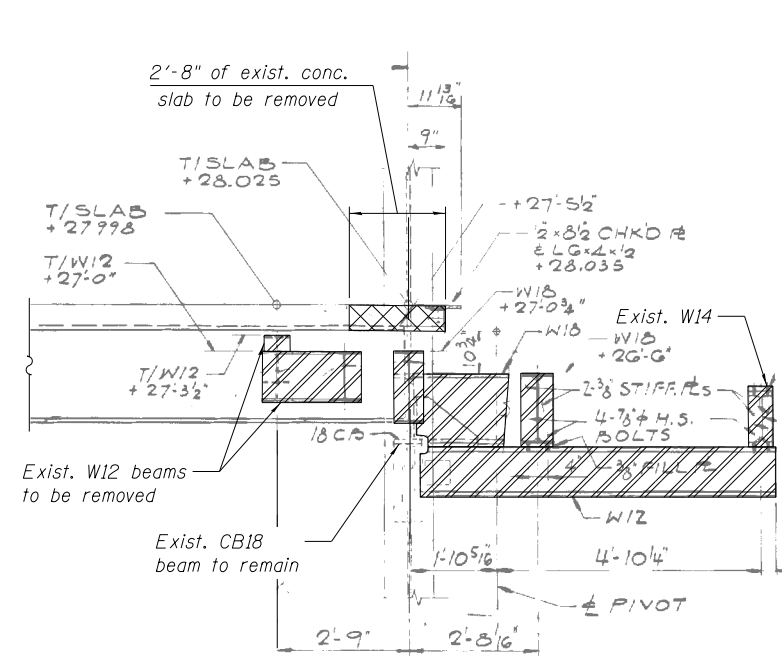
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0341	09-E0534-00-BR/CDOT	COOK	MS-12
CDOT PROJECT NO. E-6-650			53 OF 411



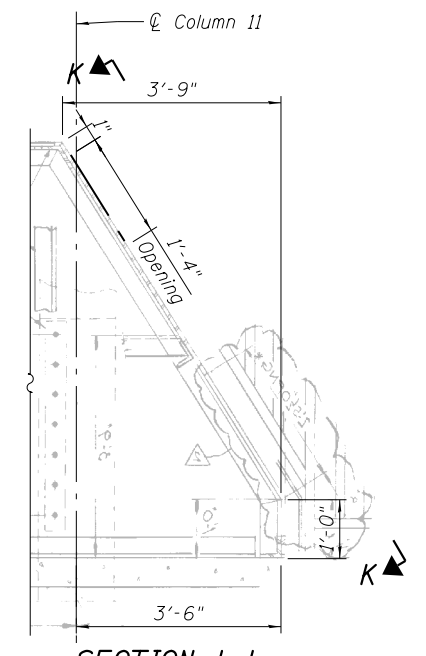
STEEL FRAMING REMOVAL AT INTERMEDIATE LEVEL
(Showing S.E. House, N.E. House opposite hand)



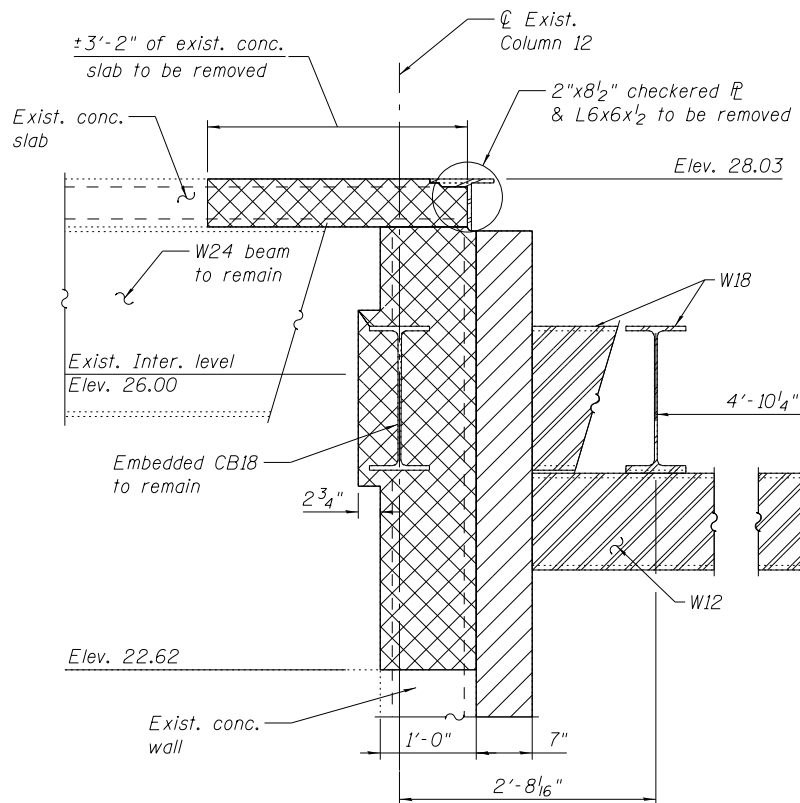
DETAIL 2
REMOVAL OF HINGED SIDEWALK STEEL FRAMING



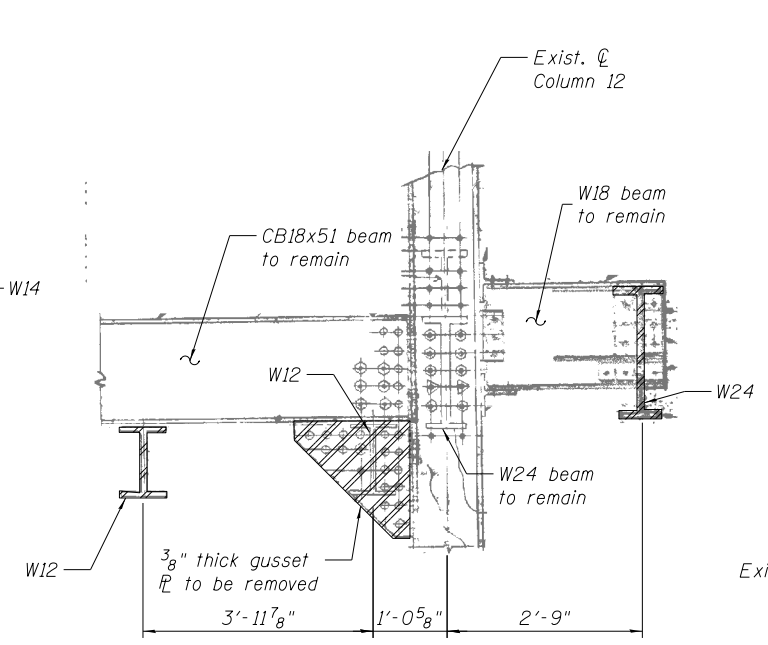
SECTION G-G



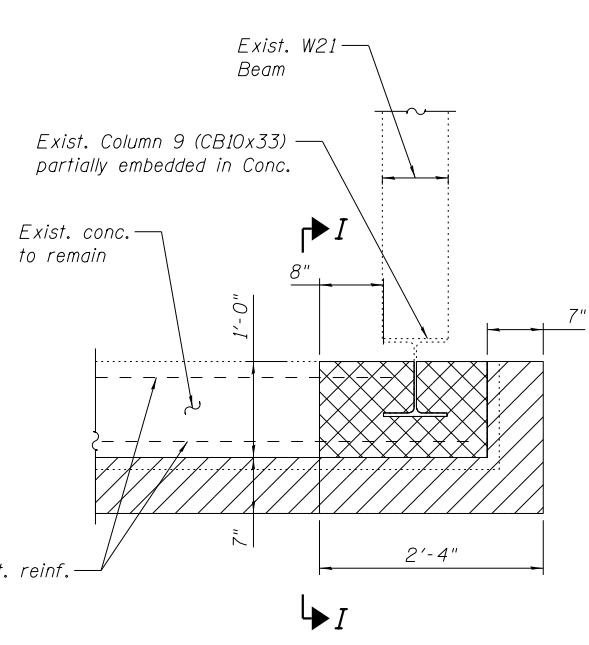
SECTION J-J



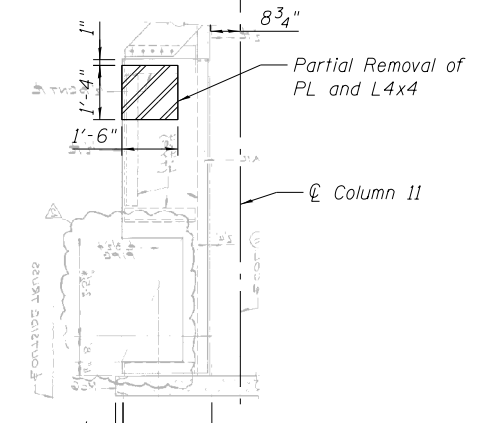
SECTION F-F



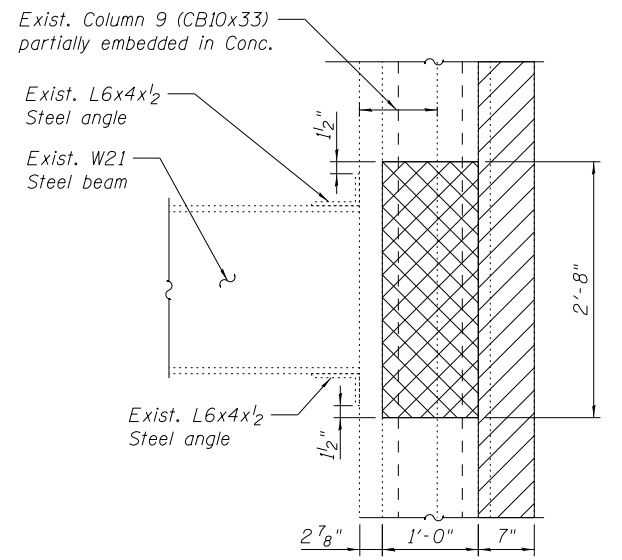
SECTION H-H



SECTION A-A



VIEW K-K



SECTION I-I

REFERENCE DRAWINGS

Drawing	Sheet No.
Upper Level Transverse Sections	1660300152
Existing Intermediate Level, Framing Plan	1660300158
Intermediate Level, Longitudinal Sections	1660300159
Intermediate Level - Protection Fence	1660300163
Protection Fence Intermediate Level	1660300429
N. Approach Field Work	1660300563
Bridge House Steel Framing & Sections	1660300807

LEGEND

	Structural Steel Removal
	Limestone Panel Removal
	Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd	11.9
Structural Steel Removal	Pound	7,628

Quantity shown includes S.E. and N.E. houses.

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USER NAME = lopezgonzalez	DESIGNED - MI	REVISED -
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PLOT DATE = 1/22/2018	DRAWN - MI	REVISED -
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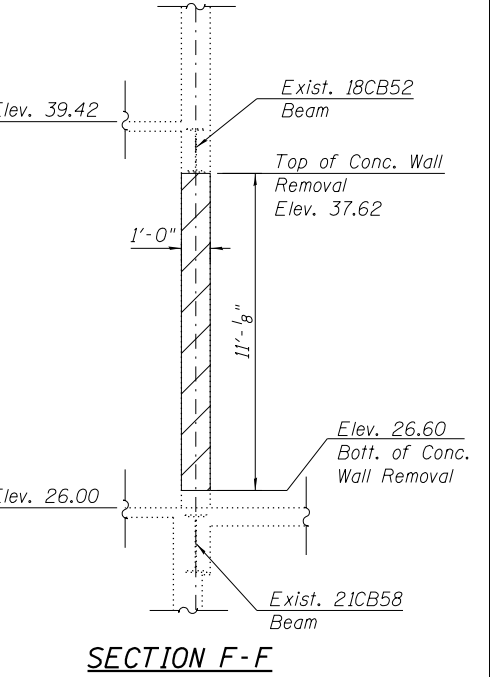
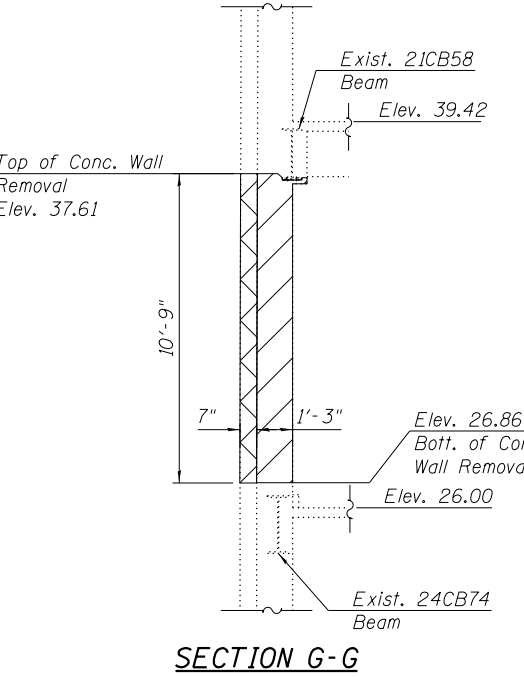
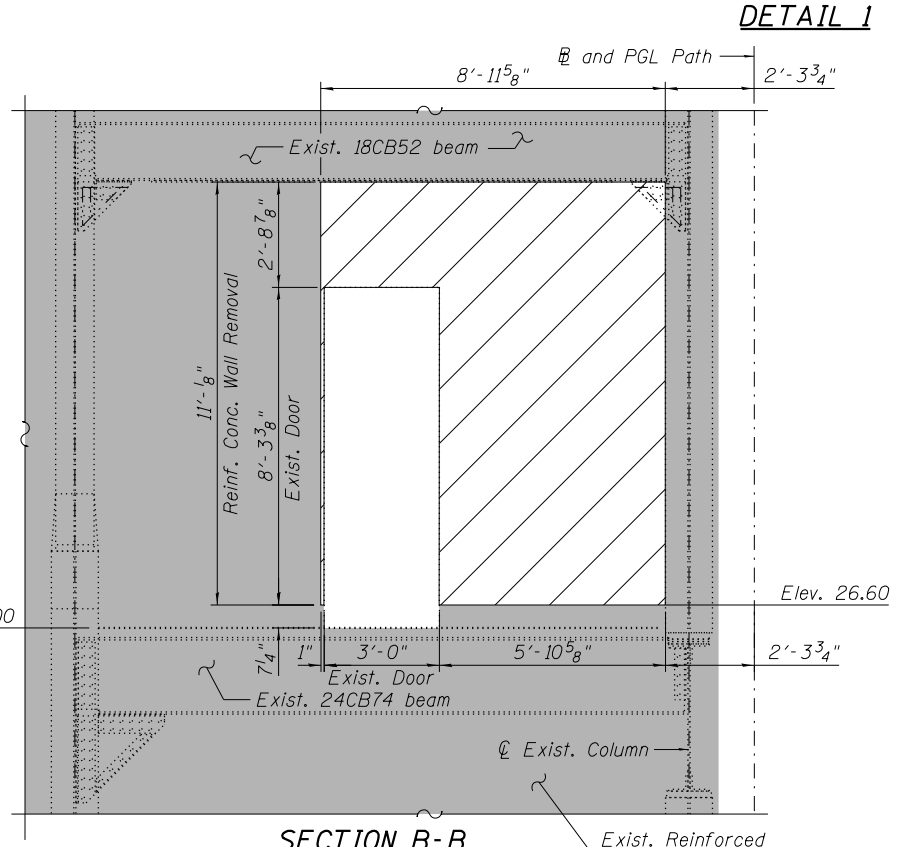
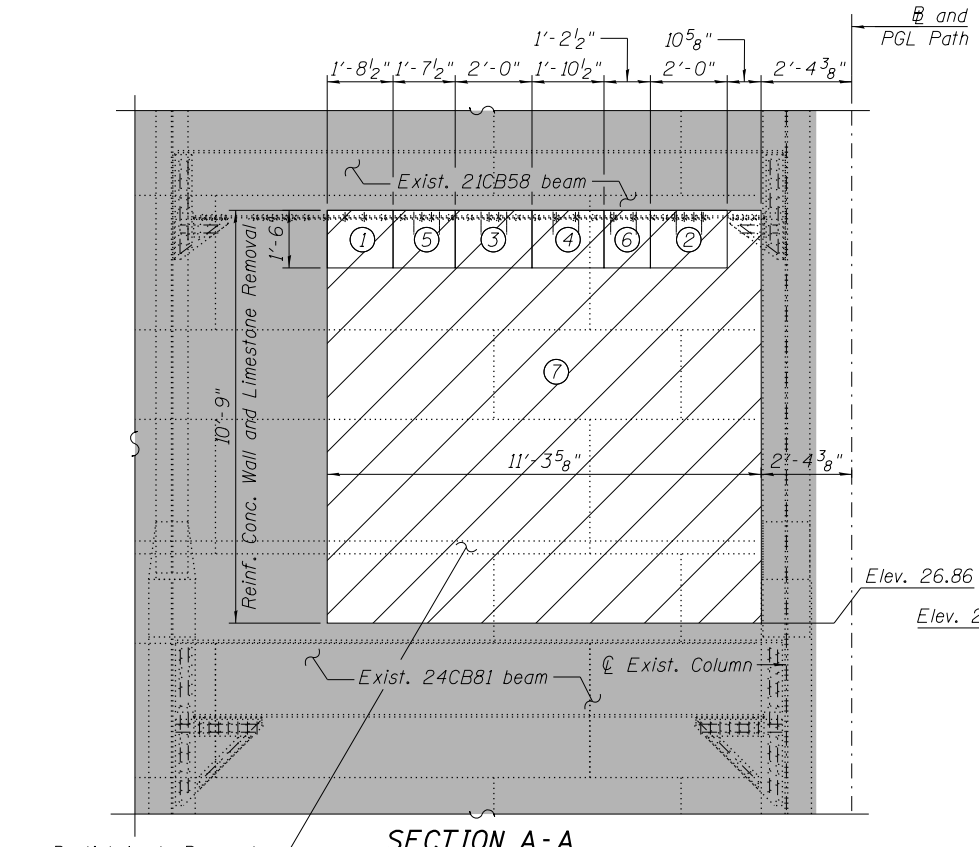
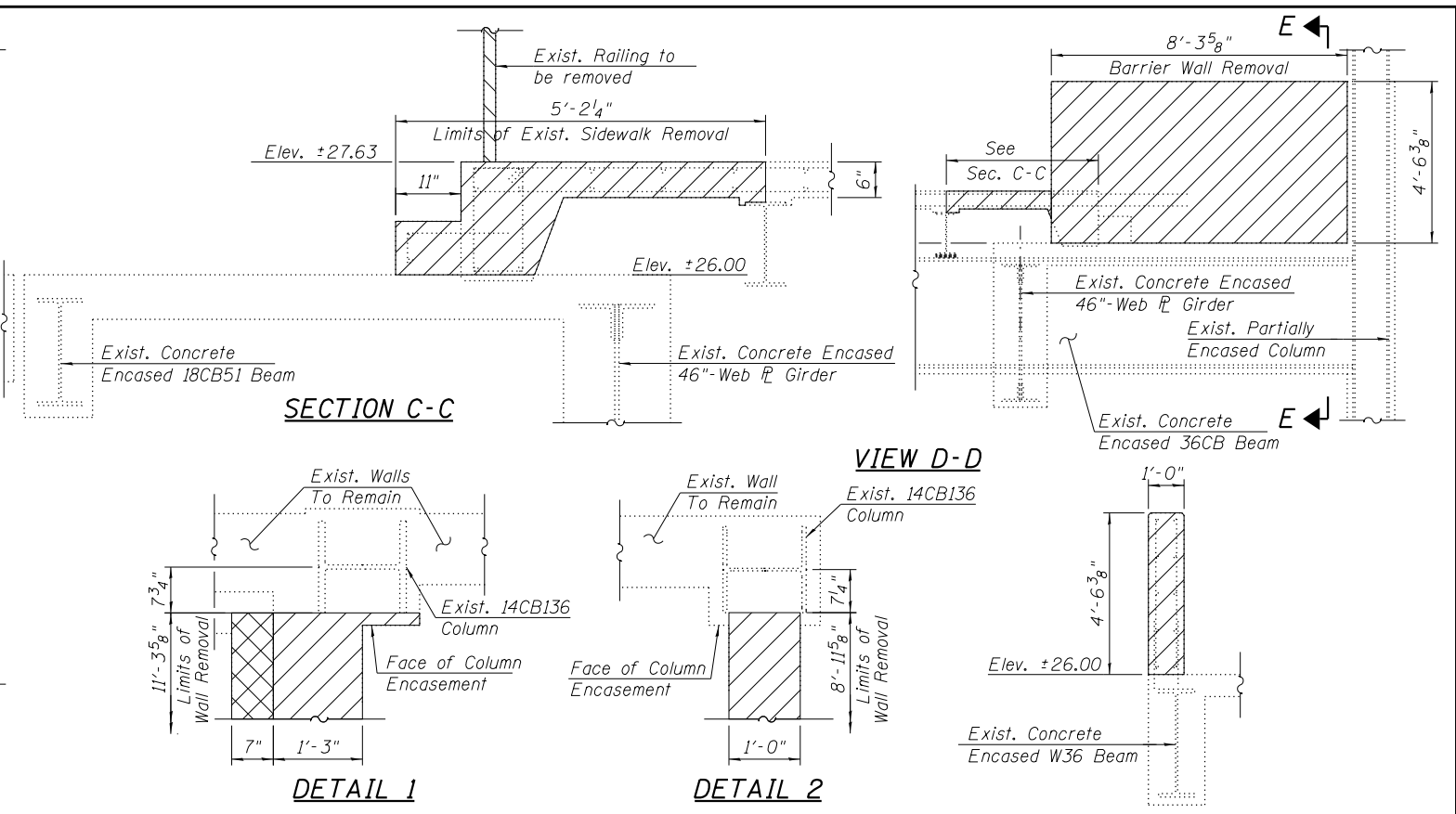
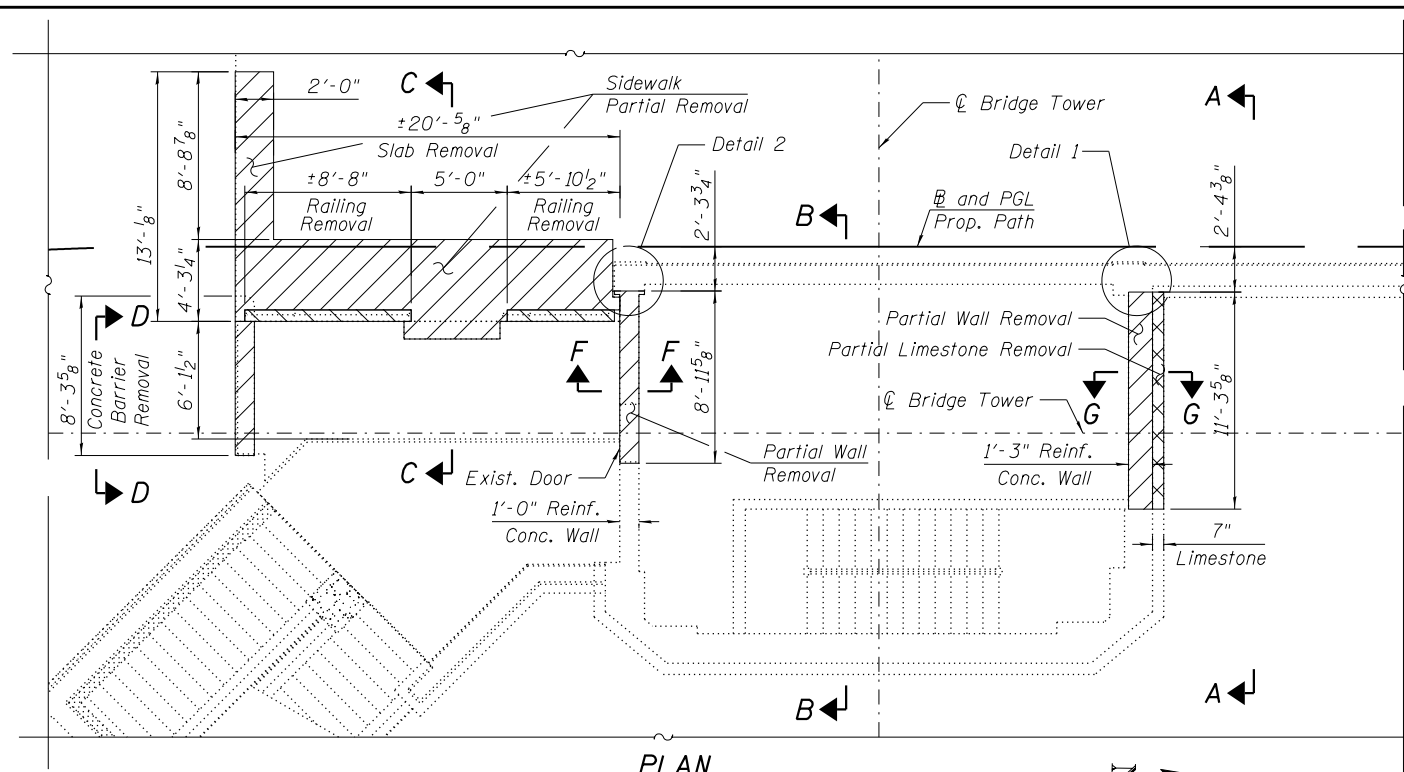
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART:
HOUSE REMOVAL DETAILS III
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-13
CDOT PROJECT NO. E-6-650			54 OF 411

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NOTES:

- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- For Limestone Removal details and quantities, see Architectural Plans
- Remove Exist. Concrete to install all the brackets and complete opening in the sequence 1 thru 7.
- Cost of removal of existing door and partial angle removal shall not be paid separately but shall be included with CONCRETE REMOVAL.

HBM
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USER NAME = fadl.alsharif	DESIGNED - JJS, FA	REVISED -
PLLOT SCALE = N.T.S.	CHECKED - MAI	REVISED -
PLOT DATE = 6/23/2017	DRAWN - FA	REVISED -
	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**FIXED PART:
HOUSE REMOVAL DETAILS IV
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-14
CDOT PROJECT NO. E-6-650			55 OF 411

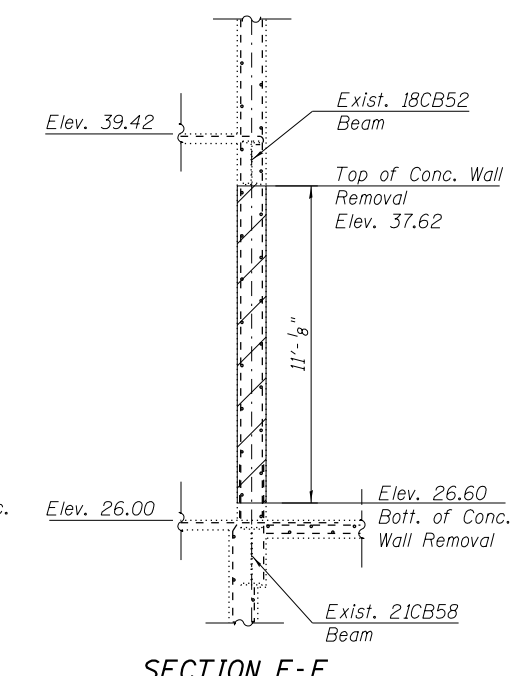
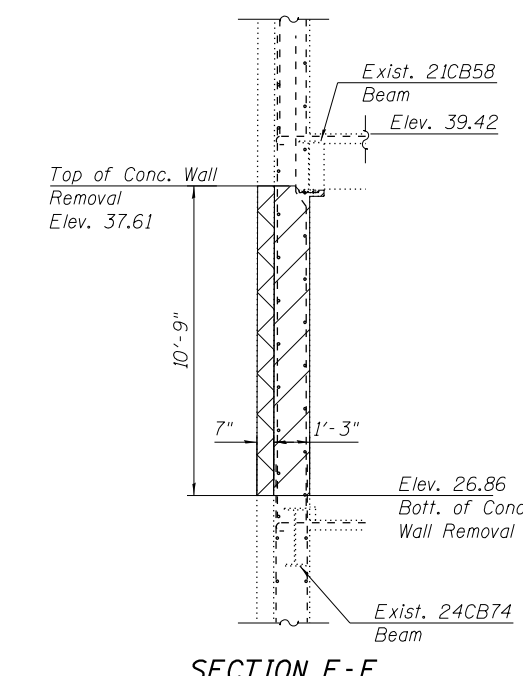
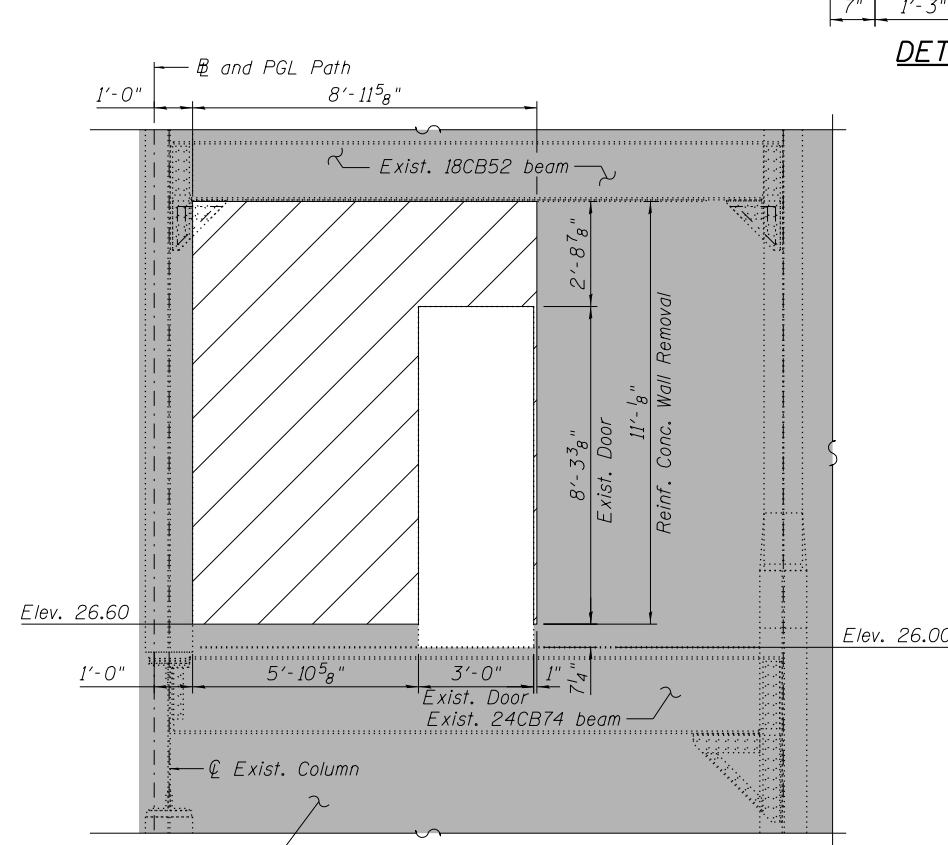
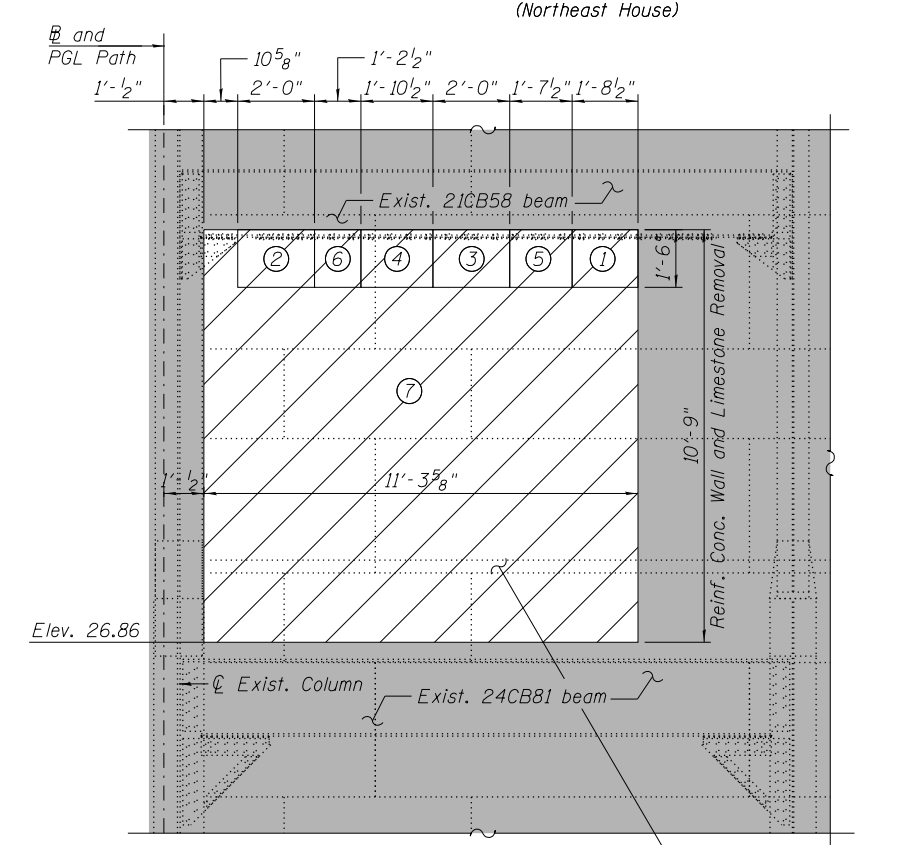
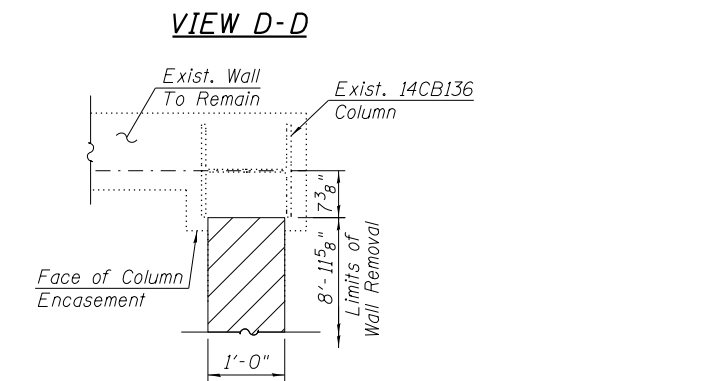
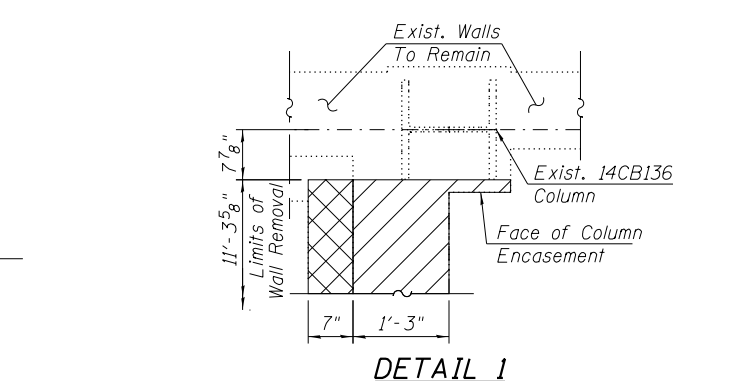
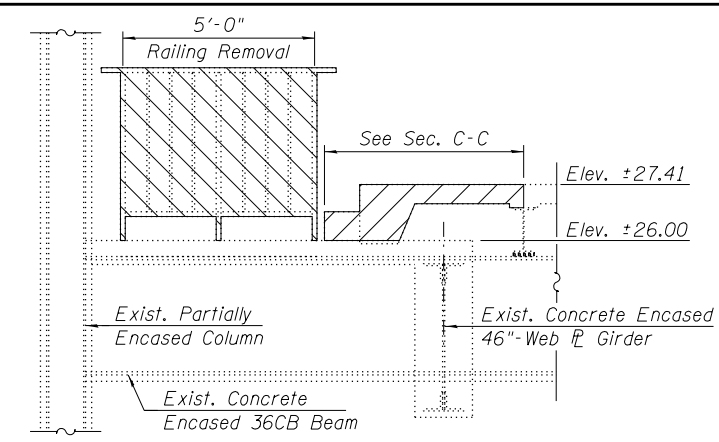
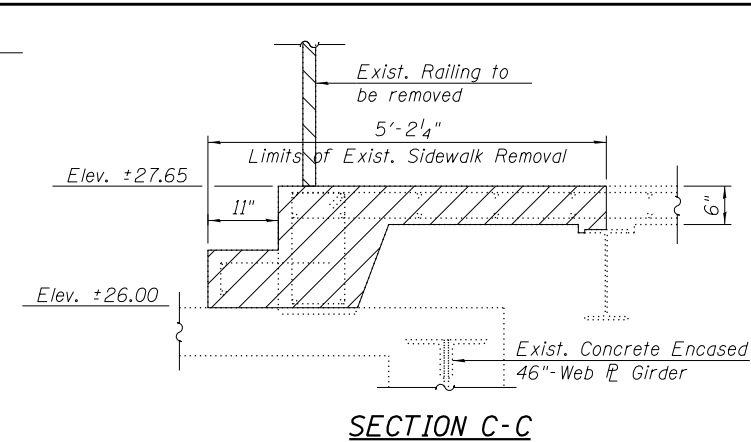
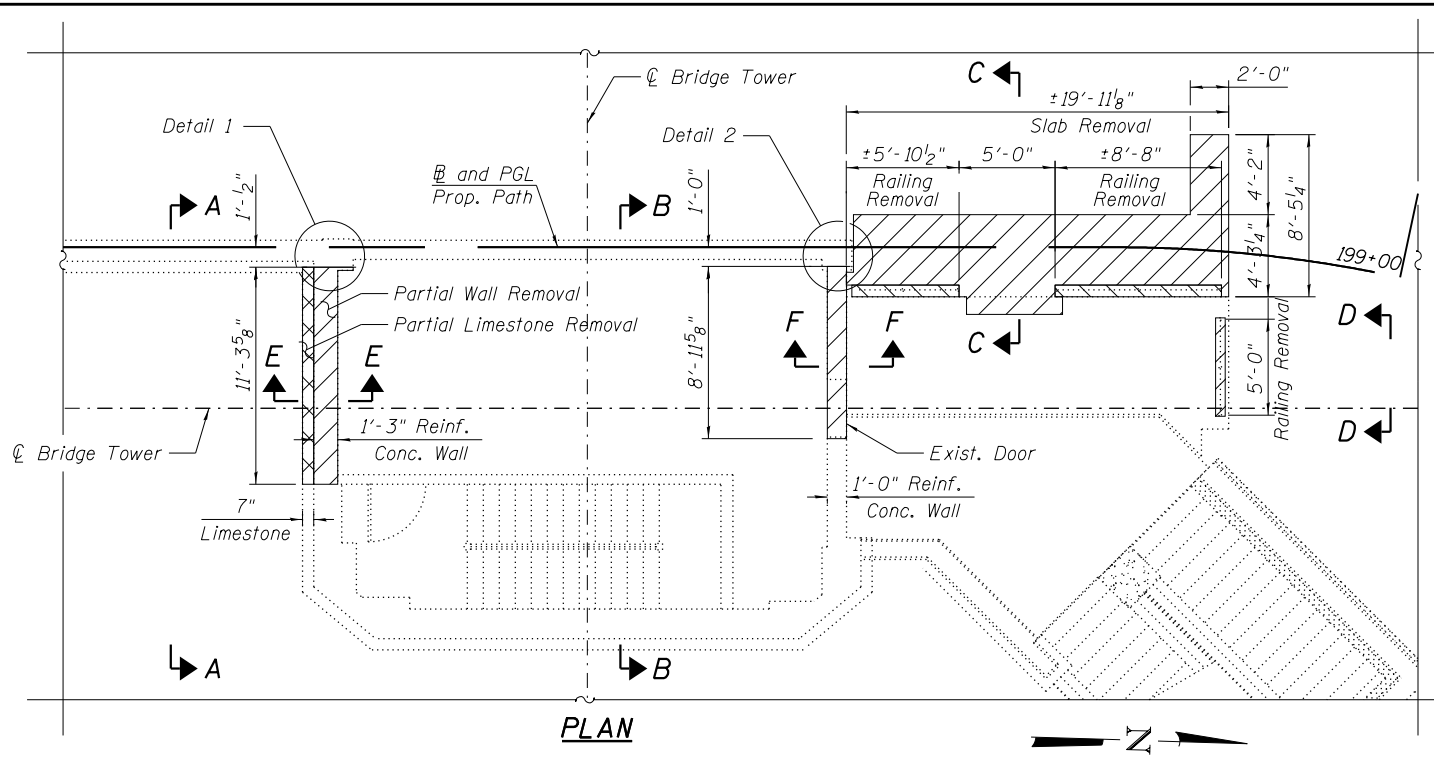
LEGEND

	Concrete Removal
	Steel Railing Removal
	Limestone Removal (See Architectural Plans)

BILL OF MATERIAL

ITEM	UNIT	QTY
CONCRETE REMOVAL	CU YD	14.4
STEEL RAILING REMOVAL	FOOT	15

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LEGEND

	Concrete Removal
	Steel Railing Removal
	Limestone Removal (See Architectural Plans)

BILL OF MATERIAL

ITEM	UNIT	QTY
CONCRETE REMOVAL	CU YD	11.6
STEEL RAILING REMOVAL	FOOT	20

- NOTES:**
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 - For Limestone Removal details and quantities, see Architectural Plans
 - Remove Exist. Concrete to install all the brackets and complete opening in the sequence 1 thru 7.
 - Cost of removal of existing door and partial angle removal shall not be paid separately but shall be included with CONCRETE REMOVAL.

HBM
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WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

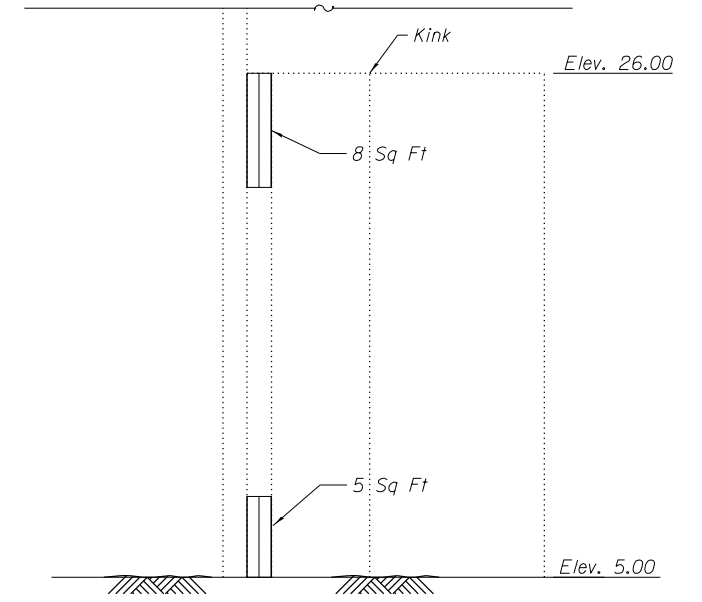
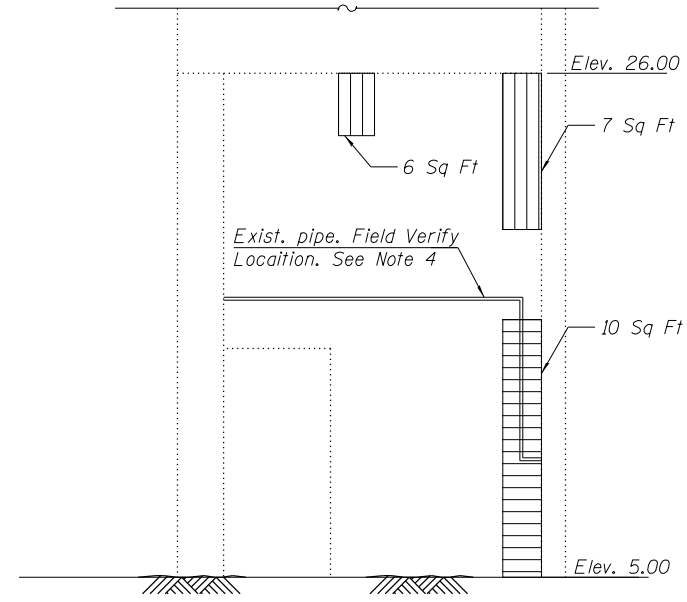
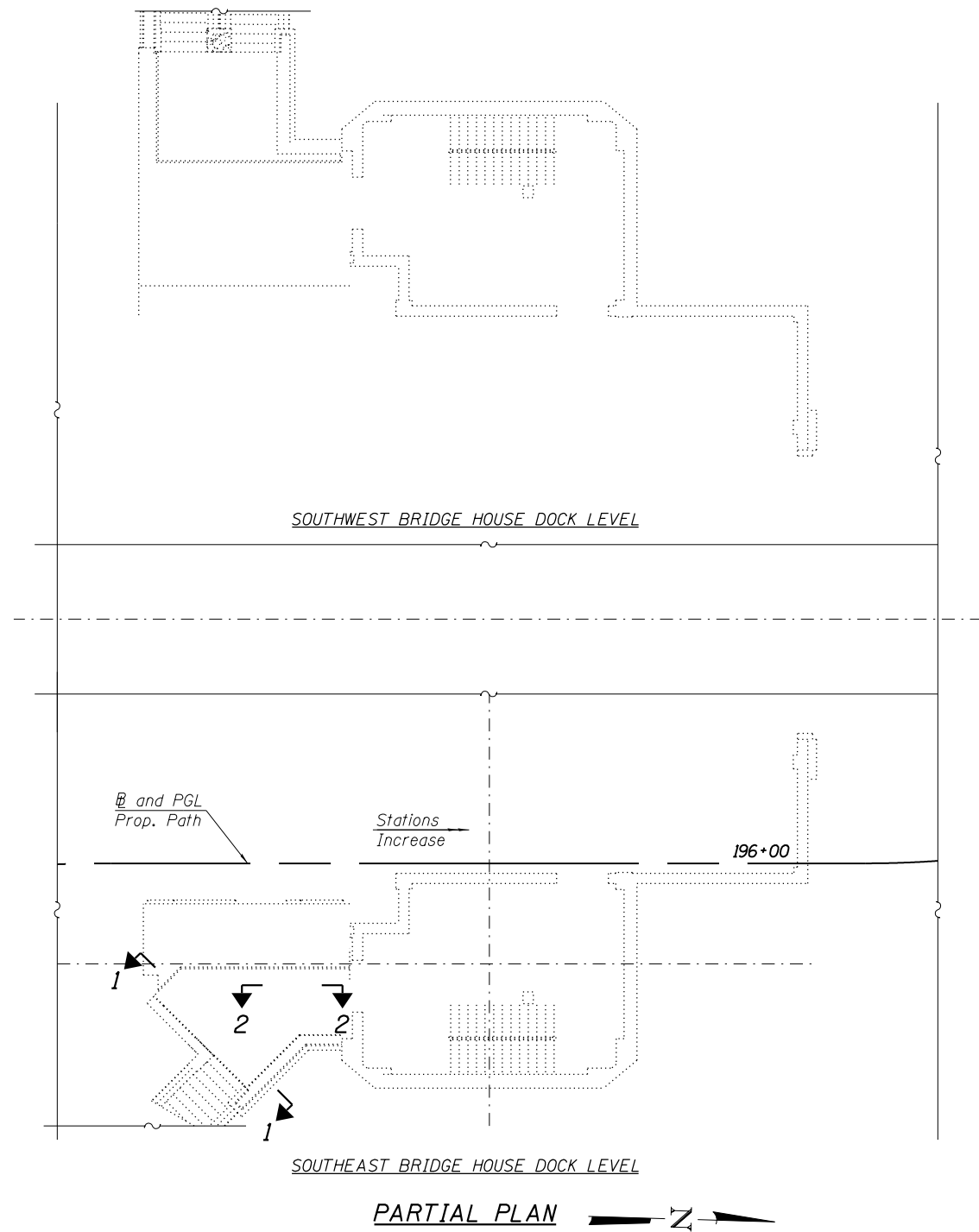
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**FIXED PART:
HOUSE REMOVAL DETAILS V
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-15
CDOT PROJECT NO. E-6-650			56 OF 411



NOTES:

1. Areas of structural steel repairs and epoxy crack injection shown are estimated. The Engineer shall show actual locations of these repairs at the time of construction.
2. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with CONCRETE REMOVAL.
3. Protective concrete sealer shall be applied to the structural concrete repair areas.
4. The Contractor shall relocate and reinstall any existing utility in conflict with the repairs shown in the plans, and shall not be paid separately.

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)
- Structural Repair of Concrete (Depth Greater than 5 Inches)

BILL OF MATERIAL

ITEM	UNIT	QTY
PROTECTIVE CONCRETE SEALER	SQ YD	36
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	26
STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	10

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USER NAME = fadl.alsharif	DESIGNED - FA, KJD	REVISED -
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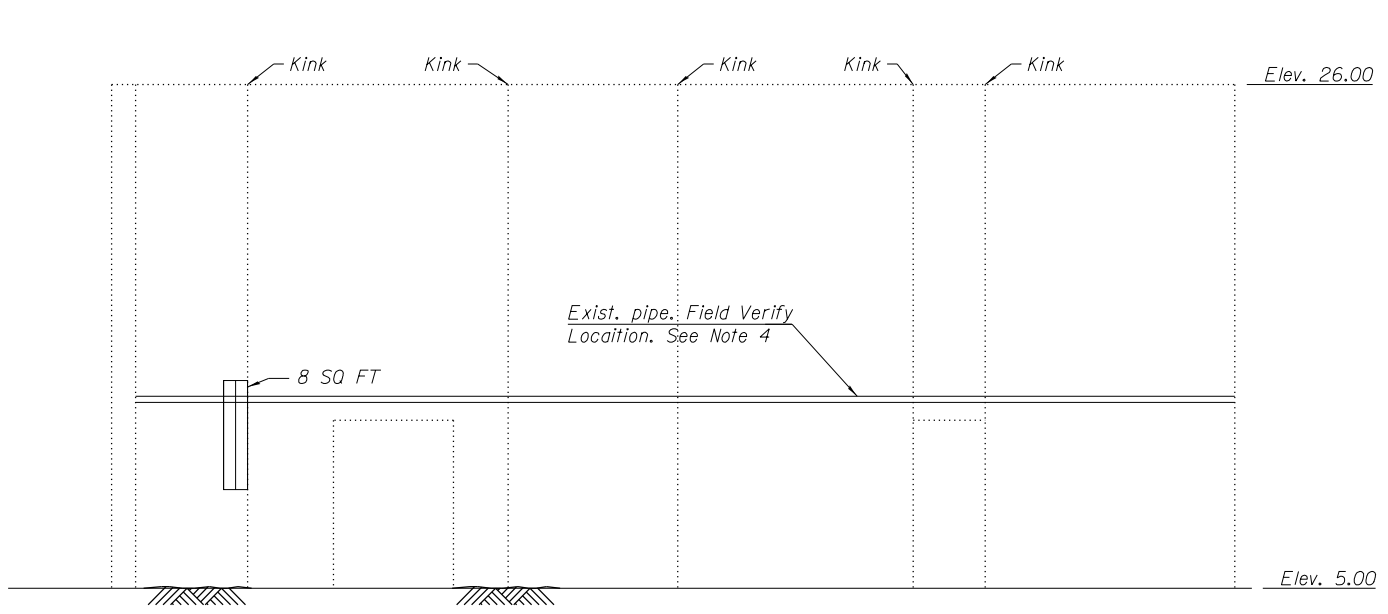
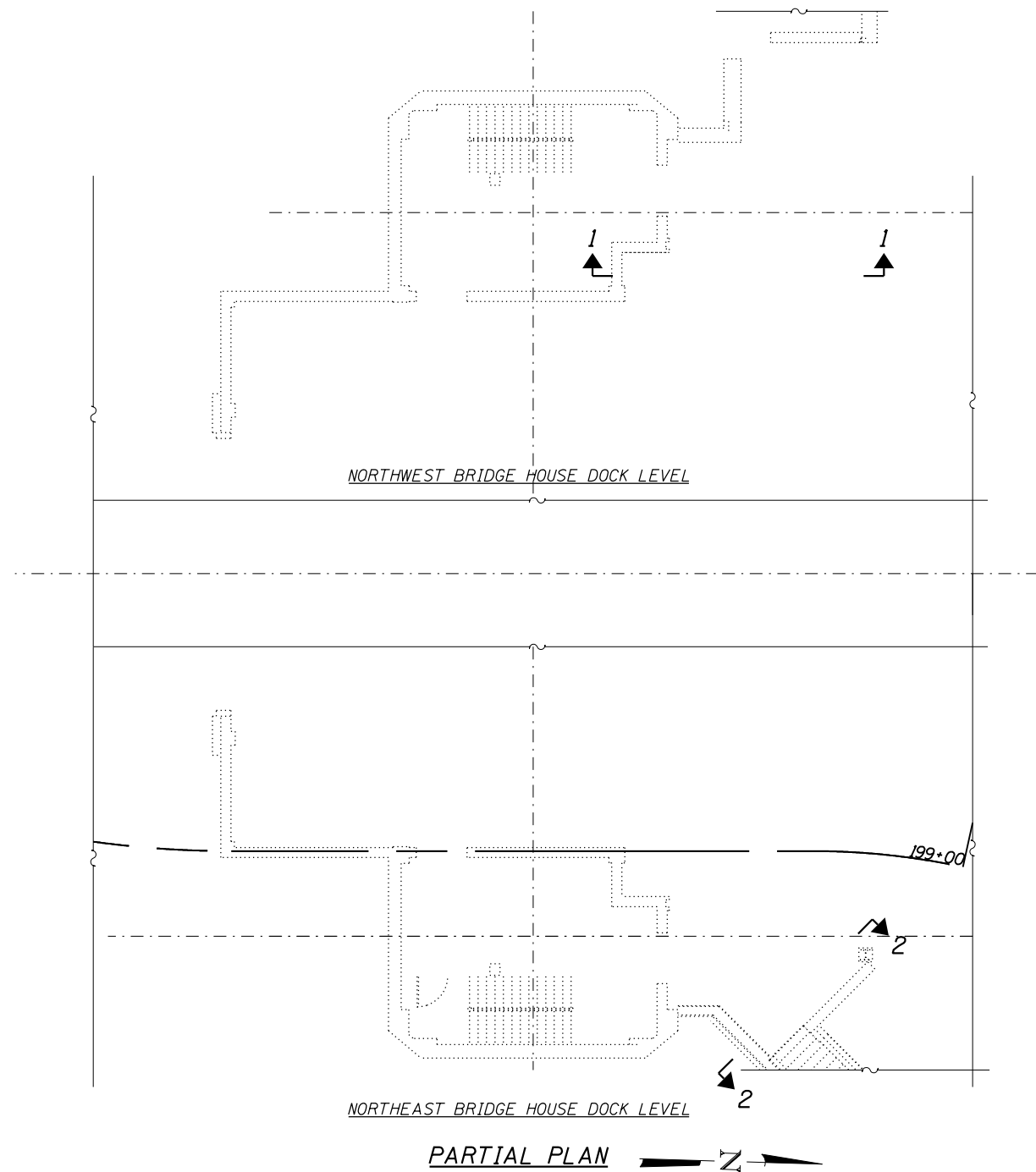
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

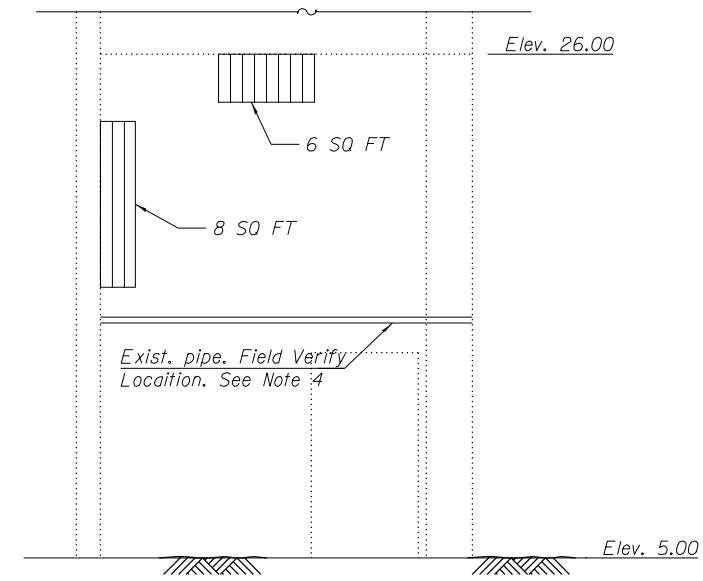
**FIXED PART: DOCK LEVEL
SOUTH HOUSES WALL REPAIRS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-16
CDOT PROJECT NO. E-6-650			57 OF 411

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SECTION 1-1




SECTION 2-2

NOTES:

1. Areas of structural steel repairs and epoxy crack injection shown are estimated. The Engineer shall show actual locations of these repairs at the time of construction.
2. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with CONCRETE REMOVAL.
3. Protective concrete sealer shall be applied to the structural concrete repair areas.
4. The Contractor shall relocate and reinstall any existing utility in conflict with the repairs shown in the plans, and shall not be paid separately.

LEGEND

 Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)

BILL OF MATERIAL

ITEM	UNIT	QTY
PROTECTIVE CONCRETE SEALER	SQ YD	22
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	22

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WSP USA Inc.
30 N. LASALLE STREET
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CHICAGO, IL 60602
TEL: (312) 782-8150
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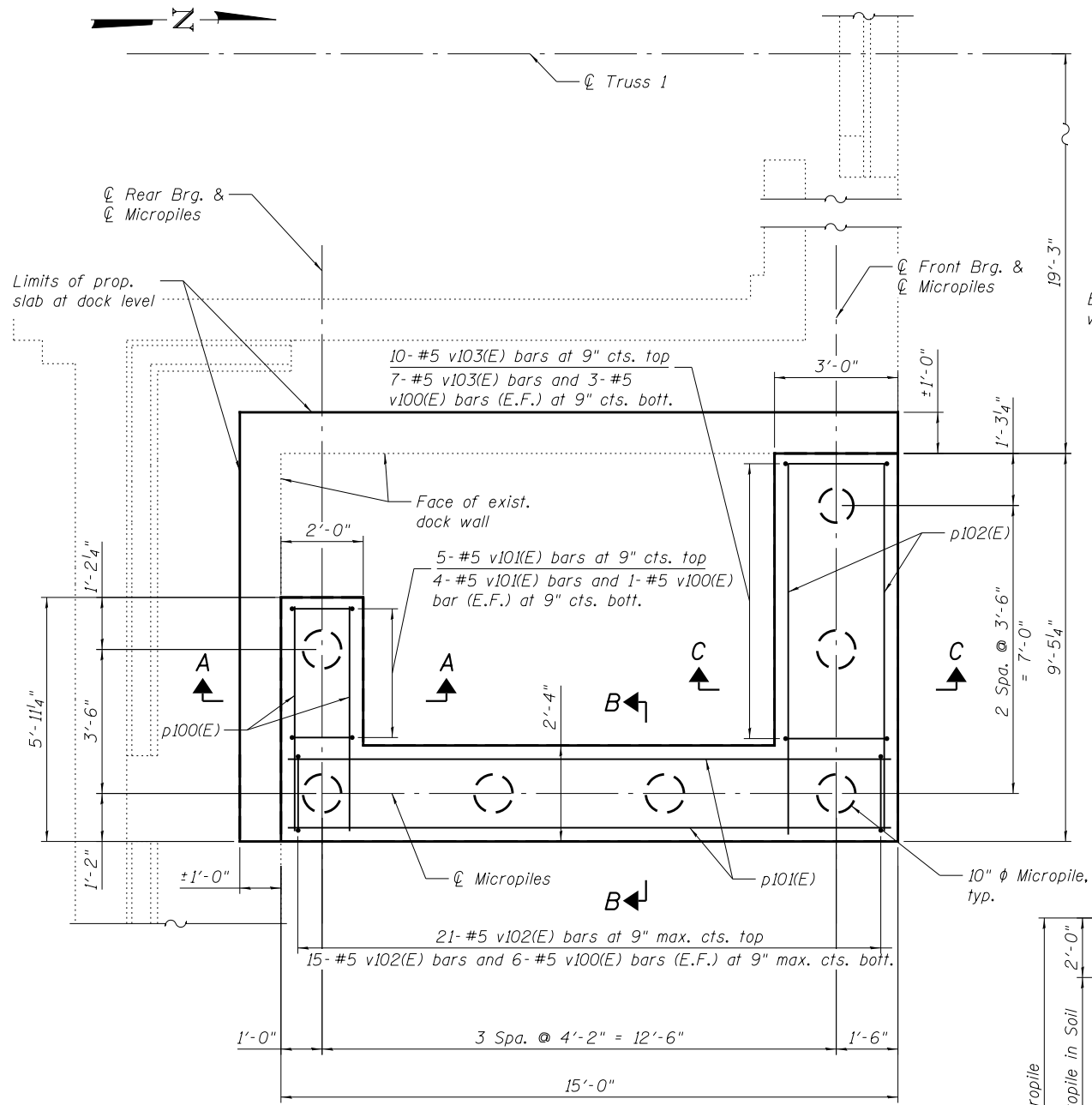
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PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

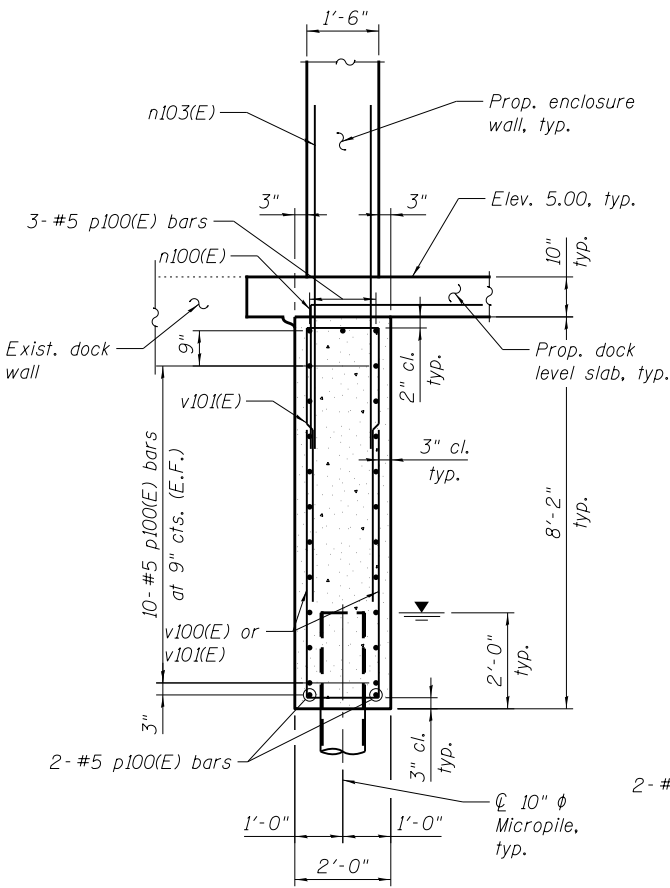
FIXED PART: DOCK LEVEL
NORTH HOUSES WALL REPAIRS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-17
CDOT PROJECT NO. E-6-650			58 OF 411

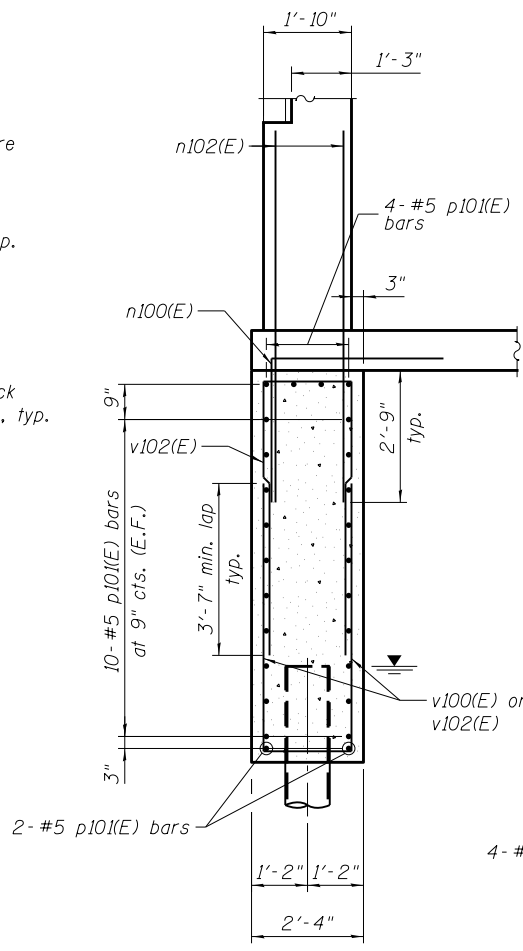


FOUNDATION PLAN

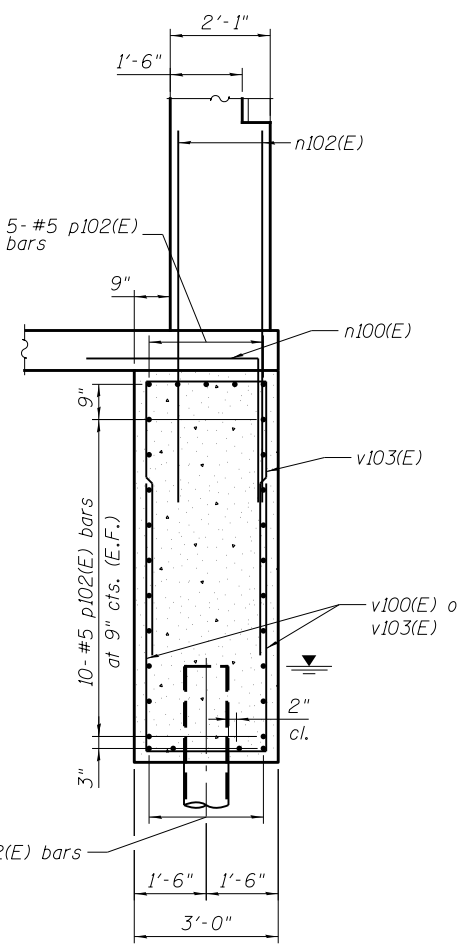
(S.E. House shown, N.E. House opposite hand)



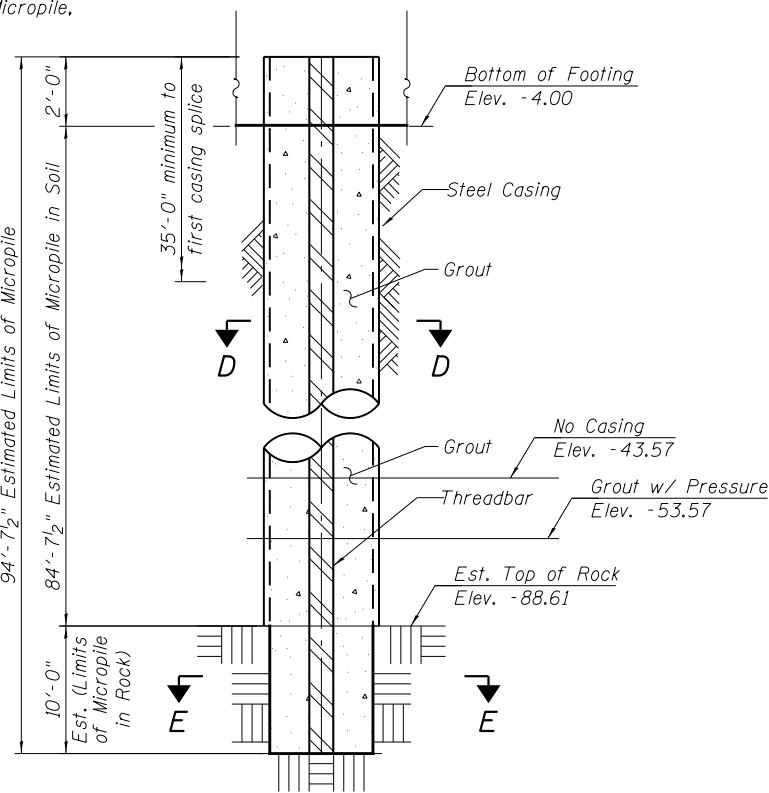
SECTION A-A



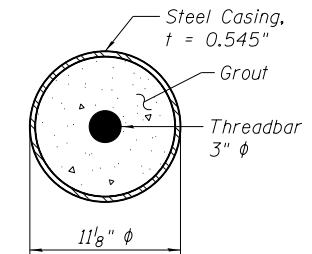
SECTION B-B



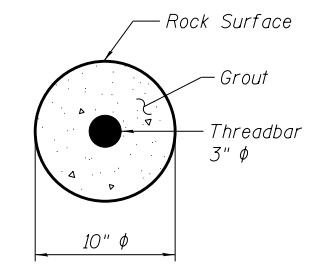
SECTION C-C



MICROPILE



SECTION D-D



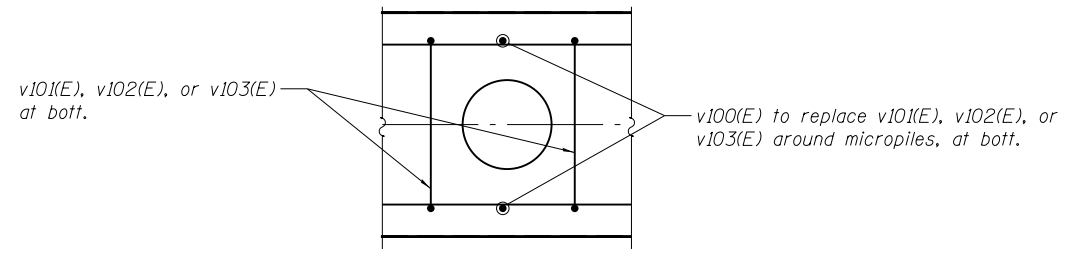
SECTION E-E

MICROPILE DATA

Maximum Factored Compression Load = 54 kips
 Maximum Service Compression Load = 41 kips
 Maximum Factored Tension Load = 8 kips
 Maximum Service Tension Load = 2 kips
 Maximum Service Load Deflection = 0.003 in.
 Note: The Factored and Service Loads and deflections shall be used for testing requirements according to the Special Provision Micropiles. The proof test pile location shall be determined by the Commissioner.

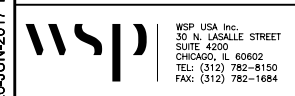
Notes:

- See Special Provision Micropiles for micropile construction and material requirements. One Micropile Load Test (verification test) shall be performed in any convenient location adjacent to or within the footprint of the foundation, as determined by the commissioner. The pile may be tested in tension up to the Maximum Factored Compression Load in order to prove both tension and compression capacity. The deflection measured during testing at the Maximum Service Compression Load shall be less than the Maximum Service Load Deflection regardless of whether the piles are tested in tension or compression.
- The foundation requires concrete placement under water. The Contractor shall place the concrete according to ACI 347 Section 9.7
- For dock slab reinforcement details, see sheet MS-21.
- For enclosure wall reinforcement details, see sheet MS-22.
- For Bill of Materials and bar bending diagrams, see sheet MS-24.



TYPICAL REINFORCEMENT AROUND MICROPILE

T:\16917A\Struct\Cadd\Sheets\0166030-E6650-MS018-Foundation.dgn 26-JUN-2017 12:57



USER NAME =	lopezgonzalez	DESIGNED -	MI	REVISED -	
		CHECKED -	PJL	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	MI	REVISED -	
PLOT DATE =	6/26/2017	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

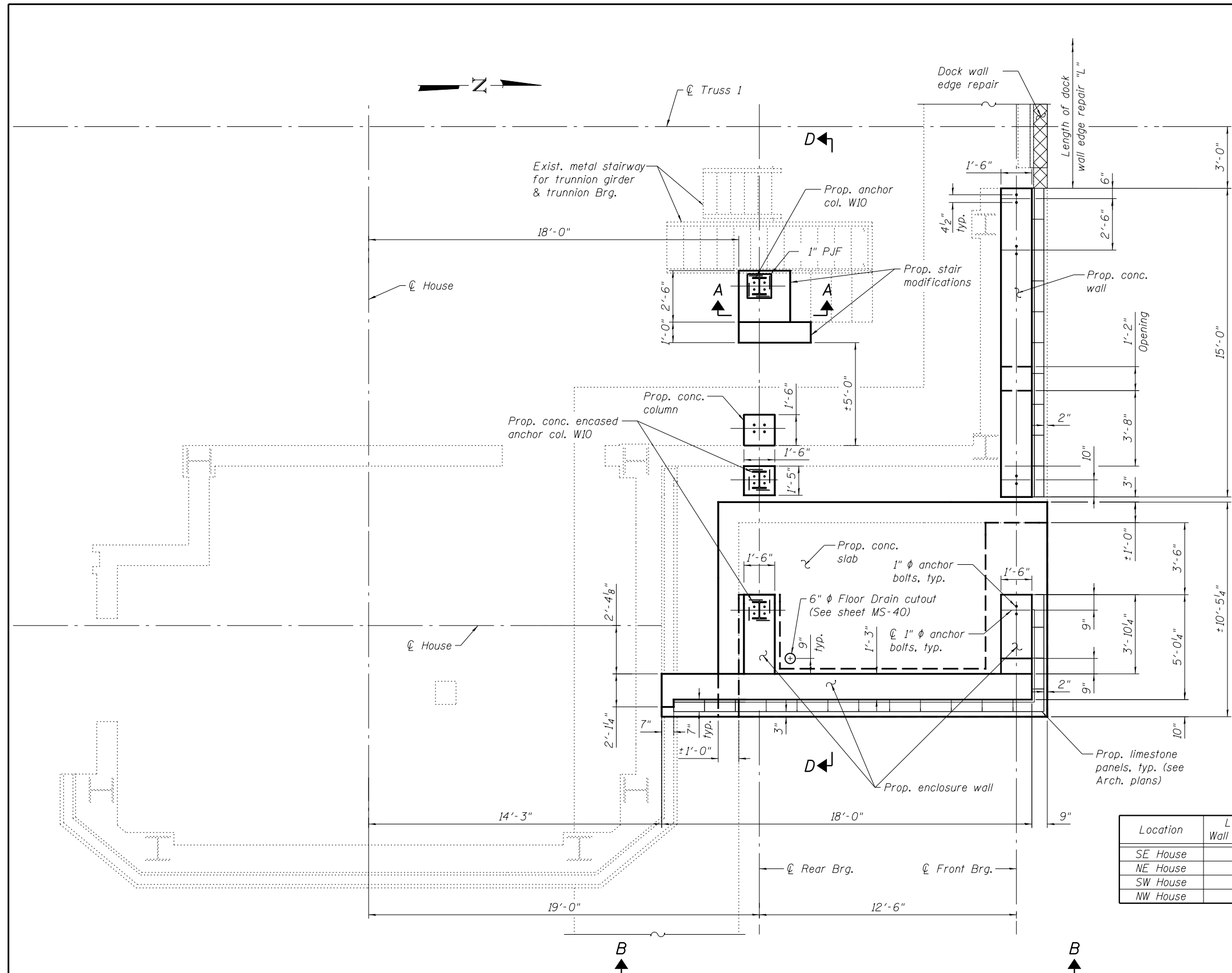
FIXED PART:
HOUSE FOUNDATION PLAN
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-18
CDOT PROJECT NO. E-6-650			59 OF 411

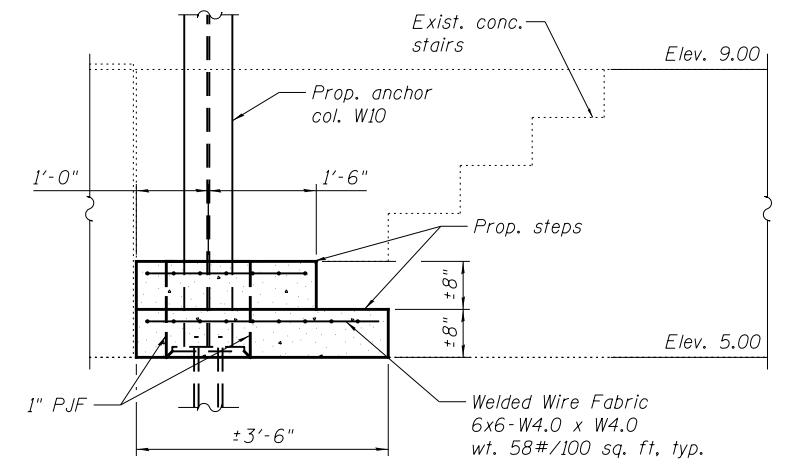
REFERENCE DRAWINGS

Drawing
Main Pier - Masonry Layout
House Floor Beams
Bridge Houses Concrete Details

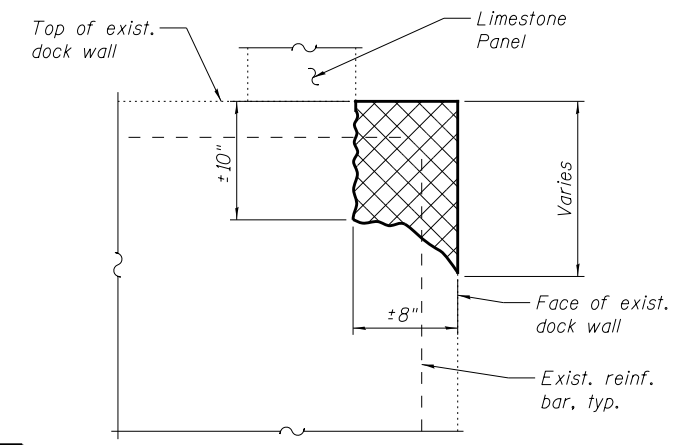
Sheet No.
1660300695
1660300700
1660300811



HOUSE GENERAL PLAN - DOCK LEVEL
(S.E. House shown, N.E. House opposite hand)
(Prop. Fender System is not shown for clarity)




**SECTION A-A
STAIR MODIFICATION**



TYPICAL DETAIL FOR EDGE OF DOCK WALL CONCRETE REPAIR

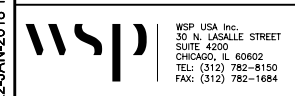
Location	Length of Dock Wall Edge Repair "L"
SE House	30'-6"
NE House	16'-3"
SW House	30'-6"
NW House	44'-9"

LEGEND

 Structural Repair of Concrete (Depth Greater than 5 inches)

- Notes:
- For Views B-B, C-C, and Section D-D, see sheet MS-20.
 - For steel and bearing details, see sheet MS-25 thru MS-28.
 - Cost of the Welded Wire Fabric is included in the cost of Concrete Structures.

T:\16617A\Struct\Cadd\Sheets\0166030-E6650-MS019-House-GeneralPlan_Dock_Level.dgn 22-JAN-2018 13:28



WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

USER NAME =	lopezgonzalez	DESIGNED -	MI	REVISED -	
		CHECKED -	PJL	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	MI	REVISED -	
PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**FIXED PART:
HOUSE GENERAL PLAN - DOCK LEVEL
(STRUCTURE NO. 016-6030)**

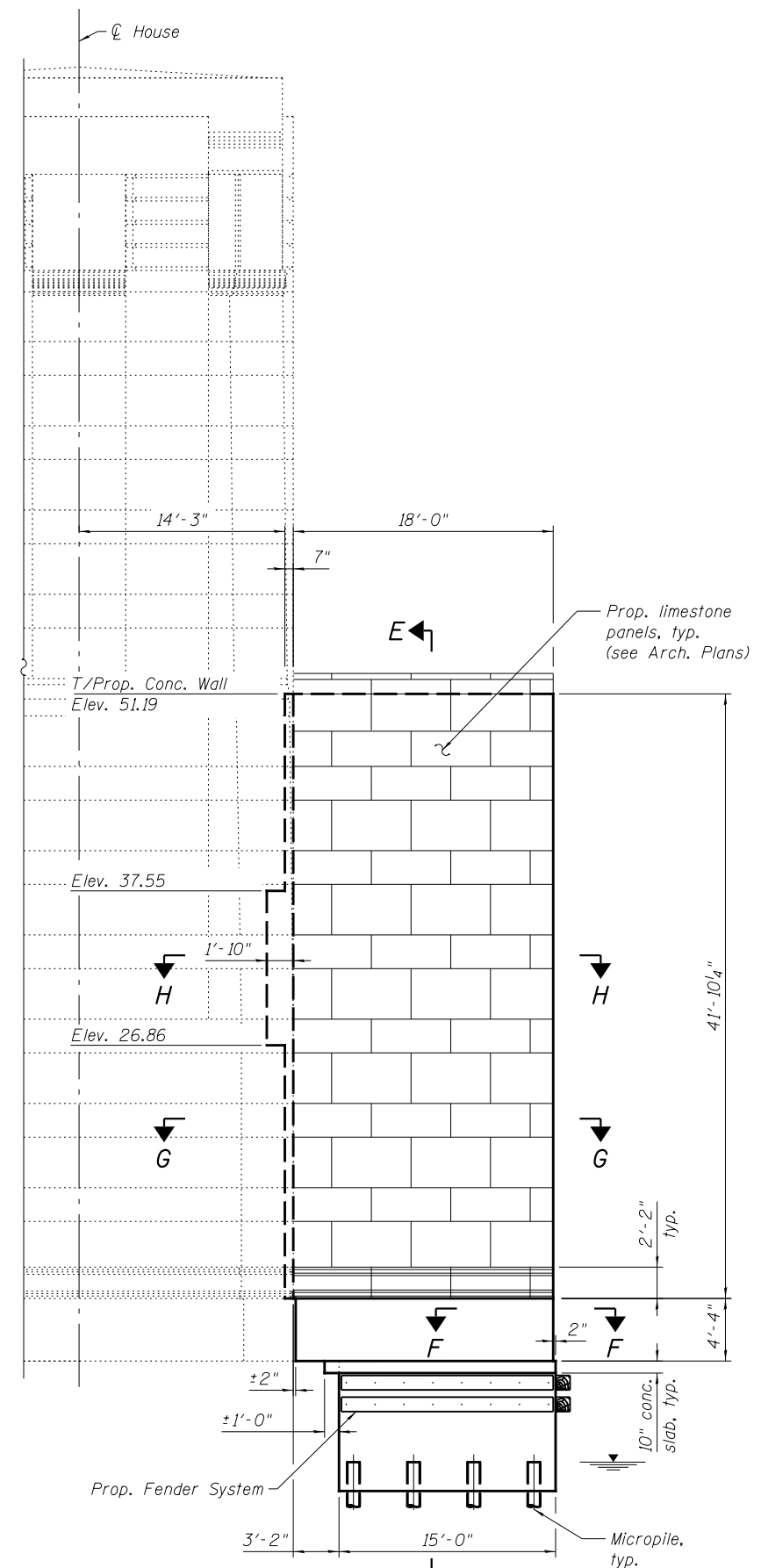
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-19
CDOT PROJECT NO. E-6-650			60 OF 411

REFERENCE DRAWINGS

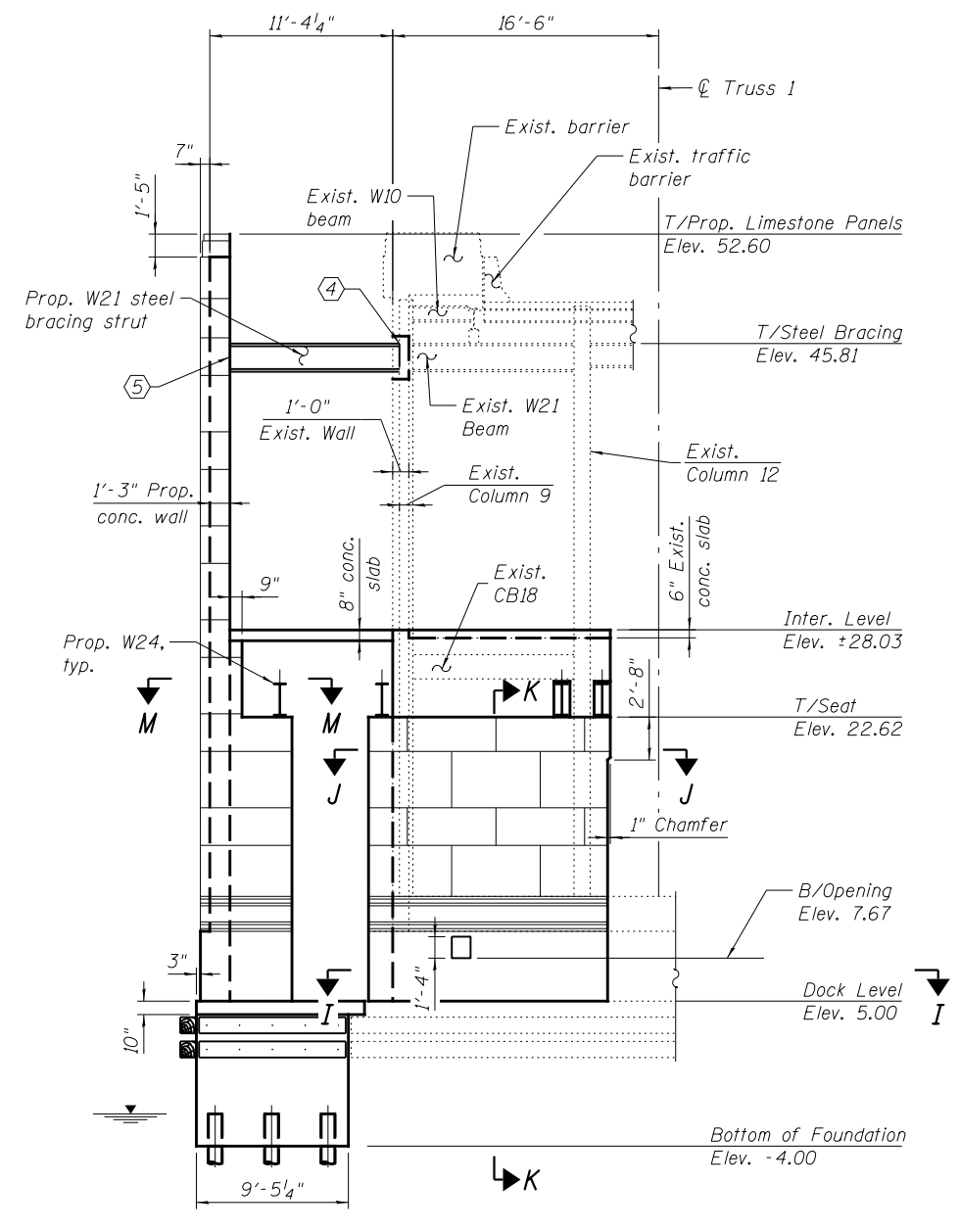
Drawing
 Bridge Houses Concrete Details
 Elevation of Houses

Sheet No.
 1660300811
 1660300870

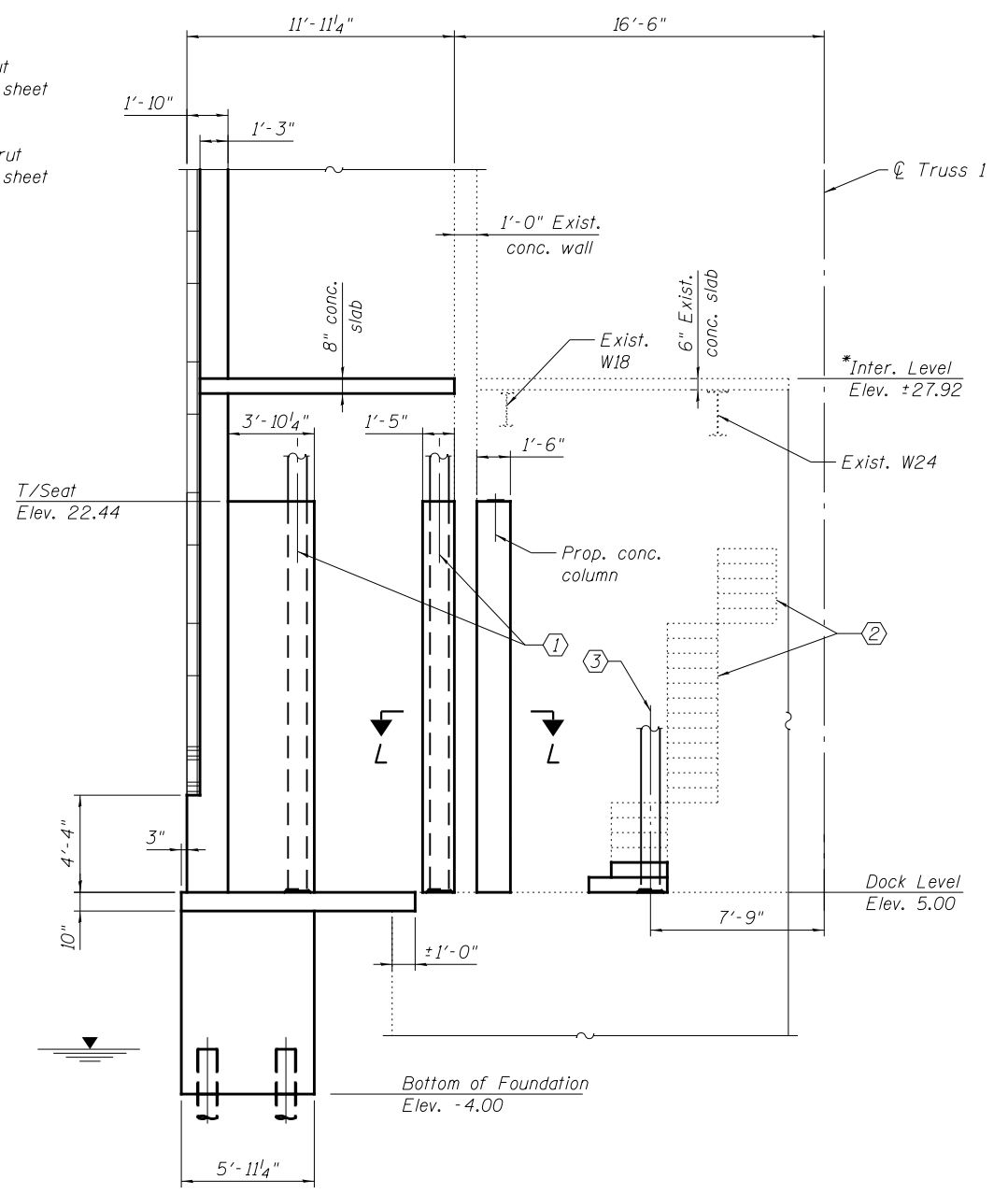
- ① \varnothing Prop. conc. encased anchor col. W10
- ② Exist. metal stairway for trunnion girder & trunnion Brg.
- ③ \varnothing Prop. anchor col. W10
- ④ Concrete encase steel strut connection, see details on sheet MS-24.
- ⑤ Embedment \varnothing for steel strut connection, see details on sheet MS-28.



ELEVATION - DOCK VIEW OF ENCLOSURE WALL
 (Looking west at S.E. House, N.E. House opposite hand)



ELEVATION - RIVER VIEW OF ENCLOSURE WALL
 (Looking south at S.E. House, N.E. House opposite hand)



SECTION D-D

* Top of slab elevation at the \varnothing Rear Brg.

- Notes:
1. For Sections E-E, F-F, G-G, and H-H, see sheet MS-22.
 2. For Sections I-I, J-J, K-K, and L-L, see sheet MS-23.
 3. For Section M-M, see sheet MS-24.
 4. For steel and bearing details, see sheet MS-25 thru MS-28.

T:\16917A\Struct\Cadd\Sheets\0166030-E6650-MS020-House-Walls-General\Elevation.dgn 22-JAN-2018 13:28



WSP USA Inc.
 30 N. LA SALLE STREET
 SUITE 4200
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1884

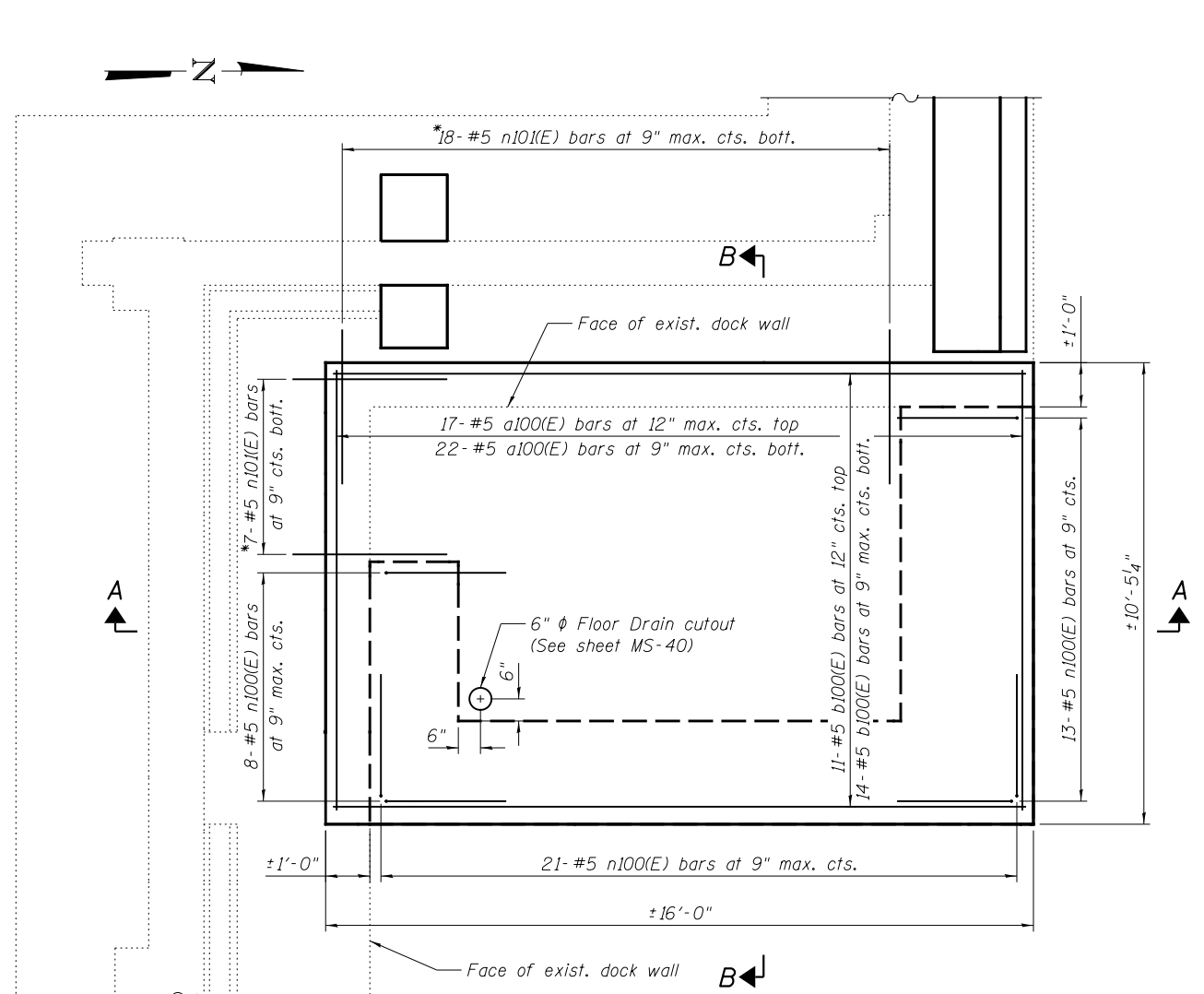
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		CHECKED -	PJL	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	IJL/MI	REVISED -	
PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

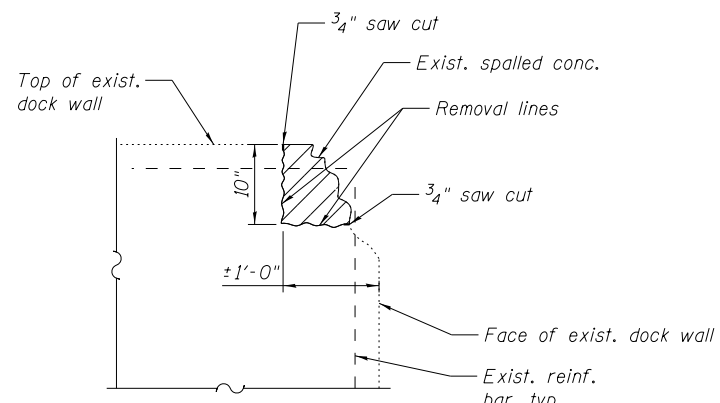
FIXED PART:
 HOUSE ELEVATIONS & SECTIONS
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-20
CDOT PROJECT NO. E-6-650			61 OF 411



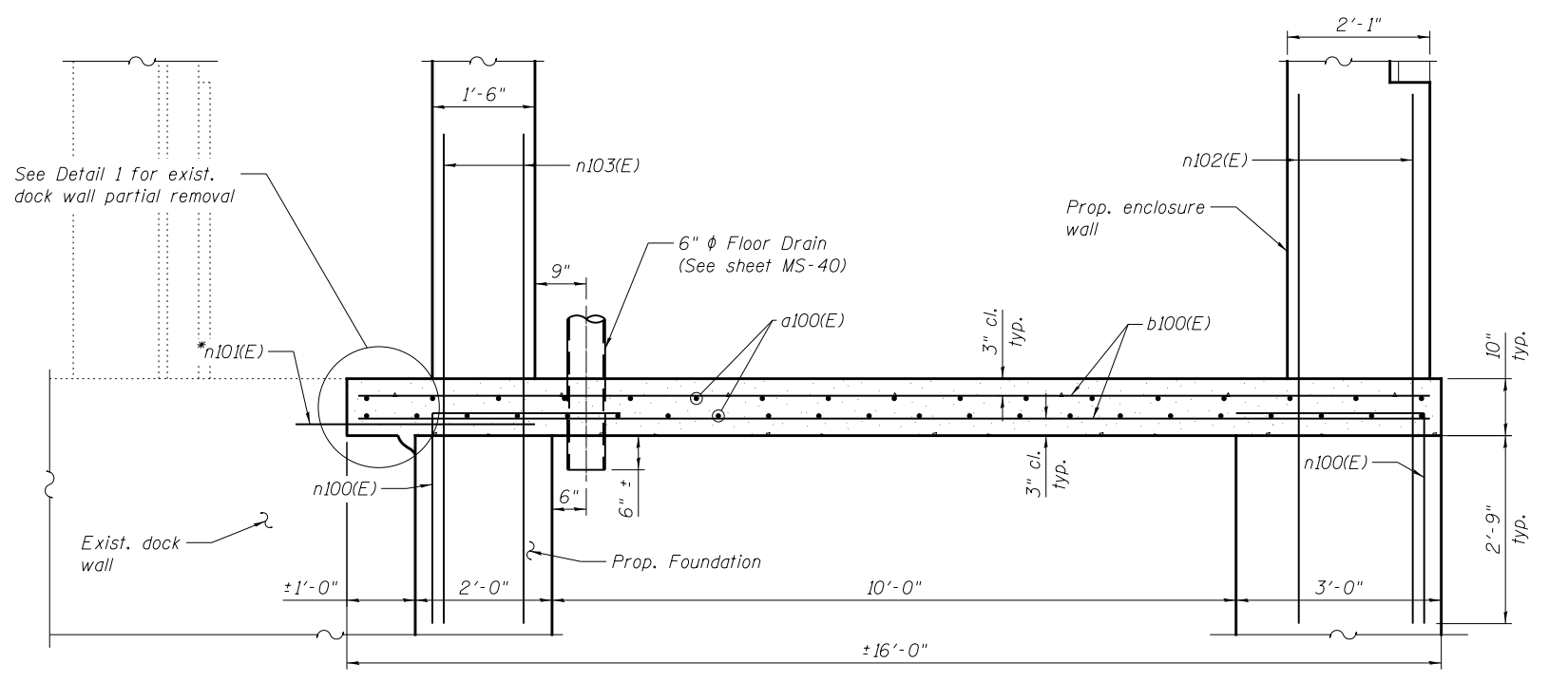
PLAN - SLAB AT DOCK LEVEL

(S.E. House shown, N.E. House opposite hand)
 (Prop. Enclosure Wall & Limestone Panels are not shown for clarity)

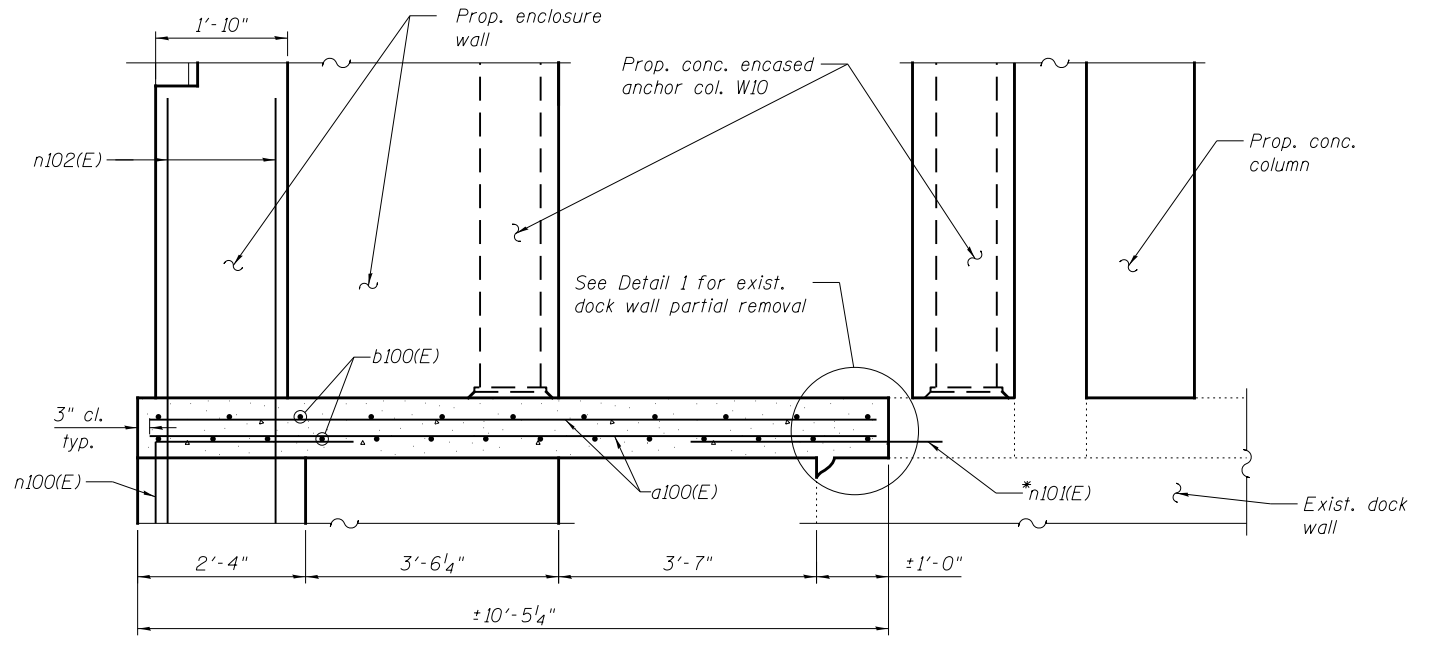


DETAIL 1

(Exist. Dock Wall Partial Removal)



SECTION A-A



SECTION B-B

REFERENCE DRAWINGS

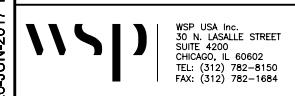
Drawing
 House Floor Beams
 Bridge Houses Concrete Details

Sheet No.
 1660300700
 1660300811

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 9\"/>

- Notes:
- Hatched areas indicate sections for Concrete Removal.
 - Perimeters of Concrete Removal areas shall be saw cut 3/4\"/>
 - Existing reinforcement shall be cleaned straightened and incorporated into the new construction. Cost incidental to Concrete Removal
 - Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to Concrete Removal
 - For enclosure wall reinforcement details, see sheet MS-22.
 - For steel and bearing details, see sheet MS-25 thru MS-28.

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USER NAME =	lopezgonzalez	DESIGNED -	MI	REVISED -	
		CHECKED -	PJL	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	MI	REVISED -	
PLOT DATE =	6/26/2017	CHECKED -	JIG	REVISED -	

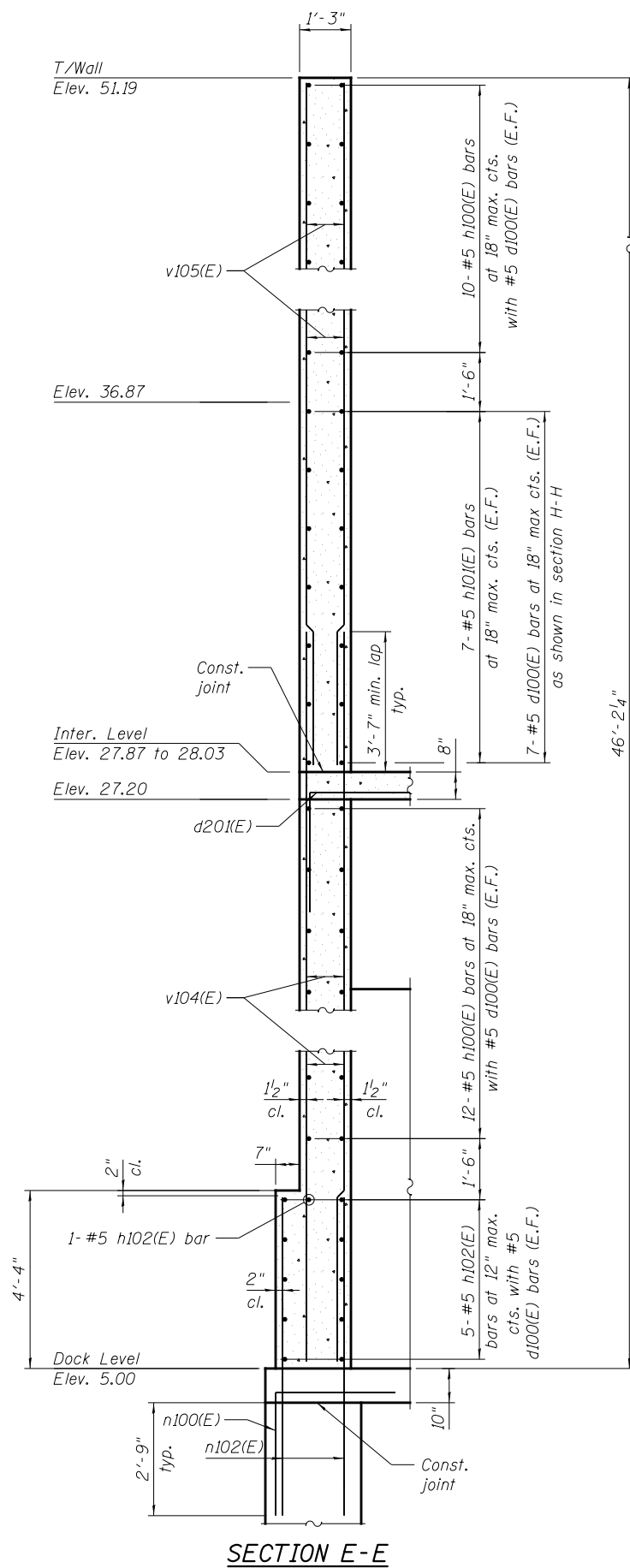
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

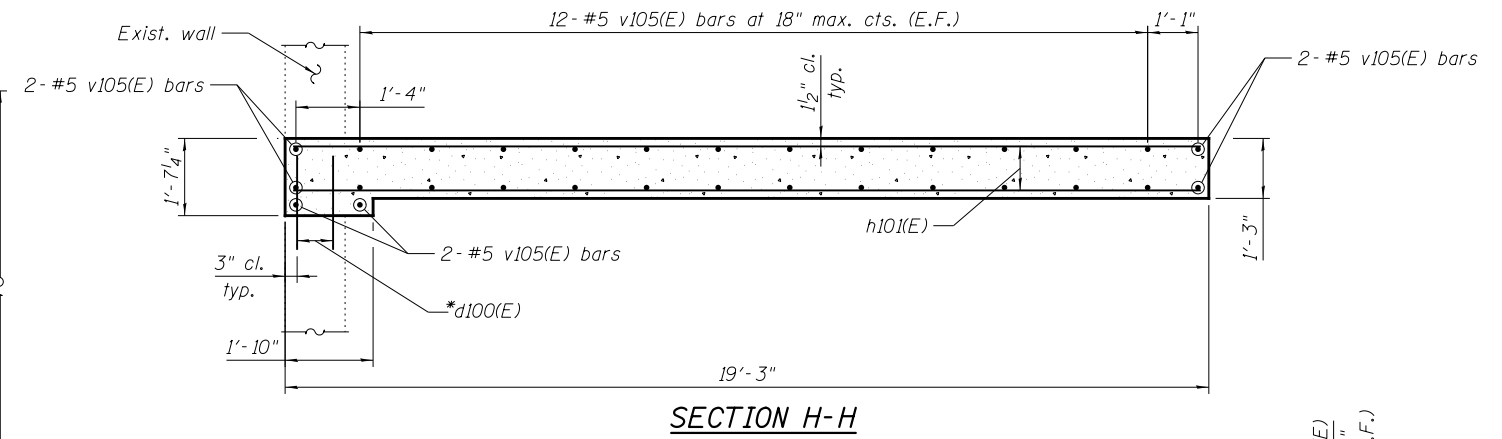
FIXED PART:
HOUSE SLAB DETAILS - DOCK LEVEL
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-21
CDOT PROJECT NO. E-6-650			62 OF 411

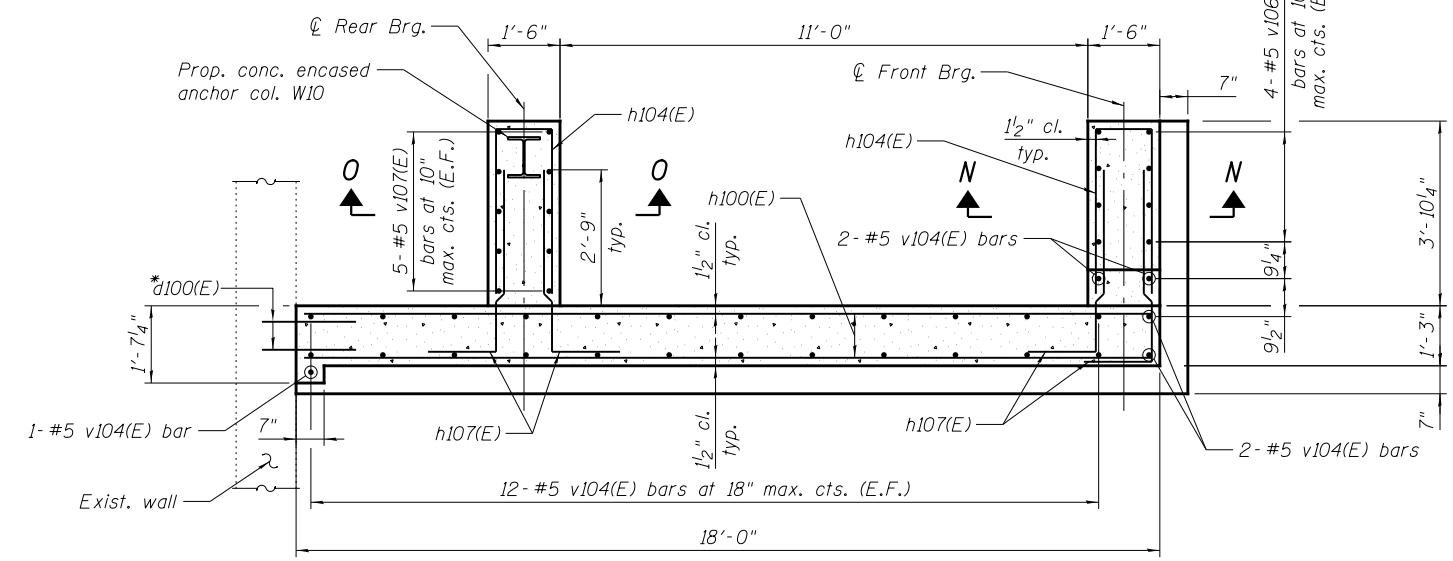
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22-JAN-2018 13:28



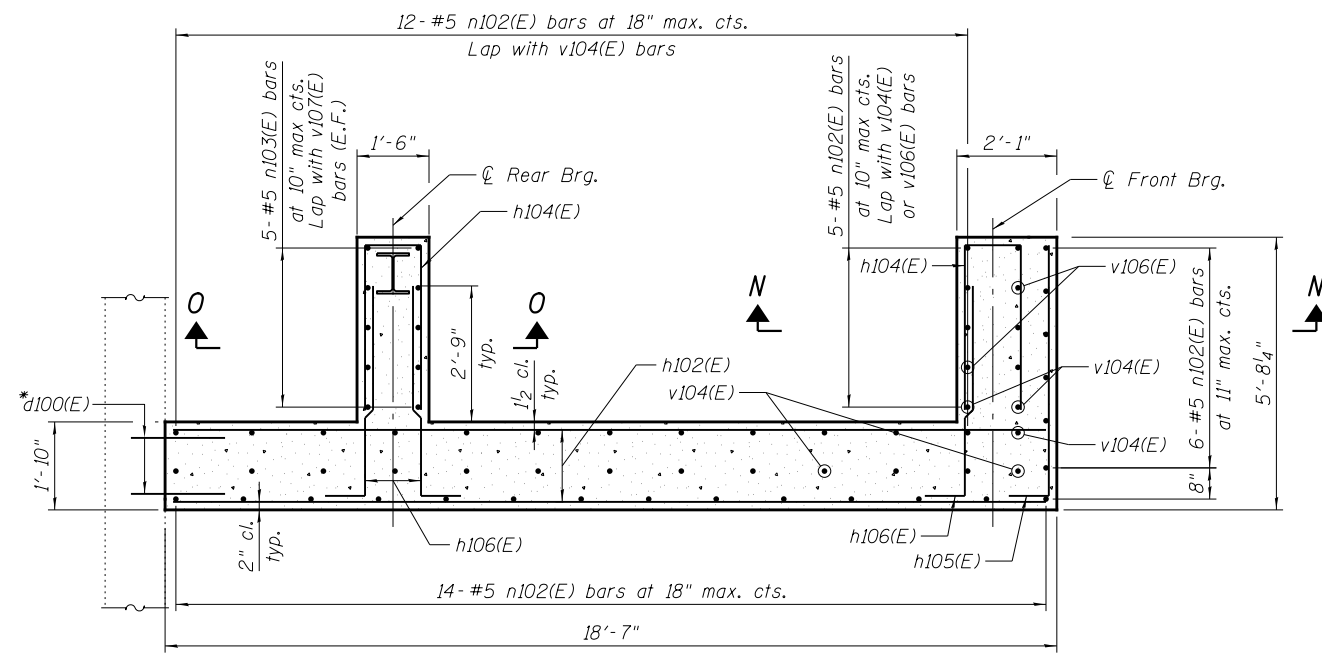
SECTION E-E



SECTION H-H

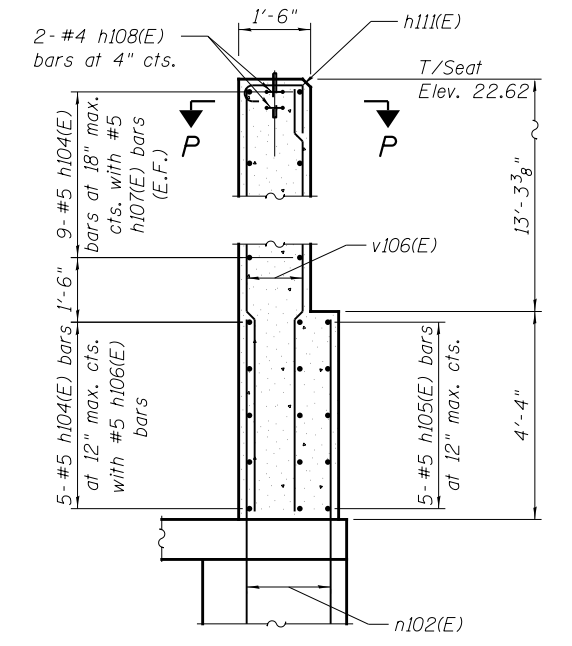


SECTION G-G

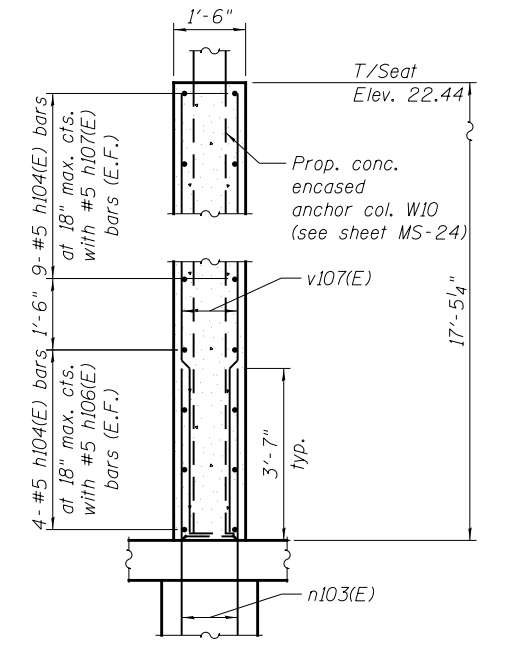


SECTION F-F

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 6". Cost included in the cost of Reinforcement Bars, Epoxy Coated.



SECTION P-P

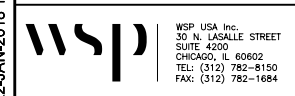


SECTION N-N

REFERENCE DRAWINGS

Drawing	Sheet No.
Concrete Removal Upper Level	1660300137
Bridge Houses Concrete Details	1660300811
Elevation of Houses	1660300870

- Notes:
- For Section P-P, see sheet MS-23.
 - For foundation reinforcement details, see sheet MS-18.
 - For dock slab reinforcement details, see sheet MS-21.
 - For Bill of Materials and bar bending diagrams, see sheet MS-24.
 - For steel and bearing details, see sheets MS-25 thru MS-28.



USER NAME = lopezgonzalez
DESIGNED - MI
CHECKED - PUL
PLOT SCALE = N.T.S.
DRAWN - IJL/MI
PLOT DATE = 1/22/2018
CHECKED - JIG

DESIGNED - MI
CHECKED - PUL
DRAWN - IJL/MI
CHECKED - JIG

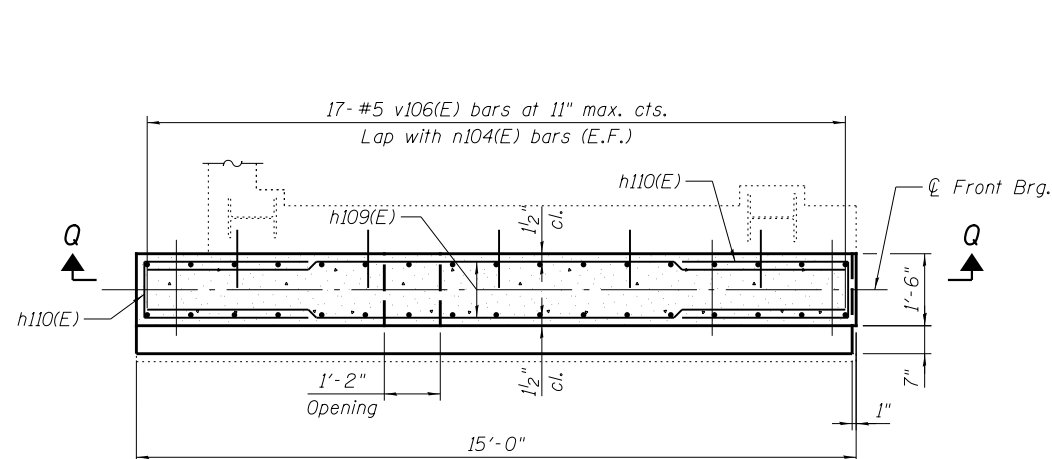
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

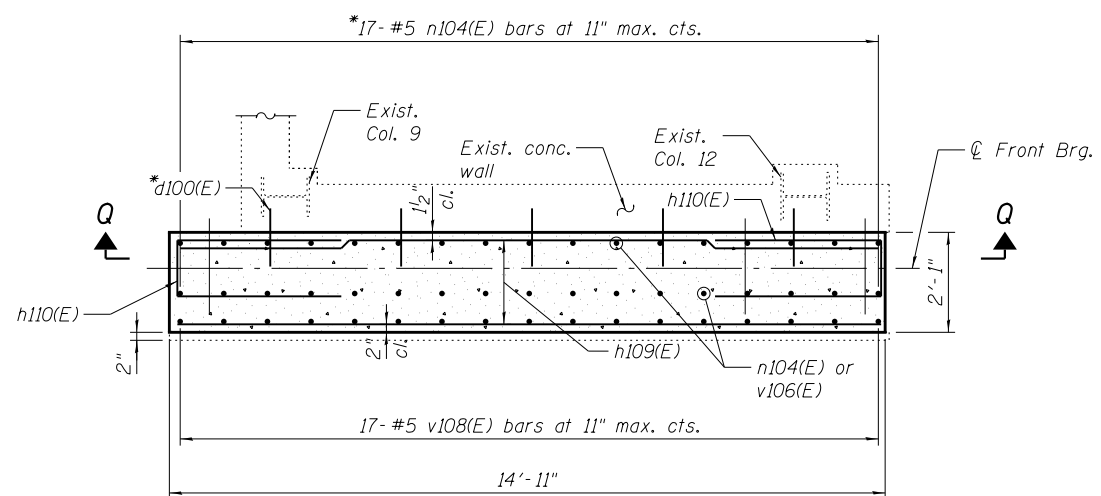
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART:
HOUSE WALLS DETAILS I
(STRUCTURE NO. 016-6030)

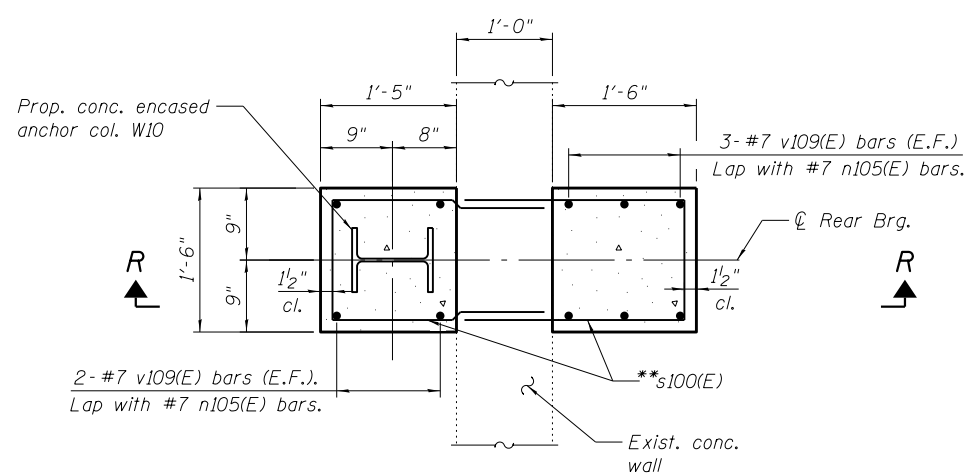
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-22
CDOT PROJECT NO. E-6-650			63 OF 411



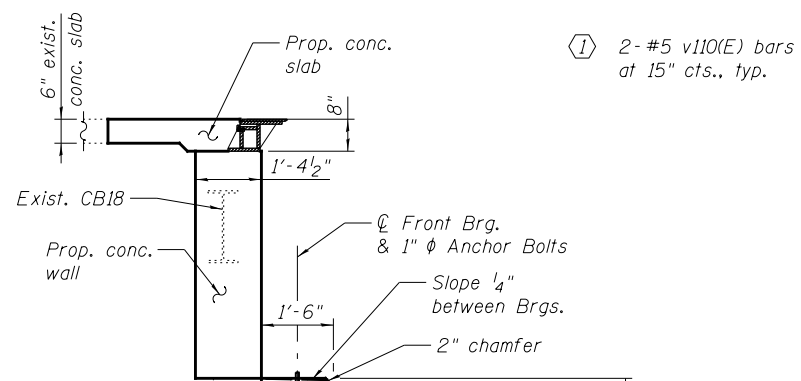
SECTION J-J



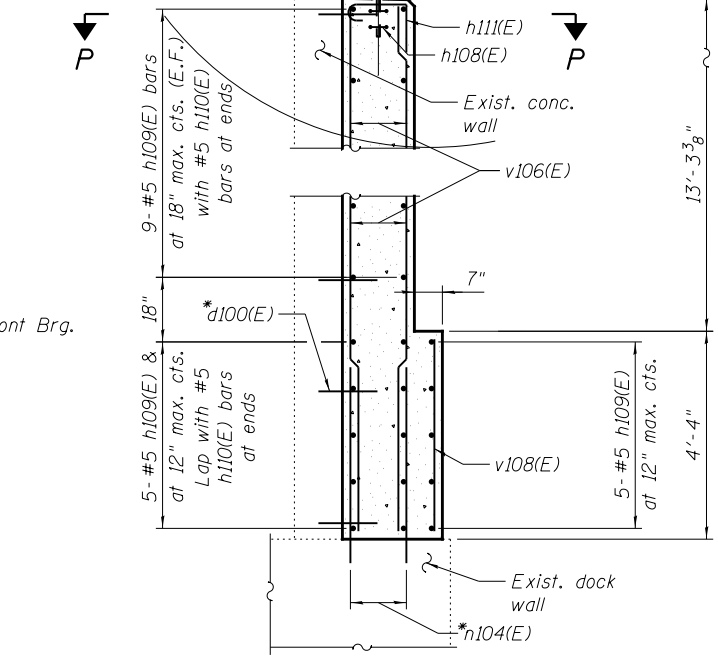
SECTION I-I



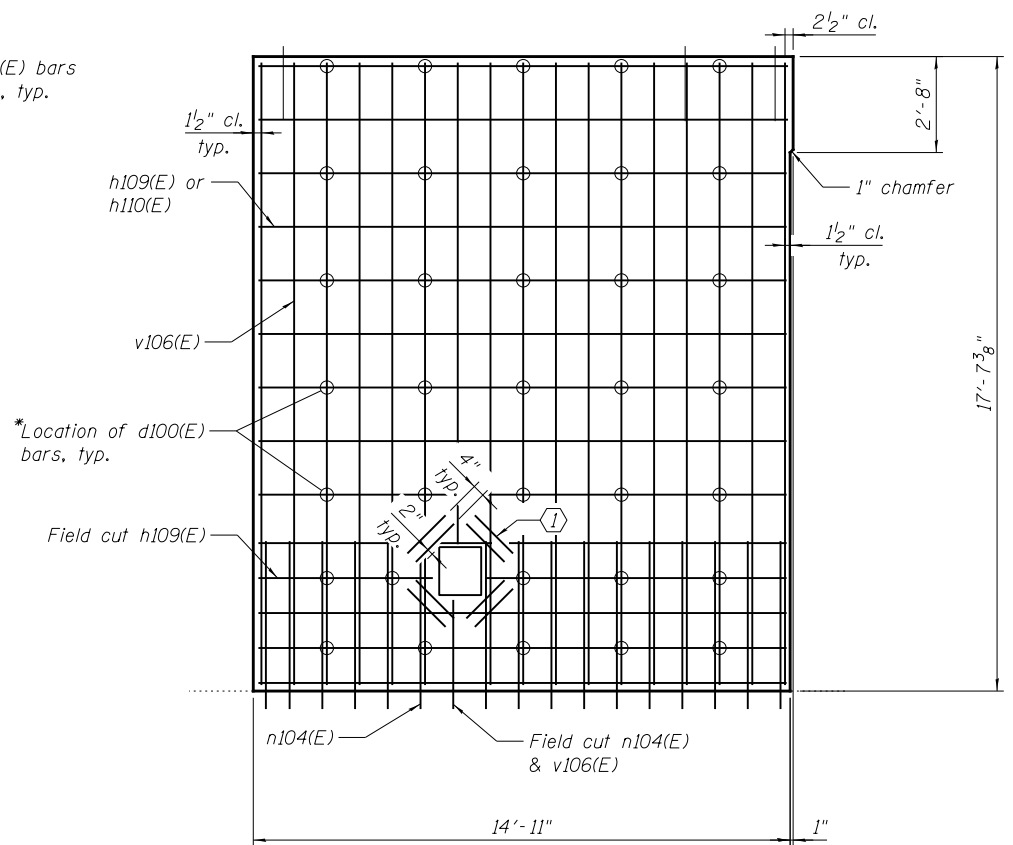
SECTION L-L



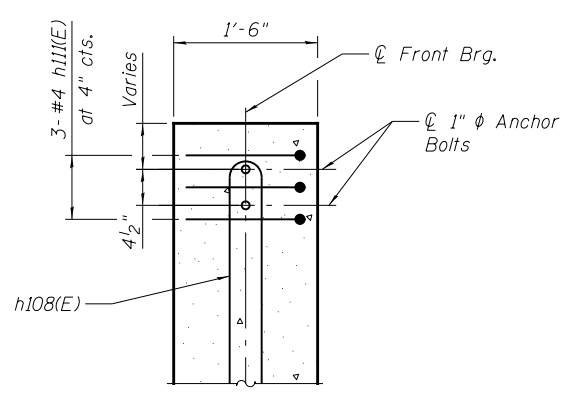
SECTION K-K



SECTION R-R



SECTION Q-Q



SECTION P-P
TYPICAL TIE REINFORCEMENT AROUND ANCHOR BOLTS

REFERENCE DRAWINGS

Drawing
Bridge Houses Concrete Details
Elevation of Houses

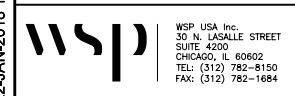
Sheet No.
1660300811
1660300870

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 6" for #5 bars and 1'-6" for #7 bars. Cost included in the cost of Reinforcement Bars, Epoxy Coated.

** Drill thru the entire thickness of the exist. conc. wall and grout bars according to Article 584 of the Std. Specs. Cost included in the cost of Reinforcement Bars, Epoxy Coated.

- Notes:
1. For steel and bearing details, see sheets MS-25 thru MS-28.
 2. For details of prop. approach slab and wall for the hinged sidewalk, see sheets MS-40 and MS-41.
 3. For Bill of Materials and bar bending diagrams, see sheet MS-24.

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USER NAME = lopezgonzalez
DESIGNED - MI
CHECKED - PUL
PLOT SCALE = N.T.S.
DRAWN - MI
CHECKED - JIG
PLOT DATE = 1/22/2018

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DRAWN - MI
CHECKED - JIG

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REVISED -
REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART:
HOUSE WALLS DETAILS II
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-23
CDOT PROJECT NO. E-6-650			64 OF 411

BILL OF MATERIAL

Item	No.	Size	Length	Shape
a100(E)	78	#5	10'-0"	—
b100(E)	50	#5	15'-7"	—
d100(E)	206	#5	1'-9"	—
h100(E)	88	#5	17'-9"	—
h101(E)	28	#5	19'-0"	—
h102(E)	22	#5	18'-3"	—
h103(E)	8	#5	4'-8"	—
h104(E)	54	#5	8'-3"	—
h105(E)	10	#5	6'-2"	—
h106(E)	26	#5	5'-3"	—
h107(E)	72	#5	5'-7"	—
h108(E)	12	#4	7'-0"	—
h109(E)	66	#5	14'-9"	—
h110(E)	56	#5	8'-5"	—
h111(E)	24	#4	2'-9"	—
h112(E)	16	#5	2'-1"	—
h113(E)	8	#5	3'-5"	—
n100(E)	84	#5	5'-10"	—
n101(E)	50	#5	3'-6"	—
n102(E)	74	#5	7'-9"	—
n103(E)	20	#5	7'-2"	—
n104(E)	68	#5	4'-1"	—
n105(E)	20	#7	7'-0"	—
p100(E)	50	#5	5'-5"	—
p101(E)	52	#5	14'-7"	—
p102(E)	58	#5	9'-0"	—
s100(E)	72	#4	5'-7"	—
v100(E)	40	#5	5'-8"	—
v101(E)	18	#5	12'-10"	—
v102(E)	72	#5	13'-2"	—
v103(E)	34	#5	13'-10"	—
v104(E)	58	#5	26'-5"	—
v105(E)	60	#5	23'-1"	—
v106(E)	84	#5	17'-5"	—
v107(E)	20	#5	17'-2"	—
v108(E)	34	#5	4'-2"	—
v109(E)	20	#7	17'-4"	—
v110(E)	32	#5	2'-0"	—
v111(E)	16	#5	2'-7"	—
High Performance Concrete Structures	Cu. Yd.	184.3		
Structural Repairs of Concrete (Depth Greater than 5 inches)	Sq. Ft.	183		
Protective Concrete Sealer	Sq. Yd.	207.1		
Reinforcement Bars, Epoxy Coated	Pound	19,160		
Micro-piles	Each	14		
Micropile Proof Load Test	Each	2		

Quantity shown includes S.E. and N.E. houses.

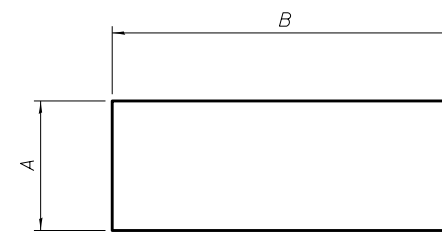
- Notes:
- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with the cost of Concrete Removal.
 - For steel and bearing details, see sheets MS-25 thru MS-28.

A & B DIMENSIONS

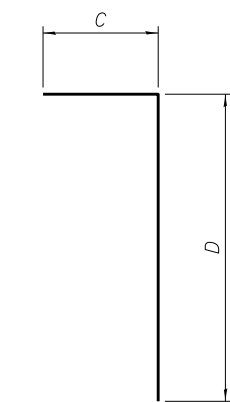
Bar	A	B
h104(E)	1'-3"	3'-6"
h110(E)	1'-3"	3'-7"
s100(E)	1'-3"	2'-2"
v101(E)	1'-6"	5'-8"
v102(E)	1'-10"	5'-8"
v103(E)	2'-6"	5'-8"

C & D DIMENSIONS

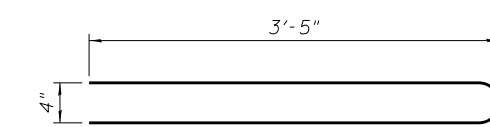
Bar	C	D
h105(E)	10"	5'-4"
h106(E)	10"	4'-5"
h107(E)	1'-8"	3'-11"
h113(E)	1'-9"	1'-8"
n100(E)	2'-9"	3'-1"



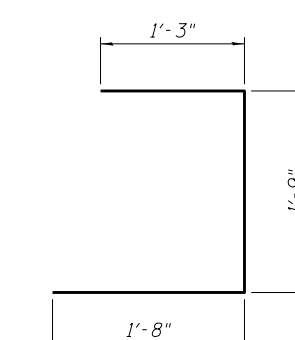
BARS



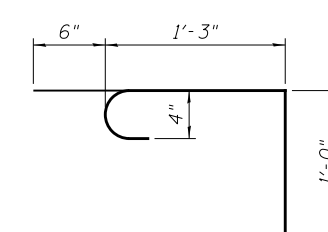
BARS



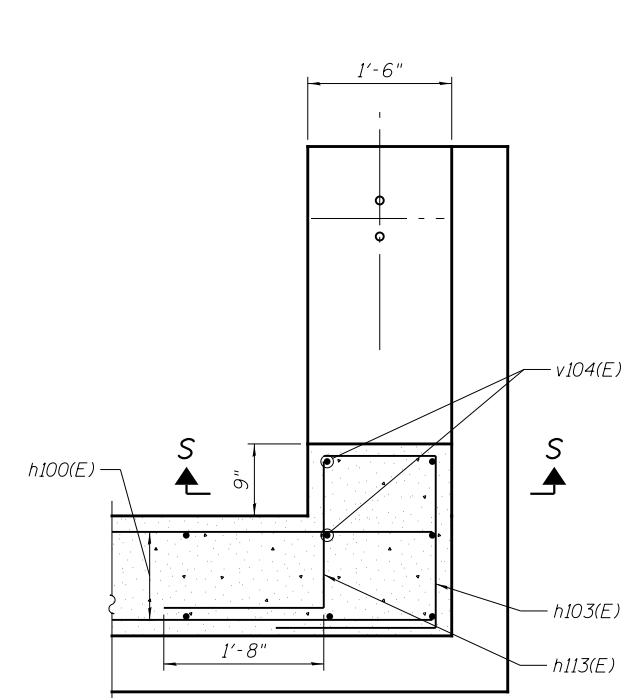
BAR h108(E)



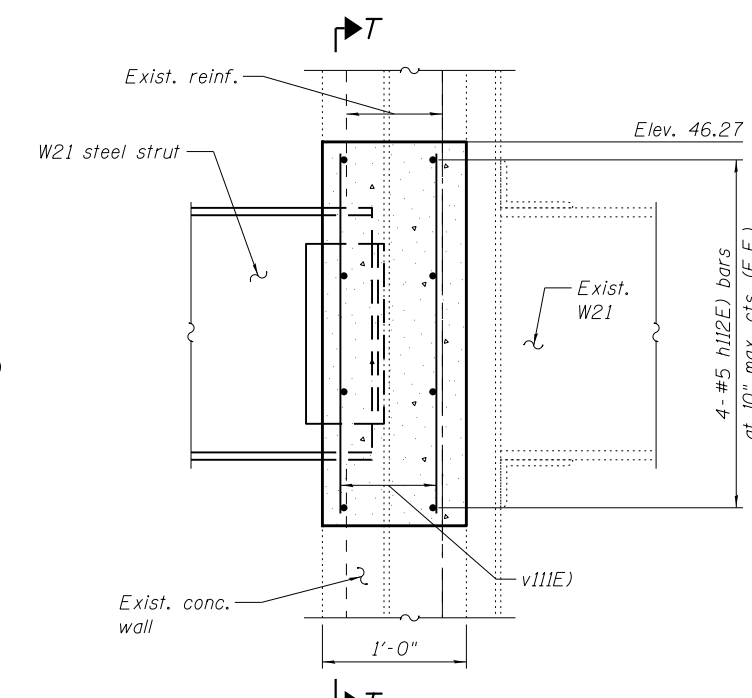
BAR h103(E)



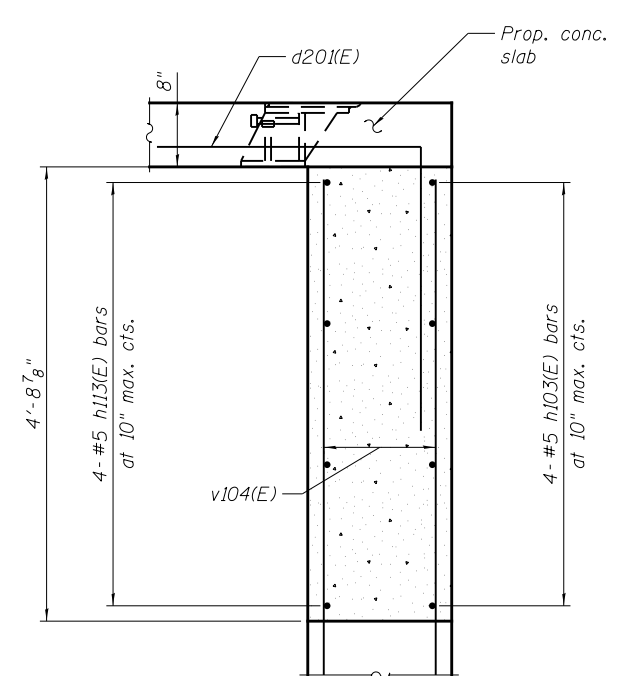
BAR h111(E)



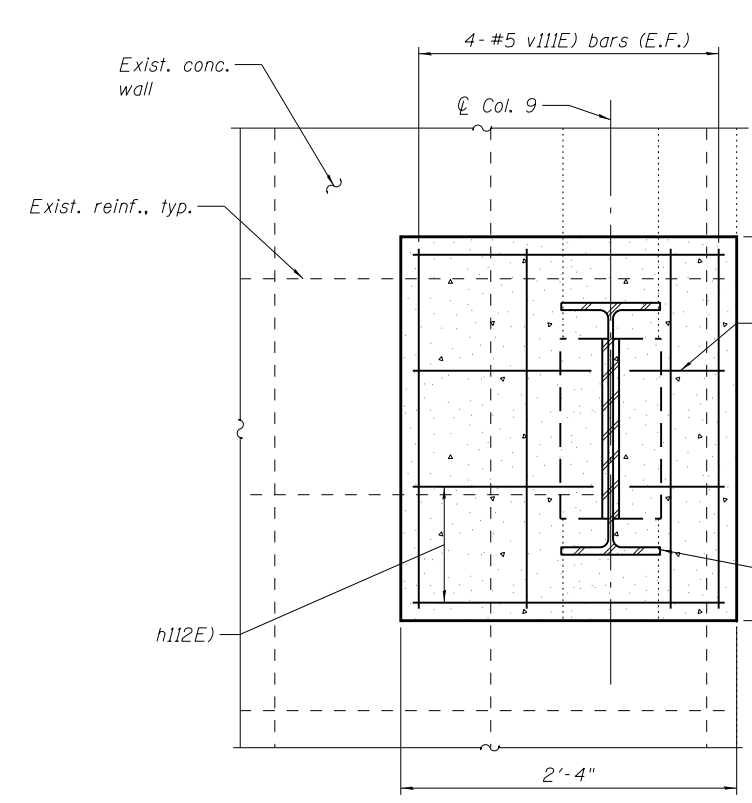
SECTION M-M



DETAIL 2



SECTION S-S



SECTION T-T

T:\16917A\Struct\Cadd\Sheets\0166030-E6650-MS024-House-Walls-Det-III.dgn 22-JAN-2018 13:28



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

USER NAME =	lopezgonzalez	DESIGNED -	MI	REVISED -	
		CHECKED -	PJL	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	MI	REVISED -	
PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

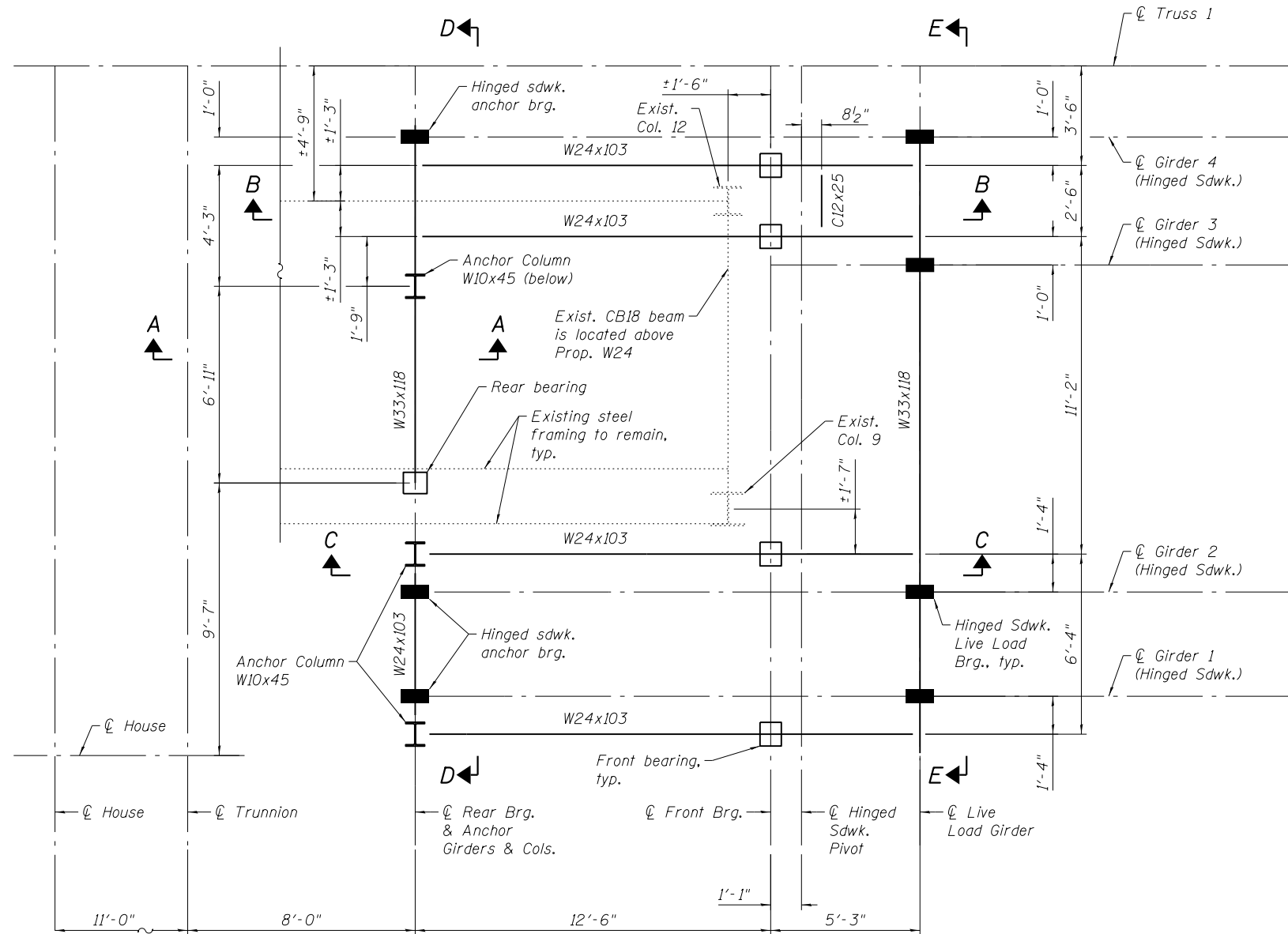
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART:
HOUSE WALLS DETAILS III
(STRUCTURE NO. 016-6030)

F.A.P. R.T.E.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-24
CDOT PROJECT NO. E-6-650			65 OF 411

REFERENCE DRAWINGS

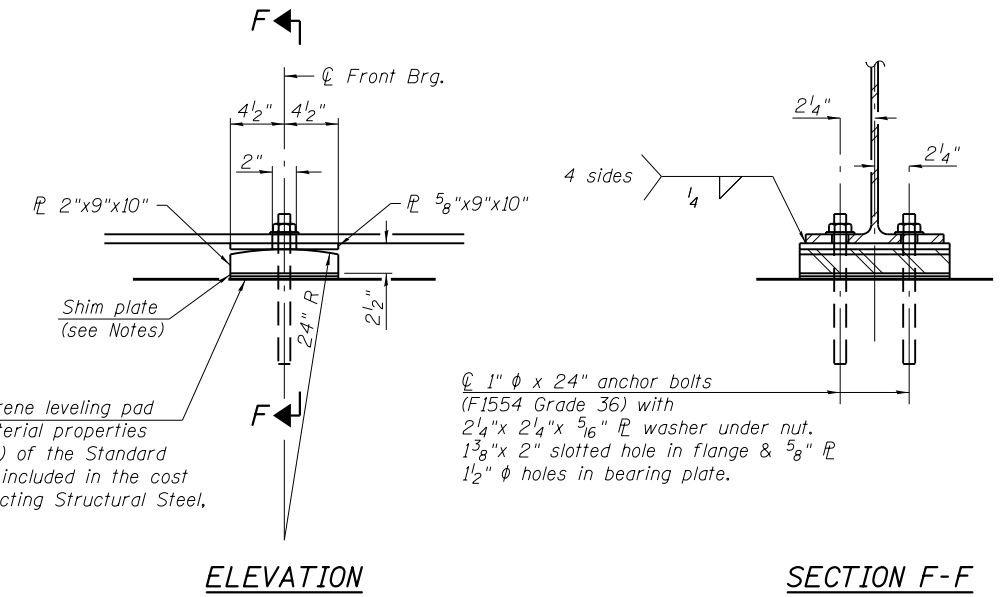
Drawing: Bridge House Steel Framing and Sections
 Sheet No.: 1660300807



PARTIAL FRAMING PLAN - BELOW INTERMEDIATE LEVEL
 (S.E. House shown, N.E. House opposite hand)

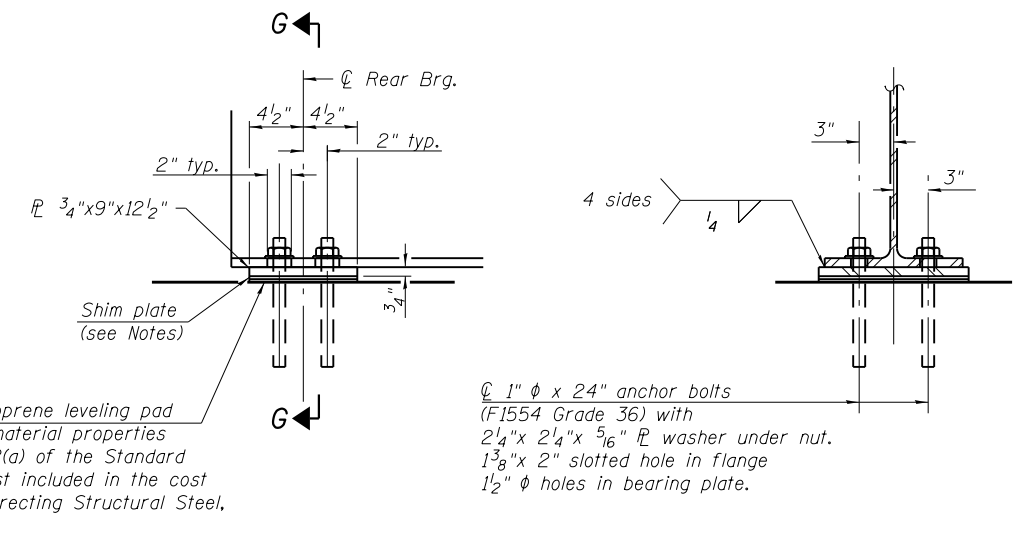
Notes:

- Anchor bolts shall be ASTM F1554 all-thread (or a Commissioner-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of F1554.
- Anchor bolts at Front Bearing shall be cast in place. Anchor bolts at Rear Bearing may be either cast in place or installed in holes drilled after the supported member is in place. Anchor bolts at Anchor Columns shall be drilled and set.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- Cost of House Steel framing and bearings included in the cost of Furnishing and Erecting Structural Steel, Bridge House.
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- Rolled W24 members shall be fabricated with natural camber down.
- For Section A-A, B-B & C-C, see sheet MS-26.
- For Section D-D & E-E, see sheet MS-27.



1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included in the cost of Furnishing & Erecting Structural Steel, Bridge House.

FRONT BEARING
 (4 Req'd per house)



1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included in the cost of Furnishing & Erecting Structural Steel, Bridge House.

REAR BEARING
 (1 Req'd per house)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Anchor Bolts, 1"	Each	48

Quantity shown includes S.E. and N.E. houses.

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 22-JAN-2018 13:28



USER NAME = lopezgonzalez
 DESIGNED - P.JL/MI
 CHECKED - JIG
 PLOT SCALE = N.T.S.
 DRAWN - P.JL/MI
 PLOT DATE = 1/22/2018
 CHECKED - JIG
 REVISED -

DESIGNED - P.JL/MI
 CHECKED - JIG
 DRAWN - P.JL/MI
 CHECKED - JIG
 REVISED -

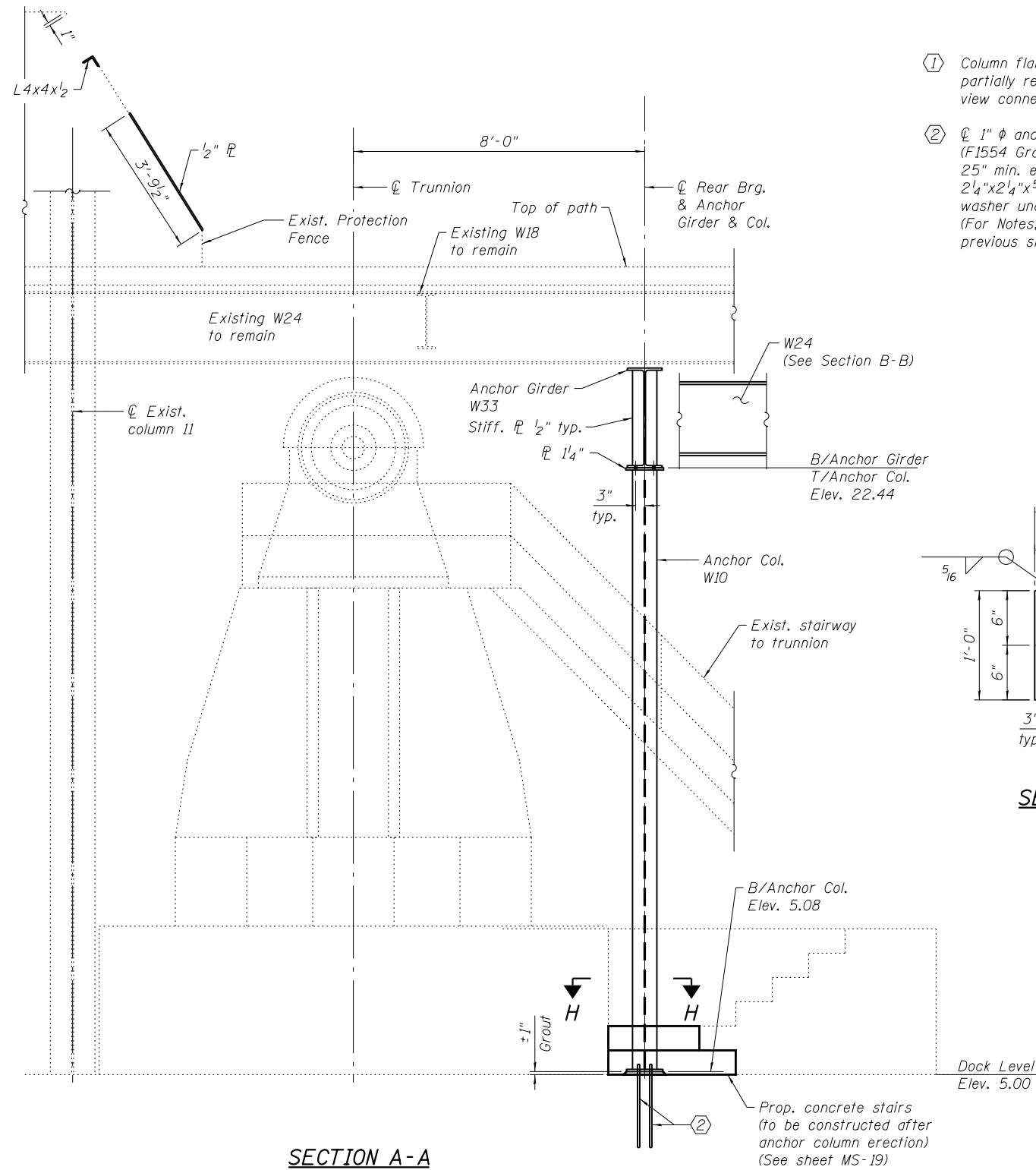
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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

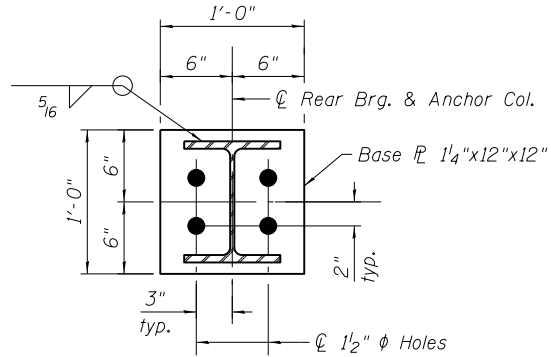
FIXED PART:
HOUSE STEEL FRAMING PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-25
CDOT PROJECT NO. E-6-650			66 OF 411

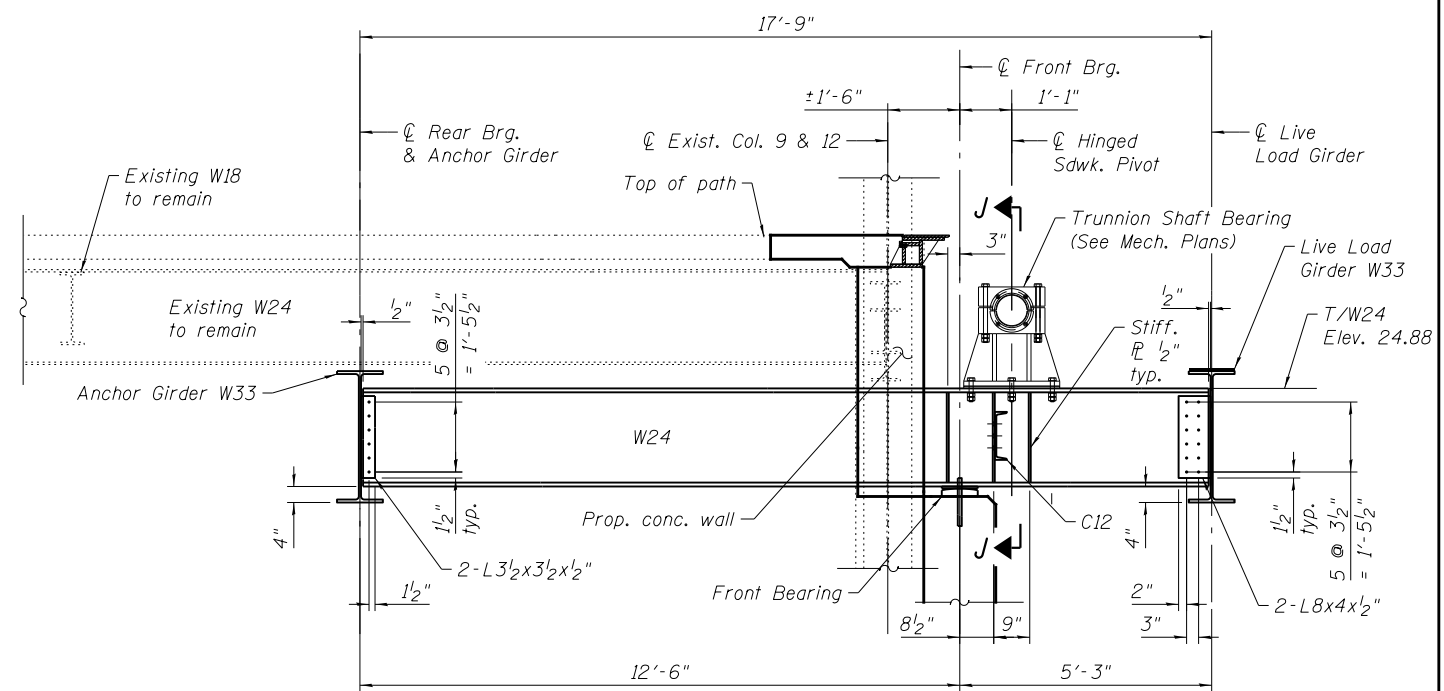


SECTION A-A

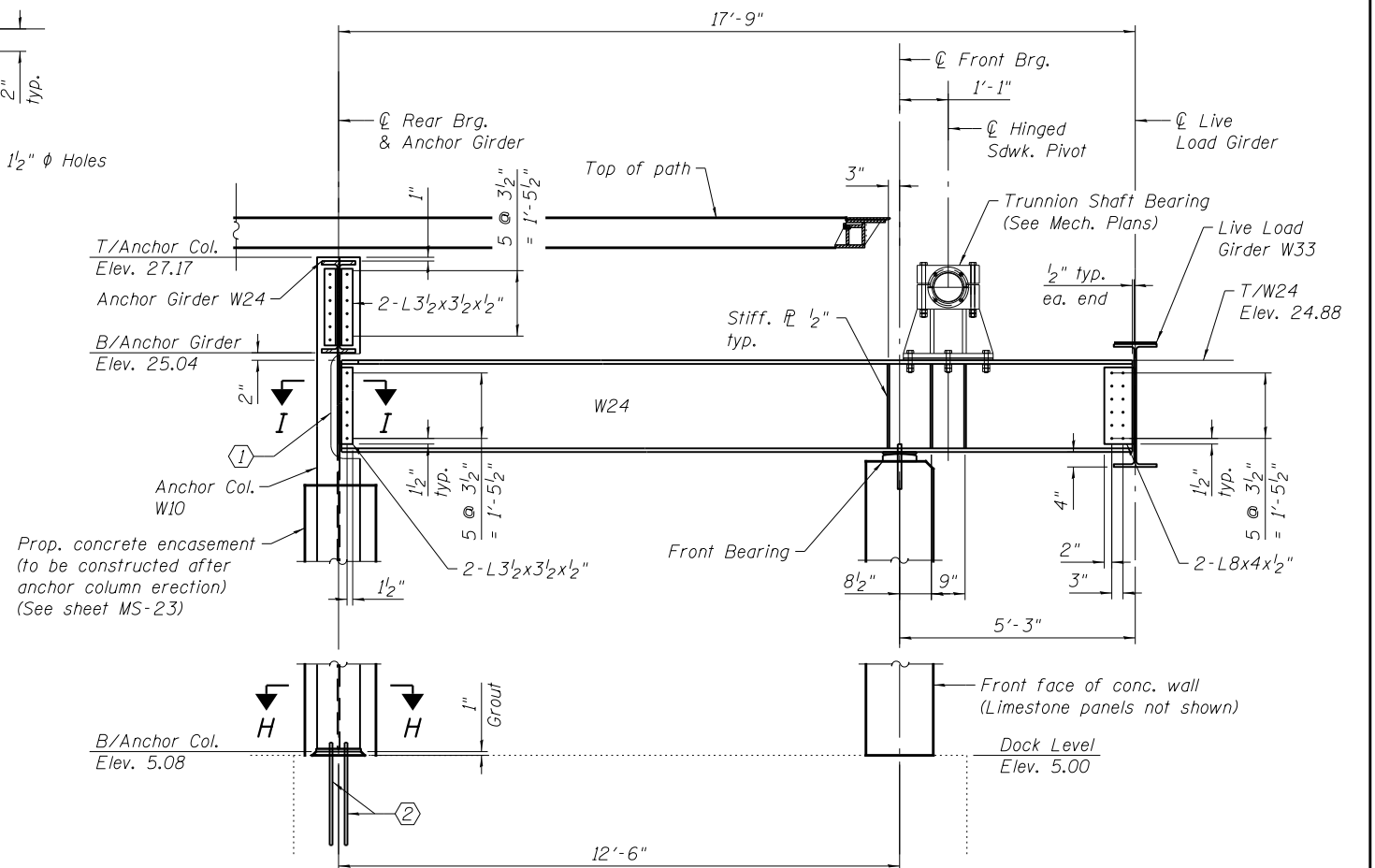
- ① Column flange shown partially removed to view connection
- ② 1" ϕ anchor bolts (F1554 Grade 55) with 25" min. embedment, 2 1/4" x 2 1/4" x 5/16" PL washer under nut. (For Notes, see previous sheet.)



SECTION H-H



SECTION B-B



SECTION C-C

REFERENCE DRAWINGS

Drawing	Sheet No.
Intermediate Level Framing	1660300156 thru 1660300161
Bridge House Steel Framing and Sections	1660300807

Notes:

1. Rolled W24 members shall be fabricated with natural camber down.
2. For location of Section A-A, B-B & C-C, see sheet MS-25.
3. For Section I-I & J-J, see sheet MS-27.

T:\16917A\Struct\Cadd\Sheets\0166030-E6650-MS026-House-Steel-Def1.dgn 22-JAN-2018 13:28



USER NAME = lopezgonzalez
 DESIGNED - P.JL/MI
 CHECKED - JIG
 DRAWN - P.JL
 CHECKED - JIG
 PLOT SCALE = N.T.S.
 PLOT DATE = 1/22/2018

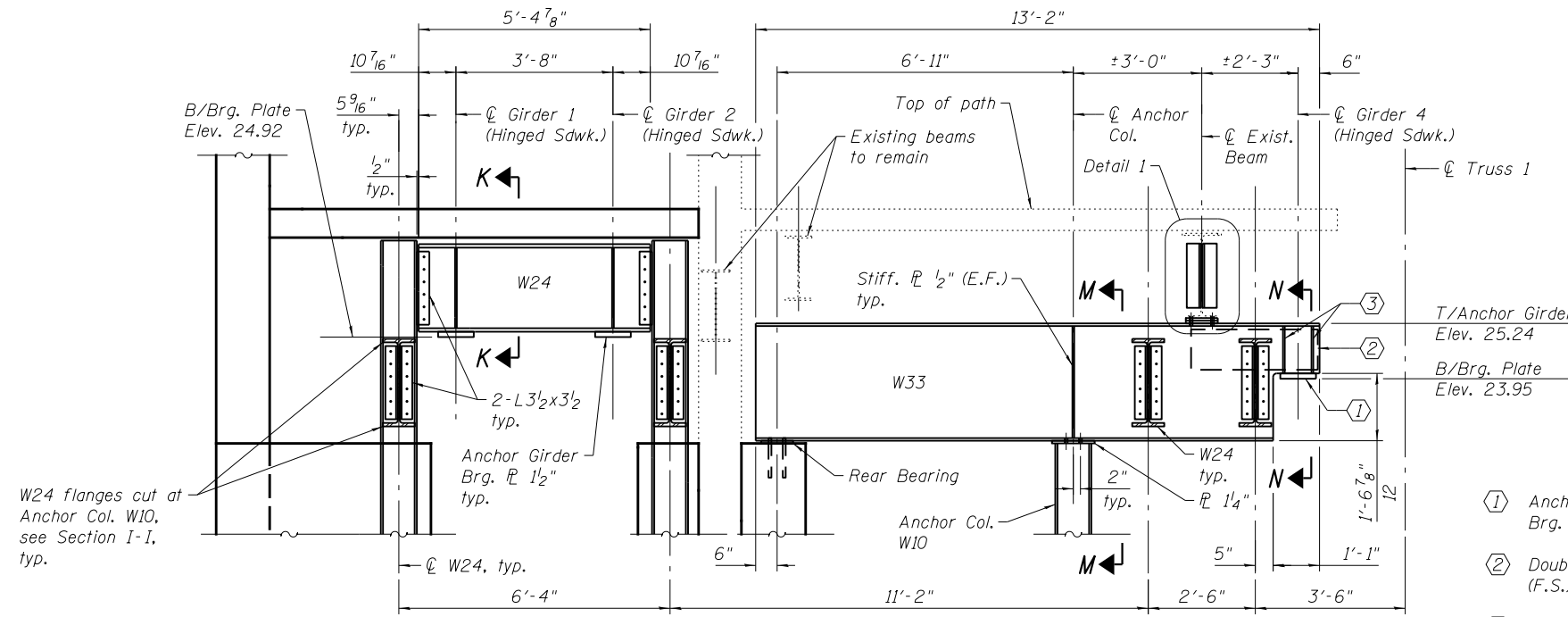
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 REVISIONS -
 REVISIONS -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

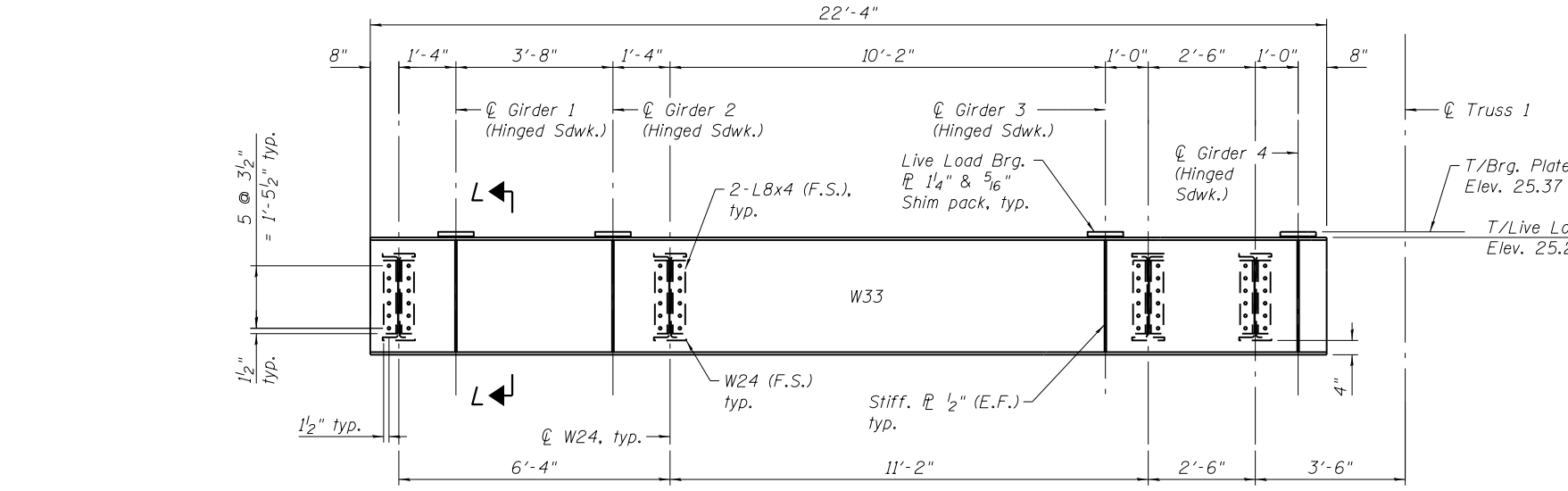
FIXED PART:
HOUSE STEEL DETAILS I
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-26
CDOT PROJECT NO. E-6-650			67 OF 411

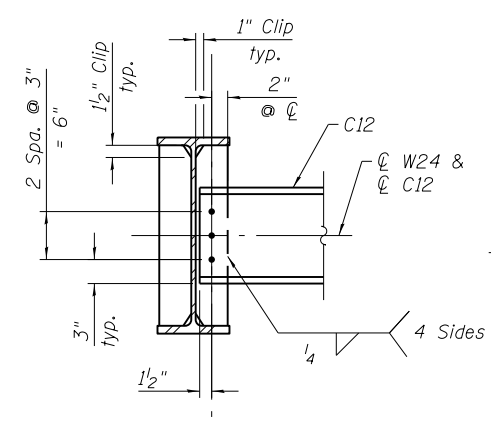


W24 flanges cut at Anchor Col. W10, see Section I-I, typ.

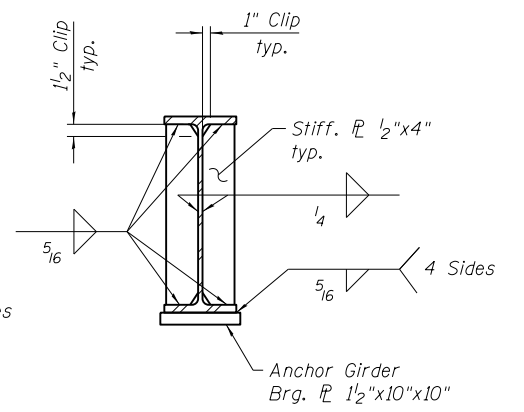
SECTION D-D



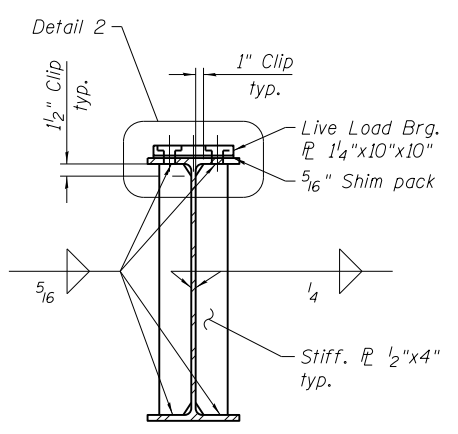
SECTION E-E



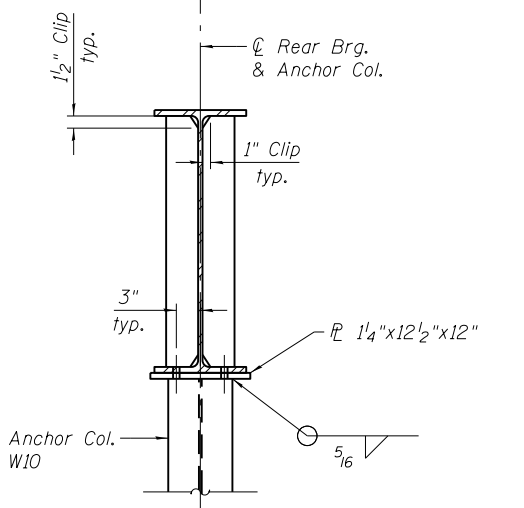
SECTION J-J



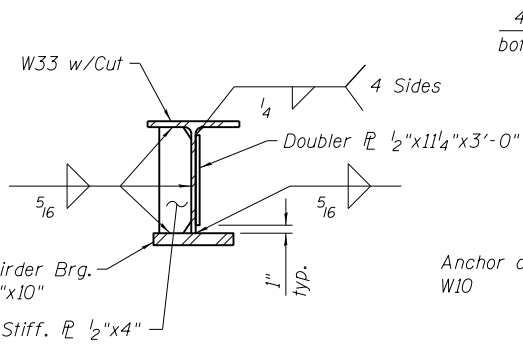
SECTION K-K



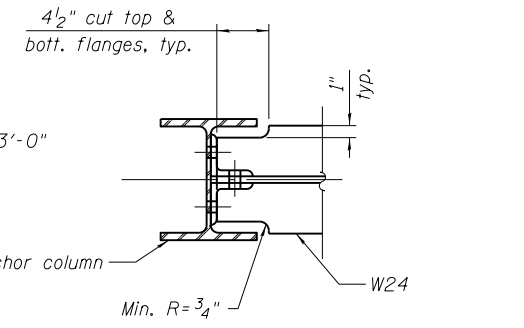
SECTION L-L



SECTION M-M



SECTION N-N



SECTION I-I

- ① Anchor Girder Brg. 1/2"
- ② Doubler 1/2" (F.S.)
- ③ Stiff. 1/2"

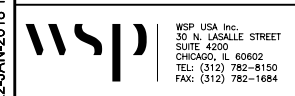
Notes:
 1. For location of Section D-D & E-E, see sheet MS-25.
 2. For location of Section I-I & J-J, see sheet MS-26.
 3. For Detail 1 & 2, see sheet MS-28.

REFERENCE DRAWINGS

Drawing
 Intermediate Level Framing
 Bridge House Steel Framing and Sections

Sheet No.
 1660300156 thru
 1660300161
 1660300807

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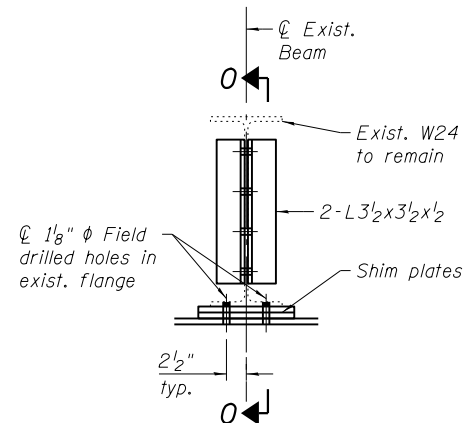
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PLOT DATE =	1/22/2018	DRAWN -	PJL	REVISED -	
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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

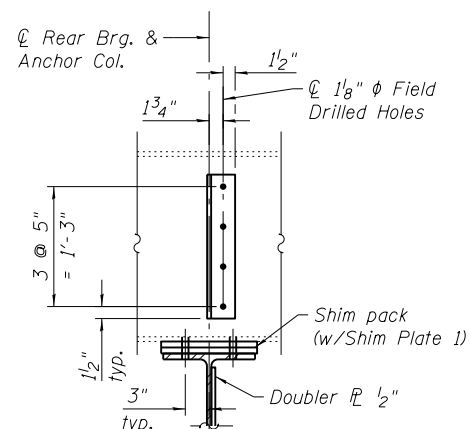
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

FIXED PART:
HOUSE STEEL DETAILS II
 (STRUCTURE NO. 016-6030)

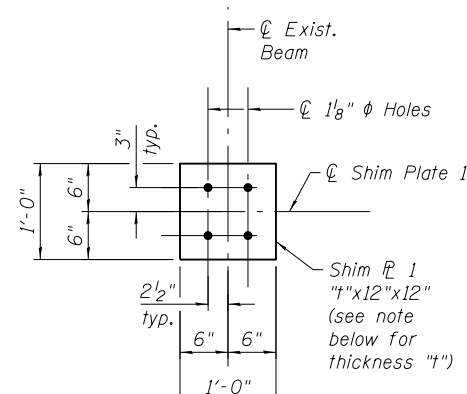
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-27
CDOT PROJECT NO. E-6-650			68 OF 411



DETAIL 1

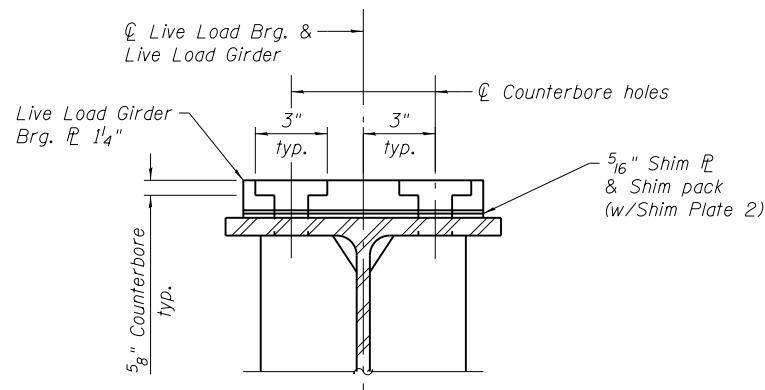


SECTION O-O

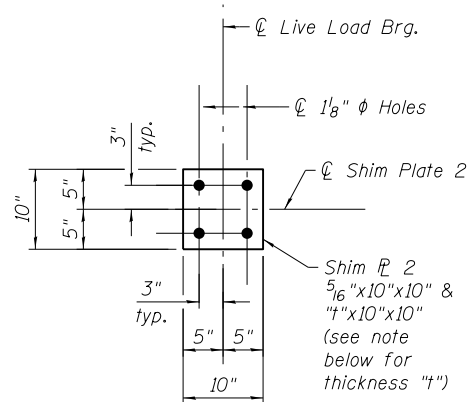


SHIM PLATE 1 DETAIL

Note:
Connection to exist. W24 shall occur after erection of all steel in House and for Hinged Sdwks. Two 1/8", two 1/4" & two 1/2" adjusting shims shall be provided and placed as shown in Detail 1.

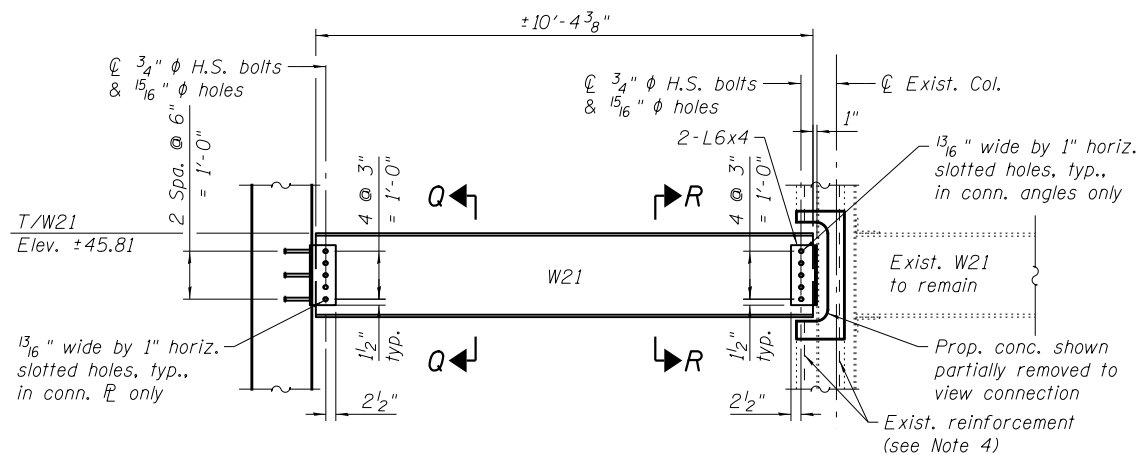


DETAIL 2

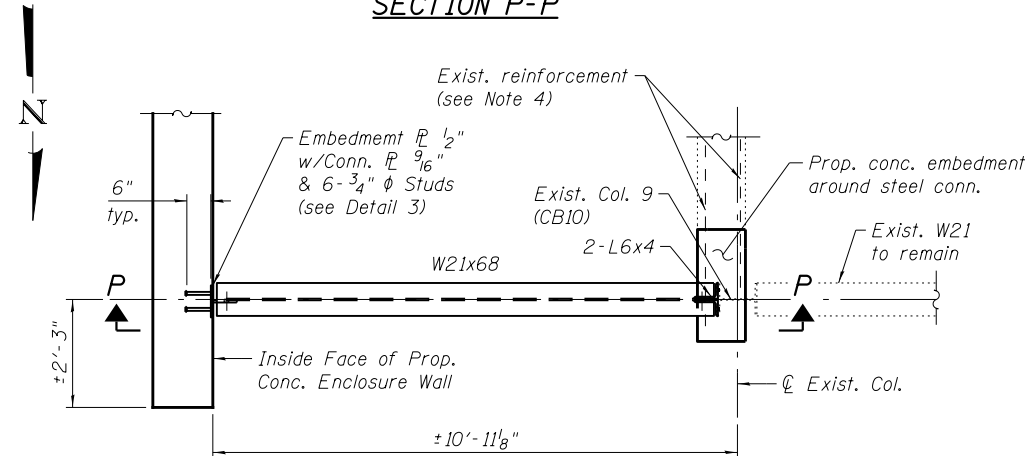


SHIM PLATE 2 DETAIL

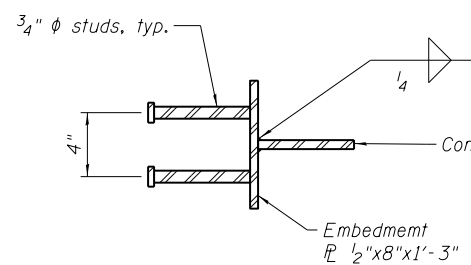
Note:
Two 1/8" & one 1/4" adjusting shims shall be provided for each shim pack location in addition to all other plates or shims and placed as shown in Detail 2.



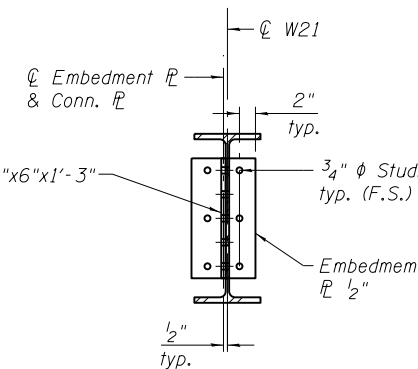
SECTION P-P



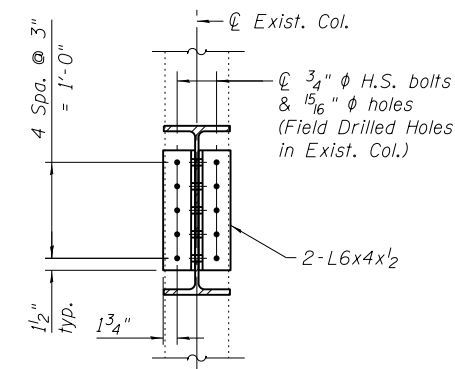
PARTIAL PLAN - UPPER LEVEL
(S.E. House shown, N.E. House opposite hand)



DETAIL 3
EMBEDMENT PLATE
(2 Required)



SECTION Q-Q



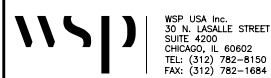
SECTION R-R

REFERENCE DRAWINGS

Drawing	Sheet No.
Intermediate Level Framing	1660300156 thru 1660300161
Bridge House Steel Framing and Sections	1660300807

- Notes:
- For location of Detail 1 & 2, see sheet MS-27.
 - Studs shall be 3/4" diameter x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded to embedment plate. Cost of studs included in the cost of Furnishing & Erecting Structural Steel, Bridge house.
 - Cost of field drilling of holes in existing steel beams included in the cost of Furnishing & Erecting Structural Steel, Bridge House.
 - Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.

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USER NAME = lopezgonzalez	DESIGNED - PJL/MI	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JIG	REVISED -
PLOT DATE = 1/22/2018	DRAWN - PJL	REVISED -
	CHECKED - JIG	REVISED -

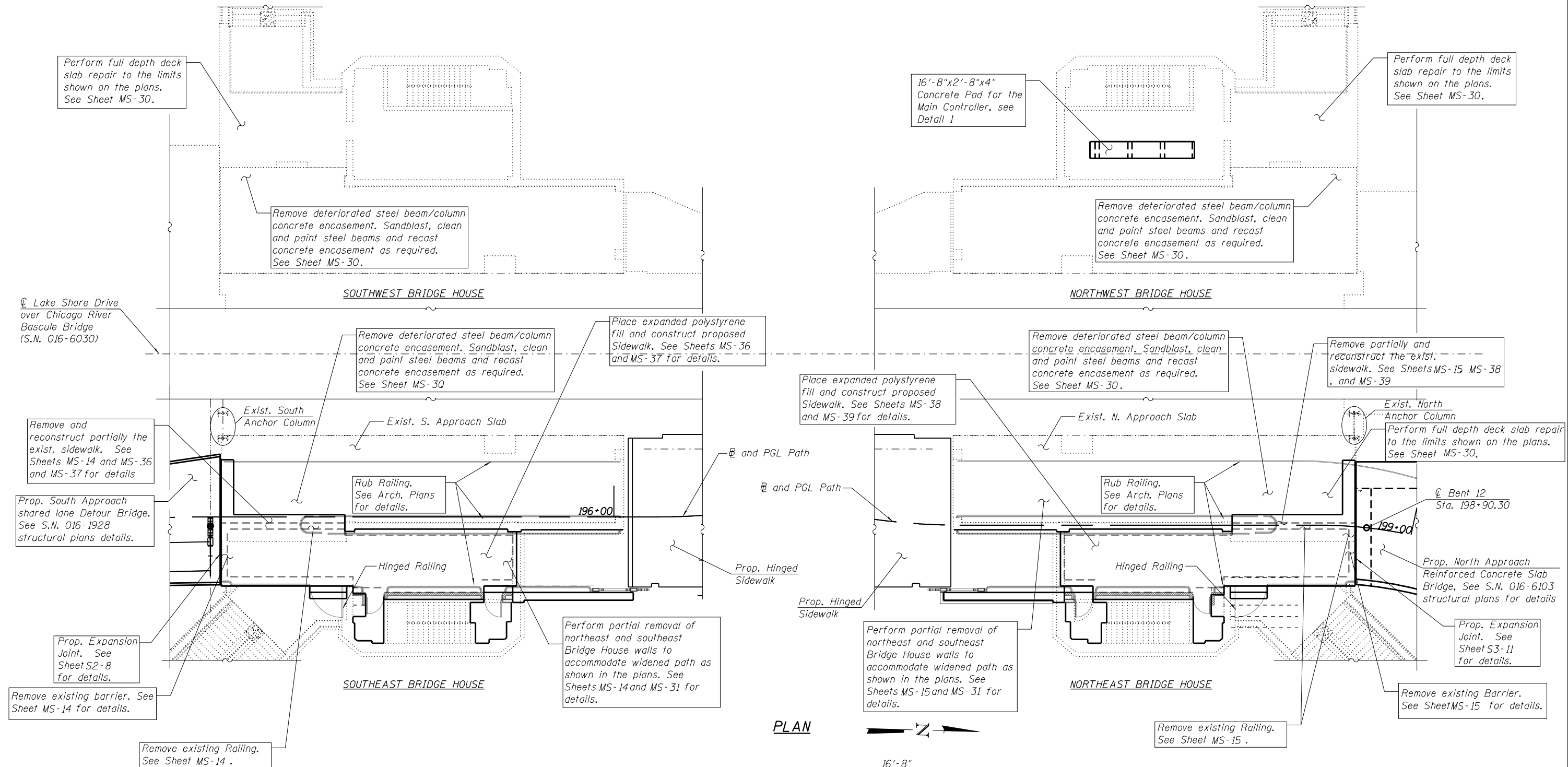
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

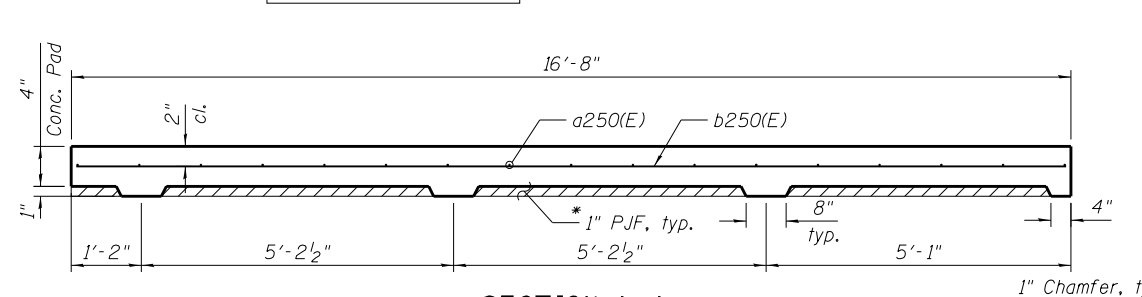
FIXED PART:
HOUSE STEEL DETAILS III
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-28
CDOT PROJECT NO. E-6-650			69 OF 411

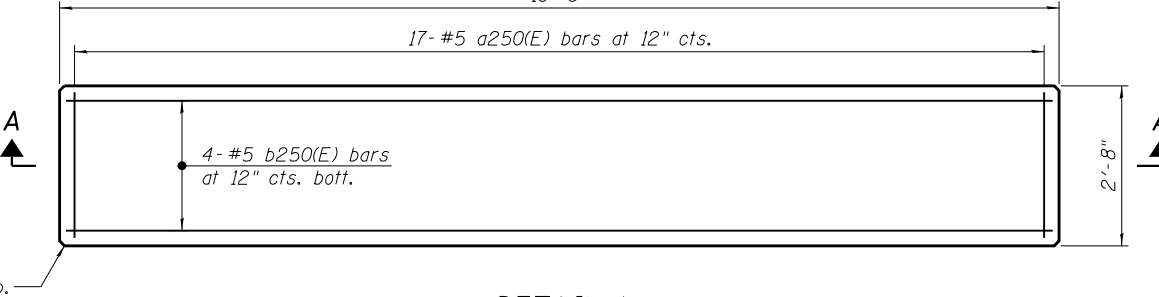
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PLAN



SECTION A-A



DETAIL 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a250(E)	17	#5	2'-5"	—
b250(E)	4	#5	16'-5"	—
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES			CU YD	1.4
REINFORCEMENT BARS, EPOXY COATED			POUND	120

* Cost of P.J.F included with HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES.

HBM
ENGINEERING GROUP, LLC.
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WSP USA Inc.
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CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

USER NAME = fad,alsharif	DESIGNED - JJS, FA	REVISED -
PLOT SCALE = N.T.S.	CHECKED - MAI	REVISED -
PLOT DATE = 6/23/2017	DRAWN - LAB	REVISED -
	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

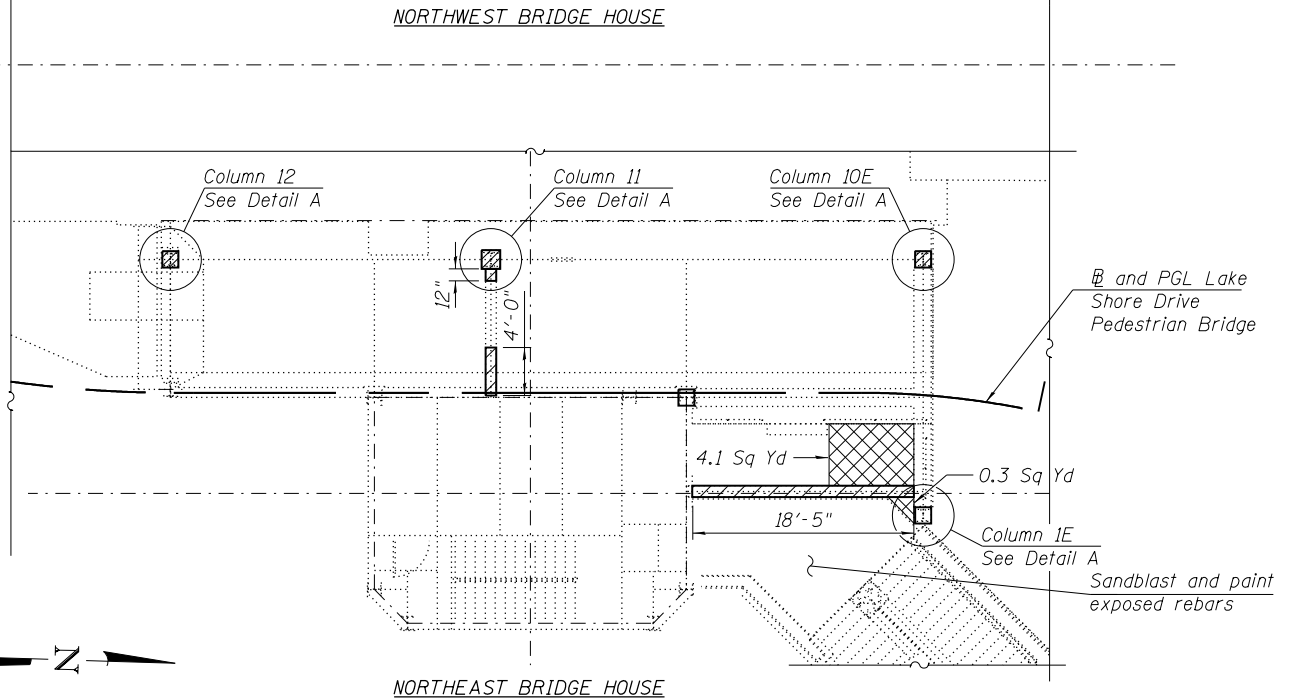
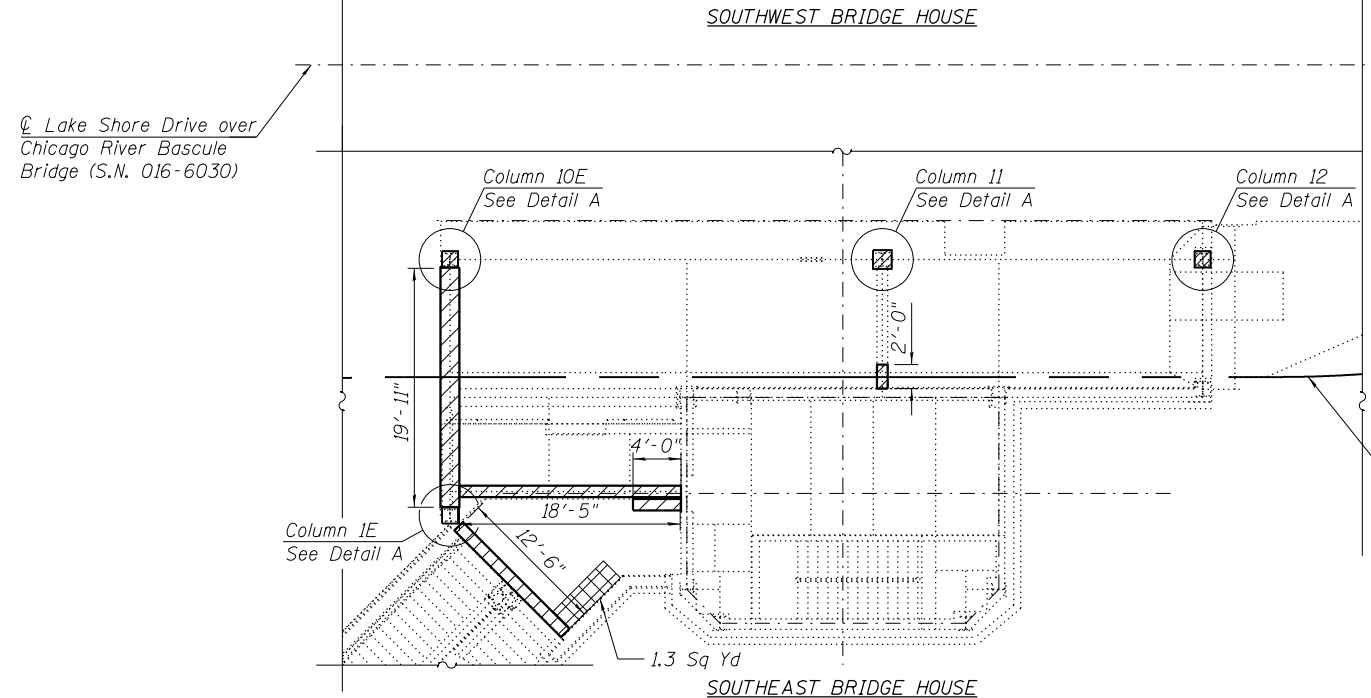
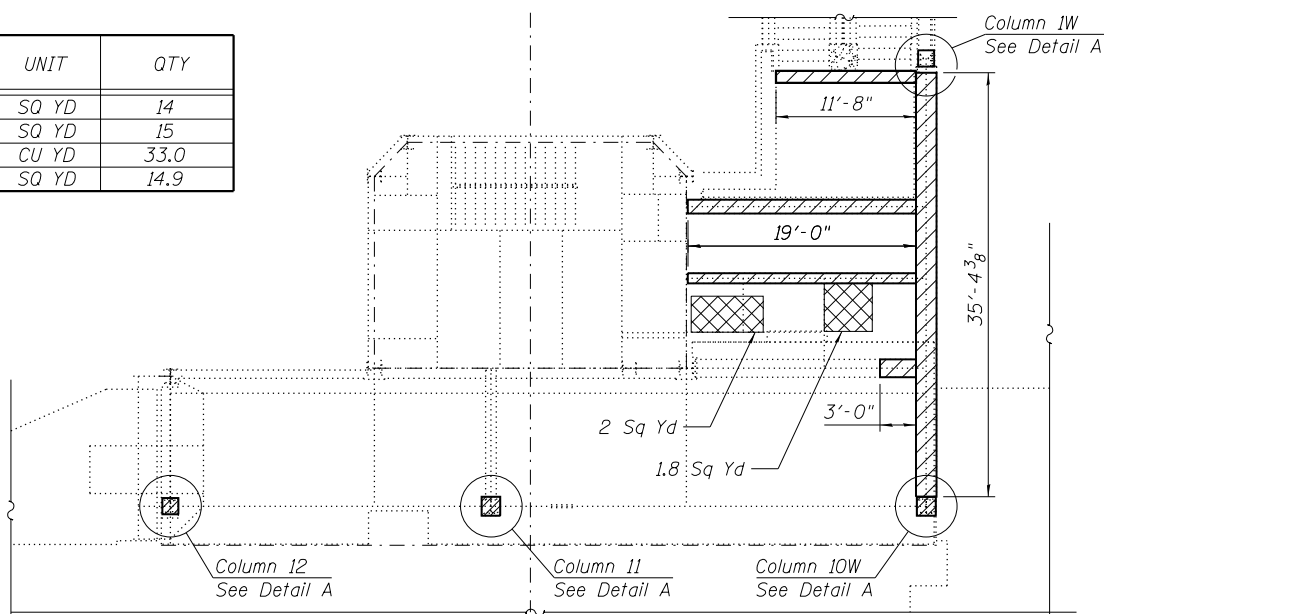
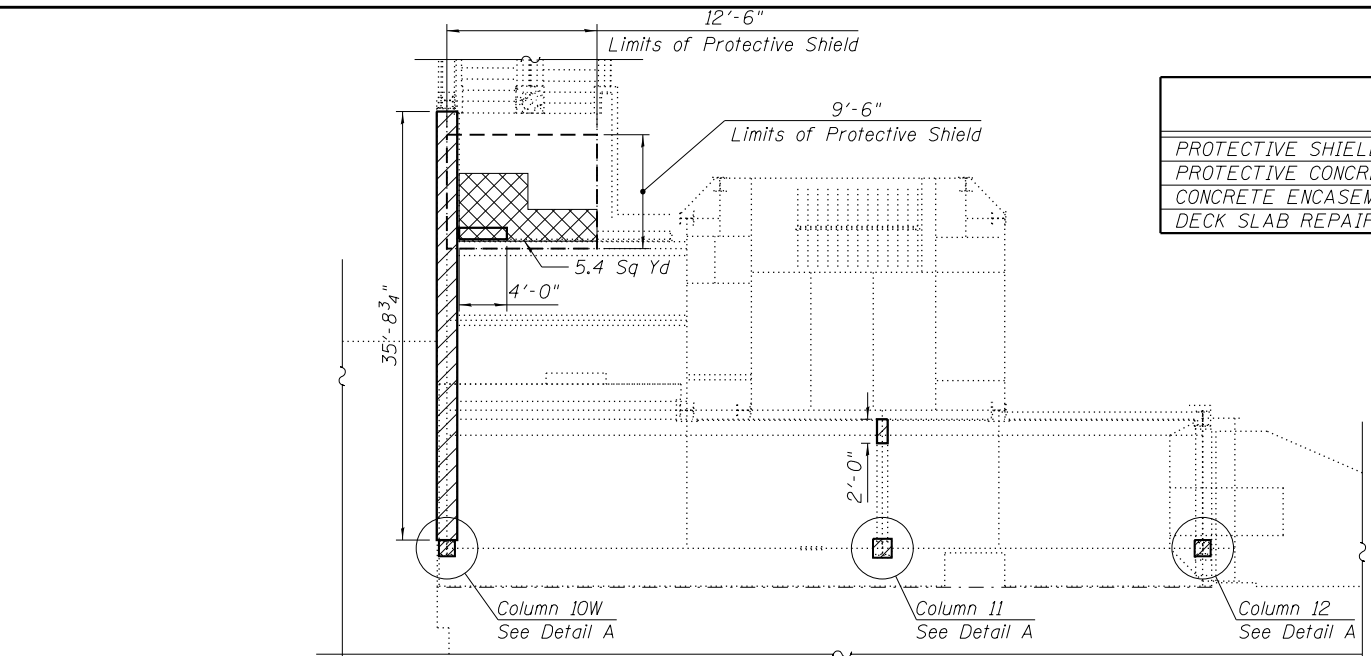
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART: INTERMEDIATE LEVEL
HOUSE GENERAL WORK PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-29
CDOT PROJECT NO. E-6-650			70 OF 411

BILL OF MATERIAL

ITEM	UNIT	QTY
PROTECTIVE SHIELD	SQ YD	14
PROTECTIVE CONCRETE SEALER	SQ YD	15
CONCRETE ENCASEMENT	CU YD	33.0
DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	14.9



☉ Lake Shore Drive over Chicago River Bascule Bridge (S.N. 016-6030)

☉ and PGL Lake Shore Drive Pedestrian Bridge

☉ and PGL Lake Shore Drive Pedestrian Bridge

PLAN

INTERMEDIATE LEVEL COLUMN ENCASEMENT REPAIR TABLE

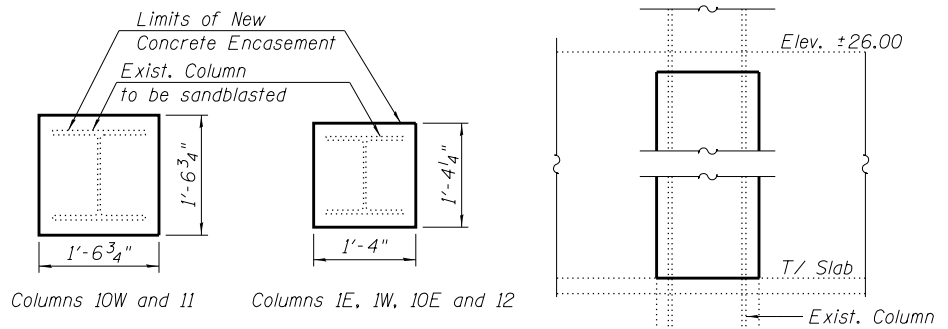
Column Location	Column Designation	Column Section	Encasement Area (ft ²)	Repair Height (ft)	
Northeast	1E	12CB85	1.8	6.0	
	10E	12CB72	1.8	20.5	
	11	14CB136	2.4	3.0 / 15.4	
Southeast	12	12CB72	1.8	18.9	
	10E	12CB72	1.8	20.5	
	11	14CB136	2.4	3.0	
Northwest	12	12CB72	1.8	18.9	
	1W	12CB65	1.8	4.0	
	10W	14CB127	1.8	20.5	
	11	14CB136	2.4	6.1	
Southwest	12	12CB72	1.8	2.0	
	Corner adjacent to Col. 12				4.0
	10W	14CB127	1.8	20.5 / 10.2	
	11	14CB136	2.4	5.0	
	12	12CB72	1.8	18.9	
	Corner adjacent to Col. 12				18.9

NOTES:

1. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

LEGEND

- Deck Slab Repair (Full Depth, Type II)
- Beam/Column Encasement Repair
- Limits of Protective Shield



DETAIL A - COLUMN ENCASEMENT

COLUMN ENCASEMENT ELEVATION

HBM
ENGINEERING GROUP, LLC.
4415 WEST HARRISON STREET, SUITE 231
HILLSDALE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

wsp
WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

USER NAME = fadl.alsharif	DESIGNED - JJS, FA	REVISED -
PLOT SCALE = N.T.S.	CHECKED - MAI	REVISED -
PLOT DATE = 6/23/2017	DRAWN - FA	REVISED -
	CHECKED - MAI	REVISED -

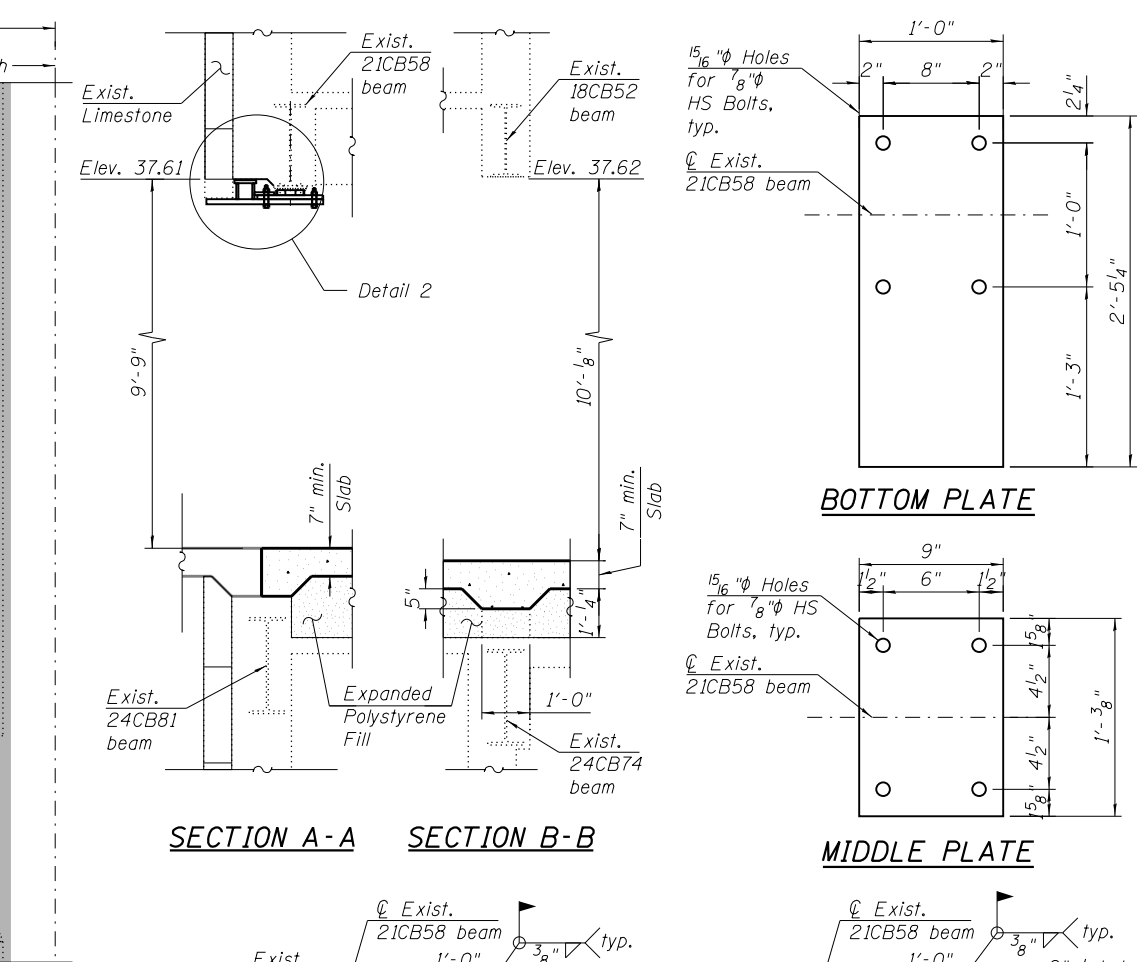
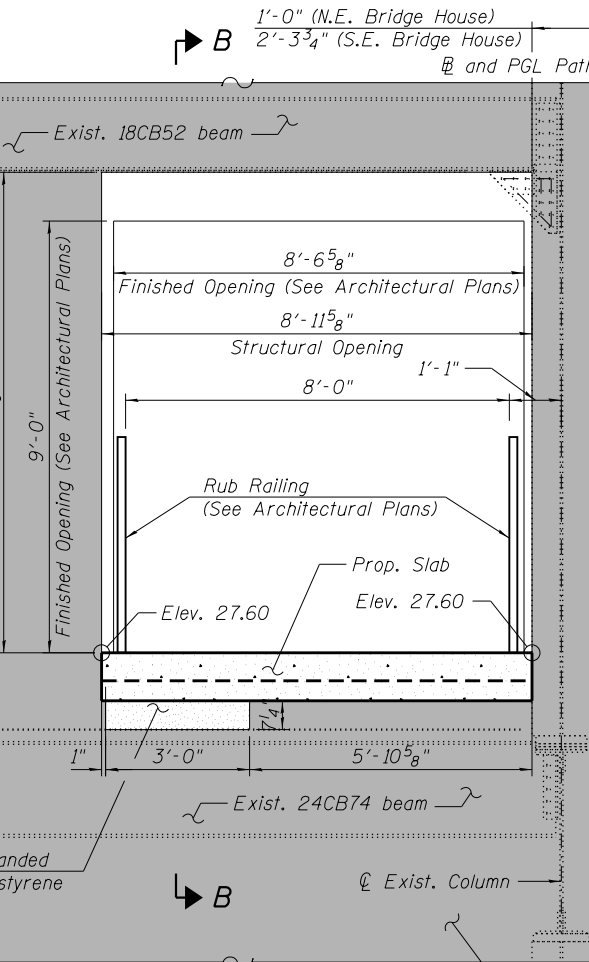
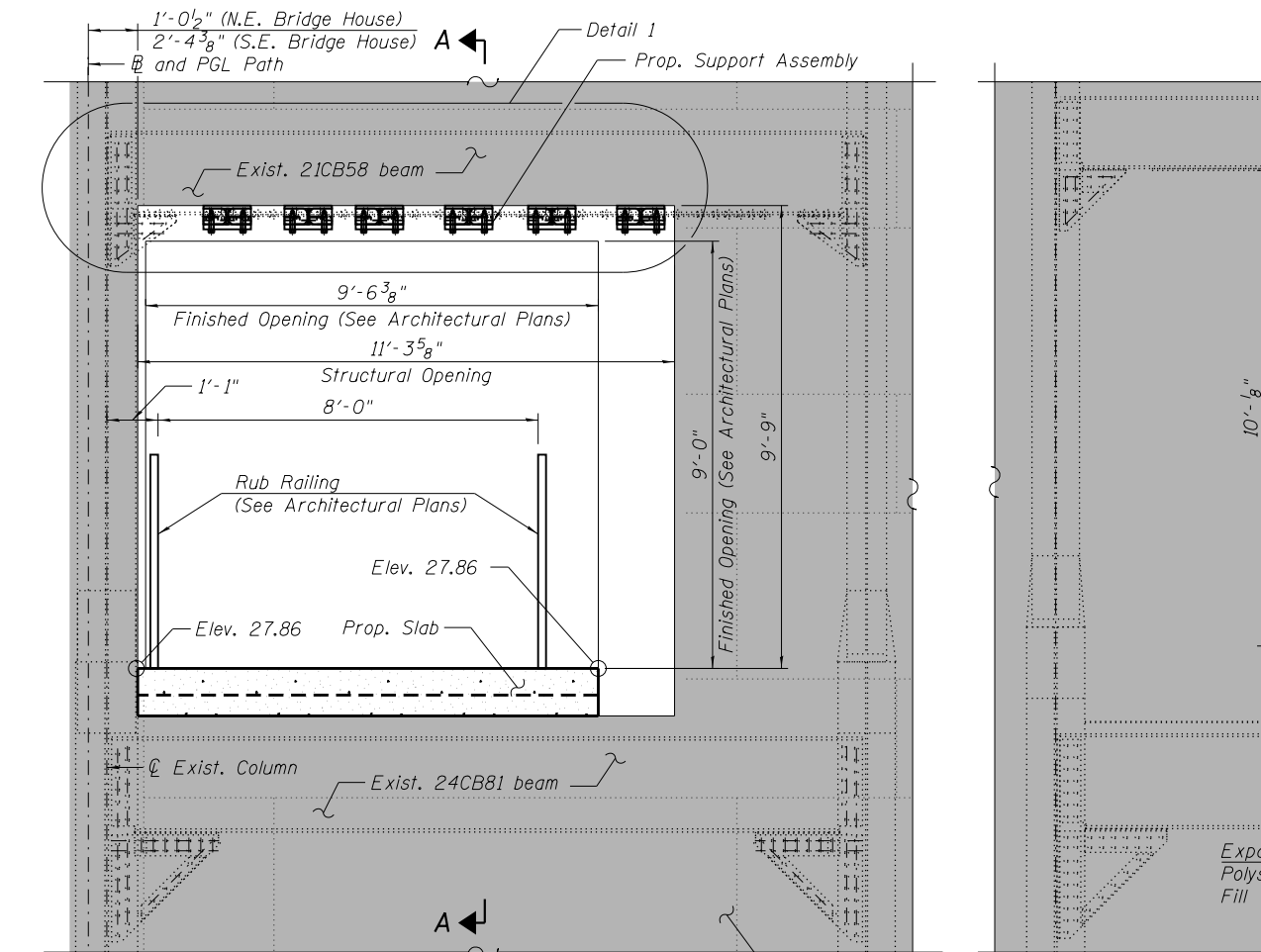
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**FIXED PART:
INTERMEDIATE LEVEL HOUSE REPAIR PLAN
(STRUCTURE NO. 016-6030)**

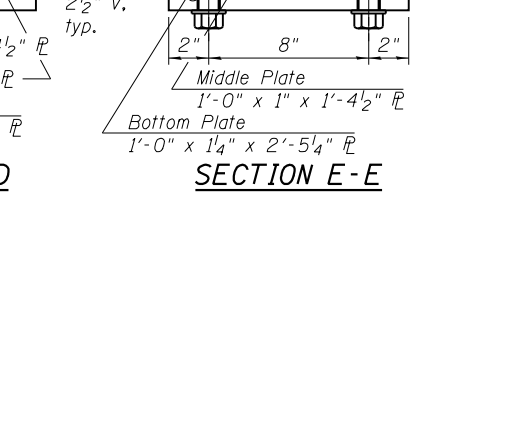
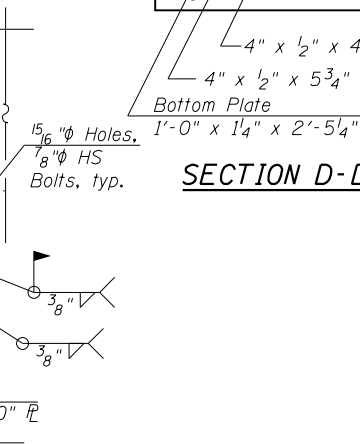
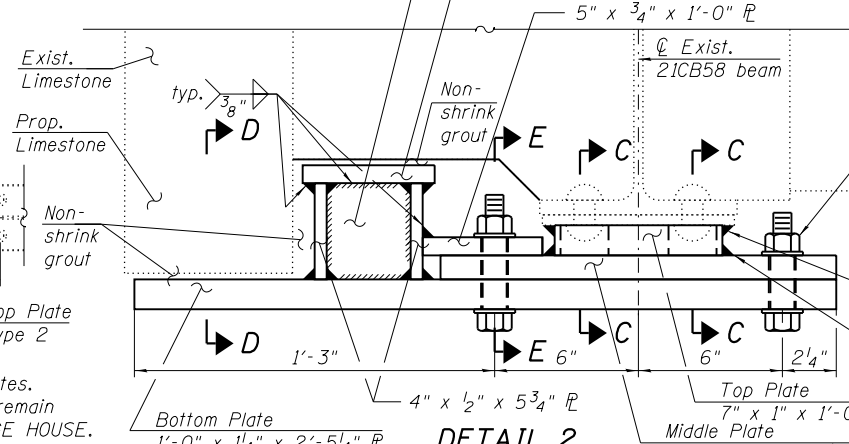
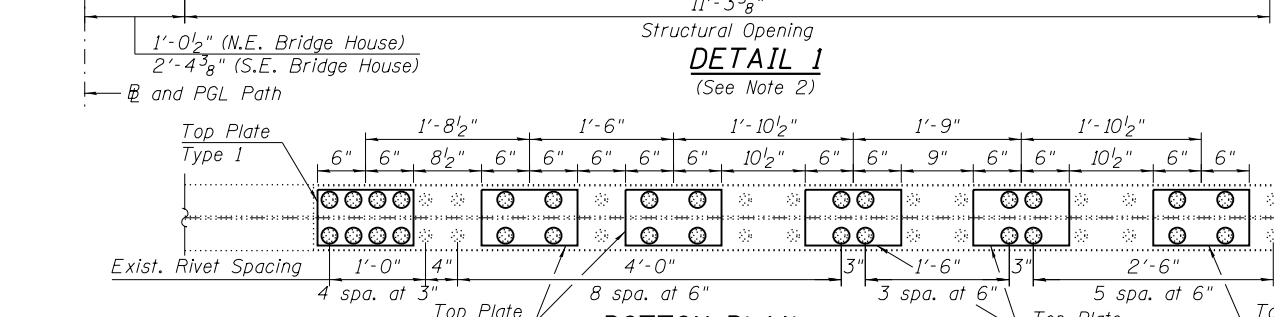
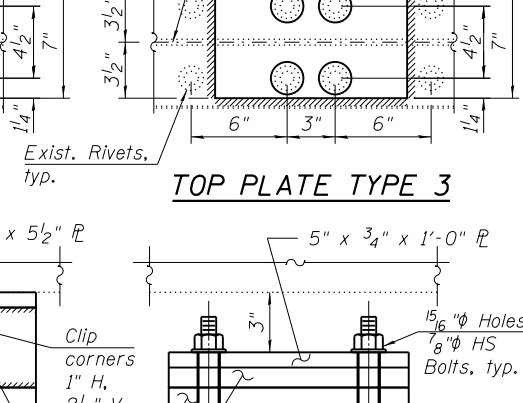
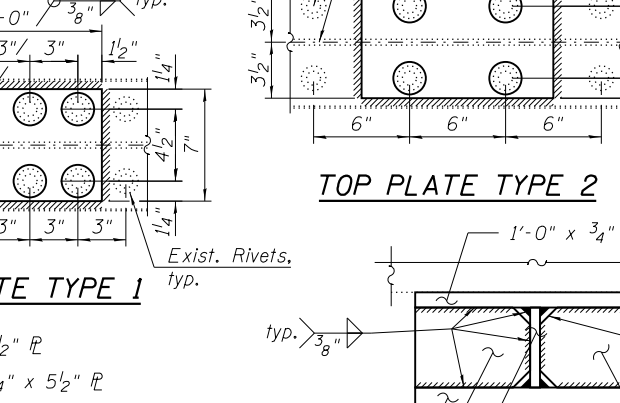
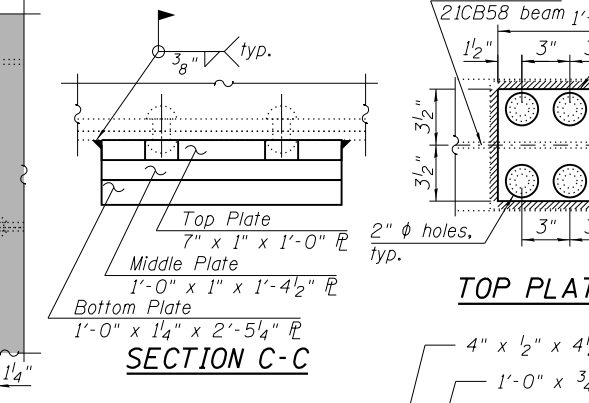
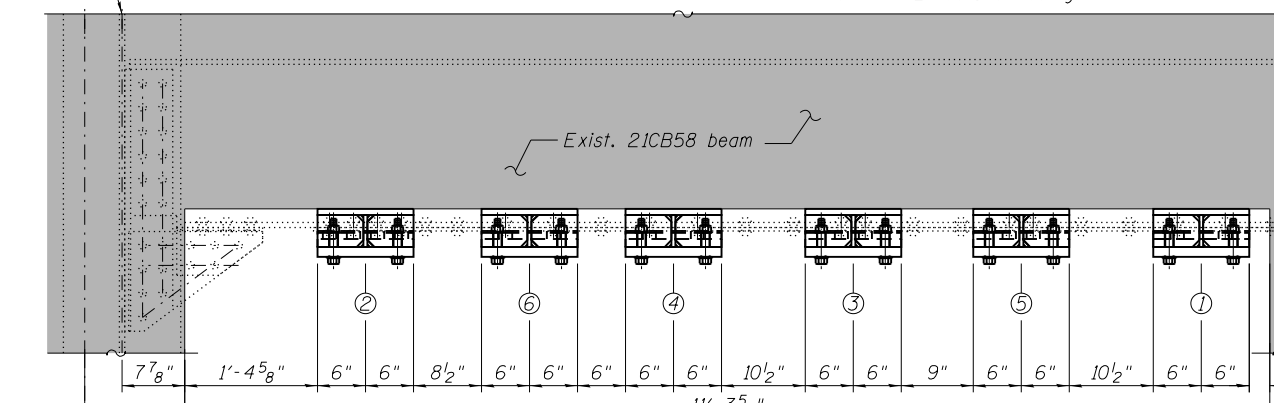
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-30
CDOT PROJECT NO. E-6-650			71 OF 411

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PARTIAL ELEVATION
 (South Wall of N.E. Bridge House Shown - Looking North;
 North Wall of S.E. Bridge House Opposite)

PARTIAL ELEVATION
 (North Wall of N.E. Bridge House Shown - Looking South;
 South Wall of S.E. Bridge House Opposite)



NOTES:

- Contractor shall field verify existing rivet locations and spacing prior to drilling holes into top plates.
- It is Contractor responsibility to provide temporary support for the existing limestone portion to remain during construction, cost included with FURNISHING AND ERECTING STRUCTURAL STEEL, BRIDGE HOUSE.
- Install the brackets in the sequence 1 thru 6 as shown in Detail 1.

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USER NAME = fadl.alsharif	DESIGNED - KJD	REVISIONS
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PLOT SCALE = N.T.S.	DRAWN - KJD	REVISIONS
PLOT DATE = 6/23/2017	CHECKED - MAI	REVISIONS

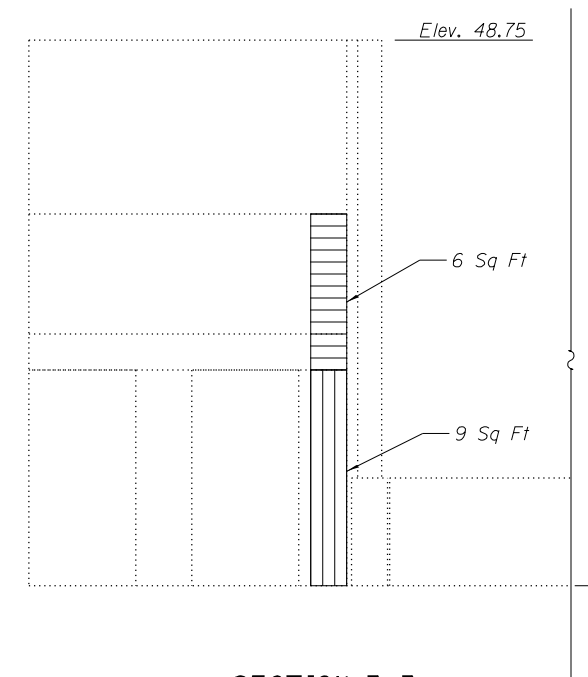
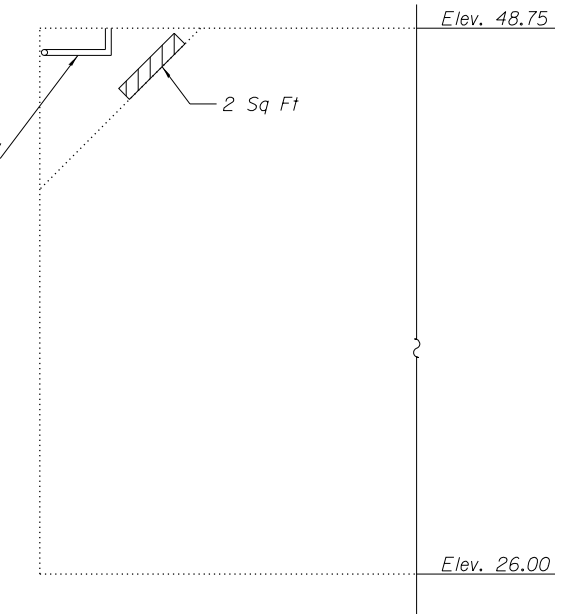
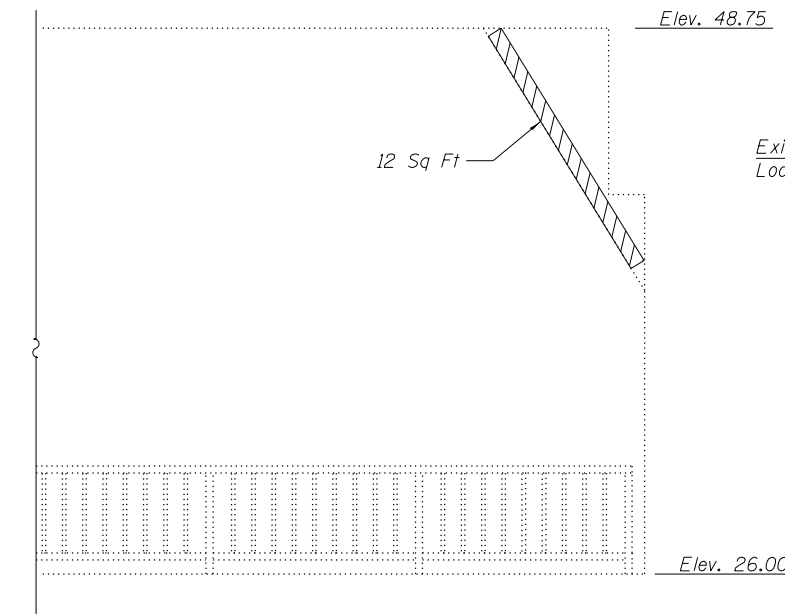
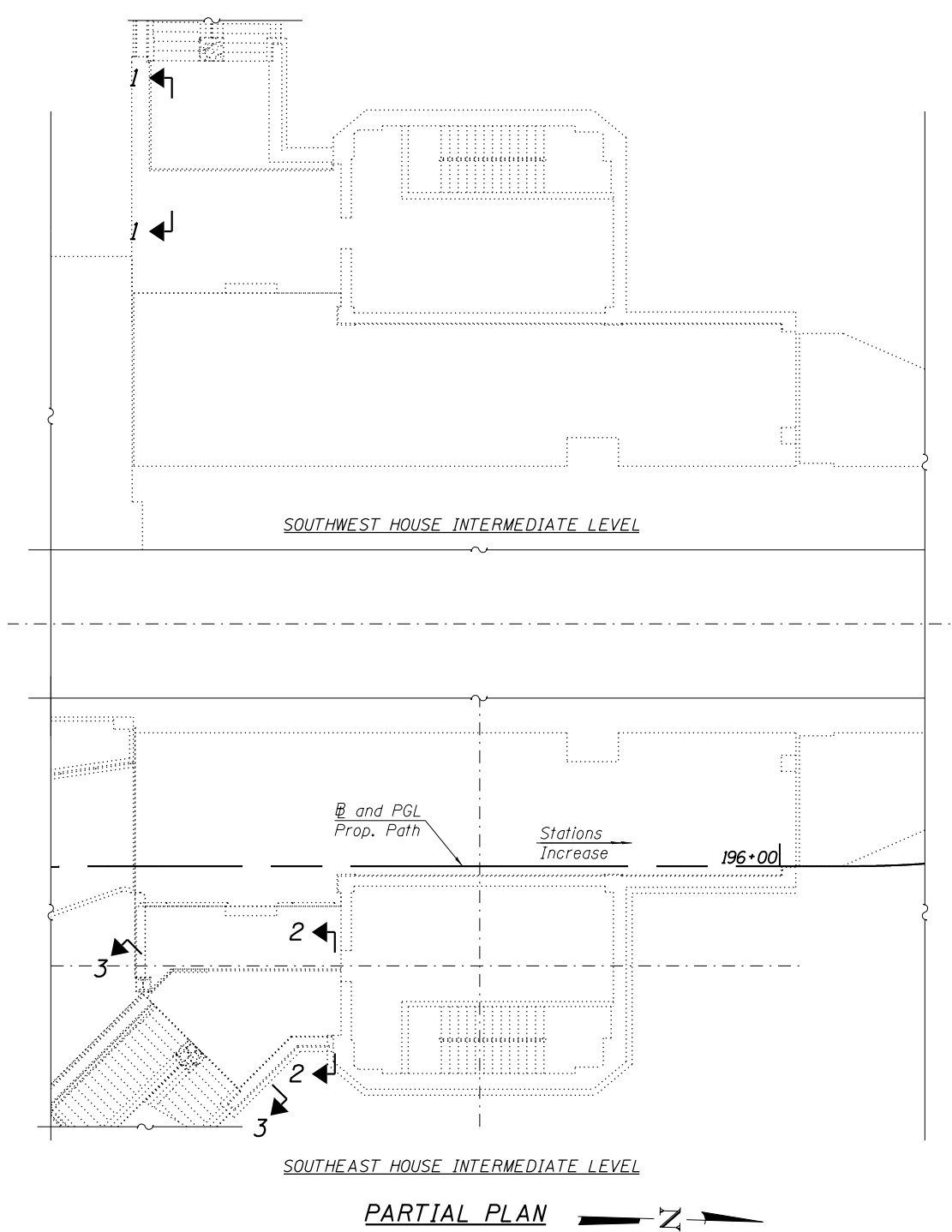
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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**FIXED PART: INTERMEDIATE LEVEL
 HOUSE WALL OPENINGS
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-31
CDOT PROJECT NO. E-6-650			72 OF 411

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NOTES:

1. Areas of structural steel repairs and epoxy crack injection shown are estimated. The Engineer shall show actual locations of these repairs at the time of construction.
2. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost Included with CONCRETE REMOVAL.
3. Protective concrete sealer shall be applied to the structural concrete repair areas.
4. The Contractor shall relocate and reinstall any existing utility in conflict with the repairs shown in the plans, and shall not be paid separately.

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)
- Structural Repair of Concrete (Depth Greater than 5 Inches)

BILL OF MATERIAL

ITEM	UNIT	QTY
PROTECTIVE CONCRETE SEALER	SQ YD	29
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	23
STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	6

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PLOT SCALE = N.T.S.	CHECKED - MAI	REVISED -
PLOT DATE = 6/23/2017	DRAWN - KJD	REVISED -
	CHECKED - MAI	REVISED -

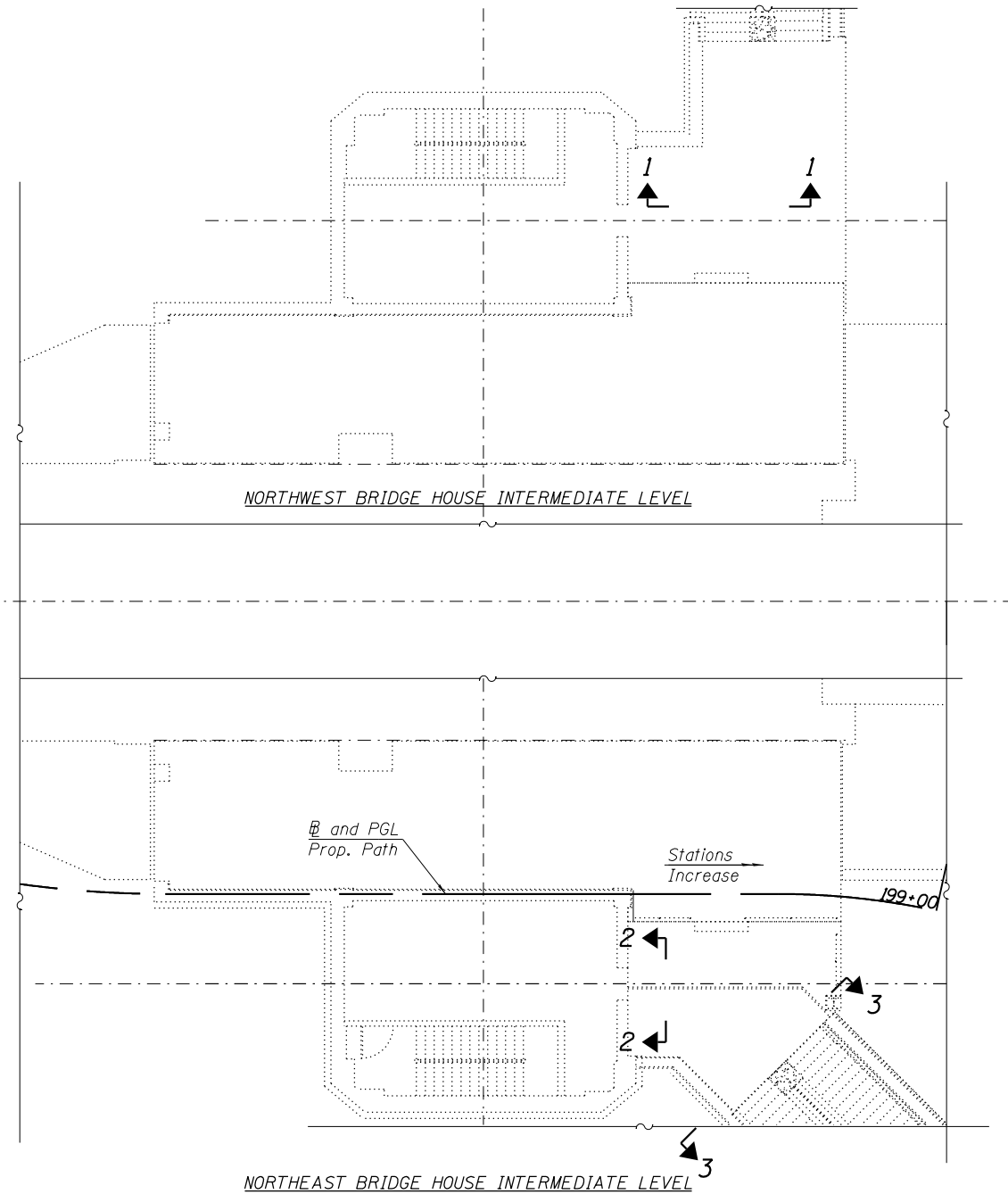
CITY OF CHICAGO
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

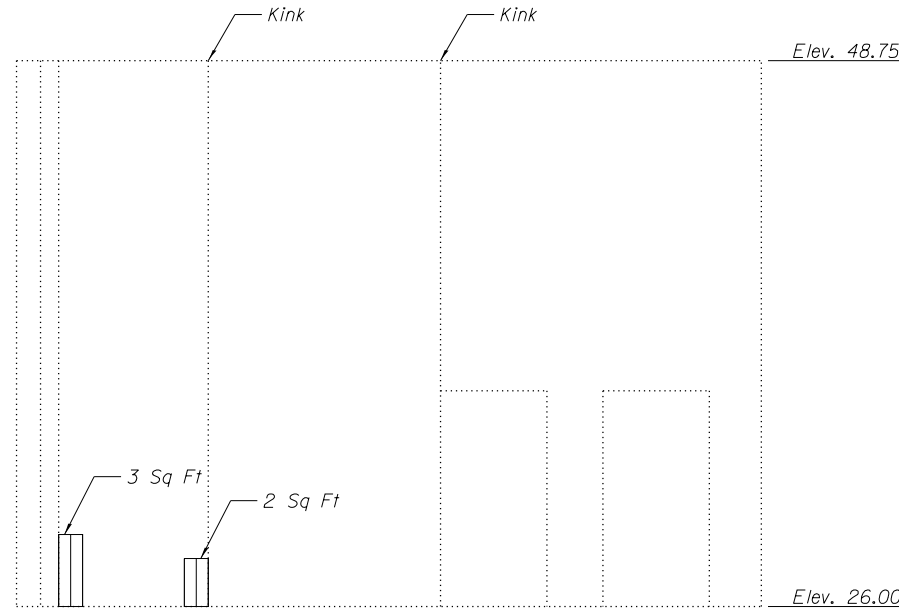
**FIXED PART: INTERMEDIATE LEVEL
SOUTH HOUSES WALL REPAIRS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-32
CDOT PROJECT NO. E-6-650			73 OF 411

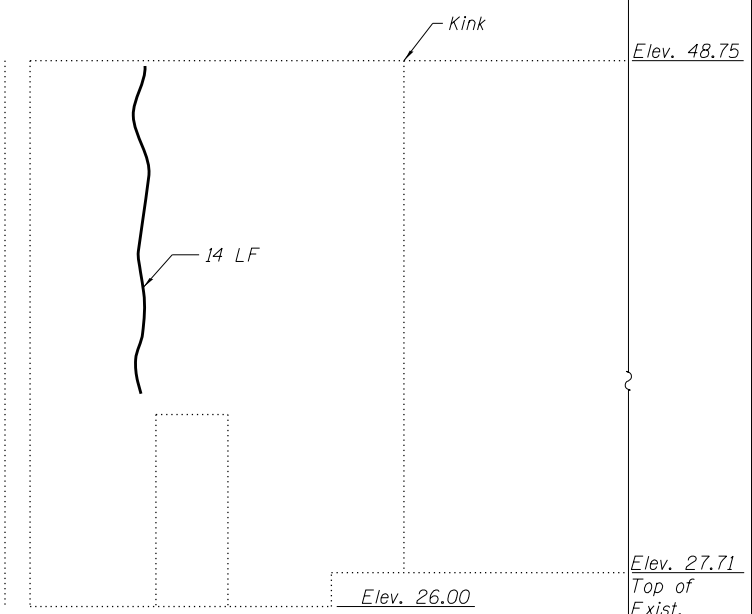
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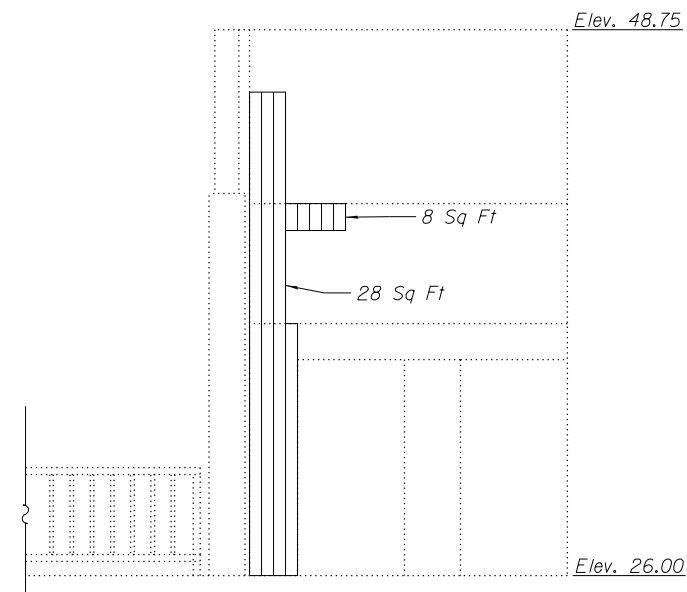
PARTIAL PLAN



SECTION 1-1



SECTION 2-2



SECTION 3-3

NOTES:

1. Areas of structural steel repairs and epoxy crack injection shown are estimated. The Engineer shall show actual locations of these repairs at the time of construction.
2. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost Included with CONCRETE REMOVAL.
3. Protective concrete sealer shall be applied to the structural concrete repair areas.
4. The Contractor shall relocate and reinstall any existing utility in conflict with the repairs shown in the plans, and shall not be paid separately.

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)
- Epoxy Crack Injection

BILL OF MATERIAL

ITEM	UNIT	QTY
PROTECTIVE CONCRETE SEALER	SQ YD	41
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	41
EPOXY CRACK INJECTION	FOOT	14

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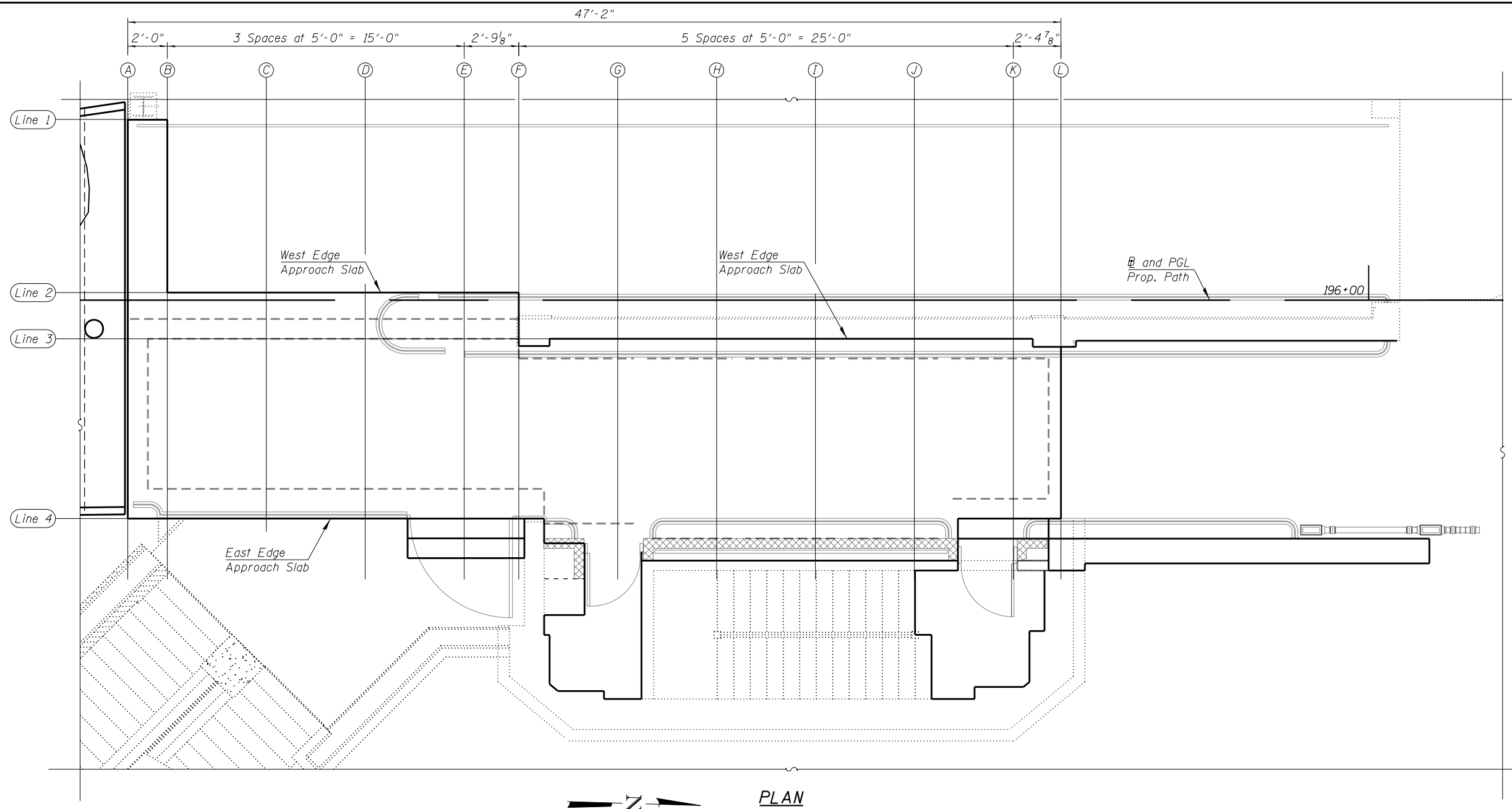
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**FIXED PART: INTERMEDIATE LEVEL
NORTH HOUSES WALL REPAIRS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-33
CDOT PROJECT NO. E-6-650			74 OF 411



PLAN

LINE 1

Location	Station	Offset	Theoretical Grade Elevations
A	195+37.28	-9.12'	27.41
B	195+39.28	-9.12'	27.43

LINE 2 - WEST EDGE APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
B	195+39.28	-0.38'	27.43
C	195+44.28	-0.38'	27.48
D	195+49.28	-0.38'	27.52
E	195+54.28	-0.38'	27.57
F	195+57.04	-0.38'	27.60

LINE 3 - WEST EDGE APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
F	195+57.04	1.95'	27.60
G	195+62.04	1.95'	27.65
H	195+67.04	1.95'	27.69
I	195+72.04	1.95'	27.74
J	195+77.04	1.95'	27.79
K	195+82.04	1.95'	27.84
L	195+84.45	1.95'	27.86

LINE 4 - EAST EDGE APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
A	195+37.28	11.04'	27.41
B	195+39.28	11.04'	27.43
C	195+44.28	11.04'	27.48
D	195+49.28	11.04'	27.52
E	195+54.28	11.04'	27.57
F	195+57.04	11.04'	27.60
G	195+62.04	11.04'	27.65
H	195+67.04	11.04'	27.69
I	195+72.04	11.04'	27.74
J	195+77.04	11.04'	27.79
K	195+82.04	11.04'	27.84
L	195+84.45	11.04'	27.86

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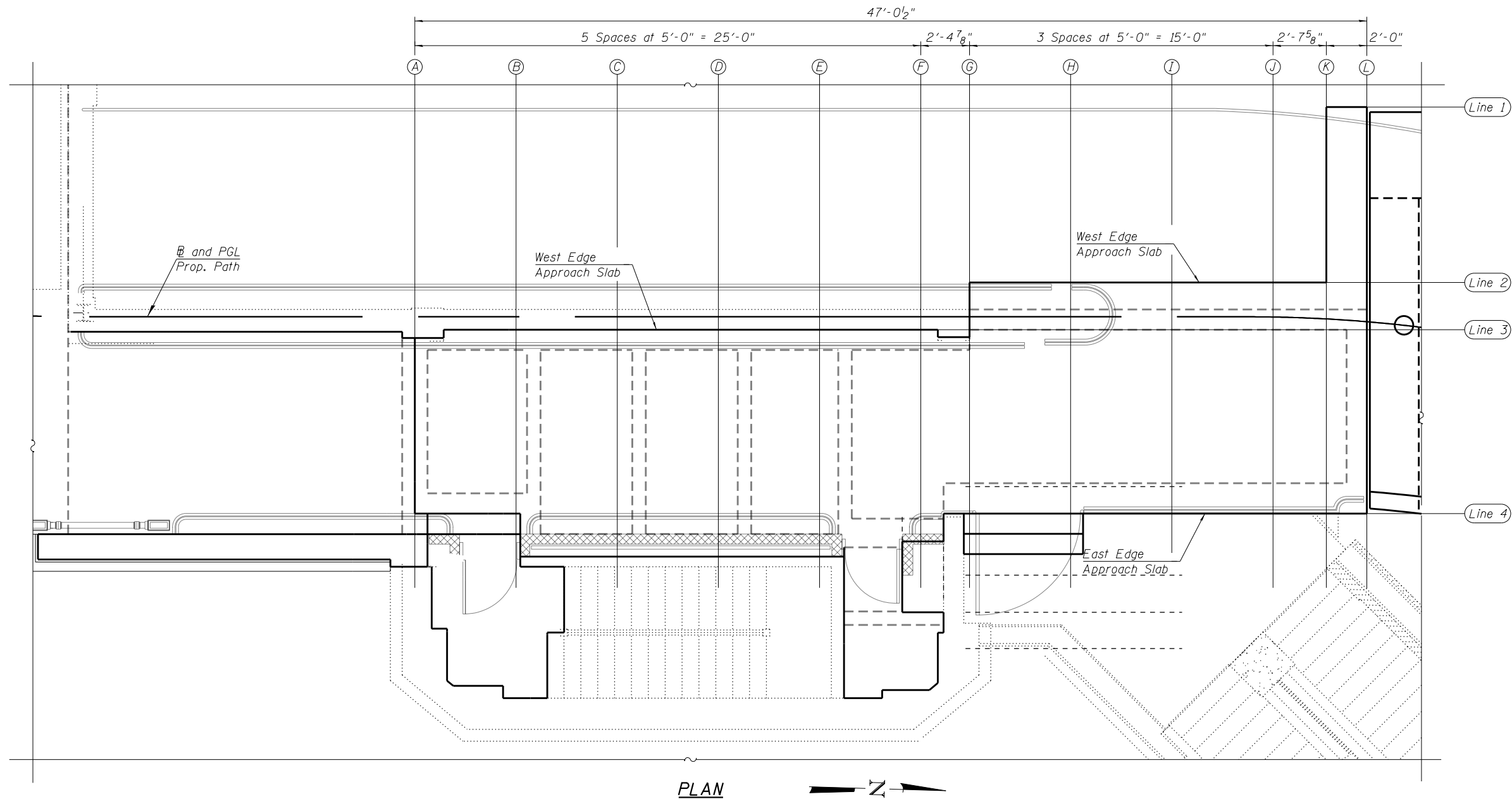
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PLOT DATE = 6/23/2017	DRAWN - LAB	REVISED -
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART: INTERMEDIATE LEVEL
SE APPROACH SLAB ELEVATIONS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-34
CDOT PROJECT NO. E-6-650			77 OF 411



PLAN

LINE 1

Location	Station	Offset	Theoretical Grade Elevations
K	198+88.47	-10.45'	27.43
L	198+90.21	-10.57'	27.41

LINE 2 - WEST EDGE APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
G	198+71.33	-1.69'	27.60
H	198+76.33	-1.69'	27.56
I	198+81.33	-1.69'	27.51
J	198+86.30	-1.70'	27.46
K	198+88.87	-1.80'	27.43

LINE 3 - WEST EDGE APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
A	198+43.93	0.64'	27.86
B	198+48.93	0.64'	27.81
C	198+53.93	0.64'	27.77
D	198+58.93	0.64'	27.72
E	198+63.93	0.64'	27.67
F	198+68.93	0.64'	27.63
G	198+71.33	0.64'	27.60

LINE 4 - EAST EDGE APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
A	198+43.93	9.72'	27.86
B	198+48.93	9.72'	27.81
C	198+53.93	9.72'	27.77
D	198+58.93	9.72'	27.72
E	198+63.93	9.72'	27.67
F	198+68.93	9.72'	27.63
G	198+71.33	9.72'	27.60
H	198+76.33	9.72'	27.56
I	198+81.33	9.72'	27.51
J	198+86.52	9.71'	27.46
K	198+89.58	9.60'	27.43
L	198+91.89	9.44'	27.41

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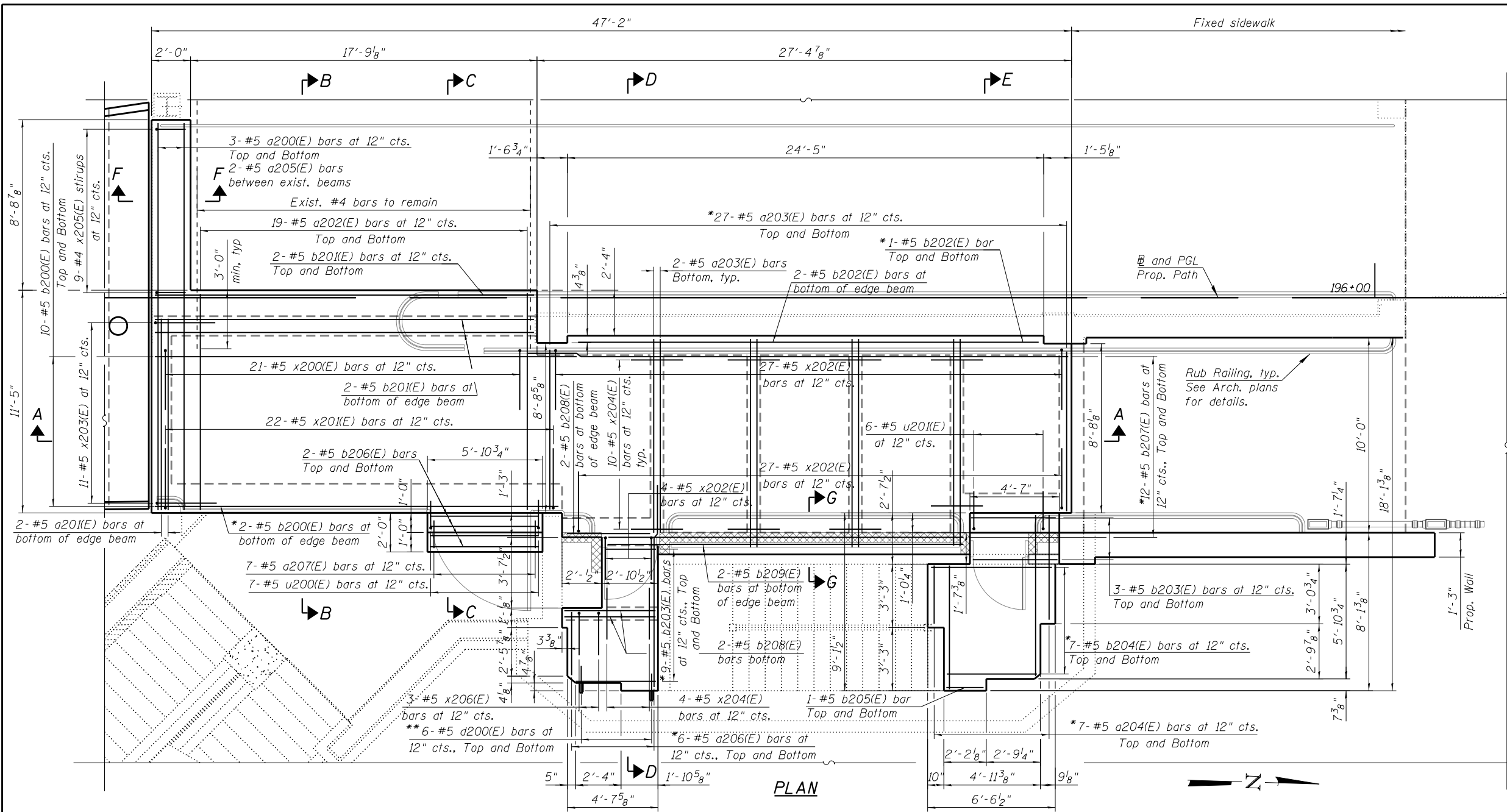
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PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

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DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**FIXED PART: INTERMEDIATE LEVEL
NE APPROACH SLAB ELEVATIONS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-35
CDOT PROJECT NO. E-6-650			79 OF 411



NOTE:

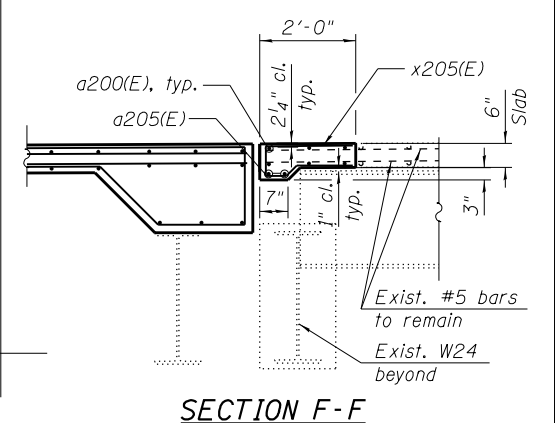
- For sections B-B thru E-E, section G-G, Bill of Material and Bar diagrams, see Sheet MS-37

* Cut to fit in field

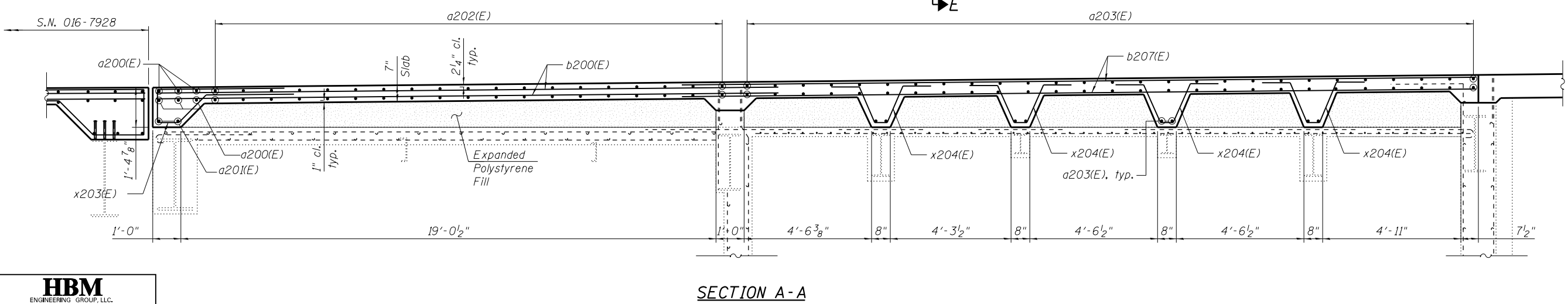
** Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 6". Cost included in the cost of REINFORCEMENT BARS, EPOXY COATED.

LEGEND

CMU Wall. See Arch. plans for details



SECTION F-F



SECTION A-A

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PLOT DATE = 6/23/2017	DRAWN - FA	REVISED -
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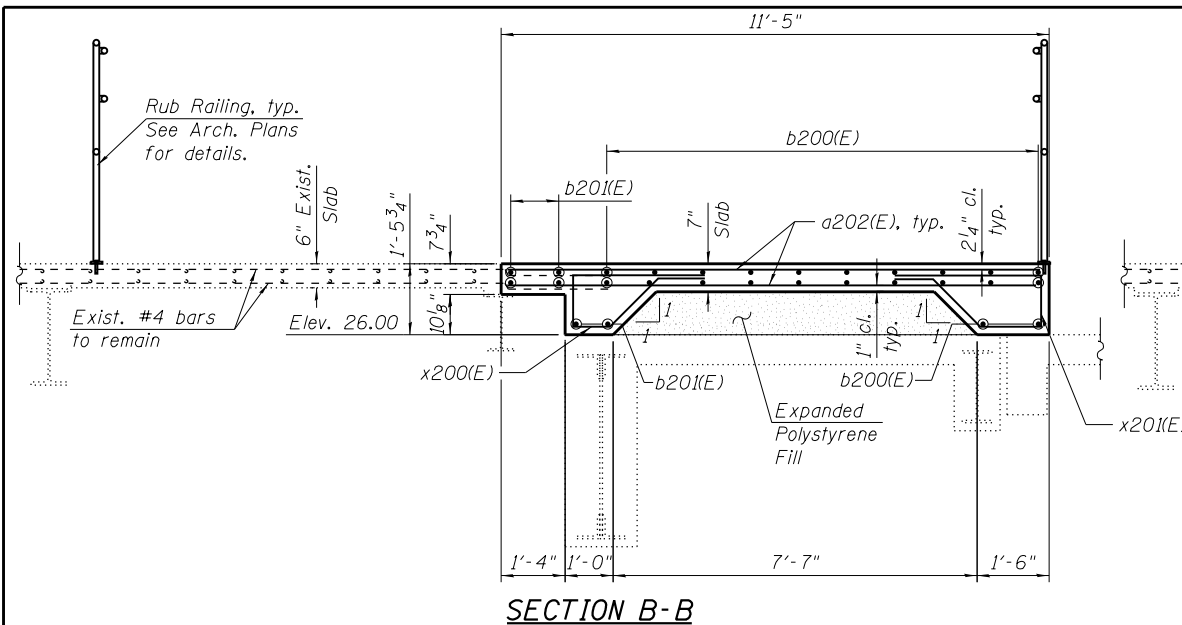
CITY OF CHICAGO
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DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

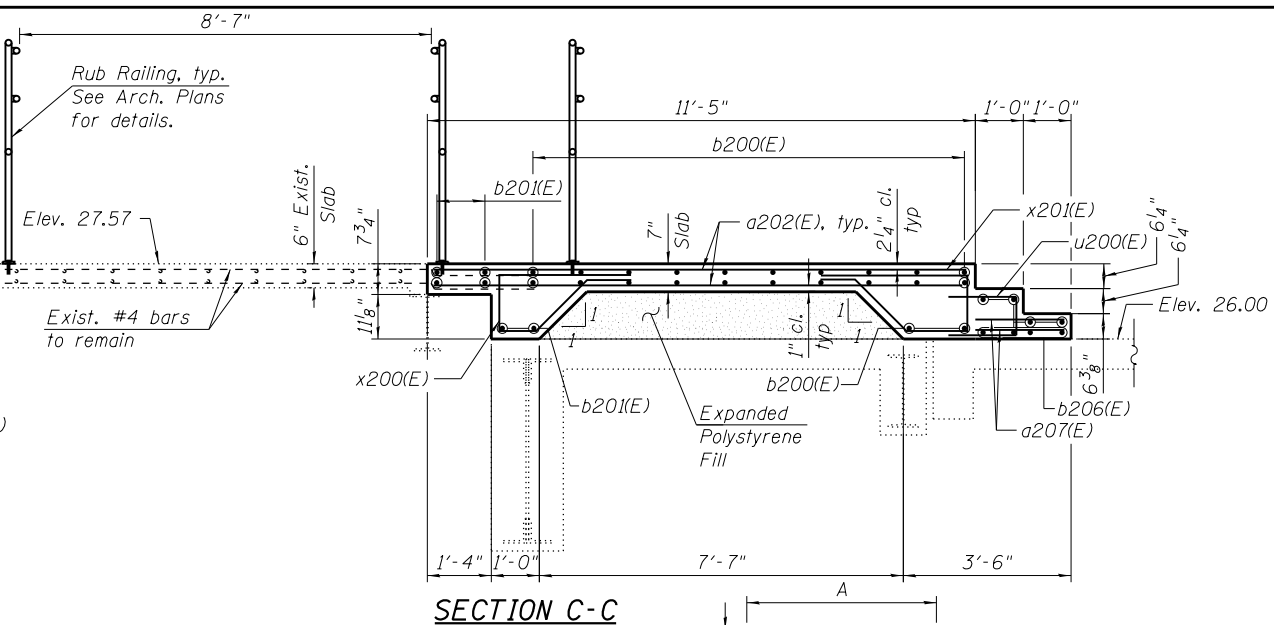
FIXED PART: INTERMEDIATE LEVEL
SE APPROACH SLAB PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-36
CDOT PROJECT NO. E-6-650			77 OF 411

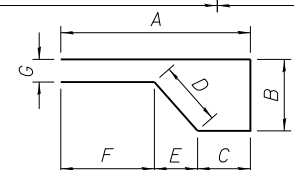
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SECTION B-B



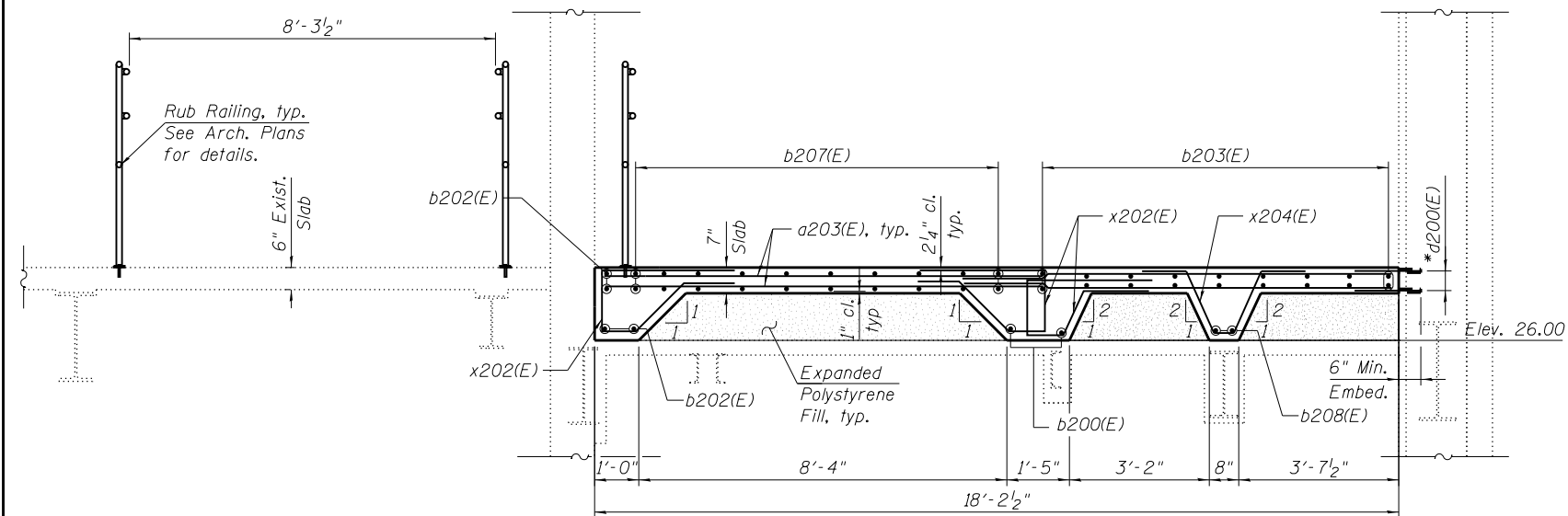
SECTION C-C



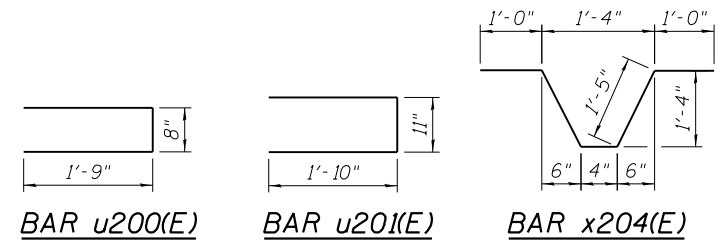
BARS x200(E) THRU x203(E),
x205(E) AND x206(E)

TABLE 1

BAR	A	B	C	D	E	F	G
x200(E)	2'-6"	1'-2"	8"	1'-2"	10"	1'-0"	4"
x201(E)	3'-0"	1'-2"	1'-2"	1'-4"	10"	1'-0"	4"
x202(E)	2'-6"	1'-4"	8"	1'-2"	10"	1'-0"	4"
x203(E)	2'-6"	1'-1"	8"	1'-1"	10"	1'-0"	4"
x205(E)	1'-8"	5"	4"	3"	2"	1'-2"	3"
x206(E)	3'-0"	1'-4"	4"	1'-1"	6"	2'-2"	4"



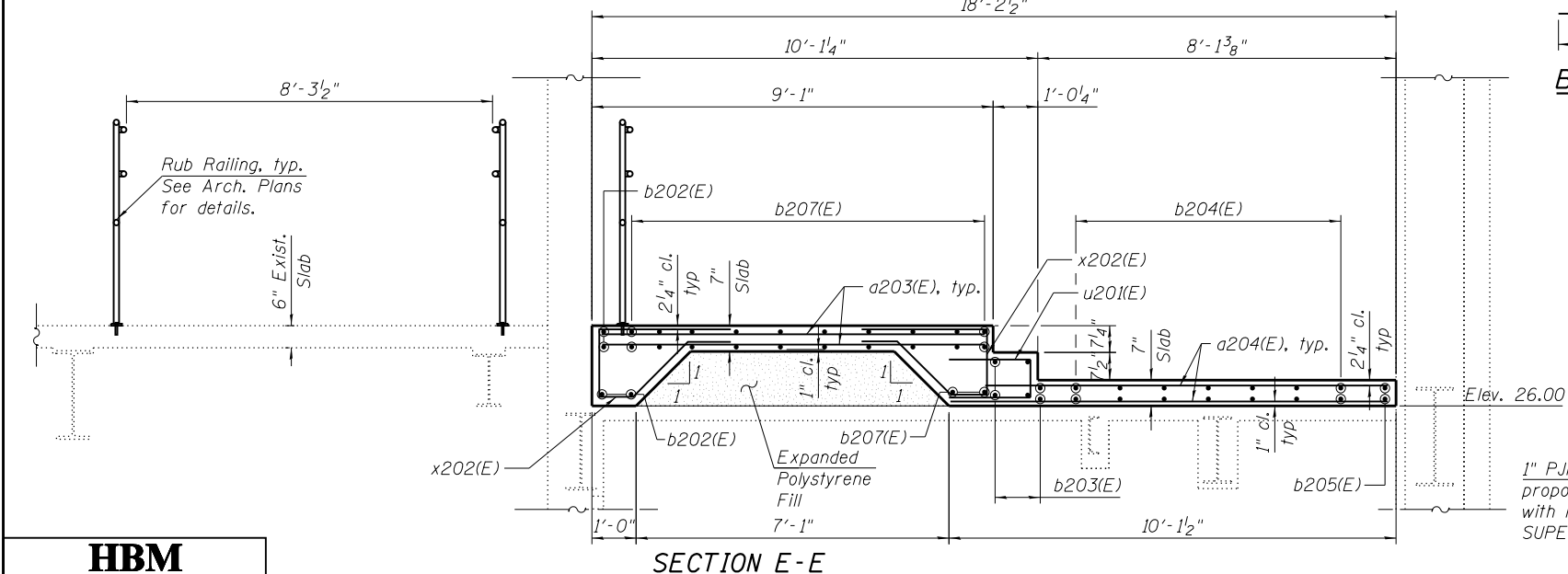
SECTION D-D



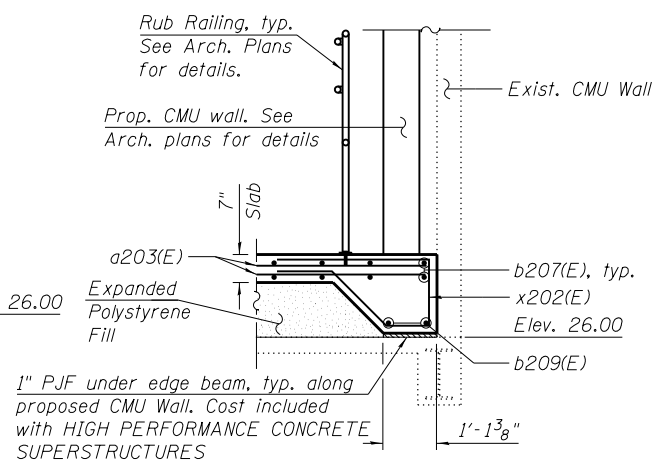
BAR u200(E)

BAR u201(E)

BAR x204(E)



SECTION E-E



SECTION G-G

Stairway not shown for clarity

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a200(E)	6	#5	19'-9"	—
a201(E)	2	#5	9'-9"	—
a202(E)	38	#5	11'-1"	—
a203(E)	62	#5	10'-9"	—
a204(E)	14	#5	8'-2"	—
a205(E)	2	#5	9'-0"	—
a206(E)	12	#5	10'-10"	—
a207(E)	7	#5	3'-0"	—
b200(E)	22	#5	21'-1"	—
b201(E)	6	#5	19'-5"	—
b202(E)	4	#5	27'-1"	—
b203(E)	24	#5	4'-3"	—
b204(E)	14	#5	6'-3"	—
b205(E)	2	#5	1'-10"	—
b206(E)	8	#5	5'-6"	—
b207(E)	24	#5	28'-9"	—
b208(E)	4	#5	4'-7"	—
b209(E)	2	#5	18'-6"	—
d200(E)	12	#5	3'-6"	—
u200(E)	7	#5	4'-2"	—
u201(E)	6	#5	4'-7"	—
x200(E)	21	#5	6'-6"	—
x201(E)	22	#5	7'-8"	—
x202(E)	58	#5	6'-8"	—
x203(E)	11	#5	6'-4"	—
x204(E)	44	#5	5'-2"	—
x205(E)	9	#4	3'-10"	—
x206(E)	3	#5	7'-11"	—
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES			CU YD	22.5
REINFORCEMENT BARS, EPOXY COATED			POUND	4,500
PROTECTIVE CONCRETE SEALER			SQ YD	80
EXPANDED POLYSTYRENE FILL			CU YD	13.3

Minimum Bar Laps	
Bar	Lap
#4	2'-5"
#5	3'-0"
#6	3'-7"
#7	4'-8"
#8	5'-11"
#9	7'-3"
#10	8'-11"

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 6". Cost included in the cost of REINFORCEMENT BARS, EPOXY COATED.

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USER NAME = fadl.alsharif	DESIGNED - JJS	REVISED -
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PLOT SCALE = N.T.S.	DRAWN - FA	REVISED -
PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART: INTERMEDIATE LEVEL
SE APPROACH SLAB SECTIONS AND DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-37
CDOT PROJECT NO. E-6-650			78 OF 411

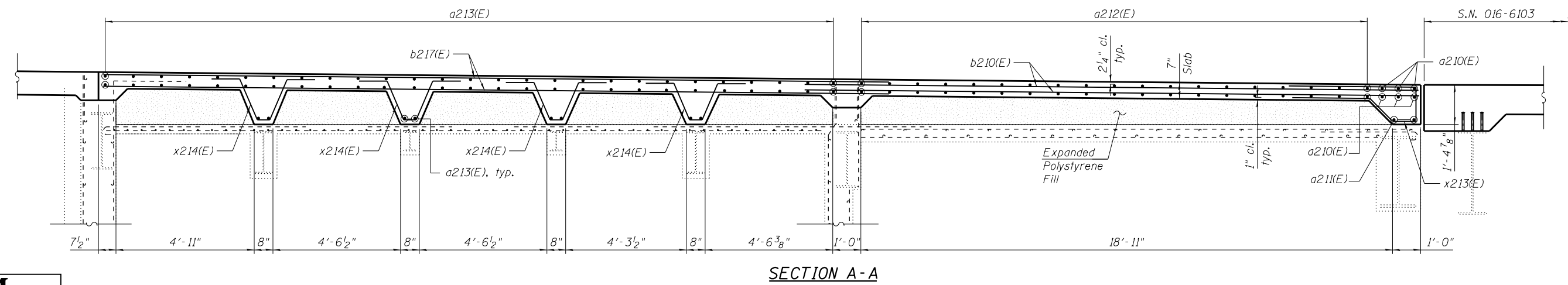
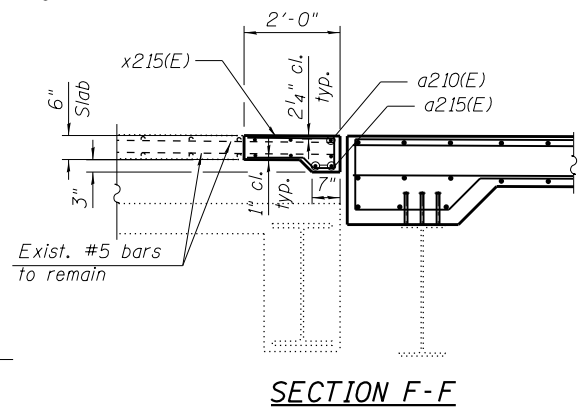
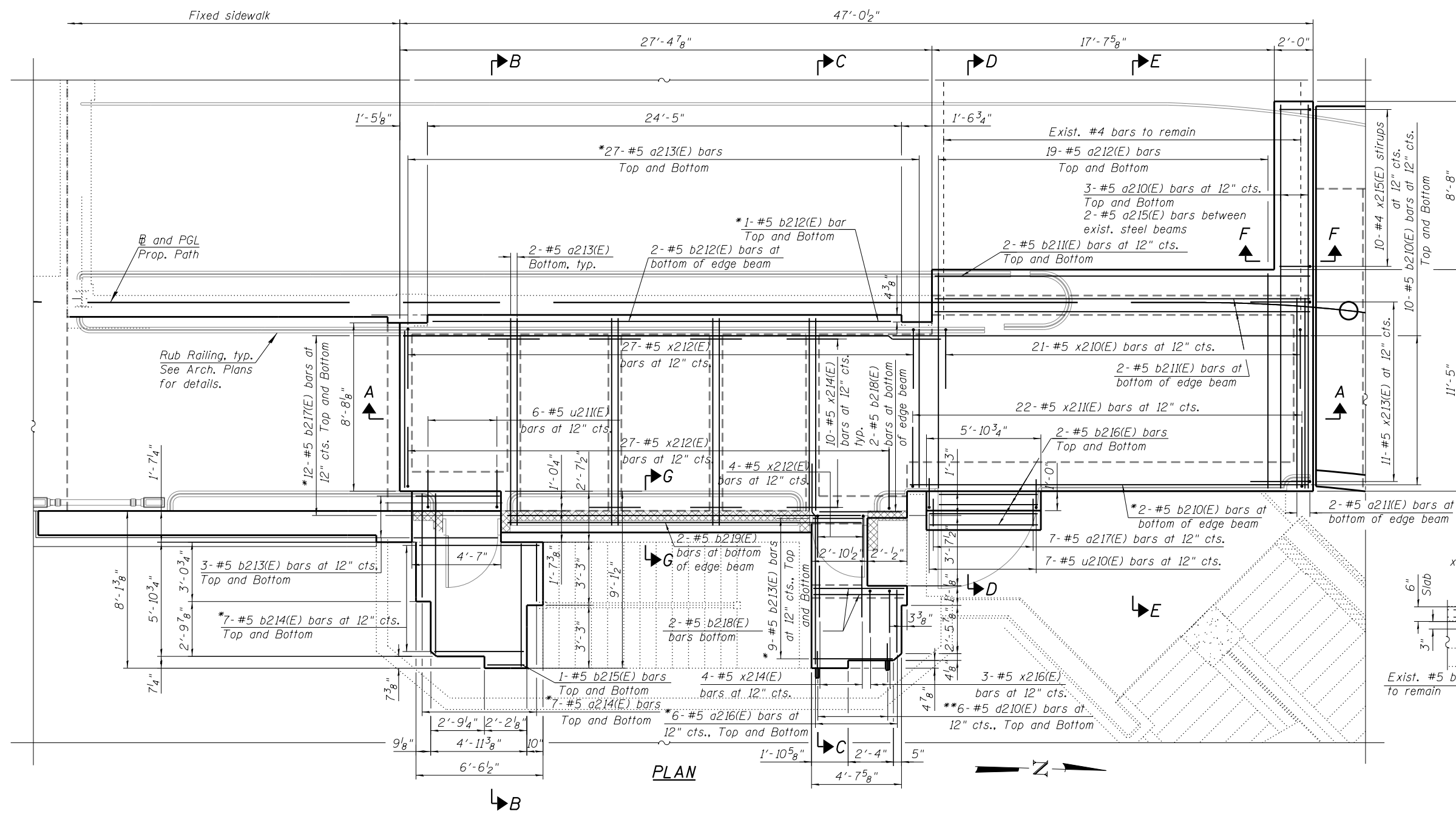
NOTE:

1. For sections B-B thru E-E, Bill of Material, and bar diagrams see Sheet MS-39

* Cut to fit in field
 ** Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 6". Cost included in the cost of REINFORCEMENT BARS, EPOXY COATED.

LEGEND

 CMU Wall. See Arch. plans for details



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PLLOT DATE = 6/23/2017	DRAWN - MAA	REVISED -
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CITY OF CHICAGO
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LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

FIXED PART: INTERMEDIATE LEVEL
NE APPROACH SLAB PLAN
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-38
CDOT PROJECT NO. E-6-650			79 OF 411

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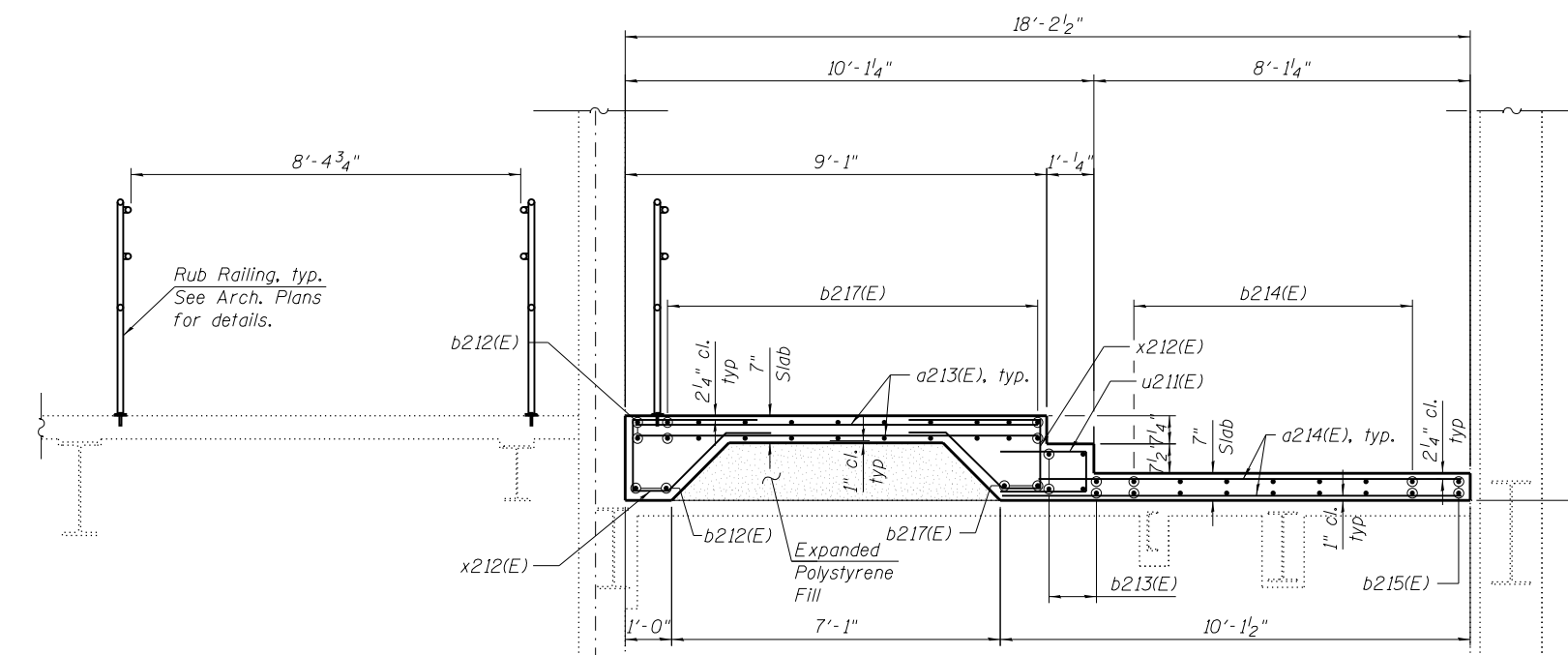
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PLOT DATE = 6/23/2017	DRAWN - FA	REVISED -
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CITY OF CHICAGO
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DIVISION OF ENGINEERING

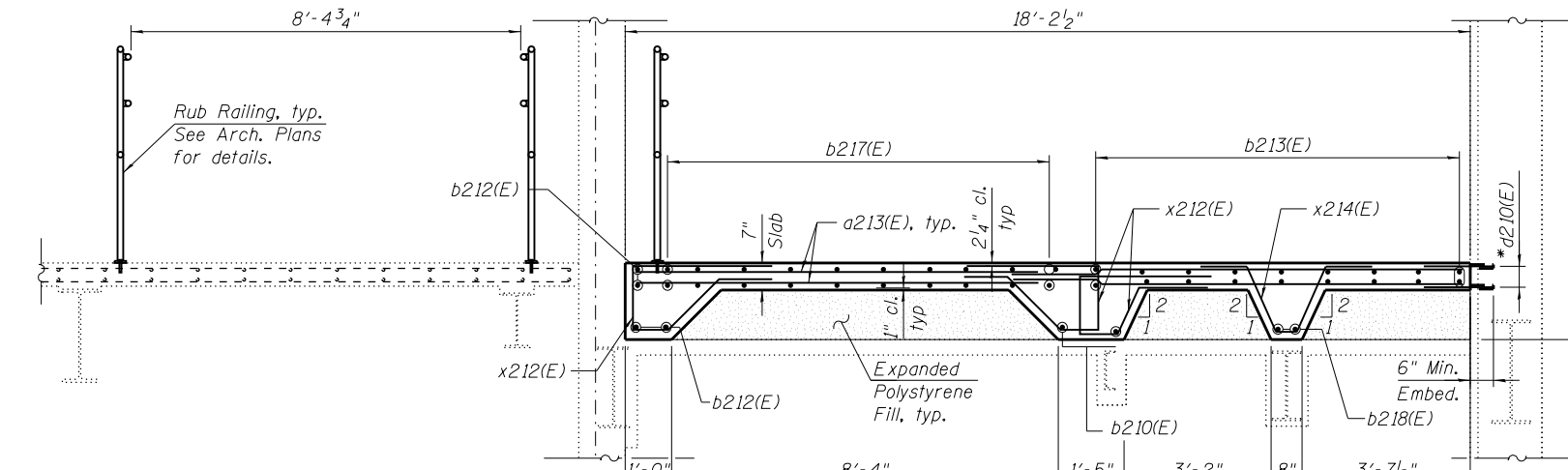
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**FIXED PART: INTERMEDIATE LEVEL
NE APPROACH SLAB SECTIONS AND DETAILS
(STRUCTURE NO. 016-6030)**

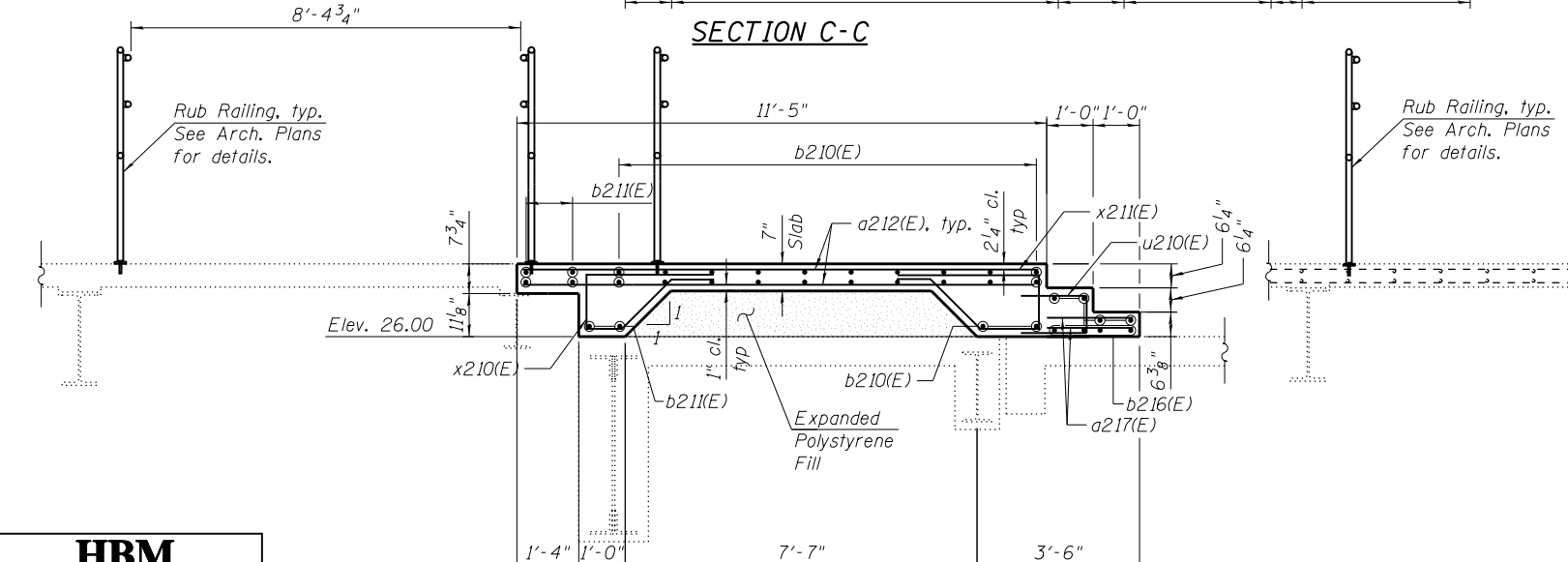
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-39
CDOT PROJECT NO. E-6-650			80 OF 411



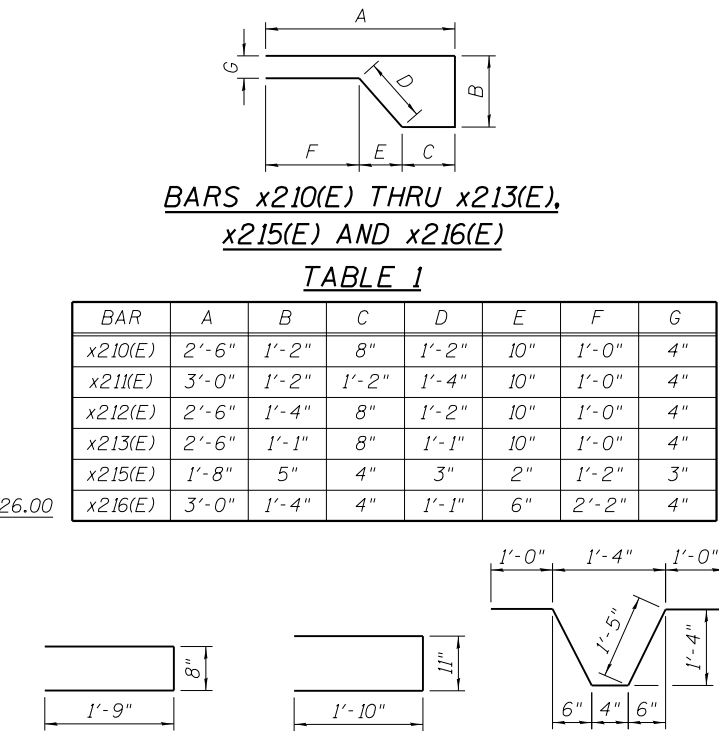
SECTION B-B



SECTION C-C



SECTION D-D

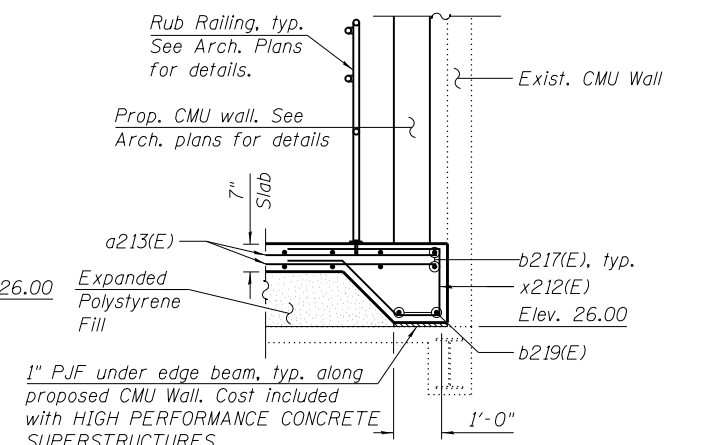


**BARS x210(E) THRU x213(E),
x215(E) AND x216(E)**

TABLE 1

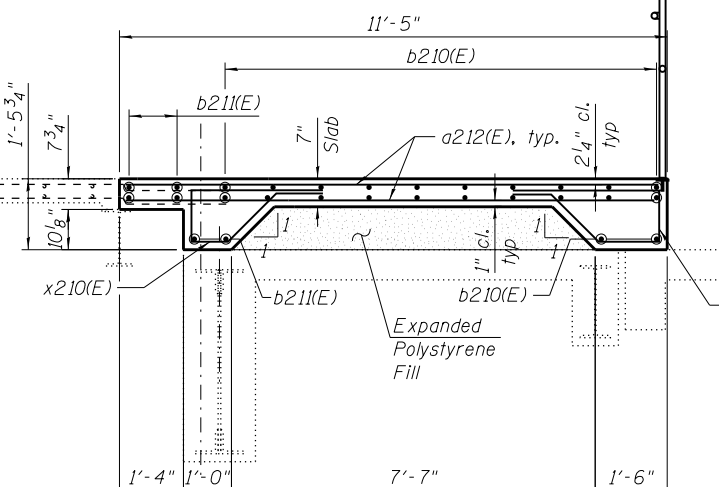
BAR	A	B	C	D	E	F	G
x210(E)	2'-6"	1'-2"	8"	1'-2"	10"	1'-0"	4"
x211(E)	3'-0"	1'-2"	1'-2"	1'-4"	10"	1'-0"	4"
x212(E)	2'-6"	1'-4"	8"	1'-2"	10"	1'-0"	4"
x213(E)	2'-6"	1'-1"	8"	1'-1"	10"	1'-0"	4"
x215(E)	1'-8"	5"	4"	3"	2"	1'-2"	3"
x216(E)	3'-0"	1'-4"	4"	1'-1"	6"	2'-2"	4"

BAR u210(E) BAR u211(E) BAR x214(E)



SECTION G-G

Stairway not shown for clarity



SECTION E-E

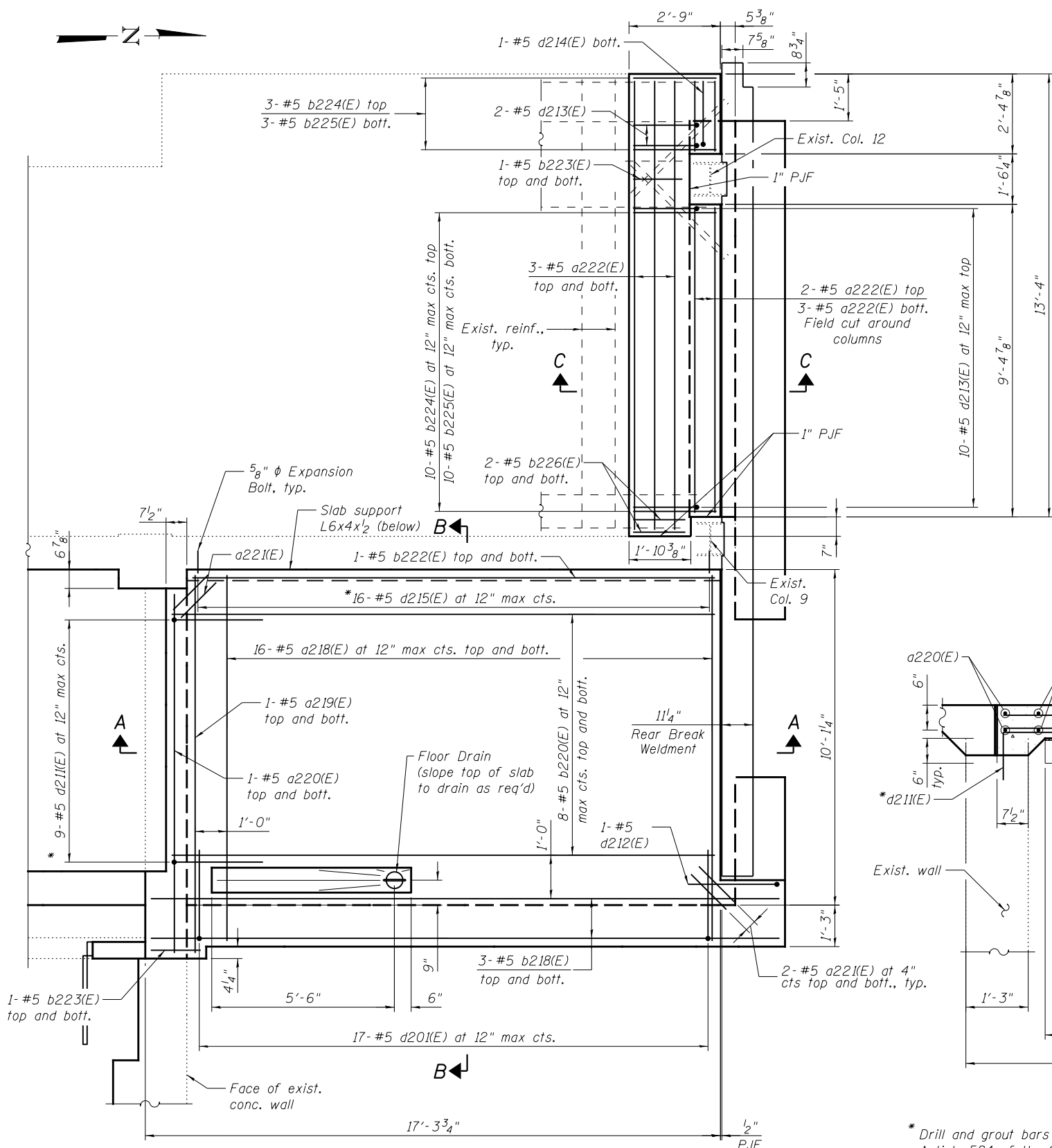
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a210(E)	6	#5	19'-9"	—
a211(E)	2	#5	9'-9"	—
a212(E)	38	#5	11'-1"	—
a213(E)	62	#5	10'-9"	—
a214(E)	14	#5	8'-2"	—
a215(E)	2	#5	9'-0"	—
a216(E)	12	#5	10'-10"	—
a217(E)	7	#5	3'-0"	—
b210(E)	22	#5	21'-0"	—
b211(E)	6	#5	19'-5"	—
b212(E)	4	#5	27'-1"	—
b213(E)	24	#5	4'-3"	—
b214(E)	14	#5	6'-3"	—
b215(E)	2	#5	1'-10"	—
b216(E)	8	#5	5'-6"	—
b217(E)	24	#5	28'-9"	—
b218(E)	4	#5	4'-7"	—
b219(E)	2	#5	18'-6"	—
d210(E)	12	#5	3'-6"	—
u210(E)	7	#5	4'-2"	—
u211(E)	6	#5	4'-7"	—
x210(E)	21	#5	6'-6"	—
x211(E)	22	#5	7'-8"	—
x212(E)	58	#5	6'-8"	—
x213(E)	11	#5	6'-4"	—
x214(E)	44	#5	5'-2"	—
x215(E)	9	#4	3'-10"	—
x216(E)	3	#5	7'-11"	—
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES			CU YD	22.5
REINFORCEMENT BARS, EPOXY COATED			POUND	4,500
PROTECTIVE CONCRETE SEALER			SQ YD	80
EXPANDED POLYSTYRENE FILL			CU YD	13.3

Minimum Bar Laps	
Bar	Lap
#4	2'-5"
#5	3'-0"
#6	3'-7"
#7	4'-8"
#8	5'-11"
#9	7'-3"
#10	8'-11"

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 6". Cost included in the cost of REINFORCEMENT BARS, EPOXY COATED.

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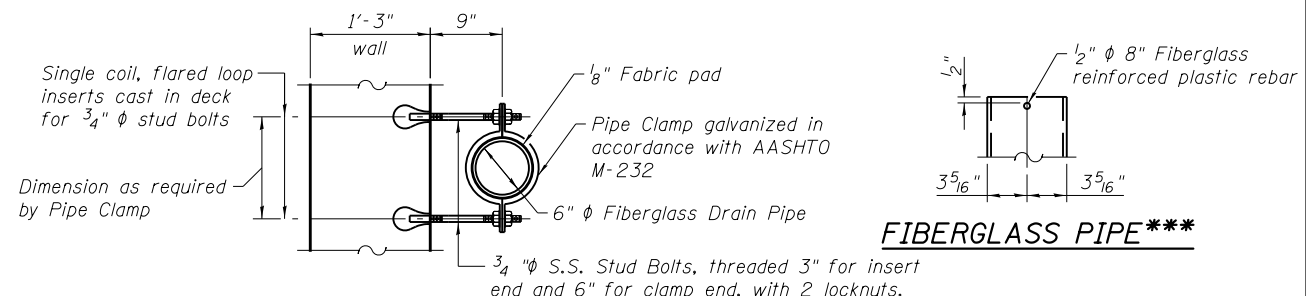


PARTIAL PLAN - APPROACH SLAB AT INTERMEDIATE LEVEL

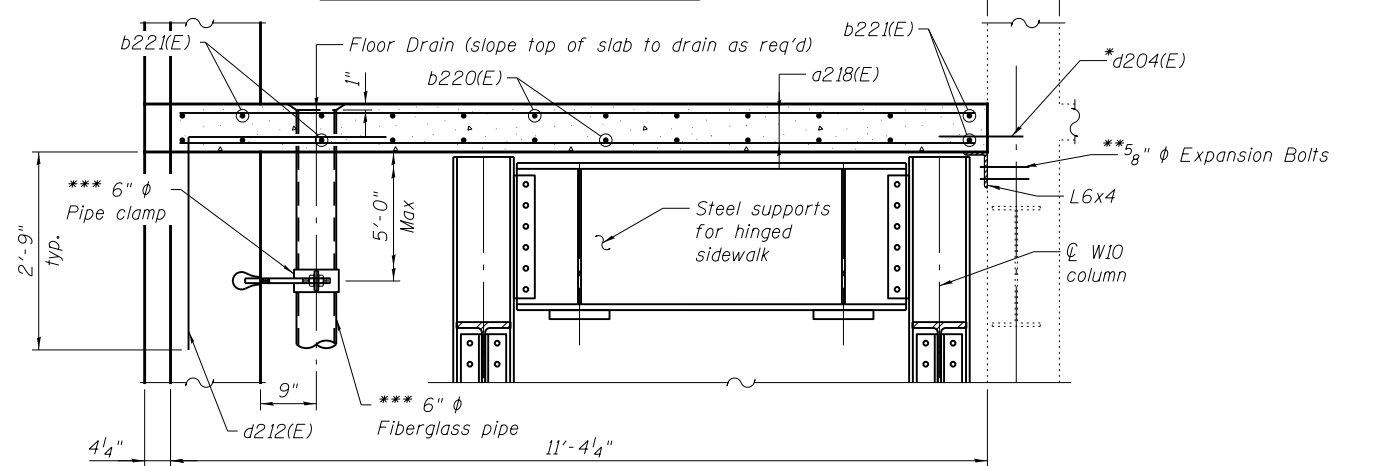
(S.E. House shown, N.E. House opposite hand)
(Railings & Limestone Facade Panels are not shown for clarity)

REFERENCE DRAWINGS

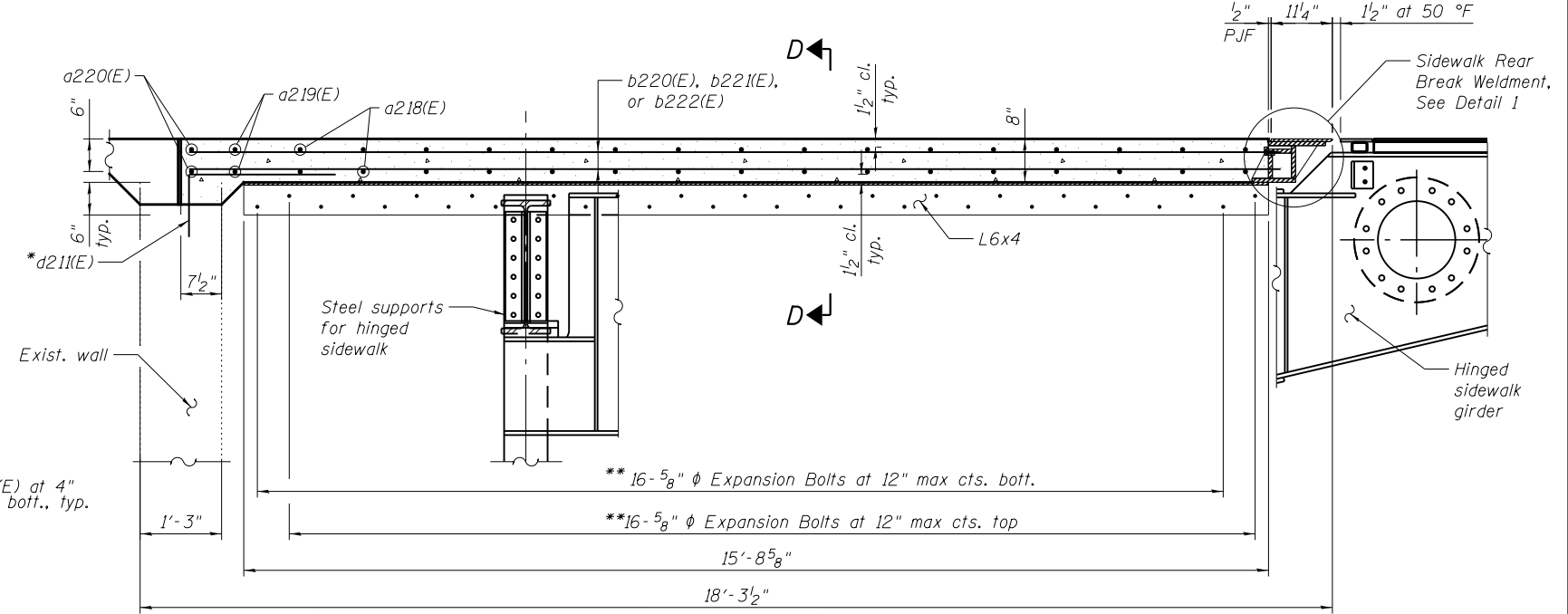
Drawing	Sheet No.
Interm. Level N. Approach Slab Reinf. Plan	1660300183
Bridge Houses Concrete Details	1660300812



PIPE SUPPORT DETAIL ***



SECTION B-B



SECTION A-A

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 6". Cost included in the cost of Reinforcement Bars, Epoxy Coated.

** Drill and grout Expansion Bolts according to Article 584 of the Std. Specs., with a minimum embedment of 7". Cost included in the cost of Reinforcement Bars, Epoxy Coated.

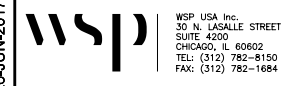
*** Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 psi mini.

The exterior surfaces of the floor drains shall be coated or pigmented by the manufacture with a color that matches the concrete.

The clamping device and inserts shall be galvanized according to AASHTO M-232. Cost of fiberglass pipe, clamping device and galvanizing included with Reinforcement Bars, Epoxy Coated.

Note:

- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with the cost of concrete removal.
- Furnishing and erection of steel support angle included in the cost of Furnishing and Erecting Structural Steel.
- Apply Protective Concrete Sealer to exposed conc. wall and front Brg. seat surfaces.
- For Sections C-C and D-D, and for Detail 1, see sheet MS-41.



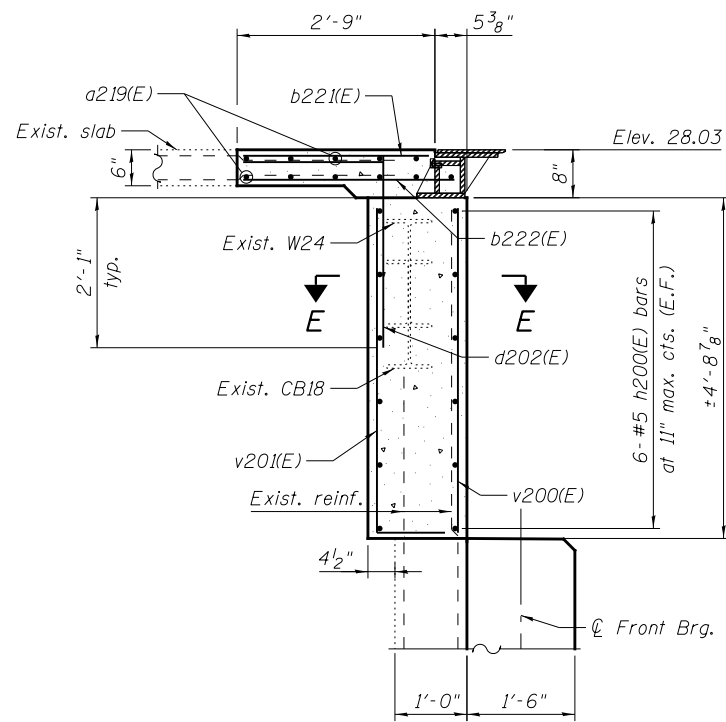
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PLOT DATE = 6/26/2017	DRAWN - MI	REVISD -
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
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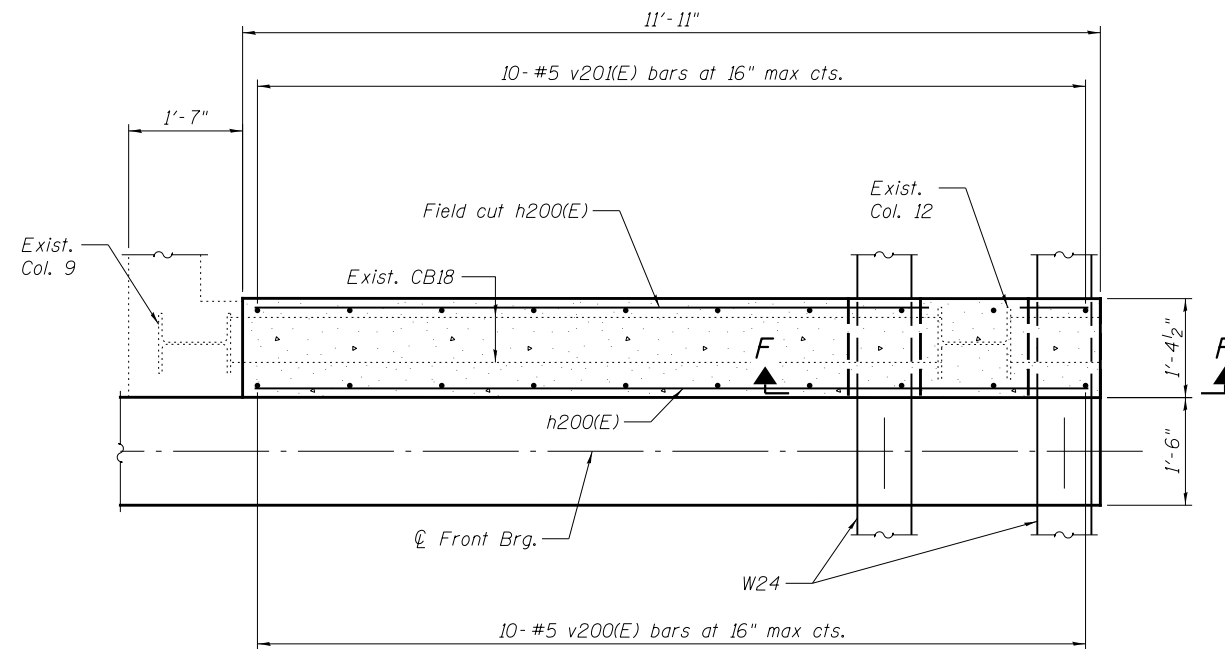
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**FIXED PART:
HOUSE APPROACH SLAB DETAILS I
(STRUCTURE NO. 016-6030)**

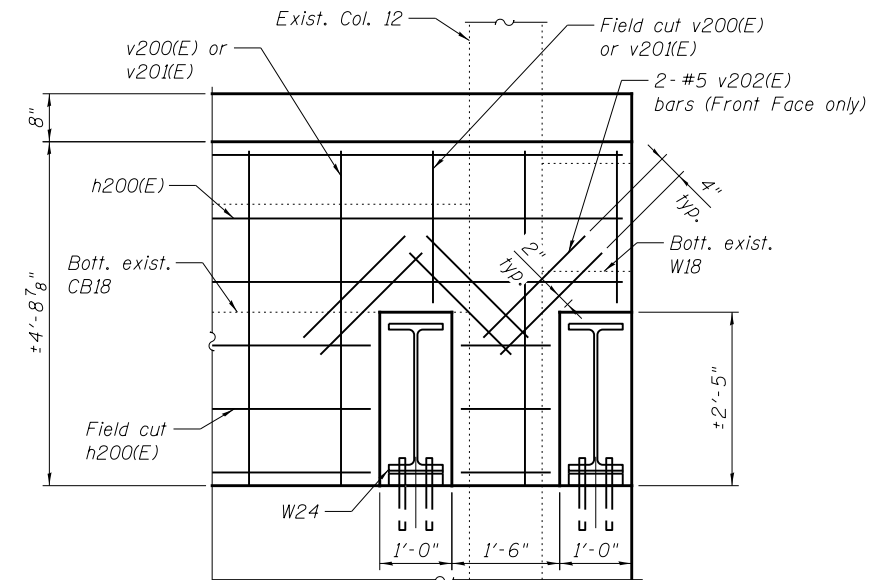
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-40
CDOT PROJECT NO. E-6-650			81 OF 411



SECTION C-C



SECTION E-E

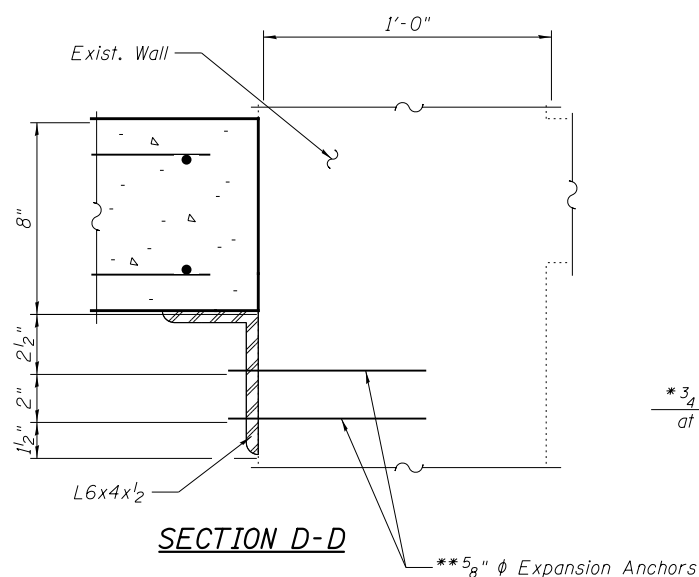


SECTION F-F

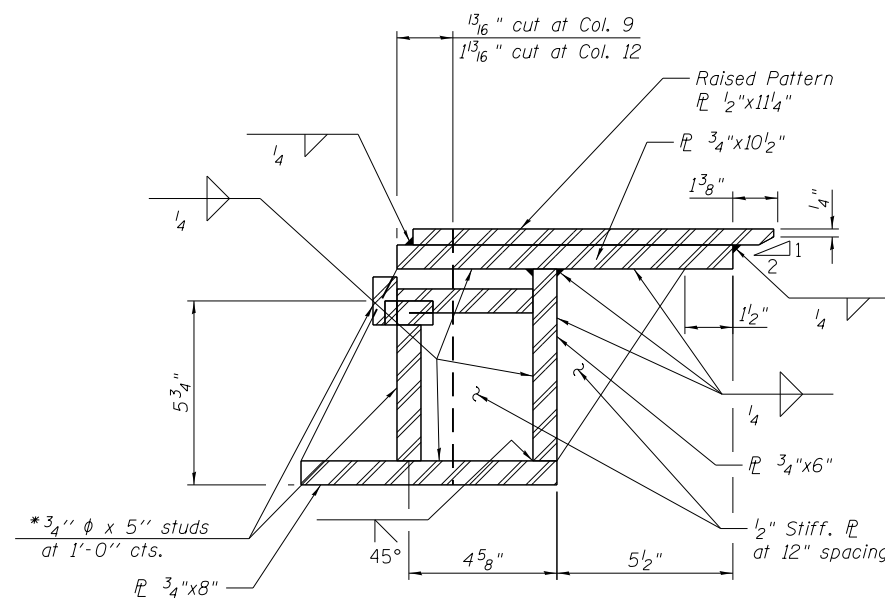
BILL OF MATERIAL

Item	No.	Size	Length	Shape
a218(E)	64	#5	11'-2"	—
a219(E)	4	#5	11'-6"	—
a220(E)	4	#5	10'-11"	—
a221(E)	16	#5	1'-6"	—
a222(E)	22	#5	13'-8"	—
b220(E)	32	#5	16'-9"	—
b221(E)	12	#5	19'-0"	—
b222(E)	4	#5	15'-10"	—
b223(E)	8	#5	1'-7"	—
b224(E)	26	#5	2'-7"	—
b225(E)	26	#5	3'-0"	—
b226(E)	8	#5	1'-8"	—
d211(E)	18	#5	3'-9"	┌
d212(E)	36	#5	5'-8"	┌
d213(E)	24	#5	5'-2"	┌
d214(E)	2	#5	5'-6"	┌
d215(E)	32	#5	1'-3"	—
h200(E)	24	#5	11'-8"	—
v200(E)	20	#5	4'-7"	—
v201(E)	20	#5	5'-8"	┌
v202(E)	12	#5	2'-0"	—
High Performance Concrete Superstructures				Cu. Yd. 17.2
Reinforcement Bars, Epoxy Coated				Pound 3,220
Protective Concrete Sealer				Sq. Yd. 13.1

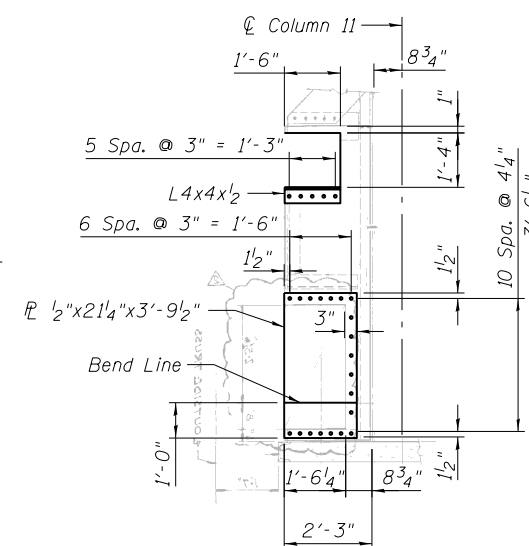
Quantity shown includes S.E. and N.E. houses.



SECTION D-D



**DETAIL 1
SIDEWALK REAR BREAK WELDMENT**



**PROTECTIVE FENCE
STEEL REPAIR**

(See sheet MS-13 for Location and Partial Removal)



BARS

A & B DIMENSIONS

Bar	A	B
d211(E)	2'-9"	1'-0"
d212(E)	2'-9"	2'-11"
d213(E)	1'-10"	3'-4"
d214(E)	2'-2"	3'-4"
d215(E)	1'-2"	4'-6"

*Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

** Drill and grout Expansion Bolts according to Article 584 of the Std. Specs., with a minimum embedment of 7". Cost included in the cost of Furnishing and Erecting Structural Steel, Bridge House.

Notes:

- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with the cost of Concrete Removal.
- Apply Protective Concrete Sealer to exposed conc. wall and front Brg. seat surfaces.
- Raised pattern steel plates shall conform to ASTM A786.

REFERENCE DRAWINGS

Drawing	Sheet No.
Intermediate Level-Protection Fence	1660300163
Interm. Level N. Approach Slab Reinf. Plan	1660300183
Protection Fence Intermediate Level	1660300429
Bridge Houses Concrete Details	1660300812

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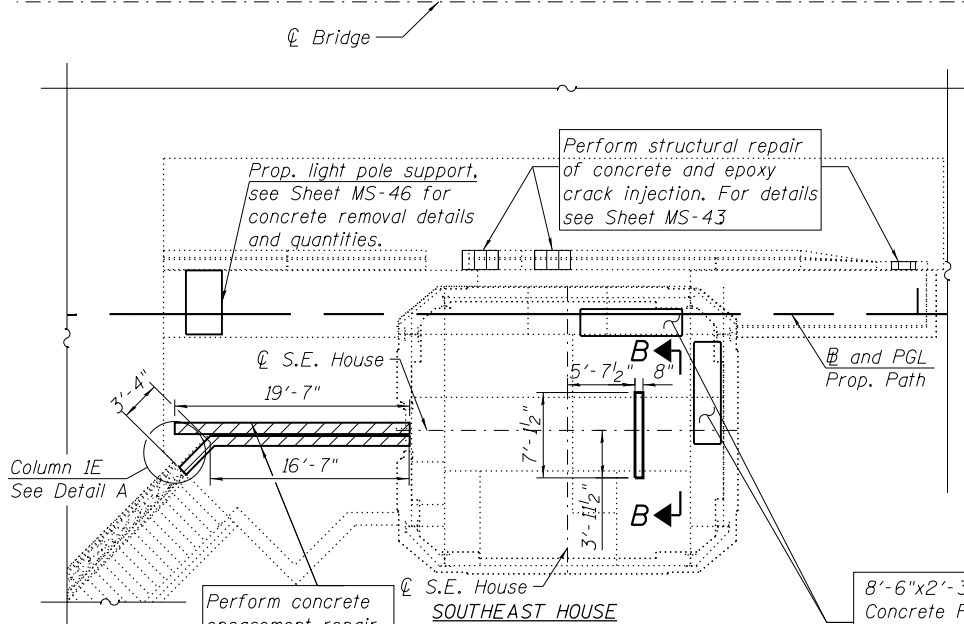
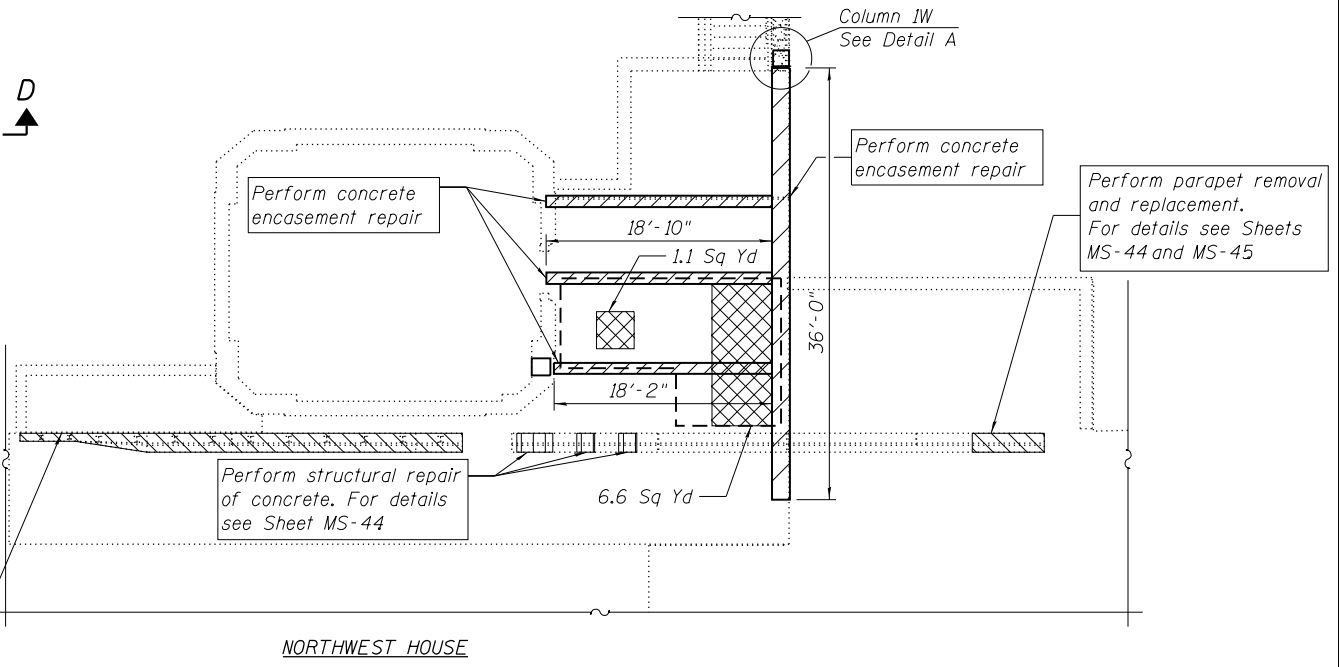
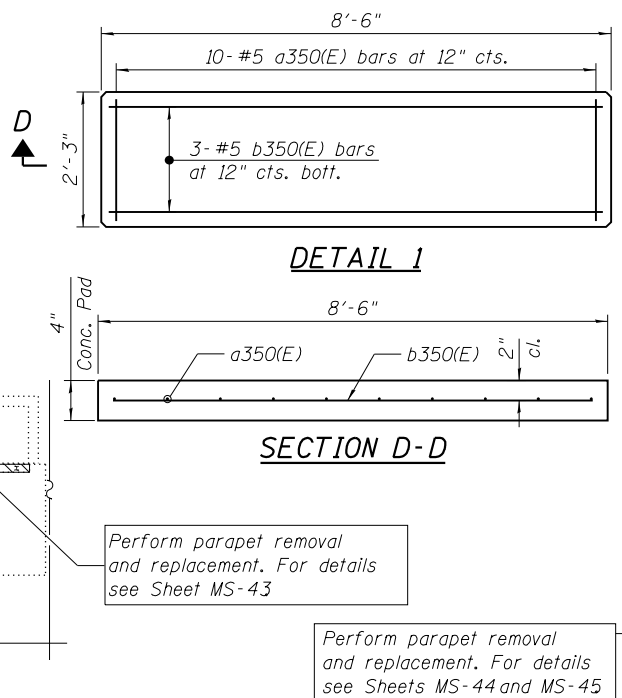
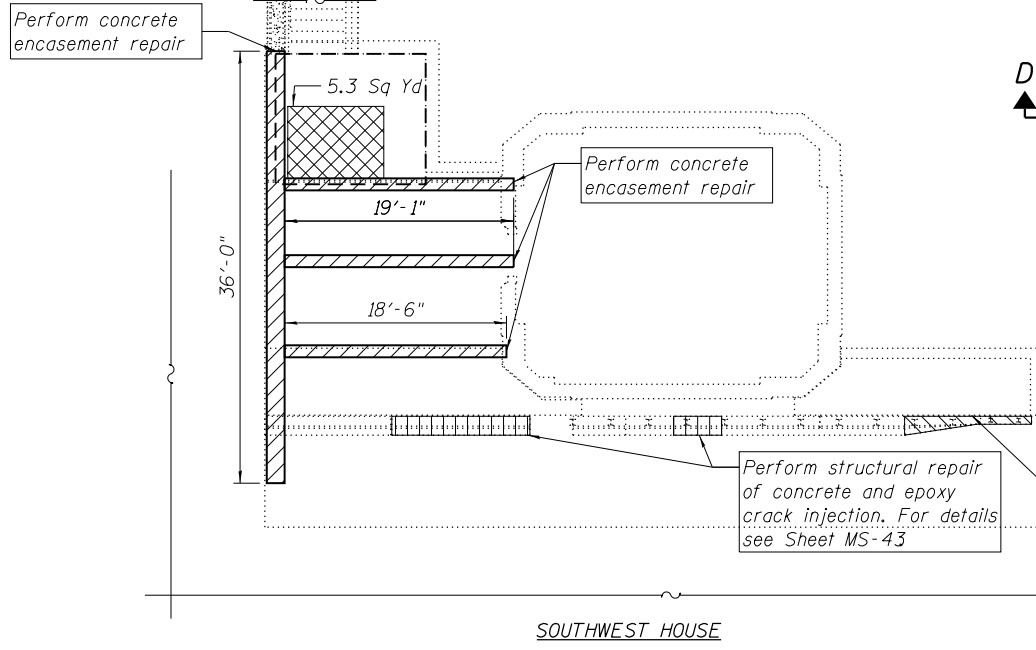
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**FIXED PART:
HOUSE APPROACH SLAB DETAILS II
(STRUCTURE NO. 016-6030)**

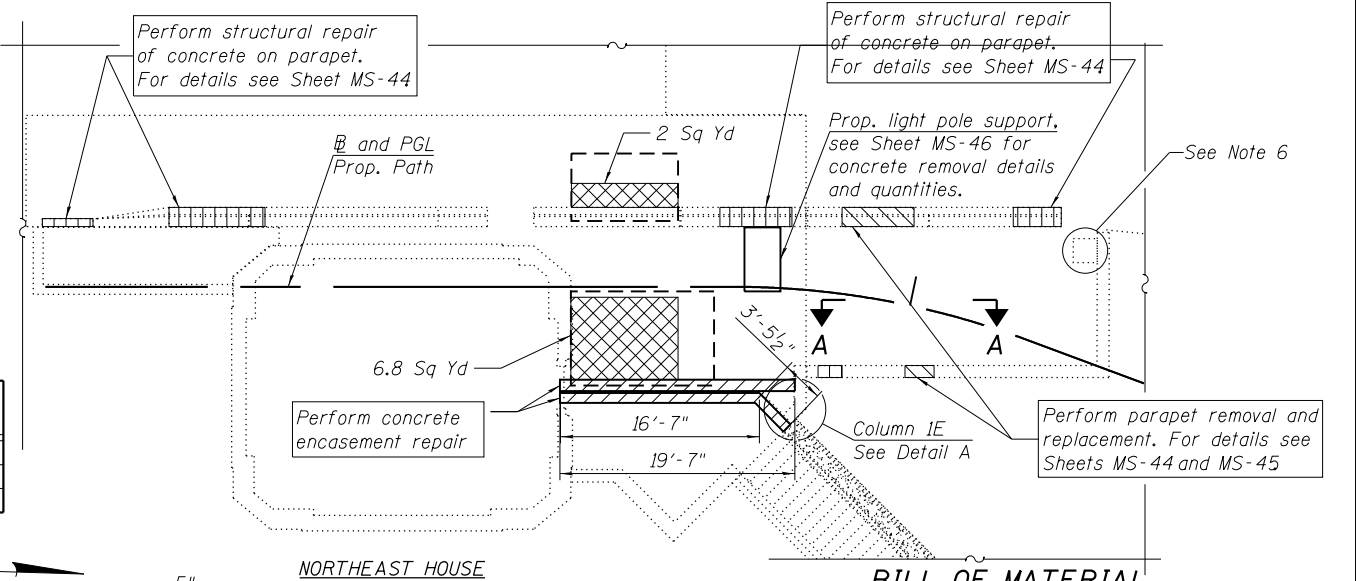
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-41
CDOT PROJECT NO. E-6-650			82 OF 411

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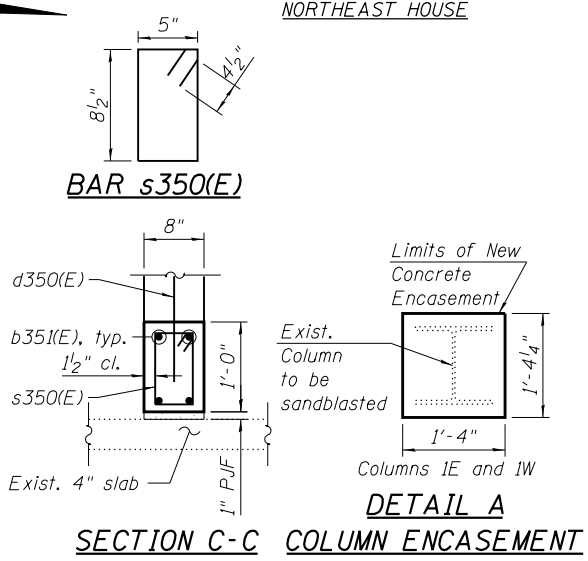
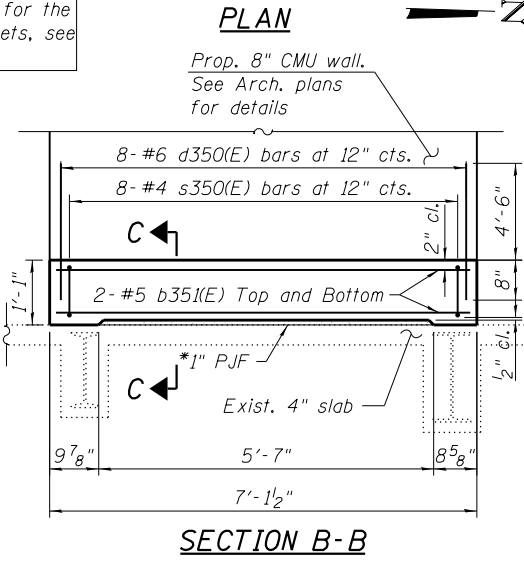
UPPER LEVEL
COLUMN ENCASEMENT REPAIR TABLE

Column Location	Column Designation	Column Section	Encasement Area (ft ²)	Repair Height (ft)
Northeast	1E	12CB85	1.8	3.0
Southeast	1E	12CB85	1.8	6.0
Northwest	1W	12CB65	1.8	6.0



- LEGEND**
- Deck Slab Repair (Full Depth, Type II)
 - Concrete Encasement Repair
 - Parapet Repair
 - Partial/Full Parapet Replacement
 - Limits of Protective Shield

- NOTES:**
- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
 - Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into new construction. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with DECK SLAB REPAIR (FULL DEPTH, TYPE II) and CONCRETE ENCASEMENT.
 - Protective Concrete Sealer shall be applied to the deck repair areas.
 - For parapet repairs, see Sheets MS-43 thru MS-45
 - For View A-A, See Sheet MS-44
 - Repair lightpost concrete base and install utility cover. See Detail 4 Sheet MS-45 for repair details.
- * Cost of P/JF included with HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a350(E)	20	#5	2'-0"	—	
b350(E)	6	#5	8'-3"	—	
b35(E)	4	#5	10'-8"	—	
d350(E)	8	#6	5'-2"	—	
s350(E)	8	#4	3'-0"	□	
PROTECTIVE SHIELD				SQ YD	52
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES				CU YD	0.7
REINFORCEMENT BARS, EPOXY COATED				POUND	220
PROTECTIVE CONCRETE SEALER				SQ YD	22
CONCRETE ENCASEMENT				CU YD	21.6
DECK SLAB REPAIR (FULL DEPTH, TYPE II)				SQ YD	21.8

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PLOT DATE = 6/23/2017	DRAWN - LAB	REVISED -
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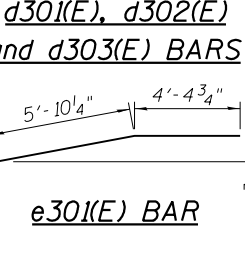
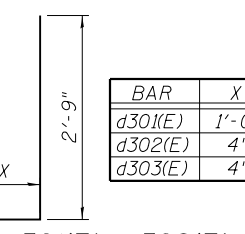
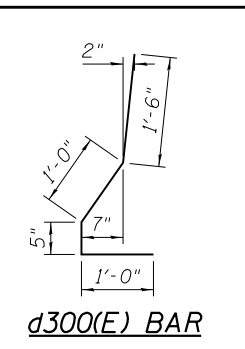
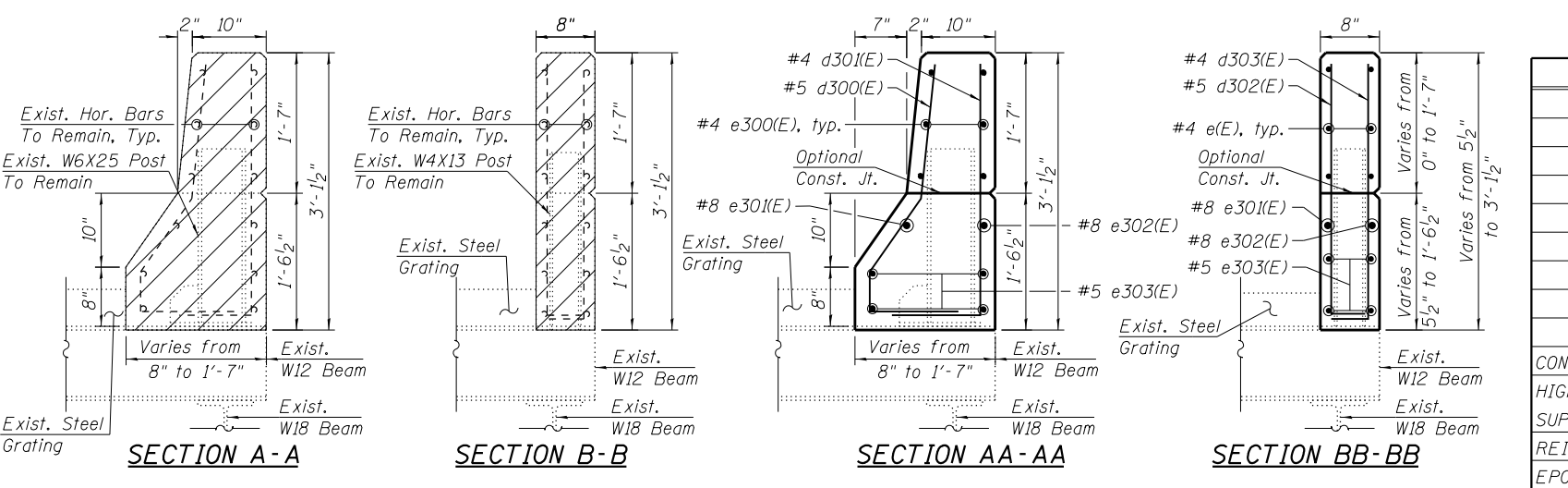
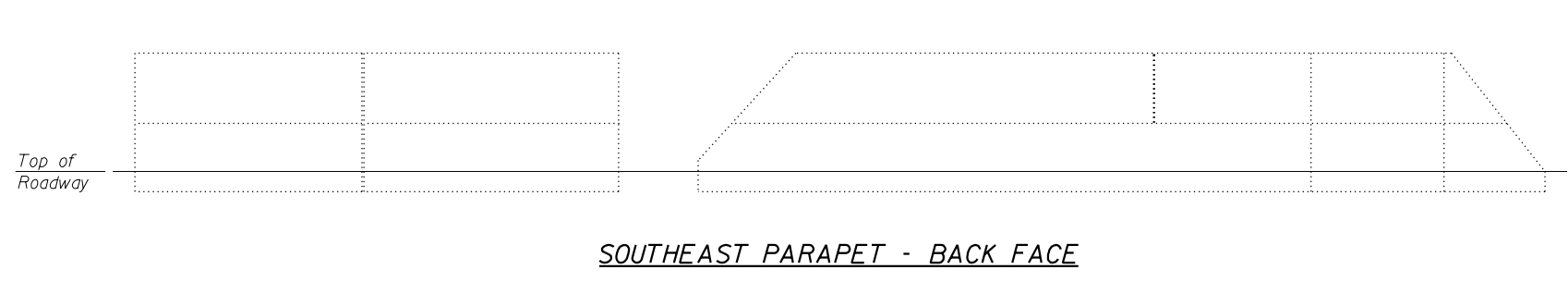
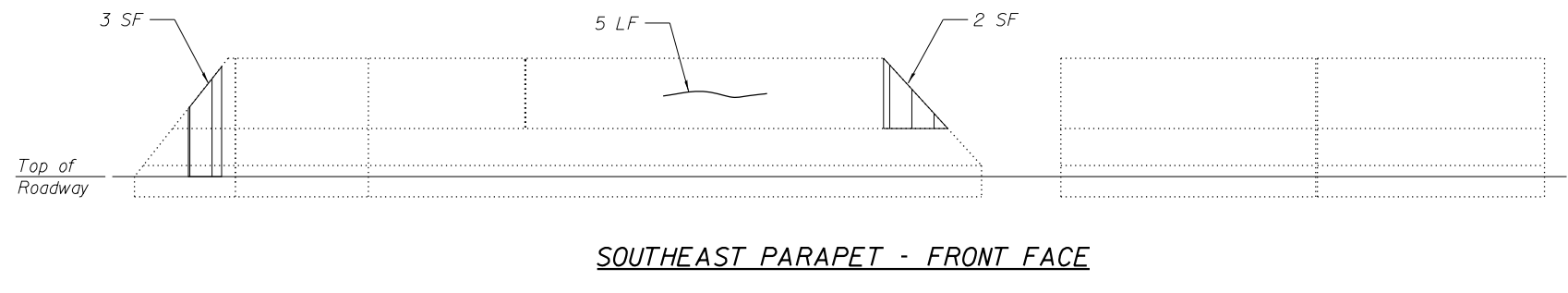
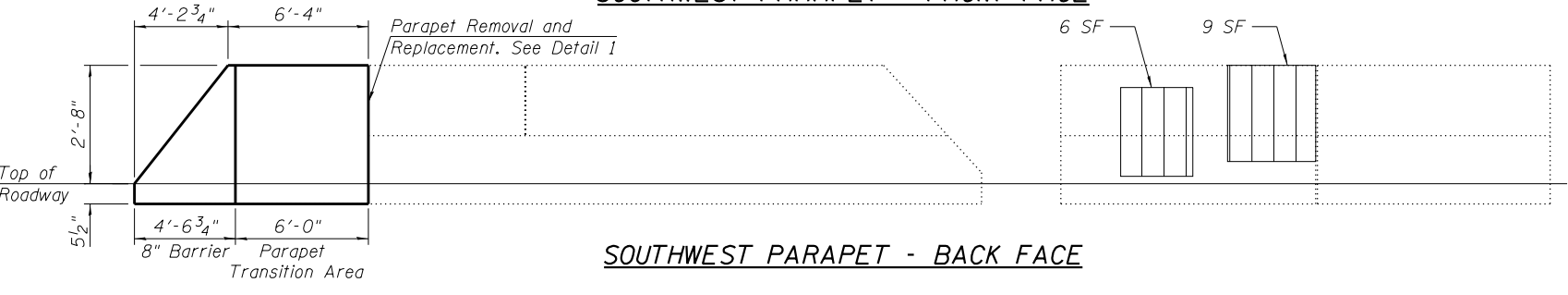
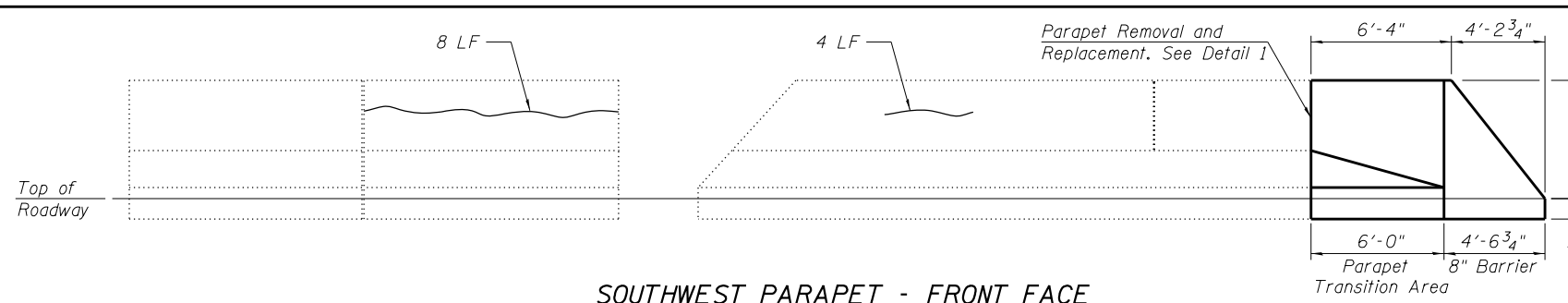
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART: UPPER LEVEL
HOUSE REPAIR PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-42
CDOT PROJECT NO. E-6-650			83 OF 411

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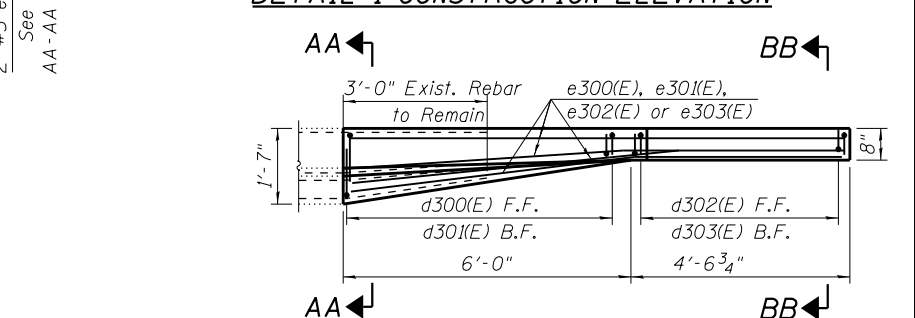
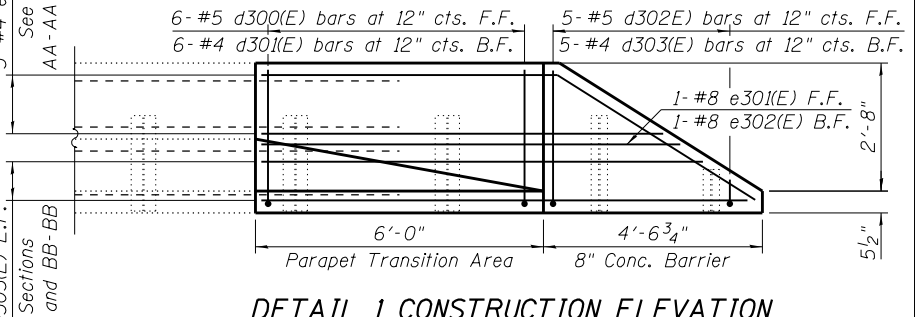
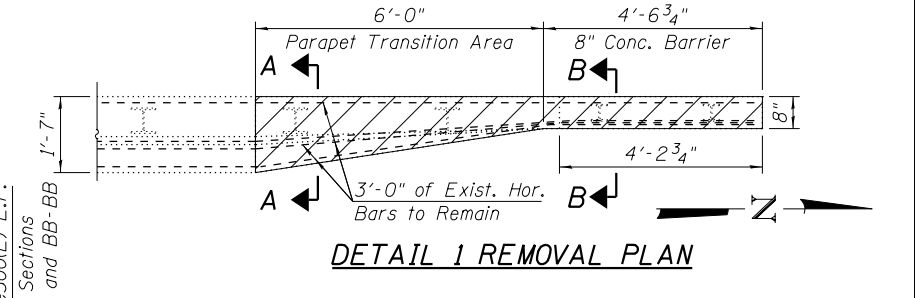
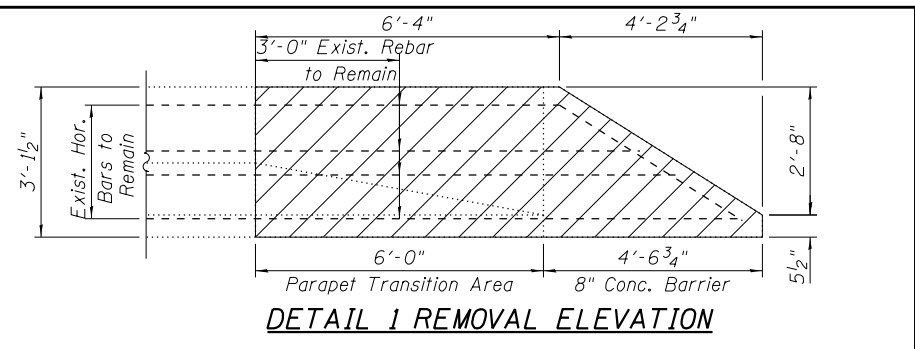


LEGEND

- Concrete Removal
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
- Low Pressure Epoxy Injection (Width >0.06")
- LF Linear Foot
- SF Square Foot

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d300(E)	6	#5	3'-11"	L
d301(E)	6	#4	3'-9"	J
d302(E)	4	#5	3'-1"	J
d303(E)	4	#4	3'-1"	J
e300(E)	6	#4	10'-10"	—
e301(E)	1	#8	10'-3"	—
e302(E)	1	#8	10'-3"	—
e303(E)	4	#5	10'-3"	—
CONCRETE REMOVAL				CU YD 0.9
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES				CU YD 0.9
REINFORCEMENT BARS, EPOXY COATED				POUND 210
EPOXY CRACK INJECTION				FOOT 17
PROTECTIVE CONCRETE SEALER				SQ YD 60
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)				SQ FT 20



NOTES:

1. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
2. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into new construction. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included in STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES) and/or CONCRETE SUPERSTRUCTURE.

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USER NAME = fadl.alsharif	DESIGNED - FA	REVISED -
PLOT SCALE = N.T.S.	CHECKED - MAI	REVISED -
PLOT DATE = 6/23/2017	DRAWN - FA	REVISED -
	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

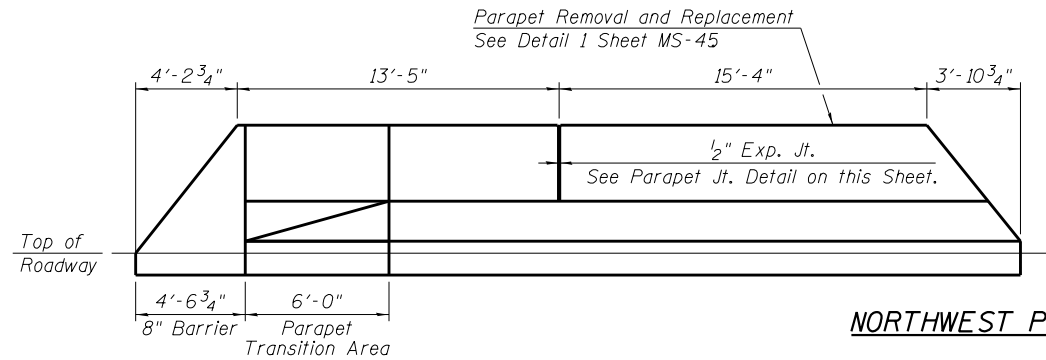
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UPPER LEVEL S. PARAPETS REPAIR ELEVATIONS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-43
CDOT PROJECT NO. E-6-650			84 OF 411

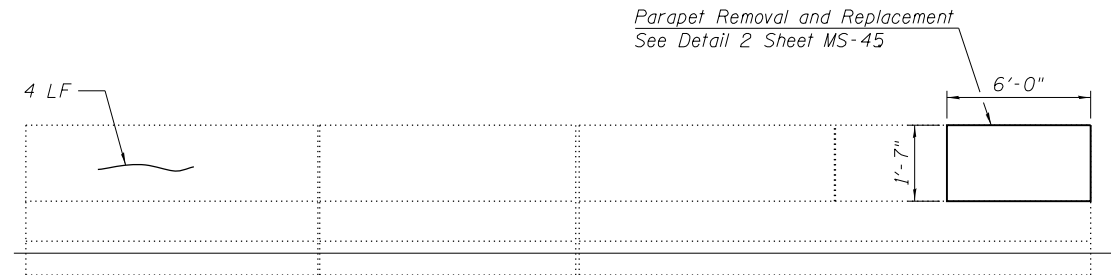
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d310(E)	4	#5	3'-11"	L
d311(E)	4	#4	3'-9"	J
d312(E)	30	#5	3'-1"	J
d313(E)	30	#4	3'-1"	J
e310(E)	6	#4	10'-10"	—
e311(E)	1	#8	39'-5"	—
e312(E)	1	#8	36'-6"	—
e313(E)	6	#4	19'-1"	—
e314(E)	4	#5	36'-6"	—
e315(E)	6	#4	5'-8"	—
s310(E)	2	#4	7'-5"	□

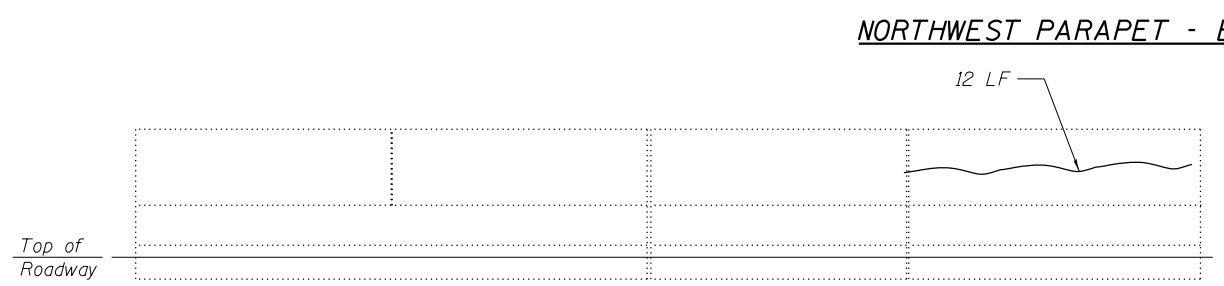
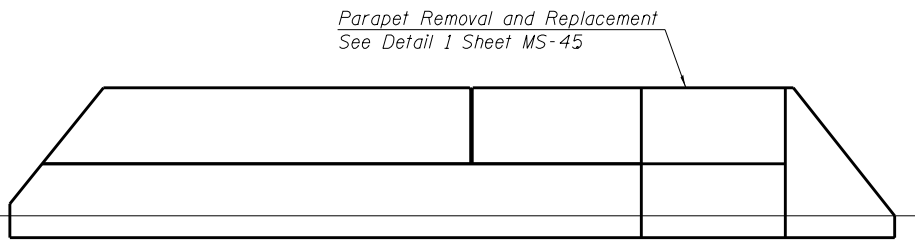
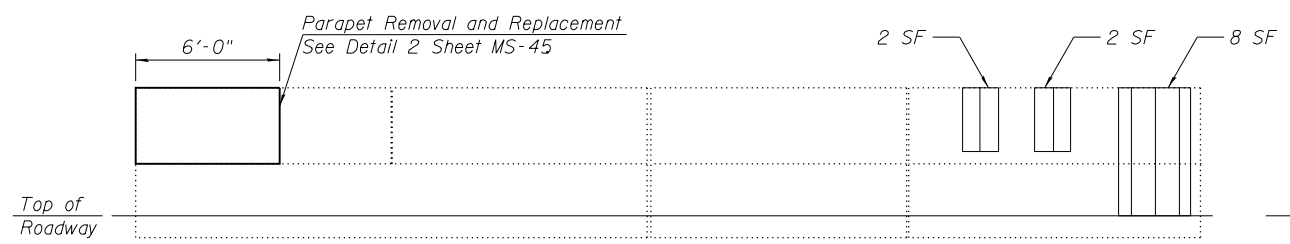
CONCRETE REMOVAL	CU YD	4.7
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES	CU YD	4.7
REINFORCEMENT BARS, EPOXY COATED	POUND	700
EPOXY CRACK INJECTION	FOOT	32
PROTECTIVE CONCRETE SEALER	SQ YD	33
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	58



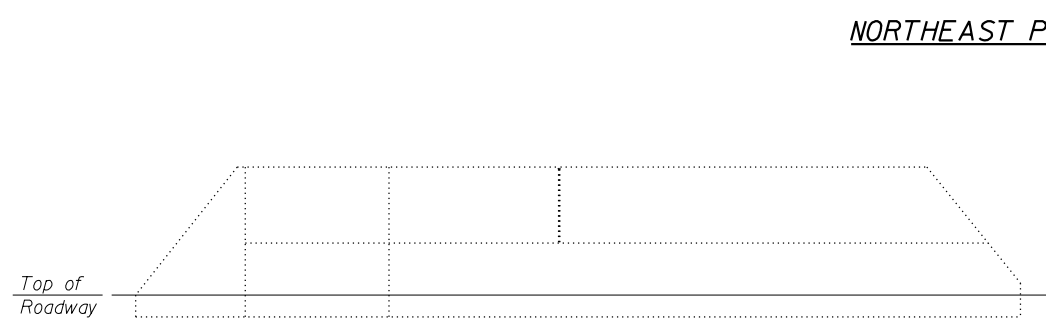
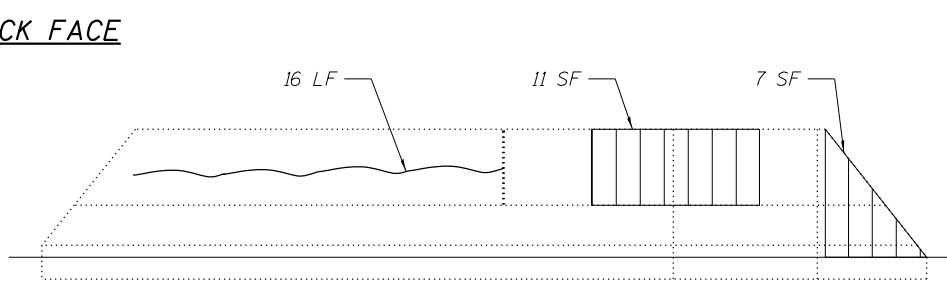
NORTHWEST PARAPET - FRONT FACE



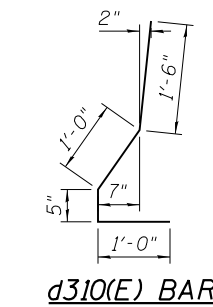
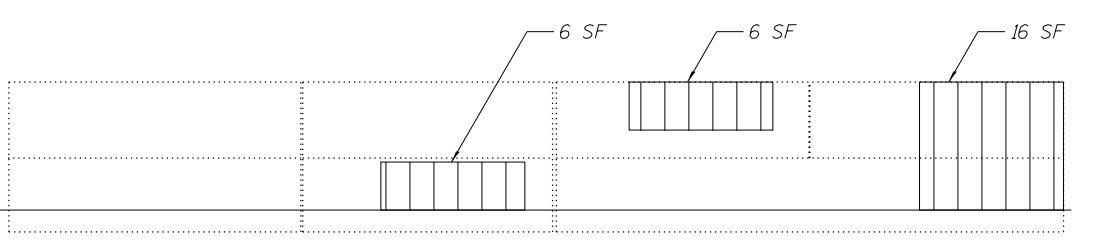
NORTHWEST PARAPET - BACK FACE



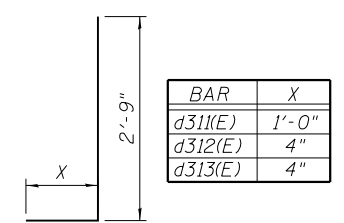
NORTHEAST PARAPET - FRONT FACE



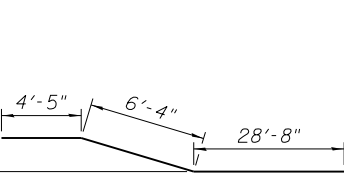
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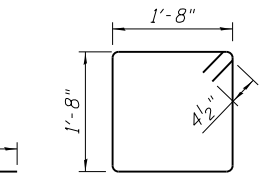
d310(E) BAR



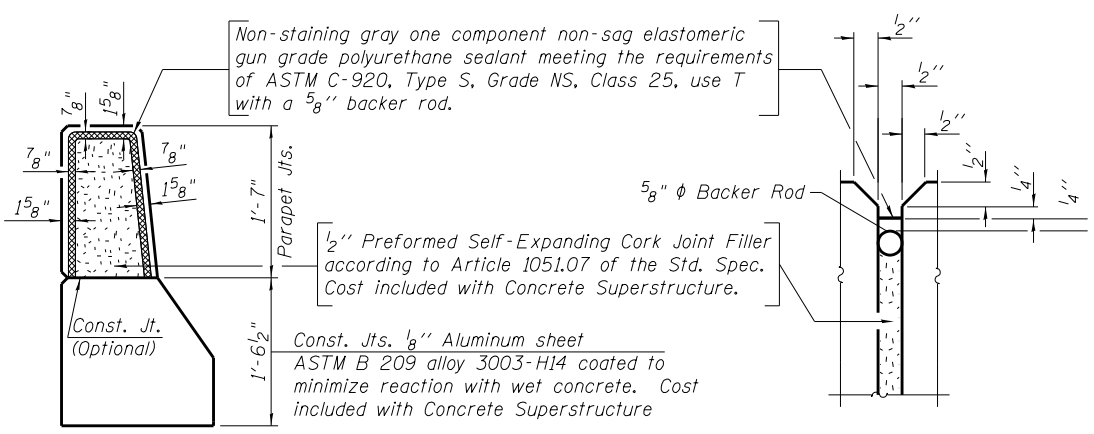
d311(E), d312(E) and d313(E) BARS



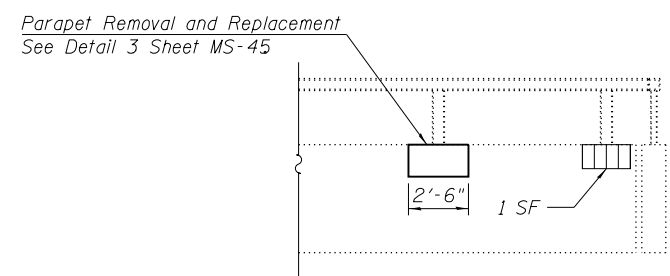
e311(E) BAR



s310(E) BAR



PARAPET JOINT DETAILS



VIEW A-A

(Upper Level Northeast House Platform)

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into new construction. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included in STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES) or CONCRETE SUPERSTRUCTURE.

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
- SF Square Foot

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30 N. LA SALLE STREET
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CHICAGO, IL 60602
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FAX: (312) 782-1884

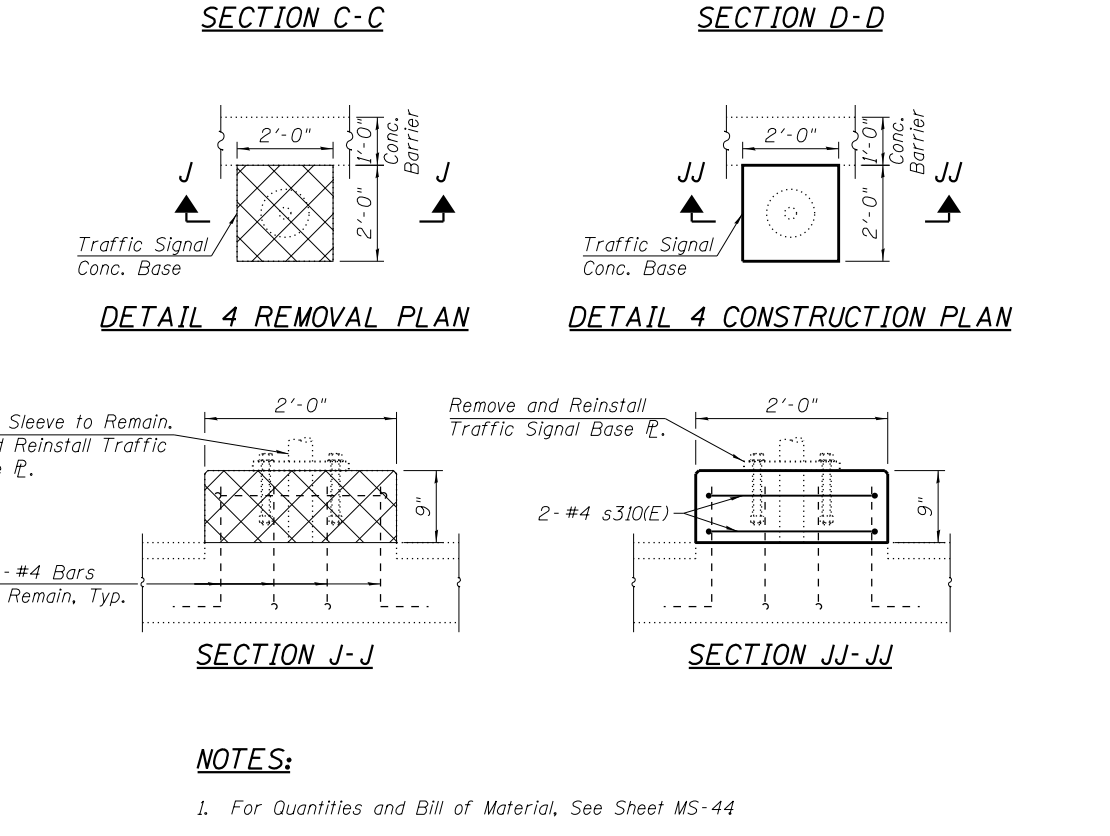
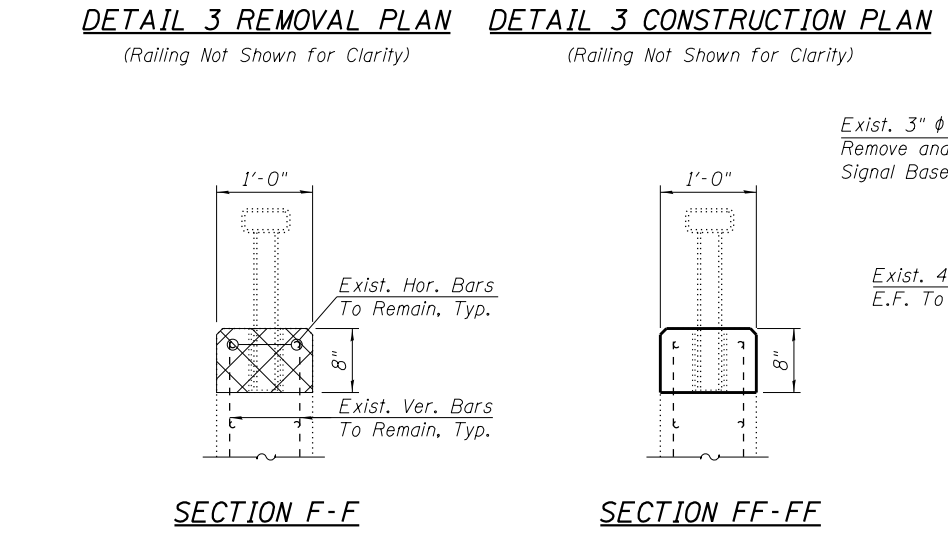
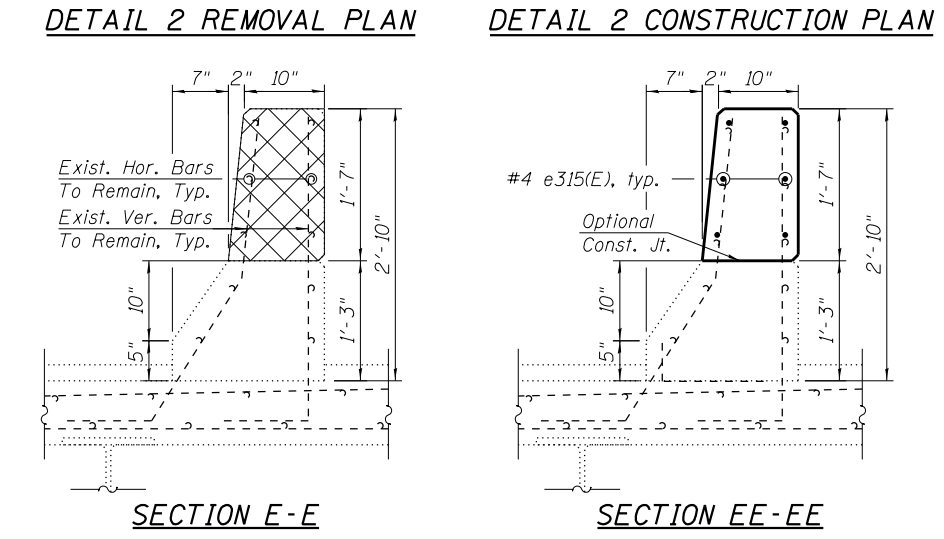
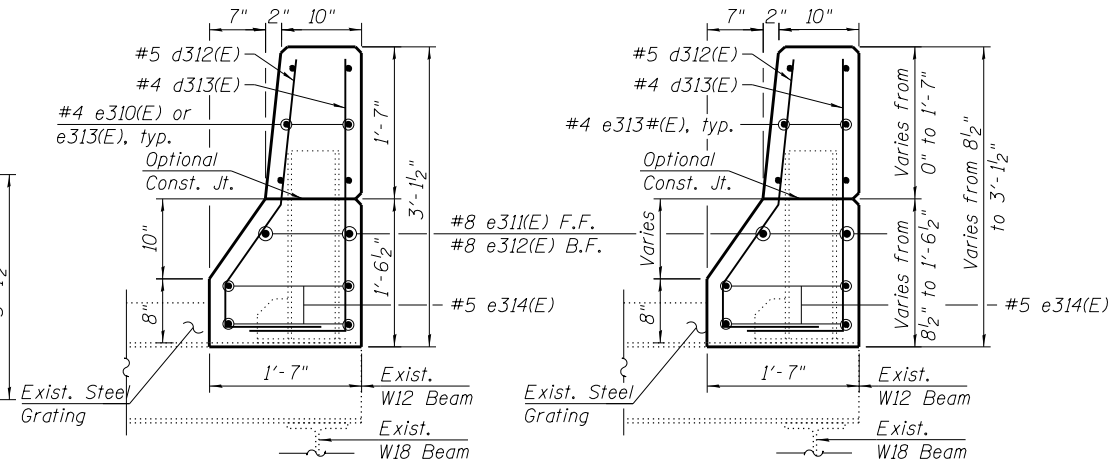
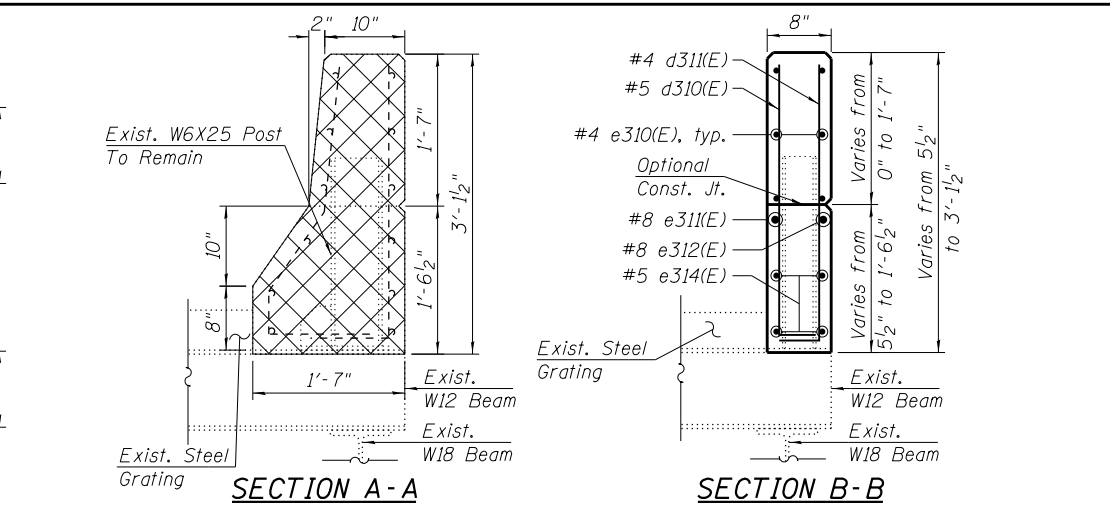
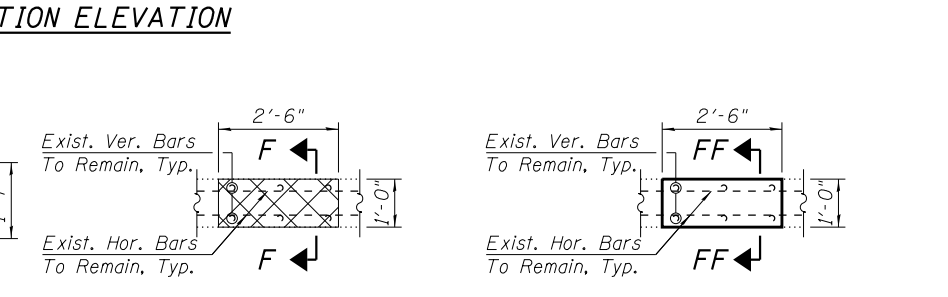
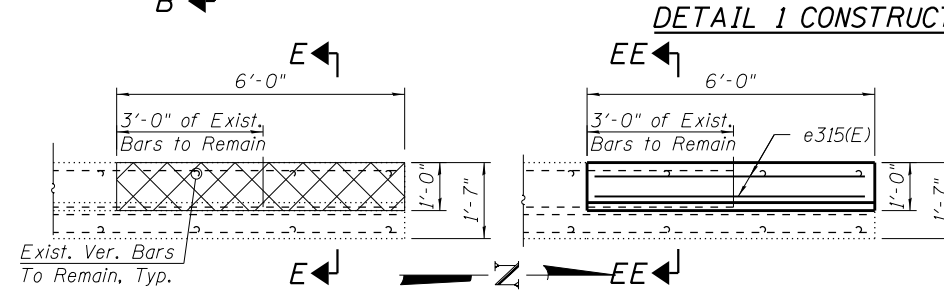
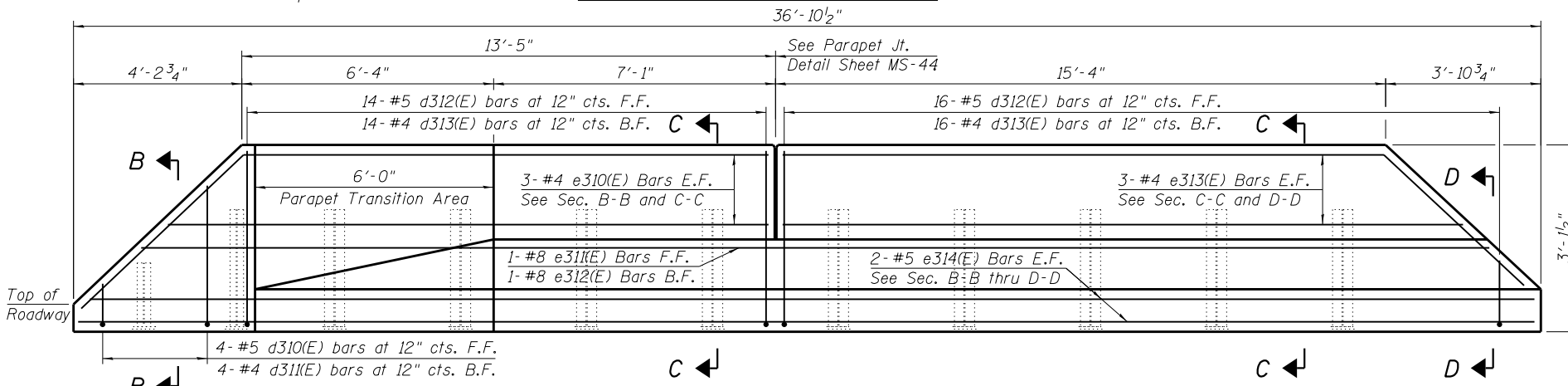
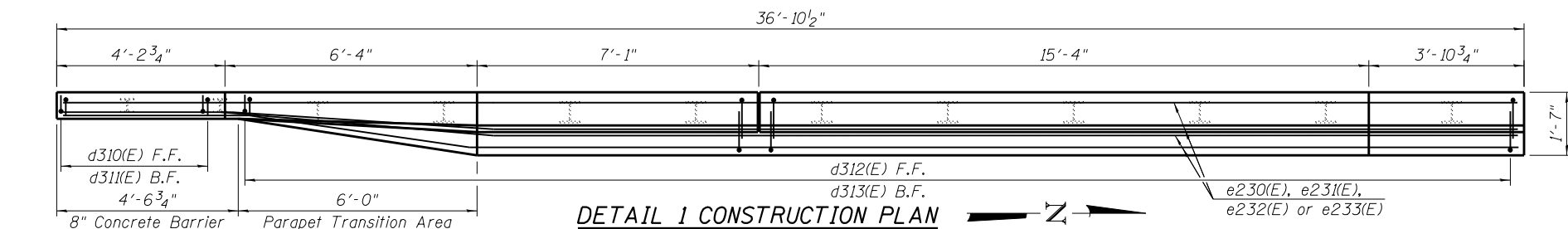
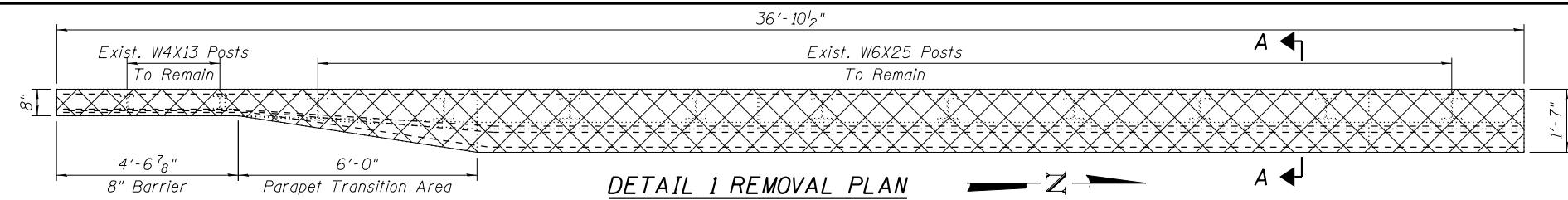
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PLOT DATE = 6/23/2017	DRAWN - FA	REVISED -
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART: UPPER LEVEL
N. PARAPETS REPAIR ELEVATIONS AND DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-44
CDOT PROJECT NO. E-6-650			85 OF 411



NOTES:
1. For Quantities and Bill of Material, See Sheet MS-44

P:\1606-681 PB-LSD over Chicago River\Sheet Files\016-6030 Main Bridge\016-6030-MS45-FP-Upl\VPParSecDet.dgn 12:54:39 PM

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USER NAME = fadl.alsharif	DESIGNED - FA	REVISED -
PLOT SCALE = N.T.S.	CHECKED - MAI	REVISED -
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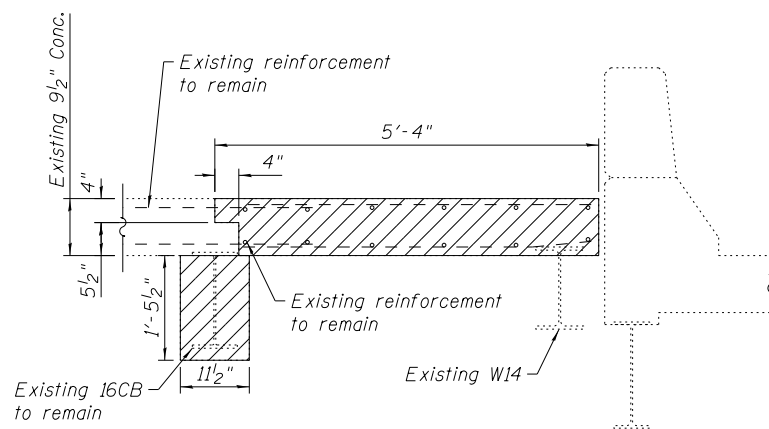
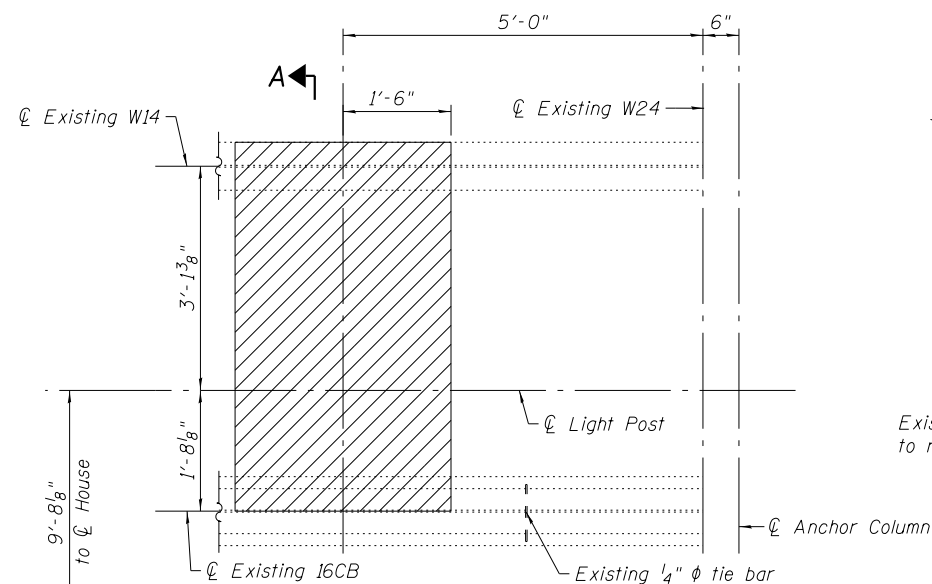
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

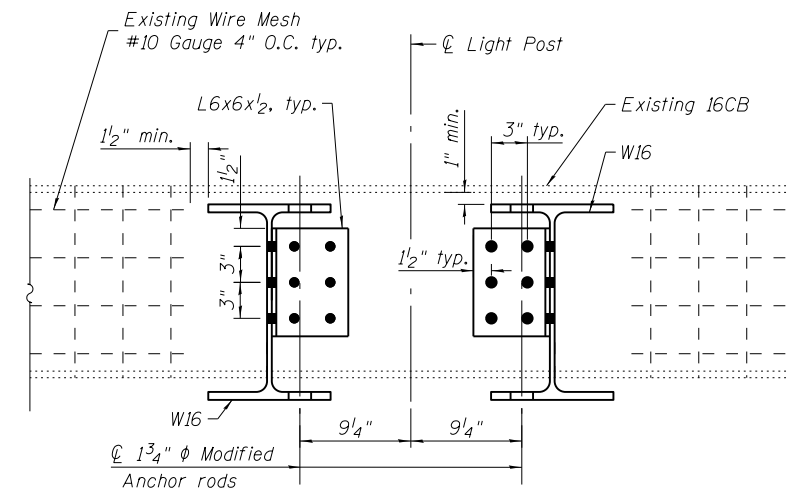
FIXED PART: UPPER LEVEL
N. PARAPETS REPLACEMENT SECTIONS AND DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-45
CDOT PROJECT NO. E-6-650			86 OF 411

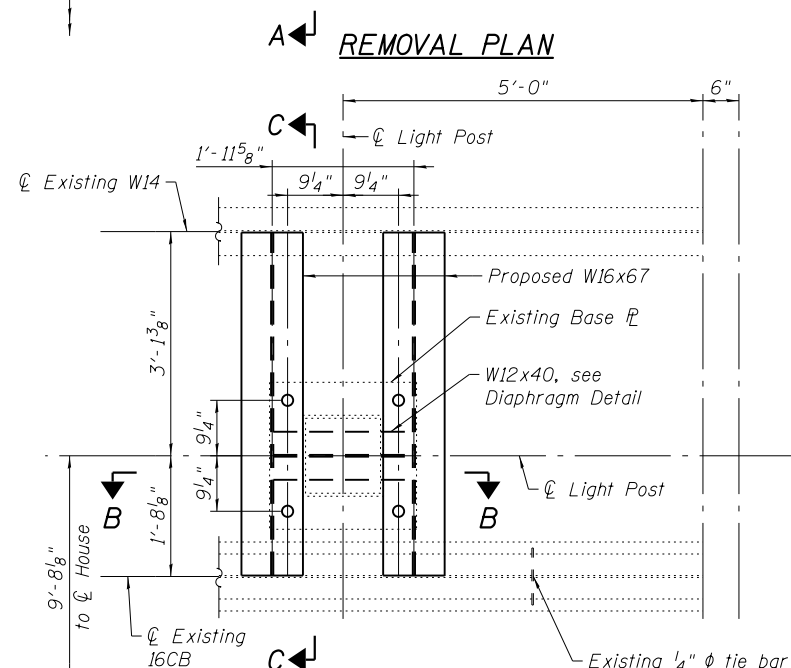
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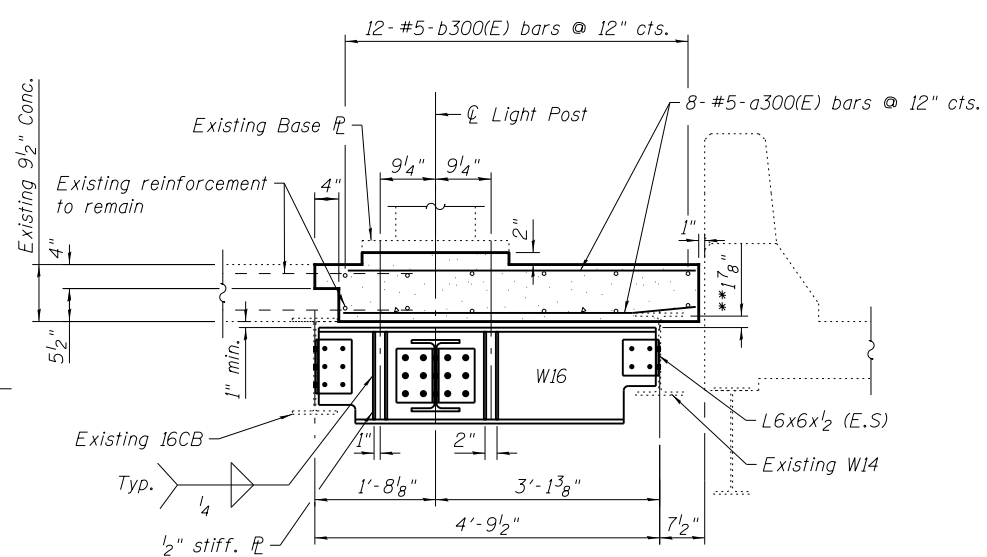
SECTION A-A



SECTION B-B

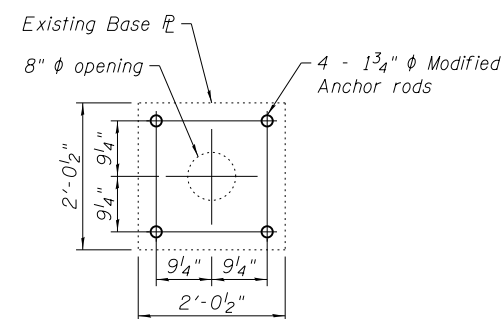


REMOVAL PLAN

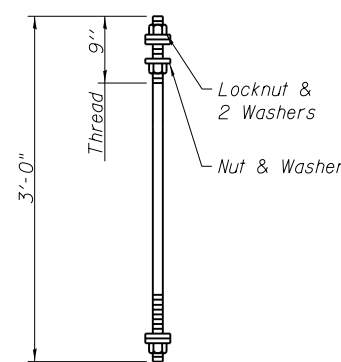


SECTION C-C

** Dimensions to be verified in field



BASE PLATE DETAIL



MODIFIED ANCHOR ROD
Diameter as specified for light poles.
(ASTM F 1554 Grade 105)

LEGEND



BILL OF MATERIAL

Item	No.	Size	Length	Shape
a300(E)	8	#5	5'-1"	—
b300(E)	12	#5	2'-8"	—
High Performance Concrete Superstructures			Cu. Yd.	1.0
Reinforcement Bars, Epoxy Coated			Pound	80
Concrete Removal			Cu. Yd.	2.4
Protective Concrete Sealer			Sq. Yd	4.0
Structural Steel Repairs			Pound	1,740

Quantity shown includes S.E. and N.E. houses.

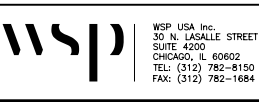
Notes:

- Existing wire mesh to be cut to fit the proposed light pole support beams.
- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
- Thickness of existing reinforced concrete slab shall be verified in the field by the Contractor.

REFERENCE DRAWINGS

- Drawing
- Upper Level Misc. Details
- Upper Level Slab Section
- Lighting Fixture Schedule and Misc. Details
- Lighting Standards
- Bridge Concrete Details

- Sheet No.
- 1660300162
- 1660300167
- 1660300300
- 1660300608
- 1660300813



USER NAME = lopezgonzalez
DESIGNED - NJP
CHECKED - JIG
PLOT SCALE = N.T.S.
DRAWN - NJP
PLOT DATE = 1/22/2018
CHECKED - JIG

DESIGNED - NJP
CHECKED - JIG
DRAWN - NJP
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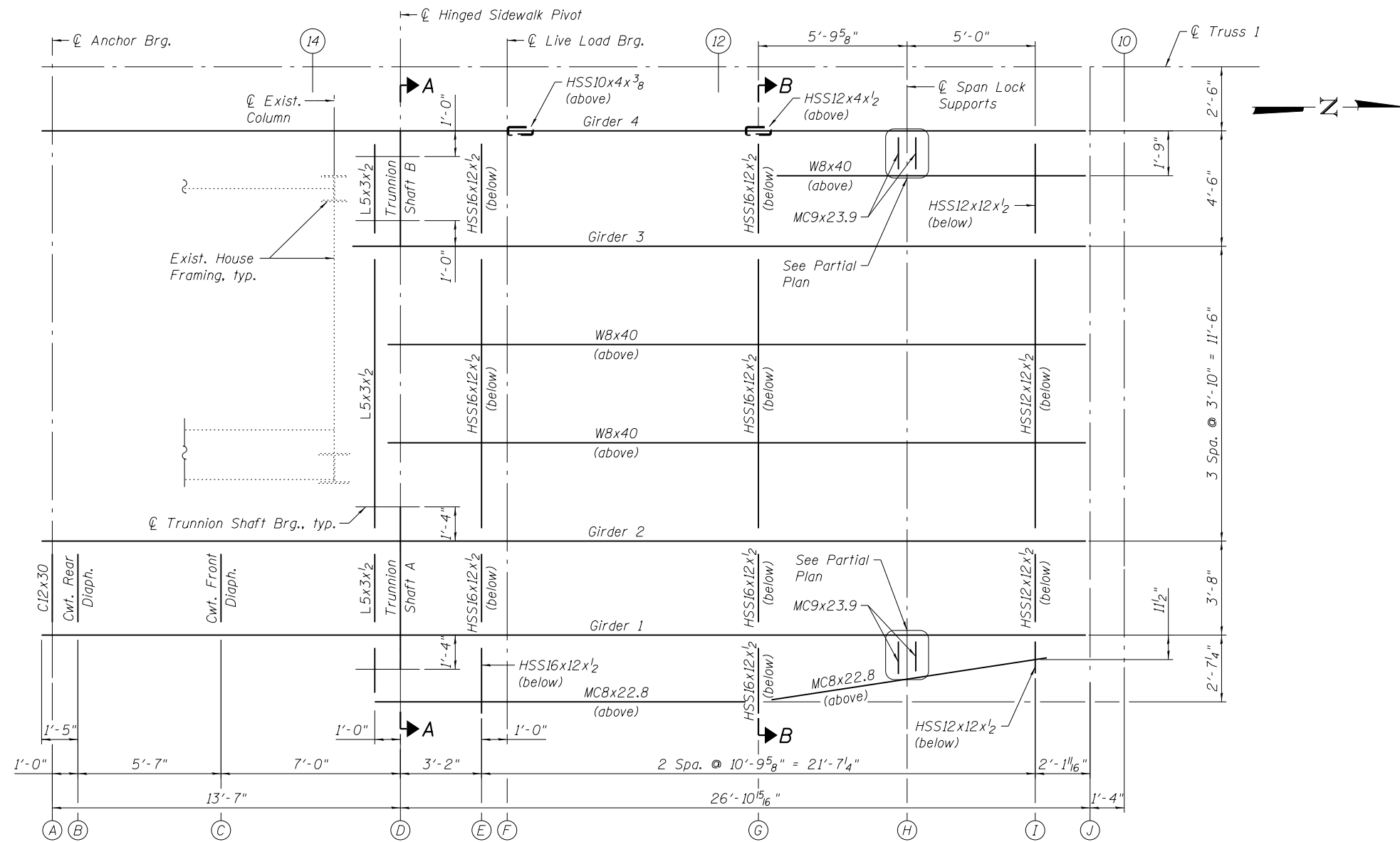
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DIVISION OF ENGINEERING

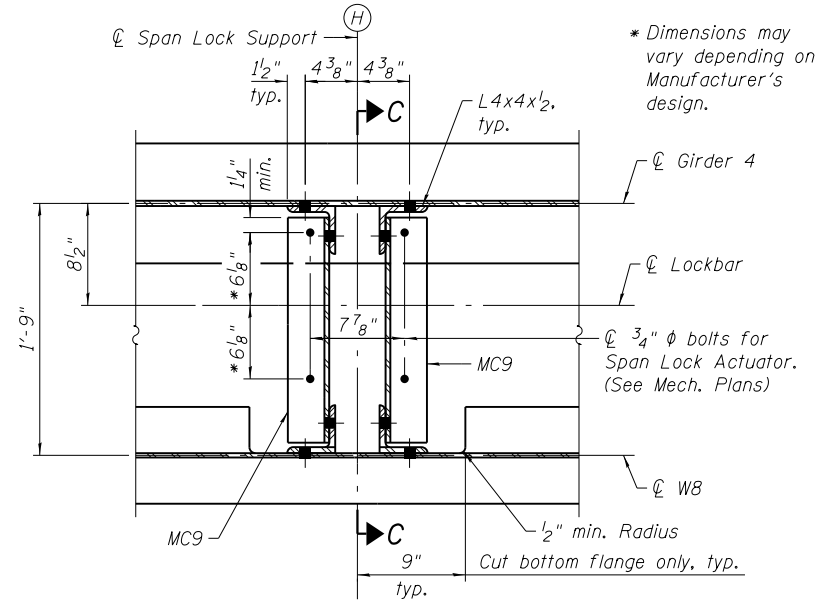
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FIXED PART: UPPER LEVEL
LIGHT POLE SUPPORT DETAILS
(STRUCTURE NO. 016-6030)

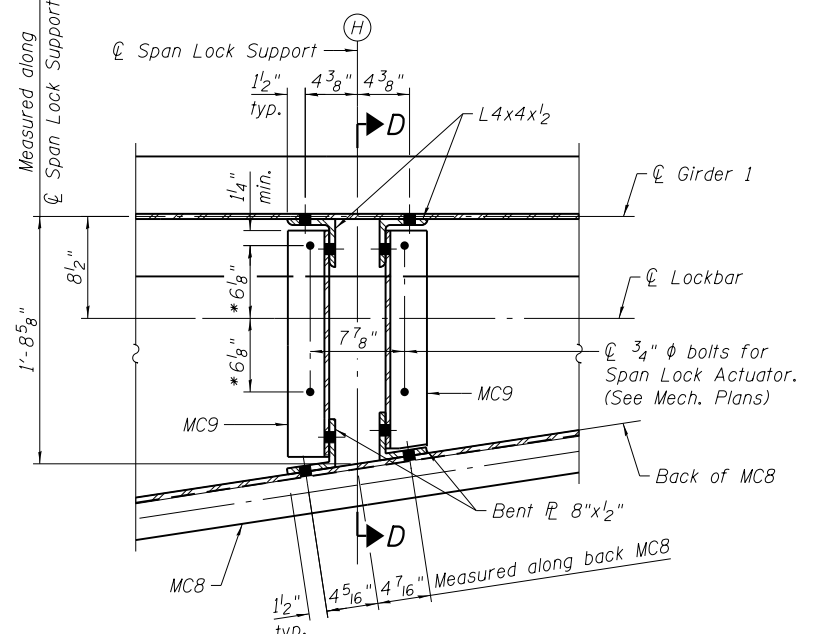
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-46
CDOT PROJECT NO. E-6-650			87 OF 411



FRAMING PLAN - SE HINGED SIDEWALK
(NE Hinged Sidewalk opposite hand)

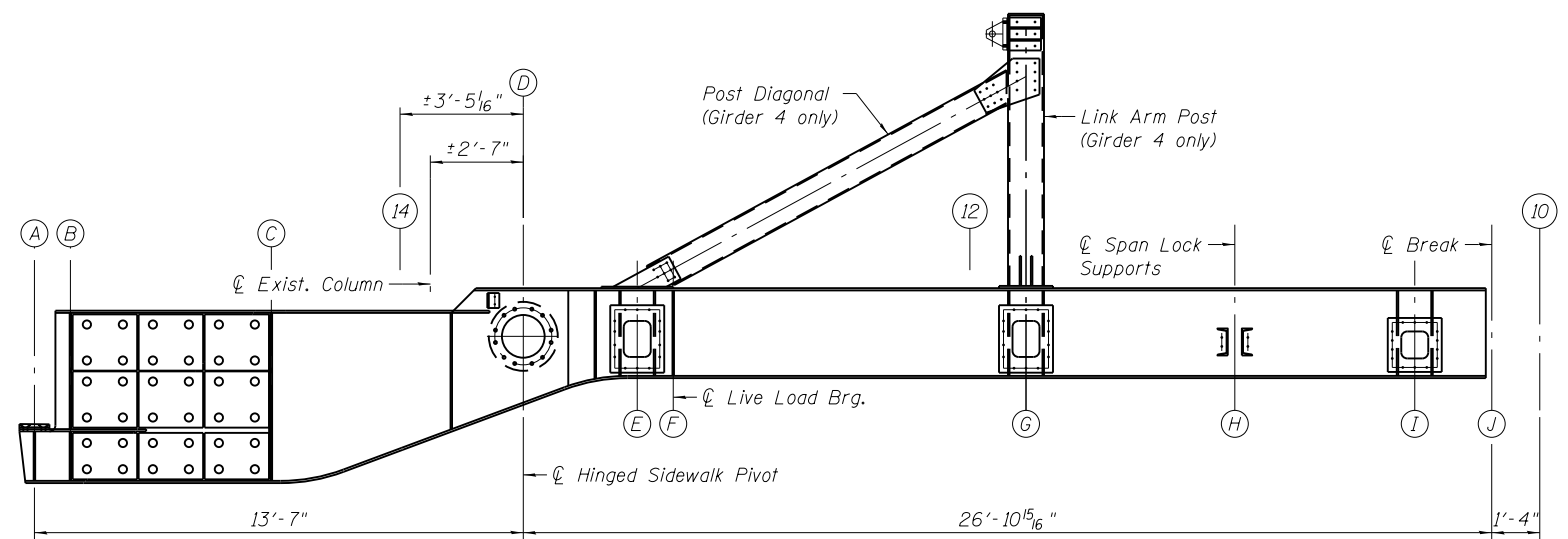


PARTIAL PLAN - WEST SPAN LOCK SUPPORT



PARTIAL PLAN - EAST SPAN LOCK SUPPORT

- Notes:
- All structural steel elements of the hinged sidewalk including the Girders, Stringers, HSS members, span lock supports, connection angles, plates and bolts, shall be included in the cost of Furnishing and Erecting Structural Steel, Hinged Sidewalk.
 - Girders 1 thru 4 will require shop assembly of the following components:
 - Trunnion Hub to Girder connection
 - Trunnion Shaft to Trunnion Hub connection
 - Interior and end diaphragms between G1-G2 and G3-G4
 - Counterweight diaphragms
 Contractor may elect to include the shop assembly of Trunnion Shaft Bearings.
 - A minimum of two separate assembly units are required:
 - Assembly Unit 1: Girders 1 & 2
 - Assembly Unit 2: Girders 3 & 4
 - All work related to shop assembly of Girders, Trunnion Hubs, Trunnion Shafts, and diaphragms shall be included in the cost of Shop Assembly of Fabricated Steel for Inspection.
 - For Section A-A, B-B, C-C, and D-D, see sheet MS-48.



ELEVATION

(Girder 4 shown, Girders 1 thru 3 similar except as noted in partial elevations)

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USER NAME = lopezgonzalez
DESIGNED - IJL
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PLOT SCALE = N.T.S.
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PLOT DATE = 1/22/2018
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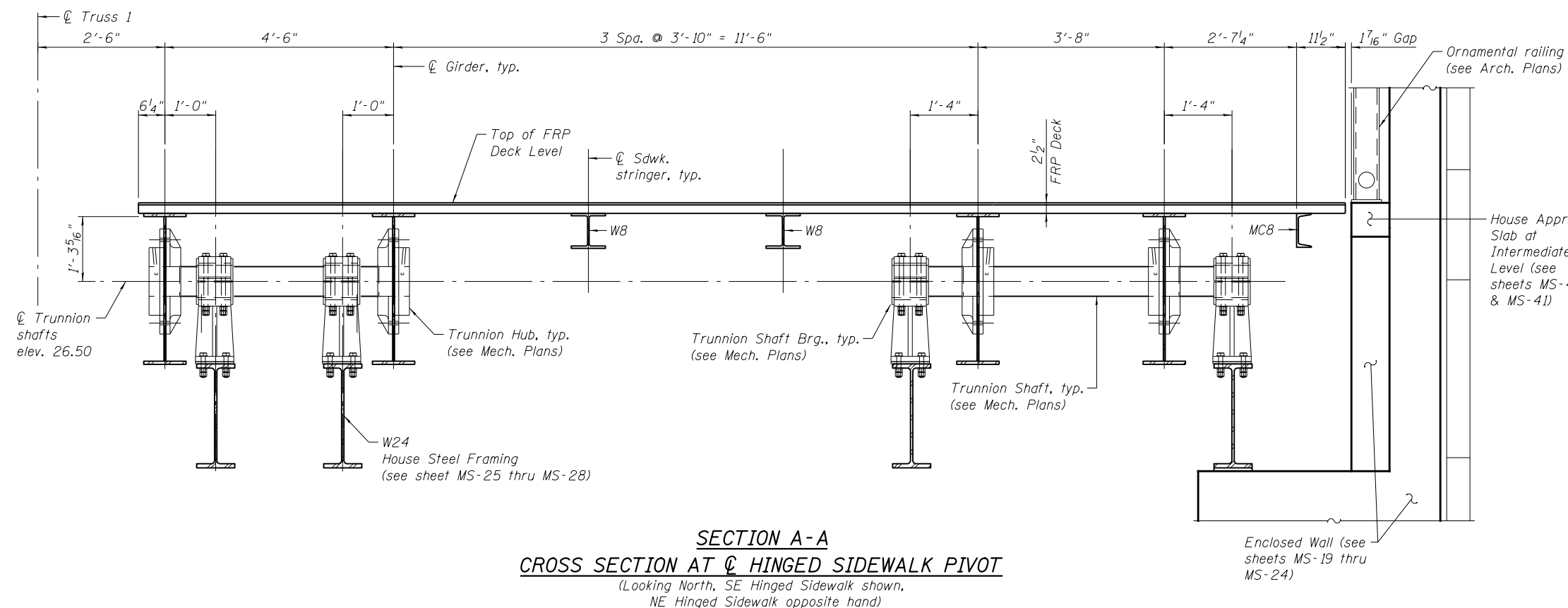
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

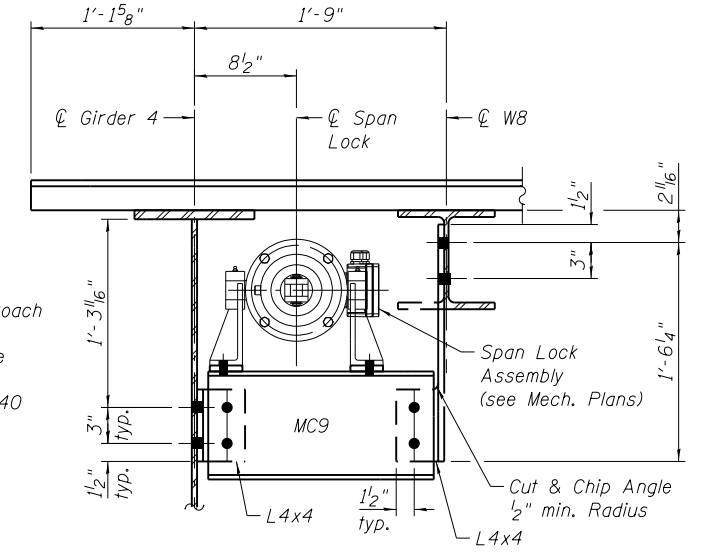
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HINGED SIDEWALK:
FRAMING PLAN
(STRUCTURE NO. 016-6030)

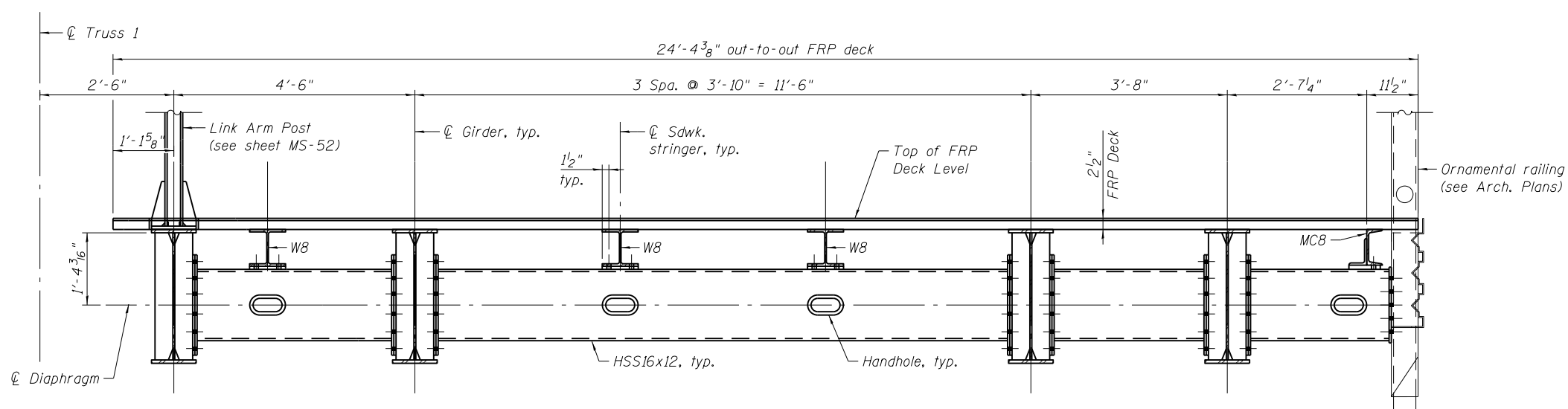
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-47
CDOT PROJECT NO. E-6-650			88 OF 411



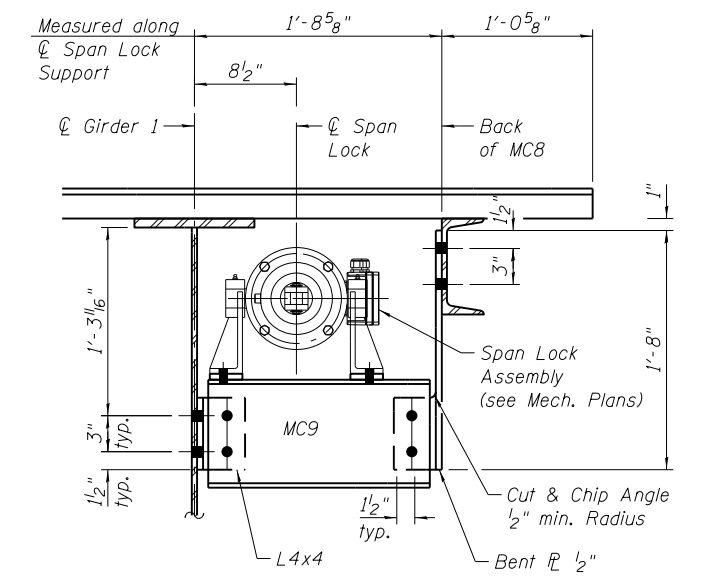
SECTION A-A
CROSS SECTION AT HINGED SIDEWALK PIVOT
 (Looking North, SE Hinged Sidewalk shown,
 NE Hinged Sidewalk opposite hand)



SECTION C-C
WEST SPAN LOCK SUPPORT



SECTION B-B
CROSS SECTION AT CENTER DIAPHRAGM
 (Looking North, SE Hinged Sidewalk shown,
 NE Hinged Sidewalk opposite hand)



SECTION D-D
EAST SPAN LOCK SUPPORT

- Notes:
- For locations of Sections A-A, B-B, C-C, and D-D, see sheet MS-47.
 - For details of Trunnion Hub, Trunnion Shaft Bearings, and Trunnion Shafts, see Mechanical Plans sheets M-10 and M-11.
 - For details of Span Lock Assembly see Mechanical Plans sheets M-14 and M-15.
 - For Ornamental Railing details, see Architectural Plans sheets A-5.1 thru A-5.3.

T:\16917A\Struct\Cadd\Sheets\0166030-E6650-MS048-Hinged-Swilk-Cross-Section.dgn 22-JAN-2018 13:29

wsp
 WSP USA Inc.
 30 N. LA SALLE STREET
 SUITE 4000
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1684

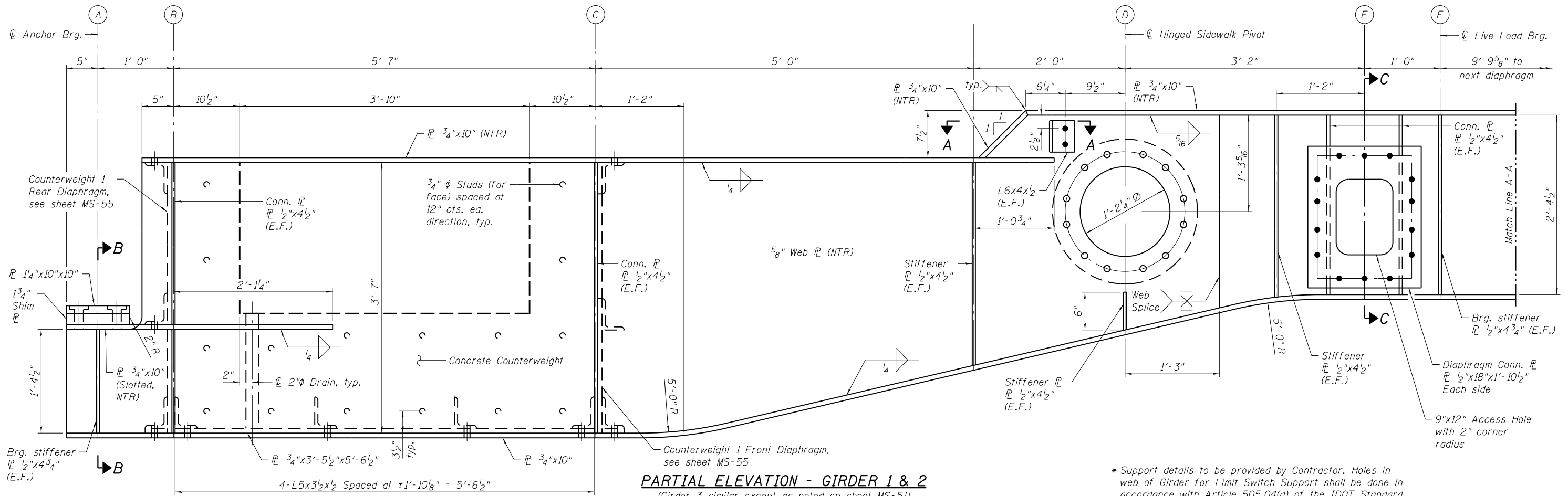
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		CHECKED -	PJL	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	IJL	REVISED -	
PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

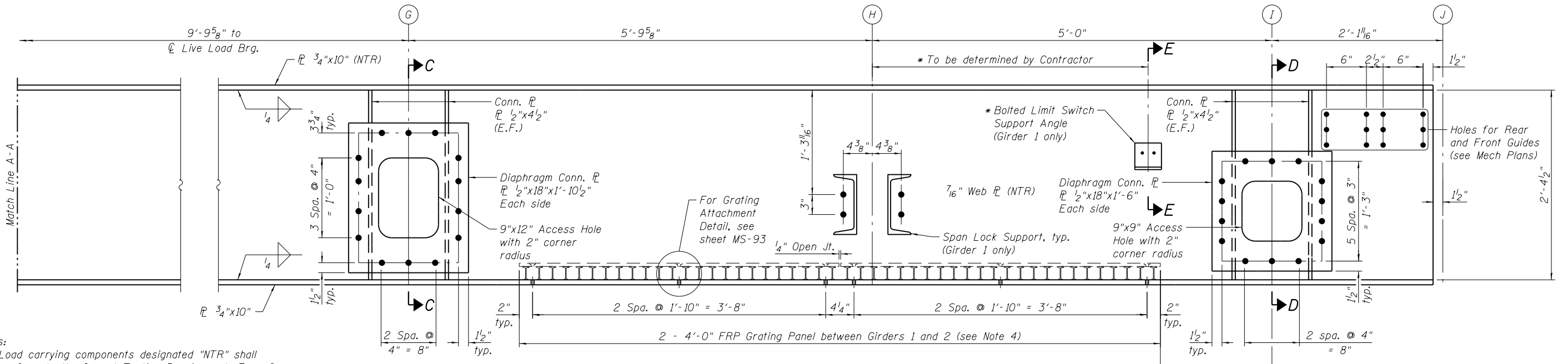
HINGED SIDEWALK:
CROSS SECTIONS
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-48
CDOT PROJECT NO. E-6-650			89 OF 411



PARTIAL ELEVATION - GIRDER 1 & 2
 (Girder 3 similar except as noted on sheet MS-51)
 (SE Hinged Sidewalk shown, NE Hinged Sidewalk opposite hand)

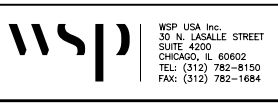
* Support details to be provided by Contractor. Holes in web of Girder for Limit Switch Support shall be done in accordance with Article 505.04(d) of the IDOT Standard Specifications. Cost included with Furnishing and Erecting Structural Steel, Hinged Sidewalk.



PARTIAL ELEVATION - GIRDER 1 & 2
 (Girder 3 similar except as noted on sheet MS-51)
 (SE Hinged Sidewalk shown, NE Hinged Sidewalk opposite hand)

- Notes:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 2. For additional notes and details, see sheet MS-47.
 3. For Section A-A, B-B, C-C, D-D, & E-E, see sheet MS-51.
 4. Cost of FRP Grating included with Furnishing and Erecting FRP Grating.

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USER NAME = lopezgonzalez
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 CHECKED - PJL
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 DRAWN - IJL
 PLOT DATE = 1/22/2018
 CHECKED - JIG

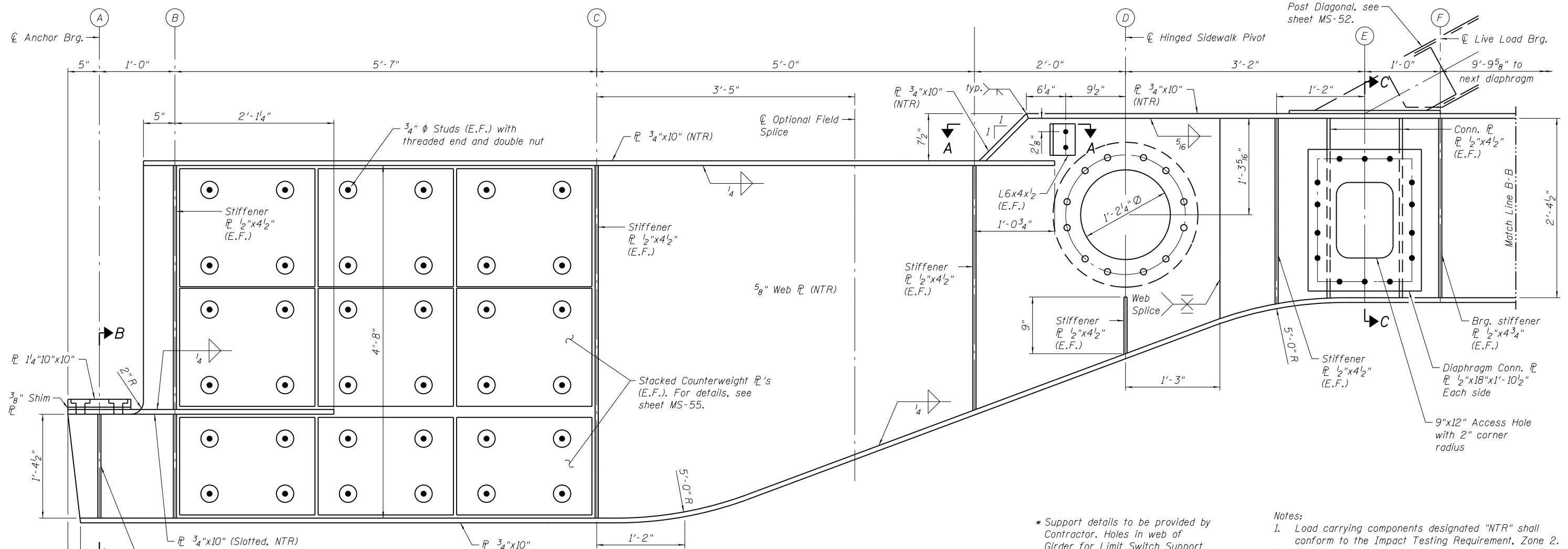
DESIGNED - IJL
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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

HINGED SIDEWALK:
STEEL DETAILS I
 (STRUCTURE NO. 016-6030)

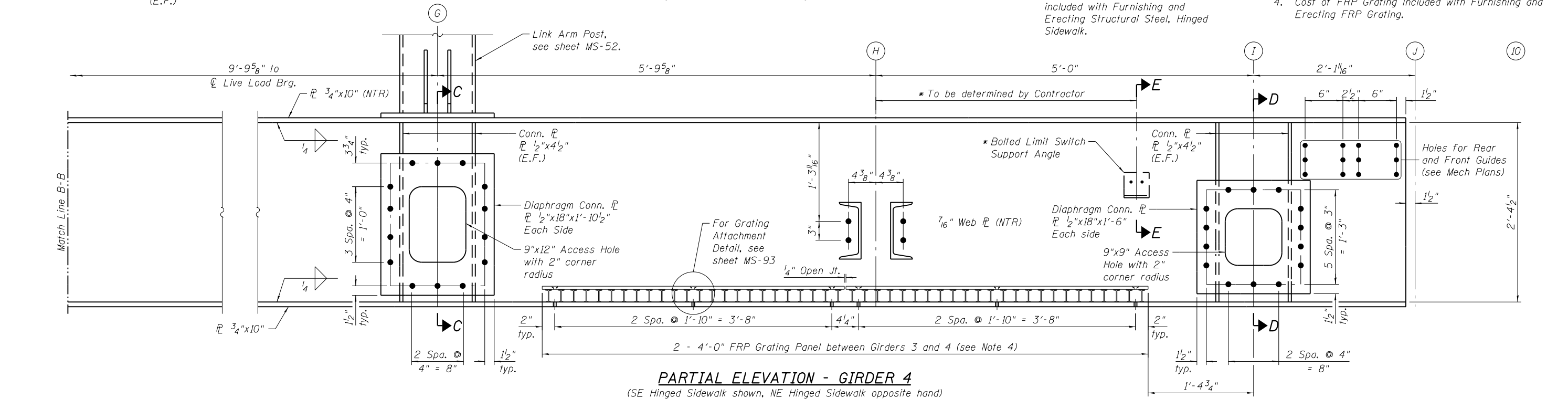
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-49
CDOT PROJECT NO. E-6-650			90 OF 411



PARTIAL ELEVATION - GIRDER 4
(SE Hinged Sidewalk shown, NE Hinged Sidewalk opposite hand)

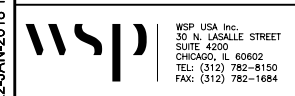
* Support details to be provided by Contractor. Holes in web of Girder for Limit Switch Support shall be done in accordance with Article 505.04(d) of the IDOT Standard Specifications. Cost included with Furnishing and Erecting Structural Steel, Hinged Sidewalk.

- Notes:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 2. For additional notes and details, see sheet MS-47.
 3. For Section A-A, B-B, C-C, D-D, & E-E, see sheet MS-51.
 4. Cost of FRP Grating included with Furnishing and Erecting FRP Grating.



PARTIAL ELEVATION - GIRDER 4
(SE Hinged Sidewalk shown, NE Hinged Sidewalk opposite hand)

T:\16917A\Struct\Cadd\Sheets\0166030-E6650-MS050-Hinged-Swilk-Details-11.dgn
22-JAN-2018 13:29



USER NAME = lopezgonzalez
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CHECKED - PUL
PLOT SCALE = N.T.S.
DRAWN - IJL
PLOT DATE = 1/22/2018
CHECKED - JIG

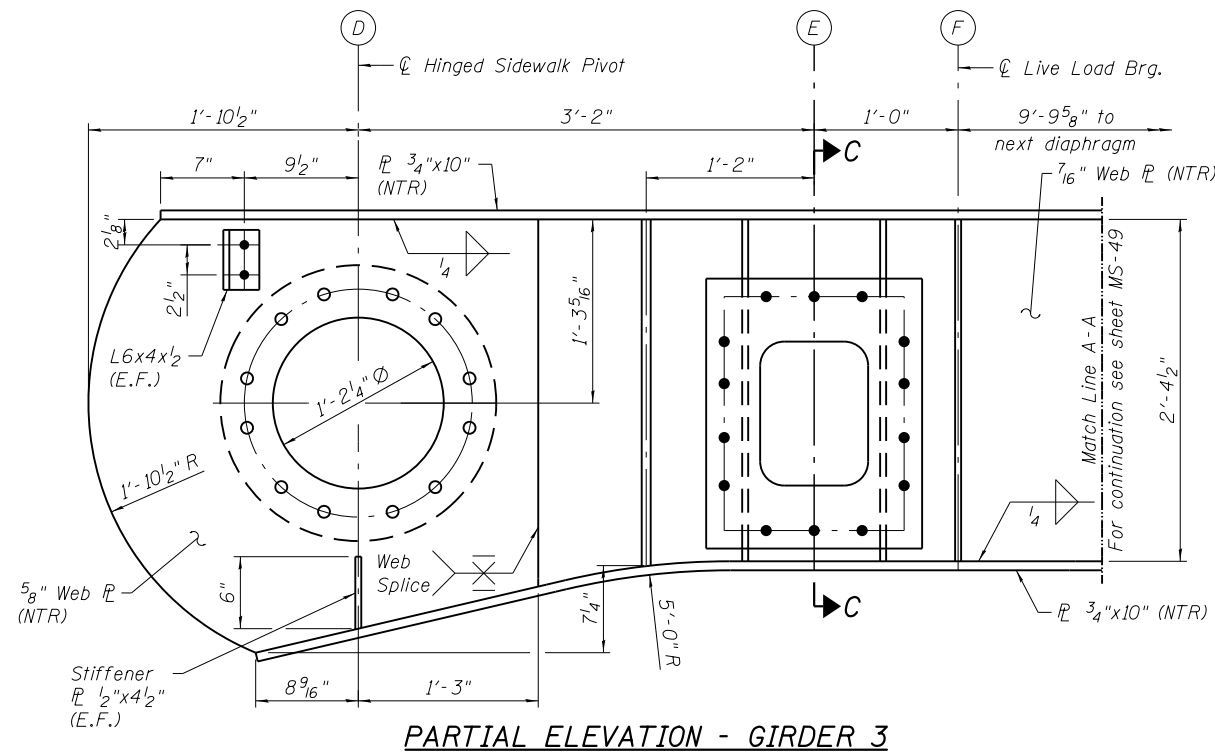
REVISOR -
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REVISION -
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REVISION -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

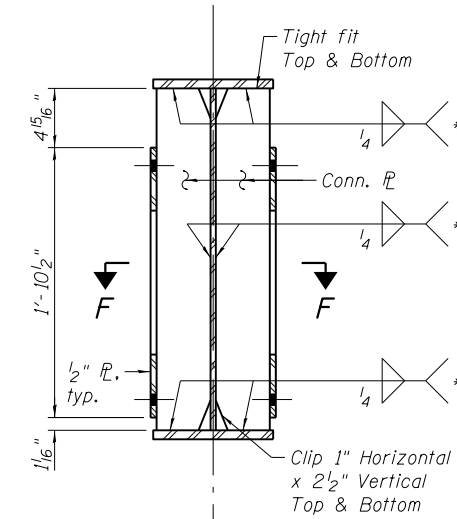
HINGED SIDEWALK:
STEEL DETAILS II
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-50
CDOT PROJECT NO. E-6-650			91 OF 411



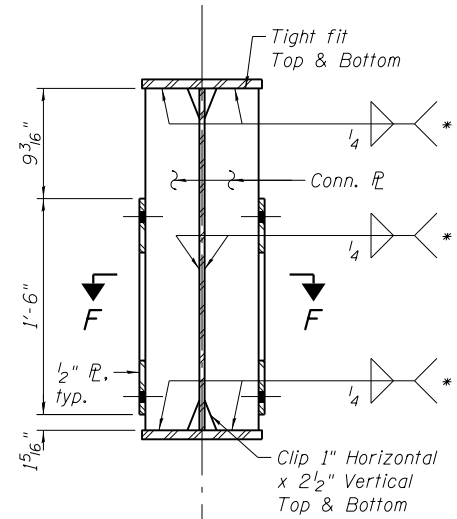
PARTIAL ELEVATION - GIRDER 3

* Terminate 1/4" (±1/8) from the end of plate intersects.

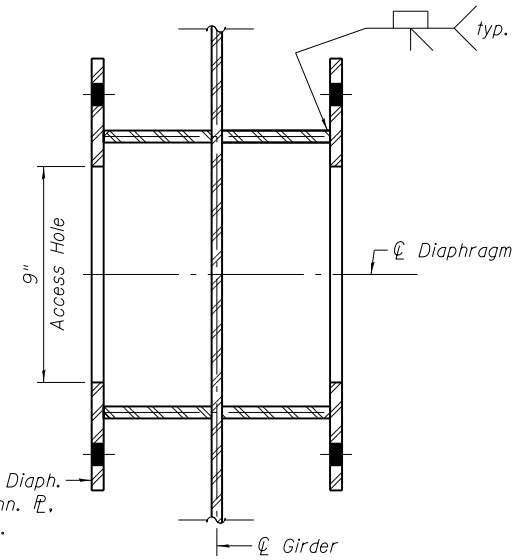


SECTION C-C

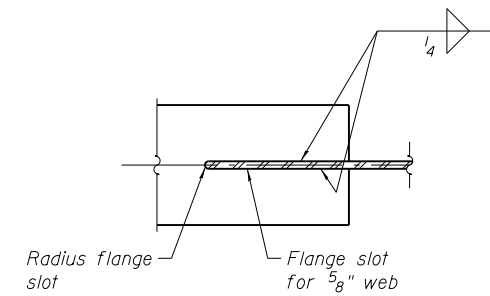
(Link Arm Post at Girder 4 not shown for clarity)



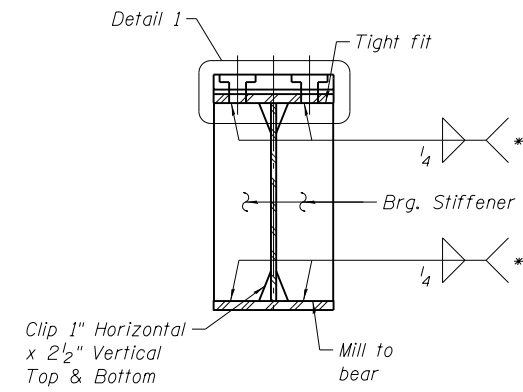
SECTION D-D



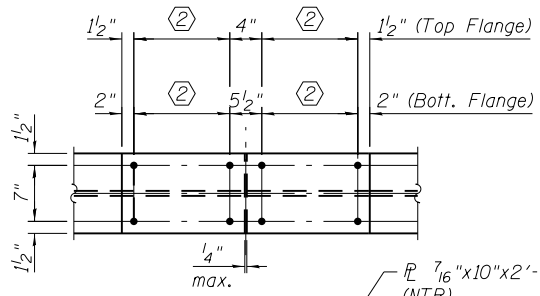
SECTION F-F



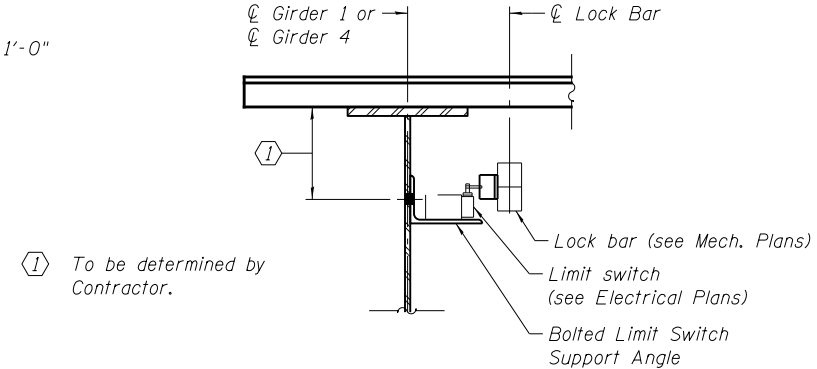
SECTION A-A
(Stiffener not shown for clarity)



SECTION B-B

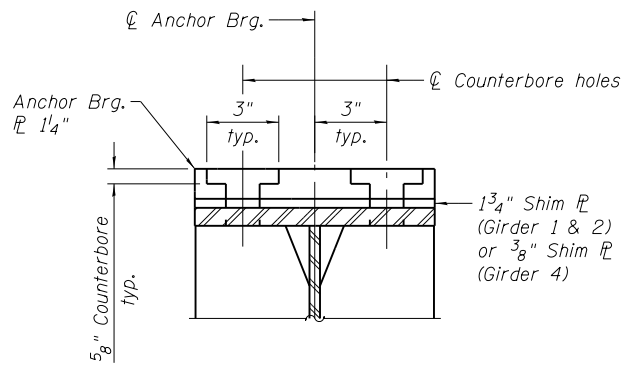


OPTIONAL SPLICE DETAIL

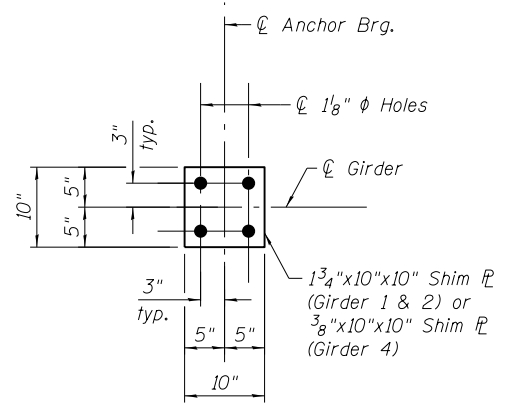


SECTION E-E

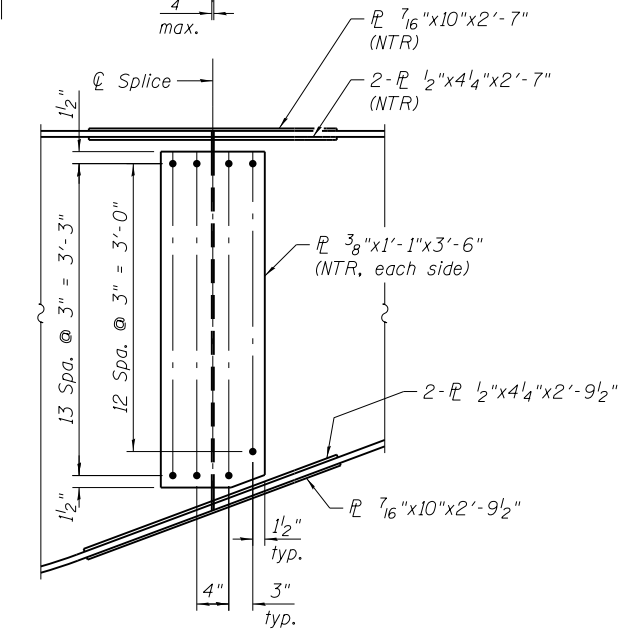
① To be determined by Contractor.



DETAIL 1



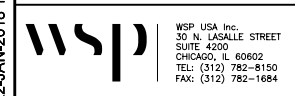
SHIM PLATE DETAIL



WELDED WEB SPLICE

- Notes:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 2. For additional notes see sheet MS-47.
 3. For locations of Section A-A, B-B, C-C, D-D, and E-E, see sheets MS-49 and MS-50.

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WSP USA Inc.
30 N. LASALLE STREET
SUITE 4000
CHICAGO, IL 60602
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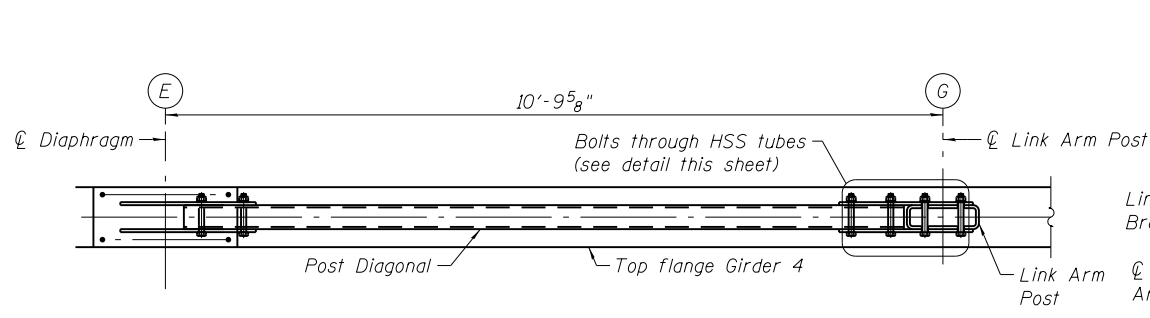
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

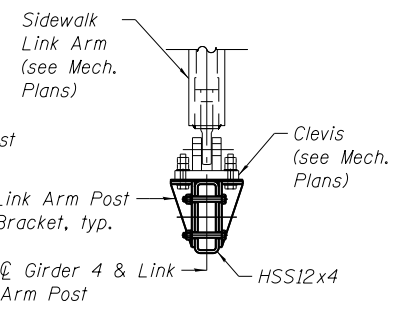
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HINGED SIDEWALK:
STEEL DETAILS III
(STRUCTURE NO. 016-6030)

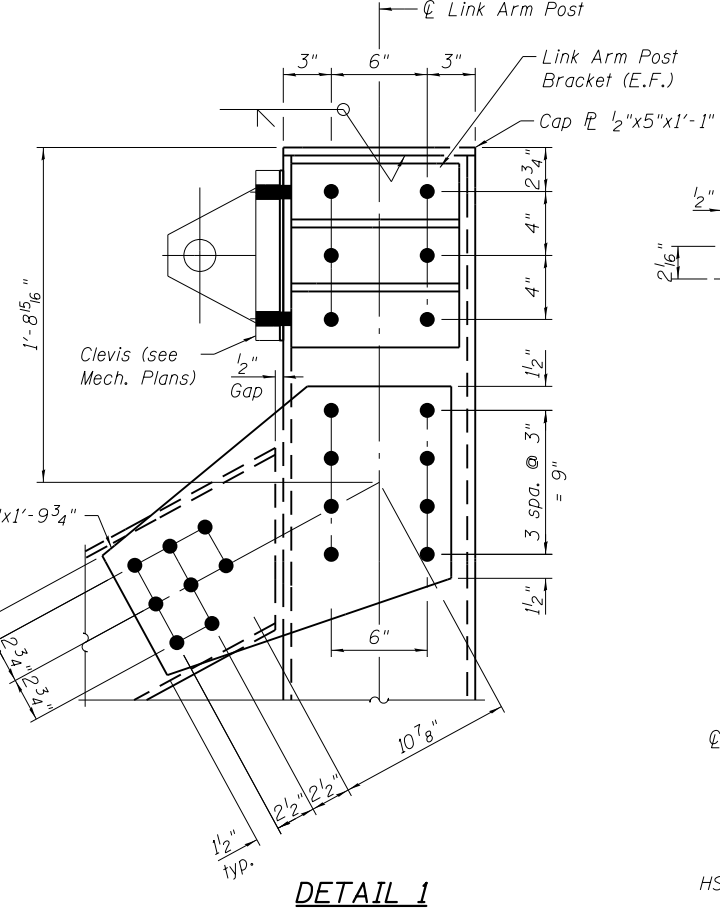
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-51
CDOT PROJECT NO. E-6-650			92 OF 411



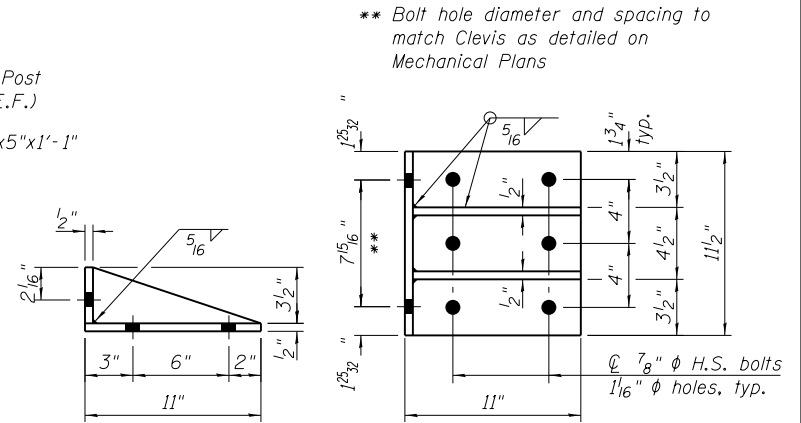
PLAN - POST & DIAGONAL
(Link Arm Post Bracket and Clevis Bracket not shown for clarity.)



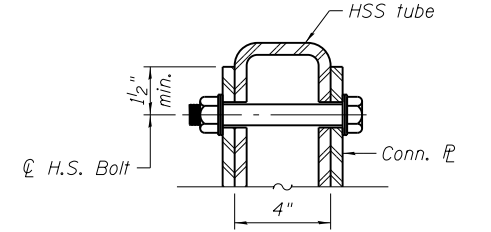
VIEW E-E



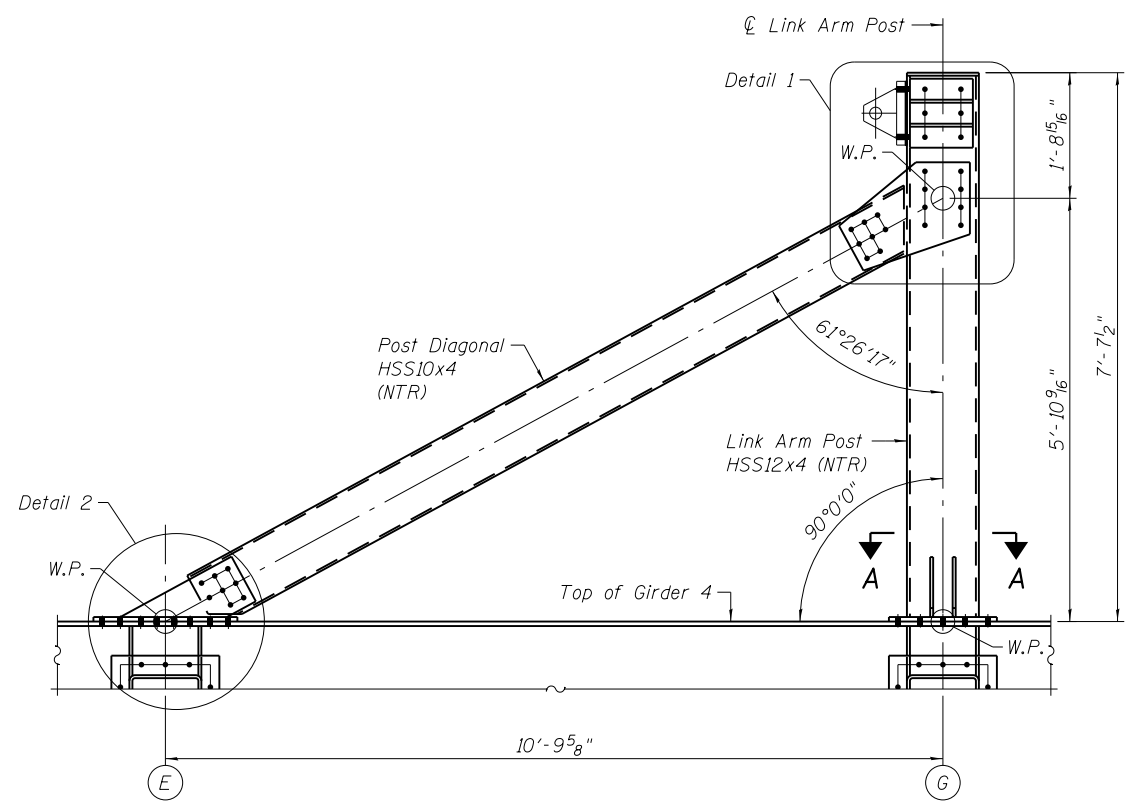
DETAIL 1



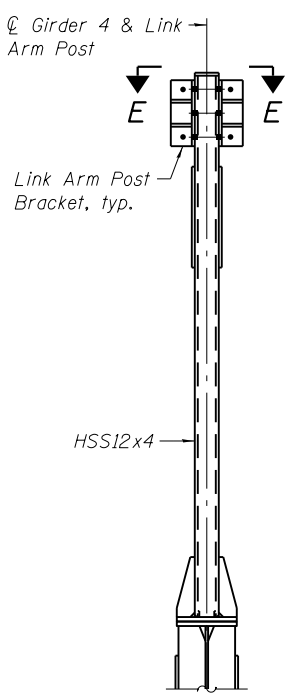
LINK ARM POST BRACKET
(One bracket on each side of Link Arm Post)



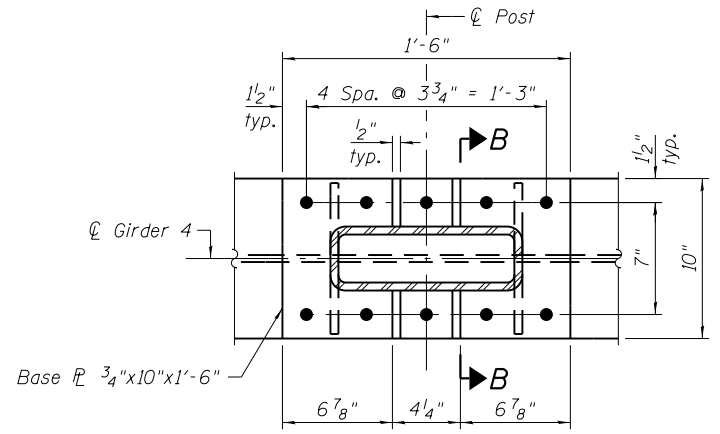
BOLTS THROUGH HSS TUBES
(Typical for all bolts connecting to HSS10x4 and HSS12x4 tube sections. Bolt and hole diameter shall be as specified on Note 1.)



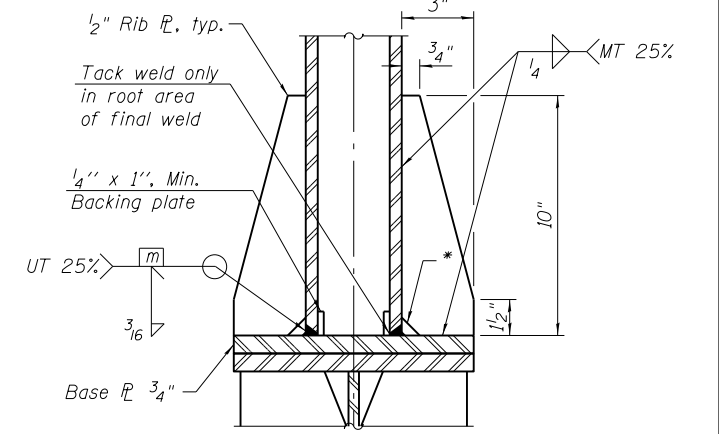
ELEVATION - LINK ARM POST & DIAGONAL
(Sidewalk Link Arm not shown for clarity.)



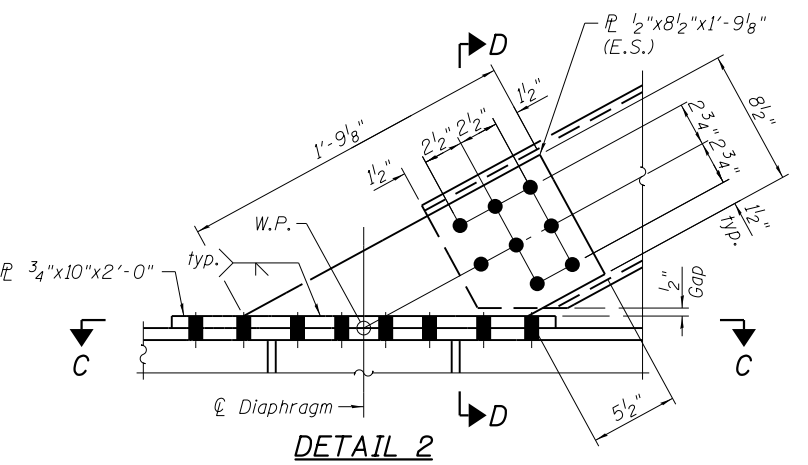
END VIEW LINK ARM POST



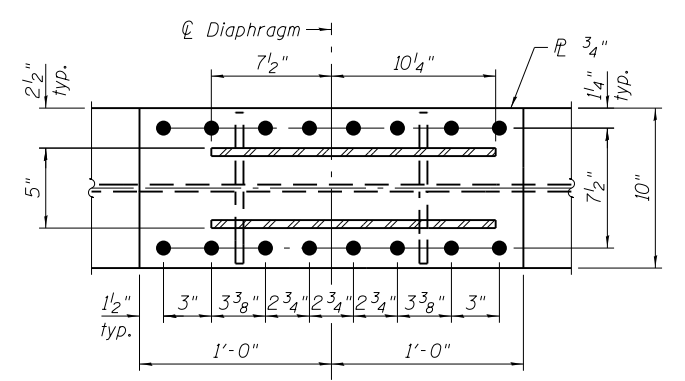
SECTION A-A



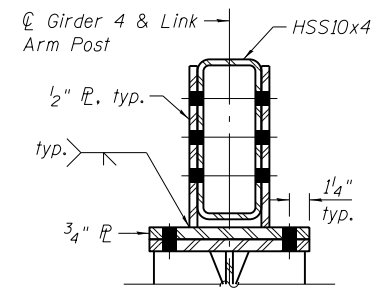
SECTION B-B



DETAIL 2



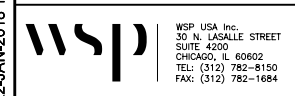
SECTION C-C



SECTION D-D

- Notes:**
- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 3/4 in. ϕ , holes 13/16 in. ϕ , unless otherwise noted. Two hardened washers required for each set of oversized holes.
 - Steel tube sections designated "NTR" shall conform to the Charpy V-notch (CVN) requirements as noted on General Note 4 of sheet MS-3.
 - For additional notes see sheet MS-47.
 - For Sidewalk Link Arm, and Clevis details, see Mechanical Plans sheets M-12 and M-13.

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30 N. LA SALLE STREET
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CHICAGO, IL 60602
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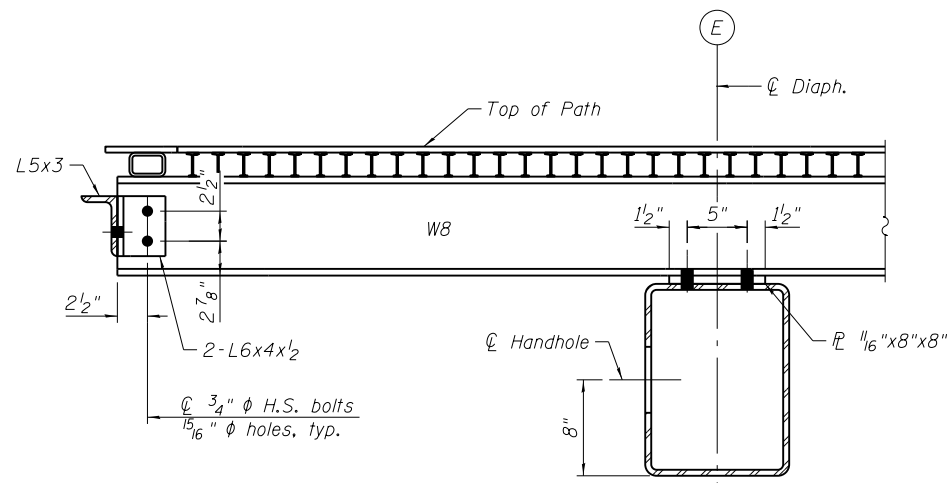
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CHECKED -	PJL	REVISED -			
PLOT SCALE =	N.T.S.	DRAWN -	IJL	REVISED -	
PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

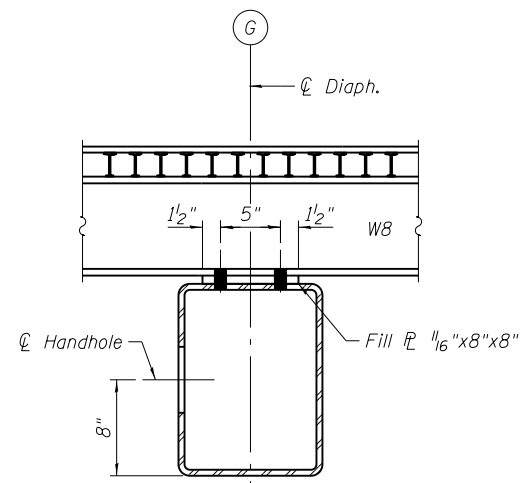
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HINGED SIDEWALK:
STEEL DETAILS IV
(STRUCTURE NO. 016-6030)

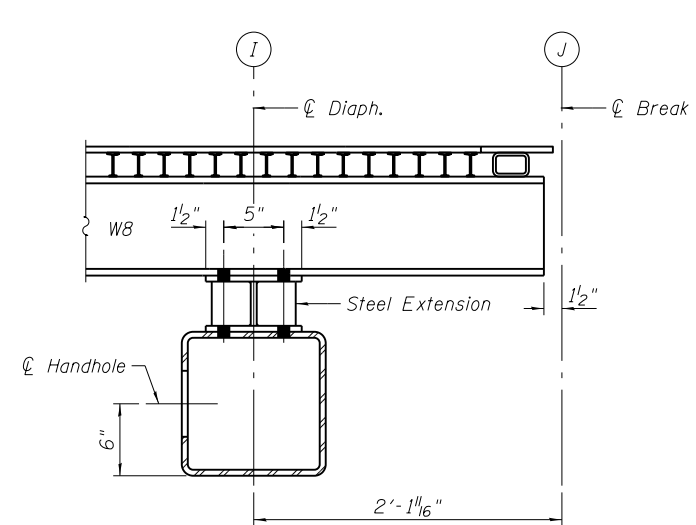
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-52
CDOT PROJECT NO. E-6-650			93 OF 411



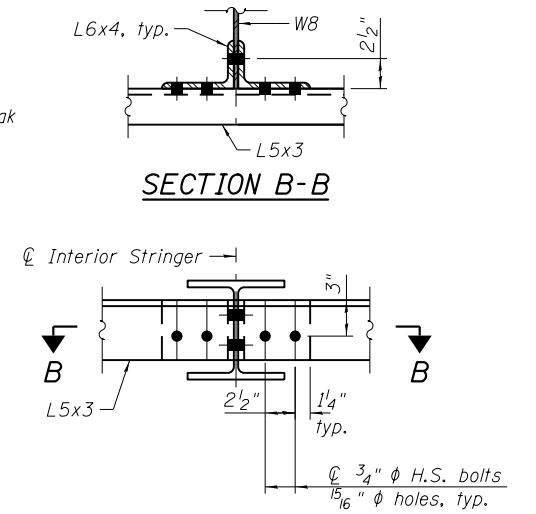
INTERIOR STRINGER CONN. AT E



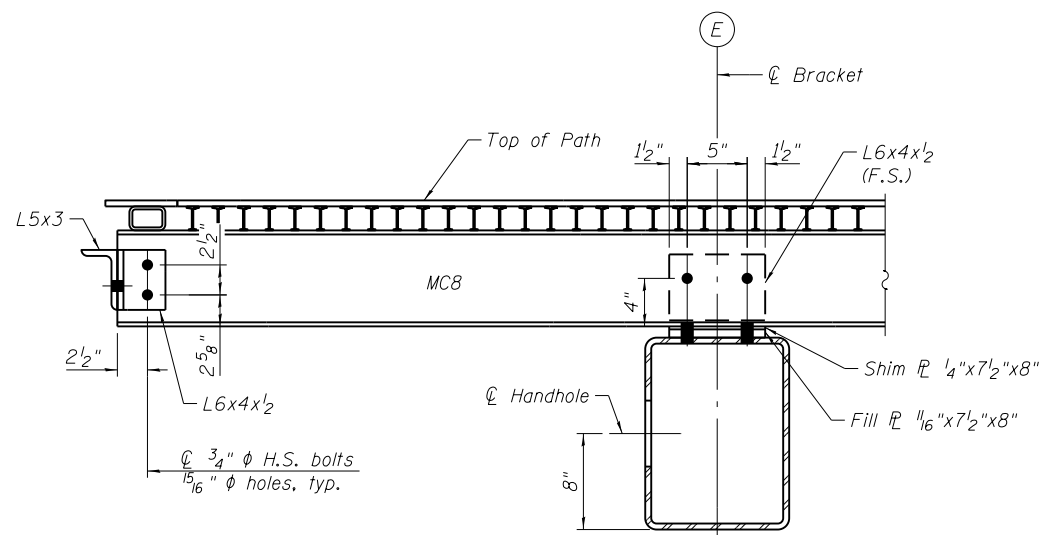
INTERIOR STRINGER CONN. AT G



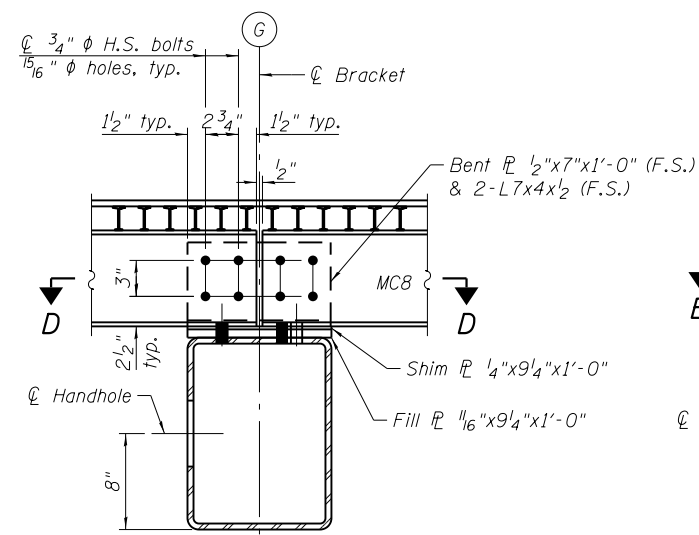
INTERIOR STRINGER CONN. AT I



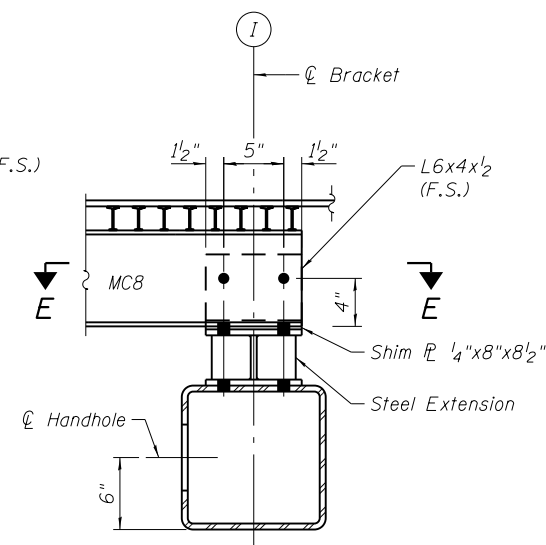
**END ANGLE CONN.
(at Interior Stringer)**



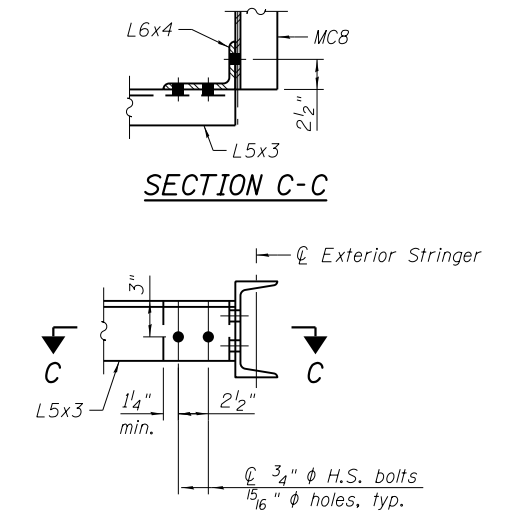
EXTERIOR STRINGER CONN. AT E



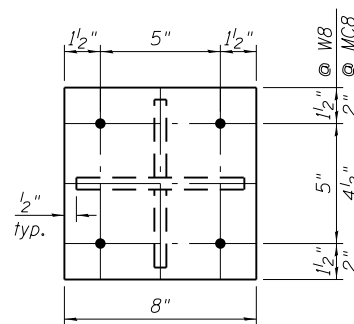
EXTERIOR STRINGER CONN. AT G



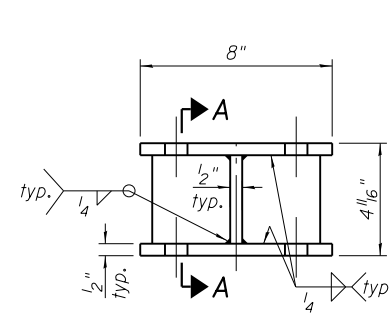
EXTERIOR STRINGER CONN. AT I



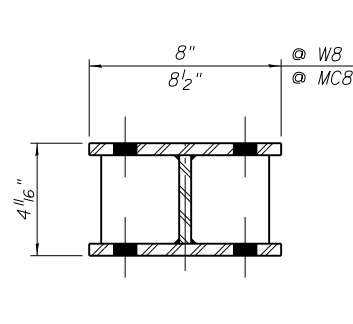
**END ANGLE CONN.
(at Exterior Stringer)**



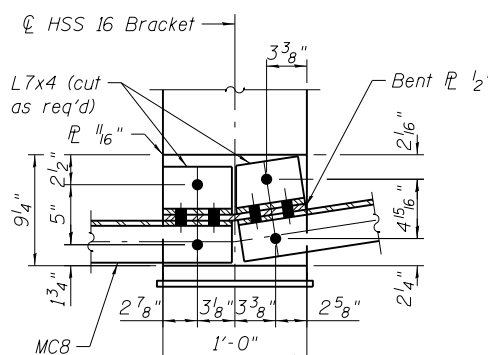
**TOP & BOTTOM PLAN
STEEL EXTENSION**



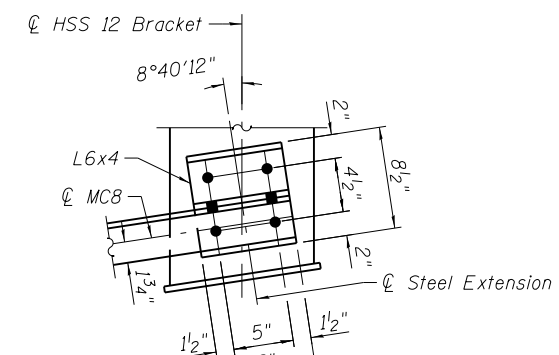
**ELEVATION
STEEL EXTENSION**
(6 Required for W8x40)
(2 Required for MCBx22.8)



SECTION A-A



SECTION D-D



SECTION E-E

- Notes:
1. For additional notes see sheet MS-47.
2. Two hardened washers required for each set of oversized holes.

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22-JAN-2018 13:29



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CHICAGO, IL 60602
TEL: (312) 782-8150
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USER NAME = lopezgonzalez
DESIGNED - IJL
CHECKED - PJL
PLOT SCALE = N.T.S.
DRAWN - IJL
PLOT DATE = 1/22/2018
CHECKED - JIG
REVISED -

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REVISED -

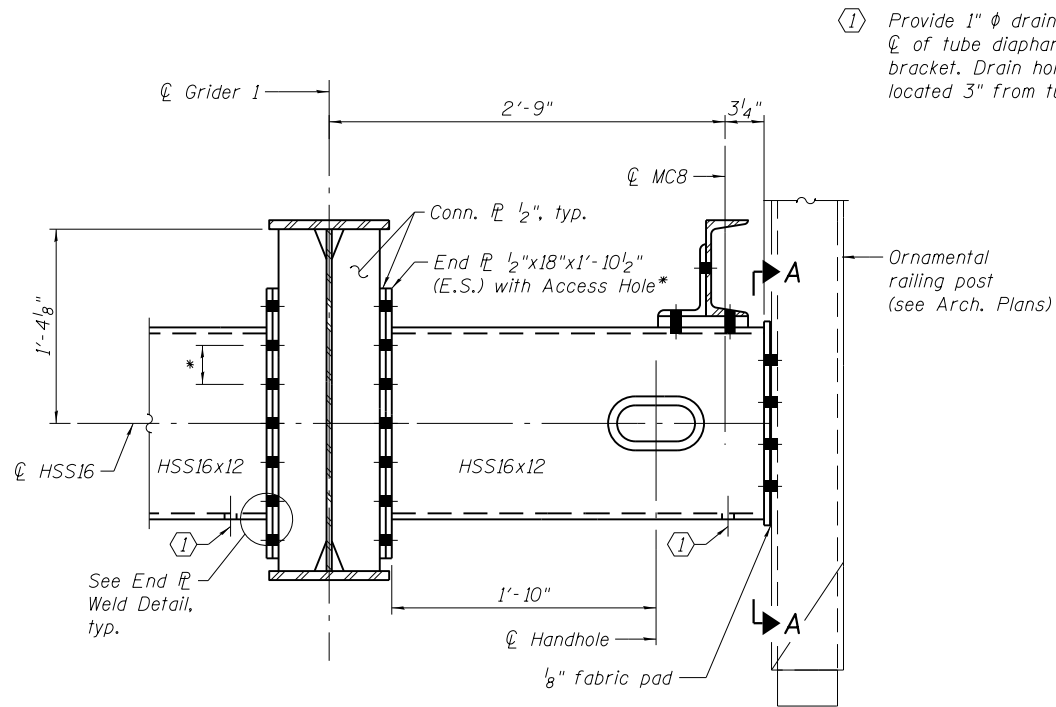
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REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

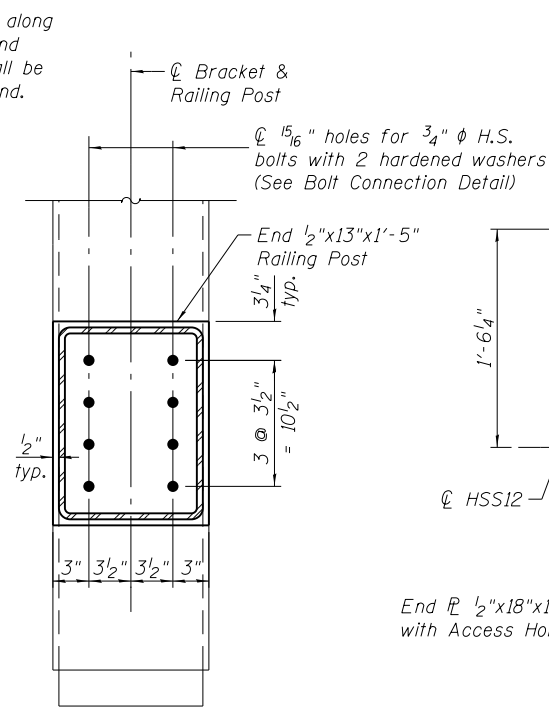
**HINGED SIDEWALK:
STEEL DETAILS V
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-53
CDOT PROJECT NO. E-6-650			94 OF 411



TYPICAL HSS16X12 DIAPHRAGM & BRACKET

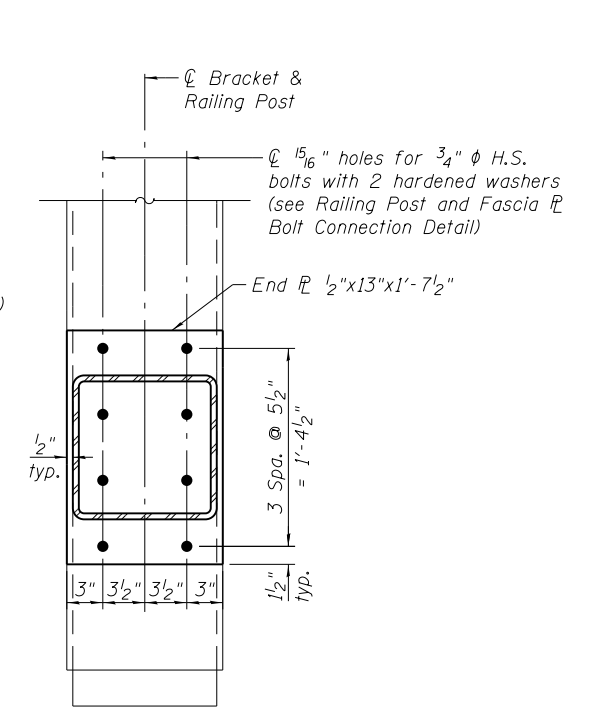
(Handholes shall also be provided on the HSS16X12 at ϕ W8 stringers, see section B-B on sheet MS-48)



SECTION A-A

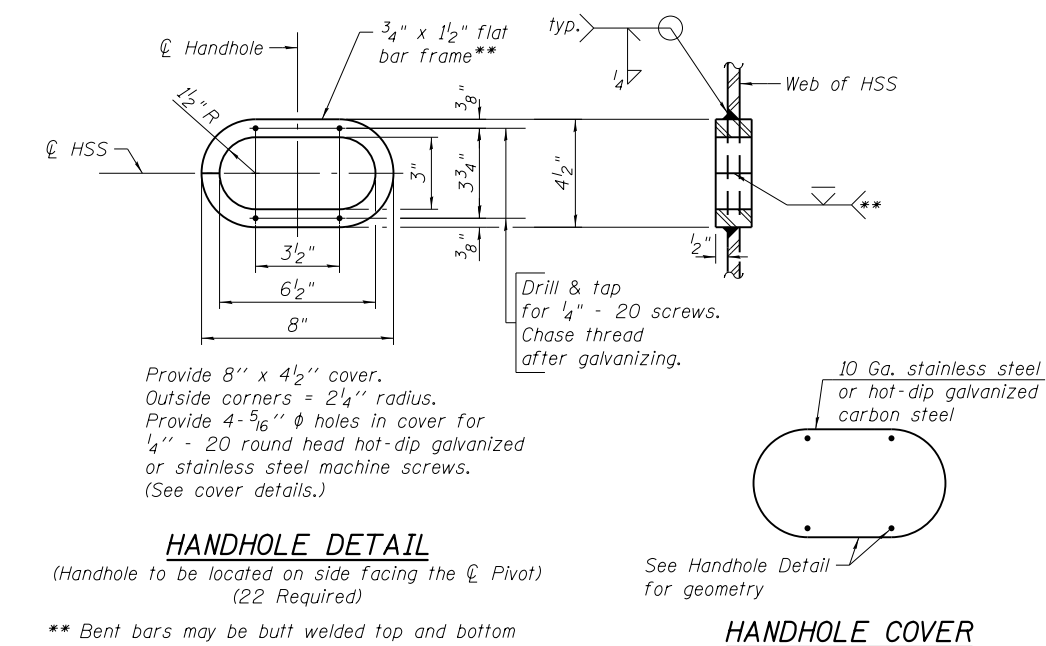
HSS12X12 DIAPHRAGM & BRACKET

(Handholes shall also be provided on the HSS12X12 at ϕ W8 stringers)



SECTION B-B

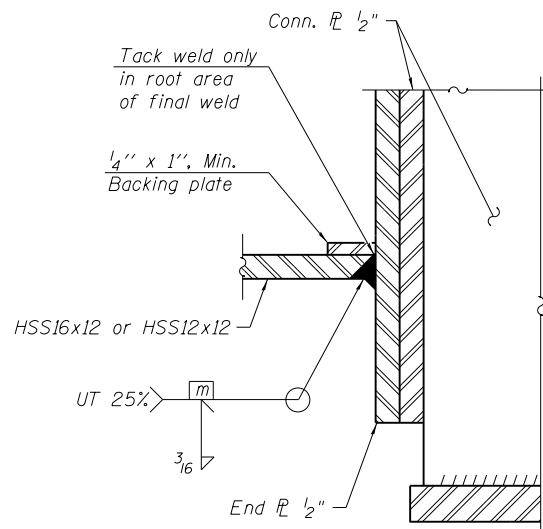
* Access hole and bolt spacing on End \mathcal{R} to match Diaphragm Connection \mathcal{R} on Girders, see sheets MS-49 thru MS-51.



HANDHOLE DETAIL

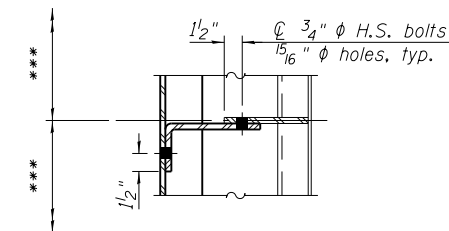
(Handhole to be located on side facing the ϕ Pivot) (22 Required)

** Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, the fabricator may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μ in or less.

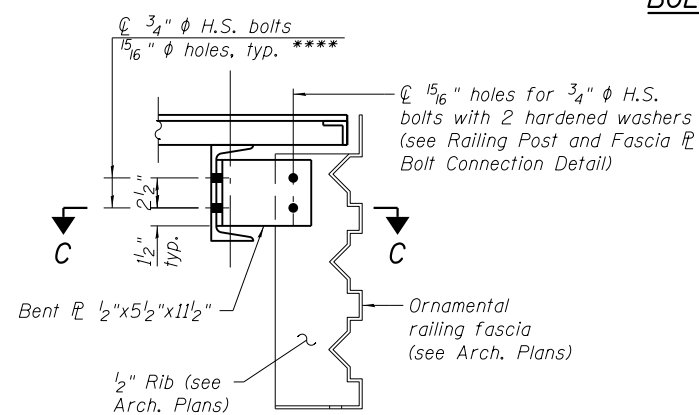


END \mathcal{R} WELD DETAIL

(Typical for all HSS diaphragms & brackets. Bolt holes not shown for clarity)



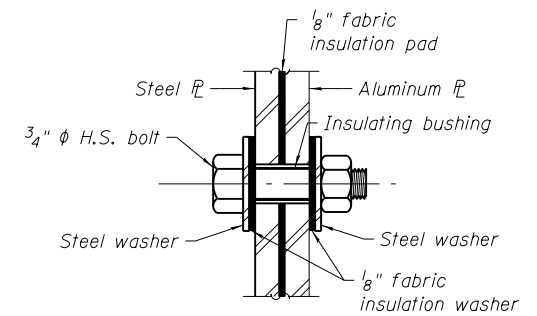
SECTION C-C



EXTERIOR STRINGER CONNECTION TO FASCIA \mathcal{R}

*** For Rib spacing on Ornamental Railing, see Arch. Plans.

**** Field drill holes in web of MCB to match holes in Bent \mathcal{R} .

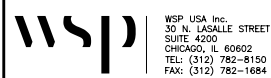


RAILING POST AND FASCIA BOLT CONNECTION DETAIL

Notes:

1. Steel tube sections designated "NTR" shall conform to the Charpy V-notch (CVN) requirements as noted on General Note 4 of sheet MS-3.
2. For additional notes see sheet MS-47.
3. Two hardened washers required for each set of oversized holes.

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DESIGNED - IJL
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PLOT SCALE = N.T.S.
DRAWN - IJL
PLOT DATE = 1/22/2018
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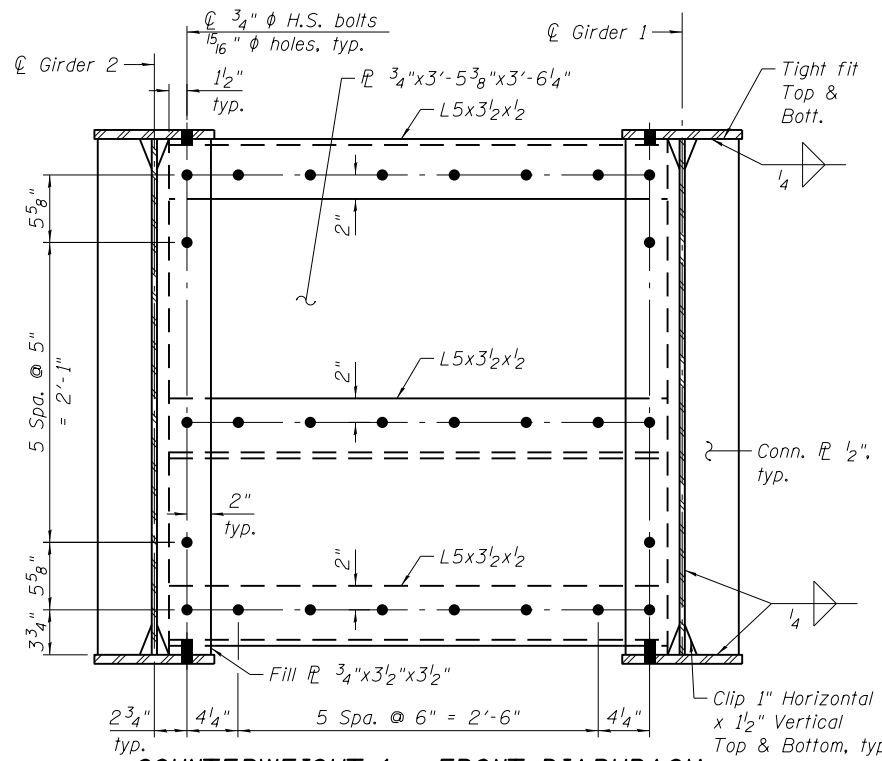
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CITY OF CHICAGO
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DIVISION OF ENGINEERING

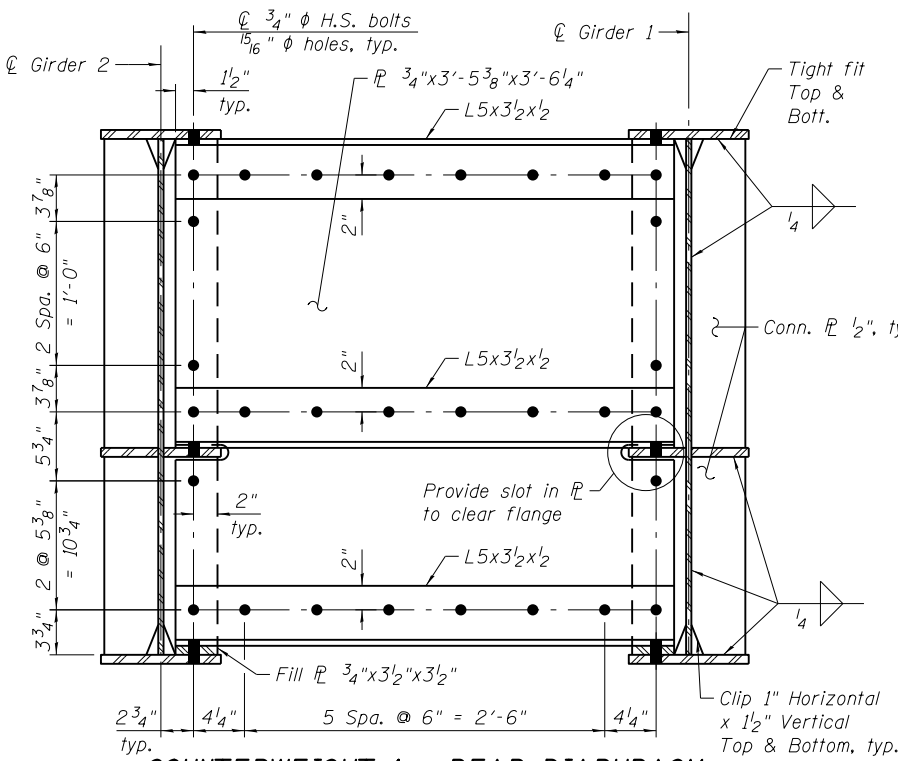
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HINGED SIDEWALK:
STEEL DETAILS VI
(STRUCTURE NO. 016-6030)

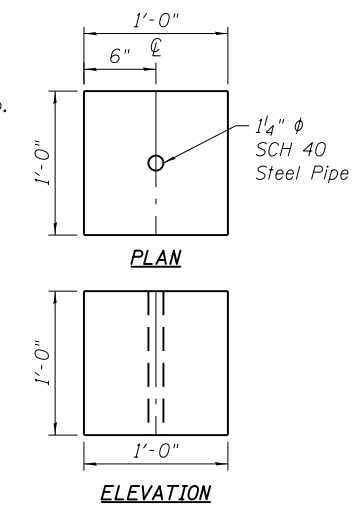
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-54
CDOT PROJECT NO. E-6-650			95 OF 411



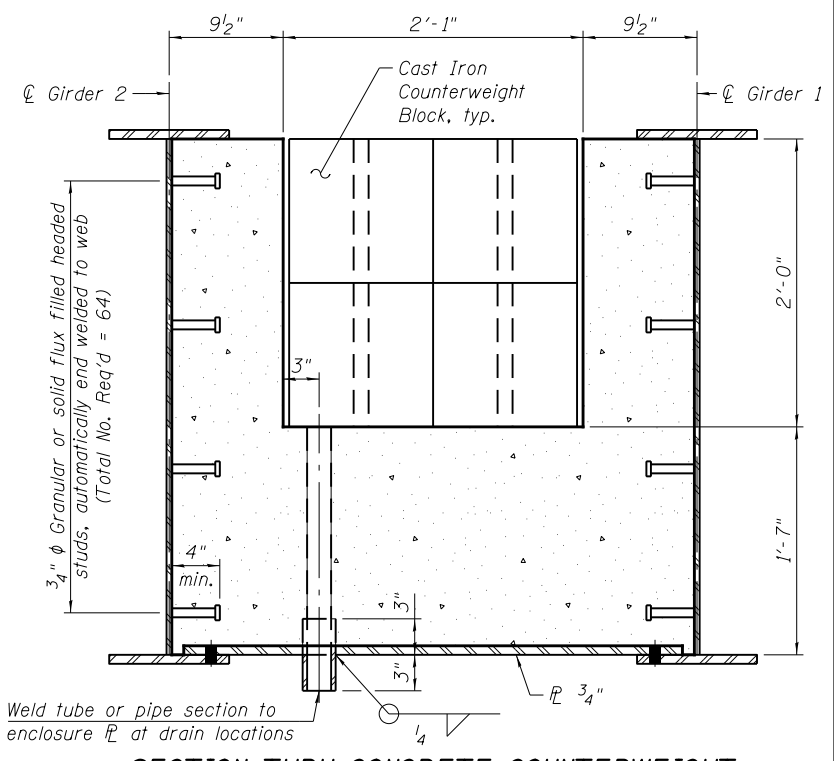
COUNTERWEIGHT 1 - FRONT DIAPHRAGM



COUNTERWEIGHT 1 - REAR DIAPHRAGM

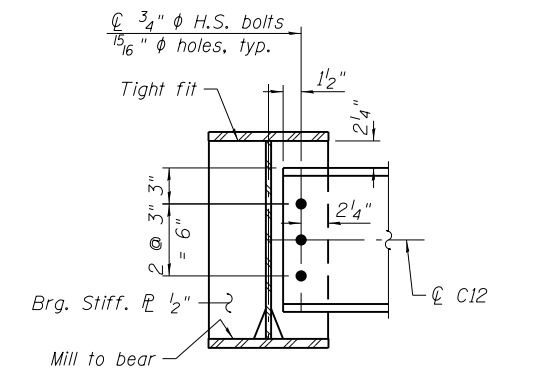


TYPICAL CAST IRON COUNTERWEIGHT BLOCK

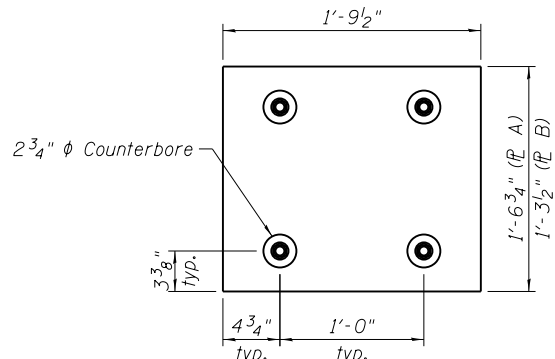


SECTION THRU CONCRETE COUNTERWEIGHT
(Cost of 3/4" φ studs included with Furnishing and Erecting Structural Steel, Hinged Sidewalk)

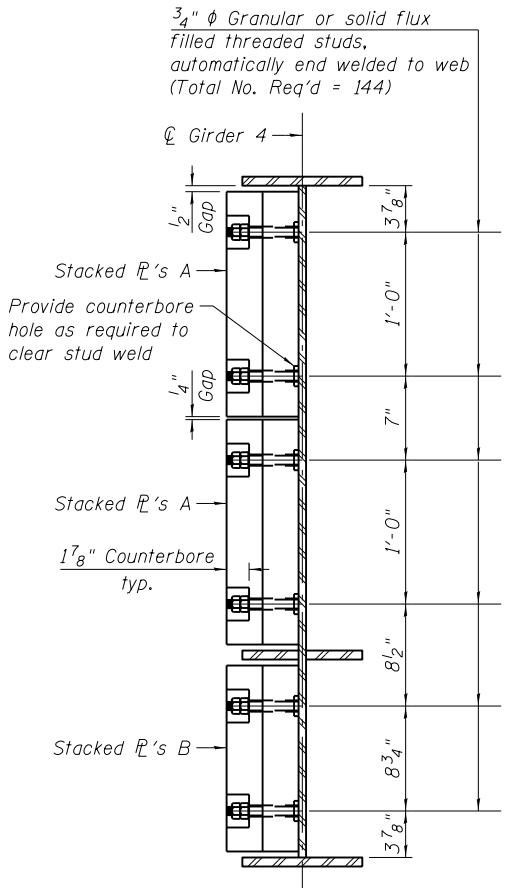
- Notes:
- The concrete counterweight shown is based on the following assumed weights:
 - Counterweight Concrete = 275 pcf.
 - Cast Iron Counterweight Blocks = 445 lbs.
 - Care shall be taken to prevent voids in concrete during pouring.
 - Drain for pocket shall be 2 in. diameter.
 - The counterweight forms must be adequately supported during the pouring of concrete, see Special Provisions.
 - The Contractor shall perform independent balancing calculations based on actual shop and field weights.
 - As far as practical, exact measured weights and locations and moment of all material entering into the make-up of the hinged sidewalk shall be furnished to the Commissioner by the Contractor.
 - The final distribution for balancing the hinged sidewalk will be determined as outlined in the Special Provisions. The Contractor shall make all adjustments and relocations necessary to attain the condition to the satisfaction of the Commissioner. The Contractor shall furnish to the Commissioner complete record of the final weights and distribution of the various counterweight materials as computed and as measured.



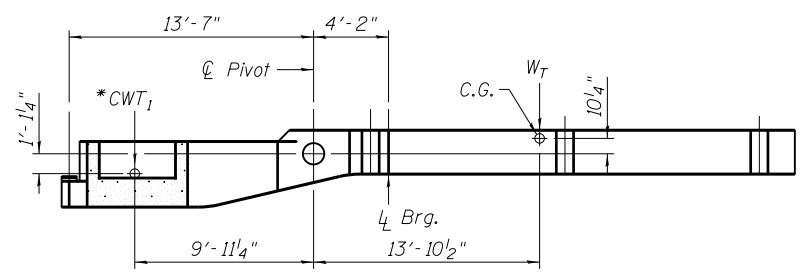
END DIAPHRAGM AT ANCHOR BEARING



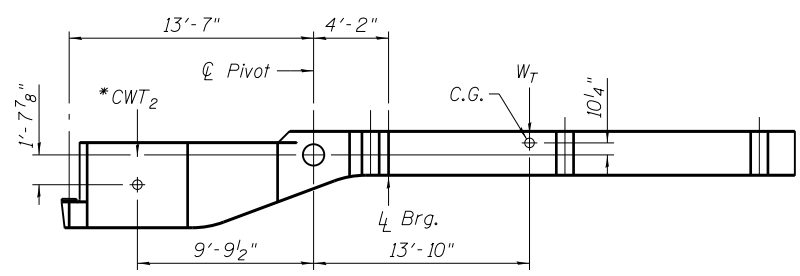
STACKED PLATES
(All stacked plates shall be 3" thick.)
No. of 1/2" A Required = 48
No. of 1/2" B Required = 24



SECTION THRU GIRDER 4 COUNTERWEIGHT
(Cost of 3/4" φ studs included with Furnishing and Erecting Structural Steel, Hinged Sidewalk)



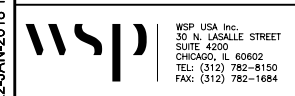
ELEVATION - GIRDERS 1 & 2
(W_T = 17,158 lbs)
* (CWT₁ = 19,251 lbs)



ELEVATION - GIRDER 4
(W_T = 14,224 lbs)
* (CWT₂ = 11,405 lbs)

*Weight shown for CWT₁ and CWT₂ does not include self-weight of girders left of 1/2" Pivot.

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PLOT SCALE = N.T.S.
DRAWN - IJL
PLOT DATE = 1/22/2018
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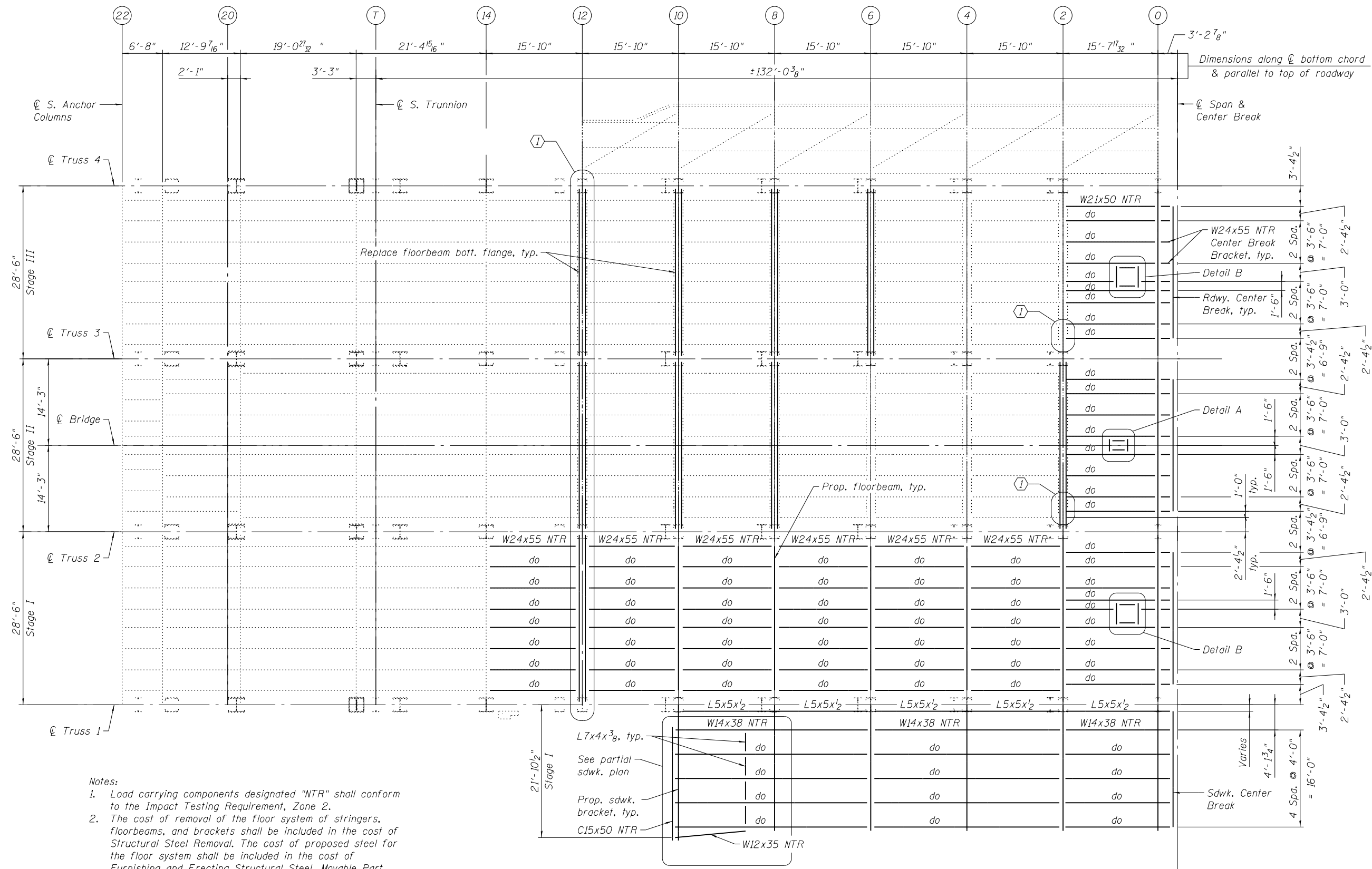
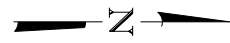
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HINGED SIDEWALK:
COUNTERWEIGHT AND BALANCE CALCULATION
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-55
CDOT PROJECT NO. E-6-650			96 OF 411



I Floorbeam web repairs

- Notes:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 2. The cost of removal of the floor system of stringers, floorbeams, and brackets shall be included in the cost of Structural Steel Removal. The cost of proposed steel for the floor system shall be included in the cost of Furnishing and Erecting Structural Steel, Movable Part.
 3. The cost of repairs to the existing floorbeams, including removal and replacement, shall be included in the cost of Structural Steel Repairs. See Special Provision.
 4. For Details A & B, see sheet MS-90.

FRAMING PLAN - INTERMEDIATE LEVEL
SOUTH LEAF

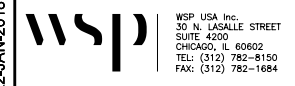
(Curb plate supports and proposed sidewalk bracing not shown for clarity)

REFERENCE DRAWINGS

Drawing
 Intermediate Level Framing Plan S. Leaf
 Intermediate Level Framing Plan S. Leaf

Sheet No.
 1660300234
 1660300539

T:\16617A\StructCadd\Sheets\0166030-E6650-MS056-Framing_S_Leaf.dgn 22-JAN-2018 13:29



WSP USA Inc.
 30 N. LA SALLE STREET
 SUITE 4000
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1884

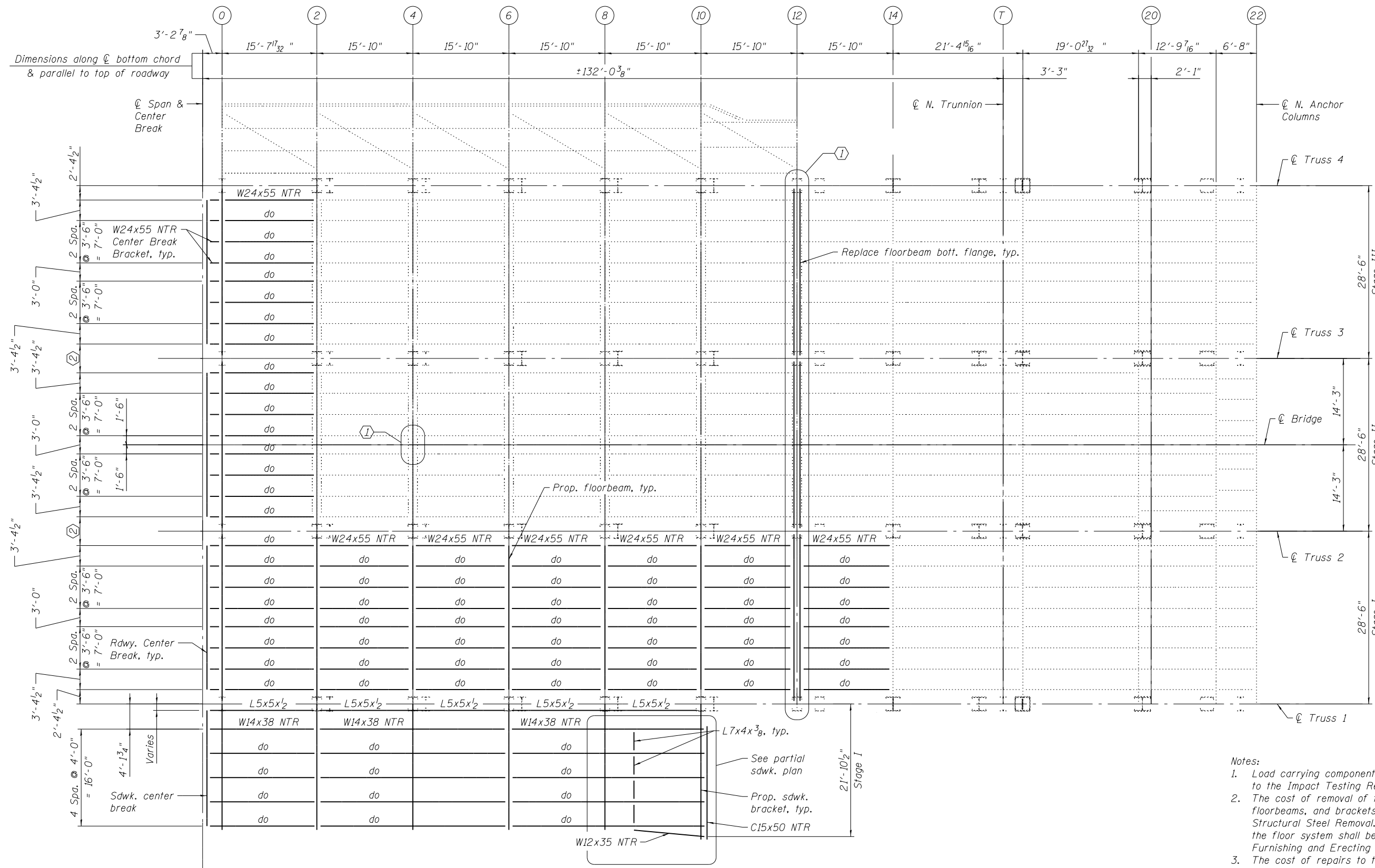
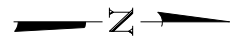
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PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
FRAMING PLAN - INTERMEDIATE LEVEL S. LEAF
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-56
CDOT PROJECT NO. E-6-650			97 OF 411



- ① Floorbeam web repairs
- ② 2 Spa. @ 2'-4 1/2" = 4'-9"

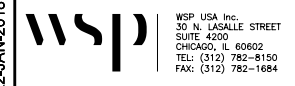
FRAMING PLAN - INTERMEDIATE LEVEL
NORTH LEAF
 (Curb plate supports and proposed sidewalk bracing not shown for clarity)

- Notes:**
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 2. The cost of removal of the floor system of stringers, floorbeams, and brackets shall be included in the cost of Structural Steel Removal. The cost of proposed steel for the floor system shall be included in the cost of Furnishing and Erecting Structural Steel, Movable Part.
 3. The cost of repairs to the existing floorbeams, including removal and replacement, shall be included in the cost of Structural Steel Repairs. See Special Provision.

REFERENCE DRAWINGS

Drawing	Sheet No.
Intermediate Level Framing Plan N. Leaf	1660300233
Intermediate Level Framing Plan N. Leaf	1660300566

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 30 N. LA SALLE STREET
 SUITE 4200
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1884

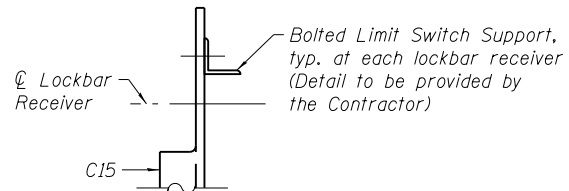
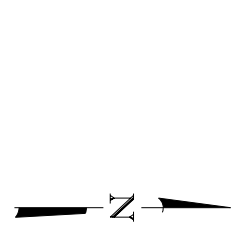
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CITY OF CHICAGO
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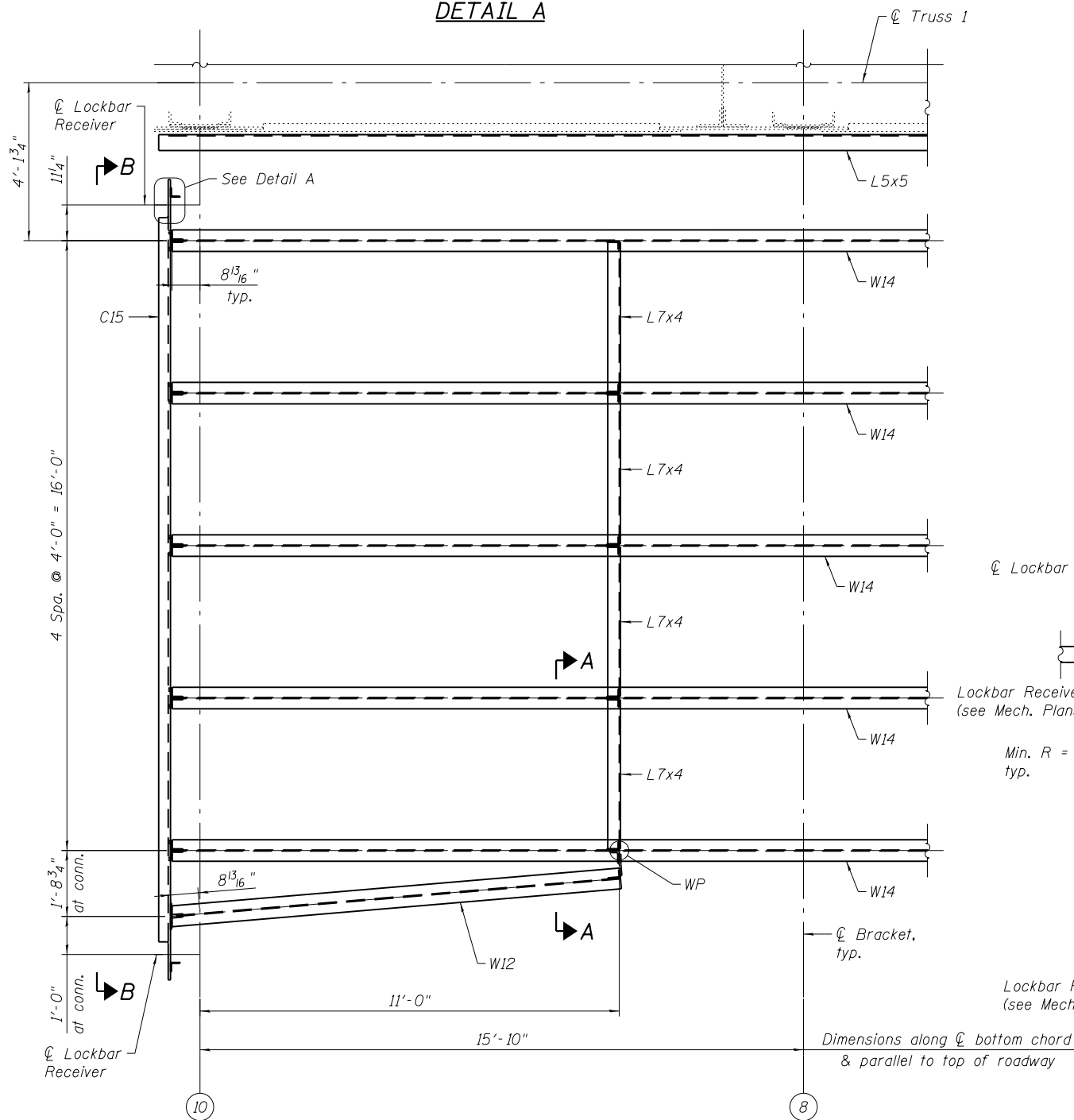
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
FRAMING PLAN - INTERMEDIATE LEVEL N. LEAF
(STRUCTURE NO. 016-6030)

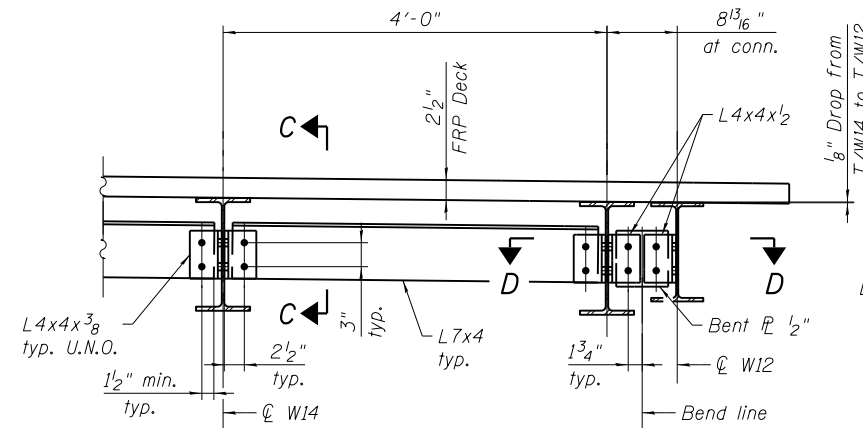
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-57
CDOT PROJECT NO. E-6-650			98 OF 411



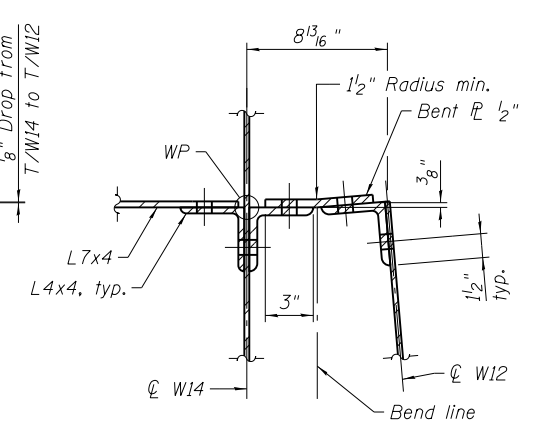
DETAIL A



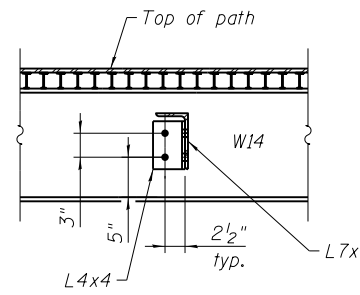
PARTIAL SIDEWALK PLAN - INTERMEDIATE LEVEL
(South Leaf shown, North Leaf similar but opposite hand)



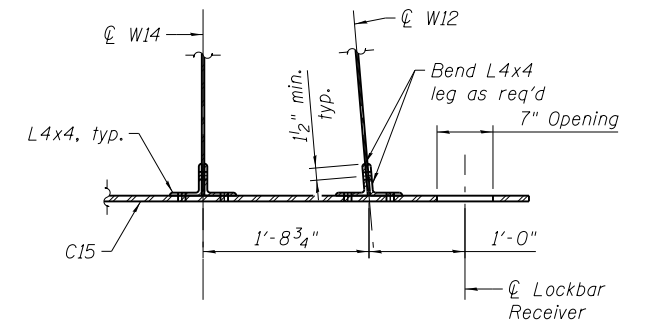
SECTION A-A



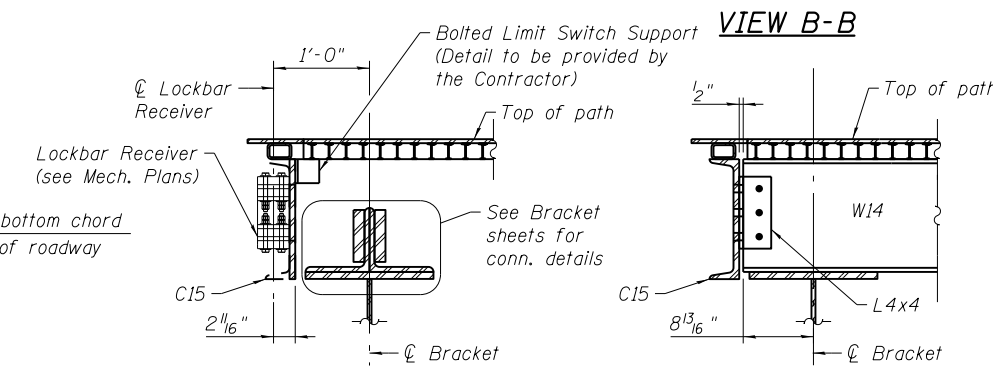
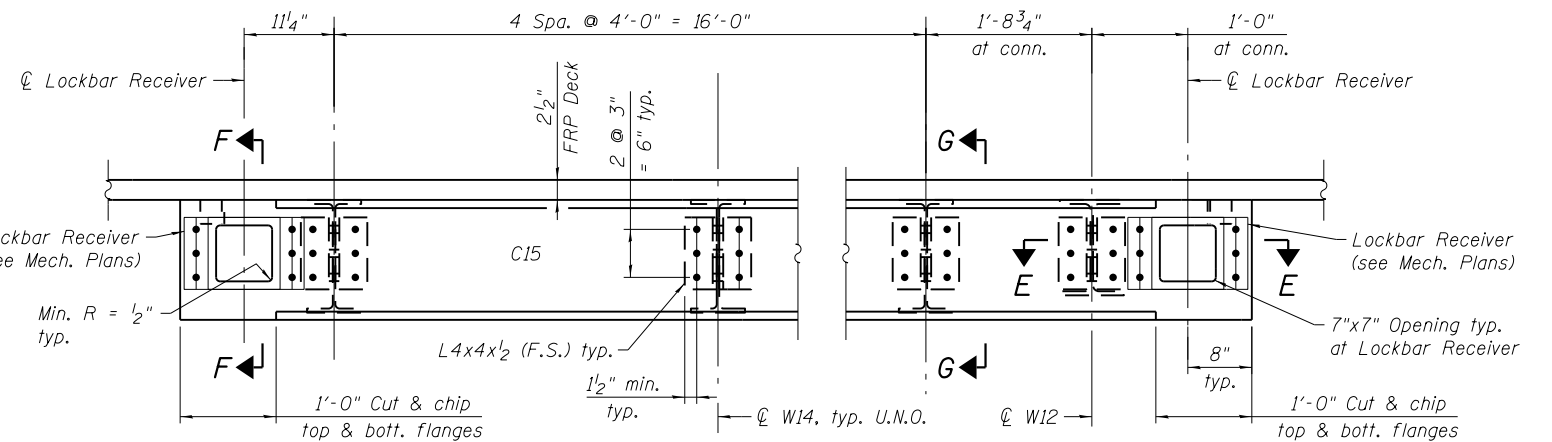
SECTION D-D



SECTION C-C



SECTION E-E



SECTION F-F

SECTION G-G

- Notes:
- All bolted bracing connections shall be ASTM A325 Type 1, 3/4" ϕ bolts in 15/16" holes.
 - Two hardened washers required for each set of oversized holes.
 - For Lockbar Receiver connection & details, see Mech. Plans.

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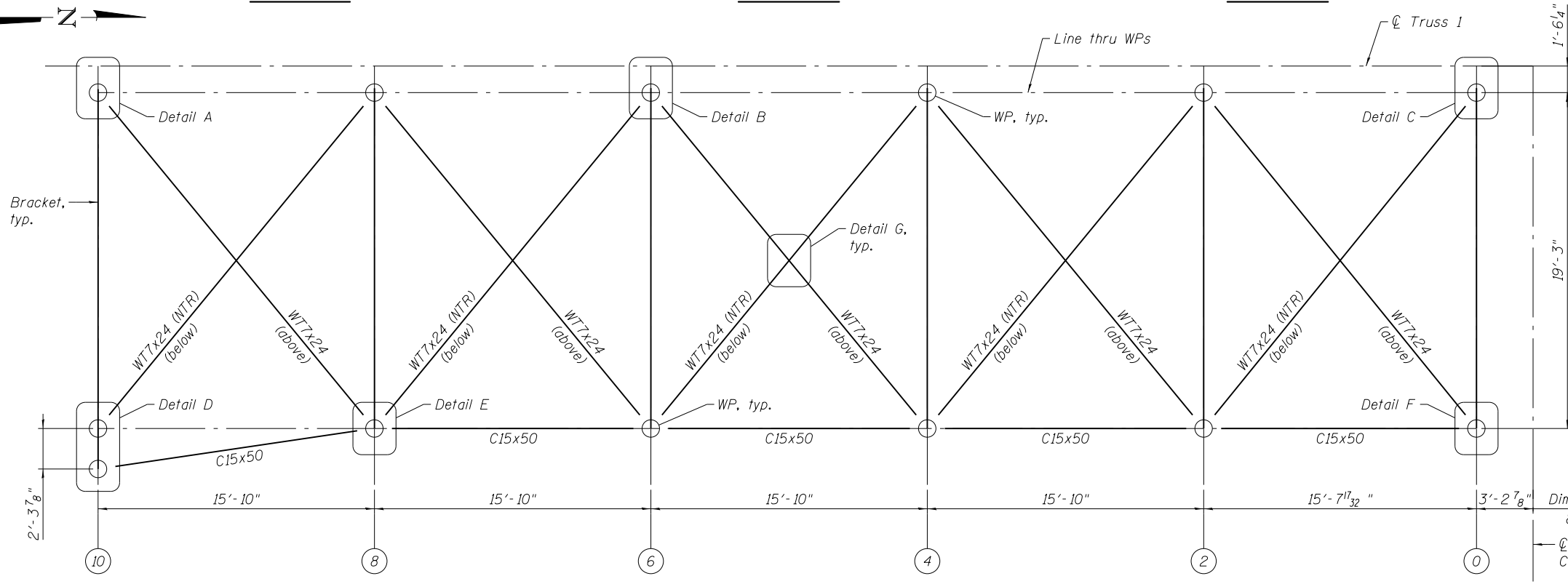
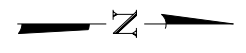
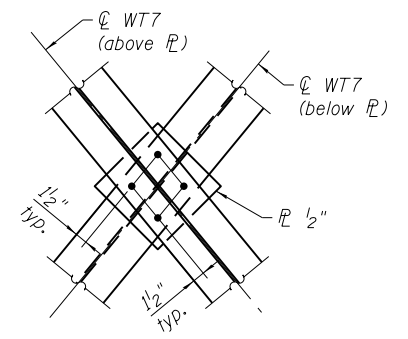
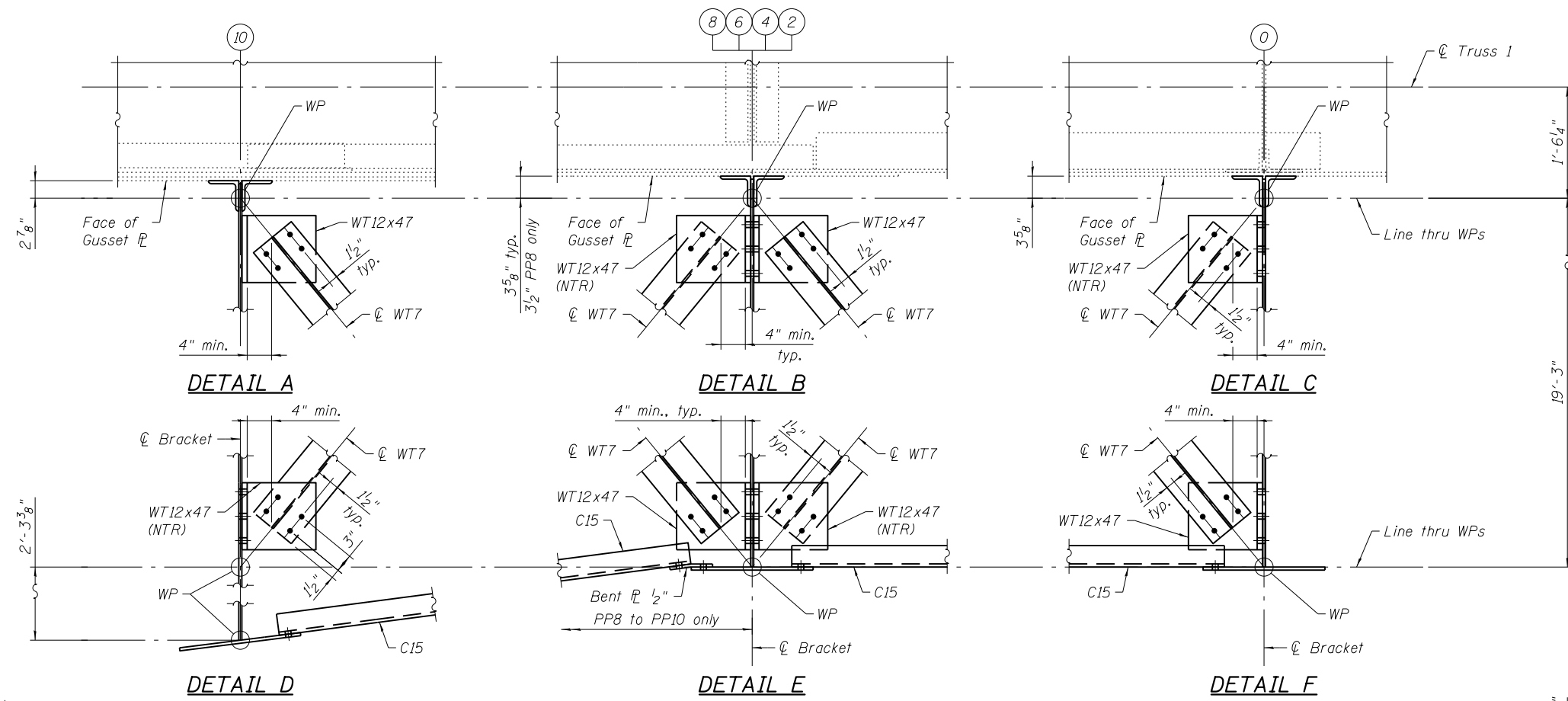
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
SIDEWALK PARTIAL PLAN - INTERMEDIATE LEVEL
(STRUCTURE NO. 016-6030)

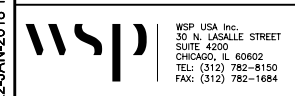
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-58
CDOT PROJECT NO. E-6-650			99 OF 411



- Notes:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 2. All bolted bracing connections shall be ASTM A325 Type 1, 3/4" ϕ bolts in 5/16" holes.
 3. Two hardened washers required for each set of oversized holes.

SIDEWALK BRACING PLAN - INTERMEDIATE LEVEL
 (South Leaf shown, North Leaf similar but opposite hand)

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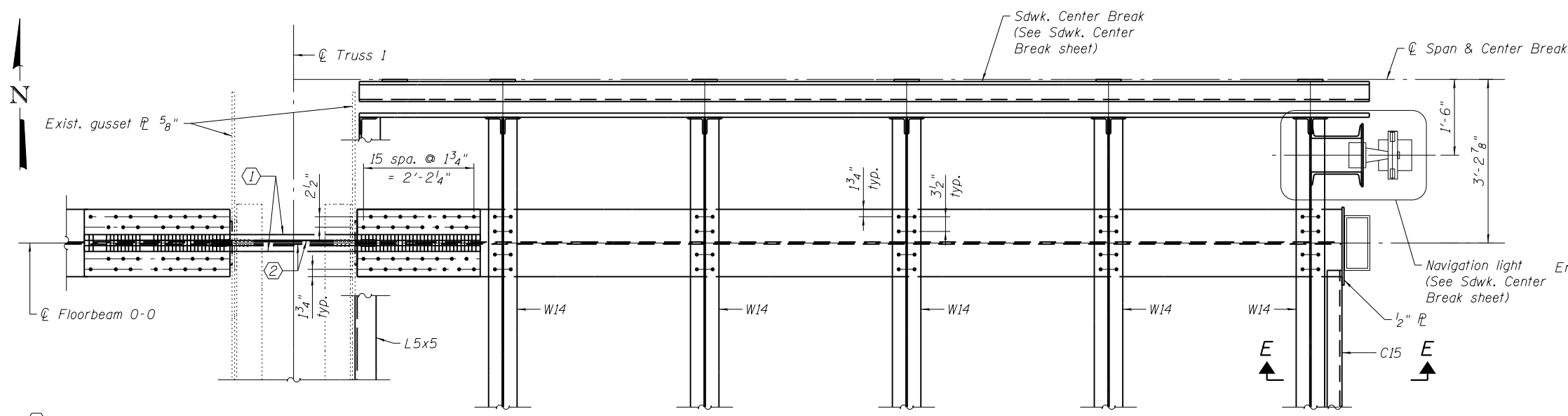
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PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
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 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

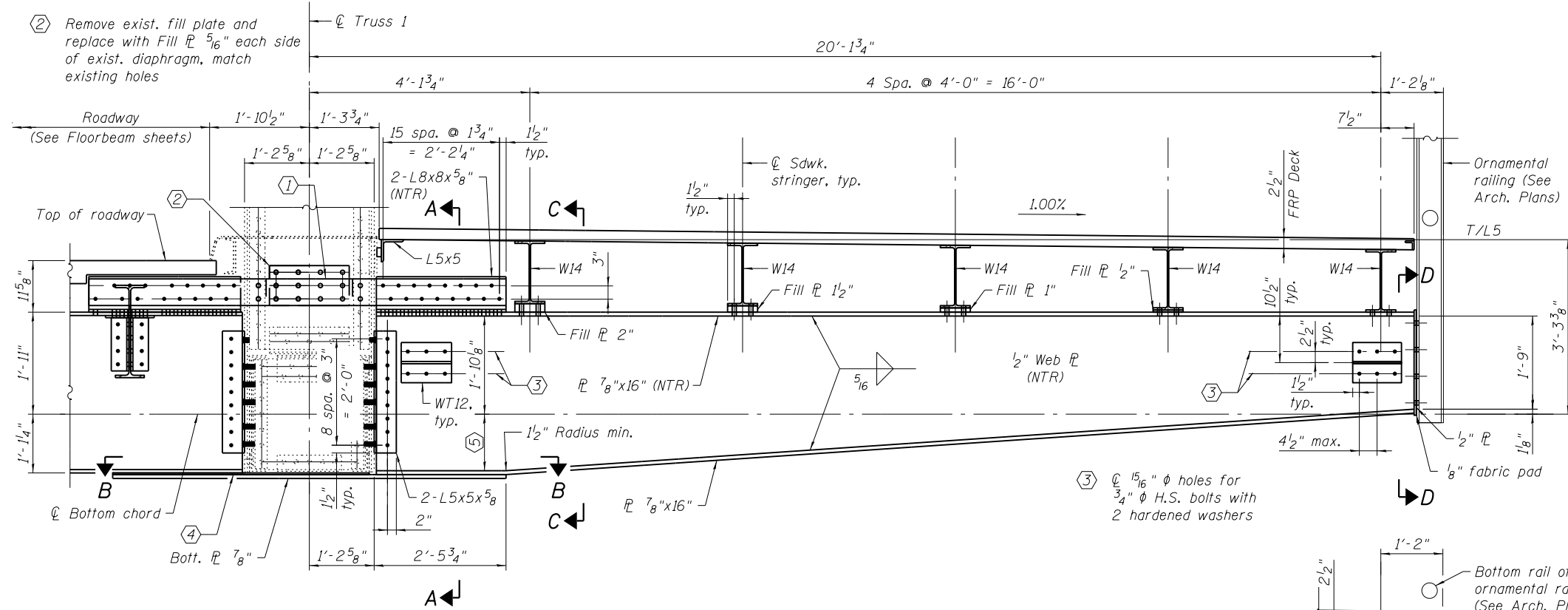
MOVABLE PART:
SIDEWALK BRACING PLAN - INTERMEDIATE LEVEL
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-59
CDOT PROJECT NO. E-6-650			100 OF 411



BRACKET TOP PLAN

- ① Remove exist. bars and replace with 2-Tie \bar{R} s $6\frac{1}{2}'' \times 1\frac{3}{8}'' \times 7'-10\frac{1}{8}''$ S. Leaf (NTR) or 2-Tie \bar{R} s $6\frac{1}{2}'' \times 1\frac{3}{8}'' \times 8'-0\frac{1}{8}''$ N. Leaf (NTR)
- ② Remove exist. fill plate and replace with Fill \bar{R} $5\frac{1}{16}''$ each side of exist. diaphragm, match existing holes

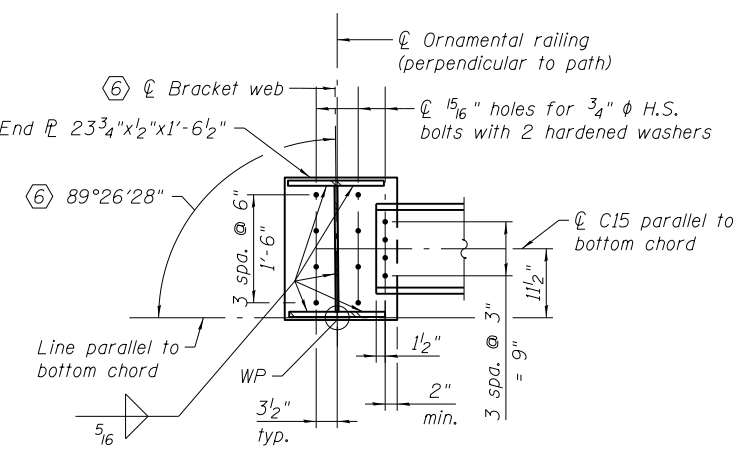


BRACKET ELEVATION - PANEL PT. 0
(S. Leaf Bracket shown looking north, N. Leaf Bracket similar but opposite hand looking south)

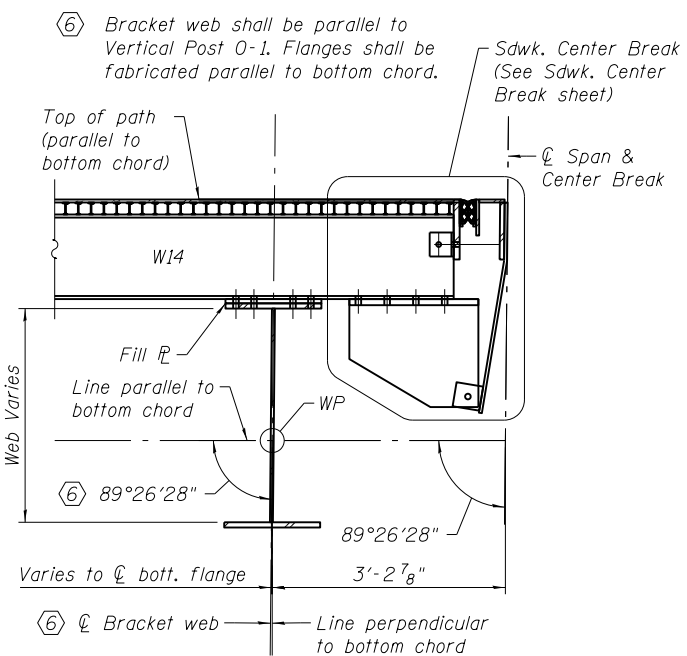
- ③ \bar{R} $7\frac{1}{8}'' \times 16''$ (NTR)
- ④ Conn. \bar{R} $3\frac{3}{8}''$ at S. Leaf
Conn. \bar{R} $1\frac{1}{16}''$ at N. Leaf
- ⑤ $1'-0\frac{3}{4}''$ at S. Leaf
 $1'-0\frac{13}{16}''$ at N. Leaf

REFERENCE DRAWINGS

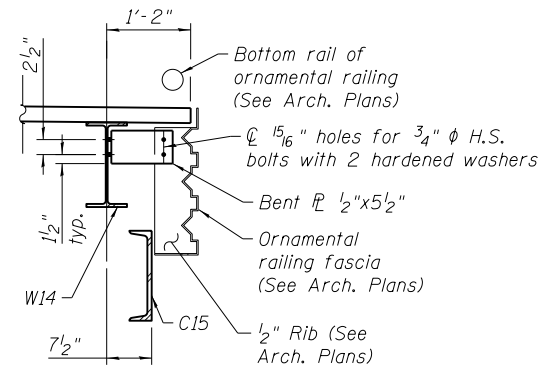
Drawing	Sheet No.
Sidewalk Brackets Inter. Level PPO S. Leaf	1660300343
Post at Center Outside Truss	1660300988
Bottom Chord L4-LoR/L Outside Truss	1660301009
Bottom Struts	1660301041



SECTION D-D



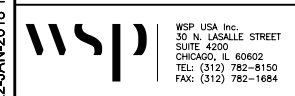
SECTION C-C



SECTION E-E

- Notes:
- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 - For railing and fascia \bar{R} bolt connection detail see sheet MS-54.
 - For Section A-A & B-B, see sheets MS-64 & MS-65.

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30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
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FAX: (312) 782-1884

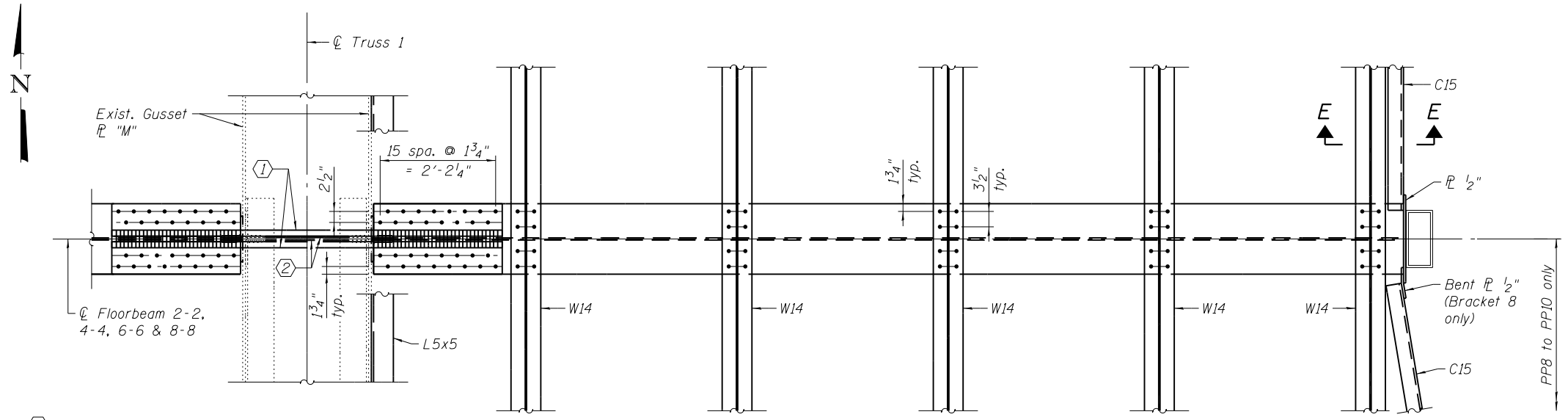
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PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
SIDEWALK BRACKET AT PANEL PT. 0
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-60
CDOT PROJECT NO. E-6-650			101 OF 411

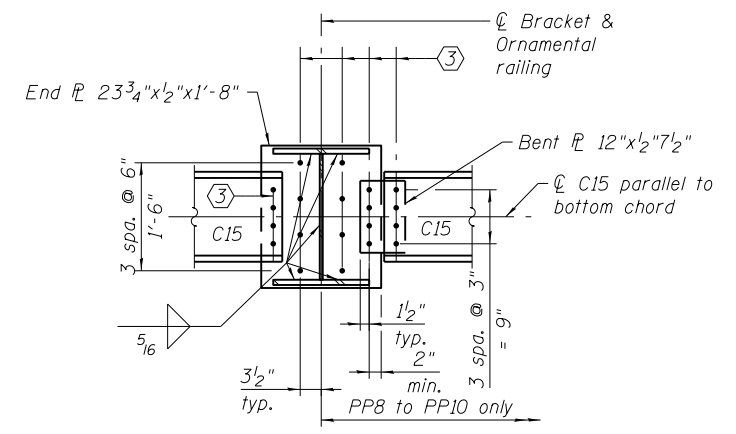


- ① Remove exist. bars and replace with 2-Tie \bar{L} s 6 $\frac{1}{2}$ "x1 $\frac{3}{8}$ "xLength "K" (NTR)
- ② Remove exist. fill plate and replace with Fill \bar{L} "L" each side of exist. diaphragm, match existing holes

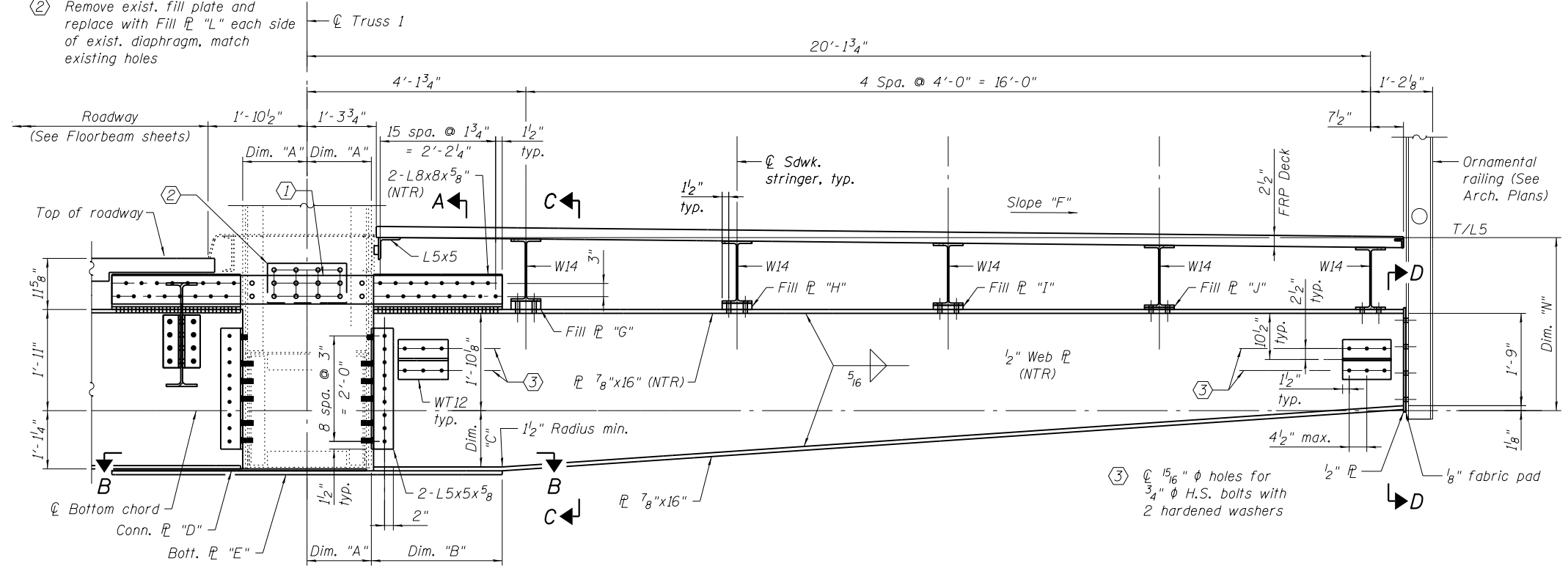
BRACKET TOP PLAN

REFERENCE DRAWINGS

Drawing	Sheet No.
Sidewalk Brackets Inter. Level	1660300343
Sidewalk Brackets Inter. Level	1660300344
Bottom Chord L4-L10R Outside Truss	1660301007
Bottom Chord L4-LOAR Outside Truss	1660301008
Bottom Chord L4-LoR/L Outside Truss	1660301009
Bottom Struts	1660301041
Bottom Struts	1660301043

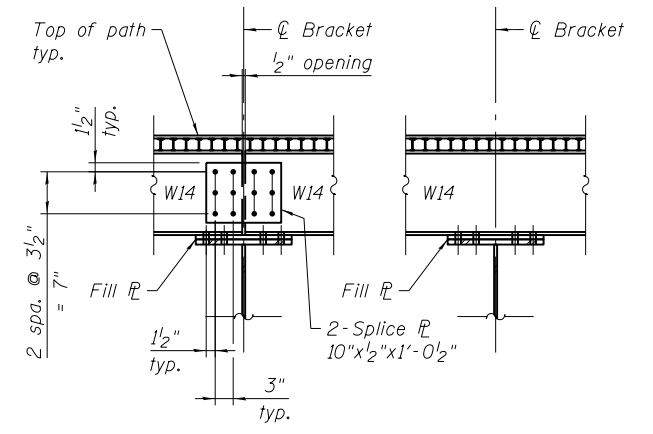


SECTION D-D



BRACKET ELEVATION - PANEL PT. 2, 4, 6 & 8

(S. Leaf Bracket shown looking north, N. Leaf Bracket similar but opposite hand looking south)



SECTION C-C

PANEL PT. 2 & 6 PANEL PT. 4 & 8

- Notes:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 2. For railing and fascia \bar{L} bolt connection detail see sheet MS-54.
 3. For Section E-E, see sheet MS-60.
 4. For Section A-A & B-B, see sheets MS-64 thru MS-67.

Bracket Panel Pt.	Dimension "A"	Dimension "B"	Dimension "C"	Conn. \bar{L} "D"	Bott. \bar{L} "E"	Slope "F"	Fill \bar{L}				Tie \bar{L} Length "K"	Fill \bar{L} "L"	Exist. Gusset \bar{L} "M"	Dimension "N"
							"G"	"H"	"I"	"J"				
2	1'-2 $\frac{5}{8}$ "	2'-5 $\frac{3}{4}$ "	1'-0 $\frac{13}{16}$ "	$\frac{7}{16}$ "	$\frac{7}{8}$ "	1.00%	2"	1 $\frac{1}{2}$ "	1"	$\frac{1}{2}$ "	7'-4 $\frac{3}{4}$ "	$\frac{5}{16}$ "	$\frac{5}{8}$ "	3'-3 $\frac{3}{8}$ "
4	"	"	1'-0 $\frac{3}{8}$ "	$\frac{7}{8}$ "	---	"	"	"	"	"	"	"	"	"
6	"	"	1'-0 $\frac{13}{16}$ "	$\frac{7}{16}$ "	$\frac{7}{8}$ "	"	"	"	"	"	"	"	"	"
8	1'-2 $\frac{3}{4}$ "	2'-5 $\frac{7}{8}$ "	1'-0 $\frac{3}{8}$ "	$\frac{7}{8}$ "	---	0.50%	1"	$\frac{3}{4}$ "	$\frac{1}{2}$ "	$\frac{1}{4}$ "	7'-5"	$\frac{13}{32}$ "	$\frac{3}{4}$ "	3'-2 $\frac{1}{4}$ "

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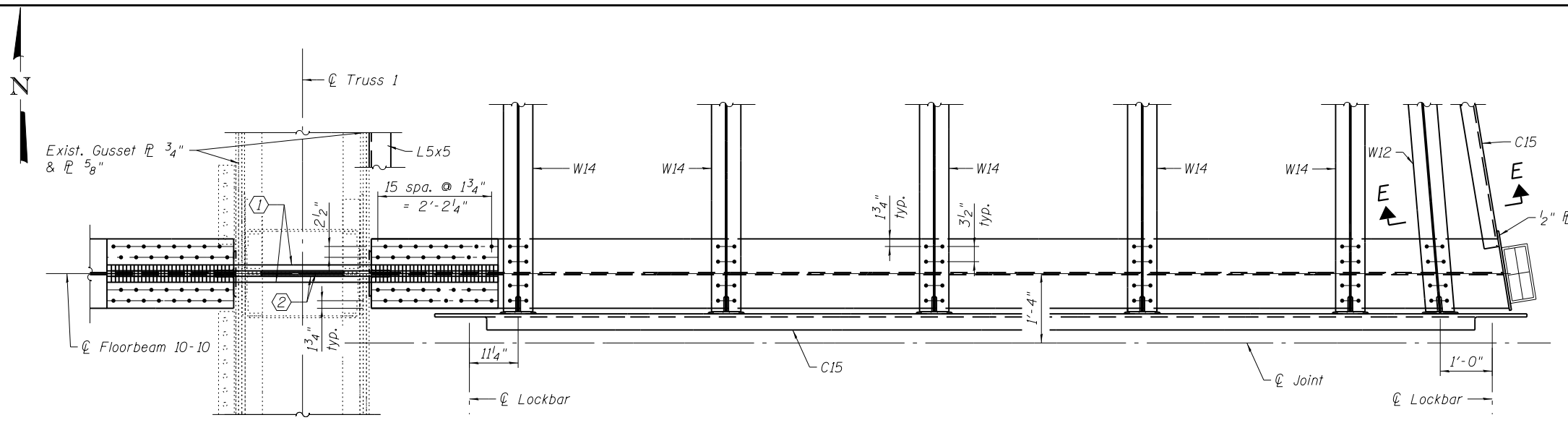
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PLOT SCALE = N.T.S.	CHECKED - J.I.G.	REVISED -
PLOT DATE = 1/22/2018	DRAWN - P.J.L.	REVISED -
	CHECKED - J.I.G.	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
BRACKET AT PANEL PT. 2, 4, 6 & 8
(STRUCTURE NO. 016-6030)

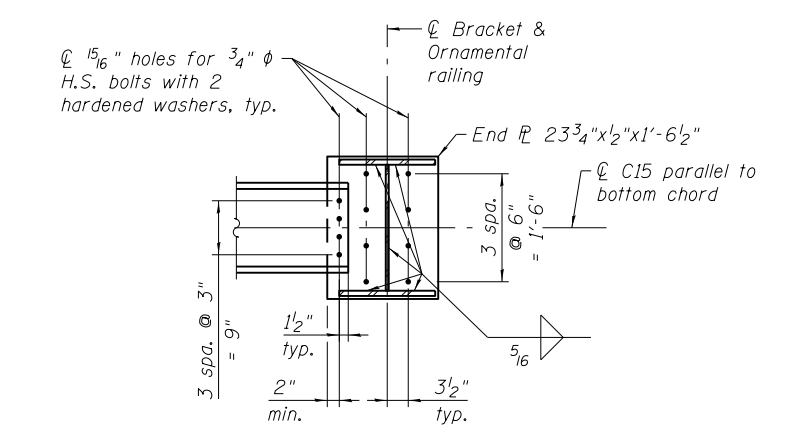
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-61
CDOT PROJECT NO. E-6-650			102 OF 411



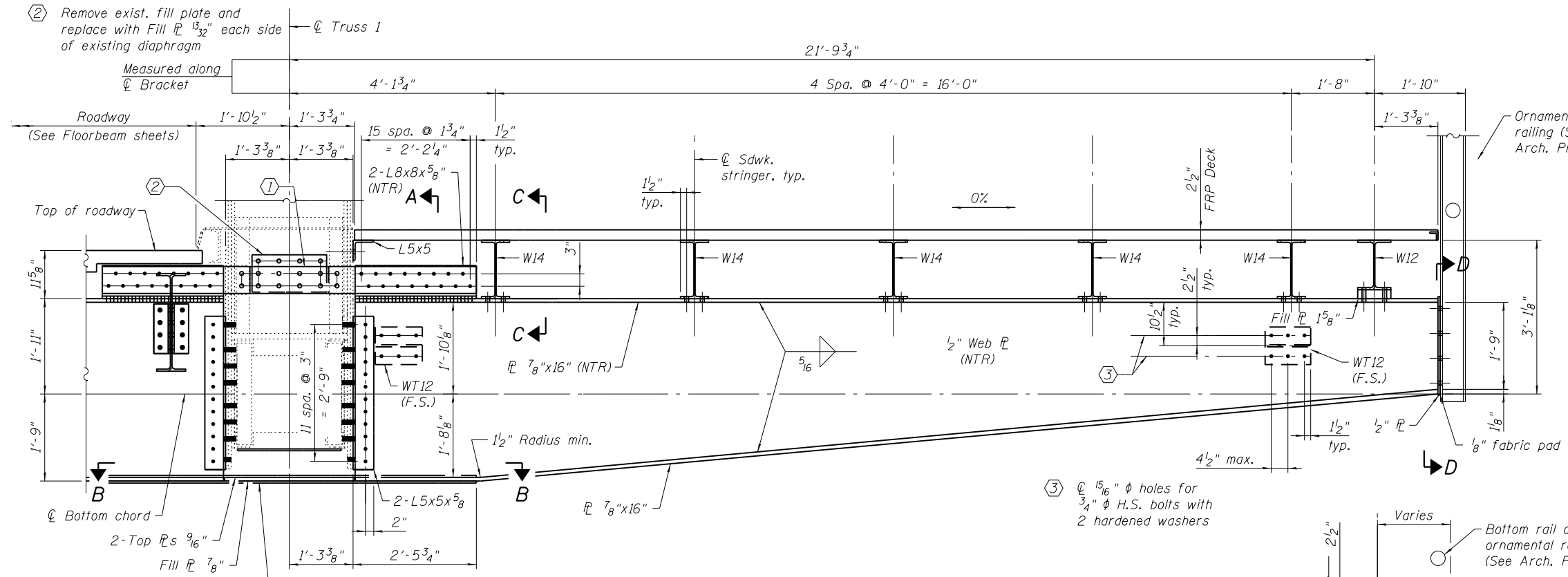
REFERENCE DRAWINGS	
Drawing	Sheet No.
Sidewalk Brackets Inter. Level	1660300345
Bottom Chord L10-L14 Outside Truss	1660301006
Bottom Struts	1660301043

- ① Remove exist. bars and replace with 2-Tie \bar{r} s $6\frac{1}{2}'' \times 1\frac{3}{8}'' \times 7'-6\frac{1}{4}''$ (NTR)
- ② Remove exist. fill plate and replace with Fill \bar{r} $1\frac{3}{32}''$ each side of existing diaphragm

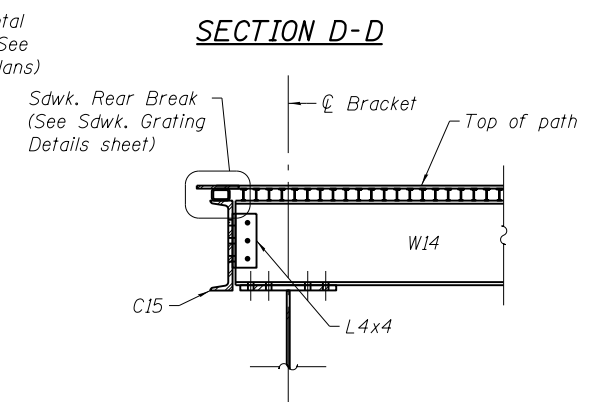
BRACKET TOP PLAN



SECTION D-D

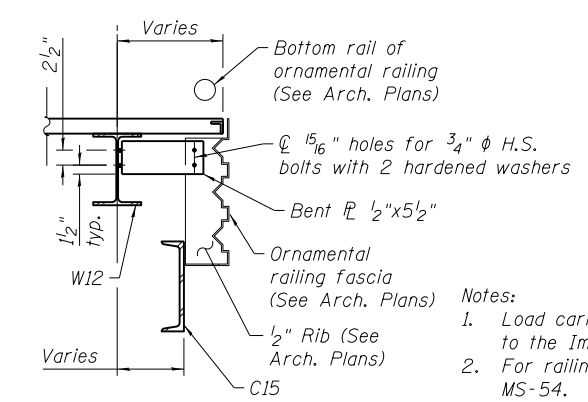


BRACKET ELEVATION - PANEL PT. 10
 (S. Leaf Bracket shown looking north,
 N. Leaf Bracket similar but opposite hand looking south)



SECTION C-C

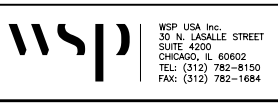
- ③ \bar{r} $1\frac{5}{16}''$ ϕ holes for $3\frac{3}{4}''$ ϕ H.S. bolts with 2 hardened washers



SECTION E-E

- Notes:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 2. For railing and fascia \bar{r} bolt connection detail see sheet MS-54.
 3. For Section A-A & B-B, see sheet MS-67.

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WSP USA Inc.
 30 N. LASALLE STREET
 SUITE 4000
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1684

USER NAME =	lopezgonzalez	DESIGNED -	PJL	REVISED -	
PLOT SCALE =	N.T.S.	CHECKED -	IJL	REVISED -	
PLOT DATE =	1/22/2018	DRAWN -	PJL	REVISED -	
		CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

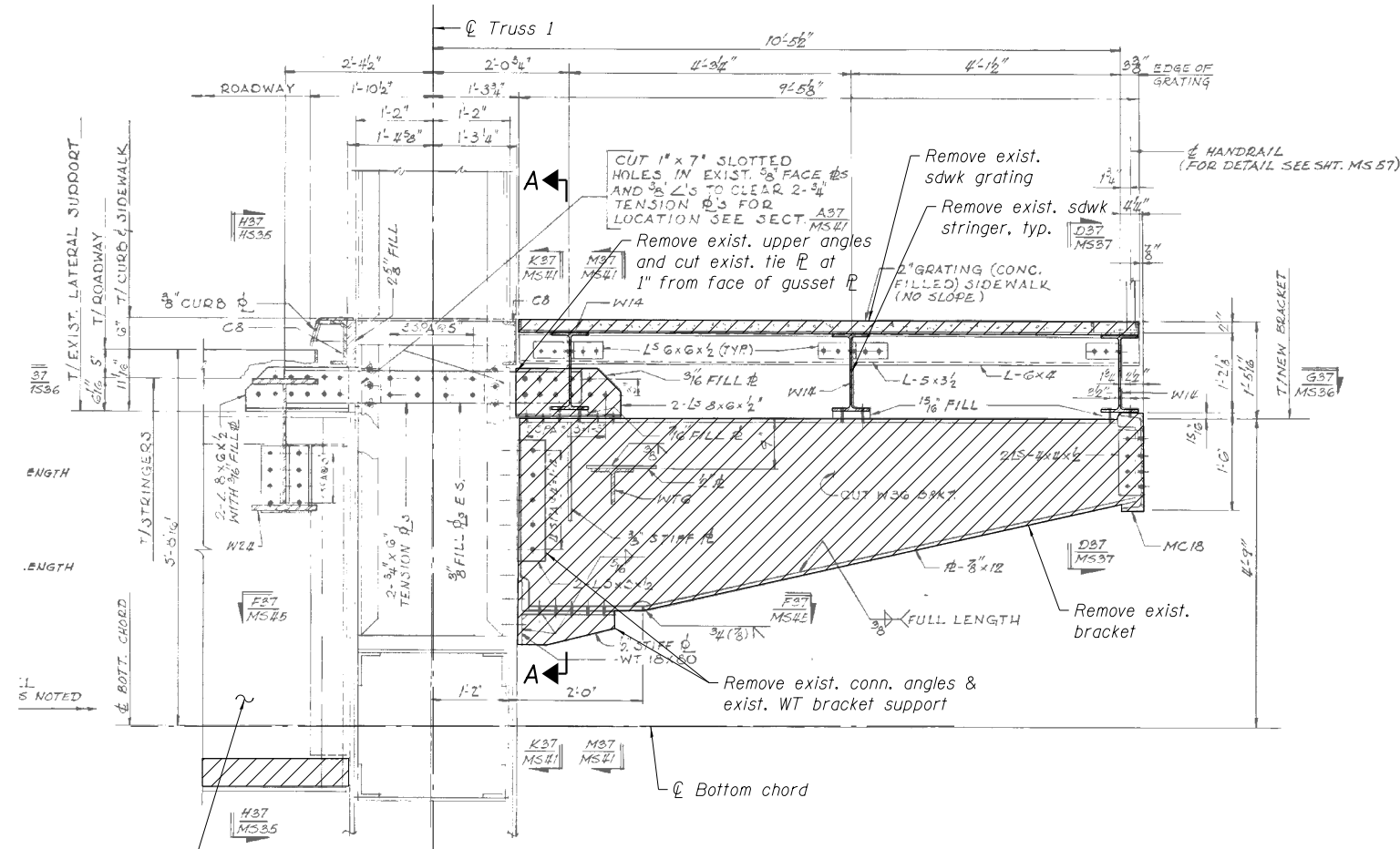
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
SIDEWALK BRACKET AT PANEL PT. 10
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-62
CDOT PROJECT NO. E-6-650			103 OF 411

REFERENCE DRAWINGS

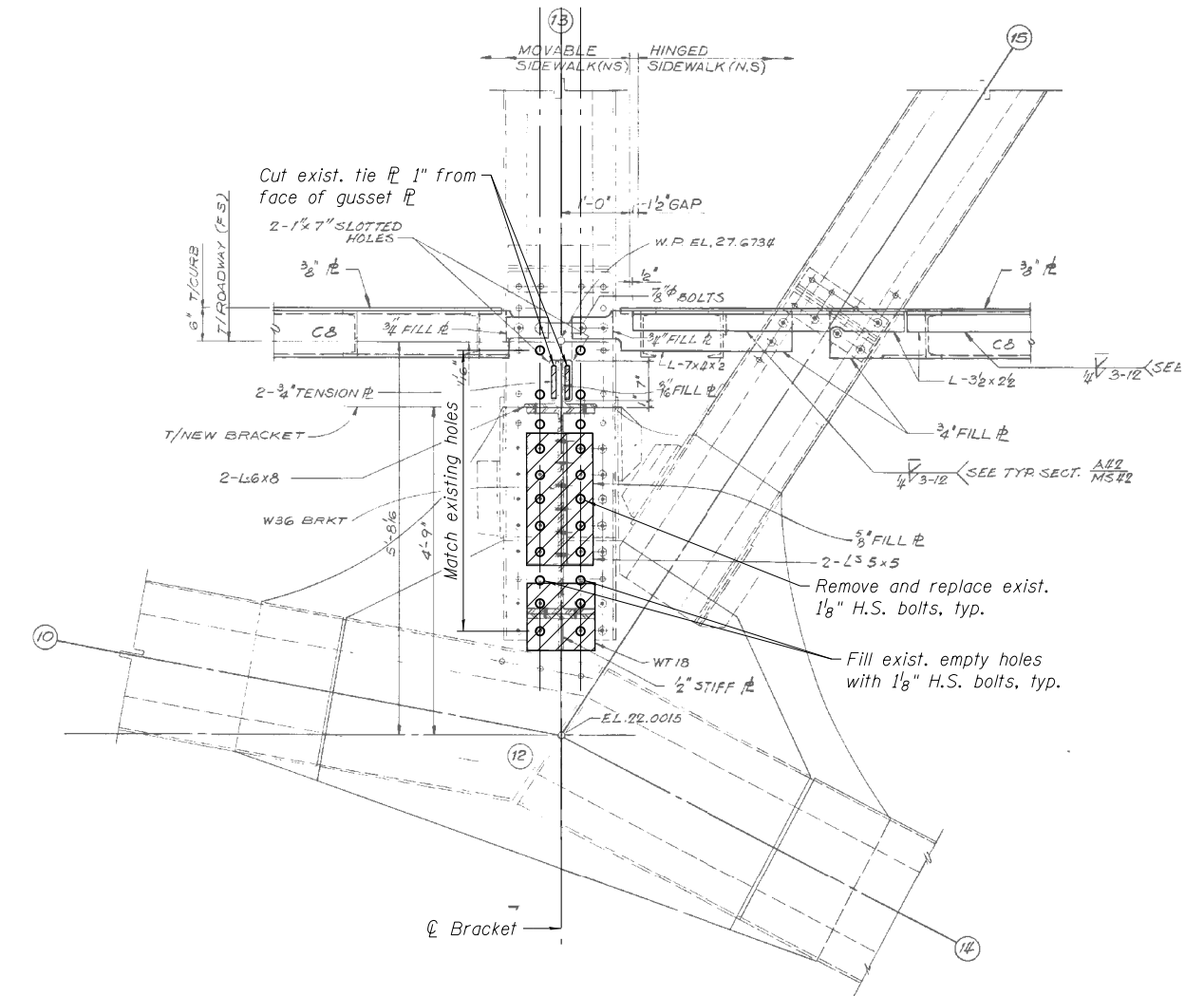
Drawing	Sheet No.
Inter. Level Sections at Panel Pts. 10 & 12	1660300240
Inter. Level Sidewalk Brackets 10 & 12	1660300244
Bottom Chord L10-L14' Outside Truss	1660301006
Sidwalk Brackets-Inter. Level	1660300345



BRACKET REMOVAL - PANEL PT. 12

(N. Leaf Bracket shown looking north,
S. Leaf Bracket similar but opposite hand looking south)

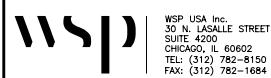
Existing FB 12-12
to be repaired,
see sheet MS-79



**SECTION A-A
CONNECTION MODIFICATION AT PANEL PT. 12**

(Looking west, North Leaf shown,
South Leaf similar but opposite hand)

T:\16917A\Struct\Cadd\Sheets\0166030-E6650-MS063-Brkt12.dgn
22-JAN-2018 13:29



USER NAME =	lopezgonzalez	DESIGNED -	PJL	REVISED -	
PLOT SCALE =	N.T.S.	CHECKED -	IJL	REVISED -	
PLOT DATE =	1/22/2018	DRAWN -	PJL	REVISED -	
		CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

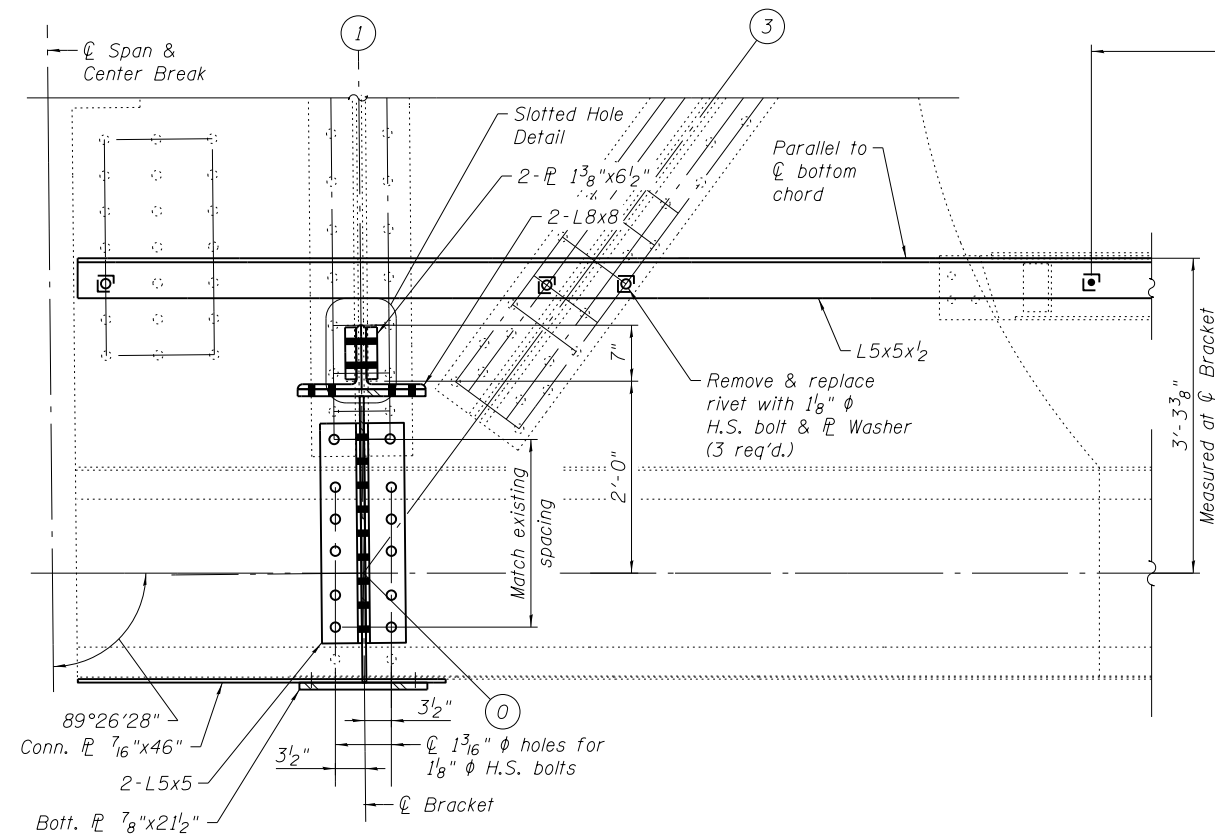
**MOVABLE PART:
BRACKET AT PANEL PT. 12
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-63
CDOT PROJECT NO. E-6-650			104 OF 411

REFERENCE DRAWINGS

Drawing
 Sidewalk Frames Inter. Level
 Sidewalk Framing
 Post at Center Outside Truss
 Posts Outside Truss
 Diagonals Outside Truss
 Bottom Chord L4-LOA
 Sidewalk Bracket-Inter. Level

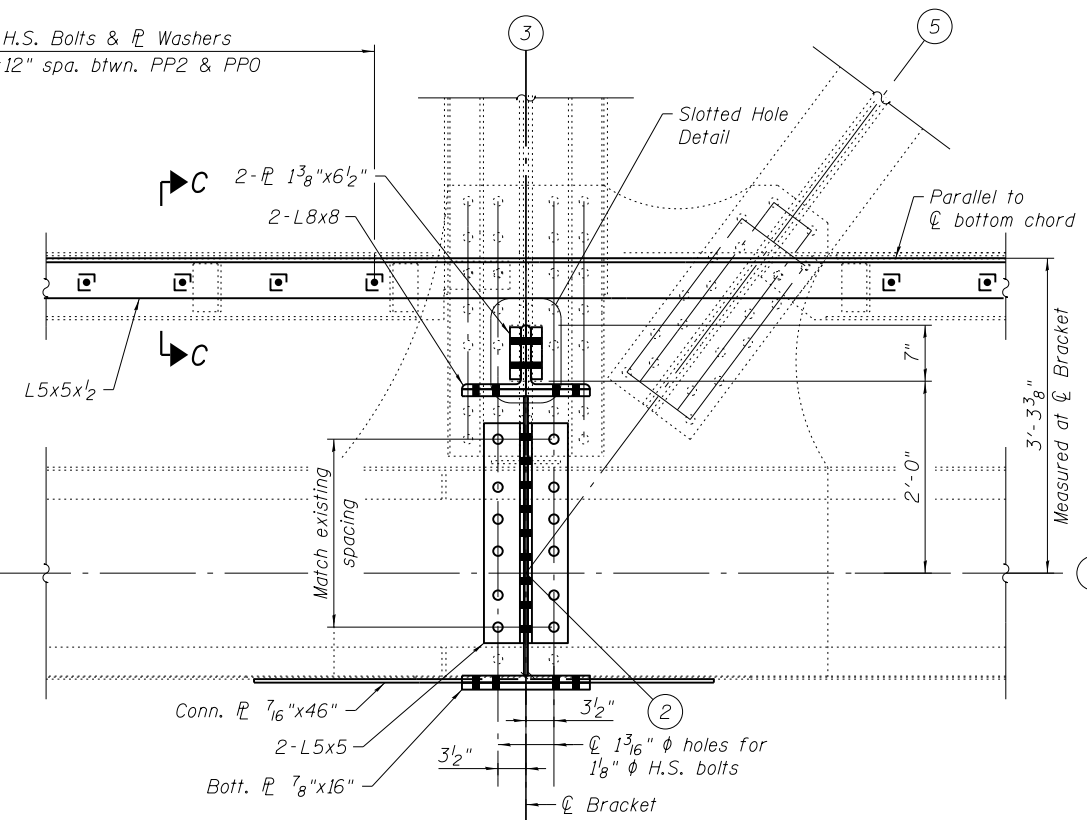
Sheet No.
 1660300358
 1660300455
 1660300988
 1660300989
 1660300992
 1660301008
 1660300343



SECTION A-A

BRACKET CONNECTION AT PANEL PT. 0 NORTH LEAF

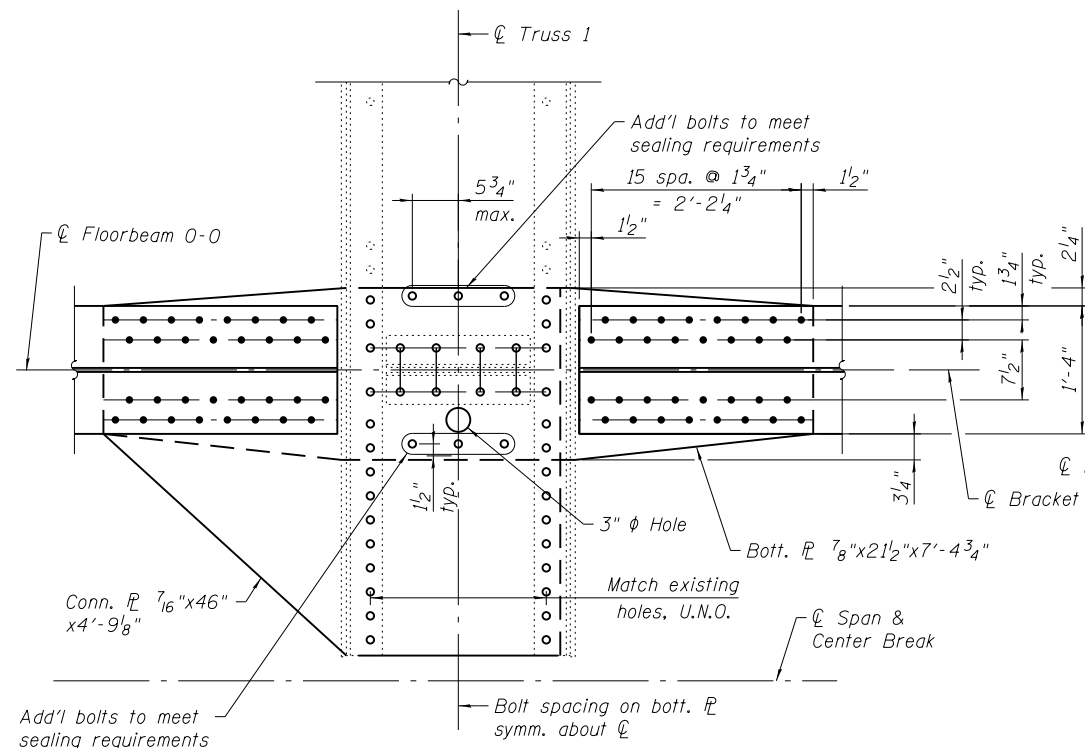
(Looking west)



SECTION A-A

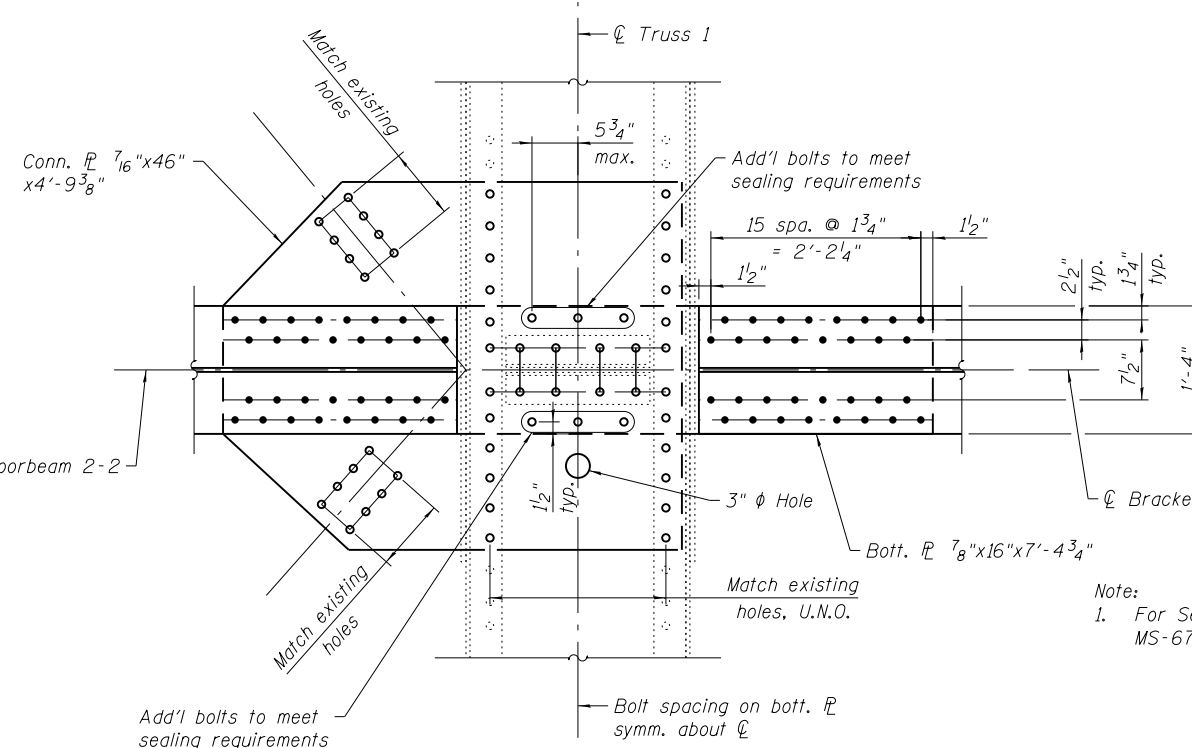
BRACKET CONNECTION AT PANEL PT. 2 NORTH LEAF

(Looking west)



SECTION B-B

BRACKET CONNECTION AT PANEL PT. 0 NORTH LEAF

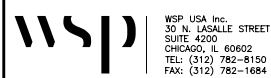


SECTION B-B

BRACKET CONNECTION AT PANEL PT. 2 NORTH LEAF

Note:
 1. For Section C-C and Slotted Hole Detail, see sheet MS-67.

T:\16917A\Struct\Cadd\Sheets\0166030-E6650-MS064-BrktD-2N_Conn.dgn
 22-JAN-2018 13:29



USER NAME = lopezgonzalez
 DESIGNED - PJL
 CHECKED - IJL
 PLOT SCALE = N.T.S.
 DRAWN - PJL
 PLOT DATE = 1/22/2018
 CHECKED - JIG

DESIGNED - PJL
 CHECKED - IJL
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 CHECKED - JIG

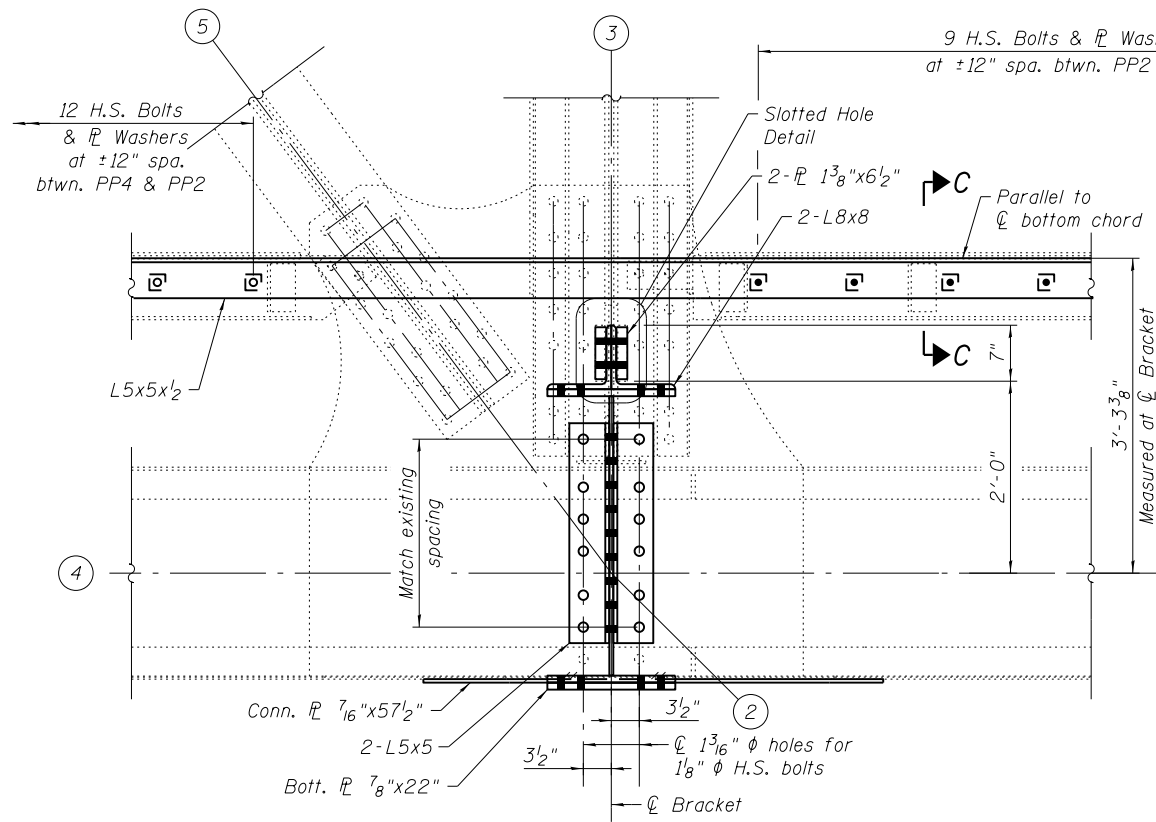
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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

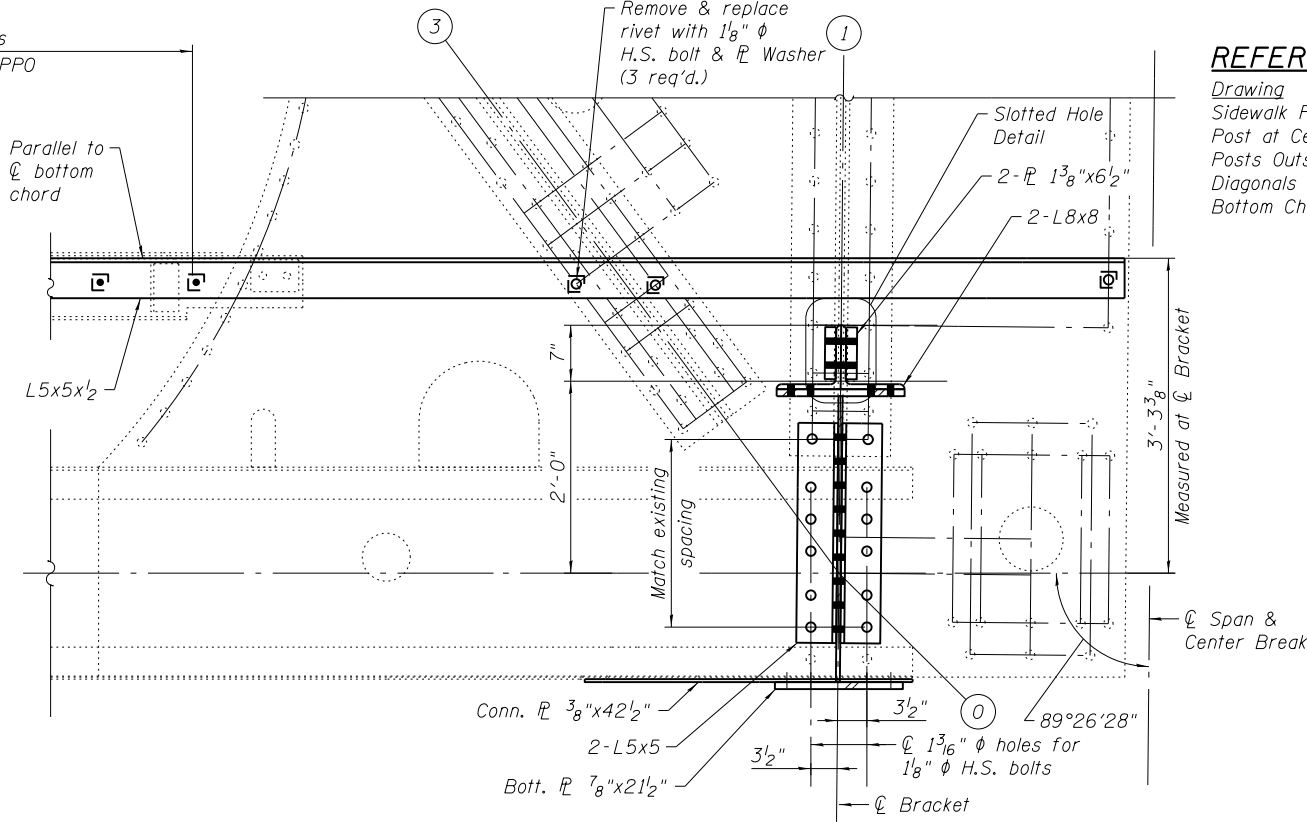
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

MOVABLE PART:
BRACKET CONNECTION AT PANEL PT. 0 & 2 N. LEAF
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-64
CDOT PROJECT NO. E-6-650			105 OF 411



SECTION A-A
BRACKET CONNECTION AT PANEL PT. 2 SOUTH LEAF
 (Looking west)

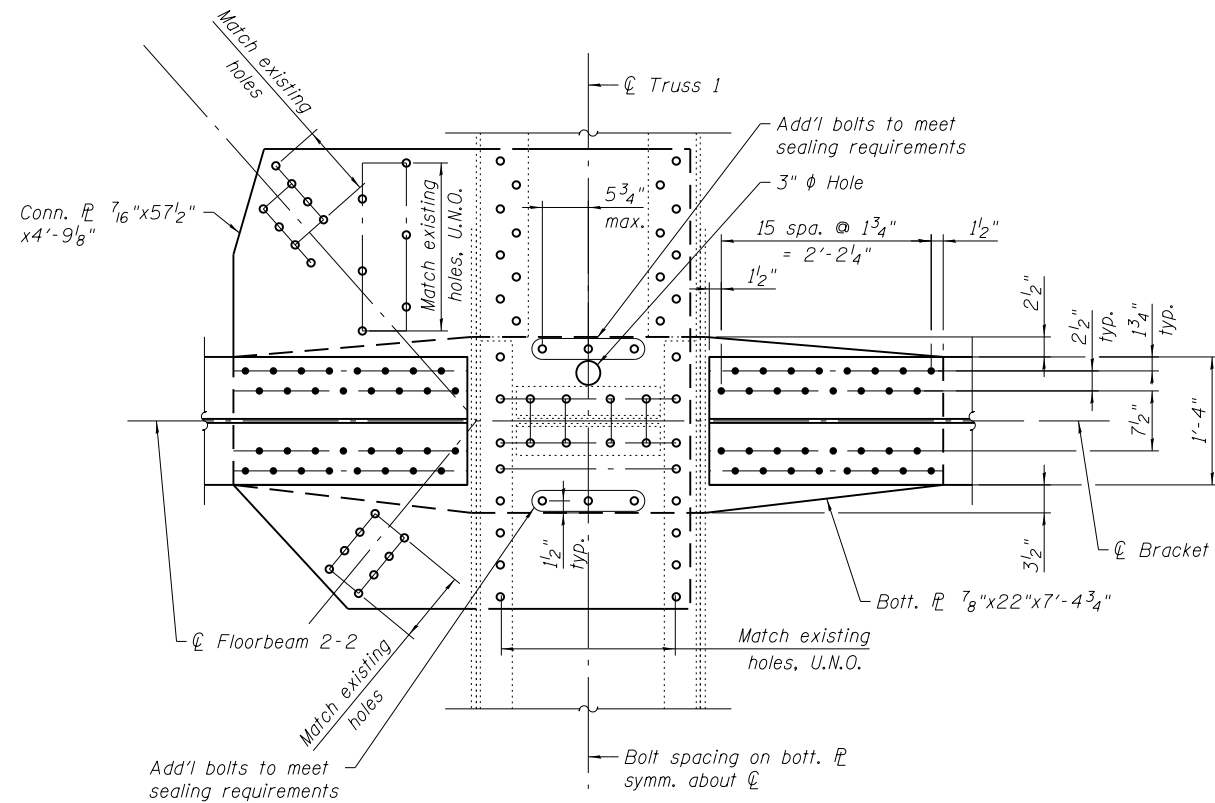


SECTION A-A
BRACKET CONNECTION AT PANEL PT. 0 SOUTH LEAF
 (Looking west)

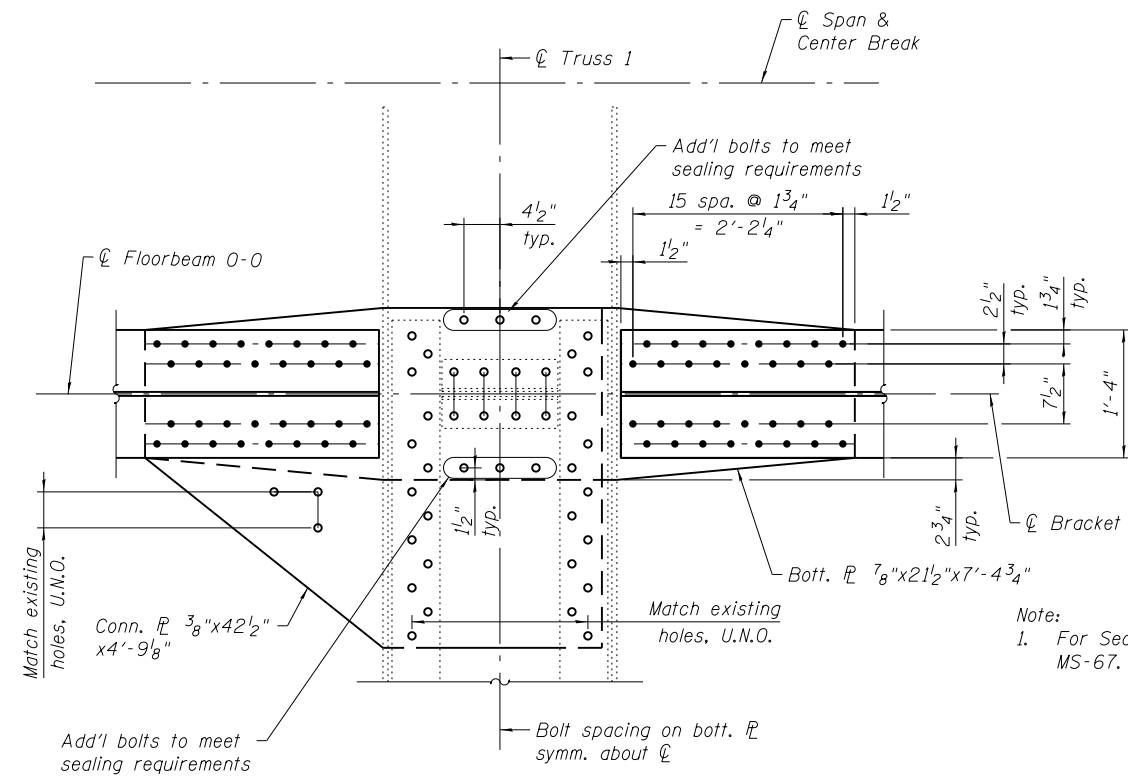
REFERENCE DRAWINGS

Drawing
 Sidewalk Frames Inter. Level
 Post at Center Outside Truss
 Diagonals Outside Truss
 Bottom Chord L4-L0

Sheet No.
 1660300358
 1660300988
 1660300989
 1660300992
 1660301009



SECTION B-B
BRACKET CONNECTION AT PANEL PT. 2 SOUTH LEAF



SECTION B-B
BRACKET CONNECTION AT PANEL PT. 0 SOUTH LEAF

Note:
 1. For Section C-C and Slotted Hole Detail, see sheet MS-67.

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USER NAME = lopezgonzalez
 DESIGNED - P.J.L.
 CHECKED - I.J.L.
 PLOT SCALE = N.T.S.
 DRAWN - P.J.L.
 PLOT DATE = 1/22/2018
 CHECKED - J.I.G.
 REVISED -

DESIGNED - P.J.L.
 CHECKED - I.J.L.
 DRAWN - P.J.L.
 CHECKED - J.I.G.
 REVISED -

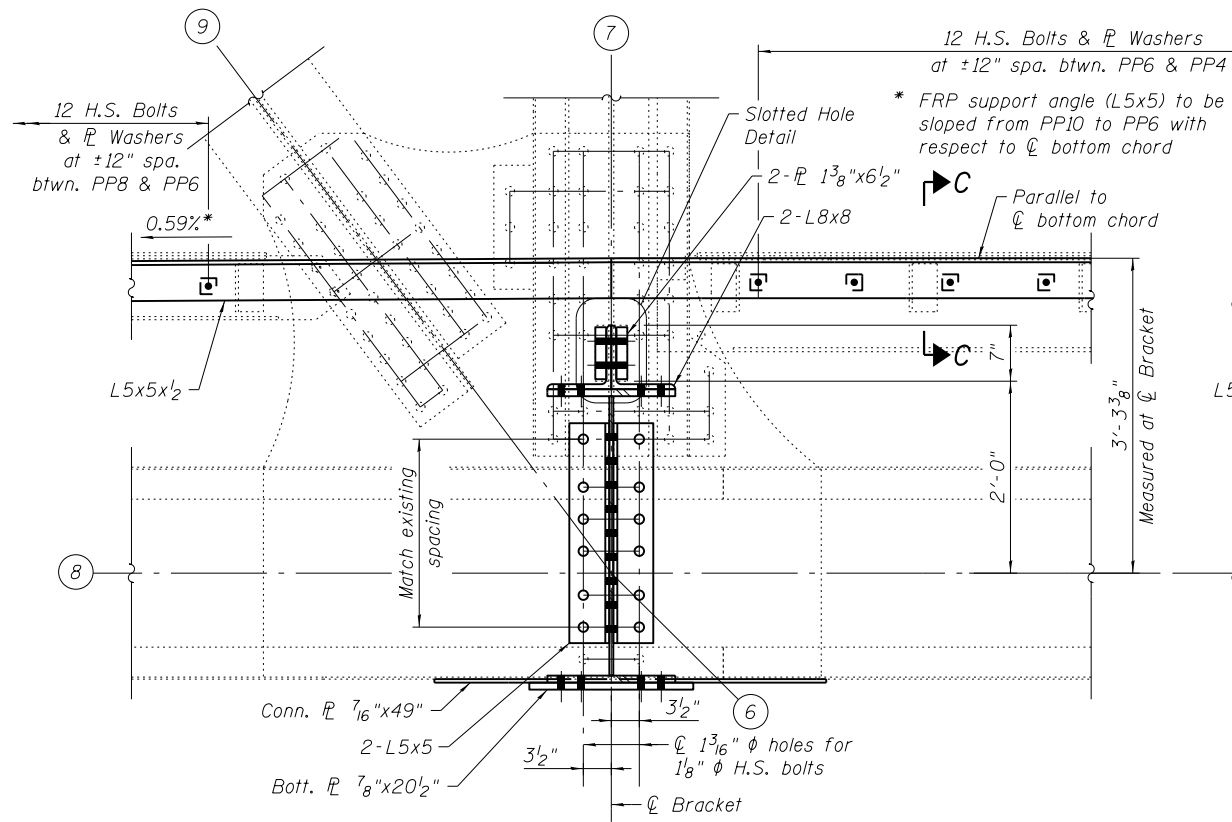
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 REVISED -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

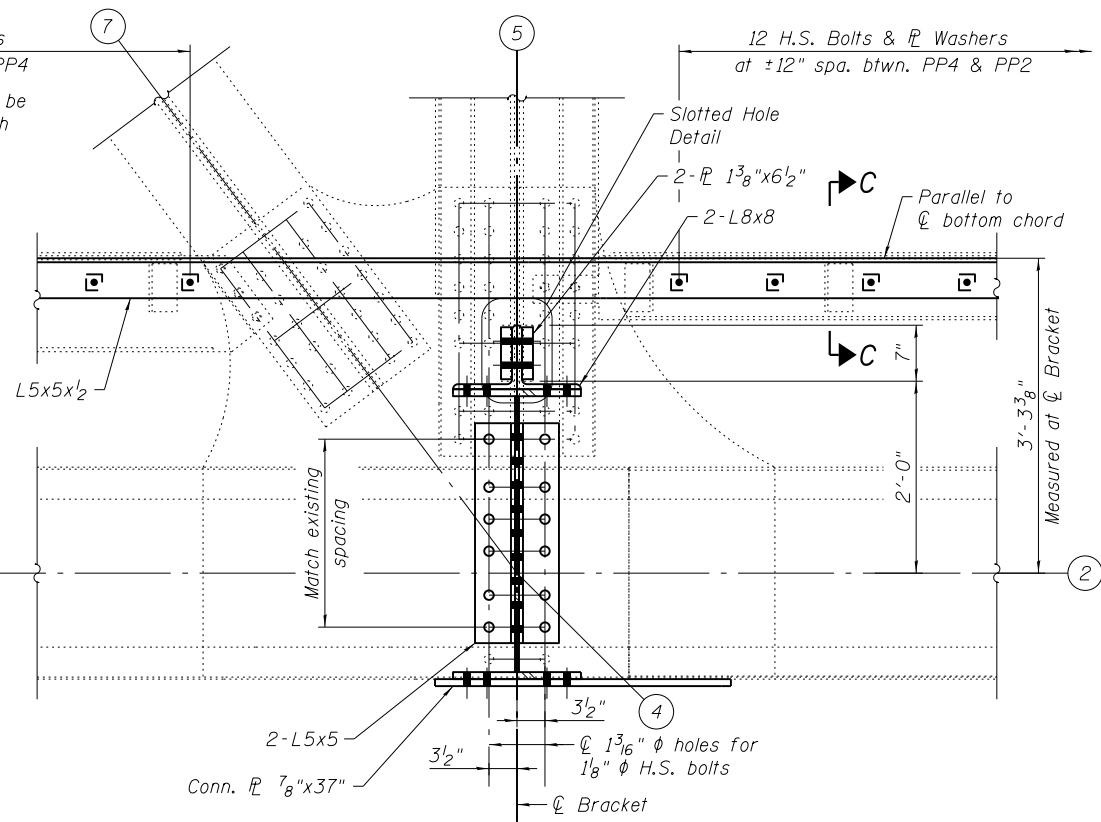
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
BRACKET CONNECTION AT PANEL PT. 0 & 2 S. LEAF
(STRUCTURE NO. 016-6030)

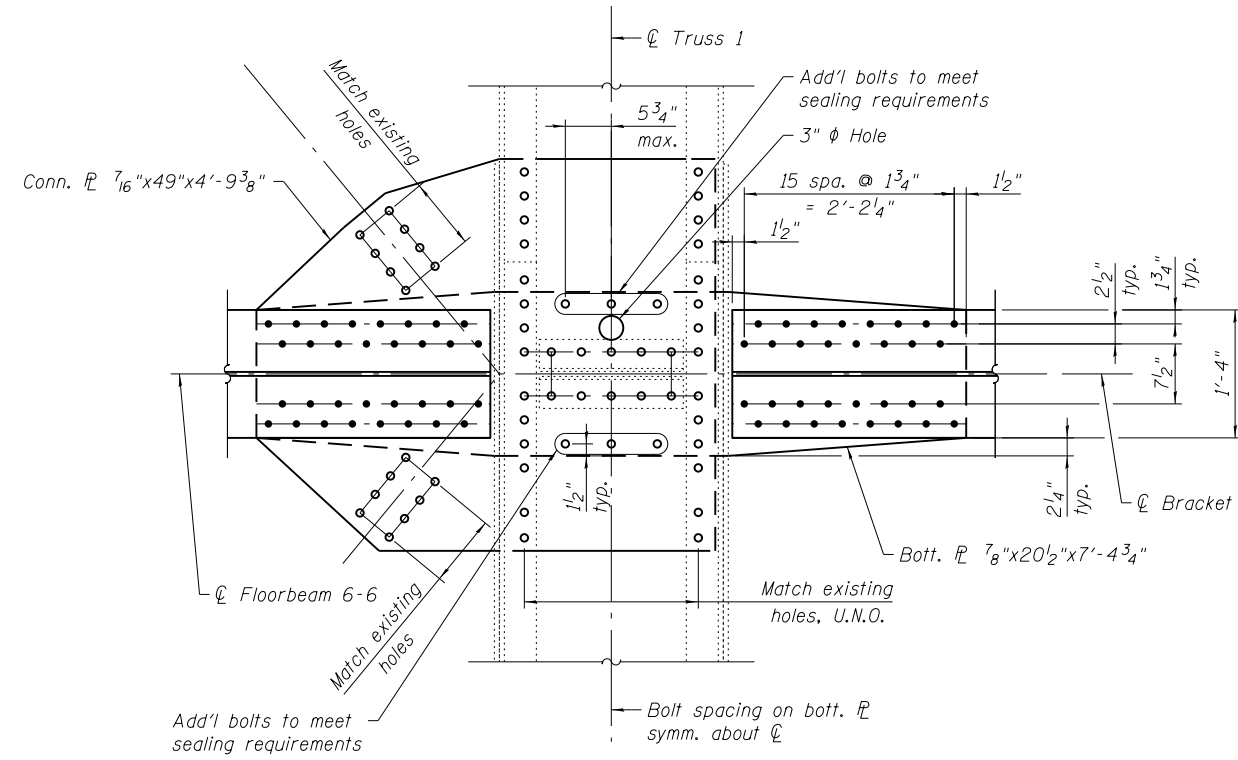
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-65
CDOT PROJECT NO. E-6-650			106 OF 411



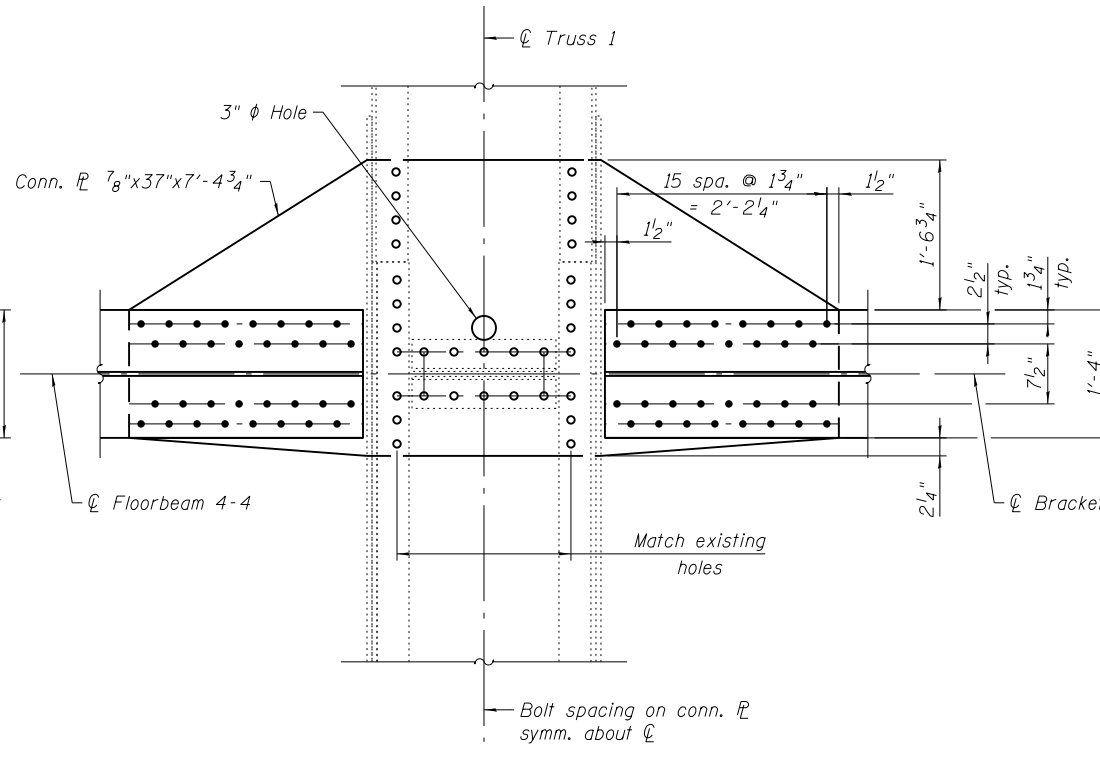
SECTION A-A
BRACKET CONNECTION AT PANEL PT. 6
 (Looking west, South Leaf shown,
 North Leaf similar but opposite hand)



SECTION A-A
BRACKET CONNECTION AT PANEL PT. 4
 (Looking west, South Leaf shown,
 North Leaf similar but opposite hand)



SECTION B-B
BRACKET CONNECTION AT PANEL PT. 6



SECTION B-B
BRACKET CONNECTION AT PANEL PT. 4

REFERENCE DRAWINGS

- Drawing
- Sidewalk Frames Inter. Level
- Sidewalk Frames Inter. Level
- Posts Outside Truss
- Diagonals Outside Truss
- Bottom Chord L4-L10 Outside Truss
- Bottom Chord L4-L0A Outside Truss
- Bottom Chord L4-L0

- Sheet No.
- 1660300358
- 1660300359
- 1660300989
- 1660300992
- 1660301007
- 1660301008
- 1660301009

Note:
 1. For Section C-C and Slotted Hole Detail, see sheet MS-67.

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wsp
 WSP USA Inc.
 30 N. LA SALLE STREET
 SUITE 4200
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1884

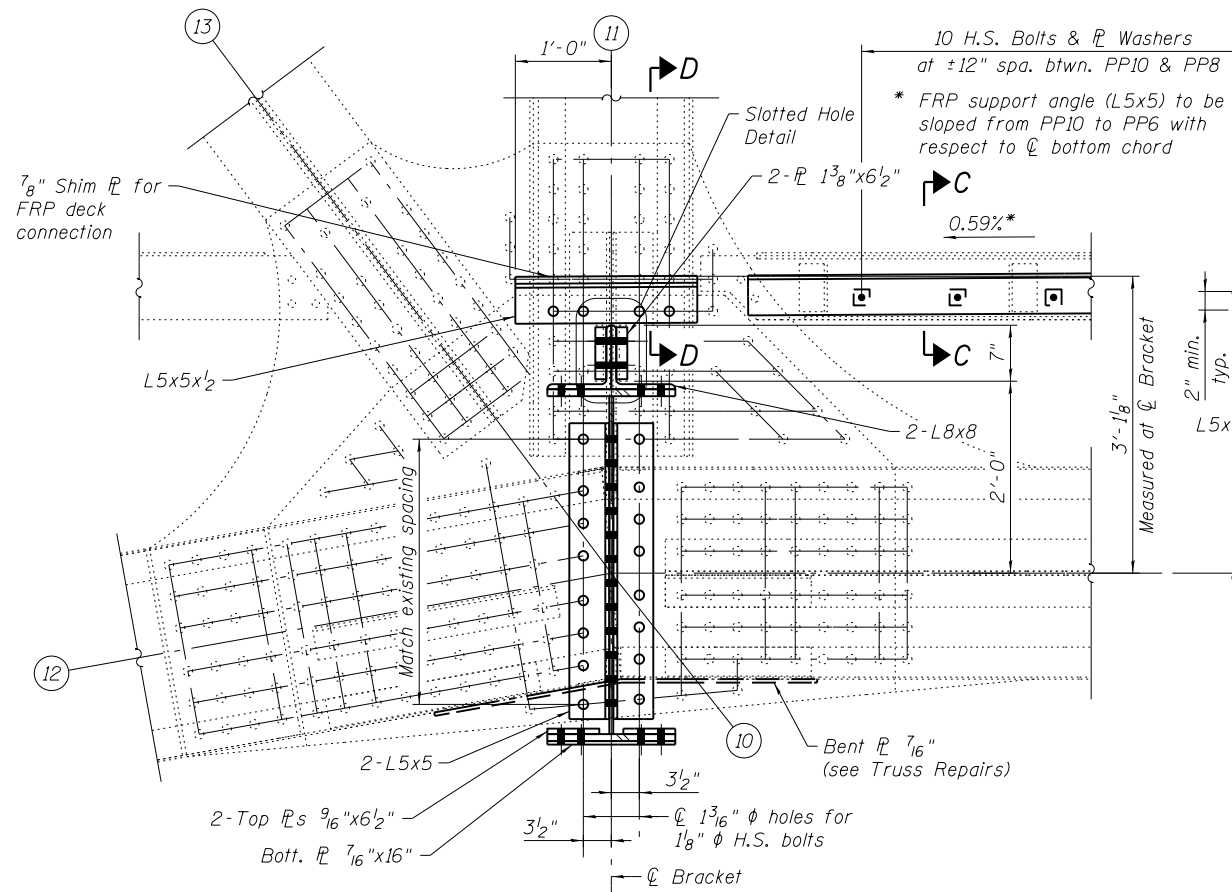
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PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

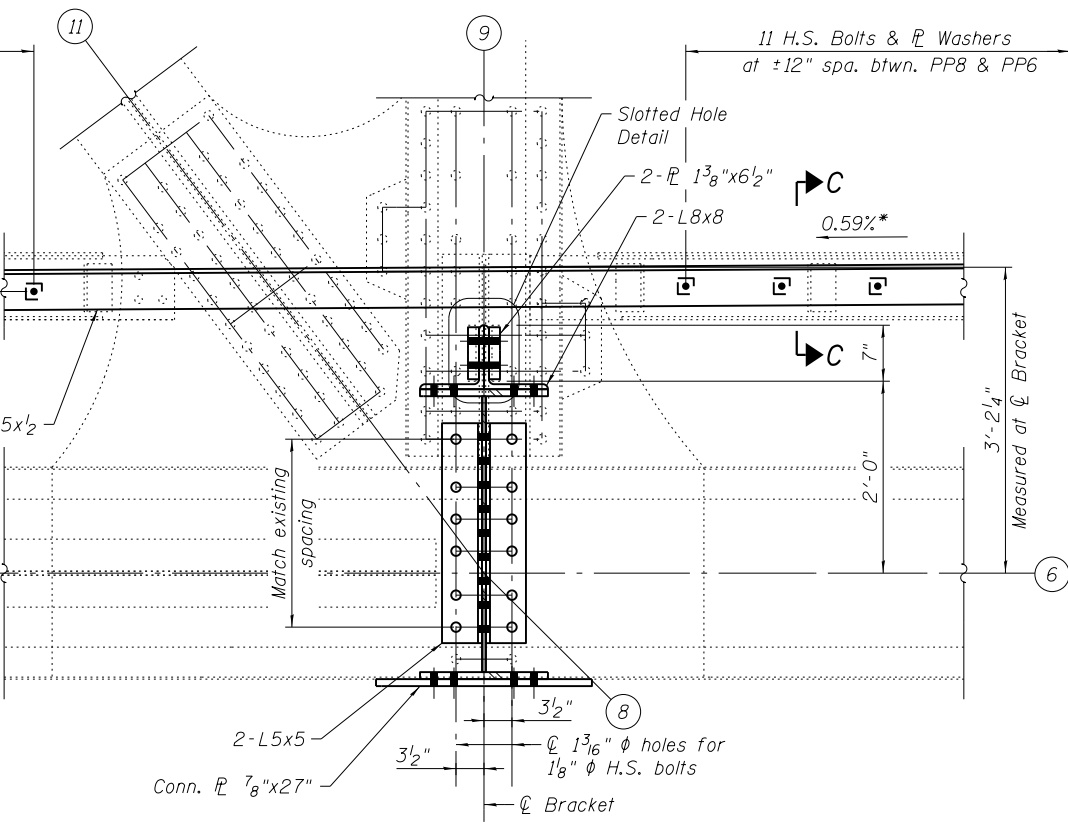
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
BRACKET CONNECTION AT PANEL PT. 4 & 6
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-66
CDOT PROJECT NO. E-6-650			107 OF 411



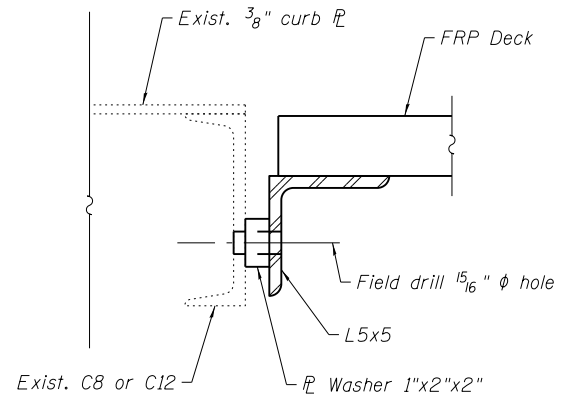
SECTION A-A
BRACKET CONNECTION AT PANEL PT. 10
 (Looking west, South Leaf shown,
 North Leaf similar but opposite hand)



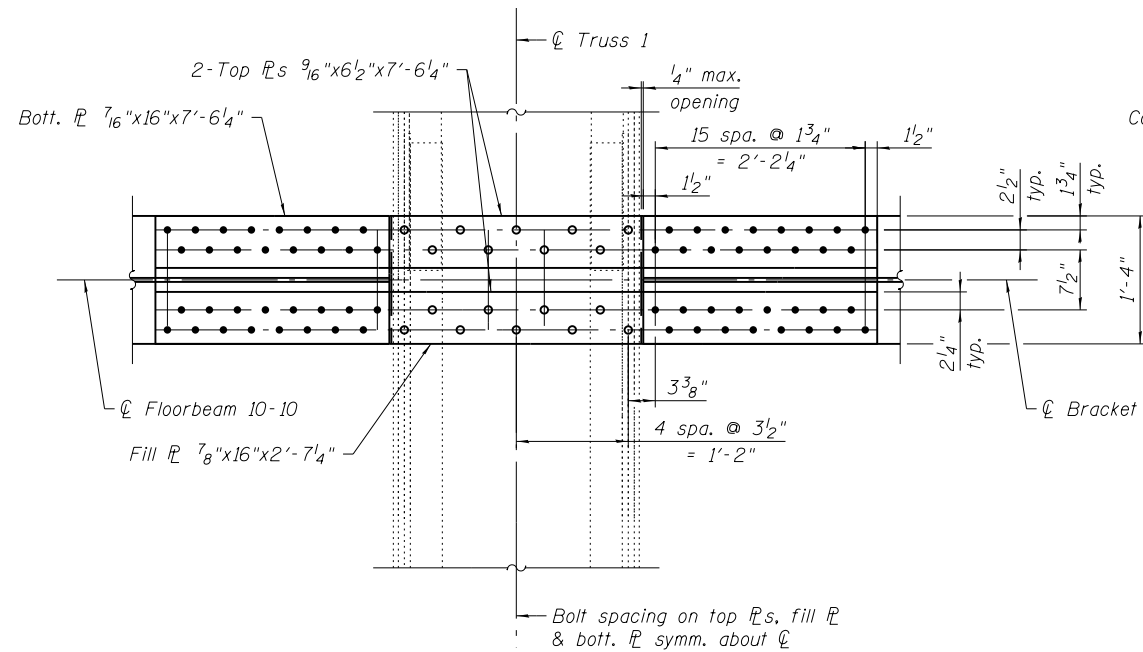
SECTION A-A
BRACKET CONNECTION AT PANEL PT. 8
 (Looking west, South Leaf shown,
 North Leaf similar but opposite hand)

REFERENCE DRAWINGS

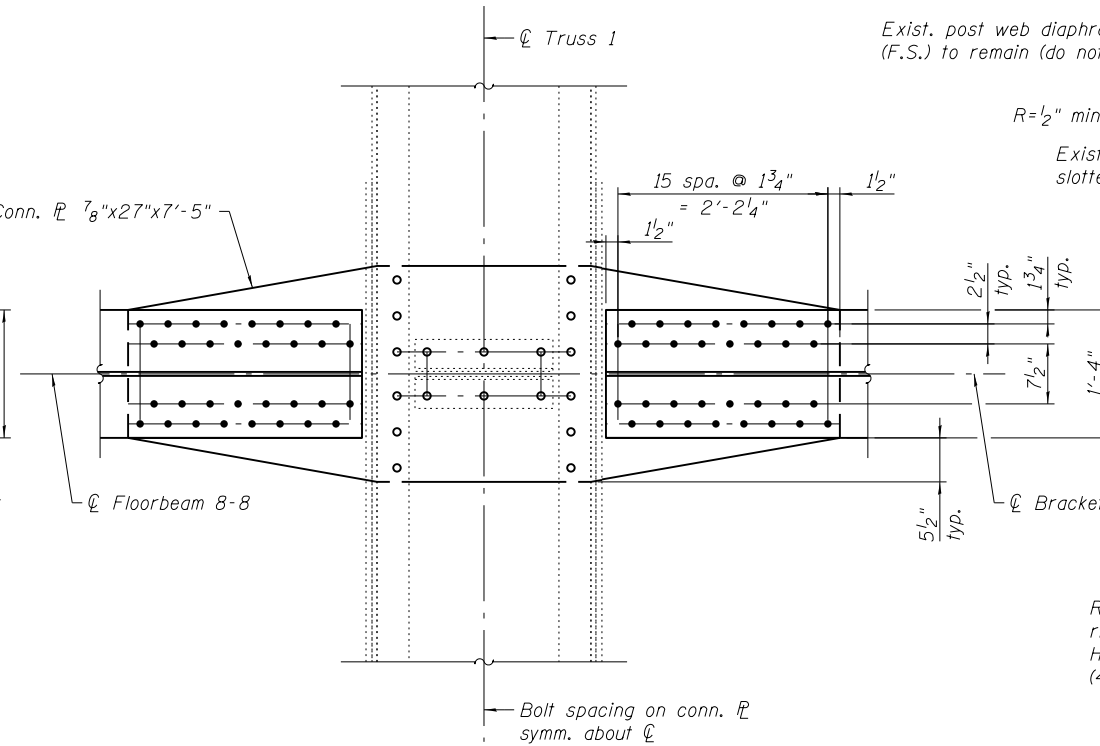
Drawing	Sheet No.
Sidewalk Frames Inter. Level	1660300359
Posts - Outside Truss	1660300990
Diagonals Outside Truss	1660300993
Bottom Chord L10-L14 Outside Truss	1660301006
Bottom Chord L4-L10 Outside Truss	1660301007



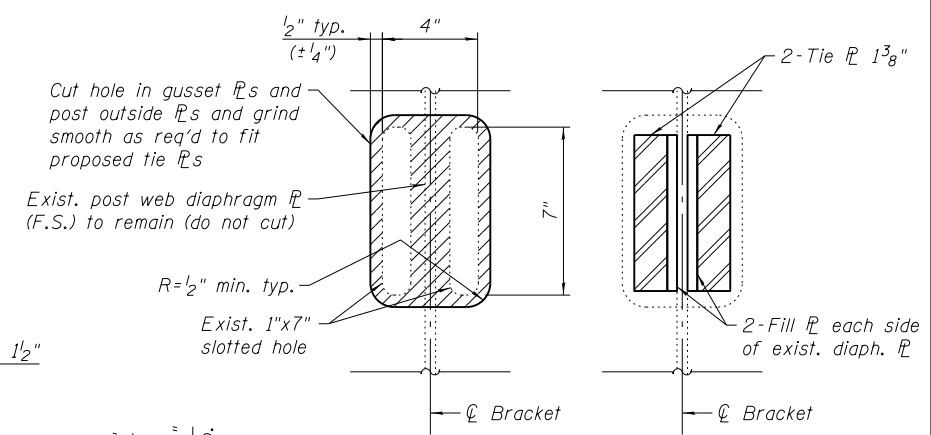
SECTION C-C



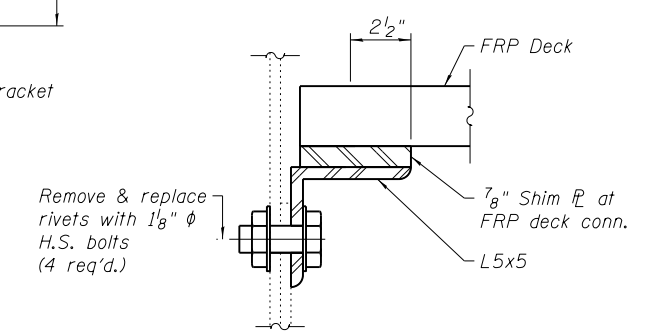
SECTION B-B
BRACKET CONNECTION AT PANEL PT. 10



SECTION B-B
BRACKET CONNECTION AT PANEL PT. 8

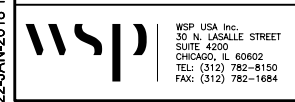


Removal Proposed
SLOTTED HOLE DETAIL



SECTION D-D

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 22-JAN-2018 13:29



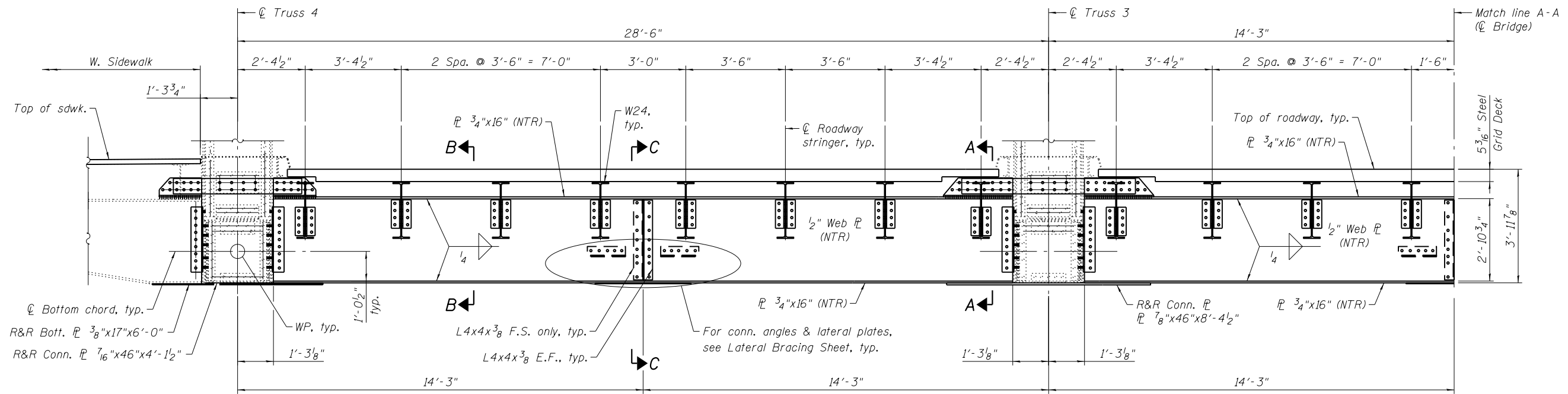
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PLOT SCALE =	N.T.S.	CHECKED -	IJL	REVISED -	
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		CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

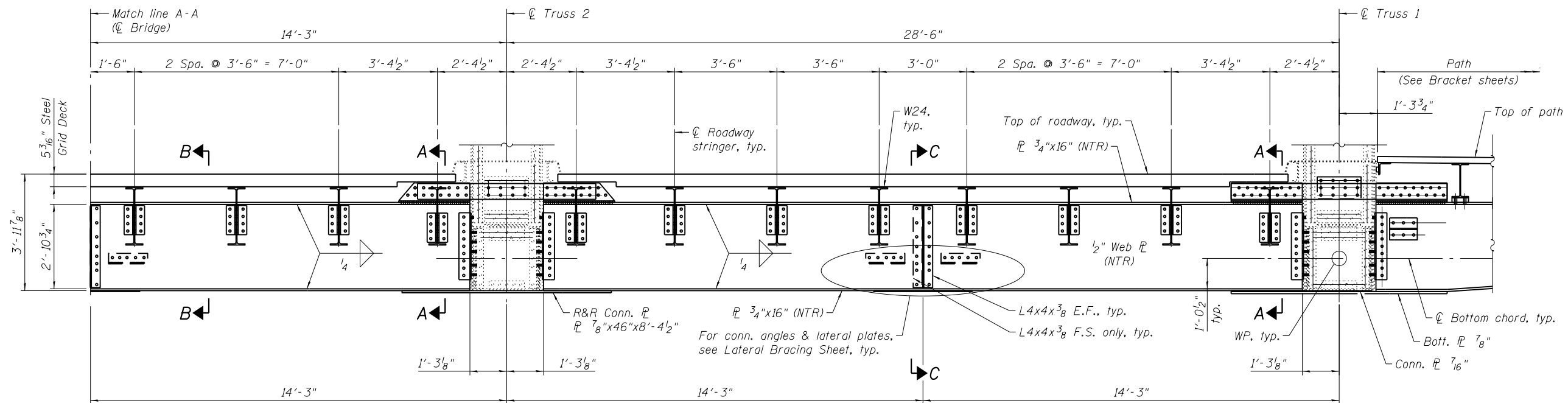
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

MOVABLE PART:
BRACKET CONNECTION AT PANEL PT. 8 & 10
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-67
CDOT PROJECT NO. E-6-650			108 OF 411



FLOORBEAM ELEVATION - PANEL PT. 0
(N. Leaf Floorbeam shown looking north)



FLOORBEAM ELEVATION - PANEL PT. 0
(N. Leaf Floorbeam shown looking north)

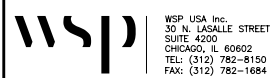
Notes:

1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
2. For Section A-A & B-B, see sheet MS-69.
3. For Section C-C, see sheet MS-70.

REFERENCE DRAWINGS

Drawing	Sheet No.
Tension Plates Inter. Level PPO N. Leaf	1660300450
Post at Center Outside Truss	1660300988
Bottom Chord L4-LoA Outside Truss	1660301008
Bottom Chord L4-LocA-Center Truss	1660301030
Bottom Struts	1660301041

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22-JAN-2018 13:29



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

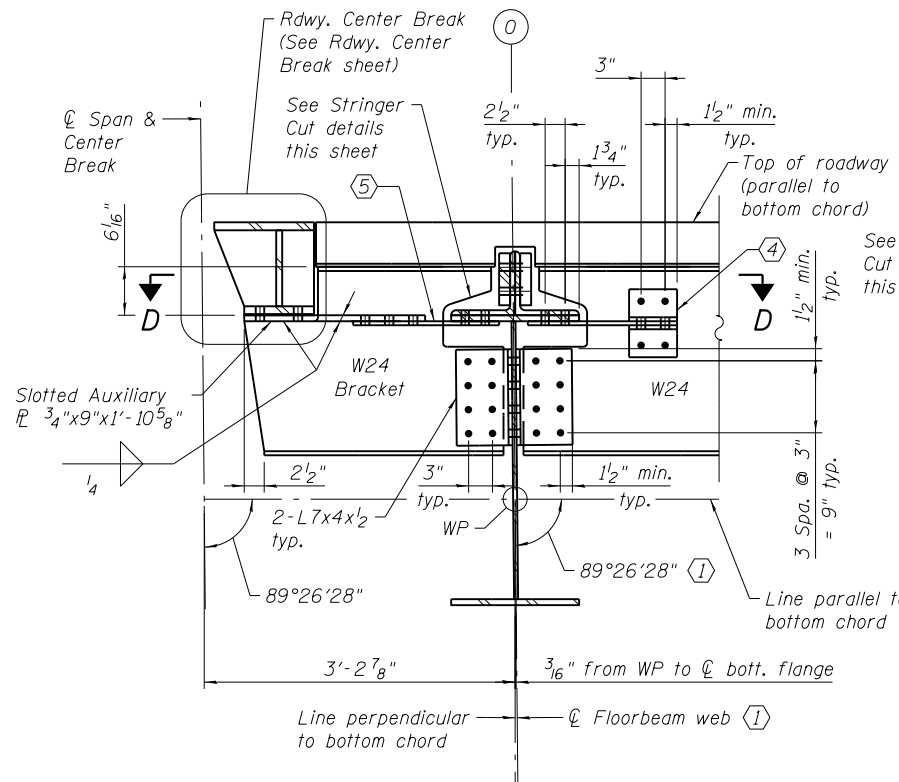
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

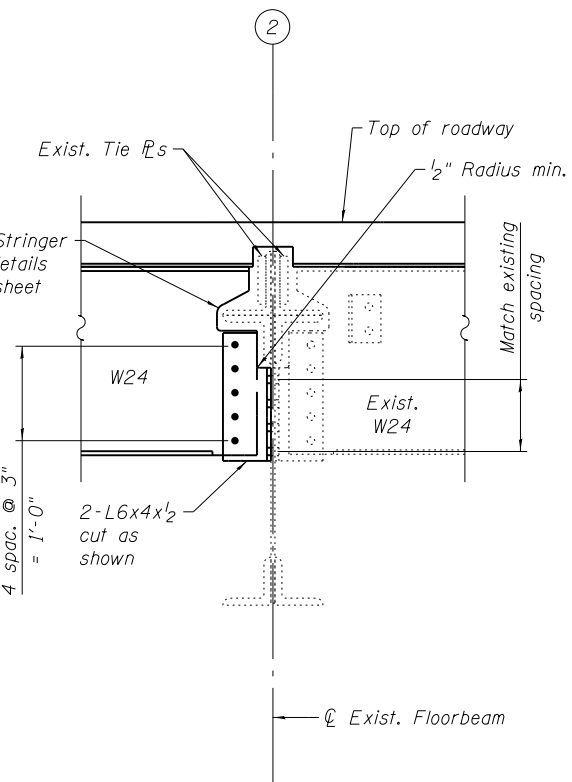
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
FLOORBEAM 0-0N
(STRUCTURE NO. 016-6030)

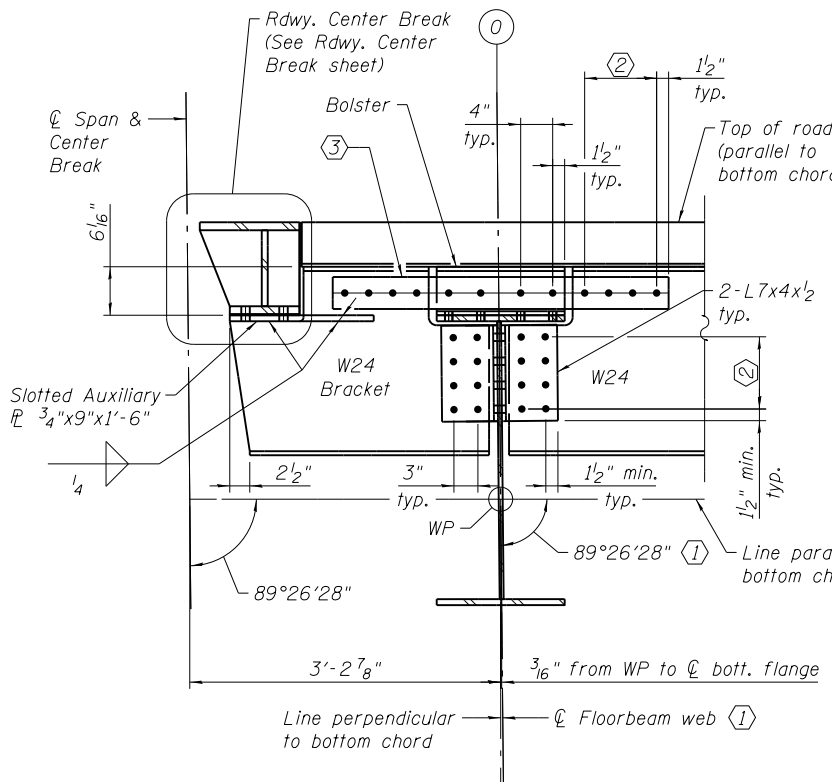
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-68
CDOT PROJECT NO. E-6-650			109 OF 411



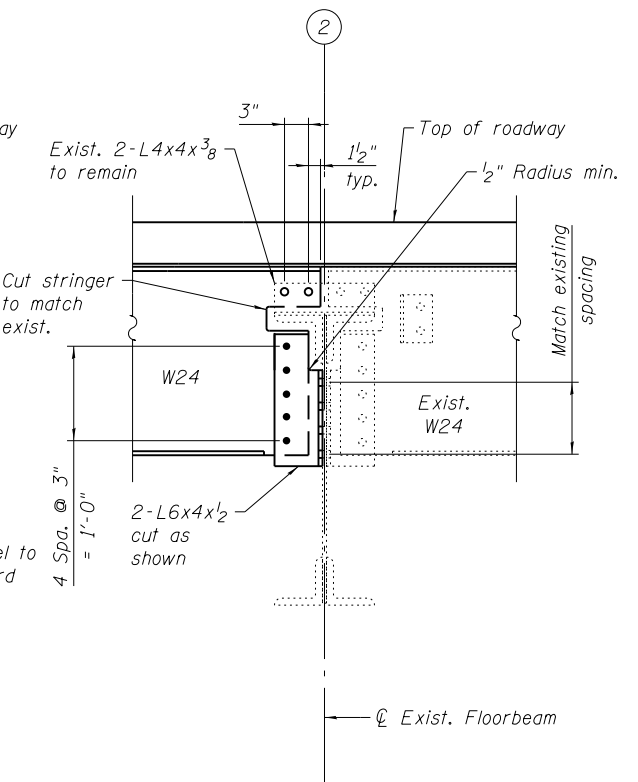
SECTION A-A
STRINGER CONN. AT TRUSS
 (6 locations, Truss 1 shown,
 other locations similar except as noted)



STRINGER CONN. AT TRUSS
(EXIST. FLOORBEAM)
 (4 locations)

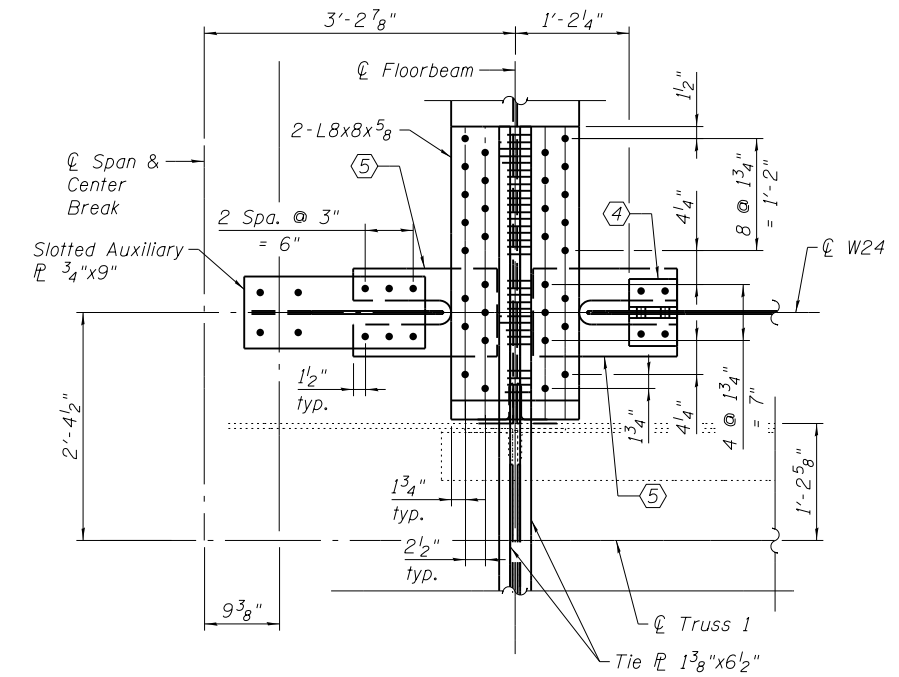


SECTION B-B
TYPICAL STRINGER CONN.
 (18 locations)

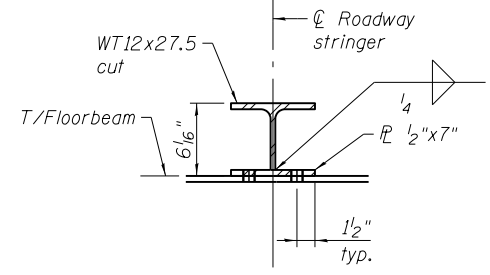


TYPICAL STRINGER CONN.
(EXIST. FLOORBEAM)
 (12 locations)

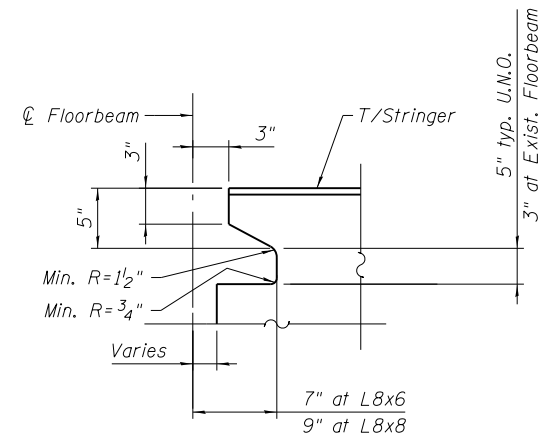
- ① Bracket web shall be parallel to Vertical Post 0-1. Flanges shall be fabricated parallel to bottom chord.
- ② 3 Spa. @ 3" = 9"
- ③ Tie PL 1/2"x4"x3'-6" (NTR) (E.S.)
- ④ 2-L4x4x3/8 (E.S.)
- ⑤ Tie PL 1/2"x11"x1'-6"



SECTION D-D
AT TRUSS 1



TYPICAL BOLSTER



TYPICAL STRINGER CUT

REFERENCE DRAWINGS

Drawing	Sheet No.
Stringers - Inter. Level	1660300327
Post at Center Outside Truss	1660300988
Bottom Chord L4-LoA Outside Truss	1660301008
Bottom Struts	1660301041

Note:
 1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

T:\16917A\Struct\Cadd\Sheets\0166030-E6650-MS069-FBO-N-Def_L.dgn 22-JAN-2018 13:29



USER NAME = lopezgonzalez
 DESIGNED - P.J.L.
 CHECKED - I.J.L.
 PLOT SCALE = N.T.S.
 DRAWN - P.J.L.
 PLOT DATE = 1/22/2018
 CHECKED - JIG

DESIGNED - P.J.L.
 CHECKED - I.J.L.
 DRAWN - P.J.L.
 CHECKED - JIG

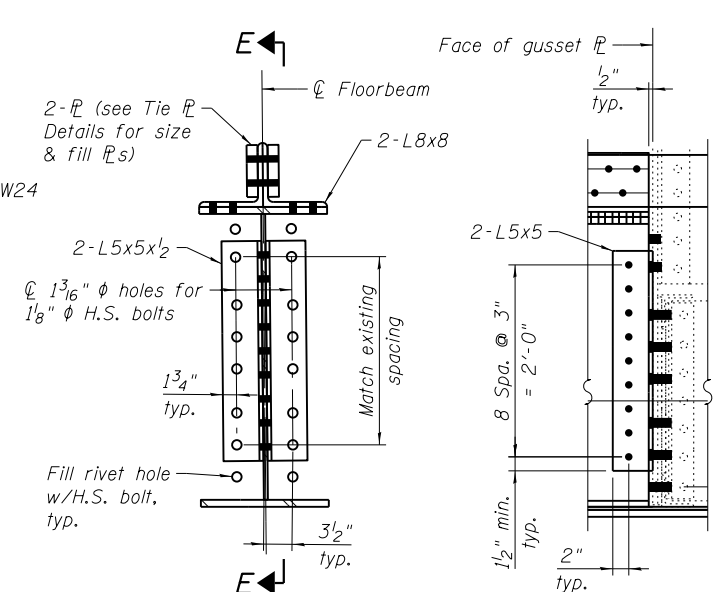
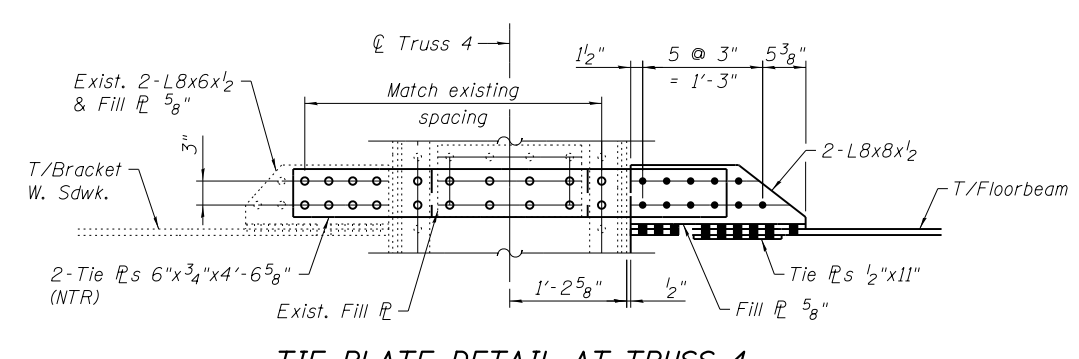
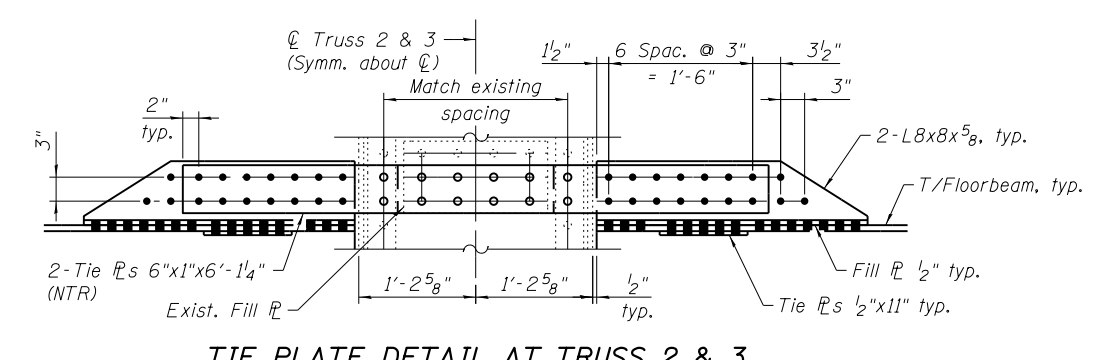
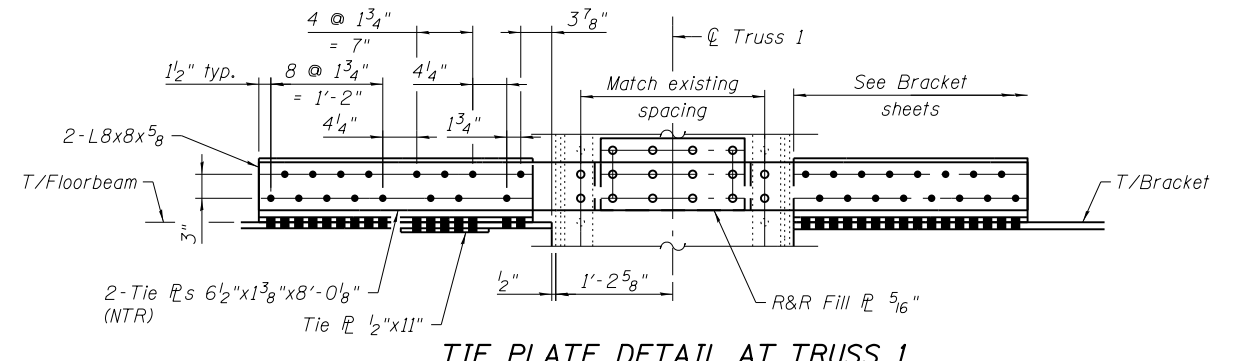
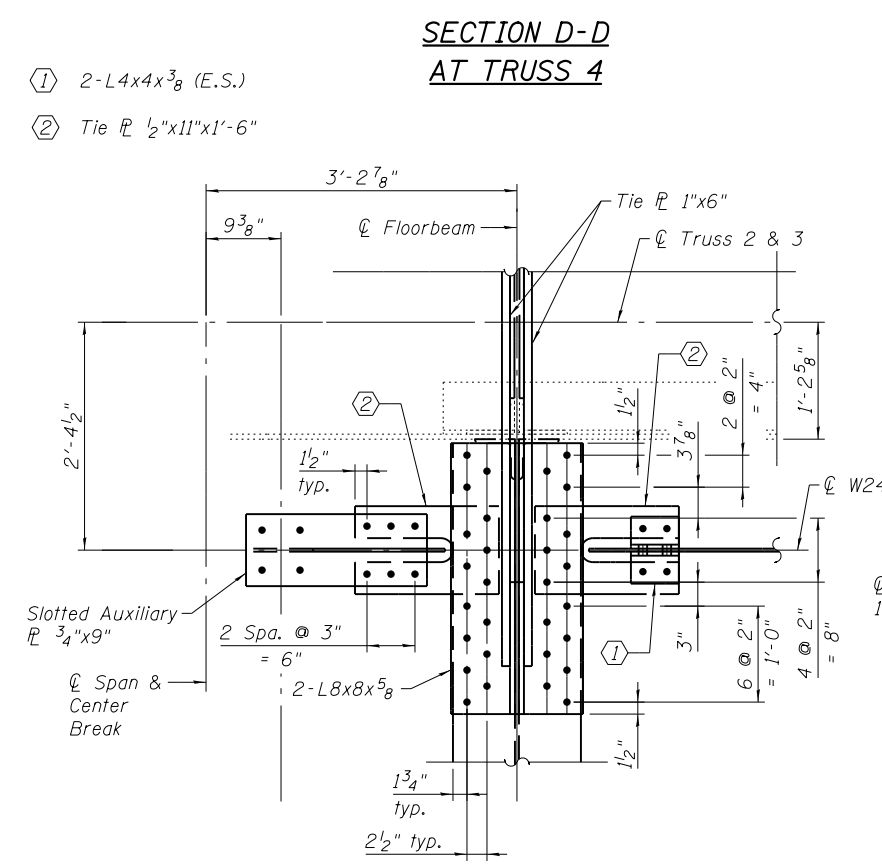
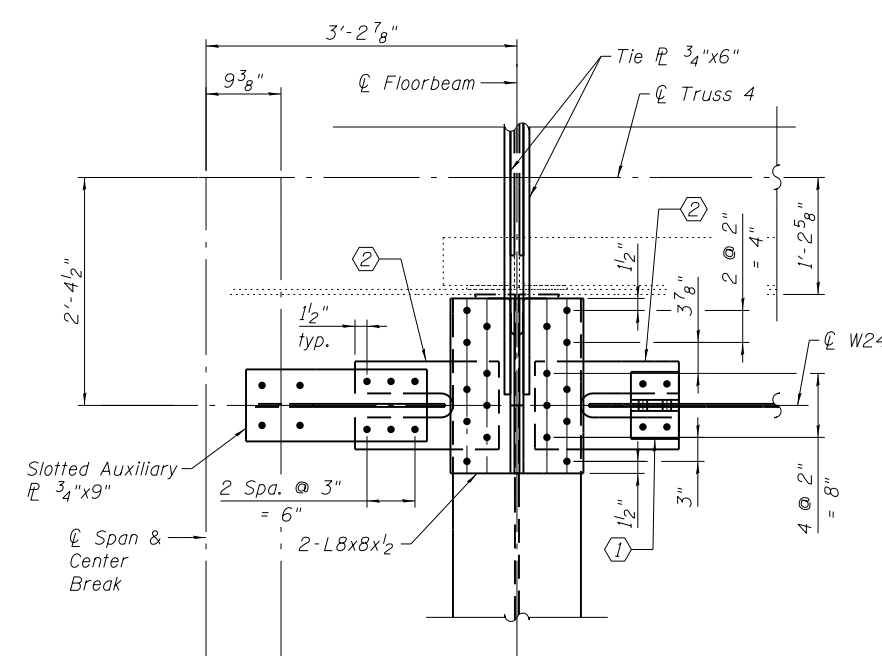
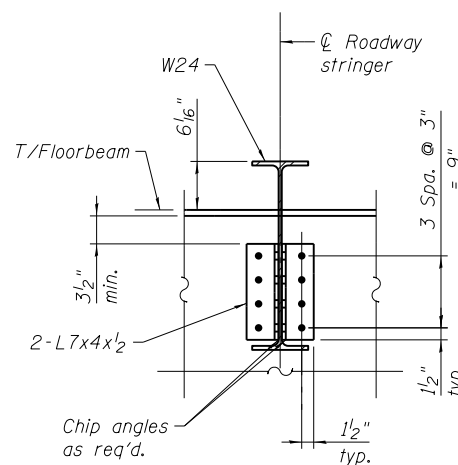
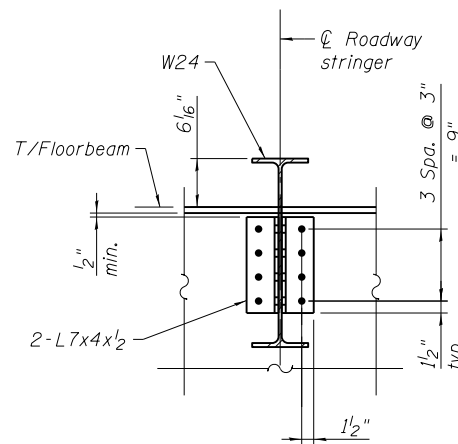
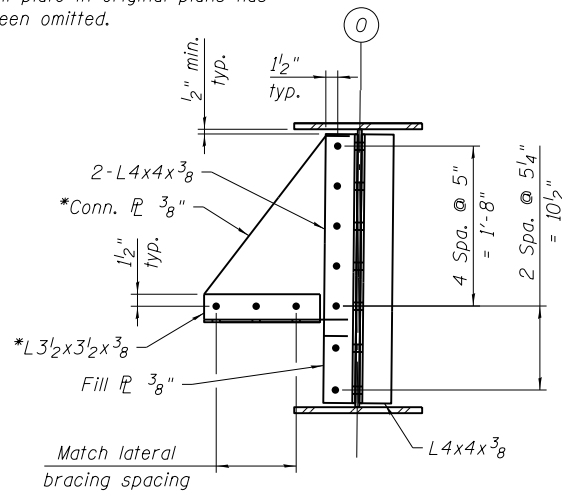
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
FLOORBEAM 0-0N DETAILS I
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-69
CDOT PROJECT NO. E-6-650			110 OF 411

* Adjust Conn. Plate and Conn. Angle lengths since the $\frac{3}{4}$ " web fill plate in original plans has been omitted.

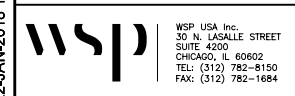


REFERENCE DRAWINGS

Drawing	Sheet No.
Tension plates Inter. Level PPO North Leaf	1660300450
Post at Center Outside Truss	1660300988
Bottom Chord L4-LoA Outside Truss	1660301008
Post - Lo-UicR/L, Lo-UicA Center Truss	1660301010
Bottom Struts and Tie Plates	1660301040
Bottom Struts	1660301041

Note:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

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22-JAN-2018 13:29



WSP USA Inc.
30 N. LASALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

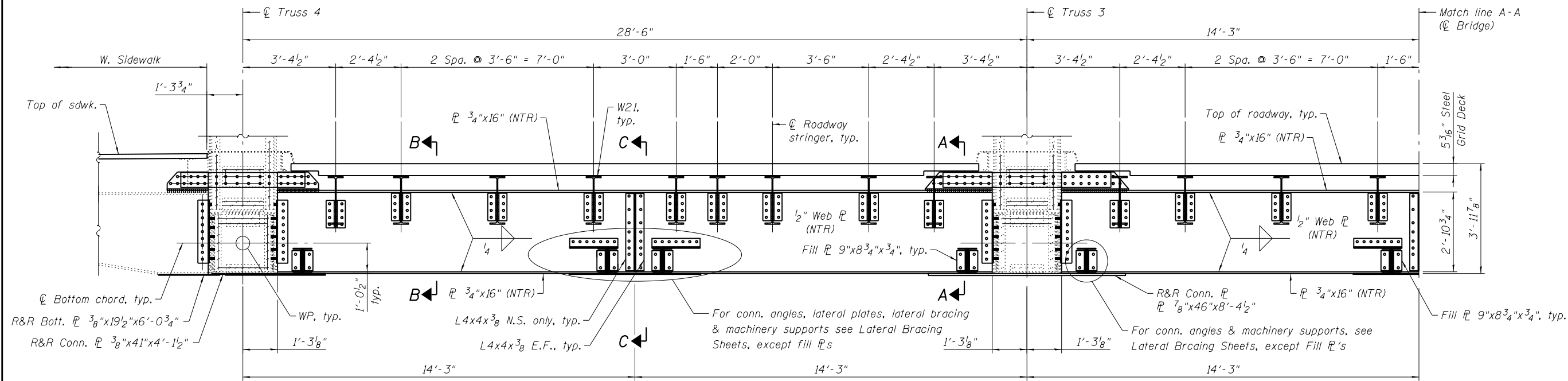
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

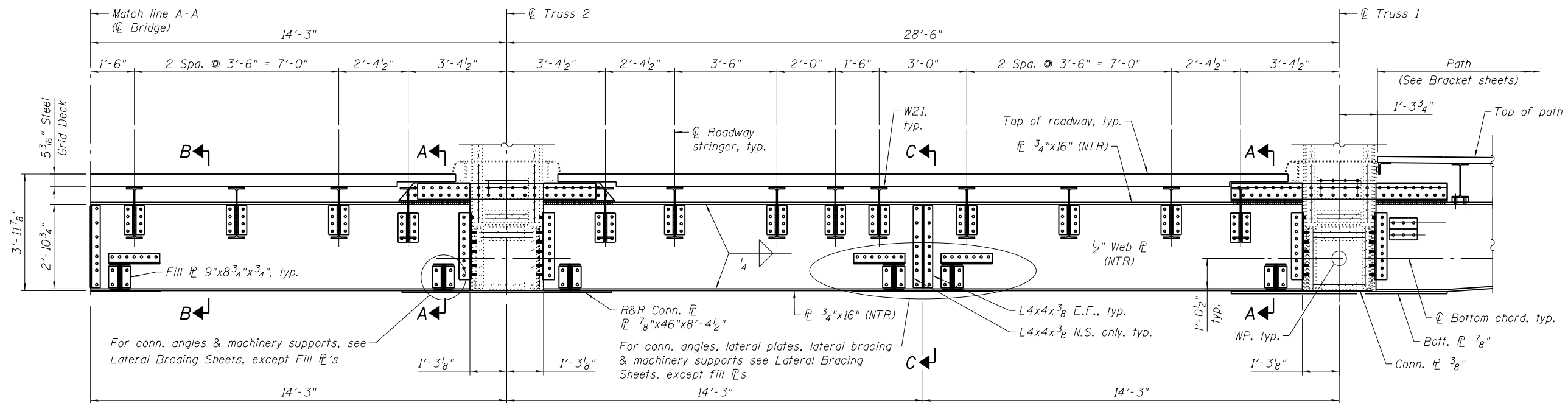
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
FLOORBEAM 0-0N DETAILS II
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-70
CDOT PROJECT NO. E-6-650			111 OF 411



FLOORBEAM ELEVATION - PANEL PT. 0
(S. Leaf Floorbeam shown looking north)



FLOORBEAM ELEVATION - PANEL PT. 0
(S. Leaf Floorbeam shown looking north)

Notes:

1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
2. For Section C-C, see sheet MS-70.
3. For Section A-A & B-B, see sheet MS-72.

REFERENCE DRAWINGS

Drawing	Sheet No.
Tension Plates Inter. Level PPO S. Leaf Post at Center Outside Truss	1660300350
Bottom Chord L4-LoR/L Outside Truss	1660300988
Bottom Chord L4-LocC - Center Truss	1660301009
Bottom Struts	1660301031
Bottom Struts	1660301041

T:\16617A\Struct\Cadd\Sheets\0166030-E6650-MS071-FBO-S.dgn
22-JAN-2018 13:29



WSP USA Inc.
30 N. LASALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

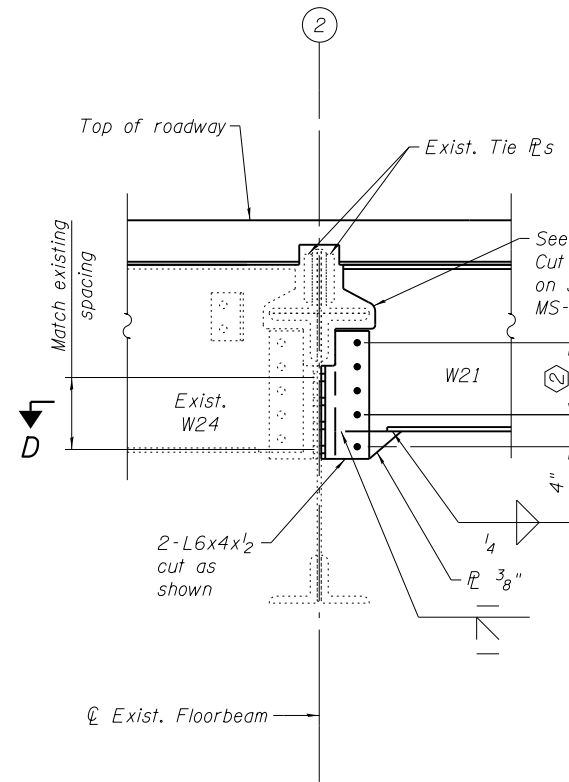
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		CHECKED -	IJL	REVISED -	
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

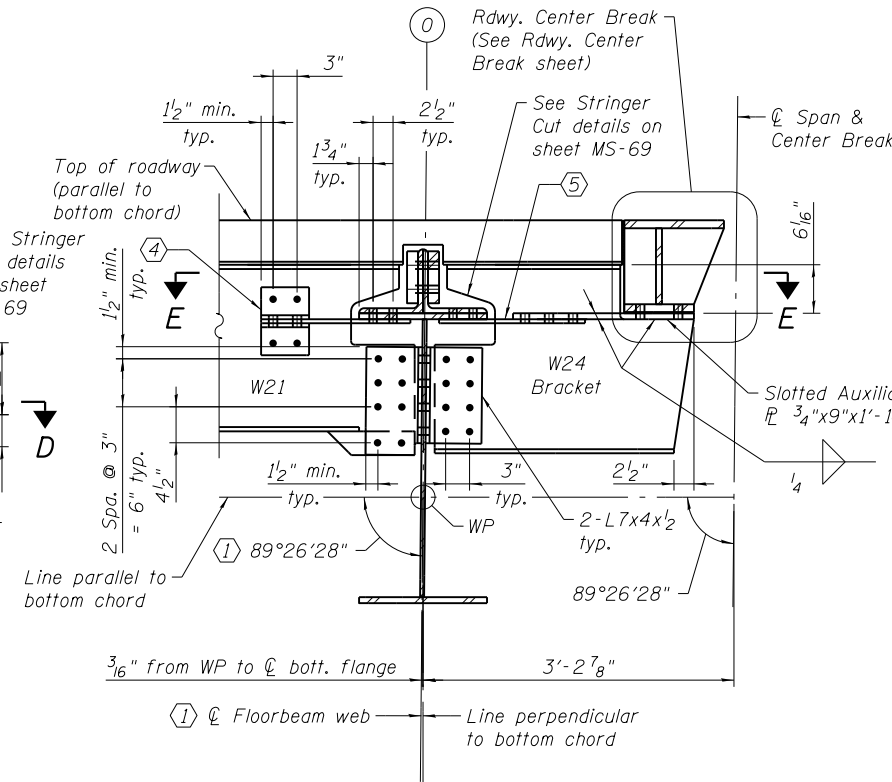
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
FLOORBEAM 0-0S
(STRUCTURE NO. 016-6030)

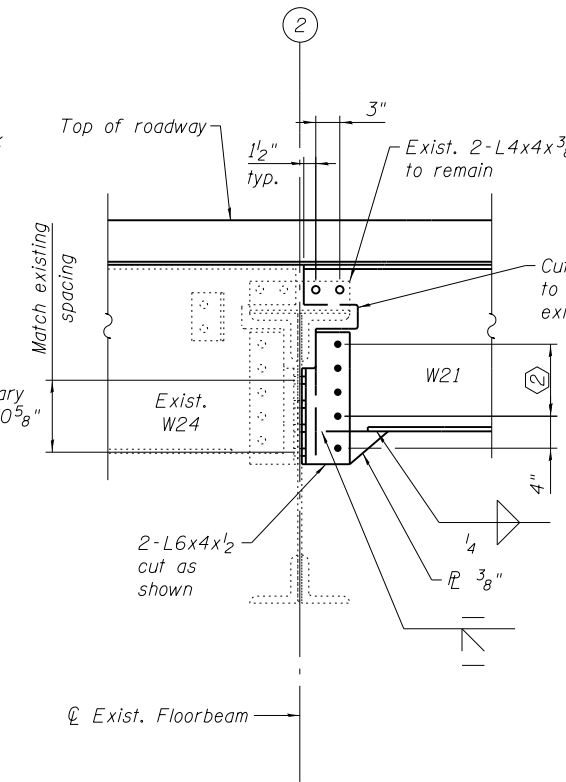
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-71
CDOT PROJECT NO. E-6-650			112 OF 411



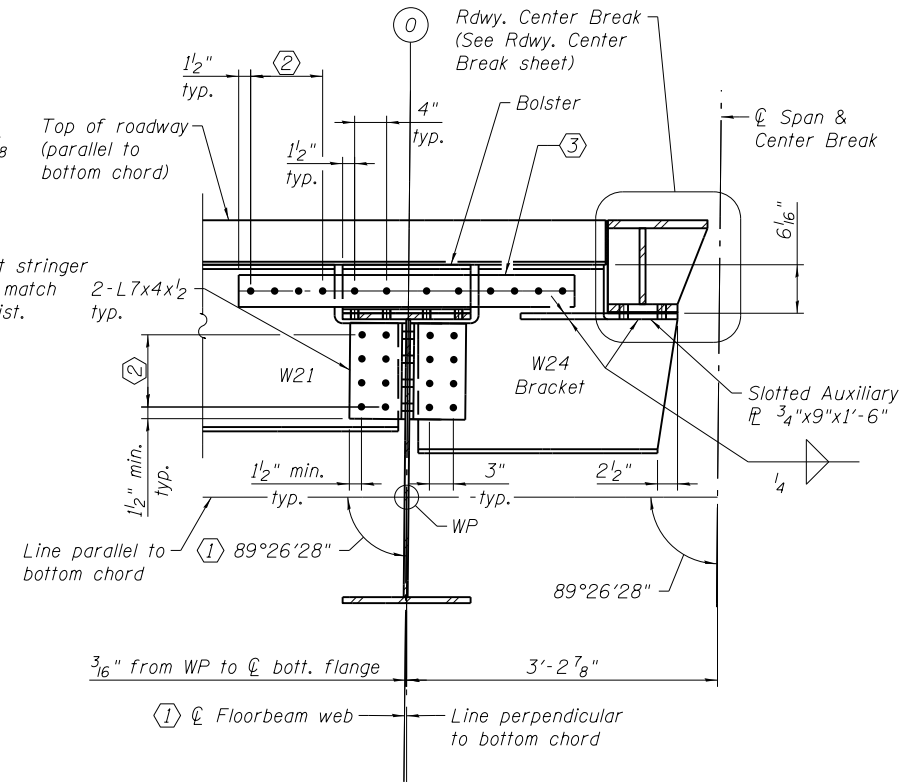
**STRINGER CONN. AT TRUSS
(EXIST. FLOORBEAM)**
(4 locations)



**SECTION A-A
STRINGER CONN. AT TRUSS**
(6 locations, Truss 1 shown,
other locations similar except as noted)



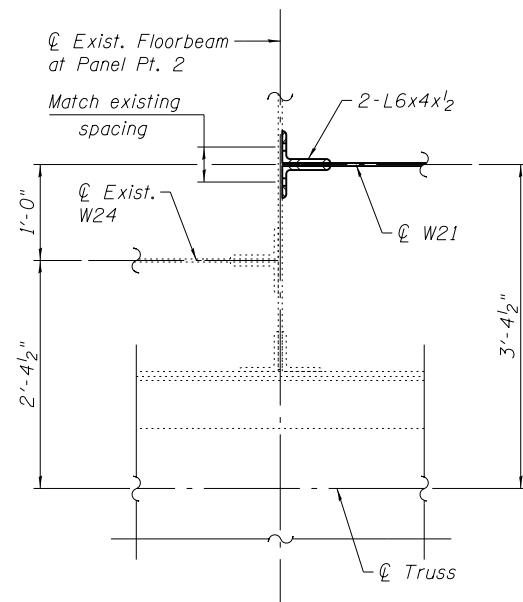
**TYPICAL STRINGER CONN.
(EXIST. FLOORBEAM)**
(13 locations)



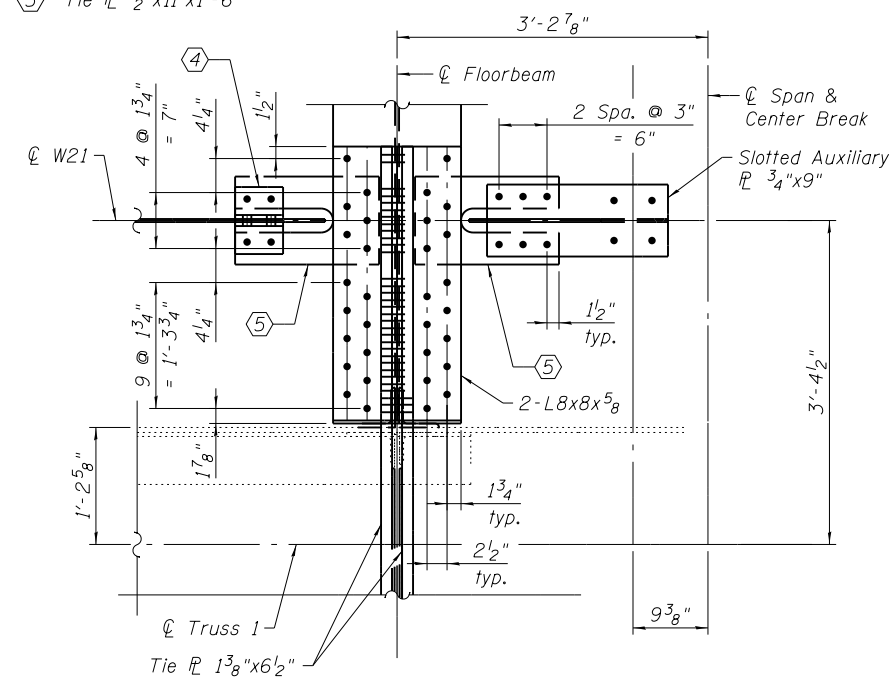
**SECTION B-B
TYPICAL STRINGER CONN.**
(20 locations)

- ④ 2-L4x4x3/8 (E.S.)
- ⑤ Tie PL 1/2"x11"x1'-6"

- ① Bracket web shall be parallel to Vertical Post 0-1. Flanges shall be fabricated parallel to bottom chord.
- ② 3 Spa. @ 3" = 9"
- ③ Tie PL 1/2"x4"x3'-6" (NTR) (E.S.)



SECTION D-D



**SECTION E-E
AT TRUSS 1**

REFERENCE DRAWINGS

Drawing	Sheet No.
Post at Center Outside Truss	1660300988
Bottom Chord L4-LoR/L Outside Truss	1660301009
Bottom Struts	1660301041
Stringers - Inter. Level	1660300327

Note:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

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22-JAN-2018 13:29



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = lopezgonzalez
DESIGNED - PJL
CHECKED - JIG
DRAWN - PJL/NJP
CHECKED - JIG

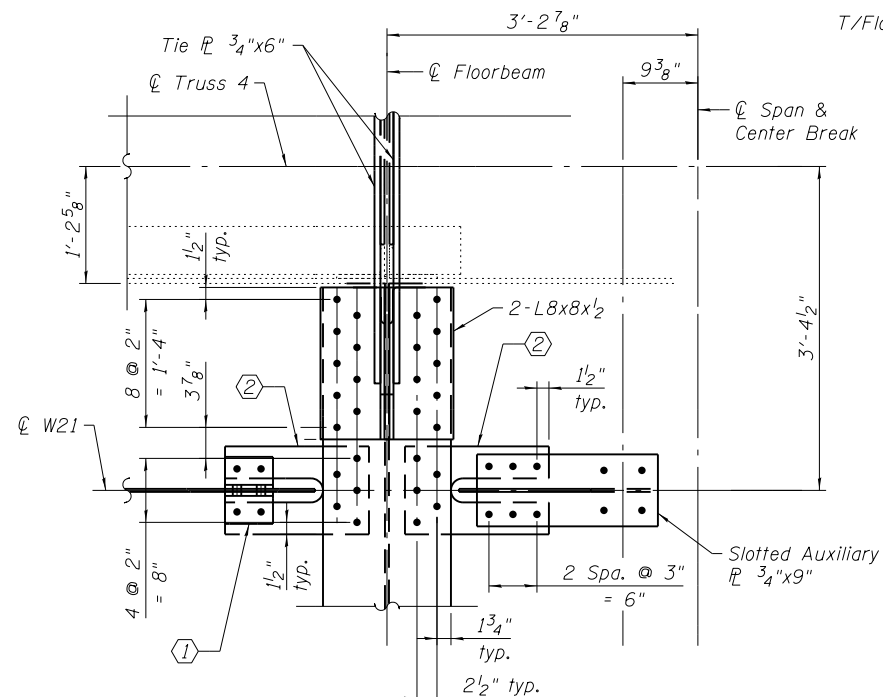
REVISIONS
REVISOR
DATE
REVISIONS
REVISOR
DATE

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

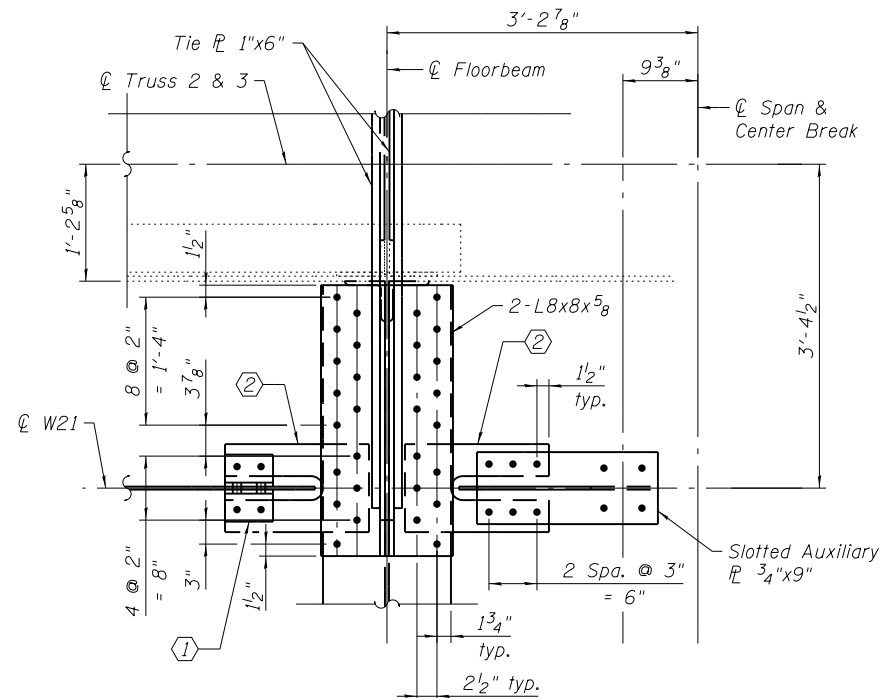
**MOVABLE PART:
FLOORBEAM 0-0S DETAILS I
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-72
CDOT PROJECT NO. E-6-650			113 OF 411

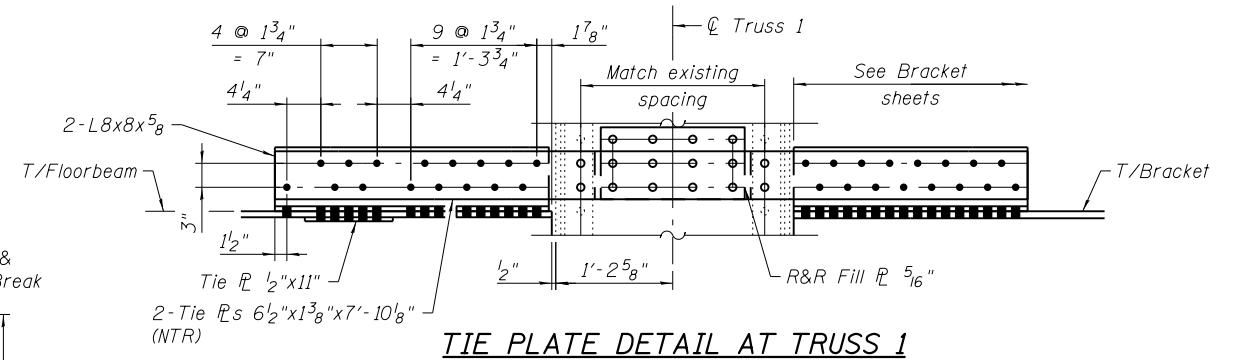


**SECTION E-E
AT TRUSS 4**

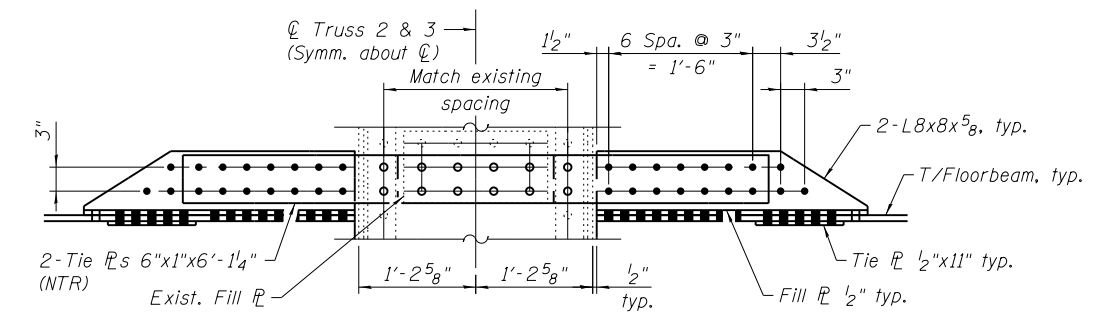
- ① 2-L4x4x3/8 (E.S.)
- ② Tie PL 1/2"x11"x1'-6"



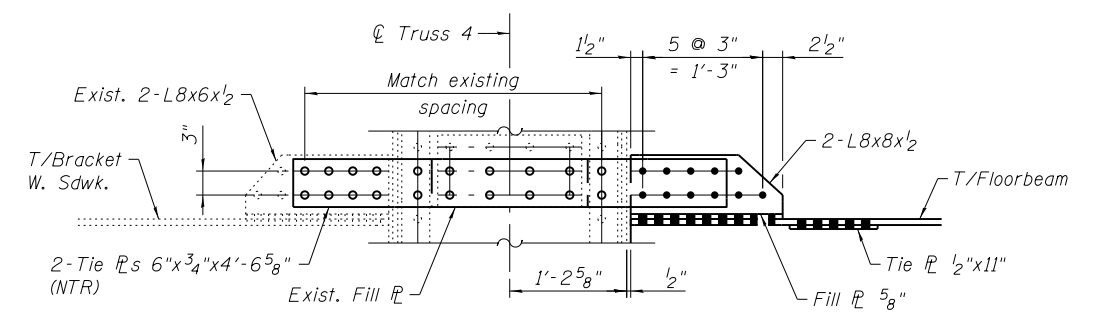
**SECTION E-E
AT TRUSS 2 & 3**



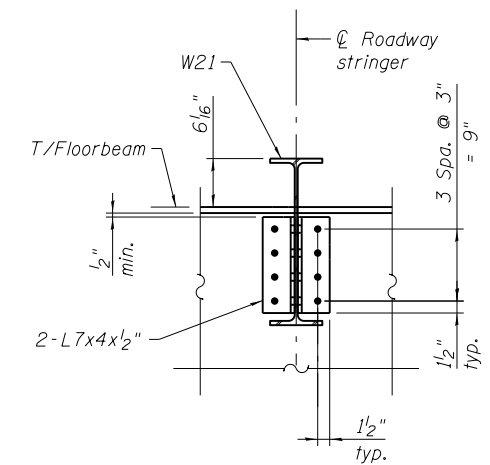
TIE PLATE DETAIL AT TRUSS 1



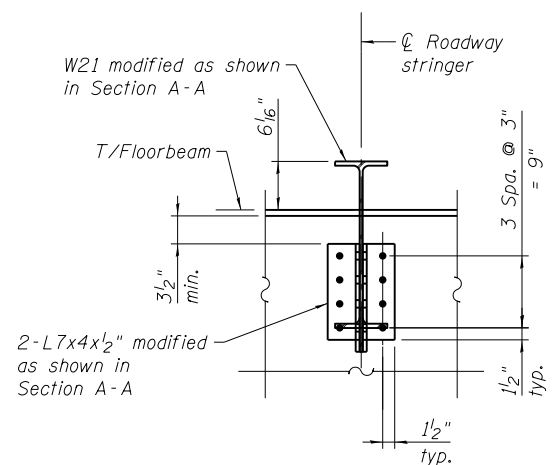
TIE PLATE DETAIL AT TRUSS 2 & 3



TIE PLATE DETAIL AT TRUSS 4



TYPICAL STRINGER CONN.



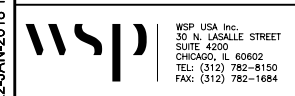
STRINGER CONN. AT TRUSS

REFERENCE DRAWINGS

Drawing	Sheet No.
Tension Plates Inter. Level PPO S. Leaf	1660300350
Post at Center Outside Truss	1660300988
Bottom Chord L4-LoR/L Outside Truss	1660301009
Post - Lo-UlcR/L, Lo-UlcA Center Truss	1660301010
Bottom Struts and Tie Plates	1660301040
Bottom Struts	1660301041

Note:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

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22-JAN-2018 13:29



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

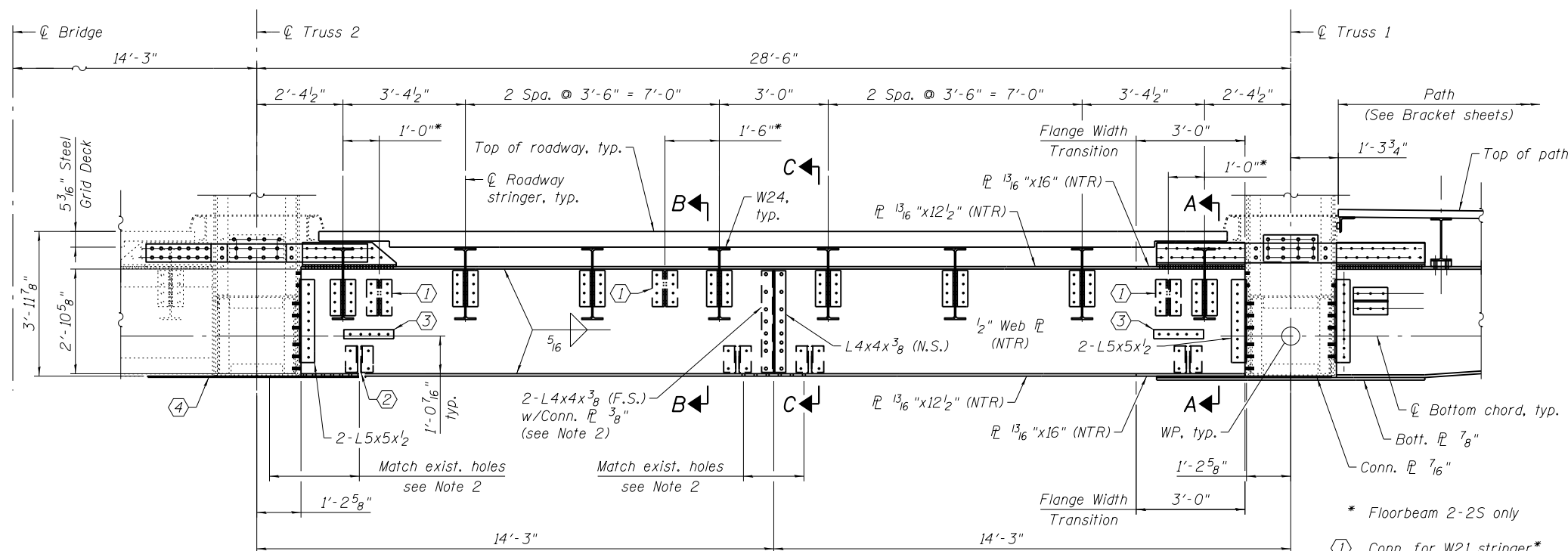
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PLOT SCALE =	N.T.S.	DRAWN -	PJL/NJP	REVISED -	
PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**MOVABLE PART:
FLOORBEAM 0-0S DETAILS II
(STRUCTURE NO. 016-6030)**

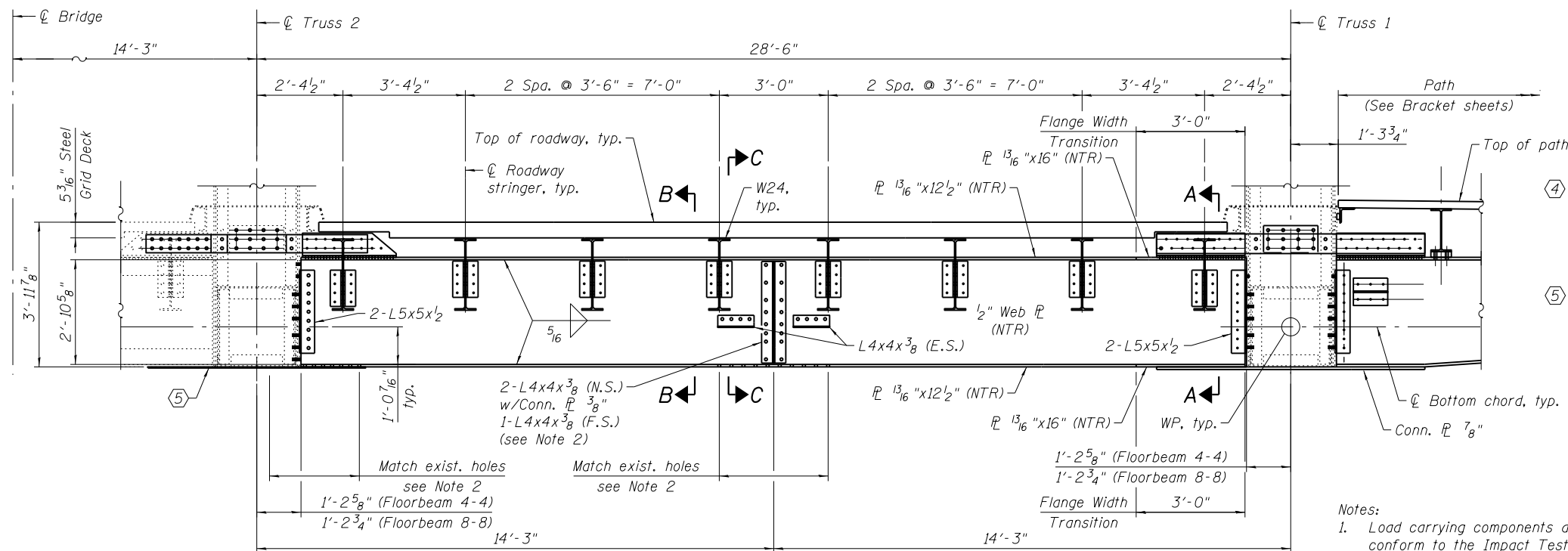
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-73
CDOT PROJECT NO. E-6-650			114 OF 411



④ R&R Bott. 1 7/16" x 46" x 8'-3 1/2" for FB 2-2 S. Leaf,
 R&R Bott. 1 7/16" x 61" x 8'-3 1/2" for FB 2-2, N. Leaf,
 R&R Bott. 1 7/16" x 44" x 7'-2" for FB 6-6

FLOORBEAM 2-2 & 6-6 ELEVATION

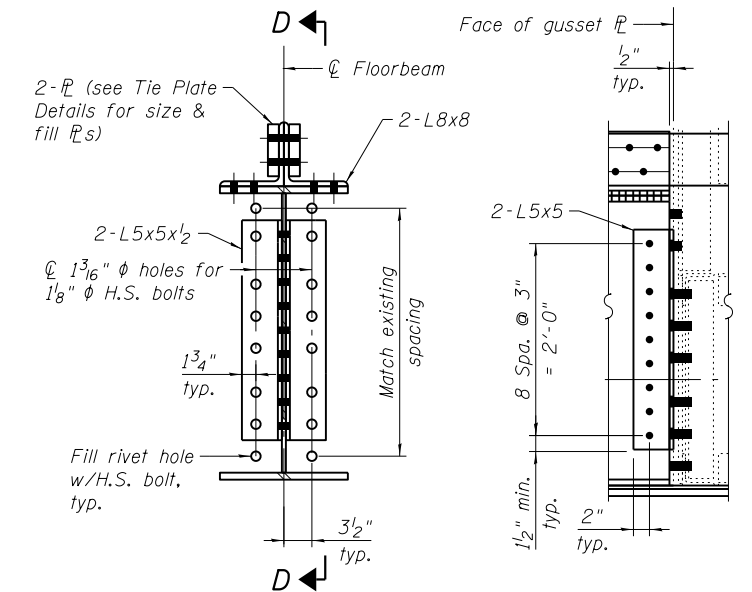
(S. Leaf Floorbeam shown looking north
 N. Leaf Floorbeam similar but opposite hand looking south)



⑤ R&R Bott. 1 7/16" x 37" x 7'-2" for FB 4-4,
 R&R Bott. 1 7/16" x 27" x 4'-10" for FB 8-8

FLOORBEAM 4-4 & 8-8 ELEVATION

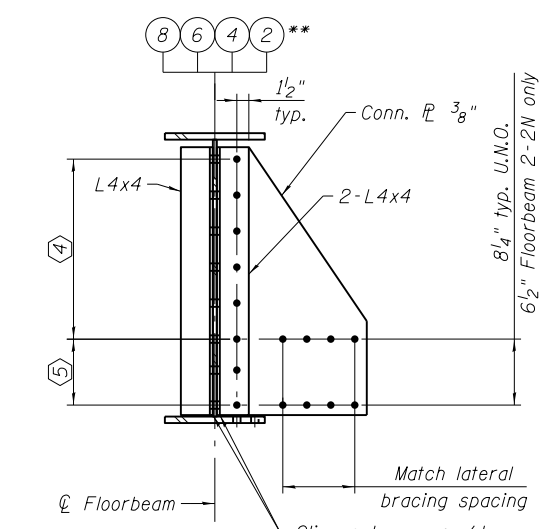
(S. Leaf Floorbeam shown looking north
 N. Leaf Floorbeam similar but opposite hand looking south)



TYPICAL TRUSS CONN.

(Bott. 1 7/16" not shown for clarity)

SECTION D-D



SECTION C-C

(7 locations, Lat. conn. plates and members not shown, see Note 2)

**For Section C-C at Floorbeam 2-2S, see MS-70.

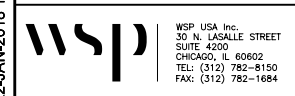
- * Floorbeam 2-2S only
- ① Conn. for W21 stringer*
- ② 2-Fill 1 3/16" x 4" x 8' (F.S.)* for machinery support beam (see Note 2)
- ③ 2-Fill 1 3/16" x 4" x 1'-3 1/2" (E.S.) Floorbeam 6-6 only

- Notes:
- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 - Lateral bracing and machinery supports shall be removed and replaced in kind unless noted otherwise. For details and notes, see Lateral Bracing sheets.
 - For Tie Plate Detail at Truss 1 & 2, Stringer Connections & Section A-A & B-B, see sheet MS-75.

REFERENCE DRAWINGS

Drawing	Sheet No.
Bottom Chord L4-L10 Outside Truss	1660301007
Bottom Chord L4-LoA Outside Truss	1660301008
Bottom Chord L4-LoR/L Outside Truss	1660301009
Bottom Chord L4-L10C - Center Truss	1660301029
Bottom Chord L4-LocA - Center Truss	1660301030
Bottom Chord L4-LocC - Center Truss	1660301031
Bottom Struts	1660301041
Bottom Struts	1660301043

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USER NAME = lopezgonzalez
 DESIGNED - P.JL/NJP
 CHECKED - I.JL
 PLOT SCALE = N.T.S.
 DRAWN - P.JL/NJP
 PLOT DATE = 1/22/2018
 CHECKED - JIG

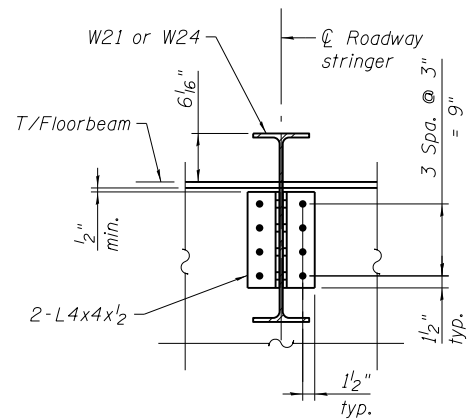
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 CHECKED - I.JL
 DRAWN - P.JL/NJP
 CHECKED - JIG

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

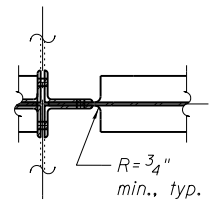
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
FLOORBEAM 2-2, 4-4, 6-6 & 8-8
(STRUCTURE NO. 016-6030)

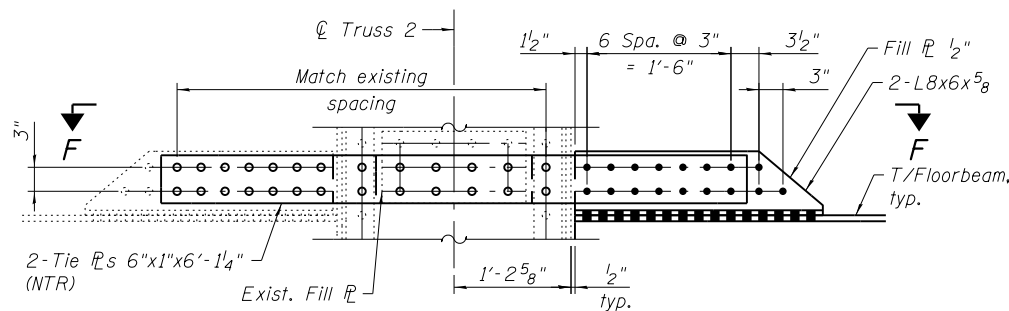
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-74
CDOT PROJECT NO. E-6-650			115 OF 411



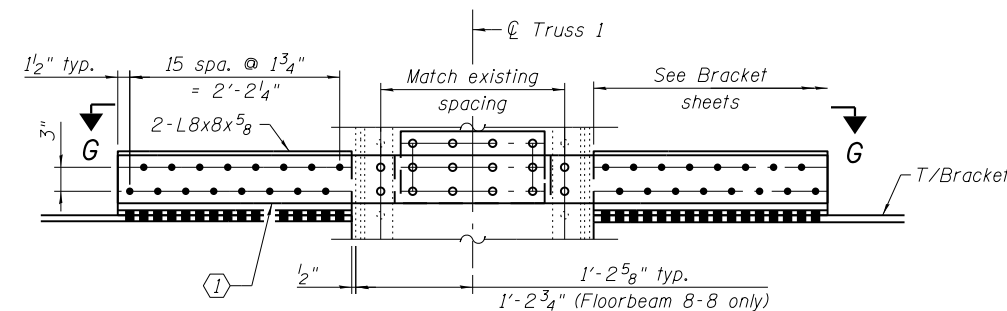
TYPICAL STRINGER CONN.



SECTION E-E

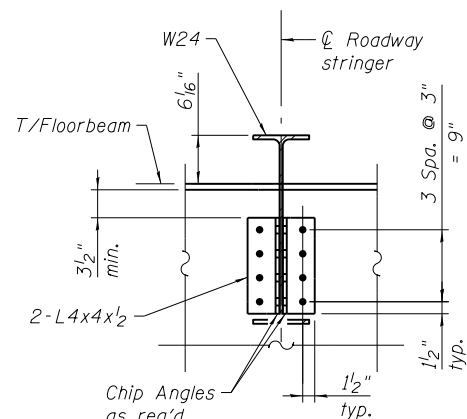


TIE PLATE DETAIL AT TRUSS 2
(Floorbeam 2-2, 4-4 & 6-6 only)

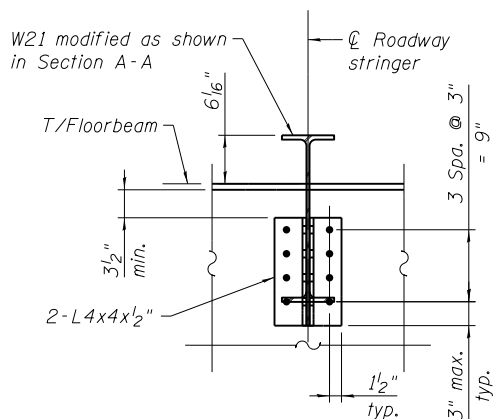


TIE PLATE DETAIL AT TRUSS 1

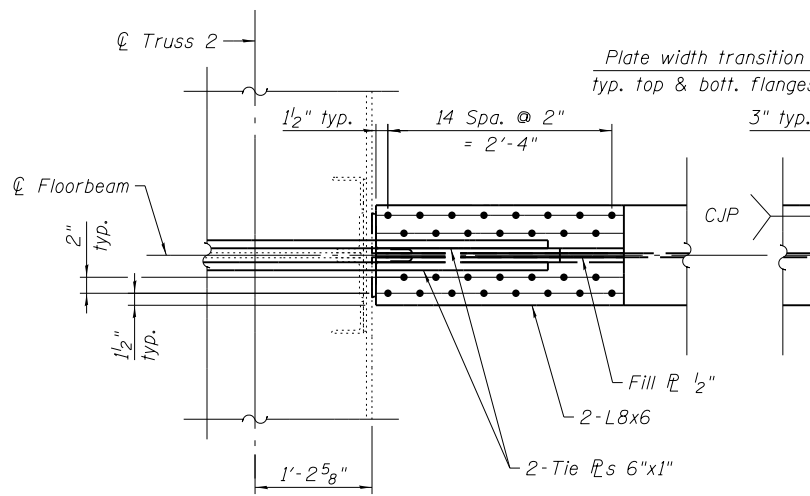
① 2-Tie Pls 6 1/2"x1 3/8"x7'-4 3/4" (NTR) typ.,
(L=7'-5" at Floorbeam 8-8 only)



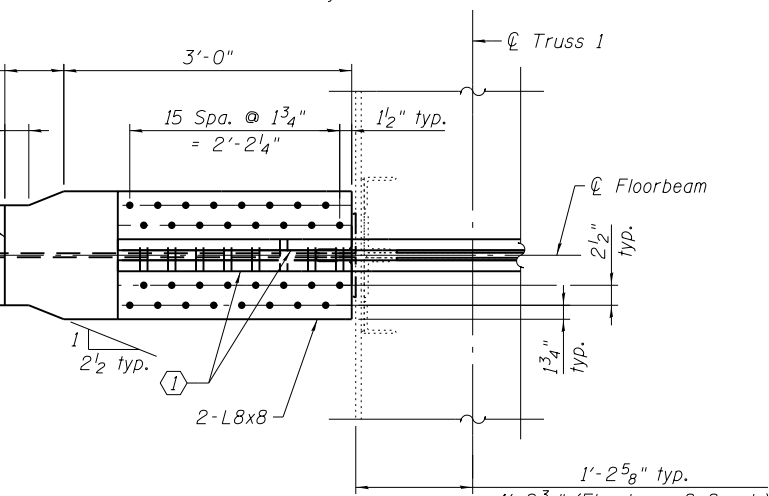
STRINGER CONN. AT TRUSS



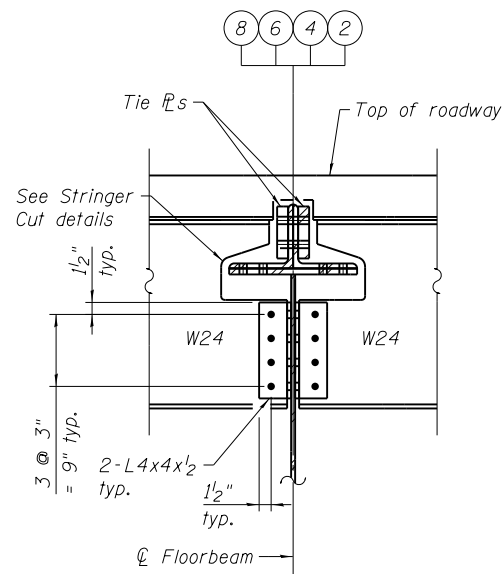
STRINGER CONN. AT TRUSS
(FLOORBEAM 2-2S)



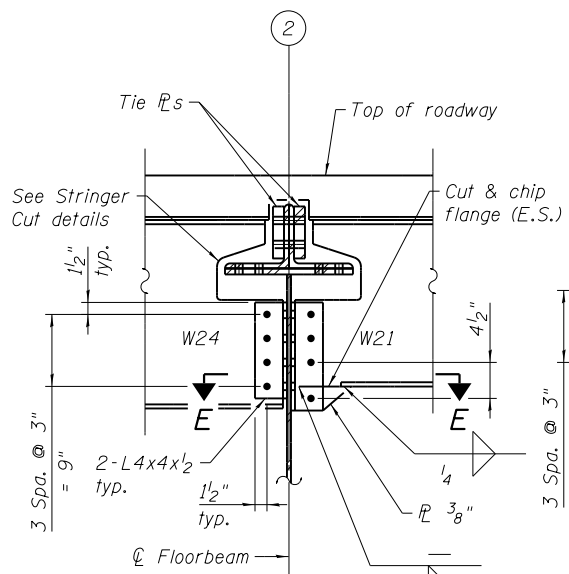
SECTION F-F



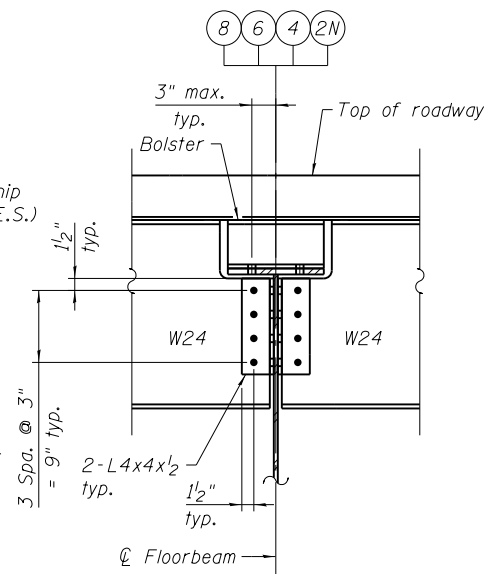
SECTION G-G



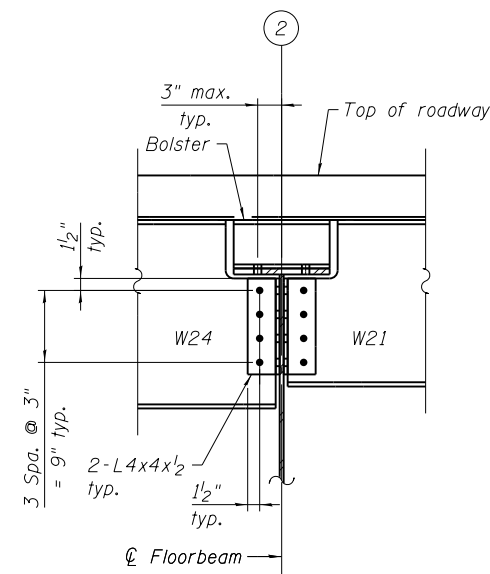
SECTION A-A
TYP. STRINGER CONN. AT TRUSS
(14 locations)



SECTION A-A
STRINGER CONN. AT TRUSS
(FLOORBEAM 2-2S)
(2 locations)



SECTION B-B
TYP. STRINGER CONN.
(42 locations)



SECTION B-B
STRINGER CONN.
(FLOORBEAM 2-2S)
(7 locations)

REFERENCE DRAWINGS

Drawing	Sheet No.
Bottom Chord L4-L10 Outside Truss	1660301007
Bottom Chord L4-LoA Outside Truss	1660301008
Bottom Chord L4-LoR/L Outside Truss	1660301009
Bottom Chord L4-L10C - Center Truss	1660301029
Bottom Chord L4-LocA - Center Truss	1660301030
Bottom Chord L4-LocC - Center Truss	1660301031
Bottom Struts and Tie Plates	1660301040
Bottom Struts	1660301041
Bottom Struts	1660301043

- Notes:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 2. For Bolster & Stringer Cut Details, see sheet MS-69.
 3. For locations of Section A-A & B-B, see sheet MS-74.

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WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

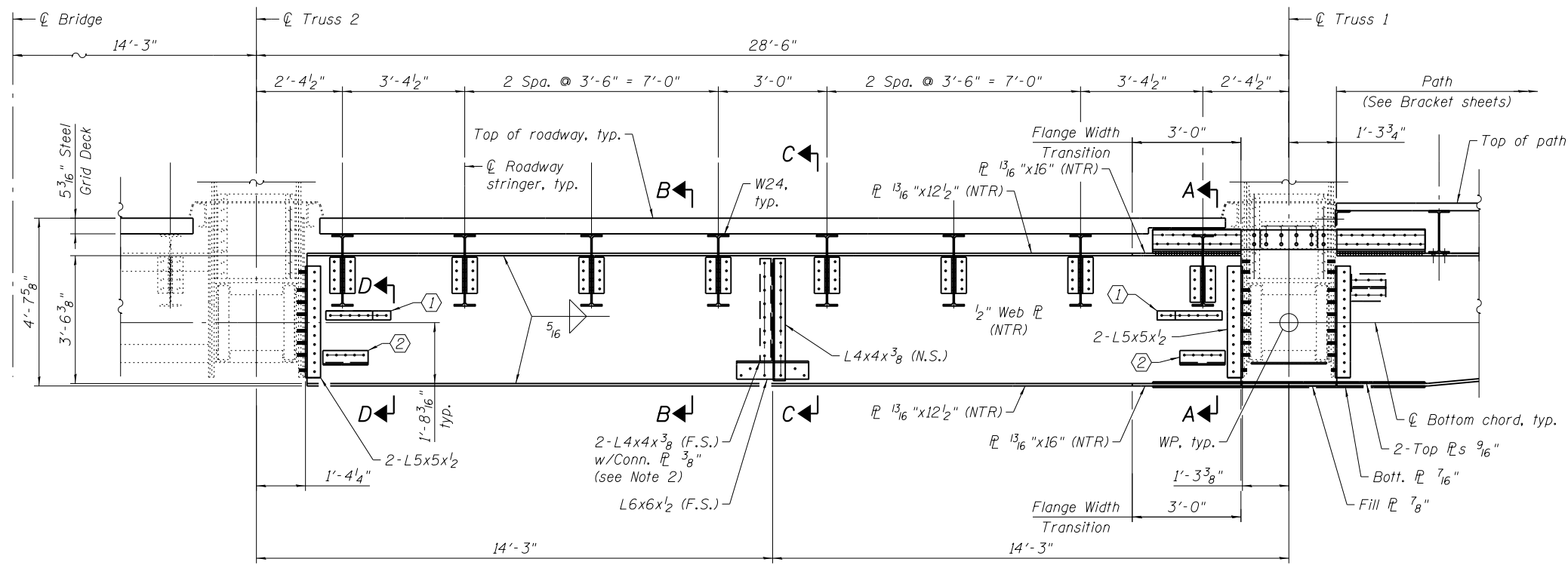
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PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

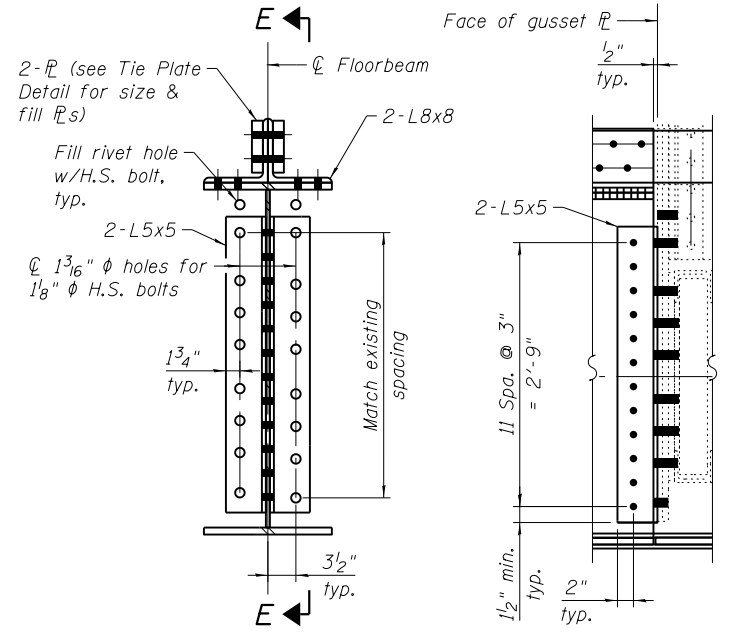
MOVABLE PART:
FLOORBEAM 2-2, 4-4, 6-6 & 8-8 DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-75
CDOT PROJECT NO. E-6-650			116 OF 411



FLOORBEAM 10-10 ELEVATION

(S. Leaf Floorbeam shown looking north
N. Leaf Floorbeam similar but opposite hand looking south)

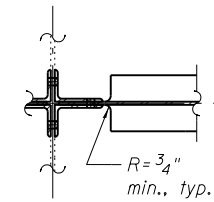


TYPICAL TRUSS CONN.

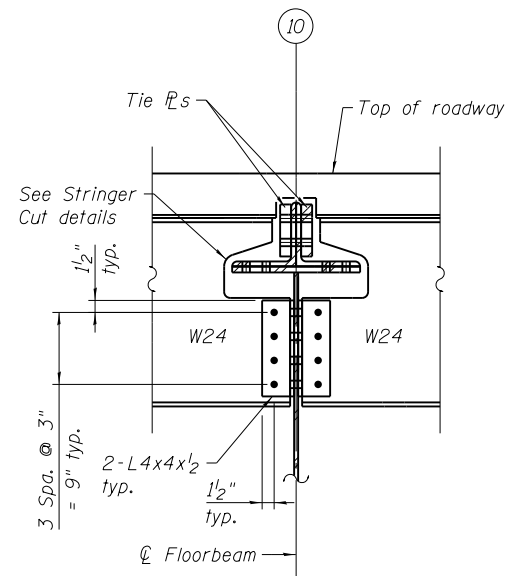
(Top & Bott. \bar{r} s
not shown for clarity)

SECTION E-E

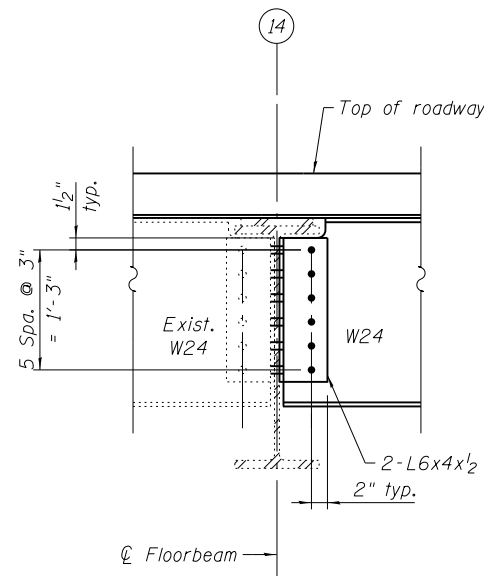
- ① Fill \bar{r} $1\frac{3}{16}$ "x3"x1'-11" (N.S.) & Fill \bar{r} $1\frac{3}{16}$ "x3"x1'-5" (F.S.) (see Note 2)
- ② Bent \bar{r} $3\frac{3}{8}$ "x15" w/Conn. \bar{r} $3\frac{3}{8}$ " (N.S.) & L4x4x3/8 w/Conn. \bar{r} $3\frac{3}{8}$ " (F.S.)



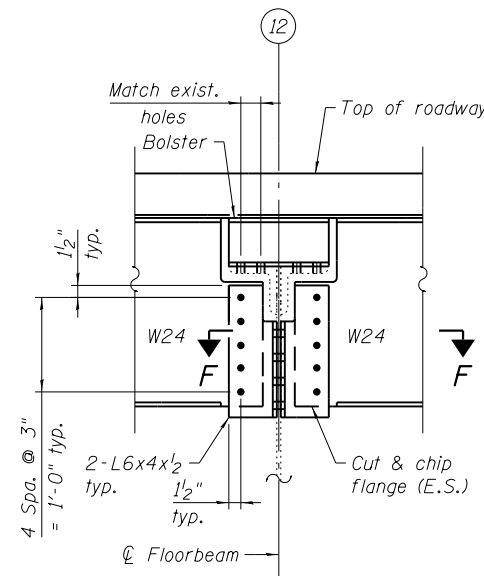
SECTION F-F



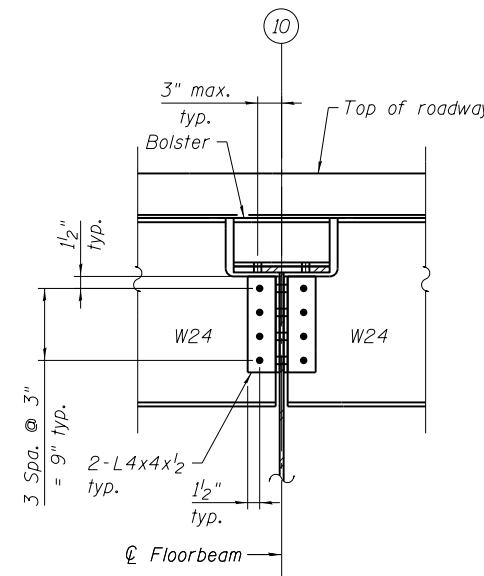
SECTION A-A
STRINGER CONN. AT TRUSS 1
FLOORBEAM 10-10
(2 locations)



TYPICAL STRINGER CONN.
EXIST. FLOORBEAM 14-14
(16 locations)



TYP. STRINGER CONN.
EXIST. FLOORBEAM 12-12
(16 locations)



SECTION B-B
TYP. STRINGER CONN.
FLOORBEAM 10-10
(14 locations)

REFERENCE DRAWINGS

Drawing	Sheet No.
Post - Outside Truss	1660300990
Diagonals Outside Truss	1660300993
Bottom Chord L10-L14 Outside Truss	1660301006
Post Center Truss	1660301012
Diagonals - Center Truss	1660301015
Bottom Chord L10-L14C - Center Truss	1660301028
Bottom Struts	1660301043

- Notes:
- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 - Lateral bracing shall be removed and replaced in kind unless noted otherwise. For details and notes, see Lateral Bracing sheets.
 - For Bolster & Stringer Cut Details, see sheet MS-69.
 - For Tie Plate Detail at Truss 1, Stringer Connections & Section C-C & D-D, see sheet MS-77.

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CHECKED - I.JL
PLOT SCALE = N.T.S.
DRAWN - P.JL/NJP
PLOT DATE = 1/22/2018
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DESIGNED - P.JL/NJP
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DRAWN - P.JL/NJP
CHECKED - JIG

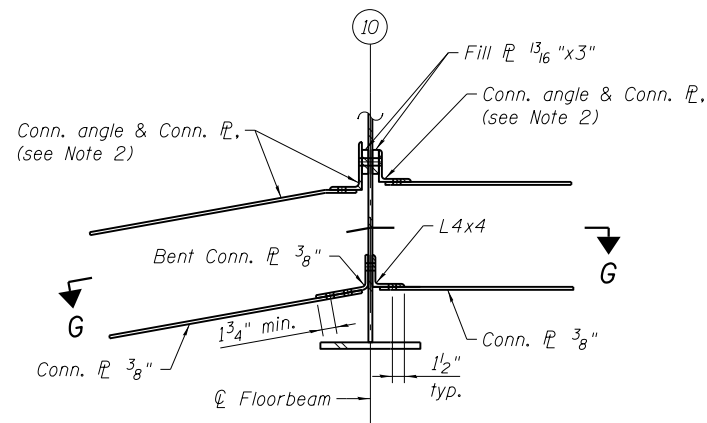
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

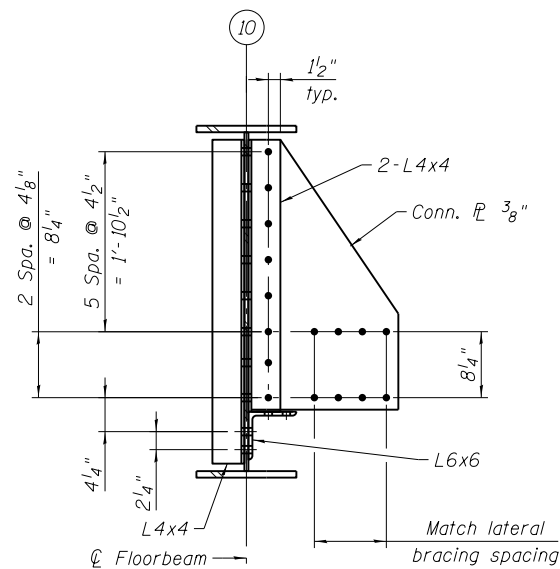
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
FLOORBEAM 10-10, 12-12 & 14-14
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-76
CDOT PROJECT NO. E-6-650			117 OF 411

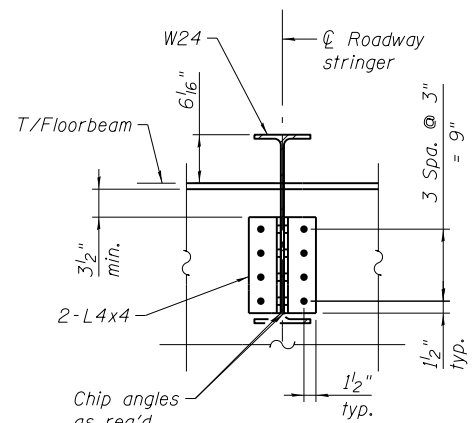


SECTION D-D

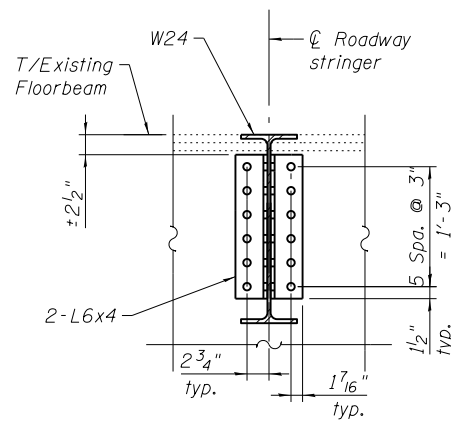


SECTION C-C

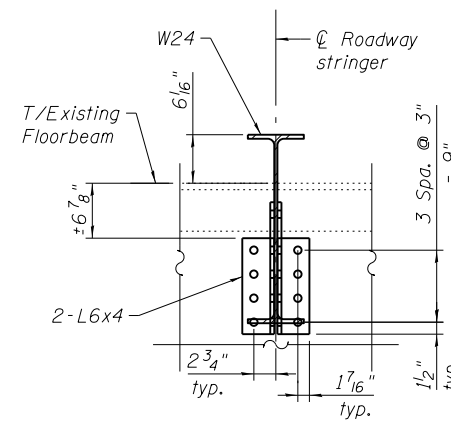
(2 locations, Lat. conn. plates and members not shown, see Note 2)



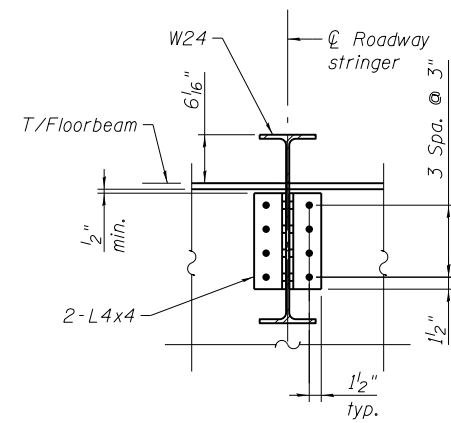
STRINGER CONN. AT TRUSS



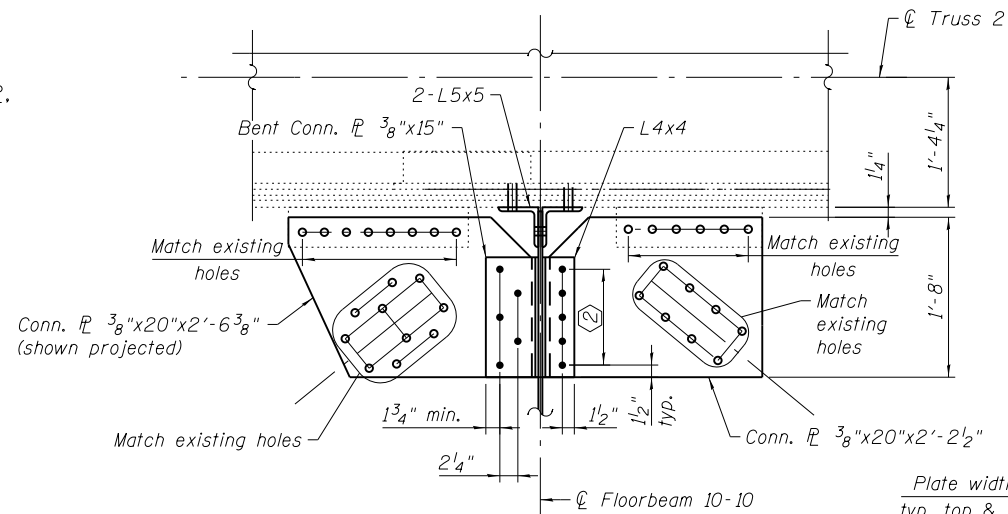
TYPICAL STRINGER CONN. EXIST. FLOORBEAM 14-14



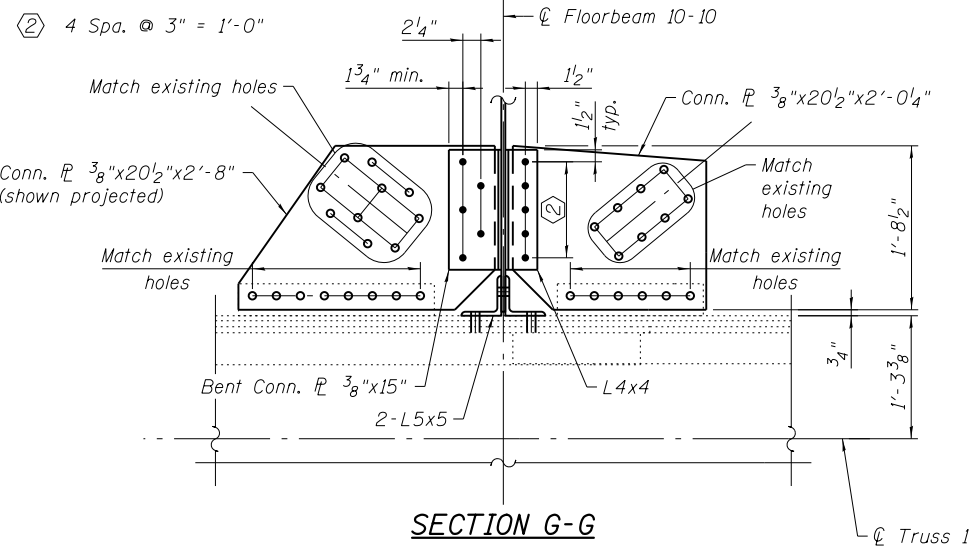
TYP. STRINGER CONN. EXIST. FLOORBEAM 12-12



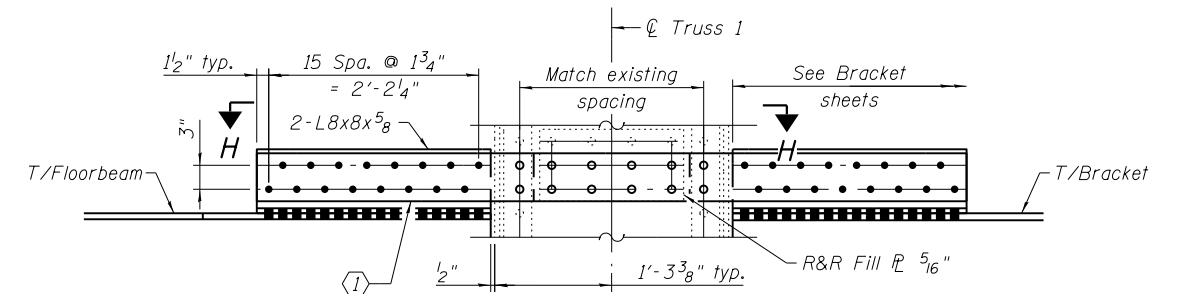
TYPICAL STRINGER CONN. FLOORBEAM 10-10



**SECTION G-G
BOTTOM LAT. BRACING CONN. AT TRUSS 2**

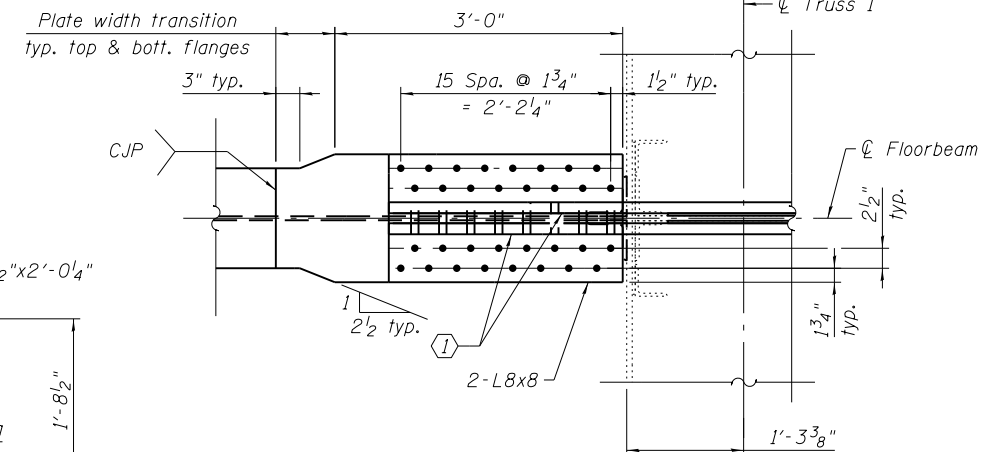


**SECTION G-G
BOTTOM LAT. BRACING CONN. AT TRUSS 1**



TIE PLATE DETAIL AT TRUSS 1

① 2-Tie P's 6 1/2" x 1 3/8" x 7'-7 1/4" (NTR)



SECTION H-H

REFERENCE DRAWINGS

Drawing	Sheet No.
Post - Outside Truss	1660300990
Bottom Chord L10-L14 Outside Truss	1660301006
Post Center Truss	1660301012
Bottom Chord L10-L14C - Center Truss	1660301028
Bottom Chord Lateral Plates	1660301038
Bottom Struts	1660301043

- Notes:
- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 - Lateral bracing shall be removed and replaced in kind unless noted otherwise. For details and notes, see Lateral Bracing sheets.
 - For locations of Section C-C & D-D, see sheet MS-76.

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WSP USA Inc.
30 N. LASALLE STREET
SUITE 4000
CHICAGO, IL 60602
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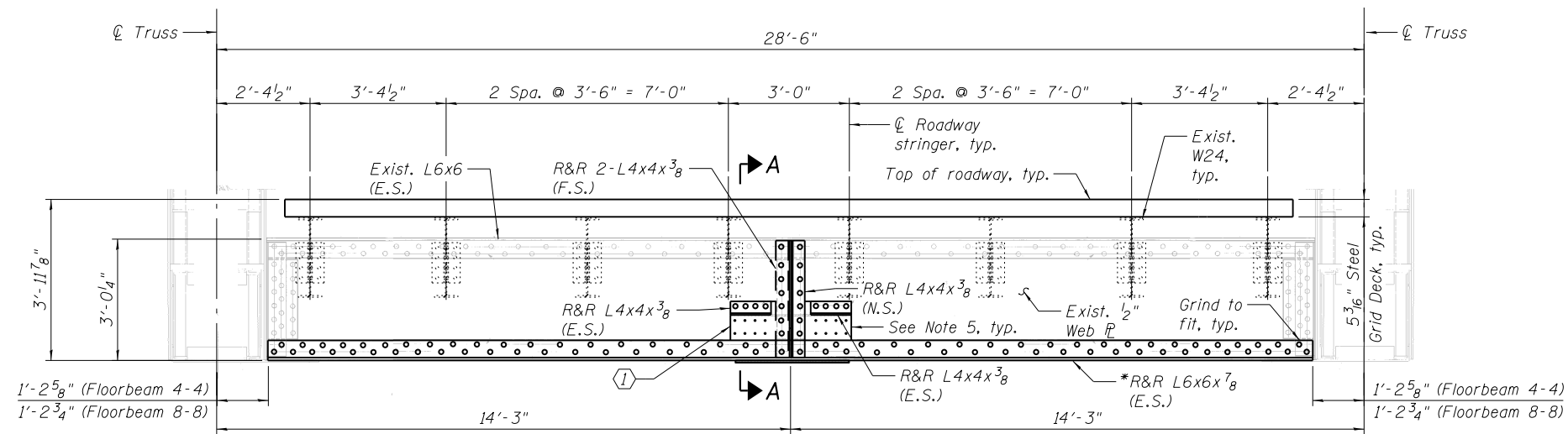
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

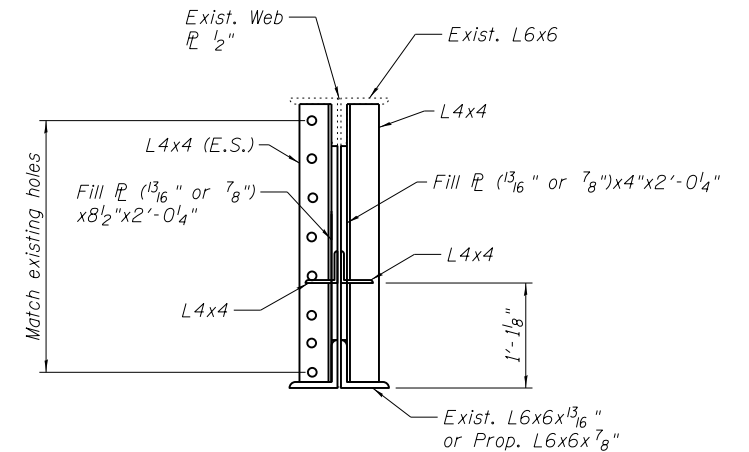
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**MOVABLE PART:
FLOORBEAM 10-10, 12-12 & 14-14 DETAILS
(STRUCTURE NO. 016-6030)**

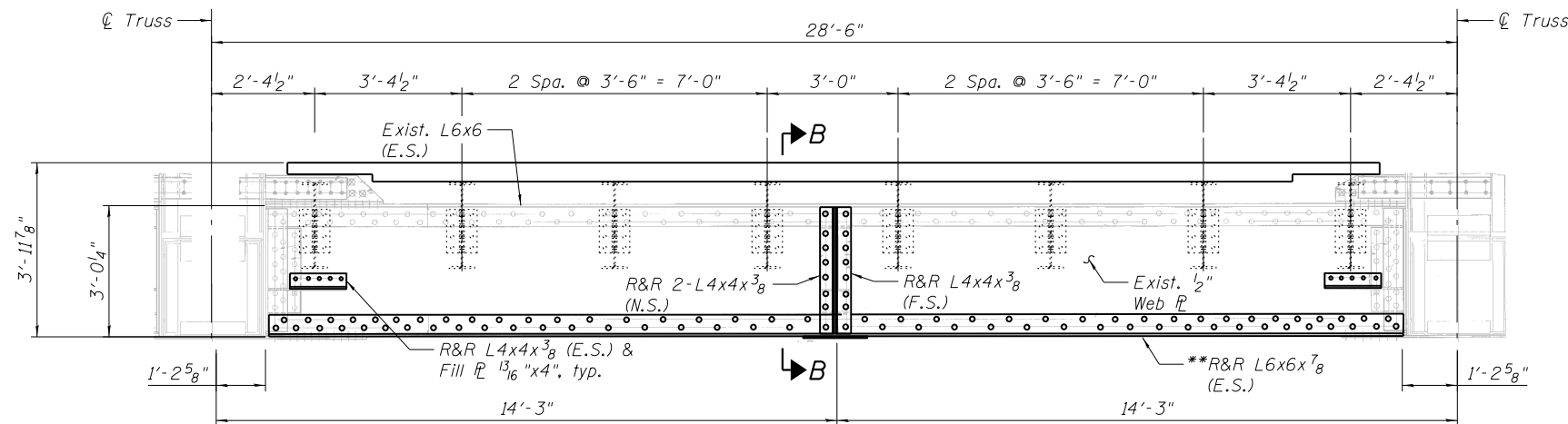
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0341	09-E0534-00-BR/CDOT	COOK	MS-77
CDOT PROJECT NO. E-6-650			118 OF 411



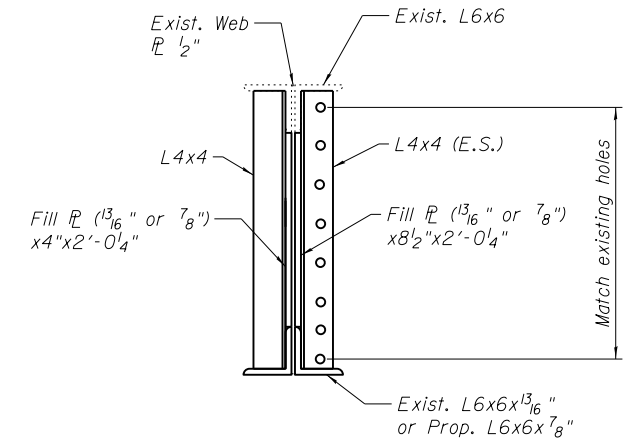
FLOORBEAM 4-4 & 8-8 ELEVATION
(S. Leaf Floorbeam shown looking north)



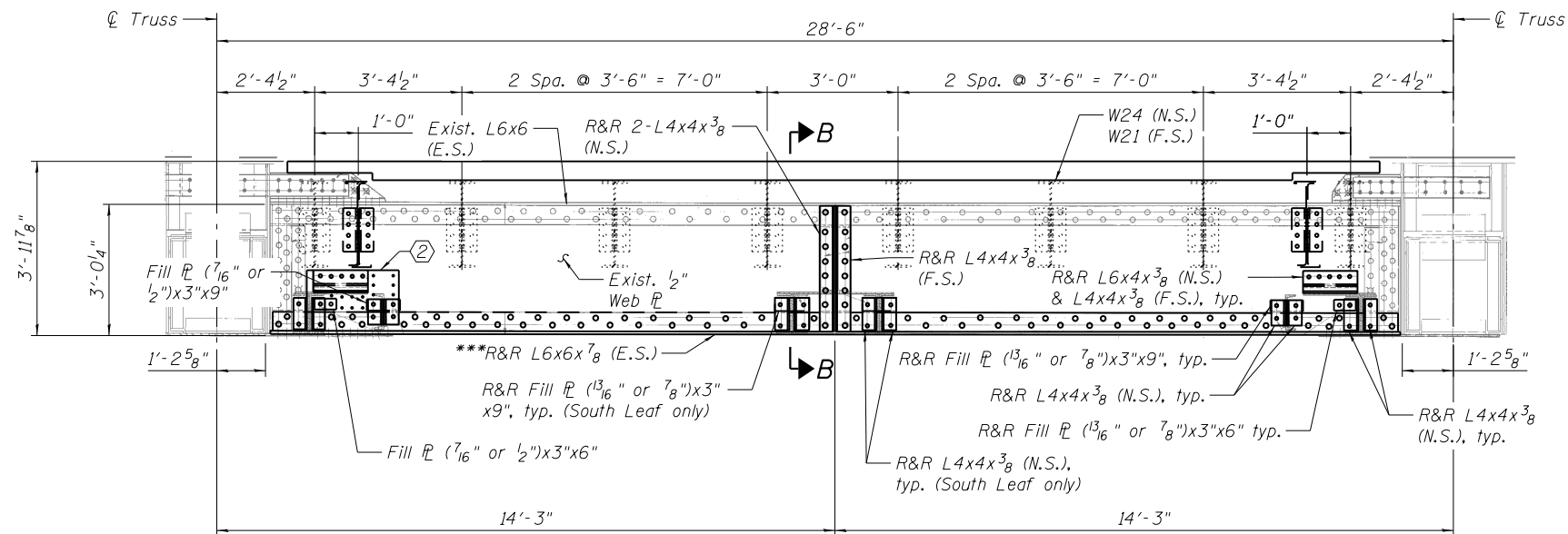
SECTION A-A



FLOORBEAM 6-6 ELEVATION
(S. Leaf Floorbeam shown looking north)



SECTION B-B



FLOORBEAM 2-2 ELEVATION
(S. Leaf Floorbeam shown looking north)

- ① Web Repair $\frac{3}{8}$ "x11 $\frac{1}{8}$ "x13 $\frac{3}{4}$ " (E.S.), typ. The Web repair is only applicable to Floorbeam 4-4 in the N. Leaf Btwn. Trusses 2 and 3.
- ② Web Repair $\frac{3}{8}$ "x10 $\frac{7}{8}$ "x2'-6" (E.S.). The Web repair is only applicable to Floorbeam 2-2 in the S. Leaf Btwn. Trusses 2 and 3 near Truss 2 and Btwn. Trusses 3 and 4 near Truss 3.

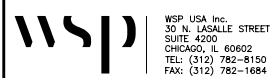
REFERENCE DRAWINGS

Drawing	Sheet No.
Struts	1660300759
Struts	1660300760
Erection Diagram Bott. Lateral and System	1660300974
Bottom Struts and Tie Plates	1660301041
Bottom Struts	1660301043

- Notes:
- All dimensions shall be field verified.
 - Cost of removing existing structural steel elements for floorbeam repairs shall be included in "Structural Steel Repairs."
 - Cost of furnishing and erecting structural steel elements for floorbeam repairs shall be included in "Structural Steel Repairs."
 - Cost of removing and replacing rivets in association with steel elements for floorbeam repairs shall be included in "Structural Steel Repairs."
 - Where new holes are required on web strengthening $\frac{1}{2}$ " the bolt spacing shall be 3" min. and 5 $\frac{1}{2}$ " max. Edge distances shall be 1 $\frac{1}{2}$ " min.

- * R&R for Floorbeam 8-8 in the S. Leaf only
- ** R&R for Floorbeam 6-6 in the S. Leaf Btwn. Trusses 3 & 4 only
- *** R&R for Floorbeam 2-2 in the S. Leaf Btwn. Trusses 2 & 3 only

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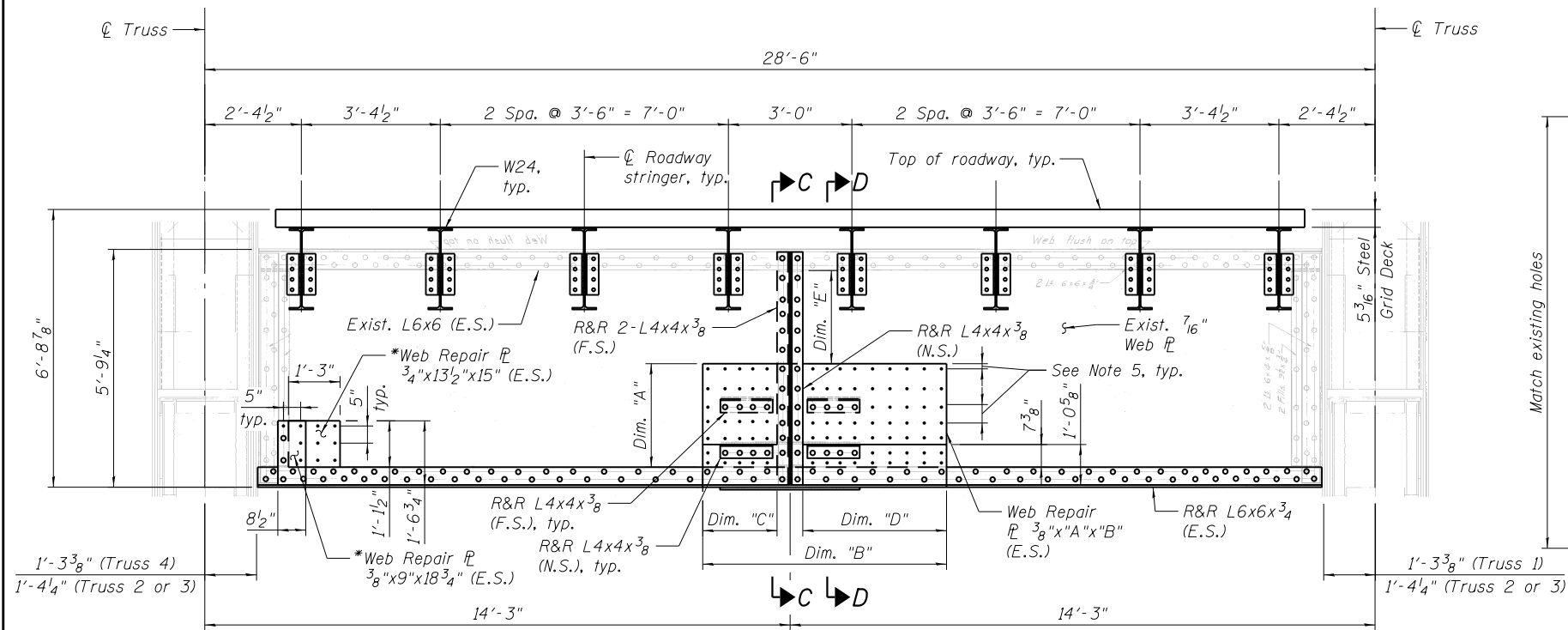
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
FLOORBEAM REPAIR DETAILS I
(STRUCTURE NO. 016-6030)

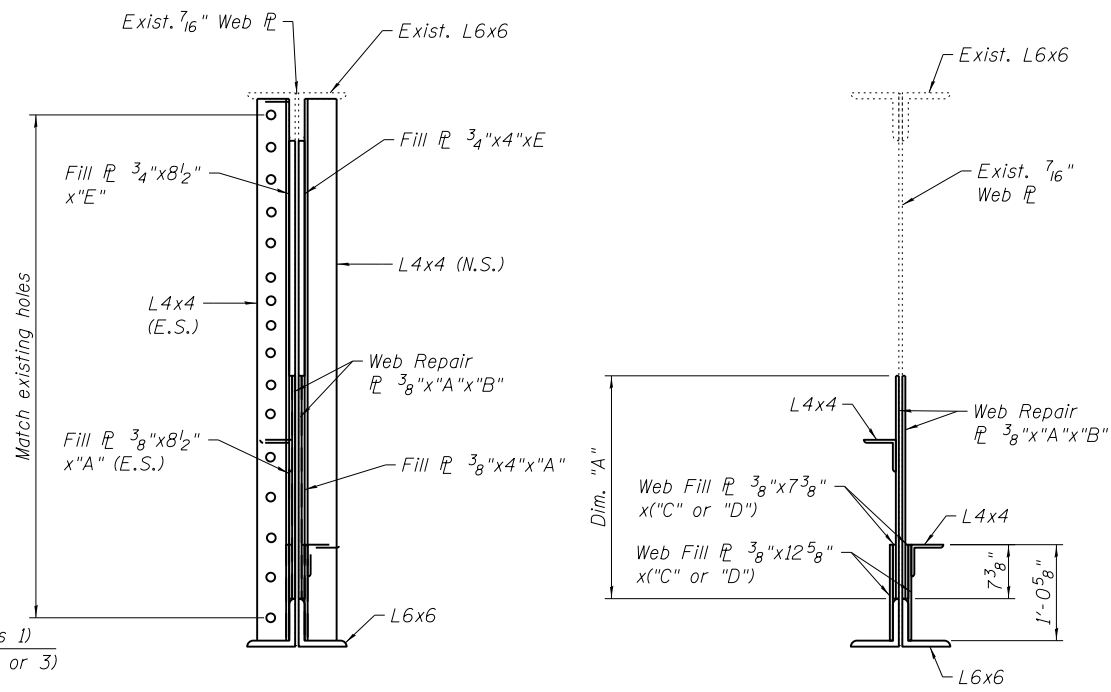
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-78
CDOT PROJECT NO. E-6-650			119 OF 411



FLOORBEAM 12-12 ELEVATION

(S. Leaf Floorbeam shown looking north
N. Leaf Floorbeam similar but opposite hand looking south)

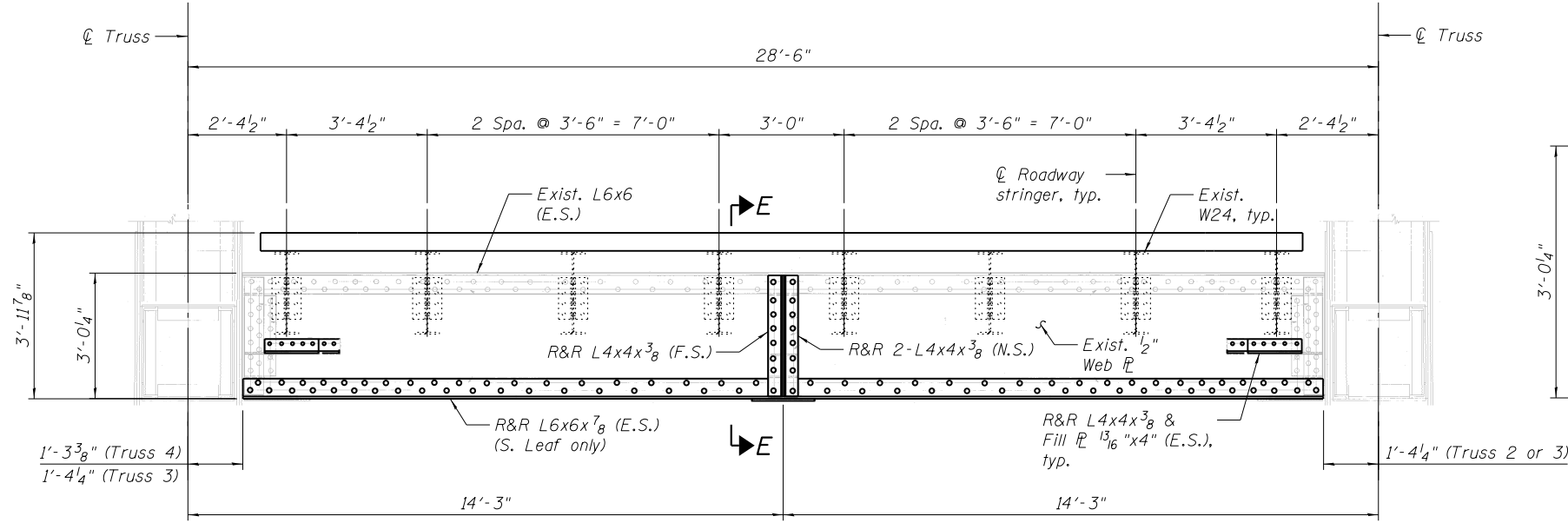
* The web repair is only applicable to Floorbeam 12-12 in the S. Leaf Btwn. Trusses 3 and 4 near Truss 3



SECTION C-C

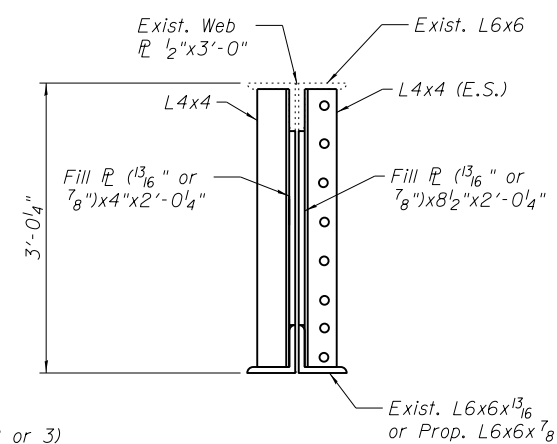
SECTION D-D

Member	Bridge	Location btwn. Trusses	Dimensions				
			"A"	"B"	"C"	"D"	"E"
Floorbeam 12-12	N. Leaf	1 to 2	2'-0 5/8"	5'-10 7/8"	1'-9 1/4"	3'-5 1/4"	2'-8 5/8"
		2 to 3	2'-0 5/8"	4'-2 7/8"	1'-9 1/4"	1'-9 1/4"	2'-8 5/8"
		3 to 4	2'-0 5/8"	4'-2 7/8"	1'-9 1/4"	1'-9 1/4"	2'-8 5/8"
	S. Leaf	1 to 2	2'-0 5/8"	4'-2 7/8"	1'-9 1/4"	1'-9 1/4"	2'-8 5/8"
		2 to 3	2'-0 5/8"	4'-2 7/8"	1'-9 1/4"	1'-9 1/4"	2'-8 5/8"
		3 to 4	2'-11 5/8"	5'-5 7/8"	1'-9 1/4"	3'-0 1/4"	1'-9 5/8"



FLOORBEAM 10-10 ELEVATION

(S. Leaf Floorbeam shown looking north)



SECTION E-E

BILL OF MATERIAL

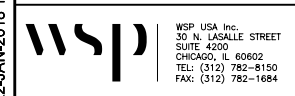
ITEM	UNIT	TOTAL
Structural Steel Repairs	Pound	29,557

REFERENCE DRAWINGS

Drawing	Sheet No.
Struts	1660300759
Erection Diagram Bott. Lateral and System	1660300974
Bottom Struts and Tie Plates	1660301040
Bottom Struts	1660301043

- Notes:
- All dimensions shall be field verified.
 - Cost of removing existing structural steel elements for floorbeam repairs shall be included in "Structural Steel Repairs."
 - Cost of furnishing and erecting structural steel elements for floorbeam repairs shall be included in "Structural Steel Repairs."
 - Cost of removing and replacing rivets in association with steel elements for floorbeam repairs shall be included in "Structural Steel Repairs."
 - Where new holes are required on web strengthening PLs the bolt spacing shall be 3" min. and 5 1/2" max. Edge distances shall be 1 1/2" min.

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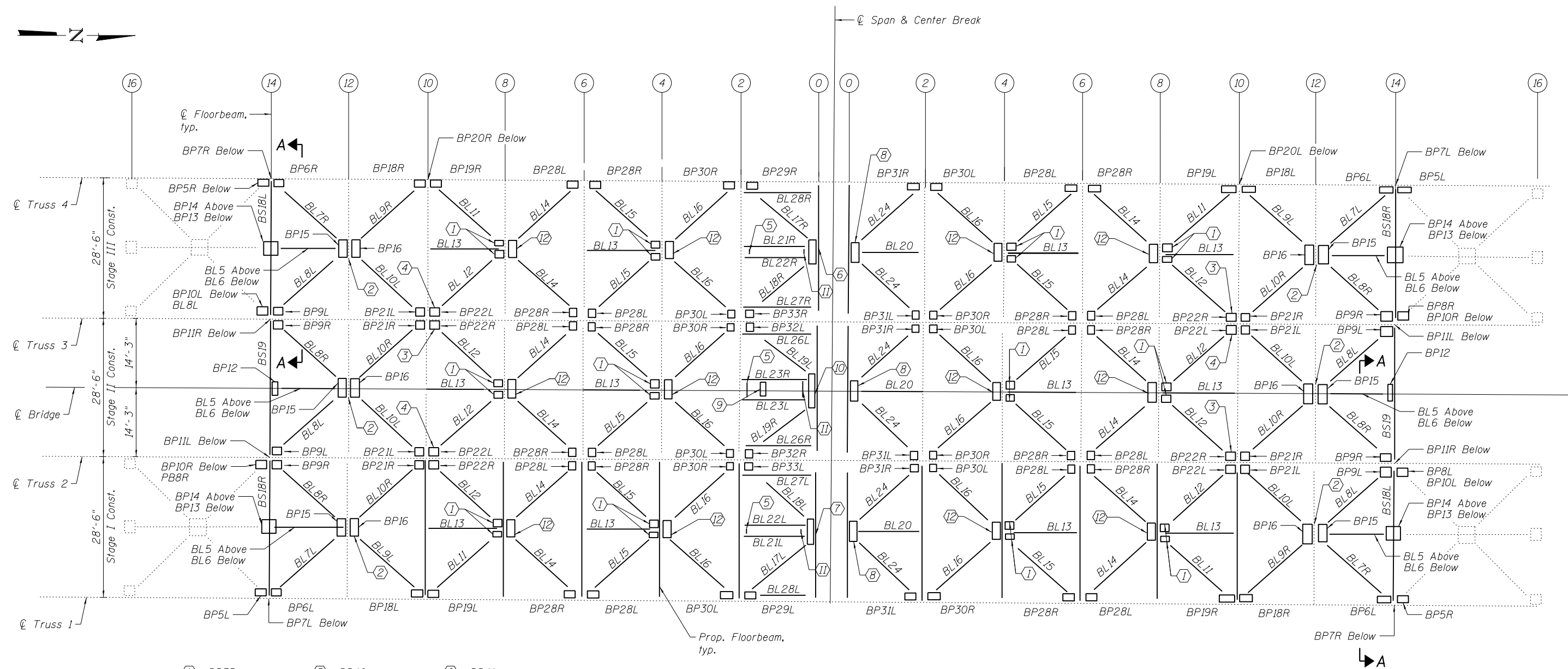
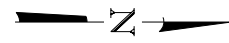
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
FLOORBEAM REPAIR DETAILS II
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-79
CDOT PROJECT NO. E-6-650			120 OF 411



- (1) BP35
- (2) BP17 Below
- (3) BP23R Below
- (4) BP23L Below
- (5) BP40
- (6) BP38R Above
BP37 Below
- (7) BP38L Above
BP37 Below
- (8) BP24 Below
BP25 Above
- (9) BP41
- (10) BP26 Below
BP27 Above
- (11) BP39
- (12) BP36
BP34 Below

ROADWAY BRACING PLAN - INTERMEDIATE LEVEL

- Notes:
- Lateral bracing shall be removed in stages. The Contractor shall submit a proposed sequence of replacement to the Commissioner for approval prior to fabrication. Cost included in the cost of Structural Steel Removal.
 - Proposed lateral bracing shown in Plan shall be replaced in kind. The Fabricator shall refer the existing plans and to the Floorbeam and Truss Repair sheets for any changes to the bolt spacing. Cost of lateral bracing included in the cost of Furnishing & Erecting Structural Steel, Movable Part.
 - For Section A-A, see sheet MS-81.
 - A Summary of Bottom Lateral Bracing has been provided for information only, see sheet MS-82.

REFERENCE DRAWINGS
 Drawing _____ Sheet No. _____
 Erection Diagram Bott. Laterals and System 1660300974

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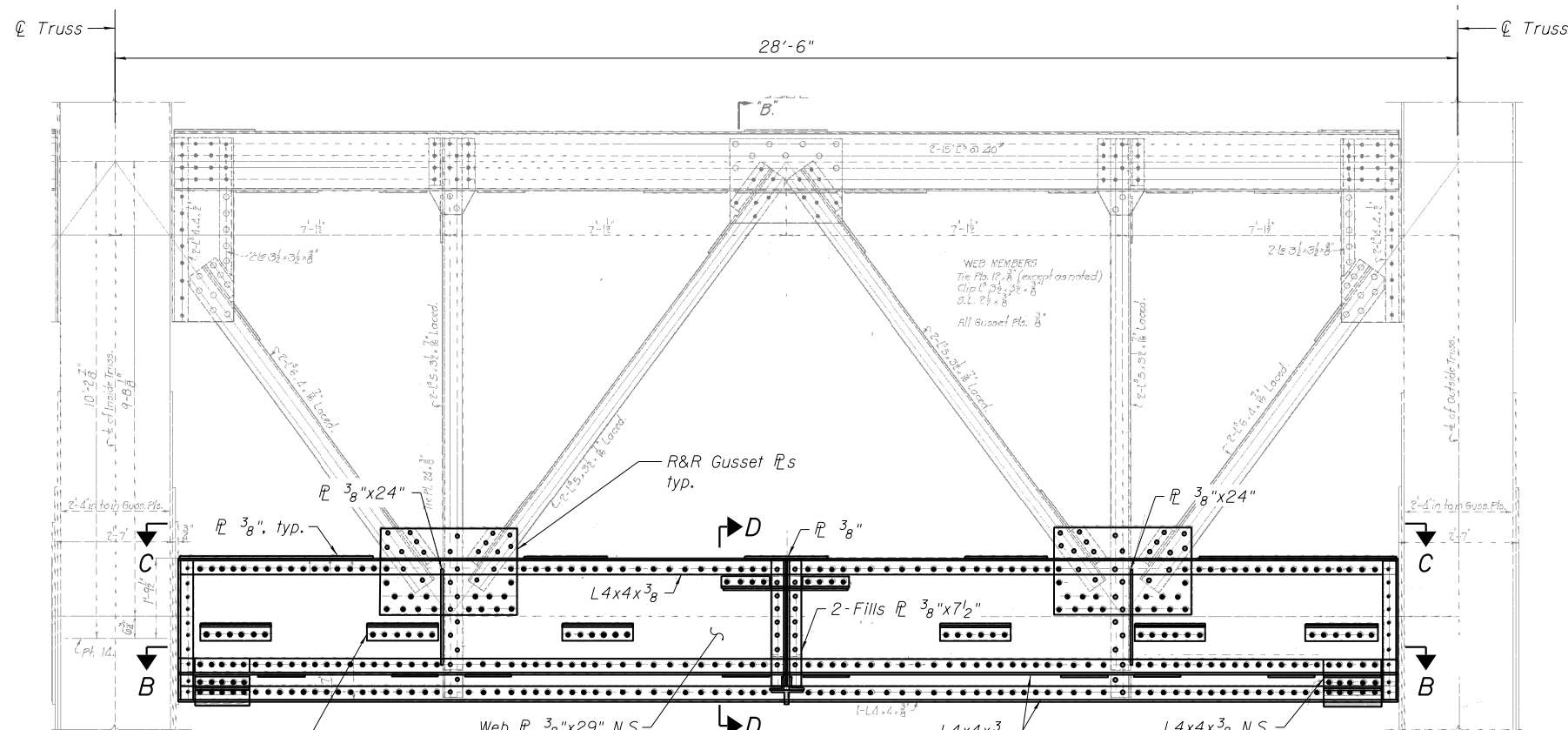
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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

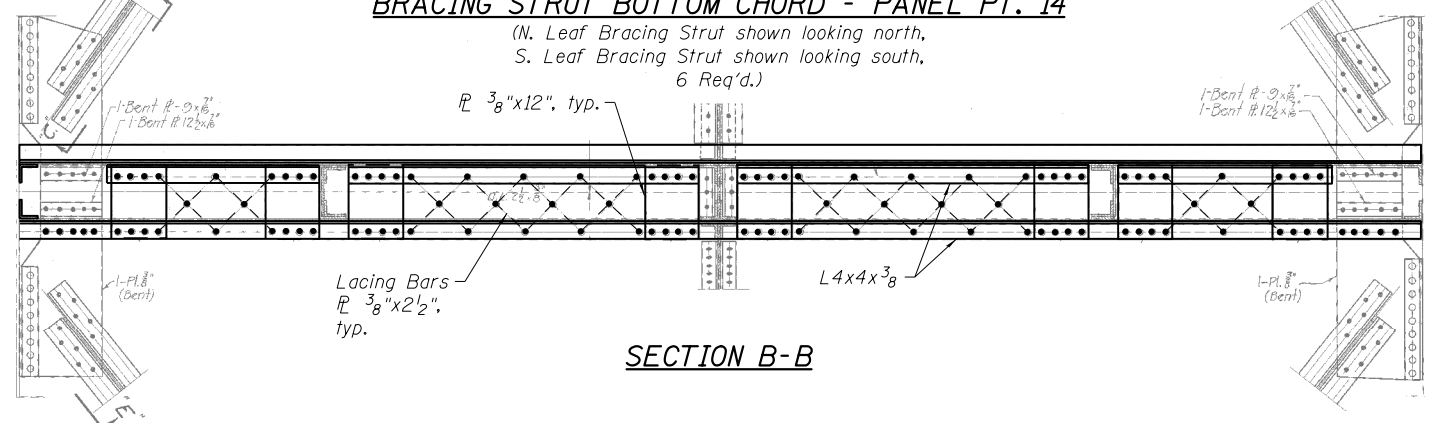
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**MOVABLE PART:
 ROADWAY LATERAL BRACING PLAN
 (STRUCTURE NO. 016-6030)**

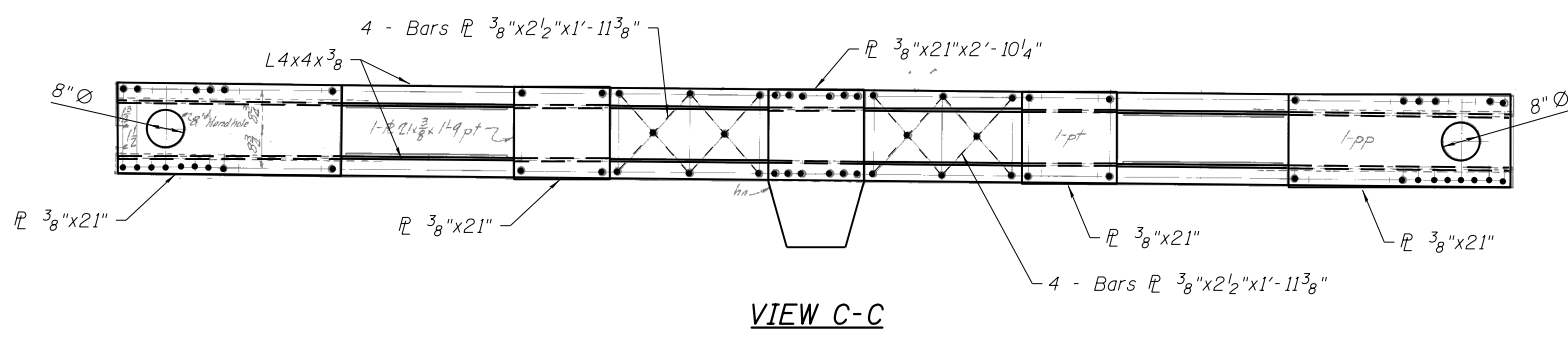
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0341	09-E0534-00-BR/CDOT	COOK	MS-80
CDOT PROJECT NO. E-6-650			121 OF 411



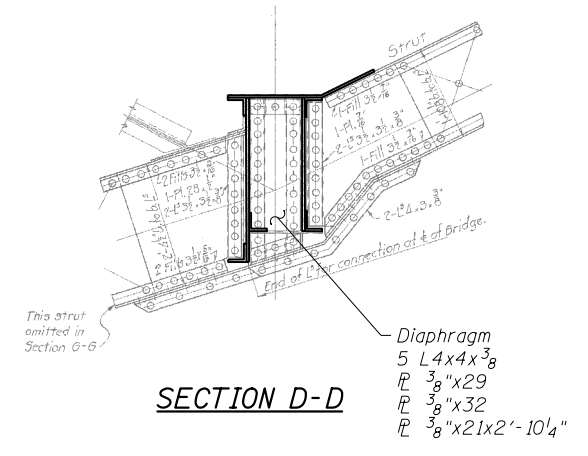
SECTION A-A
BRACING STRUT BOTTOM CHORD - PANEL PT. 14
 (N. Leaf Bracing Strut shown looking north,
 S. Leaf Bracing Strut shown looking south,
 6 Req'd.)



SECTION B-B



VIEW C-C



SECTION D-D

- Notes:**
1. Bracing Strut Bottom Chord shall be removed in stages. The Contractor shall submit a proposed sequence of replacement to the Commissioner for approval prior to fabrication. Cost included in the cost of Structural Steel Removal.
 2. Bracing Strut Bottom Chord shall be replaced in kind. The Fabricator shall refer the existing plans and to the Floorbeam and Truss Repair sheets for any changes to the bolt spacing. Cost of Bottom Strut Bottom Chord included in the cost of Furnishing & Erecting Structural Steel, Movable Part.

REFERENCE DRAWINGS

Drawing	Sheet No.
Struts	1660300761
Erection Diagram Bott. Laterals and System	1660300974
Bottom Struts	1660301042

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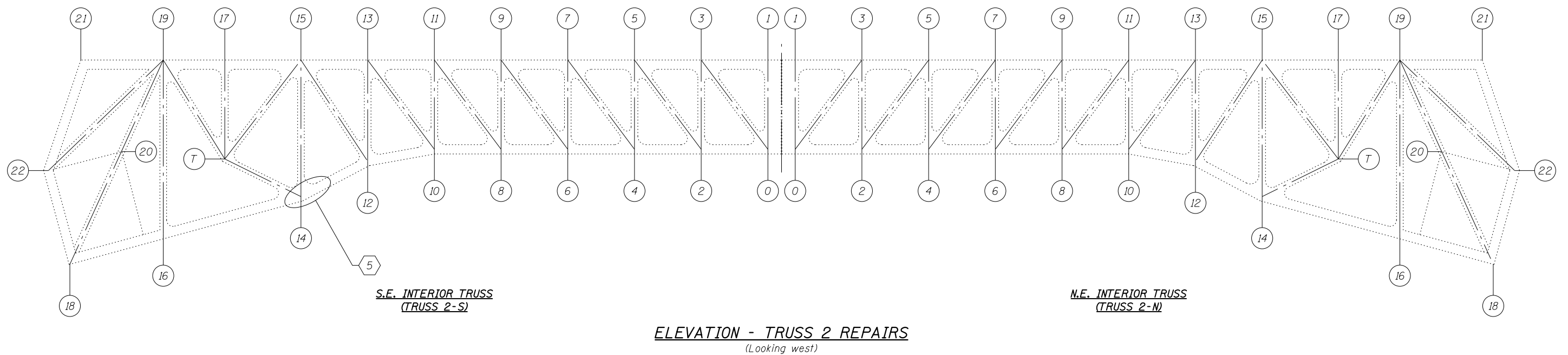
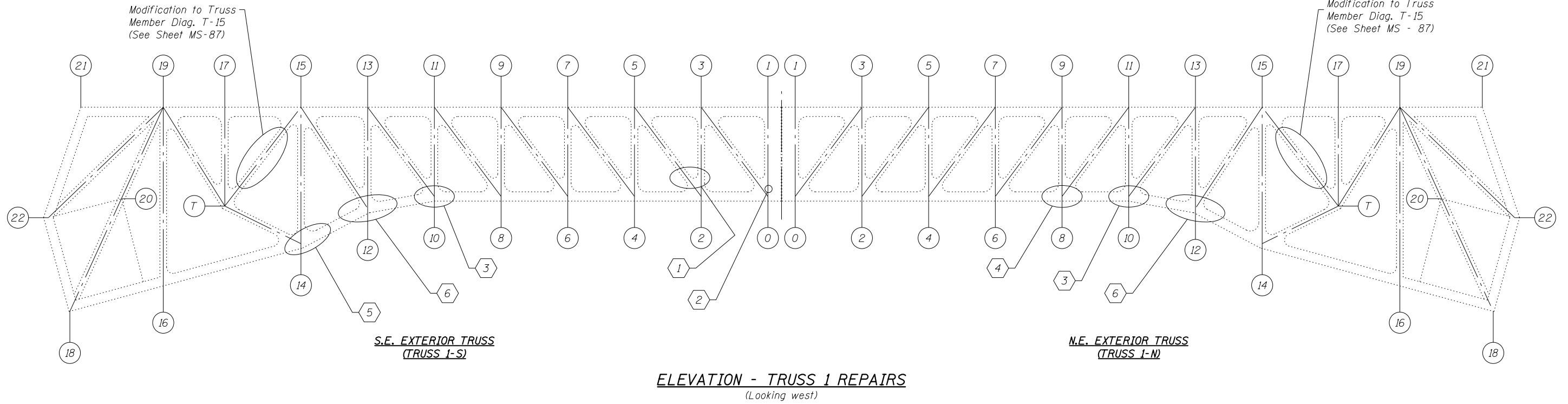
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PLOT SCALE =	N.T.S.	CHECKED -	JIG	REVISED -	
PLOT DATE =	1/22/2018	DRAWN -	NJP	REVISED -	
		CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

MOVABLE PART:
ROADWAY LATERAL BRACING DETAILS I
 (STRUCTURE NO. 016-6030)

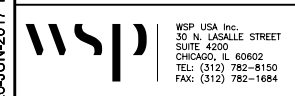
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-81
CDOT PROJECT NO. E-6-650			122 OF 411



- 1 - Repair end \bar{r} on Diagonal 2-5 (See Sheet MS-85)
- 2 - R&R in kind cover \bar{r} (See Sheet MS-85)
- 3 - R&R in kind bottom tie \bar{r} (See Sheet MS-85)
- 4 - R&R strengthening \bar{r} (See Sheet MS-86)
- 5 - R&R in kind batten and top tie \bar{r} (See Sheet MS-86)
- 6 - R&R in kind bottom tie \bar{r} and top batten \bar{r} (See Sheet MS-86)

Notes:
 1. The Contractor shall provide temporary bracing and supports to maintain structural integrity during rehabilitation. Cost included in the cost of "Structural Steel Repairs."
 2. For Truss Repair Details, see sheets MS-85 thru MS-87.

T:\16917A\StructCadd\Sheets\0166030-E6650-MS083-Truss-Repair-Key.dgn 26-JUN-2017 13:00



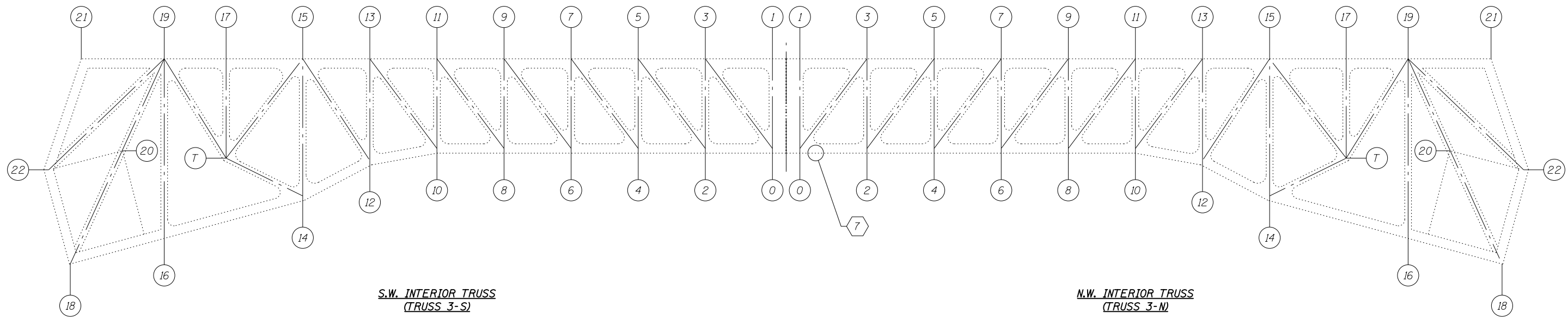
USER NAME =	lopezgonzalez	DESIGNED -	PJL	REVISED -	
PLOT SCALE =	N.T.S.	CHECKED -	IJL	REVISED -	
PLOT DATE =	6/26/2017	DRAWN -	DCP	REVISED -	
		CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
TRUSS REPAIR KEY I
(STRUCTURE NO. 016-6030)

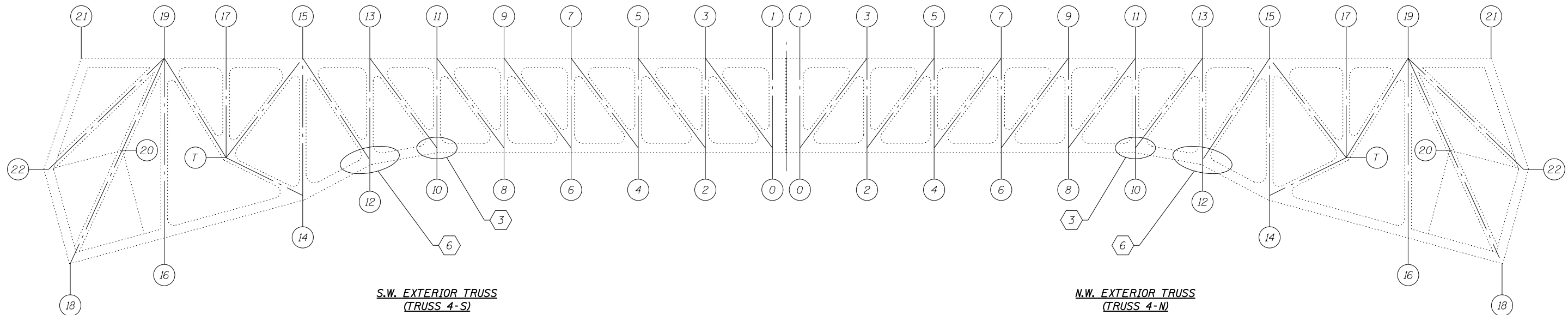
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-83
CDOT PROJECT NO. E-6-650			124 OF 411



**S.W. INTERIOR TRUSS
(TRUSS 3-S)**

**N.W. INTERIOR TRUSS
(TRUSS 3-N)**

ELEVATION - TRUSS 3 REPAIRS
(Looking west)



**S.W. EXTERIOR TRUSS
(TRUSS 4-S)**

**N.W. EXTERIOR TRUSS
(TRUSS 4-N)**

ELEVATION - TRUSS 4 REPAIRS
(Looking west)

- 3 - R&R in kind bottom tie \bar{P}
(See Sheet MS-85)
- 6 - R&R in kind bottom tie \bar{P} and
top batten \bar{P} (See Sheet MS-86)
- 7 - R&R bottom angle (See Sheet MS-85)

- Notes:
1. The Contractor shall provide temporary bracing and supports to maintain structural integrity during rehabilitation. Cost included in the cost of "Structural Steel Repairs."
 2. For Truss Repair Details, see sheets MS-85 thru MS-87.

T:\16917A\StructCadd\Sheets\0166030-E6650-MS084-Truss-Repair-Key.dgn 26-JUN-2017 13:00

wsp
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

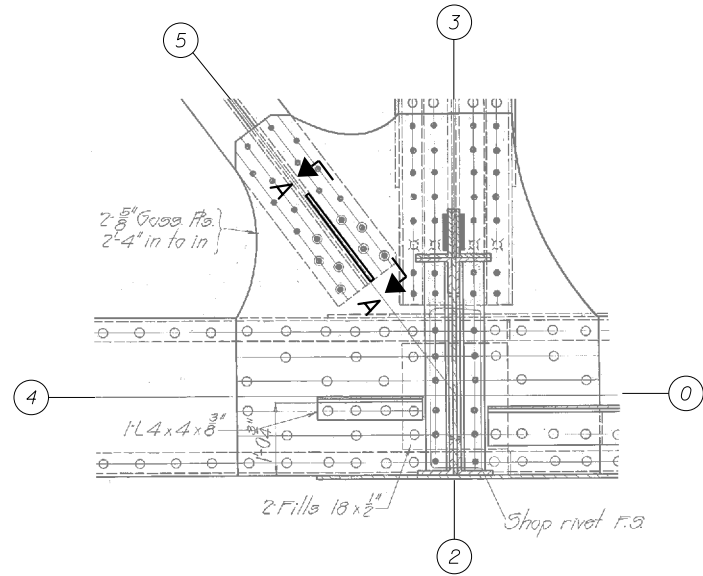
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		CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

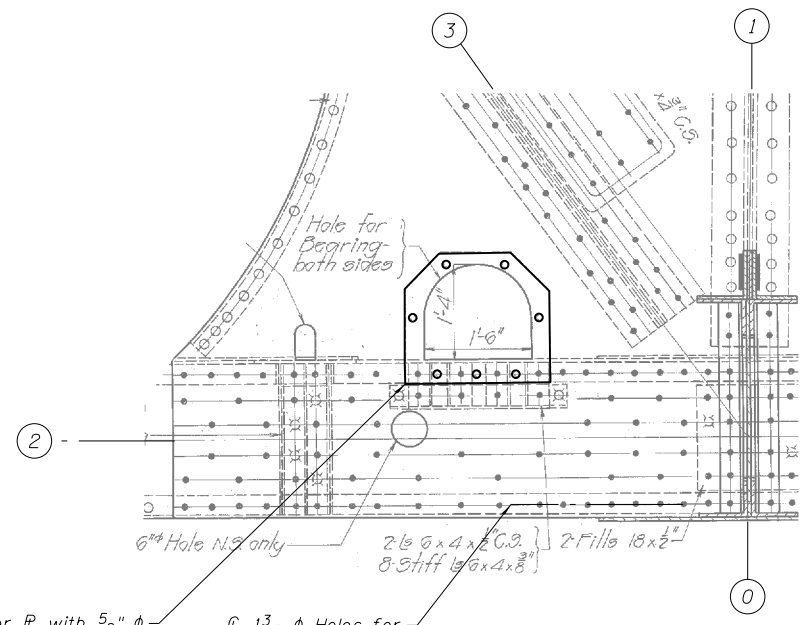
**MOVABLE PART:
TRUSS REPAIR KEY II
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-84
CDOT PROJECT NO. E-6-650			125 OF 411



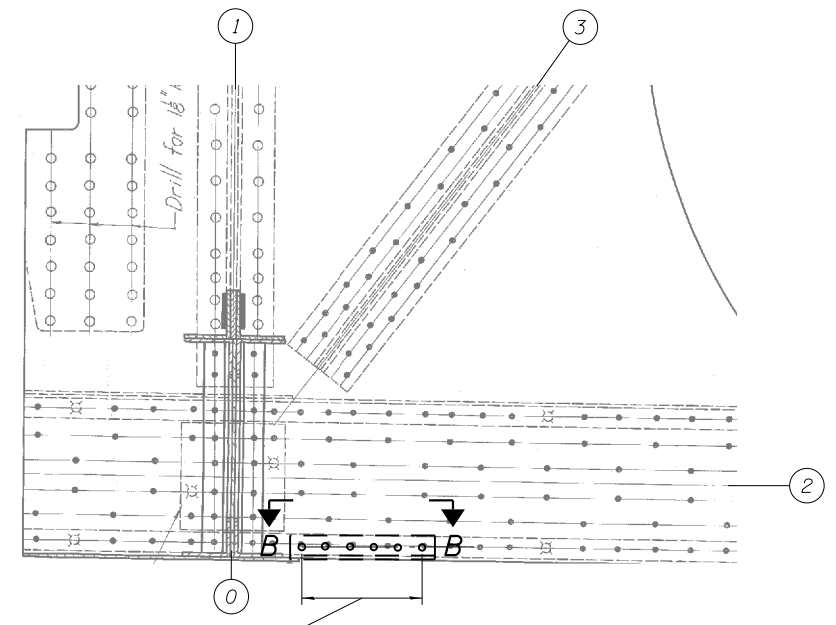
TRUSS REPAIR 1

(Looking west, South Leaf shown)



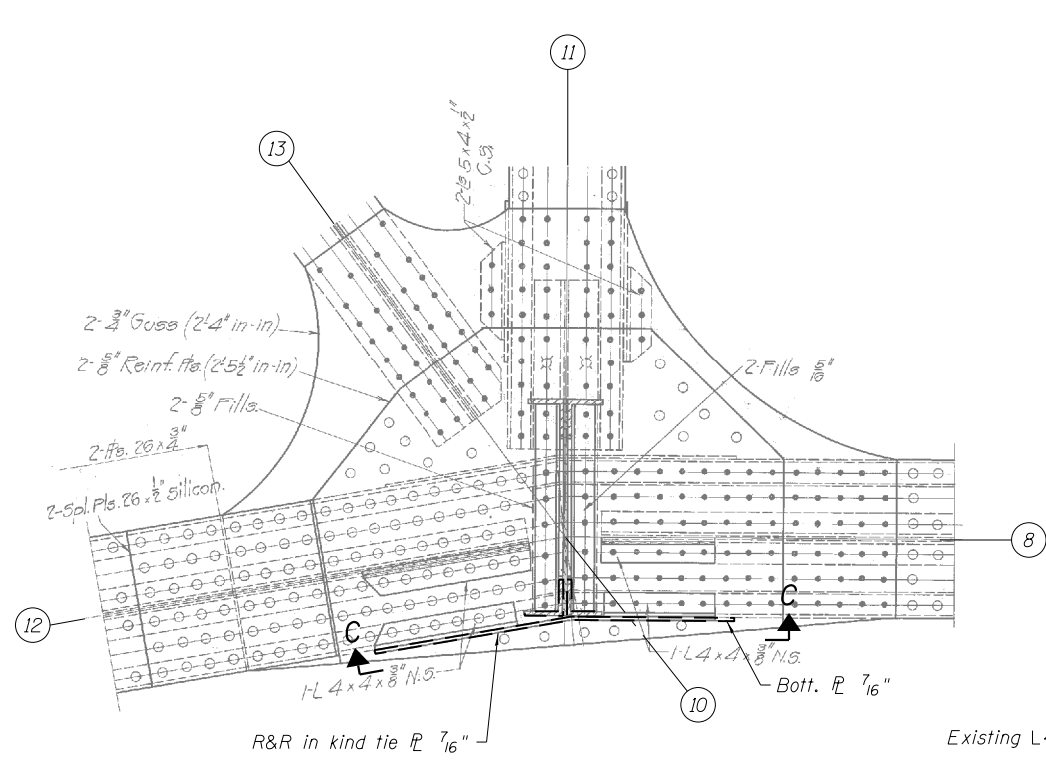
TRUSS REPAIR 2

(Looking west, South Leaf shown)



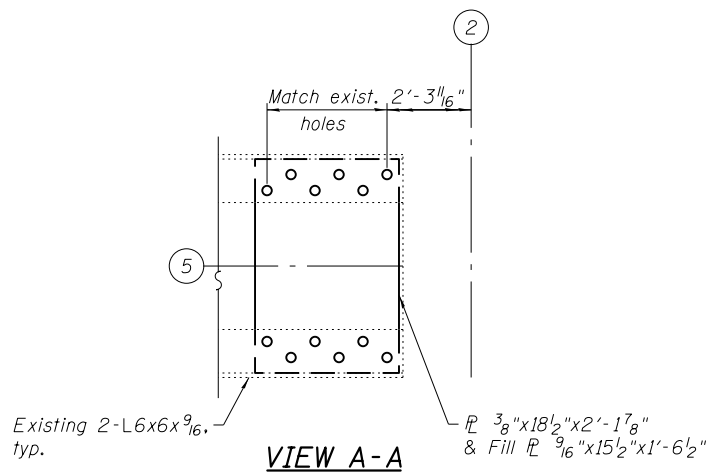
TRUSS REPAIR 3

(Looking west, North Leaf shown)

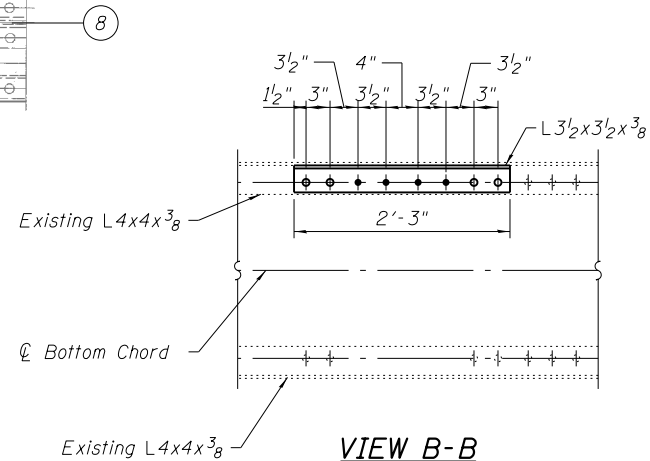


TRUSS REPAIR 3

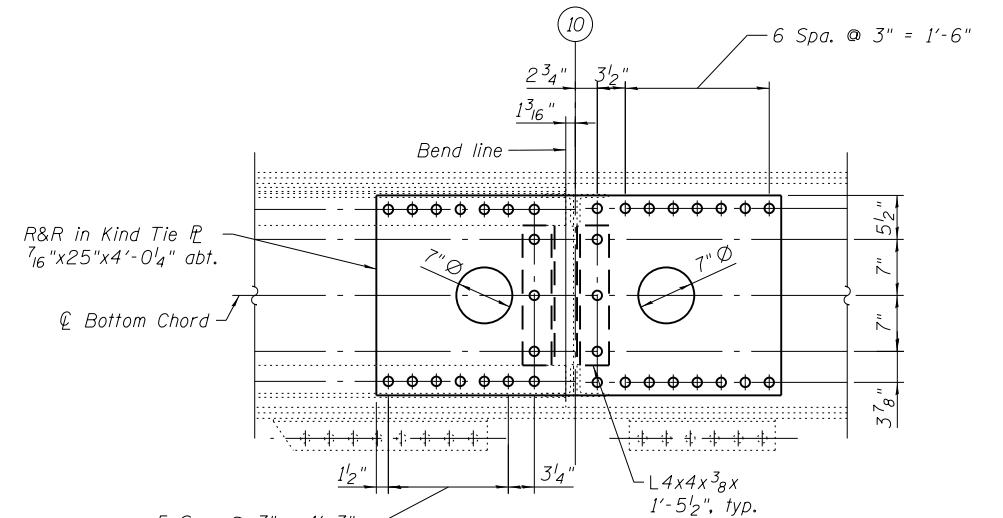
(Looking west, South Leaf shown, North Leaf similar but opposite hand) (4 Required)



VIEW A-A



VIEW B-B



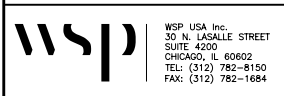
VIEW C-C

- Notes:
- Locations to be strengthened shall be verified in the field.
 - Cost of furnishing and erecting truss repair steel elements shall be included in "Structural Steel Repair."
 - Cost of removing and replacing rivets in association with furnishing and erecting truss repair steel elements shall be included in "Structural Steel Repair."
 - Cost of removing and replacing rivets that are not part of truss repairs shall be included in "Removal of Deteriorated Connectors and Replacement with High Strength Bolts."
 - For location of Truss Repairs, see sheets MS-83 and MS-84.

REFERENCE DRAWINGS

Drawing	Sheet No.
Post at Center Outside Truss	1660300988
Diagonals Outside Truss	1660300992
Bottom Chord L10-L14 Outside Truss	1660301006
Bottom Chord L4-L10 Outside Truss	1660301007
Bottom Chord L4-LocA Center Truss	1660301030

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WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

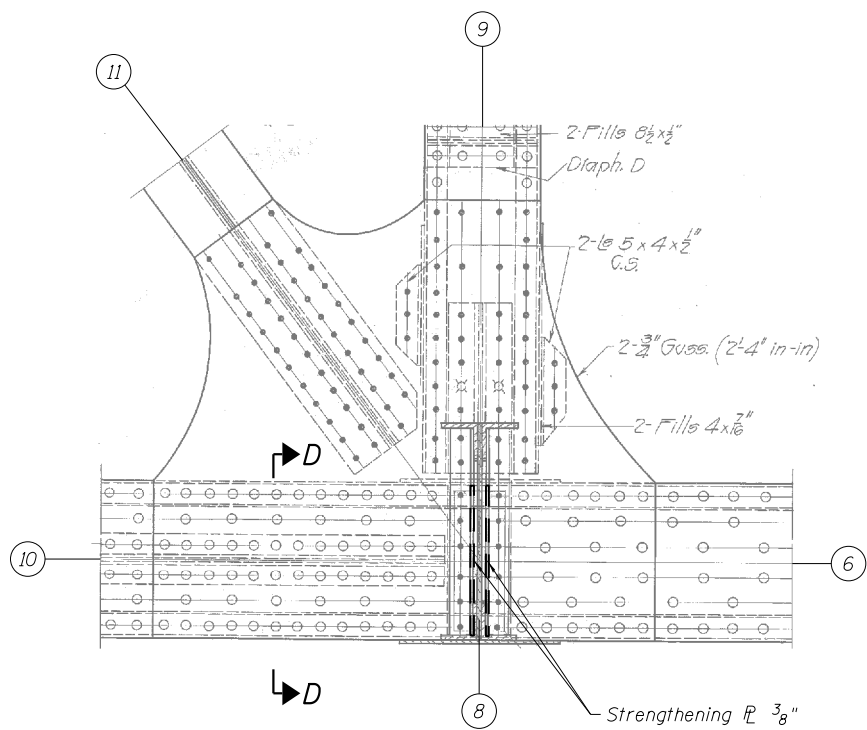
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PLOT SCALE = N.T.S.	CHECKED - JIG	REVISED -
PLOT DATE = 6/26/2017	DRAWN - NJP	REVISED -
	CHECKED - JIG	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

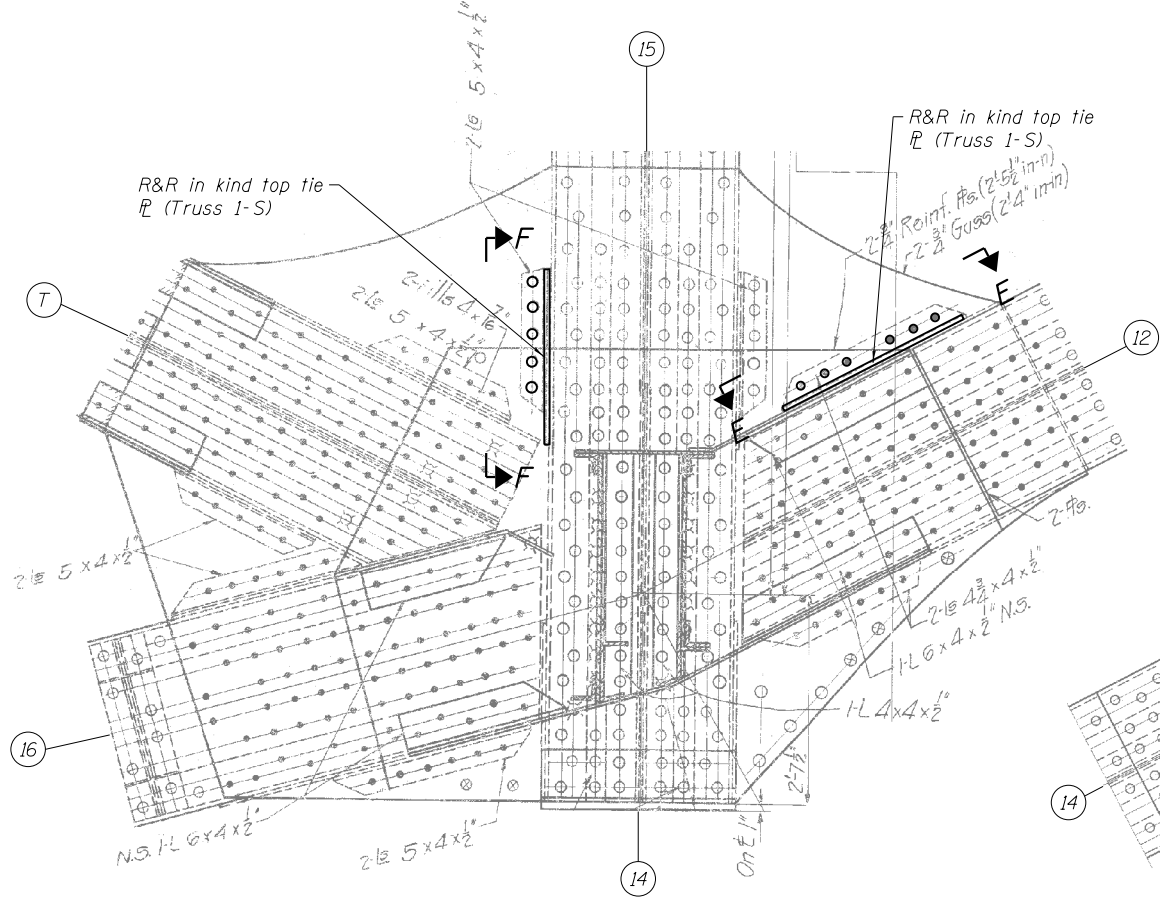
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**MOVABLE PART:
TRUSS REPAIR DETAILS I
(STRUCTURE NO. 016-6030)**

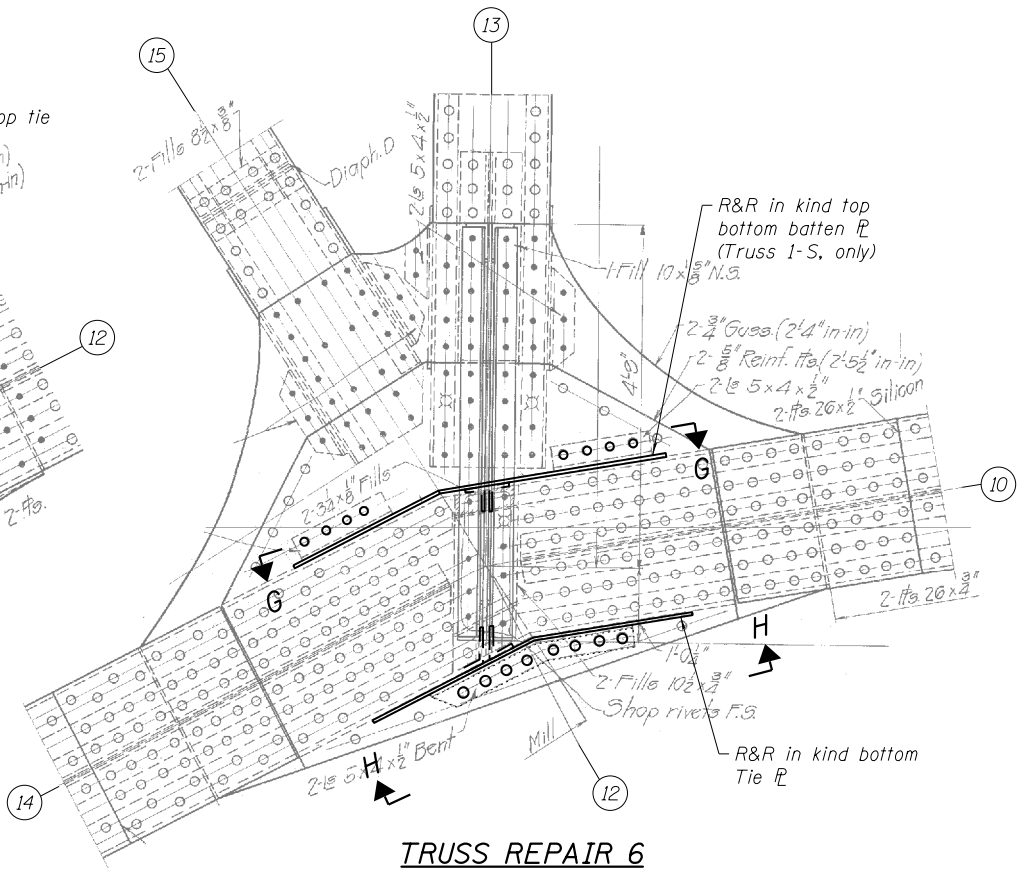
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-85
CDOT PROJECT NO. E-6-650			126 OF 411



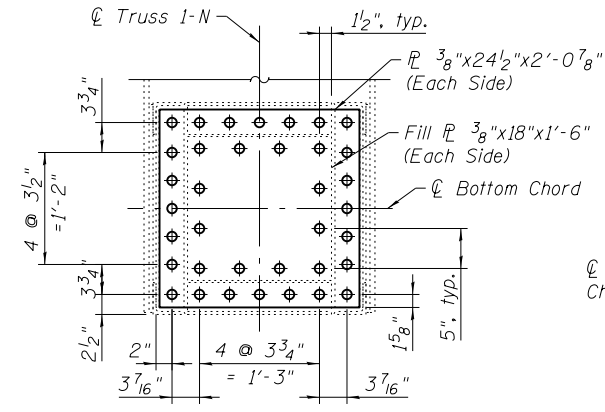
TRUSS REPAIR 4
(Looking East)



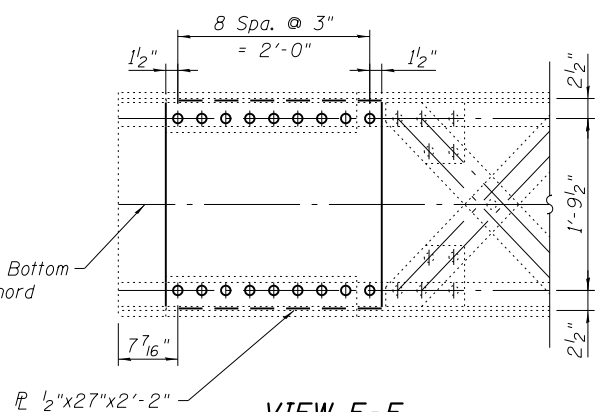
TRUSS REPAIR 5
(Looking west, S.E. Outside Truss shown S.E. Interior Truss Similar)
(2 Required)



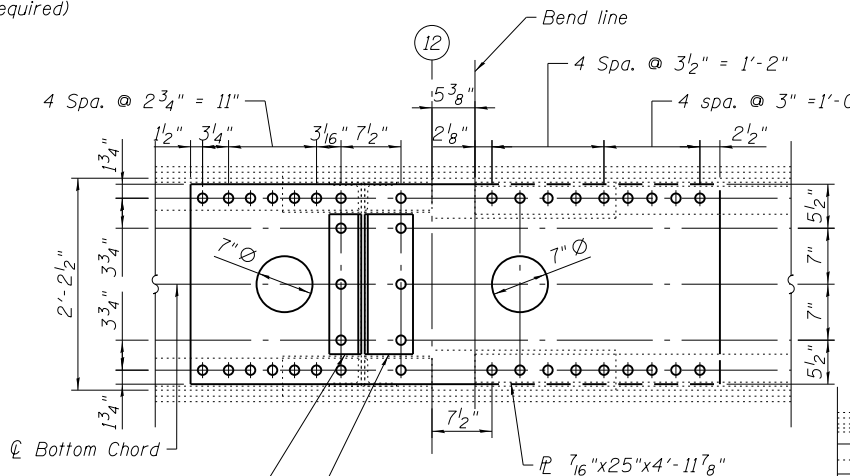
TRUSS REPAIR 6
(Looking west, South Leaf shown, North Leaf similar but opposite hand)
(4 Required)



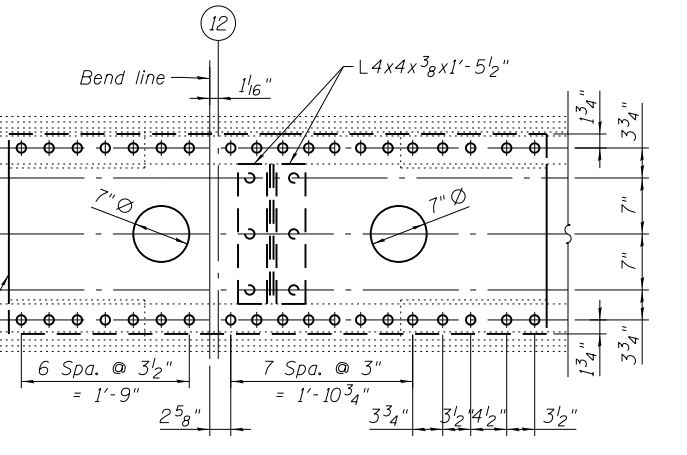
VIEW D-D



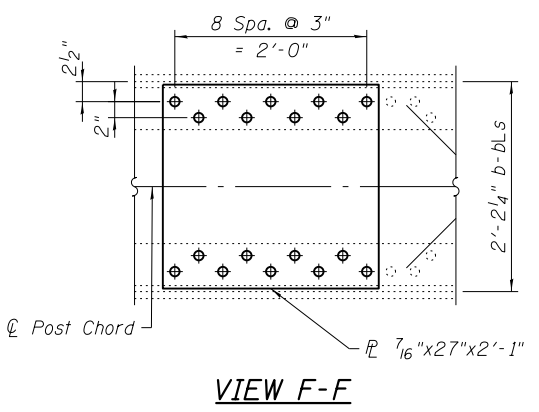
VIEW E-E



VIEW H-H



VIEW G-G

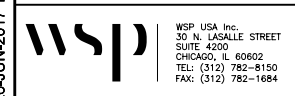


VIEW F-F

REFERENCE DRAWINGS

Drawing	Sheet No.
Outside Bascule Truss	1660300751
Bottom Chord L10-L14 Outside Truss	1660301006
Bottom Chord L4-L10 Outside Truss	1660301007
Live Load Post L14-U15C Center Truss	1660301013
Bottom Chord L10-L14C Center Truss	1660301028

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26-JUN-2017 13:00



USER NAME = lopezgonzalez
DESIGNED - P.J.L.
CHECKED - J.I.G.
PLOT SCALE = N.T.S.
DRAWN - P.J.L.
PLOT DATE = 6/26/2017
CHECKED - J.I.G.

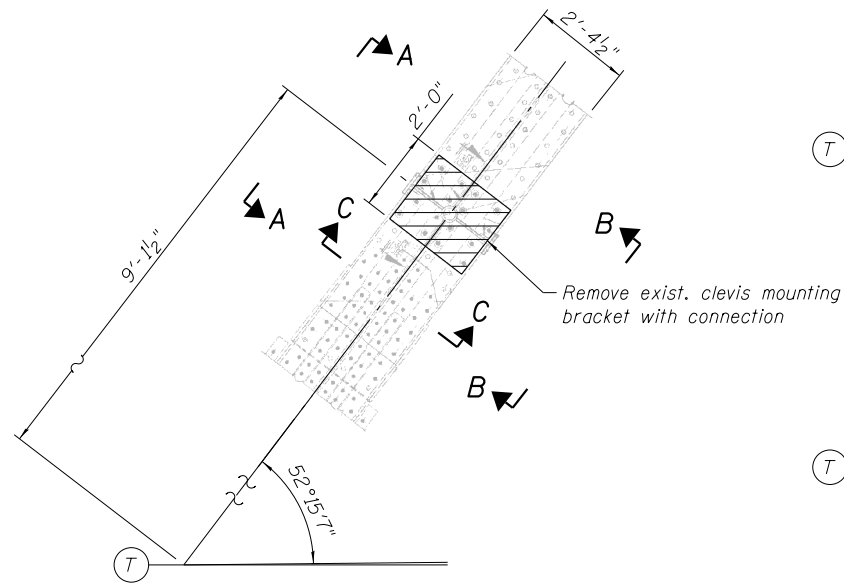
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REVISÉ -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

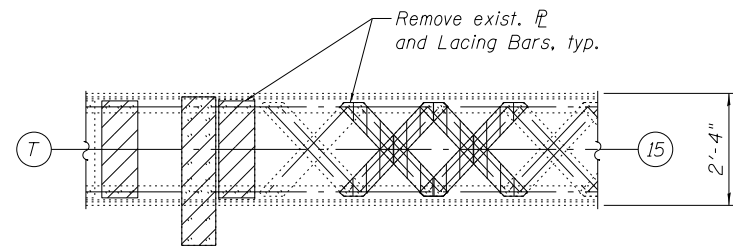
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
TRUSS REPAIR DETAILS II
(STRUCTURE NO. 016-6030)

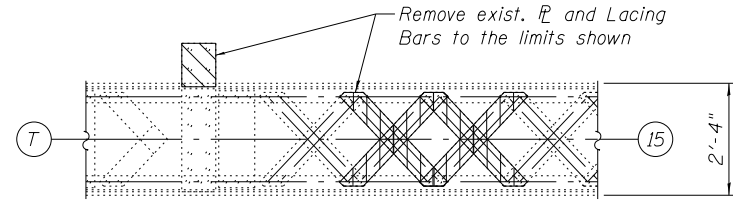
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-86
CDOT PROJECT NO. E-6-650			127 OF 411



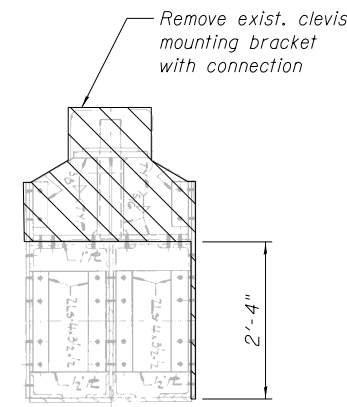
ELEVATION - REMOVAL OF CLEVIS MOUNTING BRACKET TO DIAGONAL T-U15 CONNECTION



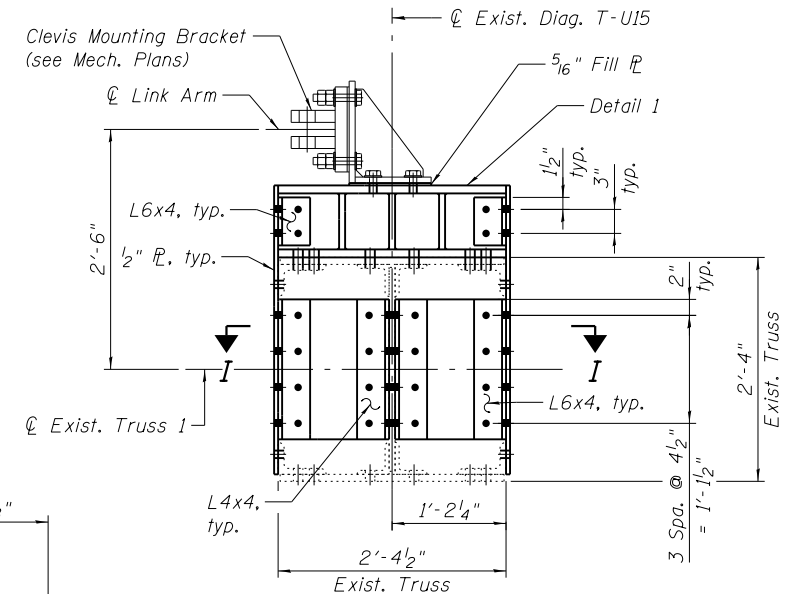
VIEW A-A
(Top view)



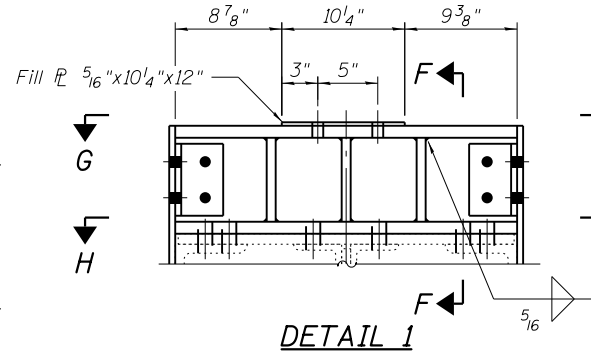
VIEW B-B
(Bottom view)



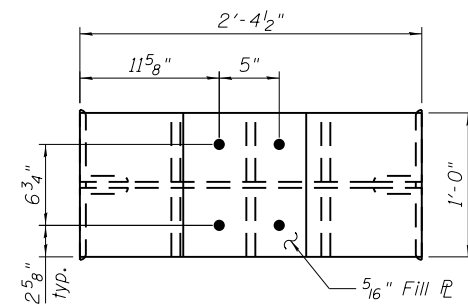
SECTION C-C



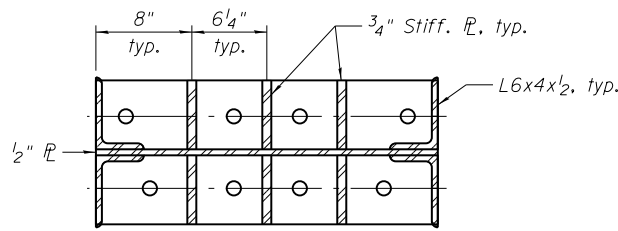
SECTION E-E



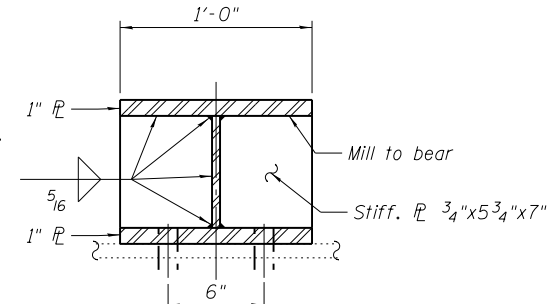
DETAIL 1



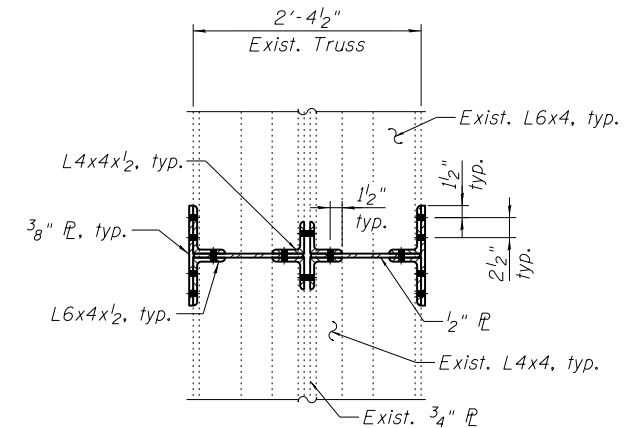
SECTION G-G



SECTION H-H



SECTION F-F



SECTION I-I

LEGEND

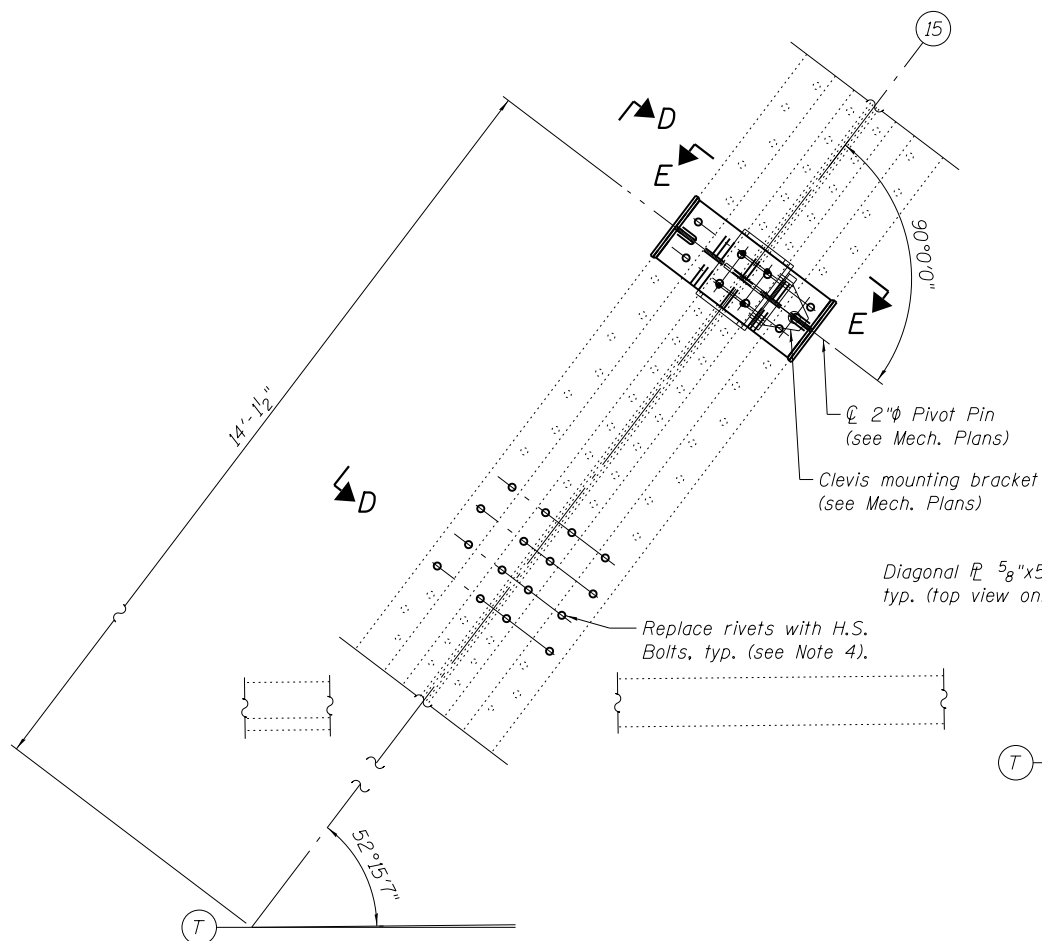
Structural Steel Removal

REFERENCE DRAWINGS

Drawing	Sheet No.
Movable Sidewalk Details	1660300264
Movable Sidewalk Details	1660300265
Movable Sidewalk Stops and Support Bracket	1660300382

Notes:

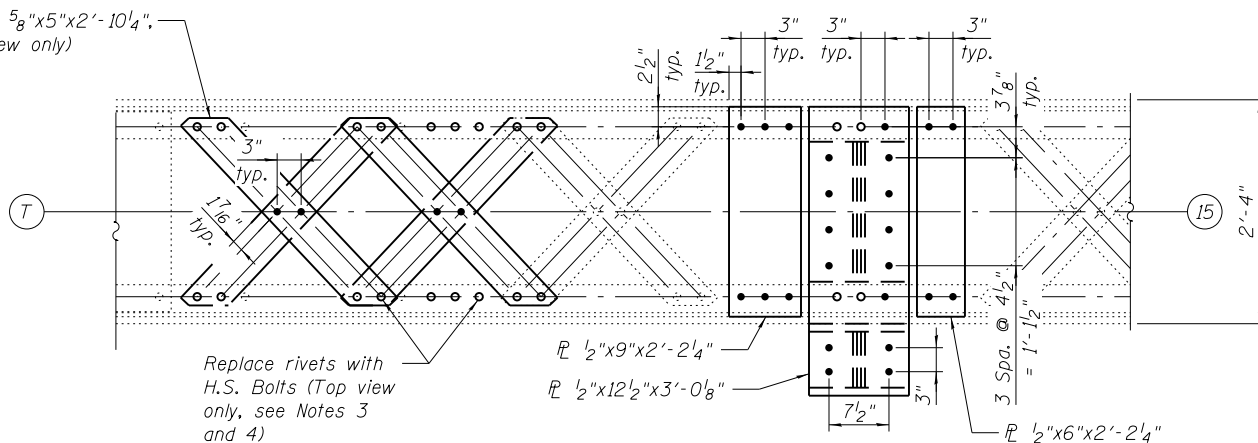
- All dimensions shall be field verified.
- Cost of furnishing and erecting truss repair steel elements shall be included in "Structural Steel Repair."
- Cost of removing and replacing rivets in association with furnishing and erecting truss repair steel elements shall be included in "Structural Steel Repair."
- Cost of removing and replacing rivets that are not part of truss repairs shall be included in "Removal of Deteriorated Connectors and Replacement with High Strength Bolts."



ELEVATION - CLEVIS MOUNTING BRACKET TO DIAGONAL T-U15 CONNECTION

Diagonal P 5/8" x 5" x 2'-10 1/4", typ. (top view only)

Replace rivets with H.S. Bolts, typ. (see Note 4).



VIEW D-D

(Top view is shown, Bottom view is similar except as noted)

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26-JUN-2017 13:00



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

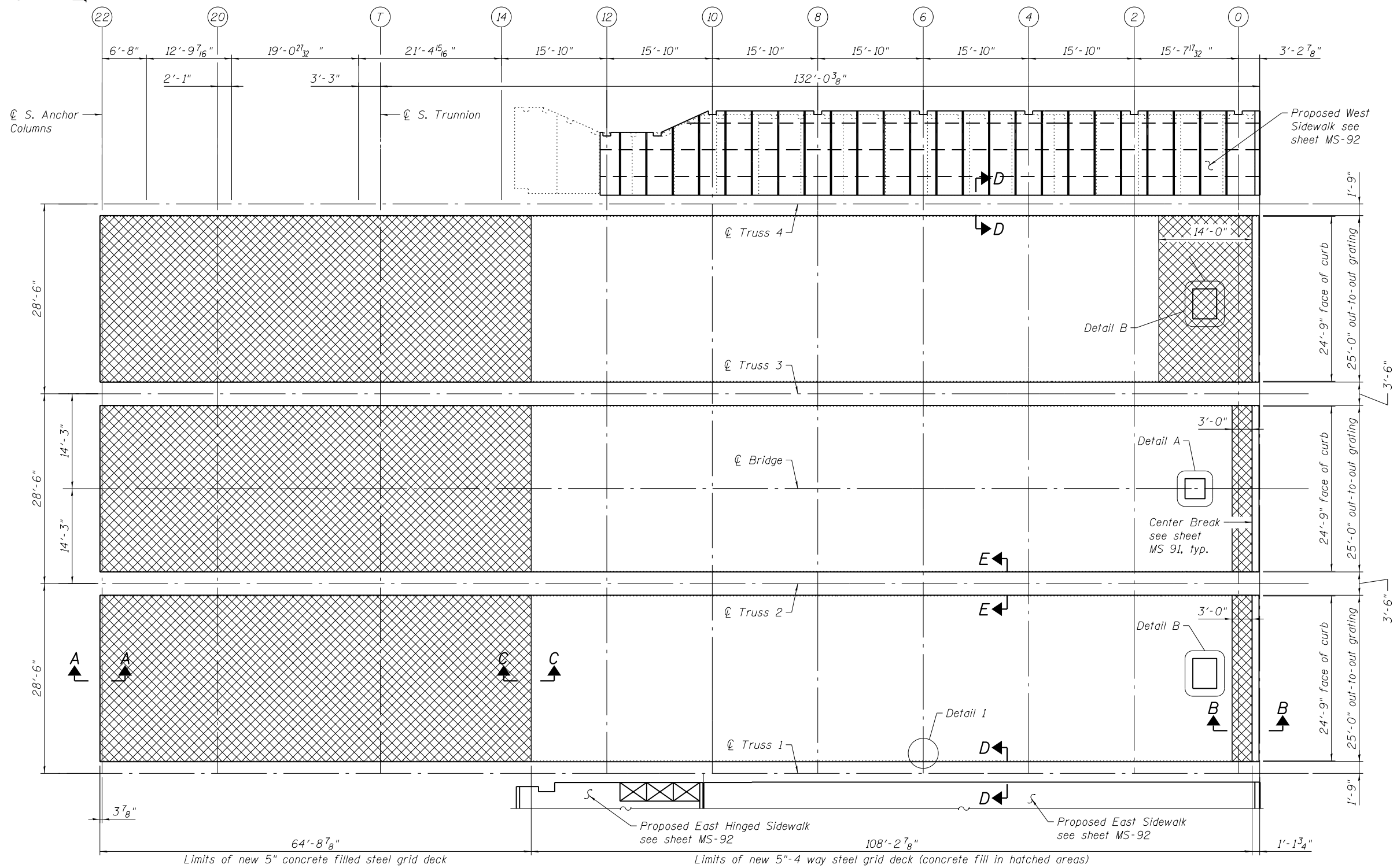
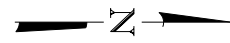
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PLOT SCALE =	N.T.S.	CHECKED -	JIG	REVISED -	
PLOT DATE =	6/26/2017	DRAWN -	PJL/MI	REVISED -	
		CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
TRUSS REPAIR DETAILS III
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-87
CDOT PROJECT NO. E-6-650			128 OF 411



- Notes:
- All structural steel shall be AASHTO M270 Grade 50.
 - Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 - All material and workmanship shall conform to the IDOT Standard Specifications for Road and Bridge Construction, adopted April 1, 2016.
 - All welding shall be in accordance with the latest version of AASHTO/AWS D1.1 and AASHTO/AWS D1.5.
 - After fabrication, all material shall be hot-dip galvanized according to ASTM A123.
 - Open grid deck with 1/4"x 2 1/2" cross bars shall be used.
 - The deck shall be manufactured from the following steel elements:
 - Main bar (MB) @ 7.5" c/c.
 - 1/4"x2 1/2" cross bar (CBAR) @ 4" c/c.
 - Diagonal bar (2 between each main bar)
 - 1/4"x1" supplemental bar @ 7.5" c/c.
 - Roadway markings shall be restriped on the deck after the new grid is in place.
 - For roadway grating sections and details, see sheet MS-89.
 - For Detail A and B, see sheet MS-90.

ROADWAY GRATING PLAN - INTERMEDIATE LEVEL
 (South Leaf shown, North Leaf opposite hand and similar)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnish and Erecting 5" Open Grid Deck	Sq. Ft.	15,236
Furnish and Erecting 5" Concrete Filled Grid Deck	Sq. Ft.	10,712

Quantity shown includes south and north leaf.

REFERENCE DRAWINGS

Drawing	Sheet No.
Grid Decking Plan View - North Leaf	1660300580
Grid Decking Plan View - South Leaf	1660300581

T:\16617A\Struct\Cadd\Sheets\0166030-E6650-MS088-Deck-Rdwy-Grating-Plan.dgn 30-JAN-2018 14:23



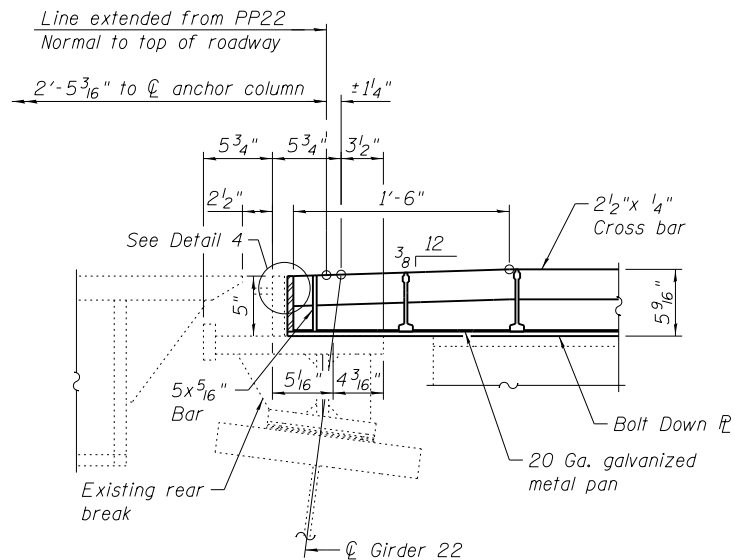
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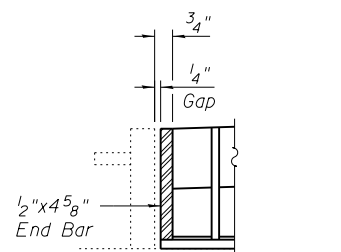
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**MOVABLE PART:
ROADWAY GRATING PLAN INTERMEDIATE LEVEL
(STRUCTURE NO. 016-6030)**

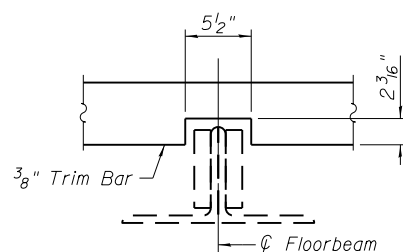
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-88
CDOT PROJECT NO. E-6-650			129 OF 411



SECTION A-A
END PANEL AT REAR BREAK

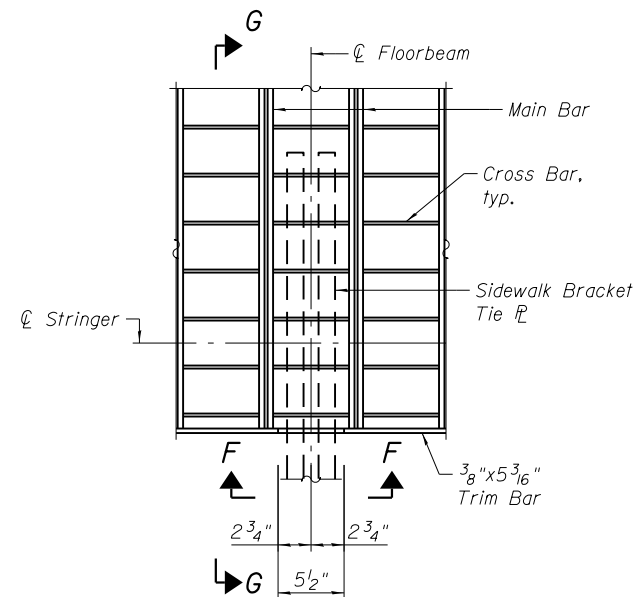


DETAIL 4



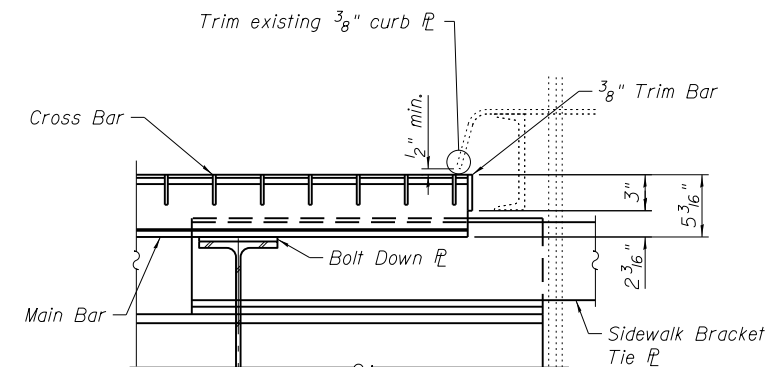
VIEW F-F

(Showing cut details for 3/8\"/>

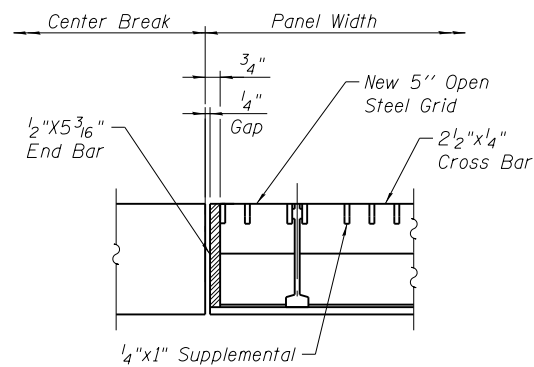


DETAIL 1

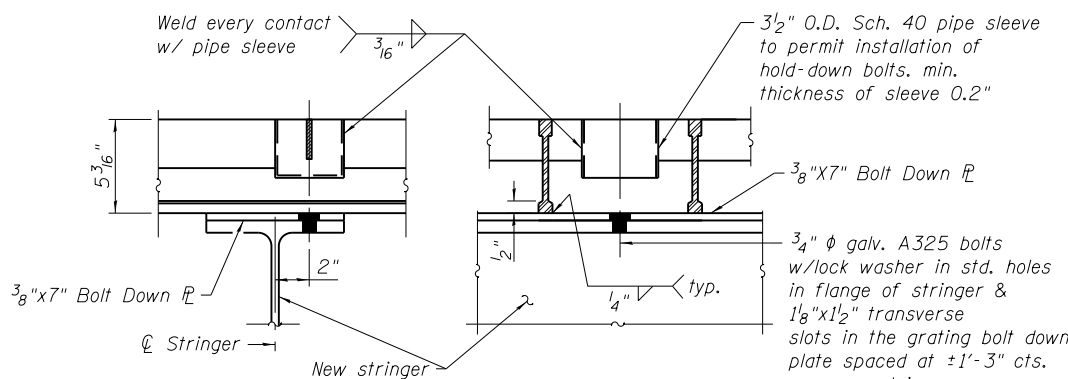
(Diagonal and supplemental bars of grating not shown for clarity)



SECTION G-G

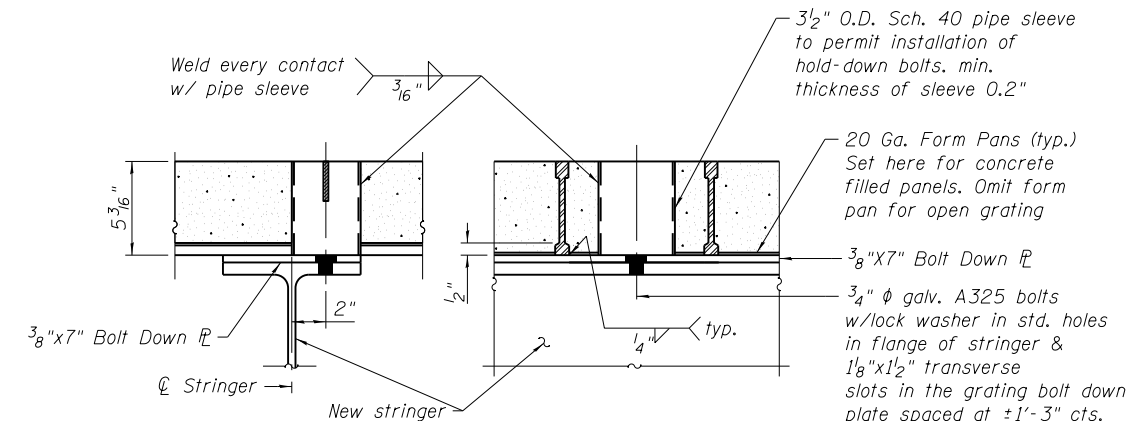


SECTION B-B
END PANEL AT CENTER BREAK



TYPICAL OPEN GRATING BOLT DOWN DETAIL

(Open grating at new stringers shown, similar at existing stringers)



TYPICAL CONCRETE FILLED GRATING BOLT DOWN DETAIL

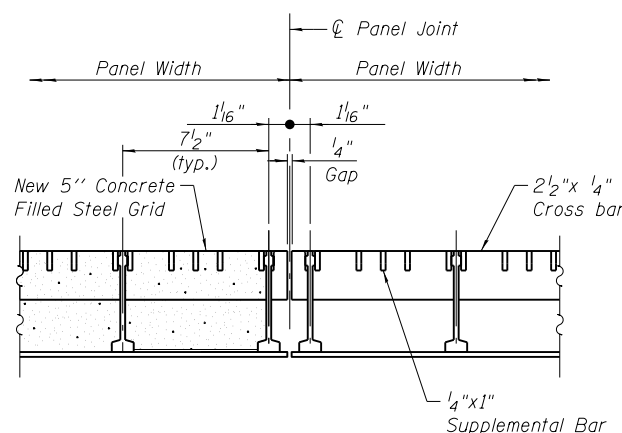
(Concrete filled grating at new stringers, similar at existing stringers)

- Notes:
- All grating elements shall be serrated on their top surfaces.
 - For additional notes see sheet MS-XX.

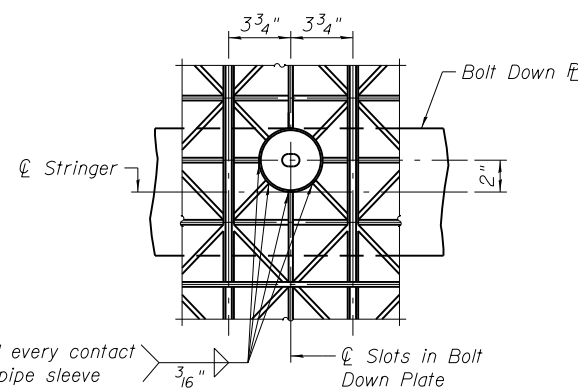
REFERENCE DRAWINGS

Drawing
Grid Decking - Sections & Details

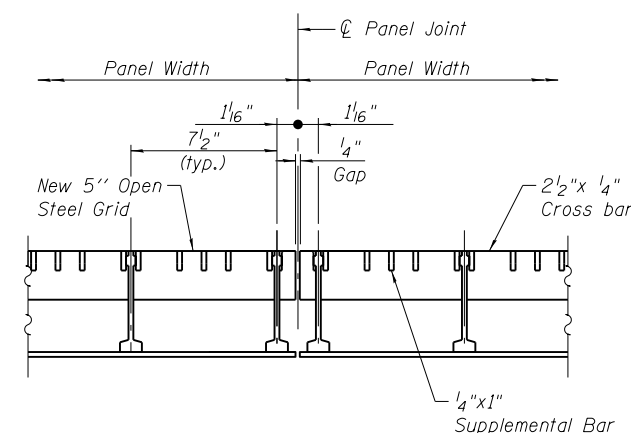
Sheet No.
1660300582



SECTION C-C



PLAN
PIPE SLEEVE & BOLT DOWN PLATE



TYPICAL INTERIOR PANEL JOINT

(Open grating shown, concrete-filled grating similar)

T:\16617A\Struct\Cadd\Sheets\0166030-E6650-MS-089-Deck-Rdwy-Grating-Details-I.dgn
26-JUN-2017 13:00



USER NAME = lopezgonzalez
DESIGNED - IJL
CHECKED - JIG
PLOT SCALE = N.T.S.
DRAWN - IJL
PLOT DATE = 6/26/2017
CHECKED - JIG

DESIGNED - IJL
CHECKED - JIG
REVISOR -
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

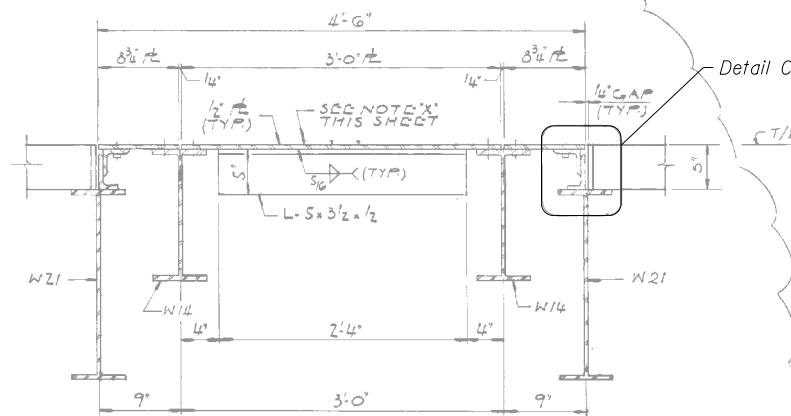
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ROADWAY GRATING DETAILS I INTERMEDIATE LEVEL
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-89
CDOT PROJECT NO. E-6-650			130 OF 411

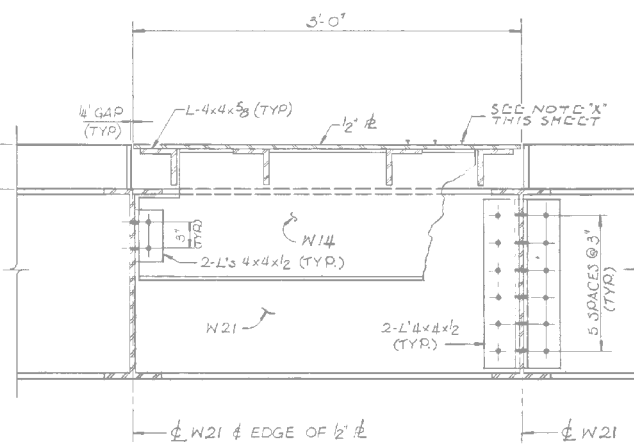
REFERENCE DRAWINGS

Drawing
Intermediate Level Misc. Details

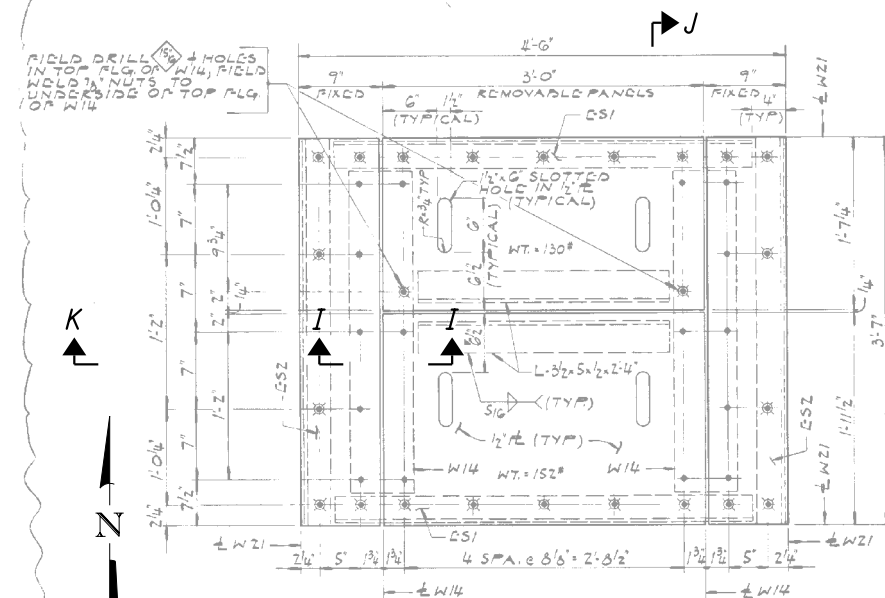
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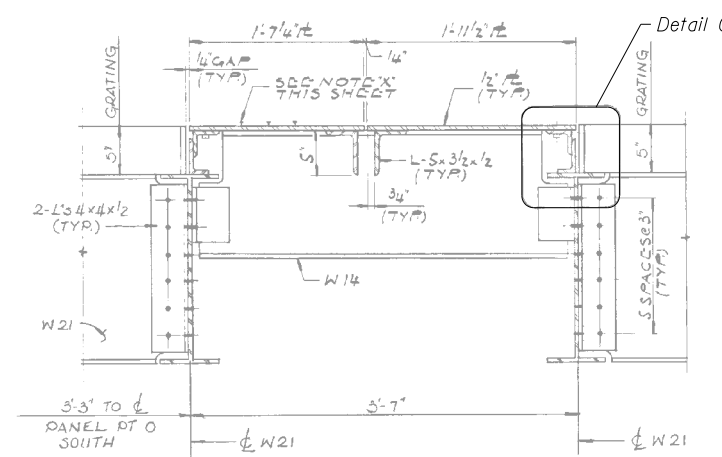
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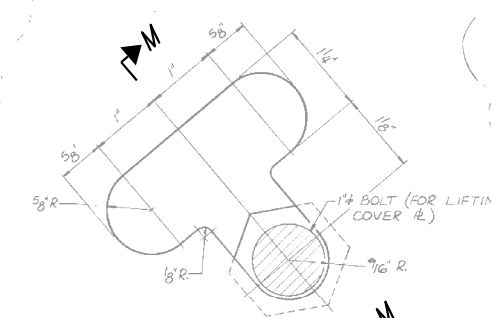
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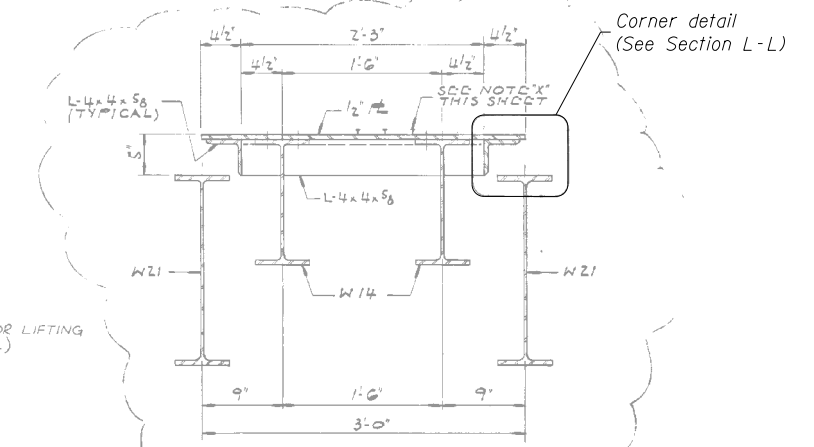
DETAIL B



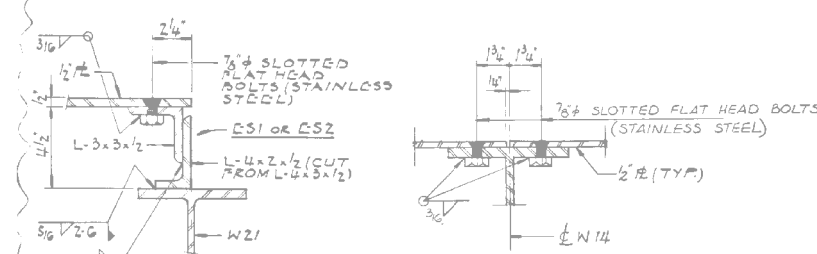
SECTION J-J



**DETAIL D
(TYPICAL T-SLOT)**



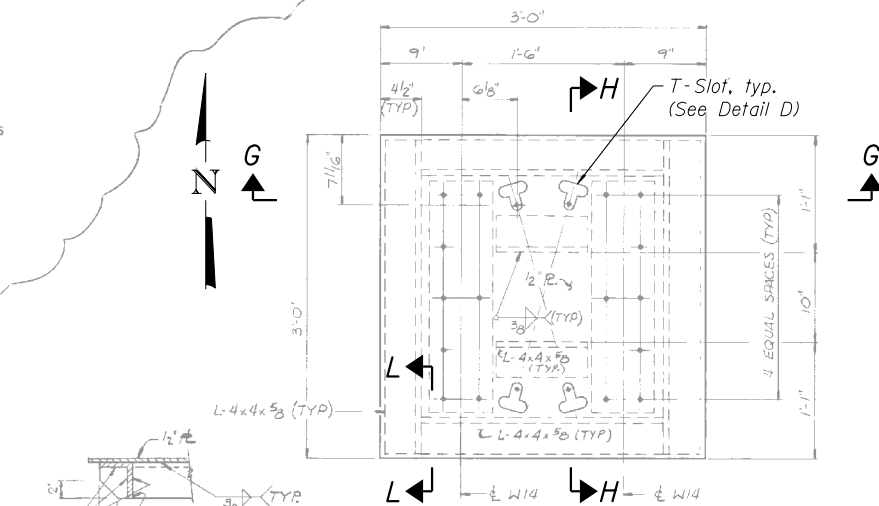
SECTION G-G



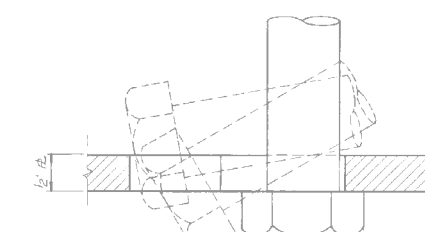
DETAIL C

SECTION I-I

NOTE 'X' NON-SKID SURFACE-NELSON STUDS
NELSON OR EQUAL FLUXED, KNOCK-OFF
NO THREAD TYPE STUDS 3/8" AND .34" OVERALL
LENGTH THROUGH HARDENED TO ROCKWELL
C68 SHALL BE USED TO PROVIDE A NON-SKID SURFACE
3" MAX SPACING BOTH DIRECTIONS



DETAIL A



SECTION M-M

- Notes:
- Roadway grating hatches are to be replaced in kind. See listed Reference Drawings for details. Cost of removal of existing roadway grating hatches included in the cost of "Structural Steel Removal." Cost of furnishing and erecting steel elements and accessories for roadway grating hatches included in the cost of "Furnishing and Erecting Structural Steel, Movable Part."
 - All hatch to plates shall have a raised pattern conforming to ASTM A 786 on their top surfaces.
 - For additional notes see sheet MS-88.

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CHECKED - JIG
REVISOR -
PLOT SCALE = N.T.S.
DRAWN - IJL
REVISOR -
PLOT DATE = 1/22/2018
CHECKED - JIG
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DESIGNED - IJL
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REVISOR -

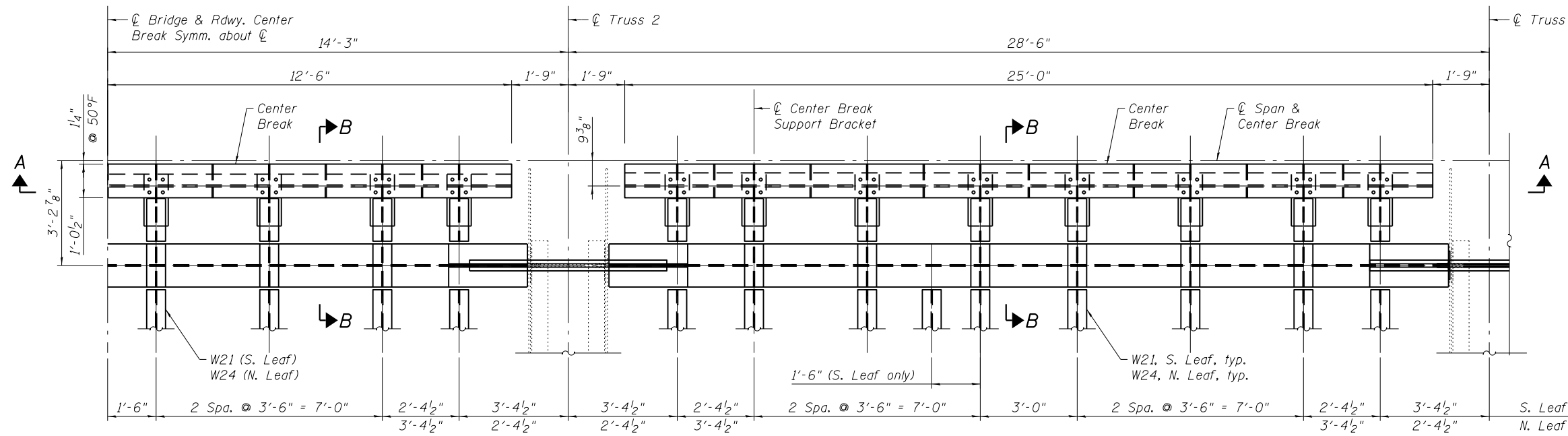
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

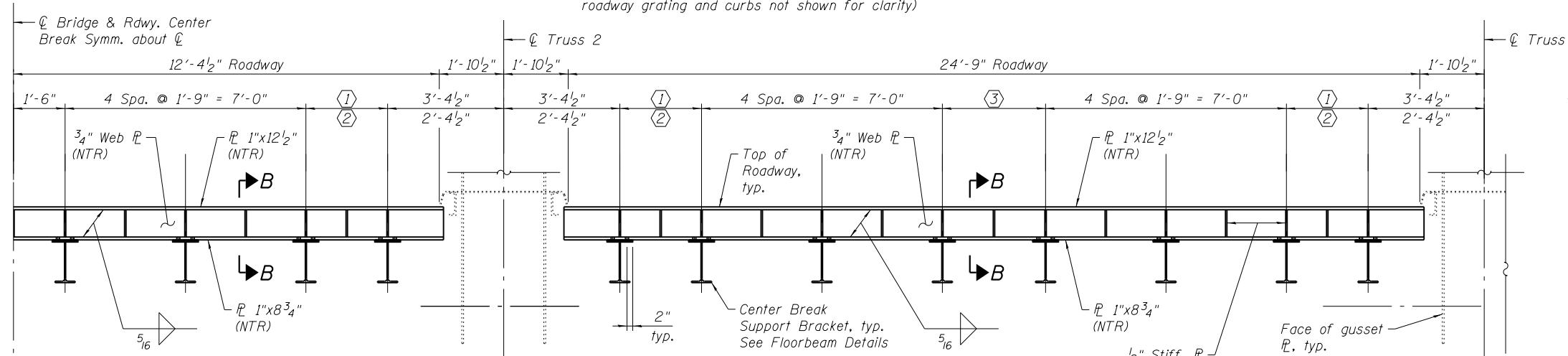
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(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
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CDOT PROJECT NO. E-6-650			131 OF 411

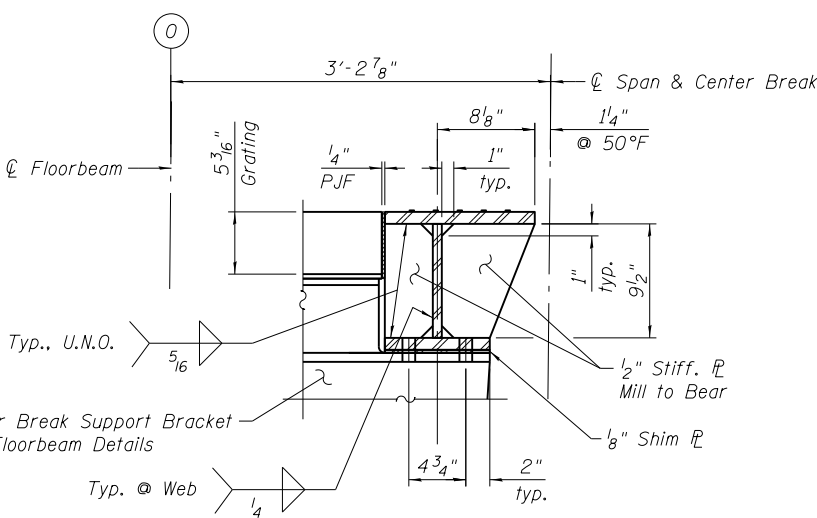


ROADWAY CENTER BREAK PLAN

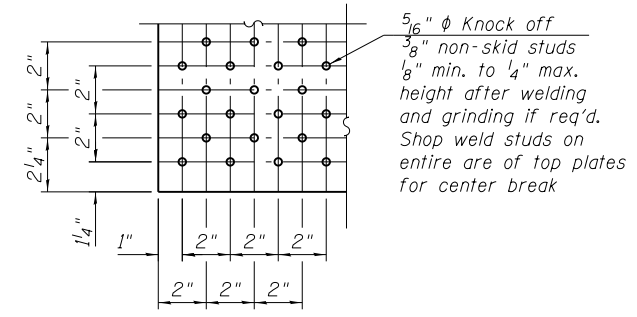
(S. Leaf shown, N. Leaf similar excepted as noted, roadway grating and curbs not shown for clarity)



SECTION A-A



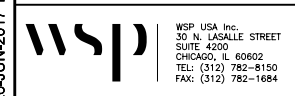
SECTION A-A



RAISED PATTERN DETAIL

- Notes:
1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 2. Cost of furnishing and installation of Center Break shall be included in the cost of Furnishing and Erecting Structural Steel (Movable Part).
 3. Final gap opening as it relates to the center break weldments are the responsibility of the Contractor. No additional compensation will be given if field or shop adjustments are necessary after fabrication to meet the required gap tolerances.

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WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

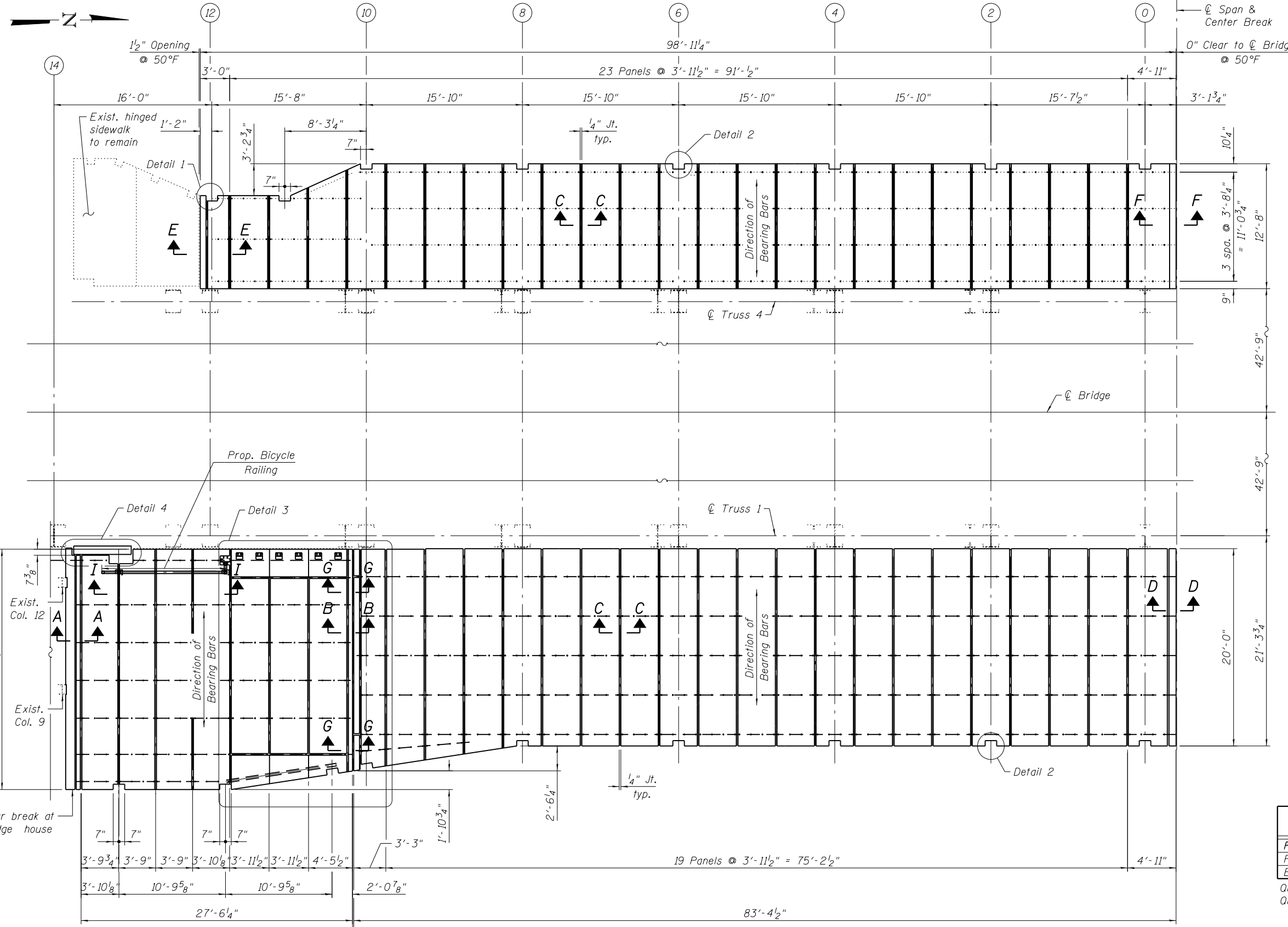
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PLOT SCALE =	N.T.S.	DRAWN -	PJL	REVISED -	
PLOT DATE =	6/26/2017	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
ROADWAY CENTER BREAK
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-91
CDOT PROJECT NO. E-6-650			132 OF 411



- Notes:
1. The Contractor shall field verify and make necessary adjustments to the placement of the anchor bolts prior to fabrication of the west sidewalk grating.
 2. Anchor bolts shall be ASTM F593 and associated hardware shall be ASTM F594.
 3. Holes in FRP panels shall be shop drilled for east sidewalk grating.
 4. FRP grating materials shown to be in accordance with the Detail Specification with the minimum section properties shown on this sheet.
 5. Raised pattern steel plates shall be ASTM A786 steel.
 6. Place units on supporting members and adjust into final position with proper bearing and alignment at joints and supports and immediately fasten. End panel at the breaks shall be the last one to be installed. Adjust height and pitch of the end panels to meet existing fixed spans at rear breaks after live-load shimming has been completed. Verify the required gap at the center and rear breaks. Make corrections on the panel widths as necessary to meet required clearances and gaps.
 7. For Preformed Joint Seal 4" details and quantity for E. Sidewalk Deck, see Sdkw. Center Break Details.

MINIMUM SECTION PROPERTIES

(Properties shown are per foot width of FRP Grating)

- I = 1.68 in⁴
- St = 1.96 in³
- Sb = 1.47 in³
- Avg. EI = 7,600,000 lb-in² (Span >= 24")

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnish and Erecting FRP Grating	Sq. Ft.	7,939
Preformed Joint Seal 4"	Foot	26
Bicycle Railing	Foot	13'-3"

Quantity shown includes S. and N. leaves.
Quantity of PJS is for W. Sdkw. only.

REFERENCE DRAWINGS

- Drawing
- Grid Decking Plan View - North Leaf Sheet No. 1660300580
- Grid Decking Plan View - South Leaf 1660300581

SIDEWALK PANEL LAYOUT PLAN - INTERMEDIATE LEVEL

(South Leaf shown, North Leaf symmetrical about \varnothing of Bridge
All horizontal dimensions are measured along \varnothing of bottom chord and parallel to top of path)

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30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

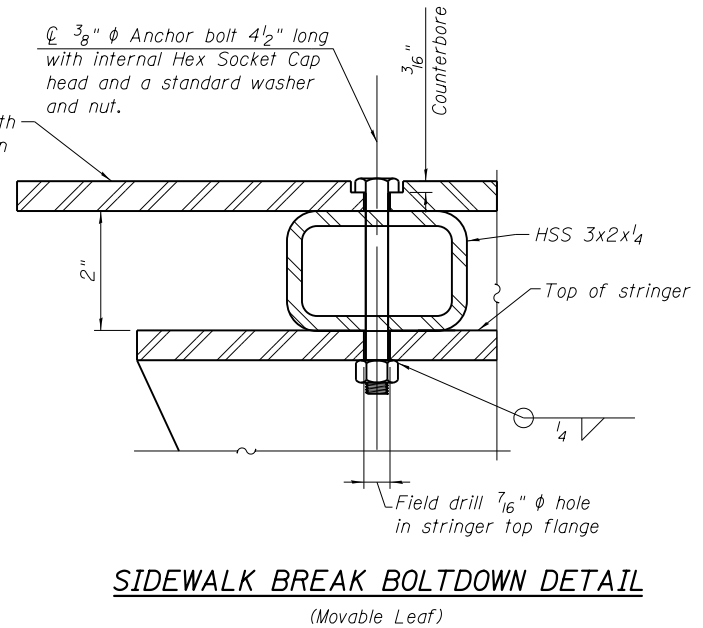
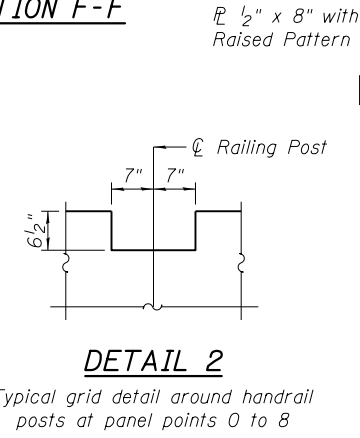
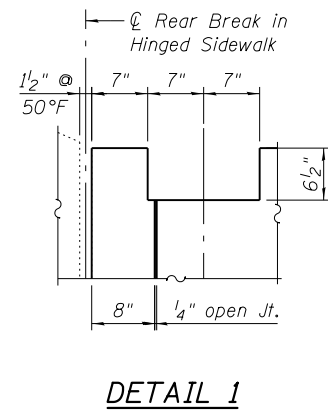
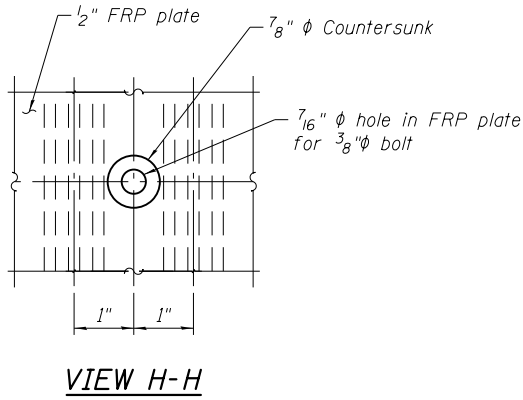
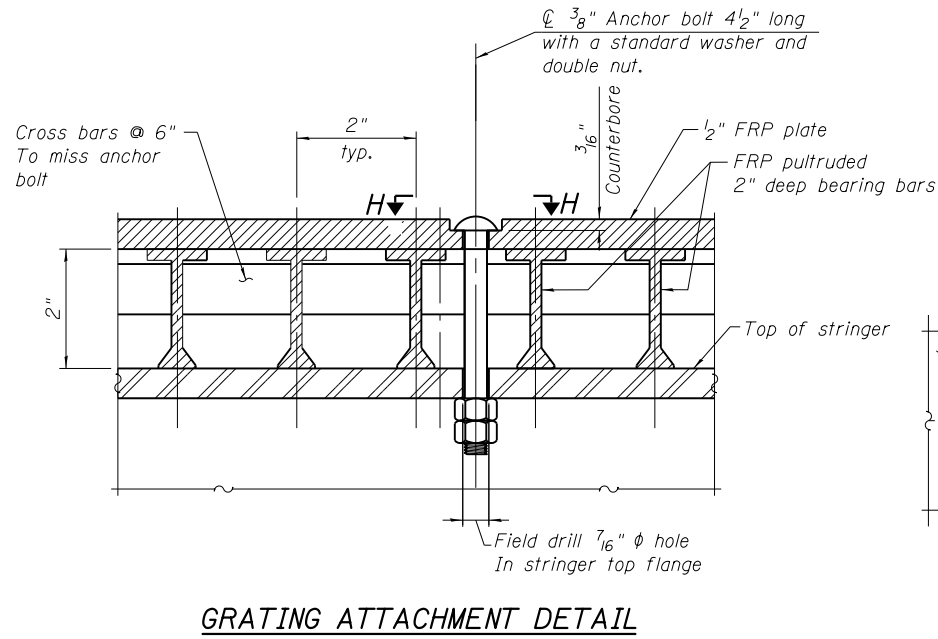
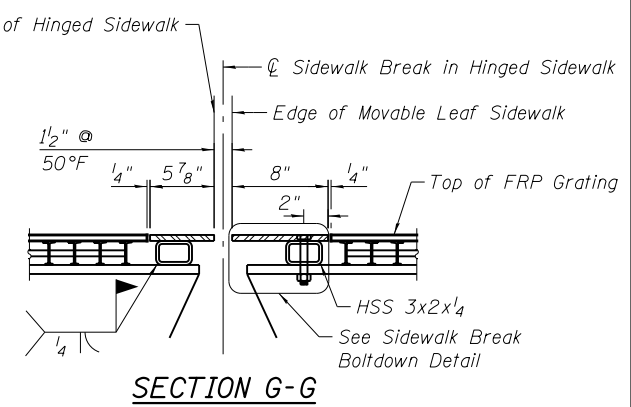
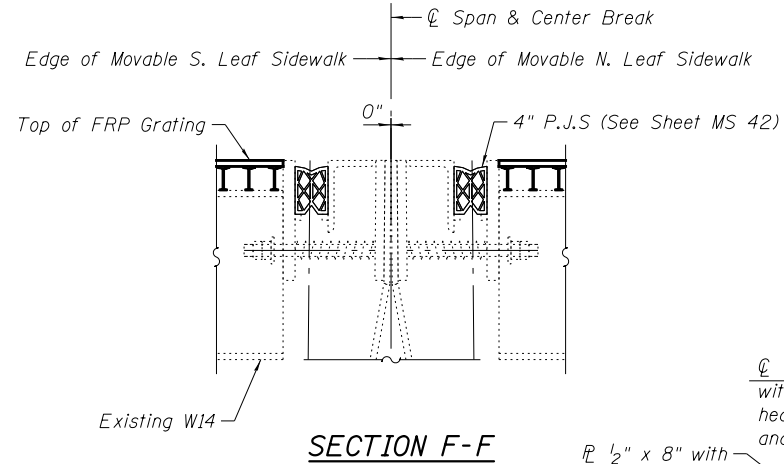
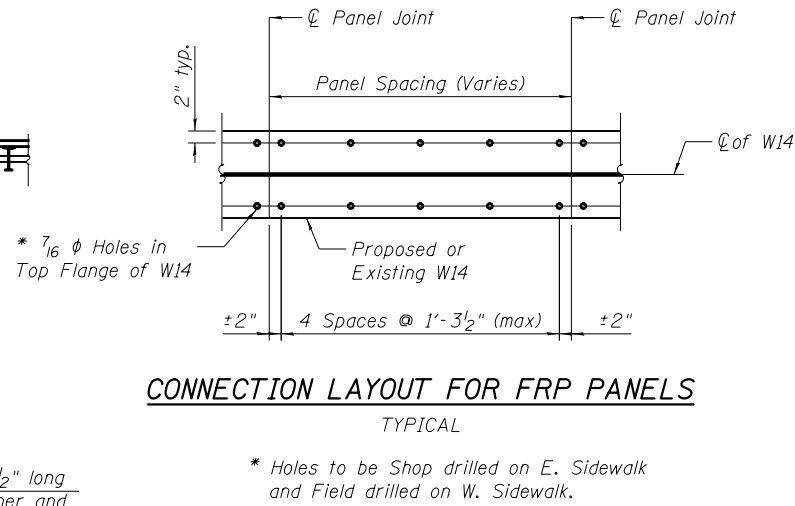
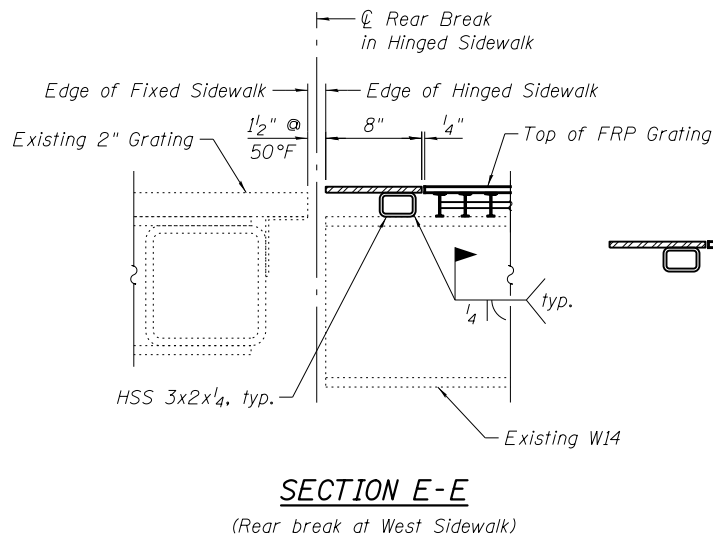
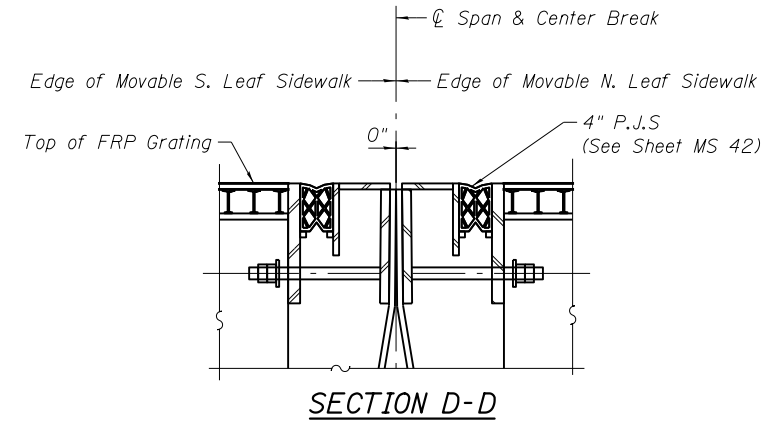
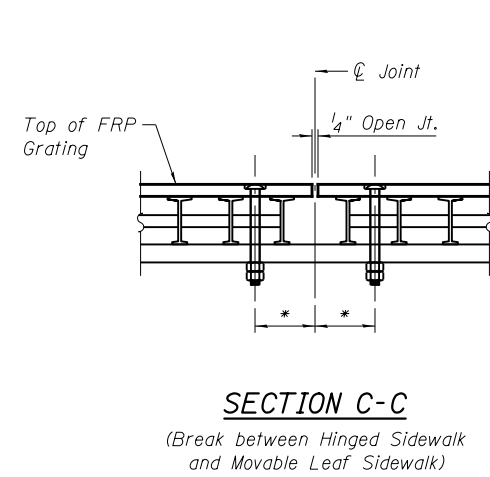
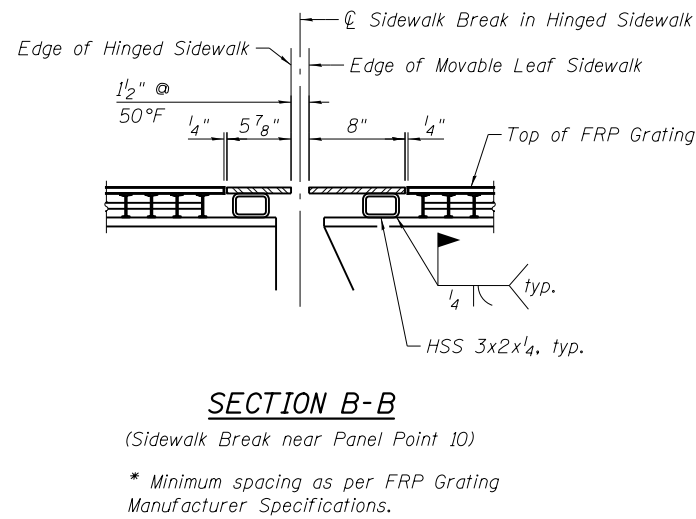
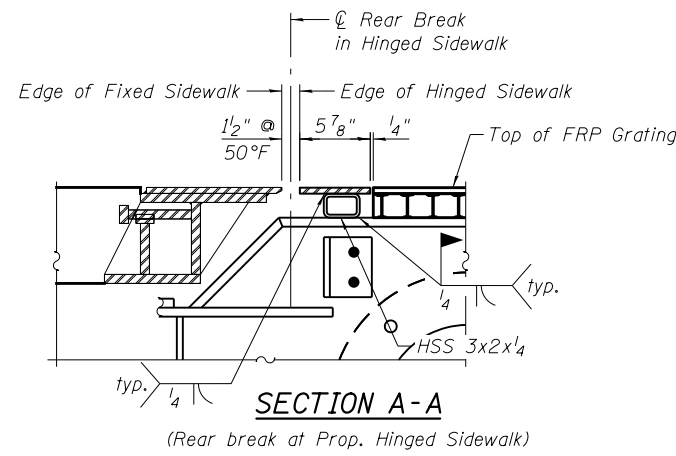
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
SIDEWALK FRP DECK PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-92
CDOT PROJECT NO. E-6-650			133 OF 411



Note:
 1. See previous sheet for FRP Deck notes.
 2. Raised pattern steel plate shall be ASTM A 786 Steel.

REFERENCE DRAWINGS

Drawing	Sheet No.
Inter. Level Sidewalk Brackets 10 & 12	1660300244
Intermediate Level Center Break	1660300253

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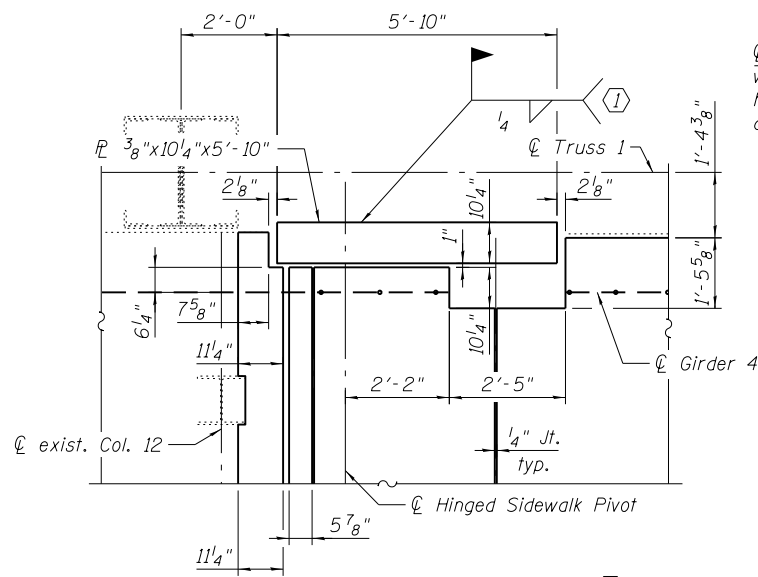
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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

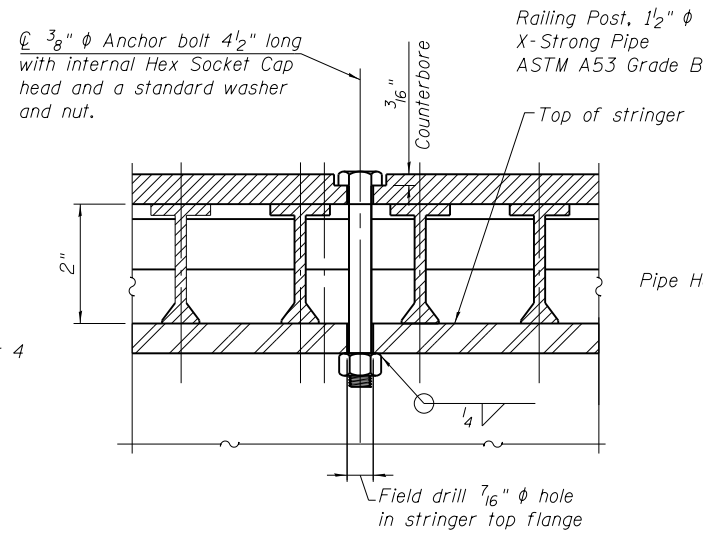
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**MOVABLE PART:
 SIDEWALK FRP DECK DETAILS I
 (STRUCTURE NO. 016-6030)**

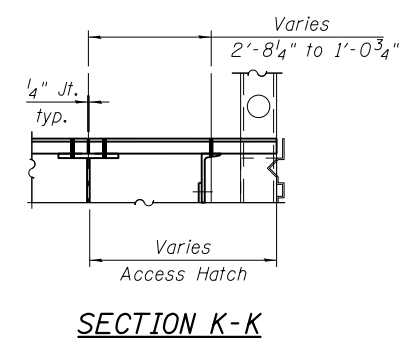
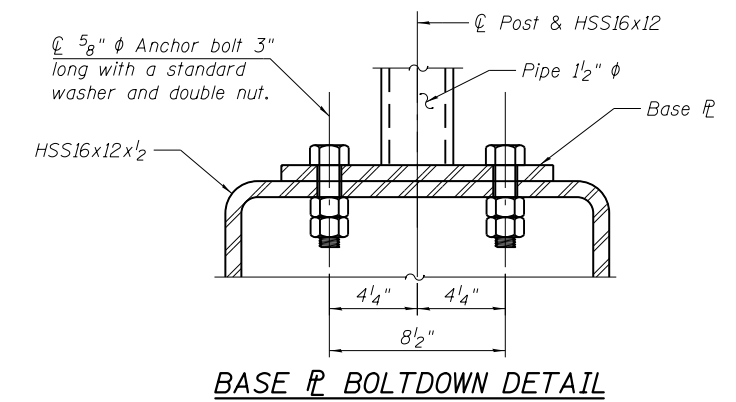
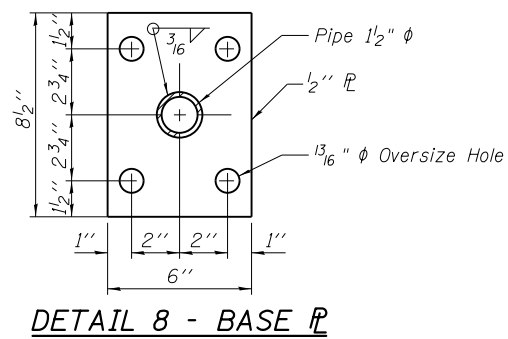
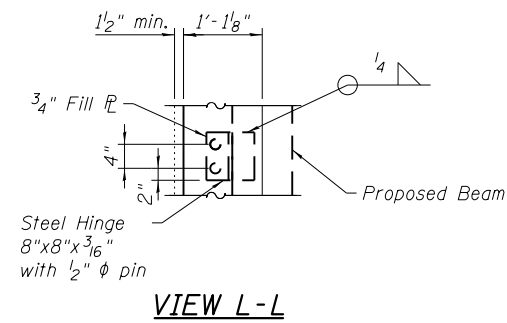
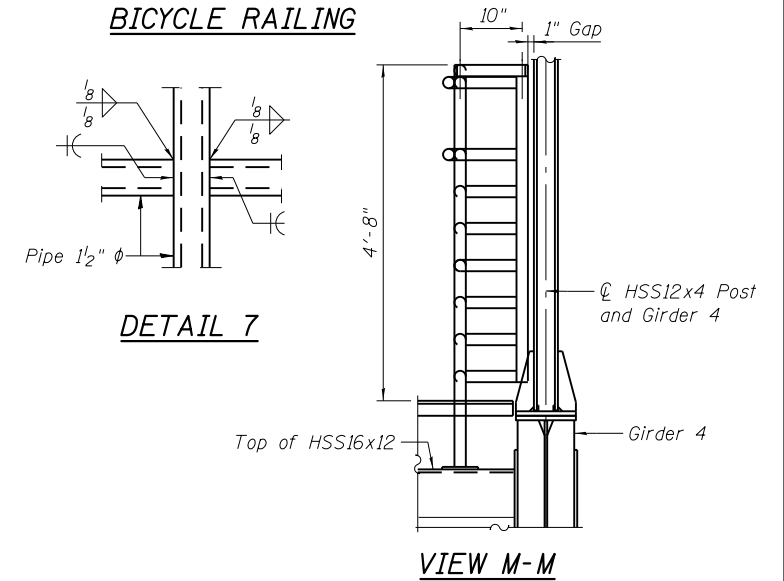
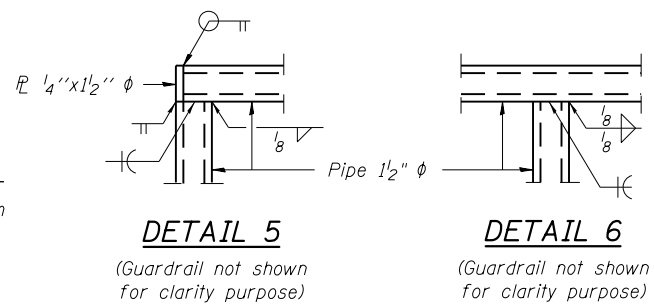
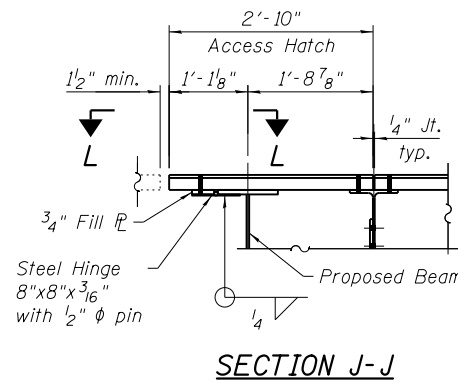
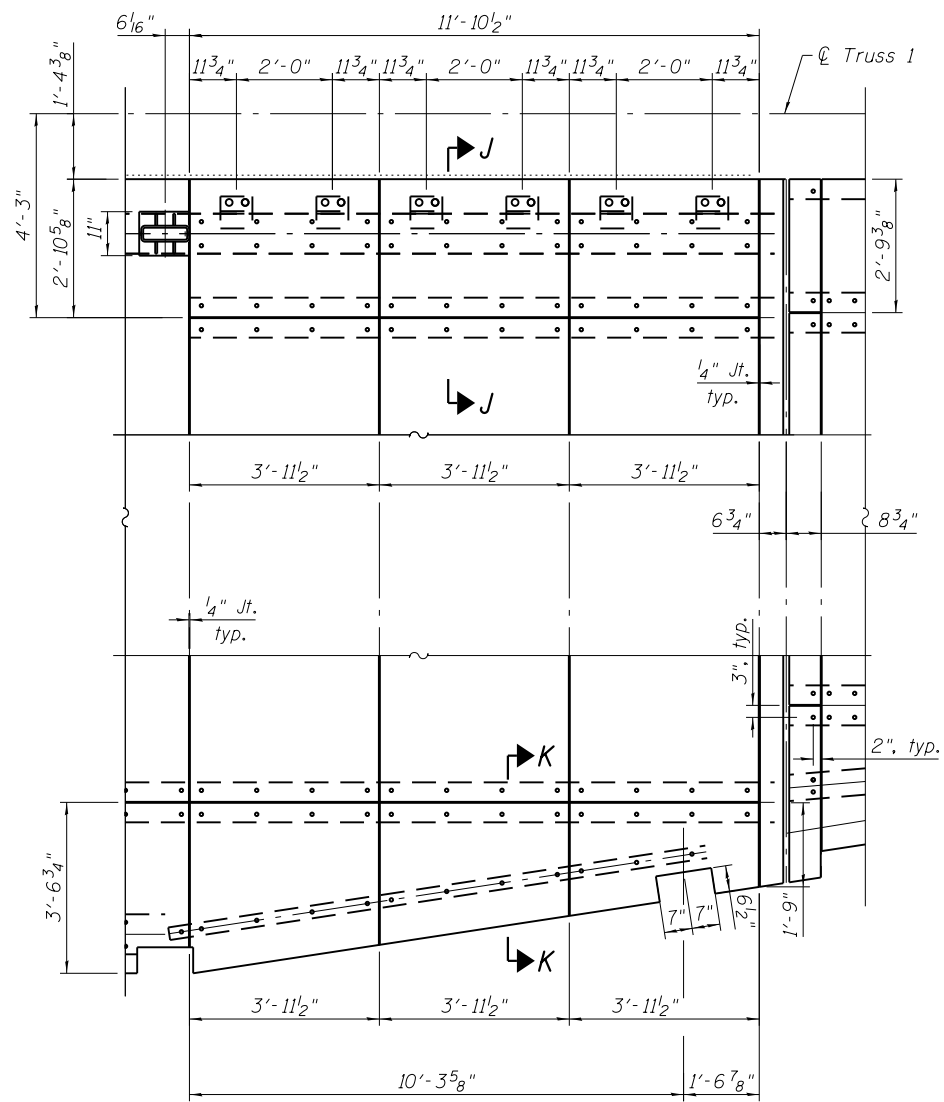
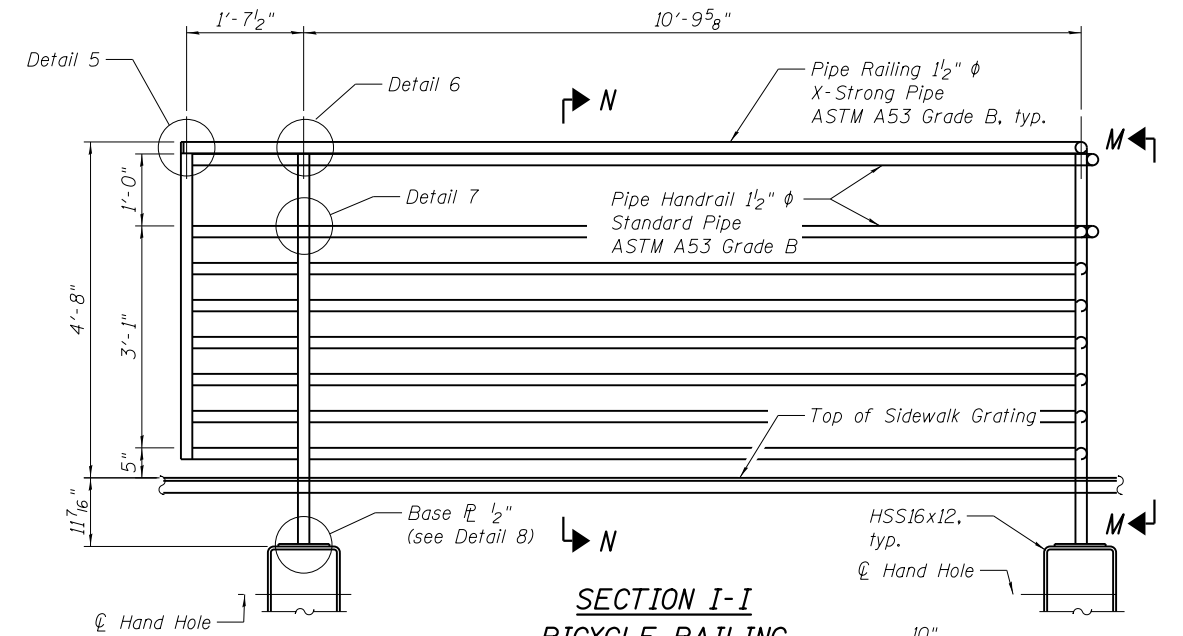
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0341	09-E0534-00-BR/CDOT	COOK	MS-93
CDOT PROJECT NO. E-6-650			134 OF 411



Weld to exist. curb plate

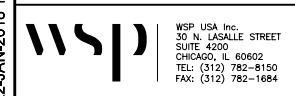


SECTION N-N



- Notes:
- All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 - All exterior faces of post and railing, anchor devices, and bent plates shall be painted. Cost included with Cleaning and Painting Structural Steel.

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30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

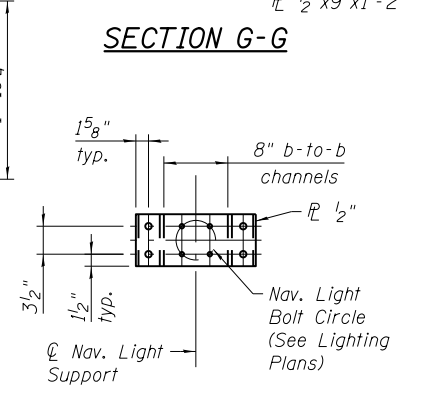
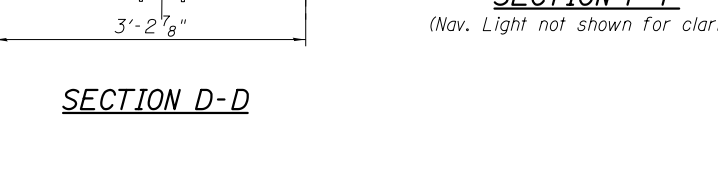
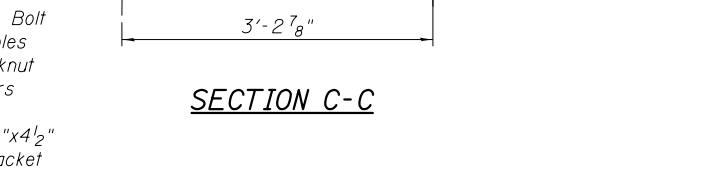
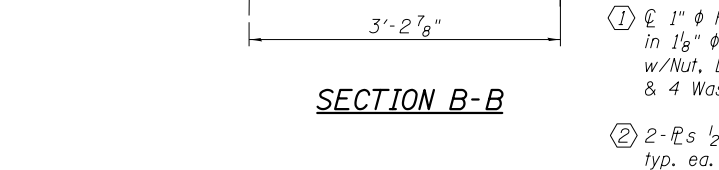
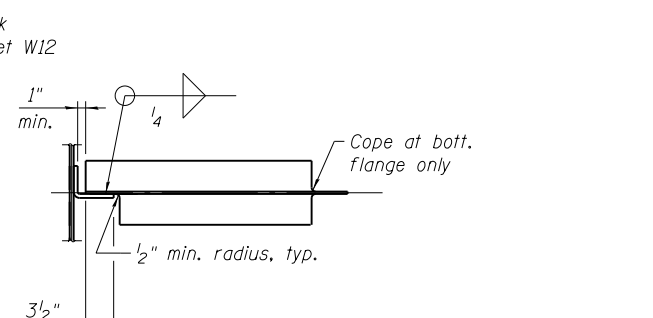
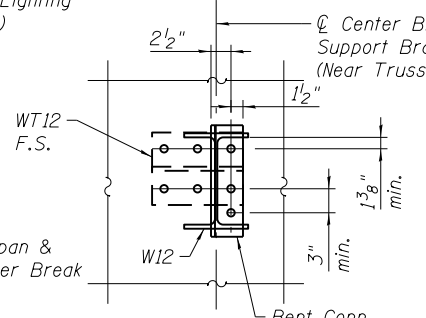
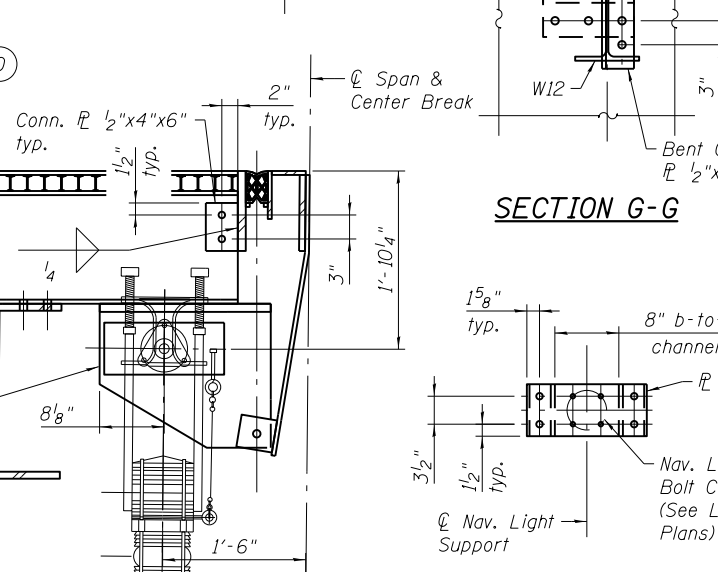
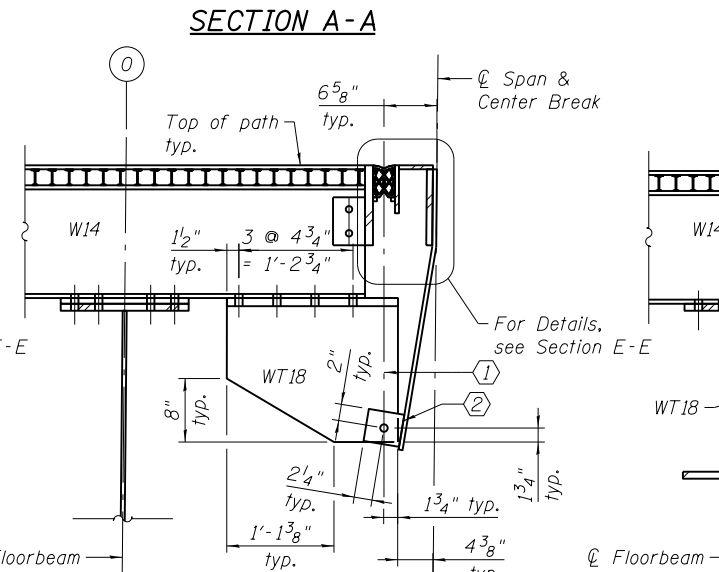
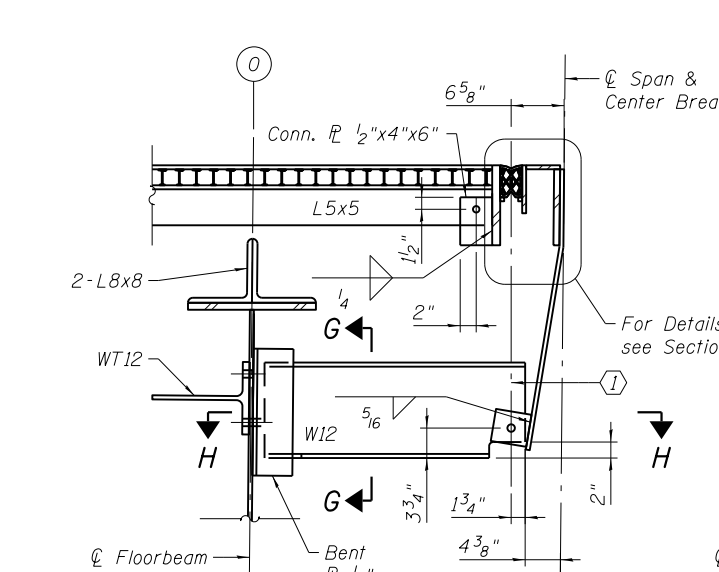
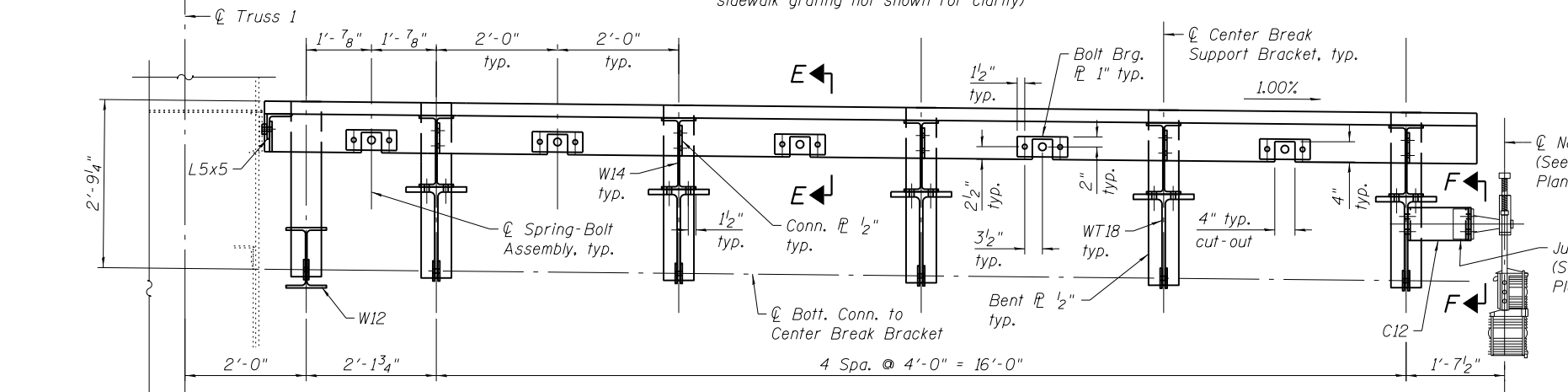
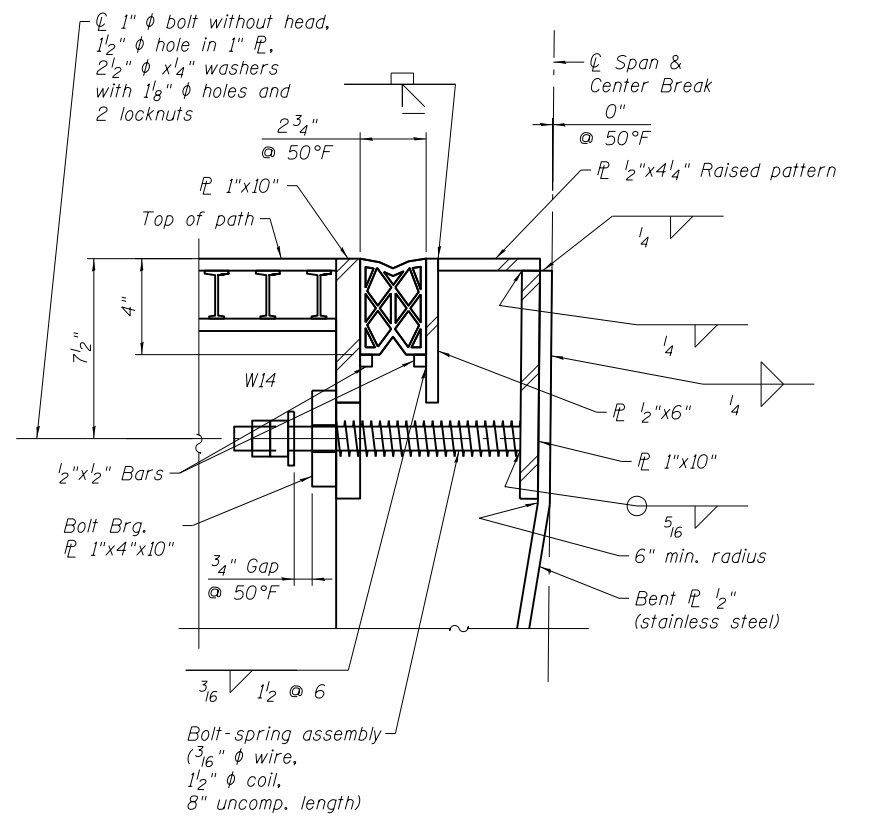
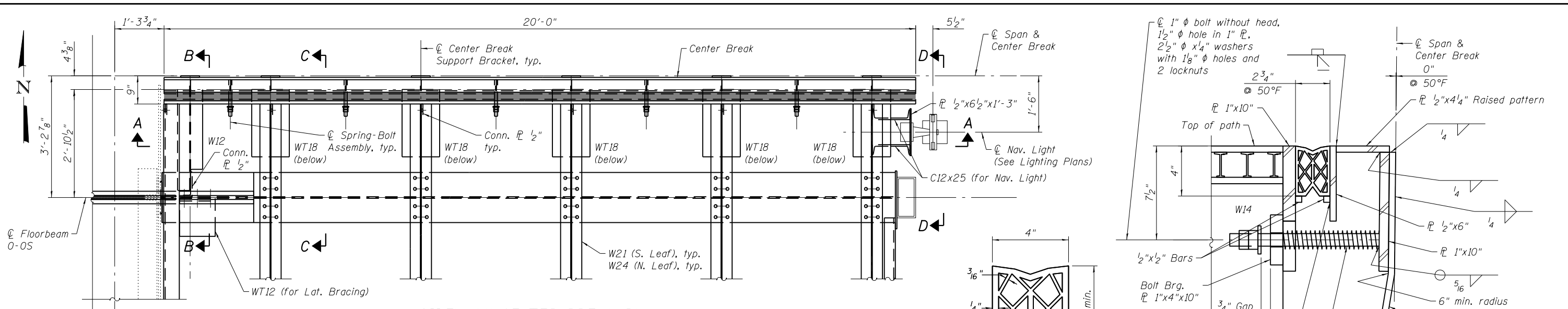
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PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
SIDEWALK FRP DECK DETAILS II
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-94
CDOT PROJECT NO. E-6-650			135 OF 411



SECTION H-H

Notes:

- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
- Cost of furnishing and installation of Center Break shall be included in the cost of Furnishing and Erecting Structural Steel (Movable Part).
- Raised pattern steel plates shall conform to ASTM A 786.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Preformed Joint Seal 4"	Foot	40

Quantity shown includes S. and N. leaves.

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WSP USA Inc.
30 N. LASALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

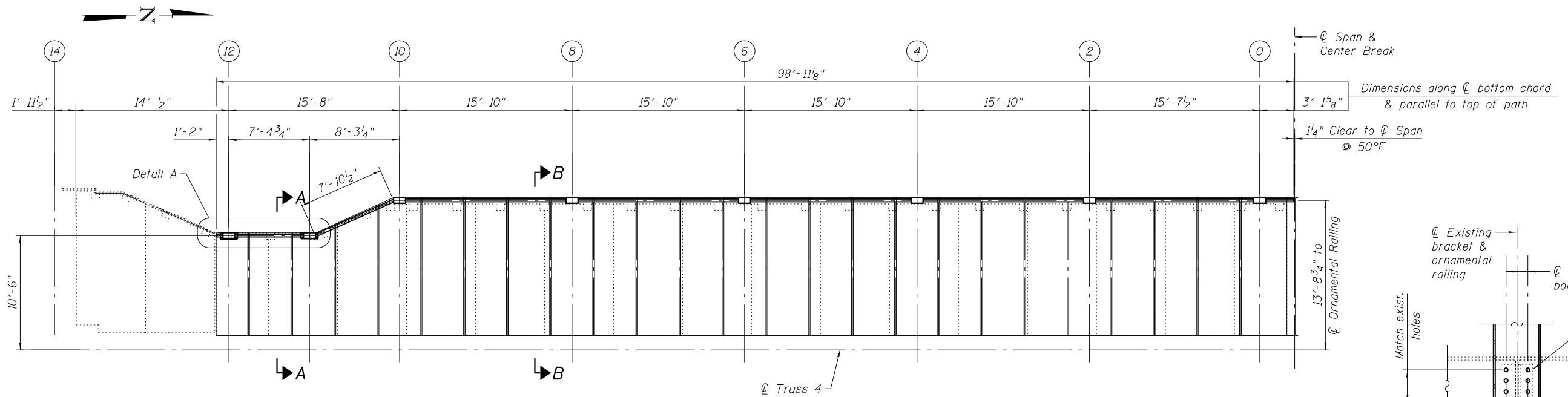
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REVISOR -
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PLOT SCALE = N.T.S.
DRAWN - PJL
REVISOR -
REVISION -
PLOT DATE = 6/26/2017
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REVISOR -
REVISION -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

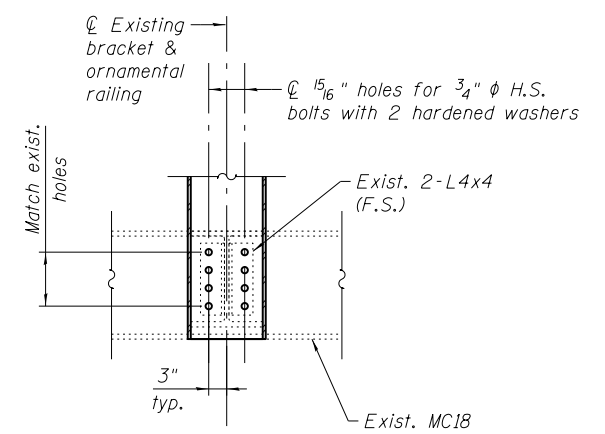
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
EAST SIDEWALK CENTER BREAK
(STRUCTURE NO. 016-6030)

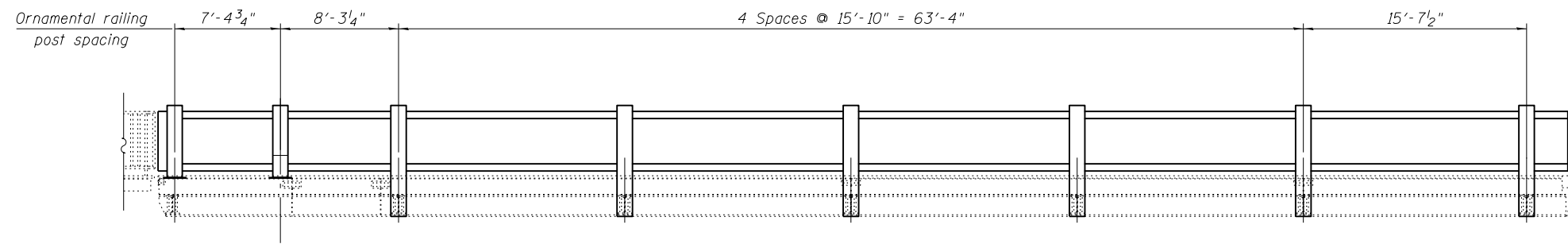
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-95
CDOT PROJECT NO. E-6-650			136 OF 411



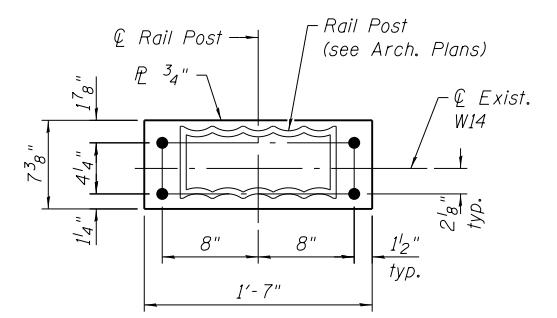
W. SIDEWALK ORNAMENTAL RAILING PLAN - INTERMEDIATE LEVEL
 (S. Leaf shown, N. Leaf symmetrical about \bar{C} of Span)



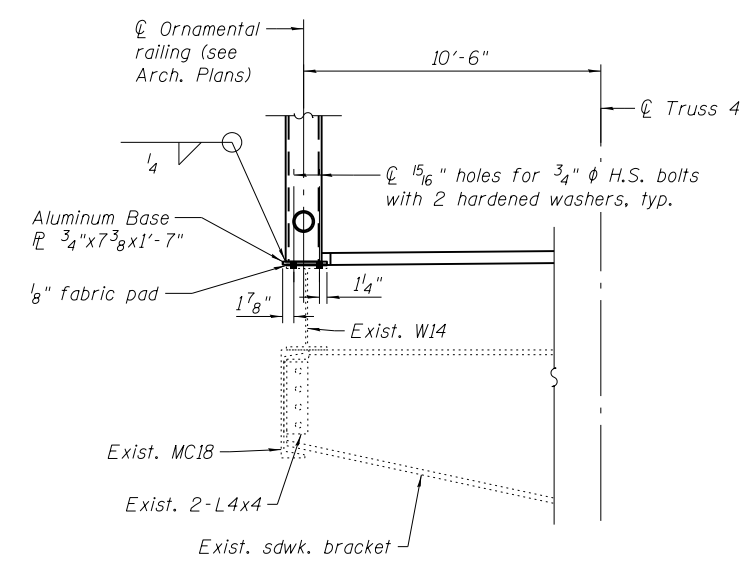
SECTION C-C



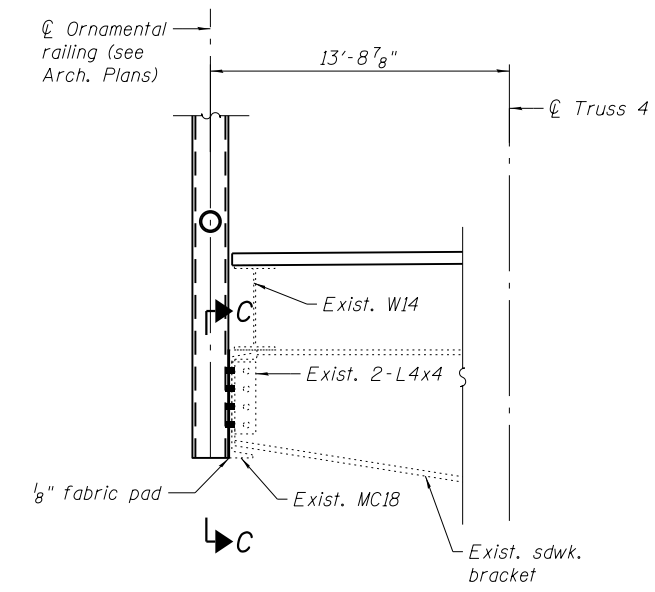
W. SIDEWALK ORNAMENTAL RAILING ELEVATION - INTERMEDIATE LEVEL
 (Ornamental panel not shown, see Arch. Plans)



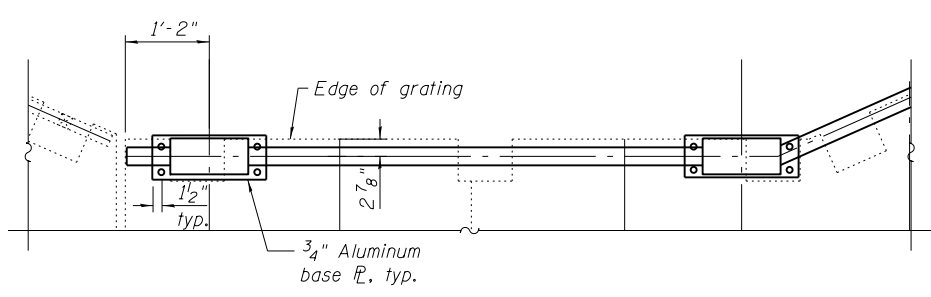
ALUMINUM BASE PLATE
 (4 Required)



SECTION A-A



SECTION B-B



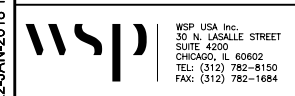
DETAIL A

- Notes:
1. All HSS tubing shall be ASTM A 500 Grade B Steel.
 2. All welding shall be in accordance with the latest version of AASHTO/AWS D1.1 and AASHTO/AWS D1.5.
 3. Raised pattern steel plates shall be ASTM A 786 steel.
 4. For railing and fascia \bar{C} bolt connection detail see sheet MS-52.

REFERENCE DRAWINGS

Drawing	Sheet No.
Erection Plan and Details of Handrails	1660300595
Handrail Details	1660300596
-	thru
Handrail details	1660300599

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WSP USA Inc.
 30 N. LA SALLE STREET
 SUITE 4000
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1684

USER NAME =	lopezgonzalez	DESIGNED -	JZ	REVISED -	
		CHECKED -	IJL	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	JZ	REVISED -	
PLOT DATE =	1/22/2018	CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MOVABLE PART:
W. SIDEWALK RAILING MODIFICATION
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-96
CDOT PROJECT NO. E-6-650			137 OF 411

TABLE 1: TRUSS 1 REMOVAL ITEMS

Item	Weight (Lbs)	X (ft)	Y (ft)	Mx (Lb-ft)	My (Lb-ft)
* Sdk. Grid Deck	-38,710	83.53	5.54	-3,233,450	-214,450
Sdk. Railing	-7,920	83.00	8.12	-657,360	-64,310
Sdk. Bracket at PP0	-2,460	128.79	2.70	-316,820	-6,640
Sdk. Bracket at PP2	-2,640	113.16	2.53	-298,740	-6,690
Sdk. Bracket at PP4	-2,450	97.33	2.73	-238,460	-6,690
Sdk. Bracket at PP6	-2,530	81.49	2.64	-206,170	-6,690
Sdk. Bracket at PP8	-2,370	65.66	2.80	-155,610	-6,640
Sdk. Bracket at PP10	-2,270	49.83	2.47	-113,110	-5,620
Sdk. Bracket at PP12	-1,770	33.99	3.14	-60,160	-5,560
Sdk. Stringers & Channel	-18,820	83.78	4.55	-1,576,790	-85,690
Sdk. Lateral Bracing	-1,930	81.42	3.43	-157,140	-6,620
Sdk. Center Break	-2,170	131.76	1.88	-285,920	-4,080
* Rdwy. Open Grid Deck	-26,130	77.00	4.91	-2,012,010	-128,300
* Rdwy. Conc. Filled Deck	-65,600	-10.00	4.91	656,000	-322,100
Floorbeam at PP0	-2,910	128.79	2.76	-374,780	-8,030
Floorbeam at PP2	-2,760	113.16	2.76	-312,320	-7,600
Floorbeam at PP4	-2,760	97.33	2.76	-268,630	-7,600
Floorbeam at PP6	-2,760	81.49	2.76	-224,910	-7,600
Floorbeam at PP8	-2,670	65.66	2.70	-175,310	-7,210
Floorbeam at PP10	-2,650	49.83	2.70	-132,050	-7,150
Rdwy. Center Break	-3,140	132.00	4.32	-414,480	-13,550
** Cwt. Blocks on Diag. 0-3	-3,560	121.77	11.88	-433,500	-42,290
Total N. Leaf	-200,980			-10,991,720	-971,110
Total S. Leaf	-200,980			-10,991,720	-971,110

TABLE 3: TRUSS 2 REMOVAL ITEMS

Item	Weight (Lbs)	X (ft)	Y (ft)	Mx (Lb-ft)	My (Lb-ft)
* Rdwy. Open Grid Deck	-52,250	77.00	4.91	-4,023,250	-256,550
* Rdwy. Conc. Filled Deck	-131,200	-10.00	4.91	1,312,000	-644,190
Floorbeam at PP0	-6,070	128.79	2.83	-781,760	-17,200
Floorbeam at PP2	-3,060	113.16	2.93	-346,270	-8,970
Floorbeam at PP4	-3,060	97.33	2.93	-297,830	-8,970
Floorbeam at PP6	-3,060	81.49	2.93	-249,360	-8,970
Floorbeam at PP8	-2,670	65.66	2.70	-175,310	-7,210
Floorbeam at PP10	-2,650	49.83	2.70	-132,050	-7,150
Rdwy. Center Break	-6,420	132.00	4.33	-847,440	-27,770
** Cwt. Blocks on Diag. 0-3	-3,560	121.77	11.88	-433,500	-42,290
Total N. Leaf	-214,000			-5,974,770	-1,029,270
Total S. Leaf	-214,000			-5,974,770	-1,029,270

- * The following unit weights are used in the balancing calculation:
Existing Sidewalk Grid Deck = 33.4 psf
Existing Roadway Open Grid Deck = 19.0 psf
Existing Roadway Conc. Filled Deck = 82.0 psf
Proposed Sidewalk Grid Deck = 10.0 psf
Proposed Roadway Open Grid Deck = 23.5 psf (includes allowance for coatings, bolt-down plate and accessories)
Proposed Roadway Conc. Filled Deck = 82.0 psf

- ** Cost of removal of Cwt. Blocks on Diag. 0-3 included in "Balancing of Bridge and Alteration of Counterweights." Counterweight blocks shall become property of the City.

TABLE 2: TRUSS 1 ADDITION ITEMS

Item	Weight (Lbs)	X (ft)	Y (ft)	Mx (Lb-ft)	My (Lb-ft)
* Sdk. Grid Deck	16,900	90.21	5.56	1,524,550	93,960
Sdk. Railing	5,880	90.55	8.12	532,430	47,750
Sdk. Bracket at PP0	4,660	128.79	2.79	600,160	13,000
Sdk. Bracket at PP2	4,720	113.16	2.79	534,120	13,180
Sdk. Bracket at PP4	4,720	97.33	2.79	459,400	13,180
Sdk. Bracket at PP6	4,720	81.49	2.79	384,630	13,180
Sdk. Bracket at PP8	4,720	65.66	2.79	309,920	13,180
Sdk. Bracket at PP10	4,890	49.83	2.79	243,670	13,670
Sdk. Stringers	16,120	89.26	4.84	1,438,870	77,940
Sdk. Deck Support Angle	1,320	90.58	1.15	119,560	1,520
Sdk. Lat. Bracing	11,170	85.53	3.26	955,380	36,440
Sdk. Center Break	2,800	131.51	3.59	368,220	10,040
* Rdwy. Open Grid Deck	30,910	75.27	5.36	2,326,460	165,680
* Rdwy. Conc. Filled Deck	69,430	-3.56	5.00	-247,390	347,450
Floorbeam at PP0	2,150	128.79	2.85	276,900	6,120
Floorbeam at PP2	1,990	113.16	2.86	225,190	5,690
Floorbeam at PP4	1,990	97.33	2.86	193,690	5,690
Floorbeam at PP6	1,990	81.49	2.86	162,170	5,690
Floorbeam at PP8	1,990	65.66	2.86	130,660	5,690
Floorbeam at PP10	2,170	49.83	2.58	108,130	5,600
Floorbeam Repair at PP12	330	33.99	-0.06	11,220	-20
Roadway Center Break	1,450	132.00	4.74	191,400	6,870
Total N. Leaf	197,020			10,849,340	901,500
Total S. Leaf	197,020			10,849,340	901,500

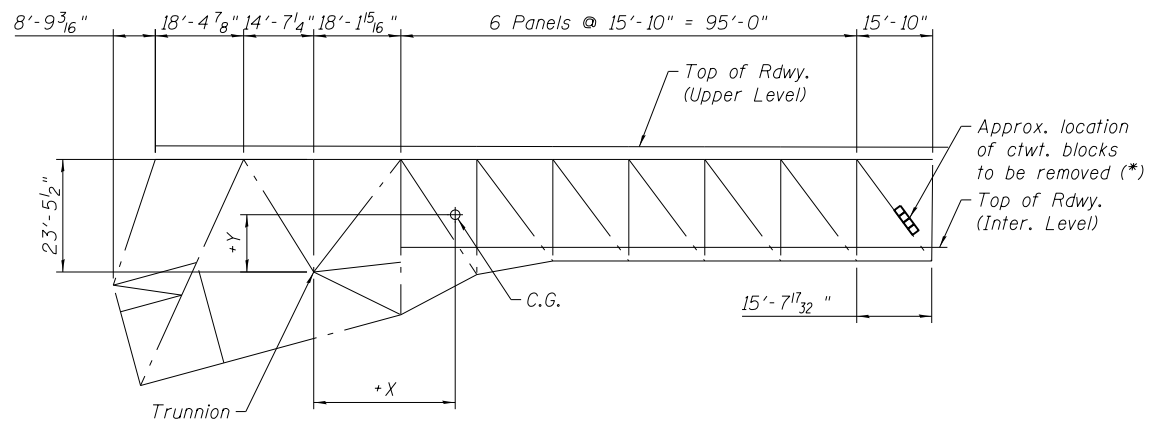
TABLE 4: TRUSS 2 ADDITION ITEMS

Item	Weight (Lbs)	X (ft)	Y (ft)	Mx (Lb-ft)	My (Lb-ft)
* Rdwy. Open Grid Deck	61,830	75.27	5.00	4,653,670	309,410
* Rdwy. Conc. Filled Deck	138,870	-3.56	5.00	-494,820	694,940
Floorbeam at PP0	4,560	128.79	2.71	587,280	12,350
Floorbeam at PP2	2,240	113.16	2.58	253,480	5,770
Floorbeam at PP4	2,240	97.33	2.58	218,020	5,770
Floorbeam at PP6	2,240	81.49	2.58	182,540	5,770
Floorbeam at PP8	2,240	65.66	2.58	147,080	5,770
Floorbeam at PP10	2,170	49.83	2.58	108,130	5,600
Floorbeam Repair at PP12	560	33.99	-0.06	19,040	-30
Roadway Center Break	2,900	132.00	4.74	382,800	13,750
Total N. Leaf	219,850			6,057,220	1,059,100
Total S. Leaf	219,850			6,057,220	1,059,100

REFERENCE DRAWINGS

Drawing	Sheet No.
Center of Gravity Calculations Inside Truss	1660300975
Center of Gravity Calculations Outside Truss	1660300976
Balance Calculation	1660300274
Balance Calculation	1660300275
Counterweight Adjustment	1660300305

- Notes:
1. It is assumed the bridge is balanced.
 2. Weight denotes the weight of member element replacement and not necessarily the total weight of members and reflect final balancing at the completion of the proposed rehabilitation. Items to be replaced in-kind are not included in balance calculations.
 3. The distances X and Y are measured from the center of trunion, see Truss Elevation.
 4. The Contractor shall submit to the Commissioner for approval bridge balancing calculations as detailed in the Special Provisions. The Cost shall be included in "Balancing of Bridge and Alteration of Counterweights."
 5. Balancing of the movable leaves will be paid for as "Balancing of Bridge and Alteration of Counterweights." Fabrication and installation of new counterweight blocks (if req'd) and shimming and adjusting the anchor columns and live load bearings as required to properly balance the bridge is included in the Cost of "Balancing of Bridge and Alteration of Counterweights." The Contractor shall make all adjustments and relocations necessary to attain the condition to the satisfaction of the Commissioner.
 6. All dimensions and elevations shown are based on existing drawings. Space available in counterweight pockets and steel racks based on existing drawings. The Contractor shall verify.
 7. The Contractor may place temporary concrete barriers or other approved materials near the center of bridge to balance the leaves as required during the work. Cost included in "Balancing of Bridge and Alteration of Counterweights."



TRUSS ELEVATION

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Balancing of Bridge and Alteration of Counterweights	L. Sum	1

Quantity shown includes S. and N. leaves.

USER NAME	DESIGNED	REVISIONS
lopezgonzalez	PJL	-
	MI	-
	PJL	-
	JIG	-

TABLE 5: TRUSS 3 REMOVAL ITEMS

Table with 6 columns: Item, Weight (Lbs), X (ft), Y (ft), Mx (Lb-ft), My (Lb-ft). Rows include Rdwy. Open Grid Deck, Rdwy. Conc. Filled Deck, Floorbeam at PPO, Rdwy. Center Break, Ctwt. Blocks on Diag. 0-3, Total N. Leaf, Total S. Leaf.

TABLE 7: TRUSS 4 REMOVAL ITEMS

Table with 6 columns: Item, Weight (Lbs), X (ft), Y (ft), Mx (Lb-ft), My (Lb-ft). Rows include Sdk. Grid Deck, Sdk. Railing, Rdwy. Open Grid Deck, Rdwy. Conc. Filled Deck, Floorbeam at PPO, Rdwy. Center Break, Ctwt. Blocks on Diag. 0-3, Total N. Leaf, Total S. Leaf.

SUMMARY - N. LEAF

Summary table for N. Leaf with 6 columns: Item, Weight (Lbs), X (ft), Y (ft), Mx (Lb-ft), My (Lb-ft). Includes Truss 1-8 removal and addition, East/West Ctwt. Adjustments, and NET CHANGE LEAF.

TABLE 6: TRUSS 3 ADDITION ITEMS

Table with 6 columns: Item, Weight (Lbs), X (ft), Y (ft), Mx (Lb-ft), My (Lb-ft). Rows include Rdwy. Open Grid Deck, Rdwy. Conc. Filled Deck, Floorbeam at PPO, Floorbeam Repair at PPI2, Roadway Center Break, Total N. Leaf, Total S. Leaf.

TABLE 8: TRUSS 4 ADDITION ITEMS

Table with 6 columns: Item, Weight (Lbs), X (ft), Y (ft), Mx (Lb-ft), My (Lb-ft). Rows include Sdk. Grid Deck, Sdk. Railing, Rdwy. Open Grid Deck, Rdwy. Conc. Filled Deck, Floorbeam at PPO, Floorbeam Repair at PPI2, Roadway Center Break, Total N. Leaf, Total S. Leaf.

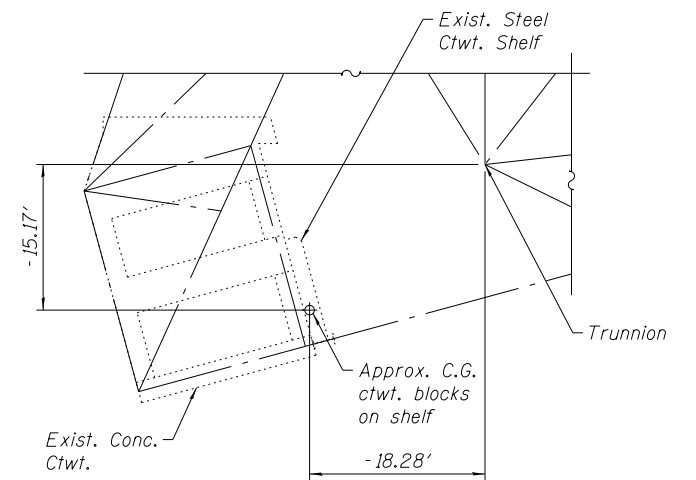
SUMMARY - S. LEAF

Summary table for S. Leaf with 6 columns: Item, Weight (Lbs), X (ft), Y (ft), Mx (Lb-ft), My (Lb-ft). Includes Truss 1-8 removal and addition, East/West Ctwt. Adjustments, and NET CHANGE LEAF.

REFERENCE DRAWINGS

Table mapping Drawing titles to Sheet Numbers. Includes Center of Gravity Calculations Inside/Outside Truss, Balance Calculation, Counterweight Adjustment.

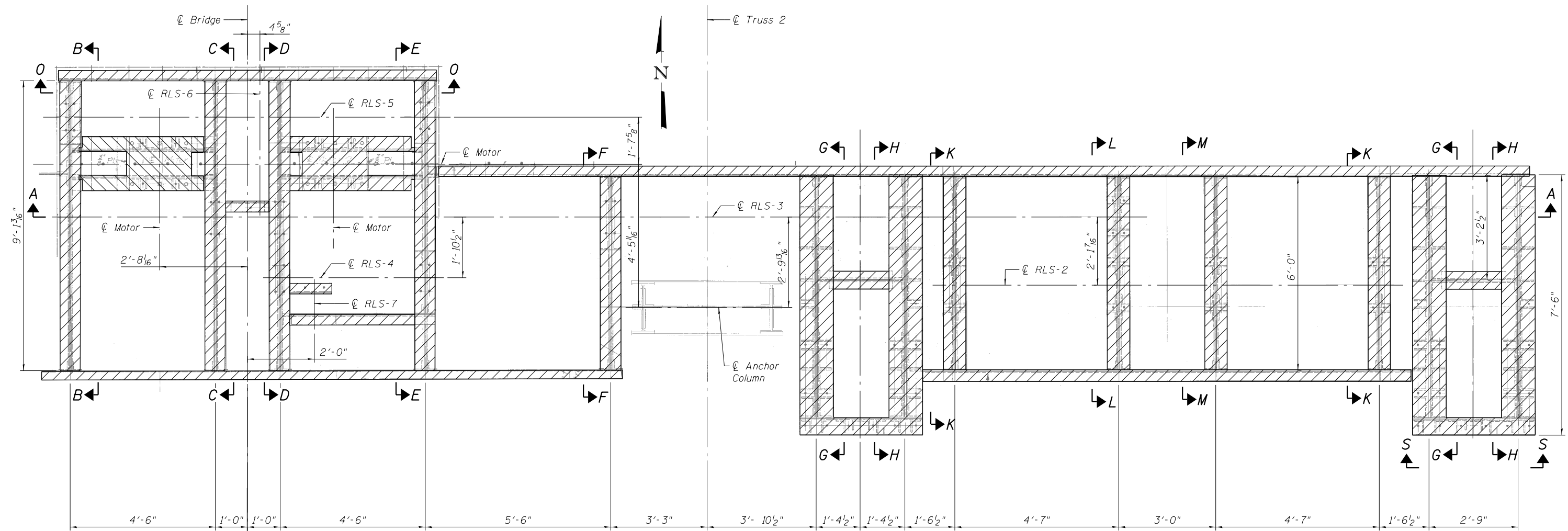
Notes: 1. For Balance Calculation notes, see previous sheet.



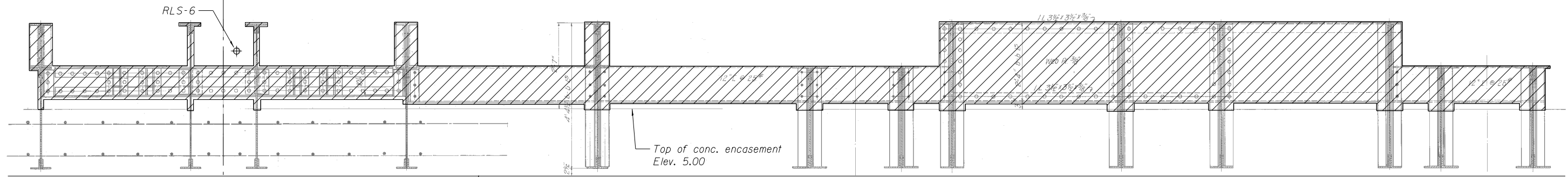
COUNTERWEIGHT ELEVATION

* The following unit weights are used in the balancing calculation: Existing Sidewalk Grid Deck = 33.4 psf, Existing Roadway Open Grid Deck = 19.0 psf, Existing Roadway Conc. Filled Deck = 82.0 psf, Proposed Sidewalk Grid Deck = 10.0 psf, Proposed Roadway Open Grid Deck = 23.5 psf (includes allowance for coatings, bolt-down plate and accessories), Proposed Roadway Conc. Filled Deck = 82.0 psf

** Cost of removal of Ctwt. Blocks on Diag. 0-3 included in 'Balancing of Bridge and Alteration of Counterweights.' Counterweight blocks shall become property of the City.



PLAN - REMOVAL OF EXISTING HEEL LOCK SUPPORT
 (NE Quadrant shown, SW Quadrant is similar and SE and NW Quadrants are opposite hand except as shown)



SECTION A-A - REMOVAL OF EXISTING HEEL LOCK SUPPORT
 (NE Quadrant shown, SW Quadrant is similar and SE and NW Quadrants are opposite hand except as shown)

REFERENCE DRAWINGS

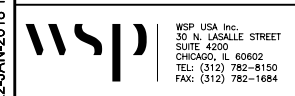
Drawing	Sheet No.	Drawing	Sheet No.
Main Pier - Masonry Layout	1660300695	Center Lock Heel Lock Details	1660300802
Heel Lock Machinery Girder	1660300782	Erection Diagram for Heel Lock	1660301067
General Plan Heel Lock	1660300797	Heel Lock Girder	1660301072
Heel Lock Details	1660300798	Bearings	1660301310
Center Lock Heel Lock Bearings	1660300801	Rear Lock	1660301318

LEGEND



- Notes:
1. Cost of structural steel removal is included in the cost of Replacement of Heel Lock Support.
 2. Work to be done in stages and coordinated with center lock replacement.
 3. Heel lock machinery is to be removed, stored, and reinstalled. Cost included with Replacement of Heel Lock Support.
 4. For additional removal requirements see Mechanical Equipment Detailed Specifications and special provision Replacement of Heel Lock Support.

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USER NAME = lopezgonzalez	DESIGNED - MI	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JIG	REVISED -
PLOT DATE = 1/22/2018	DRAWN - MI	REVISED -
	CHECKED - JIG	REVISED -

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

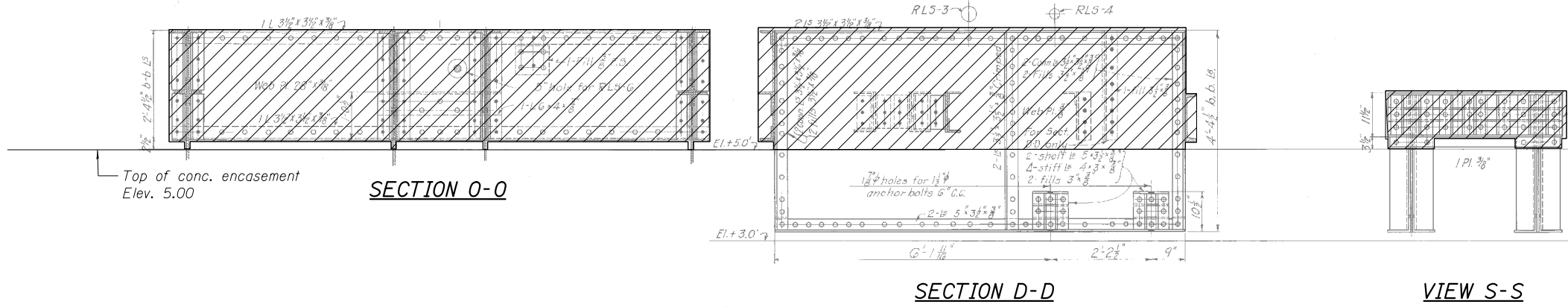
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

EXISTING HEEL LOCK SUPPORT REMOVAL
 (STRUCTURE NO. 016-6030)

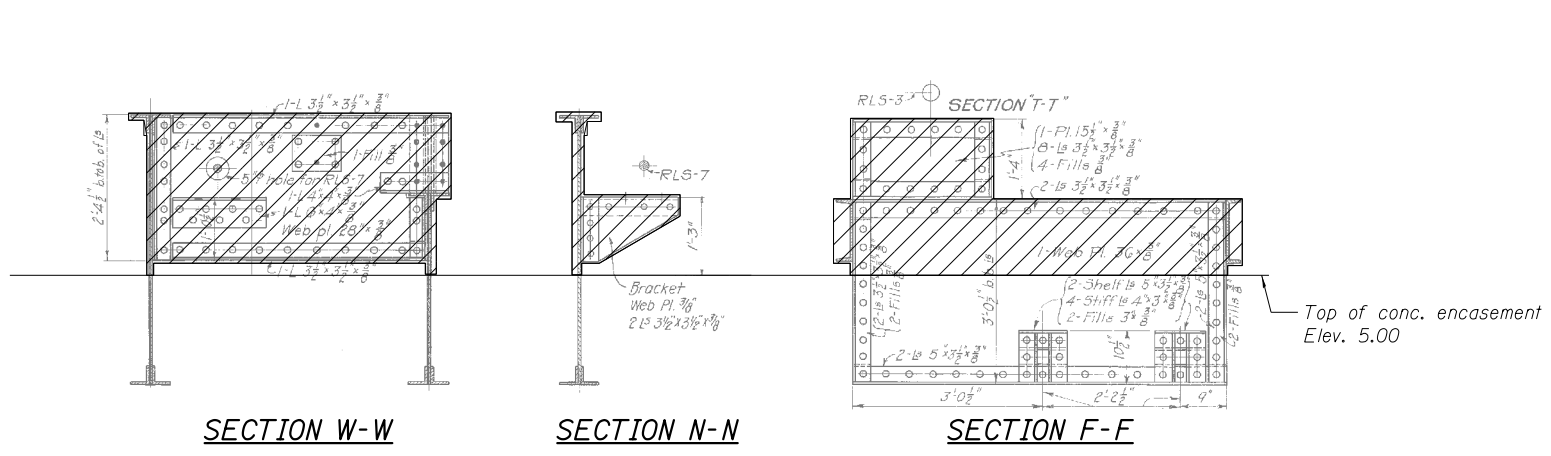
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-99
CDOT PROJECT NO. E-6-650			140 OF 411

REFERENCE DRAWINGS

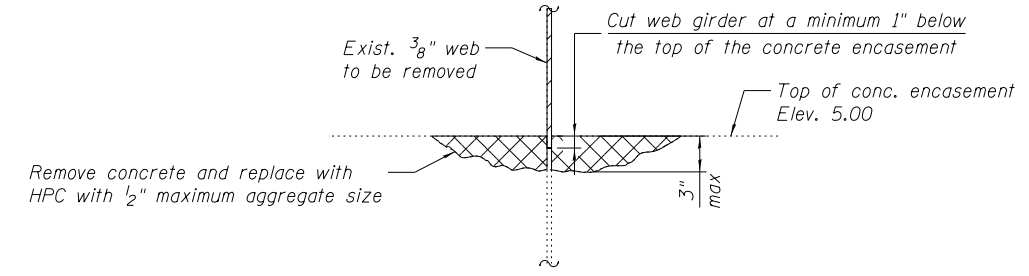
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Heel Lock Machinery Girder	1660300782
General Plan Heel Lock	1660300797
Heel Lock Details	1660300798
Center Lock Heel Lock Bearings	1660300801
Erection Diagram for Heel Lock	1660301067
Heel Lock Girder	1660301072
Rear Lock	1660301318



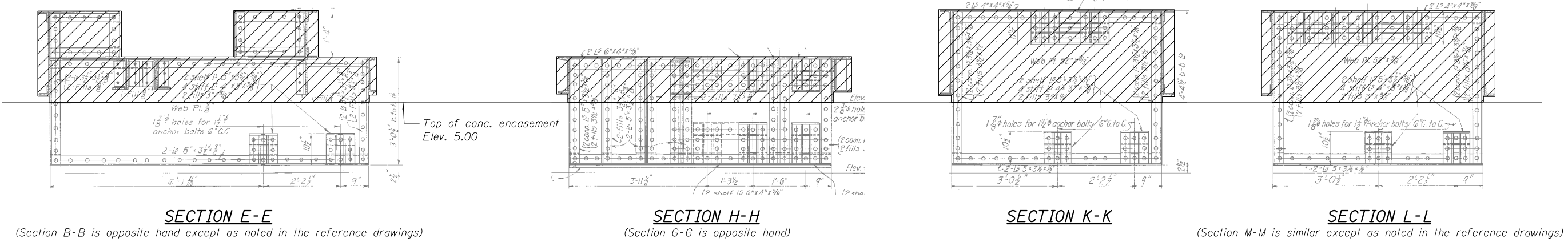
SECTION D-D
(Section C-C is opposite hand except as noted in the reference drawings)



SECTION W-W **SECTION N-N** **SECTION F-F**



TYPICAL REMOVAL OF CONCRETE EMBEDDED STEEL GIRDERS



SECTION E-E **SECTION H-H** **SECTION K-K** **SECTION L-L**
(Section B-B is opposite hand except as noted in the reference drawings) (Section G-G is opposite hand) (Section M-M is similar except as noted in the reference drawings)

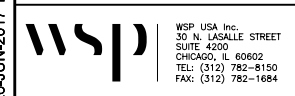
LEGEND

Structural Steel Removal

Concrete Removal

- Notes:
- Cost of structural steel and concrete removal is included in the cost of Replacement of Heel Lock Support.
 - Cost of HPC is included in the cost of Replacement of Heel Lock Support.

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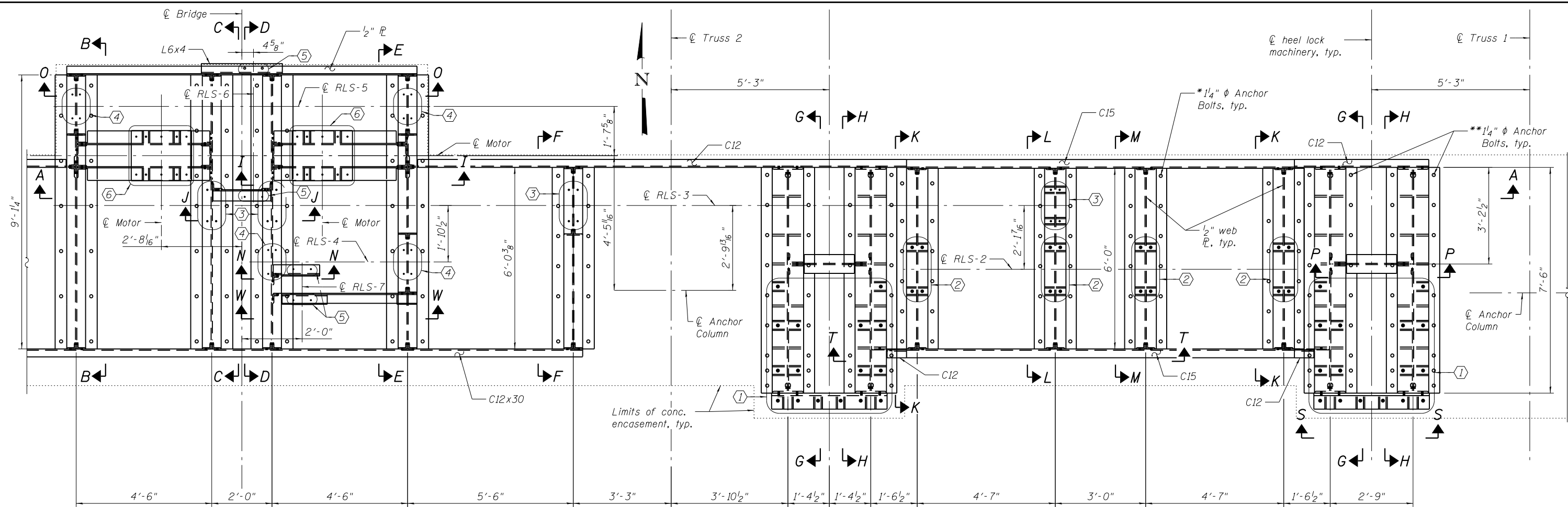
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PLOT DATE =	6/26/2017	DRAWN -	MI	REVISED -	
		CHECKED -	JIG	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

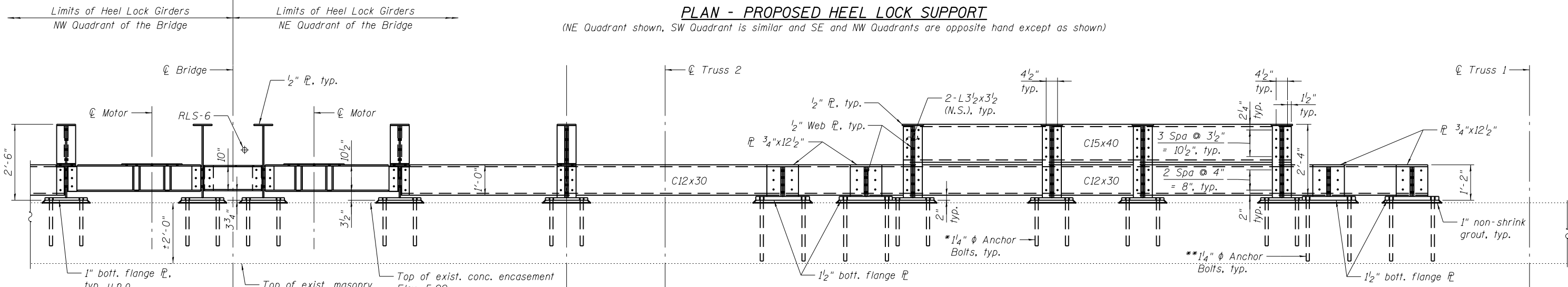
EXISTING HEEL LOCK SUPPORT REMOVAL DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-100
CDOT PROJECT NO. E-6-650			141 OF 411



PLAN - PROPOSED HEEL LOCK SUPPORT

(NE Quadrant shown, SW Quadrant is similar and SE and NW Quadrants are opposite hand except as shown)



SECTION A-A

- Notes:
- The material properties of the turned stud fasteners for the heel lock bearings and machinery shall conform to ASTM A449.
 - The ϕ of the stud fasteners is based on the thread size which is one standard size smaller than the nominal diameter.
 - The turned stud fasteners holes for the heel lock bearings and machinery in the top of the girder shall be field drilled and reamed in accordance to AASHTO LC6.
 - For more details on the turned stud fasteners, see mechanical plans.
 - Cost of turned stud fasteners and non-shrink grout is included in the cost of Replacement of Heel Lock Support.
 - For Sections G-G, H-H, K-K, P-P, and View S-S see sheet MS-102.
 - For Sections F-F, L-L, M-M, and T-T see sheet MS-103.
 - For Sections B-B thru E-E see sheet MS-104.
 - For Sections I-I and O-O see sheet MS-105.
 - For Sections J-J, N-N, and W-W see sheet MS-106.
 - For additional material and construction requirements, see Replacement of Heel Lock special provision and Mechanical Equipment Detailed Specifications.

REFERENCE DRAWINGS

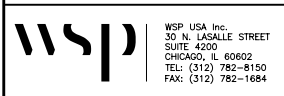
Drawing	Sheet No.
Main Pier - Masonry Layout	1660300695
Heel Lock Machinery Girder	1660300782
General Plan Heel Lock	1660300797
Heel Lock Details	1660300798
Center Lock Heel Lock Bearings	1660300801
Center Lock Heel Lock Details	1660300802
Erection Diagram for Heel Lock	1660301067
Heel Lock Girder	1660301072
Bearings	1660301310
Rear Lock	1660301318

* Drill and grout anchor bolts according to Article 584 of the Std. Specs., with a minimum embedment of 1'-6".

** Drill and grout anchor bolts according to Article 584 of the Std. Specs., with a minimum embedment of 2'-0".

- Location exist. heel lock machinery. Use 1/2" ϕ turned stud fasteners.
- Location of exist. RLB-2. Use 1 3/8" ϕ turned stud fasteners.
- Location of exist. RLB-3. Use 7/8" ϕ turned stud fasteners.
- Location of exist. RLB-4. Use 3/4" ϕ turned stud fasteners.
- Location of exist. RLB-5. Use 3/4" ϕ turned stud fasteners.
- Location of exist. Motor. Use 7/8" ϕ turned stud fasteners.

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WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

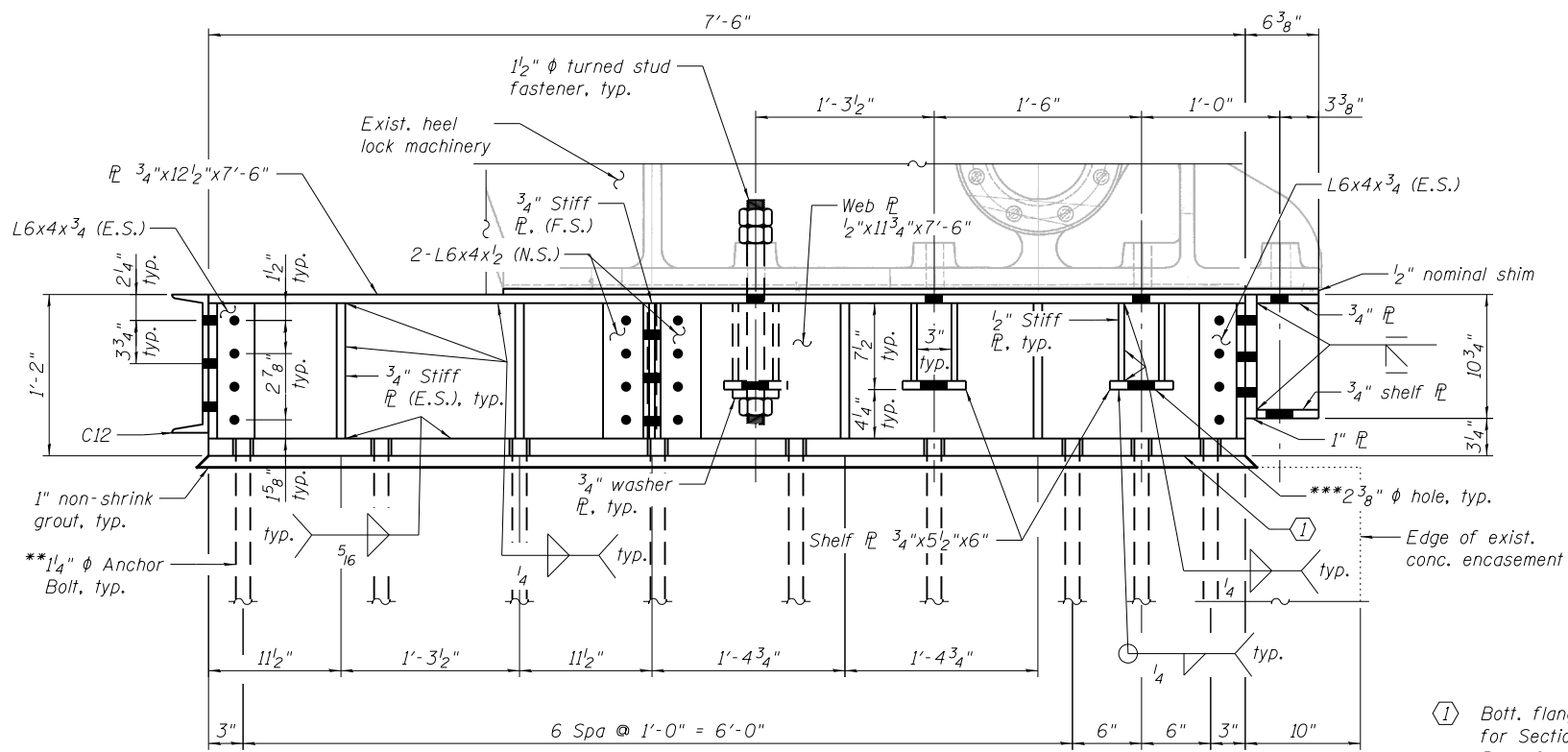
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CITY OF CHICAGO
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

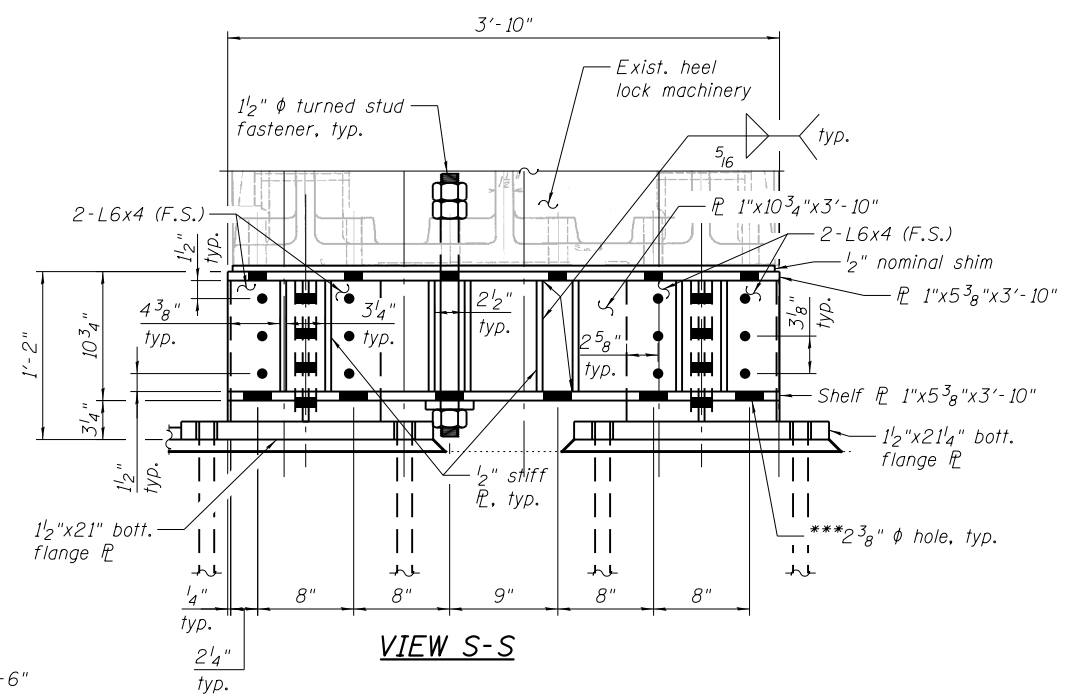
PLAN OF HEEL LOCK SUPPORT
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-101
CDOT PROJECT NO. E-6-650			142 OF 411



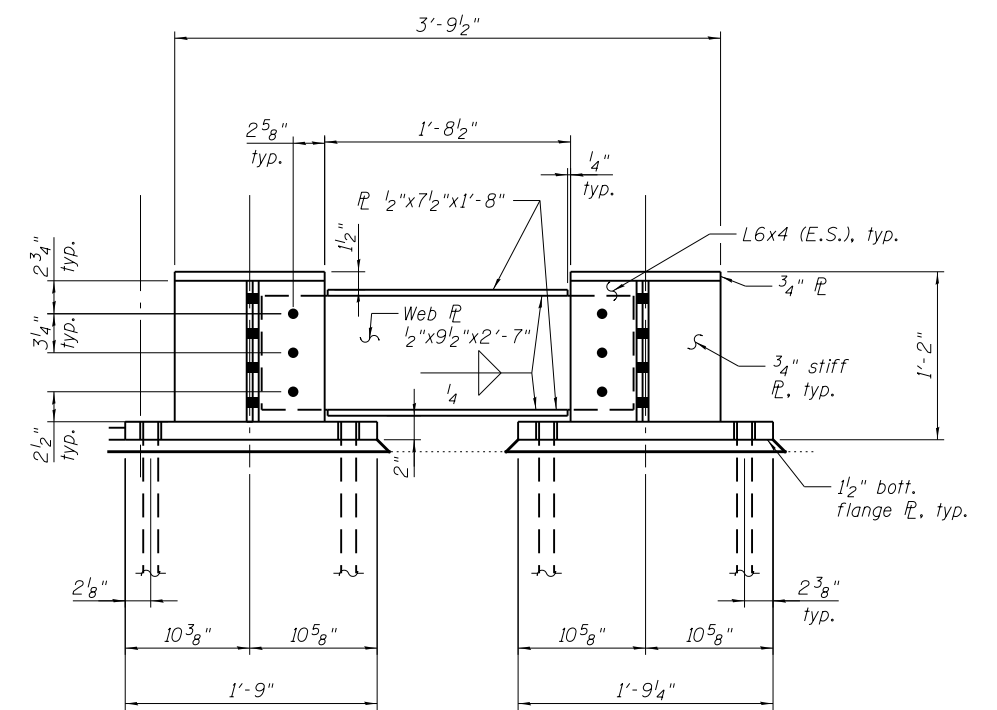
SECTION H-H

(Section G-G opposite hand except as noted)

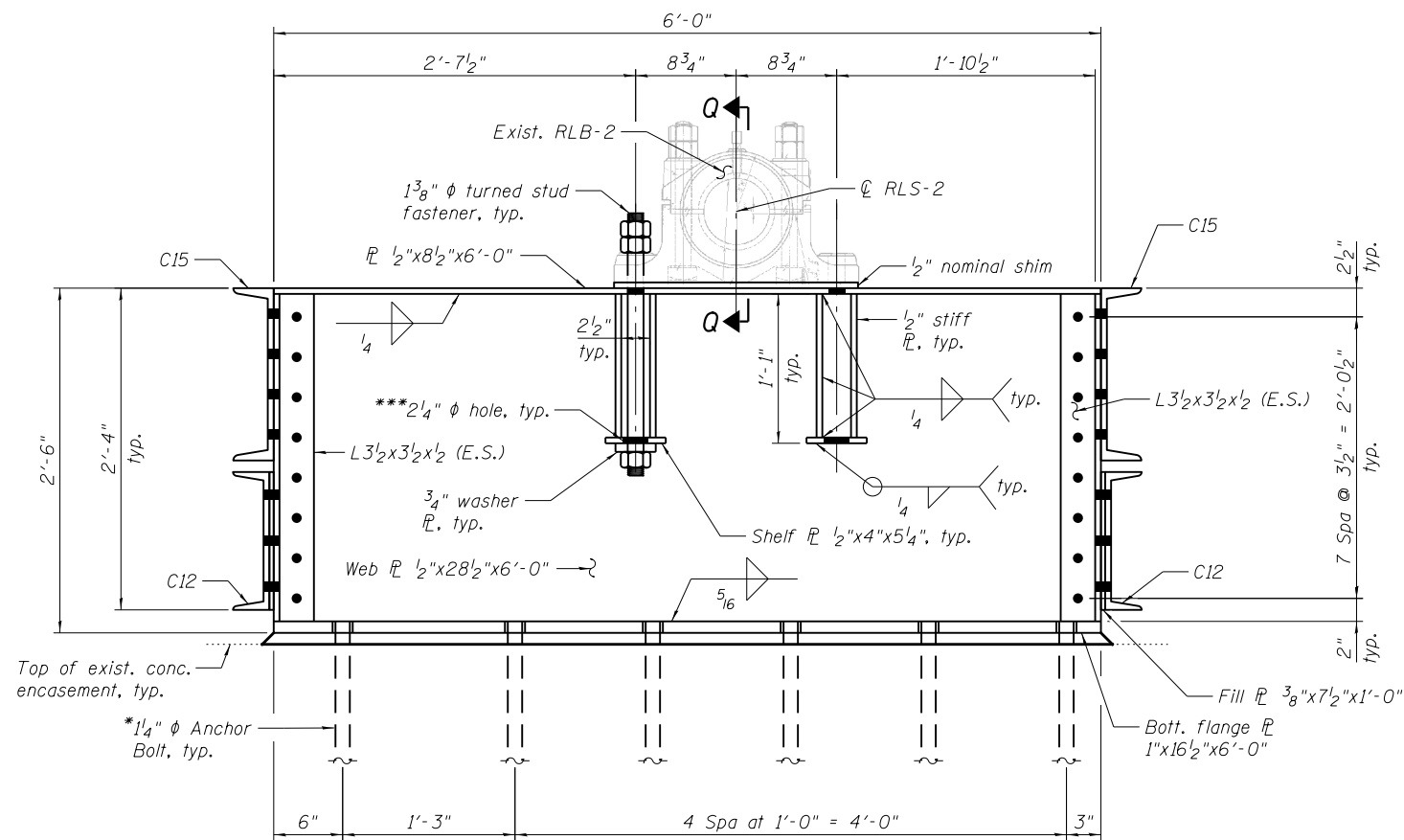


VIEW S-S

- ① Bott. flange \bar{L} $1\frac{1}{2}$ "x $21\frac{1}{4}$ "x $7'-6"$ for Section H-H
- Bott. flange \bar{L} $1\frac{1}{2}$ "x 21 "x $7'-6"$ for Section G-G



SECTION P-P



SECTION K-K

REFERENCE DRAWINGS

- Drawing
- Heel Lock Machinery Girder
- General Plan Heel Lock
- Heel Lock Details
- Center Lock Heel Lock Bearings
- Heel Lock Girder
- Bearings
- Rear Lock

- Sheet No.
- 1660300782
- 1660300797
- 1660300798
- 1660300801
- 1660301072
- 1660301310
- 1660301318

- Notes:
1. For Locations of Sections G-G, H-H, K-K, P-P, and View S-S see sheet MS-101.
 2. For Section Q-Q see sheet MS-106.

- * Drill and grout anchor bolts according to Article 584 of the Std. Specs., with a minimum embedment of 1'-6".
- ** Drill and grout anchor bolts according to Article 584 of the Std. Specs., with a minimum embedment of 2'-0".
- *** Corresponding holes in shelf \bar{L} s to be shop drilled and made $\frac{3}{4}$ " larger than the holes above.

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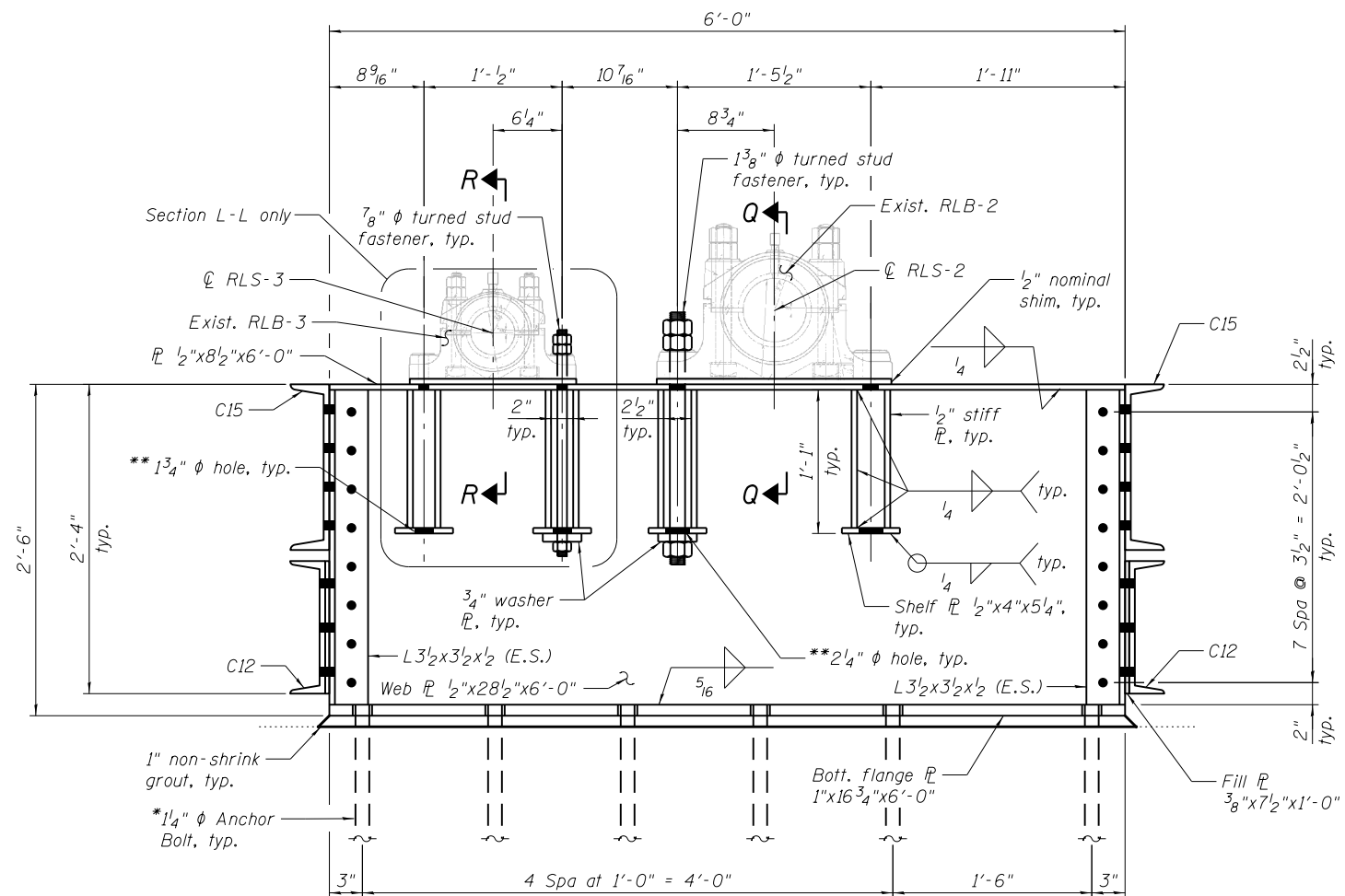
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CITY OF CHICAGO
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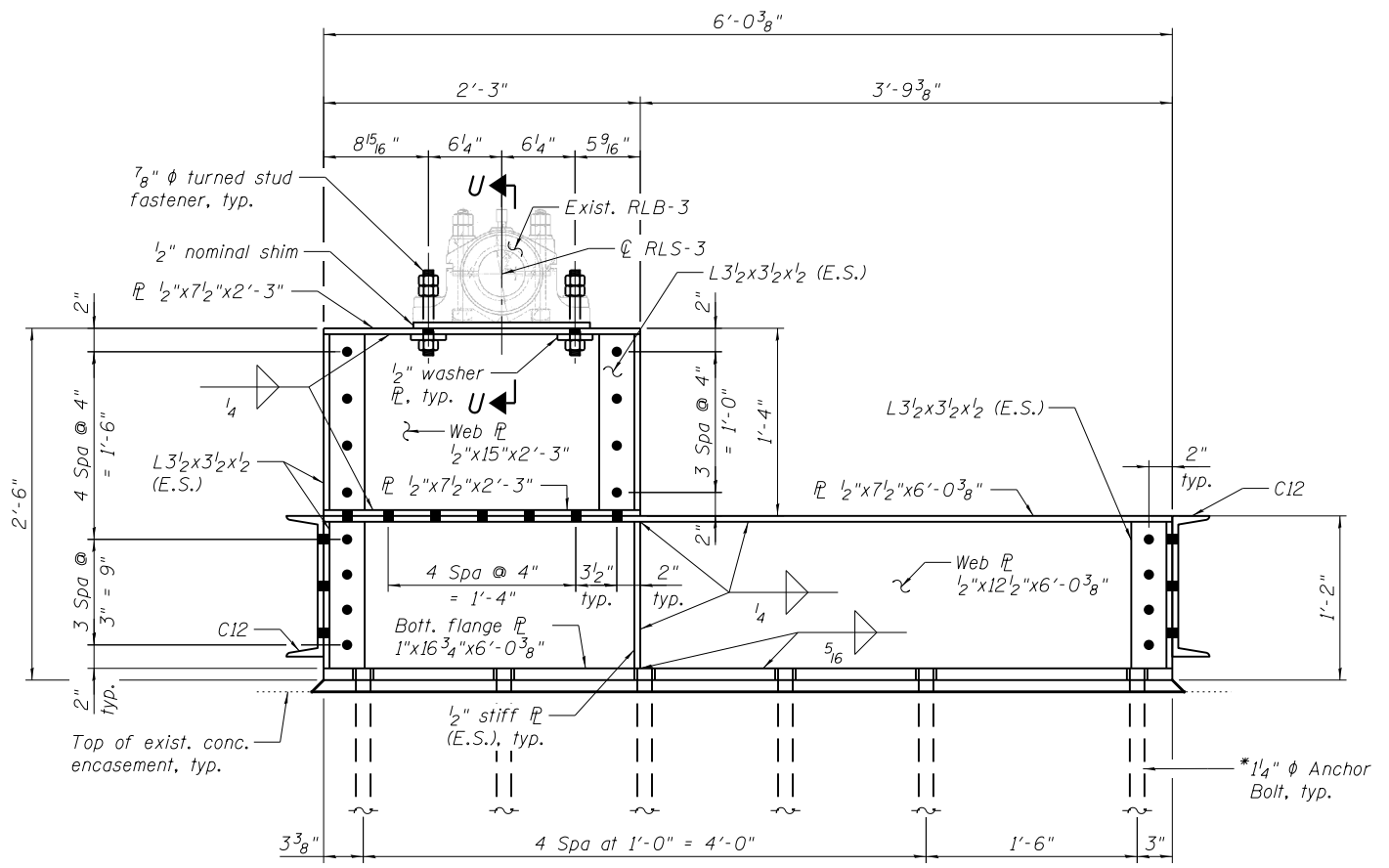
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HEEL LOCK SUPPORT DETAILS I
(STRUCTURE NO. 016-6030)

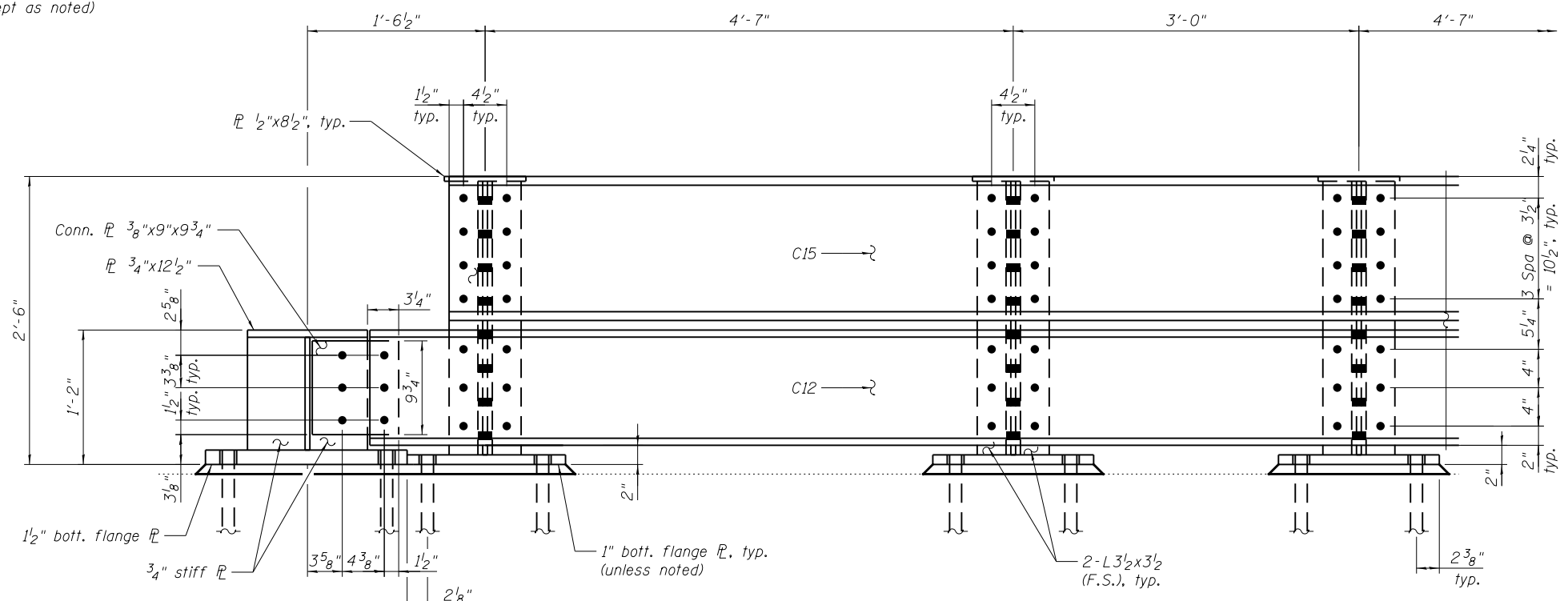
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0341	09-E0534-00-BR/CDOT	COOK	MS-102
CDOT PROJECT NO. E-6-650			143 OF 411



SECTION L-L
(Section M-M similar except as noted)



SECTION F-F



SECTION T-T

* Drill and grout anchor bolts according to Article 584 of the Std. Specs., with a minimum embedment of 1'-6".

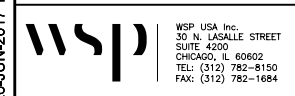
** Corresponding holes in shelf PLs to be shop drilled and made 3/4" larger than the holes above

REFERENCE DRAWINGS

Drawing	Sheet No.
Heel Lock Machinery Girder	1660300782
General Plan Heel Lock	1660300797
Center Lock Heel Lock Bearings	1660300801
Heel Lock Girder	1660301072
Bearings	1660301310

- Notes:
1. For Locations of Sections F-F, L-L, M-M, and T-T see sheet MS-101.
 2. For Sections Q-Q and R-R see sheet MS-106.

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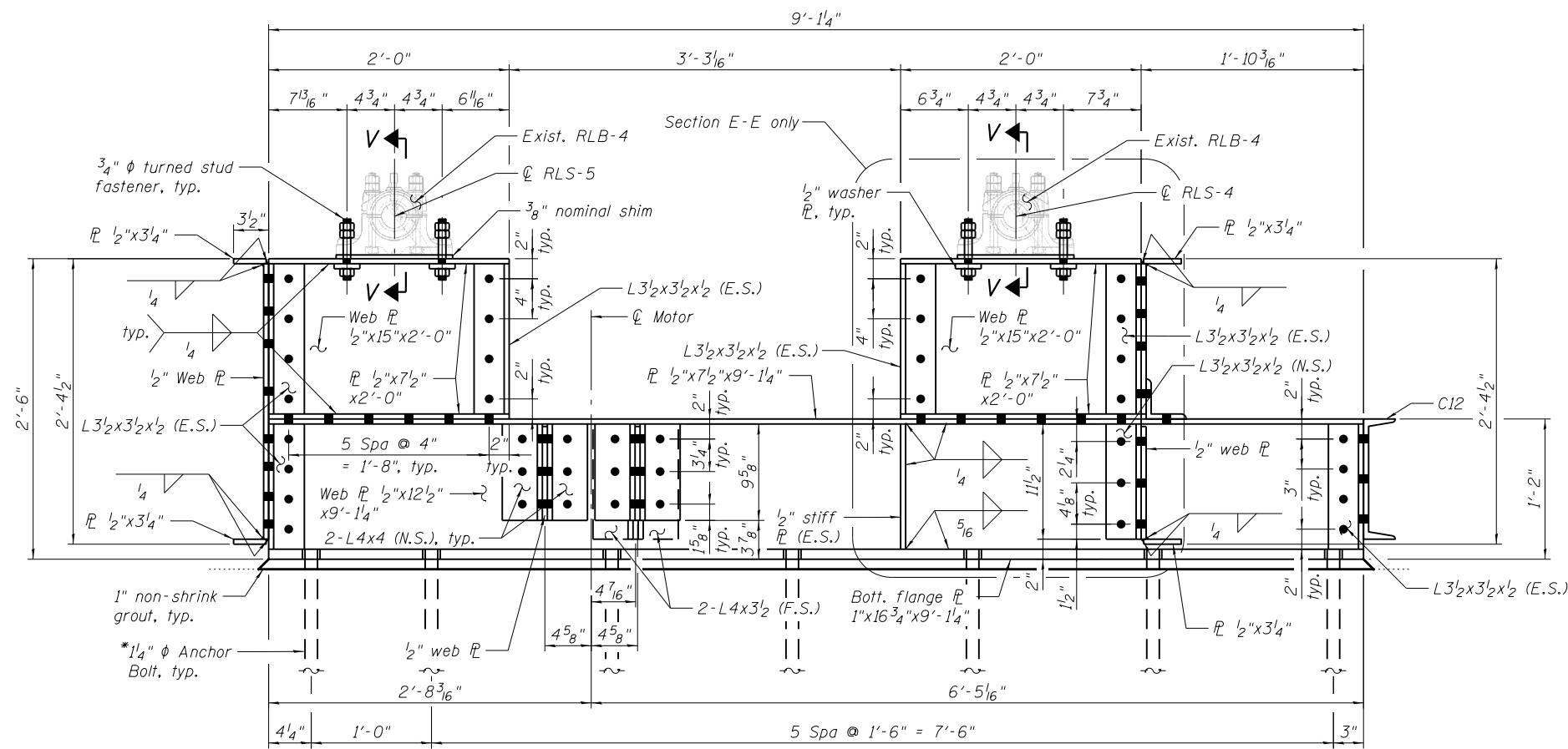
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

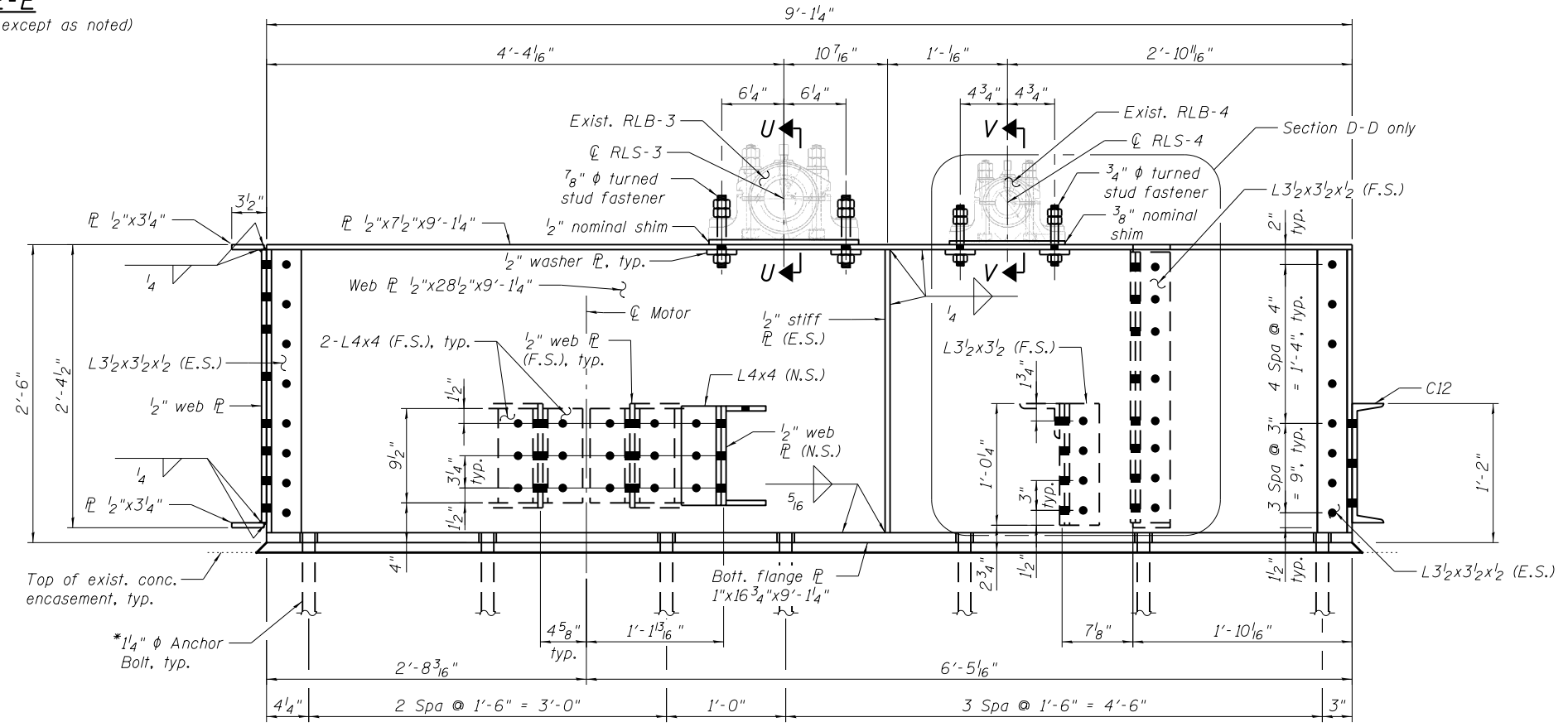
HEEL LOCK SUPPORT DETAILS II
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-103
CDOT PROJECT NO. E-6-650			144 OF 411



SECTION E-E

(Section B-B opposite hand except as noted)



SECTION D-D

(Section C-C opposite hand except as noted)

* Drill and grout anchor bolts according to Article 584 of the Std. Specs., with a minimum embedment of 1'-6".

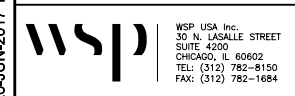
REFERENCE DRAWINGS

Drawing	Sheet No.
Heel Lock Machinery Girder	1660300782
General Plan Heel Lock	1660300797
Center Lock Heel Lock Bearings	1660300801
Heel Lock Girder	1660301072
Bearings	1660301310

Notes:

- For Locations of Section B-B thru Section E-E see sheet MS-101.
- For Sections U-U and V-V see sheet MS-106.

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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HEEL LOCK SUPPORT DETAILS III
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-104
CDOT PROJECT NO. E-6-650			145 OF 411

* Drill and grout anchor bolts according to Article 584 of the Std. Specs., with a minimum embedment of 1'-6".

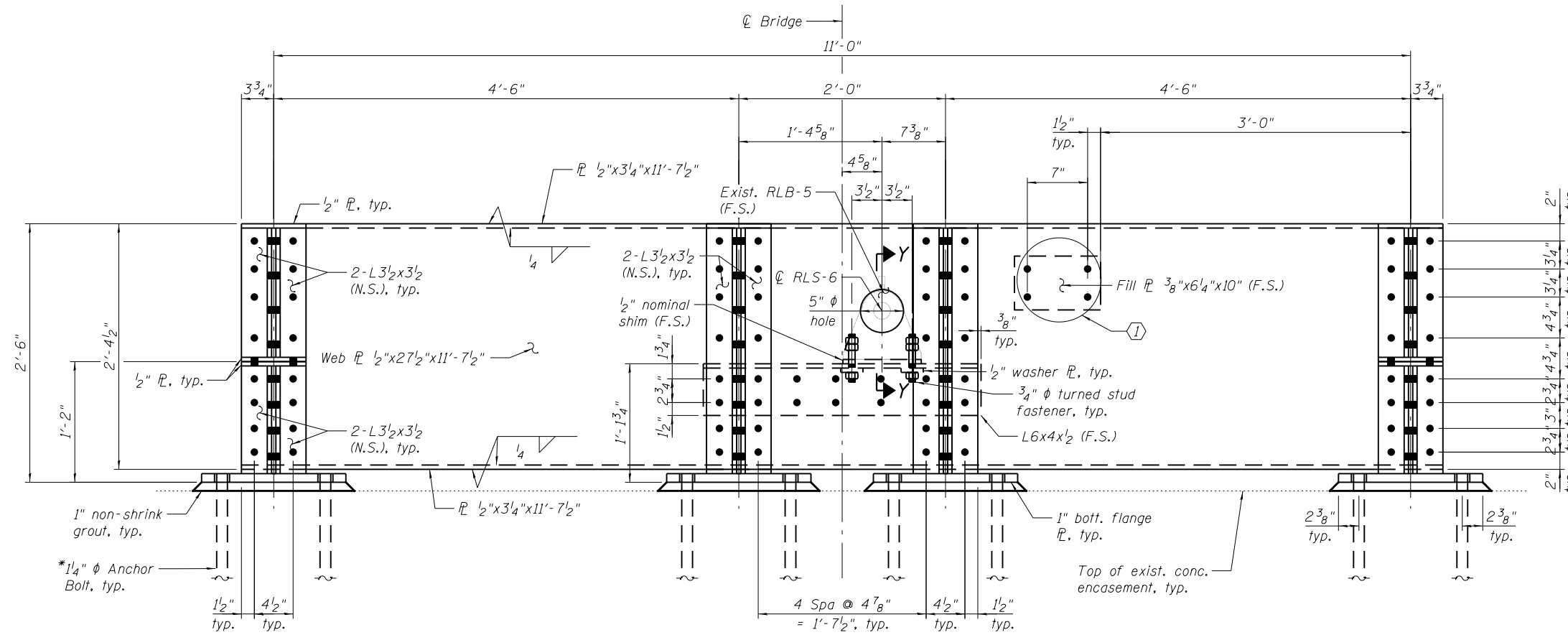
** Corresponding holes in shelf angles to be shop drilled and made $\frac{3}{4}$ " larger than the holes above

REFERENCE DRAWINGS

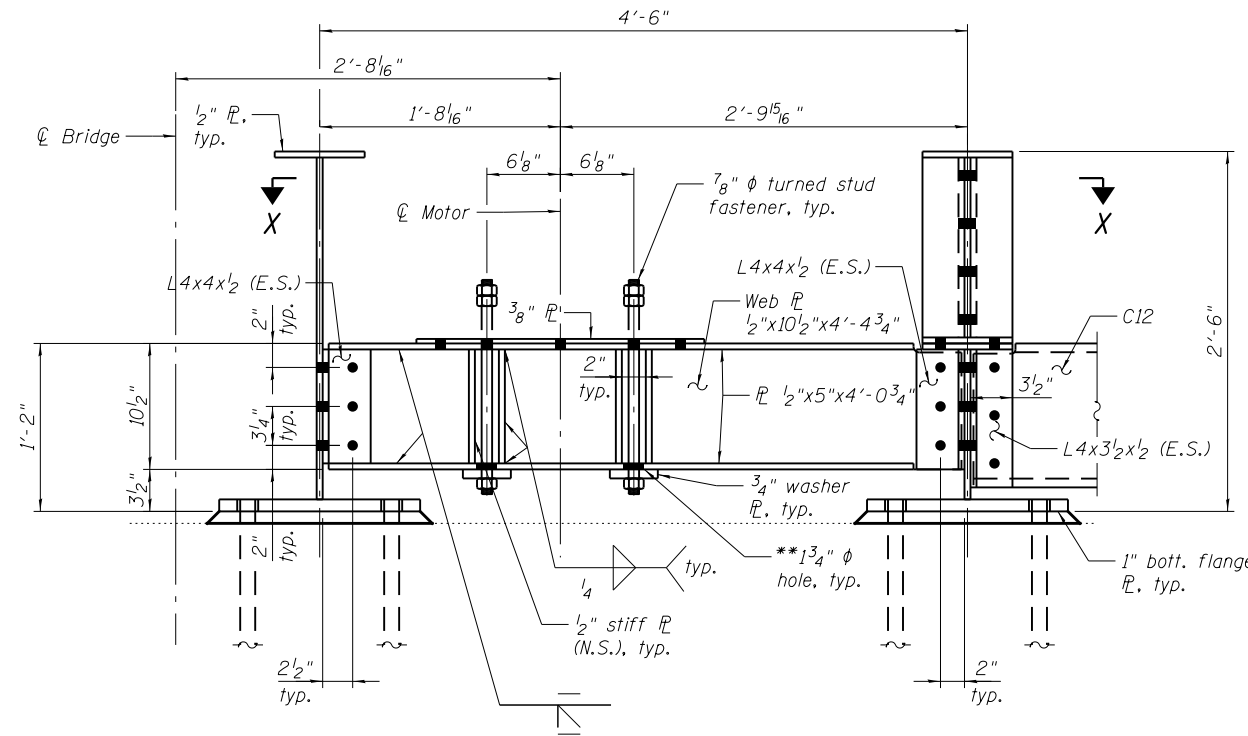
<i>Drawing</i>	<i>Sheet No.</i>
Heel Lock Machinery Girder	1660300782
General Plan Heel Lock	1660300797
Center Lock Heel Lock Bearings	1660300801
Center Lock Heel Lock Details	1660300802
Heel Lock Girder	1660301072
Bearings	1660301310

- Notes:*
1. For Locations of Sections I-I and O-O see sheet MS-101.
 2. For Section Y-Y see sheet MS-106.

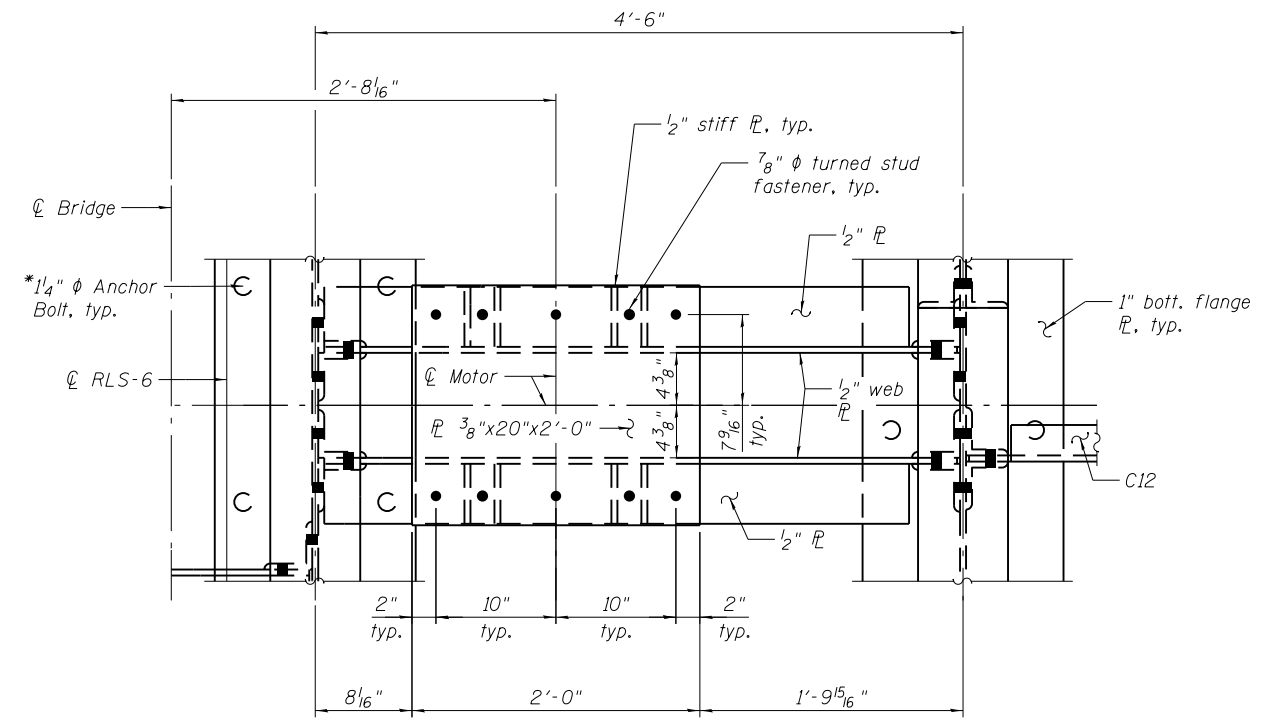
① Remove and reinstall gear shifting lever lock. Cost included with Replacement of Heel Lock Support.



SECTION O-O



SECTION I-I



SECTION X-X

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22-JAN-2018 13:31



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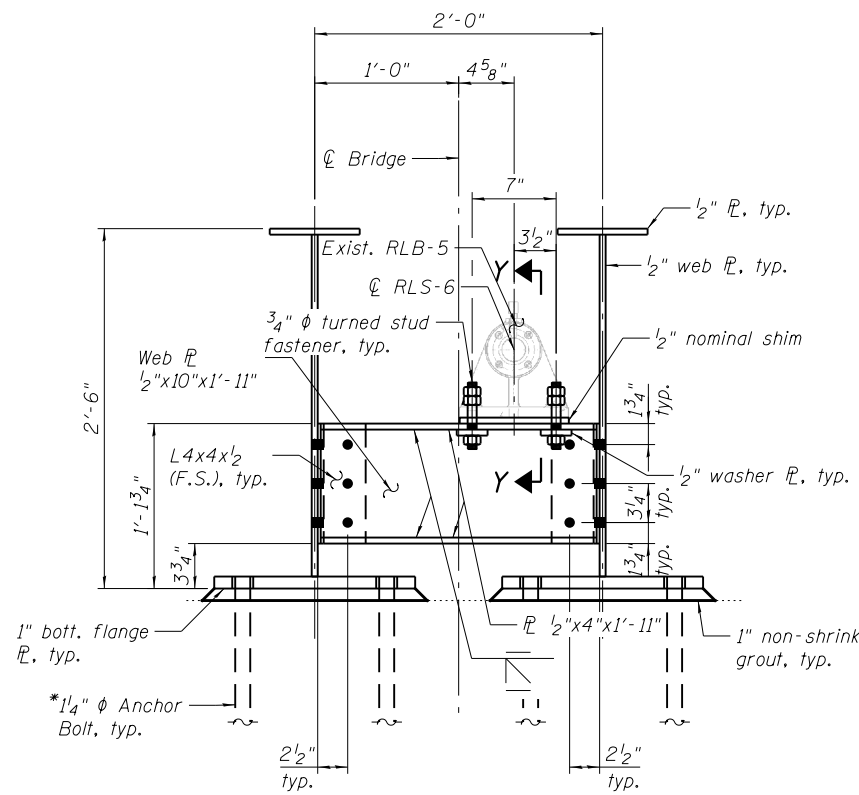
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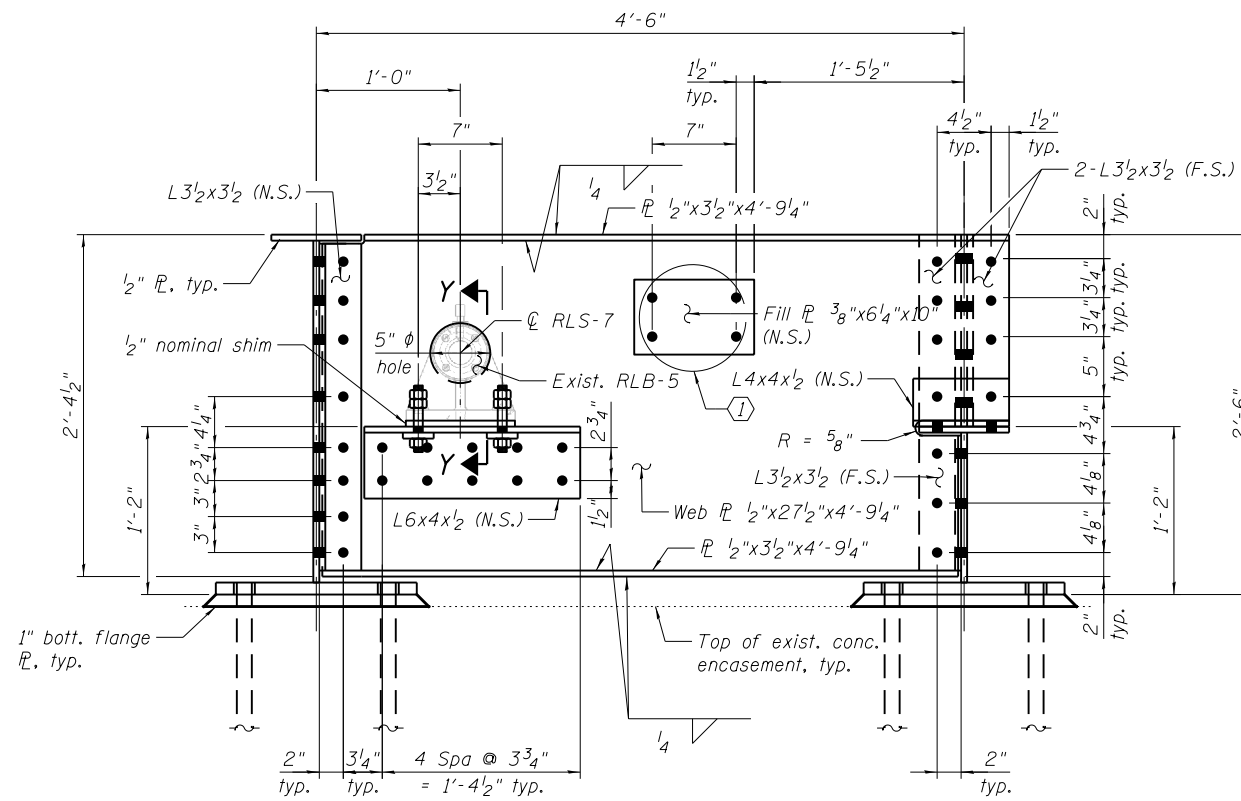
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HEEL LOCK SUPPORT DETAILS IV
(STRUCTURE NO. 016-6030)

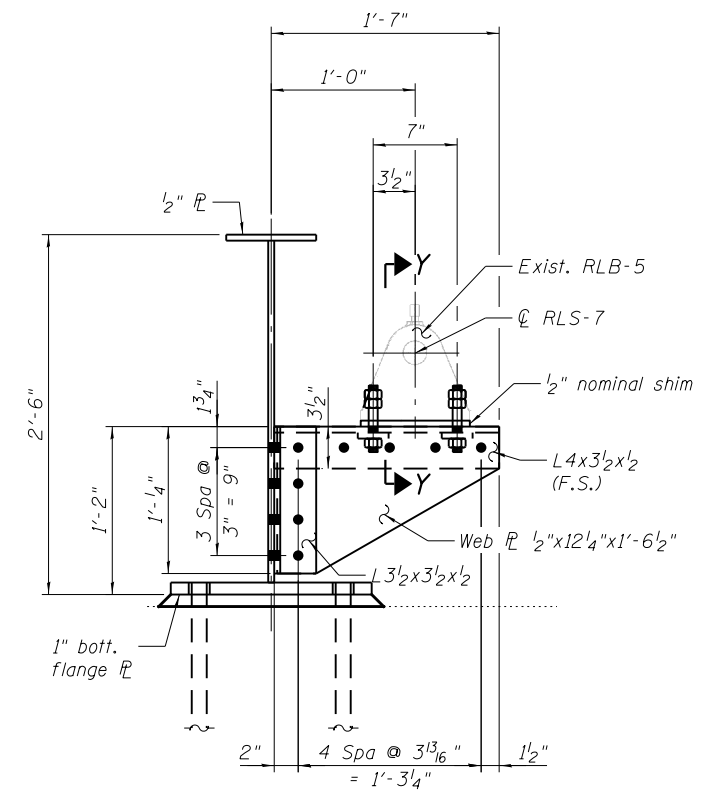
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-105
CDOT PROJECT NO. E-6-650			146 OF 411



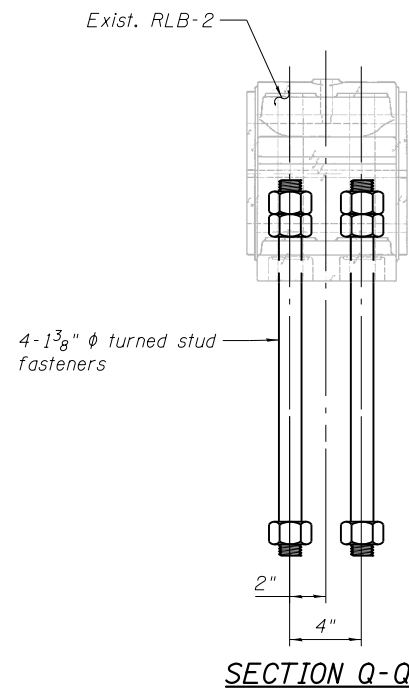
SECTION J-J



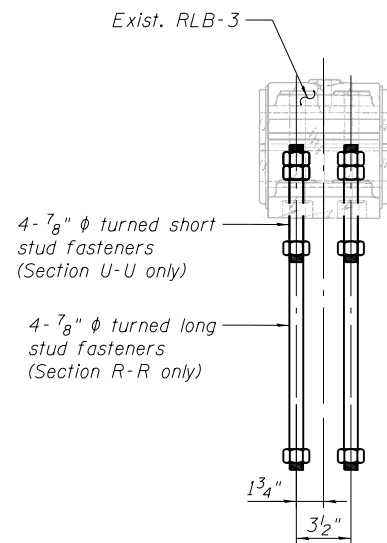
SECTION W-W



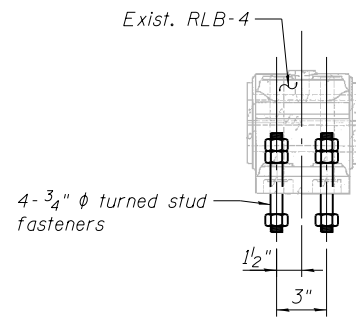
SECTION N-N



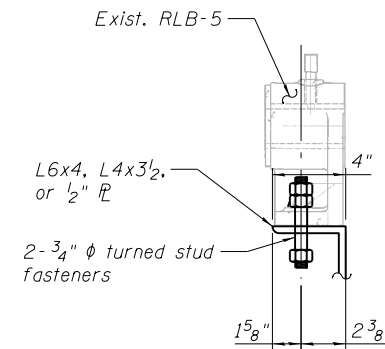
SECTION Q-Q



SECTION U-U
(Section R-R similar except as noted)



SECTION V-V



SECTION Y-Y

Ⓛ Remove and reinstall gear shifting lever lock

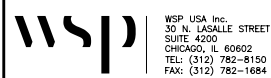
*Drill and grout anchor bolts according to Article 584 of the Std. Specs.. with a minimum embedment of 1'-6".

REFERENCE DRAWINGS

Drawing	Sheet No.
Heel Lock Machinery Girder	1660300782
General Plan Heel Lock	1660300797
Center Lock Heel Lock Bearings	1660300801
Center Lock Heel Lock Details	1660300802
Heel Lock Girder	1660301072
Bearings	1660301310

Notes:
1. For Locations of Sections J-J, N-N, and W-W see sheet MS-101.

T:\16917A\Struct\Cadd\Sheets\0166030-E6650-MS 106-HeelLock-Girders-DET V.dgn
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30 N. LASALLE STREET
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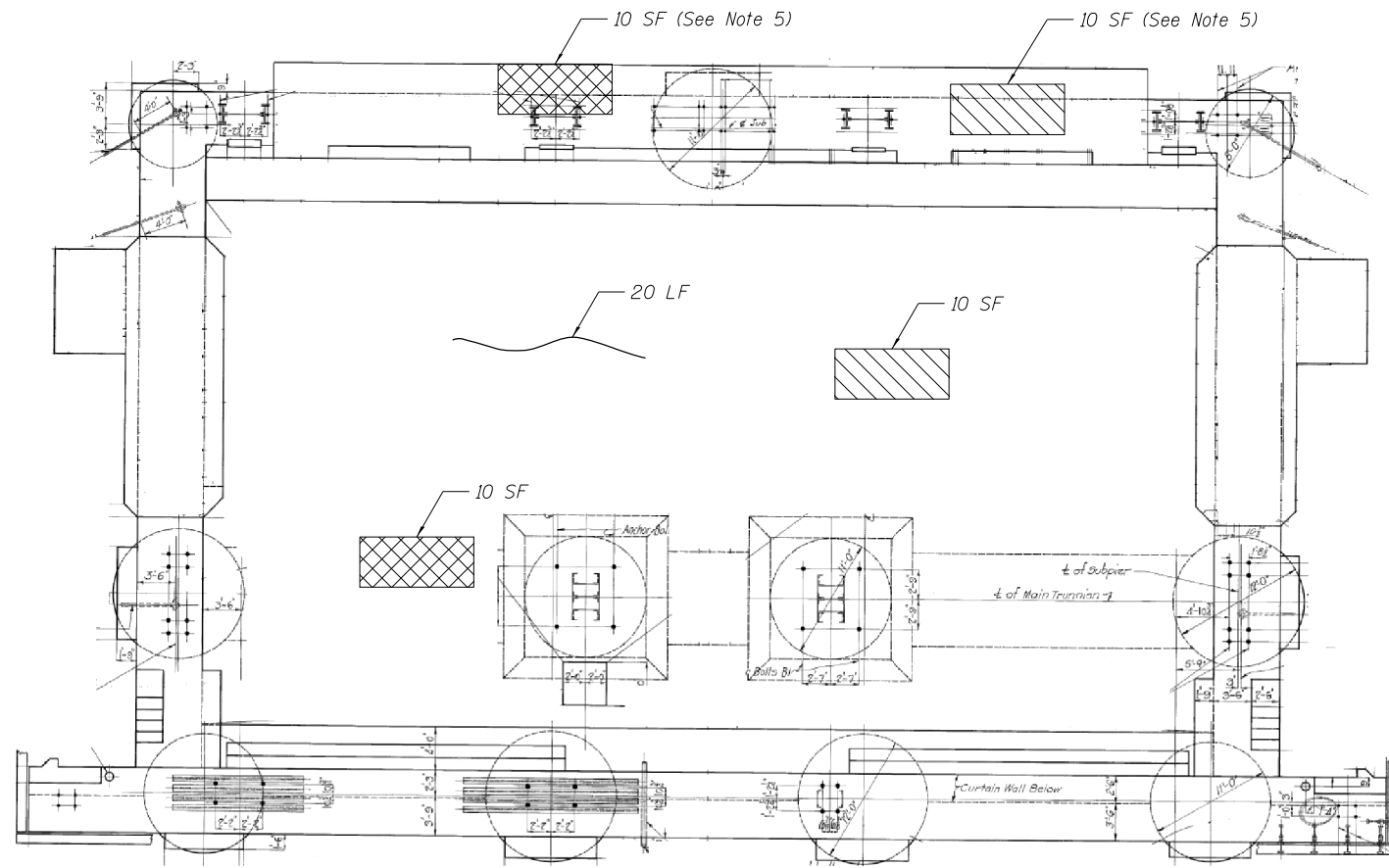
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DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HEEL LOCK SUPPORT DETAILS V
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-106
CDOT PROJECT NO. E-6-650			147 OF 411



NORTH PIT PLAN

The existing counterweight pits were inaccessible at the time of original inspection and field measurements due to the presence of water and unsafe and heavily deteriorated stairways of the pit. Accordingly, the suggested repairs are for information only. Any defects noted in the field shall be brought to the attention of the Engineer and repaired according to the applicable Std. Specs. and Special Provisions. The cost of these repairs is included with Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches), Structural Repair of Concrete (Depth Greater Than 5 Inches), Protective Concrete Sealer, and Epoxy Crack Injection, unless noted otherwise.

NOTES:

1. For North pit wall repairs, see Sheet MS-108
2. Areas of structural steel repairs and epoxy crack injection shown are estimated. The Engineer shall show actual locations of these repairs at the time of construction.
3. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost Included with Concrete Removal.
4. Protective concrete sealer shall be applied to the structural concrete repair areas.
5. Concrete repairs, within the limits of the heel lock supports, are included in the cost of Heel Lock Replacement. See Special Provisions.

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)
- Structural Repair of Concrete (Depth Greater Than 5 inches)
- Low Pressure Epoxy Injection (Width >0.06")
- SY Square Yard
- LF Linear Foot

BILL OF MATERIAL

ITEM	UNIT	QTY
PROTECTIVE CONCRETE SEALER	SQ YD	23
EPOXY CRACK INJECTION	FOOT	100
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	100
STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	100

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ENGINEERING GROUP, LLC.
4415 WEST HARRISON STREET, SUITE 231
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30 N. LASALLE STREET
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FAX: (312) 782-1884

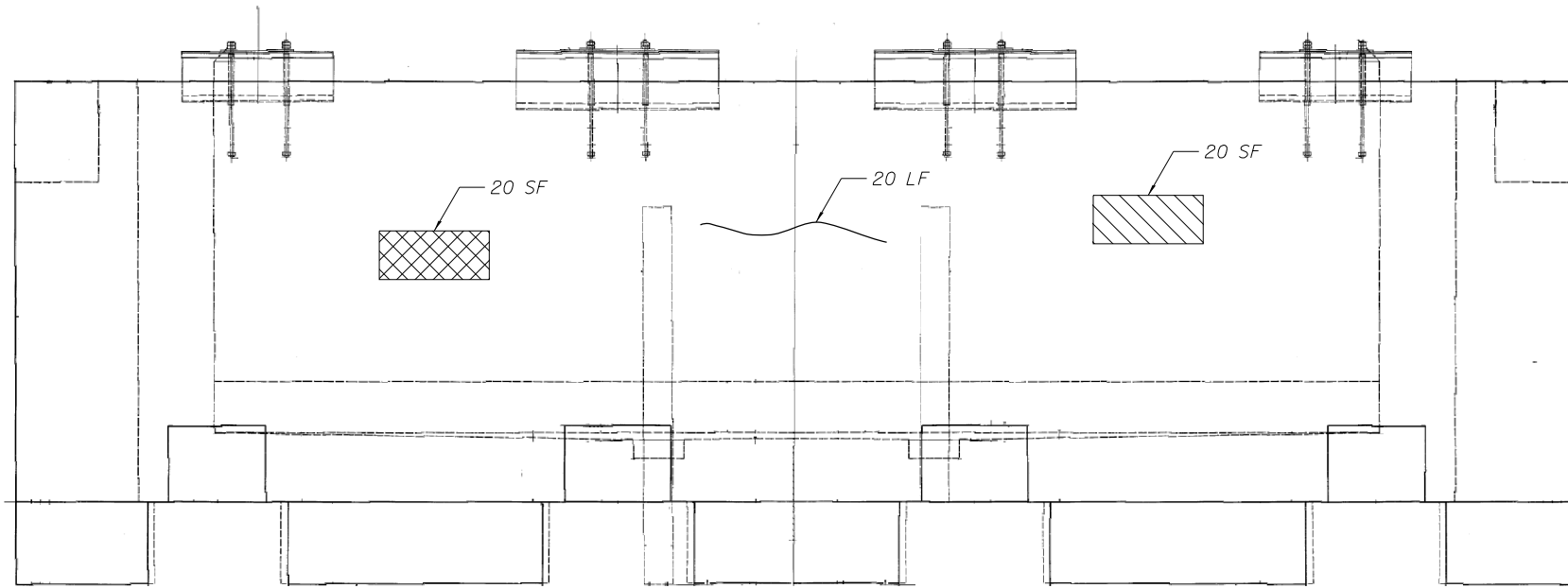
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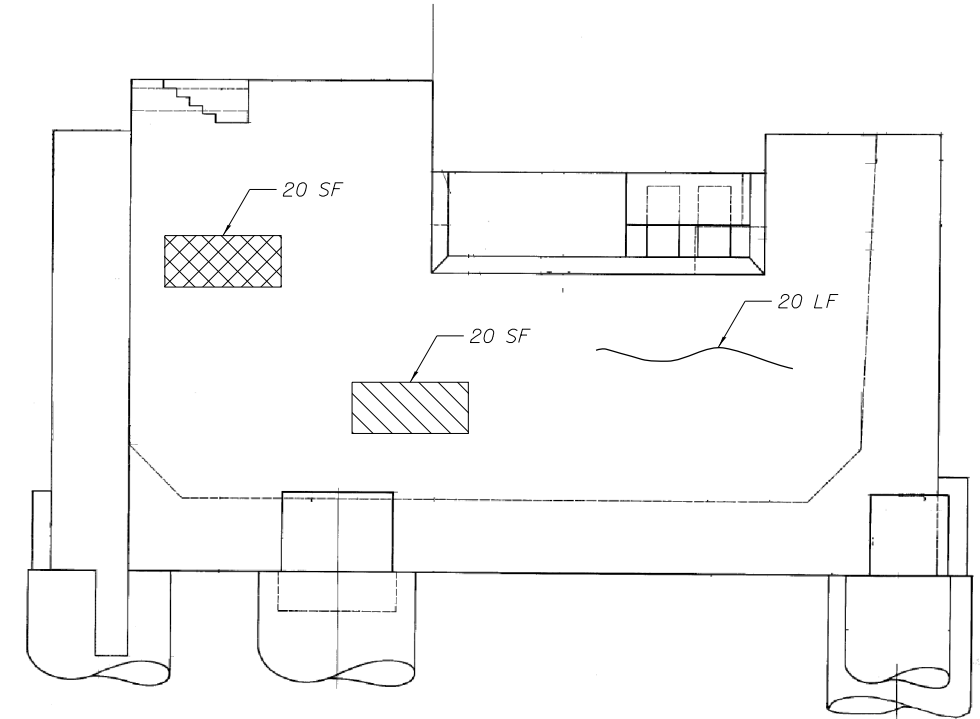
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH PIT PLAN REPAIRS
(STRUCTURE NO. 016-6030)**

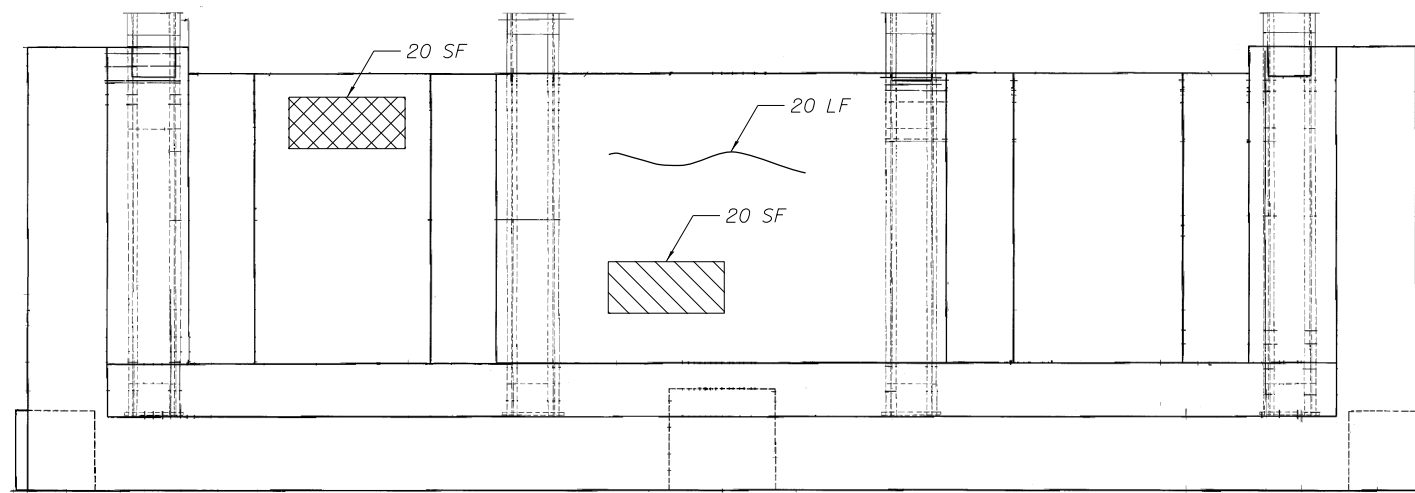
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CDOT PROJECT NO. E-6-650			148 OF 411



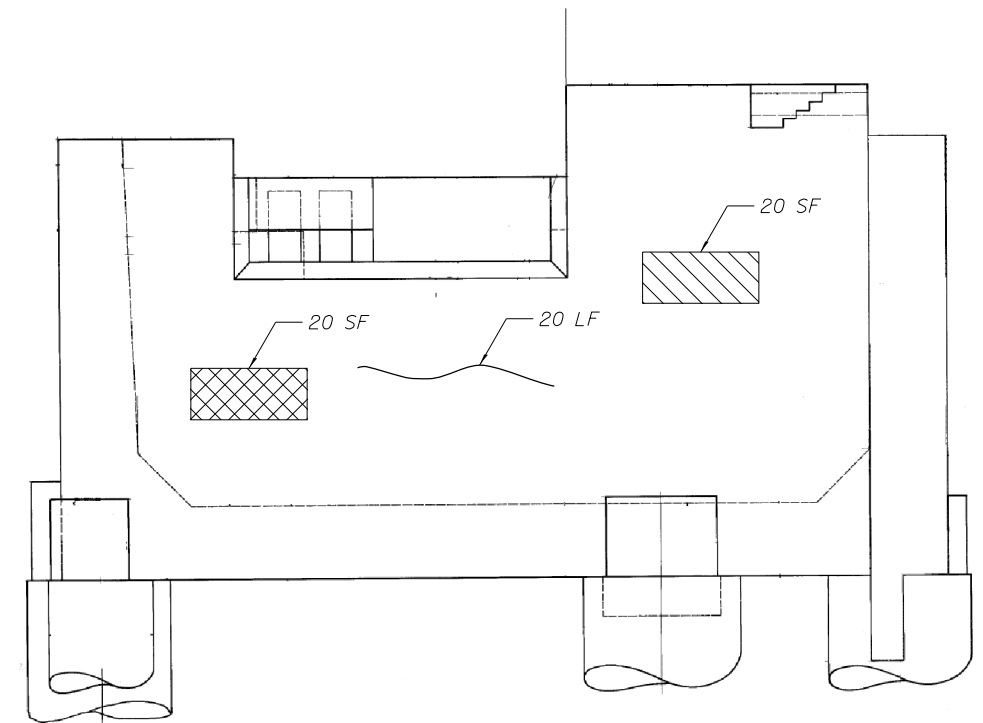
NORTH PIT SOUTH WALL INSIDE ELEVATION
(Looking South)



NORTH PIT WEST WALL INSIDE ELEVATION
(Looking West)



NORTH PIT NORTH WALL INSIDE ELEVATION
(Looking North)



NORTH PIT EAST WALL INSIDE ELEVATION
(Looking East)

NOTES:

1. For Bill of Materials and additional Notes See Sheet MS-107

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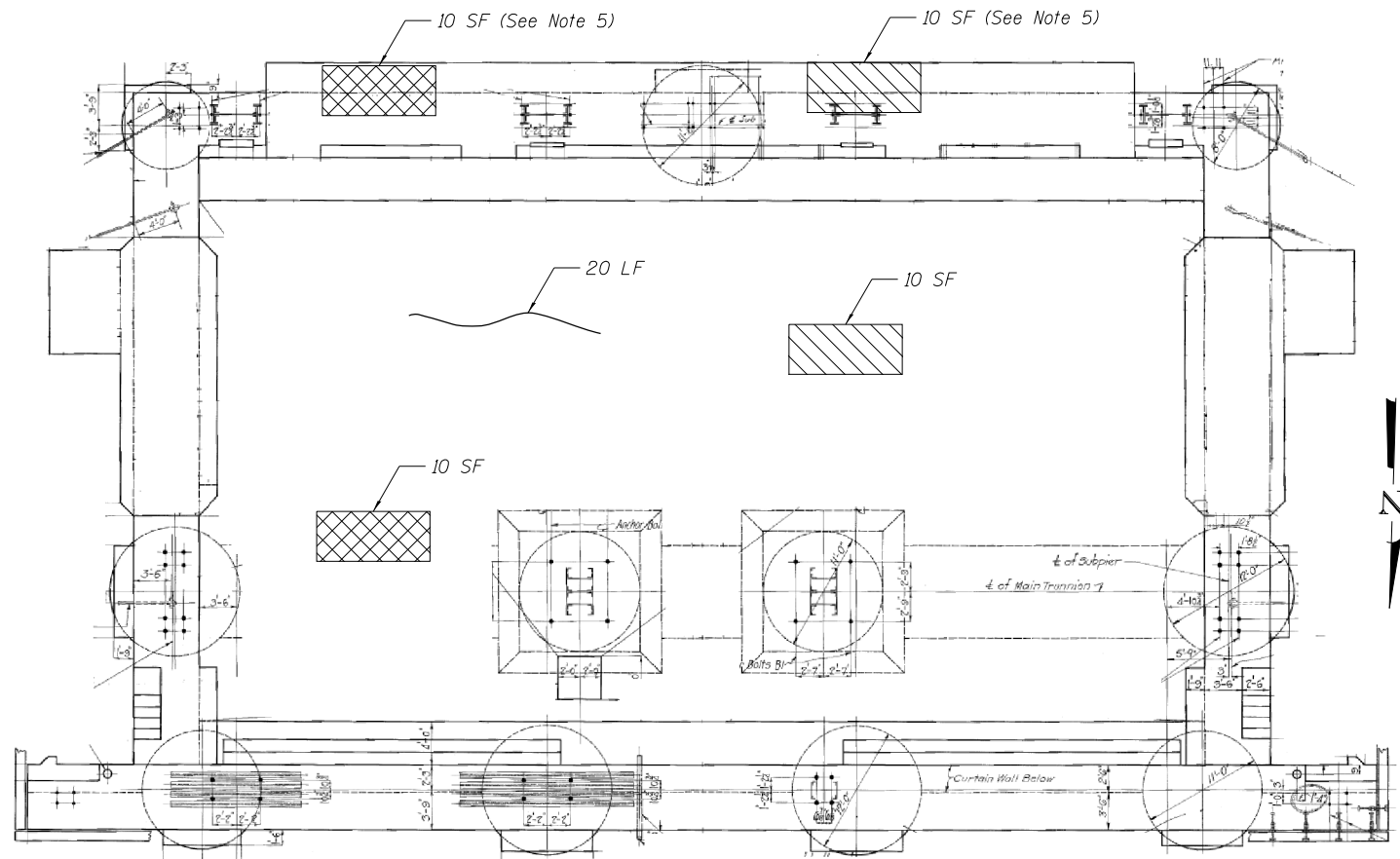
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH PIT WALL REPAIRS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-108
CDOT PROJECT NO. E-6-650			149 OF 411






SOUTH PIT PLAN

The existing counterweight pits were inaccessible at the time of original inspection and field measurements due to the presence of water and unsafe and heavily deteriorated stairways of the pit. Accordingly, the suggested repairs are for information only. Any defects noted in the field shall be brought to the attention of the Engineer and repaired according to the applicable Std. Specs. and Special Provisions. The cost of these repairs is included with Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches), Structural Repair of Concrete (Depth Greater Than 5 Inches), Protective Concrete Sealer, and Epoxy Crack Injection, unless noted otherwise.

NOTES:

1. For South pit wall repairs, see Sheet MS-110
2. Areas of structural steel repairs and epoxy crack injection shown are estimated. The Engineer shall show actual locations of these repairs at the time of construction.
3. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost Included with Concrete Removal.
4. Protective concrete sealer shall be applied to the structural concrete repair areas.
5. Concrete repairs, within the limits of the heel lock supports, are included in the cost of Heel Lock Replacement. See Special Provisions.

LEGEND

-  Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)
-  Structural Repair of Concrete (Depth Greater Than 5 inches)
-  Low Pressure Epoxy Injection (Width >0.06")
- SY Square Yard
- LF Linear Foot

BILL OF MATERIAL

ITEM	UNIT	QTY
PROTECTIVE CONCRETE SEALER	SQ YD	23
EPOXY CRACK INJECTION	FOOT	100
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	100
STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	100

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HBM
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WSP
WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

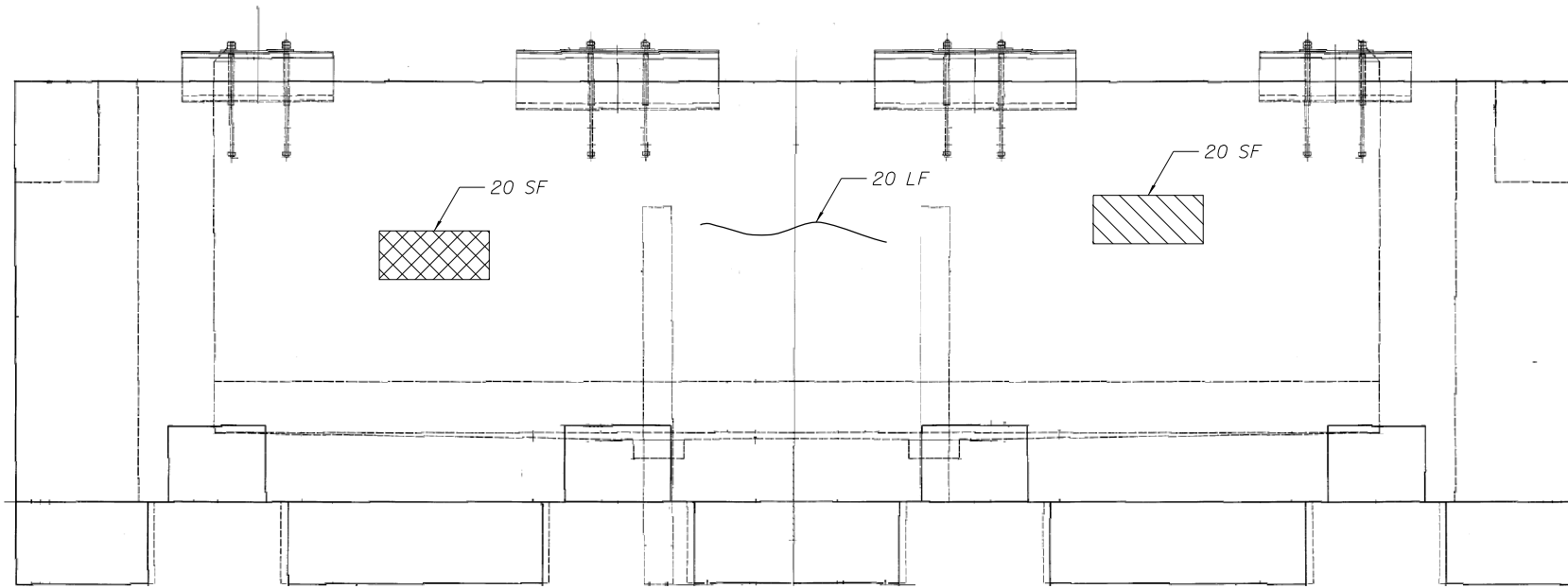
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

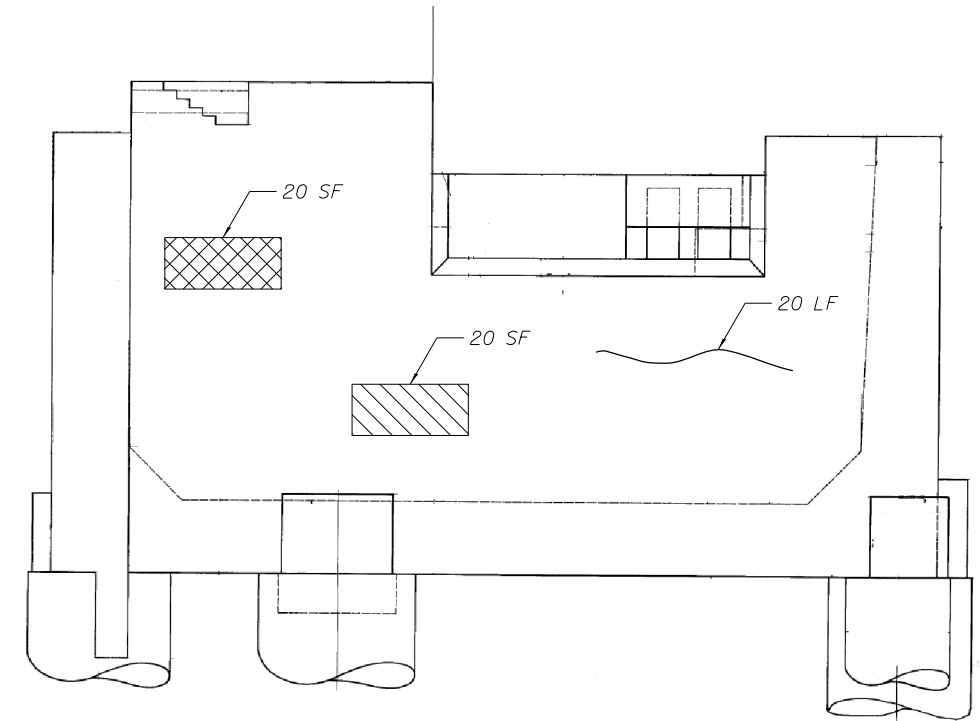
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SOUTH PIT PLAN REPAIRS
(STRUCTURE NO. 016-6030)**

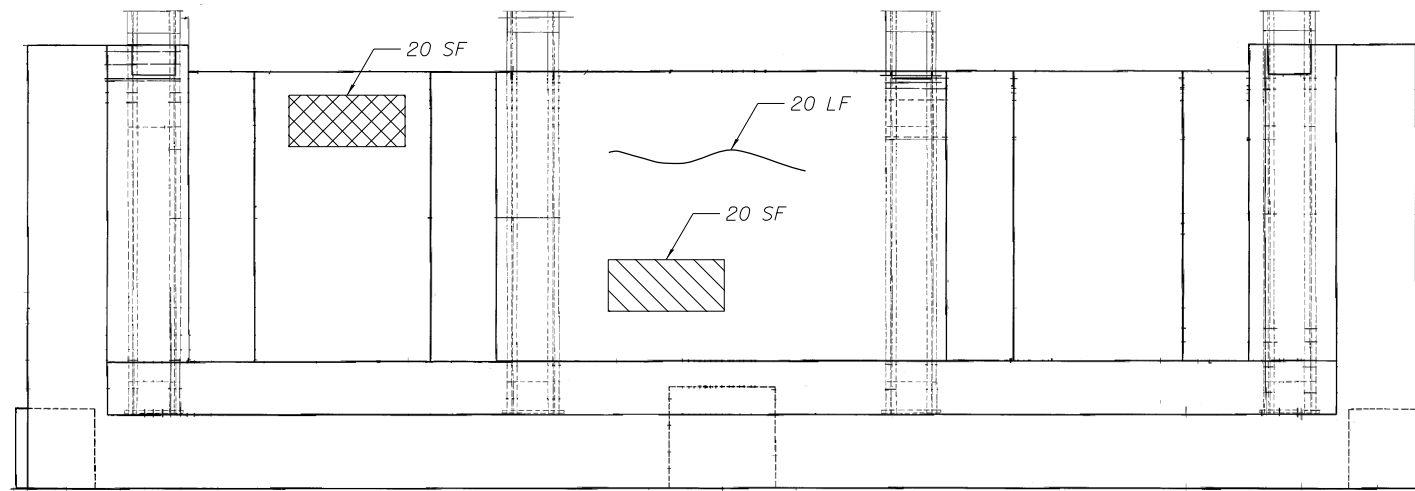
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0341	09-E0534-00-BR/CDOT	COOK	MS-109
CDOT PROJECT NO. E-6-650			150 OF 411



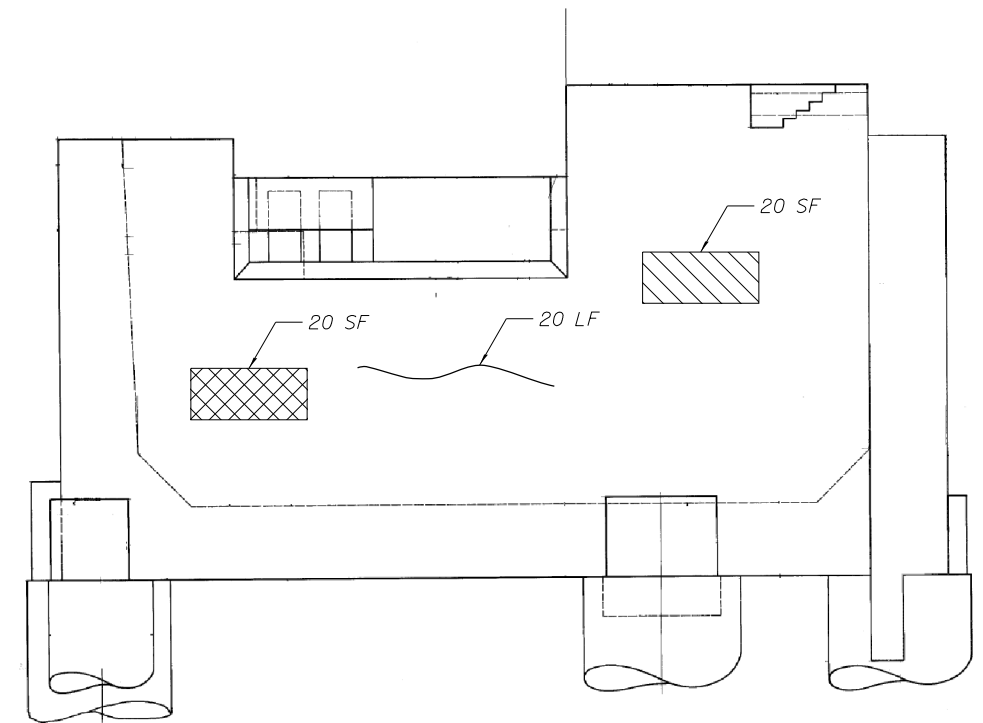
SOUTH PIT NORTH WALL INSIDE ELEVATION
(Looking North)



SOUTH PIT EAST WALL INSIDE ELEVATION
(Looking East)



SOUTH PIT SOUTH WALL INSIDE ELEVATION
(Looking South)



SOUTH PIT WEST WALL INSIDE ELEVATION
(Looking West)

NOTES:

1. For Bill of Materials and additional Notes See Sheet MS-1Q9

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HBM
ENGINEERING GROUP, LLC.
4415 WEST HARRISON STREET, SUITE 231
HILLSDALE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

wsp
WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

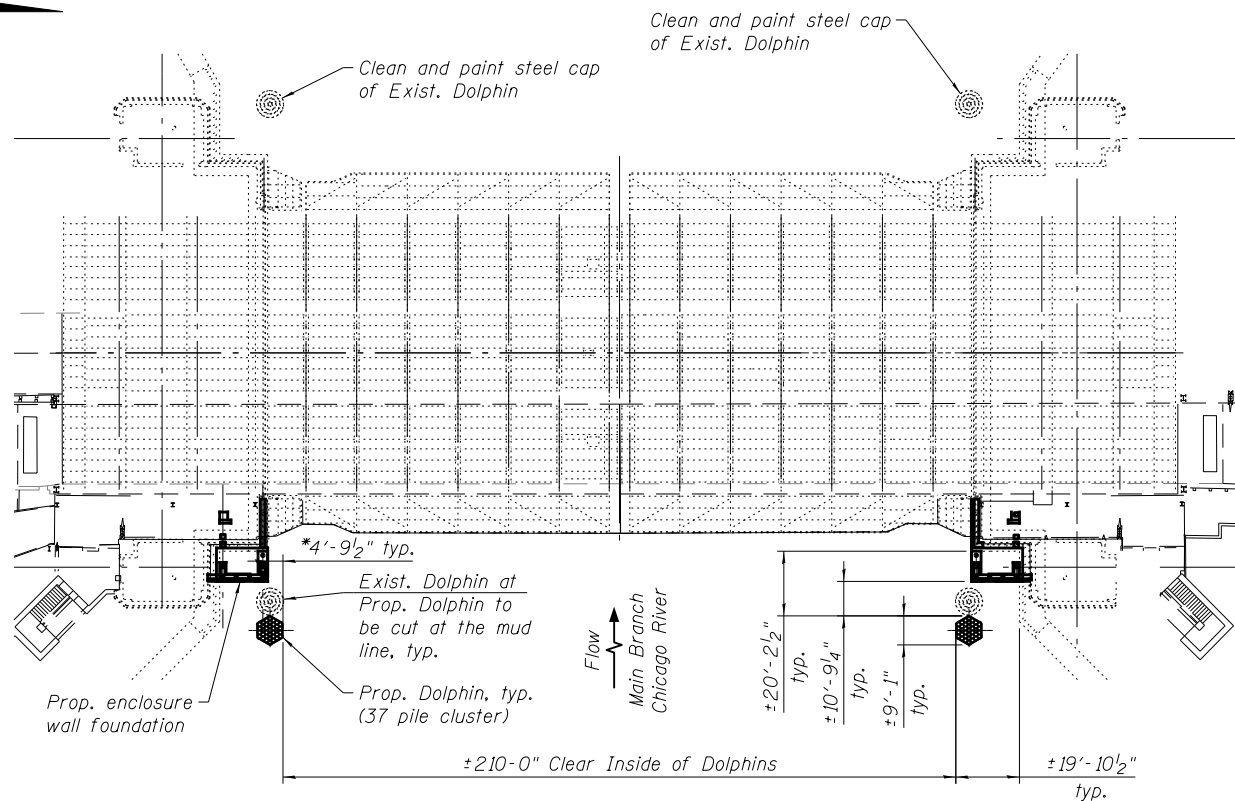
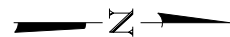
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	CHECKED - MAI	REVISED -
PLOT SCALE = N.T.S.	DRAWN - FA	REVISED -
PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

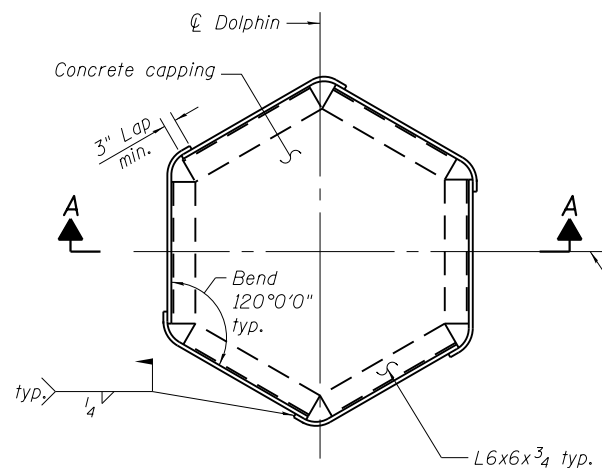
SOUTH PIT WALL REPAIRS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-110
CDOT PROJECT NO. E-6-650			151 OF 411

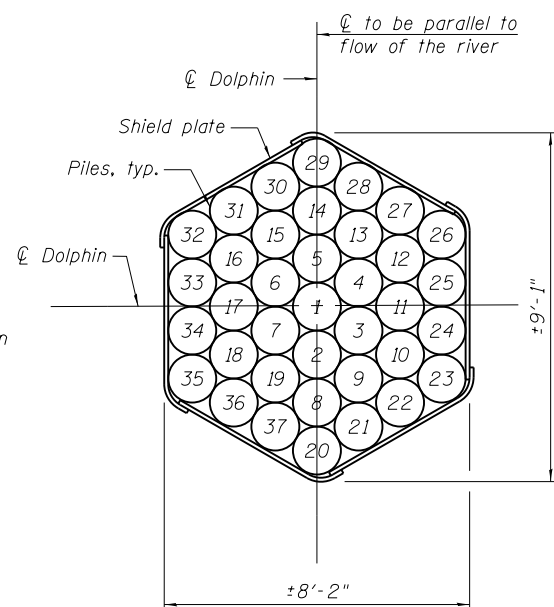


PLAN

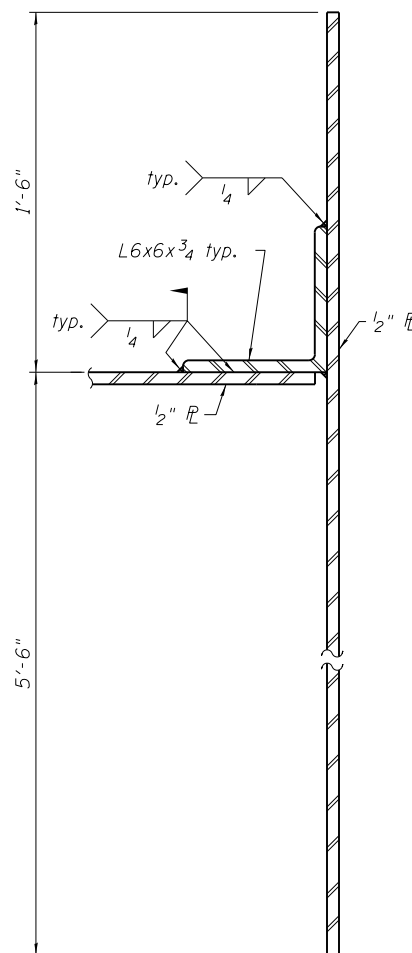
* Distance from face of prop. enclosure wall foundation to face of prop. dolphin matches existing (face of prop. enclosure wall foundation matches face of existing river pier)



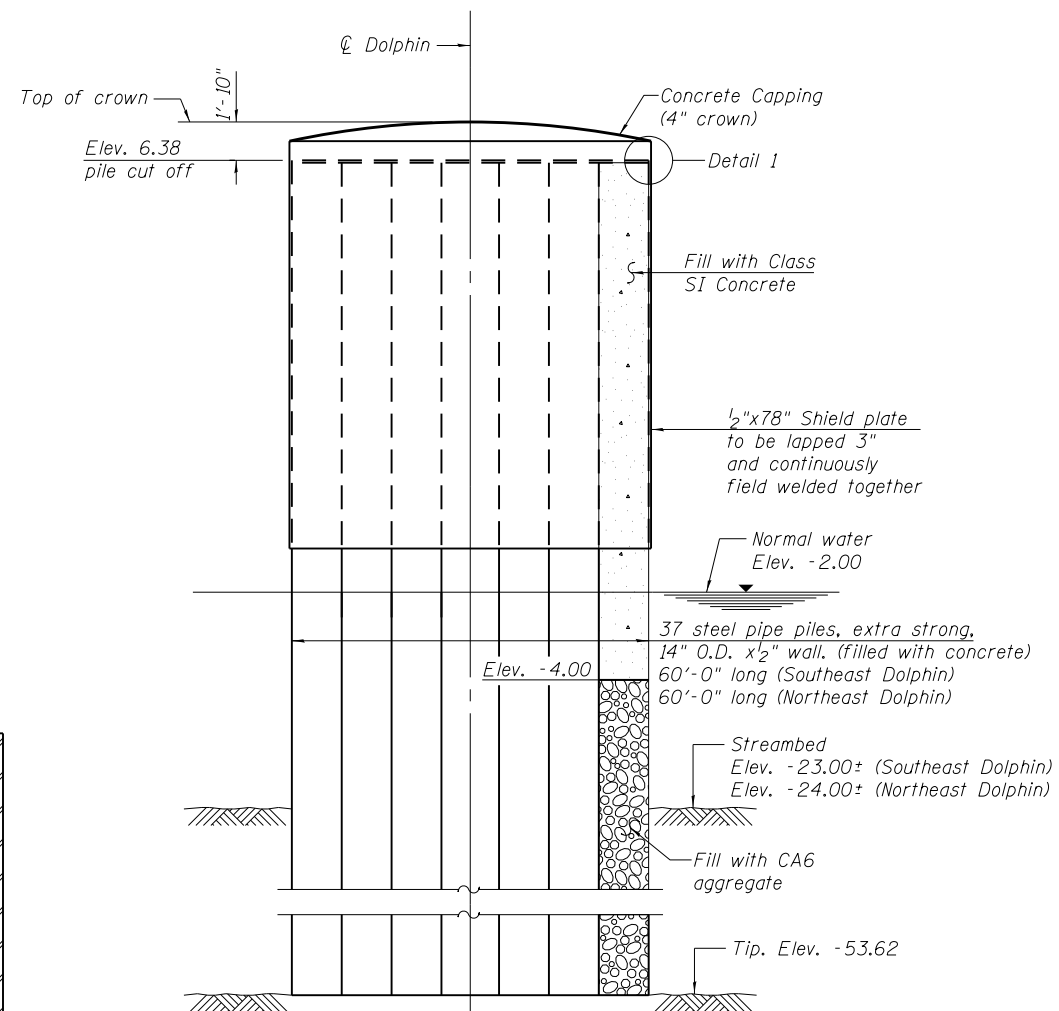
DOLPHIN - TOP PLAN



PILE DRIVING SEQUENCE



DETAIL 1



SECTION A-A

Notes:

1. It shall be the responsibility of the Contractor to verify all dimension and conditions existing in the field prior to construction and ordering of materials.
2. Number on the piles denotes driving sequence.
3. Below Elev. -4.00', all new pipe piles shall be filled with CA6 coarse aggregate according to the quality standards and gradation specified in Section 1004 of the Standard Specifications and the remaining top portion shall be filled with Class SI Concrete according to Section 512 of the Standard Specifications.
4. The new piles should be installed with care in order not to cause any damage to existing utilities or other underground facilities.
5. All work on existing and proposed dolphins shall be included in the cost of Dolphins. See Special Provision Dolphins for construction and material requirements.
6. Existing dolphin steel cap coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead in dolphin steel caps, see Special Provision.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Dolphins	Each	2

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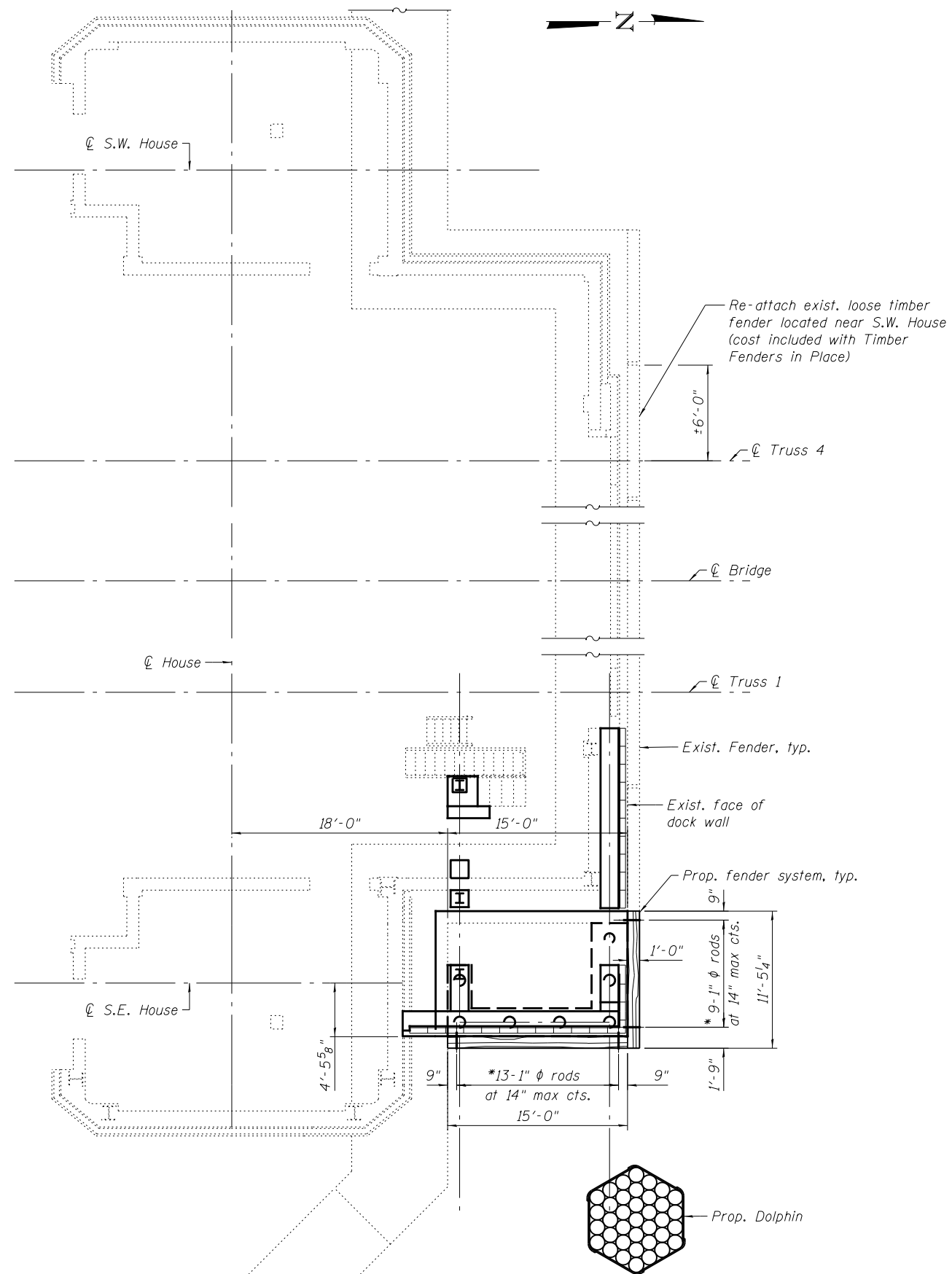
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PLOT SCALE =	N.T.S.	CHECKED -	IJL	REVISED -	
PLOT DATE =	1/22/2018	DRAWN -	PJL	REVISED -	
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

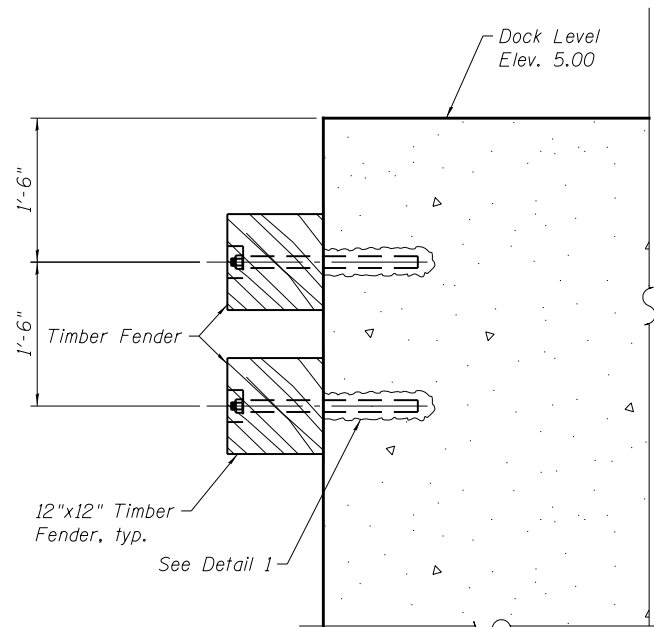
DOLPHIN DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-111
CDOT PROJECT NO. E-6-650			152 OF 411

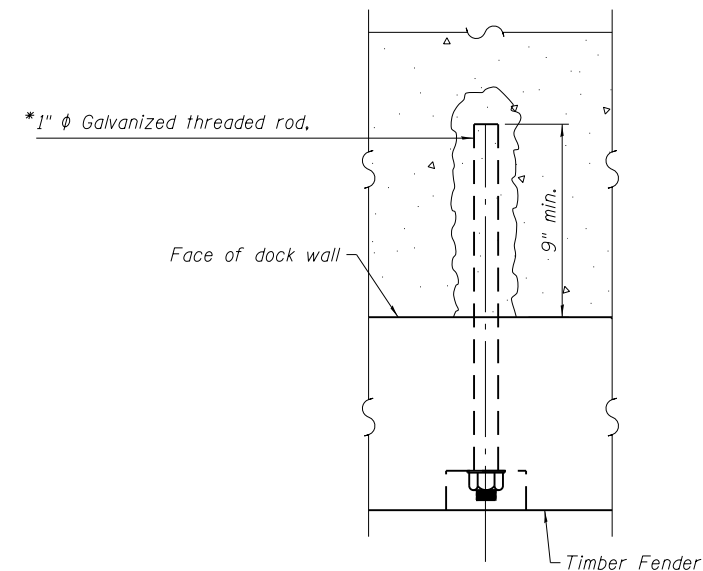


FENDER SYSTEM PLAN

(South Houses shown, North Houses opposite hand except as noted)

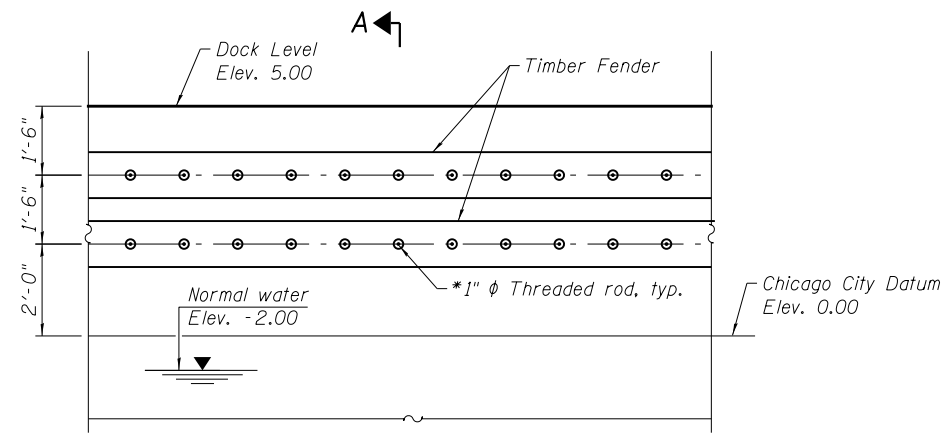


SECTION A-A



DETAIL 1

FENDER SYSTEM DETAILS



FENDER SYSTEM - PARTIAL ELEVATION

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Timber Fenders in Place	Foot	112

Quantity shown includes S.E. and N.E. houses.

- Notes:
- Timber Fender shall be Structural Timber in accordance with Section 1007.03 of the IDOT Standard Specifications and have nominal dimensions of 12" x 12", see Special Provision. The Contractor shall verify the dimensions of Timber Fenders in the field.
 - All hardware, bolts, nuts, washers, and plate washers shall be galvanized in accordance with AASHTO M 232.

* Drill and grout threaded rods according to Article 584 of the Std. Specs., with a minimum embedment of 9". Cost included with Timber Fenders in Place.

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USER NAME = lopezgonzalez	DESIGNED - P.JL/MI	REVISED -
PLOT SCALE = N.T.S.	CHECKED - I.JL	REVISED -
PLOT DATE = 1/22/2018	DRAWN - P.JL/MI	REVISED -
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FENDER SYSTEM DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	MS-112
CDOT PROJECT NO. E-6-650			153 OF 411



SOIL BORING LOG

Date 8/8/16

ROUTE Lake Front Trail- Bascule Bridge DESCRIPTION First Encounter LOGGED BY Syed

SECTION N/A LOCATION N: 1902553.367; E: 1180175.164

COUNTY Cook County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (D, B, U, M, P, L, C, O, T, W, H, S, Qu, T).

Main data table for boring log with columns for depth (ft), blow counts (B, U, M, P, L, C, O, T, W, H, S, Qu, T), and soil descriptions (e.g., FILL, SILTY CLAY).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 8/8/16

ROUTE Lake Front Trail- Bascule Bridge DESCRIPTION First Encounter LOGGED BY Syed

SECTION N/A LOCATION N: 1902553.367; E: 1180175.164

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Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (D, B, U, M, P, L, C, O, T, W, H, S, Qu, T).

Main data table for boring log with columns for depth (ft), blow counts (B, U, M, P, L, C, O, T, W, H, S, Qu, T), and soil descriptions (e.g., SILTY CLAY, GRAVELLY SILTY CLAY).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 8/8/16

ROUTE Lake Front Trail- Bascule Bridge DESCRIPTION First Encounter LOGGED BY Syed

SECTION N/A LOCATION N: 1902553.367; E: 1180175.164

COUNTY Cook County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (D, B, U, M, P, L, C, O, T, W, H, S, Qu, T).

Main data table for boring log with columns for depth (ft), blow counts (B, U, M, P, L, C, O, T, W, H, S, Qu, T), and soil descriptions (e.g., CLAYEY SILT with trace of sand).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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Table with user information: USER NAME = lopezgonzalez, DESIGNED - IJL, CHECKED - P.JL, DRAWN - IJL, CHECKED - JIG, PLOT SCALE = N.T.S., PLOT DATE = 6/26/2017

Table with revision information: REVISED - , REVISED - , REVISED - , REVISED -



LAKEFRONT BICYCLE TRAIL #3 OVER THE CHICAGO RIVER

BORING LOGS (STRUCTURE NO. 016-6030)

Table with project information: F.A.P. RTE., SECTION, COUNTY, SHEET NO. MS-113, CDOT PROJECT NO. E-6-650, 154 OF 411

GENERAL NOTES – DEMOLITION

1. THE CONTRACT IS TO PERFORM THE DEMOLITION SCOPE OF WORK AS REQUIRED TO COMPLETE NEW CONSTRUCTION. COORDINATE ARCHITECTURAL DEMOLITION WITH CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DEMOLITION SCOPE OF WORK.
2. THE CONTRACTOR MUST VISIT THE SITE AND BE KNOWLEDGEABLE OF ALL CONDITIONS. HE/SHE MUST INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT AND MUST NOTIFY THE COMMISSIONER OF ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE WORK.
3. THE CONTRACTOR MUST PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CITY OF CHICAGO, COUNTY, STATE, AND FEDERAL LAWS AND REGULATIONS.
4. DUMPSTER PLACEMENT LOCATIONS MUST BE APPROVED BY THE COMMISSIONER.
5. TO THE BEST OF COMMISSIONER'S KNOWLEDGE, THESE DRAWINGS REPRESENT THE EXTENT OF THE EXISTING CONDITIONS. EXISTING CONSTRUCTION TO BE REMOVED, RELOCATED, OR REMAIN SHALL BE VERIFIED AT THE SITE BY THE CONTRACTOR AND COMMISSIONER.
6. THE CONTRACTOR MUST NOTIFY THE COMMISSIONER IN WRITING OF ANY DISCREPANCIES ON THE DRAWING OR THE UNCOVERING OF HIDDEN CONDITIONS WHICH MAY AFFECT THE WORK.
7. ITEMS OF CONSTRUCTION SHOWN AND NOTED TO BE REMOVED SHALL REPRESENT ALL SIMILAR CONDITIONS AND CONSTRUCTION UNLESS NOTED OTHERWISE.
8. DO NOT REMOVE OR ALTER ANY EXISTING STRUCTURAL MEMBER OR PORTION OF THE STRUCTURAL FLOOR SYSTEM UNLESS SPECIFICALLY NOTED OR SHOWN ON THE CONTRACT DOCUMENTS.
9. THE CONTRACTOR MUST NEATLY SAWCUT ALL LIMESTONE, CONCRETE WALLS AND CONCRETE FLOORS IN A CLEAN AND STRAIGHT MANNER.
10. CONTRACTOR MUST PROVIDE CONTAINMENT INCLUDING CONSTRUCTION BARRICADES OR OTHER DUST COLLECTION METHODS TO PREVENT DUST GENERATED FROM DEMOLITION OR CONSTRUCTION FROM ENTERING THE PUBLIC AREAS.
11. CONTRACTOR MUST PAY ALL APPLICABLE PERMIT FEES AND COSTS RELATED TO REMOVAL AND INSTALLATION.
12. ANSI A-10.6 "SAFETY REQUIREMENTS FOR DEMOLITION" WILL GOVERN EXCEPT AS OTHERWISE MODIFIED HEREIN. WHERE THE REQUIREMENTS SPECIFIED HEREIN OR CONTAINED IN THE ANSI STANDARD DIFFER FROM OTHER APPLICABLE RULES, REGULATIONS, AND CODES, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN THE WORK UNDER CONTRACT.
13. BEFORE COMMENCING ANY WORK, SUBMIT TO THE COMMISSIONER FOR REVIEW A SCHEDULE SHOWING THE COMMENCEMENT OF WORK, THE ORDER, AND THE COMPLETION DATES FOR THE VARIOUS PARTS OF THIS WORK. THE CONTRACTOR MUST OBTAIN COMMISSIONER APPROVAL IN WRITING BEFORE PROCEEDING WITH THIS WORK.
14. PROVIDE, ERECT, AND MAINTAIN TEMPORARY WORK INCLUDING, BUT NOT LIMITED TO BARRICADES, WARNING SIGNS, ETC. AS REQUIRED FOR PROPER PROTECTION OF THE PUBLIC AND PROPERTY DURING REMOVAL OPERATIONS. SEE PHASING DOCUMENTS AS APPLICABLE.
15. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR QUALITY CONTROL, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PHASING OR PROCEDURES AND SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
16. COMMISSIONER WILL NOT BE RESPONSIBLE FOR NOR WILL HAVE CONTROL OVER OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PHASING OR PROCEDURES, SAFETY PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK, NOR WILL THEY BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. COMMISSIONER WILL NOT BE RESPONSIBLE FOR, OR HAVE CONTROL OR CHARGE OVER THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, THEIR AGENTS OR EMPLOYEES, OR ANY OTHER PERSON PERFORMING ANY OF THE WORK.
17. ALL DEMOLITION INDICATED TO BE REMOVED MUST BE REMOVED CAREFULLY. ANY ADJACENT MATERIAL DAMAGED SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
18. MATERIAL AND/OR ITEMS REMOVED AND NOT DESIGNATED TO BECOME THE PROPERTY OF THE COMMISSIONER WILL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE JOB SITE. DELIVER ALL

ITEMS DESIGNATED AS "SALVAGE" OR "REMIT" TO STORAGE SITE DESIGNATED BY COMMISSIONER. COORDINATE DELIVERY WITH COMMISSIONER.

19. ANY EXISTING COMPONENT REMOVED OR DAMAGED TO ALLOW NEW WORK TO OCCUR MUST BE REINSTALLED OR REPLACED AT THE COMPLETION OF THE NEW WORK UNLESS NOTED OTHERWISE.
20. NO BURNING OF MATERIAL ON THE PREMISES WILL BE PERMITTED. COMBUSTIBLE FUELS ARE PROHIBITED.
21. UPON COMPLETION OF REMOVAL WORK, REMOVE ALL TOOLS, MATERIALS, APPARATUS, AND RUBBISH OF ANY SORT. THE PORTION OF THE JOB SITE THAT CAN BE SEEN BY THE PUBLIC MUST BE LEFT CLEAN, REMOVE RUBBISH EVERY DAY.
22. REFER TO CONTRACT DOCUMENTS PLANS AND DETAILS INCLUDING APPLICABLE STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, COMMUNICATIONS, AND PLUMBING SCOPE OF WORK FOR EXISTING CONDITIONS AND NEW WORK COORDINATION.
23. NOTIFY COMMISSIONER IF ANY MATERIAL IS FOUND WHICH IS NOTED TO BE A HAZARDOUS MATERIAL.
24. THE FOLLOWING ITEMS/EQUIPMENT/SYSTEMS ARE TO BE REMOVED FROM THE PROJECT AND DELIVERED TO A SITE AS INDICTED BY THE COMMISSIONER UNLESS NOTED OTHERWISE:
 - ALL BRIDGE EQUIPMENT AT OPERATOR'S LEVEL THAT IS NOT GOING TO BE REUSED.
25. THE FOLLOWING AREAS ARE TO BE CLEANED:
 - COMPLETE CLEANING OF BRIDGE HOUSES, INCIDENTAL TO LUMP SUM BRIDGE HOUSE PAY ITEMS.

GENERAL NOTES – SCOPE OF WORK

THE ARCHITECTURAL SCOPE OF WORK AND ASSOCIATED PAY ITEMS GENERALLY CONSISTS OF THE RESTORATION OF THE BRIDGE HOUSES AND ABUTMENTS TO THEIR ORIGINAL HISTORICAL CONDITION AND THE REPLACEMENT OF BRIDGE RAILINGS AND GUARDRAILS WITH HISTORIC RAILINGS AS INDICATED ON THE DRAWINGS.

GENERAL NOTES – CONSTRUCTION

1. THE COMMISSIONER EXPRESSLY DISCLAIMS ANY RESPONSIBILITY ARISING FROM ANY UNAUTHORIZED USE OF THESE DRAWINGS, PLANS, AND NOTES. ANY AUTHORIZATIONS MUST BE IN WRITING. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENCE THAT ORIGINALLY DRAWN.
2. THE COMMISSIONER WILL NOT BE RESPONSIBLE FOR NOR WILL HAVE ANY CONTROL OVER OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PHASING, OR PROCEDURES OF SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, NOR WILL BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUR THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE COMMISSIONER WILL NOT BE RESPONSIBLE FOR OR HAVE ANY CONTROL OR CHARGE OVER THE ERRORS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, THEIR AGENTS, EMPLOYEES, OR ANY OTHER PERSON PERFORMING ANY OF THE WORK.
3. THE CONTRACTOR SHALL VISIT THE SITE AND BE KNOWLEDGEABLE OF ALL CONDITIONS THEREON. THE CONTRACTOR SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT AND SHALL NOTIFY THE COMMISSIONER OF ANY CONDITIONS REQUIRING MODIFICATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK. NOTES APPEAR ON VARIOUS SHEETS FOR DIFFERENT SYSTEMS AND MATERIALS: NOTES REFER TO RELATED STRUCTURAL/MEP AND DETAIL DRAWINGS. THESE SHEETS ARE TO BE REVIEWED AND NOTES ON ANY ONE SHEET ARE TO BE APPLIED ON RELATED DRAWINGS AND DETAILS. WHERE DISCREPANCIES EXIST BETWEEN THE DRAWINGS OF VARIOUS DISCIPLINES, CONSULT THE COMMISSIONER DURING THE BID PERIOD AND PRIOR TO PROCEEDING WITH THE WORK.
4. DRAWINGS THAT REPRESENT THE EXISTING PLAN CONDITIONS ARE DIAGRAMMATICALLY SHOWN. EXACT LOCATIONS, SIZES, EXTENT, AND CONDITIONS OF EXISTING CONSTRUCTION TO BE REMOVED, RELOCATED OR TO REMAIN SHALL BE VERIFIED AT THE SITE BY THE CONTRACTOR.
5. THE CONTRACTOR MUST PROVIDE ALL REQUIRED PERMITS. THE CONTRACTOR WILL PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CITY OF CHICAGO, COUNTY, STATE, AND FEDERAL LAWS, CODES, ORDINANCES, AND REGULATIONS BY MUNICIPAL AUTHORITIES HAVING JURISDICTION, INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ADOPTED PURSUANT THERETO.
6. ALL FIRE RATINGS INDICATED FOR WALLS, CEILINGS, AND ROOF ARE TO COMPLY WITH UNDERWRITERS LABORATORIES TEST RATINGS OR AS REGULATED BY CITY OF CHICAGO BUILDING CODE AND NFPA 130 FIXED GUIDE WAY TRANSIT SYSTEMS.

7. ANY DETAILS, SYSTEMS, OR MATERIALS (I.E. ARCHITECTURAL, STRUCTURAL, MECHANICAL, ETC.) WHICH ARE PROPOSED TO BE CHANGED OR SUBSTITUTED MUST BE FIRST REVIEWED AND APPROVED BY THE COMMISSIONER PRIOR TO THE PREPARATION AND SUBMITTAL OF SHOP DRAWINGS. THE COMMISSIONER RESERVES THE RIGHT TO REJECT SUBSTITUTIONS. THE CONTRACTOR IS RESPONSIBLE FOR ADDED JOB COSTS DUE TO HIS SUBSTITUTIONS IMPACTED ON OTHER TRADES.
8. THE CONTRACTOR MUST BE RESPONSIBLE FOR PROVIDING ALL REQUIRED BLOCKING, SUPPORTS, AND BRACING REQUIRED TO ACHIEVE SPECIFIED REQUIREMENTS AND STANDARDS WHETHER SPECIFICALLY INDICATED OR NOT. FIRE RETARDANT BLOCKING MUST BE PROVIDED.
9. ALL NEW GUARDRAILS AND HANDRAILS MUST MEET OSHA, NIOSH, AND ADA GUIDELINES, 200 PSF LIVE LOAD SAFETY CODE HORIZONTAL AND VERTICAL HANDRAIL REQUIREMENTS, UNLESS NOTED OTHERWISE.
10. ALL DISSIMILAR METALS MUST BE EFFECTIVELY ISOLATED FROM EACH OTHER TO AVOID GALVANIC ACTION.
11. DETAILS SHOWN ARE INTENDED TO BE INDICATIVE OF THE PROFILES AND TYPE OF DETAILING REQUIRED FOR THE WORK. CONDITIONS ARE NOT COVERED BY SPECIFIC DETAILS AND MUST MEET SPECIFIED DESIGN CRITERIA.
12. DETAILS SHOWN MAY NOT NECESSARILY GRAPHICALLY REPRESENT ALL COMPONENTS NECESSARY TO COMPLETE THE TOTAL SYSTEM. THE CONTRACTOR MUST BE RESPONSIBLE TO COORDINATE ALL OF THE REQUIREMENTS SHOWN ON THE DRAWINGS WITH THOSE STATED IN THE APPLICABLE SPECIFICATIONS AND PROJECT NOTES TO PROVIDE A COMPLETE SYSTEM.
13. THE CONTRACTOR MUST COORDINATE ALL MECHANICAL AND ELECTRICAL FLOOR AND WALL SLEEVES, FLOOR PENETRATIONS, EMBEDDED CONDUIT AND MECHANICAL DUCTWORK WITH MECHANICAL, PLUMBING, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, AND ARCHITECTURAL DISCIPLINES.
14. PROVIDE ACCESS PANELS AS REQUIRED BY APPLICABLE CODES AND AS REQUIRED FOR MECHANICAL AND ELECTRICAL EQUIPMENT. COORDINATE LOCATIONS WITH COMMISSIONER PRIOR TO INSTALLATION.
15. ALL PIPES, CONDUITS, AND DUCTWORK THAT PENETRATE WALLS OR ROOF SLABS SHALL BE INSTALLED IN A MANNER THAT WILL PRESERVE THE FIRE RESISTIVE, STRUCTURAL INTEGRITY, AND WATER-TIGHTNESS OF SUCH WALLS OR SLABS AND THE BUILDING. FIRESTOP ALL PENETRATIONS IN WALLS TO MATCH HOURLY RATING OF WALL.
16. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE SHOWN: WHERE SPECIFIC DIMENSIONS, DETAILS, OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT THE COMMISSIONER BEFORE PROCEEDING WITH WORK.
17. CONTRACTOR TO REMOVE ANY GRAFFITI WITHIN 24 HOURS DURING CONSTRUCTION.
18. REFER TO THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION AND COORDINATION OF THE WORK. IN THE EVENT OF DISCREPANCIES BETWEEN DRAWINGS OR DRAWINGS AND SPECIFICATIONS, CONSULT THE COMMISSIONER FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
19. THE CONTRACTOR MUST ASSURE ITSELF BY INDEPENDENT SURVEY THAT NO HAZARDOUS MATERIALS ARE HANDLED OR DISTRIBUTED. IF HAZARDOUS MATERIALS ARE ENCOUNTERED, IT MUST BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE COMMISSIONER.
20. THE CONTRACTOR MUST BE SOLELY RESPONSIBLE FOR QUALITY CONTROL, INCLUDING CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PHASING, PROCEDURES, SAFETY PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.
21. THE CONTRACTOR IS TO REVIEW AND HAVE A COMPLETE COMMAND OF THE VARIOUS PHASES OF THE CONSTRUCTION WORK PLUS A TOTAL UNDERSTANDING OF THE UNIQUE MANPOWER AND SUPPLY SCHEDULE REQUIREMENTS SPECIFIC TO THE SITE. THE CONTRACTOR MUST COORDINATE ALL CONSTRUCTION RELATED ACTIVITIES WITH BRIDGE LIFT SCHEDULES, OPERATION REQUIREMENTS, AND RESULTING HAZARDOUS CONDITIONS.
22. THE CONTRACTOR MUST BE RESPONSIBLE FOR SECURING THE JOB SITE AND THE PROTECTION OF THE GENERAL PUBLIC FROM ALL POSSIBLE HAZARDS OF THE ENTIRE CONSTRUCTION SITE.
23. THE GENERAL CONTRACTOR AND/OR TRADE CONTRACTOR MUST PROTECT ALL EXISTING SITE ELEMENTS FROM DAMAGE DUE TO ALTERATIONS AND CONSTRUCTION OPERATIONS, AND REPAIR OR REPLACE ELEMENTS DAMAGED DURING THIS PROJECT AT HIS/HER OWN EXPENSE.
24. DRAWINGS ARE TO BE ISSUED TO THE SUBCONTRACTORS BY THE CONTRACTOR IN COMPLETE SETS SO THAT THE EXTENT AND COORDINATION OF WORK IS MADE POSSIBLE.

25. THE CONTRACTOR MUST BE SOLELY RESPONSIBLE FOR THE ACCURATE PLACEMENT AND CONDITIONS OF THE WORK.
26. THE CONTRACTOR IS TO PROTECT, MOVE, AND STORE THE OWNER'S FIXTURES, FURNISHINGS, AND EQUIPMENT.

DIMENSION NOTES

1. ALL DIMENSIONS ARE FACE OF PARTITIONS, COLUMN CENTERLINE, OR FINISHED FACE OF EXTERIOR WALL UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BEFORE PROCEEDING WITH ANY WORK. THE COMMISSIONER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR CORRECTIONS. DIMENSIONS OF NEW WORK ARE BASED ON RECORD DRAWING OF EXISTING WORK. ANY DISCREPANCIES IN EXISTING WORK THAT WILL AFFECT NEW WORK DIMENSIONS, NOTIFY THE COMMISSIONER. CONTRACTOR TO VERIFY EXISTING CONDITIONS.
3. ALL DIMENSIONS, ELEVATIONS, REPRESENTATIONS OF THE SITE, EXISTING CONDITIONS, AND AS-BUILT DRAWINGS ARE BASED ON INFORMATION OBTAINED FROM COMMISSIONER. SOME VARIATIONS BETWEEN DRAWINGS AND FIELD CONDITIONS MUST BE ANTICIPATED AND ALLOWED FOR.
4. IT IS IMPERATIVE THAT THE CONTRACTOR FULLY FAMILIARIZE ITSELF WITH ALL EXISTING SITE CONDITIONS, SURVEYS AND REPORTS. THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AND CONDITIONS SHOP OR DESCRIBED TO BE EXISTING BY ITS OWN FIELD SURVEY PRIOR TO THE START OF SHOP DRAWINGS PREPARATION, FABRICATION, OR SITE CONSTRUCTION. NOTIFY THE COMMISSIONER OF DISCREPANCIES IN WRITING BEFORE PROCEEDING WITH WORK.
5. THE EXISTING COLUMN-TO-COLUMN SPACING VARIES. THE CONTRACTOR MUST CONDUCT ITS OWN FIELD SURVEY TO ESTABLISH EXISTING DIMENSIONAL PARAMETERS AS RELATED TO THE DESIGN BEFORE PROCEEDING WITH THE WORK. NOTIFY THE COMMISSIONER IN WRITING OF DISCREPANCIES WHICH WILL AFFECT EXECUTION OF THE DESIGN AS SHOWN.

PATCHING AND PAINTING NOTES

1. ALL EXISTING AREAS DAMAGED BY WORK OF THIS PROJECT SHALL BE PATCHED TO MATCH EXISTING ADJACENT SURFACES IN FINISH, COLOR, AND TEXTURE UNLESS OTHERWISE INDICATED.
2. ALL EXISTING PAINTED SURFACES DAMAGED OR PATCHED AS PART OF THIS PROJECT SHALL BE PAINTED TO MATCH EXISTING ADJACENT COLOR, TEXTURE, AND FINISH. EXISTING PAINT COLOR, TEXTURE, AND FINISH SHALL BE VERIFIED BY CONTRACTOR IN THE FIELD PRIOR TO CONSTRUCTION.
3. NEWLY INSTALLED EXPOSED ELECTRICAL ITEMS, INCLUDING BUT NOT LIMITED TO, CONDUIT HANGERS, AND FITTINGS SHALL BE PAINTED TO MATCH EXISTING ADJACENT SURFACES.
4. PREFINISHED ITEMS, SUCH AS STAINLESS STEEL, ARE NOT TO BE PAINTED.
5. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL ANCHOR BOLTS, CONDUIT STUBS, AND RELATED PROJECTIONS AND APPURTENANCES FROM FLOOR, WALL, AND CEILING AREAS WHERE ITEMS ARE REMOVED. REMOVE ALL ITEMS TO BELOW FINISH SURFACE PRIOR TO FLOOR PATCHING.
6. ALL EXISTING FLOOR SURFACES DAMAGED OR PATCHED AS PART OF THIS PROJECT SHALL BE PATCHED TO MATCH EXISTING ADJACENT COLOR, TEXTURE, AND FINISH. EXISTING FLOOR FINISH SHALL BE VERIFIED BY CONTRACTOR IN THE FIELD PRIOR TO CONSTRUCTION.
7. ALL NEW CMU AND EXISTING EXPOSED CONCRETE WALLS TO BE CLEANED AND PAINTED.

GENERAL NOTES – HAZARDOUS MATERIALS

ASBESTOS-CONTAINING BUILDING MATERIALS AND LEAD-BASED PAINT ARE, OR MAY BE, PRESENT IN THIS PROJECT. SEE ENVIRONMENTAL PAY ITEMS AND SPECIFICATION SECTIONS PRIOR TO DISTURBING. NO PERSON MAY DISTURB ASBESTOS-CONTAINING BUILDING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER AND CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATION(S) CONTAINED IN THE PROJECTS DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF PUBLIC HEALTH RULES AND REGULATIONS.

\$\$\$
\$DGN\$
\$SYTIME\$



THE BAR CODE ABOVE IS THE PROPERTY OF THE CONTRACTOR AND SHOULD BE USED TO IDENTIFY THE PROJECT AND CONTRACTOR.

WSP USA, Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

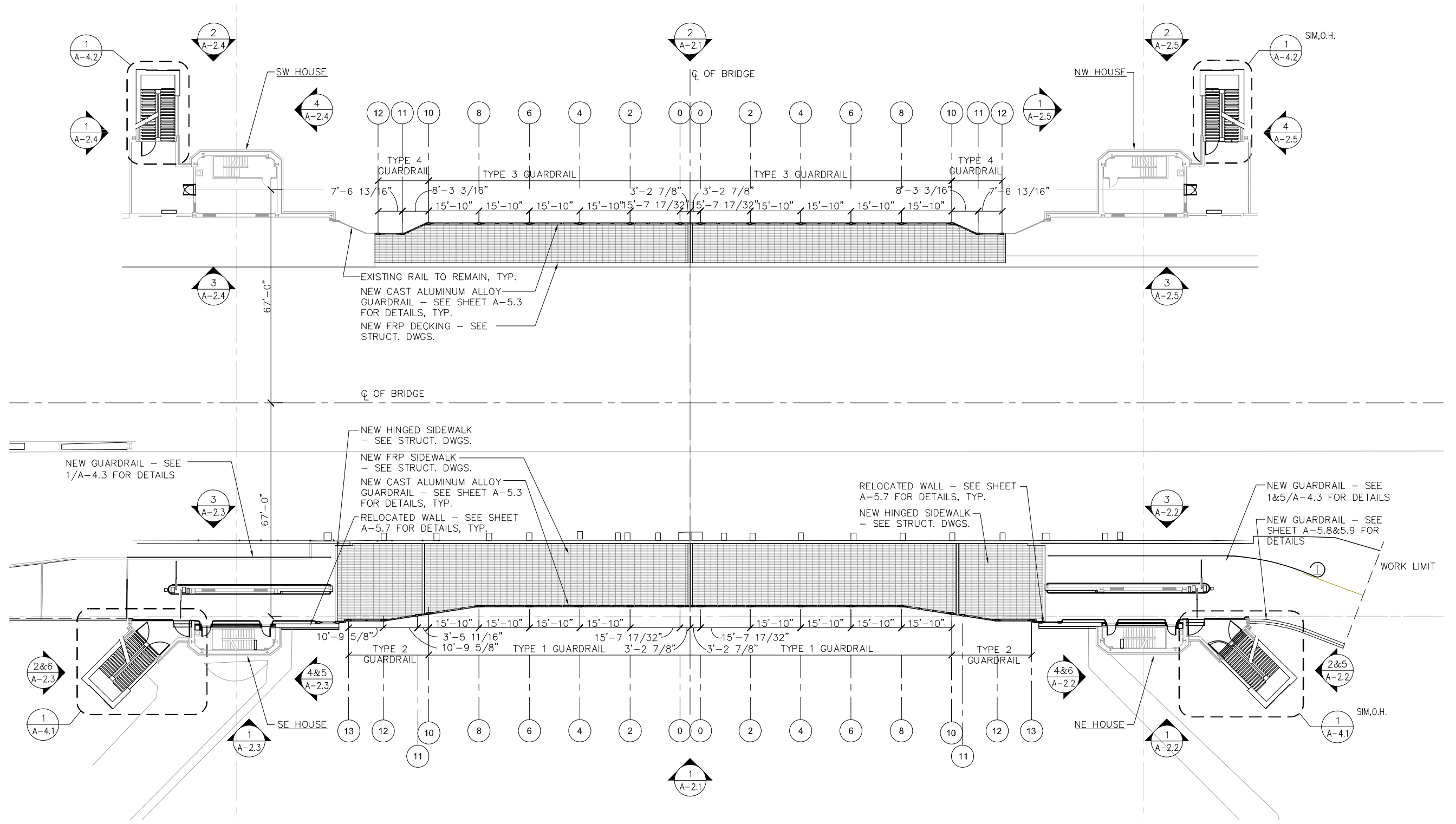
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

ARCHITECTURAL GENERAL
NOTES
(STRUCTURE NO. 016-6030)

F.A.P. RITE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-0.0
CDOT PROJECT NO. E-6-650			155 OF 411

PLAN NOTES

1. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
2. FIELD VERIFY EXISTING CONDITIONS, MAINTAIN ALL CLEARANCES, AND HOLD ALL DIMENSIONS AS NOTED.



1 ARCHITECTURAL SITE PLAN - INTERMEDIATE LEVEL AT ELEV. +26.00'
SCALE: 1/16" = 1'-0"



CITY OF CHICAGO
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SITE PLAN
(STRUCTURE NO. 016-6030)

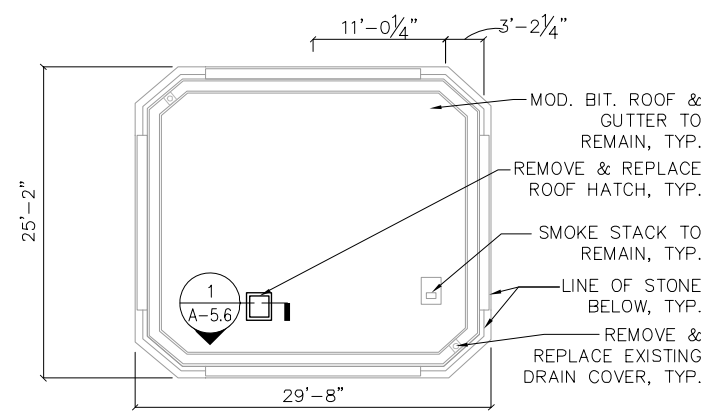
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-1.1
CDOT PROJECT NO. E-6-650			156 OF 411

wsp
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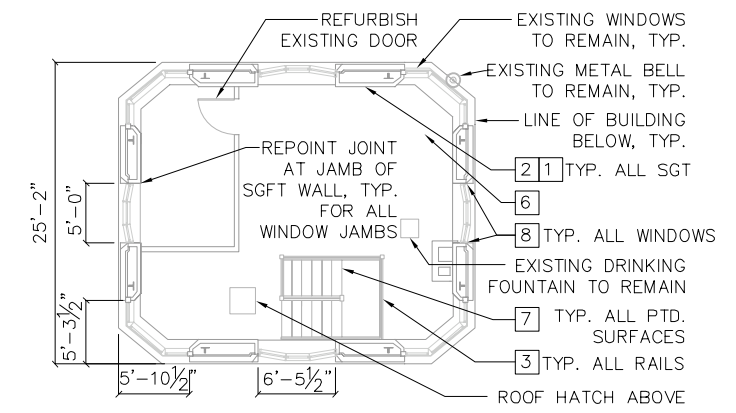
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KEY NOTE LEGEND - INTERIOR

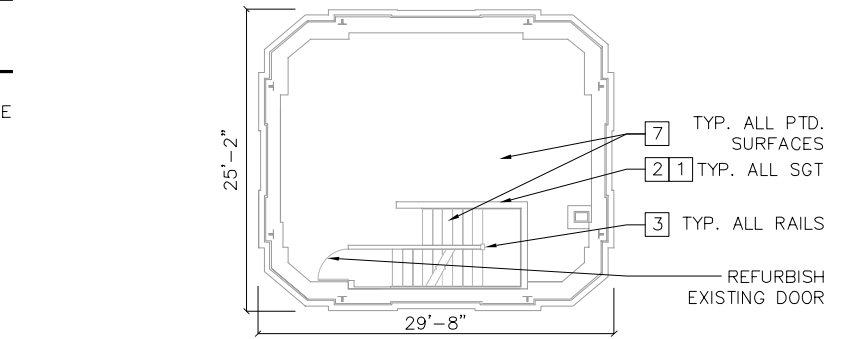
- 1 REPLACE DAMAGED STRUCTURAL GLAZED TILE UNITS IN THE WALLS THROUGHOUT THE HOUSE. DAMAGED UNITS ARE CHIPPED, CRACKED, HAVE HOLES - FROM EQUIPMENT ATTACHED TO THE WALLS AND VARIOUS OTHER CAUSES, DISCOLORED, ETC. REPLACEMENT UNITS SHALL MATCH SIZE AND COLOR OR EXISTING UNITS.
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- 5 RE-POLISH TERRAZZO FLOOR, TYPICAL.
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- 7 REPAINT CONCRETE FLOORING, WALLS, AND STAIRS, TYPICAL.
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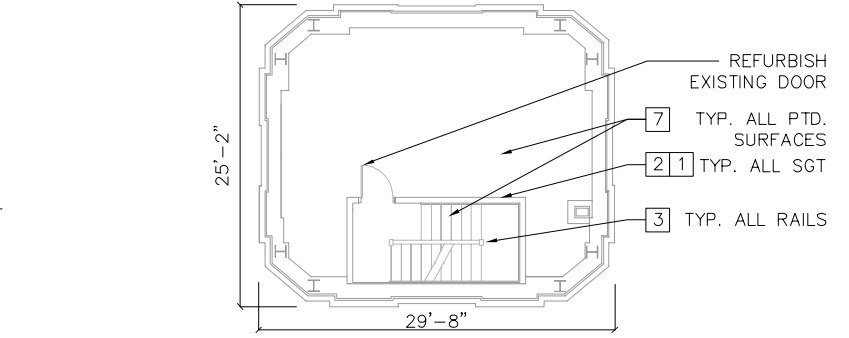
9 ROOF LEVEL AT ELEV 93.84'
SCALE: 1/8" = 1'-0"



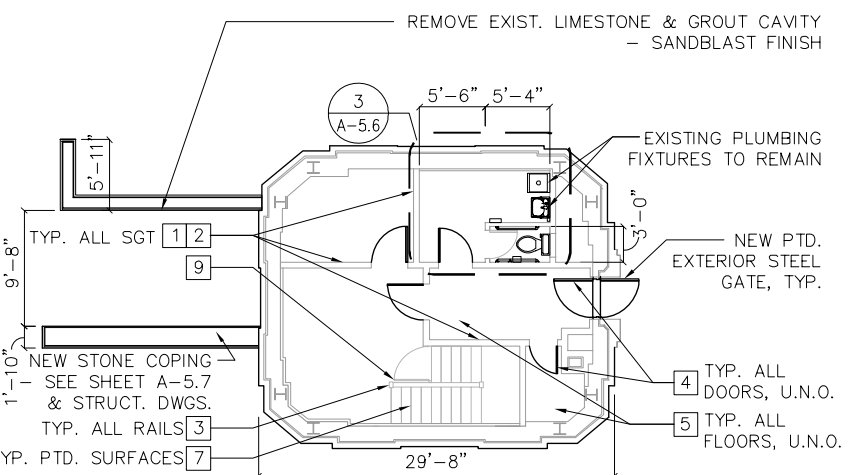
8 3RD FLOOR ABOVE UPPER LEVEL AT ELEV +77.92'
SCALE: 1/8" = 1'-0"



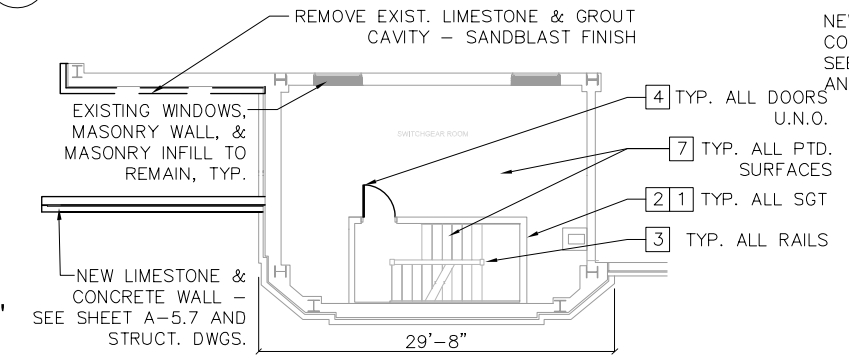
7 2ND FLOOR ABOVE UPPER LEVEL AT ELEV +68.00'
SCALE: 1/8" = 1'-0"



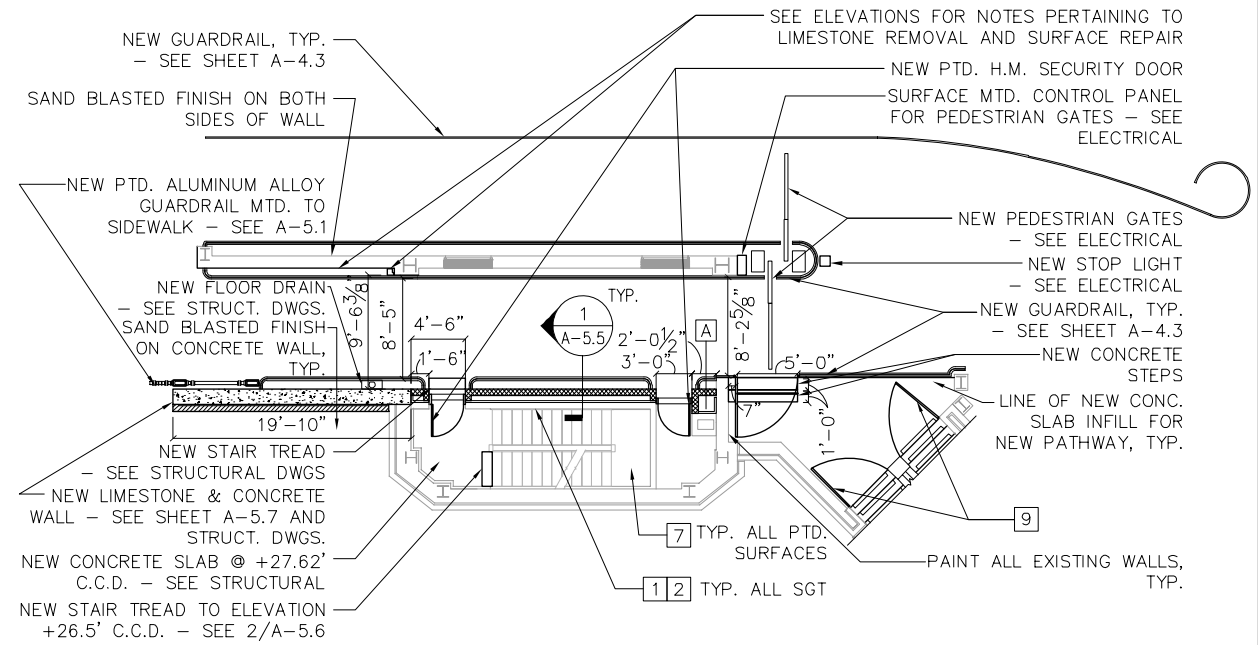
6 1ST FLOOR ABOVE UPPER LEVEL AT ELEV +58.08'
SCALE: 1/8" = 1'-0"



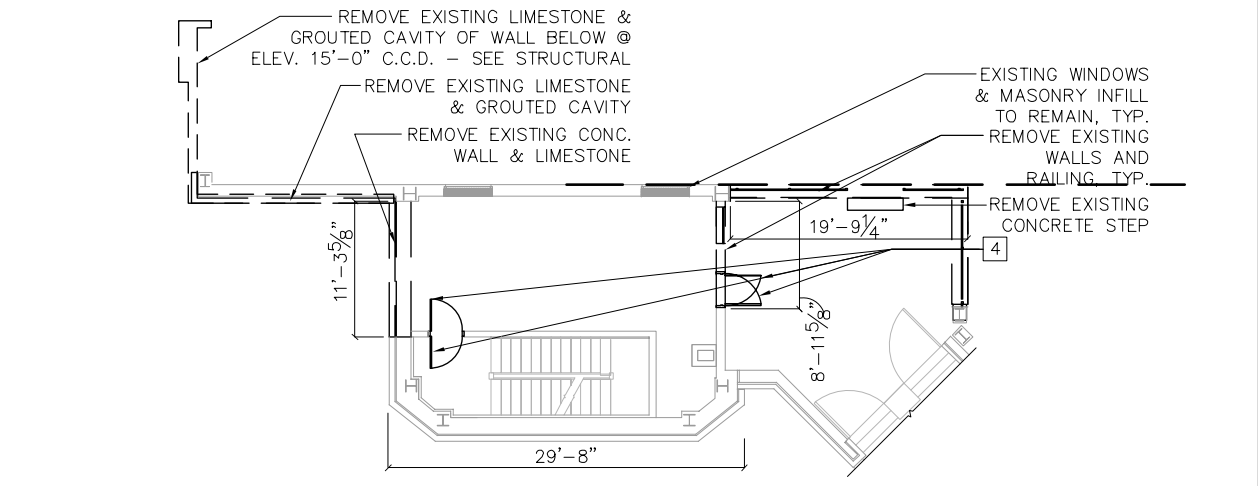
5 UPPER LEVEL AT ELEV +48.75'
SCALE: 1/8" = 1'-0"



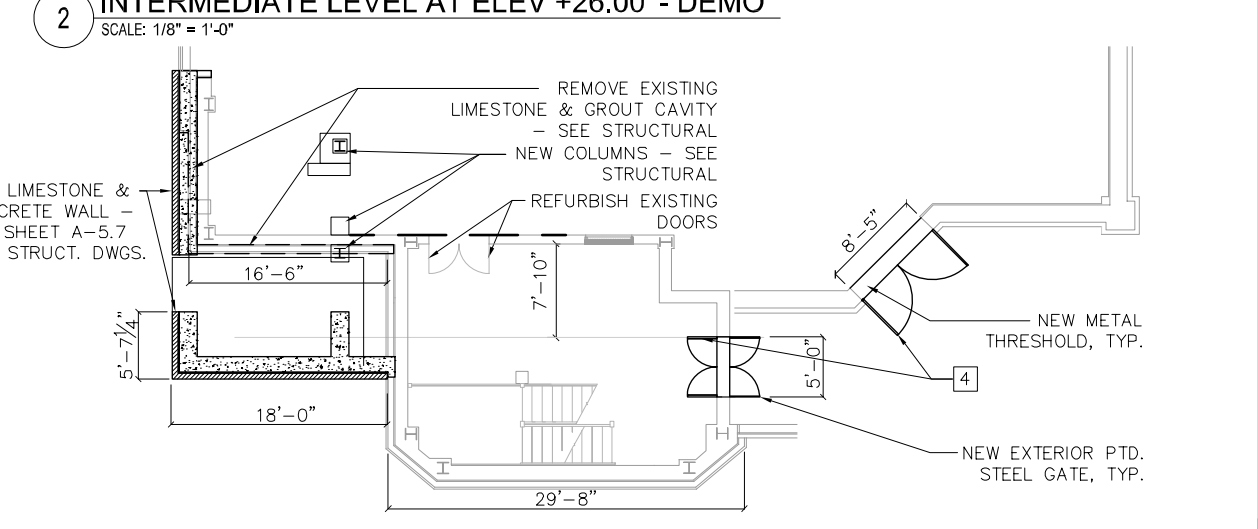
4 1ST FLOOR ABOVE INTERMEDIATE LEVEL AT ELEV +39.42'
SCALE: 1/8" = 1'-0"



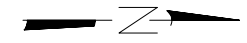
3 INTERMEDIATE LEVEL AT ELEV +26.00' - NEW
SCALE: 1/8" = 1'-0"



2 INTERMEDIATE LEVEL AT ELEV +26.00' - DEMO
SCALE: 1/8" = 1'-0"



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SCALE: 1/8" = 1'-0"



rbarc
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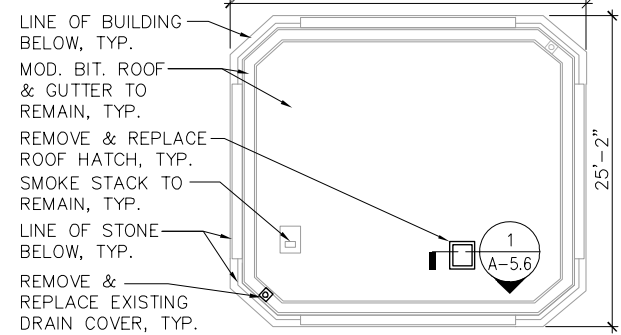
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

NORTHEAST HOUSE FLOOR
PLANS
(STRUCTURE NO. 016-6030)

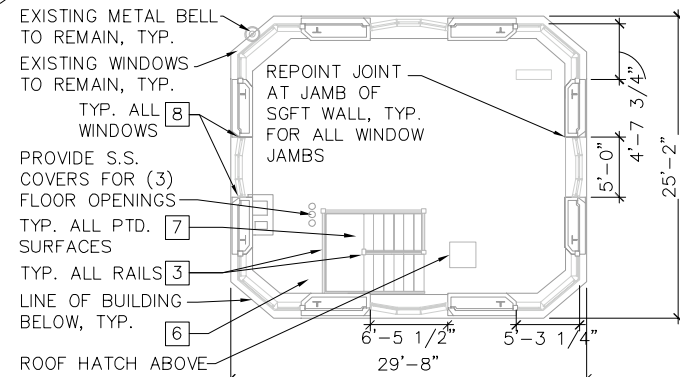
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-1.2
CDOT PROJECT NO. E-6-650			157 OF 411

KEY NOTE LEGEND - INTERIOR

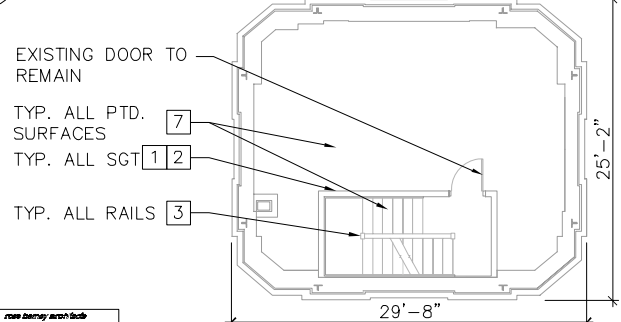
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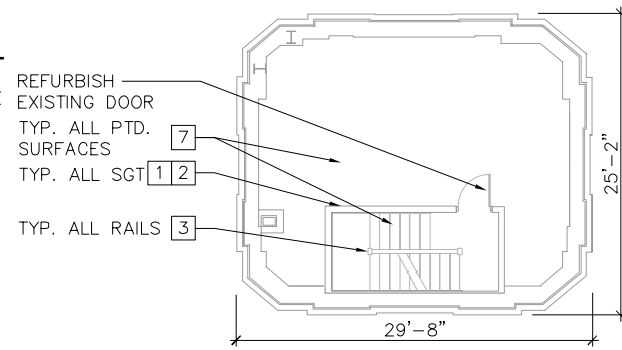
10 ROOF LEVEL AT ELEV 93.84'
SCALE: 1/8" = 1'-0"



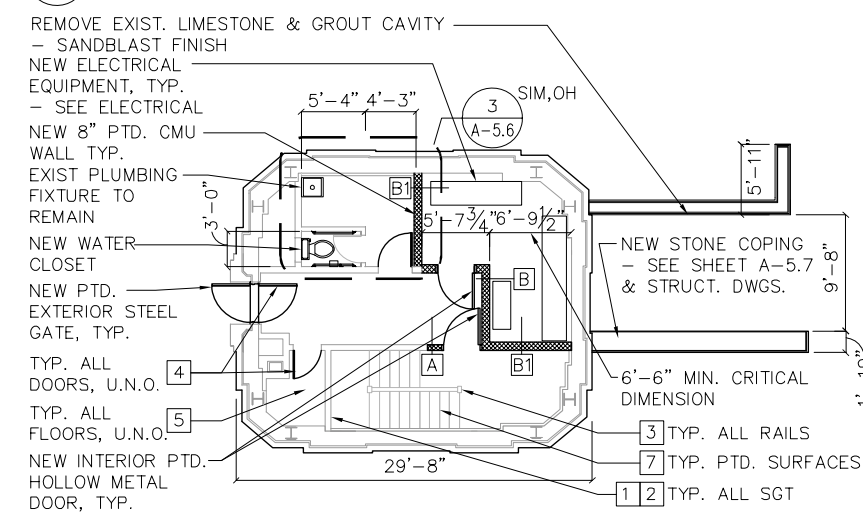
9 3RD FLOOR ABOVE UPPER LEVEL AT ELEV +77.92'
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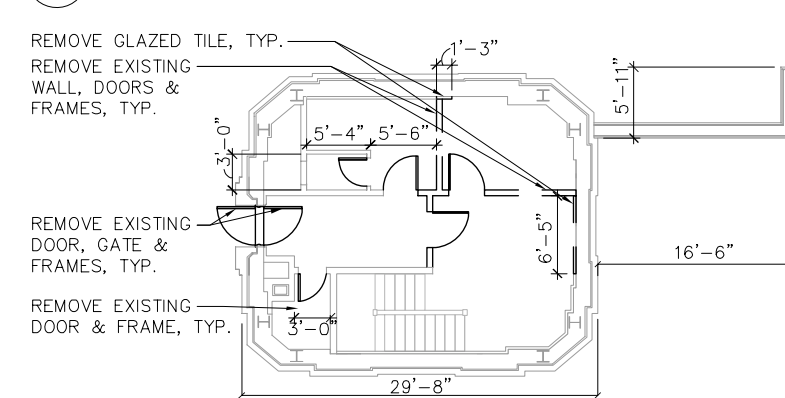
8 2ND FLOOR ABOVE UPPER LEVEL AT ELEV +68.00
SCALE: 1/8" = 1'-0"



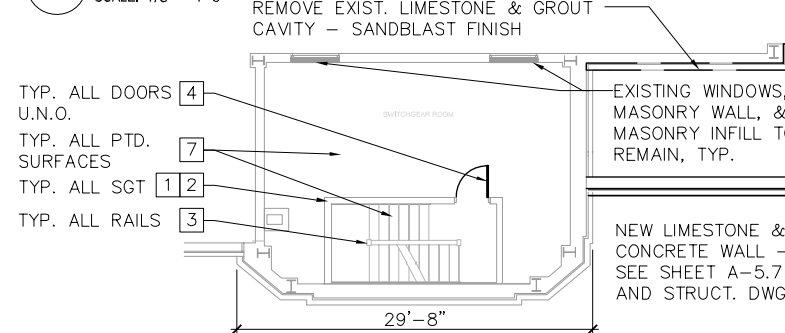
7 1ST FLOOR ABOVE UPPER LEVEL AT ELEV +58.08'
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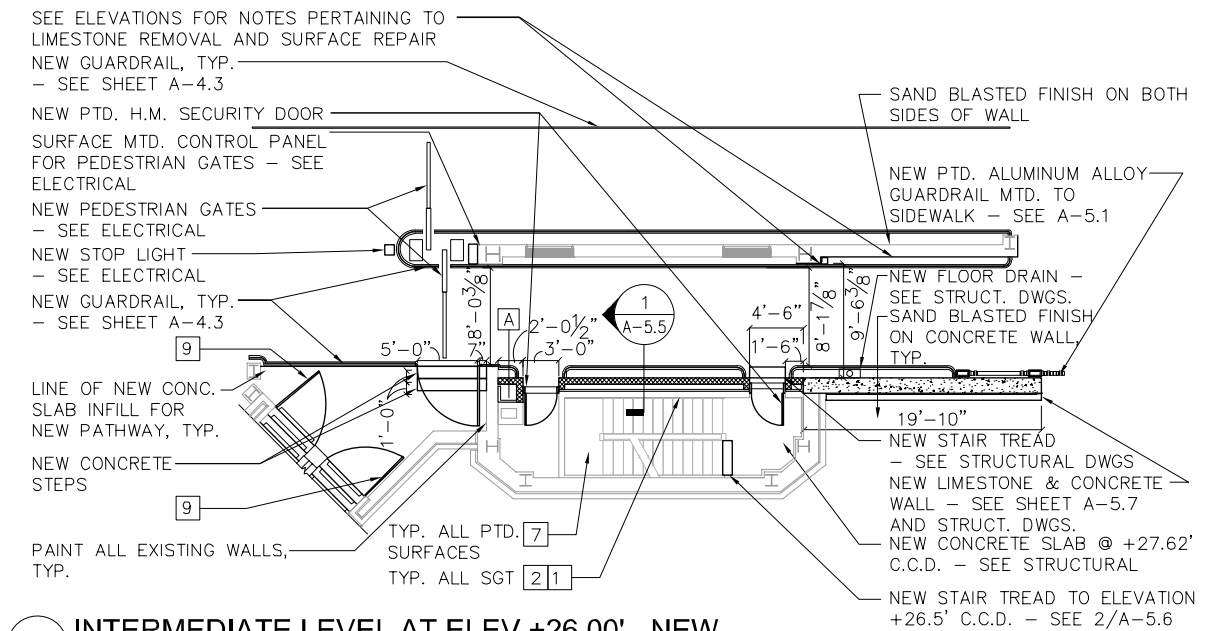
6 UPPER LEVEL AT ELEV +48.75' - NEW
SCALE: 1/8" = 1'-0"



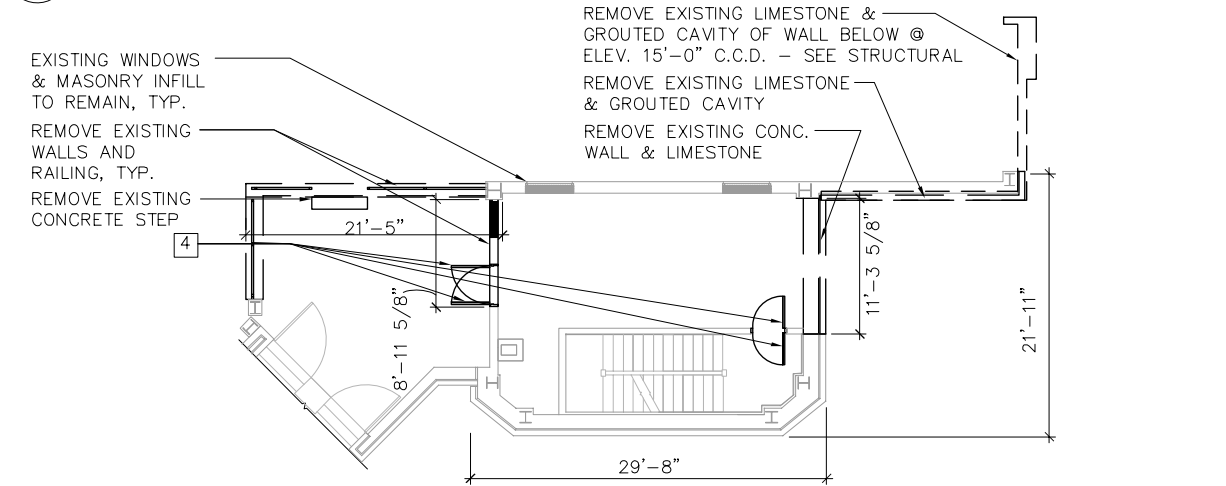
5 UPPER LEVEL AT ELEV +48.75' - DEMO
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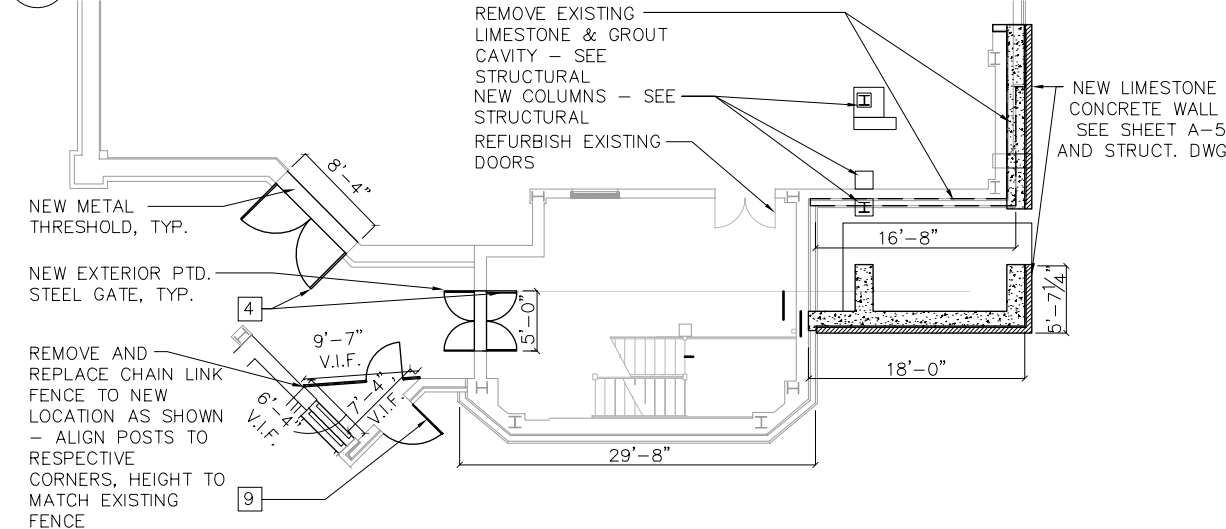
4 1ST FLOOR ABOVE INTERMEDIATE LEVEL AT +39.42'
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CITY OF CHICAGO
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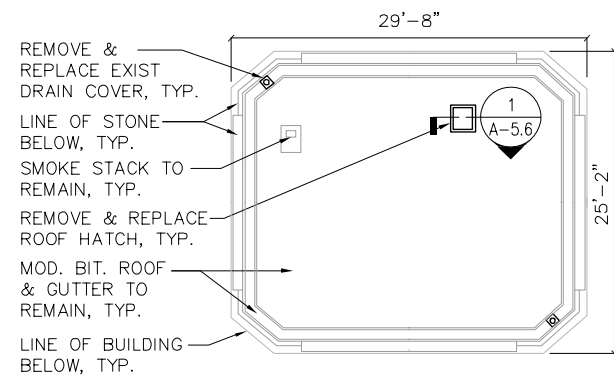
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTHEAST HOUSE FLOOR
PLANS
(STRUCTURE NO. 016-6030)

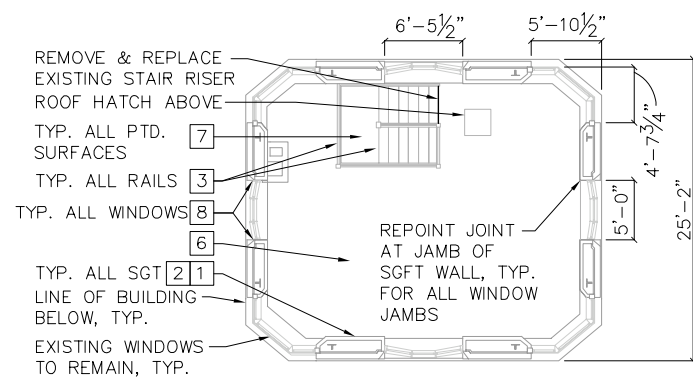
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-1.3
CDOT PROJECT NO. E-6-650			158 OF 411

KEY NOTE LEGEND - INTERIOR

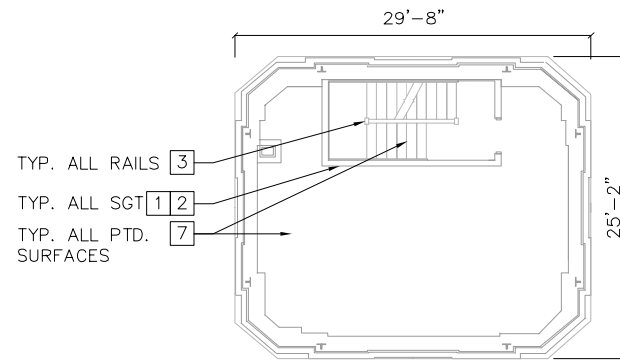
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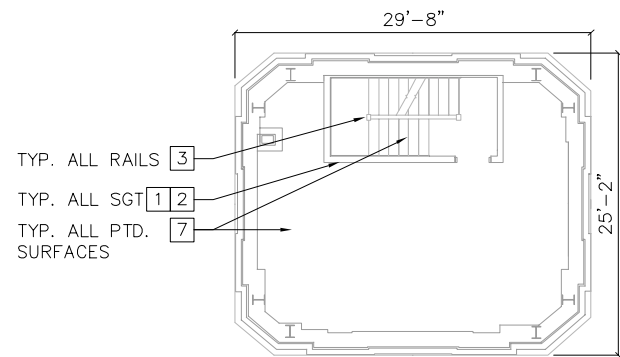
9 ROOF LEVEL AT ELEV 93.84'
 SCALE: 1/8" = 1'-0"



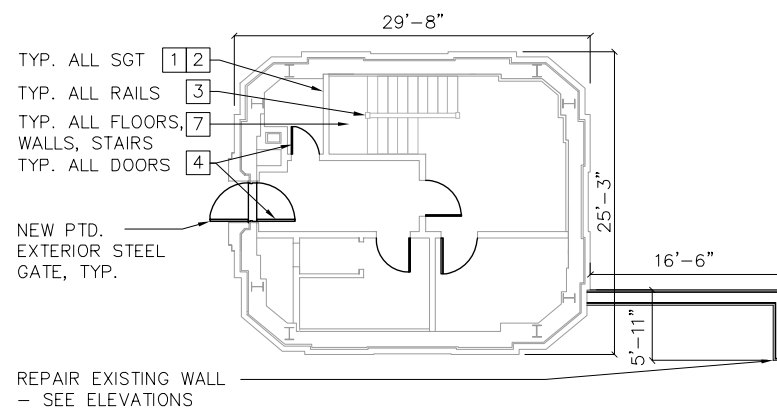
8 3RD FLOOR ABOVE UPPER LEVEL AT ELEV +77.92'
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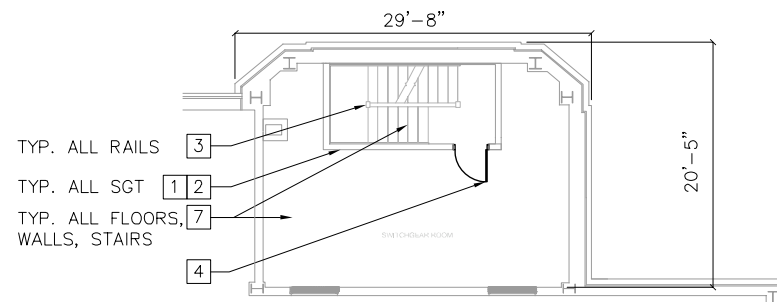
7 2ND FLOOR ABOVE UPPER LEVEL AT ELEV +68.00'
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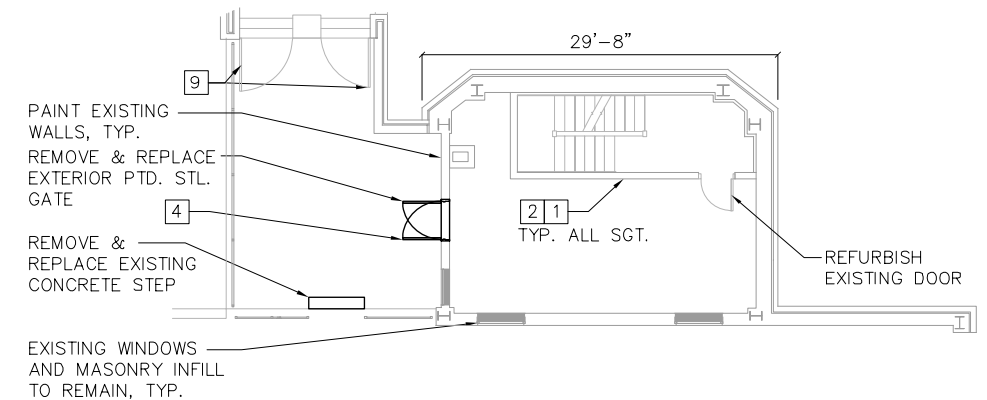
6 1ST FLOOR ABOVE UPPER LEVEL AT ELEV +58.08'
 SCALE: 1/8" = 1'-0"



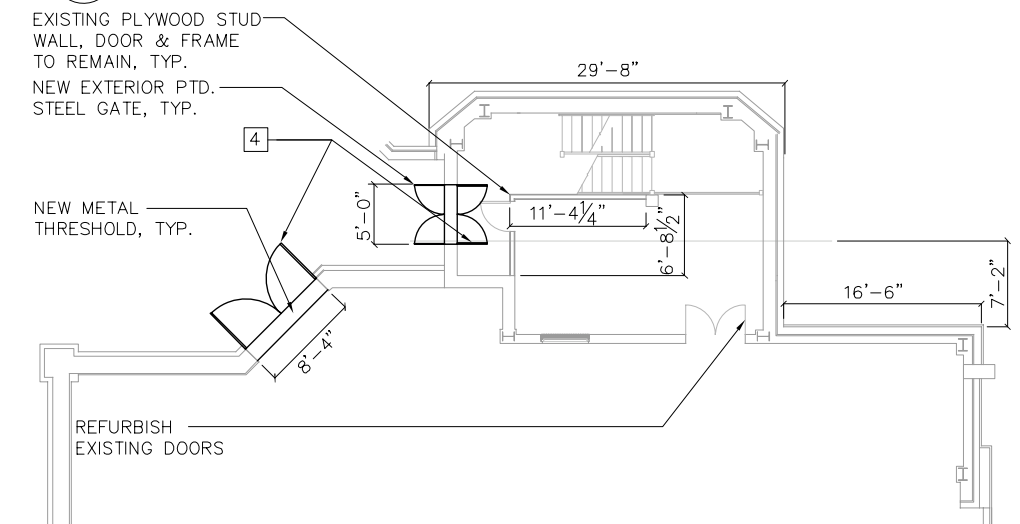
5 UPPER LEVEL AT ELEV +48.75'
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4 1ST FLOOR ABOVE INTERMEDIATE LEVEL AT +39.42'
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CITY OF CHICAGO
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LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

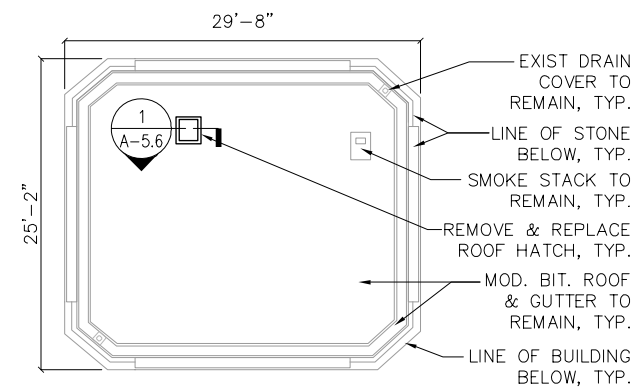
SOUTHWEST HOUSE FLOOR
 PLANS
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-1.4
CDOT PROJECT NO. E-6-650			159 OF 411

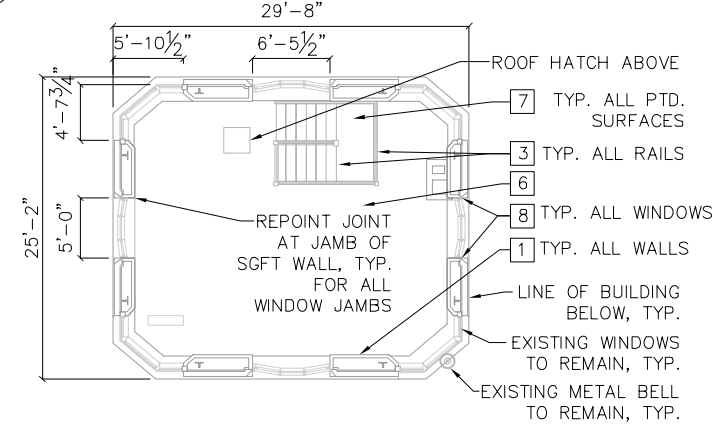
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KEY NOTE LEGEND - INTERIOR

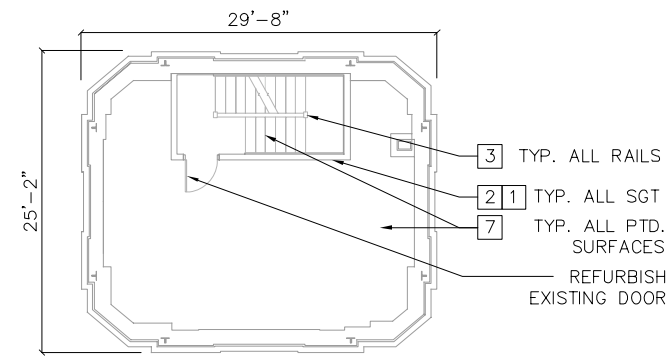
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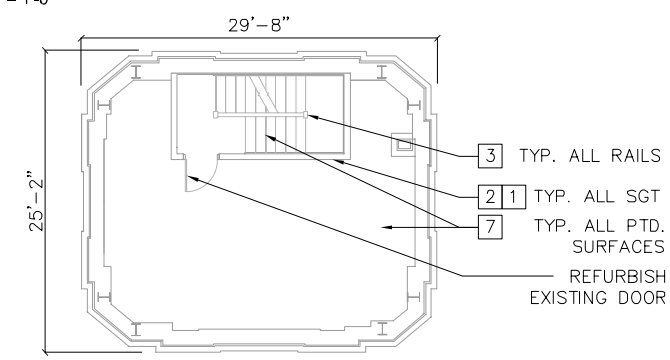
9 ROOF LEVEL AT ELEV 93.84'
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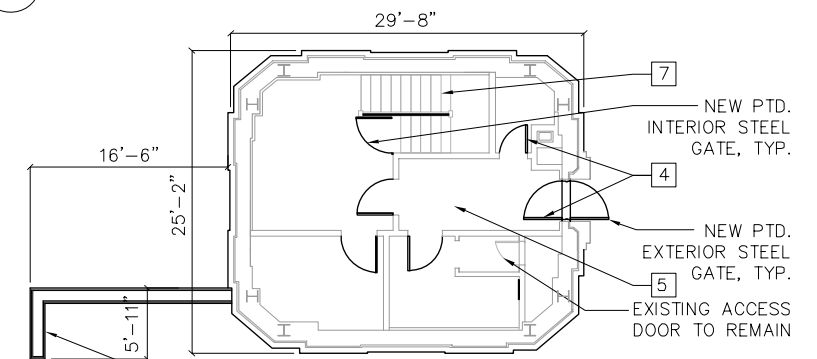
8 3RD FLOOR ABOVE UPPER LEVEL AT ELEV +77.92'
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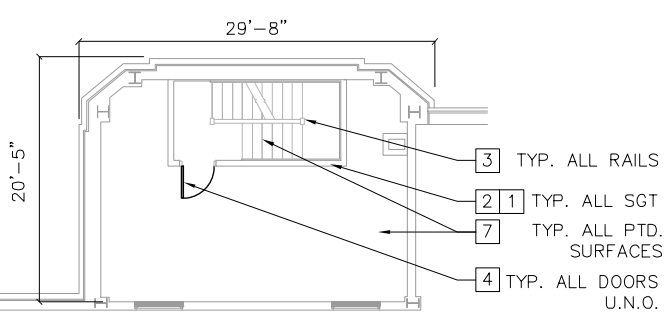
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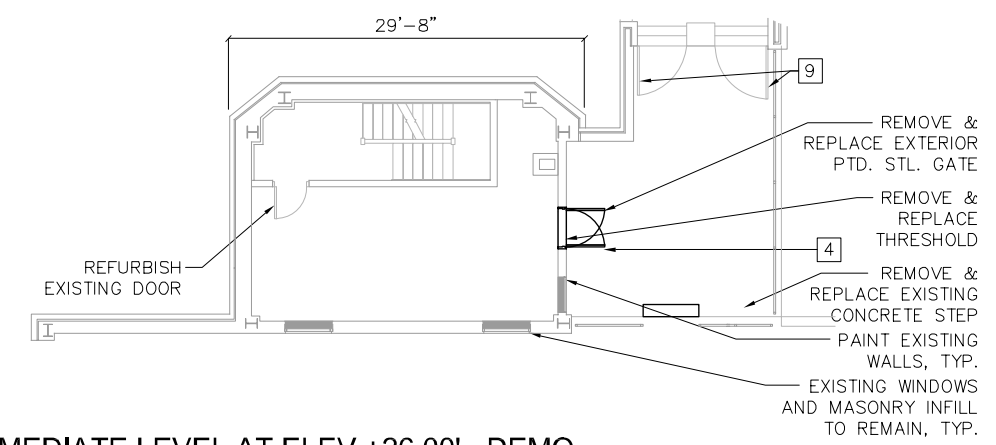
6 1ST FLOOR ABOVE UPPER LEVEL AT ELEV +58.08'
SCALE: 1/8" = 1'-0"



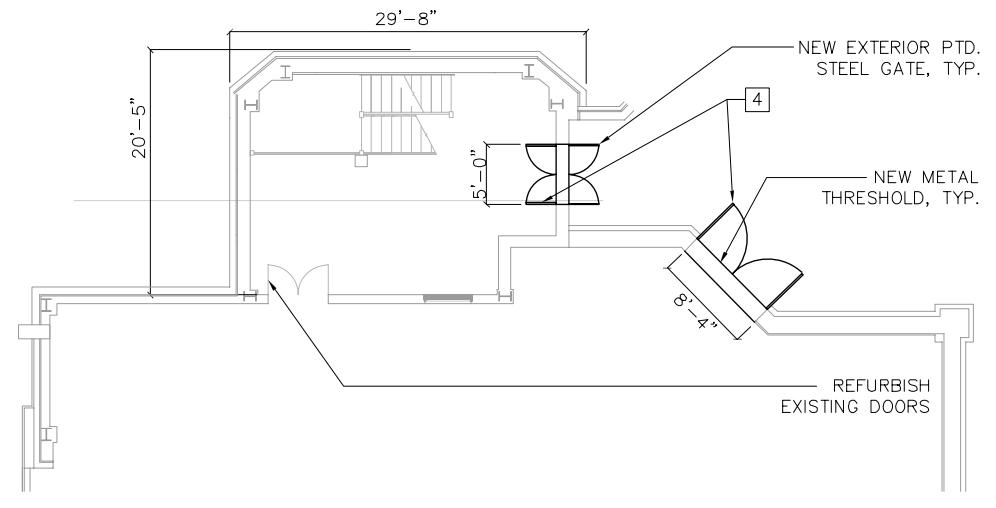
5 UPPER LEVEL AT ELEV +48.75'
SCALE: 1/8" = 1'-0"



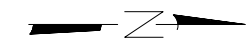
4 1ST FLOOR ABOVE INTERMEDIATE LEVEL AT +39.42'
SCALE: 1/8" = 1'-0"



2 INTERMEDIATE LEVEL AT ELEV +26.00' - DEMO
SCALE: 1/8" = 1'-0"



1 DOCK LEVEL AT ELEV +5.00'
SCALE: 1/8" = 1'-0"



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

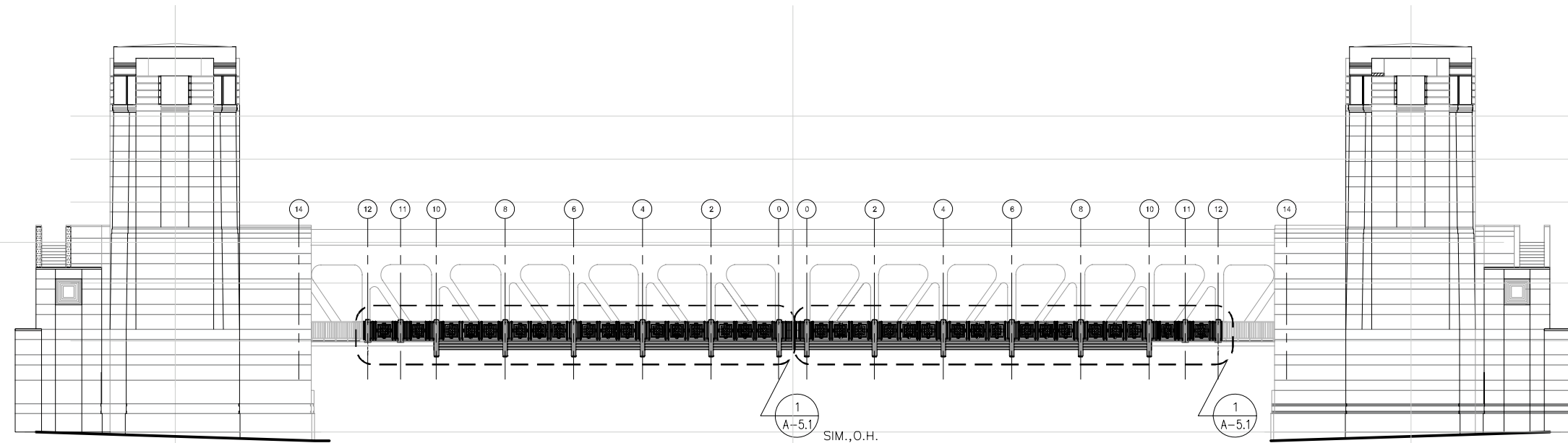
USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

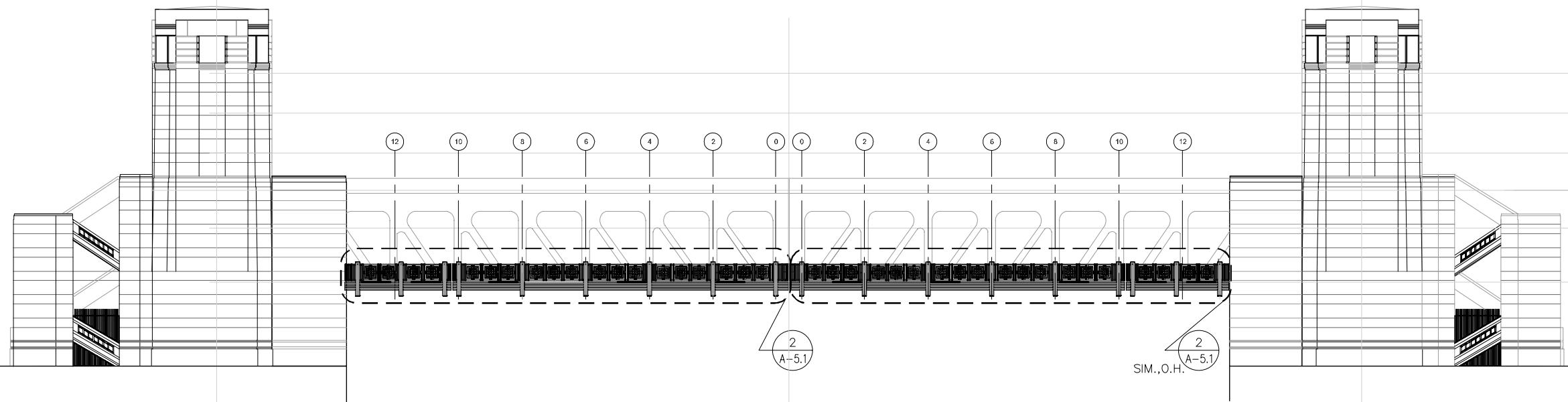
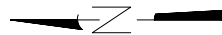
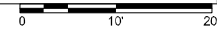
NORTHWEST HOUSE FLOOR
PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-1.5
CDOT PROJECT NO. E-6-650			160 OF 411



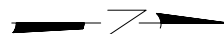
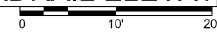
- ⊕ T/ STONE LINE
EL: +93.84' C.C.D.
- ⊕ T/ 3RD FLR ABOVE UPPER LVL
EL: +77.92' C.C.D.
- ⊕ T/ 2ND FLR ABOVE UPPER LVL
EL: +68.0' C.C.D.
- ⊕ T/ 1ST FLR ABOVE UPPER LVL
EL: +58.08' C.C.D.
- ⊕ T/ UPPER LEVEL
EL: +48.75' C.C.D.
- ⊕ T/ 1ST FLR ABOVE INTERMEDIATE LVL
EL: +39.42' C.C.D.
- ⊕ T/ INTERMEDIATE LEVEL
EL: +26.0' C.C.D.
- ⊕ T/ DOCK LEVEL
EL: +5'-0" C.C.D.

2 OVERALL GUARDRAIL ELEVATION - WEST
SCALE: 1/16" = 1'-0"



- ⊕ T/ STONE LINE
EL: +93.84' C.C.D.
- ⊕ T/ 3RD FLR ABOVE UPPER LVL
EL: +77.92' C.C.D.
- ⊕ T/ 2ND FLR ABOVE UPPER LVL
EL: +68.0' C.C.D.
- ⊕ T/ 1ST FLR ABOVE UPPER LVL
EL: +58.08' C.C.D.
- ⊕ T/ UPPER LEVEL
EL: +48.75' C.C.D.
- ⊕ T/ 1ST FLR ABOVE INTERMEDIATE LVL
EL: +39.42' C.C.D.
- ⊕ T/ INTERMEDIATE LEVEL
EL: +26.0' C.C.D.
- ⊕ T/ DOCK LEVEL
EL: +5'-0" C.C.D.

1 OVERALL GUARDRAIL ELEVATION - EAST
SCALE: 1/16" = 1'-0"



USER NAME = \$USER\$	DESIGNED —	REVISED —
PLOT SCALE = N.T.S.	CHECKED —	REVISED —
PLOT DATE = \$DATE\$	DRAWN —	REVISED —
	CHECKED —	REVISED —

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

**OVERALL GUARDRAIL
ELEVATIONS**
(STRUCTURE NO. 016-6030)

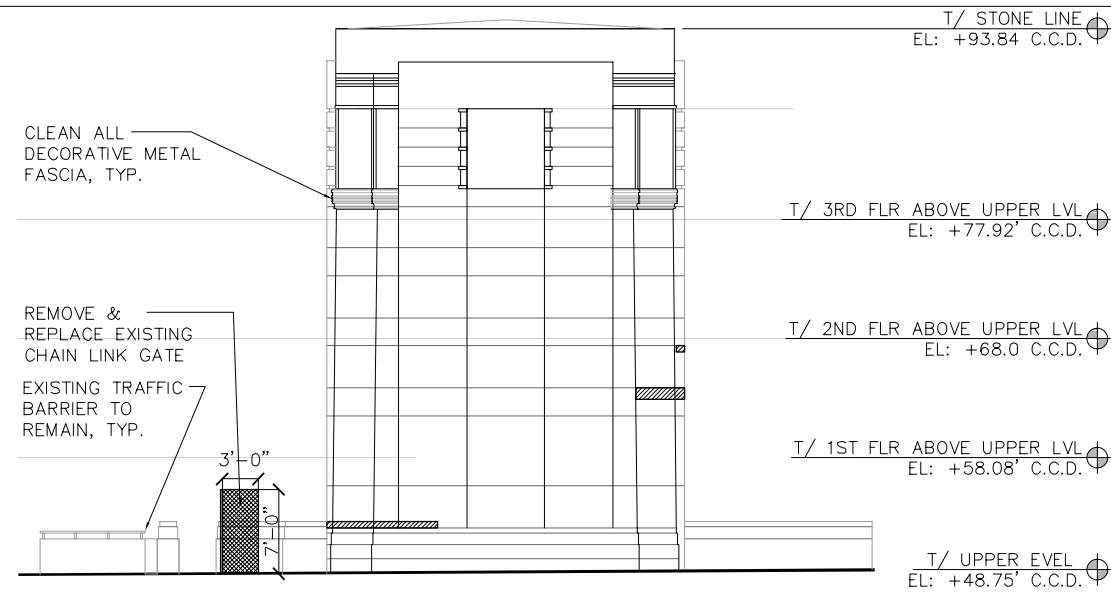
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-2.1
CDOT PROJECT NO. E-6-650			161 OF 411

GENERAL NOTES

1. REMOVE EXISTING PEELING, SPALLING, ETC. FROM THE EXTERIOR WALLS (CONCRETE, CMU, ETC.) PREP SURFACES FOR NEW SAND BLASTED FINISH.
2. GRIND OUT AND REPOINT ALL LIMESTONE JOINTS. THIS INCLUDES RETURNS AT WINDOWS AND DOORS WHICH MAY NOT APPEAR ON THE DRAWINGS.
3. REMOVE ANY UNUSED ANCHORS, FASTENERS, EMBEDDED BOLTS, CONDUITS, ETC. FROM ALL LIMESTONE ON THE HOUSES. CLEAN STAINS AND FILL HOLES WITH PATCHING MORTAR. COLOR TO MATCH EXISTING LIMESTONE.
4. PROVIDE NEW MATCHING LIMESTONE DUTCHMEN TO REPLACE MISSING BROKEN STONE.
5. PROVIDE LIMESTONE PATCHING MORTAR TO FILL SPALLS AND CHIPS. COLOR TO MATCH EXISTING LIMESTONE.
6. PROVIDE NEW LIMESTONE PANELS TO MATCH EXISTING WHERE THE UNITS HAVE BEEN REPLACED BY ANOTHER MATERIAL AND IN THE INSTANCE WHERE THE ABOVE TWO METHODS WILL NOT PROVIDE THE DESIRED RESULTS OF THE REPAIRED UNITS SHOWING SIGNS THAT IS HAS BEEN REPAIRED.
7. CLEAN ALL LIMESTONE PANELS OF STAINS, BIOLOGICAL GROWTH, GRAFFITI, ETC.
8. CLEAN PLAQUES AND METAL FASCIA BY REMOVING, SOILING, CORROSION AND FOREIGN MATERIAL. RESTORE PATINA.
9. REMOVE EXISTING STEEL GATES FROM THE WALL TO CLEAN AND REPAIR WHERE INDICATED. REMOVE CORROSION BY ABRASIVE BLAST CLEANING. PROVIDE NEW HIGH PERFORMANCE PAINT COATING. REINSTALL GATES.

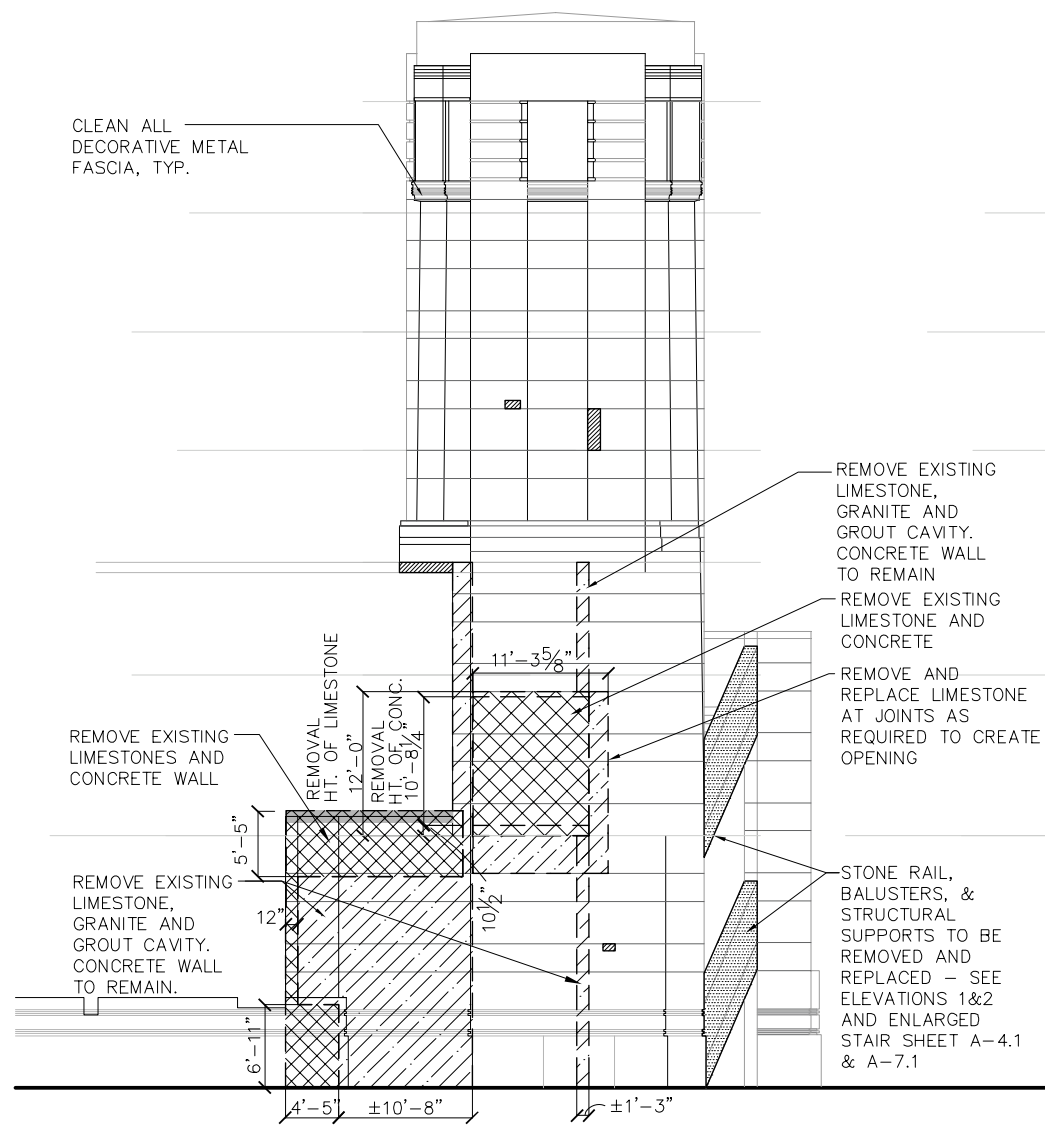
LEGEND - STONEWORK

- REPLACE STONEWORK
- REPAIR PORTION OF DAMAGED STONE PANEL
- PATCH OR FILL CRACK IN STONE PANEL

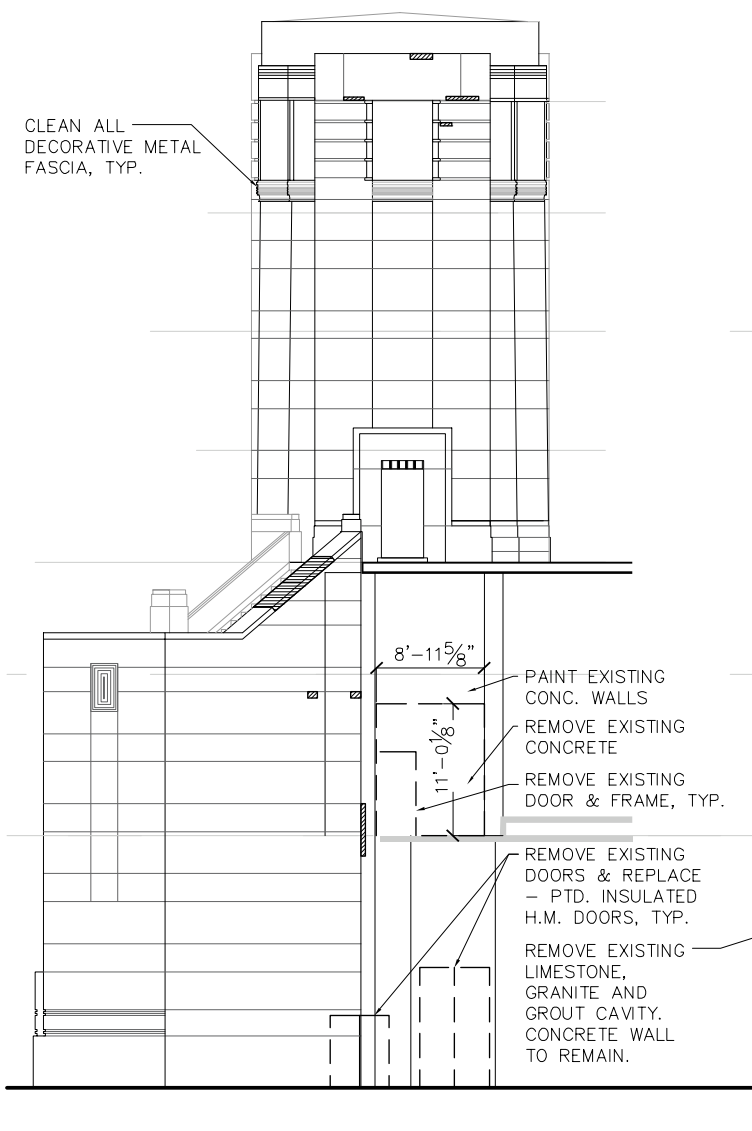


3 NE HOUSE ELEVATION - WEST
SCALE: 1/8" = 1'-0"

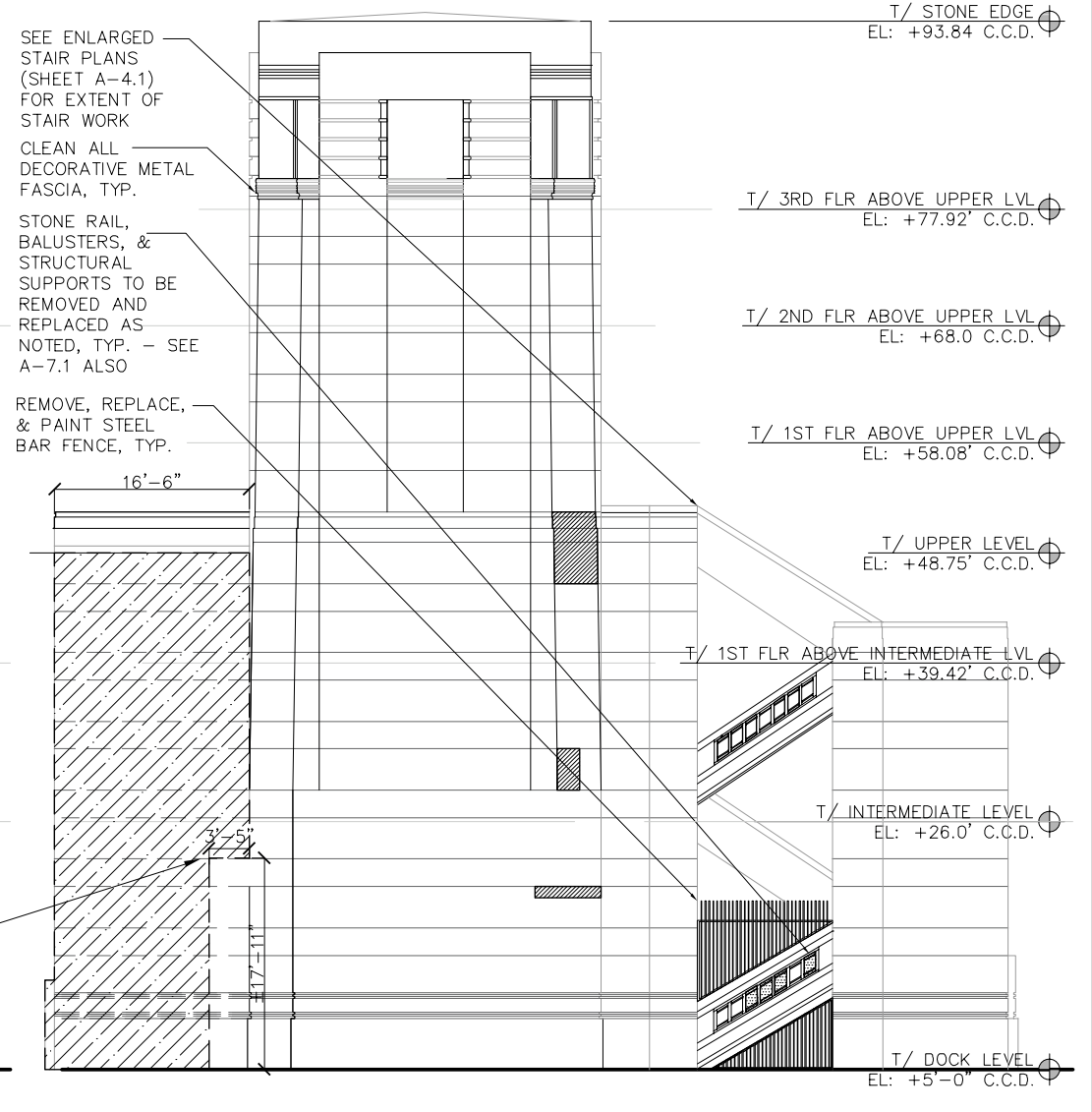
NOTE: SEE 1&3/A-2.6 FOR NEW ENLARGED ELEVATIONS, SIM.



4 NE HOUSE ELEVATION - SOUTH
SCALE: 1/8" = 1'-0"



2 NE HOUSE ELEVATION - NORTH
SCALE: 1/8" = 1'-0"



1 NE HOUSE ELEVATION - EAST
SCALE: 1/8" = 1'-0"

rbarc
ARCHITECTURE
30 N. LASALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

USER NAME = \$USER\$	DESIGNED -	REVISED -
PLOT SCALE = N.T.S.	CHECKED -	REVISED -
PLOT DATE = \$DATE\$	DRAWN -	REVISED -
	CHECKED -	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

NORTHEAST HOUSE ELEVATIONS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-2.2
CDOT PROJECT NO. E-6-650			162 OF 411

GENERAL NOTES

1. REMOVE EXISTING PEELING, SPALLING, ETC. FROM THE EXTERIOR WALLS (CONCRETE, CMU, ETC.) PREP SURFACES FOR NEW SAND BLASTED FINISH.
2. GRIND OUT AND REPOINT ALL LIMESTONE JOINTS. THIS INCLUDES RETURNS AT WINDOWS AND DOORS WHICH MAY NOT APPEAR ON THE DRAWINGS.
3. REMOVE ANY UNUSED ANCHORS, FASTENERS, EMBEDDED BOLTS, CONDUITS, ETC. FROM ALL LIMESTONE ON THE HOUSES. CLEAN STAINS AND FILL HOLES WITH PATCHING MORTAR. COLOR TO MATCH EXISTING LIMESTONE.
4. PROVIDE NEW MATCHING LIMESTONE DUTCHMEN TO REPLACE MISSING BROKEN STONE.
5. PROVIDE LIMESTONE PATCHING MORTAR TO FILL SPALLS AND CHIPS. COLOR TO MATCH EXISTING LIMESTONE.
6. PROVIDE NEW LIMESTONE PANELS TO MATCH EXISTING WHERE THE UNITS HAVE BEEN REPLACED BY ANOTHER MATERIAL AND IN THE INSTANCE WHERE THE ABOVE TWO METHODS WILL NOT PROVIDE THE DESIRED RESULTS OF THE REPAIRED UNITS SHOWING SIGNS THAT IS HAS BEEN REPAIRED.
7. CLEAN ALL LIMESTONE PANELS OF STAINS, BIOLOGICAL GROWTH, GRAFFITI, ETC.
8. CLEAN PLAQUES AND METAL FASCIA BY REMOVING, SOILING, CORROSION AND FOREIGN MATERIAL. RESTORE PATINA.
9. REMOVE EXISTING STEEL GATES FROM THE WALL TO CLEAN AND REPAIR WHERE INDICATED. REMOVE CORROSION BY ABRASIVE BLAST CLEANING. PROVIDE NEW HIGH PERFORMANCE PAINT COATING. REINSTALL GATES.

T/ STONE LINE
EL: +93.84' C.C.D.

T/ 3RD FLR ABOVE UPPER LVL
EL: +77.92' C.C.D.

T/ 2ND FLR ABOVE UPPER LVL
EL: +68.0' C.C.D.

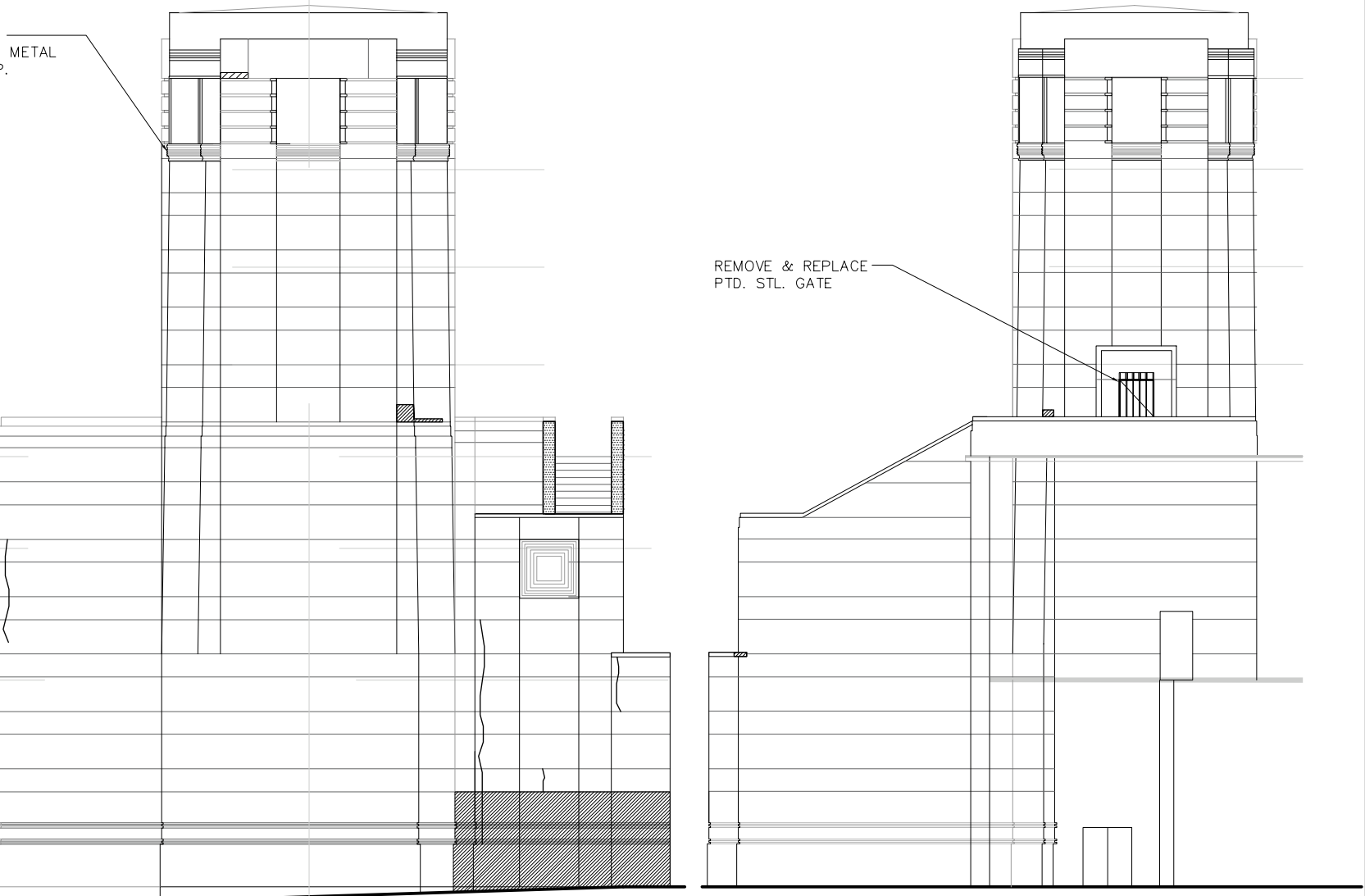
T/ 1ST FLR ABOVE UPPER LVL
EL: +58.08' C.C.D.

T/ UPPER LEVEL
EL: +48.75' C.C.D.

LEGEND - STONEWORK

- REPLACE STONEWORK
- REPAIR PORTION OF DAMAGED STONE PANEL
- PATCH OR FILL CRACK IN STONE PANEL

3 SW HOUSE ELEVATION - EAST
SCALE: 1/8" = 1'-0"



2 SW HOUSE ELEVATION - WEST
SCALE: 1/8" = 1'-0"

T/ STONE LINE
EL: +93.84' C.C.D.

T/ 3RD FLR ABOVE UPPER LVL
EL: +77.92' C.C.D.

T/ 2ND FLR ABOVE UPPER LVL
EL: +68.0' C.C.D.

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T/ UPPER LEVEL
EL: +48.75' C.C.D.

T/ 1ST FLR ABOVE INTERMEDIATE LVL
EL: +39.42' C.C.D.

T/ INTERMEDIATE LEVEL
EL: +26.0' C.C.D.

T/ DOCK LEVEL
EL: +5'-0" C.C.D.

CLEAN ALL DECORATIVE METAL FASCIA, TYP.

SEE ENLARGED STAIR PLANS (SHEET A-4.2) FOR EXTENT OF STAIR WORK
STONE RAIL, BALUSTERS, AND STRUCTURAL SUPPORTS TO BE REMOVED AND REPLACED AS NOTED - SEE SHEET A-7.2 ALSO

REMOVE, REPLACE, & PAINT STEEL BAR FENCE, TYP.

CLEAN ALL DECORATIVE METAL FASCIA, TYP.

REMOVE & REPLACE PTD. STL. GATE

4 SW HOUSE ELEVATION - NORTH
SCALE: 1/8" = 1'-0"

1 SW HOUSE ELEVATION - SOUTH
SCALE: 1/8" = 1'-0"



USER NAME = \$USER\$	DESIGNED -	REVISED -
PLOT SCALE = N.T.S.	CHECKED -	REVISED -
PLOT DATE = \$DATE\$	DRAWN -	REVISED -
	CHECKED -	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTHWEST HOUSE ELEVATIONS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-2.4
CDOT PROJECT NO. E-6-650			164 OF 411



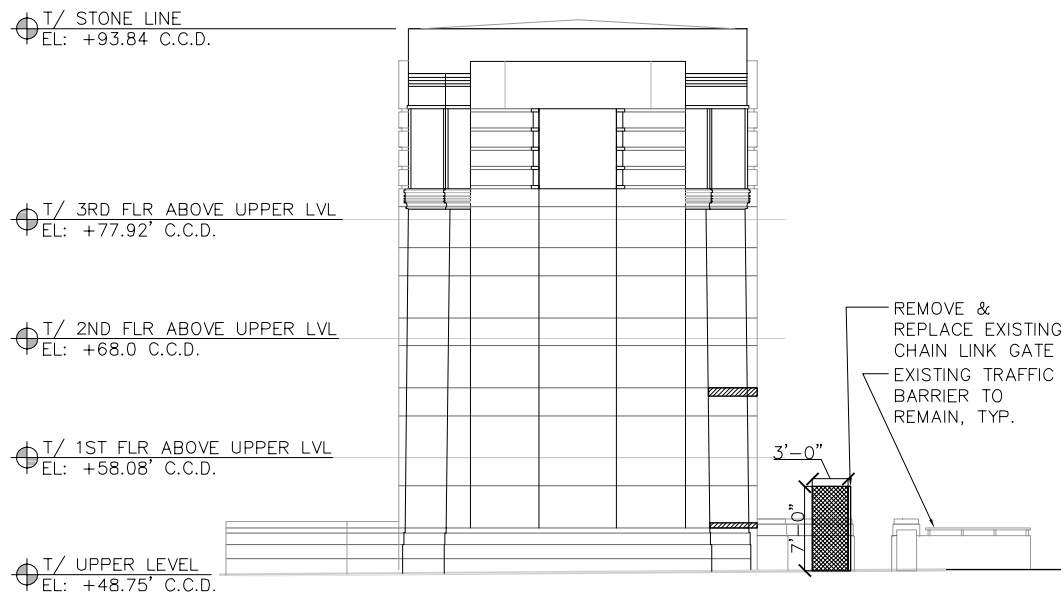
WSP USA Inc.
30 N. LASALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1584

GENERAL NOTES

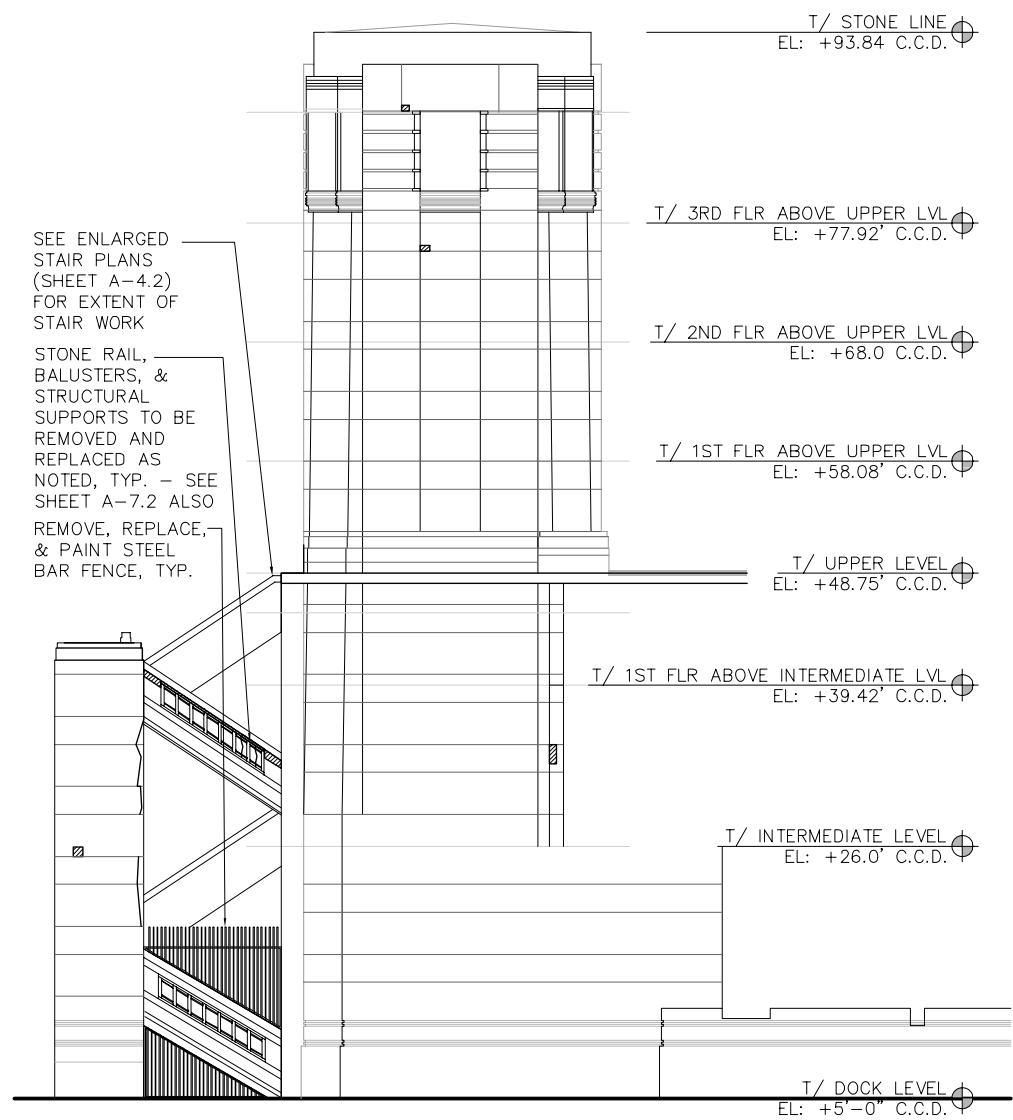
1. REMOVE EXISTING PEELING, SPALLING, ETC. FROM THE EXTERIOR WALLS (CONCRETE, CMU, ETC.) PREP SURFACES FOR NEW SAND BLASTED FINISH.
2. GRIND OUT AND REPOINT ALL LIMESTONE JOINTS. THIS INCLUDES RETURNS AT WINDOWS AND DOORS WHICH MAY NOT APPEAR ON THE DRAWINGS.
3. REMOVE ANY UNUSED ANCHORS, FASTENERS, EMBEDDED BOLTS, CONDUITS, ETC. FROM ALL LIMESTONE ON THE HOUSES. CLEAN STAINS AND FILL HOLES WITH PATCHING MORTAR. COLOR TO MATCH EXISTING LIMESTONE.
4. PROVIDE NEW MATCHING LIMESTONE DUTCHMEN TO REPLACE MISSING BROKEN STONE.
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8. CLEAN PLAQUES AND METAL FASCIA BY REMOVING, SOILING, CORROSION AND FOREIGN MATERIAL. RESTORE PATINA.
9. REMOVE EXISTING STEEL GATES FROM THE WALL TO CLEAN AND REPAIR WHERE INDICATED. REMOVE CORROSION BY ABRASIVE BLAST CLEANING. PROVIDE NEW HIGH PERFORMANCE PAINT COATING. REINSTALL GATES.

LEGEND - STONEWORK

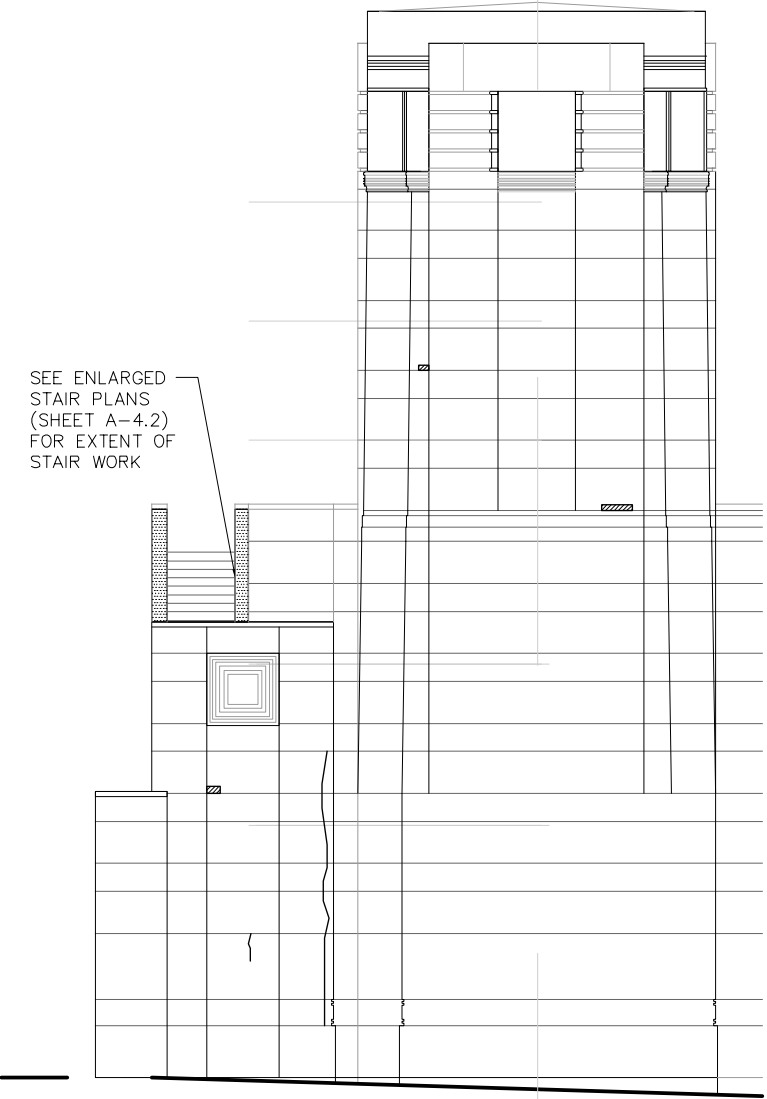
-  REPLACE STONEWORK
-  REPAIR PORTION OF DAMAGED STONE PANEL
-  PATCH OR FILL CRACK IN STONE PANEL



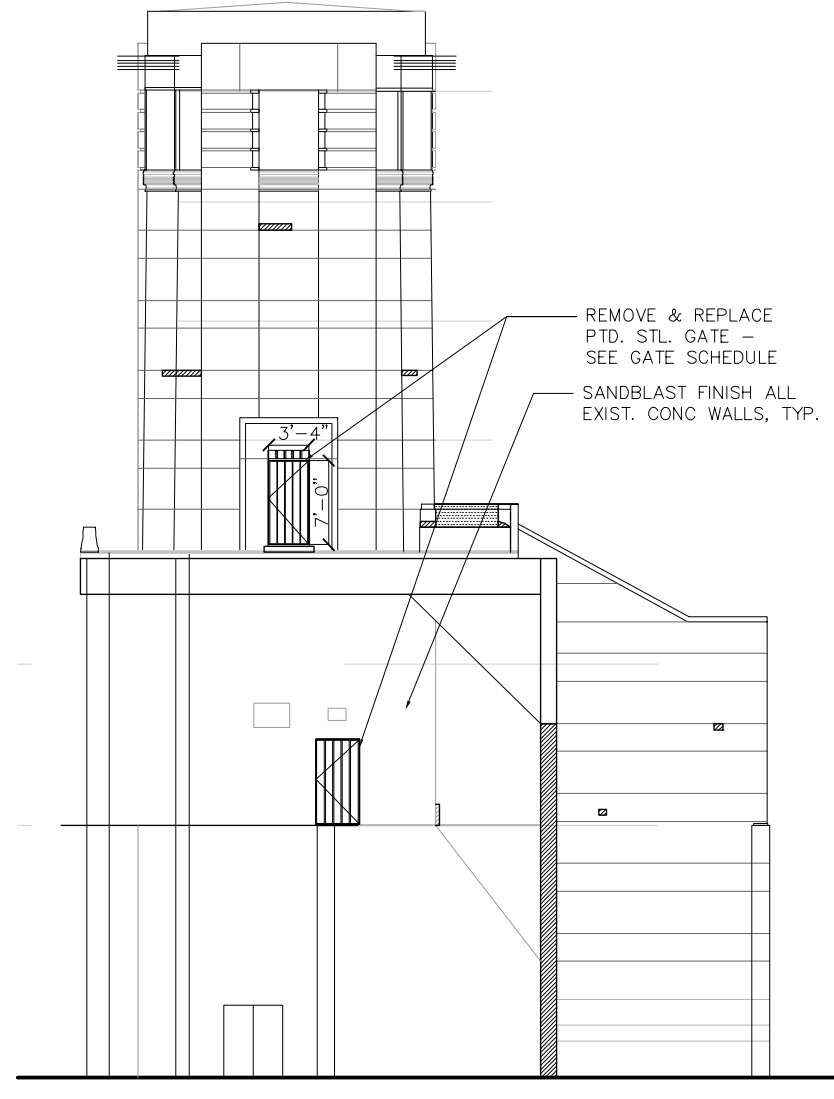
3 NW HOUSE ELEVATION - WEST
SCALE: 1/8" = 1'-0"



4 NW HOUSE ELEVATION - SOUTH
SCALE: 1/8" = 1'-0"



2 NW HOUSE ELEVATION - WEST
SCALE: 1/8" = 1'-0"



1 NW HOUSE ELEVATION - NORTH
SCALE: 1/8" = 1'-0"



USER NAME = \$USER\$	DESIGNED -	REVISED -
PLOT SCALE = N.T.S.	CHECKED -	REVISED -
PLOT DATE = \$DATE\$	DRAWN -	REVISED -
	CHECKED -	REVISED -

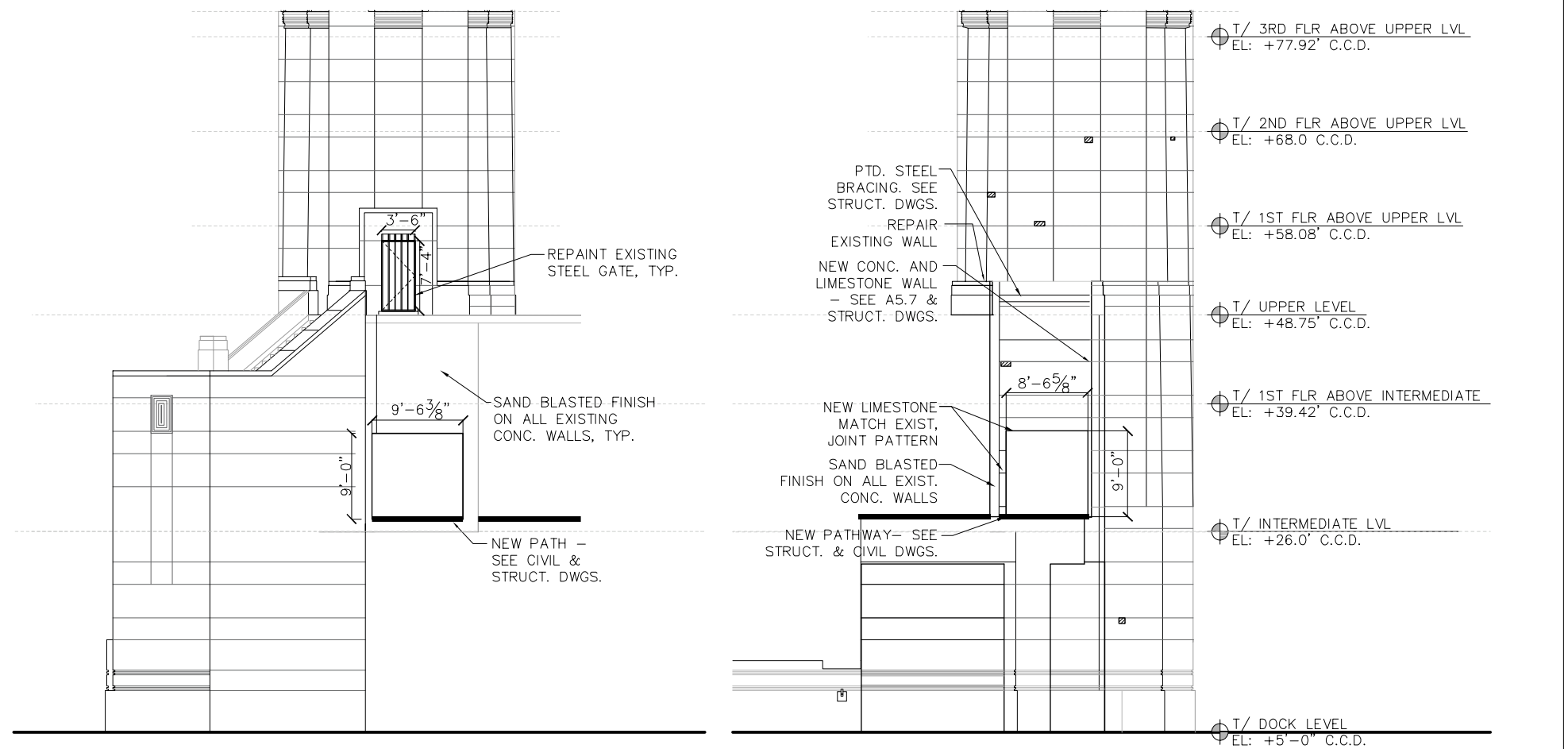
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

NORTHWEST HOUSE ELEVATIONS
(STRUCTURE NO. 016-6030)

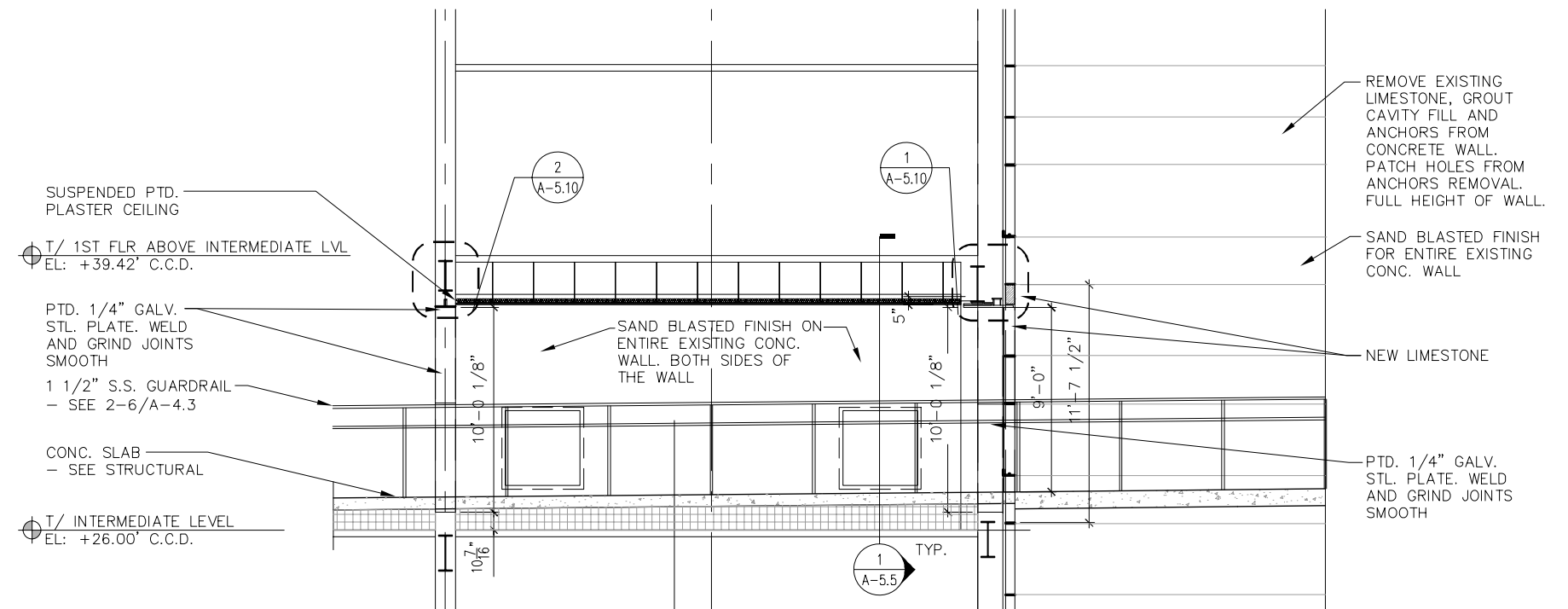
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-2.5
CDOT PROJECT NO. E-6-650			165 OF 411

\$\$\$GN\$\$\$
\$SYTIME\$



3 PARTIAL NORTH ELEVATION (S.E. HOUSE) N.E. HOUSE IS SIMILAR
SCALE: 1/8" = 1'-0"

1 PARTIAL SOUTH ELEVATION (S.E. HOUSE) N.E. HOUSE IS SIMILAR
SCALE: 1/8" = 1'-0"



2 PARTIAL BLDG SECTION (S.E. HOUSE) N.E. HOUSE IS SIMILAR
SCALE: 1/4" = 1'-0"



USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER




ENLARGED ELEVATIONS
(STRUCTURE NO. 016-6030)

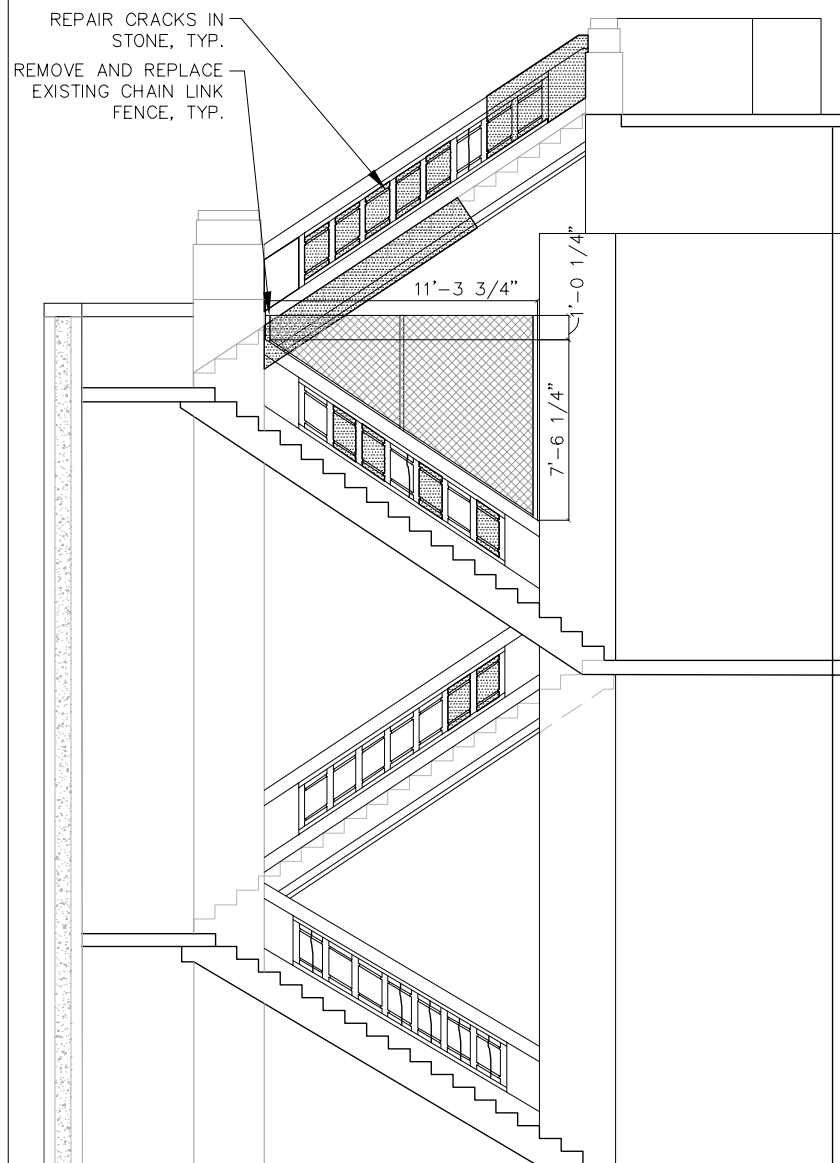
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-2.6
CDOT PROJECT NO. E-6-650			166 OF 411

PLAN NOTES

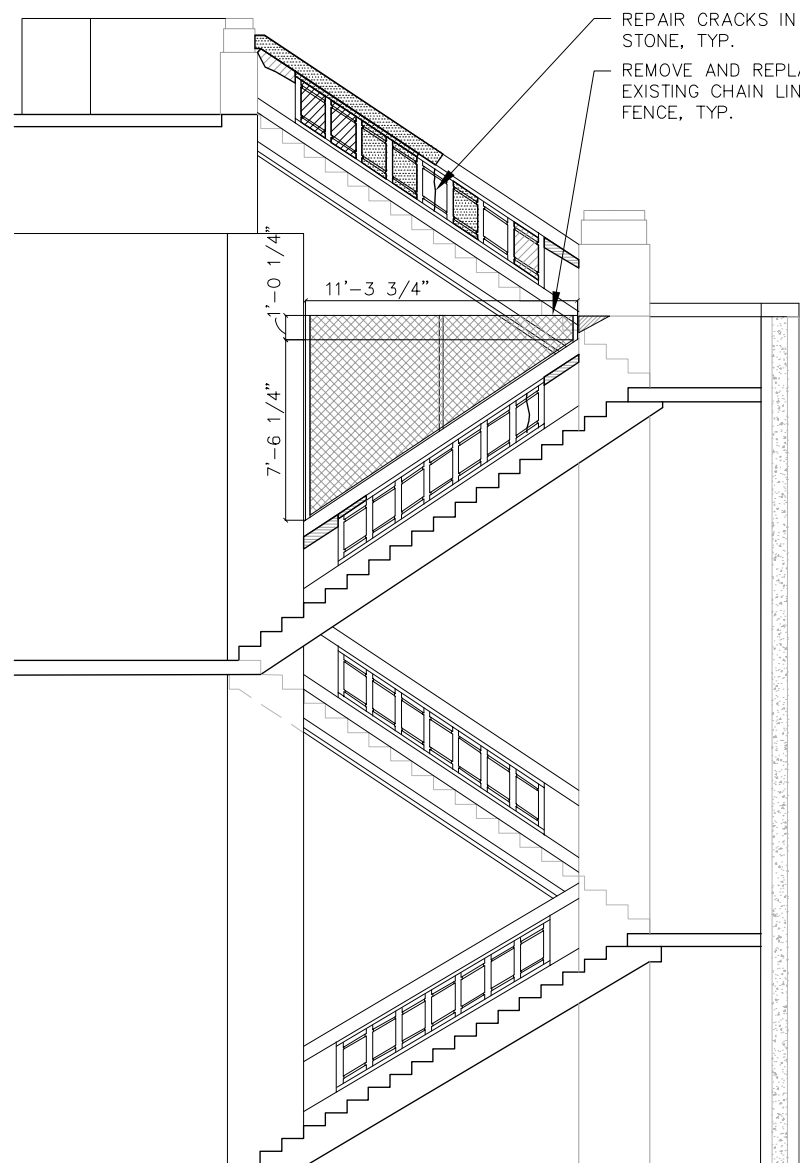
1. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
2. FIELD VERIFY EXISTING CONDITIONS, MAINTAIN ALL CLEARANCES, AND HOLD ALL DIMENSIONS AS NOTED.
3. ALL NEW STONE SHALL BE INDIANA LIMESTONE, AND MEET THE APPROVAL OF THE COMMISSIONER, AND SHALL MATCH THE EXISTING STONE AS CLOSELY AS POSSIBLE.
4. SIZE AND PROFILE OF B BLOCKS, BALUSTRADE, STONE CAP, ETC. SHALL MATCH EXISTING. CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO FABRICATE THE STONE AND SHALL PREPARE CUTTING AND SETTING SHOP DRAWINGS.
5. STONE SHALL BE SET AND ANCHORED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE INDIANA LIMESTONE INSTITUTE.

LEGEND - STONEWORK

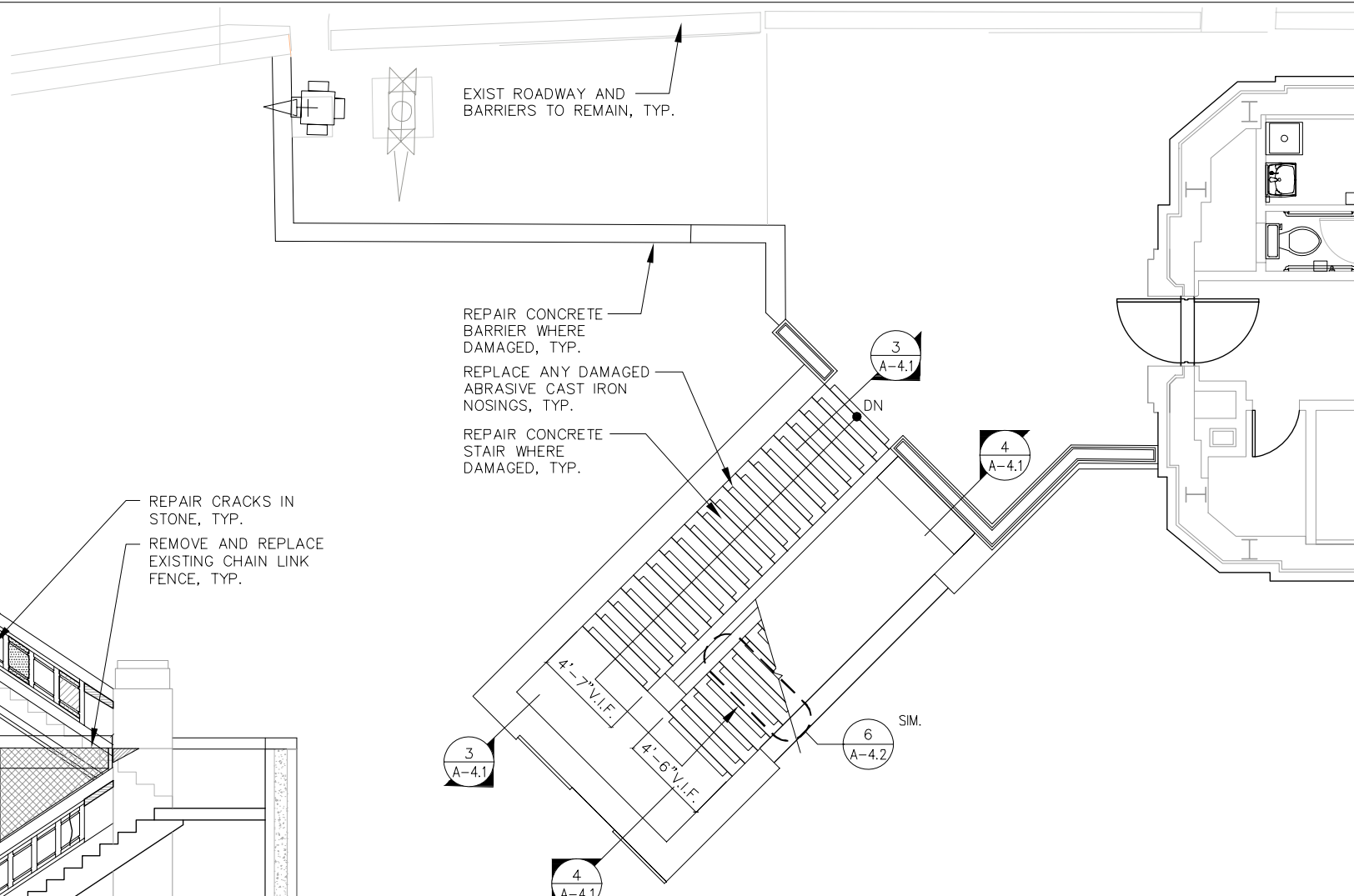
-  REPLACE STONEWORK
-  REPAIR PORTION OF DAMAGED STONE PANEL
-  PATCH OR FILL CRACK IN STONE PANEL



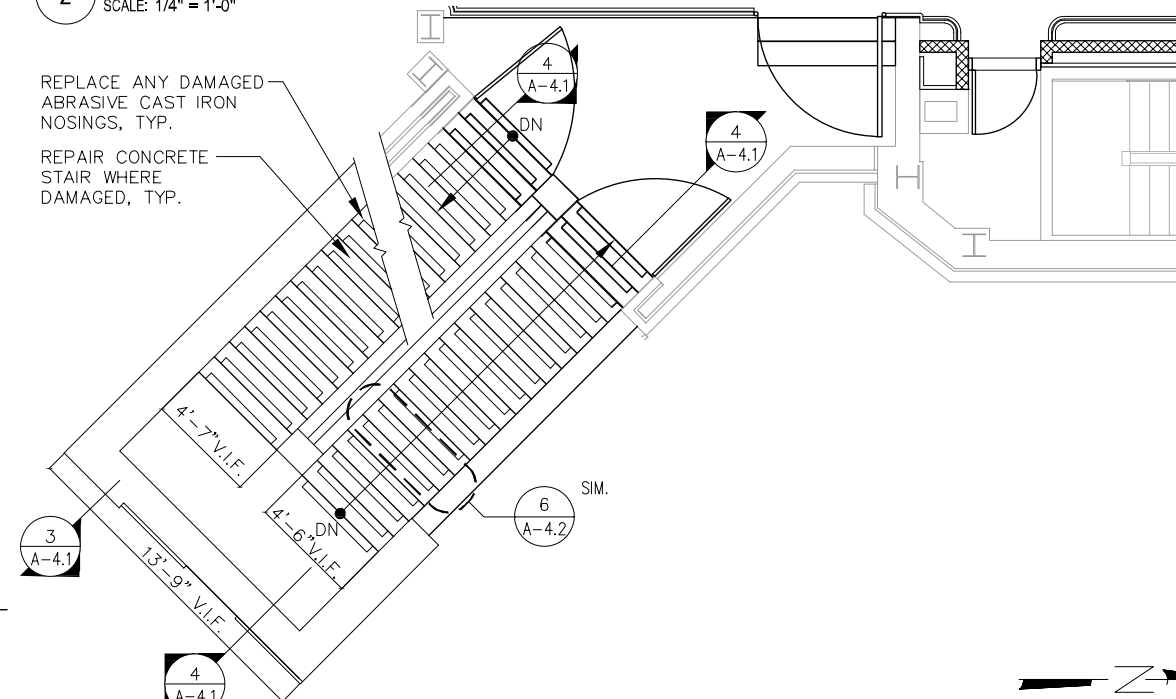
4 SOUTHEAST TOWER INNER STAIR SECTION
SCALE: 1/4" = 1'-0"



3 NORTHEAST TOWER INNER STAIR SECTION
SCALE: 1/4" = 1'-0"



2 TYP. ENLARGED PLAN - UPPER LEVEL TO INTERMEDIATE LEVEL
SCALE: 1/4" = 1'-0"



1 TYP. ENLARGED PLAN - INTERMEDIATE LEVEL TO DOCK LEVEL
SCALE: 1/4" = 1'-0"



USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

ENLARGED STAIR PLANS - EAST
(STRUCTURE NO. 016-6030)




F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-4.1
CDOT PROJECT NO. E-6-650			167 OF 411

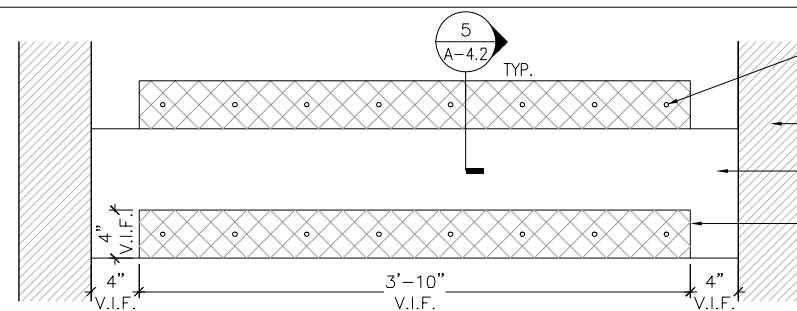
\$\$\$
DGN
SYTIME

PLAN NOTES

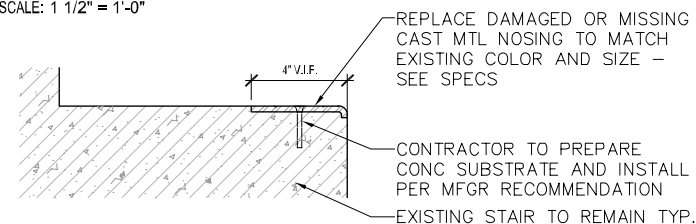
1. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
2. FIELD VERIFY EXISTING CONDITIONS, MAINTAIN ALL CLEARANCES, AND HOLD ALL DIMENSIONS AS NOTED.
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5. STONE SHALL BE SET AND ANCHORED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE INDIANA LIMESTONE INSTITUTE.

LEGEND - STONEMWORK

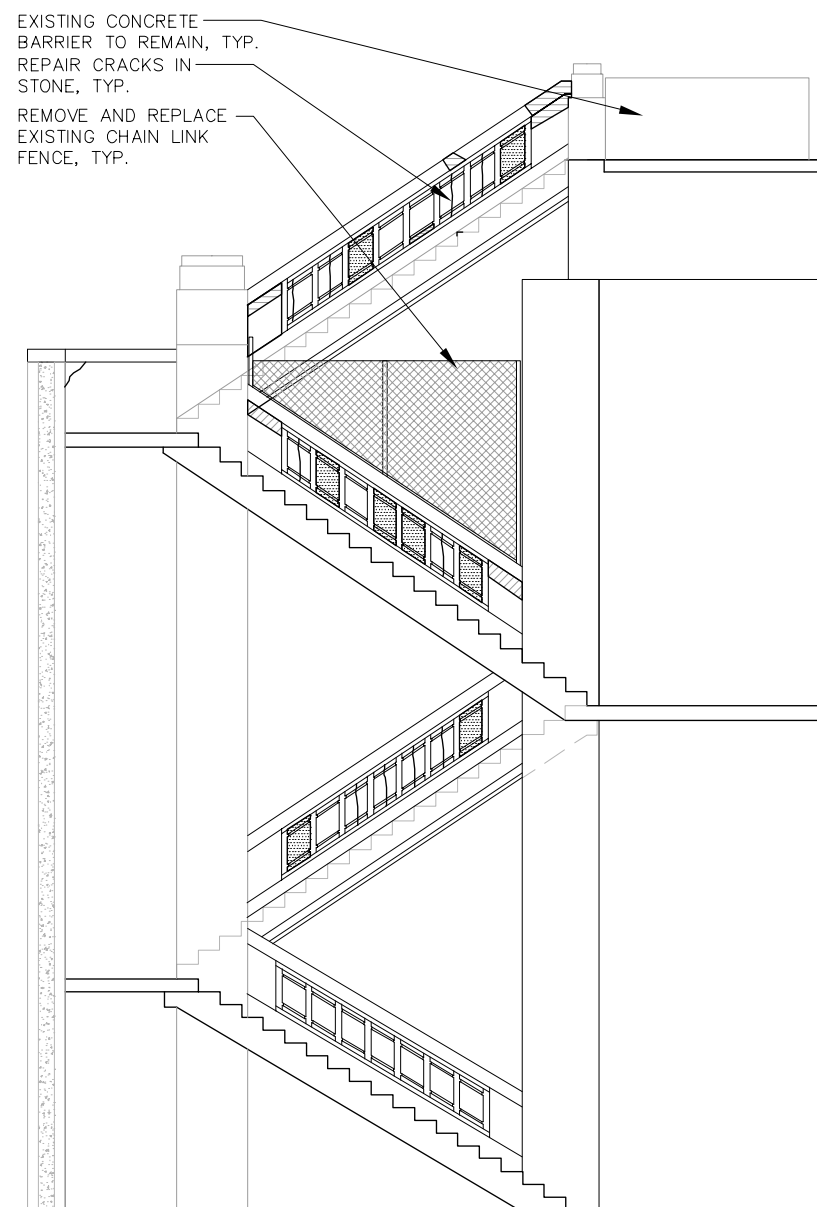
-  REPLACE STONEMWORK
-  REPAIR PORTION OF DAMAGED STONE PANEL
-  PATCH OR FILL CRACK IN STONE PANEL



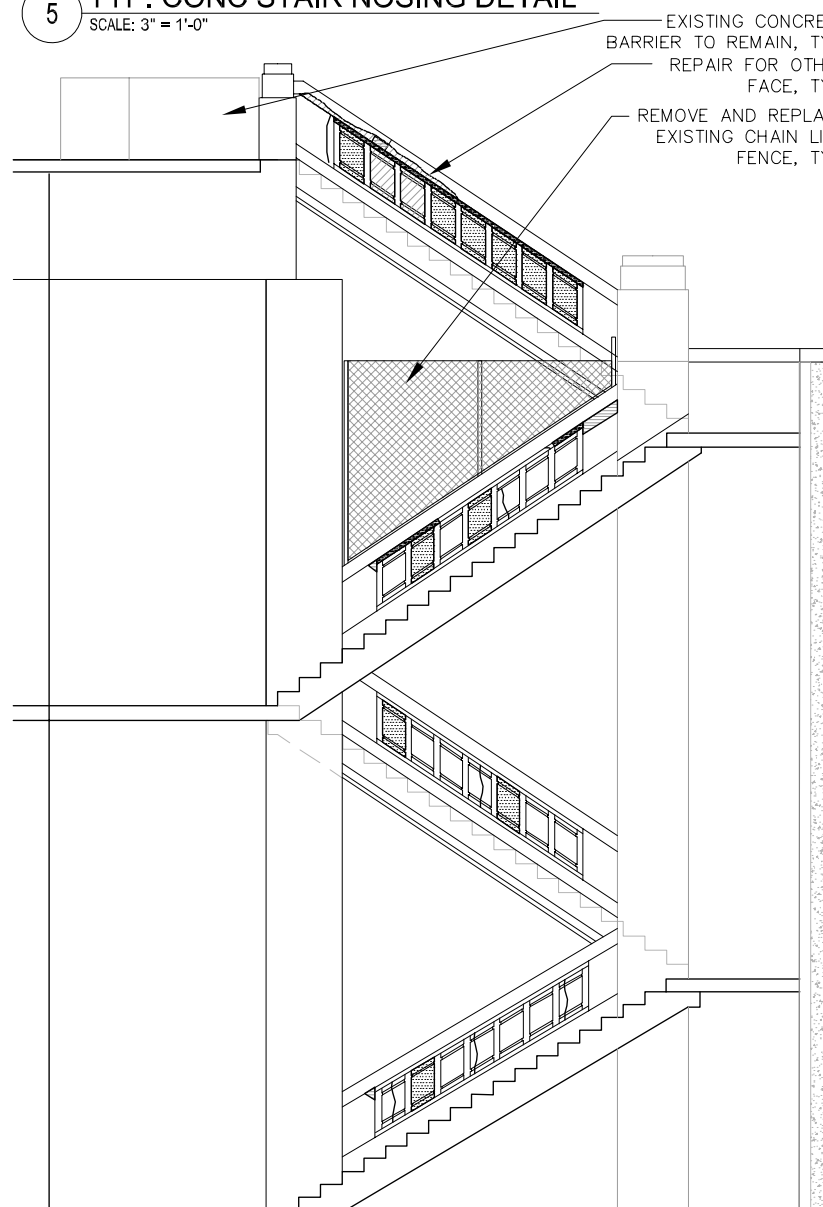
6 TYP. CONC STAIR NOSING REPLACEMENT DETAIL
SCALE: 1 1/2" = 1'-0"



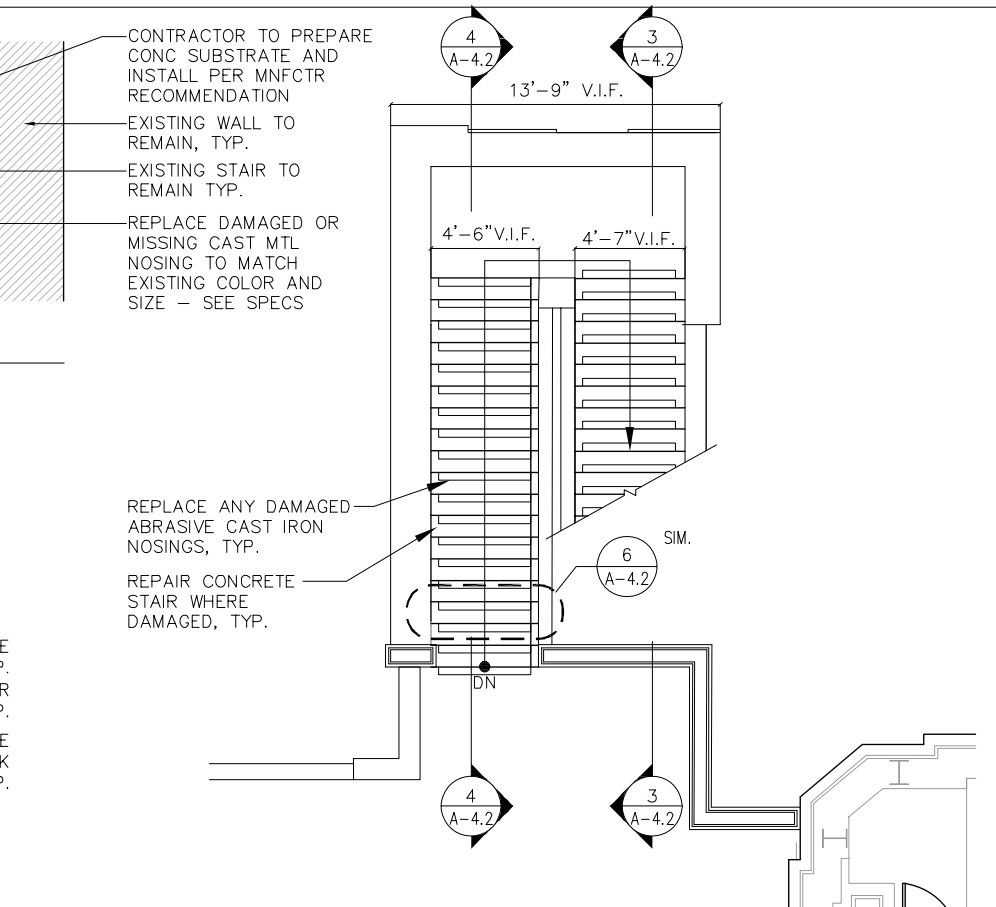
5 TYP. CONC STAIR NOSING DETAIL
SCALE: 3" = 1'-0"



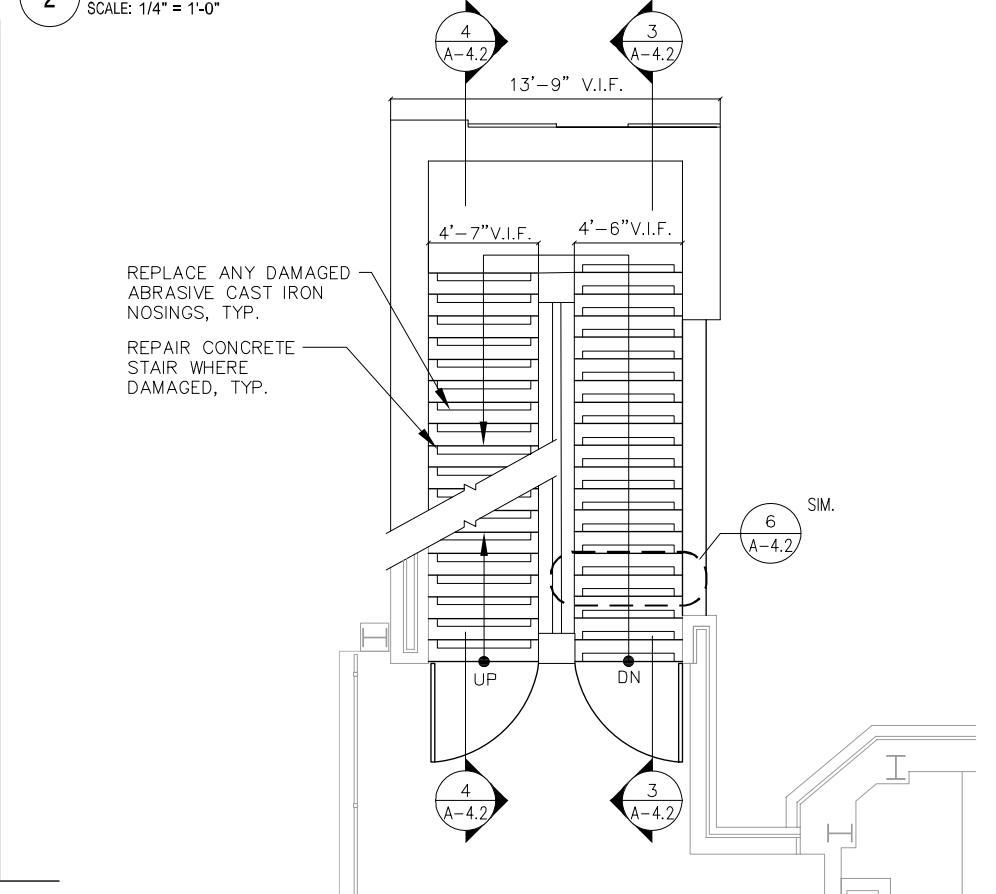
4 NORTHWEST TOWER INNER STAIR SECTION
SCALE: 1/4" = 1'-0"



3 SOUTHWEST TOWER INNER STAIR SECTION
SCALE: 1/4" = 1'-0"



2 TYP. ENLARGED PLAN - UPPER LEVEL TO INTERMEDIATE LEVEL
SCALE: 1/4" = 1'-0"



1 TYP. ENLARGED PLAN - INTERMEDIATE LEVEL TO DOCK LEVEL
SCALE: 1/4" = 1'-0"



USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

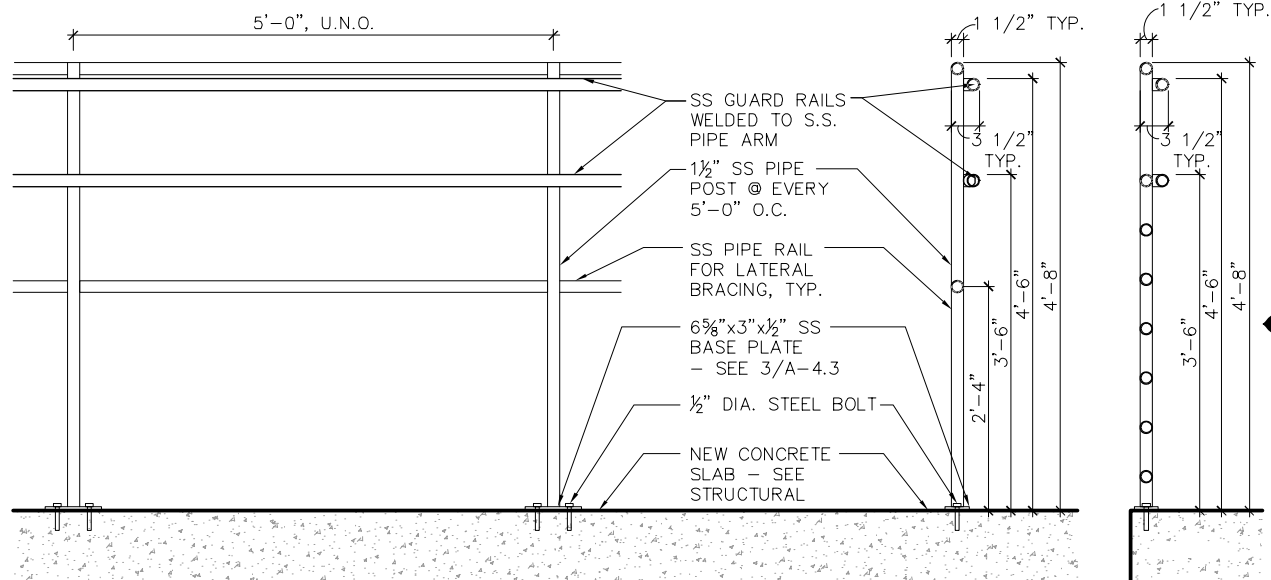
ENLARGED STAIR PLANS - WEST
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-4.2
CDOT PROJECT NO. E-6-650			168 OF 411

\$\$\$DGN\$\$\$
\$\$\$SYTIME\$\$\$

PLAN NOTES

1. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
2. FIELD VERIFY EXISTING CONDITIONS, MAINTAIN ALL CLEARANCES, AND HOLD ALL DIMENSIONS AS NOTED.

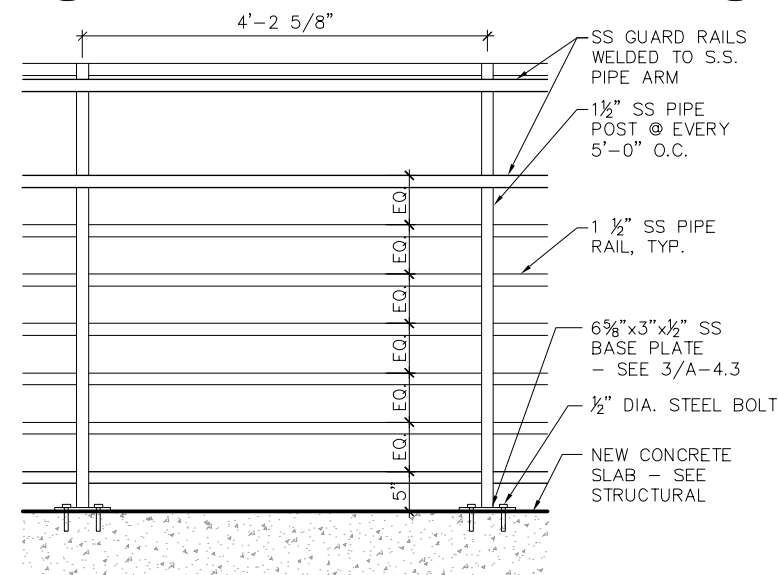


8 TYPICAL GUARDRAIL ELEVATION
SCALE: 1" = 1'-0"

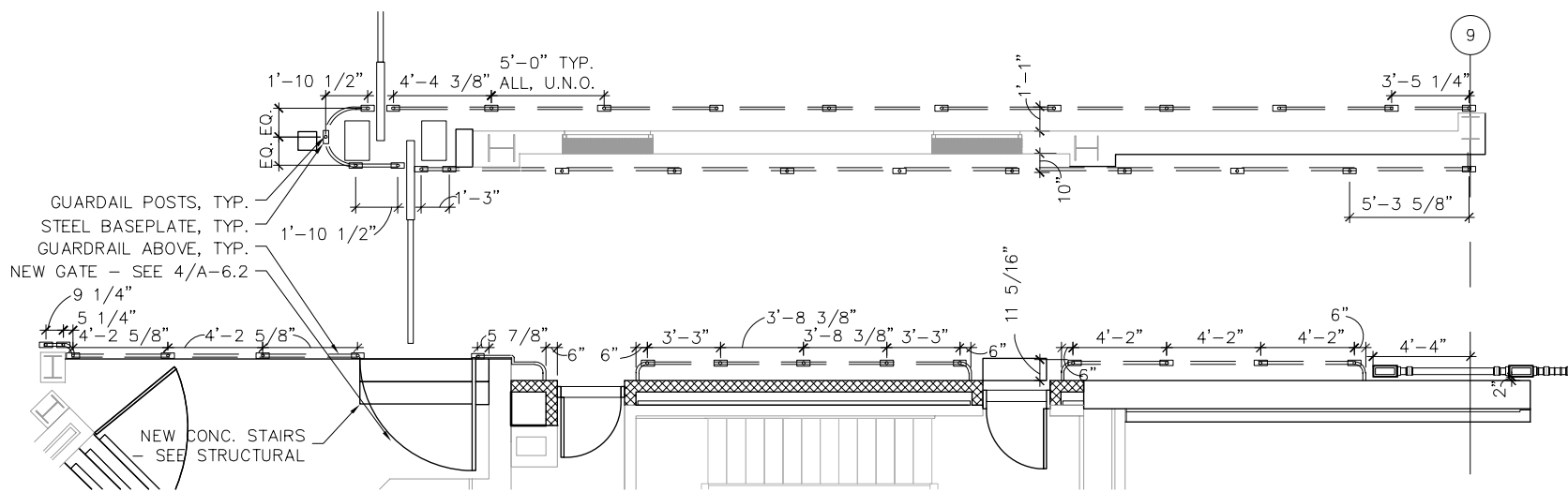
6 TYP. GUARDRAIL SECTION
SCALE: 1" = 1'-0"

5 TYP. GUARDRAIL SECTION
SCALE: 1" = 1'-0"

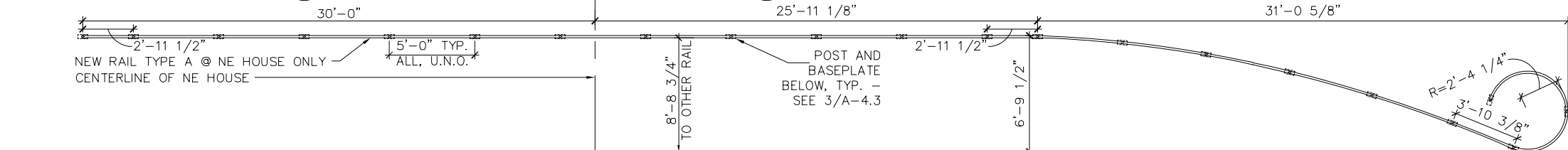
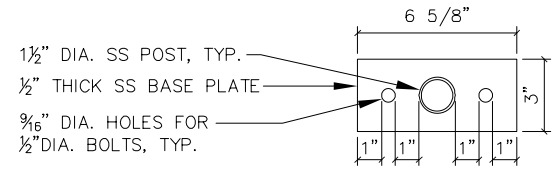
3 GUADRAIL BASEPLATE DETAIL
SCALE: 3" = 1'-0"



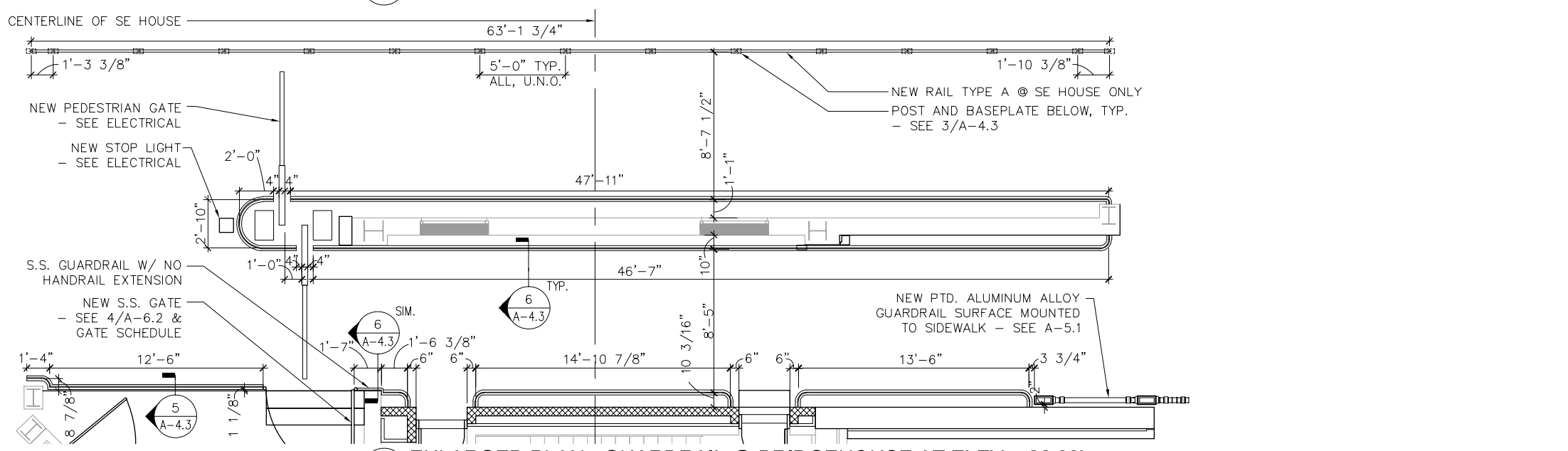
7 GUARDRAIL AT EXTERIOR STAIRS ELEVATION
SCALE: 1" = 1'-0"



4 ENLARGED PLAN - GUARDRAIL POST SPACING
SCALE: 1/4" = 1'-0"



2 ENLARGED PLAN - GUARDRAIL @ NE BRIDGEHOUSE AT ELEV. +26.00'
SCALE: 1/4" = 1'-0"



1 ENLARGED PLAN - GUARDRAIL @ BRIDGEHOUSE AT ELEV. +26.00'
SCALE: 1/4" = 1'-0"
NOTE: NE HOUSE IS SIM., O.H.



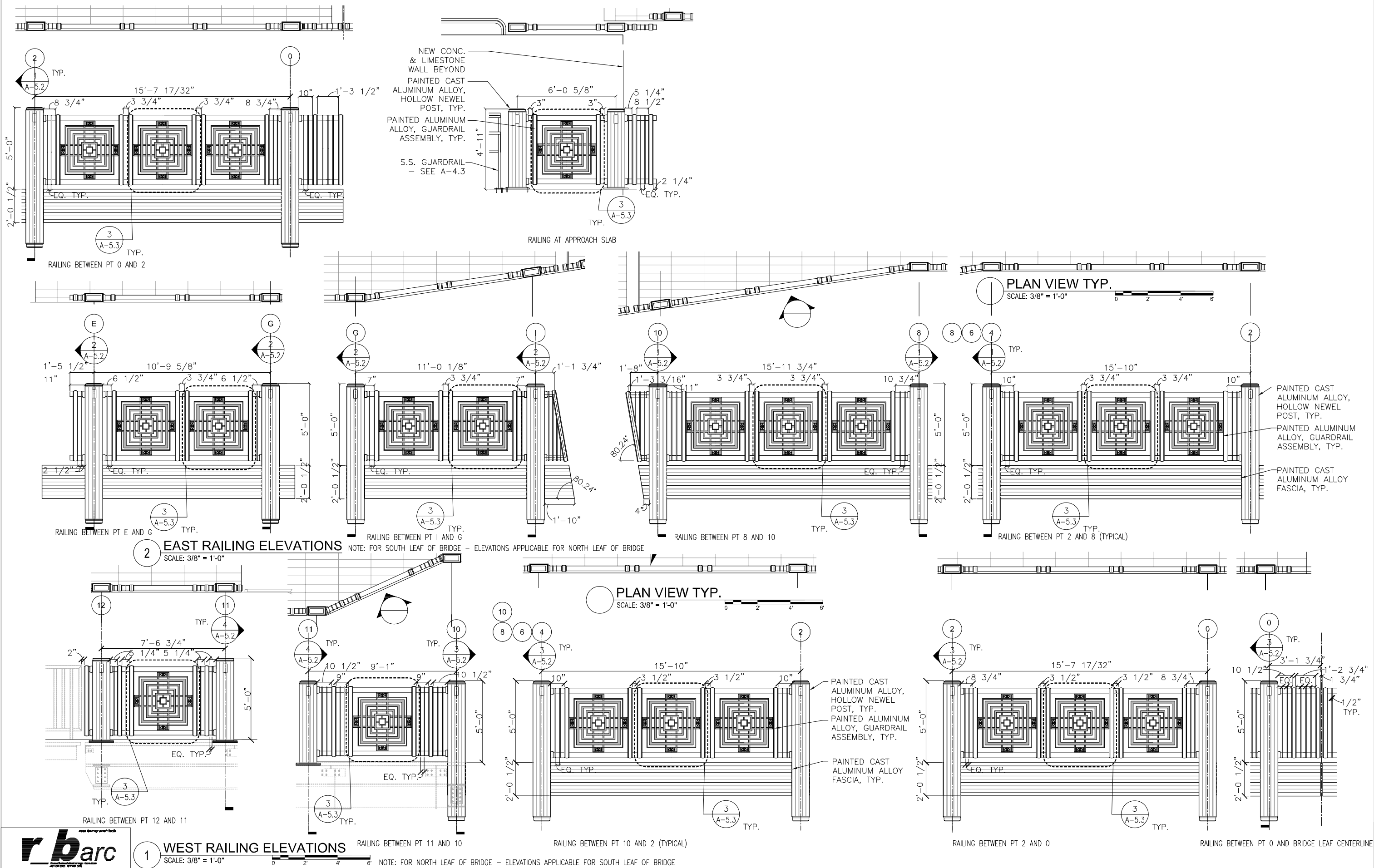
USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

CITY OF CHICAGO
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

ENLARGED PLANS &
ELEVATIONS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-4.3
CDOT PROJECT NO. E-6-650			169 OF 411



NEW CONC. & LIMESTONE WALL BEYOND
 PAINTED CAST ALUMINUM ALLOY, HOLLOW NEWEL POST, TYP.
 PAINTED ALUMINUM ALLOY, GUARDRAIL ASSEMBLY, TYP.
 S.S. GUARDRAIL - SEE A-4.3

PAINTED CAST ALUMINUM ALLOY, HOLLOW NEWEL POST, TYP.
 PAINTED ALUMINUM ALLOY, GUARDRAIL ASSEMBLY, TYP.
 PAINTED CAST ALUMINUM ALLOY FASCIA, TYP.

PAINTED CAST ALUMINUM ALLOY, HOLLOW NEWEL POST, TYP.
 PAINTED ALUMINUM ALLOY, GUARDRAIL ASSEMBLY, TYP.
 PAINTED CAST ALUMINUM ALLOY FASCIA, TYP.

2 EAST RAILING ELEVATIONS
 SCALE: 3/8" = 1'-0"
 NOTE: FOR SOUTH LEAF OF BRIDGE - ELEVATIONS APPLICABLE FOR NORTH LEAF OF BRIDGE

1 WEST RAILING ELEVATIONS
 SCALE: 3/8" = 1'-0"
 NOTE: FOR NORTH LEAF OF BRIDGE - ELEVATIONS APPLICABLE FOR SOUTH LEAF OF BRIDGE

CITY OF CHICAGO
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LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

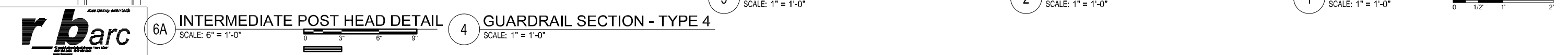
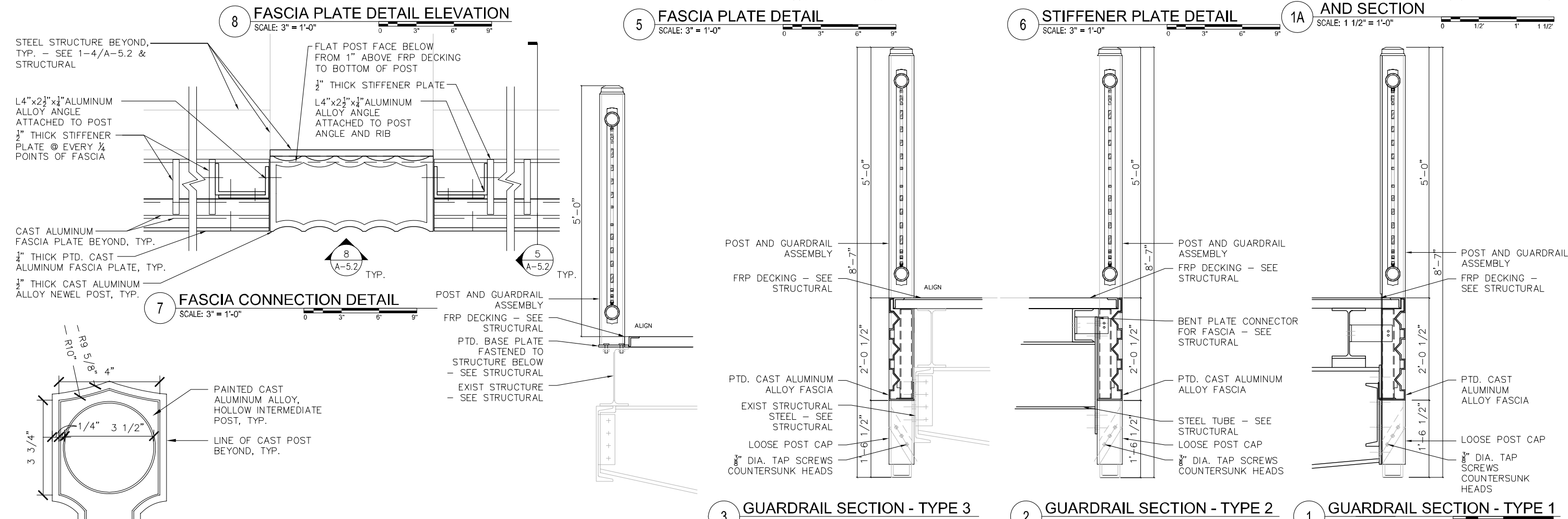
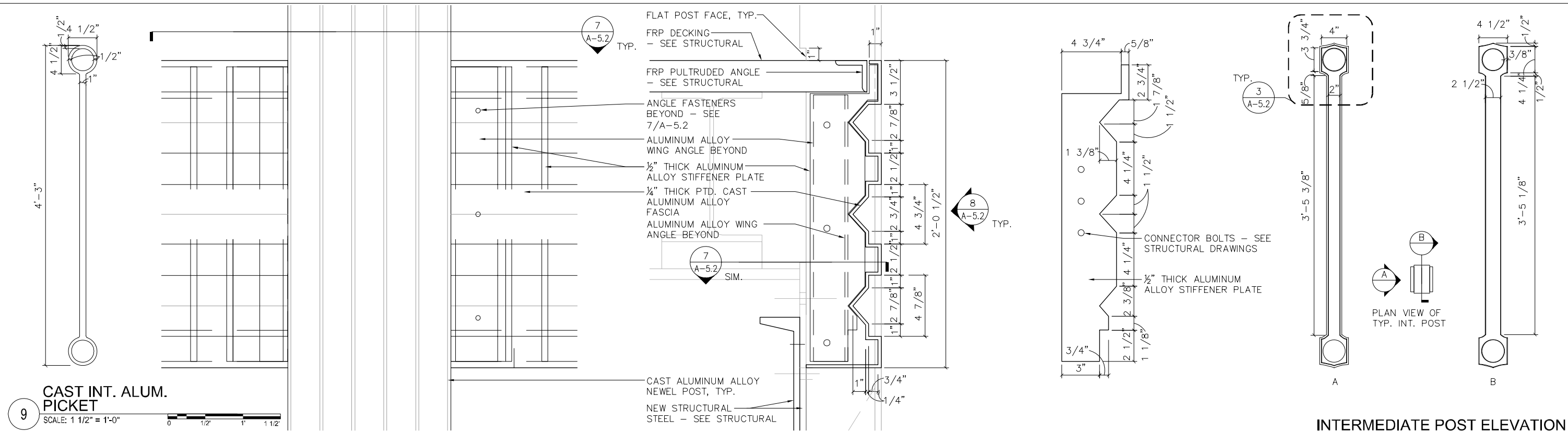
GUARDRAIL DETAILS
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-5.1
CDOT PROJECT NO. E-6-650			170 OF 411

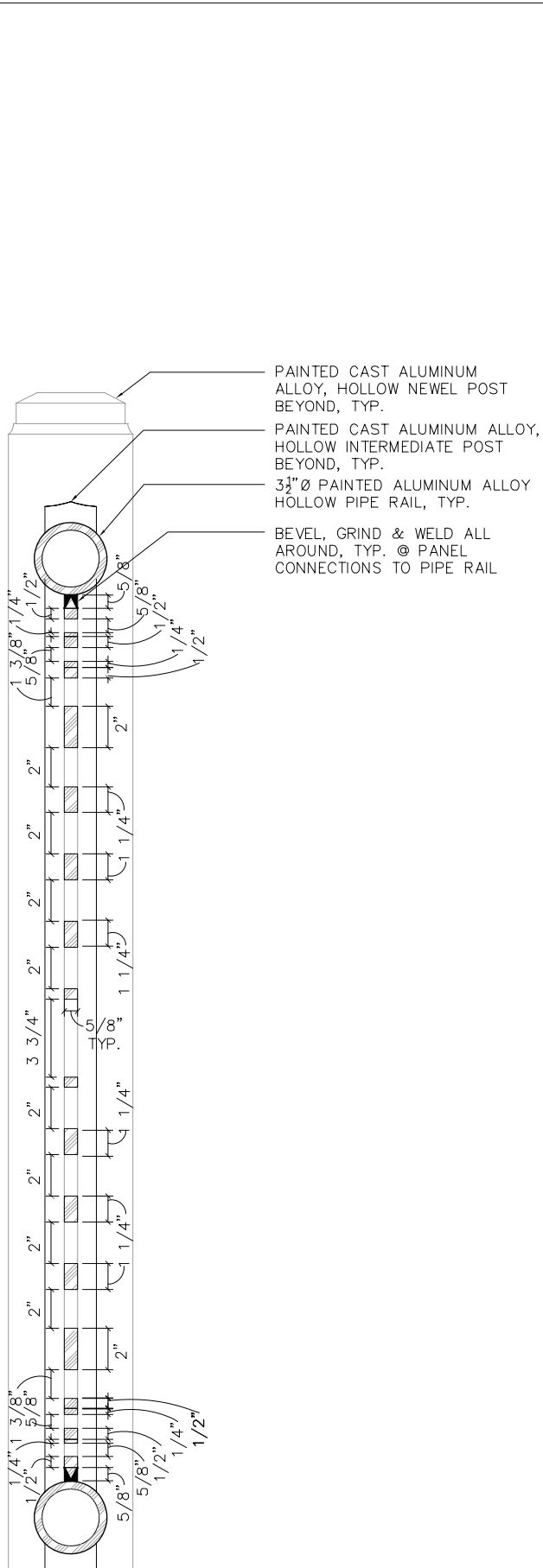
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 30 N. LASALLE STREET
 SUITE 4000
 CHICAGO, IL 60602
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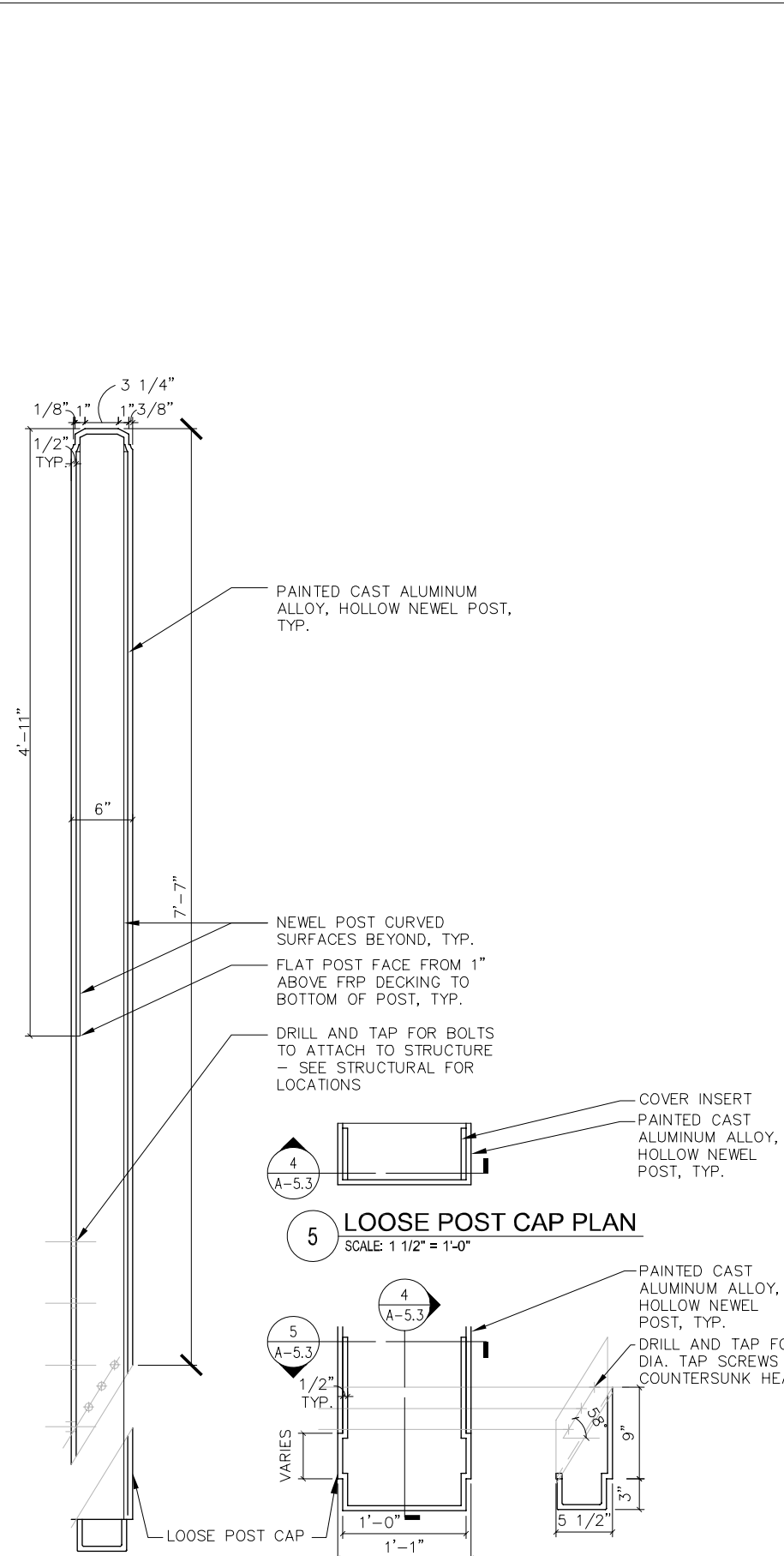
USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED



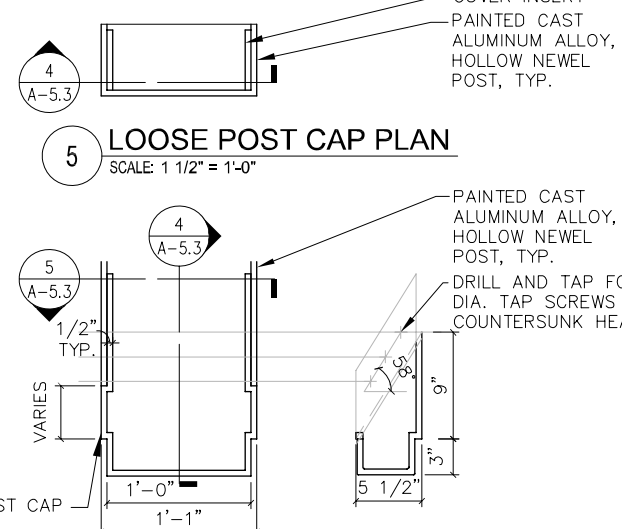
	USER NAME =	DESIGNED	REVISED	CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING	LAKEFRONT BICYCLE TRAIL #3 OVER THE CHICAGO RIVER	GUARDRAIL DETAILS (STRUCTURE NO. 016-6030)	F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
	PLOT SCALE =	CHECKED	REVISED				0341	09-E0534-00-BR/CDOT	COOK	A-5.2
	PLOT DATE =	DRAWN	REVISED				CDOT PROJECT NO. E-6-650			171 OF 411
		CHECKED	REVISED							



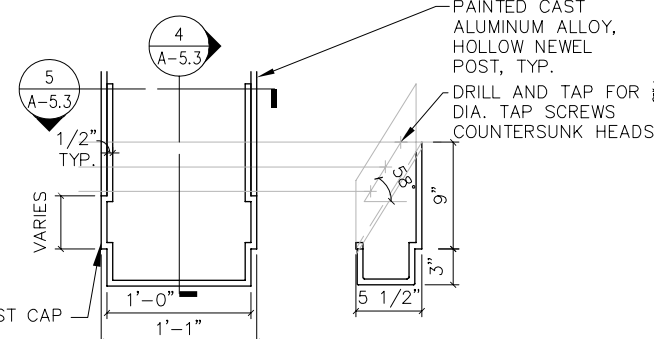
7 GUARDRAIL PANEL SECTION
SCALE: 3" = 1'-0"



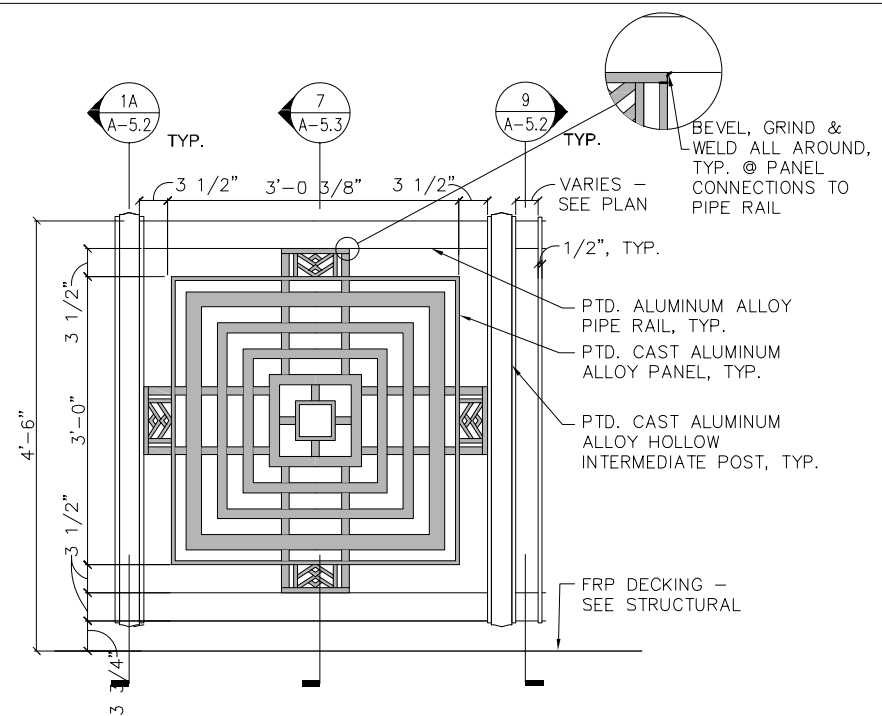
6 NEWEL POST SECTION
SCALE: 1 1/2" = 1'-0"



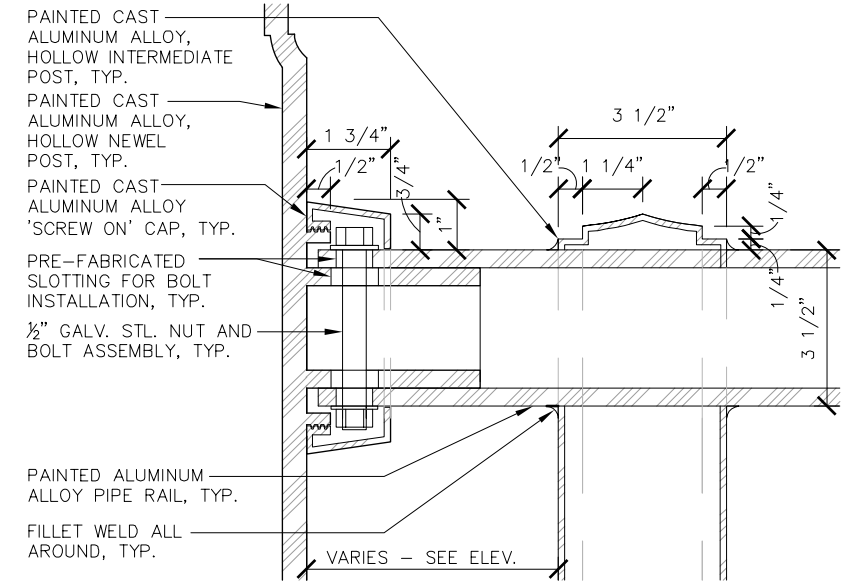
5 LOOSE POST CAP PLAN
SCALE: 1 1/2" = 1'-0"



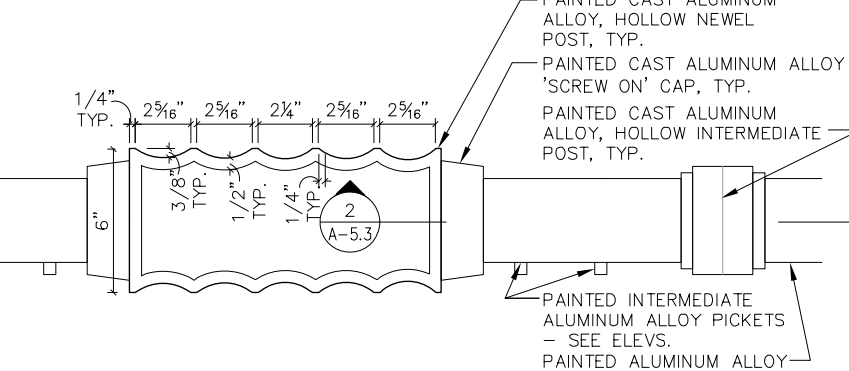
4 LOOSE POST CAP SECTION
SCALE: 1 1/2" = 1'-0"



3 TYPICAL PANEL ASSEMBLY
SCALE: 1" = 1'-0"



2 HANDRAIL CONNECTION DETAIL
SCALE: 1/2" = 1'



1 HANDRAIL CONNECTION DETAIL
SCALE: 3" = 1'-0"



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PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

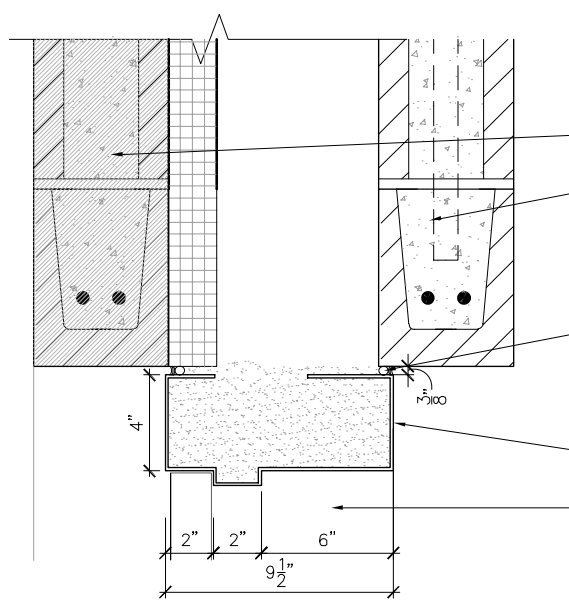
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

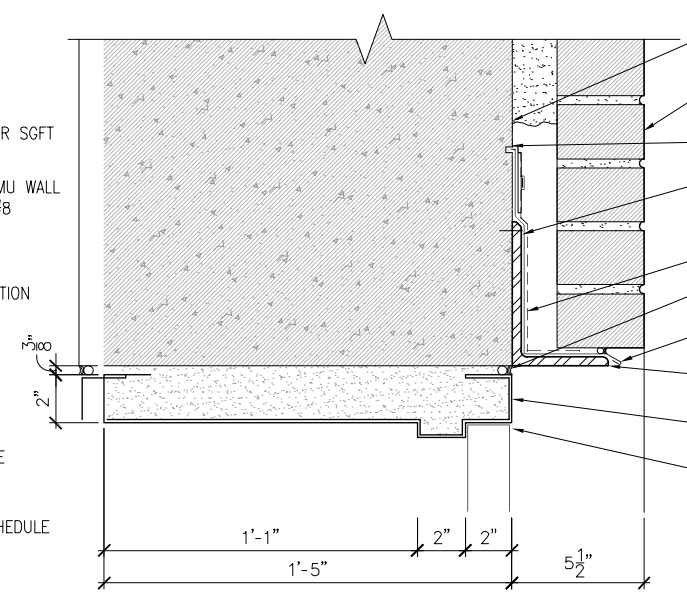
GUARDRAIL DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-5.3
CDOT PROJECT NO. E-6-650			172 OF 411

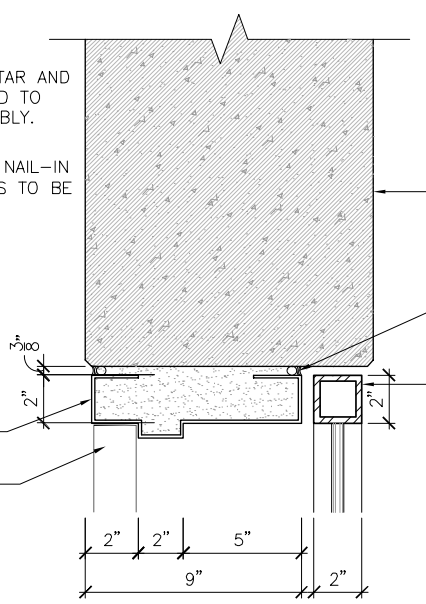
\$\$\$DGN\$\$\$
\$\$\$SYTIME\$\$\$



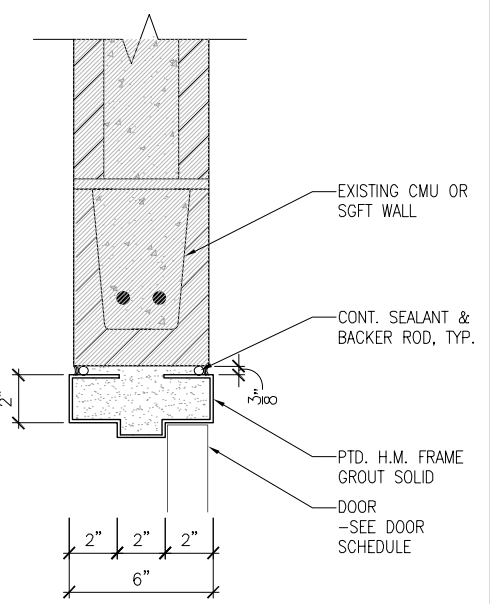
12 HEAD DETAIL @ NEW CMU WALL
SCALE: 3" = 1'-0"



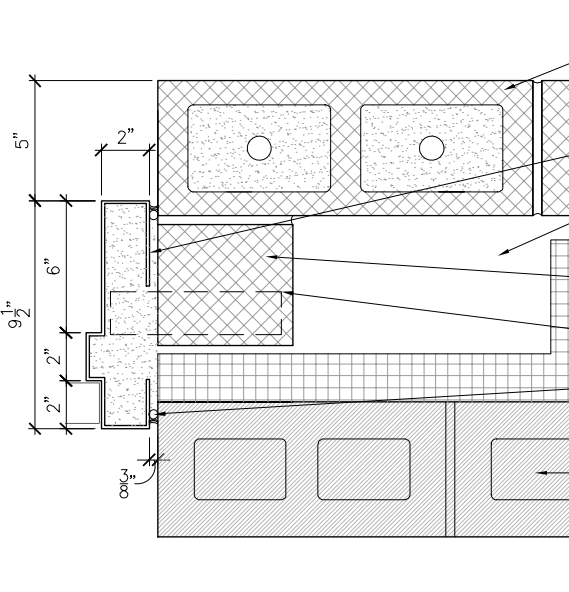
9 HEAD DETAIL @ CONC & MASONRY
SCALE: 3" = 1'-0"



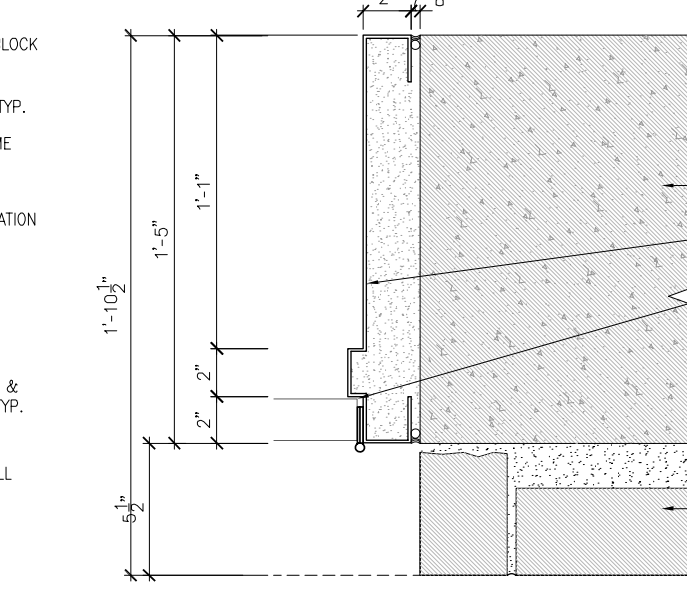
6 HEAD DETAIL @ EXISTING CONC
SCALE: 3" = 1'-0"



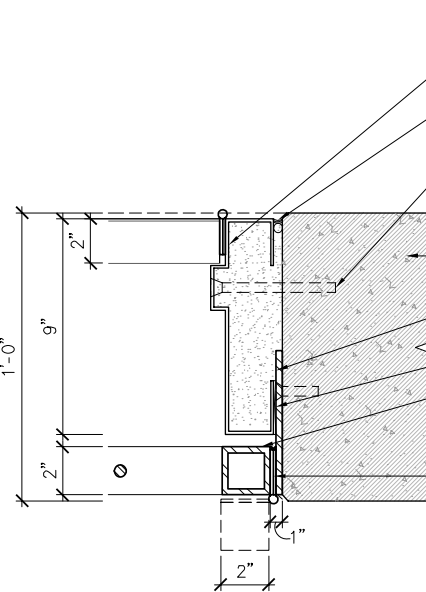
3 HEAD DETAIL @ EXIST CMU OR SGFT
SCALE: 3" = 1'-0"



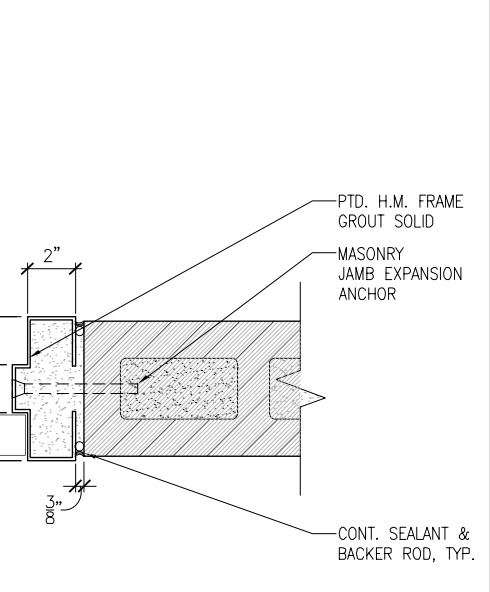
11 JAMB DETAIL @ NEW CMU WALL
SCALE: 3" = 1'-0"



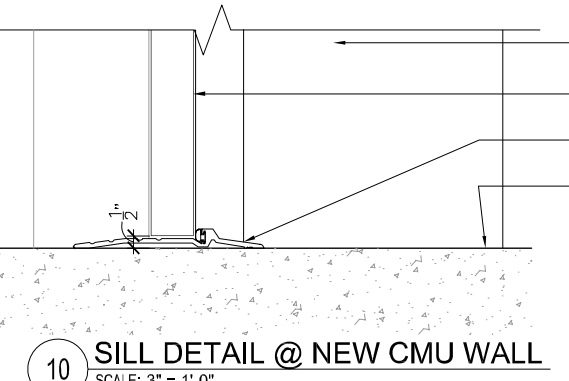
8 JAMB DETAIL @ CONC & MASONRY
SCALE: 3" = 1'-0"



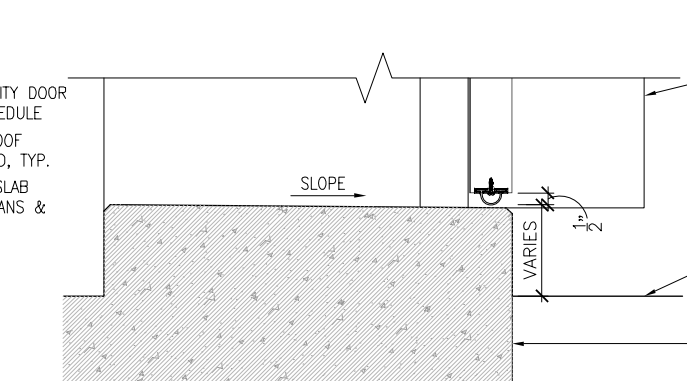
5 JAMB DETAIL @ EXISTING CONC
SCALE: 3" = 1'-0"



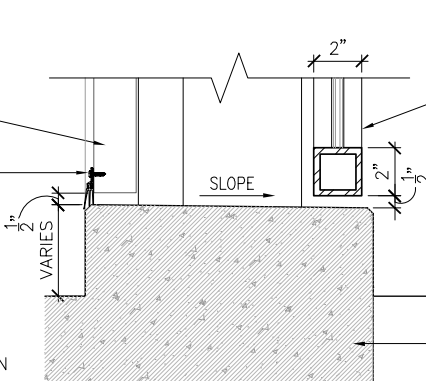
2 JAMB DETAIL @ EXIST CMU OR SGFT
SCALE: 3" = 1'-0"



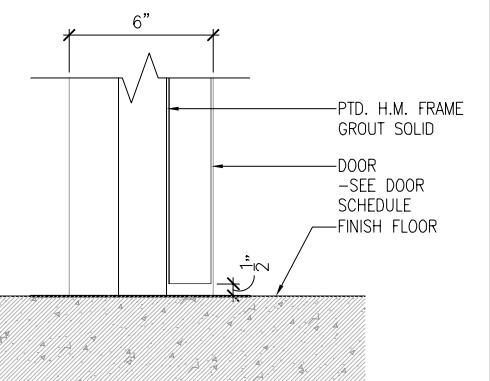
10 SILL DETAIL @ NEW CMU WALL
SCALE: 3" = 1'-0"



7 SILL DETAIL @ CONC & MASONRY
SCALE: 3" = 1'-0"



4 SILL DETAIL @ EXISTING CONC
SCALE: 3" = 1'-0"



1 SILL DETAIL @ EXIST CMU OR SGFT
SCALE: 3" = 1'-0"

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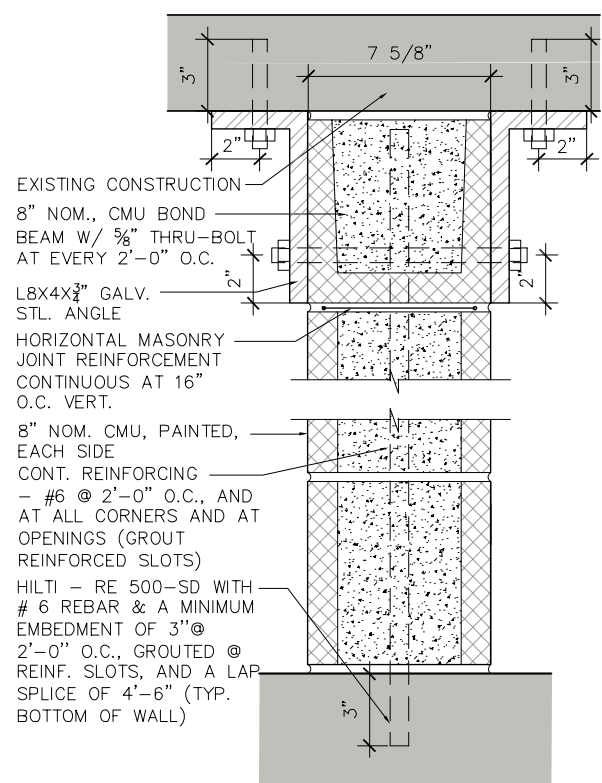
USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

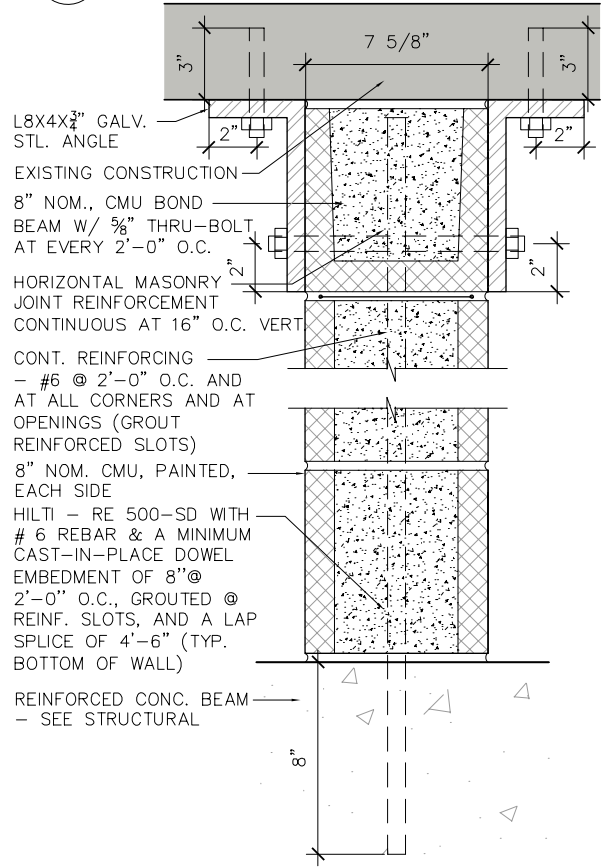
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

DOOR DETAILS
(STRUCTURE NO. 016-6030)

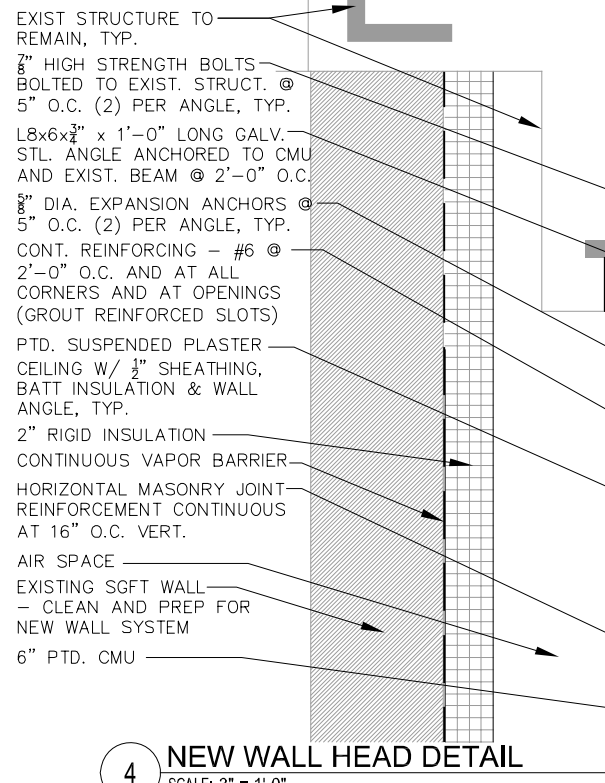
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-5.4
CDOT PROJECT NO. E-6-650			173 OF 411



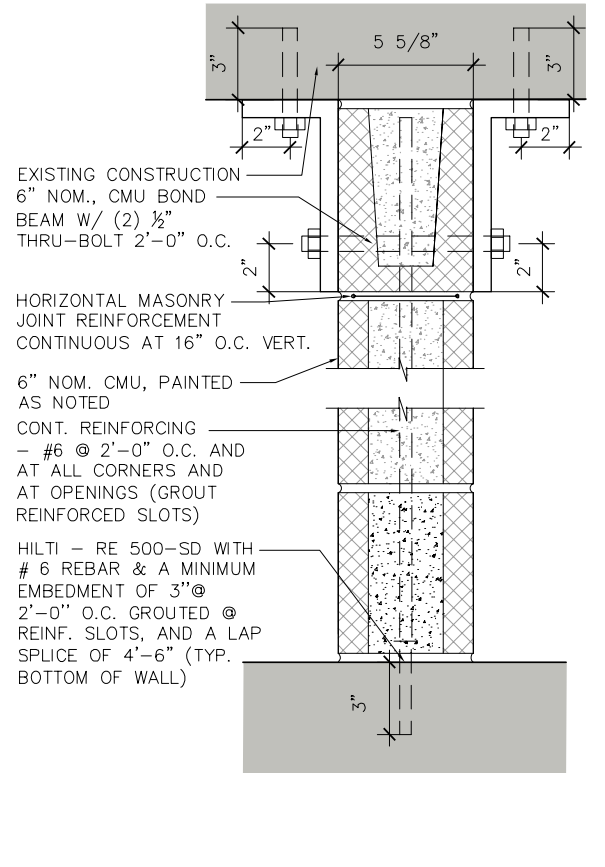
5 WALL TYPE B1 2 HR RATED WALL
SCALE: 3" = 1'-0" UL 906



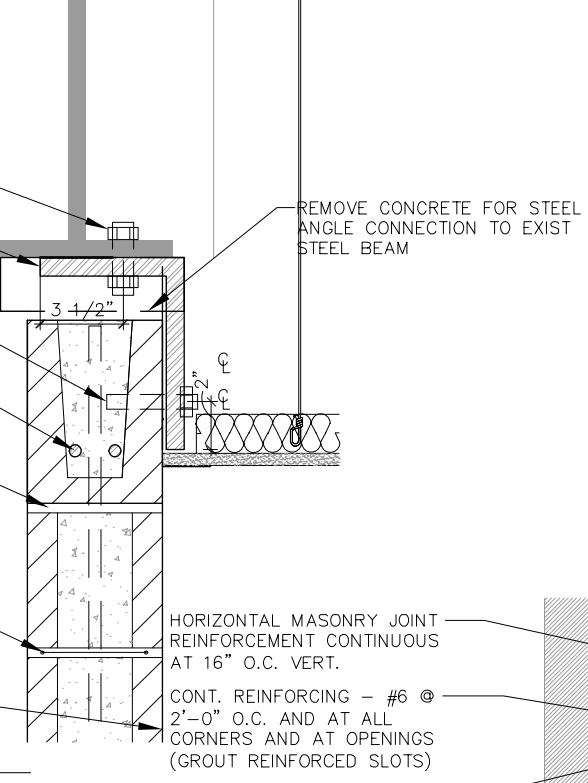
5 WALL TYPE B 2 HR RATED WALL
SCALE: 3" = 1'-0" UL 906



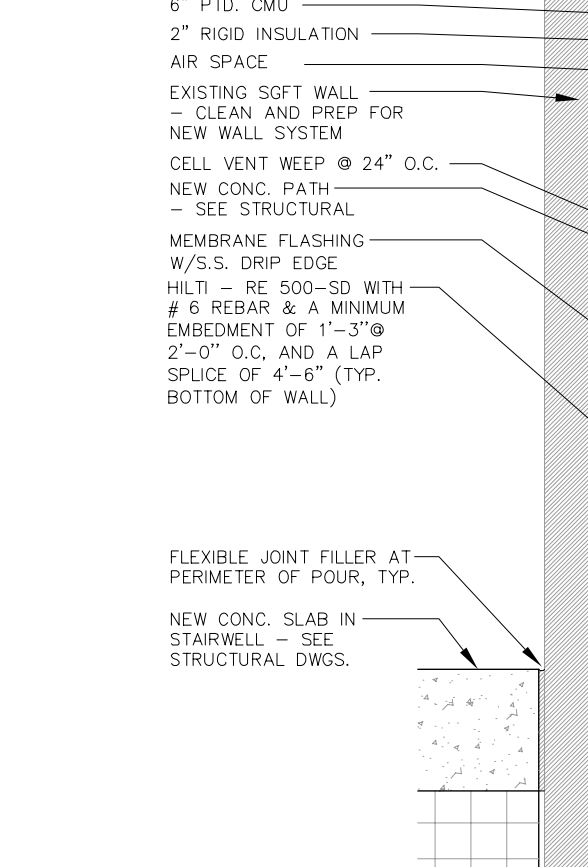
4 NEW WALL HEAD DETAIL
SCALE: 3" = 1'-0"



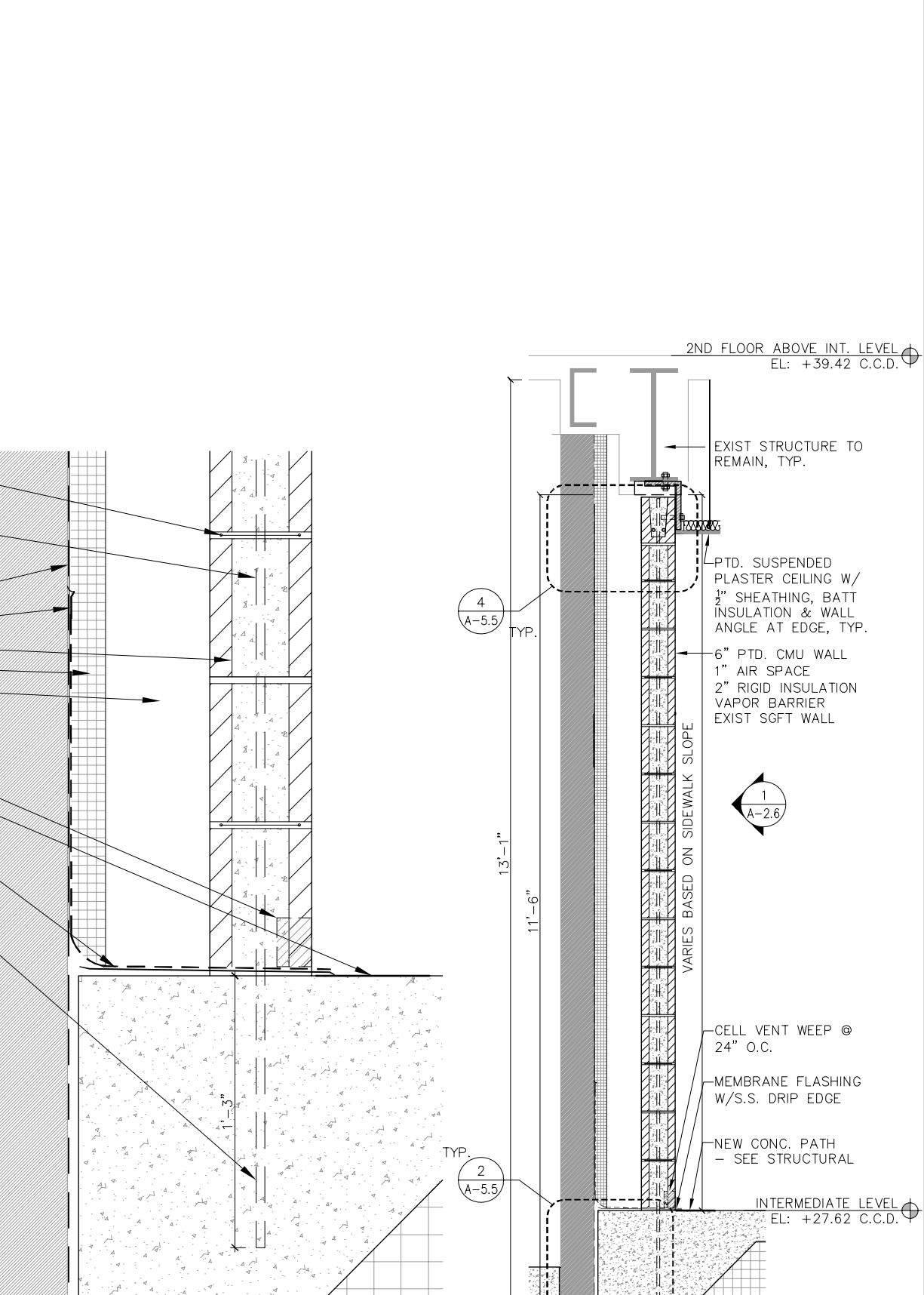
3 WALL TYPE A
SCALE: 3" = 1'-0"



2 NEW WALL BASE DETAIL
SCALE: 3" = 1'-0"



2 NEW WALL BASE DETAIL
SCALE: 3" = 1'-0"



1 WALL SECTION - NEW WALL AT PATH
SCALE: 1" = 1'-0"



USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

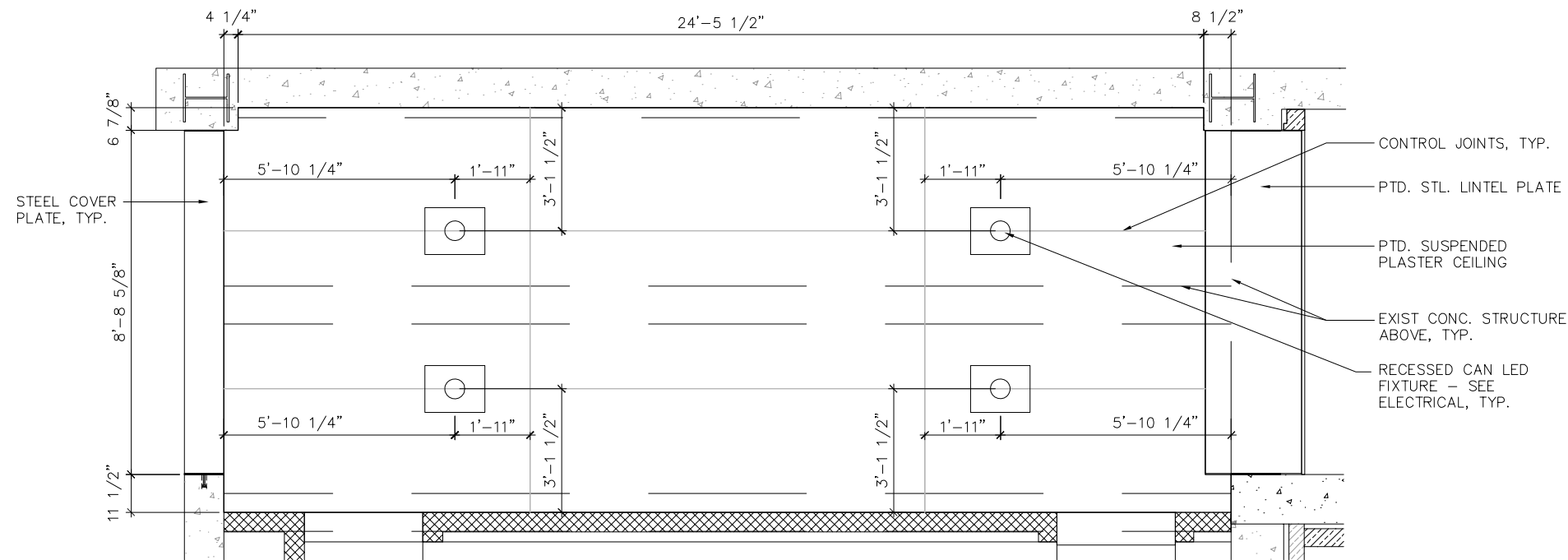
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SECTION & WALL DETAILS
(STRUCTURE NO. 016-6030)

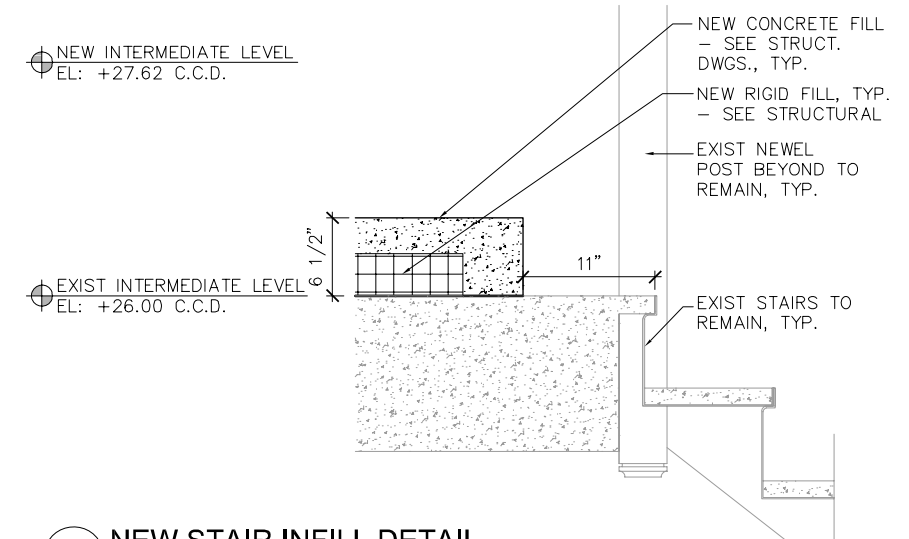
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-5.5
CDOT PROJECT NO. E-6-650			174 OF 411

\$\$\$GN\$\$\$
\$SYTIME\$



4 RCP AT INTERMEDIATE LEVEL PATHWAY
SCALE: 1/2" = 1'-0"

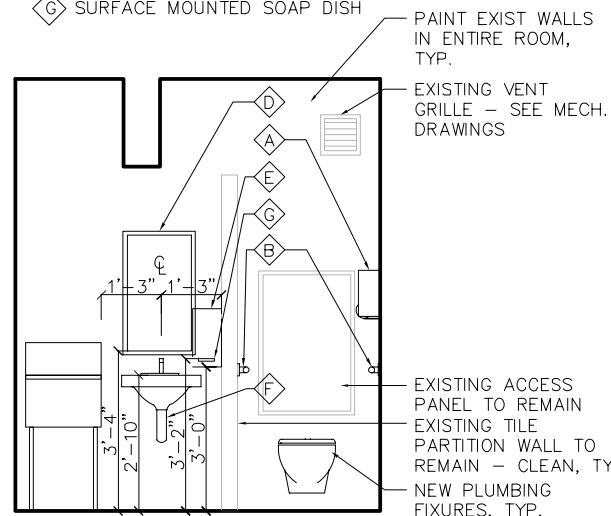
- CONTROL JOINTS, TYP.
- PTD. STL. LINTEL PLATE
- PTD. SUSPENDED PLASTER CEILING
- EXIST CONC. STRUCTURE ABOVE, TYP.
- RECESSED CAN LED FIXTURE - SEE ELECTRICAL, TYP.



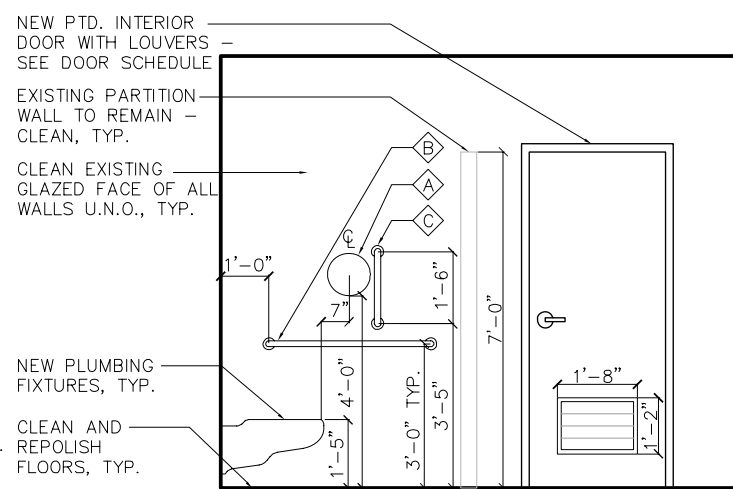
2 NEW STAIR INFILL DETAIL
SCALE: 1 1/2" = 1'-0"

SYMBOL LEGEND

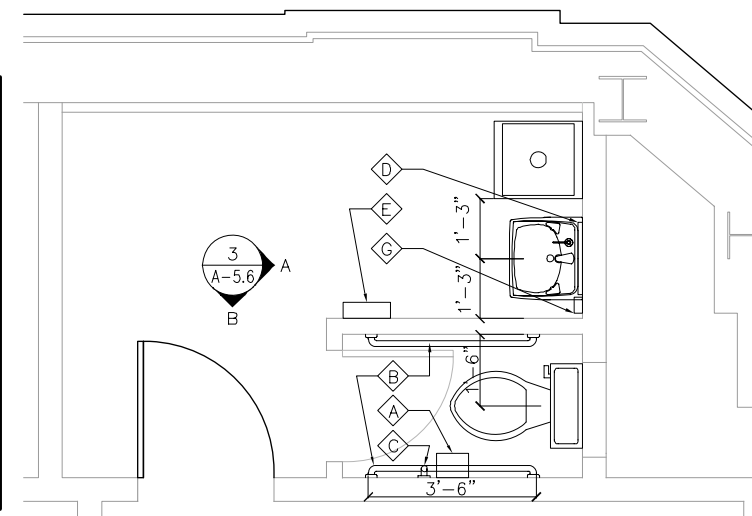
- ⬠ SURF. MTD. T.P. DISPENSER
- ⬠ S.S GB42 - 42" STAINLESS STEEL GRAB BAR
- ⬠ S.S VGB - STAINLESS STEEL VERT. GRAB BAR
- ⬠ SURF. MTD. S.S. MIRROR - 40" AFF
- ⬠ SURFACE MOUNTED SINGLE FOLD PAPER TOWEL DISPENSER
- ⬠ PIPE INSULATION
- ⬠ SURFACE MOUNTED SOAP DISH



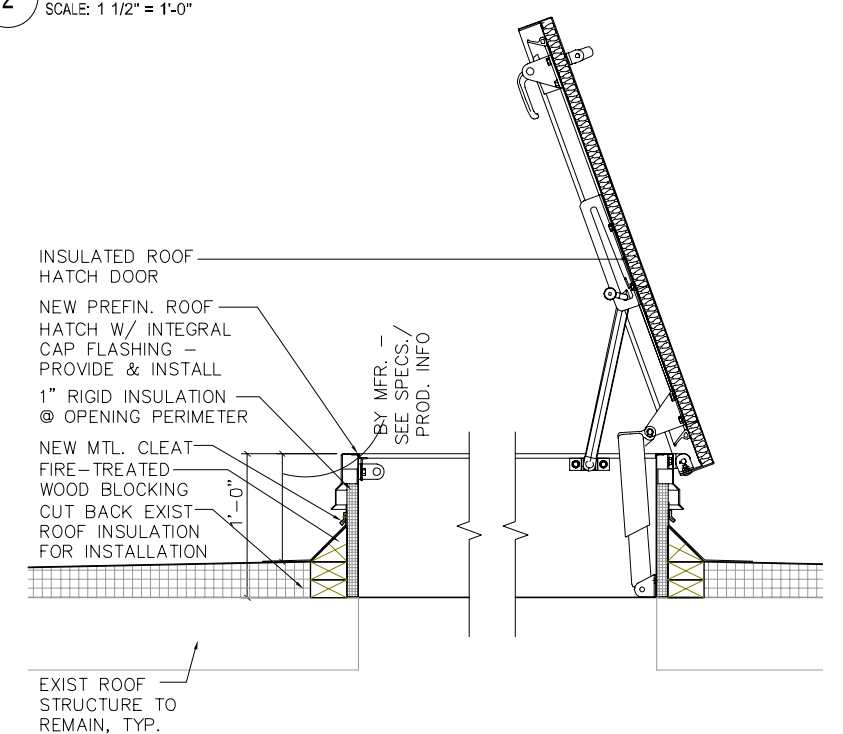
A INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"



B TOILET ROOM ELEVATION
SCALE: 1/2" = 1'-0"



3 ENLARGED TOILET ROOM PLAN
SCALE: 1/2" = 1'-0"



1 ROOF HATCH SECTION
SCALE: 1 1/2" = 1'-0"

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riley barney architects

wsp
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CHICAGO, IL 60602
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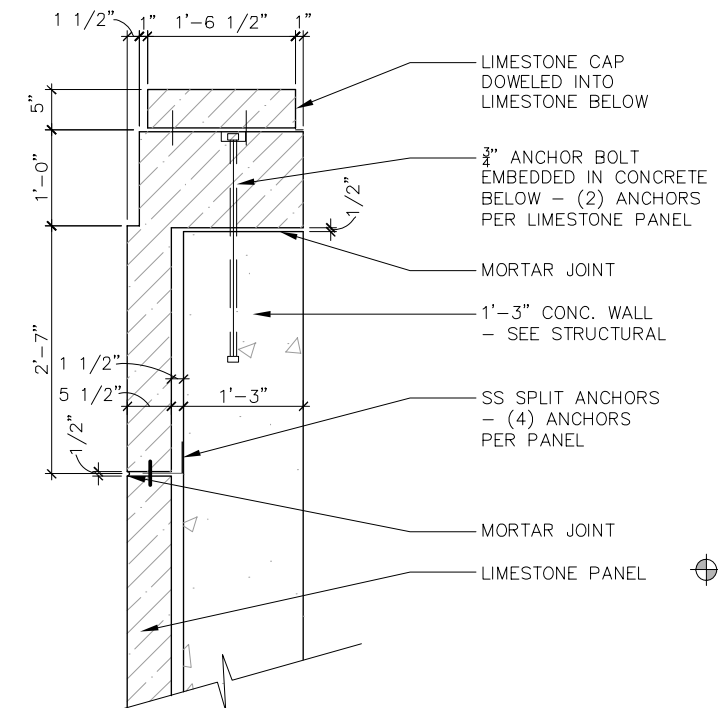
USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

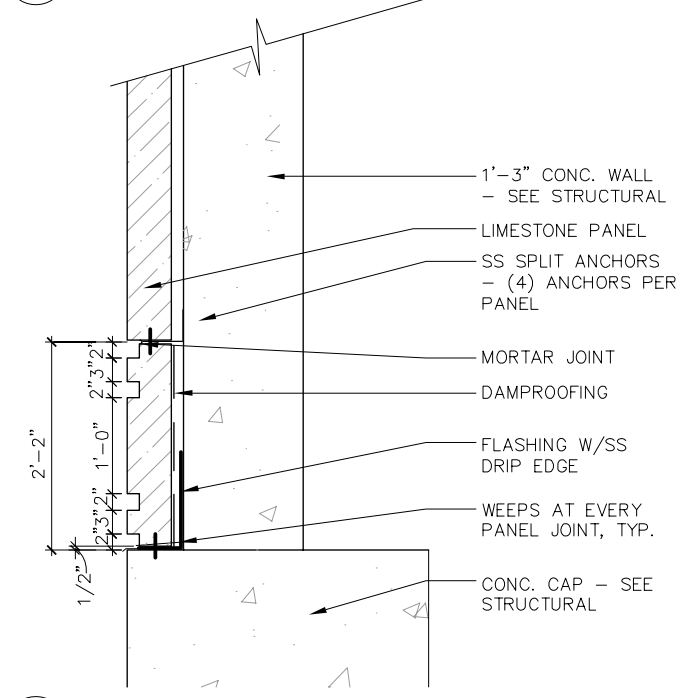
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

MISCELLANEOUS DETAILS
(STRUCTURE NO. 016-6030)

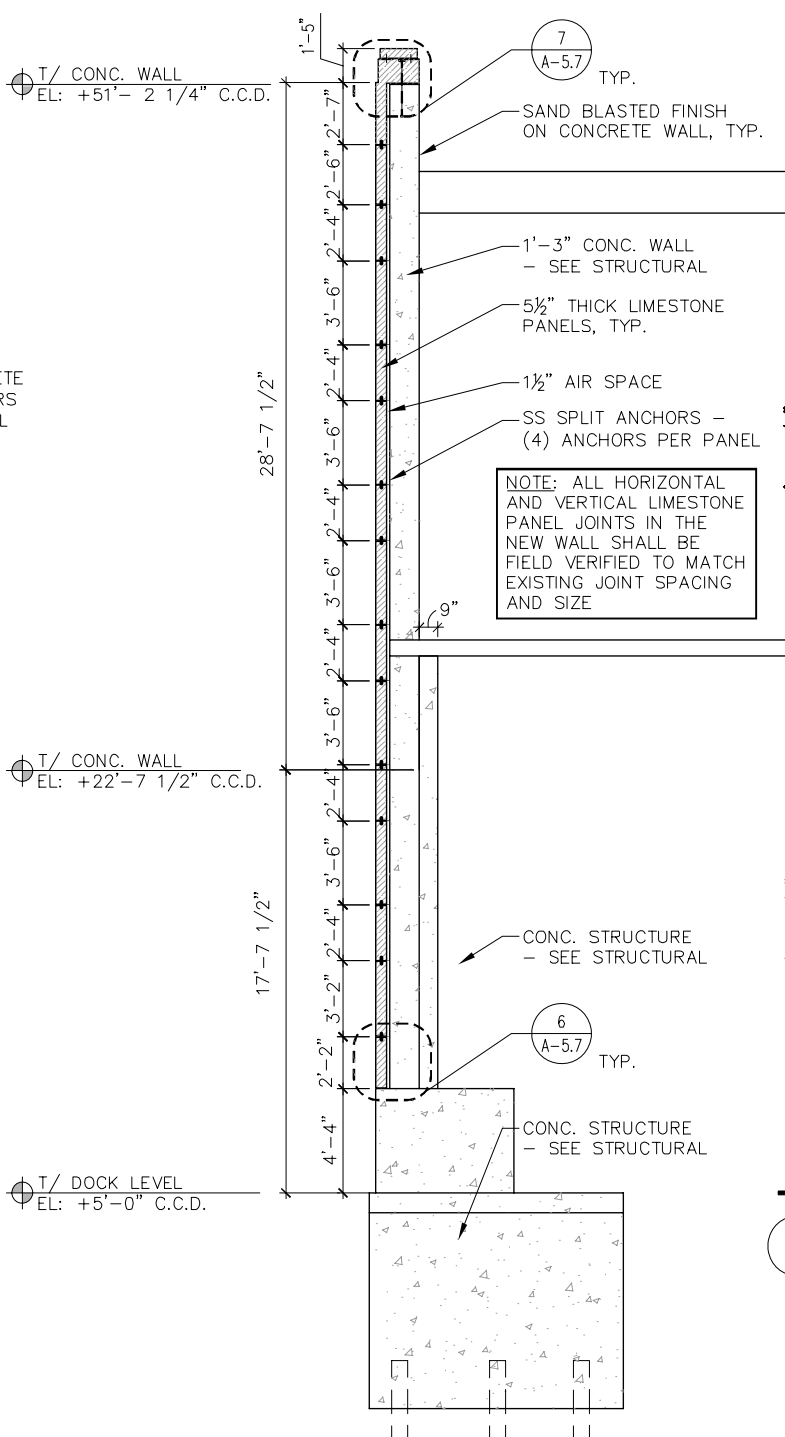
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-5.6
CDOT PROJECT NO. E-6-650			175 OF 411



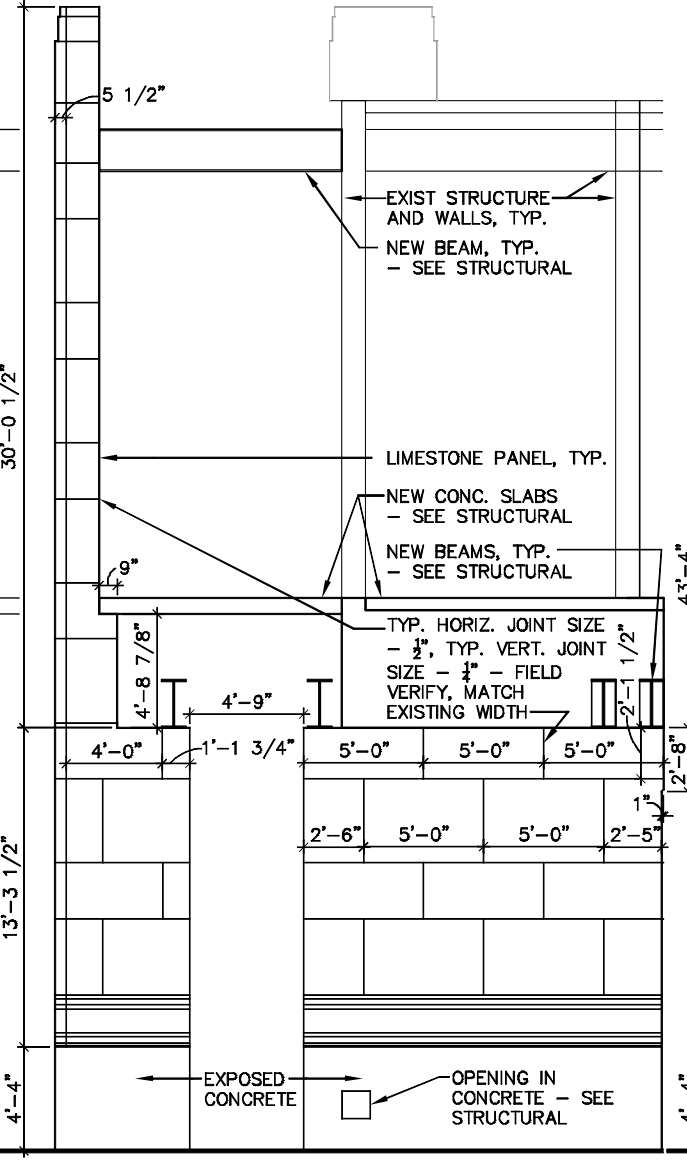
7 LIMESTONE DETAIL @ PARAPET
SCALE: 1" = 1'-0"



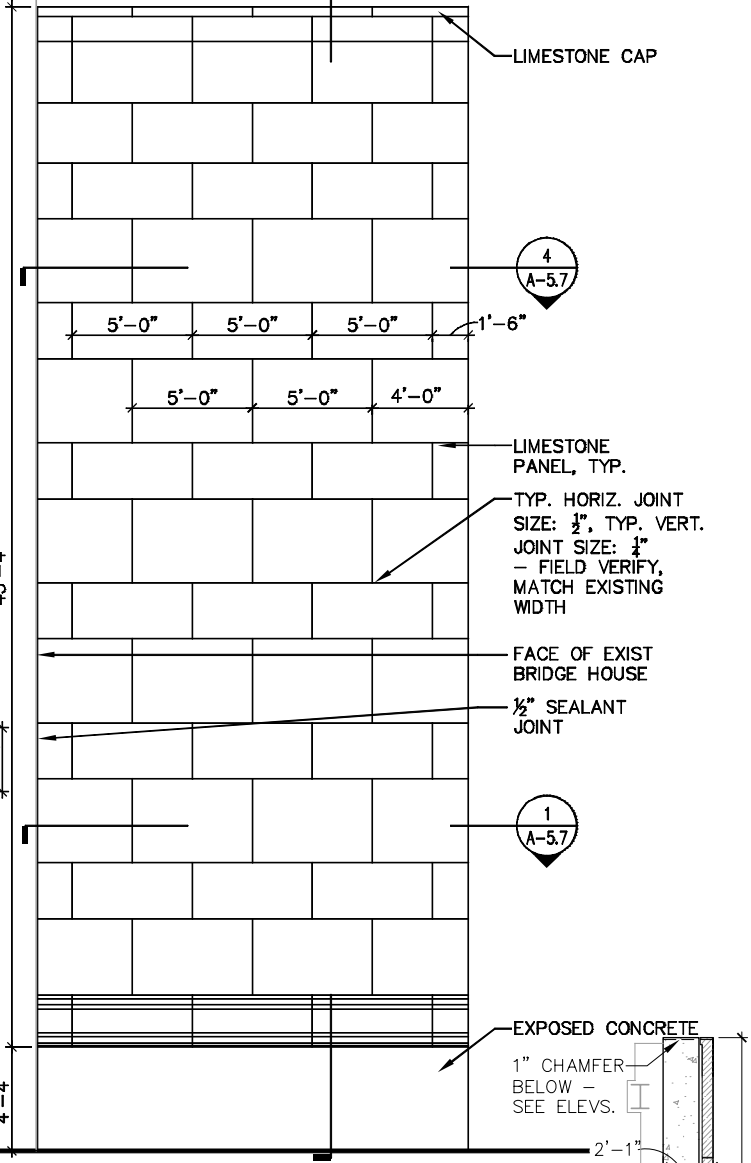
6 LIMESTONE DETAIL @ BASE
SCALE: 1" = 1'-0"



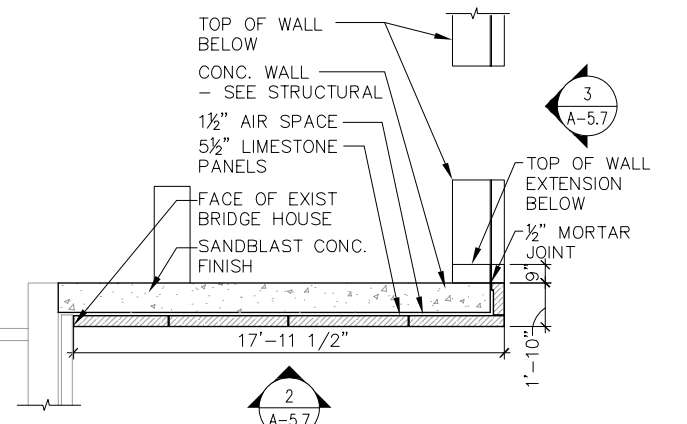
5 WALL SECTION
SCALE: 1/4" = 1'-0"



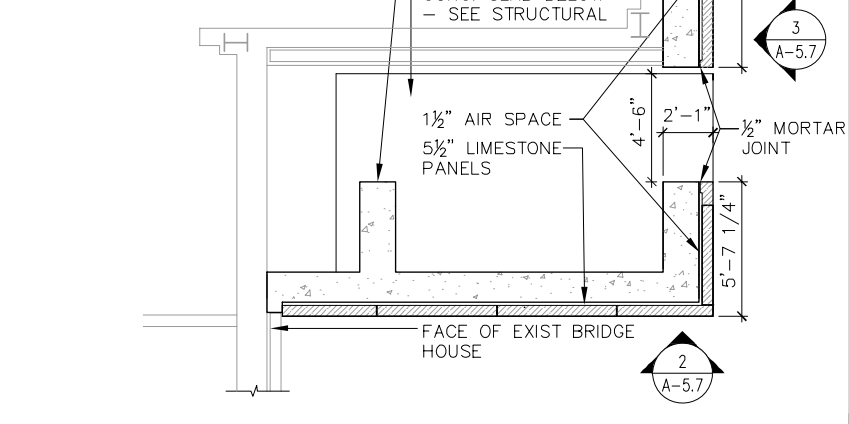
3 RELOCATED WALL ELEVATION
SCALE: 1/4" = 1'-0"



2 RELOCATED WALL ELEVATION
SCALE: 1/4" = 1'-0"



4 RELOCATED WALL PLAN @ UPPER WALL
SCALE: 1/4" = 1'-0"



1 RELOCATED WALL PLAN @ LOWER WALL
SCALE: 1/4" = 1'-0"



NOTE: DETAILS ARE OF THE SE HOUSE CONDITIONS; DETAILS ARE TYP. FOR N.E. HOUSE, OPPOSITE HAND

USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

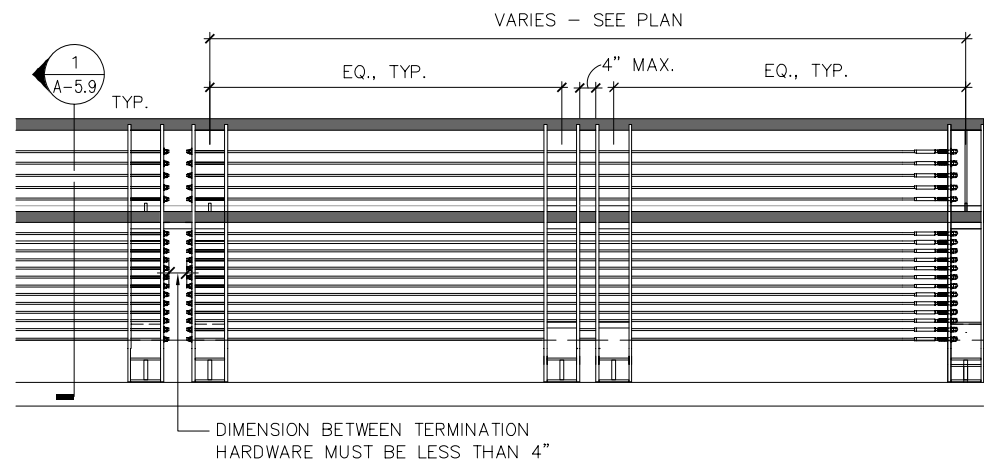
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

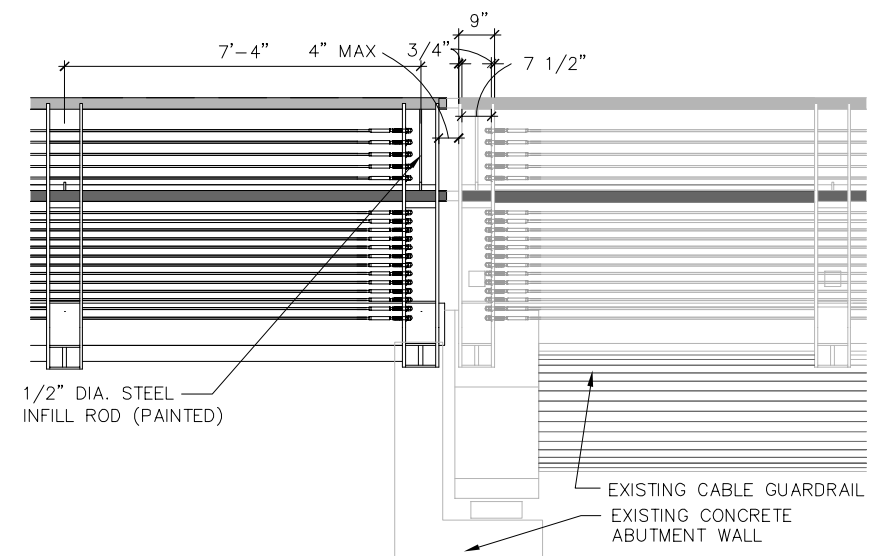
RELOCATED WALL DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-5.7
CDOT PROJECT NO. E-6-650			176 OF 411

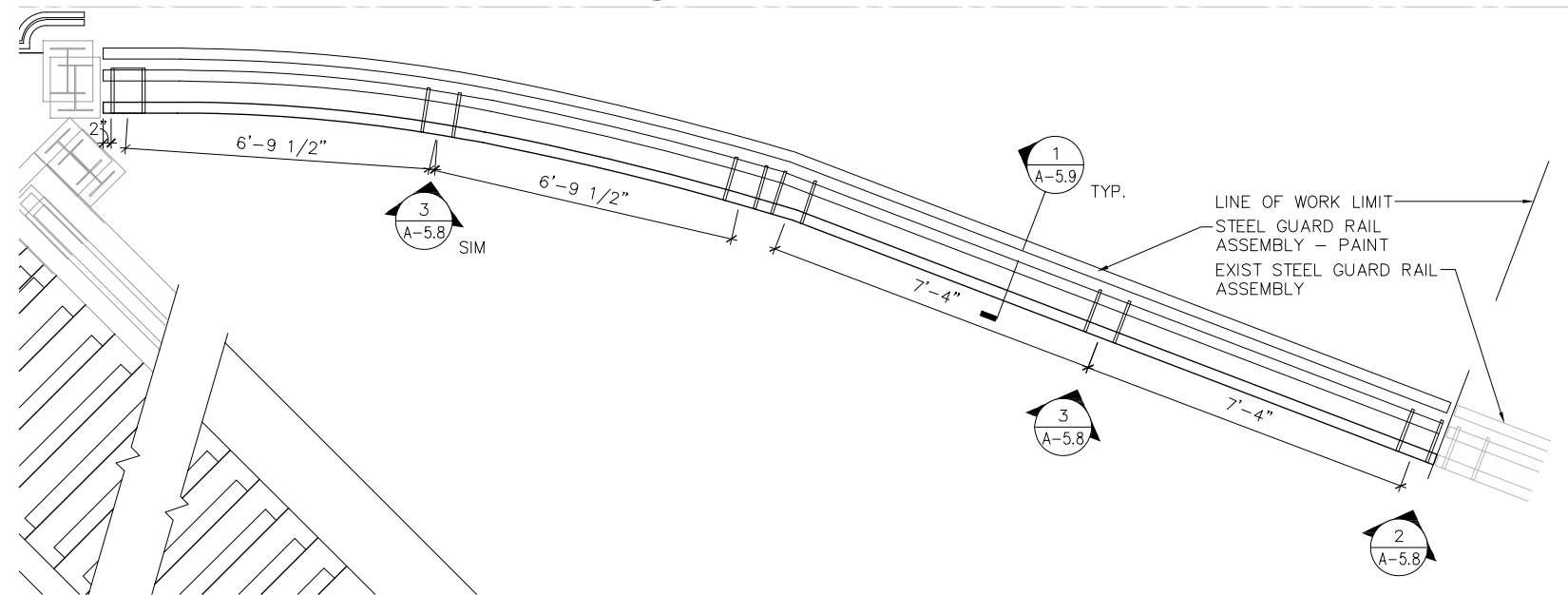
\$\$\$GN\$\$\$
\$\$SYTIME\$\$



3 TYPICAL GUARDRAIL ELEVATION
SCALE: 1/2" = 1'-0"



2 GUARDRAIL ELEVATION @ EXISTING RAIL
SCALE: 1/2" = 1'-0"



1 NORTH GUARDRAIL PLAN
SCALE: 1/2" = 1'-0"



WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

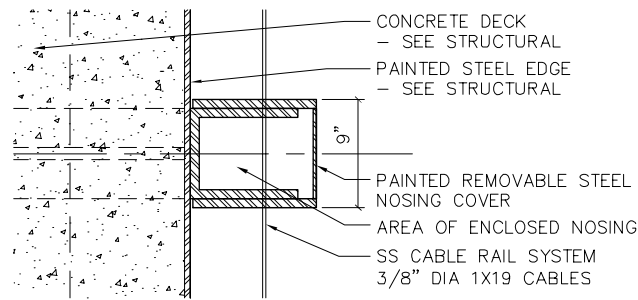
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

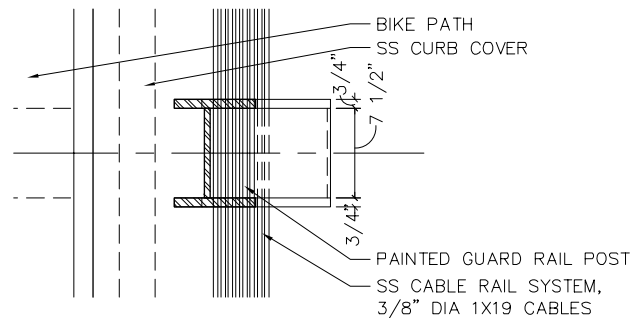
NORTH GUARDRAIL DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-5.8
CDOT PROJECT NO. E-6-650			177 OF 411

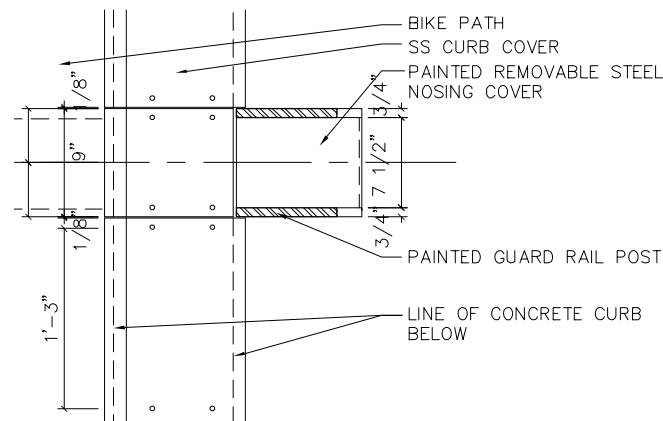
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\$SYTIME\$



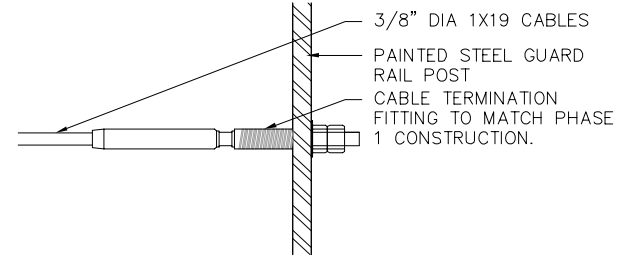
9 PLAN DETAIL - RAILING ASSEMBLY
SCALE: 1 1/2" = 1'-0"



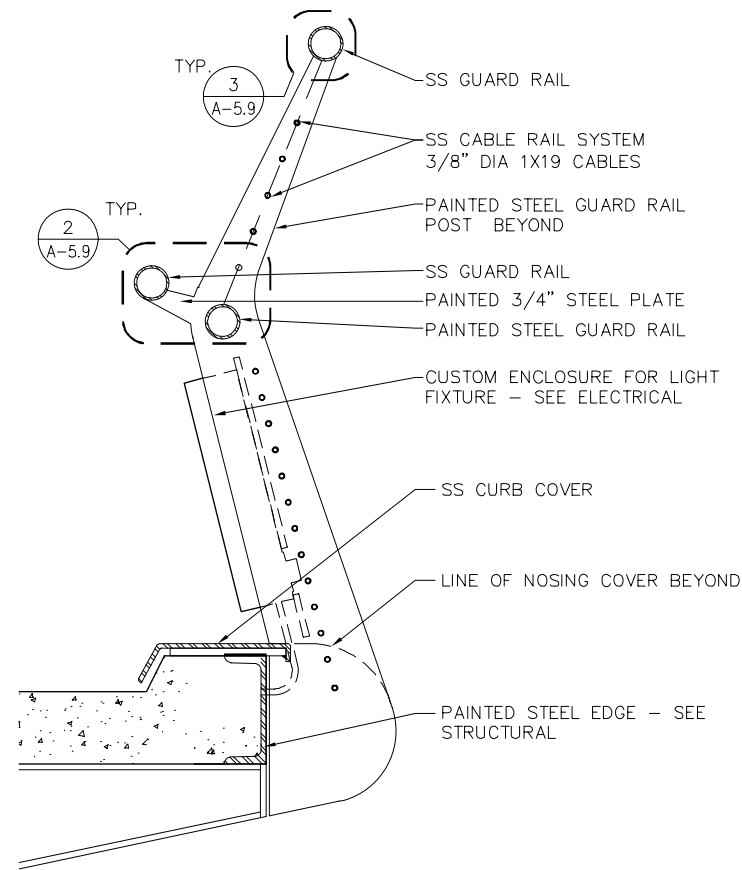
8 PLAN DETAIL - RAILING ASSEMBLY
SCALE: 1 1/2" = 1'-0"



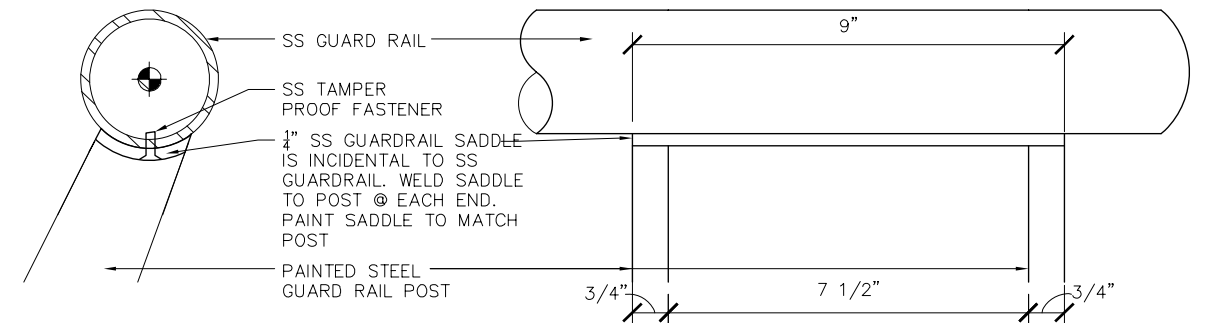
7 PLAN DETAIL - RAILING ASSEMBLY
SCALE: 1 1/2" = 1'-0"



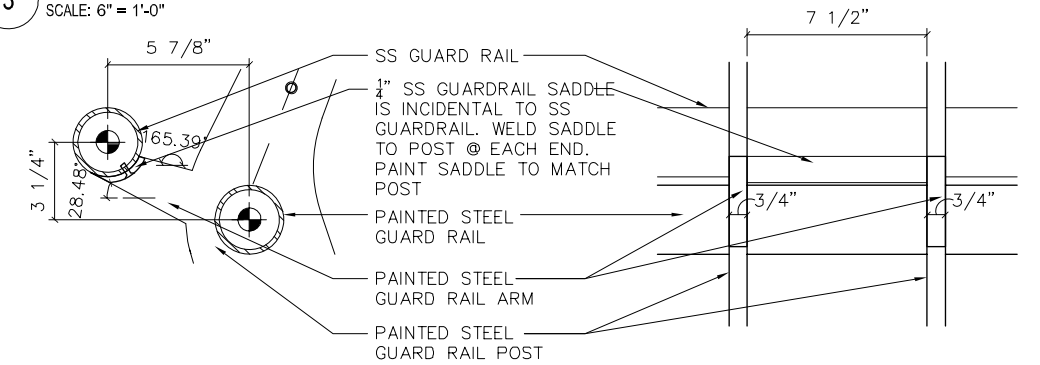
6 TYPICAL CABLE RAIL SYSTEM TERMINATION
SCALE: 3" = 1'-0"



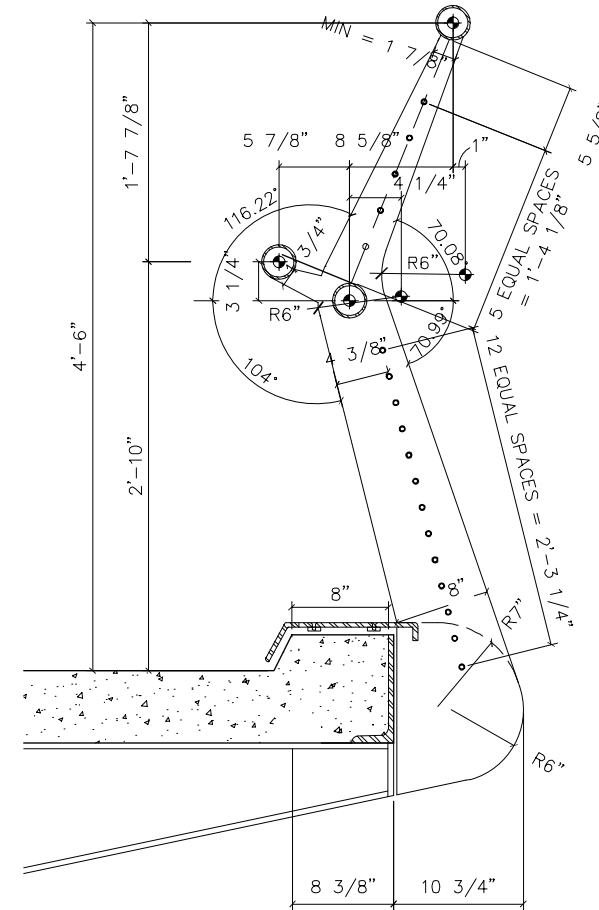
5 TYPICAL GUARDRAIL SECTION
SCALE: 1 1/2" = 1'-0"



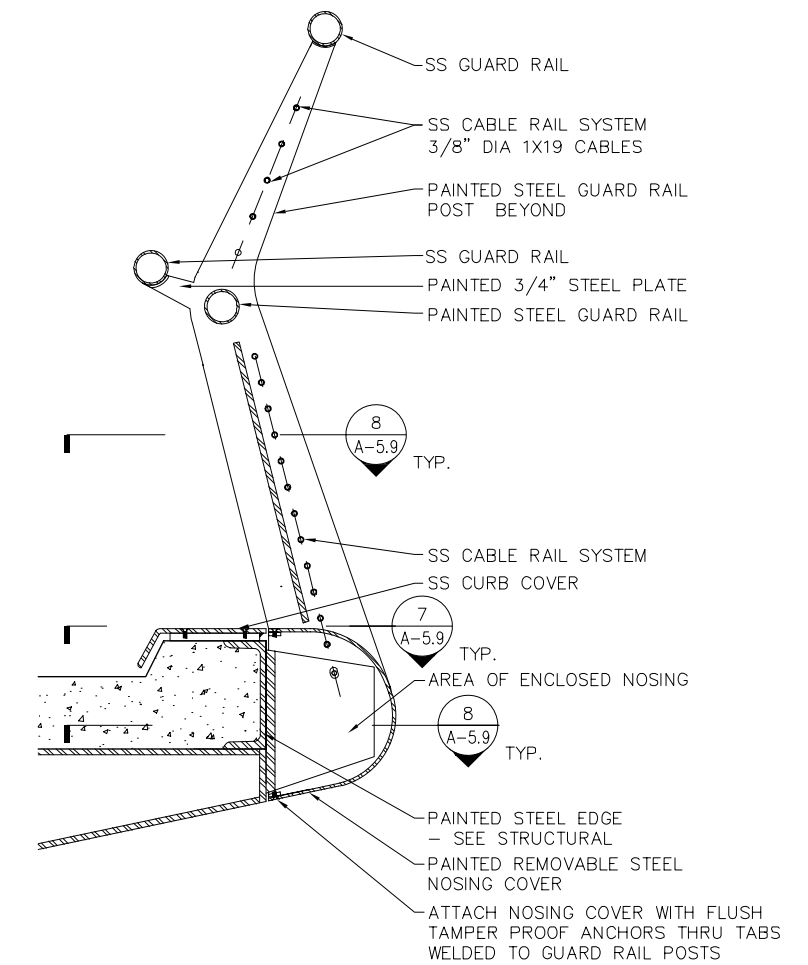
3 TYPICAL TOP RAIL DETAIL
SCALE: 6" = 1'-0"



2 TYPICAL GUARDRAIL DETAIL
SCALE: 3" = 1'-0"



4 TYPICAL GUARDRAIL SECTION
SCALE: 1 1/2" = 1'-0"



1 TYPICAL GUARDRAIL SECTION
SCALE: 1 1/2" = 1'-0"



USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

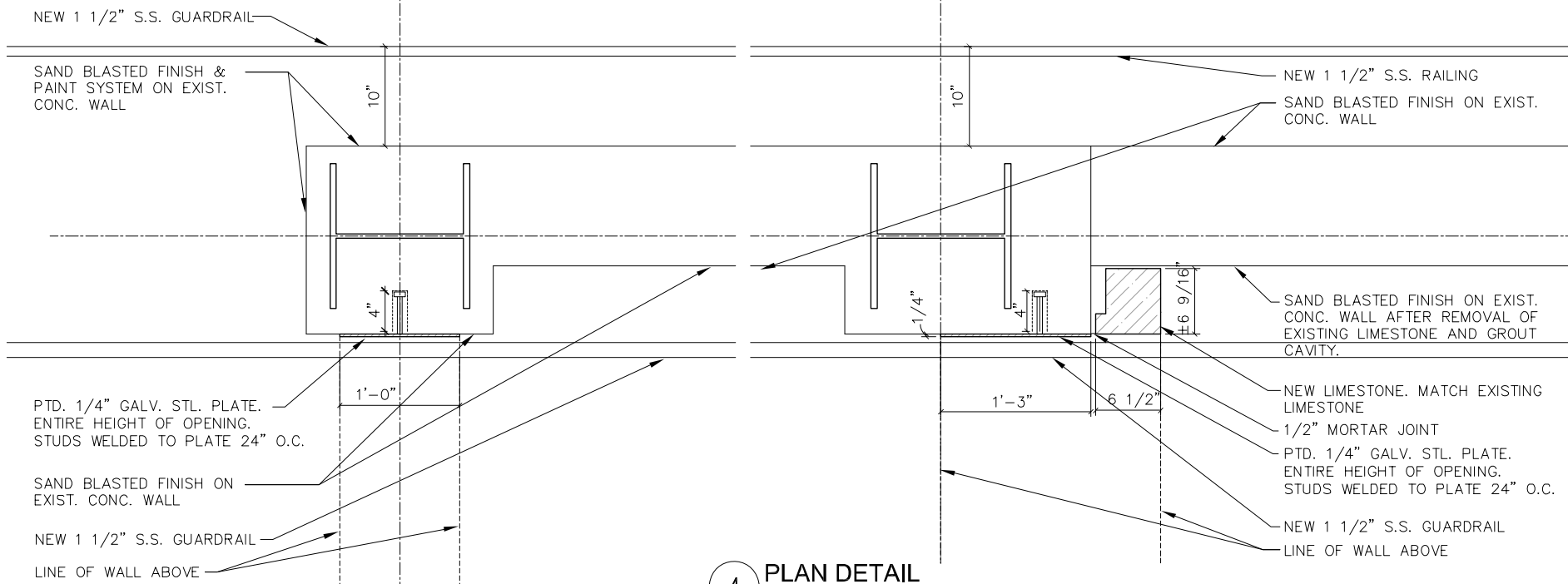
NORTH GUARDRAIL DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-5.9
CDOT PROJECT NO. E-6-650			178 OF 411

\$\$\$DGN\$\$\$
SYTIME\$

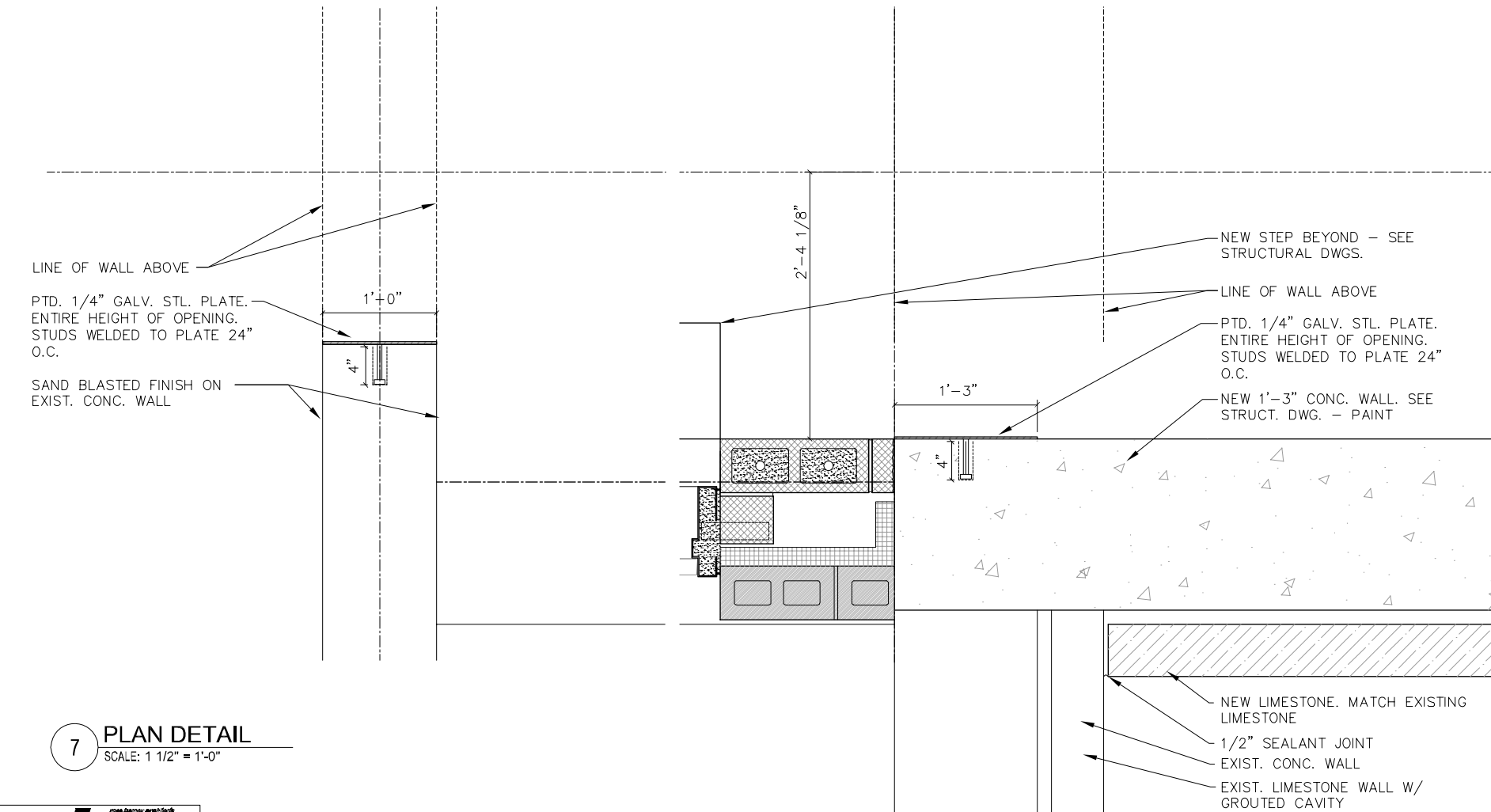


WSP USA Inc.
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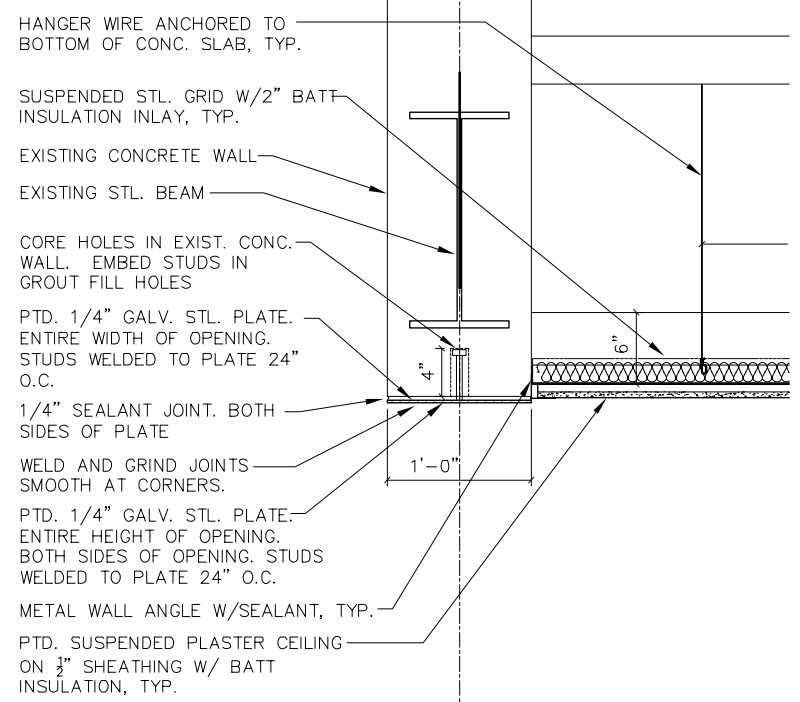
4 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

6 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

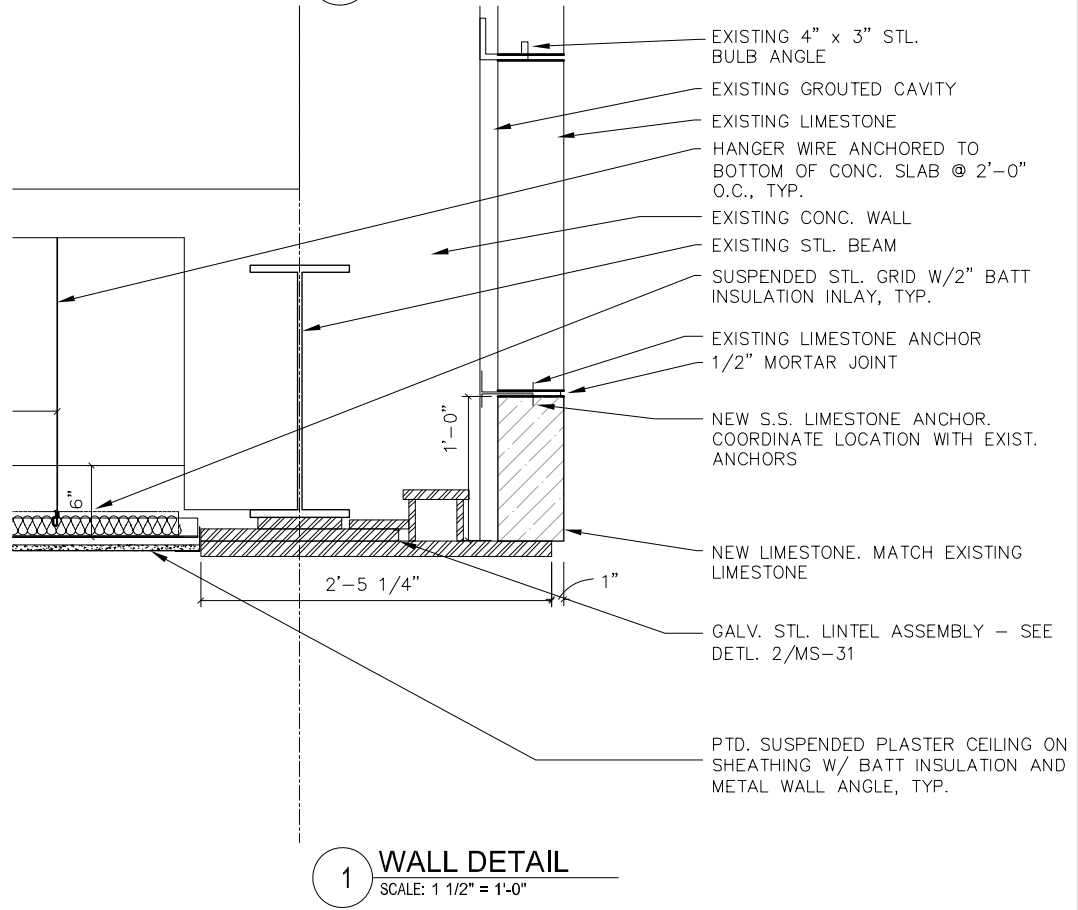


7 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

5 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



2 WALL DETAIL
SCALE: 1 1/2" = 1'-0"



1 WALL DETAIL
SCALE: 1 1/2" = 1'-0"

DETAILS ARE OF THE S.E. HOUSE.
CONDITIONS.
SIMILAR FOR THE N.E. HOUSE
CONDITIONS



WSP USA Inc.
30 N. LASALLE STREET
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CHICAGO, IL 60602
TEL: (312) 782-8180
FAX: (312) 782-1884

USER NAME =	DESIGNED	REVISED
PLOT SCALE =	CHECKED	REVISED
PLOT DATE =	DRAWN	REVISED
	CHECKED	REVISED

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

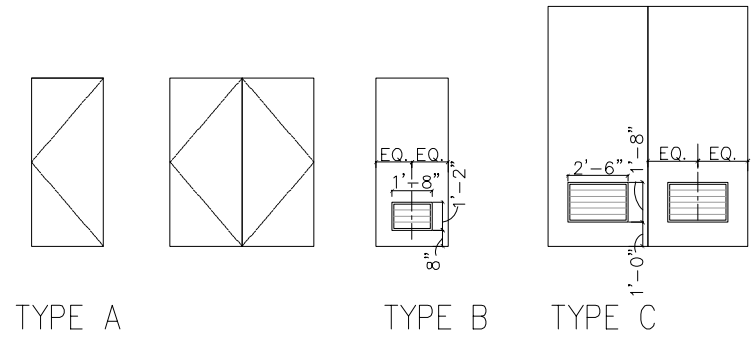
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PATH OPENING DETAILS
(STRUCTURE NO. 016-6030)

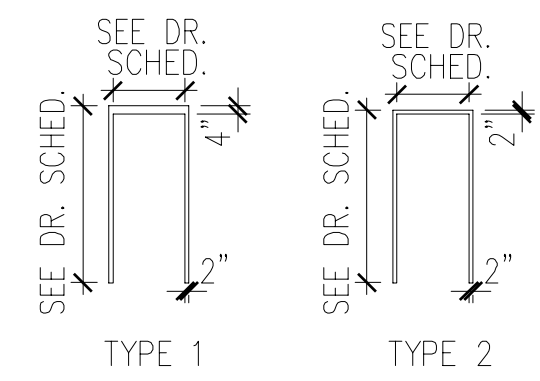
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-5.10
CDOT PROJECT NO. E-6-650			179 OF 411

DOOR SCHEDULE

DOOR NO.	TOWER	LEVEL	LABEL/ RATING	DOOR					FRAME		DETAILS (SEE SHEET A5.4)			HARDWARE SET	KEYNOTES
				WIDTH	HEIGHT	THICK.	MAT.	ELEV.	MAT.	ELEV.	HEAD	JAMB	SILL		
NE-01	NORTHEAST	DOCK LEVEL	-	-	-	-	-	-	-	-	-	-	-	-	1
NE-02	NORTHEAST	DOCK LEVEL	-	4'-7 1/2"	MATCH EXIST	1 3/4"	HM	A	HM	1	6	5	4	3	2,3
NE-03	NORTHEAST	DOCK LEVEL	-	8'-3 1/2"	MATCH EXIST	1 3/4"	HM	C	HM	1	9	8	7	3	2,3
NE-04	NORTHEAST	INTERMEDIATE LEVEL	-	MATCH EXIST	7'-0"	1 3/4"	HM	A	HM	1	12	11	10	1A	2,3,4
NE-05	NORTHEAST	INTERMEDIATE LEVEL	-	2'-7 1/2"	7'-0"	1 3/4"	HM	A	HM	1	12	11	10	1A	2,3,4
NE-06	NORTHEAST	1ST FLR ABOVE INT LVL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	1	3
NE-07	NORTHEAST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	6	5	4	1	2,3
NE-08	NORTHEAST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
NE-09	NORTHEAST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
NE-10	NORTHEAST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
NE-11	NORTHEAST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	B	HM	1	3	2	1	2A	2
NE-12	NORTHEAST	1ST FLR ABOVE UPPER LVL	-	-	-	-	-	-	-	-	-	-	-	-	1
NE-13	NORTHEAST	2ND FLR ABOVE UPPER LVL	-	-	-	-	-	-	-	-	-	-	-	-	1
NE-14	NORTHEAST	3RD FLR ABOVE UPPER LVL	-	-	-	-	-	-	-	-	-	-	-	-	1
SE-01	SOUTHEAST	DOCK LEVEL	-	-	-	-	-	-	-	-	-	-	-	-	1
SE-02	SOUTHEAST	DOCK LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	C	HM	1	6	5	4	3	2,3
SE-03	SOUTHEAST	DOCK LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	9	8	7	3	2,3
SE-04	SOUTHEAST	INTERMEDIATE LEVEL	-	MATCH EXIST	7'-0"	1 3/4"	HM	A	HM	1	12	11	10	1A	2,3,4
SE-05	SOUTHEAST	INTERMEDIATE LEVEL	-	2'-7 1/2"	7'-0"	1 3/4"	HM	A	HM	1	12	11	10	1A	2,3,4
SE-06	SOUTHEAST	1ST FLR ABOVE INT LVL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	1	2
SE-07	SOUTHEAST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	6	5	4	2	2,3
SE-08	SOUTHEAST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2A	2
SE-09	SOUTHEAST	UPPER LEVEL	B	2'-11 1/2"	7'-0"	1 3/4"	HM	A	HM	1	3, SIM.	2, SIM.	1, SIM.	2	2
SE-10	SOUTHEAST	UPPER LEVEL	-	2'-11 1/2"	7'-0"	1 3/4"	HM	A	HM	1	3, SIM.	2, SIM.	1, SIM.	2	2
SE-11	SOUTHEAST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
SE-12	SOUTHEAST	1ST FLR ABOVE UPPER LVL	-	-	-	-	-	-	-	-	-	-	-	-	1
SE-13	SOUTHEAST	2ND FLR ABOVE UPPER LVL	-	-	-	-	-	-	-	-	-	-	-	-	1
SW-01	SOUTHWEST	DOCK LEVEL	-	-	-	-	-	-	-	-	-	-	-	-	1
SW-02	SOUTHWEST	DOCK LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	C	HM	1	3	2	1	2	2
SW-03	SOUTHWEST	DOCK LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	6	5	4	3	2,3
SW-04	SOUTHWEST	DOCK LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	9	8	7	3	2,3
SW-05	SOUTHWEST	INTERMEDIATE LEVEL	-	-	-	-	-	-	-	-	-	-	-	2	1, 2
SW-06	SOUTHWEST	INTERMEDIATE LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	6	5	4	1A	2,3
SW-07	SOUTHWEST	1ST FLR ABOVE INT LVL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
SW-08	SOUTHWEST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	6	5	4	1	2,3
SW-09	SOUTHWEST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
SW-10	SOUTHWEST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
SW-11	SOUTHWEST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
SW-12	SOUTHWEST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
NW-01	NORTHWEST	DOCK LEVEL	-	-	-	-	-	-	-	-	-	-	-	-	1
NW-02	NORTHWEST	DOCK LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	C	HM	1	6	5	4	3	2,3
NW-03	NORTHWEST	DOCK LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	9	8	7	3	2,3
NW-04	NORTHWEST	INTERMEDIATE LEVEL	-	-	-	-	-	-	-	-	-	-	-	2	1
NW-05	NORTHWEST	INTERMEDIATE LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	12	11	10	1A	2,3
NW-06	NORTHWEST	1ST FLR ABOVE INT LVL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
NW-07	NORTHWEST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	6	5	4	1	2,3
NW-08	NORTHWEST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
NW-09	NORTHWEST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
NW-10	NORTHWEST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
NW-11	NORTHWEST	UPPER LEVEL	-	MATCH EXIST	MATCH EXIST	1 3/4"	HM	A	HM	1	3	2	1	2	2
NW-12	NORTHWEST	1ST FLR ABOVE UPPER LVL	-	-	-	-	-	-	-	1	-	-	-	-	1
NW-13	NORTHWEST	2ND FLR ABOVE UPPER LVL	-	-	-	-	-	-	-	1	-	-	-	-	1



DOOR TYPES
SCALE: 1/4" = 1'-0"



FRAME TYPES
SCALE: 1/4" = 1'-0"

- DOOR KEYNOTES
 1. DOORS SHALL BE REFURBISHED. EXISTING COATINGS SHALL BE REMOVED, AND BE REPAINTED TO MATCH EXISTING COLOR. REFER TO PATCHING AND PAINTING NOTES ON SHEET A-0.0.
 2. CONTRACTOR TO VERIFY EXISTING OPENING SIZE OF MASONRY, CONCRETE, CMU OR SGT WALLS PRIOR TO MANUFACTURING NEW DOOR.
 3. INSULATED
 4. SECURITY DOOR -- SEE SPECS.

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

DOOR SCHEDULE
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-6.1
CDOT PROJECT NO. E-6-650			180 OF 411

rbarc
 REAL BARRY ARCHITECTS
 30 N. LA SALLE STREET
 SUITE 4000
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1584

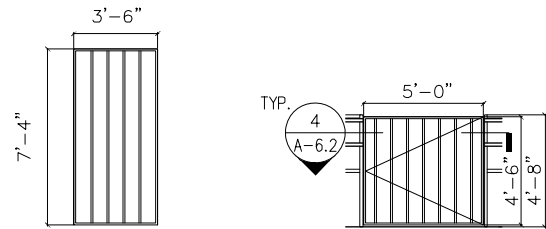
wsp
 WSP USA Inc.
 30 N. LA SALLE STREET
 SUITE 4000
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1584

GATE SCHEDULE

GATE NO.	TOWER	LEVEL	LABEL/RATING	GATE					DETAILS			HARDWARE SET	KEYNOTE
				WIDTH	HEIGHT	THICK.	MAT.	ELEV.	HEAD	JAMB	SILL		
NE-G1	NORTHEAST	DOCK LEVEL	-	5'-0"	7'-4"	2"	PTD MTL	A	6/A5.4	5/A5.4	4/A5.4	-	2
NE-G2	NORTHEAST	INTERMEDIATE LEVEL	-	-	-	-	-	-	-	-	-	-	1
NE-G3	NORTHEAST	INTERMEDIATE LEVEL	-	-	-	-	-	-	-	-	-	-	1
NE-G4	NORTHEAST	INTERMEDIATE LEVEL	-	5'-0"	4'-6"	2"	PTD MTL	B	6/A5.4	5/A5.4	2/A5.4 SIM.	-	-
NE-G5	NORTHEAST	UPPER LEVEL	-	3'-4"	7'-4"	2"	PTD MTL	A	6/A5.4	5/A5.4	2/A5.4 SIM.	-	2
NE-G6	NORTHEAST	UPPER LEVEL	-	-	-	-	-	-	-	-	-	-	1
SE-G1	SOUTHEAST	DOCK LEVEL	-	5'-0"	7'-4"	2"	PTD MTL	A	6/A5.4	5/A5.4	4/A5.4	-	2
SE-G2	SOUTHEAST	NOT USED	-	-	-	-	-	-	-	-	-	-	-
SE-G3	SOUTHEAST	INTERMEDIATE LEVEL	-	-	-	-	-	-	-	-	-	-	1, 2
SE-G4	SOUTHEAST	INTERMEDIATE LEVEL	-	-	-	-	-	-	-	-	-	-	1, 2
SE-G5	SOUTHEAST	INTERMEDIATE LEVEL	-	5'-0"	4'-6"	2"	PTD MTL	B	6/A5.4	5/A5.4	2/A5.4 SIM.	-	-
SE-G6	SOUTHEAST	UPPER LEVEL	-	3'-4"	7'-4"	2"	PTD MTL	A	6/A5.4	5/A5.4	2/A5.4 SIM.	-	2
SW-G1	SOUTHWEST	DOCK LEVEL	-	5'-0"	7'-4"	2"	PTD MTL	A	6/A5.4	5/A5.4	4/A5.4	-	2
SW-G2	SOUTHWEST	INTERMEDIATE LEVEL	-	3'-4"	7'-4"	2"	PTD MTL	A	6/A5.4	5/A5.4	4/A5.4	-	2
SW-G3	SOUTHWEST	INTERMEDIATE LEVEL	-	-	-	-	-	-	-	-	-	-	1
SW-G4	SOUTHWEST	INTERMEDIATE LEVEL	-	-	-	-	-	-	-	-	-	-	1
SW-G5	SOUTHWEST	UPPER LEVEL	-	3'-4"	7'-4"	2"	PTD MTL	A	6/A5.4	5/A5.4	4/A5.4	-	2
NW-G1	NORTHWEST	DOCK LEVEL	-	5'-0"	7'-4"	2"	PTD MTL	A	6/A5.4	5/A5.4	4/A5.4	-	2
NW-G2	NORTHWEST	INTERMEDIATE LEVEL	-	3'-4"	7'-4"	2"	PTD MTL	A	12/A5.4	11/A5.4	10/A5.4	-	2
NW-G3	NORTHWEST	INTERMEDIATE LEVEL	-	-	-	-	-	-	-	-	-	-	1
NW-G4	NORTHWEST	INTERMEDIATE LEVEL	-	-	-	-	-	-	-	-	-	-	1
NW-G5	NORTHWEST	UPPER LEVEL	-	3'-4"	7'-4"	2"	PTD MTL	A	6/A5.4	5/A5.4	4/A5.4	-	2
NW-G6	NORTHWEST	UPPER LEVEL	-	3'-0"	7'-4"	2"	PTD MTL	A	3/A6.2	2/A6.2	1/A6.2	-	2

GATE KEYNOTES

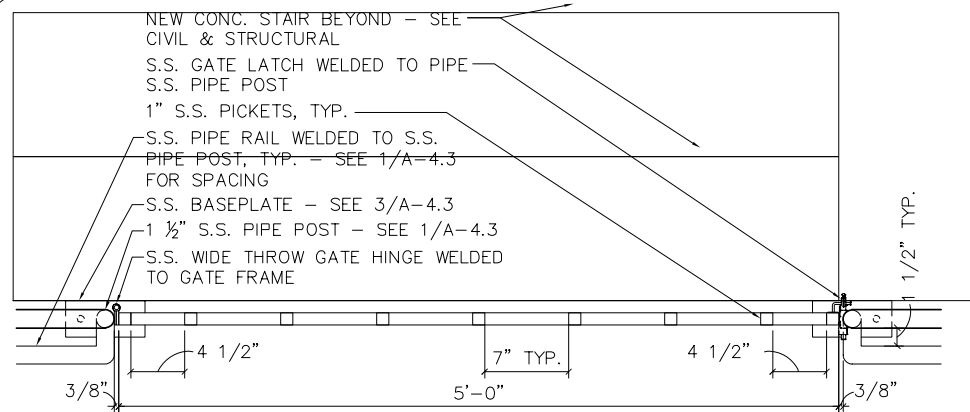
- GATES SHALL BE REFURBISHED. EXISTING COATINGS SHALL BE REMOVED, AND BE REPAINTED TO MATCH EXISTING COLOR. REFER TO PATCHING AND PAINTING NOTES ON SHEET A-0.0
- CONTRACTOR TO VERIFY EXISTING OPENING SIZE OF MASONRY, CONCRETE, CMU OR SGT WALLS PRIOR TO MANUFACTURING NEW GATE.



TYPE A TYPE B

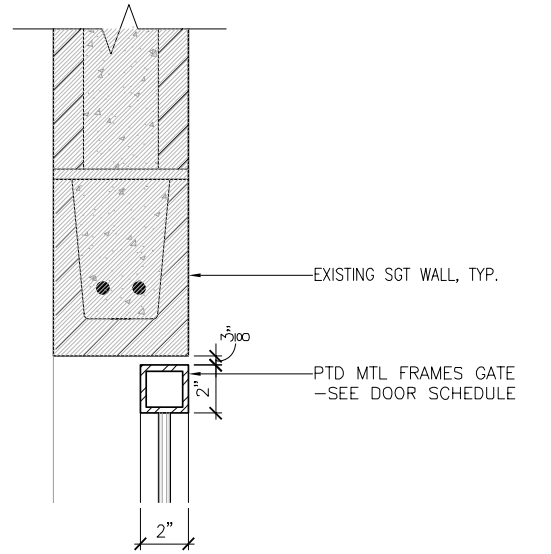
GATE TYPES

SCALE: 1/4" = 1'-0"



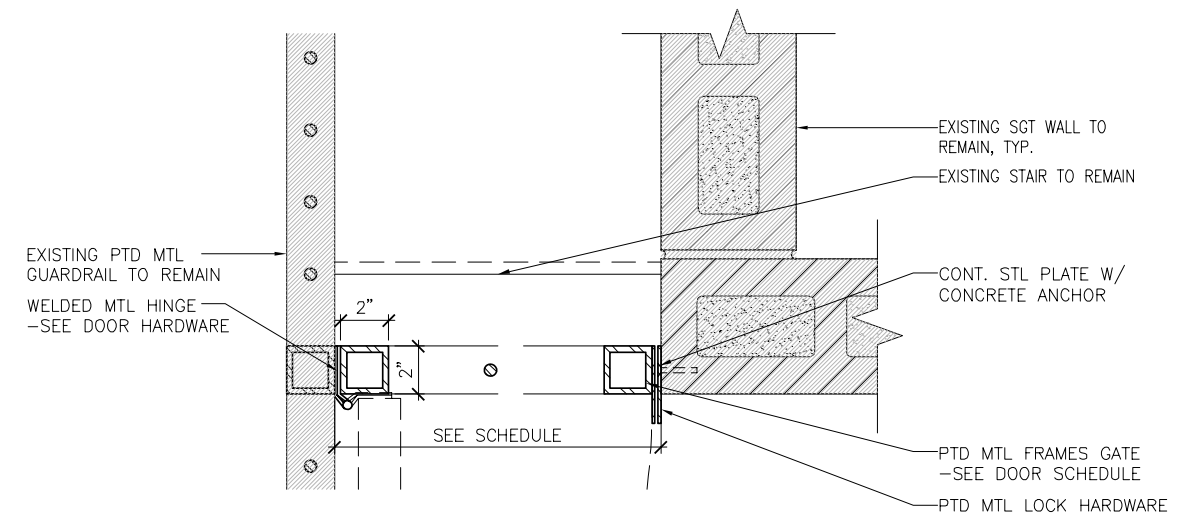
4 PLAN DETAIL @ EXTERIOR SWING GATE

SCALE: 1" = 1'-0"



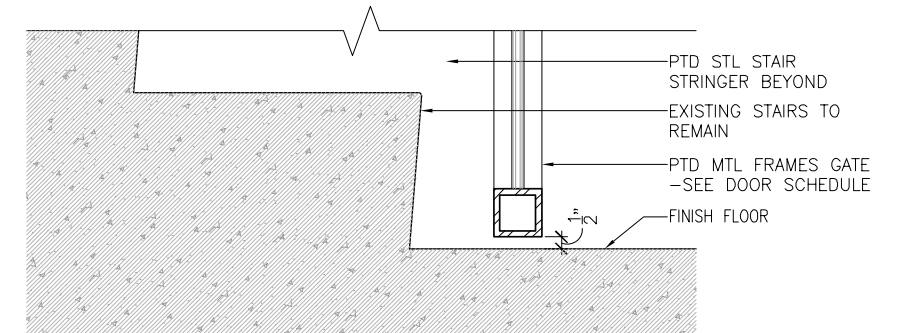
3 HEAD DETAIL @ INTERIOR GATE

SCALE: 3" = 1'-0"



2 JAMB DETAIL @ INTERIOR GATE

SCALE: 3" = 1'-0"



1 SILL DETAIL @ INTERIOR GATE

SCALE: 3" = 1'-0"



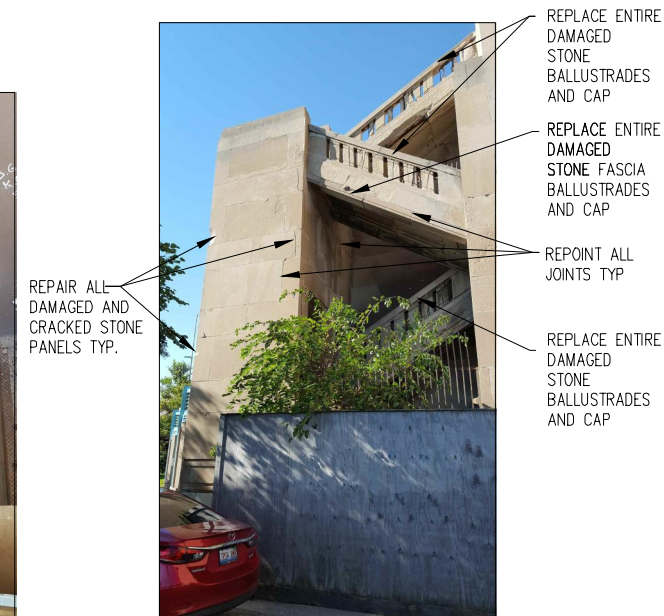
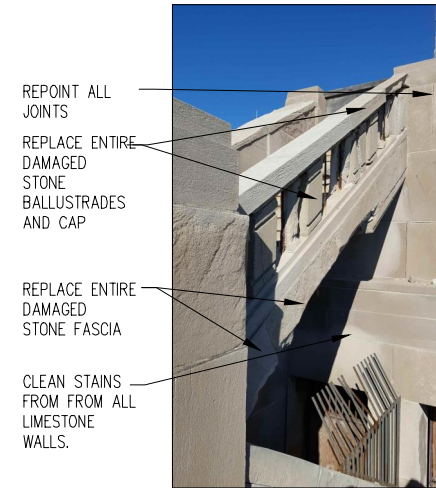
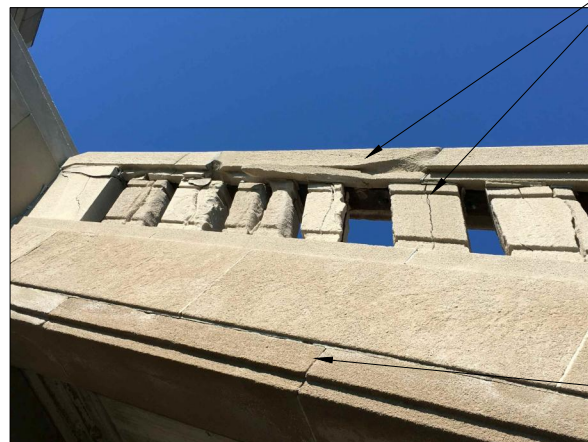
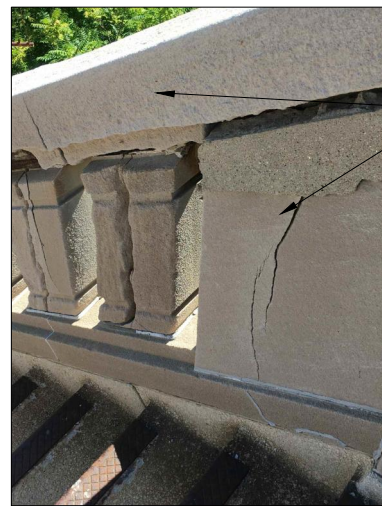
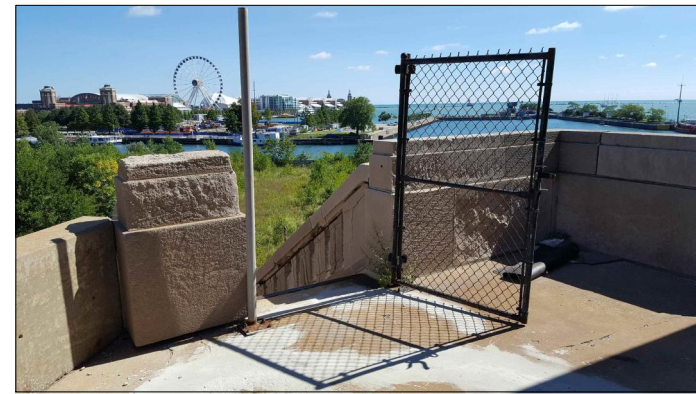
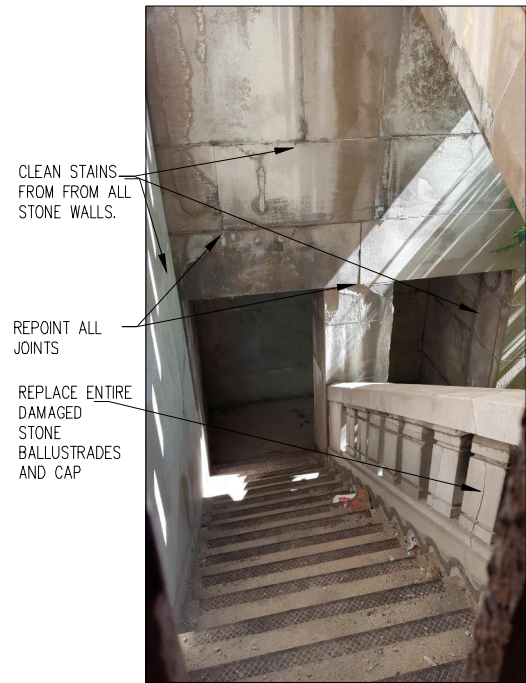
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

GATE SCHEDULE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-6.2
CDOT PROJECT NO. E-6-650			181 OF 411



NOTE: PHOTOS ARE REPRESENTATIVES OF THE REPAIRS AND REPLACEMENT REQUIRED FOR STONE AT THE EXTERIOR STAIRS. SEE DRAWINGS FOR ADDITIONAL INFORMATION

2 EXIST. CONDITION PHOTOS (N.E. HOUSE STAIRS)
SCALE: N.T.S.

1 EXIST. CONDITION PHOTOS (S.E. HOUSE STAIRS)
SCALE: N.T.S.



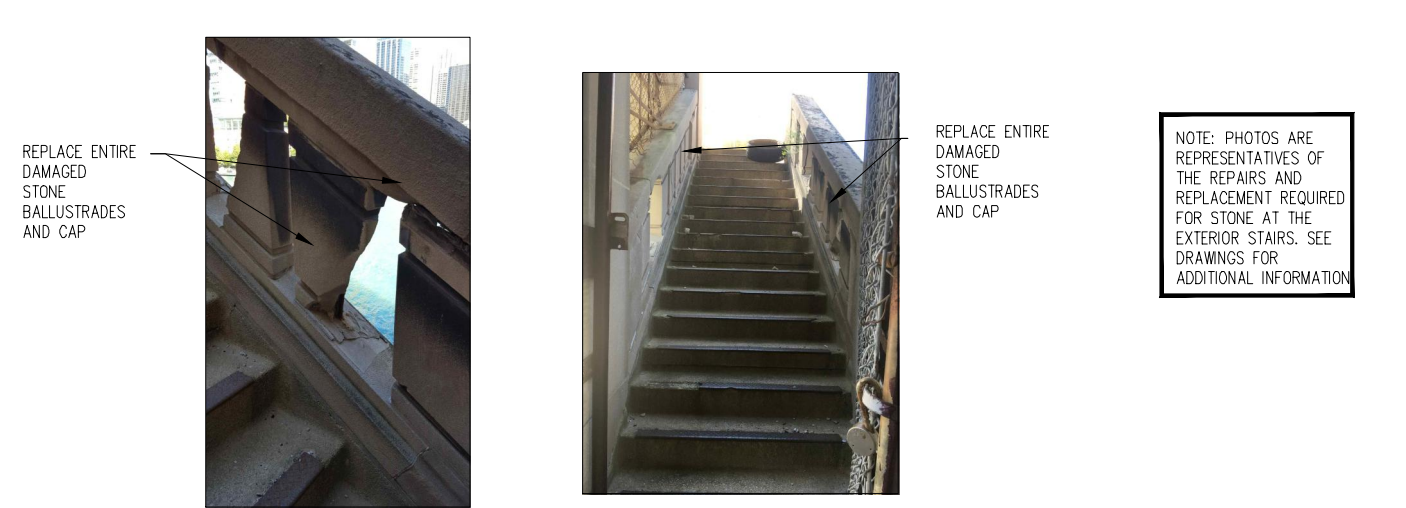
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STAIR WORK - EAST
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-7.1
CDOT PROJECT NO. E-6-650			182 OF 411



NOTE: PHOTOS ARE REPRESENTATIVES OF THE REPAIRS AND REPLACEMENT REQUIRED FOR STONE AT THE EXTERIOR STAIRS. SEE DRAWINGS FOR ADDITIONAL INFORMATION

2 EXIST. CONDITION PHOTOS (N.W. HOUSE STAIRS)
SCALE: N.T.S.

1 EXIST. CONDITION PHOTOS (S.W. HOUSE STAIRS)
SCALE: N.T.S.



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PLOT DATE =	DRAWN	REVISED
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STAIR WORK - WEST
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	A-7.2
CDOT PROJECT NO. E-6-650			183 OF 411

SYMBOL LIST – PLANS

CEILING	WALL	DESCRIPTION
⊙	⊙H	SPLICE BOX OR JUNCTION BOX OR PULL BOX WITH BLANK COVER. MINIMUM SIZE AS REQUIRED BY CODE.
⊚	⊚H	SPLICE BOX OR JUNCTION BOX OR PULL BOX WITH BLANK COVER IN FEEDER SYSTEMS. MINIMUM SIZE AS REQUIRED BY CODE.
	2⊕	DUPLEX RECEPTACLE 20A, 125V, 3W. GROUNDING TYPE. "WP" ADJACENT TO SYMBOL INDICATES WEATHERPROOF, "GFI" GROUND FAULT INTERRUPTER TYPE. "2" DENOTES CIRCUIT NUMBER.
2A	2A	FLUORESCENT FIXTURE. "A" DENOTES FIXTURE TYPE. "a" INDICATES CONTROLLING SWITCH. "2" DENOTES CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE SHEET E-44.
E		BATTERY POWERED LIGHTING FIXTURE. "E" DENOTES FIXTURE TYPE.
	C	CEILING OR PENDANT MOUNTED LIGHTING FIXTURE. "C" DENOTES FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE SHEET E-44
	C	WALL MOUNTED LIGHTING FIXTURE. "C" DENOTES FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE SHEET E-44
	⊞	FLOODLIGHT FIXTURE. SEE LIGHTING FIXTURE SCHEDULE SHEET E-44
	30A	NON-FUSIBLE HORSEPOWER RATED MOTOR DISCONNECT SWITCH-600V., 3PH,3W. "30A" DENOTES 30 AMPERES
	30A/20	FUSIBLE DISCONNECT SWITCH, 600V., 3PH, 3W, EXCEPT AS NOTED. "20" DENOTES FUSE SIZE. "30A" DENOTES SWITCH RATING.
	100A/70	INDIVIDUALLY MOUNTED 600V., 3-POLE, 3PH, 3W, CIRCUIT BREAKER. "70" DENOTES TRIP SIZE. "100A" DENOTES FRAME SIZE.
	HOA	COMBINATION NON-FUSIBLE SWITCH-MAGNETIC STARTER, 600V., 3 P. WITH START-STOP BUTTON AND INDICATING LIGHT IN COVER. "2" DENOTES STARTER SIZE. "HOA" DENOTES HAND-OFF-AUTO SELECTOR SWITCH IN COVER
	HOA	COMBINATION FUSED SWITCH-MAGNETIC STARTER, 600V., 3 P. WITH START-STOP BUTTON AND INDICATING LIGHT IN COVER. NUMBER DENOTES STARTER SIZE. "HOA" DENOTES HAND-OFF-AUTO SELECTOR SWITCH IN COVER
	⊥ _o	SINGLE POLE SWITCH. "o" DENOTES OUTLETS CONTROLLED
	⊥ _{3W}	THREE-WAY SWITCH "1" DENOTES CONDUIT NUMBER
	30 KVA	TRANSFORMER 480V-208/120, 3PH, 4W, UNLESS OTHERWISE INDICATED. "30 KVA" DENOTES RATING
		SURFACE MOUNTED PANELBOARD.
		ELECTRICAL OR POWER PANEL
	⊙	MOTOR 115V, 1PH MOTOR HORSEPOWER AS SHOWN ON PLANS. PROVIDE DISCONNECT SWITCHES WHERE REQUIRED BY CODE IN ADDITION TO THOSE
	⊙	MOTOR 208V, 3PH SHOWN ON PLAN. ALSO SEE SPECIFICATIONS.
	⊙	MOTOR 460V, 3PH SHOWN ON PLAN. ALSO SEE SPECIFICATIONS.
	①	LEGEND NUMBER FOR CONDUIT AND CABLE. SEE CONDUIT/CABLE SCHEDULE, SHEET E-42 "1" DENOTES LEGEND NUMBER.
	X	EQUIPMENT X = E EXISTING EQUIPMENT TO REMAIN X = R EXISTING EQUIPMENT TO BE REMOVED X = RR EXISTING EQUIPMENT TO BE REMOVED AND REPLACED X = RRC EXISTING EQUIPMENT TO BE REMOVED AND REPLACED BY CITY
	X	LIGHT FIXTURE X = E EXISTING FIXTURE TO REMAIN X = R EXISTING FIXTURE TO BE REMOVED X = RR EXISTING FIXTURE TO BE REMOVED AND REPLACED

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SYMBOL LIST – PLANS

CEILING	WALL	DESCRIPTION
	30/2	CIRCUIT BREAKER "30" DENOTES 30 AMPERES, "2" DENOTES 2 POLES
	◀	TELEPHONE OUTLET
	UN-#	ELECTRIC UNIT HEATER, # DENOTES UNIT HEATER NUMBER
	—	CONDUIT CONCEALED ABOVE
	—	CONDUIT ON THE CEILING BELOW
	—	EXPOSED CONDUIT
	—	SWITCH LEG NEUTRAL WIRE GROUND WIRE "HOT" WIRE
	—	CONDUIT UP
	—	CONDUIT DOWN
	⌒	FLEXIBLE CONDUIT
	1 E-4	DETAIL NUMBER- 1 SHEET NUMBER- E-4
	T	THERMOSTAT
	T	PHONE HANDSET
	T	INFRARED ULTRASONIC INTRUSION PRESENCE DETECTOR
	⌐	DOOR CONTACT
	⊘	SIREN
	⊘	SPEAKER
	⊥	GROUND ROD
	1/P #1	INTERCOM/PAGE STATION - "#1" DENOTES STATION NUMBER.
	—	EXISTING CONDUIT
	—	NEW CONDUIT
	⊞	EXISTING EQUIPMENT
	⊞	NEW EQUIPMENT

SYMBOL LIST – WIRING DIAGRAMS

SYMBOL	DESCRIPTION
⊙	AMMETER
AMS	AMMETER SHUNT
AI	ARC SUPPRESSOR
ARM	ARMATURE, DC MOTOR
BR	BRAKE COIL
30A	CIRCUIT BREAKER WITH THERMAL-MAGNETIC TRIP (30A DENOTES 30 AMPERES)
30A	CIRCUIT BREAKER WITH MAGNETIC TRIP (30A DENOTES 30 AMPERES)
CR	COIL, OPERATING
CR	CONTACT, NORMALLY CLOSED
CR	CONTACT, NORMALLY OPEN
DS	DISCONNECT SWITCH, FUSED, 3 POLE
FTS	FOOT SWITCH, NORMALLY OPEN
FTS	FOOT SWITCH, NORMALLY CLOSED
FU	FUSE
SW	GENERIC SWITCH, NORMALLY OPEN
SW	GENERIC SWITCH, NORMALLY CLOSED
AH	HORN
(1)	SINGLE SPEED NON-REVERSING CONTACTOR (1) DENOTES NEMA SIZE 1
(1)	SINGLE SPEED REVERSING CONTACTOR (1) DENOTES NEMA SIZE 1
(MMP)	MAIN MOTOR PILOT RELAY
⊙	MOTOR - MANUAL STARTER WITH THERMAL OVERLOAD AND RED PILOT LIGHT
V	VOLTMETER
M	METER
	TRANSFER
MTS	MANUAL TRANSFER SWITCH
ATS	AUTOMATIC TRANSFER SWITCH
MR	MARINE RADIO

ABBREVIATIONS

A, AMP	AMMETER OR AMPERE	MCB	MAIN CIRCUIT BREAKER
AC	ALTERNATING CURRENT	MLO	MAIN LUG ONLY
AD	AFTER DE-ENERGIZING	MOB	MOTOR BRAKE
AF	CIRCUIT BREAKER FRAME SIZE (AMPERES)	MS	MASTER SWITCH
AFF	ABOVE FINISHED FLOOR	MTR	MOTOR
AS	AMMETER SWITCH	MTS	MANUAL TRANSFER SWITCH
AT	CIRCUIT BREAKER TRIP RATING (AMPERES)	N.A.	NON-AUTOMATIC
ATS	AUTOMATIC TRANSFER SWITCH	N.C.	NORMALLY CLOSED
BKR	BREAKER	OL	OPEN ON LOWERING AT ANGLE INDICATED
BP	BY PASS	OR	OPEN ON RAISING AT ANGLE INDICATED
C	CONDUIT	ORSP	OPERATING RELAY AND SIGNAL PANEL
CC	CONTROL CONSOLE	OIS	OVERSPEED SWITCH
CKT	CIRCUIT	OSR	OVERSPEED RELAY
CL	CLOSED ON LOWERING AT ANGLE INDICATED	PB	PUSHBUTTON
COMED	COMMONWEALTH EDISON CO.	PNL	PANEL
CR	CLOSED ON RAISING AT ANGLE INDICATED	PH	PHASE
CT	CONTROL TRANSFORMER	R	RAISE
CTR	CONTACTOR	RECTP.	RECEPTACLE
DC	DIRECT CURRENT	RTD	RAISE TIME DELAY RELAY
DCRP	DRIVE CONTROL RELAYH PANEL	S	SLOW SPEED POSITION
DDSR	DOWN DECELERATION STOP RELAY	SCTD	SPAN CLOSE TIME DELAY RELAY
DFSR	DOWN FAST SIGNAL RELAY	SM	SOURCE METER
DP	DISTRIBUTION PANEL	SOTD	SPAN OPEN TIME DELAY RELAY
DP1	480 V DISTRIBUTION PANEL	S	SELECTOR SWITCH
DP2	208Y/120V DISTRIBUTION PANEL	SSOL	SOLID STATE OVERCURRENT
DISC. SW	DISCONNECT SWITCH	TB	TERMINATION BOX
DSR	DOWN STOP RELAY	TD	TIME DELAY RELAY
DSSR	DOWN SLOW SIGNAL RELAY	U.N.O.	UNLESS NOTED OTHERWISE
E	EAST	UDSR	UP DECELERATION STOP RELAY
EA	EACH	UFSR	UP FAST SIGNAL RELAY
EAD	EAST MOTOR ARMATURE DISCONNECT SWITCH AUXILIARY SWITCH	U.L.	UNDERWRITERS LABORATORIES
EB	EASTBOUND	USR	UP STOP RELAY
EFD	EAST MOTOR FIELD DISCONNECT SWITCH AUXILIARY SWITCH	USSR	UP SLOW SIGNAL RELAY
EM	EMERGENCY	UV	UNDERVOLTAGE RELAY
ETG	EAST TACHOMETER GENERATOR	V	VOLTMETER OR VOLT
EXIST	EXISTING	VS	VOLTMETER SWITCH
F	FAST SPEED POSITION	W	WEST
FSPS	FULLY SEATED PLUNGER SWITCH	WAD	WEST MOTOR ARMATURE DISCONNECT SWITCH AUXILIARY SWITCH
FSR	FOOT SWITCH RELAY	WB	WEST MOTOR FIELD DISCONNECT SWITCH AUXILIARY SWITCH
G	GROUNDING WIRE IN CONDUIT, EXPOSED WHERE SO INDICATED ON PLANS.	WFD	WEST BOUND
GFI	GROUND FAULT INTERRUPTER	WHM	WATTHOUR METER
GRD	GROUND	WTG	WEST TACHOMETER GENERATOR
GRC	GALVANIZED RIGID STEEL CONDUIT		
GRC PVC	GALVANIZED RIGID STEEL PVC COATED CONDUIT		
IL	INDICATING LIGHT		
JB	JUNCTION BOX		
K	KIRK KEY INTERLOCK		
L	LOWER OR LOAD		
LC	LIGHTING CONTACTOR		
LP	LIGHTING PANEL		
LS	LIMIT SWITCH		
LT	LATCHING RELAY		
LTD	LOWER TIME DELAY RELAY		
M	METER		
MAB	MACHINE BRAKE		

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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SYMBOL LIST AND ABBREVIATIONS
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-1
CDOT PROJECT NO. E-6-650			184 OF 411

GENERAL ELECTRICAL NOTES

1. LOCATIONS OF LIGHT FIXTURES, RECEPTACLES AND DEVICES SHOWN ARE APPROXIMATE. CONTRACTOR TO COORDINATE LOCATION OF ALL RECEPTACLES AND DEVICES IN THE FIELD WITH OTHER EQUIPMENT PRIOR TO INSTALLATION.
2. ALL CONDUIT ROUTING SHOWN IS DIAGRAMMATIC AND IS SHOWN ONLY FOR GENERAL GUIDANCE FOR THE CONTRACTOR IN SUBMITTING BIDS AND IS NOT TO BE CONSTRUED AS FINAL EITHER AS TO ARRANGEMENT OR QUANTITY REQUIRED. THE SIZE AND NUMBER OF CONDUITS NEEDED TO BE DETERMINED BY THE CONTRACTOR TO ACHIEVE THE OPERATIONAL REQUIREMENT OF ALL SYSTEMS.
3. ALL NEW CONDUITS, FITTINGS AND HARDWARE INSTALLED IN MACHINERY LEVELS, ON THE EXTERIOR OF THE BRIDGE HOUSES, AND BRIDGE SPANS TO BE PVC COATED RIGID GALVANIZED STEEL CONDUITS. ALL PULL BOXES AND JUNCTION BOXES TO BE STAINLESS STEEL, NEMA TYPE 4X, AND CORROSION RESISTANT.
4. MINIMUM CONDUIT SIZE TO BE 3/4" UNLESS OTHERWISE INDICATED. CONDUIT FILL SHALL NOT EXCEED 40%.
5. CONCEAL CONDUIT WHEREVER POSSIBLE IN FINISHED AREAS. ALL CONDUIT INSTALLED EXPOSED IN FINISHED AREAS OR ON EXTERIOR OF BRIDGE HOUSES (INCLUDING BRIDGE SPANS) EXCEPT FOR PVC COATED CONDUIT, TO BE PAINTED TO MATCH SURROUNDING SURFACES.
6. WIRING FOR POWER, EMERGENCY BATTERY LIGHTING, EXIT LIGHTING, AND CONTROL WIRING TO ALL BE ROUTED IN SEPARATE RACEWAYS.
7. ALL WORK TO COMPLY WITH THE CITY OF CHICAGO BUILDING CODE AND ALL ASSOCIATED AMENDMENTS.
8. ALL WORK ASSOCIATED WITH THE TELEPHONE SERVICE TO BE COORDINATED WITH THE TELECOM UTILITY.
9. ALL EMERGENCY BATTERY LIGHTS AND EXIT SIGNS TO BE APPROVED BY THE CITY OF CHICAGO.
10. ELECTRICAL DRAWINGS IN THIS PROJECT ARE ONLY DESIGN DRAWINGS AND INTENDED TO BE USED BY THE CONTRACTOR FOR BIDDING AND AS GENERAL GUIDANCE FOR DEVELOPING OF FINAL DETAILED WORKING (SHOP DRAWINGS). ALL WORKING DRAWINGS ARE SUBJECT TO APPROVAL BY THE COMMISSIONER. ONLY APPROVED SHOP DRAWINGS ARE TO BE USED FOR FIELD INSTALLATION. WIRES TO THE CITY EQUIPMENT (STREET LIGHTS, ETC.) WHICH DO NOT BELONG TO THE BRIDGE SYSTEM, ARE NOT TO BE MIXED WITH THE BRIDGE SYSTEM WIRING. SEPARATE CONDUIT(S) TO BE INSTALLED FOR CITY EQUIPMENT.
11. CONTRACTOR TO REPLACE ALL EXISTING LIMIT SWITCHES. NEW LIMIT SWITCHES TO MATCH EXISTING LIMIT SWITCH SPECIFICATIONS AND TYPE. LIMIT SWITCHES TO BE IN NEMA TYPE 4X STAINLESS STEEL ENCLOSURE.
12. CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE ELECTRICAL SYSTEM OF THE BRIDGE AND OPERATIONS OF THE BRIDGE FROM NOTICE TO PROCEED DATE UNTIL ACCEPTANCE OF THE PROJECT BY CDOT. CONTRACTOR IS RESPONSIBLE FOR THE LIFTING AND LOWERING OF THE BRIDGE LEAFS DURING THAT TIME.
13. CONTRACTOR TO FIELD COORDINATE ALL LIMIT SWITCH SETTINGS WITH THE CITY REQUIRED BRIDGE ANGLE REQUIREMENTS.
14. THE CONTRACTOR TO SALVAGE ALL ELECTRICAL EQUIPMENT AND DEVICES. EQUIPMENT AND DEVICES TO INCLUDE BUT ARE NOT LIMITED TO: GATES, AC CONTACTORS AND STARTERS, DC CONTACTORS AND COILS, DC EQUIPMENT, PANELS, TRANSFORMERS, AND LIGHT FIXTURES. FOR EQUIPMENT AND DEVICES THAT THE CITY DOES NOT WANT, THE CONTRACTOR TO IMMEDIATELY REMOVE THEM FROM THE SITE.
15. CONTRACTOR ACCESS TO BRING EQUIPMENT INTO REQUIRED SPACES TO BE CONSIDERED AS CONTRACTOR REQUIRED WAYS AND MEANS METHODS.
16. COMMISSIONER WILL BE PRESENT DURING EXISTING CONDITION AND FINAL OPERATIONAL TESTS. CONTRACTOR TO COORDINATE AND SCHEDULE IN ADVANCE WITH THE COMMISSIONER.
17. FLOOR PLANS WERE DERIVED FROM FIELD MEASUREMENTS, AND ARE USED FOR REFERENCE ONLY.
18. PREVIOUSLY ABANDONED OR ABANDONED UNDER THIS CONTRACT, ALL CONDUITS, WIRES AND SUPPORTS SHALL BE DEMOLISHED AND DISCARDED.
19. IN LOCATIONS WHERE NEW EQUIPMENT IS SHOWN WALL MOUNTED, BUT THERE IS NO WALL SPACE AVAILABLE DUE TO EXISTING OR NEW CONDUITS, MOUNT EQUIPMENT ON THE STRUT RACK IN FRONT OF CONDUITS.
20. WHEN ELECTRICAL EQUIPMENT IS RELOCATED, THE ELECTRICAL CONTRACTOR (E.C.) IS RESPONSIBLE TO REROUTE CONDUITS AND REPULL WIRES. WIRE SPLICING IS NOT ALLOWED. E.C. CAN REUSE THE CONDUITS INSIDE THE TOWER, BUT SHALL REPLACE THE CONDUITS IN MACHINE ROOMS AND OUTSIDE.
21. ALL TV CAMERAS AND ASSOCIATED EQUIPMENT, CONDUITS, AND CABLES TO BE REMOVED.
22. ALL CONDUITS AND BOXES IN THE MACHINE ROOMS, OUTSIDE, AND UNDER THE BRIDGE TO BE REPLACED AND WIRES TO BE REPULLED.
23. THE CONTRACTOR IS ALERTED THAT ELECTRICAL PLANS SHOW THE ALIGNMENT STATIONS INCREASING TO THE LEFT WHICH IS OPPOSITE TO THE REMAINDER OF THE PLANS.

CONSTRUCTION PHASING NOTES

- A. COAST GUARD REQUIRES THAT ONE OF THE TWO LAKE SHORE DRIVE BRIDGE LEAVES REMAIN OPERATIONAL DURING CONSTRUCTION.
- B. PHASE 1- NORTH LEAF REHAB:
 1. EQUIPMENT SUBMITTAL AND APPROVAL.
 2. EXISTING CONDITIONS OPERATIONAL TEST PROCEDURE IS TO BE DOCUMENTED AND THREE COPIES ARE TO BE SUBMITTED TO THE COMMISSIONER FOR APPROVAL.
 3. TEST EXISTING NORTH AND SOUTH LEAF AND DOCUMENT PERFORMANCE, INCLUDING BUT NOT LIMITED TO SPEED, CURRENT, AND LEAF ANGLES AT EACH SPEED SET POINT. SUBMIT THREE COPIES OF THE TEST REPORT TO COMMISSIONER FOR REVIEW.
 4. BYPASS ALL SAFETY CONTACTS FOR THE NORTH LEAF FROM THE EQUIPMENT INTERLOCKS ON THE SOUTH.
 5. SOUTH LEAF OPERATIONAL TEST.
 6. REMOVE ALL DC CONTROL EQUIPMENT ON THE NORTH SIDE.
 7. FURNISH AND INSTALL NEW HUBBELL EQUIPMENT IN THE NORTH-WEST BRIDGE HOUSE.
 8. FURNISH AND INSTALL CABLE AND CONDUIT IN THE NORTH-WEST BRIDGE HOUSE.
 9. WIRE IN THE EXISTING NORTH-WEST BRIDGE HOUSE OPERATOR LEVEL DRUM CONTROLLER THAT WILL SERVE IN EMERGENCY OPERATION.
 10. BYPASS ALL INTERLOCK TO THE SOUTH LEAF.
 11. FURNISH, INSTALL AND TEST NEW GATES AND WARNING LIGHTS ON THE NORTH SIDE.
 12. SUBMIT THREE COPIES OF THE OPERATIONAL TEST PROCEDURES AND CHECKLIST FOR APPROVAL PRIOR TO PRE-TESTING HUBBELL EQUIPMENT.
 13. PRE LIFT TESTING OF HUBBELL EQUIPMENT.
 14. TEST LIFT NORTH LEAF TO BE WITNESSED AND APPROVED BY COMMISSIONER.
 15. SUBMIT THREE COPIES OF THE FINAL OPERATIONAL TEST REPORTS AFTER SUCCESSFUL FIELD OPERATIONAL TEST.
- C. PHASE 2 - SOUTH LEAF REHAB:
 1. REMOVE ALL DC CONTROL EQUIPMENT ON THE SOUTH SIDE.
 2. FURNISH AND INSTALL NEW HUBBELL EQUIPMENT IN THE SOUTH-EAST BRIDGE HOUSE.
 3. FURNISH AND INSTALL CABLE AND CONDUIT IN THE SOUTH BRIDGE HOUSE.
 4. WIRE IN THE EXISTING SOUTH-EAST BRIDGE HOUSE OPERATOR LEVEL DRUM CONTROLLER THAT WILL SERVE IN EMERGENCY OPERATION.
 5. FURNISH, INSTALL AND TEST NEW GATES AND WARNING LIGHTS ON THE SOUTH SIDE.
 6. SUBMIT THREE COPIES OF THE OPERATIONAL TEST PROCEDURES AND CHECKLIST FOR APPROVAL PRIOR TO PRE-TESTING HUBBELL EQUIPMENT.
 7. PRE LIFT TESTING OF HUBBELL EQUIPMENT.
 8. OPERATIONAL TEST THE BRIDGE WITH THE NEW HUBBELL EQUIPMENT.
 9. SUBMIT THREE COPIES OF THE OPERATIONAL TEST REPORT AFTER SUCCESSFUL FIELD OPERATIONAL TEST.

M:\4970 Lake Shore Drive Bascule Bridge\04 - CAD\Files\04 - Sheet Files\0166030-E0534-E2-General Notes.dgn 6/26/2017

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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**GENERAL AND CONSTRUCTION PHASING NOTES
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-2
CDOT PROJECT NO. E-6-650			185 OF 411

SHEET INDEX

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 E-2 GENERAL AND CONSTRUCTION PHASING NOTES
 E-2.1 ELECTRICAL SHEET INDEX
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 E-3.2 ELECTRICAL SINGLE LINE DIAGRAM EXISTING MOTOR CONTROL CENTER MCCN
 E-3.3 ELECTRICAL SINGLE LINE DIAGRAM EXISTING MOTOR CONTROL CENTER MCCC
 E-3.4 ELECTRICAL SINGLE LINE DIAGRAM EXISTING PANEL LDPN
 E-3.5 ELECTRICAL SINGLE LINE DIAGRAM PANEL LDPS
 E-3.6 PROPOSED ELECTRICAL SINGLE LINE DIAGRAM
 E-3.7 PROPOSED NORTH BRIDGE CONTROL BLOCK DIAGRAM
 E-3.8 PROPOSED SOUTH BRIDGE CONTROL BLOCK DIAGRAM
 E-4.1 NORTH MACHINERY ROOM EXISTING ELECTRICAL PLAN (DOCK LEVEL) AT ELEV. +5.0
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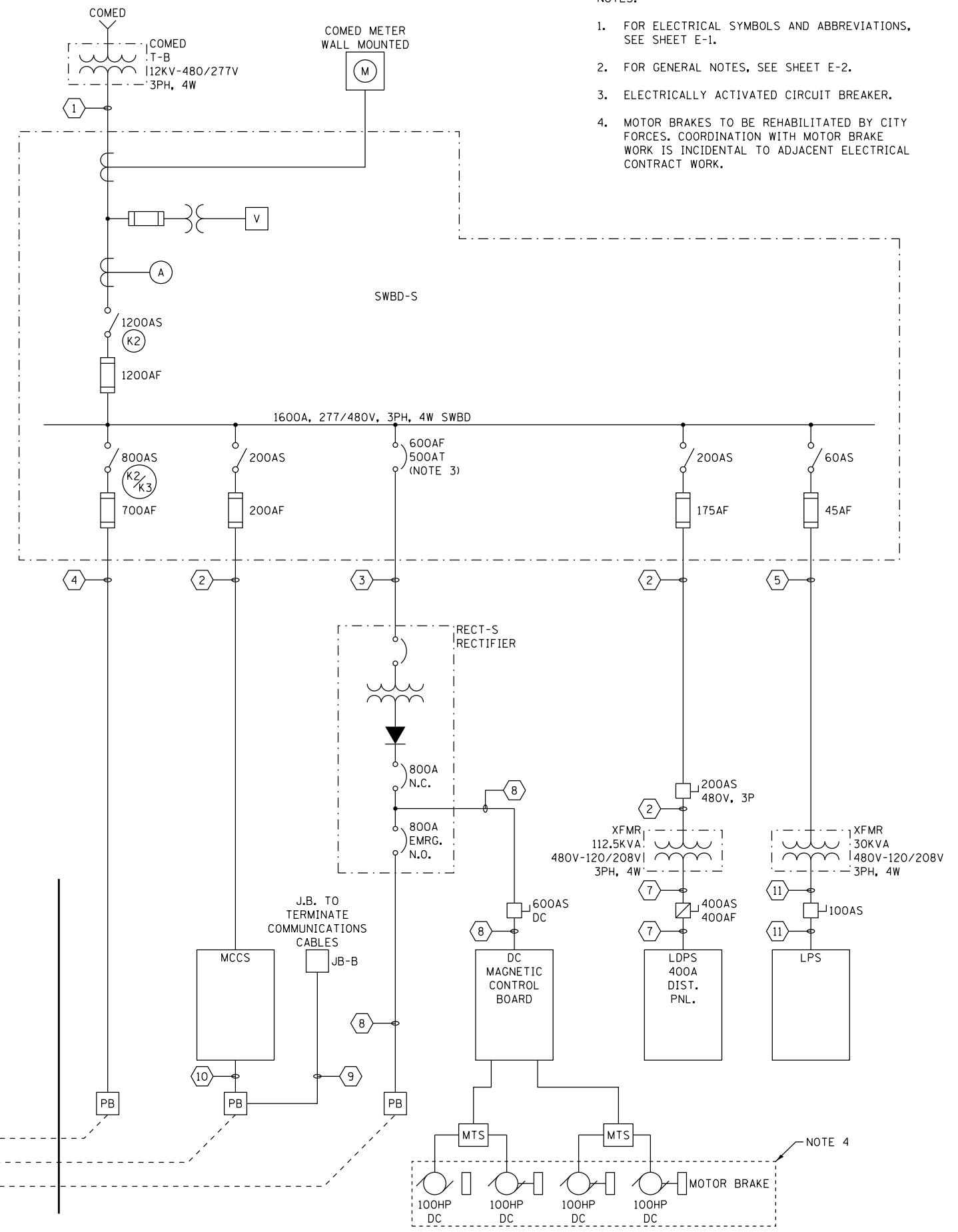
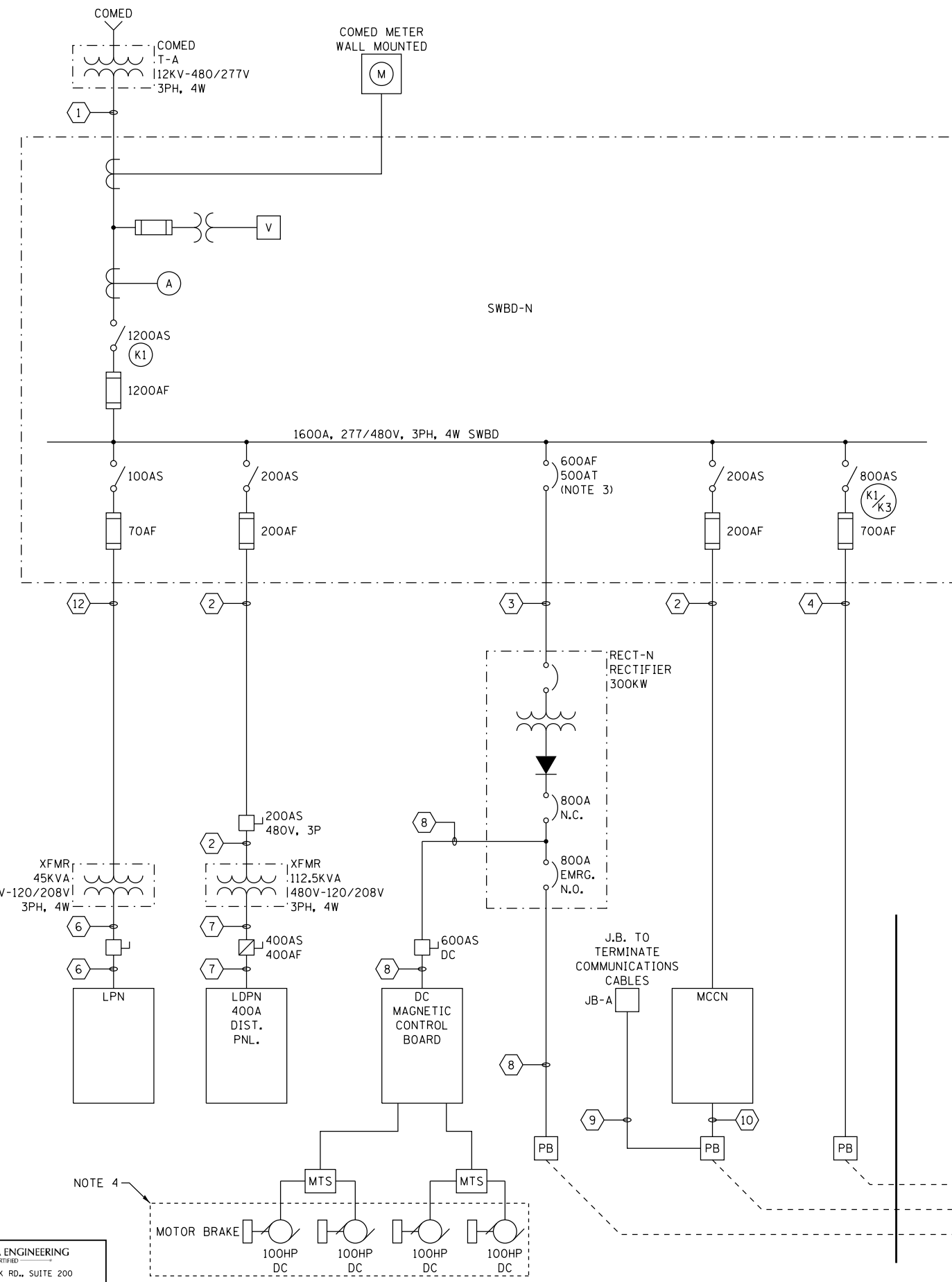
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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**ELECTRICAL SHEET INDEX
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-2.1
CDOT PROJECT NO. E-6-650			186 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. ELECTRICALLY ACTIVATED CIRCUIT BREAKER.
 4. MOTOR BRAKES TO BE REHABILITATED BY CITY FORCES. COORDINATION WITH MOTOR BRAKE WORK IS INCIDENTAL TO ADJACENT ELECTRICAL CONTRACT WORK.



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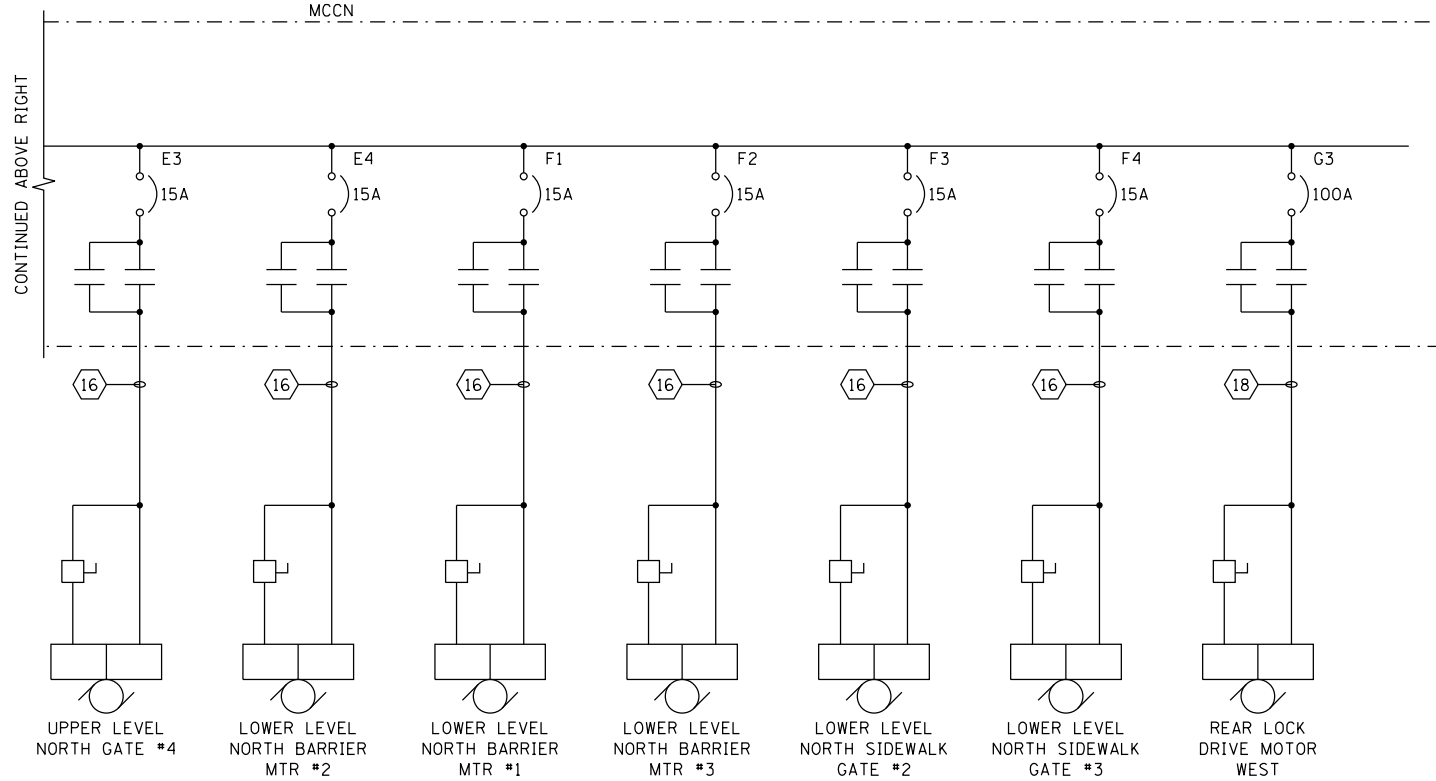
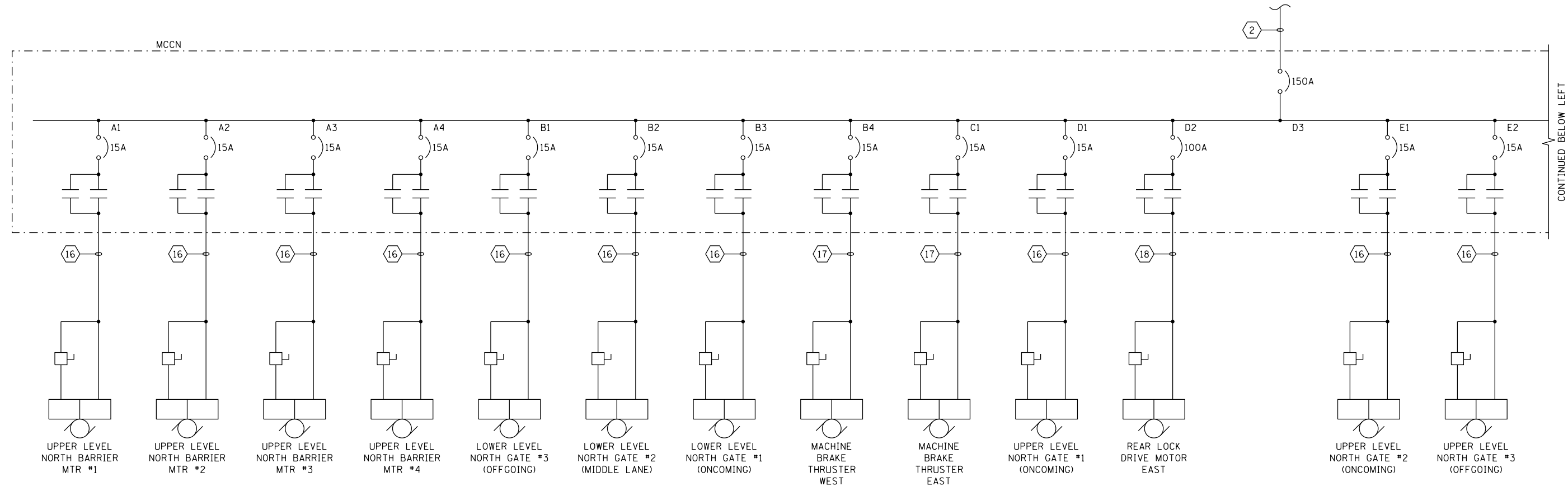
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LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

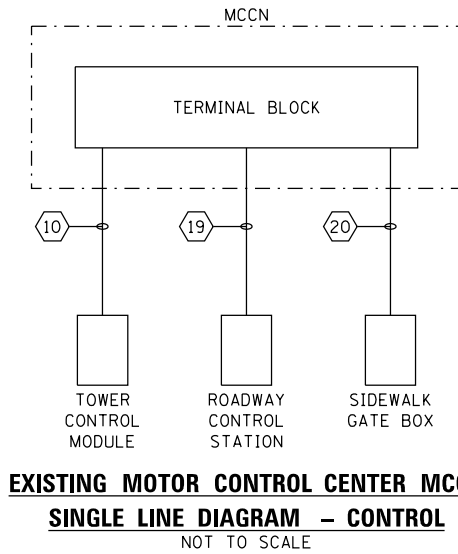
EXISTING ELECTRICAL SINGLE LINE DIAGRAM
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-3.1
CDOT PROJECT NO. E-6-650			187 OF 411

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**EXISTING MOTOR CONTROL CENTER MCCN
SINGLE LINE DIAGRAM - POWER**
NOT TO SCALE



**EXISTING MOTOR CONTROL CENTER MCCN
SINGLE LINE DIAGRAM - CONTROL**
NOT TO SCALE

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

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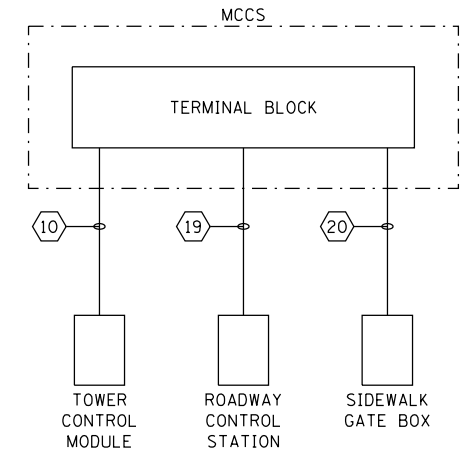
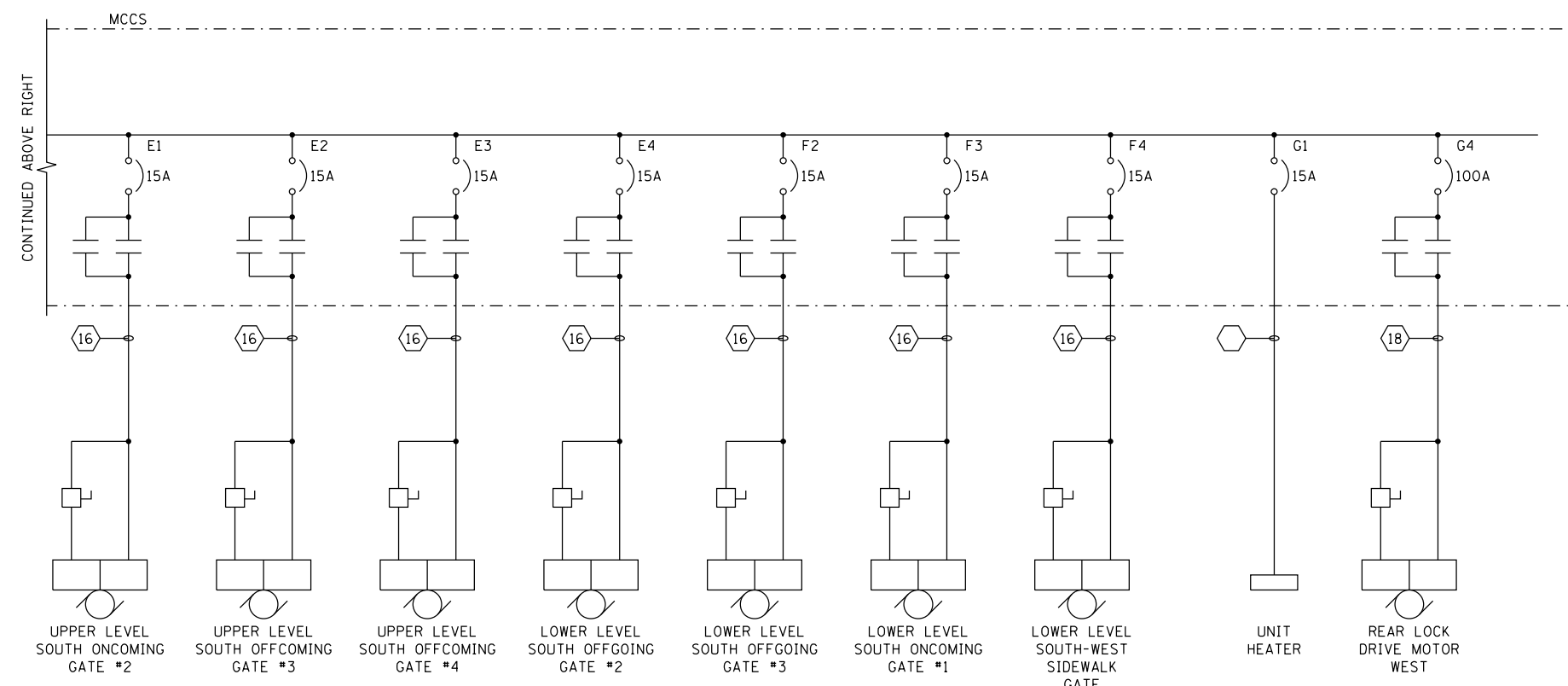
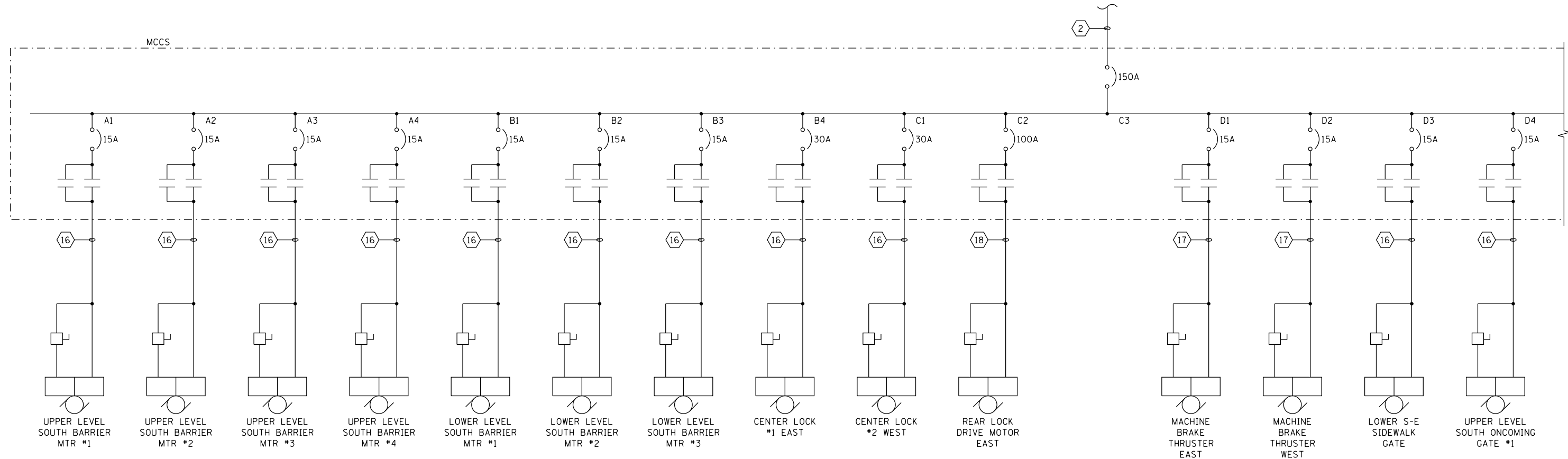
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DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**ELECTRICAL SINGLE LINE DIAGRAM
EXISTING MOTOR CONTROL CENTER MCCN
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-3.2
CDOT PROJECT NO. E-6-650			188 OF 411



- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.

EXISTING MOTOR CONTROL CENTER MCCS
SINGLE LINE DIAGRAM - POWER
 NOT TO SCALE

EXISTING MOTOR CONTROL CENTER MCCS
SINGLE LINE DIAGRAM - CONTROL
 NOT TO SCALE

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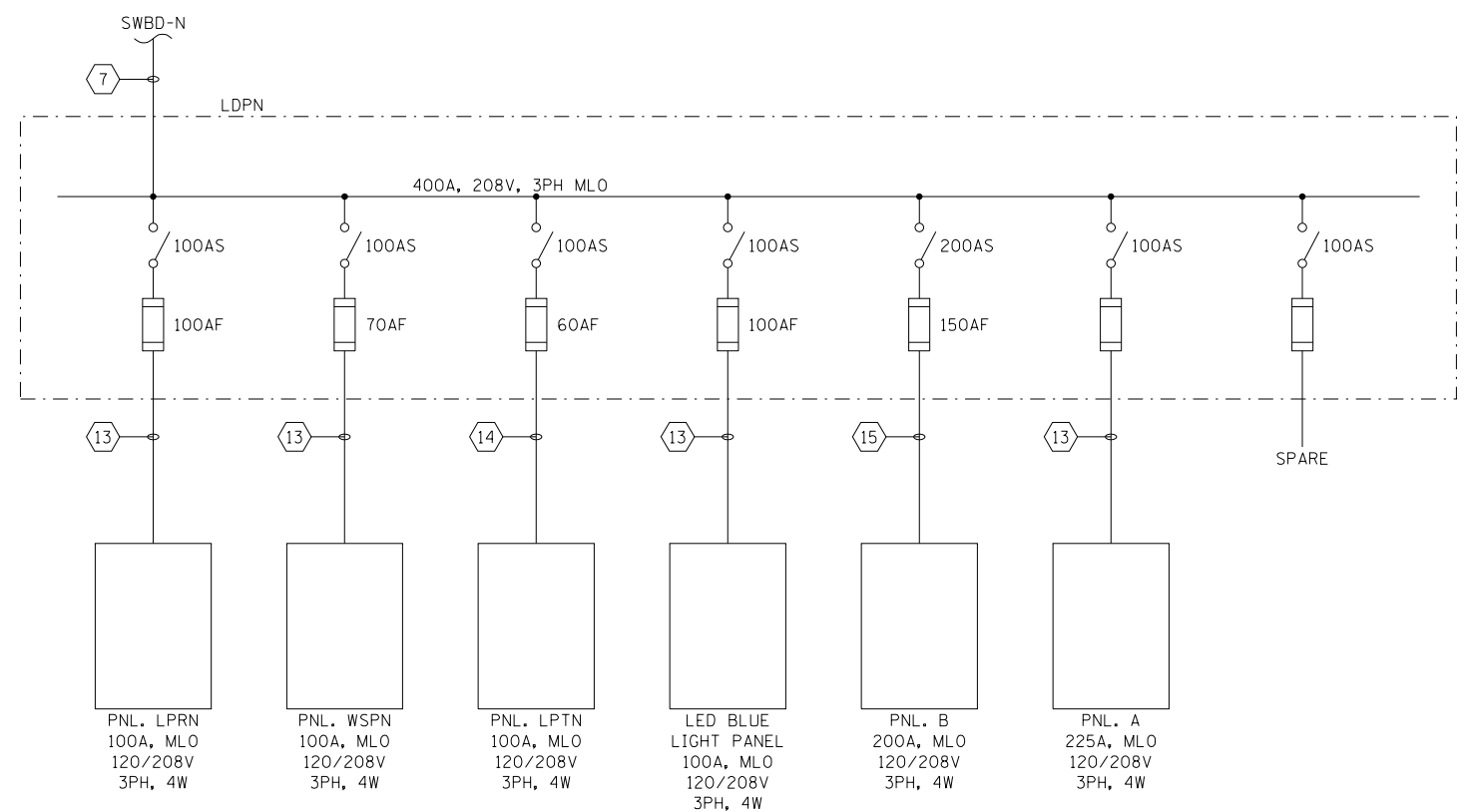
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

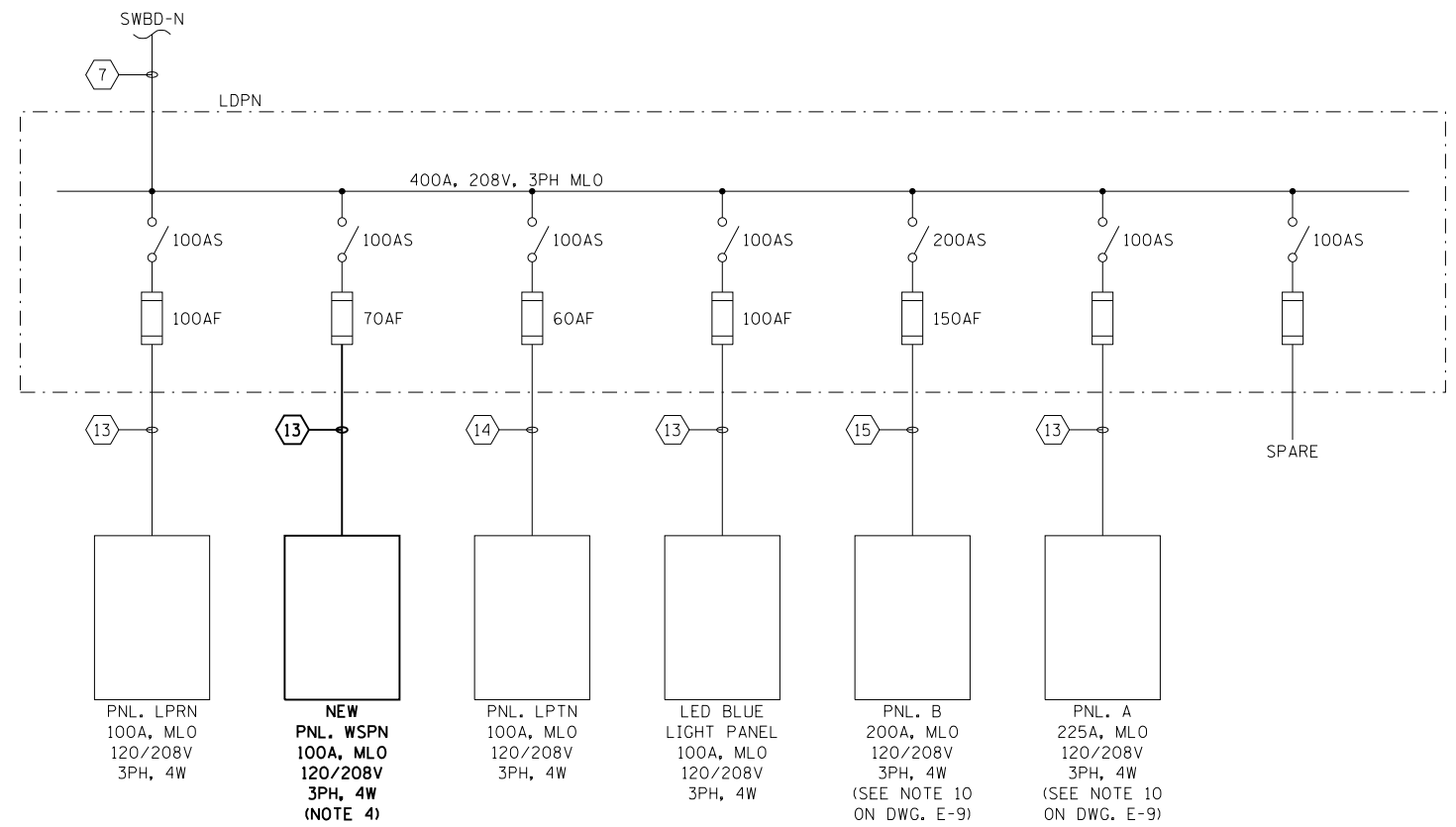
ELECTRICAL SINGLE LINE DIAGRAM
EXISTING MOTOR CONTROL CENTER MCCS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-3.3
CDOT PROJECT NO. E-6-650			189 OF 411

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR PANEL SCHEDULES REFER TO DRAWINGS E-45 THRU E-47.
 - REPULL NEW WIRES FROM PANEL LDPN TO PANEL WSPN IN EXISTING CONDUIT. ALL OTHER CONDUITS COMING OUT OF THE WSPN PANEL SHALL BE DEMOLISHED (EXCEPT INSIDE THE TOWER WHEN IN GOOD CONDITION). NEW CONDUITS TO BE INSTALLED AND NEW WIRES PULLED. NO SPLICES ALLOWED.



EXISTING LDPN SINGLE LINE DIAGRAM
NOT TO SCALE



PROPOSED LDPN SINGLE LINE DIAGRAM
NOT TO SCALE

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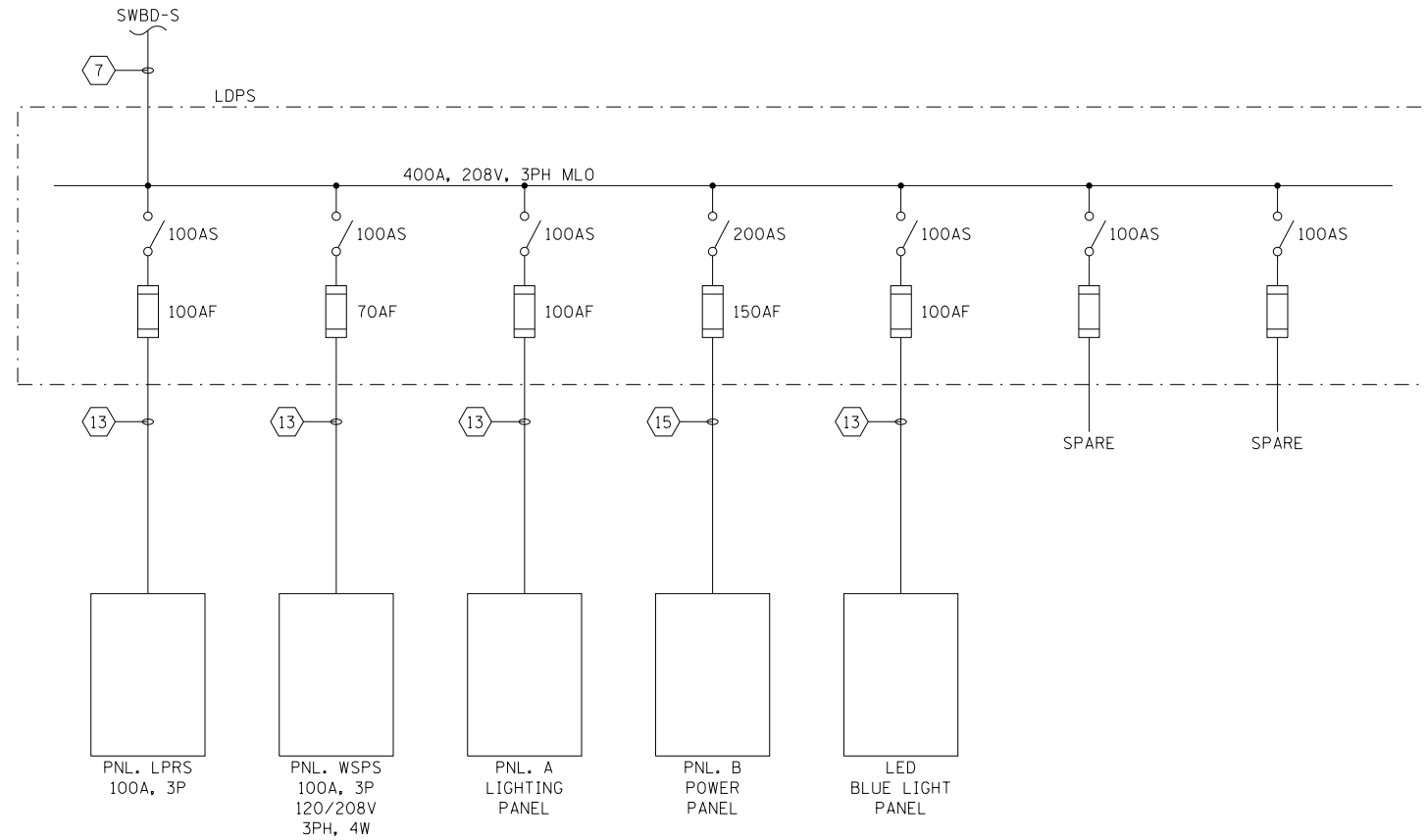
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

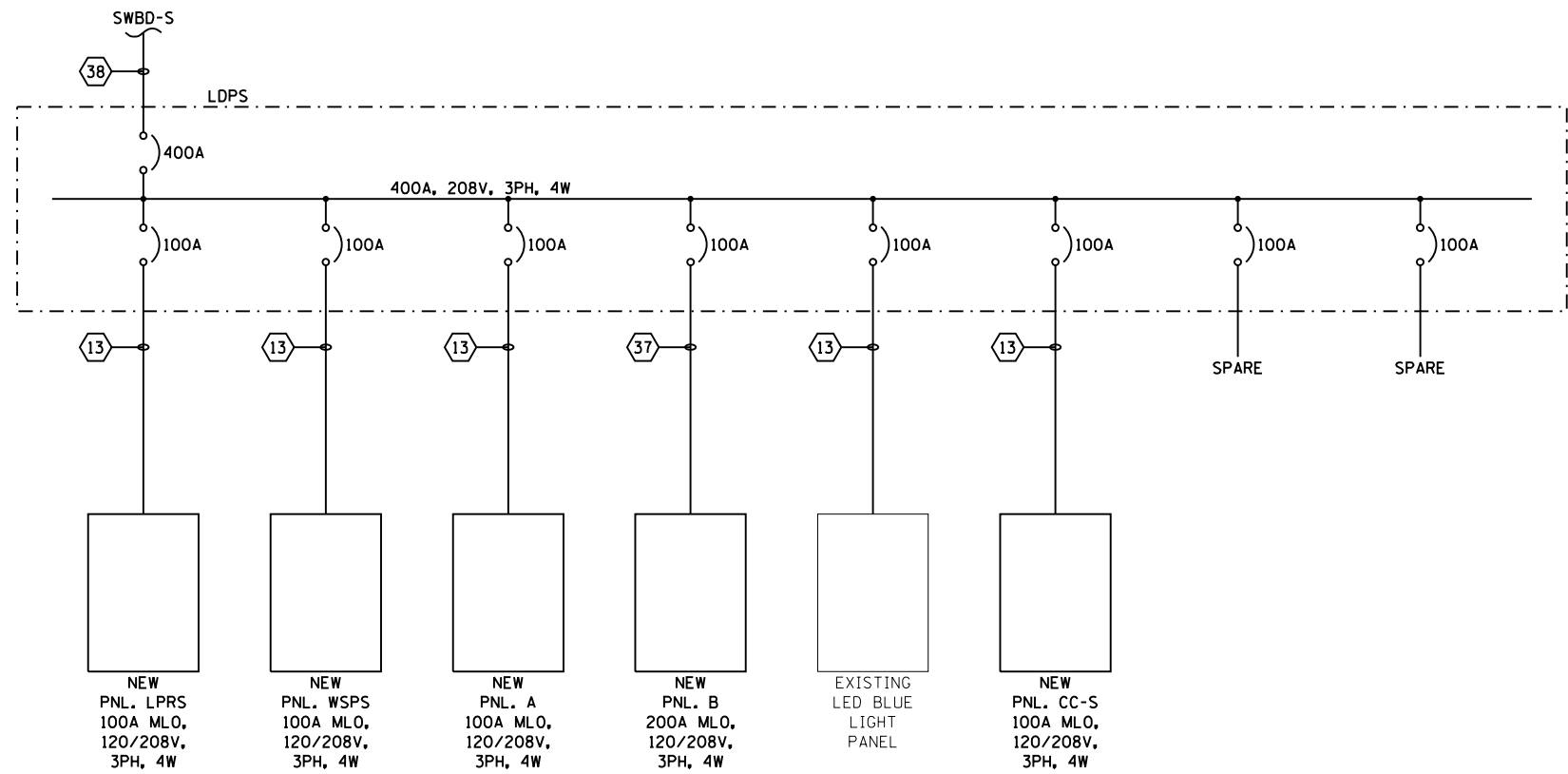
**ELECTRICAL SINGLE LINE DIAGRAM
EXISTING PANEL LDPN
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-3.4
CDOT PROJECT NO. E-6-650			190 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR CABLE AND CONDUIT SCHEDULES, SEE SHEET E-42.



EXISTING LDPS SINGLE LINE DIAGRAM
NOT TO SCALE



PROPOSED LDPS SINGLE LINE DIAGRAM
NOT TO SCALE

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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

ELECTRICAL SINGLE LINE DIAGRAM
PANEL LDPS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-3.5
CDOT PROJECT NO. E-6-650			191 OF 411

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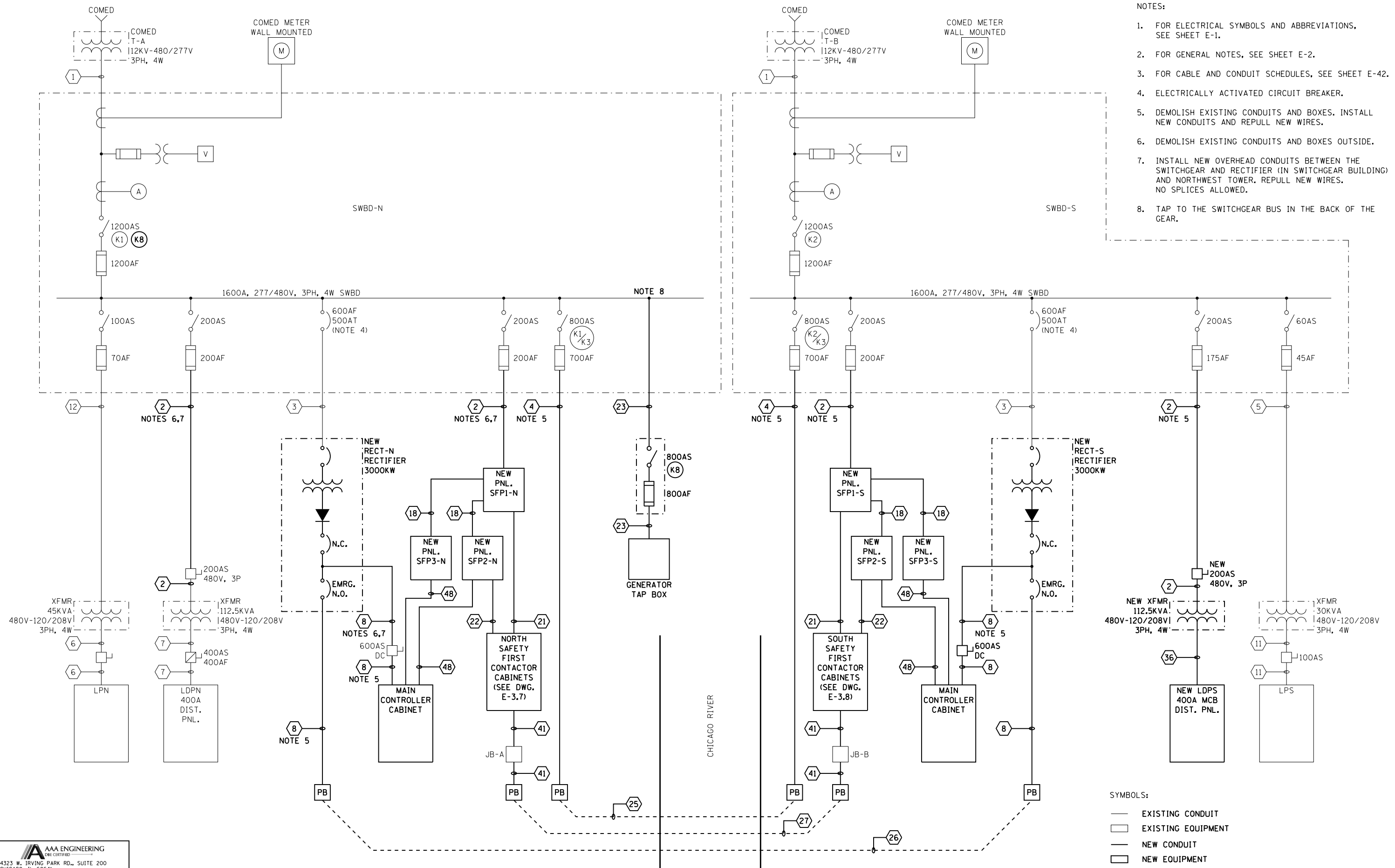
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**PROPOSED ELECTRICAL SINGLE LINE DIAGRAM
(STRUCTURE NO. 016-6030)**

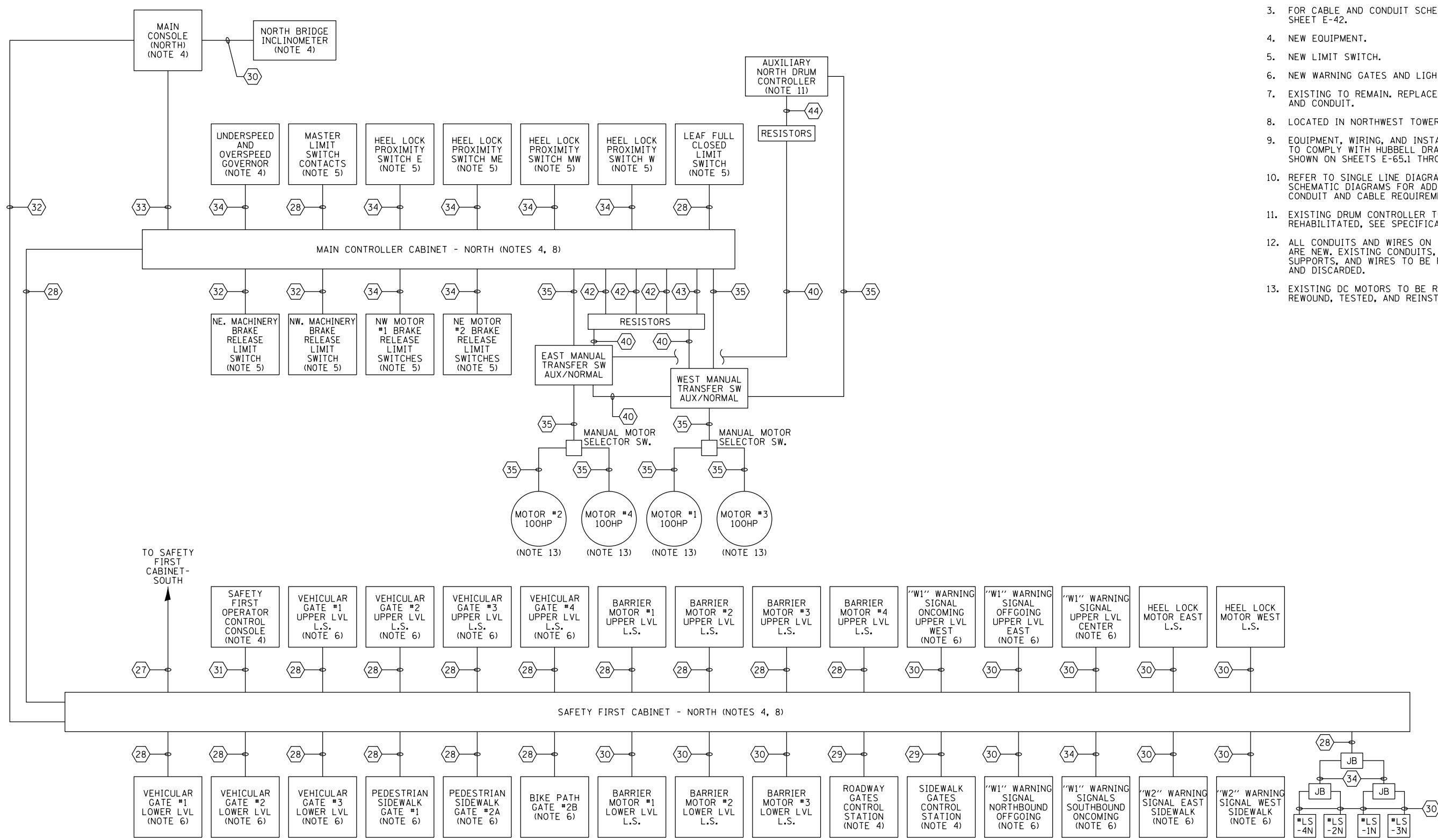
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-3.6
CDOT PROJECT NO. E-6-650			192 OF 411



- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR CABLE AND CONDUIT SCHEDULES, SEE SHEET E-42.
 - ELECTRICALLY ACTIVATED CIRCUIT BREAKER.
 - DEMOLISH EXISTING CONDUITS AND BOXES. INSTALL NEW CONDUITS AND REPULL NEW WIRES.
 - DEMOLISH EXISTING CONDUITS AND BOXES OUTSIDE.
 - INSTALL NEW OVERHEAD CONDUITS BETWEEN THE SWITCHGEAR AND RECTIFIER (IN SWITCHGEAR BUILDING) AND NORTHWEST TOWER. REPULL NEW WIRES. NO SPLICES ALLOWED.
 - TAP TO THE SWITCHGEAR BUS IN THE BACK OF THE GEAR.

- SYMBOLS:
- EXISTING CONDUIT
 - EXISTING EQUIPMENT
 - NEW CONDUIT
 - NEW EQUIPMENT

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR CABLE AND CONDUIT SCHEDULES, SEE SHEET E-42.
 - NEW EQUIPMENT.
 - NEW LIMIT SWITCH.
 - NEW WARNING GATES AND LIGHTS.
 - EXISTING TO REMAIN. REPLACE CABLE AND CONDUIT.
 - LOCATED IN NORTHWEST TOWER.
 - EQUIPMENT, WIRING, AND INSTALLATION TO COMPLY WITH HUBBELL DRAWINGS AS SHOWN ON SHEETS E-65.1 THROUGH E-76.
 - REFER TO SINGLE LINE DIAGRAMS AND SCHEMATIC DIAGRAMS FOR ADDITIONAL CONDUIT AND CABLE REQUIREMENTS.
 - EXISTING DRUM CONTROLLER TO BE REHABILITATED, SEE SPECIFICATIONS.
 - ALL CONDUITS AND WIRES ON THIS DRAWING ARE NEW. EXISTING CONDUITS, CONDUIT SUPPORTS, AND WIRES TO BE REMOVED AND DISCARDED.
 - EXISTING DC MOTORS TO BE REMOVED, REWOUND, TESTED, AND REINSTALLED.



PROPOSED NORTH BRIDGE BLOCK DIAGRAM
NOT TO SCALE

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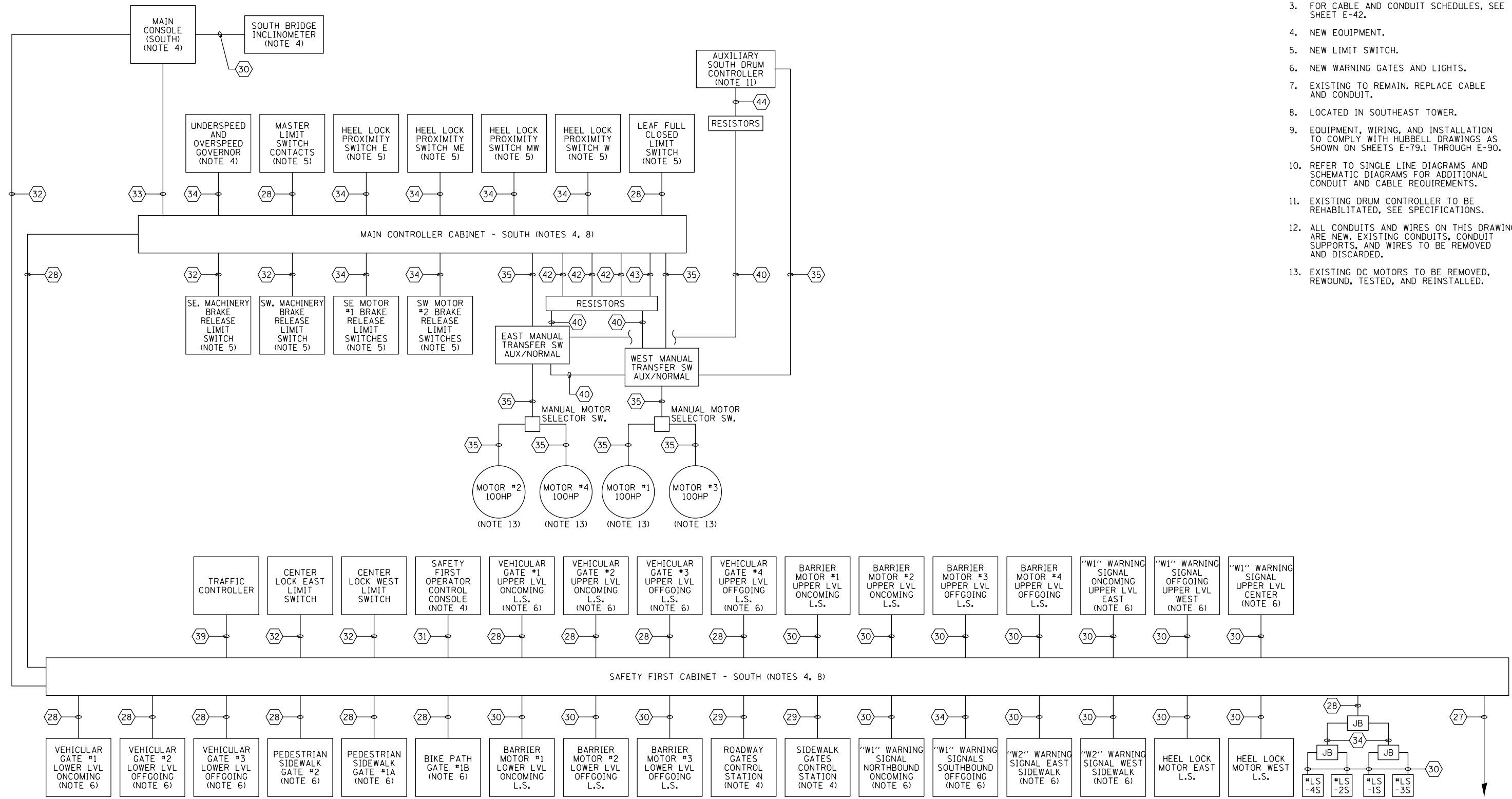
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PROPOSED NORTH BRIDGE
CONTROL BLOCK DIAGRAM
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-3.7
CDOT PROJECT NO. E-6-650			193 OF 411

M:\970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E3_g-South Bridge Block Diagram.dgn 6/22/2017



PROPOSED SOUTH BRIDGE BLOCK DIAGRAM
NOT TO SCALE

- NOTES:**
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR CABLE AND CONDUIT SCHEDULES, SEE SHEET E-42.
 - NEW EQUIPMENT.
 - NEW LIMIT SWITCH.
 - NEW WARNING GATES AND LIGHTS.
 - EXISTING TO REMAIN. REPLACE CABLE AND CONDUIT.
 - LOCATED IN SOUTHEAST TOWER.
 - EQUIPMENT, WIRING, AND INSTALLATION TO COMPLY WITH HUBBELL DRAWINGS AS SHOWN ON SHEETS E-79.1 THROUGH E-90.
 - REFER TO SINGLE LINE DIAGRAMS AND SCHEMATIC DIAGRAMS FOR ADDITIONAL CONDUIT AND CABLE REQUIREMENTS.
 - EXISTING DRUM CONTROLLER TO BE REHABILITATED, SEE SPECIFICATIONS.
 - ALL CONDUITS AND WIRES ON THIS DRAWING ARE NEW. EXISTING CONDUITS, CONDUIT SUPPORTS, AND WIRES TO BE REMOVED AND DISCARDED.
 - EXISTING DC MOTORS TO BE REMOVED, REWOUND, TESTED, AND REINSTALLED.

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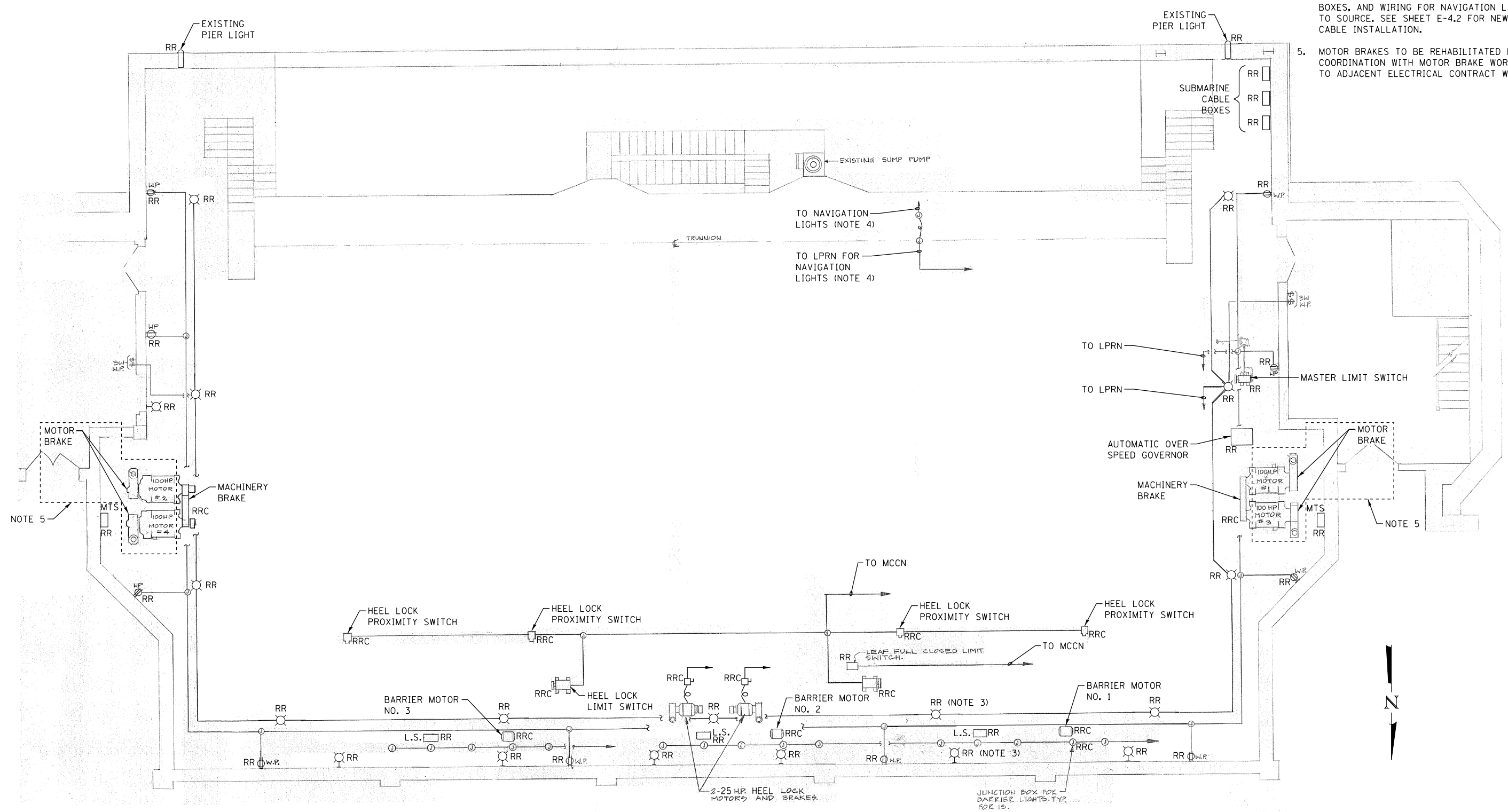
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PROPOSED SOUTH BRIDGE
CONTROL BLOCK DIAGRAM
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-3.8
CDOT PROJECT NO. E-6-650			194 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. EXISTING FIXTURE (TYP).
 4. CONTRACTOR TO REMOVE AND REPLACE ALL CONDUIT, BOXES, AND WIRING FOR NAVIGATION LIGHTS BACK TO SOURCE. SEE SHEET E-4.2 FOR NEW CONDUIT AND CABLE INSTALLATION.
 5. MOTOR BRAKES TO BE REHABILITATED BY CITY FORCES. COORDINATION WITH MOTOR BRAKE WORK IS INCIDENTAL TO ADJACENT ELECTRICAL CONTRACT WORK.



NORTH MACHINERY ROOM
EXISTING ELECTRICAL PLAN (DOCK LEVEL) AT ELEV. +5.0
 NOT TO SCALE

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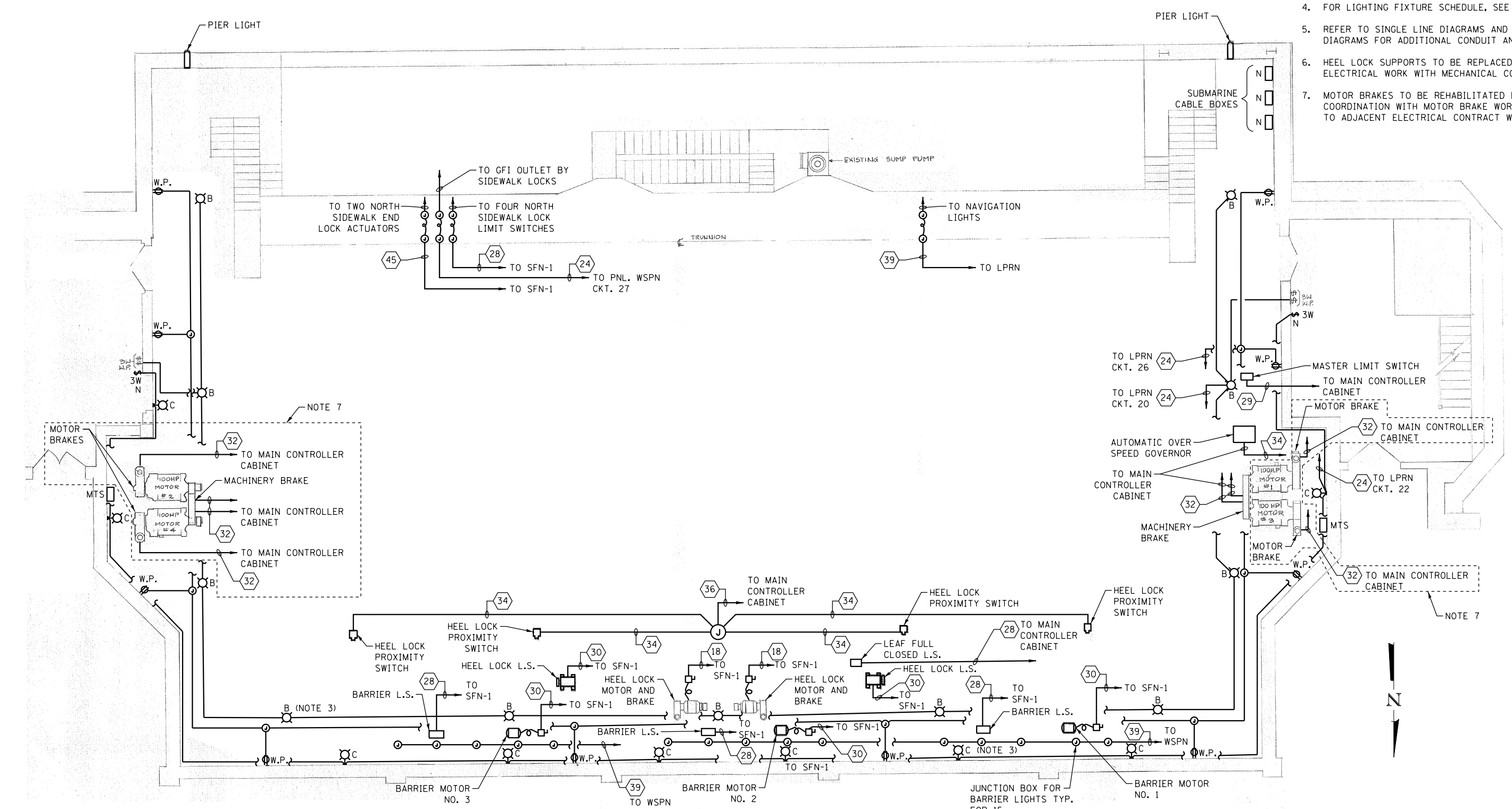
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

NORTH MACHINERY ROOM EXISTING
ELECTRICAL PLAN (DOCK LEVEL) AT ELEV. +5.0
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-4.1
CDOT PROJECT NO. E-6-650			195 OF 411

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - MATCH MOUNTING HEIGHT OF NEW FIXTURES WITH MOUNTING HEIGHT OF EXISTING FIXTURES.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - REFER TO SINGLE LINE DIAGRAMS AND CONTROL BLOCK DIAGRAMS FOR ADDITIONAL CONDUIT AND CABLE RUNS.
 - HEEL LOCK SUPPORTS TO BE REPLACED. COORDINATE ELECTRICAL WORK WITH MECHANICAL CONTRACTOR.
 - MOTOR BRAKES TO BE REHABILITATED BY CITY FORCES. COORDINATION WITH MOTOR BRAKE WORK IS INCIDENTAL TO ADJACENT ELECTRICAL CONTRACT WORK.



NORTH MACHINERY ROOM
PROPOSED ELECTRICAL PLAN (DOCK LEVEL) AT ELEV. +5.0
 NOT TO SCALE

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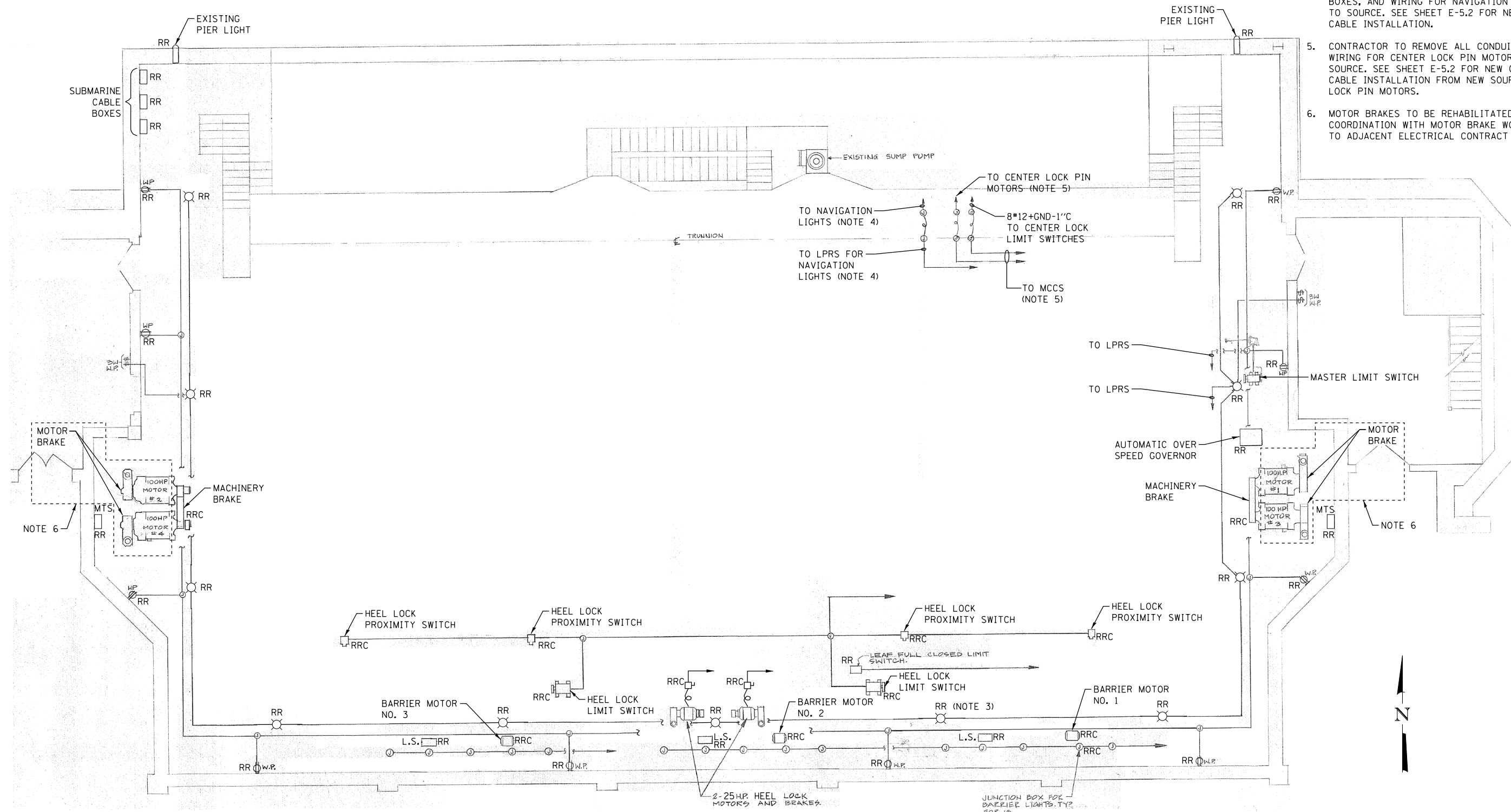
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

NORTH MACHINERY ROOM PROPOSED
ELECTRICAL PLAN (DOCK LEVEL) AT ELEV. +5.0
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-4.2
CDOT PROJECT NO. E-6-650			196 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. EXISTING FIXTURE (TYP).
4. CONTRACTOR TO REMOVE AND REPLACE ALL CONDUIT, BOXES, AND WIRING FOR NAVIGATION LIGHTS BACK TO SOURCE. SEE SHEET E-5.2 FOR NEW CONDUIT AND CABLE INSTALLATION.
5. CONTRACTOR TO REMOVE ALL CONDUIT, BOXES, AND WIRING FOR CENTER LOCK PIN MOTORS BACK TO SOURCE. SEE SHEET E-5.2 FOR NEW CONDUIT AND CABLE INSTALLATION FROM NEW SOURCE TO CENTER LOCK PIN MOTORS.
6. MOTOR BRAKES TO BE REHABILITATED BY CITY FORCES. COORDINATION WITH MOTOR BRAKE WORK IS INCIDENTAL TO ADJACENT ELECTRICAL CONTRACT WORK.



SOUTH MACHINERY ROOM
EXISTING ELECTRICAL PLAN (DOCK LEVEL) AT ELEV. +5.0
 NOT TO SCALE

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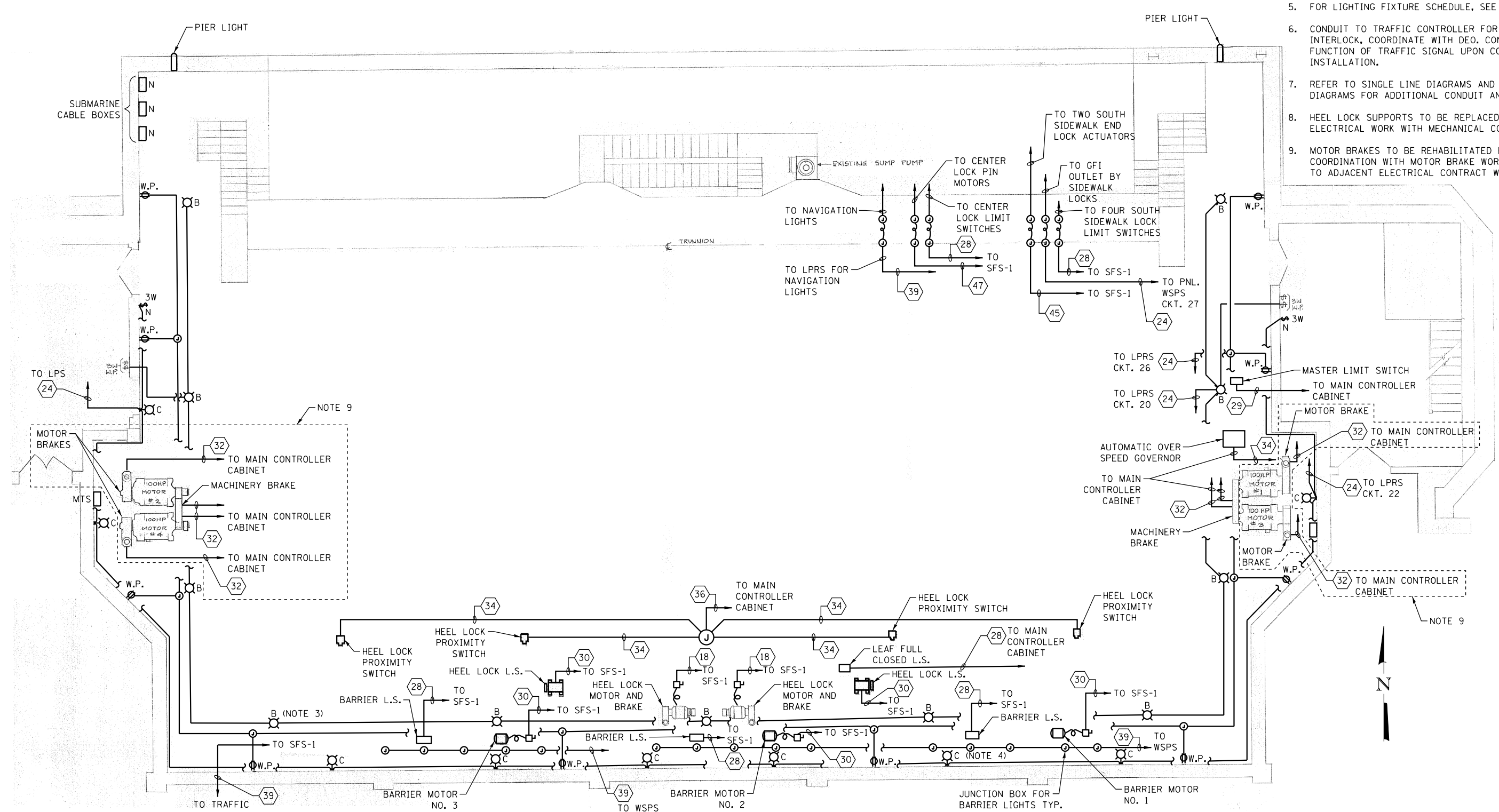
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTH MACHINERY ROOM EXISTING
ELECTRICAL PLAN (DOCK LEVEL) AT ELEV. +5.0
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-5.1
CDOT PROJECT NO. E-6-650			197 OF 411

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - MATCH MOUNTING HEIGHT OF NEW FIXTURES WITH MOUNTING HEIGHT OF EXISTING FIXTURES.
 - MOUNTING HEIGHT OF THE WALL PACKS TO BE 8'-6" TO THE BOTTOM OF FIXTURE.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - CONDUIT TO TRAFFIC CONTROLLER FOR TRAFFIC SIGNAL INTERLOCK, COORDINATE WITH DEO. CONFIRM PROPER FUNCTION OF TRAFFIC SIGNAL UPON COMPLETION OF INSTALLATION.
 - REFER TO SINGLE LINE DIAGRAMS AND CONTROL BLOCK DIAGRAMS FOR ADDITIONAL CONDUIT AND CABLE RUNS.
 - HEEL LOCK SUPPORTS TO BE REPLACED. COORDINATE ELECTRICAL WORK WITH MECHANICAL CONTRACTOR.
 - MOTOR BRAKES TO BE REHABILITATED BY CITY FORCES. COORDINATION WITH MOTOR BRAKE WORK IS INCIDENTAL TO ADJACENT ELECTRICAL CONTRACT WORK.



SOUTH MACHINERY ROOM
PROPOSED ELECTRICAL PLAN (DOCK LEVEL) AT ELEV. +5.0
 NOT TO SCALE

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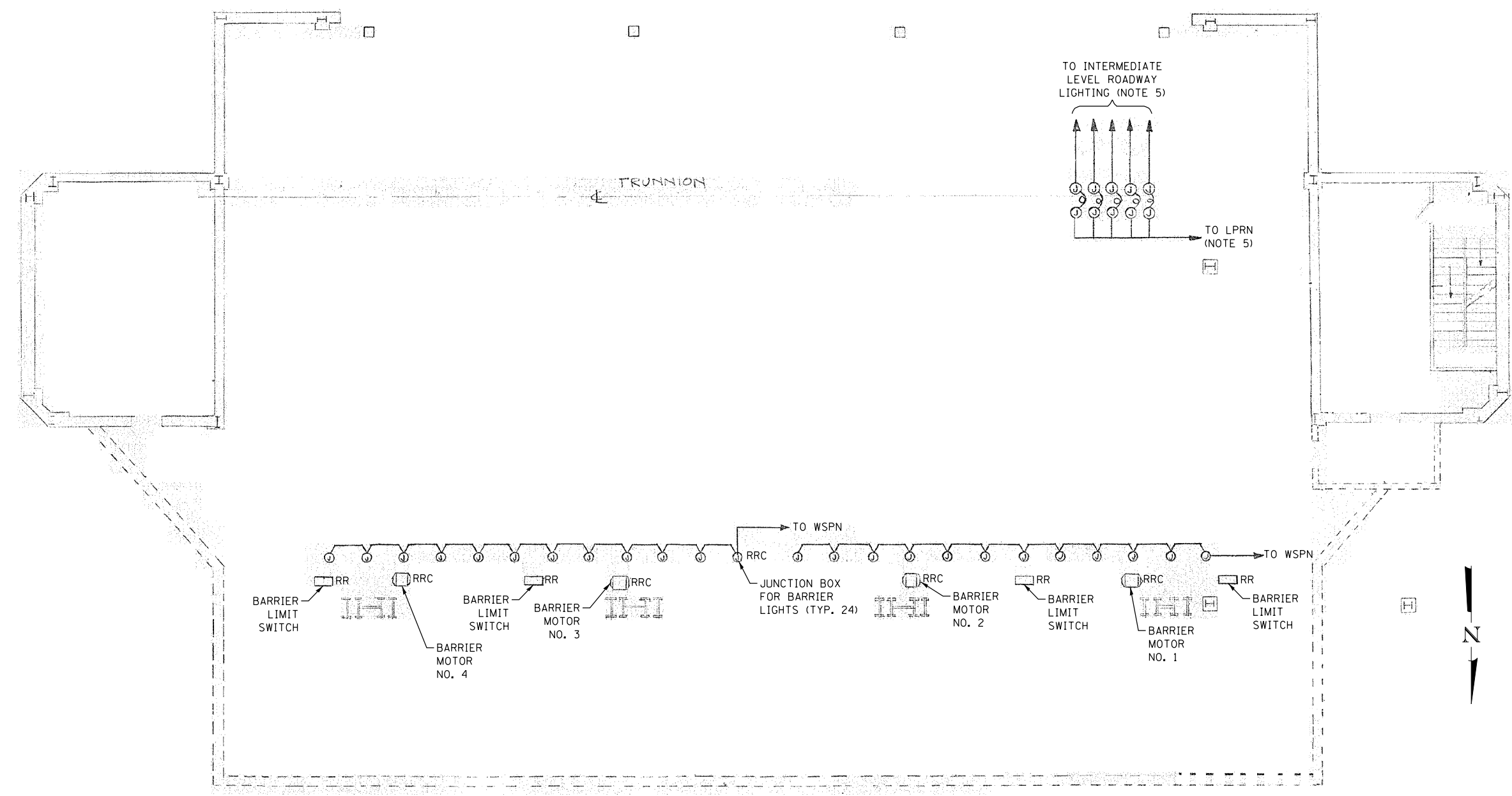
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

SOUTH MACHINERY ROOM PROPOSED
ELECTRICAL PLAN (DOCK LEVEL) AT ELEV. +5.0
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-5.2
CDOT PROJECT NO. E-6-650			198 OF 411

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- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. FOR CABLE AND CONDUIT SCHEDULES, SEE SHEET E-42.
 5. CONTRACTOR TO REMOVE AND REPLACE ALL CONDUIT, BOXES, AND WIRING FOR INTERMEDIATE LEVEL ROADWAY LIGHTS BACK TO SOURCE. SEE SHEET E-6.2 FOR NEW CONDUIT AND CABLE INSTALLATION.



NORTH MACHINERY ROOM
EXISTING ELECTRICAL PLAN (INTERMEDIATE LEVEL)
 NOT TO SCALE

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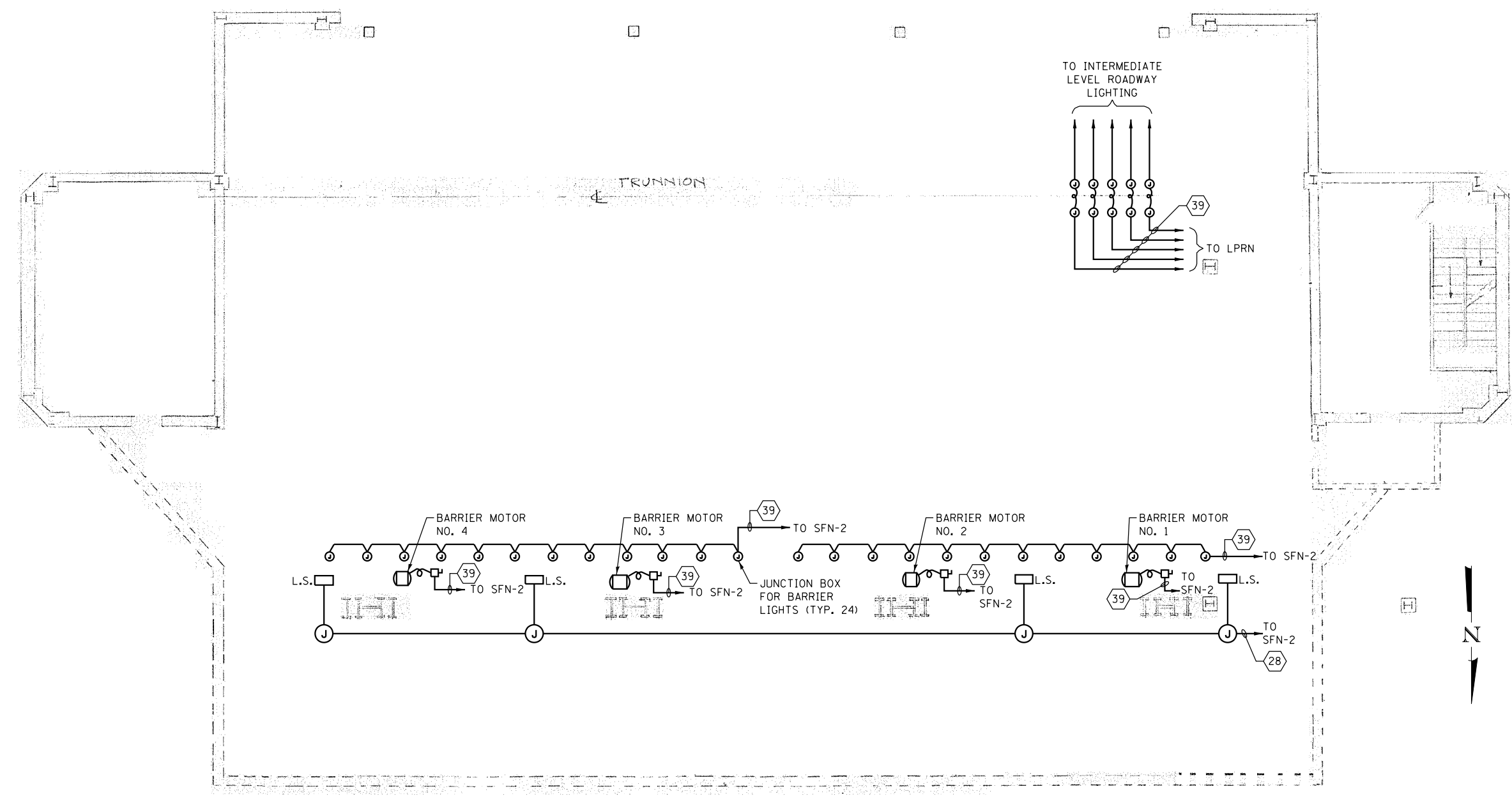
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

NORTH MACHINERY ROOM EXISTING
ELECTRICAL PLAN (INTERMEDIATE LEVEL)
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-6.1
CDOT PROJECT NO. E-6-650			199 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. FOR CABLE AND CONDUIT SCHEDULES, SEE SHEET E-42.



NORTH MACHINERY ROOM
PROPOSED ELECTRICAL PLAN (INTERMEDIATE LEVEL)
 NOT TO SCALE

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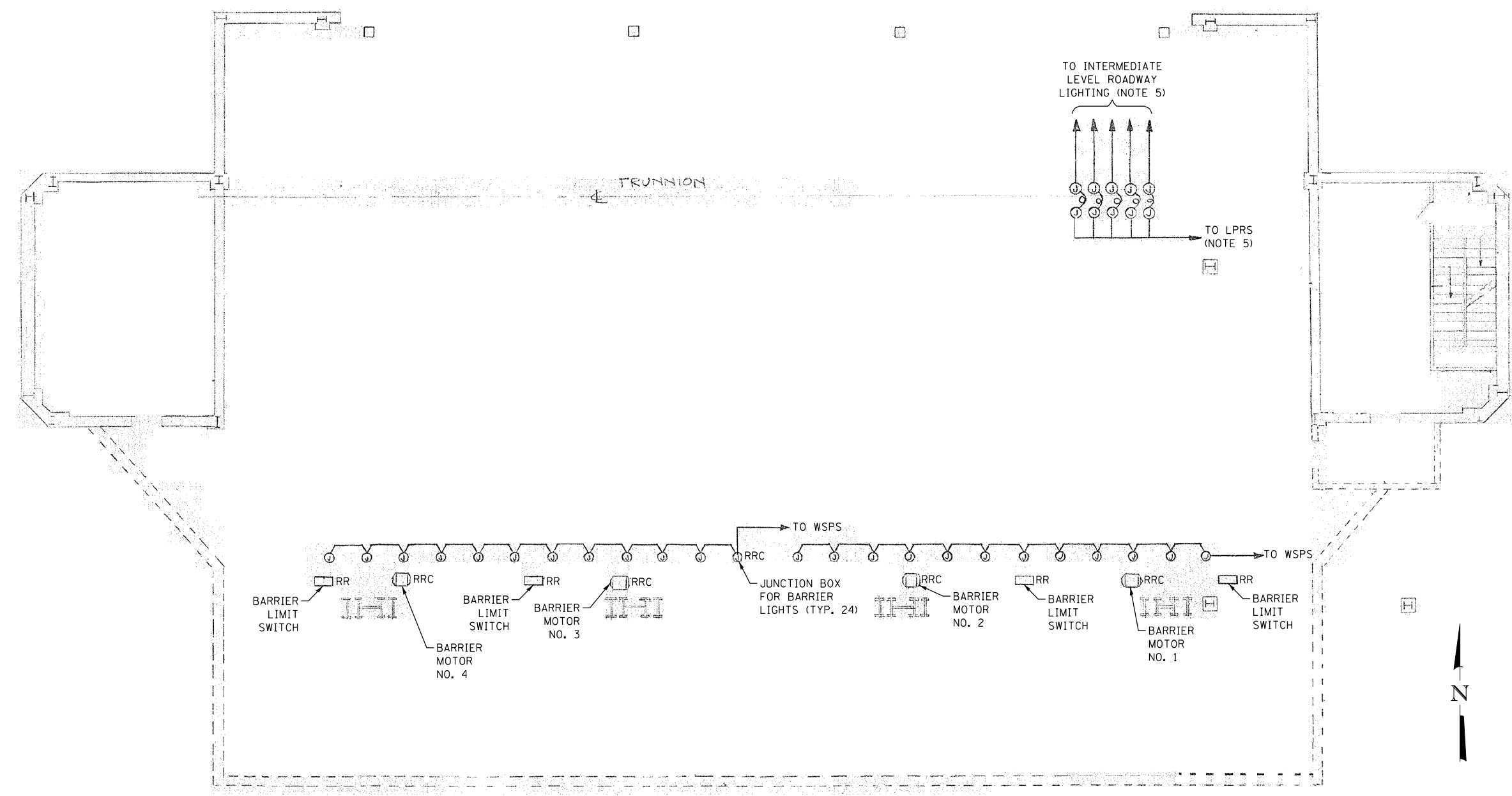
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

NORTH MACHINERY ROOM PROPOSED
ELECTRICAL PLAN (INTERMEDIATE LEVEL)
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-6.2
CDOT PROJECT NO. E-6-650			200 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. FOR CABLE AND CONDUIT SCHEDULES, SEE SHEET E-42.
 5. CONTRACTOR TO REMOVE AND REPLACE ALL CONDUIT, BOXES, AND WIRING FOR INTERMEDIATE LEVEL ROADWAY LIGHTS BACK TO SOURCE. SEE SHEET E-7.2 FOR NEW CONDUIT AND CABLE INSTALLATION.



SOUTH MACHINERY ROOM
EXISTING ELECTRICAL PLAN (INTERMEDIATE LEVEL)
 NOT TO SCALE

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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

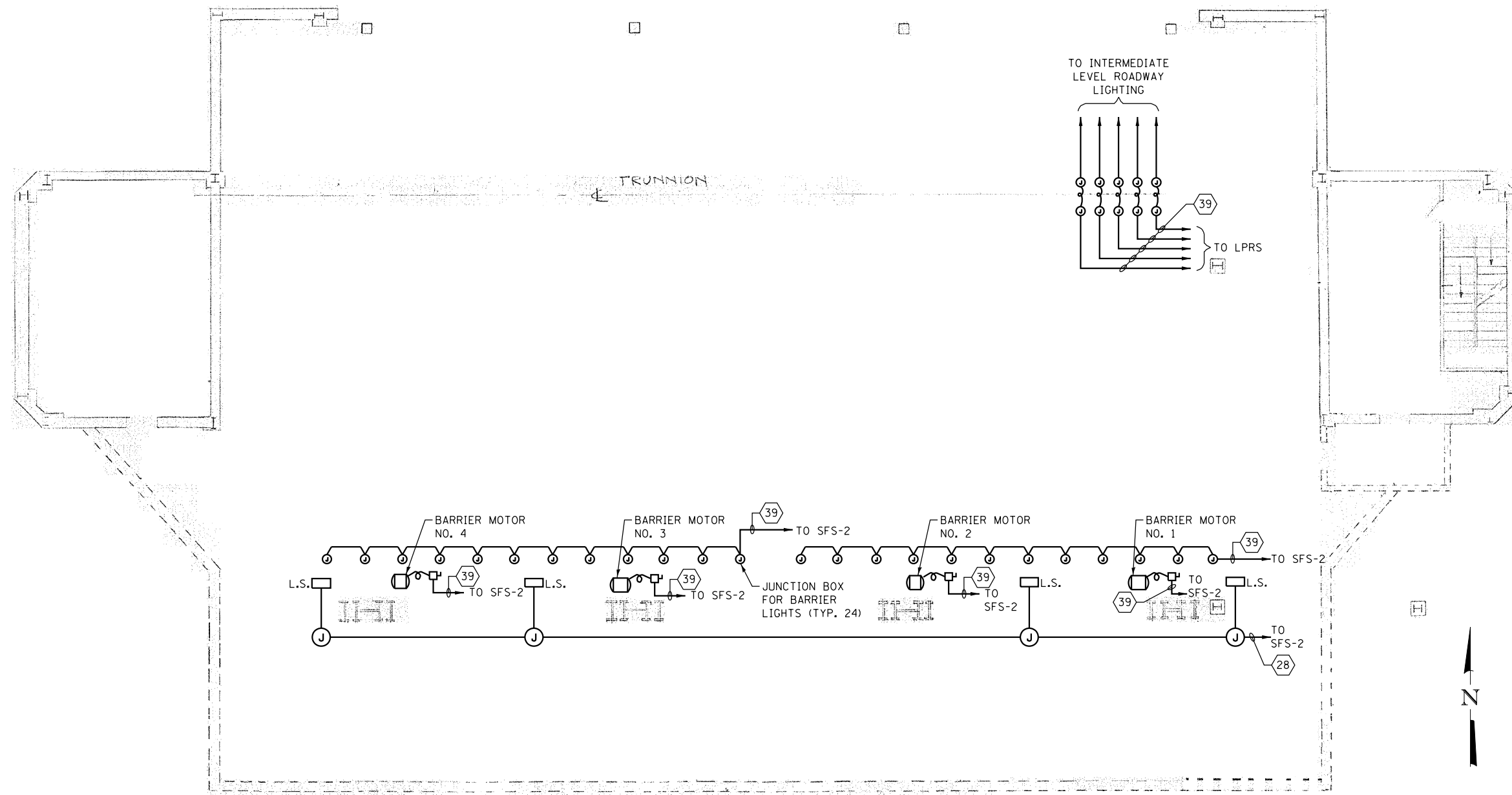
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTH MACHINERY ROOM EXISTING
ELECTRICAL PLAN (INTERMEDIATE LEVEL)
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-7.1
CDOT PROJECT NO. E-6-650			201 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. FOR CABLE AND CONDUIT SCHEDULES, SEE SHEET E-42.



SOUTH MACHINERY ROOM
PROPOSED ELECTRICAL PLAN (INTERMEDIATE LEVEL)
 NOT TO SCALE

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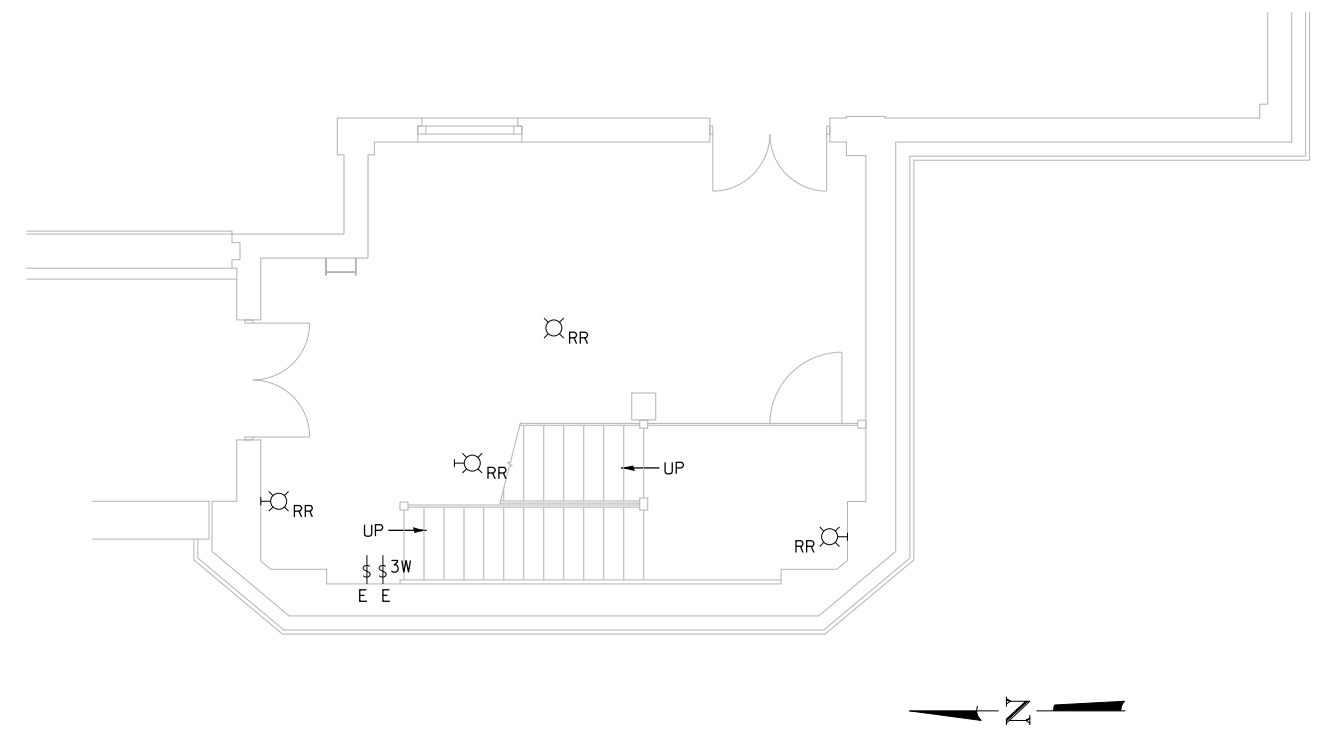
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

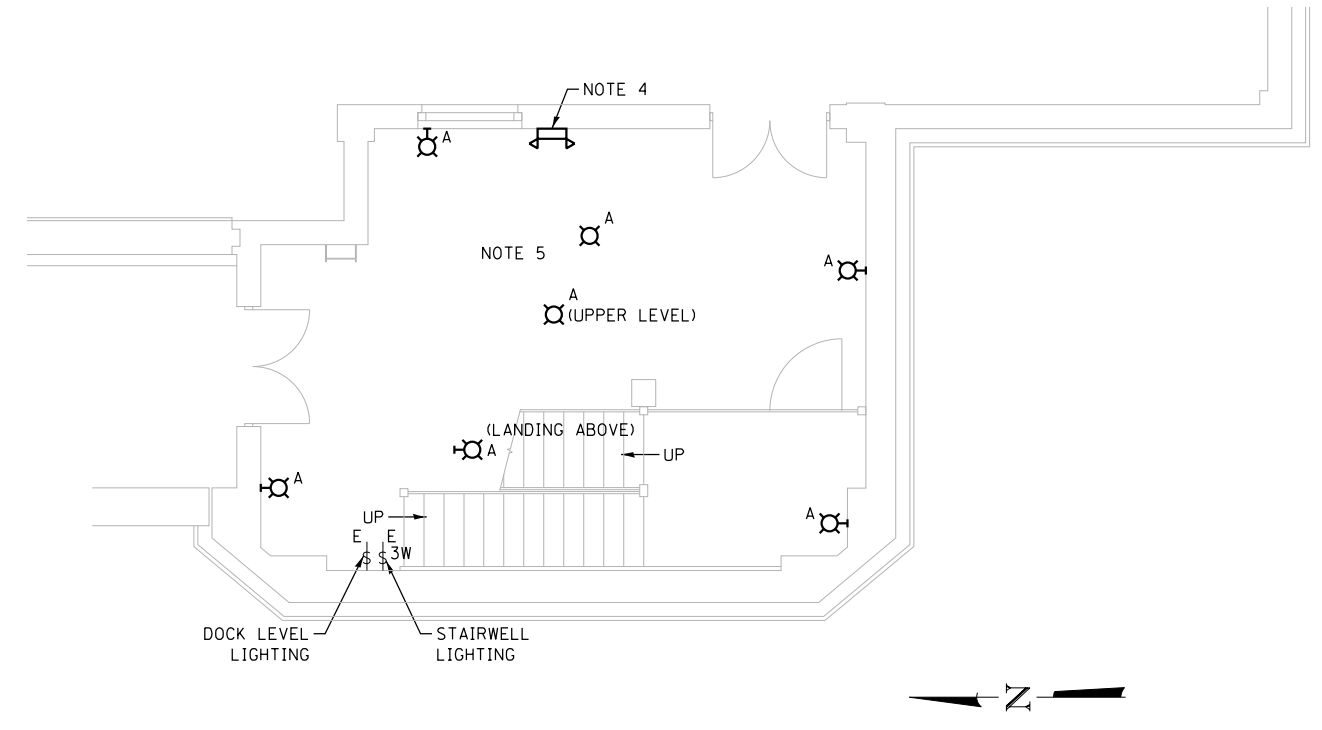
SOUTH MACHINERY ROOM PROPOSED
ELECTRICAL PLAN (INTERMEDIATE LEVEL)
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-7.2
CDOT PROJECT NO. E-6-650			202 OF 411

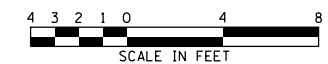
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 5. INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES IN THIS AREA.



EXISTING PLAN OF BRIDGE HOUSE
DOCK LEVEL AT ELEV. +5.0
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN OF BRIDGE HOUSE
DOCK LEVEL AT ELEV. +5.0
 SCALE: 1/4" = 1'-0"



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 30 N. LASALLE STREET
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 TEL: (312) 782-8150
 FAX: (312) 782-1684

USER NAME = cmartin	DESIGNED - BG	REVISED -
	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CUM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

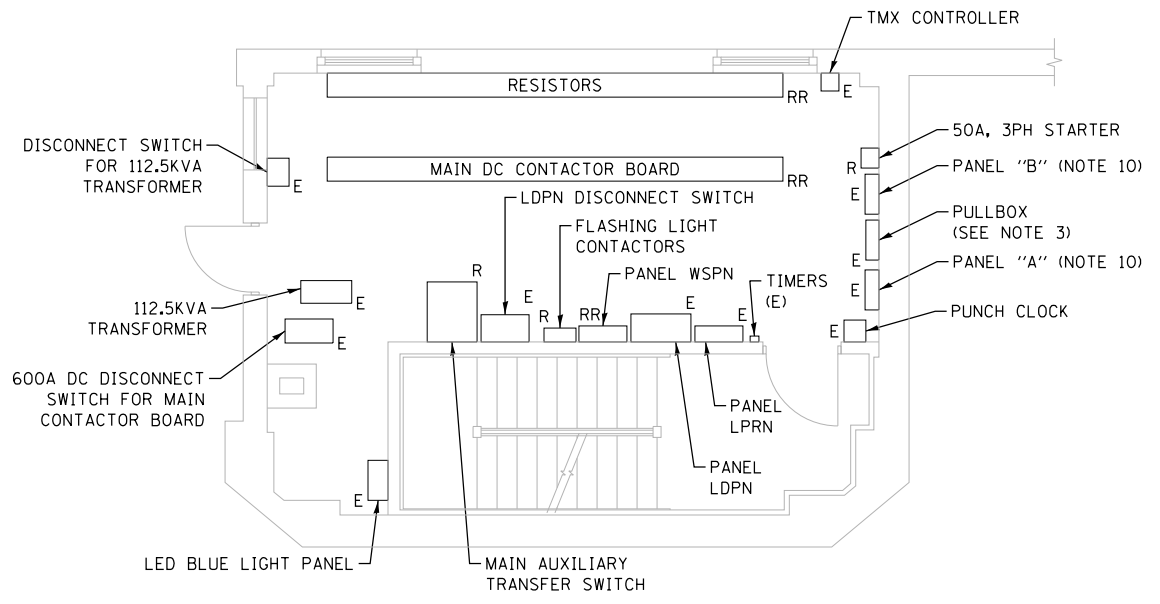
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

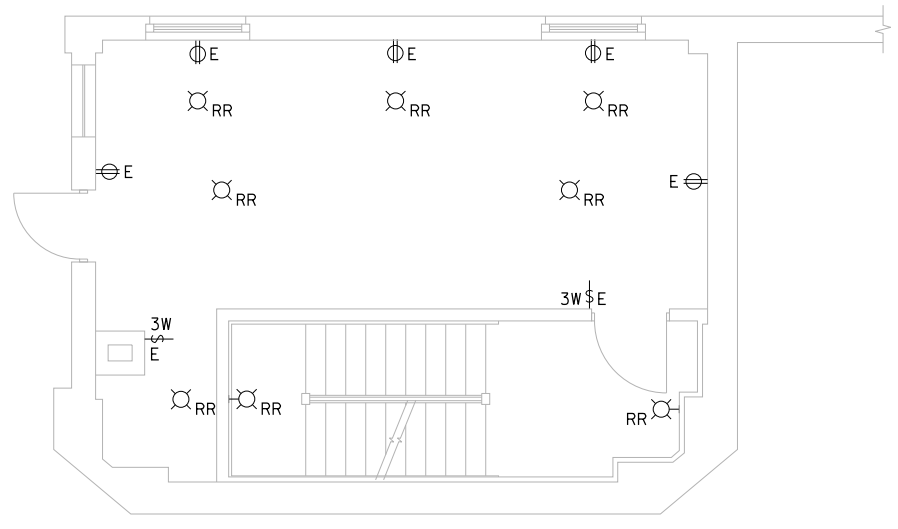
EXISTING AND PROPOSED
NORTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-8
CDOT PROJECT NO. E-6-650			203 OF 411

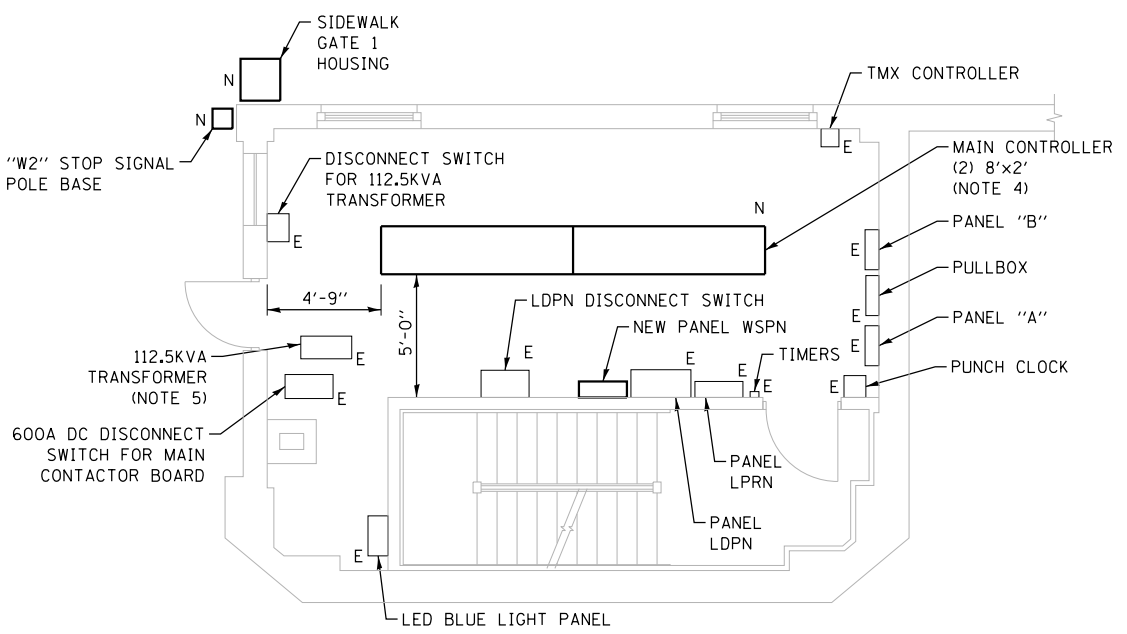
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - REMOVE RUST, SAND, AND SPRAY PAINT THE FRONT OF PANEL AND DOOR.
 - MAIN CONTROLLER TO BE MOUNTED ON A CONCRETE PAD. POUR CONCRETE PAD 16'-8"x2'-8", 4" HIGH WITH 1" CHAMFER.
 - GROUND THE TRANSFORMER AND BOND THE NEUTRAL WITH THE GROUND BUS PER CHICAGO ELECTRICAL CODE.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - FOR PANEL SCHEDULES, SEE SHEETS E-45 THROUGH E-47.
 - INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE PENDANT MOUNTED LIGHT FIXTURES ON THIS FLOOR. MOUNT FIXTURES AT 11'-0" ABOVE FINISHED FLOOR.
 - REPLACE MISSING AND BROKEN CIRCUIT BREAKERS (WITH EQUAL), UPDATE PANEL SCHEDULES, AND SPRAY PAINT THE COVER AND DOOR.



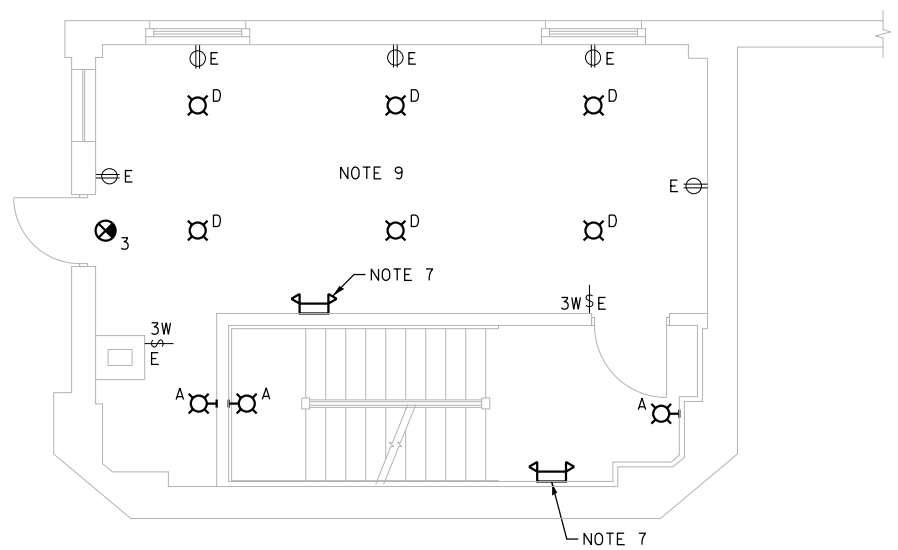
EXISTING EQUIPMENT PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



EXISTING LIGHTING AND RECEPTACLE PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING AND RECEPTACLE PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

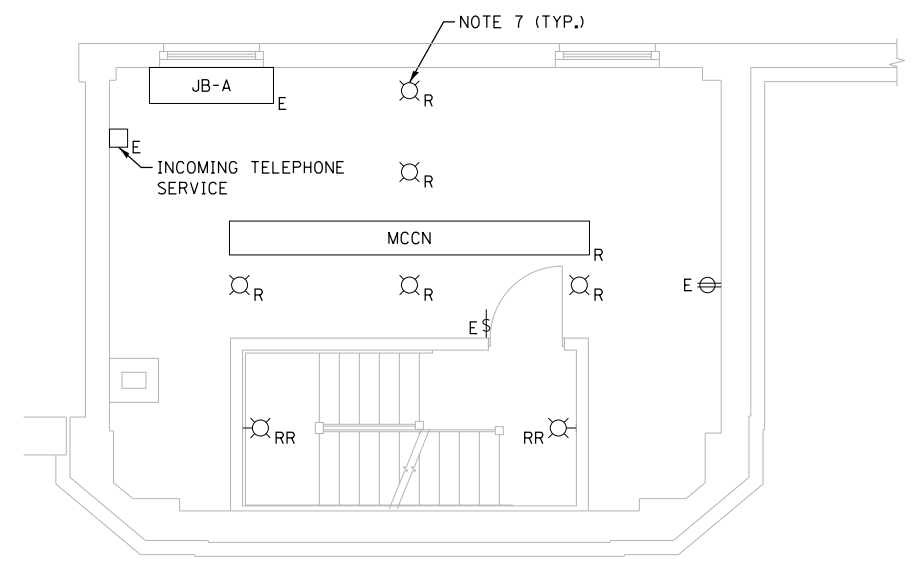
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

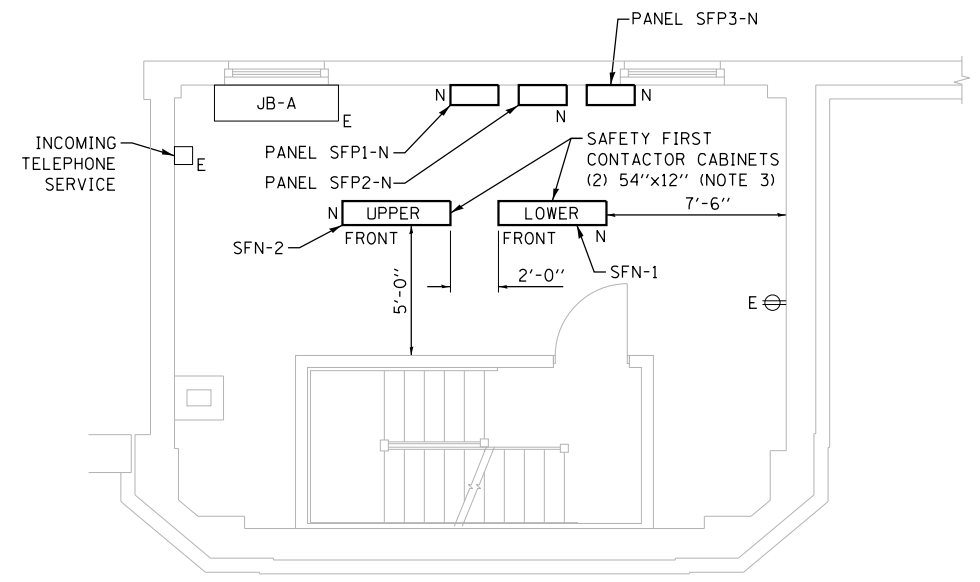
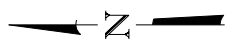
EXISTING AND PROPOSED
NORTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-9
CDOT PROJECT NO. E-6-650			204 OF 411

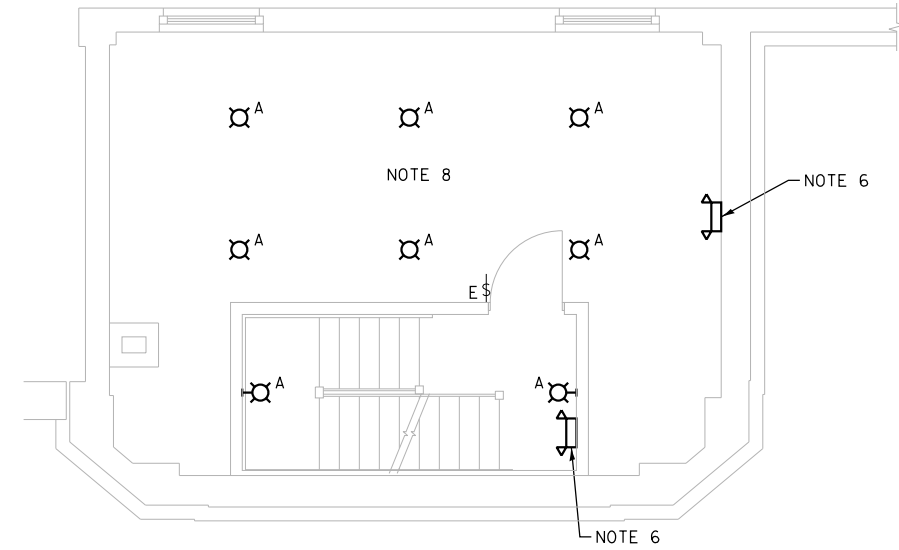
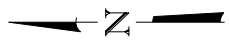
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. CABINETS TO BE MOUNTED ON CONCRETE PAD. POUR CONCRETE PAD 11'-8"x1'-6", 4" HIGH WITH 1" CHAMFER.
 4. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 5. FOR PANEL SCHEDULES, SEE SHEETS E-45 THROUGH E-47.
 6. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 7. REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 8. INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES ON THIS FLOOR



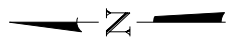
EXISTING PLAN OF FIRST FLOOR ABOVE INTERMEDIATE LEVEL AT ELEV. +39.42
SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN OF FIRST FLOOR ABOVE INTERMEDIATE LEVEL AT ELEV. +39.42
SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN OF FIRST FLOOR ABOVE INTERMEDIATE LEVEL AT ELEV. +39.42
SCALE: 1/4" = 1'-0"



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PLOT SCALE = N.T.S.	CHECKED - AF	REVISED -
PLOT DATE = 6/22/2017	DRAWN - CUM	REVISED -
	CHECKED - MEB	REVISED -

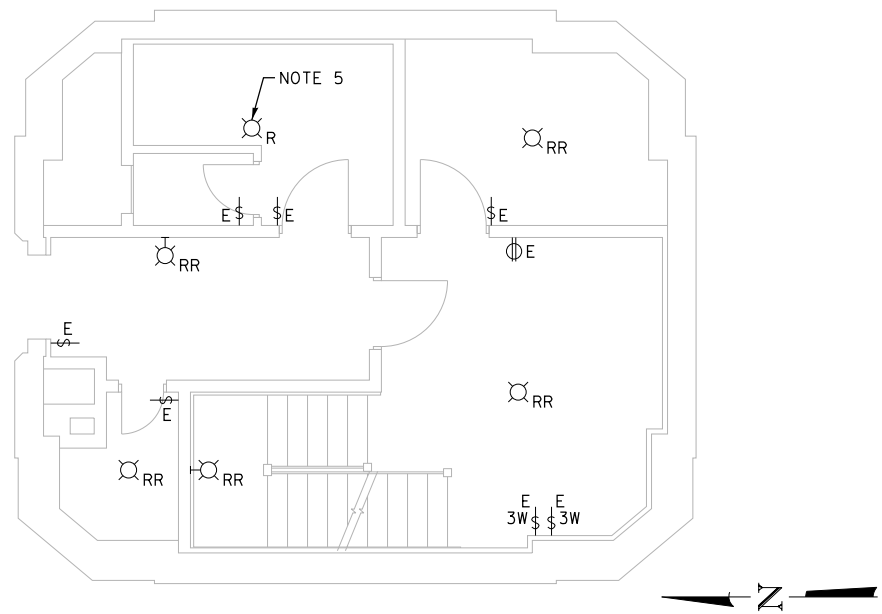
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

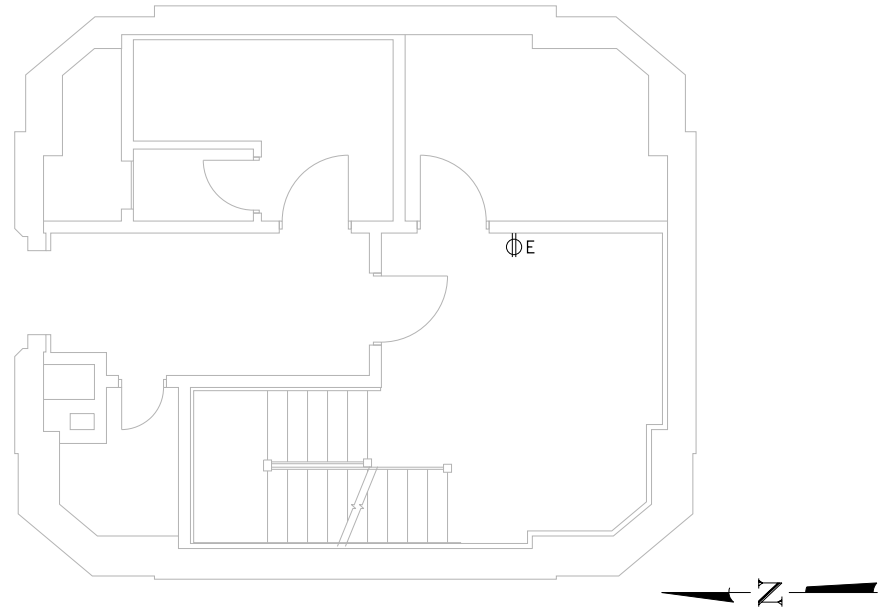
**EXISTING AND PROPOSED
NORTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-10
CDOT PROJECT NO. E-6-650			205 OF 411

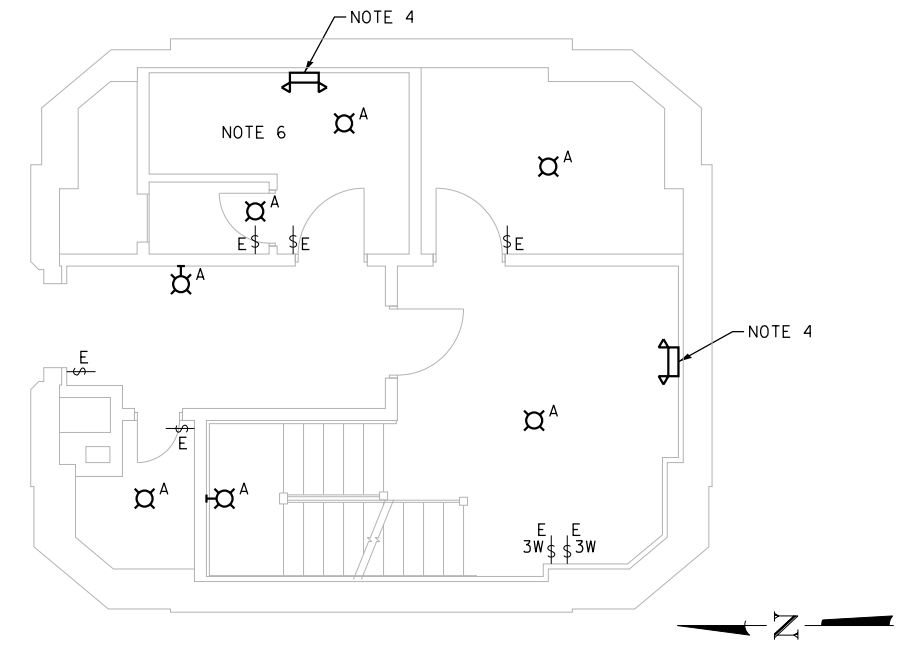
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 5. REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 6. INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS TO PIPE LIGHT FIXTURES IN THIS ROOM.



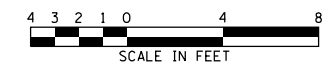
EXISTING PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

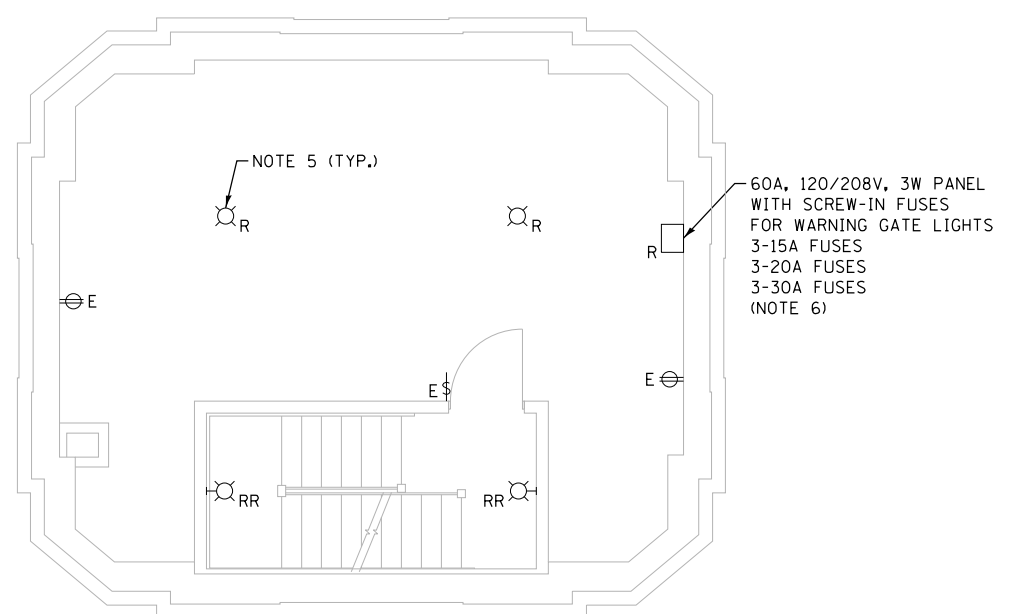
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

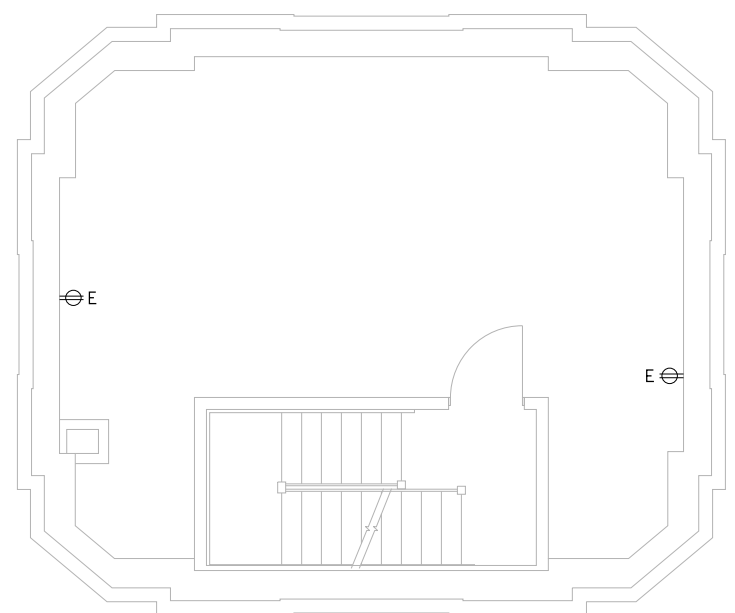
EXISTING AND PROPOSED
NORTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-11
CDOT PROJECT NO. E-6-650			206 OF 411

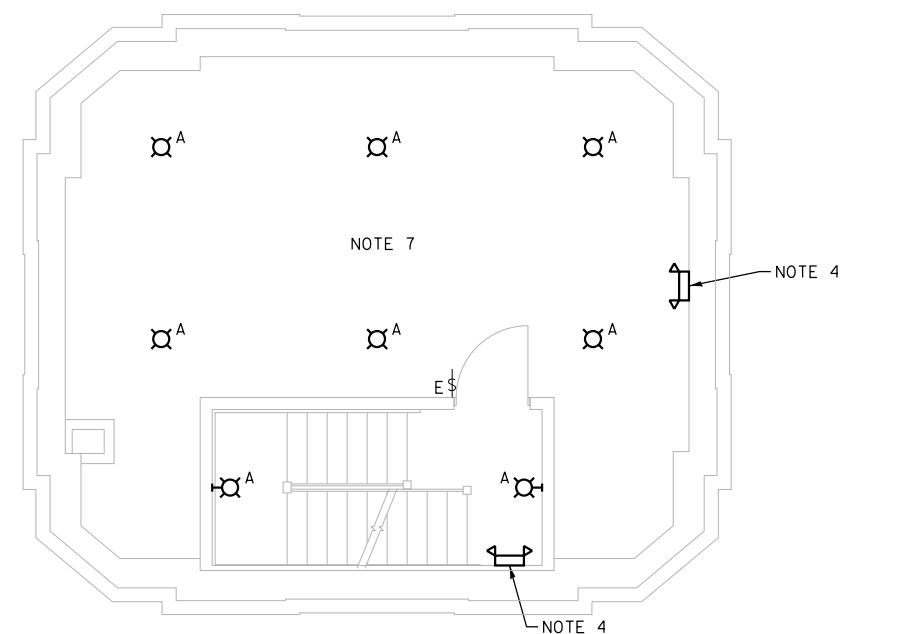
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 - INVESTIGATE THE CIRCUITS. IF THIS PANEL FEEDS ONLY WARNING LIGHTS, REMOVE THE PANEL. IF IT FEEDS ANYTHING ELSE IN THE TOWER, REPLACE IT WITH A NEW 100A PANEL WITH CIRCUIT BREAKERS.
 - INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES ON THIS FLOOR.



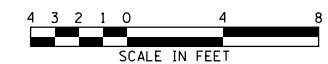
**EXISTING PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)**
SCALE: 1/4" = 1'-0"



**PROPOSED EQUIPMENT PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)**
SCALE: 1/4" = 1'-0"



**PROPOSED LIGHTING PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)**
SCALE: 1/4" = 1'-0"



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		CHECKED -	AF	REVISED -	
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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

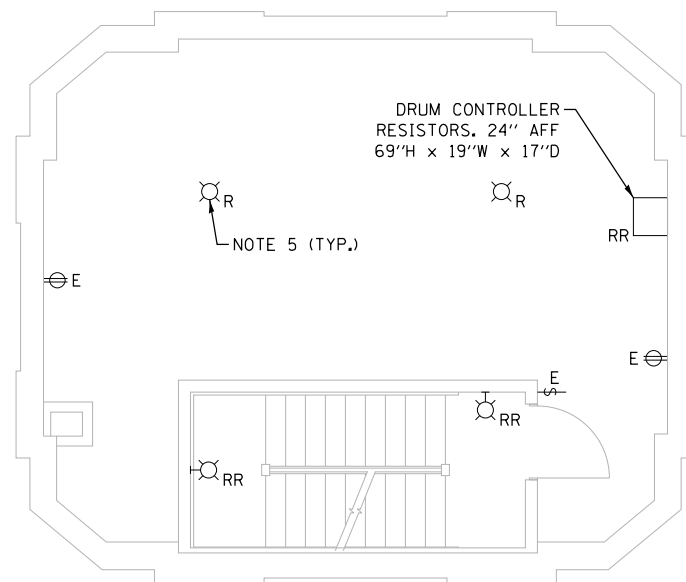
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

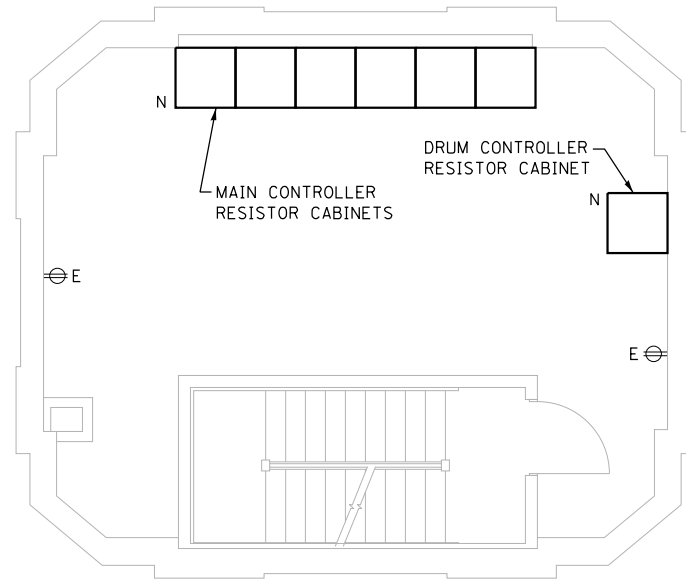
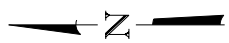
**EXISTING AND PROPOSED
NORTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-12
CDOT PROJECT NO. E-6-650			207 OF 411

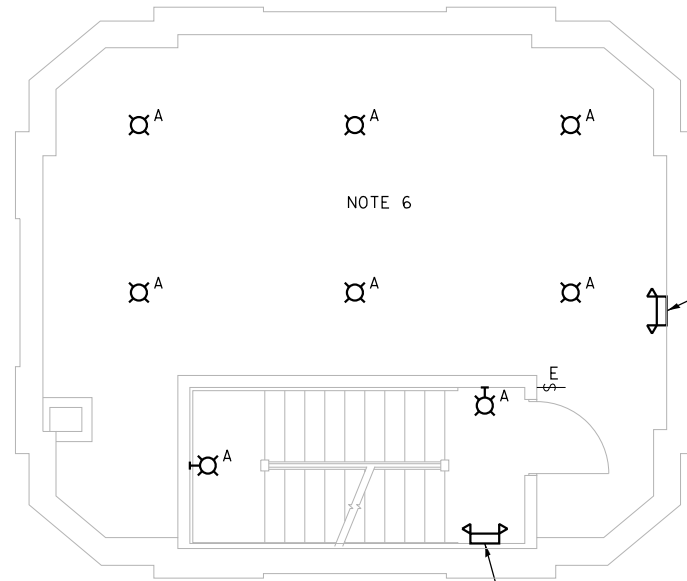
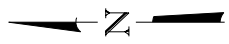
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 5. REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 6. INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES ON THIS FLOOR.



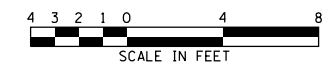
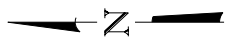
EXISTING PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)
 SCALE: 1/4" = 1'-0"



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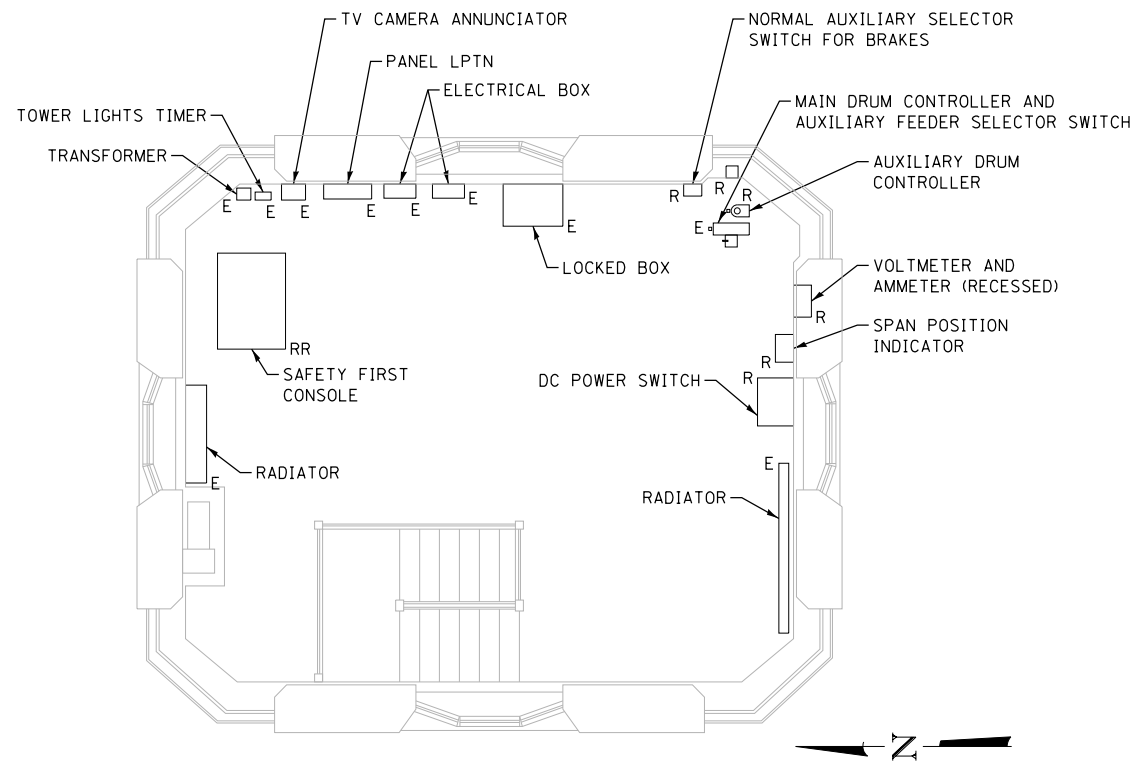
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		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

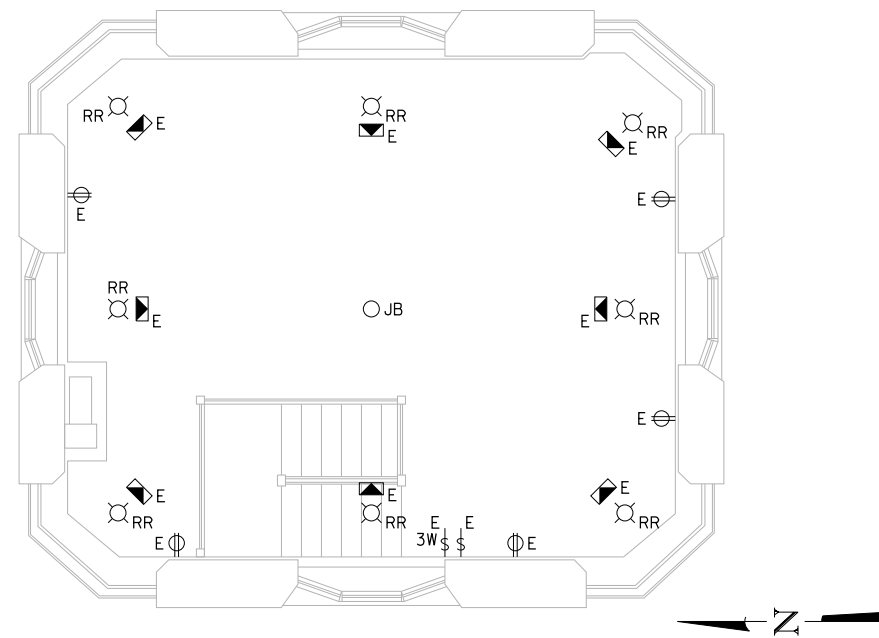
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

EXISTING AND PROPOSED
NORTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

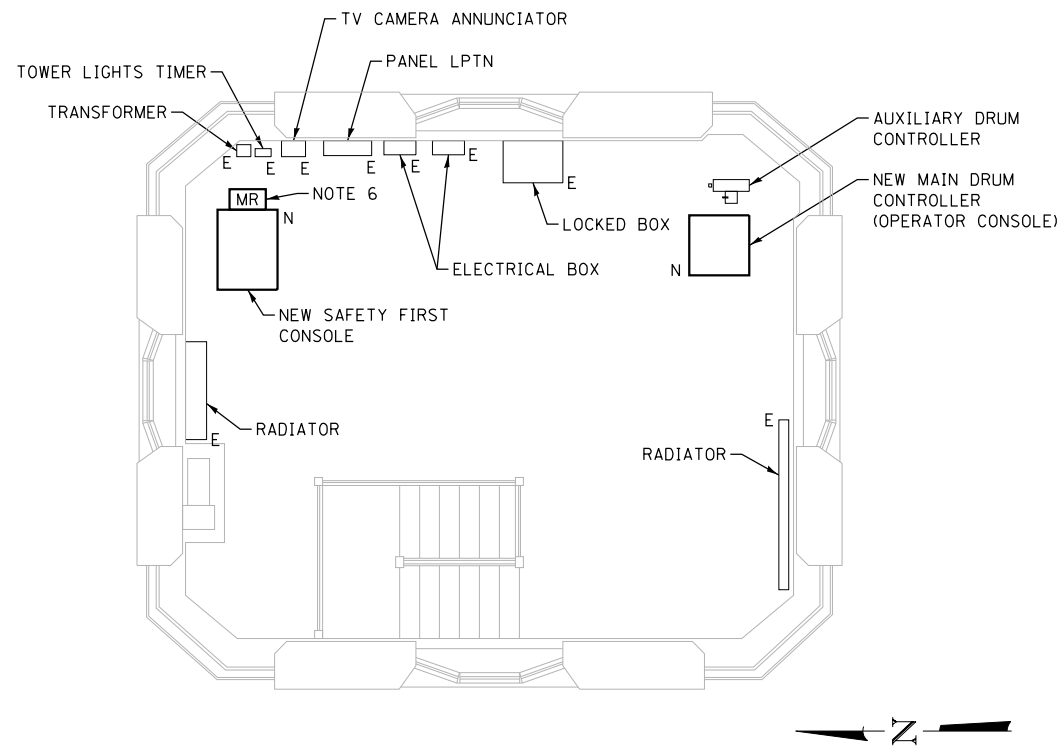
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-13
CDOT PROJECT NO. E-6-650			208 OF 411



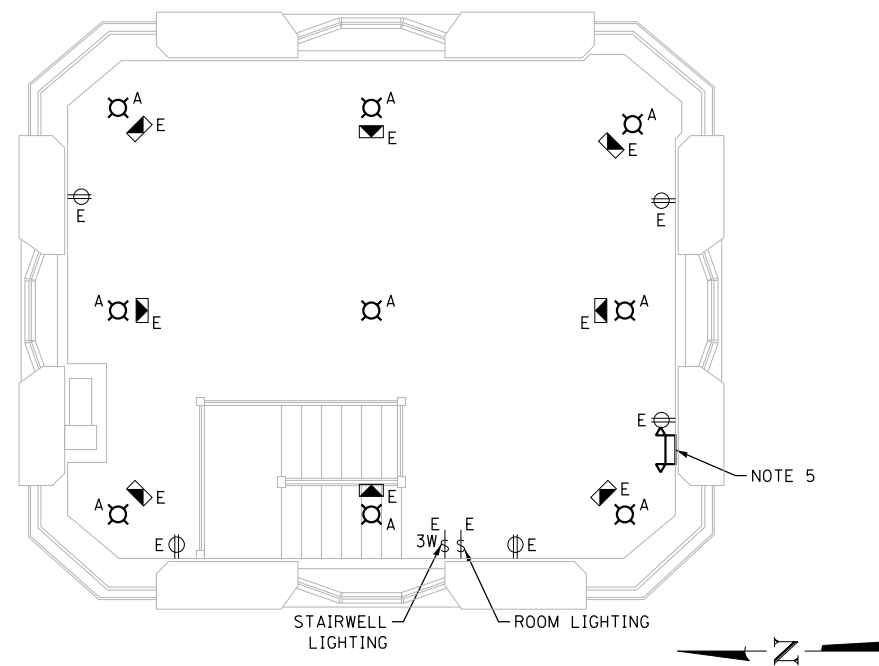
**EXISTING EQUIPMENT PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)**
SCALE: 1/4" = 1'-0"



**EXISTING LIGHTING AND RECEPTACLE PLAN OF
THIRD FLOOR ABOVE UPPER LEVEL (ELEV. +77.92)**
SCALE: 1/4" = 1'-0"

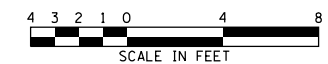


**PROPOSED EQUIPMENT PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)**
SCALE: 1/4" = 1'-0"



**PROPOSED LIGHTING AND RECEPTACLE PLAN OF
THIRD FLOOR ABOVE UPPER LEVEL (ELEV. +77.92)**
SCALE: 1/4" = 1'-0"

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - FOR PANEL SCHEDULES, SEE SHEETS E-45 THROUGH E-47.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - PROVIDE MARINE RADIO TRANSCEIVER, POWER SUPPLY AND ACCESSORIES AS MANUFACTURED BY ICOM:
 TRANSCEIVER: MODEL #IC-F5061D
 POWER SUPPLY: MODEL #ICTCS120-20AG/IC09
 HAND MICROPHONE: MODEL #HM-152
 OR MANUFACTURED BY STANDARD HORIZON:
 TRANSCEIVER: MODEL #GX1300
 POWER SUPPLY: MODEL #FP-1023
 HAND MICROPHONE: MODEL #PTT
 EQUIPMENT TO BE BOLTED IN PLACE.
 THE COST OF THIS WORK SHALL BE INCLUDED IN THE "ELECTRICAL WORK IN BASCULE BRIDGE" PAY ITEM 11. NO SEPARATE PAYMENT TO BE MADE.



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PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

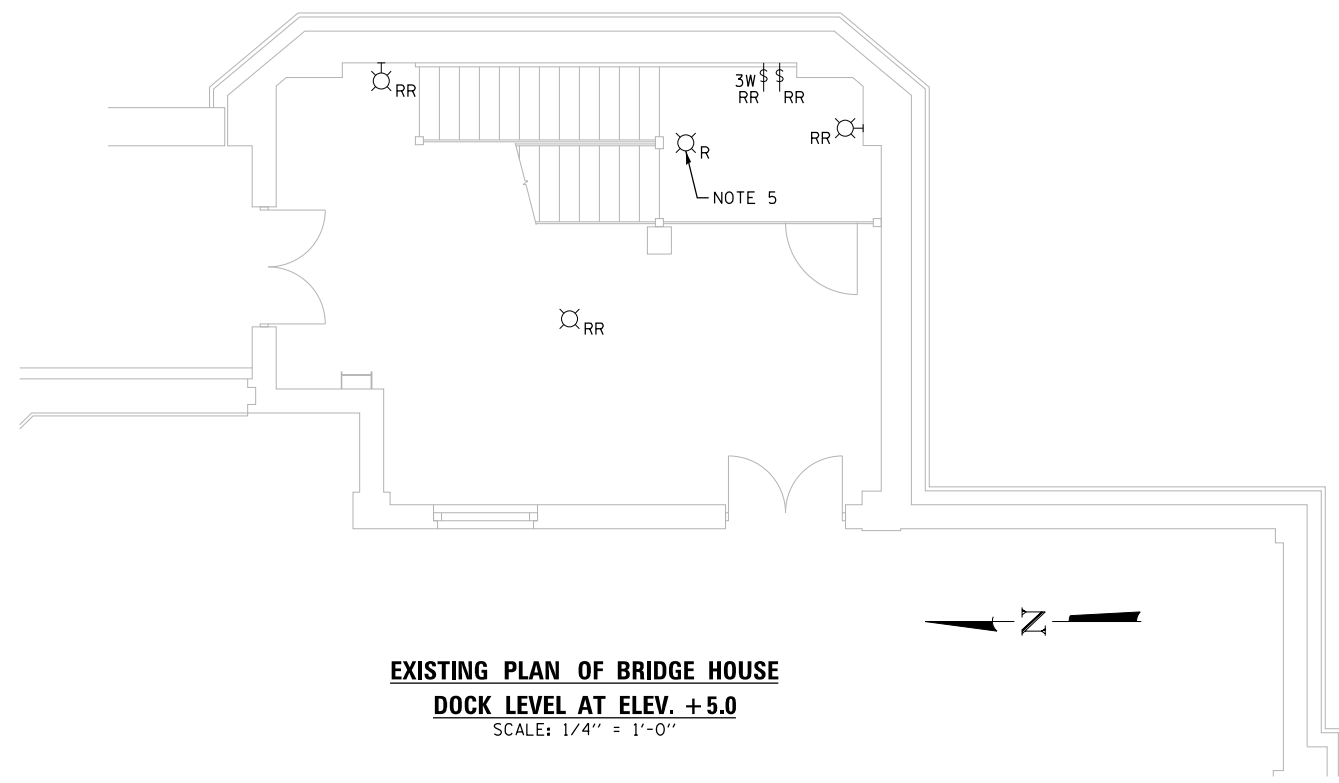
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

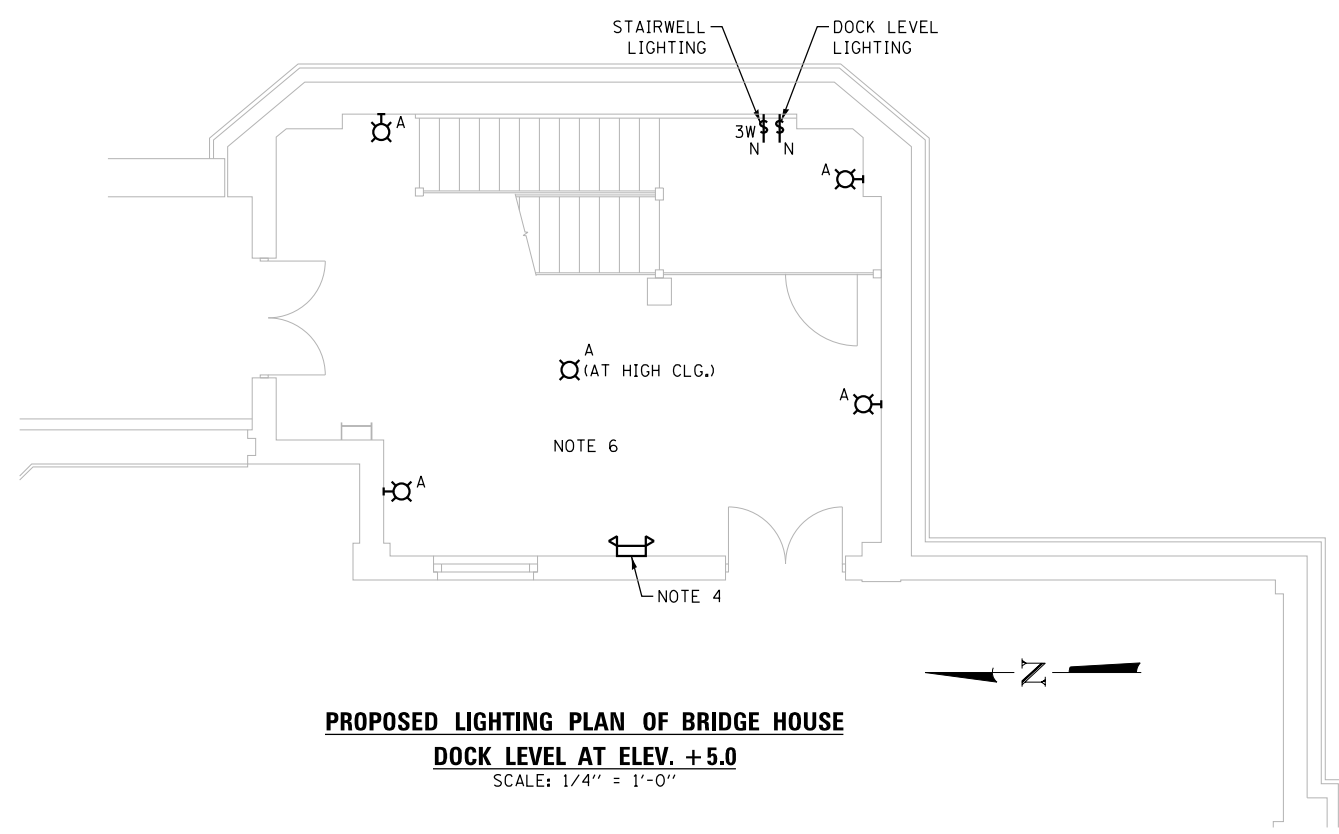
**EXISTING AND PROPOSED
NORTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-14
CDOT PROJECT NO. E-6-650			209 OF 411

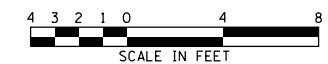
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 - INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES IN THIS AREA.



EXISTING PLAN OF BRIDGE HOUSE
DOCK LEVEL AT ELEV. +5.0
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN OF BRIDGE HOUSE
DOCK LEVEL AT ELEV. +5.0
 SCALE: 1/4" = 1'-0"



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 SUITE 4200
 CHICAGO, IL 60602
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 FAX: (312) 782-1684

USER NAME = cmartin	DESIGNED - BG	REVISED -
	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

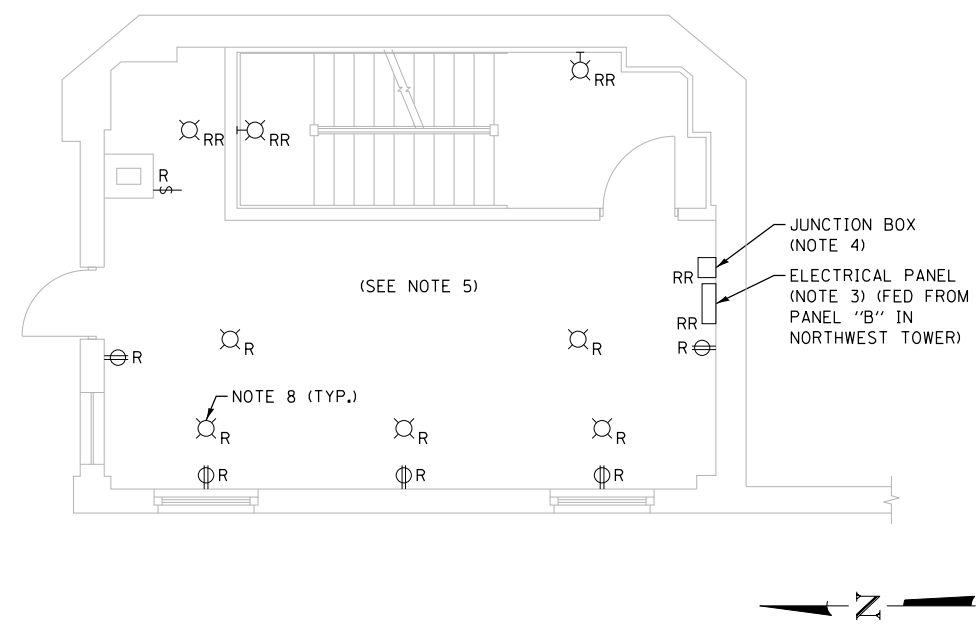
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

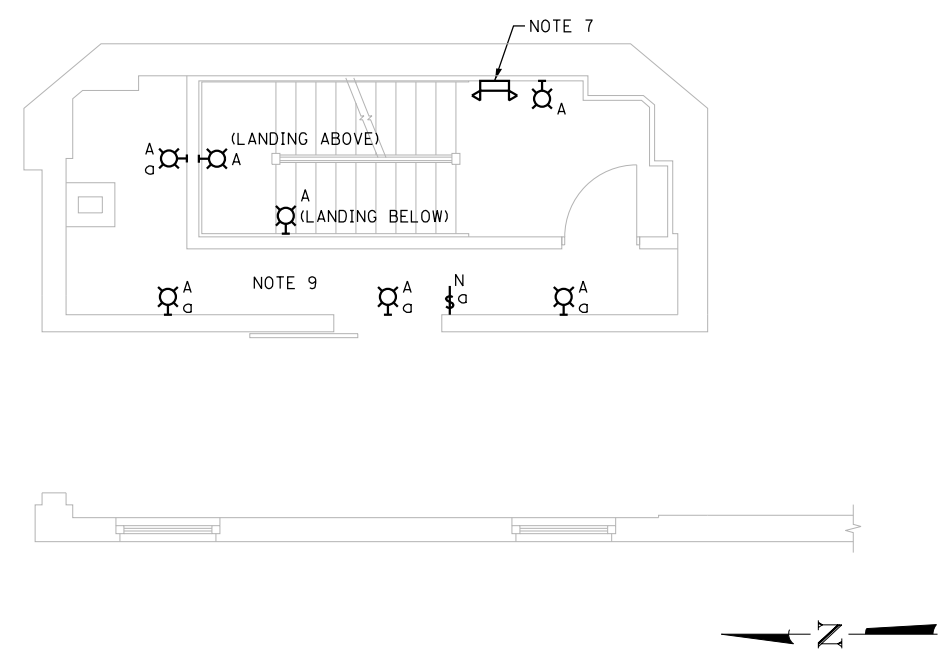
EXISTING AND PROPOSED
NORTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-15
CDOT PROJECT NO. E-6-650			210 OF 411

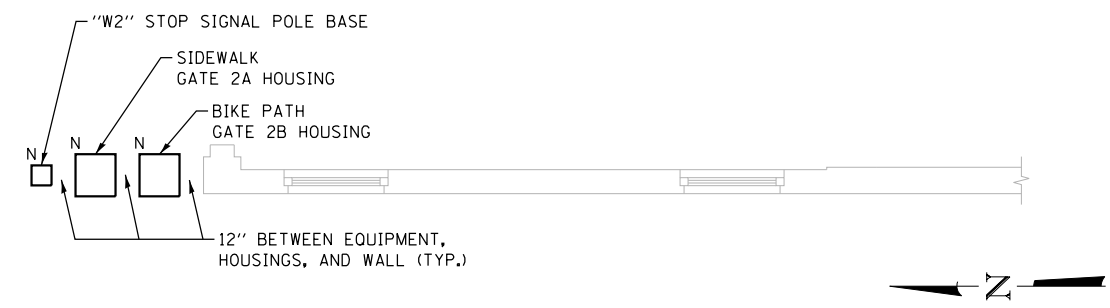
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - INSTALL NEW 100A, 120/208V, 1PH ELECTRICAL PANEL (SIMILAR TO EXISTING PANEL) ON THE FIRST FLOOR ABOVE INTERMEDIATE LEVEL. SEE SHEET E-17 FOR PROPOSED LOCATION.
 - INSTALL NEW JUNCTION BOX (SIMILAR TO EXISTING) ON THE FIRST FLOOR ABOVE INTERMEDIATE LEVEL. SEE SHEET E-17 FOR PROPOSED LOCATION.
 - ALL CONDUITS AND BOXES ON THE WALLS BEING DEMOLISHED ARE TO BE RELOCATED. NEW WIRES TO BE RE-PULLED.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 - INTERCEPT EXISTING LIGHTING CIRCUIT AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE LIGHT FIXTURES AND NEW LIGHT SWITCH IN THIS AREA. MOUNT FIXTURES AT 9'-0" AFF.



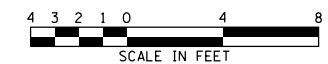
EXISTING PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



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		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

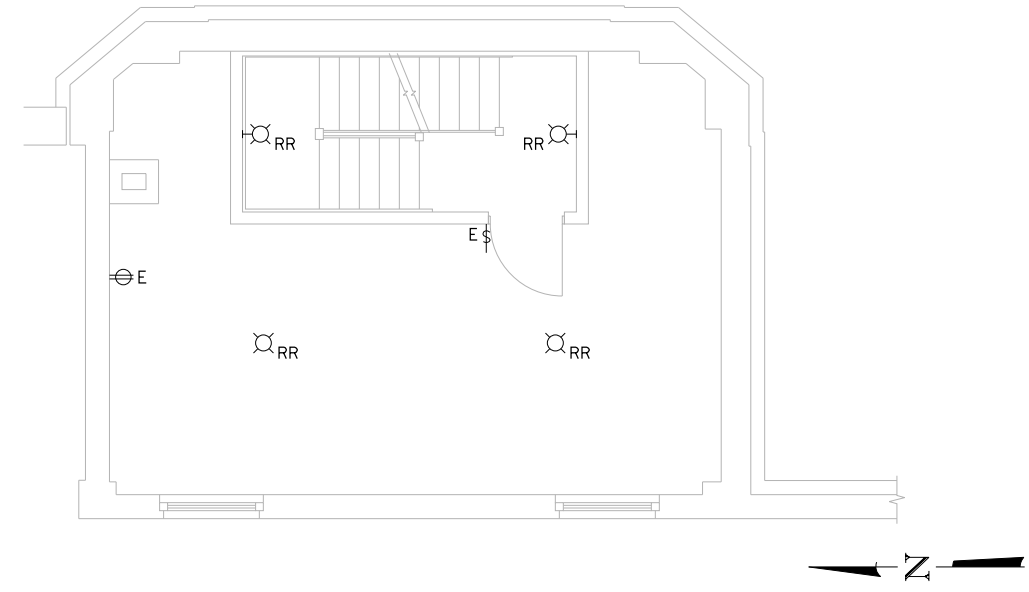
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

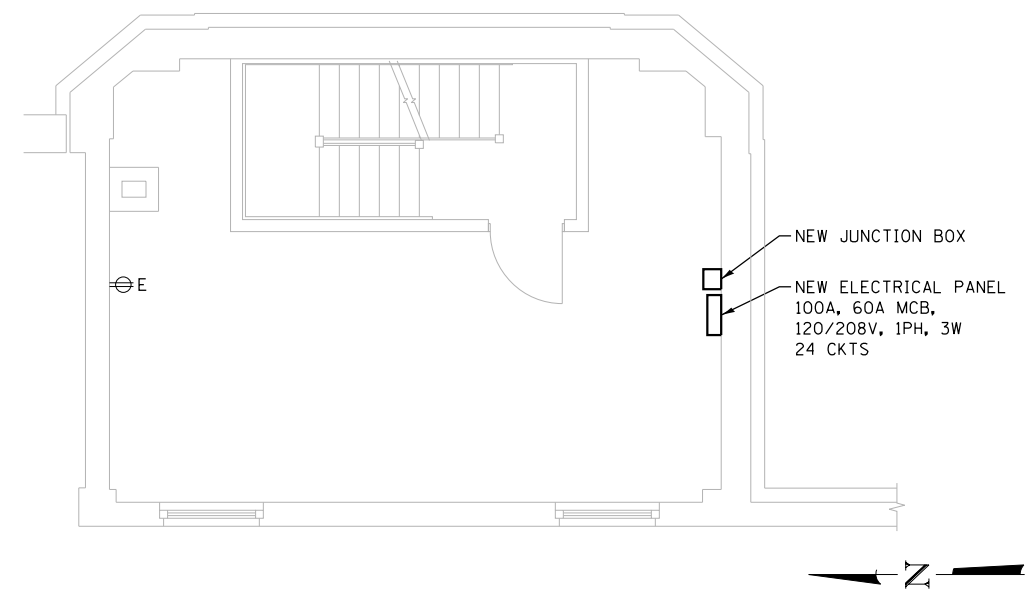
EXISTING AND PROPOSED
NORTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-16
CDOT PROJECT NO. E-6-650			211 OF 411

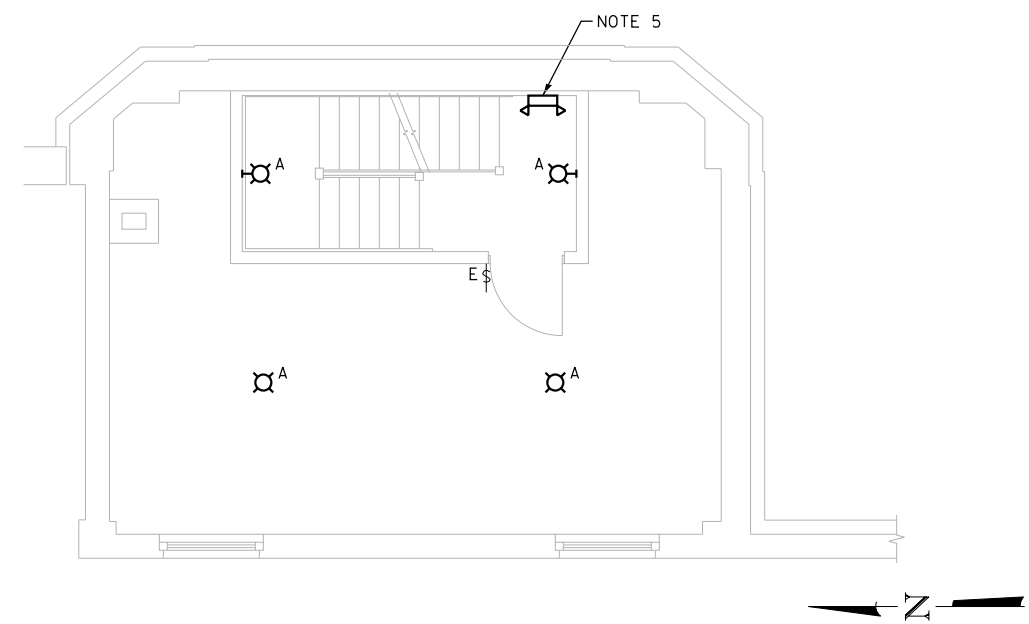
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. FOR PANEL SCHEDULES, SEE SHEETS E-45 THROUGH E-47.
 5. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.



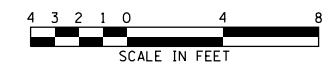
**EXISTING PLAN OF FIRST FLOOR ABOVE
INTERMEDIATE LEVEL AT ELEV. +39.42**
SCALE: 1/4" = 1'-0"



**PROPOSED EQUIPMENT PLAN OF FIRST FLOOR
ABOVE INTERMEDIATE LEVEL AT ELEV. +39.42**
SCALE: 1/4" = 1'-0"



**PROPOSED LIGHTING PLAN OF FIRST FLOOR
ABOVE INTERMEDIATE LEVEL AT ELEV. +39.42**
SCALE: 1/4" = 1'-0"



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PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

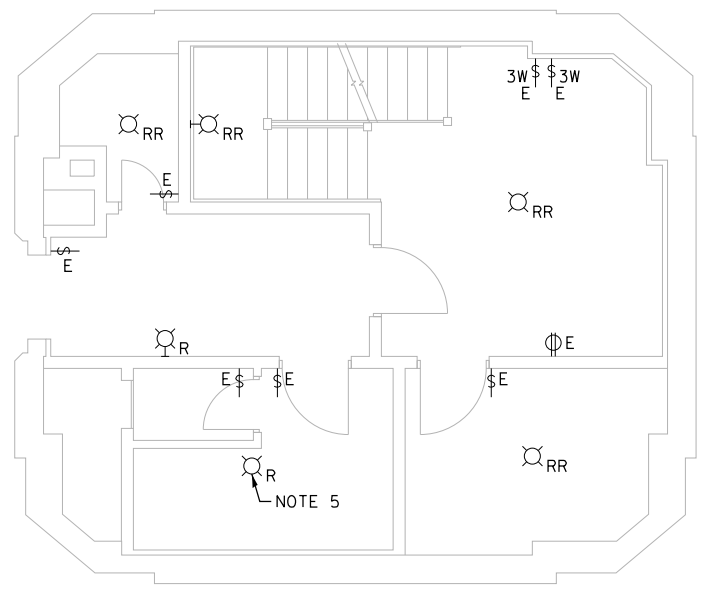
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

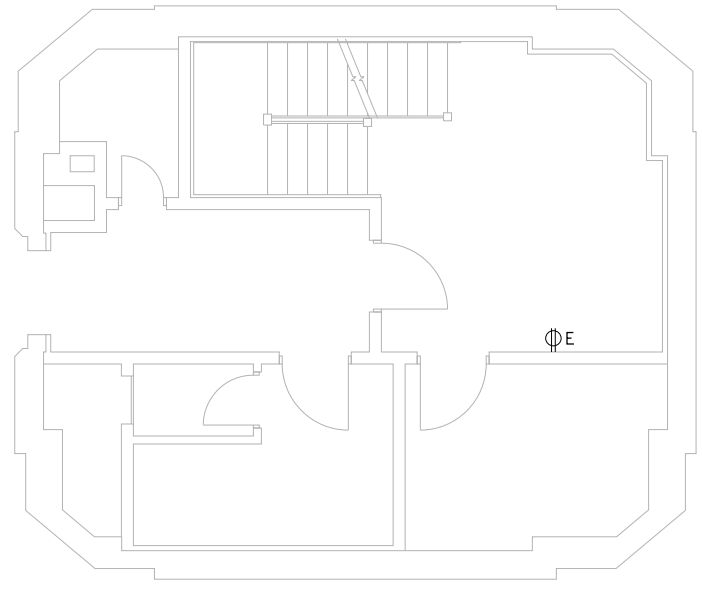
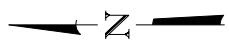
**EXISTING AND PROPOSED
NORTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-17
CDOT PROJECT NO. E-6-650			212 OF 411

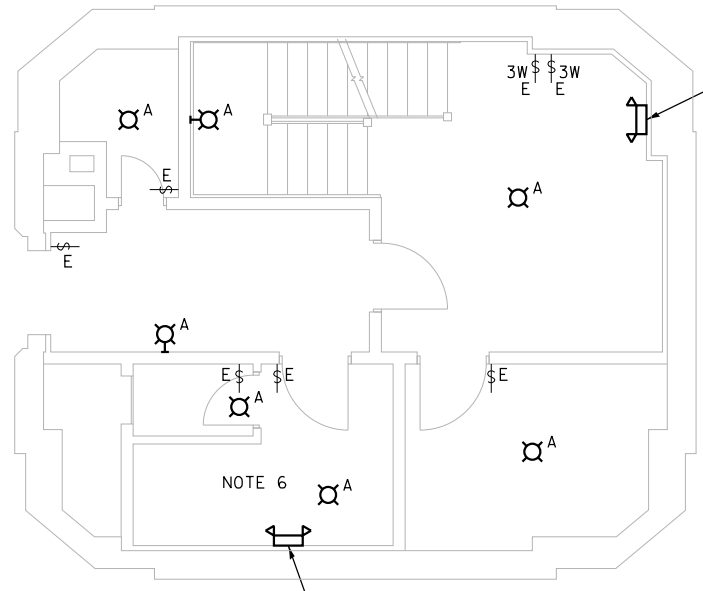
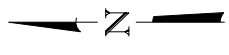
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 5. REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 6. INTERCEPT EXISTING SWITCH LEG AND WIRE LIGHT FIXTURES IN THIS ROOM WITH SURFACE MOUNTED CONDUITS AS NEEDED.



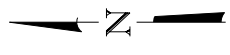
EXISTING PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

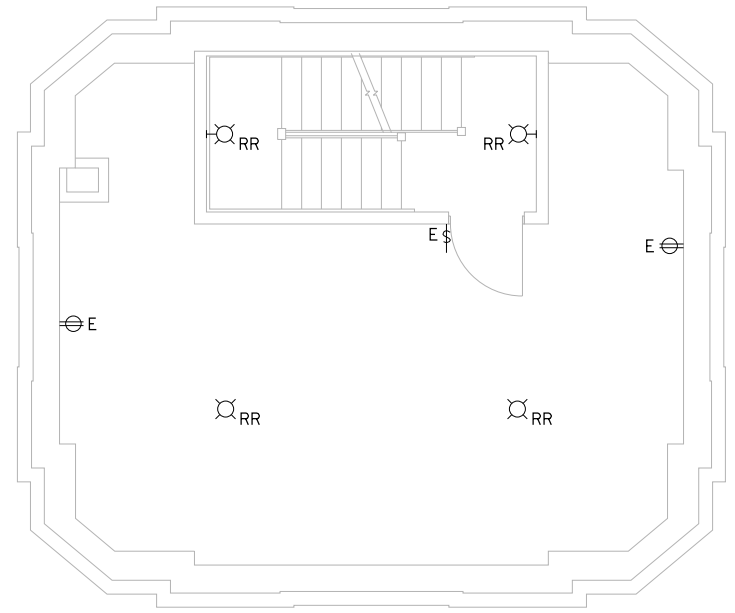
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

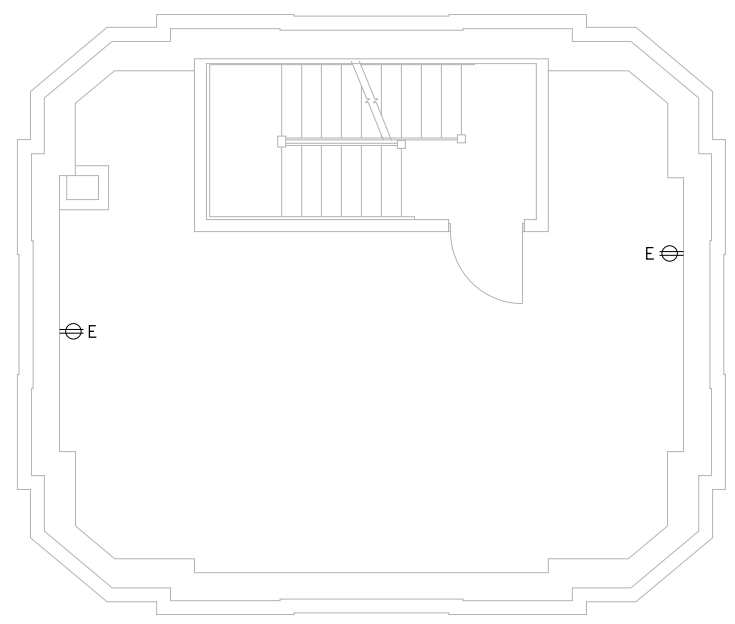
EXISTING AND PROPOSED
NORTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-18
CDOT PROJECT NO. E-6-650			213 OF 411

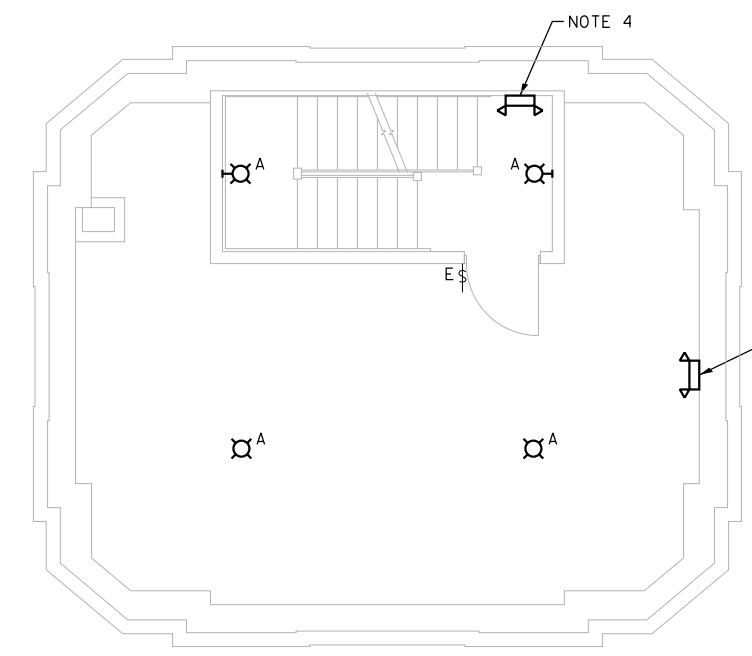
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.



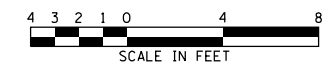
**EXISTING PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)**
SCALE: 1/4" = 1'-0"



**PROPOSED EQUIPMENT PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)**
SCALE: 1/4" = 1'-0"



**PROPOSED LIGHTING PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)**
SCALE: 1/4" = 1'-0"



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PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

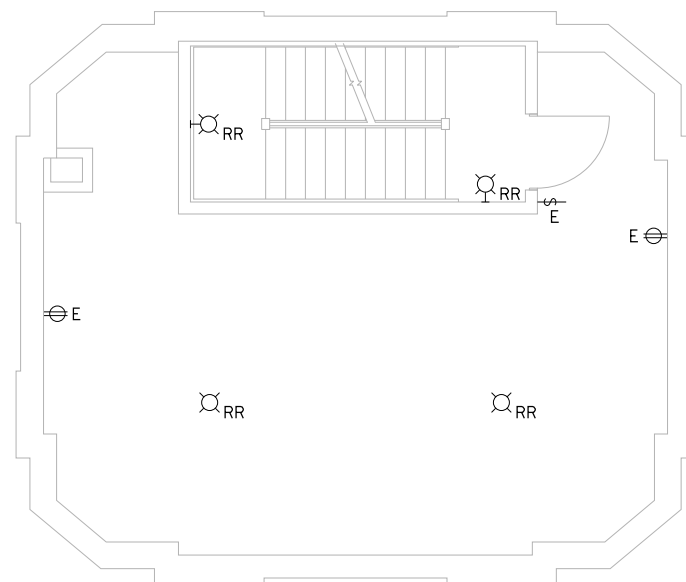
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

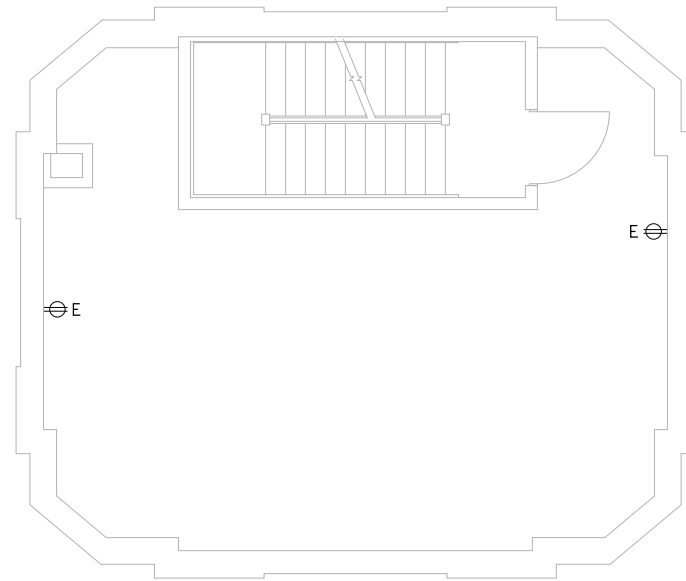
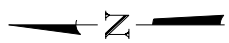
**EXISTING AND PROPOSED
NORTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-19
CDOT PROJECT NO. E-6-650			214 OF 411

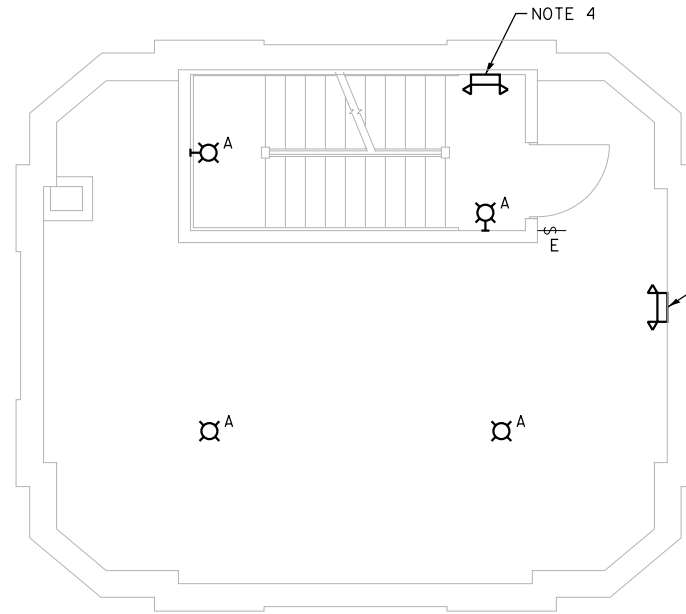
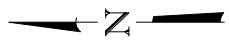
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.



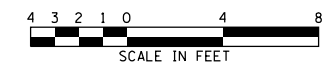
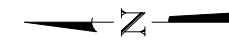
**EXISTING PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)**
SCALE: 1/4" = 1'-0"



**PROPOSED EQUIPMENT PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)**
SCALE: 1/4" = 1'-0"



**PROPOSED LIGHTING PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)**
SCALE: 1/4" = 1'-0"



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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

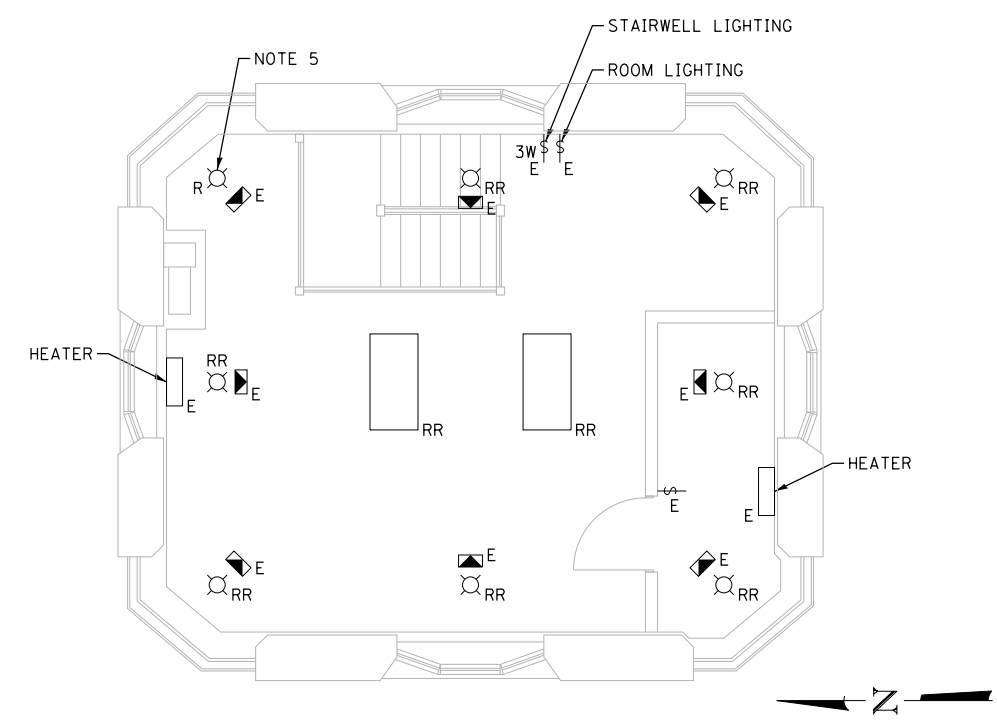
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

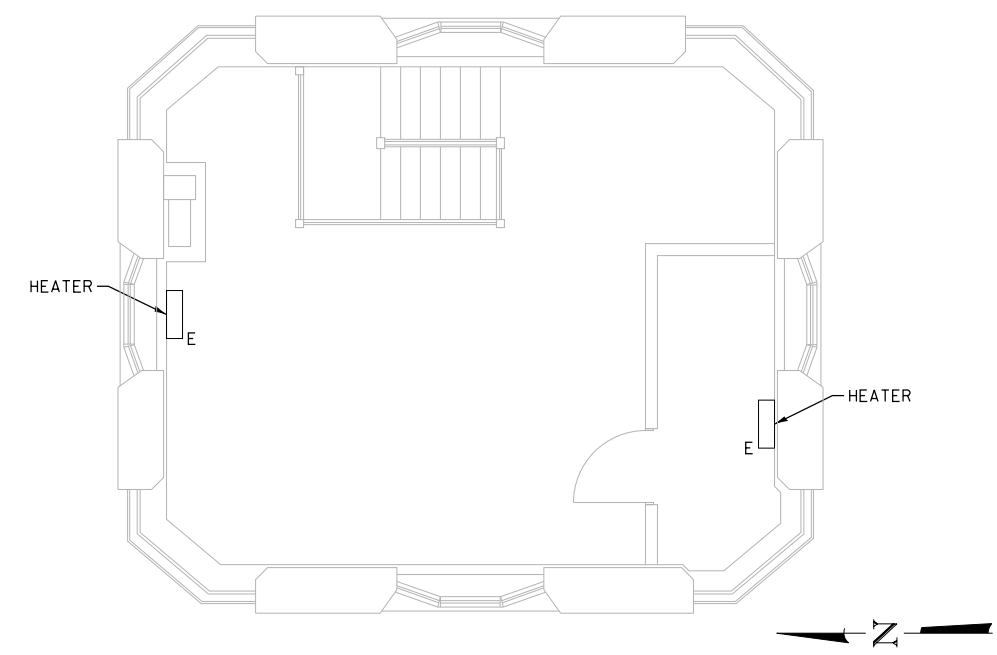
**EXISTING AND PROPOSED
NORTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-20
CDOT PROJECT NO. E-6-650			215 OF 411

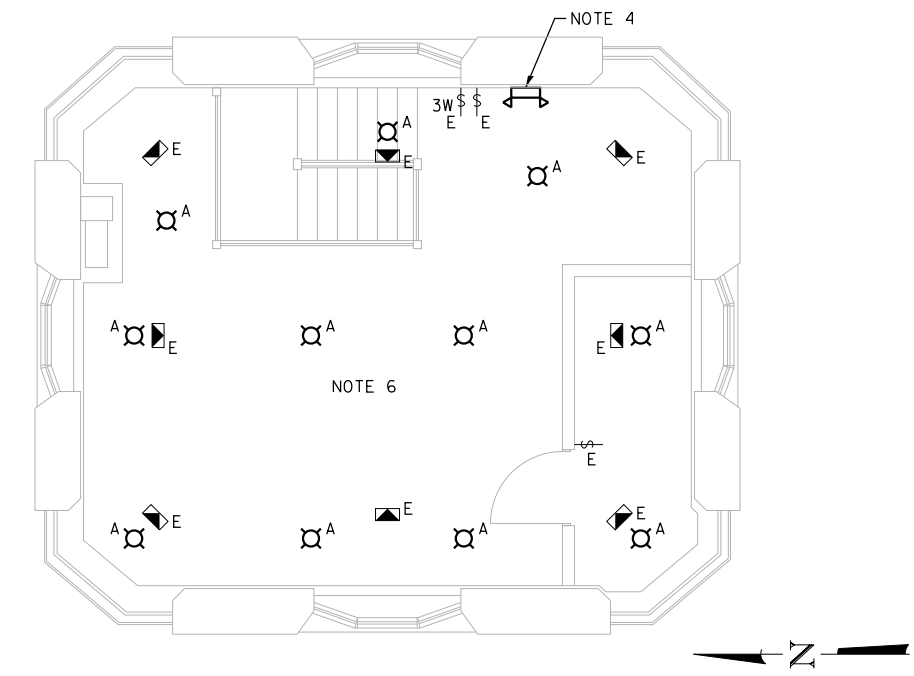
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 5. REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 6. INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES ON THIS FLOOR.



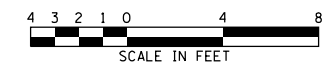
**EXISTING PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)**
SCALE: 1/4" = 1'-0"



**PROPOSED EQUIPMENT PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)**
SCALE: 1/4" = 1'-0"



**PROPOSED LIGHTING PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)**
SCALE: 1/4" = 1'-0"



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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

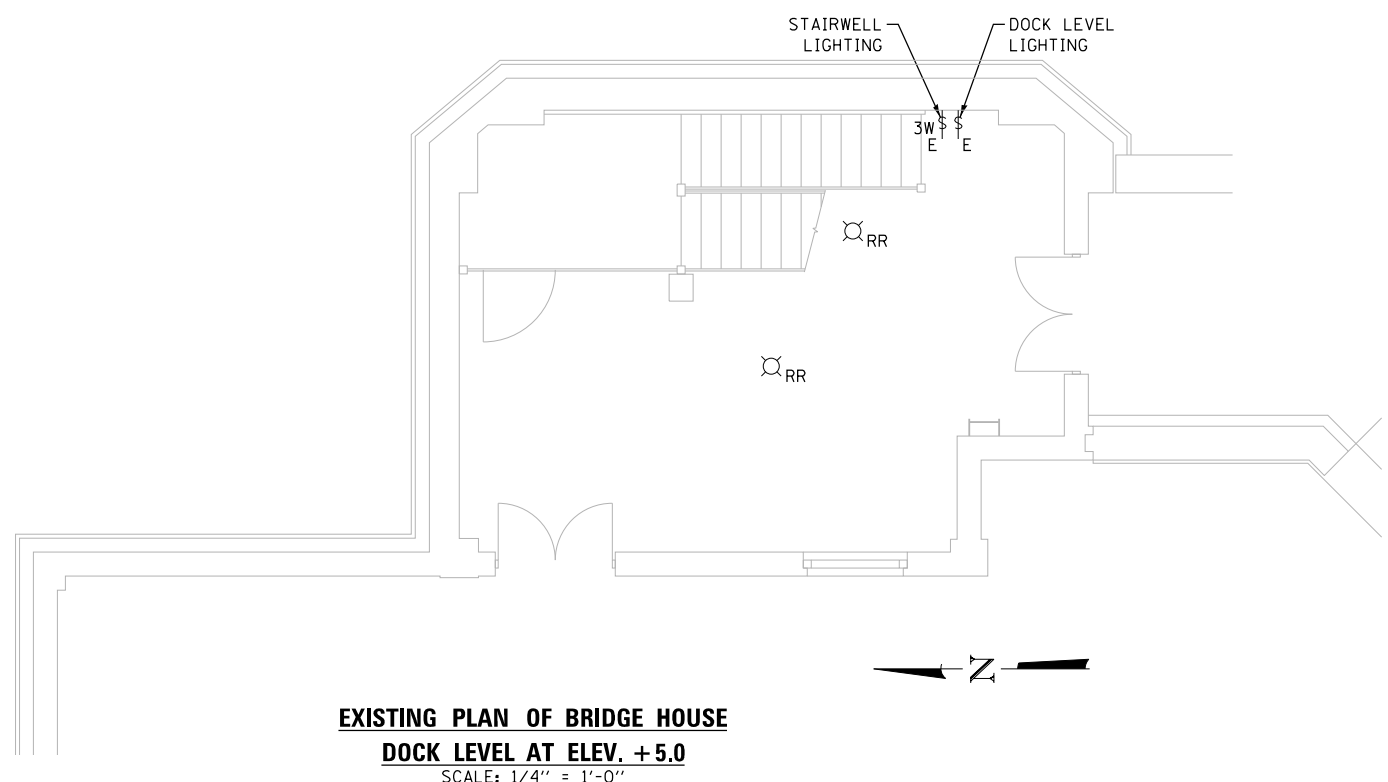
CITY OF CHICAGO
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

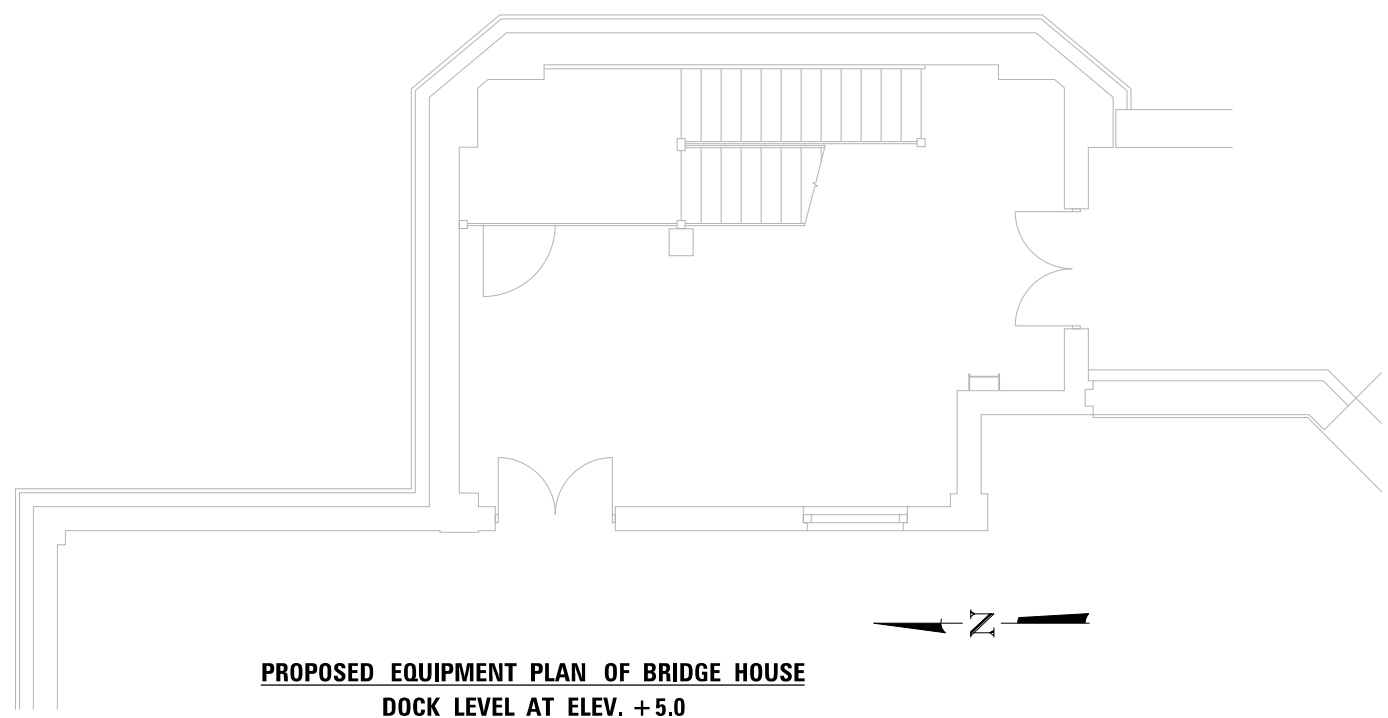
**EXISTING AND PROPOSED
NORTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-21
CDOT PROJECT NO. E-6-650			216 OF 411

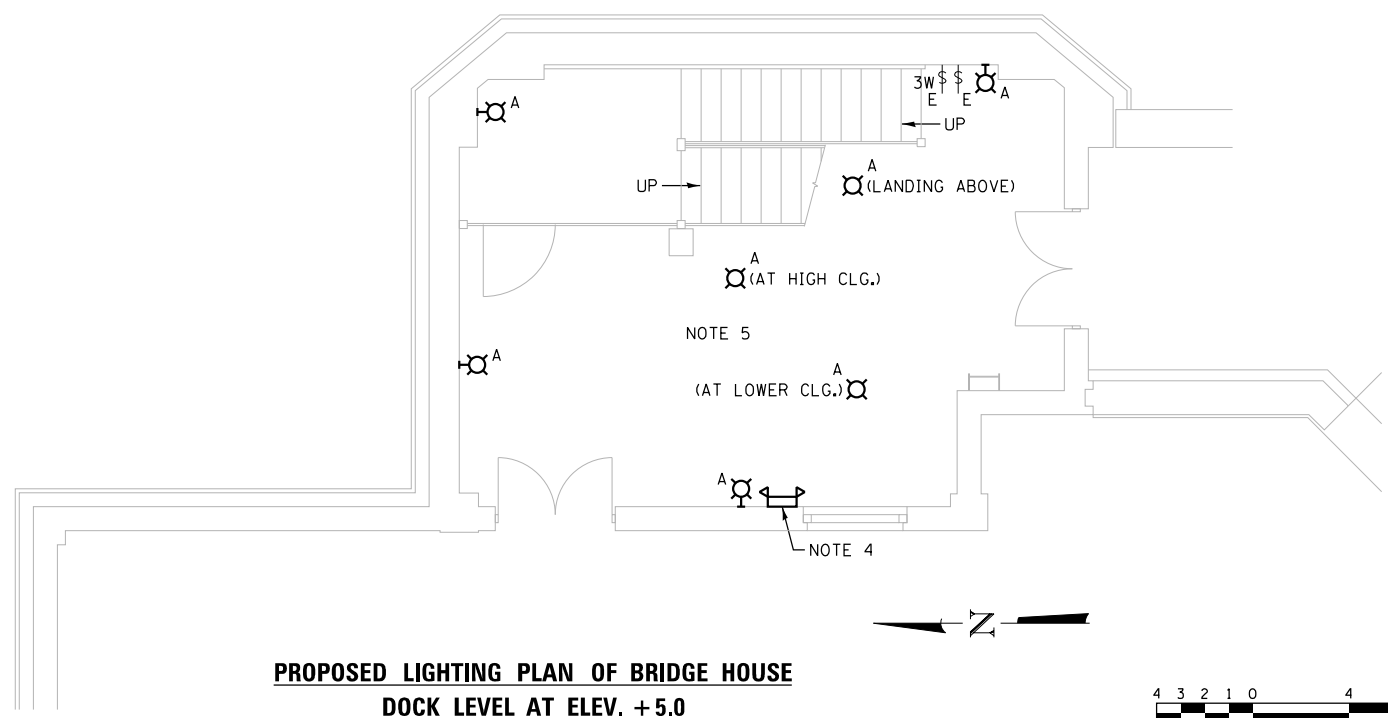
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 5. INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES IN THIS AREA.



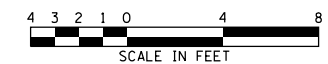
EXISTING PLAN OF BRIDGE HOUSE
DOCK LEVEL AT ELEV. +5.0
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN OF BRIDGE HOUSE
DOCK LEVEL AT ELEV. +5.0
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN OF BRIDGE HOUSE
DOCK LEVEL AT ELEV. +5.0
 SCALE: 1/4" = 1'-0"



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 TEL: (312) 782-8150
 FAX: (312) 782-1684

USER NAME = cmartin	DESIGNED - BG	REVISED -
	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

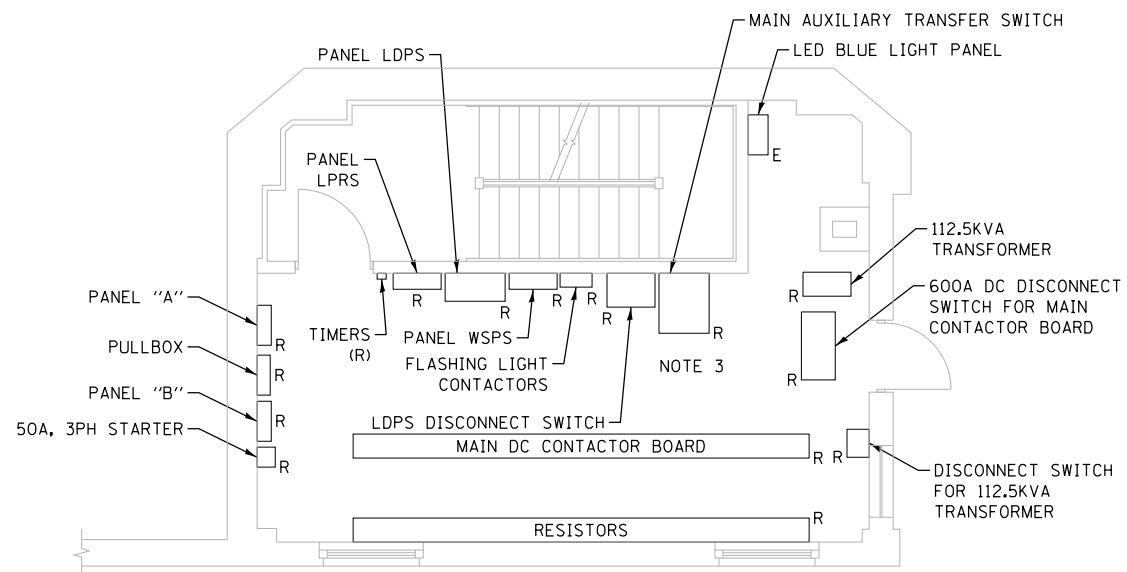
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

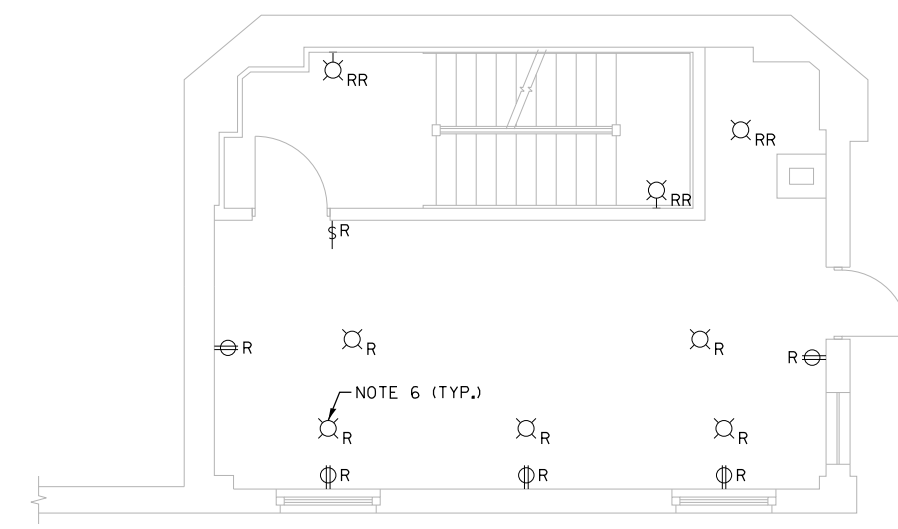
EXISTING AND PROPOSED
SOUTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-22
CDOT PROJECT NO. E-6-650			217 OF 411

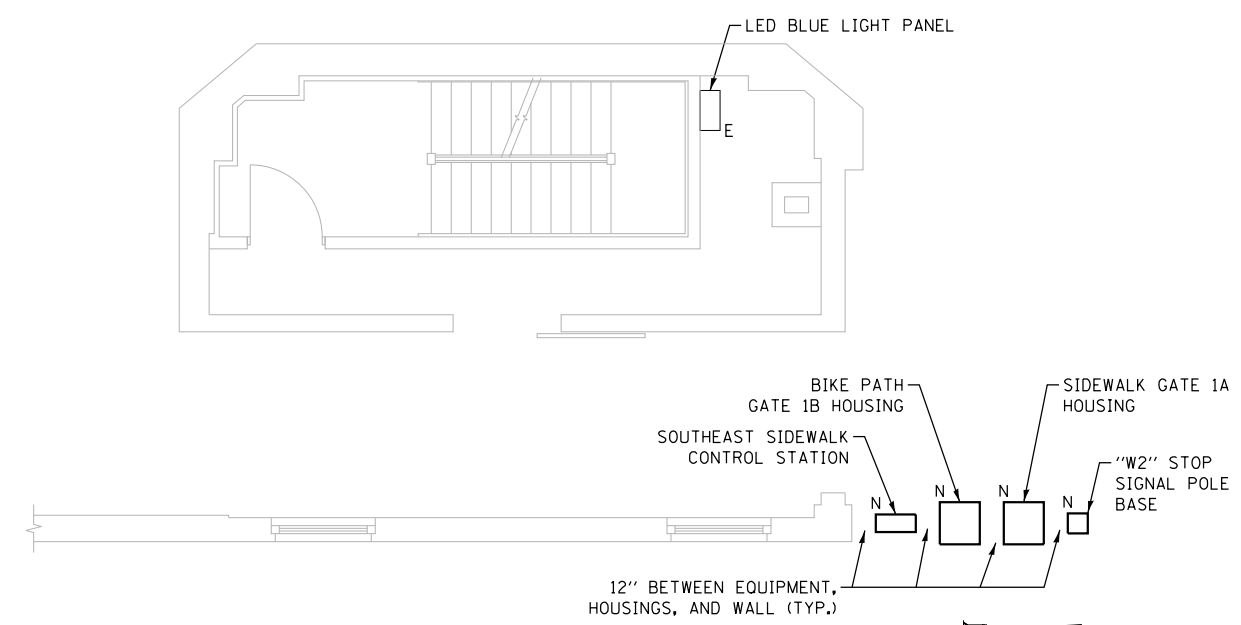
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - ALL ELECTRICAL EQUIPMENT IN THIS ROOM EXCEPT LED BLUE LIGHT PANEL TO BE REMOVED. CONDUITS TO BE INTERCEPTED IN THE DOCK LEVEL AND REROUTED TO NEW EQUIPMENT LOCATIONS. WIRES TO BE REPULLED WITHOUT SPLICES.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 - INTERCEPT EXISTING LIGHTING CIRCUIT AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE LIGHT FIXTURES AND NEW LIGHT SWITCH IN THIS AREA. MOUNT FIXTURES AT 9'-0" AFF.



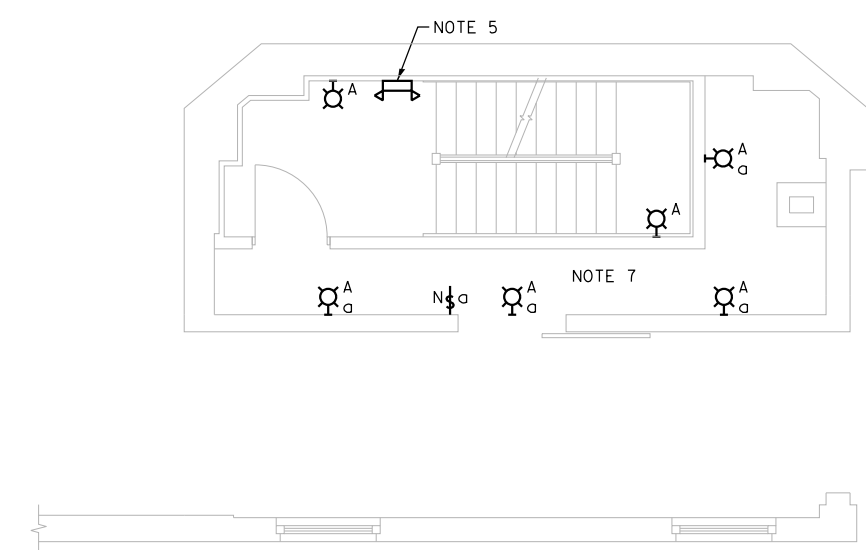
EXISTING EQUIPMENT PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



EXISTING LIGHTING AND RECEPTACLE PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

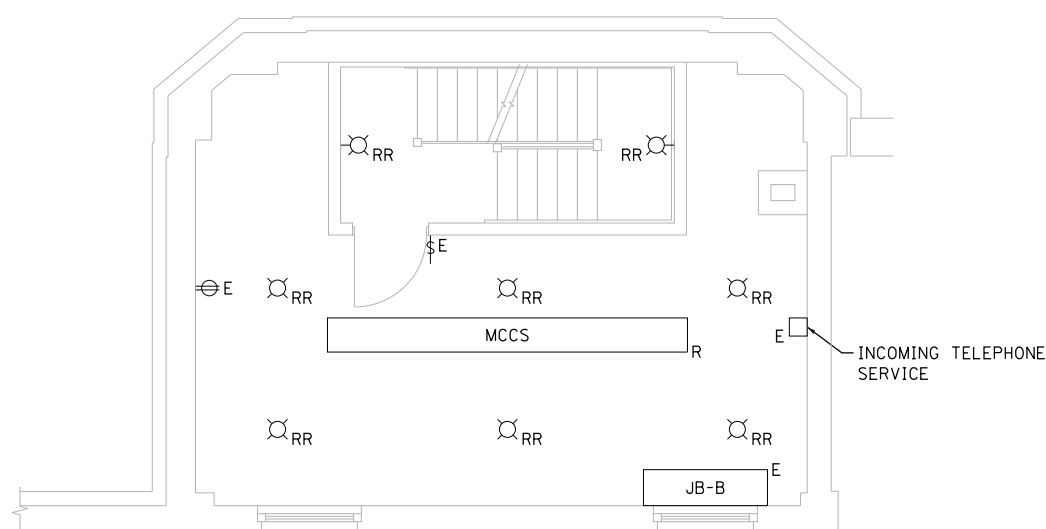
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

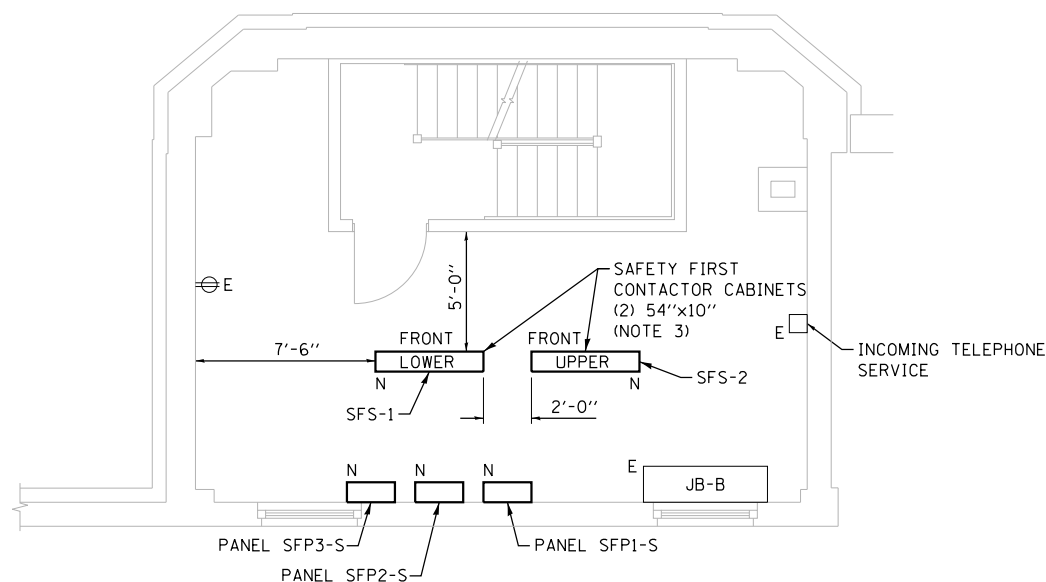
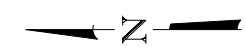
EXISTING AND PROPOSED
SOUTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-23
CDOT PROJECT NO. E-6-650			218 OF 411

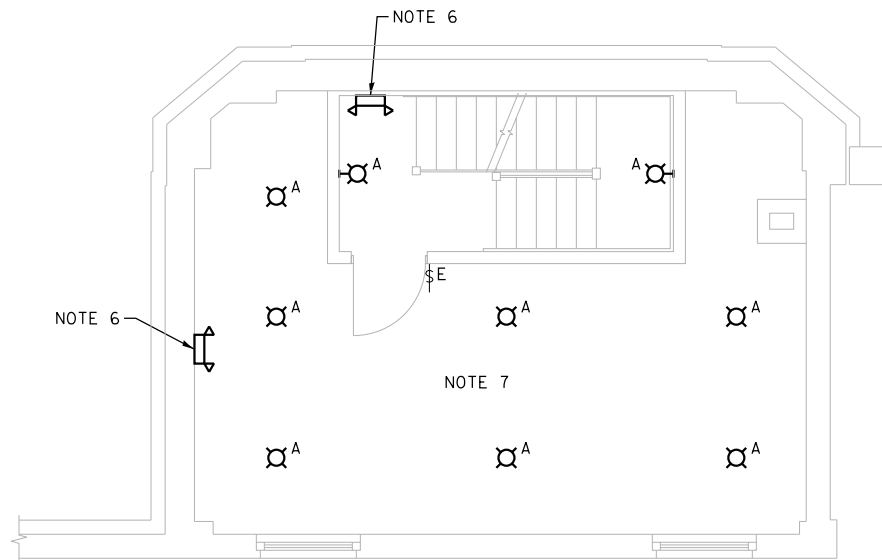
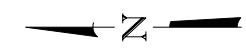
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - CABINETS TO BE MOUNTED ON CONCRETE PAD. POUR CONCRETE PAD 11'-8"x1'-6", 4" HIGH WITH 1" CHAMFER.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - FOR PANEL SCHEDULES, SEE SHEETS E-45 THROUGH E-47.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES ON THIS FLOOR.



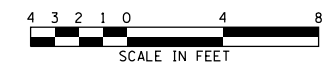
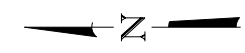
EXISTING PLAN OF FIRST FLOOR ABOVE INTERMEDIATE LEVEL AT ELEV. +39.42
SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN OF FIRST FLOOR ABOVE INTERMEDIATE LEVEL AT ELEV. +39.42
SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN OF FIRST FLOOR ABOVE INTERMEDIATE LEVEL AT ELEV. +39.42
SCALE: 1/4" = 1'-0"



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PLOT SCALE = N.T.S.	CHECKED - AF	REVISED -
PLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
	CHECKED - MEB	REVISED -

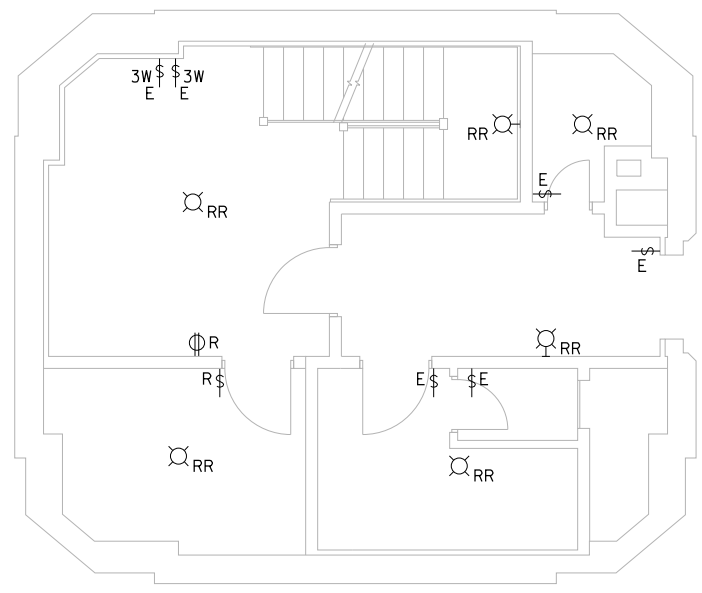
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

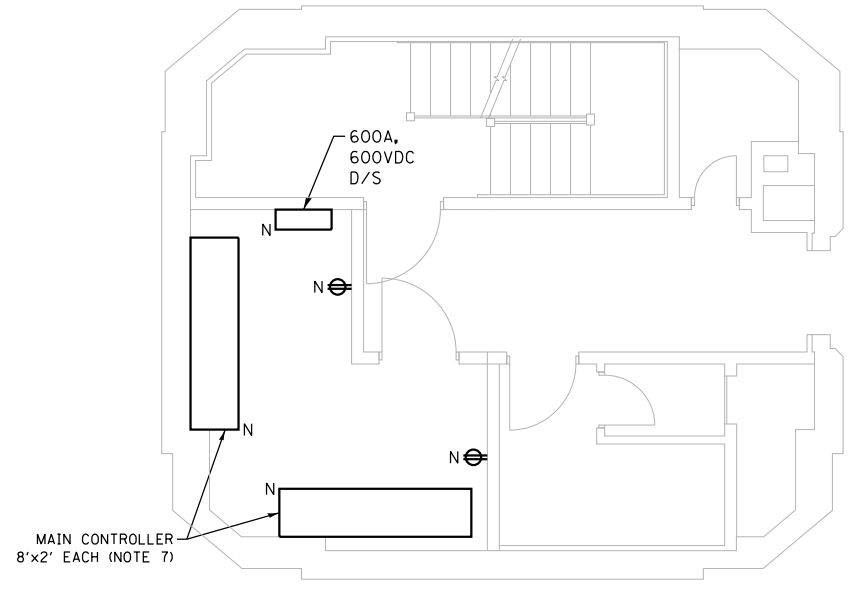
**EXISTING AND PROPOSED
SOUTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-24
CDOT PROJECT NO. E-6-650			219 OF 411

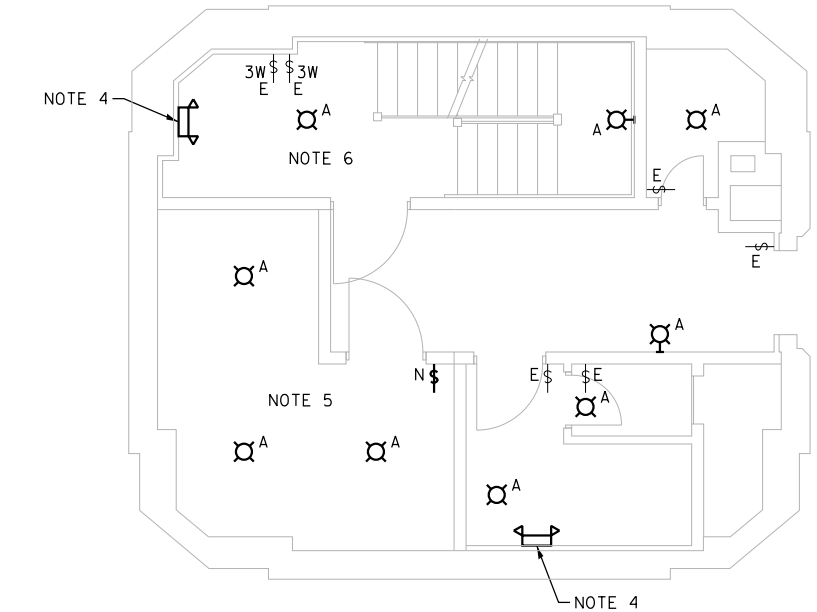
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - INTERCEPT EXISTING CIRCUIT AND WIRE THREE LIGHT FIXTURES AND A NEW LIGHT SWITCH WITH SURFACE MOUNTED CONDUITS.
 - INTERCEPT EXISTING CIRCUIT FOR STAIRWELL LIGHTING AND WIRE A NEW STAIRWELL FIXTURE IN A NEW LOCATION.
 - CABINETS TO BE MOUNTED ON CONCRETE PAD. POUR CONCRETE PAD 8'-6"x2'-3", 4" HIGH WITH 1" CHAMFER.



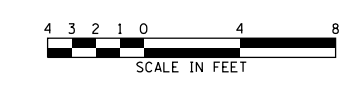
EXISTING PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

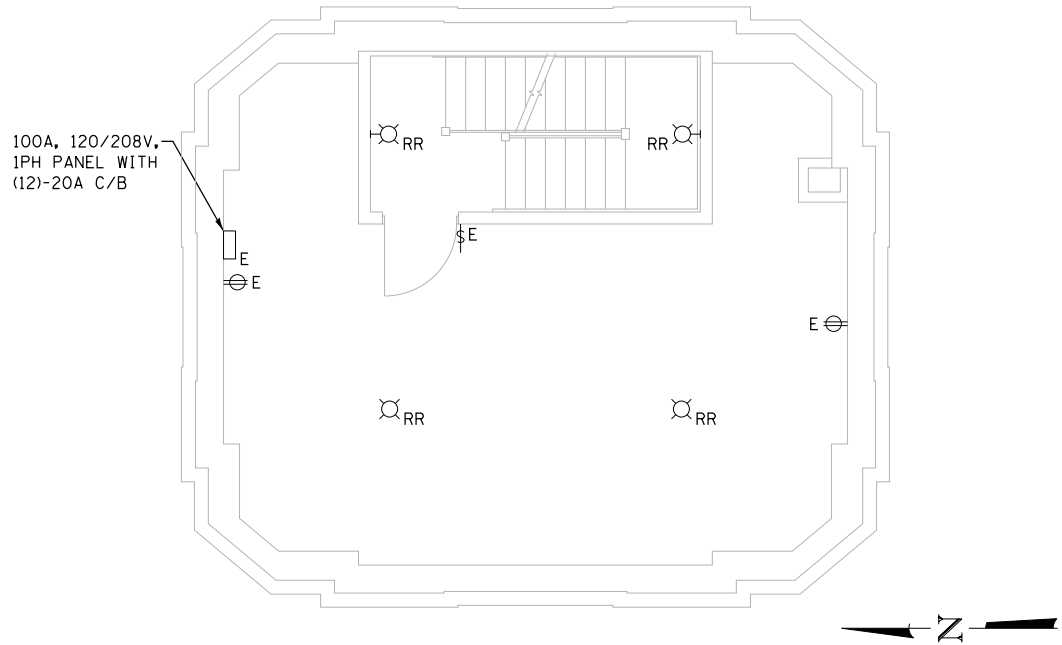
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

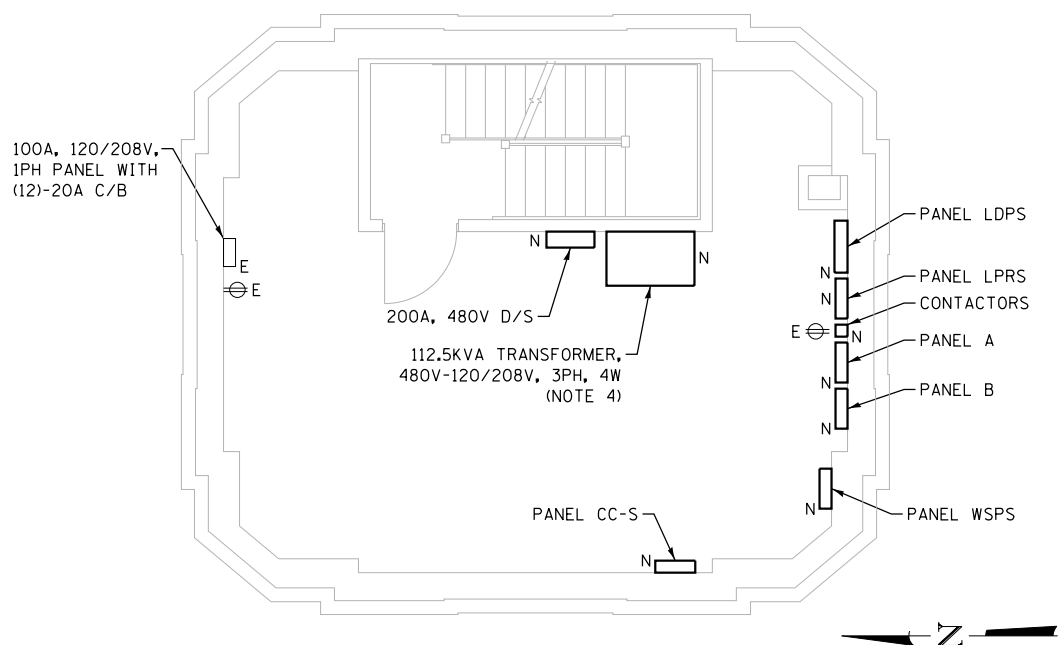
EXISTING AND PROPOSED
SOUTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-25
CDOT PROJECT NO. E-6-650			220 OF 411

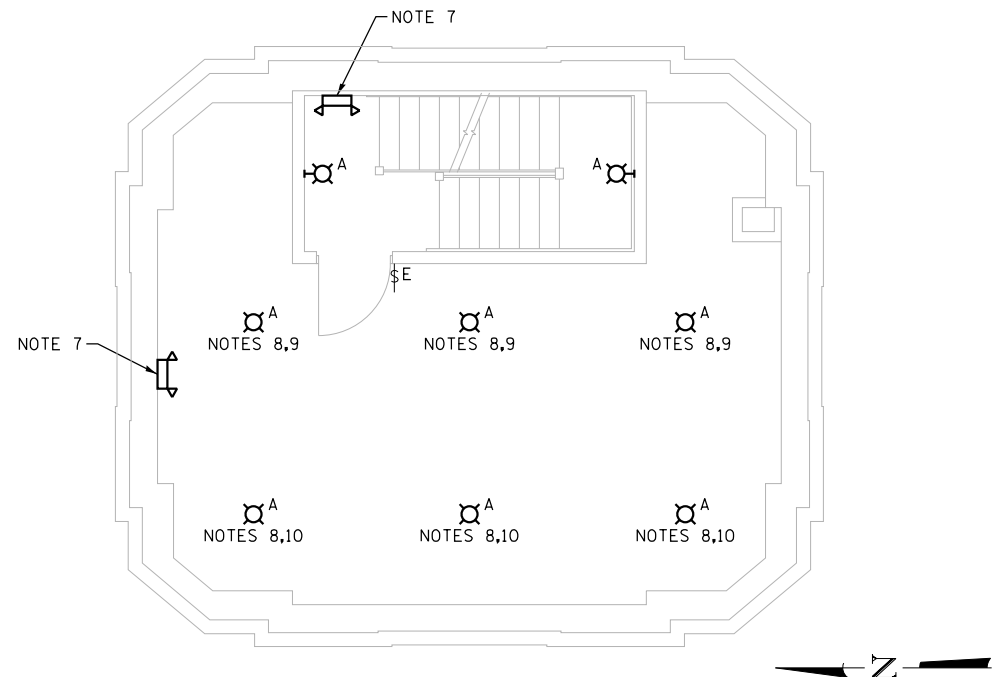
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - NOT USED.
 - GROUND THE TRANSFORMER AND BOND THE NEUTRAL WITH THE GROUND BUS PER CHICAGO ELECTRICAL CODE.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - FOR PANEL SCHEDULES, SEE SHEETS E-45 THROUGH E-47.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES IN THIS AREA.
 - MOUNT FIXTURES ON THE BOTTOM OF THE BEAM.
 - MOUNT FIXTURES AT THE FIXTURE HEIGHT OF THE FIRST ROW.



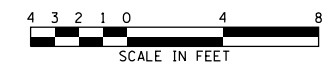
EXISTING PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)
 SCALE: 1/4" = 1'-0"



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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

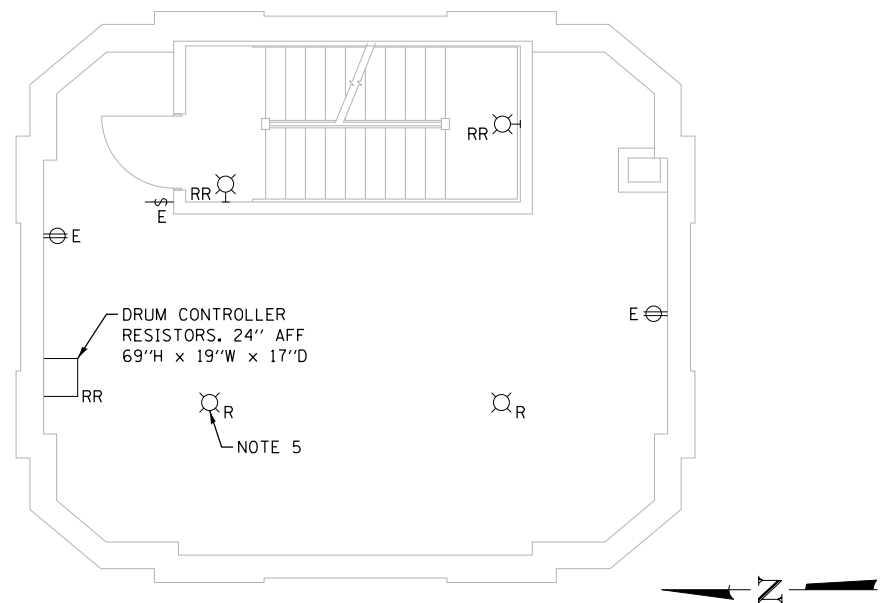
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

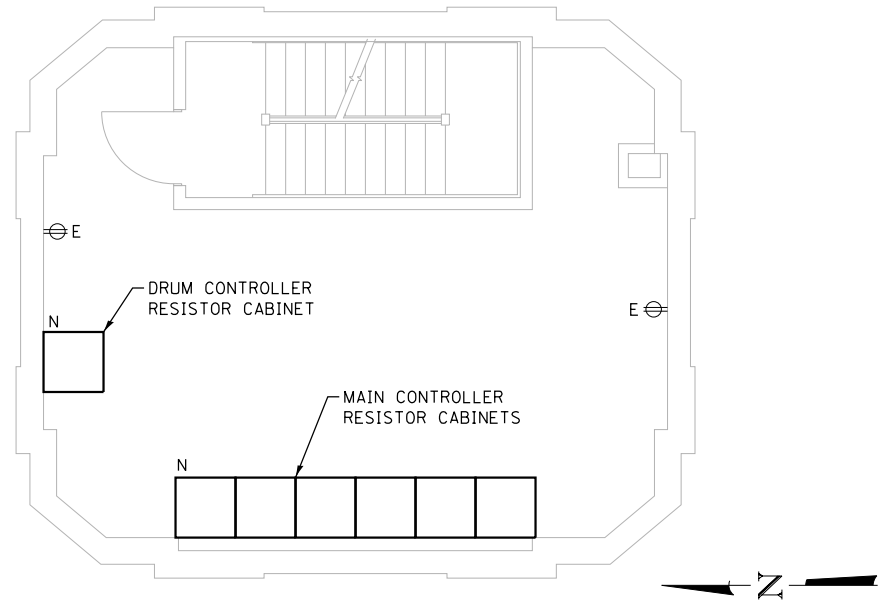
EXISTING AND PROPOSED
SOUTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-26
CDOT PROJECT NO. E-6-650			221 OF 411

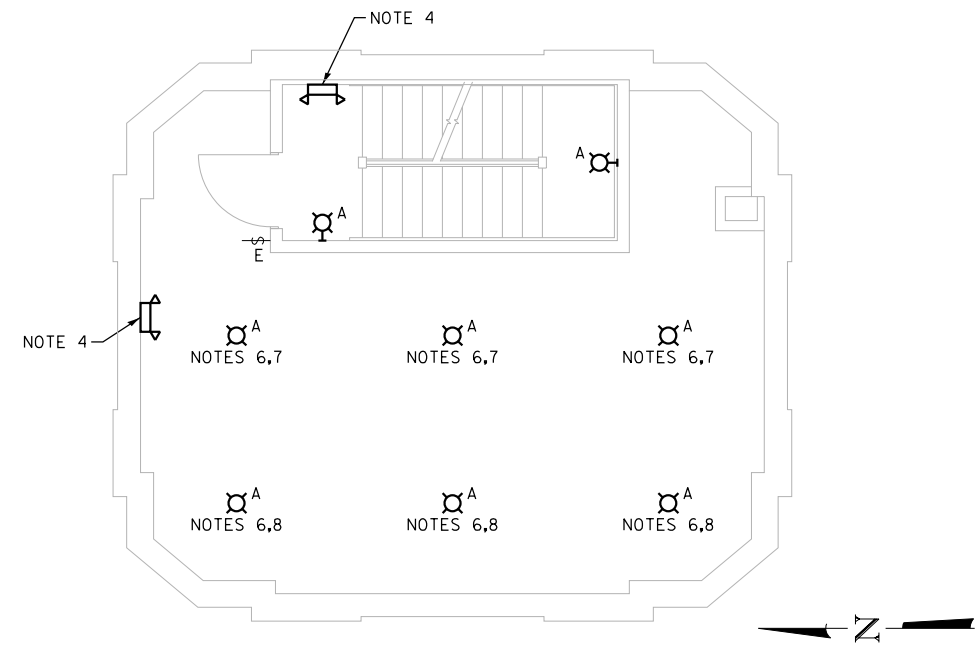
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 - INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES IN THIS AREA.
 - MOUNT FIXTURES ON THE BOTTOM OF THE BEAM.
 - MOUNT FIXTURES AT THE FIXTURE HEIGHT OF THE FIRST ROW.



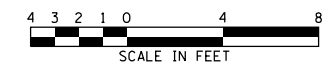
EXISTING PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)
 SCALE: 1/4" = 1'-0"



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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

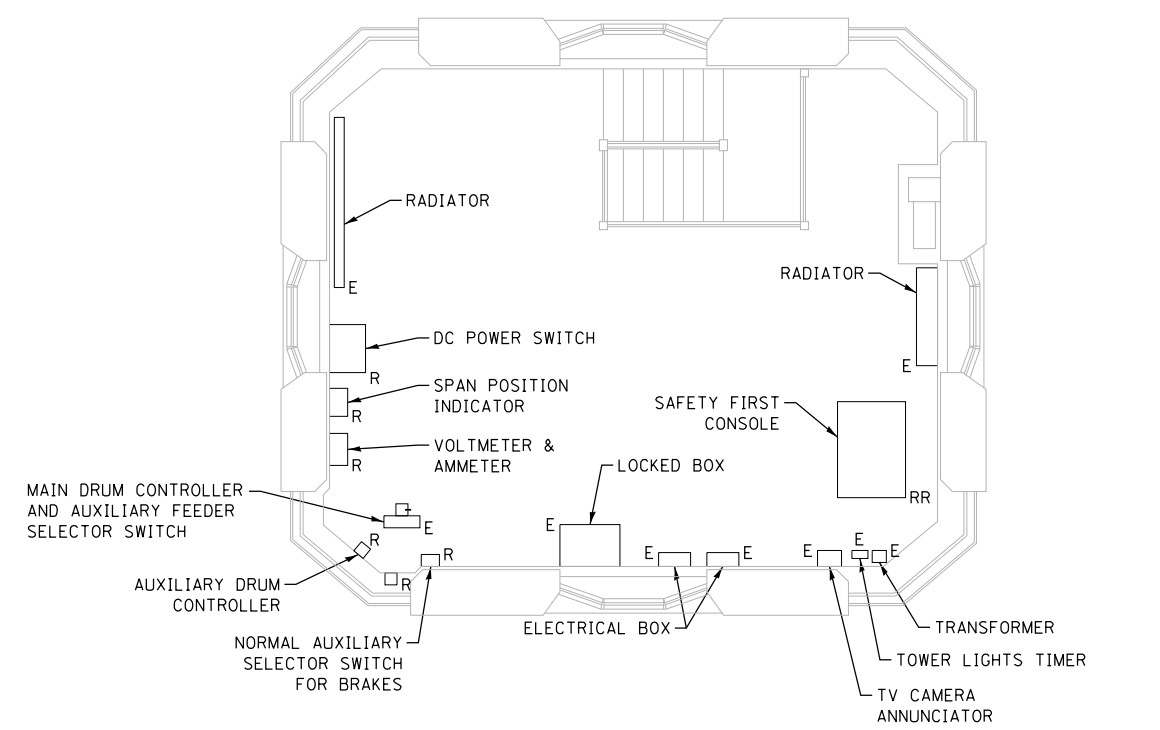
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

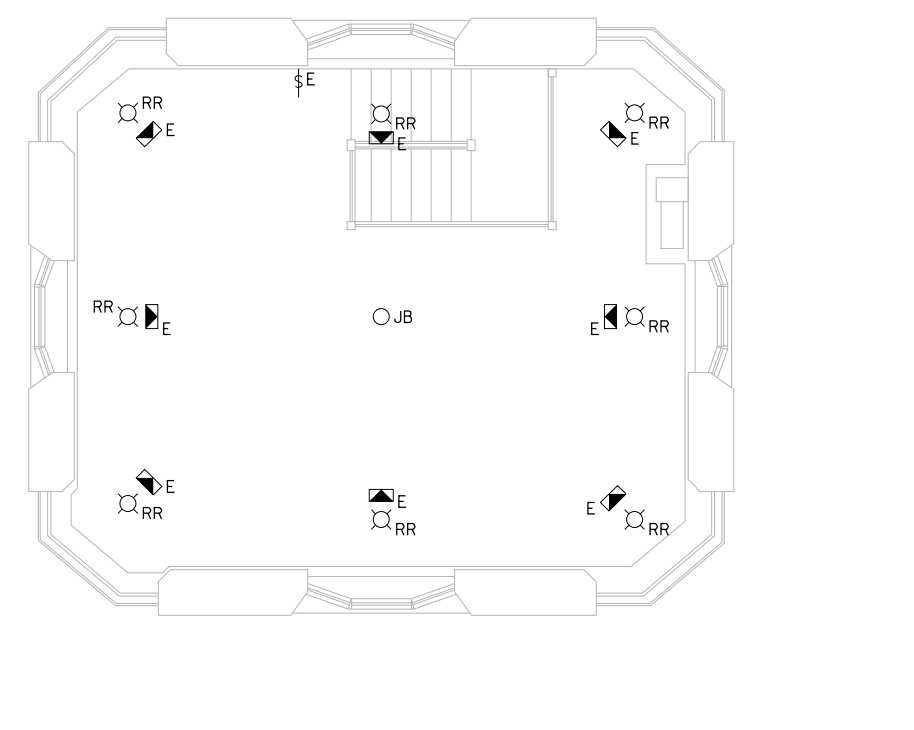
EXISTING AND PROPOSED
SOUTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-27
CDOT PROJECT NO. E-6-650			222 OF 411

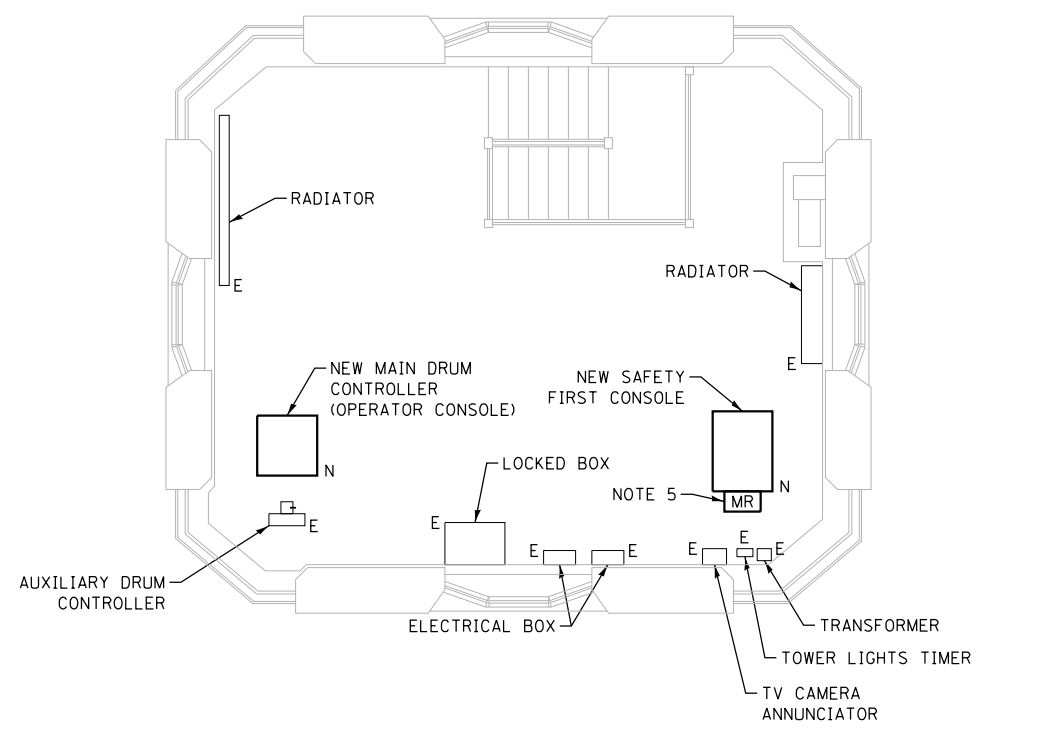
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - PROVIDE MARINE RADIO TRANSCEIVER, POWER SUPPLY AND ACCESSORIES AS MANUFACTURED BY ICOM:
 TRANSCEIVER: MODEL *IC-F5061D
 POWER SUPPLY: MODEL *ICTCS120-20AG/IC09
 HAND MICROPHONE: MODEL *HM-152
 OR MANUFACTURED BY STANDARD HORIZON:
 TRANSCEIVER: MODEL *GX1300
 POWER SUPPLY: MODEL *FP-1023
 HAND MICROPHONE: MODEL *PTT
 EQUIPMENT TO BE BOLTED IN PLACE.
 THE COST OF THIS WORK SHALL BE INCLUDED IN THE "ELECTRICAL WORK IN BASCULE BRIDGE" PAY ITEM 11. NO SEPARATE PAYMENT TO BE MADE.



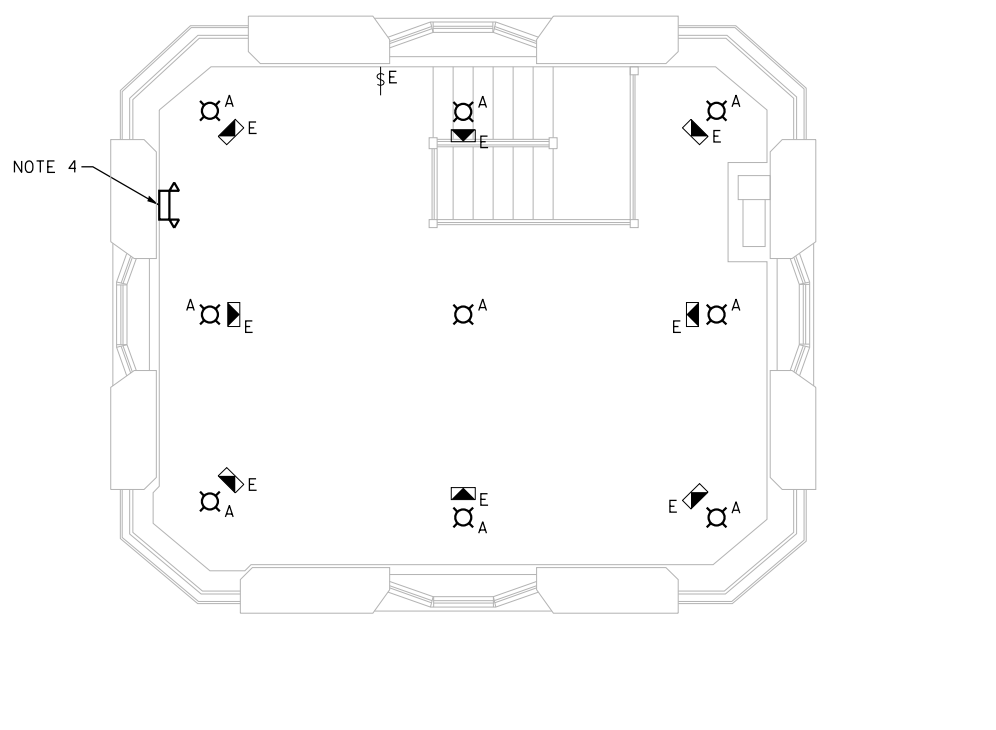
EXISTING EQUIPMENT PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)
 SCALE: 1/4" = 1'-0"



EXISTING LIGHTING PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)
 SCALE: 1/4" = 1'-0"



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	CHECKED - MEB	REVISED -

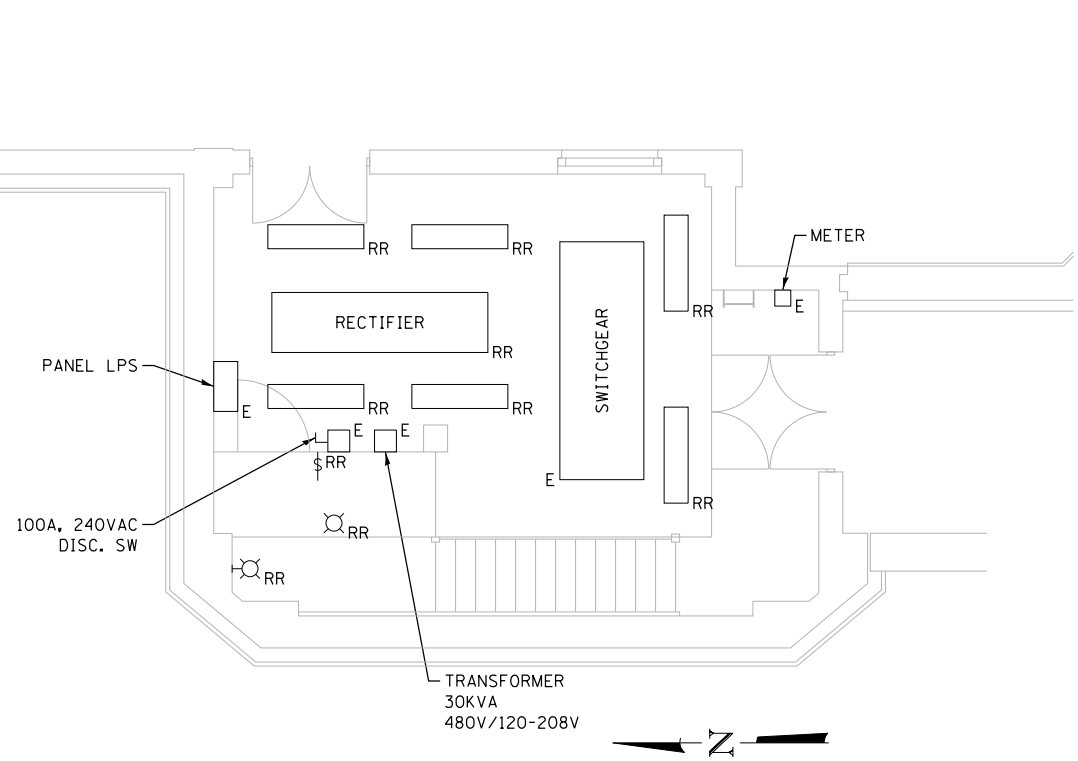
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

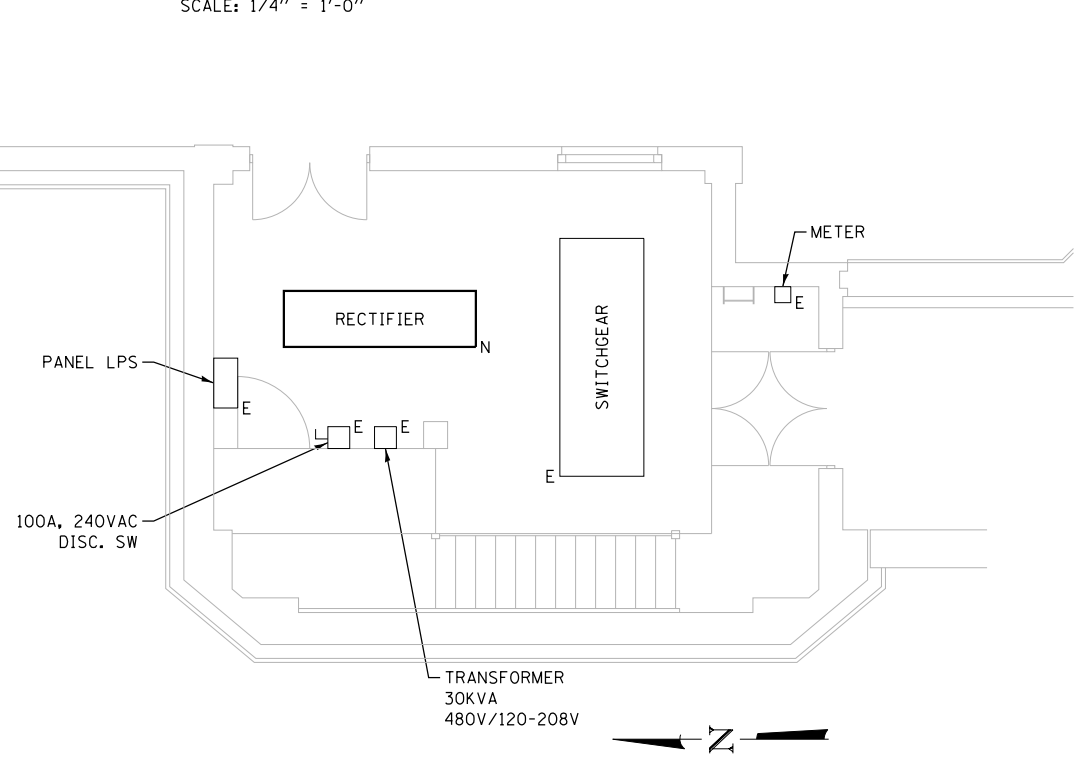
EXISTING AND PROPOSED
SOUTHEAST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-28
CDOT PROJECT NO. E-6-650			223 OF 411

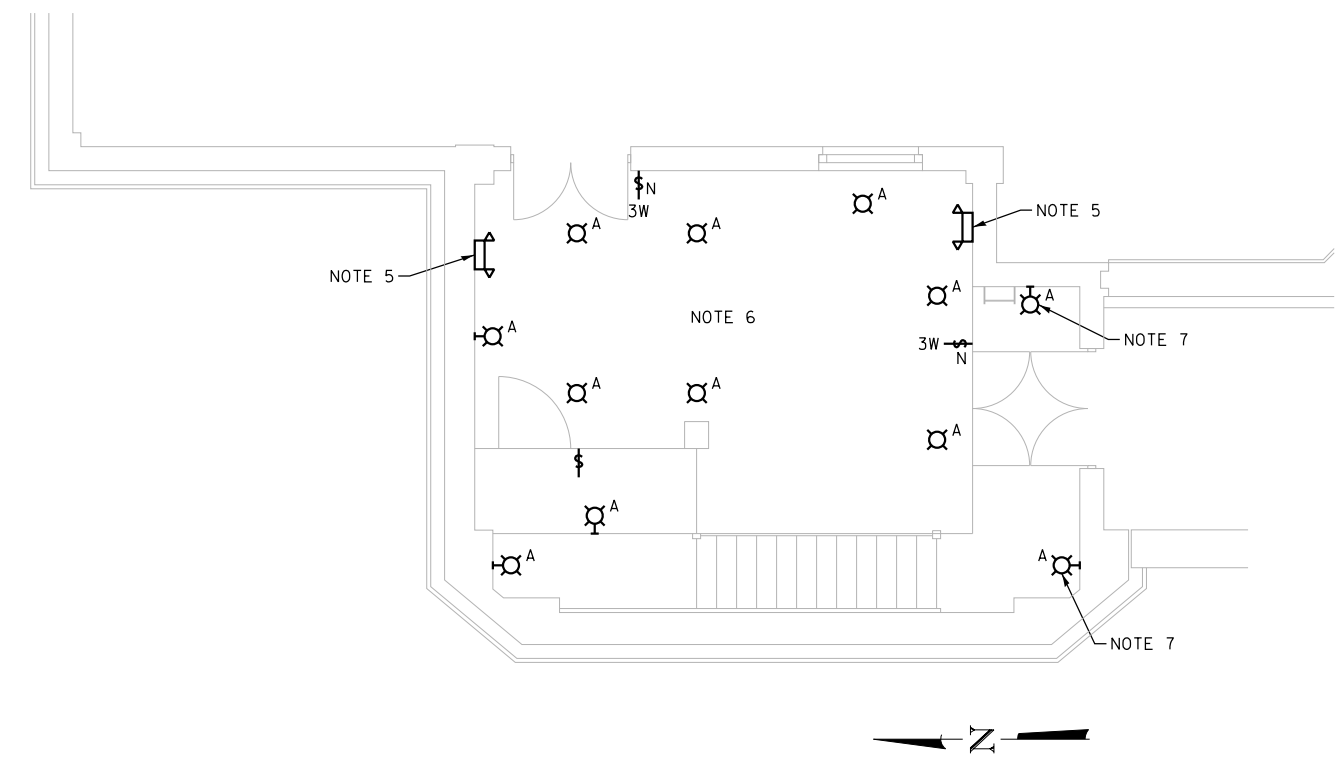
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. FOR PANEL SCHEDULES, SEE SHEETS E-45 THROUGH E-47.
 5. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 6. INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE ALL LIGHT FIXTURES IN THIS AREA.
 7. INTERCEPT EXISTING SWITCH LEG FOR STAIRWELL LIGHTING AND WIRE NEW FIXTURES.



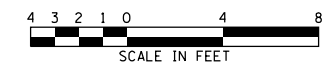
EXISTING PLAN OF BRIDGE HOUSE
DOCK LEVEL AT ELEV. +5.0
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN OF BRIDGE HOUSE
DOCK LEVEL AT ELEV. +5.0
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN OF BRIDGE HOUSE
DOCK LEVEL AT ELEV. +5.0
 SCALE: 1/4" = 1'-0"



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 TEL: (312) 782-8150
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USER NAME = cmartin	DESIGNED - BG	REVISED -
	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/29/2017	CHECKED - MEB	REVISED -

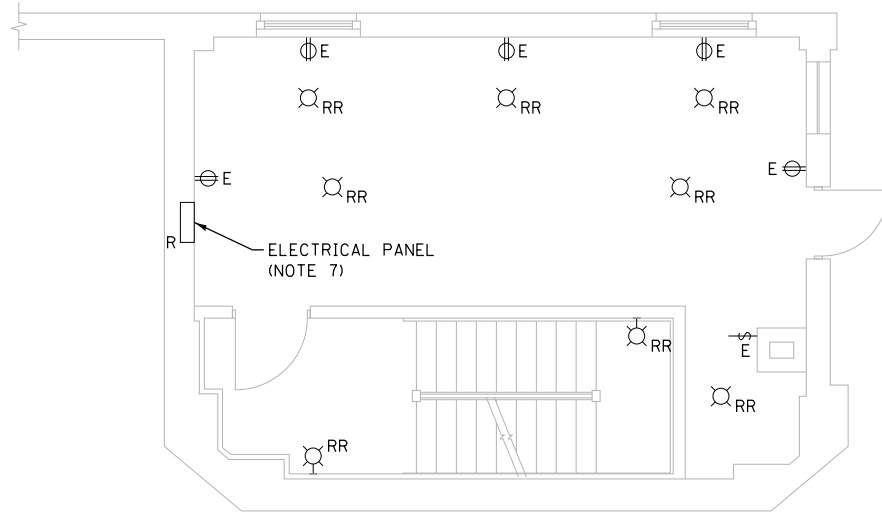
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

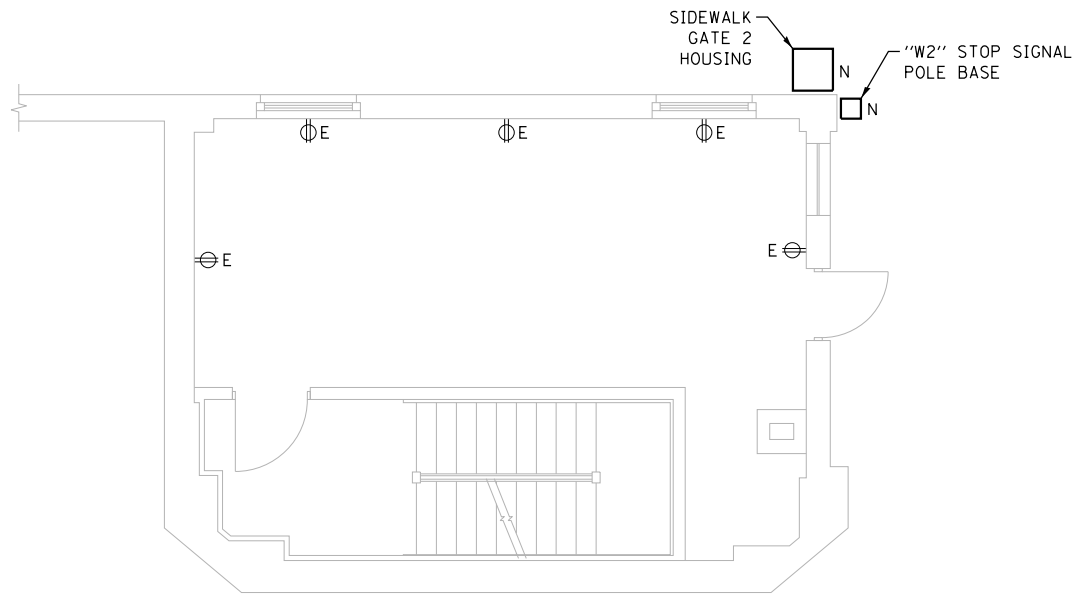
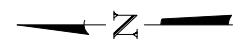
EXISTING AND PROPOSED
SOUTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-29
CDOT PROJECT NO. E-6-650			224 OF 411

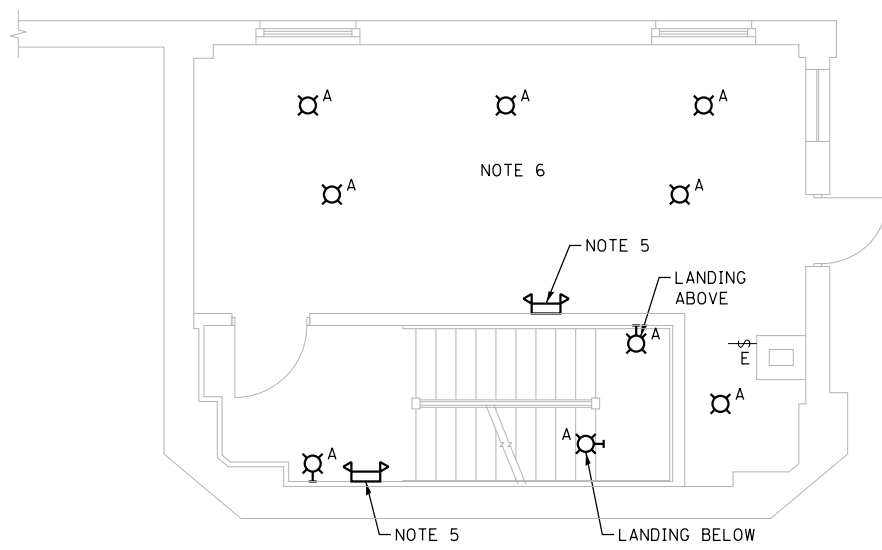
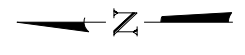
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - FOR PANEL SCHEDULES, SEE SHEETS E-45 THROUGH E-47.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS AS NEEDED TO PIPE LIGHT FIXTURES IN THIS ROOM. MOUNT FIXTURES AT 9'-0" AFF.
 - REMOVE THE PANEL AND PROVIDE A NEW COVER OVER THE EXISTING TUB.



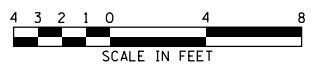
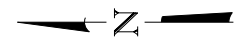
EXISTING PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN
INTERMEDIATE LEVEL AT ELEV. +26.0
 SCALE: 1/4" = 1'-0"



M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E30-Plans.dgn 6/22/2017

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USER NAME =	cmartin	DESIGNED -	BG	REVISED -	
		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

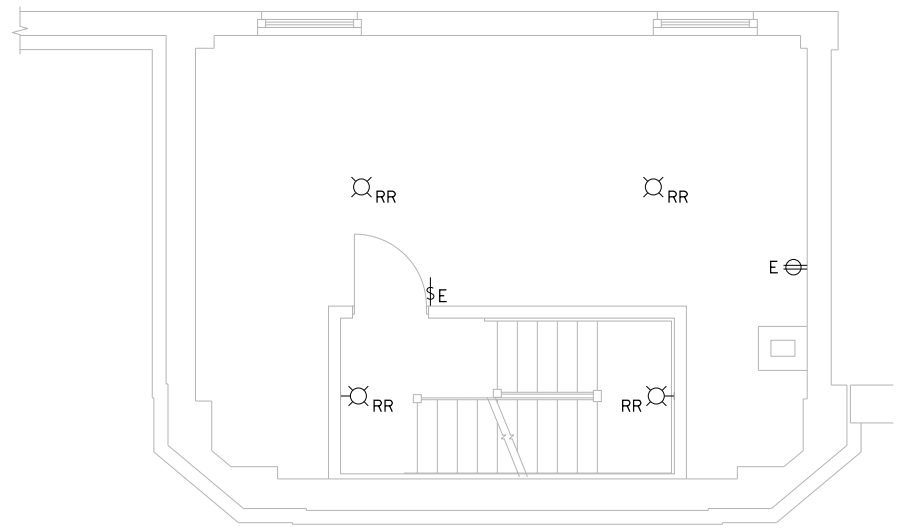
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

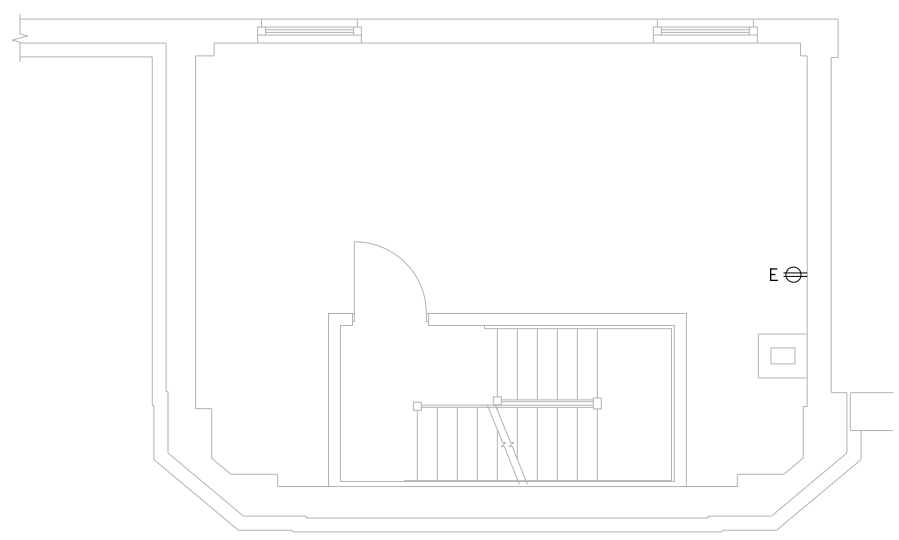
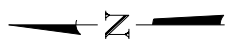
EXISTING AND PROPOSED
SOUTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-30
CDOT PROJECT NO. E-6-650			225 OF 411

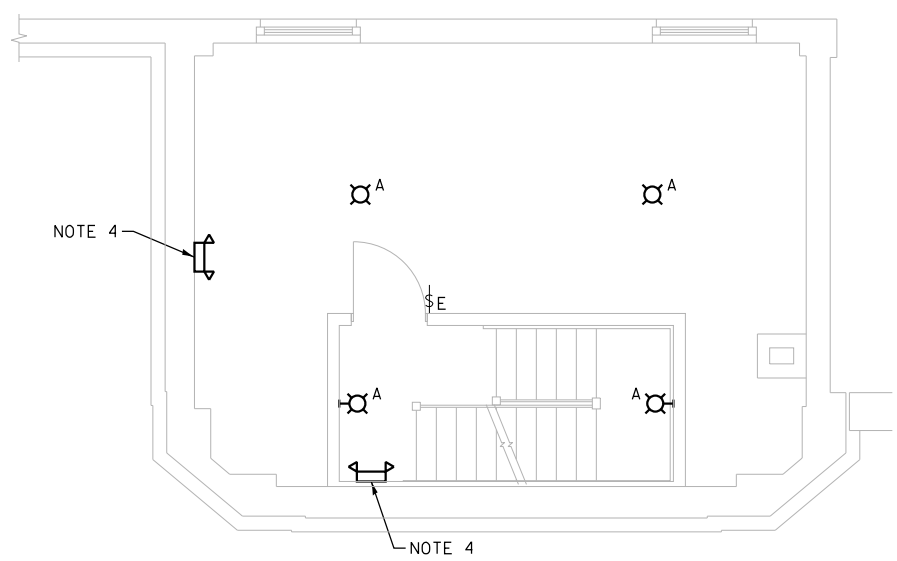
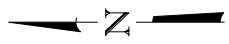
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.



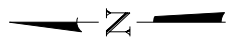
**EXISTING PLAN OF FIRST FLOOR ABOVE
INTERMEDIATE LEVEL AT ELEV. +39.42**
SCALE: 1/4" = 1'-0"



**PROPOSED EQUIPMENT PLAN OF FIRST FLOOR
ABOVE INTERMEDIATE LEVEL AT ELEV. +39.42**
SCALE: 1/4" = 1'-0"



**PROPOSED LIGHTING PLAN OF FIRST FLOOR
ABOVE INTERMEDIATE LEVEL AT ELEV. +39.42**
SCALE: 1/4" = 1'-0"



M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E31-Plans.dgn 6/22/2017

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USER NAME =	cmartin	DESIGNED -	BG	REVISED -	
		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

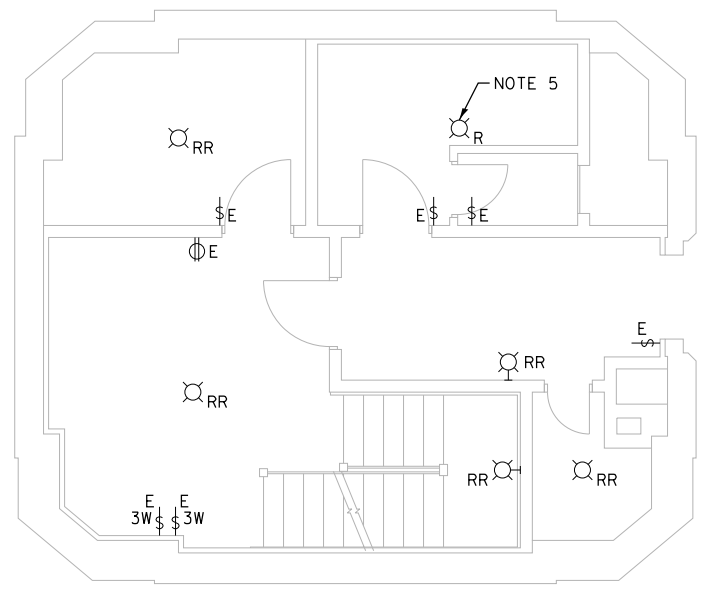
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

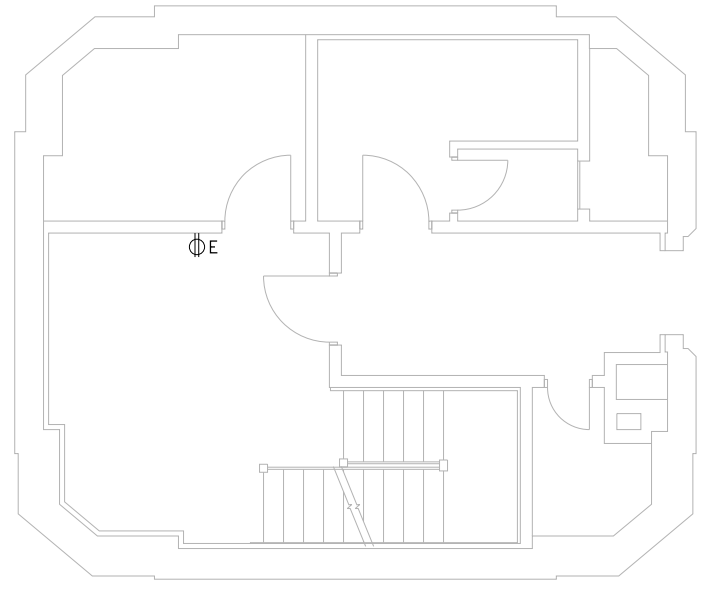
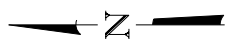
**EXISTING AND PROPOSED
SOUTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-31
CDOT PROJECT NO. E-6-650			226 OF 411

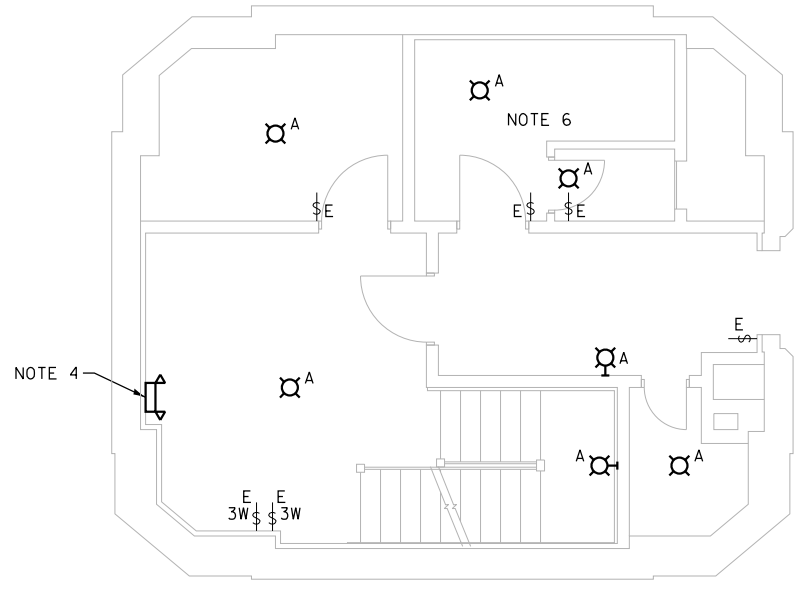
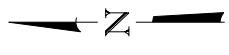
- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.
 - REMOVE EXISTING LIGHT FIXTURE AND INSTALL A COVER OVER THE JUNCTION BOX.
 - INTERCEPT EXISTING SWITCH LEG AND INSTALL SURFACE MOUNTED CONDUITS TO PIPE LIGHT FIXTURES IN THIS ROOM.



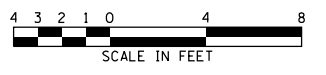
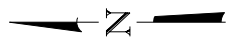
EXISTING PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



PROPOSED EQUIPMENT PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



PROPOSED LIGHTING PLAN
UPPER LEVEL (ELEV. +48.75)
 SCALE: 1/4" = 1'-0"



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 30 N. LASALLE STREET
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USER NAME = cmartin	DESIGNED - BG	REVISED -
	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

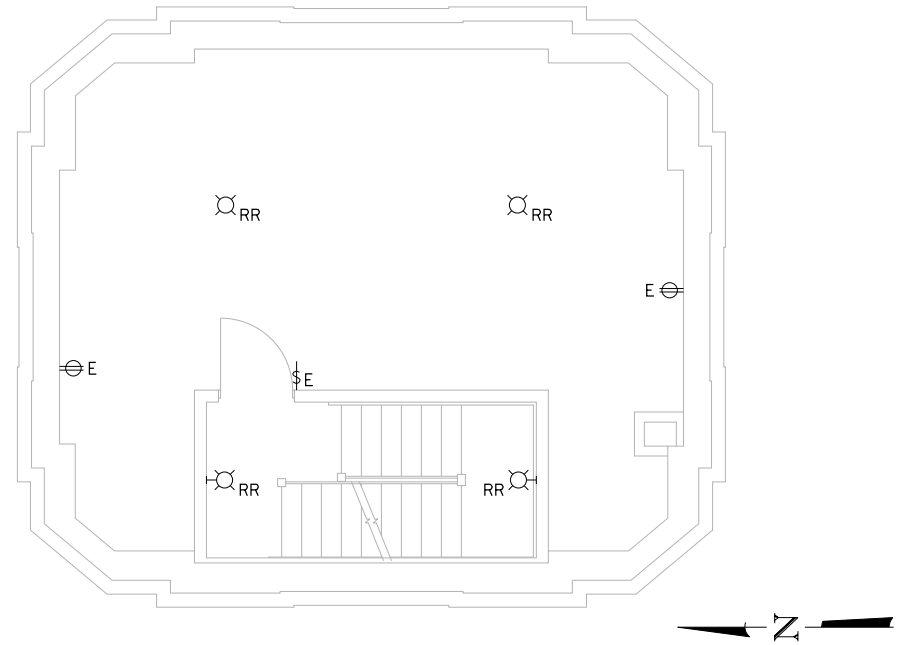
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

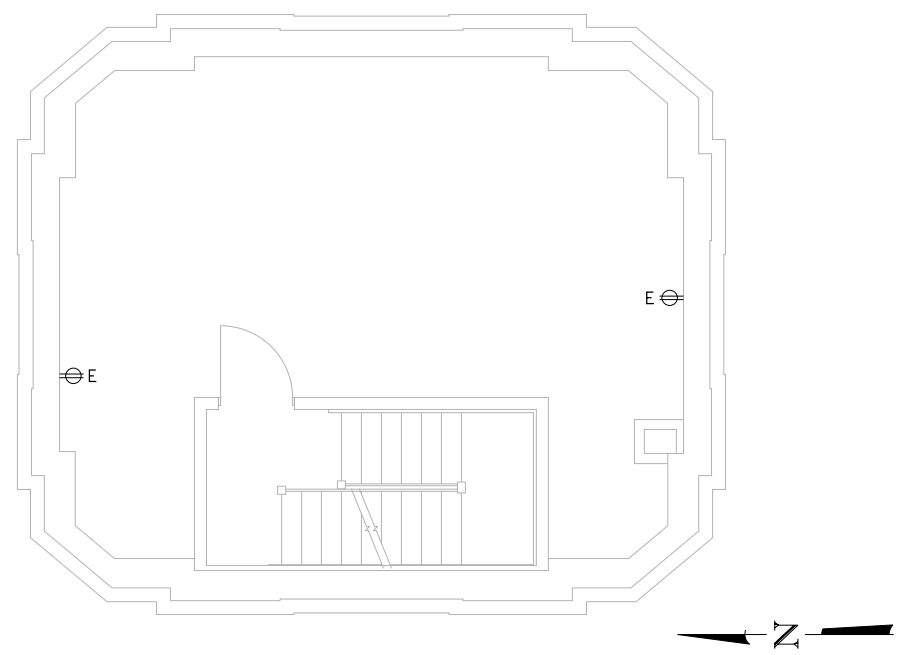
EXISTING AND PROPOSED
SOUTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-32
CDOT PROJECT NO. E-6-650			227 OF 411

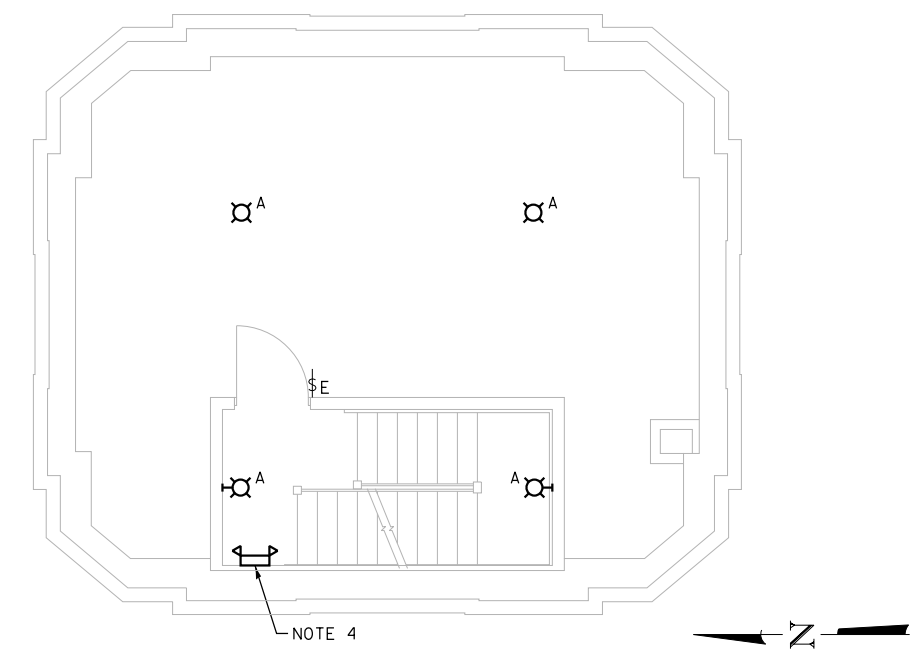
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.



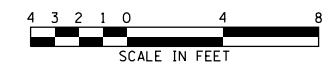
**EXISTING PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)**
SCALE: 1/4" = 1'-0"



**PROPOSED EQUIPMENT PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)**
SCALE: 1/4" = 1'-0"



**PROPOSED LIGHTING PLAN OF FIRST FLOOR
ABOVE UPPER LEVEL (ELEV. +58.08)**
SCALE: 1/4" = 1'-0"



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TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME =	cmartin	DESIGNED -	BG	REVISED -	
		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

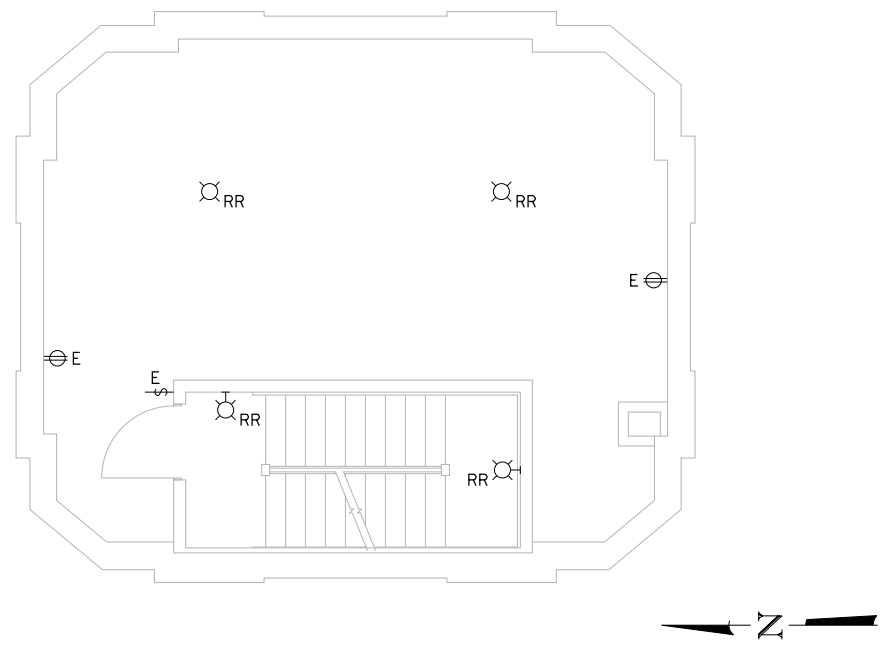
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

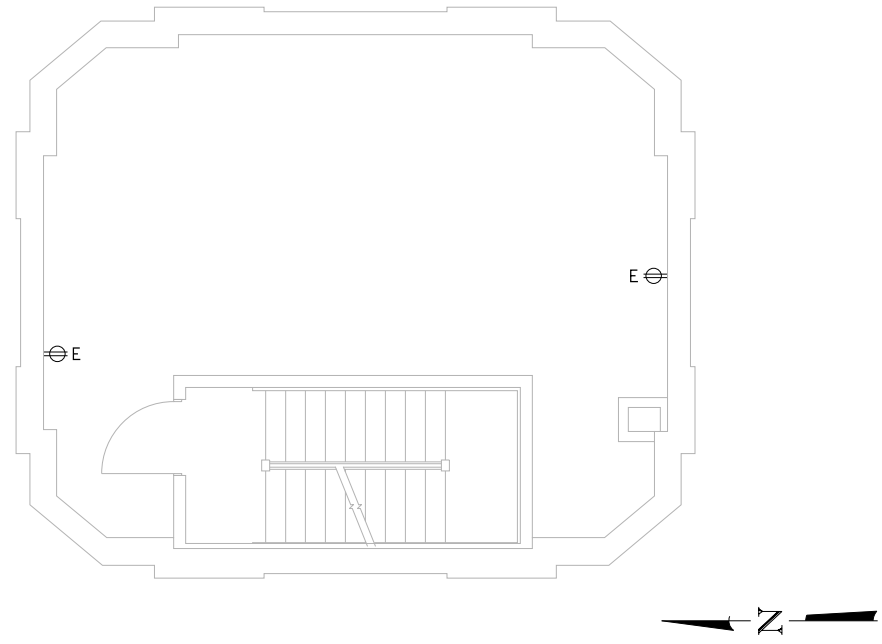
**EXISTING AND PROPOSED
SOUTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-33
CDOT PROJECT NO. E-6-650			228 OF 411

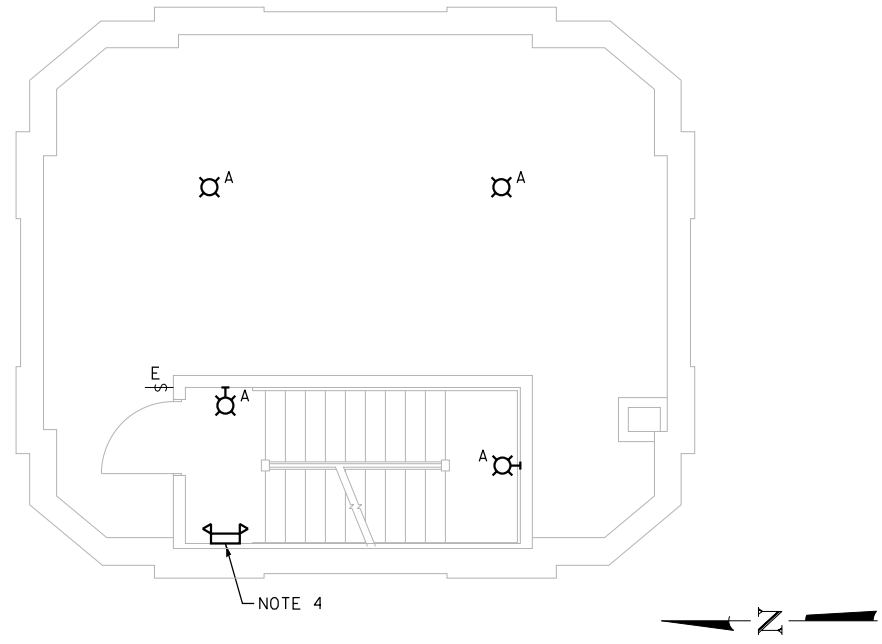
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.



**EXISTING PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)**
SCALE: 1/4" = 1'-0"



**PROPOSED EQUIPMENT PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)**
SCALE: 1/4" = 1'-0"



**PROPOSED LIGHTING PLAN OF SECOND FLOOR
ABOVE UPPER LEVEL (ELEV. +68.00)**
SCALE: 1/4" = 1'-0"



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6/22/2017

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FAX: (312) 782-1684

USER NAME =	cmartin	DESIGNED -	BG	REVISED -	
		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

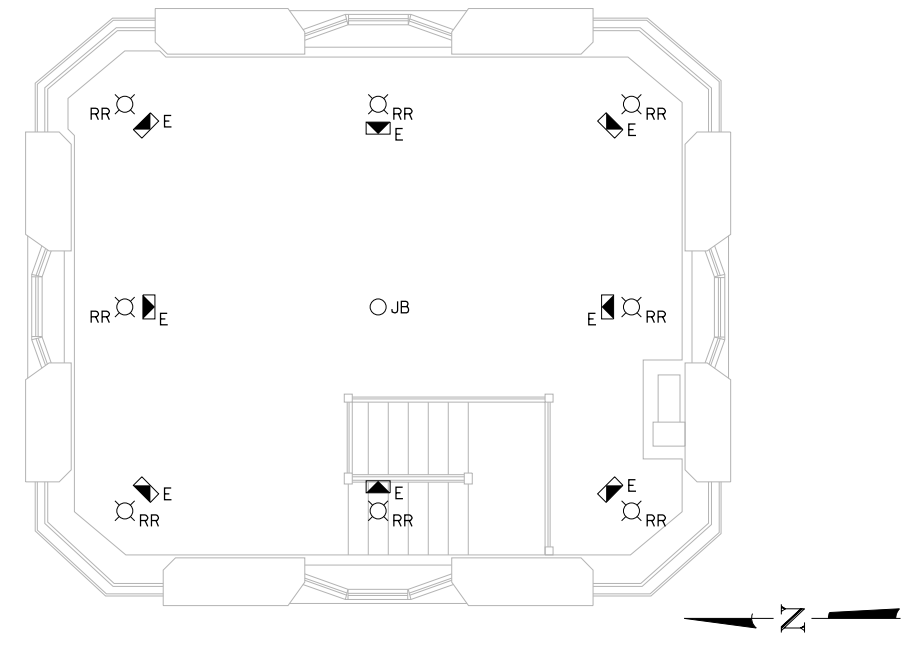
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

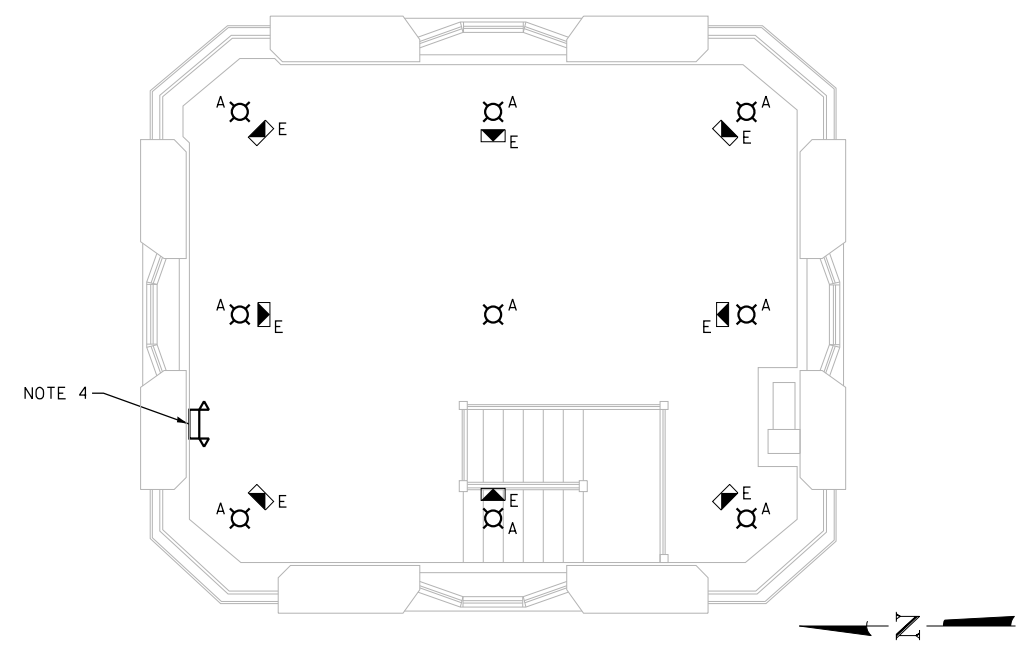
**EXISTING AND PROPOSED
SOUTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-34
CDOT PROJECT NO. E-6-650			229 OF 411

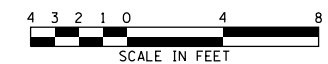
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 4. CONNECT TO EXISTING CIRCUIT SERVING THIS AREA AHEAD OF LIGHT SWITCH LEG.



**EXISTING PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)**
SCALE: 1/4" = 1'-0"



**PROPOSED LIGHTING PLAN OF THIRD FLOOR
ABOVE UPPER LEVEL (ELEV. +77.92)**
SCALE: 1/4" = 1'-0"



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PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

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DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**EXISTING AND PROPOSED
SOUTHWEST BRIDGE HOUSE ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-35
CDOT PROJECT NO. E-6-650			230 OF 411

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FAX: (312) 782-1684

USER NAME = lopezgonzalez	DESIGNED - BG	REVISED -
	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CUM	REVISED -
PLOT DATE = 6/26/2017	CHECKED - MEB	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-36
CDOT PROJECT NO. E-6-650			231 OF 411

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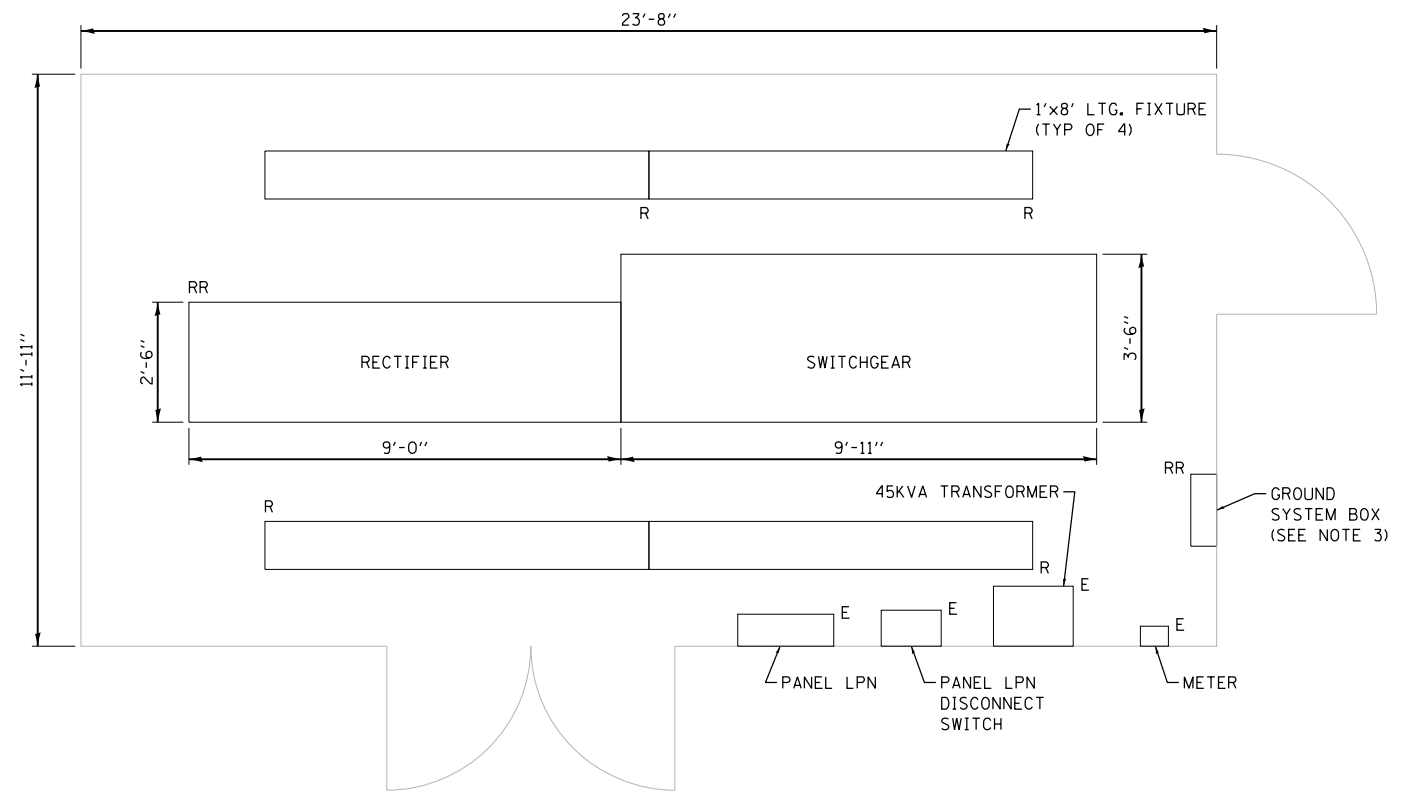
USER NAME = lopezgonzalez	DESIGNED - BG	REVISED -
	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CUM	REVISED -
PLOT DATE = 6/26/2017	CHECKED - MEB	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

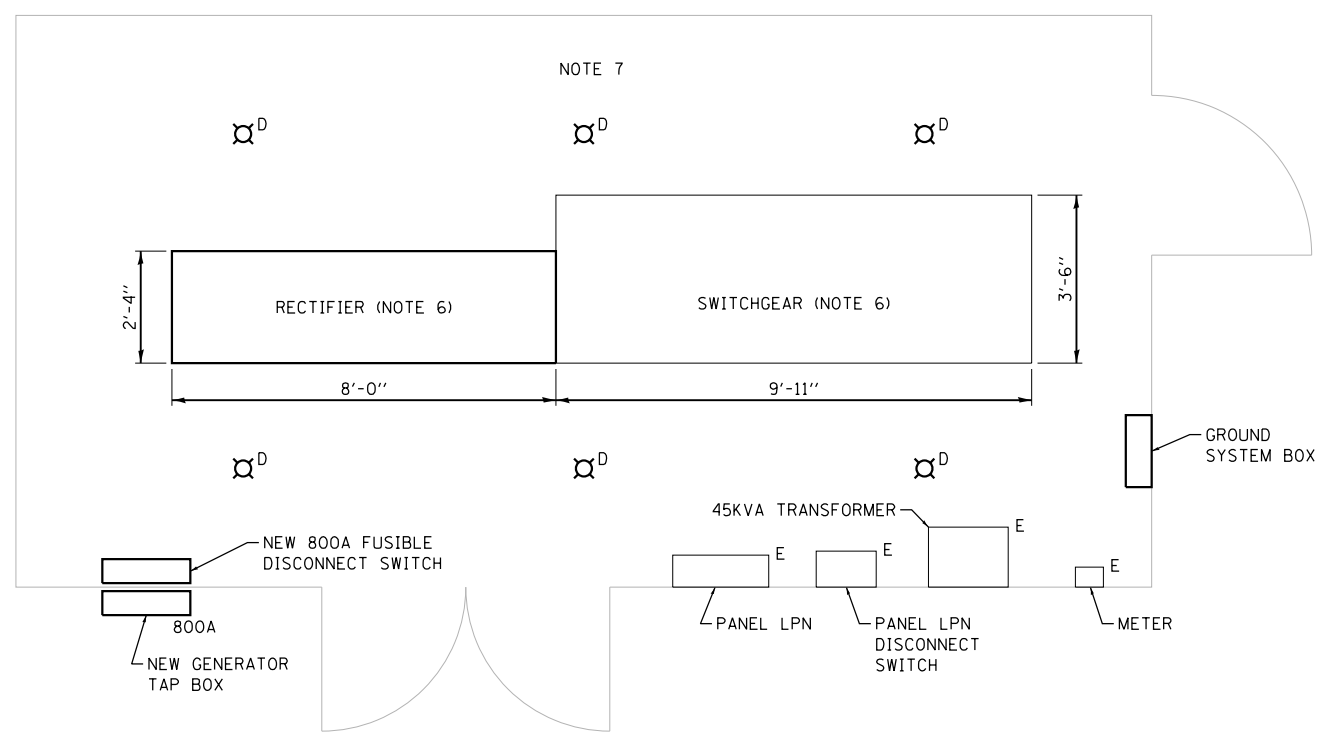
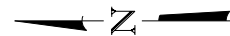
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-6030)

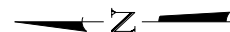
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-37
CDOT PROJECT NO. E-6-650			232 OF 411



NORTH RECTIFIER BUILDING EXISTING ELECTRICAL PLAN
SCALE: 1/2" = 1'-0"



NORTH RECTIFIER BUILDING PROPOSED ELECTRICAL PLAN
SCALE: 1/2" = 1'-0"



- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - REPLACE THE BOX WITH A NEMA 12 GALVANIZED STEEL BOX.
 - FOR LIGHTING FIXTURE SCHEDULE, SEE SHEET E-44.
 - FOR PANEL SCHEDULES, SEE SHEETS E-45 THROUGH E-47.
 - CONDUITS AND WIRES COMING OUT OF SWITCHGEAR AND RECTIFIER TO BE REPLACED BY OVERHEAD CONDUITS. SEE SHEET E-3.6. IF NECESSARY, INSTALL A BLISTER BOX ON TOP AND/OR BACK OF EQUIPMENT FOR NEW CONDUITS. MAINTAIN CLEARANCE AROUND THE EQUIPMENT PER CODE.
 - INSTALL PENDANT MOUNTED LIGHT FIXTURES AT 11'-0" ABOVE FINISHED FLOOR.



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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**EXISTING AND PROPOSED
NORTH RECTIFIER BUILDING ELECTRICAL PLANS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-38
CDOT PROJECT NO. E-6-650			233 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

MCCN 480V, 3PH, 4W

	A	B	C	D	E	F	G	
TERMINAL BLOCKS WITH RELAYS	1	5	9	13	16	20	24	RELAY SECTION
	2	6	10	14	17	21	25	
	3	7	11	15	18	22	26	
	4	8	12		19	23	27	

- | | |
|---|--|
| 1. UPPER LEVEL NORTH BARRIER MOTOR #1 | 15. 480V MAIN BREAKER |
| 2. UPPER LEVEL NORTH BARRIER MOTOR #2 | 16. UPPER NORTH ONCOMING GATE #2 |
| 3. UPPER LEVEL NORTH BARRIER MOTOR #3 | 17. UPPER NORTH OFFGOING GATE #3 |
| 4. UPPER LEVEL NORTH BARRIER MOTOR #4 | 18. UPPER NORTH OFFGOING GATE #4 |
| 5. LOWER NORTH OFFGOING GATE #3 | 19. LOWER LEVEL NORTH BARRIER MOTOR #2 |
| 6. LOWER MIDDLE LANE OF TRAFFIC GATE #2 | 20. LOWER LEVEL NORTH BARRIER MOTOR #1 |
| 7. LOWER NORTH ONCOMING GATE #1 | 21. LOWER LEVEL NORTH BARRIER MOTOR #3 |
| 8. MACHINE BRAKE THRUSTER MOTOR WEST | 22. LOWER NORTH SIDEWALK GATE #2 |
| 9. MACHINE BRAKE THRUSTER MOTOR EAST | 23. LOWER NORTH SIDEWALK GATE #3 |
| 10. SPARE | 24. SPARE |
| 11. BLANK | 25. BLANK |
| 12. SPARE | 26. BLANK |
| 13. UPPER NORTH ONCOMING GATE #1 | 27. REAR LOCK WEST |
| 14. REAR LOCK EAST | |

MCCN ELEVATION (IN NORTHWEST TOWER)

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E39-MCC Elevations.dgn 6/22/2017

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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**ELECTRICAL EQUIPMENT ELEVATIONS
 EXISTING MOTOR CONTROL CENTER MCCN
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-39
CDOT PROJECT NO. E-6-650			234 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

MCCS 600A, 480V

RELAY SECTION	A	B	C	D	E	F	G	RELAY SECTION
1	5	9	12	16	20	24		
2	6	10	13	17	21	25		
3	7	11	14	18	22	26		
4	8		15	19	23	27		

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. UPPER LEVEL SOUTH BARRIER MOTOR #1 2. UPPER LEVEL SOUTH BARRIER MOTOR #2 3. UPPER LEVEL SOUTH BARRIER MOTOR #3 4. UPPER LEVEL SOUTH BARRIER MOTOR #4 5. LOWER LEVEL SOUTH BARRIER MOTOR #1 6. LOWER LEVEL SOUTH BARRIER MOTOR #2 7. LOWER LEVEL SOUTH BARRIER MOTOR #3 8. CENTER LOCK #1 EAST 9. CENTER LOCK #2 WEST 10. REAR LOCK EAST 11. MAIN BREAKER 12. MACHINE BRAKE EAST 13. MACHINE BRAKE WEST 14. LOWER S-E SIDEWALK GATE | <ol style="list-style-type: none"> 15. UPPER SOUTH ONCOMING GATE #1 16. UPPER SOUTH ONCOMING GATE #2 17. UPPER SOUTH OFFCOMING GATE #3 18. UPPER SOUTH OFFCOMING GATE #4 19. LOWER SOUTH OFFGOING GATE #2 20. BLANK 21. LOWER SOUTH OFFCOMING GATE #3 22. LOWER SOUTH ONCOMING GATE #1 23. LOWER SOUTHWEST SIDEWALK 24. UNIT HEATER 25. SPARE 26. BLANK 27. REAR LOCK DRIVE MOTOR WEST |
|--|---|

MCCS ELEVATION (IN SOUTHEAST TOWER)

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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**ELECTRICAL EQUIPMENT ELEVATIONS
 EXISTING MOTOR CONTROL CENTER MCCS
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-40
CDOT PROJECT NO. E-6-650			235 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

BRIDGE SEQUENCE OF OPERATION

OPERATION OF THE BRIDGE CAN BEGIN WHEN THE (4) OPERATORS (IN TELEPHONE CONTACT WITH EACH OTHER) ARE AT THEIR CONTROL STATIONS, EACH TOWER MAN AT NEW CONTROL DESK/CONSOLE, AND EACH LOWER (INTERMEDIATE) LEVEL MAN AT THE NEW ROADWAY CONTROL STATION.

1. EACH TOWER OPERATOR TURNS HIS SAFETY-FIRST SWITCH TO ON POSITION. THIS ENERGIZES THE SAFETY-FIRST CONTACTS TO ACTIVATE TRAFFIC SIGNALS AND CONTROL POWER FOR BOTH LEVELS, AND STARTS THE POWER RECTIFIERS.

FOR BOTH LEVELS OF EACH LEAF:

2. ONCOMING ROADWAY GATES CAN BE LOWERED, PROVIDING BOTH SPANS ARE FULLY CLOSED, CENTERLOCKS ARE IN, AND ASSOCIATED ONCOMING BARRIERS ARE LOWERED.

3. ONCOMING BARRIERS CAN THEN BE RAISED, PROVIDING BOTH SPANS ARE FULLY CLOSED, CENTERLOCKS ARE IN, AND ASSOCIATED ONCOMING GATES HAVE BEEN FULLY LOWERED.

4. OFFGOING ROADWAY GATES CAN BE LOWERED, PROVIDING BOTH SPANS ARE FULLY CLOSED, CENTERLOCKS ARE IN, AND ASSOCIATED OFFGOING BARRIERS ARE LOWERED.

5. OFFGOING BARRIERS CAN THEN BE RAISED, PROVIDING BOTH SPANS ARE FULLY CLOSED, CENTERLOCKS ARE IN, AND ASSOCIATED OFFGOING GATES HAVE BEEN FULLY LOWERED.

FOR SOUTH LOWER LEVEL:

6. THIS OPERATOR, AFTER RAISING HIS BARRIERS, WALKS OVER TO HIS SIDEWALK GATE CONTROL BOX (NEAR THE SOUTHWEST SIDEWALK GATE) TO LOWER BOTH THE NORTH AND SOUTH SIDEWALK GATES FOR THE EAST WALKWAY. HE CAN LOWER BOTH GATES, PROVIDING BOTH SPANS ARE FULLY CLOSED, CENTERLOCKS ARE IN, AND BOTH MECHANIZED FOLDING WALKWAY SECTIONS ARE NORMALLY SEATED.

FOR NORTH LOWER LEVEL:

7. THIS OPERATOR, AFTER RAISING HIS BARRIERS, WALKS OVER TO HIS SIDEWALK GATE CONTROL BOX (NEAR THE NORTHWEST SIDEWALK GATE) TO LOWER BOTH THE NORTH AND SOUTH SIDEWALK GATES FOR THE WEST WALKWAY. HE CAN LOWER BOTH GATES, PROVIDING BOTH SPANS ARE FULLY CLOSED, CENTERLOCKS ARE IN, AND BOTH MECHANIZED FOLDING WALKWAY SECTIONS ARE NORMALLY SEATED.

RED AND GREEN INDICATING LIGHTS ON TOWER DESK AND SIDEWALK GATE CONTROL BOX FOR EACH LEAF, ACTIVATED BY FOLDING WALKWAY LIMIT SWITCHES, REGISTER SAFE OR UNSAFE CONDITIONS OF WALKWAYS.

8. AFTER ALL FOREGOING PROCEDURES ARE COMPLETED, THE BARRIERS UP RELAY FOR EACH LEAF IS ENERGIZED VIA ALL BARRIERS BEING RAISED AND SIDEWALK GATES LOWERED, ALONG WITH THE "REAR LOCKS IN" DELAY ALREADY ENERGIZED CONTACTS OF THESE TWO (2) RELAYS IN SERIES WITH CONTACTS OF IDENTICAL RELAYS ON THE OPPOSITE LEAF, ACTIVATES THE AMBER CENTER LOCK READY INDICATING LIGHT ON THE SOUTH TOWER CONTROL DESK.

9. AFTER THE CENTERLOCKS HAVE BEEN OPENED, THE SOUTH TOWER OPERATOR CAN OPEN HIS REAR LOCKS, PROVIDING ALSO THAT HIS LEAF (INDEPENDENT OF THE NORTH LEAF) IS FULLY CLOSED.

10. AFTER THE CENTERLOCKS HAVE BEEN OPENED, THE NORTH TOWER OPERATOR CAN OPEN HIS REAR LOCKS, PROVIDING ALSO THAT HIS LEAF (INDEPENDENT OF THE SOUTH LEAF) IS FULLY CLOSED.

11. AFTER EACH LEAF'S REAR LOCKS ARE FULLY OUT, ALL FOUR (4) REAR LOCK TIP SWITCHES ACTUATE TO ENERGIZE THE LEAF MOTORS INTERLOCK CONTACTOR AND THE LEAF READY AMBER INDICATING LIGHTS ON THE TOWER DESK AND LOWER LEVEL STATION. THIS IS PROVIDING THAT NO MOTOR OR MACHINERY BRAKE HAS BEEN MANUALLY RELEASED AND NONE OF THE FOUR (4) EMERGENCY STOP BUTTONS ON EITHER SIDE OF THE BRIDGE HAS BEEN DEPRESSED.

EACH TOWER OPERATOR CAN THEN WALK OVER TO HIS EXISTING LEAF CONTROLLER AND PROCEED TO OPEN HIS LEAF.

12. EMERGENCY STOP BUTTONS (PUSH-PULL TYPE) FOR EACH LEAF ARE LOCATED ON BOTH THE ROADWAY CONTROL STATION AND SIDEWALK GATE CONTROL BOX. DEPRESSING ANY BUTTON ON EITHER SIDE OF BRIDGE WILL ENERGIZE ITS ASSOCIATED EMERGENCY STOP RELAY TO OPEN BOTH LEAF MOTORS INTERLOCK CONTACTORS. THIS ACTION WILL STOP OR PREVENT MOVEMENT OF BOTH SPANS.

NEITHER LEAF CAN BE OPERATED UNTIL THE EMERGENCY STOP BUTTON (THAT HAD BEEN DEPRESSED) IS MANUALLY RESET BY PULLING OUT.

13. ALL FOREGOING CIRCUIT INTERLOCKING IS THROUGH LIMIT SWITCHES, AND RELAYS CONTROLLED BY LIMIT SWITCHES TO INSURE LEAF FULLY CLOSED, GATES & BARRIERS FULLY RAISED OR LOWERED, AND ALL LOCKS FULLY IN OR OUT.

14. BRAKE LOCKED RELEASE AND BY-PASS SWITCHES ARE LOCATED ON ALL CONTROL STATIONS AND DESKS. THESE SWITCHES BY-PASS SELECTED INTERLOCKING IN THE EVENT OF LIMIT SWITCH OR RELAY CONTACT FAILURE, OR IF BRAKES HAVE BEEN MANUALLY RELEASED.

THESE SWITCHES CAN ONLY BE OPERATED BY AN ELECTRICAL MECHANIC TO INSURE NO DAMAGE WILL RESULT PURSUING OPERATION AFTER A SWITCH IS TURNED TO ITS EMERGENCY POSITION.

LOWERING OF SPANS:

1. EACH TOWER OPERATOR LOWERS HIS LEAF TO FULLY-CLOSED POSITION, AFTER WHICH HE CAN DRIVE IN HIS REAR LOCKS.

2. AFTER BOTH SPANS ARE FULLY CLOSED AND ALL REAR LOCKS ARE IN, CONTROL CIRCUIT TO THE CENTERLOCK CONTROLLER IS RE-ESTABLISHED THROUGH THE "REAR LOCKS IN" RELAYS ON BOTH SIDES, AND THE AMBER CENTERLOCK READY LIGHT COMES ON.

3. SOUTH TOWER OPERATOR CLOSSES THE CENTERLOCKS, AFTER WHICH ALL SIDEWALK GATES CAN BE RAISED, PROVIDING EACH FOLDING WALKWAY IS SEATED, BARRIERS ON ALL LEVELS ARE NEXT TO BE LOWERED AFTER WHICH THE ROADWAY GATES CAN BE RAISED.

4. EACH TOWER OPERATOR THEN TURNS OFF HIS SAFETY-FIRST SWITCH, WHICH DEACTIVATES ALL BRIDGE CONTROLS, TRAFFIC SIGNALS, AND POWER RECTIFIERS.

EXISTING SEQUENCE OF OPERATION
PER DRAWING NO. 41265 DATED FEBRUARY 1983

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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**EXISTING BRIDGE SEQUENCE OF OPERATION
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-41.1
CDOT PROJECT NO. E-6-650			236 OF 411

LAKE SHORE DRIVE BRIDGE PROPOSED SEQUENCE OF OPERATION

OPERATION OF THE BRIDGE CAN BEGIN WHEN THE (2) OPERATORS (IN RADIO CONTACT WITH EACH OTHER) ARE AT THEIR CONTROL STATIONS; TOWER OPERATOR AT THE SAFETY-FIRST CONSOLE, AND LOWER (INTERMEDIATE) LEVEL OPERATOR AT THE ROADWAY CONTROL STATION.

PRE-EXISTING NORMAL CONDITIONS:

- A. BOTH SPANS ARE FULLY CLOSED
 - B. ALL TRAFFIC SIGNALS ARE DE-ENERGIZED
 - C. ALL ROADWAY ON-COMING AND OFF-GOING GATES ARE FULLY OPENED
 - D. ALL ON-COMING AND OFF-GOING ROADWAY BARRIERS ARE FULLY LOWERED
 - E. ALL ON-COMING AND OFF-GOING PEDESTRIAN GATES ARE FULLY OPENED
 - F. CENTER LOCKS ARE ENGAGED
 - G. ALL HEEL LOCKS ARE ENGAGED
 - H. ALL SIDEWALK END LOCKS ARE ENGAGED
1. ALL OPERATING PERSONNEL SHALL SOUND OFF THEIR LOCATION AND NOTIFY EACH OTHER "IN POSITION" BEFORE BEGINNING BRIDGE OPERATION.
 2. EACH TOWER OPERATOR TURNS THE SAFETY-FIRST SWITCH TO "ON" POSITION, THIS ENERGIZES THE SAFETY FIRST CONTACTOR TO ACTIVATE TRAFFIC SIGNALS AND CONTROL POWER FOR BOTH LEVELS, AND STARTS THE POWER RECTIFIER.

FOR BOTH LEVELS OF EACH LEAF:

3. ON-COMING ROADWAY GATES ARE LOWERED.
4. OFF-GOING ROADWAY GATES ARE LOWERED.
5. ON-COMING BARRIERS ARE RAISED (ON-COMING BARRIER BY-PASS CAN BE ACTIVATED WHEN BARRIERS ARE NOT WORKING).
6. OFF-GOING BARRIERS ARE RAISED (OFF-GOING BARRIER BY-PASS CAN BE ACTIVATED WHEN BARRIERS ARE NOT WORKING)

FOR SOUTH LOWER LEVEL:

7. LOWER LEVEL OPERATOR, AFTER BARRIERS ARE RAISED (SEE NOTES 5 & 6 ABOVE), WALKS OVER TO HIS SIDEWALK GATE CONTROL BOX (NEAR THE SOUTHEAST SIDEWALK GATE) TO LOWER BOTH THE NORTH (2) SIDEWALK GATES AND SOUTH (2) SIDEWALK GATES FOR THE EAST WALKWAY.
8. LOWER LEVEL OPERATOR RETRACTS SIDEWALK END LOCKS FOR NORTHEAST AND SOUTHEAST SIDEWALKS.

FOR NORTH LOWER LEVEL:

9. LOWER LEVEL OPERATOR, AFTER BARRIERS ARE RAISED (SEE NOTES 5 & 6 ABOVE), WALKS OVER TO HIS SIDEWALK GATE CONTROL BOX (NEAR THE NORTHWEST SIDEWALK GATE) TO LOWER THE NORTH AND SOUTH SIDEWALK GATES FOR THE WEST WALKWAY.
10. THE AMBER CENTERLOCK READY INDICATING LIGHT ON THE SOUTH TOWER SAFETY-FIRST CONSOLE TURNS ON.

FOR TOWER LEVEL:

11. SOUTH TOWER SAFETY-FIRST CONSOLE, CENTERLOCK CAN BE FULLY RETRACTED
12. THE SOUTH TOWER OPERATOR CAN RETRACT SOUTH LEAF HEEL LOCKS.
13. THE NORTH TOWER OPERATOR CAN RETRACT NORTH LEAF HEEL LOCKS.
14. THE LEAF READY AMBER INDICATING LIGHTS ON THE TOWER DESK AND LOWER LEVEL STATION TURNS ON.
15. EACH TOWER OPERATOR CAN THEN WALK OVER TO HIS MAIN OPERATOR CONSOLE AND PROCEED TO OPEN HIS LEAF.

EMERGENCY OPERATIONS:

1. EMERGENCY STOP BUTTONS (PUSH-PULL TYPE) FOR EACH LEAF ARE LOCATED ON BOTH THE ROADWAY CONTROL STATION AND SIDEWALK GATE CONTROL BOX. DEPRESSING ANY BUTTON ON EITHER SIDE OF BRIDGE WILL ENERGIZE ITS ASSOCIATED EMERGENCY STOP RELAY TO OPEN BOTH LEAF MOTORS INTERLOCK CONTACTORS. THIS ACTION WILL STOP OR PREVENT MOVEMENT OF BOTH SPANS.

NEITHER LEAF CAN BE OPERATED UNTIL THE EMERGENCY STOP BUTTON (THAT HAD BEEN DEPRESSED) IS MANUALLY RESET BY PULLING IT OUT.

2. KEY LOCKED RELEASE AND BYPASS SWITCHES ARE LOCATED ON ALL CONTROL STATIONS AND DESKS. THESE SWITCHES BYPASS SELECTED INTERLOCKING IN THE EVENT OF LIMIT SWITCH OR RELAY CONTACT FAILURE, OR IF BRAKES HAVE BEEN MANUALLY RELEASED.

THESE SWITCHES CAN ONLY BE OPERATED BY AN ELECTRICAL MECHANIC TO INSURE NO DAMAGE WILL RESULT PURSUING OPERATION AFTER A SWITCH IS TURNED TO ITS EMERGENCY POSITION.

LOWERING OF SPANS

1. EACH TOWER OPERATOR LOWERS HIS LEAF TO FULLY CLOSED POSITION. FULLY SEATED LIGHT MUST BE ON.
2. OPERATOR CAN FULLY ENGAGE EACH HEEL LOCK.
3. THE AMBER CENTER LOCK READY LIGHT COMES ON.
4. SOUTH TOWER OPERATOR ENGAGES THE CENTER LOCKS.
5. SIDEWALK END LOCKS CAN BE ENGAGED.
6. ALL BARRIERS CAN BE LOWERED. (BARRIER BYPASS TURN OFF WHEN BARRIERS ARE NOT OPERATIONAL).
7. ALL SIDEWALK GATES CAN BE RAISED.
8. ALL ROADWAY GATES CAN BE RAISED.
9. EACH TOWER OPERATOR THEN TURNS OFF HIS SAFETY-FIRST SWITCH, WHICH DEACTIVATES ALL BRIDGE CONTROLS, TRAFFIC SIGNALS, AND POWER RECTIFIERS.

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CITY OF CHICAGO
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 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**PROPOSED BRIDGE SEQUENCE OF OPERATION
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-41.2
CDOT PROJECT NO. E-6-650			237 OF 411

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CABLE AND CONDUIT SCHEDULE			
LEGEND	CABLE DESCRIPTION	CONDUIT SIZE (INCHES)	REMARKS
①	4 #500 KCMIL	3/2	-
	4 #500 KCMIL	3/2	
	4 #500 KCMIL	3/2	
	4 #500 KCMIL	3/2	
②	3 #3/0 AWG	2 1/2	-
	1 #6 AWG (G)		
③	3 #250 KCMIL	2 1/2	-
	1 #2 AWG (G)		
	3 #250 KCMIL		
④	4 #500 KCMIL	3/2	-
	1 #1/0 AWG (G)		
	4 #500 KCMIL		
⑤	3 #6 AWG	1 1/4	-
	1 #10 AWG (G)		
⑥	4 #1 AWG	2	-
	1 #6 AWG (G)		
⑦	4 #500 KCMIL	3/2	-
	(G)		
⑧	2 #350 KCMIL	2 1/2	-
	2 #350 KCMIL		
⑨	2/C #22 TWSP	-	-
	2/C #22 TWSP		
	2/C #22 TWSP		
	2/C #22 TWSP		
	2/C #22 TWSP		
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	2/C #22 TWSP		
	⑩	70 #12 AWG	
(G)			
⑪	4 #3 AWG	1 1/2	-
	1 #8 AWG (G)		
⑫	3 #4 AWG	1 1/4	-
	1 #8 AWG (G)		
⑬	4 #2 AWG	1 1/2	-
	1 #6 AWG (G)		
⑭	4 #6 AWG	1 1/2	-
	1 #8 AWG (G)		
⑮	4 #1/0 AWG	2	-

CABLE AND CONDUIT SCHEDULE					
LEGEND	CABLE DESCRIPTION	CONDUIT SIZE (INCHES)	REMARKS		
⑯	11 #12 AWG	1	-		
	(G)				
⑰	7 #12 AWG	3/4	-		
	(G)				
⑱	3 #3 AWG	1 1/4	-		
	1 #8 AWG (G)				
⑲	40 #12 AWG	2	-		
	(G)				
⑳	25 #12 AWG	1 1/2	-		
	(G)				
㉑	3 #10 AWG	3/4	-		
	1 #12 AWG (G)				
	3 #10 AWG				
	1 #12 AWG (G)				
	3 #10 AWG				
	1 #12 AWG (G)				
	3 #10 AWG				
	1 #12 AWG (G)				
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	1 #12 AWG (G)				
	3 #10 AWG				
	1 #12 AWG (G)				
	㉒	3 #10 AWG		3/4	-
		1 #12 AWG (G)			
3 #10 AWG					
1 #12 AWG (G)					
3 #10 AWG					
1 #12 AWG (G)					
3 #10 AWG					
1 #12 AWG (G)					
3 #10 AWG					
1 #12 AWG (G)					
3 #10 AWG					
1 #12 AWG (G)					
3 #10 AWG					
1 #12 AWG (G)					
3 #10 AWG					
1 #12 AWG (G)					
3 #10 AWG					
1 #12 AWG (G)					
㉓		4 #500 KCMIL	4	-	
		1 #1/0 AWG (G)			
	4 #500 KCMIL				
	1 #1/0 AWG (G)				
㉔	2 #10 AWG	3/4	-		
	1 #10 AWG (G)				

CABLE AND CONDUIT SCHEDULE			
LEGEND	CABLE DESCRIPTION	CONDUIT SIZE (INCHES)	REMARKS
㉕	4 #500 KCMIL	-	NOTE 3
	1 #1/0 AWG (G)		
	4 #500 KCMIL		
	1 #1/0 AWG (G)		
㉖	2 #250 KCMIL	-	NOTE 3
	1 #1 AWG (G)		
	2 #250 KCMIL		
㉗	1 #1 AWG (G)	-	NOTE 3
	60 #10 AWG		
㉘	20 #12 AWG	1 1/4	-
	1 #12 AWG (G)		
㉙	24 #12 AWG	1 1/4	-
	1 #12 AWG (G)		
㉚	4 #12 AWG	3/4	-
	1 #12 AWG (G)		
㉛	110 #12 AWG	3	-
	1 #12 AWG (G)		
㉜	6 #12 AWG	3/4	-
	1 #12 AWG (G)		
㉝	70 #12 AWG	2 1/2	-
	1 #12 AWG (G)		
㉞	8 #12 AWG	1	-
	1 #12 AWG (G)		
㉟	4 #2/0 AWG	2 1/2	-
	1 #2/0 AWG (G)		
㊱	32 #12 AWG	2	-
	1 #12 AWG (G)		
㊲	4 #2/0 AWG	2	-
	1 #6 AWG (G)		
㊳	4 #500 KCMIL	3/2	-
	1 #2 AWG (G)		
㊴	4 #10 AWG	3/4	-
	1 #10 AWG (G)		
㊵	2 #2/0 AWG	2	-
	1 #6 AWG (G)		
㊶	60 #10 AWG	3	-
㊷	5 #3/0 AWG	2 1/2	-
	1 #10 AWG (G)		
㊸	4 #350 KCMIL	3/2	-
	1 #6 AWG (G)		
㊹	7 #2/0 AWG	3	-
	1 #6 AWG (G)		
㊺	10 #10 AWG	1	-
	1 #10 AWG (G)		
㊻	4 #8 AWG	1 1/4	-
	1 #8 AWG (G)		
㊼	8 #8 AWG	1 1/2	-
	1 #8 AWG (G)		
㊽	3 #12 AWG	3/4	-
	1 #12 AWG (G)		
	3 #12 AWG		
	1 #12 AWG (G)		
	3 #12 AWG		
㊾	3 #12 AWG	3/4	-
	1 #12 AWG (G)		
	3 #12 AWG		
	1 #12 AWG (G)		
㊿			-

NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. SUBMARINE CABLE.

USER NAME = cmartin	DESIGNED - BG	REVISED -
PLOT SCALE = N.T.S.	CHECKED - AF	REVISED -
PLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
	CHECKED - MEB	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

CABLE AND CONDUIT SCHEDULE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-42
CDOT PROJECT NO. E-6-650			238 OF 411

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26-JUN-2017 13:51

AAA ENGINEERING
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FAX: (312) 782-1684

USER NAME = lopezgonzalez	DESIGNED - BG	REVISED -
	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CUM	REVISED -
PLOT DATE = 6/26/2017	CHECKED - MEB	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-43
CDOT PROJECT NO. E-6-650			239 OF 411

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6/22/2017

LIGHTING FIXTURE SCHEDULE

TYPE	SYMBOL	MANUFACTURER & CATALOG NUMBER	NUMBER OF LAMPS	LAMP TYPE & WATTAGE	VOLTAGE	MOUNTING	REMARKS
A		KENALL: SERIES MS11FL LUMINAIRE LED "VAULT 1010"	1	LED 20W	120	SURFACE & J.B.	NOTE 5
B		HOLOPHANE: PH6-12L-4K-8OCR1-AS-P-6-WGG SPECGRADE: FPH-4K-SPC-U-A-3-GR	1	LED 60W	120-277	PENDANT	NOTE 6
C		HUBBELL: FLL-28L4K AEL: ACPOLED-PK1-MVOLT-WFL-40K	1	LED 54W	120-277	SURFACE	NOTE 6
D		KENALL: TD17-PM-5S-TP-L6-33L-50K7-DCC-DV HUBBELL: HBL-48L-U-A2-4K-A-070-ND-GR	1	LED 33W	120	PENDANT	NOTE 5
		BIG BEAM: SERIES DXL DUALLITE: SERIES CLS SURELITES: SERIES CHX	1	LED 3W	120	SURFACE	NOTE 4
		BIG BEAM: SERIES GA DUALLITE: SERIES CCU2 SURELITES: SERIES CHXC	2	HALOGEN 50W	120	WALL	NOTE 4

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.
- FOR CONDUIT AND CABLE SCHEDULE, REFER TO SHEET E-56.
- EMERGENCY LIGHTING AND EXIT LIGHTING CHICAGO CODE APPROVED.
- TEMPERED GLASS, OUTDOOR, CORROSION RESISTANT.
- CORROSION RESISTANT.

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USER NAME = cmartin	DESIGNED - BG	REVISED -
	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CUM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

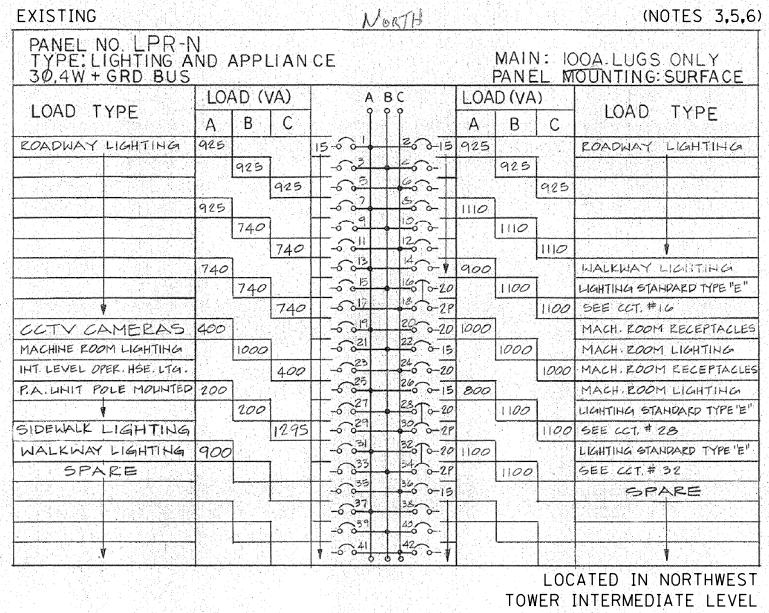
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**LIGHTING FIXTURE SCHEDULE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-44
CDOT PROJECT NO. E-6-650			240 OF 411

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - VERIFY EXISTING CIRCUITS AND REVISE PANEL SCHEDULE IF NEEDED.
 - CONDUITS FOR THE BRIDGE LIGHTING TO BE INTERCEPTED ON INTERMEDIATE LEVEL.
 - PANEL SCHEDULE FROM RECORD DRAWINGS IS SHOWN FOR INFORMATION ONLY. SEE OUTSIDE LIGHTING PLANS FOR UPDATED PANEL SCHEDULES.
 - REFER TO NOTE 20 ON SHEET E-2.



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PANEL: SFP1-N VOLTAGE: 277/480V, 3PH, 4W		MAIN MOUNTING BUS 150A MCB													
CIRCUIT USE	BREAKERS		LOAD (VA)			CKT #	LOAD (VA)			BREAKERS		CIRCUIT USE			
	TRIP	POLE	A	B	C		A	B	C	TRIP	POLE				
HEEL LOCK MOTOR EAST	70	3	10518			1	2	10518			70	3	HEEL LOCK MOTOR WEST		
				10518			3	4	10518						
					10518			5	6	10518					
				581				7	8	305					
					581			9	10	305					
					581			11	12	305					
UPPER LVL NORTH BARRIER MOTOR #1	15	3		581						15	3	UPPER LVL NORTH ONCOMING GATE #2			
					581										
					581										
UPPER LVL NORTH BARRIER MOTOR #2	15	3		581						15	3	UPPER LVL NORTH OFFGOING GATE #3			
					581										
					581										
UPPER LVL NORTH BARRIER MOTOR #3	15	3		581						15	3	UPPER LVL NORTH OFFGOING GATE #4			
					581										
					581										
UPPER LVL NORTH BARRIER MOTOR #4	15	3		581						15	3	SPARE			
					581										
					581										
UPPER LVL NORTH ONCOMING GATE #1	15	3	305			31	32			15	1	SPARE			
				305			33	34	1500			20	2	MAIN CONTROLLER	
					305			35	36	1500					
PNL SFP3-N	50	3	600			37	38	7531			50	3	PNL SFP2-N		
				600			39	40	7531						
					600			41	42	7531					
					600			43	44	7531					
TOTALS			13747	13747	13747			18964	20464	20464			TOTALS		

PHASE A:	32,711 VA
PHASE B:	34,211 VA
PHASE C:	34,211 VA
TOTAL CONNECTED VA	101,133 VA
AMPS	84 A CONNECTED
1.25X AMPS	105 A

NOTES:
1. HEEL LOCK MOTORS RUN ONE AT A TIME.

PANEL: SFP1-S VOLTAGE: 277/480V, 3PH, 4W		MAIN MOUNTING BUS 150A MCB													
CIRCUIT USE	BREAKERS		LOAD (VA)			CKT #	LOAD (VA)			BREAKERS		CIRCUIT USE			
	TRIP	POLE	A	B	C		A	B	C	TRIP	POLE				
CENTER LOCK PIN #1 EAST	25	3	3875			1	2	3875			25	3	CENTER LOCK PIN #2 WEST		
				3875			3	4	3875						
					3875			5	6	3875					
				10518				7	8	10518					
					10518			9	10	10518					
					10518			11	12	10518					
HEEL LOCK MOTOR EAST	70	3		10518						70	3	HEEL LOCK MOTOR WEST			
					10518										
					10518										
UPPER LVL SOUTH BARRIER MOTOR #1	15	3		581						15	3	UPPER LVL SOUTH ONCOMING GATE #2			
					581										
					581										
UPPER LVL SOUTH BARRIER MOTOR #2	15	3		581						15	3	UPPER LVL SOUTH OFFGOING GATE #3			
					581										
					581										
UPPER LVL SOUTH BARRIER MOTOR #3	15	3		581						15	3	UPPER LVL SOUTH OFFGOING GATE #4			
					581										
					581										
UPPER LVL SOUTH BARRIER MOTOR #4	15	3		581						15	1	SPARE			
					581							20	2	MAIN CONTROLLER	
					581										
PNL SFP3-S	50	3	600			37	38	7836			50	3	PNL SFP2-S		
				600			39	40	7836						
					600			41	42	7836					
					600			43	44	7836					
TOTALS			17317	17317	17317			23144	24644	24644			TOTALS		

PHASE A:	40,461 VA
PHASE B:	41,961 VA
PHASE C:	41,961 VA
TOTAL CONNECTED VA	124,383 VA
AMPS	112 A CONNECTED
1.25X AMPS	140 A

NOTES:
1. HEEL LOCK MOTORS RUN ONE AT A TIME.

PANEL: SFP2-N VOLTAGE: 277/480V, 3PH, 4W		MAIN MOUNTING BUS 100A MLO													
CIRCUIT USE	BREAKERS		LOAD (VA)			CKT #	LOAD (VA)			BREAKERS		CIRCUIT USE			
	TRIP	POLE	A	B	C		A	B	C	TRIP	POLE				
MACHINERY BRAKE #1	15	3	277			1	2	305			15	3	LOWER GATE NORTH OFFGOING GATE #3		
				277			3	4	305						
					277			5	6	305					
				277				7	8	305					
					277			9	10	305					
					277			11	12	305					
MACHINERY BRAKE #2	15	3		277						15	3	LOWER LEVEL NORTH WEST SIDEWALK GATE #1			
					277										
					277										
LOWER LVL NORTH BARRIER MOTOR #1	15	3		581						15	3	LOWER LEVEL NORTH EAST SIDEWALK GATE #2A			
					581										
					581										
LOWER LVL NORTH BARRIER MOTOR #2	15	3		581						15	3	LOWER LEVEL NORTHEAST BIKE PATH GATE #2B			
					581										
					581										
LOWER LVL NORTH BARRIER MOTOR #3	15	3		581				1702		15	3	SIDEWALK END LOCK NORTHEAST MOTOR #1			
					581				1702						
					581				1702						
LOWER LVL NORTH ONCOMING GATE #1	15	3	305			31	32	1702			15	3	SIDEWALK END LOCK NORTHEAST MOTOR #2		
				305			33	34	1702						
					305			35	36	1702					
LOWER LVL NORTH ONCOMING GATE #2	15	3	305			37	38								
				305			39	40							
					305			41	42						
					305			43	44						
TOTALS			2907	2907	2907			4624	4624	4624			TOTALS		

PHASE A:	7,531 VA
PHASE B:	7,531 VA
PHASE C:	7,531 VA
TOTAL CONNECTED VA	22,593 VA
AMPS	26 A CONNECTED
1.25X AMPS	33 A

PANEL: SFP2-S VOLTAGE: 277/480V, 3PH, 4W		MAIN MOUNTING BUS 100A MLO													
CIRCUIT USE	BREAKERS		LOAD (VA)			CKT #	LOAD (VA)			BREAKERS		CIRCUIT USE			
	TRIP	POLE	A	B	C		A	B	C	TRIP	POLE				
MACHINERY BRAKE #1	15	3	277			1	2	305			15	3	LOWER GATE SOUTH OFFGOING GATE #3		
				277			3	4	305						
					277			5	6	305					
				277				7	8	305					
					277			9	10	305					
					277			11	12	305					
MACHINERY BRAKE #2	15	3		277						15	3	LOWER LEVEL SOUTH EAST SIDEWALK GATE #1A			
					277										
					277										
LOWER LVL SOUTH BARRIER MOTOR #1	15	3		581						15	3	LOWER LEVEL SOUTH WEST SIDEWALK GATE #2A			
					581										
					581										
LOWER LVL SOUTH BARRIER MOTOR #2	15	3		581						15	3	LOWER LEVEL SOUTHEAST BIKE PATH GATE #1B			
					581										
					581										
LOWER LVL SOUTH BARRIER MOTOR #3	15	3		581				1702		15	3	SIDEWALK END LOCK SOUTHEAST MOTOR #1			
					581				1702						
					581				1702						
LOWER LVL SOUTH ONCOMING GATE #1	15	3	305			31	32	1702			15	3	SIDEWALK END LOCK SOUTHEAST MOTOR #2		
				305			33	34	1702						
					305			35	36	1702					
LOWER LVL SOUTH OFFGOING GATE #2	15	3	305			37	38	305			15	3	UPPER LVL SOUTH ONCOMING GATE #1		
				305			39	40	305						
					305			41	42	305					
					305			43	44	305					
TOTALS			2907	2907	2907			4929	4929	4929			TOTALS		

PHASE A:	7,836 VA
PHASE B:	7,836 VA
PHASE C:	7,836 VA
TOTAL CONNECTED VA	23,508 VA
AMPS	27 A CONNECTED
1.25X AMPS	34 A

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.

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USER NAME =	cmartin	DESIGNED -	BG	REVISED -	
PLOT SCALE =	N.T.S.	CHECKED -	AF	REVISED -	
PLOT DATE	6/22/2017	DRAWN -	CJM	REVISED -	
		CHECKED -	MEB	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**PANELBOARD SCHEDULES
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-46
CDOT PROJECT NO. E-6-650			242 OF 411

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6/22/2017

PANEL: SFP3-N VOLTAGE: 277/480V, 3PH, 4W		MAIN MOUNTING BUS 100A MLO												
CIRCUIT USE	BREAKERS		LOAD (VA)			CKT #	LOAD (VA)			BREAKERS		CIRCUIT USE		
	TRIP	POLE	A	B	C		A	B	C	TRIP	POLE			
100HP MOTOR #1 BRAKE	15	3	150			1	2	150			15	3	100HP MOTOR #2 BRAKE	
				150		3	4		150					
					150	5	6			150				
100HP MOTOR #3 BRAKE	15	3				7	8	150			15	3	100HP MOTOR #4 BRAKE	
			150			9	10		150					
				150		11	12			150				
SPARE	20	3				13	14				15	3	SPARE	
						15	16							
						17	18							
SPARE	20	3				19	20				15	3	SPARE	
						21	22							
						23	24							
SPARE	20	3				25	26						SPACE	
						27	28						SPACE	
						29	30						SPACE	
SPARE	20	3				31	32						SPACE	
						33	34						SPACE	
						35	36						SPACE	
SPARE	20	3				37	38						SPACE	
						39	40						SPACE	
						41	42						SPACE	
TOTALS			300	300	300			300	300	300			TOTALS	
PHASE A:			600 VA						600 VA					
PHASE B:			600 VA						600 VA					
PHASE C:			600 VA						600 VA					
TOTAL CONNECTED VA			1,800 VA						1,800 VA					
AMPS			2 A			CONNECTED			2 A			CONNECTED		
1.25X AMPS			2 A						2 A					

PANEL: SFP3-S VOLTAGE: 277/480V, 3PH, 4W		MAIN MOUNTING BUS 100A MLO												
CIRCUIT USE	BREAKERS		LOAD (VA)			CKT #	LOAD (VA)			BREAKERS		CIRCUIT USE		
	TRIP	POLE	A	B	C		A	B	C	TRIP	POLE			
100HP MOTOR #1 BRAKE	15	3	150			1	2	150			15	3	100HP MOTOR #2 BRAKE	
				150		3	4		150					
					150	5	6			150				
100HP MOTOR #3 BRAKE	15	3				7	8	150			15	3	100HP MOTOR #4 BRAKE	
			150			9	10		150					
				150		11	12			150				
SPARE	20	3				13	14				15	3	SPARE	
						15	16							
						17	18							
SPARE	20	3				19	20				15	3	SPARE	
						21	22							
						23	24							
SPARE	20	3				25	26						SPACE	
						27	28						SPACE	
						29	30						SPACE	
SPARE	20	3				31	32						SPACE	
						33	34						SPACE	
						35	36						SPACE	
SPARE	20	3				37	38						SPACE	
						39	40						SPACE	
						41	42						SPACE	
TOTALS			300	300	300			300	300	300			TOTALS	
PHASE A:			600 VA						600 VA					
PHASE B:			600 VA						600 VA					
PHASE C:			600 VA						600 VA					
TOTAL CONNECTED VA			1,800 VA						1,800 VA					
AMPS			2 A			CONNECTED			2 A			CONNECTED		
1.25X AMPS			2 A						2 A					

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.

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USER NAME =	cmartin	DESIGNED -	BG	REVISED -	
		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**PANELBOARD SCHEDULES
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-46.1
CDOT PROJECT NO. E-6-650			243 OF 411


PANEL: WSPN VOLTAGE: 120/208V, 3PH, 4W		A - AREA Z - ZONE B - BRANCH		MAIN: 100A MLO MOUNTING BUS:										
CIRCUIT USE	BREAKERS		LOAD (VA)			CKT #	LOAD (VA)			BREAKERS		CIRCUIT USE		
	TRIP	POLE	A	B	C		A	B	C	TRIP	POLE			
UPPER LEVEL ONCOMING GATE #1 HEATER	20	1	200			1	2	200			1	20	LOWER LEVEL ONCOMING GATE #1 HEATER	
UPPER LEVEL ONCOMING GATE #2 HEATER	20	1		200		3	4		200			1	20	LOWER LEVEL ONCOMING GATE #2 HEATER
UPPER LEVEL OFFGOING GATE #3 HEATER	20	1			200	5	6			200		1	20	LOWER LEVEL OFFGOING GATE #3 HEATER
UPPER LEVEL OFFGOING GATE #4 HEATER	20	1	200			7	8	200				1	20	LOWER LEVEL PEDESTRIAN GATE #1 HEATER
UPPER LEVEL ONCOMING GATE #1 FLASHER	20	1		1200		9	10		200			1	20	LOWER LEVEL PEDESTRIAN GATE #2 HEATER
UPPER LEVEL ONCOMING GATE #2 FLASHER	20	1			1200	11	12			1200		1	20	LOWER LEVEL ONCOMING GATE #1 FLASHER
UPPER LEVEL OFFGOING GATE #3 FLASHER	20	1	1200			13	14	1200				1	20	LOWER LEVEL ONCOMING GATE #2 FLASHER
UPPER LEVEL OFFGOING GATE #4 FLASHER	20	1		1200		15	16		1200			1	20	LOWER LEVEL OFFGOING GATE #3 FLASHER
UPPER LEVEL ONCOMING BARRIER LIGHTS	20	1			720	17	18			600		1	20	LOWER LEVEL ONCOMING BARRIER LIGHTS
UPPER LEVEL OFFGOING BARRIER LIGHTS	20	1	720			19	20	300				1	20	LOWER LEVEL OFFGOING BARRIER LIGHTS
UPPER LEVEL WARNING LIGHT NORTHWEST	20	1		1440		21	22		1440			1	20	LOWER LEVEL WARNING LIGHT NORTHWEST
UPPER LEVEL WARNING LIGHT CENTER	20	1			1440	23	24			1440		1	20	LOWER LEVEL WARNING LIGHT CENTER
UPPER LEVEL WARNING LIGHT NORTHEAST	20	1	1440			25	26	1440				1	20	LOWER LEVEL WARNING LIGHT CENTER EAST
OUTLET BY SIDEWALK LOCKS	20	1		500		27	28		600			1	20	LOWER LEVEL PEDESTRIAN WARNING LIGHT #1
SPARE	20	1				29	30			600		1	20	LOWER LEVEL PEDESTRIAN WARNING LIGHT #2
SAFETY FIRST CABINET	20	1	200			31	32	150				1	20	HEATER SFN-1
SAFETY FIRST CABINET	20	1		500		33	34		150			1	20	HEATER SFN-2
SAFETY FIRST CABINET	20	1			500	35	36			150		1	20	HEATER ROADWAY CONTROL STATION
MAIN CONTROLLER CABINET (RIGHT SIDE)	20	1	200			37	38	150				1	20	HEATER SIDEWALK CONTROL STATION
MAIN CONTROLLER CABINET HEATERS	20	1		300		39	40		180			1	20	SAFETY FIRST CONSOLE RECEPTACLE
SPARE	20	1				41	42					1	20	SPARE
TOTALS			4160	5340	4060			3640	3970	4190				TOTALS
PHASE A:			7,800 VA			LOCATED IN NORTHWEST TOWER, INTERMEDIATE LEVEL.								
PHASE B:			9,310 VA											
PHASE C:			8,250 VA											
TOTAL CONNECTED VA			25,360 VA											
AMPS			70 A			CONNECTED								
1.25X AMPS			88 A											

PANEL: WSPS VOLTAGE: 120/208V, 3PH, 4W		A - AREA Z - ZONE B - BRANCH		MAIN: 100A MLO MOUNTING BUS:										
CIRCUIT USE	BREAKERS		LOAD (VA)			CKT #	LOAD (VA)			BREAKERS		CIRCUIT USE		
	TRIP	POLE	A	B	C		A	B	C	TRIP	POLE			
UPPER LEVEL ONCOMING GATE #1 HEATER	20	1	200			1	2	200			1	20	LOWER LEVEL ONCOMING GATE #1 HEATER	
UPPER LEVEL ONCOMING GATE #2 HEATER	20	1		200		3	4		200			1	20	LOWER LEVEL OFFGOING GATE #2 HEATER
UPPER LEVEL OFFGOING GATE #3 HEATER	20	1			200	5	6			200		1	20	LOWER LEVEL OFFGOING GATE #3 HEATER
UPPER LEVEL OFFGOING GATE #4 HEATER	20	1	200			7	8	200				1	20	LOWER LEVEL PEDESTRIAN GATE #1 HEATER
UPPER LEVEL ONCOMING GATE #1 FLASHER	20	1		1200		9	10		200			1	20	LOWER LEVEL PEDESTRIAN GATE #2 HEATER
UPPER LEVEL ONCOMING GATE #2 FLASHER	20	1			1200	11	12			1200		1	20	LOWER LEVEL ONCOMING GATE #1 FLASHER
UPPER LEVEL OFFGOING GATE #3 FLASHER	20	1	1200			13	14	1200				1	20	LOWER LEVEL OFFGOING GATE #2 FLASHER
UPPER LEVEL OFFGOING GATE #4 FLASHER	20	1		1200		15	16		1200			1	20	LOWER LEVEL OFFGOING GATE #3 FLASHER
UPPER LEVEL ONCOMING BARRIER LIGHTS	20	1			720	17	18			300		1	20	LOWER LEVEL ONCOMING BARRIER LIGHTS
UPPER LEVEL OFFGOING BARRIER LIGHTS	20	1	720			19	20	600				1	20	LOWER LEVEL OFFGOING BARRIER LIGHTS
UPPER LEVEL WARNING LIGHT NORTHEAST	20	1		1440		21	22		1440			1	20	LOWER LEVEL WARNING LIGHT SOUTHEAST
UPPER LEVEL WARNING LIGHT CENTER	20	1			1440	23	24			1440		1	20	LOWER LEVEL WARNING LIGHT CENTER
UPPER LEVEL WARNING LIGHT NORTHWEST	20	1	1440			25	26	1440				1	20	LOWER LEVEL WARNING LIGHT CENTER WEST
OUTLET BY SIDEWALK LOCKS	20	1		500		27	28		600			1	20	LOWER LEVEL PEDESTRIAN WARNING LIGHT #1
SPARE	20	1				29	30			600		1	20	LOWER LEVEL PEDESTRIAN WARNING LIGHT #2
SPARE	20	1				31	32					1	20	SPARE
SPARE	20	1				33	34					1	20	SPARE
SPARE	20	1				35	36					1	20	SPARE
SPARE	20	1				37	38					1	20	SPARE
SPARE	20	1				39	40					1	20	SPARE
SPARE	20	1				41	42					1	20	SPARE
TOTALS			3760	4540	3560			3640	3640	3740				TOTALS
PHASE A:			7,400 VA			LOCATED IN SOUTHEAST TOWER, FIRST FLOOR ABOVE UPPER LEVEL.								
PHASE B:			8,180 VA											
PHASE C:			7,300 VA											
TOTAL CONNECTED VA			22,880 VA											
AMPS			64 A			CONNECTED								
1.25X AMPS			79 A											

NOTES:


- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.

PANEL: OC-5 VOLTAGE: 120/208V, 3PH, 4W		A - AREA Z - ZONE B - BRANCH		MAIN: 100A MCB MOUNTING BUS:										
CIRCUIT USE	BREAKERS		LOAD (VA)			CKT #	LOAD (VA)			BREAKERS		CIRCUIT USE		
	TRIP	POLE	A	B	C		A	B	C	TRIP	POLE			
MAIN CONTROLLER (RIGHT SIDE)	20	1	200			1	2	300			1	20	MAIN CONTROLLER CABINET HEATERS	
SAFETY FIRST CONTACTOR CABINET	20	1		500		3	4		150			1	20	HEATER SFS-1
SAFETY FIRST CONTACTOR CABINET	20	1			500	5	6			150		1	20	HEATER SFS-2
SAFETY FIRST CONTACTOR CABINET	20	1	600			7	8	150				1	20	HEATER ROADWAY CONTROL STATION
SAFETY FIRST CONSOLE RECEPTACLE	20	1		180		9	10		150			1	20	HEATER SIDEWALK CONTROL STATION
SPARE	20	1				11	12					1	20	SPARE
SPACE						13	14							SPACE
SPACE						15	16							SPACE
SPACE						17	18							SPACE
SPACE						19	20							SPACE
SPACE						21	22							SPACE
SPACE						23	24							SPACE
SPACE						25	26							SPACE
SPACE						27	28							SPACE
SPACE						29	30							SPACE
TOTALS			800	680	500			450	300	150				TOTALS
PHASE A:			1,250 VA											
PHASE B:			980 VA											
PHASE C:			650 VA											
TOTAL CONNECTED VA			2,880 VA											
AMPS			8 A			CONNECTED								
1.25X AMPS			10 A											



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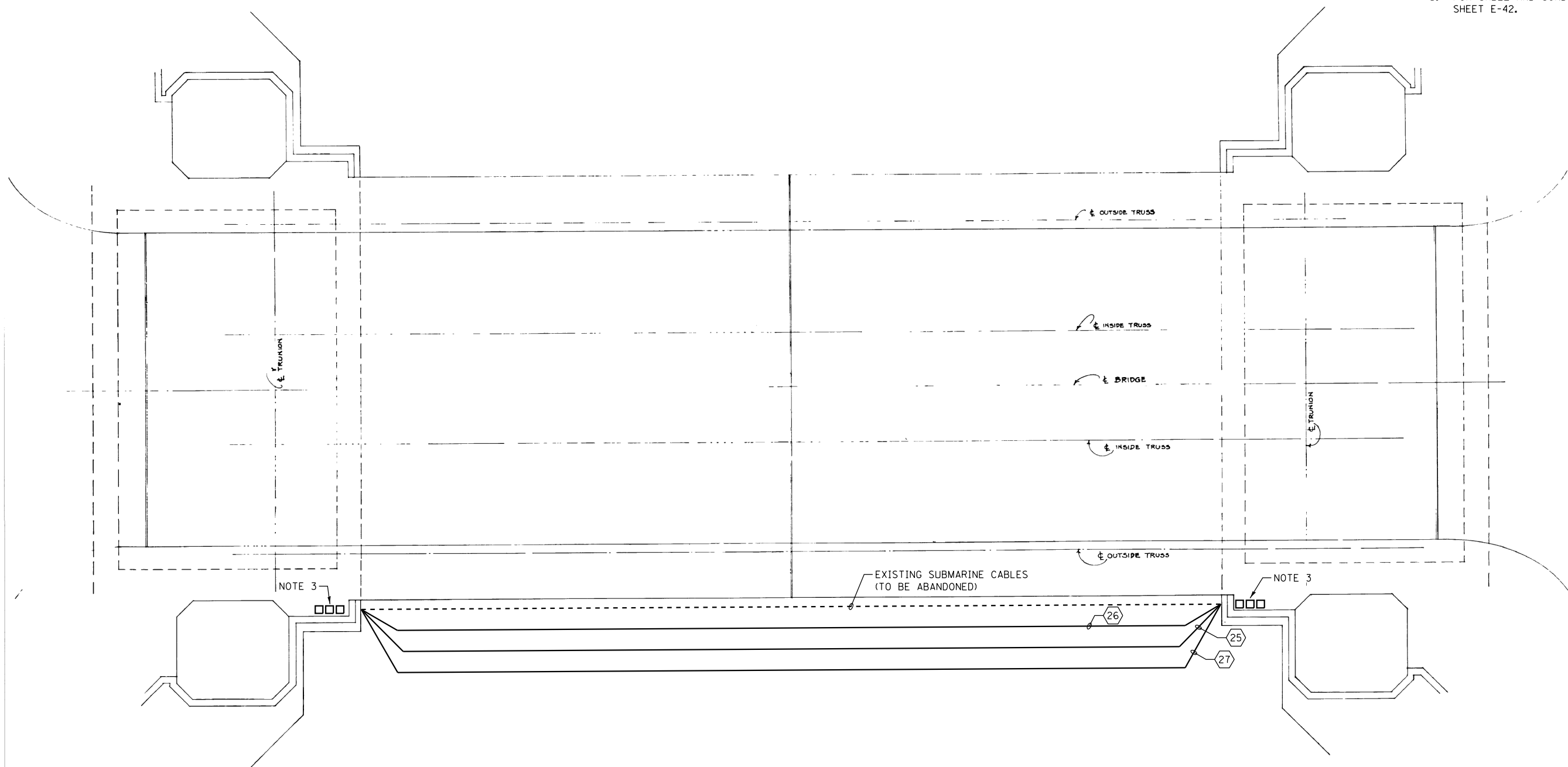
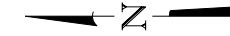
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**PANELBOARD SCHEDULES
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-47
CDOT PROJECT NO. E-6-650			244 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. REPLACE EXISTING SUBMARINE CABLE PULL BOXES WITH NEW S/S BOXES. KEEP SIMILAR ARRANGEMENT.
 1 BOX FOR AC POWER
 1 BOX FOR DC POWER
 1 BOX FOR CONTROL WIRING
4. SEE DETAIL SHEET E-49.
5. FOR CABLE AND CONDUIT SCHEDULE, SEE SHEET E-42.



SUBMARINE CABLE BRIDGE PLAN
NOT TO SCALE

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E48-Submarine Cable Bridge Plan.dgn 6/22/2017

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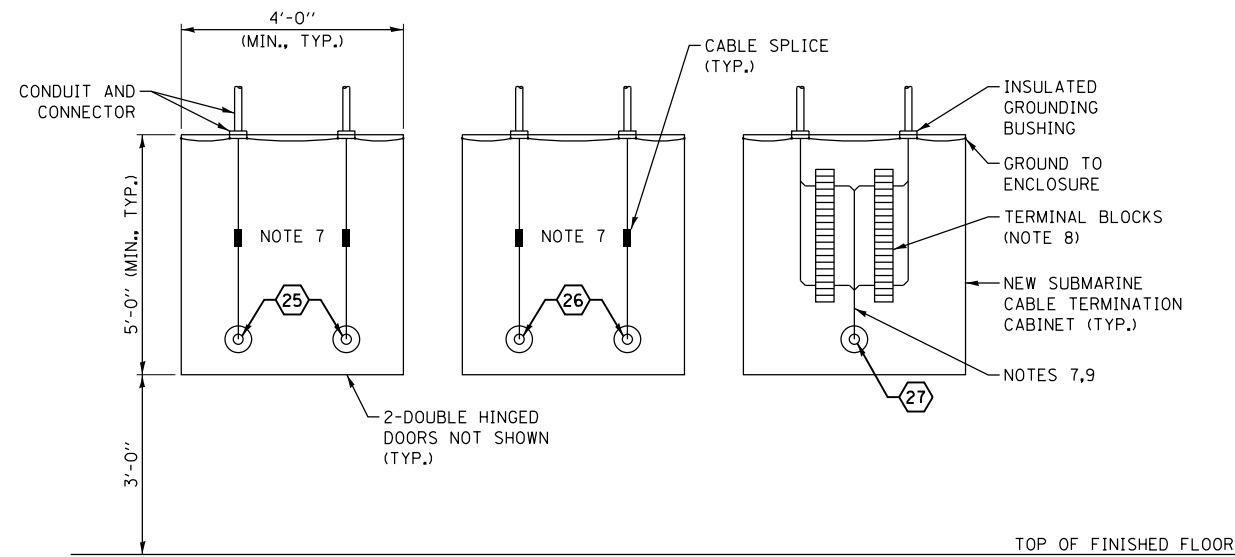
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SUBMARINE CABLE BRIDGE PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-48
CDOT PROJECT NO. E-6-650			245 OF 411

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6/22/2017

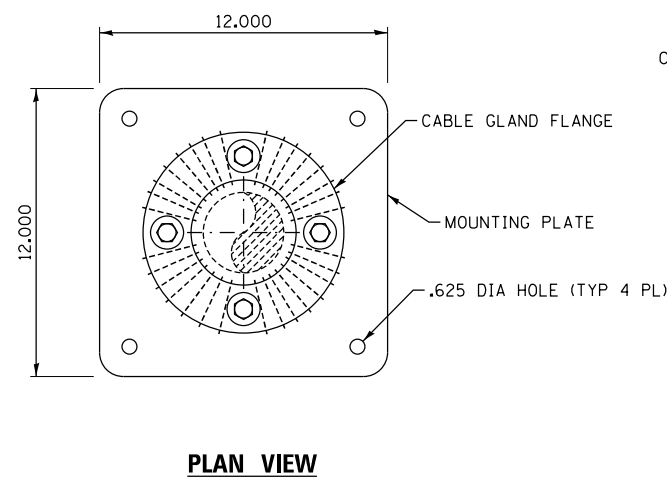


NORTH SIDE SUBMARINE CABLE TERMINATION CABINETS
(SIMILAR FOR SOUTH SIDE CABINETS)
NOT TO SCALE (NOTES 4,5)

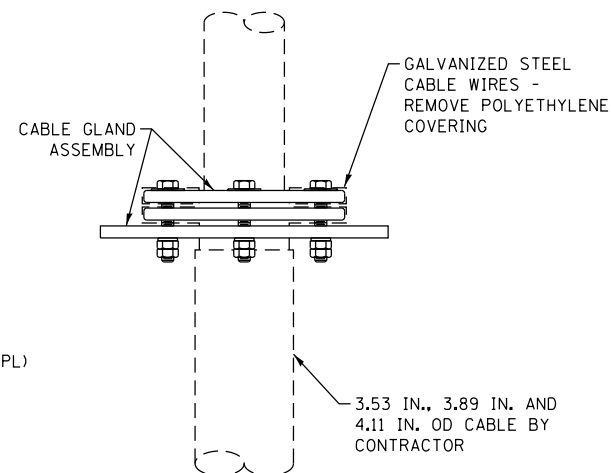
NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.
- FOR CONDUIT AND CABLE SCHEDULES, SEE SHEET E-56.
- SEE SHEETS E-4.2 AND E-5.2 FOR LOCATION OF SUBMARINE CABLE TERMINATION CABINETS.
- SIMILAR DETAIL APPLIES FOR SOUTH BRIDGE HOUSE TERMINATION CABINETS.
- SUBMARINE CABLE TERMINATION CABINET TO BE STAINLESS STEEL, NEMA TYPE 4X ENCLOSURE. CABINET TO HAVE GASKETED DOORS, 11 GAUGE, STAINLESS STEEL HINGES & HARDWARE. DOORS SHALL BE PROVIDED WITH HARDWARE SUITABLE FOR PAD LOCKING BOTH DOORS TOGETHER.
- PROVIDE ADDITIONAL 6'-0" OF CABLE ABOVE CABLE TERMINATIONS.
- 30 POINT TERMINAL BLOCK (TYP.).
- ALL CONDUCTORS TO BE TERMINATED ON THE NEW TERMINAL BLOCKS.
- CABLE ENTRY TO BOX TO BE WEATHERPROOF AND SEALED.
- CABLE GLAND ASSEMBLY TO BE B&B MODEL ACG. SEE TABLE 1 ON THIS SHEET.

TABLE 1		
QTY	B&B PART NUMBER	DESCRIPTION
1	ACG-P001	MOUNTING PLATE, 1/2 X 12 X 12 IN. MILD STEEL
2	ACG-P002	CABLE GLAND FLANGE, 1/2 X 8 3/8 IN. OD, MILD STEEL
4	BLT.5-13x3.5GA	1/2-13 X 3.5 HEX BOLT, A325 GALV.
8	NUT.5-13GA	1/2-13 HEX NUT, A325 GALV.
4	FW.5GA	1/2 FLATWASHER, GALV.
4	LKWGA.5	1/2 LOCKWASHER, A325 GALV.
-	-	-

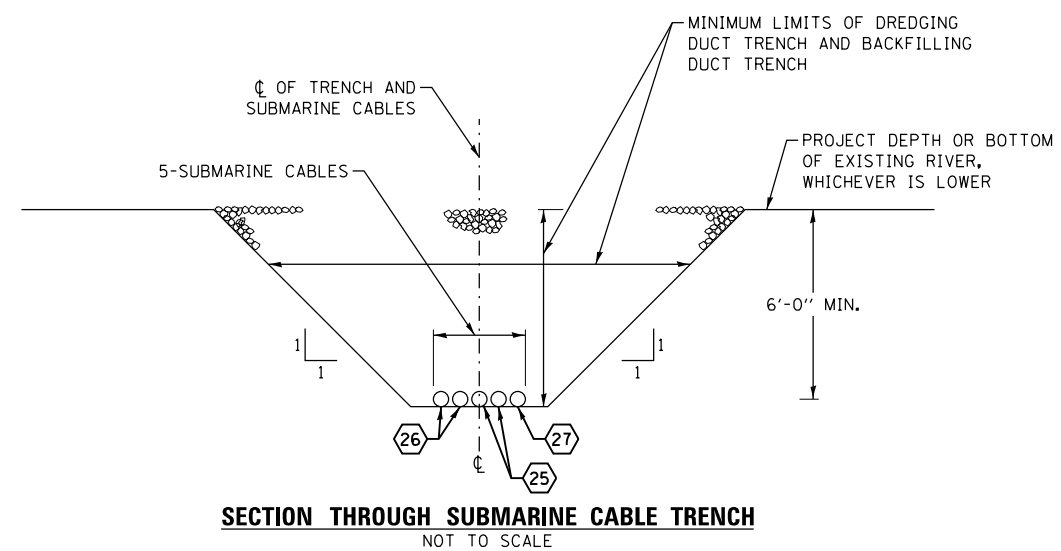


PLAN VIEW



ELEVATION VIEW

CABLE SUPPORT DETAIL
NOT TO SCALE (NOTE 11)



SECTION THROUGH SUBMARINE CABLE TRENCH
NOT TO SCALE

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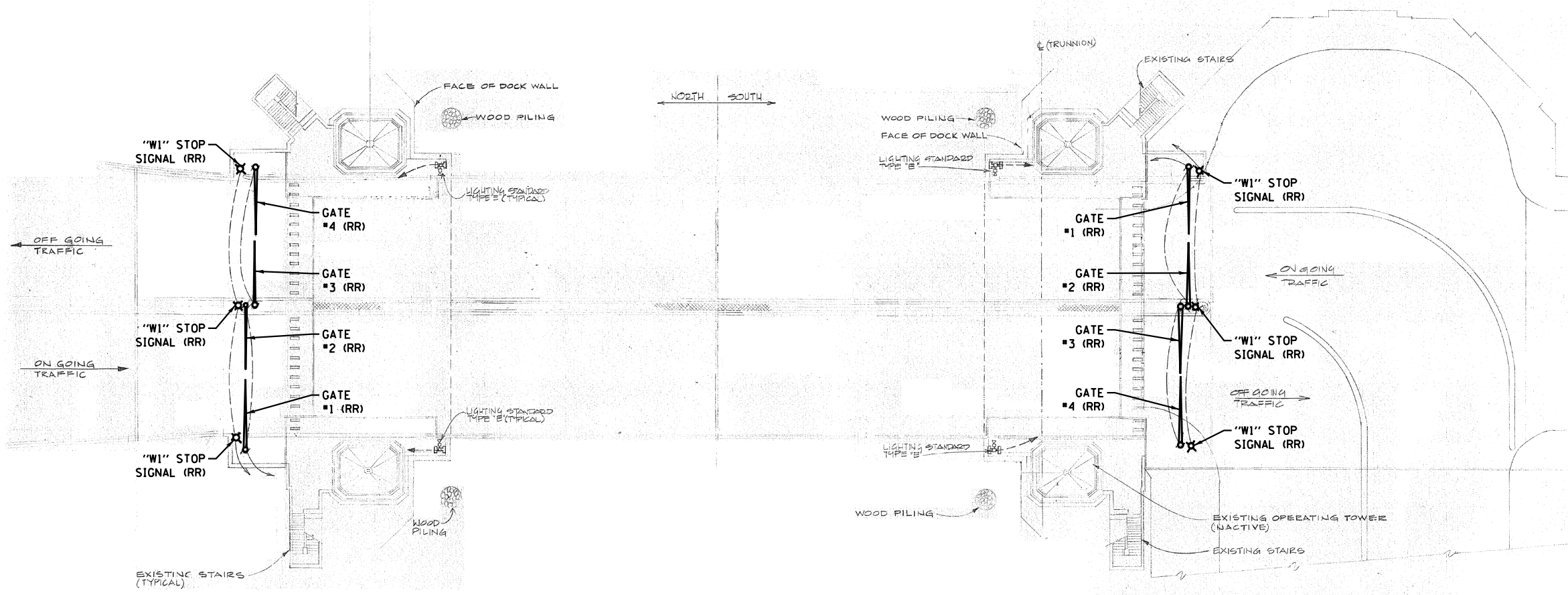
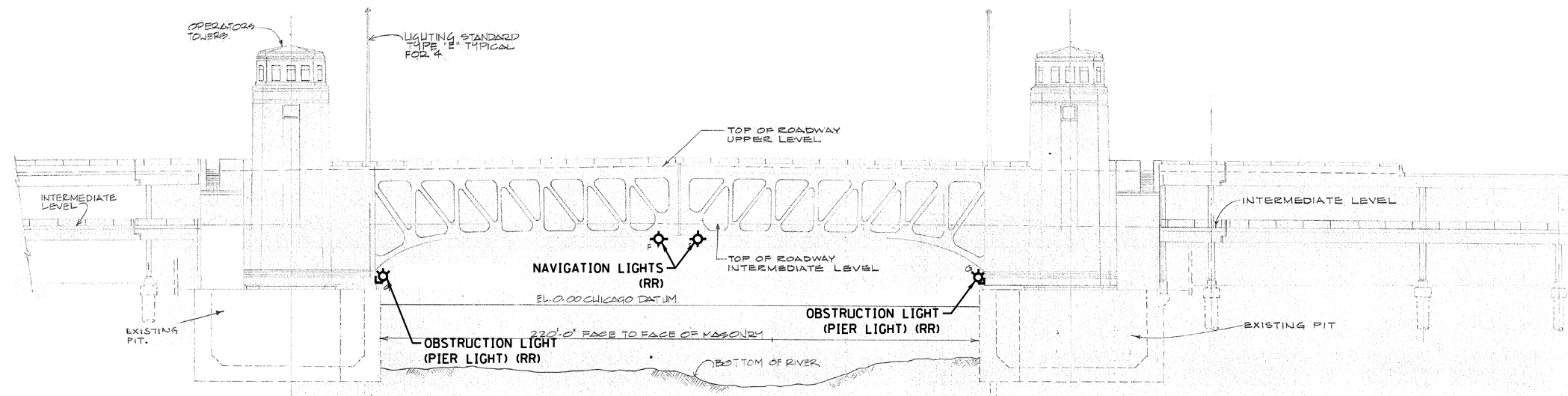
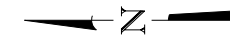
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SUBMARINE CABLE TERMINATION CABINET
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-49
CDOT PROJECT NO. E-6-650			246 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. ALL TRAFFIC GATE AND STOP LIGHTS ON THIS DRAWING TO BE REMOVED AND REPLACED.
4. ALL PIER LIGHTS AND NAVIGATION LIGHTS TO BE REPLACED.



SITE PLAN
NOT TO SCALE

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E50-Upper Level Ex Site Plan.dgn 6/22/2017

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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

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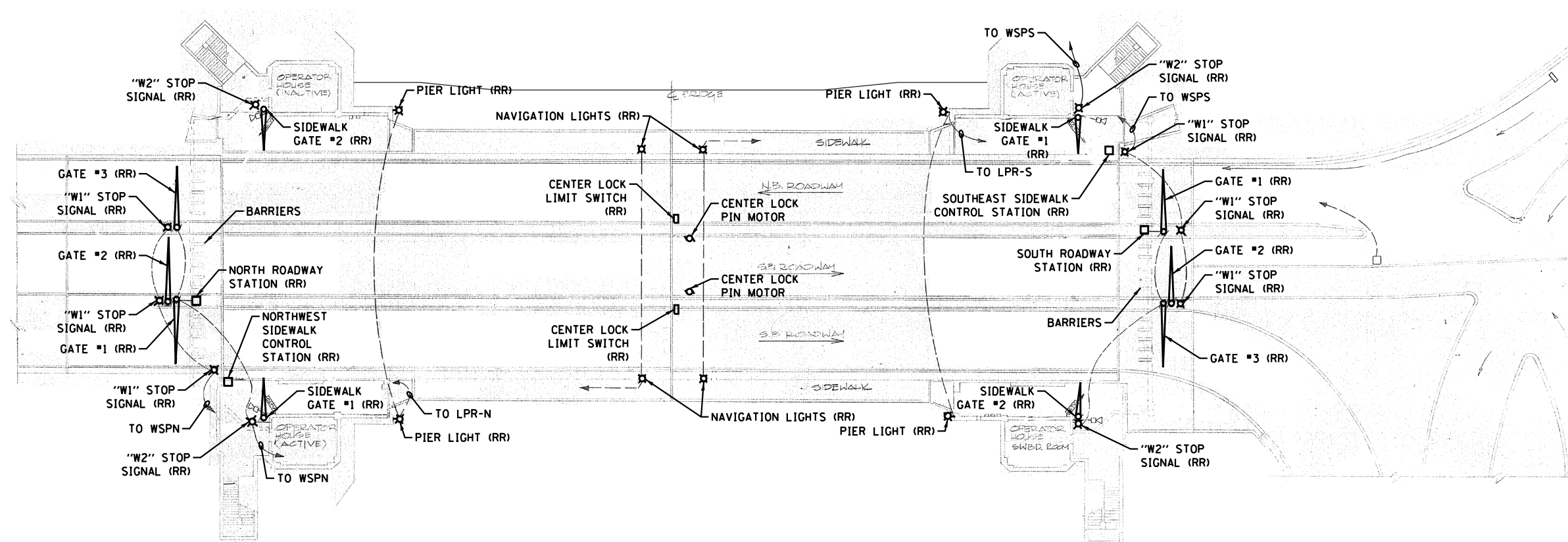
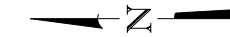
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

EXISTING UPPER LEVEL SITE PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-50
CDOT PROJECT NO. E-6-650			247 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. ALL TRAFFIC AND PEDESTRIAN GATES AND STOP LIGHTS ON THIS DRAWING TO BE REMOVED AND REPLACED.



SITE PLAN
NOT TO SCALE

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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

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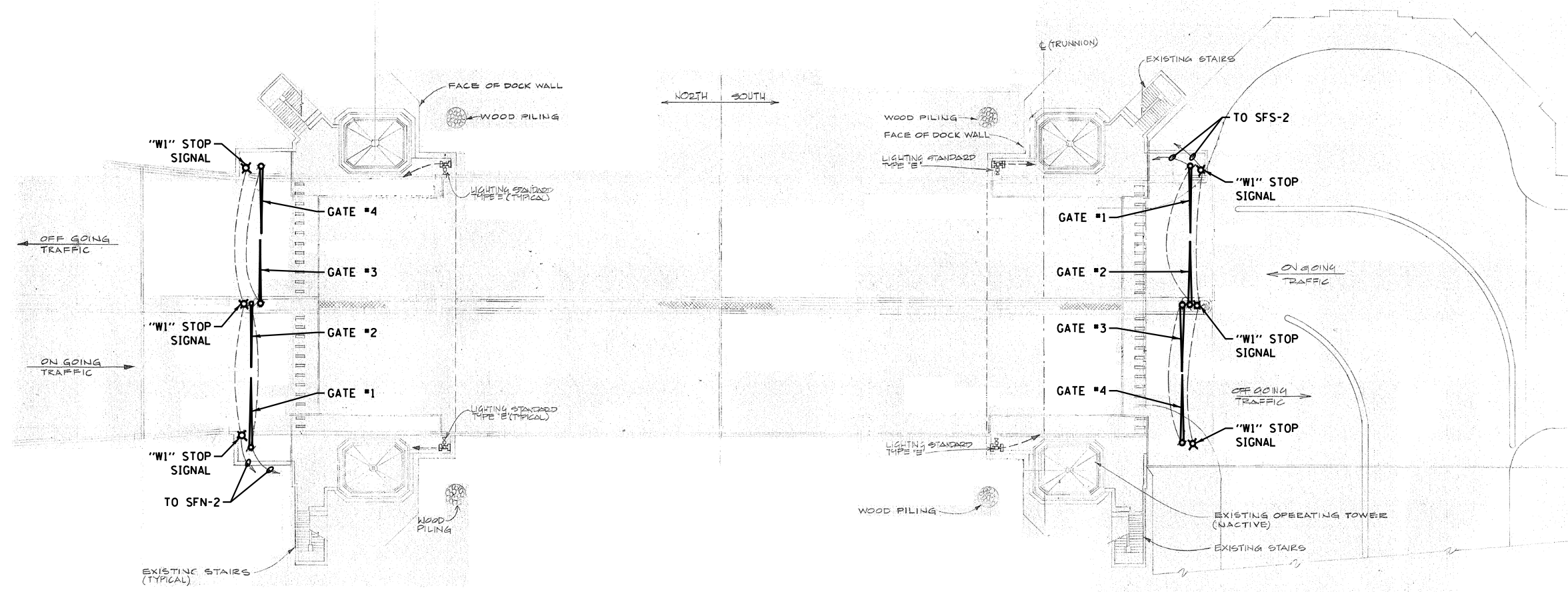
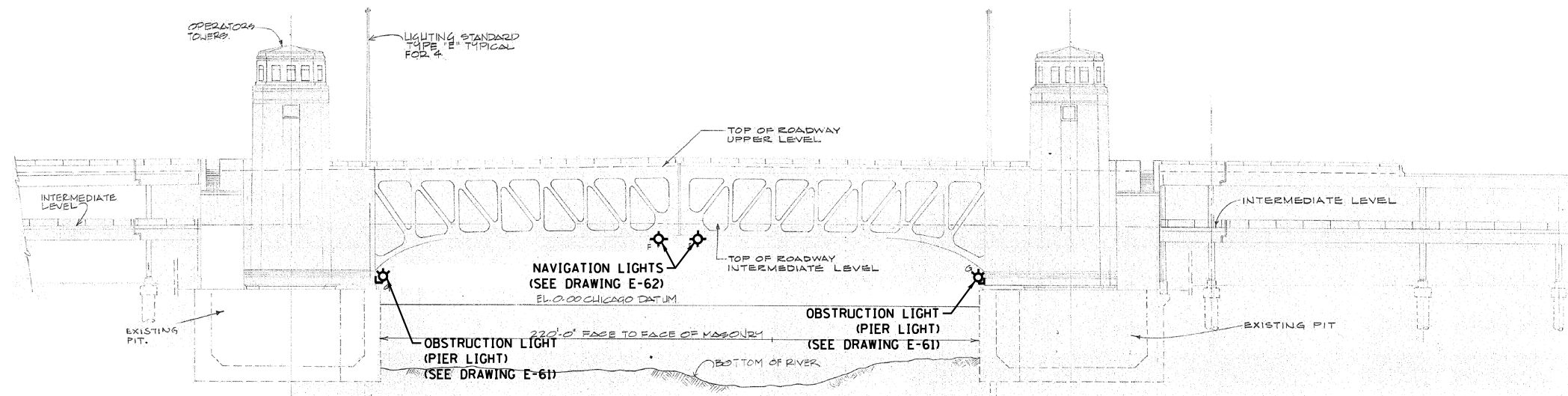
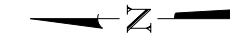
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

EXISTING LOWER LEVEL SITE PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-51
CDOT PROJECT NO. E-6-650			248 OF 411

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.
- FOR NEW GATE DETAILS REFER TO DRAWING E-55.



SITE PLAN
NOT TO SCALE

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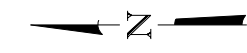
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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

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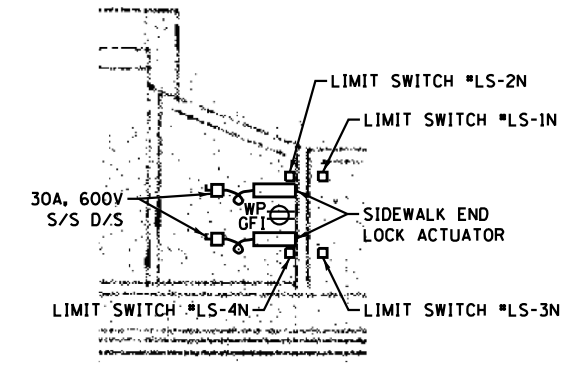
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PROPOSED UPPER LEVEL SITE PLAN
(STRUCTURE NO. 016-6030)

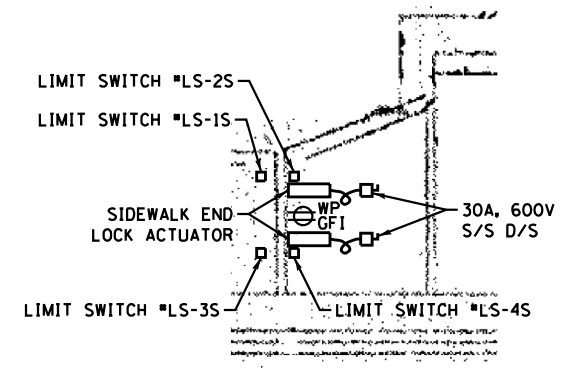
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-52
CDOT PROJECT NO. E-6-650			249 OF 411



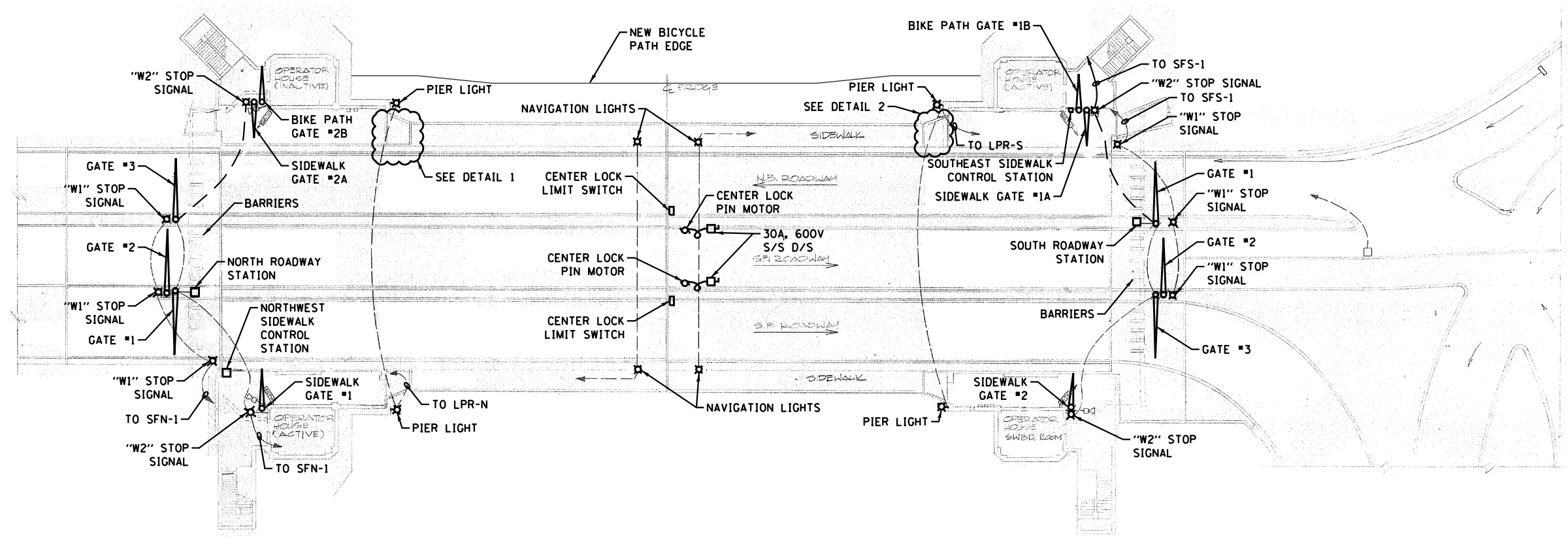
- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. FOR NEW ROAD GATES REFER TO DRAWING E-56.
 4. FOR NEW PEDESTRIAN GATES ON EAST SIDE OF THE BRIDGE REFER TO DRAWING E-58.
 5. FOR NEW PEDESTRIAN GATES ON WEST SIDE OF THE BRIDGE REFER TO DRAWING E-57.
 6. FOR NEW TRAFFIC WARNING LIGHTS REFER TO DRAWING E-59.
 7. FOR NEW PEDESTRIAN WARNING LIGHTS REFER TO DRAWING E-60.



DETAIL 1
SIDEWALK END LOCK
NOT TO SCALE



DETAIL 2
SIDEWALK END LOCK
NOT TO SCALE



SITE PLAN
NOT TO SCALE

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WSP USA Inc.
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TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME =	cmartin	DESIGNED -	BG	REVISED -	
		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

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DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

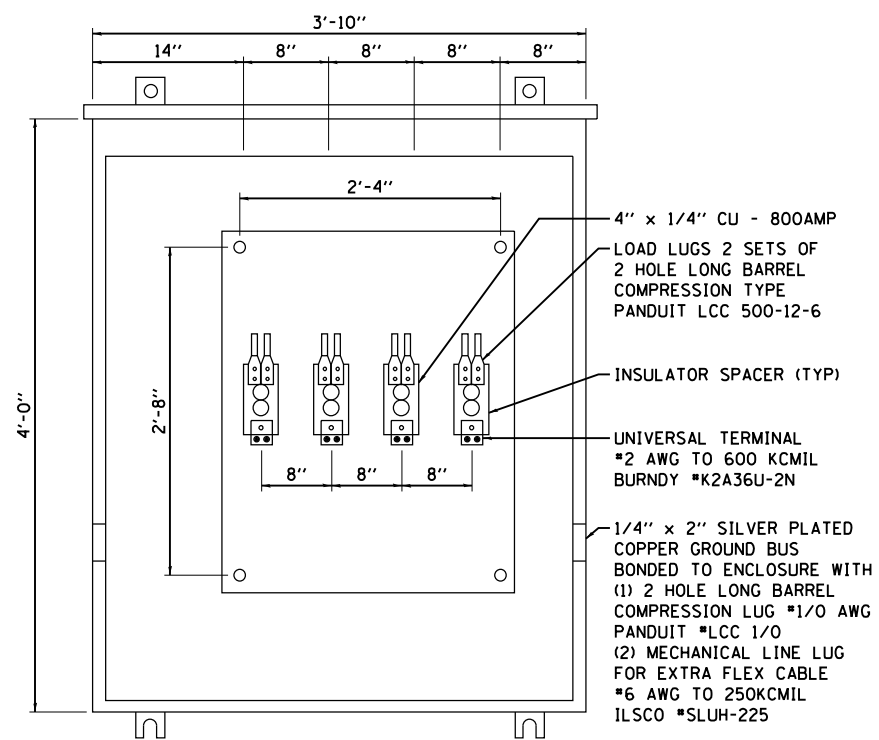
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PROPOSED LOWER LEVEL SITE PLAN
(STRUCTURE NO. 016-6030)

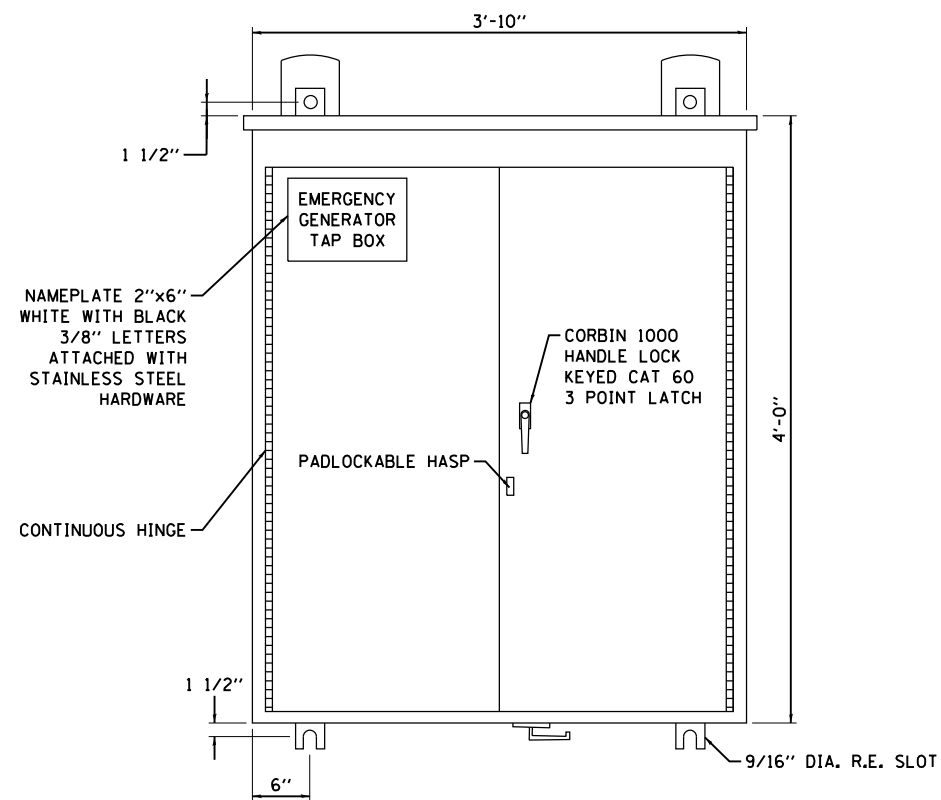
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-53
CDOT PROJECT NO. E-6-650			250 OF 411

NOTES:

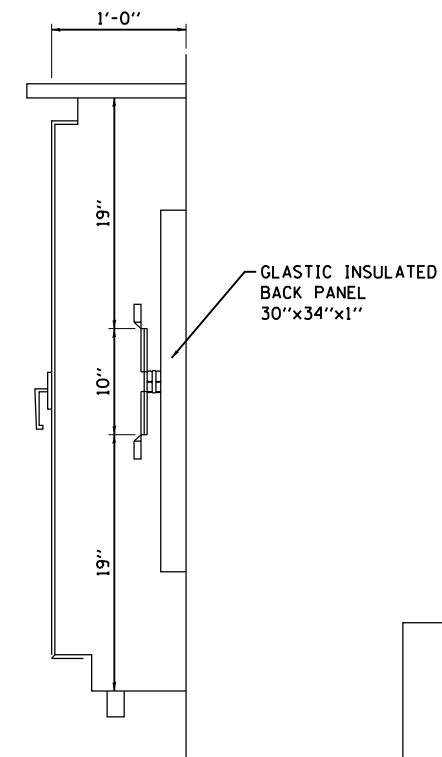
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



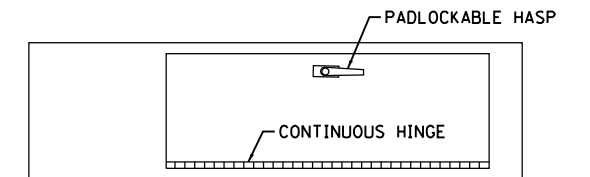
OPEN VIEW



FRONT VIEW



SECTION



BOTTOM VIEW

GENERATOR TAP BOX
NOT TO SCALE

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E54-Generator Tap Box Details.dgn 6/22/2017

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	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

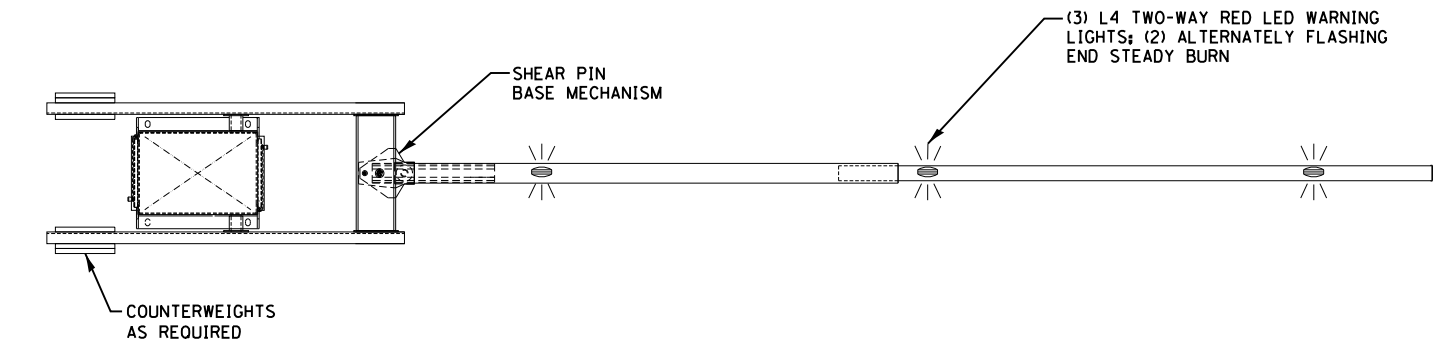
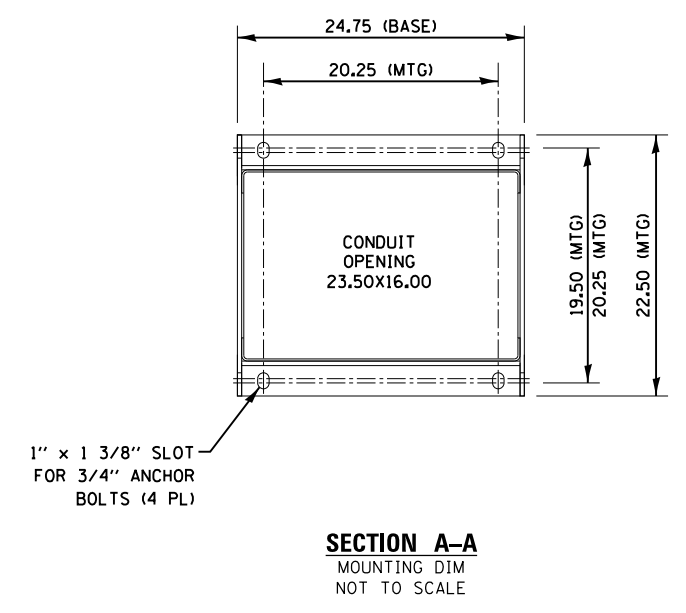
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

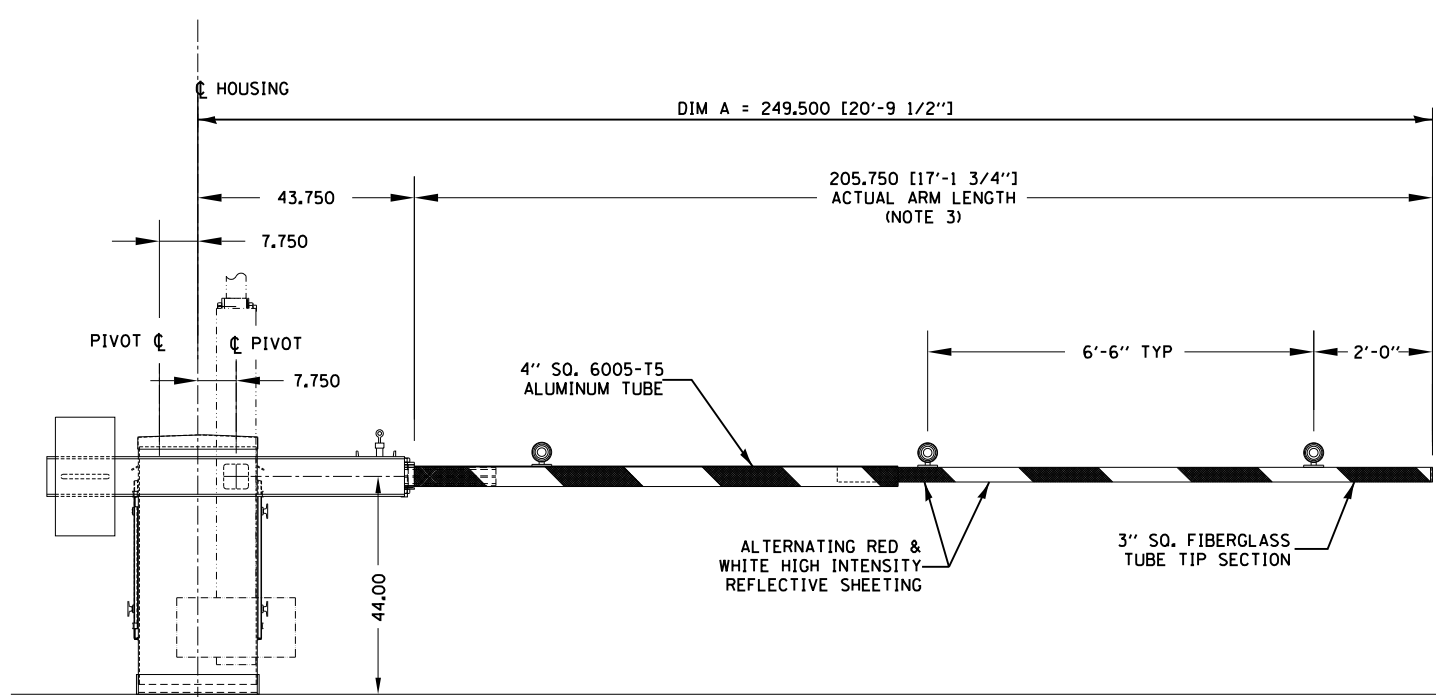
PROPOSED GENERATOR TAP BOX DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-54
CDOT PROJECT NO. E-6-650			251 OF 411

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - THE LENGTH OF GATE ARM IS APPROXIMATE. E.C. IS RESPONSIBLE TO FIELD VERIFY.



PLAN



ELEVATION VIEW
NOT TO SCALE

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E55-VW-1 Warning Gate.dgn 6/22/2017

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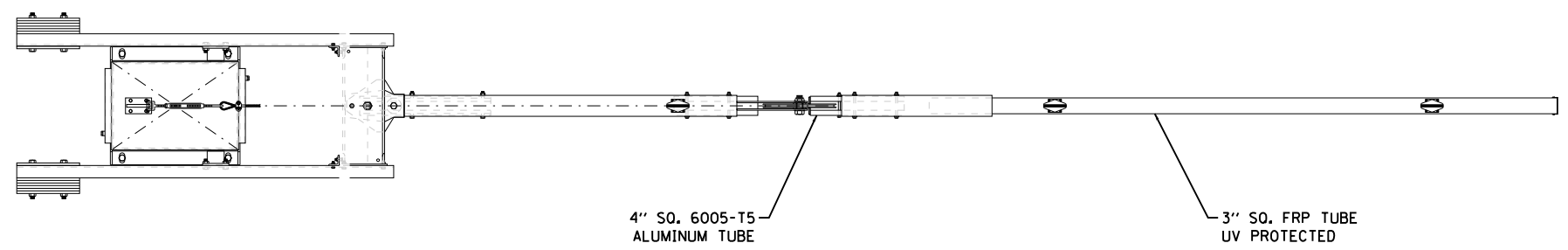
CITY OF CHICAGO
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

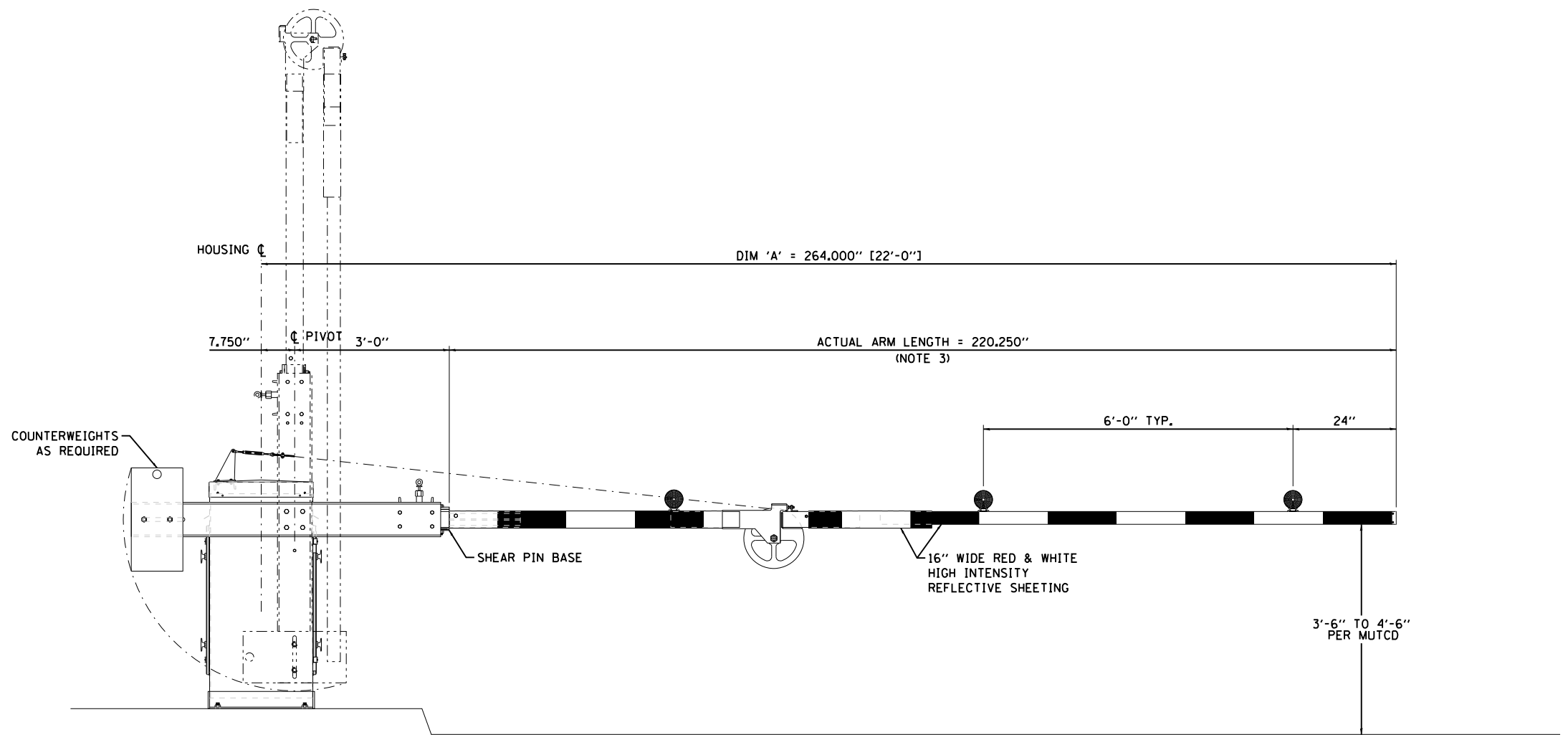
UPPER LEVEL WARNING GATE DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-55
CDOT PROJECT NO. E-6-650			252 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. THE LENGTH OF GATE ARM IS APPROXIMATE. E.C. IS RESPONSIBLE TO FIELD VERIFY.



PLAN VIEW
NOT TO SCALE



ELEVATION VIEW
NOT TO SCALE

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E56-VW-4 Jackknife Gate.dgn
6/22/2017

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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

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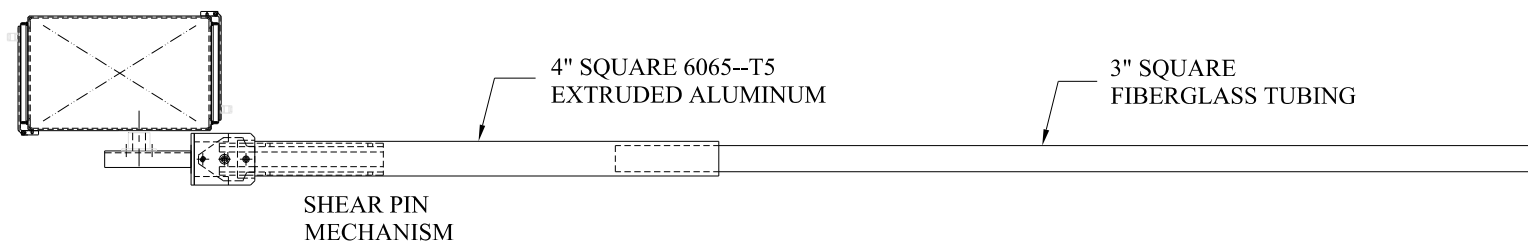
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

LOWER LEVEL JACKKNIFE GATE DETAILS
(STRUCTURE NO. 016-6030)

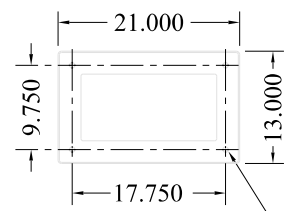
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-56
CDOT PROJECT NO. E-6-650			253 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. THE LENGTH OF GATE ARM IS APPROXIMATE. E.C. IS RESPONSIBLE TO FIELD VERIFY.

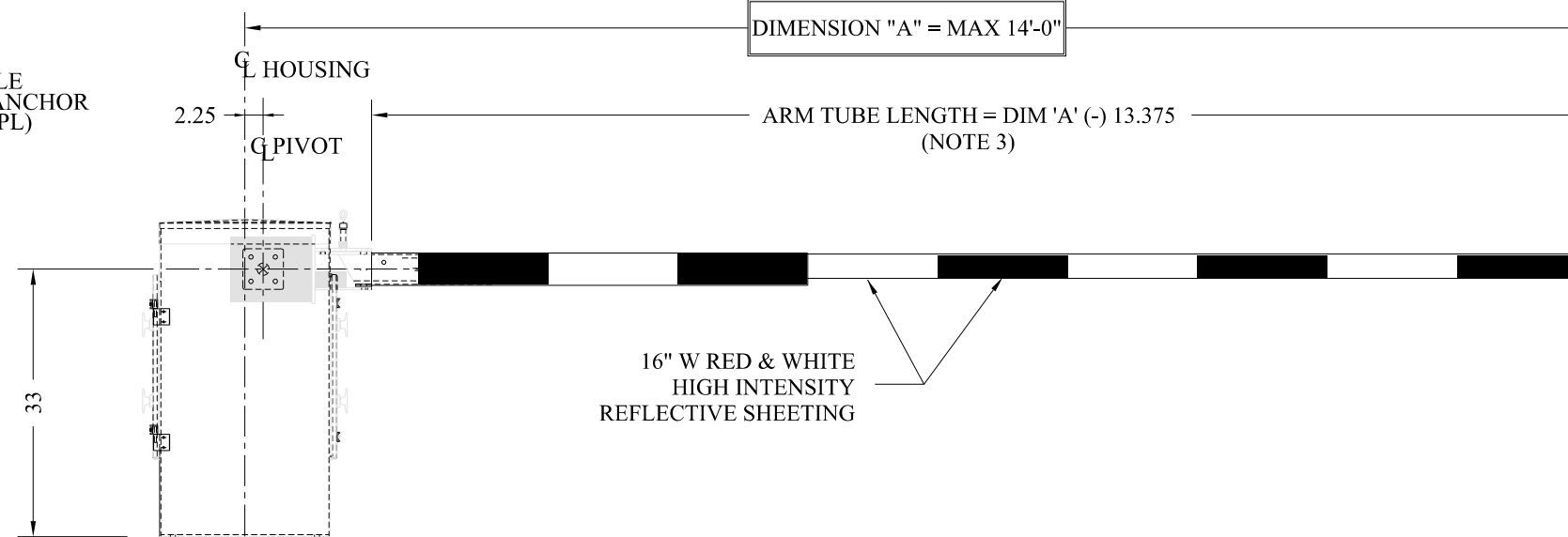


PLAN



SECTION A-A
MOUNTING DIM
NOT TO SCALE

5/8" Ø HOLE
FOR 1/2" ANCHOR
BOLTS (4 PL)



ELEVATION VIEW
NOT TO SCALE

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E57-Pedestrian Gate With One Arm.dgn 6/22/2017

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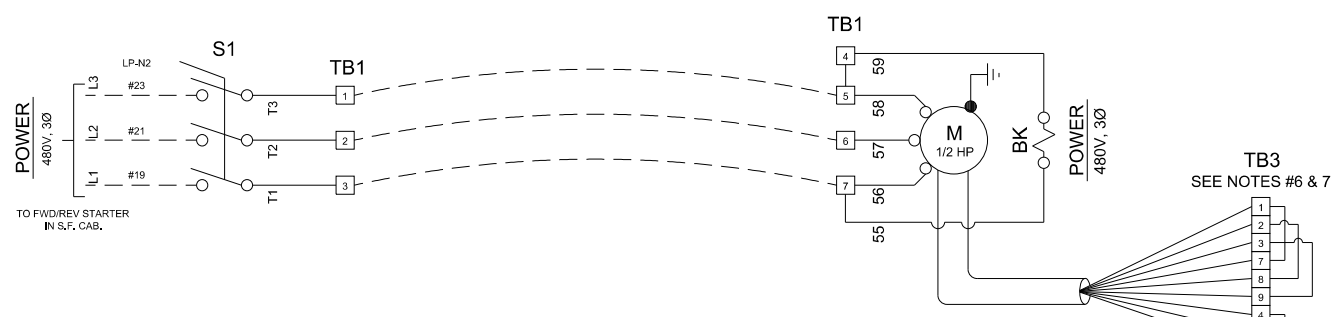
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PEDESTRIAN GATE
(STRUCTURE NO. 016-6030)

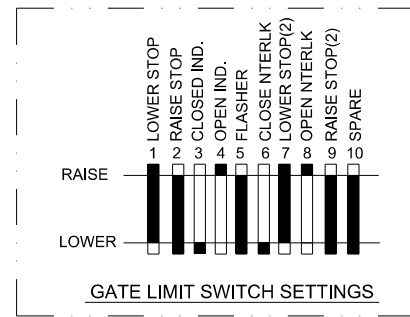
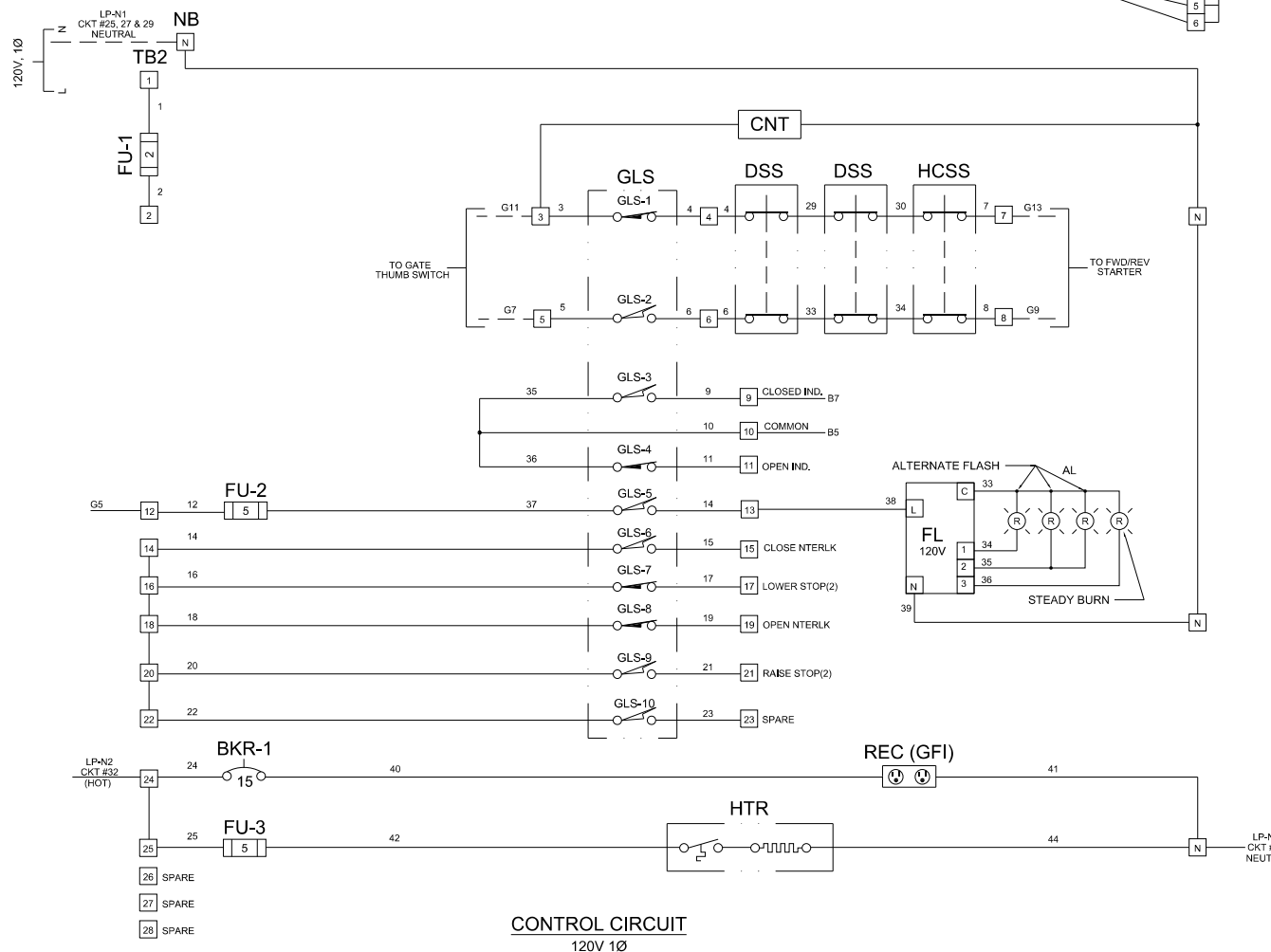
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-57
CDOT PROJECT NO. E-6-650			254 OF 411

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.



PARTS LIST		
ITEM	QTY	DESCRIPTION
AL	4	ALT-L4-120 ARM LIGHTS, L-4, 120V LAMPS
BK	1	BRAKE SOLENOID (PART OF BRAKE MOTOR)
BKR-1	1	POL-BKR15A-DIN CIRCUIT BREAKER, SINGLE POLE, 15A, 120V, DIN RAIL MTG
CNT	1	XCNT-779086-001 GATE CYCLE COUNTER
CR	1	- REVERSING MOTOR STARTER (BY OTHERS)
CR-AUX	1	- AUX. CONTACTS, REVERSING MOTOR STARTER (BY OTHERS)
DSS	2	PSW-2DM409 DOOR SAFETY SWITCH, DPDT, PULL TO TEST
FL	1	PFL-120VAC-10A FLASHER, ARM LIGHT, 120VAC, 2 ALT. CIRCUITS + STEADY BURN
FU-1	1	PFU-FNM-2 FUSE, CONTROL CIRCUIT, 2A, 120V
FU-2	1	PFU-FNM-5 FUSE, FLASHER, 5A, 120V
FU-3	1	PFU-FNM-5 FUSE, HEATER, 5A, 120V
GLS	1	ALS-A006 GATE LIMIT SWITCH ASSEMBLY, 10CCT
HCSS	1	PSW-DTE6-2RN HAND CRANK SAFETY SWITCH, 10A DPDT
HTR	1	PHT-A001 HEATER ASSEMBLY, 120V, 200W, W/ THERMOSTAT AND MTG BKT
M	1	PMO-5-3-BK BRAKE MOTOR, 1/2 HP, 208/460V, 3PH, TENV, 56C FRAME
OL	1	- OVERLOAD (BY OTHERS)
REC	1	PSO-S252BKA DUPLEX RECEPTICLE, 120V, 15A, GFI - INCL WATERPROOF COVER
S1	1	PSW-7813PMD SWITCH, DISCONNECT, 30A, 600V, 3 POLE, PASS & SEYMORE
TB1	1	TE-T7 TERMINAL BLOCK ASSY
TB2	1	TE-T28-F3-N4 TERMINAL BLOCK ASSY
TB3	1	TE-T9 TERMINAL BLOCK ASSY



- NOTES:
- CIRCUIT SHOWN WITH GATE FULLY RAISED.
 - ALL CONTROL CONDUCTORS SHALL BE #14 AWG MINIMUM STRANDED WIRE.
 - NUMBER ALL CONDUCTORS, BOTH ENDS.
 - ALL DASHED (RED) LINES REPRESENTS WIRING BY CONTRACTOR.
 - SEE DRAWING BV4-244 FOR INSTALLATION.
 - POWER WIRING THROUGH TERMINAL BLOCK E3:-
FOR 480V WIRING: JUMPER 7 & 4, 8 & 5, AND 9 & 6.
FOR 240V WIRING: JUMPER 1&7, 2&8, 3&9, AND 4, 5, & 6. (AS SHOWN)
 - BRAKE WIRING IN MOTOR WEATHERHEAD:-
FOR 208-240V WIRING: (AS SHOWN)
CONNECT B1 (R) & B3 (B) TO T1
CONNECT B2 (R) & B4 (B) TO T2
FOR 480V WIRING:
CONNECT B1 (R) TO T1
CONNECT B2 (R) TO T2
CONNECT B3 (B) TO B4 (B)

M:\970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E58-VW-4 Traffic Gate Wiring Diagram.dgn 6/22/2017

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PLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
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CITY OF CHICAGO
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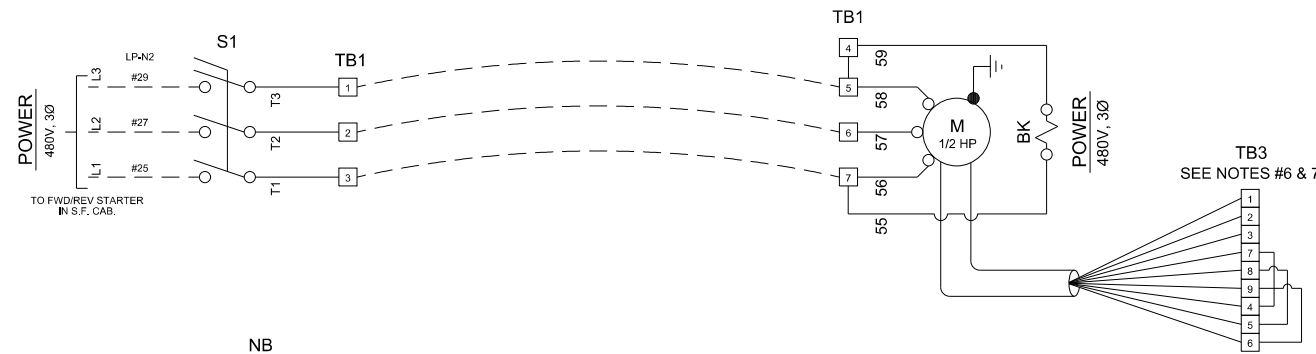
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

VW-4 TRAFFIC GATE WIRING DIAGRAM
 (STRUCTURE NO. 016-6030)

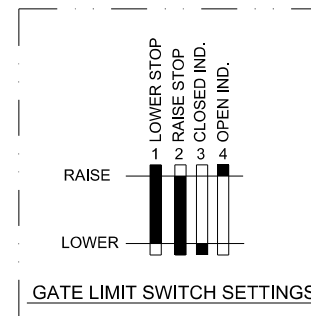
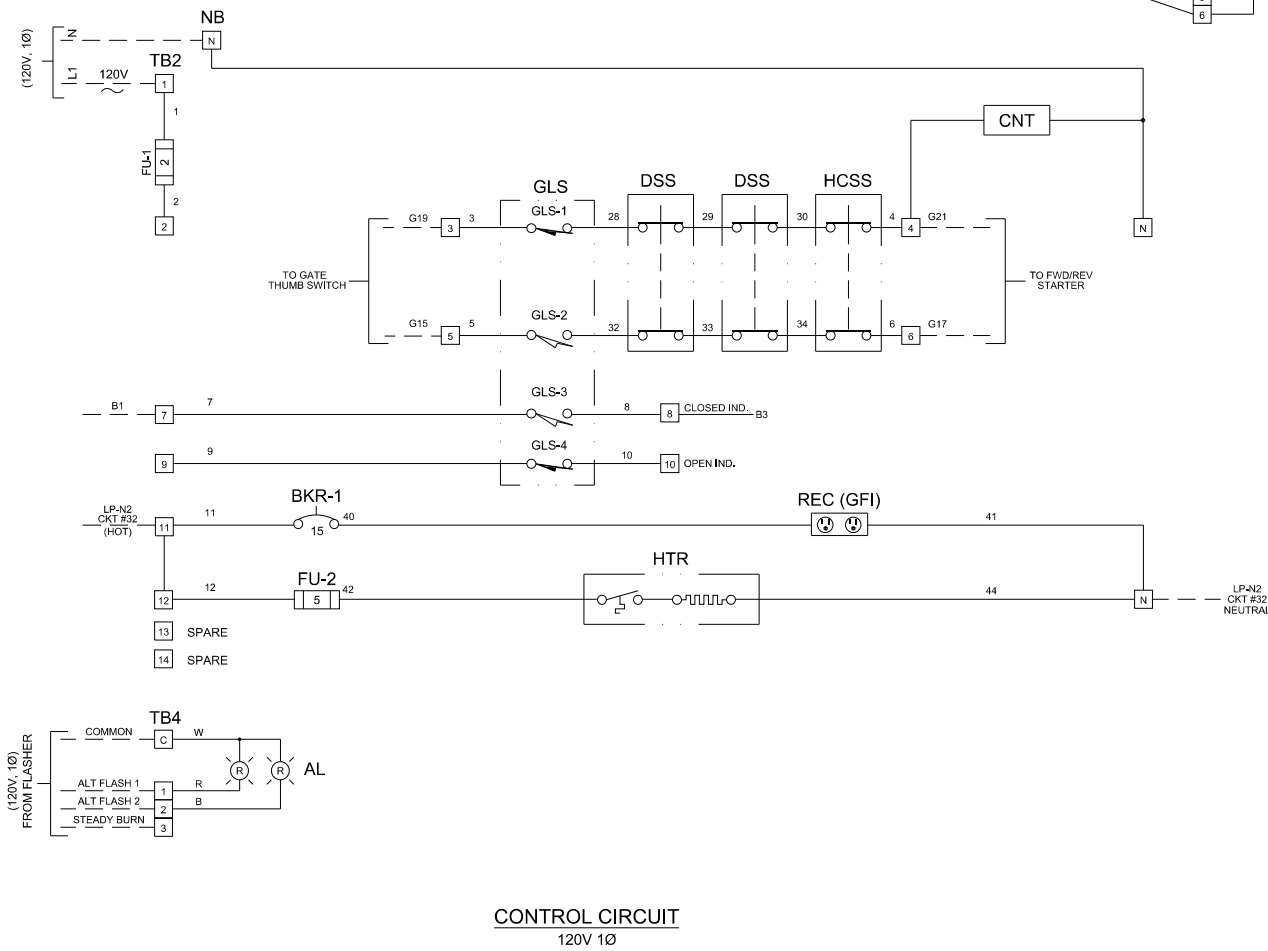
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-58
CDOT PROJECT NO. E-6-650			255 OF 411

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
AL	2	ALT-L4-12V-LED	ARM LIGHT, 4" RED 2-WAY, 12V LED
BK	-	-	BRAKE SOLENOID, (PART OF BRAKE MOTOR)
BKR-1	1	POL-BKR15A-DIN	CIRCUIT BREAKER, SINGLE POLE, 15A, 120V, DIN RAIL MTG
CNT	1	XCNT-779086-001	GATE CYCLE COUNTER
CR	1	-	REVERSING MOTOR STARTER (BY OTHERS)
CR-AUX	1	-	AUX. CONTACTS, REVERSING MOTOR STARTER (BY OTHERS)
DSS	2	PSW-2DM409	DOOR SAFETY SWITCH, DPDT, PULL TO TEST
FU-1	1	PFU-FNM-2	FUSE, CONTROL CIRCUIT, 2A, 120V
FU-2	1	PFU-FNM-5	FUSE, HEATER, 5A, 120V
GLS	1	ALS-A005	GATE LIMIT SWITCH ASSEMBLY, 4CCT
HCSS	1	PSW-DTE6-2RN	HAND CRANK SAFETY SWITCH, 10A DPDT
HTR	1	PHT-A001	HEATER ASSEMBLY, 120V, 200W, W/ THERMOSTAT AND MTG BKT
M	1	PMO-5-3-BK	BRAKE MOTOR, 1/2 HP, 208/240/480V, 3PH, TENV, 56C FRAME
OL	1	-	OVERLOAD (BY OTHERS)
REC	1	PSO-5252BKA	DUPLEX RECEPTACLE, 120V, 15A, GFI-INCL WATERPROOF COVER
S1	1	PSW-7813PMD	SWITCH, DISCONNECT, 30A, 600V, 3 POLE, PASS & SEYMORE
TB1	1	TE-T7	TERMINAL BLOCK ASSY
TB2	1	TE-T14-F2-N3	TERMINAL BLOCK ASSY
TB3	1	TE-T9	TERMINAL BLOCK ASSY
TB4	1	TE-3	TERMINAL BLOCK ASSY



NOTES:

- CIRCUIT SHOWN WITH GATE FULLY RAISED.
- ALL CONTROL CONDUCTORS SHALL BE #12 AWG MINIMUM STRANDED WIRE.
- NUMBER ALL CONDUCTORS, BOTH ENDS.
- ALL DASHED (RED) LINES REPRESENTS WIRING BY OTHERS.
- SEE DRAWING #BV2-1041 FOR INSTALLATION.
- POWER WIRING THROUGH TERMINAL BLOCK E3:
FOR 480V WIRING: JUMPER 7 & 4, 8 & 5, AND 9 & 6 (AS SHOWN).
FOR 208-240V WIRING: JUMPER 1&7, 2&8, 3&9, AND 4,5,&6.
- BRAKE WIRING IN MOTOR WEATHERHEAD:-
FOR 208-240V WIRING:
CONNECT B1 (R) & B3 (B) TO T1
CONNECT B2 (R) & B4 (B) TO T3
FOR 480V WIRING: (AS SHOWN)
CONNECT B1 (R) TO T1
CONNECT B2 (R) TO T3
CONNECT B3 (B) TO B4 (B)

M:\970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E59-VW-2 Pedestrian Gate Wiring Diagram.dgn 6/22/2017

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	CHECKED - MEB	REVISED -

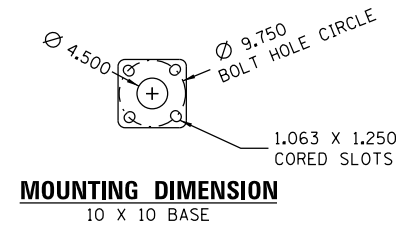
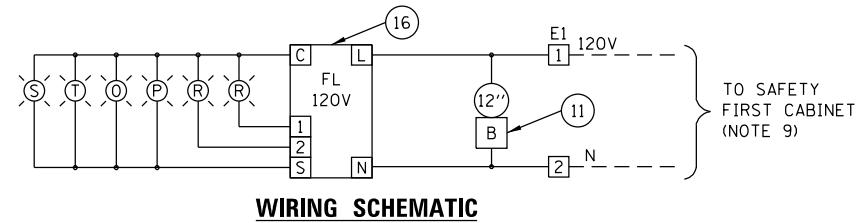
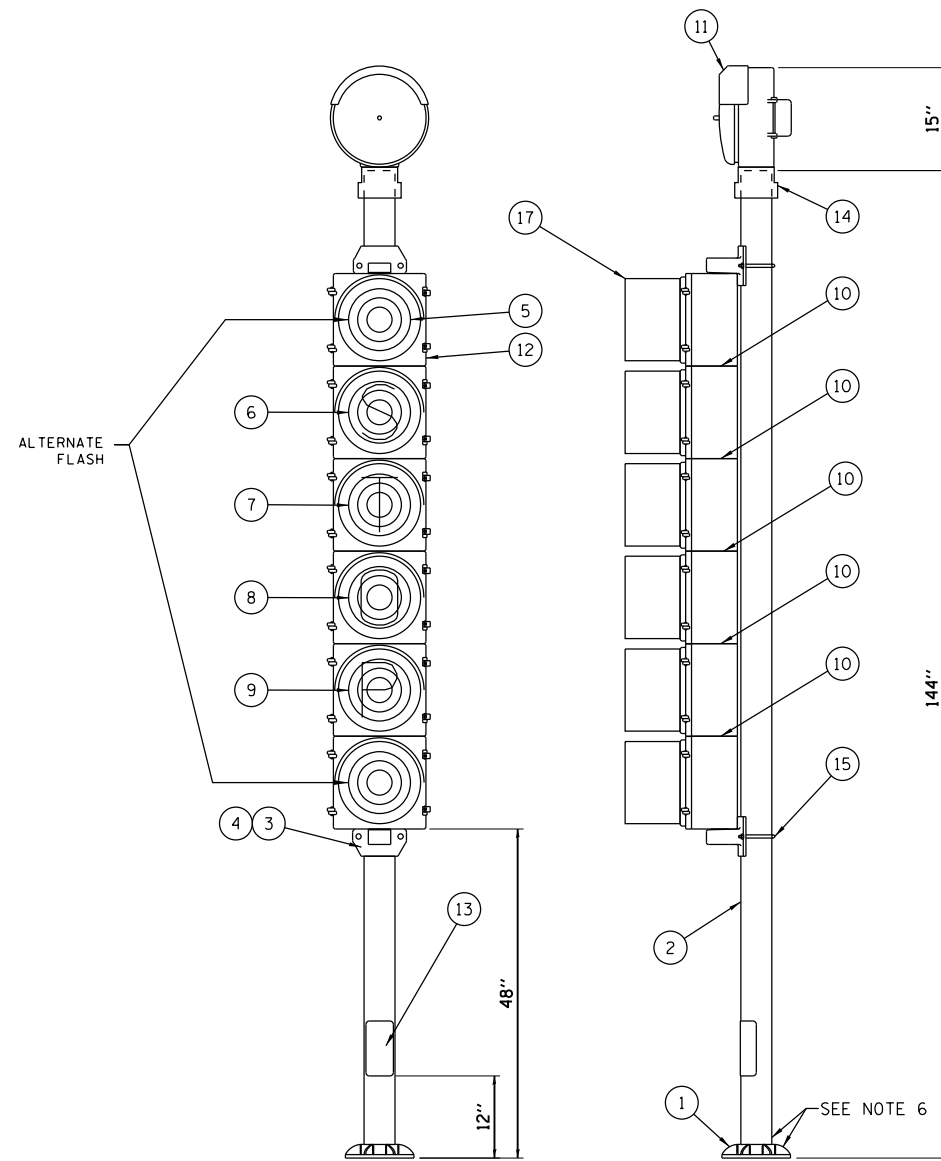
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

VW-2 PEDESTRIAN GATE WIRING DIAGRAM
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-59
CDOT PROJECT NO. E-6-650			256 OF 411

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E60-Traffic Signal Assembly.dgn
6/22/2017



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
①	1	0012-1912	BASE MOUNTING
②	1	PI4.0-40	STEEL POLE (4" SCH. 40)
③	2	PTS-CPI-SOPB1	BRACKET, POLE MTG., POLYCARBONITE
④	2	0012-9304	BRACKET GASKET
⑤	2	PLP-RD12FM-420	12" RED LED MODULE, FLANGE MOUNT
⑥	1	PLP-RD12FM-"S"	12" LED MODULE (WITH LETTER "S")
⑦	1	PLP-RD12FM-"T"	12" LED MODULE (WITH LETTER "T")
⑧	1	PLP-RD12FM-"O"	12" LED MODULE (WITH LETTER "O")
⑨	1	PLP-RD12FM-"P"	12" LED MODULE (WITH LETTER "P")
⑩	5	0012-1034	TRI-STUD WASHER
⑪	1	0555-0000/B	12" GONG, BRONZE SHELL
⑫	6	PTS-PC12-1S	12" TRAFFIC SIGNAL BODY (POLYCARBONITE)
⑬	1	0012-9300	HANDLE HOLE COVER
⑭	1	PTS-CPI-PTMI	4" SLIP FITTER, POLYCARBONITE
⑮	3	0012-9305	U-BOLT
⑯	1	PFL-120VAC-10A	FLASHER, 120V, 10A - 1 STEADY BURN, 2 ALT FLASH
⑰	6	0012-TV-B	VISOR, 12" TRAFFIC SIGNAL, BLACK

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - TWO (2) UNIT REQUIRED.
 - ANCHOR BOLTS TO BE SUPPLIED BY CONTRACTOR.
 - SIGNAL HEADS AND SIDE OF POLE BRACKETS TO BE YELLOW. POLE AND GONG TO BE PAINTED ALUMINUM.
 - POLE AND BASE ARE GALVANIZED AFTER ASSEMBLY.
 - FOR CONDUIT AND CABLE SCHEDULES, SEE SHEET EB31.
 - EQUIPMENT SHOWN IS BASED ON B&B EQUIPMENT DRAWING #0012-0072-A.
 - DASHED LINES REPRESENT FIELD WIRING.

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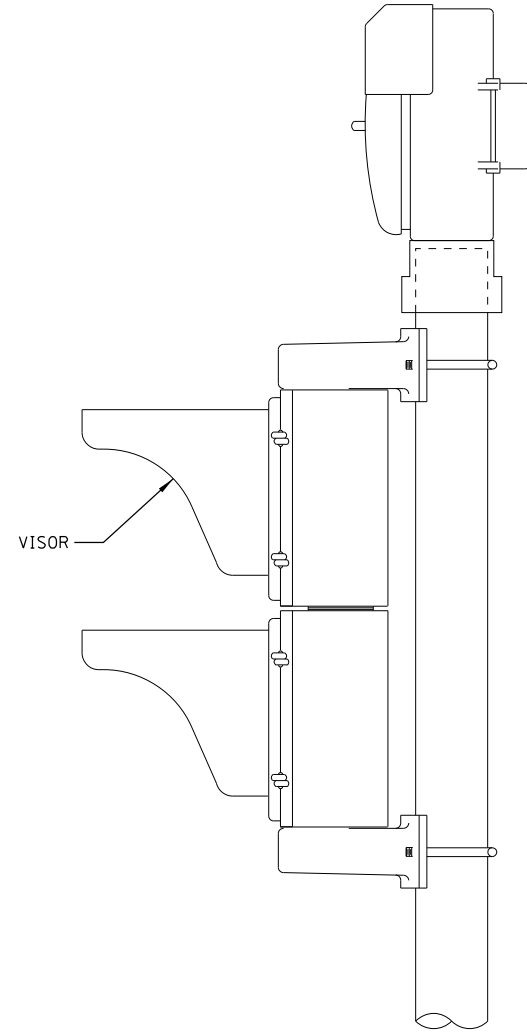
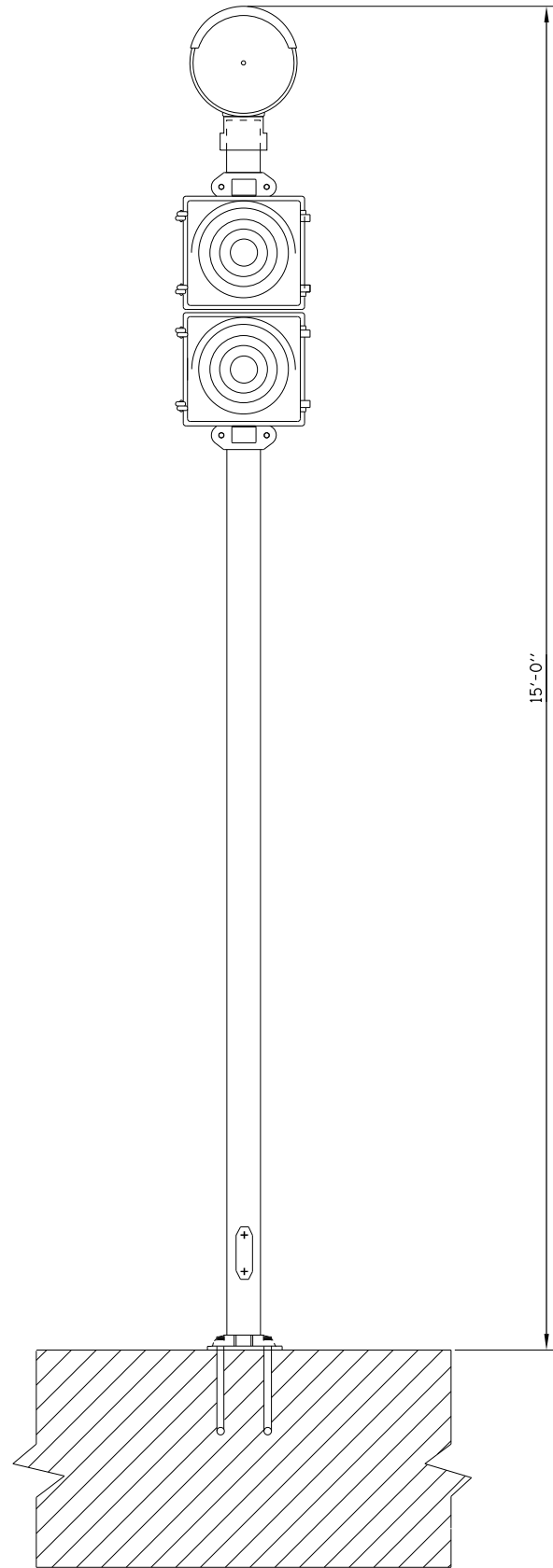
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DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

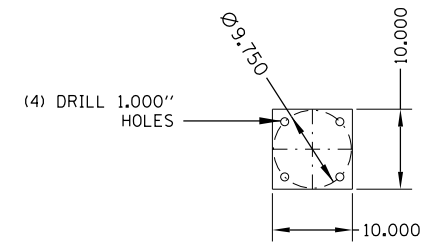
**TRAFFIC SIGNAL ASSEMBLY
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-60
CDOT PROJECT NO. E-6-650			257 OF 411

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E61-Pedestrian Traffic Signal.dgn
6/22/2017



SIDE VIEW
SCALE: 1"=1'-0"



MOUNTING PLATE DETAIL
SCALE: 1"=1'-0"

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

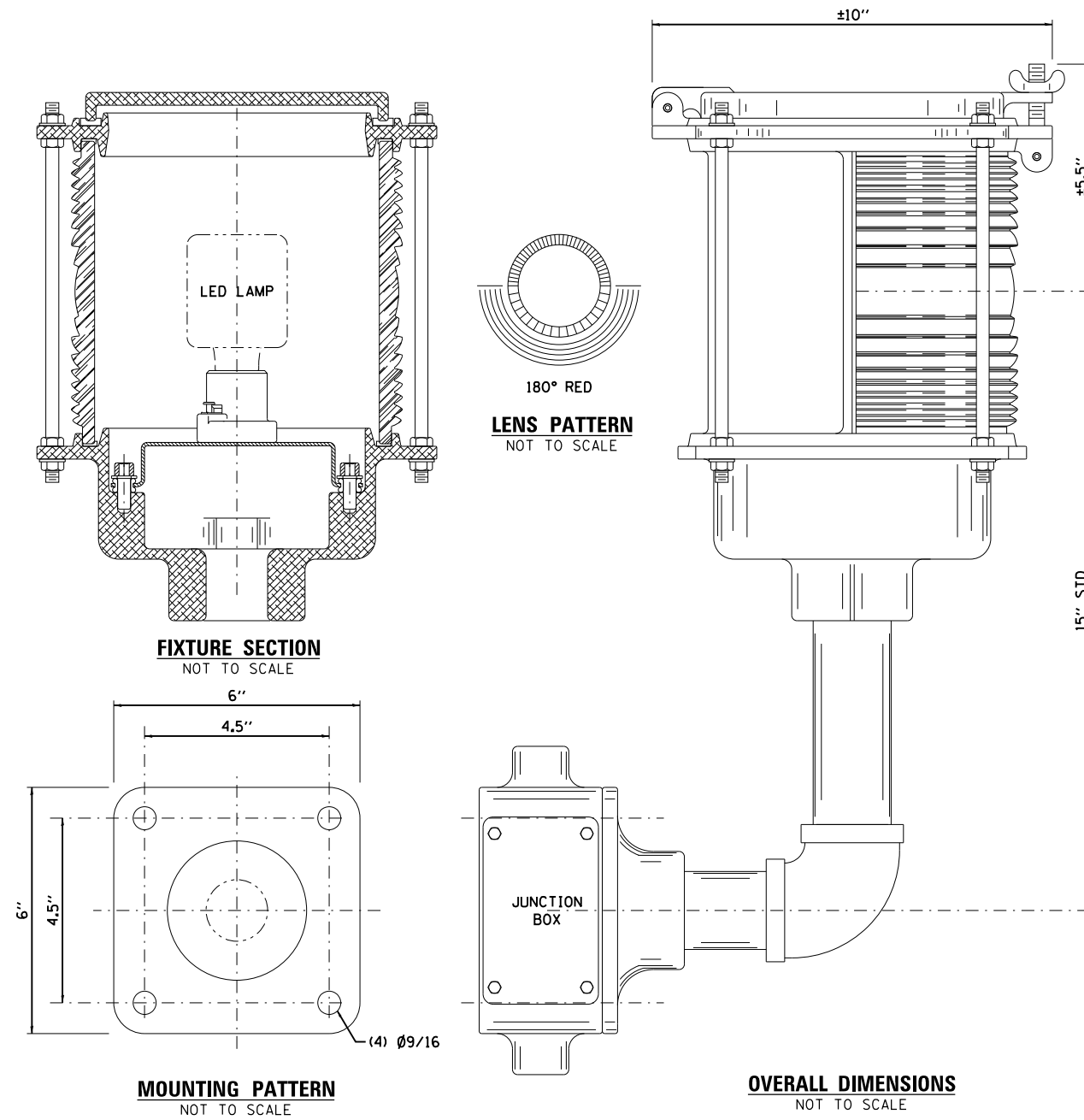
PEDESTRIAN TRAFFIC SIGNAL
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-61
CDOT PROJECT NO. E-6-650			258 OF 411

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NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



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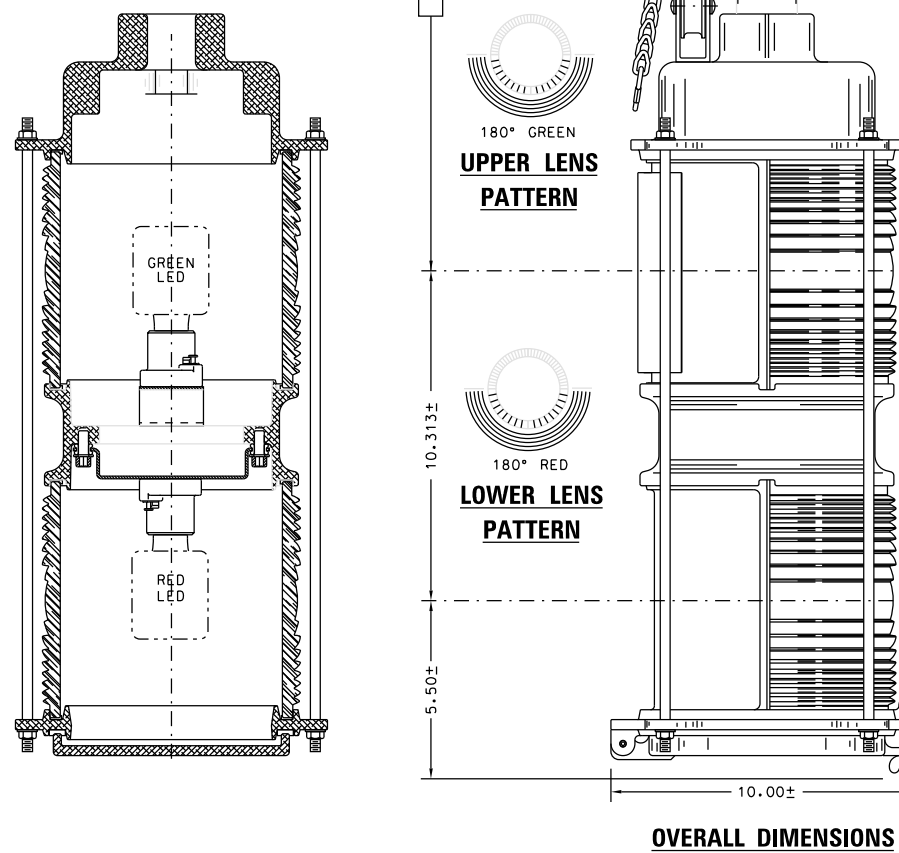
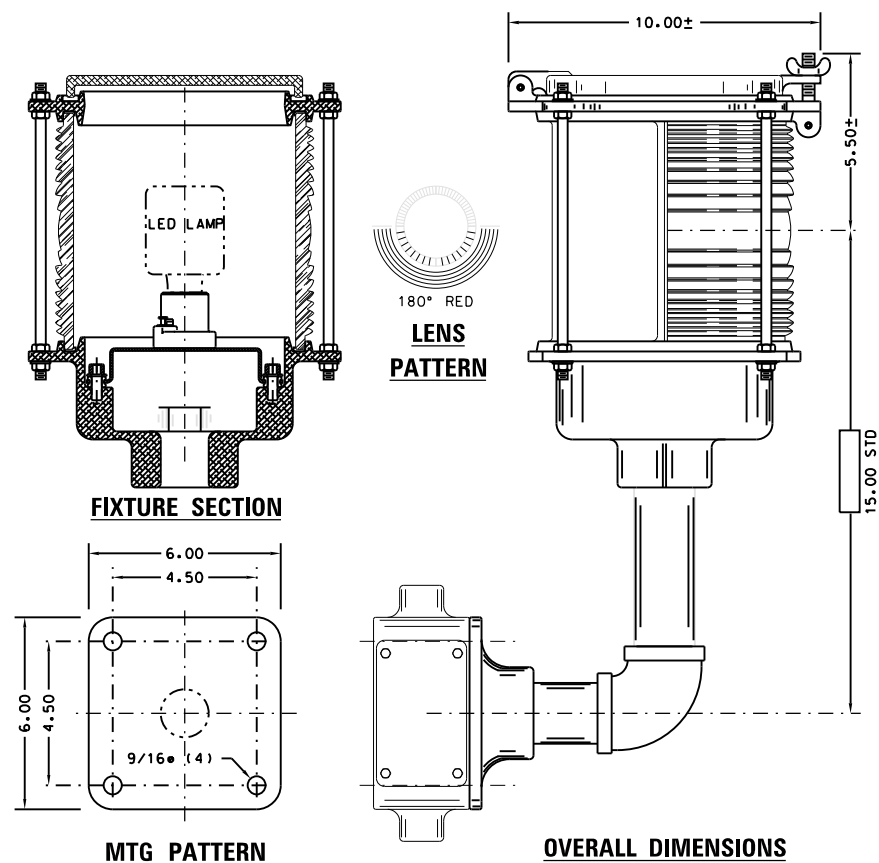
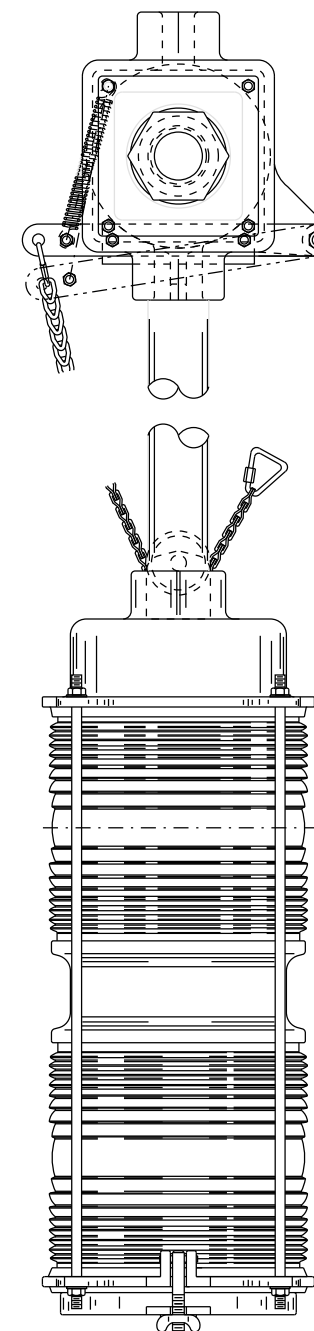
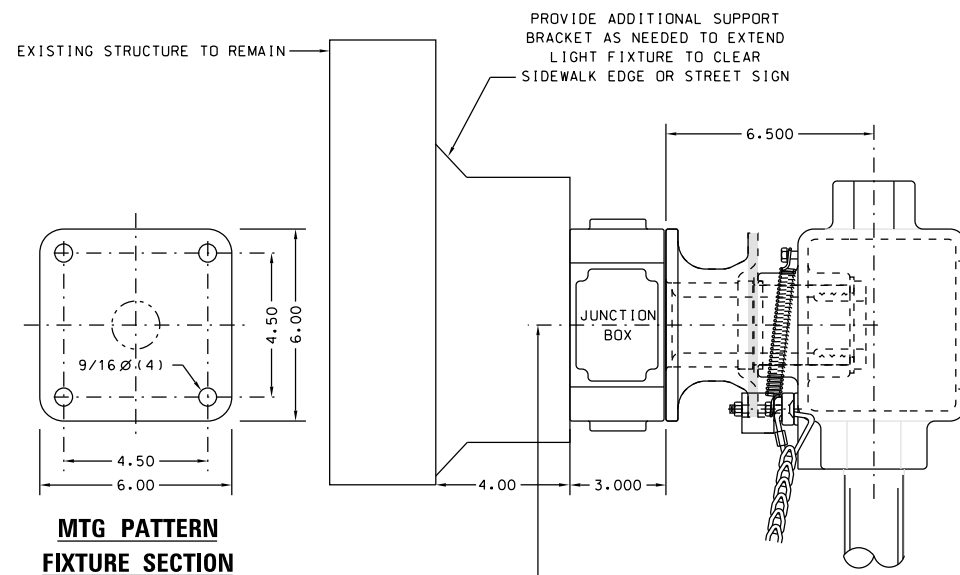
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**BRACKET MOUNTED PIER LIGHT DETAILS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-62
CDOT PROJECT NO. E-6-650			259 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. THIS EQUIPMENT TO COMPLY WITH B&B MODEL NUMBER BS-A-JB-LED-G180-R180.
4. ALL LAMPS TO BE LED TYPE.



M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E63-Navigation Lights.dgn 6/22/2017

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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NAVIGATION LIGHTS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-63
CDOT PROJECT NO. E-6-650			260 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

NORTH SIDE OF BRIDGE

AC INPUT TO SYSTEM
480V/ 3PH/ 60HZ.

SOUTH SIDE OF BRIDGE

AC INPUT TO SYSTEM
480V/ 3PH/ 60HZ.

AC CIRCUIT BREAKER #A
300Amp, 600Volt

AC CONTACTOR: M #A
300Amp, 480Volt

POWER TRANSFORMER #A
157.50 KVA
PRI: 480Volt, 189.50Amp
SEC: 407Volt, 223.50Amp

DIODE RECTIFIER

RGA
15 KW

DC CIRCUIT BREAKER #A
350Amp, 600Volt

DC OUTPUT OF SYSTEM
150KW - 550Volt, 272.70Amp

AC CIRCUIT BREAKER #B
300Amp, 600Volt

AC CONTACTOR: M #B
300Amp, 480Volt

POWER TRANSFORMER #B
157.50 KVA
PRI: 480Volt, 189.50Amp
SEC: 407Volt, 223.50Amp

DIODE RECTIFIER

RGA
15 KW

DC CIRCUIT BREAKER #B
350Amp, 600Volt

DC OUTPUT OF SYSTEM
150KW - 550Volt, 272.70Amp

AC CIRCUIT BREAKER #C
300Amp, 600Volt

AC CONTACTOR: M #C
300Amp, 480Volt

POWER TRANSFORMER #C
157.50 KVA
PRI: 480Volt, 189.50Amp
SEC: 407Volt, 223.50Amp

DIODE RECTIFIER

RGA
15 KW

DC CIRCUIT BREAKER #C
350Amp, 600Volt

DC OUTPUT OF SYSTEM
150KW - 550Volt, 272.70Amp

AC CIRCUIT BREAKER #D
300Amp, 600Volt

AC CONTACTOR: M #D
300Amp, 480Volt

POWER TRANSFORMER #D
157.50 KVA
PRI: 480Volt, 189.50Amp
SEC: 407Volt, 223.50Amp

DIODE RECTIFIER

RGA
15 KW

DC CIRCUIT BREAKER #D
350Amp, 600Volt

DC OUTPUT OF SYSTEM
150KW - 550Volt, 272.70Amp

NO LOAD BOLTED
PRESSURE SWITCH #A
800Amp, 600Volt

DC OUTPUT OF SYSTEM
300KW - 550Volt, 545.40Amp

Load #1

NO LOAD BOLTED
PRESSURE SW
TIE SW #B
800A 600V

NO LOAD BOLTED
PRESSURE SW
TIE SW #C
800A 600V

NO LOAD BOLTED
PRESSURE SWITCH #D
800Amp, 600Volt

DC OUTPUT OF SYSTEM
300KW - 550Volt, 545.40Amp

Load #2

M:\970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E64_1-Rectifier Single Line Diagram.dgn 6/22/2017

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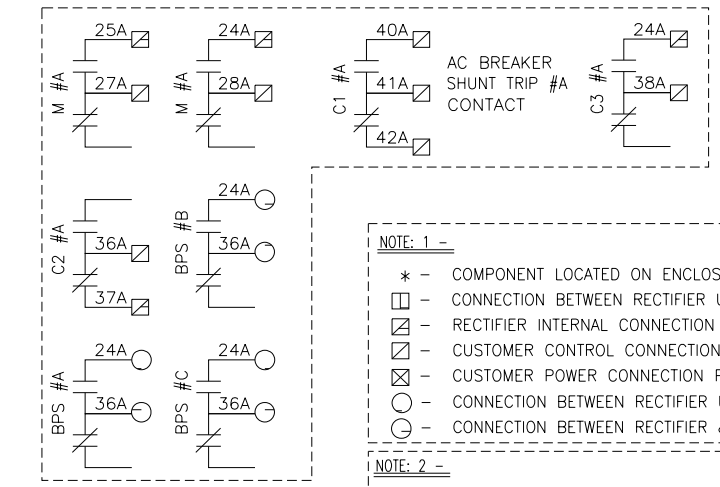
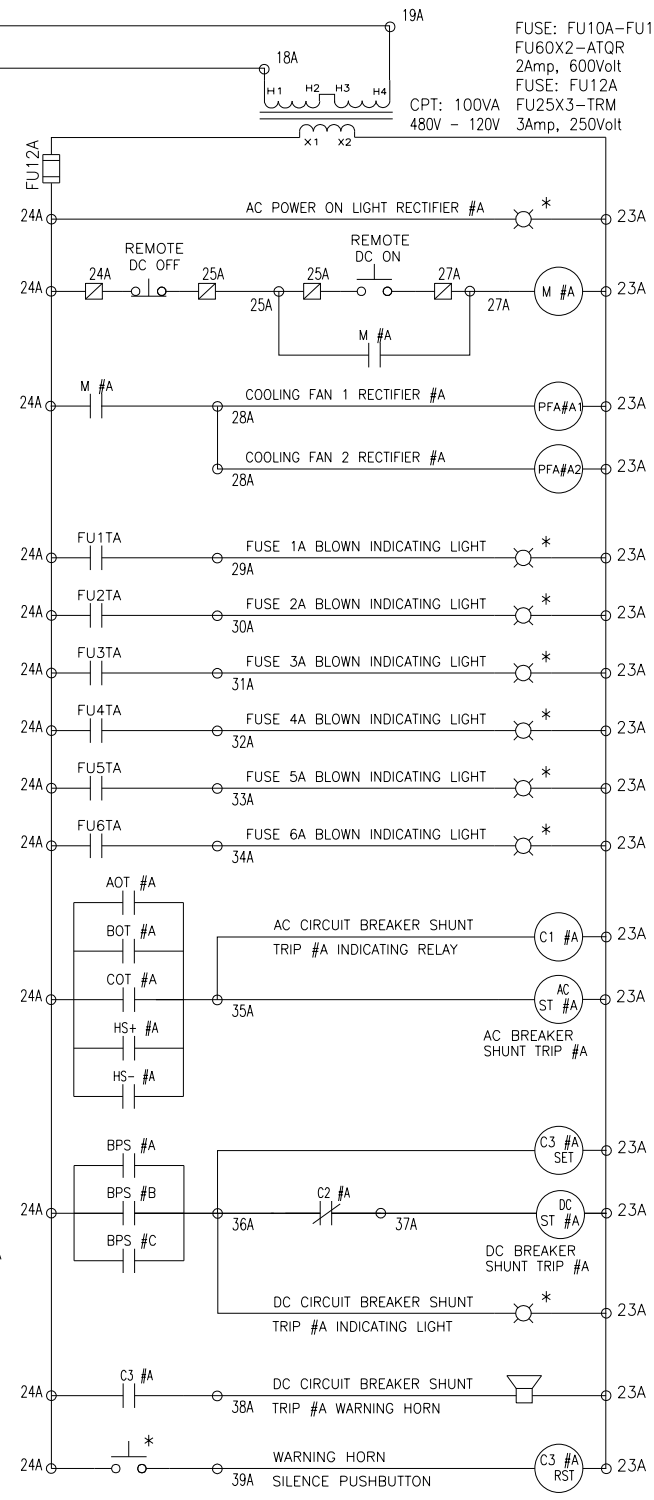
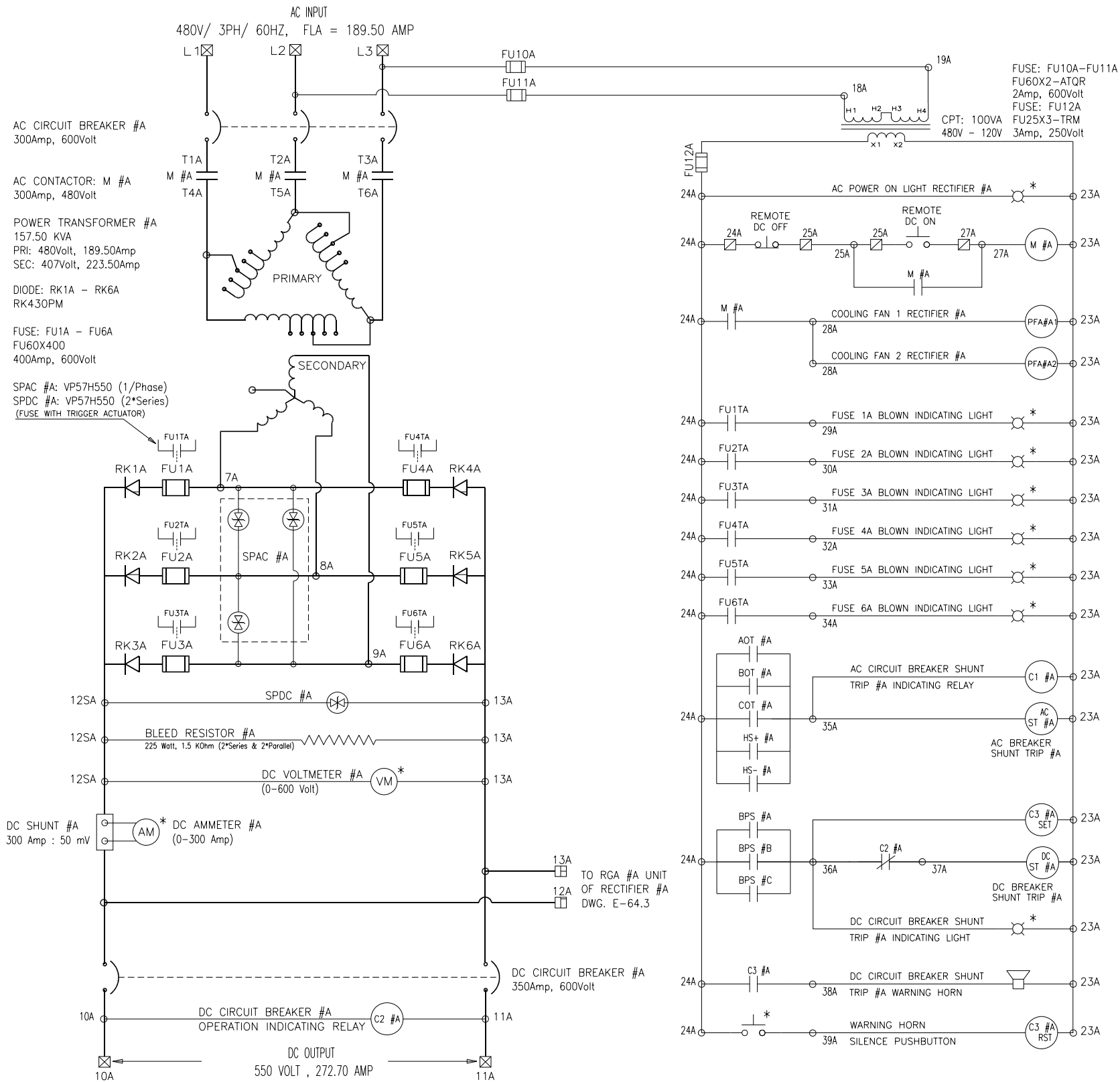
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**RECTIFIER
SINGLE LINE DIAGRAM
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-64.1
CDOT PROJECT NO. E-6-650			261 OF 411

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6/29/2017



PRELIMINARY
APPROVAL REQUIRED

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - RECTIFIER SCHEMATIC IS SIMILAR FOR #A, #B, #C, AND #D RECTIFIERS.

- NOTE: 1 -
- * - COMPONENT LOCATED ON ENCLOSURE DOOR
 - - CONNECTION BETWEEN RECTIFIER UNIT & RGA UNIT
 - ⊠ - RECTIFIER INTERNAL CONNECTION POINTS
 - ⊞ - CUSTOMER CONTROL CONNECTION POINTS
 - ⊚ - CUSTOMER POWER CONNECTION POINTS
 - - CONNECTION BETWEEN RECTIFIER UNIT & RECTIFIER PAIR BPS UNIT
 - ⊙ - CONNECTION BETWEEN RECTIFIER & PAIR RECTIFIER TIE BPS UNIT
- NOTE: 2 -
- AOT,BOT,COT ARE BIMETALIC TEMPERATURE SENSORS INSTALLED IN TRANSFORMER WINDING (TRIPS @ 180 °C)
 - HS+,HS- ARE BIMETALIC TEMPERATURE SENSORS INSTALLED ON THE RECTIFIER HEAT SINK (TRIPS @ 115°C)

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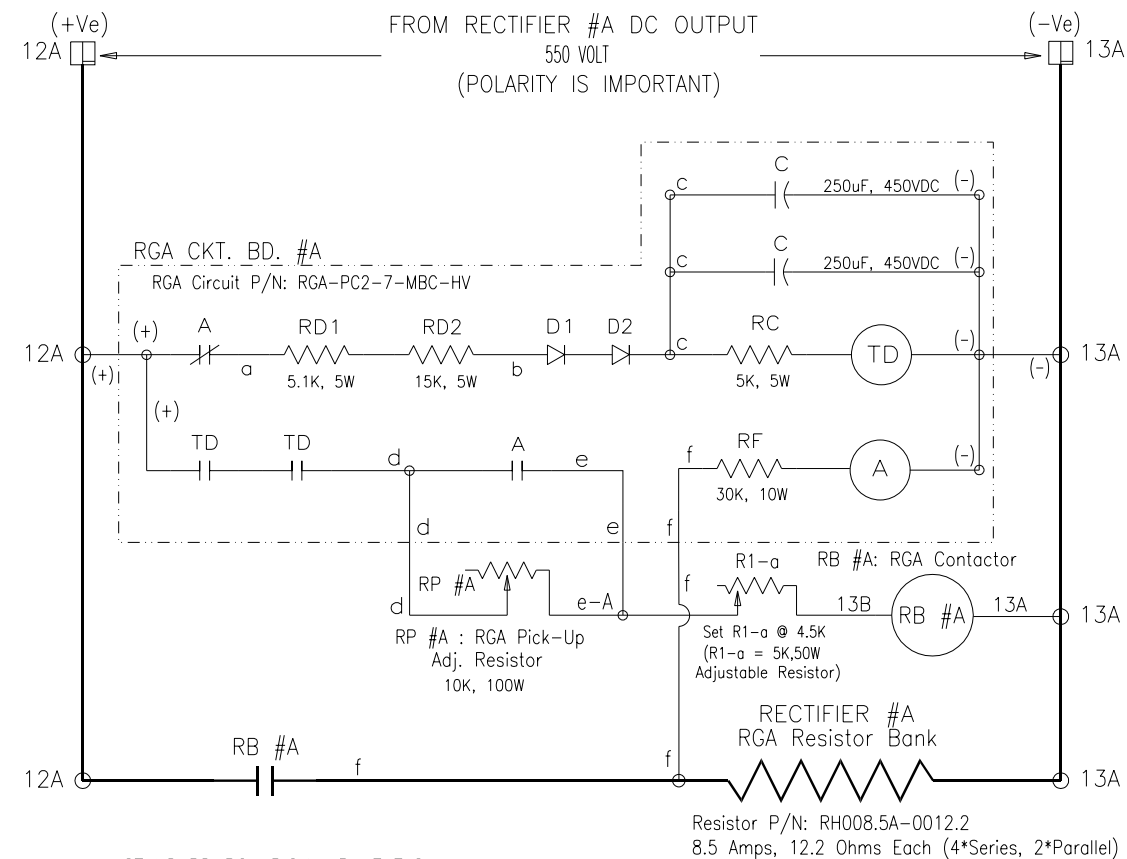
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

RECTIFIER SCHEMATIC
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-64.2
CDOT PROJECT NO. E-6-650			262 OF 411

NOTES:

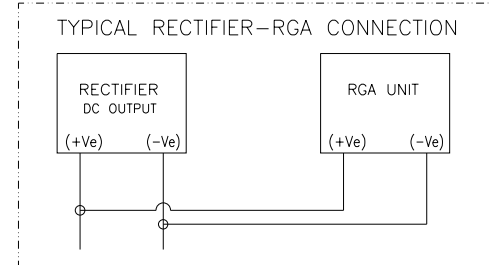
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. RECTIFIER SCHEMATIC IS SIMILAR FOR #A, #B, #C, AND #D RECTIFIERS.



STANDARD RGA PICK-UP LEVELS

RECTIFIER DC OUTPUT	RGA PICK-UP VOLTS
600 VDC	690 VDC
550 VDC	632.50 VDC
350 VDC	403 VDC
250 VDC	290 VDC
230 VDC	267 VDC
125 VDC	145 VDC

STANDARD PICK-UP TIMING PERIOD: 5 Sec.



NOTE -

☐ - CONNECTION BETWEEN RECTIFIER UNIT & RGA UNIT

PRELIMINARY
APPROVAL REQUIRED

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E64_3-Rectifier Schematic.dgn 6/29/2017

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PLOT DATE = 6/29/2017	CHECKED - MEB	REVISED -

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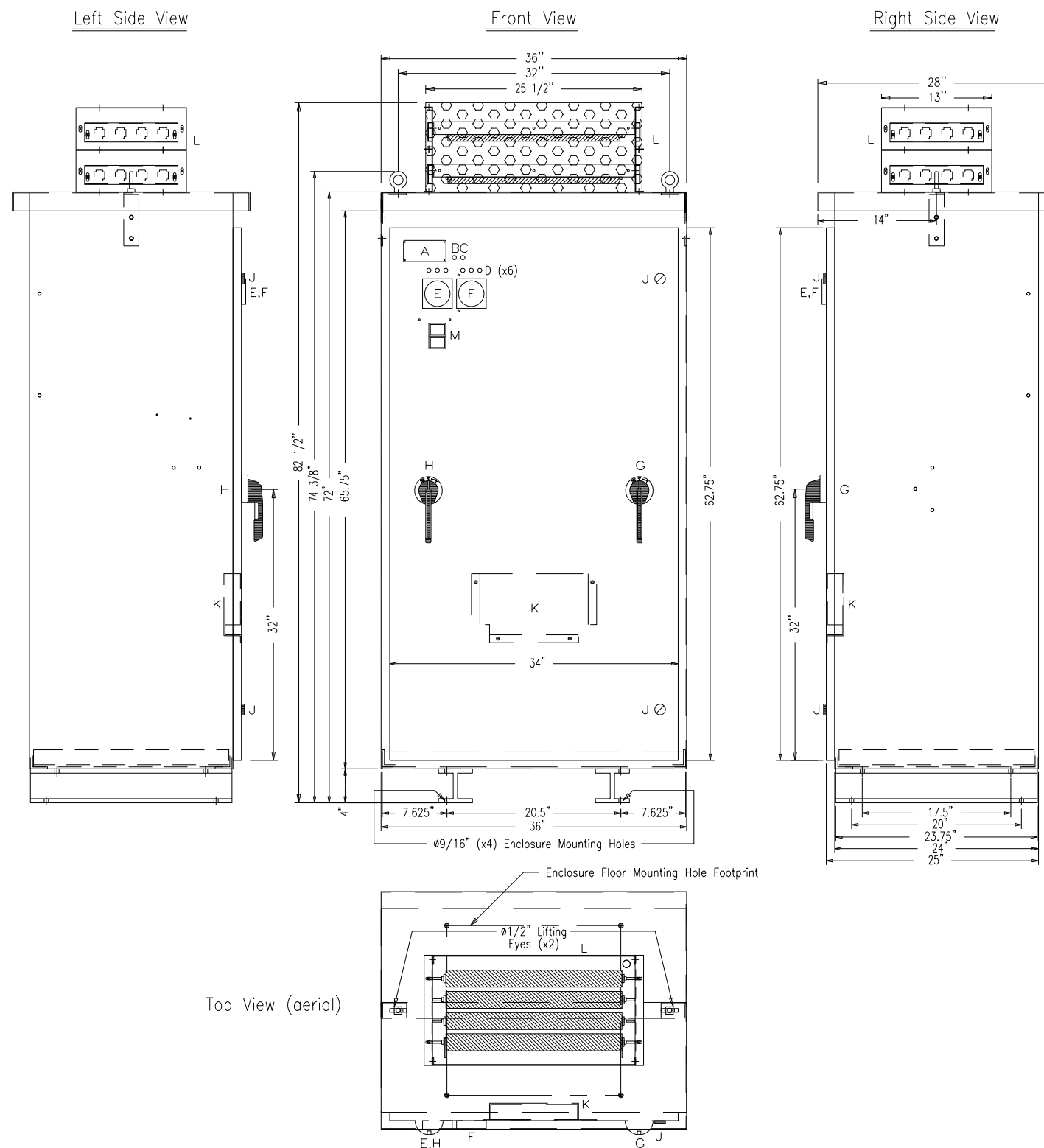
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**RECTIFIER SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-64.3
CDOT PROJECT NO. E-6-650			263 OF 411

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.



Revisions :	2
Part Number:	SM100LRFM1
Description:	Enclosure Outline Drawing
Customer:	Hubbell Industrial
Material:	14 Ga; 12 Ga; 7 Ga. Mild Steel
Finish:	ANSI #61 Gray
Enclosure Air Flow (Inlet):	573 in. ² (3,696 cm. ²)
Enclosure Air Flow (Outlet):	168 in. ² (1,084 cm. ²)

Enclosure Door Mounted Components Legend:

- A = System Identification Name Plate
- B = AC Power on Light
- C = Bolted Pressure Switch Operated Under Load DC Circuit Breaker Trip Indication Light
- D = Fu1-Fu6 Fuse Monitoring Lights
- E = DC Ammeter
- F = DC Voltmeter
- G = AC Breaker Operator
- H = DC Breaker Operator
- J = Enclosure Door Latches
- K = Manual Holder
- L = RGA Resistor
- M = DC Circuit Breaker Trip Alarm Horn Silence Pushbutton

- Note:**
- Enclosure to be of 14 Gauge Mild Steel.
 - NEMA 3R Design.
 - Floor Mounted Enclosure only.
 - Door is hinged on the left side.
 - Paint ANSI #61 Gray.
 - Screened bottom for air inlet. Raincap at top, front, rear, and sides for air outlet.
 - Single side access to all components.
 - Estimated Weight of Rectifier: 1,000 lbs.

PRELIMINARY
APPROVAL REQUIRED

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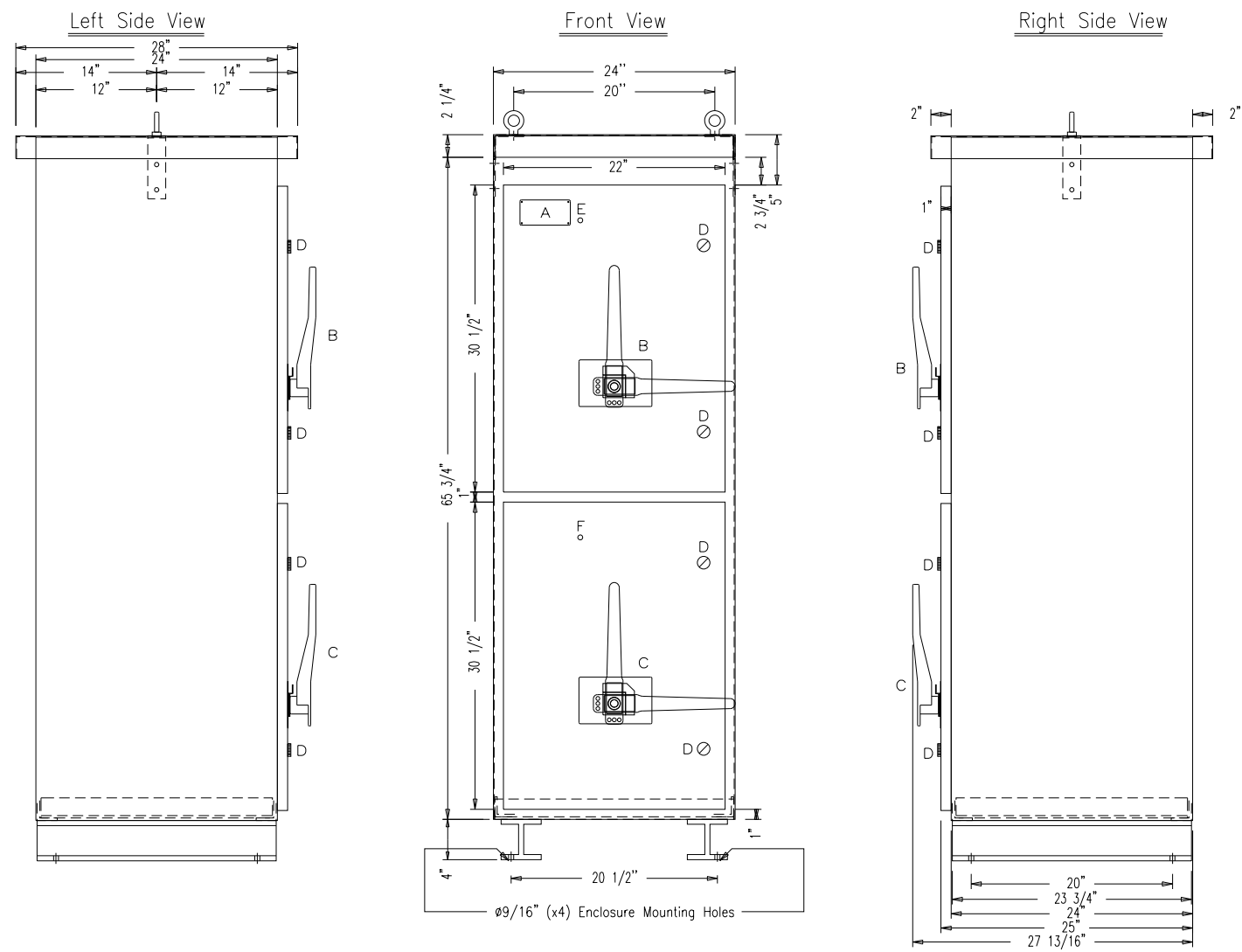
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

RECTIFIER OUTLINE (TYPICAL)
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-64.4
CDOT PROJECT NO. E-6-650			264 OF 411

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.



Revisions :	2
Part Number:	SM100LRFM1
Description:	Enclosure Outline Drawing
Material:	14 Ga; 12 Ga; 7 Ga. Mild Steel
Finish:	ANSI #61 Gray
Enclosure Air Flow (Inlet):	573 in. ² (3,696 cm. ²)
Enclosure Air Flow (Outlet):	168 in. ² (1,084 cm. ²)

Enclosure Door Mounted Components Legend:

A	= System Identification Name Plate
B	= Rectifier Pair Bolted Pressure Switch #A
C	= Pair Rectifier Tie Bolted Pressure Switch #B
D	= Enclosure Door Latches
E	= Rectifier#A Switch Close Light
F	= Rectifier#B Switch Close Light

- Note:
- Enclosure to be of 14 Gauge Mild Steel.
 - NEMA 3R Design.
 - Floor Mounted Enclosure only.
 - Door is hinged on the left side.
 - Paint ANSI #61 Gray.
 - Screened bottom for air inlet. Raincap at top, front, rear, and sides for air outlet.
 - Single side access to all components.
 - Estimated Weight of Rectifier: 1,000 lbs.

PRELIMINARY
APPROVAL REQUIRED

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E64_5-Pressure Switch Enclosure Outline.dgn 6/29/2017

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PLOT DATE =	6/29/2017	CHECKED -	MEB	REVISED -	

CITY OF CHICAGO
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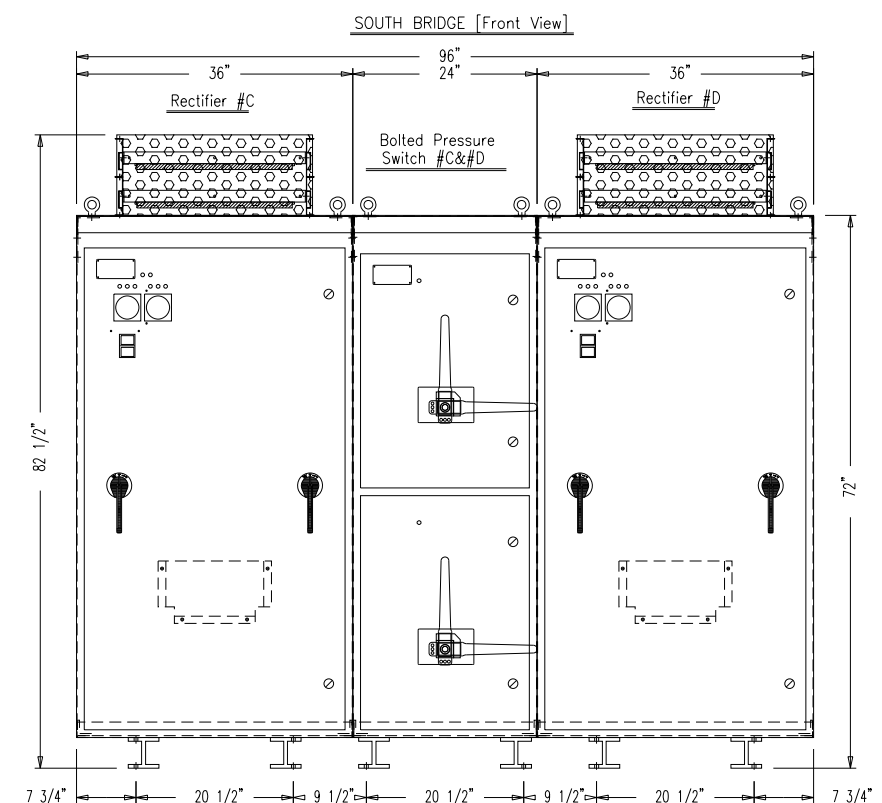
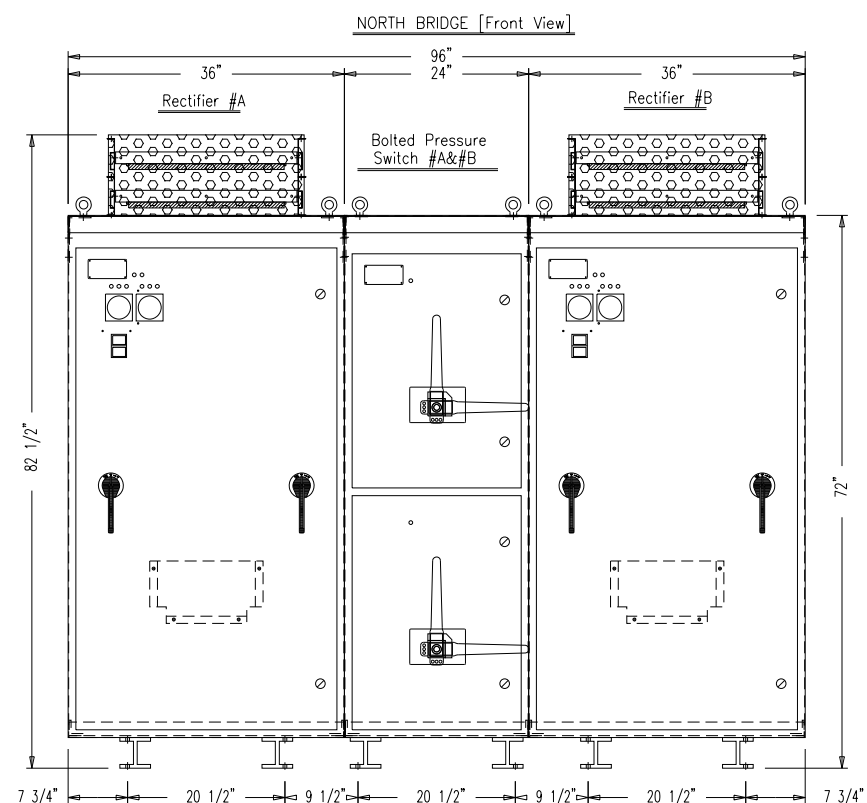
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

BOLTED PRESSURE SWITCH ENCLOSURE OUTLINE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-64.5
CDOT PROJECT NO. E-6-650			265 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



PRELIMINARY
APPROVAL REQUIRED

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PLOT DATE = 6/29/2017	CHECKED - MEB	REVISED -

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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**OVERALL RECTIFIER AND
 PRESSURE SWITCH ENCLOSURE OUTLINE
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-64.6
CDOT PROJECT NO. E-6-650			266 OF 411

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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-64.7
CDOT PROJECT NO. E-6-650			267 OF 411

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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-64.8
CDOT PROJECT NO. E-6-650			268 OF 411

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TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = lopezgonzalez	DESIGNED - BG	REVISED -
	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CUM	REVISED -
PLOT DATE = 6/29/2017	CHECKED - MEB	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-64.9
CDOT PROJECT NO. E-6-650			269 OF 411

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PLOT DATE = 6/29/2017	CHECKED - MEB	REVISED -

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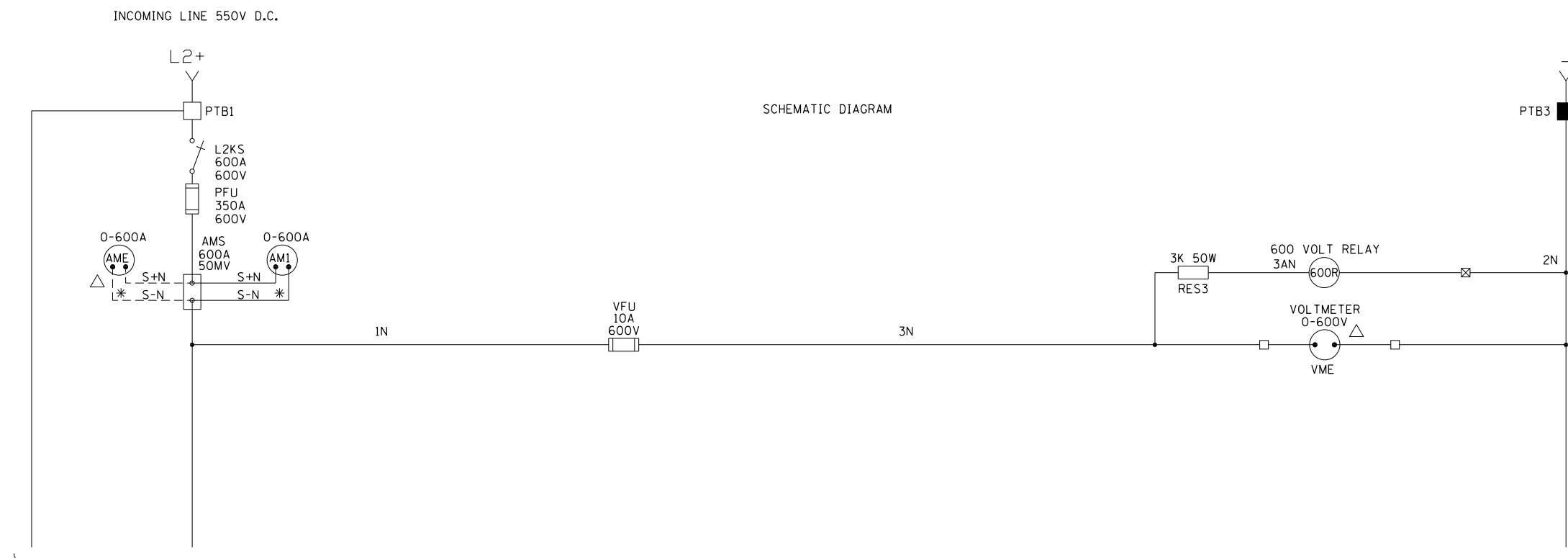
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-64.10
CDOT PROJECT NO. E-6-650			270 OF 411

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.



CONT'D-SEE DWG. E-65.2

NOTES:

- TERMINAL LOCATED IN LEFT SIDE MAIN CONTROLLER CABINET
- TERMINAL LOCATED IN RIGHT SIDE MAIN CONTROLLER CABINET
- ⊠ TRANSFER TERMINALS IN LEFT & RIGHT SIDE CABINETS
- △ LOCATED IN NORTH OPERATOR CONTROL CONSOLE
- * BLACK & WHITE TWISTED PAIR

	SYMBOL	CONTACTOR SEQUENCE												
		RAISE					OF	LOWER						
		6	5	4	3	2	1	F	1	2	3	4	5	6
MAIN LINE CONTACTOR	9	⊠	⊠	⊠	⊠	⊠	⊠		⊠	⊠	⊠	⊠	⊠	⊠
MACH. BRAKE CONTACTOR RAISE	23	⊠	⊠	⊠	⊠	⊠	⊠		⊠	⊠	⊠	⊠	⊠	⊠
MACH. BRAKE CONTACTOR LOWER	24	⊠	⊠	⊠	⊠	⊠	⊠		⊠	⊠	⊠	⊠	⊠	⊠
MOTOR BRAKE CONTACTOR	27	⊠	⊠	⊠	⊠	⊠	⊠		⊠	⊠	⊠	⊠	⊠	⊠
RAISE DIRECTIONALS	1-3-5-7	⊠	⊠	⊠	⊠	⊠	⊠		⊠	⊠	⊠	⊠	⊠	⊠
LOWER DIRECTIONALS	2-4-6-8	⊠	⊠	⊠	⊠	⊠	⊠		⊠	⊠	⊠	⊠	⊠	⊠
ARM. SHUNT HI	10-11			⊠	⊠	⊠	⊠		⊠	⊠	⊠	⊠	⊠	⊠
ARM. SHUNT MED.	40-41			⊠	⊠	⊠	⊠		⊠	⊠	⊠	⊠	⊠	⊠
ARM. SHUNT LOW	12-13			⊠	⊠	⊠	⊠		⊠	⊠	⊠	⊠	⊠	⊠
1ST ACCEL.	14	⊠	⊠						⊠	⊠				⊠
2ND ACCEL.	15	⊠	⊠						⊠	⊠				⊠
3RD ACCEL.	16	⊠	⊠						⊠	⊠				⊠
FINAL ACCEL.	17-18	⊠	⊠						⊠	⊠				⊠
ARM. SERIES CONTACTORS	19-20	⊠	⊠	⊠	⊠	⊠	⊠		⊠	⊠	⊠	⊠	⊠	⊠

⊠ CONTACT CLOSED

RELAY SETTINGS		O/L RELAY SETTINGS	
SYMBOL	SETTING	CONTACTOR	AMP SETTING
Y1	3.0 SEC	38	AMP
Y2	3.0 SEC	39	AMP
Y3	3.0 SEC	40	AMP

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PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

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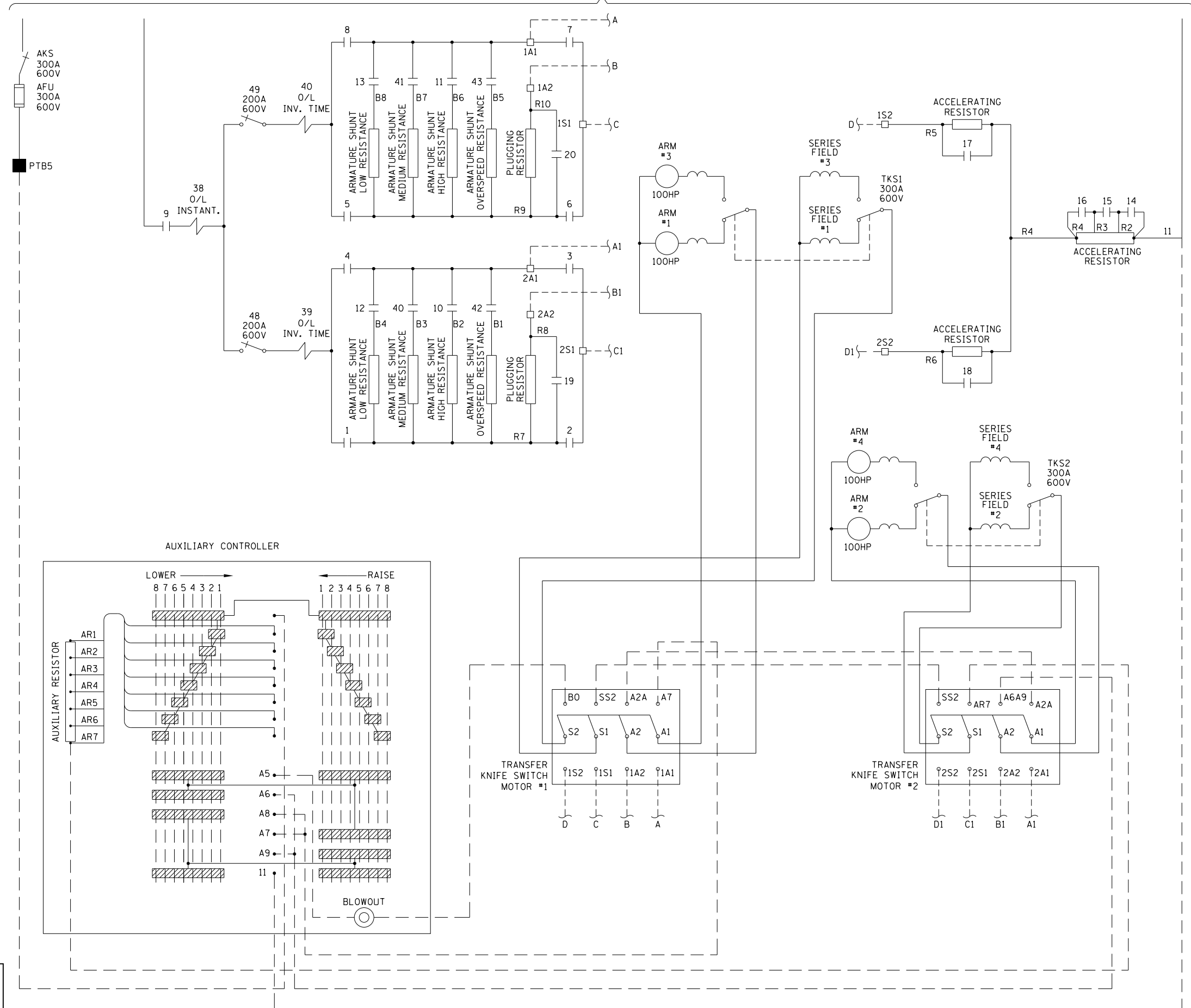
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

NORTH MAIN CONTROLLER SCHEMATIC
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-65.1
CDOT PROJECT NO. E-6-650			271 OF 411

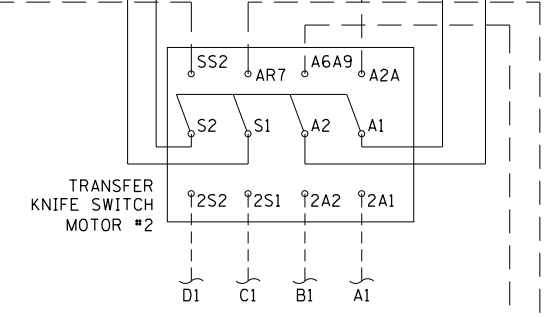
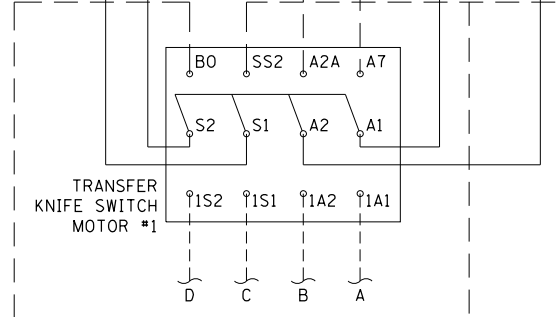
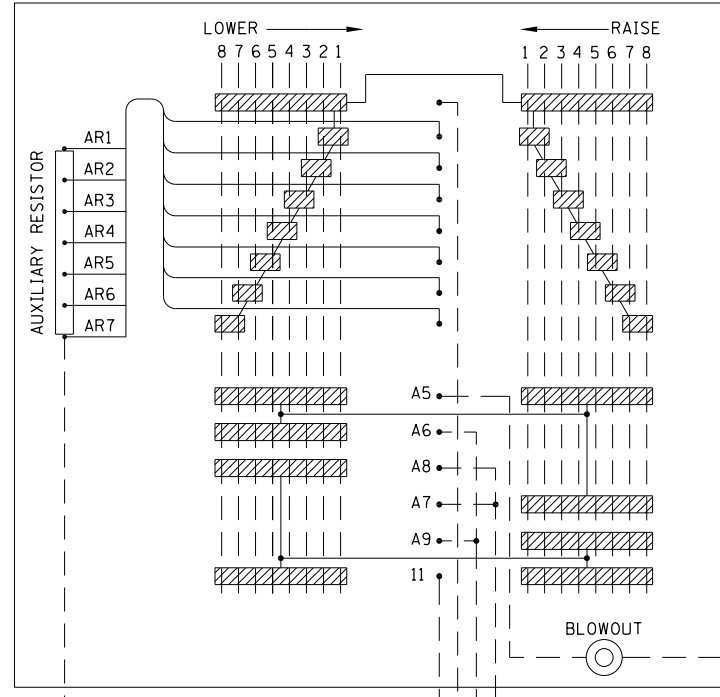
M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E65_1-North Main Controller Schematic.dgn 6/22/2017

CONT'D-SEE DWG. E-65.1



- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.

AUXILIARY CONTROLLER



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PLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
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CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
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LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

NORTH MAIN CONTROLLER SCHEMATIC
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-65.2
CDOT PROJECT NO. E-6-650			272 OF 411

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6/22/2017

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PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

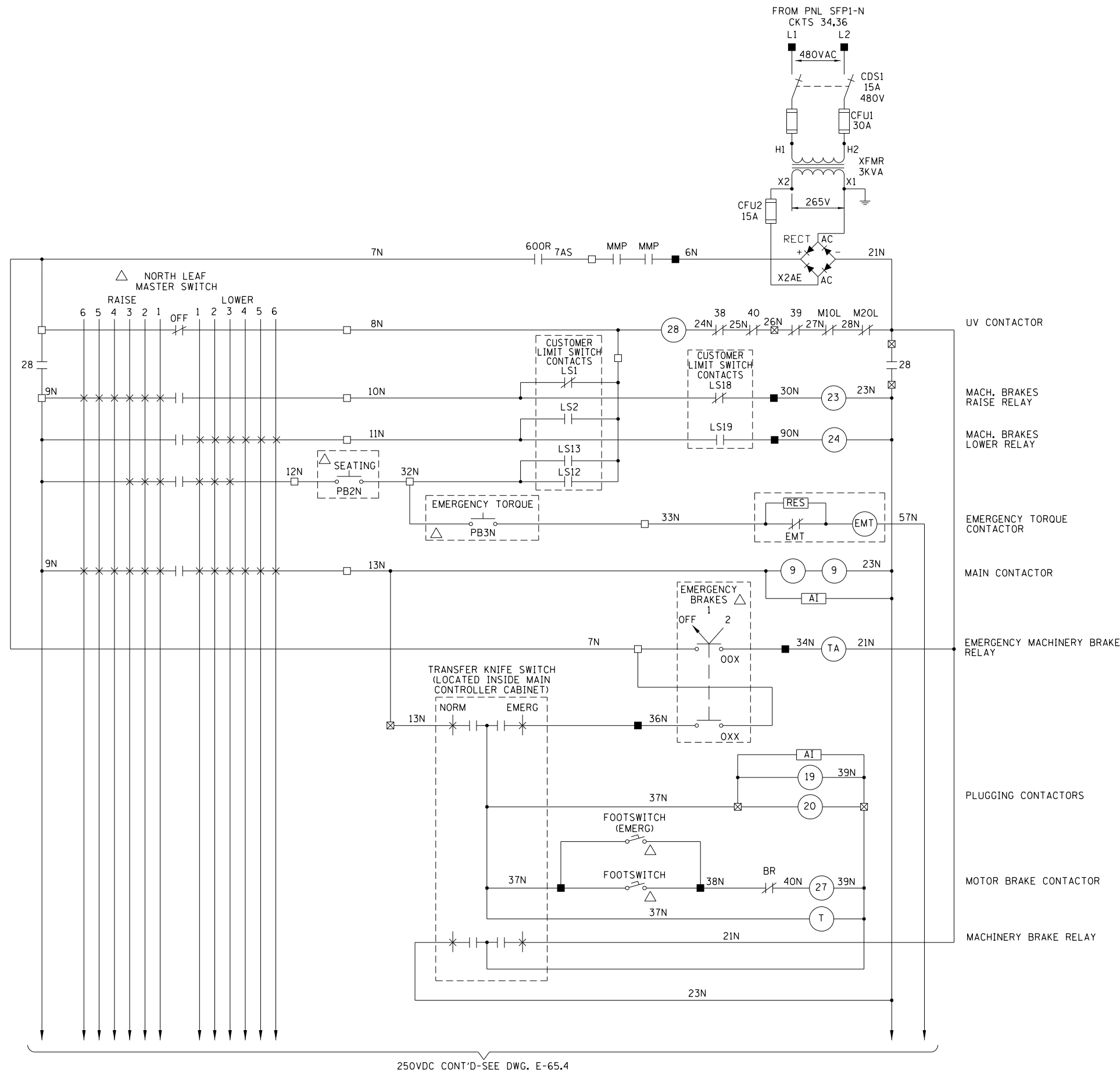
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH MAIN CONTROLLER SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-65.3
CDOT PROJECT NO. E-6-650			273 OF 411

NOTES:

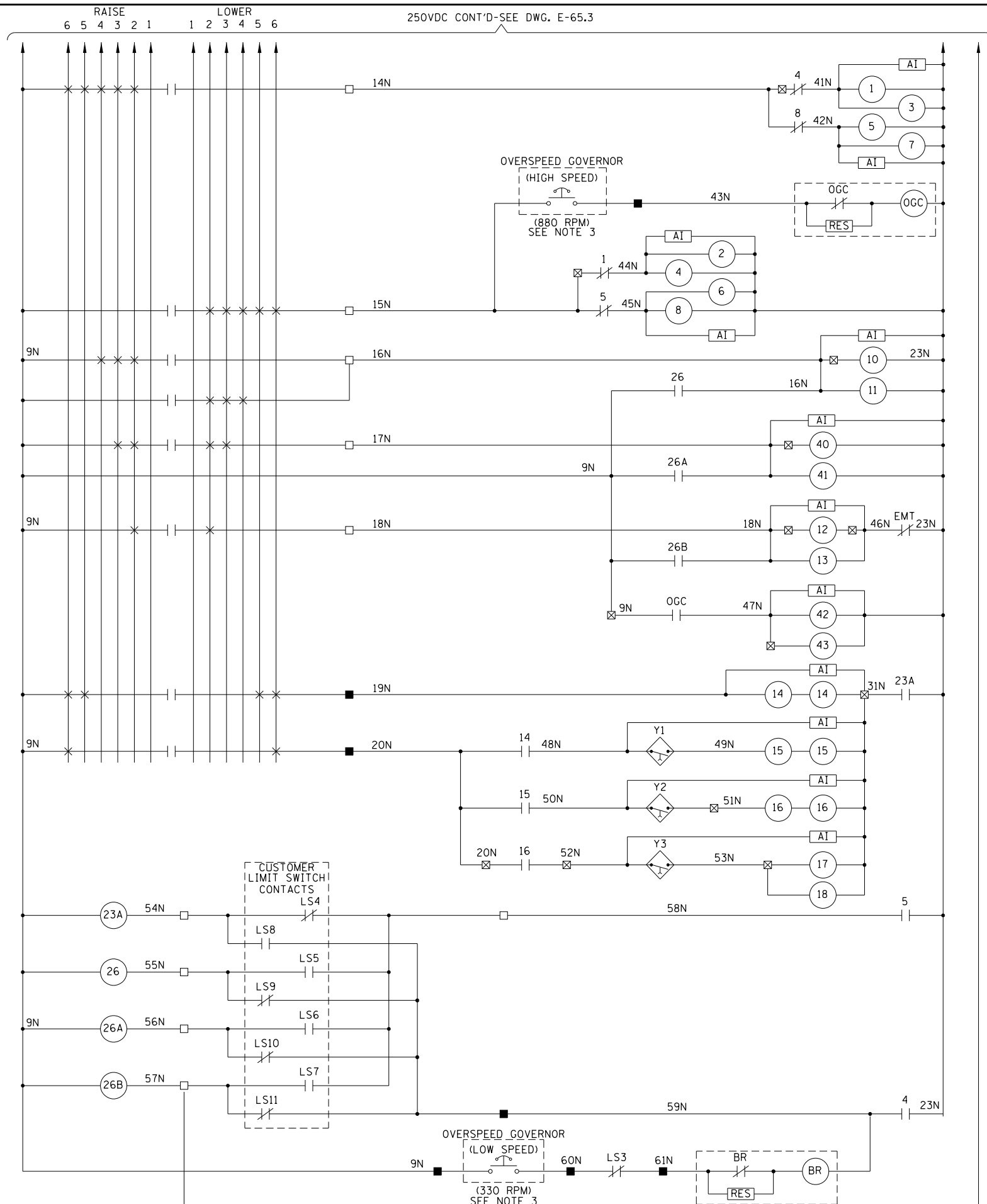
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.
- SPEED SWITCH ADJUSTABLE RANGES:
ASCENDING SPEED RANGE: 250-1350 RPM
DESCENDING SPEED RANGE: 175-1120 RPM



LEGEND:

- TERMINAL LOCATED IN LEFT SIDE MAIN CONTROLLER CABINET
- TERMINAL LOCATED IN RIGHT SIDE MAIN CONTROLLER CABINET
- ⊗ TRANSFER TERMINALS IN LEFT & RIGHT SIDE CABINETS
- △ LOCATED IN NORTH OPERATOR CONSOLE
- * BLACK & WHITE TWISTED PAIR

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6/22/2017



NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. SPEED SWITCH ADJUSTABLE RANGES:
ASCENDING SPEED RANGE: 250-1350 RPM
DESCENDING SPEED RANGE: 175-1120 RPM

LEGEND:

- TERMINAL LOCATED IN LEFT SIDE MAIN CONTROLLER CABINET
- TERMINAL LOCATED IN RIGHT SIDE MAIN CONTROLLER CABINET
- △ TRANSFER TERMINALS IN LEFT & RIGHT SIDE CABINETS
- △ LOCATED IN NORTH OPERATOR CONSOLE
- * BLACK & WHITE TWISTED PAIR

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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

CITY OF CHICAGO
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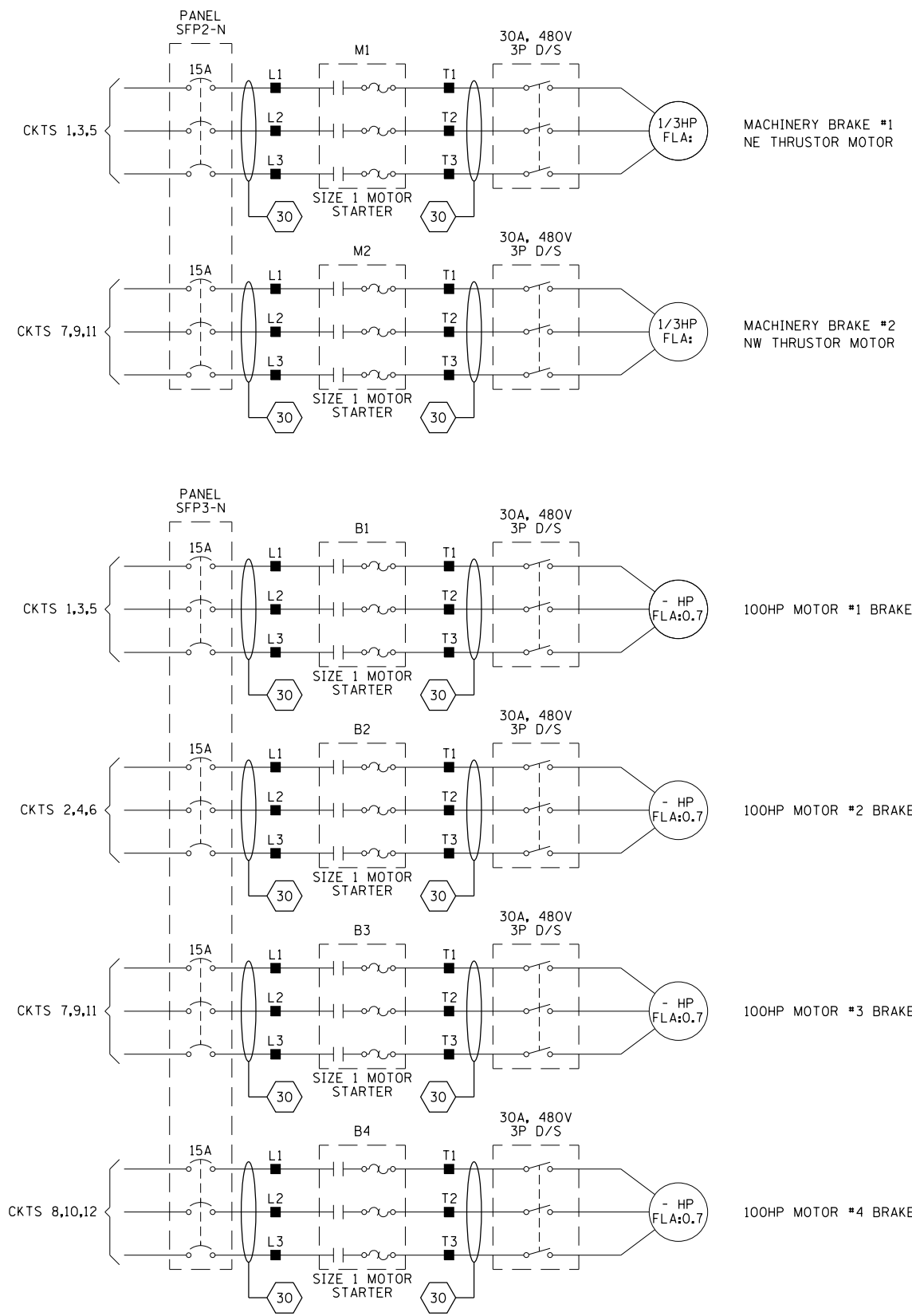
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

NORTH MAIN CONTROLLER SCHEMATIC
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-65.4
CDOT PROJECT NO. E-6-650			274 OF 411

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.



- NOTES:
- TERMINAL LOCATED IN LEFT SIDE MAIN CONTROLLER CABINET
 - TERMINAL LOCATED IN RIGHT SIDE MAIN CONTROLLER CABINET
 - ⊠ TRANSFER TERMINALS IN LEFT & RIGHT SIDE CABINETS
 - △ LOCATED IN NORTH OPERATOR CONSOLE
 - * BLACK & WHITE TWISTED PAIR

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PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISIED -	
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 DEPARTMENT OF TRANSPORTATION
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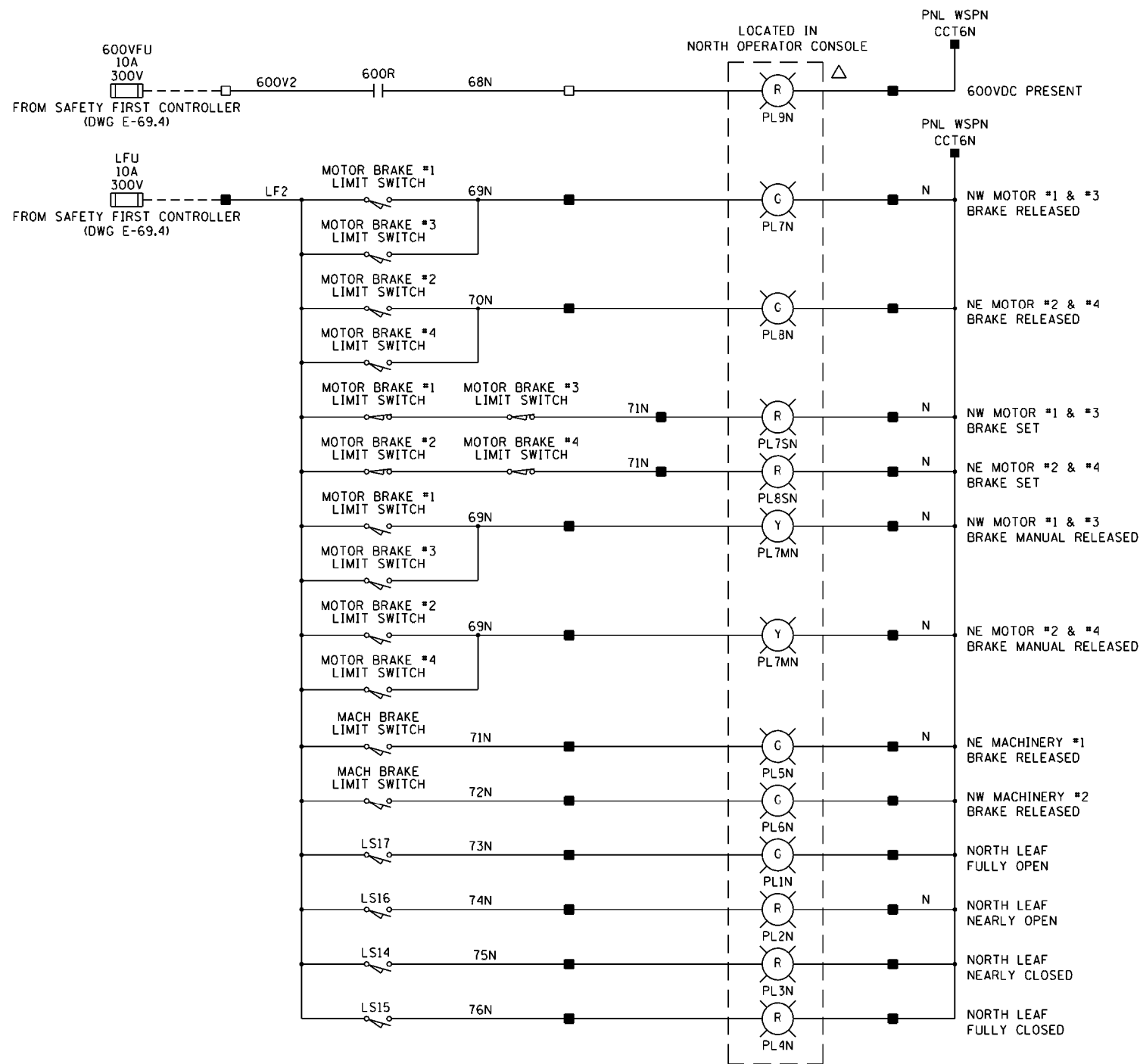
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

NORTH MAIN CONTROLLER SCHEMATIC
 (STRUCTURE NO. 016-6030)

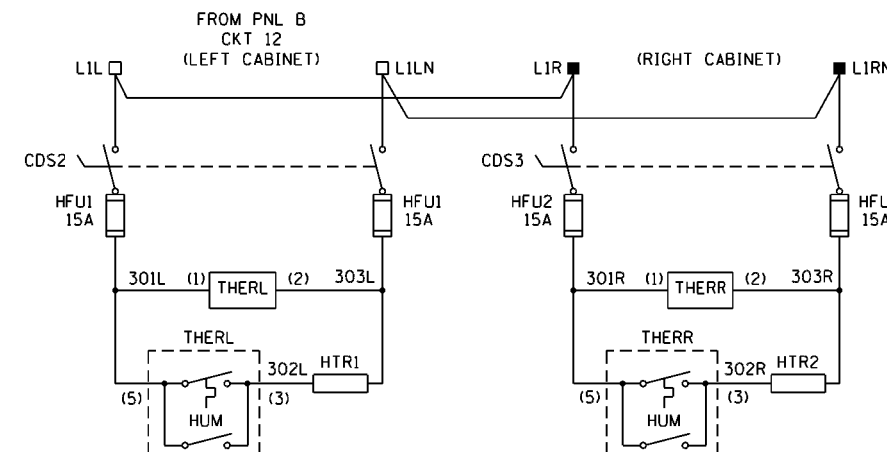
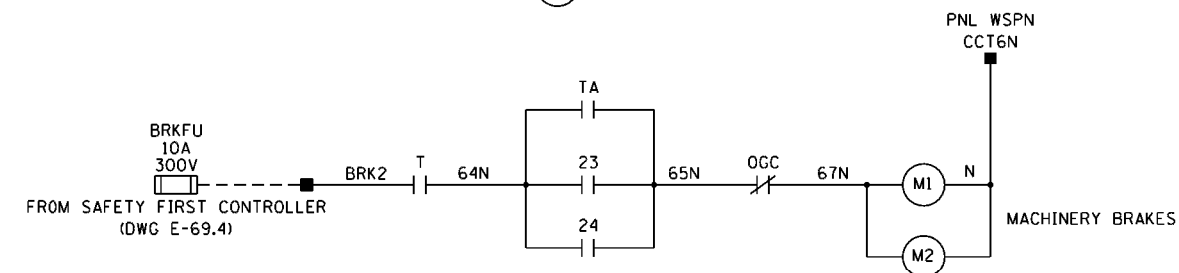
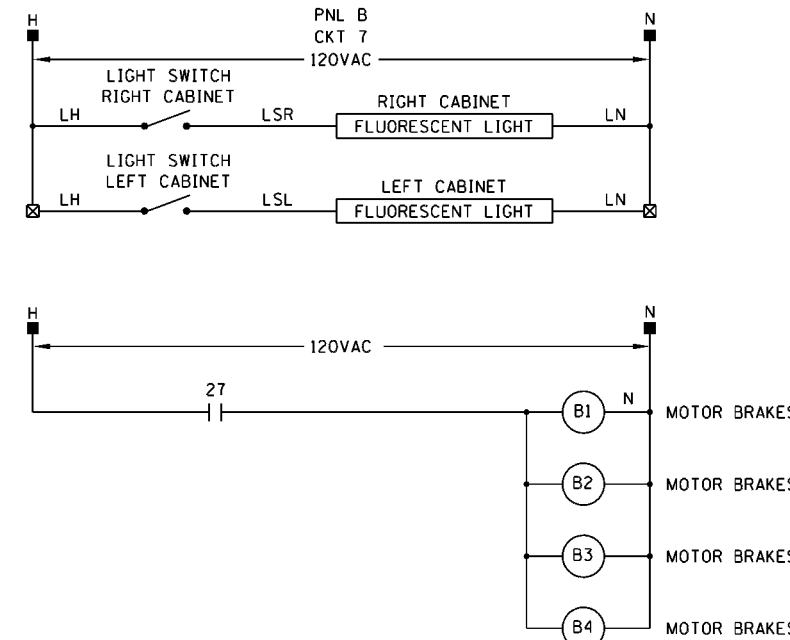
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-65.5
CDOT PROJECT NO. E-6-650			275 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



- LEGEND:
- TERMINAL LOCATED IN LEFT SIDE MAIN MOTOR CABINET
 - TERMINAL LOCATED IN RIGHT SIDE MAIN MOTOR CABINET
 - ⊠ TRANSFER TERMINALS IN LEFT & RIGHT SIDE CABINETS
 - △ LOCATED IN NORTH OPERATOR CONTROL CONSOLE
 - * BLACK & WHITE TWISTED PAIR



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USER NAME = cmartin	DESIGNED - BG	REVISED -
PLOT SCALE = N.T.S.	CHECKED - AF	REVISED -
PLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
	CHECKED - MEB	REVISED -

CITY OF CHICAGO
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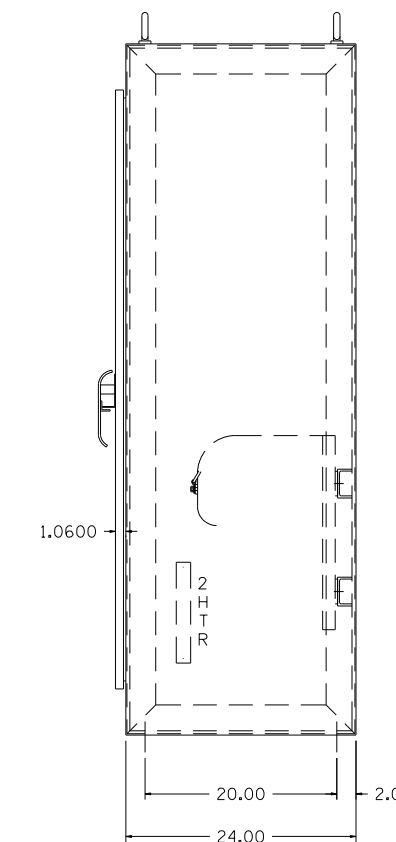
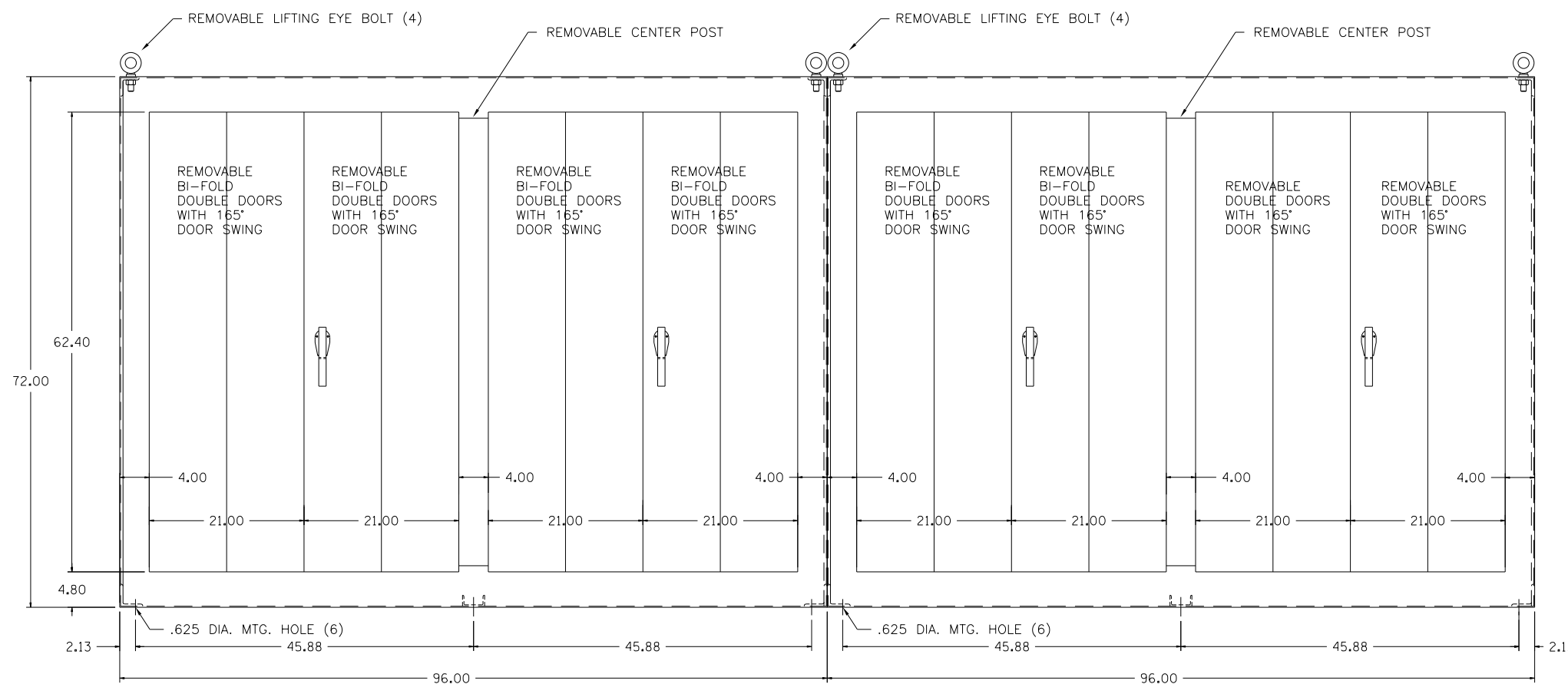
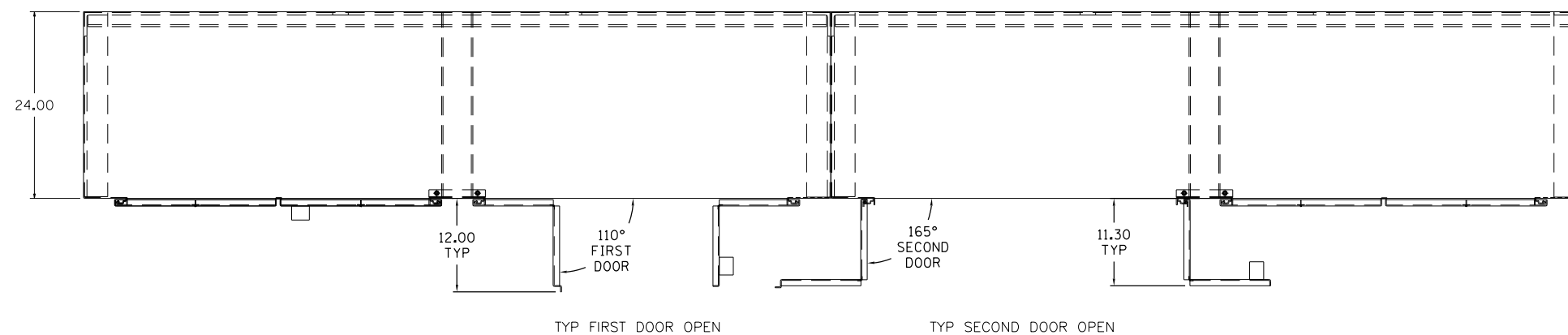
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

NORTH MAIN CONTROLLER SCHEMATIC
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-65.6
CDOT PROJECT NO. E-6-650			276 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



- NOTES:
- 72.00" HIGH X 96.00" WIDE X 24.00" DEEP (X2) 10GA CABINET CONSTRUCTION TYPE NEMA 3R ENCLOSURE. FINISH: PAINT ANSI GRAY
- LEFT SIDE CABINET "A", THE RIGHT SIDEWALL WILL HAVE CUTOUT
- RIGHT SIDE CABINET "B", THE LEFT SIDEWALL WILL HAVE CUTOUT FOR ACCESS BETWEEN CABINETS "A" AND "B"

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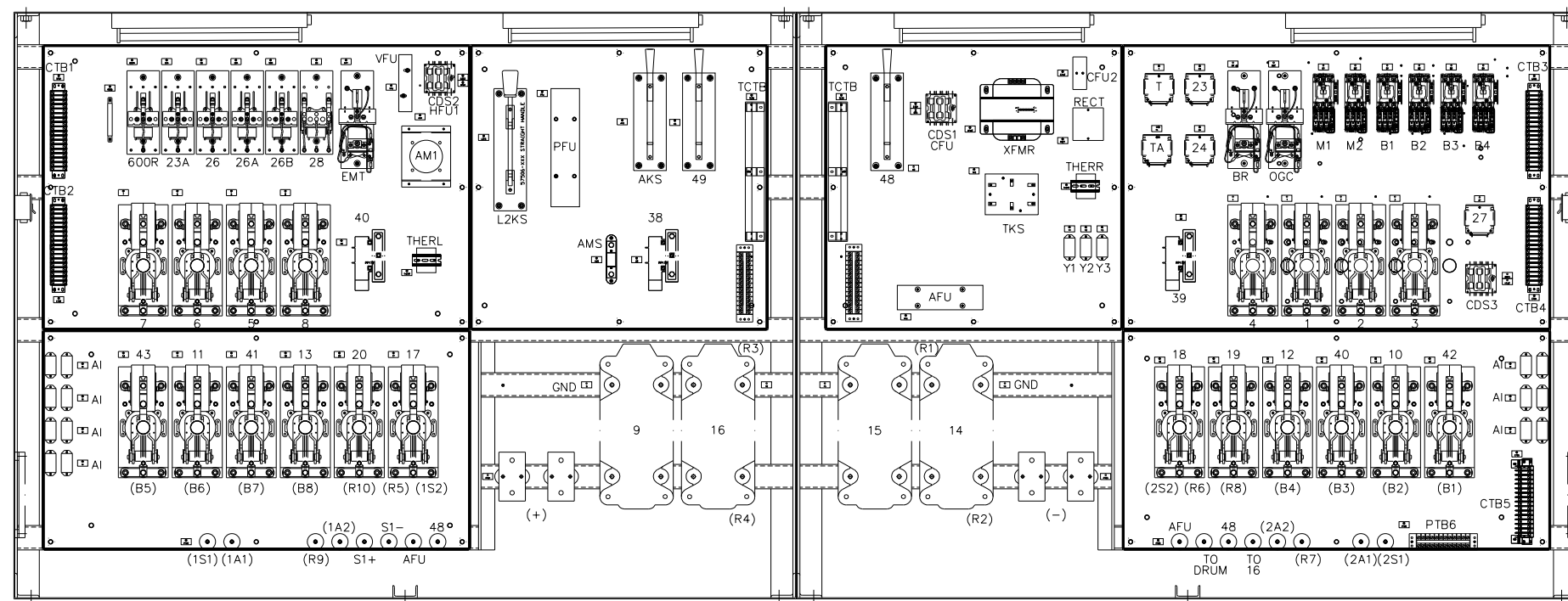
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

NORTH MAIN CONTROLLER OUTLINE
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-66.1
CDOT PROJECT NO. E-6-650			277 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



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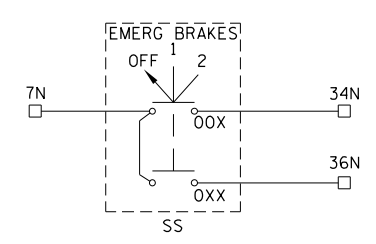
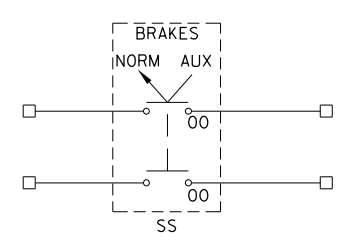
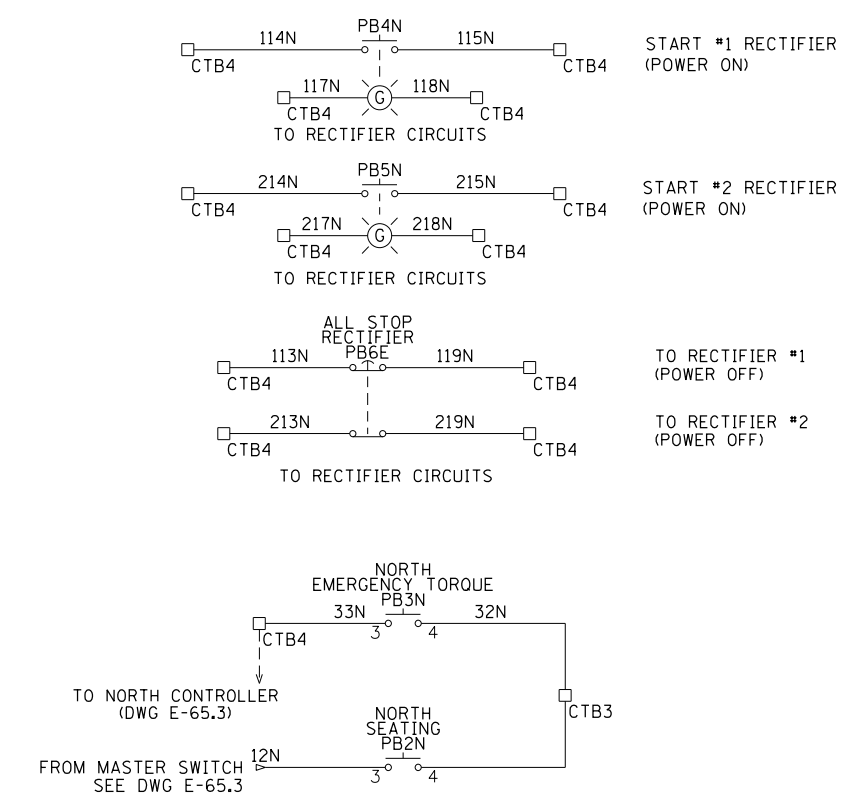
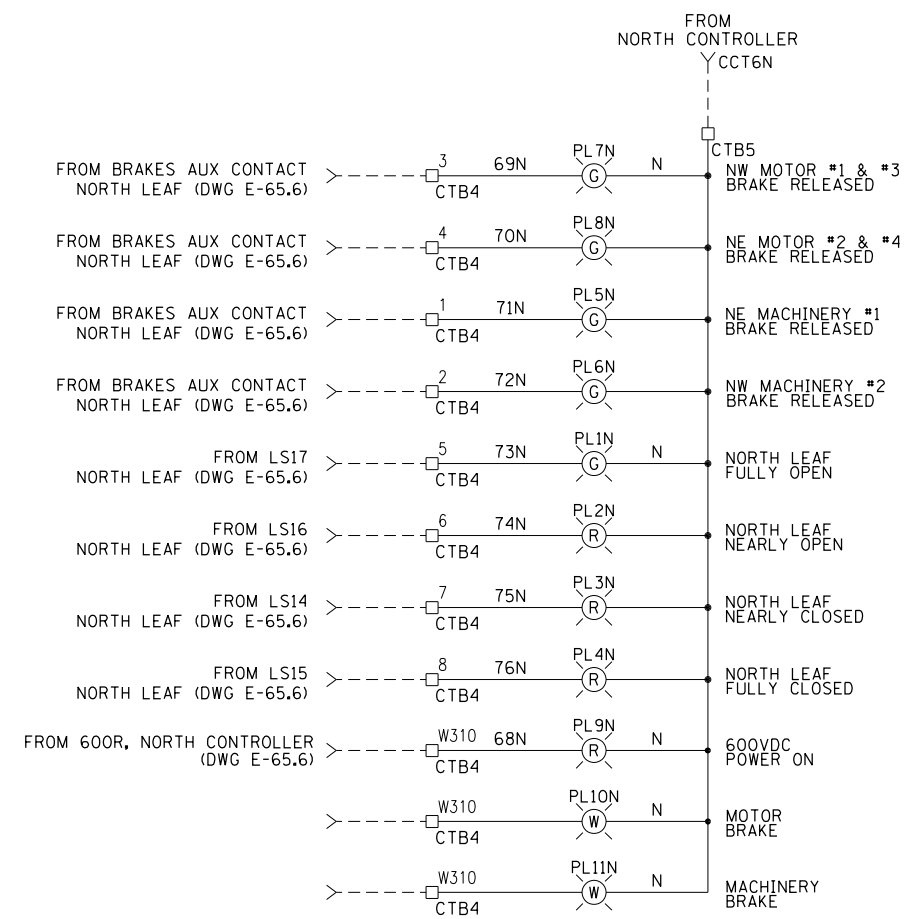
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**NORTH MAIN CONTROLLER OUTLINE
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-66.2
CDOT PROJECT NO. E-6-650			278 OF 411

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.



□ TERMINAL LOCATED IN NORTH OPERATOR CONSOLE

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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

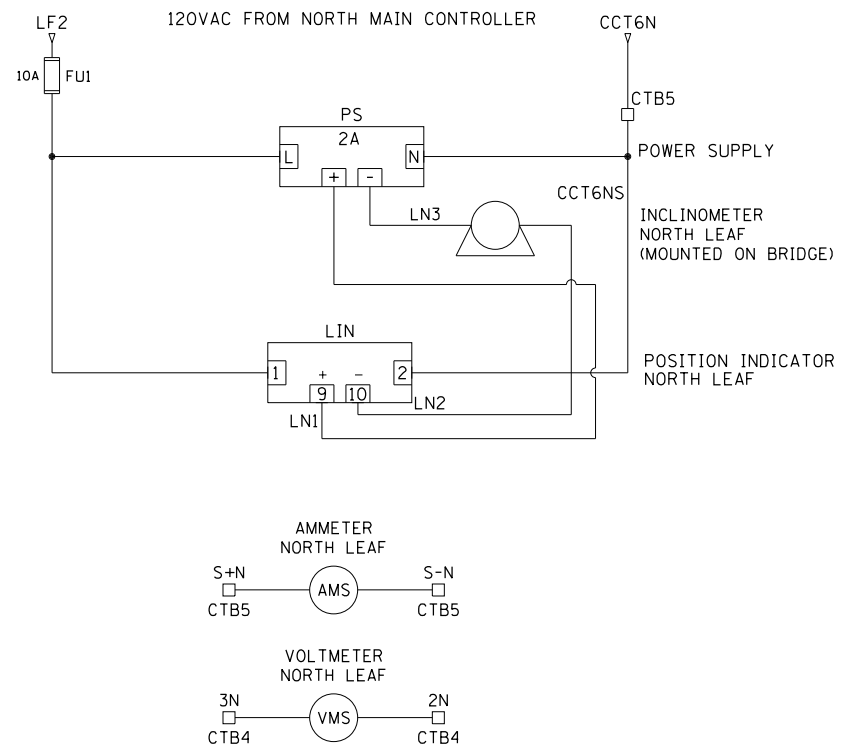
**NORTH OPERATOR CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-67.1
CDOT PROJECT NO. E-6-650			279 OF 411

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6/22/2017

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



□ TERMINAL LOCATED IN NORTH OPERATOR CONSOLE

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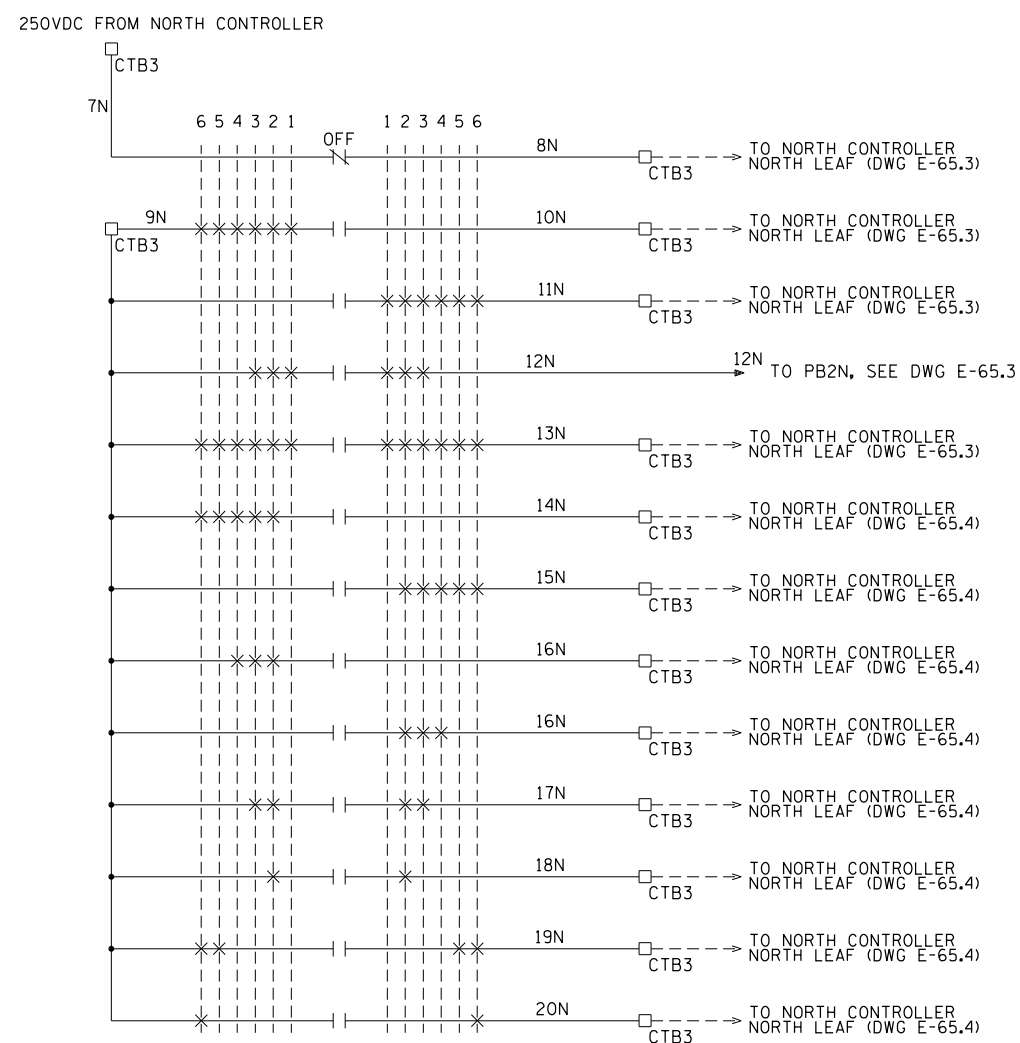
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH OPERATOR CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-67.2
CDOT PROJECT NO. E-6-650			280 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



□ TERMINAL LOCATED IN NORTH OPERATOR CONSOLE

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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**NORTH OPERATOR CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-67.3
CDOT PROJECT NO. E-6-650			281 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

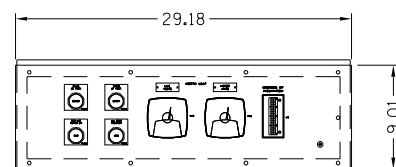


FIGURE 1
(FRONT SLOPE CONTROLS)
SEE SHEET 2

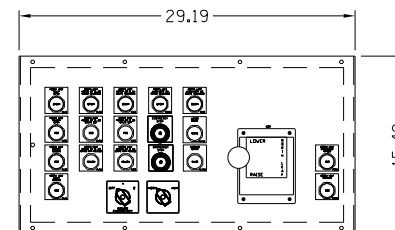
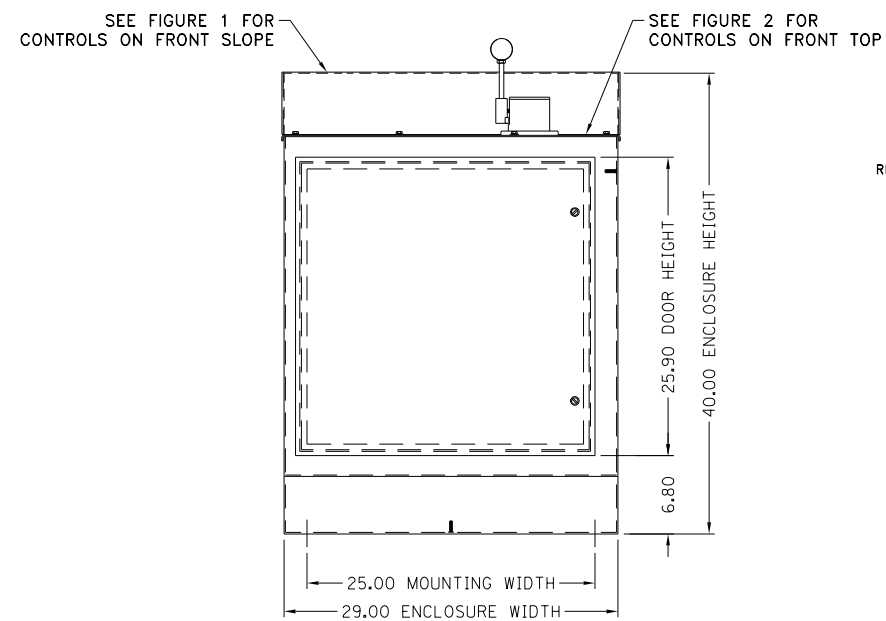
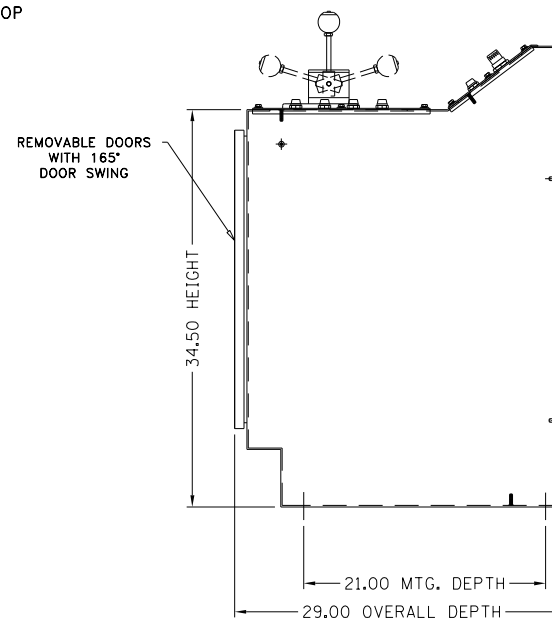


FIGURE 2
(FRONT TOP CONTROLS)
SEE SHEET 3



FRONT VIEW



RIGHT SIDE VIEW

MATERIAL: #11 GA STEEL
FINISH: PAINT ASA 61 GRAY

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DEPARTMENT OF TRANSPORTATION
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH OPERATOR CONSOLE OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-68.1
CDOT PROJECT NO. E-6-650			282 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

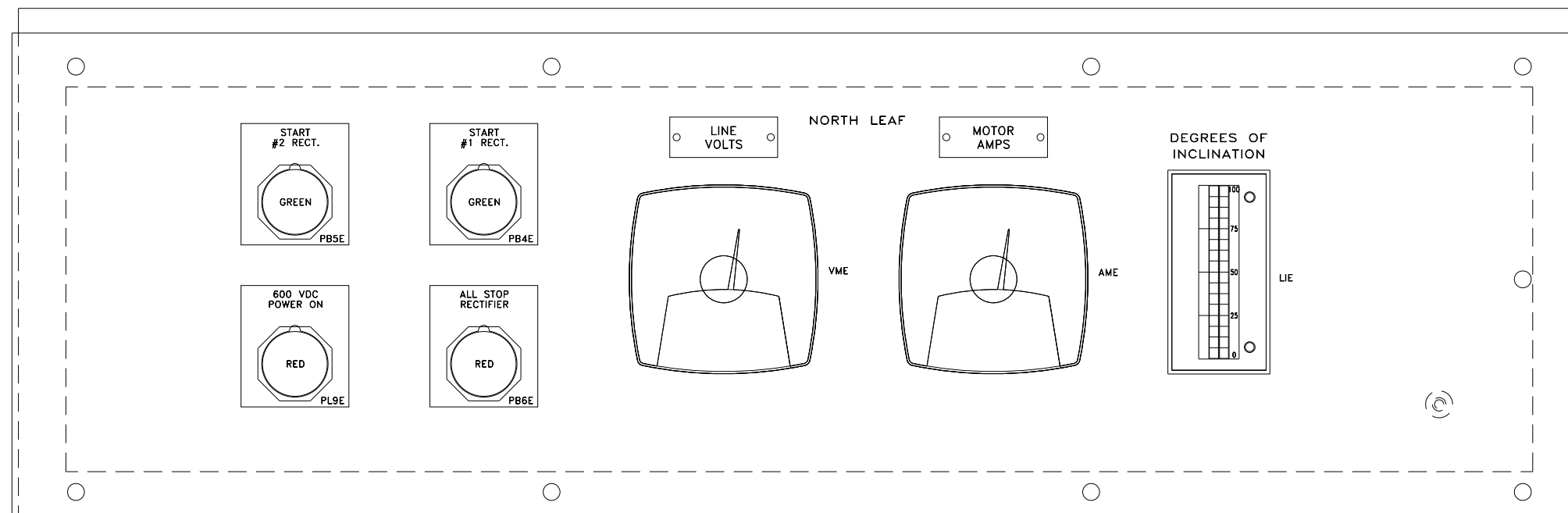


FIGURE 1 DETAIL
SCALE: NONE

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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH OPERATOR CONSOLE OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-68.2
CDOT PROJECT NO. E-6-650			283 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

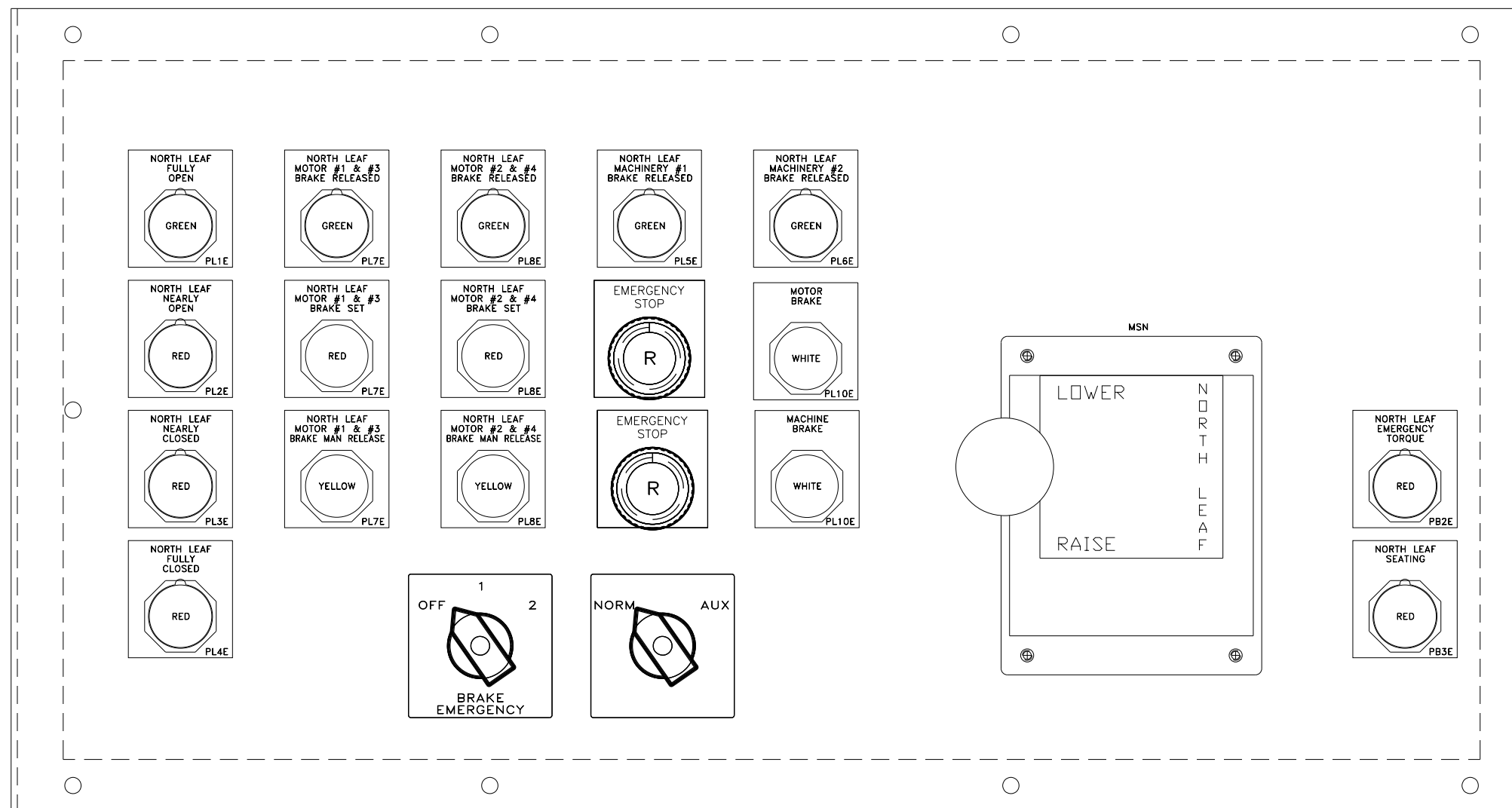


FIGURE 2 DETAIL
SCALE: NONE

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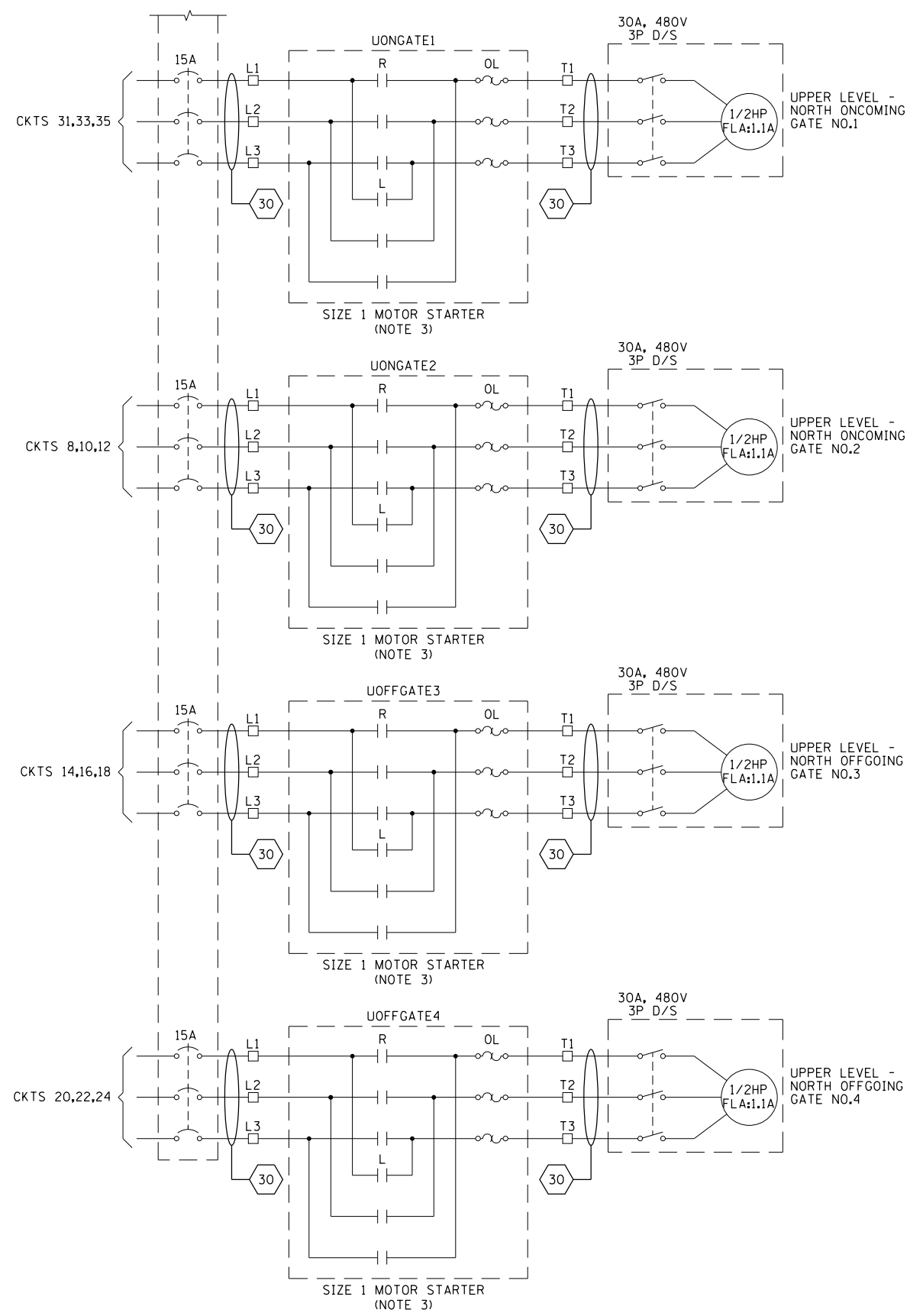
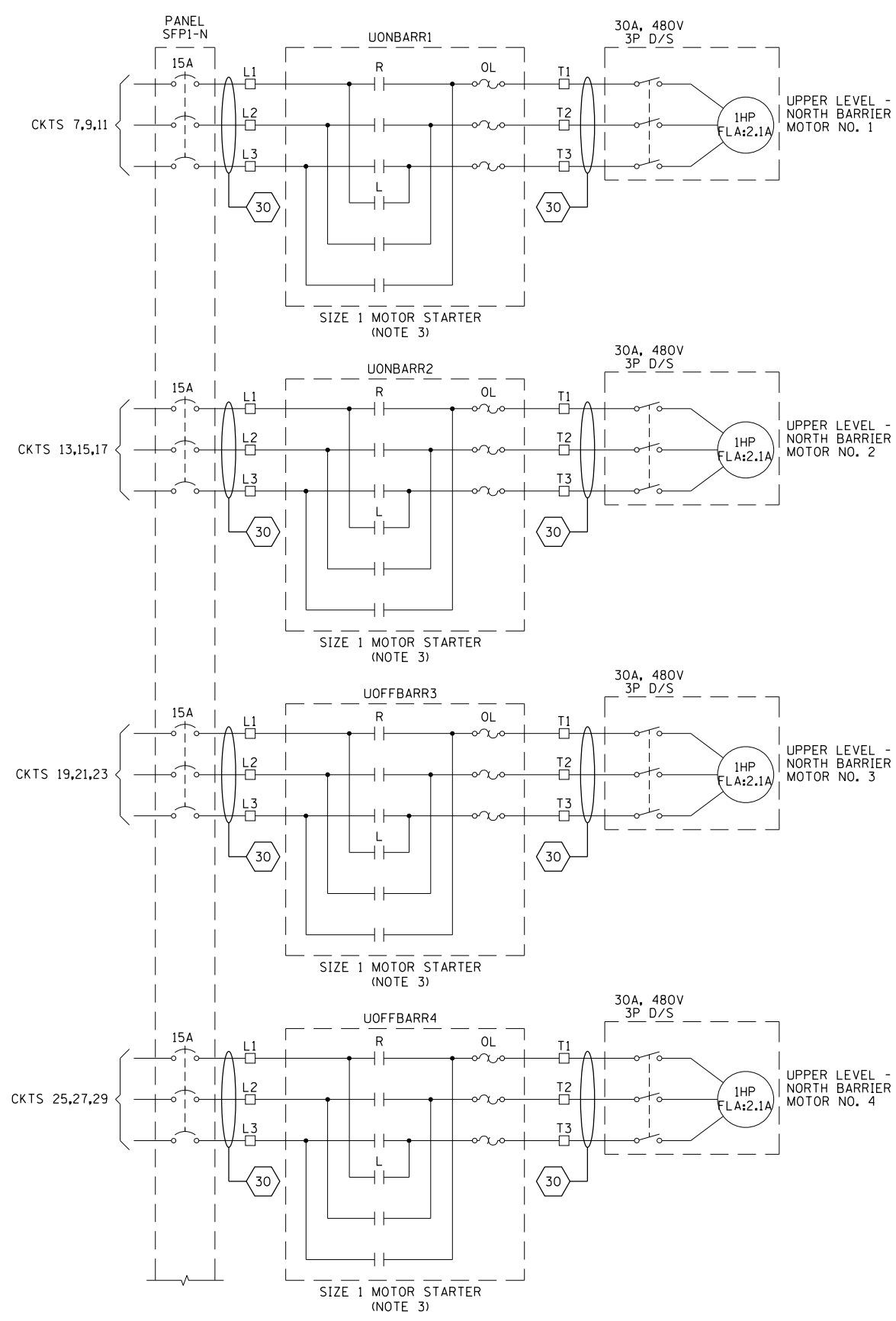
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH OPERATOR CONSOLE OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-68.3
CDOT PROJECT NO. E-6-650			284 OF 411

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - STARTERS TO BE LOCATED IN SAFETY FIRST CABINETS.



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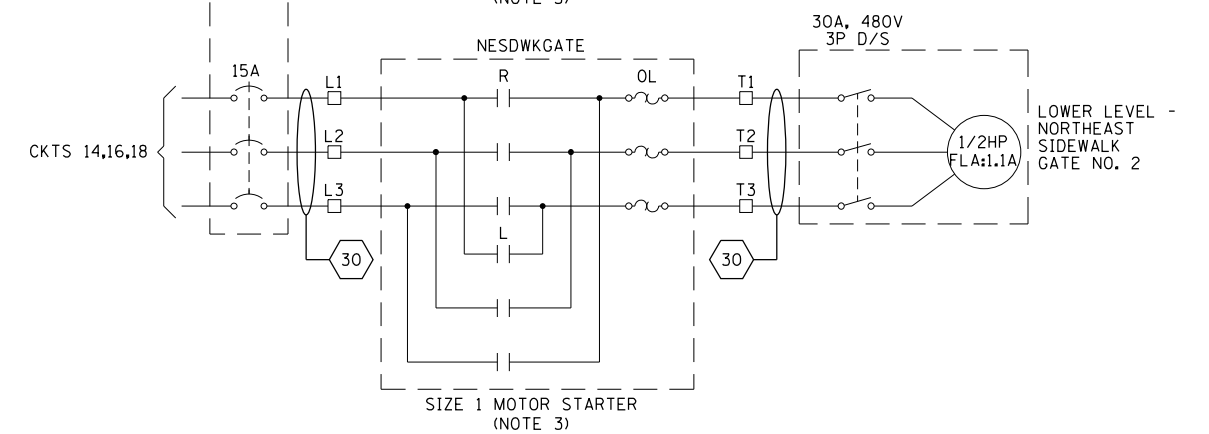
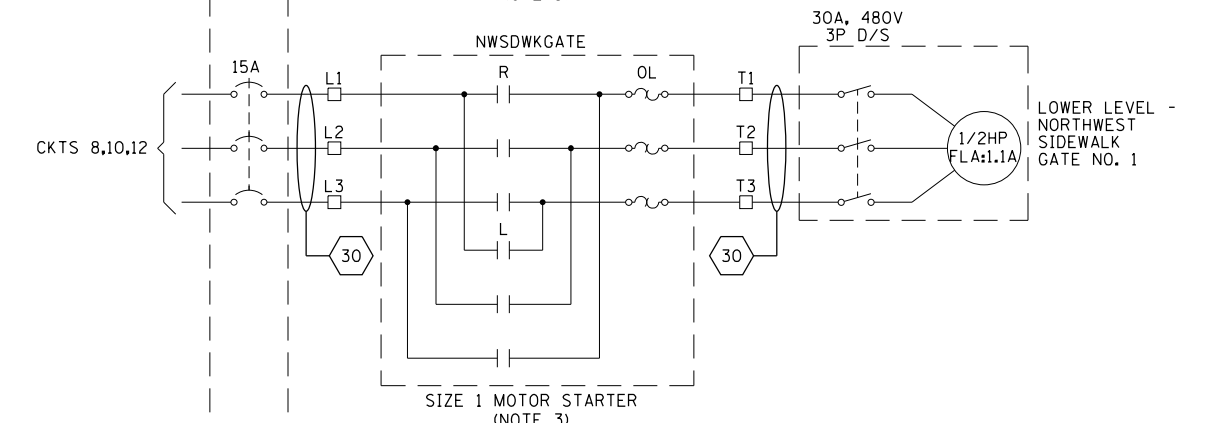
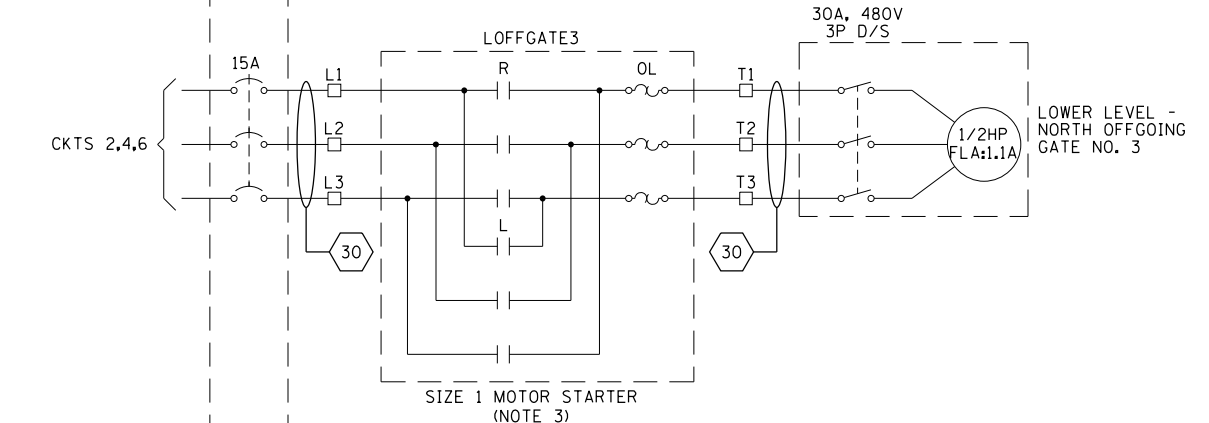
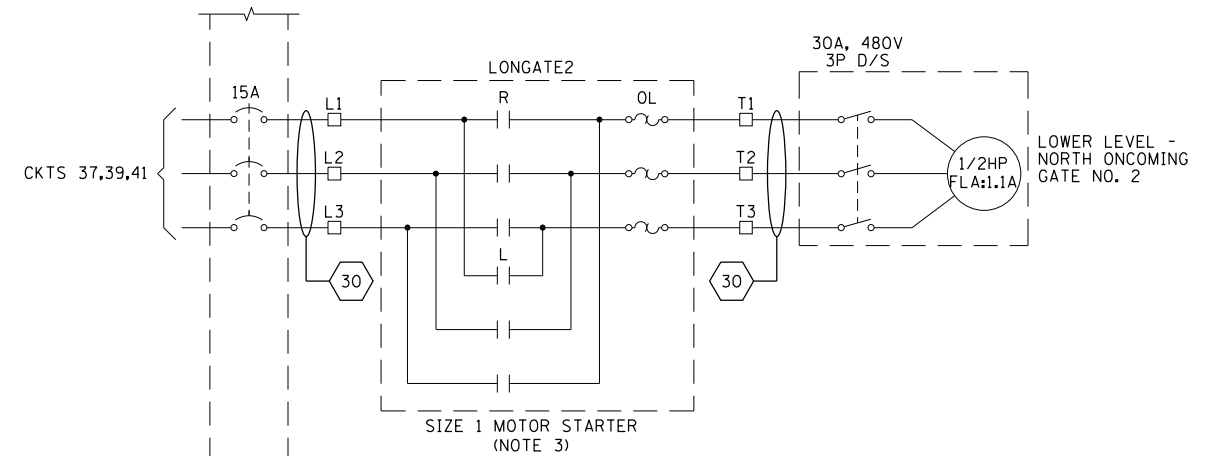
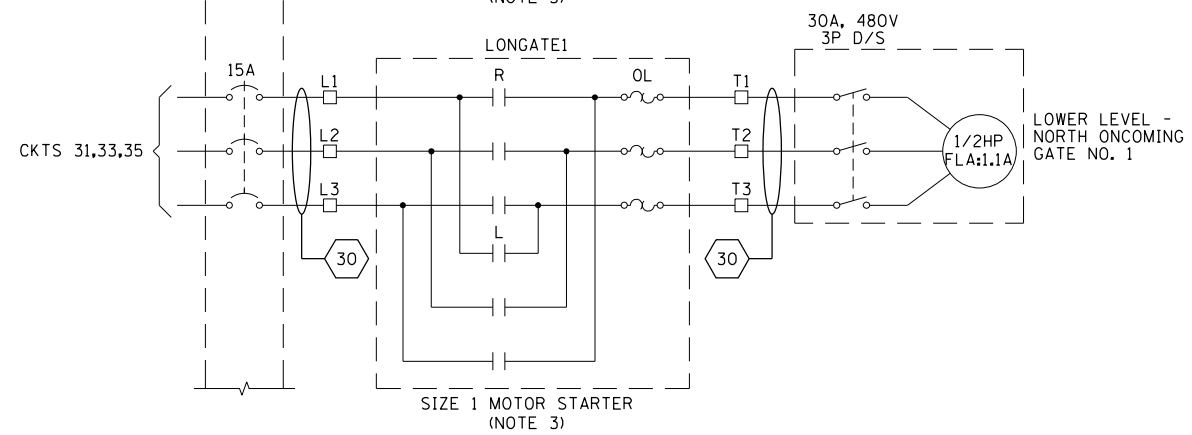
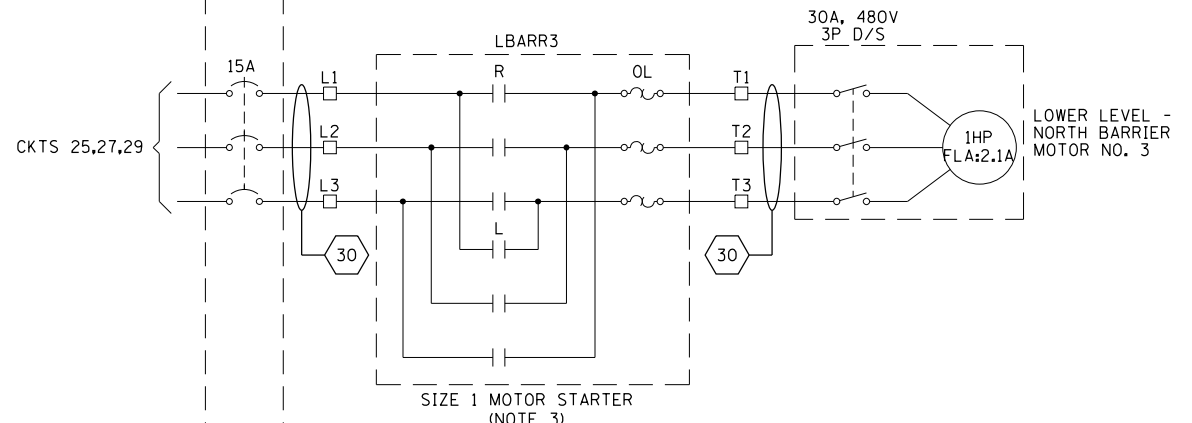
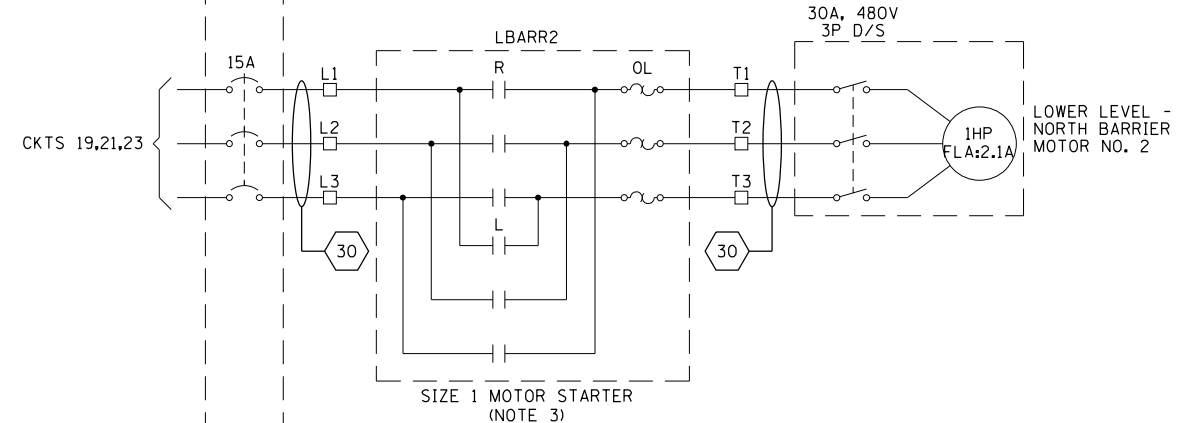
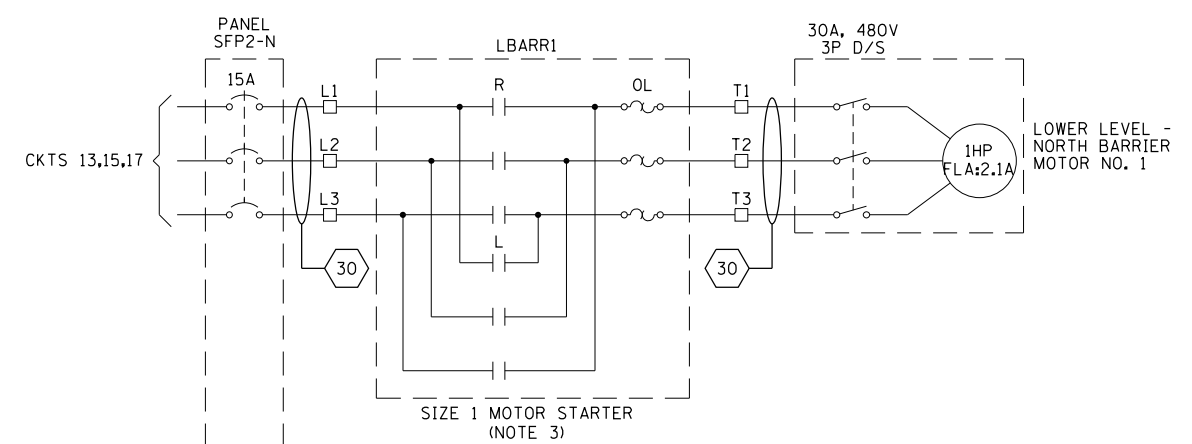
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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST
 CONTACTOR CABINET AND CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-69.1
CDOT PROJECT NO. E-6-650			285 OF 411

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - STARTERS TO BE LOCATED IN SAFETY FIRST CABINETS.



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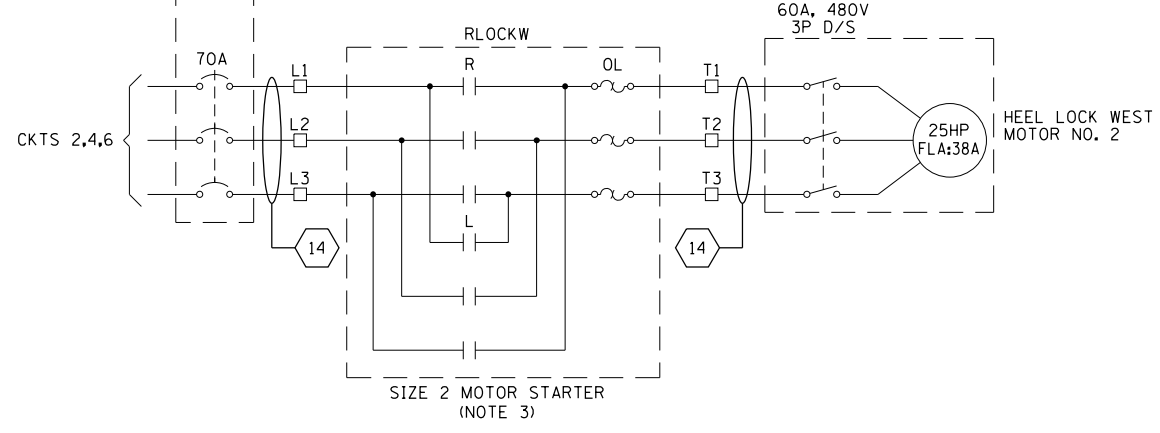
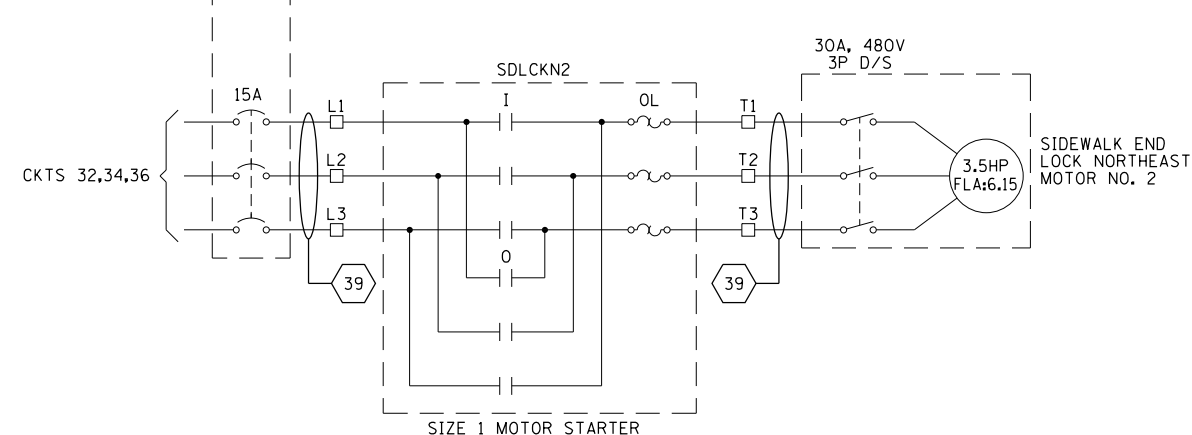
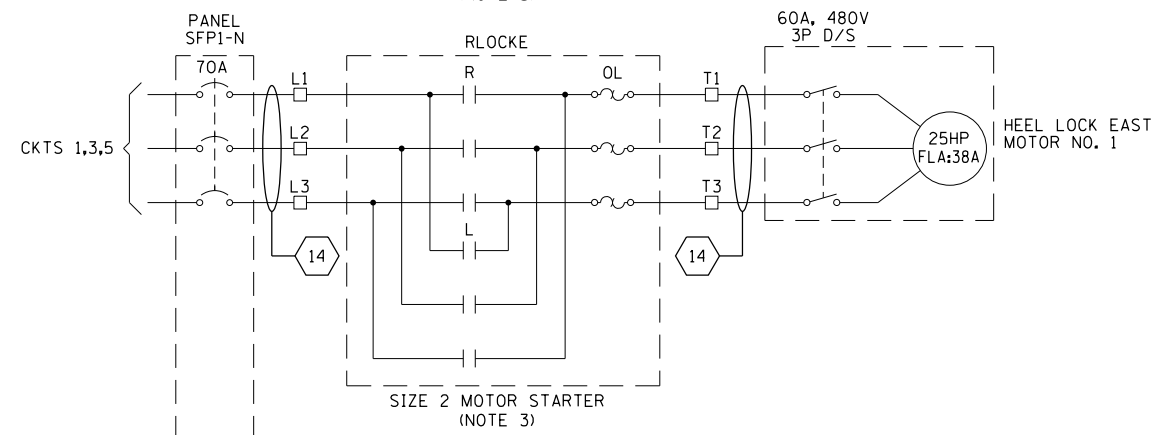
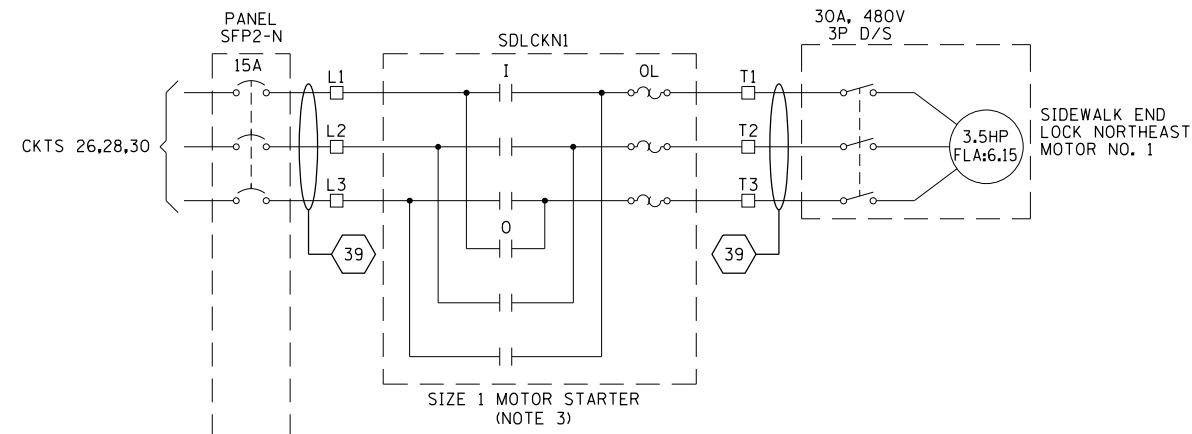
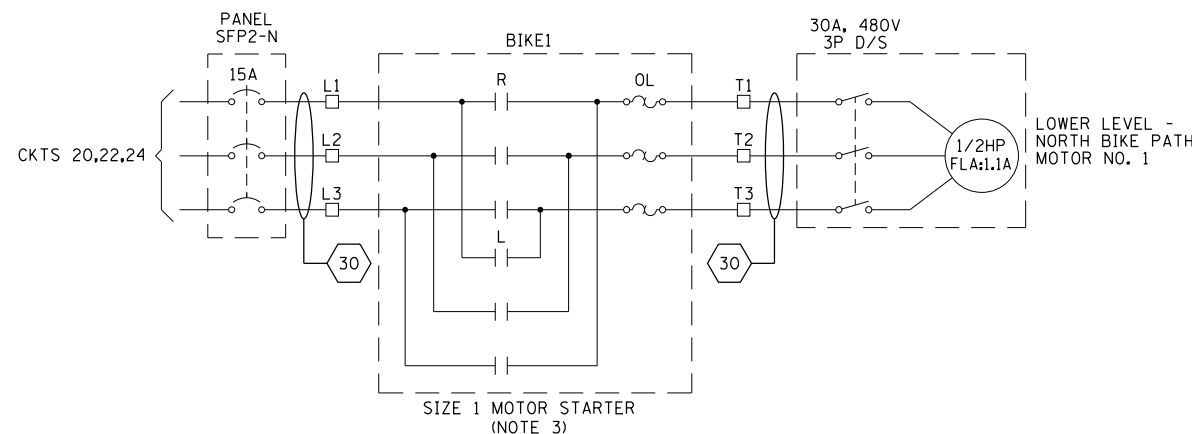
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST
 CONTACTOR CABINET AND CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-69.2
CDOT PROJECT NO. E-6-650			286 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. STARTERS TO BE LOCATED IN SAFETY FIRST CABINETS.



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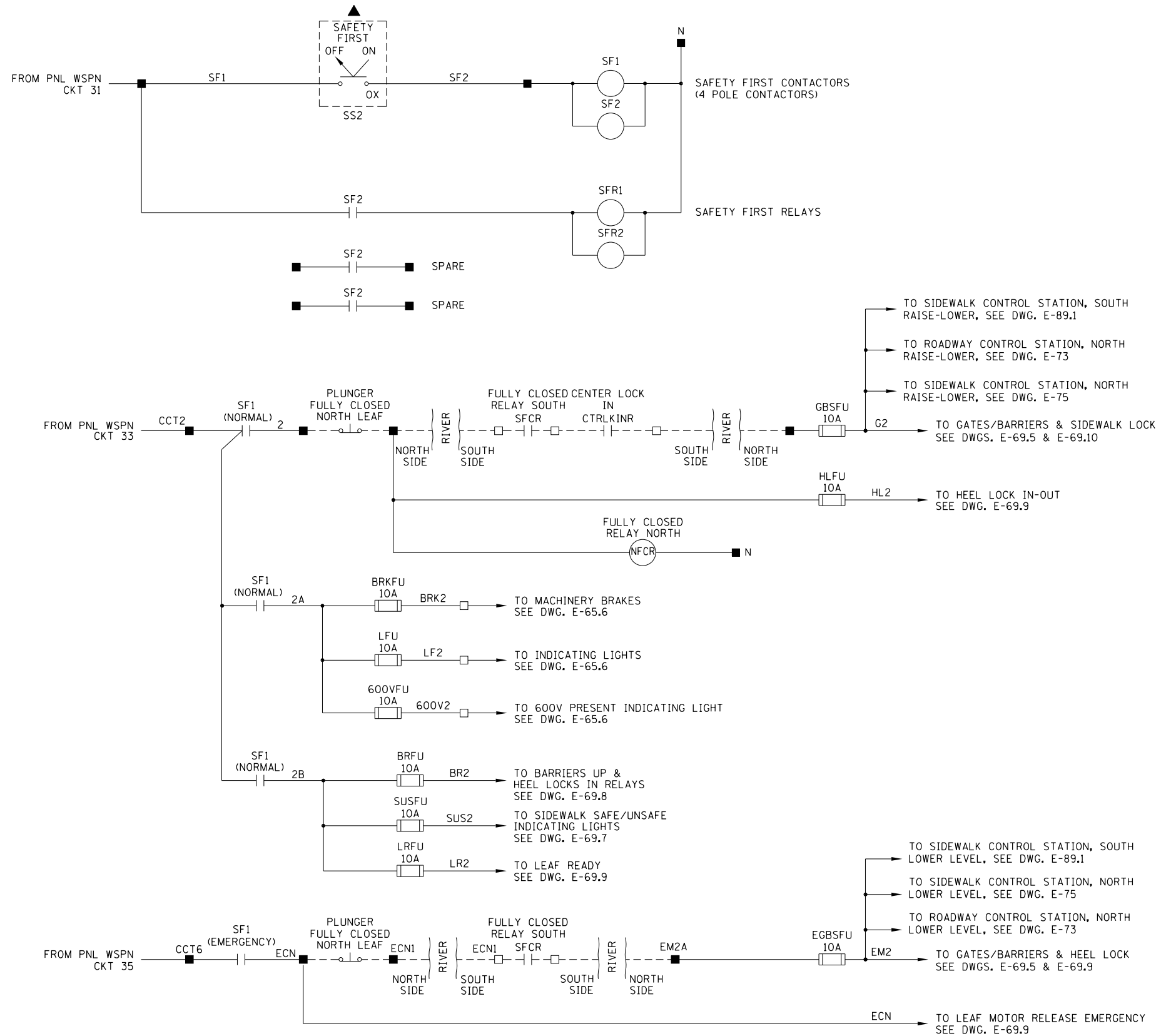
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LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

NORTH SAFETY FIRST
 CONTACTOR CABINET AND CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)

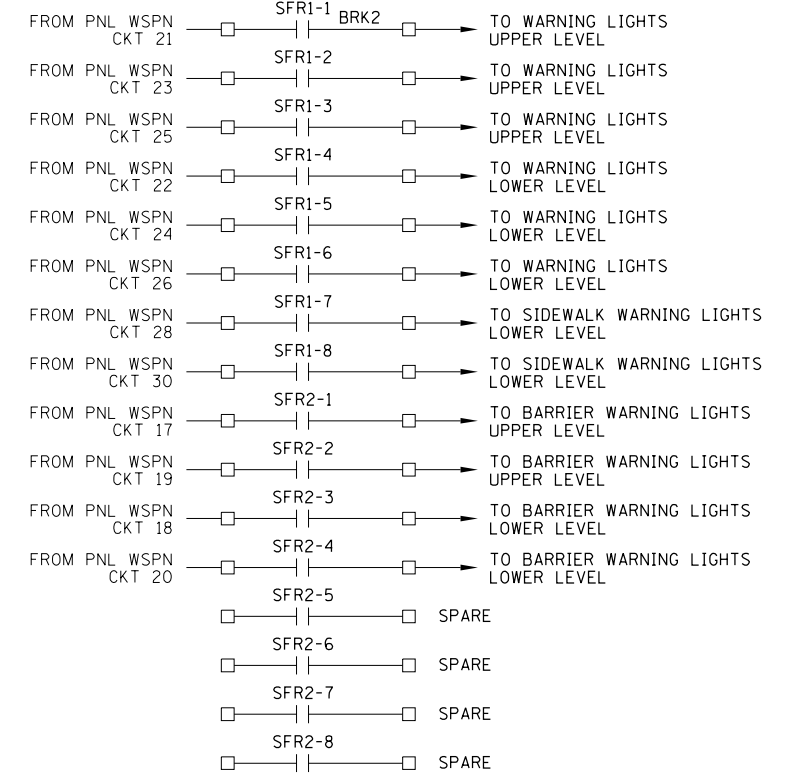
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-69.3
CDOT PROJECT NO. E-6-650			287 OF 411

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6/22/2017



NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.
- LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
- UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.



- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◇ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ☒ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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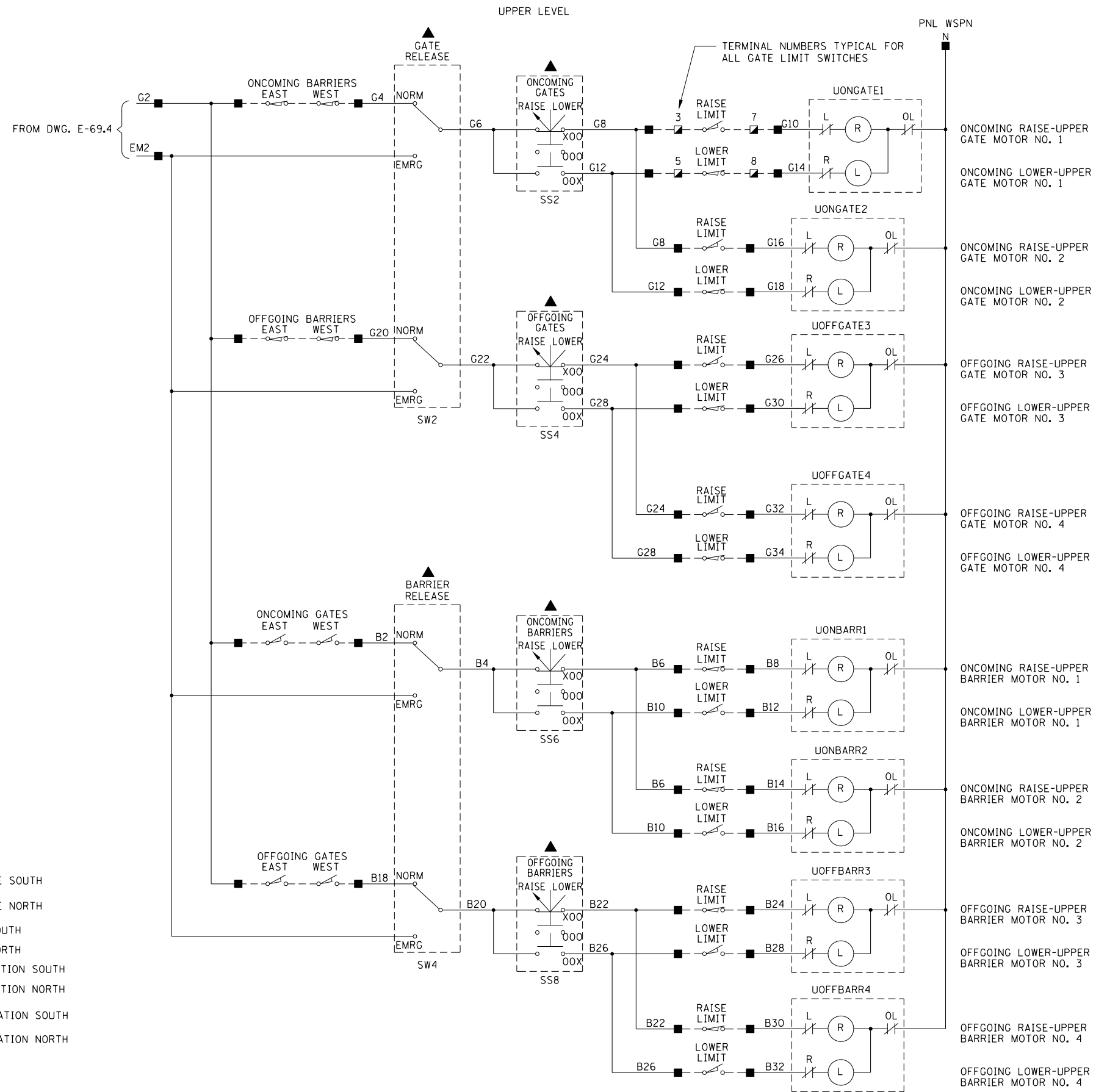
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-69.4
CDOT PROJECT NO. E-6-650			288 OF 411

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6/22/2017



- NOTES:
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 3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
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- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◻ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◼ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

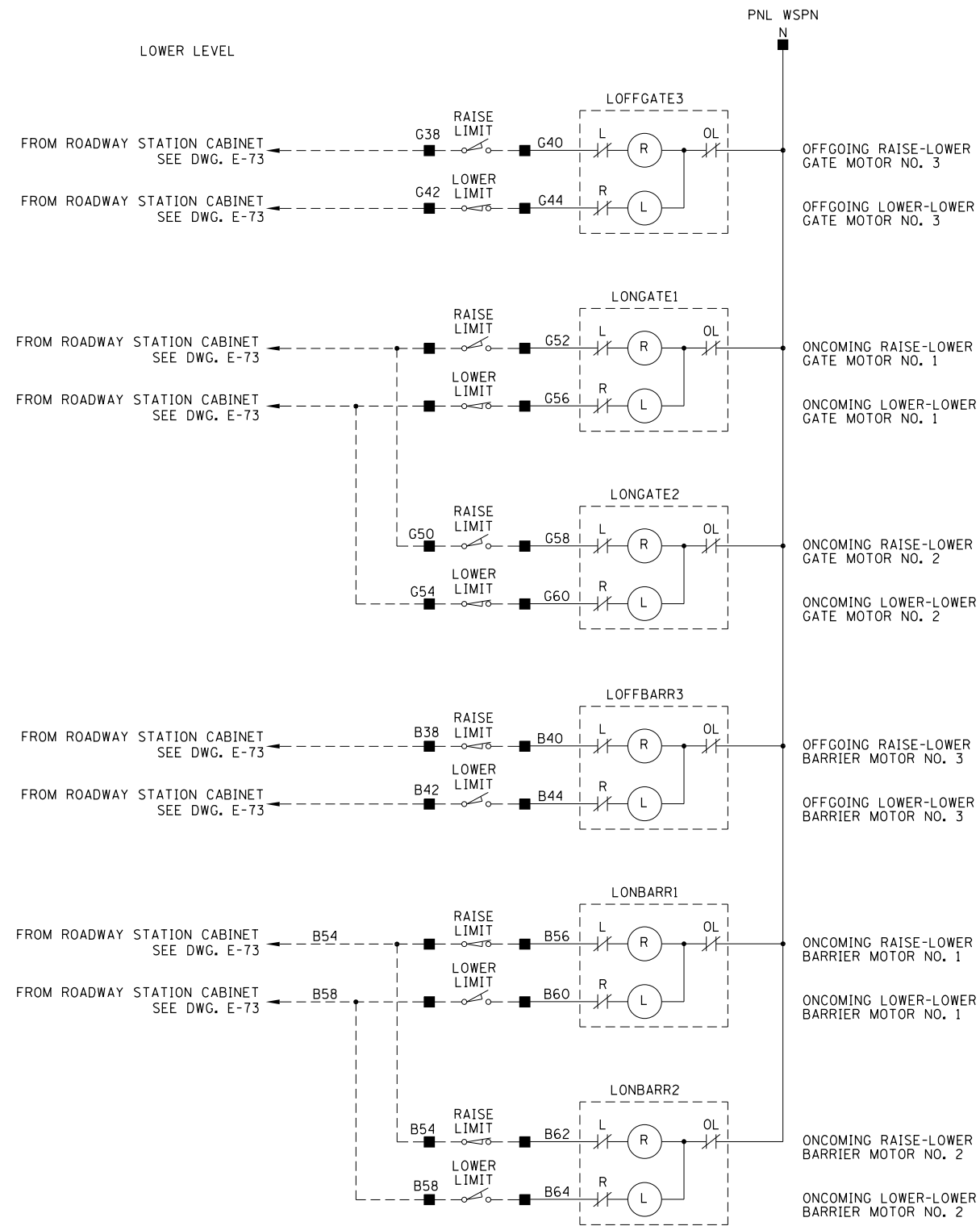
**NORTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-69.5
CDOT PROJECT NO. E-6-650			289 OF 411

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6/22/2017

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- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◻ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◼ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊗ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

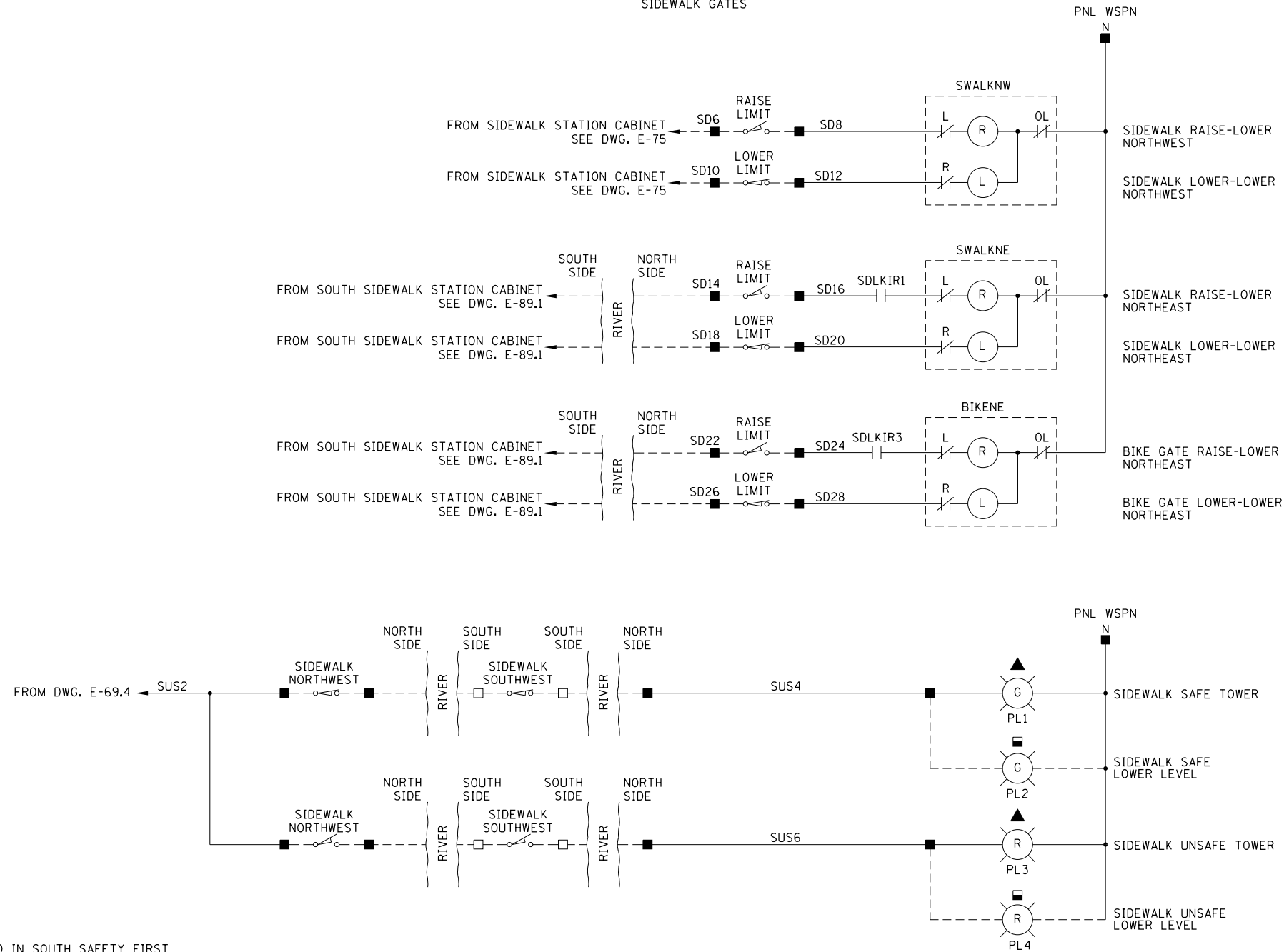
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-69.6
CDOT PROJECT NO. E-6-650			290 OF 411

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6/30/2017

SIDEWALK GATES



NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
4. UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.

- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◻ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◼ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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PLOT DATE = 6/30/2017	CHECKED - MEB	REVISED -

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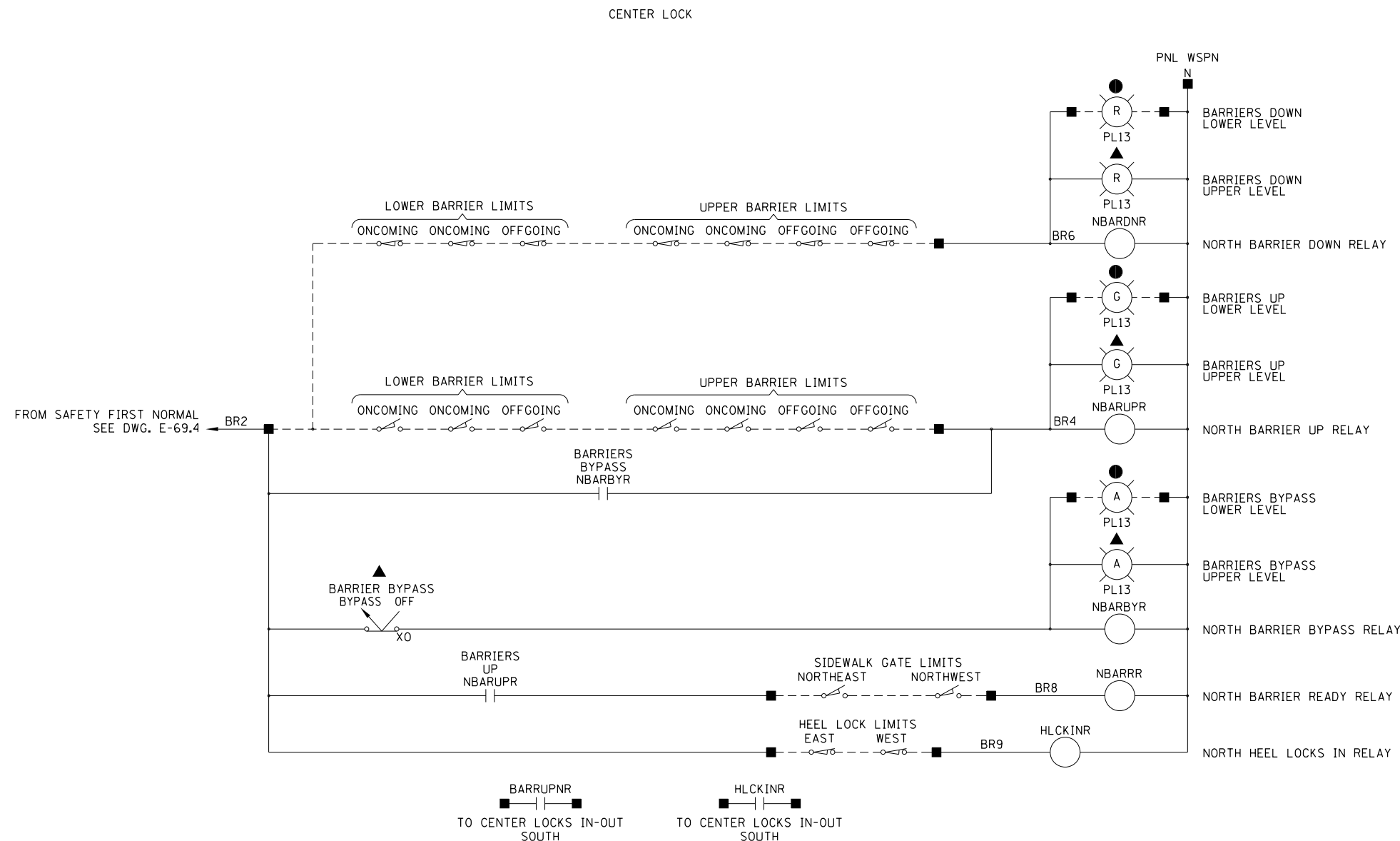
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-69.7
CDOT PROJECT NO. E-6-650			291 OF 411

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.
- LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
- UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.



- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◇ PILOT DEVICE LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ PILOT DEVICE LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ◊ COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- ⊗ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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		CHECKED -	AF	REVISED -	
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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

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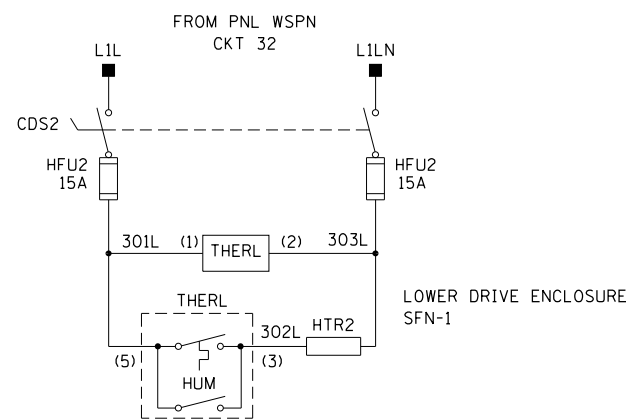
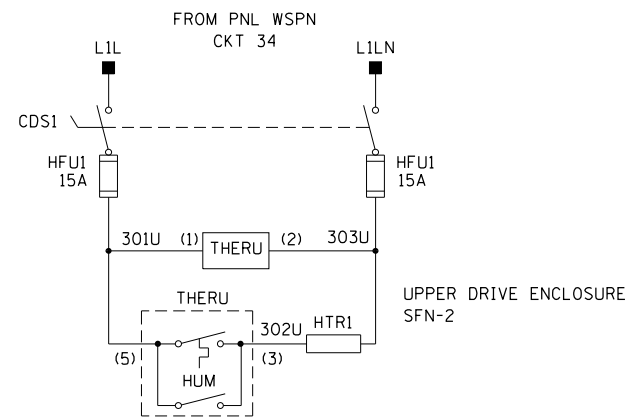
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

NORTH SAFETY FIRST
 CONTACTOR CABINET AND CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)

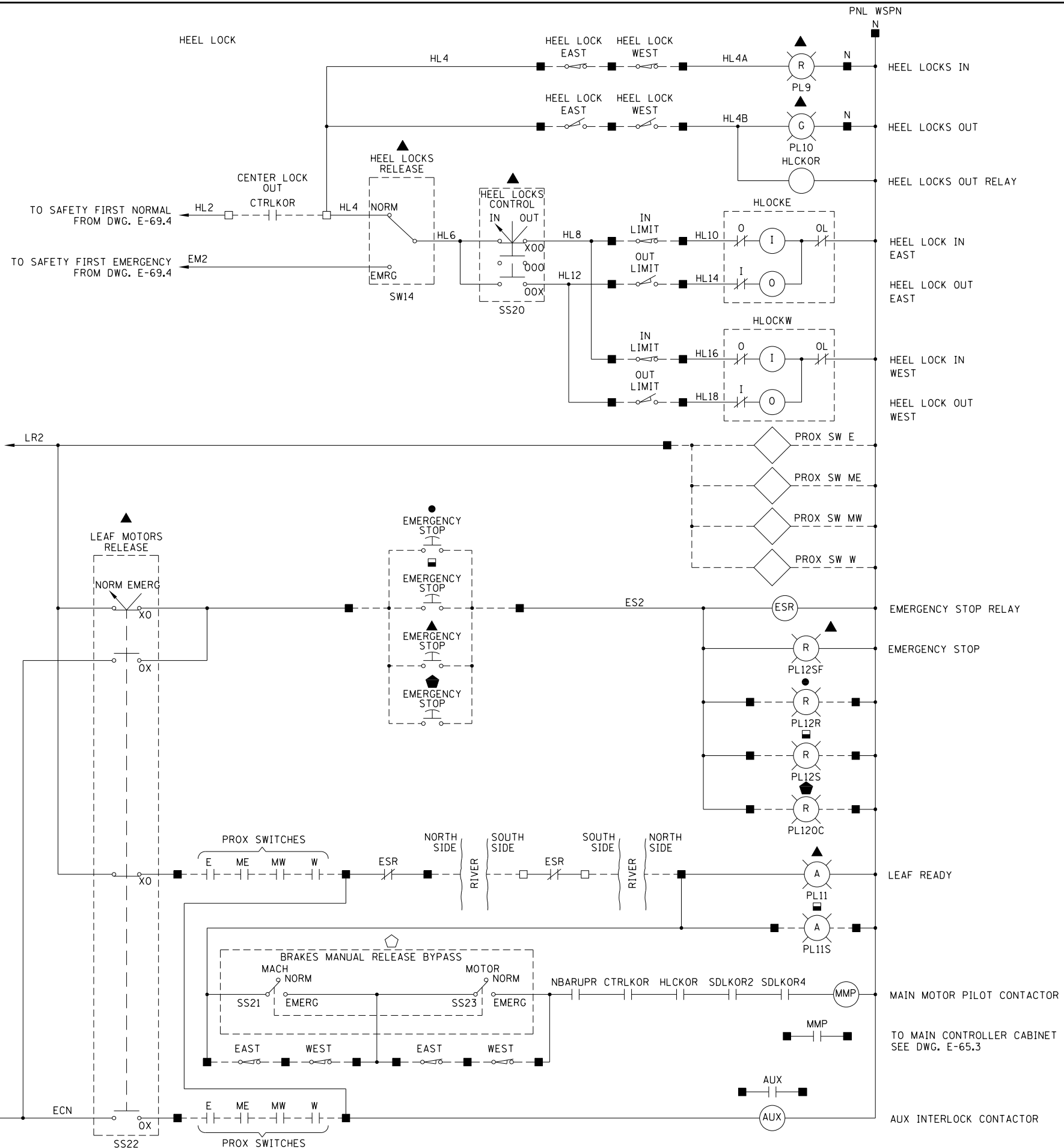
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-69.8
CDOT PROJECT NO. E-6-650			292 OF 411

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3/2/2018

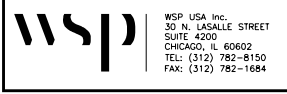


- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◇ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM



- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
 4. UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.

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DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

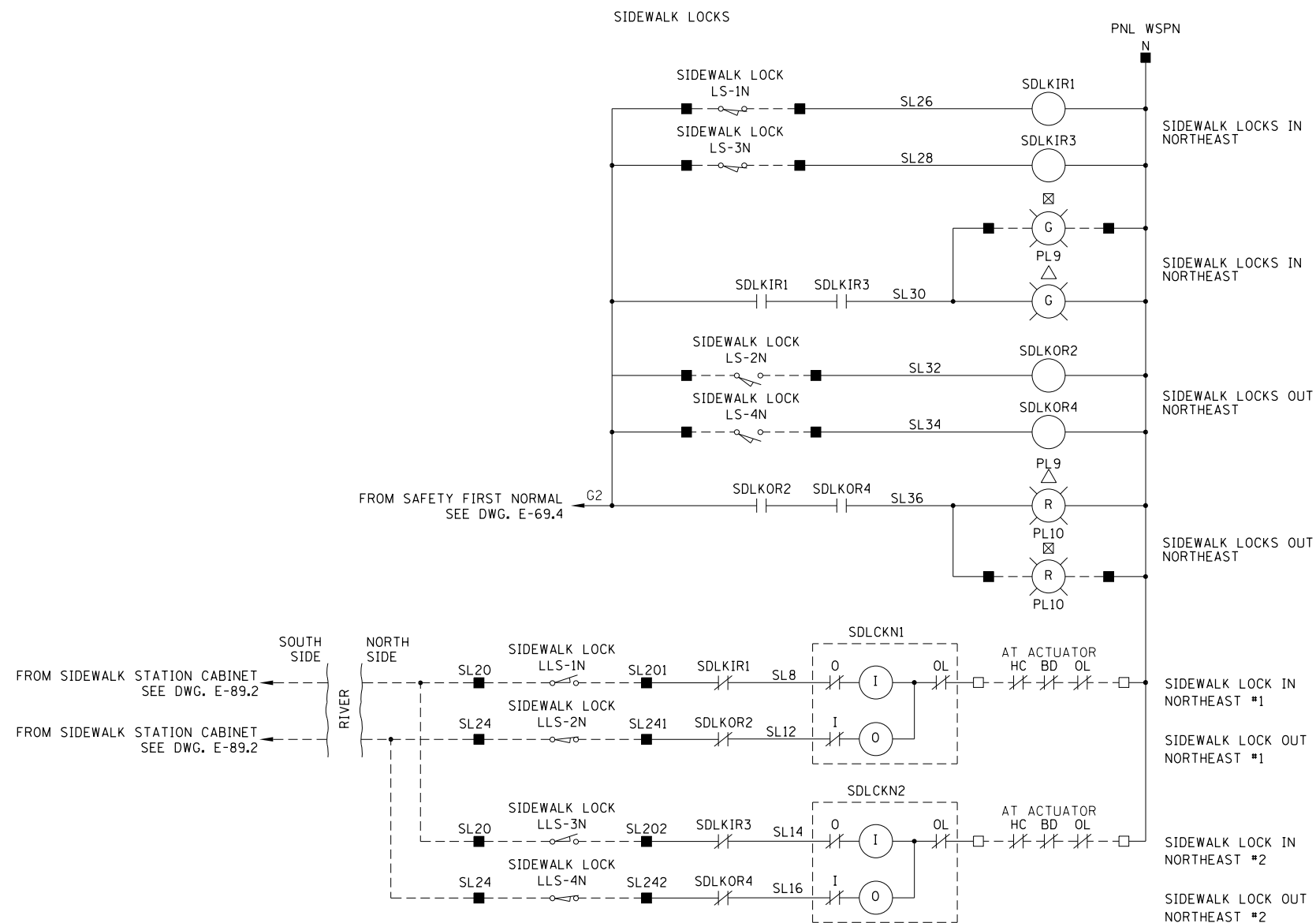
**NORTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-69.9
CDOT PROJECT NO. E-6-650			293 OF 411

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6/30/2017

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
4. UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.



BD - BRAKE DISCONNECT
HC - HANDWHEEL INTERLOCK
OL - OVERLOAD

- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◇ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- LIMIT SWITCH TERMINAL LOCATED GATE ARM

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PLOT DATE = 6/30/2017	DRAWN - CJM	REVISED -
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CITY OF CHICAGO
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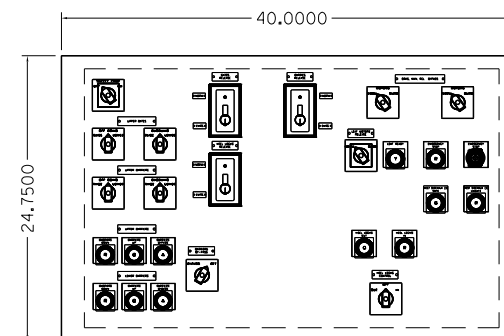
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

NORTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)

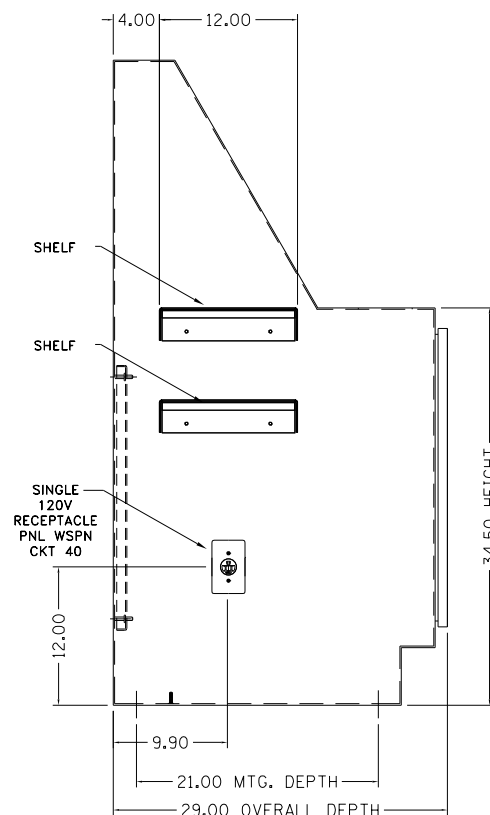
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-69.10
CDOT PROJECT NO. E-6-650			294 OF 411

NOTES:

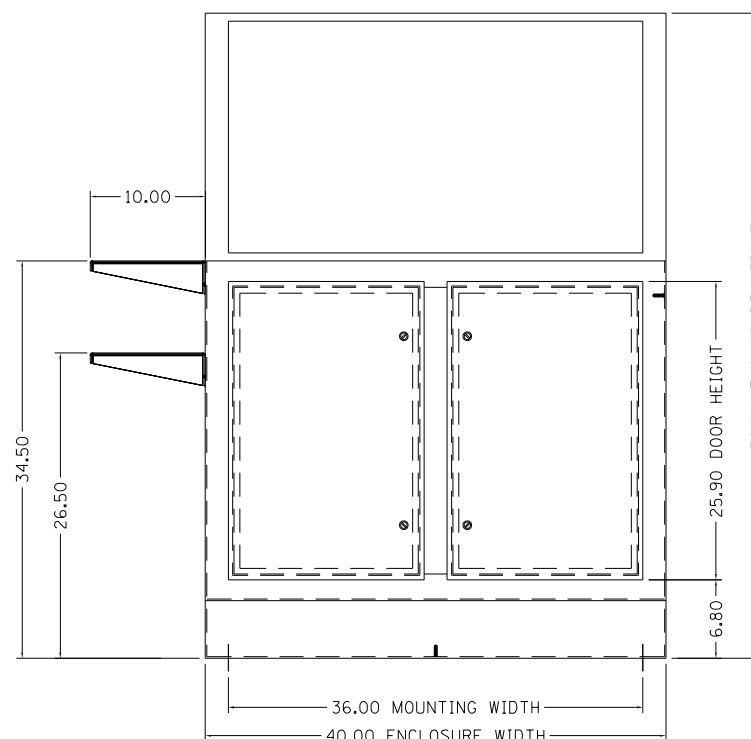
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



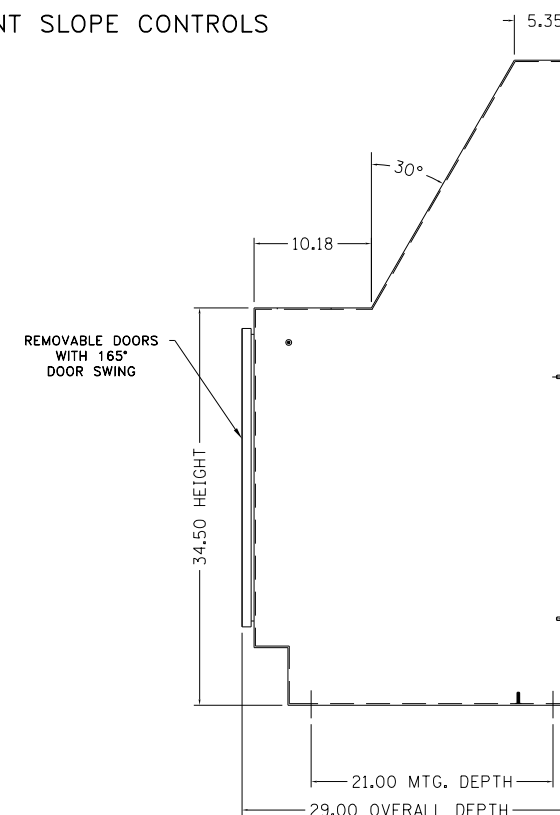
FRONT SLOPE CONTROLS



LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW

MATERIAL: #11 GA STEEL
FINISH: PAINT ASA 61 GRAY

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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

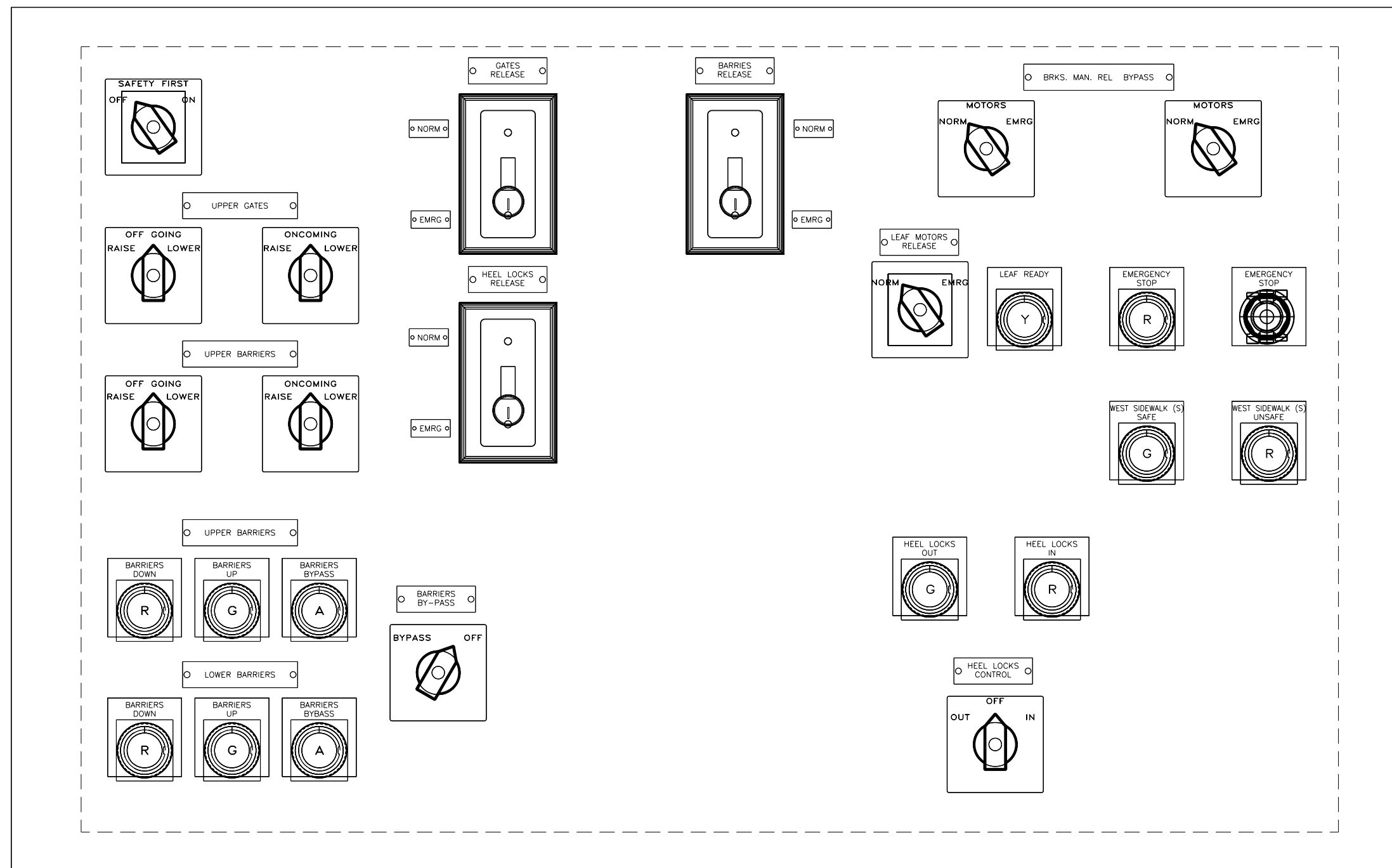
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST CONSOLE OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-70.1
CDOT PROJECT NO. E-6-650			295 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



FRONT SLOPE CONTROLS
SCALE: NONE

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6/22/2017

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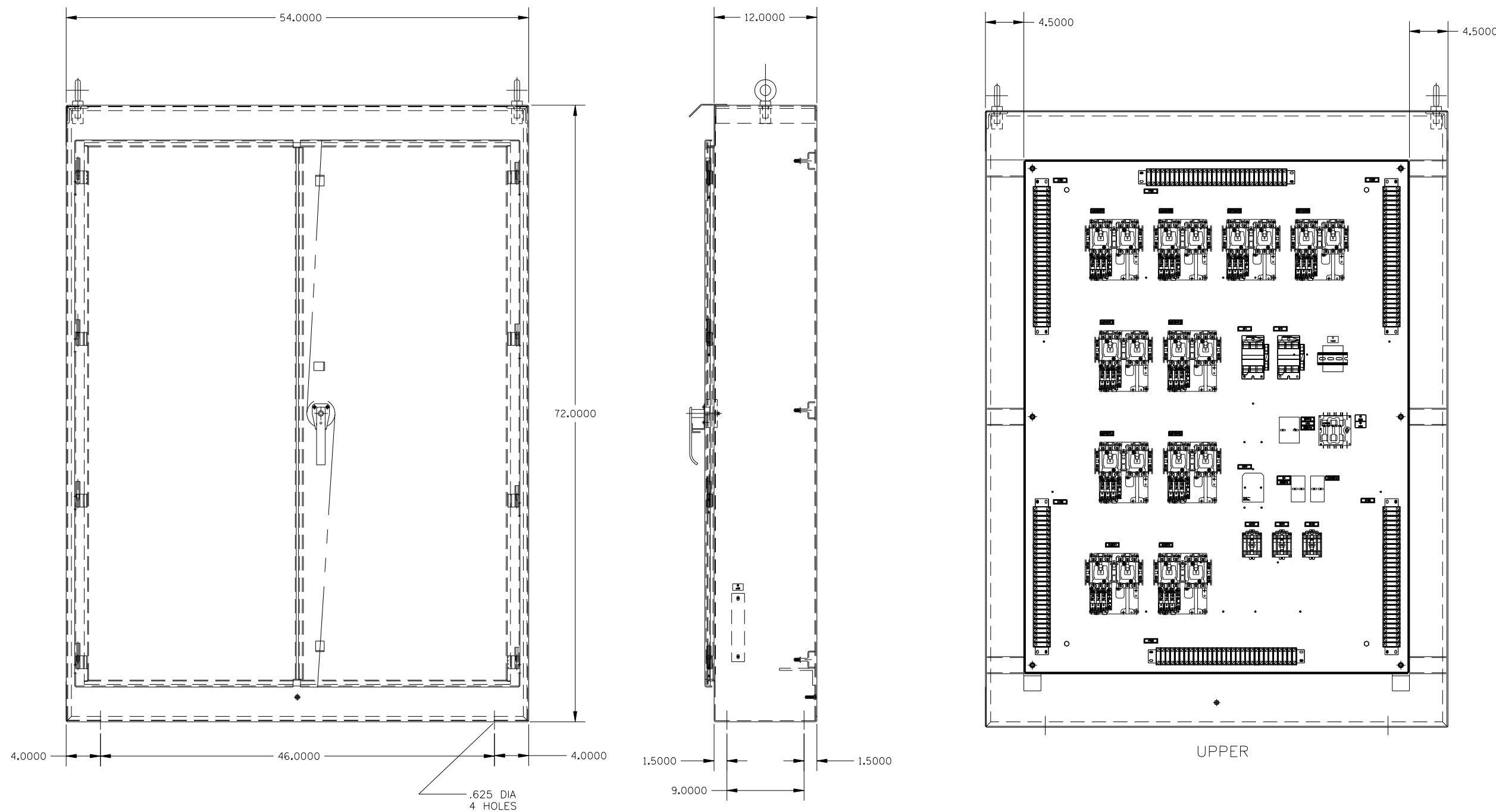
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST CONSOLE OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-70.2
CDOT PROJECT NO. E-6-650			296 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



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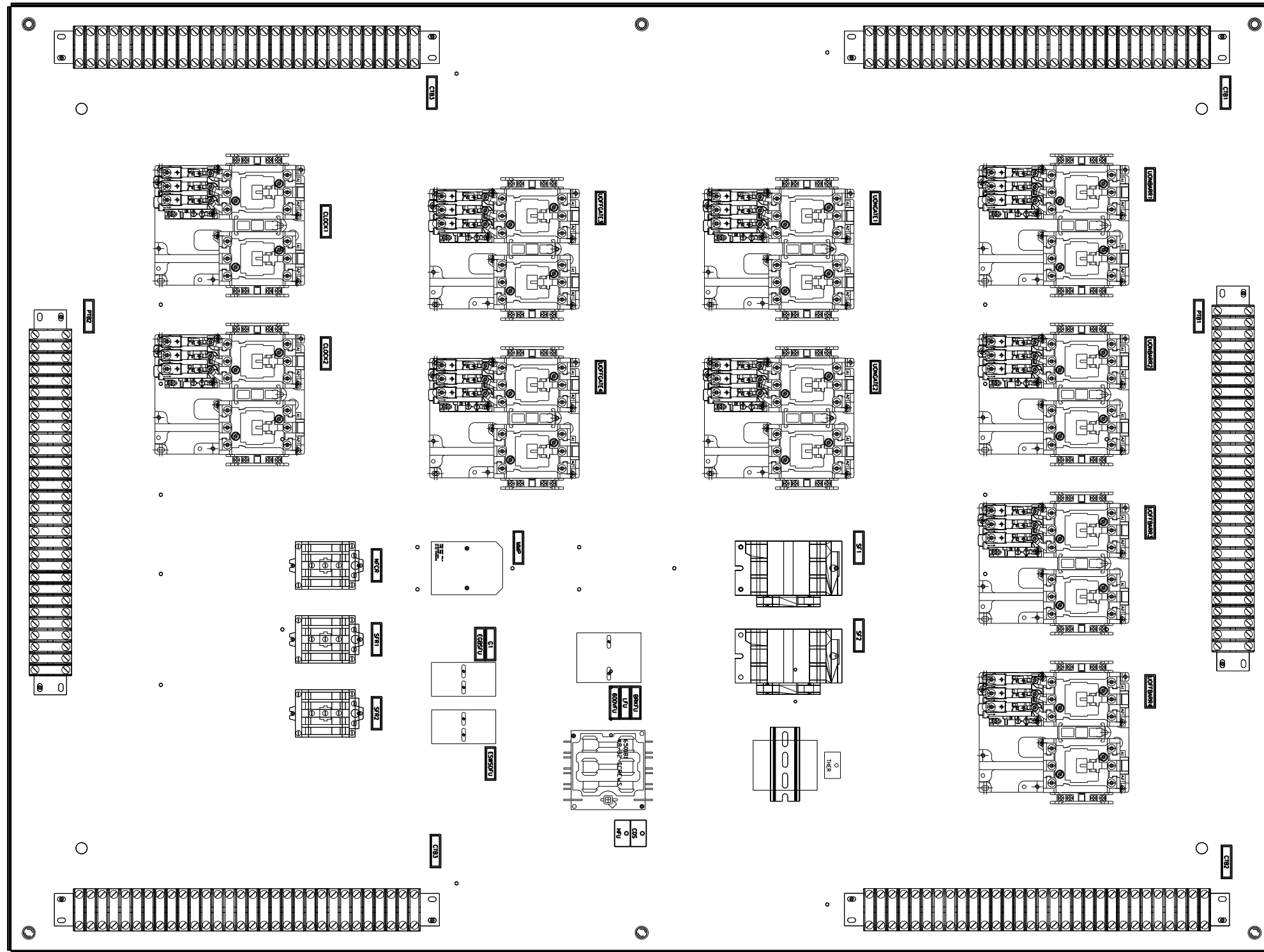
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST
 UPPER CONTACTOR CABINET OUTLINE
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-71.1
CDOT PROJECT NO. E-6-650			297 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



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PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
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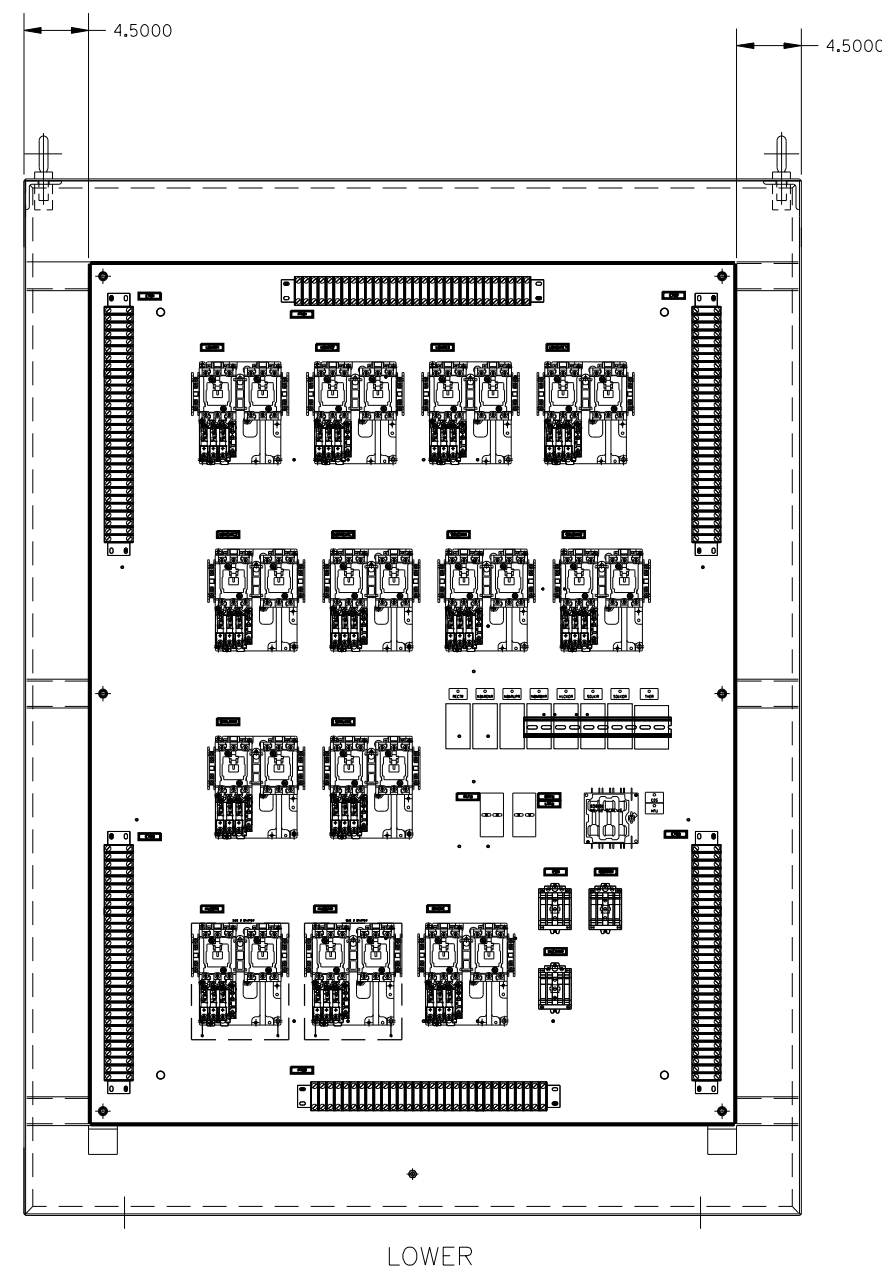
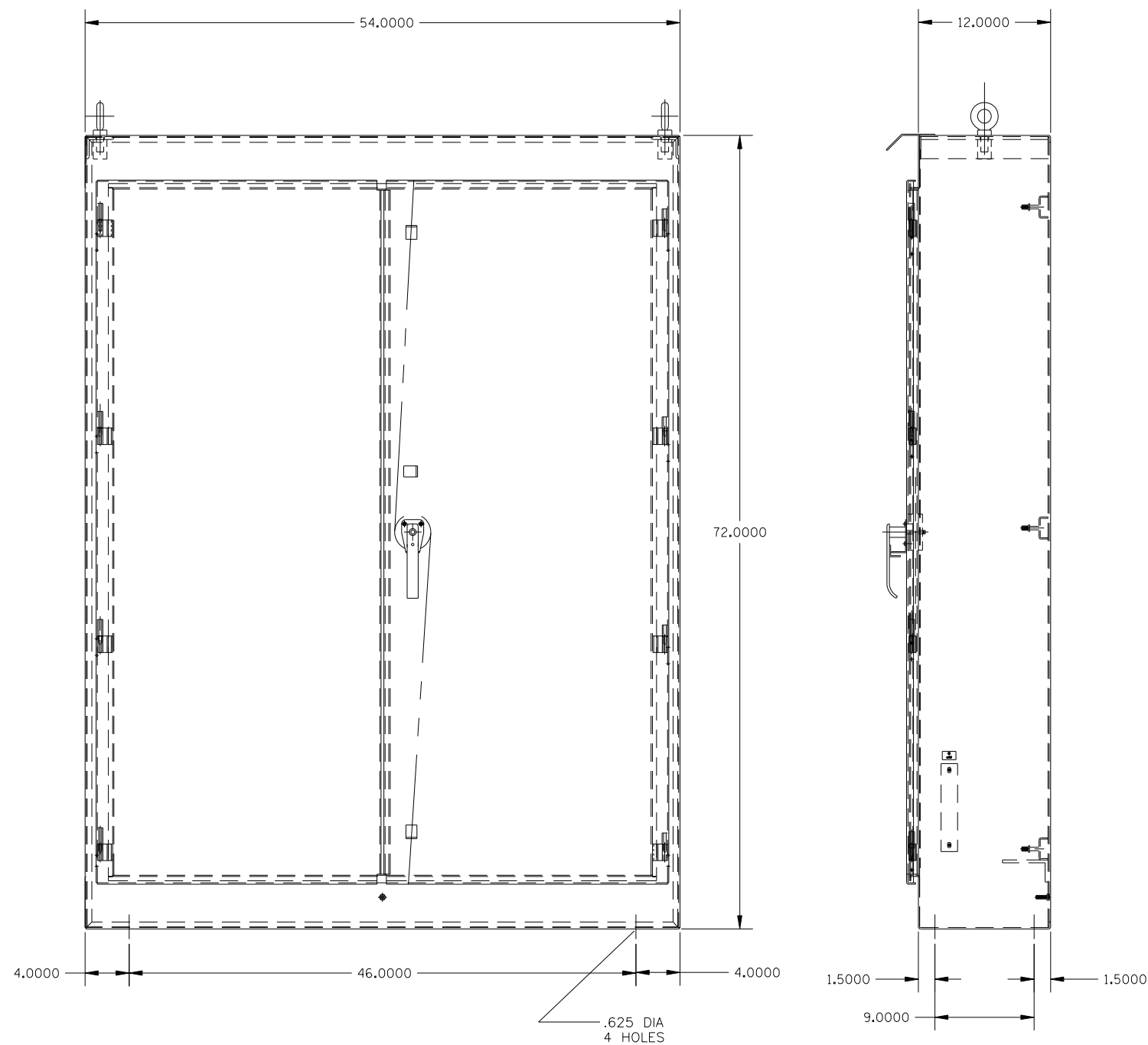
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST
UPPER CONTACTOR CABINET OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-71.2
CDOT PROJECT NO. E-6-650			298 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

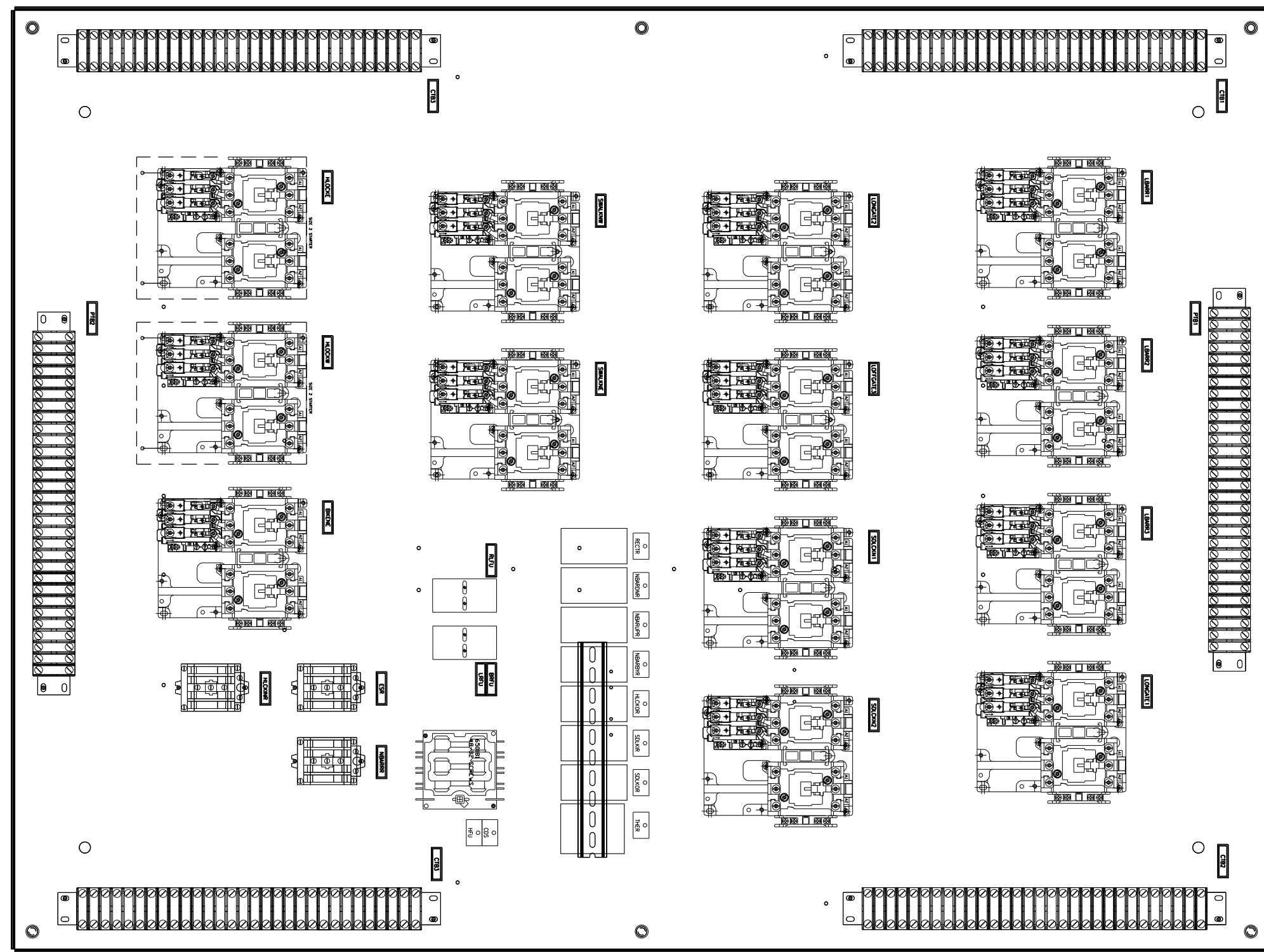
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 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST
 LOWER CONTACTOR CABINET OUTLINE
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-72.1
CDOT PROJECT NO. E-6-650			299 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.



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PLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
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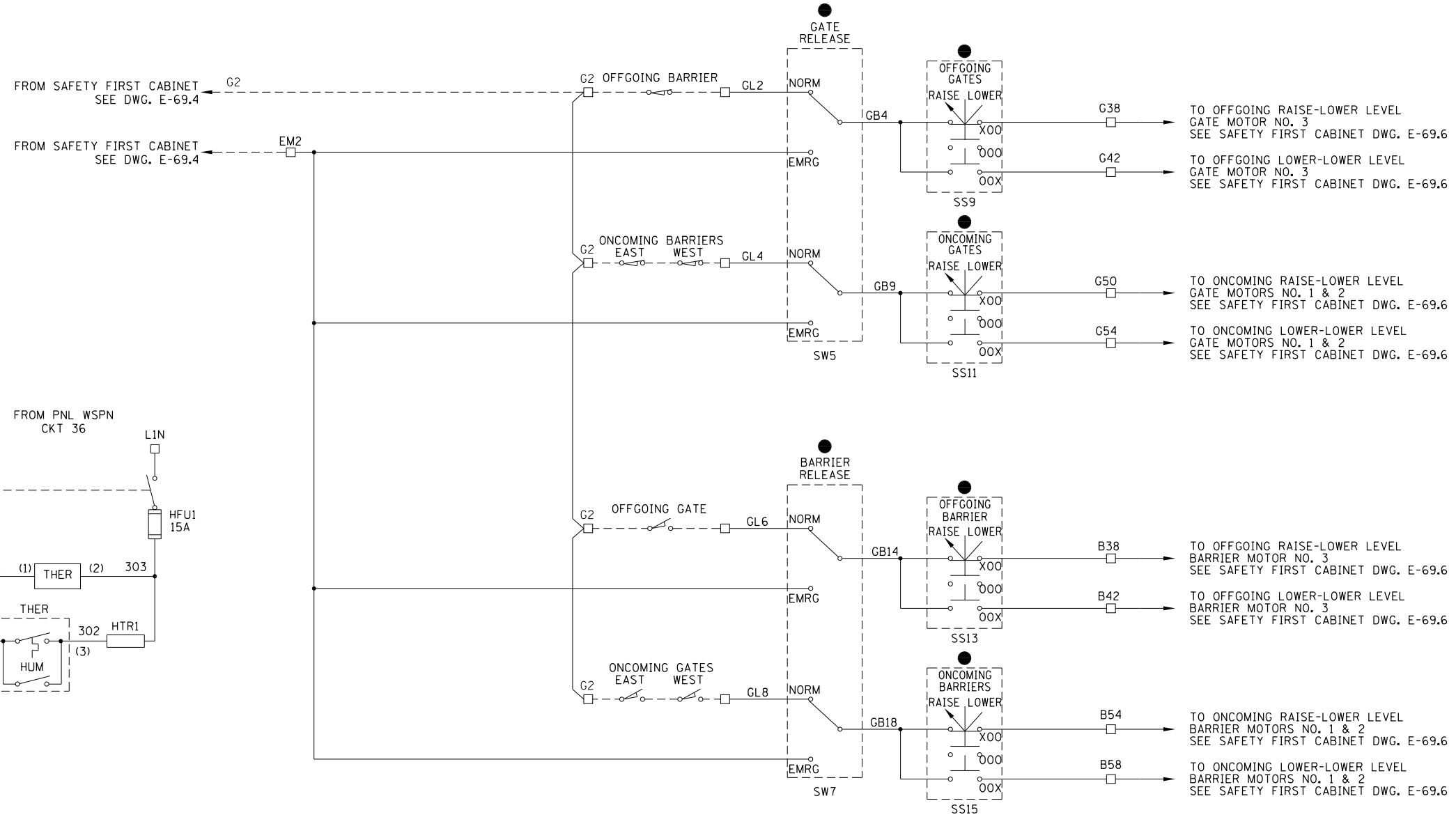
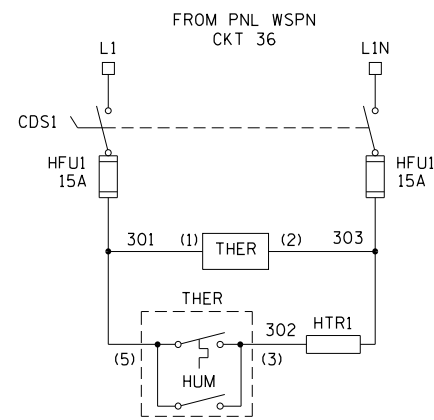
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DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH SAFETY FIRST
LOWER CONTACTOR CABINET OUTLINE
(STRUCTURE NO. 016-6030)**

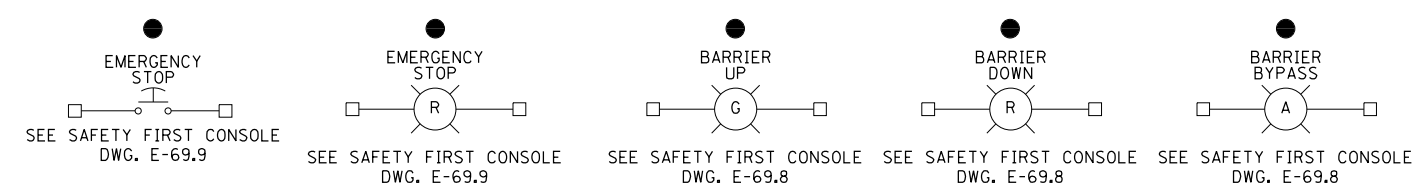
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-72.2
CDOT PROJECT NO. E-6-650			300 OF 411

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- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
 - UNLESS OTHERWISE SPECIFIED, TERMINALS SHOWN ARE LOCATED IN THE NORTH ROADWAY CONTROL STATION.

- TERMINAL LOCATED IN NORTH ROADWAY CONTROL STATION
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◻ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◼ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM



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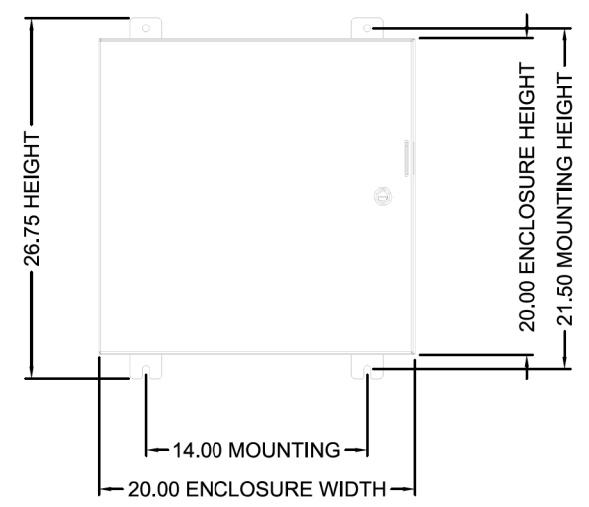
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LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

NORTH ROADWAY CONTROL STATION SCHEMATIC
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-73
CDOT PROJECT NO. E-6-650			301 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.



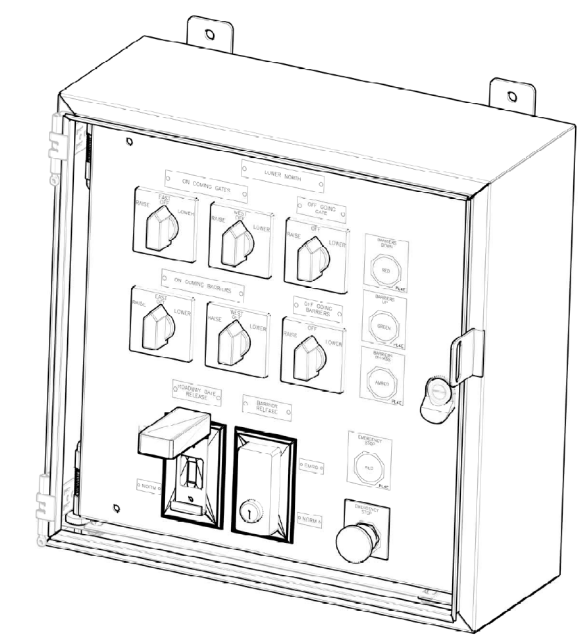
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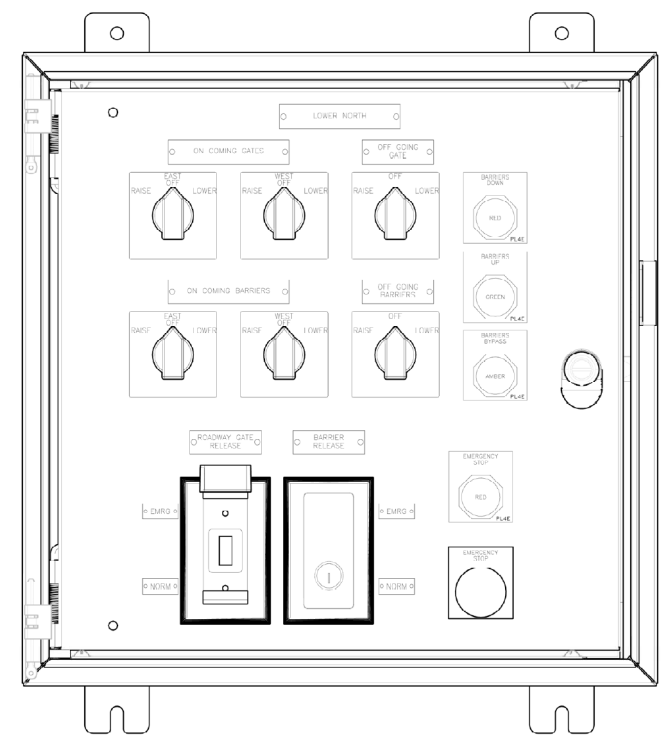
SIDE VIEW



BOTTOM VIEW



ISOMETRIC VIEW
DOOR REMOVED



ROADWAY LOWER
NORTH SHOWN
DOOR REMOVED

MATERIAL: 316 STAINLESS STEEL
CONSTRUCTION: NEMA 4X

PRELIMINARY
APPROVAL REQUIRED

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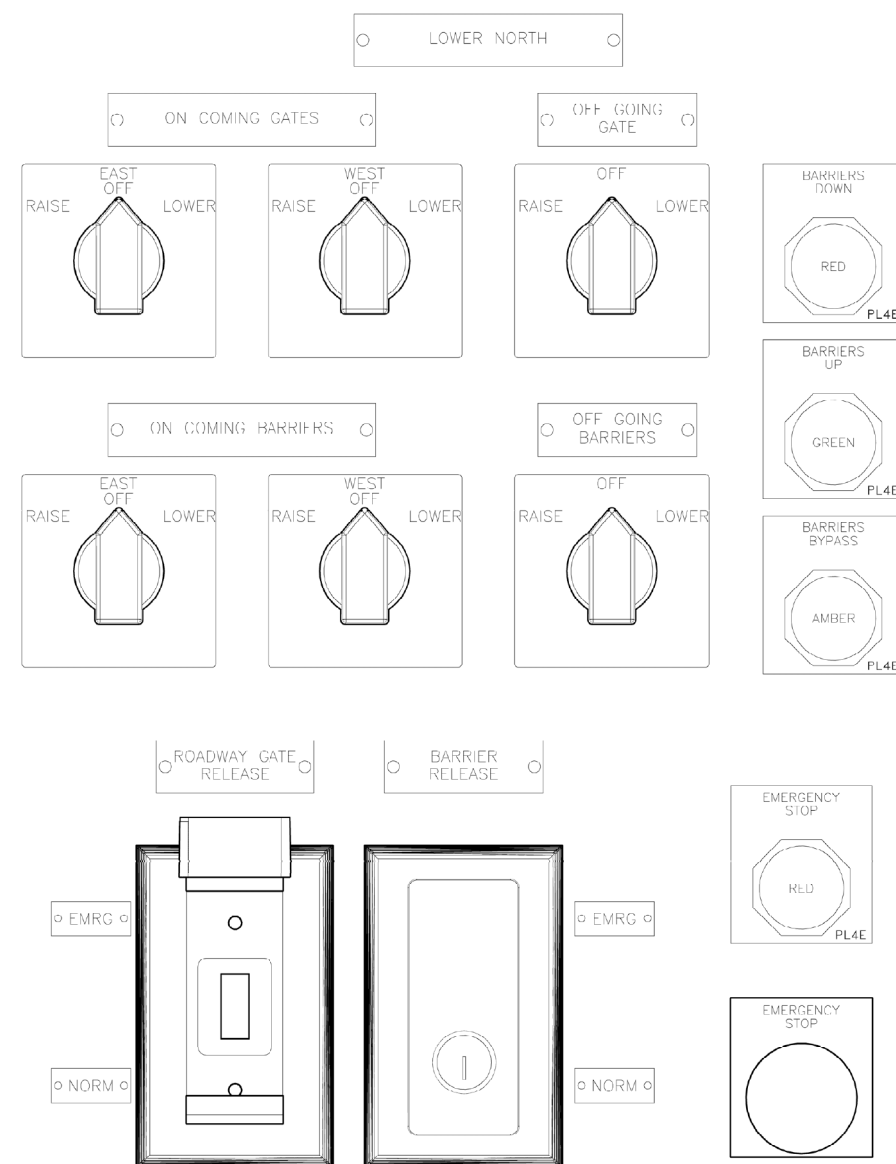
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH ROADWAY CONTROL STATION OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-74.1
CDOT PROJECT NO. E-6-650			302 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



MATERIAL: 316 STAINLESS STEEL
CONSTRUCTION: NEMA 4X

PRELIMINARY
 APPROVAL REQUIRED

**ROADWAY LOWER
 NORTH SHOWN**
 SCALE: NONE

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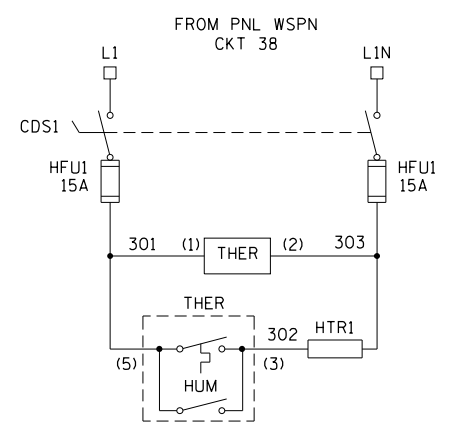
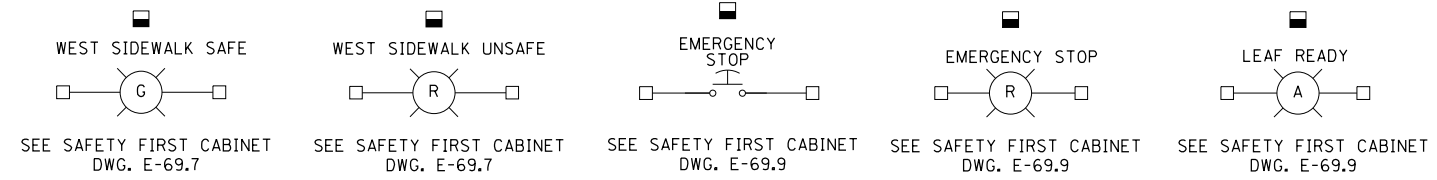
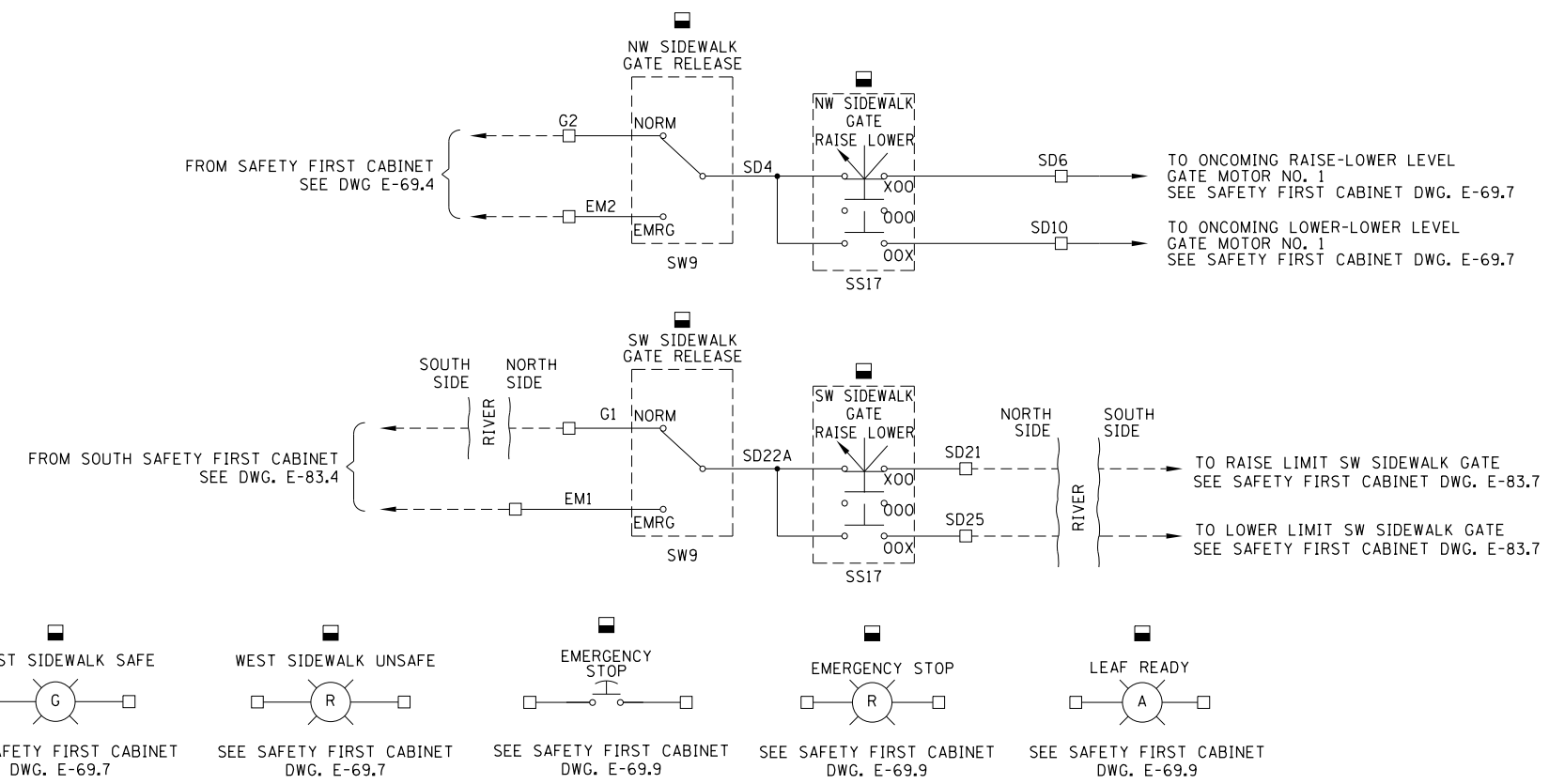
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**NORTH ROADWAY CONTROL STATION OUTLINE
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-74.2
CDOT PROJECT NO. E-6-650			303 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
4. UNLESS OTHERWISE SPECIFIED, TERMINALS SHOWN ARE LOCATED IN THE NORTH SIDEWALK CONTROL STATION.



- TERMINAL LOCATED IN NORTH SIDEWALK GATE CONTROL STATION
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◇ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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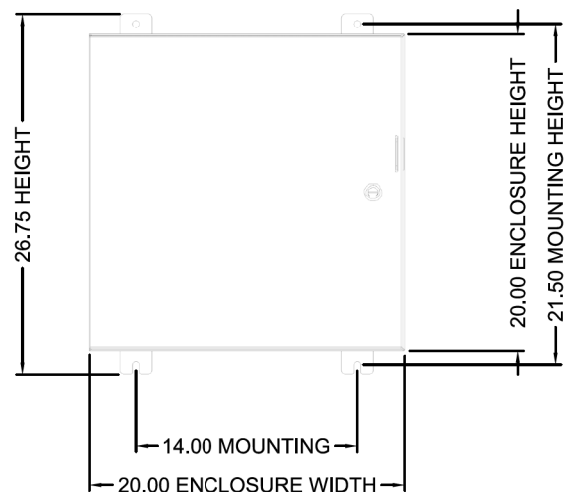
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

NORTH SIDEWALK CONTROL STATION SCHEMATIC
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-75
CDOT PROJECT NO. E-6-650			304 OF 411

NOTES:

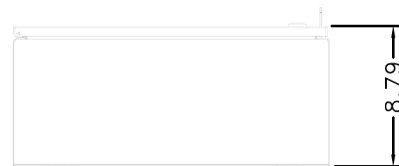
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



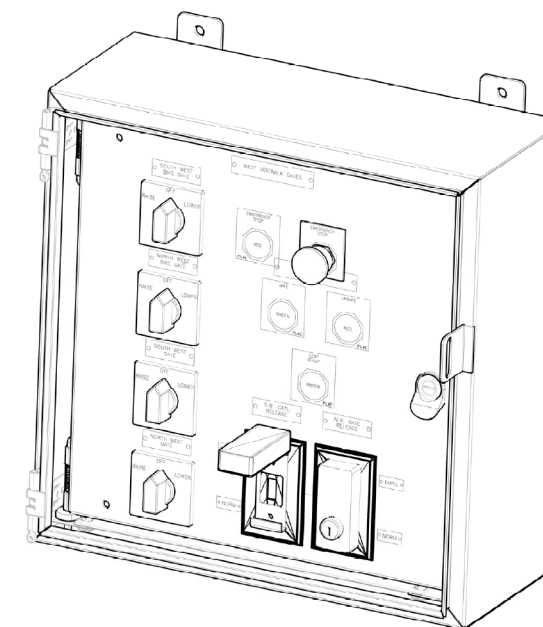
FRONT VIEW



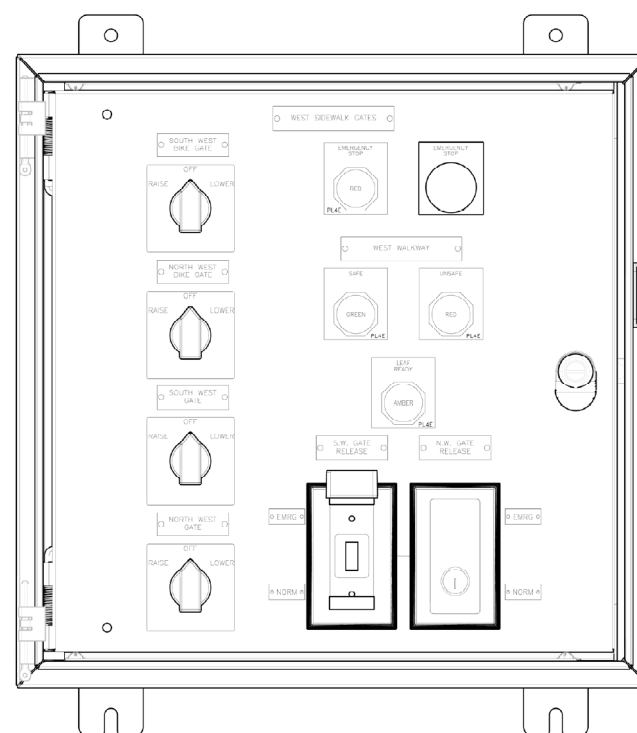
SIDE VIEW



BOTTOM VIEW



ISOMETRIC VIEW
DOOR REMOVED



SIDEWALK LOWER
NORTH SHOWN
DOOR REMOVED

MATERIAL: 316 STAINLESS STEEL
CONSTRUCTION: NEMA 4X

PRELIMINARY
APPROVAL REQUIRED

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DIVISION OF ENGINEERING

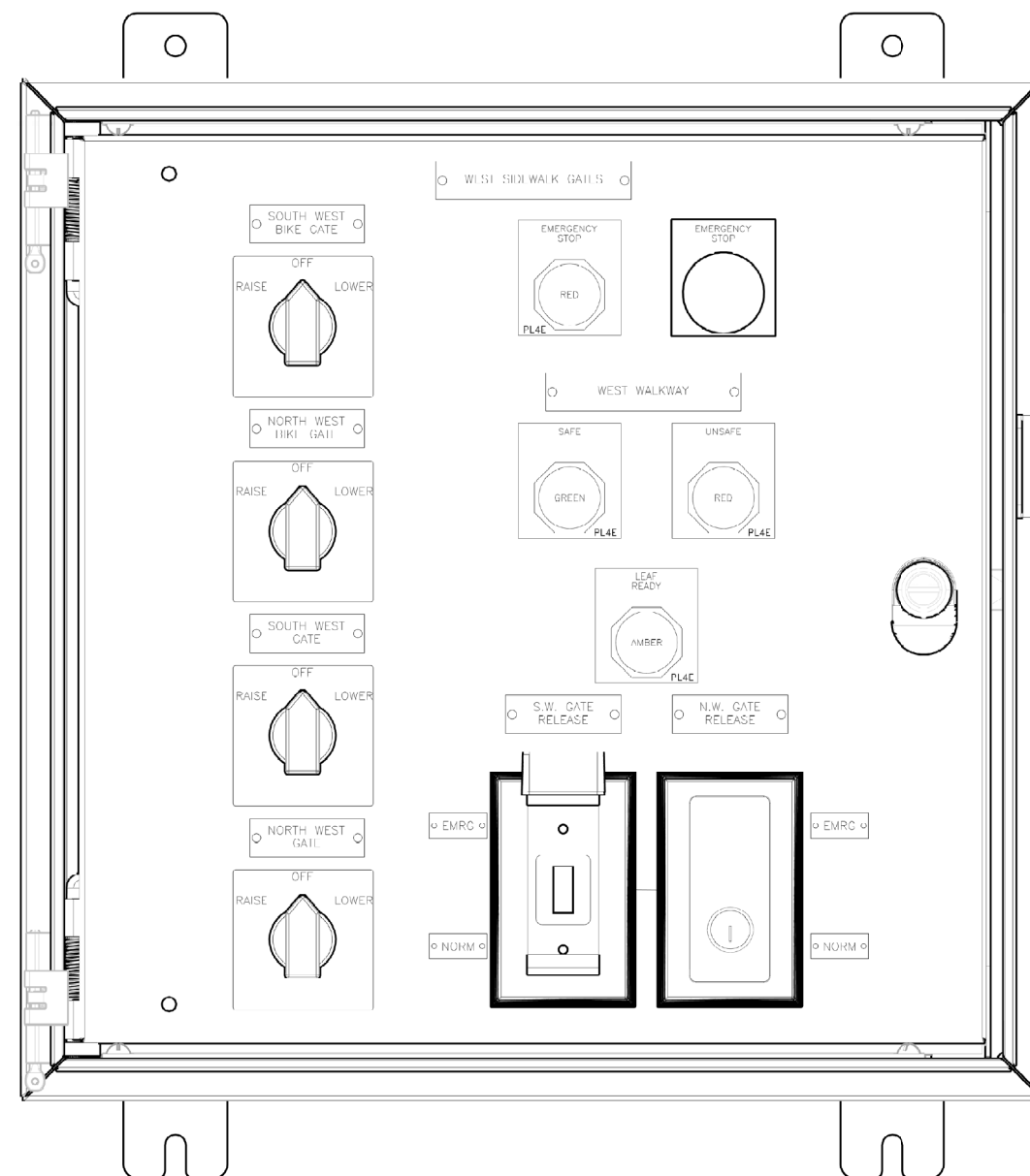
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

NORTH SIDEWALK CONTROL STATION OUTLINE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-76.1
CDOT PROJECT NO. E-6-650			305 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



MATERIAL: 316 STAINLESS STEEL
CONSTRUCTION: NEMA 4X

SIDEWALK LOWER
NORTH SHOWN

SCALE: NONE

PRELIMINARY
APPROVAL REQUIRED

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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

NORTH SIDEWALK CONTROL STATION OUTLINE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-76.2
CDOT PROJECT NO. E-6-650			306 OF 411

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USER NAME = lopezgonzalez	DESIGNED - BG	REVISED -
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-77
CDOT PROJECT NO. E-6-650			307 OF 411

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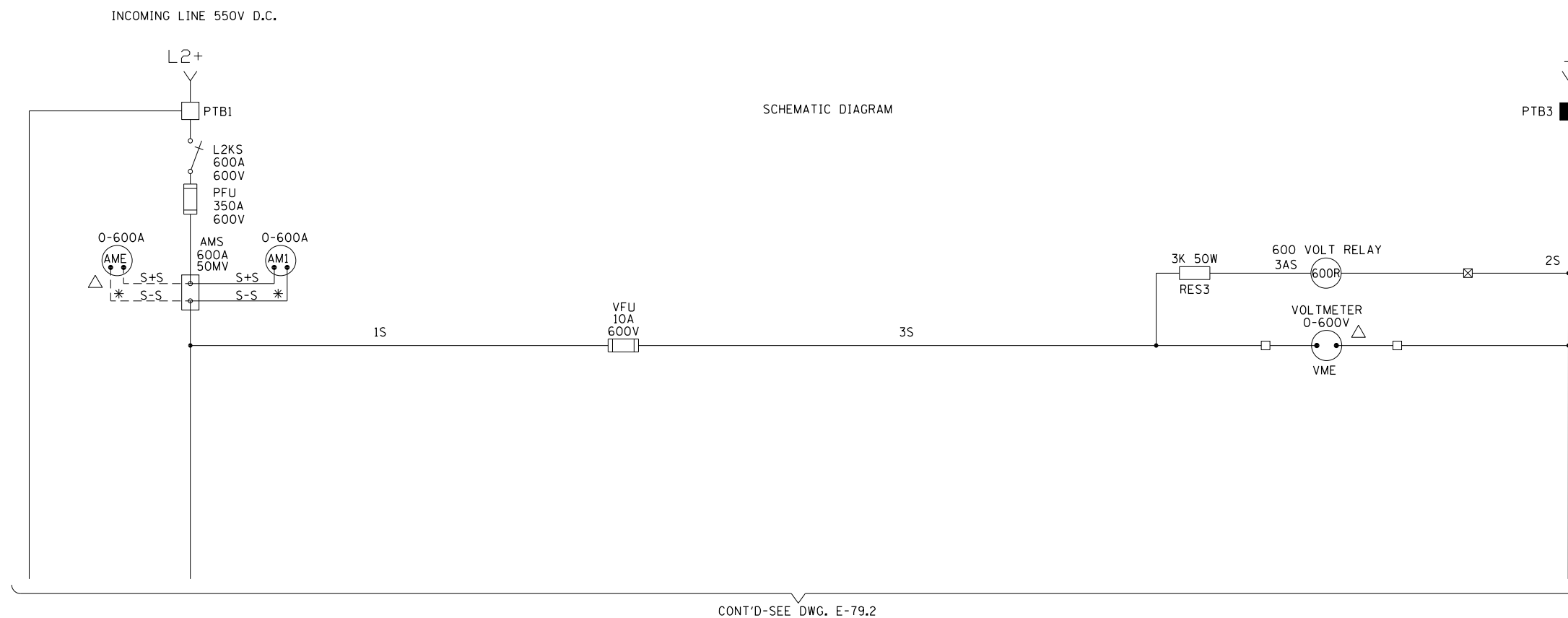
CITY OF CHICAGO
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-78
CDOT PROJECT NO. E-6-650			308 OF 411

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.



- LEGEND:
- TERMINAL LOCATED IN LEFT SIDE MAIN CONTROLLER CABINET
 - TERMINAL LOCATED IN RIGHT SIDE MAIN CONTROLLER CABINET
 - ⊗ TRANSFER TERMINALS IN LEFT & RIGHT SIDE CABINETS
 - △ LOCATED IN SOUTH OPERATOR CONTROL CONSOLE
 - * BLACK & WHITE TWISTED PAIR

	SYMBOL	CONTACTOR SEQUENCE											
		RAISE			OFF	LOWER							
		6	5	4	3	2	1	1	2	3	4	5	6
MAIN LINE CONTACTOR	9	×	×	×	×	×	×	×	×	×	×	×	×
MACH. BRAKE CONTACTOR RAISE	23	×	×	×	×	×	×						
MACH. BRAKE CONTACTOR LOWER	24							×	×	×	×	×	×
MOTOR BRAKE CONTACTOR	27	×	×	×	×	×	×	×	×	×	×	×	×
RAISE DIRECTIONALS	1-3-5-7												
LOWER DIRECTIONALS	2-4-6-8												
ARM. SHUNT HI	10-11												
ARM. SHUNT MED.	40-41												
ARM. SHUNT LOW	12-13												
1ST ACCEL.	14												
2ND ACCEL.	15												
3RD ACCEL.	16												
FINAL ACCEL.	17-18												
ARM. SERIES CONTACTORS	19-20	×	×	×	×	×	×	×	×	×	×	×	×

⊗ CONTACT CLOSED

RELAY SETTINGS		O/L RELAY SETTINGS	
SYMBOL	SETTING	CONTACTOR	AMP SETTING
Y1	3.0 SEC	38	AMP
Y2	3.0 SEC	39	AMP
Y3	3.0 SEC	40	AMP

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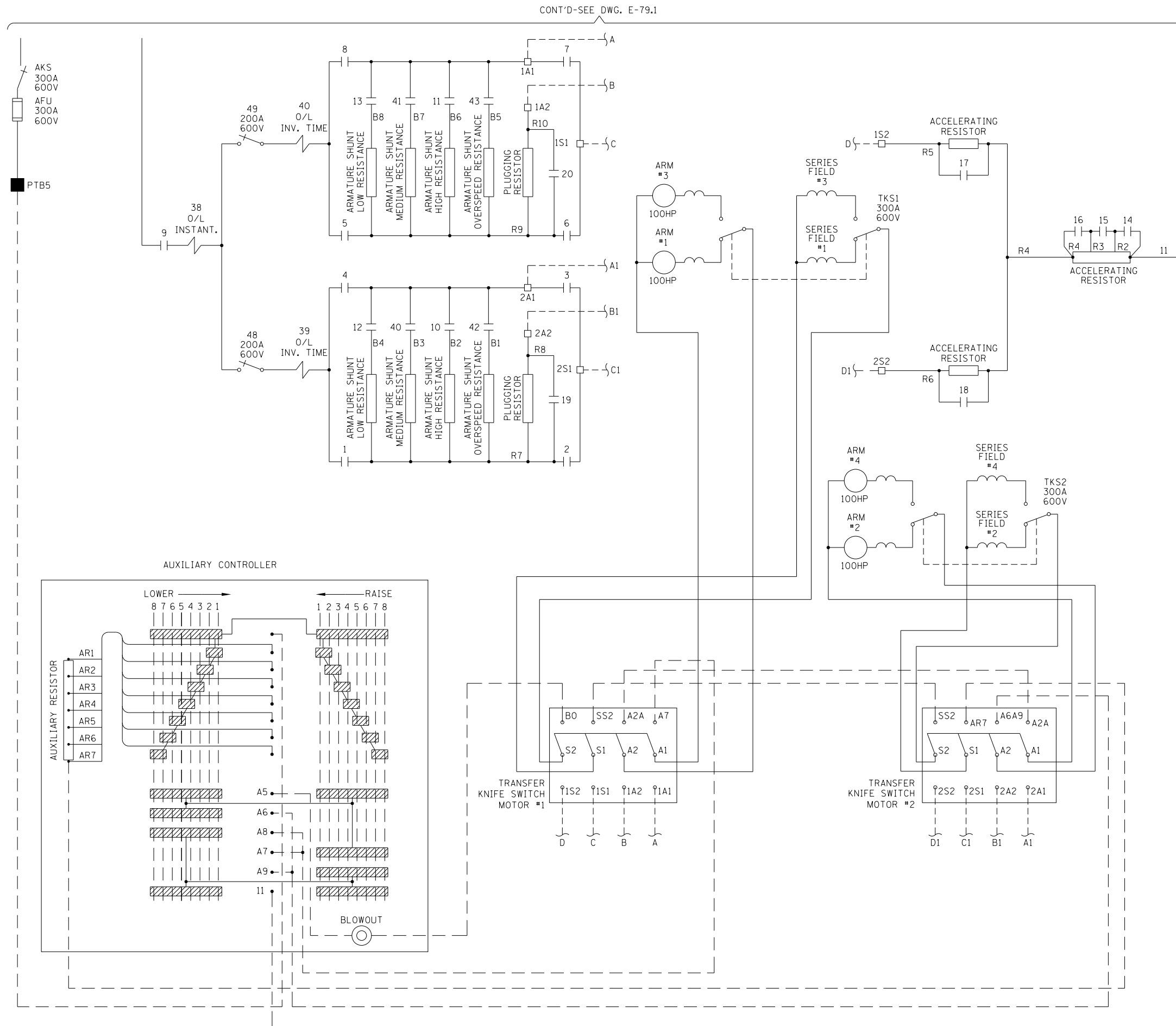
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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**SOUTH MAIN CONTROLLER SCHEMATIC
 (STRUCTURE NO. 016-6030)**

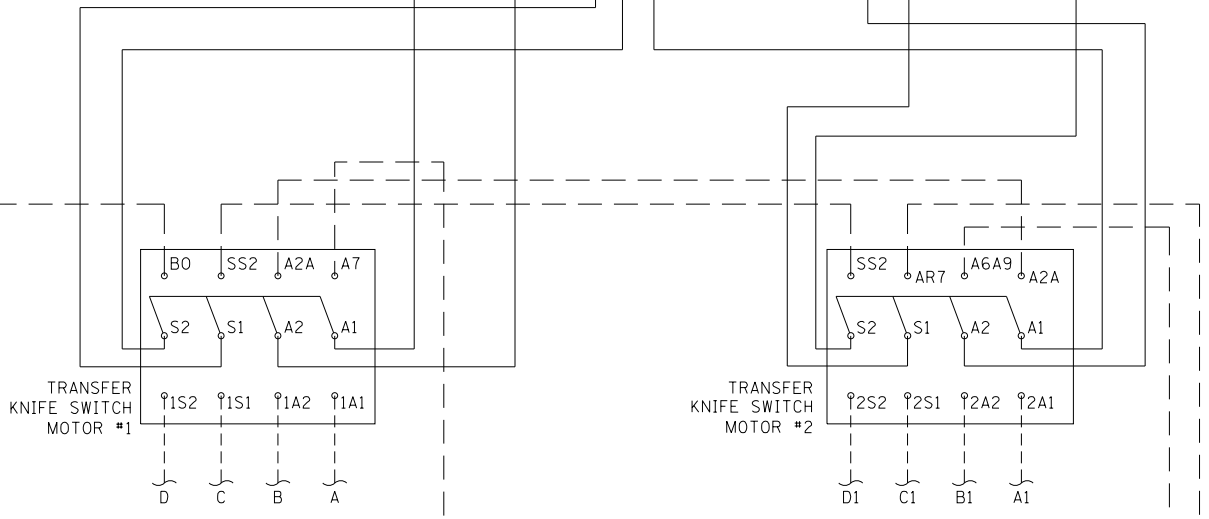
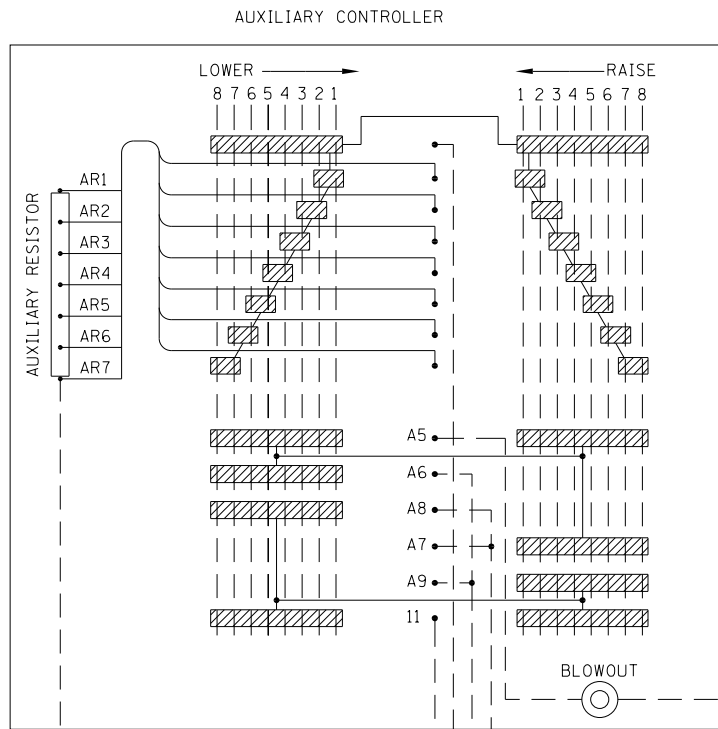
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-79.1
CDOT PROJECT NO. E-6-650			309 OF 411

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6/22/2017



NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

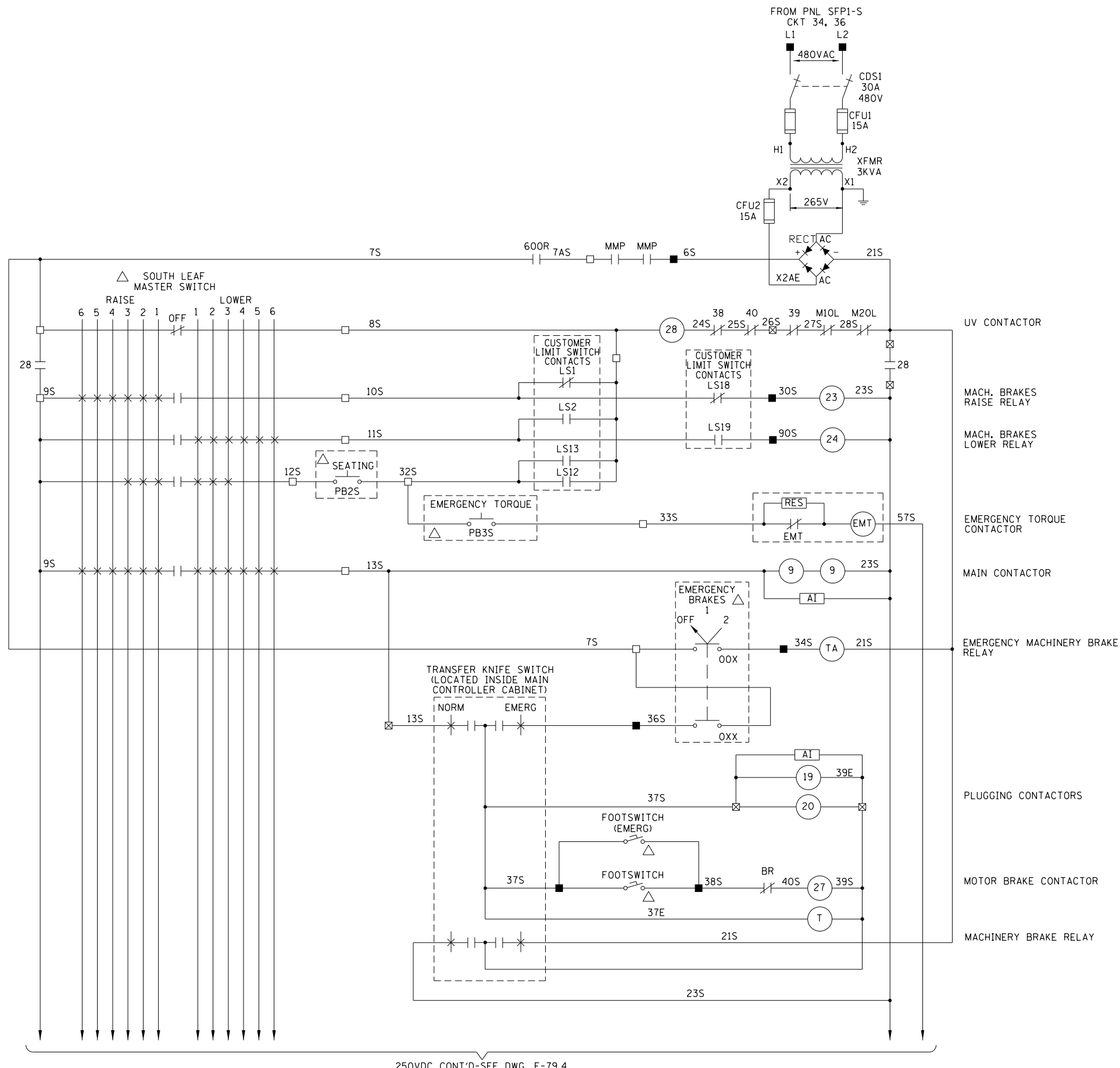
SOUTH MAIN CONTROLLER SCHEMATIC
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-79.2
CDOT PROJECT NO. E-6-650			310 OF 411

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6/22/2017

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. SPEED SWITCH ADJUSTABLE RANGES:
ASCENDING SPEED RANGE: 250-1350 RPM
DESCENDING SPEED RANGE: 175-1120 RPM



250VDC CONT'D-SEE DWG. E-79.4

- LEGEND:
- TERMINAL LOCATED IN LEFT SIDE MAIN MOTOR CABINET
 - TERMINAL LOCATED IN RIGHT SIDE MAIN MOTOR CABINET
 - ⊠ TRANSFER TERMINALS IN LEFT & RIGHT SIDE CABINETS
 - △ LOCATED IN SOUTH OPERATOR CONTROL CONSOLE
 - * BLACK & WHITE TWISTED PAIR

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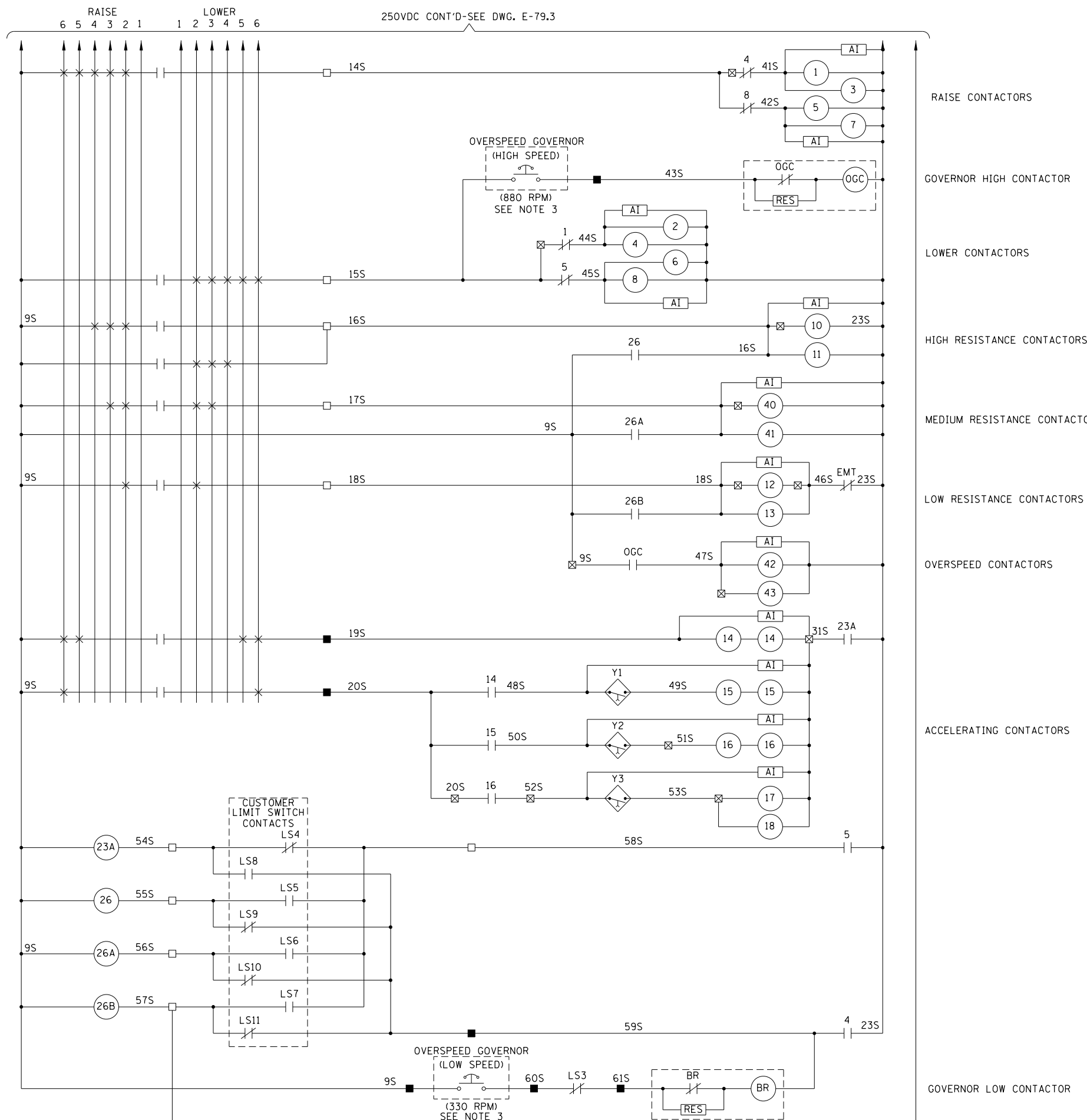
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SOUTH MAIN CONTROLLER SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-79.3
CDOT PROJECT NO. E-6-650			311 OF 411

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6/22/2017



- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - SPEED SWITCH ADJUSTABLE RANGES:
ASCENDING SPEED RANGE: 250-1350 RPM
DESCENDING SPEED RANGE: 175-1120 RPM

- RAISE CONTACTORS
- GOVERNOR HIGH CONTACTOR
- LOWER CONTACTORS
- HIGH RESISTANCE CONTACTORS
- MEDIUM RESISTANCE CONTACTORS
- LOW RESISTANCE CONTACTORS
- OVERSPEED CONTACTORS
- ACCELERATING CONTACTORS
- GOVERNOR LOW CONTACTOR

- LEGEND:
- TERMINAL LOCATED IN LEFT SIDE MAIN MOTOR CABINET
 - TERMINAL LOCATED IN RIGHT SIDE MAIN MOTOR CABINET
 - ⊗ TRANSFER TERMINALS IN LEFT & RIGHT SIDE CABINETS
 - △ LOCATED IN SOUTH OPERATOR CONTROL CONSOLE
 - * BLACK & WHITE TWISTED PAIR

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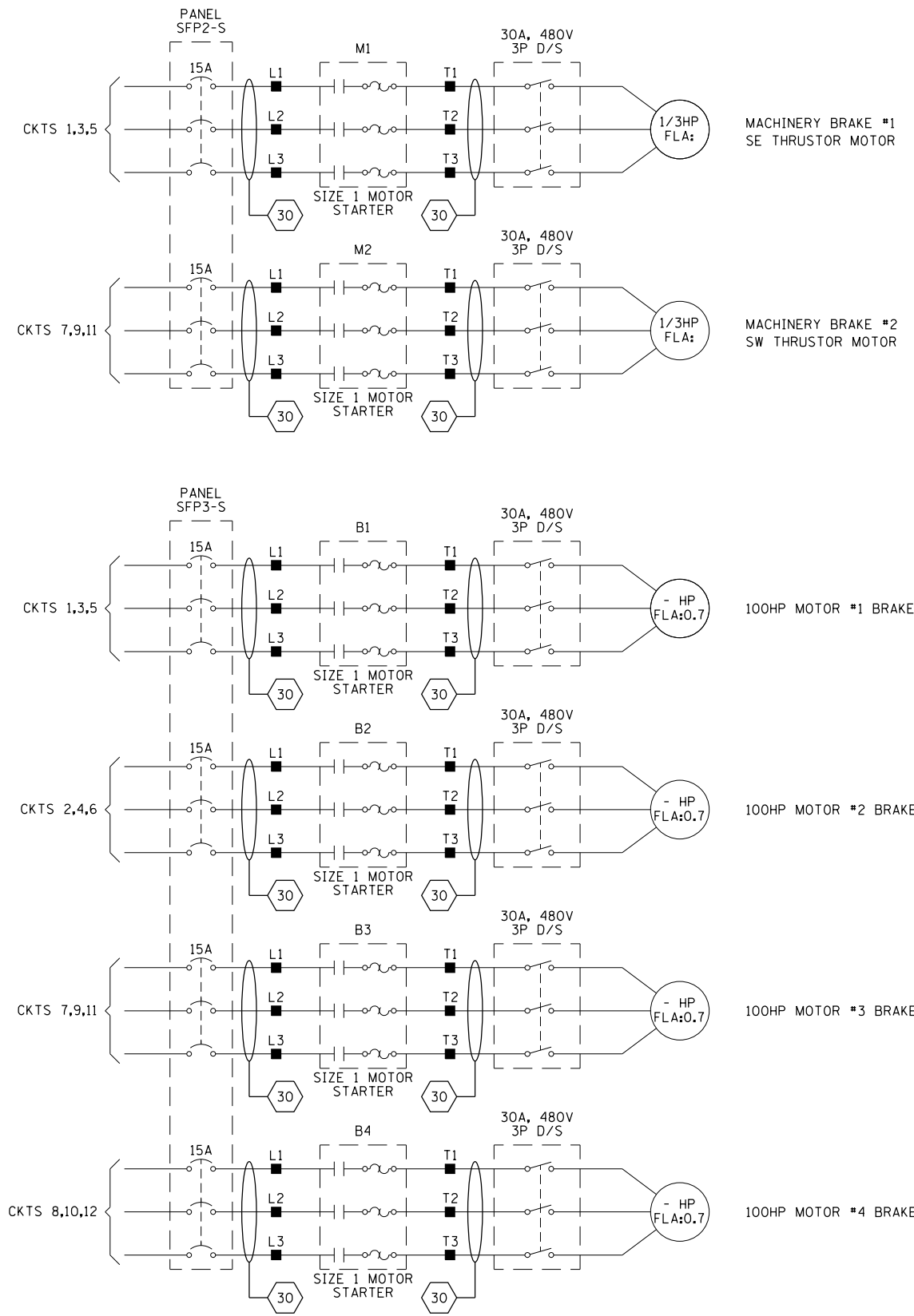
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTH MAIN CONTROLLER SCHEMATIC
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-79.4
CDOT PROJECT NO. E-6-650			312 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



NOTES:

- TERMINAL LOCATED IN LEFT SIDE MAIN CONTROLLER CABINET
- TERMINAL LOCATED IN RIGHT SIDE MAIN CONTROLLER CABINET
- TRANSFER TERMINALS IN LEFT & RIGHT SIDE CABINETS
- LOCATED IN SOUTH OPERATOR CONSOLE
- * BLACK & WHITE TWISTED PAIR

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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

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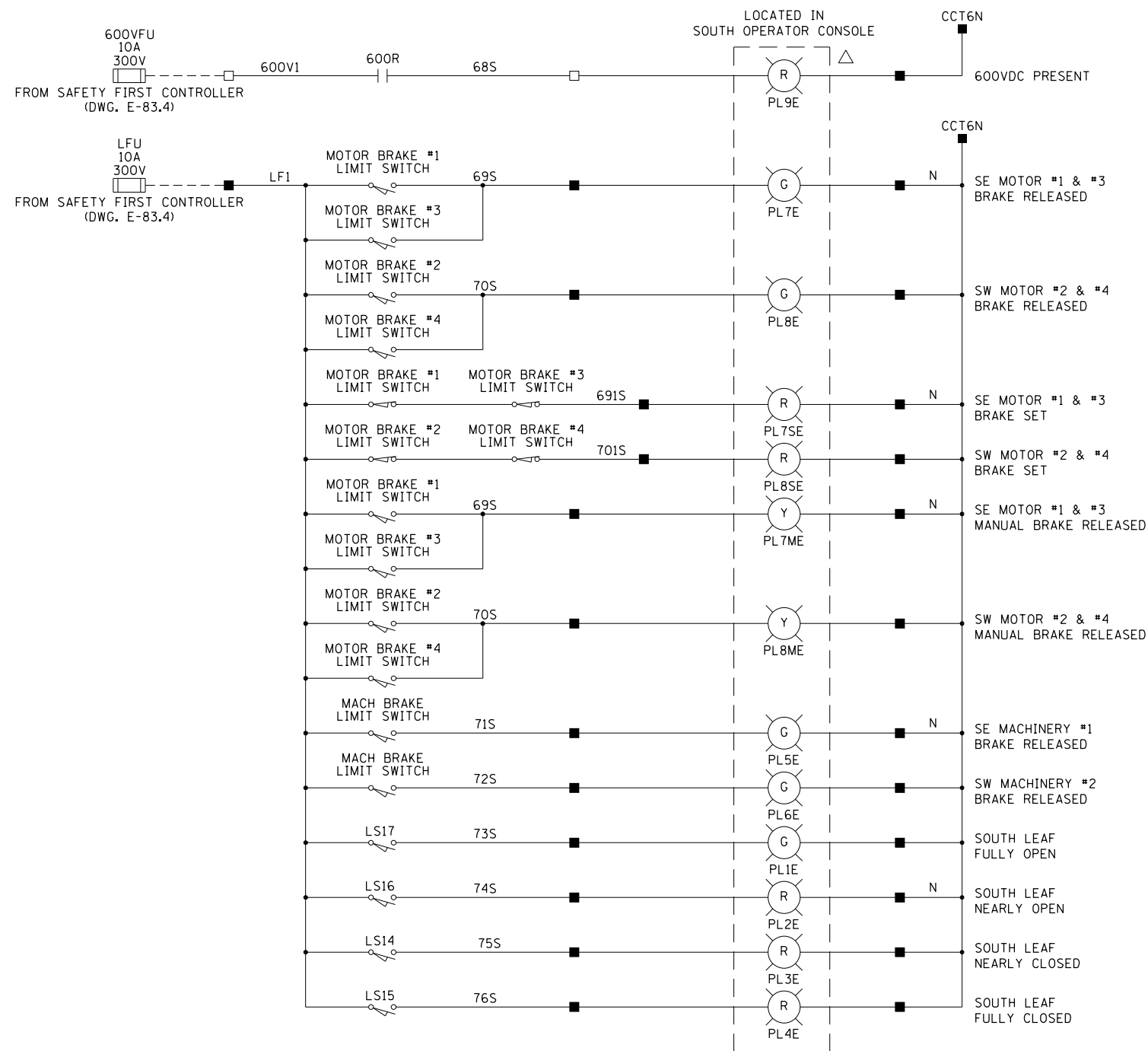
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTH MAIN CONTROLLER SCHEMATIC
(STRUCTURE NO. 016-6030)

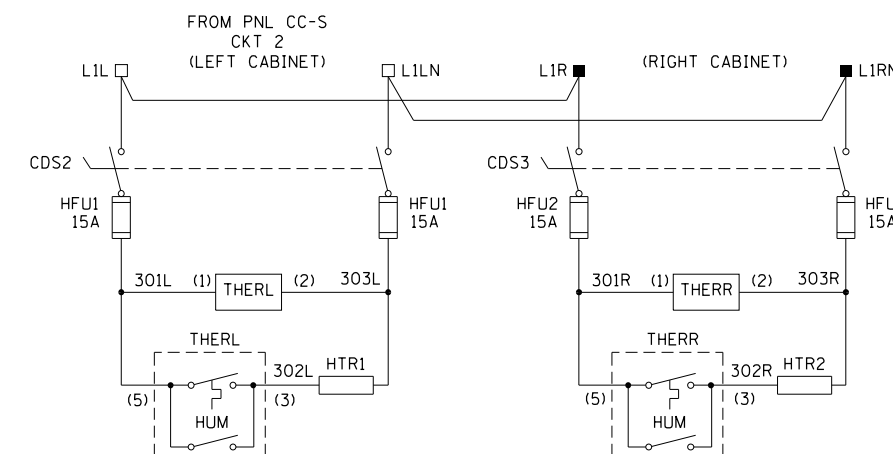
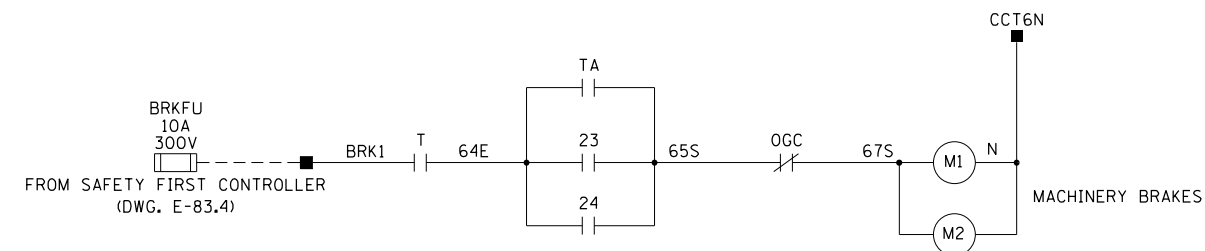
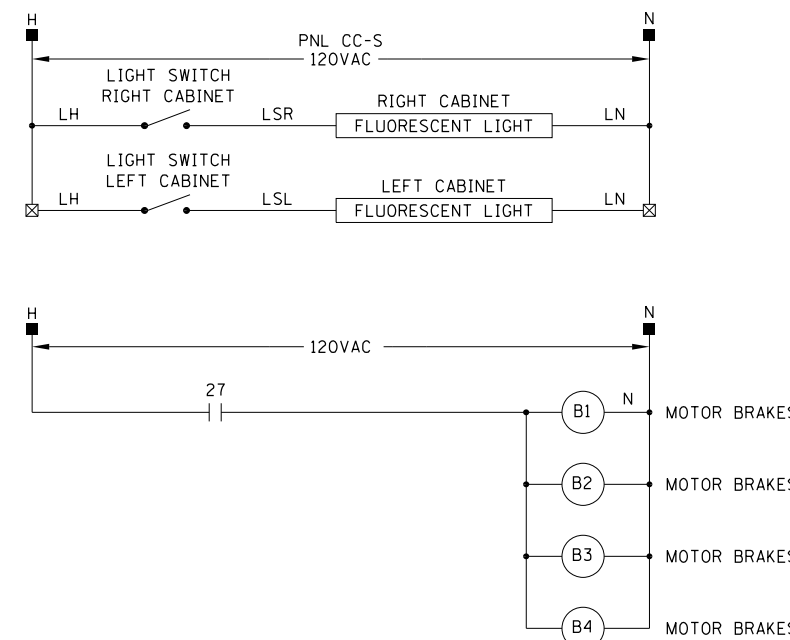
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-79.5
CDOT PROJECT NO. E-6-650			313 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



- LEGEND:
- TERMINAL LOCATED IN LEFT SIDE MAIN MOTOR CABINET
 - TERMINAL LOCATED IN RIGHT SIDE MAIN MOTOR CABINET
 - ⊠ TRANSFER TERMINALS IN LEFT & RIGHT SIDE CABINETS
 - △ LOCATED IN NORTH OPERATOR CONTROL CONSOLE
 - * BLACK & WHITE TWISTED PAIR



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		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

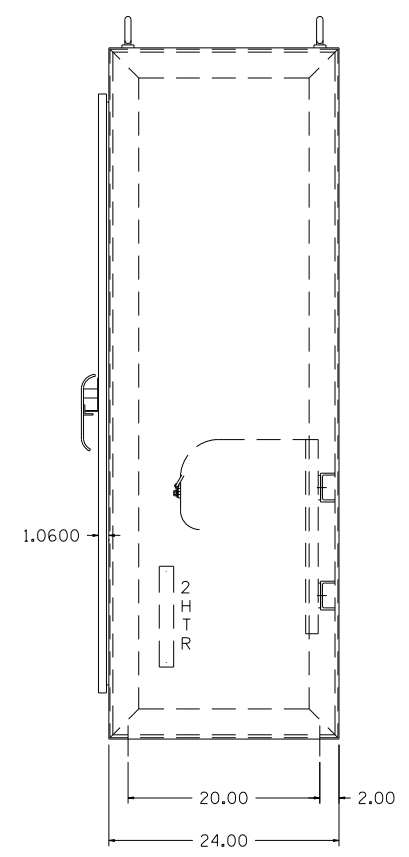
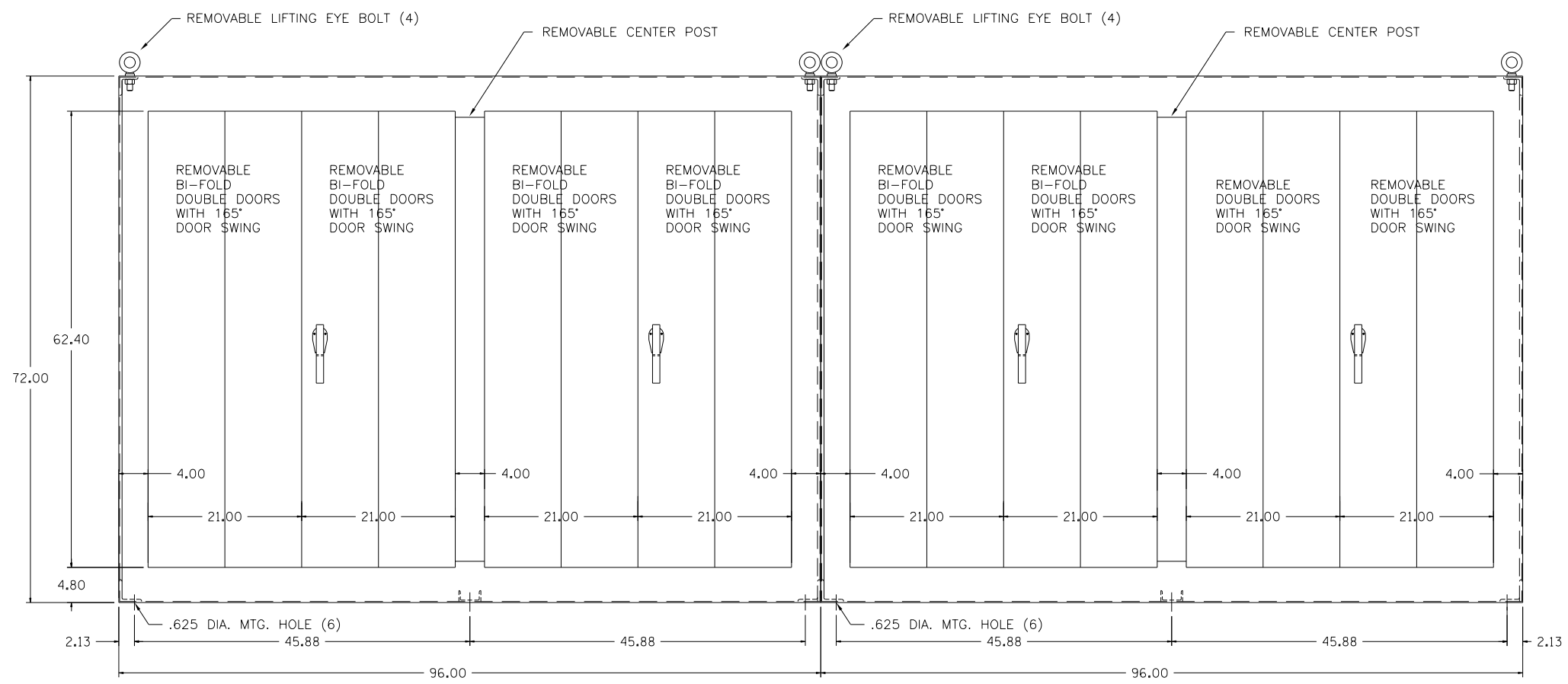
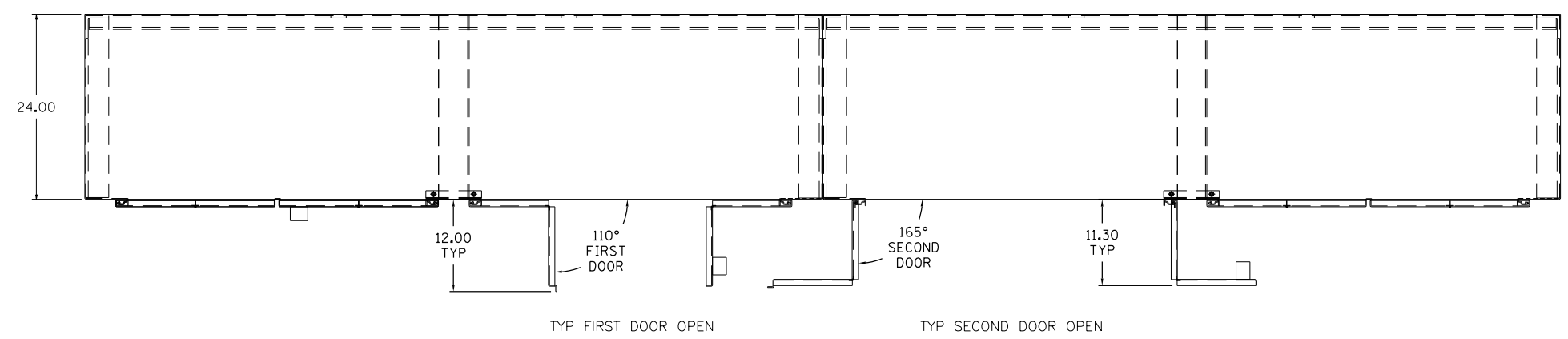
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LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

SOUTH MAIN CONTROLLER SCHEMATIC
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-79.6
CDOT PROJECT NO. E-6-650			314 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.



- NOTES:
- 72.00" HIGH X 96.00" WIDE X 24.00" DEEP (X2) 10GA CABINET CONSTRUCTION TYPE NEMA 3R ENCLOSURE. FINISH: PAINT ANSI GRAY
- LEFT SIDE CABINET "A", THE RIGHT SIDEWALL WILL HAVE CUTOUT
 RIGHT SIDE CABINET "B", THE LEFT SIDEWALL WILL HAVE CUTOUT FOR ACCESS BETWEEN CABINETS "A" AND "B"

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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

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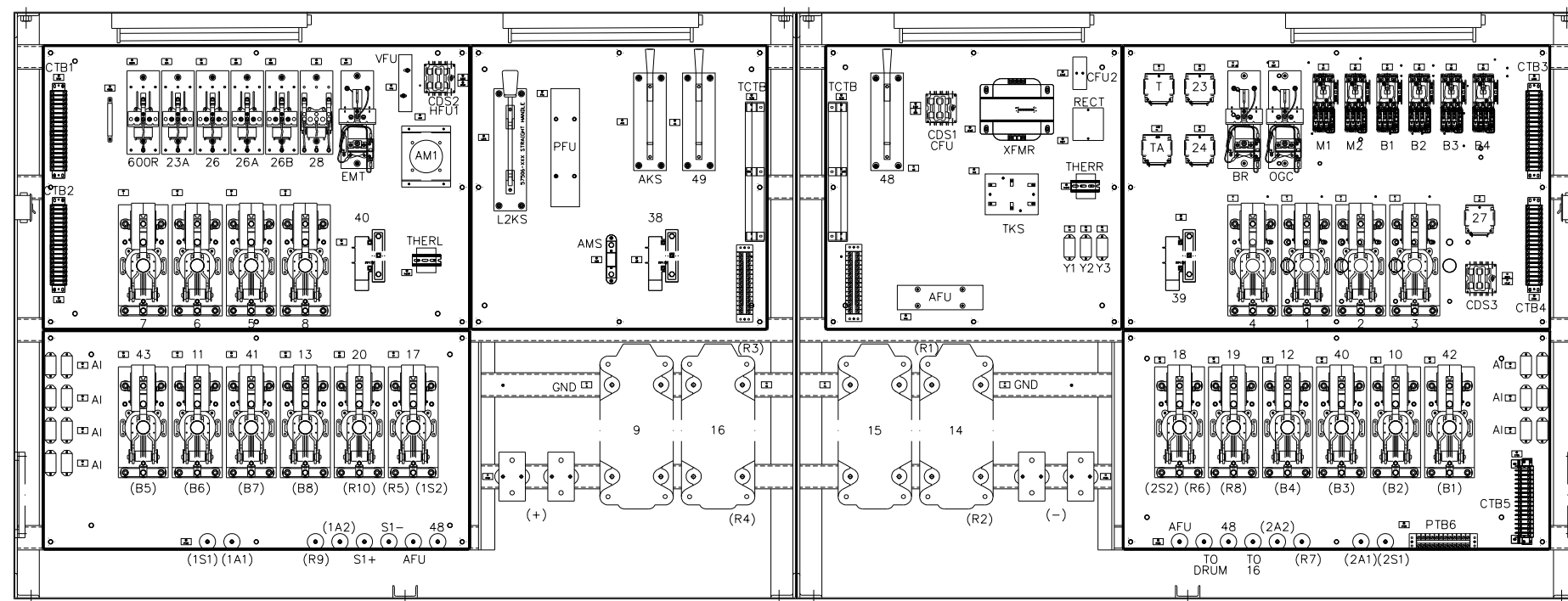
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

SOUTH MAIN CONTROLLER OUTLINE
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-80.1
CDOT PROJECT NO. E-6-650			315 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



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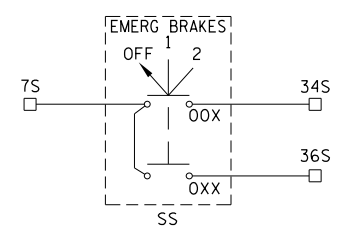
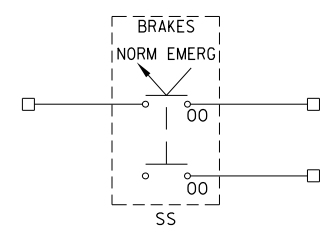
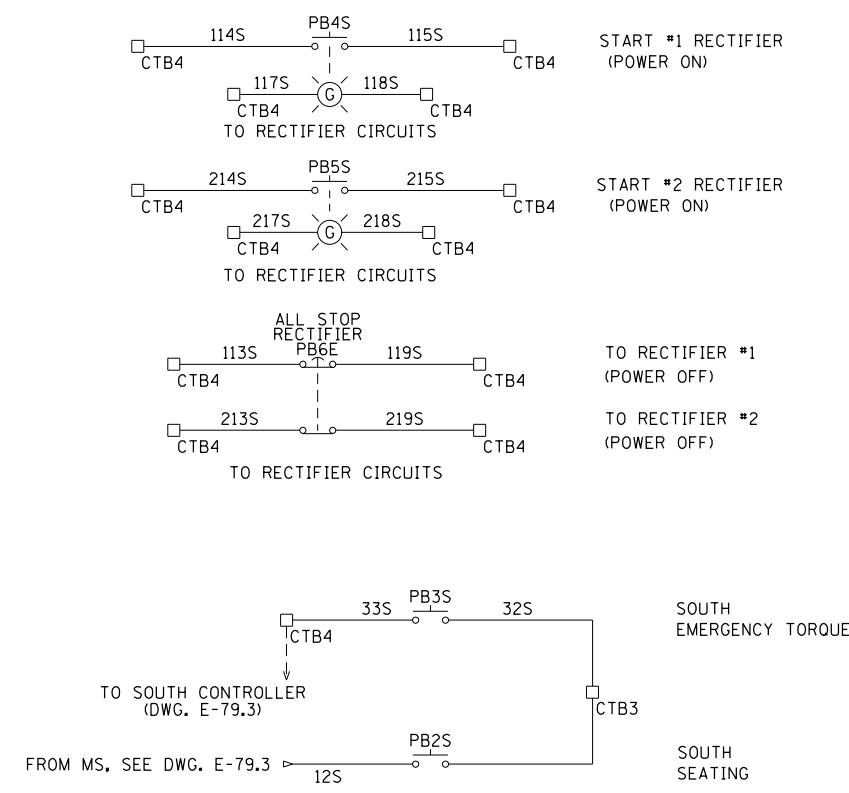
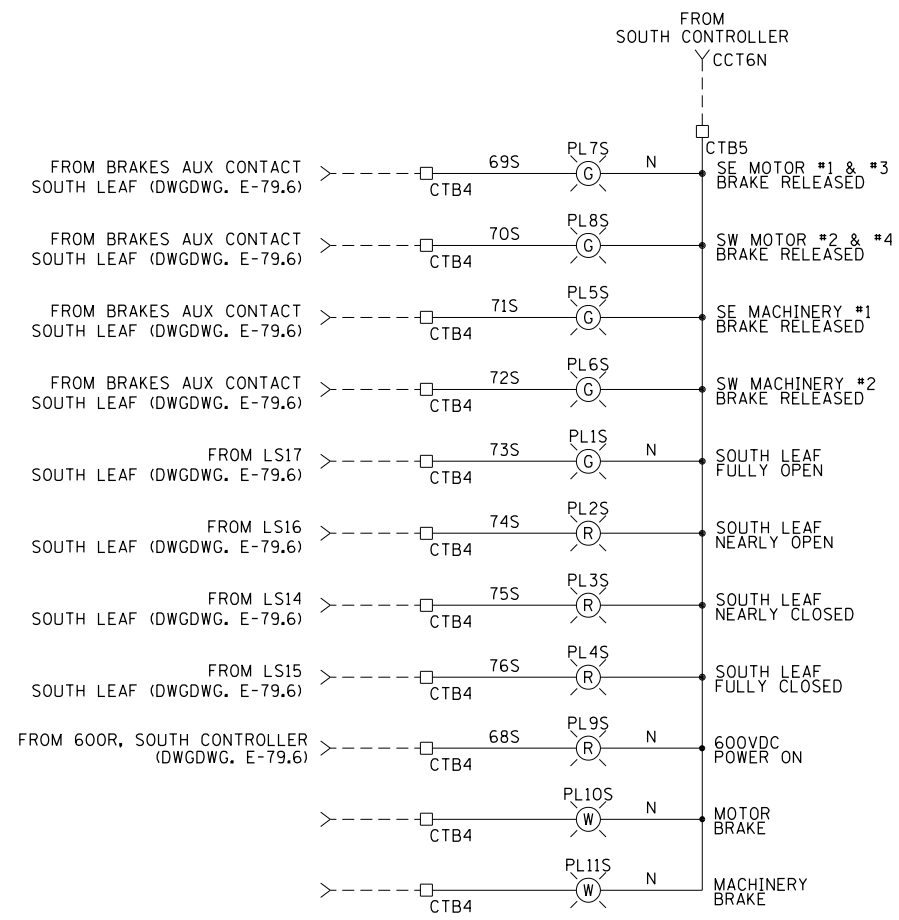
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**SOUTH MAIN CONTROLLER OUTLINE
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-80.2
CDOT PROJECT NO. E-6-650			316 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



□ TERMINAL LOCATED IN SOUTH OPERATOR CONSOLE

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PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISIED -	

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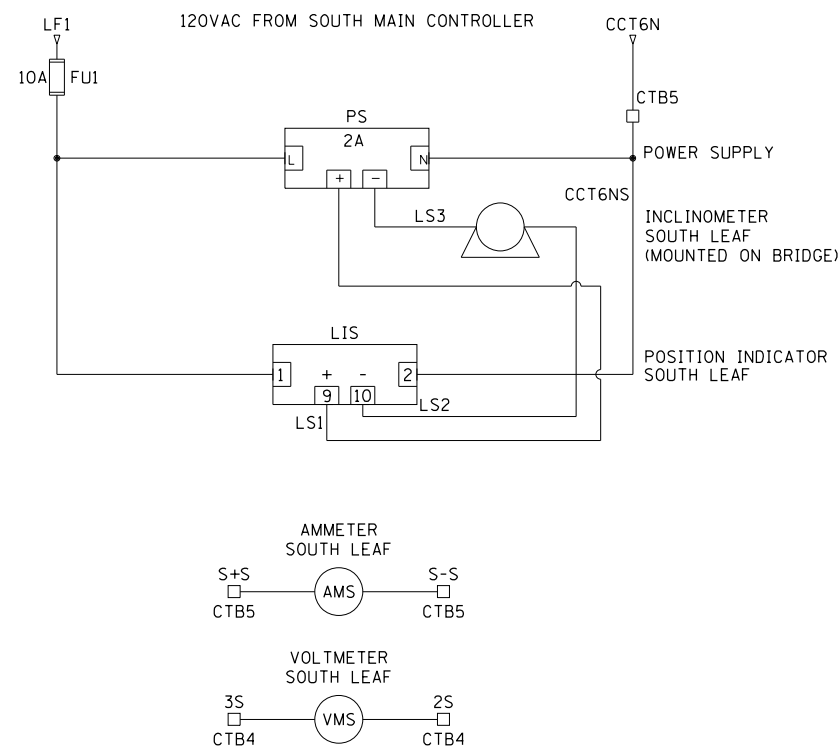
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**SOUTH OPERATOR CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-81.1
CDOT PROJECT NO. E-6-650			317 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



□ TERMINAL LOCATED IN SOUTH OPERATOR CONSOLE

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PLOT SCALE = N.T.S.	DRAWN - CUM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

CITY OF CHICAGO
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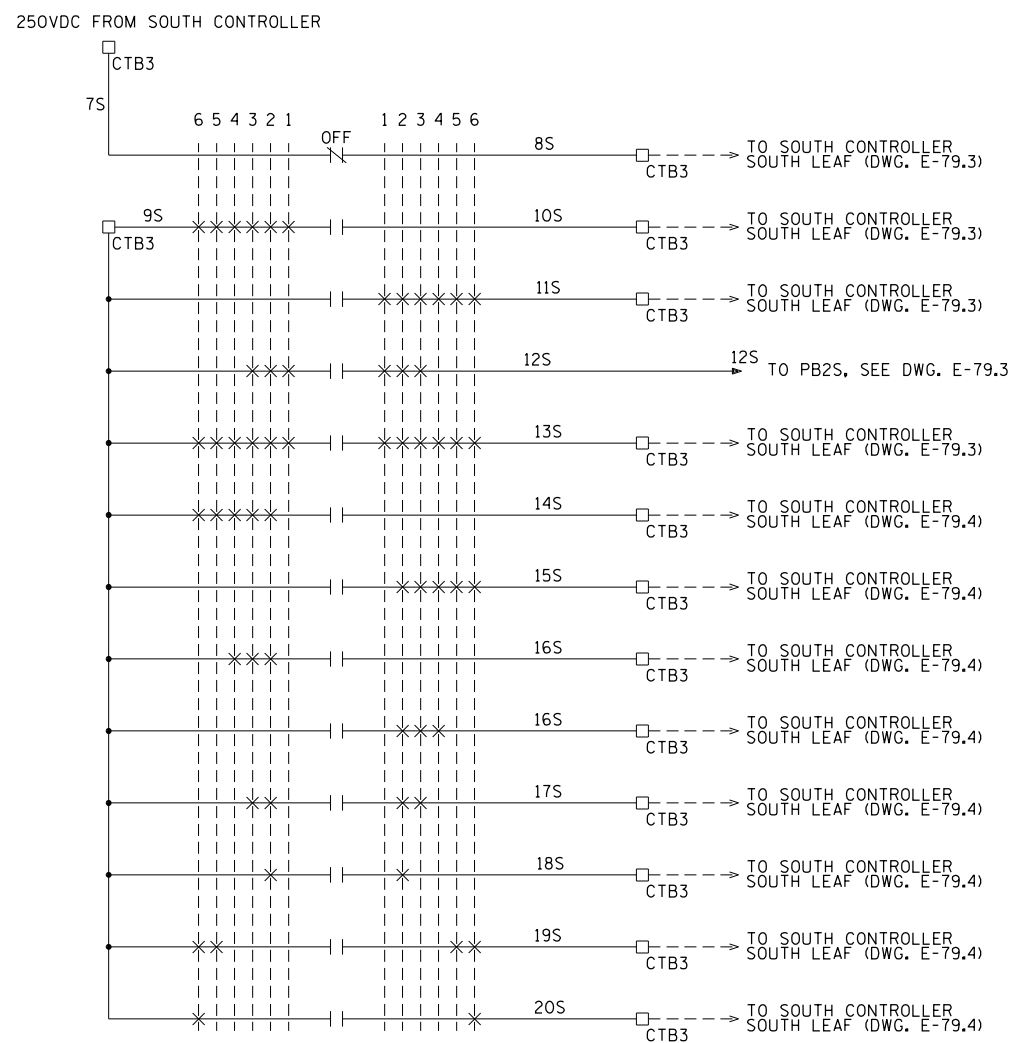
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**SOUTH OPERATOR CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-81.2
CDOT PROJECT NO. E-6-650			318 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



□ TERMINAL LOCATED IN SOUTH OPERATOR CONSOLE

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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**SOUTH OPERATOR CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-81.3
CDOT PROJECT NO. E-6-650			319 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

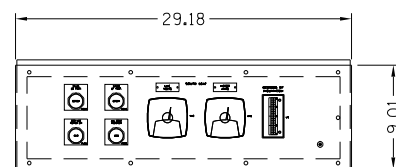


FIGURE 1
(FRONT SLOPE CONTROLS)
SEE SHEET 2

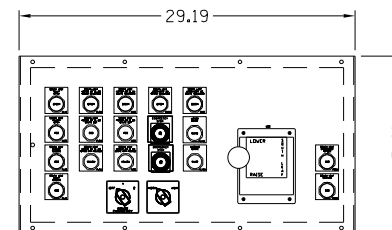
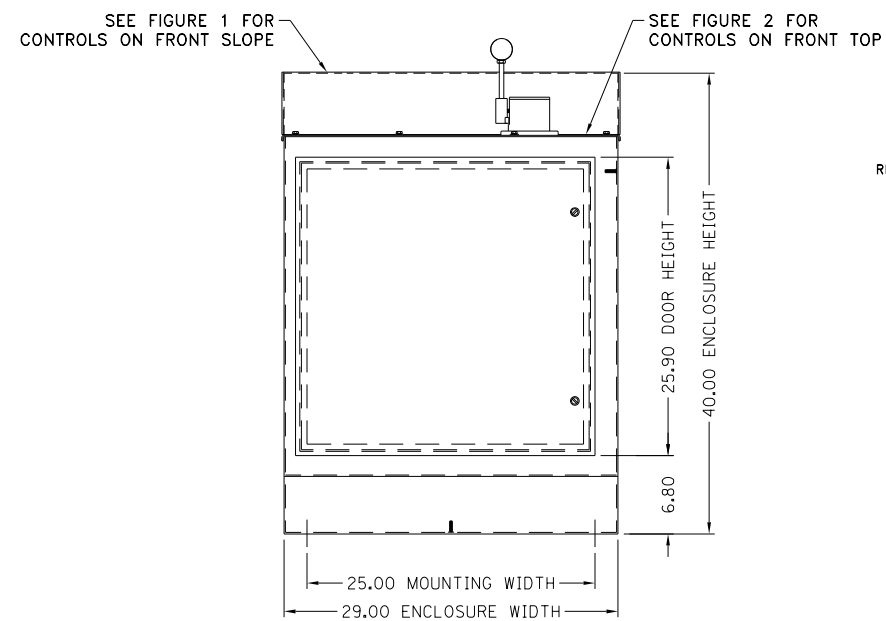
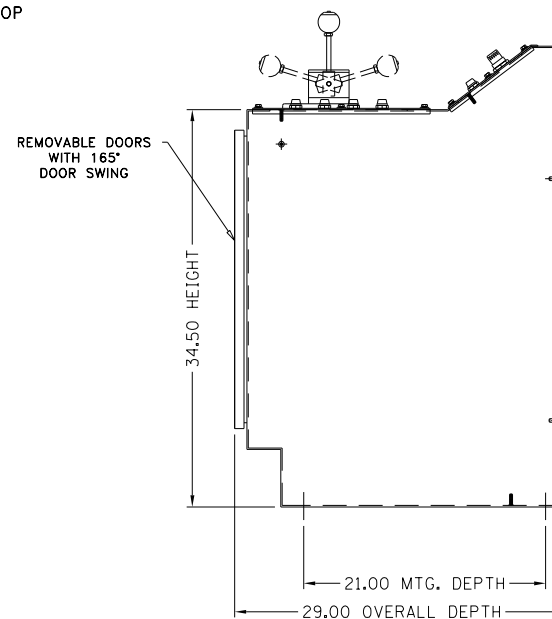


FIGURE 2
(FRONT TOP CONTROLS)
SEE SHEET 3



FRONT VIEW



RIGHT SIDE VIEW

MATERIAL: #11 GA STEEL
FINISH: PAINT ASA 61 GRAY

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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTH OPERATOR CONSOLE OUTLINE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-82.1
CDOT PROJECT NO. E-6-650			320 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

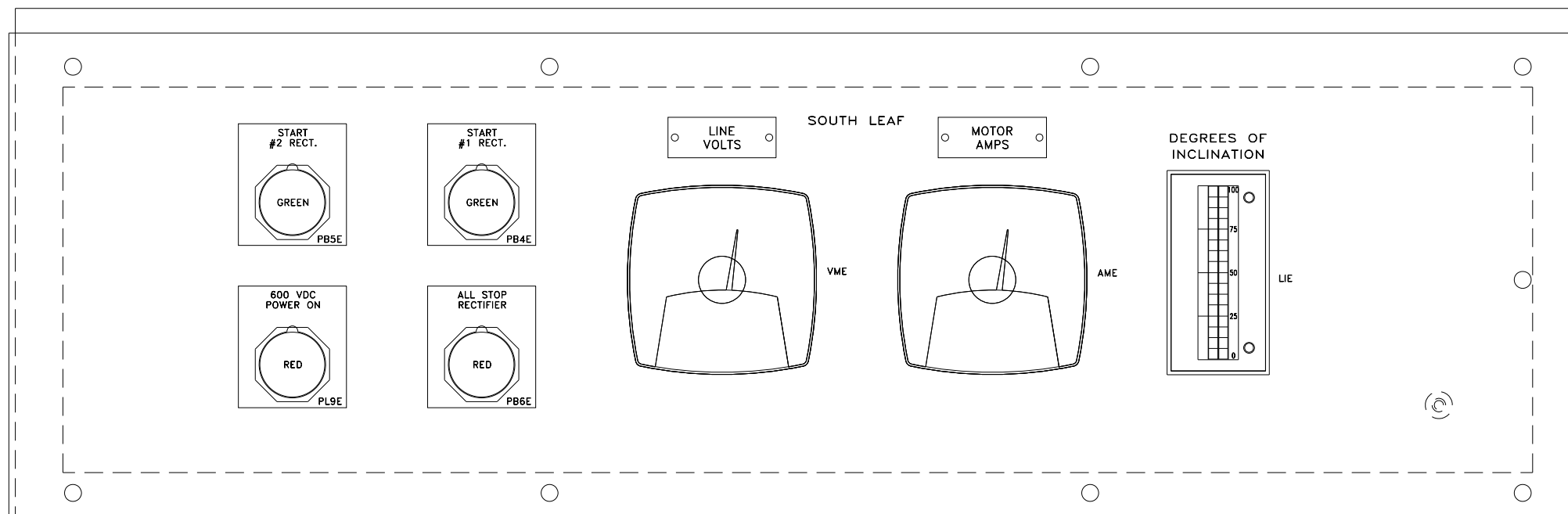


FIGURE 1 DETAIL
SCALE: NONE

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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SOUTH OPERATOR CONSOLE OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-82.2
CDOT PROJECT NO. E-6-650			321 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

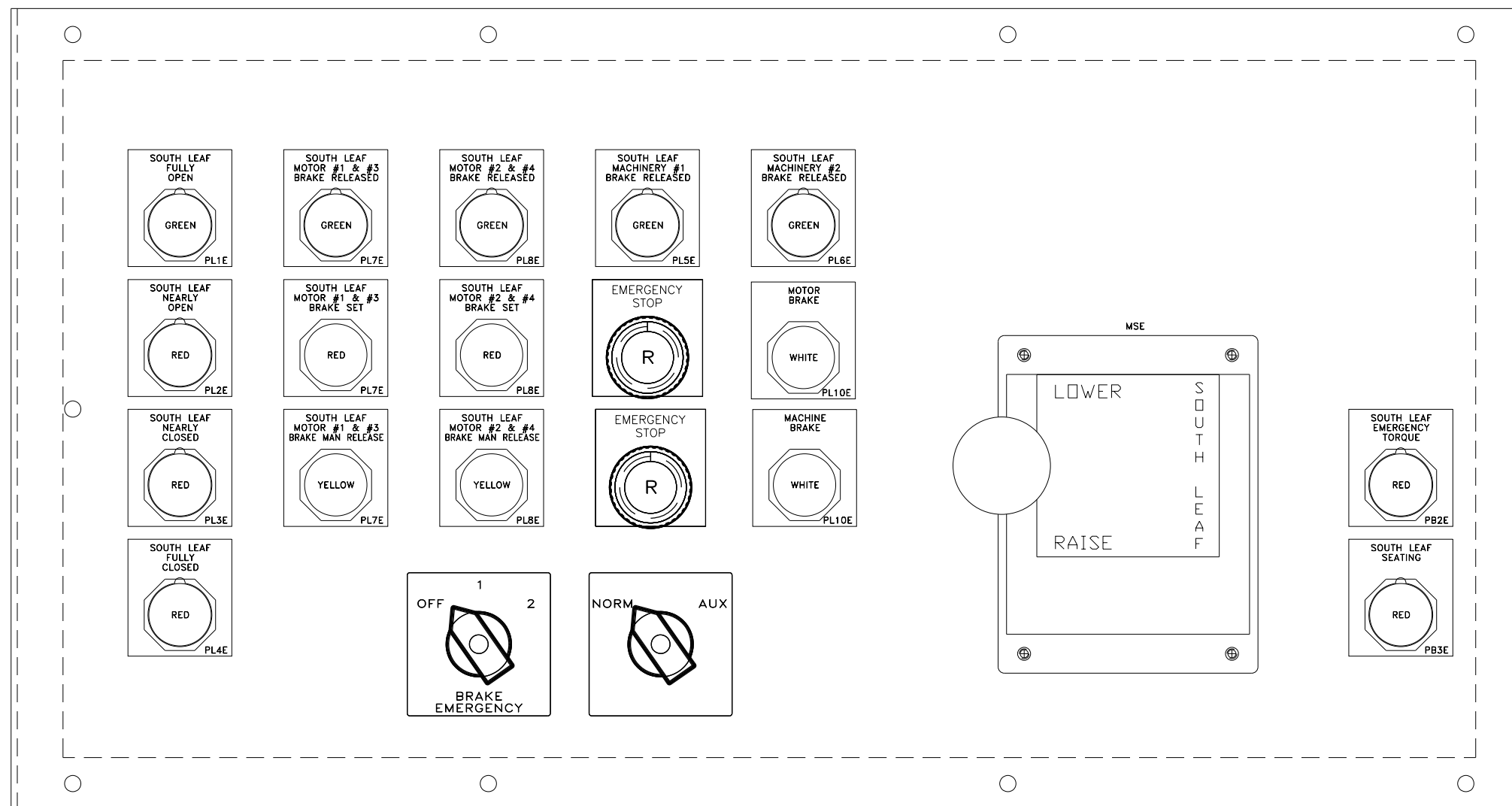


FIGURE 2 DETAIL
SCALE: NONE

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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

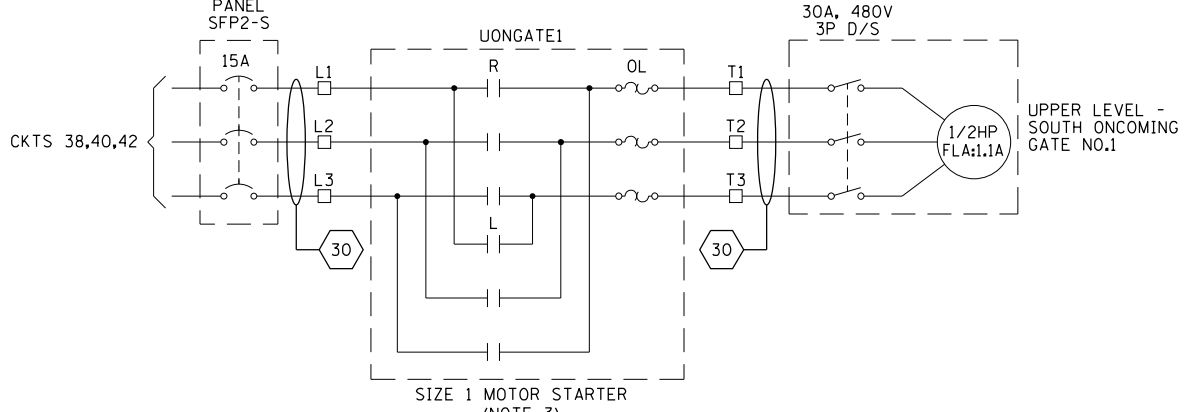
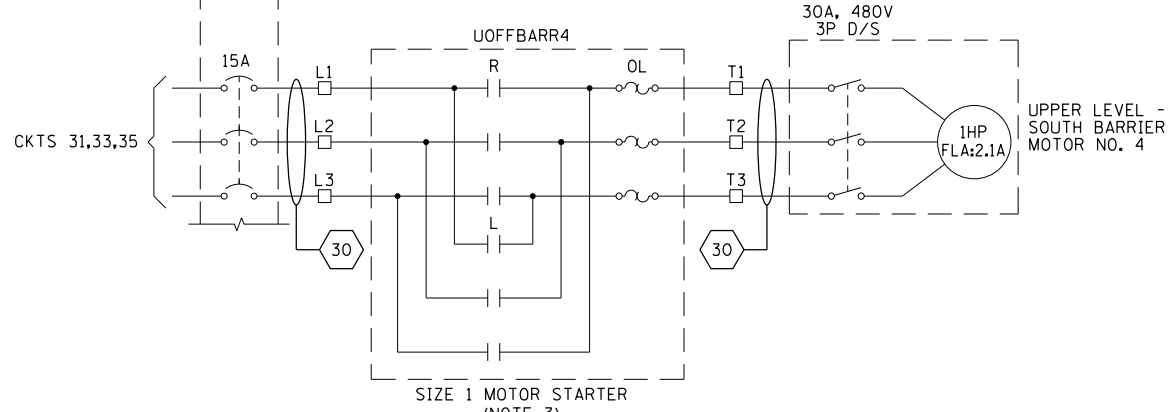
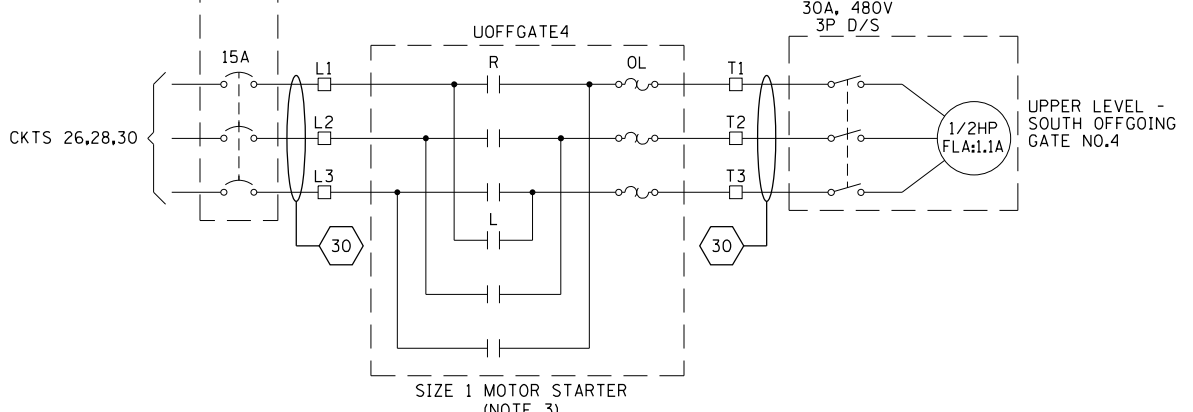
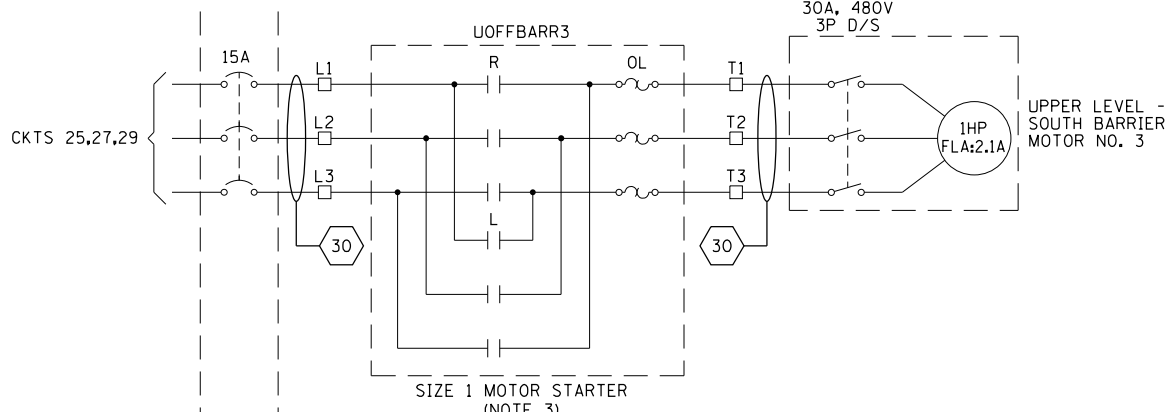
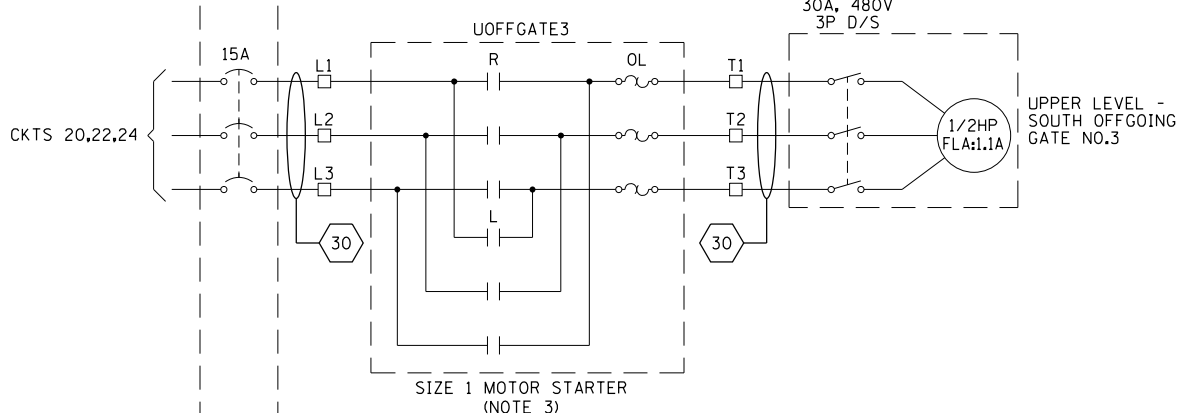
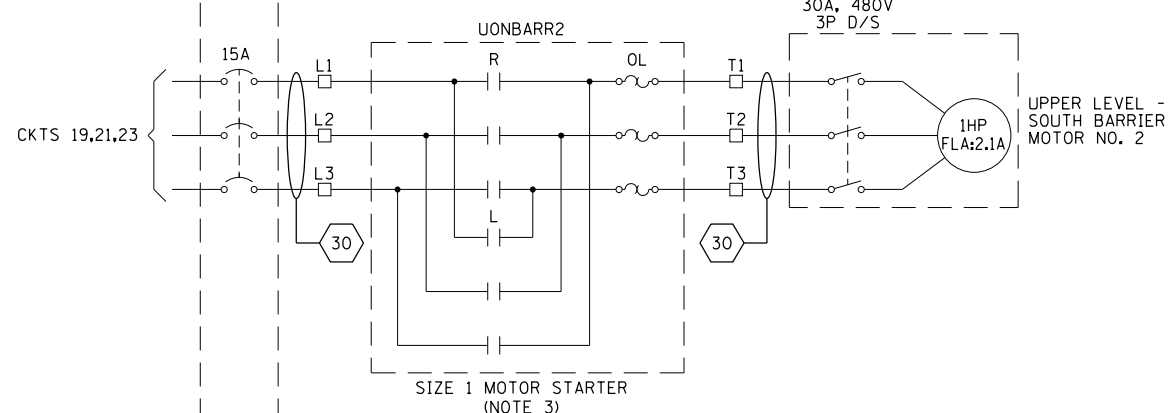
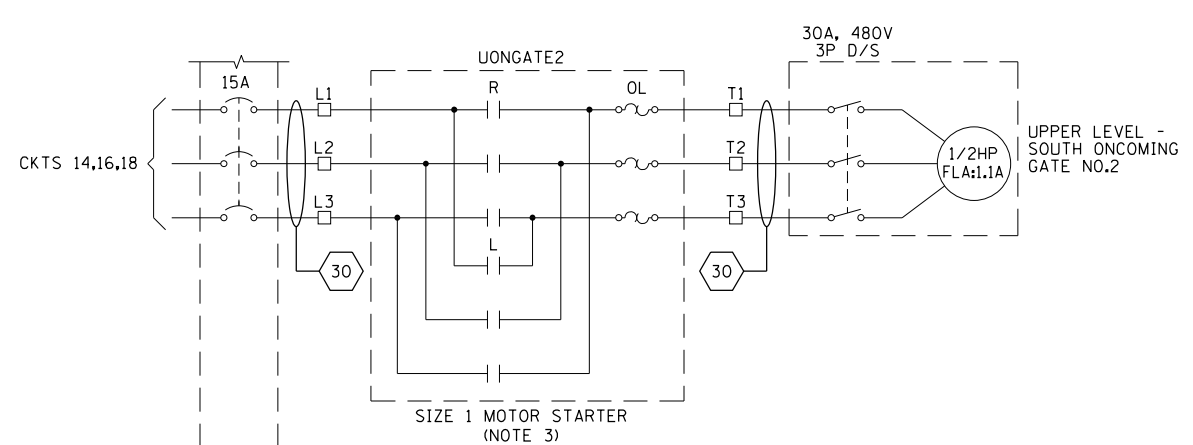
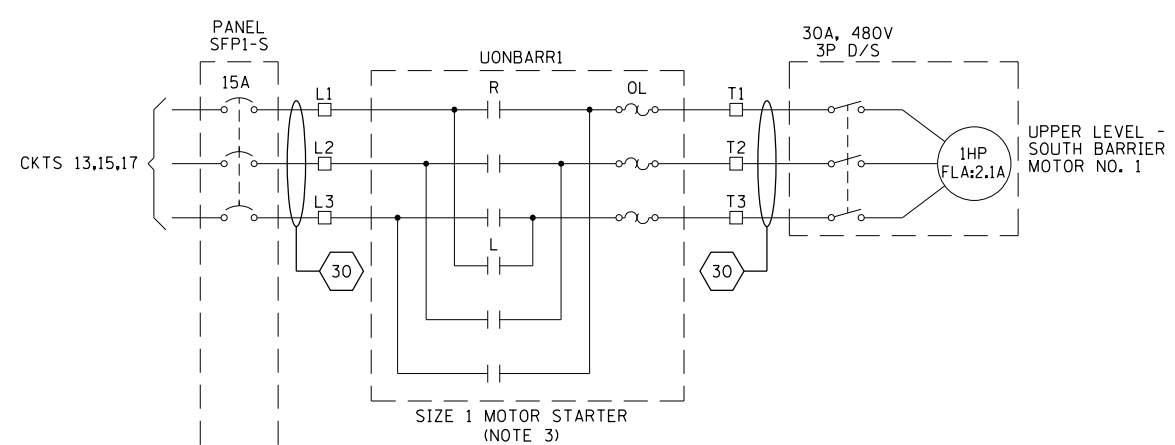
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SOUTH OPERATOR CONSOLE OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-82.3
CDOT PROJECT NO. E-6-650			322 OF 411

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - STARTERS TO BE LOCATED IN SAFETY FIRST CABINETS.



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PLOT SCALE = N.T.S.	CHECKED - AF	REVISED -
PLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
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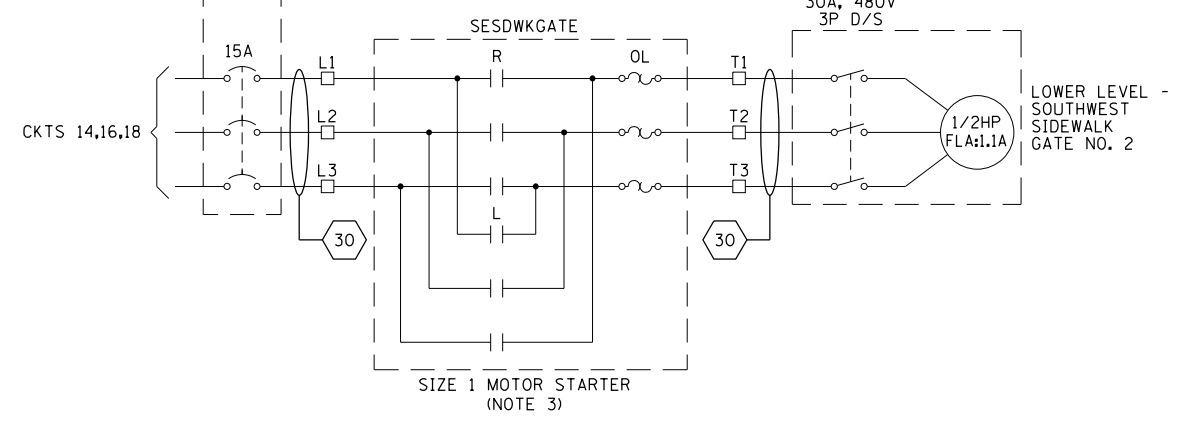
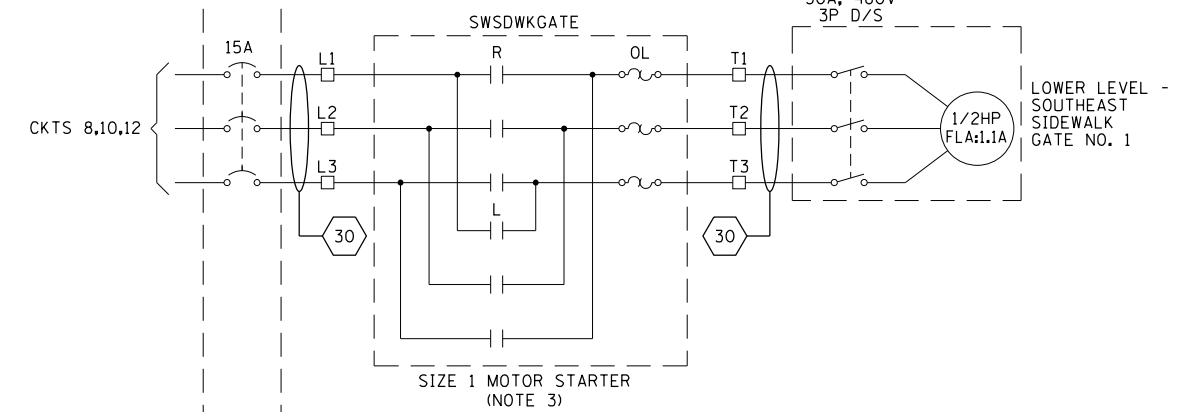
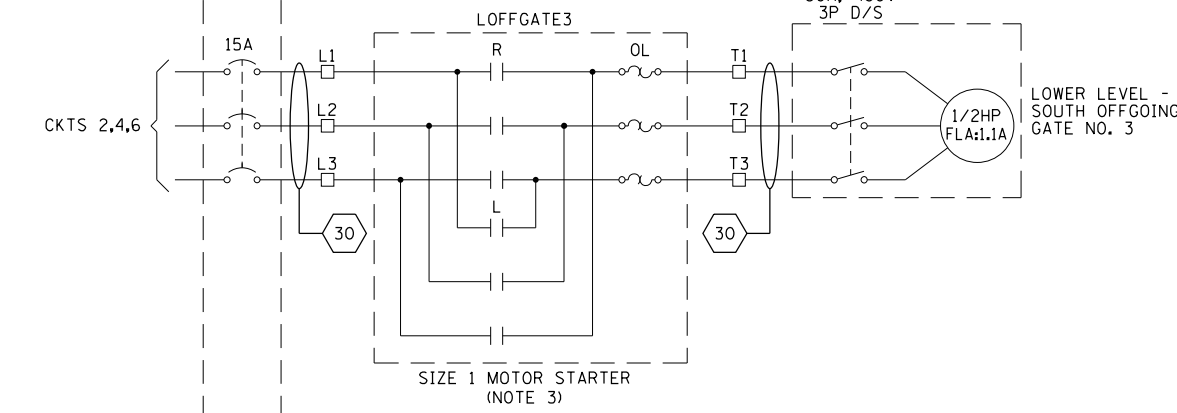
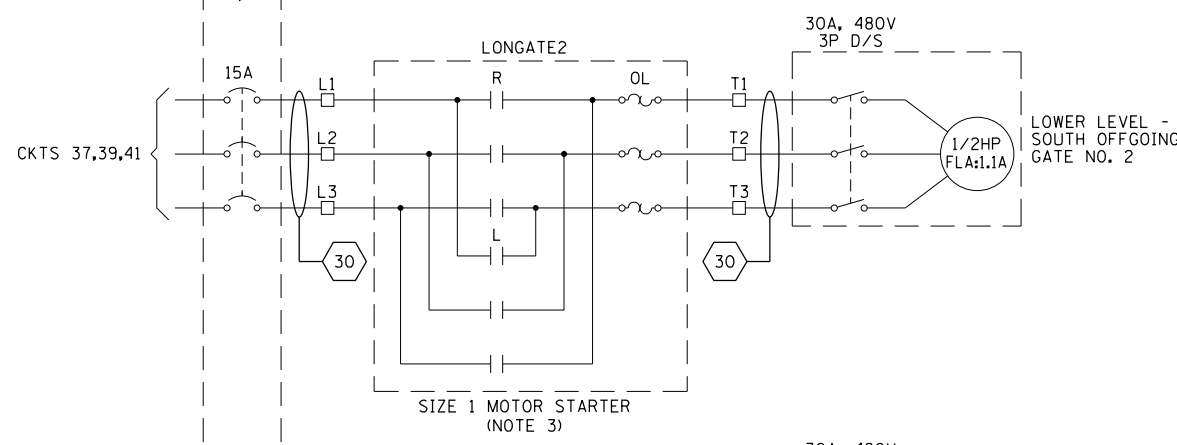
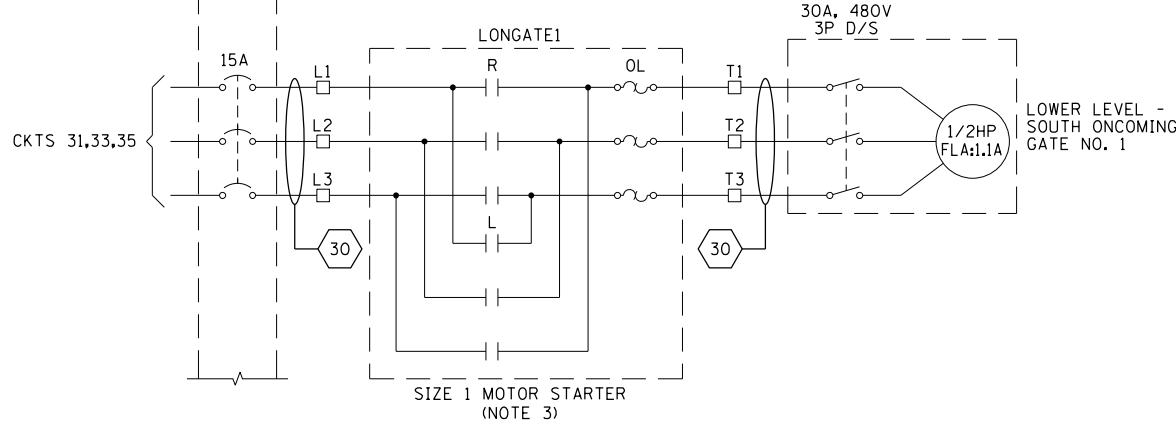
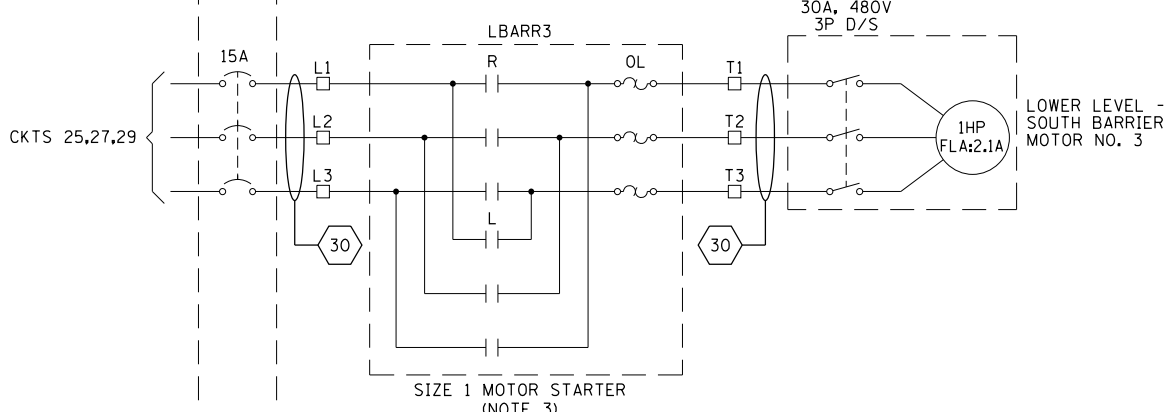
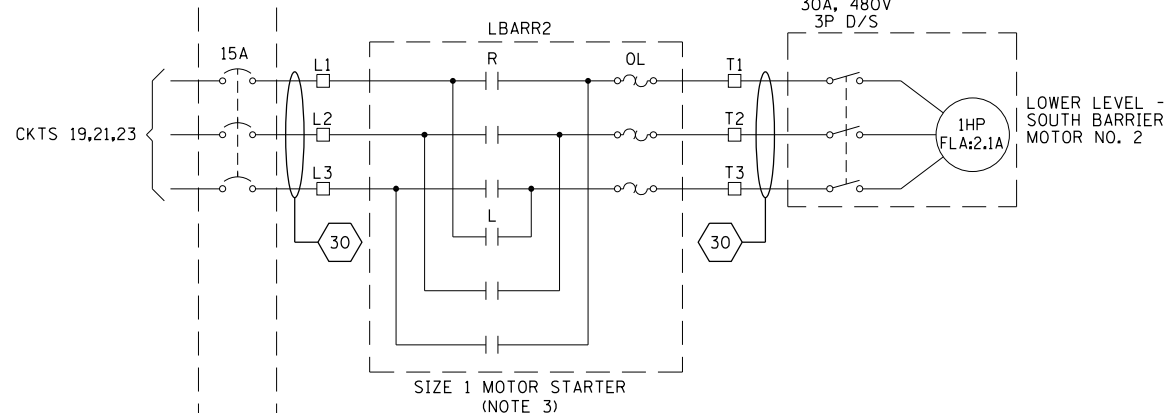
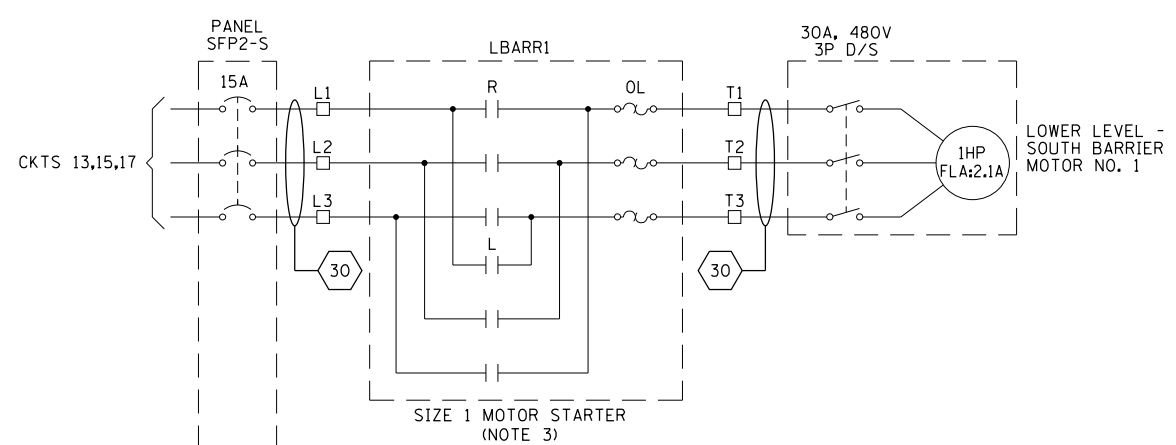
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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**SOUTH SAFETY FIRST
 CONTACTOR CABINET AND CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-83.1
CDOT PROJECT NO. E-6-650			323 OF 411

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - STARTERS TO BE LOCATED IN SAFETY FIRST CABINETS.



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		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

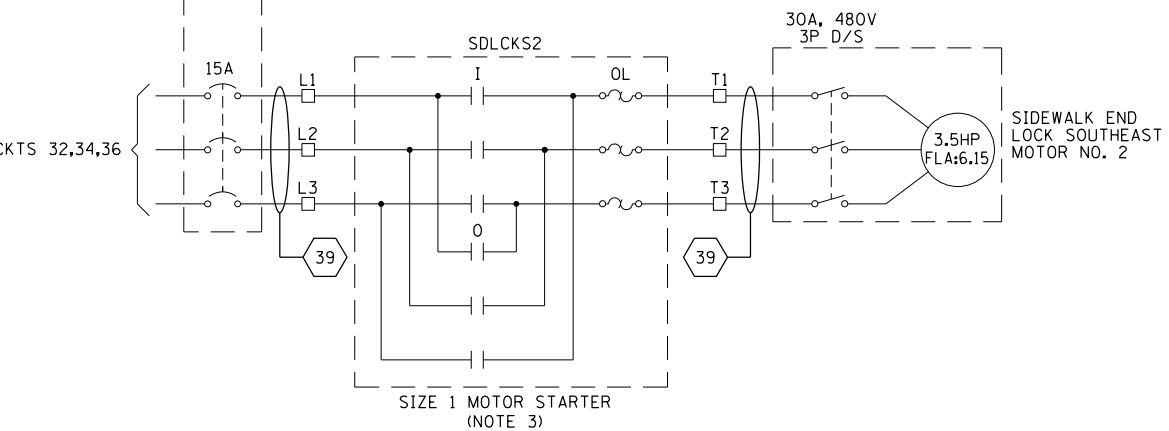
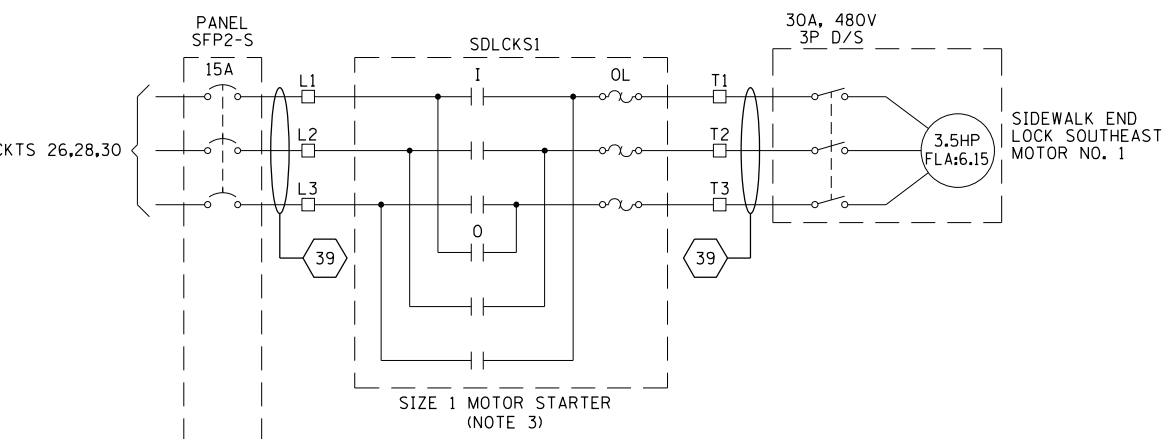
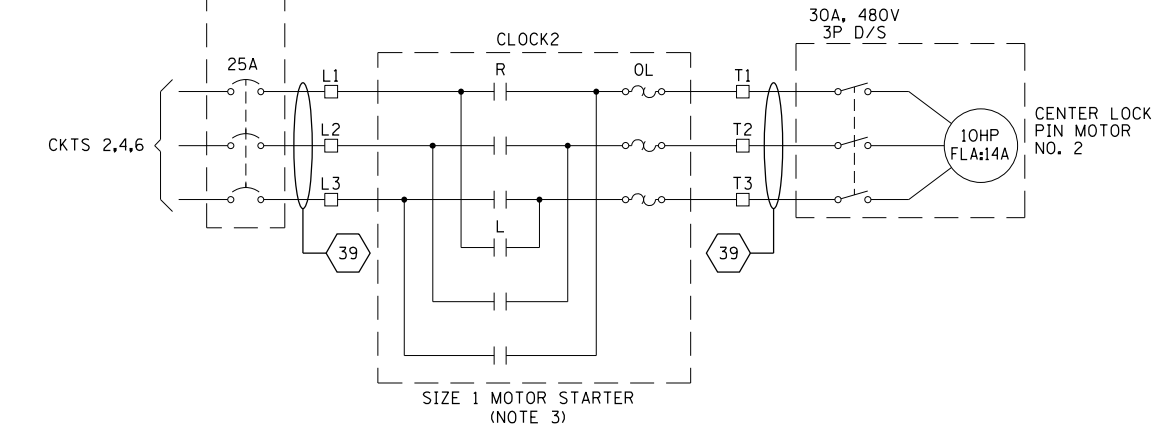
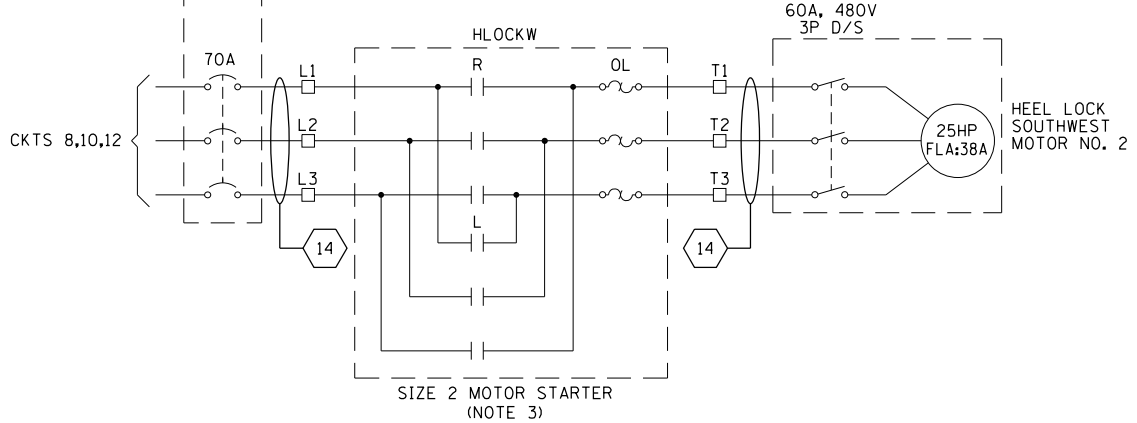
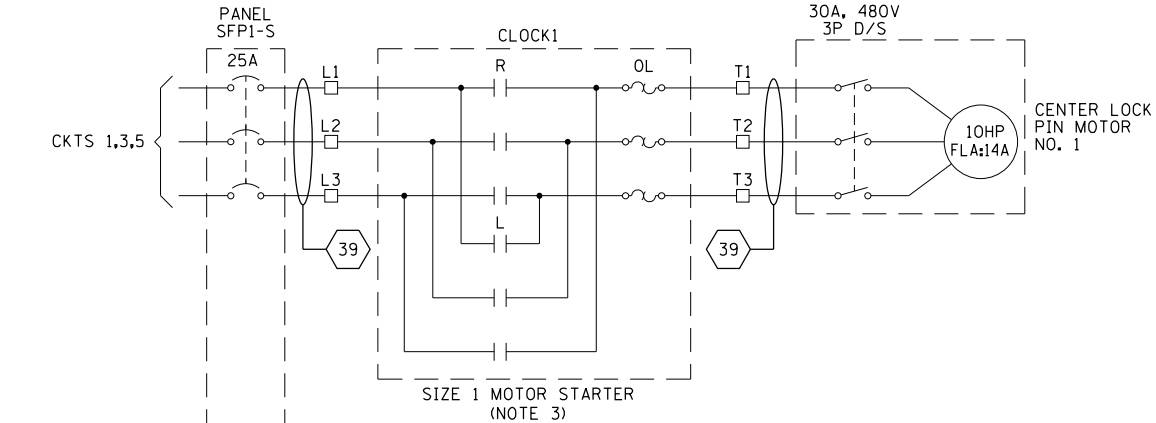
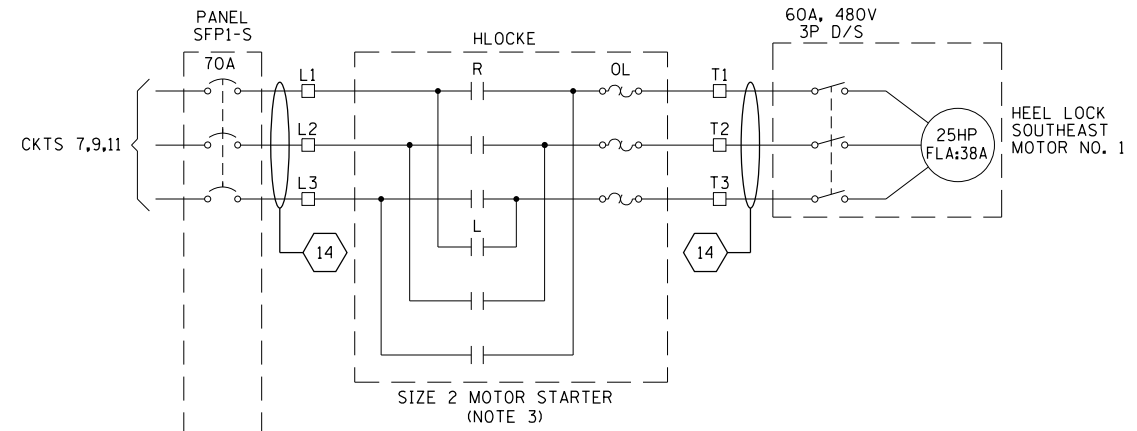
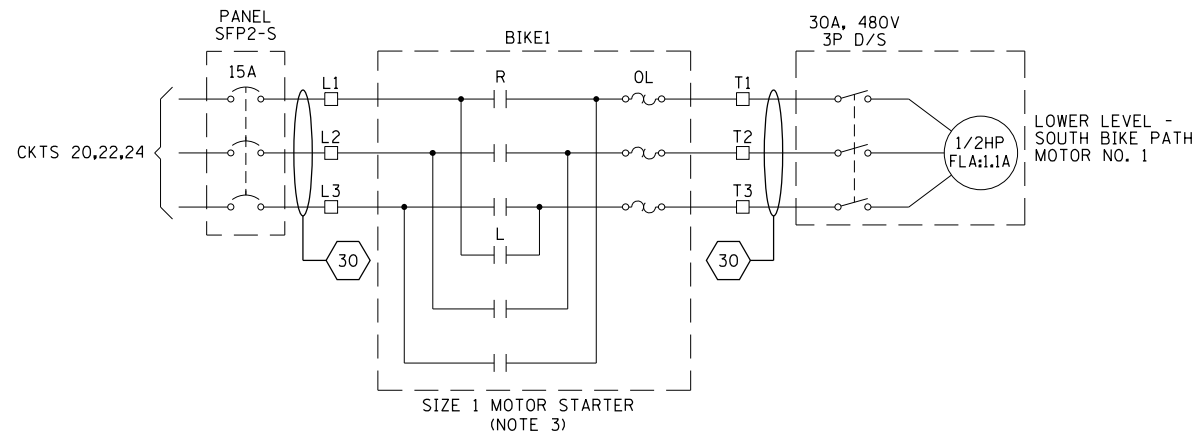
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 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

SOUTH SAFETY FIRST
 CONTACTOR CABINET AND CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-83.2
CDOT PROJECT NO. E-6-650			324 OF 411

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6/22/2017



NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. STARTERS TO BE LOCATED IN SAFETY FIRST CABINETS.

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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

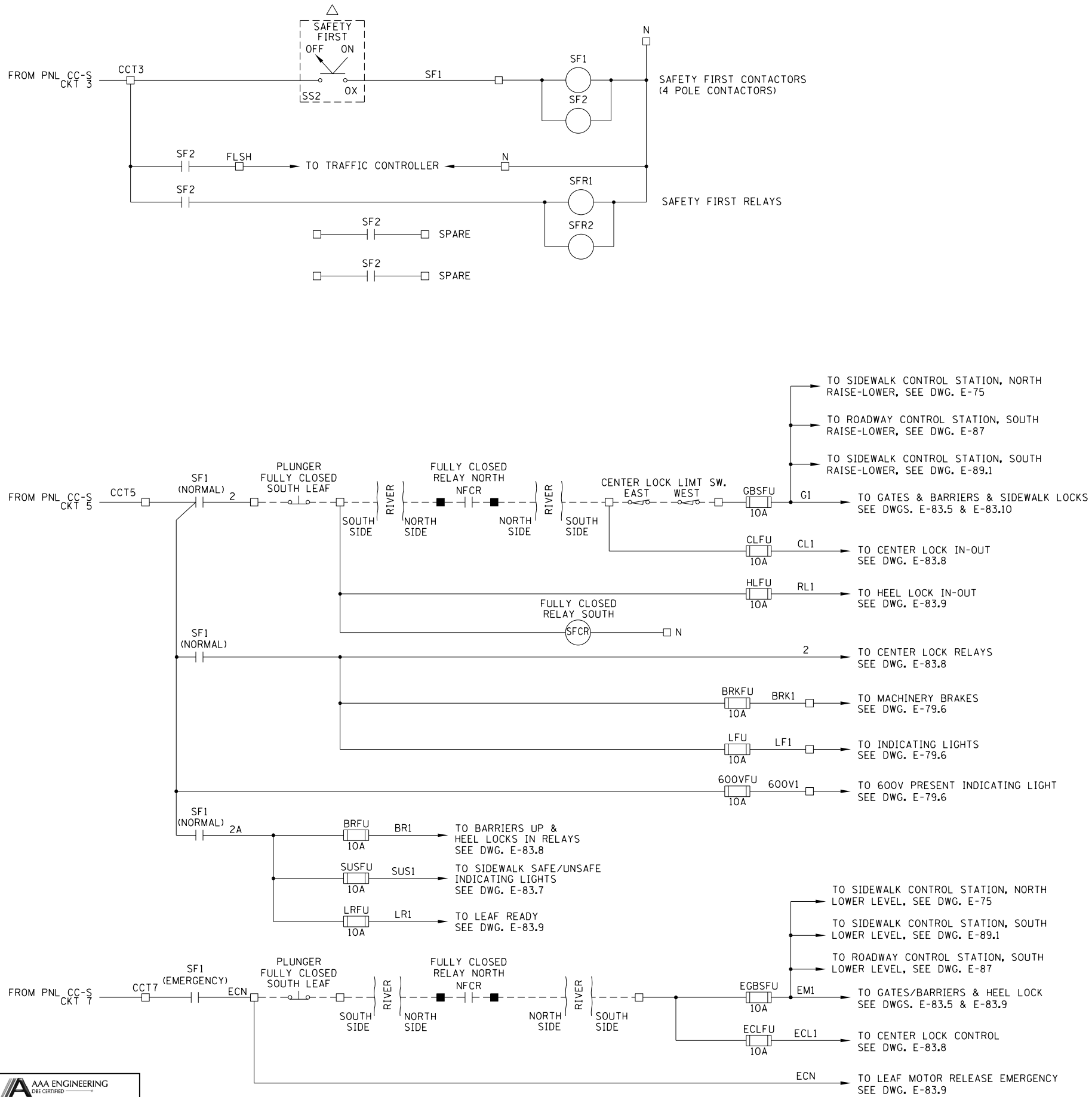
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

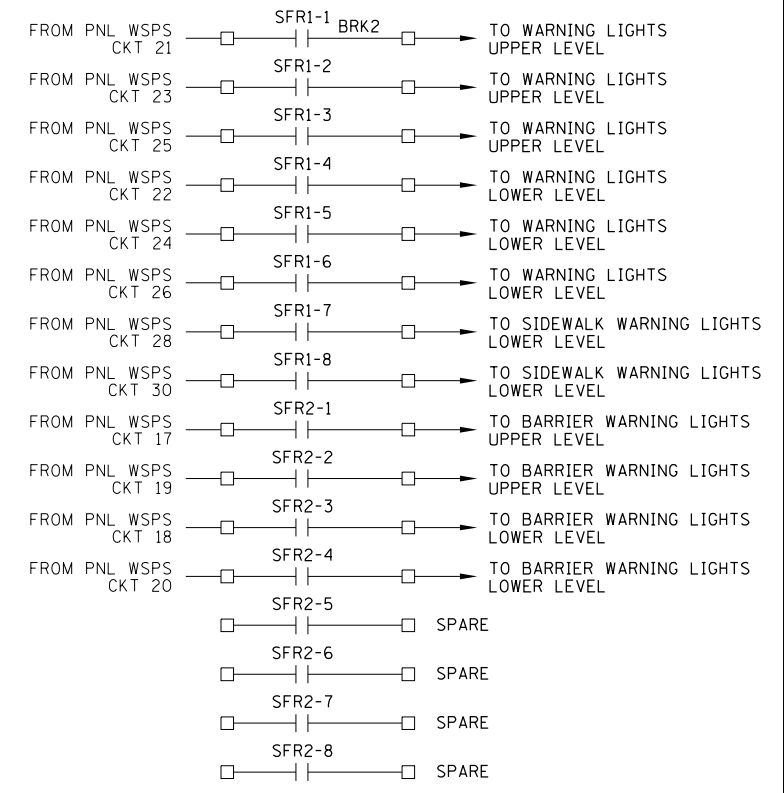
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CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-83.3
CDOT PROJECT NO. E-6-650			325 OF 411

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- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.
 3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
 4. UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.



- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◊ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ☒ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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PLLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
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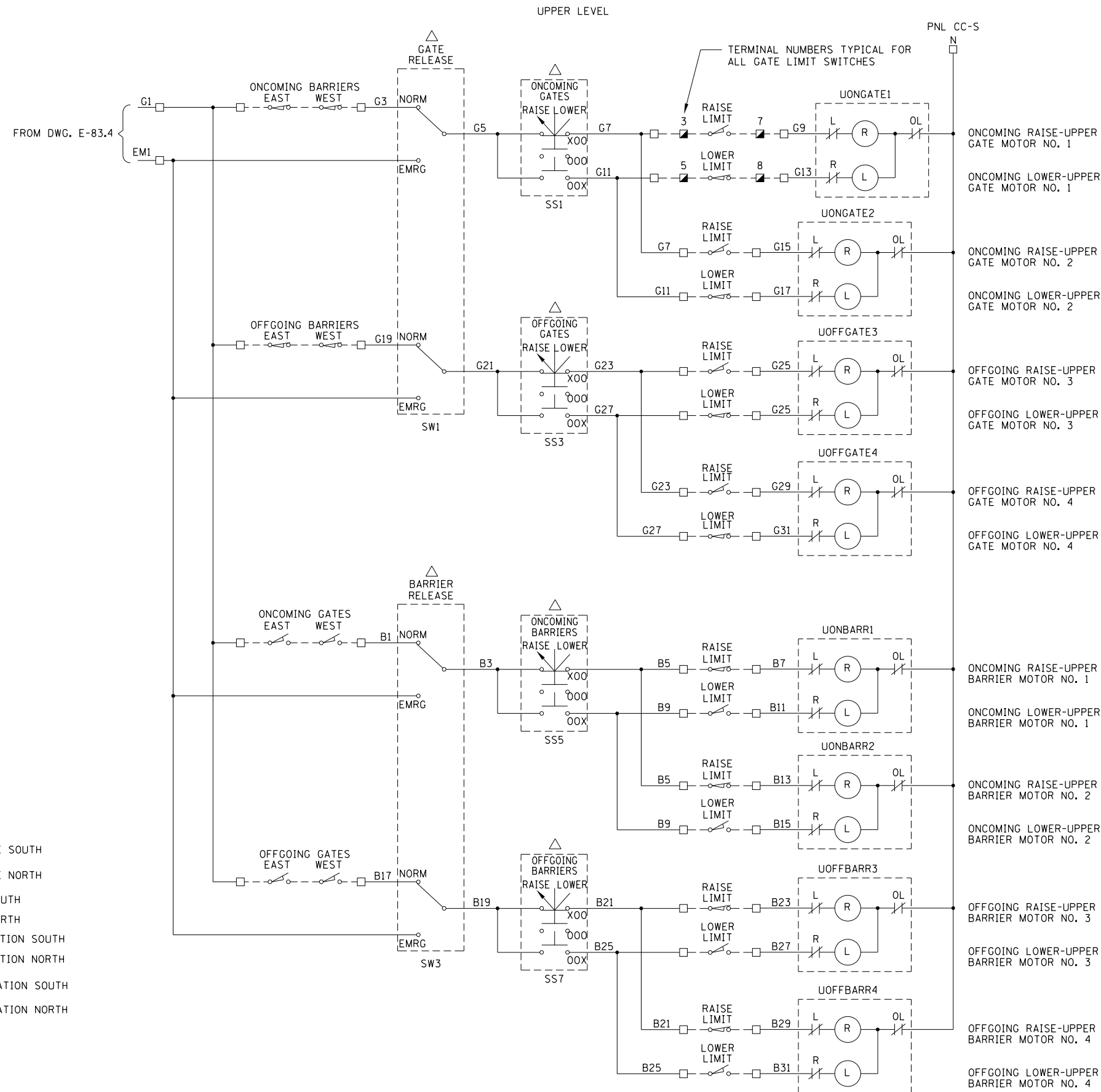
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-83.4
CDOT PROJECT NO. E-6-650			326 OF 411

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- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◊ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
4. UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.

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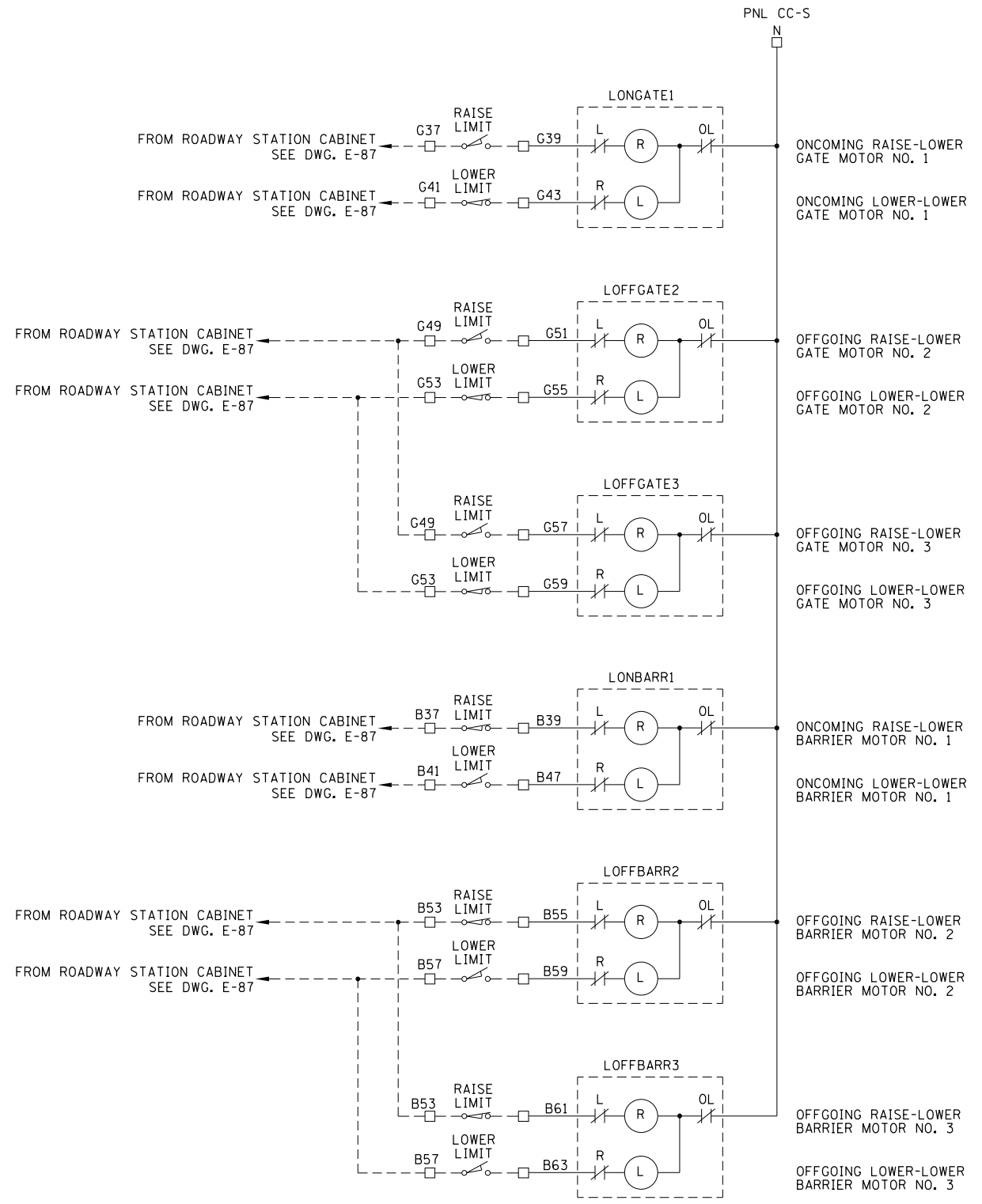
**LAKEFRONT BICYCLE TRAIL #3
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**SOUTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-83.5
CDOT PROJECT NO. E-6-650			327 OF 411

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6/22/2017

LOWER LEVEL



- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◇ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ▣ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▤ LIMIT SWITCH TERMINAL LOCATED GATE ARM

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
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**LAKEFRONT BICYCLE TRAIL #3
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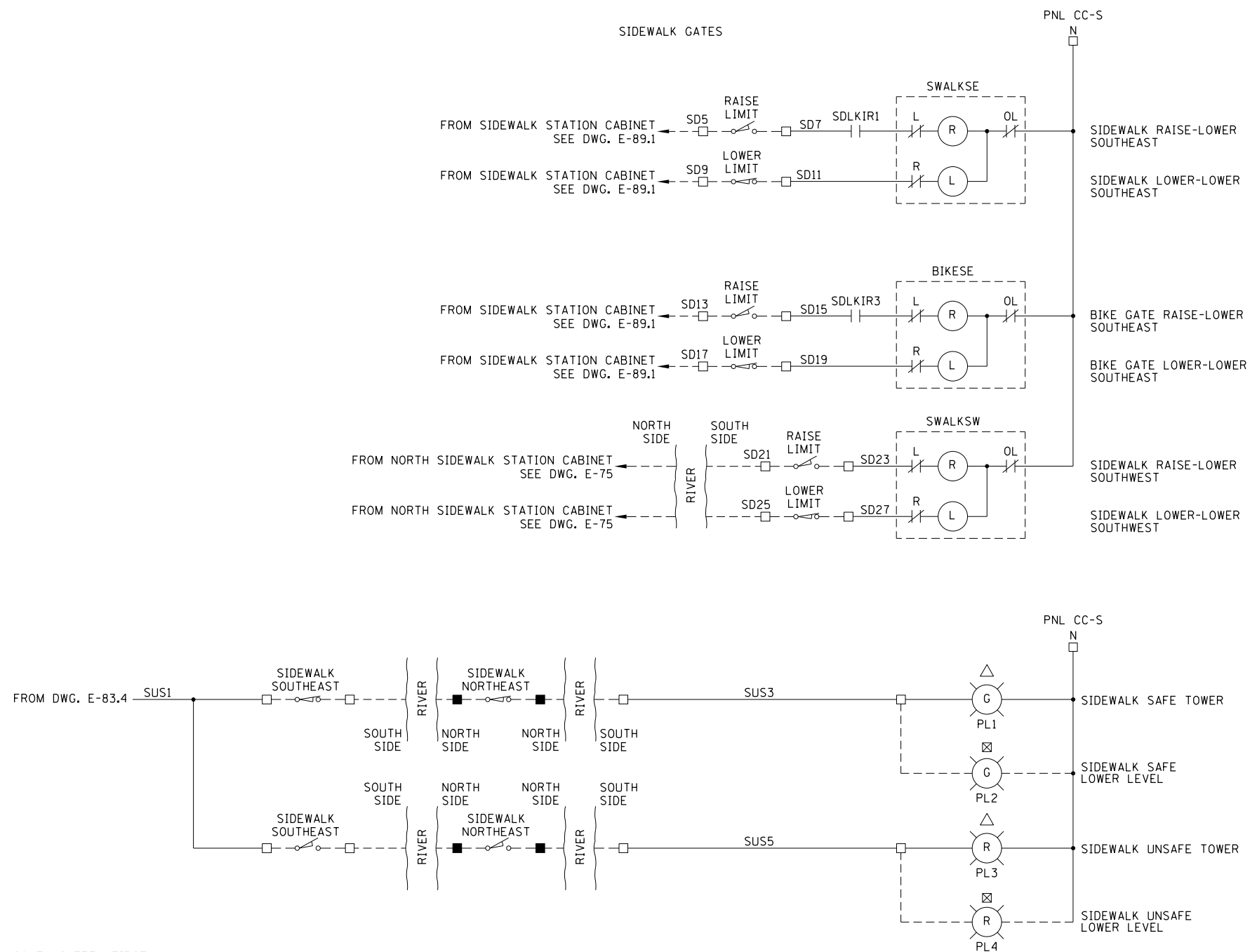
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(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-83.6
CDOT PROJECT NO. E-6-650			328 OF 411

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6/30/2017

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
4. UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.



- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◊ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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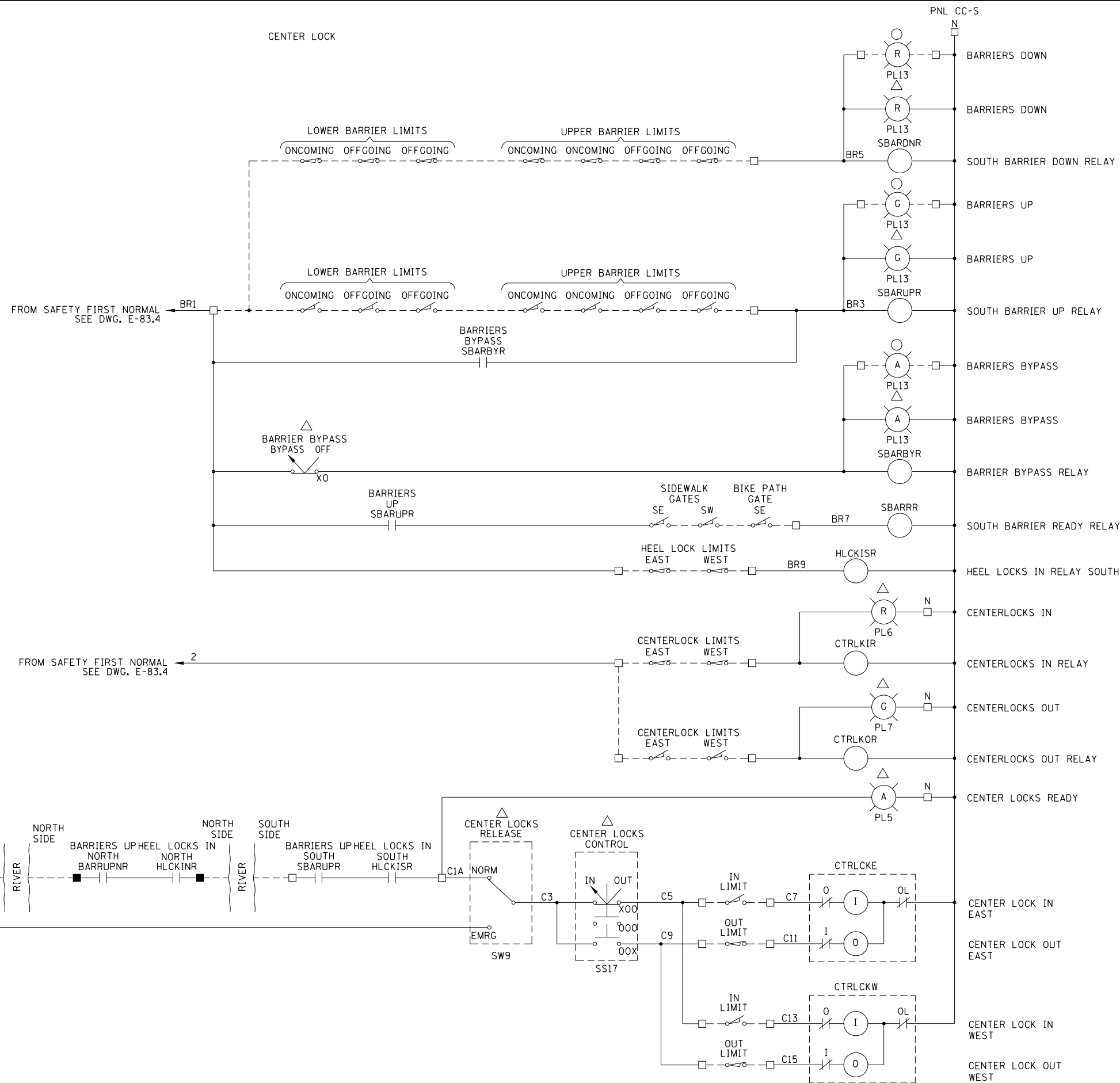
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SOUTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-83.7
CDOT PROJECT NO. E-6-650			329 OF 411

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6/22/2017



NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
4. UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.

- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◊ PILOT DEVICE LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ PILOT DEVICE LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊗ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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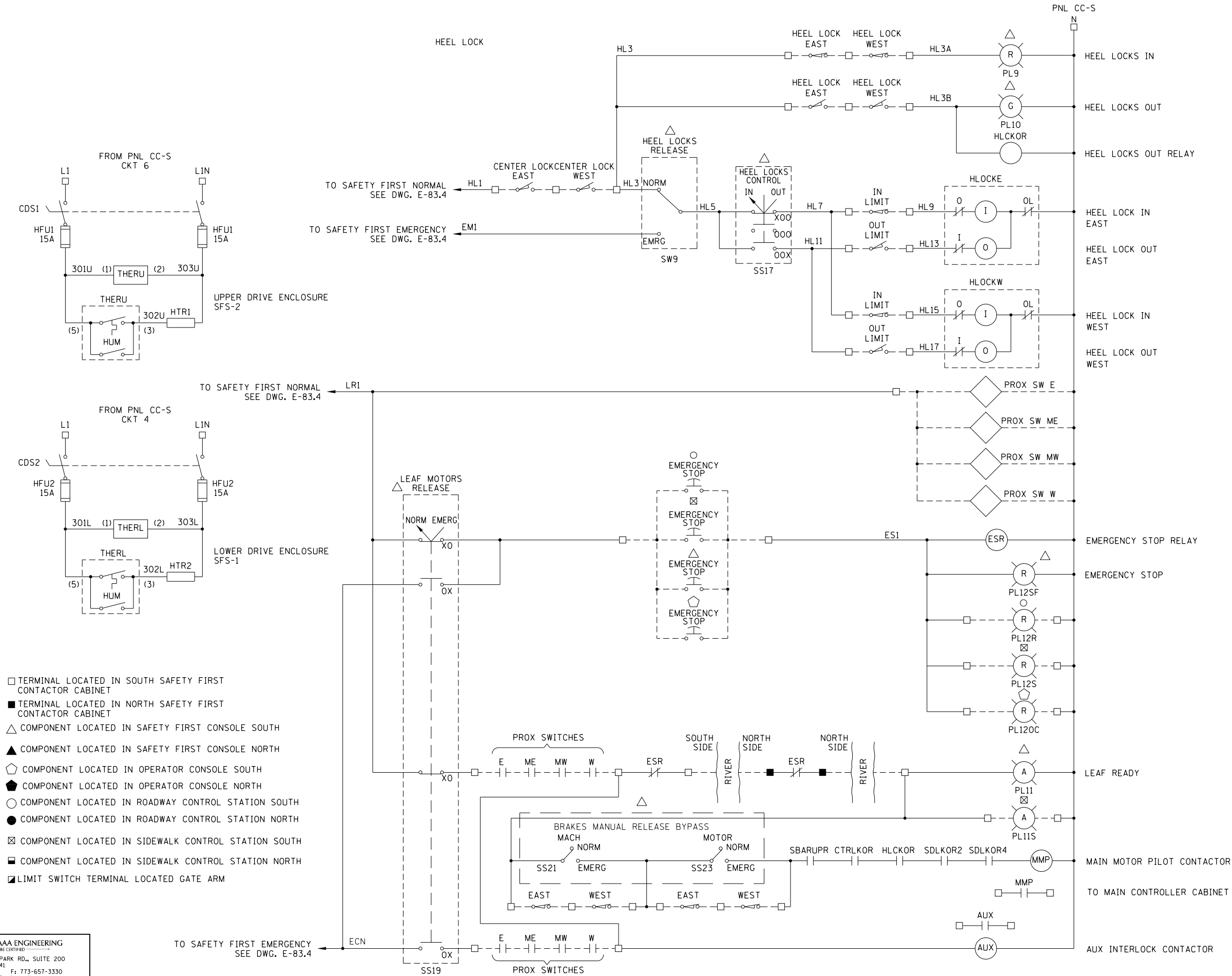
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SOUTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-83.8
CDOT PROJECT NO. E-6-650			330 OF 411

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3/2/2018



- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
 - UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.

- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◊ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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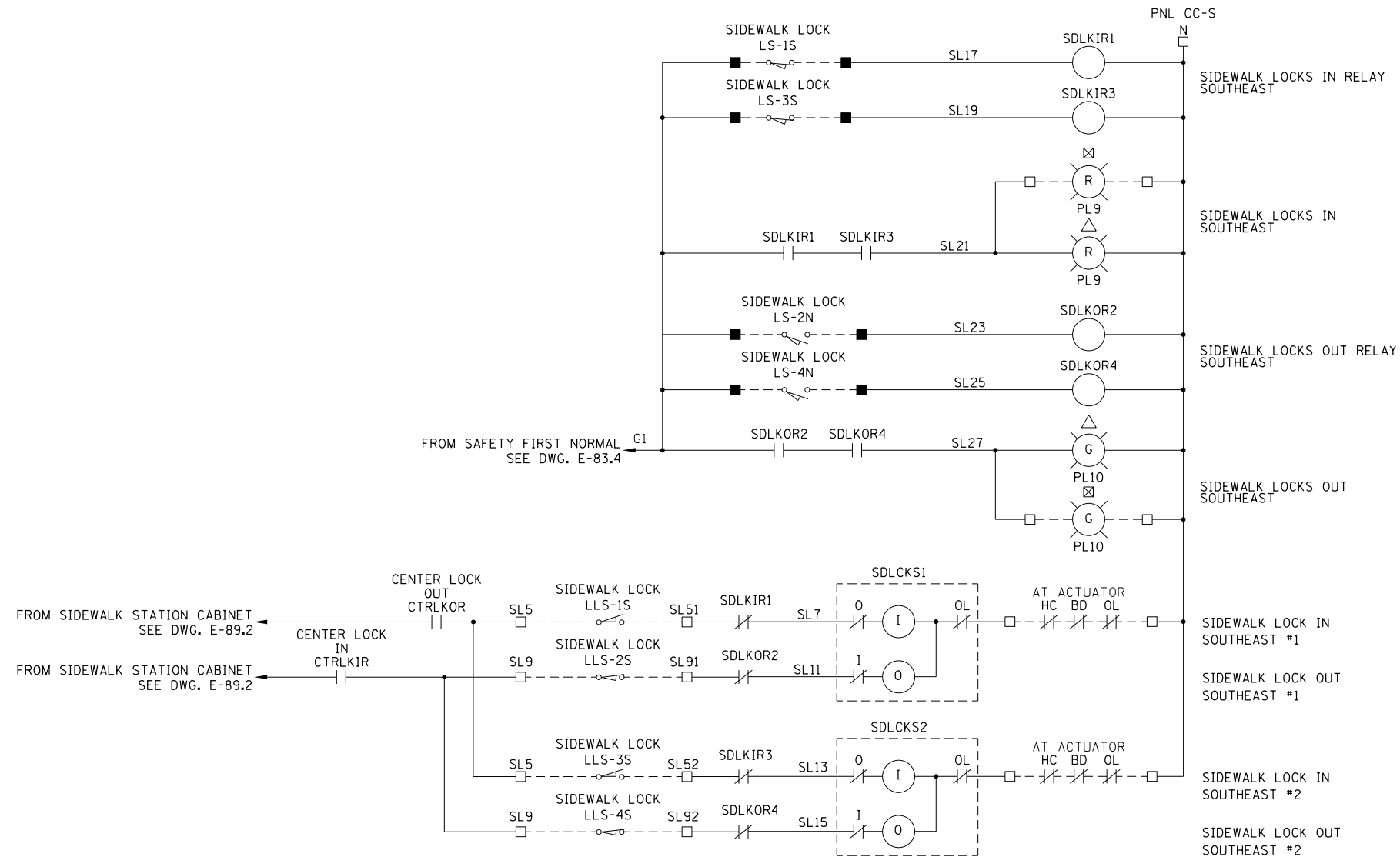
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SOUTH SAFETY FIRST
CONTACTOR CABINET AND CONSOLE SCHEMATIC
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-83.9
CDOT PROJECT NO. E-6-650			331 OF 411

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SIDEWALK LOCKS



- BD - BRAKE DISCONNECT
- HC - HANDWHEEL INTERLOCK
- OL - OVERLOAD
- TERMINAL LOCATED IN SOUTH SAFETY FIRST CONTACTOR CABINET
- TERMINAL LOCATED IN NORTH SAFETY FIRST CONTACTOR CABINET
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◻ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◼ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
4. UNLESS OTHERWISE SPECIFIED, ALL CONTACTORS ARE LOCATED IN THE SAFETY FIRST CONTACTOR CABINET.

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 FAX: (312) 782-1884

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		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/30/2017	CHECKED -	MEB	REVISED -	

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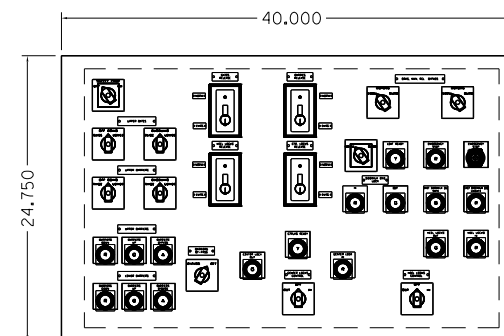
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

SOUTH SAFETY FIRST
 CONTACTOR CABINET AND CONSOLE SCHEMATIC
 (STRUCTURE NO. 016-6030)

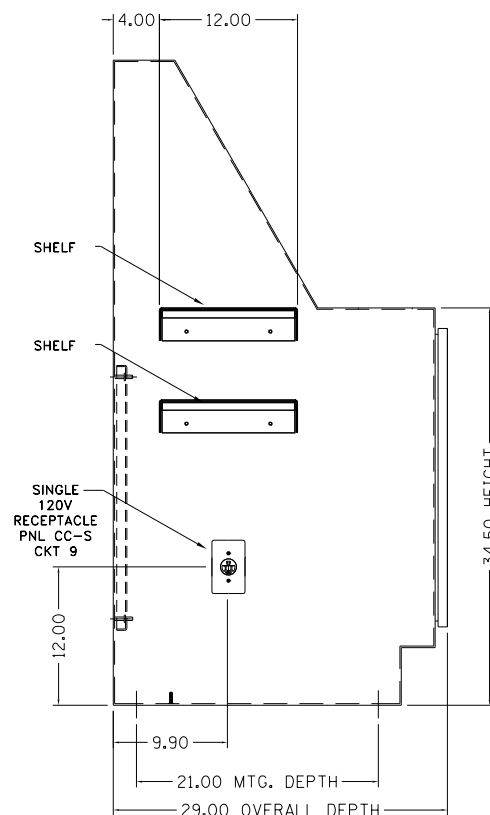
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-83.10
CDOT PROJECT NO. E-6-650			332 OF 411

NOTES:

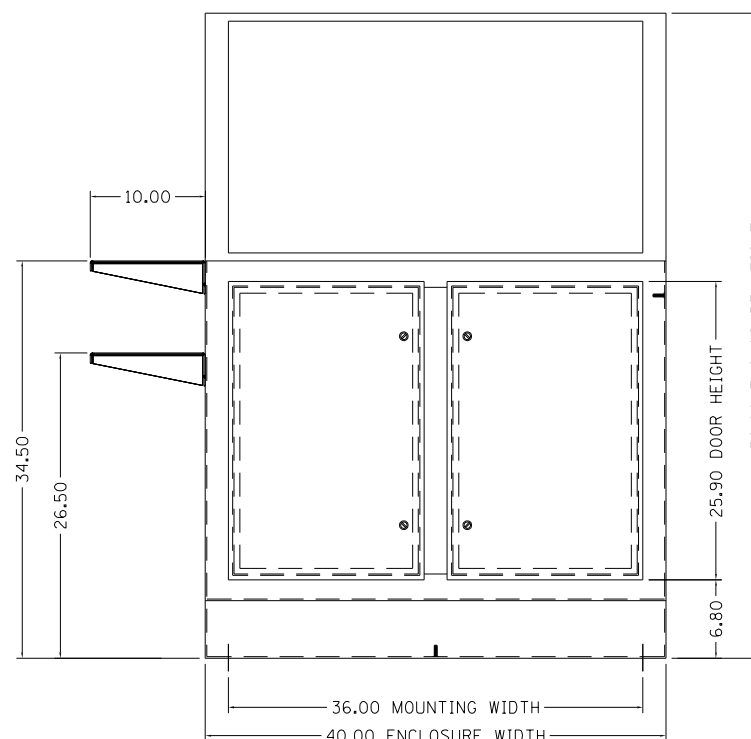
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



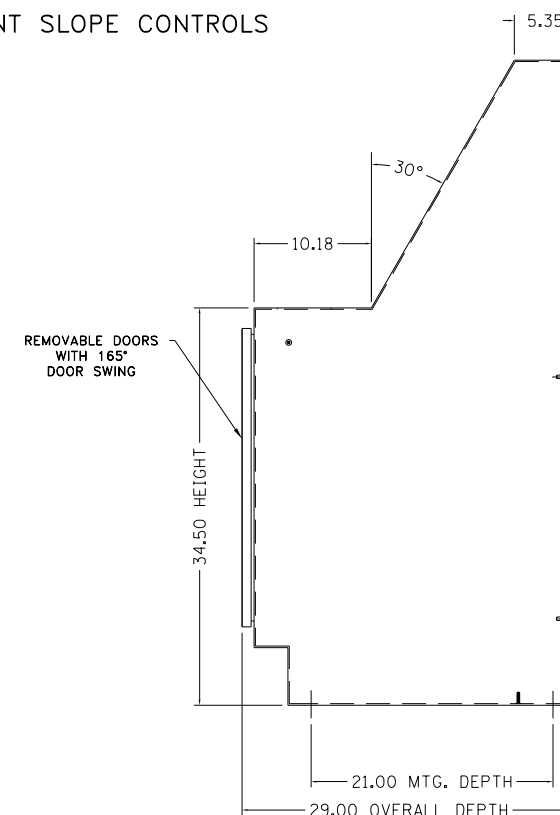
FRONT SLOPE CONTROLS



LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW

MATERIAL: #11 GA STEEL
FINISH: PAINT ASA 61 GRAY

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E84_1-South Safety First Console Outline.dgn 6/22/2017

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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

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DIVISION OF ENGINEERING

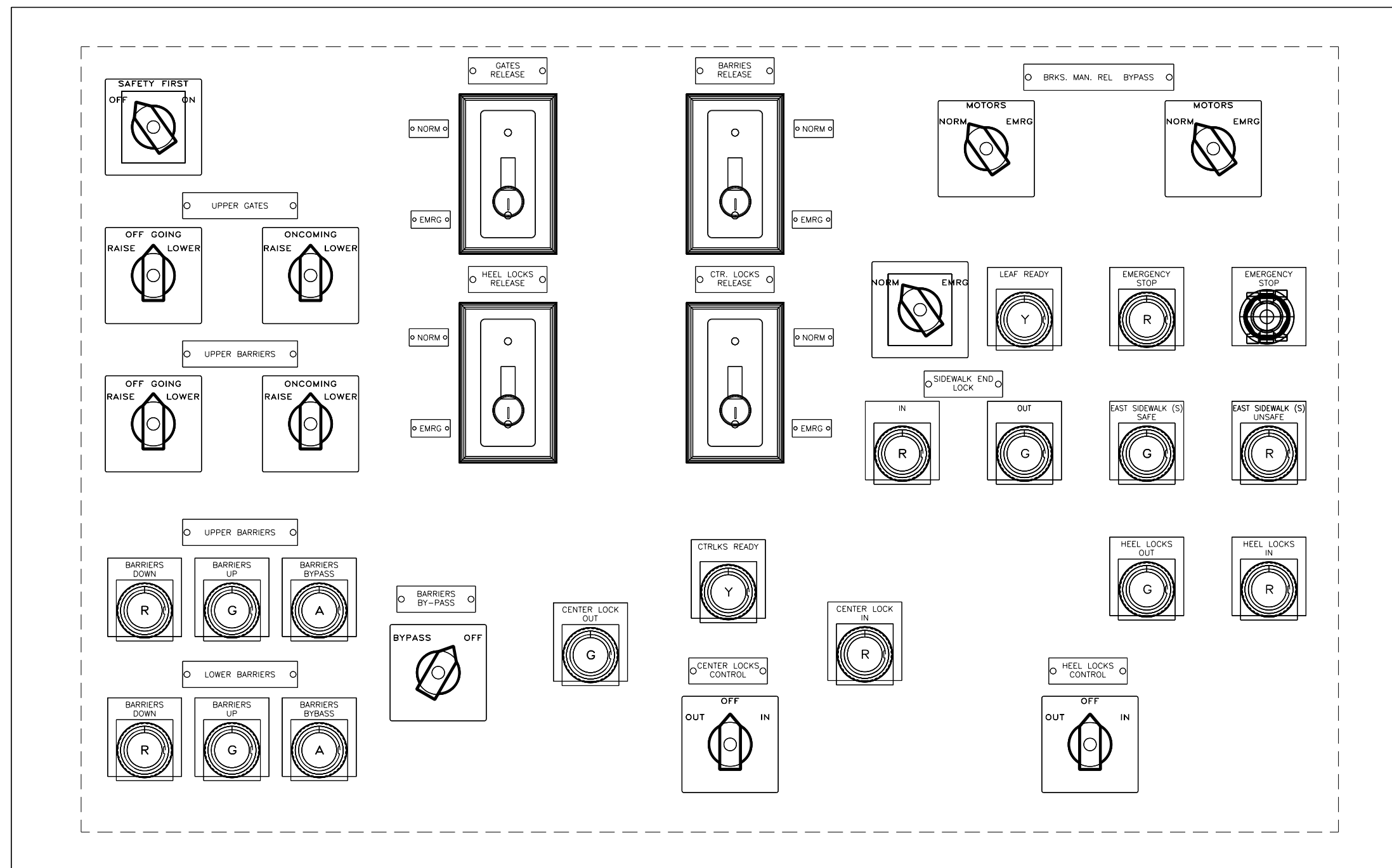
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SOUTH SAFETY FIRST CONSOLE OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-84.1
CDOT PROJECT NO. E-6-650			333 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



FRONT SLOPE CONTROLS
SCALE: NONE

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PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

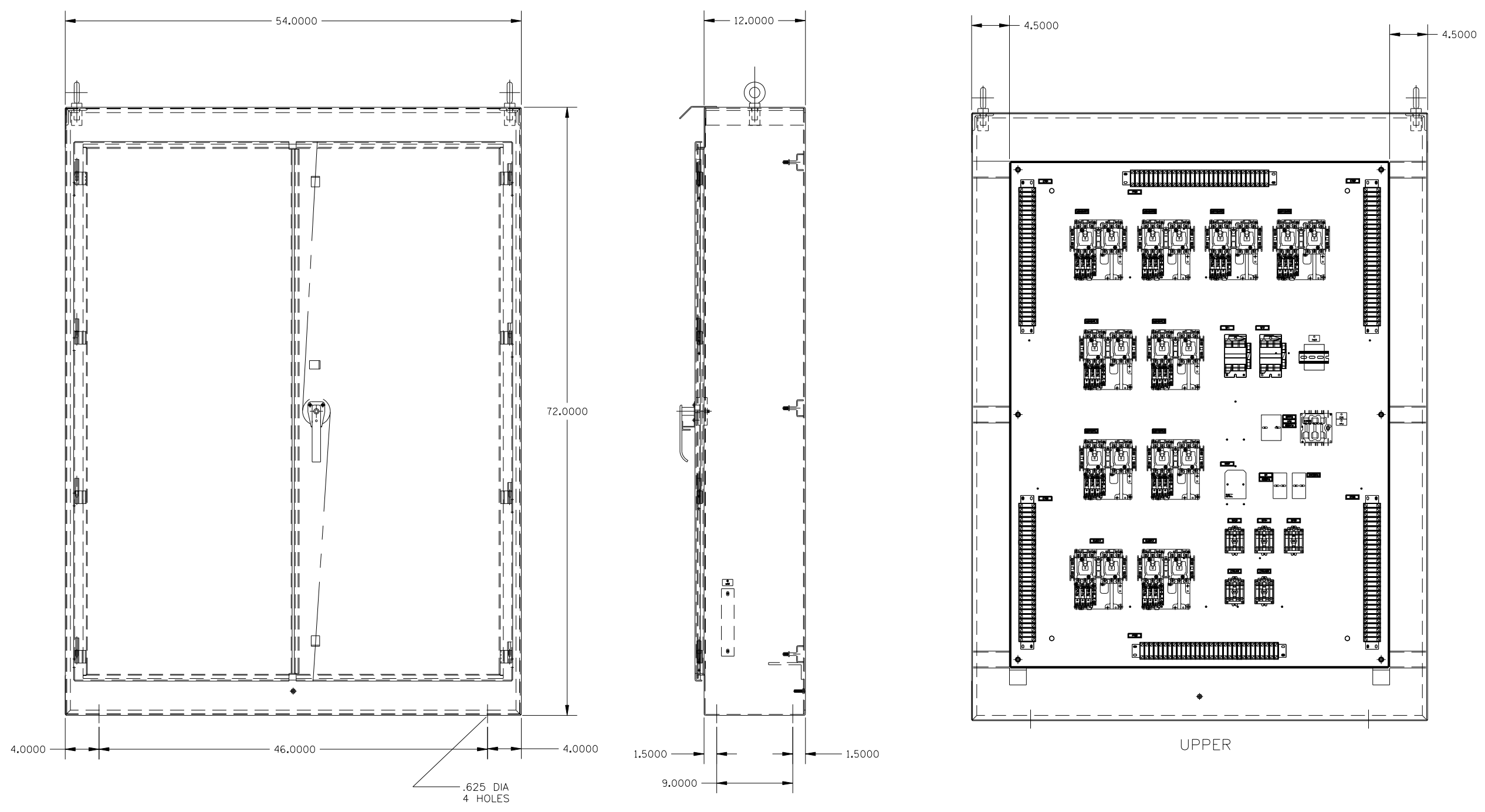
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DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTH SAFETY FIRST CONSOLE OUTLINE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-84.2
CDOT PROJECT NO. E-6-650			334 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.



M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E85_1-South Safety First Upper Contactor Cabinet Outline.dgn 6/22/2017

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	CHECKED - AF	REVISED -
PLOT SCALE = N.T.S.	DRAWN - CJM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

CITY OF CHICAGO
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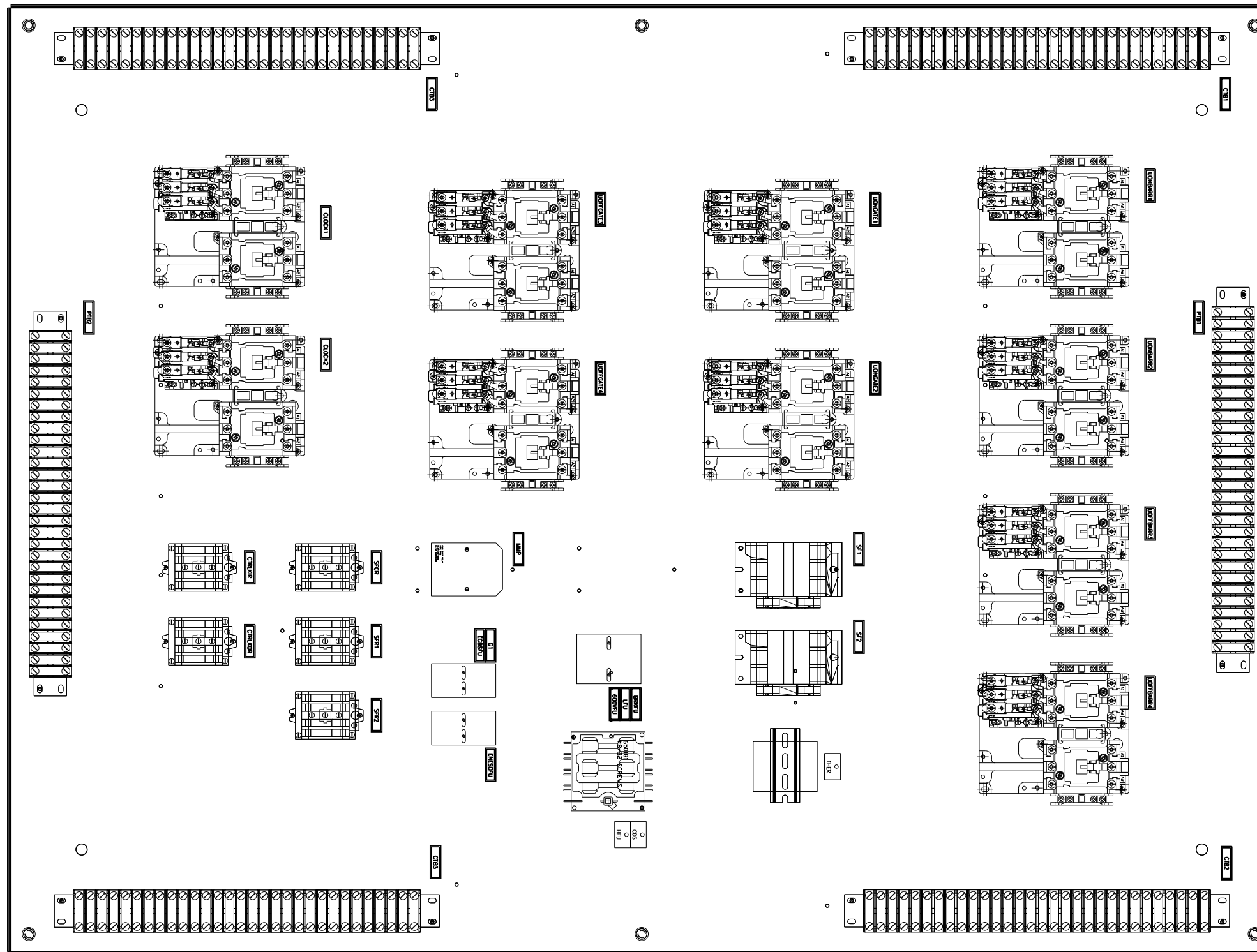
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**SOUTH SAFETY FIRST
 UPPER CONTACTOR CABINET OUTLINE
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-85.1
CDOT PROJECT NO. E-6-650			335 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



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PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

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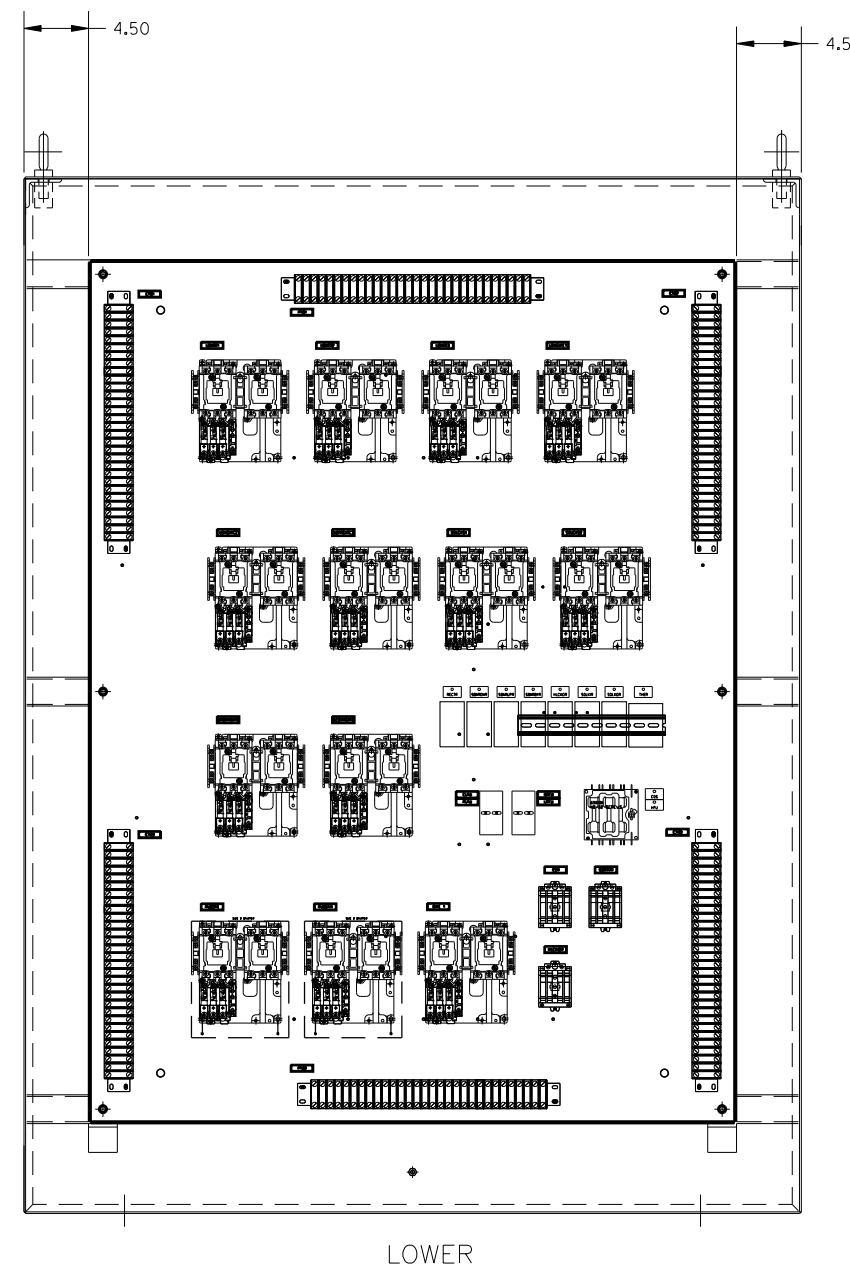
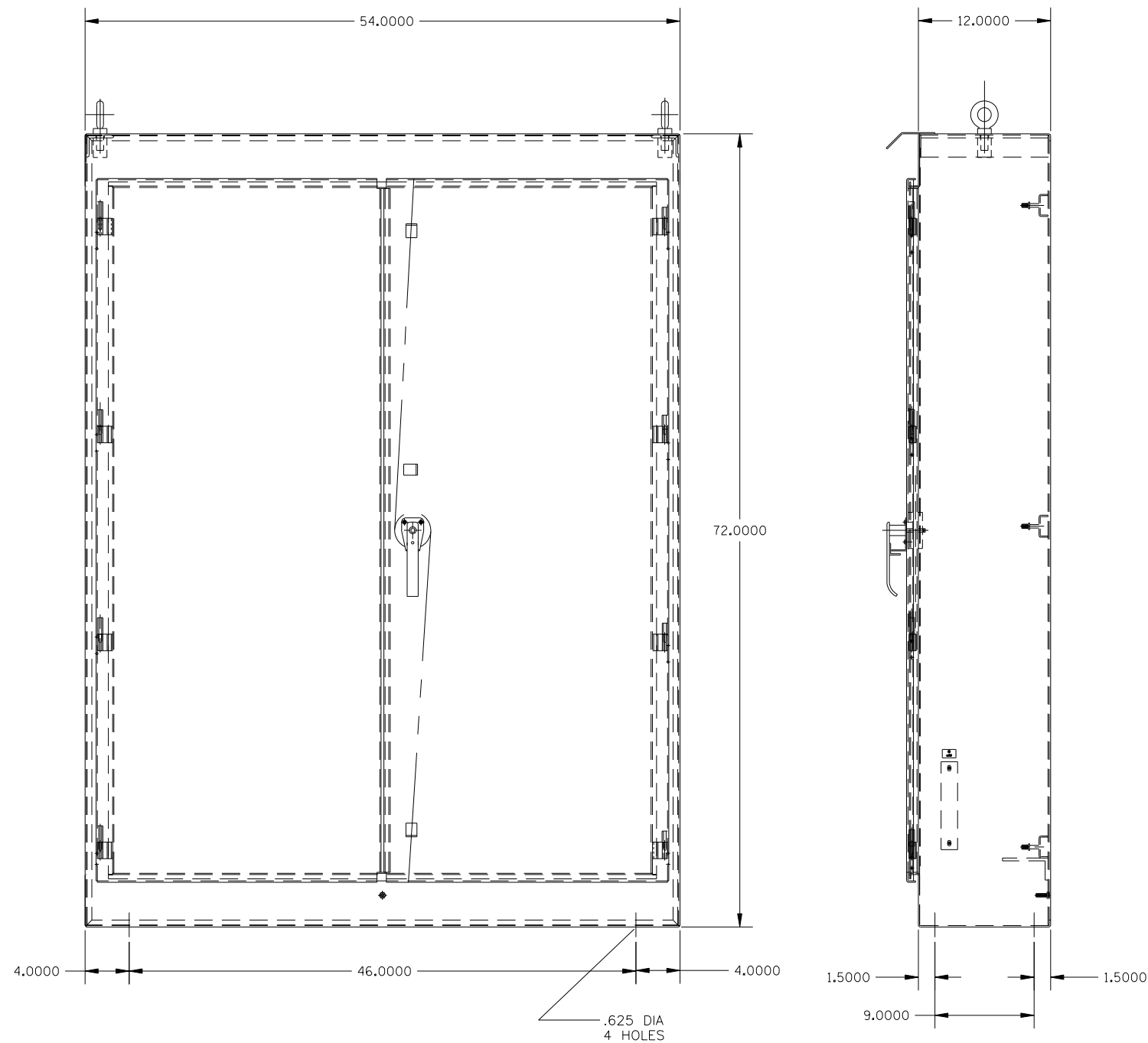
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTH SAFETY FIRST
UPPER CONTACTOR CABINET OUTLINE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-85.2
CDOT PROJECT NO. E-6-650			336 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



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		CHECKED -	AF	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	CJM	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -	MEB	REVISED -	

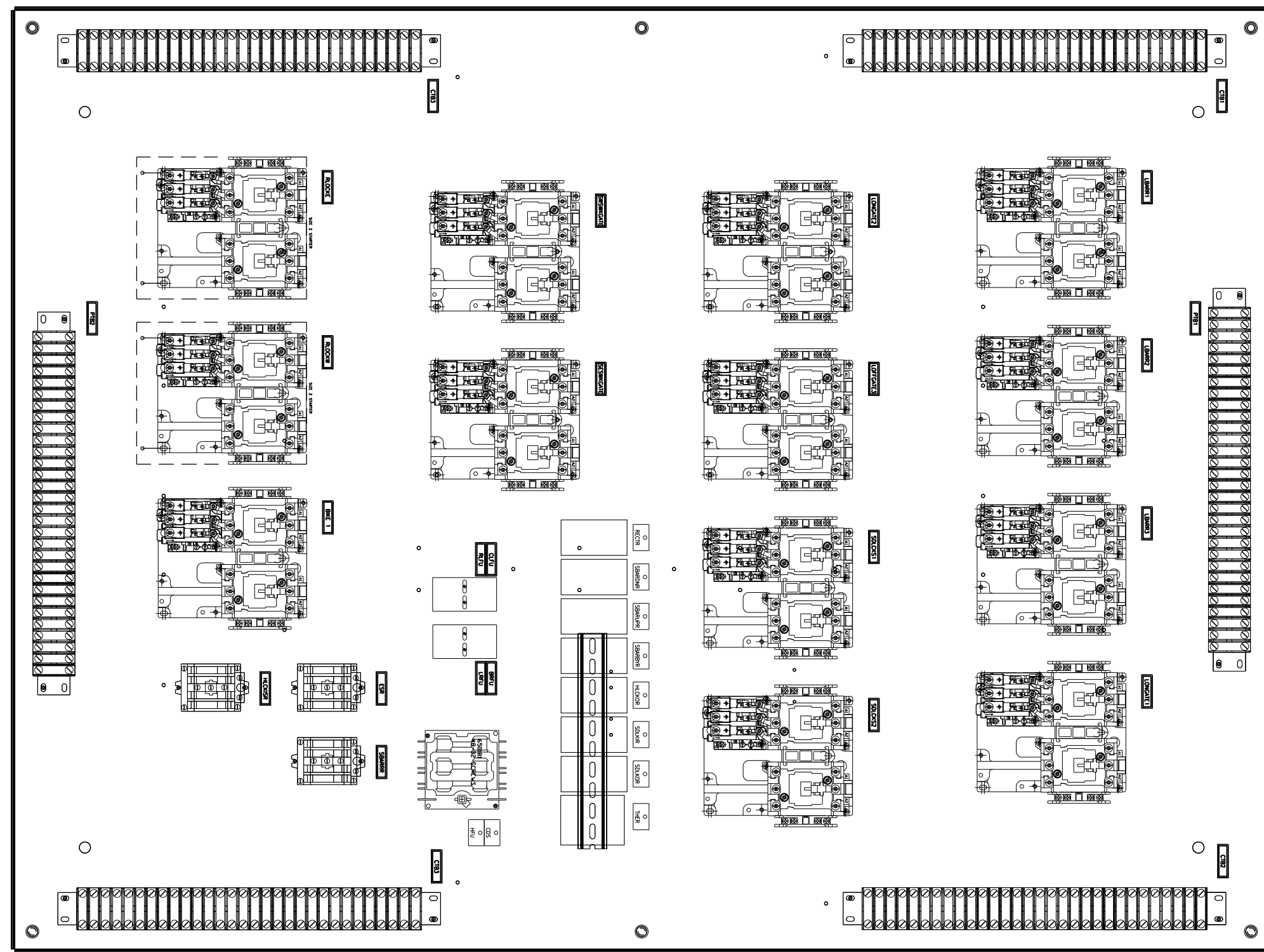
CITY OF CHICAGO
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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**SOUTH SAFETY FIRST
 LOWER CONTACTOR CABINET OUTLINE
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-86.1
CDOT PROJECT NO. E-6-650			337 OF 411

- NOTES:
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-2.



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6/22/2017

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PLOT SCALE = N.T.S.	CHECKED - AF	REVISED -
PLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

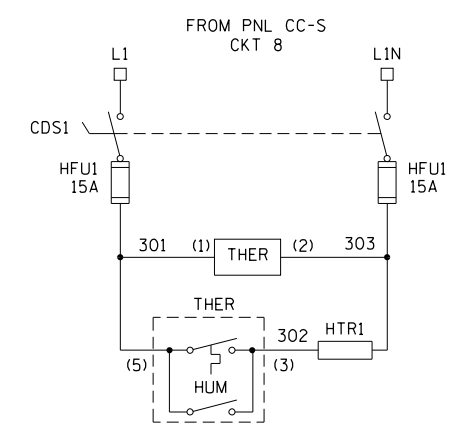
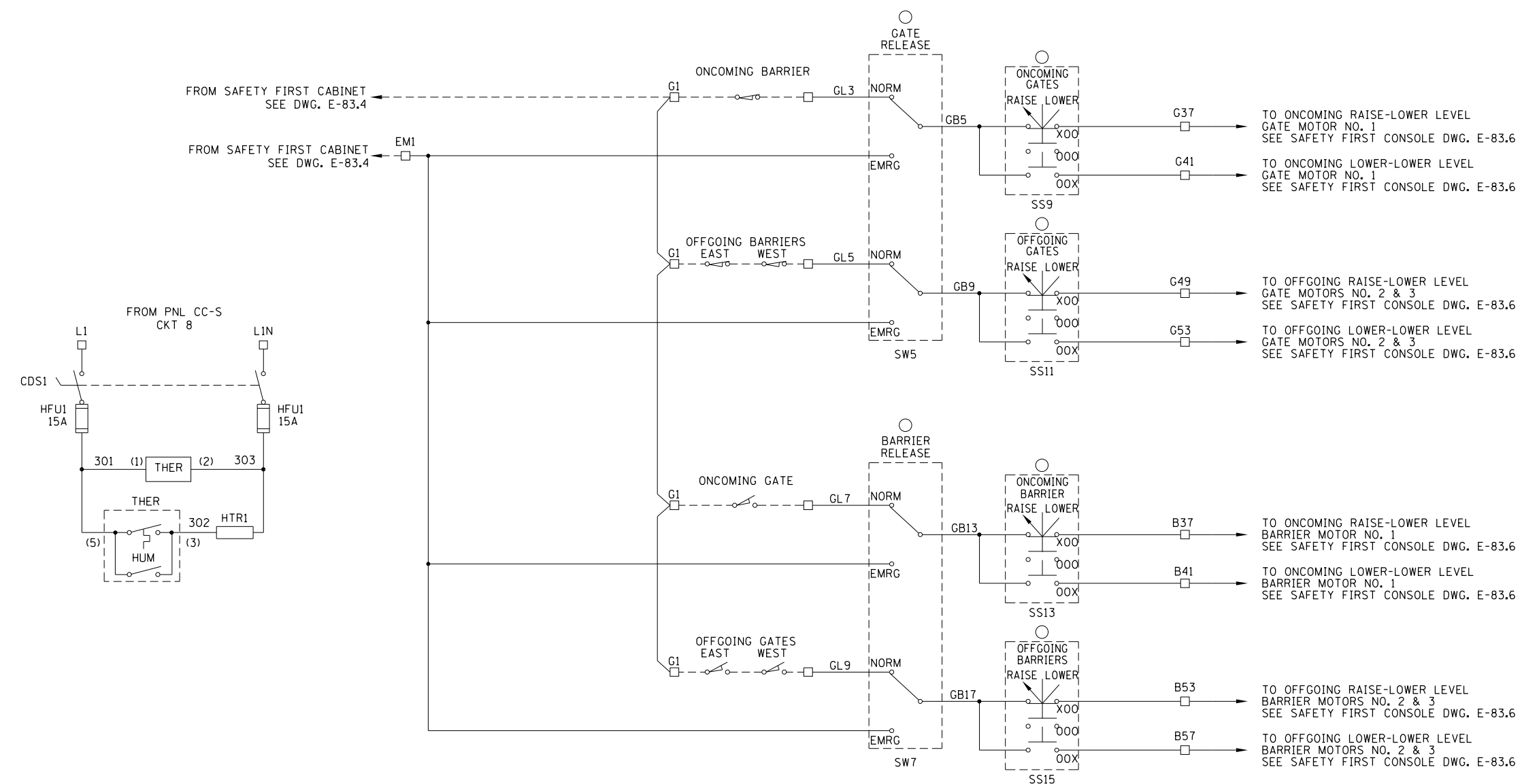
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SOUTH SAFETY FIRST
LOWER CONTACTOR CABINET OUTLINE
(STRUCTURE NO. 016-6030)**

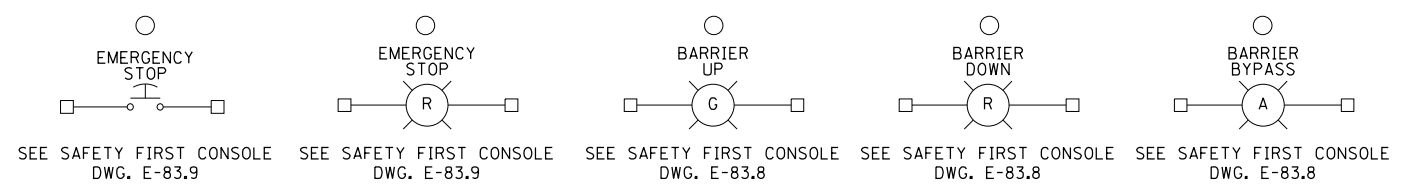
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-86.2
CDOT PROJECT NO. E-6-650			338 OF 411

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E87-South Roadway Control Console Schematic.dgn 6/22/2017

- NOTES:
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
 - FOR GENERAL NOTES, SEE SHEET E-2.
 - LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
 - UNLESS OTHERWISE SPECIFIED, TERMINALS SHOWN ARE LOCATED IN THE SOUTH ROADWAY CONTROL STATION.



- TERMINAL LOCATED IN SOUTH ROADWAY CONTROL STATION
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◇ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM



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USER NAME = cmartin	DESIGNED - BG	REVISED -
PLOT SCALE = N.T.S.	CHECKED - AF	REVISED -
PLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
	CHECKED - MEB	REVISED -

CITY OF CHICAGO
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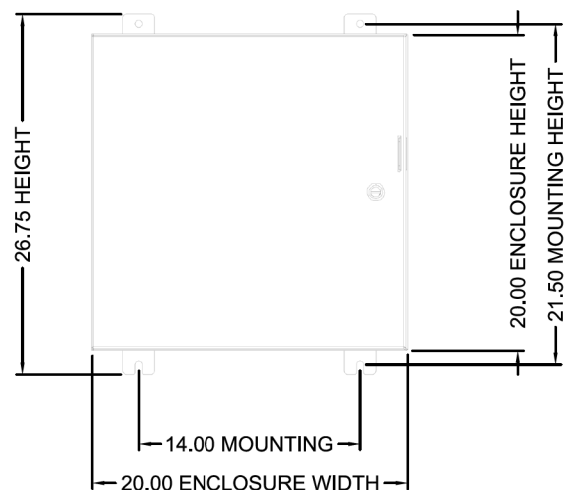
LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

SOUTH ROADWAY CONTROL STATION SCHEMATIC
 (STRUCTURE NO. 016-6030)

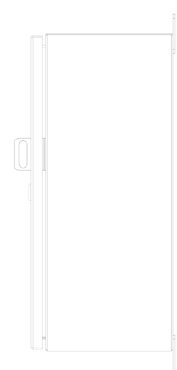
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-87
CDOT PROJECT NO. E-6-650			339 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



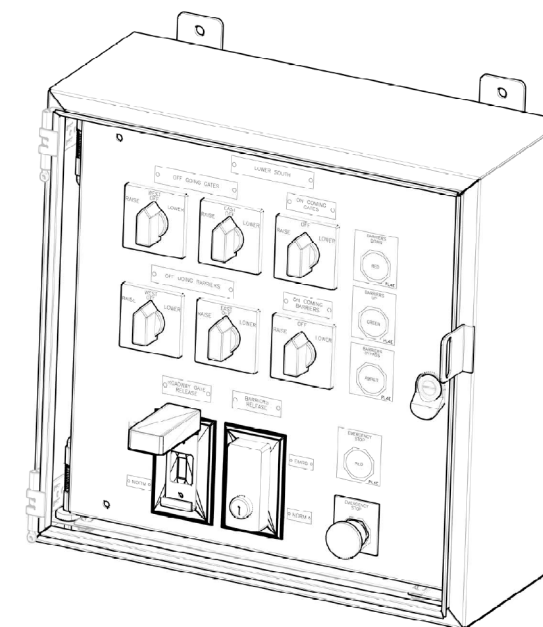
FRONT VIEW



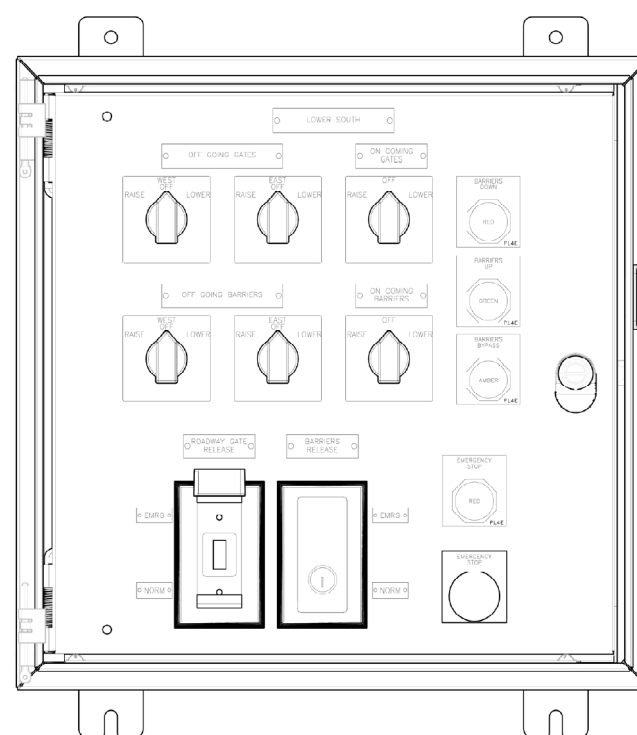
SIDE VIEW



BOTTOM VIEW



ISOMETRIC VIEW
DOOR REMOVED



ROADWAY LOWER
SOUTH SHOWN
DOOR REMOVED

MATERIAL: 316 STAINLESS STEEL
CONSTRUCTION: NEMA 4X

PRELIMINARY
APPROVAL REQUIRED

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E88_1-South Roadway Control Console Outline.dgn 6/22/2017

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USER NAME = cmartin	DESIGNED - BG	REVISED -
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PLOT SCALE = N.T.S.	DRAWN - CUM	REVISED -
PLOT DATE = 6/22/2017	CHECKED - MEB	REVISED -

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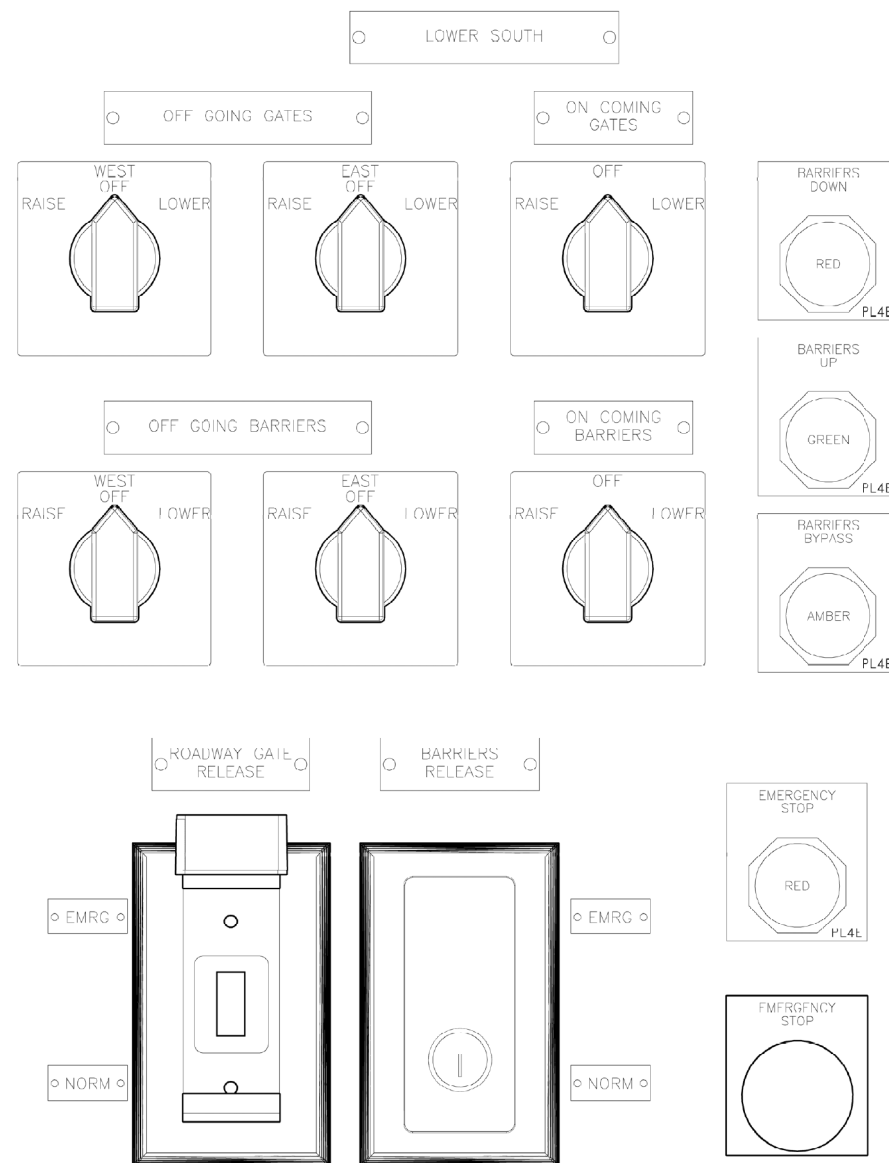
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SOUTH ROADWAY CONTROL STATION OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-88.1
CDOT PROJECT NO. E-6-650			340 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



MATERIAL: 316 STAINLESS STEEL
CONSTRUCTION: NEMA 4X

**ROADWAY LOWER
 SOUTH SHOWN**

SCALE: NONE

PRELIMINARY
 APPROVAL REQUIRED

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E88_2-South Roadway Control Console Outline.dgn 6/22/2017

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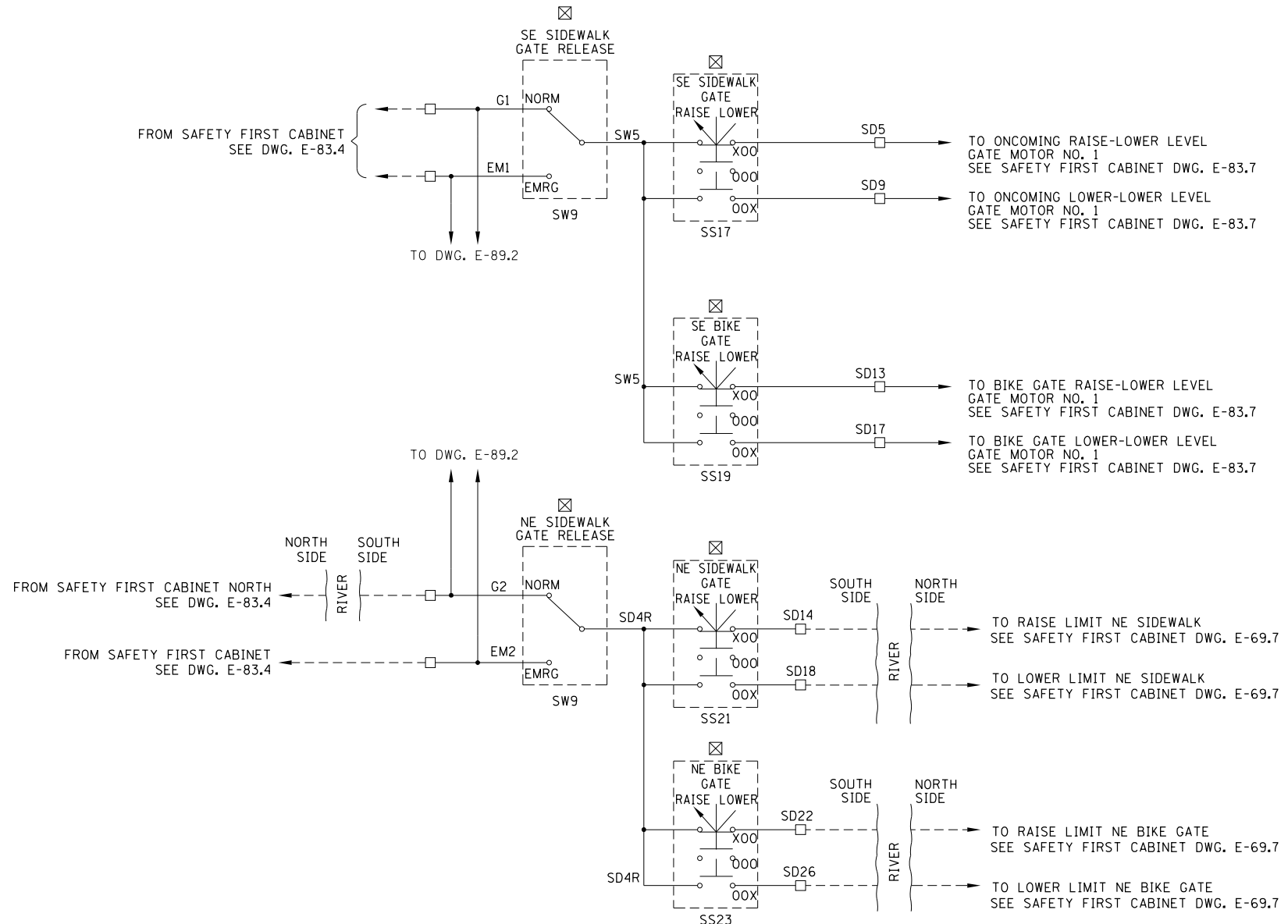
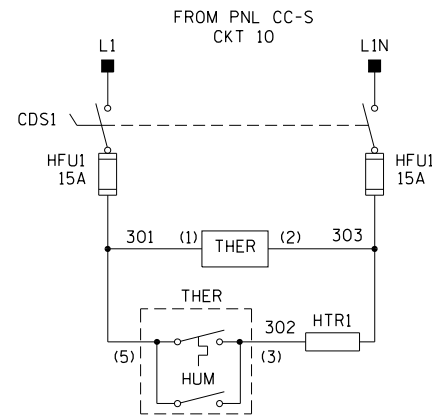
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**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**SOUTH ROADWAY CONTROL STATION OUTLINE
 (STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-88.2
CDOT PROJECT NO. E-6-650			341 OF 411

M:\4970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E89_1-South Sidewalk Control Console Schematic.dgn
6/22/2017



- TERMINAL LOCATED IN SOUTH SIDEWALK GATE CONTROL STATION
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◡ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◢ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ▣ LIMIT SWITCH TERMINAL LOCATED GATE ARM

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
4. UNLESS OTHERWISE SPECIFIED, TERMINALS SHOWN ARE LOCATED IN THE SOUTH SIDEWALK CONTROL STATION.

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PLOT DATE = 6/22/2017	DRAWN - CJM	REVISED -
	CHECKED - MEB	REVISED -

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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

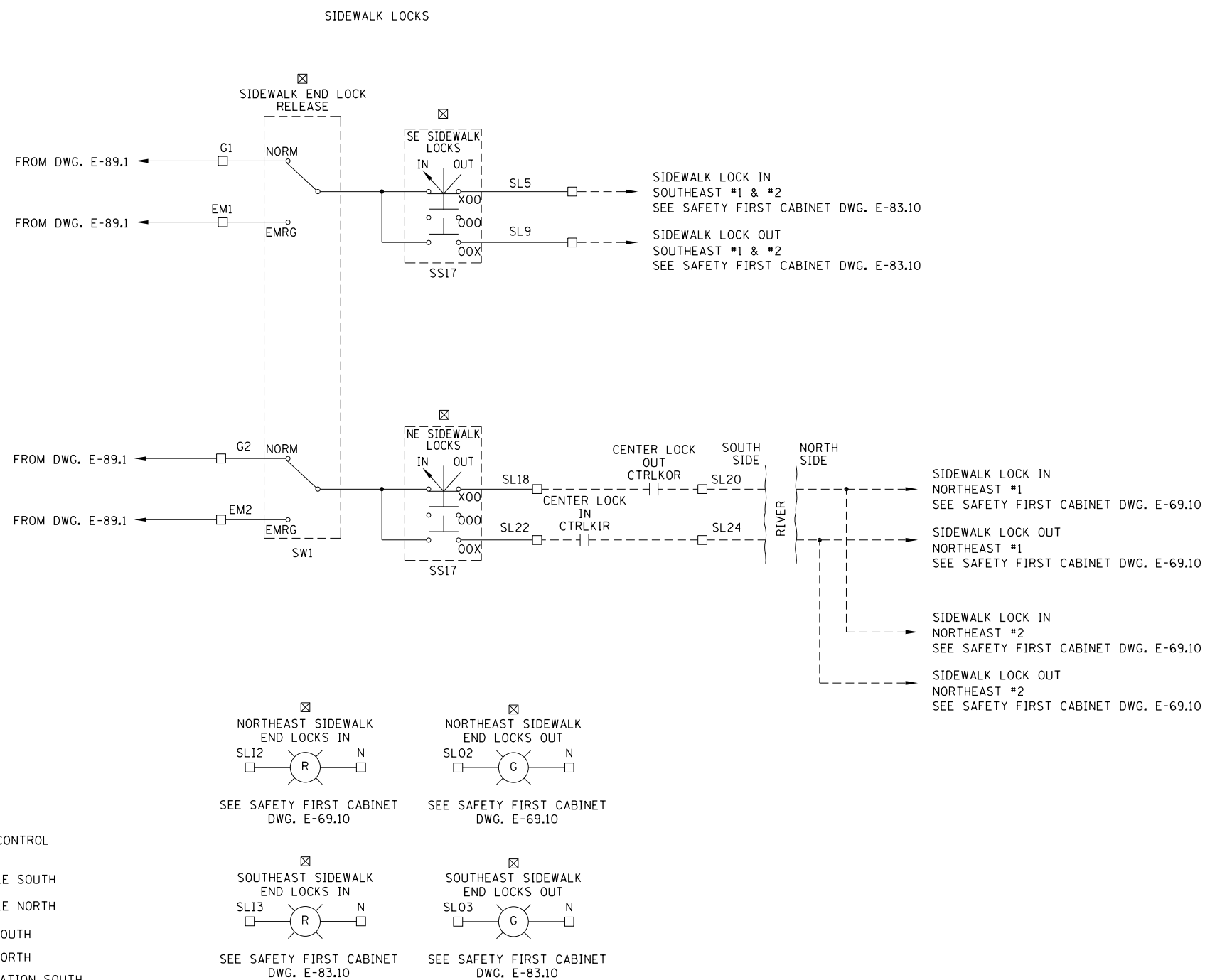
SOUTH SIDEWALK CONTROL STATION SCHEMATIC
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-89.1
CDOT PROJECT NO. E-6-650			342 OF 411

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6/22/2017

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.
3. LIMIT SWITCHES SHOWN WITH THE BRIDGE IN CLOSED POSITION AND TRAFFIC FLOWING.
4. UNLESS OTHERWISE SPECIFIED, TERMINALS SHOWN ARE LOCATED IN THE SOUTH SIDEWALK CONTROL STATION.



- TERMINAL LOCATED IN SOUTH SIDEWALK GATE CONTROL STATION
- △ COMPONENT LOCATED IN SAFETY FIRST CONSOLE SOUTH
- ▲ COMPONENT LOCATED IN SAFETY FIRST CONSOLE NORTH
- ◇ COMPONENT LOCATED IN OPERATOR CONSOLE SOUTH
- ◆ COMPONENT LOCATED IN OPERATOR CONSOLE NORTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION SOUTH
- COMPONENT LOCATED IN ROADWAY CONTROL STATION NORTH
- ⊠ COMPONENT LOCATED IN SIDEWALK CONTROL STATION SOUTH
- ⊡ COMPONENT LOCATED IN SIDEWALK CONTROL STATION NORTH
- ⊞ LIMIT SWITCH TERMINAL LOCATED GATE ARM

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DIVISION OF ENGINEERING

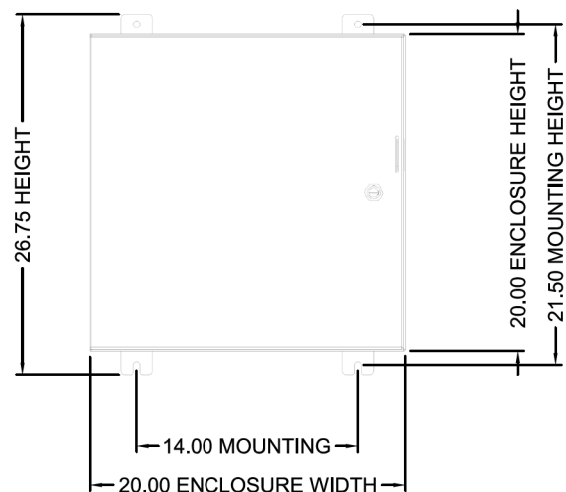
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

SOUTH SIDEWALK CONTROL STATION SCHEMATIC
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-89.2
CDOT PROJECT NO. E-6-650			343 OF 411

NOTES:

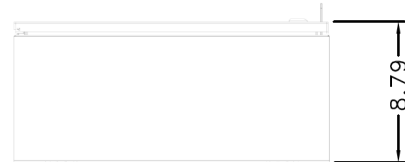
1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



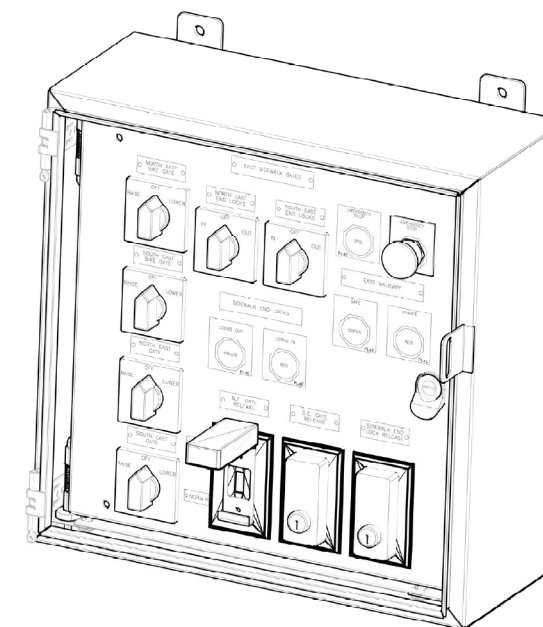
FRONT VIEW



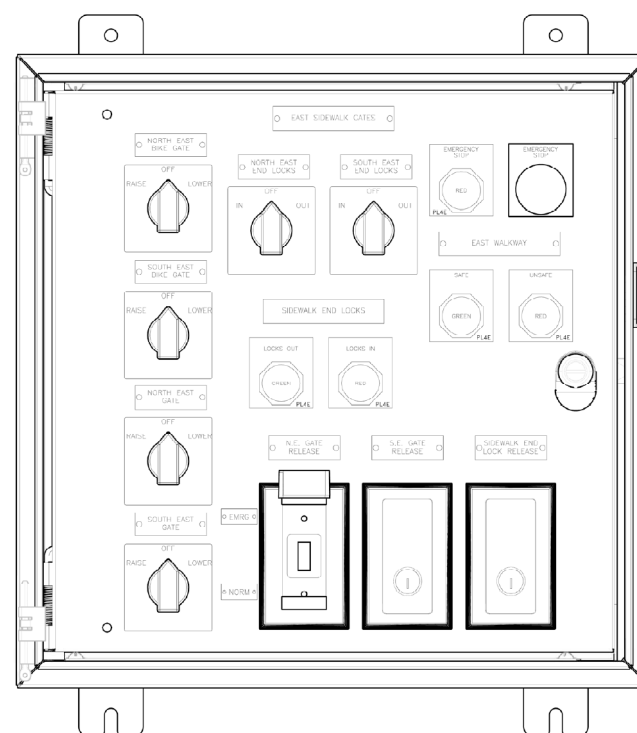
SIDE VIEW



BOTTOM VIEW



ISOMETRIC VIEW
DOOR REMOVED



SIDEWALK LOWER
SOUTH SHOWN
DOOR REMOVED

MATERIAL: 316 STAINLESS STEEL
CONSTRUCTION: NEMA 4X

PRELIMINARY
APPROVAL REQUIRED

M:\970 Lake Shore Drive Bascule Bridge\04 - CADD Files\04 - Sheet Files\0166030-E0534-E90_1-South Sidewalk Control Console Outline.dgn 6/22/2017

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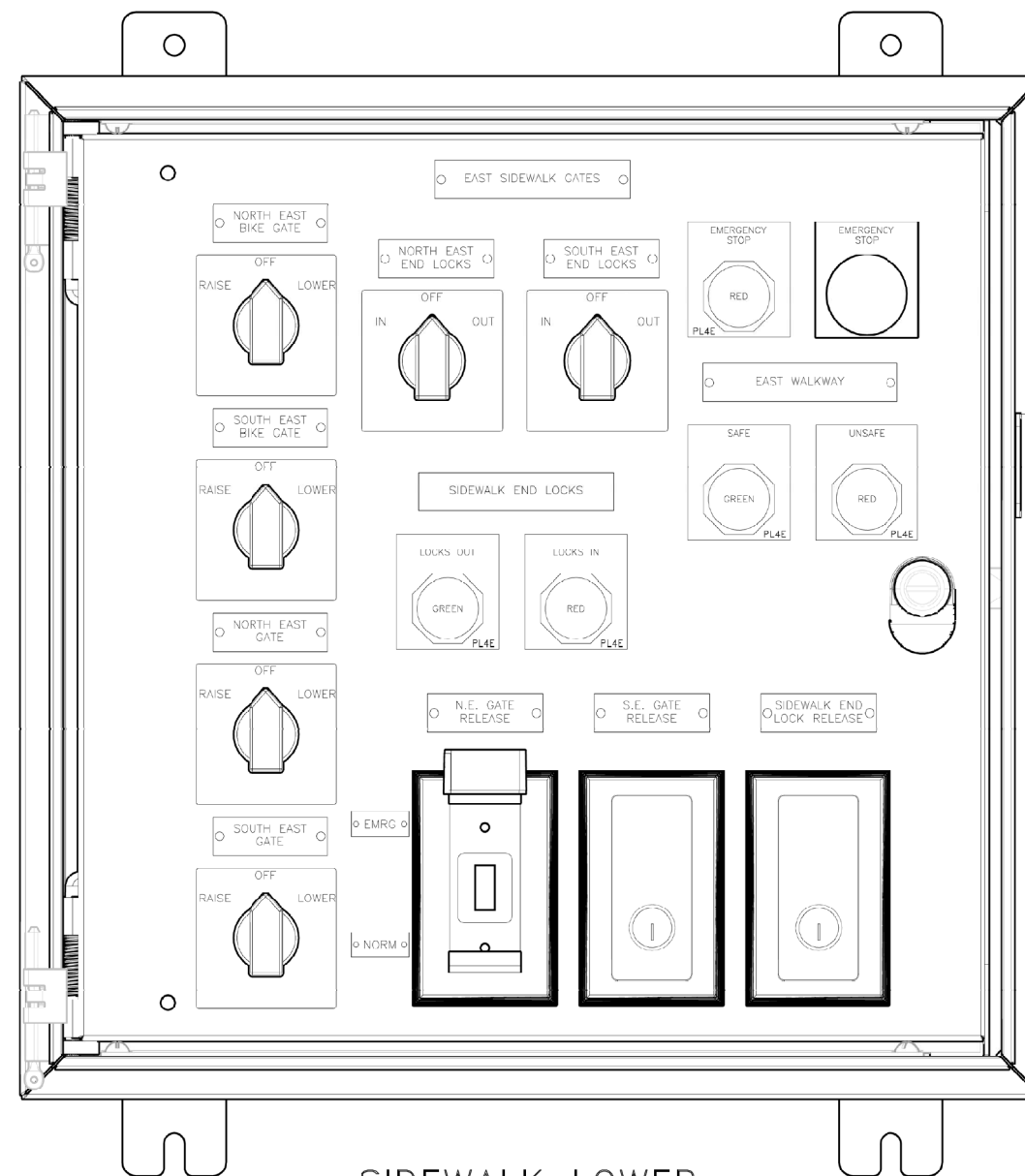
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**SOUTH SIDEWALK CONTROL STATION OUTLINE
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-90.1
CDOT PROJECT NO. E-6-650			344 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.



MATERIAL: 316 STAINLESS STEEL
CONSTRUCTION: NEMA 4X

SIDEWALK LOWER
SOUTH SHOWN
SCALE: NONE

PRELIMINARY
APPROVAL REQUIRED

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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

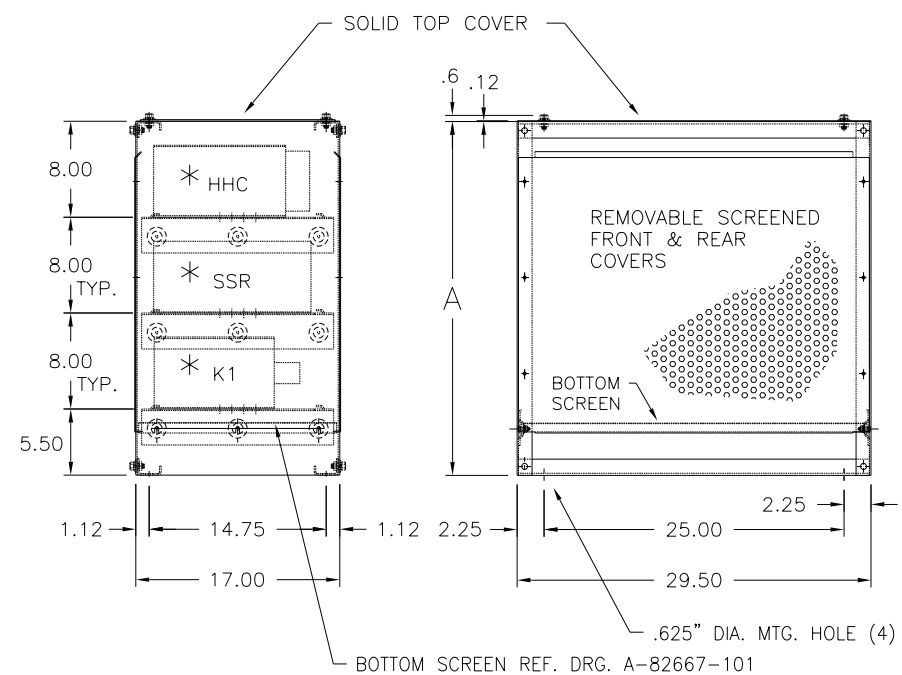
SOUTH SIDEWALK CONTROL STATION OUTLINE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-90.2
CDOT PROJECT NO. E-6-650			345 OF 411

NOTES:

1. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-2.

* PROFILE VIEW OF DIFFERENT RESISTOR TYPES ONLY
SEE RESISTOR SKETCH FOR RESISTOR TYPES USED



NUMBER OF RESISTORS	A
2 HIGH	21.5"
3 HIGH	29.5"
4 HIGH	37.5"
5 HIGH	45.5"
6 HIGH	53.5"
7 HIGH	△ 61.5"
8 HIGH	△ 69.5"
9 HIGH	△ 77.5"
10 HIGH	△ 85.5"

△ 2 PIECE FRONT & REAR SCREENED COVERS

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DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

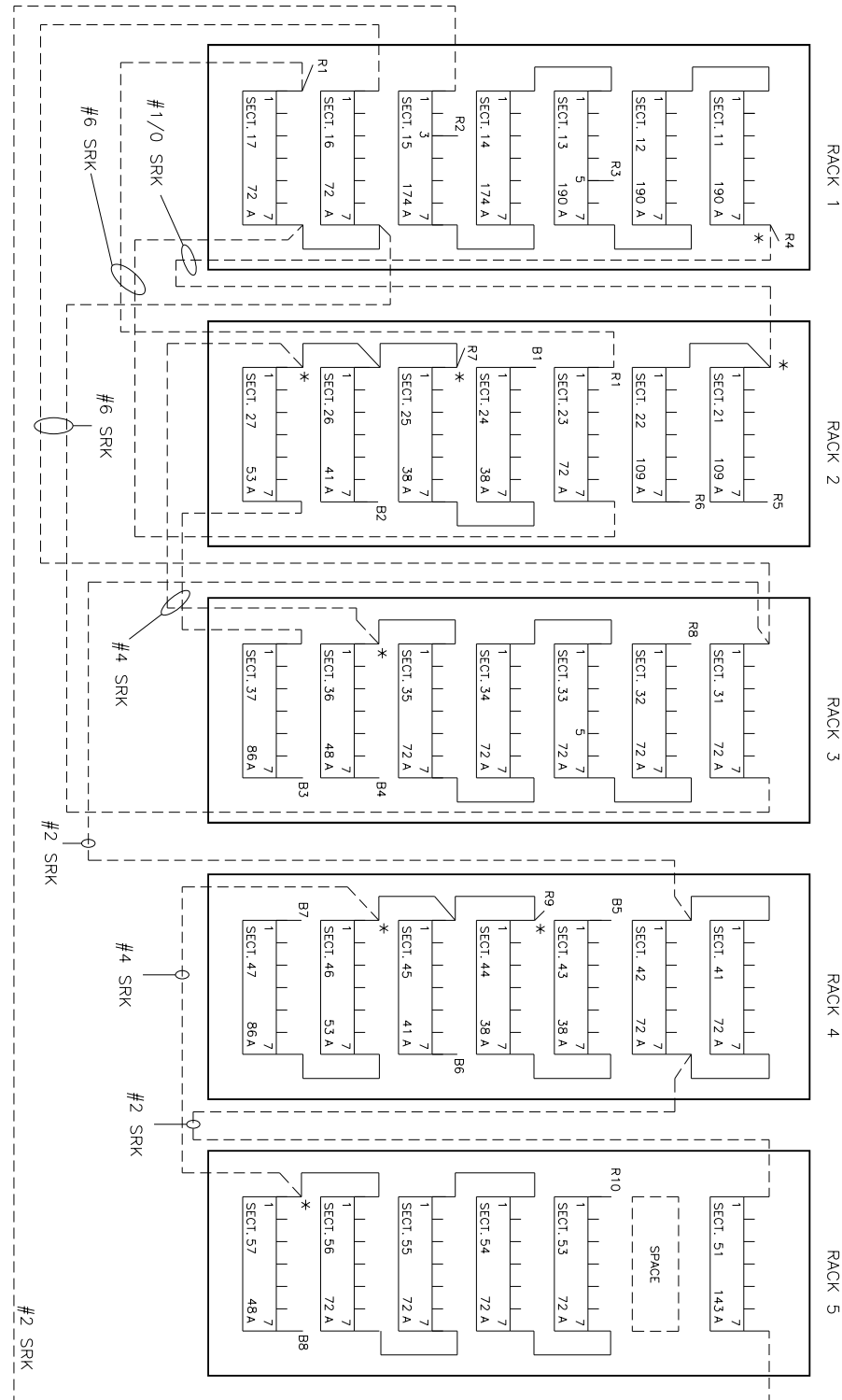
**RESISTOR DETAILS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-91
CDOT PROJECT NO. E-6-650			346 OF 411

ITEM	ASSEMBLY PART OR DESCRIPTION	DRG. NO.	PART NO.	QTY	ITEM	COIL REF. NO.	AMPS	OHMS	QTY	PART NO.
1	RACK - SEE BELOW	B-82668			1	Z38W5030GB	38	5.030	4	30856-001
2	STAINLESS STEEL JUMPER - K1	A-66492-204	66492-204	24	2	Z41W3900GB	41	3.900	2	30856-002
3	COPPER JUMPER - HHC	T-136	66492-002	-	3	Z48W3230GB	48	3.230	2	30856-003
4	MOUNTING HARDWARE SS - 1/2-13 X 1-1/4	A-65130-014	65130-017	66	4	Z53W2500GB	53	2.500	2	30856-004
5	TERMINAL HARDWARE - K1 1/2-13 X 1-1/2	A-65130-014	65130-015	22	5	Z72W1480GB	72	1.480	14	30856-009
6	JUMPER HARDWARE - K1 1/2-13 X 1-1/2	A-65130-014	65130-015	39	6	Z86W970GB	86	0.970	2	30856-012
7	TERMINAL HARDWARE - K1 1/2-13 X 2-1/4 *	A-65130-018	65130-021	12	7	Z109W542GB	109	0.542	2	30856-018
8					8	Z174W181GB	174	0.181	2	30856-034
9	NAME PLATE	B-58441-006	58441-006	5	9	Z190W141GB	190	0.141	3	30856-037
10	#2 x 1/8" LG DRIVE SCREW	A-47788	477088-007	10	10	Z143W282GB	143	0.282	1	30856-027

NOTES:

- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET E-1.
- FOR GENERAL NOTES, SEE SHEET E-2.

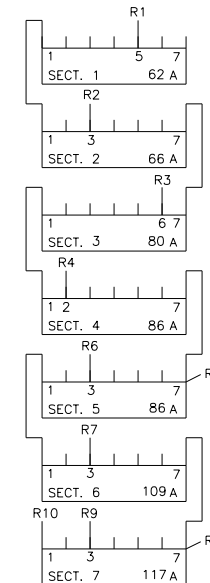


* LONGER TERMINAL HARDWARE AT THESE LOCATIONS
 ----- WIRES AND LUGS BY CONTRACTOR - MINIMUM SIZE AND TYPE AS NOTED ON THE LAYOUT

ITEM	ASSEMBLY PART OR DESCRIPTION	DRG. NO.	PART NO.	QTY	ITEM	COIL REF. NO.	AMPS	OHMS	QTY	PART NO.
1	STAINLESS STEEL JUMPER - K1	A-66492-204	66492-204	6	1	Z62W1990GB	62	1.99	1	30856-006
2	1/2-13 X 1-1/2" SCREW ASSY (TERMINALS)	A-65130	65130-014	18	2	Z66W1620GB	66	1.62	1	30856-007
3	1/2-13 X 1-1/4" SCREW ASSY (MOUNTING)	A-65130	65130-016	24	3	Z80W1020GB	80	1.02	1	30856-011
4					4	Z86W970GB	86	.92	2	30856-012
5					5	Z109W542GB	109	.542	1	30856-018
6					6	Z117W463GB	117	.463	1	30856-021
7					7					
8					8					
9					9					
10					10					

PART NO.	DESCRIPTION	HC6945474B	HC69454735	HC82668047	HC82668017	HC82668028
HC6945474B	RESISTOR	1	1			
HC6945474BR	RESISTOR W/ OPEN RACK W/ SOLID TOP COVER	1	1	5		
HC6945474BS	RESISTOR W/ SCREENED RACK W/ SOLID TOP	1	1		5	
HC6945474BV	RESISTOR W/OUTDOOR VENTILATED RACK	1	1			5

R1 - R2	144	2.562
R2 - R3	174	0.396
R3 - R4	190	0.329
R4 - R5	109	0.542
R4 - R6	109	0.542
TOTAL R1 - R5	3.547	
TOTAL R1 - R6	3.547	
B1 - R7	38	10.06
R7 - B2	41	3.90
R7 - B3	53	3.47
R7 - B4	48	3.23
R7 - R8	72	5.92
TOTAL B1 - B3	17.43	
TOTAL B1 - R8	19.88	
B5 - R9	38	10.06
R9 - B6	41	3.90
R9 - B7	53	3.47
R9 - B8	48	3.23
R9 - R10	72	5.92
TOTAL B5 - B7	13.53	
TOTAL B5 - R10	15.98	
STEPS	AMPS	OHMS
RESISTOR VALUES		



NOTES:

- SHIP THE RESISTORS AS SEPARATE UNITS.
- PACKAGE THE MOUNTING HARDWARE, TERMINAL HARDWARE AND JUMPERS SEPARATELY AND SHIP WITH THE RESISTORS.
- RESISTOR STACK ASSEMBLED AND WIRED BY CONTRACTOR.

R1-R2	62	1.867
R2-R3	66	1.250
R3-R4	80	1.012
R4-R5	86	0.808
R5-R6	86	0.647
R6-R7	86	0.504
R7-R8	109	0.361
R8-R9	117	0.309
R9-R10	117	0.154
TOTAL	6.911	
STEPS	AMPS	OHMS
RESISTOR VALUES		

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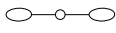








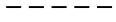



CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

RESISTOR DETAILS
 (STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	E-92
CDOT PROJECT NO. E-6-650			347 OF 411

LIGHTING LEGEND

-  EXISTING 66 FT STEEL LIGHT POLE WITH TWIN ARMS
-  PROPOSED BIKE PATH LIGHTING UNIT, 19' CONCRETE ANCHOR BASE POLE WITH LED BIKE PATH LUMINAIRE
-  EXISTING 100 WATT HPS VIADUCT LUMINAIRE
-  PROPOSED LED VIADUCT LUMINAIRE
-  EXISTING BLUE BEACON LUMINAIRE
-  EXISTING NAVIGATION LUMINAIRE
-  PROPOSED NAVIGATION LUMINAIRE
-  PROPOSED DOWNLIGHT LUMINAIRE
-  EXISTING CONDUIT
-  PROPOSED CONDUIT, SIZE AND TYPE AS NOTED
-  EXISTING JUNCTION BOX ATTACHED TO STRUCTURE
-  PROPOSED JUNCTION BOX ATTACHED TO STRUCTURE (6" X 6" X 4" STAINLESS STEEL, NEMA 4X, UNLESS NOTED)
-  EXISTING CCTV CAMERA

ABBREVIATIONS

- | | |
|-------|---|
| ATS | ATTACHED TO STRUCTURE |
| BRKR | BREAKER |
| CKT | CIRCUIT |
| GRD | GROUND |
| GRS | GALVANIZED RIGID STEEL |
| HPS | HIGH PRESSURE SODIUM |
| JB | JUNCTION BOX |
| LED | LIGHT EMITTING DIODE |
| LTFMC | LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT |
| MLO | MAIN LUGS ONLY |
| NEMA | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION |
| PA | PUBLIC ADDRESS |
| SS | STAINLESS STEEL |
| VA | VOLT-AMPERE |

LIGHTING GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CHICAGO ELECTRICAL CODE AND THE STANDARDS OF APPLICABLE ORGANIZATIONS LISTED IN ARTICLE 101.01 OF THE STANDARD SPECIFICATIONS.
2. CONDUIT RUNS AND BOX LOCATIONS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC. EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT THE SITE BY THE CONTRACTOR AND WILL BE SUBJECT TO THE REVIEW OF THE ENGINEER.
3. THE ITEM "REMOVE ELECTRIC CABLE FROM CONDUIT" WILL BE USED FOR REMOVAL OF CABLE FROM EXISTING CONDUIT TO REMAIN IN USE. REMOVAL OF CABLE FROM CONDUIT TO BE REMOVED IS INCLUDED IN THE PRICE OF OTHER PAY ITEMS. REFER TO SPECIAL PROVISIONS.
4. THE EXISTING LIGHTING OF THE SHARED USE PATH SHALL BE REMOVED AND REPLACED DURING STAGE 1 CONSTRUCTION, AND SHALL BE FULLY OPERATIONAL FOR THE BEGINNING OF STAGE 2. THE EXISTING ROADWAY LIGHTING MUST REMAIN OPERATIONAL DURING ALL STAGES OF CONSTRUCTION. ANY TEMPORARY CABLING OR RECIRCUITING REQUIRED TO COMPLY WITH THESE REQUIREMENTS IS INCLUDED IN THE PRICE OF THE ITEM "MAINTAIN LIGHTING SYSTEM."

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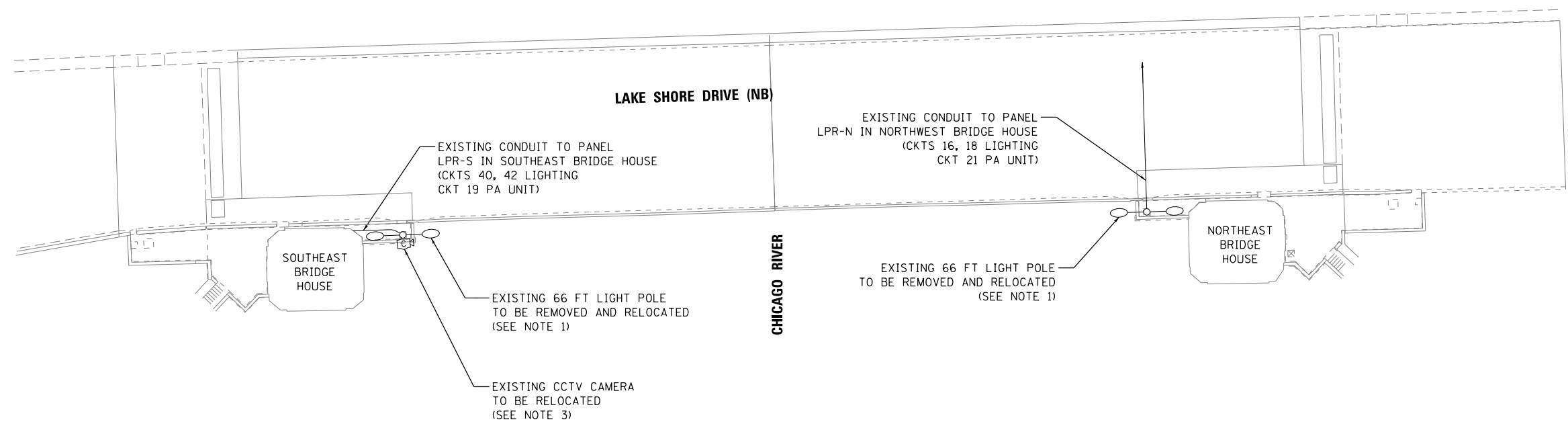
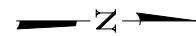
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DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

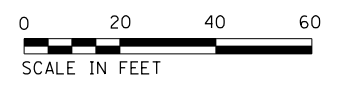
**LIGHTING LEGEND, ABBREVIATIONS,
AND GENERAL NOTES
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	LT-1
CDOT PROJECT NO. E-6-650			348 OF 411



NOTES:

1. EXISTING ANCHOR BOLTS SHALL BE CUT 1 IN. BELOW THE DECK SURFACE, AND THE VOIDS FILLED WITH PORTLAND CEMENT CONCRETE MORTAR. THE EXISTING ANCHORAGE SYSTEM SHALL BE ABANDONED. ALL EXISTING ELECTRIC CABLE BETWEEN EXISTING PANELBOARDS AND THE ABANDONED ANCHORAGE SHALL BE REMOVED. THIS WORK IS INCLUDED IN THE PRICE OF THE ITEM "POLE, ANCHOR BASE, RELOCATE COMPLETE."
2. EXISTING CONDUIT BETWEEN LIGHT POLES AND BRIDGE HOUSES IS ROUTED VIA INTERMEDIATE LEVEL.
3. THE CCTV CAMERA WILL BE REMOVED AND REINSTALLED ON THE RELOCATED POLE BY OTHERS.
4. THE REMOVAL OPERATION SHALL BE STAGED SUCH THAT EACH POLE IS REINSTALLED ON A NEW FOUNDATION AND FULLY OPERATIONAL BEFORE DUSK THE SAME DAY IT IS REMOVED FROM THE EXISTING FOUNDATION.



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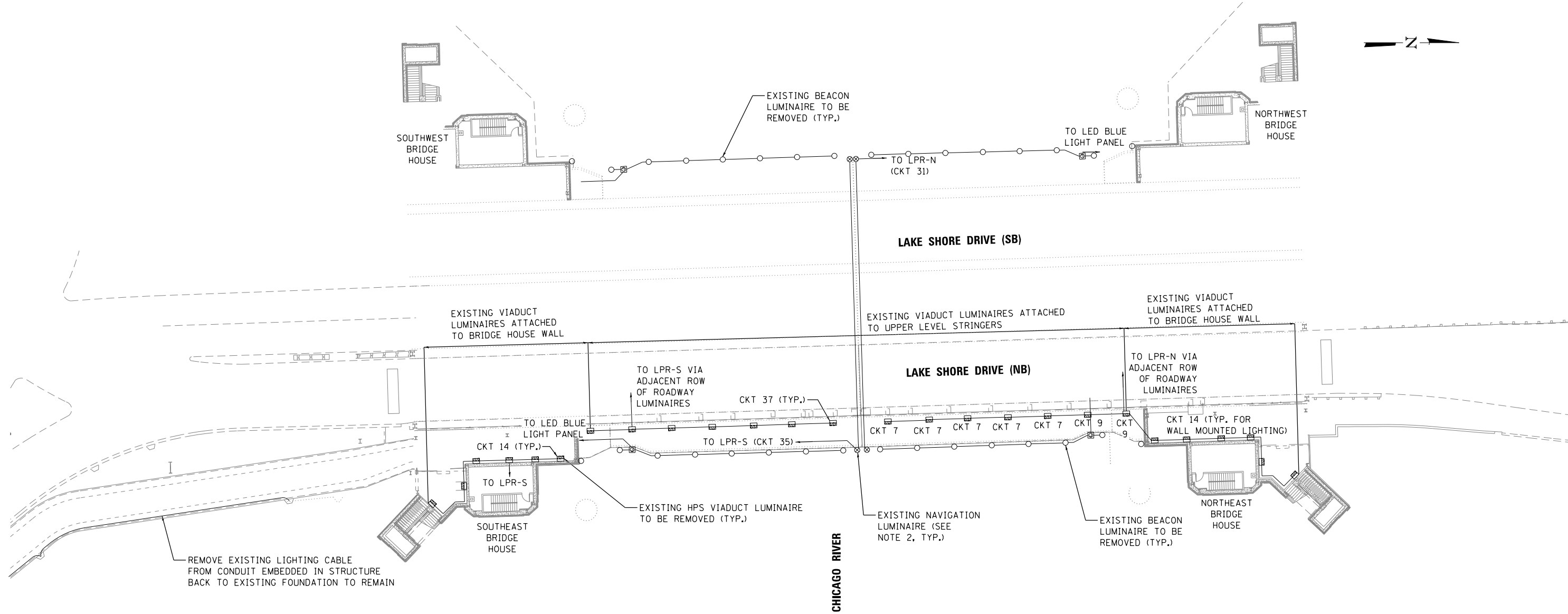
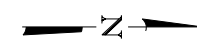
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

UPPER LEVEL
LIGHTING REMOVAL PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	LT-2
CDOT PROJECT NO. E-6-650			349 OF 411



NOTES:

1. THE REMOVAL OF ALL EXISTING LUMINAIRES ATTACHED TO STRUCTURE INCLUDES THE REMOVAL OF ALL ASSOCIATED CONDUIT, WIRE, JUNCTION BOXES, HARDWARE, AND APPURTENANT MATERIALS. REFER TO SPECIAL PROVISIONS. REFER GENERAL NOTE 22 ON SHEET E-2.
2. THE NAVIGATION LIGHTS ARE SHOWN ON THIS DRAWING FOR INFORMATION ONLY. SEE ELECTRICAL PLANS FOR REMOVAL AND REPLACEMENT OF NAVIGATION LIGHTING.



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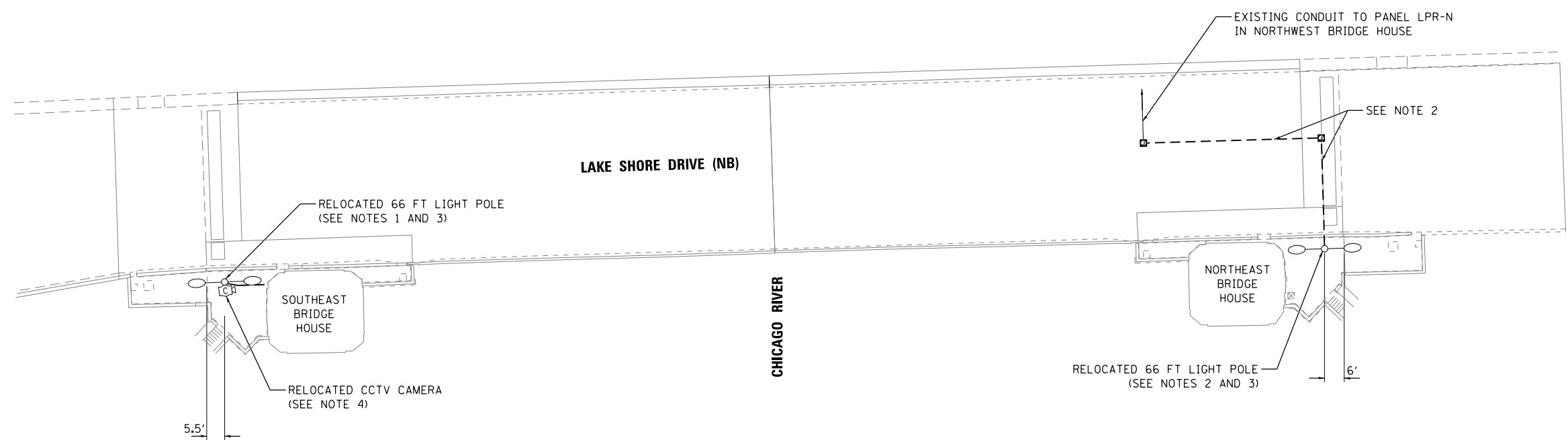
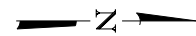
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**INTERMEDIATE LEVEL
LIGHTING REMOVAL PLAN
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	LT-3
CDOT PROJECT NO. E-6-650			350 OF 411

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NOTES:

1. CORE DRILL BRIDGE HOUSE WALL AND PROVIDE NEW 3/4" GRS CONDUIT AS REQUIRED TO INTERCEPT EXISTING CONDUIT INSIDE BRIDGE HOUSE. PROVIDE 4-1/C NO. 10 AND 1-1/C NO. 10 GRD BETWEEN PANEL LPR-S AND RELOCATED LIGHTING UNIT (CKTS 40, 42 LIGHTING, CKT 19 PA UNIT).
2. INTERCEPT EXISTING CONDUIT CROSSING BRIDGE AND PROVIDE NEW 3/4" GRS CONDUIT ATTACHED TO UPPER LEVEL STRUCTURE AS REQUIRED WITH 4-1/C NO. 10 AND 1-1/C NO. 10 GRD TO PANEL LPR-N IN NORTHWEST BRIDGE HOUSE (CKTS 16, 18 LIGHTING, CKT 21 PA UNIT).
3. SEE STRUCTURAL PLANS FOR POLE ANCHORAGE DETAILS AND LIGHT POLE LOCATION.
4. CCTV CAMERA WILL BE REINSTALLED ON THE RELOCATED POLE BY OTHERS.



EJM EJM ENGINEERING, INC.
41 South Wells Street Suite 1000
Chicago, Illinois 60607

wsp WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

USER NAME =	mkucinas	DESIGNED -	MRT	REVISED -	
		CHECKED -	MEK	REVISED -	
PLOT SCALE =	40.00' / in.	DRAWN -	MRT	REVISED -	
PLOT DATE =	6/23/2017	CHECKED -	MKR	REVISED -	

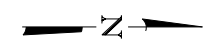
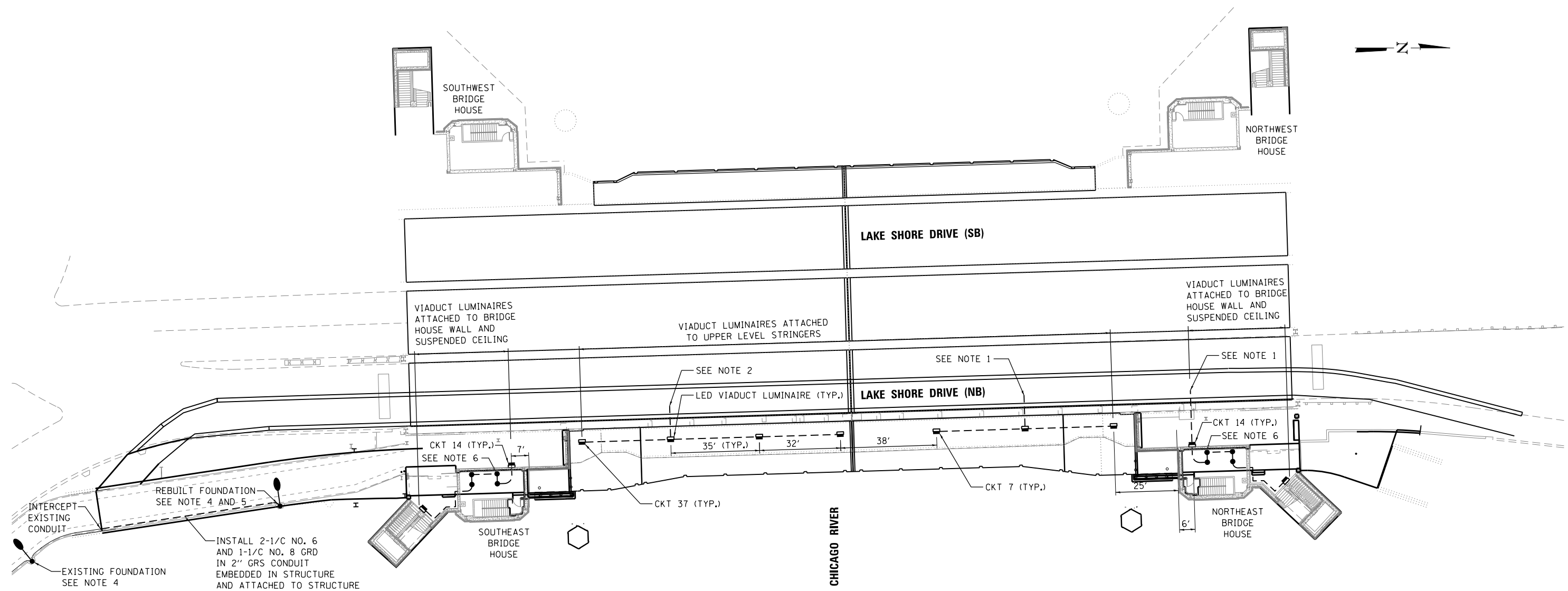
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

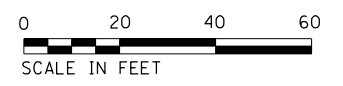
**UPPER LEVEL
LIGHTING PLAN
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	LT-4
CDOT PROJECT NO. E-6-650			351 OF 411

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- NOTES:**
1. ROUTE CABLE TO LPR-N VIA ADJACENT ROW OF ROADWAY LUMINAIRES.
 2. ROUTE CABLE TO LPR-S VIA ADJACENT ROW OF ROADWAY LUMINAIRES.
 3. ALL NEW BRANCH CIRCUIT WIRING CONSISTS OF 2-1/C NO. 10 AND 1-1/C NO. 10 GRD IN 3/4" GRS CONDUIT ATTACHED TO STRUCTURE UNLESS NOTED OTHERWISE. REFER GENERAL NOTE 22 ON SHEET E-2.
 4. INSTALL CPD CONCRETE POLE WITH LED BIKE PATH LUMINAIRE.
 5. SIZE OF PROPOSED CONDUIT EMBEDDED IN STRUCTURE TO BE VERIFIED IN THE FIELD AND TO MATCH EXISTING CONDITIONS.
 6. REFER SHEET A-5.6 FOR FIXTURE LAYOUT DETAIL.



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USER NAME =	mkucinas	DESIGNED -	MRT	REVISED -	
		CHECKED -	MEK	REVISED -	
PLOT SCALE =	40.00' / in.	DRAWN -	MRT	REVISED -	
PLOT DATE =	6/23/2017	CHECKED -	MKR	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

INTERMEDIATE LEVEL
LIGHTING PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	LT-5
CDOT PROJECT NO. E-6-650			352 OF 411

...0166030-E0534-E004-IntermediateProposed.dgn 3:48:55 PM

PANEL DESIGNATION: LPR-N BUS: 100A (MLO)				PHASE: 3 PHASE, 4 WIRE VOLTS: 120/208									
LOAD DESCRIPTION	LOAD (VA)			BRKR	A B C			BRKR	LOAD (VA)			LOAD DESCRIPTION	
	A	B	C		A	B	C						
ROADWAY LIGHTING	650			15	1			2	15	650			ROADWAY LIGHTING
ROADWAY LIGHTING		650		15	3			4	15		650		ROADWAY LIGHTING
ROADWAY LIGHTING			650	15	5			6	15			650	ROADWAY LIGHTING
ROADWAY LIGHTING	400			15	7			8	15	780			ROADWAY LIGHTING
ROADWAY LIGHTING		260		15	9			10	15		780		ROADWAY LIGHTING
ROADWAY LIGHTING			520	15	11			12	15			780	ROADWAY LIGHTING
ROADWAY LIGHTING	520			15	13			14	15	400			WALL MOUNT LIGHTING
ROADWAY LIGHTING		520		15	15			16	20		1100		UPPER LEVEL POLE LIGHTING (NE)
ROADWAY LIGHTING			520	15	17			18	2		1100		UPPER LEVEL POLE LIGHTING (NE)
CCTV CAMERAS	400			15	19			20	15	800			MACHINE ROOM LIGHTS
PA UNITS (EAST)		200		15	21			22	15		1000		MACHINE ROOM LIGHTS
PA UNITS (WEST)			200	15	23			24	15			-	SPARE
SPARE	-			15	25			26	20	1000			MACHINE ROOM OUTLETS
CLOCK FEEDS		*		15	27			28	15		*		EXHAUST FAN
WALKWAY LIGHTS			910	15	29			30	20			1000	MACHINE ROOM OUTLETS
NAVIGATION LIGHTS	100			15	31			32	15	780			WALL MOUNT LIGHTING
HEEL LOCK MOTOR		*		20	33			34	15		*		CATWALK OUTLETS
BRAKES			*	2	35			36	15		*		CATWALK LIGHTING
NORMAL BRIDGE POWER	*			15	37			38	15	*			PIER LIGHTS
EMERGENCY BRIDGE POWER		*		15	39			40	20		1100		UPPER LEVEL POLE LIGHTING (NW)
SPARE			-	15	41			42	2		1100		UPPER LEVEL POLE LIGHTING (NW)
TOTAL "A"													TOTAL "A"
TOTAL "B"													TOTAL "B"
TOTAL "C"													TOTAL "C"
TOTAL "A,B,C"													TOTAL "A,B,C"

* DENOTES EXISTING LOAD NOT REFLECTED IN RECORD DRAWINGS

NOTES:

- ALL PANELBOARDS SHOWN ON THIS SHEET ARE EXISTING. CIRCUITS IMPACTED BY CONSTRUCTION ARE DENOTED BY A BOLDED LOAD DESCRIPTION (AND LOAD IF APPLICABLE).
- SEE ELECTRICAL PLANS FOR LOCATION OF PANELS WITHIN BRIDGE HOUSE (LOCATED ON FIRST FLOOR ABOVE DOCK LEVEL).



USER NAME =	mkucinas	DESIGNED -	MRT	REVISED -	
		CHECKED -	MEK	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	MRT	REVISED -	
PLOT DATE =	6/23/2017	CHECKED -	MKR	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

PANELBOARD SCHEDULES
NORTHWEST BRIDGE HOUSE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	LT-6
CDOT PROJECT NO. E-6-650			353 OF 411

PANEL DESIGNATION: LED BLUE LIGHT PANEL NORTH BUS: 100A (60A MAIN)				PHASE: 1 PHASE, 3 WIRE VOLTS: 120/240							
LOAD DESCRIPTION	LOAD (VA)		BRKR	A B		BRKR	LOAD (VA)		LOAD DESCRIPTION		
	A	B		A	B						
MAIN	-		60	1		2	20	200	BRIDGE LIGHTS (NE)		
			2	3		4	20	200	BRIDGE LIGHTS (NE)		
SPARE	-		20	5		6	20	200	BRIDGE LIGHTS (NW)		
TOWERS		200	20	7		8	20	200	BRIDGE LIGHTS (NW)		
PHOTOCELL	-		20	9		10			SPACE		
SPACE				11		12			SPACE		
SPACE				13		14			SPACE		
SPACE				15		16			SPACE		
SPACE				17		18			SPACE		
TOTAL "A"	-					400		400	TOTAL "A"		
TOTAL "B"		200				600		400	TOTAL "B"		
TOTAL "A,B"						1,000			TOTAL "A,B"		

PANEL DESIGNATION: LPR-S				PHASE: 3 PHASE, 4 WIRE								
BUS: 100A (MLO)				VOLTS: 120/208								
LOAD DESCRIPTION	LOAD (VA)			BRKR	A B C			BRKR	LOAD (VA)			LOAD DESCRIPTION
	A	B	C		A	B	C					
ROADWAY LIGHTING	650			15	1			15	650			ROADWAY LIGHTING
ROADWAY LIGHTING		650		15	3			15		650		ROADWAY LIGHTING
ROADWAY LIGHTING			650	15	5			15			650	ROADWAY LIGHTING
ROADWAY LIGHTING	910			15	7			15	780			ROADWAY LIGHTING
ROADWAY LIGHTING		650		15	9			15		780		ROADWAY LIGHTING
ROADWAY LIGHTING			520	15	11			15			780	ROADWAY LIGHTING
ROADWAY LIGHTING	520			15	13			15	400			WALL MOUNT LIGHTS
ROADWAY LIGHTING		520		15	15			15		*		BRIDGE EMERGENCY POWER
ROADWAY LIGHTING			520	15	17			15			*	BRIDGE NORMAL POWER
PA (EAST)	200			15	19			15	*			MACHINE ROOM LIGHTS
PA (WEST)		200		15	21			15		*		MACHINE ROOM LIGHTS
C.C.T.V. POWER			400	15	23			15			400	TOWER TV AND SECURITY PANEL
BRIDGE BALANCE TOWER	300			15	25			20	*			MACHINE ROOM PLUGS AND CATWALK
BRIDGE BALANCE TOWER		300		15	27			15		*		CATWALK LIGHTING
BRIDGE BALANCE TOWER			300	15	29			20		*		MACHINE ROOM PLUGS
BRIDGE BALANCE TOWER	300			15	31			15	525			WALL MOUNT LIGHTS
BRIDGE INDICATION TOWER		-		15	33			20		*		HEEL LOCK MOTOR
NAVIGATION LIGHTS			100	15	35			2		*		BRAKES
WALKWAY LIGHTING	500			15	37			15	*			PIER LIGHTS
UPPER LEVEL POLE LIGHTS (SW)		1100		20	39			20			1100	UPPER LEVEL POLE LIGHTS (SE)
			1100	2	41			2			1100	
TOTAL "A"												TOTAL "A"
TOTAL "B"												TOTAL "B"
TOTAL "C"												TOTAL "C"
TOTAL "A,B,C"												TOTAL "A,B,C"

* DENOTES EXISTING LOAD NOT REFLECTED IN RECORD DRAWINGS

PANEL DESIGNATION: LED BLUE LIGHT PANEL SOUTH				PHASE: 1 PHASE, 3 WIRE					
BUS: 100A (60A MAIN)				VOLTS: 120/240					
LOAD DESCRIPTION	LOAD (VA)		BRKR	A B		BRKR	LOAD (VA)		LOAD DESCRIPTION
	A	B		A	B				
MAIN	-		60	1		20	200		BRIDGE LIGHTS (SW)
			2	3		20		200	BRIDGE LIGHTS (SW)
SPARE	-		20	5		20	200		BRIDGE LIGHTS (SE)
TOWERS		200	20	7		20		200	BRIDGE LIGHTS (SE)
PHOTOCELL	-		20	9					SPACE
SPACE				11					SPACE
TOTAL "A"	-						400		TOTAL "A"
TOTAL "B"		200						400	TOTAL "B"
TOTAL "A,B"							1,000		TOTAL "A,B"

NOTES:

- EXISTING PANELBOARD LPR-S IS TO BE REMOVED AND REPLACED (AT A NEW LOCATION) BY THIS CONTRACT. SEE ELECTRICAL PLANS.
- THE EXISTING LED BLUE LIGHT PANEL SOUTH IS TO REMAIN IN PLACE. CIRCUITS IMPACTED BY CONSTRUCTION ARE DENOTED BY A BOLDED LOAD DESCRIPTION (AND LOAD IF APPLICABLE). SEE ELECTRICAL PLANS FOR LOCATION (LOCATED ON FIRST FLOOR ABOVE DOCK LEVEL).



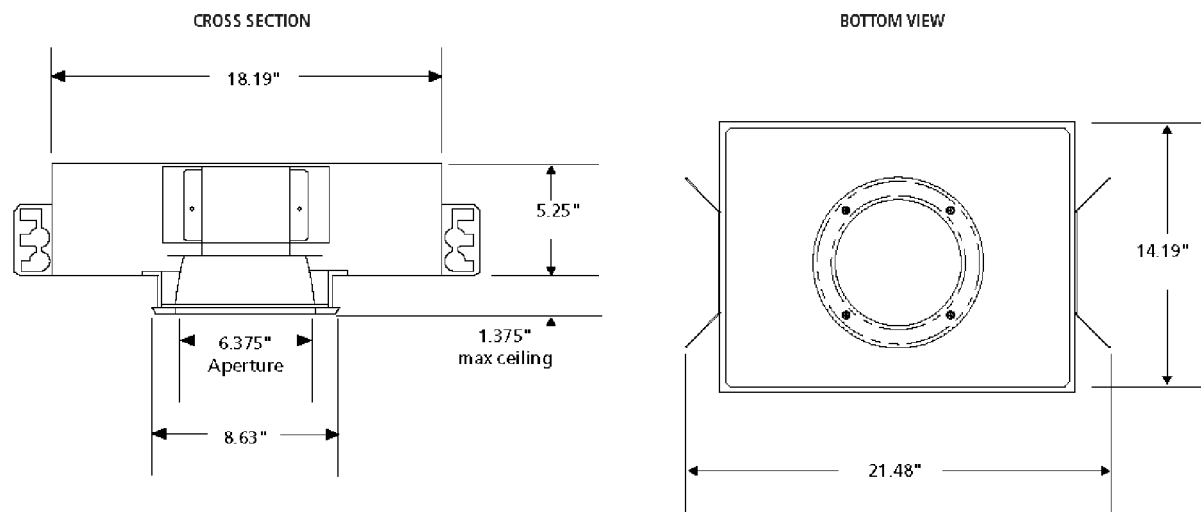
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PLOT SCALE =	N.T.S.	DRAWN -	MRT	REVISED -	
PLOT DATE =	6/23/2017	CHECKED -	MKR	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

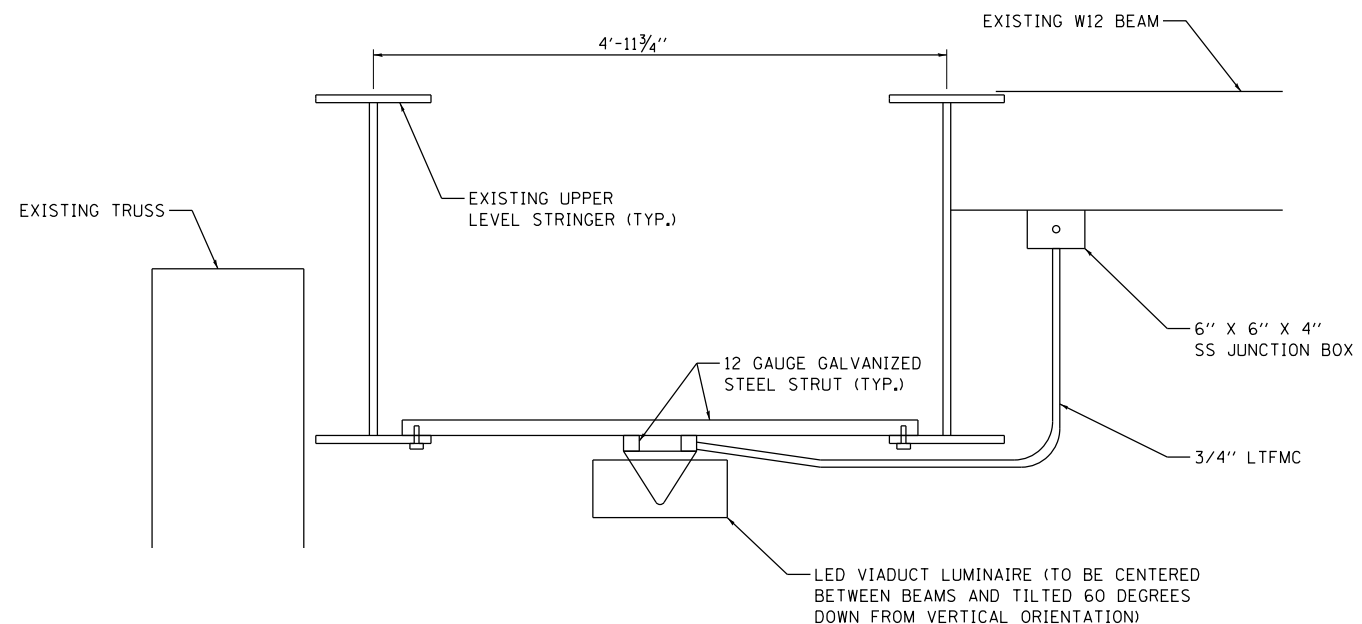
PANELBOARD SCHEDULES
SOUTHEAST BRIDGE HOUSE
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	LT-7
CDOT PROJECT NO. E-6-650			354 OF 411



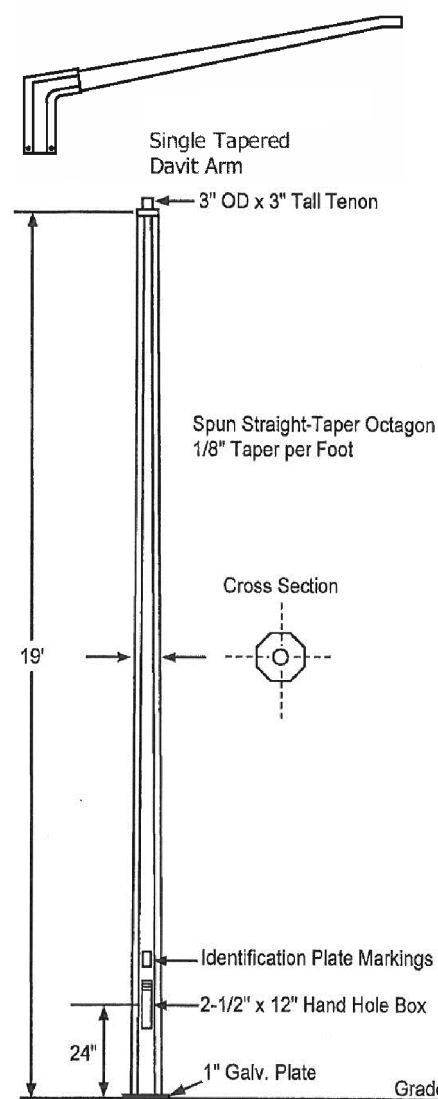
CEILING MOUNT DOWNLIGHT DETAIL

NOT TO SCALE



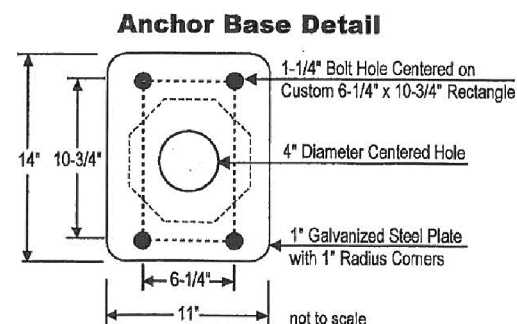
SUSPENDED MOUNT VIADUCT LUMINAIRE

NOT TO SCALE (FACING NORTH)

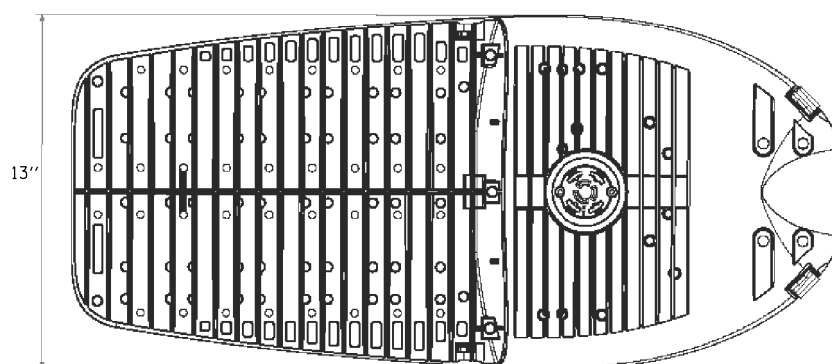
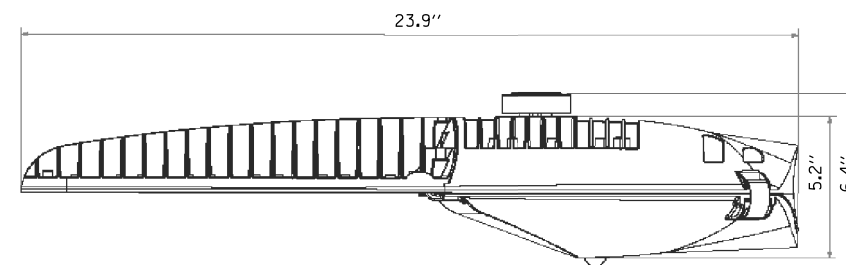
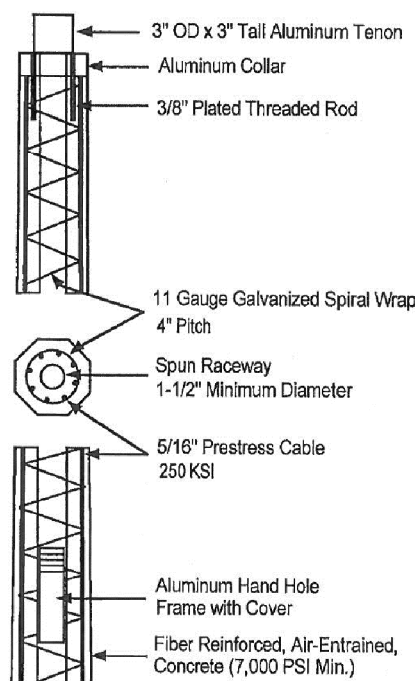


CHICAGO PARK DISTRICT 19' CONCRETE POLE

NOT TO SCALE

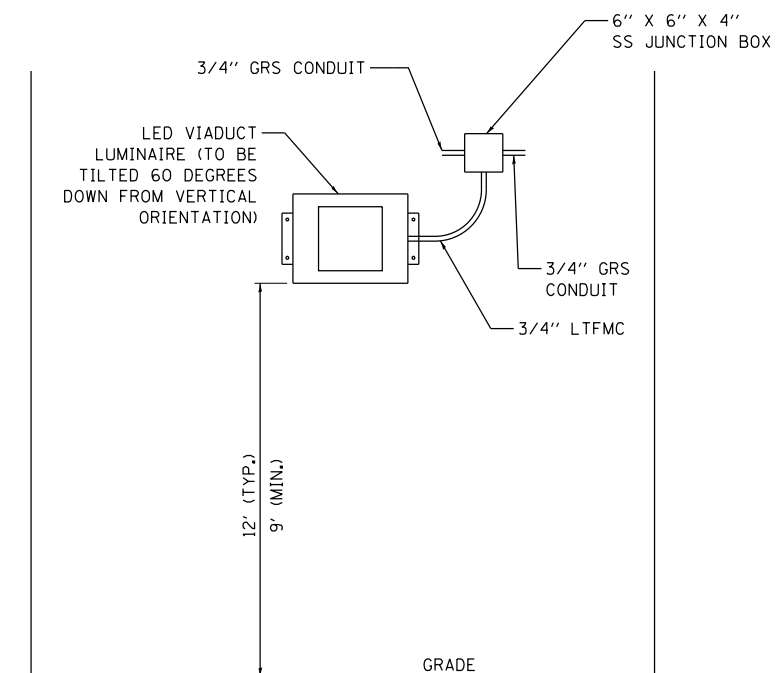


Typical Structural Detail



CHICAGO PARK DISTRICT BIKE PATH LUMINAIRE

NOT TO SCALE



WALL MOUNT VIADUCT LUMINAIRE

NOT TO SCALE (FACING WALL)

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EJM EJM ENGINEERING, INC.
41 South Wells Street Suite 1000
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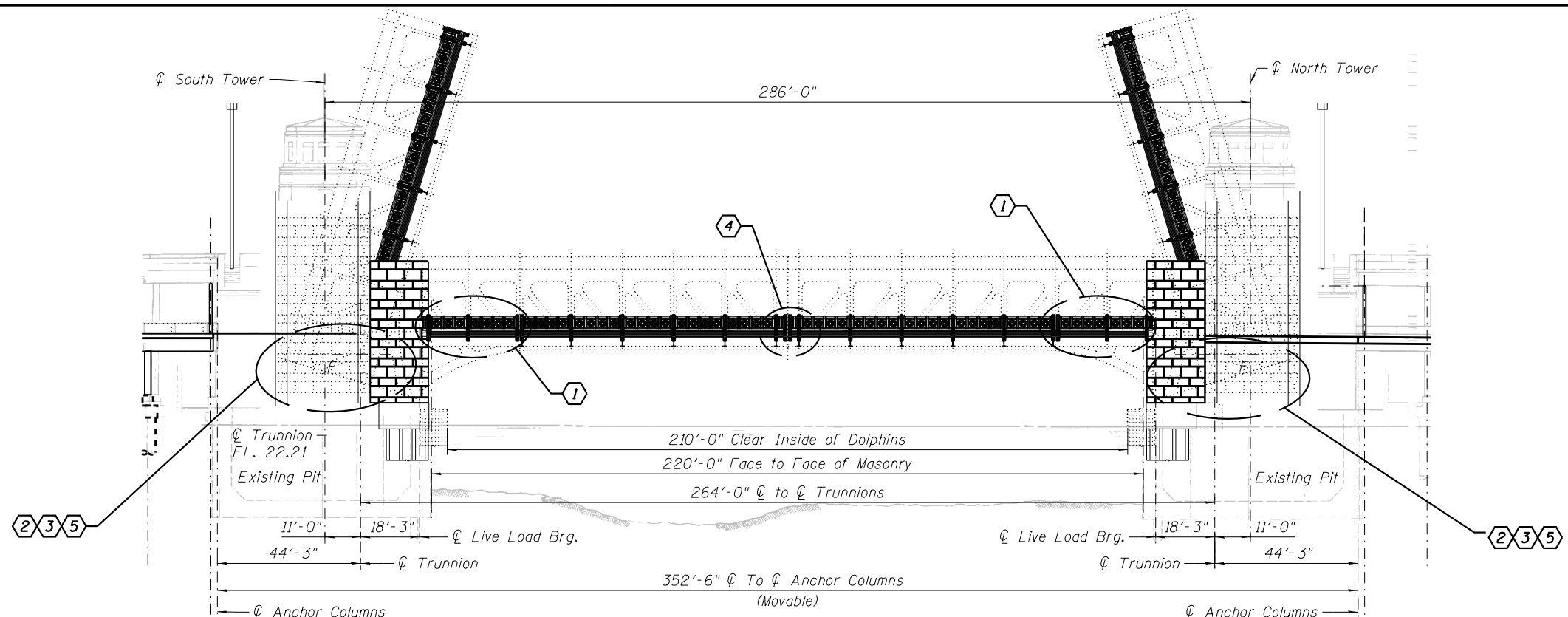
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PLOT SCALE =	N.T.S.	DRAWN -	MRT	REVISED -	
PLOT DATE =	6/23/2017	CHECKED -	MKR	REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

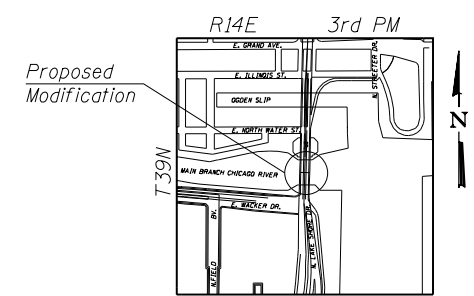
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

LIGHTING DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	LT-8
CDOT PROJECT NO. E-6-650			355 OF 411



ELEVATION
(Looking West)



LOCATION SKETCH

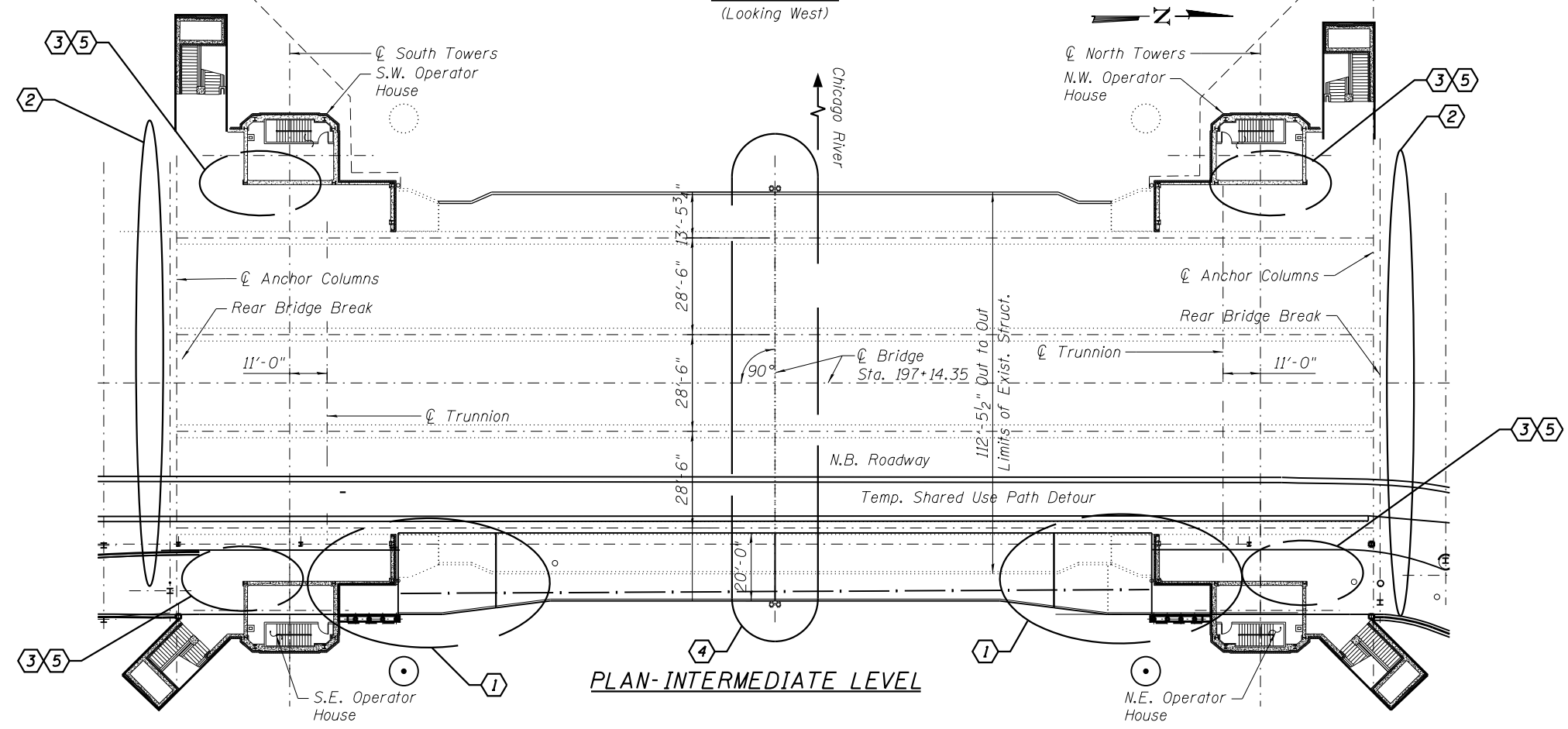
LEGEND

- Existing to Remain
- New Members
- XXX Signifies that the actual dimension at the mating component is to be used to determine the exact value.
- (XXX) Reference dimension indicating that the dimensions shown are for information only and requires field verification.
- φ Diameter
- ✓ Surface finish in micro-inches
- ℄ Centerline

MECHANICAL WORK ITEMS

- 1 Remove existing mechanical components furnish and install new mechanical elements required to support and operate new hinged sidewalk sections.
- 2 Remove, store, and re-install heel lock machinery on new support structures. All fasteners removed for machinery removal shall be replaced with new.
- 3 Rehabilitation of the main drive system, replace fasteners, and adjust equipment as identified in the mechanical plans.
- 4 Design furnish and install new center lock system, as described in the specifications.
- 5 Rehabilitation of the trunnions, replace fasteners, and adjust equipment as identified in the mechanical plans.

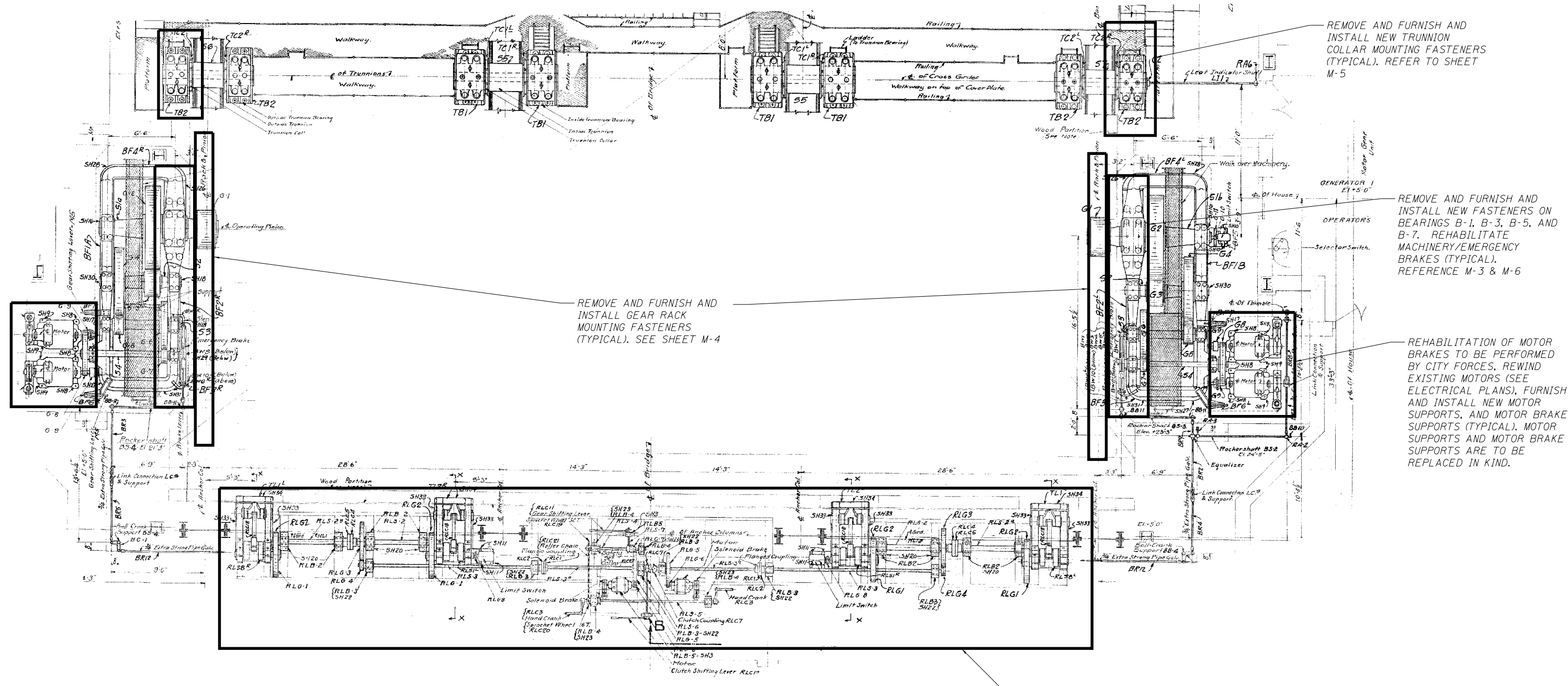
Notes:
Motor brakes to be rehabilitated by City forces. Coordination with motor brake work is incidental to adjacent mechanical and electrical contract work.



PLAN-INTERMEDIATE LEVEL

USER NAME =	branglepm	DESIGNED -	PMB	REVISED -	
		CHECKED -		REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	RJP	REVISED -	
PLOT DATE =	1/10/2018	CHECKED -		REVISED -	

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-1
CDOT PROJECT NO. E-6-650			356 OF 411



REMOVE AND FURNISH AND INSTALL GEAR RACK MOUNTING FASTENERS (TYPICAL). SEE SHEET M-4

REMOVE AND FURNISH AND INSTALL NEW TRUNNION COLLAR MOUNTING FASTENERS (TYPICAL). REFER TO SHEET M-5

REMOVE AND FURNISH AND INSTALL NEW FASTENERS ON BEARINGS B-1, B-3, B-5, AND B-7. REHABILITATE MACHINERY/EMERGENCY BRAKES (TYPICAL). REFERENCE M-3 & M-6

REHABILITATION OF MOTOR BRAKES TO BE PERFORMED BY CITY FORCES. REWIND EXISTING MOTORS (SEE ELECTRICAL PLANS). FURNISH AND INSTALL NEW MOTOR SUPPORTS, AND MOTOR BRAKE SUPPORTS (TYPICAL). MOTOR SUPPORTS AND MOTOR BRAKE SUPPORTS ARE TO BE REPLACED IN KIND.

REMOVE, STORE, AND REINSTALL HEEL LOCK MACHINERY ON NEW SUPPORT STRUCTURES. SEE DETAILS IN THIS MECHANICAL SET.

MACHINERY PLAN VIEW
NORTH PLAN SHOWN
SOUTH PLAN SIMILAR

\$\$\$DGN\$\$\$
\$\$SYTIME\$\$



WSP USA Inc.
30 N. LA SALLE STREET
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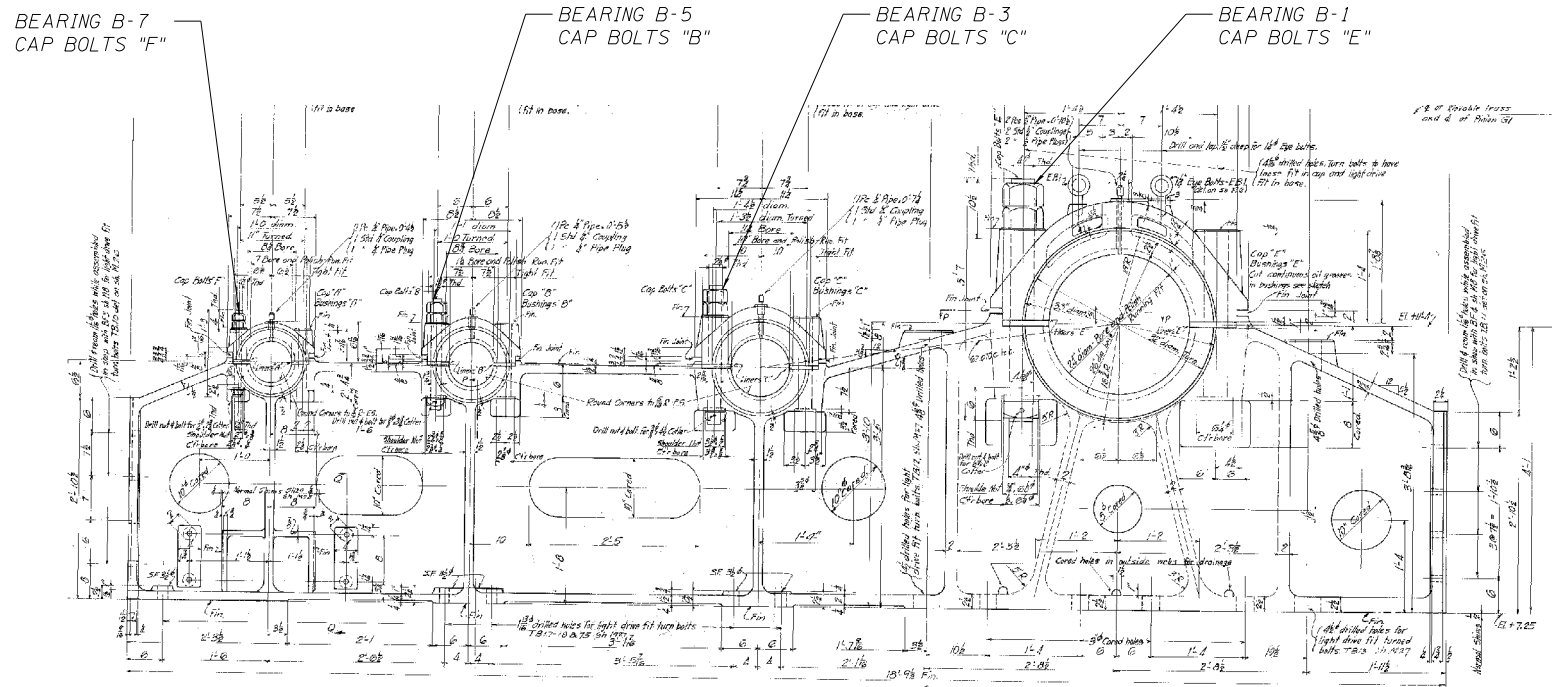
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PLOT SCALE =	N.T.S.	DRAWN -	RJP	REVISED -	
PLOT DATE =	1/5/2018	CHECKED -		REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

GENERAL
MECHANICAL REHABILITATION PLAN
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-2
CDOT PROJECT NO. E-6-650			357 OF 411

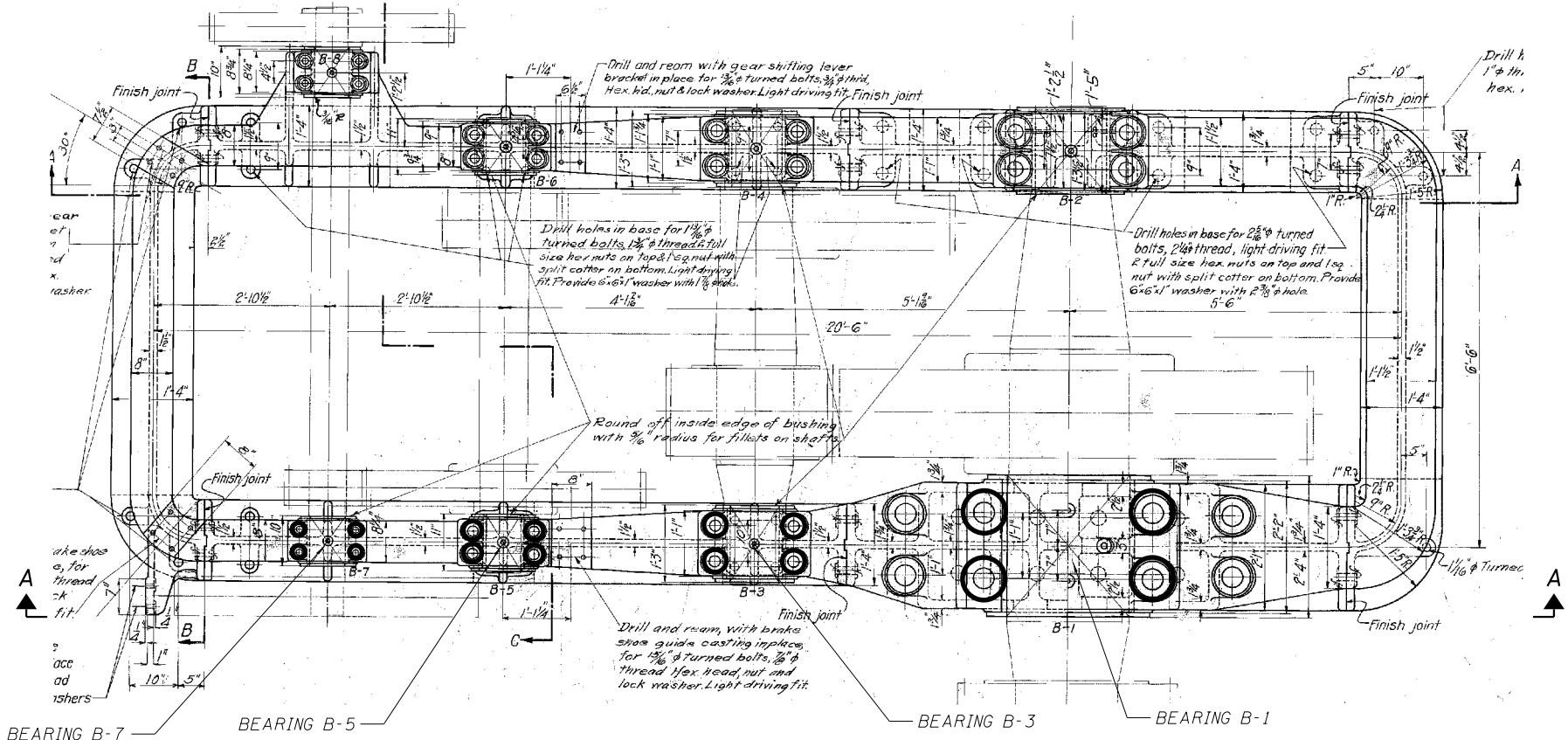


SPAN DRIVE MACHINERY SECTION VIEW
VIEW A-A

- 16 Turn Bolts - $1\frac{5}{16}$ ϕ , 1'-3" Cap Bolts "F"
 32 Std. Hex. Nuts $1\frac{1}{2}$ top Semi-fin.
 16 " Sq. " $1\frac{1}{4}$ " " " Shouldered and drilled for cotter.
 16 Split Cotters $\frac{3}{8}$ ϕ x $0-2\frac{3}{4}$
 16 Turn Bolts $1\frac{1}{16}$ ϕ , 1'-7" Cap Bolts "B"
 32 Std. Hex. Nuts $1\frac{1}{2}$ top Semi-fin.
 16 " Sq. " $1\frac{1}{4}$ " " " " Shouldered and drilled for cotter.
 16 Split Cotters $\frac{3}{8}$ ϕ x $0-3\frac{1}{4}$
 16 Turn Bolts - $2\frac{1}{16}$ ϕ , 2'-0" Cap Bolts "C"
 32 Std. Hex. Nuts - $2\frac{1}{4}$ top Semi-fin.
 16 " Sq. " $2\frac{1}{4}$ " " " " Shouldered and drilled for cotter.
 16 Split Cotters $\frac{3}{8}$ ϕ x $0-4\frac{1}{2}$
 16 Turn Bolts - $4\frac{1}{16}$ ϕ , 3'-7" Cap Bolts "E"
 32 Std. Hex. Nuts 4 top Semi-fin.
 16 " Sq. " 4 " " " " Shouldered and drilled for cotter.
 16 Split Cotters $\frac{3}{8}$ ϕ x $0-8$

FASTENERS AS DETAILED IN 1931 DESIGN PLANS

FASTENER DATA IS PROVIDED AS A REFERENCE ONLY. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY EXISTING CONDITIONS OF THE FASTENER HOLES AND PROVIDE APPROPRIATE FITS FOR THE NEW FASTENERS.

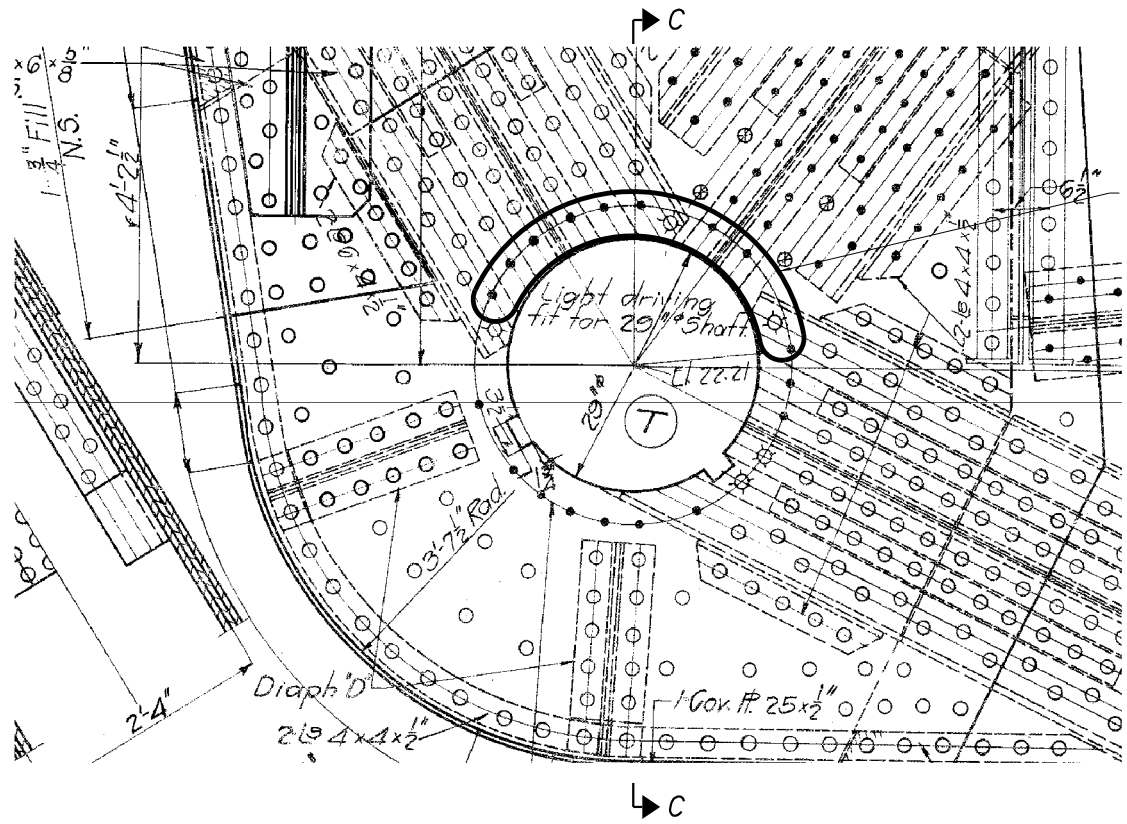


SPAN DRIVE MACHINERY PLAN VIEW
4 LOCATIONS

- NOTES:
 1. REPLACE IN KIND THE BEARING CAP FASTENERS B-1, B-3, B-5, AND B-7. FASTENERS SHALL BE FIELD VERIFIED.
 2. GEARS AND BEARINGS ARE TO BE PROTECTED FROM ANY CONTAMINANTS DURING BLASTING AND PAINTING.
 3. ALL FASTENERS FOR AN INDIVIDUAL BEARING ARE TO BE THE SAME NOMINAL DIMENSION AND HAVE THE SAME TOLERANCE RANGE.
 4. REPLACEMENT TURNED FASTENERS SHALL HAVE FITS AND FINISH AS DESCRIBED IN THE MECHANICAL PLANS AND THE CONTRACT DOCUMENTS.

USER NAME =	brenglepm	DESIGNED -	PMB	REVISED -	
		CHECKED -		REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	RJP	REVISED -	
PLOT DATE	6/22/2017	CHECKED -		REVISED -	

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-3
CDOT PROJECT NO. E-6-650			358 OF 411



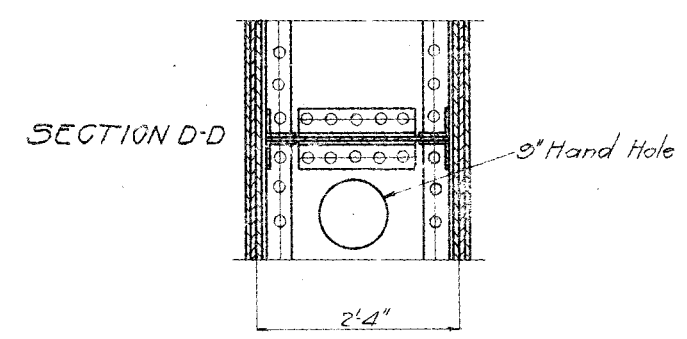
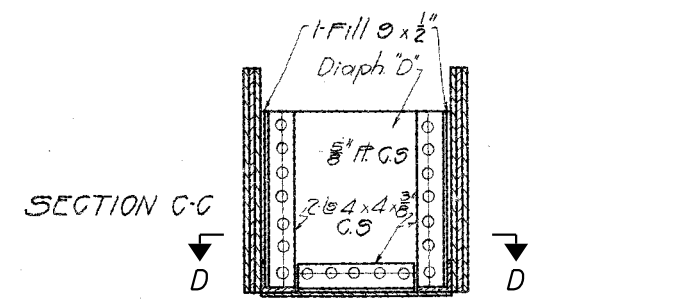
TRUNNION COLLAR FASTENERS IN UPPER 180 DEGREES ARE TO BE REPLACED WITH NEW TURNED FASTENERS. THE NEW TURNED FASTENERS ARE TO HAVE FITS AND FINISHES AS REQUIRED BY THE MECHANICAL PLANS AND CONTRACT DOCUMENTS.

CONSTRUCTION SEQUENCE:

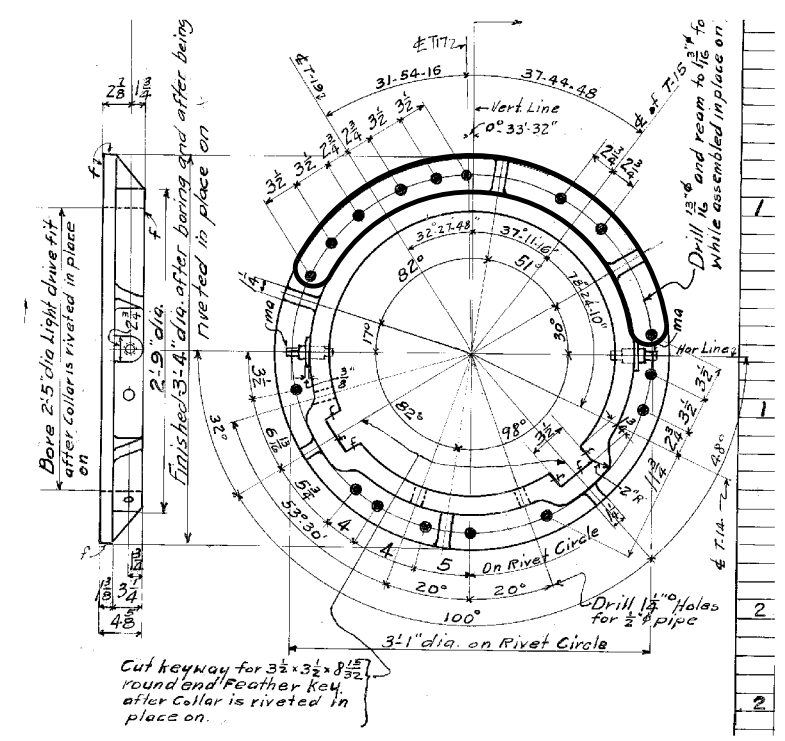
1. CLEAN AREA REMOVING LOOSE PAINT, DIRT, DEBRIS, AND LOOSE CORROSION FROM AREA TO BE AFFECTED BY WORK.
2. REMOVE THE BEARING CAP OF THE OUTSIDE TRUNNION BEARING. (BEARING CAP TO BE SECURELY FASTENED DURING BRIDGE OPENINGS).
3. REMOVE TRUNNION HUB FASTENERS ONE AT A TIME AND REPLACE THE FASTENER WITH A NEW TURNED BOLT. TORQUE FASTENER AS REQUIRED BEFORE REMOVING THE NEXT FASTENER.
4. AFTER ALL FASTENERS HAVE BEEN REPLACED, REINSTALL BEARING CAP TORQUE CAP FASTENER AS REQUIRED.

EXISTING OUTSIDE BASCULE TRUSS

NW & SE SHOWN
NE & SW OPPOSITE HAND
(4 LOCATIONS)



DETAIL OF STRUCTURAL ACCESS HAND HOLES



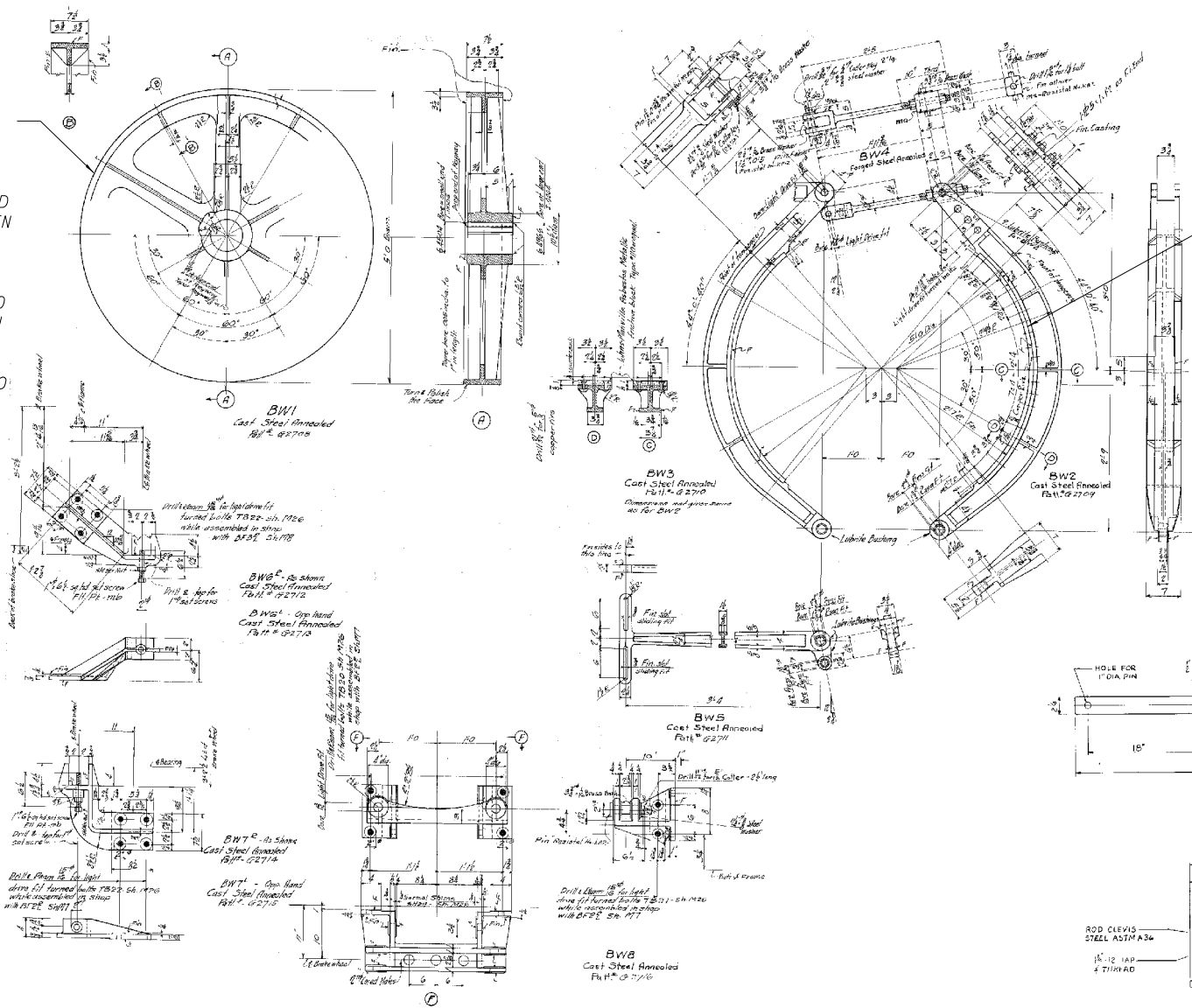
EXISTING OUTSIDE TRUNNION COLLAR

(4 LOCATIONS)

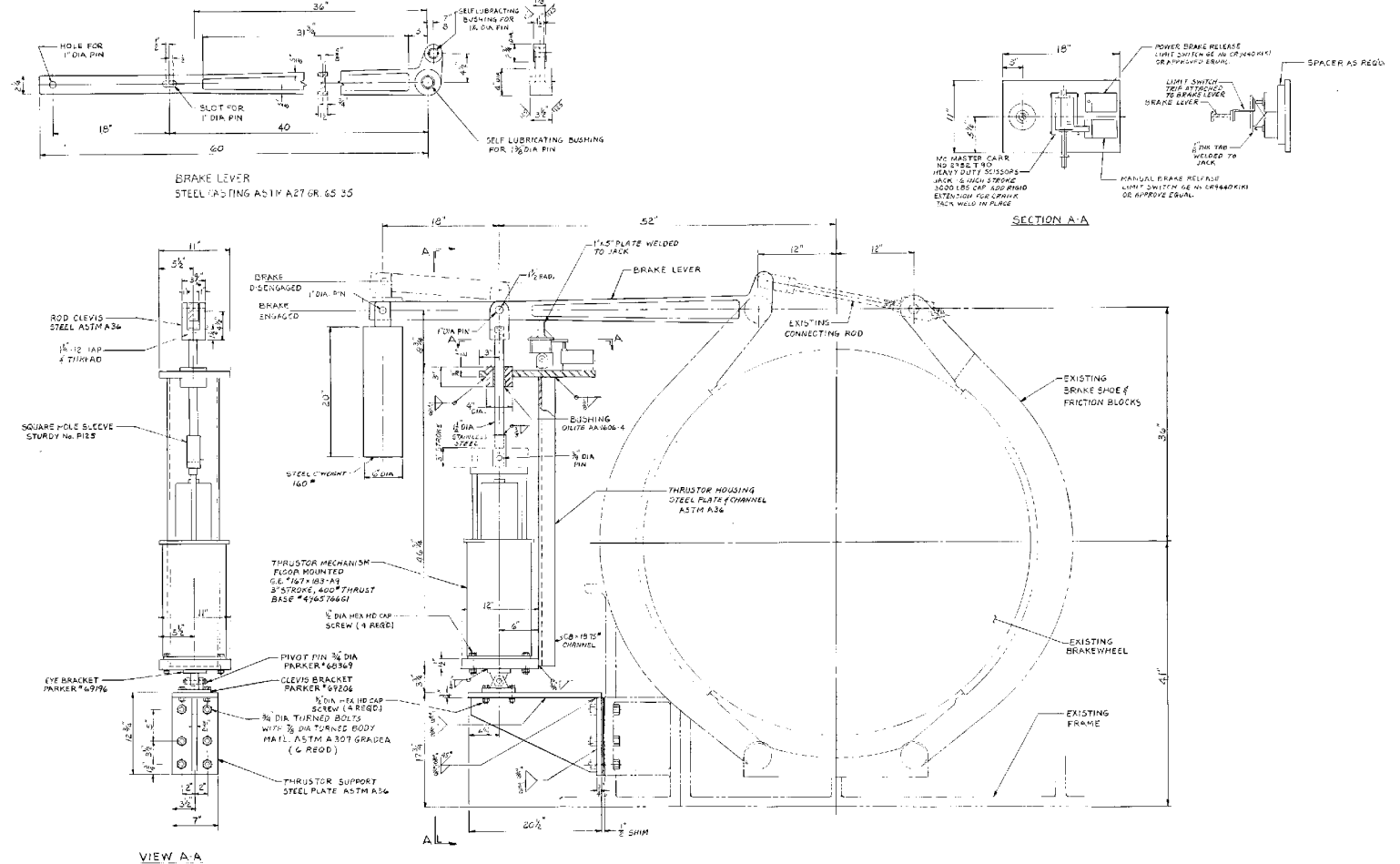
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		CHECKED -		REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	RJP	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -		REVISED -	

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-5
CDOT PROJECT NO. E-6-650			360 OF 411

BRAKE WHEEL FRICTION SURFACE TO BE MACHINED AND TRUED. SURFACE SHALL HAVE A SURFACE ROUGHNESS AND RUN OUT AS DETAILED IN THE MECHANICAL SPECIFICATIONS. NOTIFY THE ENGINEER OF THE AMOUNT OF MATERIAL TO BE REMOVED FROM EACH WHEEL PRIOR TO MACHINING. ALL WHEELS ARE TO BE MACHINED TO THE SAME FINAL DIAMETER.



BRAKE SHOES ARE TO BE RELINED WITH A MOLDED NON- ASBESTOS MATERIAL MEETING THE FRICTION COEFFICIENT SPECIFIED IN THE EXISTING DRAWINGS OF 0.4. THE ORIGINAL CONTRACT DRAWING INDICATE THAT THE AS BUILT FRICTION MATERIAL IS JOHNS MANVILL ASBESTOS METALLIC FRICTION BLOCK TYPE #110 OR EQUAL. THE NEW MATERIAL SHALL BE AN APPROVED REPLACEMENT. THE NEW MATERIAL SHALL BE FASTENED USING RIVETS OR BRASS MACHINE SCREWS. THE EXISTING FRICTION MATERIAL IS TO BE REMOVED AND THE SHOES ARE TO BE CLEANED OF CORROSION. THE FASTENERS SECURING THE NEW LINER SHALL HAVE A LC6 FIT WITH THEIR HOLE. THE THICKNESS OF THE NEW FRICTION MATERIAL IS TO BE 31 INCHES MINUS THE NEW RADIUS OF THE DRUM. THE FRICTION MATERIAL SHALL BE AT LEAST 1 INCH THICK.



EXISTING EMERGENCY BRAKES
DETAIL SHOWING 1930'S SHOP DRAWING

EXISTING EMERGENCY BRAKES

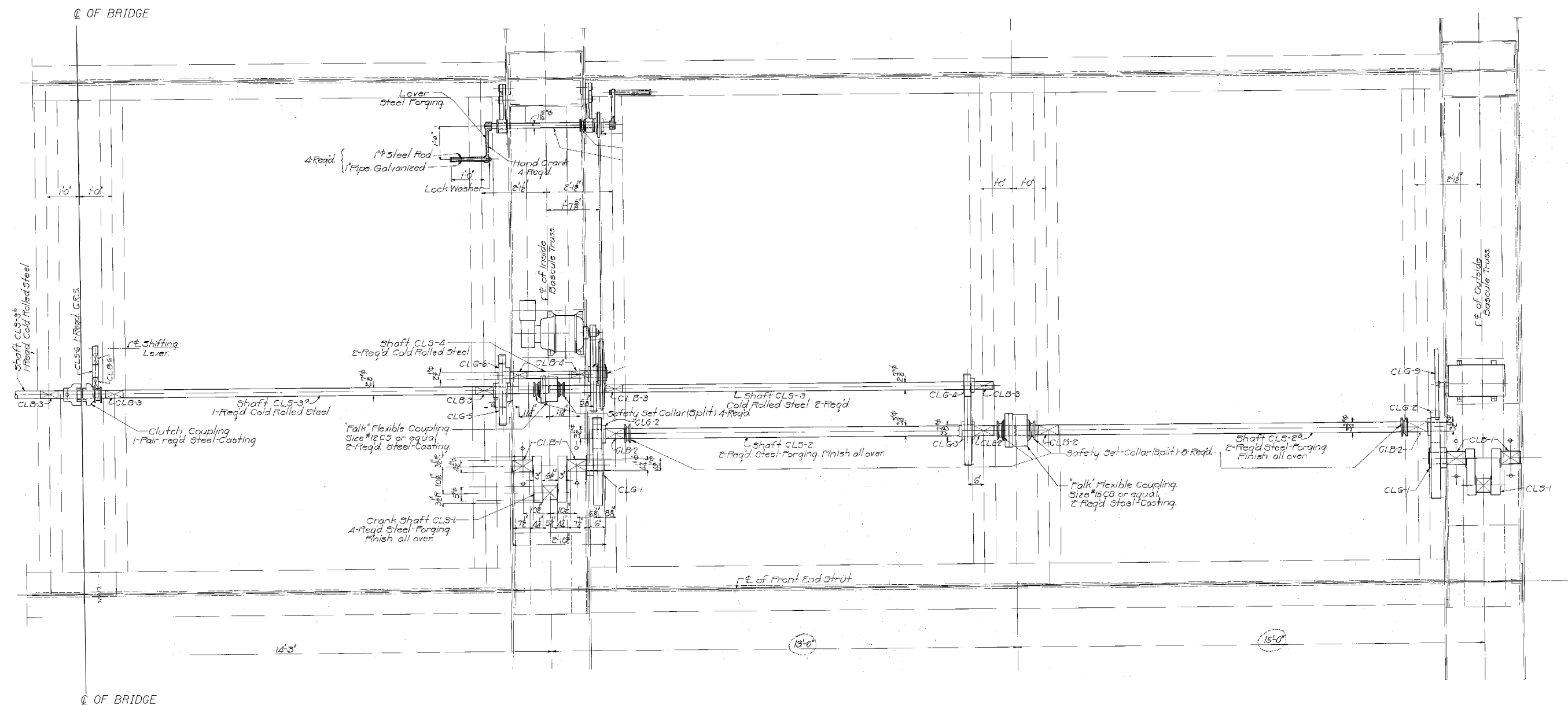
DETAIL SHOWING 1980'S REHABILITATION IN WHICH A HYDRAULIC THRUSTER WAS FITTED TO THE EXISTING BRAKE ASSEMBLY.

NOTES:

1. CONTRACTOR TO DISASSEMBLE BRAKES ONE LEAF AT A TIME. ALL OF THE PARTS OF THE BRAKES SHALL BE UNIQUELY MATCH MARKED PRIOR TO DISASSEMBLY.
2. WORK TO BE INCLUDED IN THE REHABILITATION OF THE MACHINERY BRAKES; DISASSEMBLY OF THE MACHINERY BRAKE ASSEMBLY, CLEAN, PAINT, REPLACE ALL FASTENERS, REPLACE PARTS THAT EXHIBIT GREATER THAN 20% SECTION LOSS. THE BRAKE WHEELS ARE TO BE CLEANED AND PAINTED. THE MACHINING IS TO BE DONE WITH OUT REMOVING THE BRAKE WHEEL FROM THE SHAFT.
2. EXISTING BRAKE LINERS ARE LIKELY TO CONTAIN ASBESTOS. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE ASBESTOS ABATEMENT PROCEDURES.

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		CHECKED -		REVISED -	

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
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CDOT PROJECT NO. E-6-650			361 OF 411



CENTER LOCK MACHINERY

HALF OF THE CENTER LOCK MACHINERY IS SHOWN. COMPLETE SYSTEM IS SYMMETRICAL ABOUT C OF BRIDGE

NOTES:
1. DESIGN, FURNISH, AND INSTALL NEW CENTER LOCK MACHINERY PER THE SPECIFICATIONS.

\$\$\$DGN\$\$\$
\$\$SYTIME\$



WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

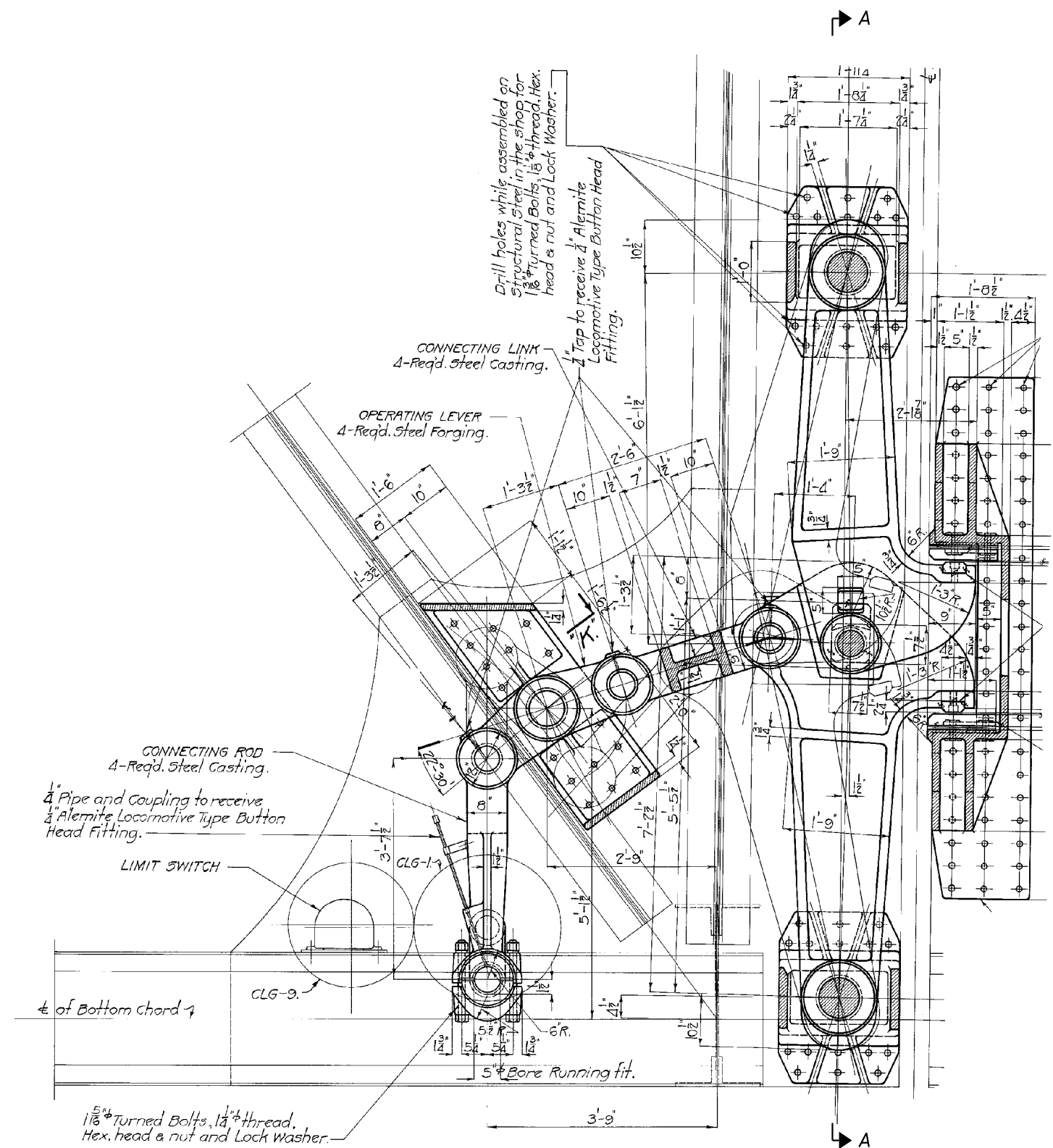
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PLOT DATE =	6/22/2017	CHECKED -		REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

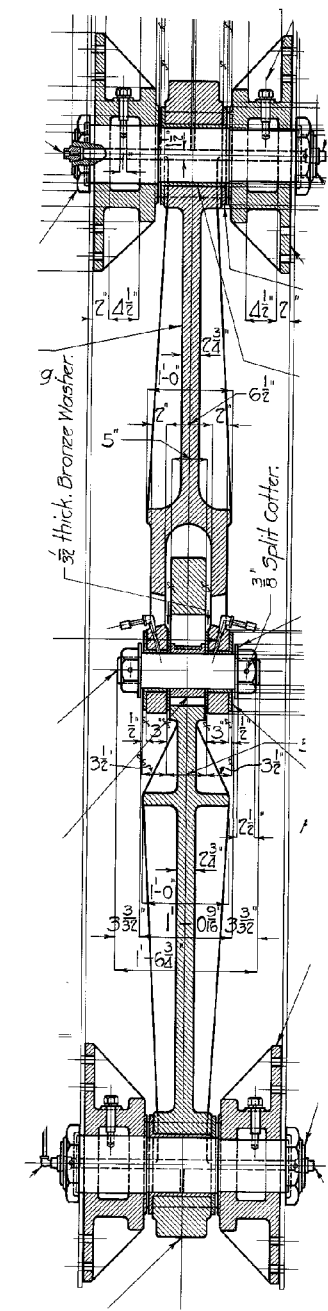
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

CENTER LOCK DRIVE
MACHINERY REHABILITATION DETAILS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-7
CDOT PROJECT NO. E-6-650			362 OF 411



CENTER LOCK JAWS ELEVATION VIEW



**CENTER LOCK JAWS
(VIEW A-A)**

NOTES:
1. DESIGN, FURNISH, AND INSTALL NEW CENTER LOCK MACHINERY PER THE SPECIFICATIONS.

WSP USA Inc.
30 N. LASALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

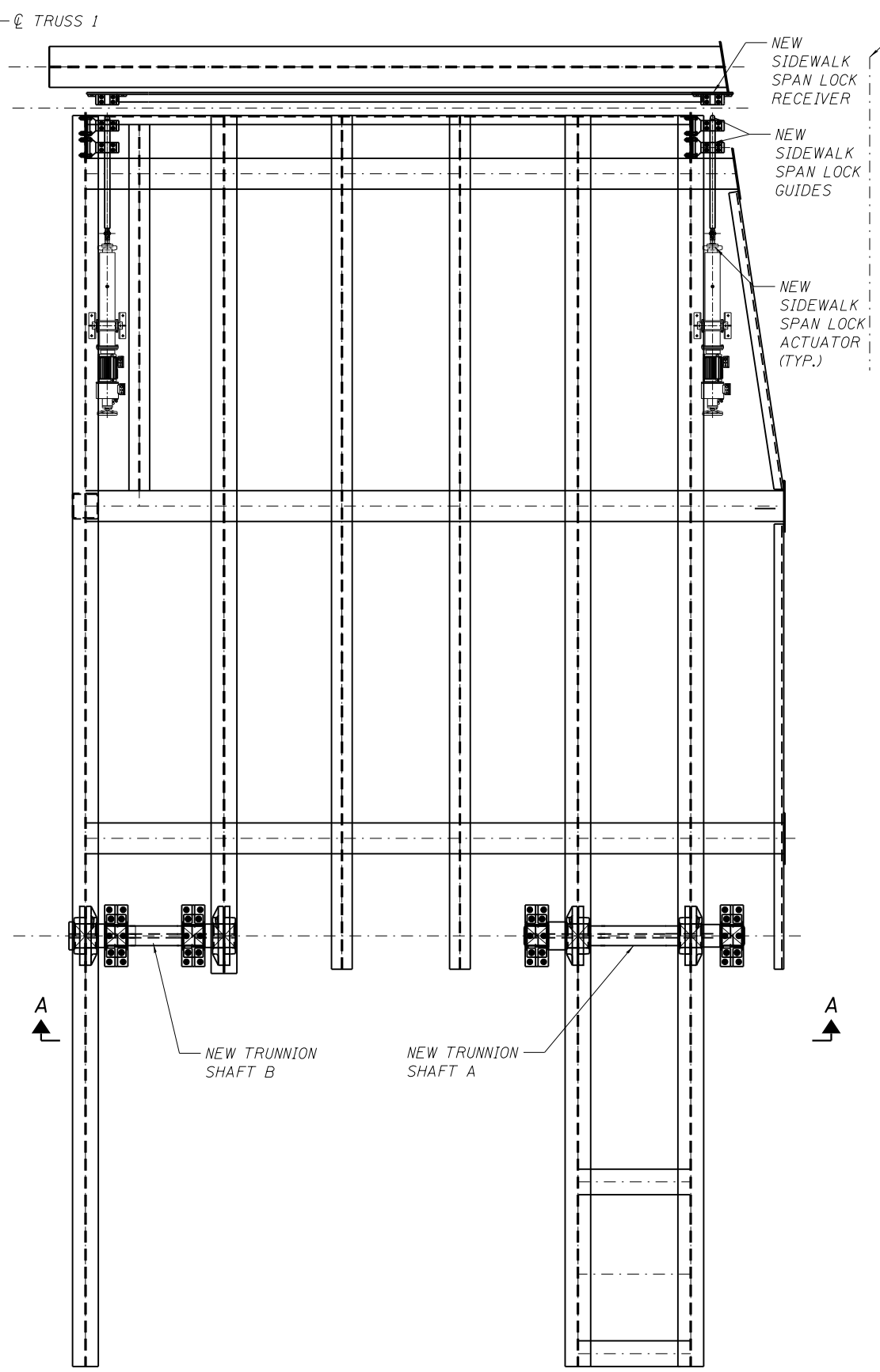
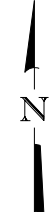
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PLOT SCALE =	N.T.S.	DRAWN -	RJP	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -		REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

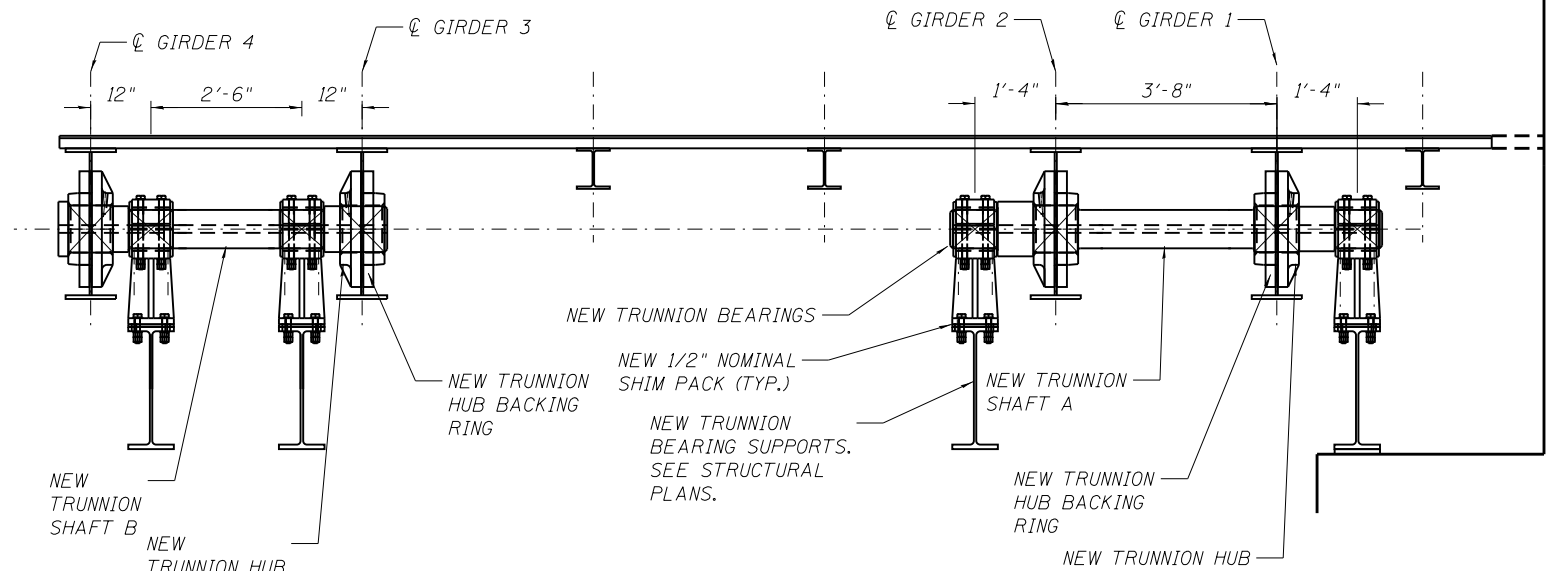
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**CENTER LOCK REHABILITAION DETAILS
(STRUCTURE NO. 016-6030)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-8
CDOT PROJECT NO. E-6-650			363 OF 411



HINGED SIDEWALK PLAN VIEW



HINGED SIDEWALK ELEVATION
(VIEW A-A)

WSP USA Inc.
30 N. LASALLE STREET
SUITE 4200
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

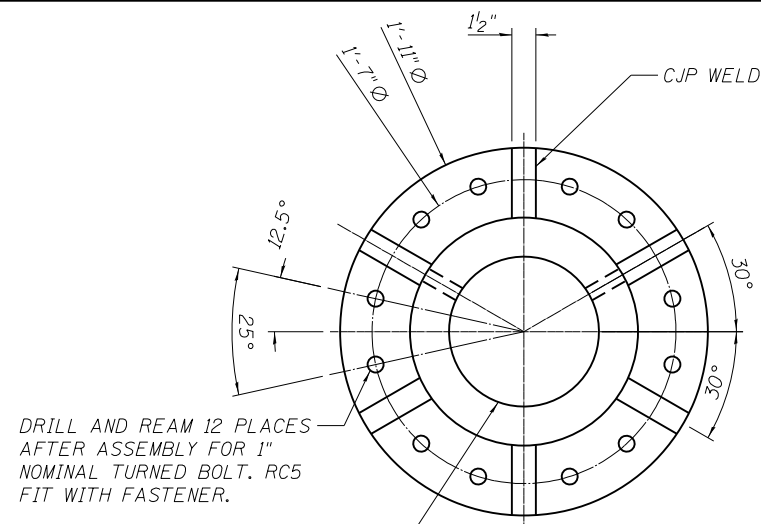
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PLOT SCALE =	N.T.S.	DRAWN -	RJP	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -		REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HINGED SIDEWALK KEY SHEET
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-9
CDOT PROJECT NO. E-6-650			364 OF 411

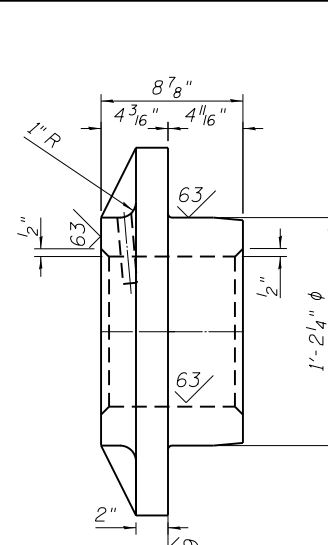


DRILL AND REAM 12 PLACES AFTER ASSEMBLY FOR 1" NOMINAL TURNED BOLT. RC5 FIT WITH FASTENER.

QTY. 4, 9 1/8" BORE
QTY. 4, 9 3/8" BORE
FN1 FIT WITH THE TRUNNION SHAFT

TRUNNION HUB

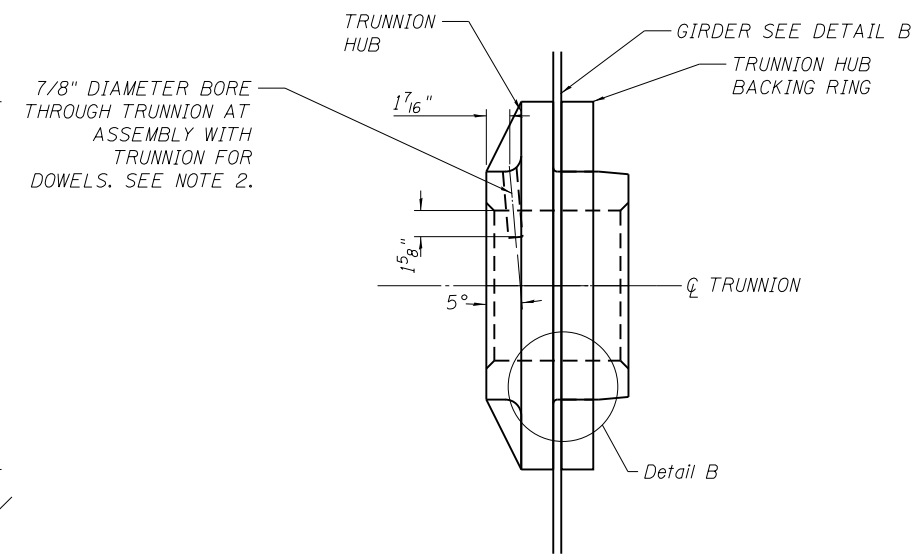
(8 REQUIRED)
ASTM 668 CLASS D



FN2 FIT WITH GIRDER AND TRUNNION HUB BACKING RING

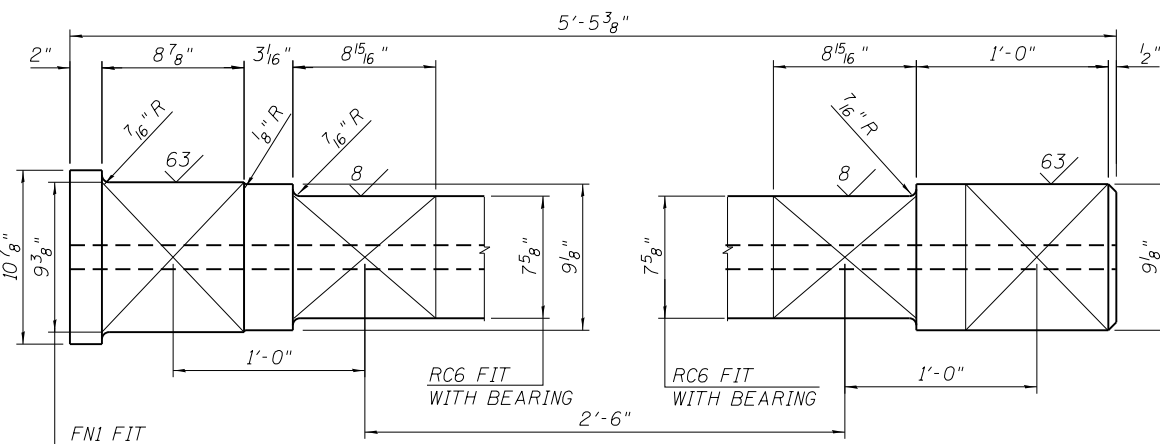
TRUNNION HUB BACKING RING

(8 REQUIRED)
ASTM 668 CLASS D



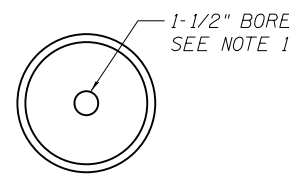
7/8" DIAMETER BORE THROUGH TRUNNION AT ASSEMBLY WITH TRUNNION FOR DOWELS. SEE NOTE 2.

TRUNNION HUB GIRDER AND BACKING RING ASSEMBLY

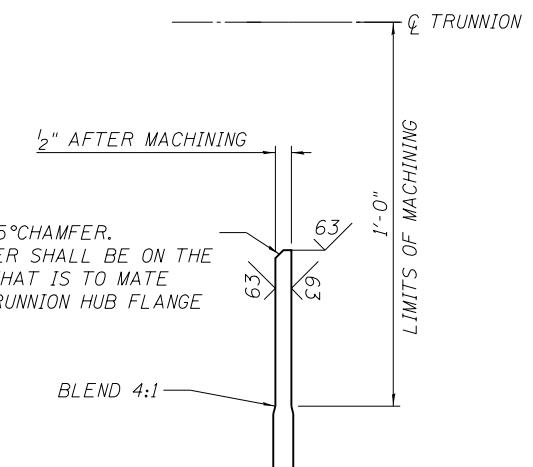


TRUNNION SHAFT B

(2 REQUIRED)
ASTM 668 CLASS D

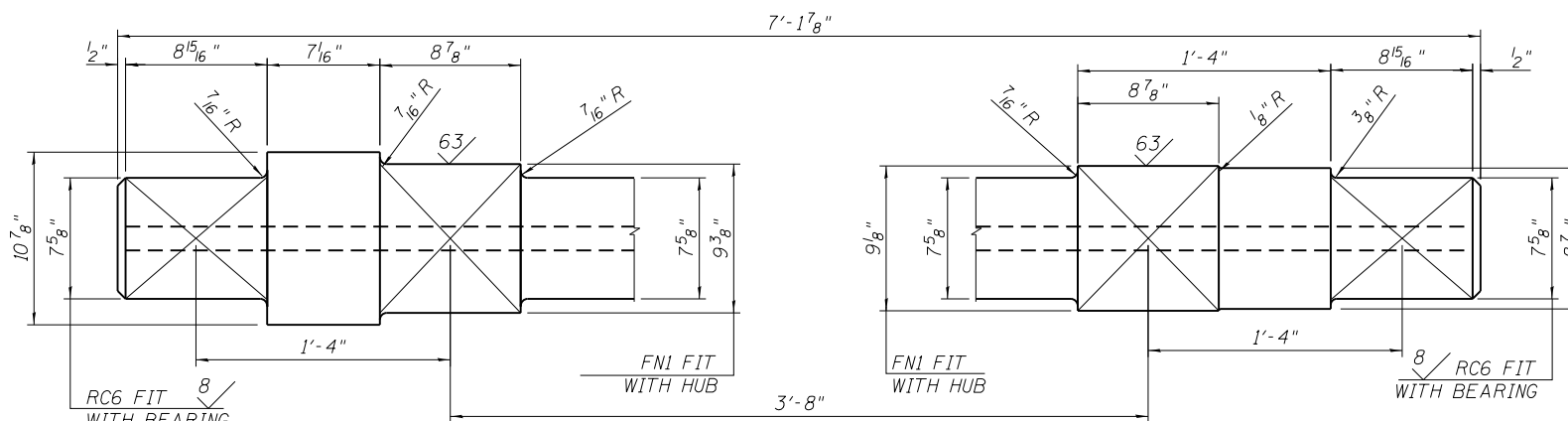


FN1 FIT WITH HUB



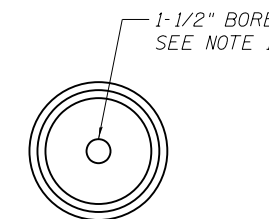
TRUNNION HUB MATING SURFACE

DETAIL B



TRUNNION SHAFT A

(2 REQUIRED)
ASTM 668 CLASS D



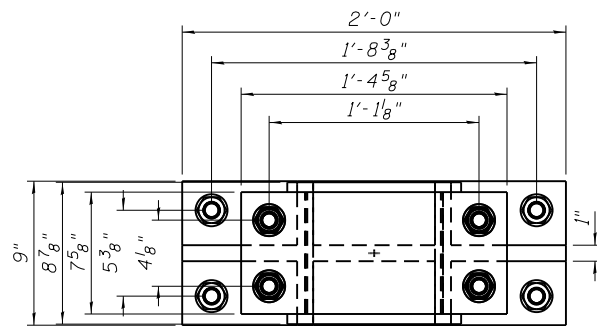
1-1/2" BORE
SEE NOTE 1

NOTES:

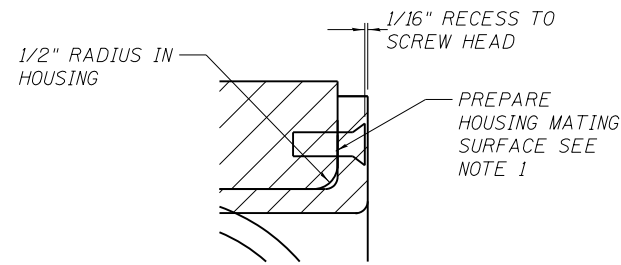
1. THE FIRST 4" OF THE BORE AT EACH END OF THE TRUNNION SHAFT SHALL BE AT THE EXACT CENTER AND HAVE A 125 MICROINCH SURFACE FINISH. 500 MICROINCH FINISH MAXIMUM ON THE REMAINDER OF THE BORE.
2. PROVIDE 2 DOWELS AT 120° PER HUB, 7/8" DIAMETER X 4 3/8" LONG TO SECURE TRUNNION. BORE THROUGH HUB AT ASSEMBLY 1 5/8" INTO TRUNNION. PROVIDE FN2 FIT, ASTM A688M CLASS K MATERIAL. PROVIDE MEANS FOR AIR TO ESCAPE AT ASSEMBLY.

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		CHECKED -		REVISED -	

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-10
CDOT PROJECT NO. E-6-650			365 OF 411

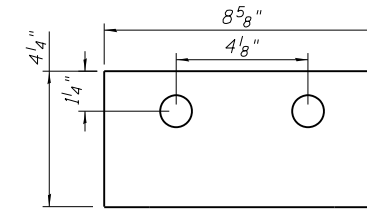


TRUNNION SHAFT BEARING PLAN VIEW

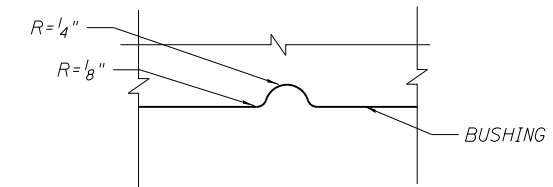


TRUNNION SHAFT BEARING

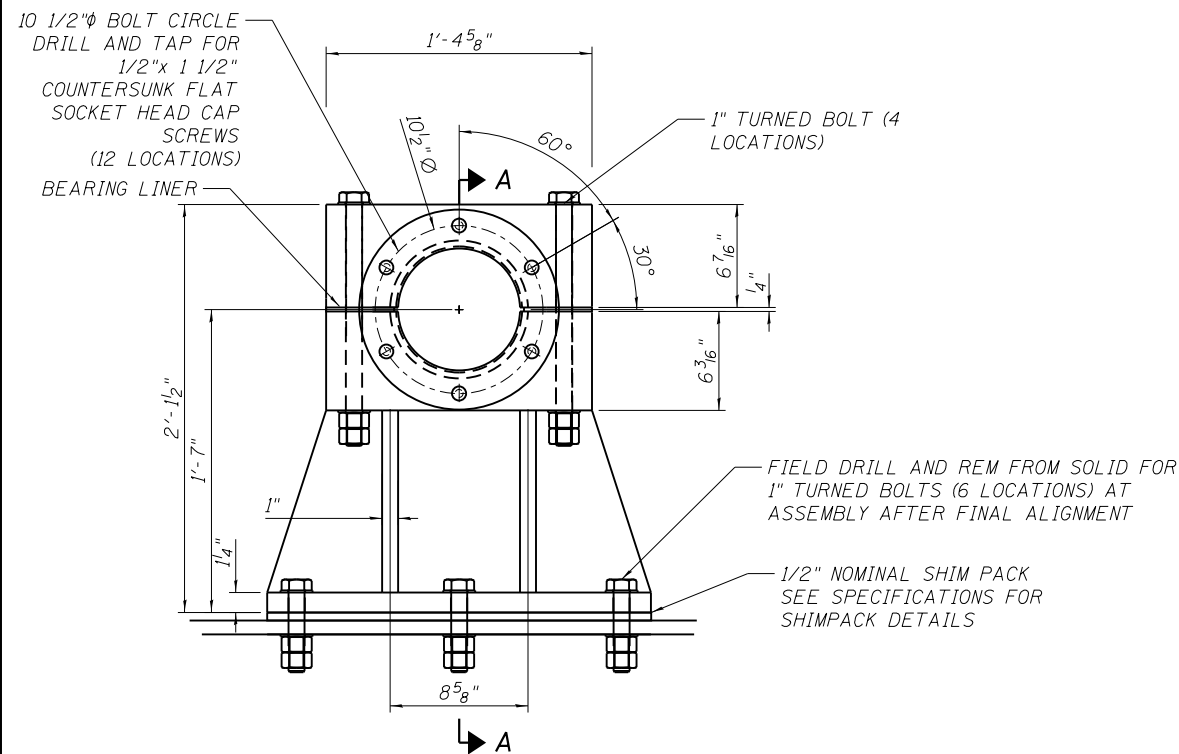
DETAIL A



LAMINATED BEARING LINER DETAIL

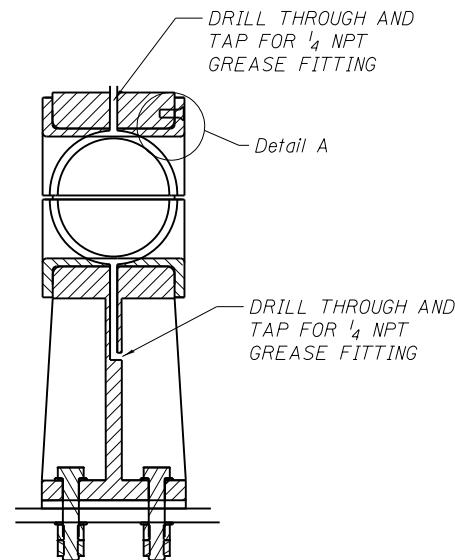


TRUNNION SHAFT BUSHING GREASE GROOVE DETAIL



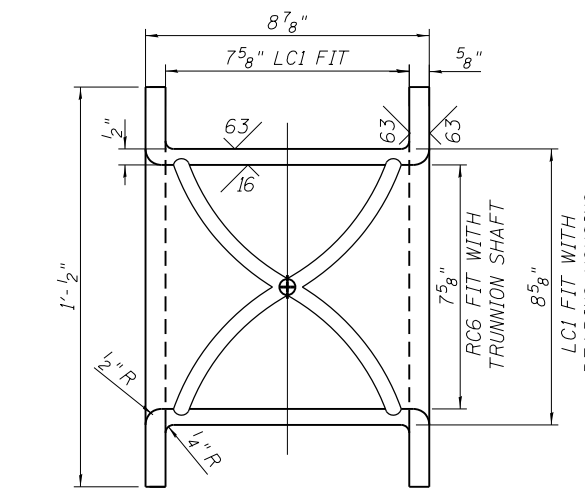
TRUNNION SHAFT BEARING ELEVATION VIEW

BEARING HOUSING ASTM A709 GRADE 50
(8 REQUIRED)



TRUNNION SHAFT BEARING

VIEW A-A



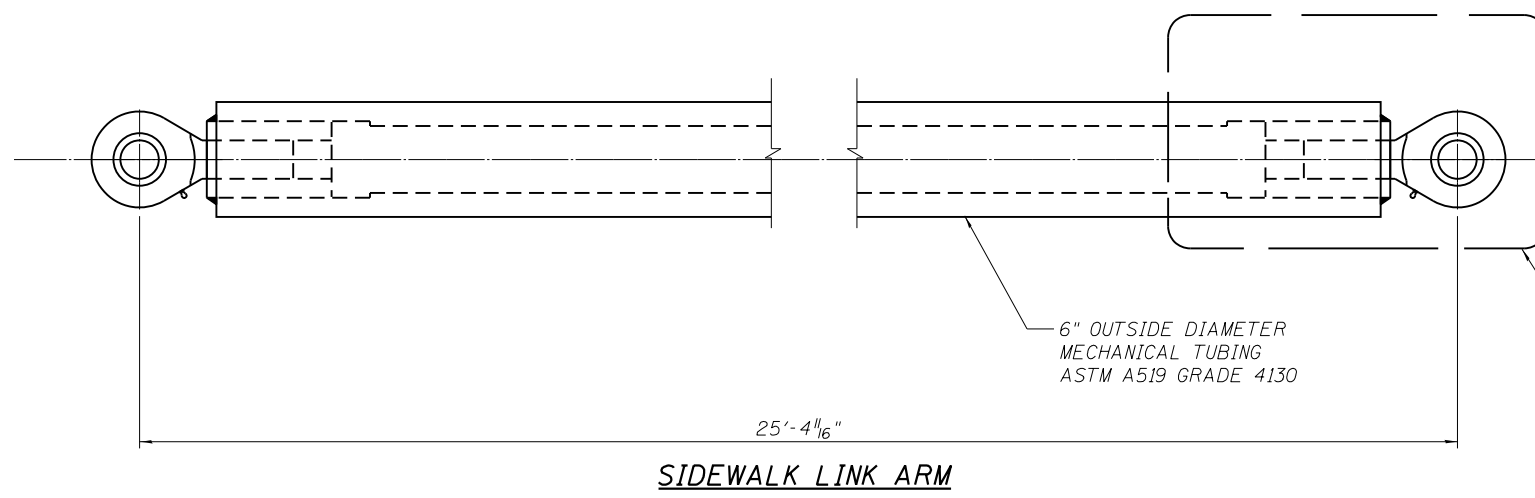
HALF SECTION OF BEARING BUSHING

MATERIAL: ASTM B22 C91100

- NOTES:
1. MACHINE SMOOTH FLAT, AND PERPENDICULAR TO AXIAL CENTERLINE OF BUSHING.
 2. SEE SPECIFICATIONS FOR GREASE FITTING DETAILS.
 3. CONNECT ALL ADJOINING PLATES WITH COMPLETE JOINT PENETRATION WELDS.
 4. STRESS RELIEVE WELDMENT AFTER WELDING AND PRIOR TO FINAL MACHINING.
 5. DIMENSIONS SHOWN ARE FINAL DIMENSIONS AFTER MACHINING.

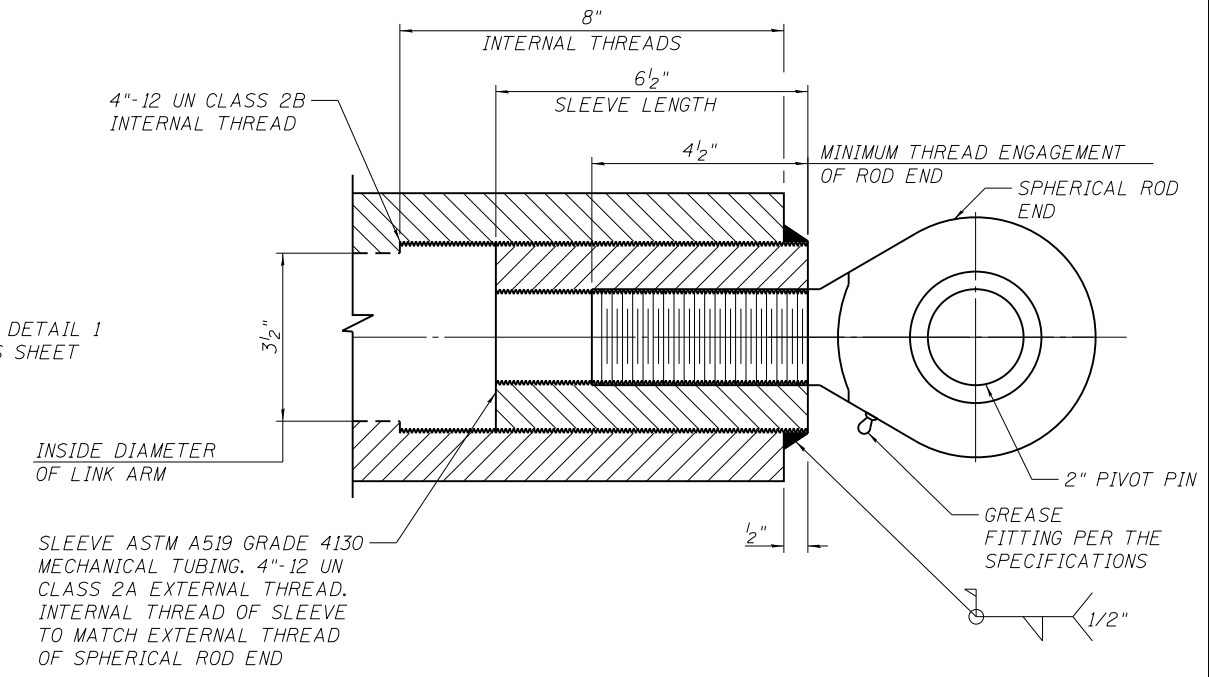
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PLOT DATE =	6/22/2017	CHECKED -		REVISED -	

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-11
CDOT PROJECT NO. E-6-650			366 OF 411

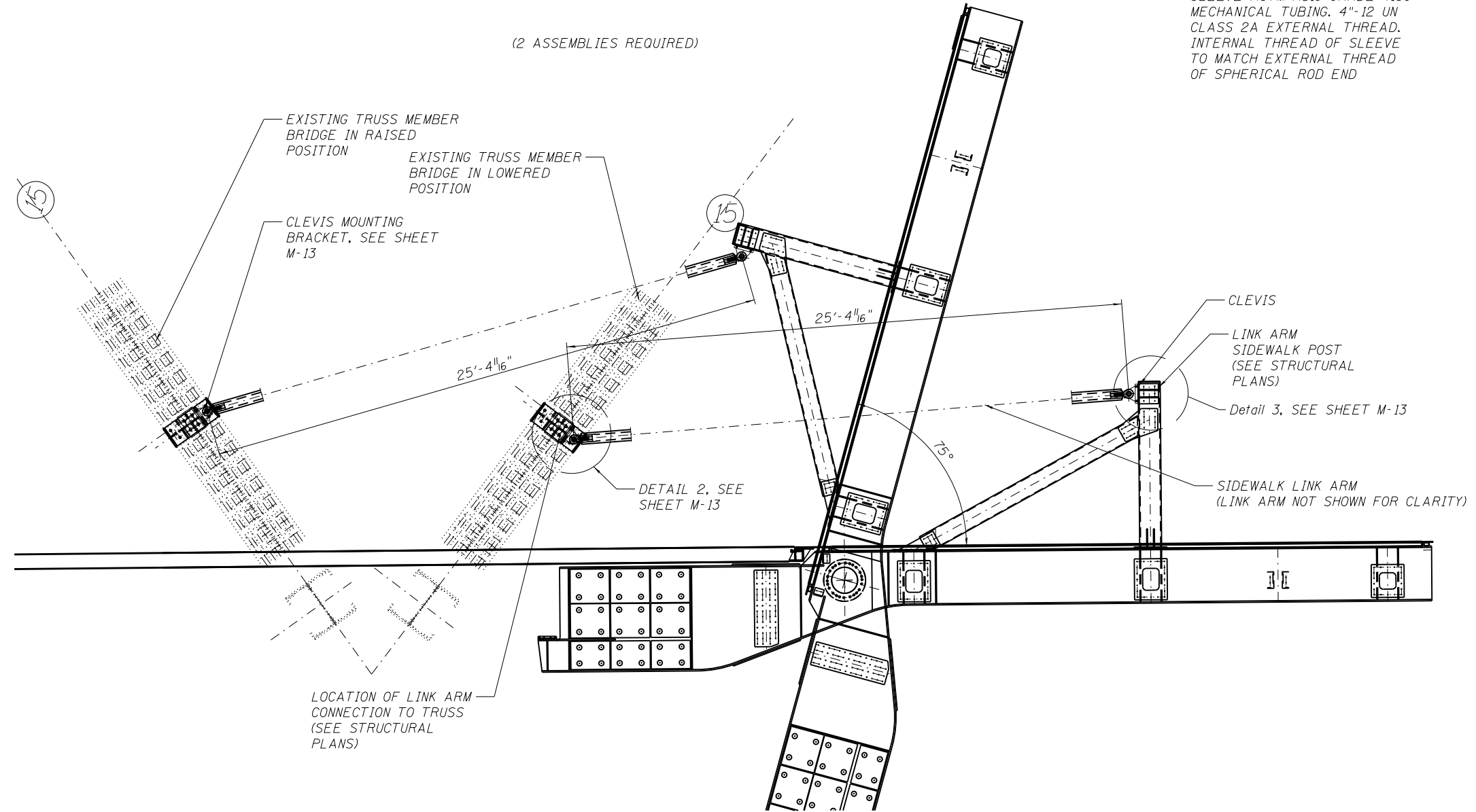


SIDEWALK LINK ARM

(2 ASSEMBLIES REQUIRED)



**DETAIL 1
(PARTIAL SECTION)**

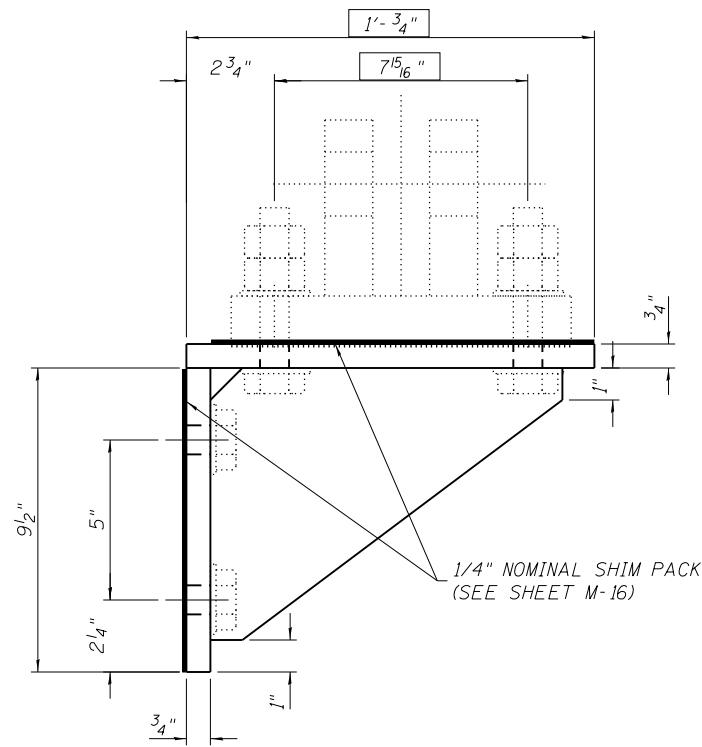


LINK ARM ASSEMBLY
(SOUTH END SHOWN
NORTH END SIMILAR)

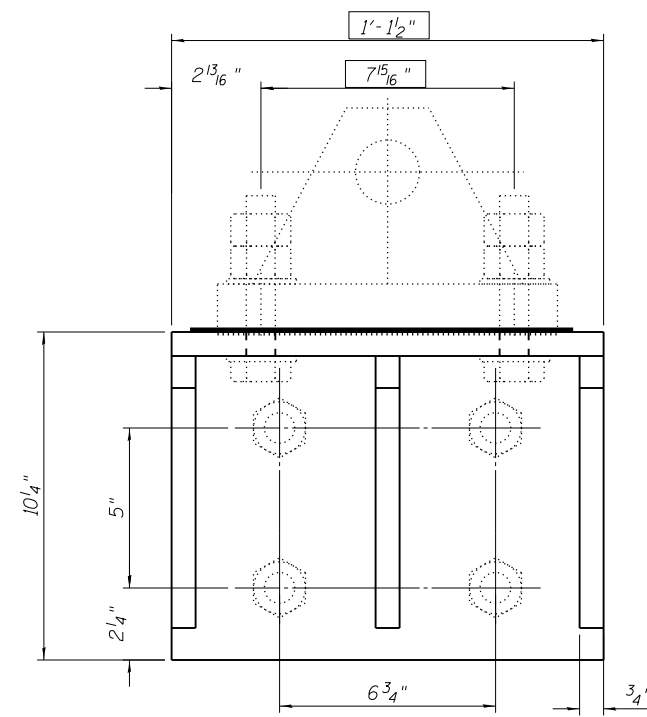
- NOTES:
1. ROD END TO HAVE SPHERICAL PLAN BEARING WITH GREASE FITTING.
 2. ROD END TO BE THREADED TIGHT WITH SLEEVE.
 3. SLEEVE MAY BE THREADED IN OR OUT $\pm 1/8$ " AT ASSEMBLY FOR ADJUSTMENT.

EQUIPMENT SCHEDULE

ITEM	QTY.	MINIMUM LOAD CAPACITY
SPHERICAL ROD END	4	153,000 LB
2" PIVOT PIN	4	137,000 LB
CLEVIS	4	50,000 LB



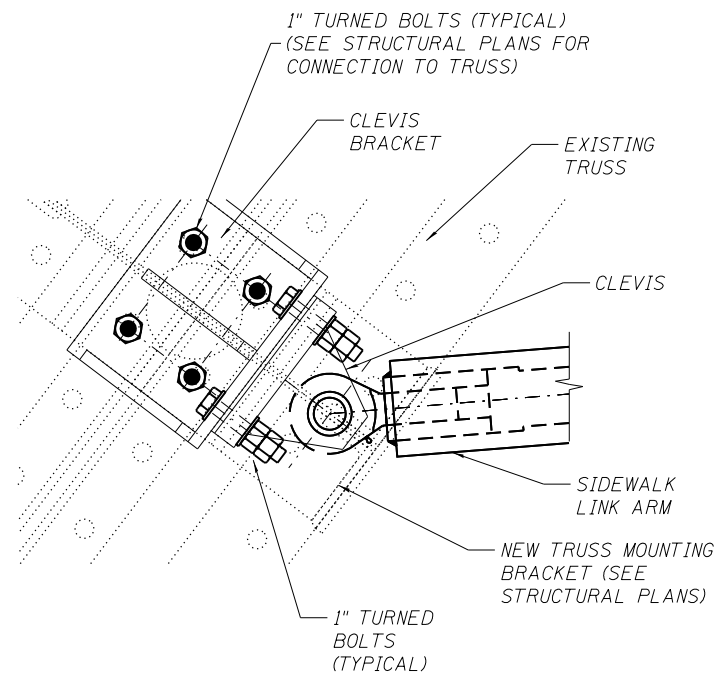
SIDE



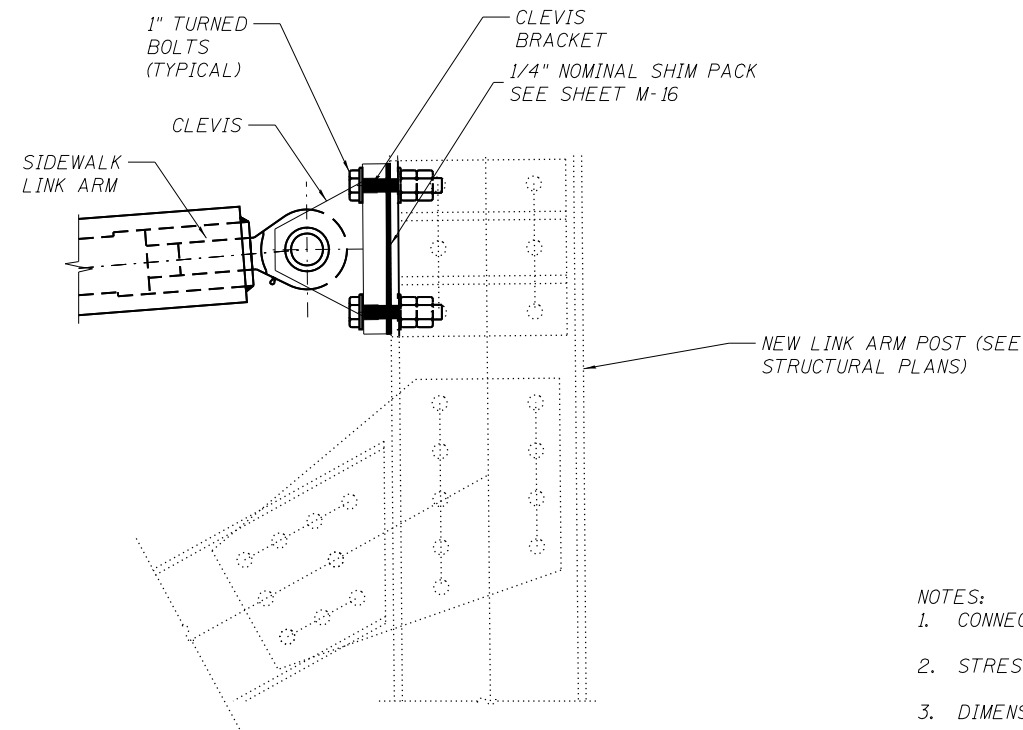
ELEVATION

CLEVIS MOUNTING BRACKET

ASTM A709 GRADE 50W
(2 REQUIRED)



DETAIL 2



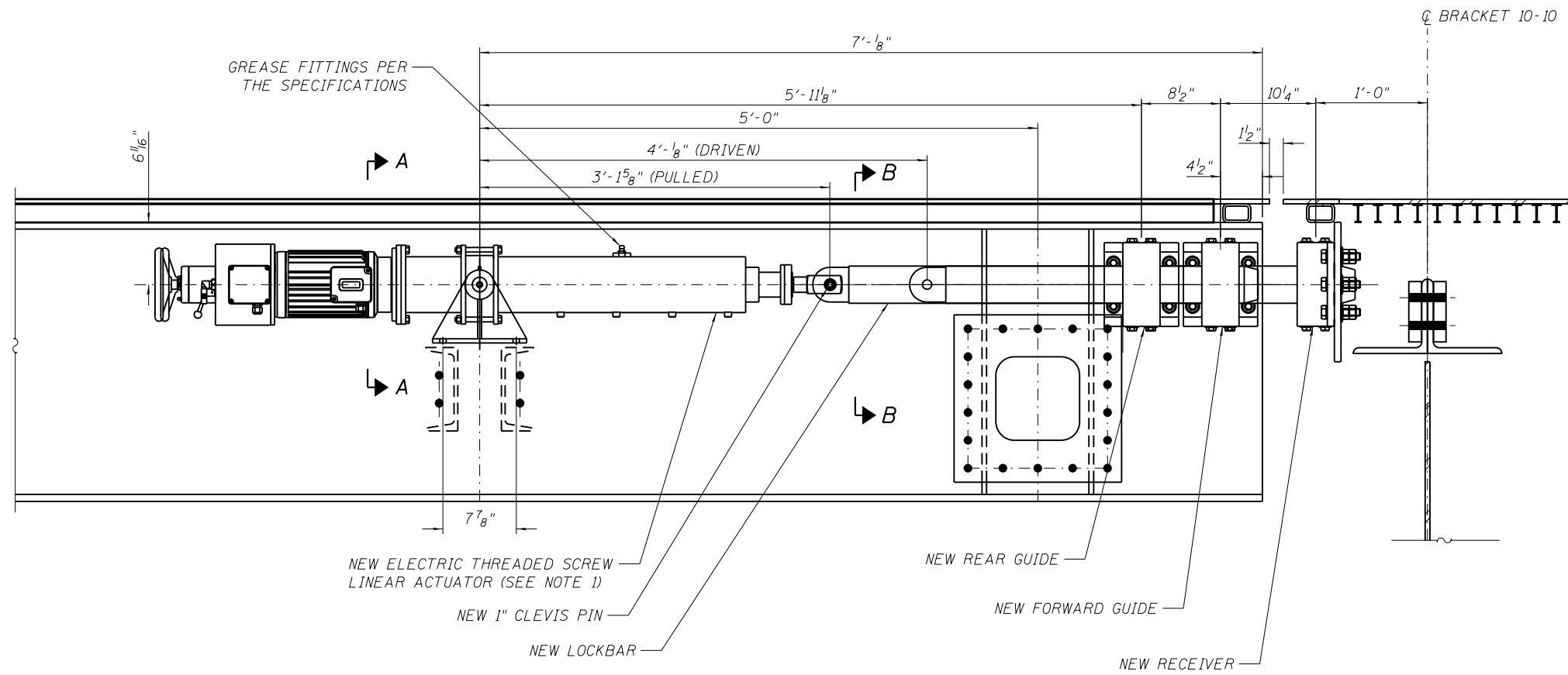
DETAIL 3

NOTES:

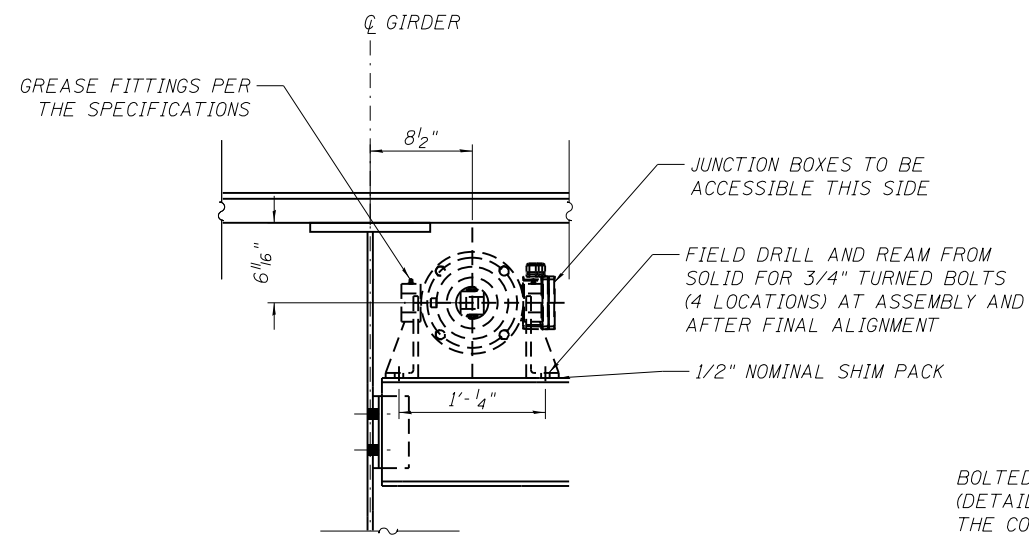
1. CONNECT ALL ADJOINING PLATES WITH COMPLETE JOINT PENETRATION WELDS.
2. STRESS RELIEVE WELDMENT AFTER WELDING AND PRIOR TO FINAL MACHINING.
3. DIMENSIONS SHOWN ARE FINAL DIMENSIONS AFTER MACHINING.
4. MINIMUM PLATE THICKNESS AFTER FINAL MACHINING IS 3/4" EXCEPT AS NOTED.

USER NAME =	brenglepm	DESIGNED -	PMB	REVISED -	
		CHECKED -		REVISED -	
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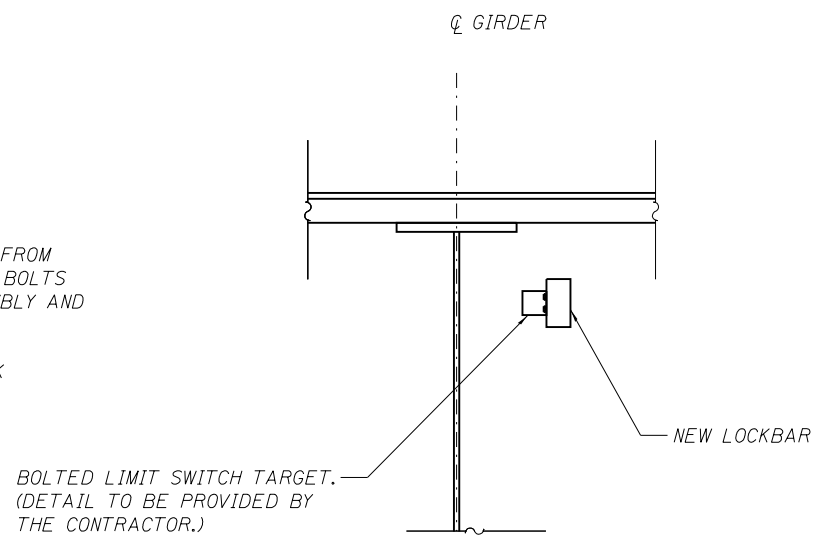
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-13
CDOT PROJECT NO. E-6-650			368 OF 411



SIDEWALK SPAN LOCK ASSEMBLY
(4 REQUIRED)



SIDEWALK SPAN LOCK ASSEMBLY
VIEW A-A

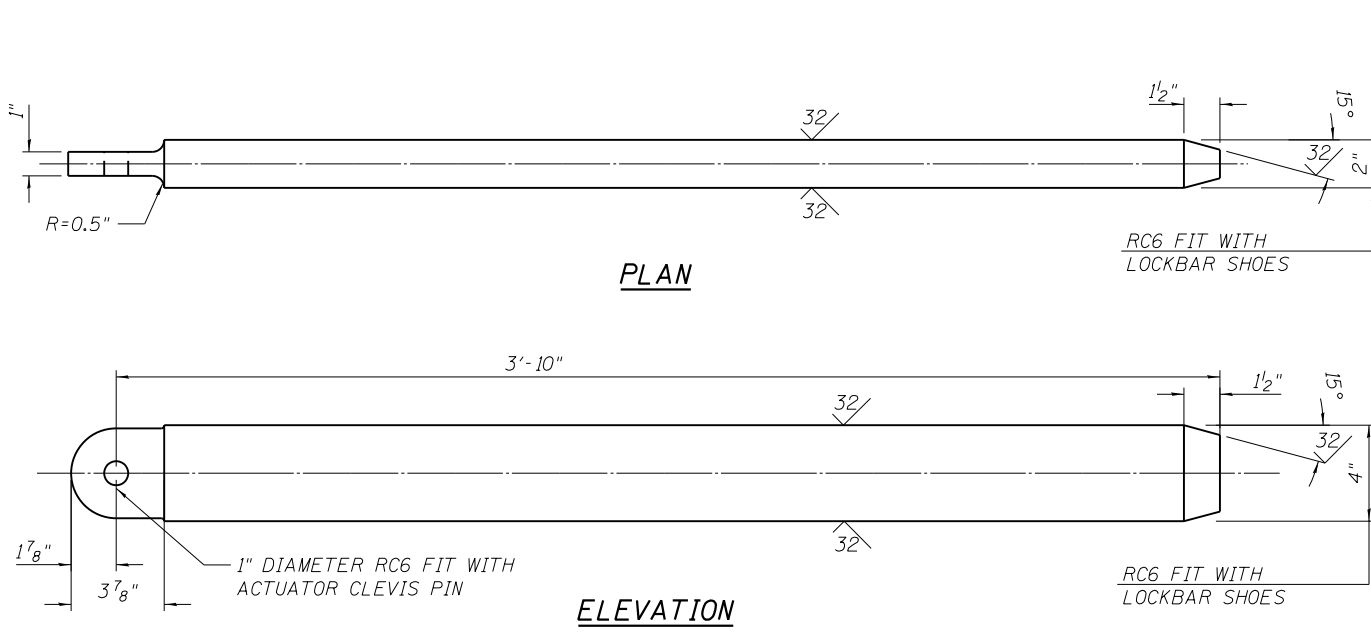
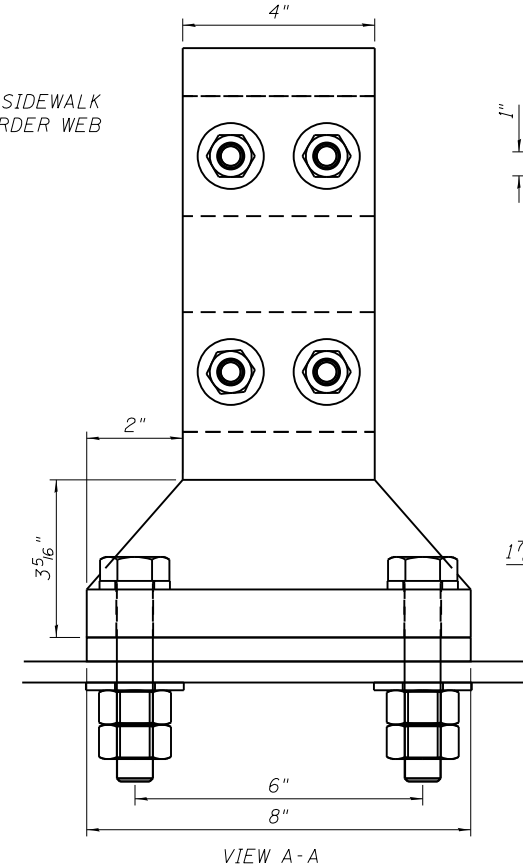
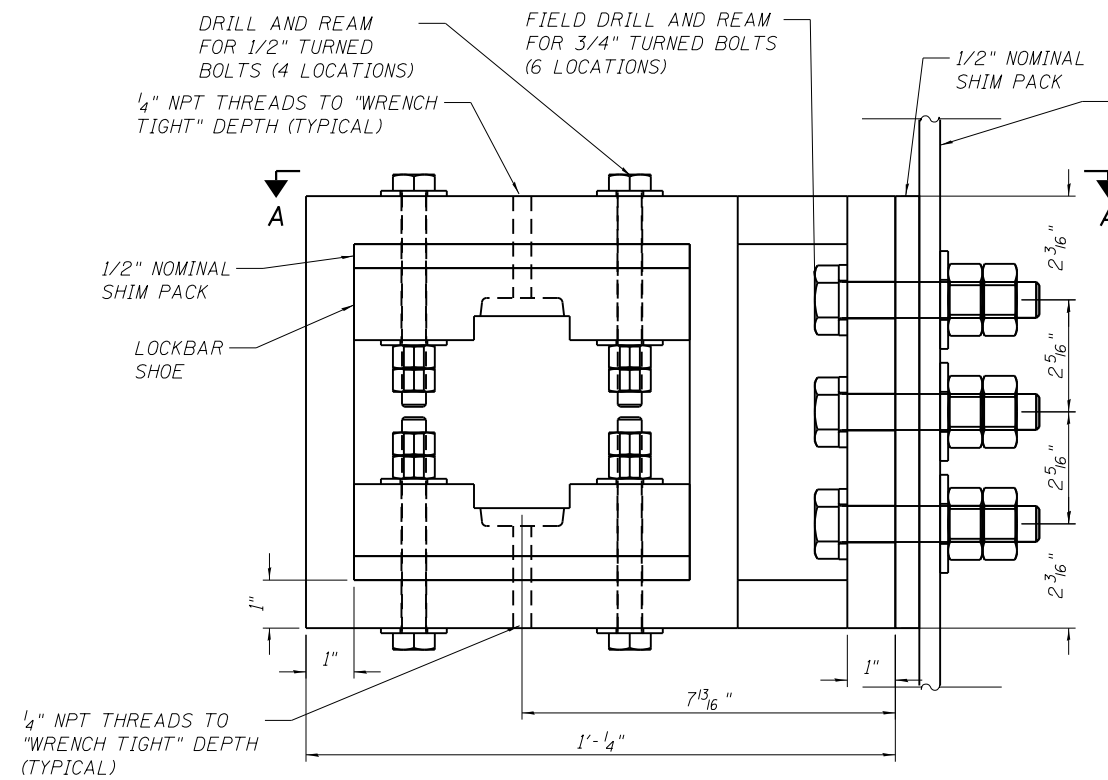


SIDEWALK SPAN LOCK LIMIT SWITCH
VIEW B-B

NOTES:
1. SEE SPECIFICATIONS FOR ACTUATOR DETAILS.

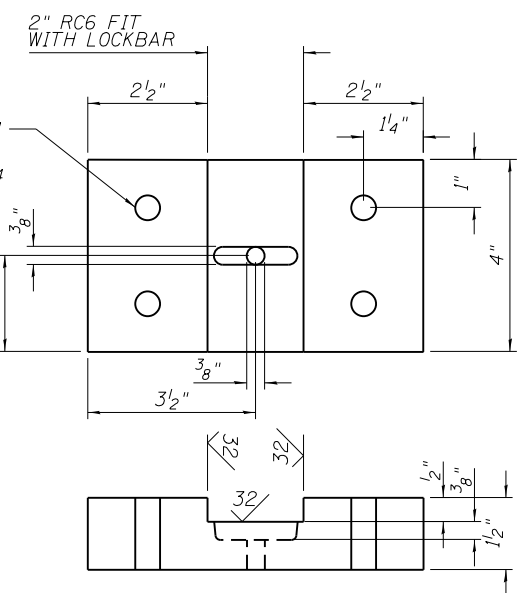
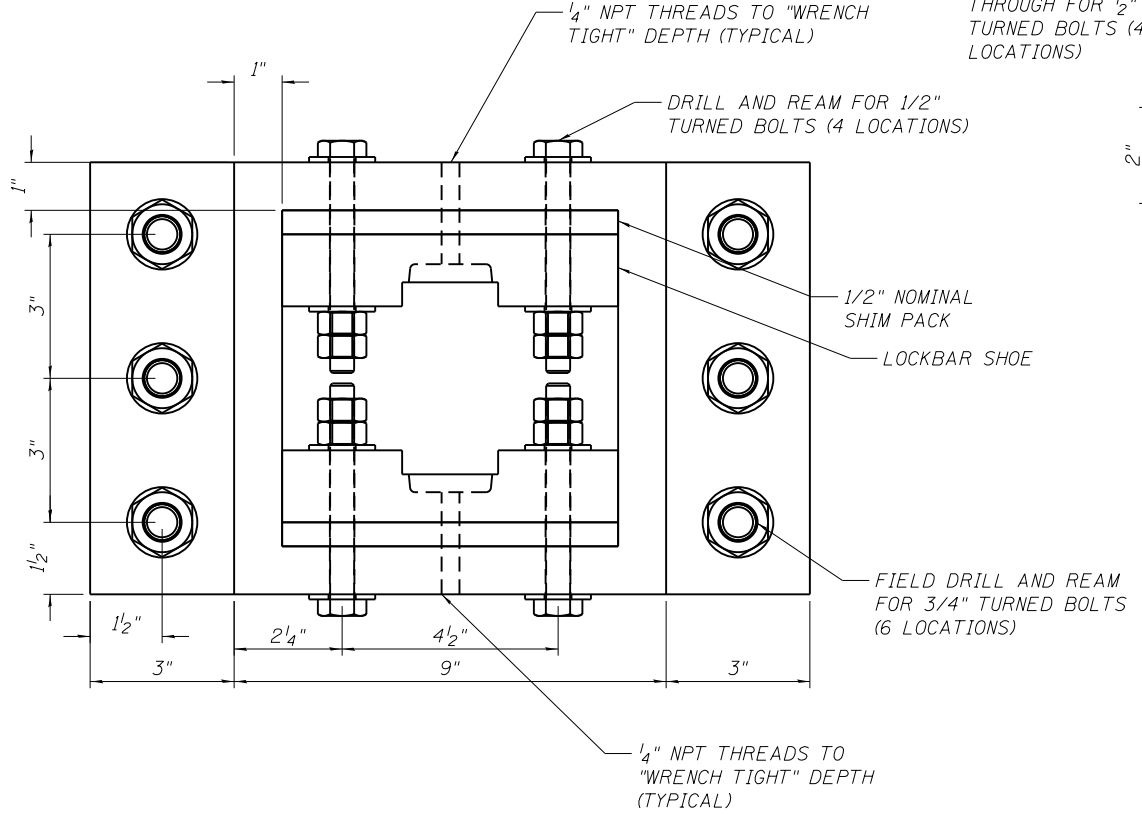
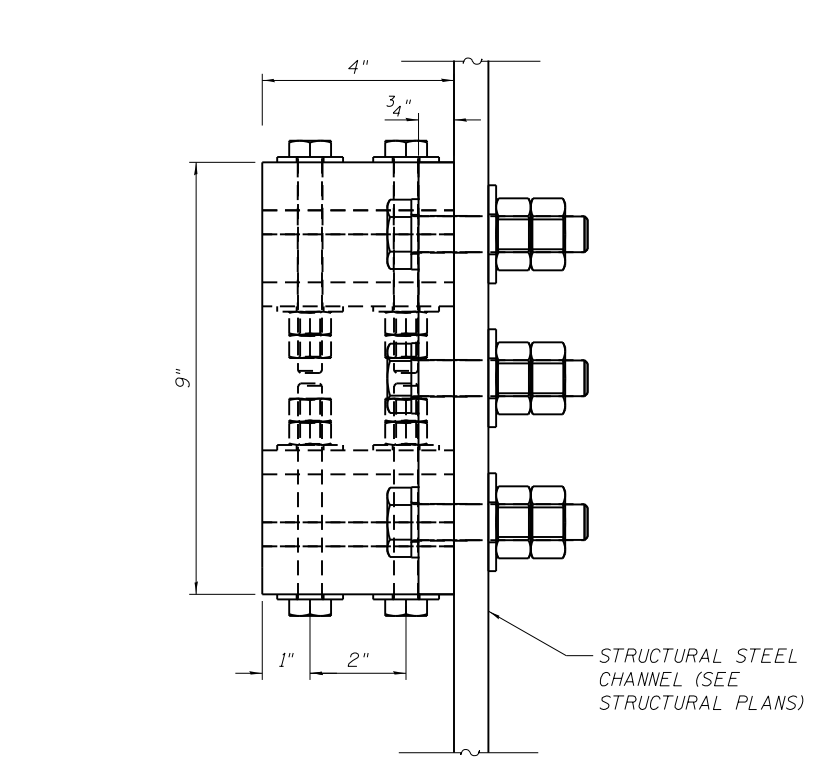
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PLOT SCALE =	N.T.S.	DRAWN -	RJP	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -		REVISED -	

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-14
CDOT PROJECT NO. E-6-650			369 OF 411

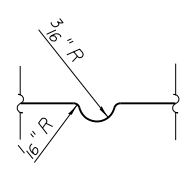


FRONT AND REAR GUIDE

LOCKBAR FRONT AND REAR GUIDE MATERIAL ASTM A709 GRADE 50 (8 REQUIRED)



GREASE GROOVE DETAIL



LOCKBAR SHOE

MATERIAL ASTM B22 C91100 (24 REQUIRED)

- NOTES:
1. SEE SPECIFICATIONS FOR GREASE FITTING DETAILS.
 2. CONNECT ALL ADJOINING PLATES WITH COMPLETE JOINT PENETRATION WELDS.
 3. STRESS RELIEVE WELDMENT AFTER WELDING AND PRIOR TO FIELD MACHINING
 4. DIMENSIONS SHOWN ARE FINAL DIMENSIONS AFTER MACHINING.

LOCKBAR RECEIVER

LOCKBAR RECEIVER HOUSING MATERIAL ASTM A709 GRADE 50 (4 REQUIRED)

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

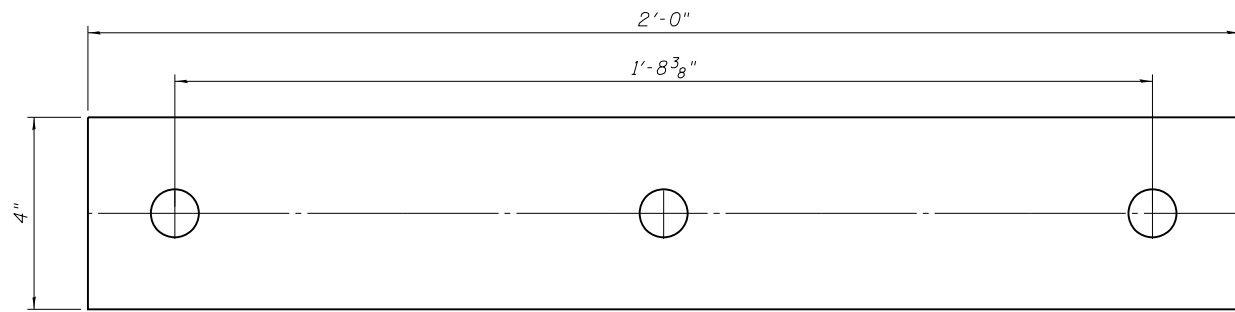
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HINGED SIDEWALK SPANLOCK LOCK BARS,
GUIDES, AND RECEIVERS
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-15
CDOT PROJECT NO. E-6-650			370 OF 411

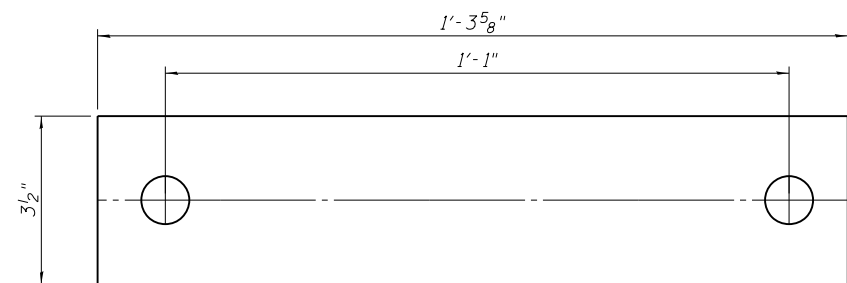
WSP USA Inc.
30 N. LASALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

USER NAME =	DESIGNED -	REVISED -
branglepm	PMB	
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
N.T.S.	RJP	
PLOT DATE =	CHECKED -	REVISED -
6/22/2017		



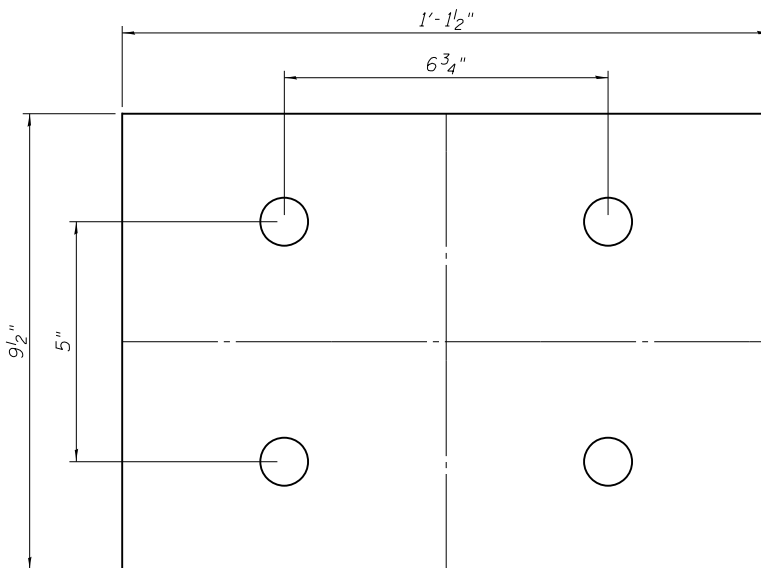
TRUNNION BEARING SHIMS

DIMENSIONS TO BE FIELD AND SHOP DRAWING VERIFIED
QTY 16



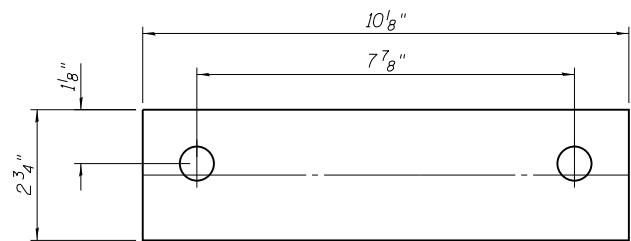
MOTOR BRAKE SHIMS

DIMENSIONS TO BE FIELD AND SHOP DRAWING VERIFIED
QTY 16



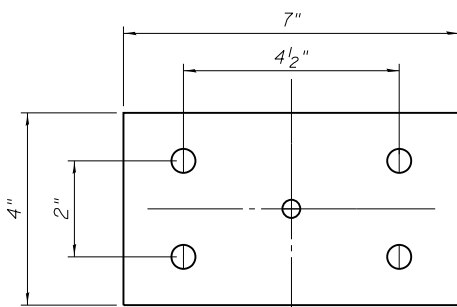
LINK ARM CLEVIS MOUNTING BRACKET SHIMS

DIMENSIONS TO BE FIELD AND SHOP DRAWING VERIFIED
QTY 2



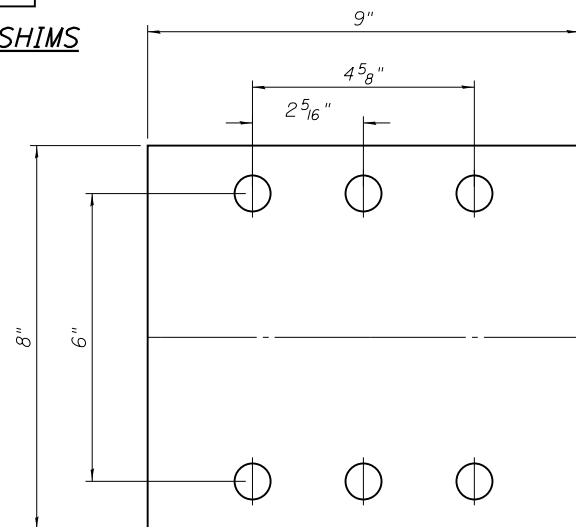
SIDEWALK SPAN LOCK ACTUATOR SHIMS

DIMENSIONS TO BE FIELD AND SHOP DRAWING VERIFIED
QTY 8



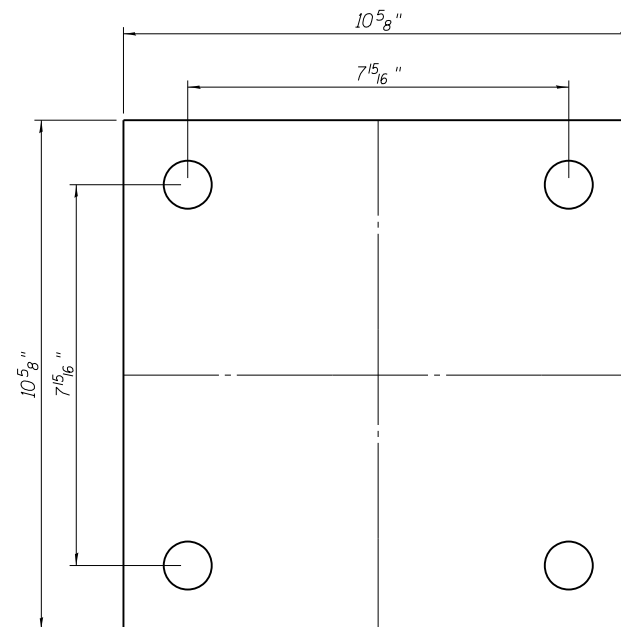
SIDEWALK LOCK BAR GUIDES AND RECIEVER SHOE SHIMS

DIMENSIONS TO BE FIELD AND SHOP DRAWING VERIFIED
QTY 24



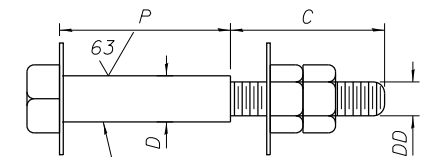
SIDEWALK LOCK BAR GUIDES SHIMS

DIMENSIONS TO BE FIELD AND SHOP DRAWING VERIFIED
QTY 8



LINK ARM CLEVIS SHIMS

DIMENSIONS TO BE FIELD AND SHOP DRAWING VERIFIED
QTY 4



RC5 FIT WITH HOLE

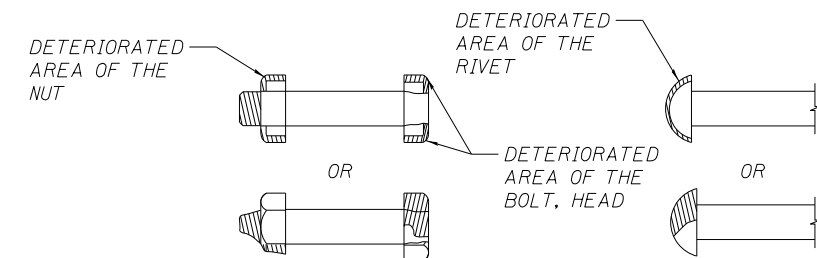
DD= THREAD SIZE, ONE STANDARD SIZE SMALLER THAN NOMINAL BOLT DIAMETER.

C= THREAD LENGTH, SUFFICIENT FOR WASHER AND DOUBLE NUT PLUS NOMINAL SHIM THICKNESS

P= SHANK LENGTH, GRIP LESS NOMINAL SHIM THICKNESS

TURNED BOLTS

NTS
BOLTS: ASTM A449
NUTS: ASTM A563
WASHERS: ASTM F436



ELEVATION VIEW

(BOLT AND NUT SHOWING EXAMPLE DETERIORATED AREAS)

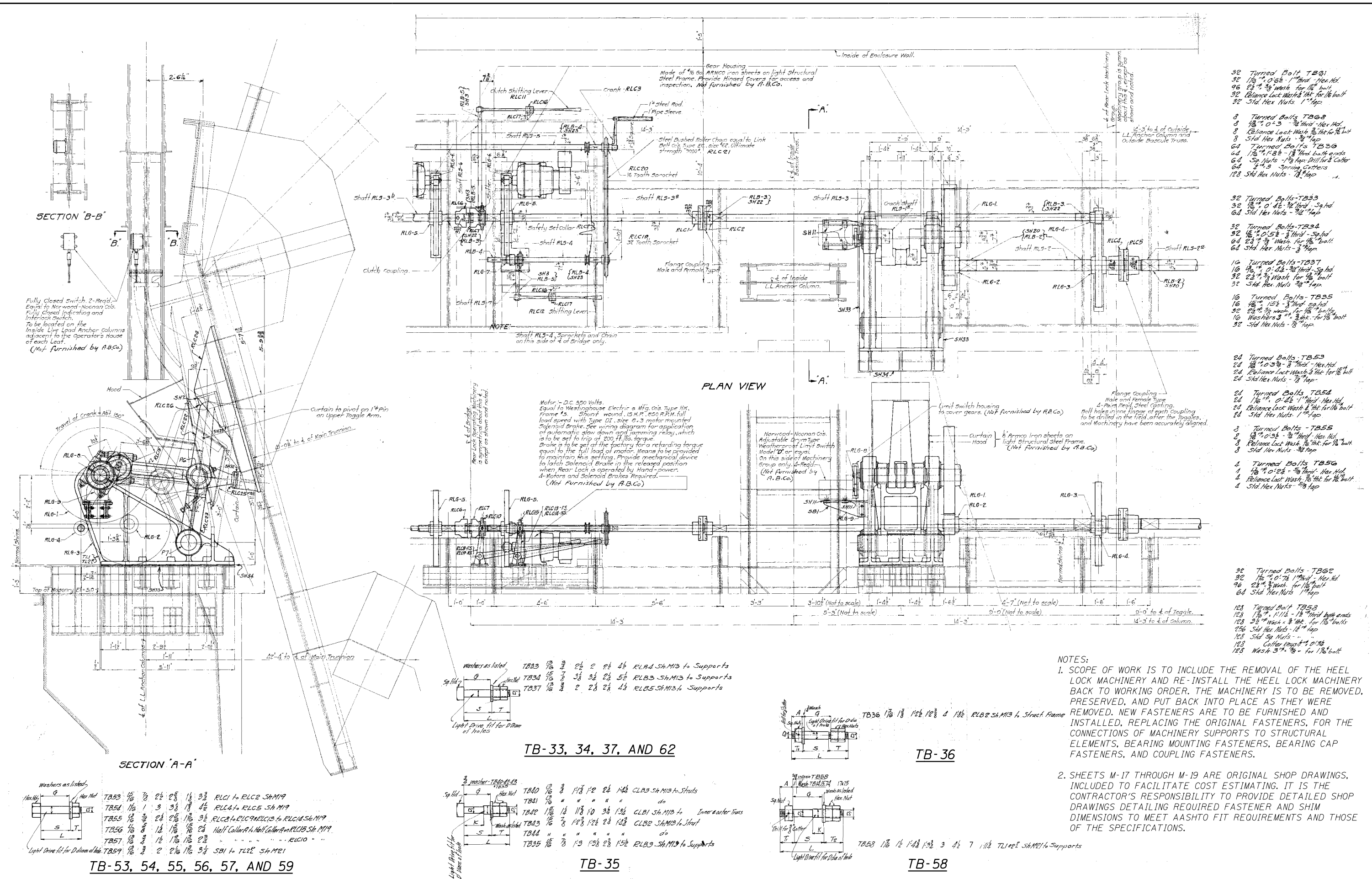
ELEVATION VIEW

(RIVET SHOWING EXAMPLE DETERIORATED AREAS)

NOTES:
1. HOLES IN SHIMS MAY BE PREDRILLED 1/32" LARGER THAN THE TURNED BOLT SHANKS

USER NAME =	branglepm	DESIGNED -	PMB	REVISED -	
		CHECKED -		REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	RJP	REVISED -	
PLOT DATE =	6/22/2017	CHECKED -		REVISED -	

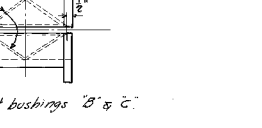
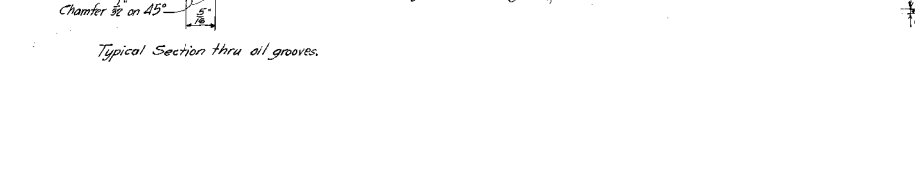
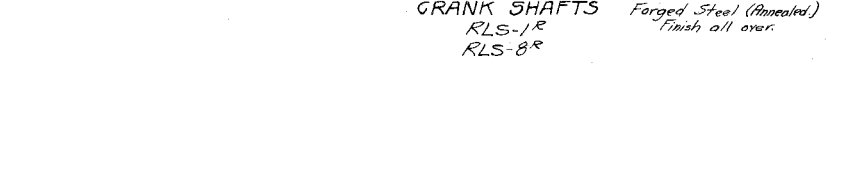
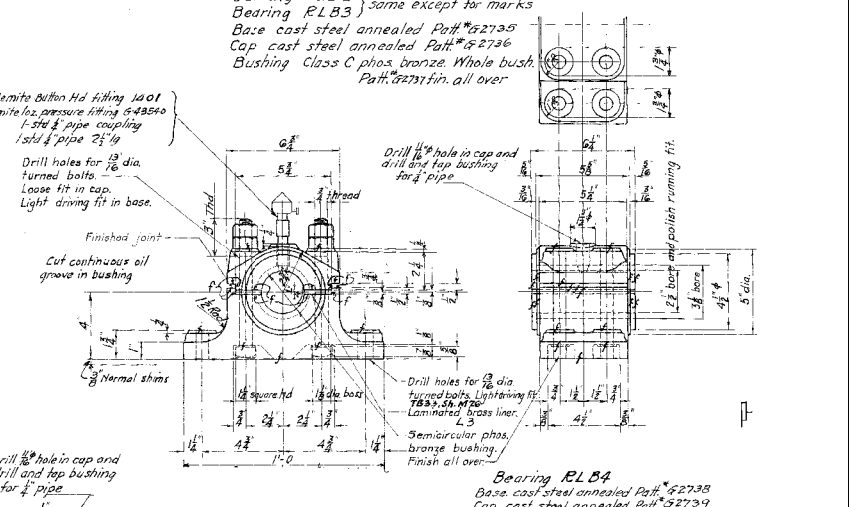
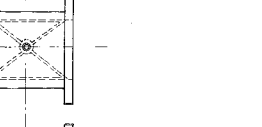
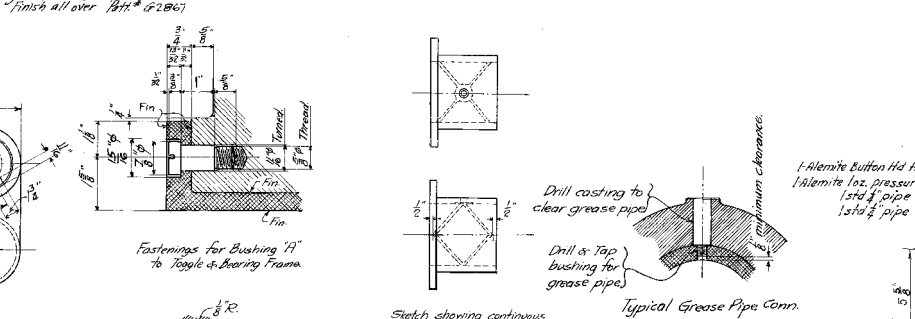
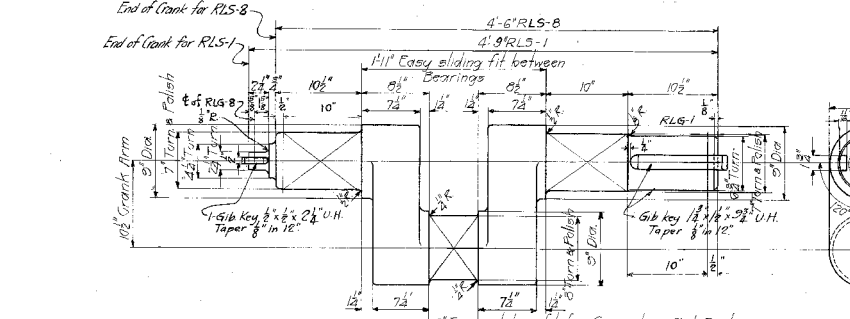
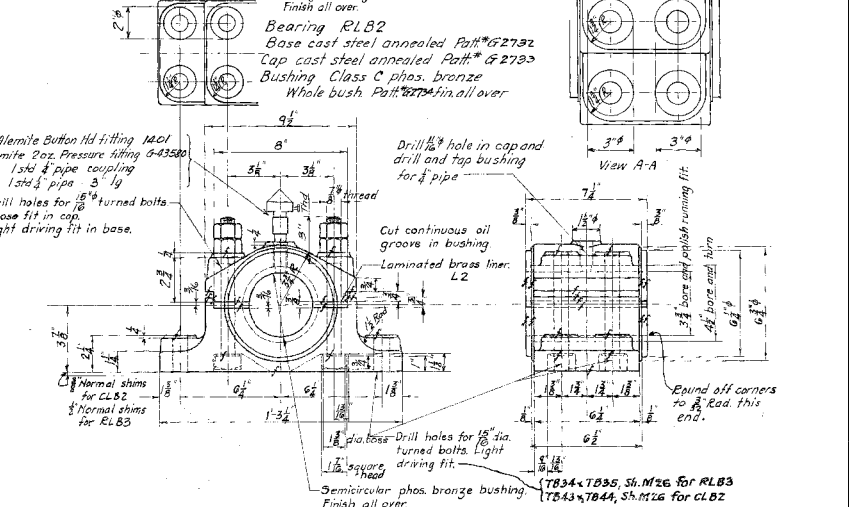
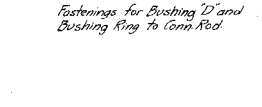
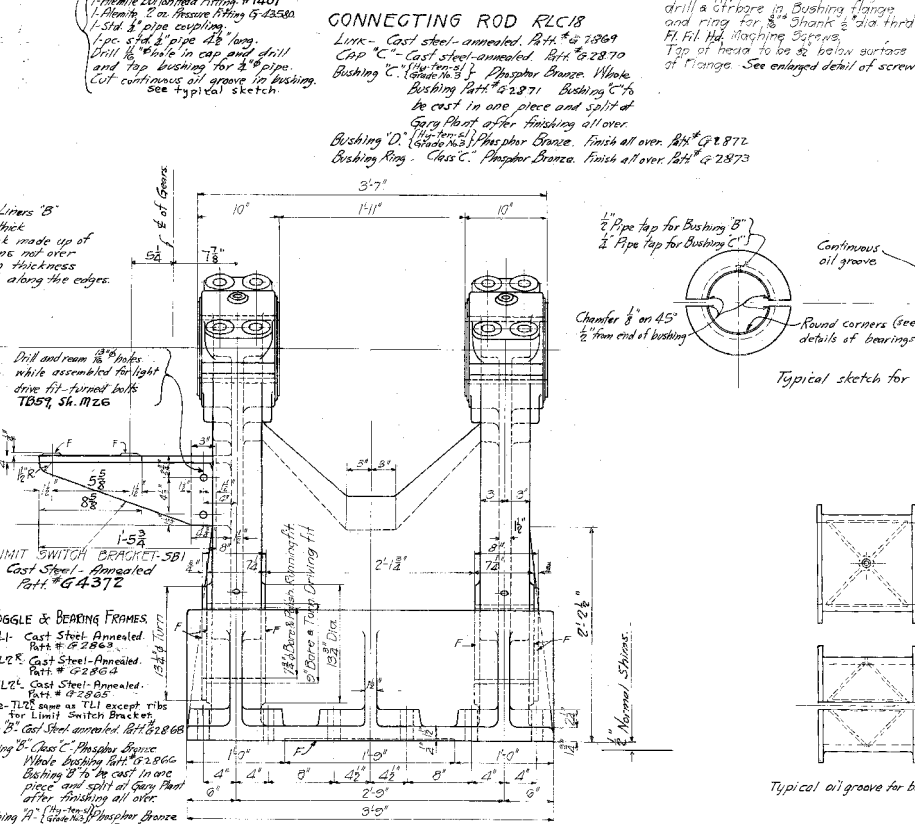
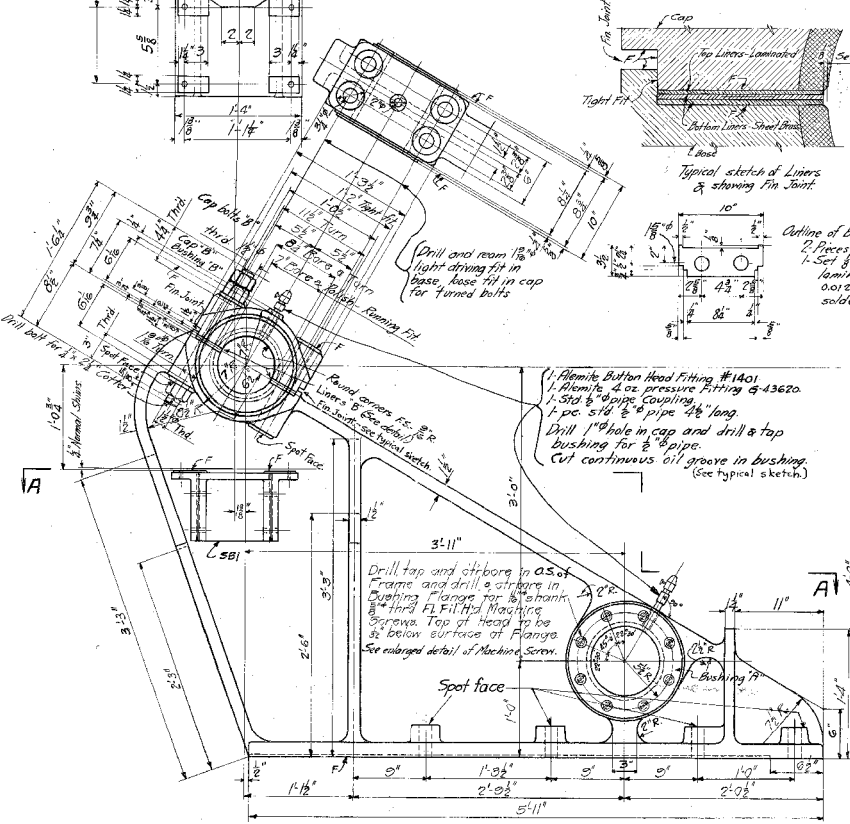
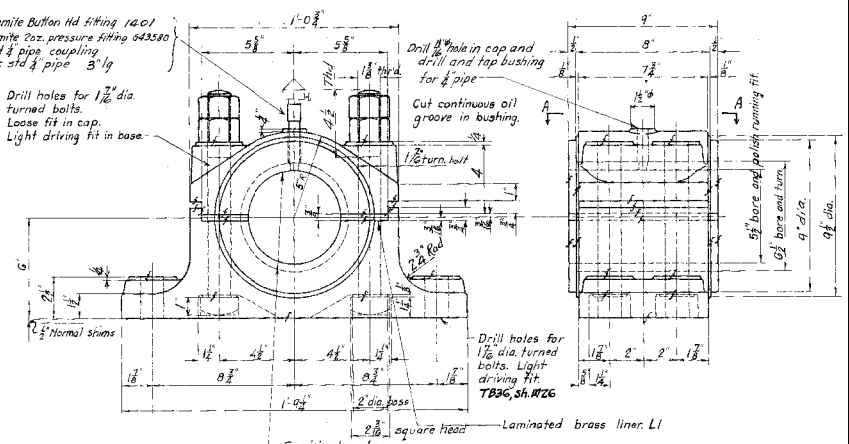
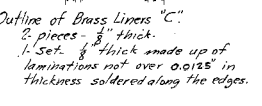
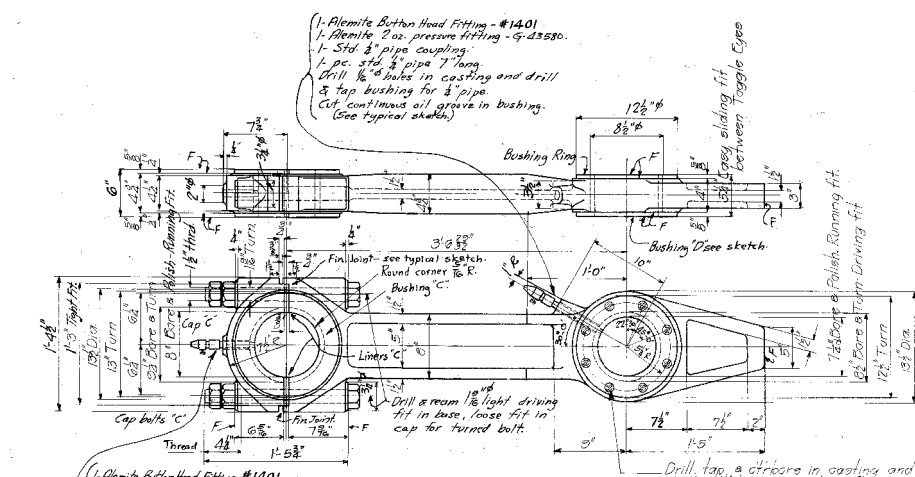
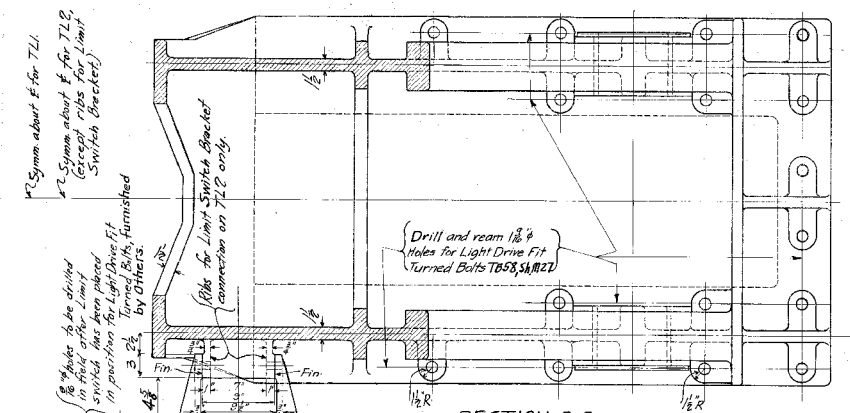
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-16
CDOT PROJECT NO. E-6-650			371 OF 411



- 32 Turned Bolt TB61
- 32 1/8" x 0.625" 1" Hex. Hd.
- 96 2 1/2" x 3/8" Wash. for 1/2" bolt
- 32 Balance Lock Wash 3/16" for 1/2" bolt
- 32 Std. Hex Nuts 1" Tap
- 8 Turned Bolts TB68
- 8 1/2" x 0.375" 3/4" Hex. Hd.
- 8 Balance Lock Wash 3/16" for 1/2" bolt
- 8 Std. Hex Nuts 3/4" Tap
- 64 Turned Bolts TB66
- 64 1/8" x 1.1875" 1 1/8" Hex. Bolt ends
- 64 Sp. Nuts - 1 1/8" Tap; Drill for Collar
- 64 3/4" x 3/8" Spring Cotter Pins
- 128 Std. Hex Nuts - 1 1/8" Tap
- 32 Turned Bolts TB33
- 32 1/8" x 0.4625" 3/4" Hex. Hd. Sq. Hd.
- 64 Std. Hex Nuts - 3/4" Tap
- 32 Turned Bolts TB34
- 32 1/8" x 0.5625" 3/4" Hex. Hd. Sq. Hd.
- 64 2 1/2" x 3/8" Wash. for 1/2" bolt
- 64 Std. Hex Nuts - 3/4" Tap
- 16 Turned Bolts TB37
- 16 1/8" x 0.4625" 3/4" Hex. Hd. Sq. Hd.
- 32 2 1/2" x 3/8" Wash. for 1/2" bolt
- 32 Std. Hex Nuts - 3/4" Tap
- 16 Turned Bolts TB35
- 16 1/8" x 0.5625" 3/4" Hex. Hd. Sq. Hd.
- 32 2 1/2" x 3/8" Wash. for 1/2" bolt
- 16 Washers 3" x 3/8" for 1/2" bolt
- 32 Std. Hex Nuts - 3/4" Tap
- 24 Turned Bolts TB53
- 24 1/8" x 0.375" 3/4" Hex. Hd.
- 24 Balance Lock Wash 3/16" for 1/2" bolt
- 24 Std. Hex Nuts - 3/4" Tap
- 24 Turned Bolts TB54
- 24 1/8" x 0.4625" 3/4" Hex. Hd.
- 24 Balance Lock Wash 3/16" for 1/2" bolt
- 24 Std. Hex Nuts - 3/4" Tap
- 8 Turned Bolts TB55
- 8 1/8" x 0.375" 3/4" Hex. Hd.
- 8 Balance Lock Wash 3/16" for 1/2" bolt
- 8 Std. Hex Nuts - 3/4" Tap
- 4 Turned Bolts TB56
- 4 1/8" x 0.5625" 3/4" Hex. Hd.
- 4 Balance Lock Wash 3/16" for 1/2" bolt
- 4 Std. Hex Nuts - 3/4" Tap
- 32 Turned Bolts TB62
- 32 1/8" x 0.7625" 1" Hex. Hd.
- 96 2 1/2" x 3/8" Wash. for 1/2" bolt
- 64 Std. Hex Nuts 1" Tap
- 128 Turned Bolt TB53
- 128 1/8" x 1.11875" 1 1/8" Hex. Bolt ends
- 128 3/8" x 3/8" Wash. for 1/2" bolts
- 256 Std. Hex Nuts - 1 1/8" Tap
- 128 Std. Sp. Nuts - 1 1/8" Tap
- 128 Collar Pins 1" x 0.375"
- 128 Wash 3" x 3/8" for 1/2" bolt

NOTES:

- SCOPE OF WORK IS TO INCLUDE THE REMOVAL OF THE HEEL LOCK MACHINERY AND RE-INSTALL THE HEEL LOCK MACHINERY BACK TO WORKING ORDER. THE MACHINERY IS TO BE REMOVED, PRESERVED, AND PUT BACK INTO PLACE AS THEY WERE REMOVED. NEW FASTENERS ARE TO BE FURNISHED AND INSTALLED, REPLACING THE ORIGINAL FASTENERS, FOR THE CONNECTIONS OF MACHINERY SUPPORTS TO STRUCTURAL ELEMENTS, BEARING MOUNTING FASTENERS, BEARING CAP FASTENERS, AND COUPLING FASTENERS.
- SHEETS M-17 THROUGH M-19 ARE ORIGINAL SHOP DRAWINGS, INCLUDED TO FACILITATE COST ESTIMATING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE DETAILED SHOP DRAWINGS DETAILING REQUIRED FASTENER AND SHIM DIMENSIONS TO MEET AASHTO FIT REQUIREMENTS AND THOSE OF THE SPECIFICATIONS.



WSP USA Inc.
30 N. LASALLE STREET
SUITE 400
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1884

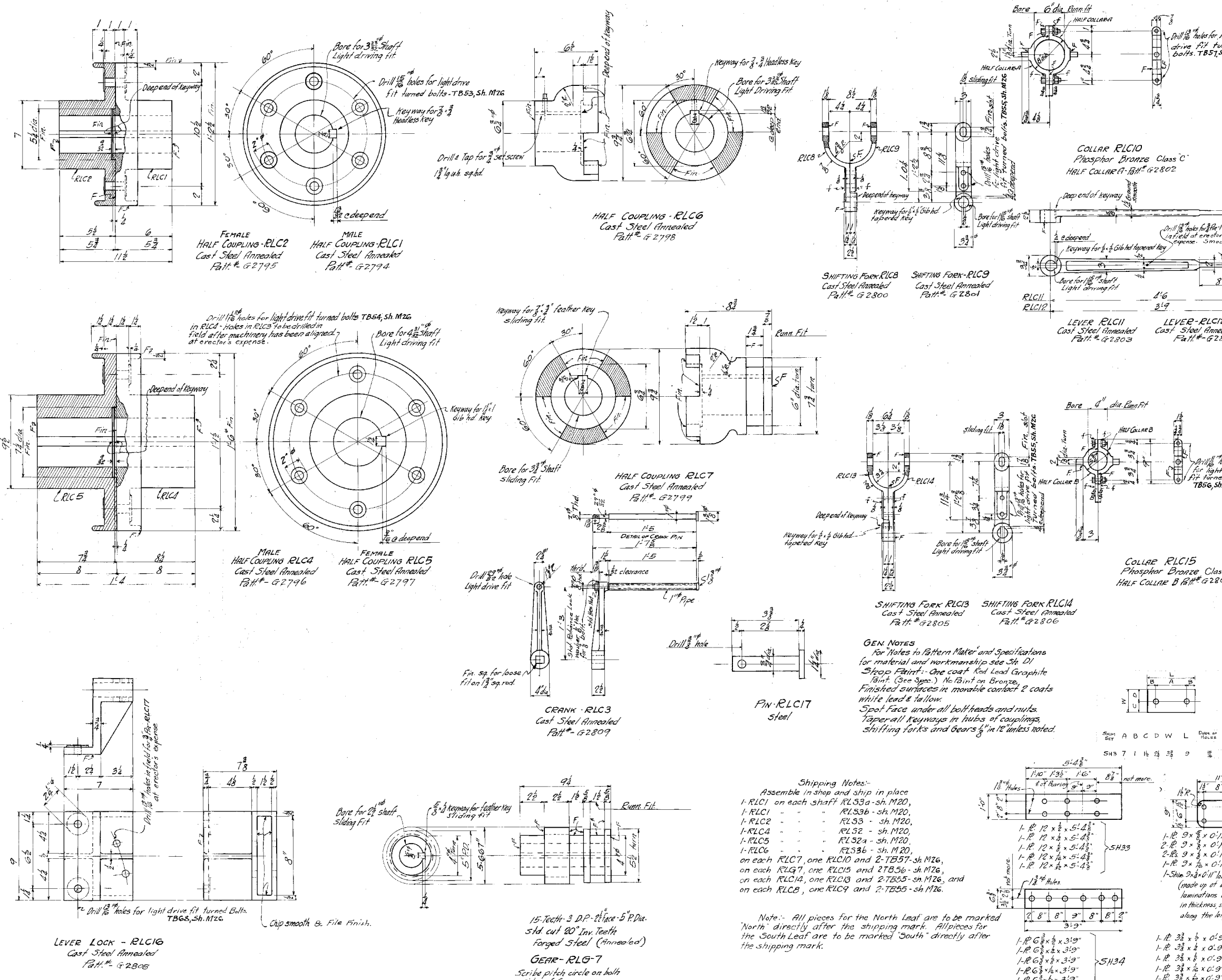
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PLOT DATE =	6/22/2017	DRAWN -	RJP	REVISED -	
		CHECKED -		REVISED -	

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

HEEL LOCK MACHINERY REMOVE
AND RE-INSTALLATION II
(STRUCTURE NO. 016-6030)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	M-18
CDOT PROJECT NO. E-6-650			373 OF 411



Quantity	Part Name	Material	Part #
8	SHIMS SH32		
8	1/2" x 3/8" x 0.11"		
16	3/8" x 1/2" x 0.11"		
8	3/8" x 1/2" x 0.11"		
8	3/8" x 1/2" x 0.11"		
8	SHIMS SH34		
8	1/2" x 3/8" x 0.11"		
8	3/8" x 1/2" x 0.11"		
8	3/8" x 1/2" x 0.11"		
8	3/8" x 1/2" x 0.11"		
8	SHIMS SH20		
16	7/8" x 1/2" x 1.94"		
16	7/8" x 1/2" x 1.94"		
16	7/8" x 1/2" x 1.94"		
16	7/8" x 1/2" x 1.94"		
16	7/8" x 1/2" x 1.94"		
16	7/8" x 1/2" x 1.94"		
12	SHIMS SH22		
12	1/2" x 3/8" x 1.34"		
12	1/2" x 3/8" x 1.34"		
12	1/2" x 3/8" x 1.34"		
12	1/2" x 3/8" x 1.34"		
12	1/2" x 3/8" x 1.34"		
12	1/2" x 3/8" x 1.34"		
8	SHIMS SH23		
8	1/2" x 3/8" x 1.0"		
8	1/2" x 3/8" x 1.0"		
8	1/2" x 3/8" x 1.0"		
8	1/2" x 3/8" x 1.0"		
8	1/2" x 3/8" x 1.0"		
8	1/2" x 3/8" x 1.0"		
8	SHIMS SH25		
8	1/2" x 3/8" x 1.62"		
8	1/2" x 3/8" x 1.62"		
8	1/2" x 3/8" x 1.62"		
8	1/2" x 3/8" x 1.62"		
8	1/2" x 3/8" x 1.62"		
8	1/2" x 3/8" x 1.62"		
16	SHIMS SH11		
16	1/2" x 3/8" x 0.33"		
16	1/2" x 3/8" x 0.33"		
16	1/2" x 3/8" x 0.33"		
16	1/2" x 3/8" x 0.33"		
16	1/2" x 3/8" x 0.33"		
16	1/2" x 3/8" x 0.33"		

GEN NOTES
 For "Notes to Pattern Maker" and Specifications for material and workmanship see Sh D1.
 Shop Paint: One coat Red Lead Graphite (Paint See Spec.) No Paint on Bronze.
 Finished surfaces in movable contact 2 coats white lead & tallow.
 Spot Face under all bolt heads and nuts.
 Taper all keyways in hubs of couplings, shifting forks and gears 1/8" in 12 unless noted.

- Shipping Notes:**
 Assemble in shop and ship in place
 1-RLC1 on each shaft RL53a-sh.M20,
 1-RLC1 - - - - - RL53b-sh.M20,
 1-RLC2 - - - - - RL53-sh.M20,
 1-RLC4 - - - - - RL52-sh.M20,
 1-RLC5 - - - - - RL52a-sh.M20,
 1-RLC6 - - - - - RL53b-sh.M20,
 on each RLC7, one RLC10 and 2-TB57-sh.M26,
 on each RLC7, one RLC15 and TB56-sh.M26,
 on each RLC14, one RLC13 and 2-TB55-sh.M26, and
 on each RLC8, one RLC9 and 2-TB55-sh.M26.

Note: All pieces for the North Leaf are to be marked 'North' directly after the shipping mark. All pieces for the South Leaf are to be marked 'South' directly after the shipping mark.

Shim Set	A	B	C	D	W	L	Diam of Holes
SH3	7	1	1	2	2	2	3/8"
SH11	1	1	1	1	2	2	3/8"
SH20	1	1	1	1	2	2	3/8"
SH22	1	1	1	1	2	2	3/8"
SH23	1	1	1	1	2	2	3/8"
SH25	1	1	1	1	2	2	3/8"
SH33	1	1	1	1	2	2	3/8"
SH34	1	1	1	1	2	2	3/8"

Bench Mark: Elev. 27.50' CP4-CRS - Second level, found chisel "cross" in concrete on pedestrian ramp 40' north of N.E. Bridge Tower.

Existing Structures: Lake Shore Drive Bascule Bridge over the Main Branch of the Chicago River (S.N. 016-6030) was constructed in 1937. Deteriorated members were repaired in 1969. The roadway deck was repaired in 1982 under Section No. 2121.12 C.S. The west sidewalk was repaired in 1983 under a separate project. Under another project in 1983, Section No. 2121.10 C.S., a sidewalk was added to the intermediate level of the bridge and the roadway was widened at the upper level. Construction occurred in 1987. The bridge length is approximately 352'-6" from centerline to centerline of anchor columns. The out to out deck width is 107'-2" at the upper level (Level 1) and 112'-5 1/2" at the intermediate level (Level 2). There is a 12'-2" sidewalk and bicycle path on the east side of the intermediate level and a 12'-2" sidewalk on the west side.

Traffic: There are three portals on the intermediate level of the bascule bridge. Each portal will be rehabilitated in three separate stages, and modifications to the bike trail will occur concurrently in the first stage. Vehicular traffic will be shifted from portal to portal. Bicycle and pedestrian traffic will be detoured during construction.

Salvage: The limestone of the bridge tower facade wall shall be salvaged.

TOTAL BILL OF MATERIAL

CODE NO.	ITEM	UNIT	TOTAL
50102400	CONCRETE REMOVAL	CU YD	33.9
50157300	PROTECTIVE SHIELD	SQ YD	216
CDOT5030030	HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES	CU YD	33.9
50300260	BRIDGE DECK GROOVING	SQ YD	95
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4,040
CDOT5870010	PROTECTIVE CONCRETE SEALER	SQ YD	248
Z0007122	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	24
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	112
Z0018900	DRILL AND GROUT DOWEL BARS	EACH	167

GENERAL NOTES

- Reinforcement bars designated (E) shall be epoxy coated.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- The contractor shall take all necessary precaution for the protection of passing vehicles, pedestrians and bikers from falling objects and/or materials until completion of the work.
- For profile grade line and offset sketch, see S.N. 016-7928 plans.

SCOPE OF WORK

- Provide protective shielding within limits as indicated on the plans.
- Relocate the existing traffic light post.
- Remove the portion of parapet and slab to allow for the temporary bridge construction.
- Remove the existing steel railing above the portion of parapet removed in item 3 to be re-erected at the same location after the pedestrian bridge removal.
- Remove and re-construct medians within limits shown on the plans.
- Perform full-depth deck slab repairs.
- Perform bridge deck grooving for the full-depth repair areas outside the median areas existing under vehicular traffic.
- Apply protective concrete sealer for the full-depth repair areas, replaced medians, and replaced parapet.
- Repaint pavement markings on the top of the deck.

INDEX OF SHEETS

- S1-1 General Plan
- S1-2 Removal Sections and Details
- S1-3 Intermediate Level Partial Deck Repair Plan
- S1-4 Median Replacement Plan and Details
- S1-5 Parapet and Deck Partial Replacement

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification for Highway Bridges 17th Edition
 AASHTO Standard Specifications for Movable Highway Bridges 1988, with Interim Revisions through 1995
 1997 AASHTO Guide Specifications for Design of Pedestrian Bridges
 1994 CDOT Design Standards for Bascule Bridges

DESIGN STRESSES

FIELD UNITS (New Construction)
 f'c = 5,000 psi HPC (SUPERSTRUCTURES)
 fy = 60,000 psi (reinforcement)
 fy = 50,000 psi (AASHTO M270, Gr. 50)

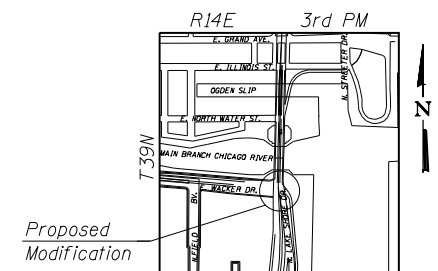
FIELD UNITS (Existing Construction)
 f'c = 3,500 psi
 fy = 60,000 psi (reinforcement)
 fy = 50,000 psi (AASHTO M223, Gr. 50)
 fy = 36,000 psi (carbon steel)
 fy = 45,000 psi (silicon steel)

LOADING HS20-44 (ROADWAY)

No allowance for future wearing surface

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Horizontal Bedrock Acceleration Coefficient (A) = 0.025g
 Site Coefficient (S) = 1.0

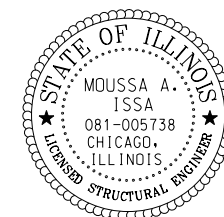


LOCATION SKETCH

**GENERAL PLAN
 LAKE SHORE DRIVE
 SOUTH PEDESTRIAN AND BICYCLE RAMP
 E. HURON ST. TO CHICAGO RIVER
 SECTION 00-E0534-00-BR**

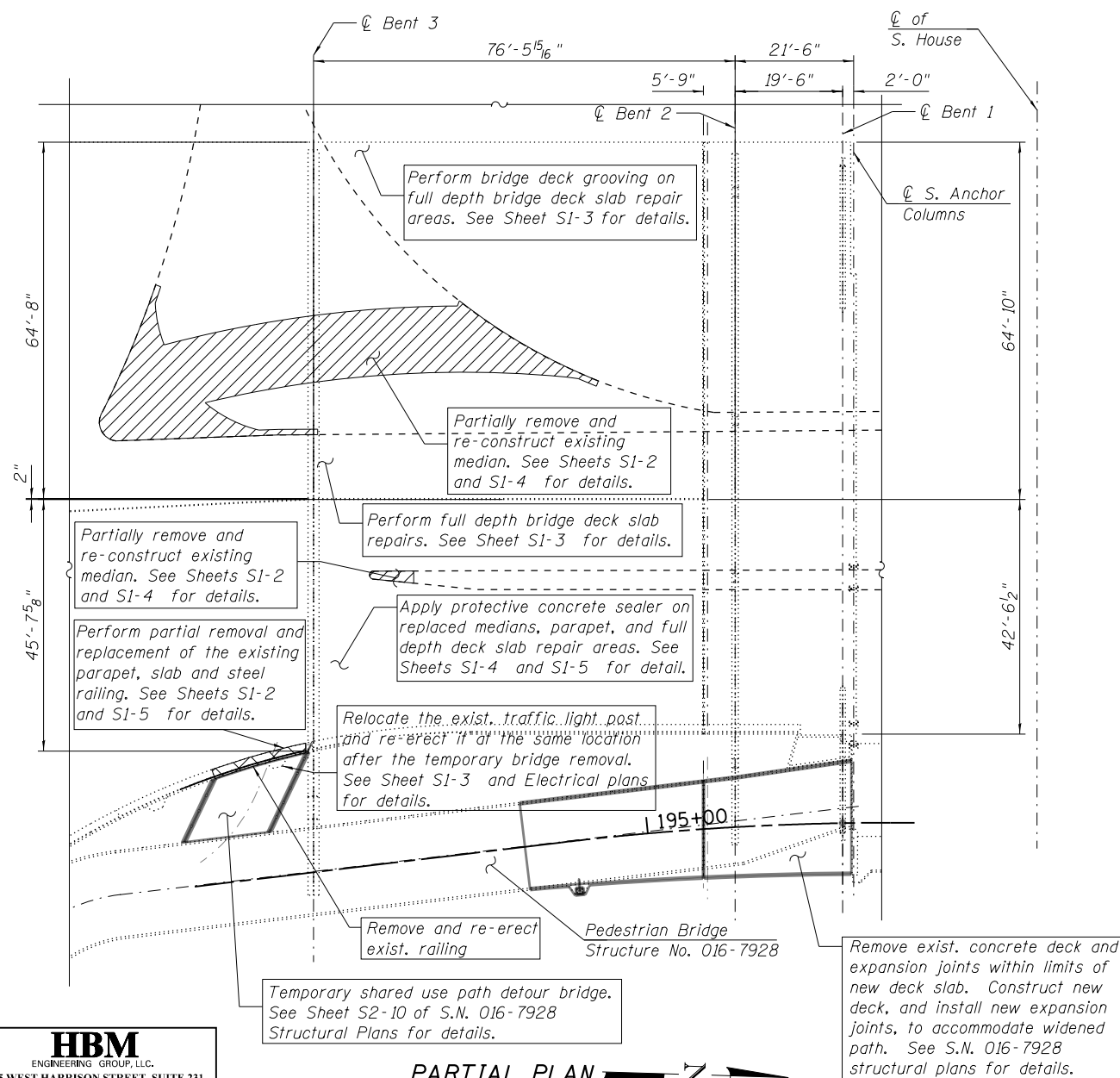
COOK COUNTY

S.N. 016-6491



Signed Moussa A. Issa
 Moussa A. Issa, HBM
 Il. Lic. No. 081-005738
 Expires 11-30-2017

Date 01/18/2018
 For Sheets S1-1 Thru S1-5
 (Total of 5 Sheets)



PARTIAL PLAN

HBM
 ENGINEERING GROUP, LLC.
 4415 WEST HARRISON STREET, SUITE 231
 HILLSDALE, IL 60162
 PHONE: (708) 236-0900 FAX: (708) 236-0901

wsp
 WSP USA Inc.
 30 N. LASALLE STREET
 SUITE 4000
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1884

USER NAME = fadl.alsharif	DESIGNED - JJS, FA	REVISED -
	CHECKED - MAI	REVISED -
PLOT SCALE = N.T.S.	DRAWN - FA	REVISED -
PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

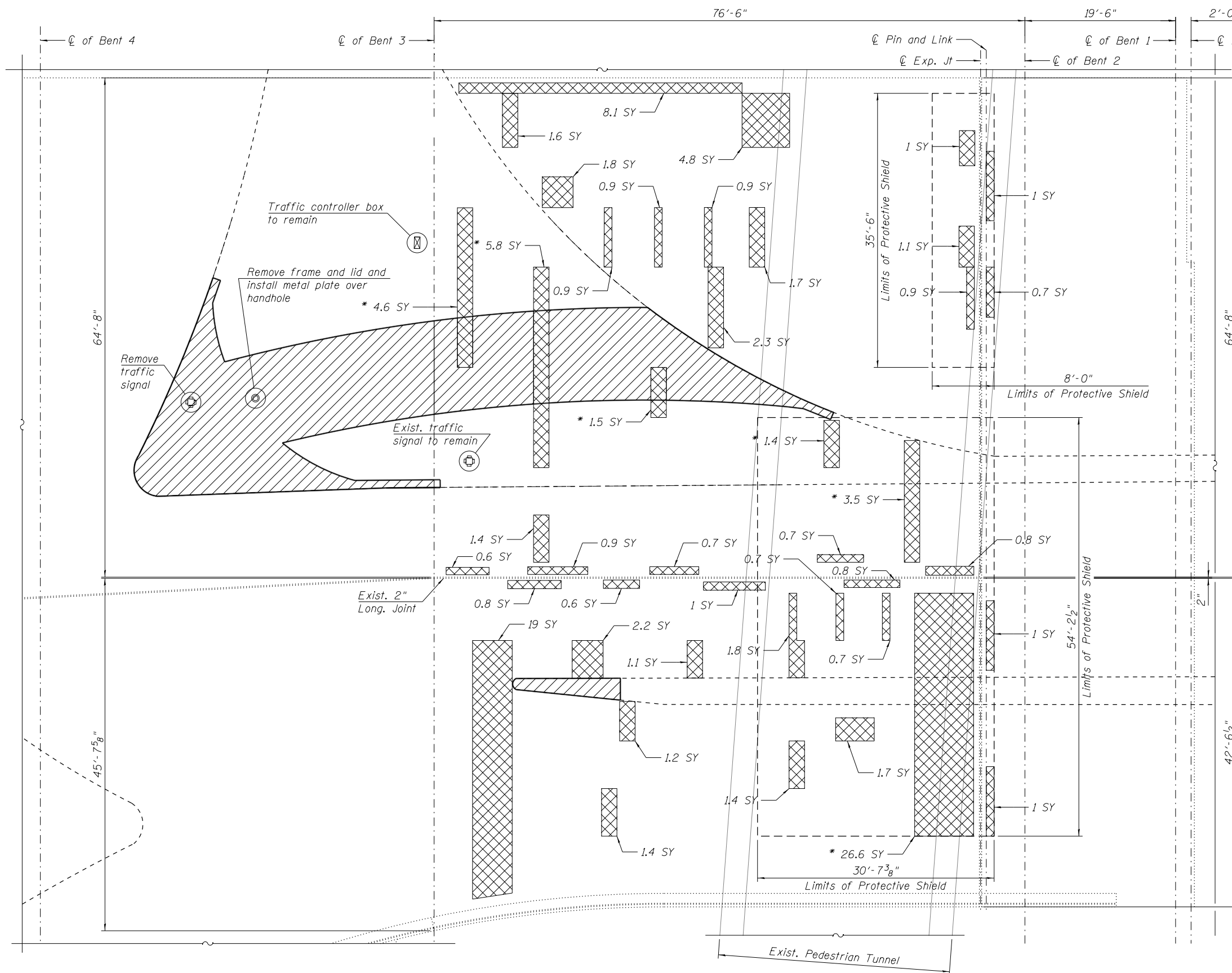
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-6491)

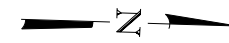
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S1-1
CDOT PROJECT NO. E-6-650			375 OF 411

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* See Construction sequence of full-depth slab repairs at median.

DECK PLAN BENT 1 TO BENT 3



NOTES:

1. Areas of deck repair shown are estimated. The Engineer shall show actual locations of deck repairs at the time of construction.
2. For General Notes and Total Bill of Material, see Sheet SI-1 .
3. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with CONCRETE REMOVAL.
4. Perform bridge deck grooving for the full depth deck slab repaired areas under vehicular traffic.
5. Protective concrete sealer shall be applied to the full depth deck slab repair areas, replaced medians, and parapet.
6. For medians partial removal sections and details, see Sheet SI-2 .
7. For medians replacement plan and details, see Sheet SI-4 .
8. The Contractor shall take all precautions to protect the longitudinal and transverse expansion joints during full-depth deck slab repairs. Any damage to the existing joints shall be repaired by the Contractor with no additional cost to CDOT.

SEQUENCE OF FULL-DEPTH SLAB REPAIR AT MEDIAN

1. Remove concrete median with the existing reinforcement to remain. Cost shall be paid as CONCRETE REMOVAL.
2. Perform full-depth repairs for the designated areas.
3. Construct in kind the removed medians. Cost shall be paid as HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES.

LEGEND

- Median Concrete Removal and replacement
- Area > 0.55 SQ YD - Deck Slab Repair (Full Depth, Type II)
- Face of Existing Median
- Limits of Protective Shield
- SY Square Yard

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
CONCRETE REMOVAL	CU YD	2.4
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES	CU YD	2.4
PROTECTIVE SHIELD	SQ YD	216
BRIDGE DECK GROOVING	SQ YD	95
PROTECTIVE CONCRETE SEALER	SQ YD	112
DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	112

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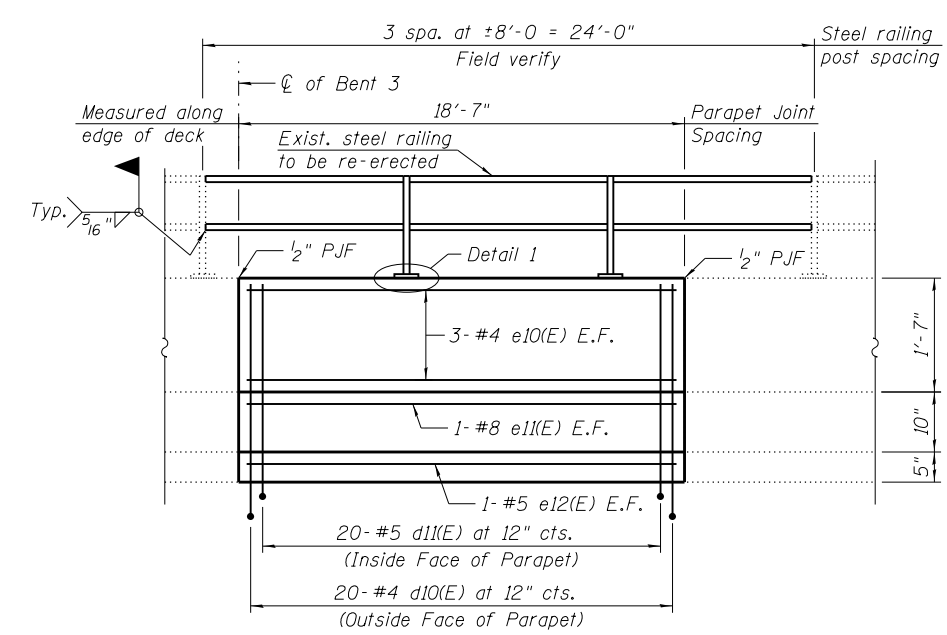
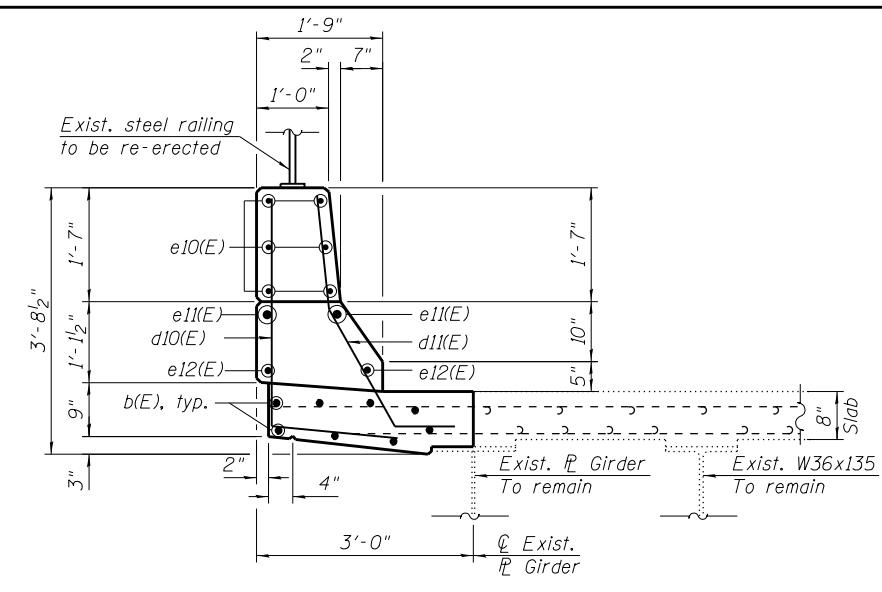
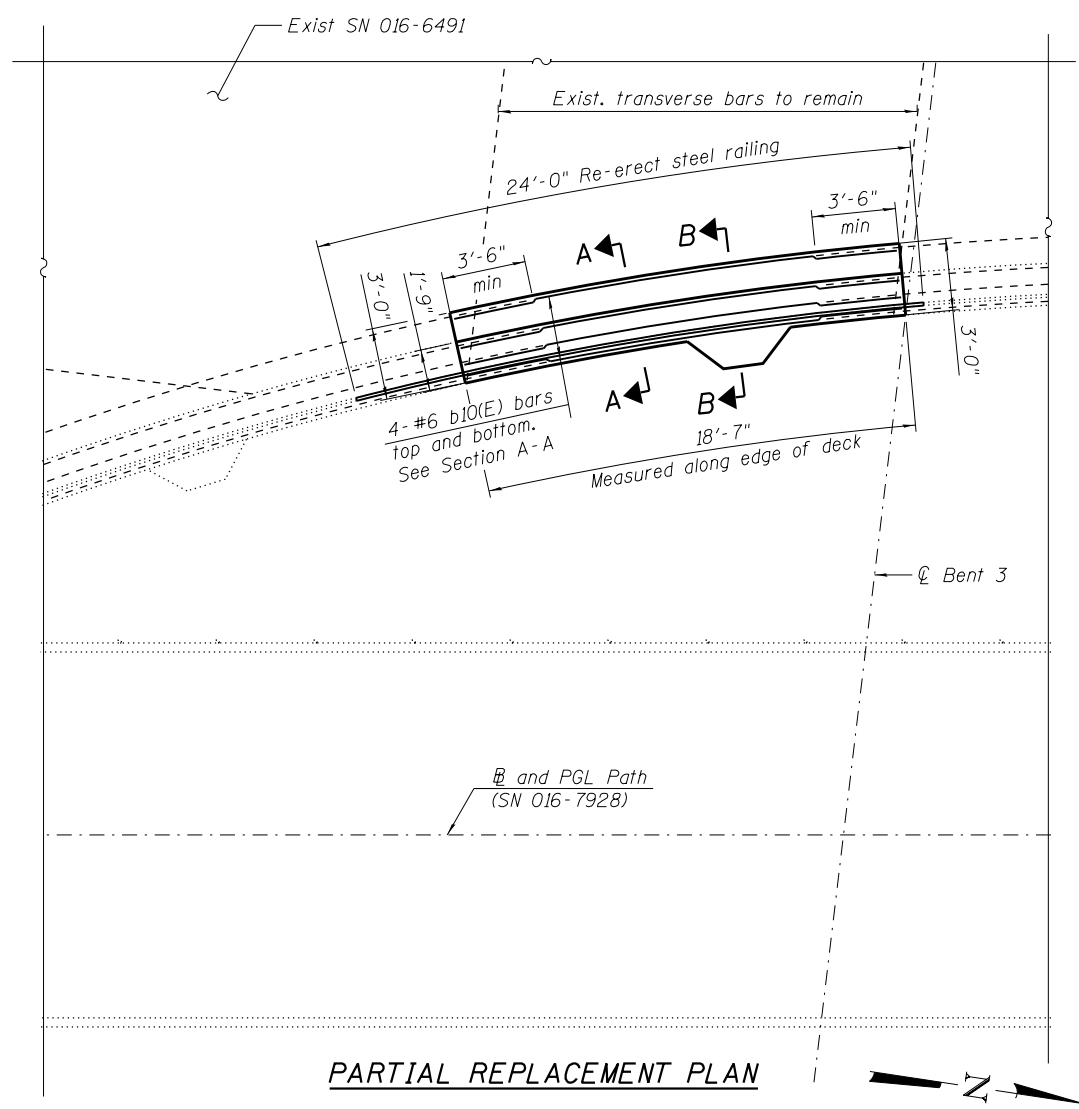
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PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

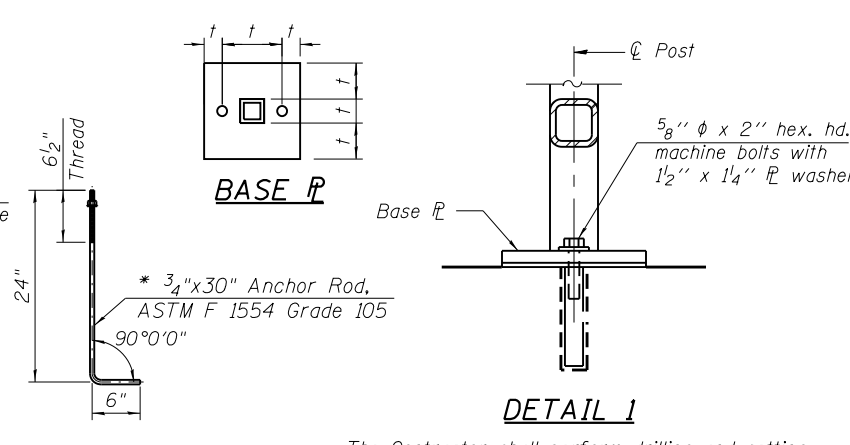
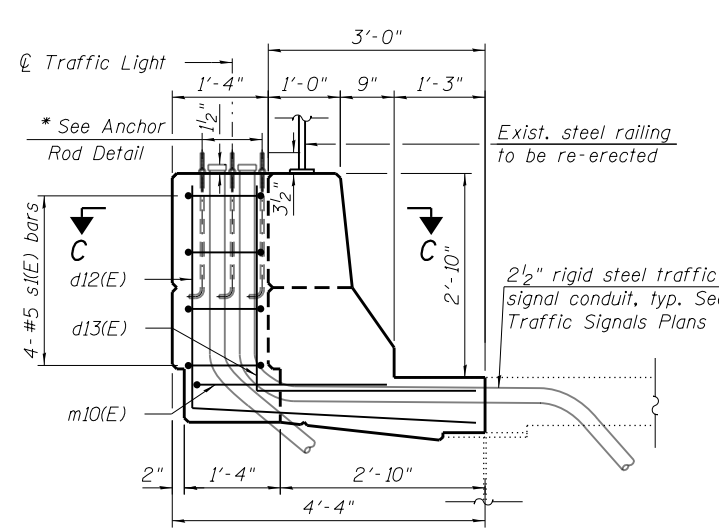
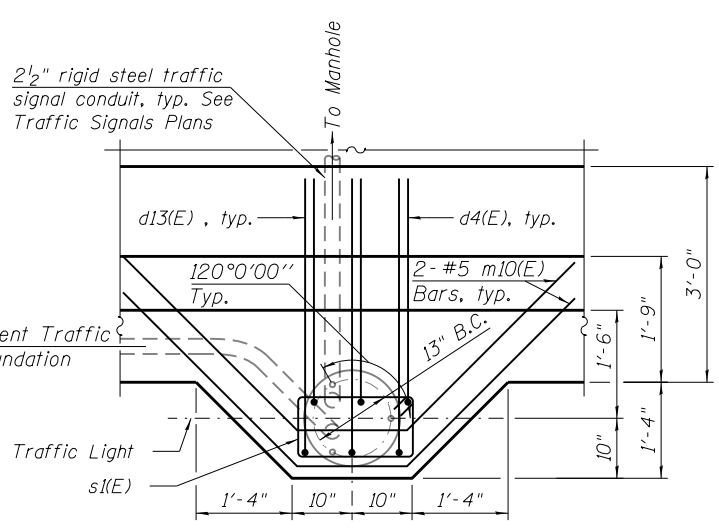
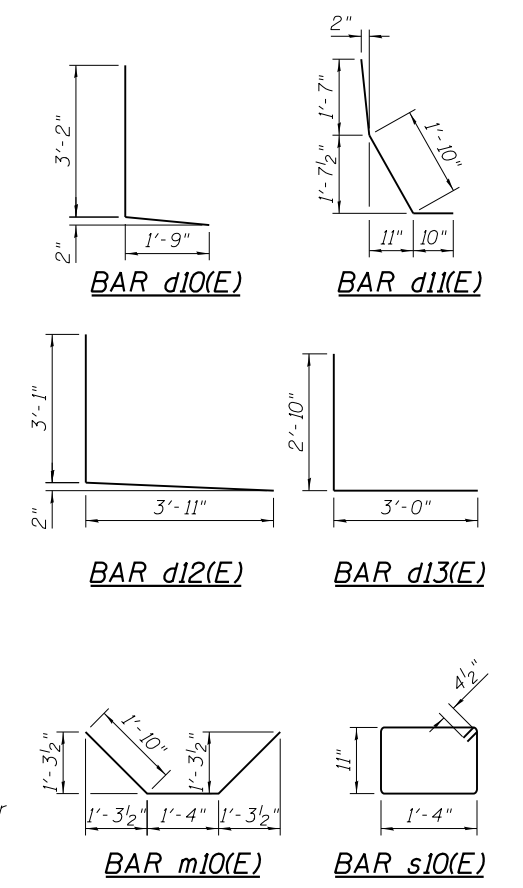
INTERMEDIATE LEVEL PARTIAL DECK REPAIR PLAN
(STRUCTURE NO. 016-6491)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S1-3
CDOT PROJECT NO. E-6-650			377 OF 411



BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
b10(E)	8	#6	18'-3"	—	
d10(E)	20	#4	4'-11"	L	
d11(E)	20	#5	4'-3"	L	
d12(E)	3	#5	7'-0"	L	
d13(E)	3	#5	5'-10"	L	
e10(E)	6	#4	18'-3"	—	
e11(E)	2	#8	18'-3"	—	
e12(E)	2	#5	18'-3"	—	
m10(E)	2	#5	5'-0"	∩	
s10(E)	4	#4	5'-3"	□	
HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES				CU YD	4.6
REINFORCED BARS, EPOXY COATED				POUND	650
PROTECTIVE CONCRETE SEALER				SQ YD	15
REMOVING AND RE-ERECTING EXISTING RAILING				FOOT	24



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SECTION C-C
(Deck and Parapet Reinforcement
Not Shown for Clarity)

SECTION B-B
Section Thru Traffic Light Foundation
(Deck and Parapet Reinforcement Not Shown for Clarity)

ANCHOR ROD DETAIL
The Contractor shall perform drilling and setting of 3/4" anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

* Cost included with HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES.
† Field verify existing steel railing dimensions prior to fabrication.

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PLOT DATE = 6/23/2017	DRAWN - FA	REVISED -
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CITY OF CHICAGO
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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**PARAPET AND DECK PARTIAL REPLACEMENT
(STRUCTURE NO. 016-6491)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S1-5
CDOT PROJECT NO. E-6-650			379 OF 411

Benchmark: Elev. 27.50' CP4-CRS - Second level, found chisel "cross" in concrete on pedestrian ramp 40' north of N.E. Bridge Tower.

Existing Structure: The Lake Shore Drive South Pedestrian and Bicycle Ramp (S.N. 016-7928), constructed in 1936, is a six-span structure consisting of continuous built up steel girders supported on steel column bents, a reinforced concrete pier, and a reinforced concrete abutment (at the south end). The girders support a reinforced concrete deck with steel pedestrian railing. The structure has an approximate length of 393 feet and an out-to-out deck width that varies from a typical dimension of 16'-0" to 12'-0 1/2" (at the North end of Span 1).

Traffic: There are three portals on the Intermediate Level of the Lake Shore Drive over Chicago River bascule bridge (S.N. 016-6030). Each portal will be rehabilitated in three separate stages, and modifications to the bicycle trail will occur concurrently with the first stage. Vehicular traffic will be shifted from portal to portal. Bicycle and pedestrian traffic will be detoured during construction.

Salvage: Portions of the existing steel pedestrian railing removed in the course of construction shall be salvaged.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges 17th Edition
1997 AASHTO Guide Specifications for Design of Pedestrian Bridges

DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 5,000 psi HPC (STRUCTURES)
f'c = 5,000 psi HPC (SUPERSTRUCTURES)
fy = 60,000 psi (reinforcement)
fy = 50,000 psi (AASHTO M270, Gr. 50)

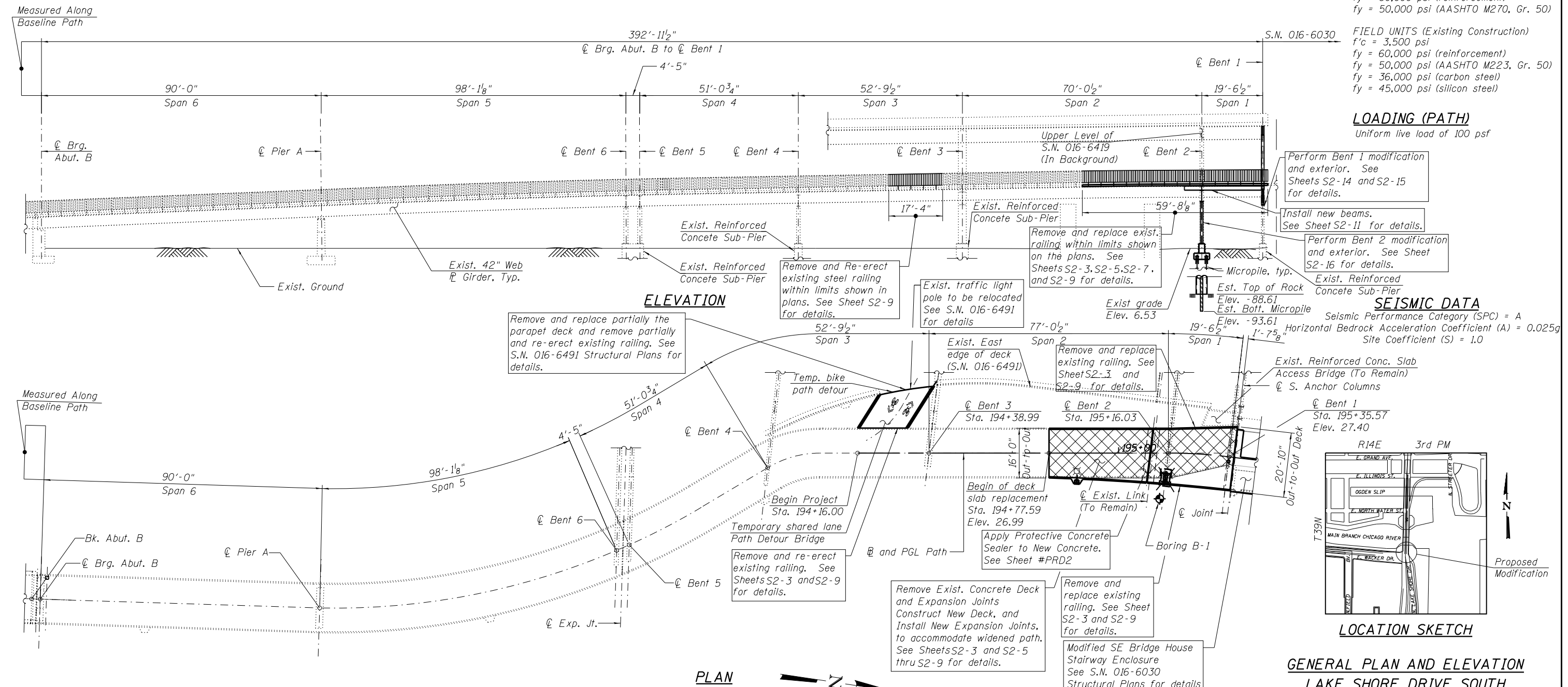
FIELD UNITS (Existing Construction)
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 50,000 psi (AASHTO M223, Gr. 50)
fy = 36,000 psi (carbon steel)
fy = 45,000 psi (silicon steel)

LOADING (PATH)

Uniform live load of 100 psf

SEISMIC DATA

Seismic Performance Category (SPC) = A
Horizontal Bedrock Acceleration Coefficient (A) = 0.025g
Site Coefficient (S) = 1.0



NOTES
1. For General Notes, Index of Sheets, Total Bill of Material, Profile Grade Line Offset Sketch, and Scope of Work, see Sheet S2-2.

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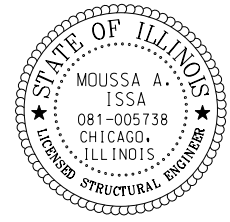
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PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

Signed *Moussa A. Issa*
Moussa A. Issa, HBM
Il. Lic. No. 081-005738
Expires 11-30-2017
Date 01/18/2018
For Sheets S2-1 Thru S2-18
(Total of 18 Sheets)



GENERAL PLAN AND ELEVATION
LAKE SHORE DRIVE SOUTH
PEDESTRIAN AND BICYCLE RAMP
E. MONROE ST. TO CHICAGO RIVER
SECTION 00-E0534-00-BR
COOK COUNTY
S.N. 016-7928

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-1
CDOT PROJECT NO. E-6-650			380 OF 411

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GENERAL NOTES

- Fasteners shall be ASTM A325 Type 1, hot-dipped galvanized bolts. Bolts 7/8" φ, holes 15/16" φ, unless otherwise noted.
- Calculated weight of Structural Steel = 11,580 lbs.
- All structural steel shall be AASHTO M270 Grade 50, unless otherwise noted.
- No field welding is permitted except as specified in the contract document.
- Reinforcement bars designated (E) shall be epoxy coated.
- Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
- All new steel and existing steel to be repaired, strengthened, or encased with concrete, shall be cleaned and painted utilizing Paint System I - Oz/E/U. The color of the final finish coat shall match Sherwin Williams Standard Glossy Color SW2717 (Bordeaux). Cost included in the pay item Concrete Encasement.
- All new structural steel shall be shop primed and faying surfaces shall be cleaned to base metal prior to erection.
- The existing structural steel to be cleaned and painted shall be cleaned per near white blast cleaning, SSPC-SP10, and shall be painted as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures".
- All motors and machinery shall be properly protected from cleaning and painting work.
- The Contractor shall take all necessary precautions for the protection of passing vehicles, bikers, and pedestrians from falling objects and/or materials until completion of the work.
- The Structural Steel Bents 1 and 2 modification and extensions are designed for final conditions. It shall be the Contractor's responsibility to provide adequate temporary shoring as required. All such temporary shoring shall require design calculations and drawings, signed and sealed by a Structural Engineer licensed in the State of Illinois, and shall be subject to the approval of the Commissioner. The cost of temporary shoring if required shall not be paid separately and shall be included with CONCRETE REMOVAL.

SCOPE OF WORK

- Provide protective shielding within limits as indicated in the plans.
- Remove existing pedestrian railing as required for the construction of the temporary shared use path detour structure.
- Install temporary shared use path detour structure as per manufacturer's specifications.
- Remove existing concrete deck and pedestrian railing at the north end of the structure to the limits shown in the plans.
- Install new micropile to support the proposed column at Bent 2 extension.
- Construct Bent 1 and 2 extensions as per the details indicated on the plans.
- Erect new structural steel beams, bracket, and diaphragms.
- Install deck forms and construct reinforced concrete deck and expansion joint.
- Install Steel Railing (Special) as required.
- Apply Protective Concrete Sealer for the constructed deck slab.
- Repaint pavement markings on the top of the deck.

INDEX OF SHEETS

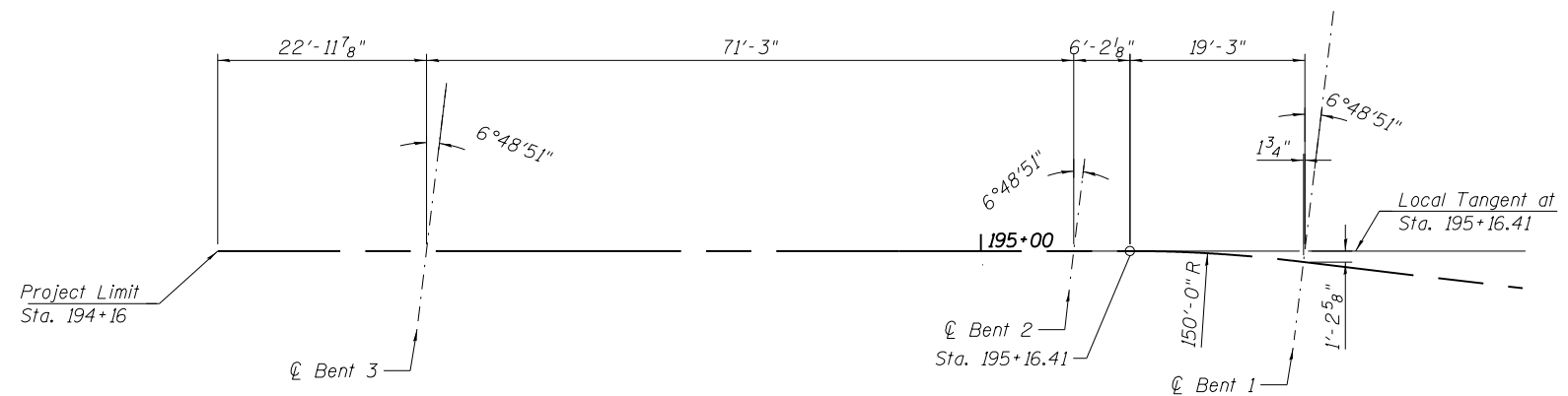
- S2-1 General Plan and Elevation
- S2-2 General Notes, Index of Sheets and Total Bill of Material
- S2-3 Removal Details
- S2-4 Top of Slab Elevations
- S2-5 Bridge Deck Replacement Plan
- S2-6 Bridge Deck Replacement Sections and Details (Sheet 1 of 2)
- S2-7 Bridge Deck Replacement Sections and Details (Sheet 2 of 2)
- S2-8 Expansion Joint Details
- S2-9 Steel Railing Details
- S2-10 Temporary Shared Use Path Detour Bridge Plan and Elevation
- S2-11 Framing Plan and Beam Elevations
- S2-12 Girder and Beam Moment and Reaction Tables
- S2-13 Diaphragm and Miscellaneous Steel Details
- S2-14 Bent 1 Steel Modification (Sheet 1 of 2)
- S2-15 Bent 1 Steel Modification (Sheet 2 of 2)
- S2-16 Bent 2 Steel Modification
- S2-17
- S2-18

CURVE DATA

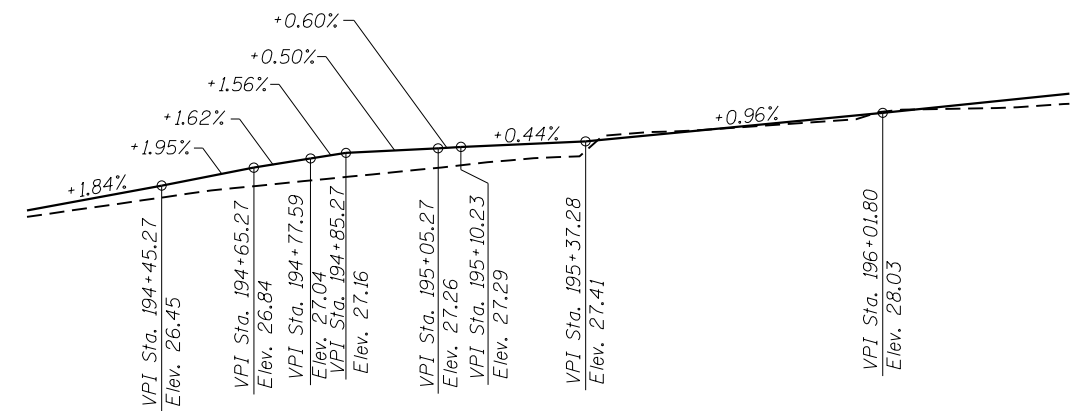
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 E = 0.27'
 e = -----
 T.R. = -----
 S.E. RUN = -----
 P.C. STA = 195+16.41
 P.T. STA = 195+34.25

TOTAL BILL OF MATERIAL

CODE NO.	ITEM	UNIT	TOTAL
50102400	CONCRETE REMOVAL	CU YD	22.9
50157300	PROTECTIVE SHIELD	SQ YD	116
CD075030030	HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES	CU YD	30.3
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	11,580
50606702	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 2	L SUM	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	8,940
52000110	PREFORMED JOINT STRIP SEAL	FOOT	39
GD075870010	PROTECTIVE CONCRETE SEALER	SQ YD	121
X0321963	MICRO-PILES	EACH	1
X0326519	STEEL RAILING REMOVAL	FOOT	121
X0327644	TEMPORARY BRIDGE	L SUM	1
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	1,400
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1
Z0007122	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	21
Z0007124	STEEL RAILING (SPECIAL)	FOOT	119



OFFSET SKETCH



PROFILE GRADE
(Along B Path)

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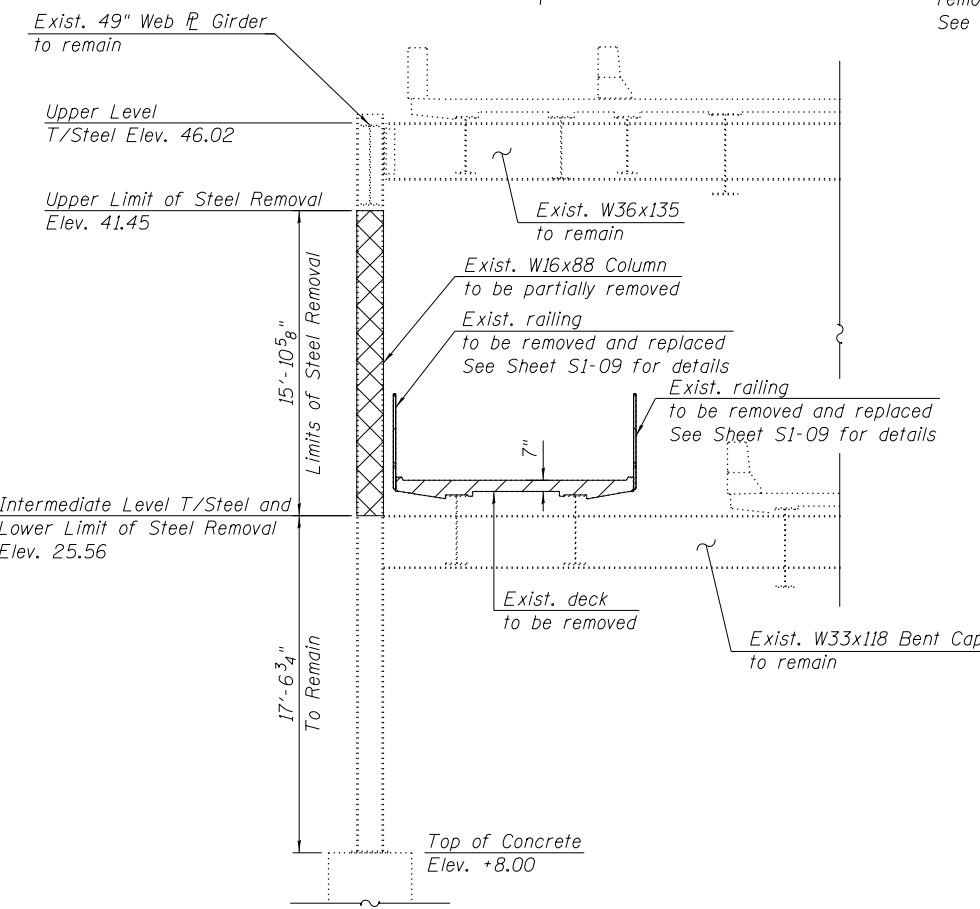
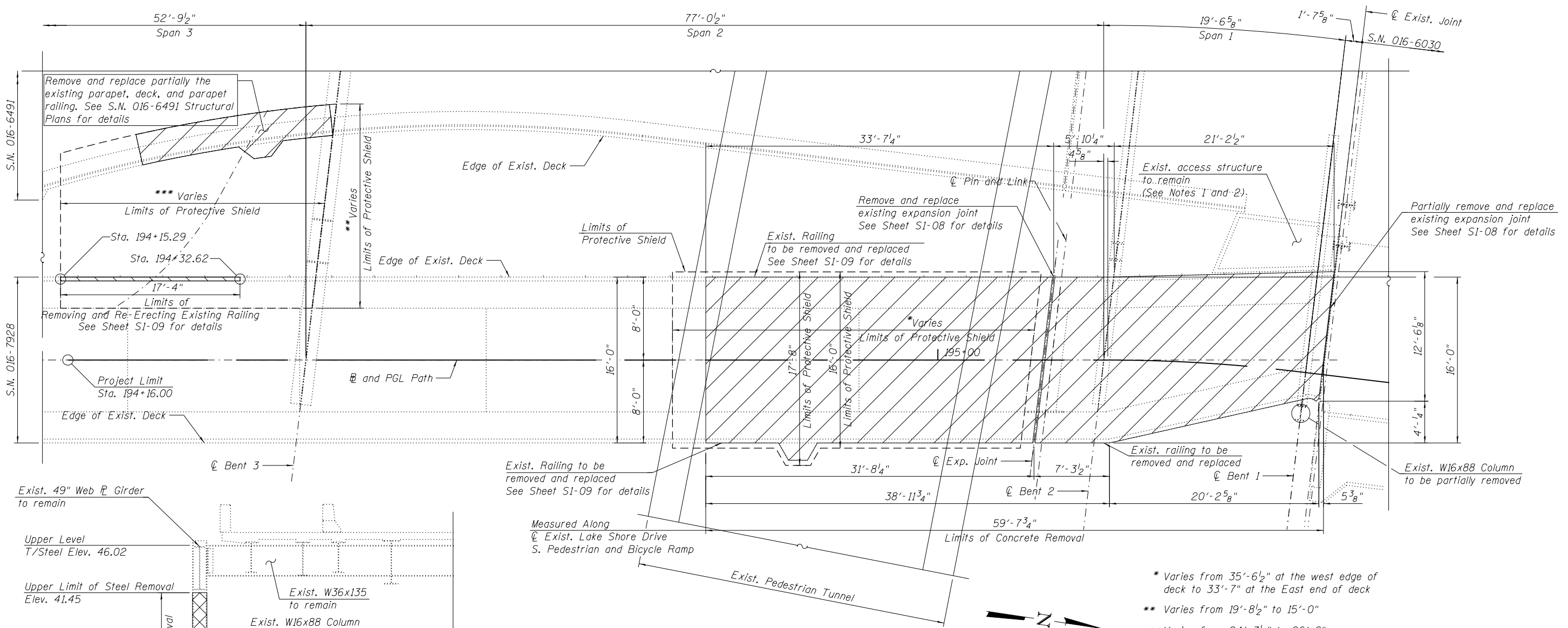
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PLOT SCALE = N.T.S.	CHECKED - MAI	REVISED -
PLOT DATE = 6/23/2017	DRAWN - LAB, MAA	REVISED -
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

GENERAL NOTES, INDEX OF SHEETS
AND TOTAL BILL OF MATERIAL
(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-2
CDOT PROJECT NO. E-6-650			381 OF 411



PARTIAL DECK REMOVAL PLAN (SPANS 1 THRU 3)

NOTES:

- The existing access structure provides pedestrian/bicycle access between Lake Shore Drive and the Lake Shore Drive South Pedestrian and Bicycle Ramp. This structure is to remain. It shall be the Contractor's responsibility to investigate the existing method of support for this structure and provide adequate temporary shoring as required. All such temporary shoring shall require design calculations and drawings, signed and sealed by a Structural Engineer licensed in the State of Illinois, and shall be subject to the approval of the Commissioner. The cost of temporary shoring, if required, shall not be paid separately and shall be included with CONCRETE REMOVAL.
- Any damage to the adjacent access structure caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Commissioner, at no cost to the Department.
- An existing security camera is attached to the steel girder within the limits of concrete removal. It shall be the Contractor's responsibility to protect the camera and temporarily support and/or relocate any conduits/cables in conflict with removal or construction operations. However, the camera shall not be removed and shall remain operable at all times. Should temporary removal of the camera be required, the Contractor shall coordinate with the City of Chicago and obtain all necessary permits prior to removing the camera. Costs included with CONCRETE REMOVAL.
- Existing utilities in conflict with new construction shall be abandoned or relocated according to directions given on the Roadway plans or as directed by the Commissioner.
- It shall be the Contractor's responsibility to protect, temporarily support, remove, and/or relocate all existing utilities interfering with removal and construction operations. Such items shall not be paid separately but shall be included with CONCRETE REMOVAL.

- * Varies from 35'-6 1/2" at the west edge of deck to 33'-7" at the East end of deck
- ** Varies from 19'-8 1/2" to 15'-0"
- *** Varies from 24'-3 1/2" to 26'-8"

BILL OF MATERIAL

ITEM	UNIT	TOTAL
CONCRETE REMOVAL	CU YD	22.9
PROTECTIVE SHIELD	SQ YD	116
STEEL RAILING REMOVAL	FOOT	121
STRUCTURAL STEEL REMOVAL	POUND	1400

LEGEND

- Concrete Removal
- Removing and Re-Erecting Existing Railing
- Structural Steel Removal
- Limits of Protective Shield

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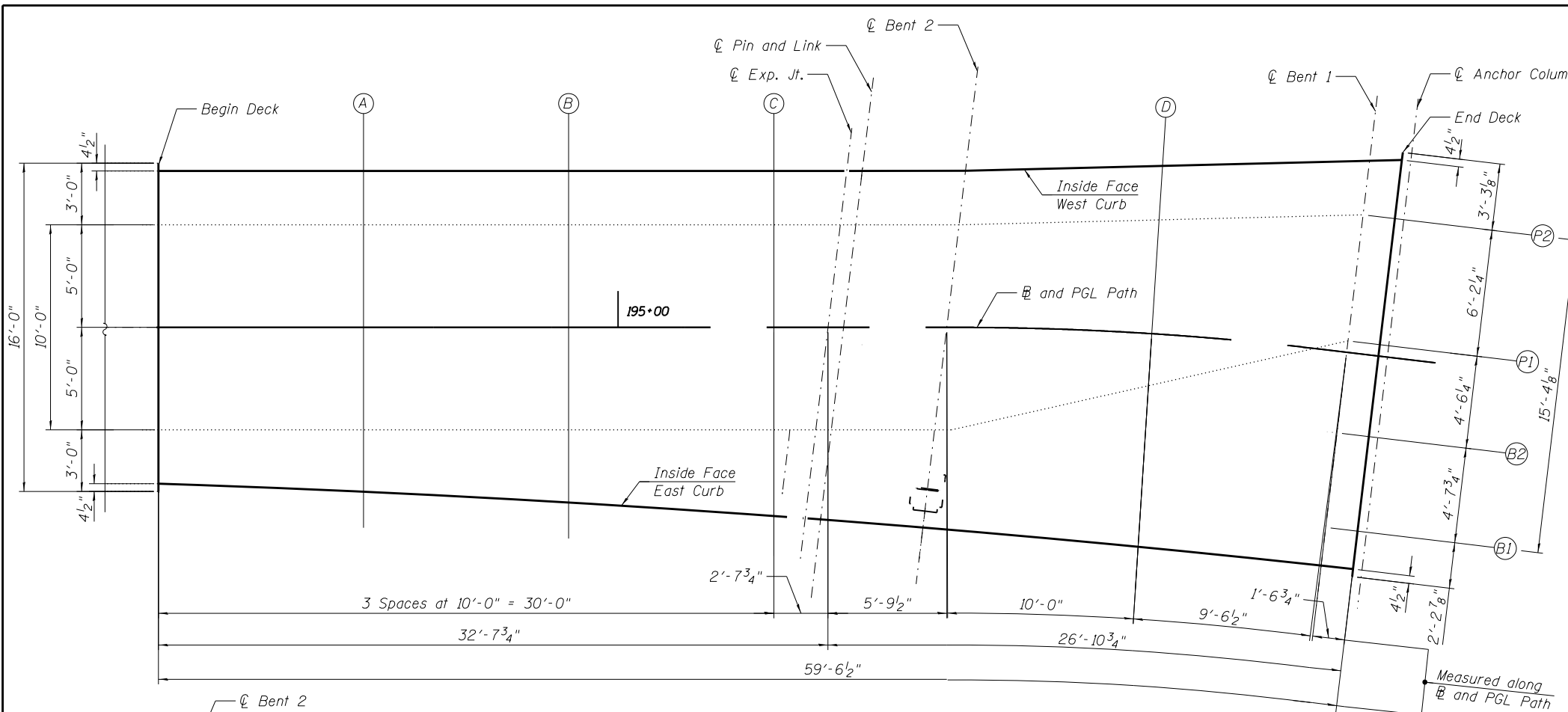
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PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**REMOVAL DETAILS
(STRUCTURE NO. 016-7928)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-3
CDOT PROJECT NO. E-6-650			382 OF 411



B AND PGL PATH

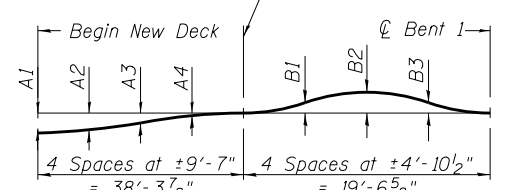
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BEGIN DECK	194+77.59	0.00'	27.04	27.16
A	194+87.59	0.00'	27.17	27.29
B	194+97.59	0.00'	27.22	27.32
C	195+07.59	0.00'	27.27	27.34
CL. EXP. JT.	195+10.23	0.00'	27.29	27.35
CL. BENT 2	195+16.02	0.00'	27.32	27.32
D	195+26.02	0.00'	27.36	27.35
CL. BENT 1	195+35.57	0.00'	27.40	27.40
END DECK	195+37.13	0.00'	27.41	27.41

GIRDER P1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BEGIN DECK	194+77.59	5.00	26.94	27.09
A	194+87.59	5.00	27.07	27.22
B	194+97.59	5.00	27.12	27.26
C	195+07.59	5.00	27.17	27.28
CL. EXP. JT.	195+09.64	5.00	27.19	27.29
CL. BENT 2	195+15.43	5.00	27.21	27.21
D	195+26.02	2.54	27.31	27.30
CL. BENT 1	195+35.57	-0.56	27.40	27.40
END DECK	195+37.13	-1.11	27.41	27.41

BEAM B2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BEGIN DECK	-	-	-	-
A	-	-	-	-
B	-	-	-	-
C	-	-	-	-
CL. EXP. JT.	-	-	-	-
CL. BENT 2	-	-	-	-
D	195+26.02	3.96	27.31	27.30
CL. BENT 1	195+35.57	3.95	27.40	27.40
END DECK	195+37.13	3.95	27.41	27.41



NOTE:
 1. Elevations adjacent to the existing deck, access bridge and SE bridge house stairway may be adjusted as necessary and as approved by the Commissioner to meeting existing adjacent elevations.

DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of new concrete only.)

Note:
 The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection."

Girder Number	DEAD LOAD DEFLECTIONS						
	Span 1				Span 2		
	A1	A2	A3	A4	B1	B2	B3
P1	1"	1"	1"	7/8"	0"	-1/8"	0"
P2	1/2"	1/2"	3/8"	1/8"	0"	0"	0"
B1	-	-	-	-	0"	0"	0"
B2	-	-	-	-	-	-1/8"	0"

INSIDE FACE WEST CURB

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BEGIN DECK	194+77.59	-7.63	27.19	27.28
A	194+87.59	-7.63	27.32	27.40
B	194+97.59	-7.63	27.37	27.43
C	195+07.59	-7.63	27.42	27.44
CL. EXP. JT.	195+11.14	-7.63	27.44	27.45
CL. BENT 2	195+16.91	-7.64	27.44	27.44
D	195+26.02	-8.20	27.44	27.44
CL. BENT 1	195+35.57	-9.40	27.44	27.44
END DECK	195+37.13	-9.63	27.44	27.44

BEAM B1

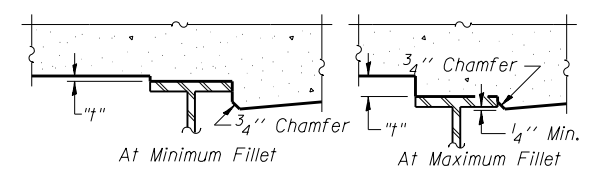
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BEGIN DECK	-	-	-	-
A	-	-	-	-
B	-	-	-	-
C	-	-	-	-
CL. EXP. JT.	195+09.36	7.35	27.13	27.13
CL. BENT 2	195+15.08	7.90	27.15	27.15
D	195+26.02	8.60	27.28	27.28
CL. BENT 1	195+35.57	8.60	27.40	27.40
END DECK	195+37.13	8.60	27.41	27.41

GIRDER P2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BEGIN DECK	194+77.59	-5.00	27.14	27.23
A	194+87.59	-5.00	27.27	27.35
B	194+97.59	-5.00	27.32	27.38
C	195+07.59	-5.00	27.37	27.39
CL. EXP. JT.	195+10.83	-5.00	27.39	27.40
CL. BENT 2	195+16.62	-5.00	27.42	27.42
D	195+26.02	-5.56	27.41	27.41
CL. BENT 1	195+35.57	-6.75	27.40	27.40
END DECK	195+37.13	-6.97	27.41	27.41

INSIDE FACE EAST CURB

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BEGIN DECK	194+77.59	7.63	26.89	27.04
A	194+87.59	8.02	27.01	27.16
B	194+97.59	8.54	27.05	27.19
C	195+07.59	9.20	27.09	27.20
CL. EXP. JT.	195+09.12	9.31	27.09	27.09
CL. BENT 2	195+14.86	9.76	27.11	27.11
D	195+26.02	10.41	27.26	27.26
CL. BENT 1	195+35.57	10.47	27.40	27.40
END DECK	195+37.13	10.46	27.41	27.41



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on the plans. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on the plans, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

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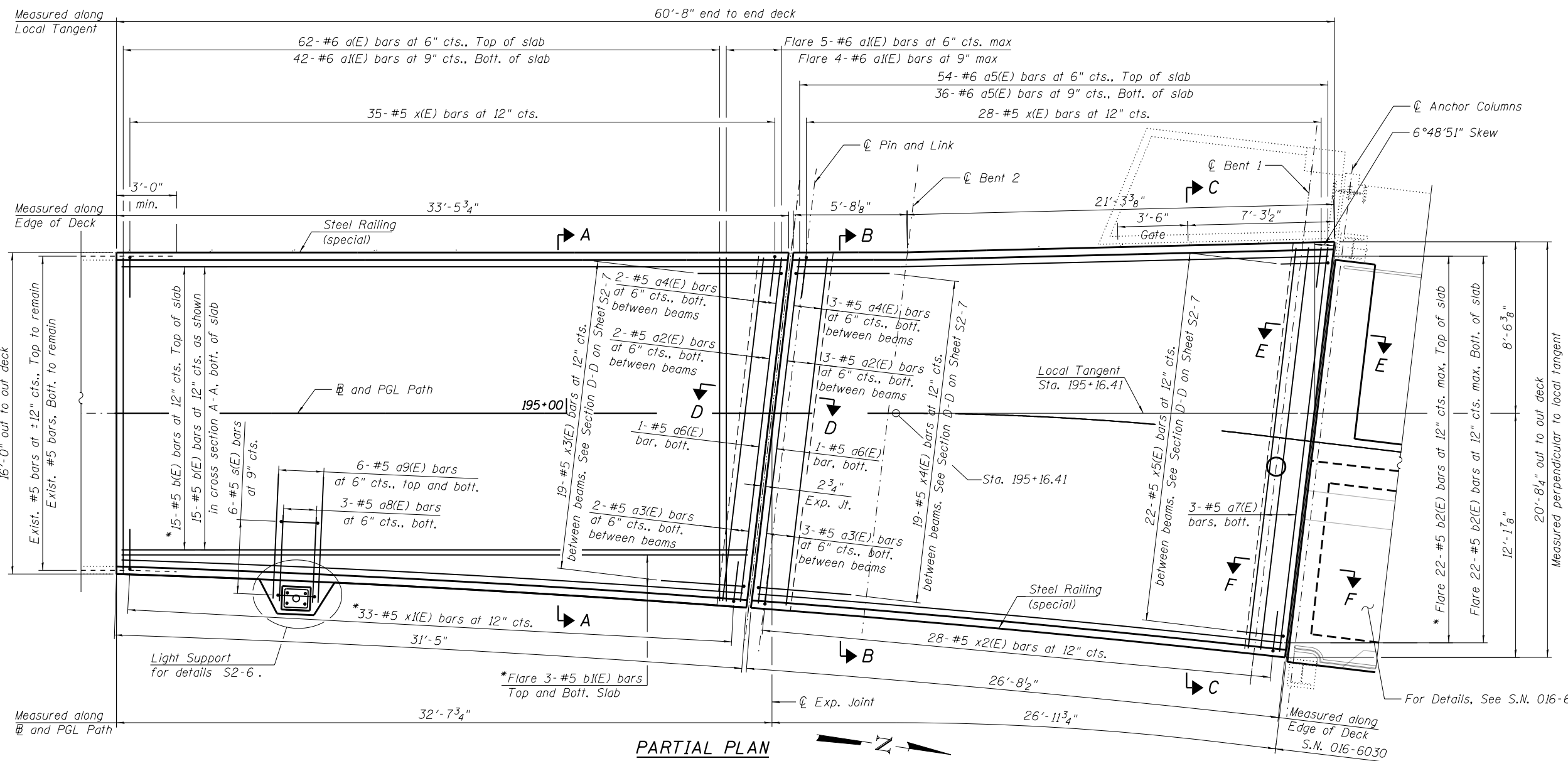
CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

TOP OF SLAB ELEVATIONS
(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-4
CDOT PROJECT NO. E-6-650			383 OF 411

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PARTIAL PLAN

- NOTES:**
1. For General Notes and Total Bill of Material, see Sheet S2-2.
 2. For Sections A-A thru C-C, see Sheet S2-6.
 3. For Sections D-D thru F-F and Bill of Material, see Sheet S2-7.
 4. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with CONCRETE REMOVAL.

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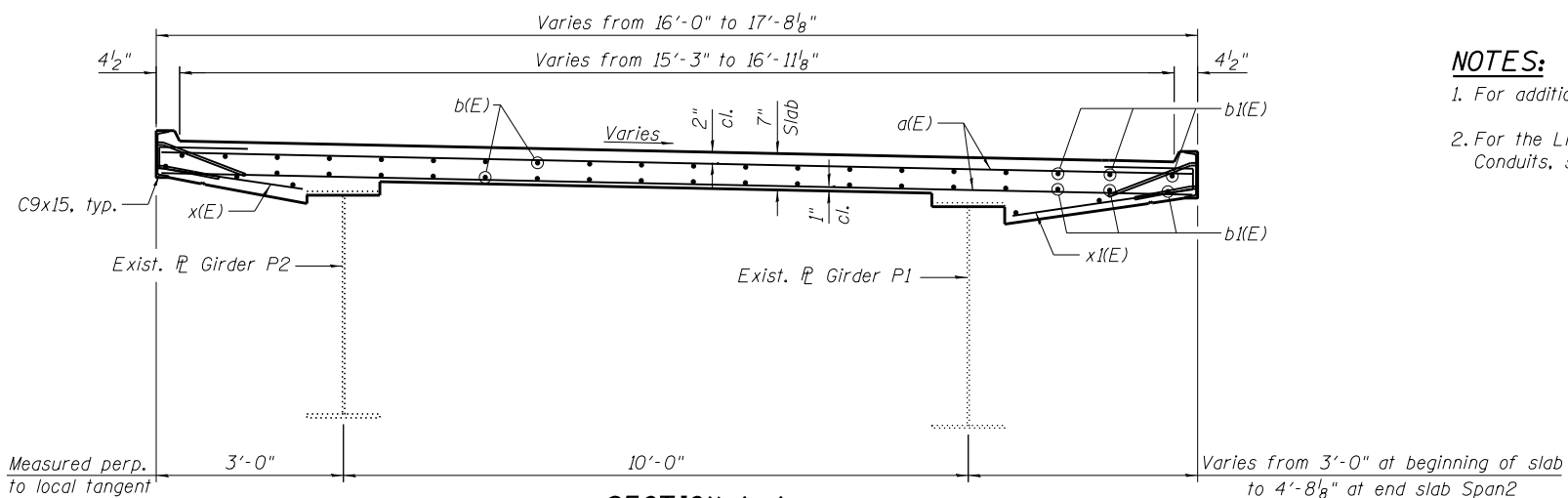
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DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

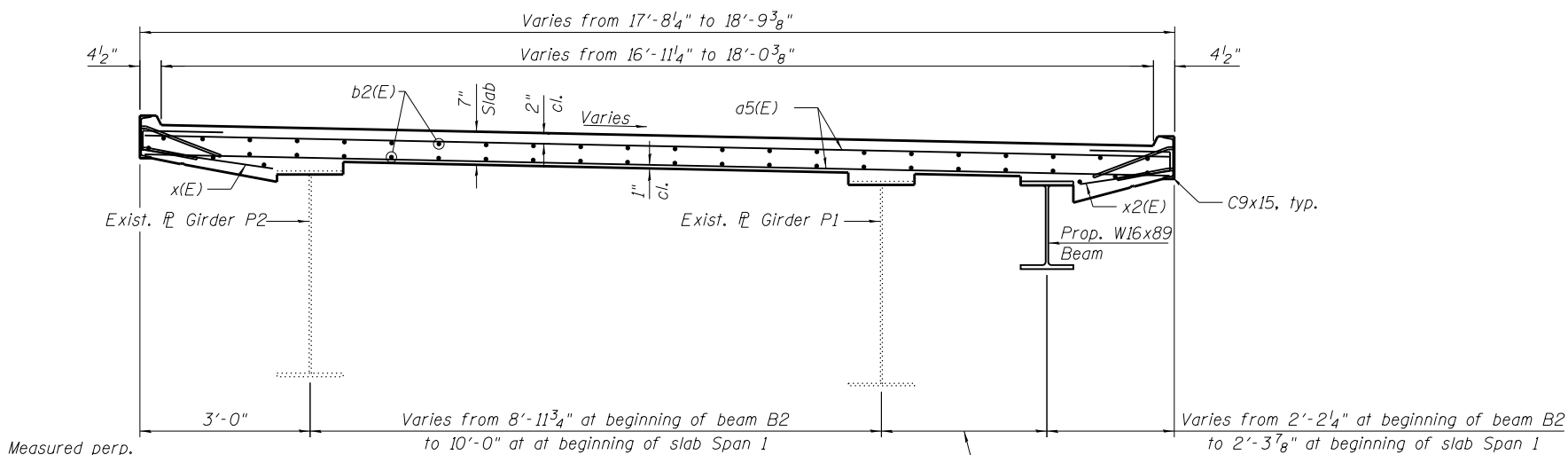
BRIDGE DECK REPLACEMENT PLAN
(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-5
CDOT PROJECT NO. E-6-650			384 OF 411



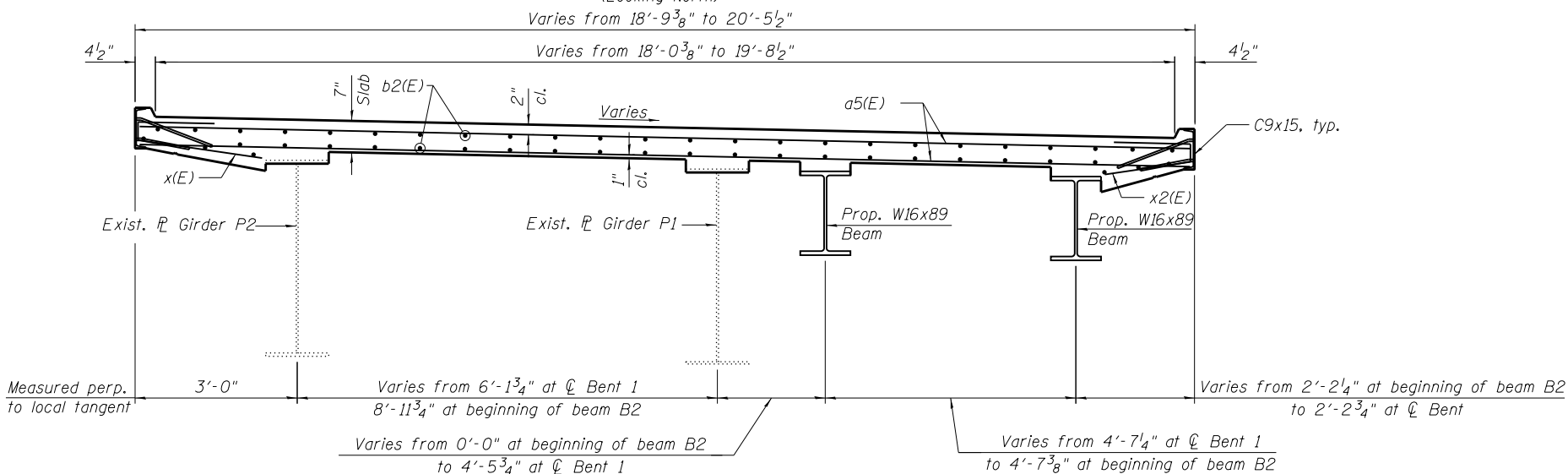
SECTION A-A

(Railing is not shown for clarity)
(Looking North)



SECTION B-B

(Railing is not shown for clarity)
(Looking North)

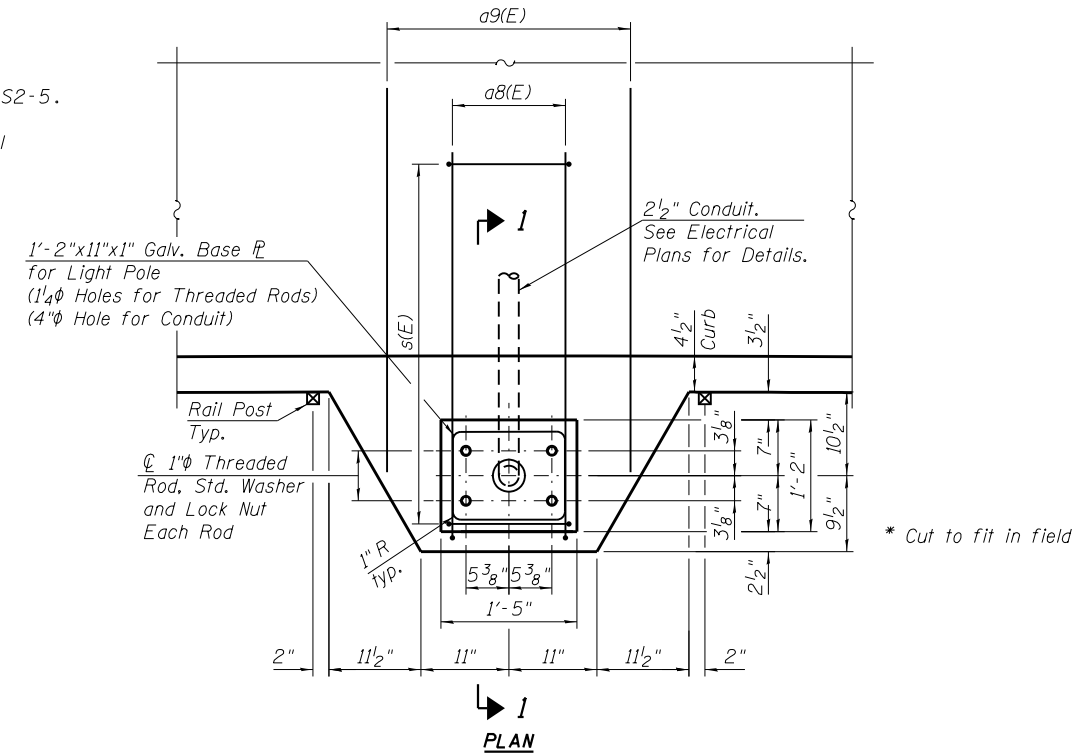


SECTION C-C

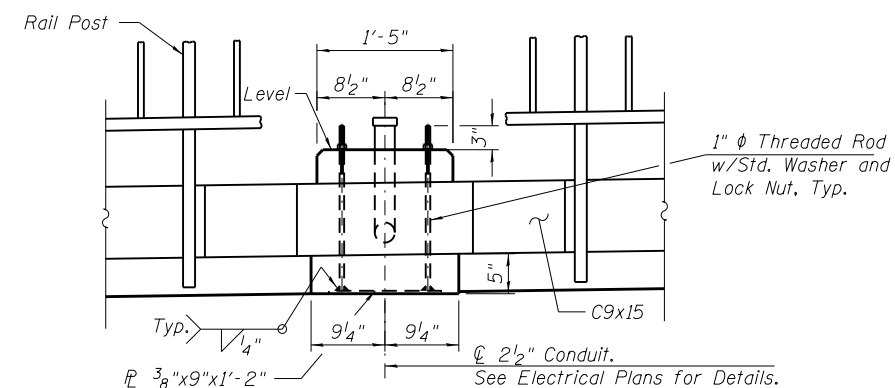
(Railing is not shown for clarity)
(Looking North)

NOTES:

1. For additional Notes, see Sheet S2-5.
2. For the Light pole and electrical Conduits, see Electrical plans.

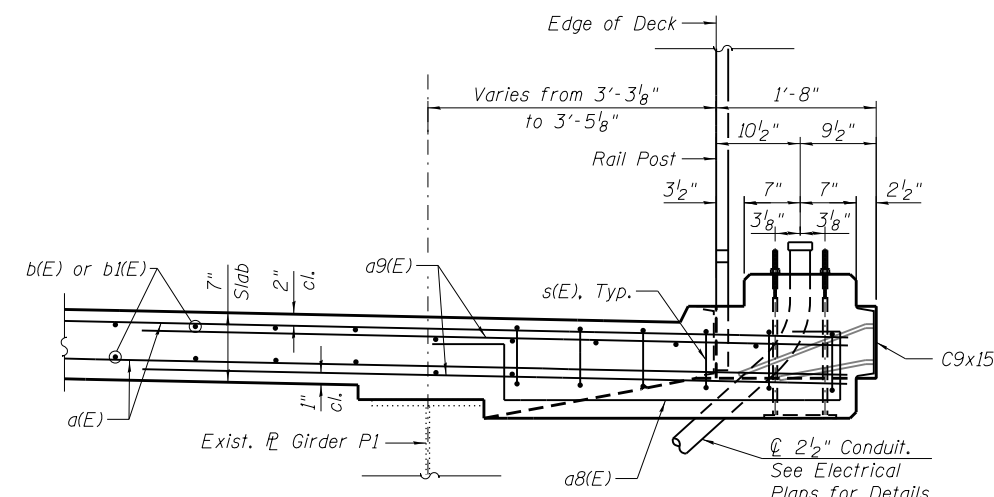


PLAN



ELEVATION

LIGHT SUPPORT DETAIL



SECTION 1-1

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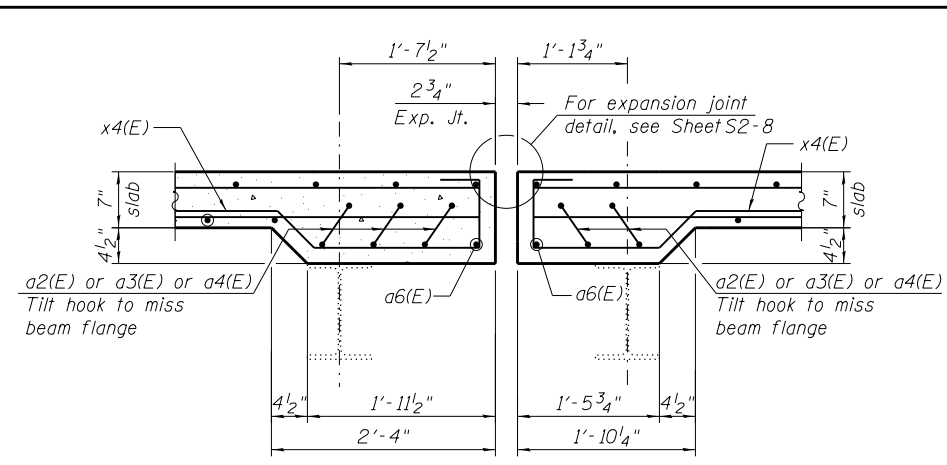
CITY OF CHICAGO
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

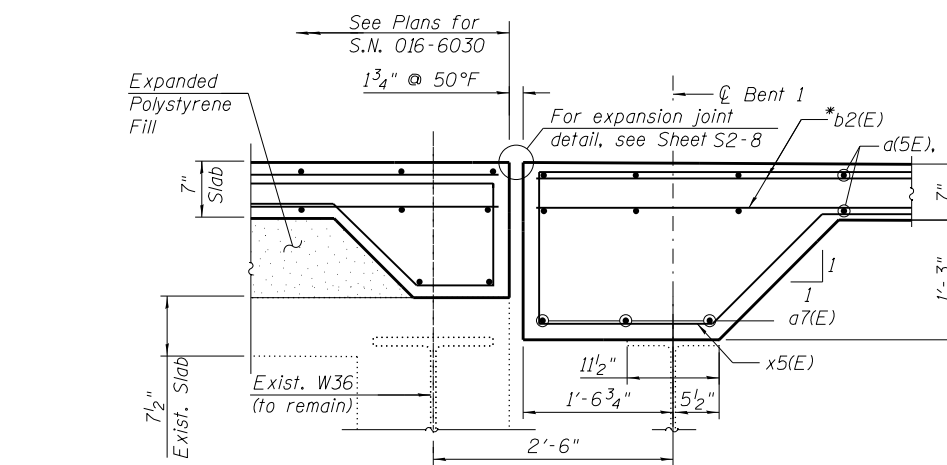
BRIDGE DECK REPLACEMENT SECTIONS
AND DETAILS (SHEET 1 OF 2)
(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-6
CDOT PROJECT NO. E-6-650			385 OF 411

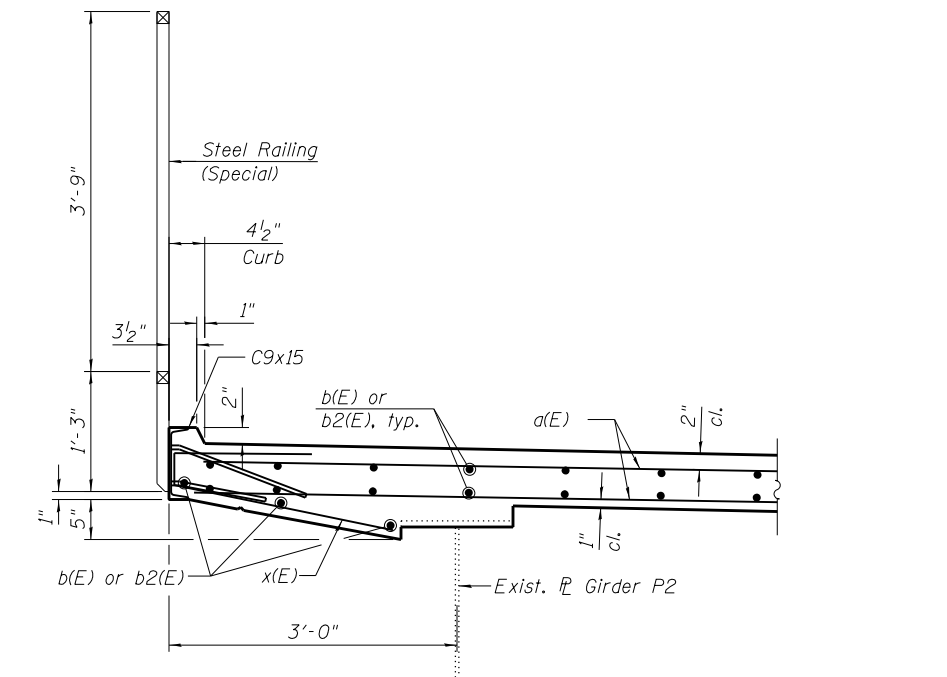
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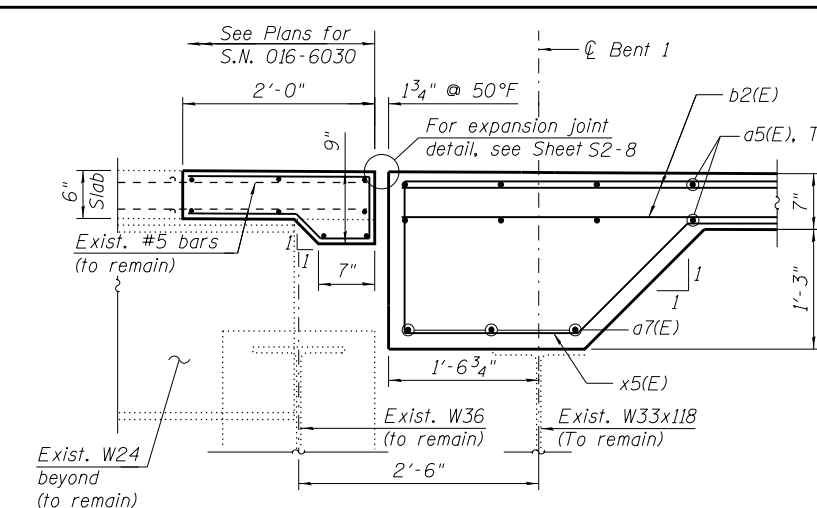
SECTION D-D



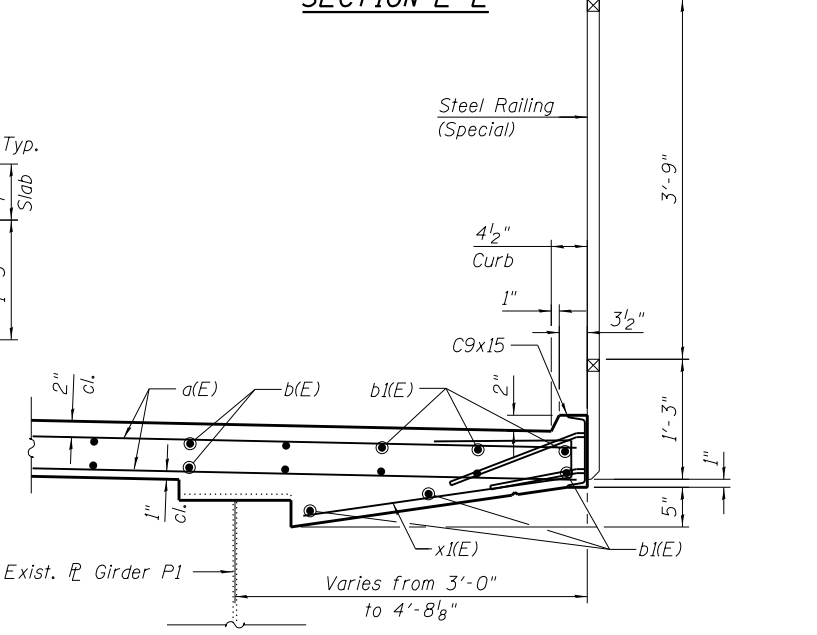
SECTION F-F



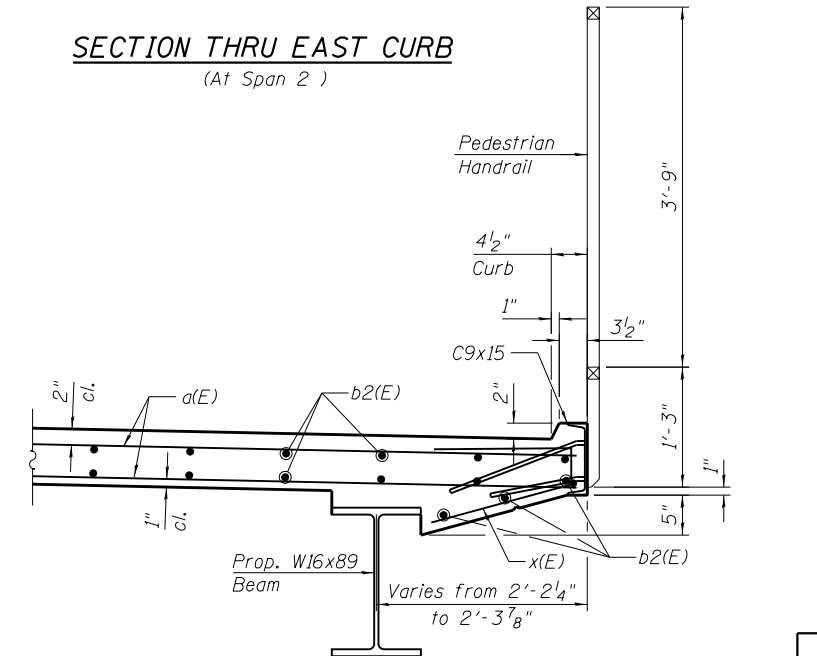
SECTION THRU WEST CURB
(At Spans 1 and 2)



SECTION E-E

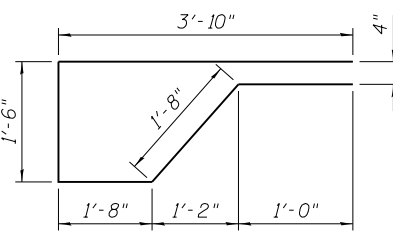


SECTION THRU EAST CURB
(At Span 2)

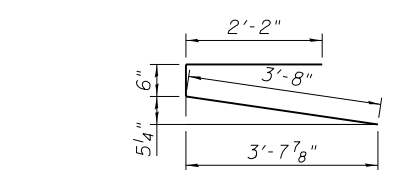


SECTION THRU EAST CURB
(At Span 1)

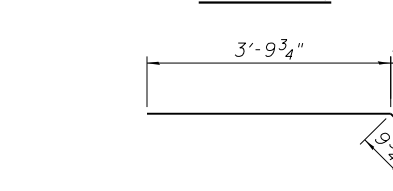
NOTES:
1. For Notes, see Sheet S2-5.



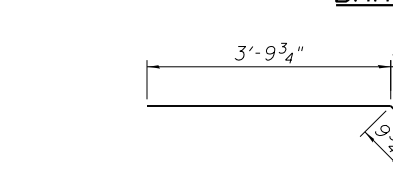
BAR x5(E)



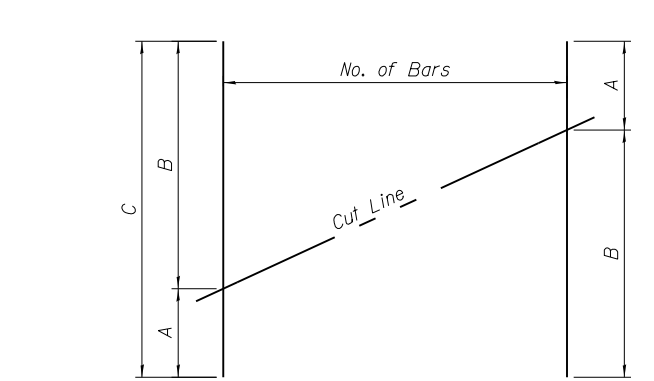
BAR x1(E)



BAR x3(E)



BAR x4(E)



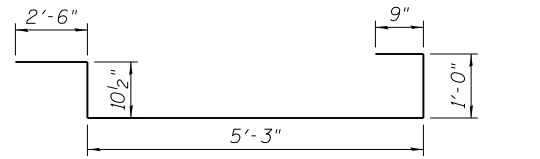
BAR CUTTING DIAGRAM
See Table for dimensions, make all cuts normal to bar axis.

Bar	No. of Sets Required	Bar No.	No. of Bars Per Set	A	B	C
a(E)	1	#6	52	15'-8"	17'-0"	32'-8"
a5(E)	1	#6	45	17'-0"	20'-3"	37'-3"

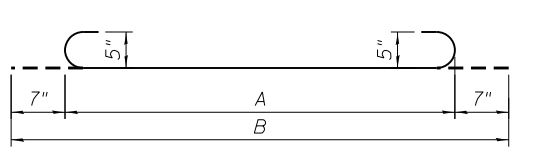
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	52	#6	32'-8"	
a1(E)	9	#5	17'-4"	
a2(E)	5	#5	10'-10"	
a3(E)	5	#5	5'-5"	
a4(E)	5	#5	3'-10"	
a5(E)	45	#6	37'-3"	
a6(E)	2	#5	17'-5"	
a7(E)	3	#5	19'-6"	
a8(E)	3	#5	6'-0"	
a9(E)	12	#5	7'-10"	
b(E)	30	#5	33'-2"	
b1(E)	6	#5	31'-1"	
b2(E)	44	#5	26'-8"	
s(E)	6	#5	3'-7"	
x(E)	63	#5	3'-9"	
x1(E)	33	#5	5'-5"	
x2(E)	28	#5	3'-2"	
x3(E)	19	#5	5'-6"	
x4(E)	19	#5	5'-10"	
x5(E)	22	#5	9'-8"	

HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES	CU YD	30.3
REINFORCED BARS, EPOXY COATED	POUND	8,940
PROTECTIVE CONCRETE SEALER	SQ YD	121



BAR a8(E)



BARS a2(E) or a3(E) or a4(E)

Bar	A	B
a2(E)	9'-8"	10'-10"
a3(E)	4'-3"	5'-5"
a4(E)	2'-8"	3'-10"

Minimum Bar Laps	
Bar	Lap
#4	2'-5"
#5	3'-0"
#6	3'-7"
#7	4'-8"
#8	5'-11"

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PLOT SCALE = N.T.S.	CHECKED - MAI	REVISD -
PLOT DATE = 6/23/2017	DRAWN - SK	REVISD -
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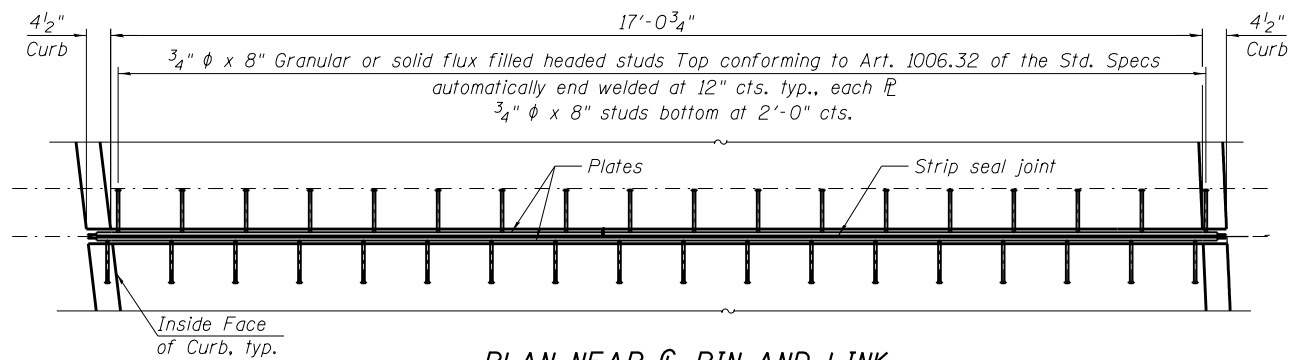
CITY OF CHICAGO
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

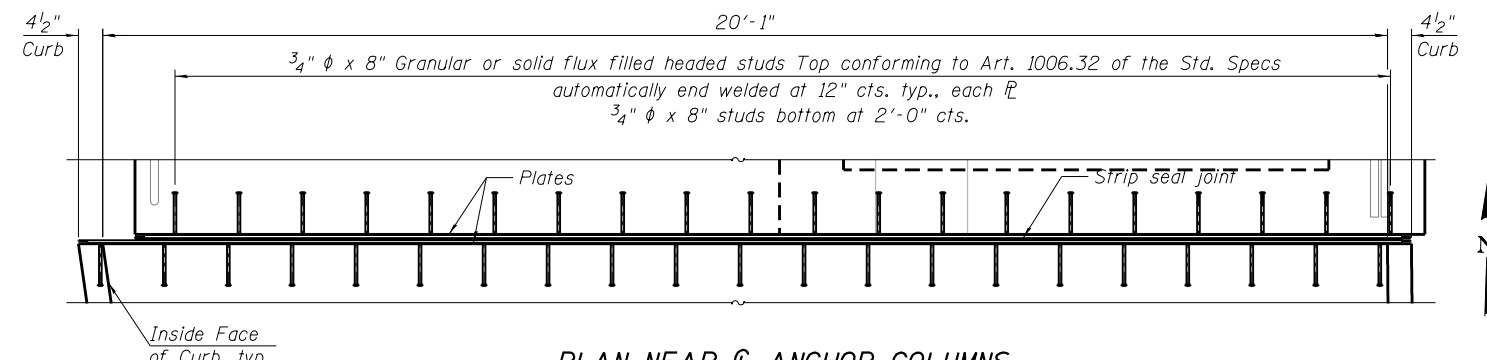
BRIDGE DECK REPLACEMENT SECTIONS
AND DETAILS (SHEET 2 OF 2)
(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-7

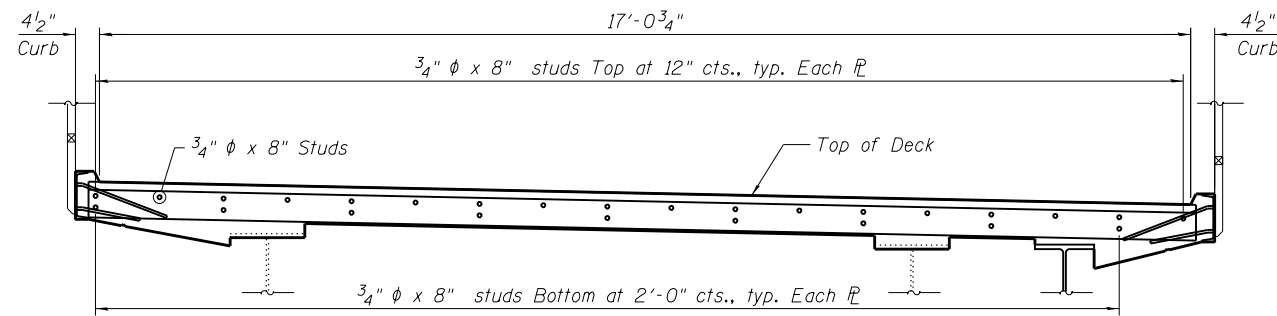
CDOT PROJECT NO. E-6-650 386 OF 411



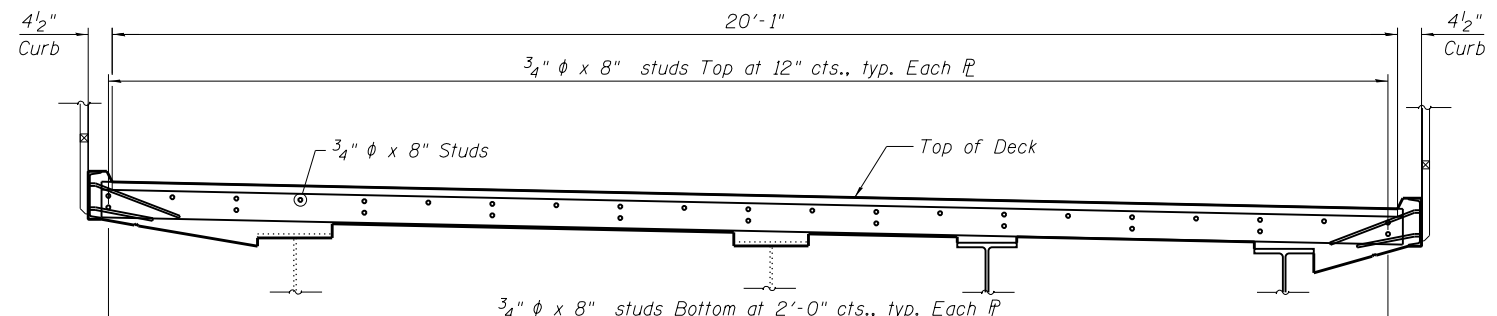
PLAN NEAR C PIN AND LINK



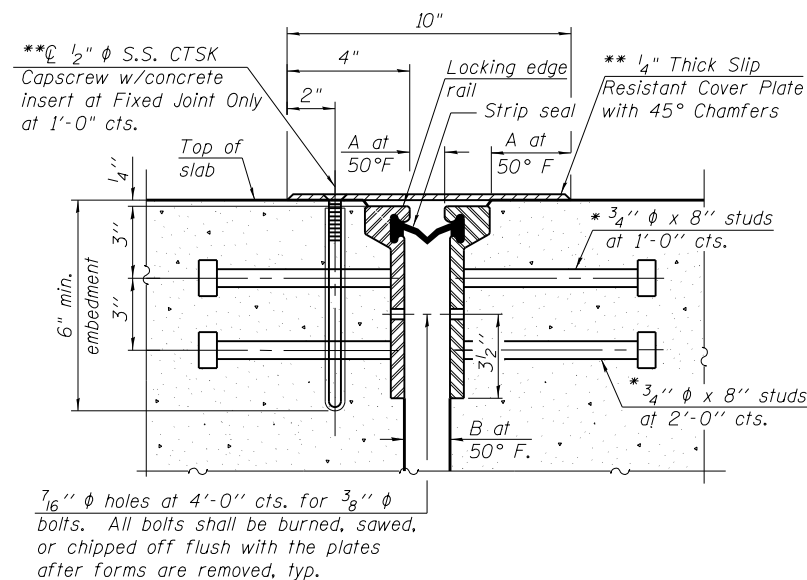
PLAN NEAR C ANCHOR COLUMNS



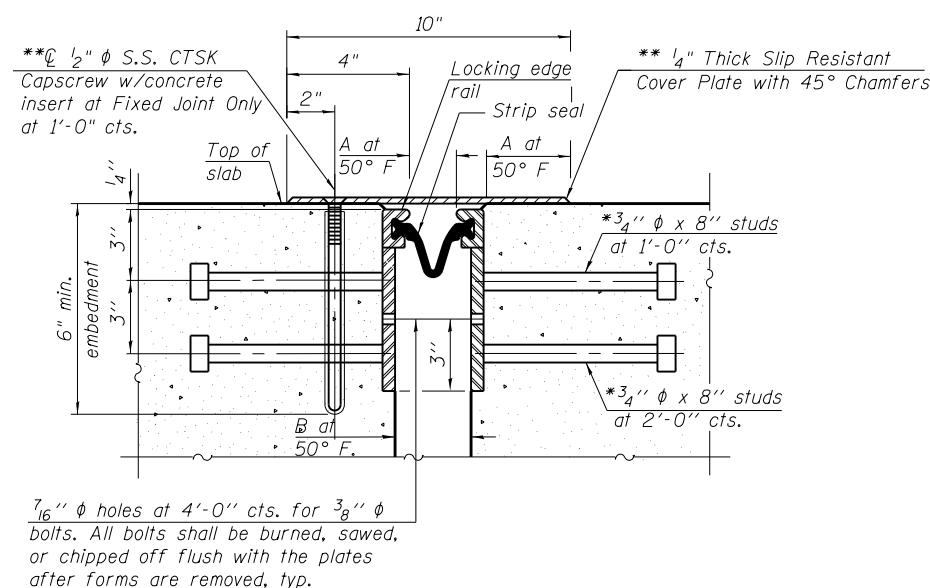
TYPICAL END TREATMENT



TYPICAL END TREATMENT

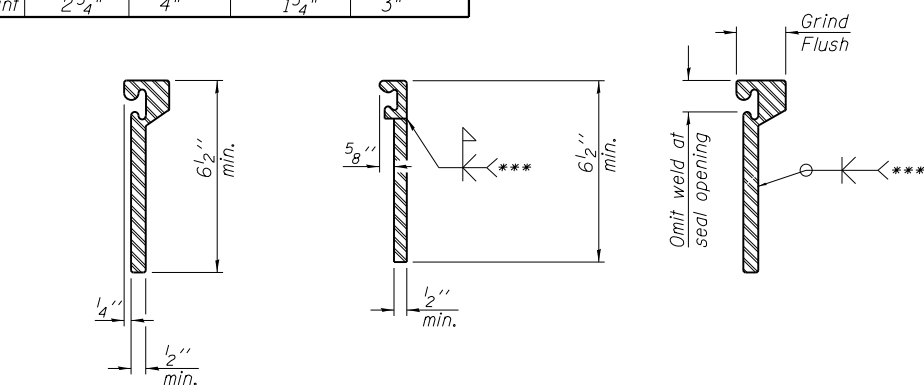


SECTION THRU ROLLED RAIL JOINT



SECTION THRU WELDED RAIL JOINT

Rail Type	Near C Pin and Link		Near C Anchor Columns	
	A	B	A	B
Rolled Rail Joint	2 3/4"	3 1/4"	1 3/4"	2 1/4"
Welded Rail Joint	2 3/4"	4"	1 3/4"	3"



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

NOTES:

- The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
- The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

- The manufacturer's recommended installation methods shall be followed.
- The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
- All steel components (except expansion joint plates and attached bars, see General Notes) shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
- All joints in rails shall be welded.

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

** Attach cover plate to the deck slab with 1/2" diameter S.S. CTSK capscrew with concrete insert at 1'-0" cts. Cost shall be included with Preformed Joint Strip Seal.

*** Back gouge not required if complete joint penetration is verified by mock-up.

BILL OF MATERIAL

Item	Unit	Total
PREFORMED JOINT STRIP SEAL	FOOT	39

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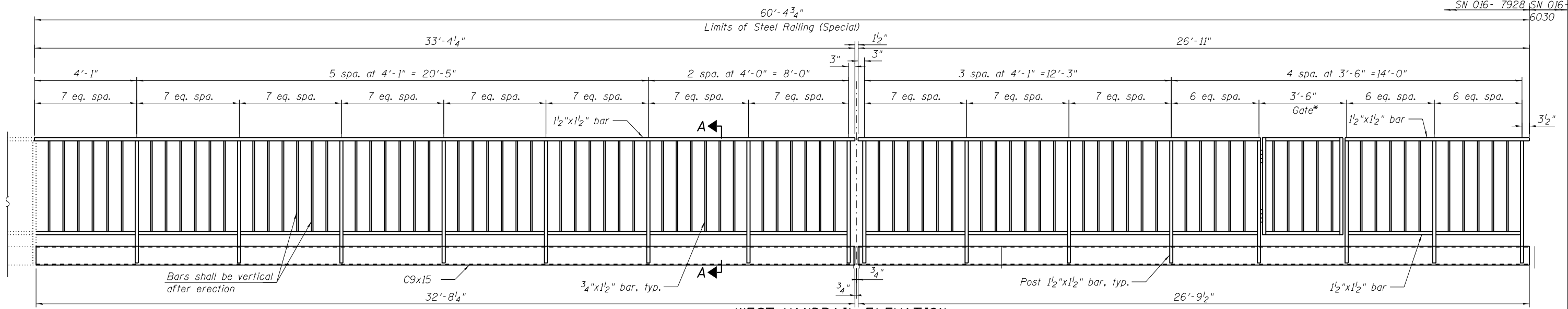
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PLOT SCALE = N.T.S.	DRAWN - LAB, SK	REVISED -
PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

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DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

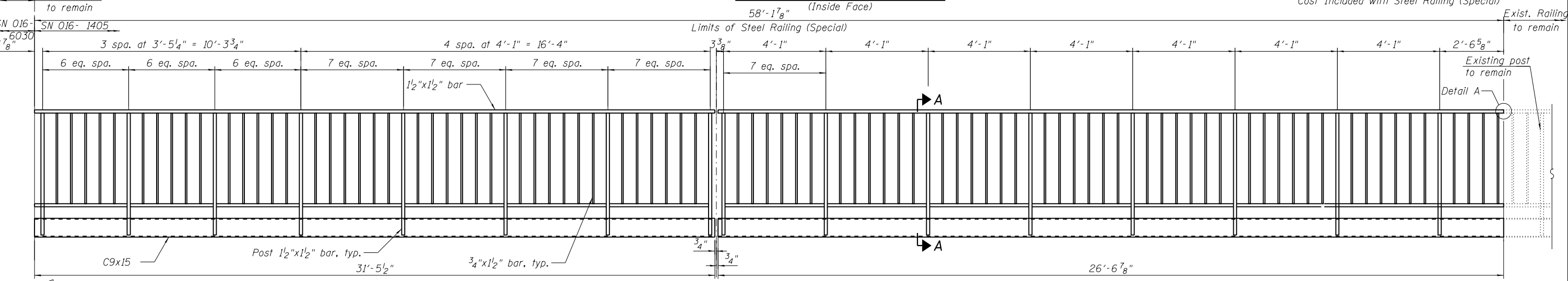
**EXPANSION JOINT DETAILS
(STRUCTURE NO. 016-7928)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-8
CDOT PROJECT NO. E-6-650			387 OF 411

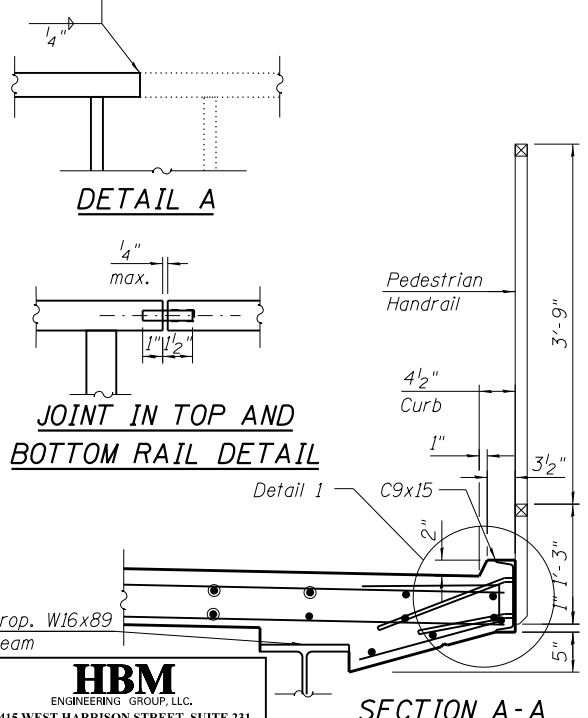


WEST HANDRAIL ELEVATION
(Inside Face)

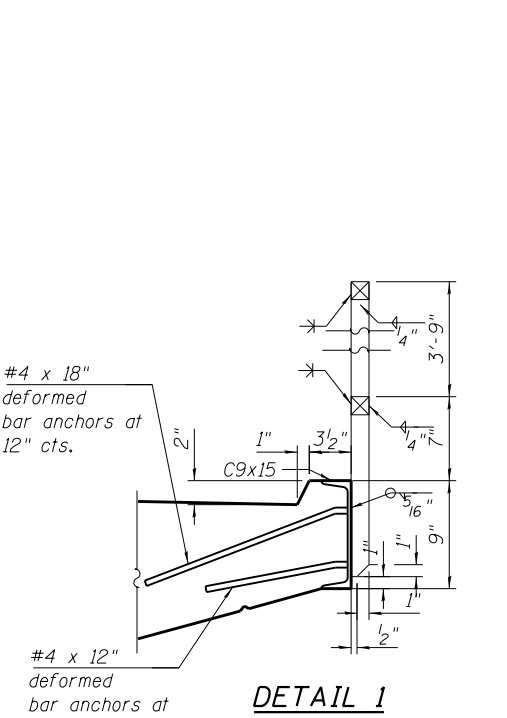
* Cost Included with Steel Railing (Special)



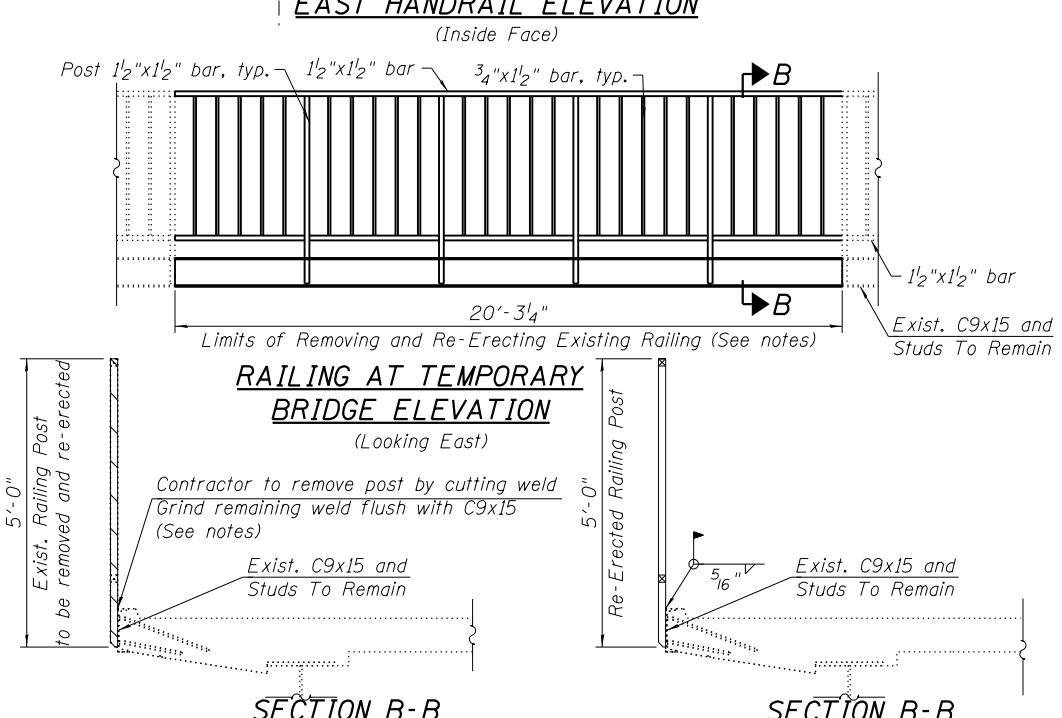
EAST HANDRAIL ELEVATION
(Inside Face)



SECTION A-A



SECTION B-B (Removal)



SECTION B-B (Re-Erection)

- NOTES:**
- The post to Channel welds shall be ground flush after removal of existing railing. extreme caution should be taken to avoid damaging the posts and channel during the removal process to allow for welding of the posts to the channel during the re-erection. Any damage to portions of the railing to be re-used during the removal and/or re-erection process shall be repaired by the contractor to the satisfaction of the Commissioner at no cost to the Department.
 - The Contractor shall exercise extreme caution during the removal and re-erection processes. Any damage to the railing components to be removed and re-erected, railing components to remain, or existing reinforced concrete deck to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Commissioner, at no cost to the Department.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	21
STEEL RAILING (SPECIAL)	FOOT	119

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USER NAME = fadl.alsharif	DESIGNED - JJS, FA	REVISD -
	CHECKED - MAI	REVISD -
PLOT SCALE = N.T.S.	DRAWN - FA	REVISD -
PLOT DATE = 6/23/2017	CHECKED - MAI	REVISD -

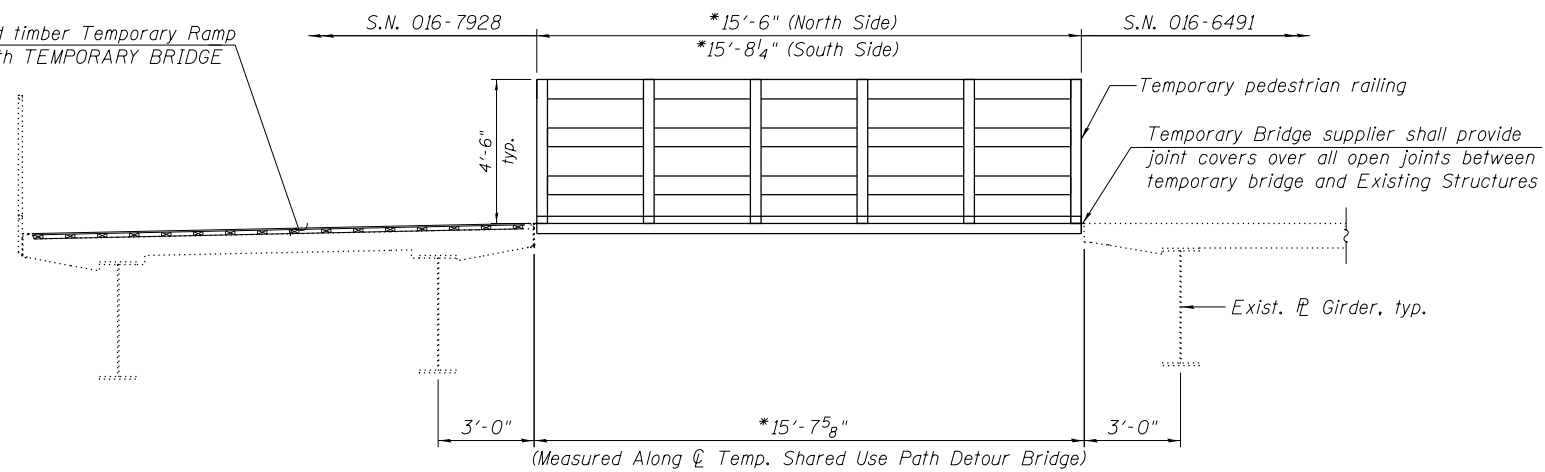
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STEEL RAILING DETAILS
(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-9
CDOT PROJECT NO. E-6-650			388 OF 411

** Pressure-treated timber Temporary Ramp
Cost included with TEMPORARY BRIDGE



ELEVATION
(Looking South)

* Contractor shall verify span length before fabrication.

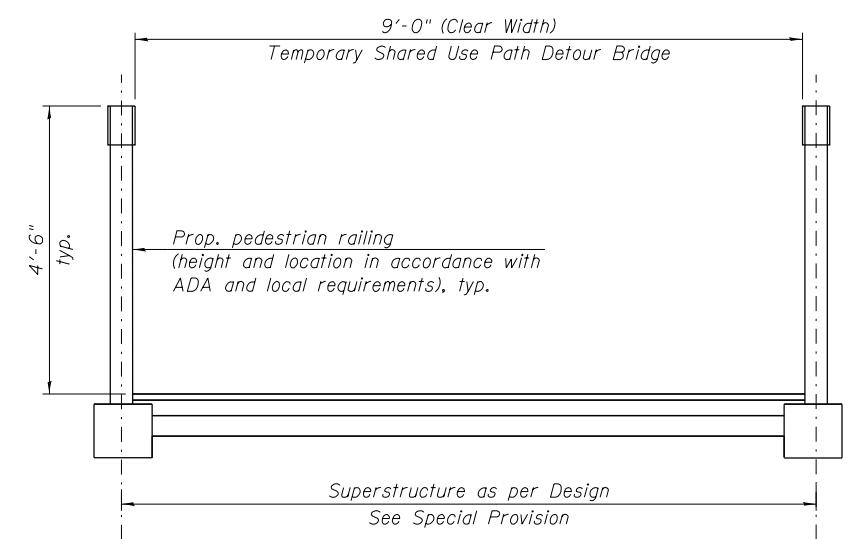
** The Contractor may, at his/her option and as approved by the Commissioner, propose an alternative method to accommodate the 2" elevation difference between S.N. 016-1405 top of deck and top of curb. All such alternatives shall be designed and installed in accordance with ADA and CDOT requirements.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges 17th Edition
1997 AASHTO Guide Specifications for Design of Pedestrian Bridges

LOADING

Uniform Live Load of 100psf



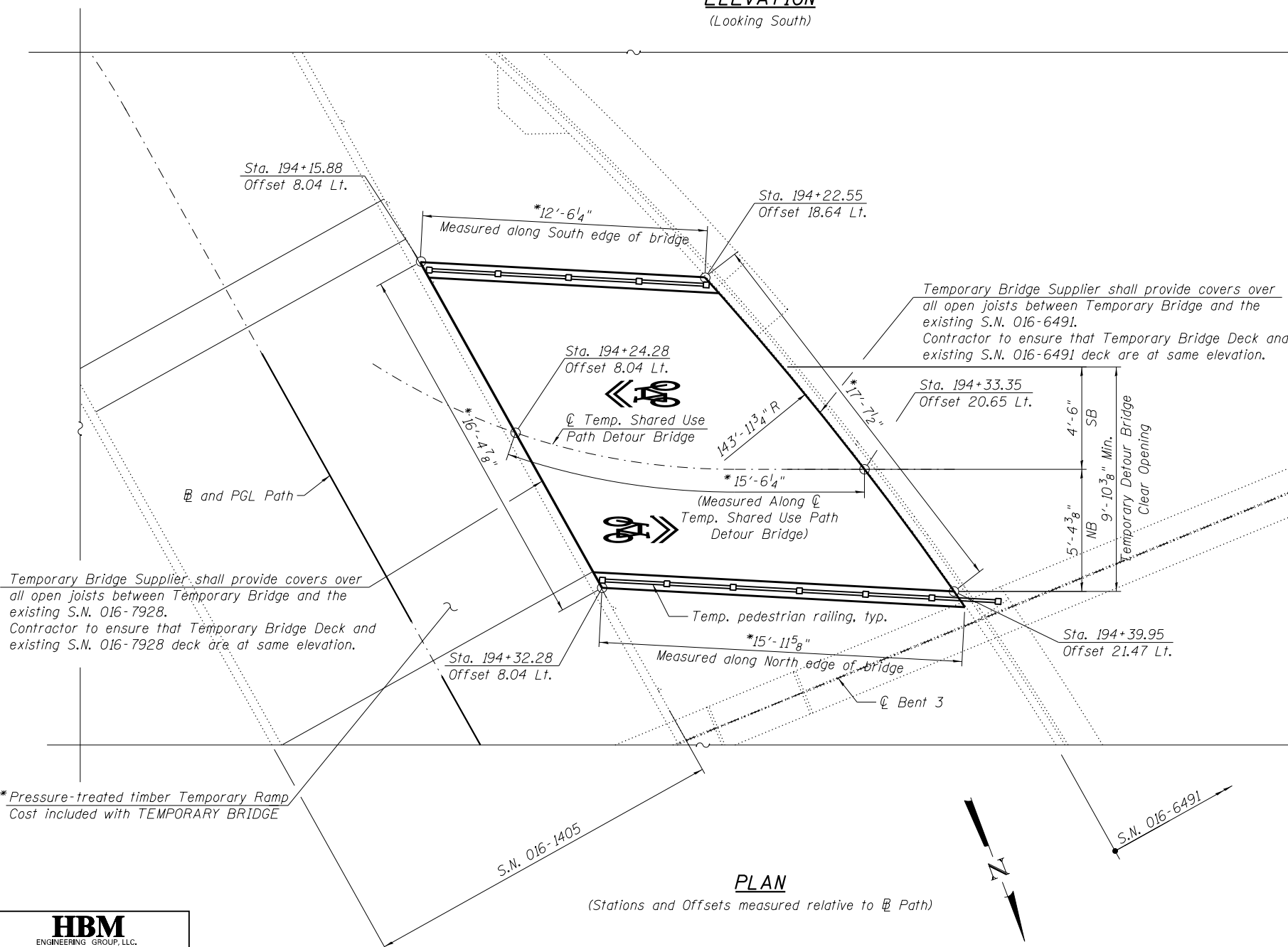
CROSS SECTION

CONSTRUCTION SEQUENCE:

1. Relocate S.N. 016-6491 existing traffic signal pole and remove parapet within the limits indicated on Sheet S1-5 .
2. Remove S.N. 016-7928 railing within the limits indicated on Sheet S2-3.
3. Construct Temporary Shared Use Path Detour Bridge and associated pressure-treated timber temporary ramp.
4. Remove Temporary Shared Use Path Detour Bridge and associated pressure-treated timber temporary ramp.
5. Re-erect railing on S.N. 016-7928.
6. Remove S.N. 016-6491 concrete deck within the limits indicated on Sheet S1-5 .
7. Reconstruct concrete deck and parapet on S.N. 016-6491 as per the details included on Sheet S1-5 .
8. Install traffic signal.

NOTES:

1. The Temporary Shared Use Path Detour Bridge shall be supported on the fascia girders of S.N. 016-7928 and S.N. 016-6491. The construction of temporary bents on City of Chicago Park District property will not be permitted. The Contractor shall submit design calculations for the temporary bridge, signed and sealed by a Structural Engineer licensed in the State of Illinois, to the Commissioner for approval.



PLAN
(Stations and Offsets measured relative to CL Path)

** Pressure-treated timber Temporary Ramp
Cost included with TEMPORARY BRIDGE

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
TEMPORARY BRIDGE	L SUM	1

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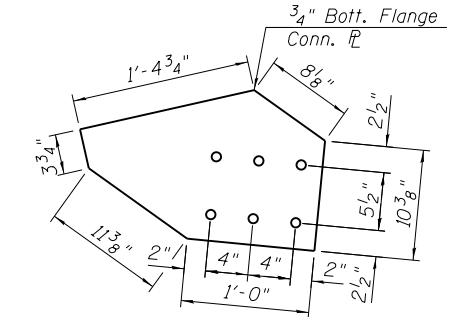
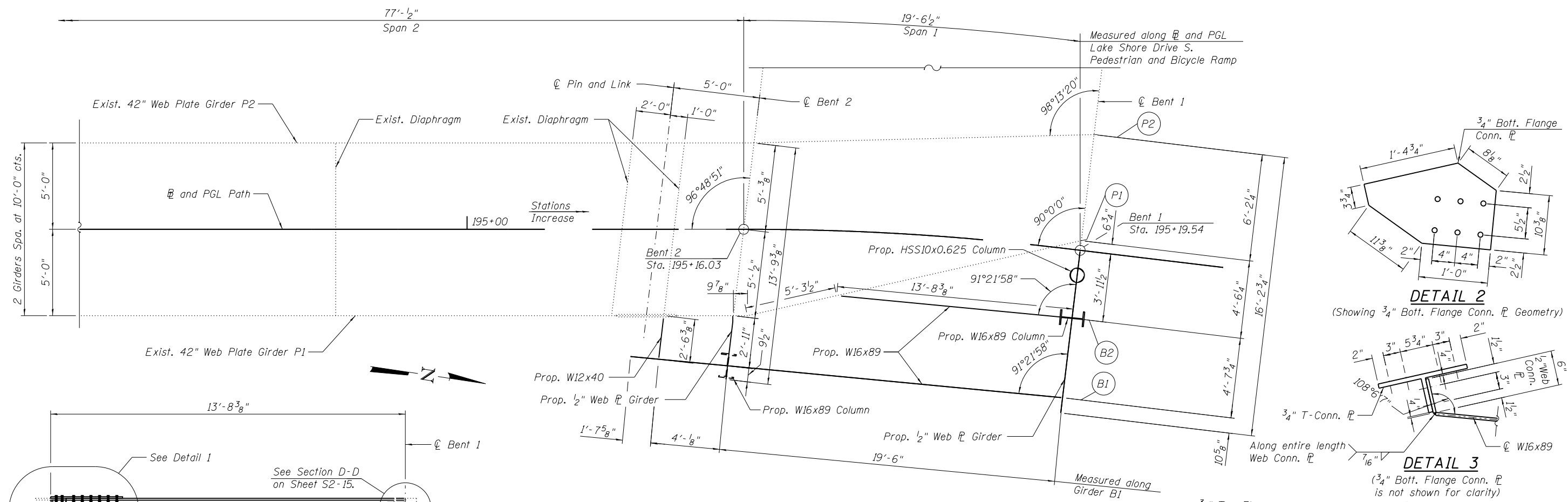
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	CHECKED - MAI	REVISED -
PLOT SCALE = N.T.S.	DRAWN - FA	REVISED -
PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

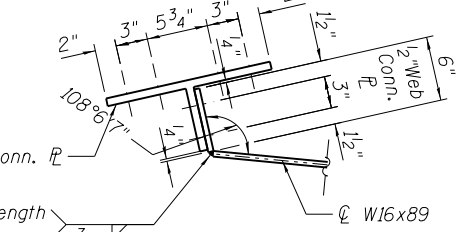
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**TEMPORARY SHARED USE PATH DETOUR BRIDGE
PLAN AND ELEVATION
(STRUCTURE NO. 016-7928)**

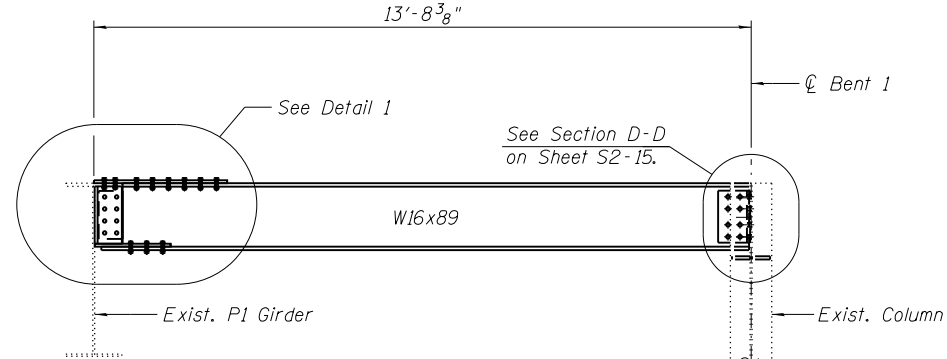
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-10
CDOT PROJECT NO. E-6-650			389 OF 411



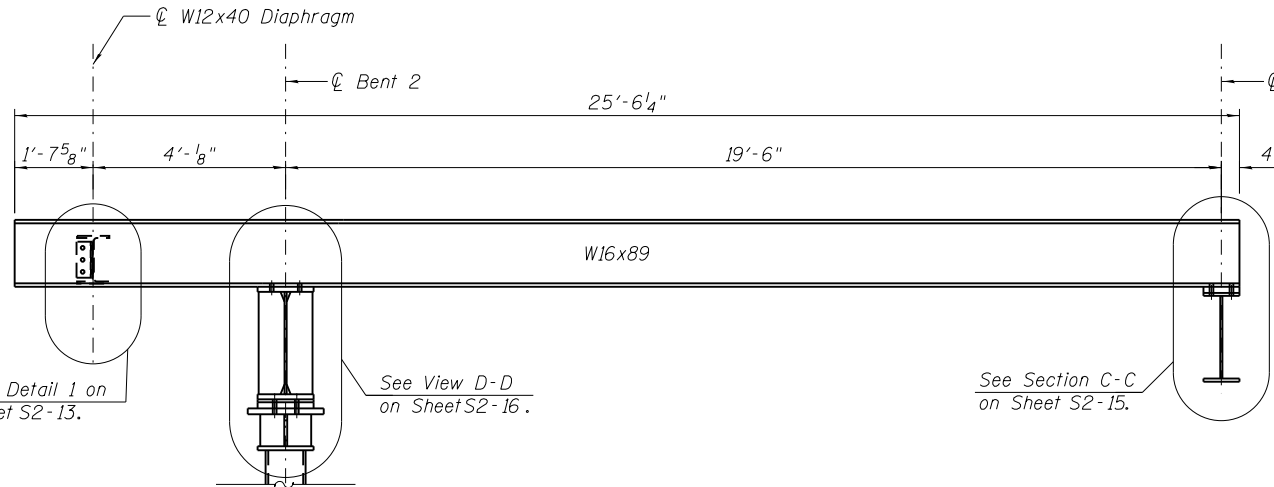
DETAIL 2
(Showing 3/4" Bott. Flange Conn. Geometry)



DETAIL 3
(3/4" Bott. Flange Conn. is not shown for clarity)

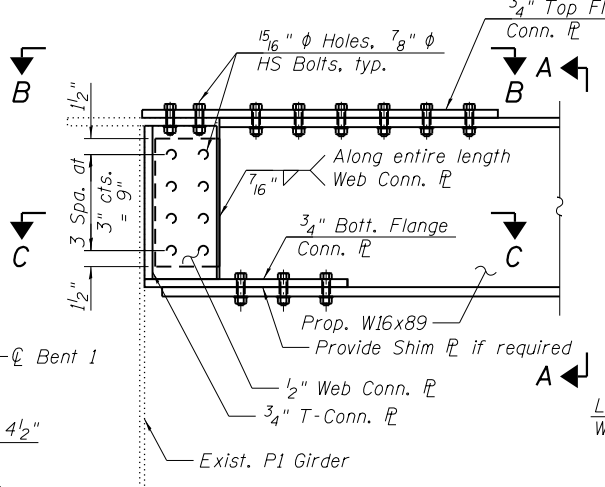


BEAM ELEVATION B2

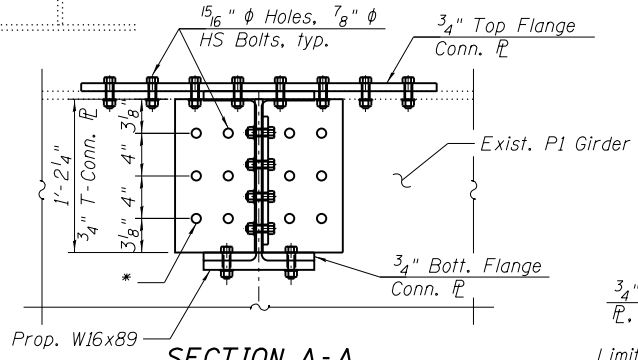


BEAM ELEVATION B1

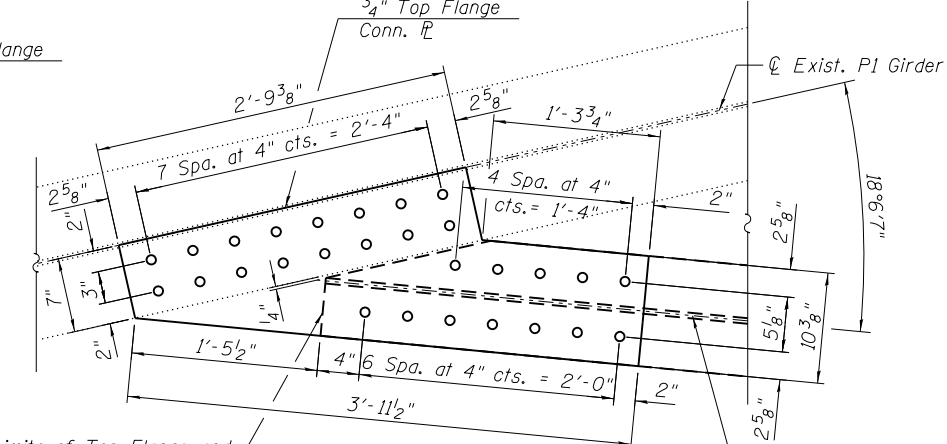
PARTIAL FRAMING PLAN



DETAIL 1

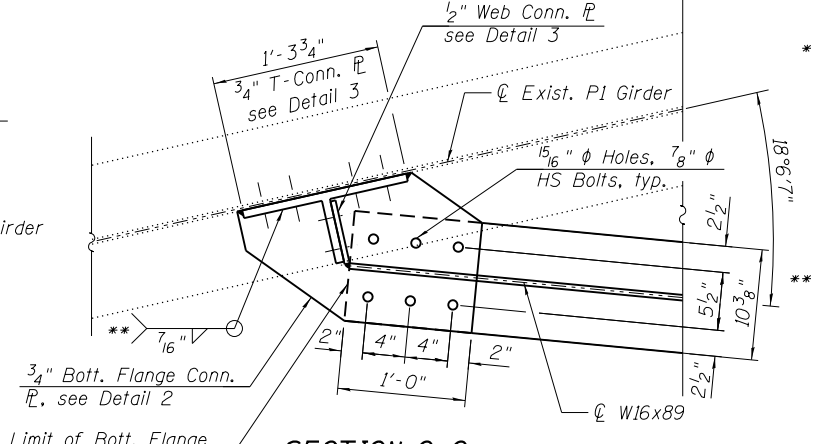


SECTION A-A



SECTION B-B

Limits of Top Flange and Web for prop. W16x89



SECTION C-C

Limit of Bott. Flange for prop. W16x89

* Drill in field holes into the existing P1 Girder to match the shop drilled holes in the 3/4" T-Connection. Cost included with FURNISHING AND ERECTING STRUCTURAL STEEL.

** Weld used to connect the 3/4" Bottom Flange Connection with the 3/4" T-Connection.

NOTES:

- For Bill of Material, proposed bracket support and W12x40 diaphragm sections and details, see Sheet S2-13.

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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

FRAMING PLAN AND GIRDER ELEVATIONS
(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-11
CDOT PROJECT NO. E-6-650			390 OF 411

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EXISTING GIRDER P1 MOMENT TABLE								
		0.4 Sp. 1	Bent 2	0.6 Sp. 2	Bent 3	0.4 Sp. 3	Bent 4	0.6 Sp. 4
I_s	(in ⁴)	12,297	12,297	12,297	13,962	13,962	12,297	12,297
$I_c(n)$	(in ⁴)	-	-	-	-	-	-	-
$I_c(3n)$	(in ⁴)	-	-	-	-	-	-	-
S_s	(in ³)	565	565	565	638	638	565	565
$S_c(n)$	(in ³)	-	-	-	-	-	-	-
$S_c(3n)$	(in ³)	-	-	-	-	-	-	-
Z	(in ³)	642	642	642	718	718	642	642
ϕ	(k/')	0.69	0.69	1.10	0.88	0.88	0.94	0.88
$M\phi$	('k)	117	195	497	461	54	220	232
$s\phi$	(k/')	-	-	-	-	-	-	-
$M_s\phi$	('k)	-	-	-	-	-	-	-
M_t	('k)	121	154	497	569	105	246	246
M_{IM}	('k)	-	-	-	-	-	-	-
$^5_3 [M_t + I]$	('k)	202	257	828	948	175	410	411
M_a	('k)	414	587	1,723	1,832	298	818	836
M_u	('k)	1,926	1,926	1,926	2,154	2,154	1,926	1,926
$f_s \phi$ non-comp	(ksi)	2.48	4.14	10.57	8.66	1.02	4.67	4.94
$f_s \phi$ (comp)	(ksi)	-	-	-	-	-	-	-
$f_s ^5_3 [M_t + M_I]$	(ksi)	4.29	5.46	17.58	17.84	3.29	8.70	8.72
f_s (Overload)	(ksi)	6.77	9.60	28.14	26.50	4.31	13.37	13.65
f_s (Total)	(ksi)	-	-	-	-	-	-	-
VR	(k)	-	-	-	-	-	-	-

EXISTING GIRDER P1 REACTION TABLE						
		Bent 1	Bent 2	Bent 3	Bent 4	Bent 5
$R\phi$	(k)	2.59	59.47	77.5	54.64	21.66
R_t	(k)	7.06	47.51	67.70	49.29	20.00
R_I	(k)	0.00	0.00	0.00	0.00	0.00
R_{Total}	(k)	9.65	106.98	145.2	103.93	41.66

PROPOSED GIRDER B1 MOMENT TABLE			
		0.4 Sp. 1	Bent 2
I_s	(in ⁴)	1,300	1,300
$I_c(n)$	(in ⁴)	-	-
$I_c(3n)$	(in ⁴)	-	-
S_s	(in ³)	155	155
$S_c(n)$	(in ³)	-	-
$S_c(3n)$	(in ³)	-	-
Z	(in ³)	175	175
ϕ	(k/')	0.48	0.48
$M\phi$	('k)	26	10
$s\phi$	(k/')	-	-
$M_s\phi$	('k)	-	-
M_t	('k)	21	13
M_{IM}	('k)	-	-
$^5_3 [M_t + I]$	('k)	35	22
M_a	('k)	80	42
M_u	('k)	729	729
$f_s \phi$ non-comp	(ksi)	2.01	0.78
$f_s \phi$ (comp)	(ksi)	-	-
$f_s ^5_3 [M_t + M_I]$	(ksi)	2.74	1.71
f_s (Overload)	(ksi)	4.74	2.49
f_s (Total)	(ksi)	-	-
VR	(k)	-	-

PROPOSED GIRDER B2 MOMENT TABLE		
		0.4 Sp. 1
I_s	(in ⁴)	1,300
$I_c(n)$	(in ⁴)	-
$I_c(3n)$	(in ⁴)	-
S_s	(in ³)	155
$S_c(n)$	(in ³)	-
$S_c(3n)$	(in ³)	-
Z	(in ³)	175
ϕ	(k/')	0.42
$M\phi$	('k)	10
$s\phi$	(k/')	-
$M_s\phi$	('k)	-
M_t	('k)	8
M_{IM}	('k)	-
$^5_3 [M_t + I]$	('k)	14
M_a	('k)	30
M_u	('k)	729
$f_s \phi$ non-comp	(ksi)	0.77
$f_s \phi$ (comp)	(ksi)	-
$f_s ^5_3 [M_t + M_I]$	(ksi)	1.05
f_s (Overload)	(ksi)	1.81
f_s (Total)	(ksi)	-
VR	(k)	-

PROPOSED GIRDER B1 REACTION TABLE			
		Bent 1	Bent 2
$R\phi$	(k)	5.82	10
R_t	(k)	4.40	9.06
R_I	(k)	0.00	0.00
R_{Total}	(k)	10.22	19.06

PROPOSED GIRDER B2 REACTION TABLE			
		Bent 1	Girder P1
$R\phi$	(k)	3.11	2.66
R_t	(k)	2.62	2.11
R_I	(k)	0.00	0.00
R_{Total}	(k)	5.73	4.77

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in⁴ and in³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in⁴ and in³).

Z: Plastic Section Modulus of the steel section in non-composite areas (in³).

ϕ : Un-factored non-composite dead load (kips/ft.).

$M\phi$: Un-factored moment due to non-composite dead load (kip-ft.).

$s\phi$: Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s\phi$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_t : Un-factored live load moment (kip-ft.).

M_I : Un-factored moment due to impact (kip-ft.).

M_a : Factored design moment (kip-ft.).
 $1.3 [M\phi + M_s\phi + \frac{5}{3} (M_t + M_I)]$

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $M\phi + M_s\phi + \frac{5}{3} (M_t + M_I)$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M\phi + M_s\phi + \frac{5}{3} (M_t + M_I)]$

VR: Maximum ϕ + impact shear range within the composite portion of the span for stud shear connector design (kips).

* Compact section
 ** Braced non-compact and partially braced section

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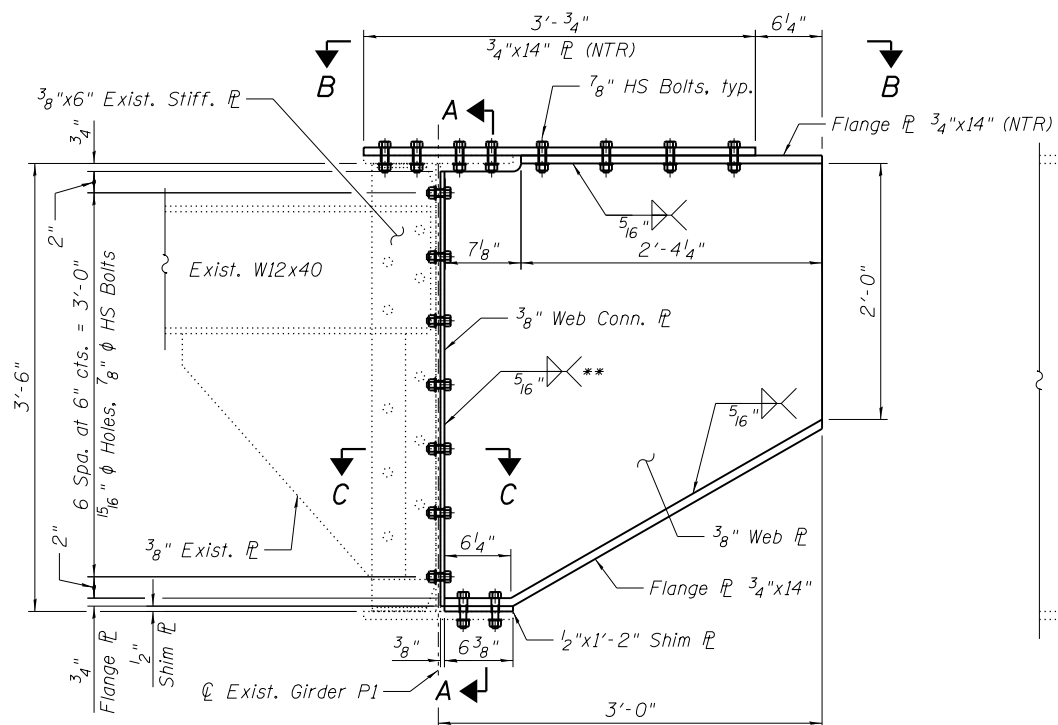
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 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

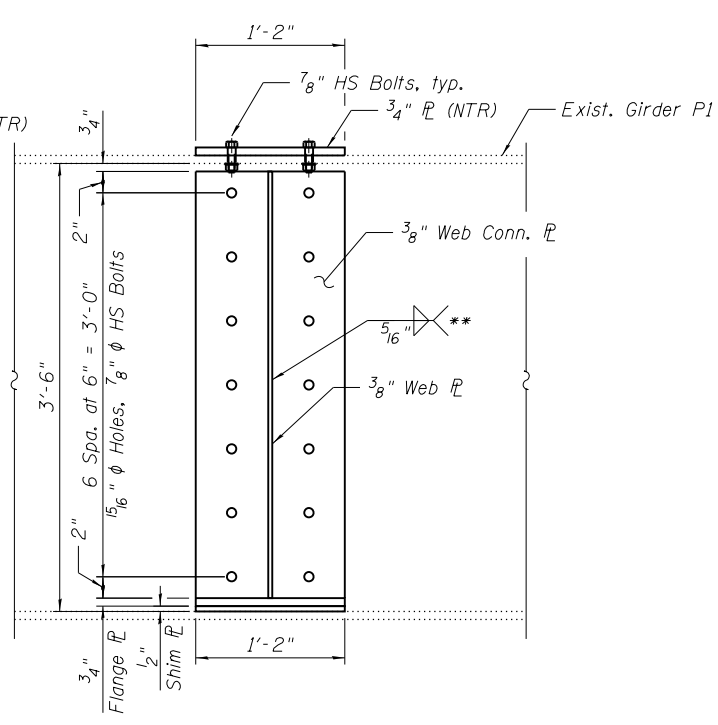
GIRDER AND BEAM
MOMENT AND REACTION TABLES
(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-12
CDOT PROJECT NO. E-6-650			391 OF 411

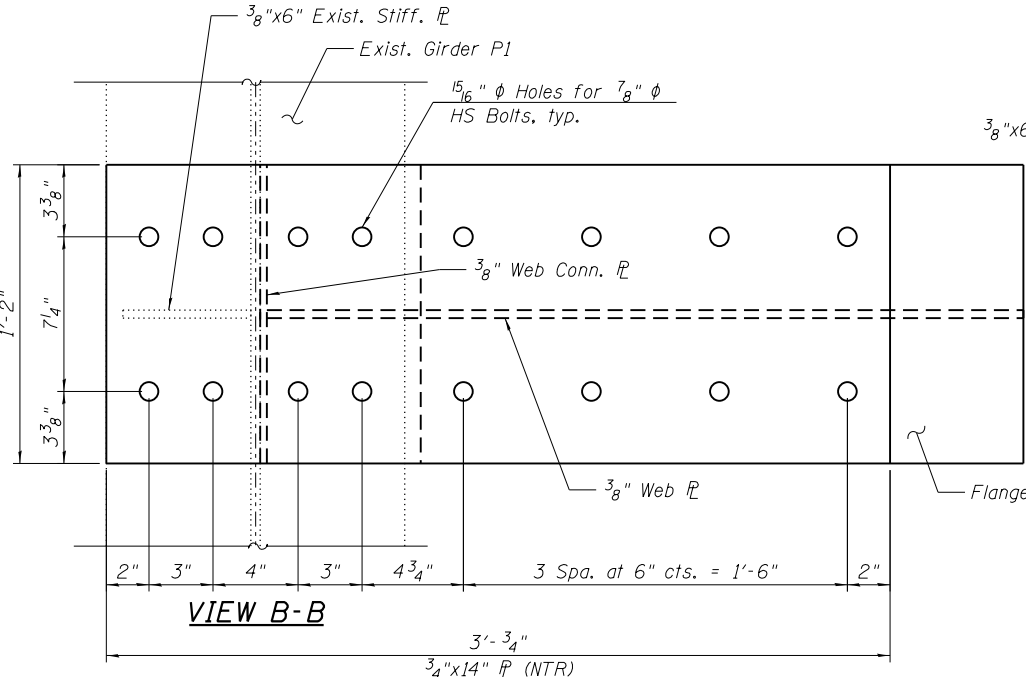
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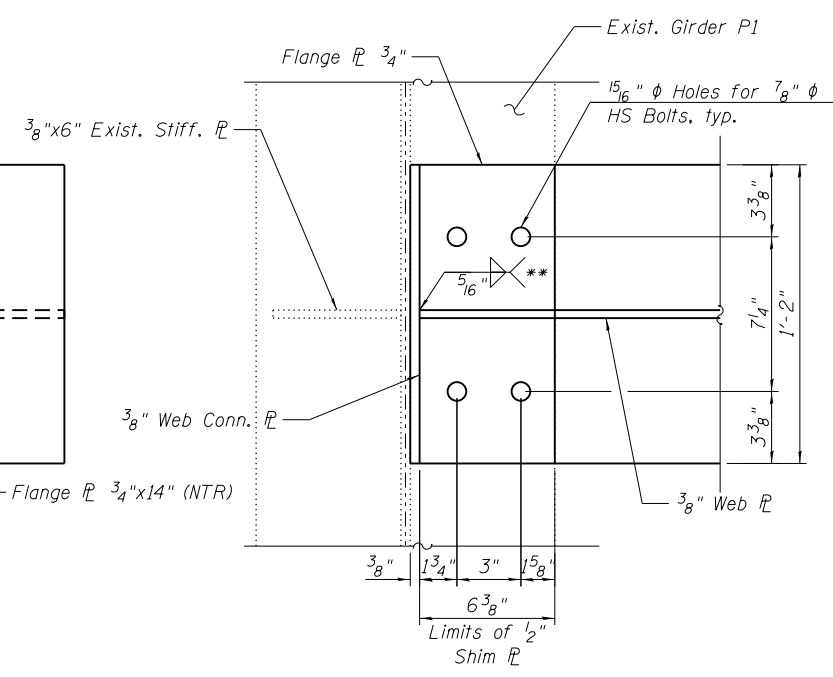
BRACKET SUPPORT AT EXISTING DIAPHRAGM
(See Framing Plan for Exact Location)



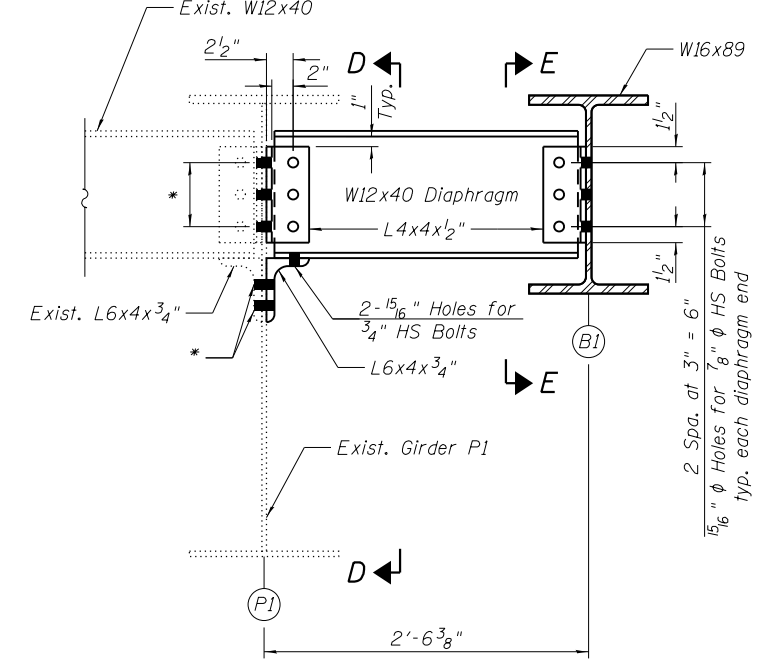
SECTION A-A



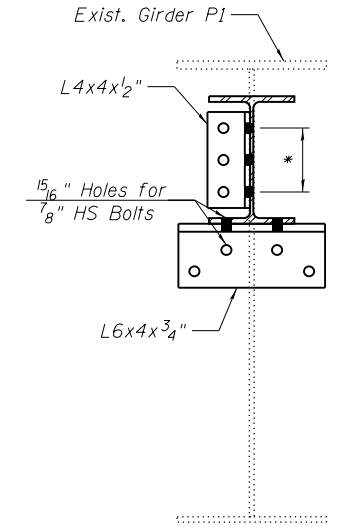
VIEW B-B



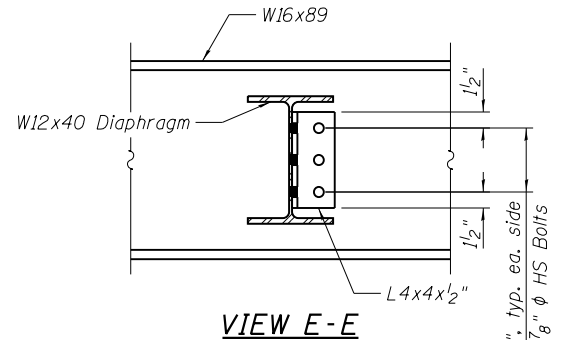
VIEW C-C



DETAIL 1
(Diaphragm Between Existing P1 Girder & Proposed B1 Beam, see Framing Plan for Exact Location)



VIEW D-D



VIEW E-E

* 15/16" ϕ Holes for 7/8" ϕ HS Bolts, holes location should match holes in existing angles and existing Girder P1. Prior drilling holes in the proposed angles, the Contractor shall verify the location of holes in the existing angles and existing Girder P1.
** Terminate weld at bottom such that a 1" clearance is provided to bottom flange.

NOTES:

- Two hardened washers required for each set of oversized holes.
- Any damage to existing elements which are to remain and/or be re-erected shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
- Cost of re-electing existing diaphragm is included with FURNISHING AND ERECTING STRUCTURAL STEEL.
- Load-carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	5,170

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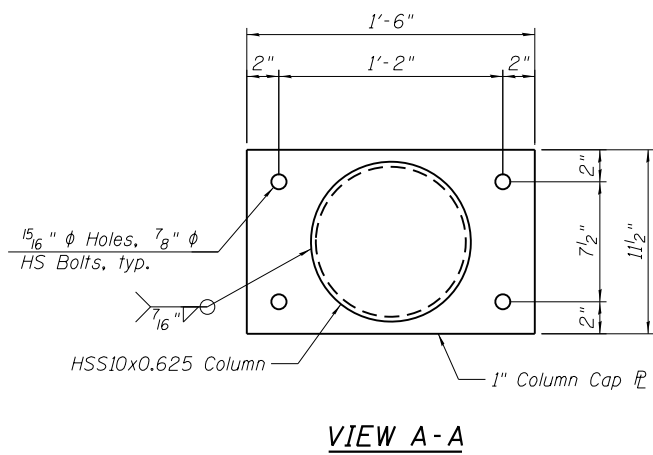
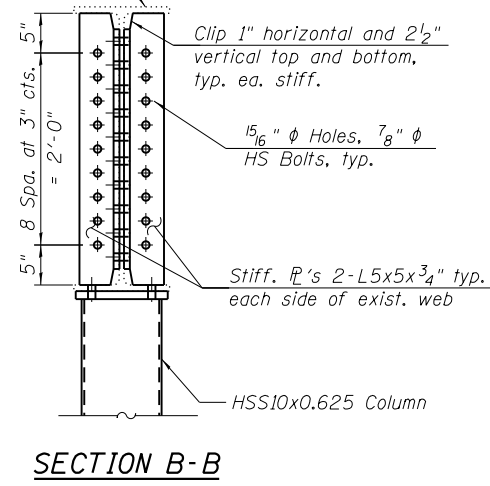
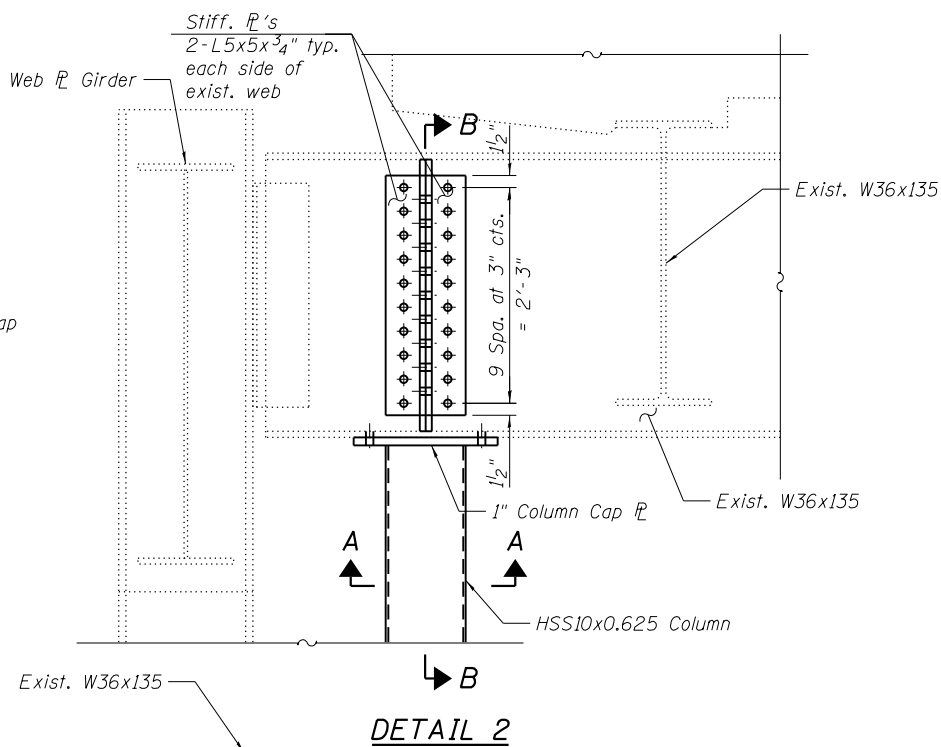
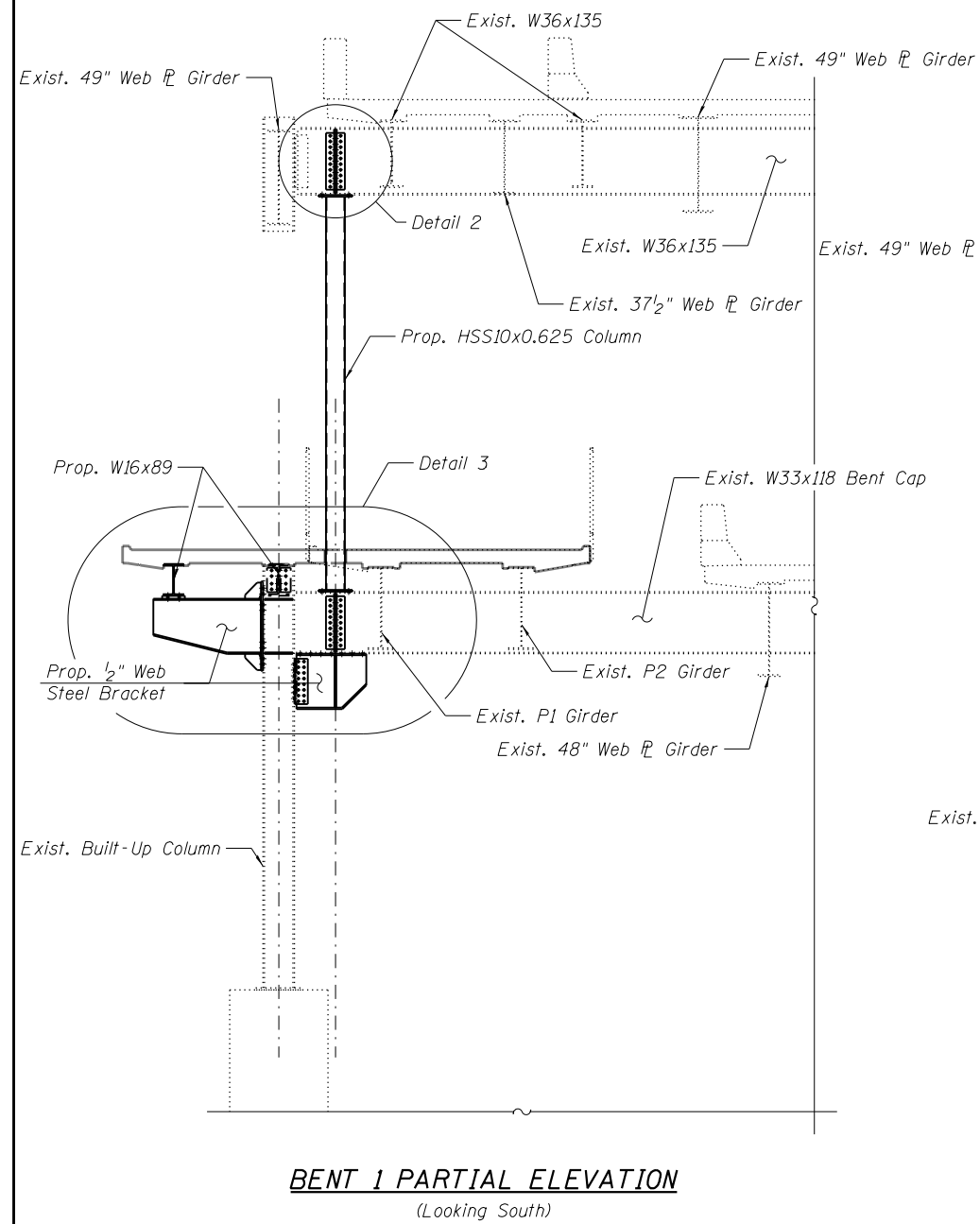
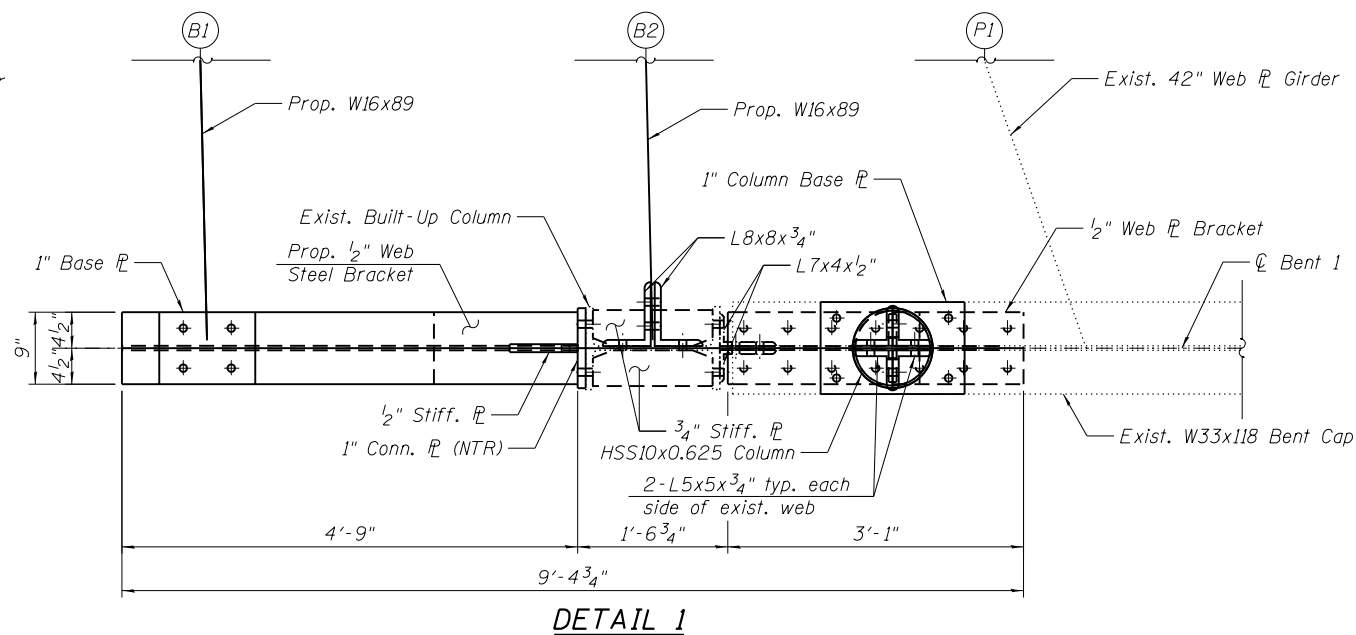
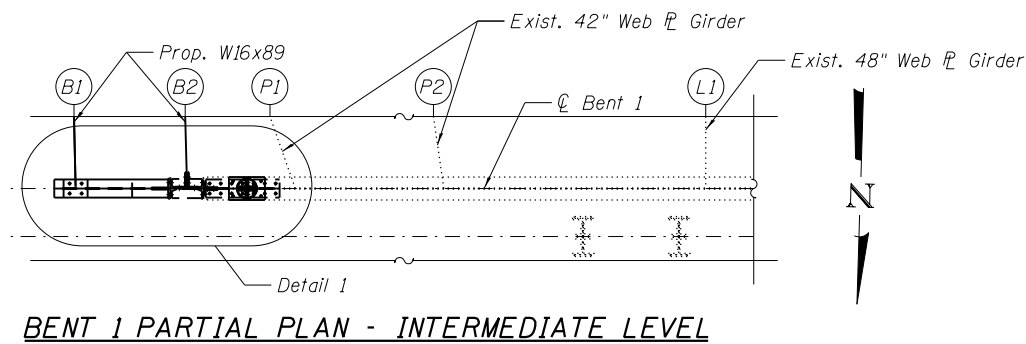
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DEPARTMENT OF TRANSPORTATION
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

DIAPHRAGM AND MISCELLANEOUS STEEL DETAILS
(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-13
CDOT PROJECT NO. E-6-650			392 OF 411



NOTES:

1. For Bill of Material, Detail 3 and additional sections and details, see Sheet S2-15.
2. Two hardened washers required for each set of oversized holes.
3. Any damage to existing elements which are to remain and/or be re-erected shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
4. Cost of drilling thru existing steel is included with FURNISHING AND ERECTING STRUCTURAL STEEL.
5. Cost of provided Shim P's shall be included with FURNISHING AND ERECTING STRUCTURAL STEEL.
6. Load-carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

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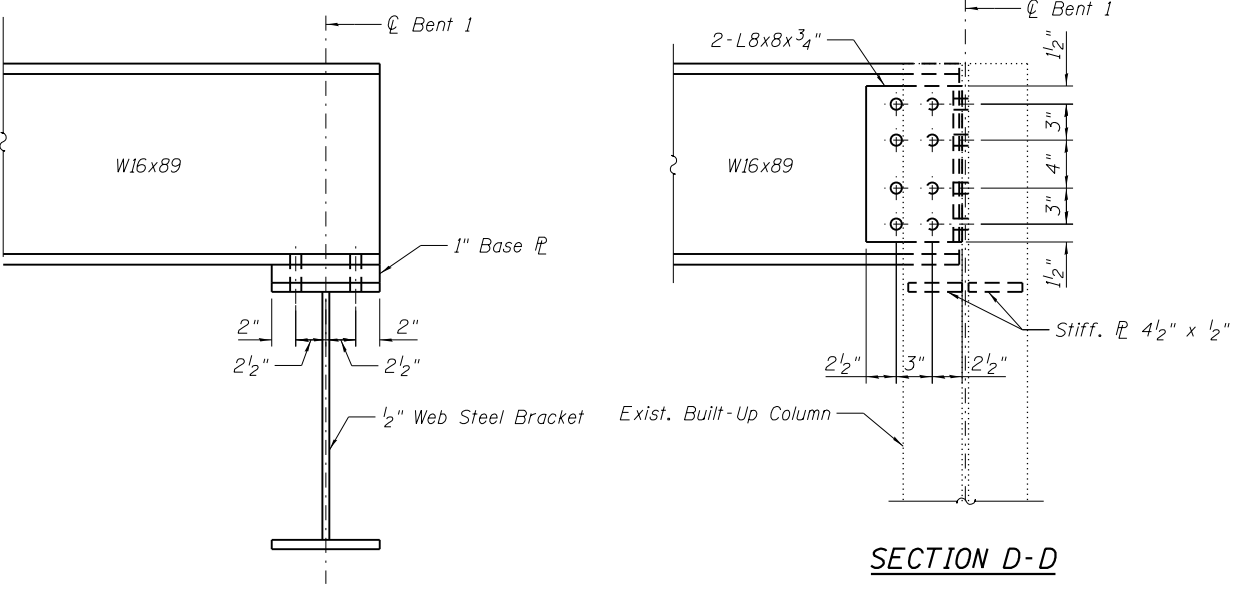
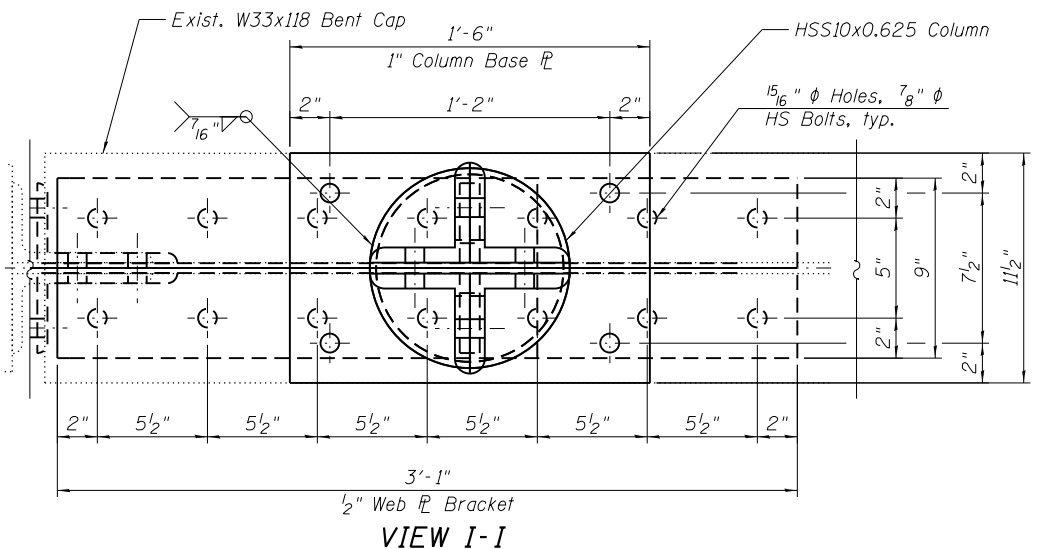
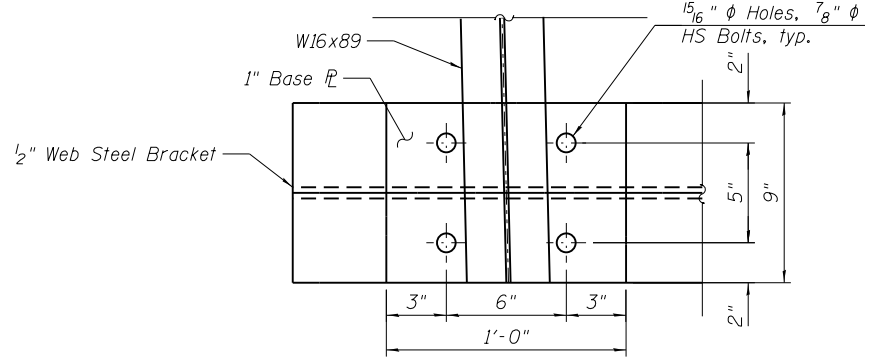
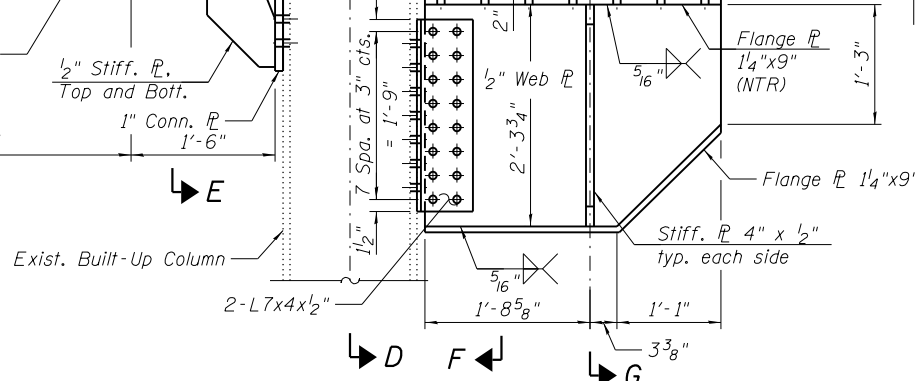
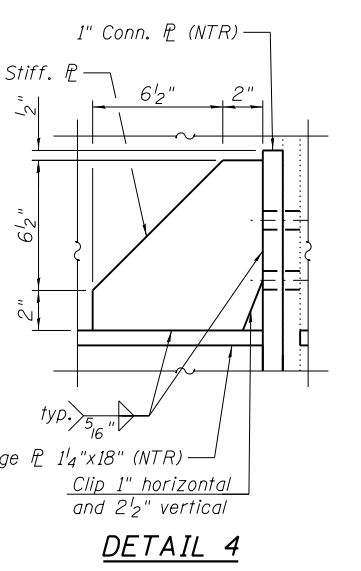
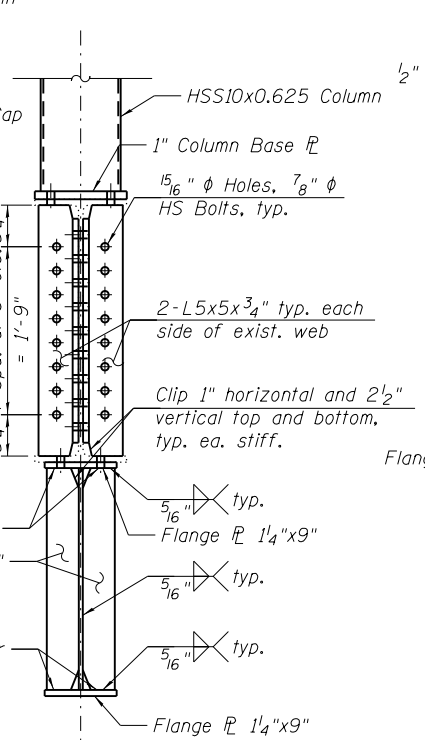
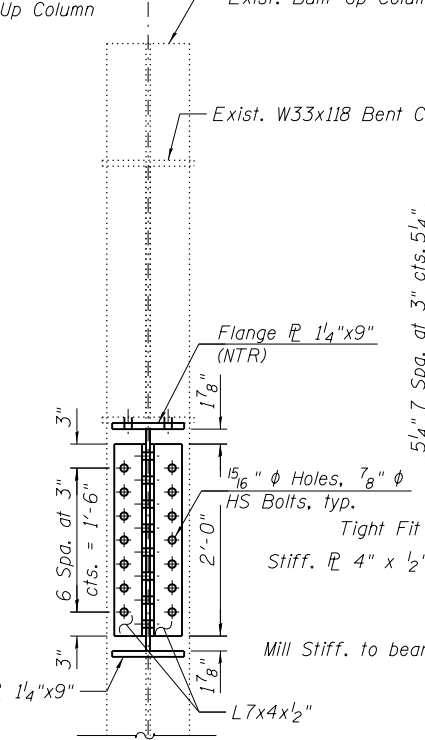
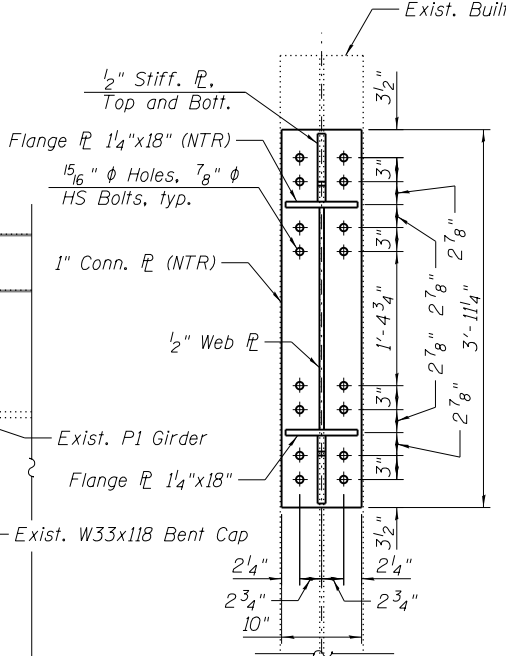
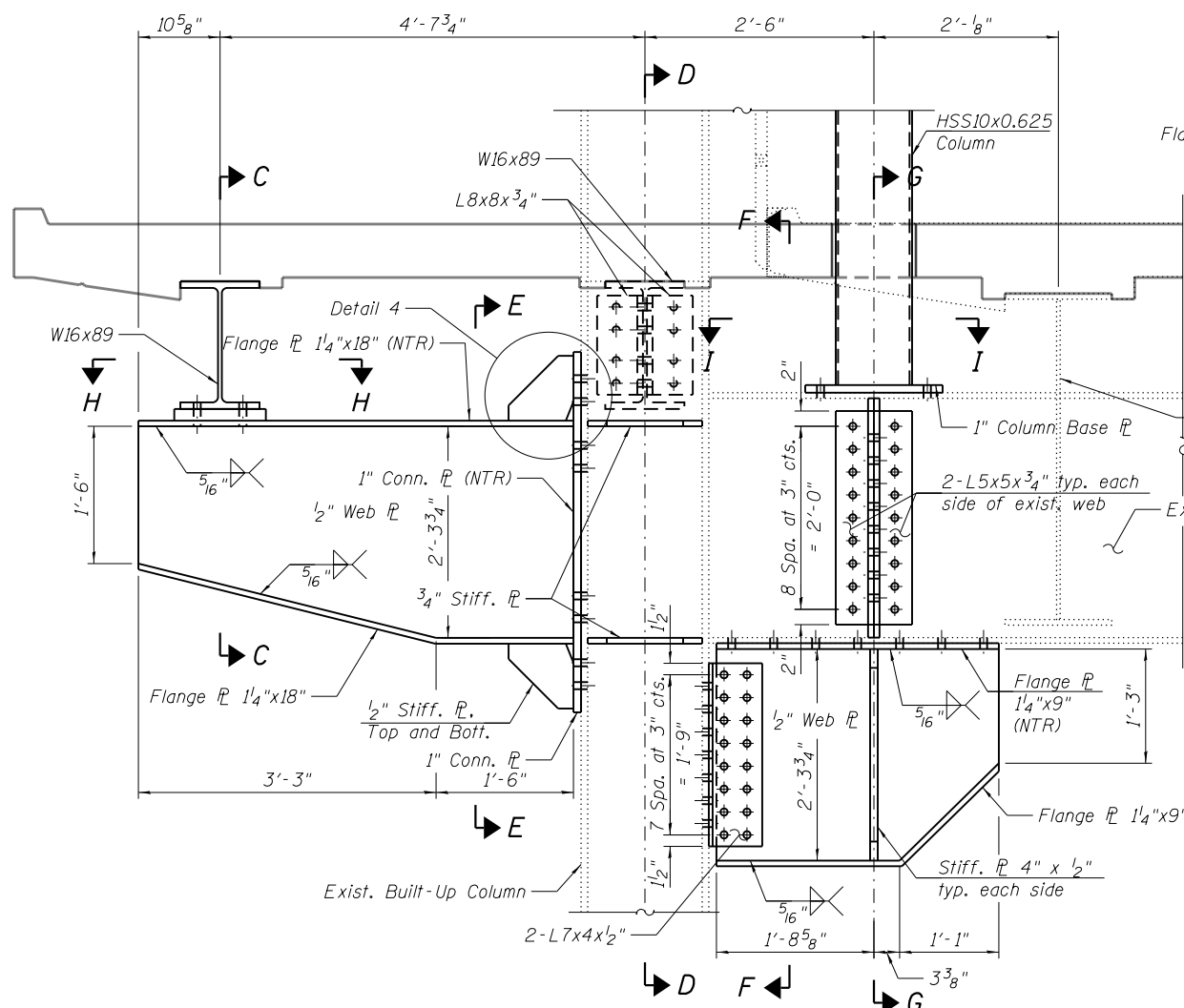
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PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**BENT 1 STEEL MODIFICATION
(SHEET 1 OF 2)
(STRUCTURE NO. 016-7928)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-14
CDOT PROJECT NO. E-6-650			393 OF 411



BILL OF MATERIAL

Item	Unit	Quantity
FURNISHING AND ERECTING	POUND	3,190
STRUCTURAL STEEL		
CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 2	L.SUM	0.6
CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L.SUM	0.5

P:\1606-681 PB-LSD over Chicago River\Sheet Files\016-7928 Pedestrian Ramp\0167928-E0534-S115-Bent1Mod2.dgn 12:33:57 PM

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PLOT SCALE = N.T.S.	DRAWN - FA, MA	REVISED -
PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

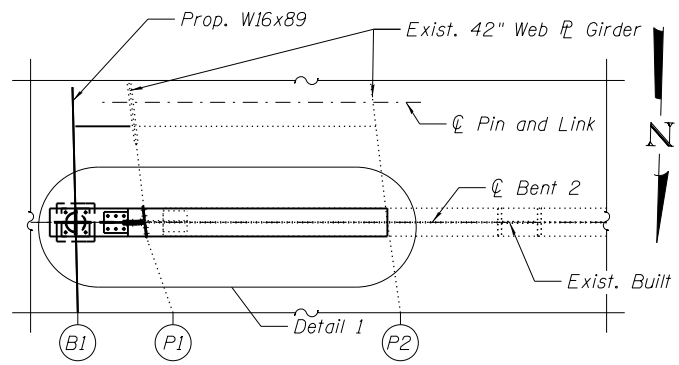
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

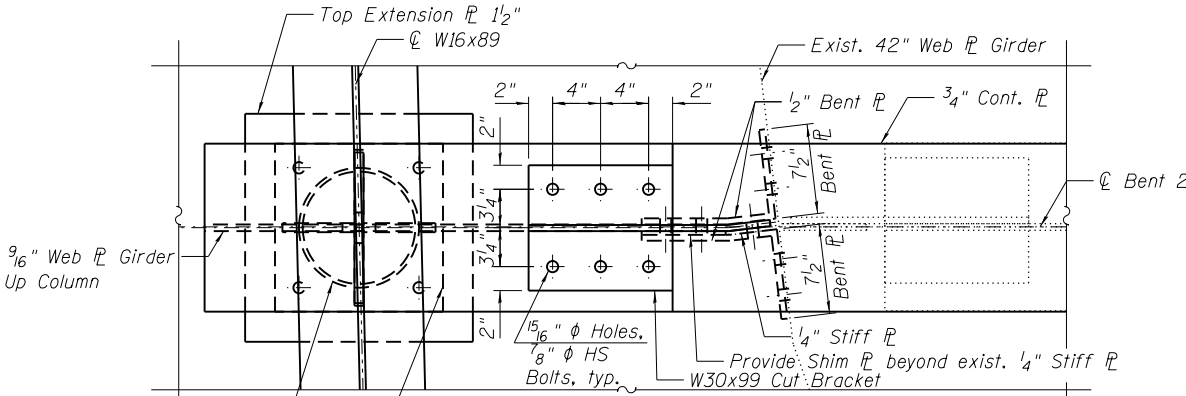
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(SHEET 2 OF 2)
(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-15
CDOT PROJECT NO. E-6-650			394 OF 411

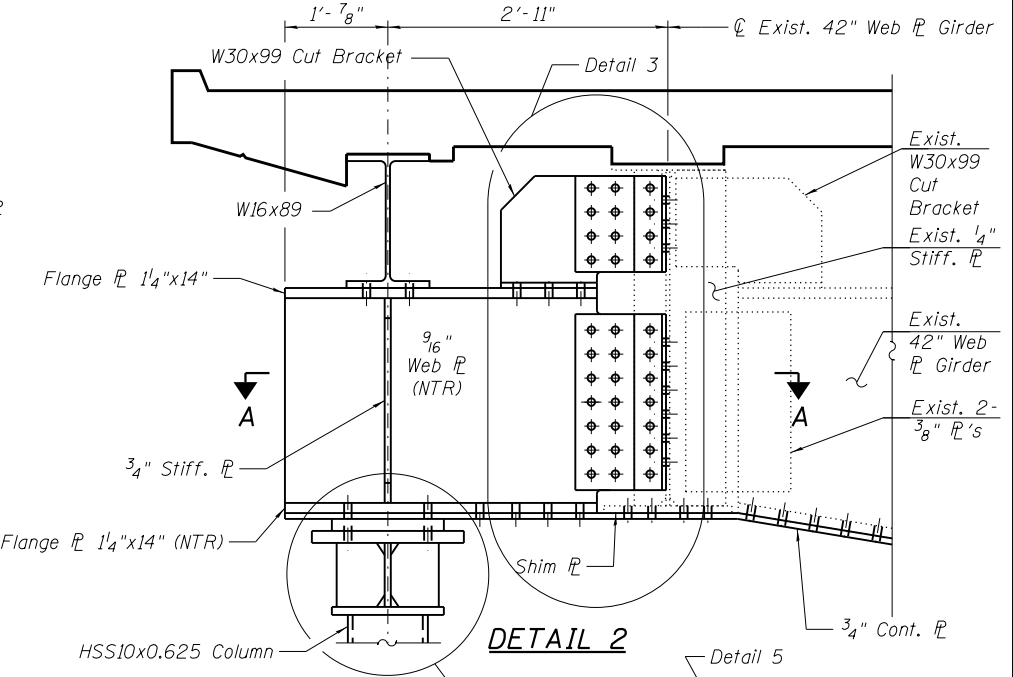
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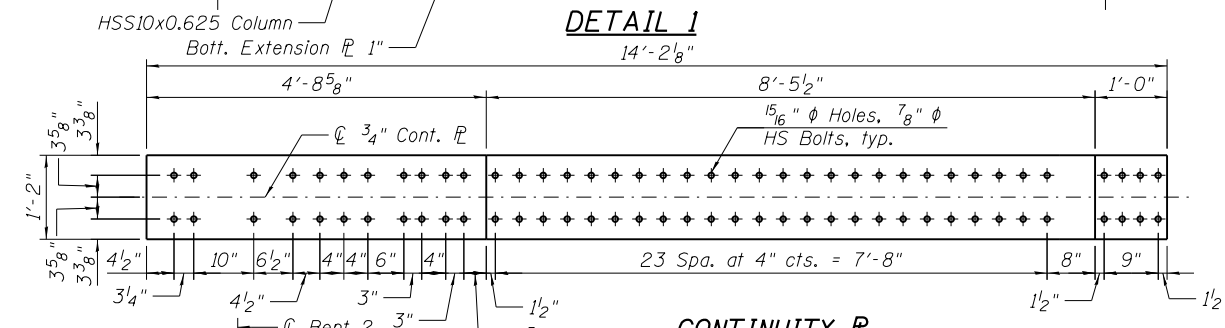
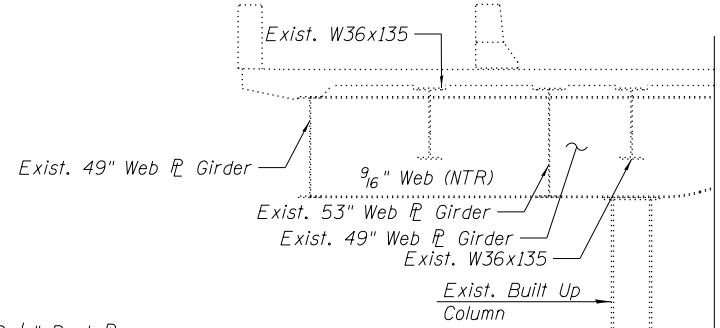
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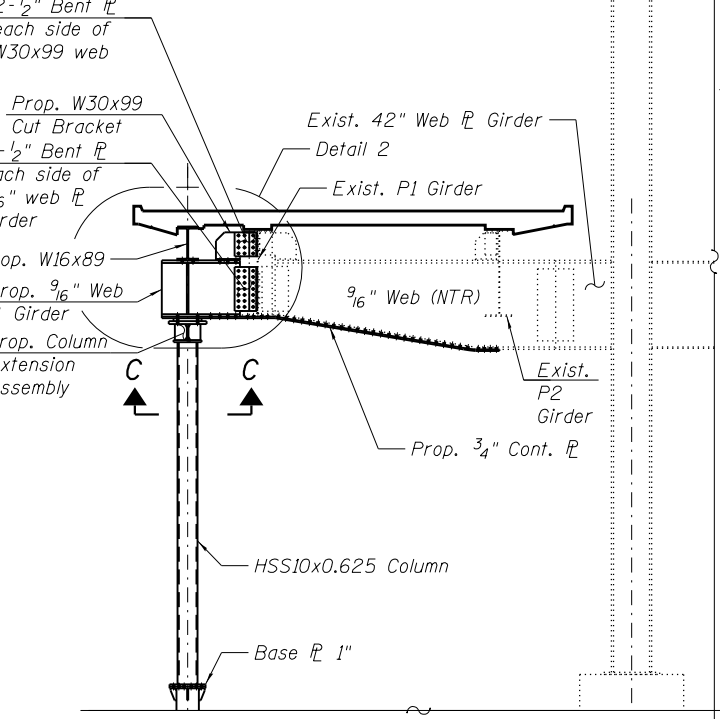
DETAIL 1



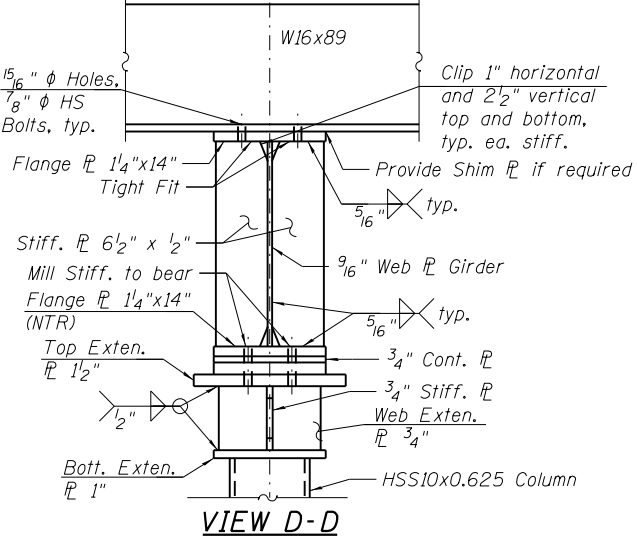
DETAIL 2



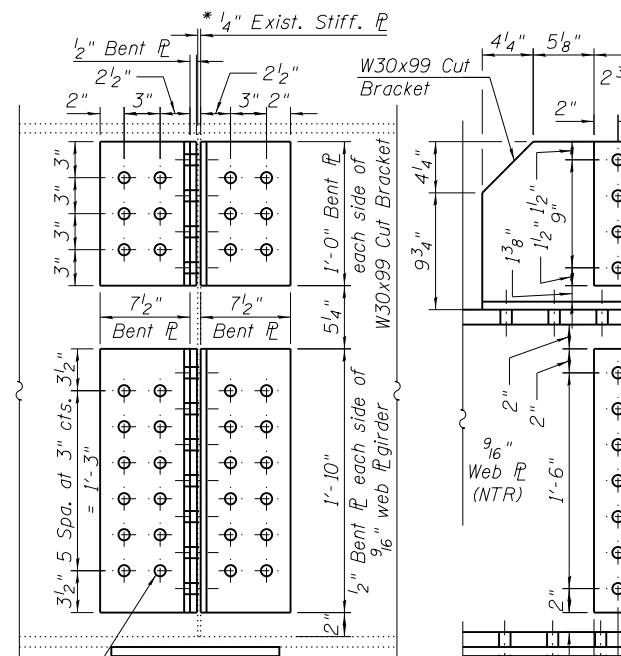
CONTINUITY R



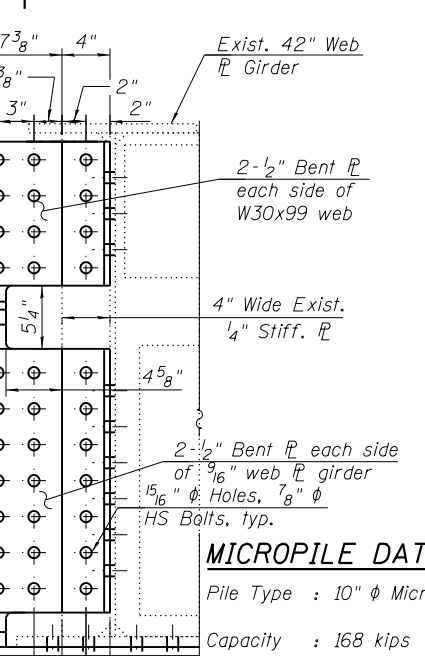
BENT 2 PARTIAL ELEVATION (Looking South)



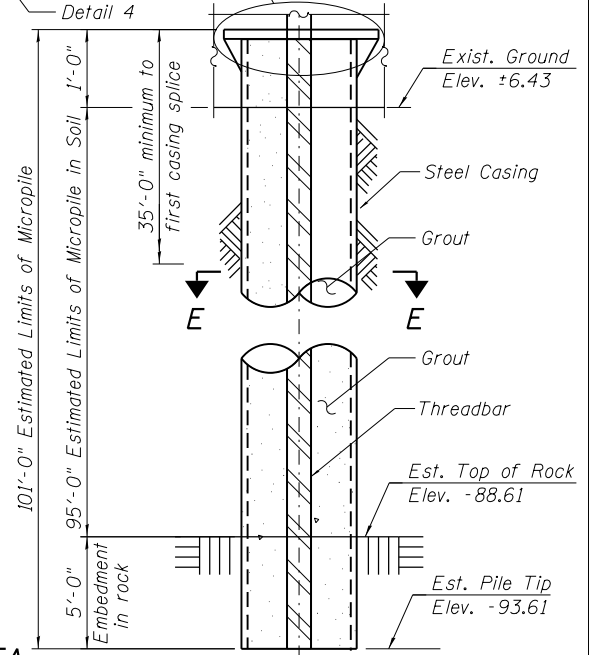
VIEW D-D



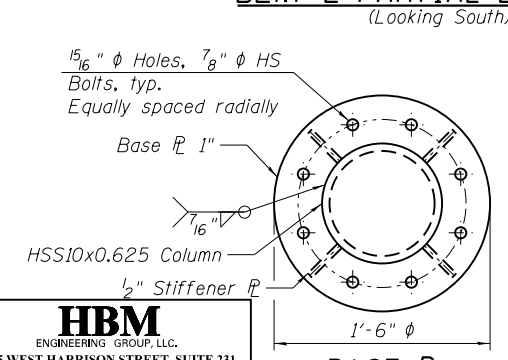
SECTION B-B



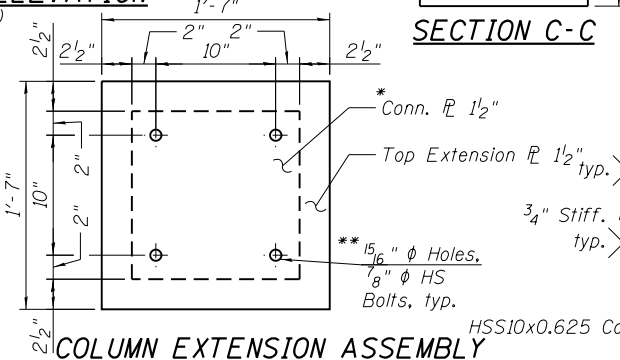
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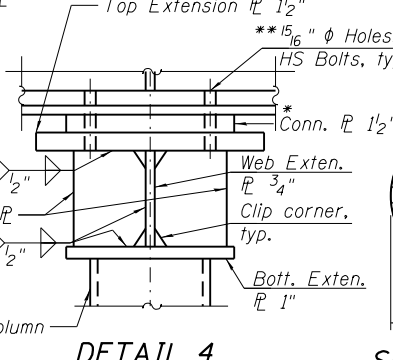
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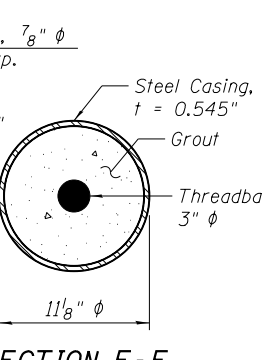
BASE R



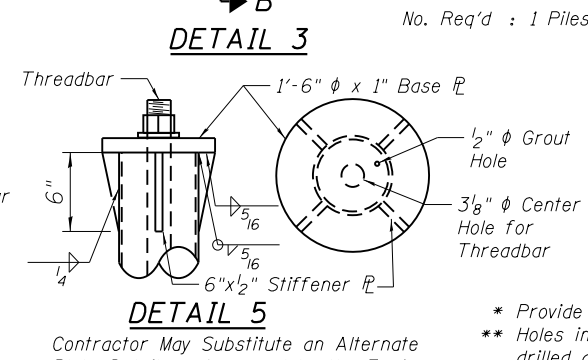
COLUMN EXTENSION ASSEMBLY



DETAIL 4



SECTION E-E



DETAIL 5

MICROPILE DATA:

Pile Type : 10" ϕ Micropile
 Capacity : 168 kips
 Estimated Length : 101'-0"
 No. Req'd : 1 Piles

BILL OF MATERIAL

Item	Unit	Quantity
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3,220
CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 2	L.SUM	0.4
MICRO-PILES	EACH	1
CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L.SUM	0.5

NOTES:

1. Cost of top plates included with Micro-piles.
2. See Special Provision Micropiles for micropile construction and material requirements.
3. For additional notes see Sheet S2-14.

* Provide Shim R if Required.
 ** Holes in top extension R shall be field drilled after verifying the location.

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DESIGNED - MAI	CHECKED - MAI	REVISED -
PLLOT SCALE = N.T.S.	DRAWN - FA, MA	REVISED -
PLLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

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 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER

BENT 2 STEEL MODIFICATION
 (STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-16
CDOT PROJECT NO. E-6-650	395 OF 411		

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PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-17
CDOT PROJECT NO. E-6-650			396 OF 411

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PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

(STRUCTURE NO. 016-7928)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S2-18
CDOT PROJECT NO. E-6-650			397 OF 411

Benchmark: Elev. 27.50' CP4-CRS - Second level, Found chisel "cross" in concrete on pedestrian ramp 40' north of N.E. Bridge Tower.

Existing Structure: Lake Shore Drive-Chicago River to Ogden Slip (S.N. 016-6103) is a five span structure consisting of continuous multiple steel stringers carrying two levels of traffic. The upper Level carries 8 Lanes and the Intermediate Level carries 6 lanes. The superstructure supports a reinforced concrete deck with bituminous overlay. The structure has an overall length of 432 feet and an overall deck width of 214 feet.

Traffic: There are three portals on the intermediate level of the bascule bridge. Each portal will be rehabilitated in three separate stages, and modifications to the bike trail will occur concurrently with the first stage. Vehicular traffic will be shifted from portal to portal. Bicycle and pedestrian traffic will be detoured during construction.

Salvage: No salvage

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification for Highway Bridges, 17th Edition
1997 AASHTO Guide Specifications for Design of Pedestrian Bridges

DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 5,000 psi HPC (SUPERSTRUCTURES)
fy = 60,000 psi (reinforcement)
fy = 50,000 psi (AASHTO M270, Gr. 50)

FIELD UNITS (Existing Construction)
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 50,000 psi (AASHTO M223, Gr. 50)
fy = 36,000 psi (carbon steel)
fy = 45,000 psi (silicon steel)

LOADING (PATH)

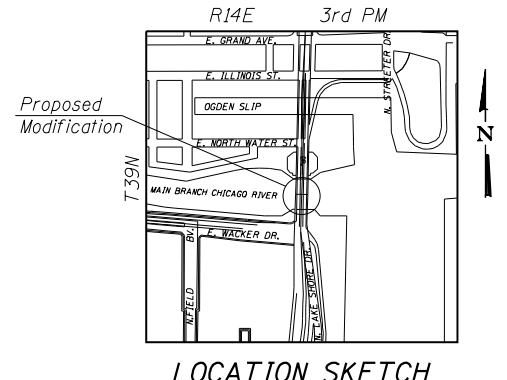
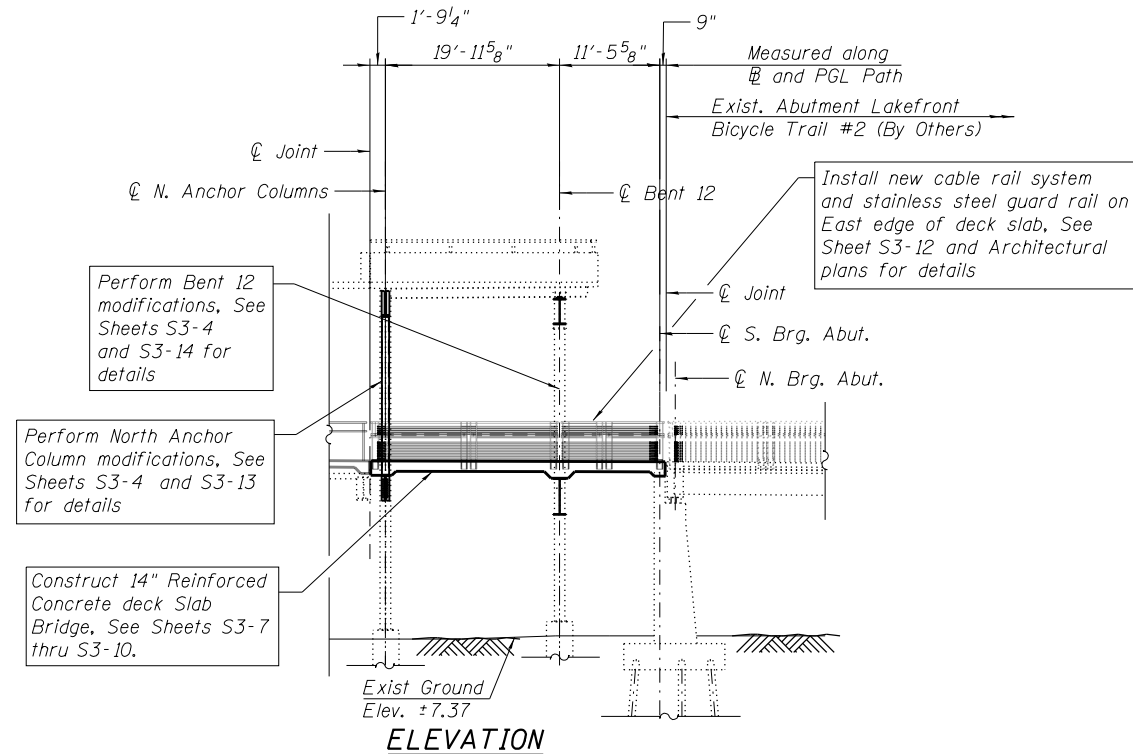
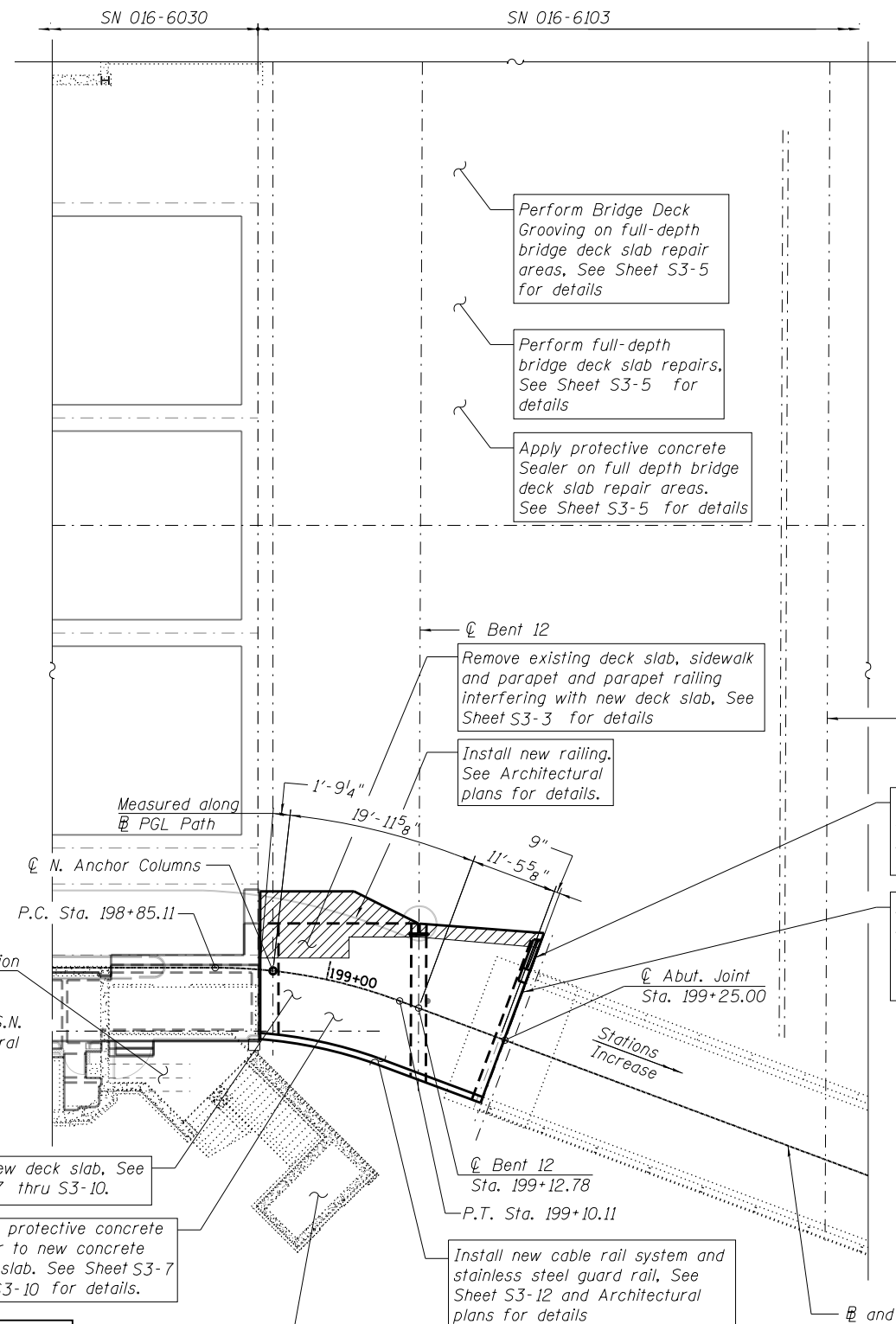
Uniform live load of 100 psf

SEISMIC DATA

Seismic Performance Category (SPC) = A
Horizontal Bedrock Acceleration Coefficient (A) = 0.025g
Site Coefficient (S) = 1.0

NOTES:

1. For General Notes, Index of Sheets, Profile Grade Line, Offset Sketch and Total Bill of Material, see Sheet S3-2.



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NE Stairway Enclosure
See Architectural Plans.

PLAN



Signed Moussa A. Issa
Moussa A. Issa, HBM
Il. Lic. No. 081-005738
Expires 11-30-2017
Date 01/18/2018
For Sheets S3-1 Thru S3-14
(Total of 14 Sheets)

GENERAL PLAN & ELEVATION
LAKE SHORE DRIVE
NORTH PEDESTRIAN AND BICYCLE RAMP
E. HURON ST. TO CHICAGO RIVER
SECTION 00-E0534-00-BR
COOK COUNTY
S.N. 016-6103

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

(STRUCTURE NO. 016-6103)

USER NAME = fadl.alsharif	DESIGNED - JJS	REVISED -
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PLOT DATE = 6/23/2017	DRAWN - FA, LAB	REVISED -
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F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S3-1
CDOT PROJECT NO. E-6-650			398 OF 411

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GENERAL NOTES

- Fasteners shall be ASTM A325 Type 1, hot-dipped galvanized bolts. Bolts 7/8" ϕ , holes 15/16" ϕ , unless otherwise noted.
- Calculated weight of Structural Steel = 11,640 lbs, AASHTO M270 Grade 50.
- All structural steel shall be AASHTO M270 Grade 50, unless otherwise noted.
- No field welding is permitted except as specified in the contract document.
- Reinforcement bars designated (E) shall be epoxy coated.
- Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
- All new steel and existing sell to be repaired, strengthened, or encased with concrete, shall be cleaned and painted utilizing Paint System I - Oz/E/U. The color of the final finish coat shall match Sherwin Williams Standard Glossy Color SW2717 (Bordeaux). Cost included in the pay item Concrete Encasement.
- All new structural steel shall be shop primed and faying surfaces shall be cleaned to base metal prior to erection.
- The Contractor shall take all necessary precautions of passing vehicles, pedestrians, and bikers from falling objects and/or materials until completion of work.
- The Anchor Column Bent and Bent 12 modifications and extensions are designed for the final conditions. It shall be the Contractor's responsibility to investigate the existing method of support for this structure and provide adequate temporary shoring as required. All such temporary shoring shall require design calculations and drawings, signed and sealed by a Structural Engineer licensed in the State of Illinois, and shall be subject to the approval of the Commissioner. The cost of temporary shoring if required shall not be paid separately and shall be included with CONCRETE REMOVAL.
- The Contractor is hereby alerted that construction of the abutment at the north end of the structure is included in the adjacent Lakefront Bicycle Trail #2 project at DuSable Park and is to be completed by others. It shall be the Contractor's responsibility to coordinate construction of the bridge (SN 016-6103) with construction of the supporting abutment. No superstructure concrete may be poured prior to completion of north abutment construction and compensation for delays in work caused by construction of the abutment shall not be permitted. All costs associated with Contractor coordination shall not be paid separately and shall be included with HIGH PERFORMANCE CONCRETE STRUCTURES.

SCOPE OF WORK

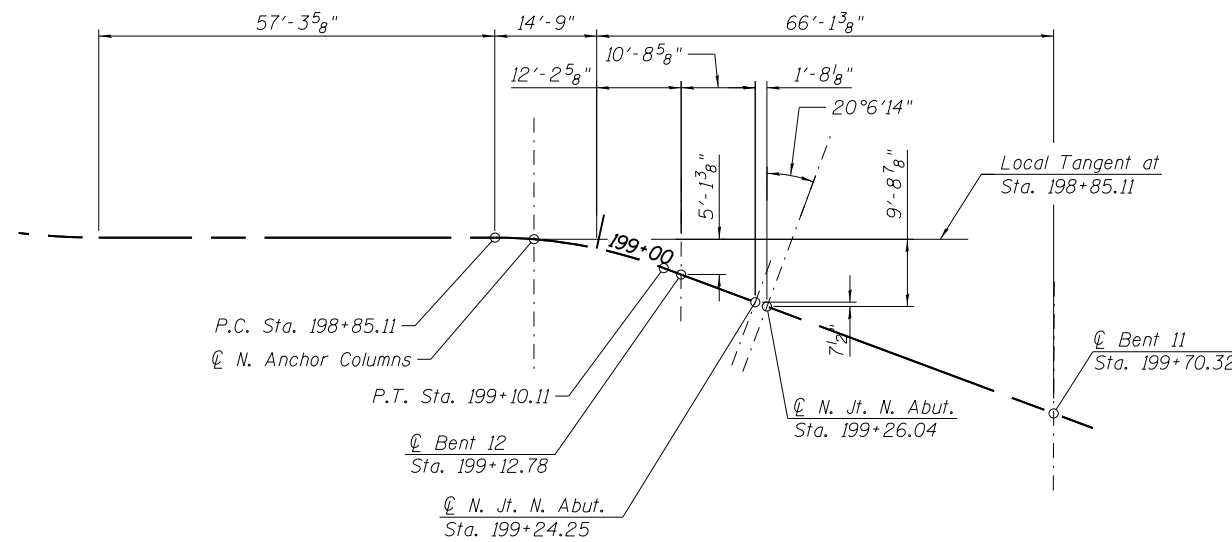
- Provide protective shielding within limits as indicated in the plans and perform temporary shoring as required.
- Remove existing concrete deck, sidewalk, parapet, steel railing, beams and columns to the limits shown in the plans.
- Modify existing Anchor Column Bent, and Bent 12, at Upper and Intermediate Levels as per the details shown in the plans.
- Install new expansion joints at south, northwest and north ends of proposed structure.
- Install deck forms and construct reinforced concrete deck slab bridge.
- Install proposed parapet, new rub railing, parapet railing, cable rail system, and stainless steel guard rails as required.
- Perform full-depth deck slab repairs.
- Perform bridge deck grooving for the full depth repair areas existing under vehicular traffic.
- Apply protective coat sealer for the full-depth repair areas, new constructed deck slab and parapet.
- Repaint pavement markings on the top of the deck.

INDEX OF SHEETS

- S3-1 General Plan and Elevation
- S3-2 General Notes, Index of Sheets and Total Bill of Material
- S3-3 Concrete Removal Sections and Details
- S3-4 Structural Steel Removal Sections and Details
- S3-5 Intermediate Level Partial Deck Repair Plan
- S3-6 Top of Slab Elevations
- S3-7 Deck Plan
- S3-8 Deck Cross Sections
- S3-9 Deck Sections and Details (Sheet 1 of 2)
- S3-10 Deck Sections and Details (Sheet 2 of 2)
- S3-11 Expansion Joint Details
- S3-12 East Railing Section and Details
- S3-13 North Anchor Column Bent Modification
- S3-14 Bent 12 Modification

TOTAL BILL OF MATERIAL

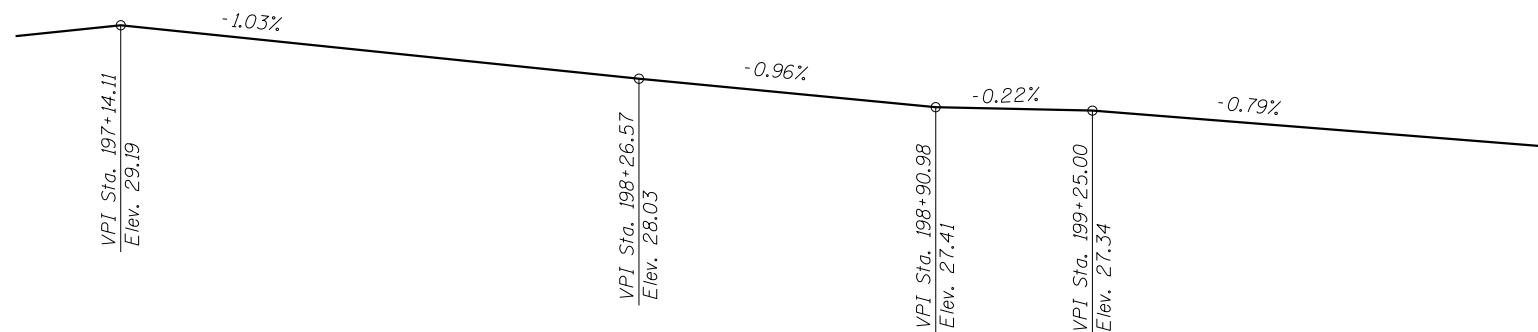
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CDOT5030030	HIGH PERFORMANCE CONCRETE SUPERSTRUCTURES	CU YD	33.5
50300260	BRIDGE DECK GROOVING	SQ YD	111
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	11640
50500505	STUD SHEAR CONNECTORS	EACH	102
50606703	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 3	L SUM	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	10,010
50901750	PARAPET RAILING	FOOT	4
52000110	PREFORMED JOINT STRIP SEAL	FOOT	38
CDOT5870010	PROTECTIVE CONCRETE SEALER	SQ YD	188
X0326519	STEEL RAILING REMOVAL	FOOT	41
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	6,625
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES, NO. 3	L SUM	1
Z0016002	DECK SLAB REPAIR (FULL-DEPTH, TYPE II)	SQ YD	111
	CABLE RAIL SYSTEM	FOOT	31
	STAINLESS STEEL GUARD RAIL	FOOT	62



OFFSET SKETCH

CURVE DATA

PI STA. = 198+97.76
 Δ = 20° 26' 35" (RT)
 D = 81° 51' 04"
 R = 70.00'
 T = 12.62'
 L = 24.98'
 E = 1.13'
 e = -----
 T.R. = -----
 S.E. RUN = -----
 P.C. STA = 198+85.14
 P.T. STA = 199+10.11



PROFILE GRADE
(Along \bar{M} Path)

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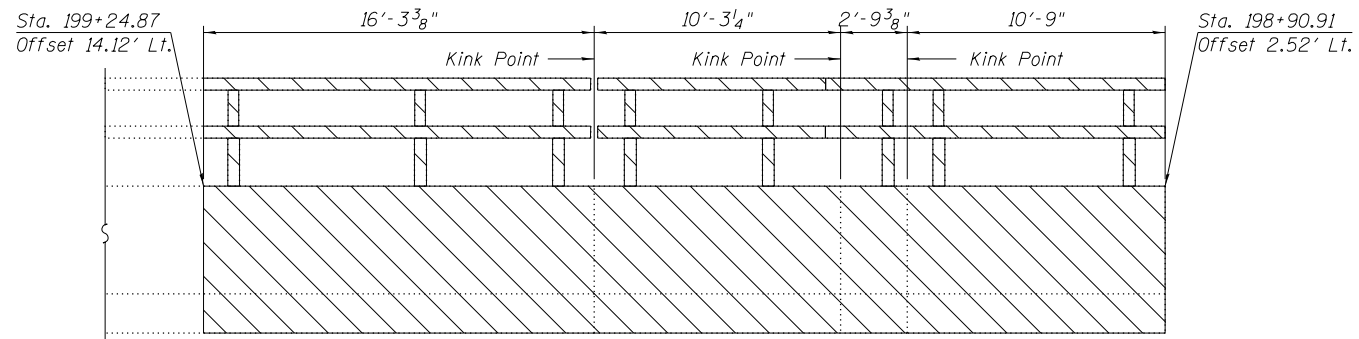
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PLOT DATE	8/10/2017	CHECKED -	MAI	REVISED -	

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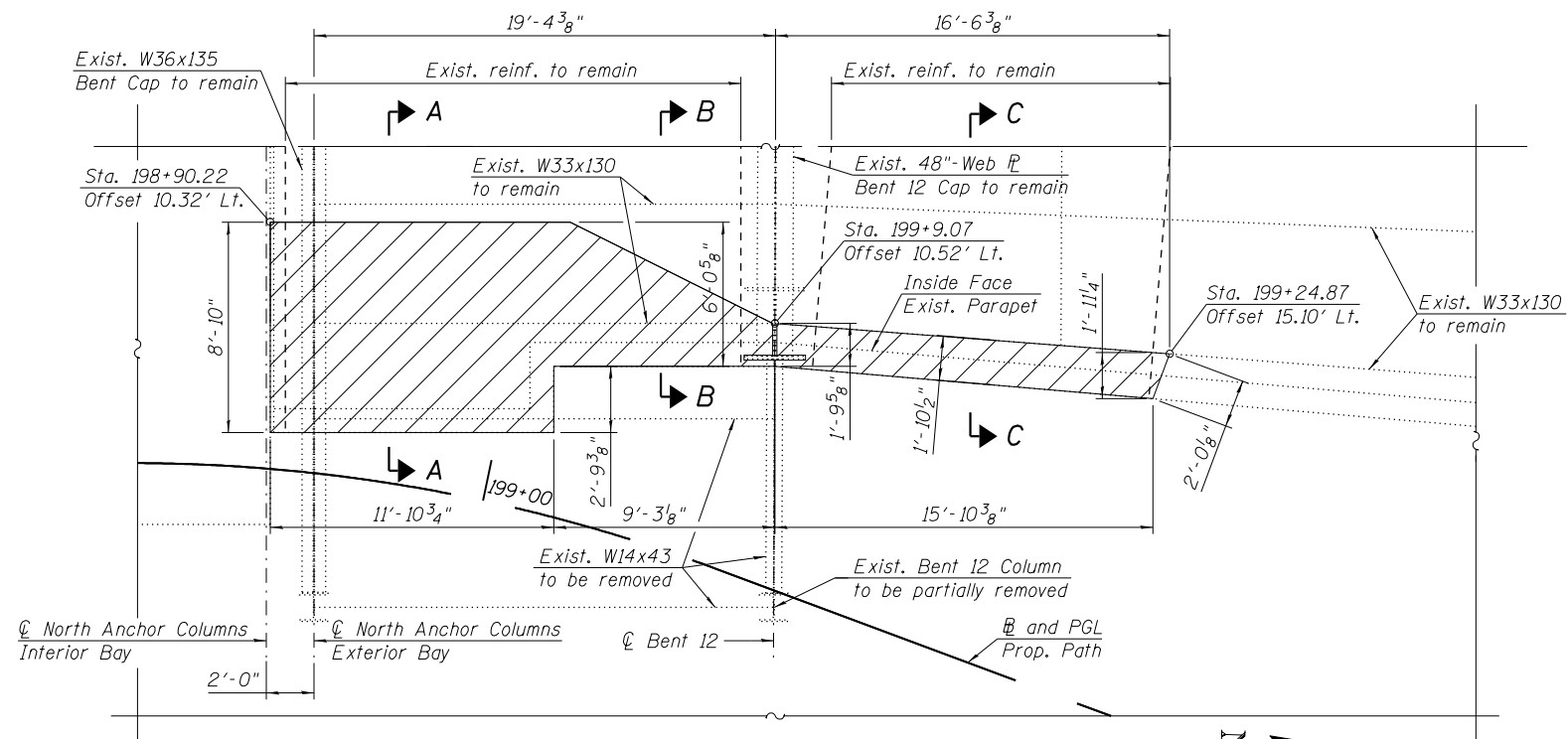
**LAKEFRONT BICYCLE TRAIL #3
 OVER THE CHICAGO RIVER**

**GENERAL NOTES, INDEX OF SHEETS
 AND TOTAL BILL OF MATERIAL
 (STRUCTURE NO. 016-6103)**

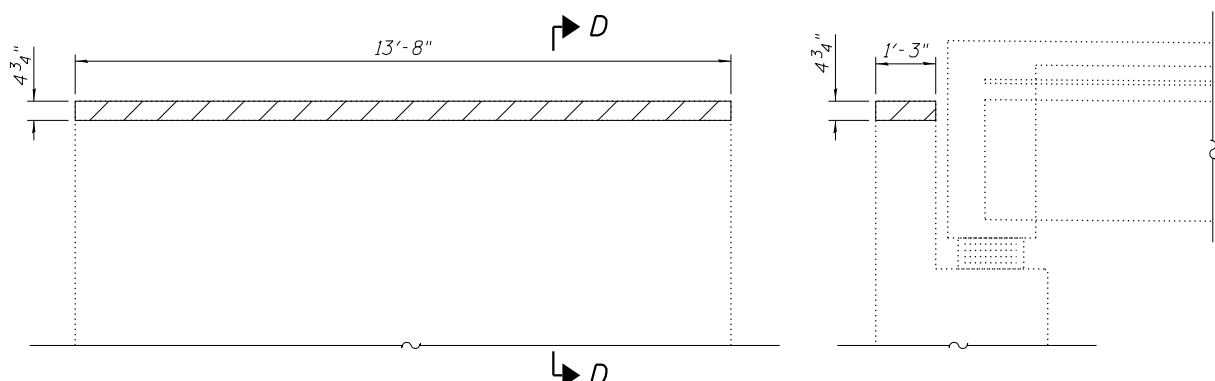
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S3-2
CDOT PROJECT NO. E-6-650			399 OF 411



PARAPET REMOVAL ELEVATION
(Measured along inside face)

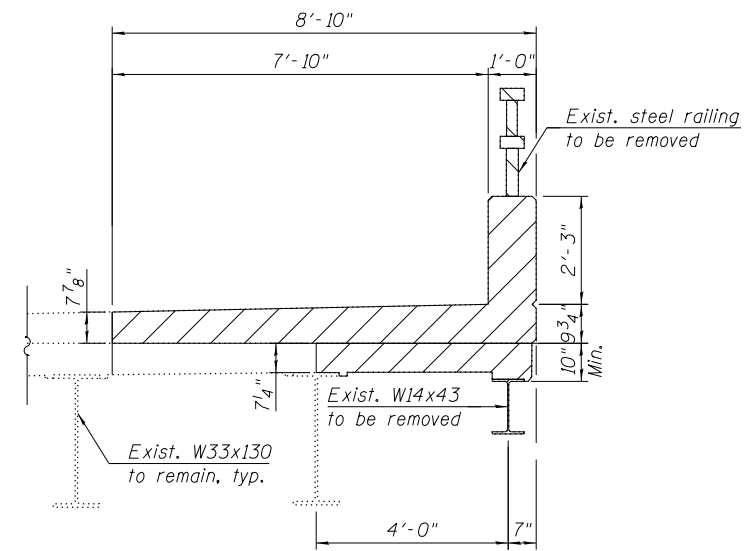


PARTIAL DECK AND SIDEWALK REMOVAL PLAN
(Intermediate Level)

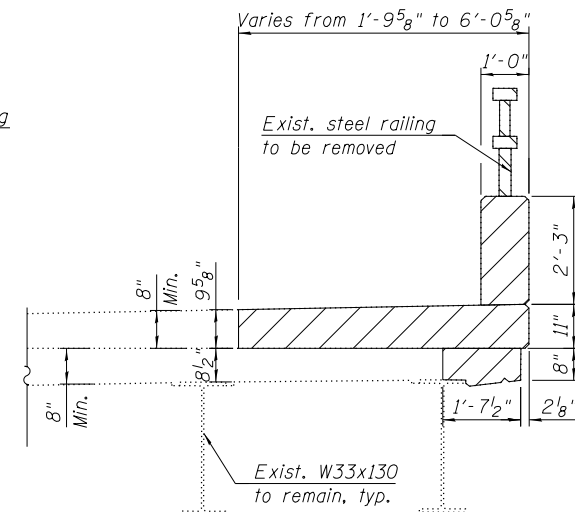


ABUTMENT BACKWALL PARTIAL REMOVAL

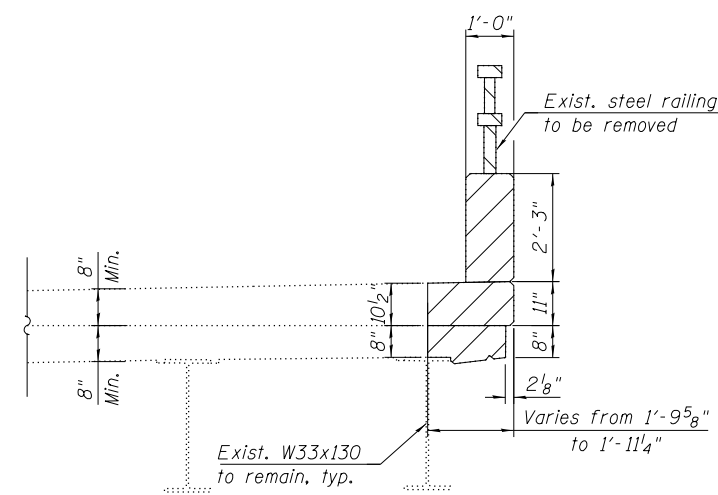
(Looking North backface of Abutment)
Lakeront Bicycle Trail #2 (By Others)



SECTION A-A



SECTION B-B



SECTION C-C

BILL OF MATERIAL

ITEM	UNIT	TOTAL
CONCRETE REMOVAL	CU YD	11.7
STEEL RAILING REMOVAL	FOOT	41

NOTES:

- Dimensions shown have been taken from historical design drawings and may not represent "as built" conditions. The Contractor must verify all dimensions in the field. Variation in the field dimensions shall not warrant additional compensation for CONCRETE REMOVAL.
- It shall be the Contractor's responsibility to protect, temporarily support, remove and/or relocate all existing utilities interfering with removal operations. Such items shall not be paid for separately but shall be included with CONCRETE REMOVAL.

LEGEND

	Concrete Removal
	Steel Railing Removal

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USER NAME = fadl.alsharif	DESIGNED - JJS	REVISED -
PLOT SCALE = N.T.S.	CHECKED - MAI	REVISED -
PLOT DATE = 6/23/2017	DRAWN - FA, LAB	REVISED -
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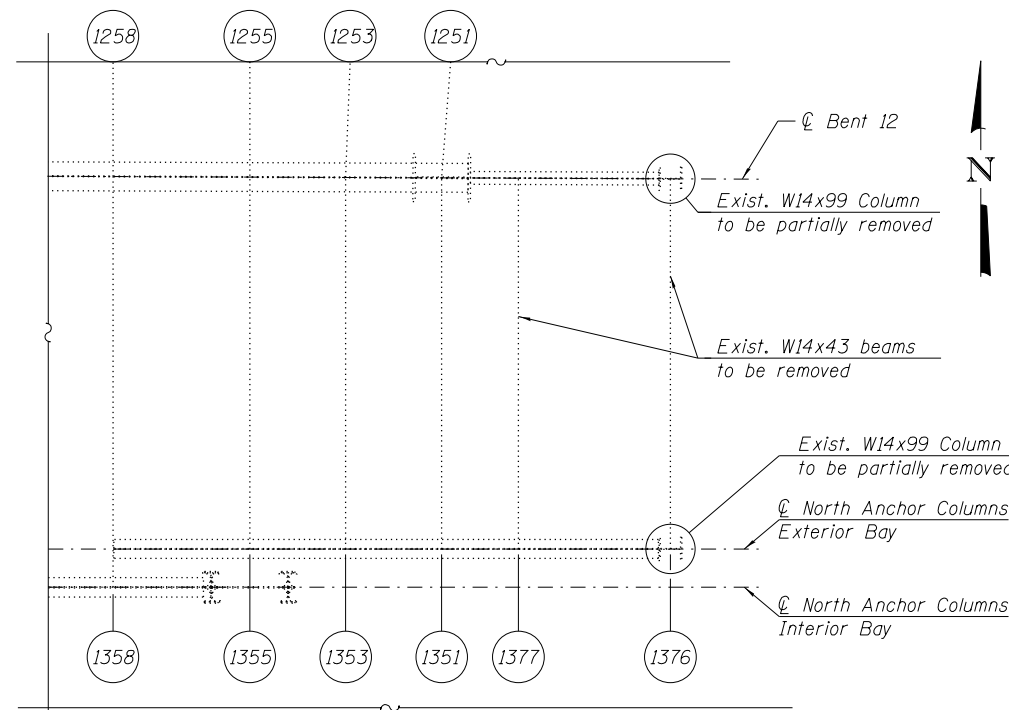
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

CONCRETE REMOVAL SECTIONS AND DETAILS
(STRUCTURE NO. 016-6103)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S3-3
CDOT PROJECT NO. E-6-650			400 OF 411

BILL OF MATERIAL

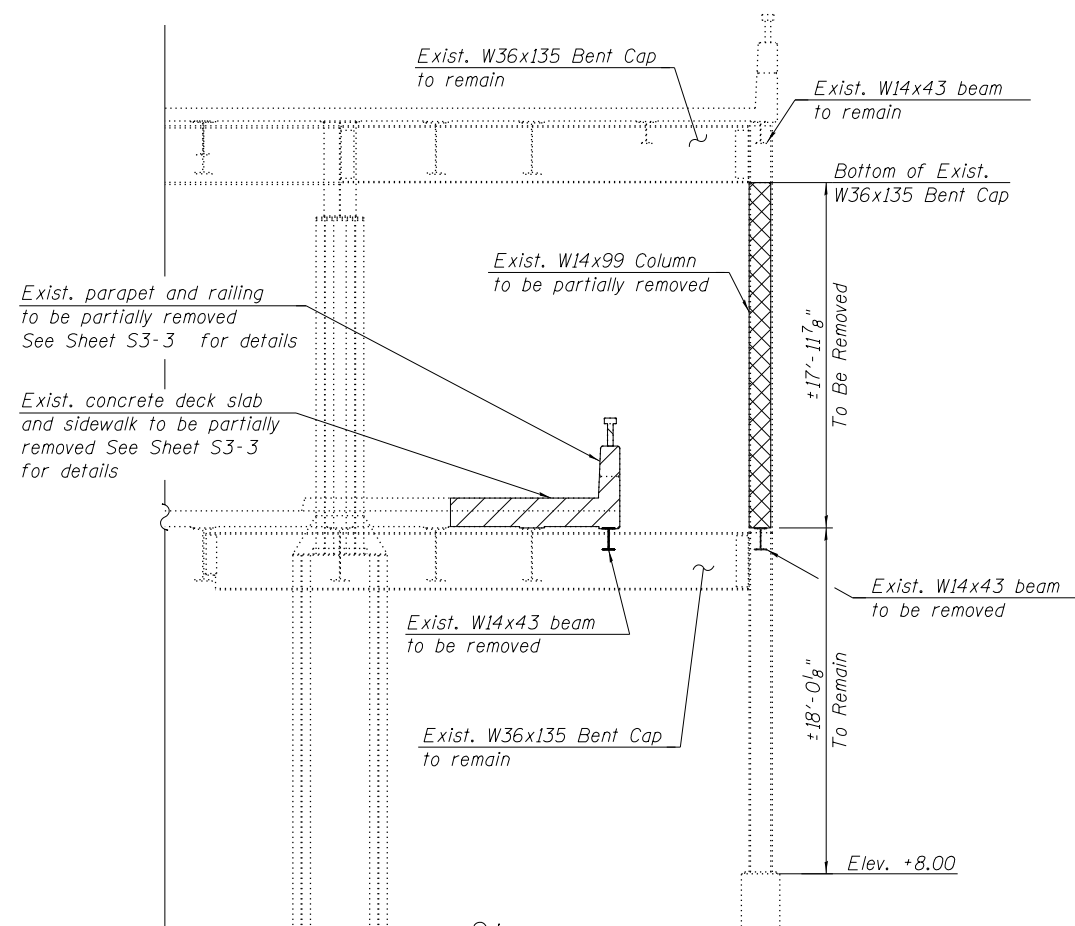
ITEM	UNIT	TOTAL
STRUCTURAL STEEL REMOVAL	POUND	6,625



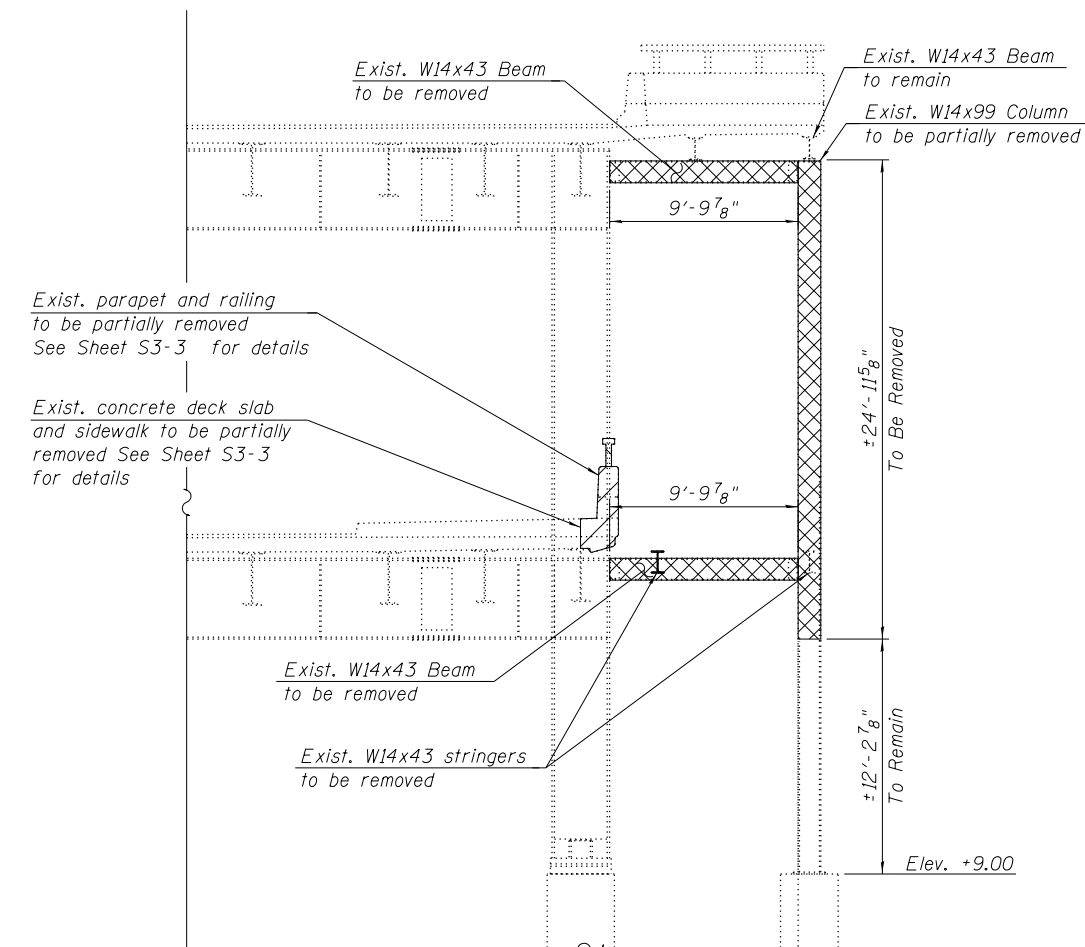
PARTIAL FRAMING PLAN - INTERMEDIATE LEVEL

NOTES:

- Dimensions shown have been taken from historical design drawings and may not represent "as built" conditions. The Contractor must verify all dimensions in the field. Variation in the field dimensions shall not warrant additional compensation for STRUCTURAL STEEL REMOVAL.
- It shall be the Contractor's responsibility to protect, temporarily support, remove and/or relocate all existing utilities interfering with removal operations. Such items shall not be paid for separately but shall be included with STRUCTURAL STEEL REMOVAL.



ELEVATION - ANCHOR COLUMN BENT PARTIAL REMOVAL
(Looking North)



ELEVATION - BENT 12 PARTIAL REMOVAL
(Looking North)

NOTES:

- For Notes, see Sheet S3-3.

LEGEND

- Concrete Removal
- Structural Steel Removal
- Steel Railing Removal

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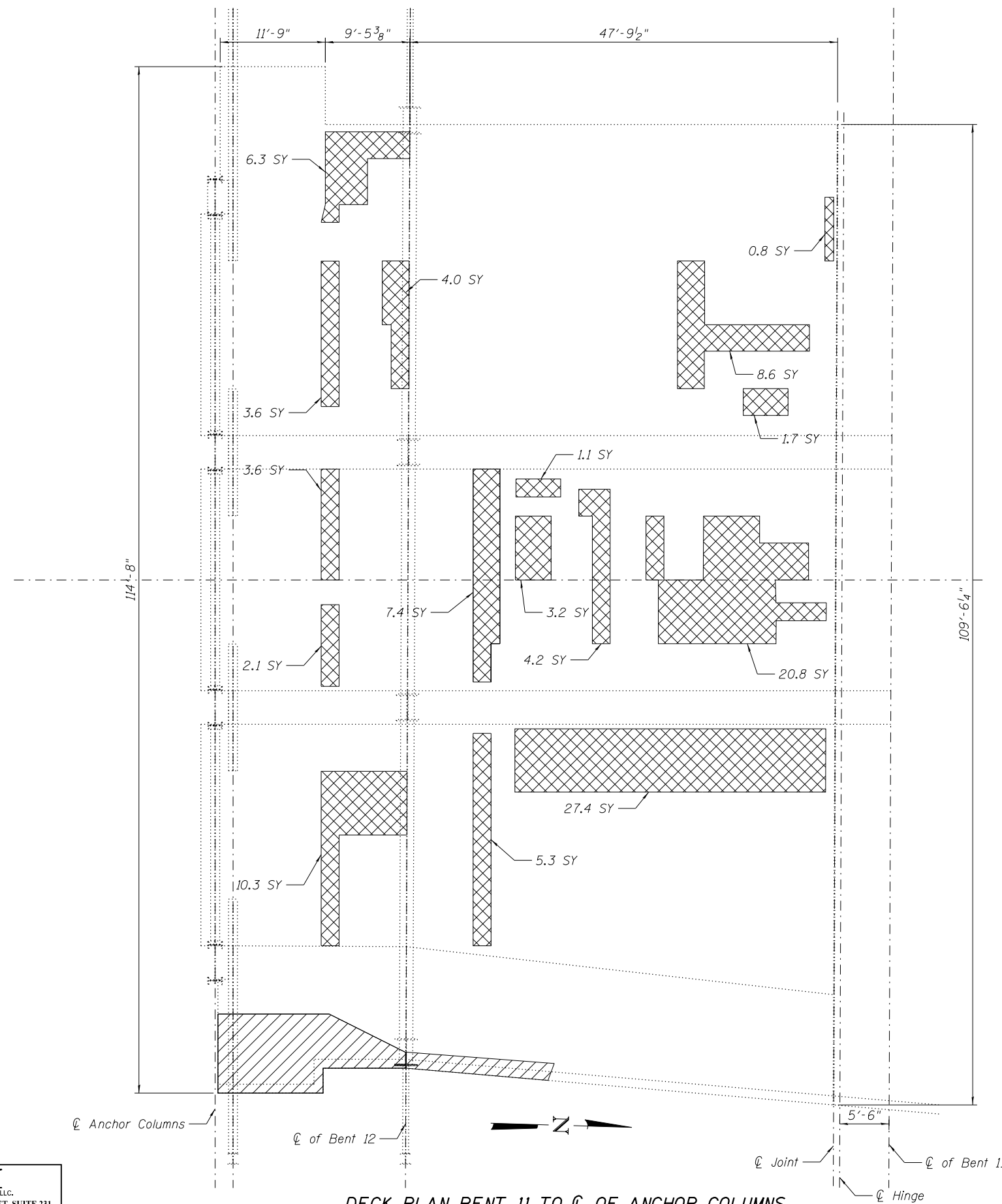
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

STRUCTURAL STEEL REMOVAL
SECTIONS AND DETAILS
(STRUCTURE NO. 016-6103)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S3-4
CDOT PROJECT NO. E-6-650			401 OF 411

BILL OF MATERIAL



ITEM	UNIT	QUANTITY
BRIDGE DECK GROOVING	SQ YD	111
PROTECTIVE CONCRETE SEALER	SQ YD	111
DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	111



NOTES

1. Areas of deck repair shown are estimated. The Engineer shall show actual locations of deck repairs at the time of construction.
2. For General Notes and Total Bill of Material, see Sheet S3-2 .
3. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with CONCRETE REMOVAL.
4. Protective concrete sealer shall be applied to the full depth deck slab repair areas.
5. For sidewalks, deck, parapet, and parapet steel railing partial removal sections and details, see Sheet S3-3 .

LEGEND

-  Area > 0.55 SQ YD - Deck Slab Repair (Full Depth, Type II)
-  Concrete Removal
- SY Square Yard

DECK PLAN BENT 11 TO CL OF ANCHOR COLUMNS

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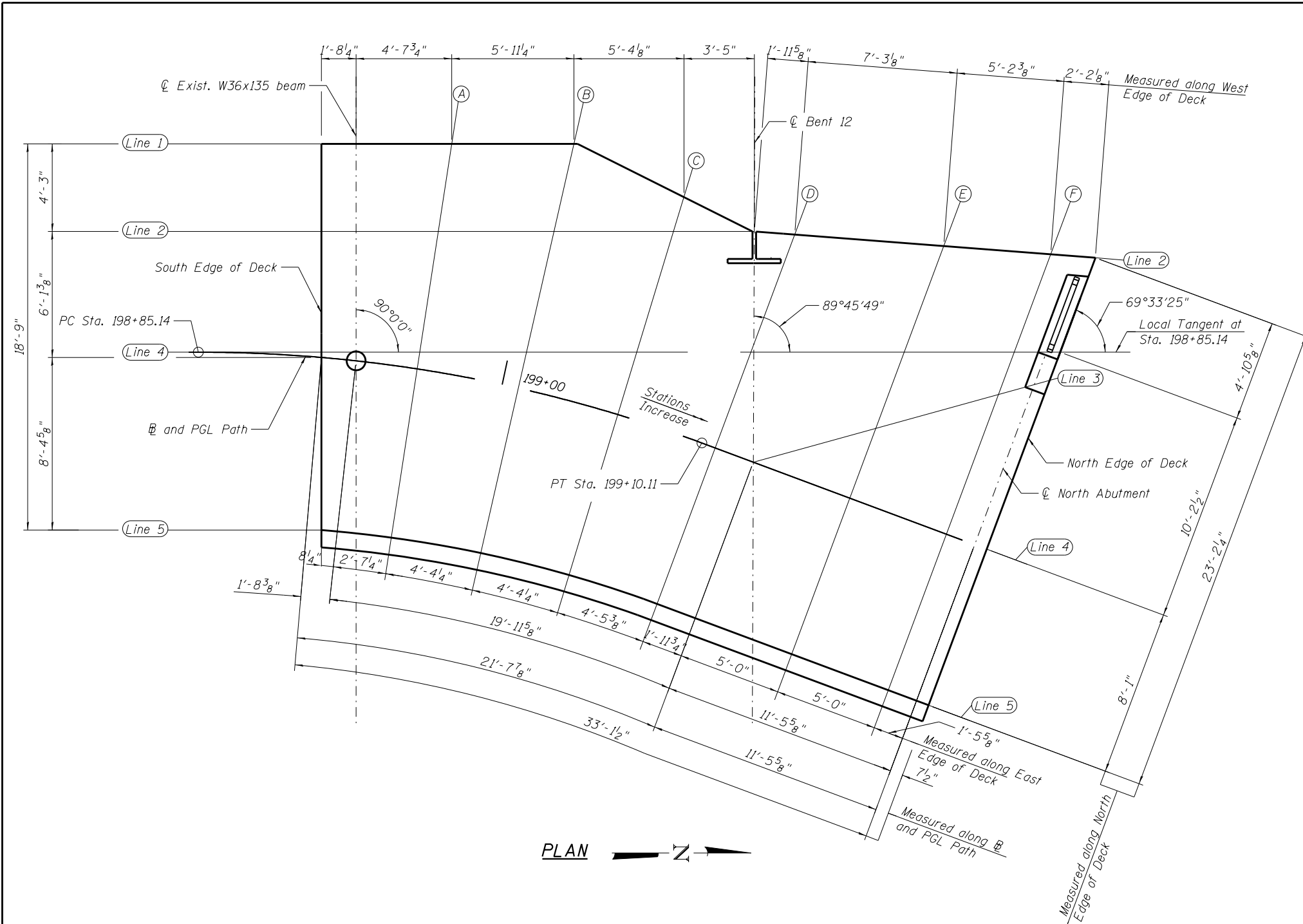
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PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**INTERMEDIATE LEVEL PARTIAL DECK REPAIR PLAN
(STRUCTURE NO. 016-6103)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S3-5
CDOT PROJECT NO. E-6-650			402 OF 411



LINE 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
South Edge of Deck	198+90.64	-6.10'	27.57	27.57
Exist. W36x135 beam	198+92.19	-6.25'	27.57	27.57
A	198+95.81	-6.75'	27.56	27.56
B	199+00.81	-7.80'	27.54	27.54
C	199+05.81	-9.29'	27.52	27.52
Bent 12	199+09.07	-10.52'	27.51	27.51
D	199+10.81	-11.06'	27.50	27.50
E	199+17.79	-13.06'	27.45	27.45
F	199+22.79	-14.50'	27.41	27.41
North Abutment	199+24.26	-14.92'	27.40	27.40
North Edge of Deck	199+24.88	-15.10'	27.40	27.40

LINE 3 - SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bent 12	199+12.79	0.00'	27.36	27.36
E	199+17.79	-3.61'	27.29	27.29
F	199+22.79	-7.23'	27.21	27.21
North Abutment	199+24.26	-8.29'	27.19	27.19
North Edge of Deck	199+24.88	-8.75'	27.18	27.18

LINE 4 - B AND PGL PATH

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
South Edge of Deck	198+90.81	0.00'	27.41	27.41
Exist. W36x135 beam	198+92.82	0.00'	27.41	27.41
A	198+95.81	0.00'	27.40	27.40
B	199+00.81	0.00'	27.39	27.39
C	199+05.81	0.00'	27.38	27.38
D	199+10.81	0.00'	27.37	27.37
Bent 12	199+12.79	0.00'	27.36	27.36
E	199+17.79	0.00'	27.35	27.35
F	199+22.79	0.00'	27.34	27.34
North Abutment	199+24.26	0.00'	27.34	27.34
North Edge of Deck	199+24.88	0.00'	27.34	27.34

LINE 6 - INSIDE FACE EAST CURB

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
South Edge of Deck	198+91.58	8.36'	27.39	27.39
Exist. W36x135 beam	198+93.86	8.32'	27.39	27.39
A	198+95.81	8.29'	27.37	27.37
B	199+00.81	8.21'	27.33	27.33
C	199+05.81	8.14'	27.28	27.28
D	199+10.81	8.08'	27.24	27.24
Bent 12	199+15.75	8.08'	27.19	27.19
E	199+17.79	8.08'	27.19	27.19
F	199+22.79	8.08'	27.18	27.18
North Abutment	199+24.26	8.08'	27.18	27.18
North Edge of Deck	199+24.88	8.08'	27.17	27.17

LINE 1 - WEST EDGE OF SIDEWALK REPLACEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
North Anchor Columns	198+90.64	-6.10'	27.57	27.57
Exist. W36x135 beam	198+92.19	-6.25'	27.57	27.57
A	198+95.81	-6.75'	27.56	27.56
B	199+00.81	-7.80'	27.54	27.54
C	199+05.81	-9.29'	27.52	27.52
Bent 12	199+09.07	-10.52'	27.51	27.51

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PLOT SCALE = N.T.S.	DRAWN - JJS	REVISED -
PLOT DATE = 6/23/2017	CHECKED - MAI	REVISED -

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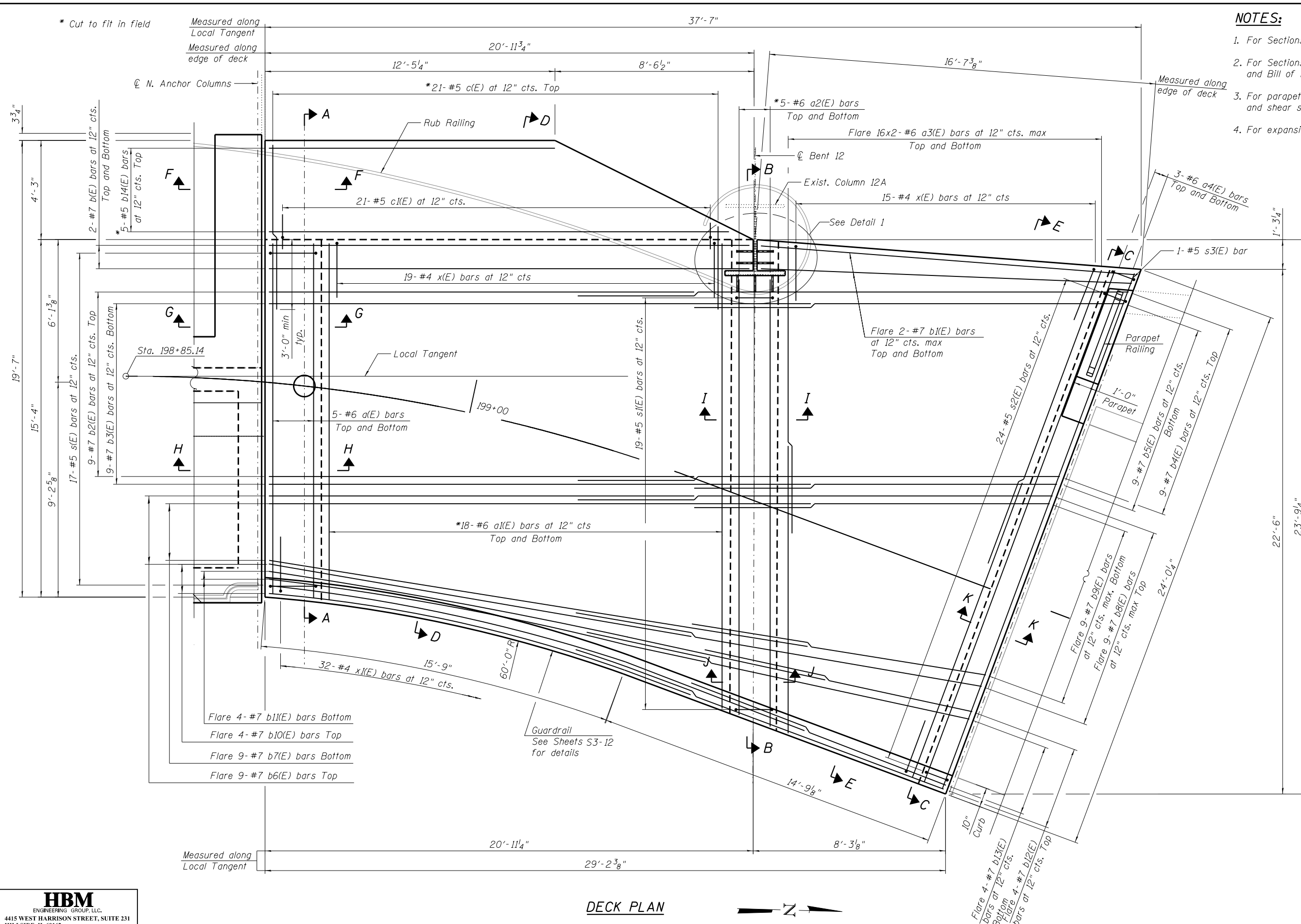
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**TOP OF SLAB ELEVATIONS
(STRUCTURE NO. 016-6103)**

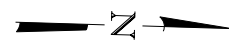
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0341	09-E0534-00-BR/CDOT	COOK	S3-6
CDOT PROJECT NO. E-6-650			403 OF 411

NOTES:

1. For Sections A-A thru E-E, see Sheet S3-8.
2. For Sections F-F thru K-K, Bar Diagrams and Bill of Material, see Sheet S3-10.
3. For parapet and parapet railing details, Detail 1 and shear studs details, see Sheet S3-9.
4. For expansion joints details, see Sheet S3-11.



DECK PLAN



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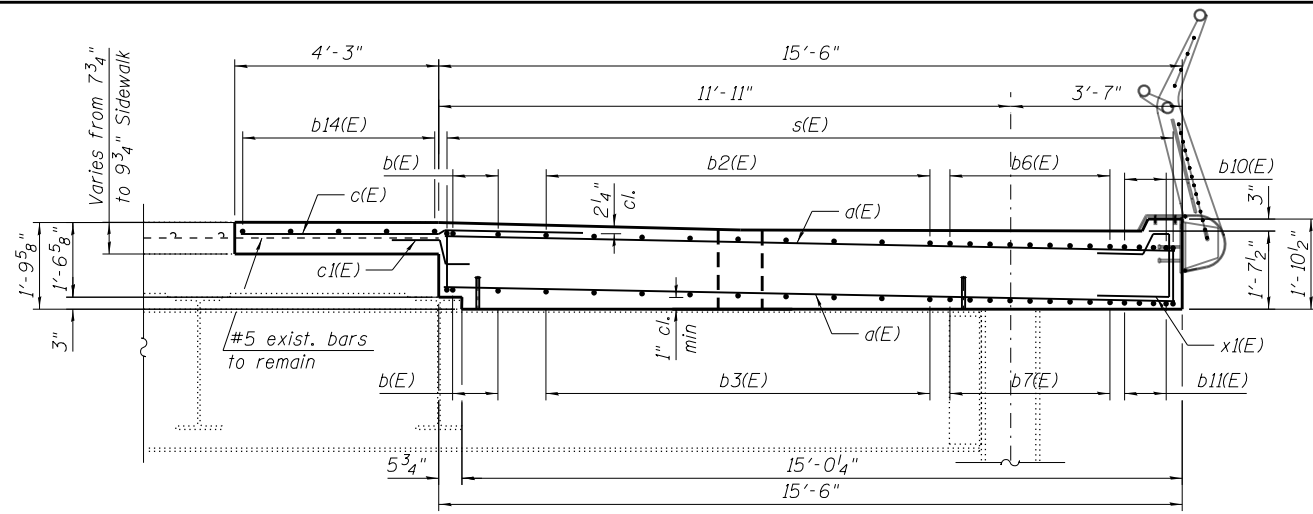
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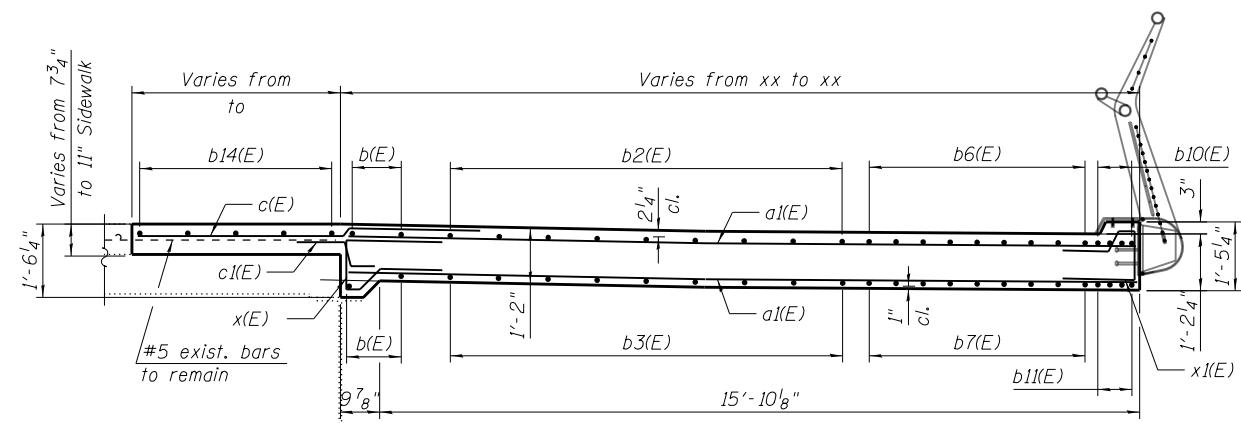
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

DECK PLAN
(STRUCTURE NO. 016-6103)

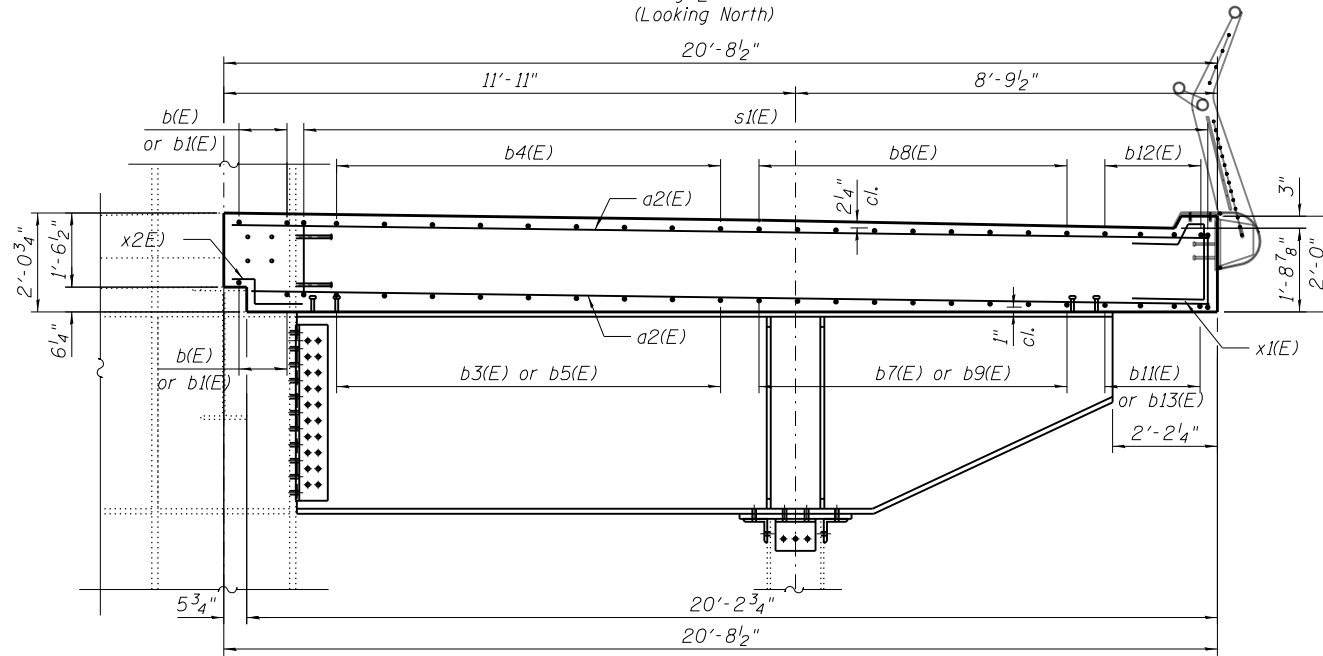
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0341	09-E0534-00-BR/CDOT	COOK	S3-7
CDOT PROJECT NO. E-6-650			404 OF 411



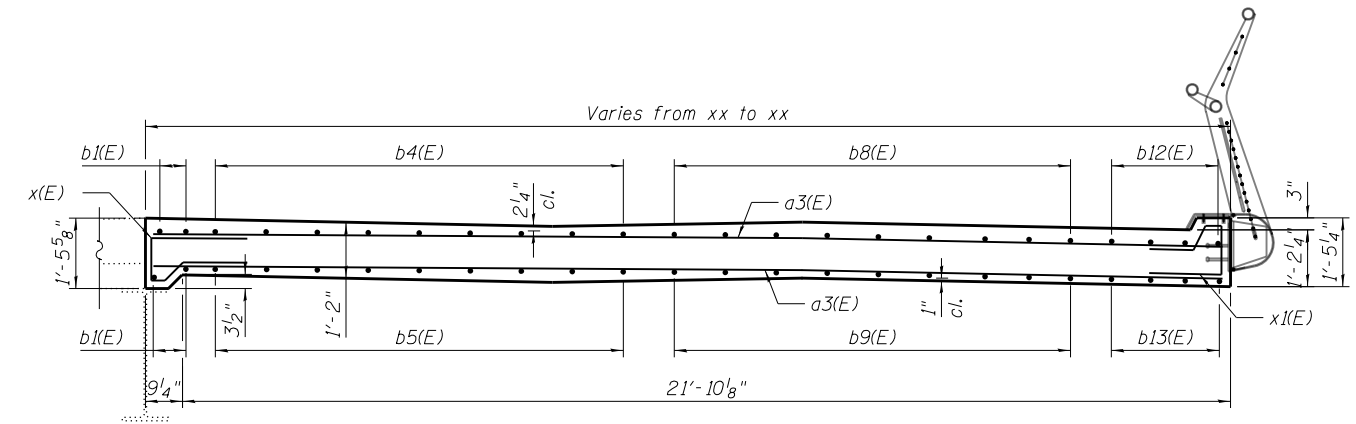
SECTION A-A
(Section along \varnothing Anchor Columns)
(Looking North)



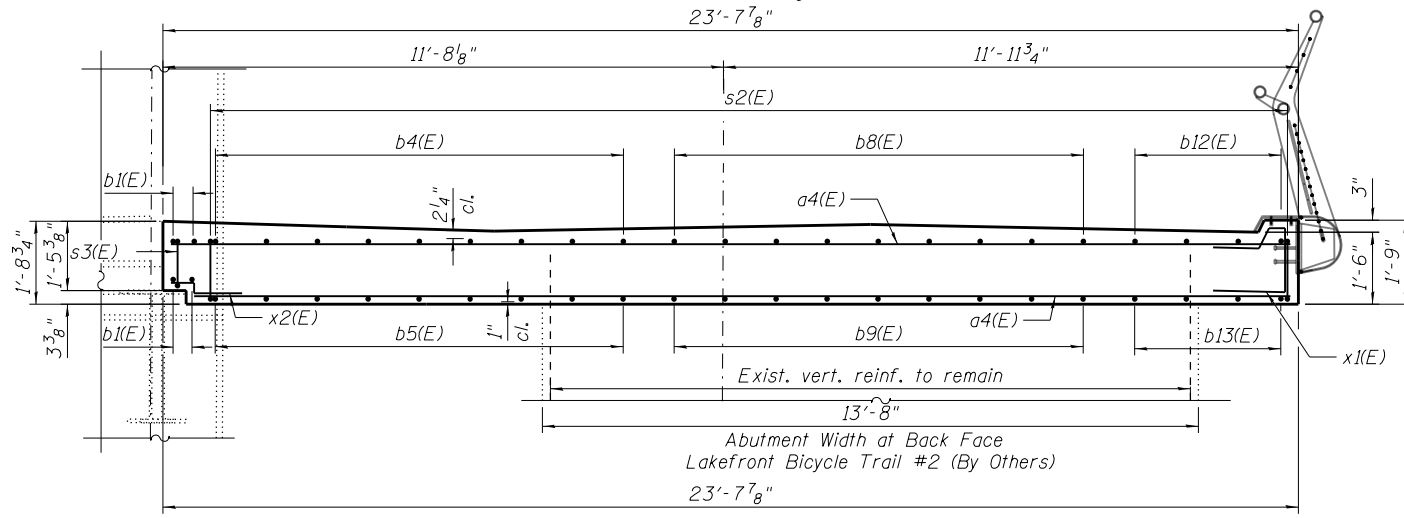
DECK SECTION D-D
(Looking North)



SECTION B-B
(Section along \varnothing Bent 12)
(Looking North)



DECK SECTION E-E
(Looking North)



SECTION C-C
(Section at \varnothing Bearing at Backwall)
(Looking Northeast)

NOTE:
1. For Bar Diagrams, Bill of Material and additional notes, see Sheet S3-10

P:\1606-681 PB-LSD over Chicago River\Sheet Files\016-6103 North Structure\0166103-E0534-S308-DeckSec.dgn 12:35:17 PM

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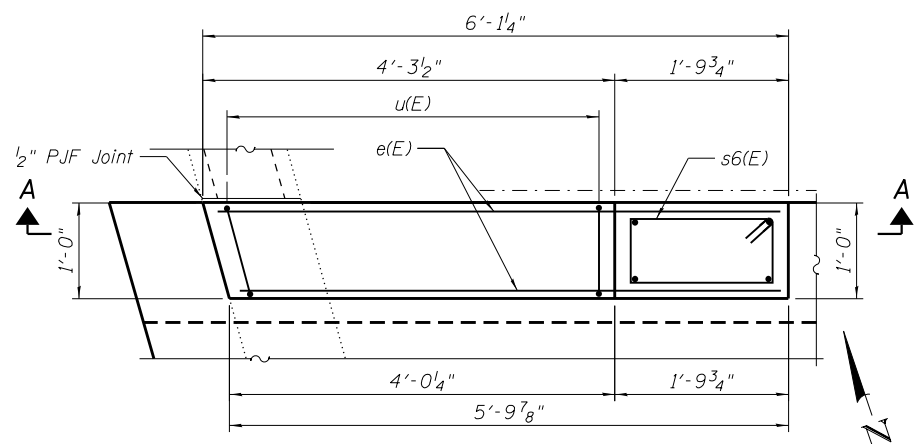
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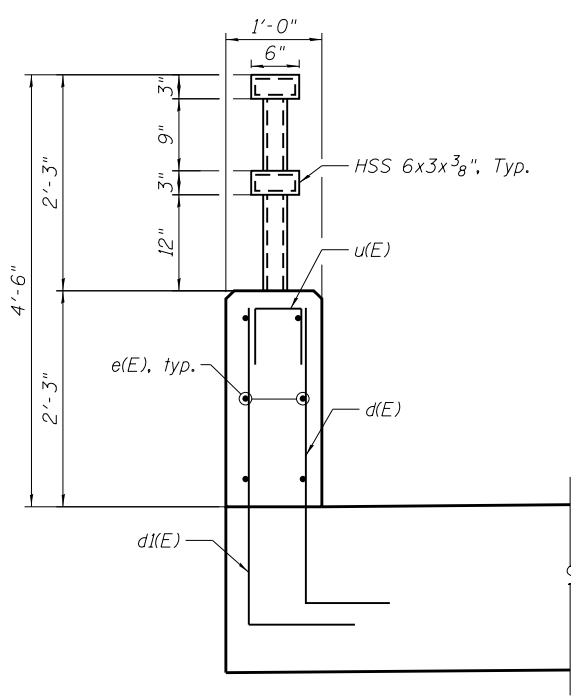
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

DECK CROSS SECTIONS
(STRUCTURE NO. 016-6103)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S3-8
CDOT PROJECT NO. E-6-650			405 OF 411

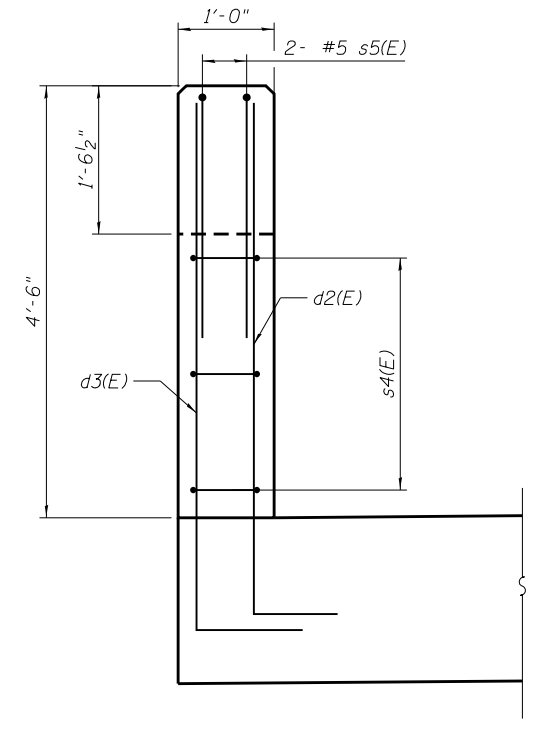


PARAPET PLAN



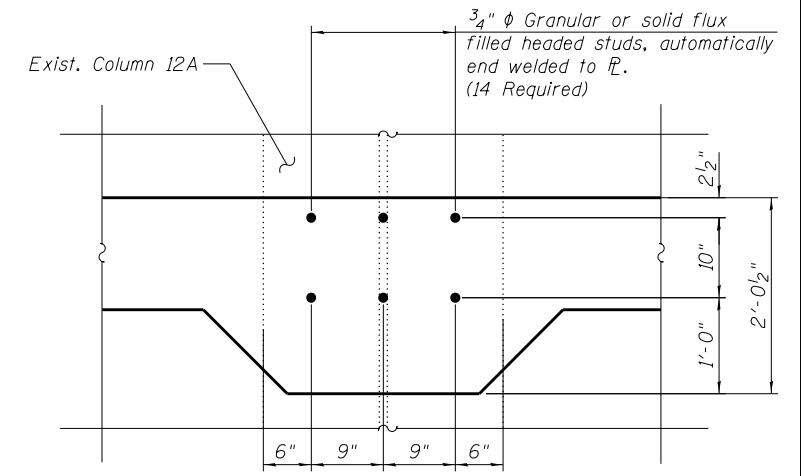
SECTION B-B

(Deck reinforcement not shown for clarity)

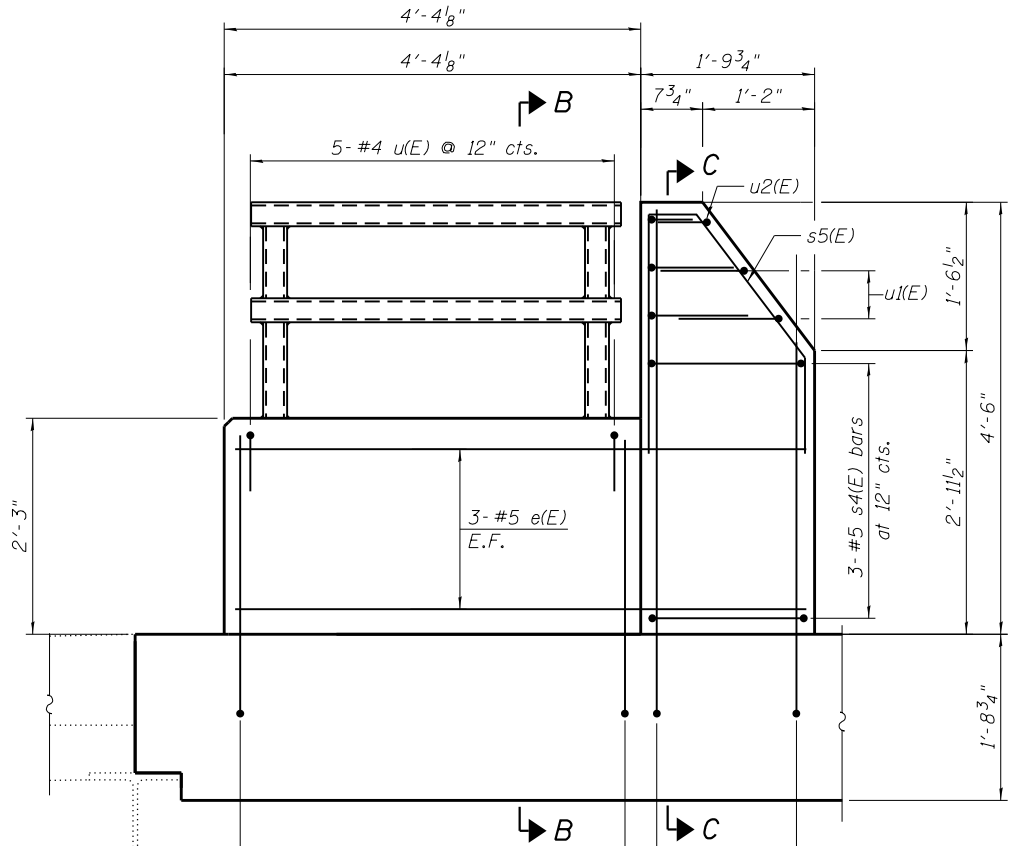


SECTION C-C

(Deck reinforcement not shown for clarity)

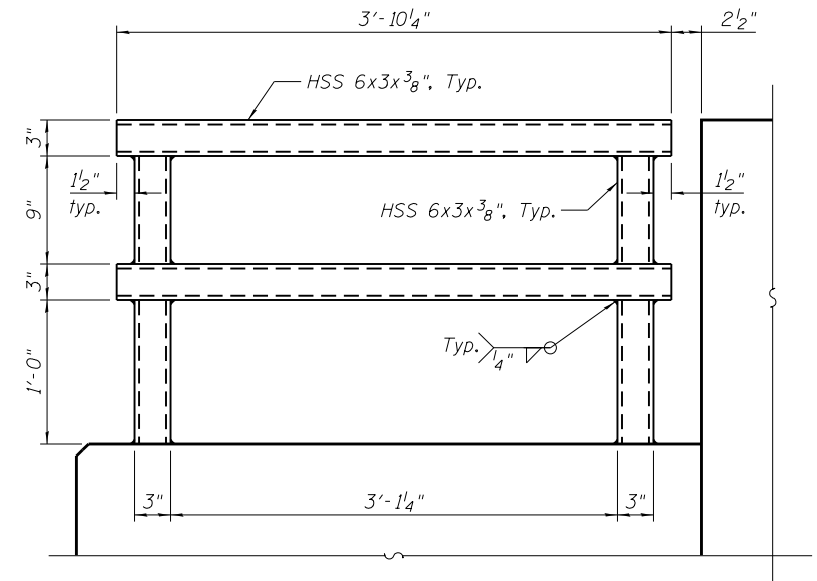


SECTION K-K

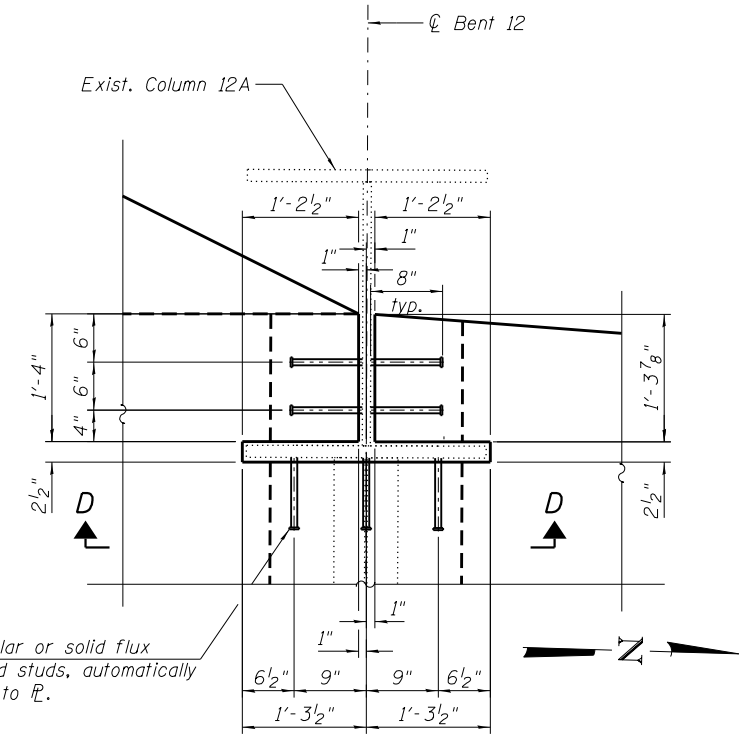


SECTION A-A

(Deck reinforcement not shown for clarity)



RAILING ELEVATION



DETAIL 1

* Cut in field to fit

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PLOT SCALE = N.T.S.	CHECKED - MAI	REVISED -
PLOT DATE = 6/23/2017	DRAWN - JJS, MAA	REVISED -
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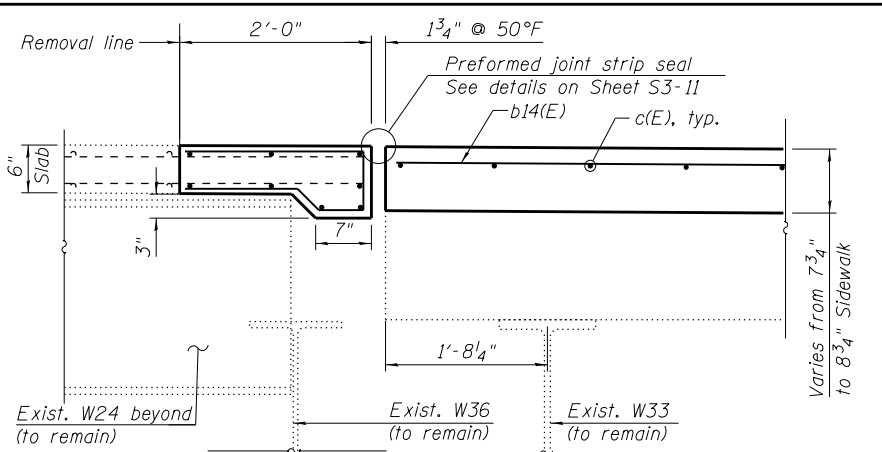
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

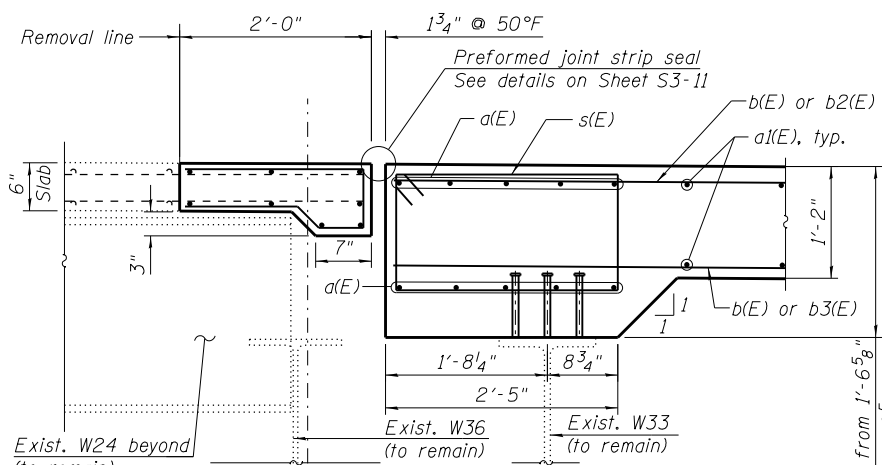
DECK SECTIONS AND DETAILS
(SHEET 1 OF 2)
(STRUCTURE NO. 016-6103)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S3-9
CDOT PROJECT NO. E-6-650			406 OF 411

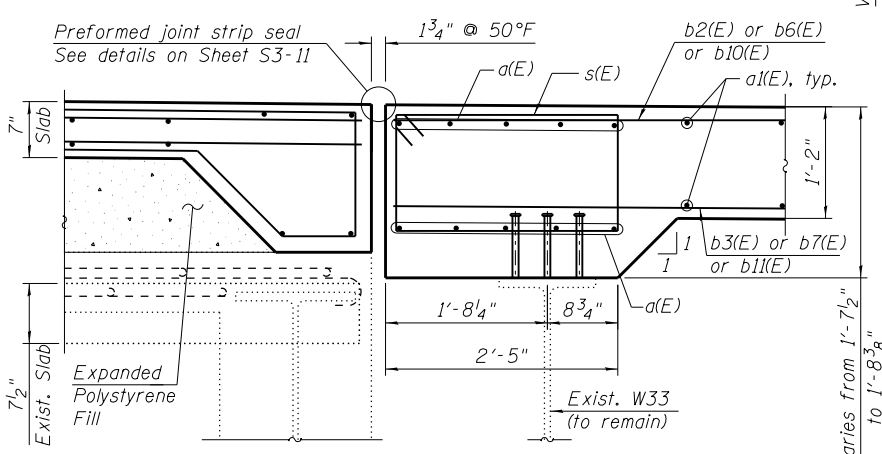
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SECTION F-F



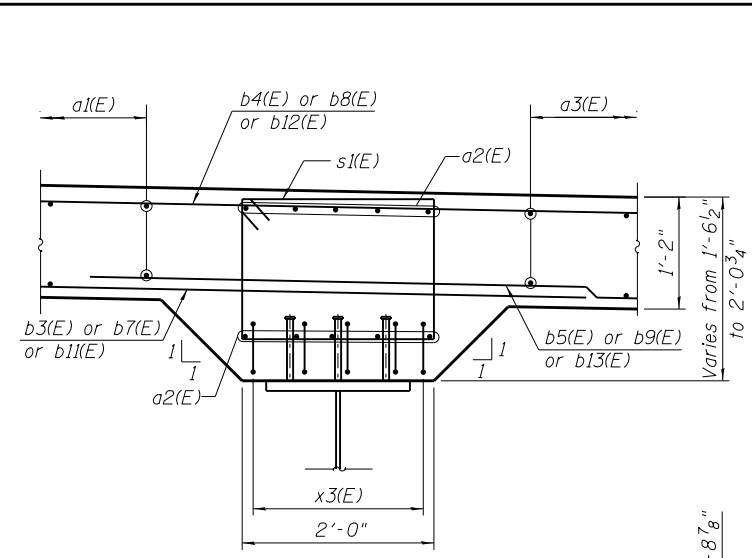
SECTION G-G



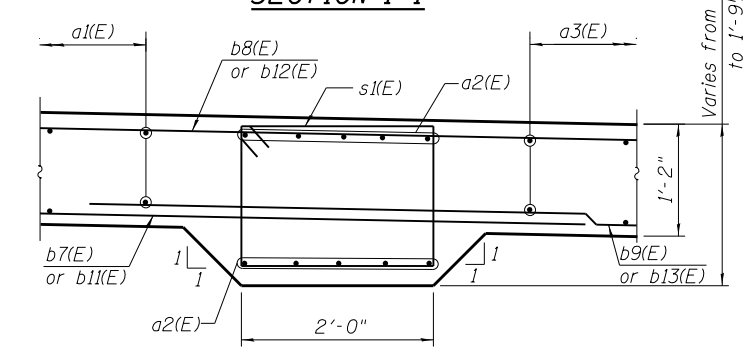
SECTION H-H

TABLE 4

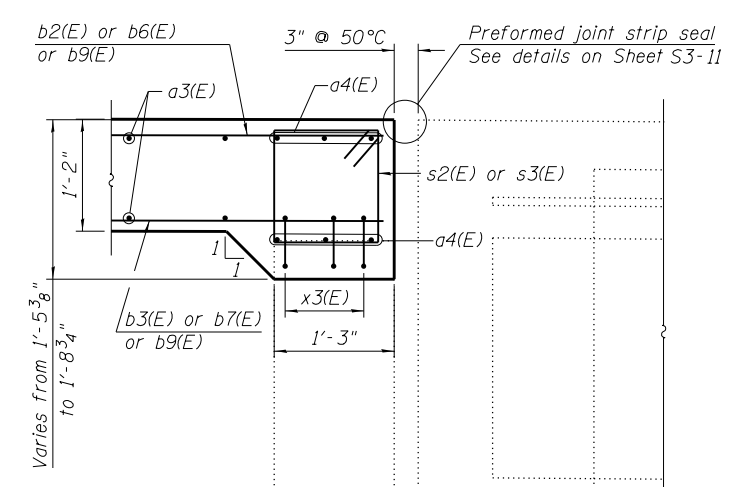
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b4(E)	23'-5"	20'-5"	43'-10"
b5(E)	18'-5"	15'-5"	33'-10"
b6(E)	18'-5"	18'-8"	37'-1"
b7(E)	23'-5"	23'-8"	47'-1"
b8(E)	20'-4"	17'-6"	37'-10"
b9(E)	15'-4"	12'-6"	27'-10"



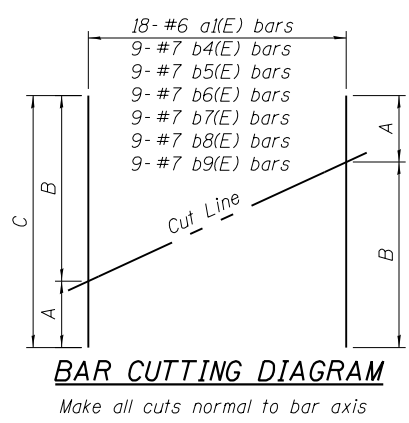
SECTION I-I



SECTION J-J

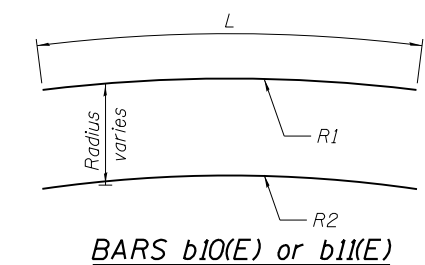


SECTION K-K

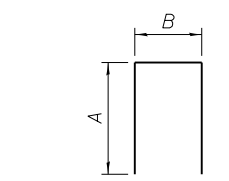
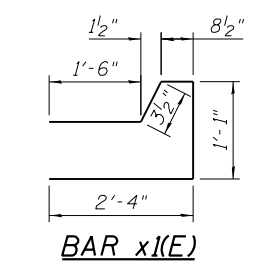
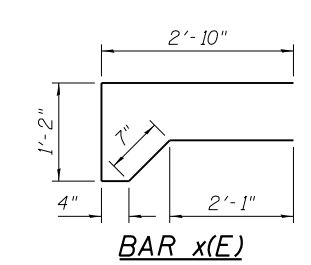


NOTES:

- For General Notes and Total Bill of Material, see Sheet S3-2 .
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with CONCRETE REMOVAL.
- For proposed deck details and reinforcement, see Sheets S3-7 thru S3-9 .



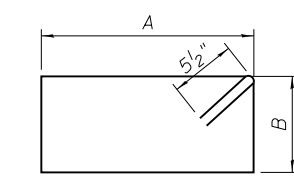
Bar	No. Per Series	R1	R2	L	No. Series
b10(E)	4	238'-4"	60'-2"	18'-7"	1
b11(E)	4	238'-4"	60'-2"	23'-7"	1



(See Table 2)

TABLE 2

BAR	A	B
u(E)	1'-2"	8"
u1(E)	10"	8"
u2(E)	4"	8"



(See Table 3)

TABLE 3

BAR	A	B
s(E)	2'-5"	1'-2 1/2"
s1(E)	1'-9"	1'-5"
s2(E)	1'-3"	1'-2"
s3(E)	1'-3"	10 1/2"
s4(E)	1'-5 3/4"	8"

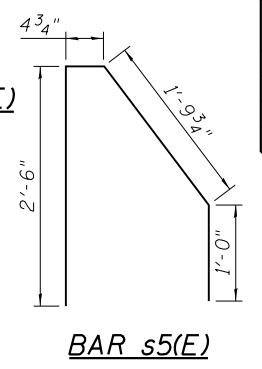
Minimum Bar Laps

Bar	Lap
#4	2'-5"
#5	3'-0"
#6	3'-7"
#7	5'-2"

BAR d1(E) THRU d3(E)
(See Table 1)

TABLE 1

BAR	A	B
d(E)	10 1/2"	3'-1"
d1(E)	10 1/2"	3'-3"
d2(E)	10 1/2"	5'-4"
d3(E)	10 1/2"	5'-6"



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	10	#6	15'-0"	—
a2(E)	18	#6	35'-7"	—
a3(E)	10	#6	19'-2"	—
a3(E)	64	#6	13'-5"	—
a4(E)	6	#6	23'-4"	—
b(E)	4	#7	20'-8"	—
b1(E)	4	#7	15'-11"	—
b2(E)	9	#7	18'-2"	—
b3(E)	9	#7	23'-2"	—
b4(E)	9	#7	43'-10"	—
b5(E)	9	#7	33'-10"	—
b6(E)	9	#7	37'-1"	—
b7(E)	9	#7	47'-1"	—
b8(E)	9	#7	37'-10"	—
b9(E)	9	#7	27'-10"	—
b10(E)	4	#7	18'-7"	—
b11(E)	4	#7	23'-7"	—
b12(E)	4	#7	17'-7"	—
b13(E)	4	#7	12'-7"	—
b14(E)	5	#5	19'-10"	—
c(E)	21	#5	7'-1"	—
c1(E)	21	#5	2'-4"	—
d(E)	5	#5	4'-0"	—
d1(E)	5	#5	4'-2"	—
d2(E)	3	#5	6'-3"	—
d3(E)	3	#5	6'-5"	—
e(E)	6	#5	5'-7"	—
s(E)	17	#5	8'-2"	—
s1(E)	19	#5	7'-3"	—
s2(E)	24	#5	5'-9"	—
s3(E)	1	#5	5'-2"	—
s4(E)	3	#5	5'-3"	—
s5(E)	2	#5	5'-9"	—
u(E)	5	#4	2'-10"	—
u1(E)	4	#4	2'-4"	—
u2(E)	2	#4	1'-4"	—
x(E)	32	#4	5'-11"	—
x1(E)	34	#4	7'-0"	—
x2(E)	8	#5	2'-0"	—
HIGH PERFORMANCE CONCRETE	CU YD		33.5	
SUPERSTRUCTURES				
STUD SHEAR CONNECTORS	EACH		14	
REINFORCEMENT BARS, EPOXY COATED	POUND		10,010	
BYCYCLE RAILING	FOOT		33	
PARAPET RAILING	FOOT		4	
PROTECTIVE CONCRETE SEALER	SQ YD		77	

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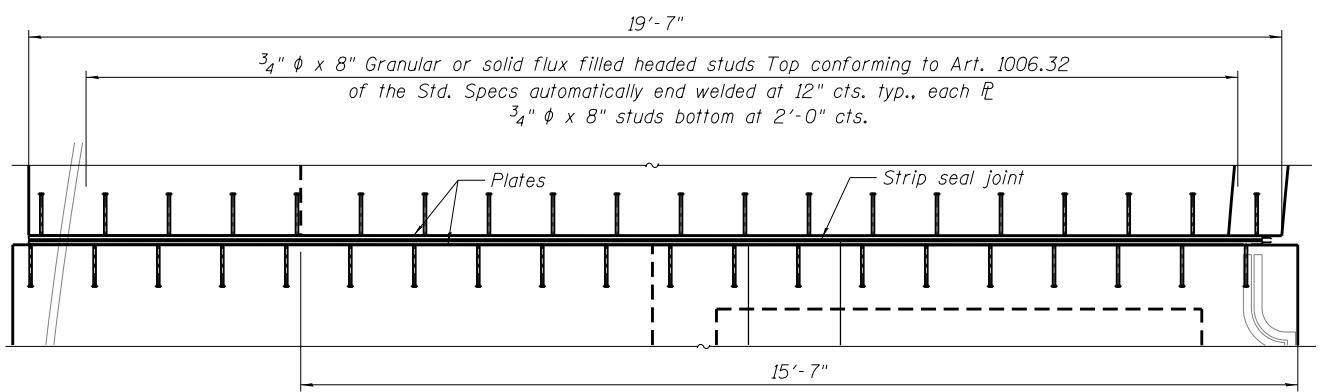
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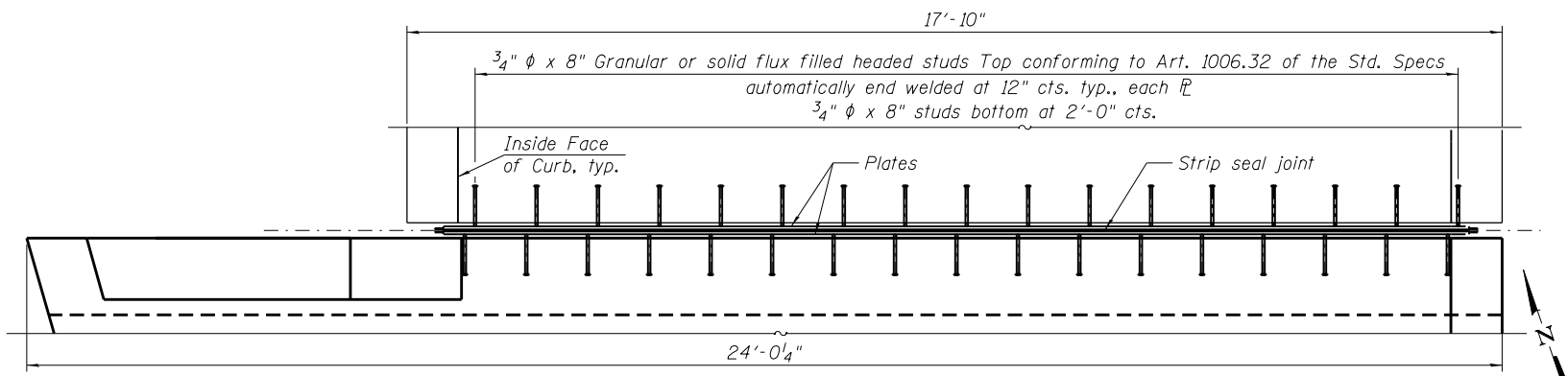
LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

DECK SECTIONS AND DETAILS
(SHEET 2 OF 2)
(STRUCTURE NO. 016-6103)

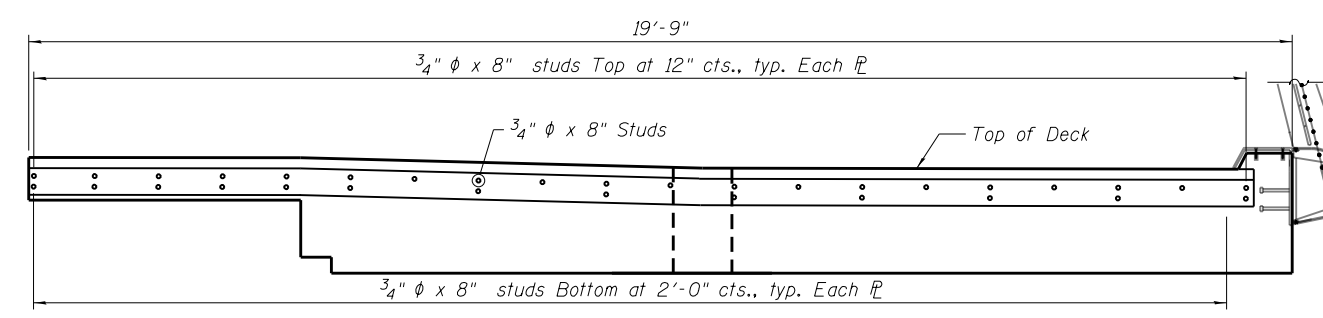
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0341	09-E0534-00-BR/CDOT	COOK	S3-10
CDOT PROJECT NO. E-6-650			407 OF 411



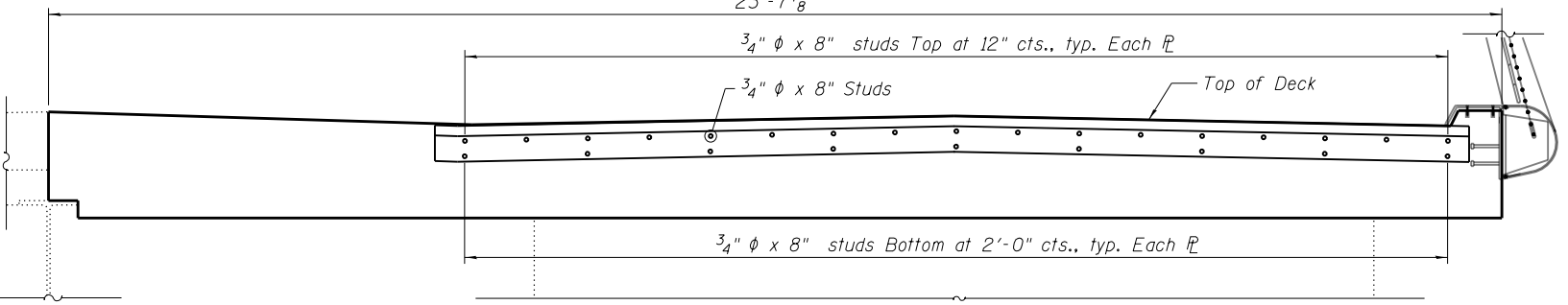
PLAN AT ANCHOR COLUMN BENT



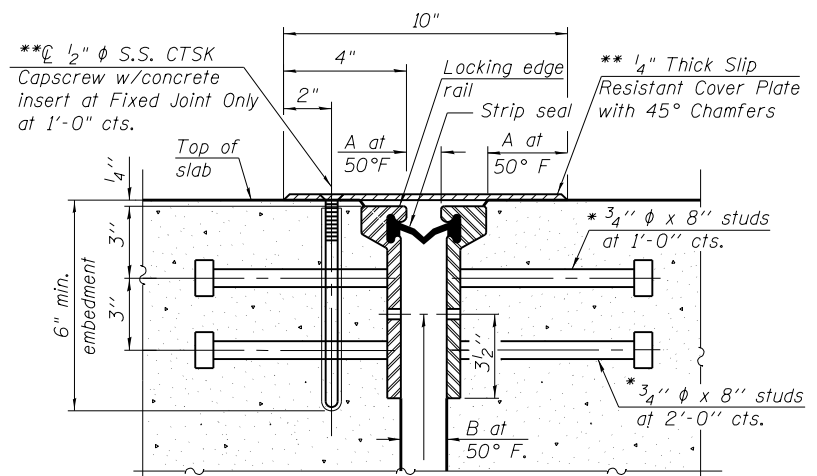
PLAN AT NORTH ABUTMENT



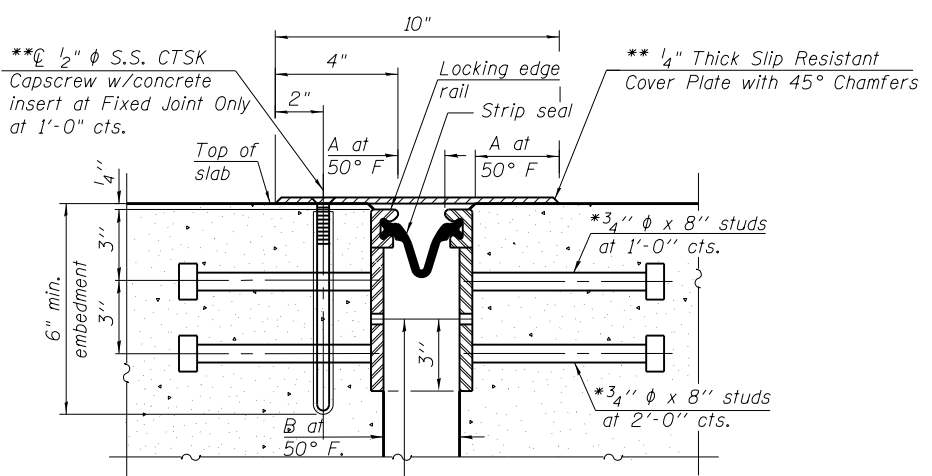
TYPICAL END TREATMENT



TYPICAL END TREATMENT

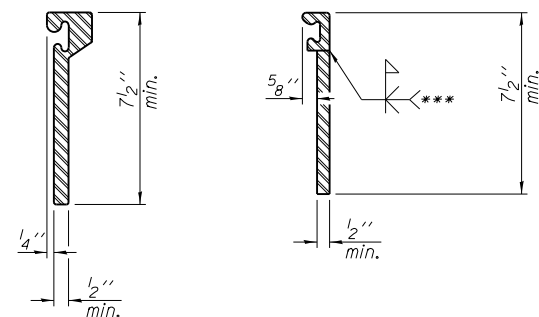


SECTION THRU ROLLED RAIL JOINT

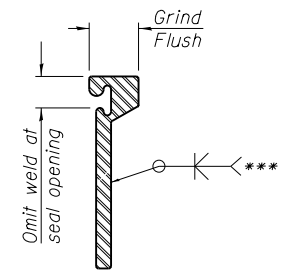


SECTION THRU WELDED RAIL JOINT

Rail Type	Near Anchor Columns		At North Abutment	
	A	B	A	B
Rolled Rail Joint	1 3/4"	2 1/4"	3"	3 1/2"
Welded Rail Joint	1 3/4"	3"	3"	4 1/4"



ROLLLED EXTRUDED RAIL LOCKING EDGE RAILS



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

NOTES:

- The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
- The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

- The manufacturer's recommended installation methods shall be followed.
- The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
- All steel components (except expansion joint plates and attached bars, see General Notes) shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
- All joints in rails shall be welded.

- * Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.
- ** Attach cover plate to the Ramp Pavement with 1/2" S.S. CTSK capscrew with concrete insert at 1'-0" cts. Cost shall be included with Preformed Joint Strip Seal.
- *** Back gouge not required if complete joint penetration is verified by mock-up.

BILL OF MATERIAL

Item	Unit	Total
PREFORMED JOINT STRIP SEAL	FOOT	38

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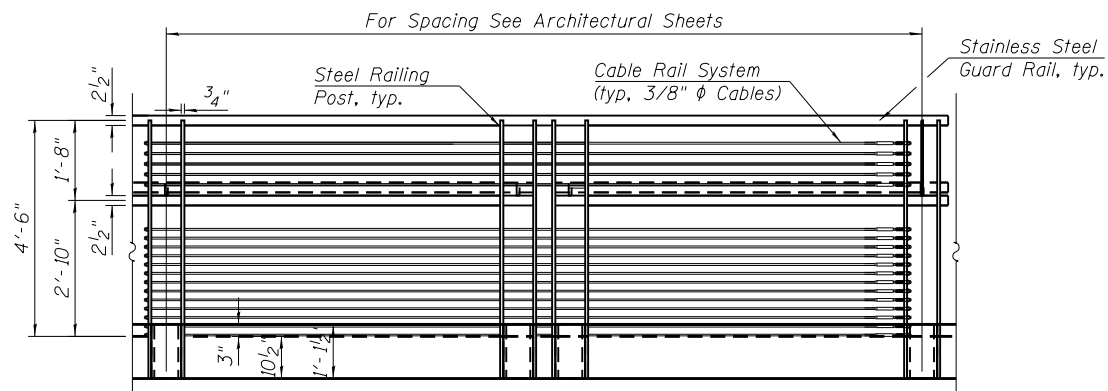
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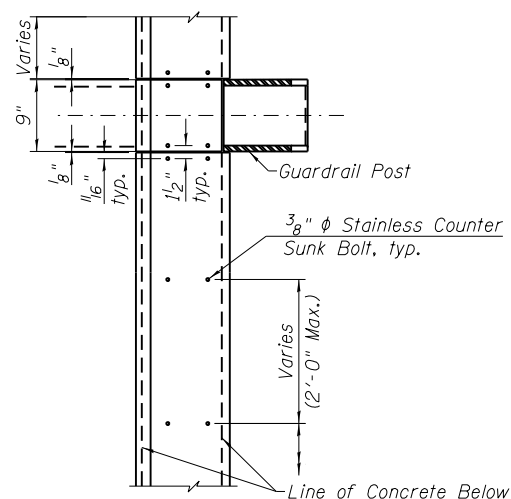
**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**EXPANSION JOINT DETAILS
(STRUCTURE NO. 016-6103)**

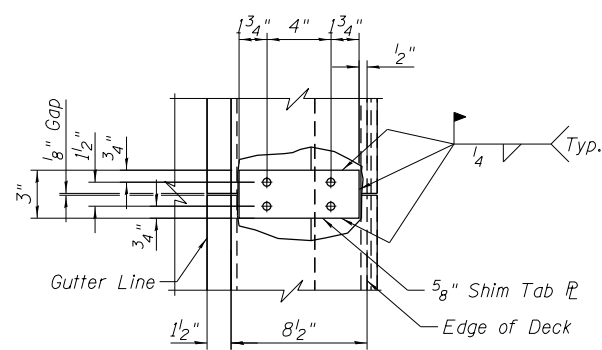
F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S3-11
CDOT PROJECT NO. E-6-650			408 OF 411



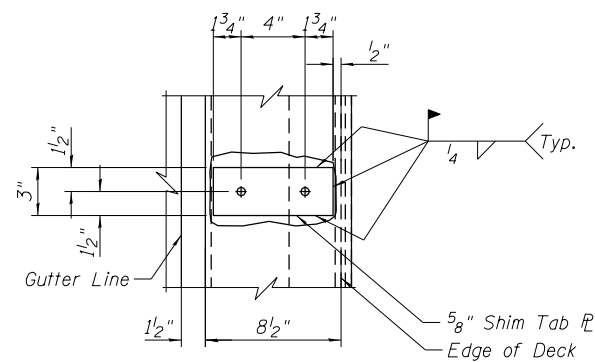
TYPICAL GUARDRAIL ELEVATION



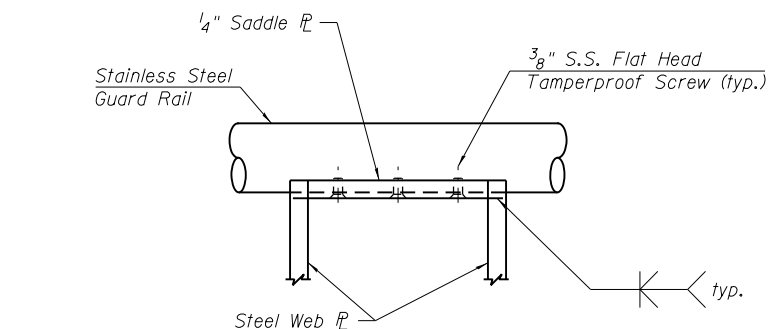
STAINLESS STEEL CURB COVER - PLAN VIEW



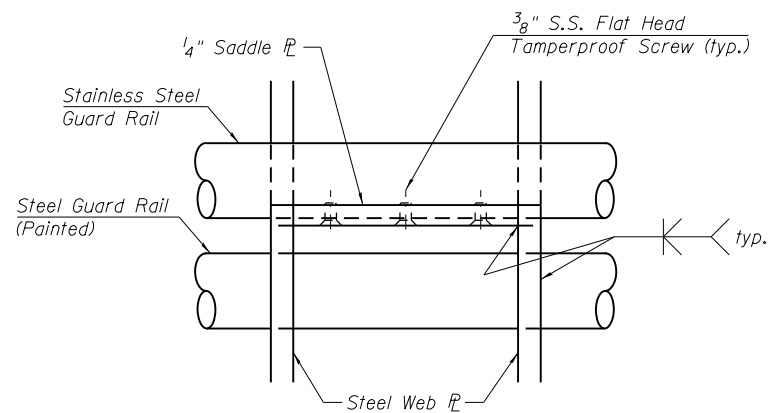
SECTION C-C
(At Curb Cover Connection)



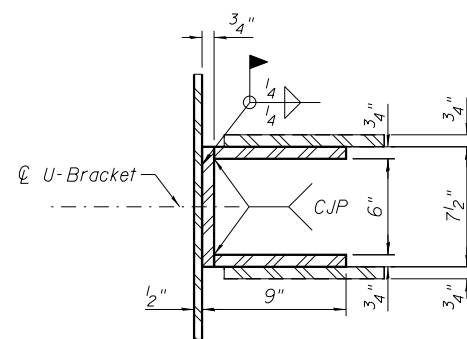
SECTION C-C
(At Midspan Cover Connection)



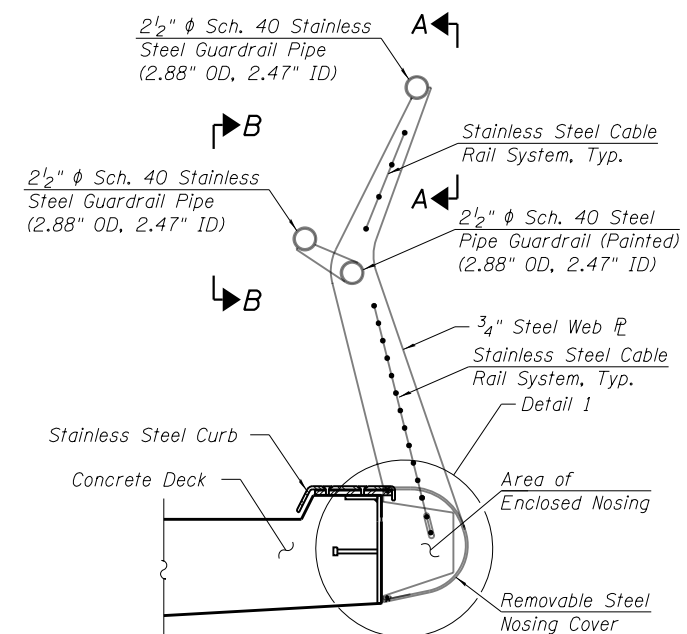
SECTION A-A



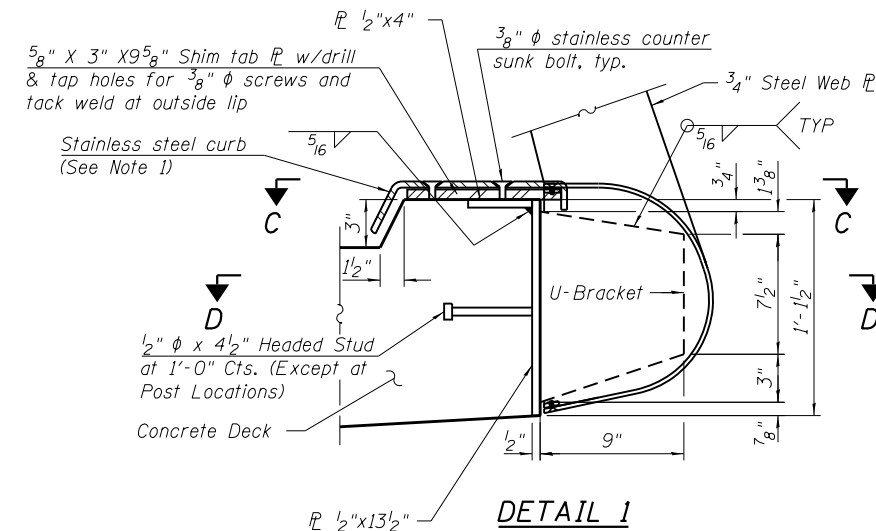
SECTION B-B



SECTION D-D



TYPICAL SECTION



DETAIL 1

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
CABLE RAIL SYSTEM	FOOT	31
STAINLESS STEEL GUARD RAILS	FOOT	62

NOTES:

1. For stainless steel curb details, see Architectural Sheets

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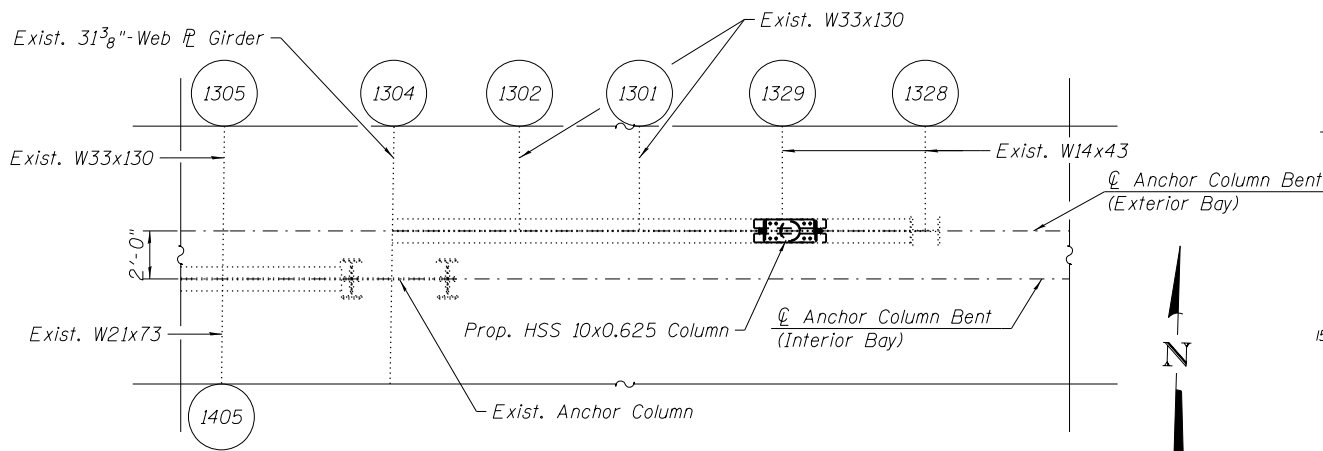
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LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER

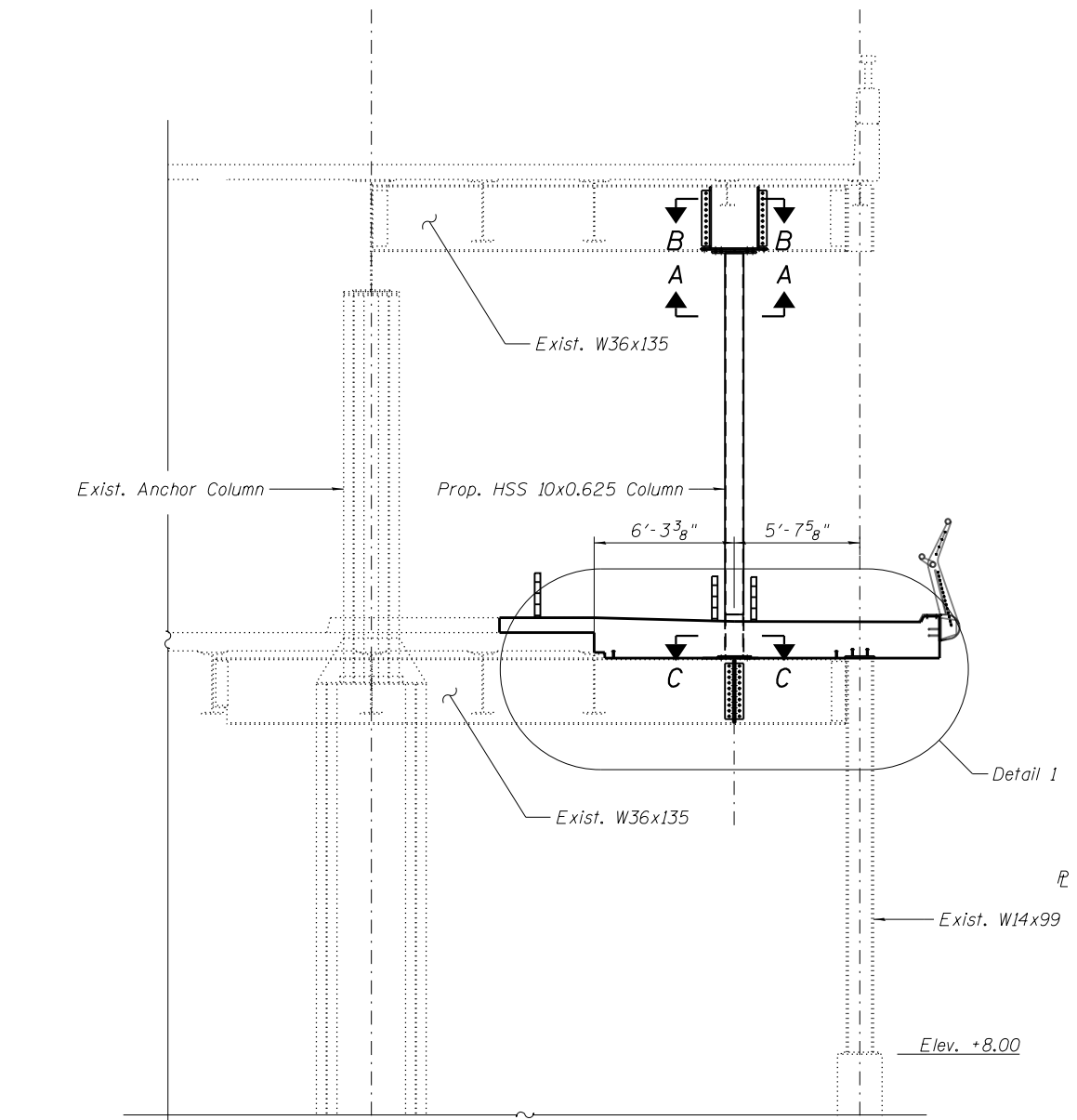
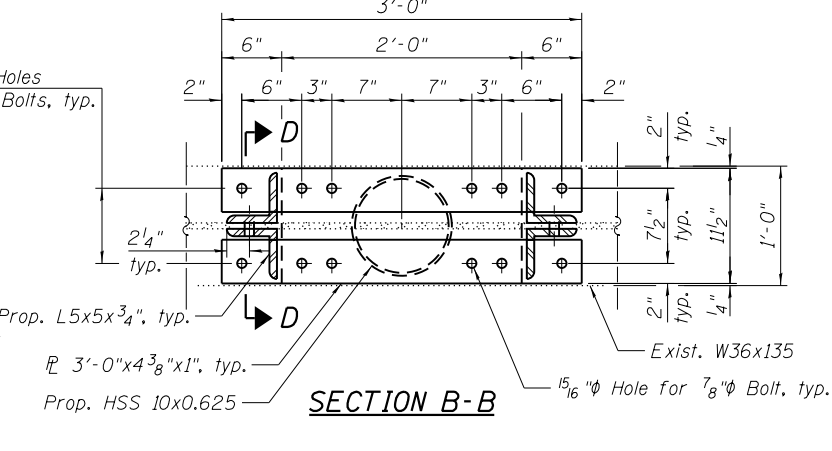
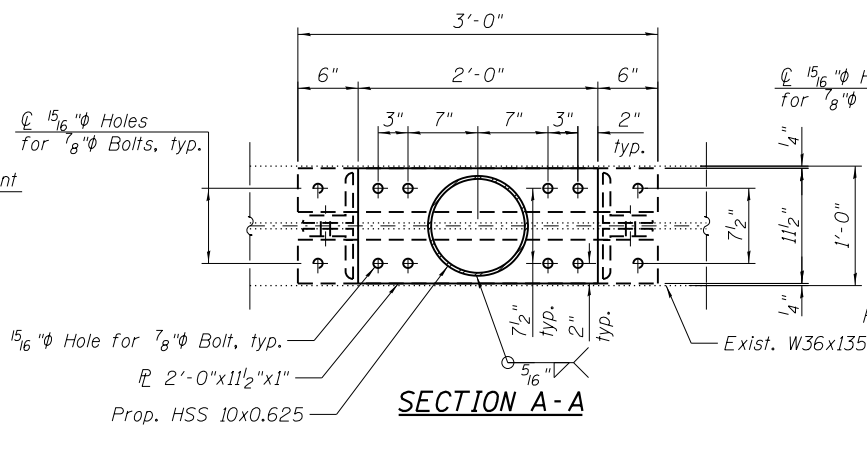
EAST RAILING SECTIONS AND DETAILS
(STRUCTURE NO. 016-6103)

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
0341	09-E0534-00-BR/CDOT	COOK	S3-12
CDOT PROJECT NO. E-6-650			409 OF 411

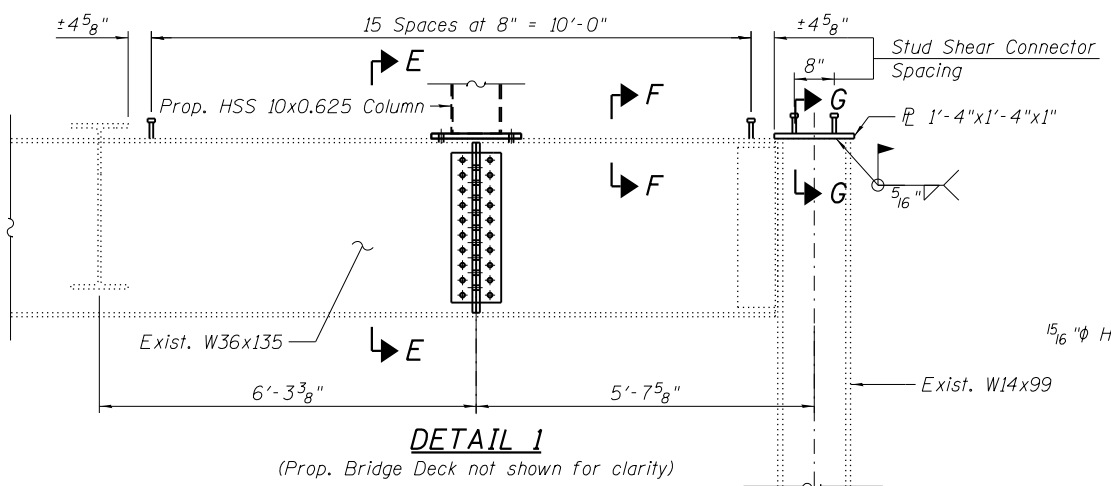
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ANCHOR COLUMN BENT PARTIAL PLAN - UPPER LEVEL

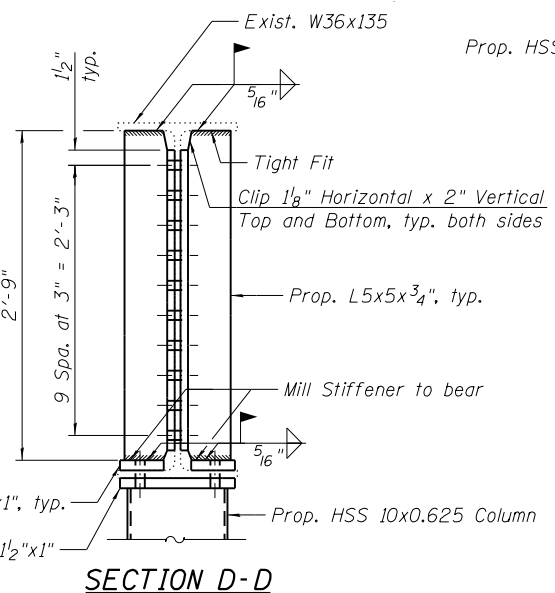


ANCHOR COLUMN BENT PARTIAL ELEVATION (Looking North)

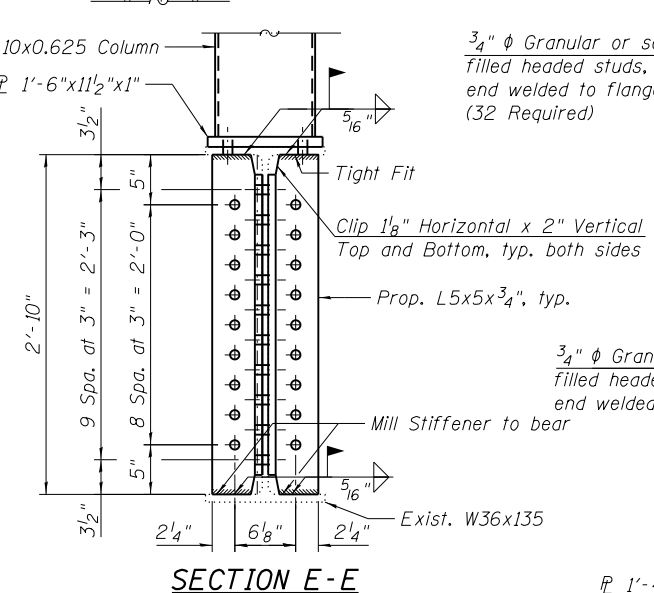


DETAIL 1

(Prop. Bridge Deck not shown for clarity)

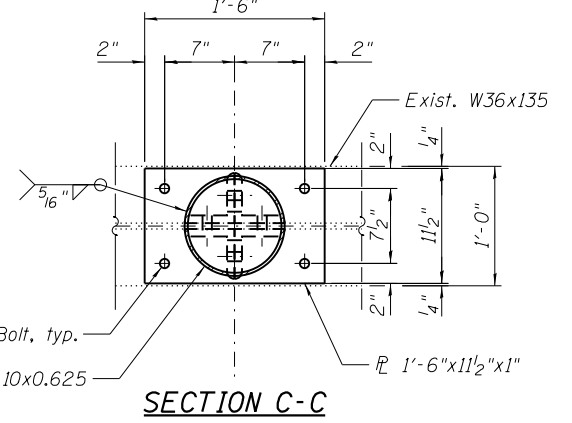


SECTION D-D

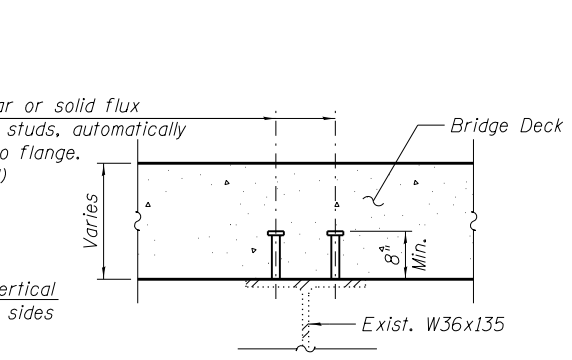


SECTION E-E

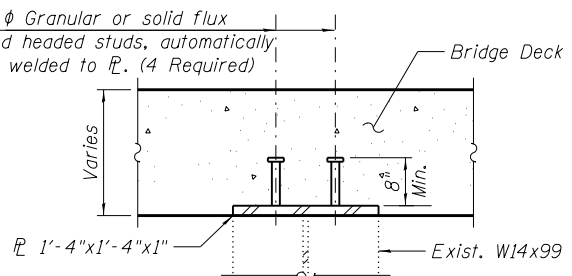
(Stud Shear Connectors not shown for clarity)



SECTION C-C



SECTION F-F



SECTION G-G

- NOTES:**
- Load-carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 - 1 5/16 inch diameter Holes for 7/8 inch Bolts unless noted otherwise.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING	POUND	2,270
STRUCTURAL STEEL		
STUD SHEAR CONNECTORS	EACH	36
CONTAINMENT AND DISPOSAL OF LEAD	L. SUM	0.2
PAINT CLEANING RESIDUES, NO. 3		

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**LAKEFRONT BICYCLE TRAIL #3
OVER THE CHICAGO RIVER**

**NORTH ANCHOR COLUMN BENT MODIFICATION
(STRUCTURE NO. 016-6103)**

F.A.P. RTE.	SECTION	COUNTY	SHEET NO.
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CDOT PROJECT NO. E-6-650			410 OF 411

