

GENERAL NOTES:

- All materials and construction methods shall conform to the "Standard Specifications for Road and Bridge Construction" adopted January 1, 2016 by the Illinois Department of Transportation. Including supplement specifications and recurring special provisions unless otherwise specified.
- The Contractor shall coordinate all construction activities with the City of Chicago.
- These contract documents have been prepared based on field inspection, existing plans, and other information available at the time. Actual field conditions may require modifications to construction details and work quantities. It shall be the Contractor's responsibility to verify the plan dimensions and details in the field and make necessary (approved by City of Chicago) adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation or a change in the scope of work. However, the contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Once on site the Contractor shall complete a survey of the project site to verify the existing conditions. Any conditions found by the Contractor that were not anticipated on the Contract Plans and that will affect the cost or implementation of the reconstruction specified shall be immediately brought to the attention of the City of Chicago.
- The Contractor shall make his own investigation to determine the existence, nature, and exact location of all utility lines and appurtenances within the limits of the rehabilitation. The cost of this work shall be included in the cost of the contract.
- The Contractor shall exercise caution during all construction operations to prevent any damage to adjacent structures, buildings, and structural components not within the scope of these project. Structures, building members, and structural components not within the scope of these reconstruction and improvements that are damaged during the reconstruction operations shall be repaired or replaced at the expense of the Contractor to the satisfaction of the City of Chicago.
- The Contractor is responsible for the full cost to repair and restore any and all utilities damage by his operation.
- The Contractor shall protect and/or relocate all utilities, which would be affected by the construction. Pipes/ducts, fittings, and inserts are to be furnished and installed by the contractor to the manufacturer's recommendation and owners requirements. The cost of this work will be considered incidental to the contract.
- The Contractor shall submit detailed shop drawings, calculations, procedure, and sequences of the proposed construction work to the Commissioner for approval prior to starting any work. The Contractor shall be responsible for all methods and procedures necessary to achieve the plan details. All cost shall be included in the cost of the contract. The Contractor shall obtain all necessary permits from the City of Chicago, the State of Illinois, U.S. Army Corps of Engineers, Coast Guard and other jurisdictional agencies prior to commencing construction. All cost related to this work shall be included in the cost of the contract.
- All debris resulting from the removal of the existing structure or created while performing the specified work shall be removed from the project site. No material shall be discharged into the waterway around the project site in accordance to the Coast Guard and City of Chicago regulations. 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 at his/her expense and to the Coast Guard and City of Chicago satisfaction. All cost related to this work shall be included in the cost of the contract.
- Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts (in painted areas and ASTM A325 Type 3 in unpainted areas). Bolts 3/4" diameter, holes 1 3/16" diameter, unless otherwise noted.
- Contract plans shall be worked in conjunction with all existing drawings, and can be obtained from the City of Chicago.
- All new structural steel shall be cleaned and painted in accordance with Section 506 of IDOT SSRBC, Adopted April 1, 2016 with Supplemental Specifications and Recurring Special Provisions adopted January 2017. The Inorganic Zinc Rich Primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel. New structural steel primer shall be shop applied and intermediate and final coats shall be field applied. The color of the final finish coat shall be Reddish Brown, Munsell No. 2.5YR 3/4.
- All contact surfaces between new and existing steel, including connections bolts, nut or washer contact areas, shall be free of scale, burrs, dirt or other foreign material, as well as oil, previously applied paint, lacquer, or other coatings that would prevent solid seating of the connected parts. The contact surfaces shall be cleaned and primed with Inorganic Zinc Rich Primer to match new structural steel primer in accordance with the latest version of the Guide Bridge Special Provision (GBSP) 21 "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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 312-565-0450 Job No. 10601.00

FILE NAME =	USER NAME = jsurber	DESIGNED - JLS	REVISED -
10601.6077.Repair Plans.dgn		CHECKED - HMA	REVISED -
	PLOT SCALE =	DRAWN - JLS	REVISED -
	PLOT DATE = 9/18/2017	CHECKED - HMA	REVISED -

**CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING**

EXPANSION JOINT AND DIAPHRAGM REPLACEMENT GENERAL NOTES

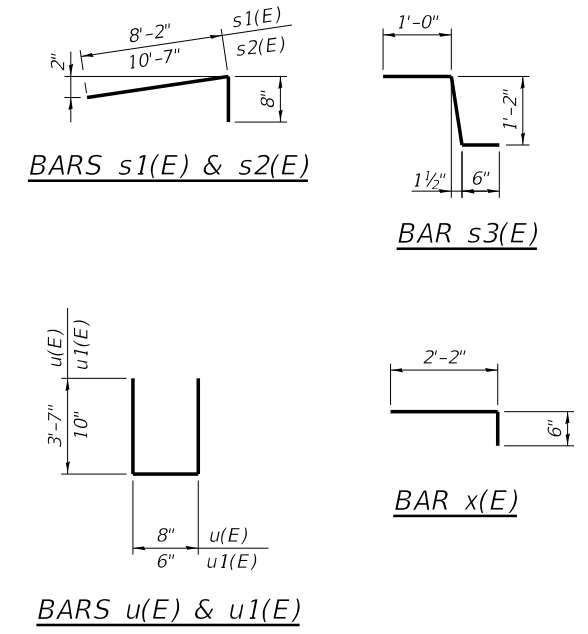
SHEET NO. 1 OF 7 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	1	1
CDOT PROJECT NO.			SN 016-6077	
ILLINOIS FED. AID PROJECT				

***BILL OF MATERIAL**

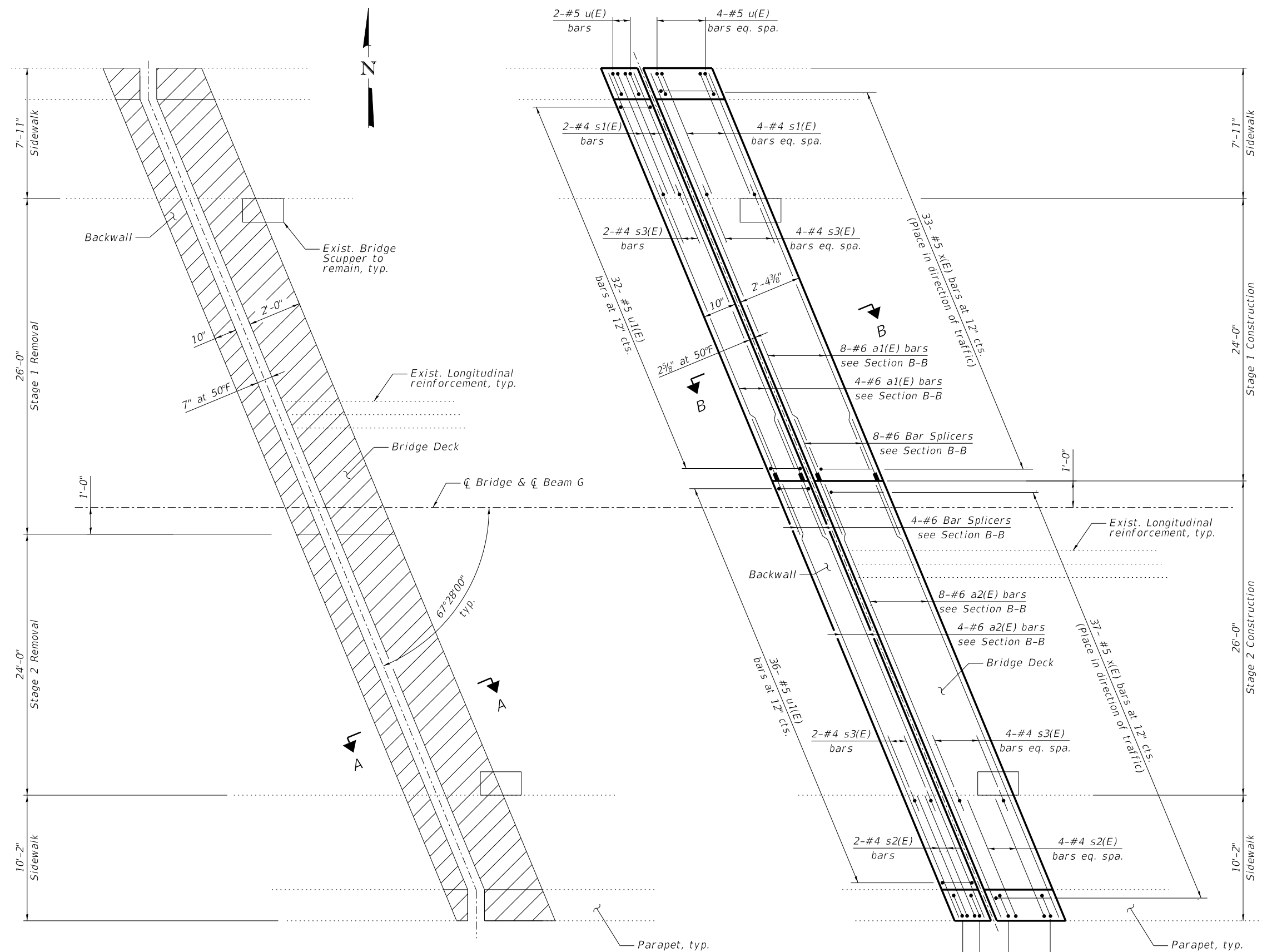
Bar	No.	Size	Length	Shape
a1(E)	12	#6	34'-2"	—
a2(E)	12	#6	38'-9"	—
s1(E)	6	#4	8'-10"	┌
s2(E)	6	#4	11'-3"	┌
s3(E)	12	#4	2'-8"	└
u(E)	12	#5	7'-10"	—
u1(E)	68	#5	2'-2"	—
x(E)	70	#5	2'-8"	┌
Bar Splicers			Each	12
Reinforcement Bars, Epoxy Coated			Pound	1,870

* For Information Only



NOTES:

1. I.F. denotes Inside Face.
O.F. denotes Outside Face.
E.E. denotes Each End.
E.S. denotes Each Side.
2. Hatched areas indicate Concrete Removal.
3. Existing longitudinal reinforcement shall be cleaned and incorporated into the new construction.
4. Apply Protective Coat to new concrete surfaces per Article 503 of the IDOT Standard Specifications.
5. Dimensions are base on a Rolled Rail Strip Seal Joint. If the contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the Details on Sheet 5.
6. Joint shall be fabricated to match roadway and sidewalk profiles and cross slopes.



PLAN - CONCRETE REMOVAL AT WEST ABUTMENT

PLAN - CONCRETE REPLACEMENT AT WEST ABUTMENT

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10601.6077.ExpJtRepair.WAbut.dgn		CHECKED - HMA	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
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EXPANSION JOINT REPLACEMENT PLAN
AT WEST ABUTMENT
 SHEET NO. 2 OF 7 SHEETS

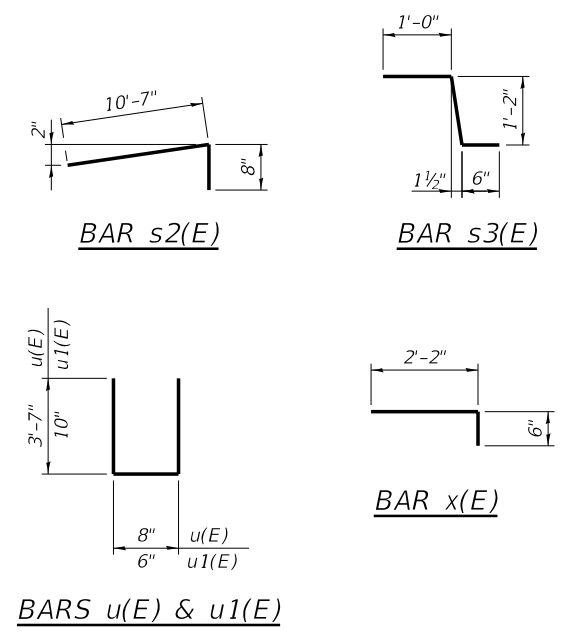
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CDOT PROJECT NO.		SN 016-6077		
ILLINOIS FED. AID PROJECT				

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***BILL OF MATERIAL**

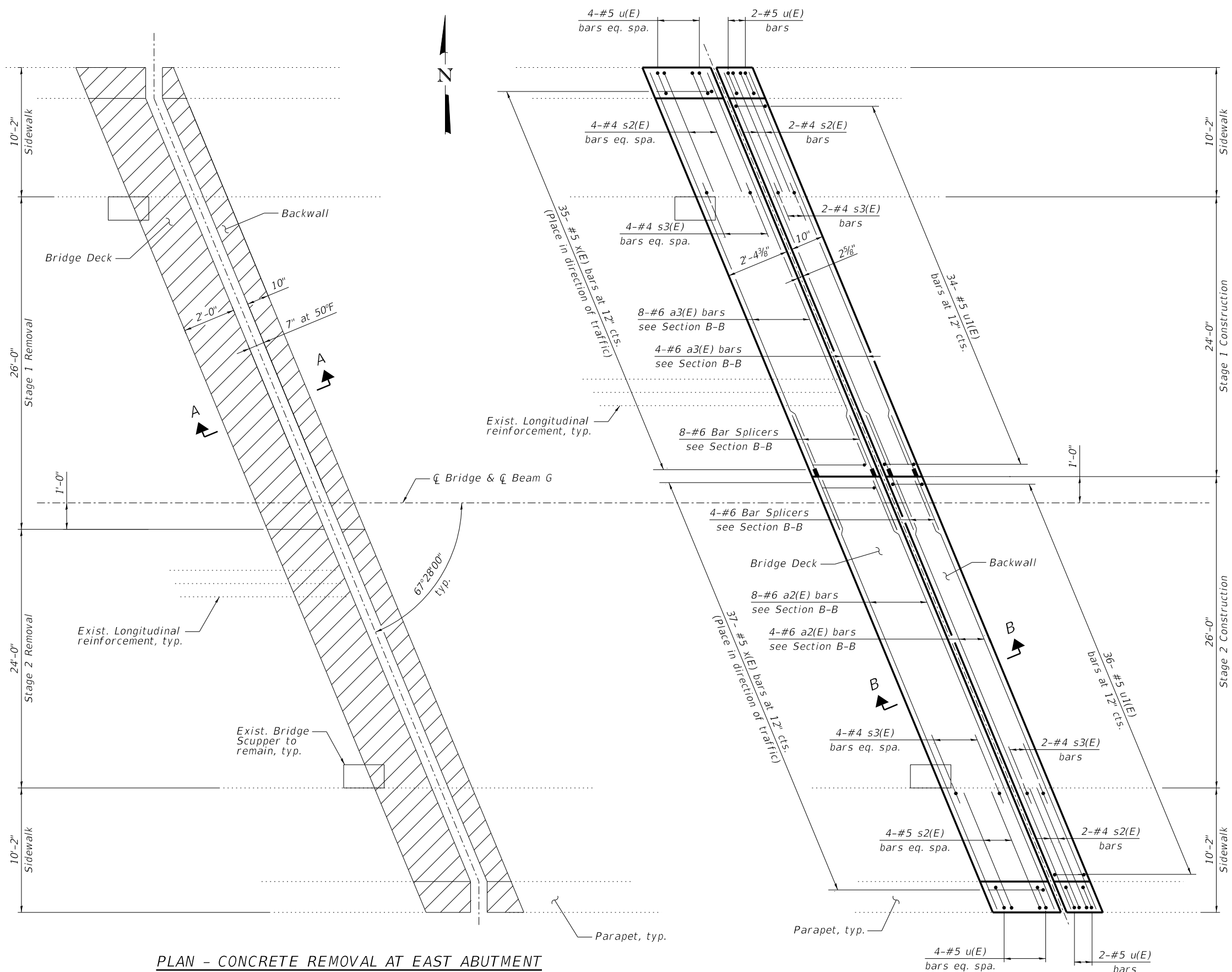
Bar	No.	Size	Length	Shape	
a2(E)	12	#6	38'-9"	—	
a3(E)	12	#6	36'-7"	—	
s2(E)	12	#4	11'-3"	┌	
s3(E)	12	#4	2'-8"	└	
u(E)	12	#5	7'-10"	—	
u1(E)	70	#5	2'-2"	—	
x(E)	72	#5	2'-8"	┌	
Bar Splicers				Each	12
Reinforcement Bars, Epoxy Coated				Pound	1,930

* For Information Only



NOTES:

1. I.F. denotes Inside Face.
O.F. denotes Outside Face.
E.E. denotes Each End.
E.S. denotes Each Side.
2. Hatched areas indicate Concrete Removal.
3. Existing longitudinal reinforcement shall be cleaned and incorporated into the new construction.
4. Apply Protective Coat to new concrete surfaces per Article 503 of the IDOT Standard Specifications.
5. Dimensions are base on a Rolled Rail Strip Seal Joint. If the contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the Details on Sheet 5.
6. Joint shall be fabricated to match roadway and sidewalk profiles and cross slopes.



PLAN - CONCRETE REMOVAL AT EAST ABUTMENT

PLAN - CONCRETE REPLACEMENT AT EAST ABUTMENT

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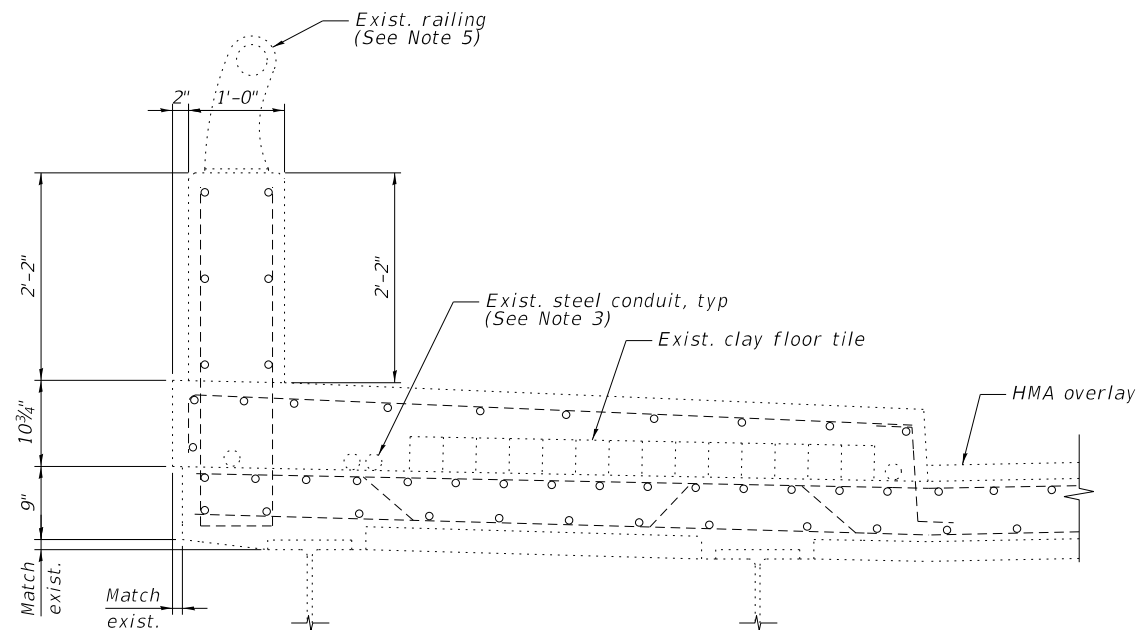
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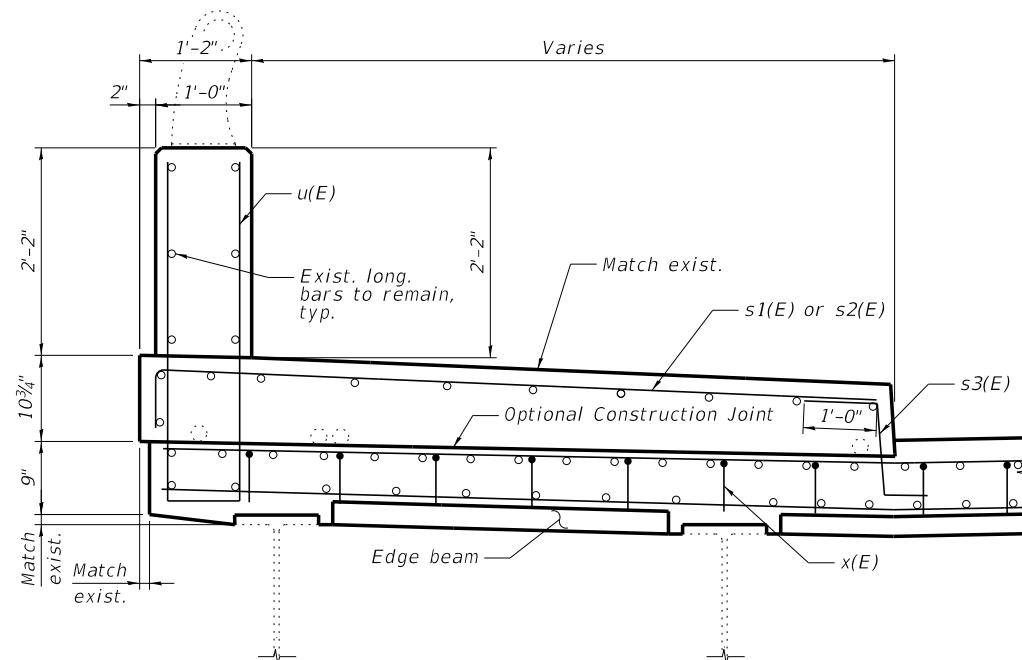
EXPANSION JOINT REPLACEMENT PLAN
AT EAST ABUTMENT
 SHEET NO. 3 OF 7 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CDOT PROJECT NO.			SN 016-6077	
ILLINOIS FED. AID PROJECT				

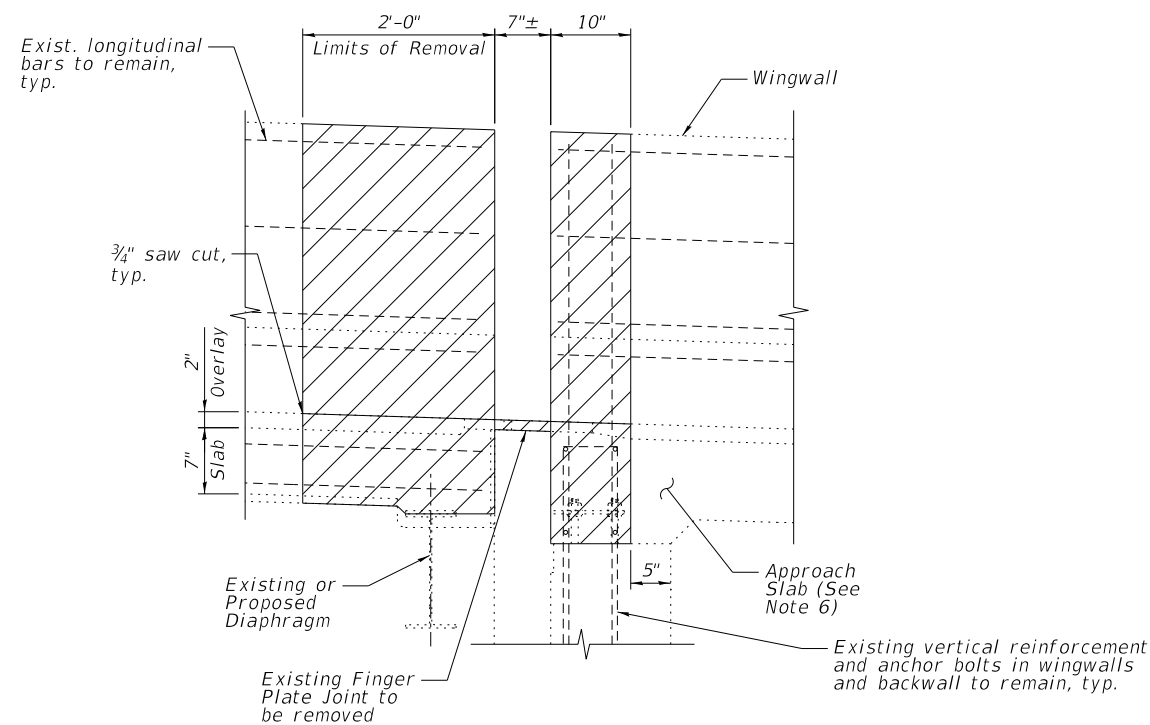
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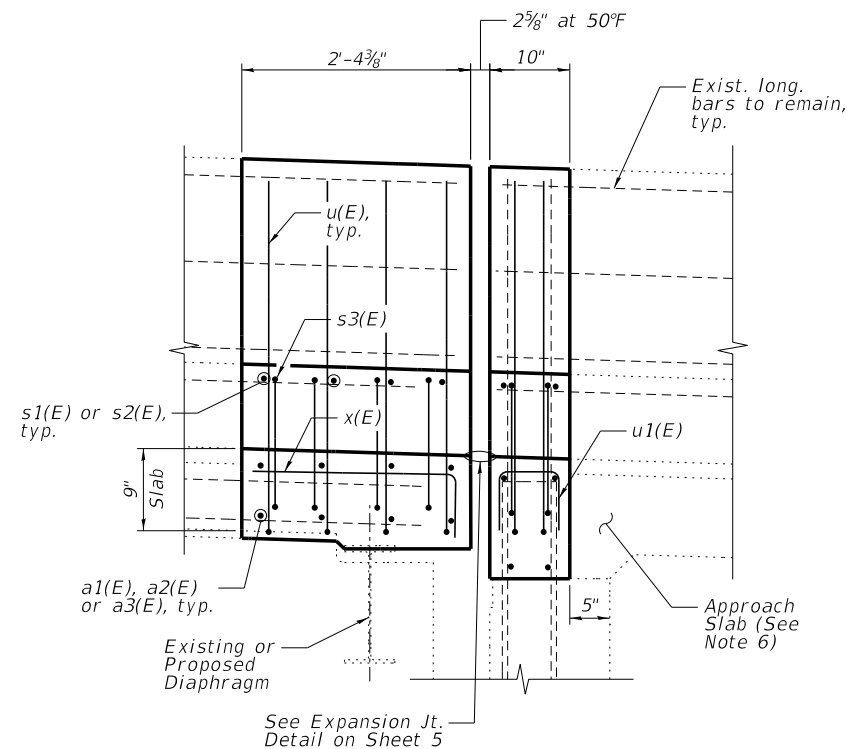
SECTION - EXISTING PARAPET AT ABUTMENT
(Existing Bridge Scupper to remain not shown for clarity. See Note 4.)



SECTION - PROPOSED PARAPET AT ABUTMENT
(Existing Bridge Scupper to remain not shown for clarity. See Note 4.)



SECTION A-A



SECTION B-B

NOTES:

- Existing longitudinal reinforcement bars in the deck and sidewalk, all existing reinforcement bars in the wingwalls extending into the concrete removal area and all vertical reinforcement and anchor bolts in the backwalls shall be cleaned and incorporated into the new construction.
- Existing deck reinforcement bars in the concrete removal area parallel to the expansion joint shall be removed.
- The Contractor shall exercise extreme care with the existing conduits in the sidewalk sections to be removed and to protect and support the conduits. The Contractor will be required to repair any damage to the conduits to the satisfaction of the City of Chicago. No splicing will be allowed to any cable damage resulting from this work to the proposed cables, instead the Contractor will be required to replace any damaged cables the entire span at no additional cost to the City of Chicago.
- The Contractor shall exercise care with the existing bridge deck drainage scuppers to remain in the bridge deck removal area. Scuppers shall be temporarily supported as necessary and the Contractor will be required to repair any damage to the scuppers to the satisfaction of the City of Chicago at the expense of the Contractor.
- Existing railing to remain in the deck and sidewalk removal area shall be temporarily supported and reincorporated into the new construction. Contractor will be required to repair any damage to the railing to the satisfaction of the City of Chicago at the expense of the Contractor.
- The Contractor shall exercise extreme care not to damage the existing approach during concrete removal operations. The existing construction joint between the backwall and approach is covered by an HMA overlay and this overlay shall be removed to locate the existing construction joint.



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PLOT SCALE =
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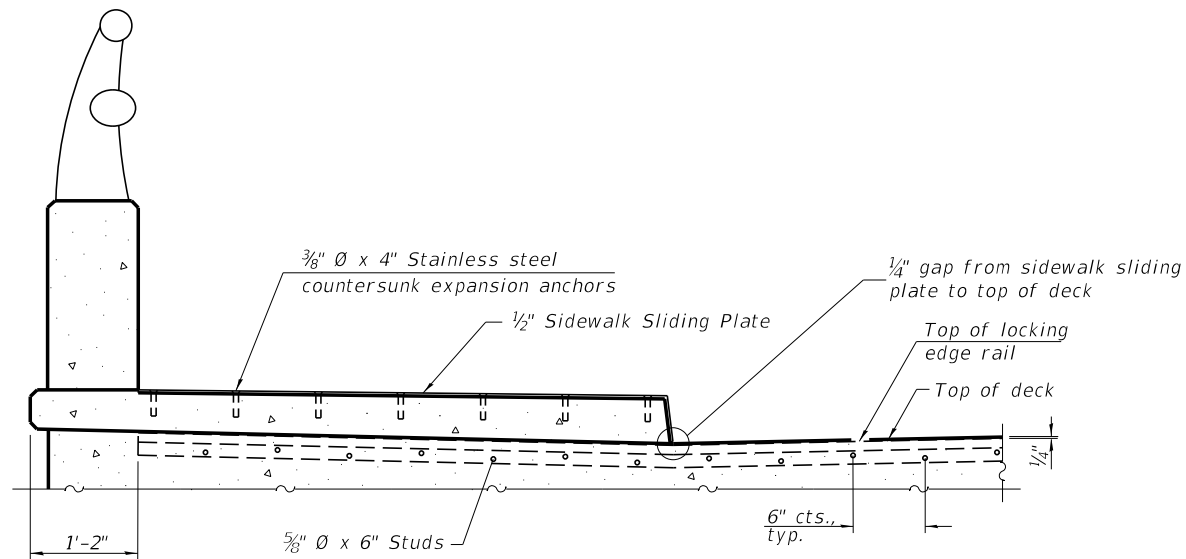
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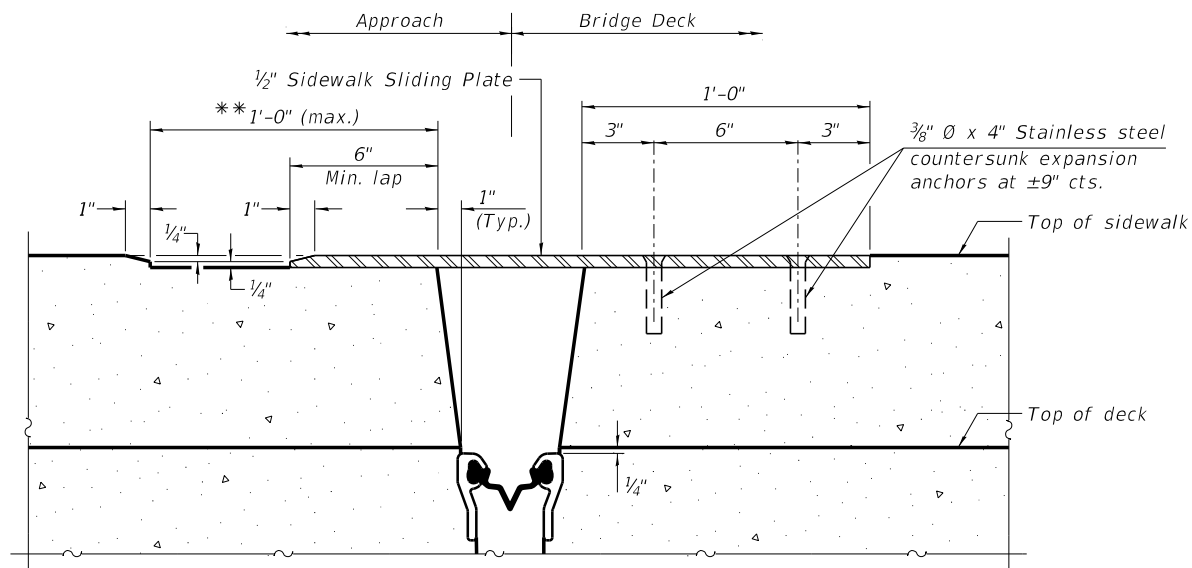
EXPANSION JOINT REPAIR DETAILS

SHEET NO. 4 OF 7 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CDOT PROJECT NO.			SN 016-6077	
ILLINOIS FED. AID PROJECT				

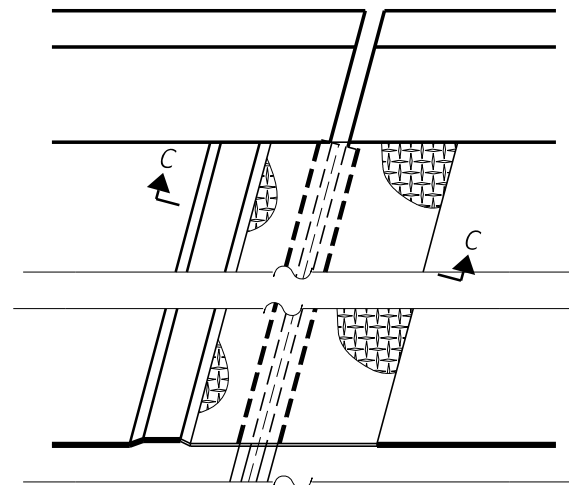


ELEVATION AT RAISED SIDEWALK

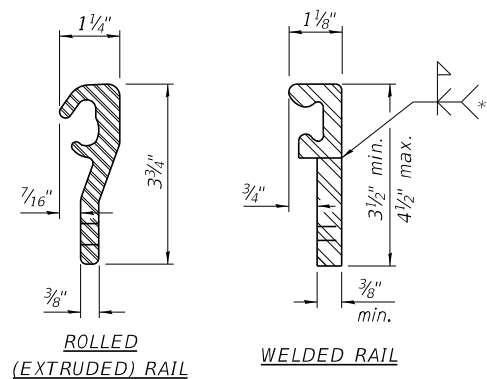


SECTION C-C

** Verify in field and coordinate with sidewalk removal limits.

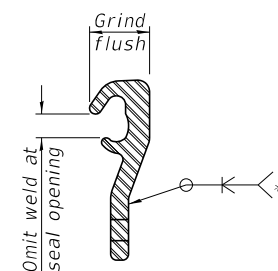


PLAN AT RAISED SIDEWALK



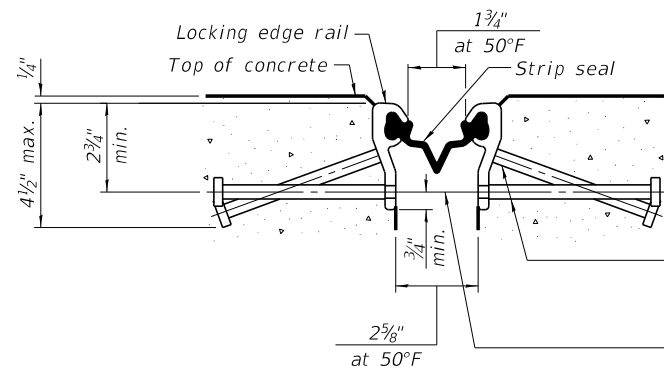
LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

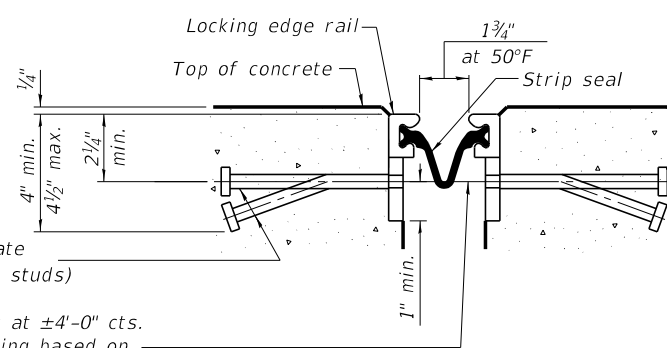
The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.



SHOWING ROLLED RAIL JOINT

* $\frac{5}{8}$ " \emptyset x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

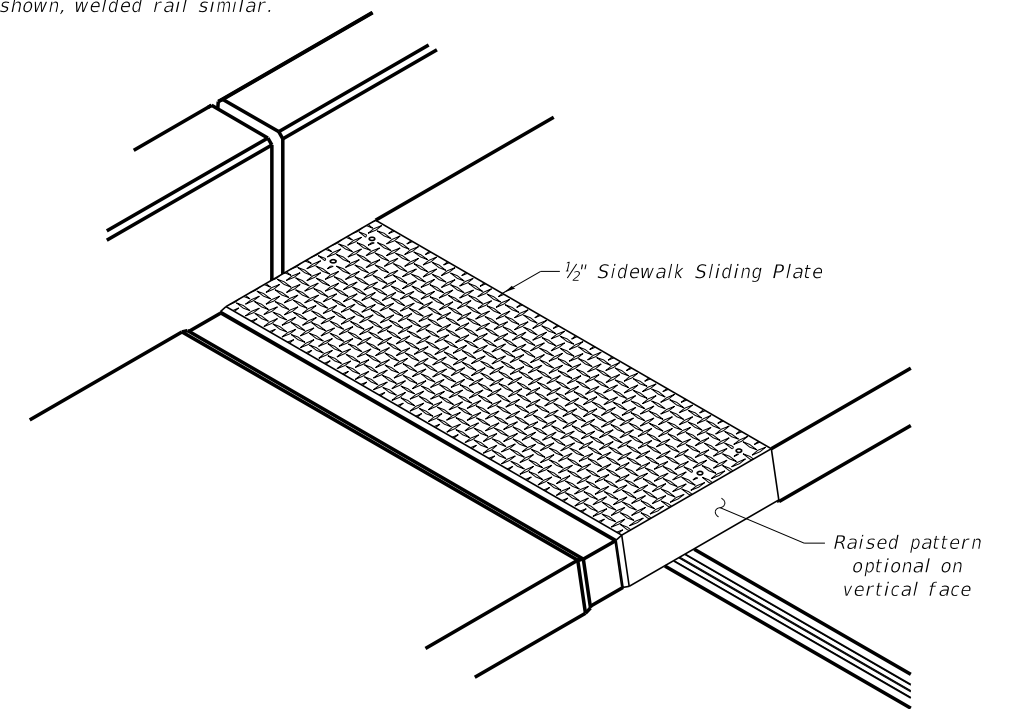
$\frac{3}{8}$ " \emptyset threaded rods in $\frac{7}{16}$ " \emptyset holes at ± 4 '-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.



SHOWING WELDED RAIL JOINT

SECTION A-A

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



TRIMETRIC VIEW

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". 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 configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the $4\frac{1}{2}$ " maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

The Maximum space between locking edge rail segments shall be $\frac{3}{16}$ " and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

The top surface of sidewalk sliding plates shall have a raised pattern according to ASTM A786.

Cost of parapet sliding plates, sidewalk sliding plates, embedded plates, anchorage studs, and expansion anchors included with Preformed Joint Strip Seal.

34" F-shape barrier shown, 42" F-shape similar as noted. The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



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 312-565-0450 Job No. 10601.00

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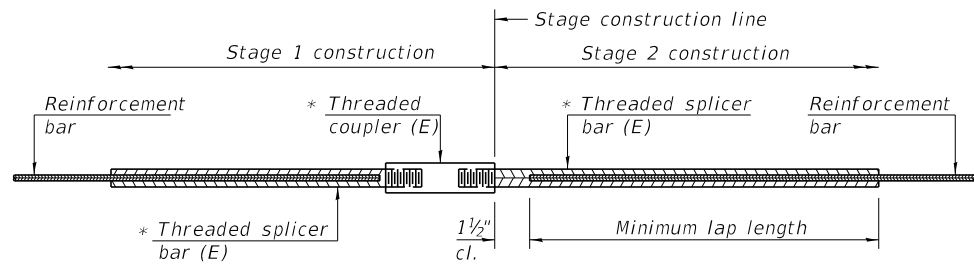
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
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PREFORMED JOINT STRIP SEAL

SHEET NO. 5 OF 7 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CDOT PROJECT NO.			SN 016-6077	
ILLINOIS FED. AID PROJECT				

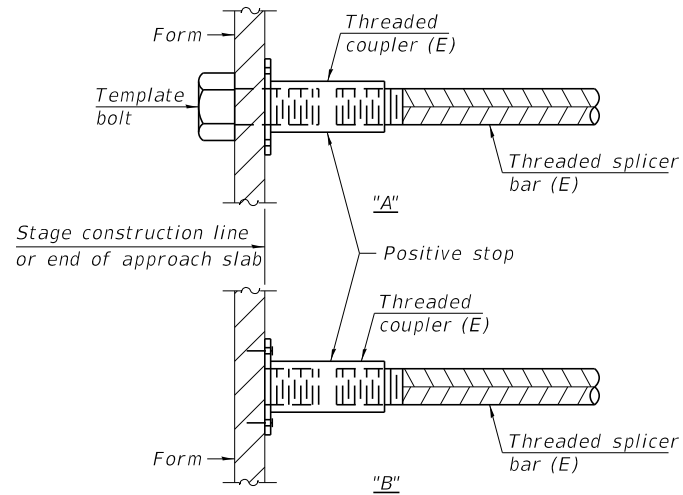


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

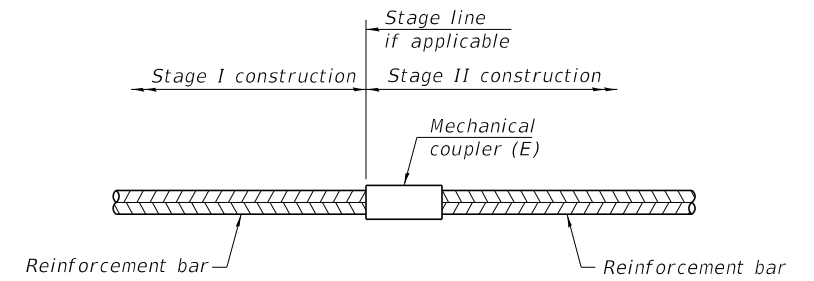
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
W. Abut. Backwall	#6	4	4'-10"
W. Abut. Bridge Deck	#6	8	4'-10"
E. Abut. Backwall	#6	4	4'-10"
E. Abut. Bridge Deck	#6	8	4'-10"



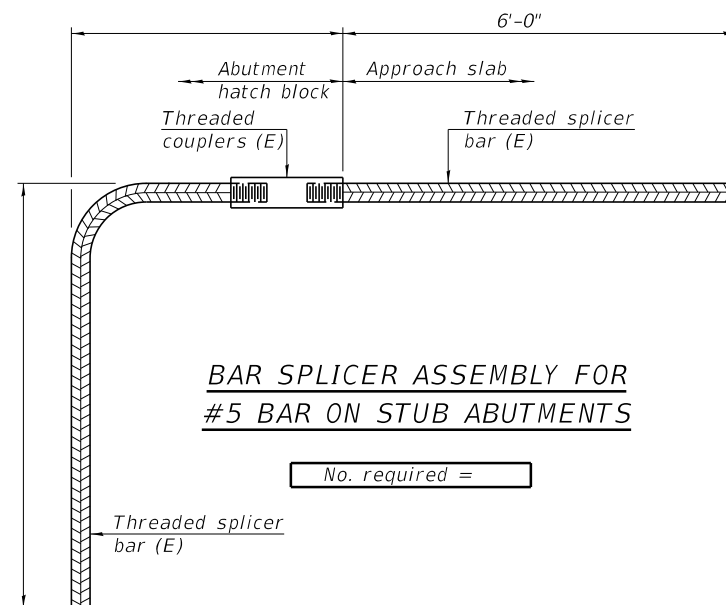
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.



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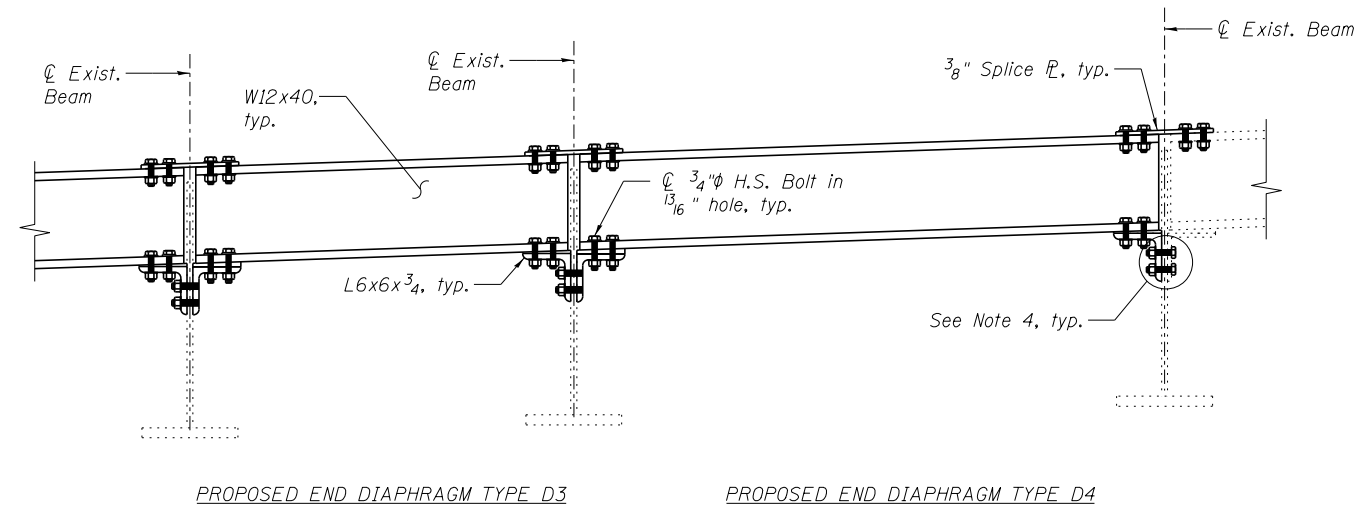
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BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS

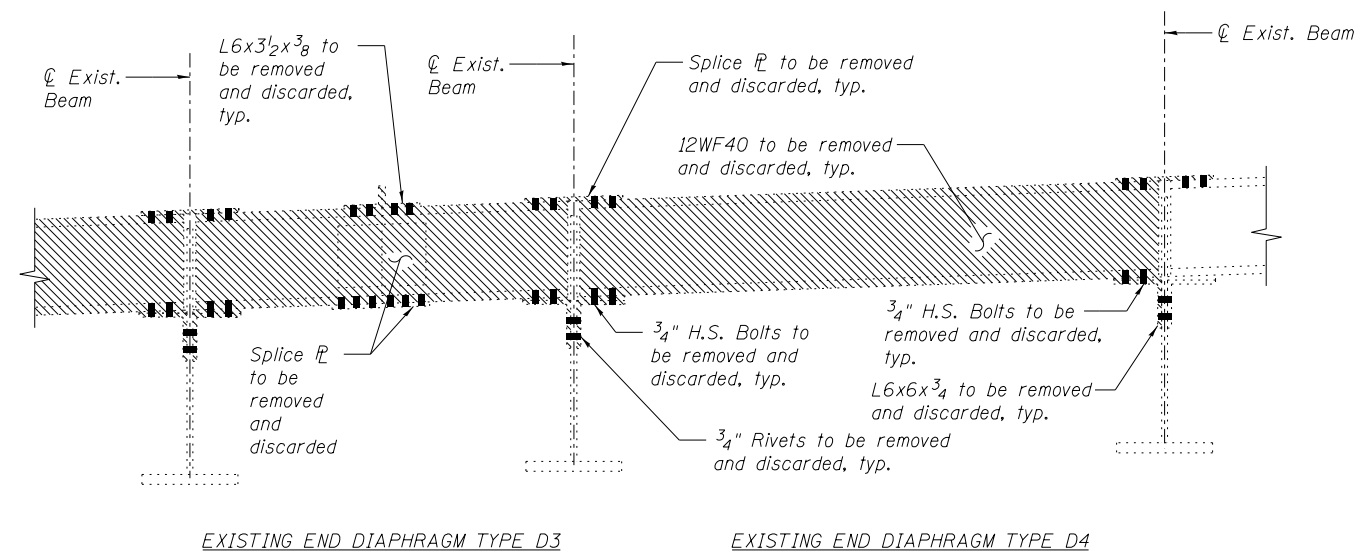
SHEET NO. 6 OF 7 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	6	6
CDOT PROJECT NO.			SN 016-6077	
ILLINOIS FED. AID PROJECT				



END DIAPHRAGM REPLACEMENT DETAIL

(No. of Locations Type D3 = 4)
(No. of Locations Type D4 = 14)



EXISTING END DIAPHRAGM REMOVAL DETAIL

(No. of Locations Type D3 = 4)
(No. of Locations Type D4 = 14)

NOTES:

1. New 3/4" dia. fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Field drill holes in W12 flange using holes in horizontal angle leg as a template. Field drill holes in vertical angle leg using holes in existing beam web as a template. Contractor to field verify location, size and spacing of existing holes prior to ordering new materials.
2. Diaphragms, angles and plates shall conform to the requirements of AASHTO M270 Grade 50.
3. See Sheet 1 for location of diaphragm replacement and removal.
4. Contractor shall ensure that the adjacent existing diaphragm is supported during angle replacement under proposed diaphragm.
5. Contractor shall field verify existing dimensions and hole locations and make necessary adjustments prior to construction or ordering of materials.
6. After finger plate joint removal, unused holes in existing diaphragms to remain that previously connected to finger plate stool supports shall be filled with high strength fasteners.



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	PLOT SCALE =	DRAWN - JLS	REVISED -
	PLOT DATE = 9/18/2017	CHECKED - HMA	REVISED -

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DIAPHRAGM DETAILS

SHEET NO. 7 OF 7 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	7	7
CDOT PROJECT NO.		SN 016-6077		
ILLINOIS FED. AID PROJECT				

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