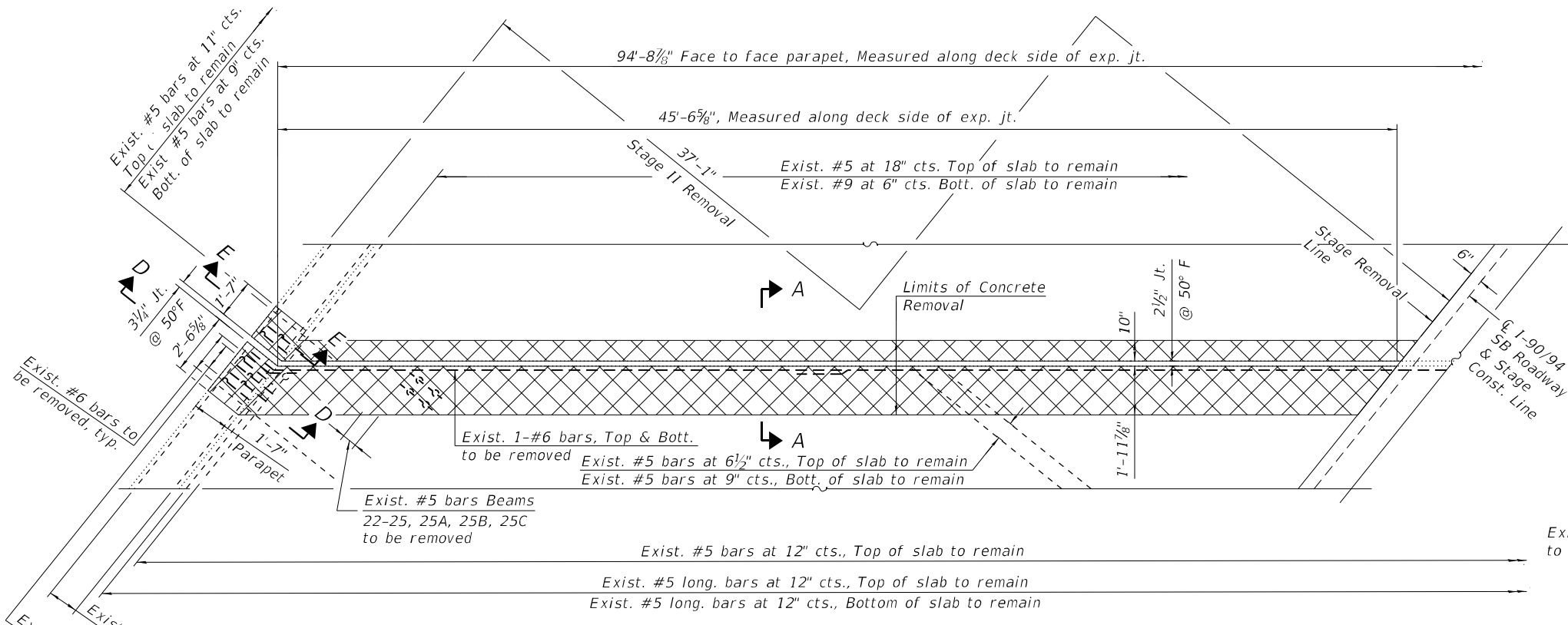
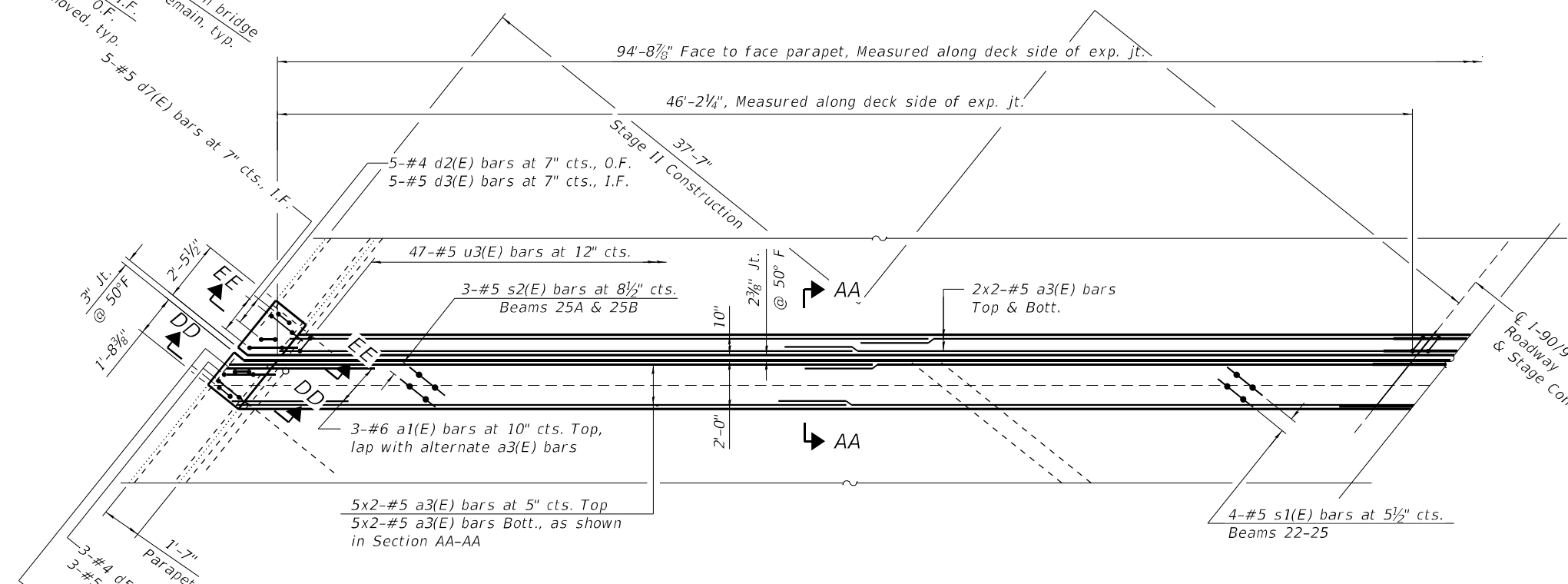


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 8/30/2022 3:16:14 PM

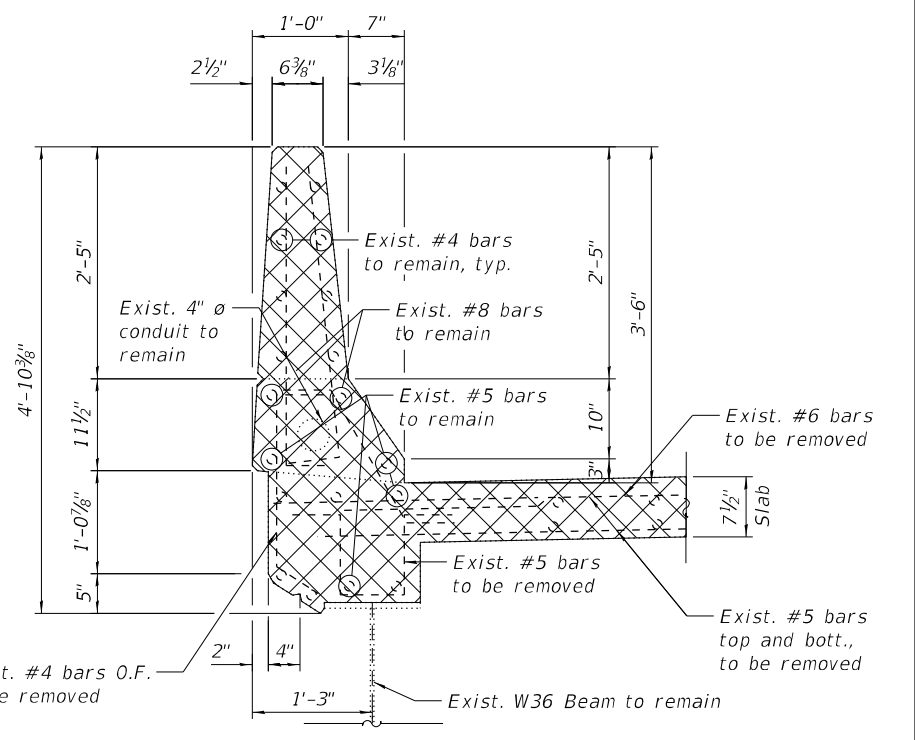


WEST ABUTMENT JOINT REMOVAL PARTIAL PLAN

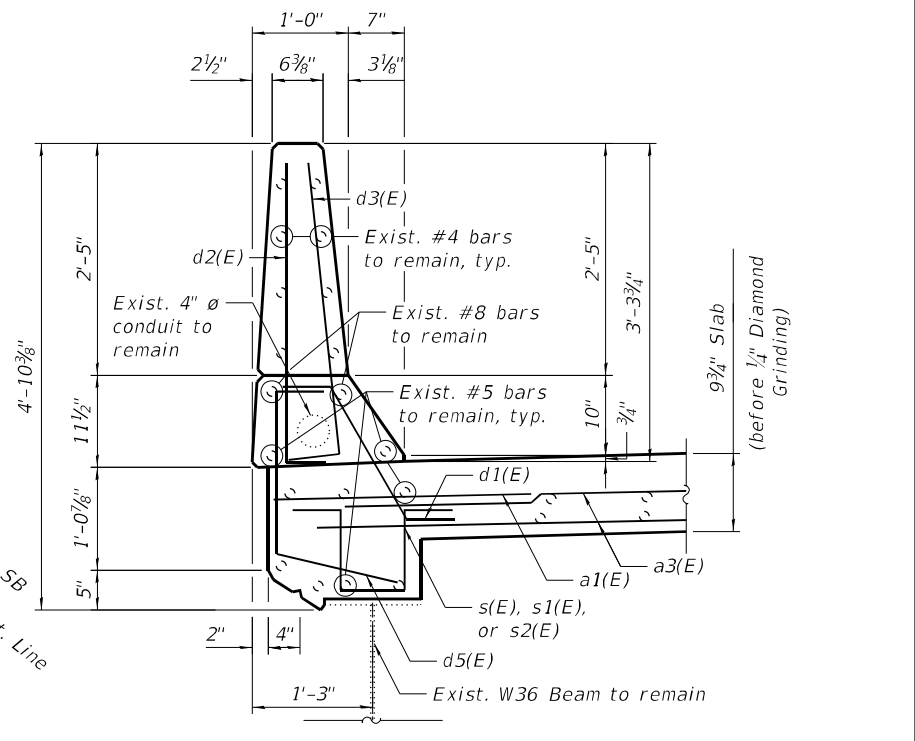


WEST ABUTMENT JOINT RECONSTRUCTION PARTIAL PLAN

- NOTES:**
1. For legend and Sections A-A and AA-AA, see Sheet S17-12.
 2. For Sections E-E and EE-EE, Bar Diagrams, additional Notes and Bill of Material, see Sheet S17-14.



SECTION D-D



SECTION DD-DD



USER NAME =	DESIGNED - SK, FL	REVISED -
CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - FL, AMS	REVISED -
PLOT DATE =	DATE - 8/30/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

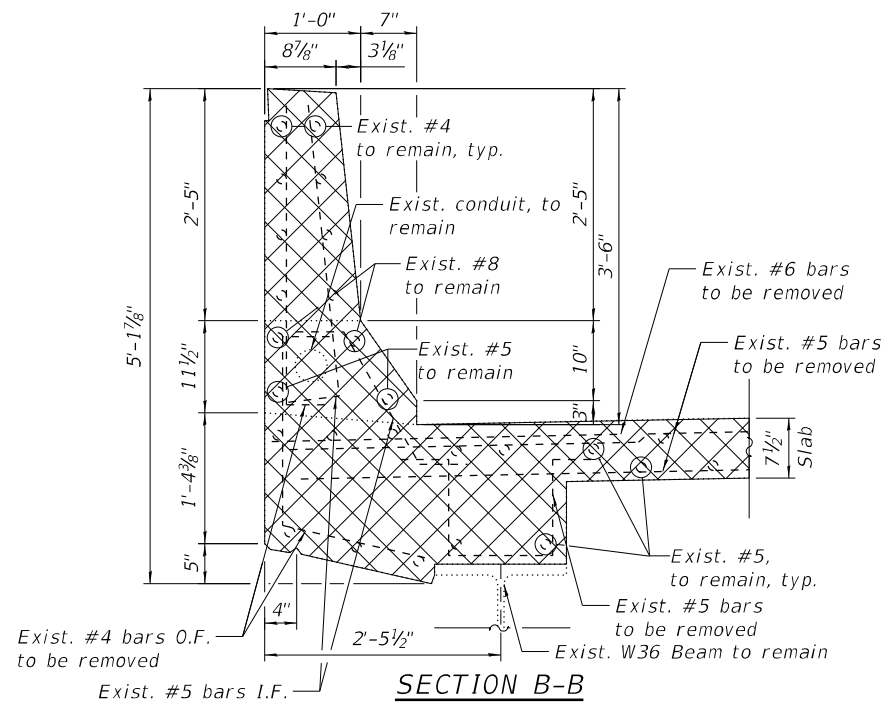
**W. ABUT. JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 3)
 STRUCTURE NO. 016-0128 (SB)**

F.A.I. RTE. 90/94	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 1001
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

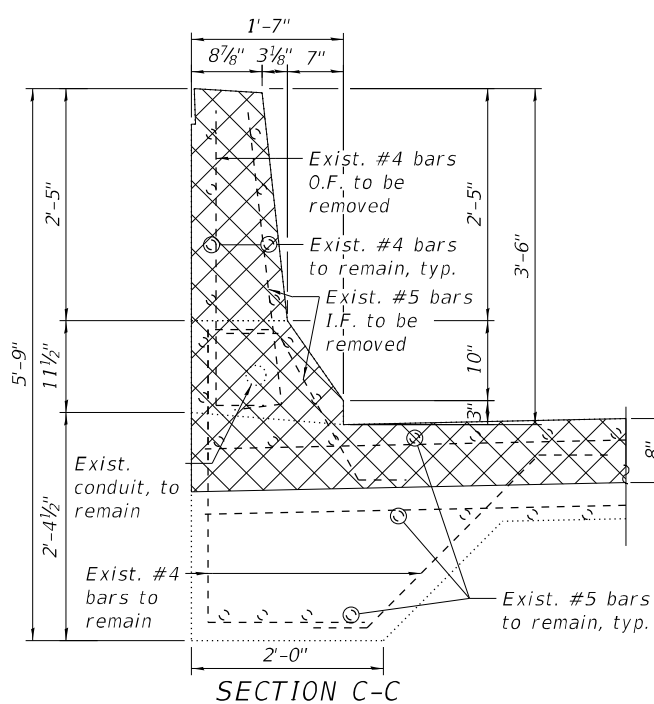
SHEET S17-13 OF S17-24 SHEETS

BILL OF MATERIAL

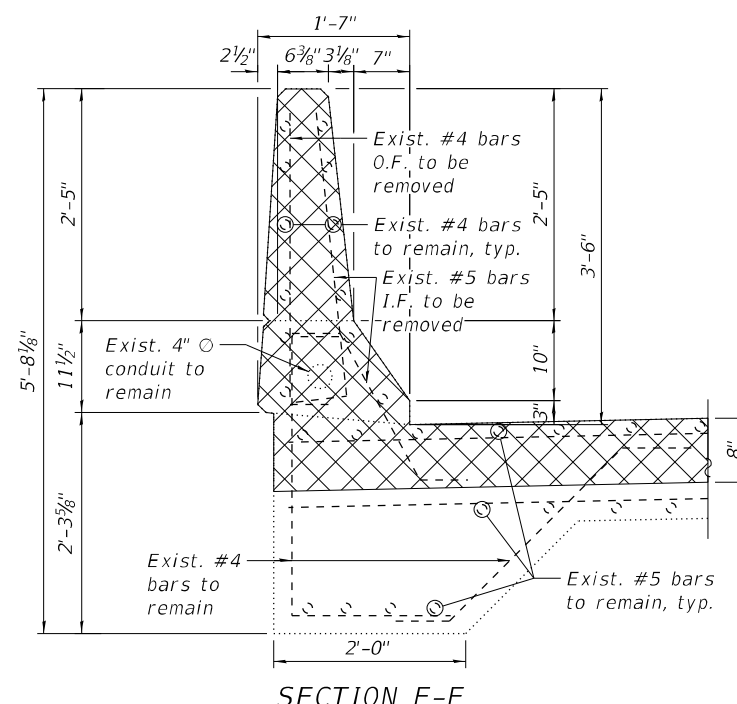
Bar	No.	Size	Length	Shape
a(E)	28	#5	22'-10"	▬
a1(E)	6	#6	6'-6"	▬
a3(E)	28	#5	25'-6"	▬
d(E)	5	#4	4'-0"	┌┐
d1(E)	8	#5	2'-7"	┌┐
d2(E)	16	#4	4'-0"	┌┐
d3(E)	16	#5	4'-0"	┌┐
d5(E)	3	#4	4'-4"	┌┐
d7(E)	8	#4	3'-0"	┌┐
s(E)	20	#5	4'-1"	┌┐
s1(E)	19	#5	4'-5"	┌┐
s2(E)	6	#5	3'-4"	┌┐
u3(E)	89	#5	1'-6"	┌┐
Concrete Removal		Cu Yd	9.4	
Concrete Superstructure		Cu Yd	11.2	
Protective Coat		Sq Yd	31	
Reinforcement Bars, Epoxy Coated		Pound	1,970	



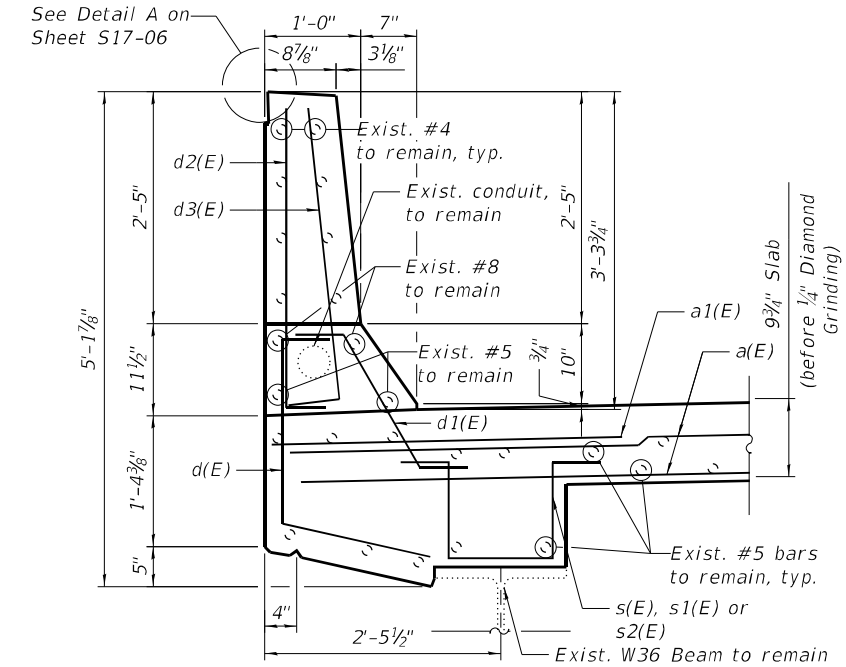
SECTION B-B



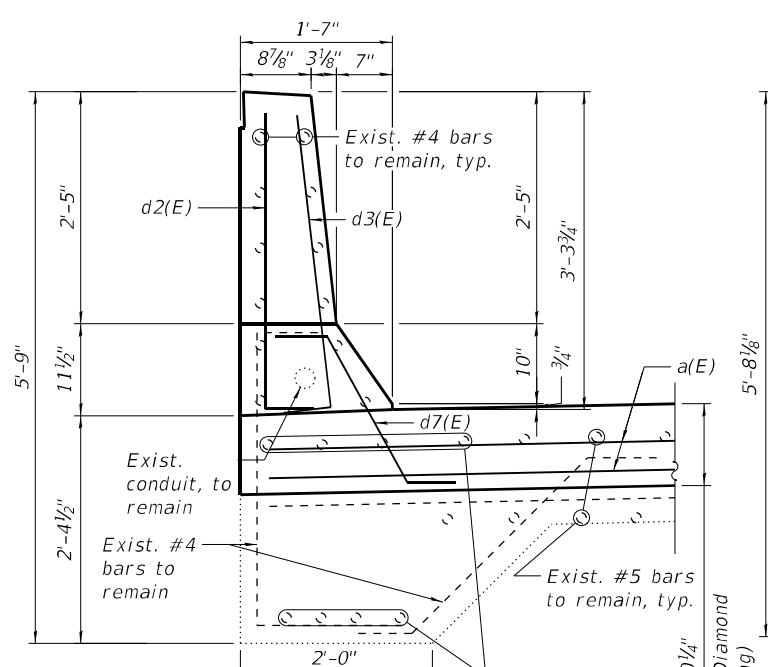
SECTION C-C



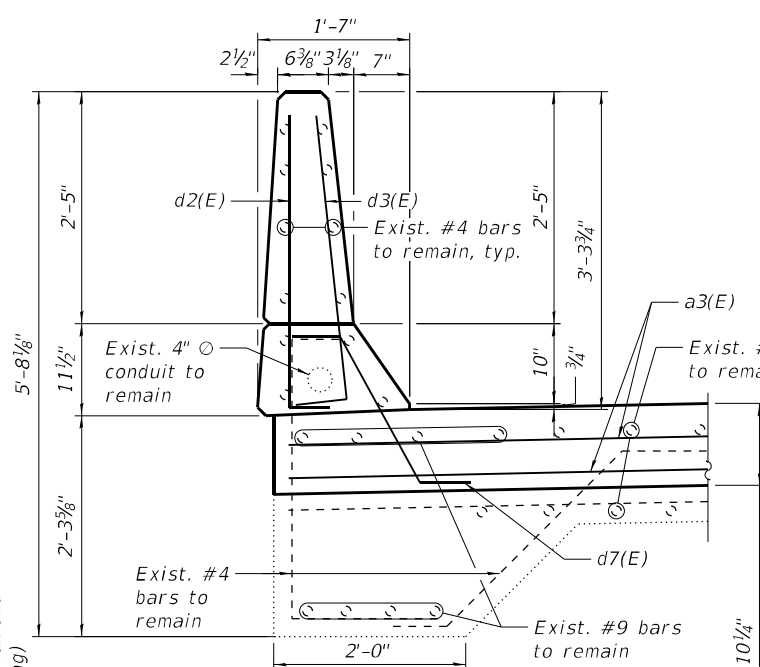
SECTION E-E



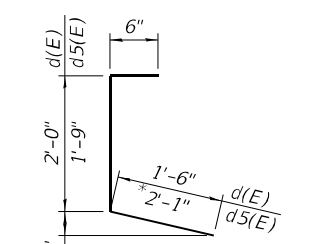
SECTION BB-BB



SECTION CC-CC

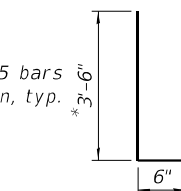


SECTION EE-EE



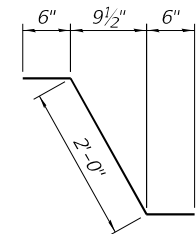
BARS d(E) & d5(E)

*Cut end bar in the field to fit

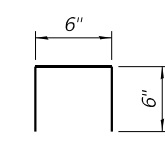


BARS d2(E) & d3(E)

*Cut end bar in the field to fit

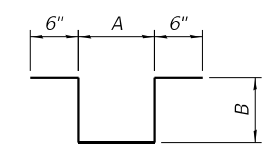


BAR d7(E)



BAR u3(E)

BARS	A	B
s(E)	1'-1"	1'-0"
s1(E)	1'-1"	1'-2"
s2(E)	8"	10"



BARS s(E), s1(E) & s2(E)

MIN BAR LAPS

#5 3'-6"

NOTES:

1. For legend, see Sheet S17-12.
2. For Preformed Joint Strip Seal details, see Sheet S17-15.
3. For bar splicer assembly details, see Sheet S17-24.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.



USER NAME =	DESIGNED - SK, FL	REVISED -
CHECKED - MI	REVISIONS -	
PLOT SCALE =	DRAWN - FL, AMS	REVISED -
PLOT DATE =	DATE - 8/30/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

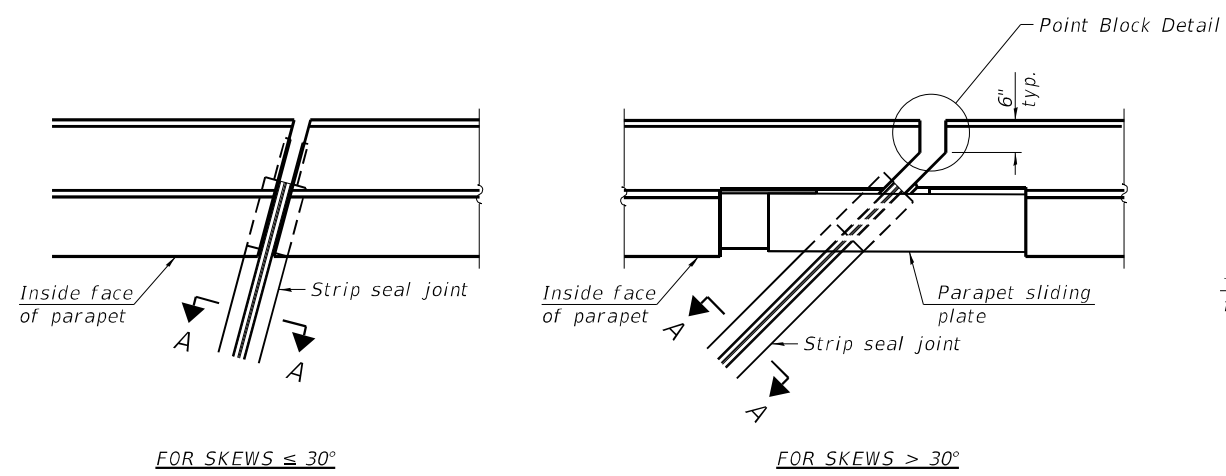
**W. ABUT. JOINT REMOVAL & REPLACEMENT (SHT. 3 OF 3)
STRUCTURE NO. 016-0128 (SB)**

F.A.I. RTE. 90/94	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 1002
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

SHEET S17-14 OF S17-24 SHEETS

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8/30/2022 3:16:19 PM

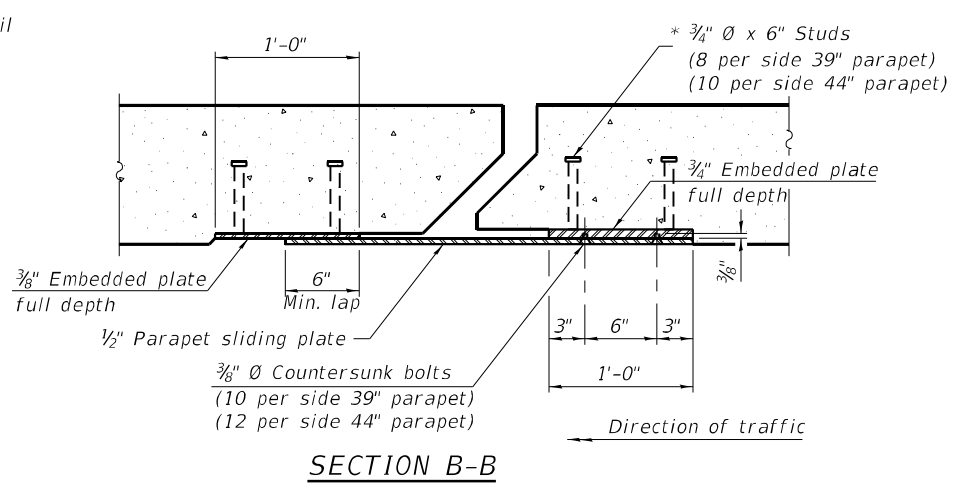
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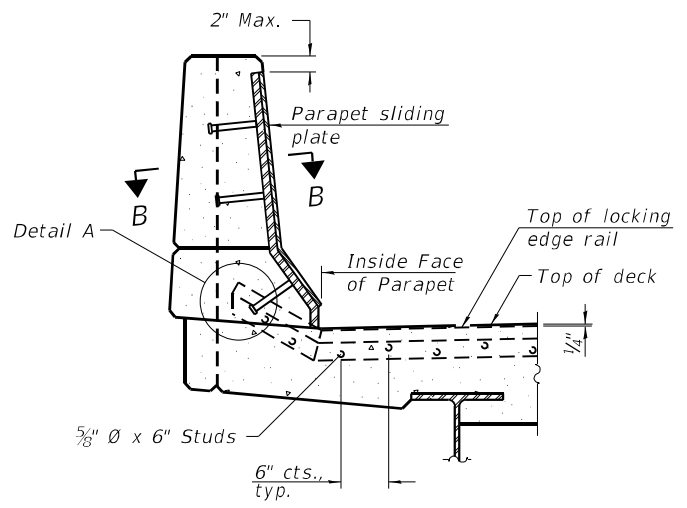
FOR SKEWS $\leq 30^\circ$

PLAN AT PARAPET

FOR SKEWS $> 30^\circ$

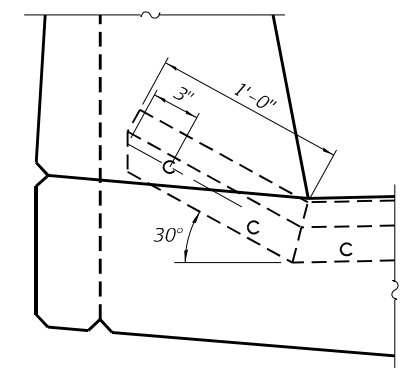


SECTION B-B

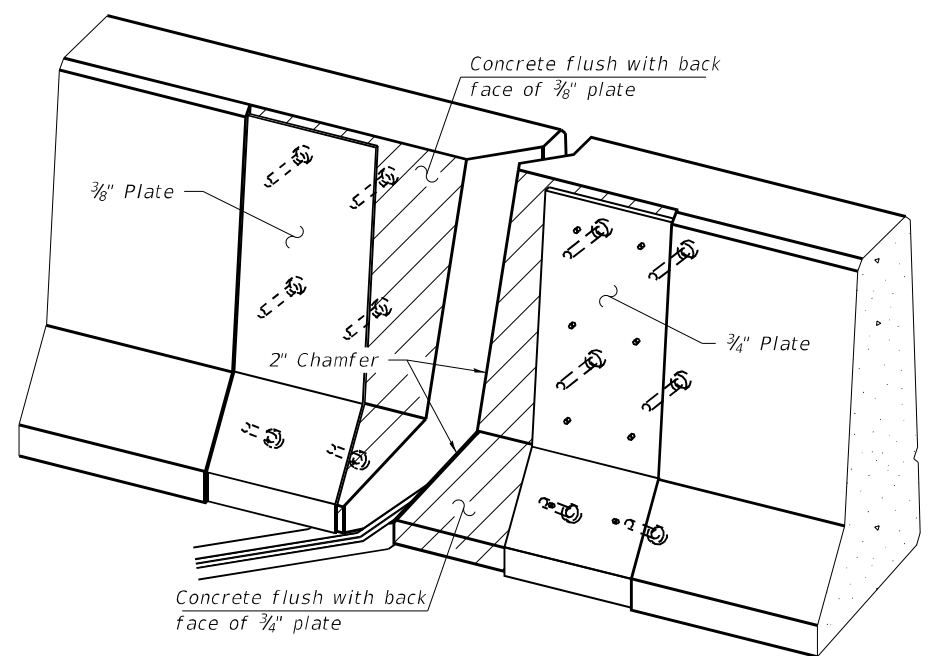


SECTION AT PARAPET

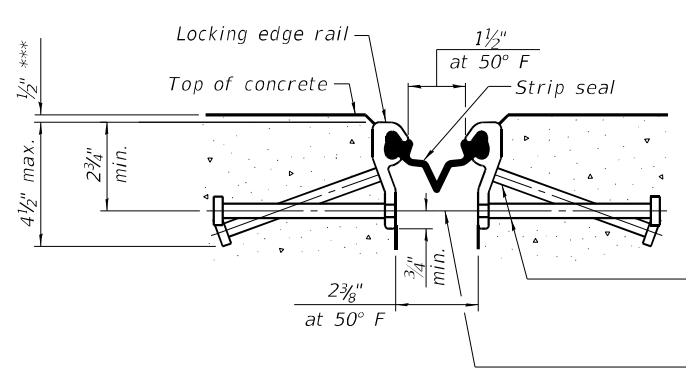
(Skews $> 30^\circ$ shown. Skews $\leq 30^\circ$ similar except as shown in plan view.)



DETAIL A

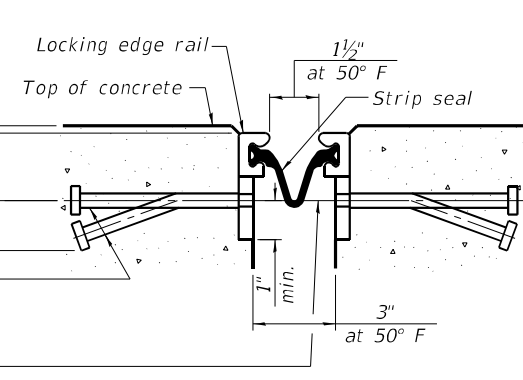


TRIMETRIC VIEW
(Showing embedded plates only)

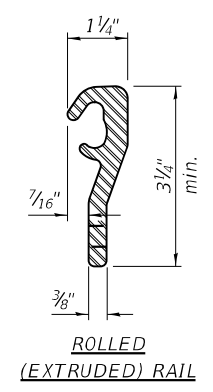


SHOWING ROLLED RAIL JOINT

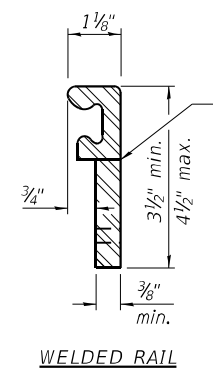
* $5/8"$ ϕ x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)
 $3/8"$ ϕ threaded rods in $1/16"$ ϕ holes at $\pm 4"-0"$ cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.



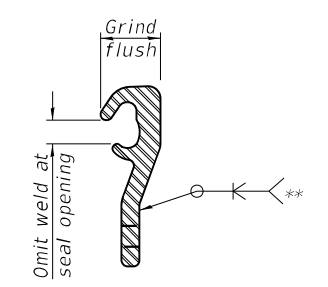
SHOWING WELDED RAIL JOINT



ROLLED (EXTRUDED) RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

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

LOCKING EDGE RAILS

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

SECTION A-A

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

*** Before $1/4"$ Diamond Grinding

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	189



USER NAME =	DESIGNED - FL	REVISED -
PLOT SCALE =	CHECKED - MI	REVISED -
PLOT DATE =	DRAWN - FL	REVISED -
	DATE - 8/30/2022	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

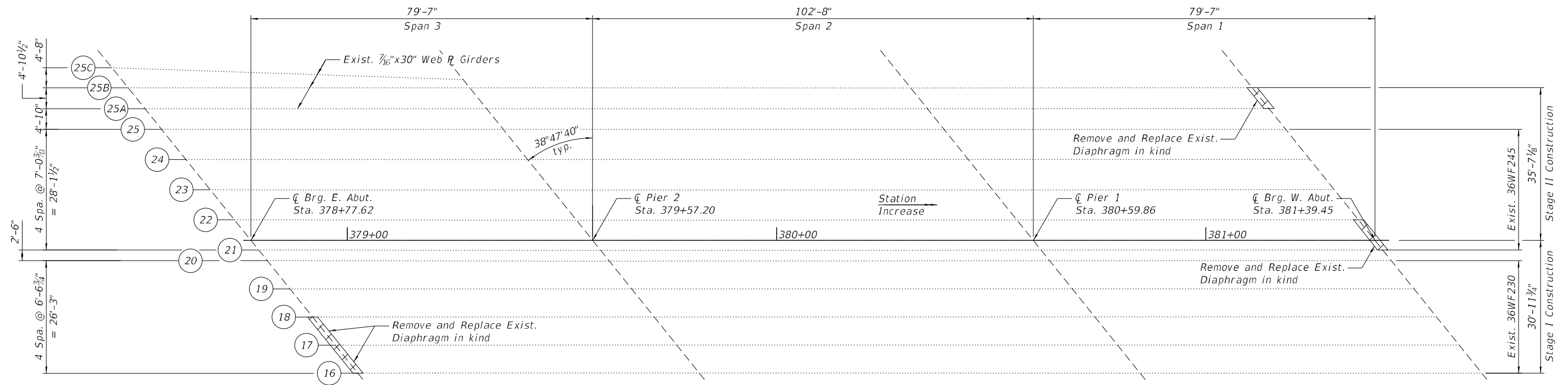
PREFORMED JOINT STRIP SEAL
 STRUCTURE NO. 016-0128 (SB)

SHEET S17-15 OF S17-24 SHEETS

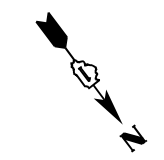
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1003
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing And Erecting Structural Steel	Pound	1,510
Structural Steel Removal	Pound	1,470



FRAMING PLAN



NOTES:

- All work is to be performed utilizing stage construction. See Sheets S17-03 and S17-04 for details.
- For Diaphragm Removal and Replacement Details, see Sheet S17-17.

LEGEND:

Remove and Replace Exist. Diaphragm

MODEL: Default
FILE NAME: P:\2004-824-PTB195-010-GRAEF\WO#8 I-90_SB & Rev. Var. Overlays - Western SB & Rev. Var. Overlays - SB\0160128-62K7-S16A-Framing Plan.dgn



USER NAME =	DESIGNED - EBK	REVISED -
CHECKED - MI	REVISIONS -	
PLOT SCALE =	DRAWN - EBK	REVISED -
PLOT DATE =	DATE - 8/30/2022	REVISED -

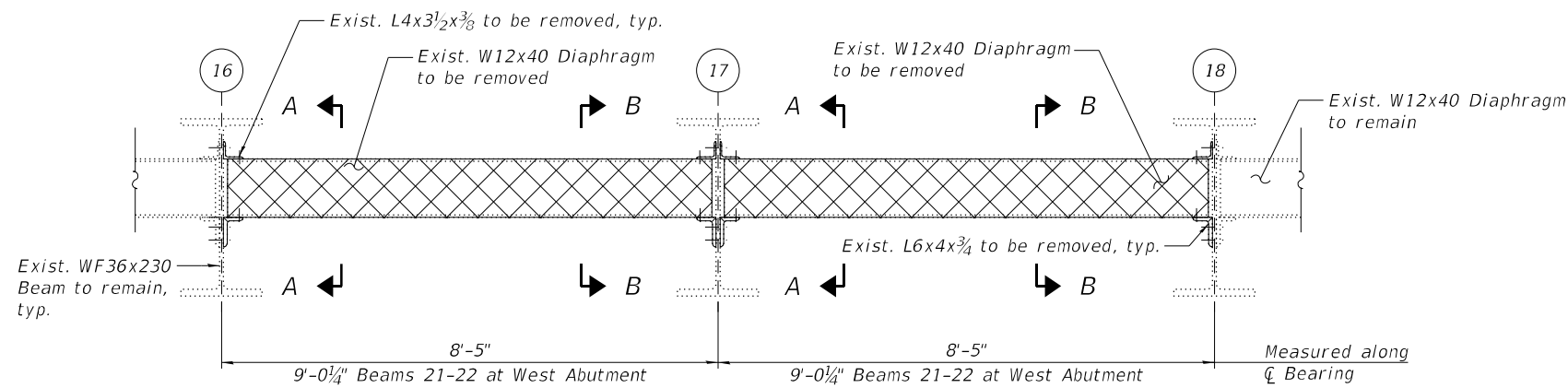
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN REPAIRS
STRUCTURE NO. 016-0128 (SB)**

SHEET S17-16 OF S17-24 SHEETS

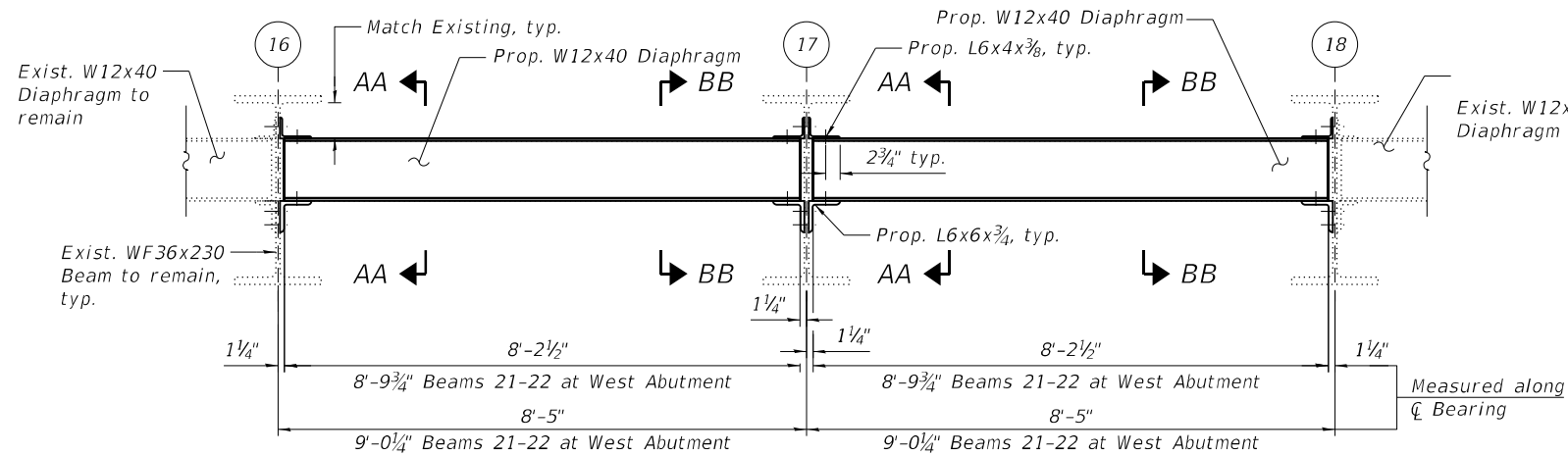
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1004
CONTRACT NO. 62K74				
		ILLINOIS	FED. AID PROJECT	

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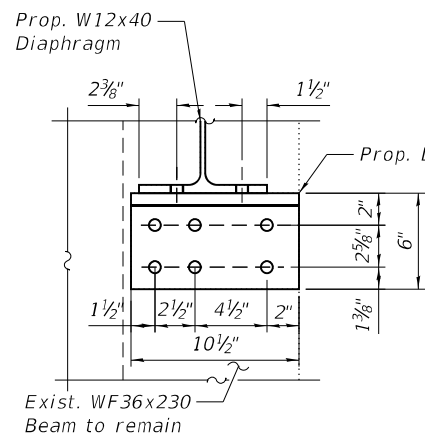
EXISTING END DIAPHRAGM REMOVAL

At East Abutment
Beams 21-22 at West Abutment Similar Except As Noted

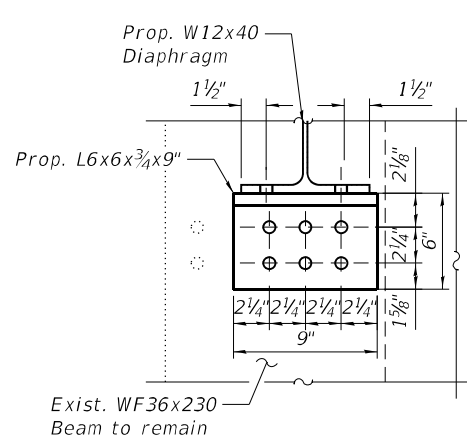


EXISTING END DIAPHRAGM REPLACEMENT

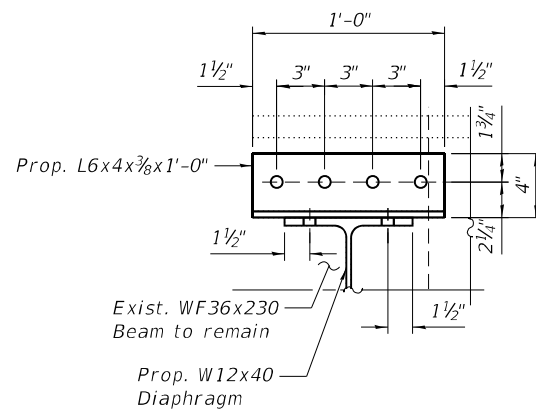
At East Abutment
Beams 21-22 at West Abutment Similar Except As Noted



DETAIL 1



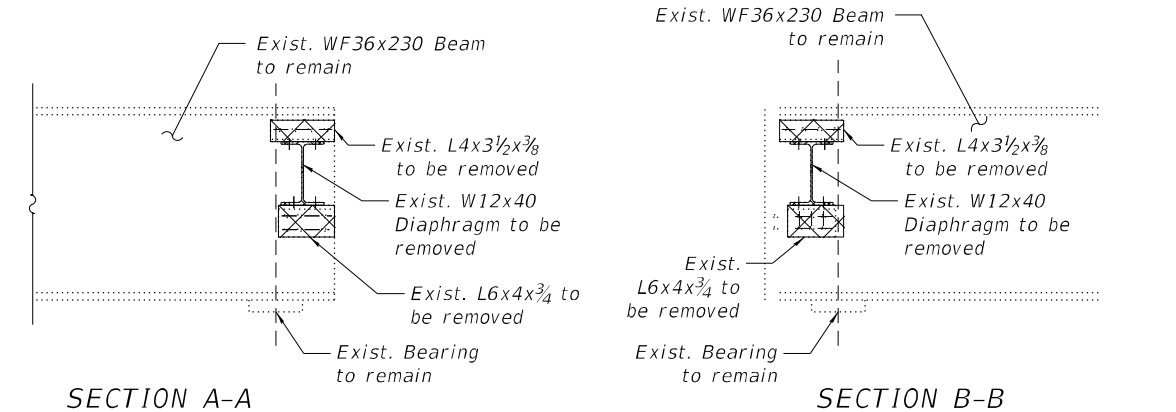
DETAIL 2



DETAIL 3

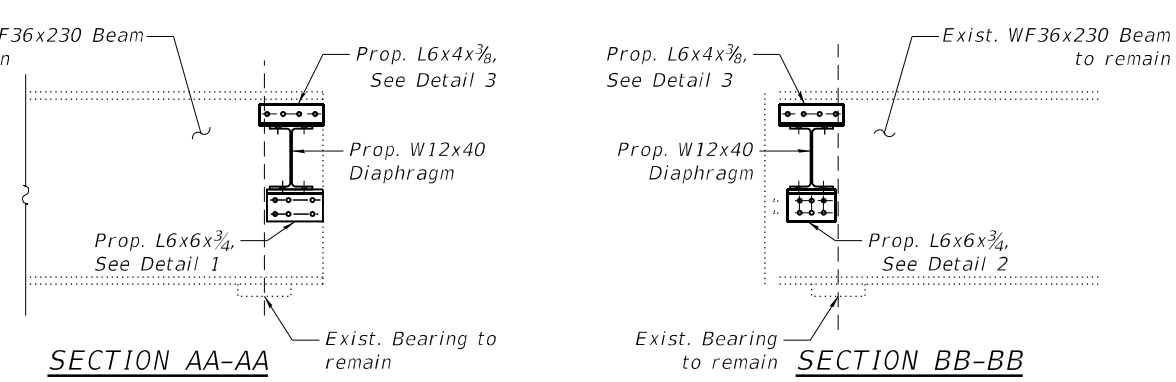
NOTES:

1. For location of Diaphragm Removal/Replacement and Bill of Material, see Sheet S17-16.
2. All structural steel shall conform to the requirements of AASHTO M270 Grade 36.
3. Diaphragm connection holes shall be $\frac{15}{16}$ " for $\frac{3}{4}$ " bolts. Two hardened washers shall be required at diaphragm connections. Fasteners shall be high strength bolts.
4. Holes in new steel shall be field drilled using existing steel as a template.



SECTION A-A

SECTION B-B



SECTION AA-AA

SECTION BB-BB

LEGEND

- Structural Steel Removal
- Field drill holes in new steel using existing steel as a template



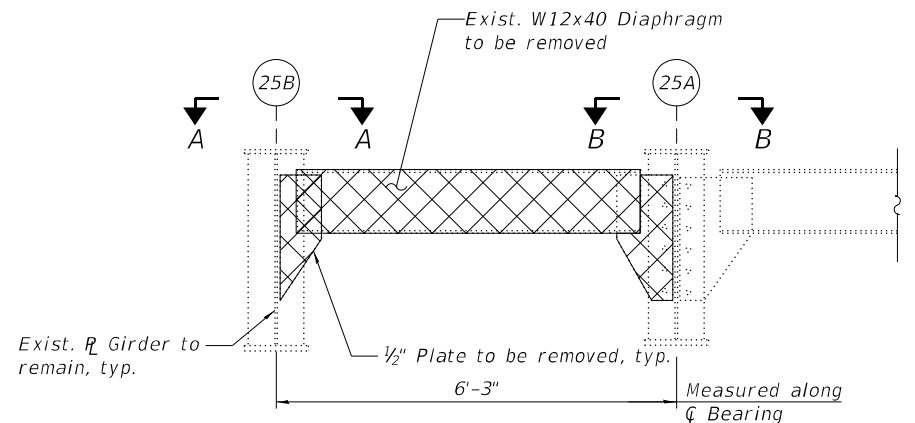
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PLOT SCALE =	CHECKED - MI	REVISED -
PLOT DATE =	DRAWN - EBK	REVISED -
	DATE - 8/30/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

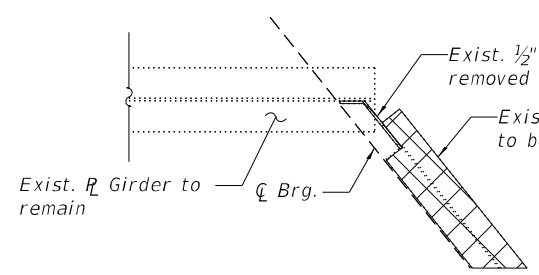
**STRUCTURAL STEEL REPAIR DETAILS (SHEET 1 OF 2)
STRUCTURE NO. 016-0128 (SB)**

SHEET S17-17 OF S17-24 SHEETS

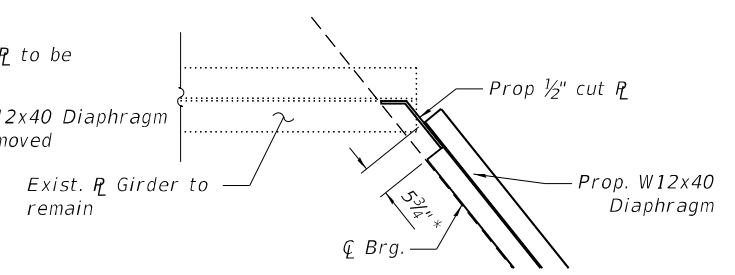
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1005
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



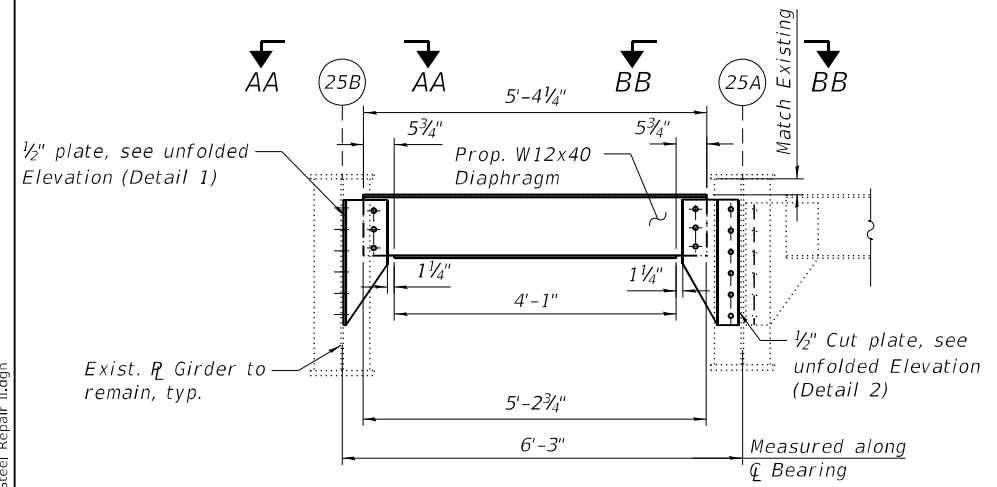
EXISTING END DIAPHRAGM REMOVAL
(At West Abutment)



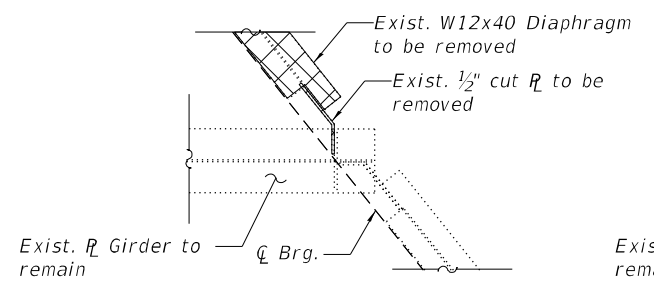
SECTION A-A



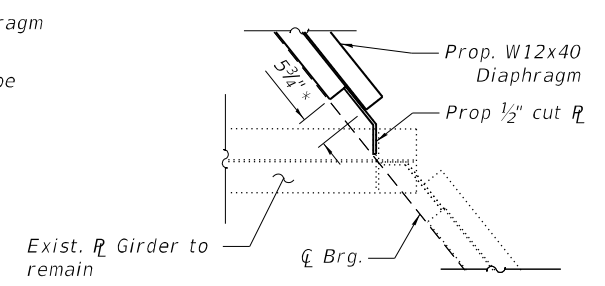
SECTION AA-AA



EXISTING END DIAPHRAGM REPLACEMENT
(At West Abutment)

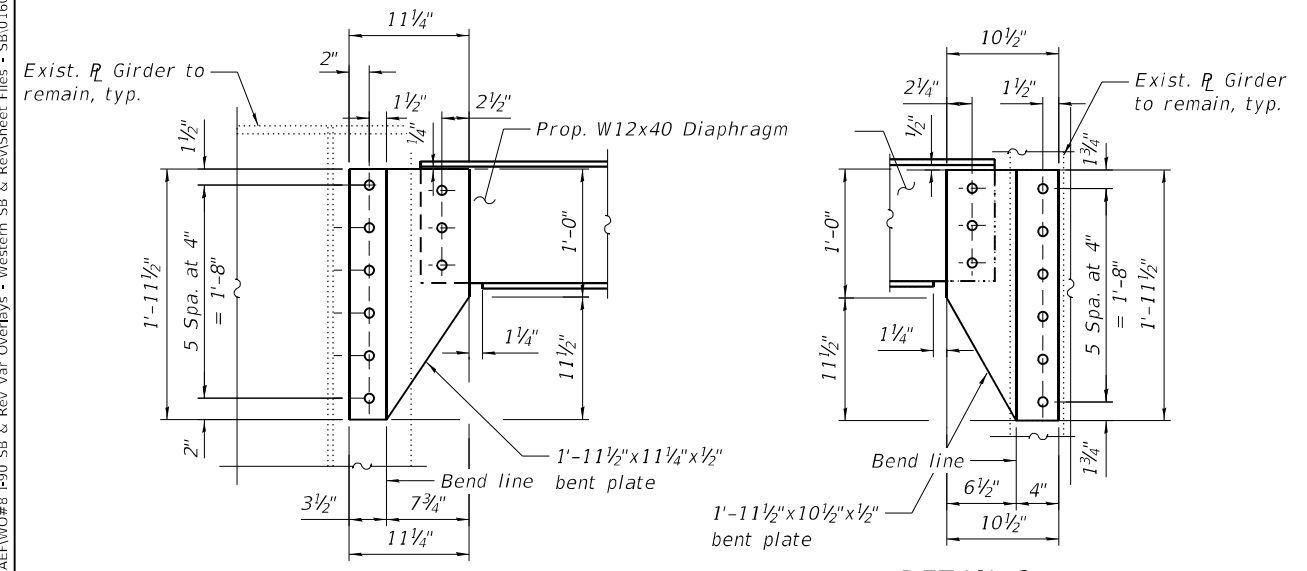


SECTION B-B



SECTION BB-BB

*At bottom flange only



DETAIL 1

DETAIL 2



PHOTO - DETAIL 1



PHOTO - DETAIL 2

LEGEND
 Structural Steel Removal
 Field drill holes in new steel using existing steel as a template

NOTE:
 1. For notes, see Sheet S17-17.

MODEL: Default
 FILE NAME: P:\2004-824 PTB195-010-GRAEF\WO#8 I-90_SB & Rev. Var. Overlays - Western SB & Rev. Sheel Files - SB\0160128-62K73-S16C-Steel Repair II.dgn
 8/30/2022 3:16:30 PM



USER NAME =	DESIGNED - EBK, MAA	REVISED -
CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - EBK, MAA	REVISED -
PLOT DATE =	DATE - 8/30/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

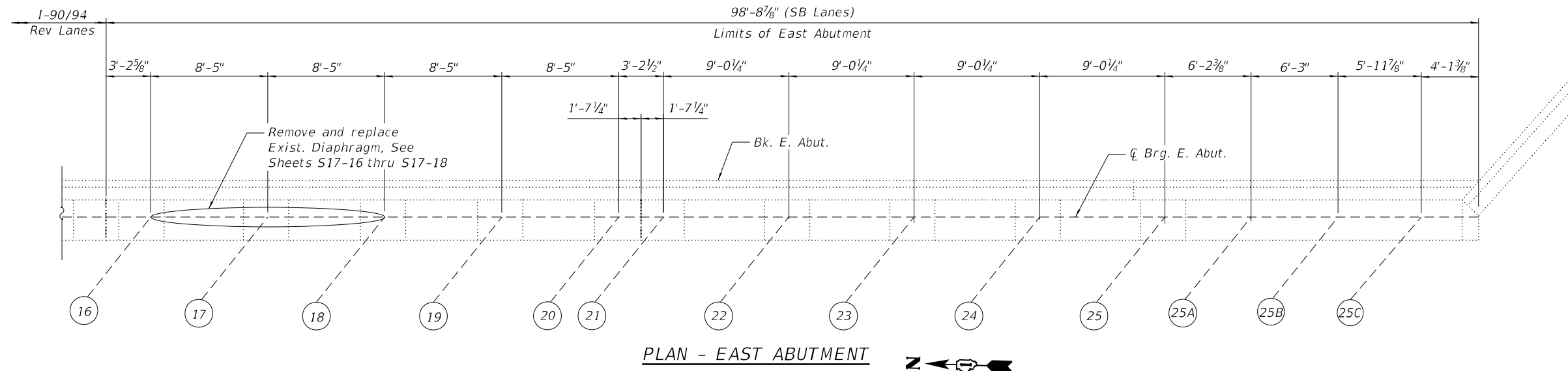
**STRUCTURAL STEEL REPAIR DETAILS (SHEET 2 OF 2)
 STRUCTURE NO. 016-0128 (SB)**

SHEET S17-18 OF S17-24 SHEETS

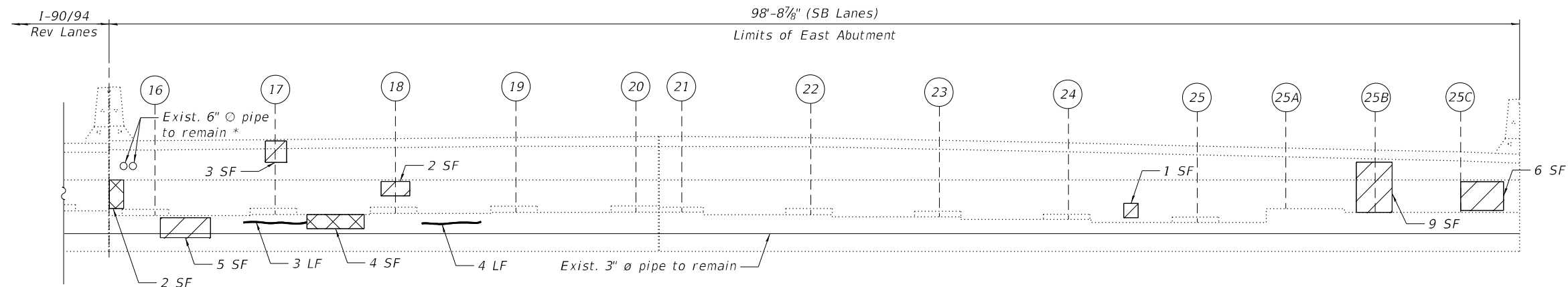
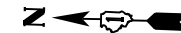
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1006
			CONTRACT NO. 62K74	
		ILLINOIS FED. AID PROJECT		

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	486
Epoxy Crack Injection	Foot	7
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	6



PLAN - EAST ABUTMENT



ELEVATION - EAST ABUTMENT

(Looking East)

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.
- Concrete Sealer shall be applied to the abutment seat and the bottom 2 feet of the abutment backwall.
- For Slope Wall repairs, see Sheet S17-23.

* The Contractor shall cap or seal the ends of the pipes with a method approved by the Engineer. Cost included with Structural Repair of Concrete (Depth Greater than 5 inches).

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
- Structural Repair of Concrete (Depth Greater than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

MODEL: Default
FILE NAME: P:\2004-824-PTB\195-010-GRAEF\WO#8 I-90_SB & Rev. Var. Overlays - Western SB & Rev. Var. Overlays - SB\0160128-02K73-S16-East-Abutment-Repairs.dgn



USER NAME =	DESIGNED - AMS, TA	REVISED -
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	DATE - 8/30/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

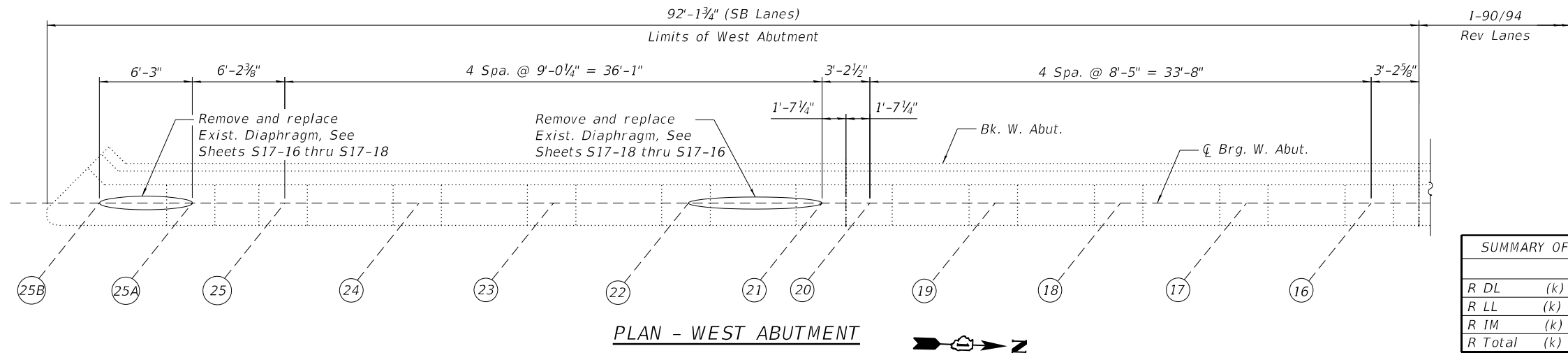
**EAST ABUTMENT REPAIRS
STRUCTURE NO. 016-0128 (SB)**

SHEET S17-19 OF S17-24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1007
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

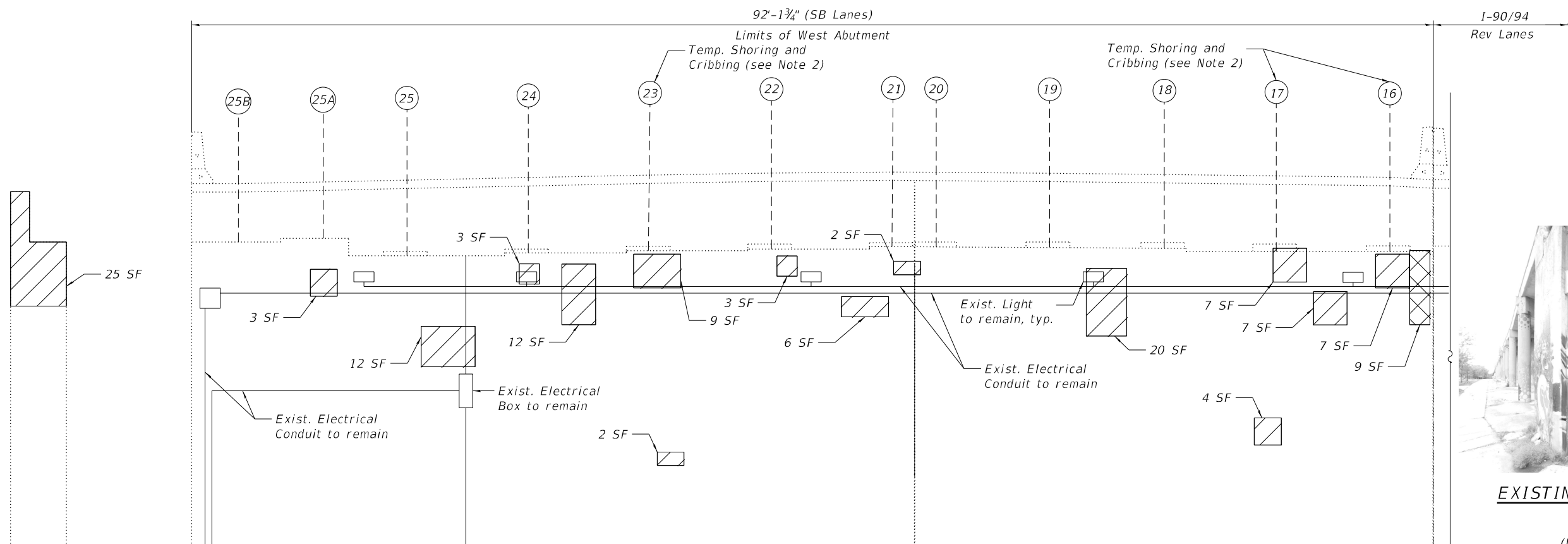
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	497
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	122
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	9
Temporary Shoring And Cribbing	Each	3



SUMMARY OF REACTIONS - WEST ABUTMENT

	Beams 16 & 17	Beam 23
R DL (k)	37.0	40.1
R LL (k)	41.8	44.8
R IM (k)	10.0	10.7
R Total (k)	88.8	95.6



EXISTING LIGHTING: WEST ABUTMENT
(Looking Northwest)

WEST ABUTMENT SIDE VIEW
(Looking North)

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.
- Concrete Sealer shall be applied to the abutment seat and the bottom 2 feet of the abutment backwall.
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after completing the structural repair of concrete.

ELEVATION - WEST ABUTMENT
(Looking West)

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
- Structural Repair of Concrete (Depth Greater than 5 inches)
- SF - Square Foot

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PLOT SCALE =	DRAWN - AMS, TA	REVISED -
PLOT DATE =	DATE - 8/30/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT REPAIRS
STRUCTURE NO. 016-0128 (SB)**

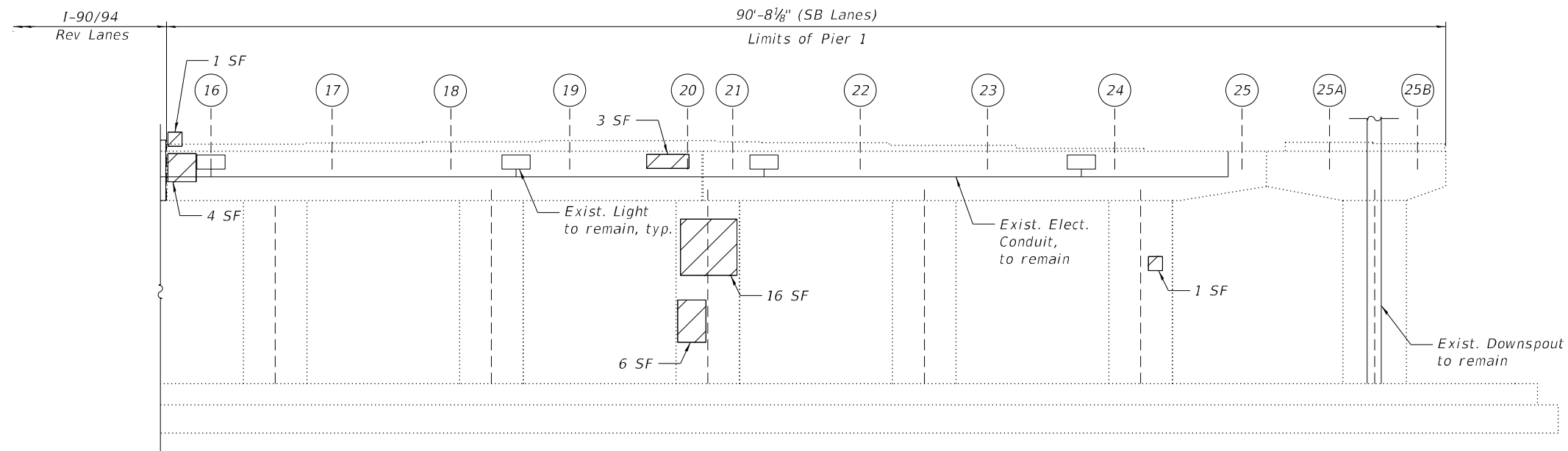
SHEET S17-20 OF S17-24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1008
CONTRACT NO. 62K74				

ILLINOIS FED. AID PROJECT

BILL OF MATERIAL

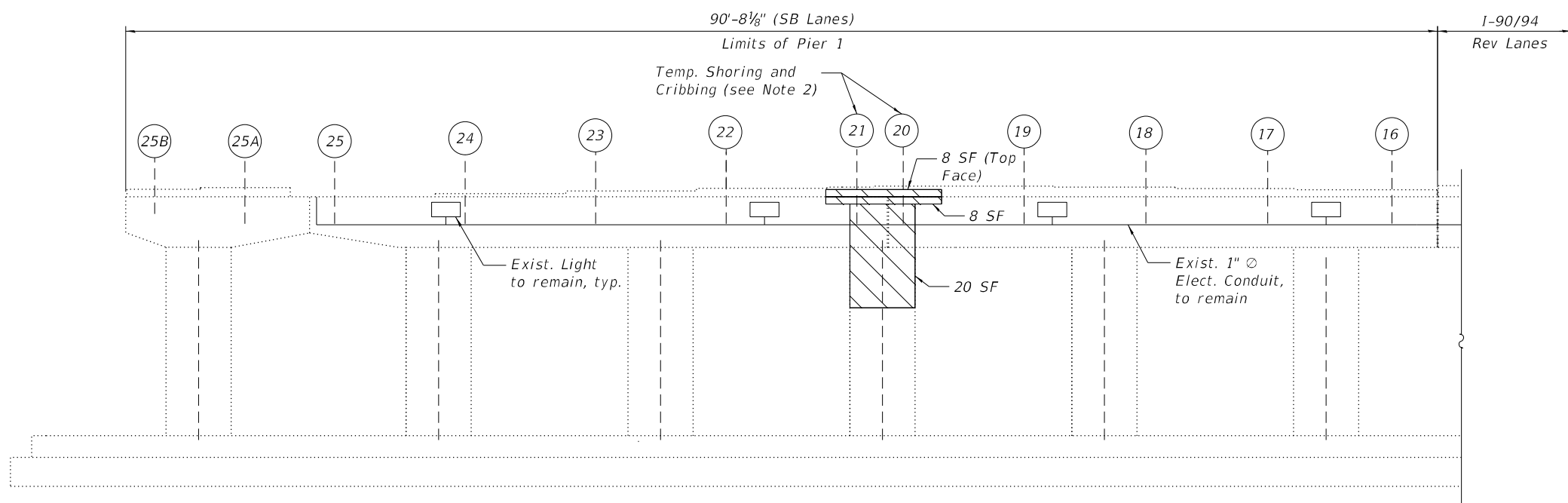
ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	67
Temporary Shoring And Cribbing	Each	2



PIER 1 ELEVATION
(Looking East)



EXISTING LIGHTING: PIER 1
(Looking East)



PIER 1 ELEVATION
(Looking West)



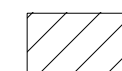
EXISTING LIGHTING: PIER 1
(Looking West)

NOTES:

- Quantities and limits shown are estimated for bidding purpose 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.
- Temporary shoring and cribbing shall be installed prior to the start of structural repair of concrete and shall be removed after completing the structural repair of concrete.

SUMMARY OF REACTIONS - PIER 1		
	Beam 20	Beam 21
R DL (k)	132.0	142.7
R LL (k)	59.3	63.3
R IM (k)	13.6	14.6
R Total (k)	204.9	220.6

LEGEND



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

SF - Square Foot

MODEL: Default
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

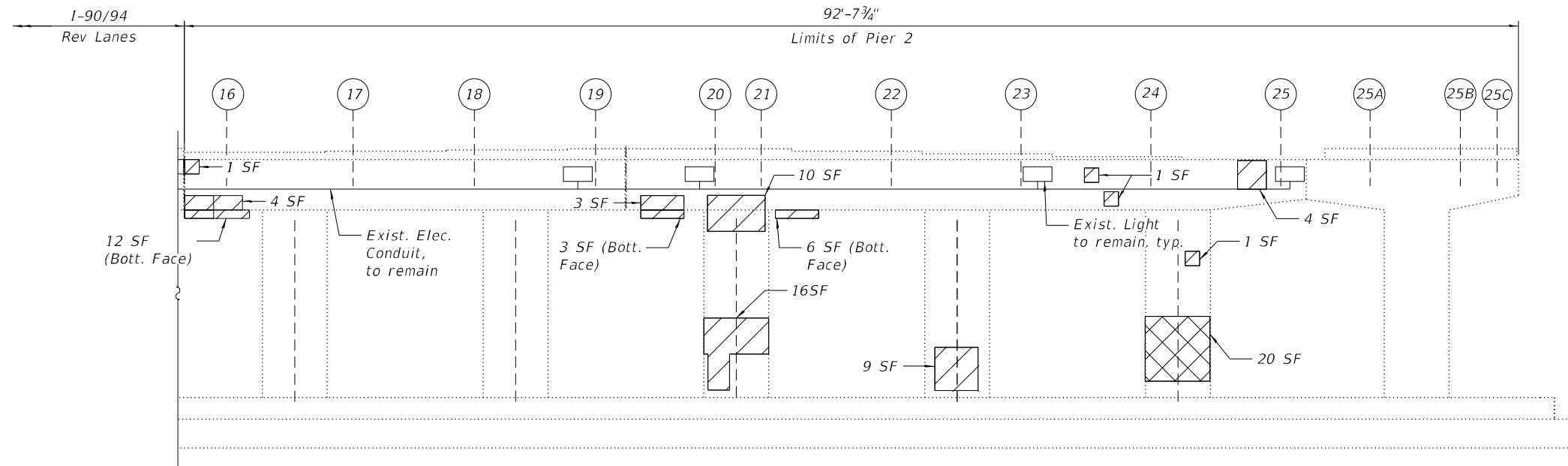
**PIER 1 REPAIRS
STRUCTURE NO. 016-0128 (SB)**

SHEET S17-21 OF S17-24 SHEETS

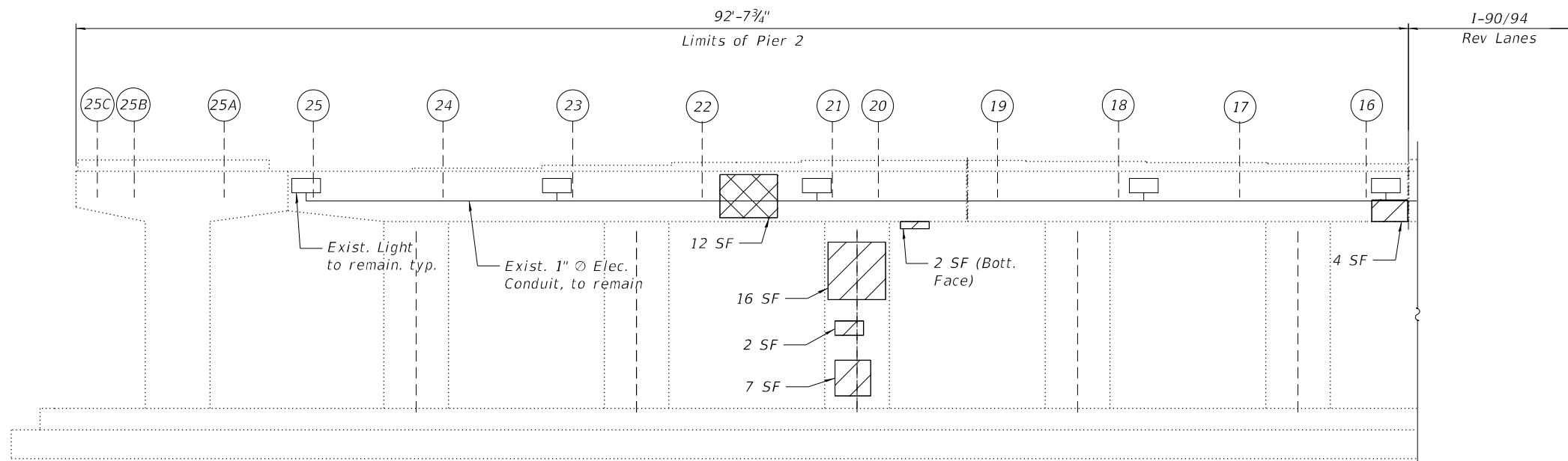
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90/94	2020-004-BR	COOK	1492	1009
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	102
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	32



PIER 2 ELEVATION
(Looking East)



PIER 2 ELEVATION
(Looking West)



EXISTING LIGHTING: PIER 2
(Looking Northeast)





EXISTING LIGHTING: PIER 2
(Looking Northwest)

NOTE:

1. Quantities and limits shown are estimated for bidding purpose 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.

LEGEND

	Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
	Structural Repair of Concrete (Depth Greater than 5 inches)
SF	- Square Foot

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

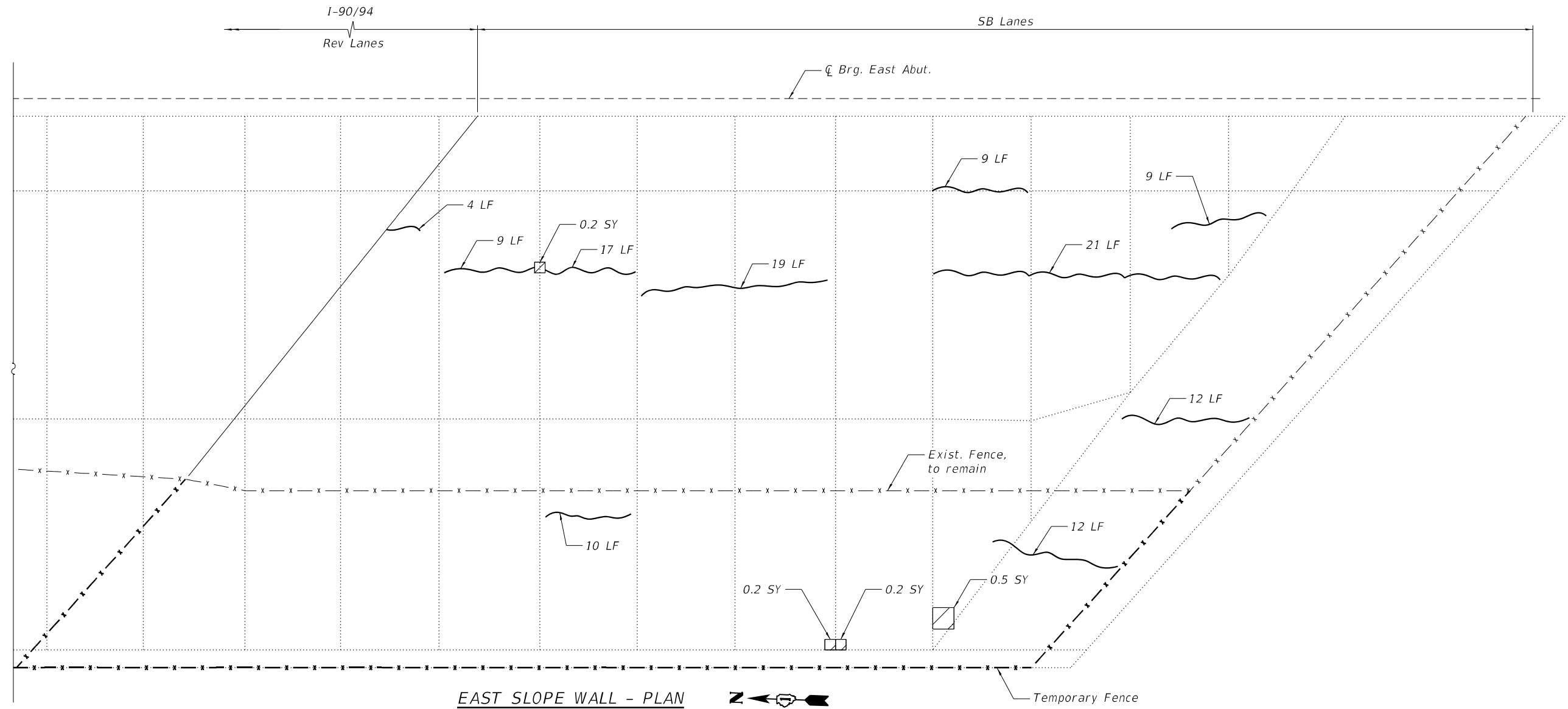
**PIER 2 REPAIRS
STRUCTURE NO. 016-0128 (SB)**

SHEET S17-22 OF S17-24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1010
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Porous Granular Embankment	Cu Yd	0.5
Slope Wall Removal	Sq Yd	1.1
Slope Wall 4 Inch	Sq Yd	1.1
Slope Wall Crack Sealing	Foot	122



EAST SLOPE WALL - PLAN



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.
- Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

LEGEND

- Slope Wall Removal and Replacement with 4 Inch Slope Wall
- Slope Wall Crack Sealing
- SY Square Yard
- LF Linear Foot

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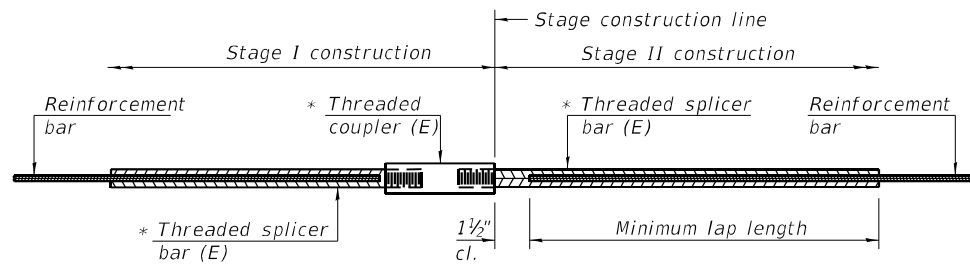
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EAST SLOPE WALL REPAIRS
STRUCTURE NO. 016-0128 (SB)**

SHEET S17-23 OF S17-24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1011
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

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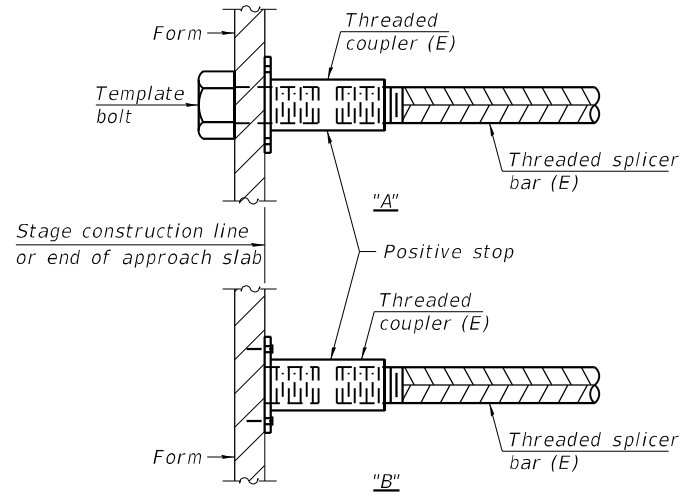


STANDARD BAR SPLICER ASSEMBLY

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

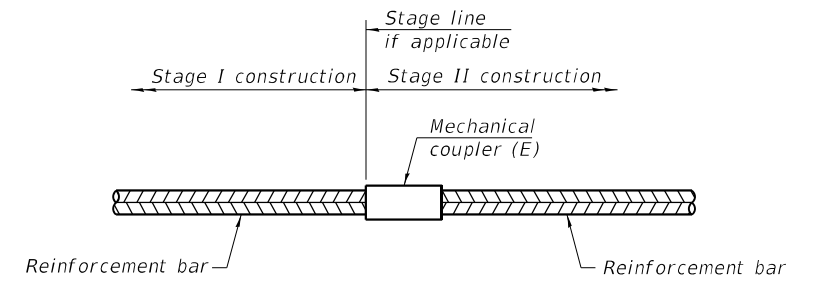
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
E. Abut. Exp. Jt.	#5	10	3'-6"
	#6	6	4'-0"
W. Abut. Exp. Jt.	#5	14	3'-6"



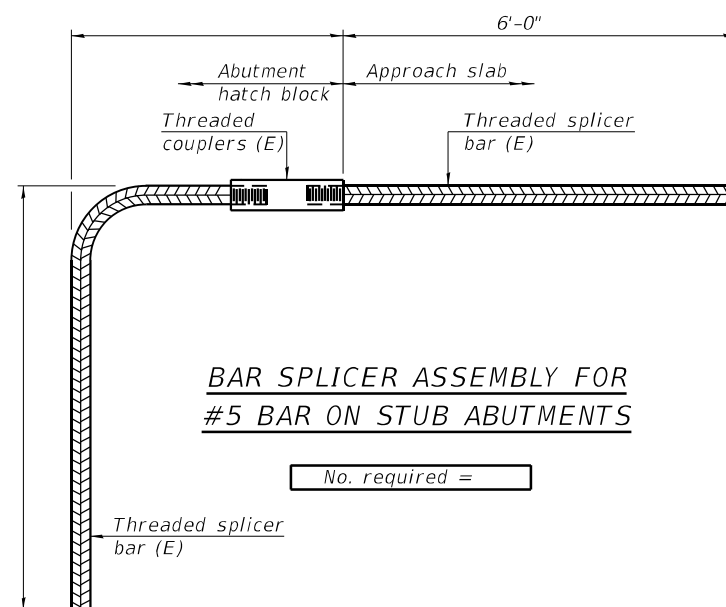
INSTALLATION AND SETTING METHODS

"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.

BSD-1

2-17-2017



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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 016-0128 (SB)

SHEET S17-24 OF S17-24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1012
			CONTRACT NO. 62K74	
		ILLINOIS FED. AID PROJECT		

Existing Structure: S.N. 016-0128 was originally built in 1957 and reconstructed in 1990. The structure has a back-to-back abutment length of 268'-7 1/2" and an out-to-out deck width of 35'-11". The superstructure consists of a 7 1/2" thick reinforced concrete deck supported on three span continuous steel beams of span lengths 79'-7", 102'-8" and 79'-7". The substructure consists of reinforced concrete abutments on piles and multi-column piers on caissons.

DESIGN SPECIFICATION

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

RECONSTRUCTION 1993

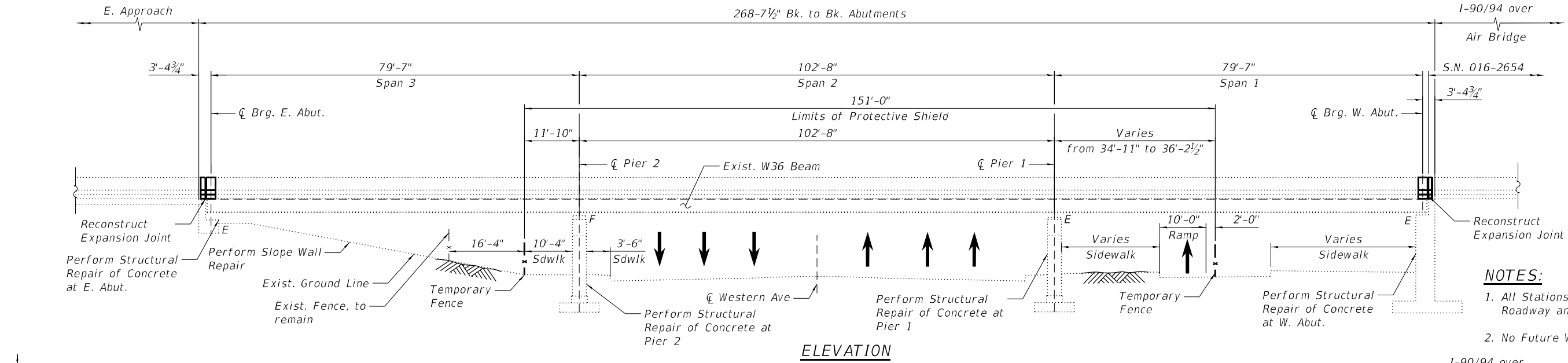
1989 AASHTO Standard Specifications for Highway Bridges with 1990 & 1991 Interim Specifications

RECONSTRUCTION 2013

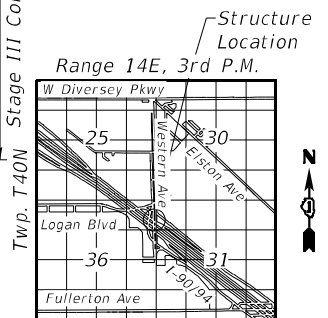
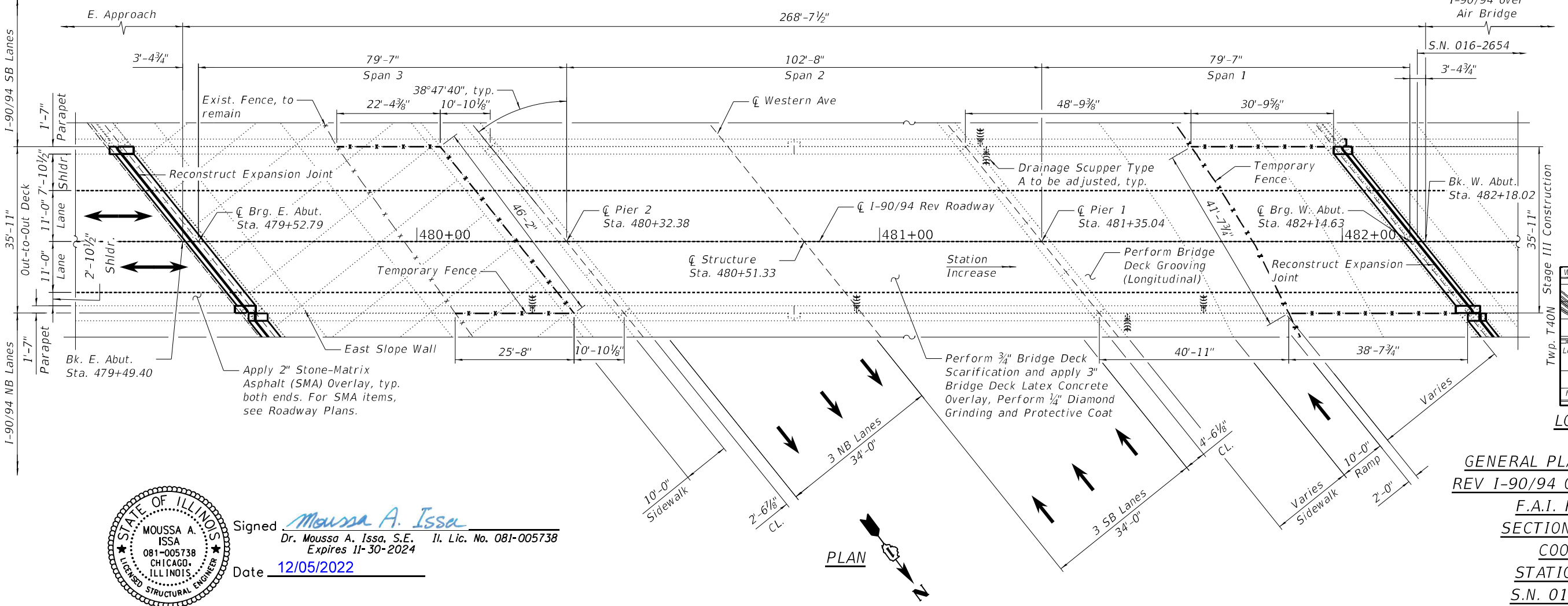
2002 AASHTO Standard Specifications for Highway Bridges

The reversible lanes will be closed to traffic during construction.

No salvage.



- NOTES:**
- All Stations are to the \bar{C} I-90/94 REV Roadway and taken from existing plans.
 - No Future Wearing Surface is allowed.



GENERAL PLAN AND ELEVATION
REV I-90/94 OVER WESTERN AVE.
 F.A.I. ROUTE 90/94
 SECTION 2020-004-BR
 COOK COUNTY
 STATION 480+51.33
 S.N. 016-0128 (REV)



Signed Moussa A. Issa
 Dr. Moussa A. Issa, S.E. Il. Lic. No. 081-005738
 Expires 11-30-2024
 Date 12/05/2022

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-0128 (REV)
 SHEET S18-01 OF S18-17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1013
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. 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.
3. Bars noted thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bars per line.
4. All exposed concrete edges shall have a 3/4"x45° chamfer except where shown otherwise.
5. 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.
6. For SMA overlay on Approach Slab, see Roadway Sheets.
7. Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside faces of parapets, and top of Latex Concrete Overlay.
8. Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.
9. Prior to pouring the new concrete deck for expansion joint reconstruction and deck slab repairs, 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. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further dispositions. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
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. Adjacent I-90/94 NB and SB bridges are not shown throughout the plans for clarity.
12. The Contractor shall take the necessary precautions for the protection of passing vehicles, bicycles and pedestrians from falling objects and/or materials until completion of work.
13. The Contractor is responsible to remove, support and reinstall all existing electrical conduits interfering with the work. See special provision "Protection and Maintenance of Existing Underpass Luminaires".
14. The Contractor shall exercise extreme caution during Concrete Removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
15. The Contractor is responsible to protect the existing conduit embedded in the parapet during concrete removal and construction. Any damage to the existing conduit shall be repaired by the Contractor at no additional cost to the Department.
16. Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to ride above the existing lighting fixtures in order to maintain the existing level of lighting on the roadway underneath. Details shall be approved by the Engineer before installation.
17. Any adjustment done to the Protective Shield System must not change the load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.
18. The Contractor shall contact Chandra Libby, the Director of City of Chicago Department of Family Support Services (DFSS) at 312-746-5443 or Chandra.Libby@cityofchicago.org to coordinate the relocation of persons and their personal belongings under the bridges within the areas bounded by the temporary chain-link-fence.
19. The intent of the temporary fence is to deny access of any unauthorized personnel under the bridge during construction. Actual fence installations may vary from what is shown on the plans. All fence installations must be approved by the Engineer.
20. Concrete Sealer shall be applied to the designated areas of the abutments.
21. Prior to the application of the Concrete Sealer, the Contractor shall clean all existing debris from the abutment seals. The method of debris removal shall not damage the existing concrete and shall be approved by the Engineer. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleanings included in the cost of Concrete Sealer.

INDEX OF SHEETS

S18-01	General Plan and Elevation
S18-02	General Notes, Index of Sheets & TBOM
S18-03	Stage 1 Construction
S18-04	Deck Repair Plan
S18-05	Drainage Scupper Type A Adjustment Details
S18-06	E. Abut. Joint Removal & Replacement (Sht. 1 of 3)
S18-07	E. Abut. Joint Removal & Replacement (Sht. 2 of 3)
S18-08	E. Abut. Joint Removal & Replacement (Sht. 3 of 3)
S18-09	W. Abut. Joint Removal & Replacement (Sht. 1 of 3)
S18-10	W. Abut. Joint Removal & Replacement (Sht. 2 of 3)
S18-11	W. Abut. Joint Removal & Replacement (Sht. 3 of 3)
S18-12	Preformed Joint Strip Seal
S18-13	East Abutment Repairs
S18-14	West Abutment Repairs
S18-15	Pier 1 Repairs
S18-16	Pier 2 Repairs
S18-17	East Slope Wall Repairs

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu Yd	12	-	12
Protective Shield	Sq Yd	635	-	635
Concrete Superstructure	Cu Yd	13.6	-	13.6
Protective Coat	Sq Yd	1,228	-	1,228
Reinforcement Bars, Epoxy Coated	Pound	2,450	-	2,450
Preformed Joint Seal 2 1/2"	Foot	279	-	279
Preformed Joint Strip Seal	Foot	92	-	92
Concrete Sealer	Sq Ft	-	454	454
Slope Wall Crack Sealing	Foot	-	55	55
Protect And Maintain Existing Underpass Luminaire	L Sum	0.022	-	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	647	-	647
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	944	-	944
Cleaning Drainage System	L Sum	0.05	-	0.05
Bridge Deck Scarification 3/4"	Sq Yd	944	-	944
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	-	79	79
Drainage Scuppers To Be Adjusted	Each	4	-	4
Diamond Grinding (Bridge Section)	Sq Yd	975	-	975
Maintenance Of Lighting System	Cal Mo	6	-	6
Temporary Construction Fence	Foot	-	208	208
Temporary Shoring And Cribbing	Each	-	2	2

SCOPE OF WORK

1. Provide Protective Shield within limits indicated on the plans.
2. Scarify 3/4" from the bridge deck slab.
3. Perform Deck Slab Repairs and adjust existing scuppers and inlets as required.
4. Reconstruct Expansion Joints at the East and West abutments and install new preformed joint strip seals.
5. Adjust drain scuppers type A.
6. Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck.
7. Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
8. Apply 2" Stone-Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Roadway Plans.
9. Perform Bridge Deck Grooving (Longitudinal), on traffic lanes.
10. Apply protective coat to the top of reconstructed transverse joint areas and top and inside faces of parapets and top of Latex Overlay.
11. Perform structural concrete repairs for the abutments and piers as noted on the plans.
12. Perform Slope Wall Repairs.
13. Install 2 1/2" PJS along top of parapet between I-90/94 Southbound and Reversible lanes.

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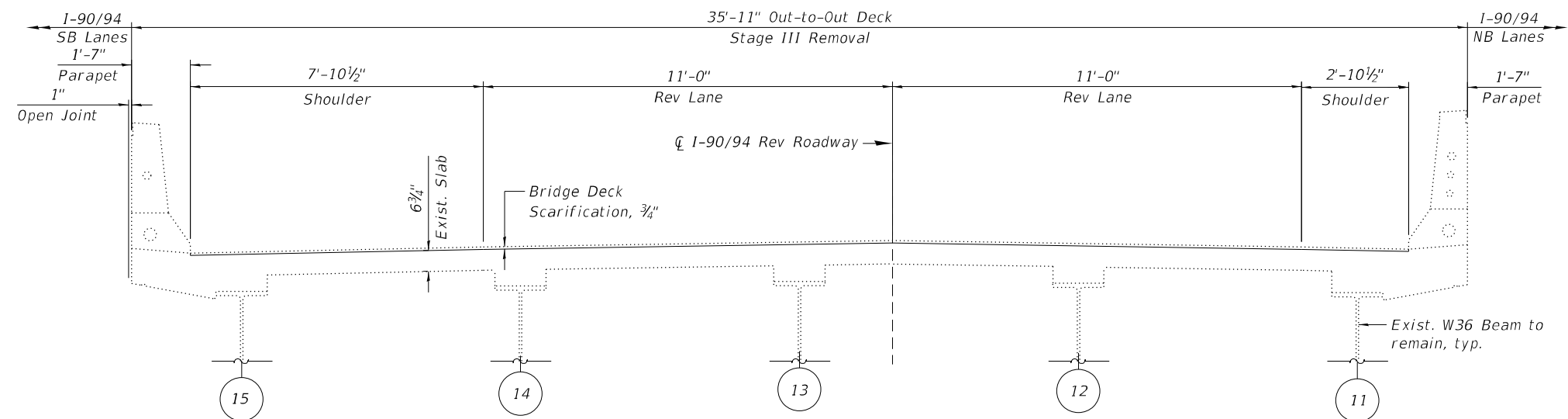
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DEPARTMENT OF TRANSPORTATION**

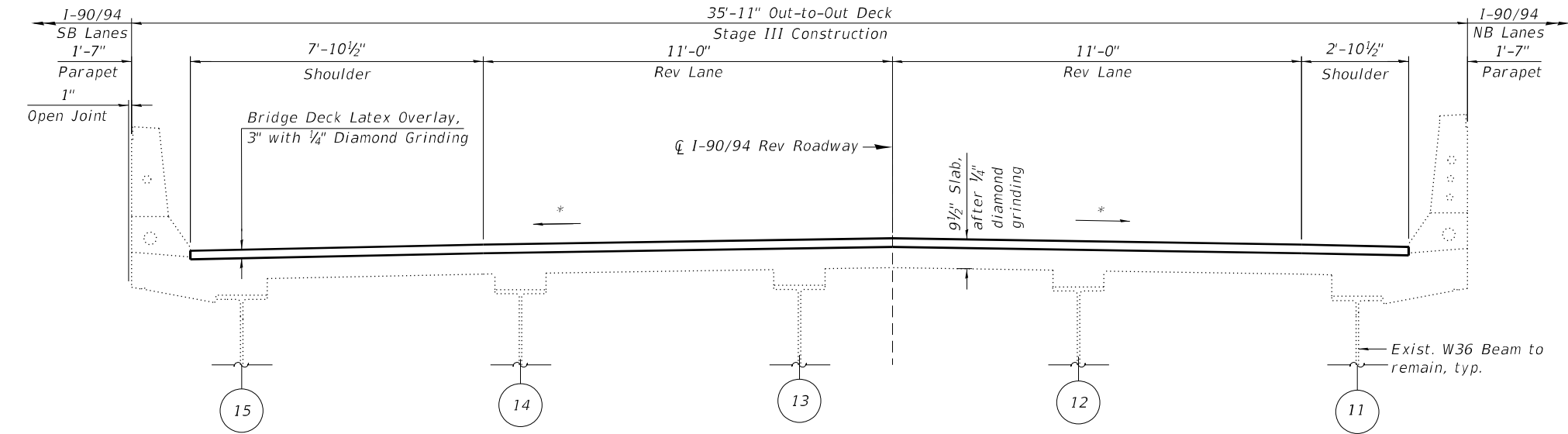
**GENERAL NOTES, INDEX OF SHEETS & TBOM
STRUCTURE NO. 016-0128 (REV)**

SHEET S18-02 OF S18-17 SHEETS

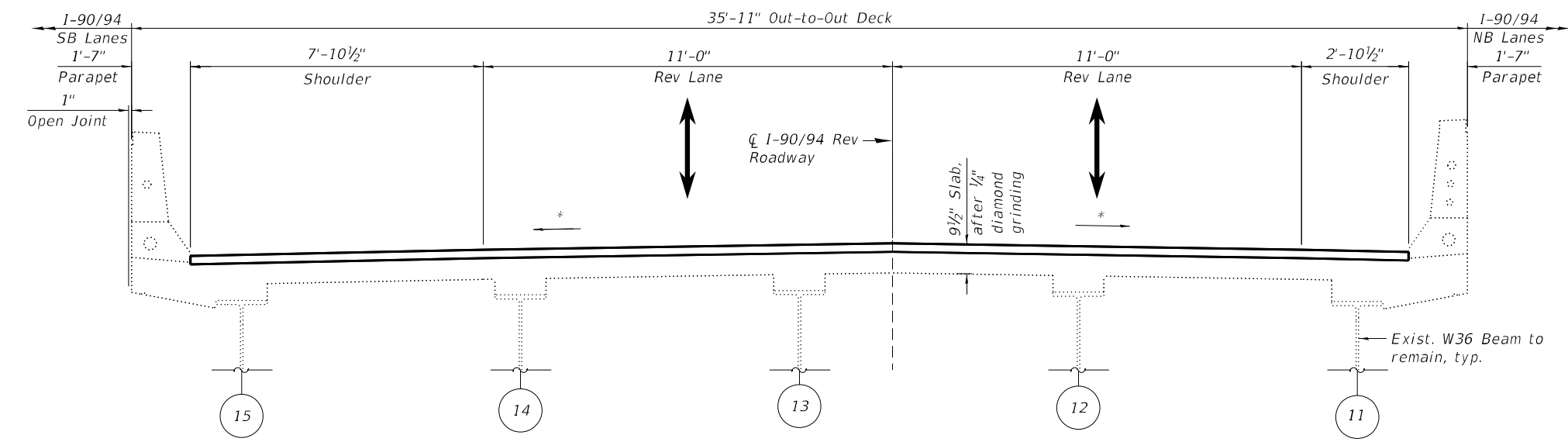
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90/94	2020-004-BR	COOK	1492	1014
CONTRACT NO. 62K74				
		ILLINOIS	FED. AID PROJECT	



STAGE III REMOVAL
(Looking West)



STAGE III CONSTRUCTION
(Looking West)



FINAL CROSS SECTION
(Looking West)

STAGE III REMOVAL

1. Perform 3/4" bridge deck scarification.
2. Remove areas of existing deck for full-depth deck slab repairs at locations shown in the plans.
3. Remove portions of bridge concrete deck/approach slab adjacent to expansion joints at the East and West Abutments.
4. Perform temporary shoring and cribbing at locations shown on the plans.

STAGE III CONSTRUCTION

1. Perform bridge deck slab repairs.
2. Reconstruct transverse expansion joints and install new preformed joint strip seals.
3. Perform structural repair of concrete for abutments and piers.
4. Apply 3" bridge deck latex concrete overlay.
5. Perform 1/4" Diamond Grinding to bridge deck and abutment hatched block.
6. Perform bridge deck grooving (Longitudinal) for the 3" bridge deck latex concrete overlay and reconstructed abutment expansion joint areas.
7. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach slab and taper into existing roadway. See Roadway Plans.
8. Apply protective coat to top and inside faces of north and south parapets, reconstructed transverse expansion joints and to the surfaces of the new overlay.
9. Perform Slope Wall repairs as shown on the plans.

*Match Exist. Cross-slopes

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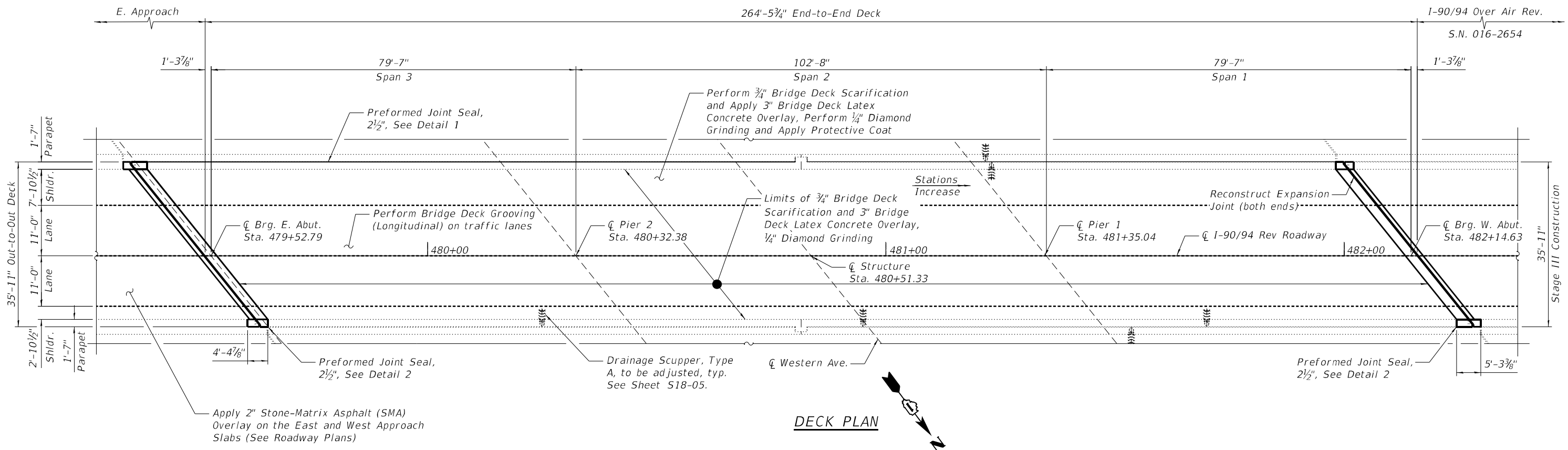
**STAGE I CONSTRUCTION
STRUCTURE NO. 016-0128 (REV)**

SHEET S18-03 OF S18-17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1015
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		

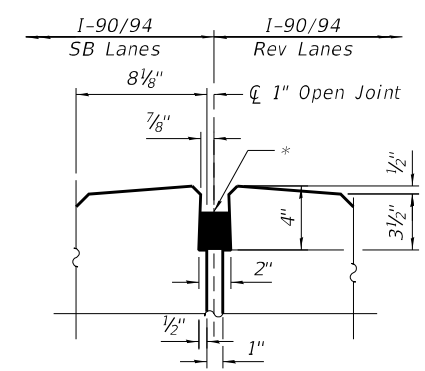
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Coat	Sq Yd	1,228
Preformed Joint Seal 2 1/2"	Foot	279
Bridge Deck Grooving (Longitudinal)	Sq Yd	647
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	944
Bridge Deck Scarification 3/4"	Sq Yd	944
Diamond Grinding (Bridge Section)	Sq Yd	975

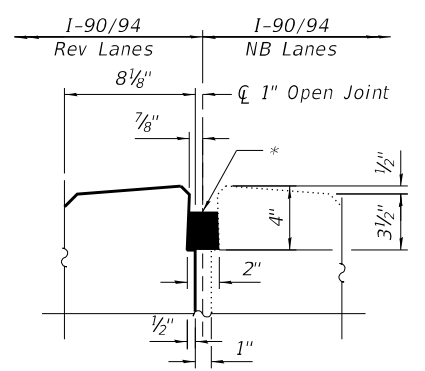


NOTES:

1. Areas of deck repair shown are estimated. The Engineer shall show actual locations of deck repairs at the time of construction.
2. For bridge deck final cross section, see Sheet S18-03.
3. For East and West transverse joint removal and replacement, see Sheets S18-06 thru S18-10.
4. Perform bridge deck grooving (Longitudinal) on traffic lanes.
5. Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched area.
6. Protective Coat shall be applied to the top of reconstructed transverse joints, top and inside face of parapets and top of latex concrete overlay.
7. 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.
8. The Contractor shall exercise extreme caution during Concrete Removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.



*Existing 2 1/2" PJS to be removed and replaced.



*Existing 2 1/2" PJS to be removed and replaced.

MODEL: Default
FILE NAME: P:\2004-824 PTB\195-010-GRAEF\WO#8 I-90_SB & Rev Var Overlays - Western SB & Rev Var Overlays - Rev\0160128-62K73-504-Deck Repair Plan.dgn



USER NAME =	DESIGNED - AMS, HMI	REVISED -
PLOT SCALE =	CHECKED - MI	REVISED -
PLOT DATE =	DRAWN - AMS, HMI	REVISED -
	DATE - 8/30/2022	REVISED -

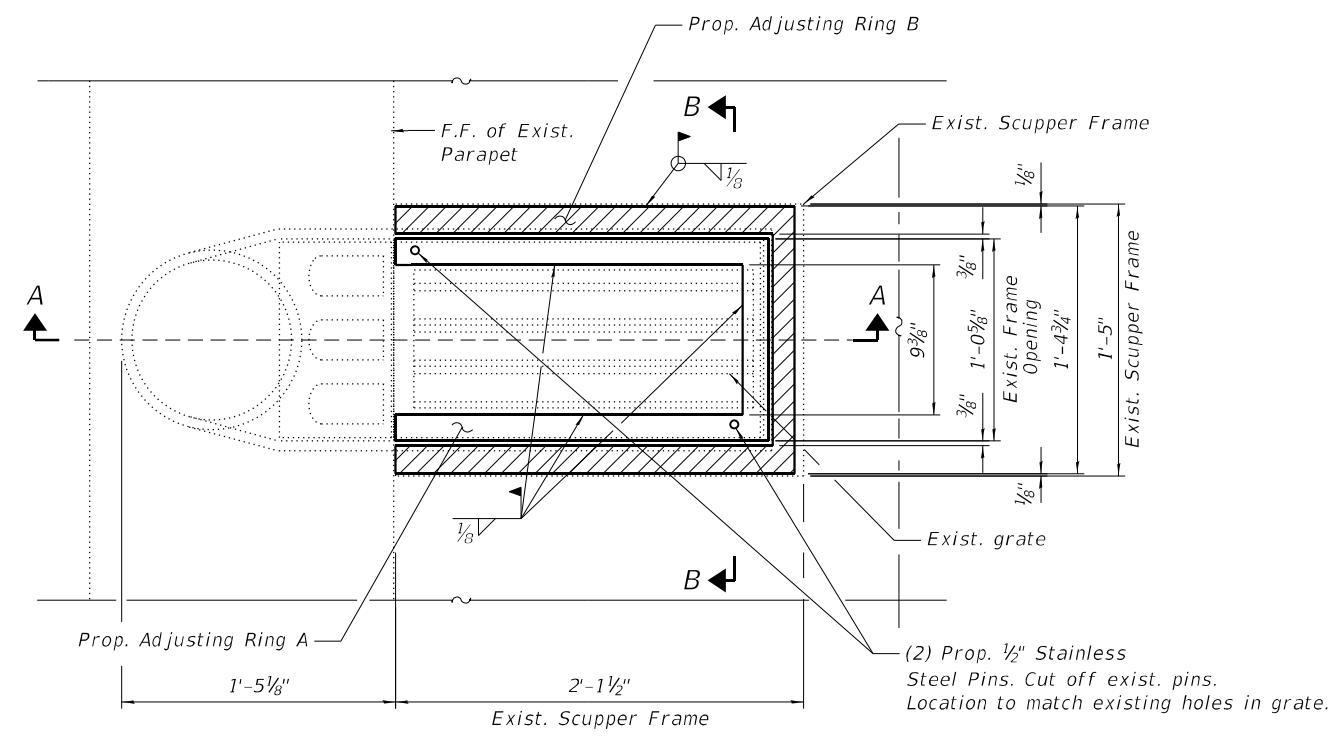
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK REPAIR PLAN
STRUCTURE NO. 016-0128 (REV)**

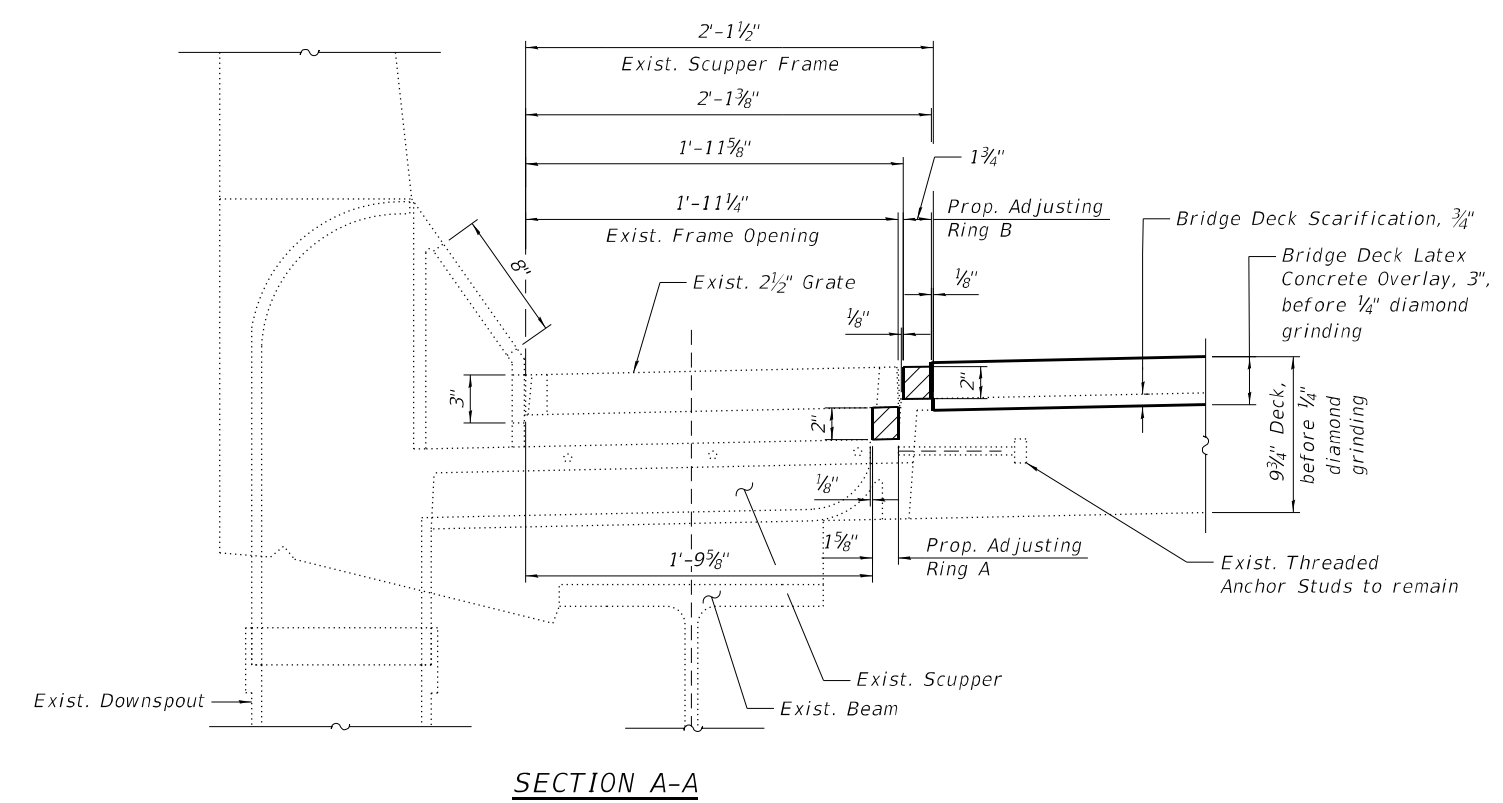
SHEET S18-04 OF S18-17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

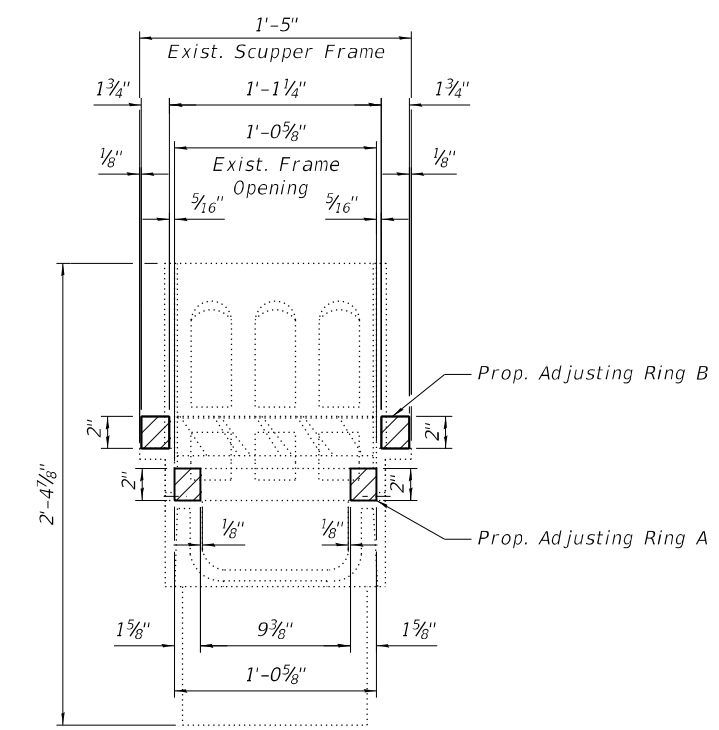
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 8/30/2022 3:13:32 PM



TYPICAL SCUPPER TYPE A PLAN
(4 Locations)



SECTION A-A



SECTION B-B

NOTES

1. The Contractor shall field verify Existing Dimensions and Details of the Existing Scuppers and make necessary adjustments prior to construction of New Adjusting Rings or ordering of material for Adjusting Drainage Scuppers.
2. All Cast Iron Parts shall be Grey Iron conforming to the requirements of AASHTO M 105, Class 35B.
3. Cast Iron Parts shall be unfinished.
4. The Contractor shall take appropriate measures to ensure that Protective Coat is not applied to the scuppers.
5. Adjusting Rings shall be from Neenah or approved equal. Structural steel weldments or equal section and of the same configuration may be submitted in place of Cast Iron. Fillet or full penetration welds may be used for weldments. Details shall be submitted to the Engineer for approval.
6. Provide a 1/8" Fillet Weld around perimeter of new Adjusting Rings to secure to existing scupper.
7. Cost of all labor and materials necessary to clean all existing floor drains and scuppers, install adjusting scupper rings, remove and reinstall grates is included in the cost for Drainage Scupper to be Adjusted.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers To Be Adjusted	Each	4



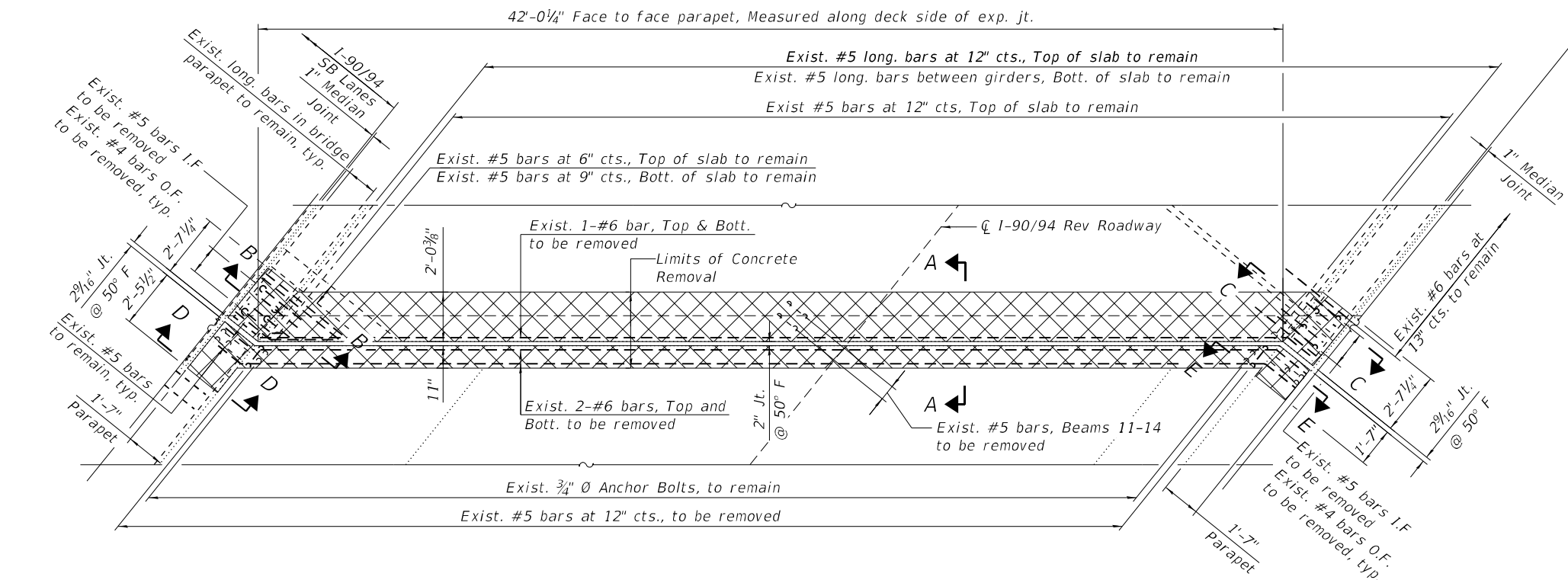
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CHECKED - MI, RB	REVISIONS -	
PLOT SCALE =	DRAWN - CP	REVISED -
PLOT DATE =	DATE - 8/30/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

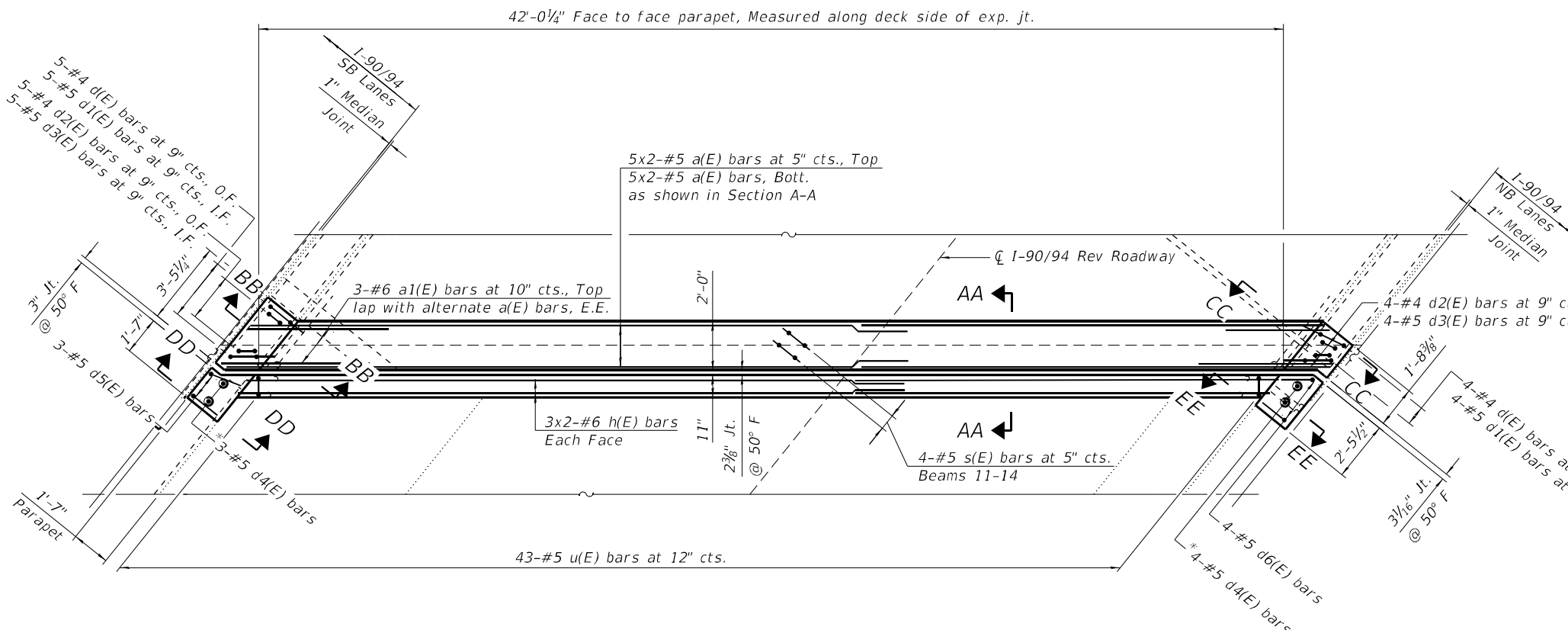
DRAINAGE SCUPPER TYPE A ADJUSTMENT DETAILS
STRUCTURE NO. 016-0128 (REV)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1017
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

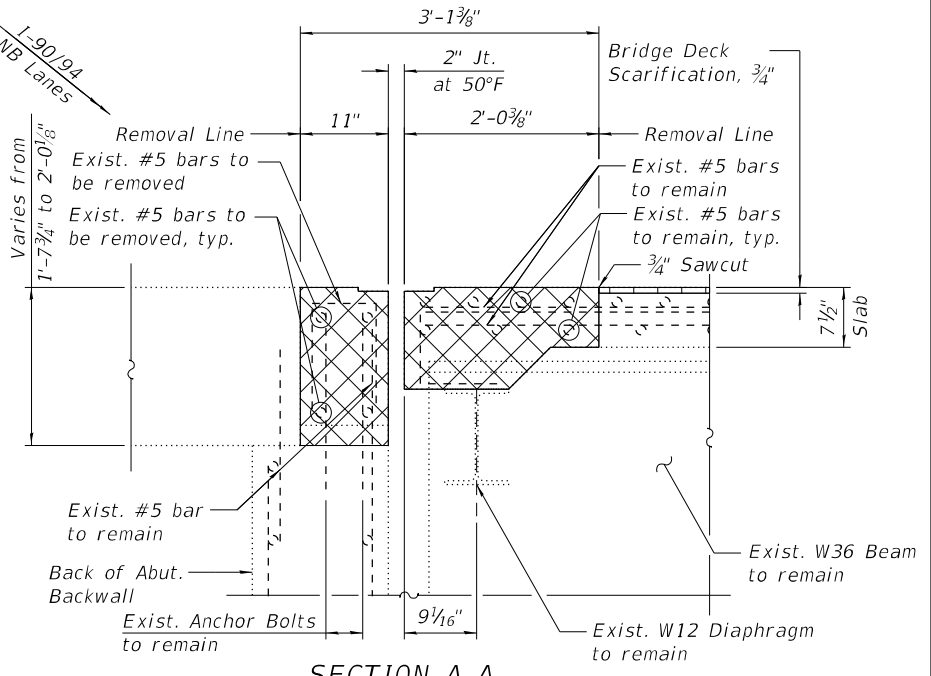
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 8/30/2022 3:13:36 PM



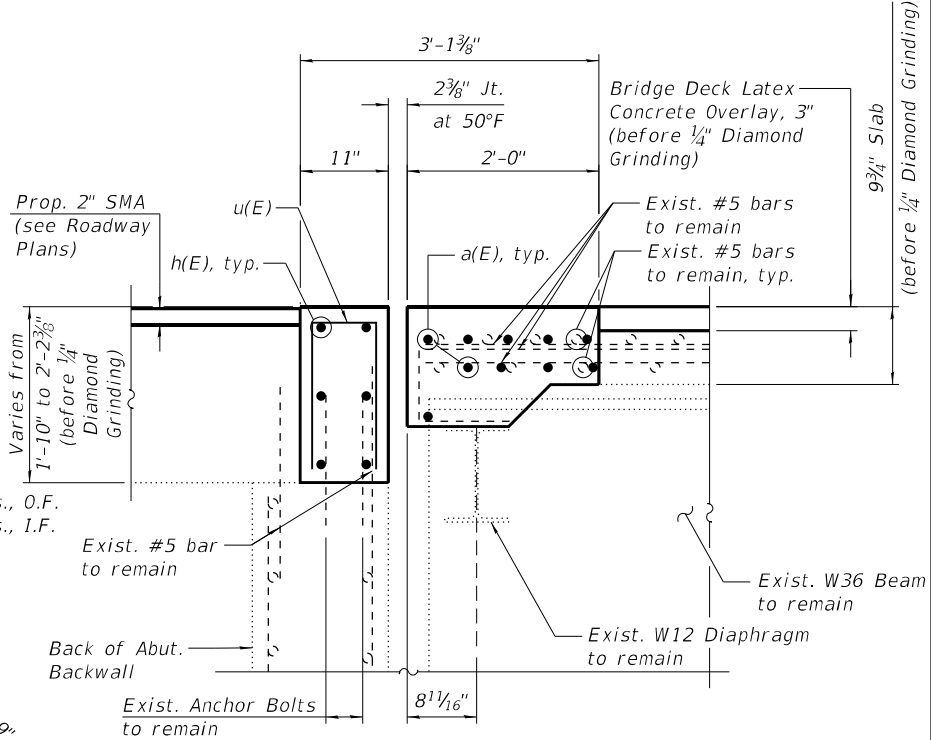
EAST ABUTMENT JOINT REMOVAL PLAN



EAST ABUTMENT JOINT RECONSTRUCTION PLAN



SECTION A-A



SECTION AA-AA

LEGEND

	Concrete Removal
I.F.	Inside Face
O.F.	Outside Face
E.E.	Each End

NOTES:

- For Sections B-B, C-C, D-D, E-E, BB-BB, CC-CC, DD-DD and EE-EE see Sheet S18-07.
- For additional Notes, Bar Diagrams and Bill of Material see Sheet S18-08.

*Epoxy grout #5 d4(E) bars in 9" min. holes according to Section 584 of the Standard Specifications.



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CHECKED - MI	REVISIONS -	
PLOT SCALE =	DRAWN - FL	REVISED -
PLOT DATE =	DATE - 8/30/2022	REVISED -

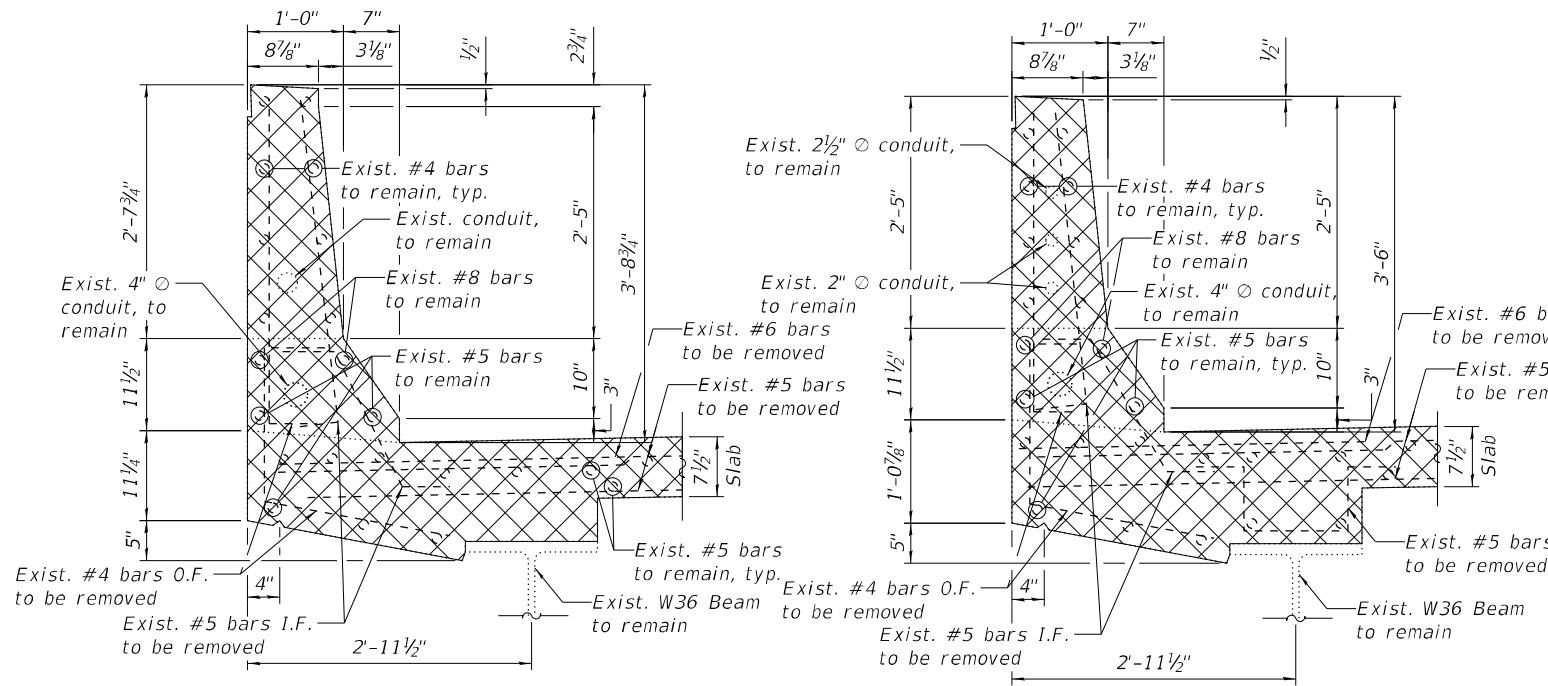
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**E. ABUT. JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 3)
STRUCTURE NO. 016-0128 (REV)**

F.A.I. RTE. 90/94	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 1018
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

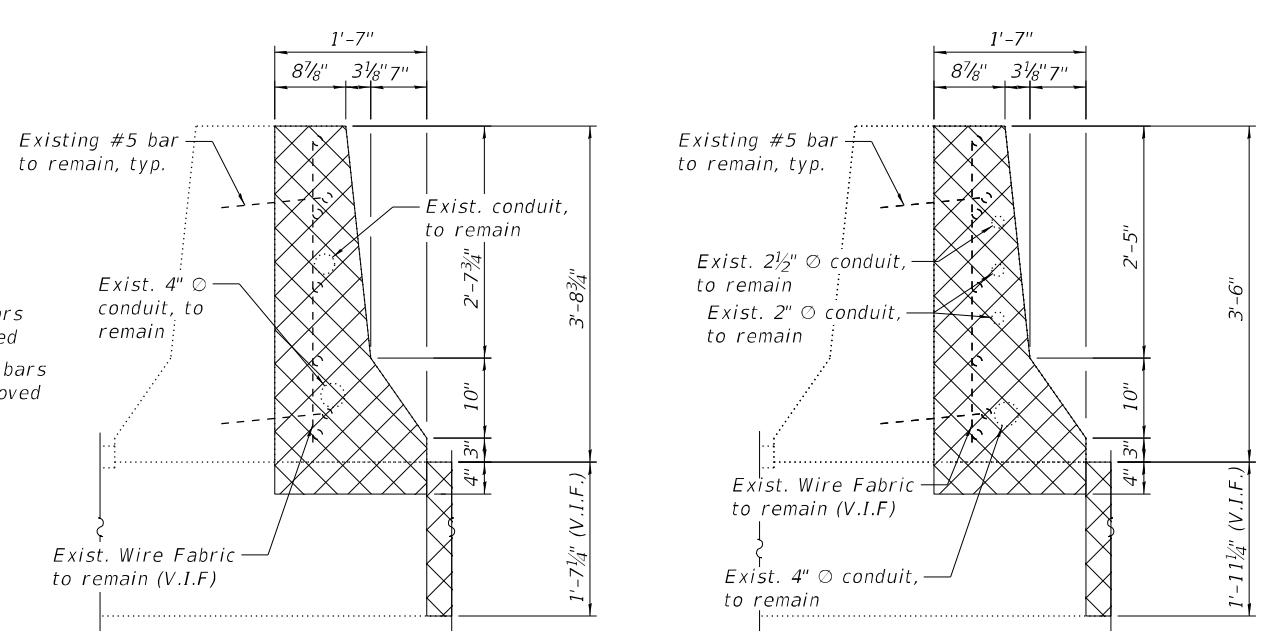
SHEET S18-06 OF S18-17 SHEETS

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SECTION B-B

SECTION C-C



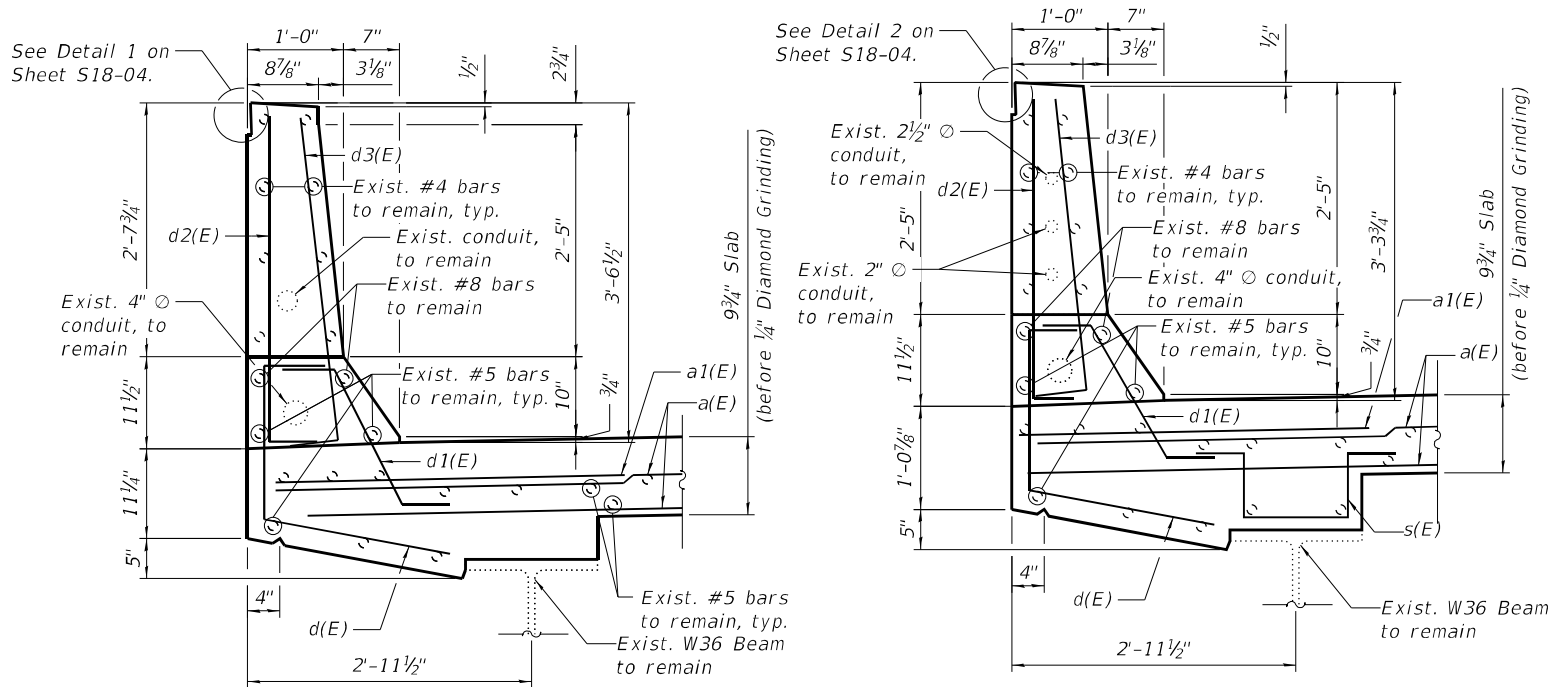
SECTION D-D

SECTION E-E

*Dimensions are taken at the Back of Abut.

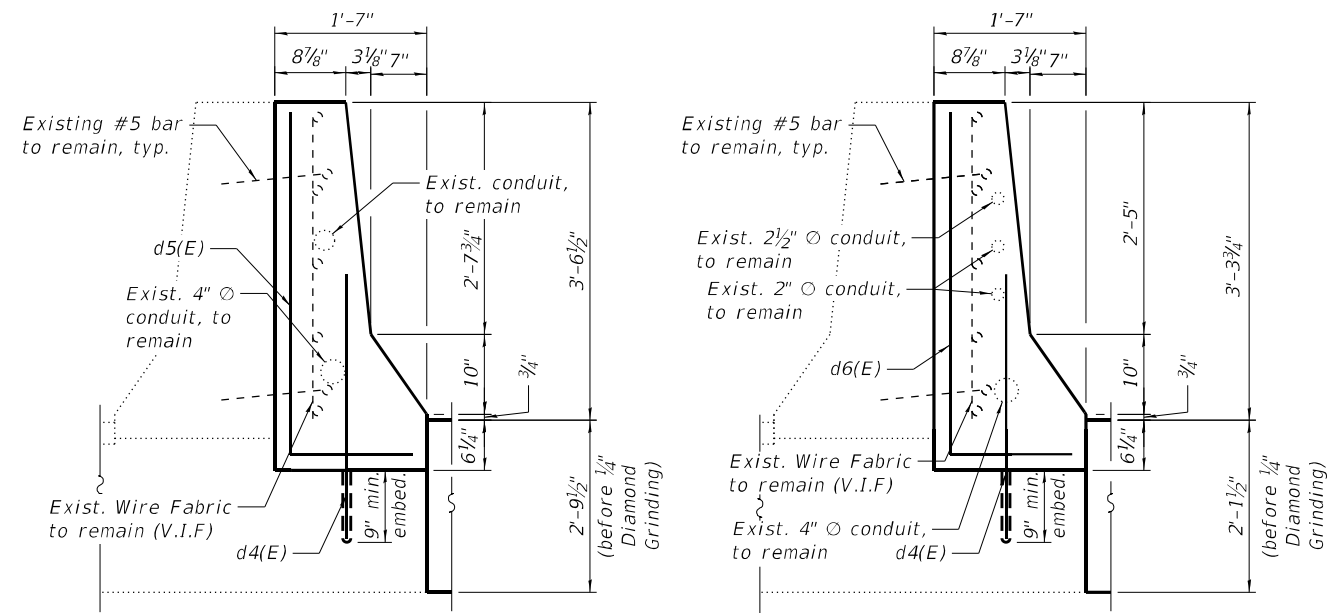
(Reinforcement in the pour strip not shown for clarity)

(Reinforcement in the pour strip not shown for clarity)



SECTION BB-BB

SECTION CC-CC



SECTION DD-DD

SECTION EE-EE

(Reinforcement in the pour strip not shown for clarity)

(Reinforcement in the pour strip not shown for clarity)

NOTES:

1. For legend, see Sheet S18-06.
2. For additional Notes, Bar Diagrams and Bill of Material see Sheet S18-08.
3. Epoxy grout d4(E) bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. Cost included with Concrete Superstructure.



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PLOT SCALE =	CHECKED - MI	REVISED -
PLOT DATE =	DRAWN - FL	REVISED -
	DATE - 8/30/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

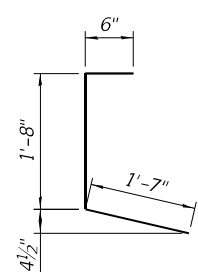
**E. ABUT. JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 3)
 STRUCTURE NO. 016-0128 (REV)**

SHEET S18-07 OF S18-17 SHEETS

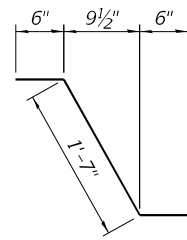
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1019
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

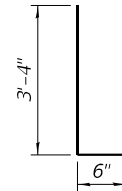
Bar	No.	Size	Length	Shape
a(E)	20	#5	24'-10"	▬
a1(E)	6	#6	6'-6"	▬
d(E)	9	#4	3'-9"	┌
d1(E)	9	#5	2'-7"	┌
d2(E)	9	#4	3'-10"	┌
d3(E)	9	#5	3'-10"	┌
d4(E)	7	#5	2'-9"	▬
d5(E)	3	#5	4'-5"	┌
d6(E)	4	#5	4'-2"	┌
h(E)	12	#6	23'-4"	▬
s(E)	16	#5	3'-5"	┌
u(E)	43	#5	3'-4"	┌
Concrete Removal			Cu Yd	6.8
Concrete Superstructure			Cu Yd	7.6
Protective Coat			Sq Yd	18.0
Reinforcement Bars, Epoxy Coated			Pound	1,360



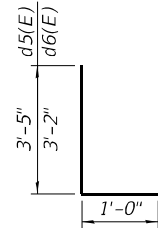
BAR d(E)



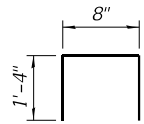
BAR d1(E)



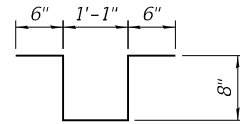
BARS d2(E) & d3(E)



BARS d5(E) & d6(E)



BAR u(E)



BAR s(E)

NOTES:

1. For legend, see Sheet S18-06.
2. For Preformed Joint Strip Seal details, see Sheet S18-12.
3. Removal and disposal of the existing expansion joints is included with Concrete Removal.

MIN BAR LAPS

- #5 3'-6"
- #6 4'-0"

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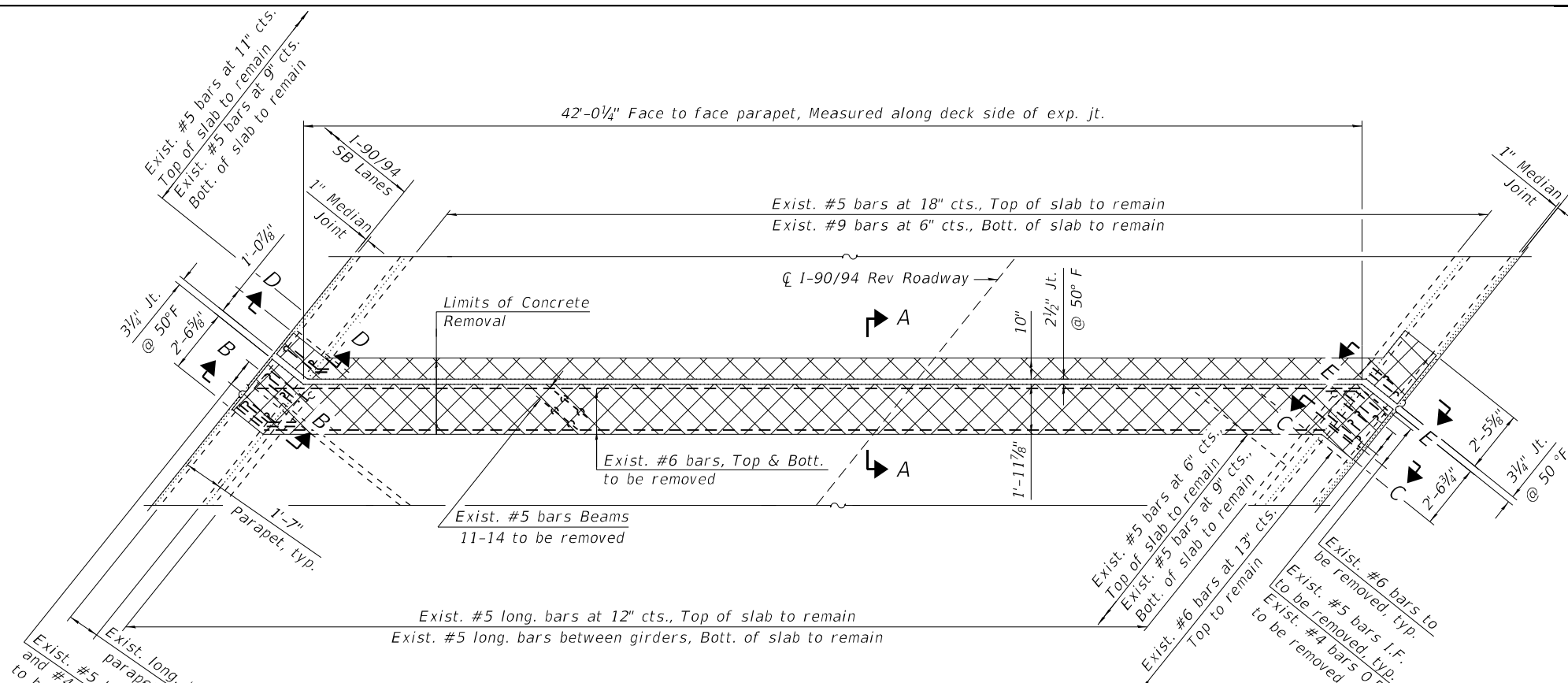
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**E. ABUT. JOINT REMOVAL & REPLACEMENT (SHT. 3 OF 3)
STRUCTURE NO. 016-0128 (REV)**

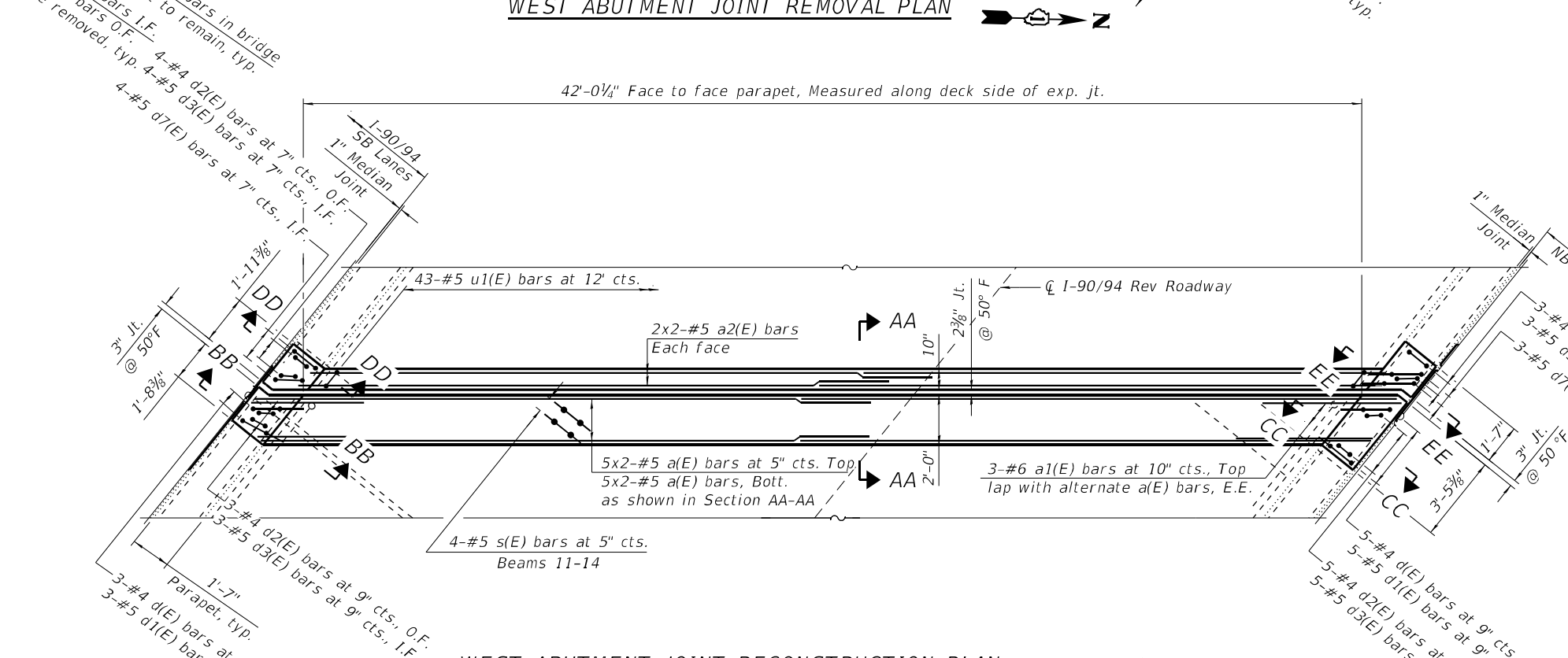
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90/94	2020-004-BR	COOK	1492	1020
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

SHEET S18-08 OF S18-17 SHEETS

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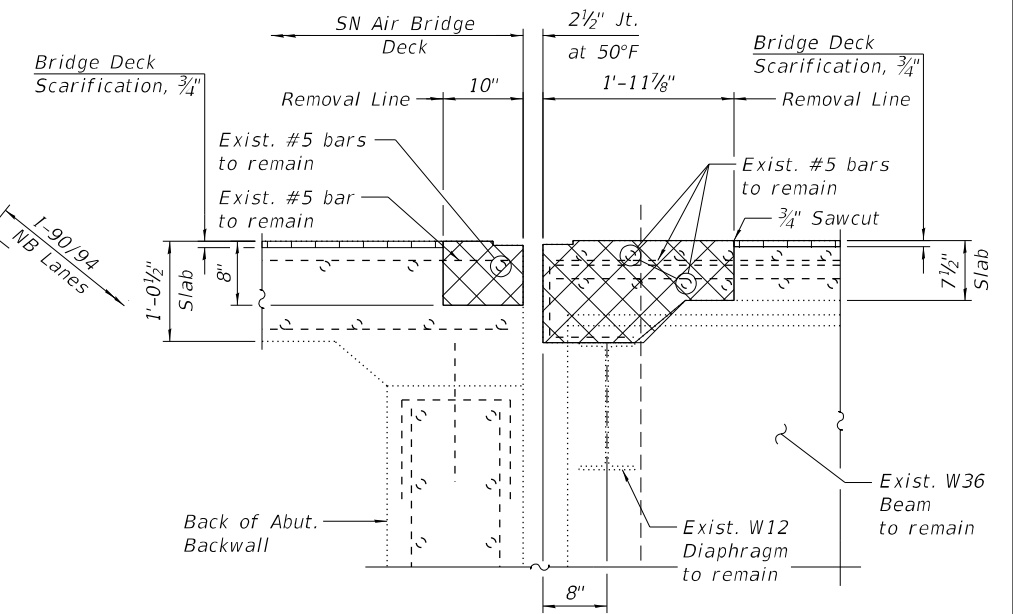
WEST ABUTMENT JOINT REMOVAL PLAN



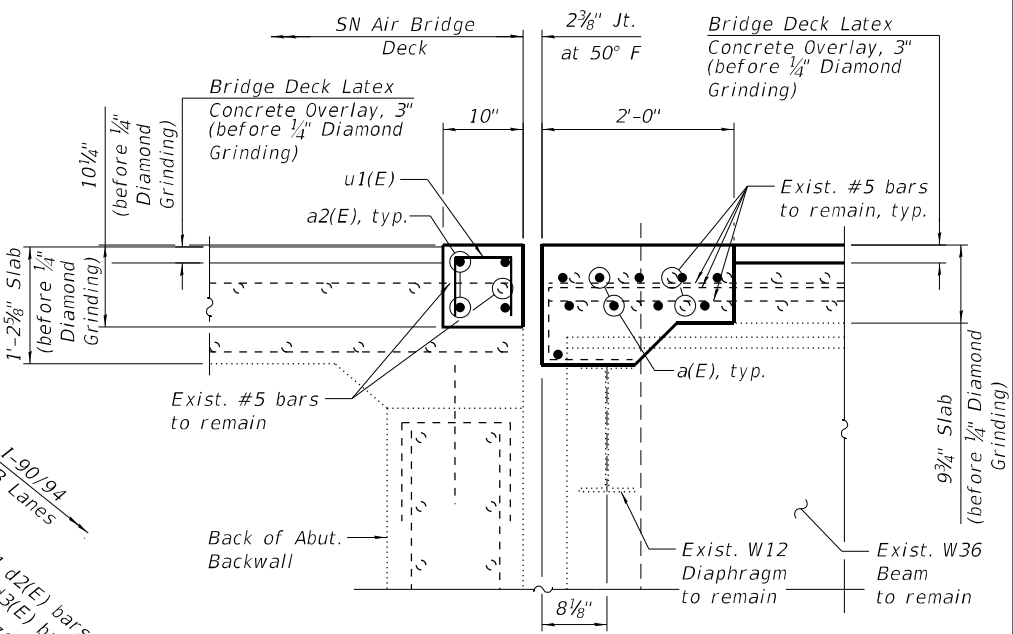
WEST ABUTMENT JOINT RECONSTRUCTION PLAN

NOTES:

1. For Sections B-B, C-C, D-D, E-E, BB-BB, CC-CC, DD-DD and EE-EE, see Sheet S18-10.
2. For Bar Diagrams, additional Notes and Bill of Material, see Sheet S18-11.



SECTION A-A



SECTION AA-AA

LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- E.E. Each End



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PLOT SCALE =	CHECKED - MI	REVISED -
PLOT DATE =	DRAWN - FL	REVISED -
	DATE - 8/30/2022	REVISED -

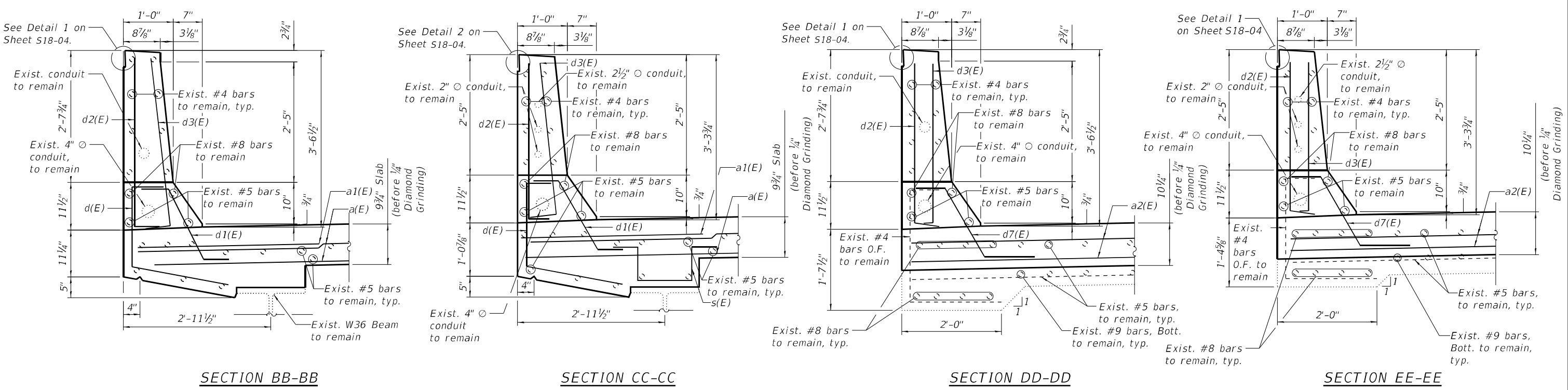
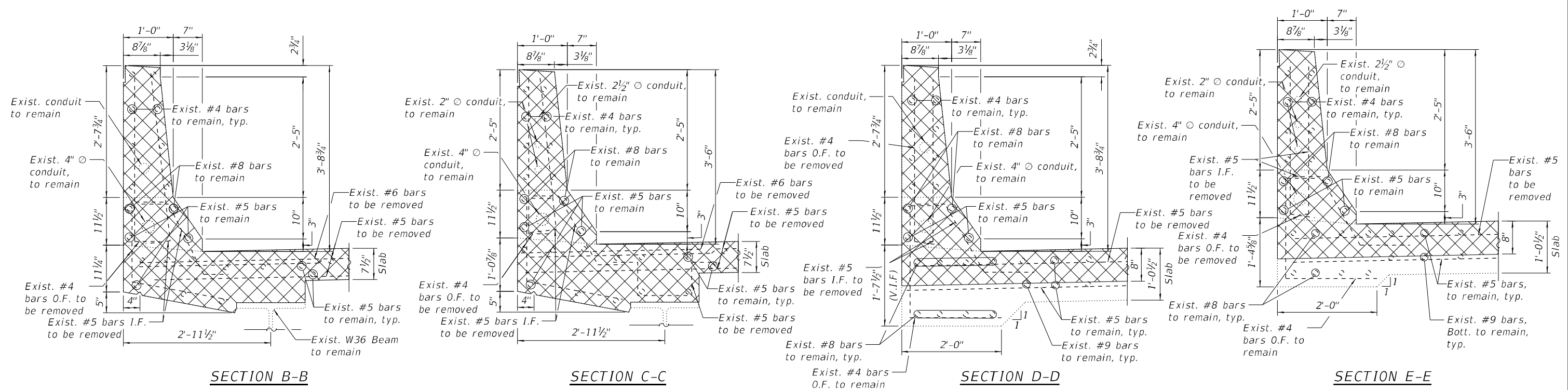
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

W. ABUT. JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 3)
STRUCTURE NO. 016-0128 (REV)

SHEET S18-09 OF S18-17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1021
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	

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NOTES:

1. For legend, see Sheet S18-09.
2. For additional Notes, Bar Diagrams and Bill of Material see Sheet S18-11.



USER NAME =	DESIGNED - SK, FL	REVISED -
CHECKED - MI	REVISIONS -	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

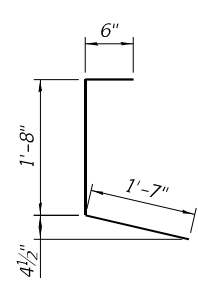
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STRUCTURE NO. 016-0128 (REV)

SHEET S18-10 OF S18-17 SHEETS

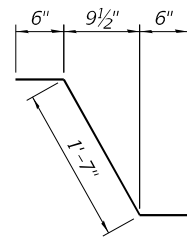
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90/94	2020-004-BR	COOK	1492	1022
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

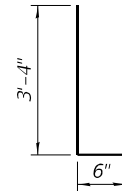
Bar	No.	Size	Length	Shape
a(E)	20	#5	24'-10"	▬
a1(E)	6	#6	6'-6"	▬
a2(E)	8	#5	23'-4"	▬
d(E)	8	#4	3'-9"	└
d1(E)	8	#5	2'-7"	└
d2(E)	15	#4	3'-10"	└
d3(E)	15	#5	3'-10"	└
d7(E)	7	#5	3'-0"	└
s(E)	16	#5	3'-5"	└
u1(E)	43	#5	1'-6"	▬
Concrete Removal			Cu Yd	5.2
Concrete Superstructure			Cu Yd	6
Protective Coat			Sq Yd	17
Reinforcement Bars, Epoxy Coated			Pound	1,060



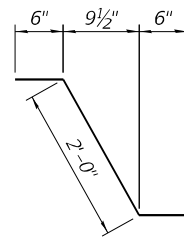
BAR d(E)



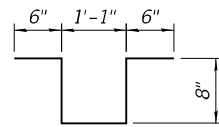
BAR d1(E)



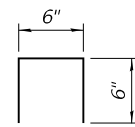
BARS d2(E) & d3(E)



BAR d7(E)



BAR s(E)



BAR u1(E)

NOTES:

1. For legend, see Sheet S18-09.
2. For Preformed Joint Strip Seal details, see Sheet S18-12.
3. Removal and disposal of the existing expansion joints is included with Concrete Removal.

MIN BAR LAP
#5 3'-6"

MODEL: Default
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8/30/2022 3:13:49 PM



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PLOT DATE =	DATE - 8/30/2022	REVISED -

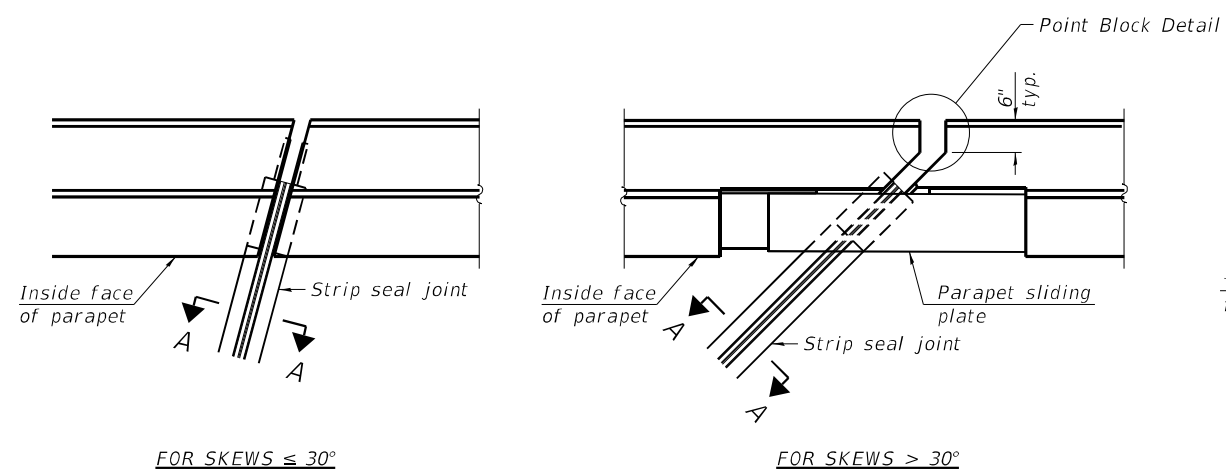
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**W. ABUT. JOINT REMOVAL & REPLACEMENT (SHT. 3 OF 3)
STRUCTURE NO. 016-0128 (REV)**

SHEET S18-10 OF S18-17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	

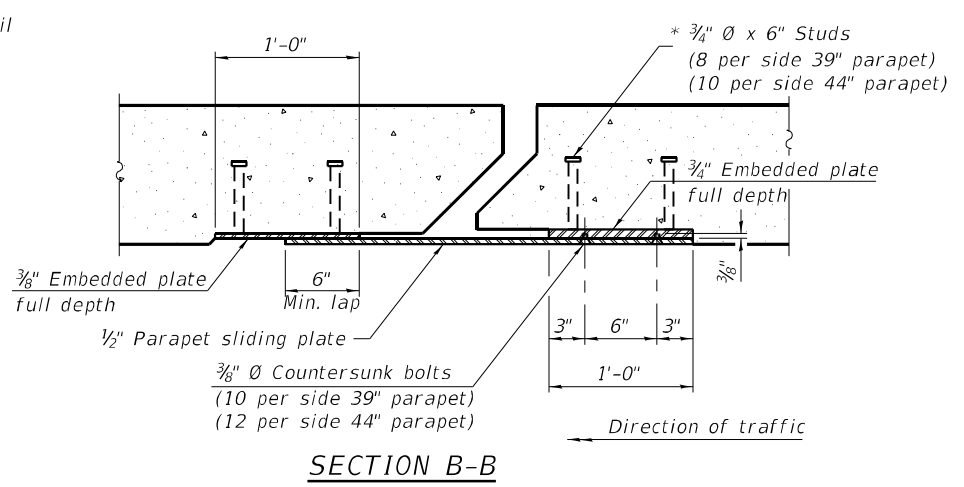
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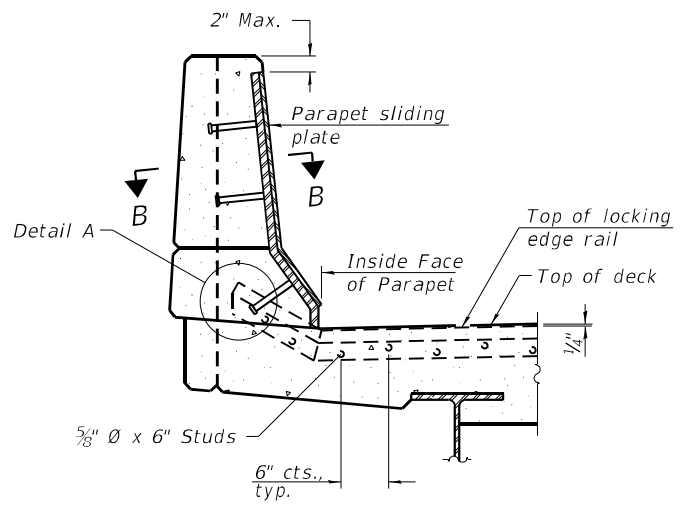
FOR SKEWS $\leq 30^\circ$

PLAN AT PARAPET

FOR SKEWS $> 30^\circ$

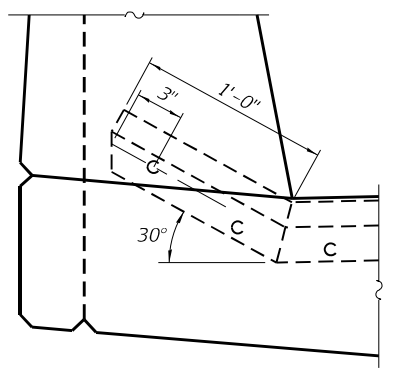


SECTION B-B

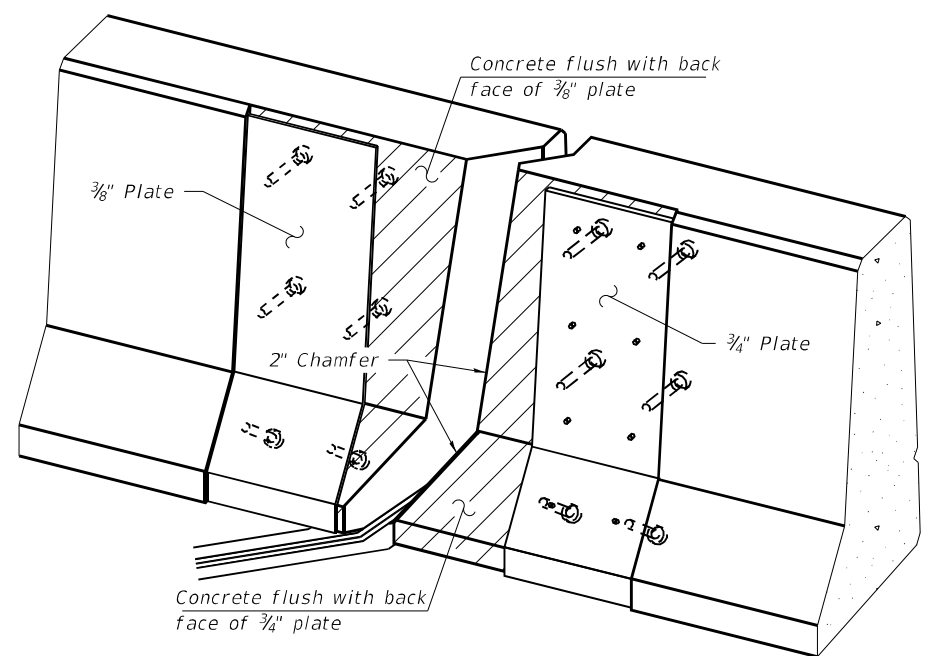


SECTION AT PARAPET

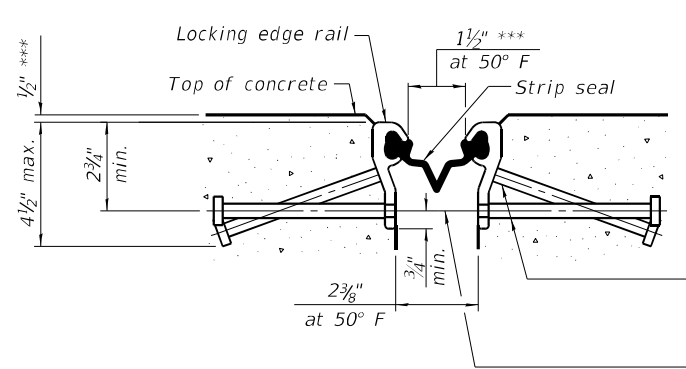
(Skews $> 30^\circ$ shown. Skews $\leq 30^\circ$ similar except as shown in plan view.)



DETAIL A



TRIMETRIC VIEW
 (Showing embedded plates only)



SHOWING ROLLED RAIL JOINT

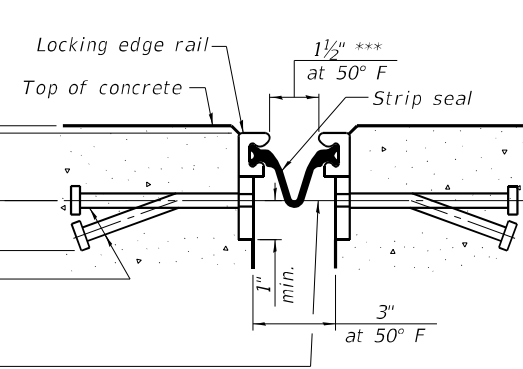
* $5/8$ " ϕ x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

$3/8$ " ϕ threaded rods in $1/16$ " ϕ 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.

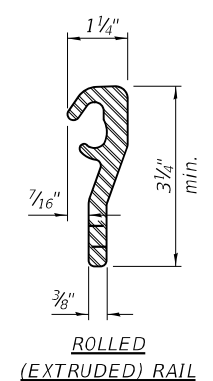
SECTION A-A

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

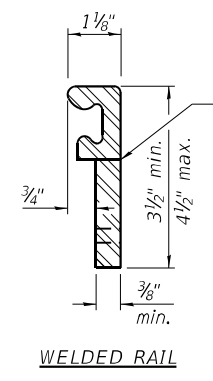
*** Before $1/4$ " Diamond Grinding



SHOWING WELDED RAIL JOINT



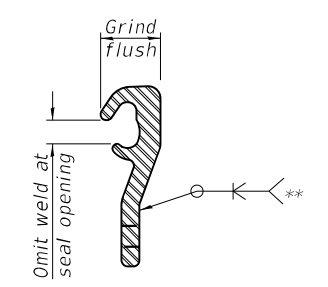
ROLLED (EXTRUDED) RAIL



WELDED RAIL

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.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	92



USER NAME =	DESIGNED - SK, FL	REVISED -
PLOT SCALE =	CHECKED - MI	REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

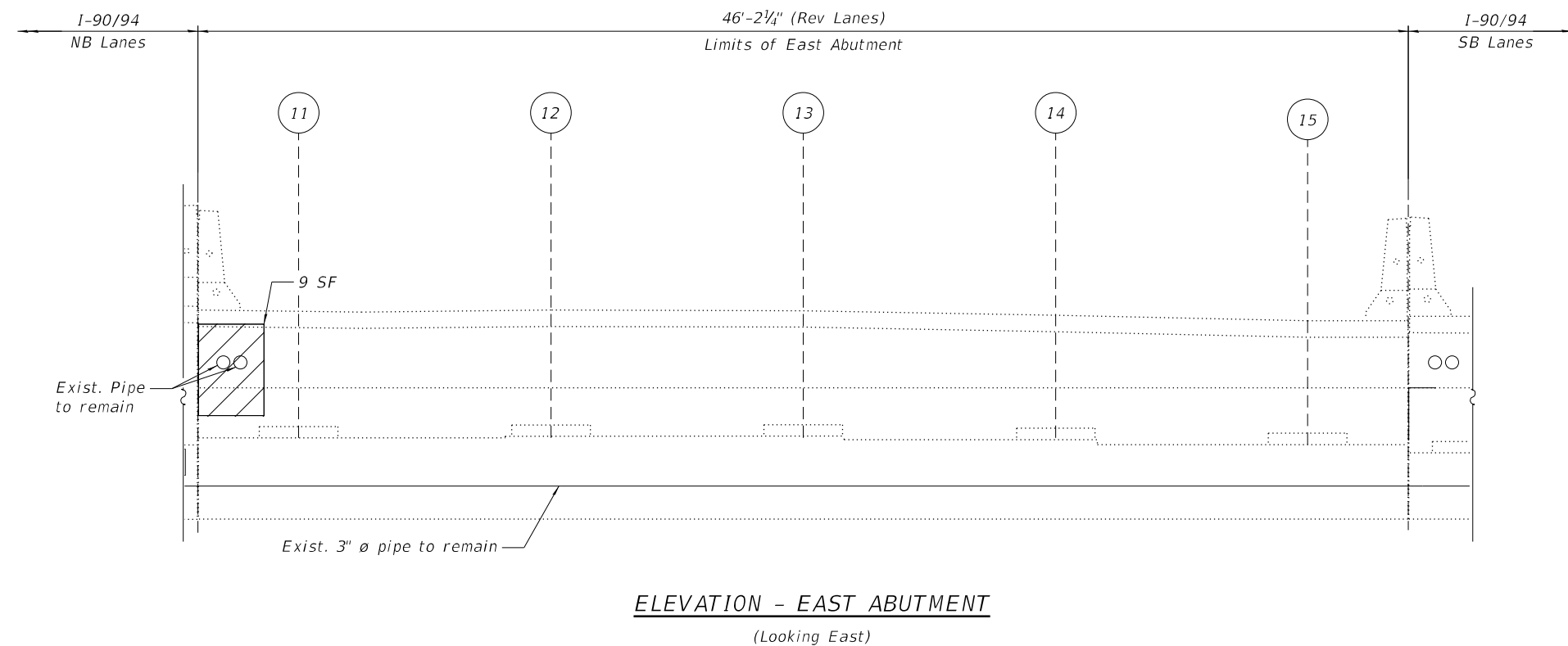
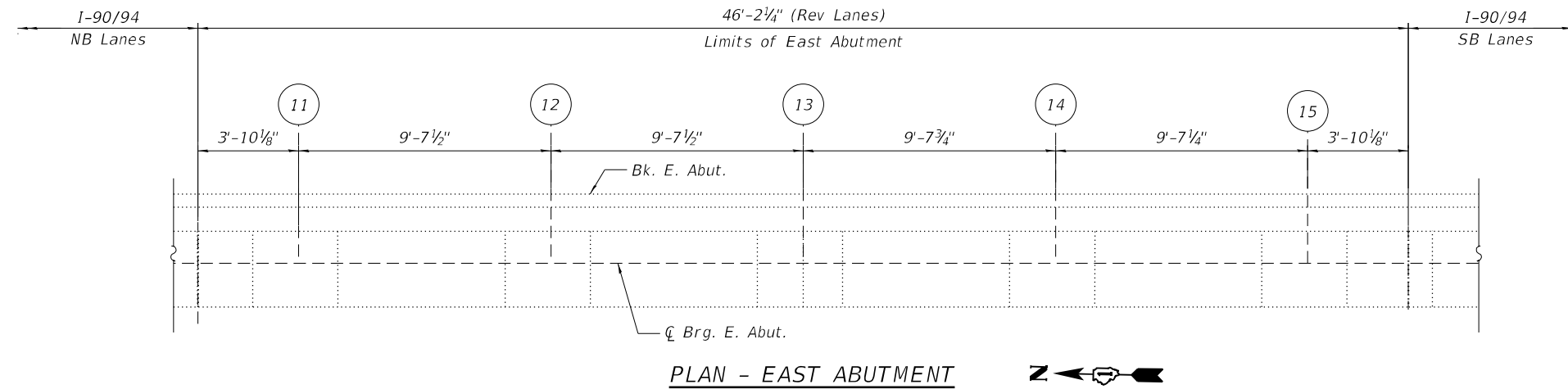
PREFORMED JOINT STRIP SEAL
 STRUCTURE NO. 016-0128 (REV)

SHEET S18-12 OF S18-17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1024
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	231
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	9



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.
- Concrete Sealer shall be applied to the abutment seat and the bottom 2 feet of the abutment backwall.
- For Slope Wall repairs, see Sheet S18-17.

LEGEND

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

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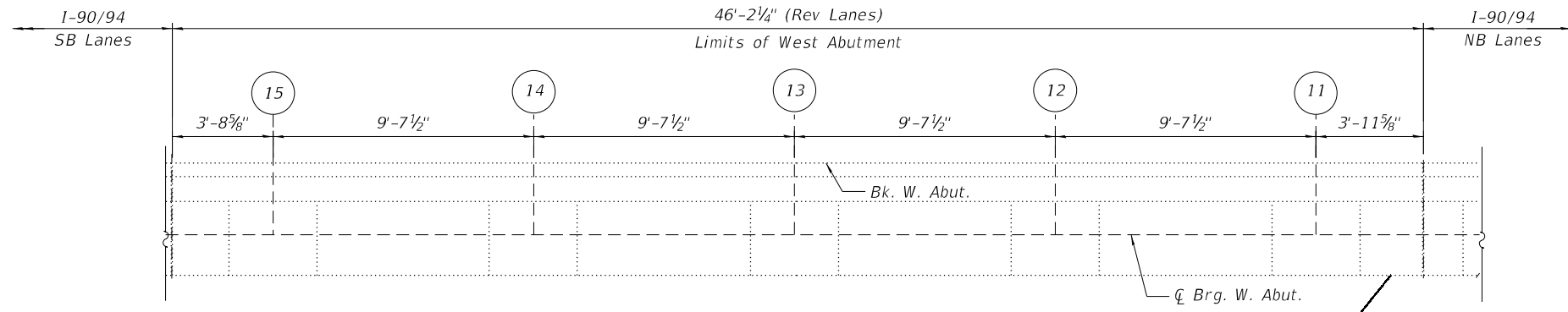
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PLOT DATE =	DATE - 8/30/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

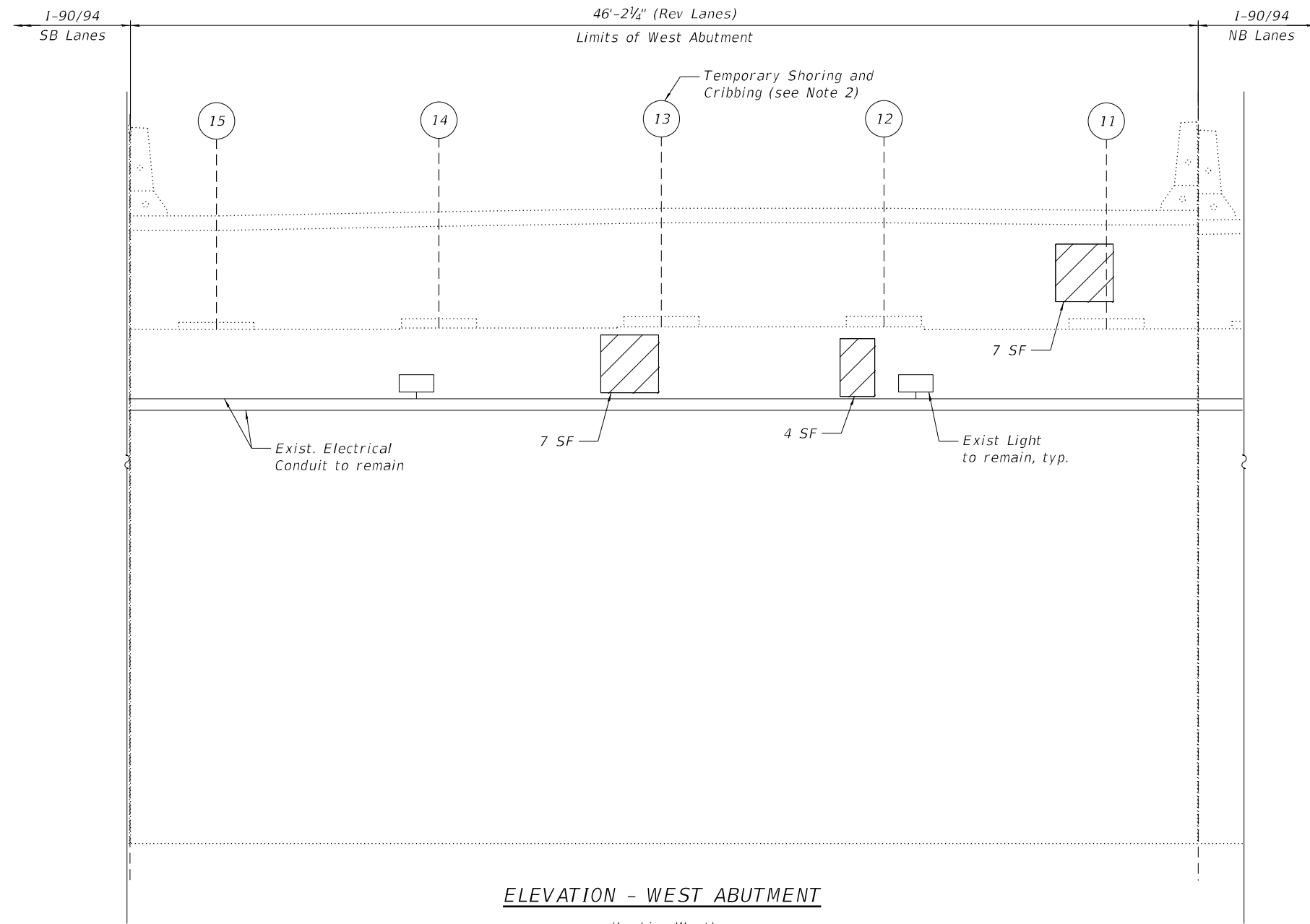
**EAST ABUTMENT REPAIRS
STRUCTURE NO. 016-0128 (REV)**

SHEET S18-13 OF S18-17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1025
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



PLAN - WEST ABUTMENT



ELEVATION - WEST ABUTMENT
(Looking West)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	223
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	18
Temporary Shoring And Cribbing	Each	1

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.
- Concrete Sealer shall be applied to the abutment seat and the bottom 2 feet of the abutment backwall.
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after completing the structural repair of concrete.

SUMMARY OF REACTIONS WEST ABUTMENT BEAM 13		
R DL	(k)	41.3
R LL	(k)	47.3
R IM	(k)	11.5
R Total	(k)	100.1

LEGEND

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

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PLOT DATE =	DATE - 8/30/2022	REVISED -

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DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT REPAIRS
STRUCTURE NO. 016-0128 (REV)

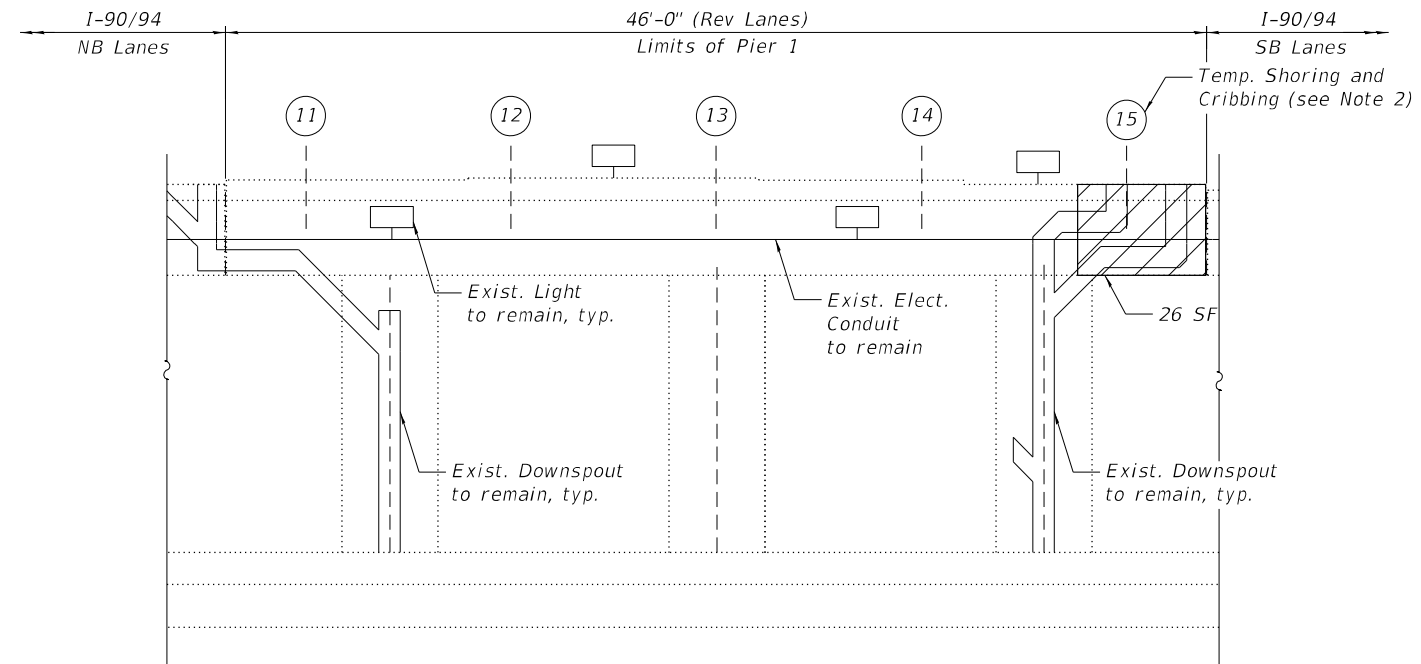
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90/94	2020-004-BR	COOK	1492	1026
CONTRACT NO. 62K74				

SHEET S18-14 OF S18-17 SHEETS

ILLINOIS FED. AID PROJECT

BILL OF MATERIAL

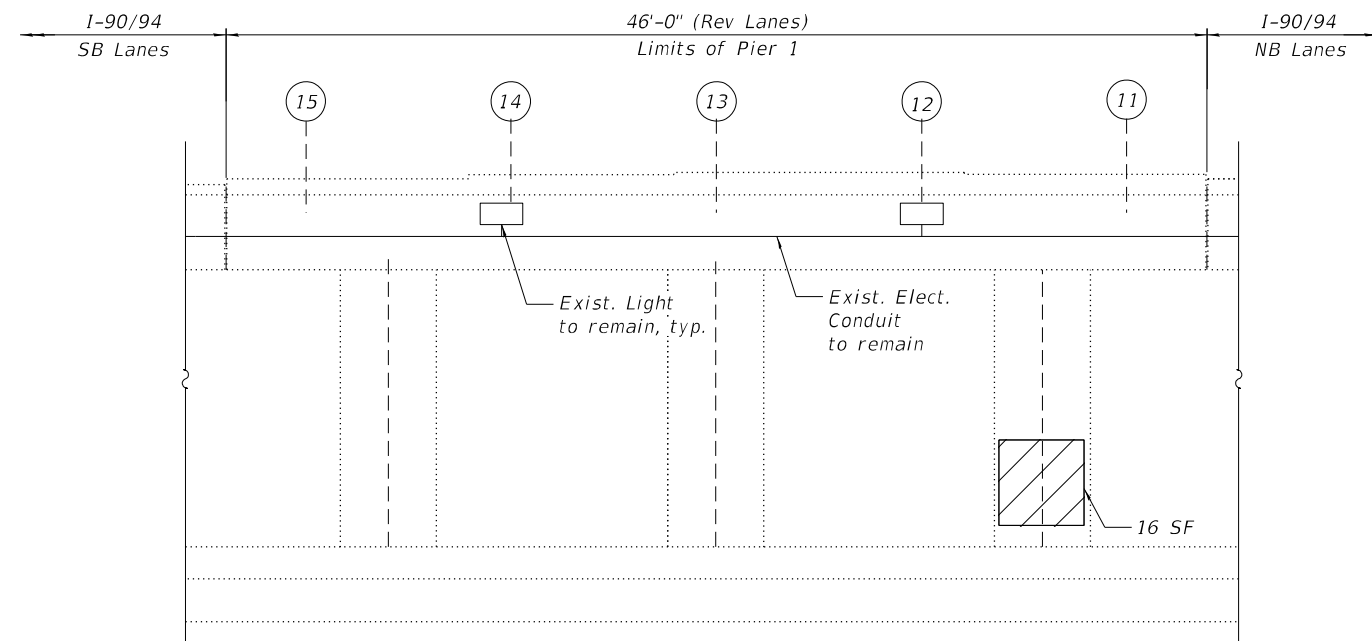
ITEM	UNIT	QUANTITY
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	42
Temporary Shoring And Cribbing	Each	1



PIER 1 ELEVATION
(Looking East)



EXISTING LIGHTING: PIER 1
(Looking Northeast)



PIER 1 ELEVATION
(Looking West)

NOTES:

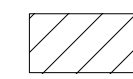
- Quantities and limits shown are estimated for bidding purpose only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the engineer in the field at the time of construction.
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after completing the structural repair of concrete.



EXISTING LIGHTING: PIER 1
(Looking Southwest)

SUMMARY OF REACTIONS PIER 1 BEAM 15		
R DL	(k)	141.0
R LL	(k)	55.7
R IM	(k)	12.9
R Total	(k)	209.6

LEGEND



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

SF - Square Foot

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

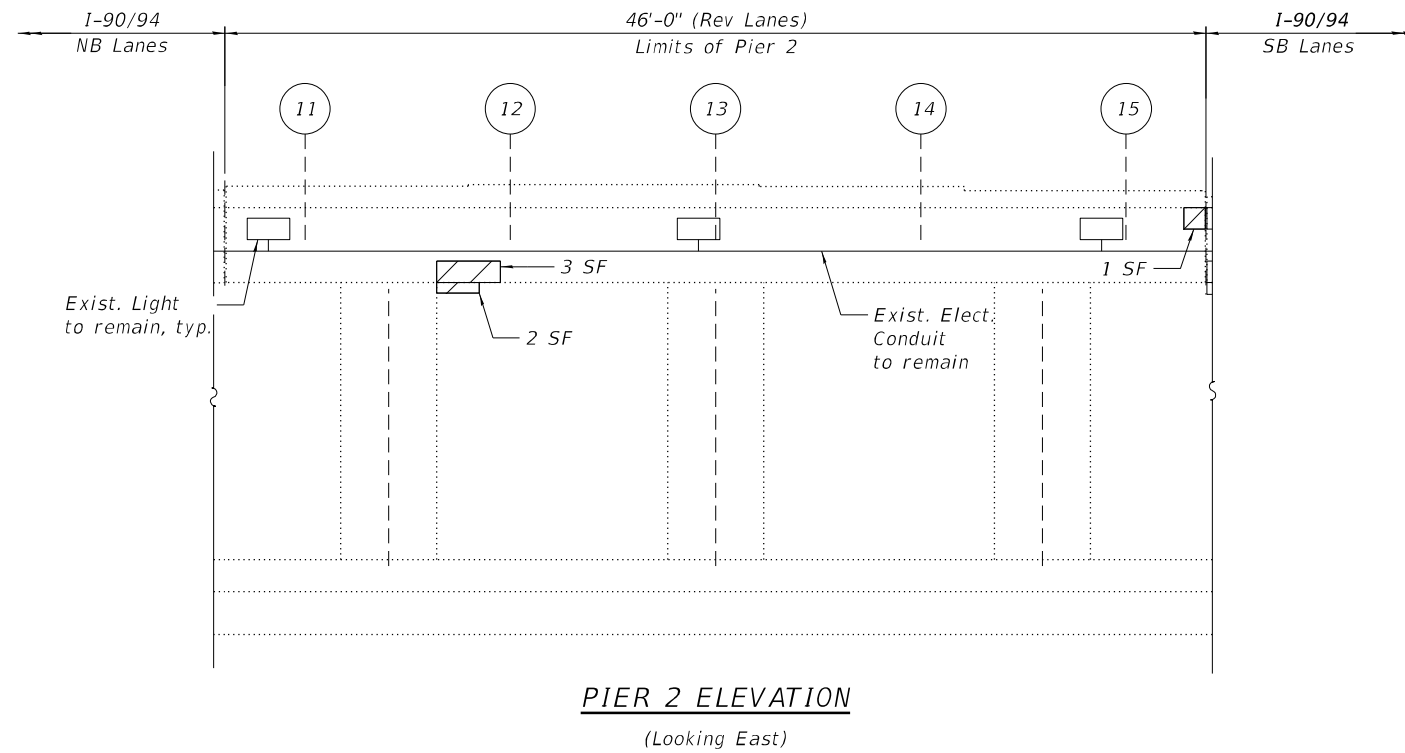
**PIER 1 REPAIRS
STRUCTURE NO. 016-0128 (REV)**

SHEET S18-15 OF S18-17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1027
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

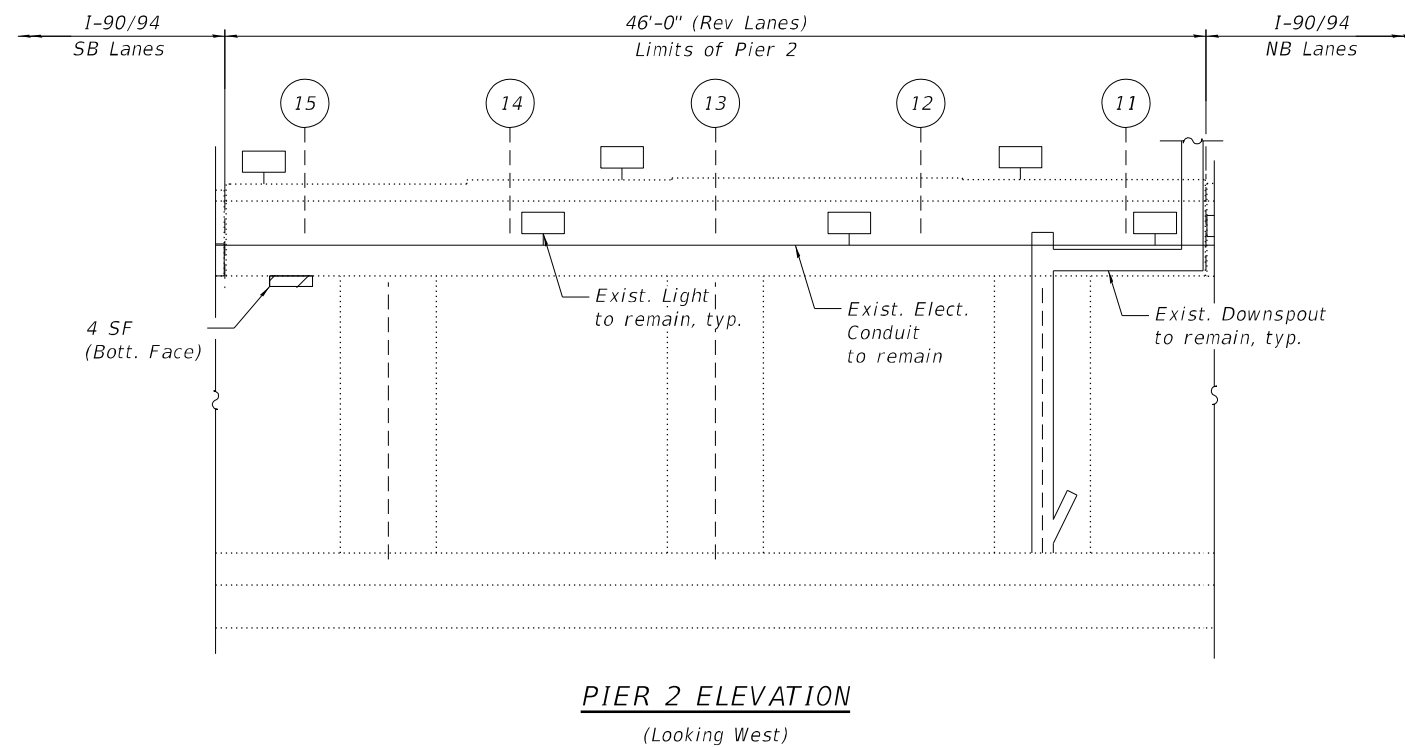
ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	10



EXISTING LIGHTING: PIER 2
(Looking Northeast)


NOTE:

1. Quantities and limits shown are estimated for bidding purpose 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 LIGHTING: PIER 2
(Looking Northwest)

LEGEND

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

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PLOT DATE =	DATE - 8/30/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

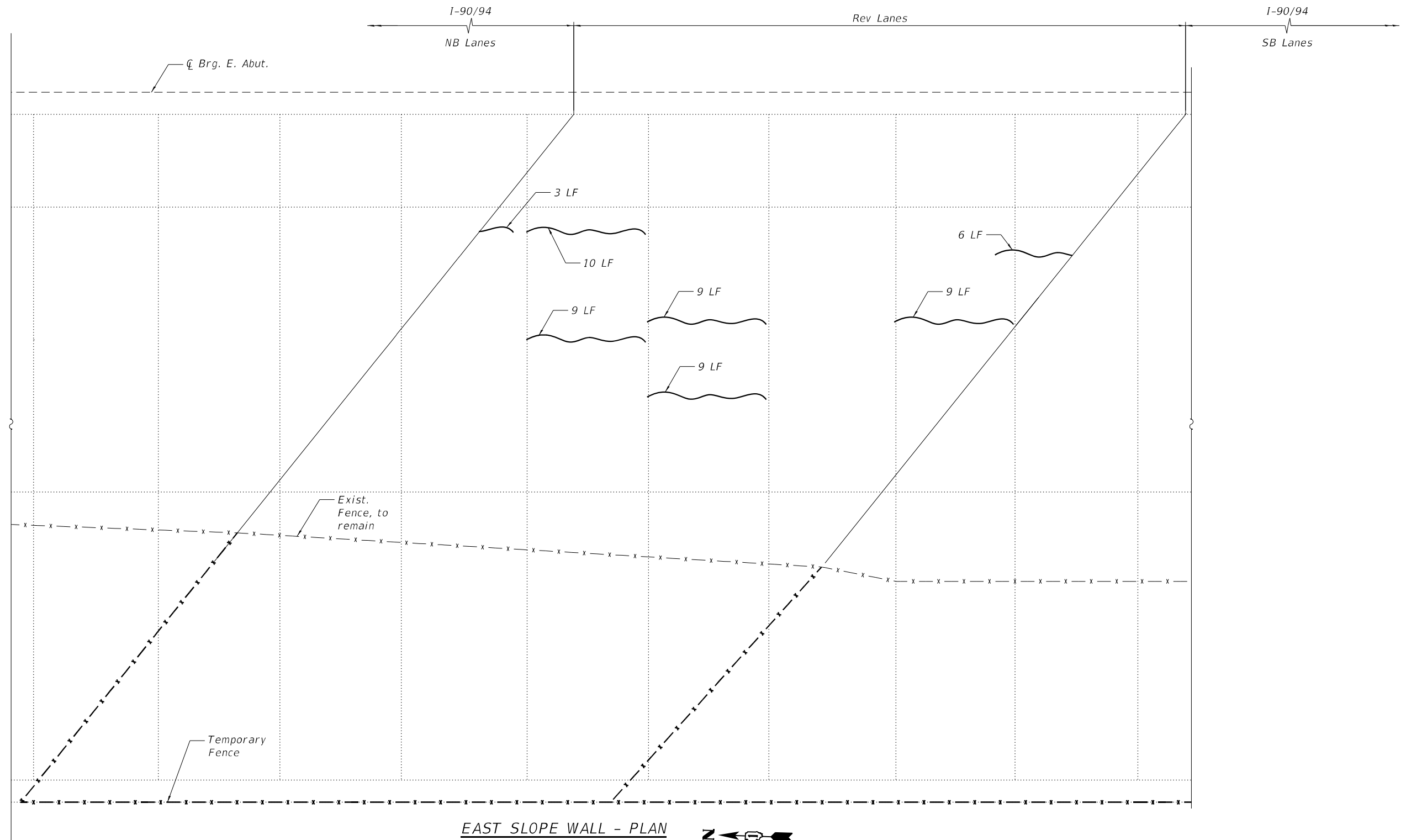
**PIER 2 REPAIRS
STRUCTURE NO. 016-0128 (REV)**

SHEET S18-15 OF S18-17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1028
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Slope Wall Crack Sealing	Foot	55



EAST SLOPE WALL - PLAN

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.
- Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

LEGEND

- Slope Wall Crack Sealing
- LF Linear Foot

MODEL: Default
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PLOT SCALE =	DRAWN - AMS	REVISED -
PLOT DATE =	DATE - 8/30/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EAST SLOPE WALL REPAIRS
STRUCTURE NO. 016-0128 (REV)**

SHEET S18-17 OF S18-17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	1029
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

Existing Structure: S.N. 016-2654 was originally built in 1960 from BCR. The bridge was widened and the superstructure was replaced between 1992 and 1994. Joint repairs were performed in 2013. The structure has a back-to-back abutment length of 244'-4" along the centerline of the southbound lanes and an out-to-out width that varies between 70'-0½" to 71'-0½". The superstructure consists of a 1'-0½" thick reinforced concrete slab between the South Abutment and Pier 1, and between the West Abutment and Pier 12. The slab is 10½" thick between Pier 1 and Pier 12. The slabs are supported on reinforced concrete piers founded on timber piles.

Traffic will be maintained utilizing stage construction.

No salvage.

LOADING

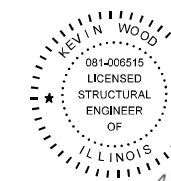
HS20-44 and alternate military loading

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification for Highway Bridges, 17th Edition

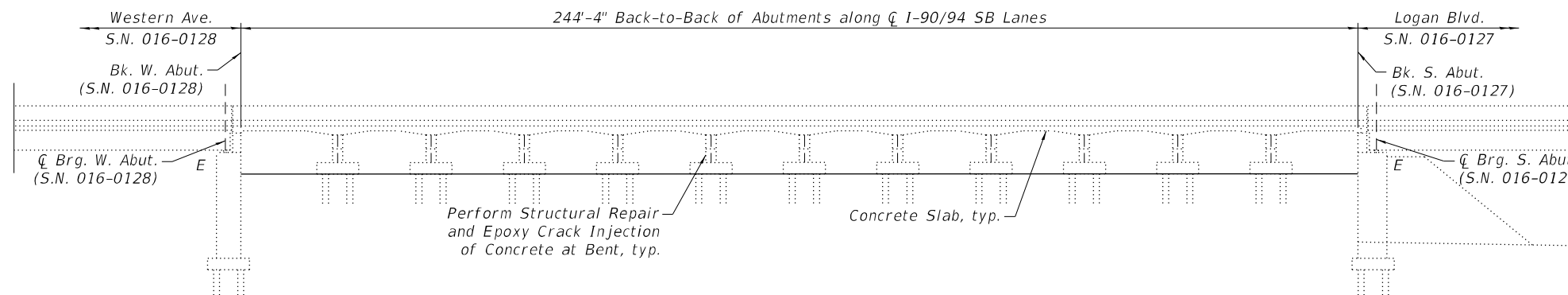
NOTE:

1. All stations are to the \bar{C} I-90/94 SB Roadway and taken from existing plans.
2. No Future Wearing Surface is allowed.

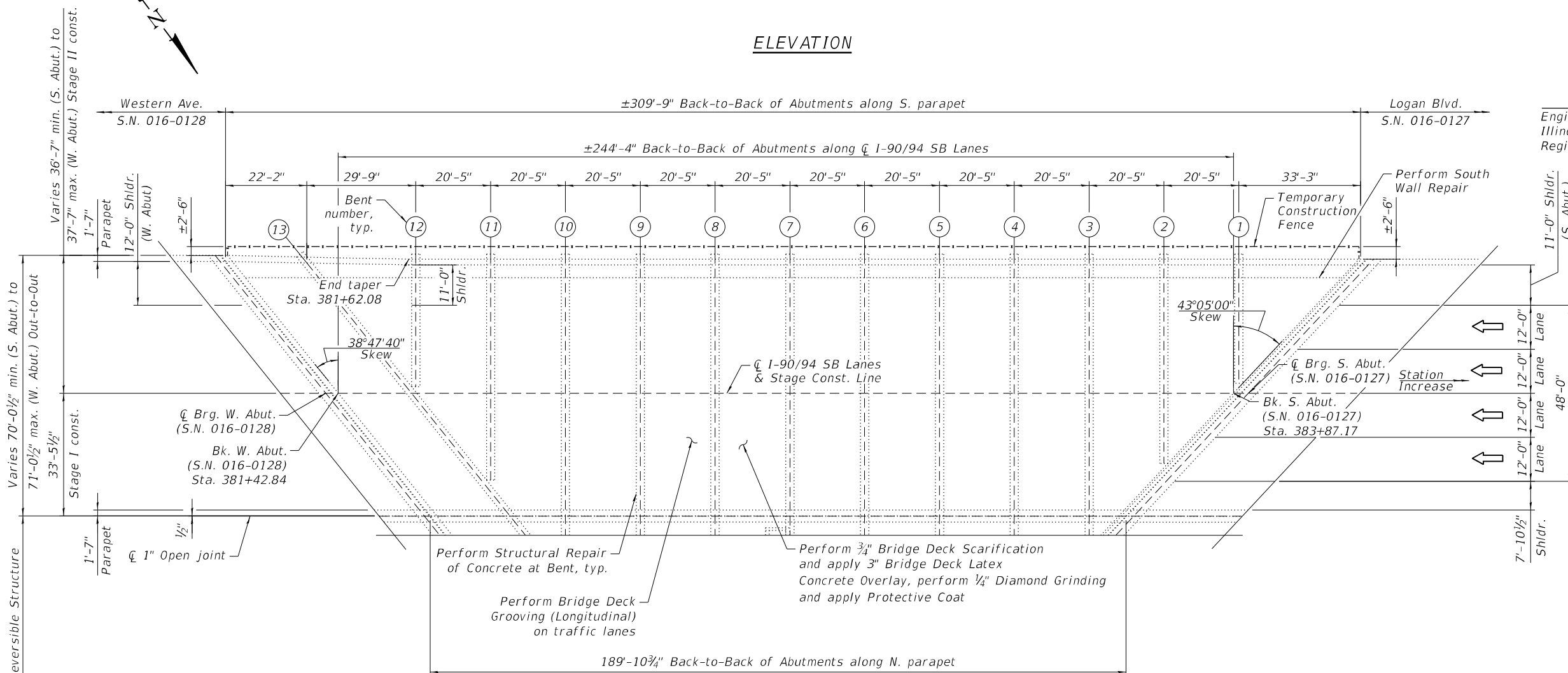


Kevin Wood

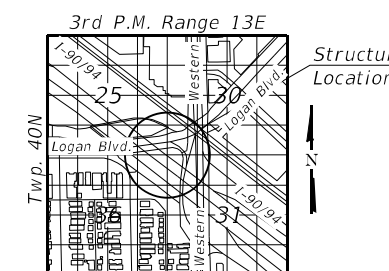
Engineer Full Name: Kevin Wood Date: 10-20-2022
 Illinois Registered Engineer No. 081-006515
 Registration Expires 11. 30, 2024



ELEVATION



PLAN



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
SB I-90 OVER AIR
F.A.I. SEC 2020-004-BR
COOK COUNTY
STATION: 382+65.01
STRUCTURE NO. 016-2654 (SB)

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PLOT SCALE =	DRAWN -	D.C.P.	REVISED -
PLOT DATE =	CHECKED -	K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET S19-01 OF S19-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1030
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

1. Plan dimensions and details relative to the 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 furnished at the unit price bid for the work.
2. During the repair operations, the contractor shall locate and protect all utilities in the vicinity of the work, including, but not limited to, fiber optic and/or electrical conduits under the bridge deck, lighting, traffic signals or signs attached to the structure. This work shall be performed to the satisfaction of the Engineer and will not be paid for separately but shall be included with the contract. It shall be the Contractor's responsibility to restore and replace any damaged utilities or facilities to the satisfaction of the Engineer at no cost to the Department.
3. Protective Coat shall be applied to the top and inside face of the parapets and to the surface of the new overlay.
4. The contractor can access the interior of the vault via a bolted hatch located in the reversible lanes during the restricted hours noted in the Keeping the Expressway Open to Traffic special provision. The hatch should be re-bolted shut prior to opening to traffic.
5. Appropriate safety precautions should be taken when working in the confined space inside the vault.
6. Existing name plate shall be cleaned and incorporated into the new construction. Cost included in Concrete Removal.
7. Adjacent I-90/94 reversible bridge is not shown throughout the plans for clarity.
8. The Contractor shall take the necessary precautions for the protection of passing vehicles, bicycles and pedestrians from falling objects and/or materials until completion of work.
9. The contractor shall take necessary precautions to insure that no debris will endanger or interfere with pedestrian traffic on the south sidewalk beneath the bridge according to Article 107.09 of the Standard Specifications. This work will not be paid for separately, but shall be included in the contract unit price for the appropriate pay item involved and no additional compensation will be allowed.
10. For adjacent structures, see plans for S.N. 016-0128 and S.N. 016-0127. For S.N. 016-0128 plans, see sheets S17-01 thru S17-24. For S.N. 016-0127 plans, see sheets S21-01 thru S21-23.

INDEX OF SHEETS

S19-01	General Plan & Elevation
S19-02	General Data
S19-03-S19-04	Stage Construction Details I & II
S19-05	Temporary Concrete Barrier
S19-06	Bridge Slab Repair Plan and Details
S19-07-S19-09	Bent Repairs I, II & III
S19-10-S19-11	South Wall Repairs I & II

SCOPE OF WORK

1. Scarify ¾" from the bridge slab.
2. Perform slab repairs.
3. Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck.
4. Perform ¼" Diamond Grinding to top of bridge slab.
5. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
6. Apply Protective Coat to the top and inside faces of parapets and to the surface of the new overlay.
7. Perform Structural Repair of Concrete to the interior bents and south wall and Epoxy Crack Injection to the interior bents as noted in the plans.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Protective Coat	Sq Yd	2,111		2,111
Epoxy Crack Injection	Foot		35	35
Protect and Maintain Existing Underpass Luminaire	L Sum		0.022	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,331		1,331
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,854		1,854
Bridge Deck Scarification 3/4"	Sq Yd	1,854		1,854
Structural Repair of Concrete (Depth Equal to or less than 5 Inches)	Sq Ft		913	913
Diamond Grinding (Bridge Section)	Sq Yd	1,867		1,867
Maintenance of Lighting System	Cal Mo	6		6
Temporary Construction Fence	Foot		315	315

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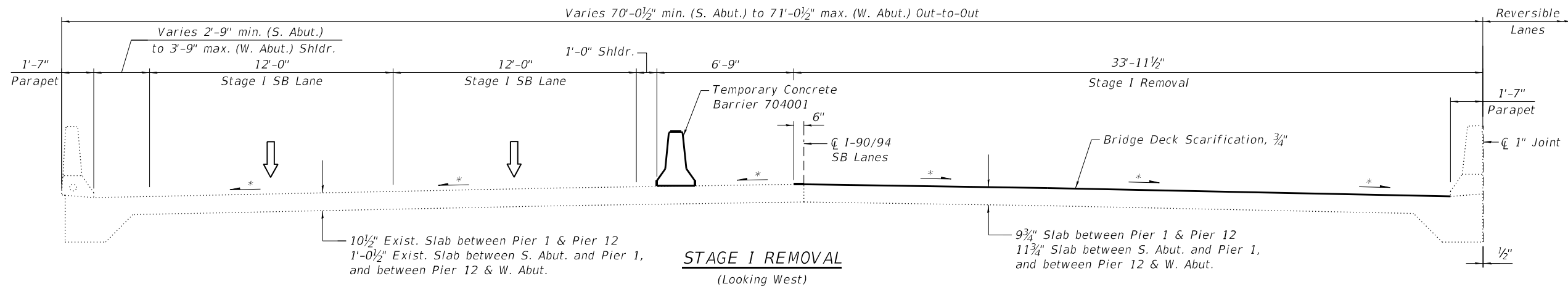
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
SN 016-2654 (SB)**

SHEET S19-02 OF S19-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1031
CONTRACT NO. 62K74				
		ILLINOIS	FED. AID PROJECT	



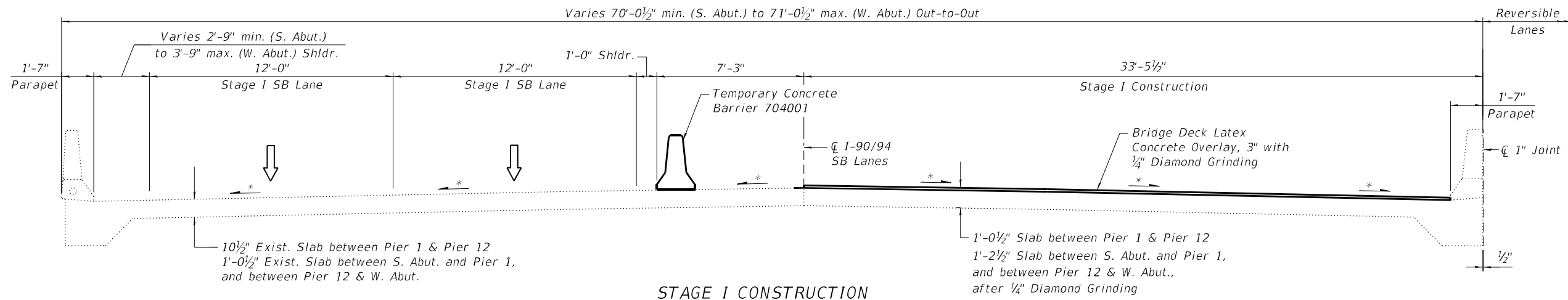
STAGE I REMOVAL
(Looking West)

STAGE I REMOVAL

1. Install Temporary Concrete Barrier as shown to locate traffic on the west side of the existing structure.
2. Scarify $\frac{3}{4}$ " from the top of the slab.

STAGE I CONSTRUCTION

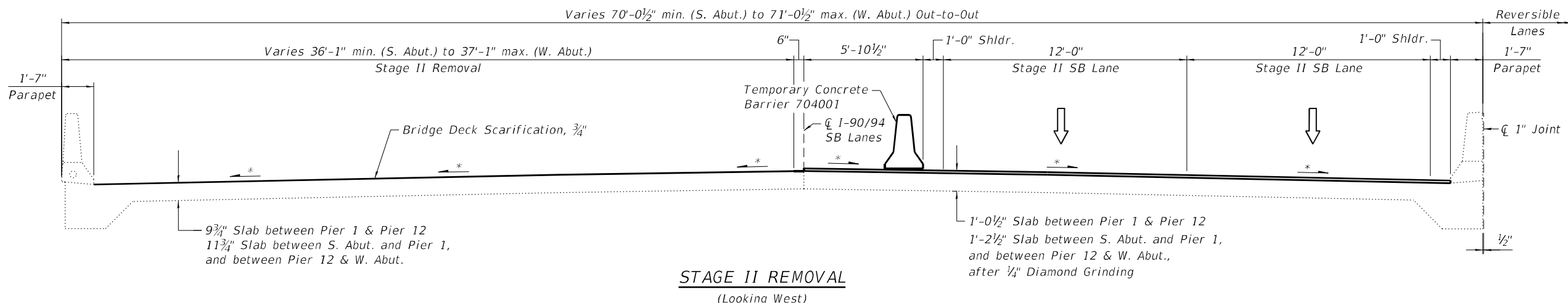
1. Perform Slab Repairs at the locations shown in the plans.
2. Perform Structural Repair of Concrete to the bents and abutments. Perform Epoxy Crack Injection at bents.
3. Apply 3" Bridge Deck Latex Concrete Overlay to bridge slab.
4. Perform $\frac{1}{4}$ " diamond grinding to bridge slab.
5. Perform Bridge Deck Grooving (Longitudinal) for the 3" Bridge Deck Latex Concrete Overlay.
6. Apply Protective Coat to the surface of the new overlay and the top and inside faces of the parapets.



STAGE I CONSTRUCTION
(Looking West)

STAGE II REMOVAL

1. Install Temporary Concrete Barrier as shown to locate traffic on the east side of the existing structure.
2. Scarify $\frac{3}{4}$ " from the top of the deck.



STAGE II REMOVAL
(Looking West)

* Match existing deck surface profile

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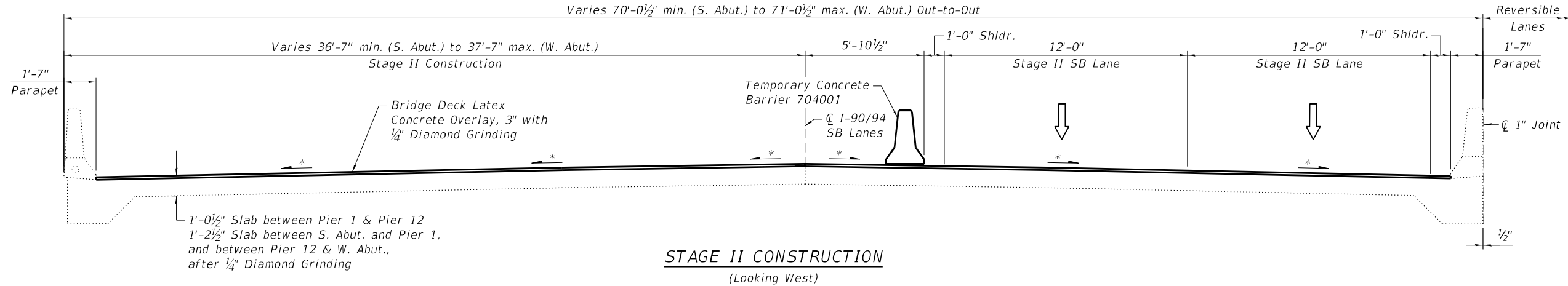
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	CHECKED - K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS I
SN 016-2654 (SB)

SHEET S19-03 OF S19-11 SHEETS

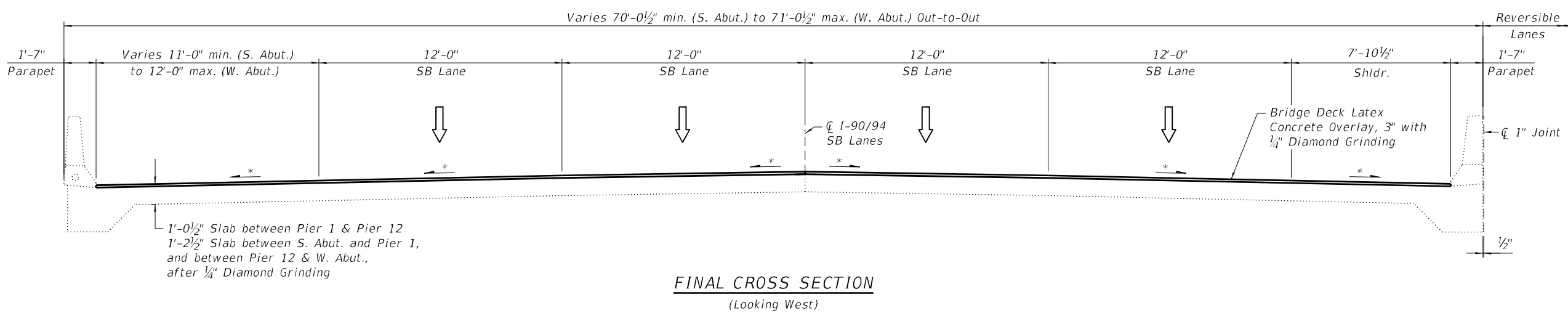
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90	2020-004-BR	COOK	1492	1032
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



STAGE II CONSTRUCTION
(Looking West)

STAGE II CONSTRUCTION

1. Perform Slab Repairs at the locations shown in the plans.
2. Perform Structural Repair of Concrete to the bents and abutments. Perform Epoxy Crack Injection at bents.
3. Apply 3" Bridge Deck Latex Concrete Overlay to bridge slab.
4. Perform 1/4" diamond grinding to bridge slab.
5. Perform Bridge Deck Grooving (Longitudinal) for the 3" Bridge Deck Latex Concrete Overlay.
6. Apply Protective Coat to the surface of the new overlay and the top and inside faces of the parapets.



FINAL CROSS SECTION
(Looking West)

* Match existing deck surface profile

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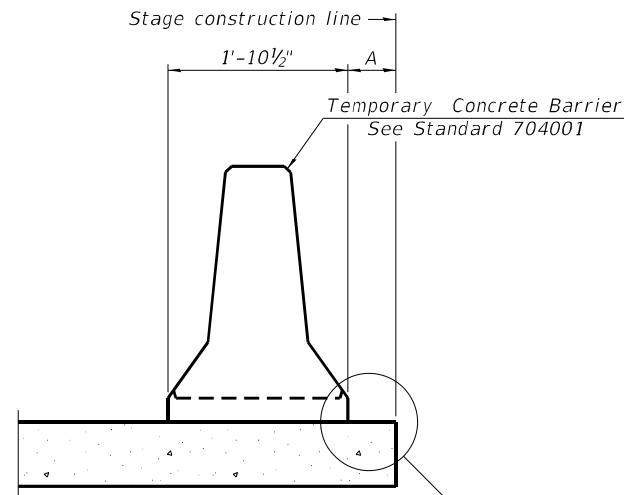
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PLOT DATE =	CHECKED -	K.G.W.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS II
SN 016-2654 (SB)**

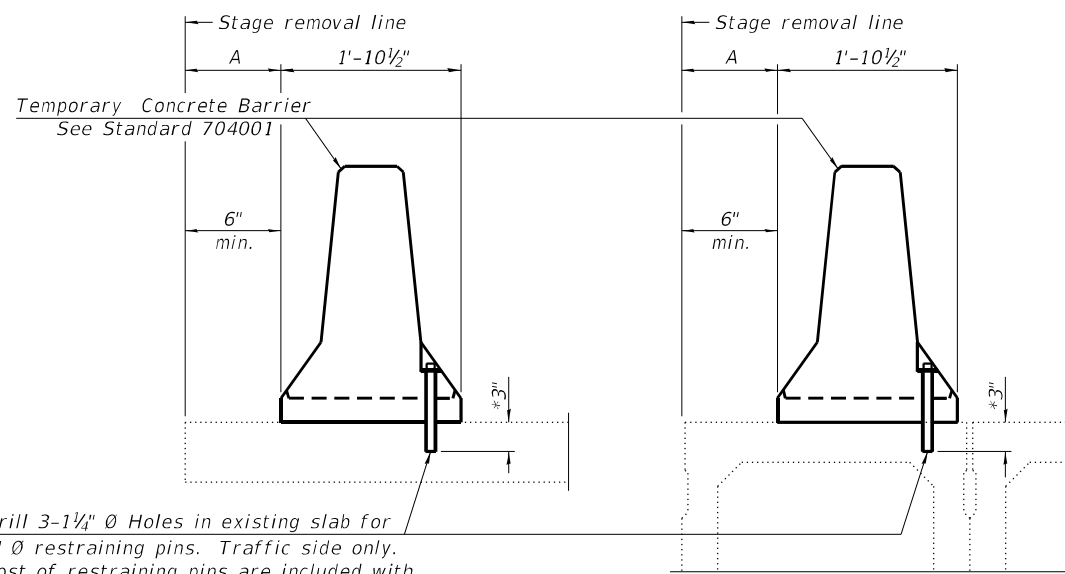
SHEET S19-04 OF S19-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1033
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

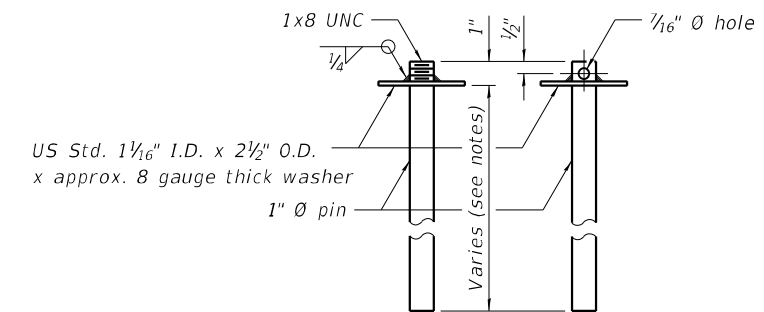


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

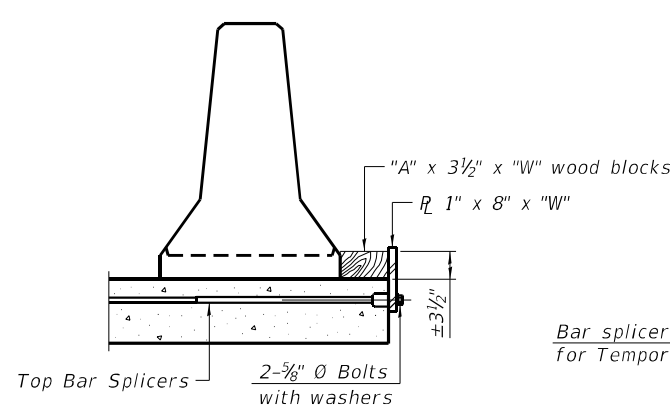
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

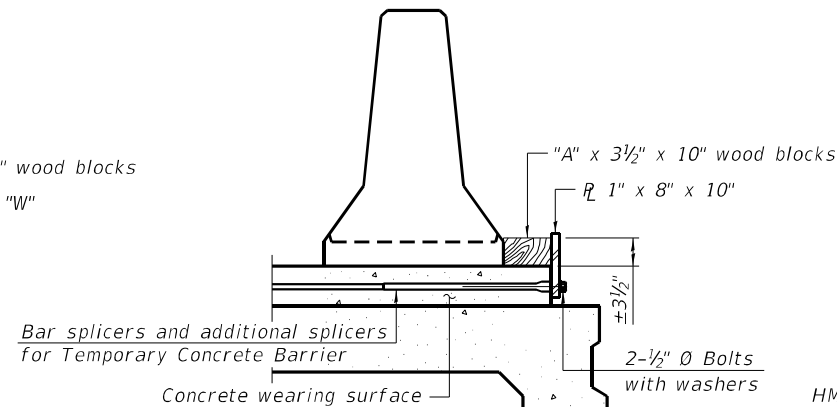


RESTRAINING PIN

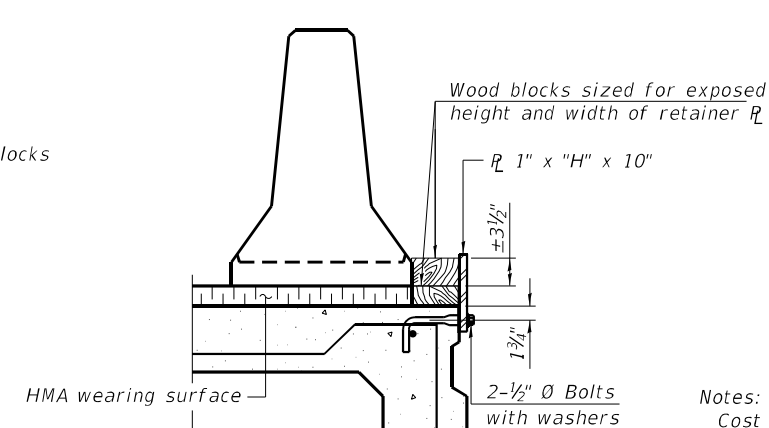
SECTIONS THRU SLAB OR DECK BEAM



DETAIL I

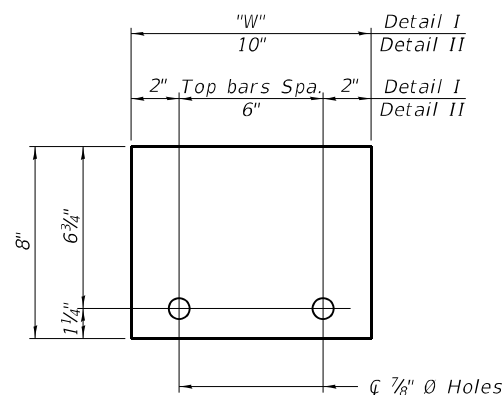


DETAIL II

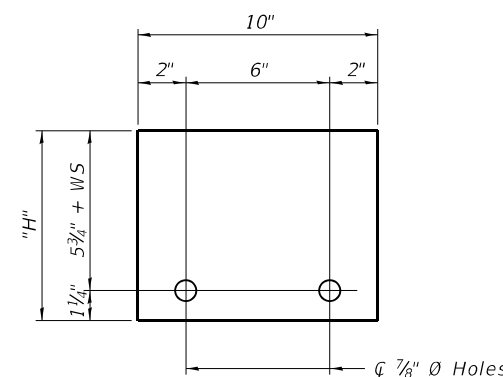


DETAIL III

BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W" (Detail I and II)



STEEL RETAINER R 1" x "H" x 10" (Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate $\frac{1}{2}$ of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6' to accommodate the shear key clamping device.

- Detail I - Installation for a new bridge deck or bridge slab.
- Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
- Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 10-12-2021

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 Chicago, Illinois 60631; (773) 399-0112

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PLOT SCALE =	CHECKED - H.A.	REVISED -
PLOT DATE =	DRAWN - D.C.P.	REVISED -
	CHECKED - K.G.W.	REVISED -

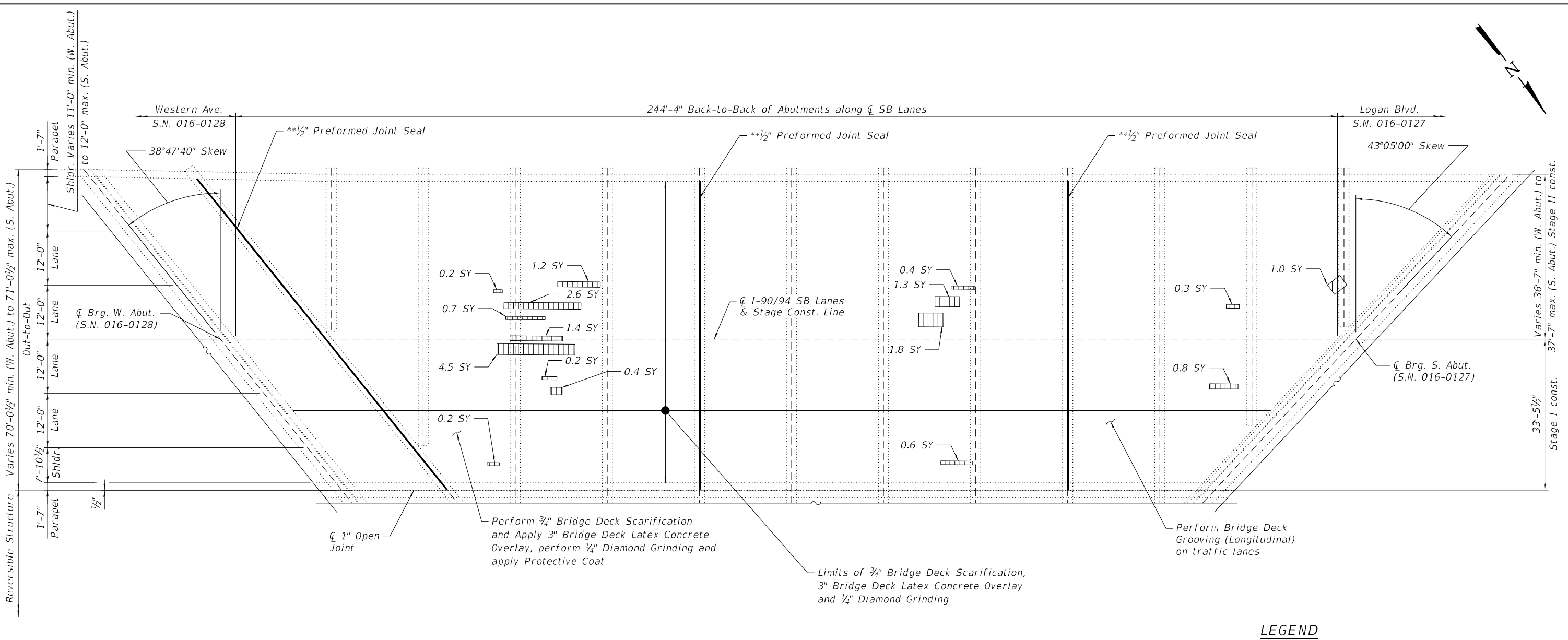
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
 SN 016-2654 (SB)

SHEET S19-05 OF S19-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1034
			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	

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DECK PLAN

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 bridge deck final cross section, see Sheet S19-04.
3. Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
4. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
5. Protective Coat shall be applied to the top of reconstructed transverse joints, top and inside face of parapets and top of latex concrete overlay.
6. The Contractor shall exercise extreme caution during concrete removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer at no cost to the Department.

LEGEND

*Deck Slab Repair (Partial Depth)
 SY Square Yard

* Areas of Deck Slab Repair (Partial Depth) are provided for information only and shall be included in the cost of Bridge Deck Latex Concrete Overlay, 3 Inches

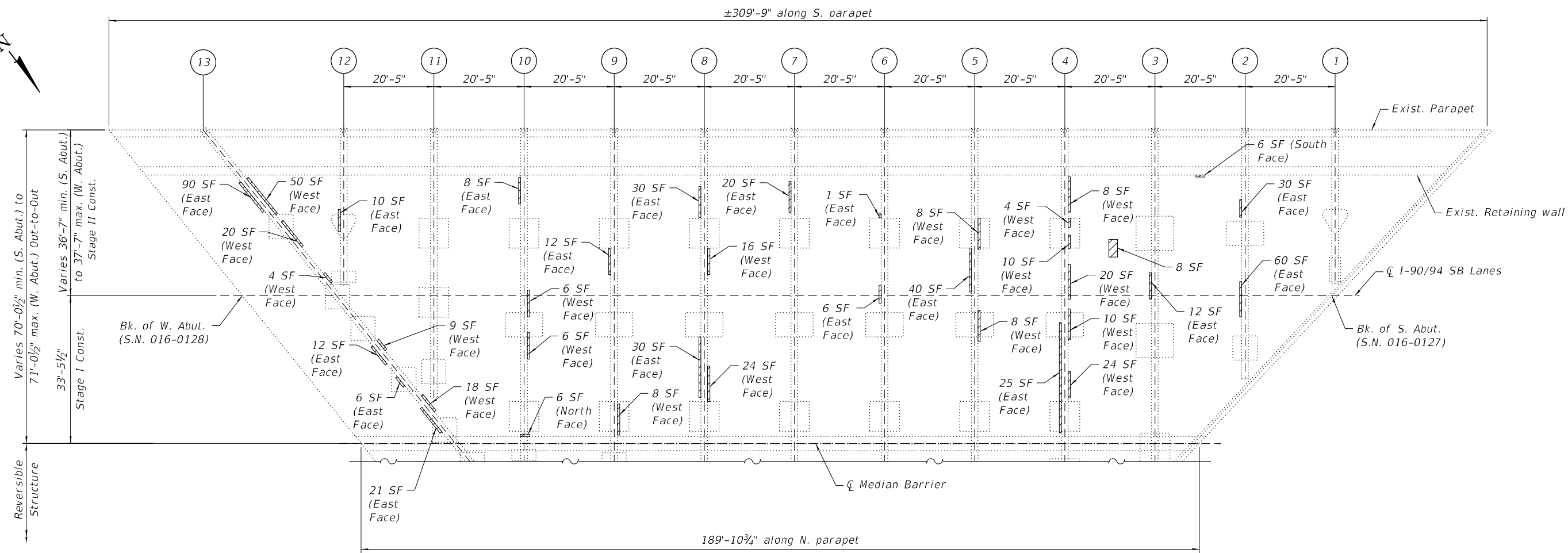
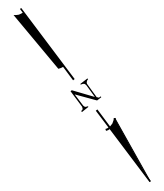
** 1/2" Preformed Joint Seal shall be included in the cost of Bridge Deck Latex Concrete Overlay, 3 Inches

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Coat	Sq Yd	2,111
Protect and Maintain Existing Underpass Luminaire	L Sum	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,331
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,854
Bridge Deck Scarification 3/4"	Sq Yd	1,854
Diamond Grinding (Bridge Section)	Sq Yd	1,867
Maintenance of Lighting System	Cal Mo	6

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	CHECKED - H.A.	REVISED -
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1035
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



PLAN

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.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	686

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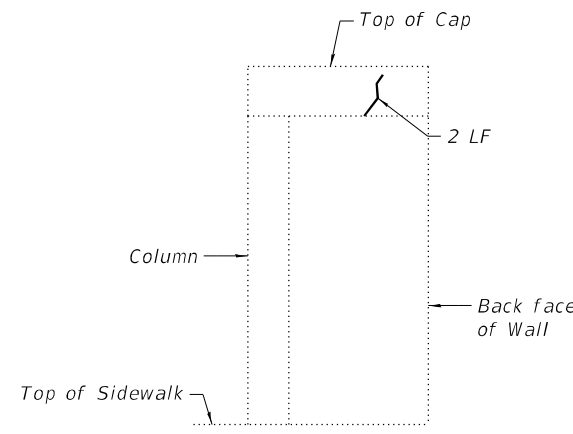
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BENT REPAIRS I
 SN 016-2654 (SB)**

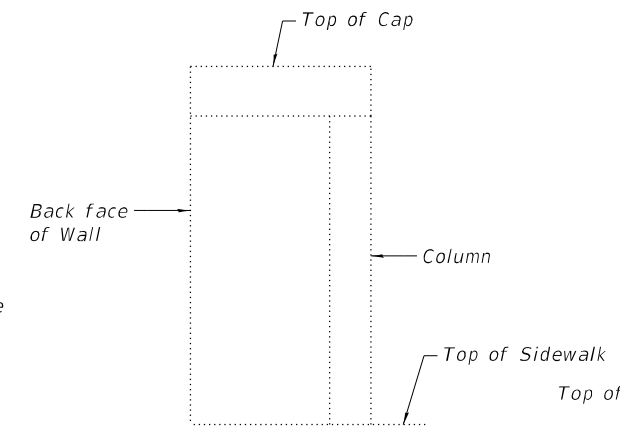
SHEET S19-07 OF S19-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

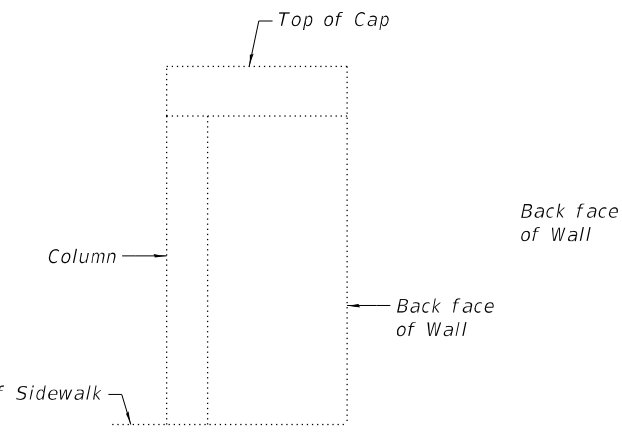
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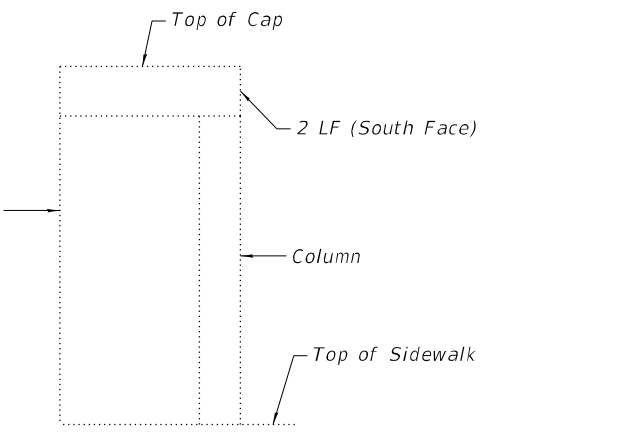
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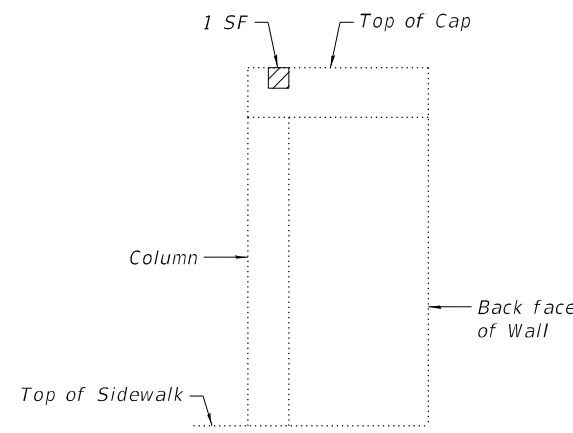
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(Looking East)



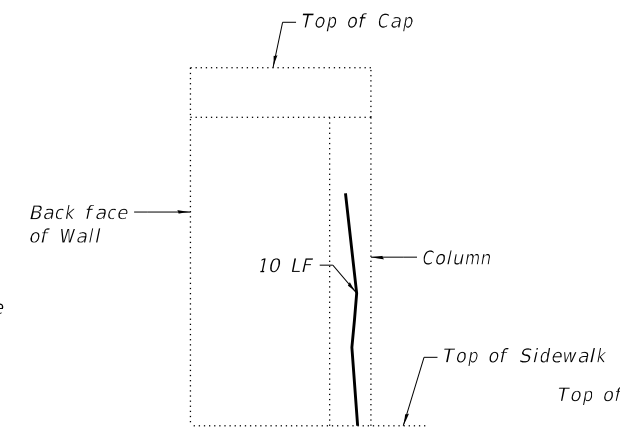
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(Looking West)



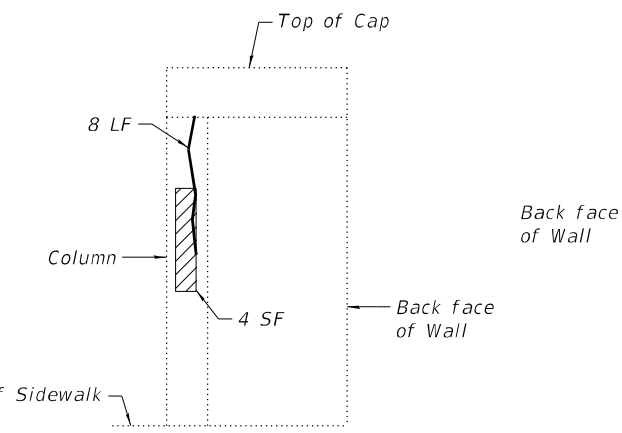
BENT 2
(Looking East)



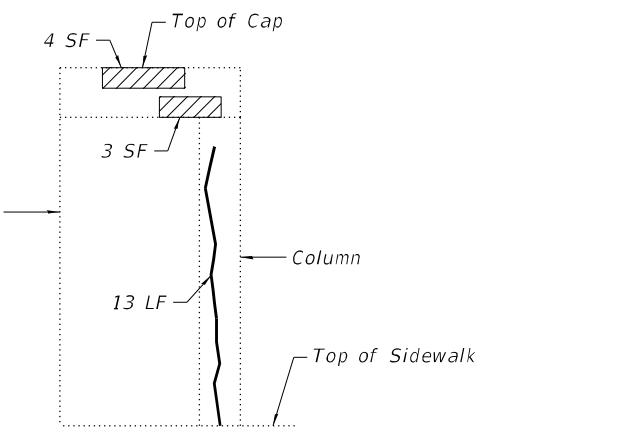
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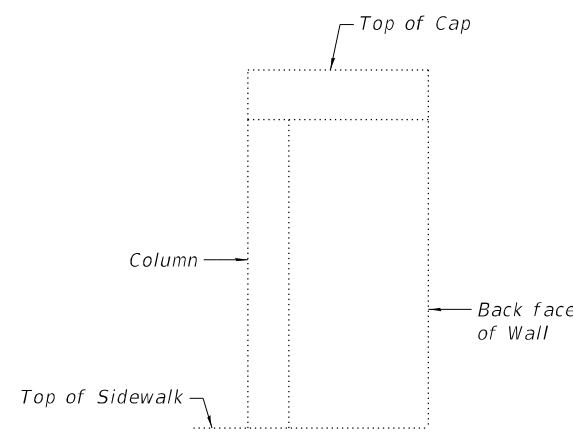
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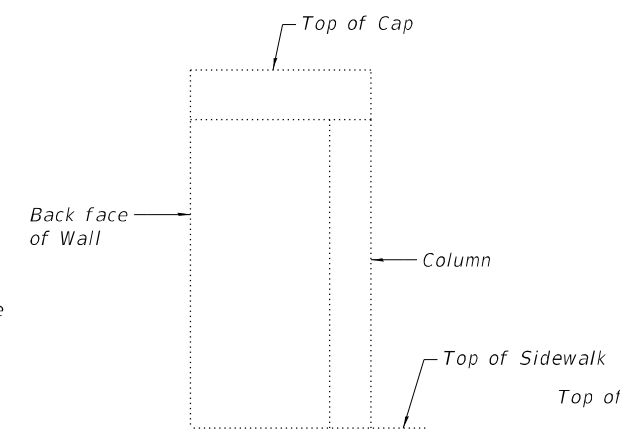
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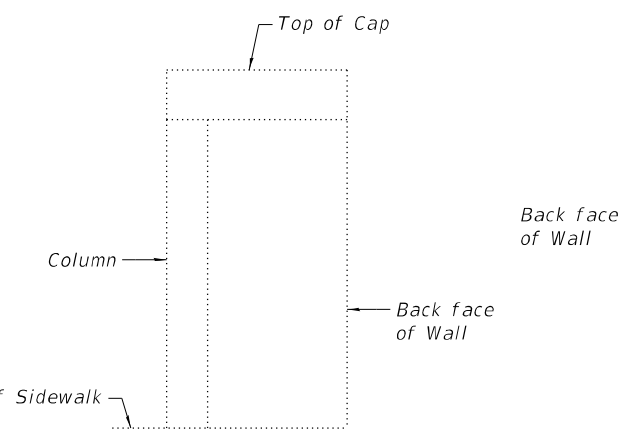
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(Looking East)



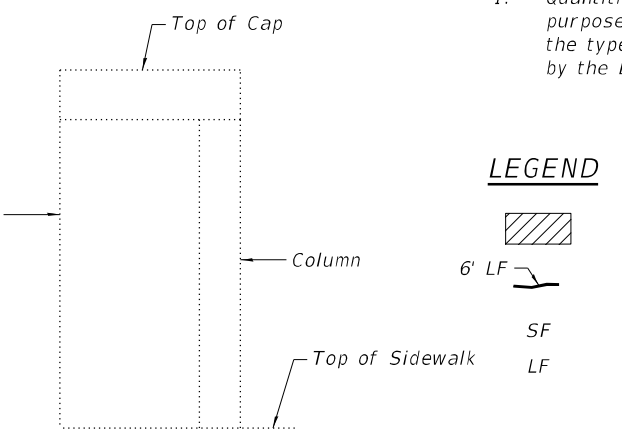
BENT 5
(Looking West)



BENT 5
(Looking East)



BENT 6
(Looking West)



BENT 6
(Looking East)

NOTES:

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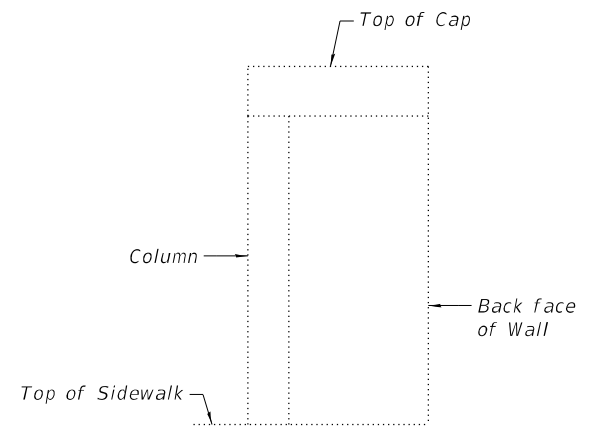
LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- 6' LF Epoxy Crack Injection (Width > 0.06")
- SF Square Foot
- LF Linear Foot

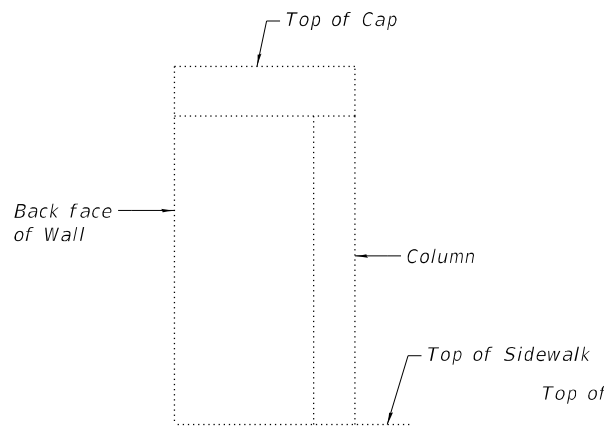
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	35
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	12

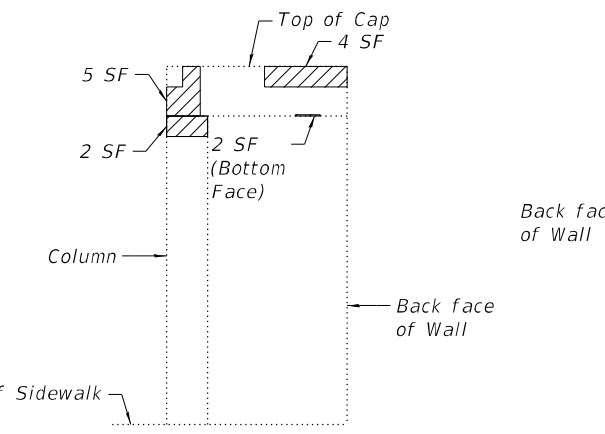
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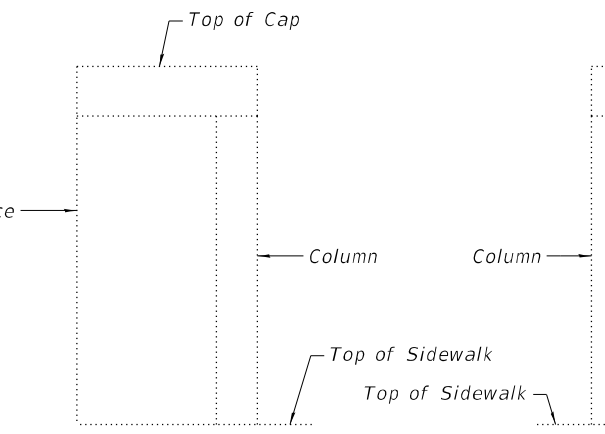
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(Looking West)



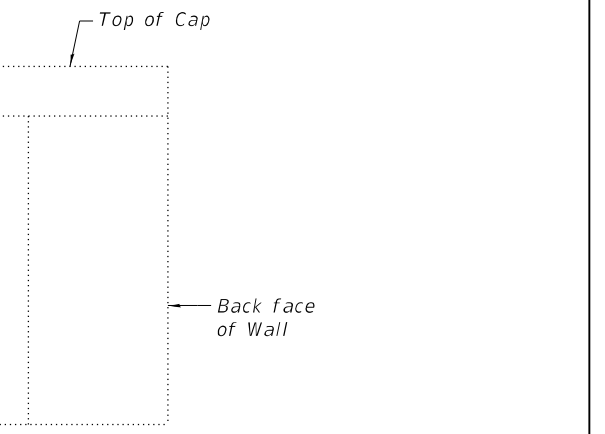
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(Looking East)



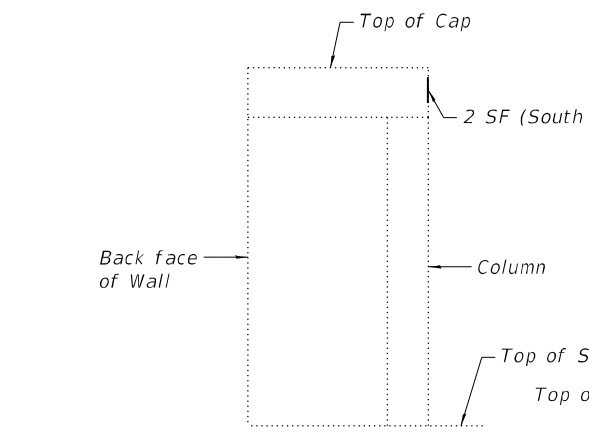
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(Looking West)



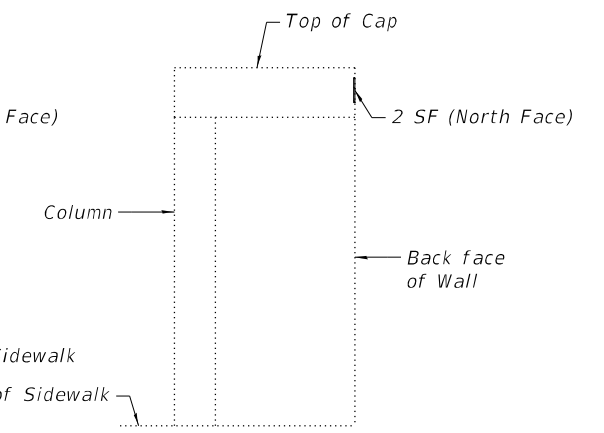
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(Looking East)



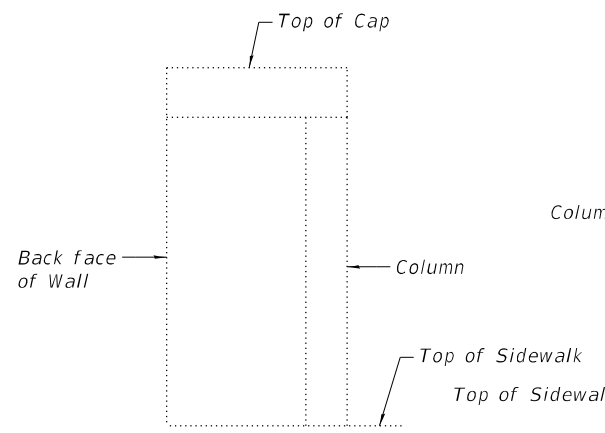
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(Looking West)



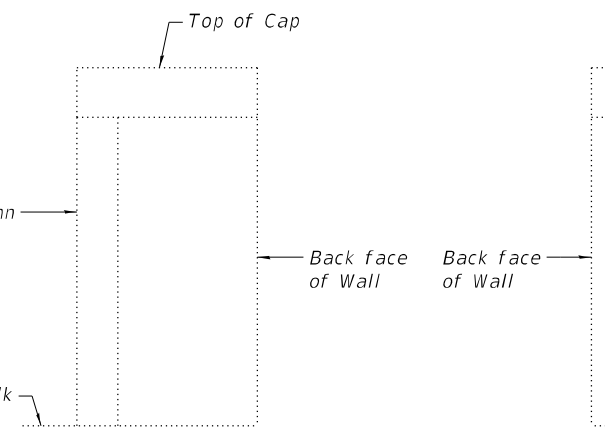
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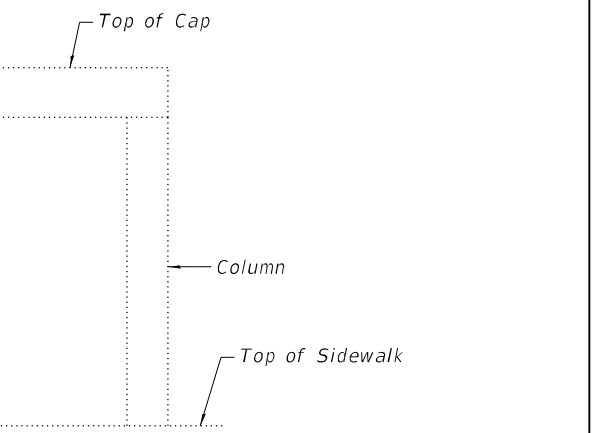
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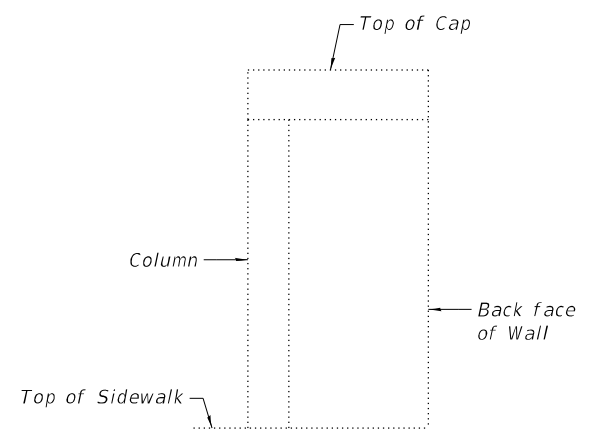
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(Looking East)



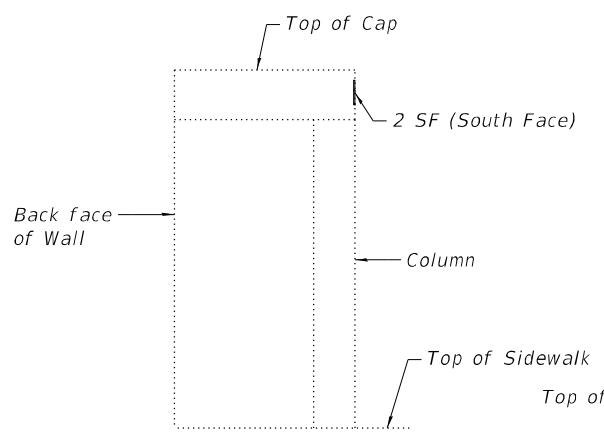
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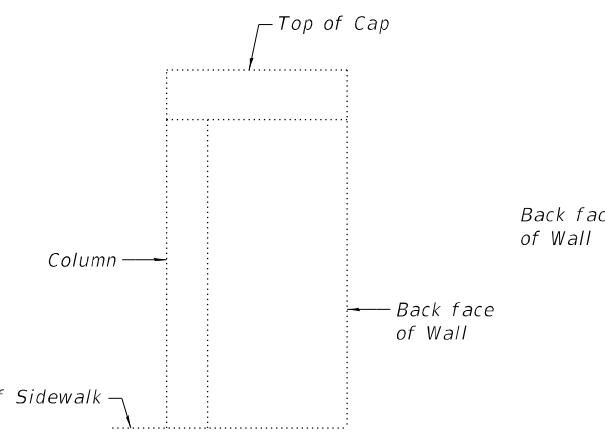
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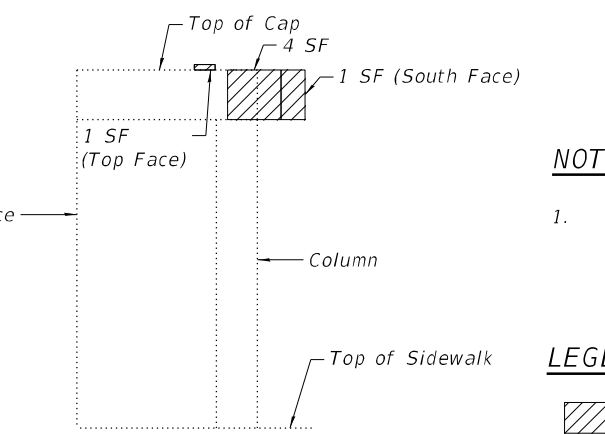
BENT 12
(Looking West)



BENT 12
(Looking East)



BENT 13
(Looking West)



BENT 13
(Looking East)

NOTES:

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LEGEND

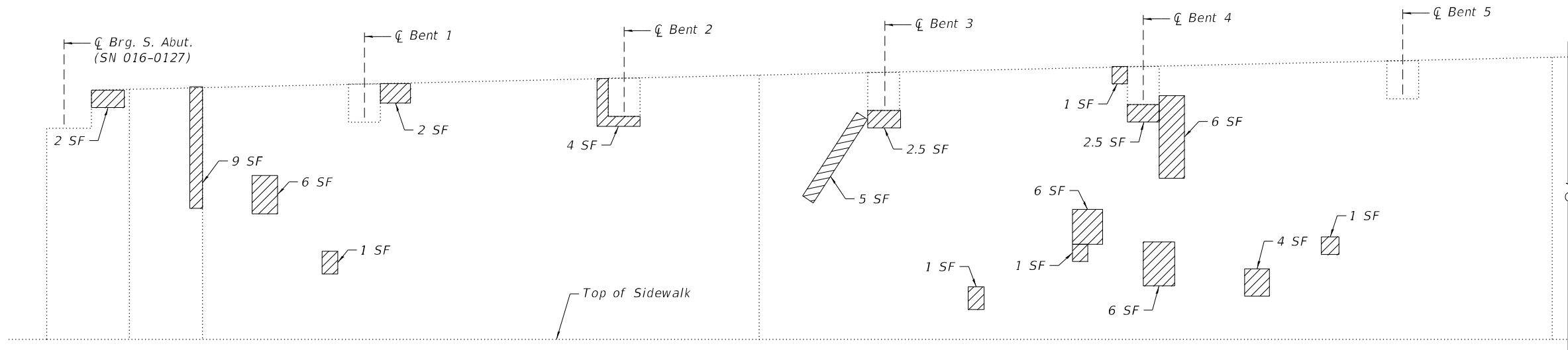
- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

BILL OF MATERIAL

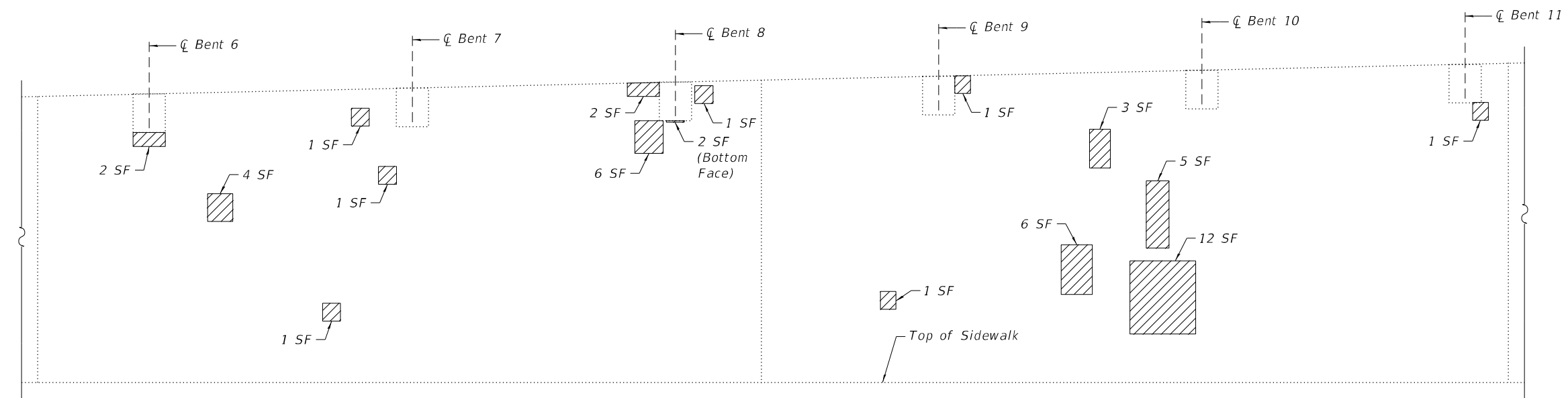
ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	25

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PLOT DATE =	CHECKED - K.G.W.	REVISED -

F.A.I. RTE. 90	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 1038
			CONTRACT NO. 62K74	
		ILLINOIS FED. AID PROJECT		



ELEVATION SOUTH WALL
(Looking North)



ELEVATION SOUTH WALL
(Looking North)

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.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	109

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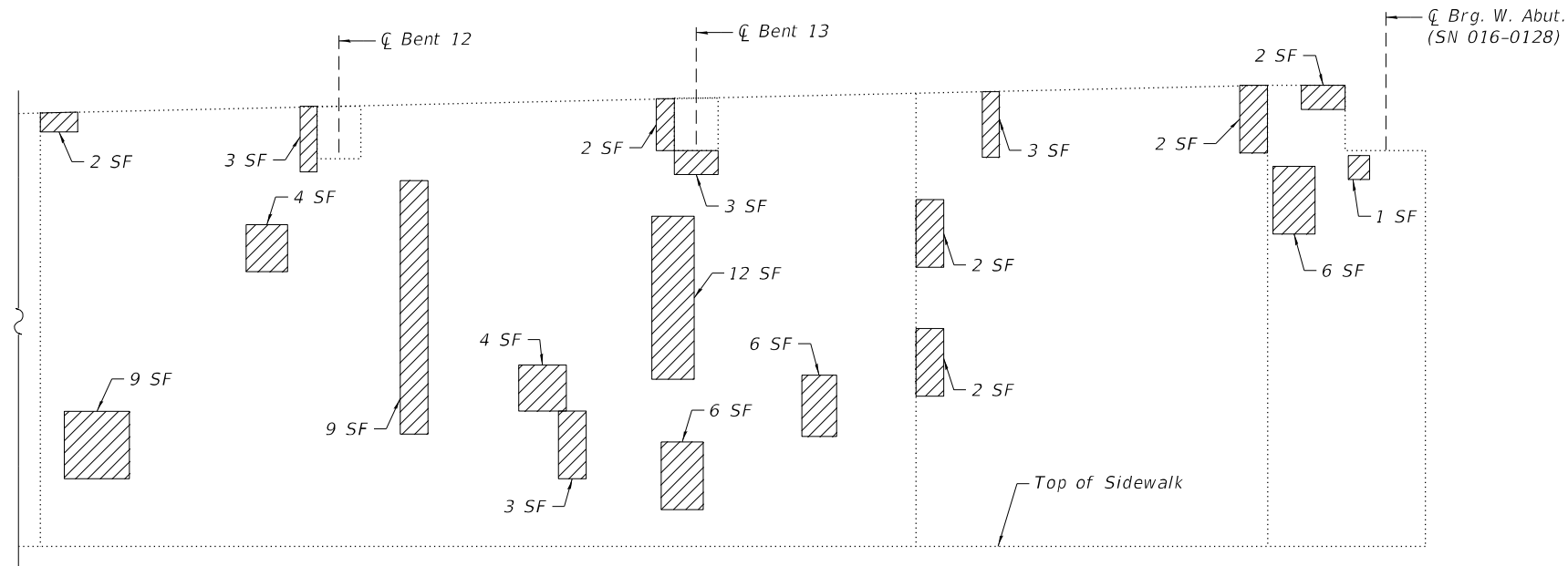
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PLOT DATE =	CHECKED - K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH WALL REPAIRS I
SN 016-2654 (SB)

SHEET S19-10 OF S19-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1039
			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	



ELEVATION SOUTH WALL
(Looking North)

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.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	81

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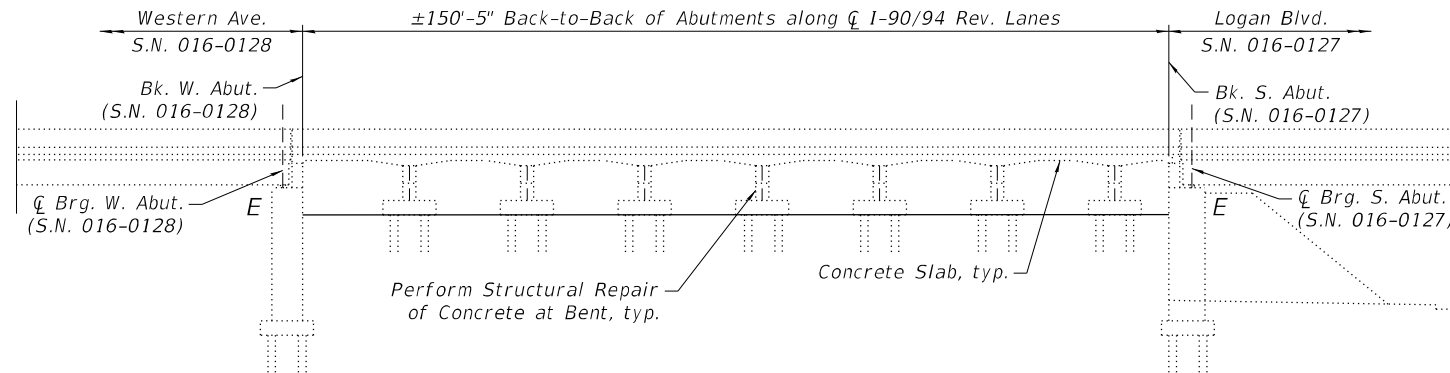
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1040
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	

Existing Structure: S.N. 016-2654 was originally built in 1960 from BCR. The bridge was widened and the superstructure was replaced between 1992 and 1994. Joint repairs were performed in 2013. The structure has a back-to-back abutment length of 150'-5" along the centerline of the reversible lanes and an out-to-out width of 35'-11". The superstructure consists of a 10½" thick reinforced concrete slab from the South Abutment to Pier 13, and 1'-0½" thick reinforced concrete slab from Pier 13 to the West Abutment. The superstructure is supported on reinforced concrete piers founded on timber piles.

The reversible lanes will be closed to traffic during construction.

No salvage.



ELEVATION

LOADING

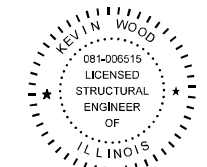
HS20-44 and alternate military loading

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification for Highway Bridges, 17th Edition

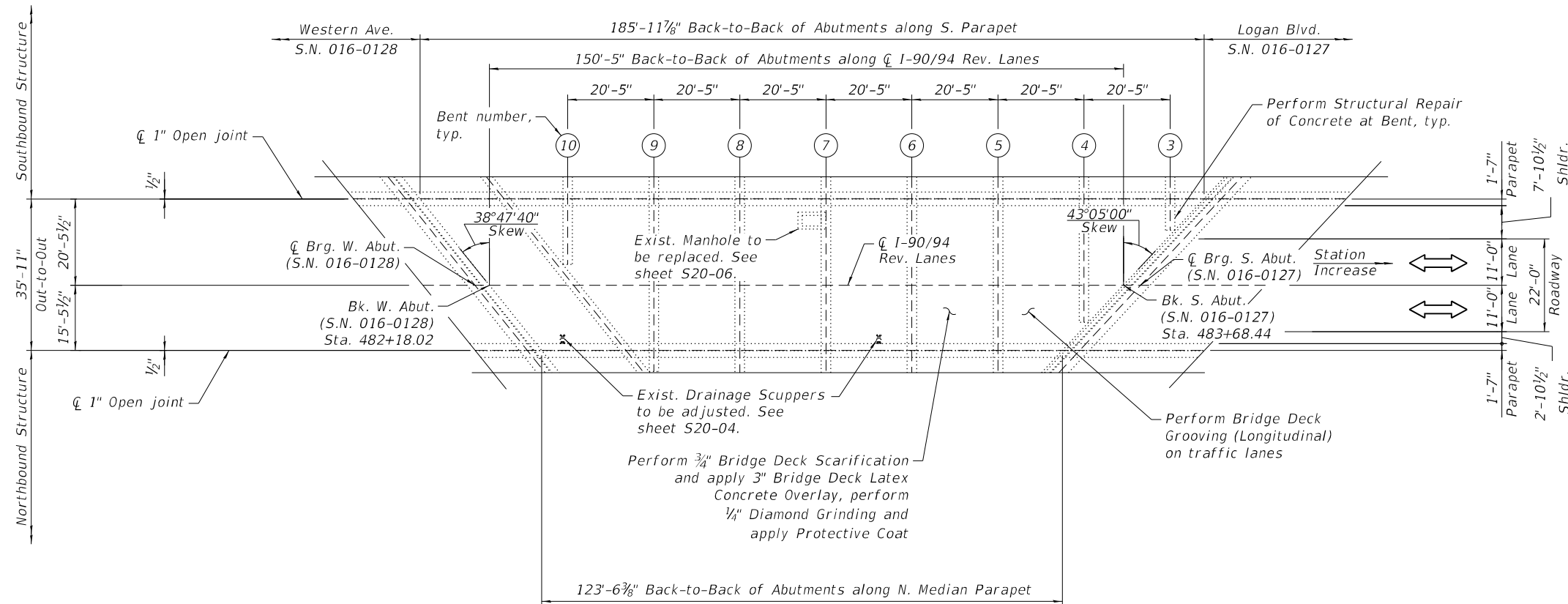
NOTE:

- All stations are to the C I-90/94 Rev. Roadway and taken from existing plans.
- No Future Wearing Surface is allowed.

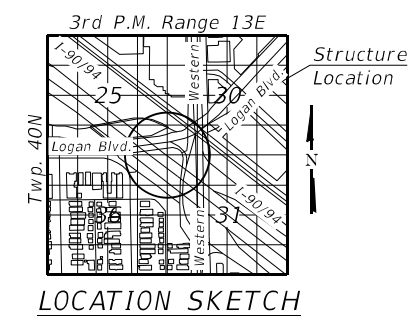


Kevin Wood

Engineer Full Name: Kevin Wood Date: 10-20-2022
 Illinois Registered Engineer No. 081-006515
 Registration Expires 11. 30, 2024



PLAN



**GENERAL PLAN AND ELEVATION
 REVERSIBLE I-90 OVER AIR
 F.A.I. SEC 2020-004-BR
 COOK COUNTY
 STATION: 482+93.23
 STRUCTURE NO. 016-2654 (REV)**

MODEL: SMODELNAME5
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PLOT SCALE =	DRAWN - D.C.P.	REVISED -
PLOT DATE =	CHECKED - K.G.W.	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SHEET S20-01 OF S20-06 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1041
CONTRACT NO. 62K74				

ILLINOIS FED. AID PROJECT

GENERAL NOTES

- Plan dimensions and details relative to the 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 furnished at the unit price bid for the work.
- During the repair operations, the contractor shall locate and protect all utilities in the vicinity of the work, including, but not limited to, fiber optic and/or electrical conduits under the bridge deck, lighting, traffic signals or signs attached to the structure. This work shall be performed to the satisfaction of the Engineer and will not be paid for separately but shall be included with the contract. It shall be the Contractor's responsibility to restore and replace any damaged utilities or facilities to the satisfaction of the Engineer at no cost to the Department.
- The contractor can access the interior of the vault via a bolted hatch located in the reversible lanes during the restricted hours noted in the Keeping the Expressway Open to Traffic special provision. The hatch should be re-bolted shut prior to opening to traffic.
- Appropriate safety precautions should be taken when working in the confined space inside the vault.
- Protective Coat shall be applied to the top and inside face of the parapets and to the surface of the new overlay.
- Existing name plate shall be cleaned and incorporated into the new construction. Cost included in Concrete Removal.
- Adjacent I-90/94 southbound and northbound bridges are not shown throughout the plans for clarity.
- For adjacent structures, see plans for S.N. 016-0128 and S.N. 016-0127. For S.N. 016-0128, see sheets S18-01 thru S18-17. For S.N. 016-0127, see sheets S22-01 thru S22-16.

INDEX OF SHEETS

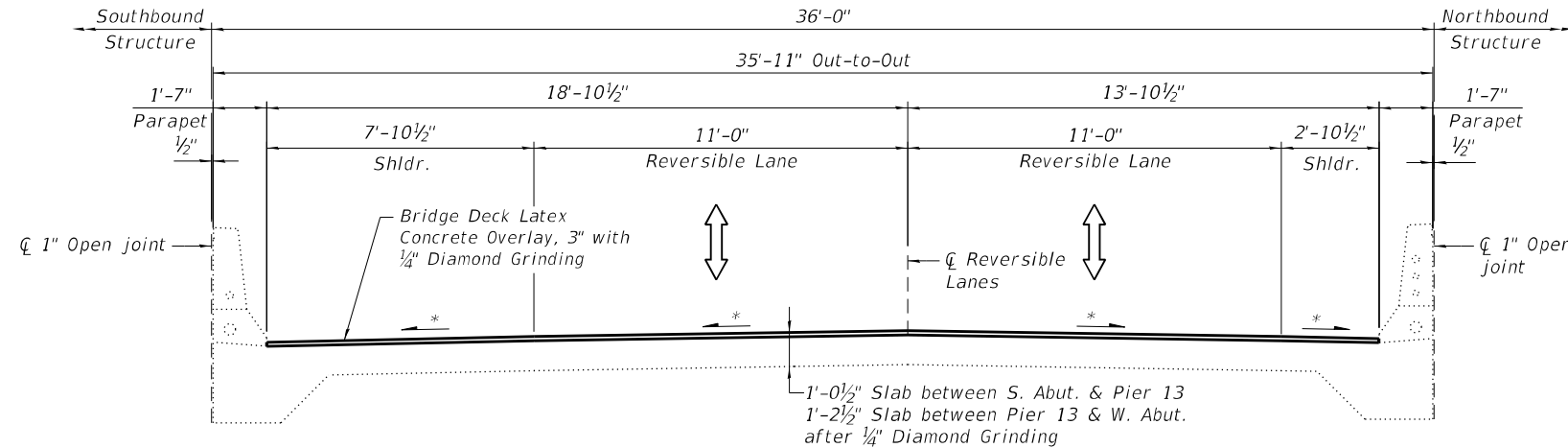
- S20-01 General Plan & Elevation
- S20-02 General Data
- S20-03 Bridge Slab Repair Plan and Details
- S20-04 Drainage Scupper Type B Adjustment Details
- S20-05 Bent Repairs
- S20-06 Manhole Details

SCOPE OF WORK

- Scarify ¾" from the deck slab.
- Perform slab repairs.
- Adjust drainage scuppers.
- Remove and replace Manhole, Special, Frame and Lid.
- Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck.
- Perform ¼" Diamond Grinding to top of bridge slab.
- Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
- Apply Protective Coat to the top and inside faces of parapets and to the surface of the new overlay.
- Perform Structural Repair of Concrete to the interior bents as noted in the plans.
- Install 2½" Preformed joint seal along the top of the parapet between I-90/94 Southbound and Reversible Lanes

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Protective Coat	Sq Yd	719		719
Preformed Joint Seal 2 1/2"	Foot	190		190
Manhole, Special, Frame and Lid	Each	1		1
Bridge Deck Grooving (Longitudinal)	Sq Yd	380		380
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	559		559
Cleaning Drainage System	L Sum	0.05		0.05
Bridge Deck Scarification 3/4"	Sq Yd	559		559
Structural Repair of Concrete (Depth Equal to or less than 5 Inches)	Sq Ft		123	123
Drainage Scuppers To Be Adjusted	Each	2		2
Diamond Grinding (Bridge Section)	Sq Yd	565		565
Maintenance of Lighting System	Cal Mo	6		6



FINAL CROSS SECTION
(Looking West)

* Match existing deck surface profile

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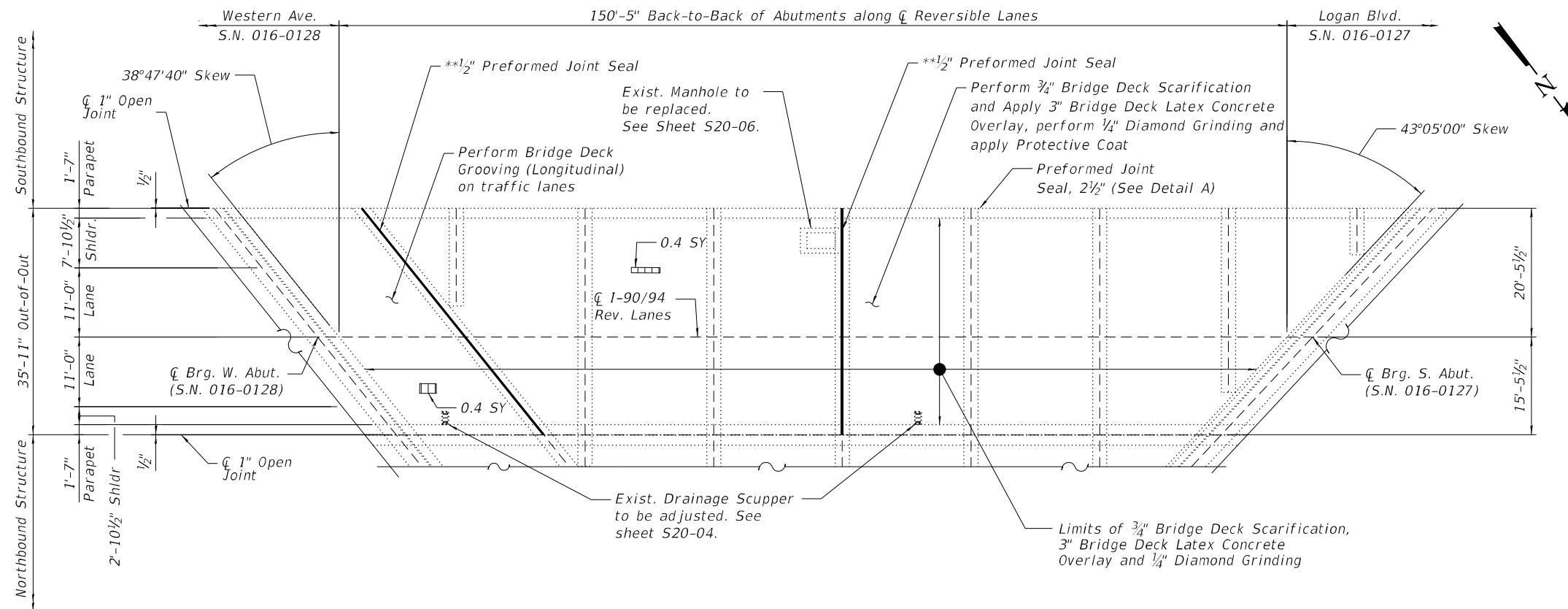
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PLOT DATE =	CHECKED - K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
SN 016-2654 (REV)

SHEET S20-02 OF S20-06 SHEETS

F.A.I. RTE. 90	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 1042
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



DECK PLAN

LEGEND

	*Deck Slab Repair (Partial Depth)
SY	Square Yard

* Areas of Deck Slab Repair (Partial Depth) are provided for information only and shall be included in the cost of Bridge Deck Latex Concrete Overlay, 3 Inches

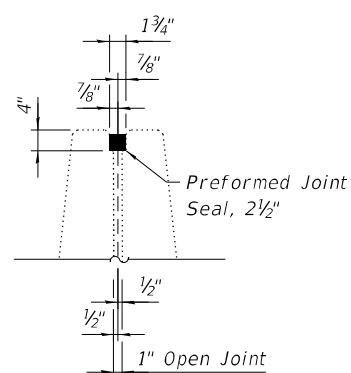
** 1/2" Preformed Joint Seal shall be included in the cost of Bridge Deck Latex Concrete Overlay, 3 Inches

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Coat	Sq Yd	719
Preformed Joint Seal 2 1/2"	Foot	190
Bridge Deck Grooving (Longitudinal)	Sq Yd	380
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	559
Bridge Deck Scarification 3/4"	Sq Yd	559
Diamond Grinding (Bridge Section)	Sq Yd	565
Maintenance of Lighting System	Cal Mo	6

NOTES:

- Deck repair areas are estimated based on visual inspection and will be paid for as specified in the Special Provision. Actual repair areas and locations shall be determined by the Engineer and shown on As-built plans. Engineer shall sound deck after deck scarification.
- Protective Coat shall be applied to the bridge overlay and front and top faces of the new and existing parapets.
- All dimensions are perpendicular to \bar{C} 1-90/94 Reversible Lanes.
- For bridge final cross section, see Sheet S20-02.
- Perform 1/4" Diamond Grinding to top of bridge deck.
- Perform Bridge Deck Grooving (Longitudinal) for Bridge Deck Latex Concrete Overlay, 3 Inches.
- The Contractor shall exercise extreme caution during concrete removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer at no cost to the Department.



DETAIL A

(Reinforcement not shown for clarity)

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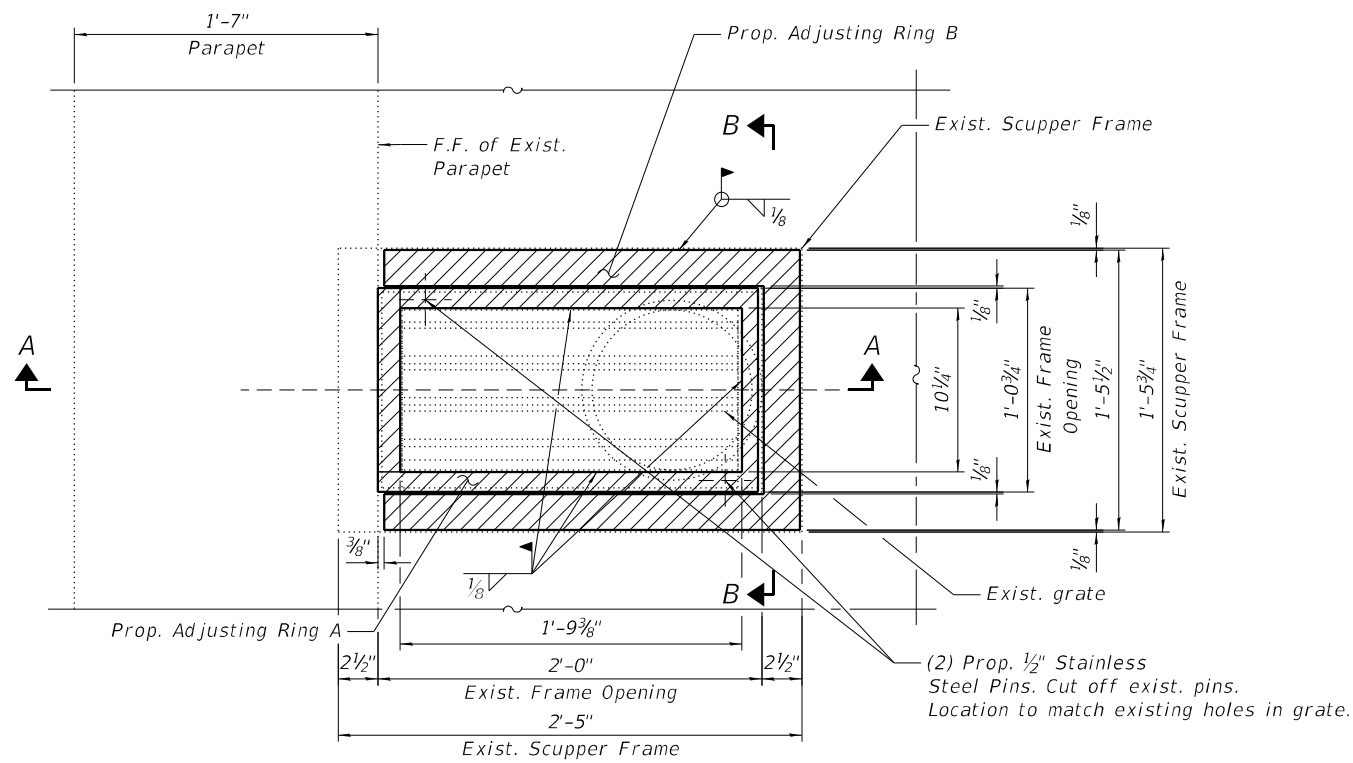
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BRIDGE SLAB REPAIR PLAN AND DETAILS
SN 016-2654 (REV)**

SHEET S20-03 OF S20-06 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1043
			CONTRACT NO. 62K74	
		ILLINOIS FED. AID PROJECT		

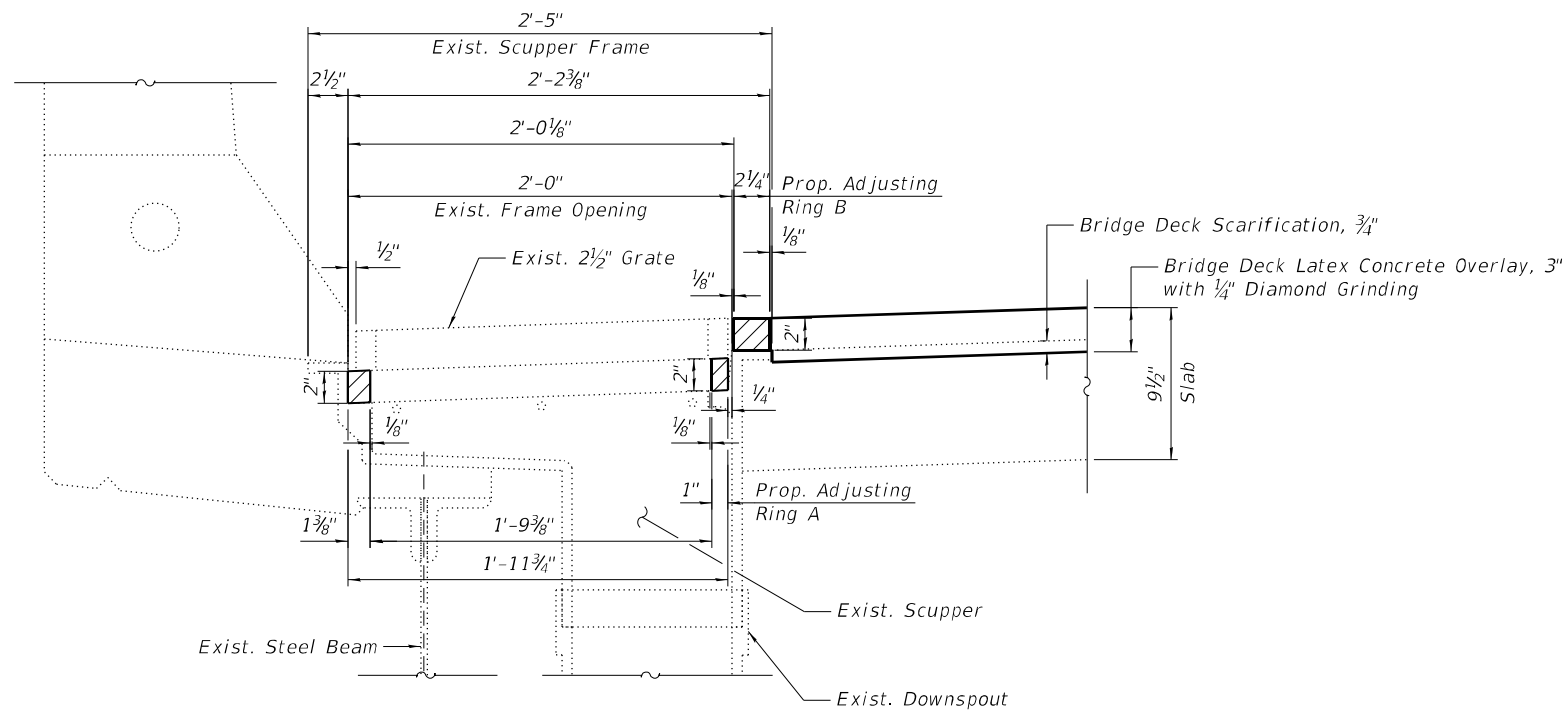


TYPICAL SCUPPER TYPE B PLAN

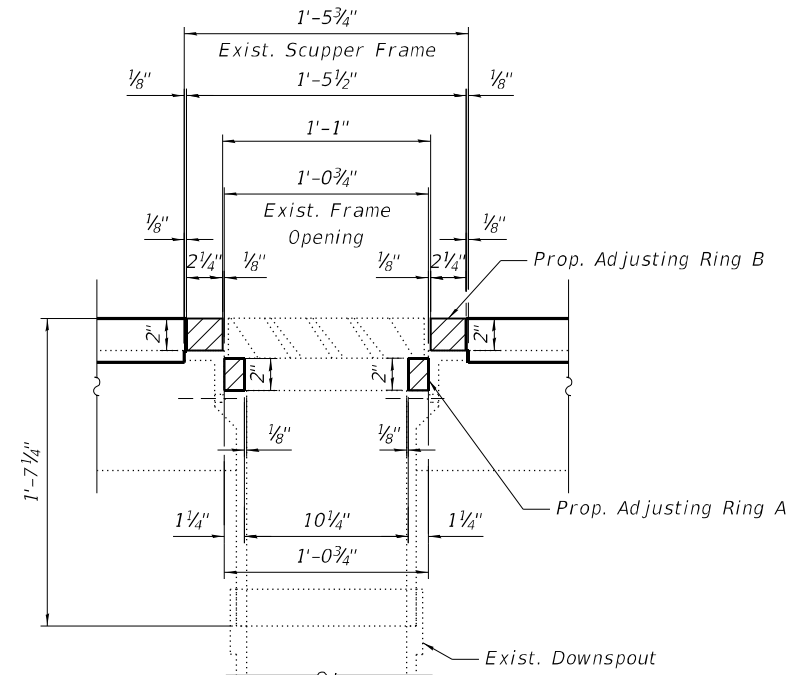
(x Locations)

NOTES

1. The Contractor shall field verify Existing Dimensions and Details of the Existing Scuppers and make necessary adjustments prior to construction of New Adjusting Rings or ordering of material for Adjusting Drainage Scuppers.
2. All Cast Iron Parts shall be Grey Iron conforming to the requirements of AASHTO M 105, Class 35B.
3. Cast Iron Parts shall be unfinished.
4. The Contractor shall take appropriate measures to ensure that Protective Coat is not applied to the scuppers.
5. Adjusting Rings shall be from Neenah or approved equal. Structural steel weldments or equal section and of the same configuration may be submitted in place of Cast Iron. Fillet or full penetration welds may be used for weldments. Details shall be submitted to the Engineer for approval.
6. Provide a 1/8" Fillet Weld around perimeter of new Adjusting Rings to secure to existing Scupper.
7. Cost of all labor and materials necessary to clean all existing floor drains and scuppers, install adjusting scupper rings, remove and reinstall grates is included in the cost for Drainage Scupper to be Adjusted.



SECTION A-A



SECTION B-B

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Cleaning Drainage System	L Sum	0.05
Drainage Scuppers To Be Adjusted	Each	2

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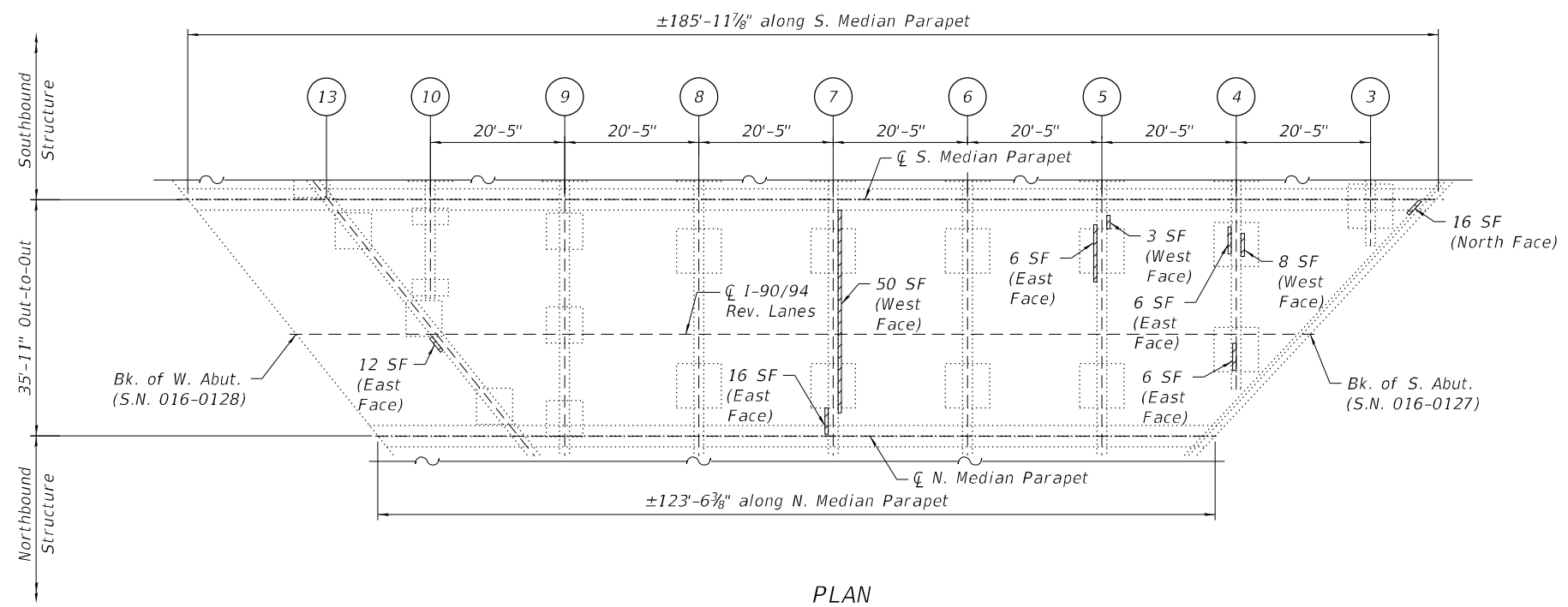
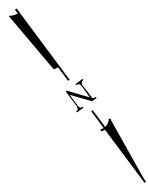
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER TYPE B ADJUSTMENT DETAILS
 SN 016-2654 (REV)

SHEET S20-04 OF S20-06 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1044
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



PLAN

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.

LEGEND

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

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	123

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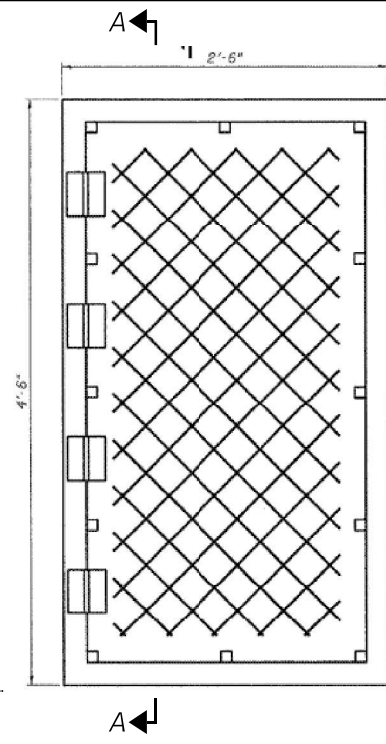
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BENTS REPAIRS
 SN 016-2654 (REV)**

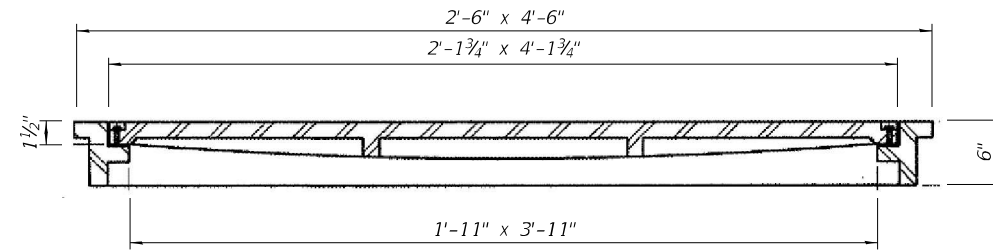
SHEET S20-05 OF S20-06 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1045
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



MANHOLE

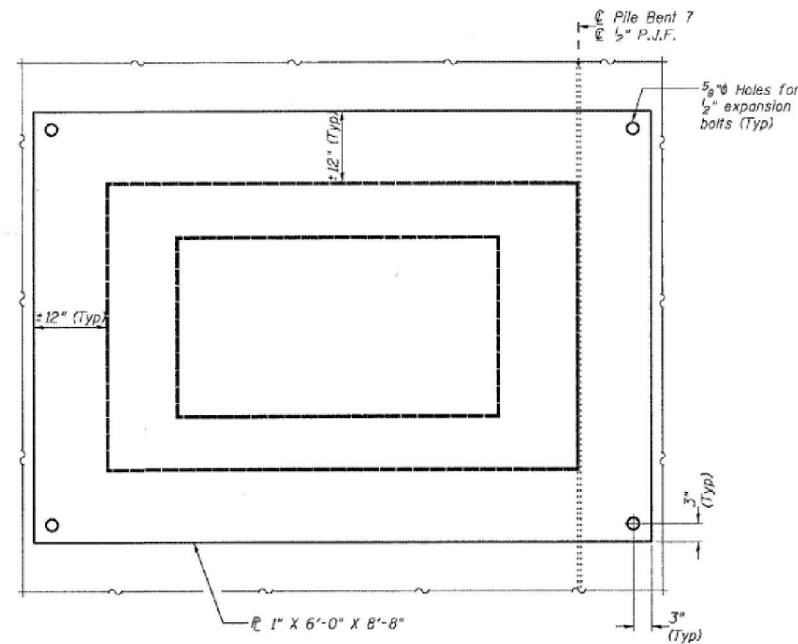
Provide one 30" x 54" manhole, Neenah R-6663-KH. Manhole shall have countersunk stainless steel screws neoprene gasket, waterproof lift handles and stainless steel hinges.



SECTION A-A

NOTES

1. The contractor can access the interior of the vault via a bolted hatch located in the reversible lanes during the restricted hours noted in the Keeping the Expressway Open to Traffic special provision. Appropriate safety precautions should be taken when working in the confined space inside the vault. The hatch should be re-bolted shut prior to opening to traffic.
2. The manhole lid, frame and all other accessories shall be galvanized according to AASHTO M111 and ASTM A385.
3. The cost of steel drilling, bolts, hinges, screws, neoprene gaskets and lift handles shall be covered by Manhole, Special, Frame and Lid.



STEEL COVER PLATE DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Manhole, Special, Frame and Lid	Each	1

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 DEPARTMENT OF TRANSPORTATION

MANHOLE DETAILS
 SN 016-2654 (REV)

SHEET S20-06 OF S20-06 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1046
			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	

Existing Structure: S.N. 016-0127 was originally built in 1957 from BCR. The bridge was widened and redecked between 1990 and 1993, and expansion joint repairs were performed in 2013. The structure has a back-to-back abutment length of 368'-1 1/4" and an out-to-out deck width of 70'-0 1/2". The superstructure consists of a 7 1/2" thick reinforced concrete deck supported on three span continuous steel beams of span lengths 100'-0", 125'-0", and 135'-0". The substructure consists of reinforced concrete abutments and piers supported on cast-in-place concrete piles at the abutments and timber piles at the piers.

Traffic will be maintained utilizing stage construction

No salvage.

LOADING

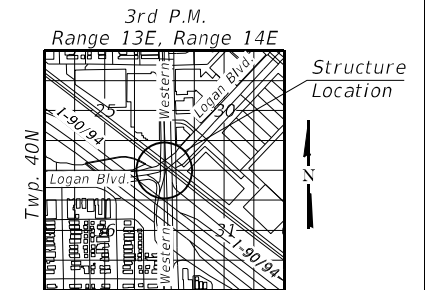
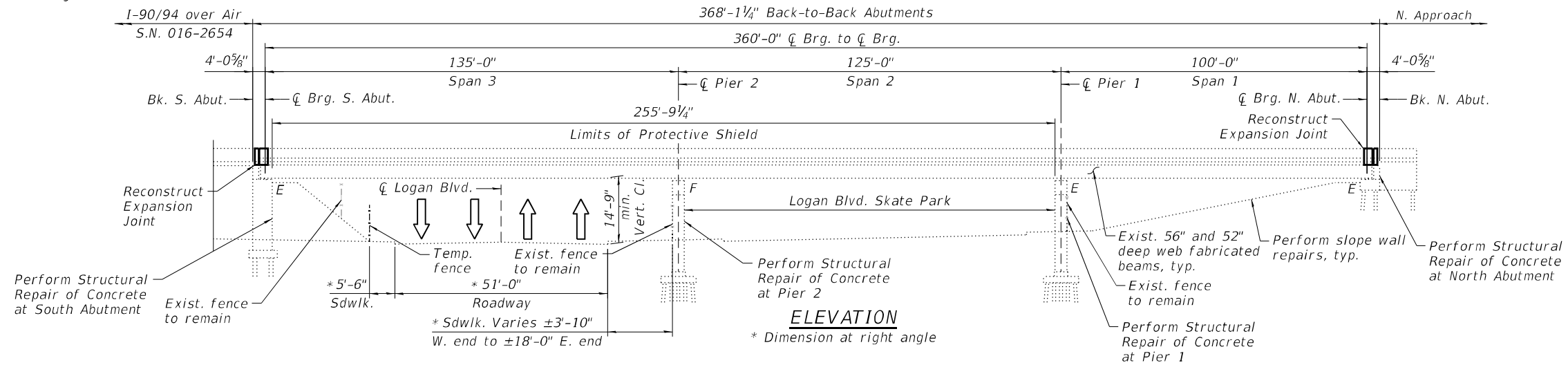
H520-44 and alternate military loading

DESIGN SPECIFICATIONS

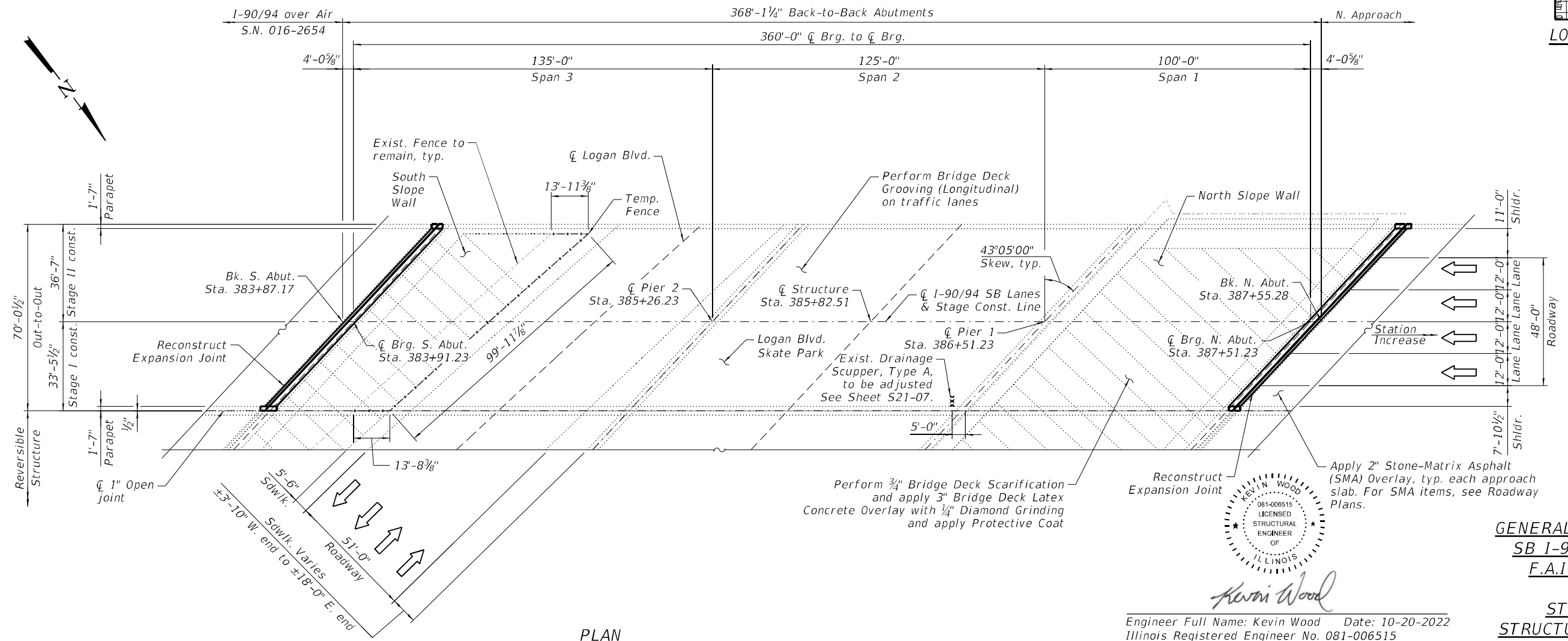
2002 AASHTO Standard Specification for Highway Bridges, 17th Edition

NOTE:

- All stations are to the CL I-90/94 SB Roadway and taken from existing plans.
- No Future Wearing Surface is allowed.



LOCATION SKETCH



PLAN



Kevin Wood

Engineer Full Name: Kevin Wood Date: 10-20-2022
 Illinois Registered Engineer No. 081-006515
 Registration Expires 11. 30, 2024

GENERAL PLAN AND ELEVATION
SB I-90 OVER LOGAN BLVD.
F.A.I. SEC 2020-004-BR
COOK COUNTY
STATION: 385+82.51
STRUCTURE NO. 016-0127 (SB)

MODEL: sMODELNAME5
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET S21-01 OF S21-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1047
CONTRACT NO. 62K74				

ILLINOIS FED. AID PROJECT

GENERAL NOTES

- Fasteners shall be ASTM A325 Type 1, galvanized according to ASTM F 2329. Bolts 3/4 in., holes 13/16 in., unless otherwise noted. Diaphragm connection holes be 15/16" for 3/4" bolts. Two hardened washers shall be required at diaphragm connections.
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars designated (E) shall be epoxy coated.
- Prior to pouring the new concrete deck for Expansion Joints Reconstruction and Bridge Deck repairs, all heavy or 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 Concrete Removal pay item. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further dispositions. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
- Plan dimensions and details relative to the 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 furnished at the unit price bid for the work.
- Cleaning and field painting of structural steel shall be done under a separate painting contract.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Existing reinforcement extended into the removal of area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. The cost of cleaning shall be included in the cost of Concrete Removal.
- Bars indicated thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bar per line.
- All exposed concrete edges shall have a 3/4"x45° chamfer, except where shown otherwise.
- For SMA overlay on Approach Slab, see Roadway Plans.
- Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside face of the parapets, and top of Latex Concrete overlay.
- Joint openings shall be adjusted according to Article 520.04 of the Standard Specification when the deck is poured at an ambient temperature other than 50°F.
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provisions "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- All new structural steel shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanized for Structural Steel".
- Adjacent I-90/94 reversible bridge is not shown throughout the plans for clarity.
- The Contractor shall take the necessary precautions for the protection of passing vehicles, bicycles and pedestrians from falling objects and/or materials until completion of work.
- The Contractor is responsible to remove, support and reinstall all existing electrical conduits interfering with the work. See special provision "Protection and Maintenance of Existing Underpass Luminaires".
- The Contractor shall exercise caution during Concrete Removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
- The Contractor is responsible to protect the existing conduit and junction box embedded in the parapet during concrete removal and construction. Any damage to the existing conduit and junction box shall be repaired by the Contractor at no additional cost to the Department.
- Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to be placed above the existing lighting fixtures in order to maintain the existing level of lighting on the roadway underneath. Details shall be approved by the Engineer before installation.
- Any adjustment done to the Protective Shield System must not change the system's load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.
- The Contractor shall contact Chandra Libby, the Director of City of Chicago Department of Family Support Services (DFSS) at 312-746-5443 or Chandra.Libby@cityofchicago.org to coordinate the relocation of persons and their personal belongings under the bridges within the areas bounded by the temporary chain-link-fence.
- The intent of the temporary fence is to deny access of any unauthorized personnel under the bridge during construction. Actual fence installations may vary from what is shown on the plans. All fence installations must be approved by the Engineer.
- Prior to the application of the Concrete Sealer, the Contractor shall clean all existing debris from the abutment seats. The method of debris removal shall not damage the existing concrete and shall be approved by the Engineer. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleaning shall be included in the cost of Concrete Sealer.

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S21-02	General Data
S21-03-S21-04	Stage Construction Details I & II
S21-05	Temporary Concrete Barrier
S21-06	Bridge Deck Repair Plan and Details
S21-07	Drainage Scupper Type A Adjustment Details
S21-08-S21-10	South Abutment Expansion Joint Details I, II & III
S21-11-S21-13	North Abutment Expansion Joint Details I, II & III
S21-14	Preformed Joint Strip Seal
S21-15	Framing Plan
S21-16-S21-17	Structural Steel Repair Details I & II
S21-18	South Abutment Repairs
S21-19	North Abutment Repairs
S21-20	Pier 1 Repairs
S21-21	Pier 2 Repairs
S21-22	Slope Wall Repairs
S21-23	Bar Splicer Assembly and Mechanical Splicer Details


SCOPE OF WORK

- Provide Protective Shield within limits indicated on the plans.
- Scarify 3/4" from the bridge deck slab.
- Perform deck repairs.
- Remove and reconstruct expansion joints at north and south abutments and install new Preformed Joint Strip Seals.
- Repair steel cross frames as shown on the plans.
- Adjust Drainage Scuppers.
- Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck. Apply a 2" Stone-Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Roadway Plans.
- Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
- Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
- Apply Protective Coat to the top and inside faces of parapets, reconstructed transverse expansion joints and to the surface of the new overlay.
- Perform Structural Repair of Concrete to the Abutments and Piers as noted in the plans.
- Perform slope wall repairs.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu Yd		10	10
Concrete Removal	Cu Yd	23.3		23.3
Slope Wall Removal	Sq Yd		10	10
Protective Shield	Sq Yd	1,991		1,991
Concrete Superstructure	Cu Yd	26.8		26.8
Protective Coat	Sq Yd	3,091		3,091
Furnishing and Erecting Structural Steel	Pound	810		810
Reinforcement Bars, Epoxy Coated	Pound	5,320		5,320
Bar Splicers	Each	30		30
Slope Wall 4 Inch	Sq Yd		10	10
Preformed Joint Strip Seal	Foot	188		188
Concrete Sealer	Sq Ft		1,005	1,005
Slope Wall Crack Sealing	Foot		237	237
Protect and Maintain Existing Underpass Luminaire	L Sum		0.022	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,938		1,938
Structural Steel Removal	Pound	810		810
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	2,662		2,662
Cleaning Drainage System	L Sum	0.05		0.05
Bridge Deck Scarification 3/4"	Sq Yd	2,662		2,662
Structural Repair of Concrete (Depth Equal to or less than 5 Inches)	Sq Ft		118	118
Deck Slab Repair (Full Depth, Type II)	Sq Yd	5.3		5.3
Drainage Scuppers to be Adjusted	Each	1		1
Diamond Grinding (Bridge Section)	Sq Yd	2,700		2,700
Maintenance of Lighting System	Cal Mo		6	6
Temporary Construction Fence	Foot		128	128

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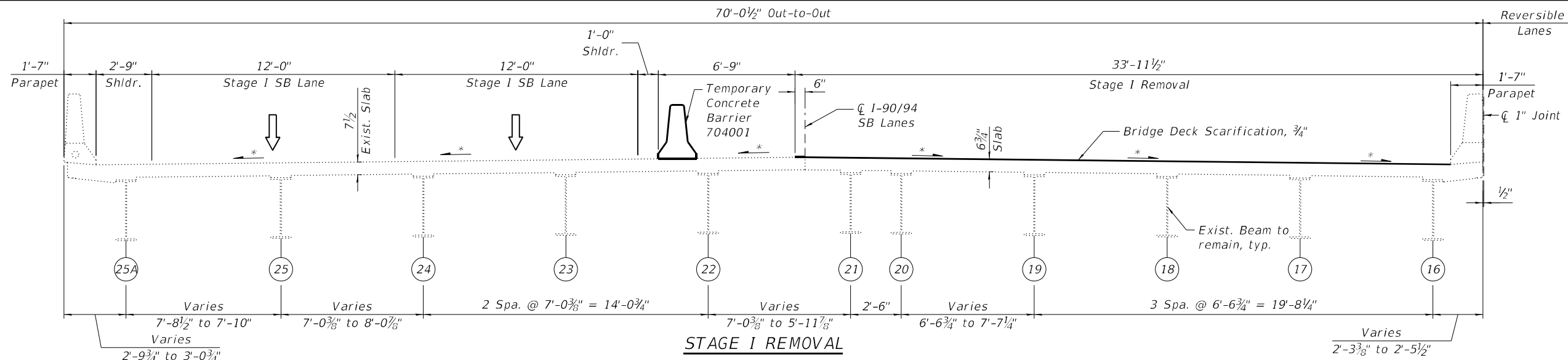
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
SN 016-0127 (SB)**

SHEET S21-02 OF S21-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1048
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		

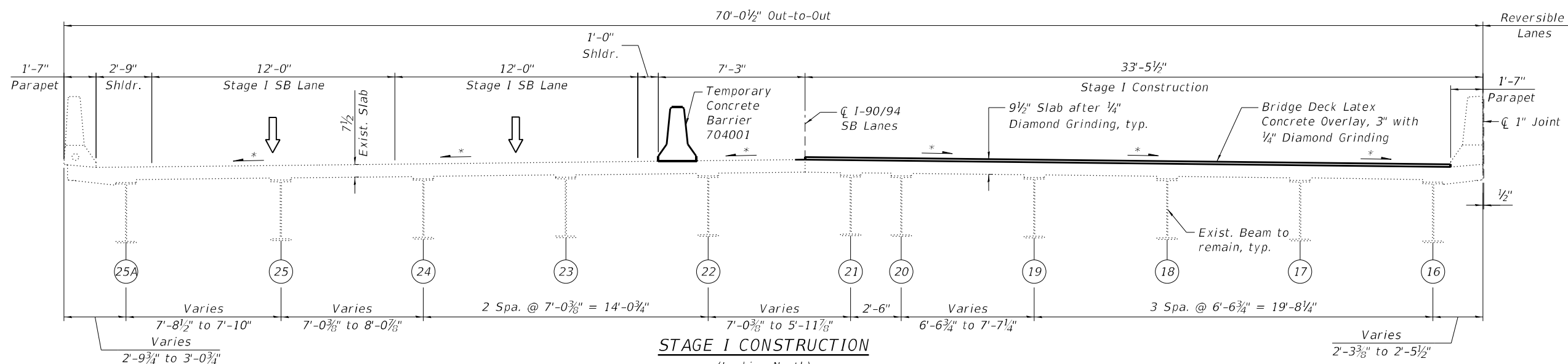


STAGE I REMOVAL

1. Install Temporary Concrete Barrier as shown to locate traffic on the west side of the existing structure.
2. Scarify 3/4" from the top of the deck.
3. Remove portions of bridge deck adjacent to abutment joints, as shown in the plans.

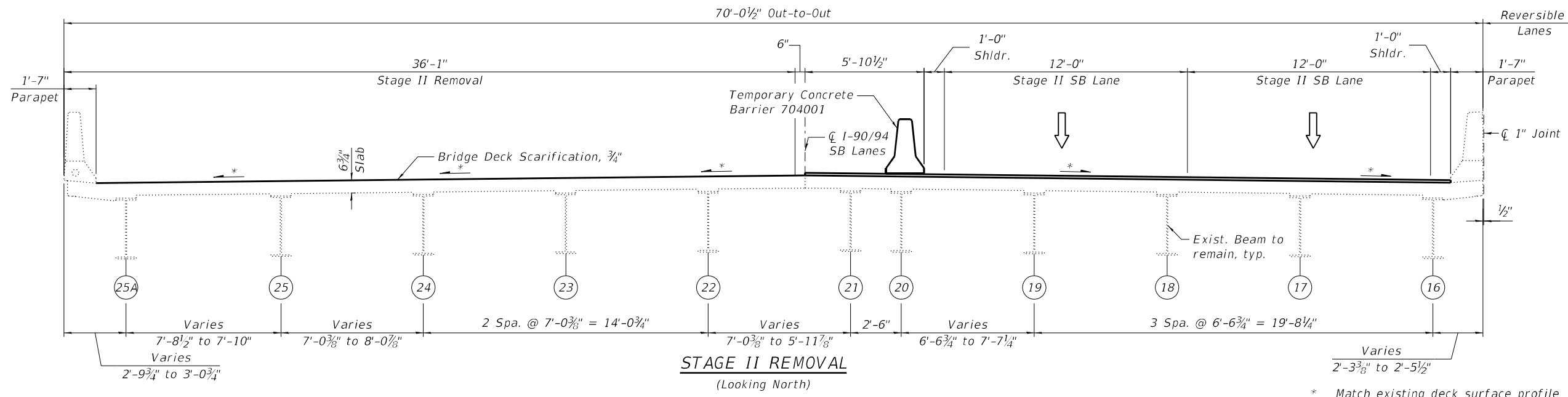
STAGE I CONSTRUCTION

1. Perform Deck Slab Repairs at the locations shown in the plans.
2. Reconstruct transverse expansion joints and install Preformed Joint Strip Seal at north and south abutments and replace associated reinforcement and concrete adjacent to the joint.
3. Perform Structural Repair of Concrete and at abutments and piers.
4. Apply 3" Bridge Deck Latex Concrete Overlay to bridge deck slab.
5. Perform 1/4" diamond grinding to bridge deck and abutment hatched block.
6. Perform Bridge Deck Grooving (Longitudinal) for the 3" Bridge Deck Latex Concrete Overlay and reconstructed abutment expansion joint areas.
7. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach pavement and taper into existing roadway. See Roadway Plans.
8. Apply Protective Coat to the top of reconstructed transverse joint areas, the surface of the new overlay, and the top and inside faces of the parapets.
9. Perform slope wall repairs as shown in the plans.



STAGE I CONSTRUCTION

(Looking North)



STAGE II REMOVAL

(Looking North)

* Match existing deck surface profile

MODEL: SMODELNAMES
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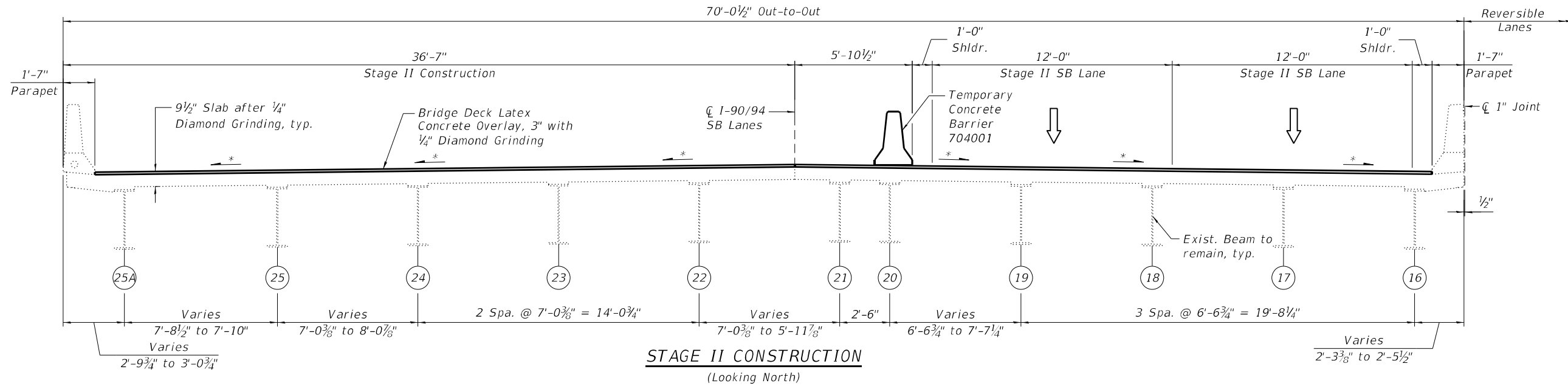
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PLOT SCALE =	CHECKED - H.A.	REVISED -
PLOT DATE =	DRAWN - D.C.P.	REVISED -
	CHECKED - K.G.W.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS I
SN 016-0127 (SB)**

SHEET S21-03 OF S21-23 SHEETS

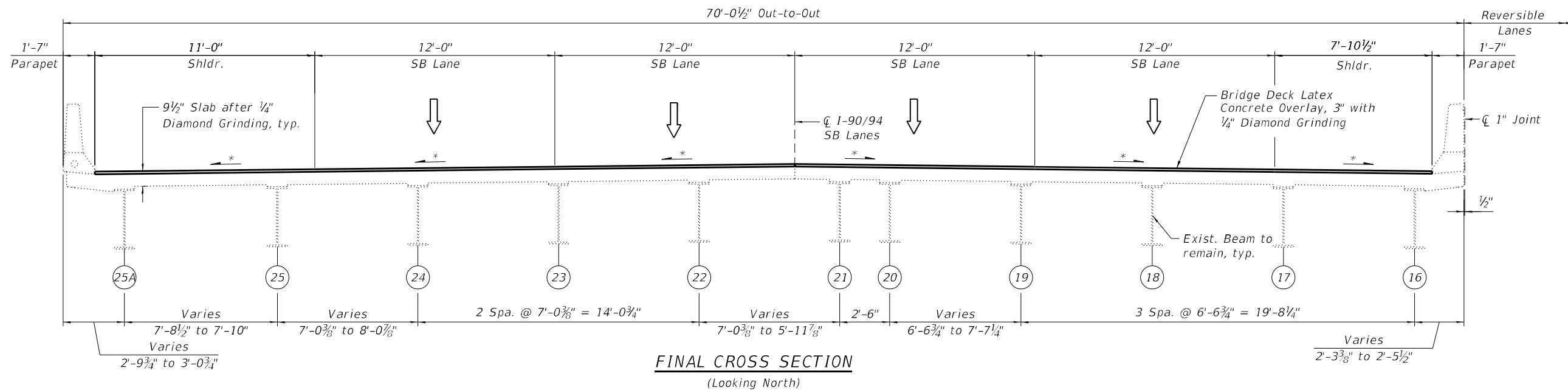
F.A.I. RTE. 90	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 1049
			CONTRACT NO. 62K74	
ILLINOIS FED. AID PROJECT				



STAGE II CONSTRUCTION
(Looking North)

STAGE II CONSTRUCTION

1. Perform Deck Slab Repairs at the locations shown in the plans.
2. Reconstruct transverse expansion joints and install Preformed Joint Strip Seal at north and south abutments and replace associated reinforcement and concrete adjacent to the joint.
3. Perform Structural Repair of Concrete and Epoxy Crack Injection at abutments and piers.
4. Apply 3" Bridge Deck Latex Concrete Overlay to bridge deck slab.
5. Perform 1/4" diamond grinding to bridge deck and abutment hatched block.
6. Perform Bridge Deck Grooving (Longitudinal) for the 3" Bridge Deck Latex Concrete Overlay and reconstructed abutment expansion joint areas.
7. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach pavement and taper into existing roadway. See Roadway Plans.
8. Apply Protective Coat to the top of reconstructed transverse joint areas, the surface of the new overlay, and the top and inside faces of the parapets.
9. Perform slope wall repairs as shown in the plans.



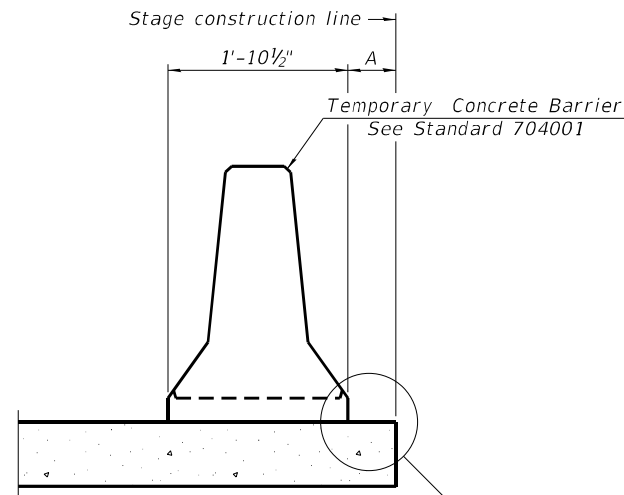
FINAL CROSS SECTION
(Looking North)

* Match existing deck surface profile

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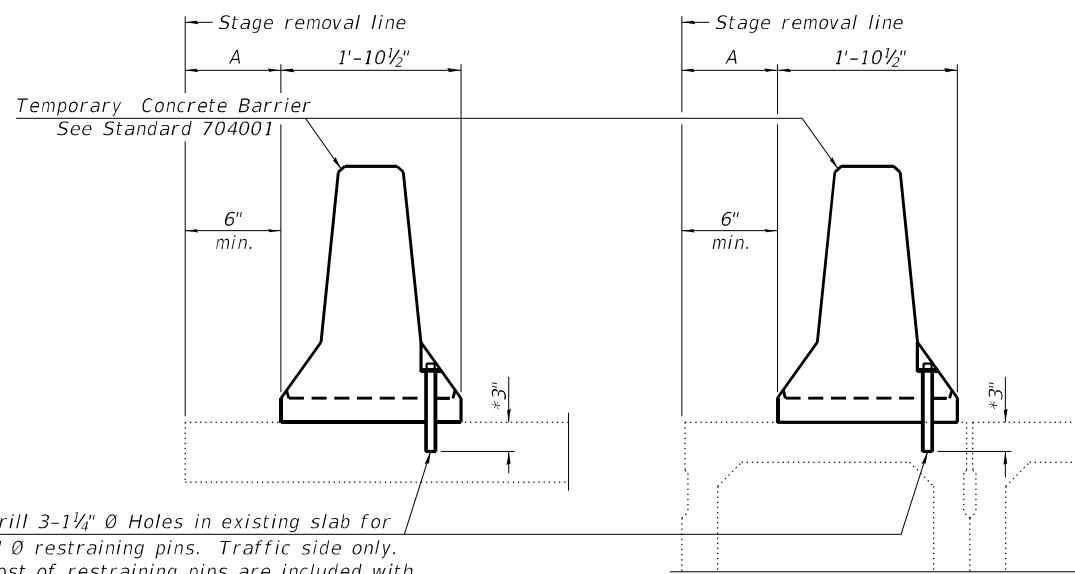
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F.A.I. RTE. 90	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 1050
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

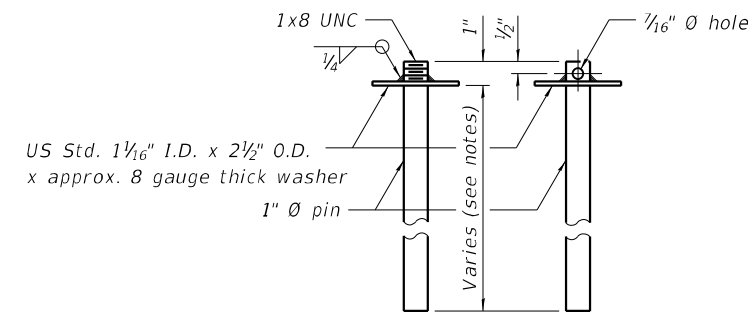


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

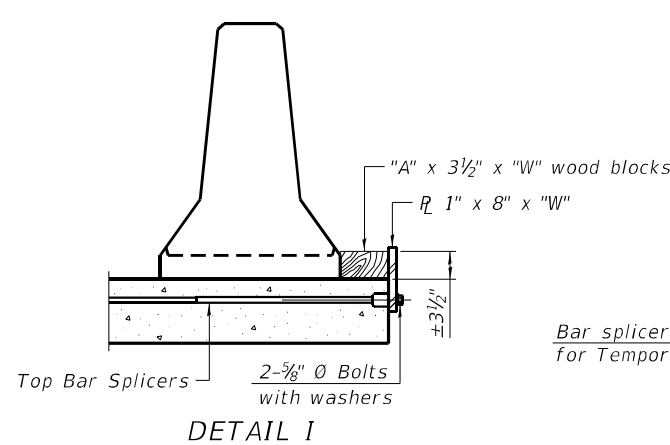
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

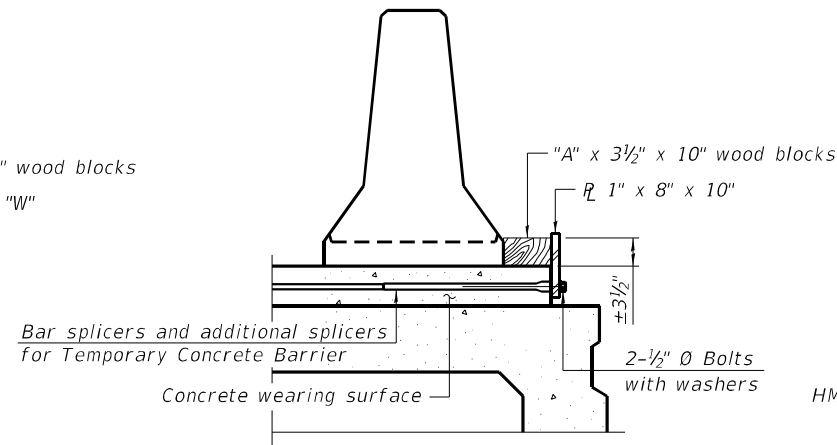


RESTRAINING PIN

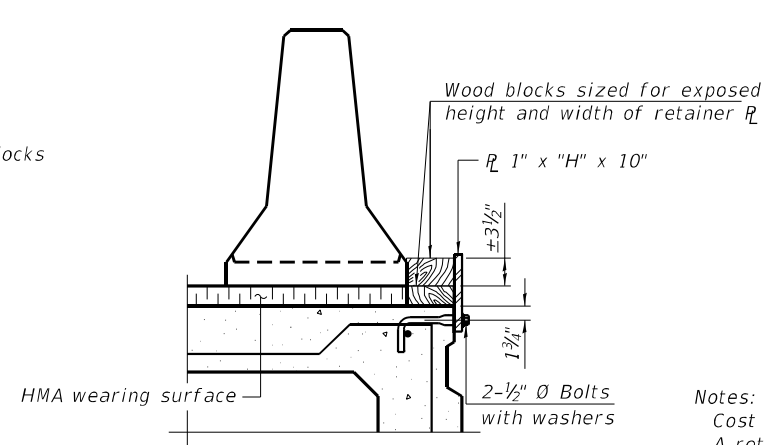
SECTIONS THRU SLAB OR DECK BEAM



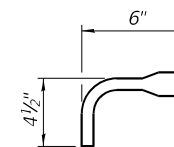
DETAIL I



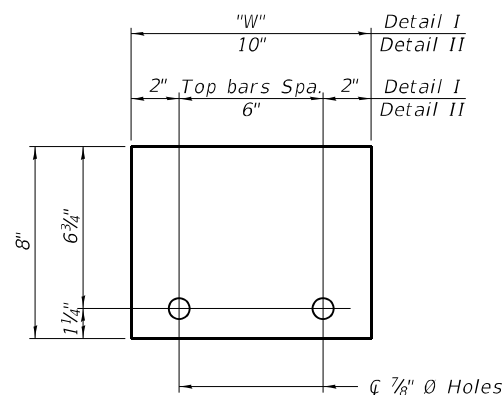
DETAIL II



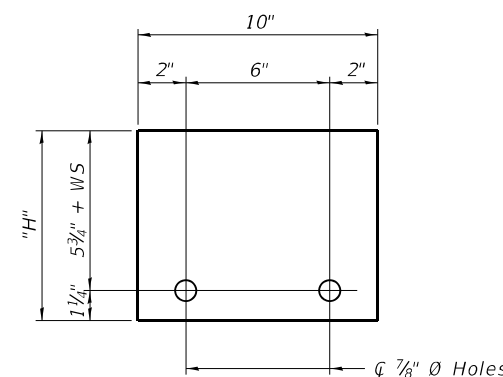
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W" (Detail I and II)



STEEL RETAINER R 1" x "H" x 10" (Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate \bar{c} of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 10-12-2021

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 Chicago, Illinois 60631; (773) 399-0112

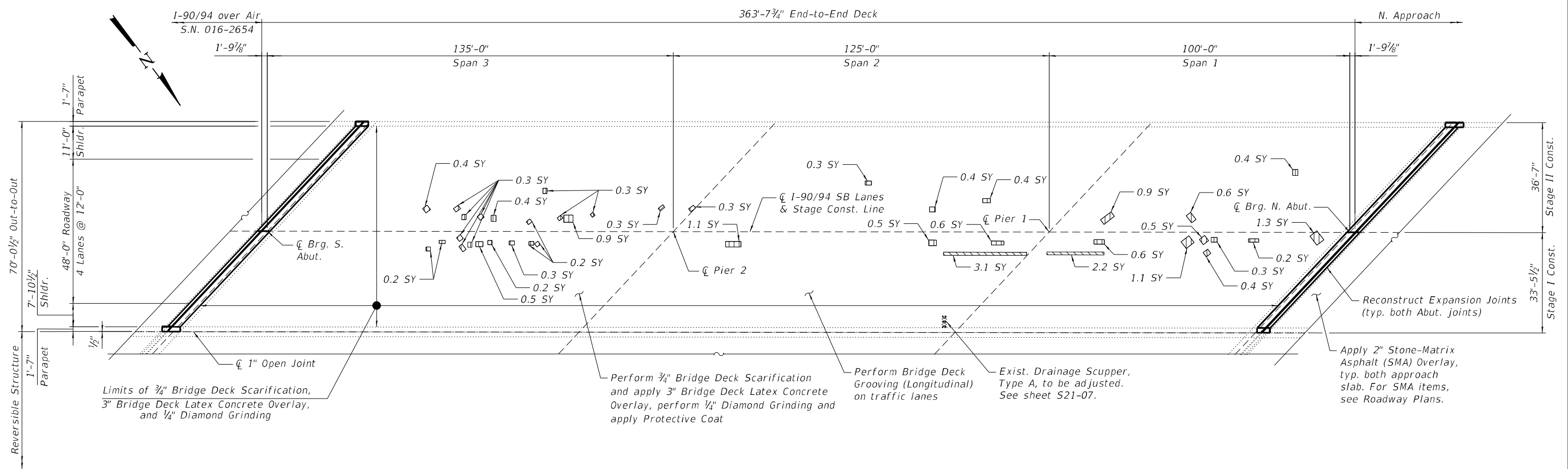
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
 SN 016-0127 (SB)

SHEET S21-05 OF S21-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1051
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



DECK PLAN

LEGEND

- *Deck Slab Repair (Partial Depth)
- Deck Slab Repair (Full Depth, Type II)
- Square Yard

* Areas of Deck Slab Repair (Partial Depth) are provided for information only and shall be included in the cost of Bridge Deck Latex Concrete Overlay, 3 Inches

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 bridge deck final cross section, see Sheet S21-04.
3. For North and South transverse joint removal and reconstruction, see Sheet S21-08 thru S21-13.
4. Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
5. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
6. Protective Coat shall be applied to the top of reconstructed transverse joints, top and inside face of parapets and top of latex concrete overlay.
7. 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.
8. The Contractor shall exercise extreme caution during concrete removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer at no cost to the Department.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Shield	Sq Yd	1,991
Protective Coat	Sq Yd	3,091
Protect and Maintain Existing Underpass Luminaire	L Sum	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,938
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	2,662
Bridge Deck Scarification 3/4"	Sq Yd	2,662
Deck Slab Repair (Full Depth, Type II)	Sq Yd	5.3
Diamond Grinding (Bridge Section)	Sq Yd	2,700
Maintenance of Lighting System	Cal Mo	6

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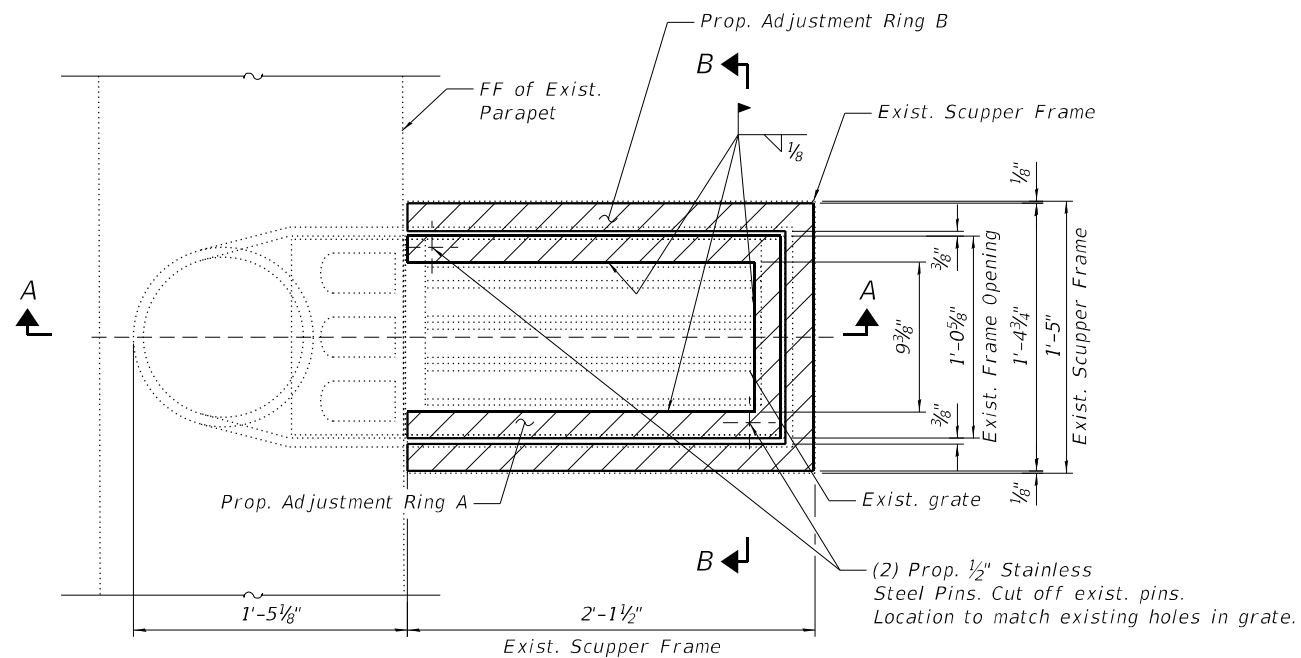
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BRIDGE DECK REPAIR PLAN AND DETAILS
SN 016-0127 (SB)**

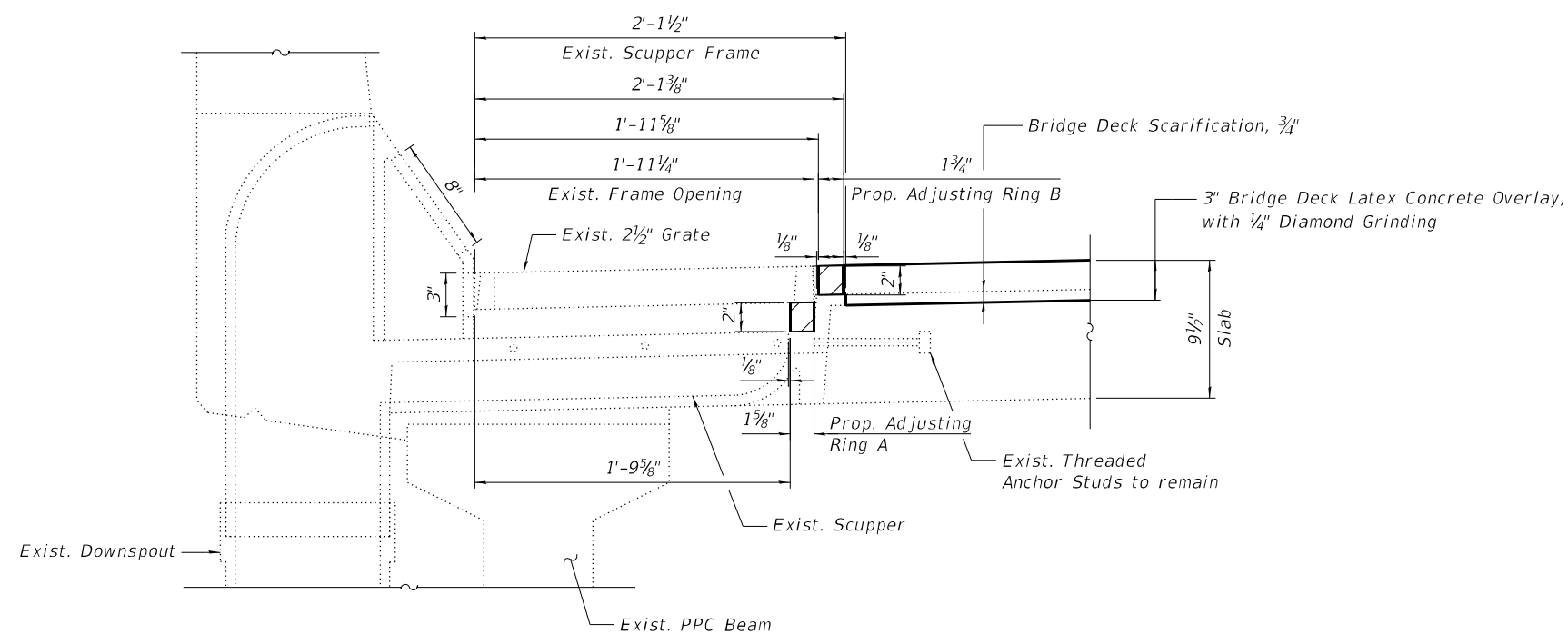
SHEET S21-06 OF S21-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

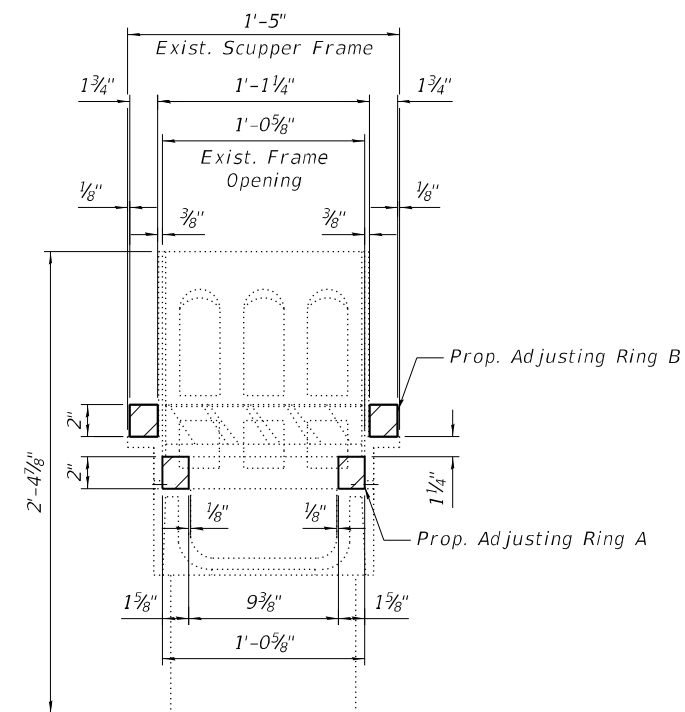


TYPICAL SCUPPER TYPE A PLAN

(1 Location)



SECTION A-A



SECTION B-B

NOTES

1. The Contractor shall field verify Existing Dimensions and Details of the Existing Scuppers and make necessary adjustments prior to construction of New Adjusting Ring or ordering of material for Adjusting Drainage Scuppers.
2. All Cast Iron Parts shall be Grey Iron conforming to the requirements of AASHTO M 105, Class 35B.
3. Cast Iron Parts shall be unfinished.
4. The Contractor shall take appropriate measures to ensure that Protective Coat is not applied to the scuppers.
5. Adjusting Ring shall be from Neenah or approved equal. Structural steel weldments or equal section and of the same configuration may be submitted in place of Cast Iron. Fillet or full penetration welds may be used for weldments. Details shall be submitted to the Engineer for approval.
6. Provide a 1/8" Fillet Weld around perimeter of new Adjusting Ring to secure to existing Scupper.
7. Cost of all labor and materials necessary to clean all existing floor drains and scuppers, install adjusting scupper rings, remove and reinstall grates is included in the cost for Drainage Scupper to be Adjusted.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Cleaning Drainage System	L Sum	0.05
Drainage Scuppers To Be Adjusted	Each	1

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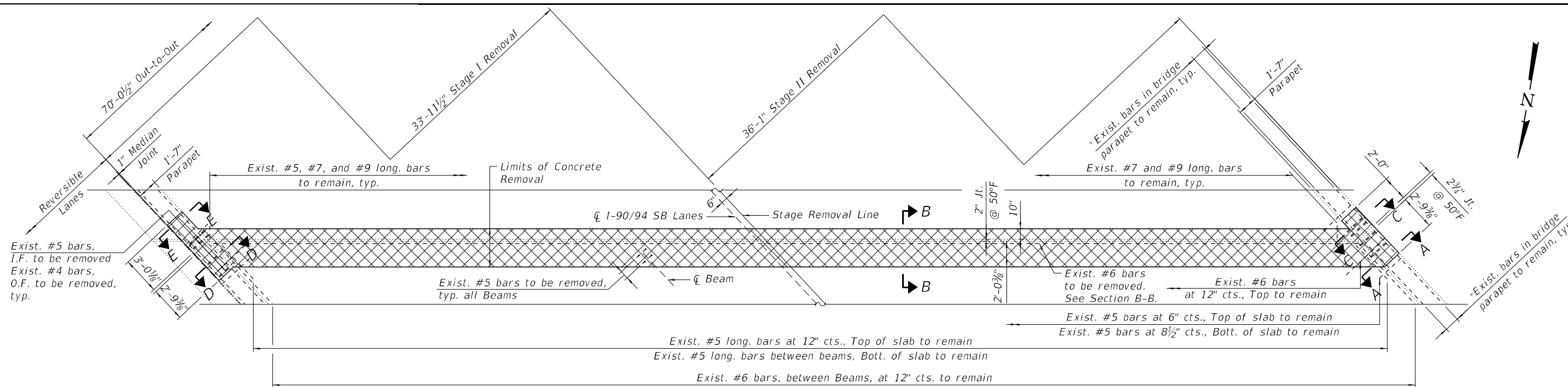
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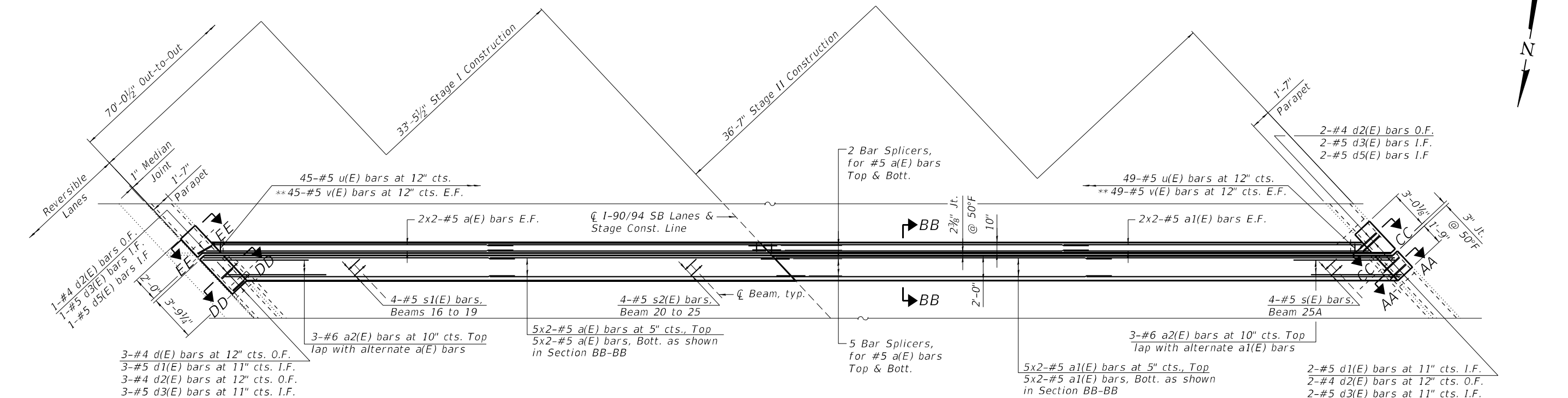
DRAINAGE SCUPPER TYPE A ADJUSTMENT DETAILS
 SN 016-0127 (SB)

SHEET S21-07 OF S21-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1053
			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	



SOUTH ABUTMENT JOINT REMOVAL PLAN



SOUTH ABUTMENT JOINT RECONSTRUCTION PLAN

NOTES:

- For sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, see sheet S21-09.
- For sections D-D, E-E, DD-DD and EE-EE, see sheet S21-10.

- * Existing longitudinal bars to remain in the parapets can be cut in the field as required
- ** Epoxy grout #5 v(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.

LEGEND

	Concrete Removal
I.F.	Inside Face
O.F.	Outside Face
E.F.	Each Face

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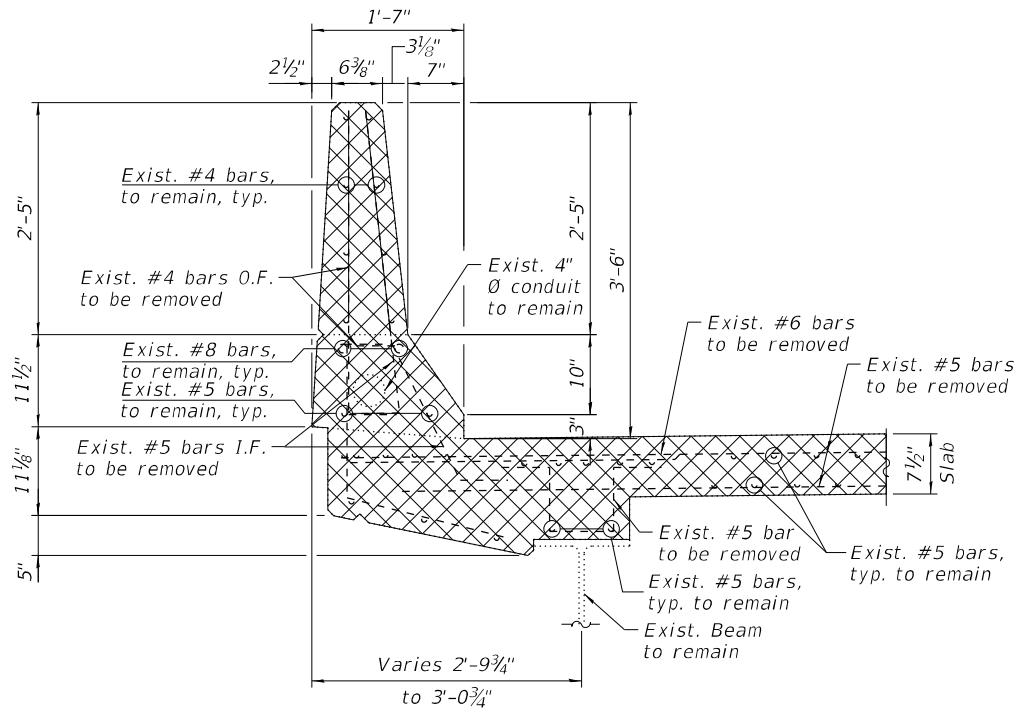
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**STATE OF ILLINOIS
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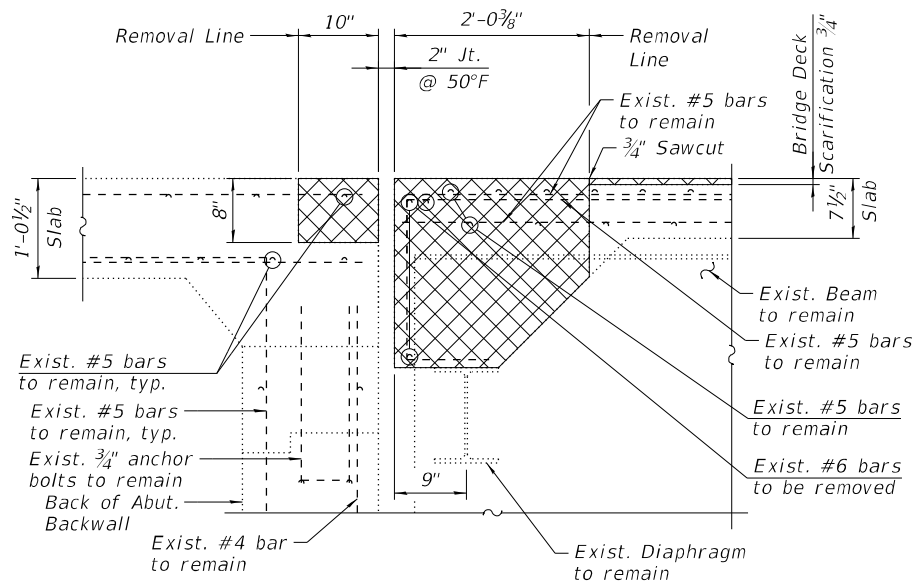
**SOUTH ABUTMENT EXPANSION JOINT DETAILS I
 SN 016-0127 (SB)**

SHEET S21-08 OF S21-23 SHEETS

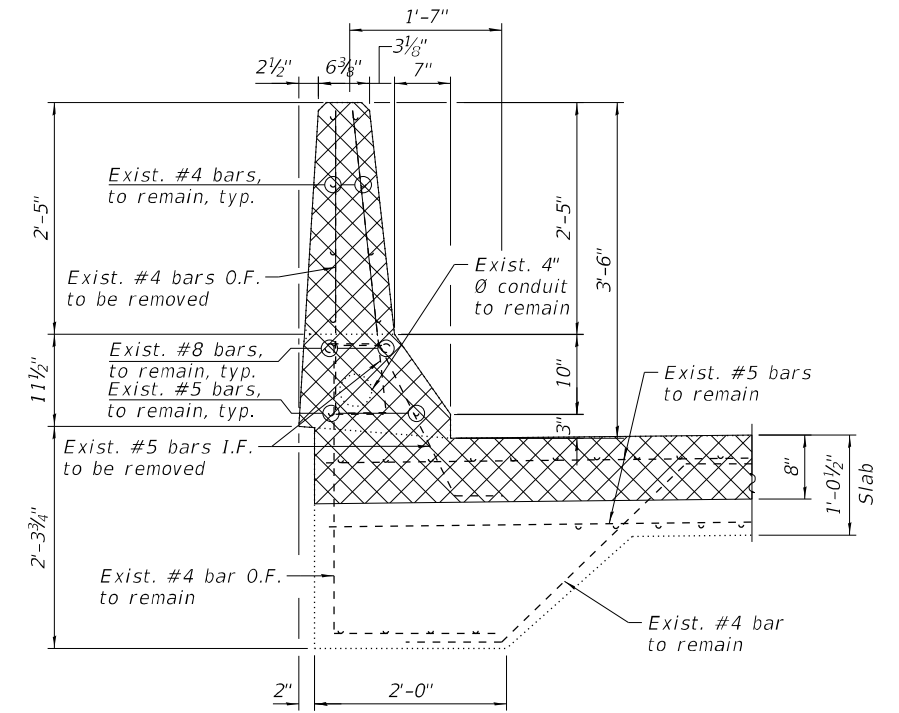
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



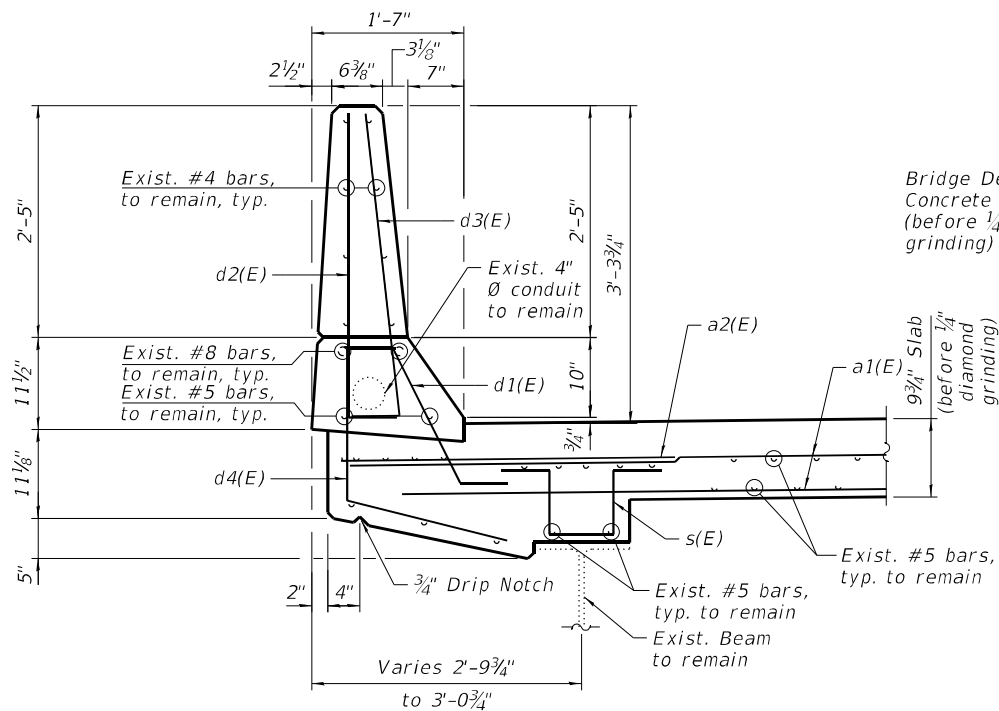
SECTION A-A
(West parapet removal)



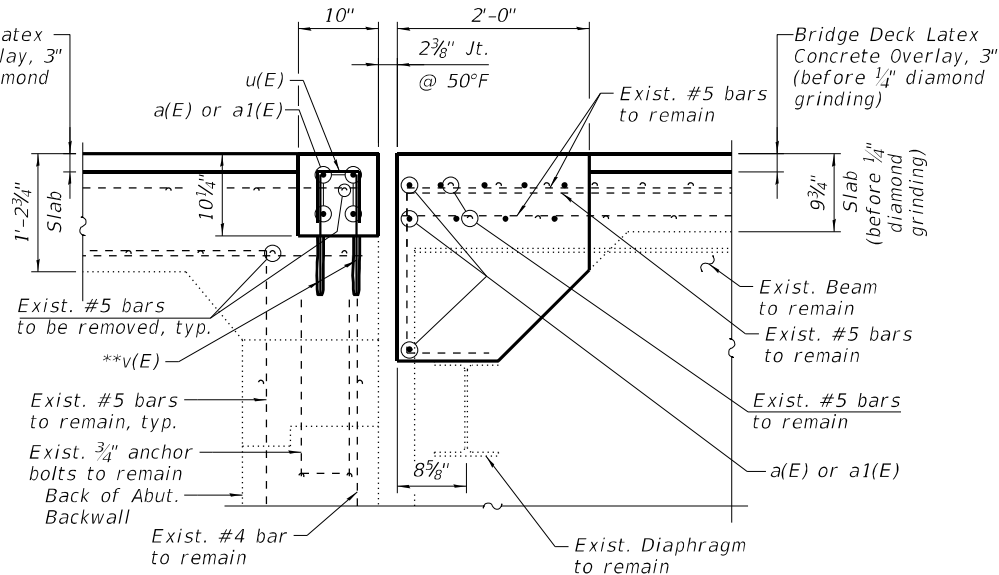
SECTION B-B



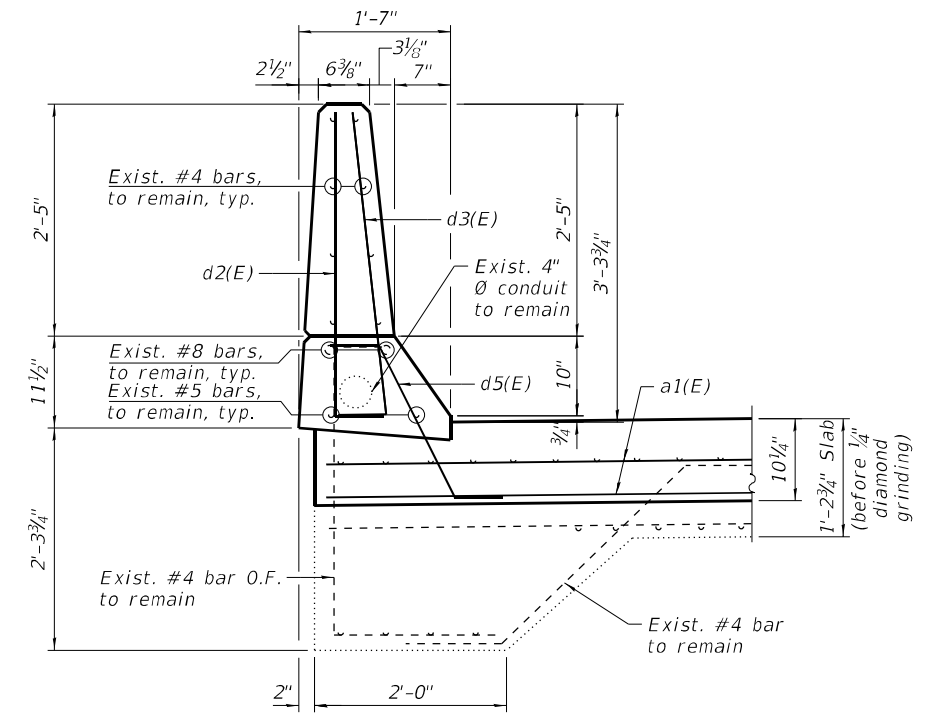
SECTION C-C
(West parapet removal)



SECTION AA-AA
(West parapet reconstruction)



SECTION BB-BB



SECTION CC-CC
(West parapet reconstruction)

** Epoxy grout #5 v(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

LEGEND

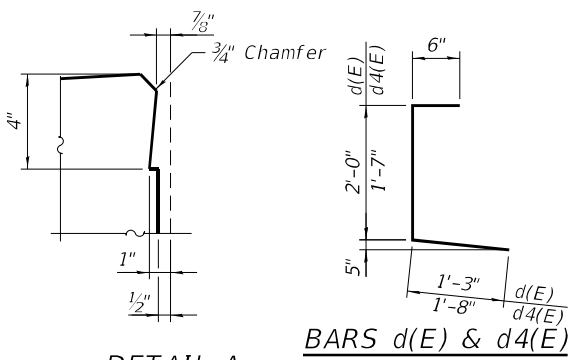
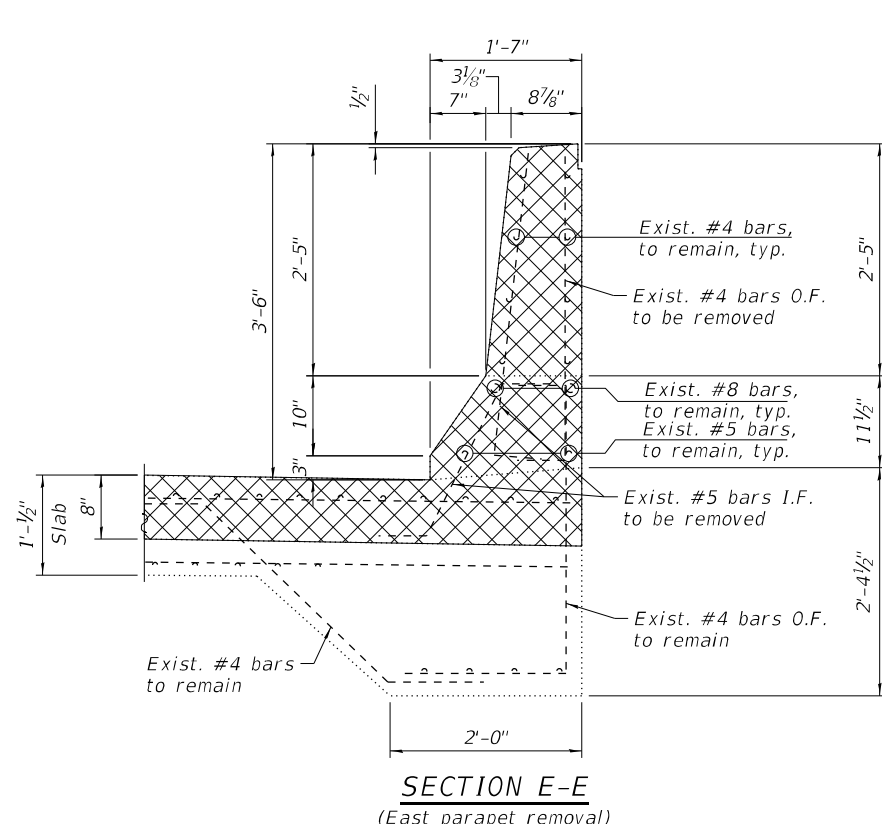
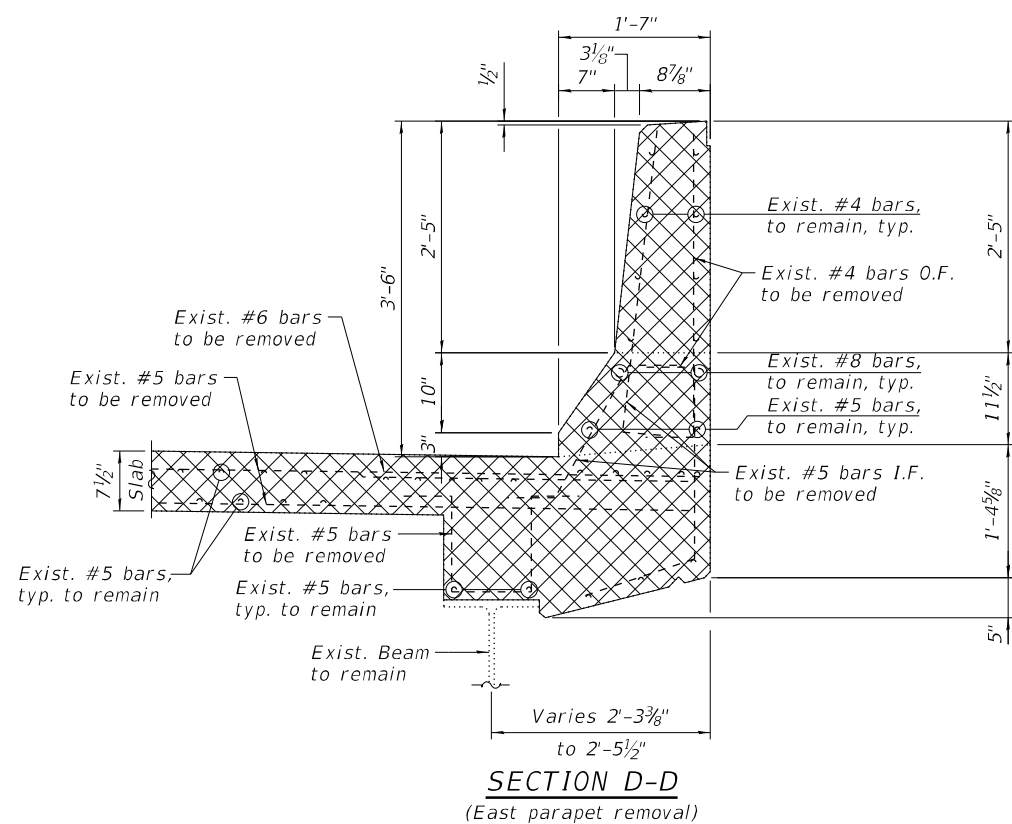
- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- V.I.F. Verify in Field

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT				

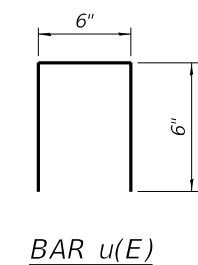
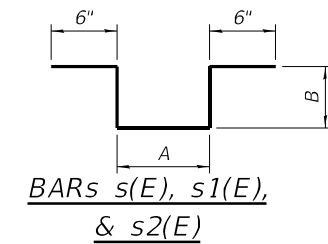
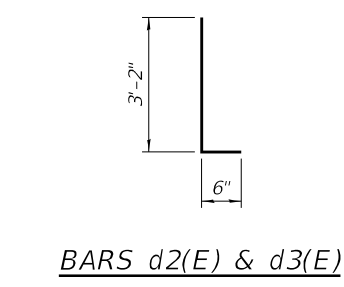
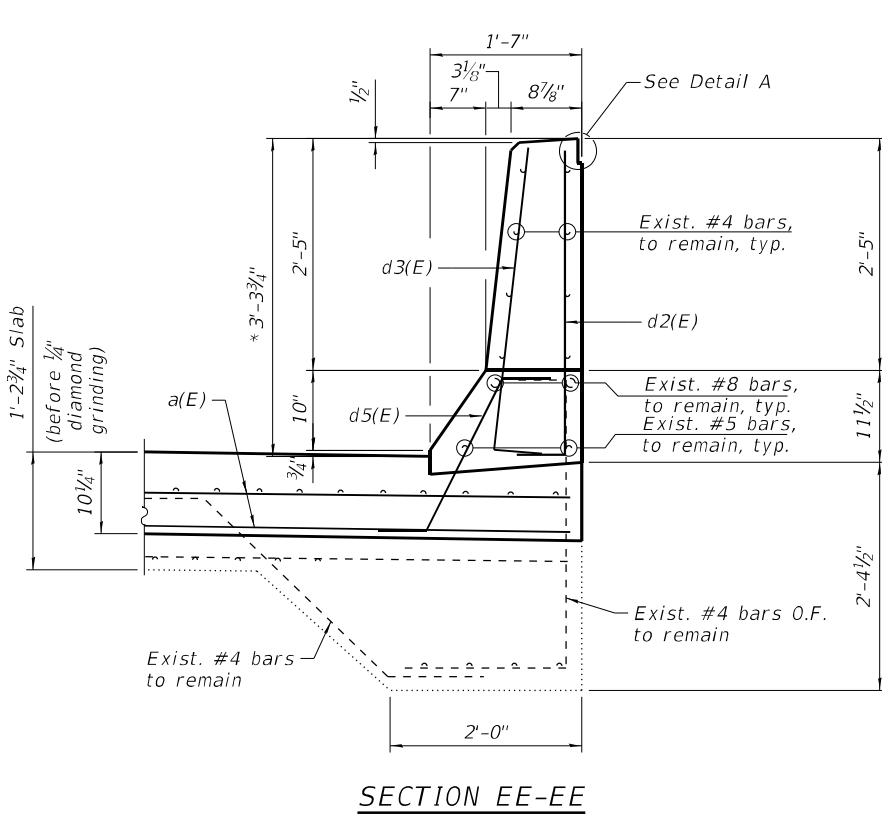
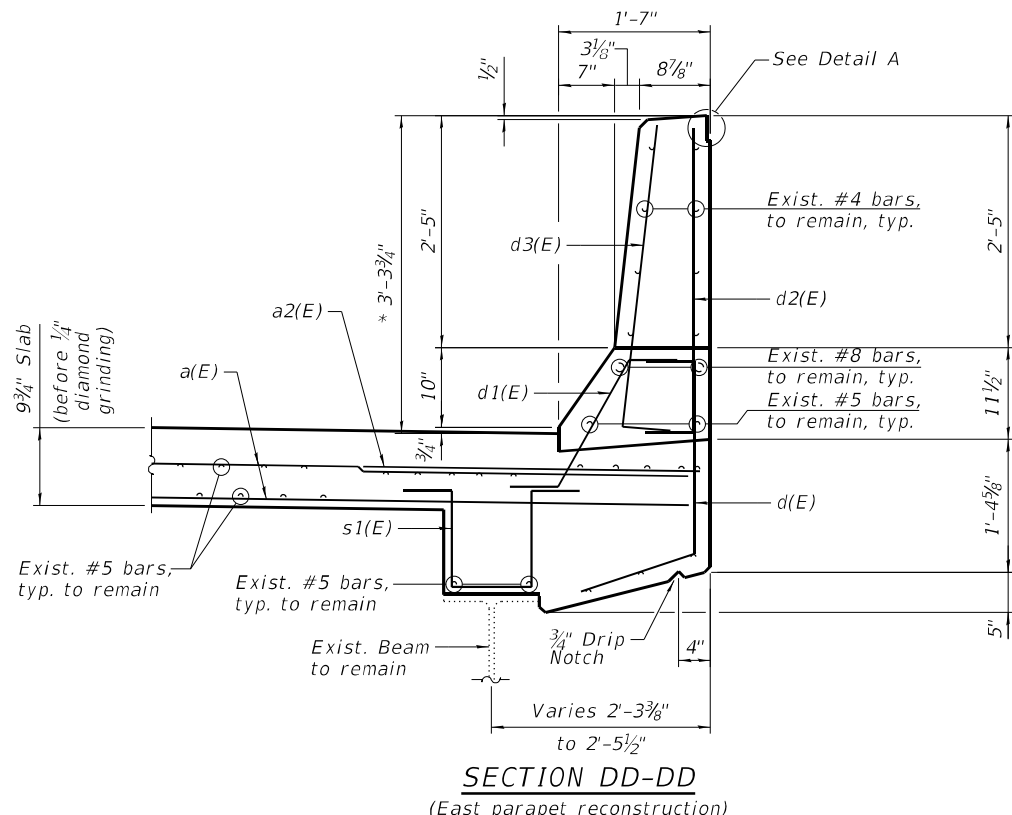
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BILL OF MATERIAL
SOUTH ABUTMENT

Bar	No.	Size	Length	Shape
a(E)	28	#5	24'-3"	—
a1(E)	28	#5	26'-5"	—
a2(E)	6	#6	6'-6"	—
d(E)	3	#4	3'-9"	⌋
d1(E)	5	#5	2'-7"	⌋
d2(E)	8	#4	3'-8"	⌋
d3(E)	8	#5	3'-8"	⌋
d4(E)	2	#4	3'-9"	⌋
d5(E)	3	#5	2'-10"	⌋
s(E)	4	#5	3'-0"	⌋
s1(E)	16	#5	4'-1"	⌋
s2(E)	24	#5	4'-5"	⌋
u(E)	94	#5	1'-6"	⌋
v(E)	188	#5	1'-3"	—

Concrete Removal	Cu Yd	10.5
Reinforcement Bars, Epoxy Coated	Pound	2,300
Concrete Superstructure	Cu Yd	12.1



Bar	A	B
s(E)	8"	8"
s1(E)	1'-1"	1'-0"
s2(E)	1'-1"	1'-2"

NOTES:

- For Preformed Joint Strip Seal details, see sheet S21-14.
- For Bar Splicer Assembly details, see sheet S21-23.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- V.I.F. Verify in Field

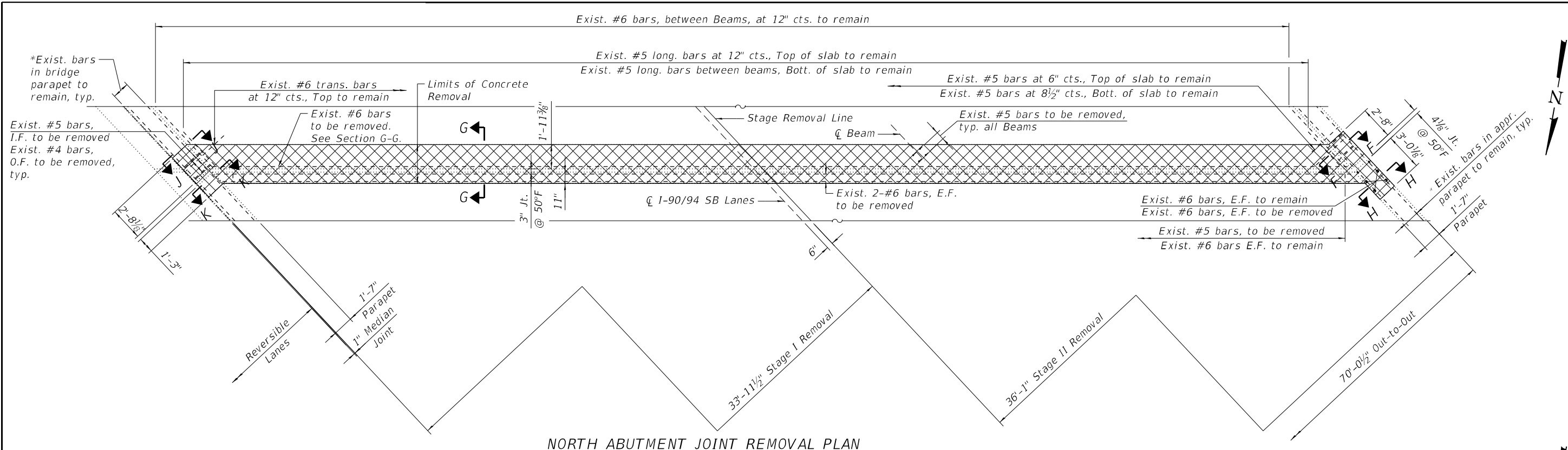
MIN BAR LAPS

- #5 3'-6"
- #6 4'-0"

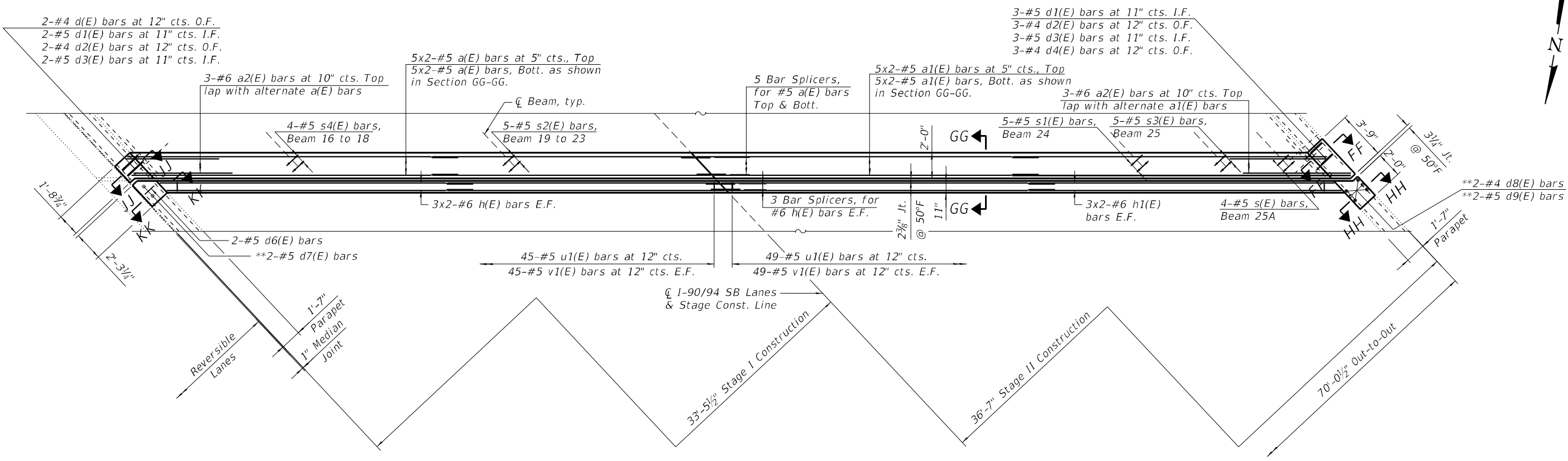
* Adjust in field as required to match reversible parapet

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PLOT DATE =	DRAWN - J.T.B.	REVISED -
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1056
CONTRACT NO. 62K74				



NORTH ABUTMENT JOINT REMOVAL PLAN



NORTH ABUTMENT JOINT RECONSTRUCTION PLAN


NOTES:

- For sections F-F, G-G, H-H, FF-FF, GG-GG and HH-HH, see sheet S21-12.
- For sections J-J, K-K, JJ-JJ, and KK-KK, see sheet S21-13.

* Existing longitudinal bars to remain in the parapets can be cut in the field as required

** Epoxy grout #5 d7(E) and d9(E) and #4 d8(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.

LEGEND

-  Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- E.F. Each Face

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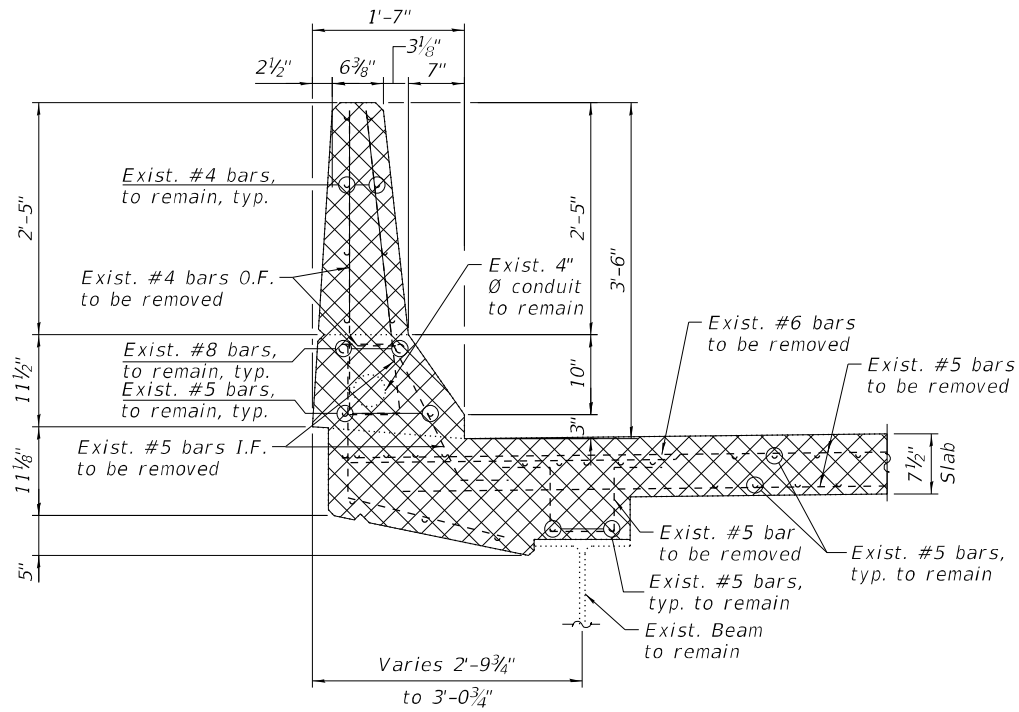
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 DEPARTMENT OF TRANSPORTATION**

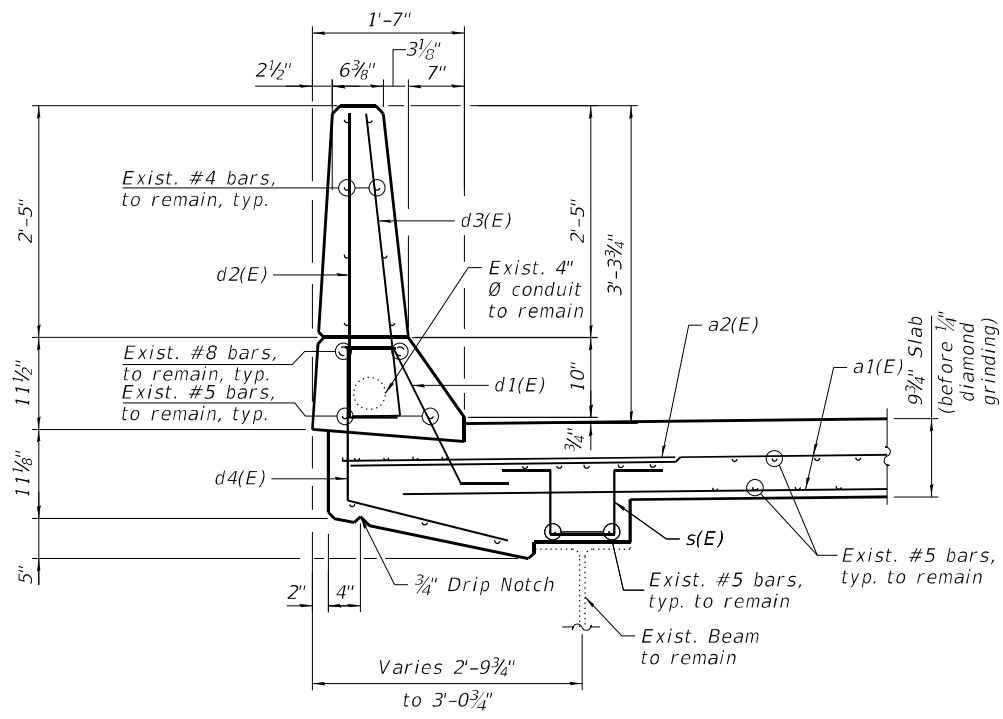
**NORTH ABUTMENT EXPANSION JOINT DETAILS I
 SN 016-0127 (SB)**

SHEET S21-11 OF S21-23 SHEETS

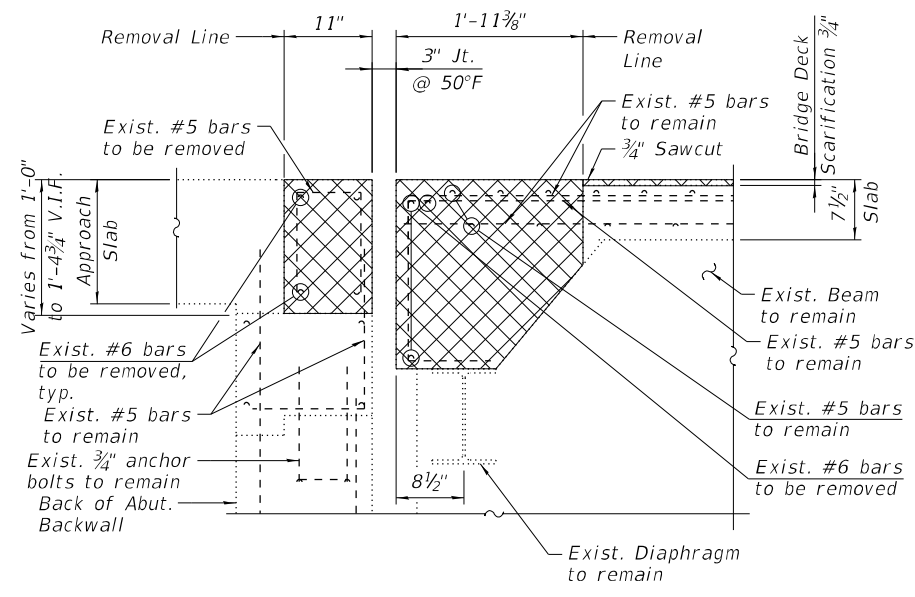
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90	2020-004-BR	COOK	1492	1057
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



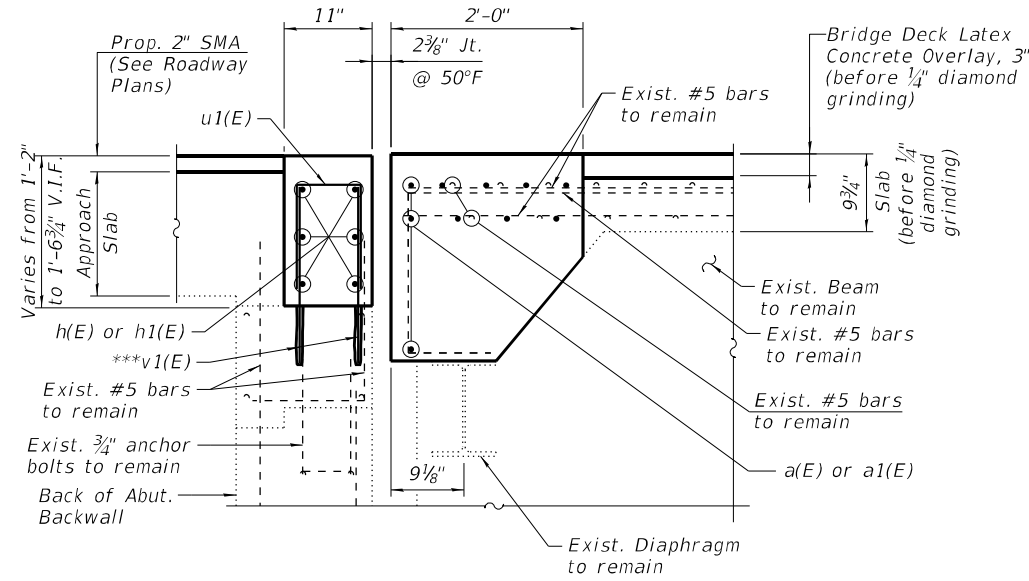
SECTION F-F
(West parapet removal)



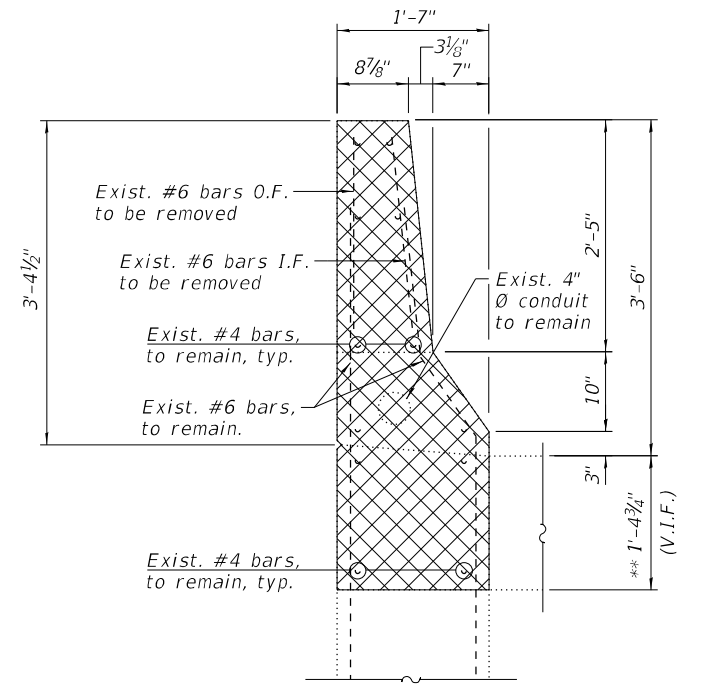
SECTION FF-FF
(West parapet reconstruction)



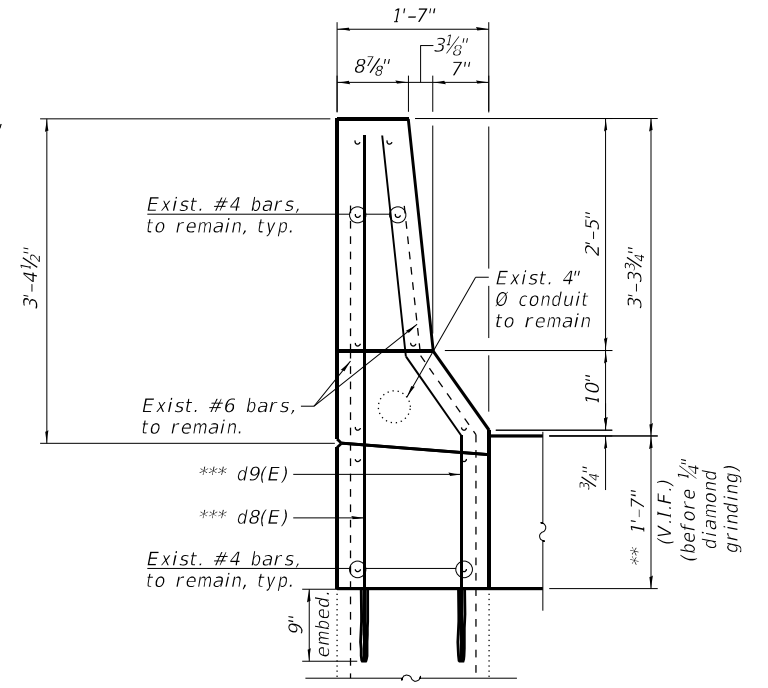
SECTION G-G



SECTION GG-GG



SECTION H-H
(West parapet removal)



SECTION HH-HH
(West parapet reconstruction)

LEGEND

- ** Dimension is taken at the Back of Abut.
- *** Epoxy grout #5 d8(E), d9(E) & v1(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.
- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- V.I.F. Verify in Field

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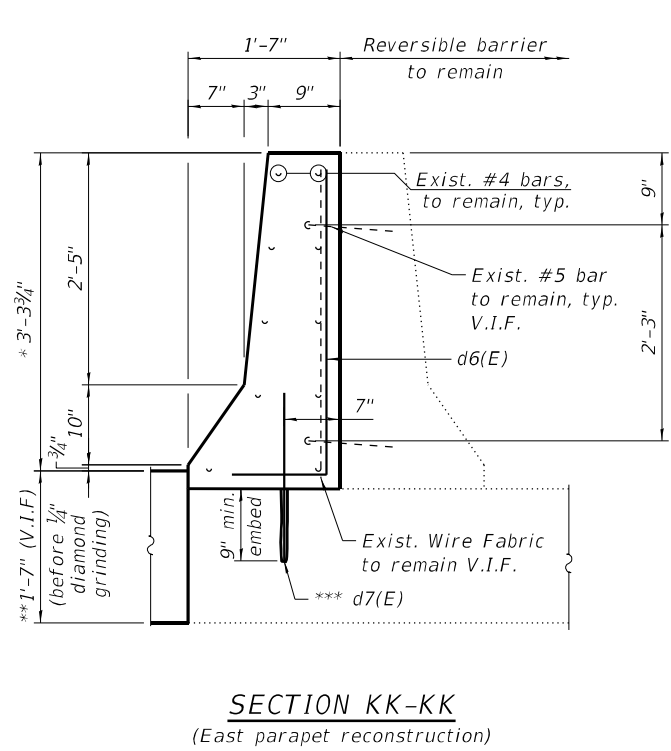
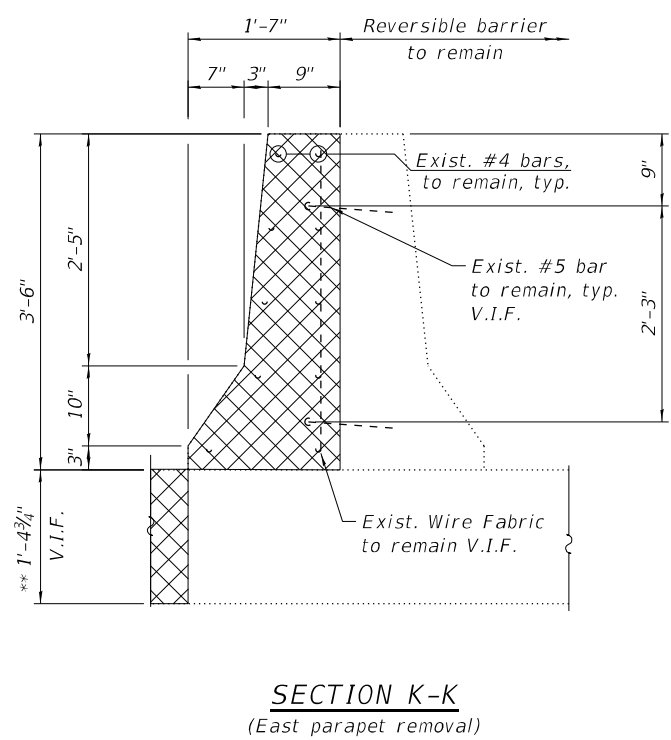
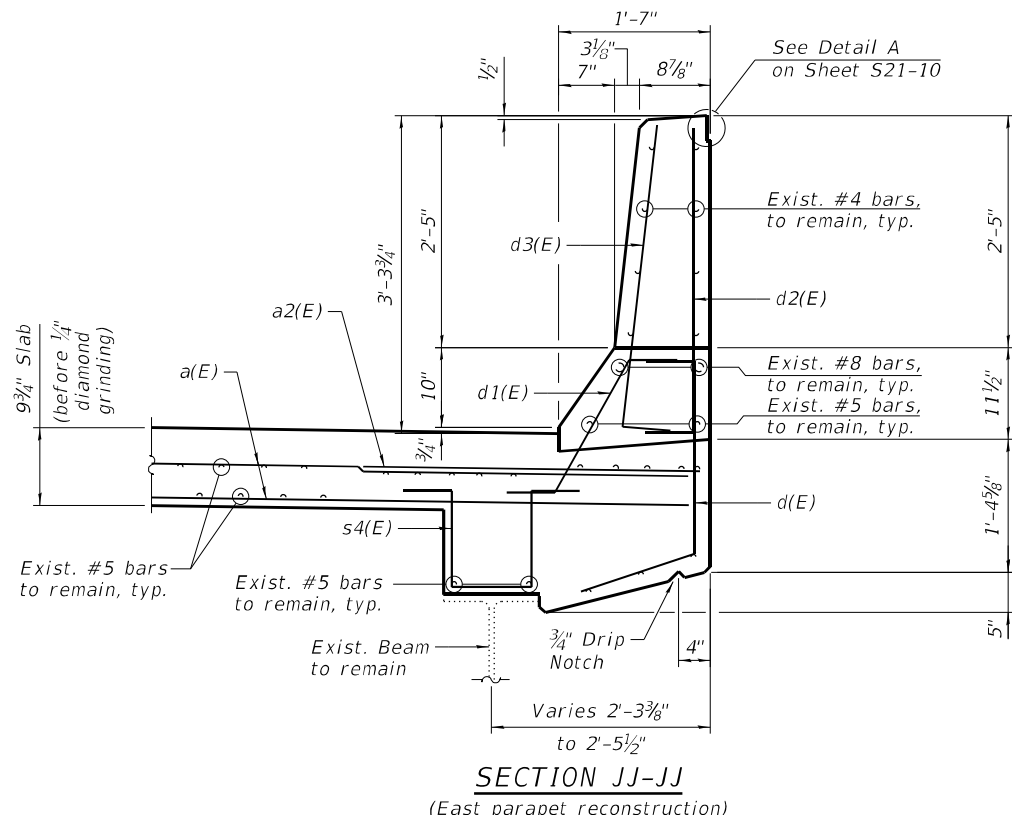
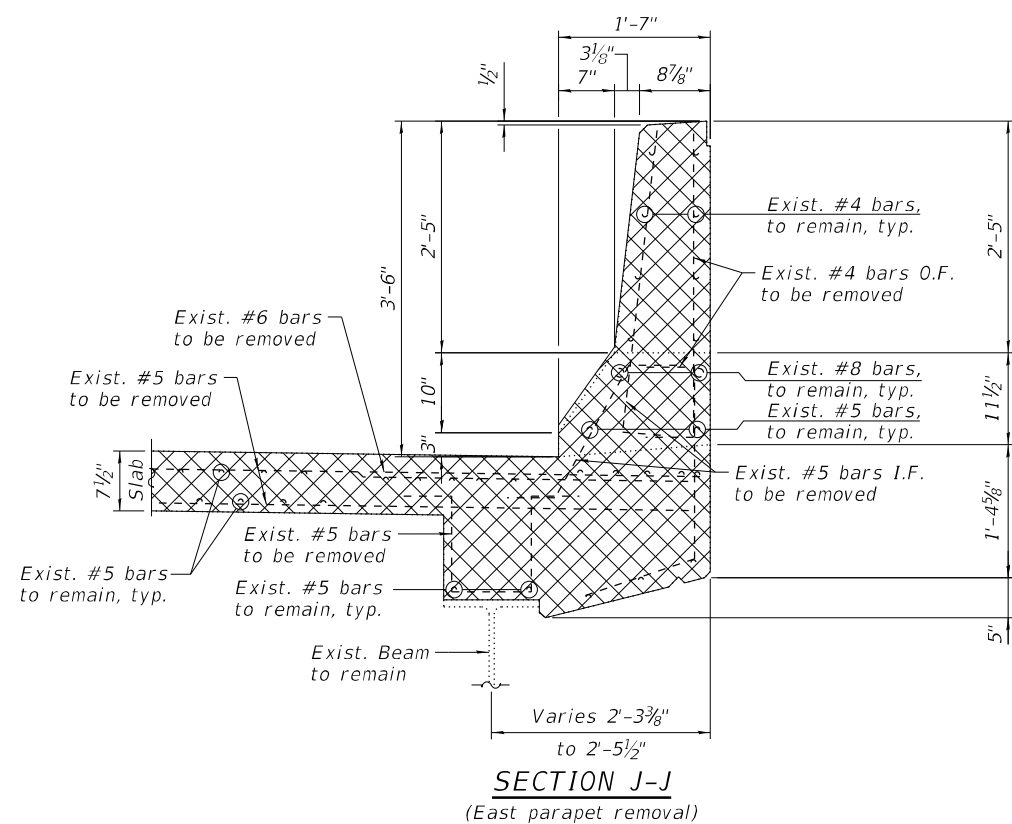
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT EXPANSION JOINT DETAILS II
SN 016-0127 (SB)

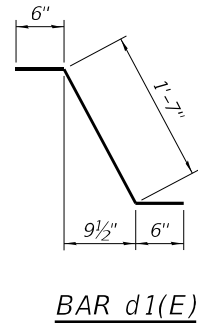
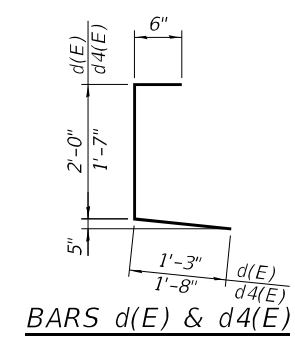
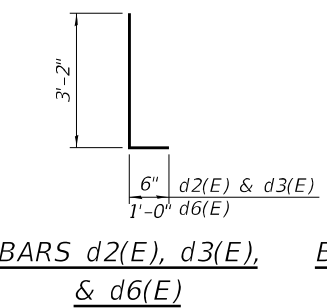
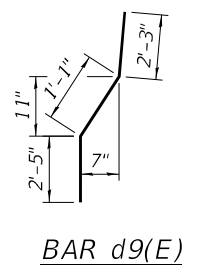
SHEET S21-12 OF S21-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1058
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

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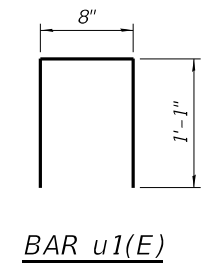
*** Epoxy grout #5 d7(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.



Bar	A	B
s(E)	8"	8"
s1(E)	1'-1"	1'-0"
s2(E)	1'-1"	1'-2"
s3(E)	1'-1"	10"
s4(E)	1'-1"	1'-4"

BILL OF MATERIAL
NORTH ABUTMENT

Bar	No.	Size	Length	Shape
a(E)	20	#5	24'-3"	—
a1(E)	20	#5	26'-5"	—
a2(E)	6	#6	6'-6"	—
d(E)	2	#4	3'-9"	┌
d1(E)	5	#5	2'-7"	┌
d2(E)	5	#4	3'-8"	┌
d3(E)	5	#5	3'-8"	┌
d4(E)	3	#4	3'-9"	┌
d6(E)	2	#5	4'-2"	┌
d7(E)	2	#5	1'-10"	—
d8(E)	2	#4	5'-4"	┌
d9(E)	2	#5	5'-9"	┌
h(E)	12	#6	24'-3"	—
h1(E)	12	#6	26'-5"	—
s(E)	4	#5	3'-0"	┌
s1(E)	5	#5	4'-1"	┌
s2(E)	25	#5	4'-5"	┌
s3(E)	5	#5	3'-9"	┌
s4(E)	12	#5	4'-9"	┌
u1(E)	94	#5	2'-10"	┌
v1(E)	188	#5	2'-0"	—
Concrete Removal			Cu Yd	12.8
Reinforcement Bars, Epoxy Coated			Pound	3,020
Concrete Superstructure			Cu Yd	14.7



NOTES:

- For Preformed Joint Strip Seal details, see sheet S21-14.
- For Bar Splicer Assembly details, see sheet S21-23.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- V.I.F. Verify in Field

MIN BAR LAPS

- #5 3'-6"
- #6 4'-0"

* Adjust in field as required to match reversible parapet
 ** Dimension is taken at the Back of Abut.



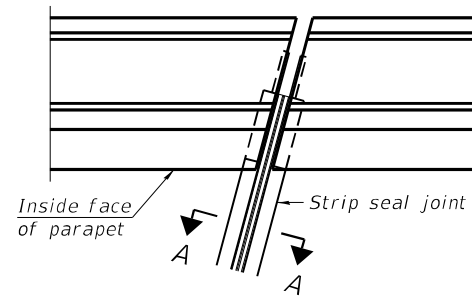
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT EXPANSION JOINT DETAILS III
SN 016-0127 (SB)

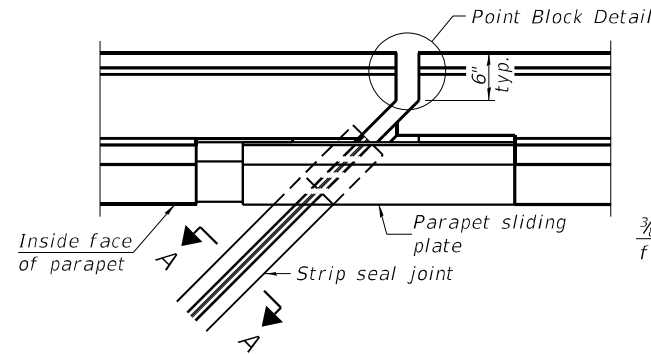
SHEET S21-13 OF S21-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1059
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

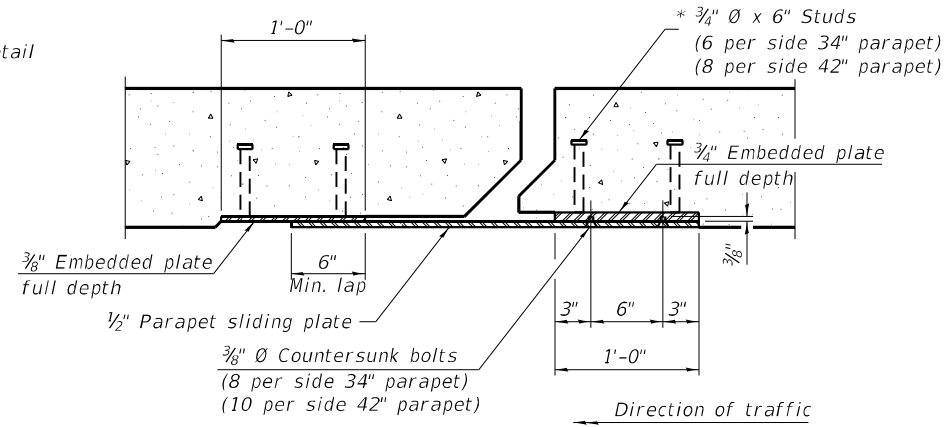


FOR SKEWS $\leq 30^\circ$

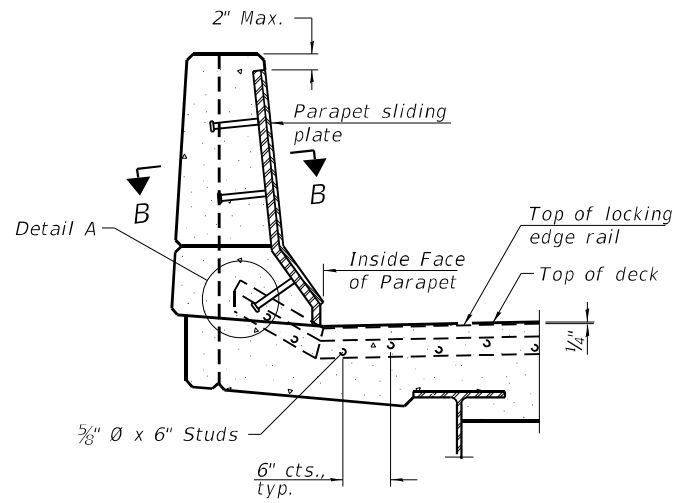
PLAN AT PARAPET



FOR SKEWS $> 30^\circ$

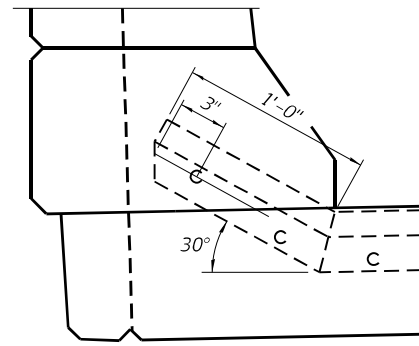


SECTION B-B

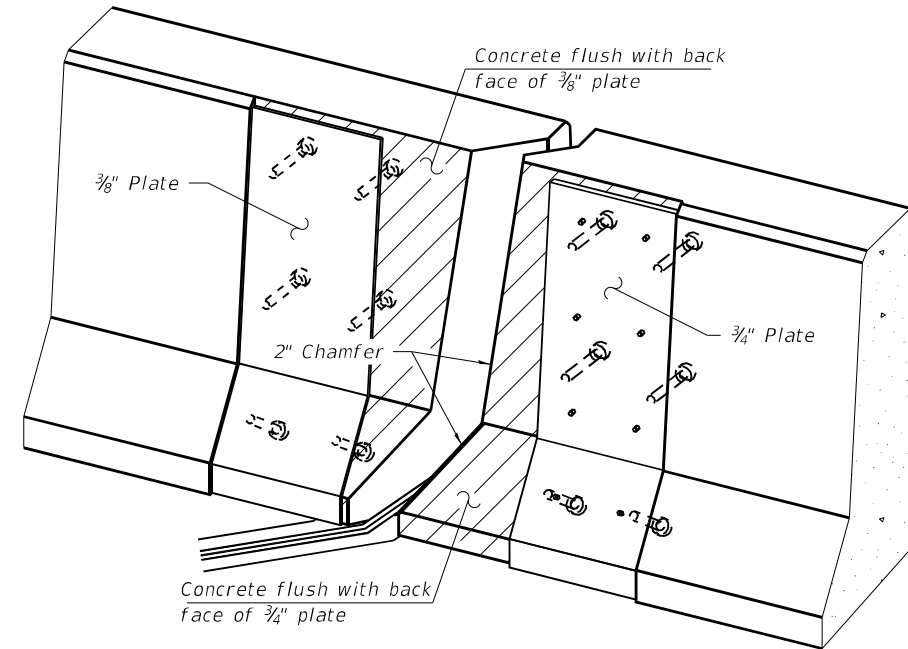


ELEVATION AT PARAPET

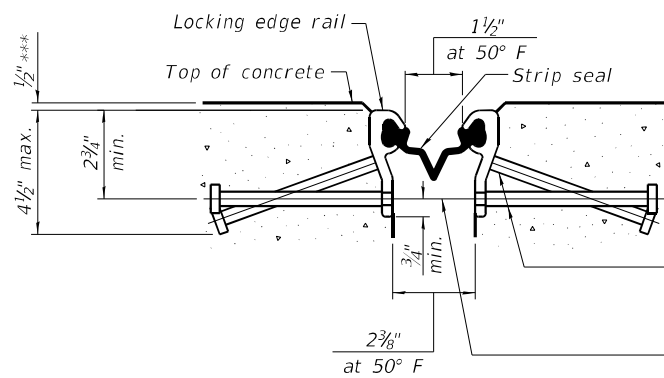
(Skews $> 30^\circ$ shown. Skews $\leq 30^\circ$ similar except as shown in plan view.)



DETAIL A



TRIMETRIC VIEW
(Showing embedded plates only)



SHOWING ROLLED RAIL JOINT

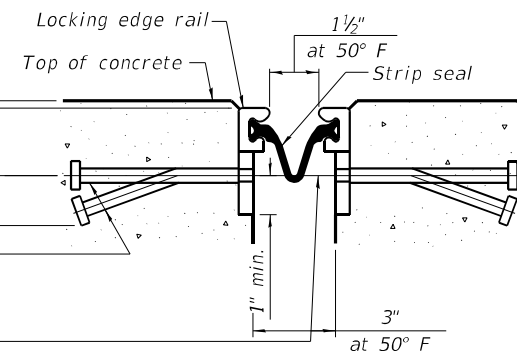
* $5/8"$ ϕ x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

$3/8"$ ϕ threaded rods in $1/16"$ ϕ holes at $\pm 4"$ 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.

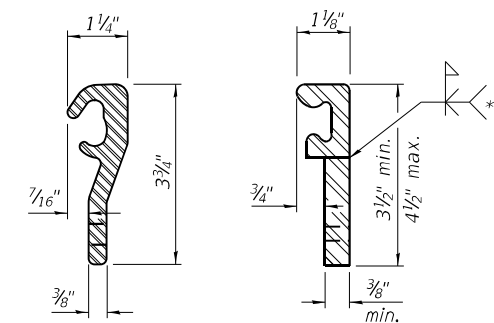
SECTION A-A

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

*** Before $1/4"$ Diamond Grinding.

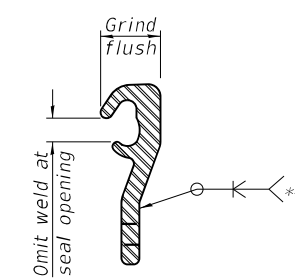


SHOWING WELDED RAIL JOINT



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.

BILL OF MATERIAL

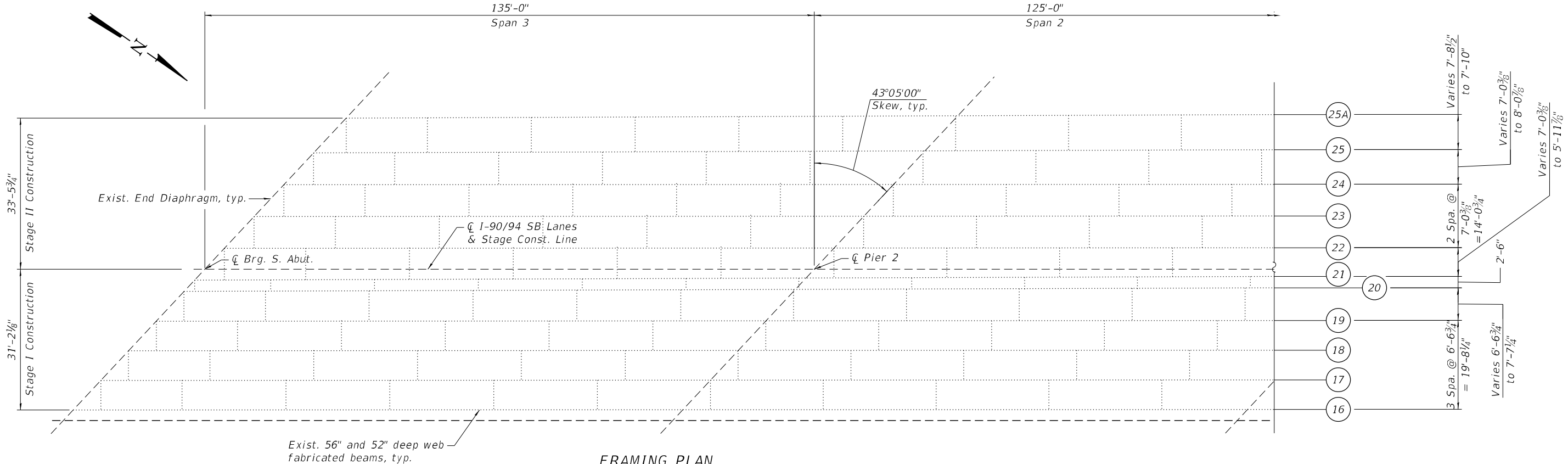
Item	Unit	Total
Preformed Joint Strip Seal	Foot	188

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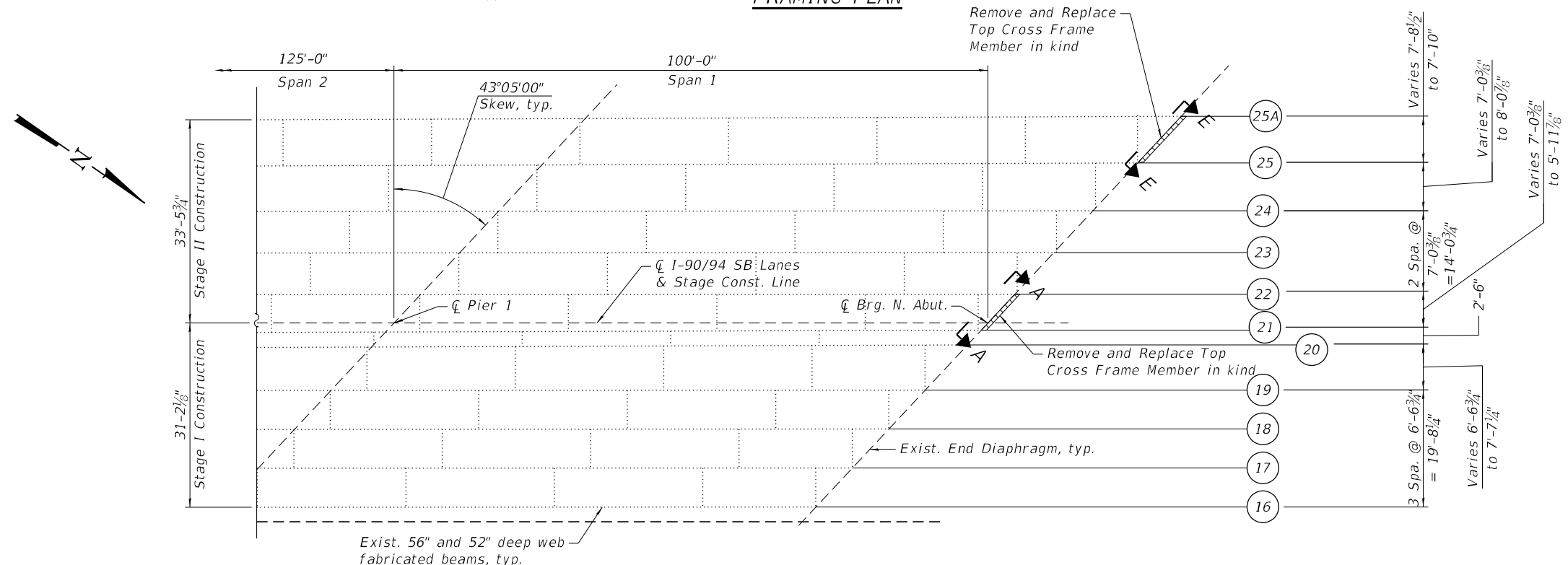
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1060
CONTRACT NO. 62K74				

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FRAMING PLAN



FRAMING PLAN

NOTES:

1. All work is to be performed utilizing staged construction. See Sheets S21-03 and S21-04 for details.
2. For Section A-A, see Sheet S21-16.
3. For Section E-E, see Sheet S21-17.

LEGEND

Remove and Replace Exist. Cross Frame Member

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing And Erecting Structural Steel	Pound	810
Structural Steel Removal	Pound	810



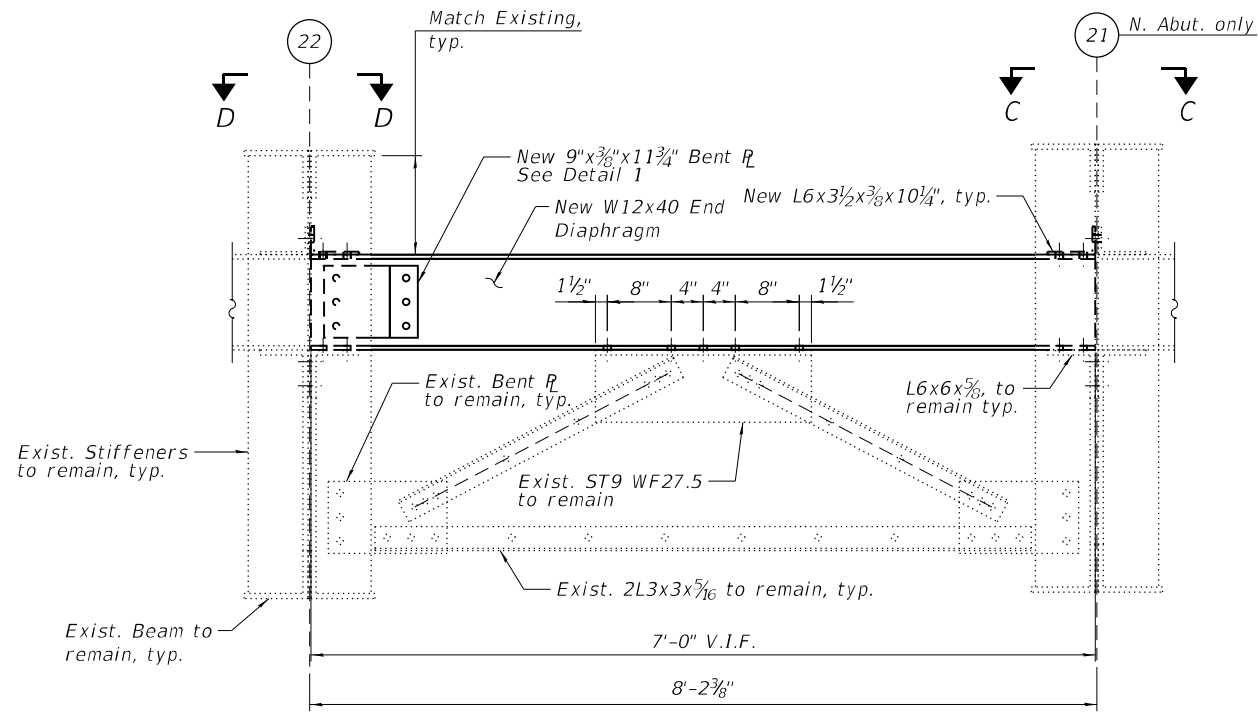
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

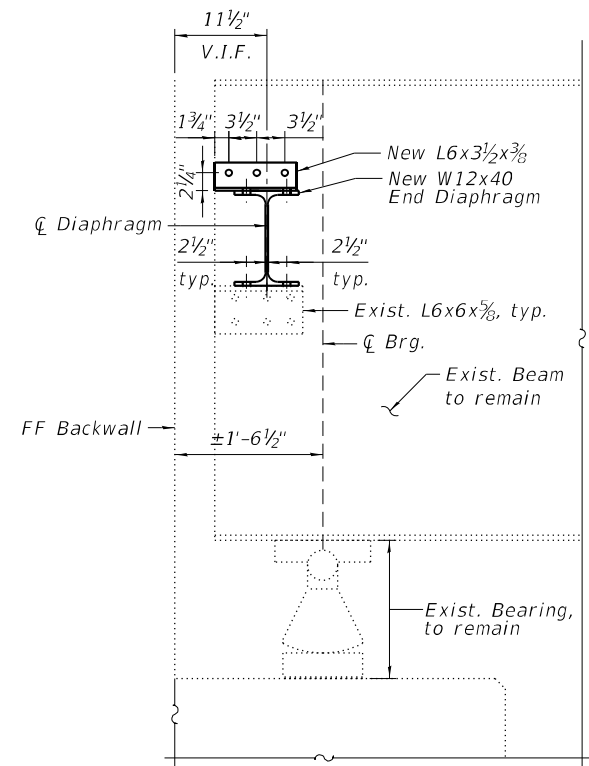
**FRAMING PLAN
 SN 016-0127 (SB)**

SHEET S21-15 OF S21-23 SHEETS

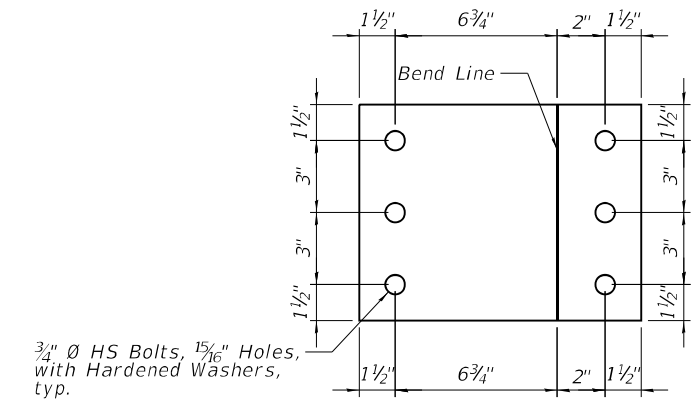
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			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	



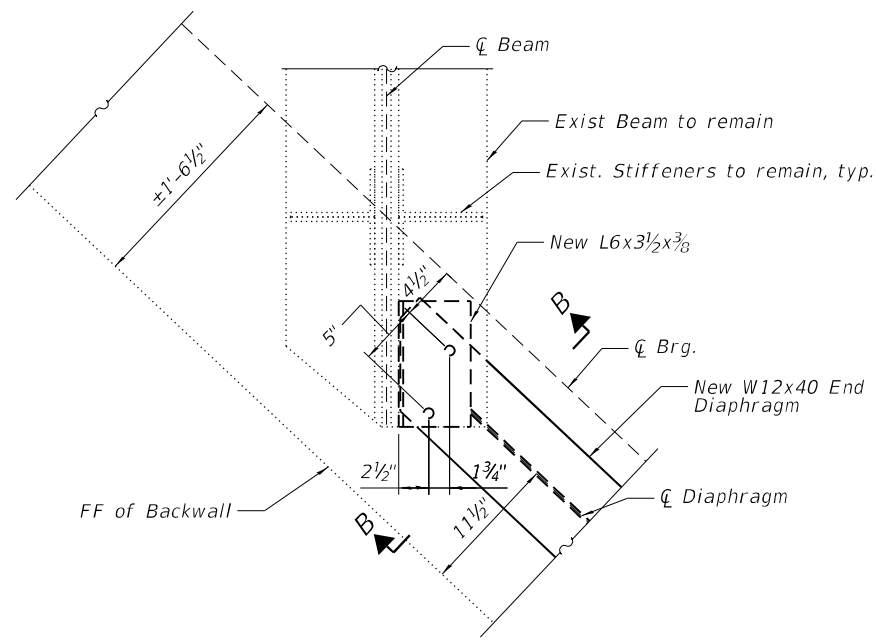
SECTION A-A
(At North Abutment)



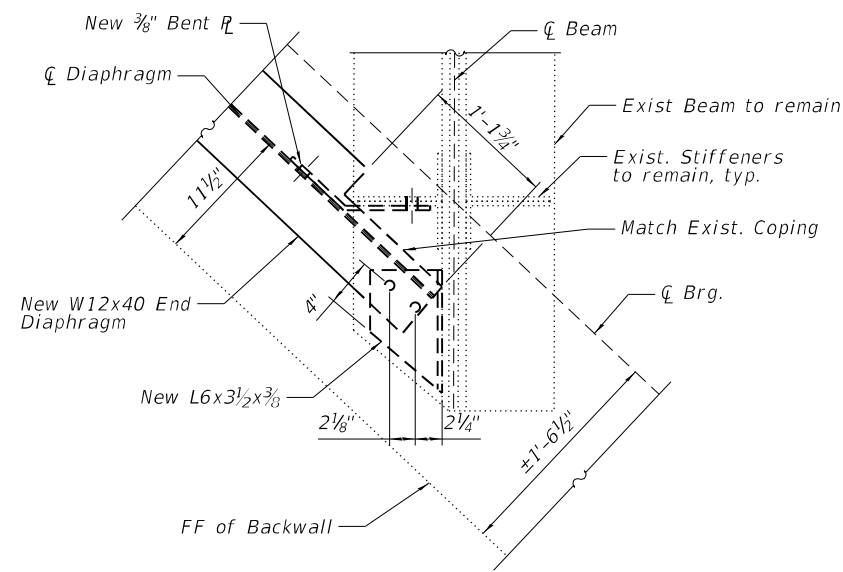
SECTION B-B



DETAIL 1



SECTION C-C



SECTION D-D

NOTES

1. For location of Diaphragm Repair and Bill of Material, see Sheet S21-15.
2. All proposed diaphragm repair plates and angles shall conform to the requirements of AASHTO M270 Grade 36.
3. All proposed diaphragm repair plates, angles, bolts, nuts and washers shall be paid for as Furnishing and Erecting Structural Steel.
4. The cost of all field drilling shall be included in the cost of Furnishing and Erecting Structural Steel.
5. Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection. Cost shall be included with Furnishing and Erecting Structural Steel.
6. Existing diaphragm and connection angle removal shall be paid for as Structural Steel Removal.
7. All proposed steel dimensions shall be verified in the field prior to fabrication.

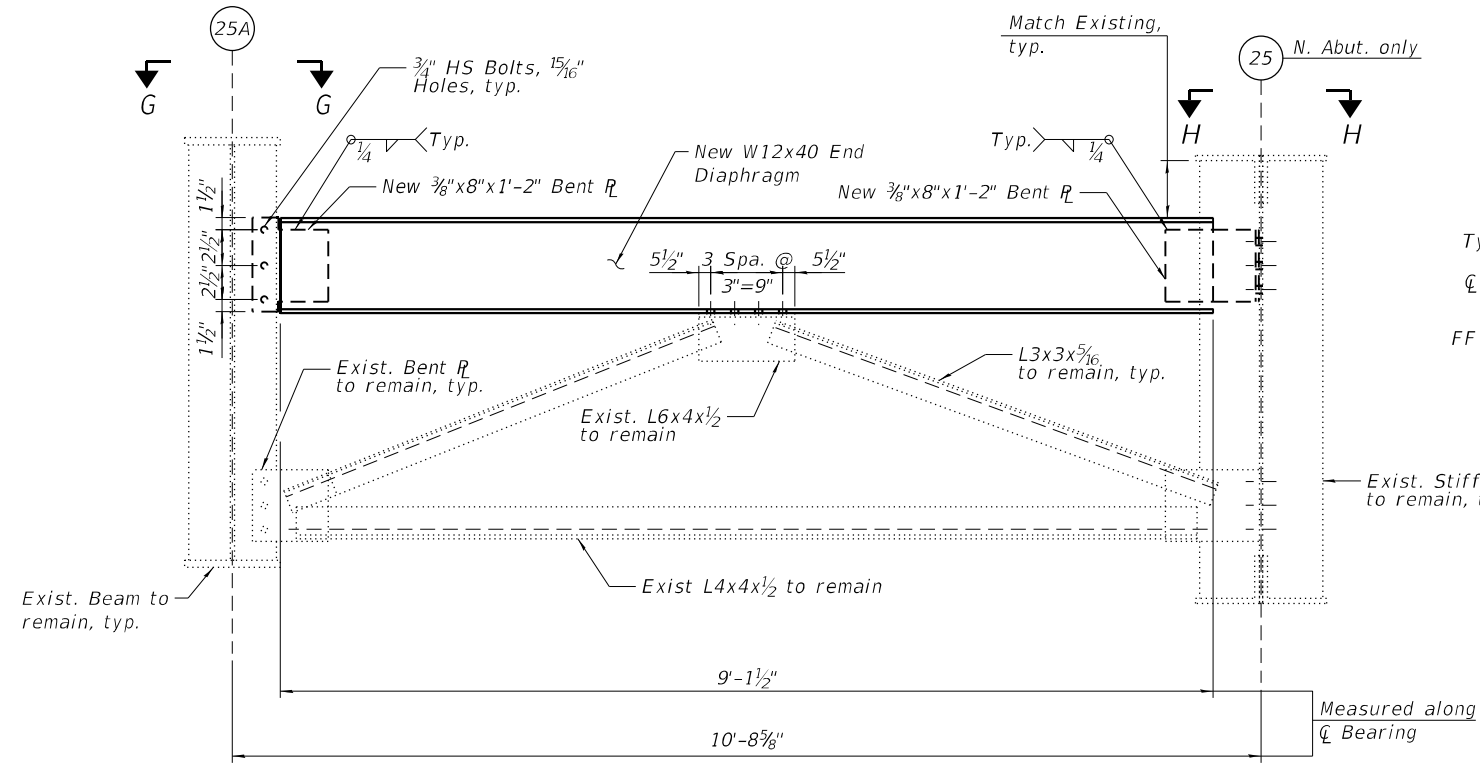
LEGEND

- Field drill holes in new steel. Use existing steel as a template to field drill holes in new steel.

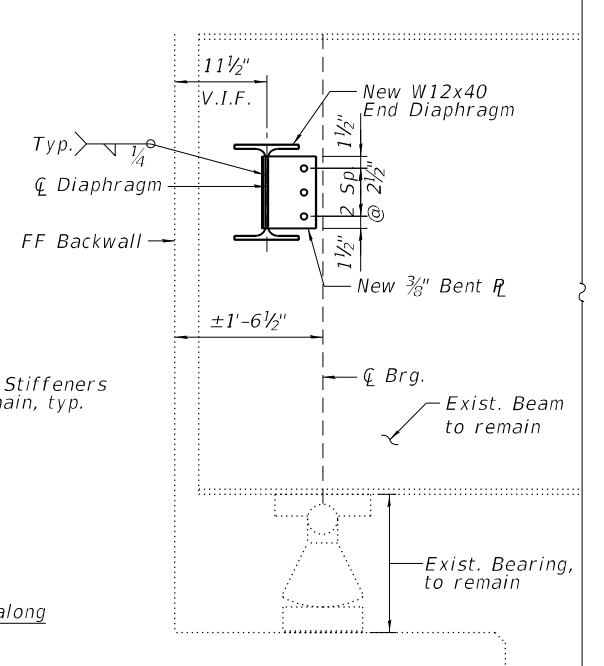
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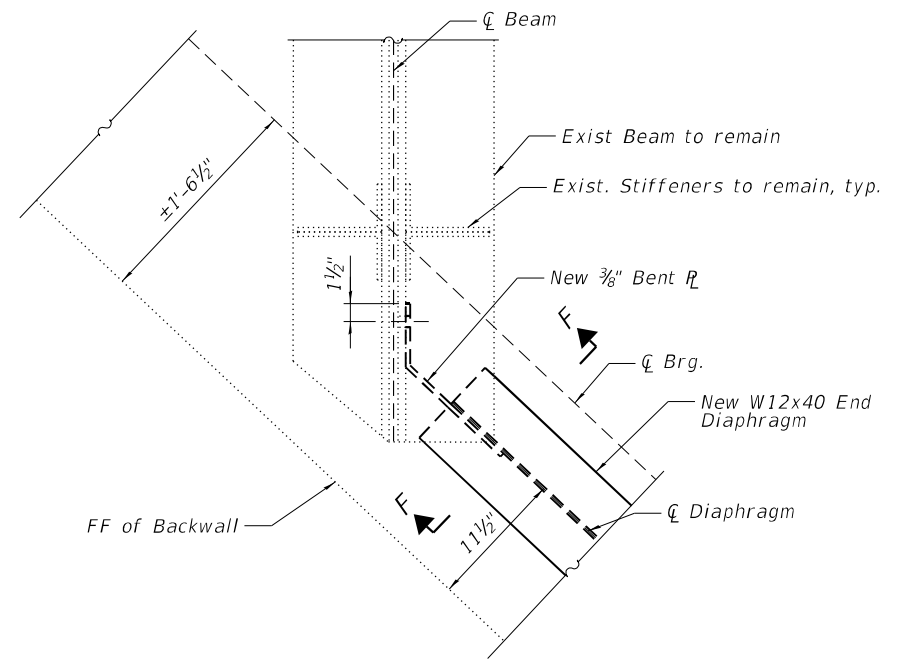
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			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	



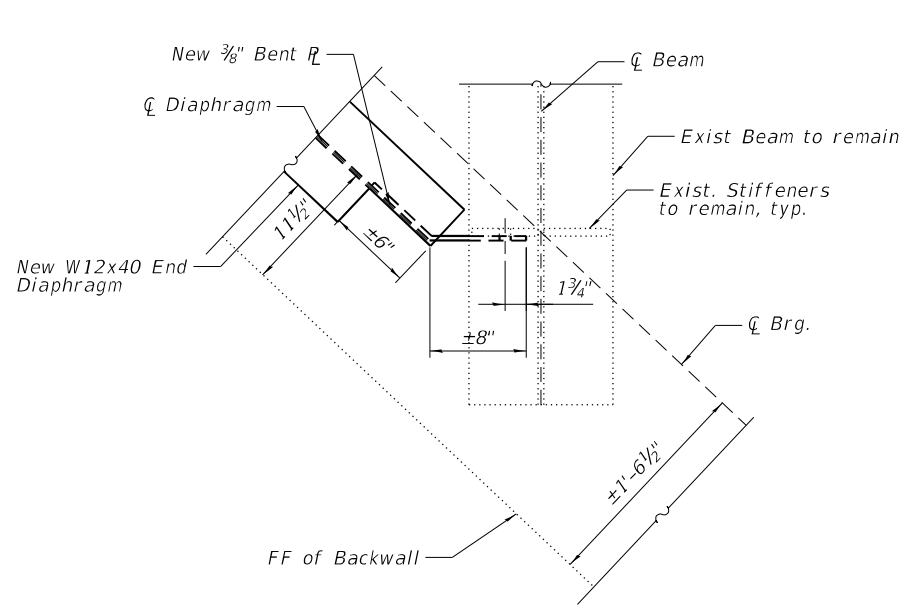
SECTION E-E
(At North Abutment)



SECTION F-F



SECTION G-G



SECTION H-H

NOTES

1. For location of Diaphragm Repair and Bill of Material, see Sheet S21-15.
2. All proposed diaphragm repair plates and angles shall conform to the requirements of AASHTO M270 Grade 36.
3. All proposed diaphragm repair plates, angles, bolts, nuts and washers shall be paid for as Furnishing and Erecting Structural Steel.
4. The cost of all field drilling shall be included in the cost of Furnishing and Erecting Structural Steel.
5. Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection. Cost shall be included with Furnishing and Erecting Structural Steel.
6. Existing diaphragm and connection angle removal shall be paid for as Structural Steel Removal.
7. All proposed steel dimensions shall be verified in the field prior to fabrication.

LEGEND

- Field drill holes in new steel. Use existing steel as a template to field drill holes in new steel.

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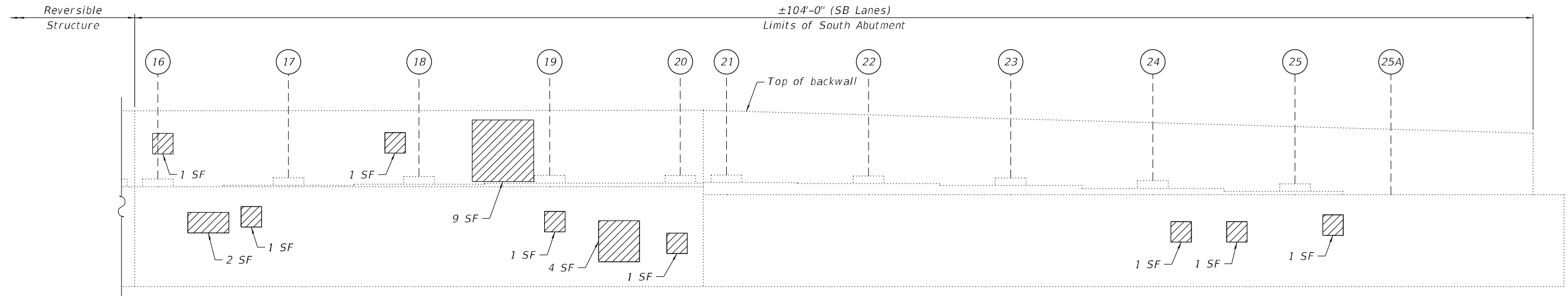
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL REPAIR DETAILS II
 SN 016-0127 (SB)**

SHEET S21-17 OF S21-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1063
			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	



ELEVATION - SOUTH ABUTMENT
(Looking South)

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.
- Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
- For slope wall repairs, see Sheet S21-22.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

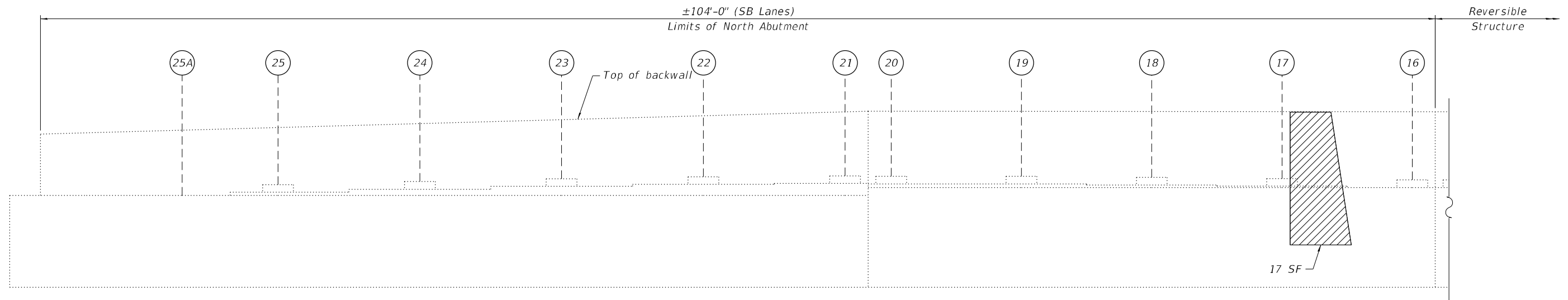
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	527
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	23

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1064
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



ELEVATION - NORTH ABUTMENT
(Looking North)

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.
- Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
- For slope wall repairs, see Sheet S21-22.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	478
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	17

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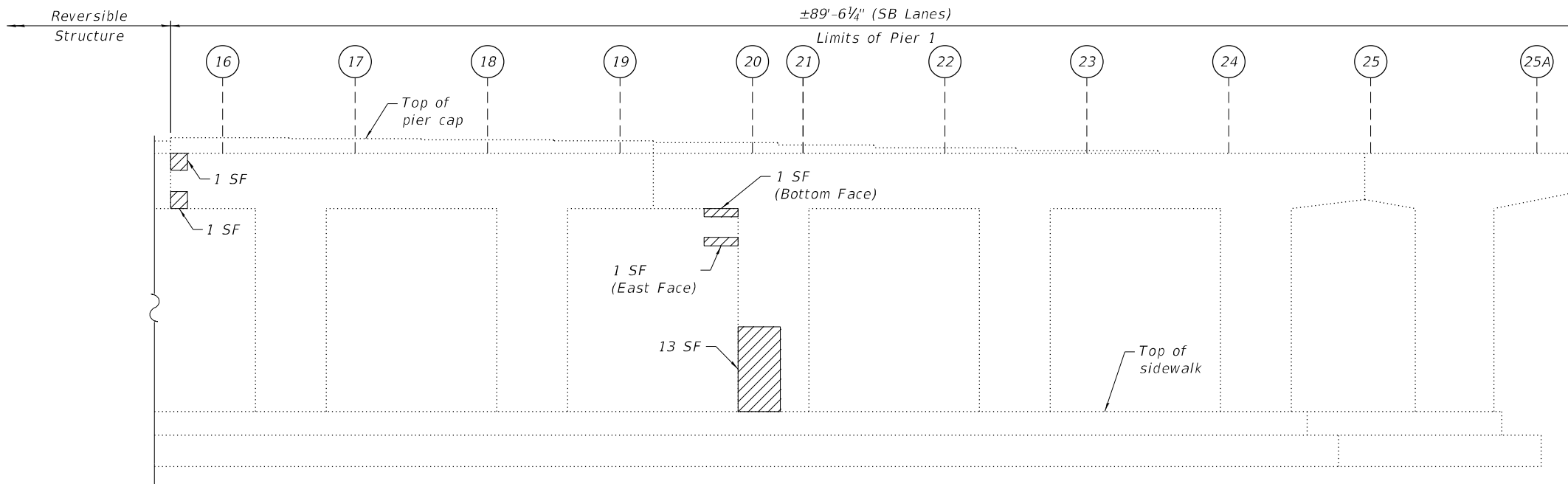
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NORTH ABUTMENT REPAIRS
SN 016-0127 (SB)**

SHEET S21-19 OF S21-23 SHEETS

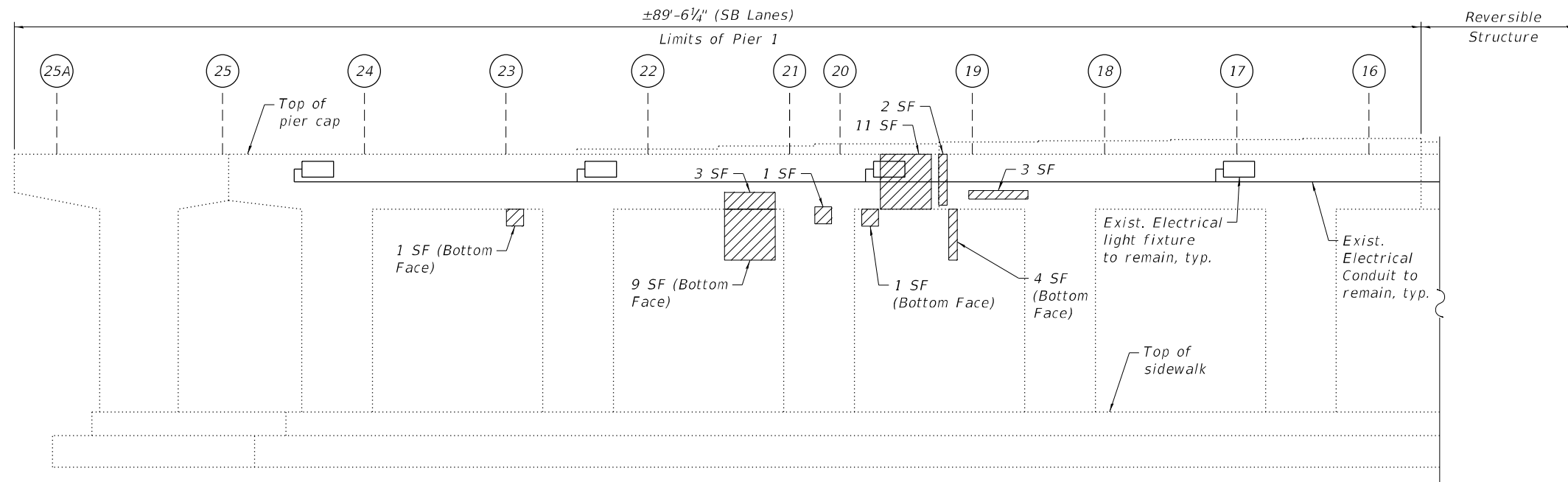
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1065
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



ELEVATION - PIER 1
(Looking South)



EXISTING LIGHTING: PIER 1
(Looking Northwest)



ELEVATION - PIER 1
(Looking North)

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.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

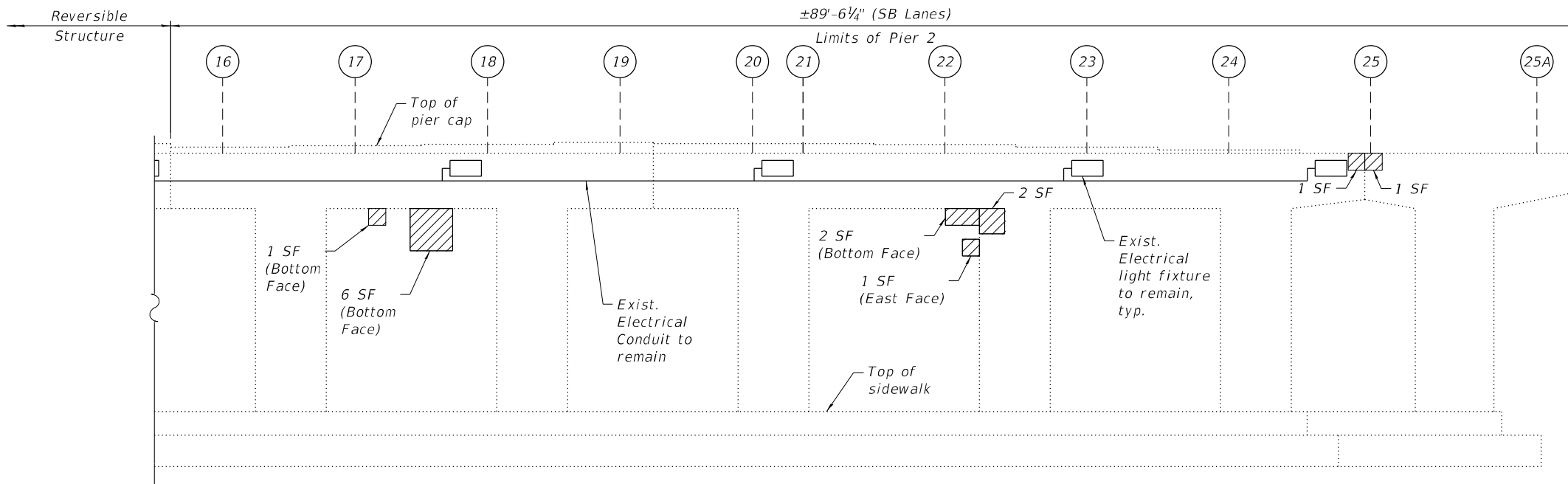
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	52

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1066
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



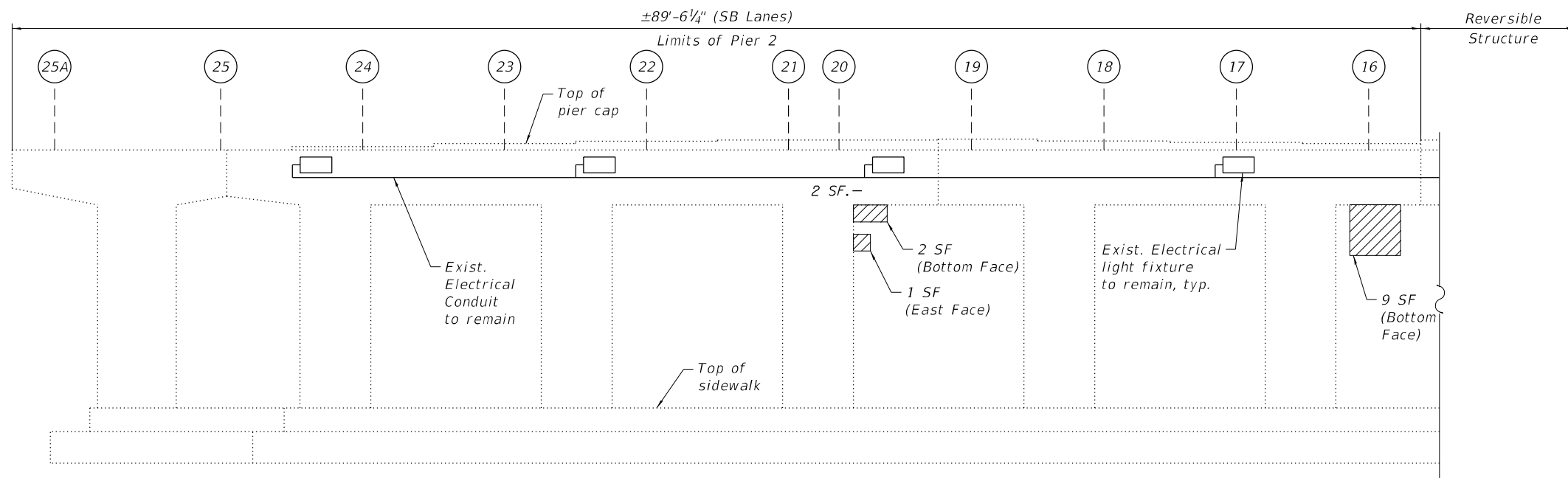
ELEVATION - PIER 2
(Looking South)



EXISTING LIGHTING: PIER 2
(Looking Northwest)



EXISTING LIGHTING: PIER 2
(Looking Northwest)



ELEVATION - PIER 2
(Looking North)

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.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

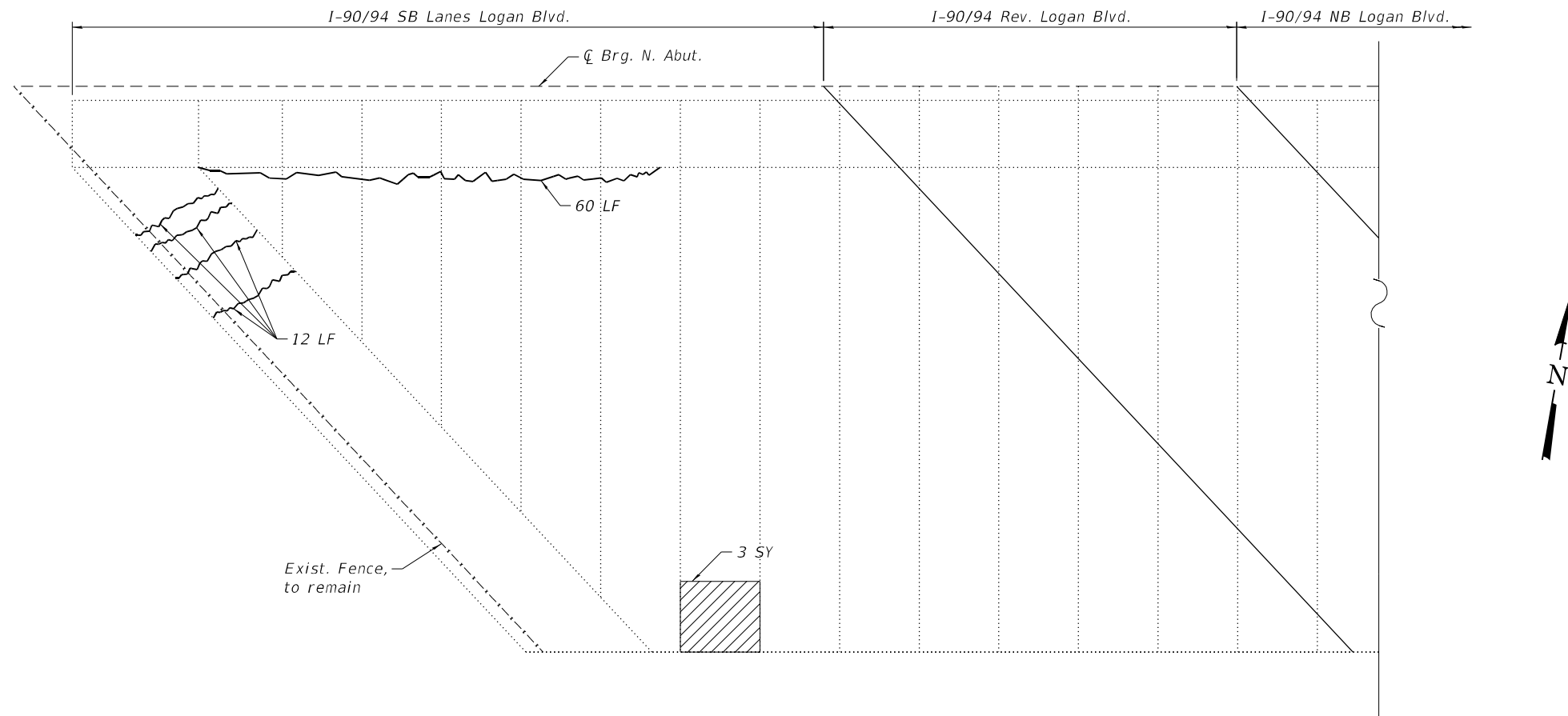
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ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	26

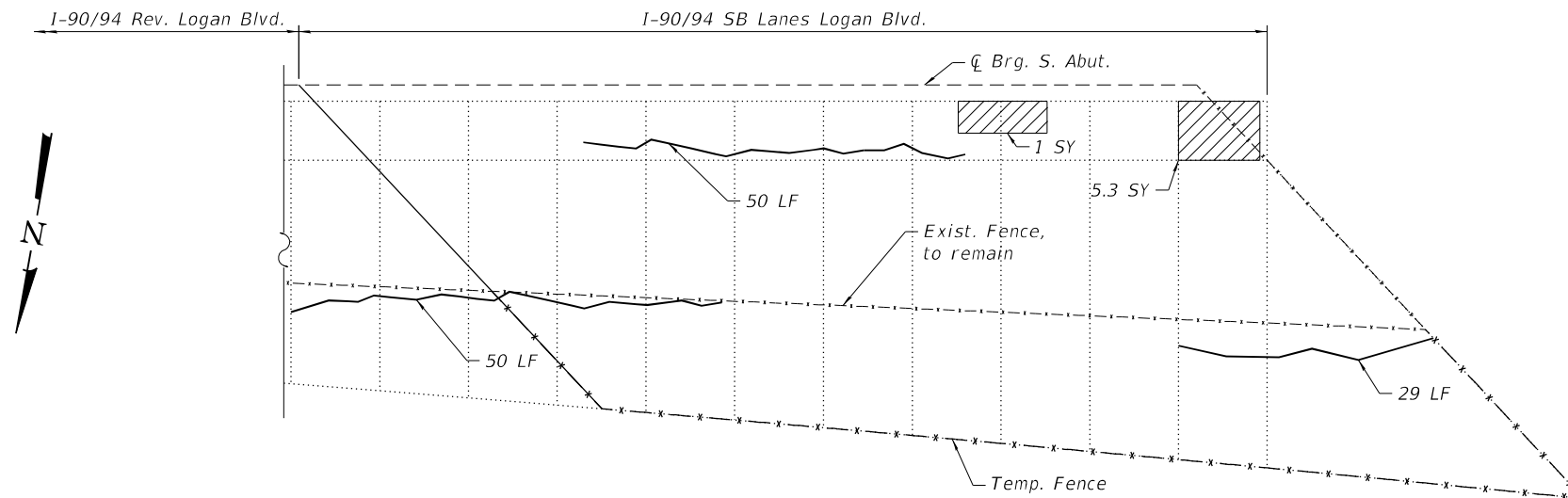
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1067
			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	



NORTH SLOPE WALL - PLAN
(Looking North)



SOUTH SLOPE WALL - PLAN
(Looking South)

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.
- Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq ft

LEGEND

- Slope Wall Removal and Replacement with 4 Inch Slope Wall
- SY Square Yard
- LF Linear Foot
- Slope Wall Crack Sealing

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Porous Granular Embankment	Cu Yd	10
Slope Wall Removal	Sq Yd	10
Slope Wall 4 Inch	Sq Yd	10
Slope Wall Crack Sealing	Foot	237

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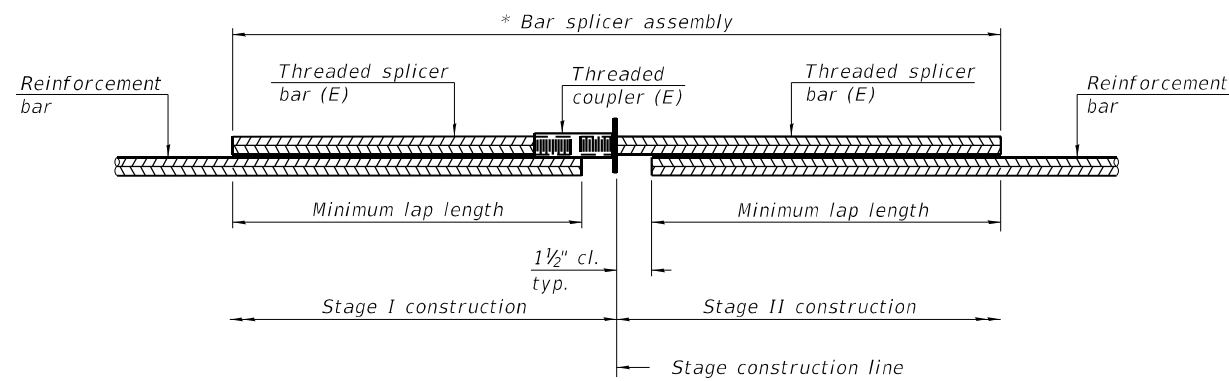
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SLOPE WALL REPAIRS
SN 016-0127 (SB)**

SHEET S21-22 OF S21-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1068
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



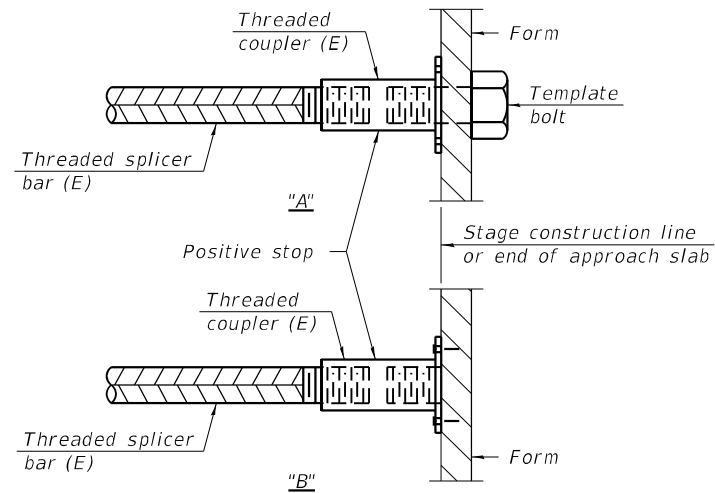
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

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
South Abutment Exp. Jt.	#5	14	3'-6"
North Abutment Exp. Jt.	#5	10	3'-6"
	#6	6	4'-0"

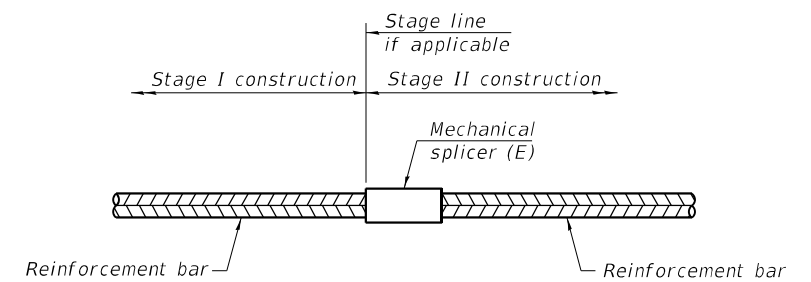


INSTALLATION AND SETTING METHODS

"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

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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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
SN 016-0127 (SB)**

SHEET S21-23 OF S21-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1069
ILLINOIS			FED. AID PROJECT	

CONTRACT NO. 62K74

Existing Structure: S.N. 016-0127 was originally built in 1957 from BCR. The bridge was widened and redecked between 1990 and 1993, and expansion joint repairs were performed in 2013. The structure has a back-to-back abutment length of 368'-1 1/4" and an out-to-out deck width of 35'-11". The superstructure consists of a 7 1/2" thick reinforced concrete deck supported on three span continuous steel beams of span lengths 100'-0", 125'-0", and 135'-0". The substructure consists of reinforced concrete abutments and piers supported on cast-in-place concrete piles at the abutments and timber piles at the piers.

The reversible lanes will be closed to traffic during construction.

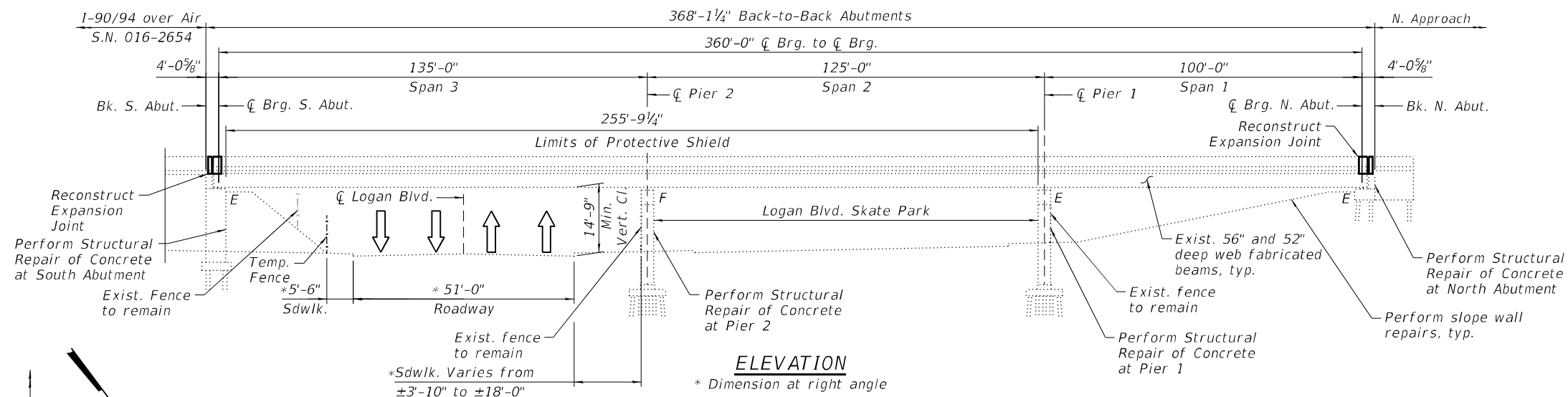
No salvage.

LOADING

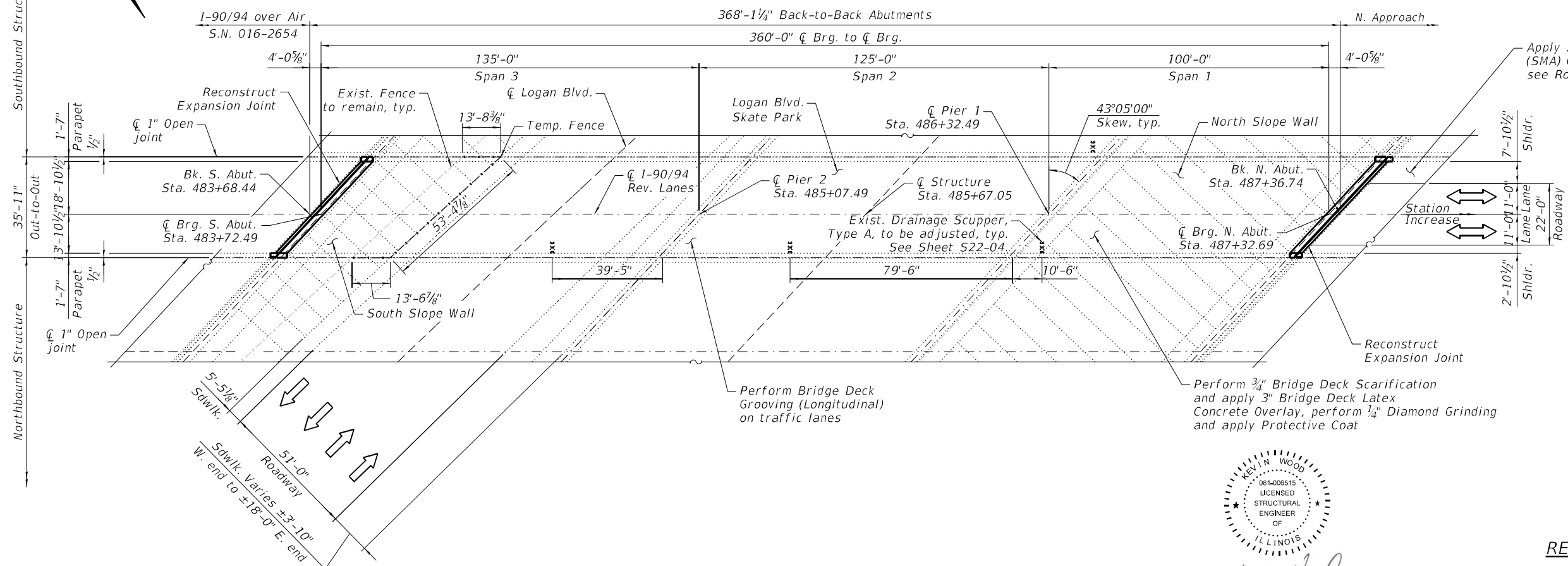
HS20-44 and alternate military loading

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification for Highway Bridges, 17th Edition



ELEVATION
* Dimension at right angle

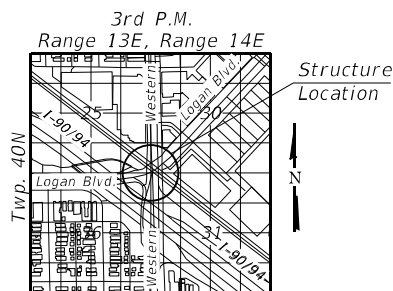


PLAN

NOTE:

1. All stations are to the \O I-90/94 Reversible Roadway and taken from existing plans.
2. No Future Wearing Surface is allowed.

Apply 2" Stone-Matrix Asphalt (SMA) Overlay. For SMA items, see Roadway Plans.



LOCATION SKETCH



Kevin Wood

Engineer Full Name: Kevin Wood Date: 10-20-2022
Illinois Registered Engineer No. 081-006515
Registration Expires 11. 30, 2024

GENERAL PLAN AND ELEVATION
REVERSIBLE I-90 OVER LOGAN BLVD.
F.A.I. SEC 2020-004-BR
COOK COUNTY
STATION: 485+67.05
STRUCTURE NO. 016-0127 (REV)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET S22-01 OF S22-16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1070
CONTRACT NO. 62K74				

ILLINOIS FED. AID PROJECT

GENERAL NOTES

- Reinforcement bars designated (E) shall be epoxy coated.
- Prior to pouring the new concrete deck for Expansion Joints Reconstruction and Bridge Deck repairs, all heavy or 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 Concrete Removal pay item. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further dispositions. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
- Plan dimensions and details relative to the 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 furnished at the unit price bid for the work.
- Cleaning and field painting of structural steel shall be done under a separate painting contract.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Existing reinforcement extended into the removal of area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. The cost of cleaning shall be included in the cost of Concrete Removal.
- Bars indicated thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bar per line.
- All exposed concrete edges shall have a 3/4"x45° chamfer, except where shown otherwise.
- For SMA overlay on Approach Slab, see Roadway Plans.
- Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside face of the parapets, and top of Latex Concrete overlay.
- Joint openings shall be adjusted according to Article 520.04 of the Standard Specification when the deck is poured at an ambient temperature other than 50°F.
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provisions "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- Adjacent I-90/94 Northbound and Southbound bridge is not shown throughout the plans for clarity.
- The Contractor shall take the necessary precautions for the protection of passing vehicles, bicycles and pedestrians from falling objects and/or materials until completion of work.
- The Contractor is responsible to remove, support and reinstall all existing electrical conduits interfering with the work. See special provision "Protection and Maintenance of Existing Underpass Luminaires".
- The Contractor shall exercise caution during Concrete Removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
- The Contractor is responsible to protect the existing conduit and junction box embedded in the parapet during concrete removal and construction. Any damage to the existing conduit and junction box shall be repaired by the Contractor at no additional cost to the Department.
- Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to be placed above the existing lighting fixtures in order to maintain the existing level of lighting on the roadway underneath. Details shall be approved by the Engineer before installation.
- Any adjustment done to the Protective Shield System must not change the system's load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.
- The Contractor shall contact Chandra Libby, the Director of City of Chicago Department of Family Support Services (DFSS) at 312-746-5443 or Chandra.Libby@cityofchicago.org to coordinate the relocation of persons and their personal belongings under the bridges within the areas bounded by the temporary chain-link-fence.
- The intent of the temporary fence is to deny access of any unauthorized personnel under the bridge during construction. Actual fence installations may vary from what is shown on the plans. All fence installations must be approved by the Engineer.
- Prior to the application of the Concrete Sealer, the Contractor shall clean all existing debris from the abutment seats. The method of debris removal shall not damage the existing concrete and shall be approved by the Engineer. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleaning shall be included in the cost of Concrete Sealer.

INDEX OF SHEETS

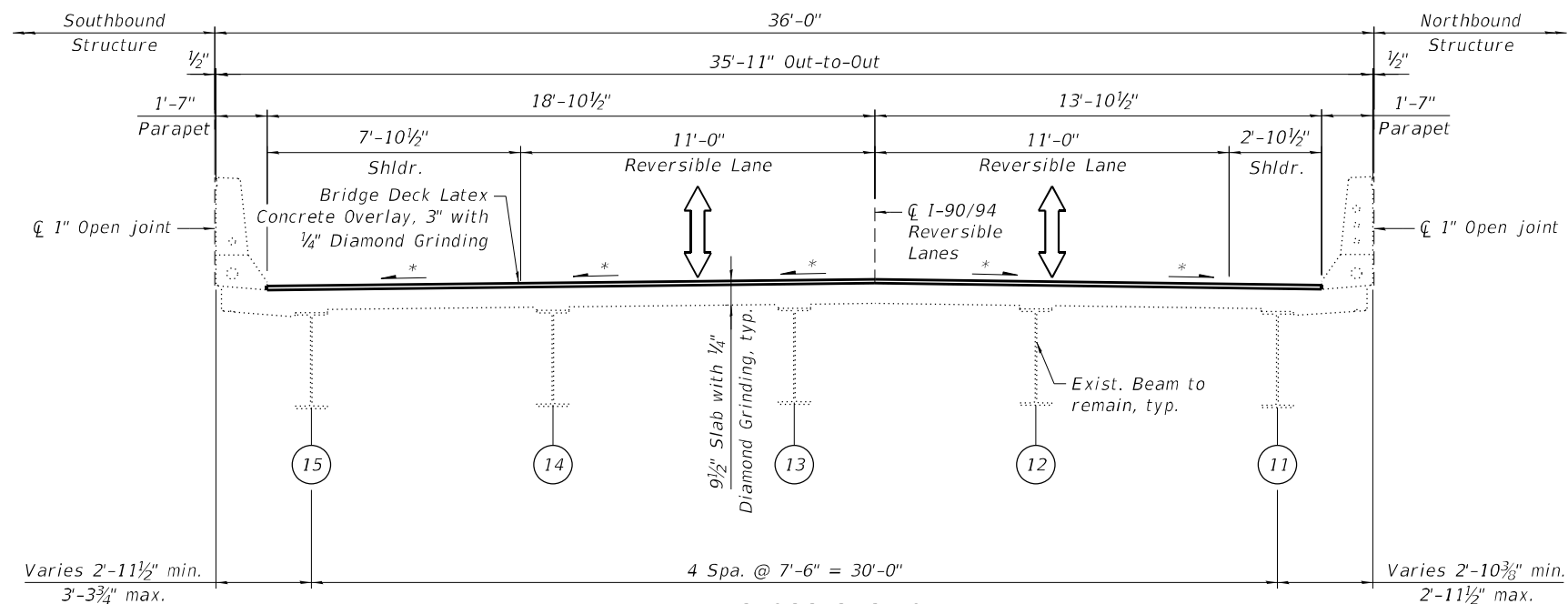
S22-01	General Plan & Elevation
S22-02	General Data
S22-03	Bridge Deck Repair Plan and Details
S22-04	Drainage Scupper Type A Adjustment Details
S22-05-S22-07	South Abutment Expansion Joint Details I, II & III
S22-08-S22-10	North Abutment Expansion Joint Details I, II & III
S22-11	Preformed Joint Strip Seal
S22-12	South Abutment Repairs
S22-13	North Abutment Repairs
S22-14	Pier 1 Repairs
S22-15	Pier 2 Repairs
S22-16	Slope Wall Repairs

SCOPE OF WORK

- Provide Protective Shield within limits indicated on the plans.
- Scarify 3/4" from the bridge deck slab.
- Perform deck repairs.
- Remove and reconstruct expansion joints at north and south abutments and install new Preformed Joint Strip Seals.
- Adjust Drainage Scuppers.
- Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck. Apply a 2" Stone-Matrix Asphalt (SMA) Overlay on the Approach Slabs.
- Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
- Perform Bridge Deck Grooving (Longitudinal) on traffic lanes
- Apply Protective Coat to the top and inside faces of parapets, reconstructed transverse expansion joints and to the surface of the new overlay.
- Perform Structural Concrete repairs to the Abutments and Piers as noted in the plans.
- Perform slope wall repairs.
- Install Longitudinal Preformed Joint Strip Seal along top of parapet between Reversible and SB lanes

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu Yd	13.8		13.8
Protective Shield	Sq Yd	1,021		1,021
Concrete Superstructure	Cu Yd	15.6		15.6
Protective Coat	Sq Yd	1,747		1,747
Reinforcement Bars, Epoxy Coated	Pound	2,890		2,890
Preformed Joint Seal 2 1/2"	Foot	369		369
Preformed Joint Strip Seal	Foot	94		94
Concrete Sealer	Sq Ft		566	566
Slope Wall Crack Sealing	Foot		10	10
Protect and Maintain Existing Underpass Luminaire	L Sum		0.022	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	889		889
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,304		1,304
Cleaning Drainage System	L Sum	0.05		0.05
Bridge Deck Scarification 3/4"	Sq Yd	1,304		1,304
Structural Repair of Concrete (Depth Equal to or less than 5 Inches)	Sq Ft		42	42
Deck Slab Repair (Full Depth, Type II)	Sq Yd	8.0		8.0
Drainage Scuppers to be Adjusted	Each	3		3
Diamond Grinding (Bridge Section)	Sq Yd	1,323		1,323
Maintenance of Lighting System	Cal Mo		6	6
Temporary Construction Fence	Foot		81	81



FINAL CROSS SECTION

(Looking North)

* Match existing deck surface profile

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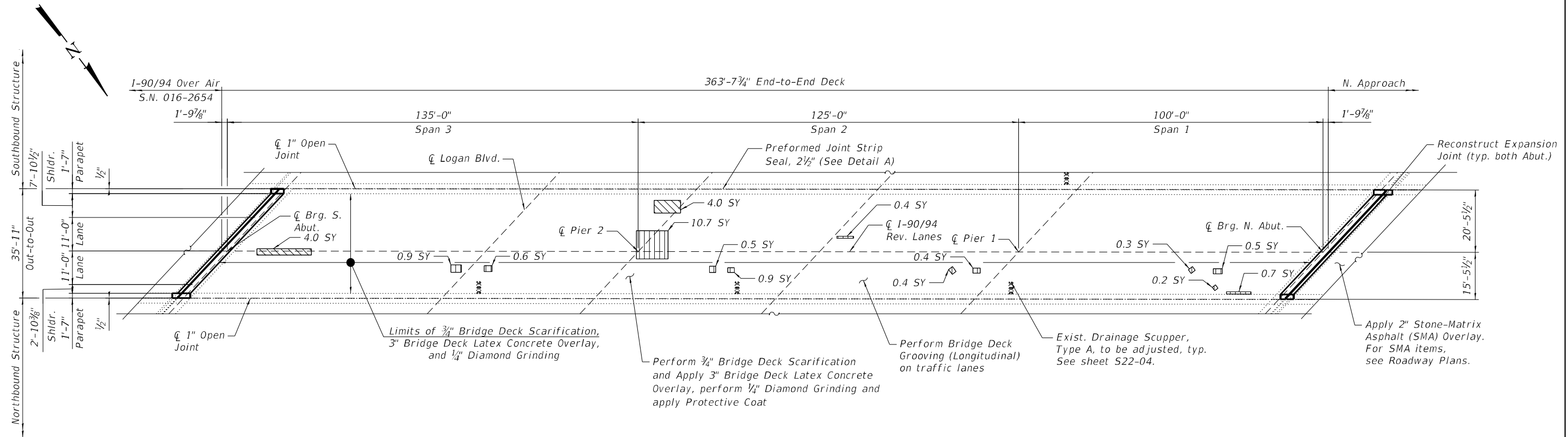
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
SN 016-0127 (REV)**

SHEET S22-02 OF S22-16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1071
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



DECK PLAN

LEGEND

- *Deck Slab Repair (Partial Depth)
- Deck Slab Repair (Full Depth, Type II)
- Square Yard

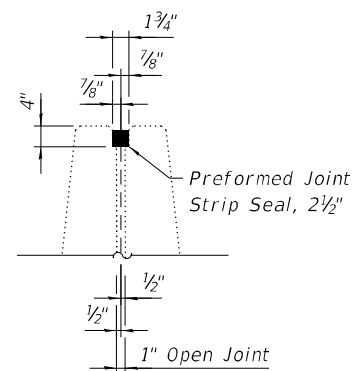
* Areas of Deck Slab Repair (Partial Depth) are provided for information only and shall be included in the cost of Bridge Deck Latex Concrete Overlay, 3 Inches

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 bridge deck final cross section, see Sheet S22-02.
3. For North and South transverse joint removal and reconstruction, see Sheet S22-05 thru S22-10.
4. Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
5. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
6. Protective Coat shall be applied to the top of reconstructed transverse joints, top and inside face of parapets and top of latex concrete overlay.
7. 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.
8. The Contractor shall exercise extreme caution during concrete removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer at no cost to the Department.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Shield	Sq Yd	1,021
Protective Coat	Sq Yd	1,747
Preformed Joint Seal 2 1/2"	Foot	369
Protect and Maintain Existing Underpass Luminaire	L Sum	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	889
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,304
Bridge Deck Scarification 3/4"	Sq Yd	1,304
Deck Slab Repair (Full Depth, Type II)	Sq Yd	8.0
Diamond Grinding (Bridge Section)	Sq Yd	1,323
Maintenance of Lighting System	Cal Mo	6



DETAIL A

(Reinforcement not shown for clarity)

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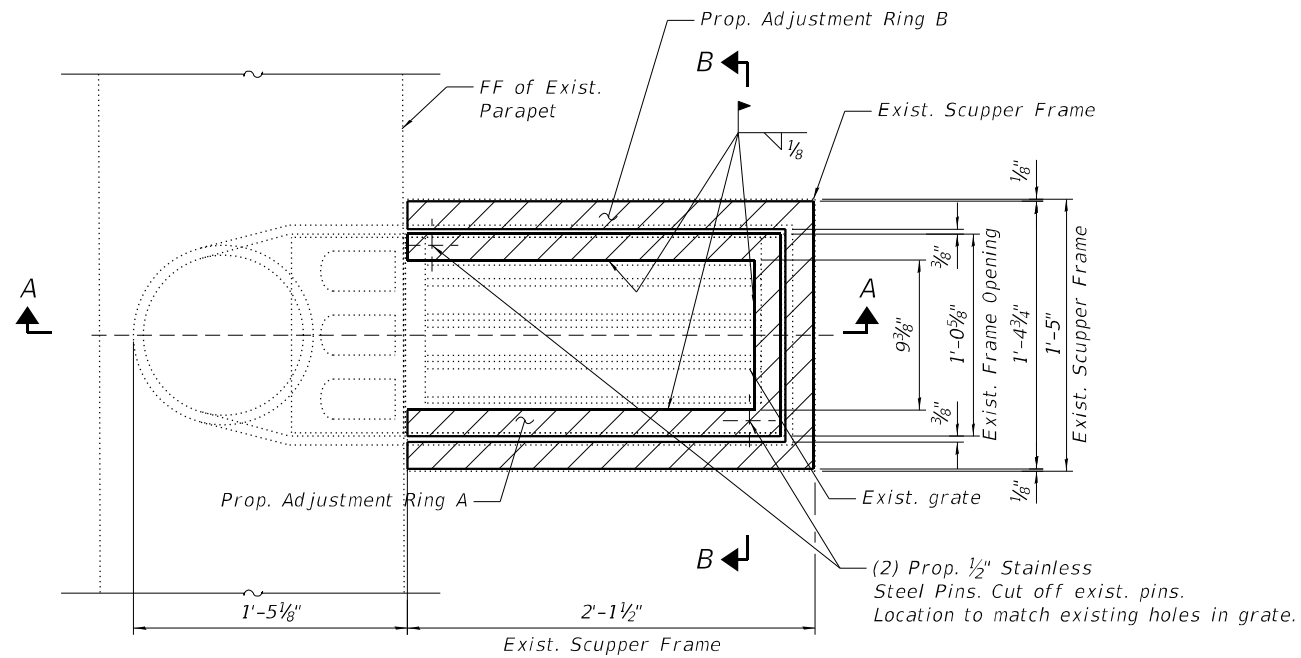
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BRIDGE DECK REPAIR PLAN AND DETAILS
SN 016-0127 (REV)**

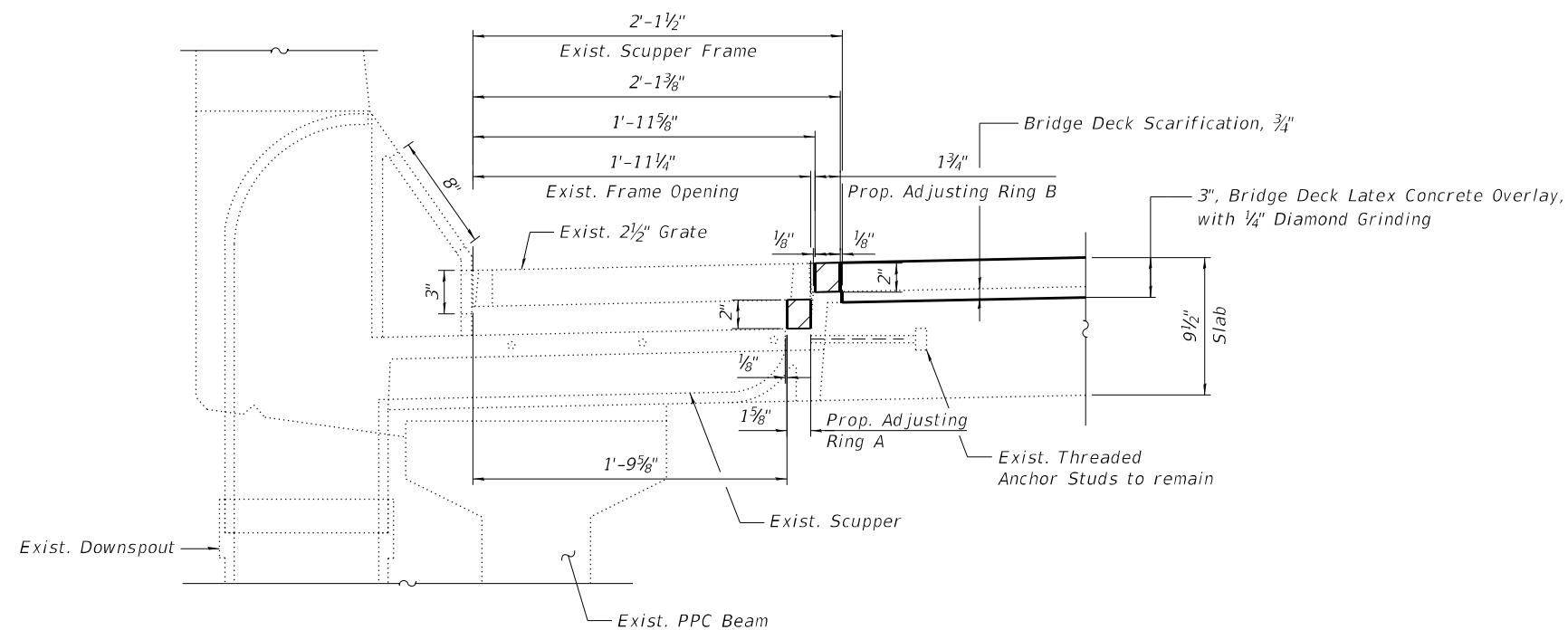
SHEET S22-03 OF S22-16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT				

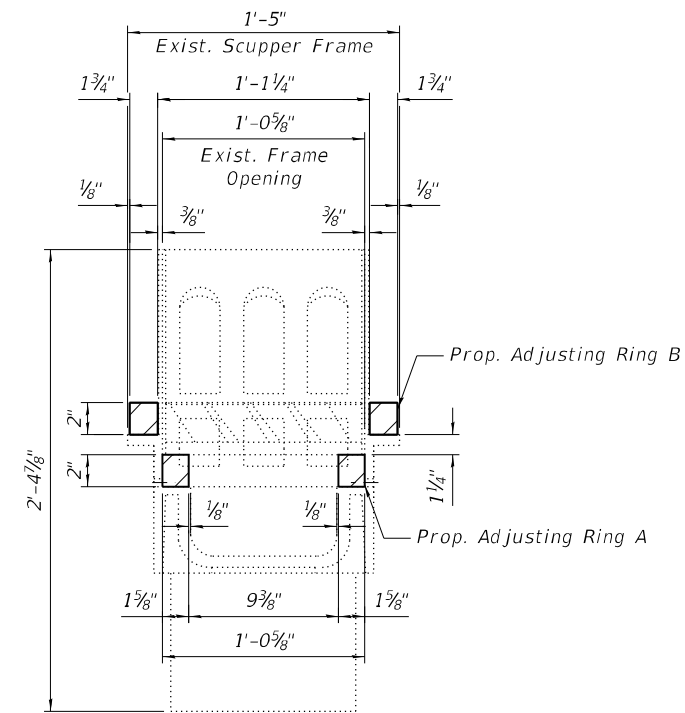


TYPICAL SCUPPER TYPE A PLAN

(3 Locations)



SECTION A-A



SECTION B-B

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Cleaning Drainage System	L Sum	0.05
Drainage Scuppers To Be Adjusted	Each	3

NOTES

1. The Contractor shall field verify Existing Dimensions and Details of the Existing Scuppers and make necessary adjustments prior to construction of New Adjusting Ring or ordering of material for Adjusting Drainage Scuppers.
2. All Cast Iron Parts shall be Grey Iron conforming to the requirements of AASHTO M 105, Class 35B.
3. Cast Iron Parts shall be unfinished.
4. The Contractor shall take appropriate measures to ensure that Protective Coat is not applied to the scuppers.
5. Adjusting Ring shall be from Neenah or approved equal. Structural steel weldments or equal section and of the same configuration may be submitted in place of Cast Iron. Fillet or full penetration welds may be used for weldments. Details shall be submitted to the Engineer for approval.
6. Provide a 1/8" Fillet Weld around perimeter of new Adjusting Ring to secure to existing Scupper.
7. Cost of all labor and materials necessary to clean all existing floor drains and scuppers, install adjusting scupper rings, remove and reinstall grates is included in the cost for Drainage Scupper to be Adjusted.

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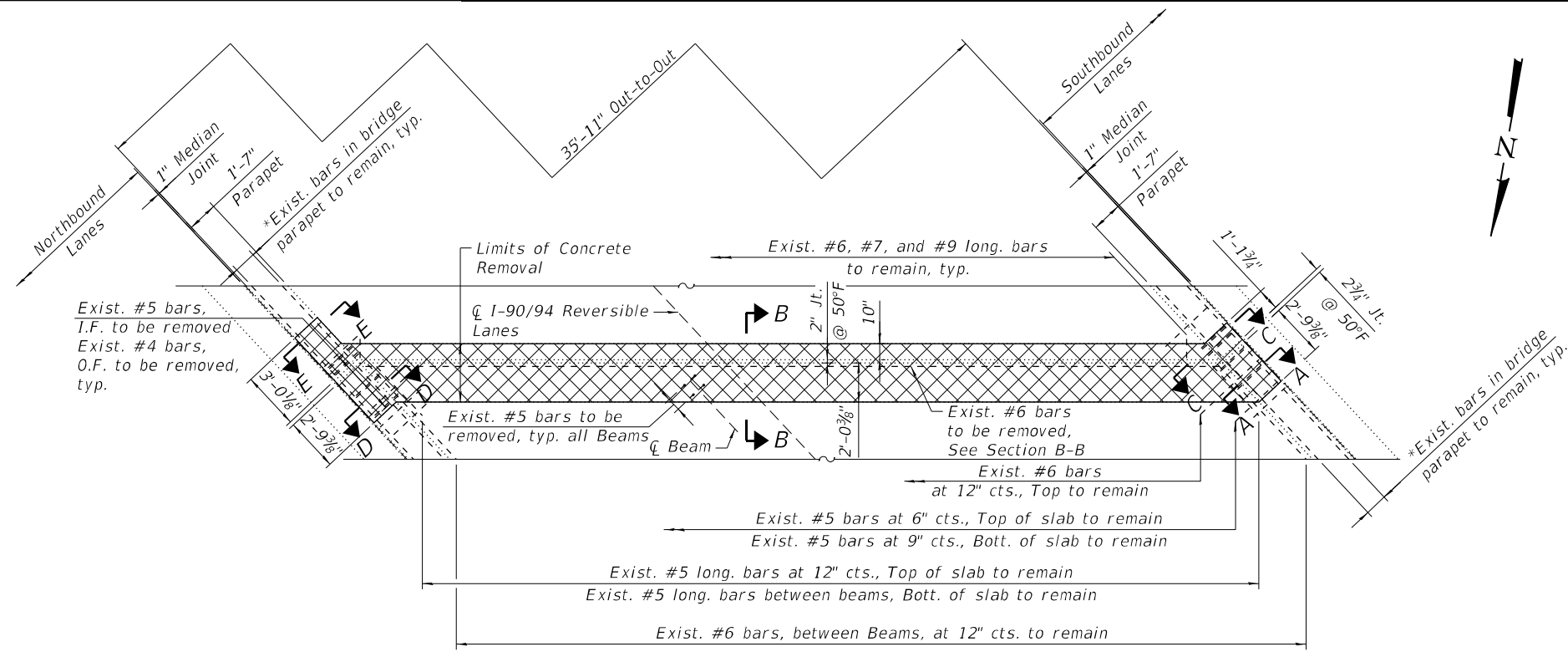
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	CHECKED -	K.G.W.	REVISED -

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DEPARTMENT OF TRANSPORTATION

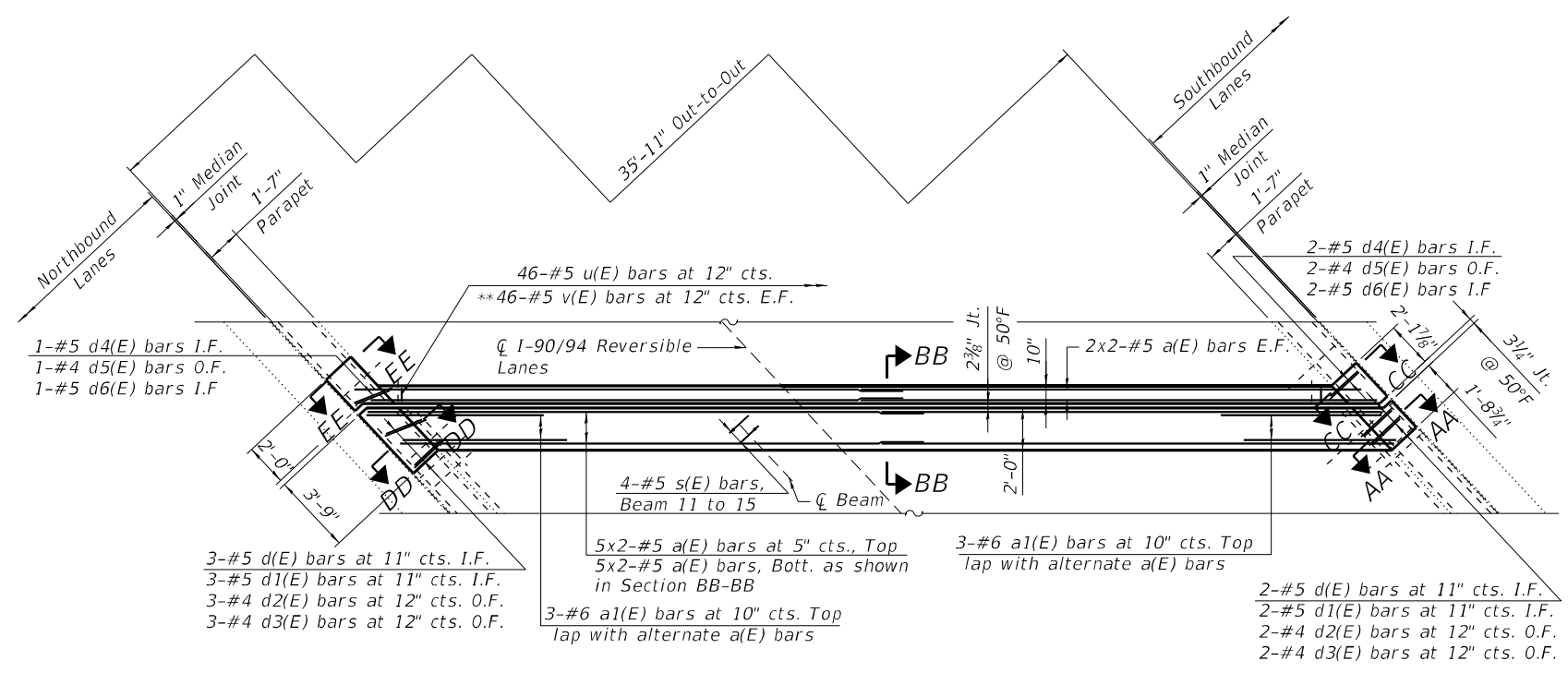
DRAINAGE SCUPPER TYPE A ADJUSTMENT DETAILS
SN 016-0127 (REV)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1073
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

SHEET S22-04 OF S22-16 SHEETS



SOUTH ABUTMENT JOINT REMOVAL PLAN



SOUTH ABUTMENT JOINT RECONSTRUCTION PLAN

NOTES:

- For sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, see sheet S22-06.
- For sections D-D, E-E, DD-DD and EE-EE, see sheet S22-07.

- * Existing longitudinal bars to remain in the parapets can be cut in the field as required
- ** Epoxy grout #5 v(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.

LEGEND

	Concrete Removal
I.F.	Inside Face
O.F.	Outside Face
E.F.	Each Face

MODEL: sMODELNAME5
FILE NAME: X:\OHA\2020\20200221-03\Design\Structural\Design Files\CADD\SH\T016-0127_Logam\Rev\0160127-62K74-5005-EXPR.dgn
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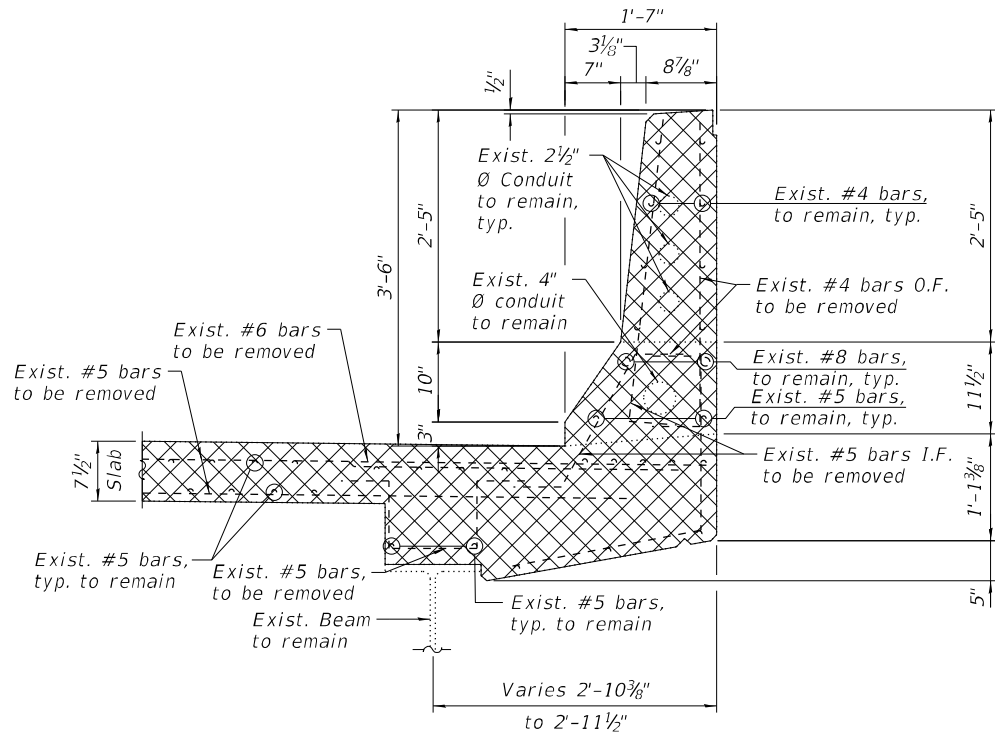
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SOUTH ABUTMENT EXPANSION JOINT DETAILS I
SN 016-0127 (REV)**

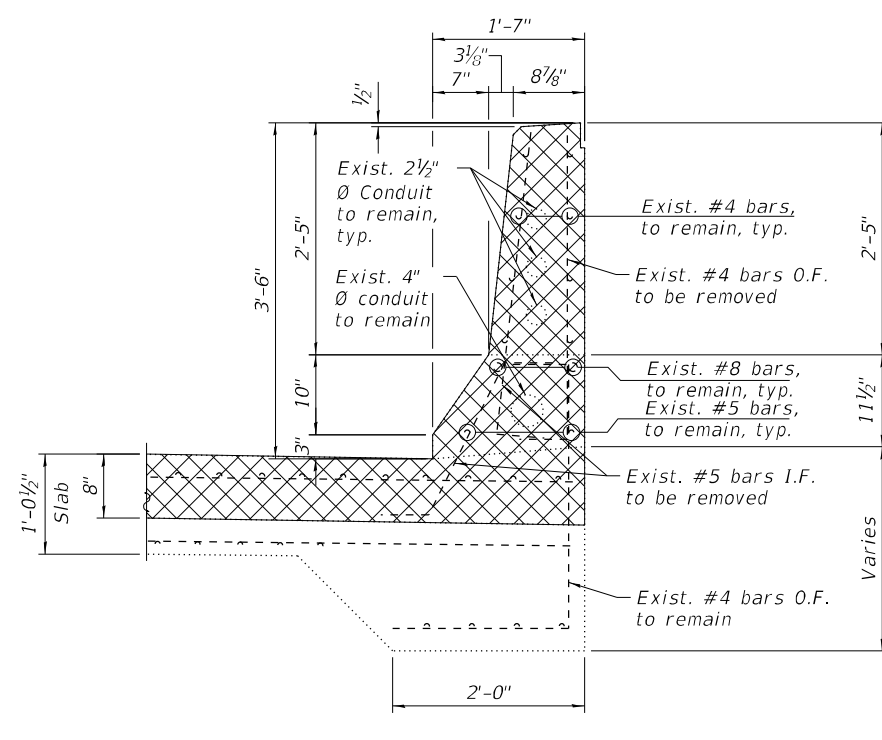
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90	2020-004-BR	COOK	1492	1074
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL
SOUTH ABUTMENT**

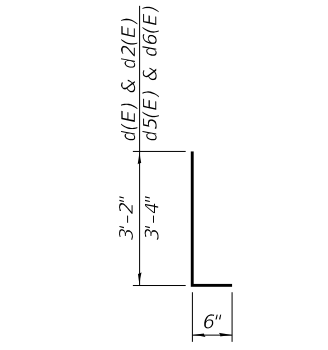
Bar	No.	Size	Length	Shape
a(E)	28	#5	27'-5"	—
a1(E)	6	#6	6'-6"	—
d(E)	5	#5	3'-8"	┌
d1(E)	5	#5	2'-7"	┌
d2(E)	5	#4	3'-8"	┌
d3(E)	5	#4	4'-0"	┌
d4(E)	3	#5	3'-2"	┌
d5(E)	3	#4	3'-10"	┌
d6(E)	3	#5	3'-10"	┌
s(E)	20	#5	3'-5"	┌
u(E)	46	#5	1'-6"	┌
v(E)	92	#5	1'-3"	—
Concrete Removal		Cu Yd	6.0	
Reinforcement Bars, Epoxy Coated		Pound	1,220	
Concrete Superstructure		Cu Yd	6.8	



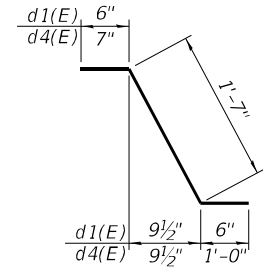
SECTION D-D
(East parapet removal)



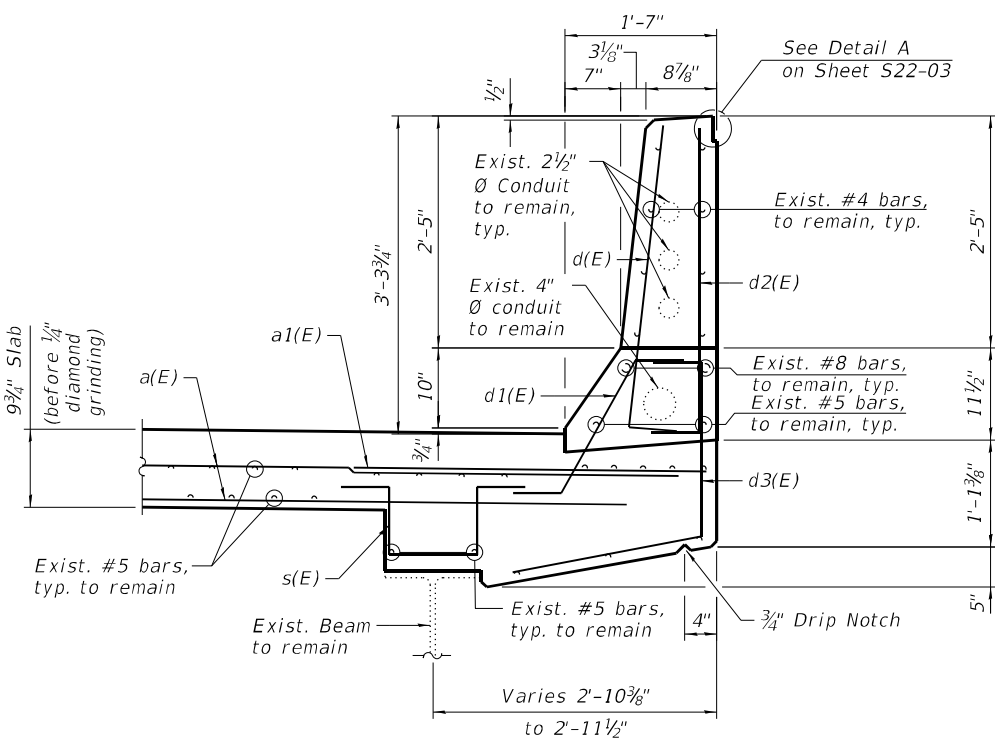
SECTION E-E
(East parapet removal)



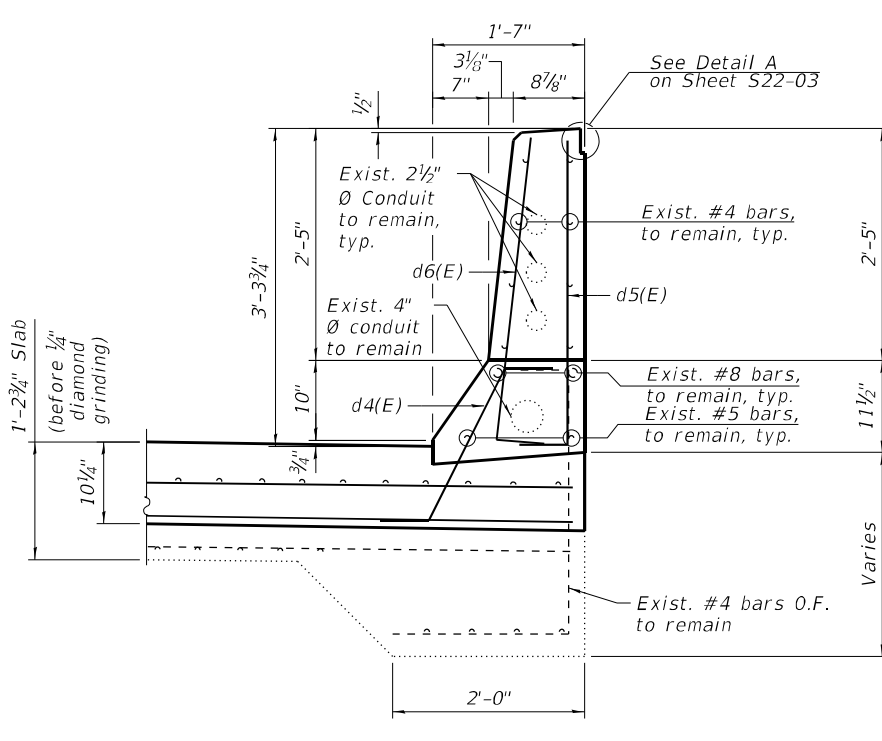
**BARS d(E), d2(E),
d5(E) & d6(E)**



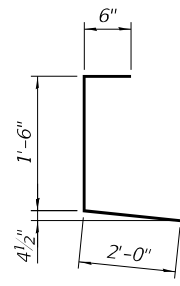
BARS d1(E) & d4(E)



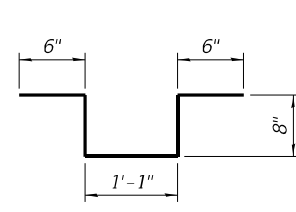
SECTION DD-DD
(East parapet reconstruction)



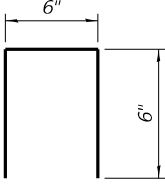
SECTION EE-EE
(East parapet reconstruction)



BAR d3(E)



BAR s(E)



BAR u(E)

NOTES:

- For Preformed Joint Strip Seal details, see sheet S22-11.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- V.I.F. Verify in Field

MIN BAR LAPS

- #5 3'-6"
- #6 4'-0"

MODEL: SMODELNAME5
FILE NAME: X:\OH\2020\20200221-03\Design\Structural\Design Files\CADD\SH21016-0127_Logan\Rev0160127-62K74-5007-EXPR.dgn

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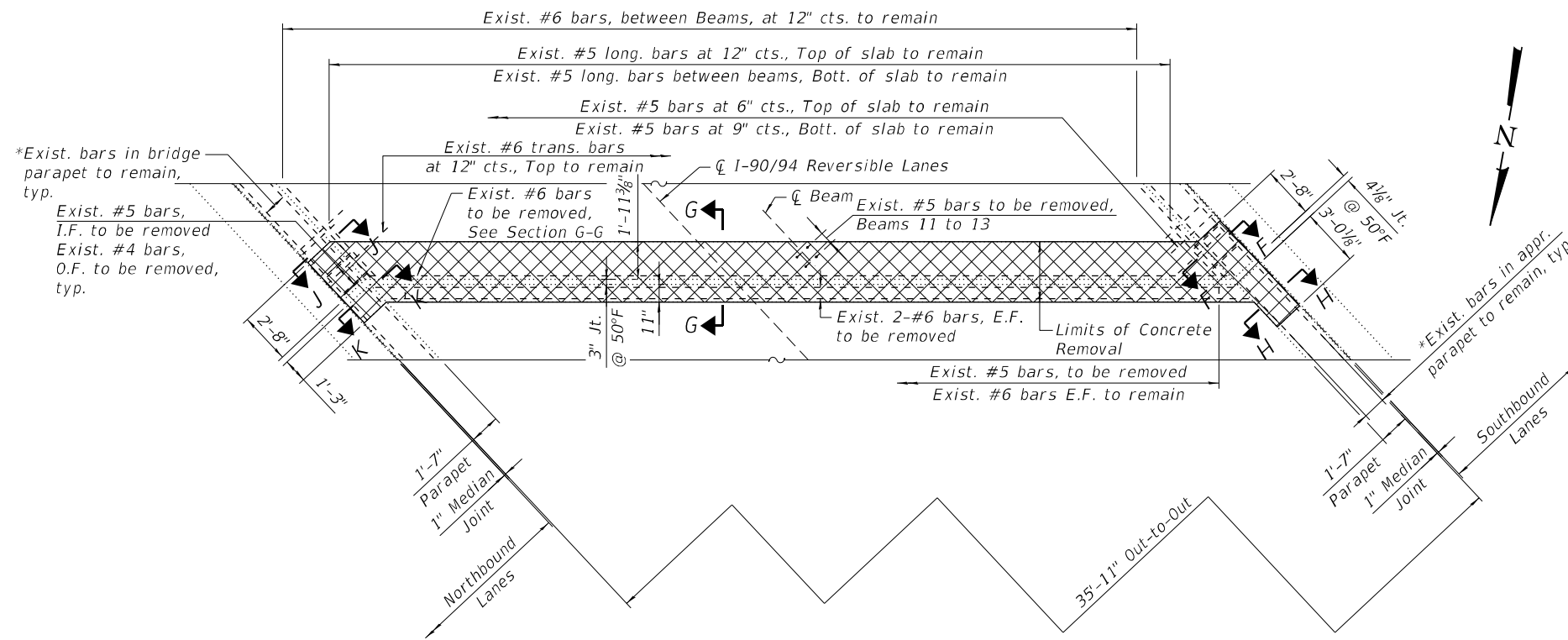
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

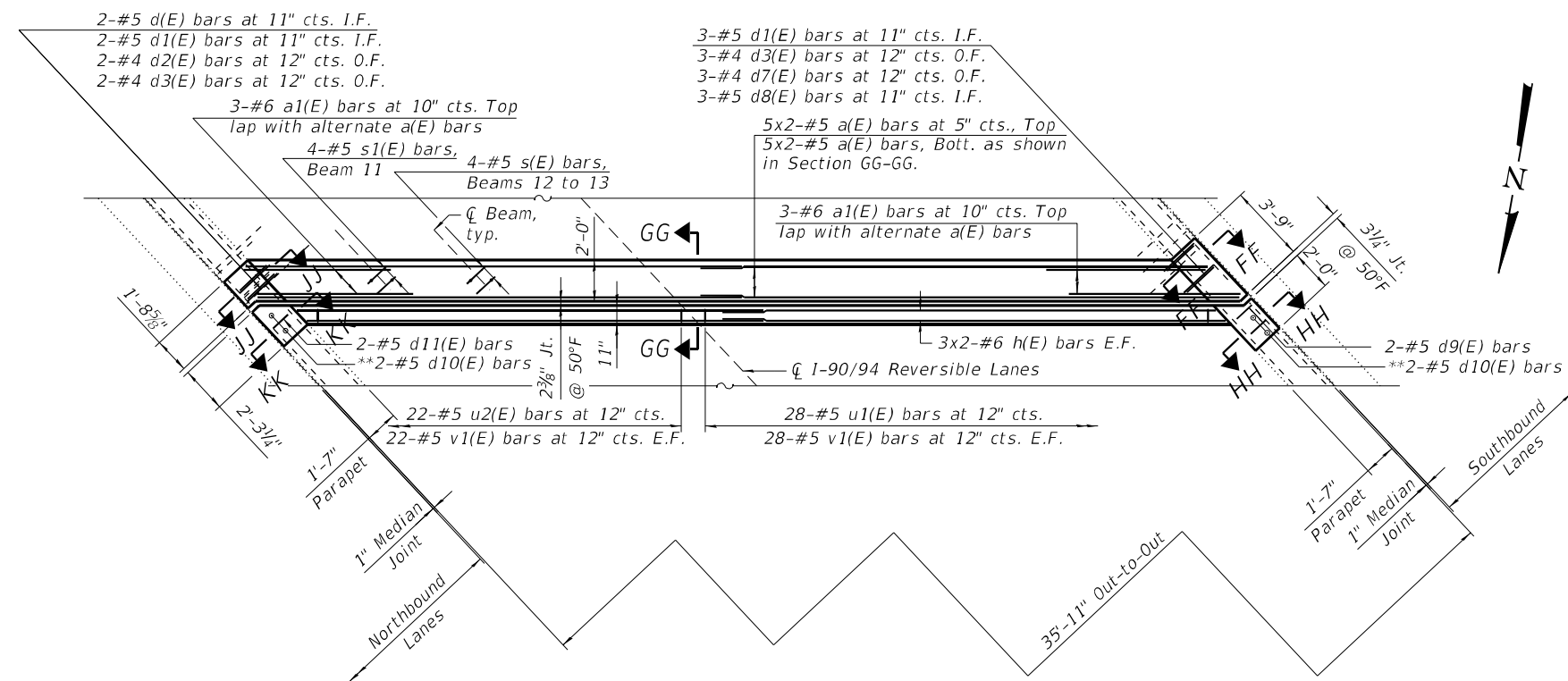
**SOUTH ABUTMENT EXPANSION JOINT DETAILS III
SN 016-0127 (REV)**

SHEET S22-07 OF S22-16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1076
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



NORTH ABUTMENT JOINT REMOVAL PLAN




NORTH ABUTMENT JOINT RECONSTRUCTION PLAN

NOTES:

1. For sections F-F, G-G, H-H, FF-FF, GG-GG and HH-HH, see sheet S22-09.
2. For sections J-J, K-K, JJ-JJ, and KK-KK, see sheet S22-10.

- * Existing longitudinal bars to remain in the parapets can be cut in the field as required
- ** Epoxy grout #5 d10(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.

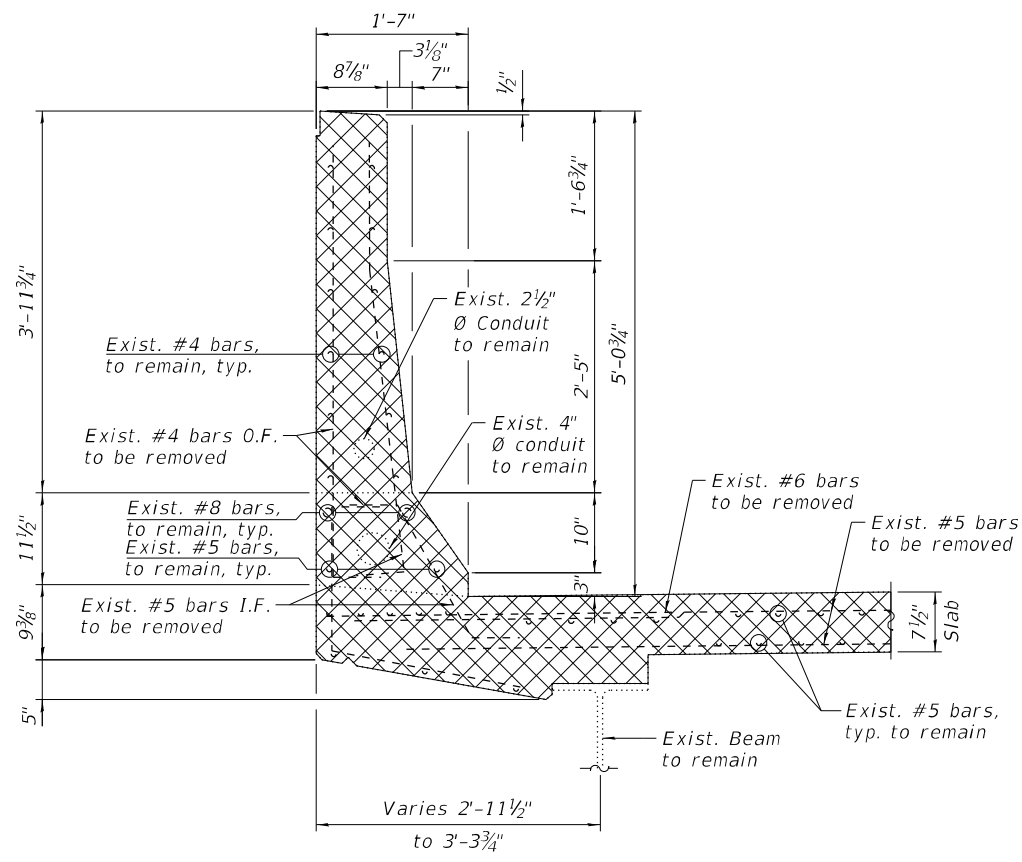
LEGEND

-  Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- E.F. Each Face

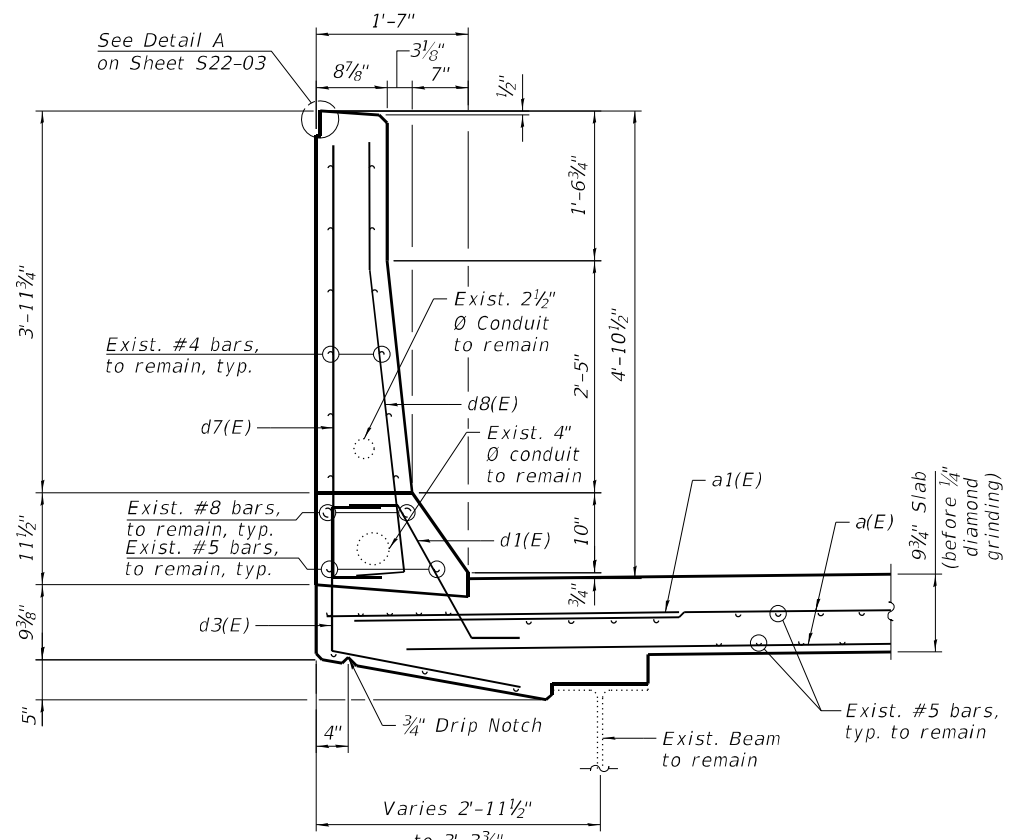
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PLOT DATE =	CHECKED -	K.G.W.	REVISED -

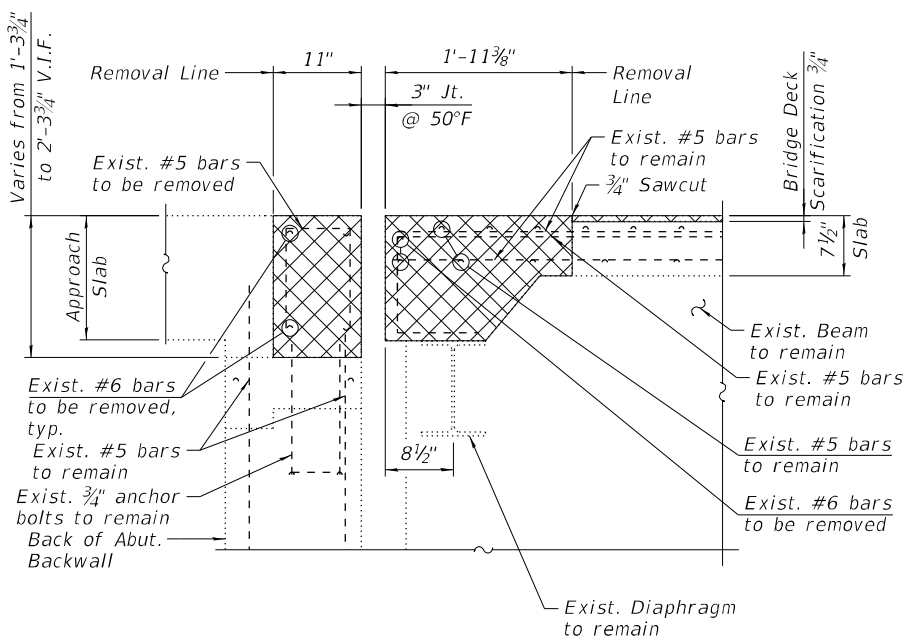
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1077
CONTRACT NO. 62K74				



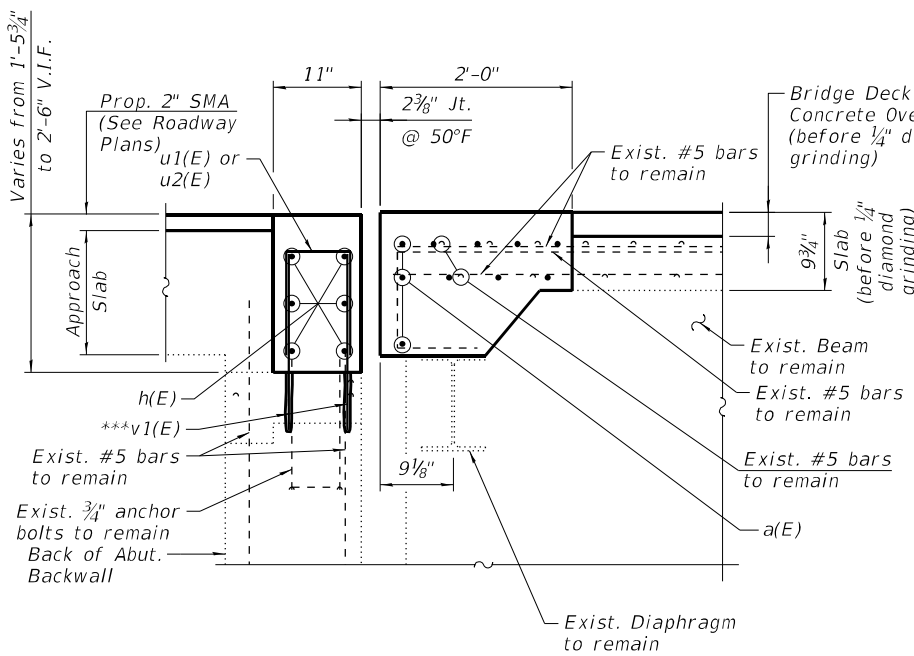
SECTION F-F
(West parapet removal)



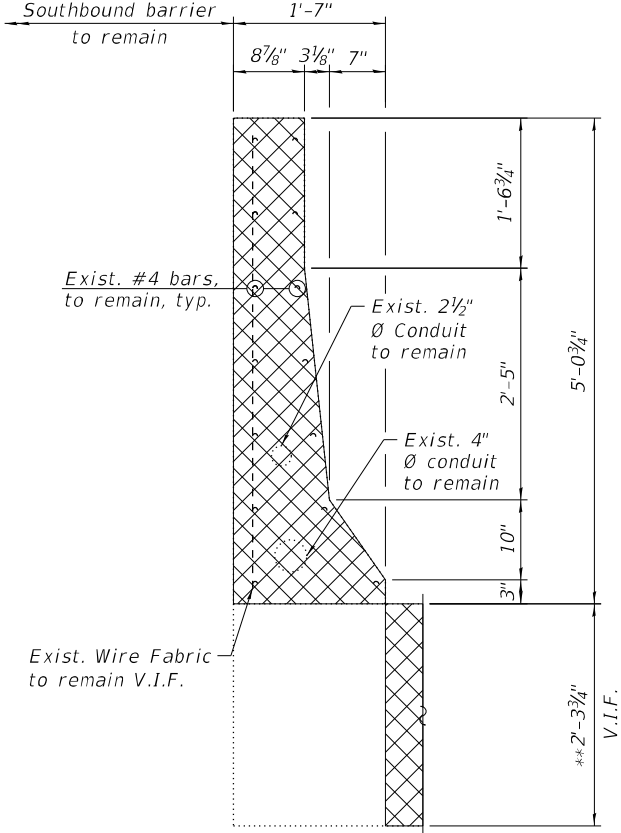
SECTION FF-FF
(West parapet reconstruction)



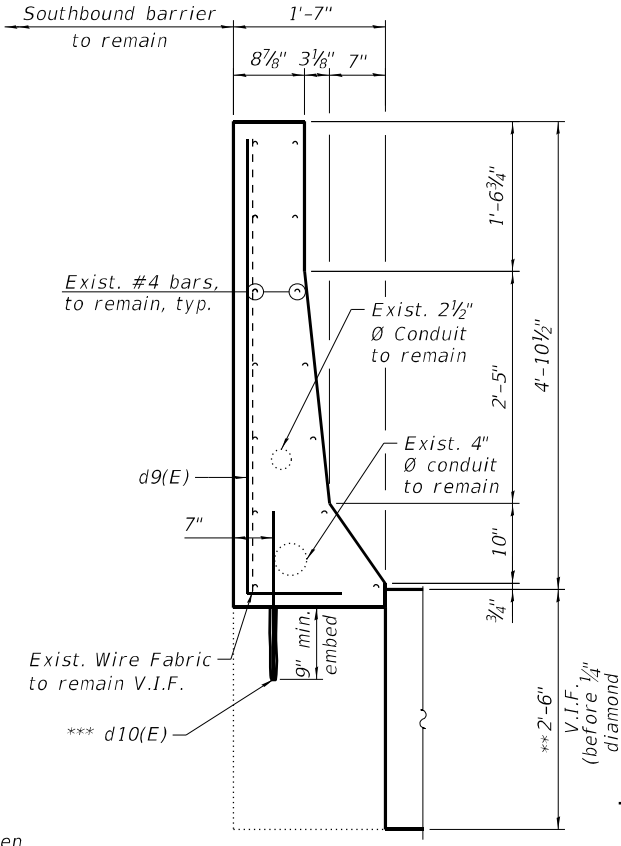
SECTION G-G



SECTION GG-GG



SECTION H-H
(West parapet removal)



SECTION HH-HH
(West parapet reconstruction)

** Dimension is taken at the Back of Abut.

*** Epoxy grout #5 d10(E) and v1(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.

LEGEND

	Concrete Removal
I.F.	Inside Face
O.F.	Outside Face
V.I.F.	Verify in Field

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DEPARTMENT OF TRANSPORTATION

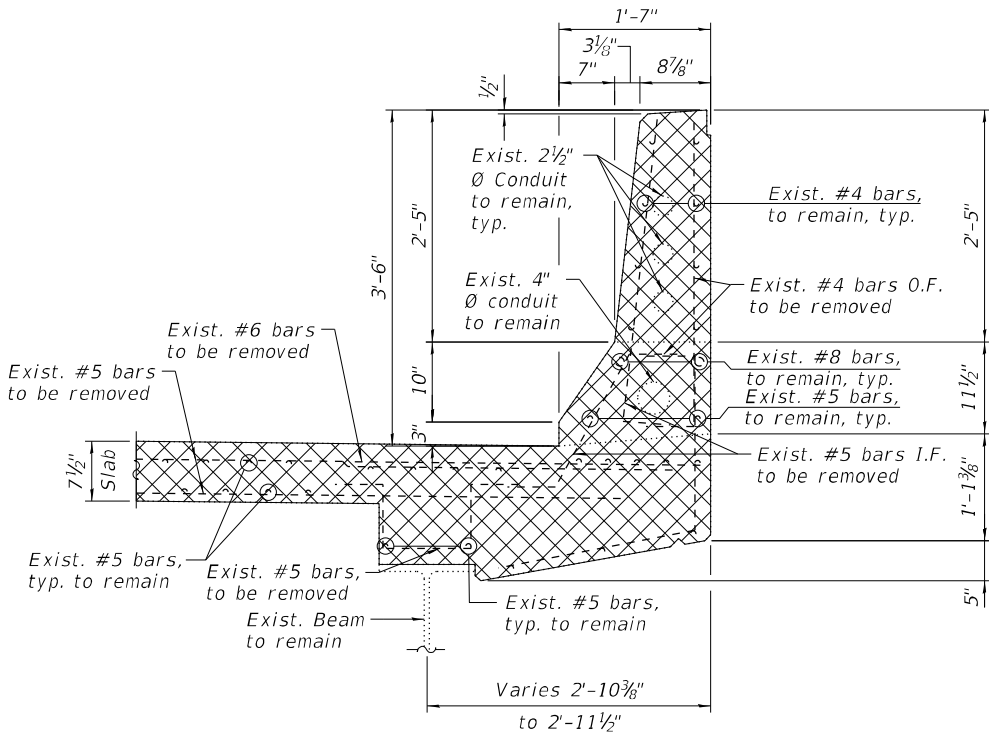
NORTH ABUTMENT EXPANSION JOINT DETAILS II
SN 016-0127 (REV)

SHEET S22-09 OF S22-16 SHEETS

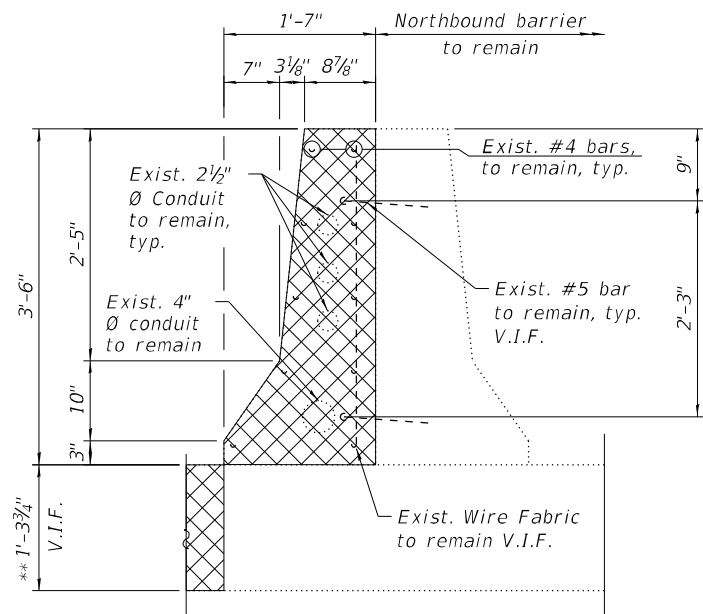
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	

**BILL OF MATERIAL
NORTH ABUTMENT**

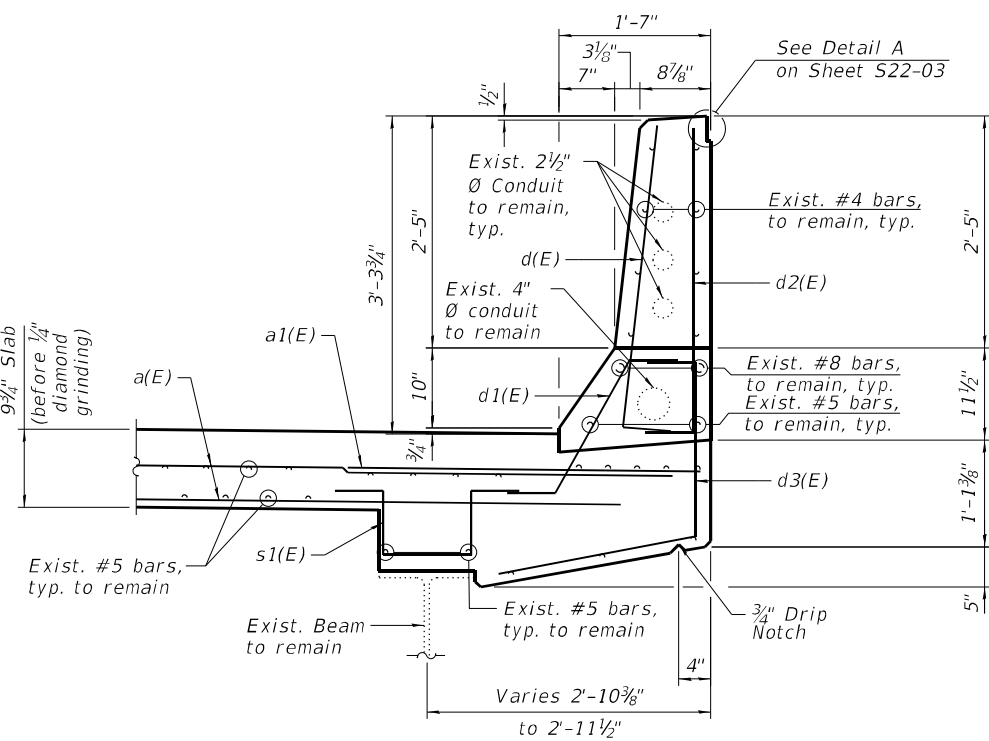
Bar	No.	Size	Length	Shape
a(E)	20	#5	27'-5"	—
a1(E)	6	#6	6'-6"	—
d(E)	2	#5	3'-8"	┌┐
d1(E)	5	#5	2'-7"	┌┐
d2(E)	2	#4	3'-8"	┌┐
d3(E)	5	#4	4'-0"	┌┐
d7(E)	3	#4	5'-0"	┌┐
d8(E)	3	#5	5'-0"	┌┐
d9(E)	2	#5	5'-8"	┌┐
d10(E)	4	#5	1'-10"	┌┐
d11(E)	2	#5	4'-2"	┌┐
h(E)	12	#6	27'-6"	—
s(E)	8	#5	3'-5"	┌┐
s1(E)	4	#5	3'-9"	┌┐
u1(E)	28	#5	3'-2"	┌┐
u2(E)	22	#5	3'-8"	┌┐
v1(E)	100	#5	2'-2"	—
Concrete Removal			Cu Yd	7.8
Reinforcement Bars, Epoxy Coated			Pound	1,670
Concrete Superstructure			Cu Yd	8.8



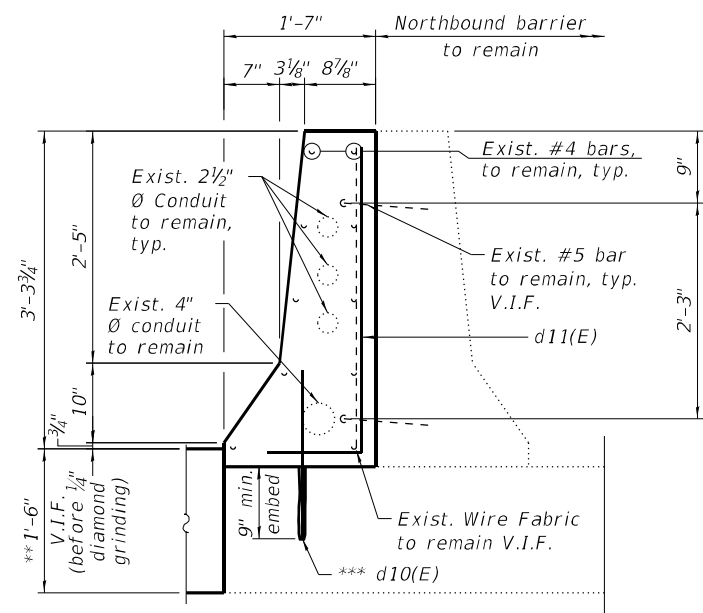
SECTION J-J
(East parapet removal)



SECTION K-K
(East parapet removal)

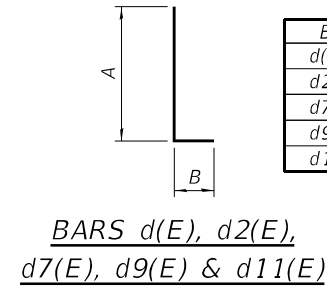


SECTION JJ-JJ
(East parapet reconstruction)

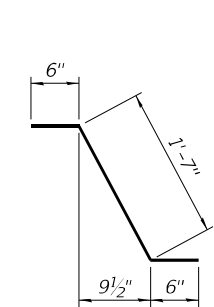


SECTION KK-KK
(East parapet reconstruction)

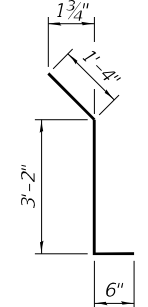
*** Epoxy grout #5 d10(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.



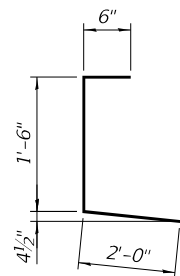
BARS d(E), d2(E), d7(E), d9(E) & d11(E)



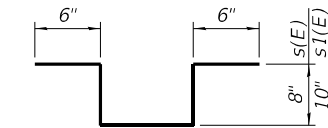
BAR d1(E)



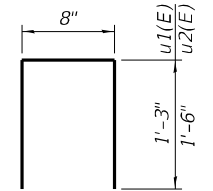
BAR d8(E)



BAR d3(E)



BARS s(E) & s1(E)



BARS u1(E) & u2(E)

NOTES:

- For Preformed Joint Strip Seal details, see sheet S22-11.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- V.I.F. Verify in Field

MIN BAR LAPS

- #5 3'-6"
- #6 4'-0"

** Dimension is taken at the Back of Abut.

MODEL: SMODELNAME5
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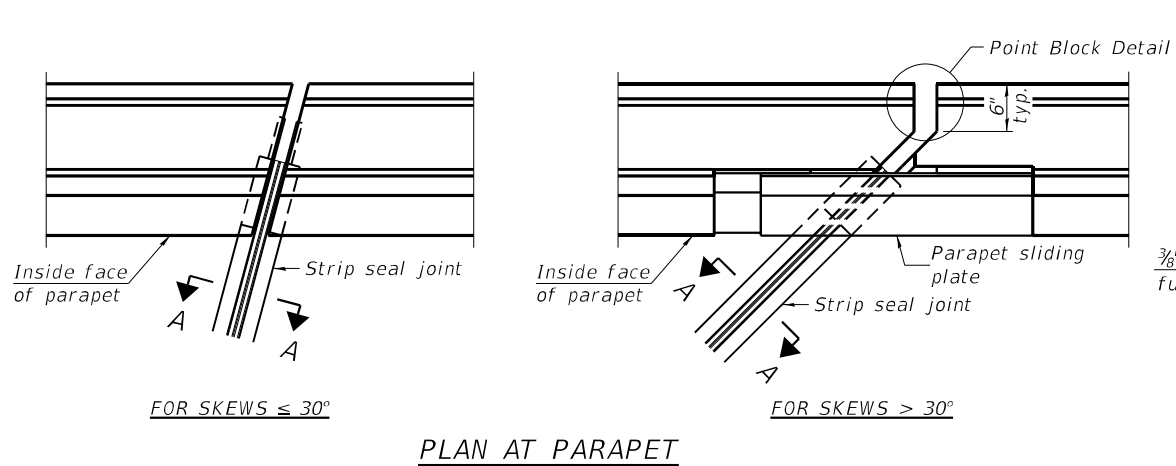
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	CHECKED - K.G.W.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

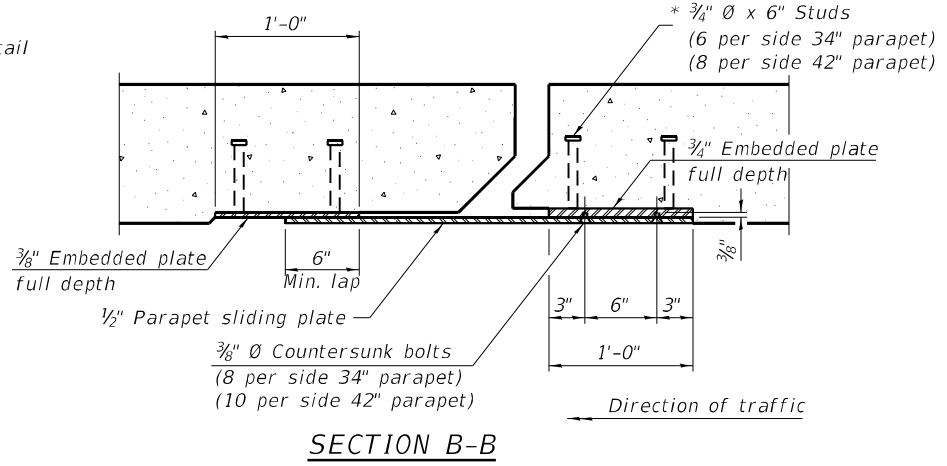
**NORTH ABUTMENT EXPANSION JOINT DETAILS III
SN 016-0127 (REV)**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1079
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

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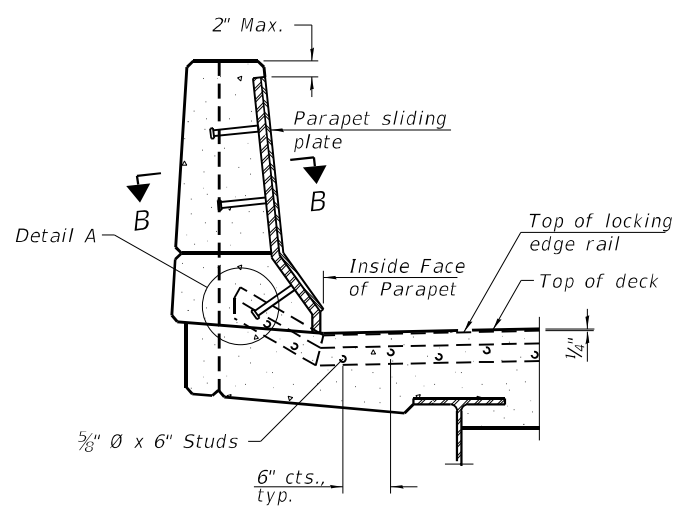


PLAN AT PARAPET



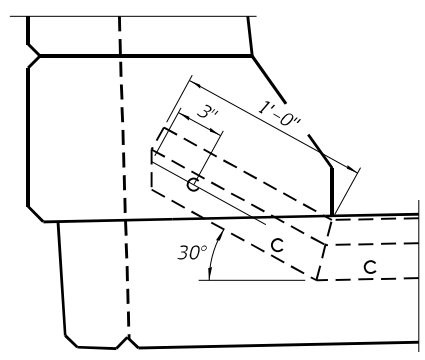
SECTION B-B

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 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 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 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.
 Cost of parapet sliding plates, embedded plates, and anchorage studs 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.

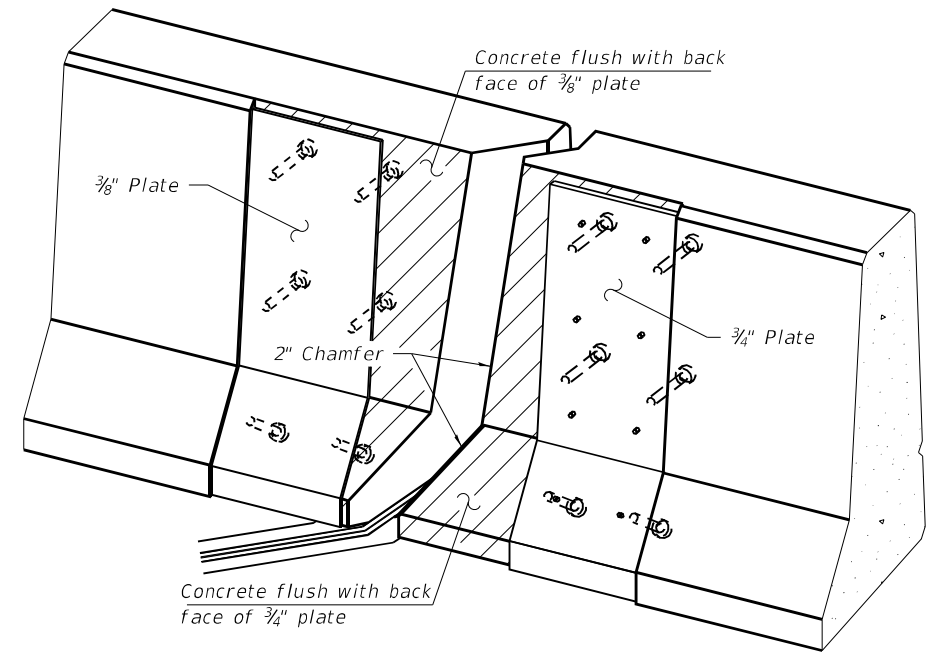


ELEVATION AT PARAPET

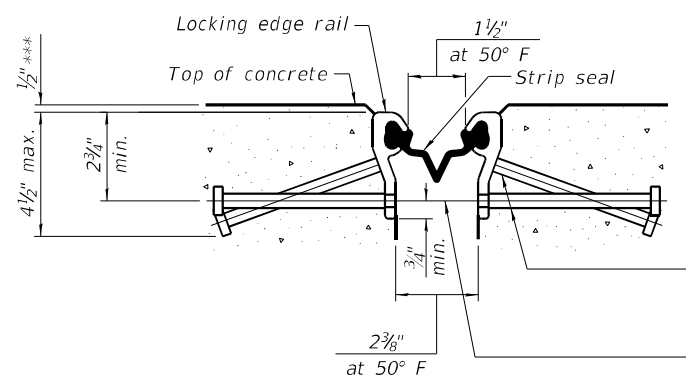
(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)



DETAIL A



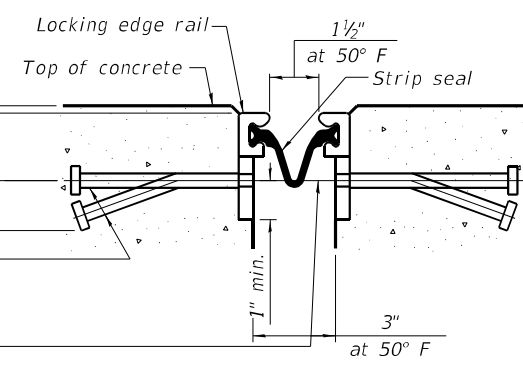
TRIMETRIC VIEW (Showing embedded plates only)



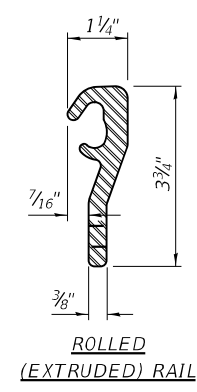
SHOWING ROLLED RAIL JOINT

* 3/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

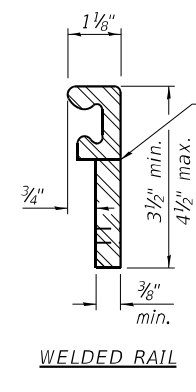
3/8" Ø threaded rods in 1/16" Ø holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.



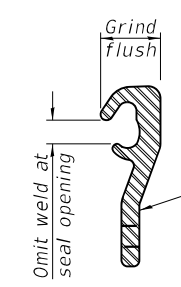
SHOWING WELDED RAIL JOINT



ROLLED (EXTRUDED) RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

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

LOCKING EDGE RAILS

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

SECTION A-A

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

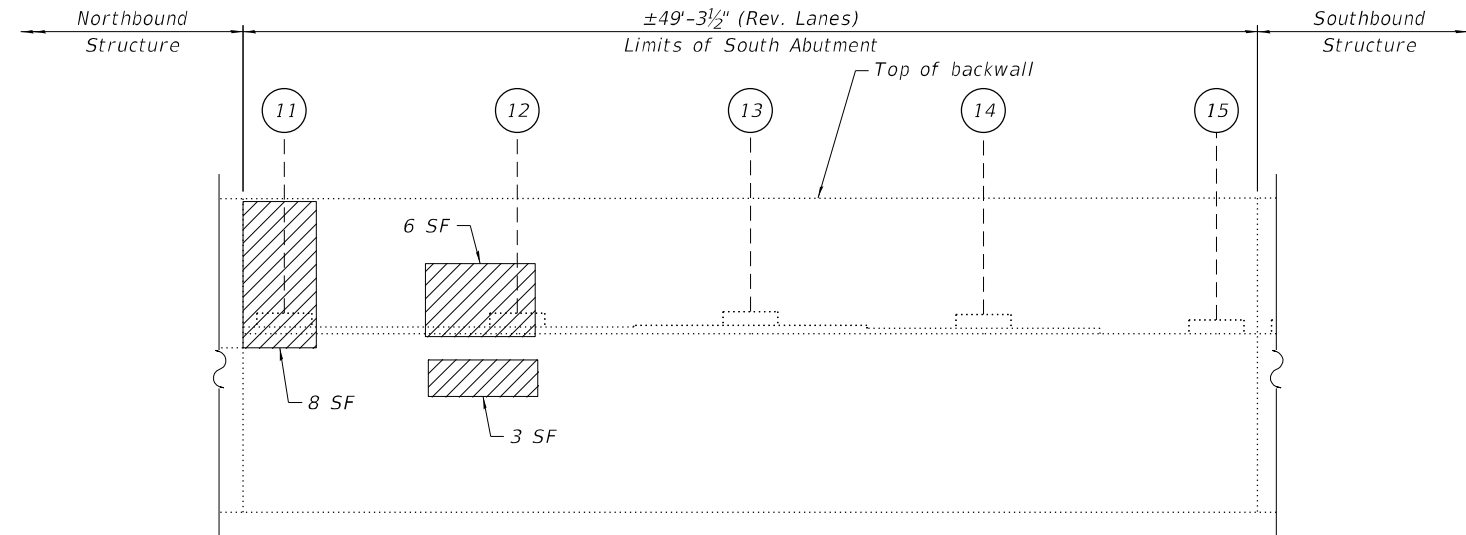
*** Before 1/4" Diamond Grinding.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	94

USER NAME =	DESIGNED - J.T.B.	REVISED -
PLOT SCALE =	CHECKED - H.A.	REVISED -
PLOT DATE =	DRAWN - D.C.P.	REVISED -
	CHECKED - K.G.W.	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1080
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



ELEVATION - SOUTH ABUTMENT
(Looking South)

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. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
3. For slope wall repairs, see Sheet S22-16.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	283
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	17

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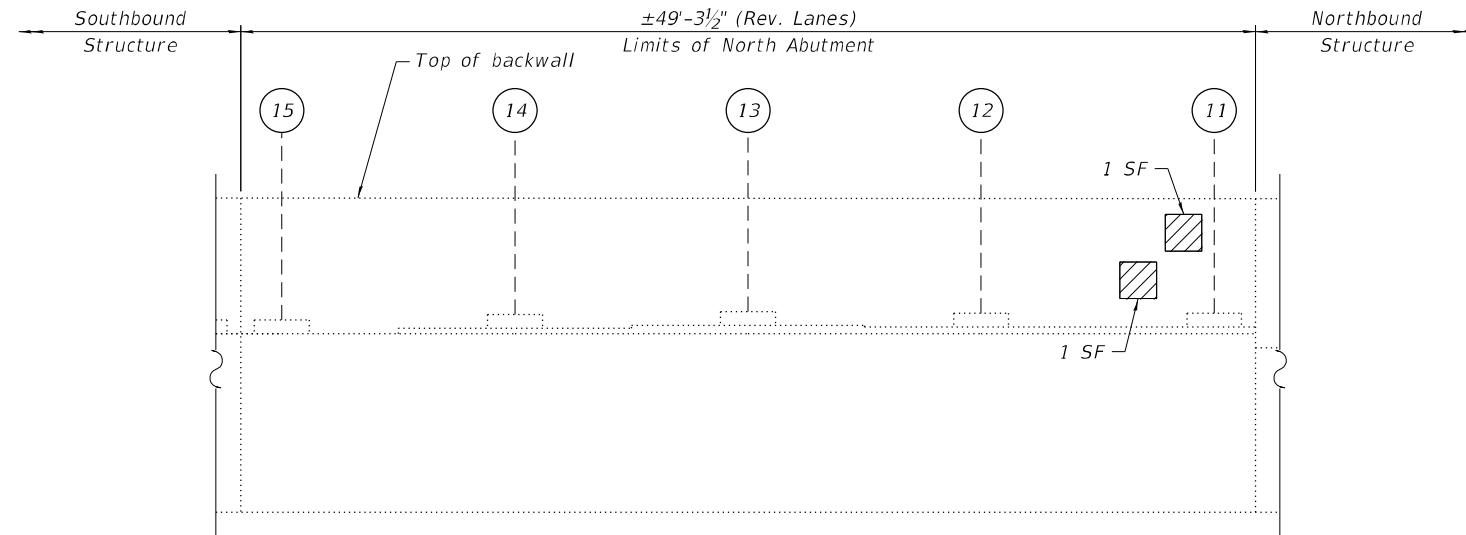
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PLOT DATE =	CHECKED -	K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT REPAIRS
SN 016-0127 (REV)

SHEET S22-12 OF S22-16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1081
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



ELEVATION - NORTH ABUTMENT
(Looking North)

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.
- Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
- For slope wall repairs, see Sheet S22-16.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	283
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	2

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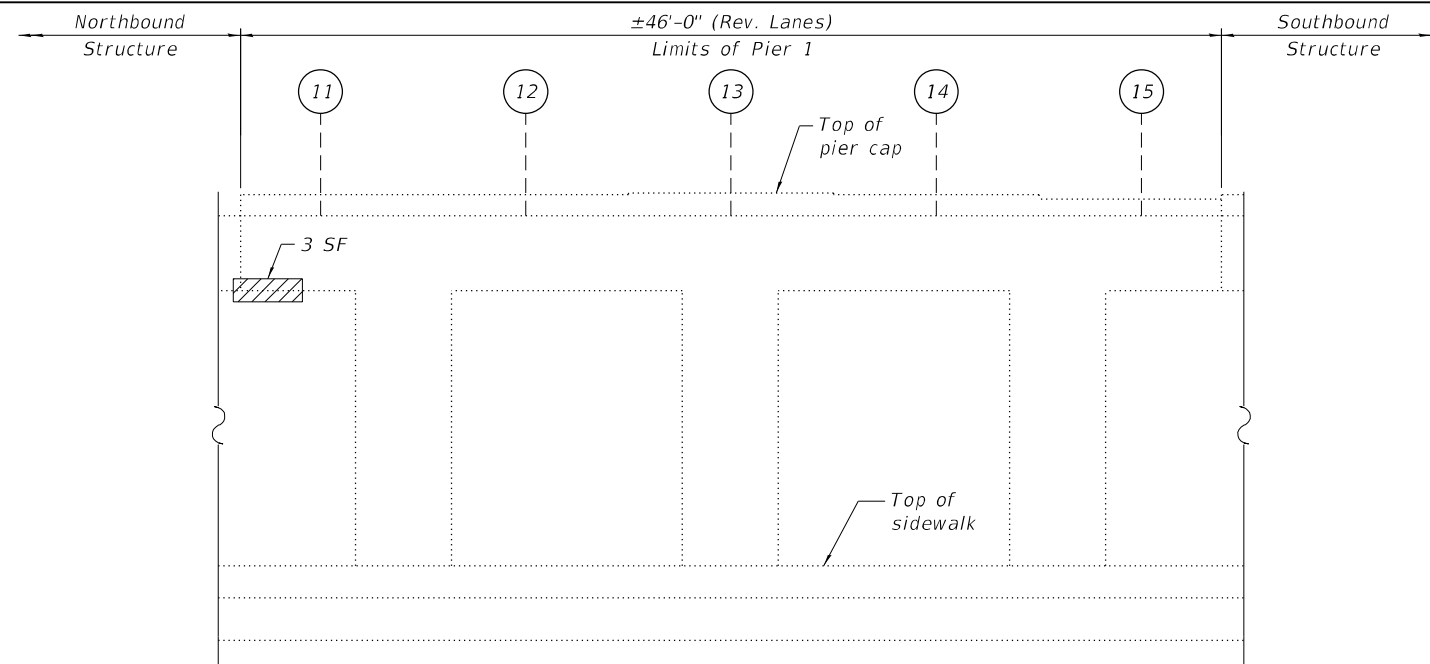
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

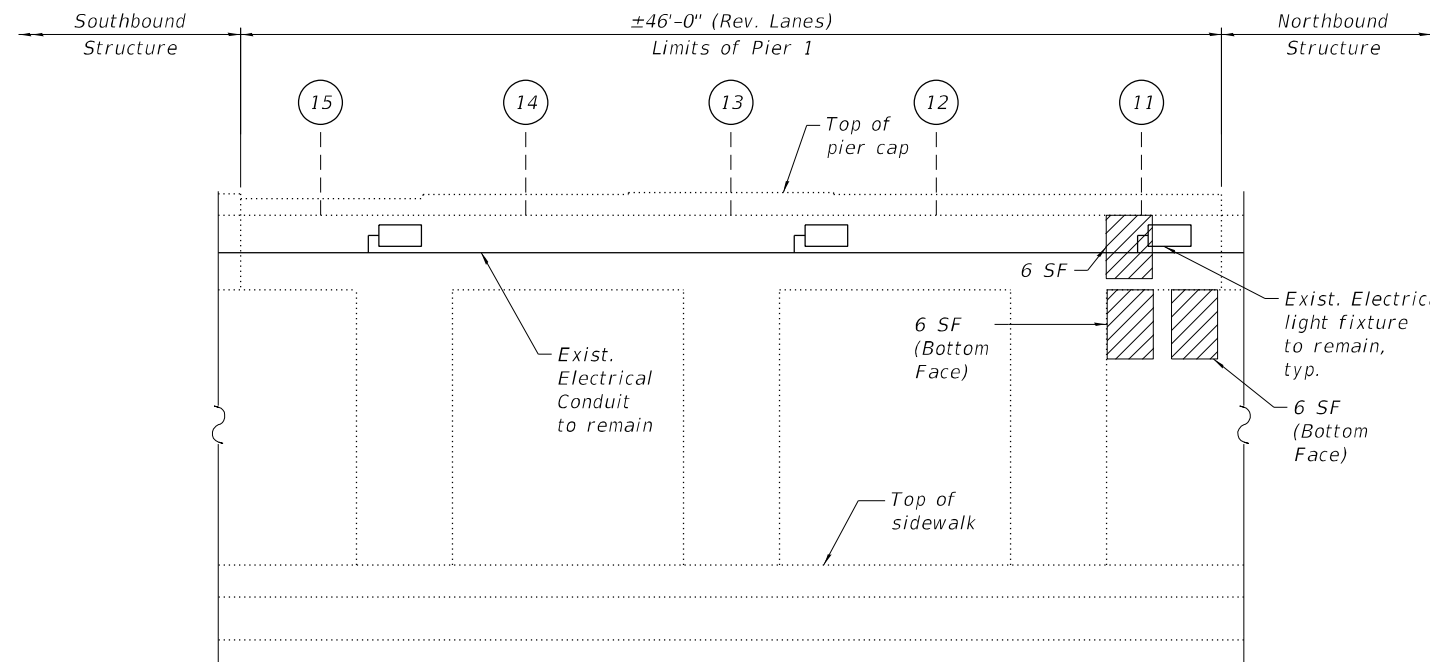
**NORTH ABUTMENT REPAIRS
SN 016-0127 (REV)**

SHEET S22-13 OF S22-16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1082
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



ELEVATION - PIER 1
(Looking South)



ELEVATION - PIER 1
(Looking North)



EXISTING LIGHTING: PIER 1
(Looking Northeast)

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.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	21

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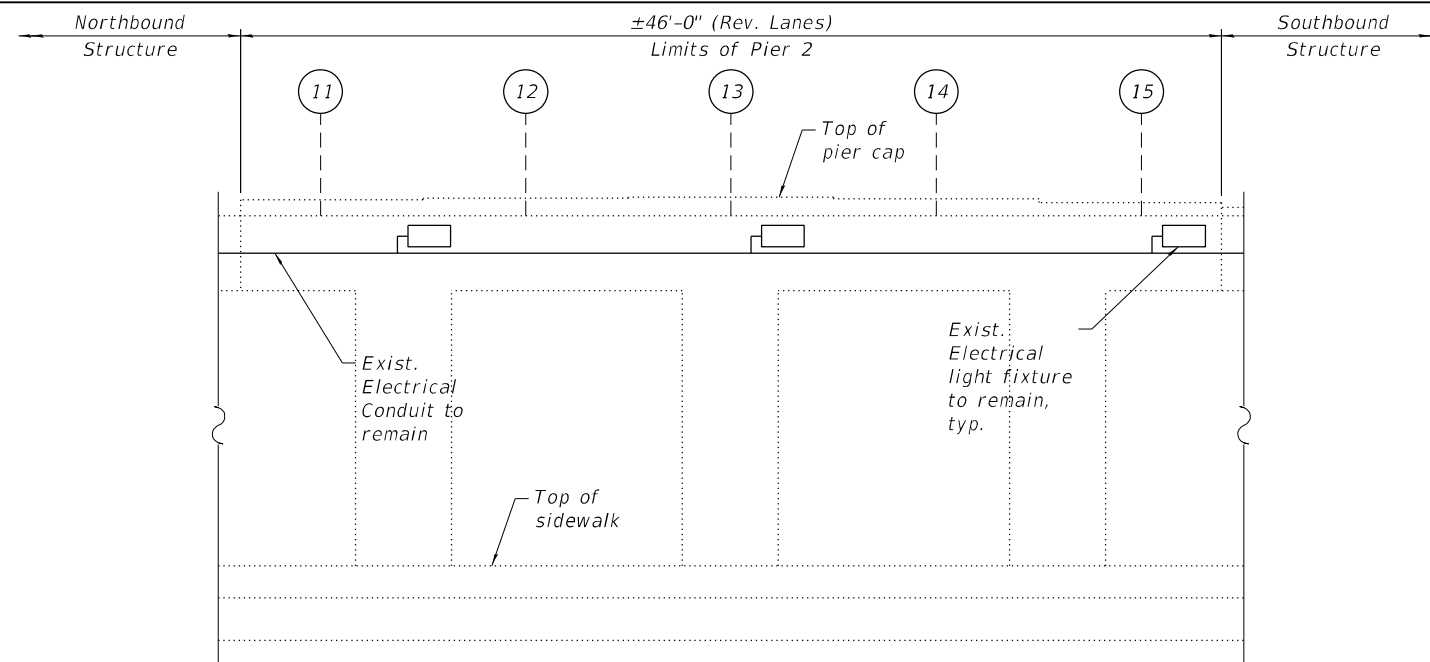
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PLOT SCALE =	DRAWN - D.C.P.	REVISED -
PLOT DATE =	CHECKED - K.G.W.	REVISED -

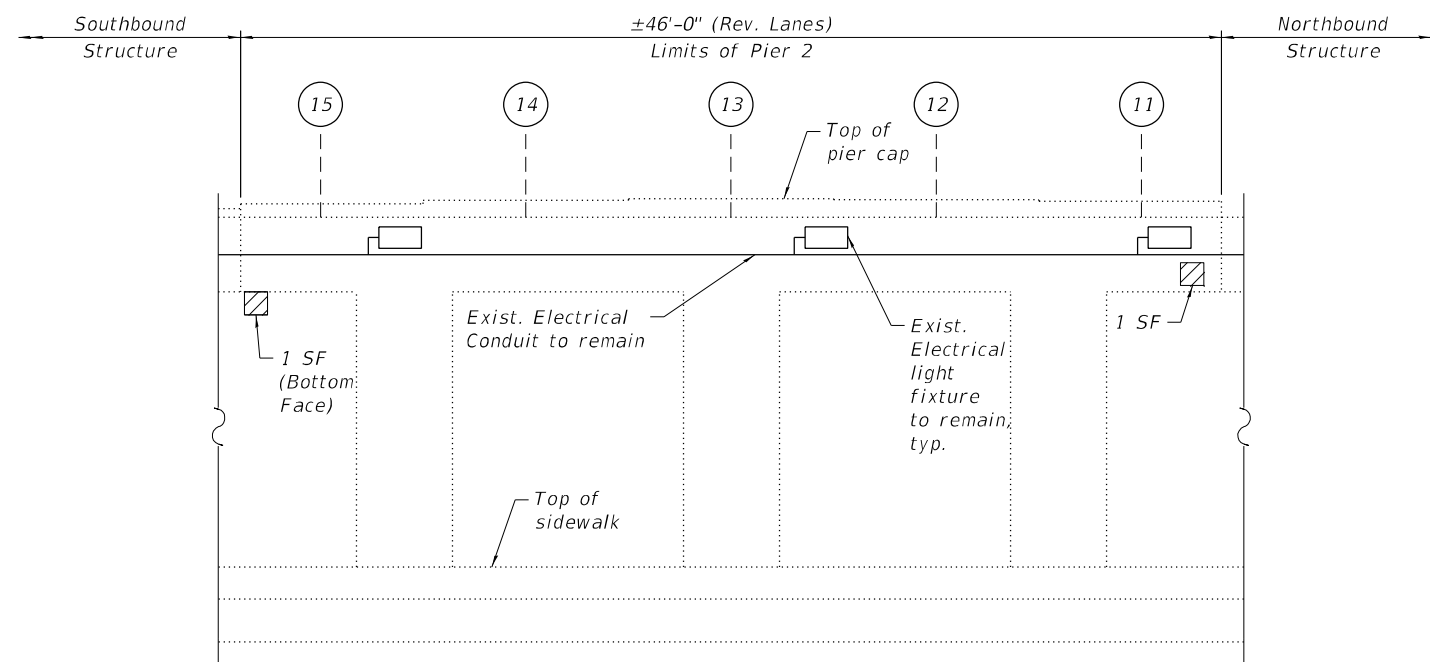
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 REPAIRS
SN 016-0127 (REV)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1083
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



ELEVATION - PIER 2
(Looking South)



ELEVATION - PIER 2
(Looking North)



EXISTING LIGHTING: PIER 2
(Looking Southeast)



EXISTING LIGHTING: PIER 2
(Looking Northwest)

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.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

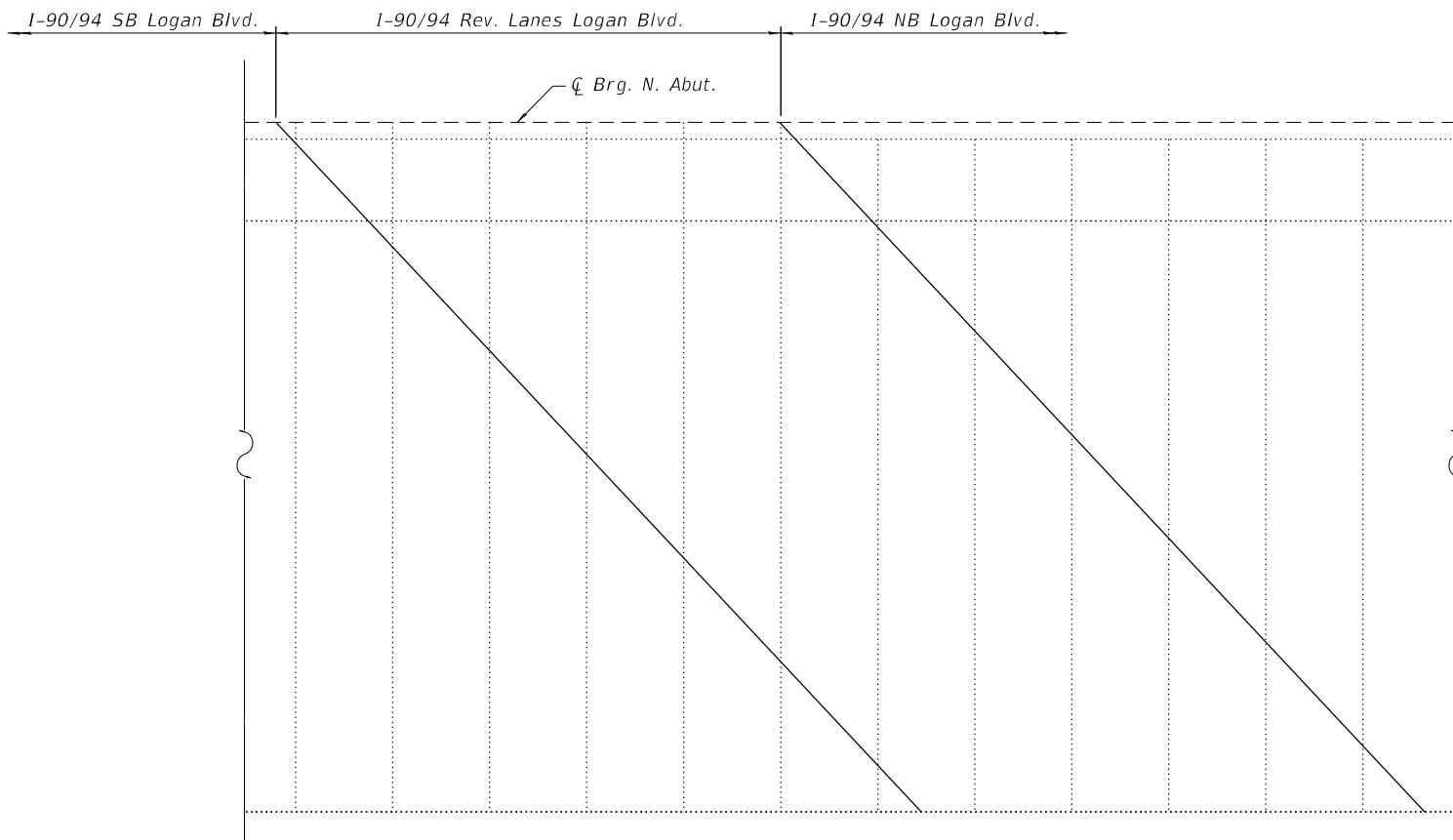
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	2

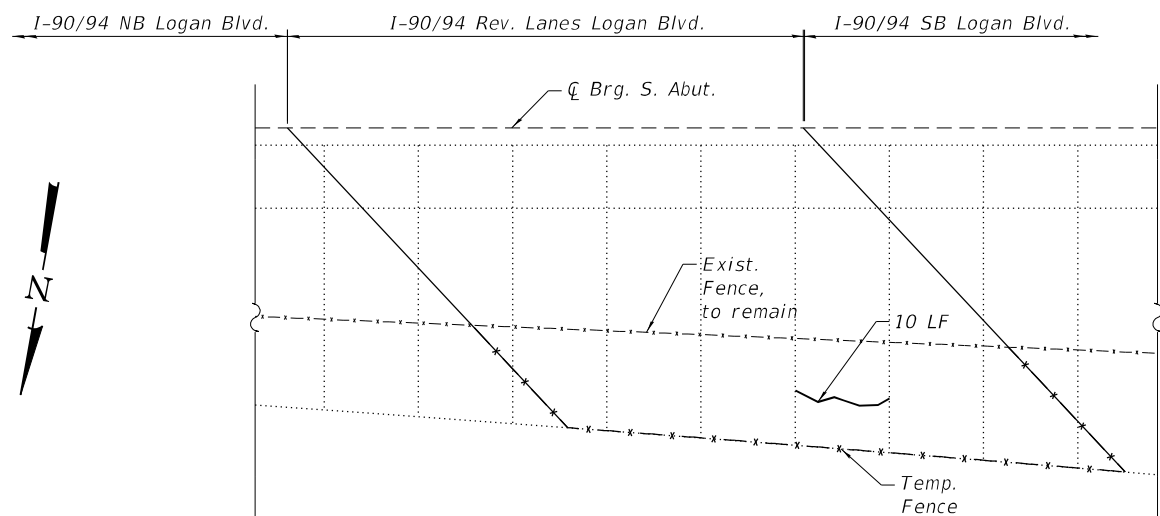
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1084
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



NORTH SLOPE WALL - PLAN
(Looking North)



SOUTH SLOPE WALL - PLAN
(Looking South)

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.
- Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq ft

LEGEND

- LF Linear Foot
- Slope Wall Crack Sealing

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Slope Wall Crack Sealing	Foot	10

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SLOPE WALL REPAIRS
 SN 016-0127 (REV)

SHEET S22-16 OF S22-16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1085
			CONTRACT NO. 62K74	
		ILLINOIS FED. AID PROJECT		

Existing Structure: S.N. 016-1078 was originally built in 1958 from BCR. The bridge was widened and redecked between 1990 and 1993, and expansion joint repairs were performed in 2013. The structure has a back-to-back abutment length of 263'-4" and an out-to-out deck width that varies from 95'-3 7/8" to 102'-9 1/8". The superstructure consists of a 7 1/2" thick reinforced concrete deck supported on three span continuous steel beams of span lengths 76'-5 7/16", 102'-2", and 76'-3 5/8". The substructure consists of reinforced concrete abutments and piers supported on piles at the abutments and timber piles at the piers.

Traffic will be maintained utilizing stage construction.

LOADING

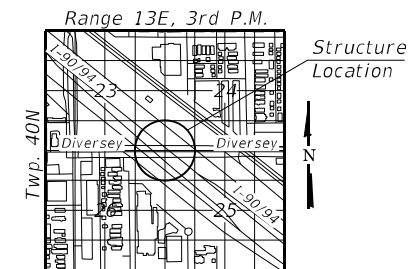
HS20-44 and alternate military loading

DESIGN SPECIFICATIONS

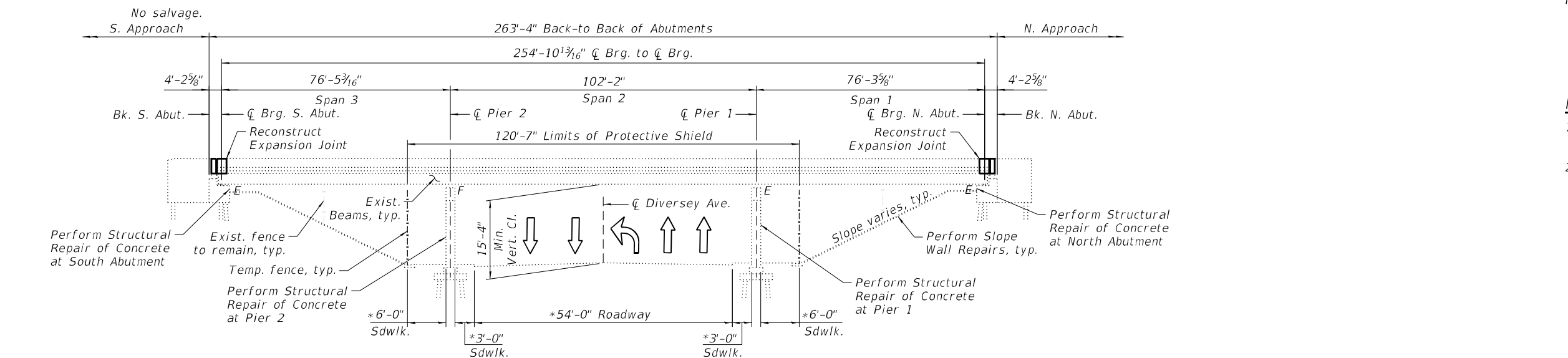
2002 AASHTO Standard Specification for Highway Bridges, 17th Edition

NOTE:

1. All stations are to the ϕ I-90/94 Roadway and taken from existing plans.
2. No Future Wearing Surface is allowed.

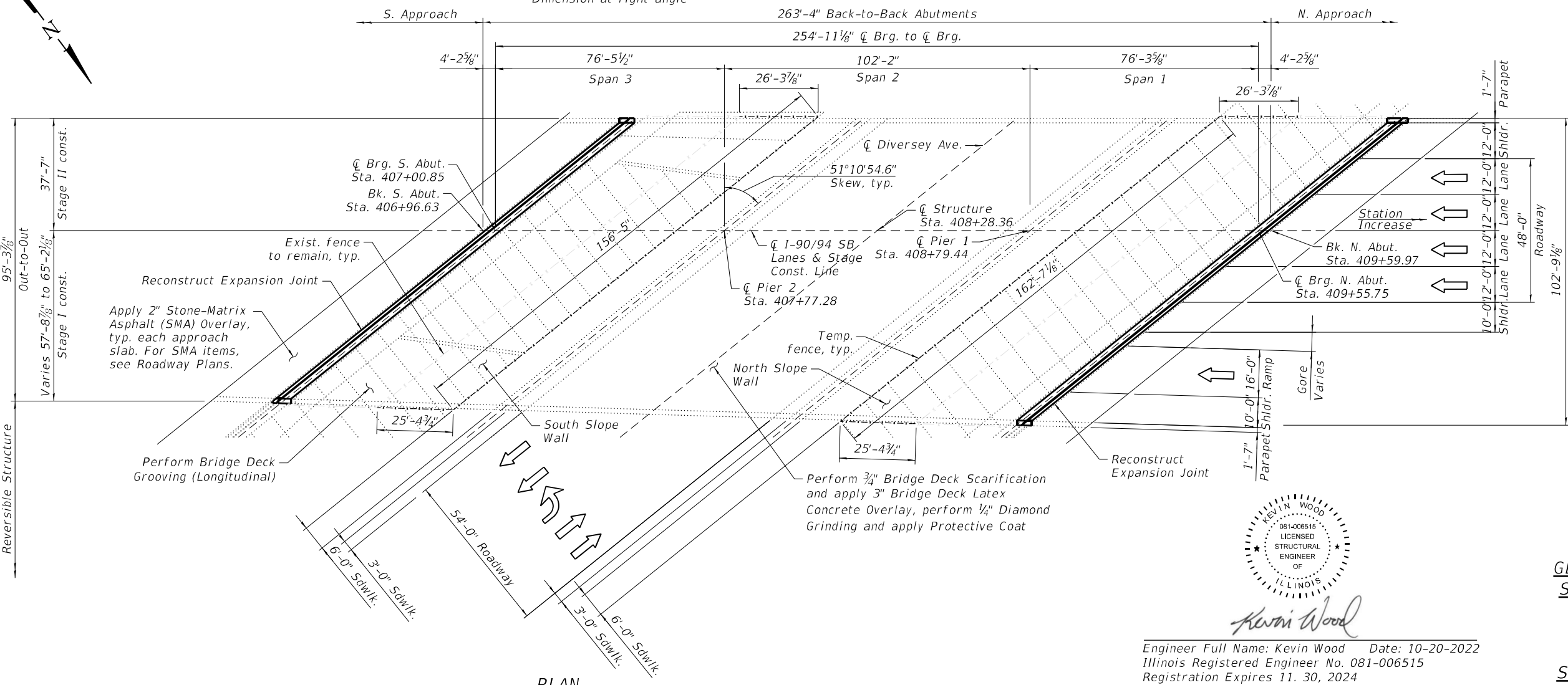


LOCATION SKETCH

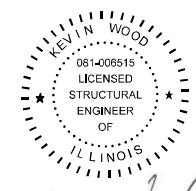


ELEVATION

* Dimension at right angle



PLAN



Kevin Wood

Engineer Full Name: Kevin Wood Date: 10-20-2022
 Illinois Registered Engineer No. 081-006515
 Registration Expires 11. 30, 2024

GENERAL PLAN AND ELEVATION
SB I-90 OVER DIVERSEY AVE.
F.A.I. SEC 2020-004-BR
COOK COUNTY
STATION: 408+28.36
STRUCTURE NO. 016-1078 (SB)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET S23-01 OF S23-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1086
CONTRACT NO. 62K74				

ILLINOIS FED. AID PROJECT

GENERAL NOTES

- Reinforcement bars designated (E) shall be epoxy coated.
- Prior to pouring the new concrete deck for Expansion Joints Reconstruction and Bridge Deck repairs, all heavy or 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 Concrete Removal pay item. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further dispositions. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
- Plan dimensions and details relative to the 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 furnished at the unit price bid for the work.
- Cleaning and field painting of structural steel shall be done under a separate painting contract.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Existing reinforcement extended into the removal of area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. The cost of cleaning shall be included in the cost of Concrete Removal.
- Bars indicated thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bar per line.
- All exposed concrete edges shall have a 3/4"x45° chamfer, except where shown otherwise.
- For SMA overlay on Approach Slab, see Roadway Plans.
- Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside face of the parapets, and top of Latex Concrete overlay.
- Joint openings shall be adjusted according to Article 520.04 of the Standard Specification when the deck is poured at an ambient temperature other than 50°F.
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provisions "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- Adjacent I-90/94 reversible bridge is not shown throughout the plans for clarity.
- The Contractor shall take the necessary precautions for the protection of passing vehicles, bicycles and pedestrians from falling objects and/or materials until completion of work.
- The Contractor is responsible to remove, support and reinstall all existing electrical conduits interfering with the work. See special provision "Protection and Maintenance of Existing Underpass Luminaires".
- The Contractor shall exercise caution during Concrete Removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
- The Contractor is responsible to protect the existing conduit and junction box embedded in the parapet during concrete removal and construction. Any damage to the existing conduit and junction box shall be repaired by the Contractor at no additional cost to the Department.
- Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to be placed above the existing lighting fixtures in order to maintain the existing level of lighting on the roadway underneath. Details shall be approved by the Engineer before installation.
- Any adjustment done to the Protective Shield System must not change the system's load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.
- The Contractor shall contact Chandra Libby, the Director of City of Chicago Department of Family Support Services (DFSS) at 312-746-5443 or Chandra.Libby@cityofchicago.org to coordinate the relocation of persons and their personal belongings under the bridges within the areas bounded by the temporary chain-link-fence.
- Prior to the application of the Concrete Sealer, the Contractor shall clean all existing debris from the abutment seats. The method of debris removal shall not damage the existing concrete and shall be approved by the Engineer. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleaning shall be included in the cost of Concrete Sealer.

INDEX OF SHEETS

- S23-01 General Plan & Elevation
- S23-02 General Data
- S23-03-S23-04 Stage Construction Details I & II
- S23-05 Temporary Concrete Barrier
- S23-06 Bridge Deck Repair Plan and Details
- S23-07-S23-09 South Abutment Expansion Joint Details I, II & III
- S23-10-S23-12 North Abutment Expansion Joint Details I, II & III
- S23-13 Preformed Joint Strip Seal
- S23-14 South Abutment Repairs
- S23-15 North Abutment Repairs
- S23-16 Pier 1 Repairs
- S23-17 Pier 2 Repairs
- S23-18 Slope Wall Repairs
- S23-19 Bar Splicer Assembly and Mechanical Splicer Details


SCOPE OF WORK

- Provide Protective Shield within limits indicated on the plans.
- Scarify 3/4" from the bridge deck slab.
- Perform deck repairs.
- Remove and reconstruct expansion joints at north and south abutments and install new Preformed Joint Strip Seals.
- Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck. Apply a 2" Stone-Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Roadway Plans.
- Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
- Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
- Apply Protective Coat to the top and inside faces of parapets, reconstructed transverse expansion joints and to the surface of the new overlay.
- Perform Structural Repair of Concrete to the Abutments and Piers as noted in the plans.
- Perform slope wall repairs.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu Yd	58.1		58.1
Protective Shield	Sq Yd	1,327		1,327
Concrete Superstructure	Cu Yd	65.7		65.7
Protective Coat	Sq Yd	3,038		3,038
Reinforcement Bars, Epoxy Coated	Pound	8,650		8,650
Bar Splicers	Each	32		32
Preformed Joint Strip Seal	Foot	320		320
Concrete Sealer	Sq Ft		1,623	1,623
Slope Wall Crack Sealing	Foot		30	30
Protect and Maintain Existing Underpass Luminaire	L Sum		0.022	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,374		1,374
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	2,680		2,680
Bridge Deck Scarification 3/4"	Sq Yd	2,680		2,680
Structural Repair of Concrete (Depth Equal to or less than 5 Inches)	Sq Ft		103	103
Deck Slab Repair (Full Depth, Type I)	Sq Yd	0.2		0.2
Deck Slab Repair (Full Depth, Type II)	Sq Yd	6.5		6.5
Diamond Grinding (Bridge Section)	Sq Yd	2,744		2,744
Maintenance of Lighting System	Cal Mo		6	6
Temporary Construction Fence	Foot		423	423

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
SN 016-1078 (SB)**

SHEET S23-02 OF S23-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1087
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		

STAGE I REMOVAL

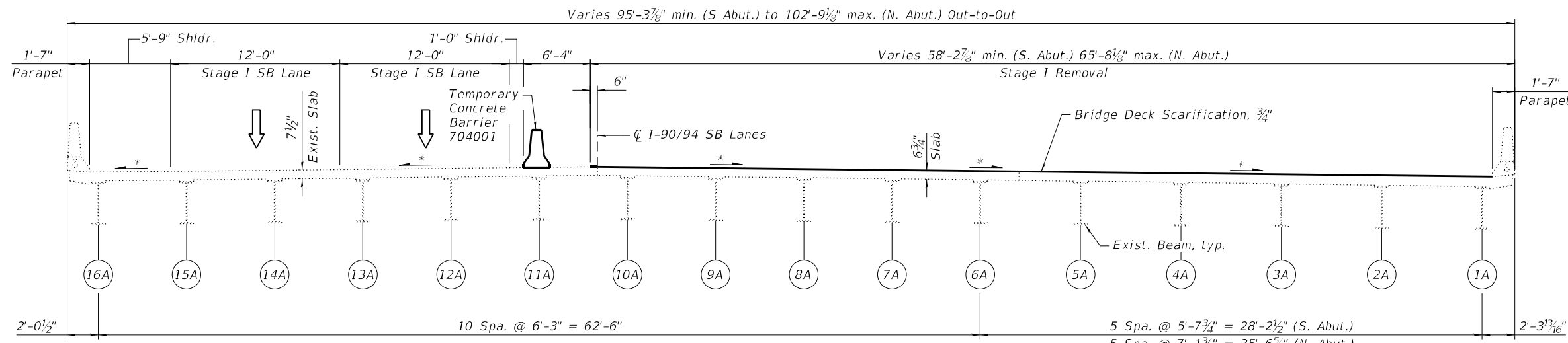
1. Install Temporary Concrete Barrier as shown to locate traffic on the west side of the existing structure.
2. Scarify $\frac{3}{4}$ " from the top of the deck.
3. Remove portions of bridge deck adjacent to abutment joints, as shown in the plans.

STAGE I CONSTRUCTION

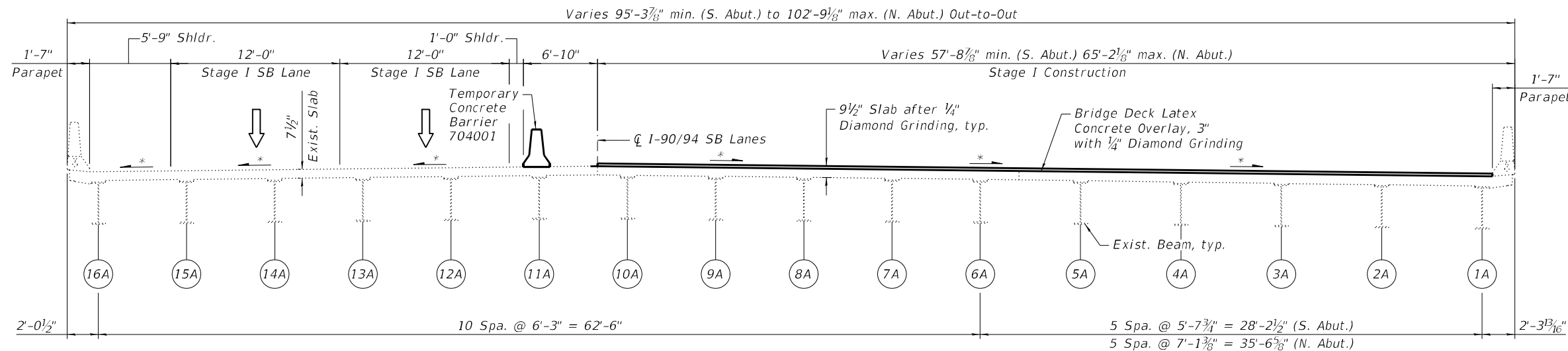
1. Perform Deck Slab Repairs at the locations shown in the plans.
2. Reconstruct transverse expansion joints and install Preformed Joint Strip Seal at north and south abutments and replace associated reinforcement and concrete adjacent to the joint.
3. Perform Structural Repair of Concrete at abutments and piers.
4. Apply 3" Bridge Deck Latex Concrete Overlay to bridge deck slab.
5. Perform $\frac{1}{4}$ " diamond grinding to bridge deck and abutment hatched block.
6. Perform Bridge Deck Grooving (Longitudinal) for the 3" Bridge Deck Latex Concrete Overlay and reconstructed abutment expansion joint areas.
7. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach pavement and taper into existing roadway. See Roadway Plans.
8. Apply Protective Coat to the top of reconstructed transverse joint areas, the surface of the new overlay, and the top and inside faces of the parapets.
9. Perform slope wall repairs as shown in the plans

STAGE II REMOVAL

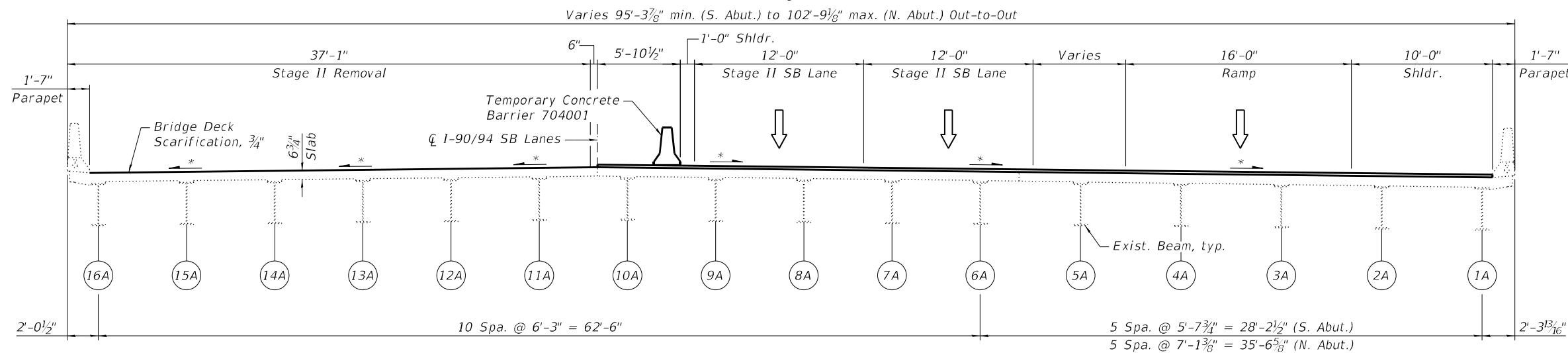
1. Install Temporary Concrete Barrier as shown to locate traffic on the East side of the existing structure.
2. Scarify $\frac{3}{4}$ " from the top of the deck.
3. Remove portions of bridge deck adjacent to abutment joints, as shown in the plans.



STAGE I REMOVAL
(Looking North)



STAGE I CONSTRUCTION
(Looking North)



STAGE II REMOVAL
(Looking North)

* Match existing deck surface profile

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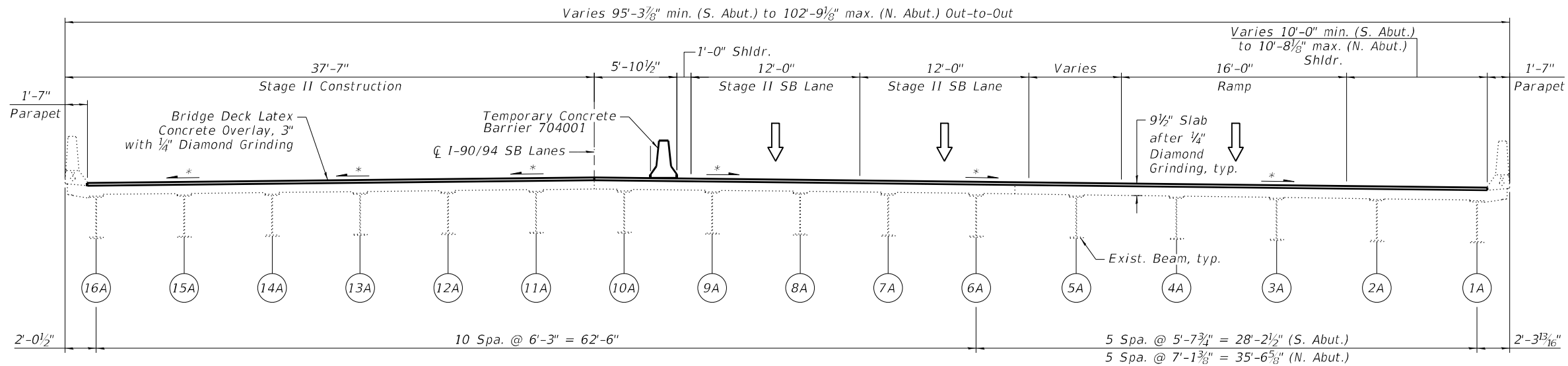
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS I
SN 016-1078 (SB)**

SHEET S23-03 OF S23-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1088
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

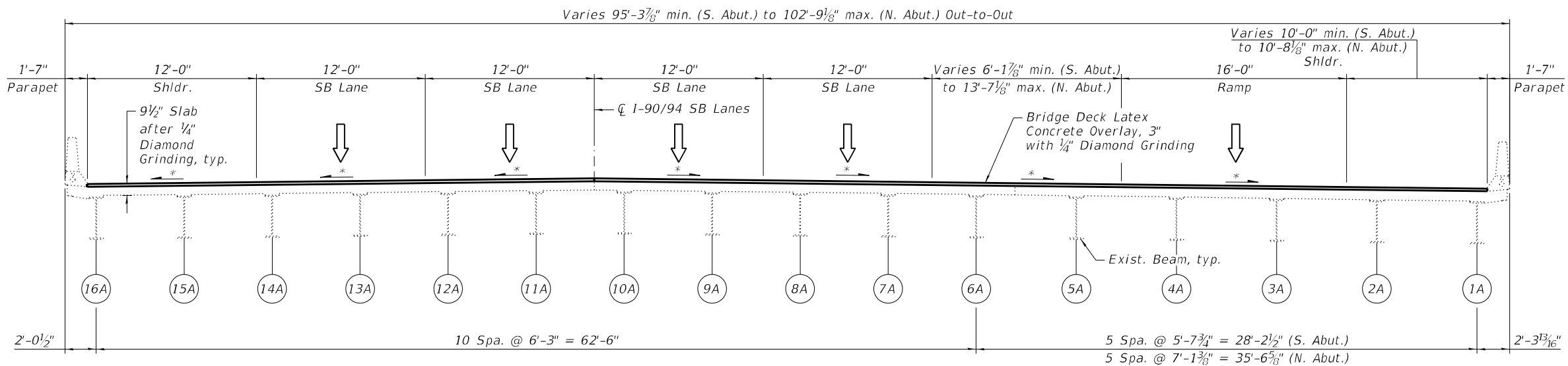


STAGE II CONSTRUCTION
(Looking North)

STAGE II CONSTRUCTION

1. Perform Deck Slab Repairs at the locations shown in the plans.
2. Reconstruct transverse expansion joints and install Preformed Joint Strip Seal at north and south abutments and replace associated reinforcement and concrete adjacent to the joint.
3. Perform Structural Repair of Concrete at abutments and piers.
4. Apply 3" Bridge Deck Latex Concrete Overlay to bridge deck slab.
5. Perform 1/4" diamond grinding to bridge deck and abutment hatched block.
6. Perform Bridge Deck Grooving (Longitudinal) for the 3" Bridge Deck Latex Concrete Overlay and reconstructed abutment expansion joint areas.
7. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach pavement and taper into existing roadway. See Roadway Plans.
8. Apply Protective Coat to the top of reconstructed transverse joint areas, the surface of the new overlay, and the top and inside faces of the parapets.
9. Perform slope wall repairs as shown in the plans

* Match existing deck surface profile



FINAL CROSS SECTION
(Looking North)

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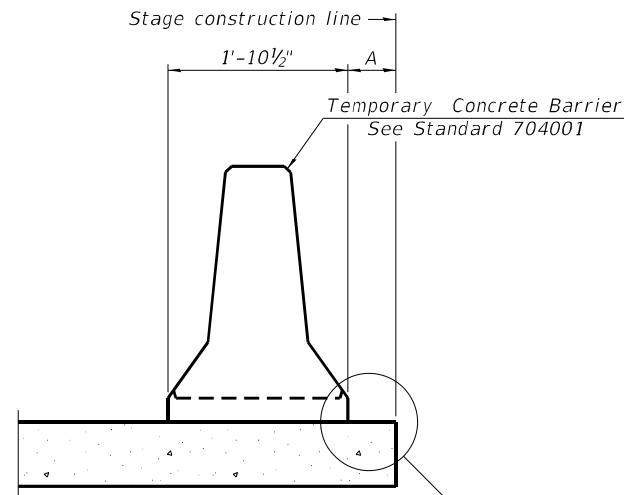
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PLOT SCALE =	DRAWN -	D.C.P.	REVISED -
PLOT DATE =	CHECKED -	H.A.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS II
SN 016-1078 (SB)**

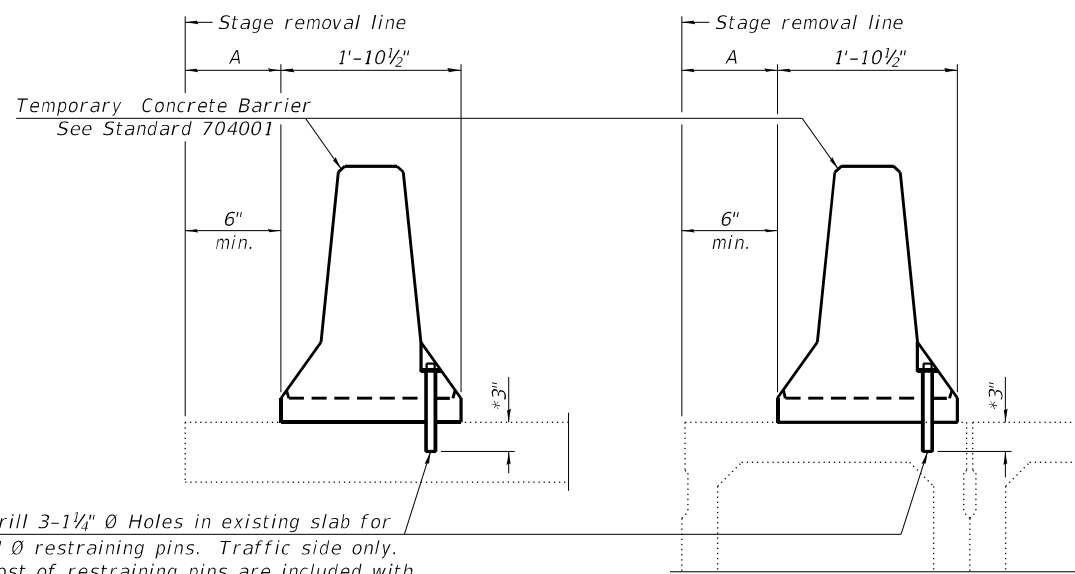
SHEET S23-04 OF S23-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1089
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



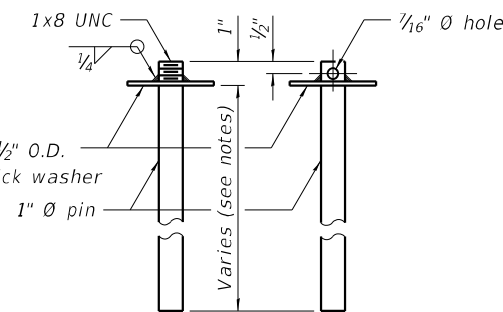
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

EXISTING DECK BEAM

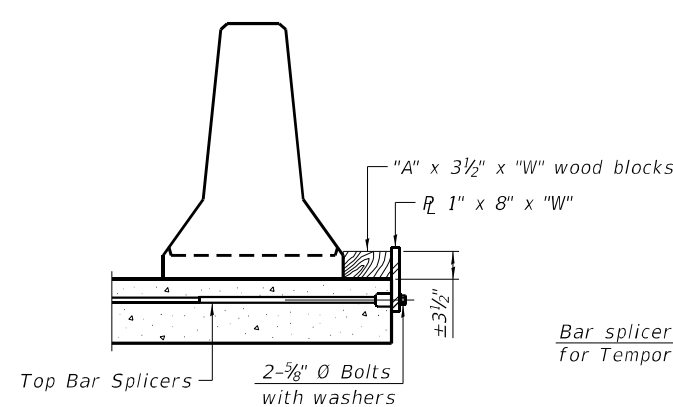
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

SECTIONS THRU SLAB OR DECK BEAM

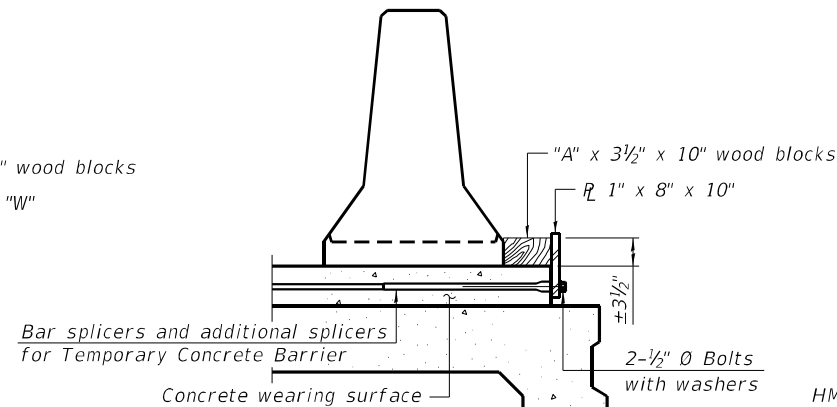


RESTRAINING PIN

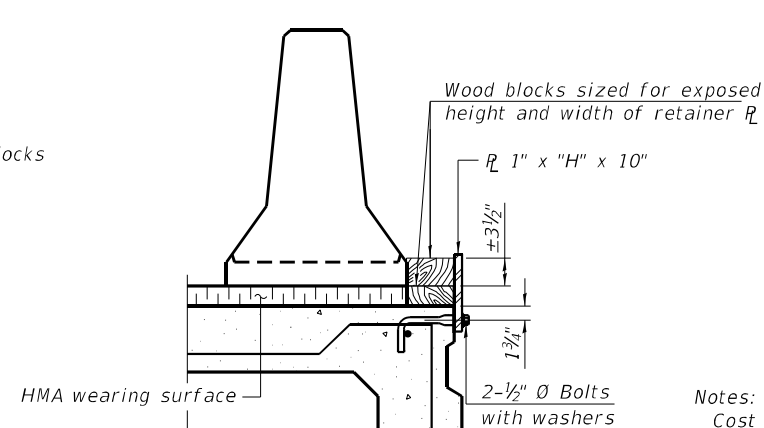
US Std. 1 1/16" I.D. x 2 1/2" O.D. x approx. 8 gauge thick washer



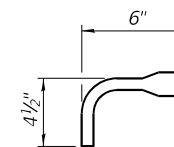
DETAIL I



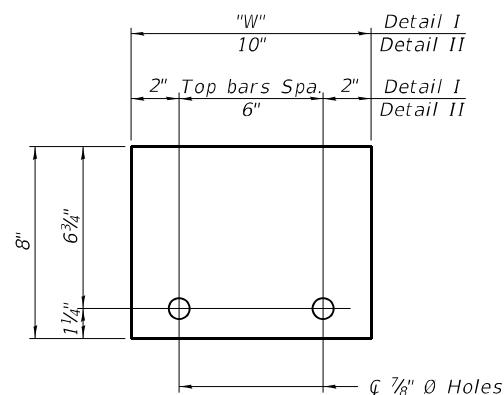
DETAIL II



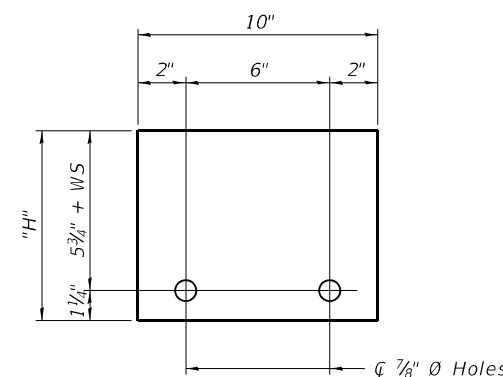
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W" (Detail I and II)



STEEL RETAINER R 1" x "H" x 10" (Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate center of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 10-12-2021

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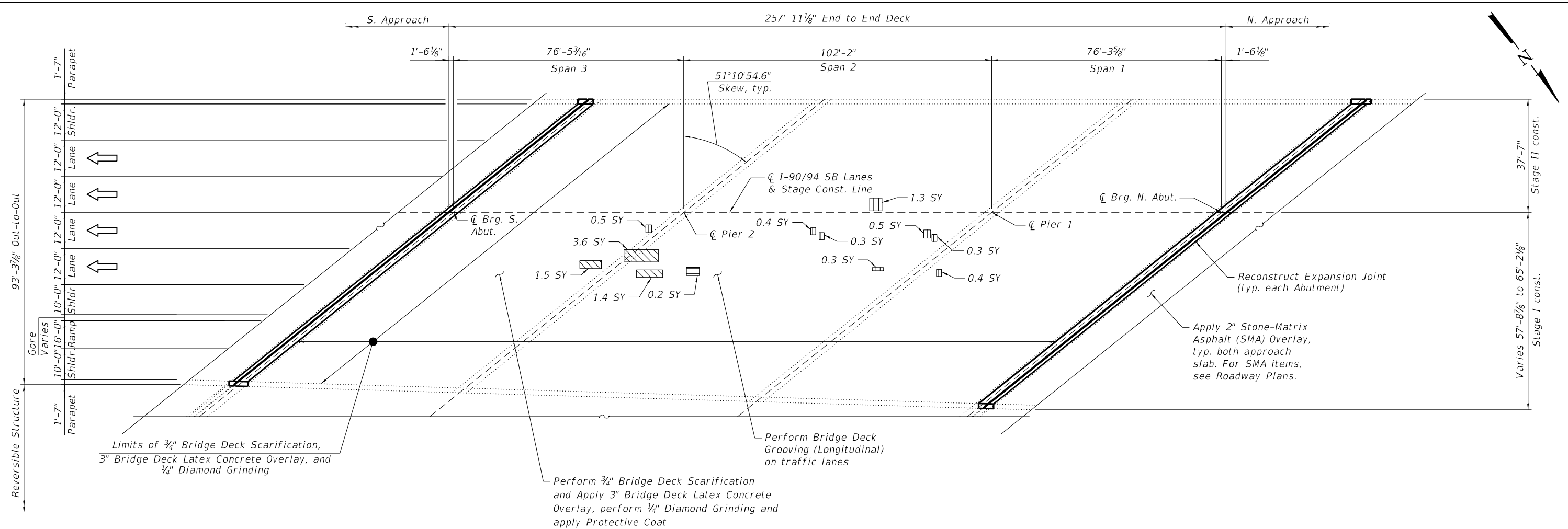
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PLOT DATE =	DRAWN - D.C.P.	REVISED -
	CHECKED - H.A.	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
 SN 016-1078 (SB)

SHEET S23-05 OF S23-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1090
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



DECK PLAN

LEGEND

- *Deck Slab Repair (Partial Depth)
- Deck Slab Repair (Full Depth, Type I)
- Deck Slab Repair (Full Depth, Type II)
- Square Yard

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 bridge deck final cross section, see Sheet S23-04.
3. For North and South transverse joint removal and reconstruction, see Sheet S23-07 thru S23-12.
4. Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
5. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
6. Protective Coat shall be applied to the top of reconstructed transverse joints, top and inside face of parapets and top of latex concrete overlay.
7. 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.
8. The Contractor shall exercise extreme caution during concrete removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer at no cost to the Department.

* Areas of Deck Slab Repair (Partial Depth) are provided for information only and shall be included in the cost of Bridge Deck Latex Concrete Overlay, 3 Inches

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Shield	Sq Yd	1,327
Protective Coat	Sq Yd	3,038
Protect and Maintain Existing Underpass Luminaire	L Sum	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,374
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	2,680
Bridge Deck Scarification 3/4"	Sq Yd	2,680
Deck Slab Repair (Full Depth, Type I)	Sq Yd	0.2
Deck Slab Repair (Full Depth, Type II)	Sq Yd	6.5
Diamond Grinding (Bridge Section)	Sq Yd	2,744
Maintenance of Lighting System	Cal Mo	6

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8501 N. Higgins Road, Suite 280
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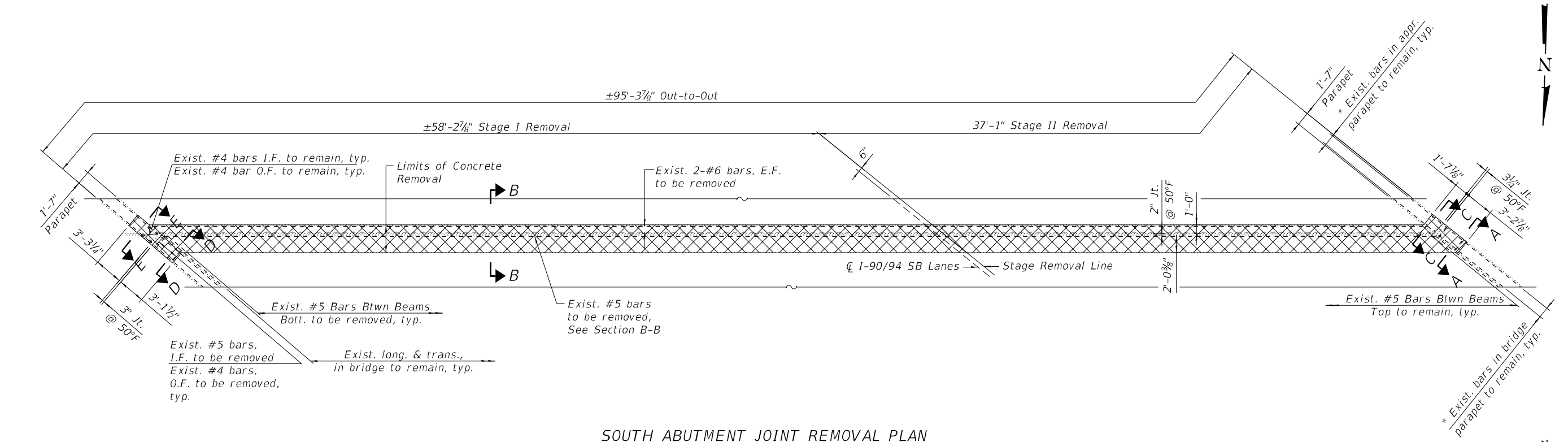
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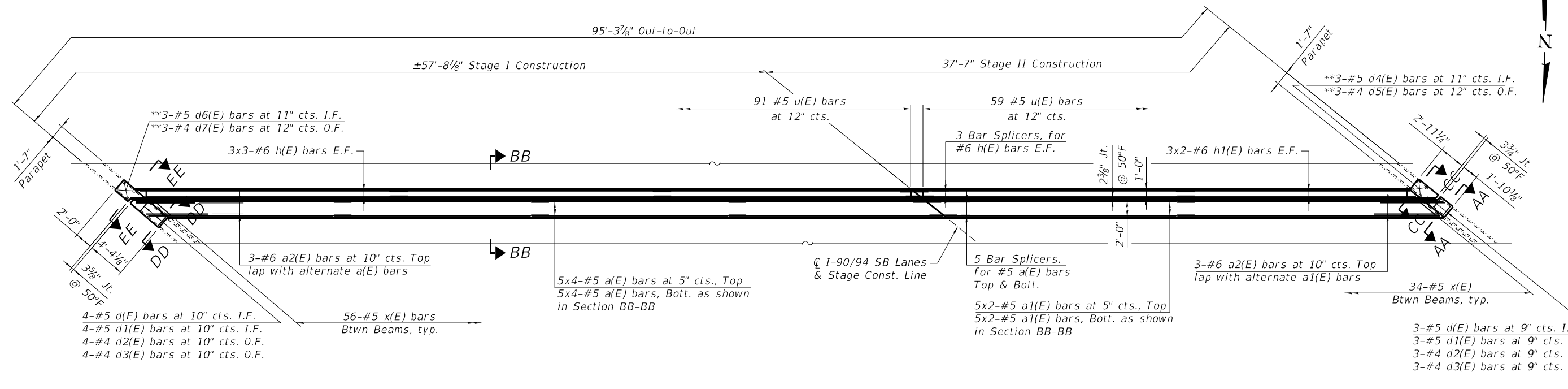
**BRIDGE DECK REPAIR PLAN AND DETAILS
SN 016-1078 (SB)**

SHEET S23-06 OF S23-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1091
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



SOUTH ABUTMENT JOINT REMOVAL PLAN



SOUTH ABUTMENT JOINT RECONSTRUCTION PLAN

NOTES:

- For sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, see sheet S23-08.
- For sections D-D, E-E, DD-DD and EE-EE, see sheet S23-09.

* Existing longitudinal bars to remain in the parapets can be cut in the field as required

** Epoxy grout #5 d4(E), d6(E) & #4 d5(E), d7(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- E.F. Each Face

MODEL: SMODELNAMES
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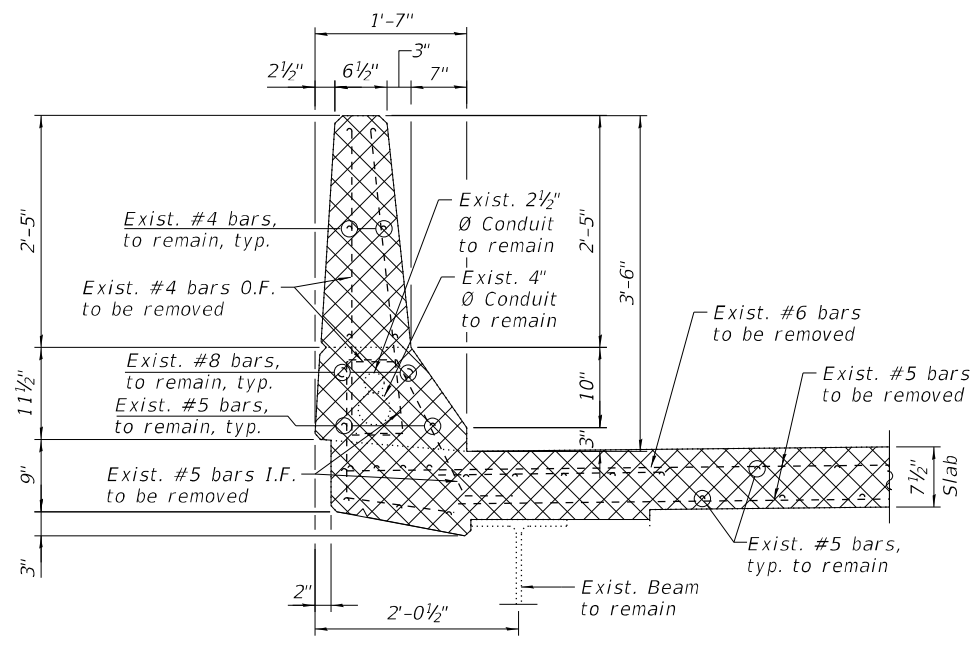
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**STATE OF ILLINOIS
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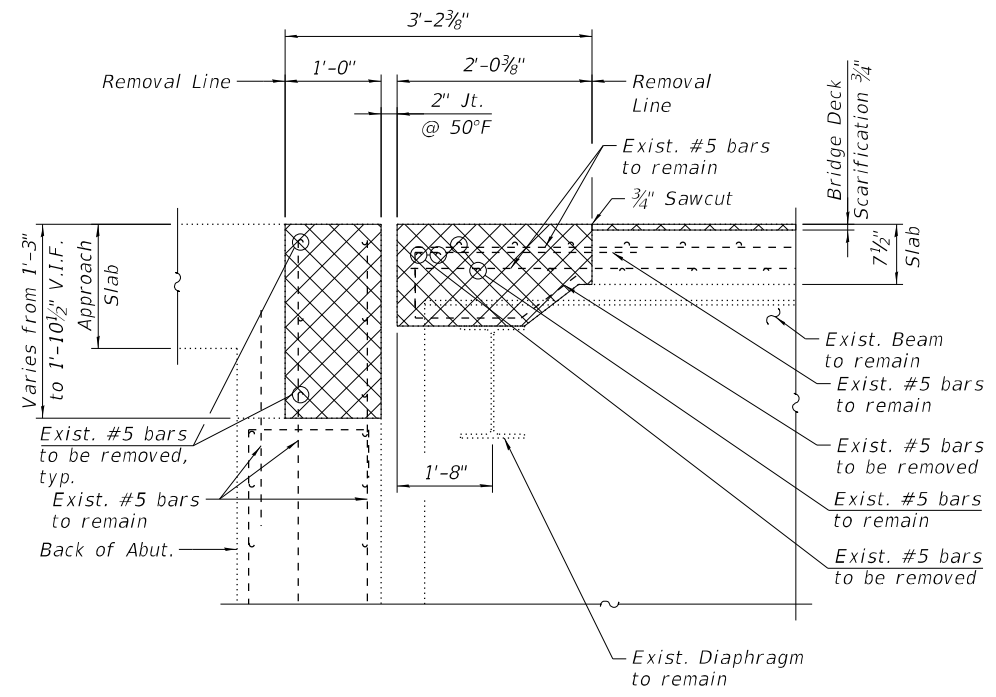
**SOUTH ABUTMENT EXPANSION JOINT DETAILS I
SN 016-1078 (SB)**

SHEET S23-07 OF S23-19 SHEETS

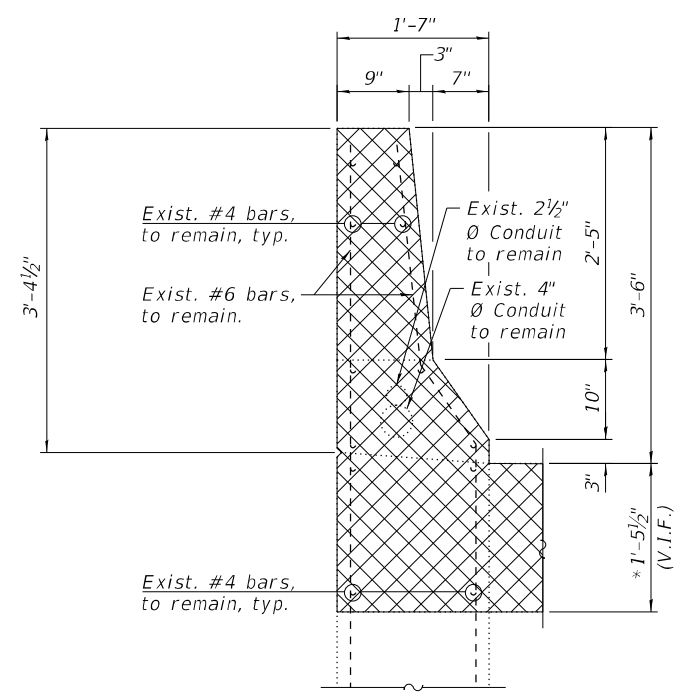
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90	2020-004-BR	COOK	1492	1092
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



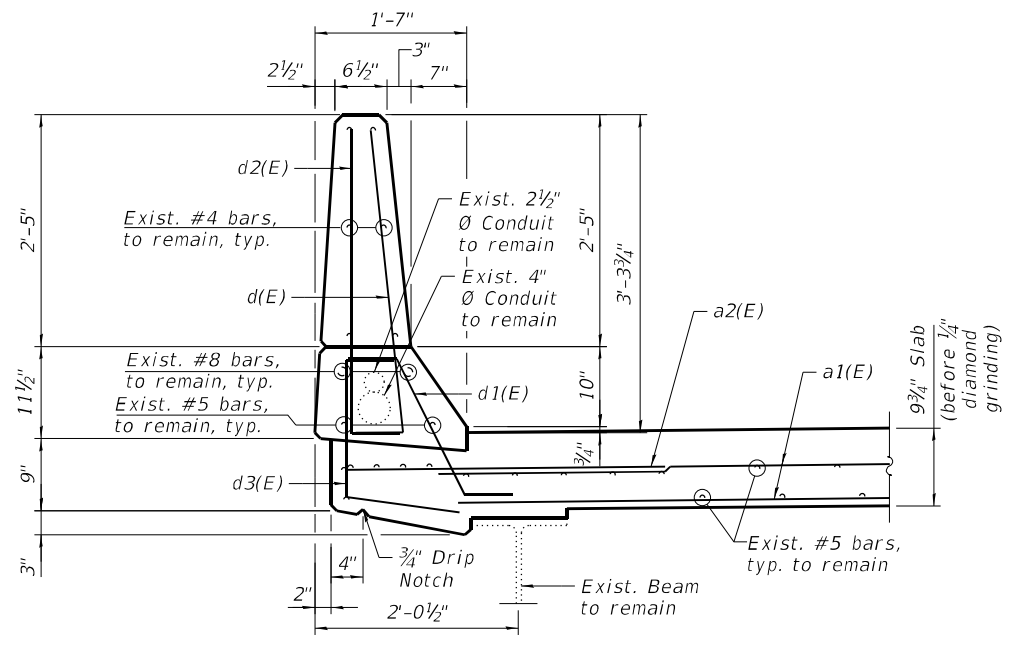
SECTION A-A
(West parapet removal)



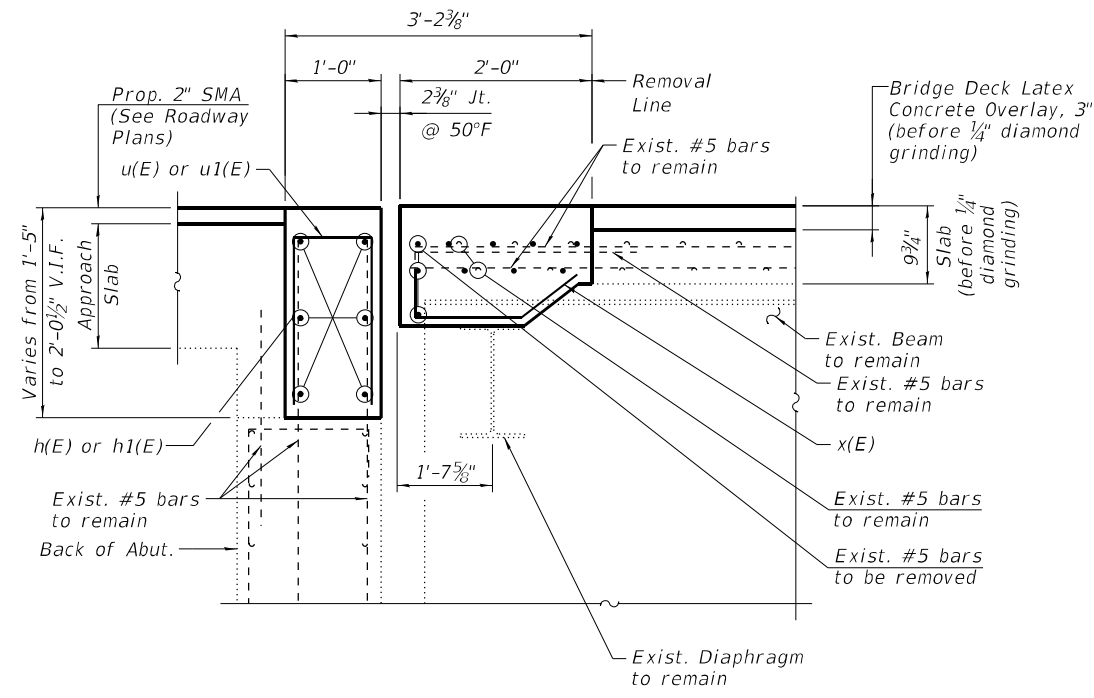
SECTION B-B



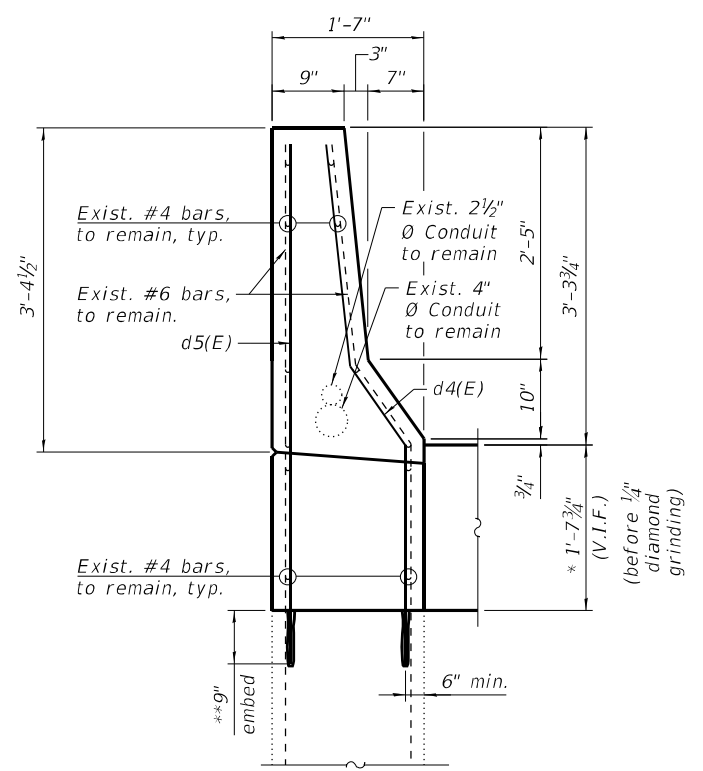
SECTION C-C
(West parapet removal)



SECTION AA-AA
(West parapet reconstruction)



SECTION BB-BB



SECTION CC-CC
(West parapet reconstruction)

LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- V.I.F. Verify in Field

* Dimension is taken at the Back of Abut.

** Epoxy grout #5 d4(E) & #4 d5(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

MODEL: sMODELNAME5
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DEPARTMENT OF TRANSPORTATION

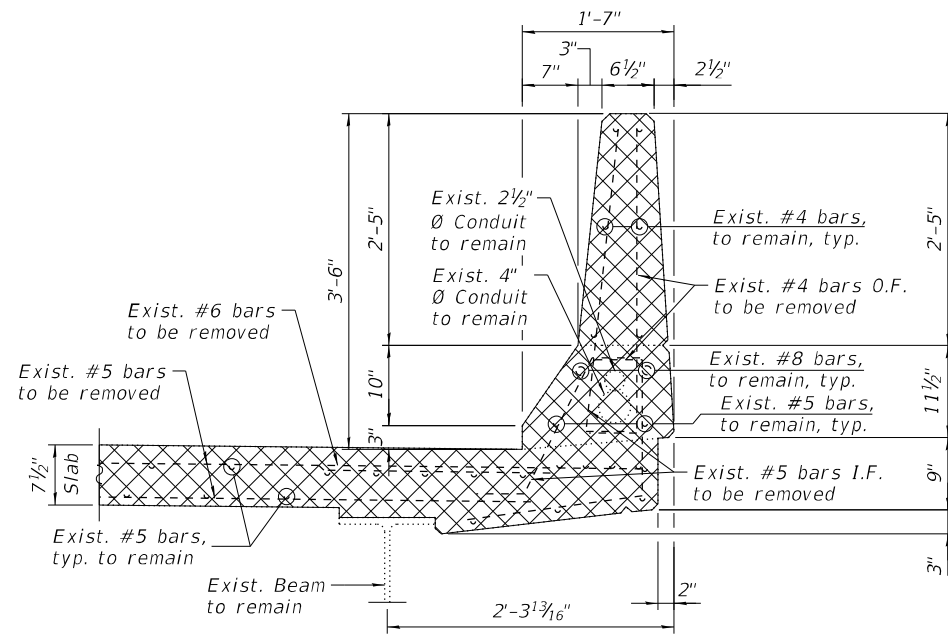
SOUTH ABUTMENT EXPANSION JOINT DETAILS II
SN 016-1078 (SB)

SHEET S23-08 OF S23-19 SHEETS

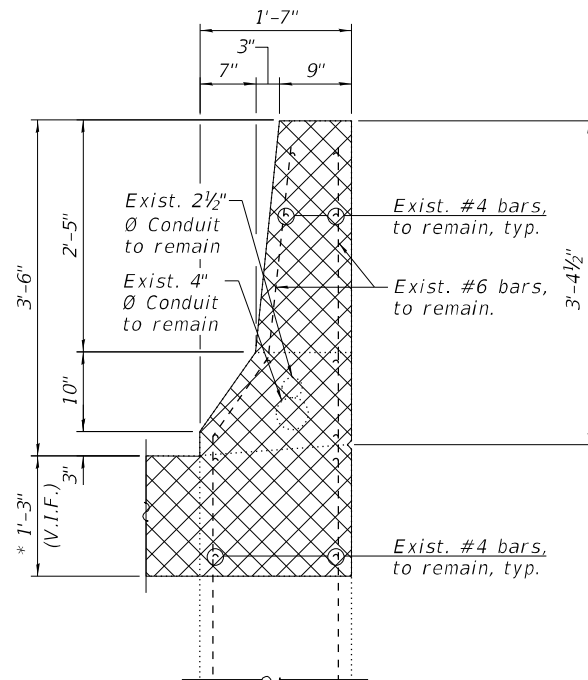
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90	2020-004-BR	COOK	1492	1093
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL
SOUTH ABUTMENT**

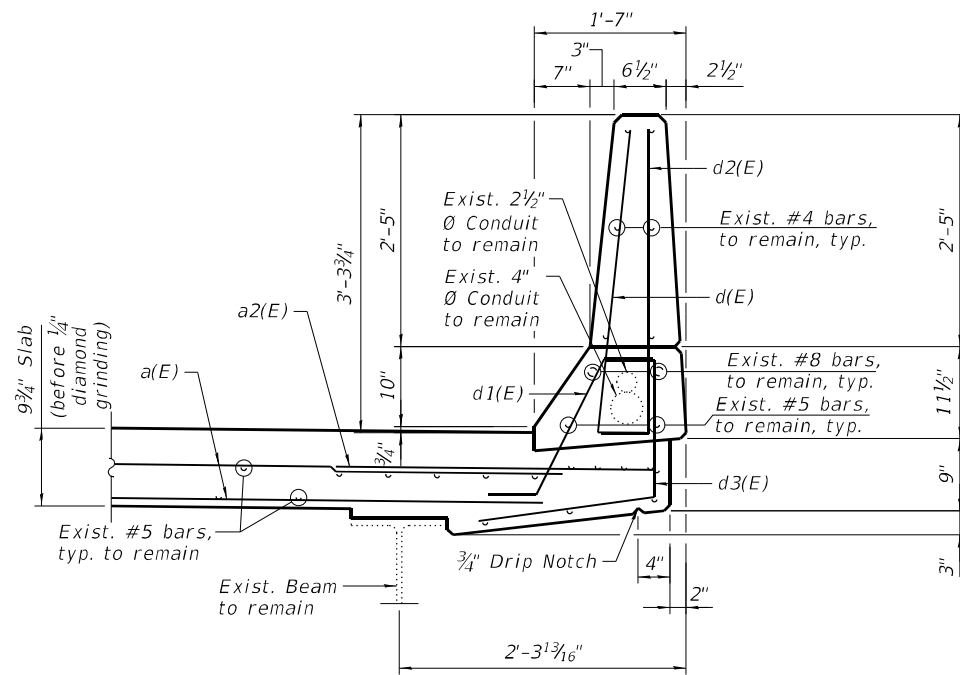
Bar	No.	Size	Length	Shape
a(E)	40	#5	25'-9"	—
a1(E)	20	#5	31'-9"	—
a2(E)	6	#6	6'-6"	—
d(E)	7	#5	3'-8"	┘
d1(E)	7	#5	2'-7"	┘
d2(E)	7	#4	3'-8"	┘
d3(E)	7	#4	3'-6"	┘
d4(E)	3	#5	5'-7"	┘
d5(E)	3	#4	5'-6"	┘
d6(E)	3	#5	5'-5"	┘
d7(E)	3	#4	5'-3"	┘
h(E)	18	#6	32'-7"	—
h1(E)	12	#6	32'-9"	—
u(E)	150	#5	2'-10"	┘
x(E)	90	#5	3'-4"	┘
Concrete Removal		Cu Yd	28.3	
Reinforcement Bars, Epoxy Coated		Pound	4,160	
Concrete Superstructure		Cu Yd	31.9	



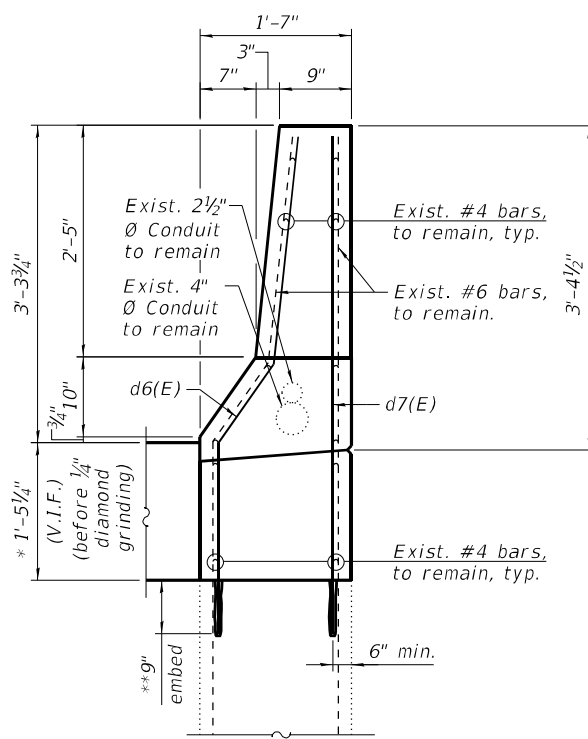
SECTION D-D
(East parapet removal)



SECTION E-E
(East parapet removal)

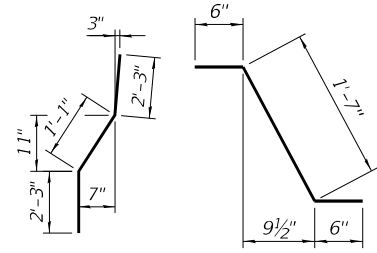


SECTION DD-DD
(East parapet reconstruction)



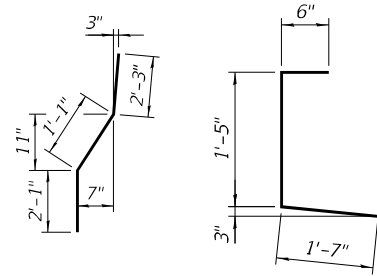
SECTION EE-EE
(East parapet reconstruction)

BARS d(E) & d2(E)



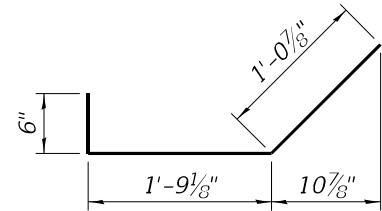
BAR d4(E)

BAR d1(E)

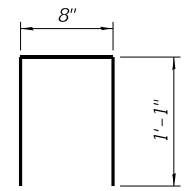


BAR d6(E)

BAR d3(E)



BAR x(E)



BAR u(E)

NOTES:

- For Preformed Joint Strip Seal details, see sheet S23-13.
- For Bar Splicer Assembly details, see sheet S23-19.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

* Dimension is taken at the Back of Abut.

** Epoxy grout #4 d7(E) & #5 d6(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

MIN BAR LAPS

#5	3'-6"
#6	4'-0"

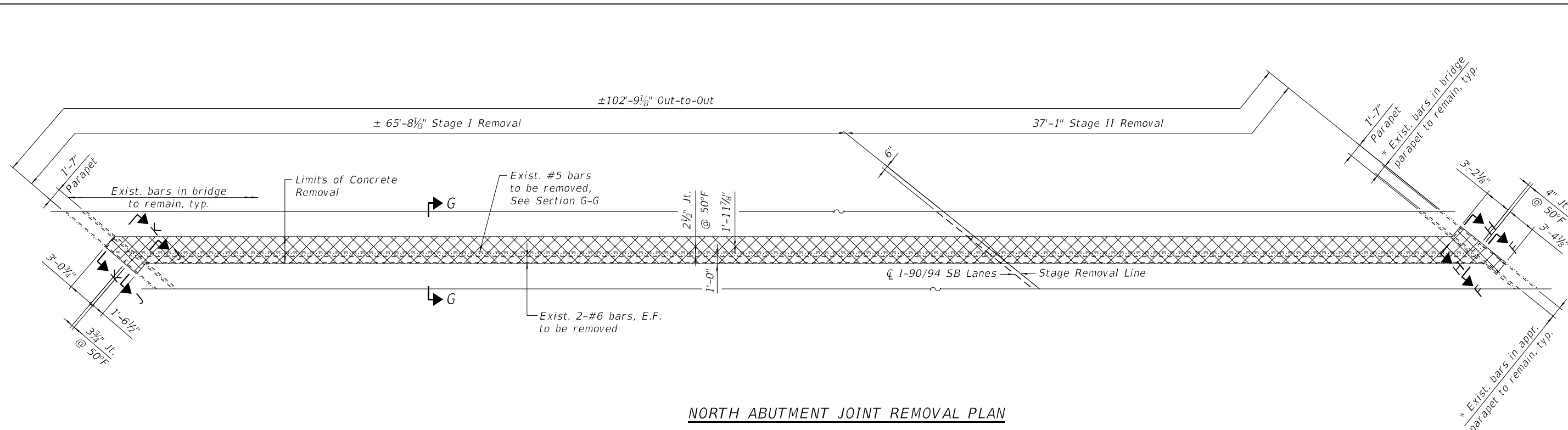
LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- V.I.F. Verify in Field

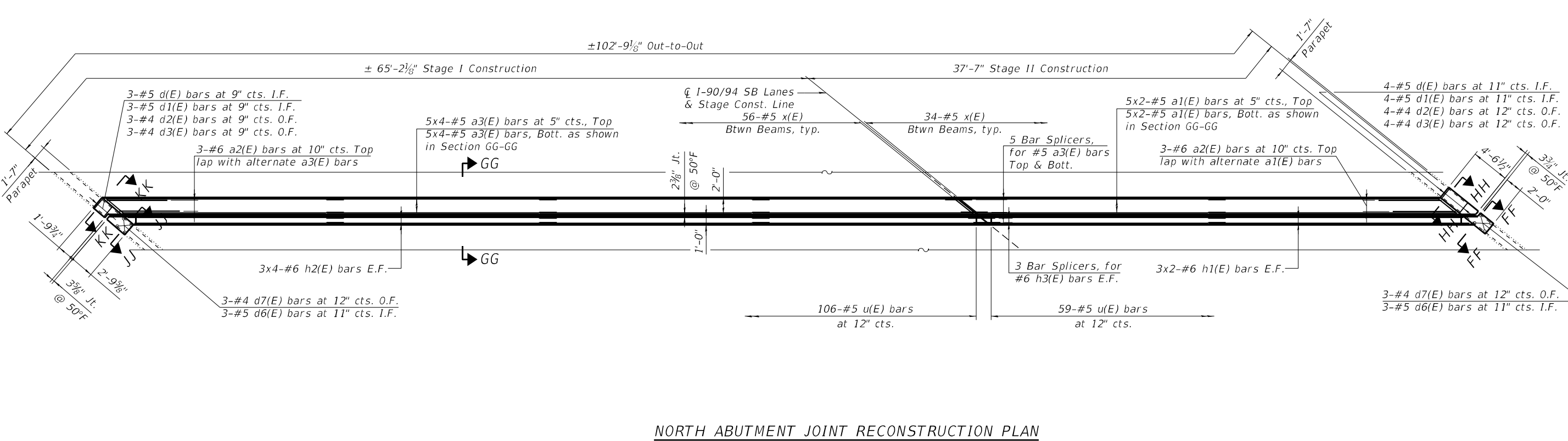
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1094
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



NORTH ABUTMENT JOINT REMOVAL PLAN



NORTH ABUTMENT JOINT RECONSTRUCTION PLAN

- NOTES:**
- For sections F-F, H-H, G-G, FF-FF, HH-HH and GG-GG, see sheet S23-11.
 - For sections J-J, K-K, JJ-JJ and KK-KK, see sheet S23-12.

- LEGEND**
- * Existing longitudinal bars to remain in the parapets can be cut in the field as required
 - ** Epoxy grout #5 d6(E) & #4 d7(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.
 - Concrete Removal
 - I.F. Inside Face
 - O.F. Outside Face
 - E.F. Each Face

MODEL: SMODELNAMES
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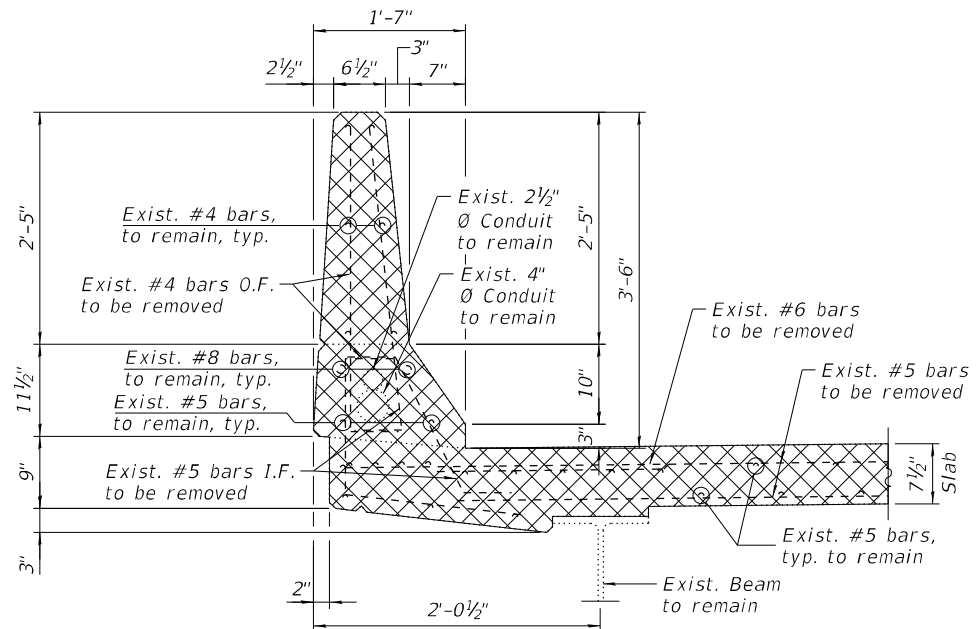
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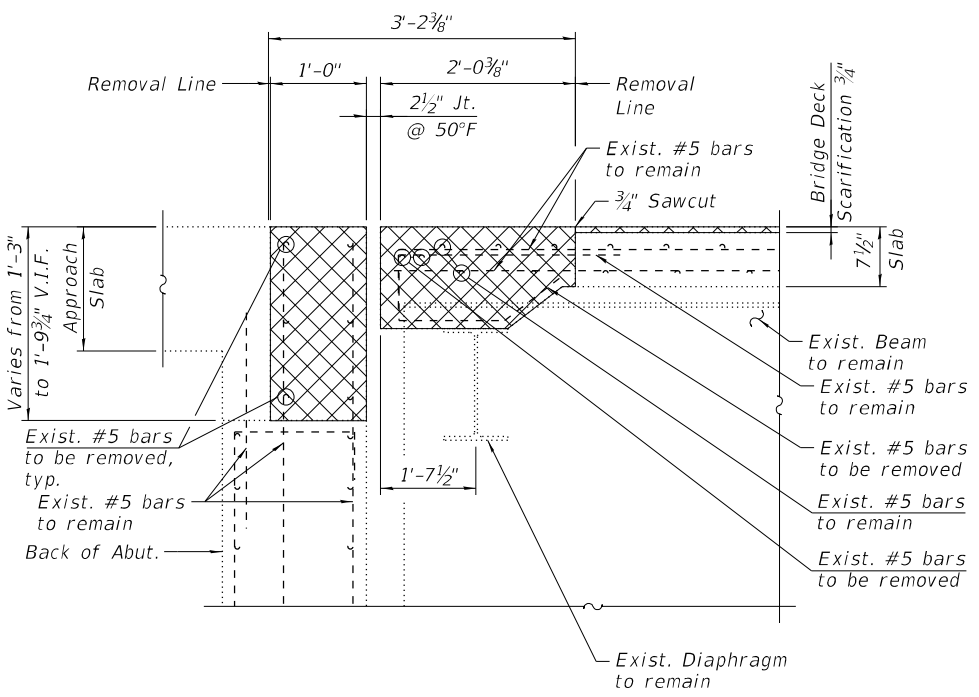
NORTH ABUTMENT EXPANSION JOINT DETAILS I
SN 016-1078 (SB)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

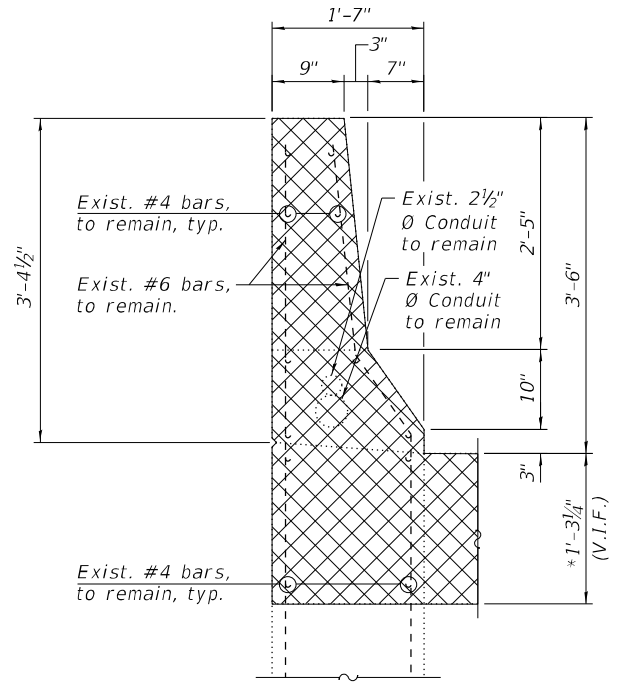
SHEET S23-10 OF S23-19 SHEETS



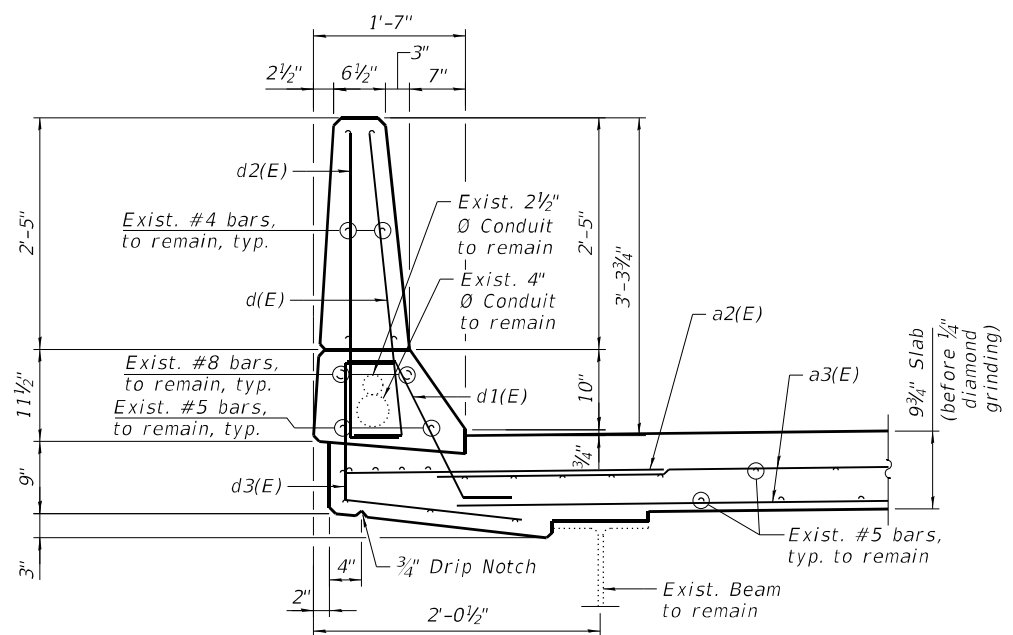
SECTION H-H
(West parapet removal)



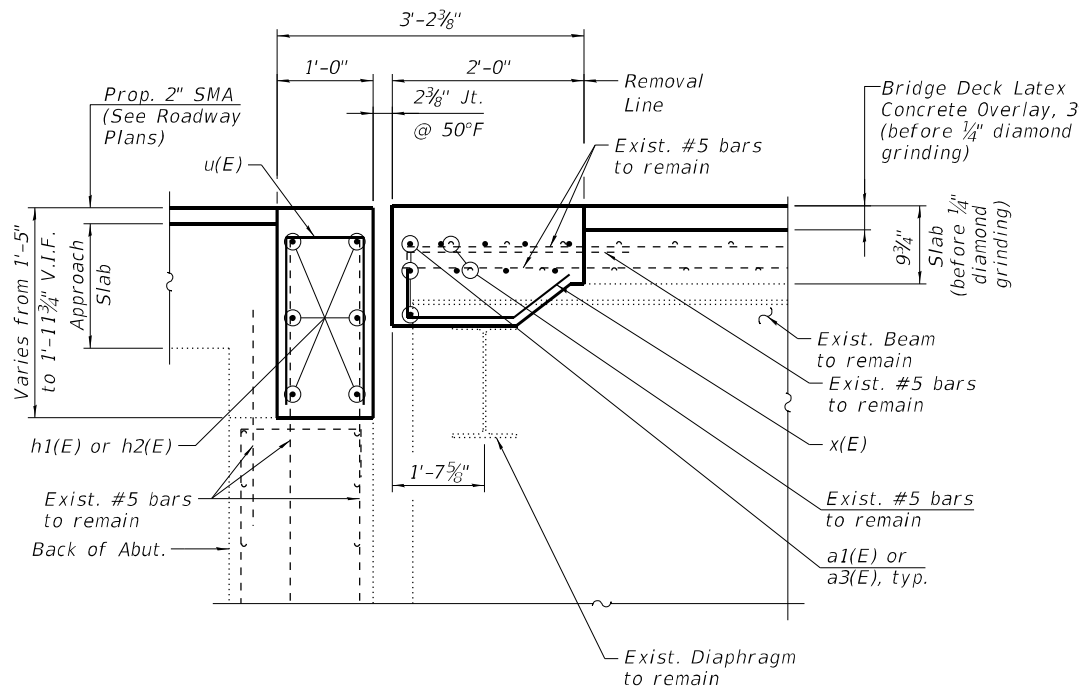
SECTION G-G



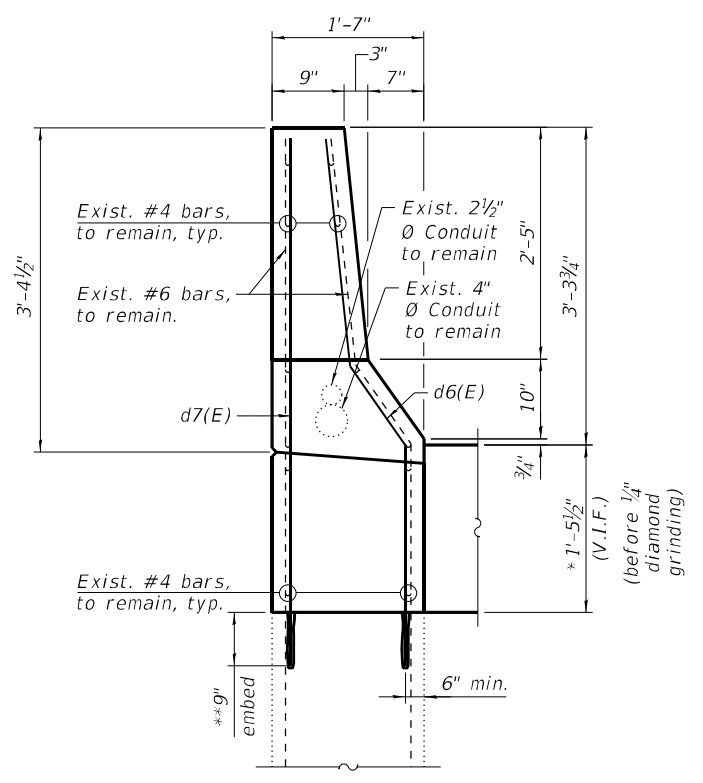
SECTION F-F
(West parapet removal)



SECTION HH-HH
(West parapet reconstruction)



SECTION GG-GG



SECTION FF-FF
(West parapet reconstruction)

LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- V.I.F. Verify in Field

* Dimension is taken at the Back of Abut.

** Epoxy grout #4 d7(E) & #5 d6(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

MODEL: sMODELNAME5
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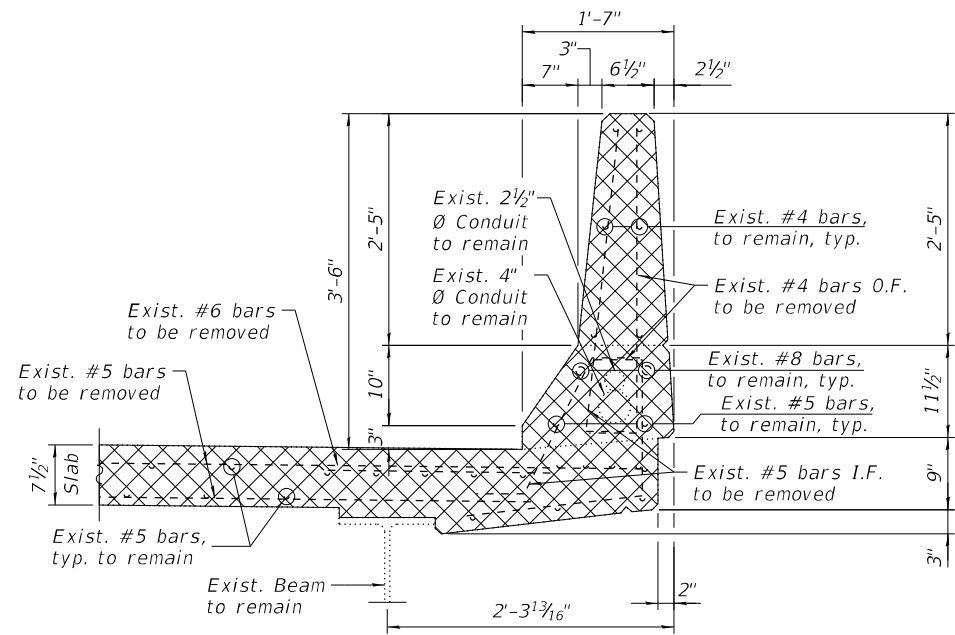
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SN 016-1078 (SB)

SHEET S23-11 OF S23-19 SHEETS

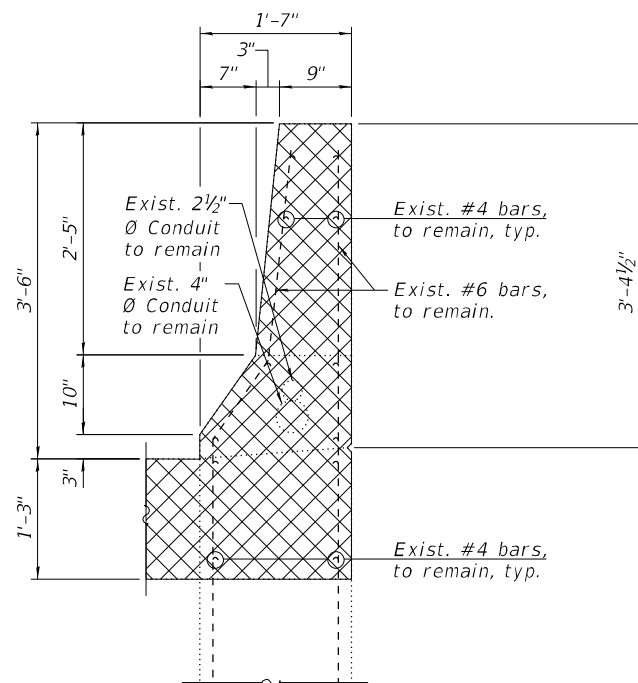
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL
NORTH ABUTMENT**

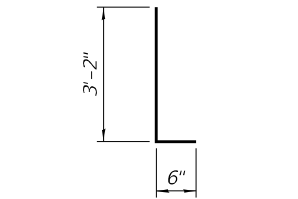
Bar	No.	Size	Length	Shape
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a2(E)	6	#6	6'-6"	—
a3(E)	40	#5	28'-7"	—
d(E)	7	#5	3'-8"	┘
d1(E)	7	#5	2'-7"	┘
d2(E)	7	#4	3'-8"	┘
d3(E)	7	#4	3'-6"	┘
d6(E)	6	#5	5'-5"	—
d7(E)	6	#4	5'-4"	—
h1(E)	12	#6	32'-7"	—
h2(E)	24	#6	29'-0"	—
u(E)	165	#5	2'-10"	┘
x(E)	90	#5	3'-4"	┘
Concrete Removal		Cu Yd	29.9	
Reinforcement Bars, Epoxy Coated		Pound	4,490	
Concrete Superstructure		Cu Yd	33.7	



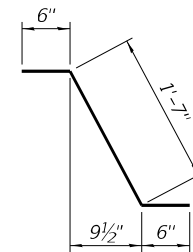
SECTION J-J
(East parapet removal)



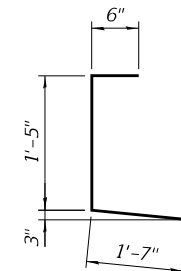
SECTION K-K
(East parapet removal)



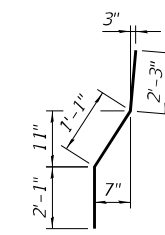
BARS d(E) & d2(E)



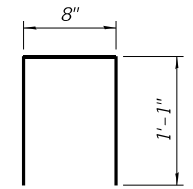
BAR d1(E)



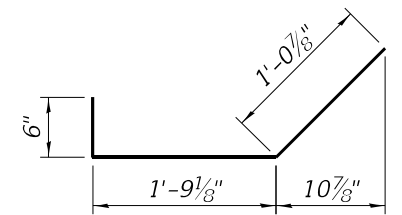
BAR d3(E)



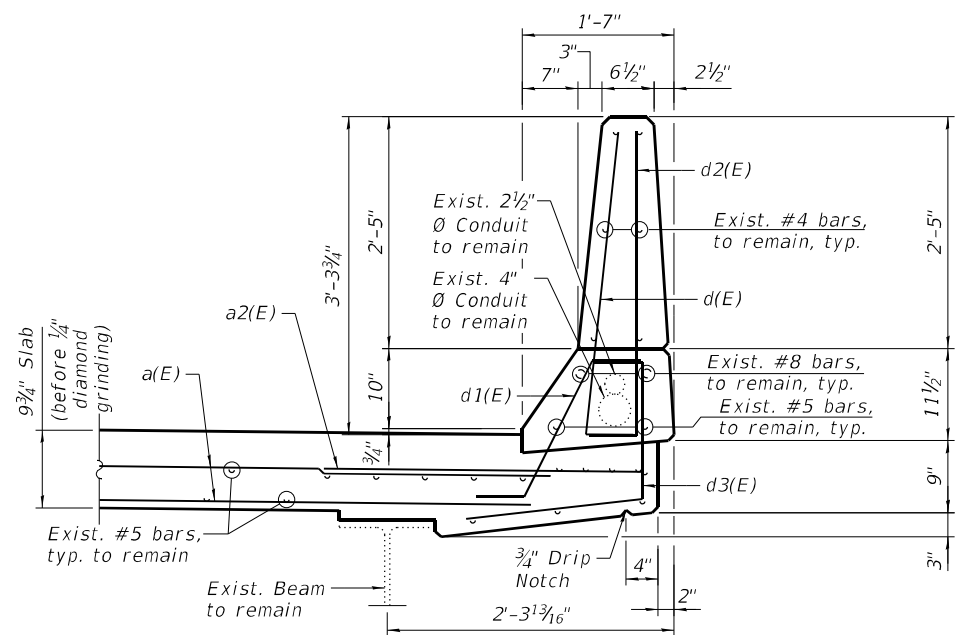
BAR d6(E)



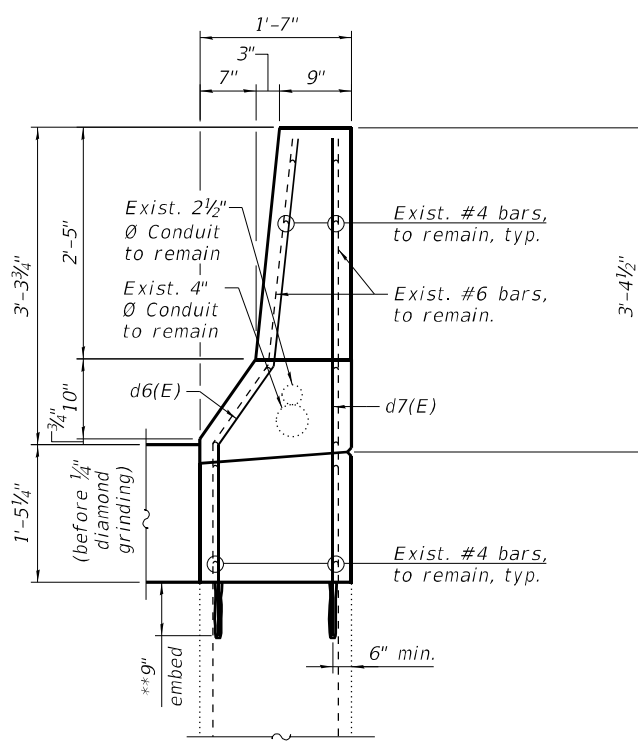
BAR u(E)



BAR x(E)



SECTION JJ-JJ
(East parapet reconstruction)



SECTION KK-KK
(East parapet reconstruction)

NOTES:

- For Preformed Joint Strip Seal details, see sheet S23-13.
- For Bar Splicer Assembly details, see sheet S23-19.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

* Dimension is taken at the Back of Abut.

** Epoxy grout #4 d7(E) & #5 d6(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

MIN BAR LAPS

#5	3'-6"
#6	4'-0"

LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- V.I.F. Verify in Field

MODEL: SMODELNAME5
FILE NAME: X:\OH\2020\20200221-03\Design\Structural\Design Files\CADD\SH\T016-1078_Diversey\SB\0161078-62K74-5012-EXP5.dgn

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PLOT DATE =	DRAWN - D.C.P.	REVISED -
	CHECKED - H.A.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

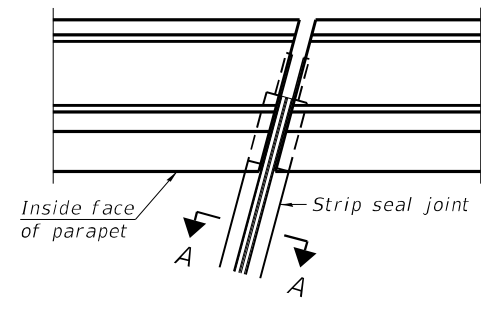
**NORTH ABUTMENT EXPANSION JOINT DETAILS III
SN 016-1078 (SB)**

SHEET S23-12 OF S23-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1097
CONTRACT NO. 62K74				

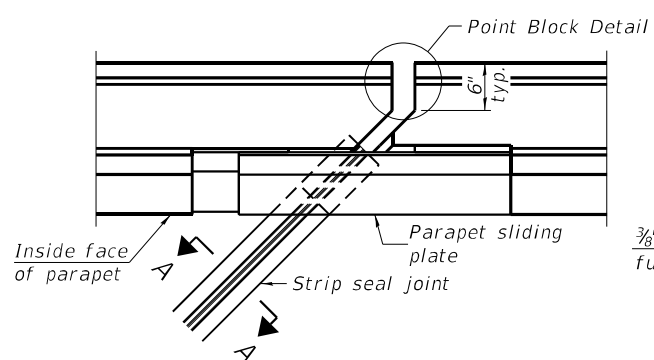
ILLINOIS FED. AID PROJECT

MODEL: sMODELNAME
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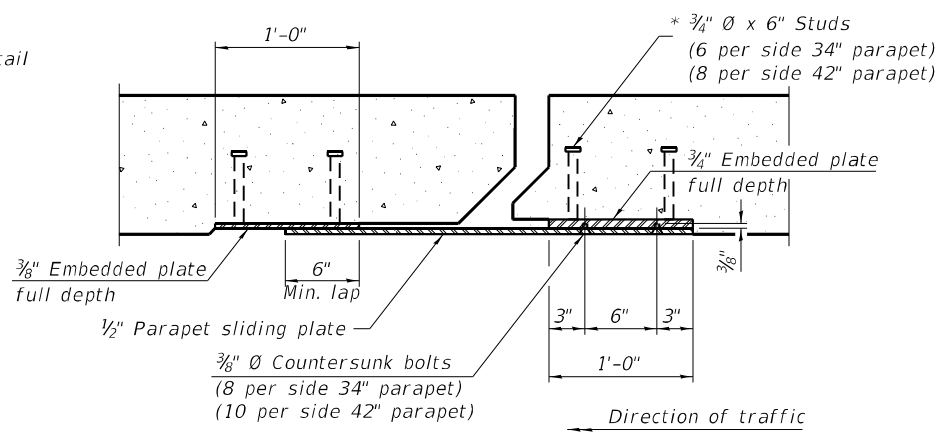


FOR SKEWS $\leq 30^\circ$

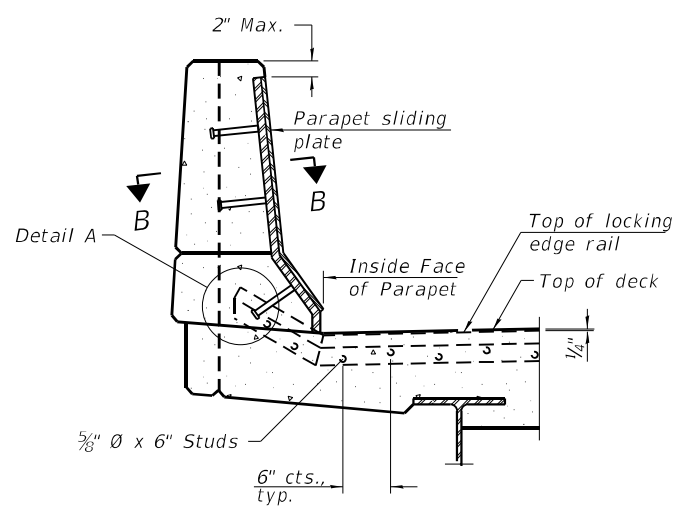
PLAN AT PARAPET



FOR SKEWS $> 30^\circ$

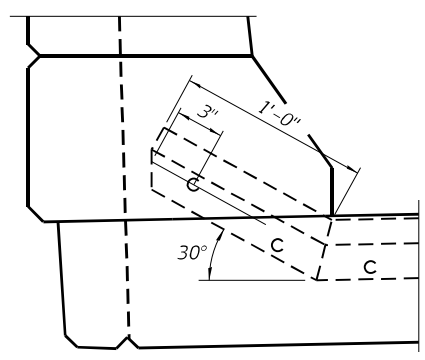


SECTION B-B

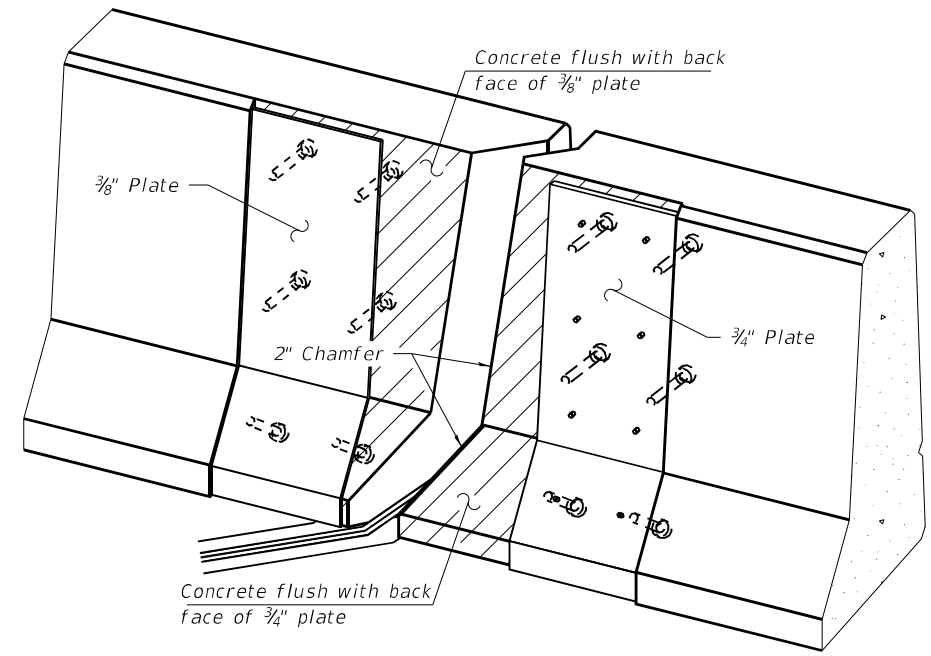


ELEVATION AT PARAPET

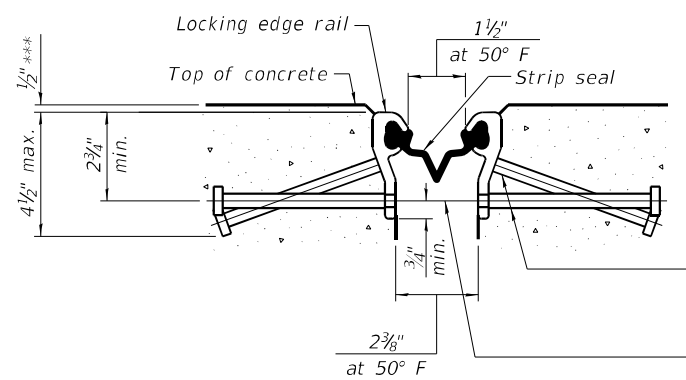
(Skews $> 30^\circ$ shown. Skews $\leq 30^\circ$ similar except as shown in plan view.)



DETAIL A



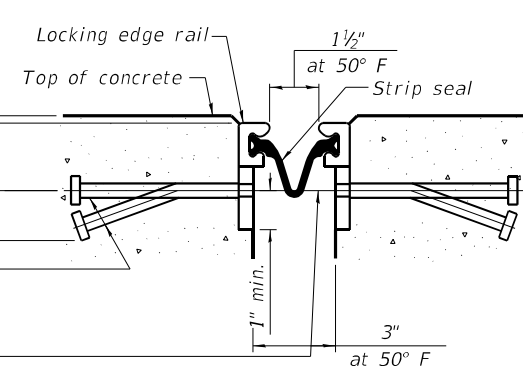
TRIMETRIC VIEW
(Showing embedded plates only)



SHOWING ROLLED RAIL JOINT

* $3/8"$ ϕ x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

$3/8"$ ϕ threaded rods in $1/16"$ ϕ holes at $\pm 4'-0"$ 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.

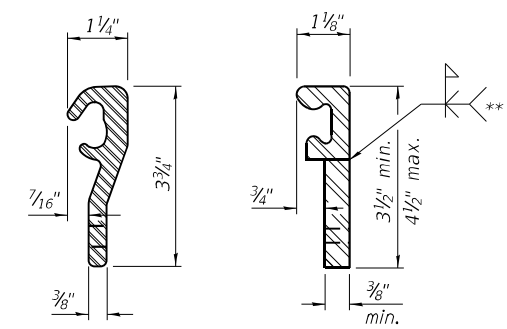


SHOWING WELDED RAIL JOINT

SECTION A-A

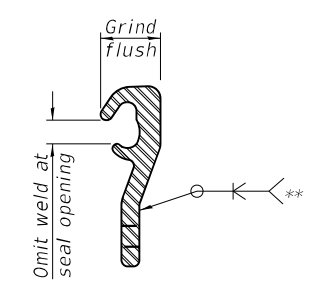
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

*** Before $1/4"$ Diamond Grinding.



LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

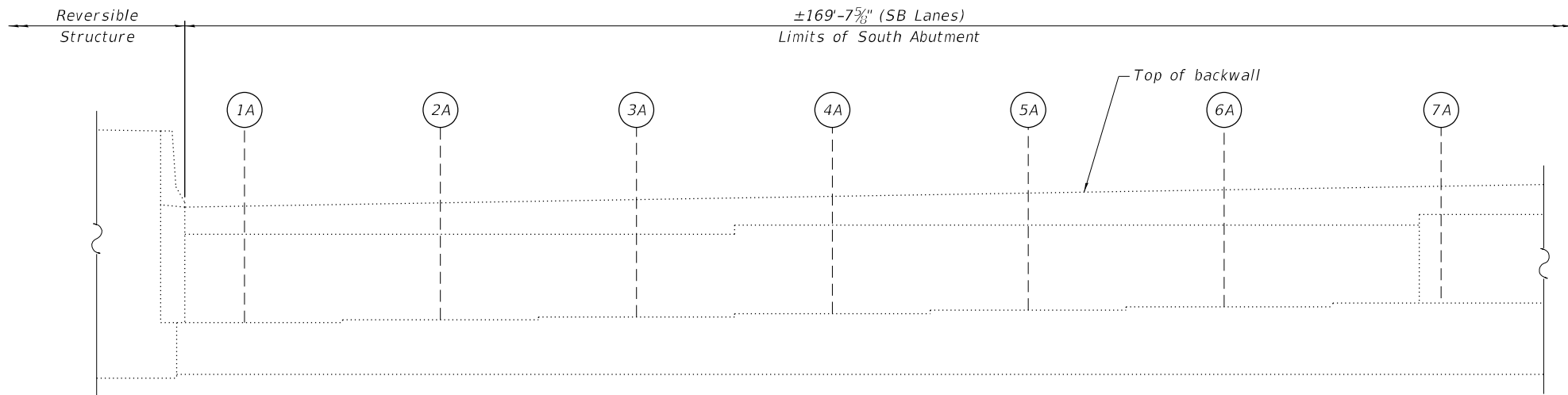
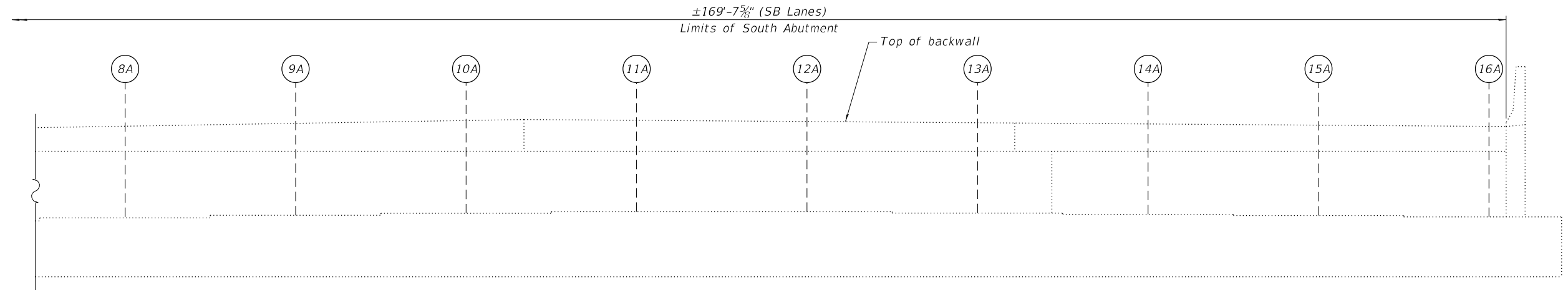
The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	320

USER NAME =	DESIGNED -	C.W.G.	REVISED -
PLOT SCALE =	CHECKED -	H.A.	REVISED -
PLOT DATE =	DRAWN -	D.C.P.	REVISED -
	CHECKED -	H.A.	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1098
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



ELEVATION - SOUTH ABUTMENT
(Looking South)

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. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
3. For Slope Wall repairs, see Sheet S23-18

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	779

MODEL: sMODELNAME5
FILE NAME: X:\OH\2020\20200221-03\Design\Structural\Design Files\CADD\SH\T016-1078_Diversey\SB\0161078-62K74-S014-SABS.dgn

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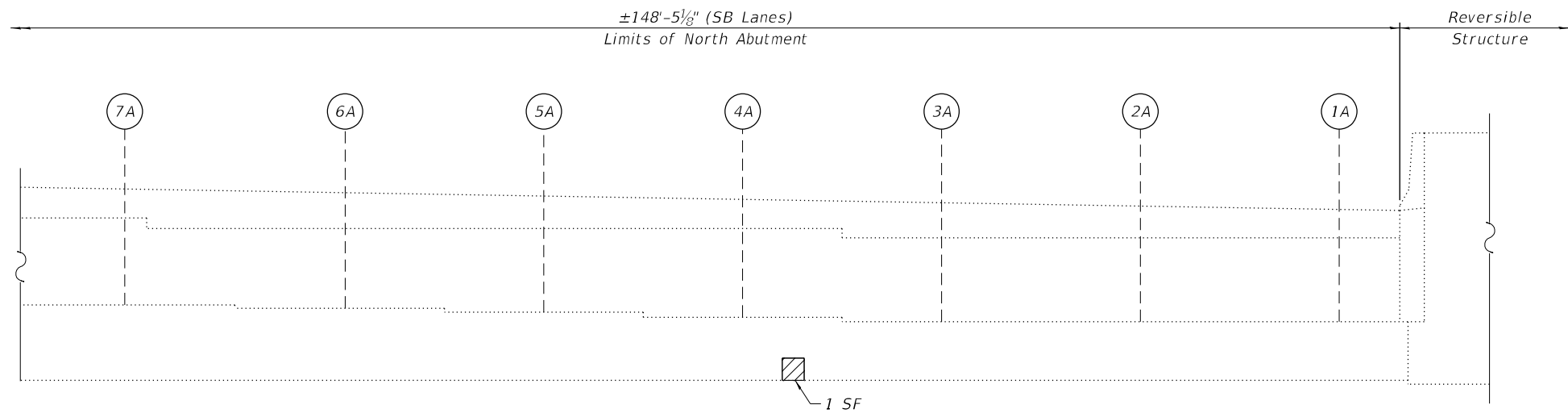
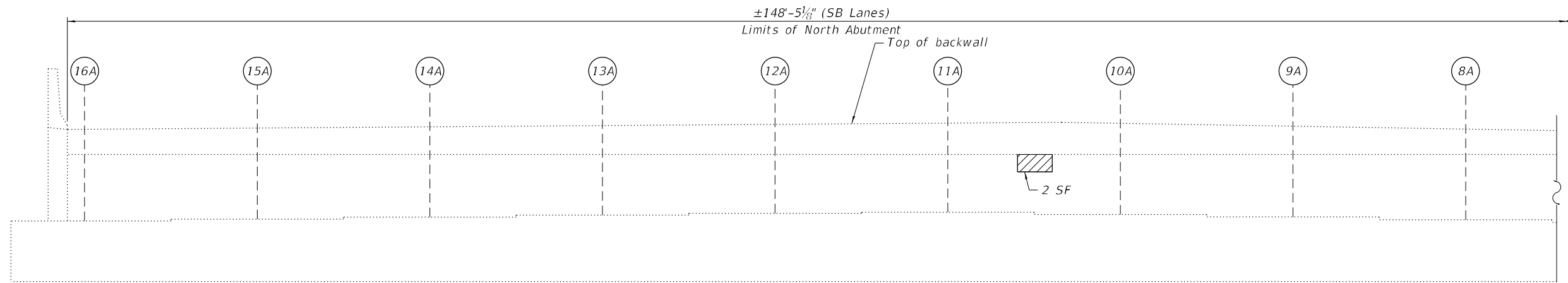
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	CHECKED -	H.A.	REVISED -
PLOT SCALE =	DRAWN -	D.C.P.	REVISED -
PLOT DATE =	CHECKED -	H.A.	REVISED -

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**SOUTH ABUTMENT REPAIRS
SN 016-1078 (SB)**

SHEET S23-14 OF S23-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1099
			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	



ELEVATION - NORTH ABUTMENT
(Looking North)

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. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments..
3. For Slope Wall repairs, see Sheet S23-18

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5 Inches)
- SF Square Foot

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	844
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	3

MODEL: sMODELNAME5
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	1100
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		