

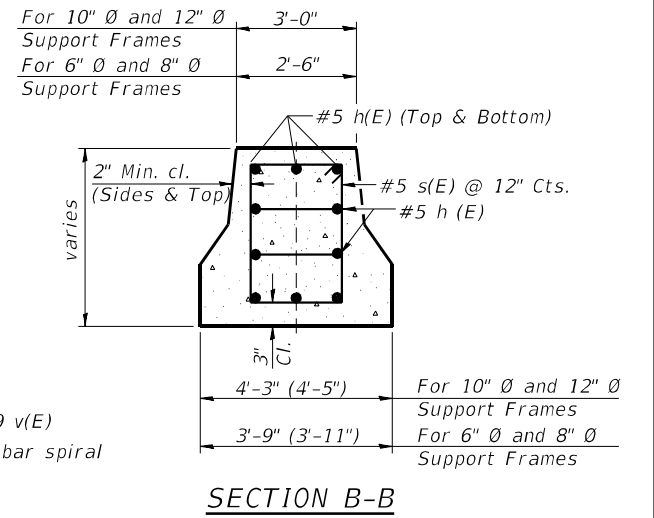
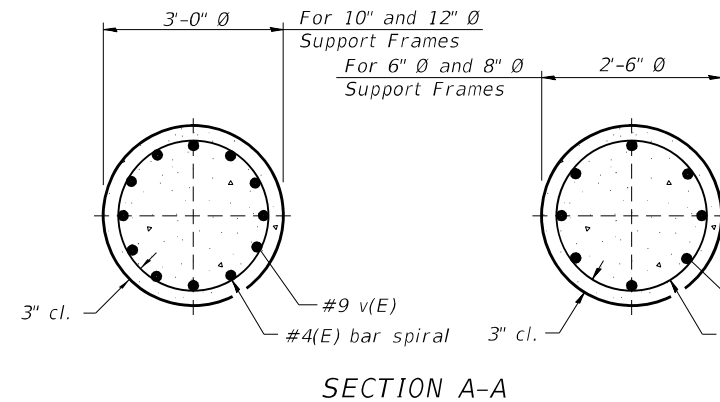
NOTES:
 The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.
 If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.
 No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.
 Concrete shall be placed monolithically, without construction joints.
 Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.
 A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

BAR LIST - EACH FOUNDATION

Pipe Support Frames	cc	M	a	a/2
6"Ø	7'-0"	9'-6"	0'-11"	5 1/2"
8"Ø	7'-6"	10'-0"	1'-1 1/2"	6 3/4"
10"Ø	8'-3"	11'-3"	1'-3"	7 1/2"
12"Ø	9'-0"	12'-0"	1'-6"	9"

Bar	Number	Size	Length	Shape
h(E)	10	#5	M less 4"	—
s(E)	Varies	#5	Varies	□
v(E)	16	#9	F less 0'-5"	—
v(E)	24	#9	F less 0'-5"	—
#4(E) bar spiral see Side Elevation				

All dimensions in parenthesis are for 42" high barrier.



Structure Number	Station	Left Foundation				Right Foundation				Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	
Sign 1 1S0161094R044.2	644+79.47	628.49	603.49	20'-6"	25'-0"					19.5

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054-MED 2-17-2017

GRAEF
 8501 W. Higgins Road, Suite 280
 Chicago, Illinois 60631; (773) 399-0112

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

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

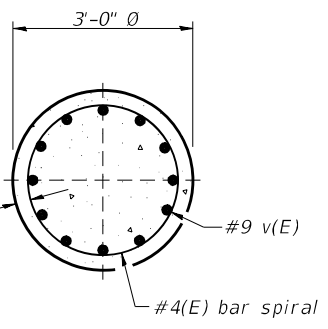
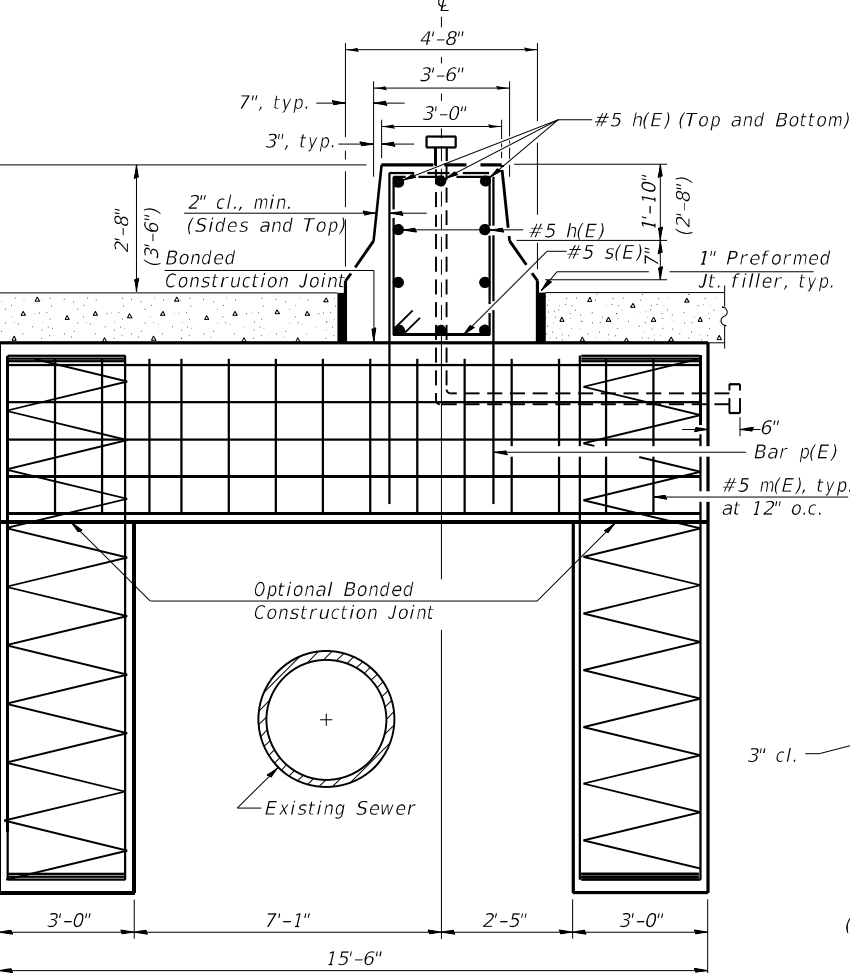
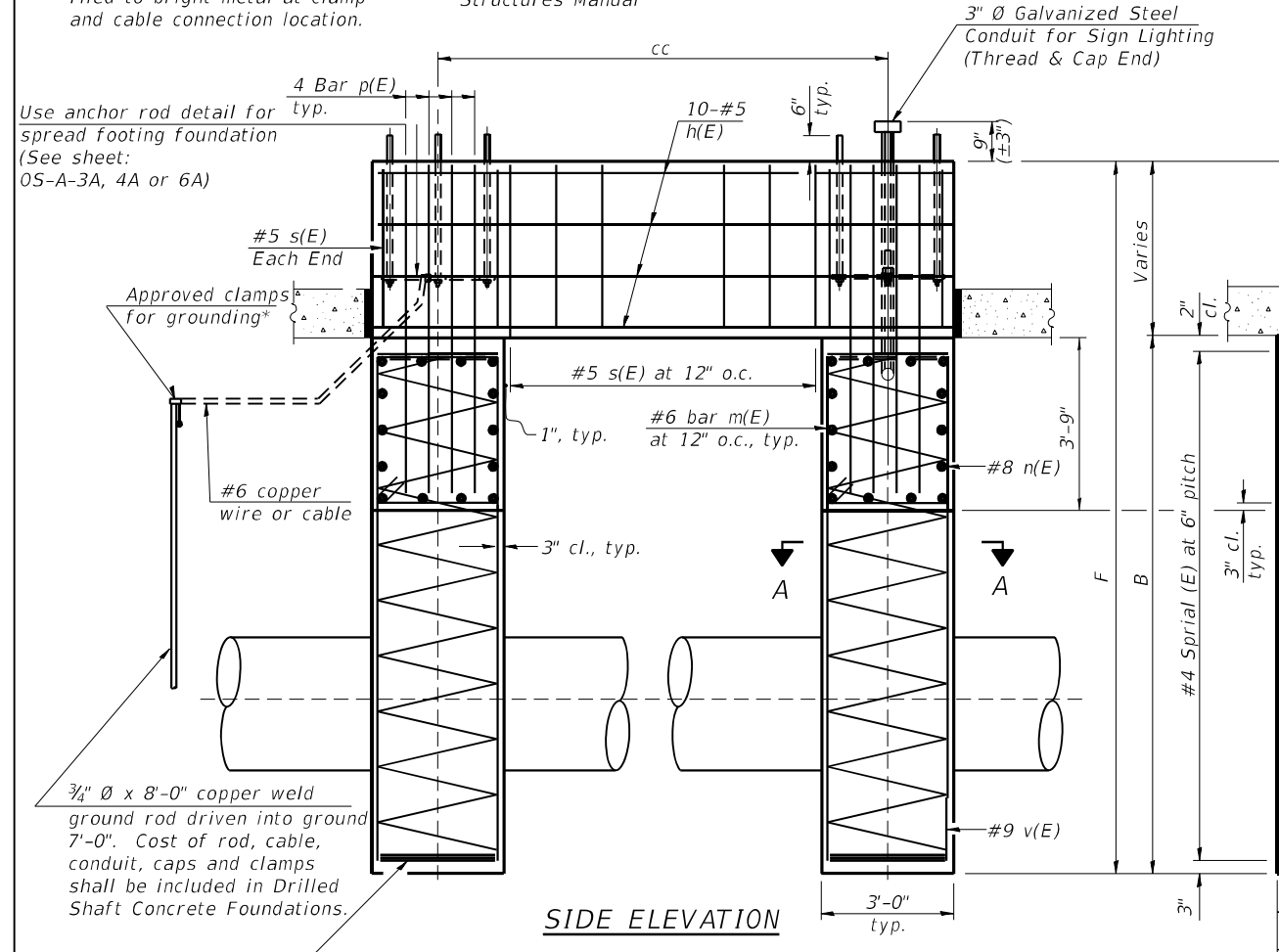
**OVERHEAD SIGN STRUCTURES
 MEDIAN SUPPORT FOUNDATION DETAILS II**

SHEET OSG5-14 OF OSG5-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	401
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

** B = 1/2 the depth given in the Sign Structures Manual

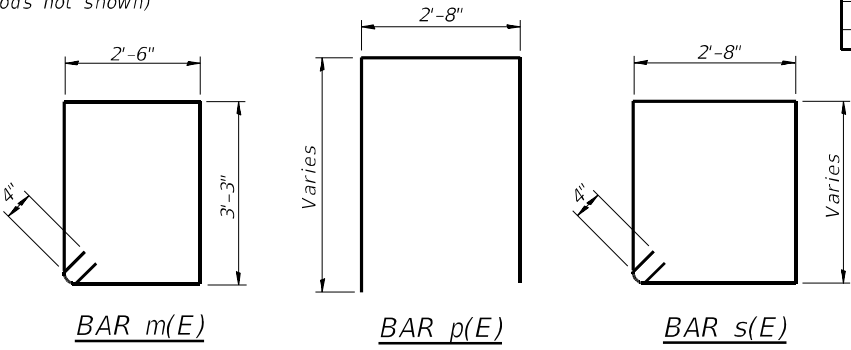
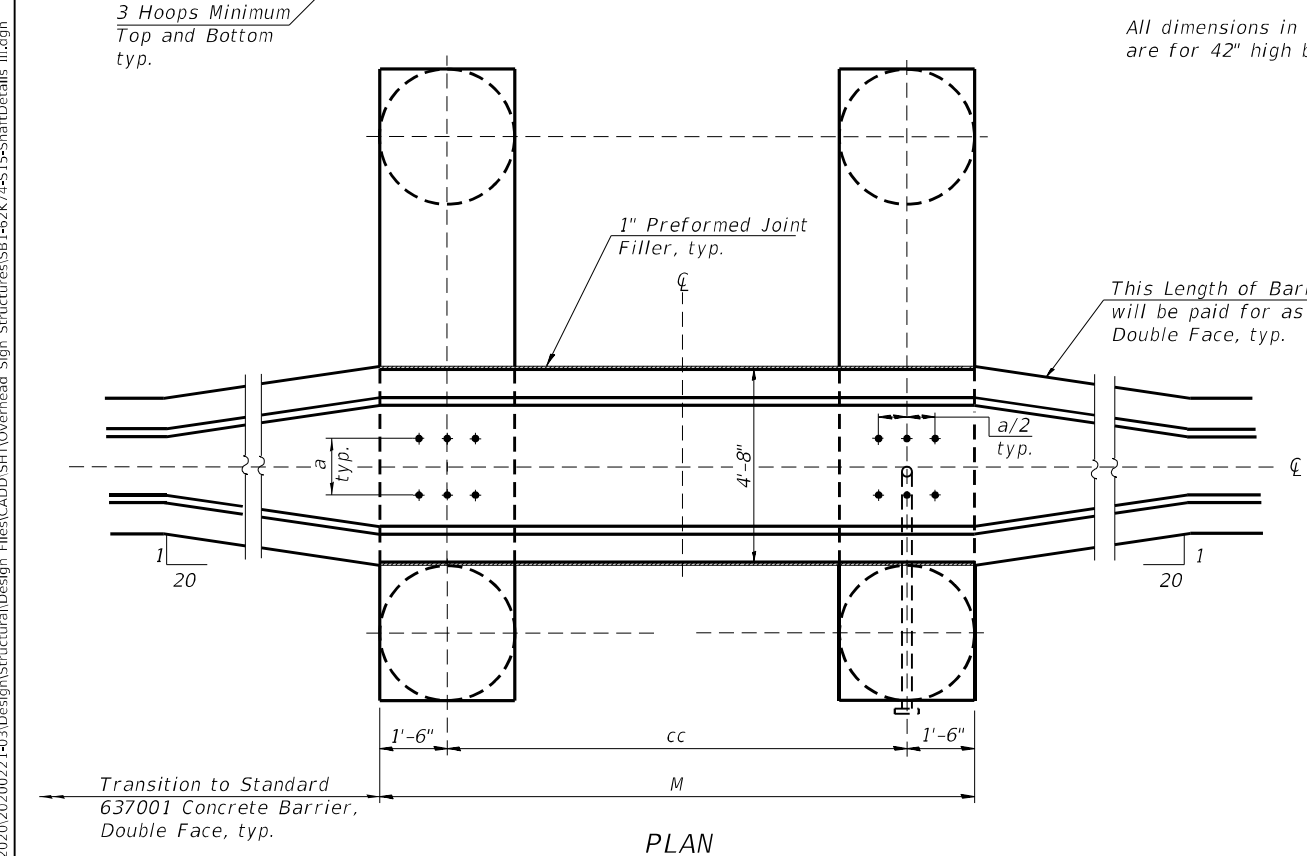


BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
h(E)	10	#5	M less 4"	—
s(E)	Varies	#5	Varies	□
v(E)	48	#9	B less 0'-5"	—
m(E)	30	#6	12'-0"	□
n(E)	28	#8	15'-0"	—
p(E)	8	#5	Varies	⊏

#4 Bar Spiral - See Side Elevation

Pipe Support Frames	cc	M	a	a/2
6"Ø	7'-0"	9'-6"	0'-11"	5 1/2"
8"Ø	7'-6"	10'-0"	1'-1 1/2"	6 3/4"
10"Ø	8'-3"	11'-3"	1'-3"	7 1/2"
12"Ø	9'-0"	12'-0"	1'-6"	9"



All dimensions in parenthesis are for 42" high barrier.

Structure Number	Station	Left Foundation				Right Foundation				Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	
Sign 6	1S0161094R043.8	655+85.00	624.56	599.23	20'-6"	25'-4"				39.2

NOTES:
 The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.
 If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.
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 Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.
 Concrete shall be placed monolithically, without construction joints.
 Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.
 A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

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 8501 W. Higgins Road, Suite 280
 Chicago, Illinois 60631; (773) 399-0112

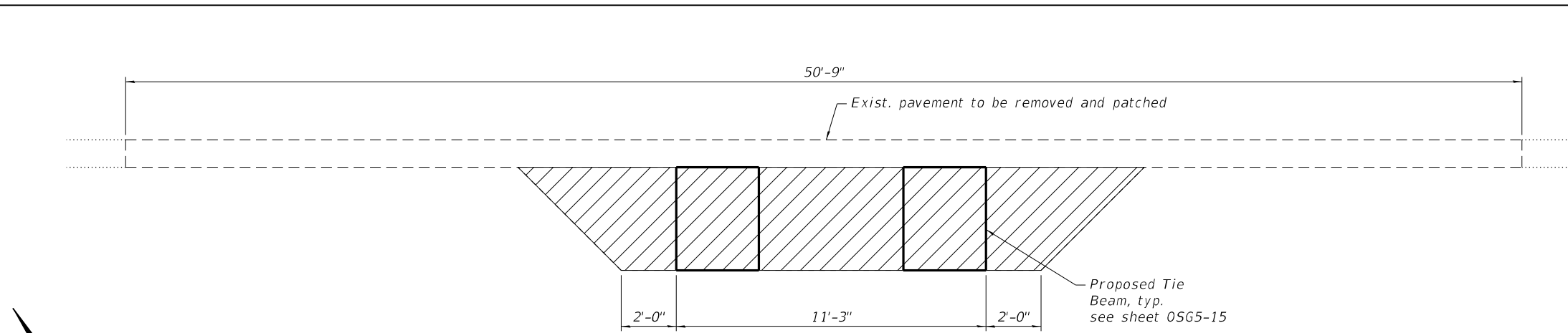
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PLOT SCALE =	CHECKED -	H.A.	REVISED -	
PLOT DATE =	DRAWN -	D.C.P.	REVISED -	
	CHECKED -	K.M.	REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

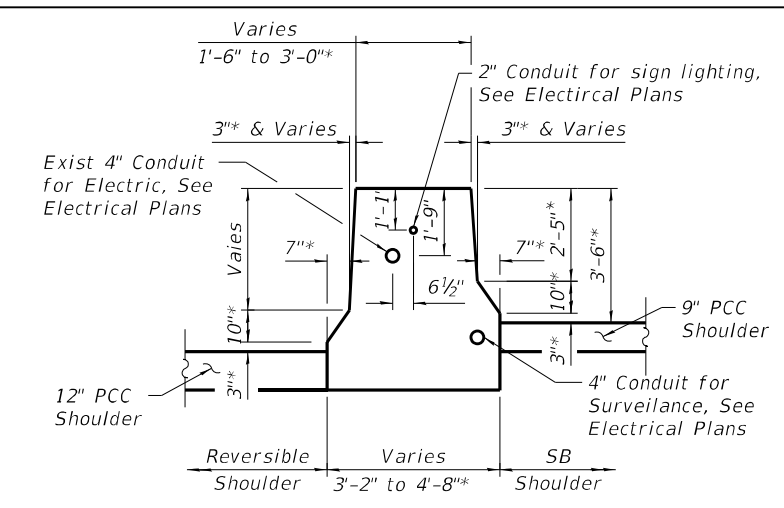
**OVERHEAD SIGN STRUCTURES
 MEDIAN SUPPORT FOUNDATION DETAILS III**

SHEET OSG5-15 OF OSG5-19 SHEETS

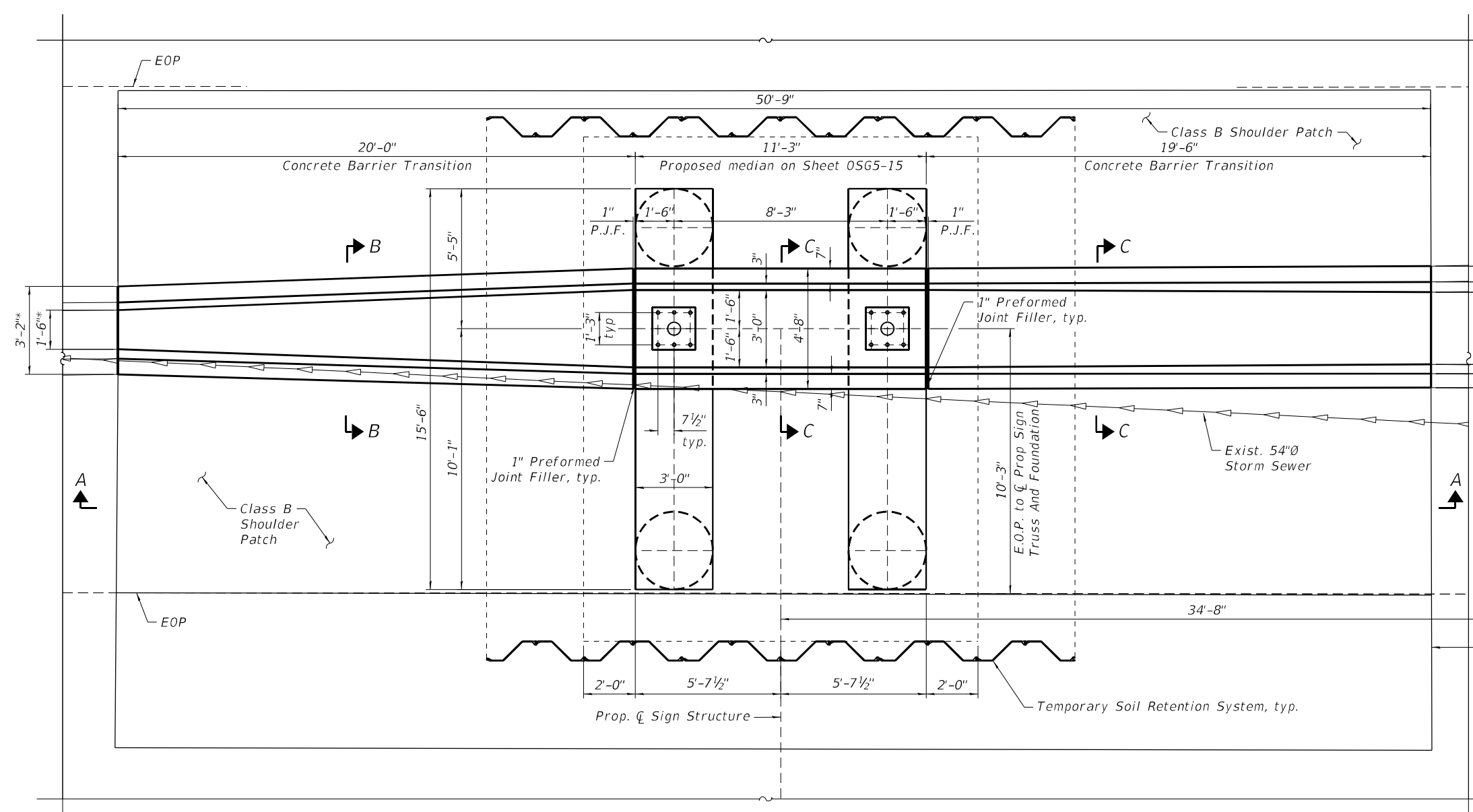
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	402
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



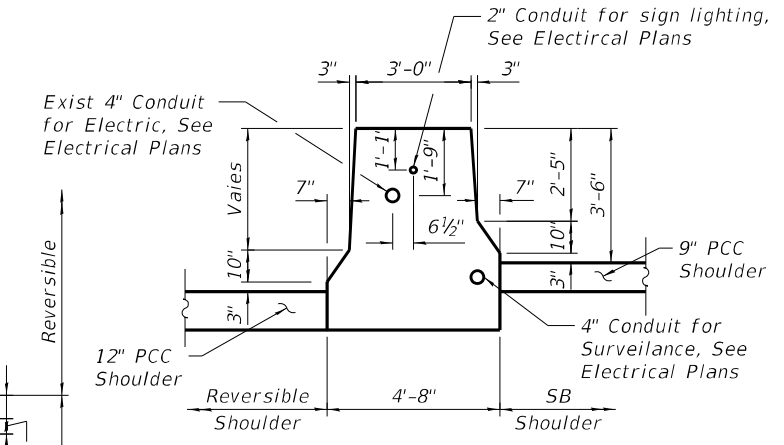
SECTION A-A



SECTION B-B



PARTIAL PLAN



SECTION C-C

Exist. \varnothing Sign Structure

LEGEND

Structure Excavation

BILL OF MATERIAL

Item	Unit	Quantity
Structure Excavation	Cu Yd	44.5
Temporary Soil Retention System	Sq Ft	280
Concrete Barrier Transition	Foot	39.5

* Verify in Field to Match Existing

MODEL: sMODELNAME5
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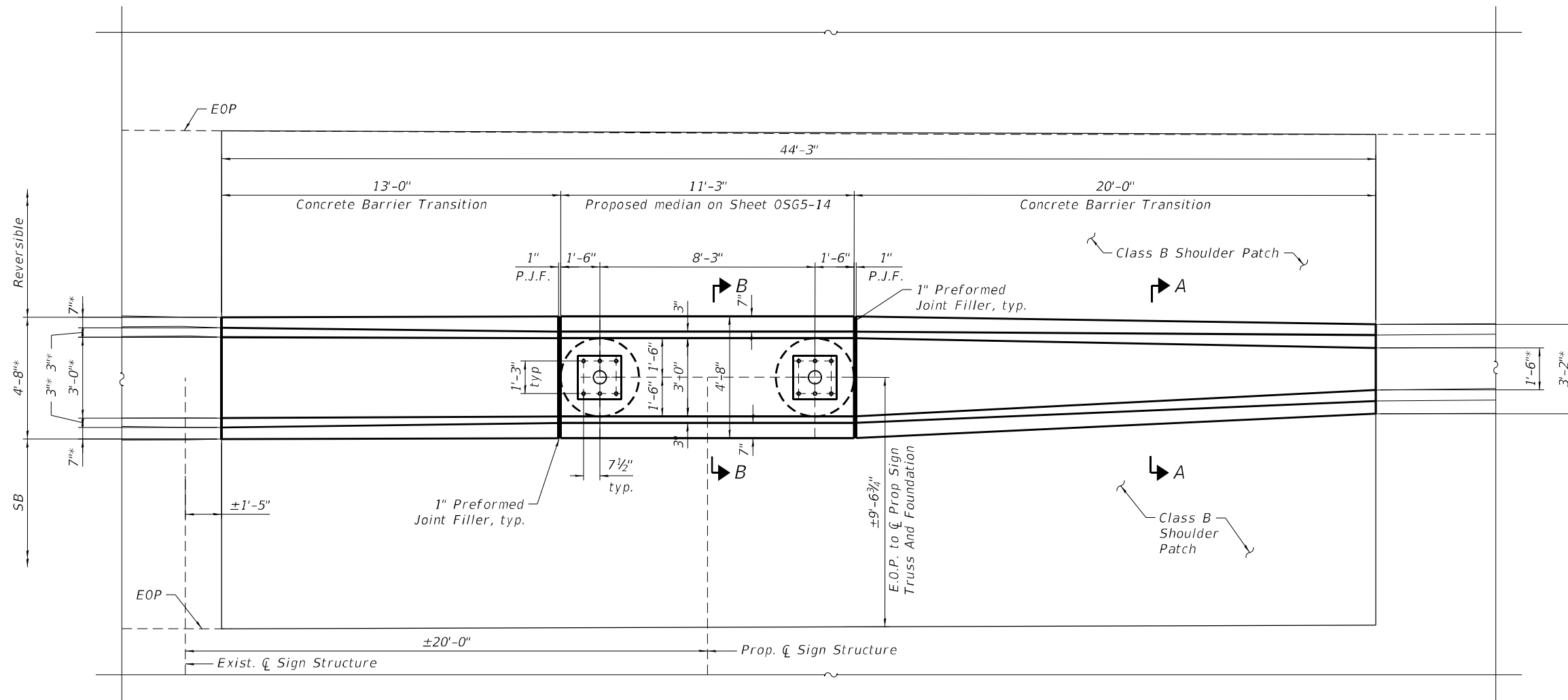
GR&E
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631; (773) 399-0112

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

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

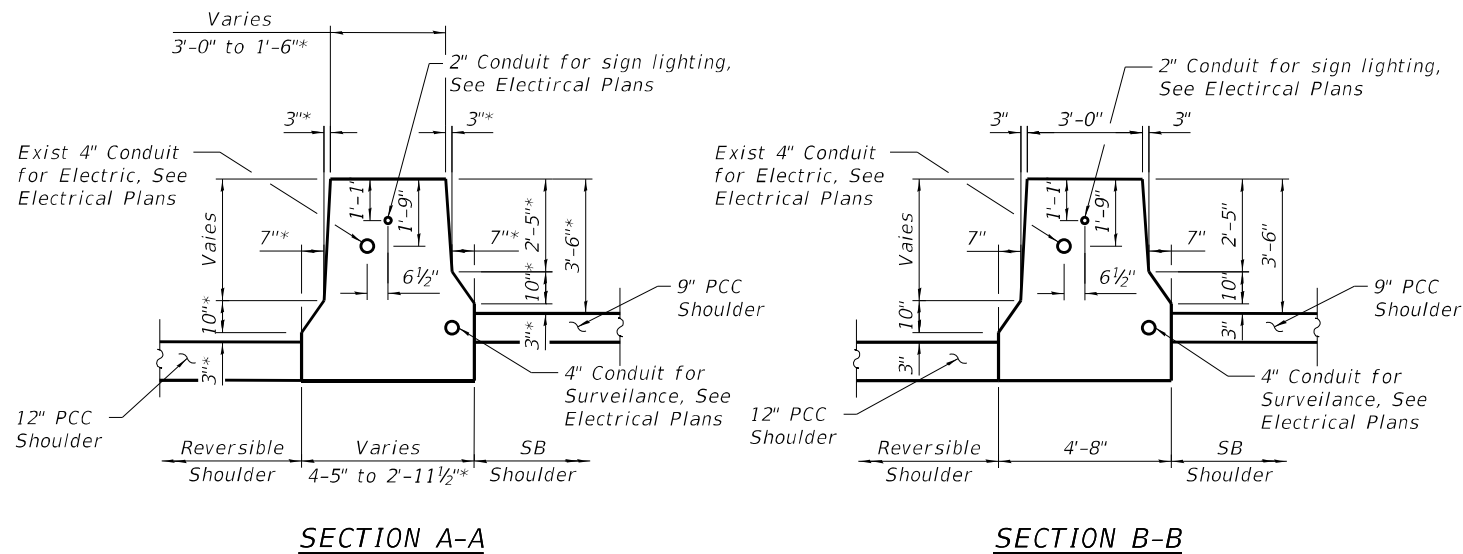
**MEDIAN BARRIER ADDITIONAL SECTION AND DETAILS
SN 1S0161094R043.8 (SIGN 6)**

F.A.I. RTE. 90	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 403
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



* Verify in Field to Match Existing

PARTIAL PLAN



SECTION A-A

SECTION B-B

BILL OF MATERIAL

Item	Unit	Quantity
Concrete Barrier Transition	Foot	33

MODEL: sMODELNAME5
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GRAEF
 8501 W. Higgins Road, Suite 280
 Chicago, Illinois 60631; (773) 399-0112

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

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**MEDIAN BARRIER ADDITIONAL SECTION AND DETAILS
 SN 1S016I094R044.2 (SIGN 1)**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	404
			CONTRACT NO. 62K74	
		ILLINOIS FED. AID PROJECT		

SHEET OSG5-17 OF OSG5-19 SHEETS

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.
The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

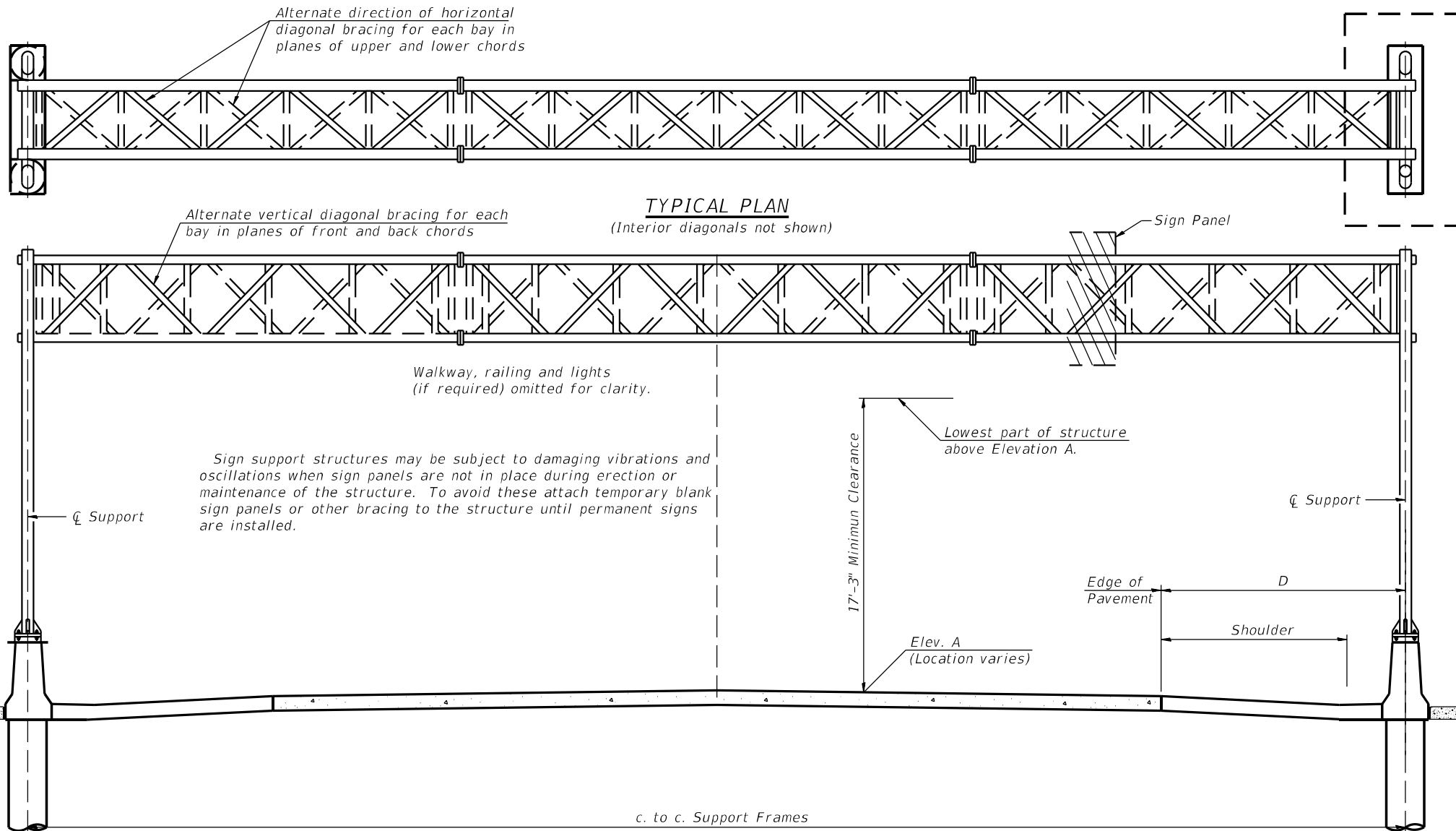
CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A (4'-0" x 4'-6")	Foot	72
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A (5'-0" x 7'-0")	Foot	36
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	5
REMOVE OVERHEAD SIGN STRUCTURE	Span	2
CONCRETE BARRIER REMOVAL	Foot	139
CONCRETE BARRIER TRANSITION	Foot	105
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	52.5




TYPICAL ELEVATION
(Looking at Face of Signs)**

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

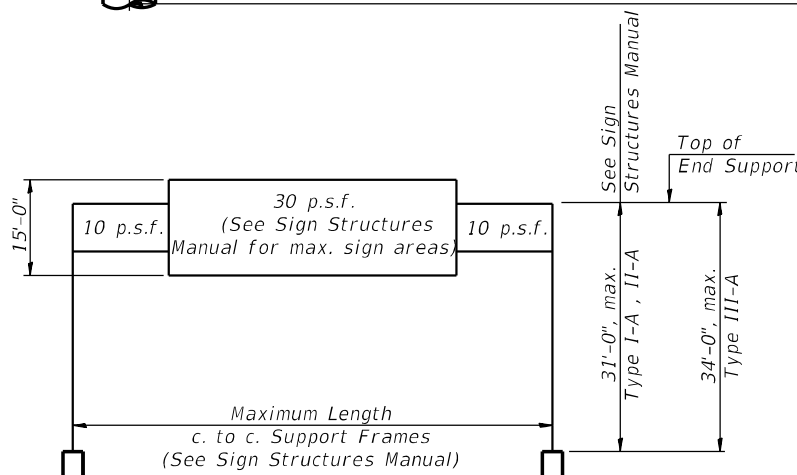
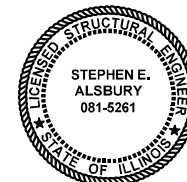
Sign No.	Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area Sq Ft
3	1S0161094L046.8	496+04.88 (Rev)	I-A	72'-0"	607.07	11'-9"±	11'-0"	479
4 (DMS)	1S0161094L048.1	428+71.11 (Rev)	III-A	36'-0"	599.97	4'-6"±	7'-11"	222

**Looking upstation for structures with signs both sides.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

Signed: 
Stephen E. Alsbury, S.E. IL Lic. No. 081-5261
Expires: 11/30/2024

Date: 10/18/2022 For Sheets OSG6-01 - OSG6-21



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

05-A-1 2-17-2017



745 McClintock Drive
Suite 210
Burr Ridge, IL 60527
Ph: 773-881-4788
Fax: 773-239-3720

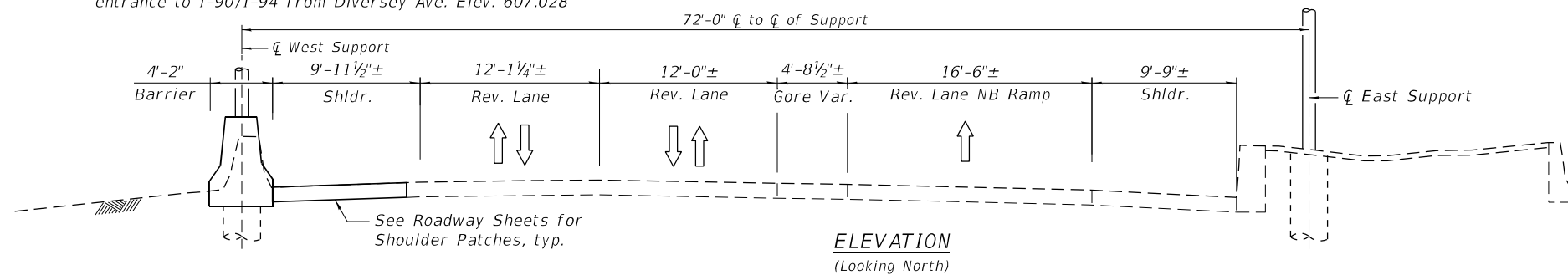
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	CHECKED - FH	REVISED -
PLOT SCALE =	DRAWN - MBJ	REVISED -
PLOT DATE =	CHECKED - SDATES	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - GENERAL PLAN &
ELEVATION - ALUMINUM TRUSS & STEEL SUPPORTS

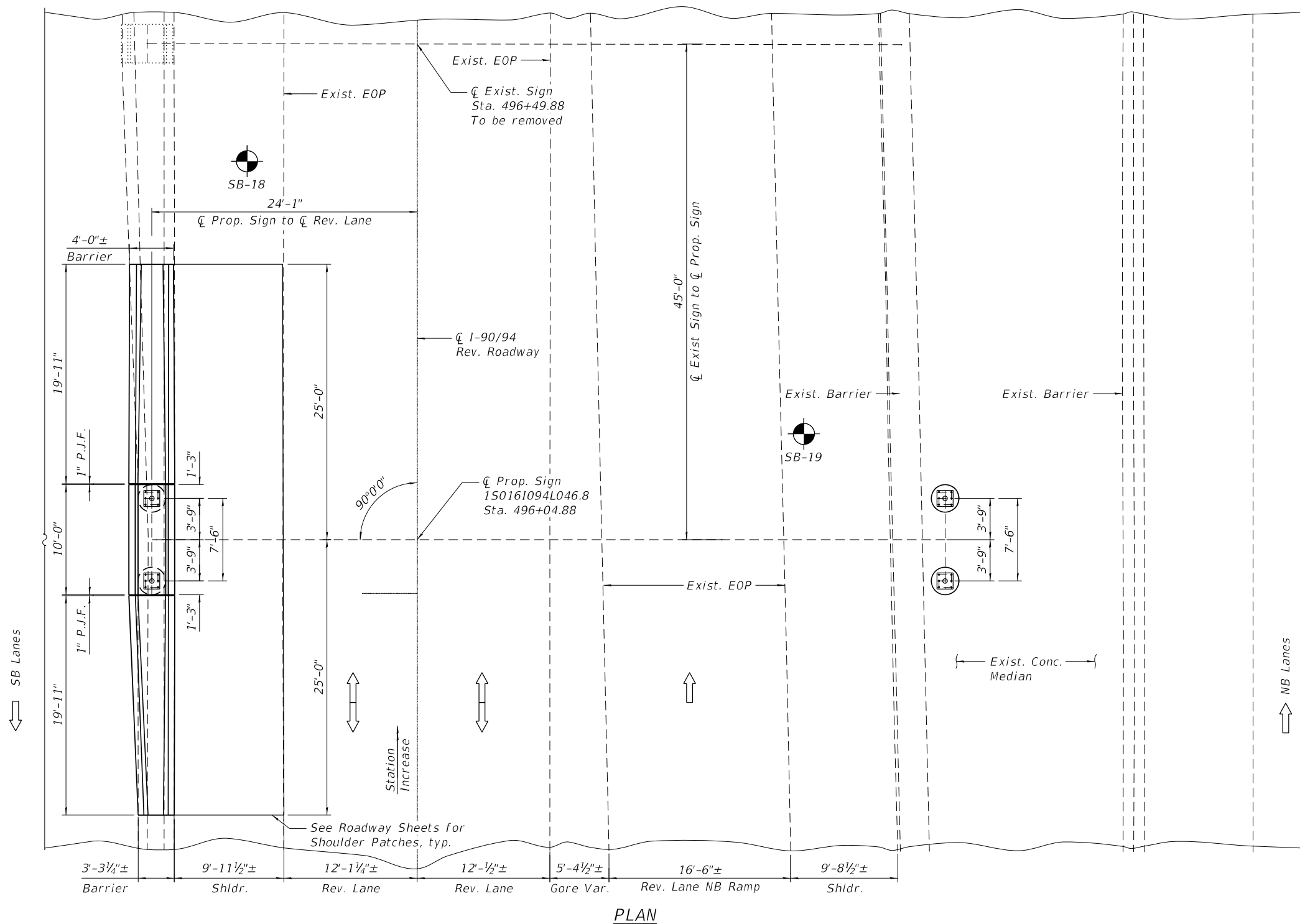
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	407
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

Benchmark: TBM "J" - Top of NE bolt of light pole base (Pole # M13) at entrance to I-90/I-94 from Diversey Ave. Elev. 607.028

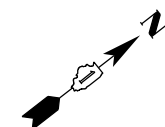
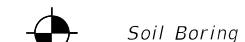


NOTES:

1. Stations that are shown are with respect to the Reversible I90/94 baseline.
2. The contractor shall establish a local version of the REV Baseline based on the dimension shown on this plan. The stationing shall be with respect to the center line of existing sign truss as shown. The offset of the baseline shall be measured from existing features as shown.



LEGEND:



FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-GPE.dgn



745 McClintock Drive
Suite 210
Burr Ridge, IL 60527
Ph. 773-881-4788
Fax: 773-239-3728

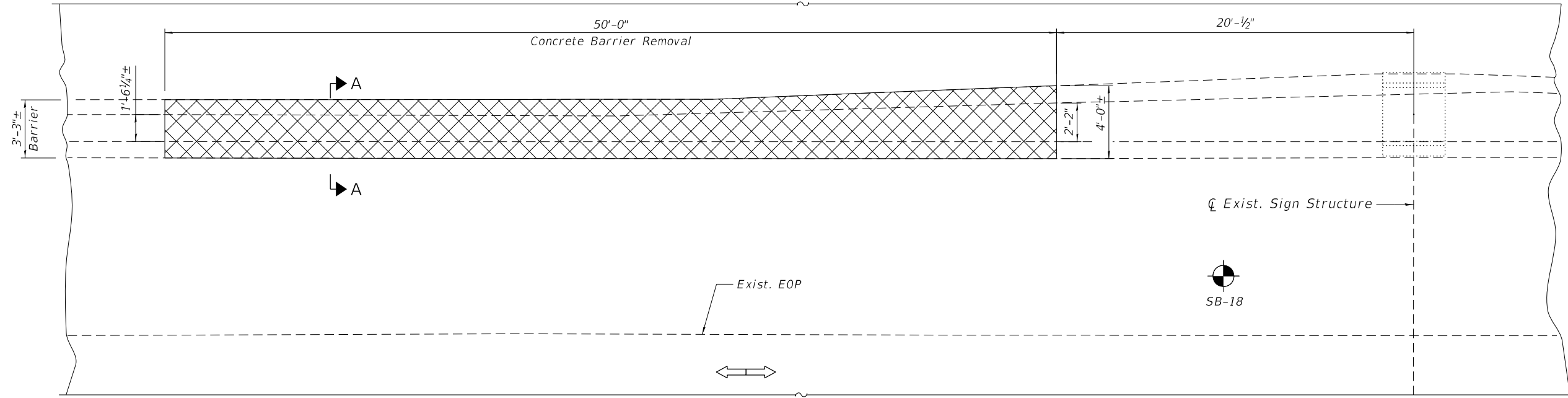
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PLOT SCALE =	DRAWN - MBJ	REVISED -
PLOT DATE =	CHECKED - 7/13/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
S.N. 1S0161094L046.8 (SIGN 3)**

SHEET OSG6-02 OF OSG6-21 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	408
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		

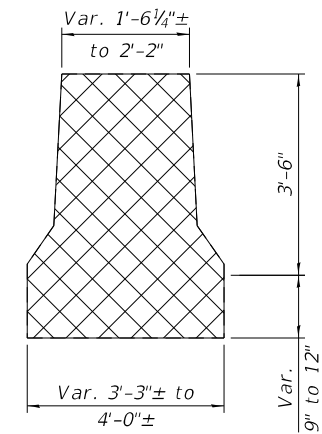


PARTIAL PLAN



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Barrier Removal	Foot	50



SECTION A-A

LEGEND



FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-REMOVAL.dgn



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Suite 210
Burr Ridge, IL 60527
Ph. 773-881-4788
Fax: 773-239-3728

USER NAME =	DESIGNED - SEA	REVISED -
	CHECKED - FH	REVISED -
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PLOT DATE =	CHECKED - 7/13/2022	REVISED -

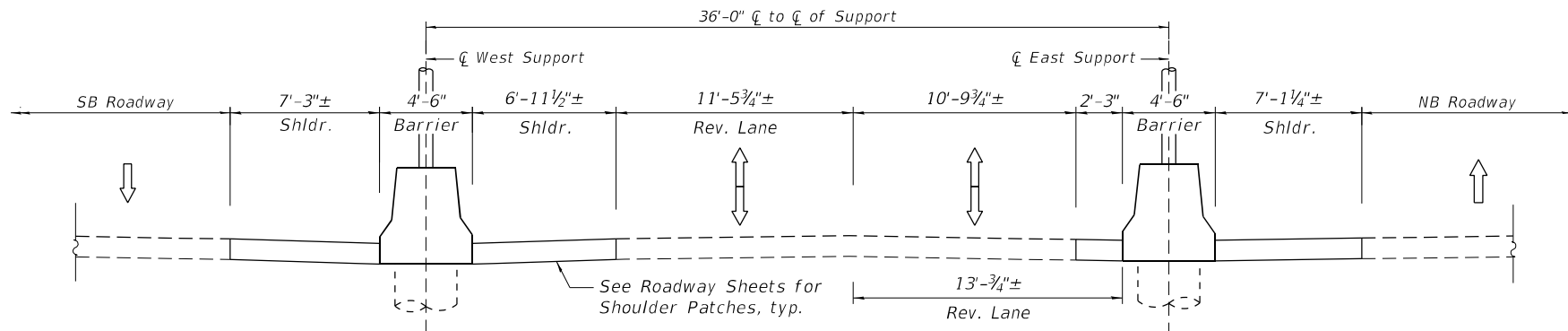
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REMOVAL DETAILS FOR EXISTING MEDIAN BARRIER
S.N. 1S0161094L046.8 (SIGN 3)**

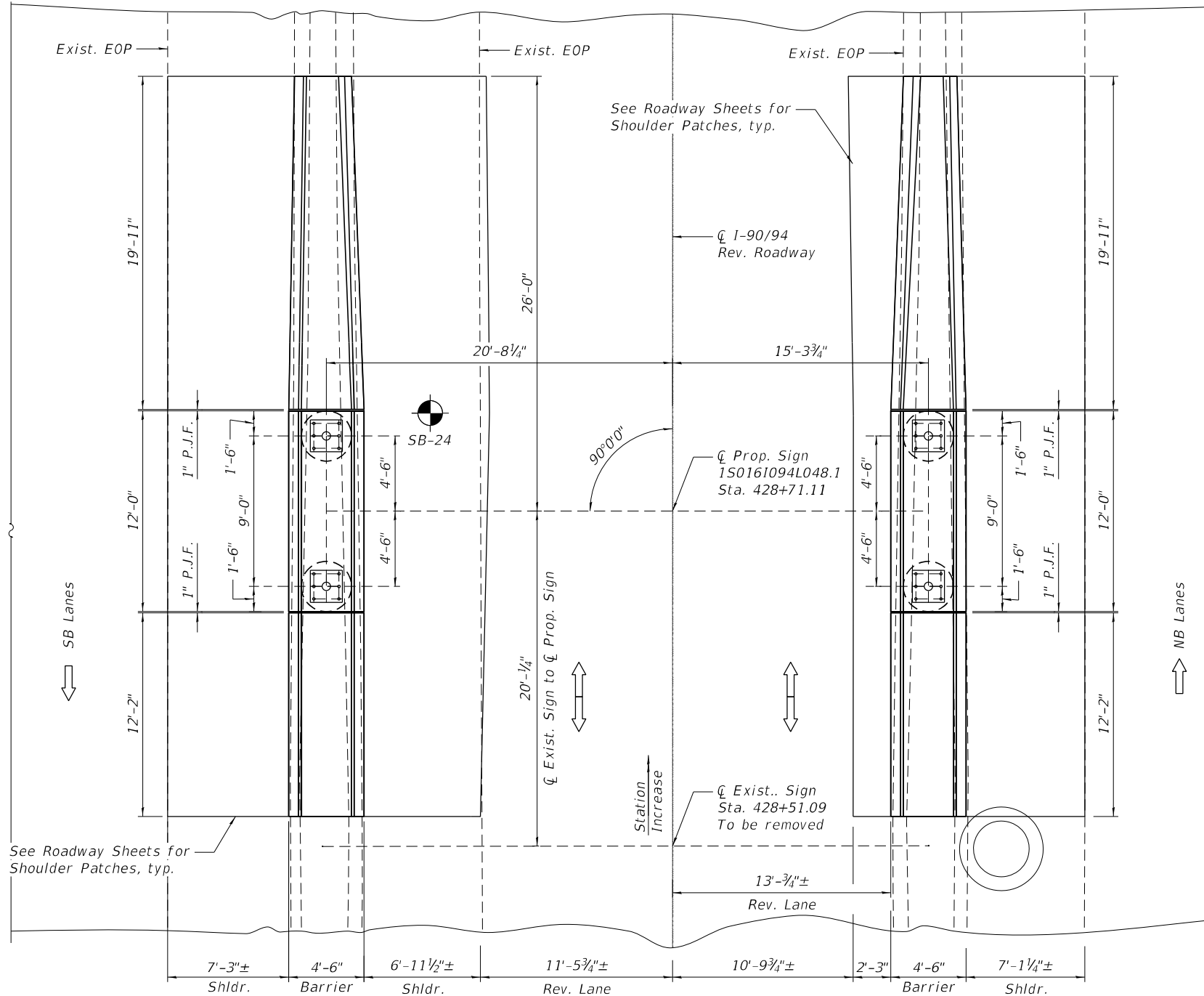
SHEET OSG6-03 OF OSG6-21 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	409
CONTRACT NO. 62K74				

ILLINOIS FED. AID PROJECT



ELEVATION
(Looking North)

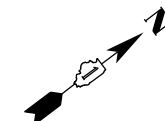


PLAN

NOTES:

1. Stations that are shown are with respect to the Reversible 190/94 baseline.
2. The contractor shall establish a local version of the REV Baseline based on the dimension shown on this plan. The stationing shall be with respect to the center line of existing sign truss as shown. The offset of the baseline shall be measured from existing features as shown.

LEGEND:



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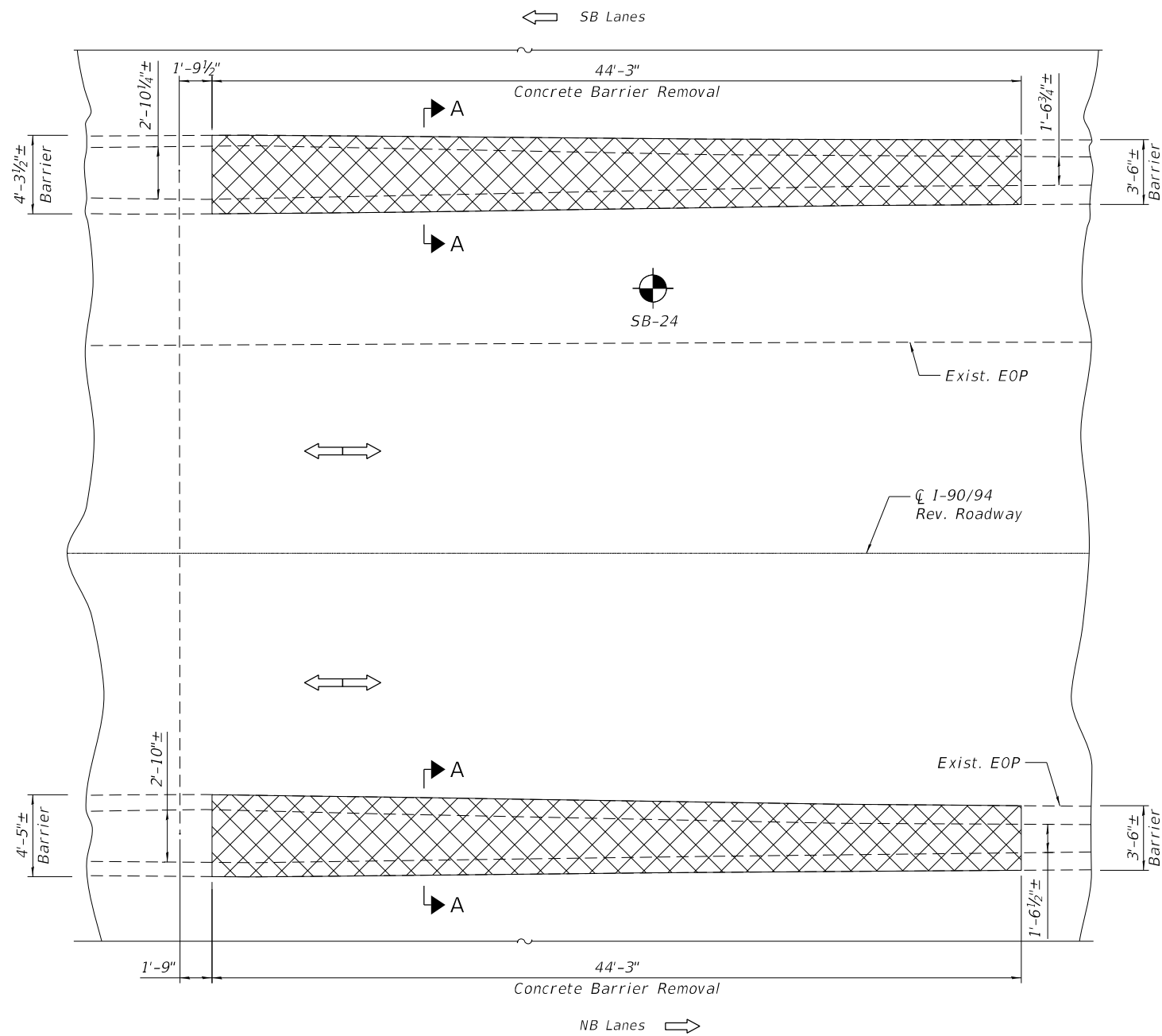
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CHECKED - FH	REVISED -	
PLOT SCALE =	DRAWN - MBJ	REVISED -
PLOT DATE =	CHECKED - 7/13/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
S.N. 1S0161094L048.1 (SIGN 4)**

SHEET OSG6-04 OF OSG6-21 SHEETS

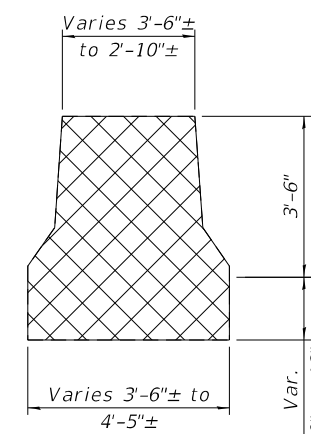
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	410
CONTRACT NO. 62K74				
		ILLINOIS	FED. AID PROJECT	



PARTIAL PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Barrier Removal	Foot	89



SECTION A-A

LEGEND



FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN4-REMOVAL.dgn



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Suite 210
Burr Ridge, IL 60527
Ph. 773-881-4788
Fax: 773-239-3728

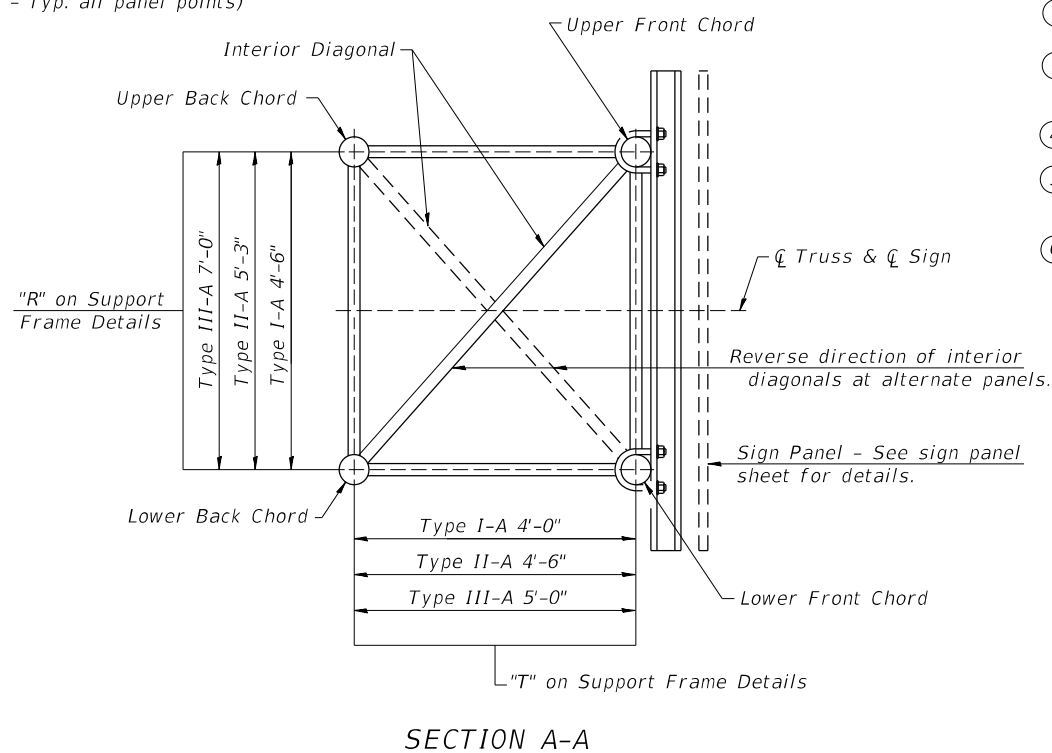
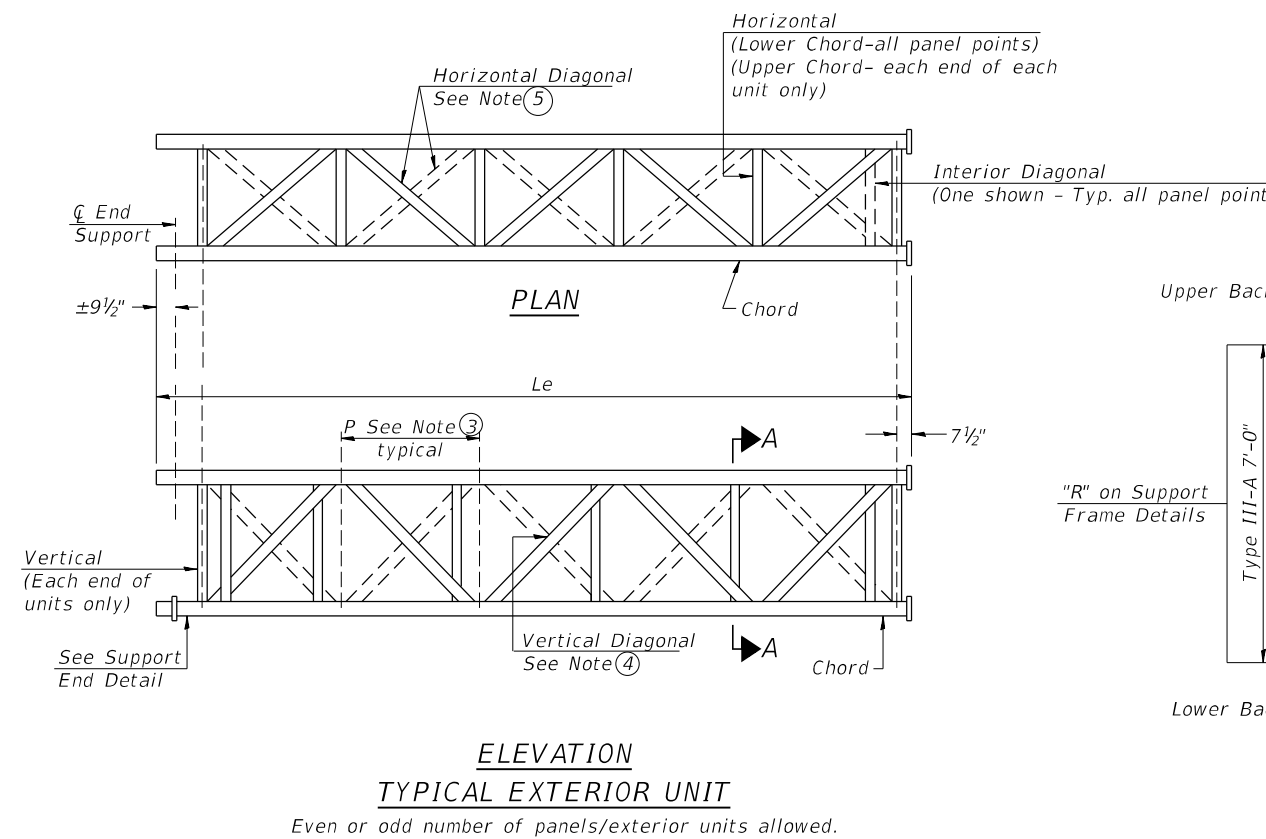
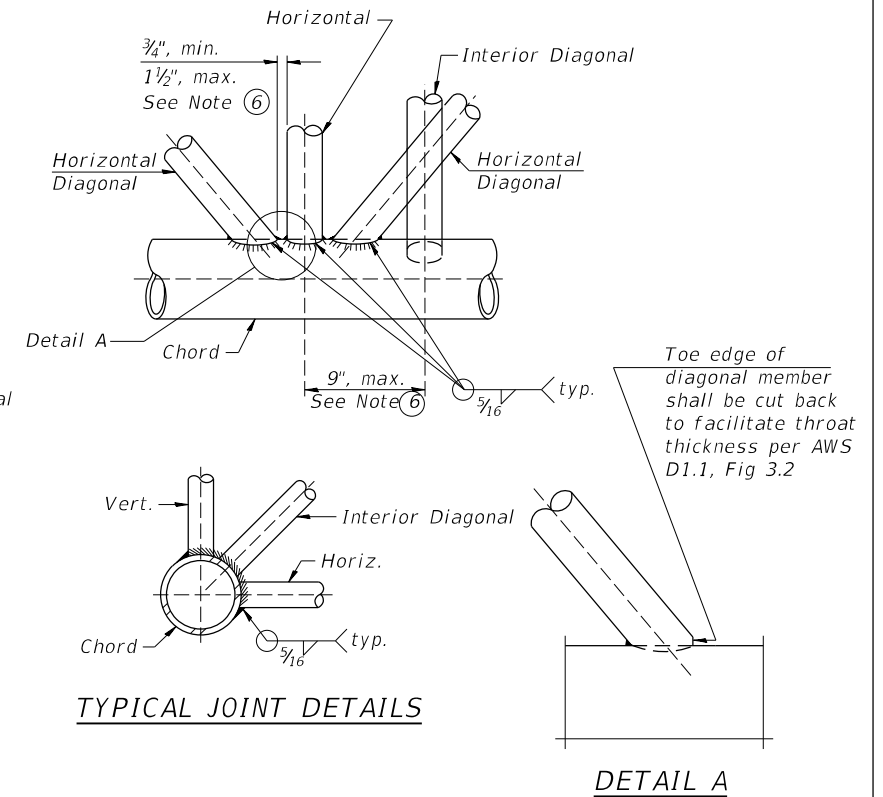
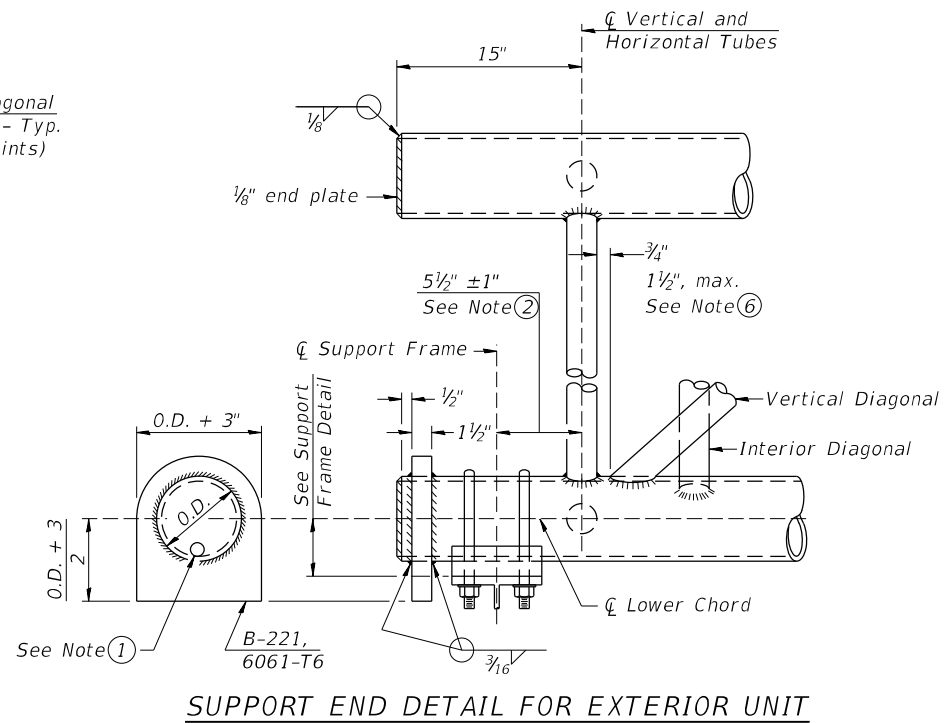
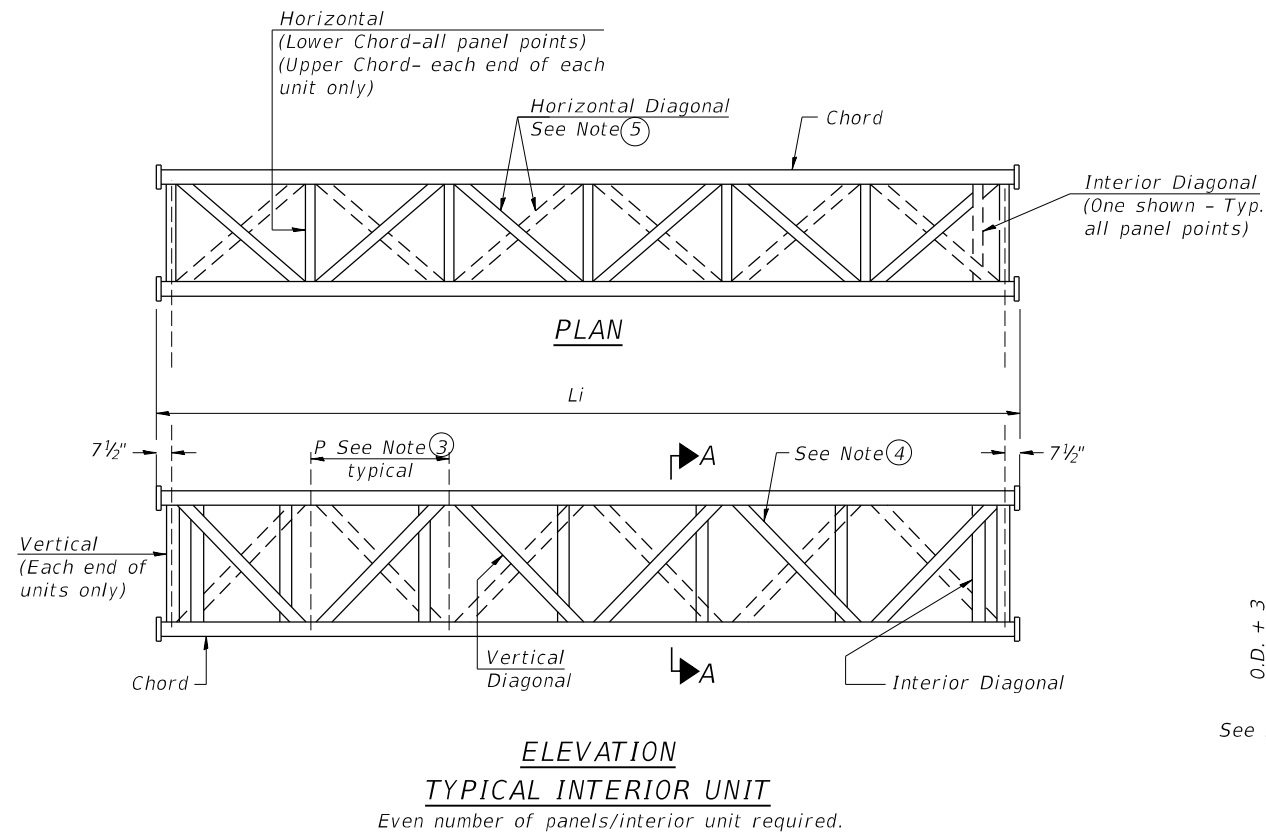
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REMOVAL DETAILS FOR EXISTING MEDIAN BARRIER
S.N. 1S0161094L048.1 (SIGN 4)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	411
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		

SHEET OSG6-05 OF OSG6-21 SHEETS



- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" Ø drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" end dimension may vary by ±1" to provide uniform panel spacing (P).
- ③ Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
- ④ Vertical Diagonals in front and back face shall alternate.
- ⑤ Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
- ⑥ All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a 3/4" minimum to 1 1/2" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-4.dgn

05-A-2

2-17-2017



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

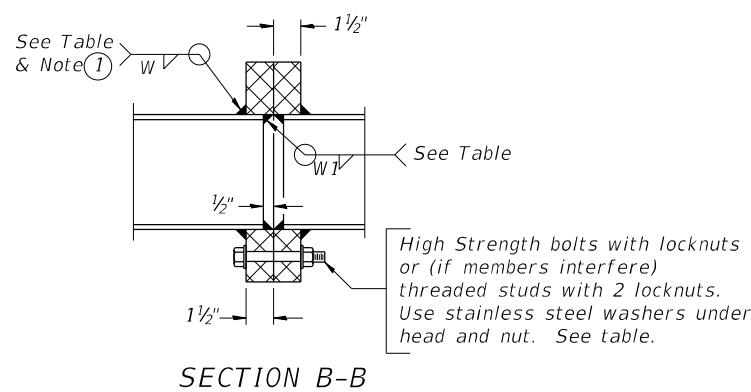
OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS
DETAILS FOR TRUSS TYPES I-A, II-A AND III-A

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	412
CONTRACT NO. 62K74				
		ILLINOIS	FED. AID PROJECT	

SHEET OSG6-06 OF OSG6-21 SHEETS

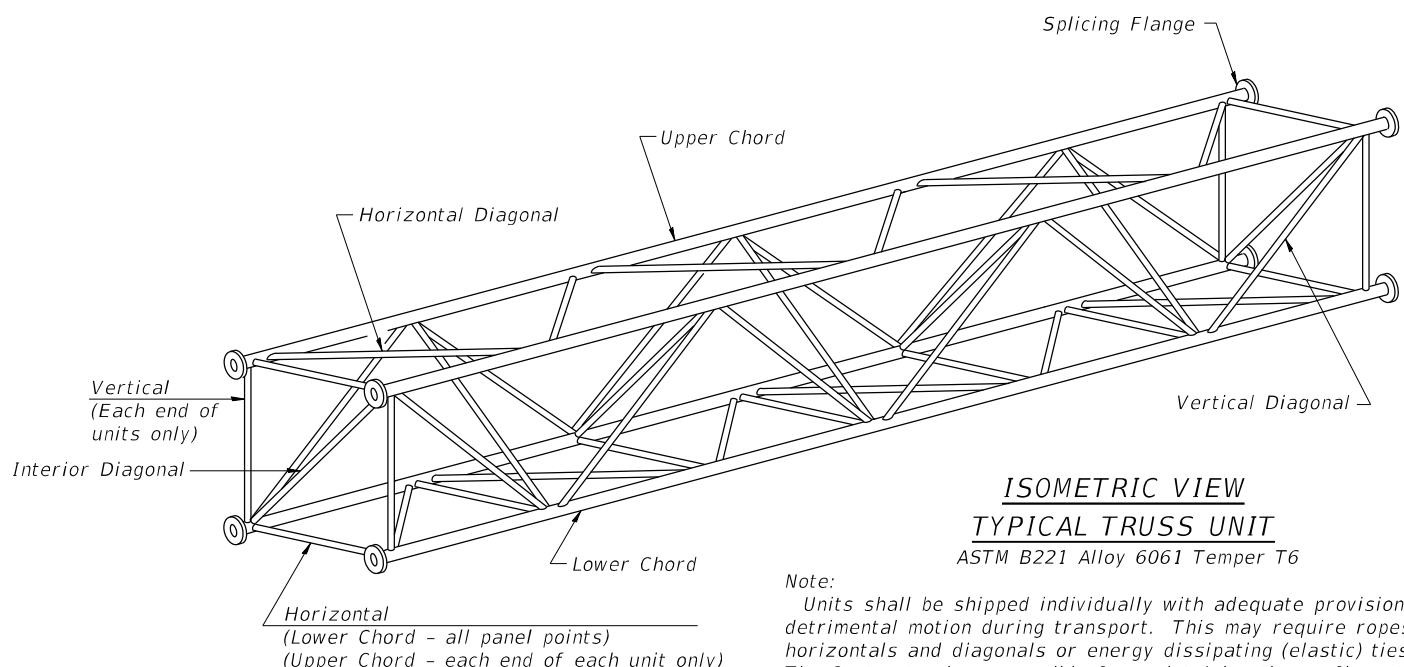
TRUSS UNIT TABLE

Sign No.	Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontal; and Interior Diagonals		Camber at Midspan	Splicing Flange												
				No. Panels per Unit	Unit Lgth.(Le)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(Li)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B							
																No./Splice	Dia.	W	W1									
3	1S0161094L046.8	496+04.88 (Rev)	I-A	7	36'-10 1/2"	5'-0"									5	5/16"	2 1/2"	5/16"	1 3/8"	6	7/8"	5/16"	1/4"	8 3/4"	11 3/4"			
4 (DMS)	1S0161094L048.1	428+71.11 (Rev)	III-A	4	18'-9 1/2"	4'-2 3/4"									7	5/16"	3 1/4"	5/16"	7/16"	6	1"	7/16"	5/16"	11 1/2"	15"			



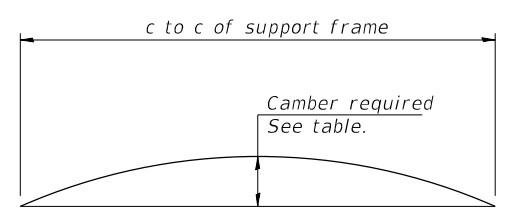
SECTION B-B

① Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.



ISOMETRIC VIEW
TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6

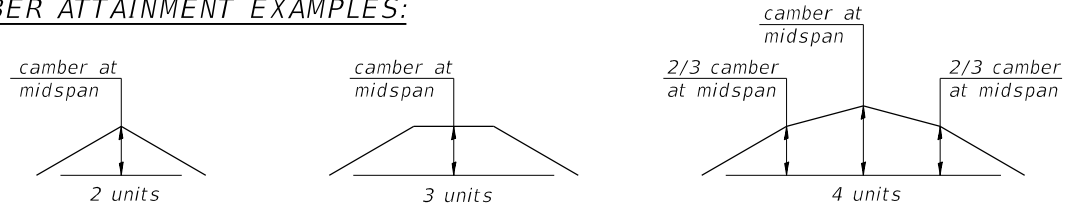
Note:
Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection of the units.



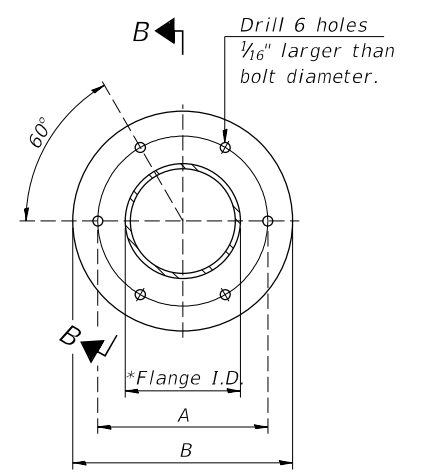
CAMBER DIAGRAM

Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

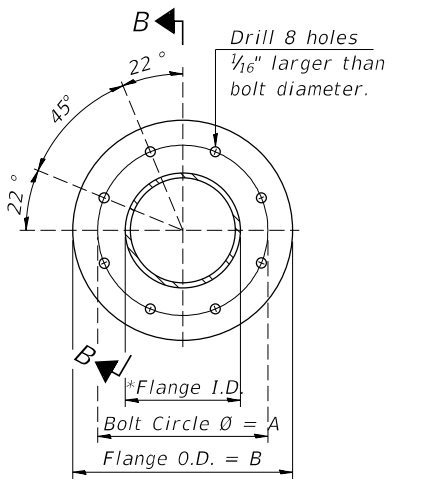
CAMBER ATTAINMENT EXAMPLES:



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)



TRUSS TYPES I-A, II-A, & III-A



TRUSS TYPES II-A & III-A
SPlicing FLANGES

ASTM B221, Alloy 6061-T6 or ASTM B209, Alloy 6061-T651
*To fit O.D. of Chord with maximum gap of 1/16".

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054-A-2 2-17-2017



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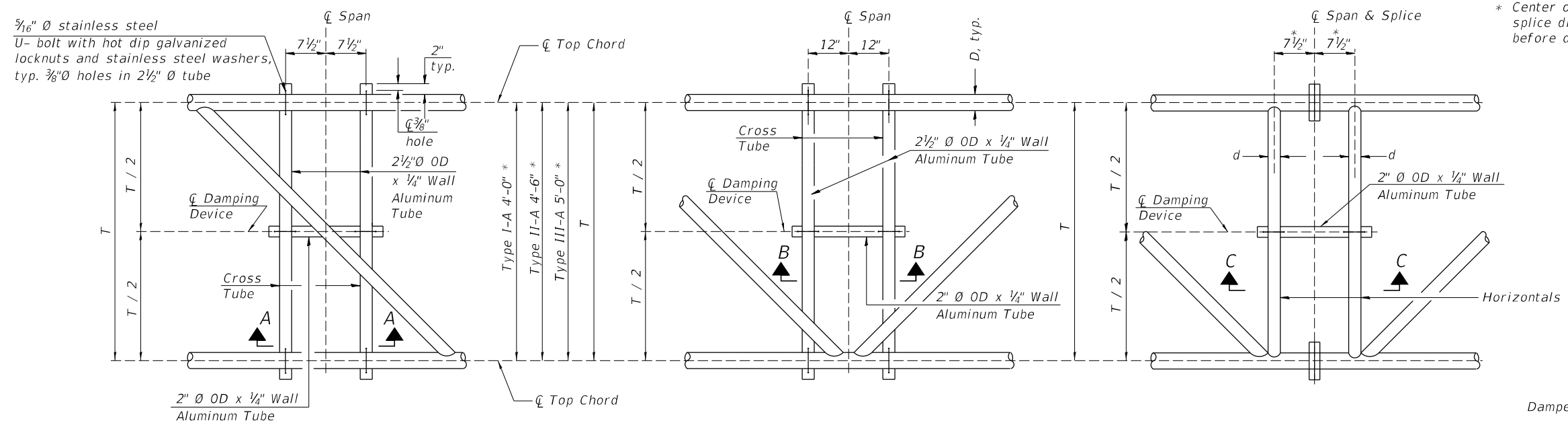
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A AND III-A

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	413
CONTRACT NO. 62K74				

SHEET OSG6-07 OF OSG6-21 SHEETS

ILLINOIS FED. AID PROJECT



* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

PLAN DETAIL "A"
 ☐ Span between Panel Points

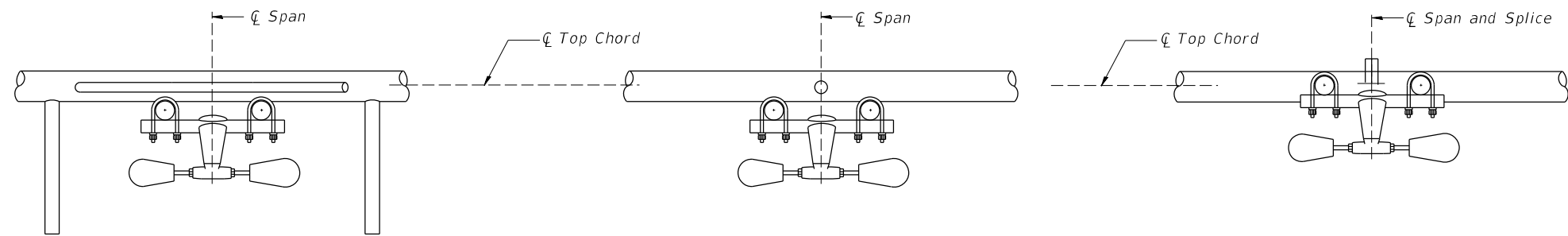
PLAN DETAIL "B"
 ☐ Span at Panel Point

PLAN DETAIL "C"
 ☐ Span at ☐ Chord Splice

NOTES

Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...

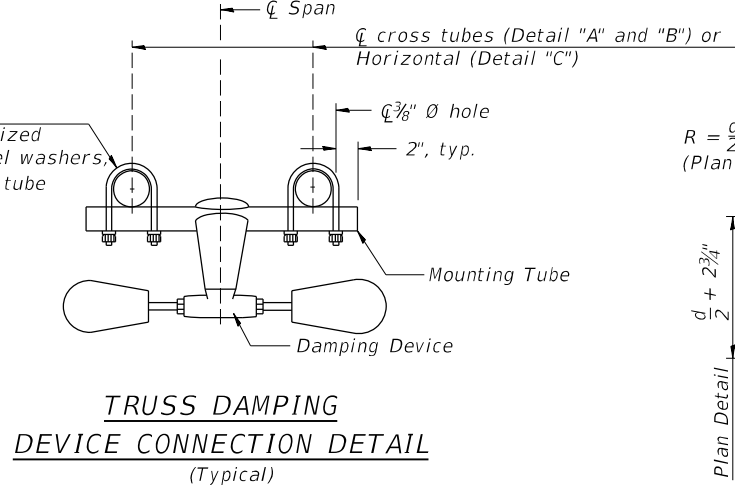
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



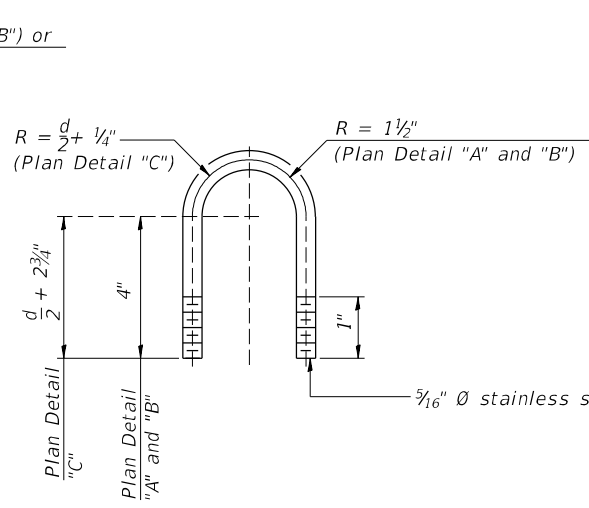
SECTION A-A

SECTION B-B

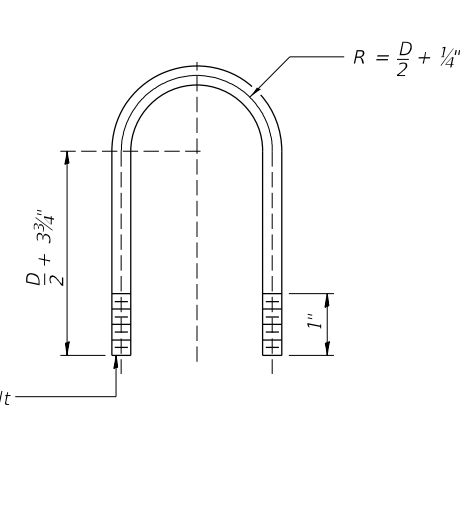
SECTION C-C



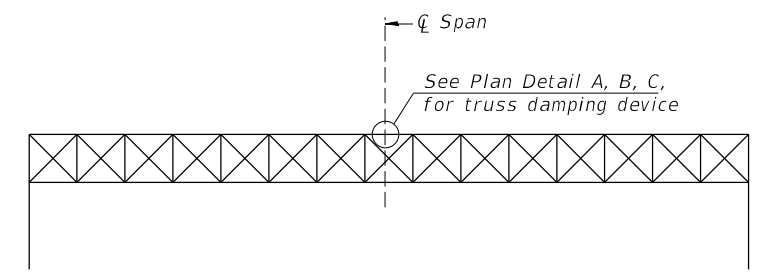
TRUSS DAMPING DEVICE CONNECTION DETAIL
 (Typical)



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
 (Typical)



TOP CHORD TO CROSS TUBE U-BOLT DETAIL
 (Typical - Detail "A" and "B")



ELEVATION
 Aluminum Overhead Sign Truss

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-4.dgn

05-A-D

2-17-2017



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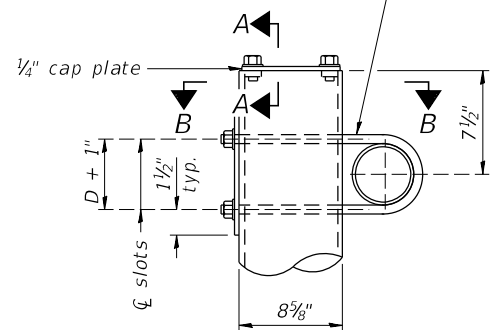
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURE
 DAMPING DEVICE**

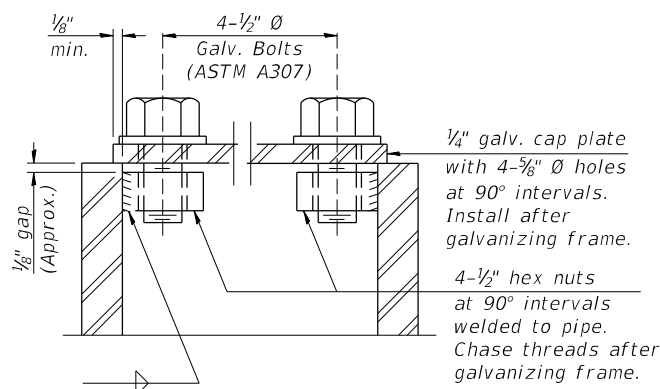
SHEET OSG6-08 OF OSG6-21 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	414
CONTRACT NO. 62K74				
		ILLINOIS	FED. AID PROJECT	

3/4" Ø stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
1 3/16" x 2" slots on 8" Ø pipe.
(4 slots required per pipe)

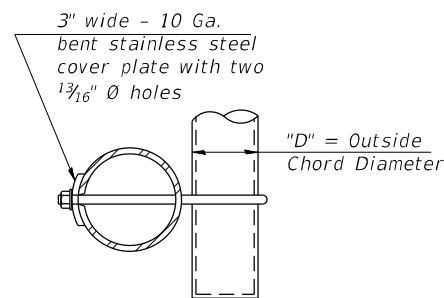


DETAIL A

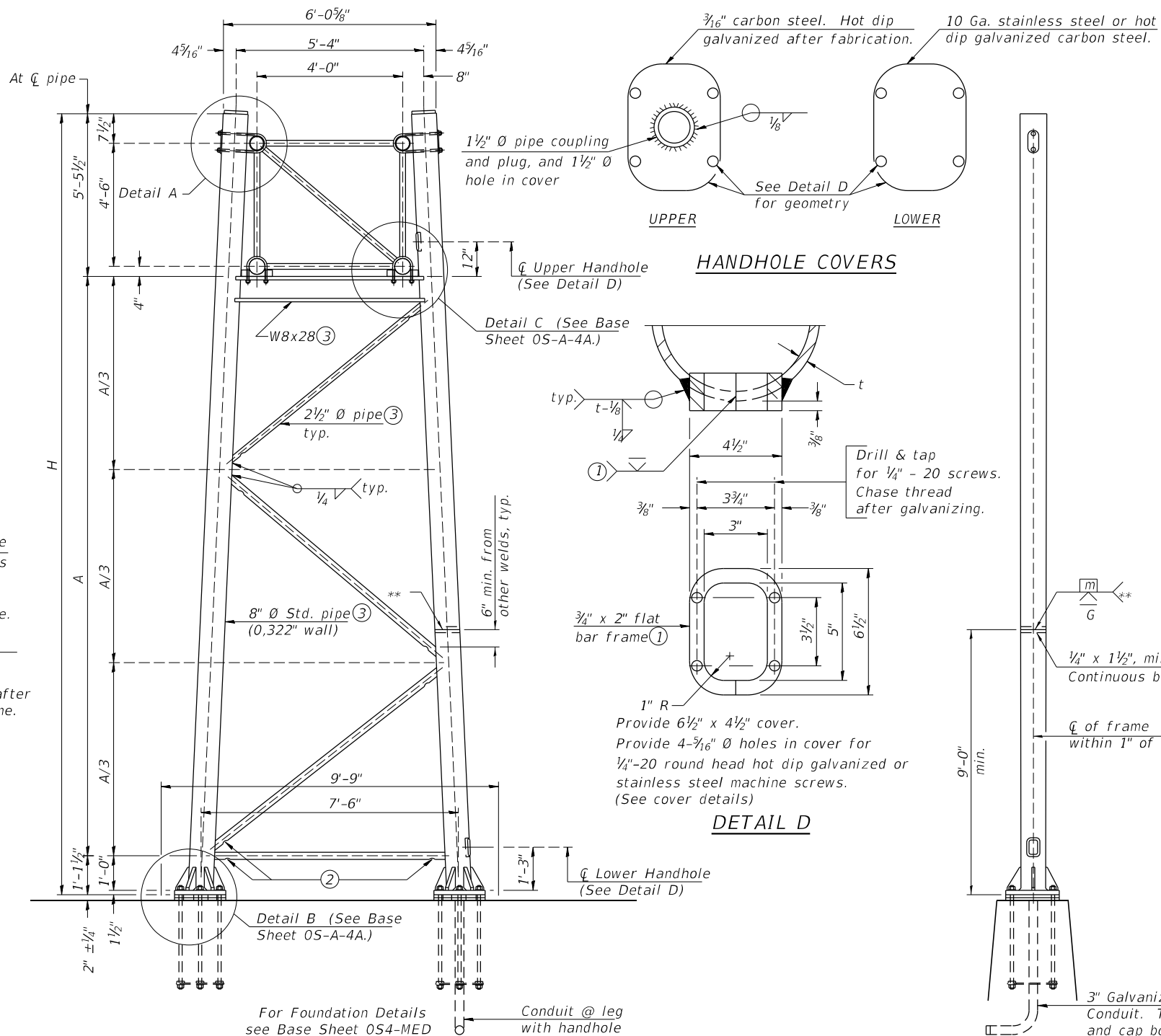


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B

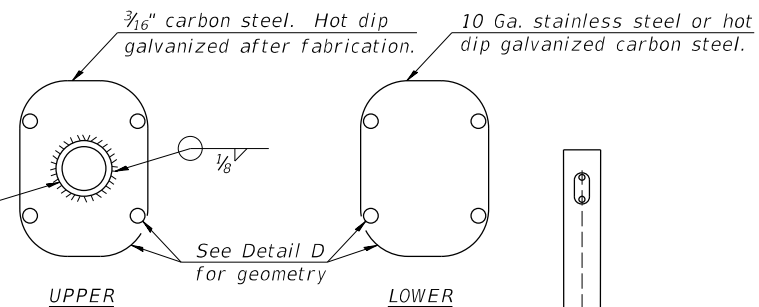


SIDE ELEVATION

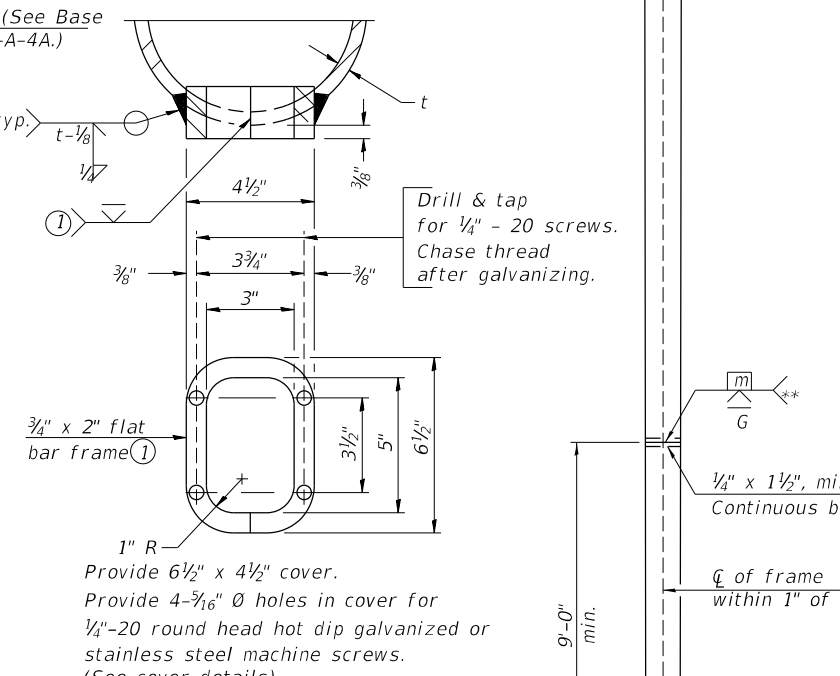
8" Ø PIPE TRUSS SUPPORT FRAME

** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

HANDHOLE COVERS



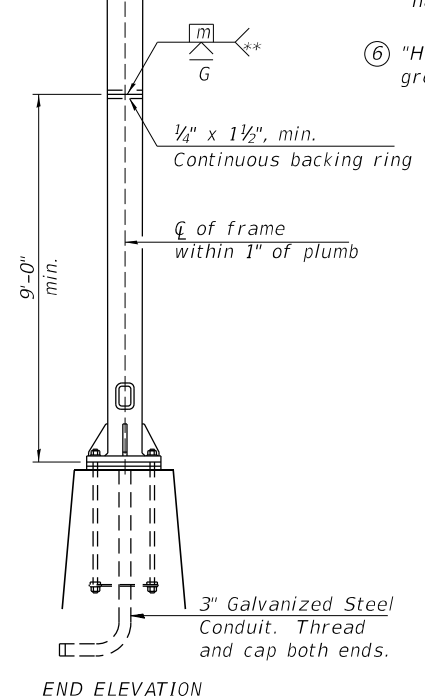
HANDHOLE COVERS



DETAIL D

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

- ① In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500µ in or less.
- ② Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- ③ Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
- ④ See General Notes for fasteners.
- ⑤ Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- ⑥ "H" based on 15'-0" or actual sign height, whichever is greater.



END ELEVATION

Sign No.	Structure Number	Station	Support		H ⑥	A
			West	East		
3	150161094L046.8	496+04.88 (Rev)	X	X	25'-0 3/4"	18'-5 3/4"
					25'-0 3/4"	18'-5 3/4"

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-4.dgn

OS-A-4 2-17-2017



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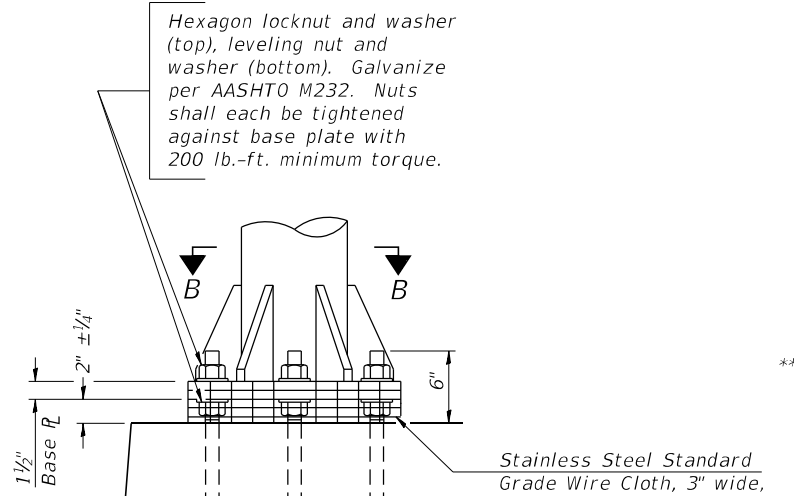
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	CHECKED - FH	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR TYPE I-A ALUMINUM TRUSS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	415
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

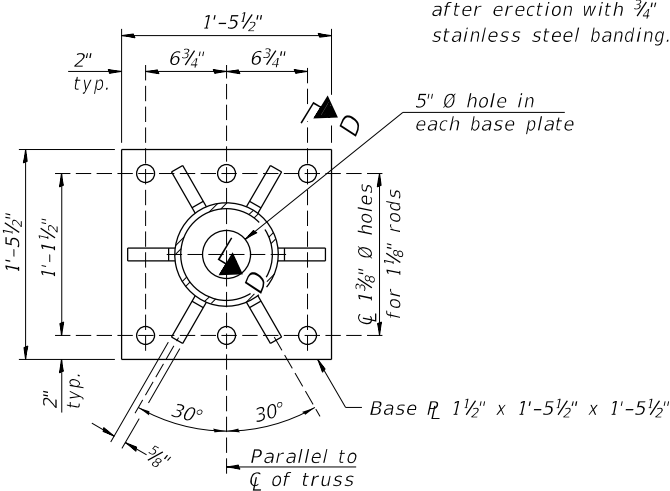
SHEET OSG6-09 OF OSG6-21 SHEETS



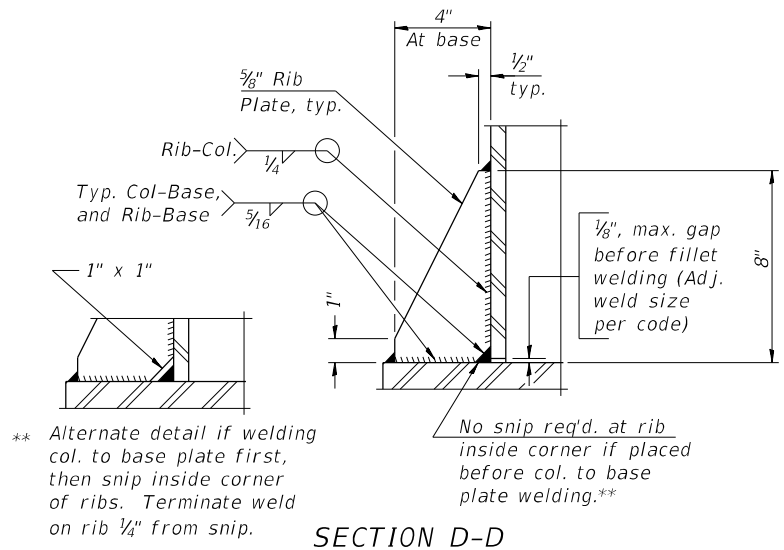
DETAIL B

Ribs shall be cut to fit slope of pipe.

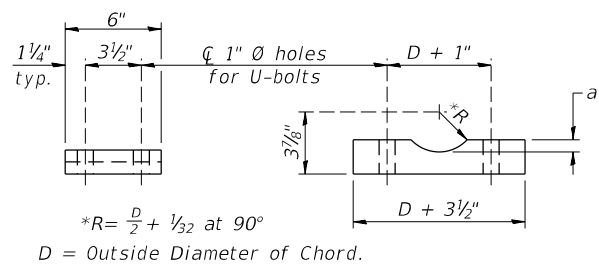
Stainless Steel Standard Grade Wire Cloth, 3" wide, 1/4" maximum opening with a minimum wire diameter of AWG. No. 16 with a minimum 2" lap. Secure to base plate after erection with 3/4" stainless steel banding.



SECTION B-B



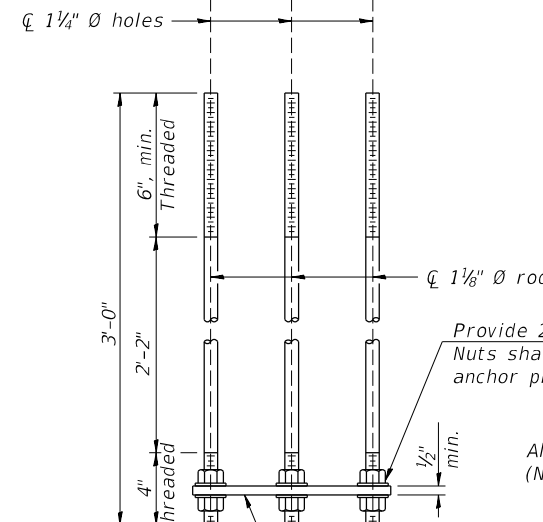
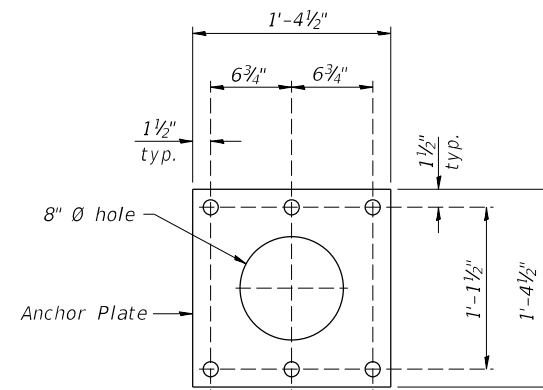
SECTION D-D



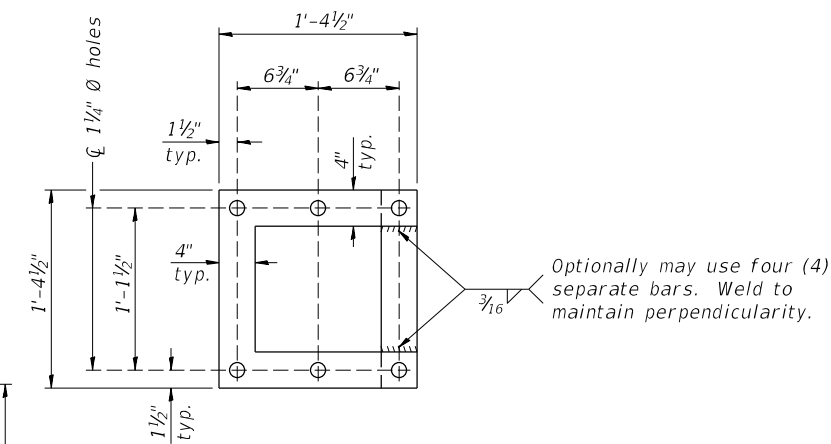
SADDLE SHIM DETAIL

ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

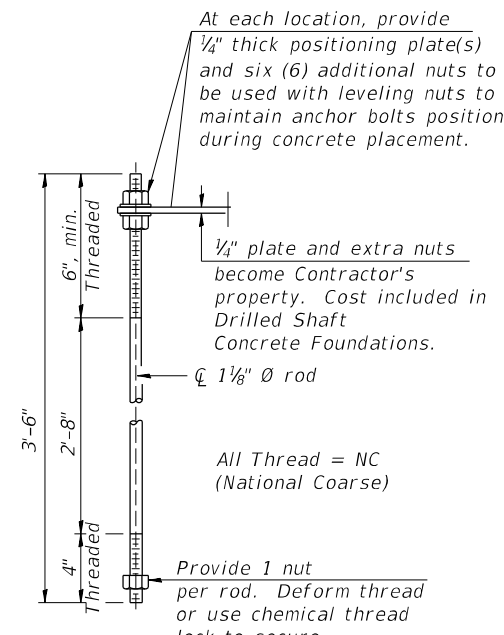
Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	1 3/16"
6"	7/8"
6 1/2"	1 5/16"



ANCHOR ROD DETAIL
Spread Footing Foundation

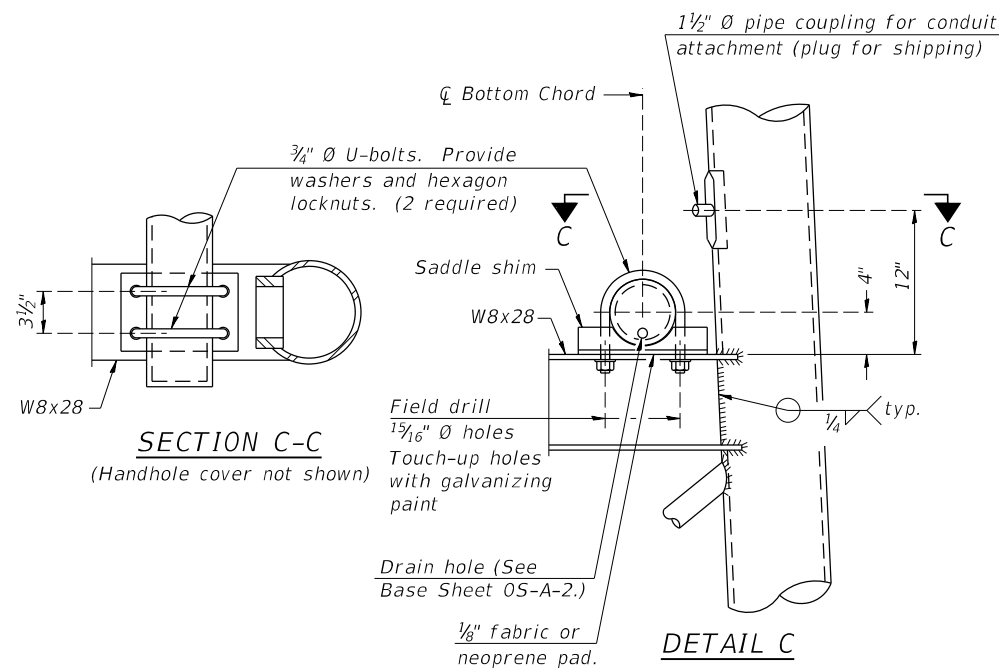


POSITIONING PLATE(S)



ANCHOR ROD DETAIL
Drilled Shaft Foundation

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.



SECTION C-C

(Handhole cover not shown)

DETAIL C

TYPE I-A TRUSS
8" Ø PIPE SUPPORT FRAME DETAILS

05-A-4A

2-17-2017

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DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS - ALUMINUM TRUSS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	416
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		

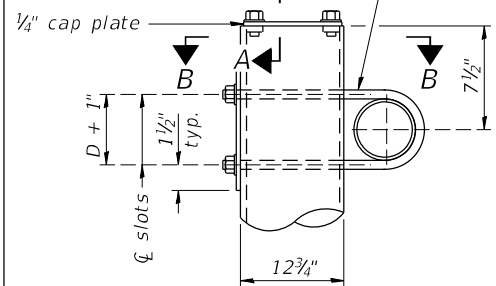
SHEET OSG6-10 OF OSG6-21 SHEETS

Support Design Loads: See Base Sheet 05-A-1 for design and loading criteria.
 Load combinations checked include deadload plus:
 a) 100% wind normal to sign, 20% parallel to sign
 b) 60% wind normal to sign, 30% parallel to sign

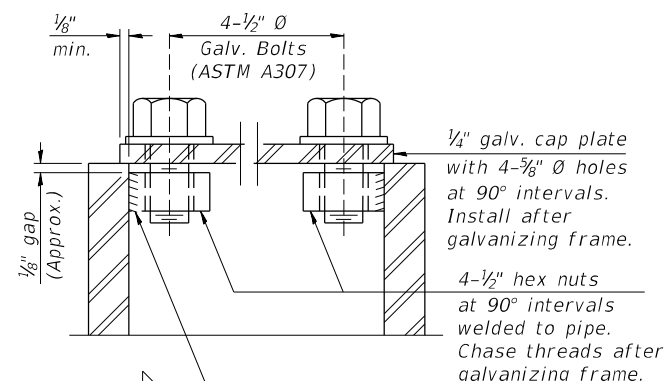
- ① In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 µin or less.
- ② Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- ③ Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet 05-A-1.
- ④ See General Notes for fasteners.
- ⑤ Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- ⑥ "H" based on 15'-0" or actual sign height, whichever is greater.

* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

3/4" Ø stainless steel U-bolt.
 Provide two washers and two hexagon locknuts. ④
 1 3/16" x 2" slots on 1/2" Ø pipe.
 (4 slots required per pipe)

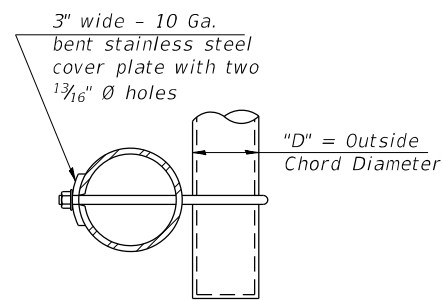


DETAIL A

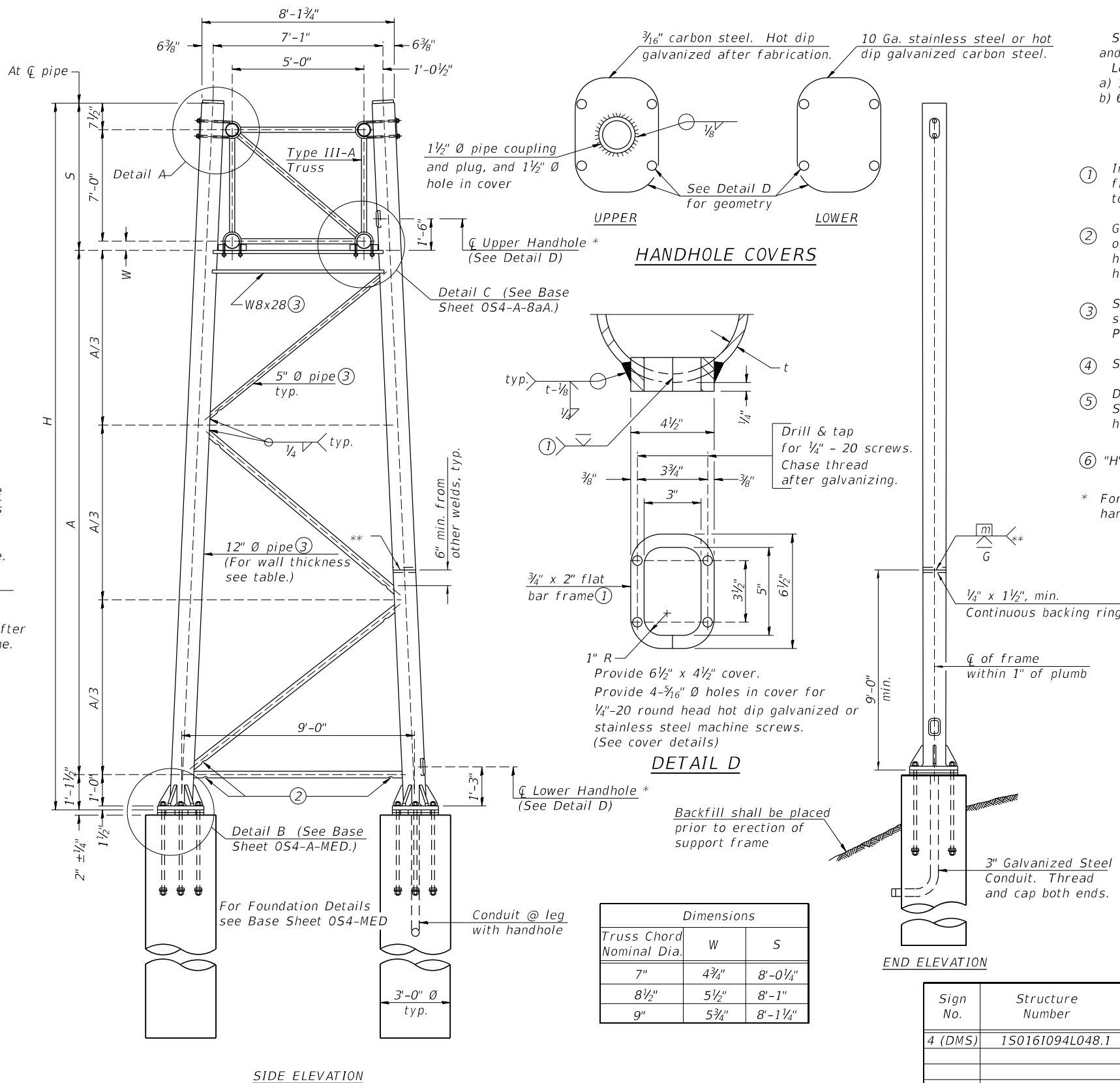


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



Dimensions		
Truss Chord Nominal Dia.	W	S
7"	4 3/4"	8'-0 1/4"
8 1/2"	5 1/2"	8'-1"
9"	5 3/4"	8'-1 1/4"

TRUSS SUPPORT DETAILS

(12" Ø Pipe-Type III-A Truss)

** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Sign No.	Structure Number	Station	Support		Pipe Wall Thickness	H ⑥	A
			West	East			
4 (DMS)	150161094L048.1	428+71.11 (Rev)	X	X	0.33	26'-10 1/2"	17'-8 3/4"
					0.33	26'-8 1/2"	17'-6 1/2"

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054-A-8a

2-17-2017



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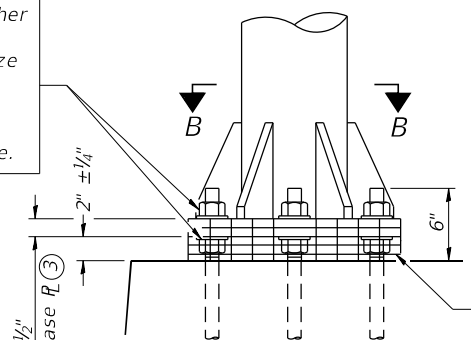
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SUPPORT FRAME
 FOR TYPE III-A ALUMINUM TRUSS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	417
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

SHEET OSG6-11 OF OSG6-21 SHEETS

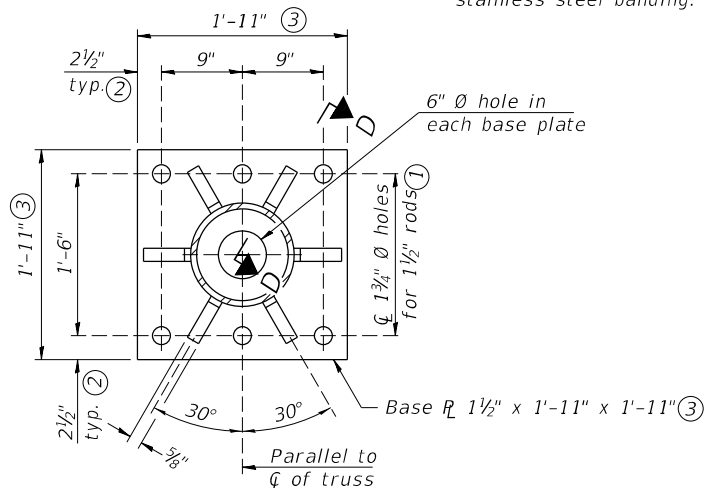
Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.



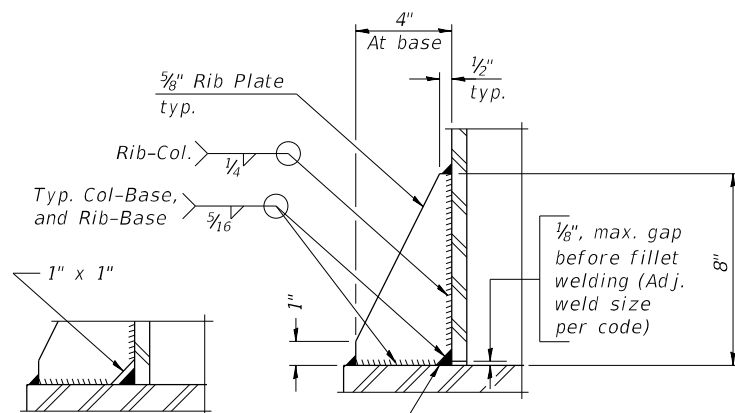
DETAIL B

Ribs shall be cut to fit slope of pipe.

Stainless Steel Standard Grade Wire Cloth, 3" wide, 1/4" maximum opening with a minimum wire diameter of AWG. No. 16 with a minimum 2" lap. Secure to base plate after erection with 3/4" stainless steel banding.



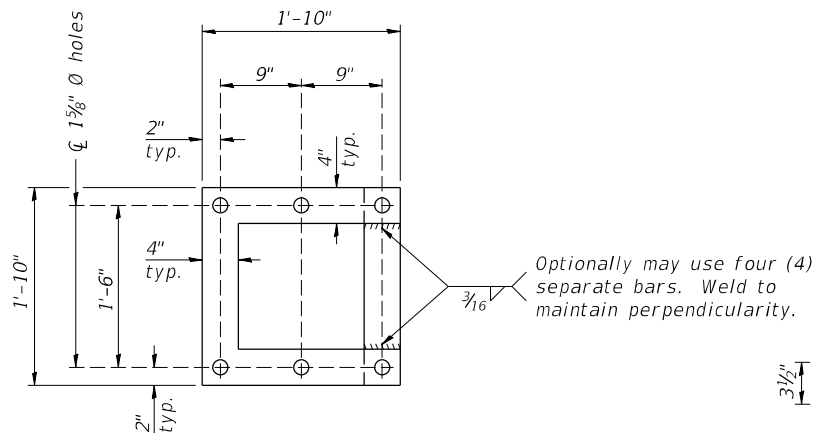
SECTION B-B



SECTION D-D

** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.

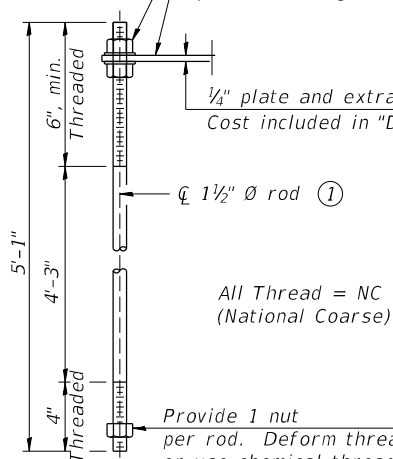
No snip req'd. at rib inside corner if placed before col. to base plate welding.**



POSITIONING PLATE(S)

At each location, provide 1/4" thick positioning plate(s) and six (6) additional nuts to be used with leveling nuts to maintain anchor bolts position during concrete placement.

1/4" plate and extra nuts become Contractor's property. Cost included in "Drilled Shaft Concrete Foundation".



ANCHOR ROD DETAIL

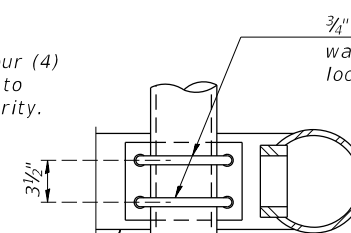
Anchor rods shall conform to ASTM F1554 Grade 105 Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

TYPE III-A TRUSS

12" Ø PIPE SUPPORT FRAME DETAILS

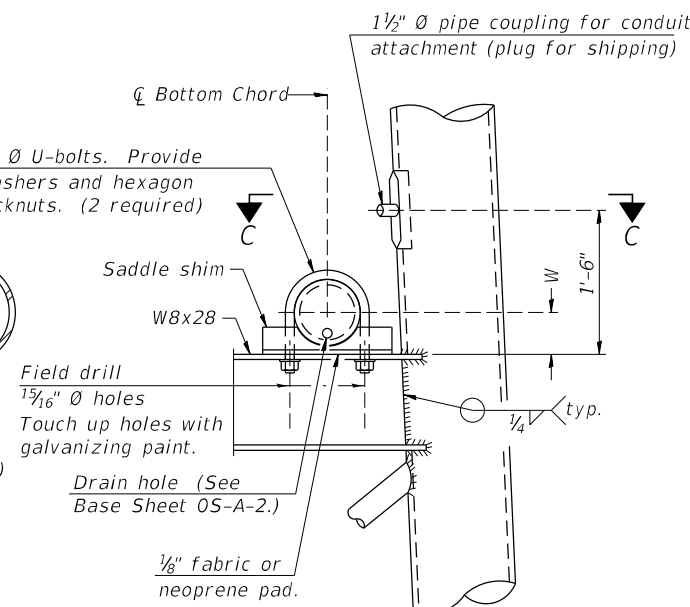
Notes:
For Type III-A Truss spans greater than 150 ft, and up to 160 ft.:

- ① 1 3/4" Ø rod, 2" Ø holes
- ② 2 3/4" edge distance
- ③ Base Pl 1 5/8" x 1'-11 1/2" x 1'-11 1/2"

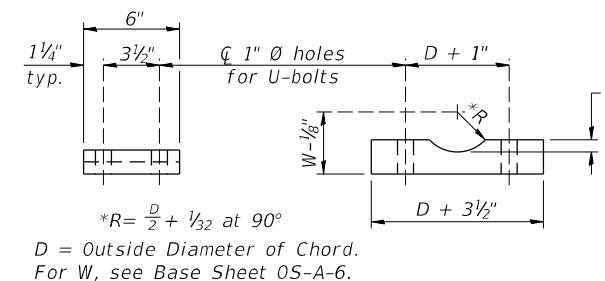


SECTION C-C

(Handhole cover not shown)



DETAIL C



Truss Chord Nominal Dia.	a
7"	1"
8 1/2"	1 1/4"
9"	1 3/8"

SADDLE SHIM DETAIL

ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-4.dgn

054-A-8aA

2-17-2017



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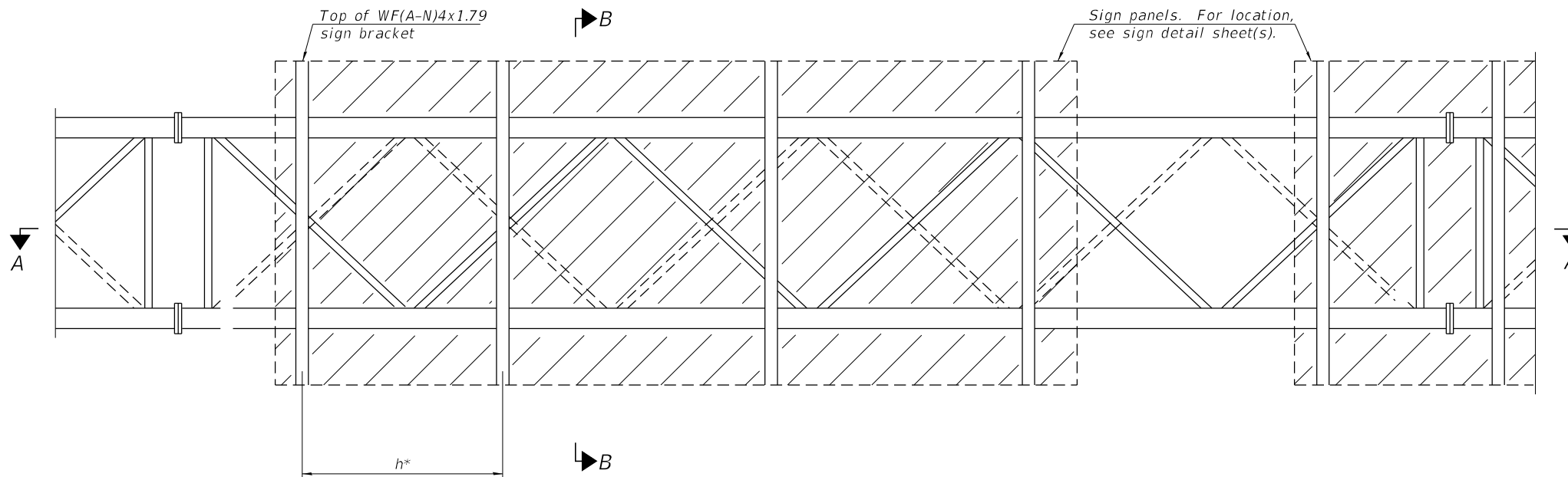
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PLOT SCALE =	DRAWN - MBJ	REVISED -
PLOT DATE =	CHECKED - 7/13/2022	REVISED -

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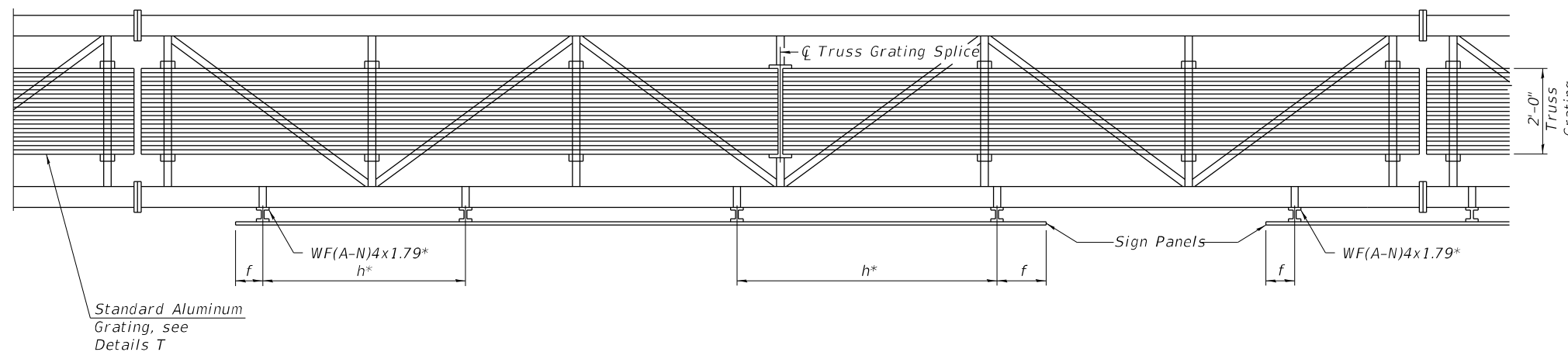
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR TYPE III-A ALUMINUM TRUSS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	418
CONTRACT NO. 62K74				
		ILLINOIS	FED. AID PROJECT	

SHEET OSG6-12 OF OSG6-21 SHEETS



TYPICAL FRONT ELEVATION



SECTION A-A

Place all sign brackets as close to panel points as practical.

BRACKET TABLE

WF(A-N)4x1.79 ASTM B308, Alloy 6061-T6		
Sign Width	Number	
Greater Than	Less Than or Equal To	Brackets Required
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

* Space sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:

f = 12" maximum, 4" minimum (End of sign to \bar{c} of nearest bracket)
 h = 6'-0" maximum (\bar{c} to \bar{c} sign support brackets, WF(A-N)4x1.7)

Notes:

For Detail T and Section B-B, see Base Sheet OS-A-10-NW.
 Truss grating to facilitate inspection shall run full length (center to center of support frames) 12"± on overhead trusses.
 Cost of truss grating is included in "Overhead Sign Structure".
 Truss Grating width dimensions are nominal and may vary 1/2"± based on available standard widths.

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-4.dgn

05-A-9-NW

4-1-2020



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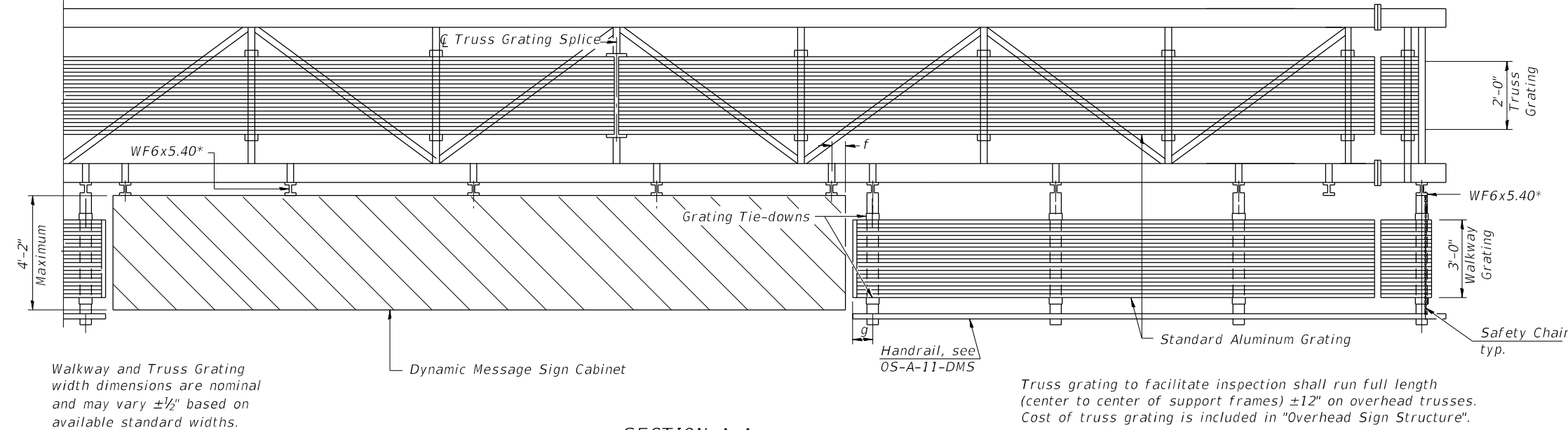
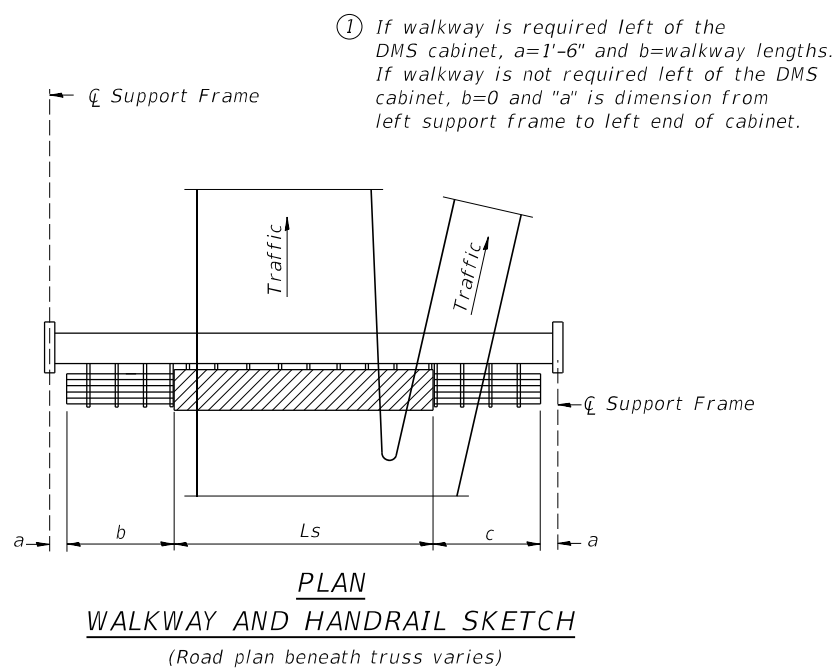
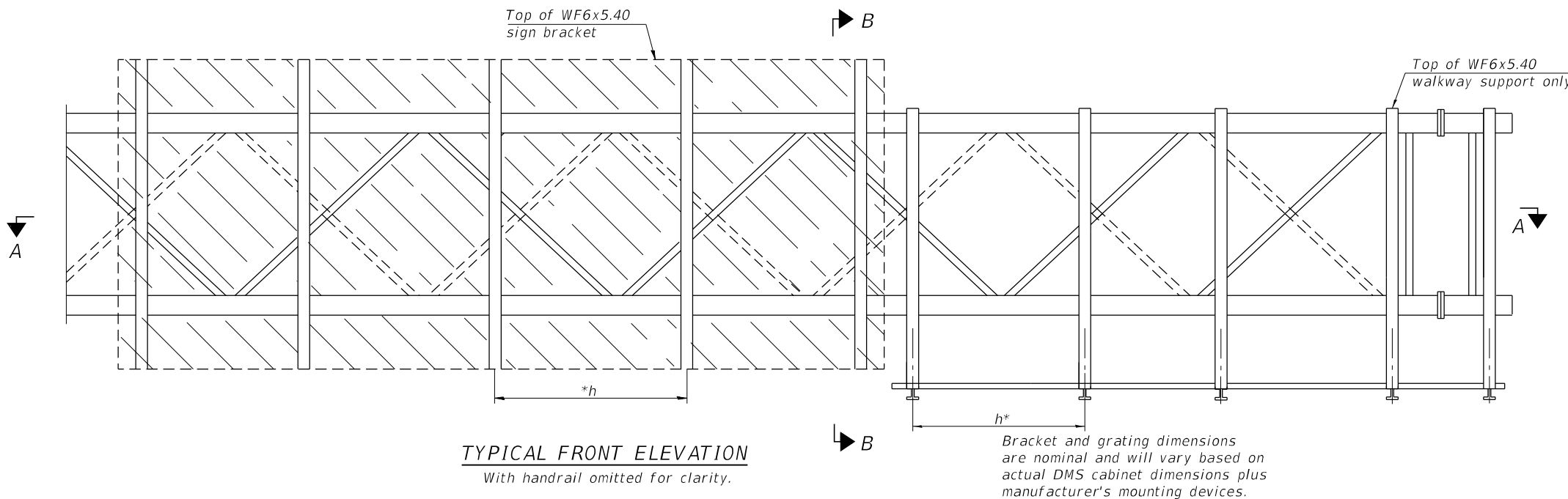
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OVERHEAD SIGN STRUCTURES
 ALUMINUM WALKWAY DETAILS

SHEET OSG6-13 OF OSG6-21 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	419
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



BRACKET TABLE

WF6x5.40 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Grating and handrail splices placed as needed.

Notes:
 * Space walkway brackets WF6x5.40 for efficiency and within limits shown:
 f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
 g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
 h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF6x5.40)

Maximum DMS weight = 5000 lbs. 4'-2" maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40.
 For Section B-B and Grating Splice Details, see Base Sheet OS-A-10-DMS.
 For Handrail Splice Details, see Base Sheet OS-A-11-DMS.

Sign No.	Structure Number	Station	a	b	c	Ls	Walkway Grating and Handrail Lengths
4 (DMS)	1S0161094L048.1	428+71.11 (Rev)	1'-6"	4'-2"	-	28'-1"	5'-0"

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-4.dgn

05-A-9-DMS 2-17-2017

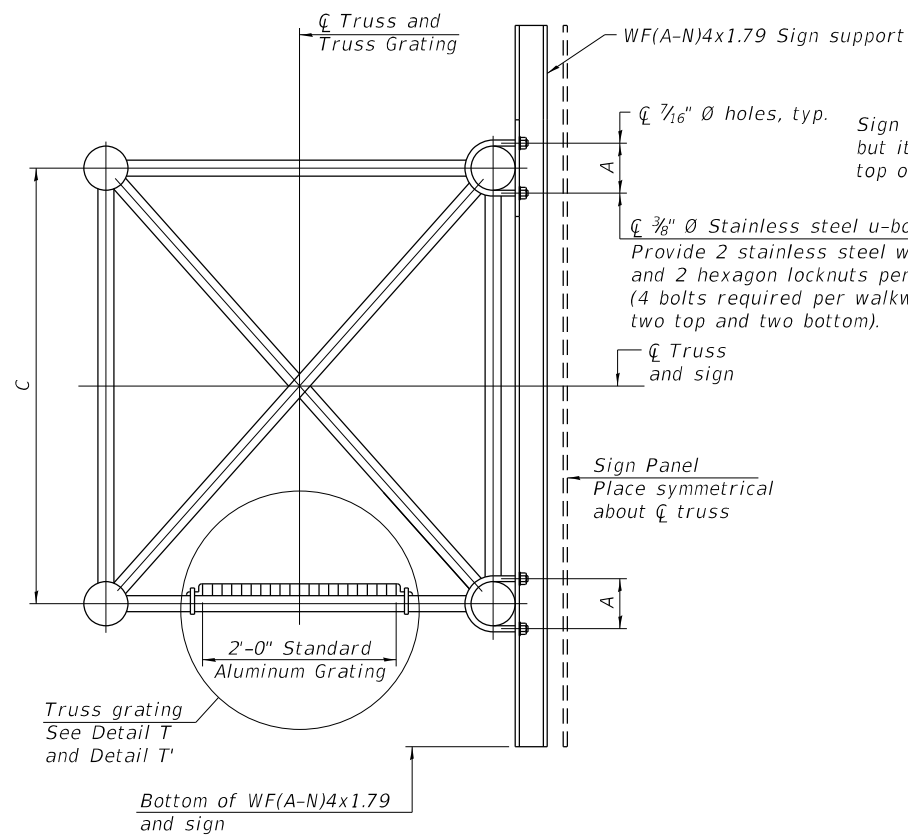
ABNA
 DESIGN FIRM REG. 184.002117
 745 McClintock Drive
 Suite 210
 Burr Ridge, IL 60527
 Ph. 773-881-4788
 Fax: 773-239-3728

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
 ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	420
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



SECTION B-B

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.

Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "t" sections for main bearing bars shall meet the following requirements:

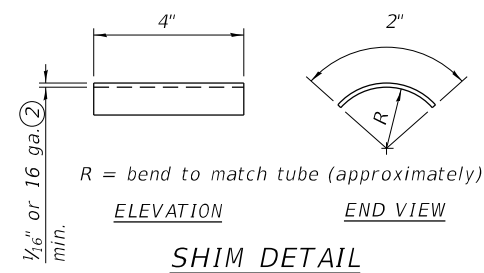
Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.

Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

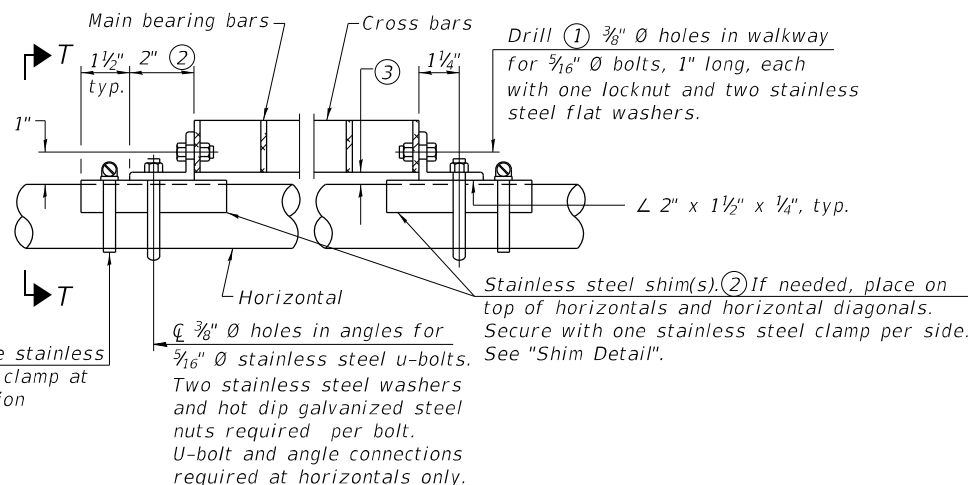
Sign No.	Structure Number	Station	A	C
3	1S0161094L046.8	496+04.88 (Rev)	5 1/2"	4'-6"

Sign shall be even with the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.

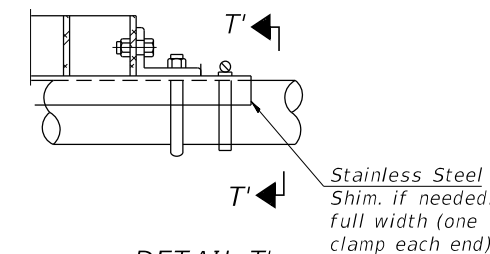
Provide 2 stainless steel washers and 2 hexagon locknuts per bolt. (4 bolts required per walkway bracket, two top and two bottom).



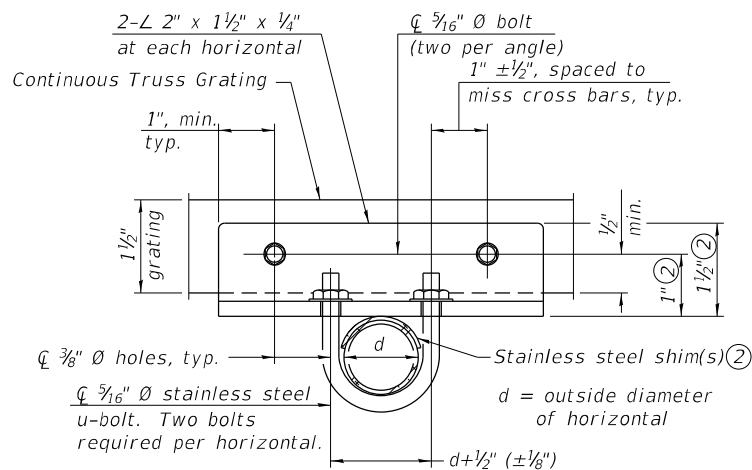
- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.



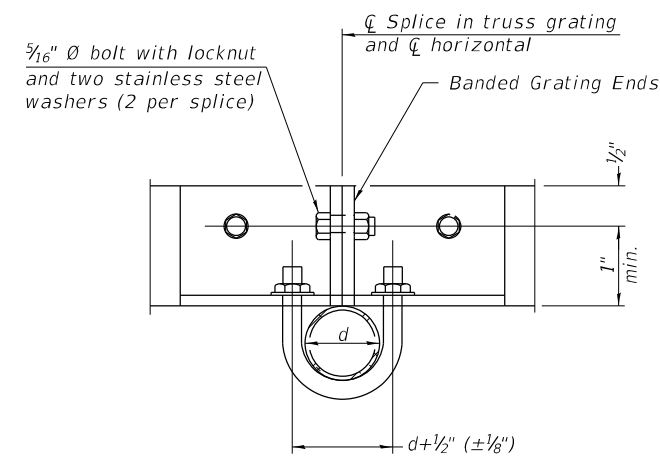
DETAIL T
(Continuous Truss grating)



DETAIL T'
(Truss grating splice)
Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.



SECTION T-T



SECTION T'-T'

05-A-10-NW 4-1-2020



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PLOT DATE =	CHECKED - 7/13/2022	REVISED -

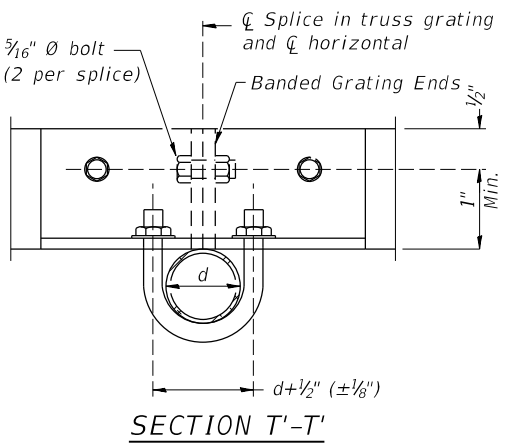
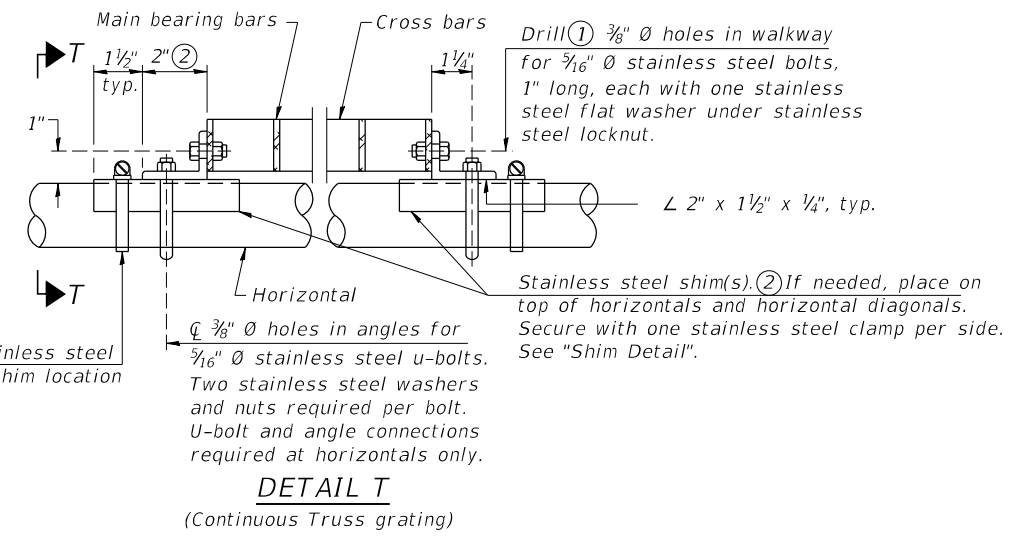
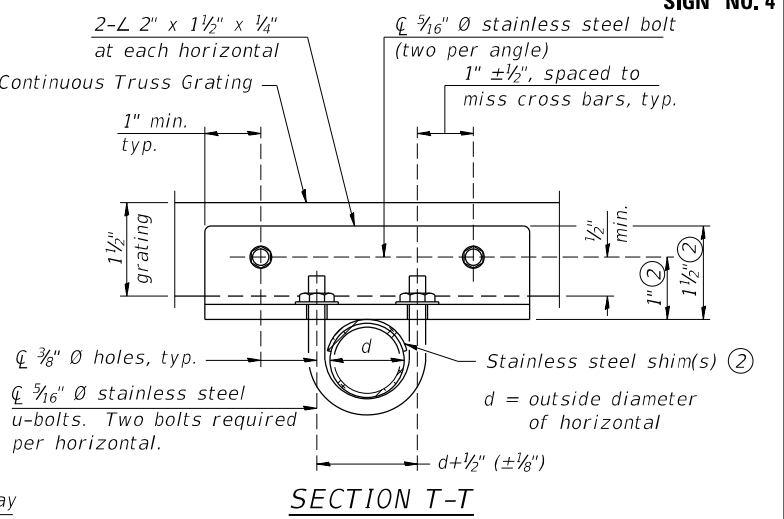
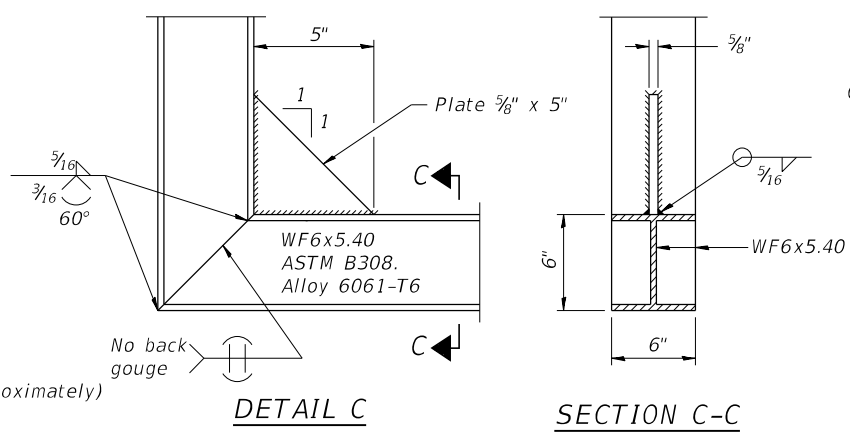
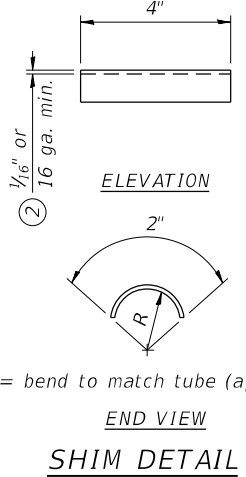
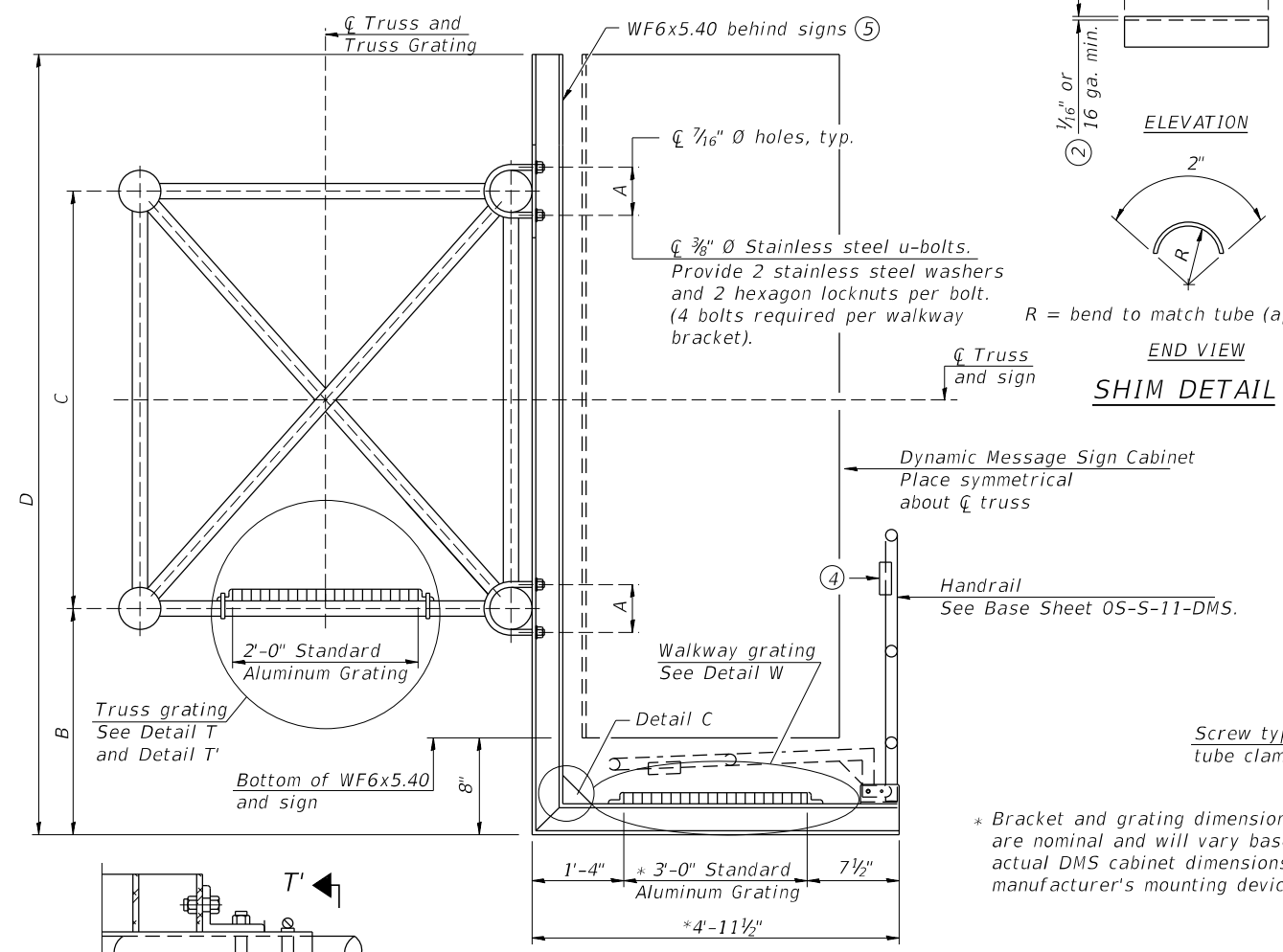
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SHEET OSG6-15 OF OSG6-21 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	421
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-4.dgn



* Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

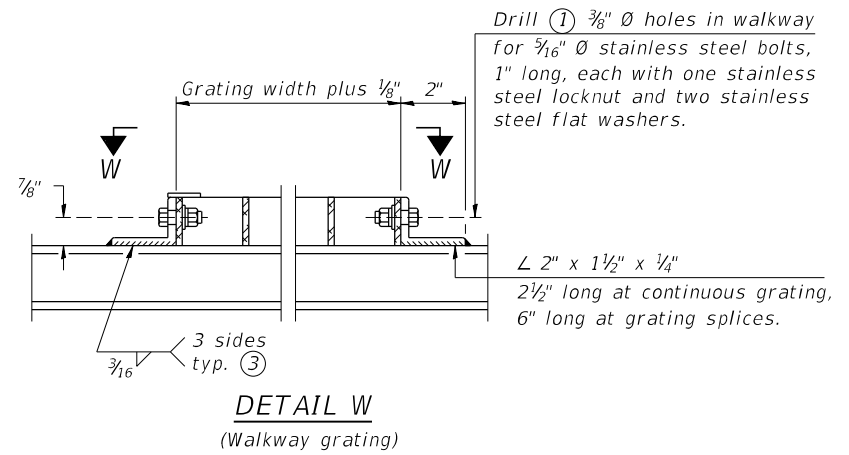
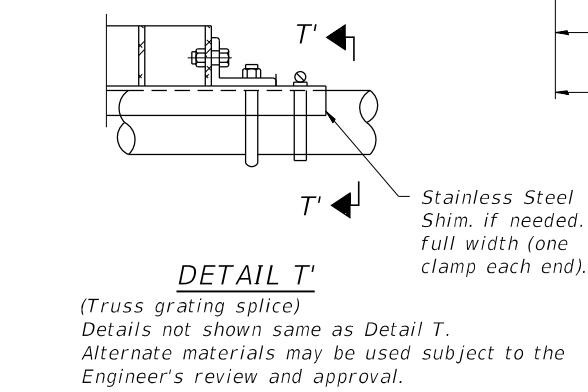
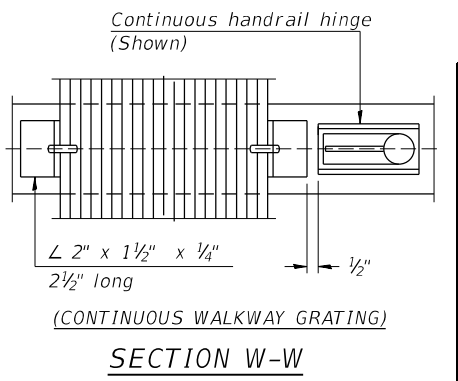
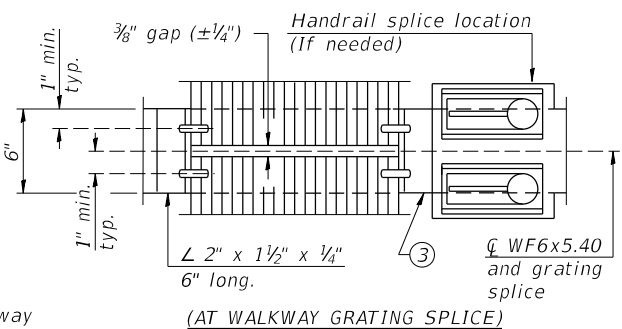
Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.
 Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "t" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
 Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

- ① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- ② Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- ③ If Handrail Joint present, weld angle to WF(A-N)4 and 1/2" extension bars. (See Base Sheet OS-A-11.)
- ④ 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ Cabinet manufacturer must design and supply hardware for connection of cabinet to WF6's. Bolts must be stainless steel or hot dip galvanized high strength per IDOT specifications.
- ⑥ Based on actual height of tallest sign given on OS-A-1.



Sign No.	Structure Number	Station	A	⑥ B	C	⑥ D
4 (DMS)	ISO161094L048.1	428+71.11 (Rev)	7 1/2"	1'-2"	7'-0"	8'-8"

OS-A-10-DMS 2-17-2017



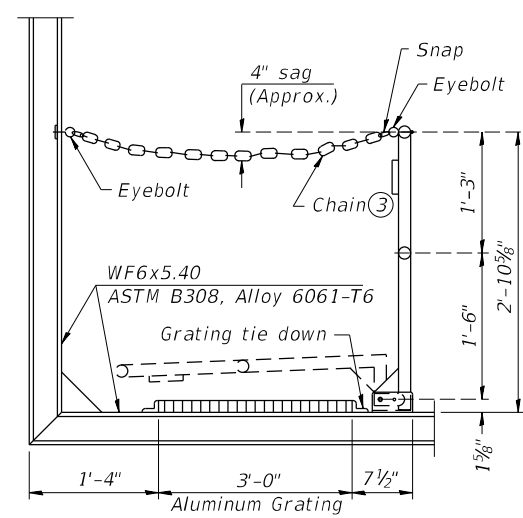
745 McClintock Drive
 Suite 210
 Burr Ridge, IL 60527
 Ph. 773-881-4788
 Fax: 773-239-3728

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PLOT DATE =	CHECKED - 7/13/2022	REVISED -

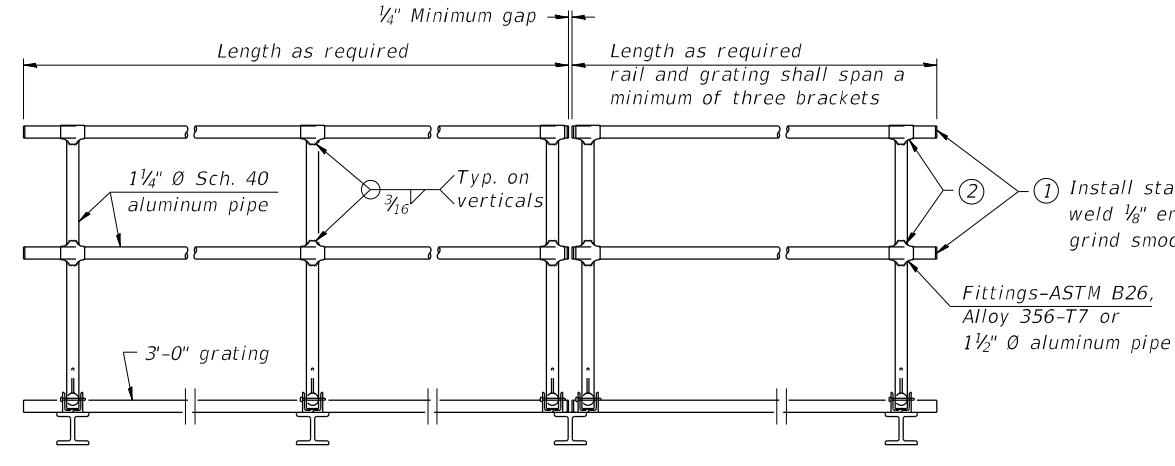
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
 ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS

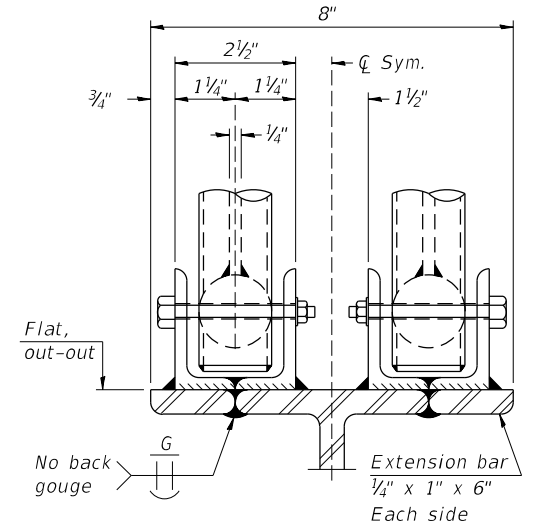
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	422
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



SIDE ELEVATION
(Showing safety chain w/o sign)



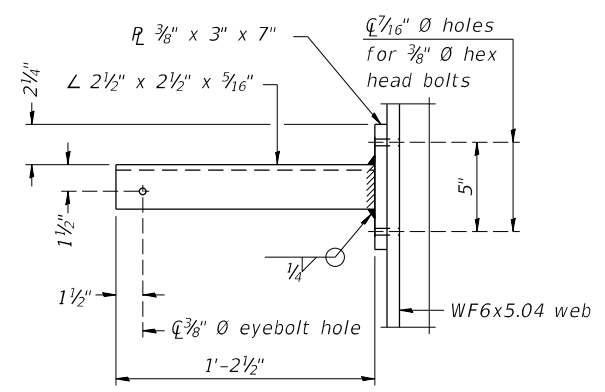
FRONT ELEVATION



ELEVATION AT HANDRAIL JOINT

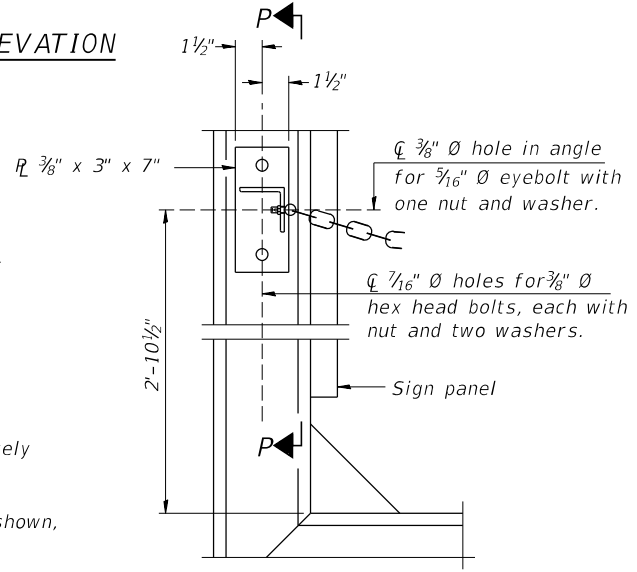
HANDRAIL DETAILS

Handrail pipe shall be ASTM B241, Alloy 6063-T6 or Alloy 6061-T6.

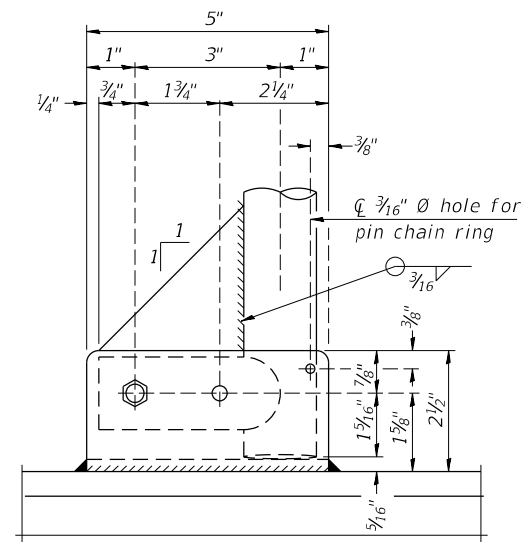


SECTION P-P

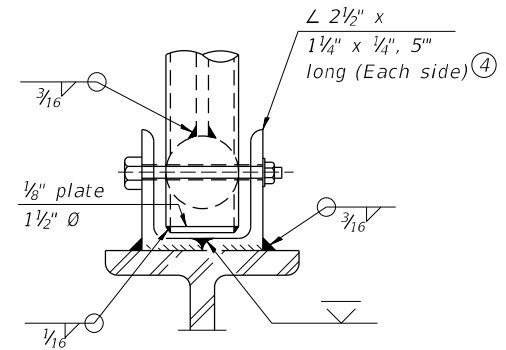
- ② Horizontal handrail member shall be continuous thru fitting. Provide 7/16 inch hole in fitting for 3/8 inch bolt. Field drill 7/16 inch hole in horizontal rail member. Provide washer and locknut for bolt. (Use 3/16 inch eyebolts in 7/16 inch holes on top rail at ends only.)
- ③ 3/16 inch type 304L stainless steel chain, approximately 12 links per foot.
- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.



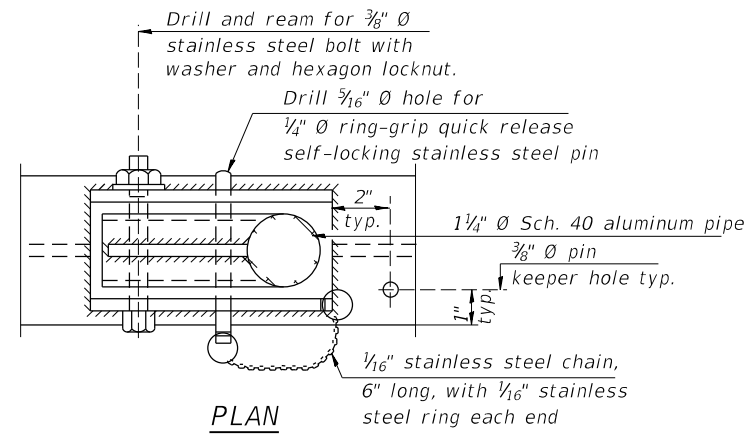
ALTERNATE SAFETY CHAIN ATTACHMENT



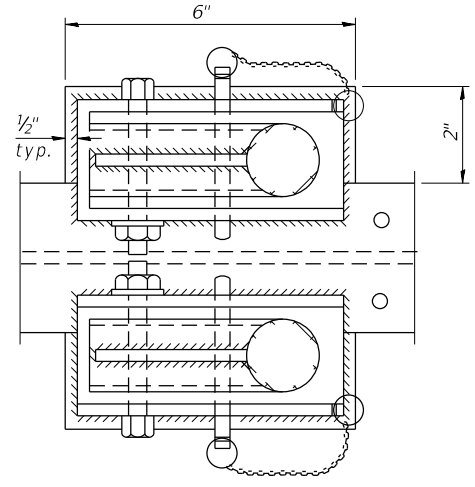
SIDE ELEVATION



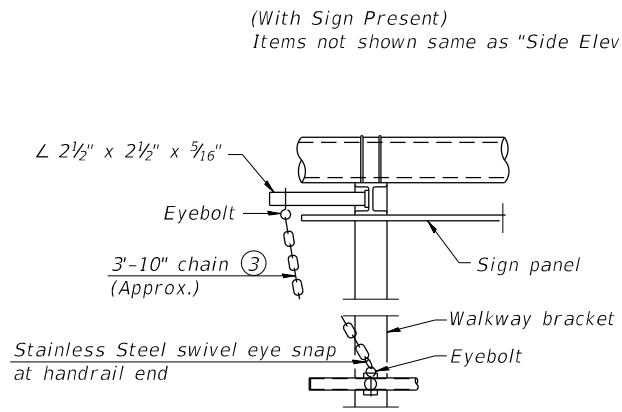
FRONT ELEVATION
See "ELEVATION" at right for dimensions.



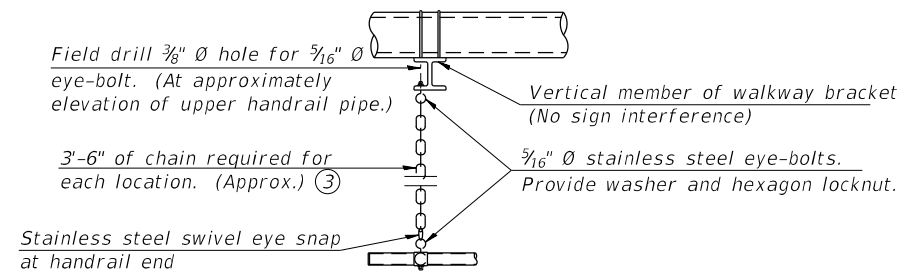
DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT
Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)



SAFETY CHAIN
One required for each end of each walkway.

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-4.dgn

05-A-11-DMS 2-17-2017



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PLOT DATE =	CHECKED - 7/13/2022	REVISED -

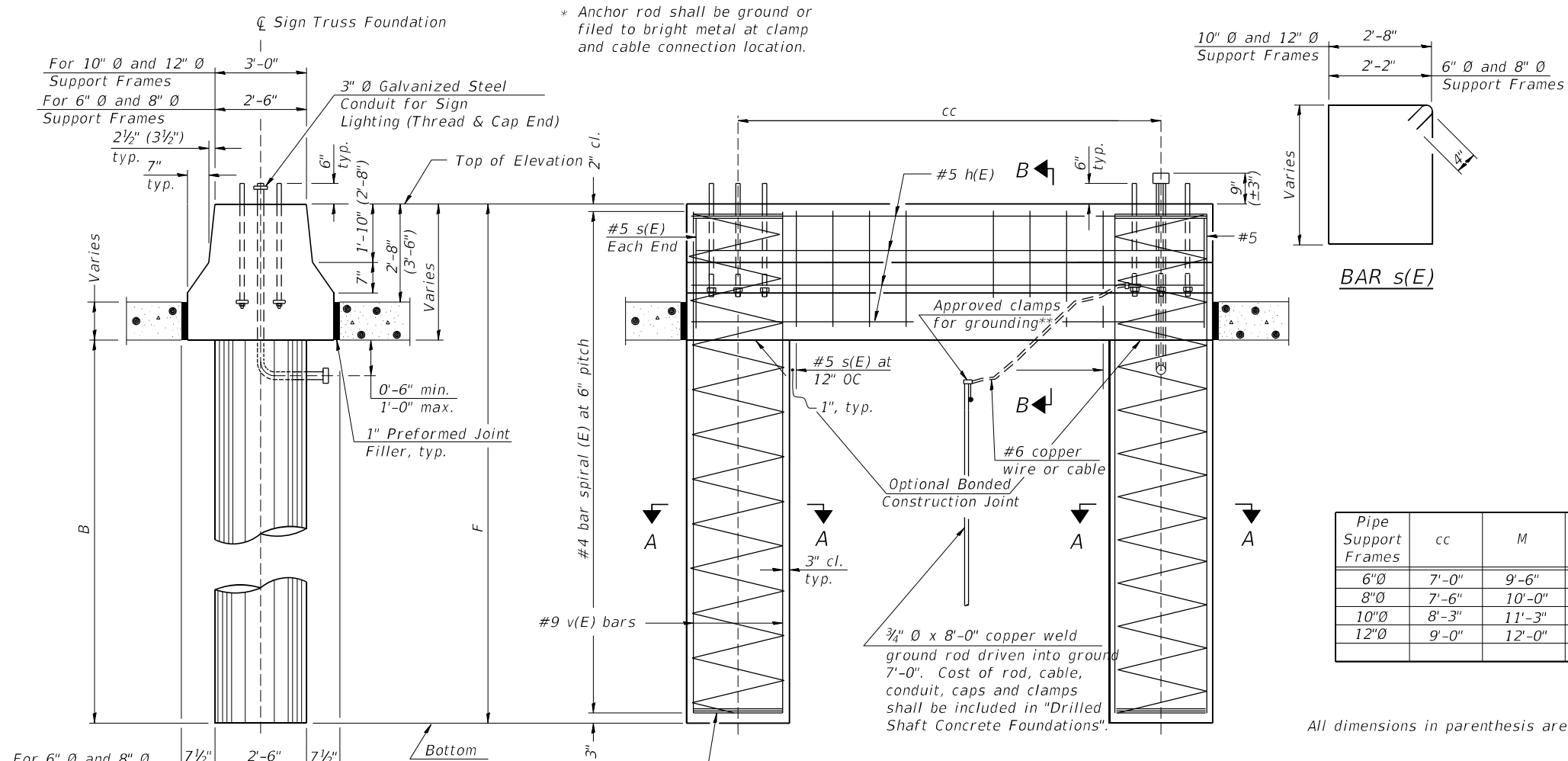
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM HANDRAIL DETAILS FOR DMS

SHEET OSG6-17 OF OSG6-21 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	423
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

NOTES:
 The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.
 If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.
 No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.
 Concrete shall be placed monolithically, without construction joints.
 Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.
 A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

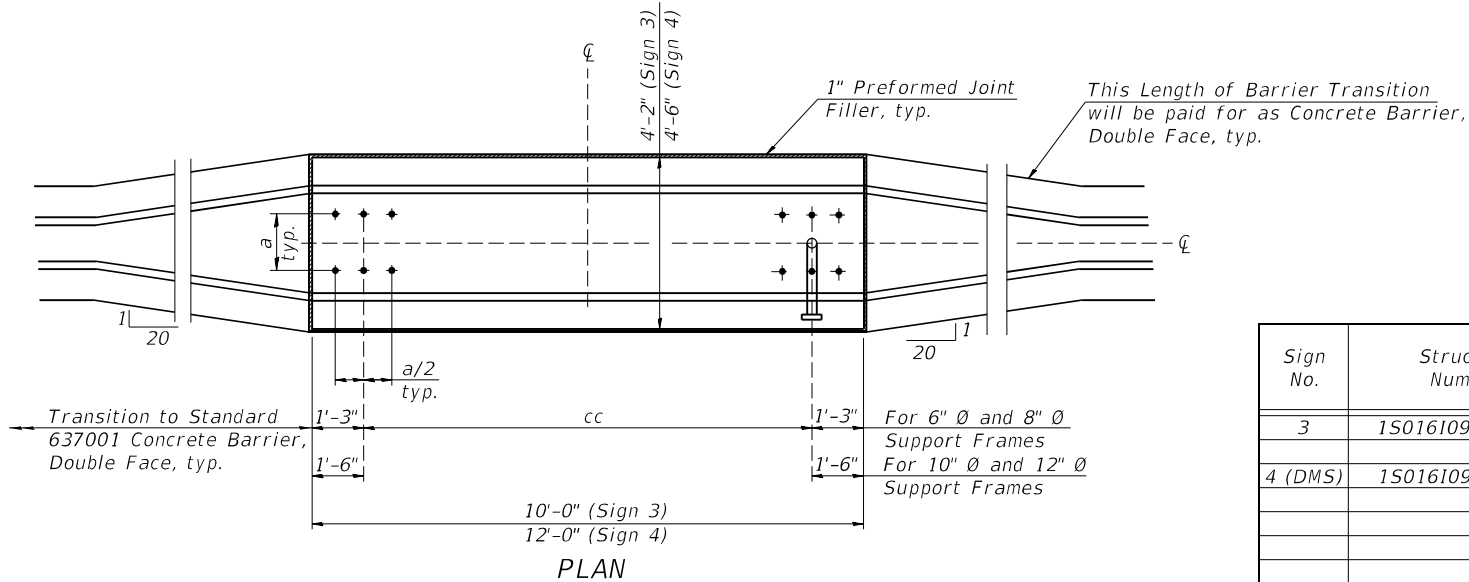
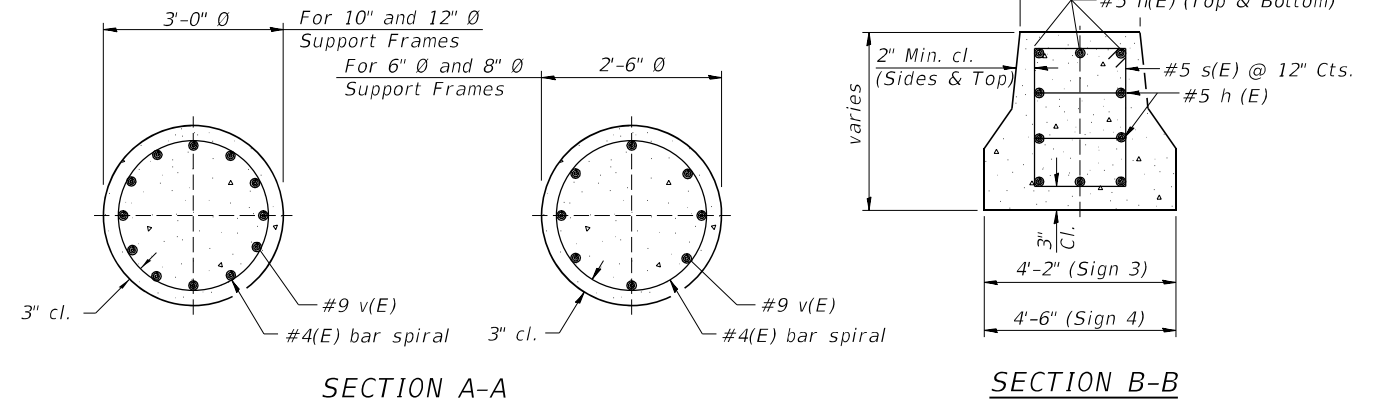


Pipe Support Frames	cc	M	a	a/2
6"Ø	7'-0"	9'-6"	0'-11"	5 1/2"
8"Ø	7'-6"	10'-0"	1'-1 1/2"	6 3/4"
10"Ø	8'-3"	11'-3"	1'-3"	7 1/2"
12"Ø	9'-0"	12'-0"	1'-6"	9"

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
h(E)	10	#5	M less 4"	—
s(E)	Varies	#5	Varies	□
v(E)	16	#9	F less 0'-5"	—
v(E)	24	#9	F less 0'-5"	—
#4(E) bar spiral - see Side Elevation				

All dimensions in parenthesis are for 42" high barrier.



Sign No.	Structure Number	Station	West Foundation				East Foundation				Class DS Concrete (Cu. Yds.)
			Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	
3	1S0161094L046.8	496+04.88 (Rev)	609.97	589.47	16'-0"	20'-6"	-	-	-	-	11.7
4 (DMS)	1S0161094L048.1	428+71.11 (Rev)	602.97	580.47	18'-0"	22'-6"	603.17	580.67	18'-0"	22'-6"	33.3

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-4.dgn

OS4-MED 2-17-2017



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 Suite 210
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
 MEDIAN SUPPORT FOUNDATION DETAILS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	424
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	16	#9	F less 5"	—
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

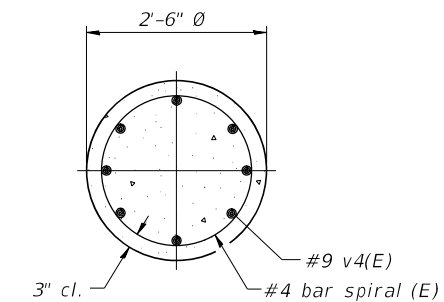
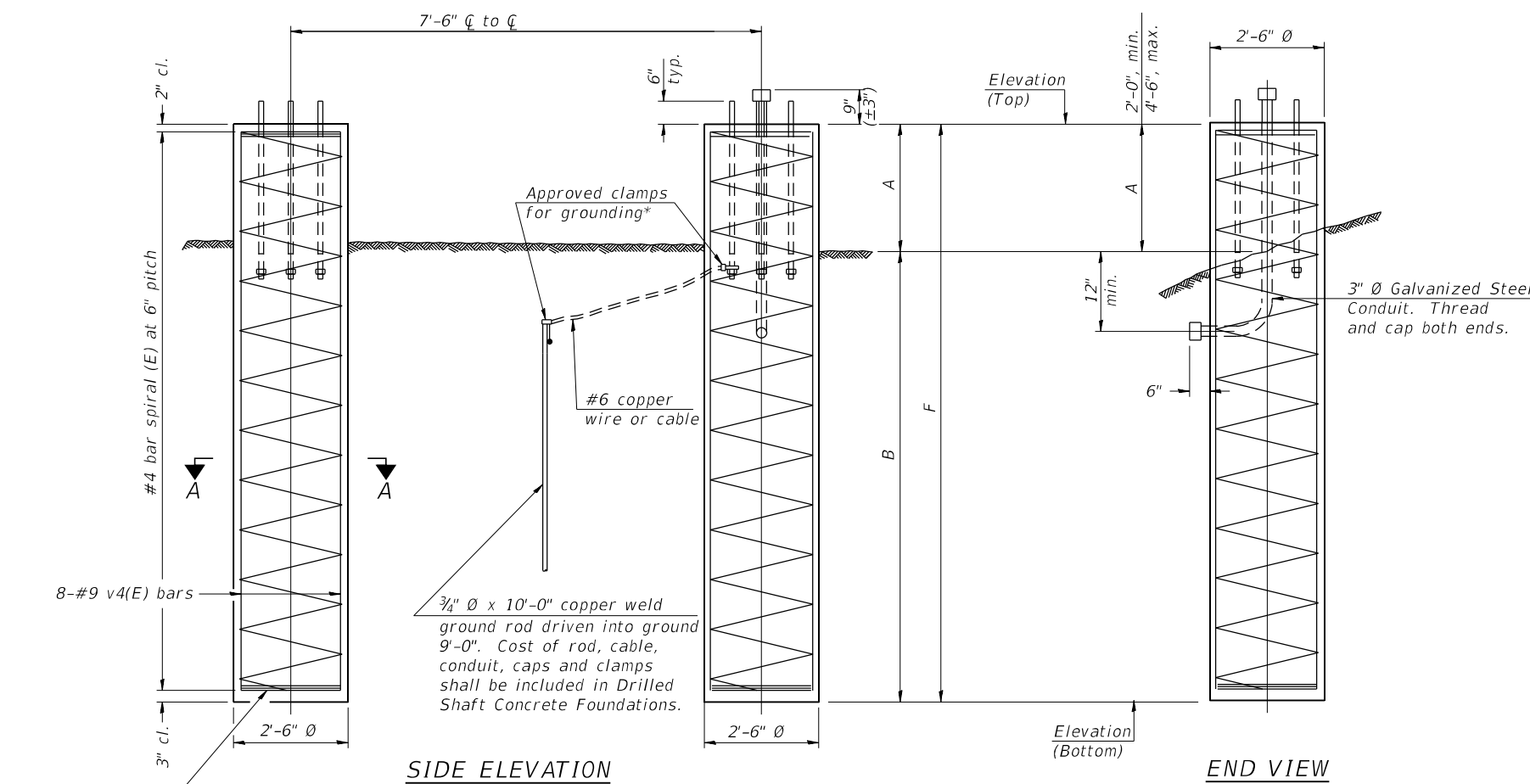
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

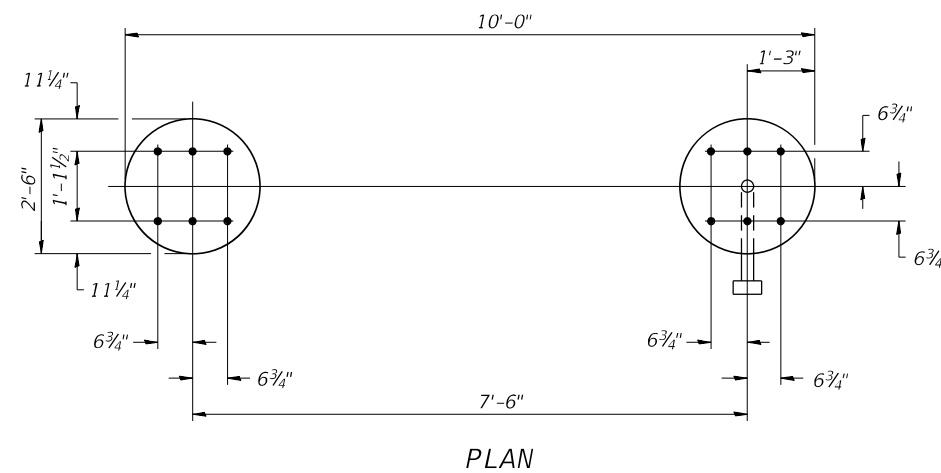
Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



3 hoops minimum top and bottom



For anchor rod size and placement, see Support Frame Detail Sheet.

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

DETAILS FOR 8" Ø SUPPORT FRAME TYPE I-A TRUSS

Sign No.	Structure Number	Station	Elevation Top	Elevation Bottom	A	B	F	East Foundation			Class DS Concrete (Cu. Yds.)		
								Elevation Top	Elevation Bottom	A		B	F
3	1S0161094L046.8	496+04.88 (Rev)	-	-	-	-	-	609.97	589.47	4'-6"	16'-0"	20'-6"	7.5

054-F2

2-17-2017



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	425
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



GSI Job No. 19079-B

SOIL BORING LOG

Page 1 of 1

Date 10/19/21

PROJECT PTB 185-012, WO #32

LOCATION I-90 & I-94 Tollway

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

CLIENT HBM	DEPTH (ft)	BLOW (blows/6")	UCS (tsf)	MOIST (%)	SOIL TYPE	Surface Water Elev. _____ ft	DEPTH (ft)	BLOW (blows/6")	UCS (tsf)	MOIST (%)	SOIL TYPE
BORING NO. OSB-18						Stream Bed Elev. _____ ft					
Northing 1918153						Groundwater Elev.:					
Easting 1158208						First Encounter 582.9 ft					
Ground Surface Elev. 605.9 ft						Upon Completion 579.9 ft					
						After _____ Hrs.					

10.0" CONCRETE	605.1					CLAY LOAM-brown & gray-stiff (continued)	585.4				
CRUSHED STONE-medium dense (Fill)		14				CLAY-gray-soft to medium stiff		2			
		10	5					0.50	23		
		13						B			
602.9											
CRUSHED STONE SCREENINGS-loose (Fill)		5						2			
		5	5					0.40	24		
		14						B			
		-5									
600.4											
CRUSHED STONE-medium dense (Fill)		14						2			
		15	4					0.60	17		
		13						B			
597.9											
CLAY LOAM-gray-hard (Fill)		3						2			
		5	4.00	14				0.25	20		
		5	P					P			
		-10									
595.4						End Of Boring @ -30.0'. Boring backfilled with cuttings.	575.9				
CRUSHED STONE-dense (Fill)		25									
		21	4								
		13									
592.9											
CLAY LOAM-brown & gray-hard (Fill)		5									
		8	4.50	16							
		10	P								
		-15									
590.4											
CLAY LOAM-brown & gray-stiff		2									
		2	1.30	18							
		4	B								
		3									
		3	1.30	18							
		4	B								
		-20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)



GSI Job No. 19079-B

SOIL BORING LOG

Page 1 of 1

Date 10/20/21

PROJECT PTB 185-012, WO #32

LOCATION I-90 & I-94 Tollway

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

CLIENT HBM	DEPTH (ft)	BLOW (blows/6")	UCS (tsf)	MOIST (%)	SOIL TYPE	Surface Water Elev. _____ ft	DEPTH (ft)	BLOW (blows/6")	UCS (tsf)	MOIST (%)	SOIL TYPE
BORING NO. OSB-19						Stream Bed Elev. _____ ft					
Northing 1918177						Groundwater Elev.:					
Easting 1158259						First Encounter 584.5 ft					
Ground Surface Elev. 605.5 ft						Upon Completion 580.5 ft					
						After _____ Hrs.					

10.0" CONCRETE	604.6					CLAY LOAM-brown & gray-stiff to very stiff (continued)					
CRUSHED STONE-medium dense (Fill)		21				becoming gray @ -20.5		4			
		19	3					4	1.50	25	
		10						5	B		
602.5											
CLAY LOAM with Stone-gray-soft (Fill)		6						2			
		3	0.30	14				3	1.60	9	
		3	B					5	B		
		-5									
600.0											
CLAY LOAM-dark brown, gray & black-medium stiff to very stiff (Fill)		3						0			
		2	0.90	13				0	0.25	27	
		3	B					0	P		
		4						0			
		7	2.00	19				0	0.25	25	
		17	P					0	P		
		-10									
580.0						CLAY-gray-soft	580.0				
CRUSHED STONE-medium dense (Fill)		4									
		5	3.50	21							
		15	P								
		2									
		2	0.60	23							
		3	B								
		-15									
590.0											
CLAY LOAM-brown & gray-stiff to very stiff		4									
		4	3.10	21							
		5	B								
		2									
		3	1.00	25							
		3	P								
		-20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN3-4.dgn



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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BORING LOGS
 S.N. 1S016I094L046.8 (SIGN 3)
 SHEET OSG6-20 OF OSG6-21 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	426
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



SOIL BORING LOG

PROJECT PTB 185-012, WO #32

LOCATION I-90 & I-94 Tollway

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

CLIENT HBM

BORING NO. OSB-24
 Northing 1914137
 Easting 1163648
 Ground Surface Elev. 599.0 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UNSATURATED SOIL QUANTITY (tsf)	MOISTURE (%)	SOIL CLASSIFICATION (pcf)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter Upon Completion (ft)	After Hrs.
------------	-----------------------	---------------------------------	--------------	---------------------------	--------------------------	-----------------------	------------------------	--------------------------------------	------------

9.0" CONCRETE									
	598.2						578.5		
CLAY LOAM-brown & gray-very stiff (Fill)		26							
		14	3.70	14					
		8	B						
		3							
		4	2.50	17					
		5	B						
		-5							
		3							
		4	2.50	23					
		8	B						
BRICK & STONE-medium dense (Fill)	591.0								
		4							
		8		14					
		9							
		-10							
CINDERS-black-very loose (Fill)	588.5								
		0							
		0		81					
		2							
CLAY LOAM-brown & gray-stiff to very stiff	586.0								
		4							
		6	3.50	18					
		9	P						
		-15							
		2							
		5	3.50	20					
		6	B						
becoming gray @ -18.0'									
		1							
		2	1.40	19					
		4	B						
		-20							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

Z:\PROJECTS\2019\19079-B.EFK.IDOT.192-007-WO#15.KENNEDY.PROJECTS.62K73&62K74\19079-B.BORING.LOGS\19079-B.LCS.GPJ.11/22/21



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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BORING LOGS
 S.N. 1S016I094L048.1 (SIGN 4)
 SHEET OSG6-21 OF OSG6-21 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	427
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:

Field Units
 $f^c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer. The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2) of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

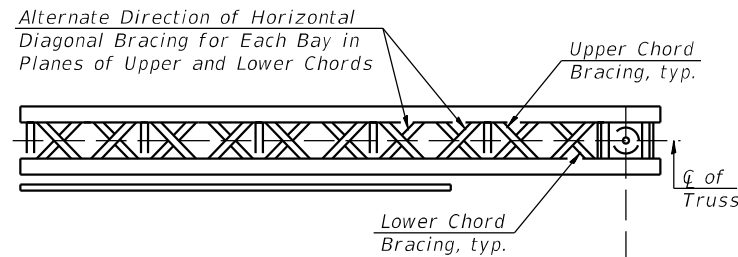
GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

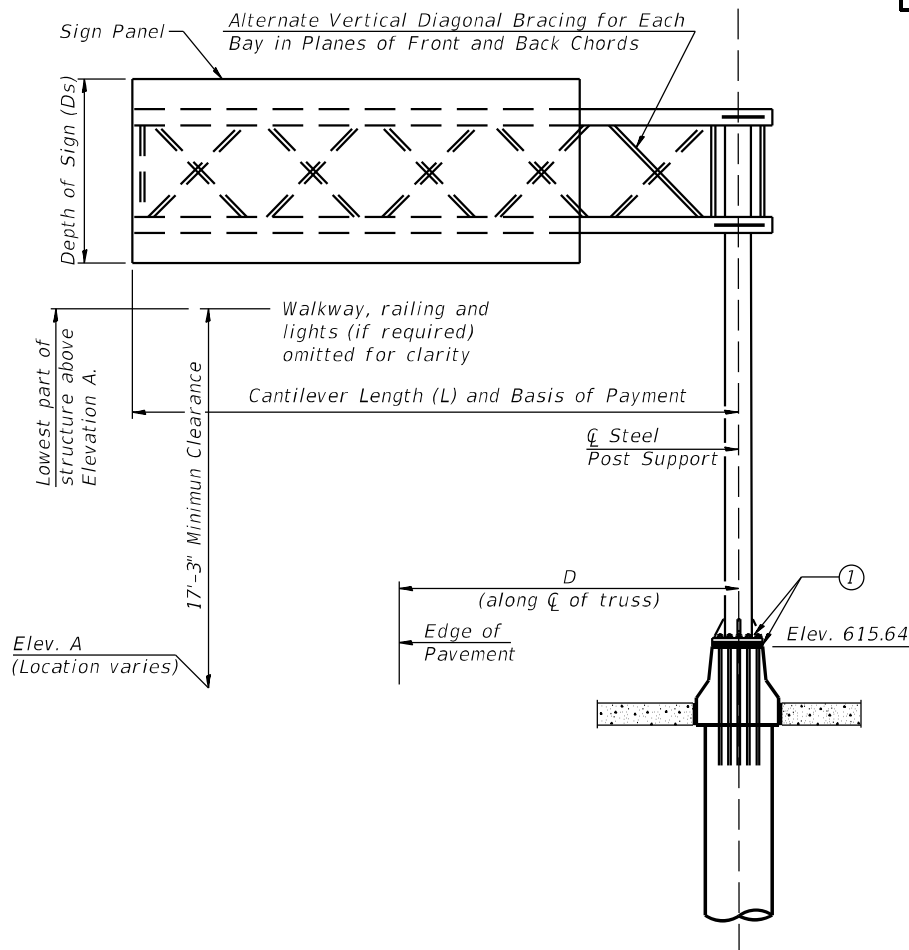
FOUNDATIONS: The contract unit price for Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.



TYPICAL PLAN

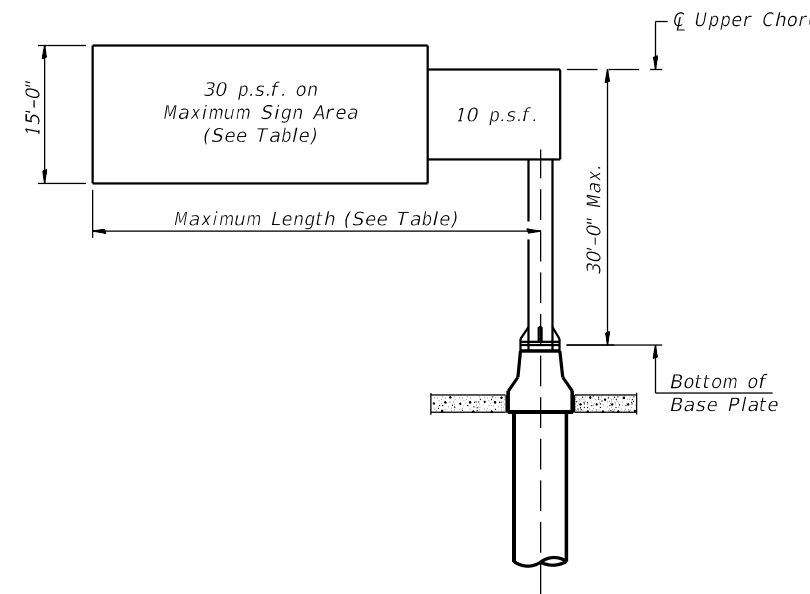
Sign No.	Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	Ds	Total Sign Area Sq Ft
2	1C0161094L043.7	659+43.87 (Rev)	I-C-A	23	612.58	9'-6"	8'-0"	88

Truss Type	Maximum Sign Area	Maximum Length
I-C-A	170 Sq. Ft.	25 Ft.
II-C-A	340 Sq. Ft.	30 Ft.
III-C-A	400 Sq. Ft.	40 Ft.



TYPICAL ELEVATION

Looking in Direction of Traffic



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards. Installations not within dimensional limits shown require special analysis for all components.

Note:

Trusses shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The contractor is responsible for maintaining the configuration and protection of the trusses.

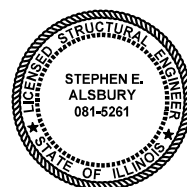
① After adjustments to level truss and insure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE I-C-A (24" x 4'-6")	Foot	23
REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	Span	1
CONCRETE BARRIER REMOVAL	Foot	41
CONCRETE BARRIER TRANSITION	Foot	37
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	6.8

Sign support structures may be subject to damaging vibrations and oscillations when sign panels are not in place during erection or maintenance of the structure. To avoid these vibrations and oscillations, consideration should be given to attaching temporary blank sign panels to the structure.



Signed: *[Signature]*
 Stephen E. Alsbury, S.E. IL Lic. No. 081-5261
 Expires: 11/30/2024

Date: 10/18/2022 For Sheets OSG7-01 - OSG7-11

OSC-A-1

2-17-2017



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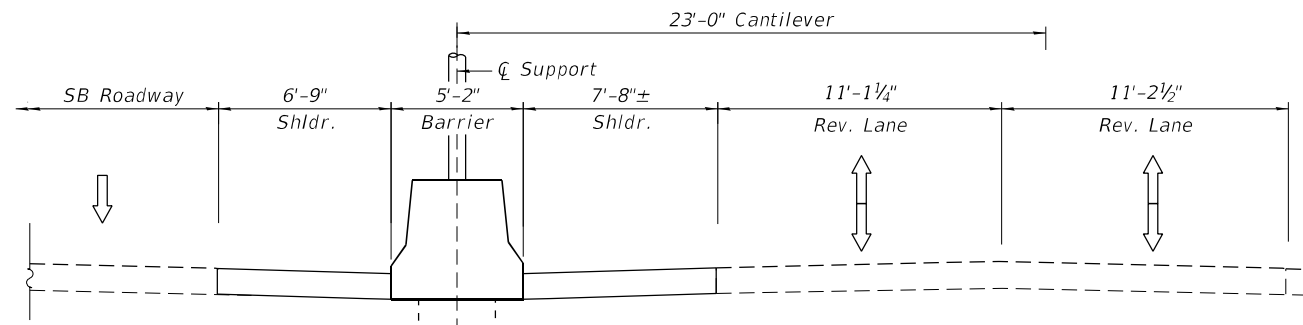
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

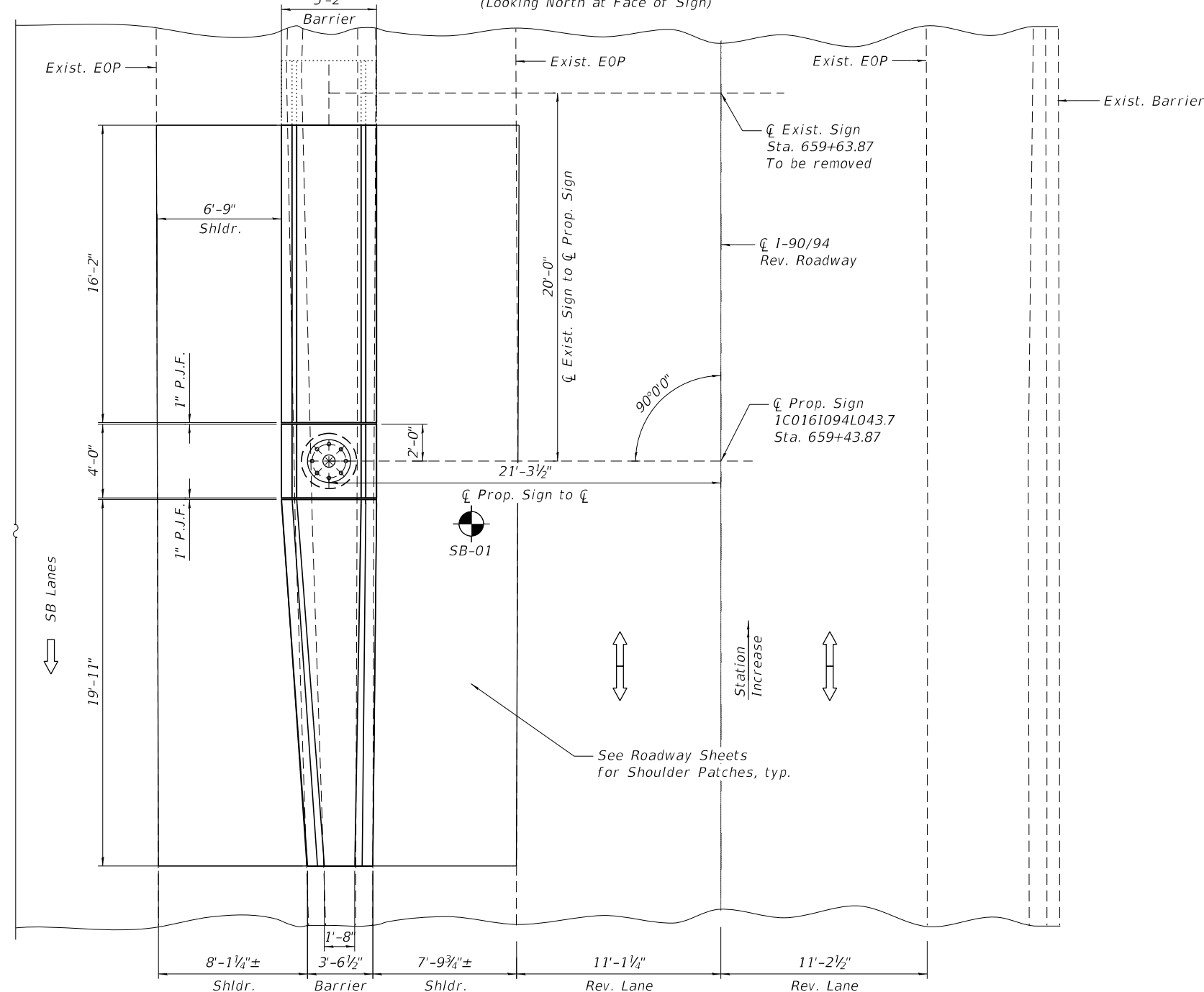
CANTILEVER SIGN STRUCTURES - GENERAL PLAN & ELEVATION
 ALUMINUM TRUSS & STEEL POST

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	428
CONTRACT NO. 62K74				
SHEET OSG7-01 OF OSG7-11 SHEETS		ILLINOIS FED. AID PROJECT		

Benchmark: TBM "E" - Square cut on top of light pole foundation along I-90 NW of exit 44A sign
 '1/4 Mile to Exit' along eastbound entrance ramp Montrose ave. Elevation 622.951



ELEVATION
 (Looking North at Face of Sign)

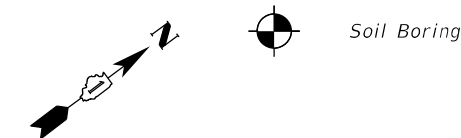


PLAN

NOTES:

1. Stations that are shown are with respect to the Reversible 190/94 baseline.
2. The contractor shall establish a local version of the REV Baseline based on the dimension shown on this plan. The stationing shall be with respect to the center line of existing sign truss as shown. The offset of the baseline shall be measured from existing features as shown.

LEGEND:



FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN2-GPE.dgn



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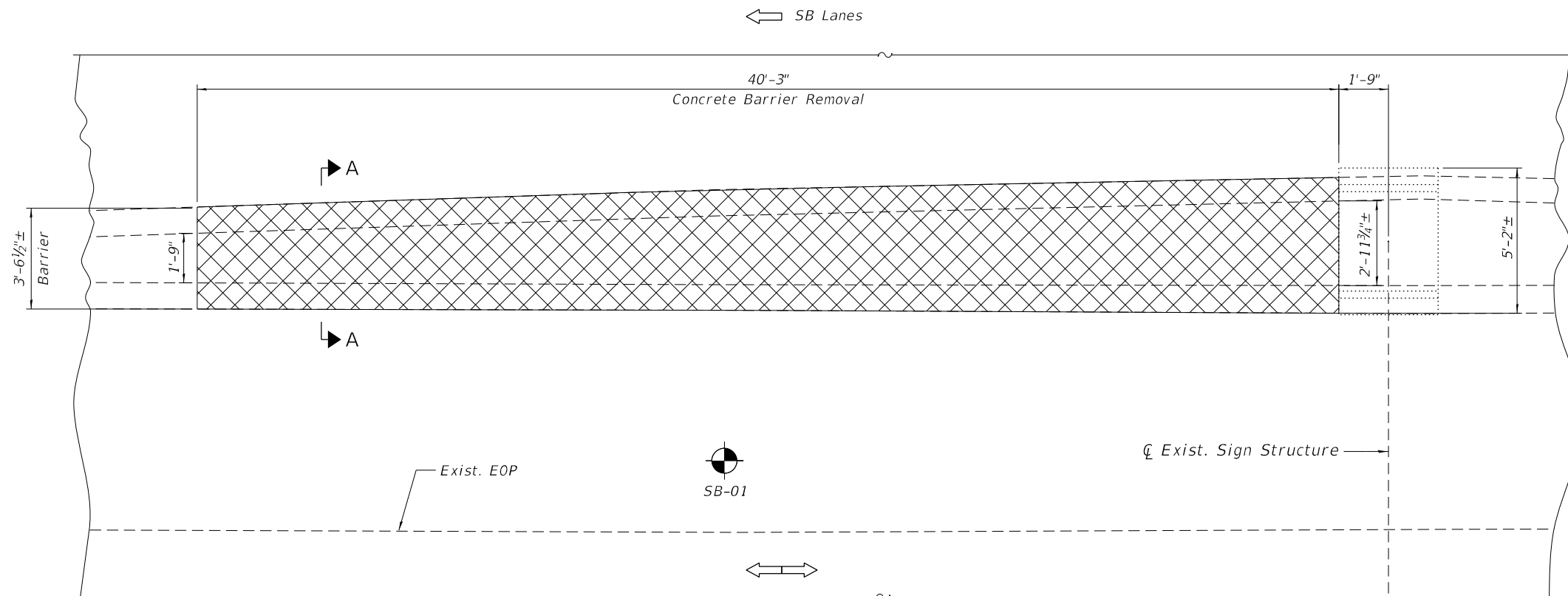
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PLOT DATE =	CHECKED - 7/13/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
 S.N. 1C0161094L043.7 (SIGN 2)**

SHEET OSG7-02 OF OSG7-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	429
CONTRACT NO. 62K74				
		ILLINOIS	FED. AID PROJECT	

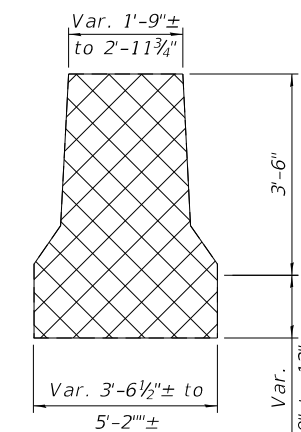


PARTIAL PLAN



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Barrier Removal	Foot	41



SECTION A-A

LEGEND



FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN2-REMOVAL.dgn



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PLOT DATE =	CHECKED - 7/13/2022	REVISED -

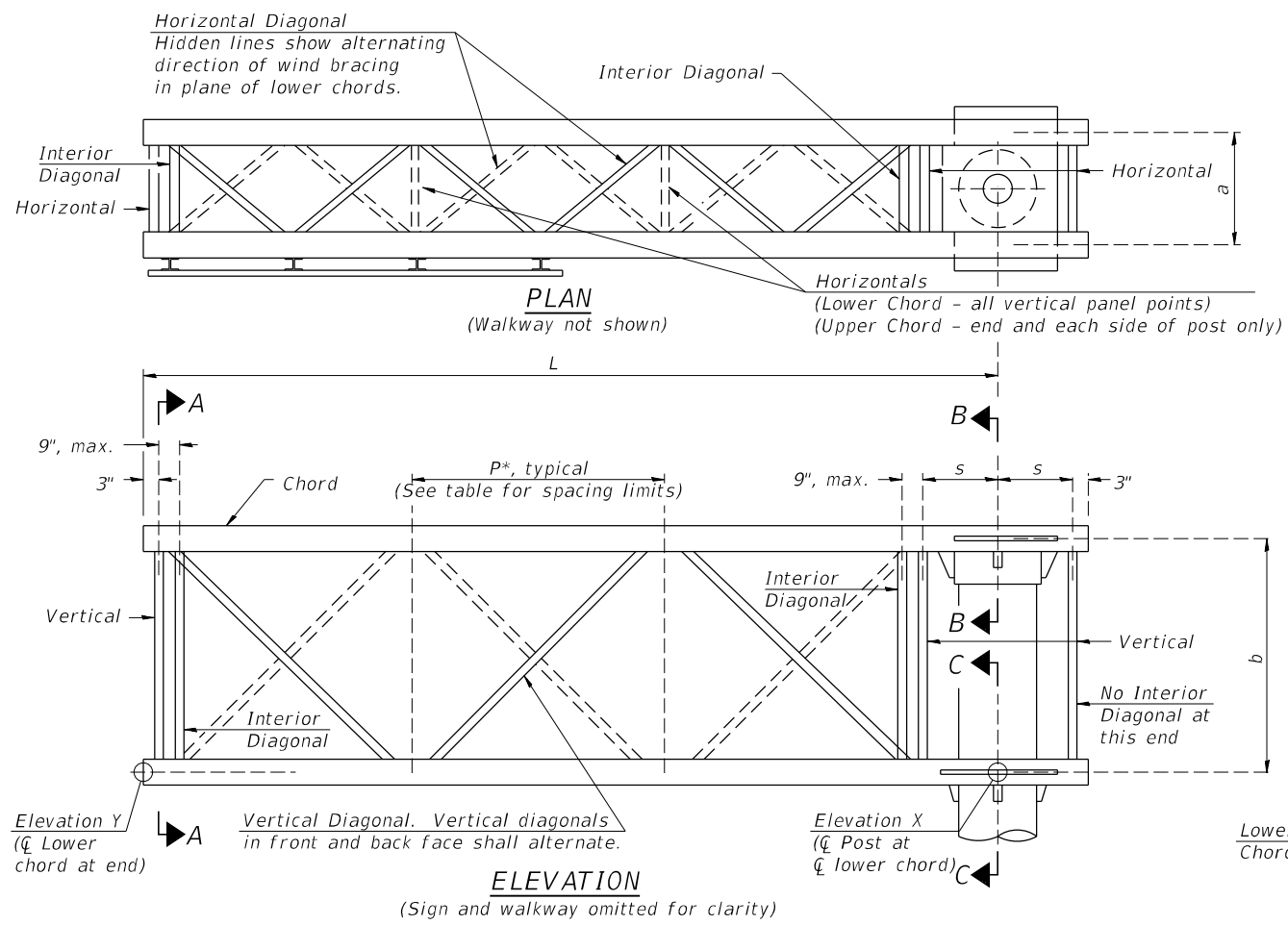
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REMOVAL DETAILS FOR EXISTING MEDIAN BARRIER
S.N. 1C016I094L043.7 (SIGN 2)**

SHEET OSG6-03 OF OSG6-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	430
CONTRACT NO. 62K74				

ILLINOIS FED. AID PROJECT



TYPICAL TRUSS UNIT
(Sign and walkway omitted for clarity)

Note: For Section B-B and Section C-C, see Base Sheet OSC-A-3.

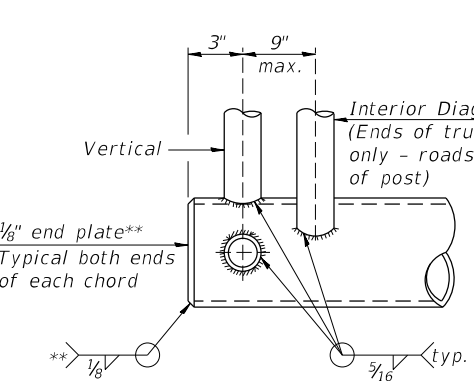
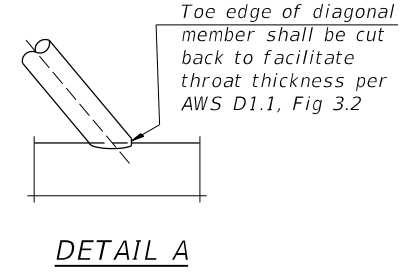
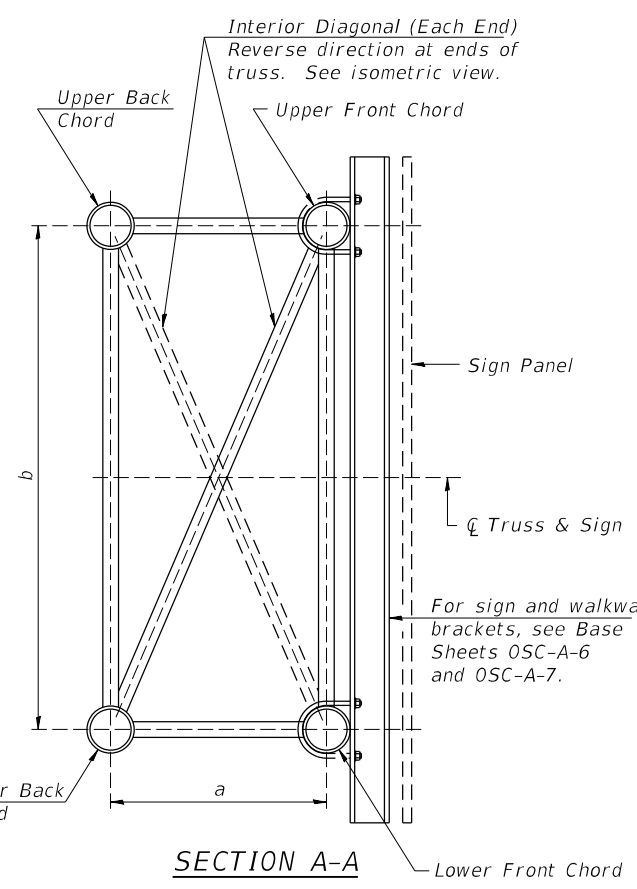
There are twice as many horizontal diagonals as there are vertical diagonals.

TRUSS UNIT TABLE

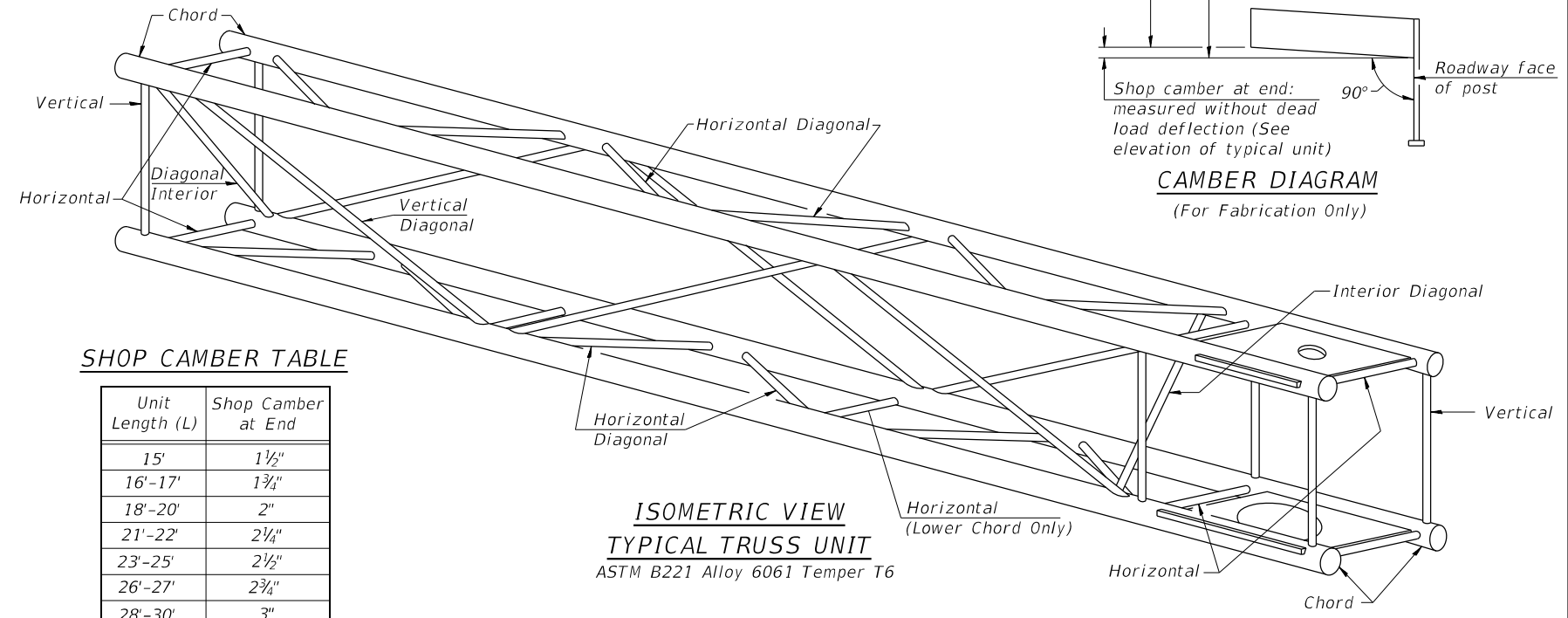
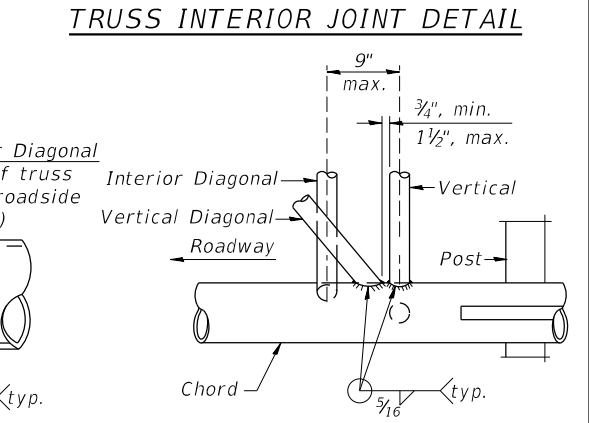
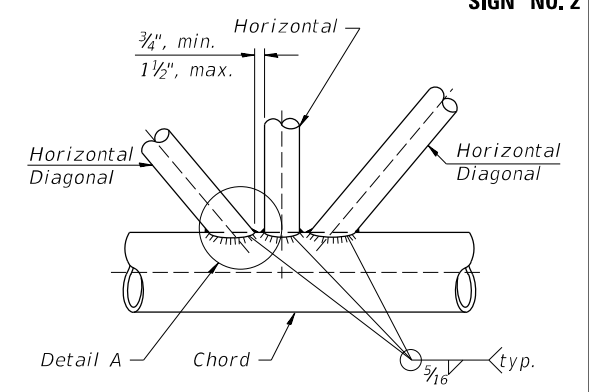
Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals	
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 1/2"	5/16"	3 1/4"	5/16"
III-C-A (35' Max.)	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3 1/2"	3/8"
III-C-A (>35' to 40')	36"	84"	21"	48" min. to 66" max.	8"	3/8"	3 1/2"	3/8"

$$*p = \frac{L-3}{\# \text{ Panels}}$$

Sign No.	Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
2	1C0161094L043.7	659+43.87 (Rev)	I-C-A	23	6	3'-6 1/8"

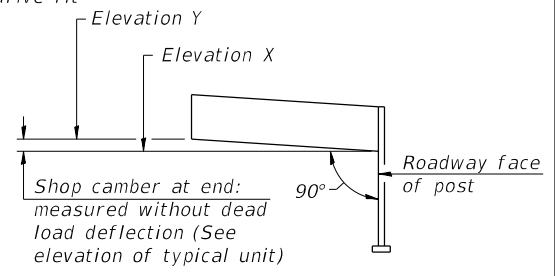


** Contractor may alternatively use standard aluminum drive-fit cap to close ends. 1/2" Ø Drain hole in end plate / drive-fit cap.



SHOP CAMBER TABLE

Unit Length (L)	Shop Camber at End
15'	1 1/2"
16'-17'	1 3/4"
18'-20'	2"
21'-22'	2 1/4"
23'-25'	2 1/2"
26'-27'	2 3/4"
28'-30'	3"
31'-32'	3 1/4"
33'-35'	3 1/2"
36'-37'	4"
38'-40'	4 1/2"



OSC-A-2 2-17-2017



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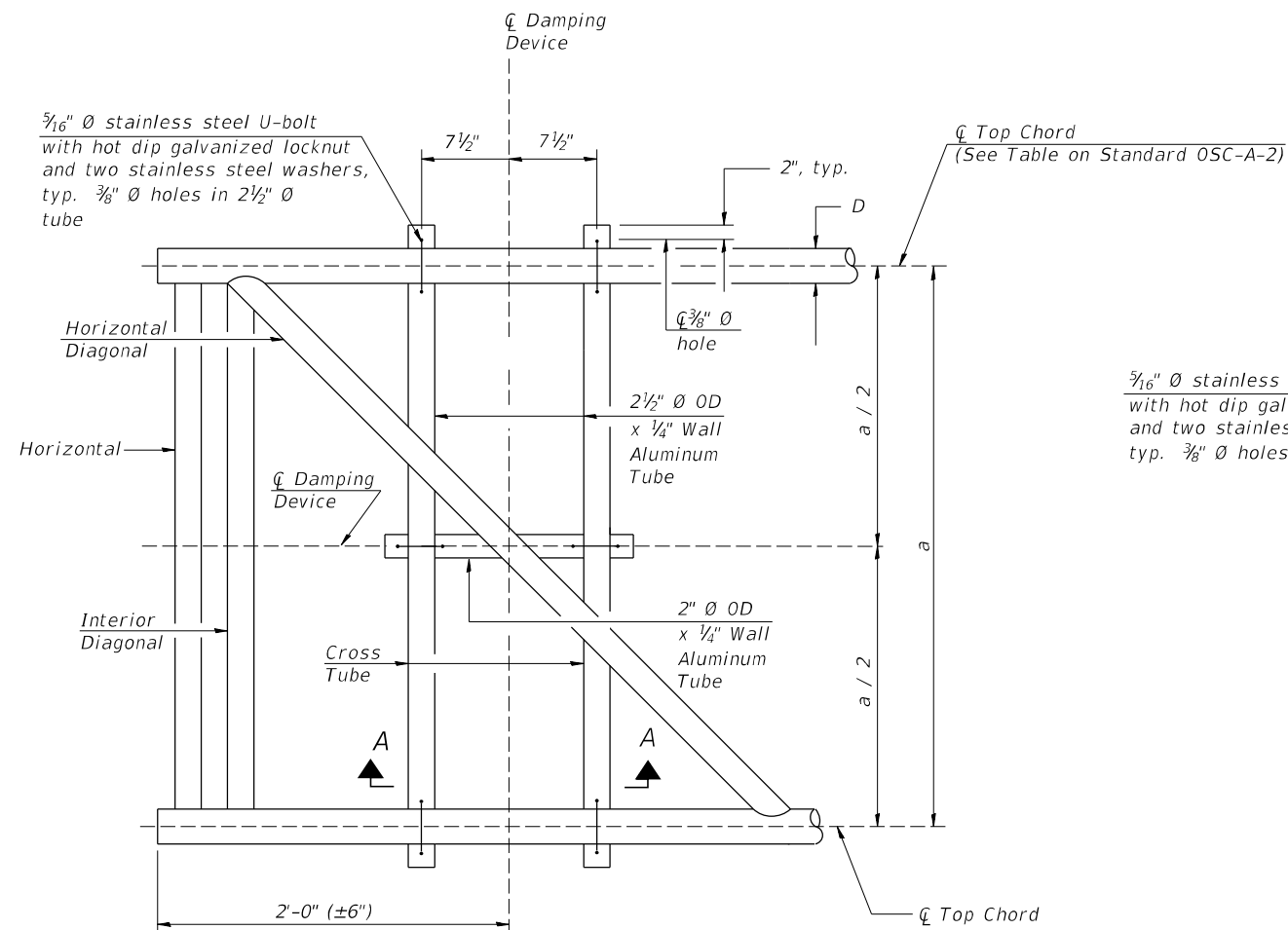
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PLOT SCALE =	CHECKED - FH	REVISED -
PLOT DATE =	DRAWN - MBJ	REVISED -
	CHECKED - 7/13/2022	REVISED -

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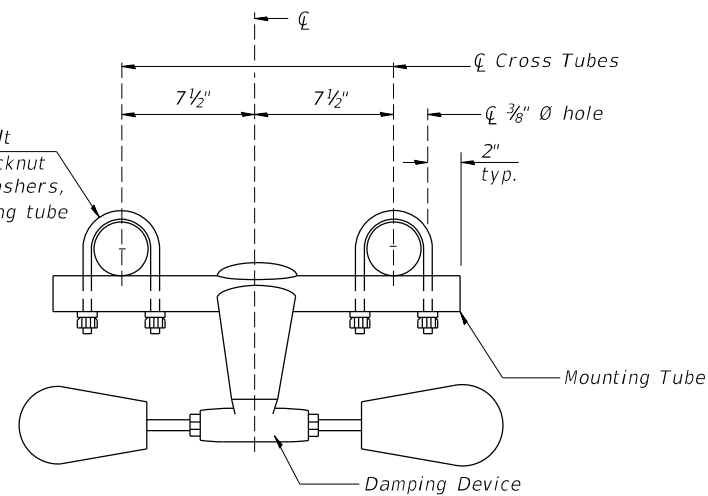
CANTILEVER SIGN STRUCTURES - TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	431
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

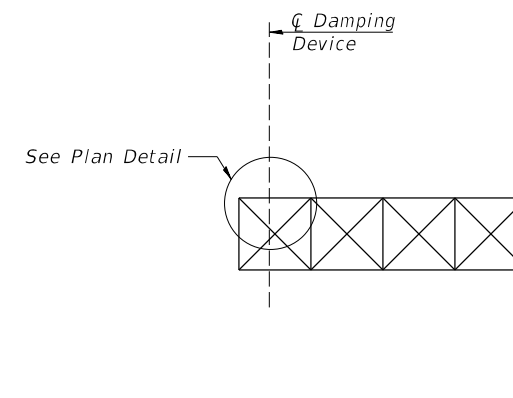
SHEET OSG7-04 OF OSG7-11 SHEETS



PLAN DETAIL



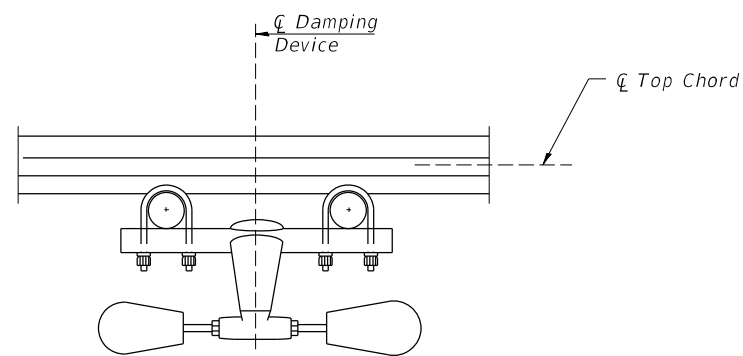
TRUSS DAMPING DEVICE CONNECTION DETAIL



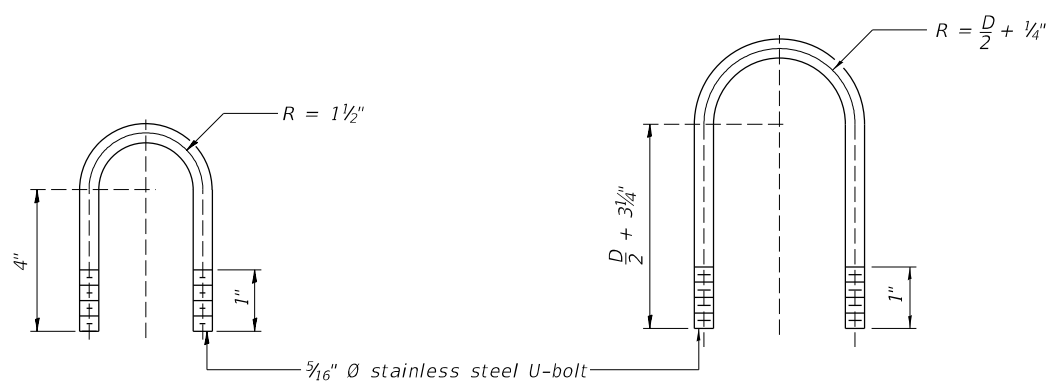
ELEVATION
Aluminum Cantilever Sign Structure

GENERAL NOTES

- Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum-29" minimum between ends of weights)
- Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6



SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)

TOP CHORD TO CROSS TUBE U-BOLT DETAIL
(Typical)

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN2.dgn

OSC-A-D

2-17-2017



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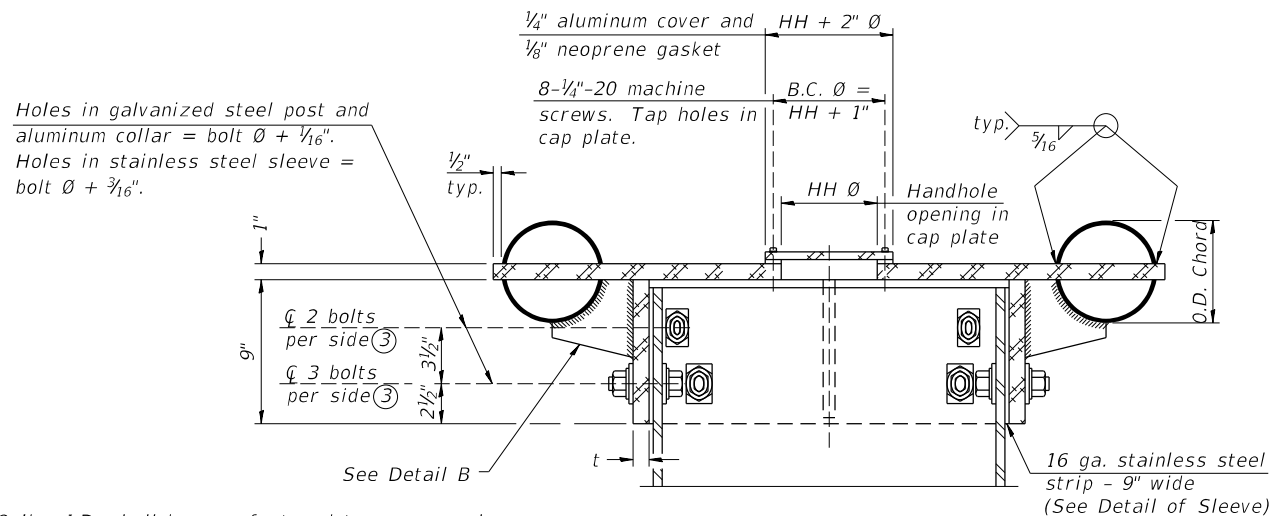
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	CHECKED - FH	REVISED -
PLOT SCALE =	DRAWN - MBJ	REVISED -
PLOT DATE =	CHECKED - 7/13/2022	REVISED -

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DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURE
DAMPING DEVICE

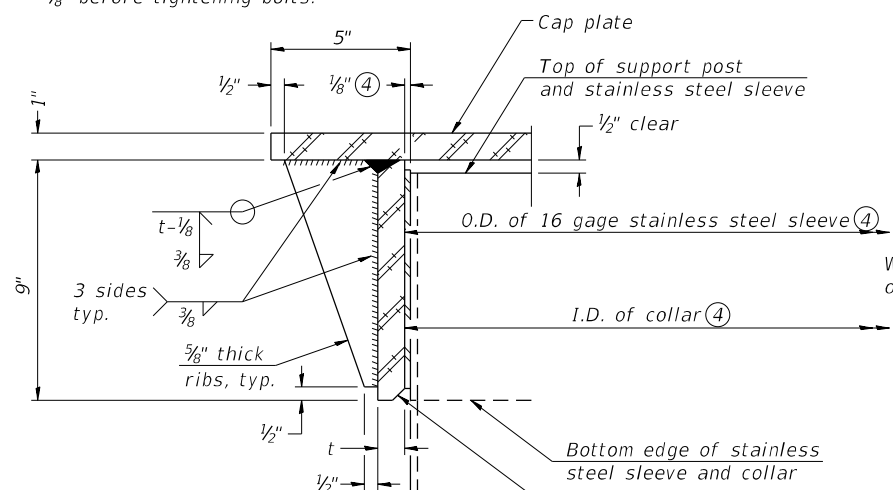
SHEET OSG7-05 OF OSG7-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	432
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		

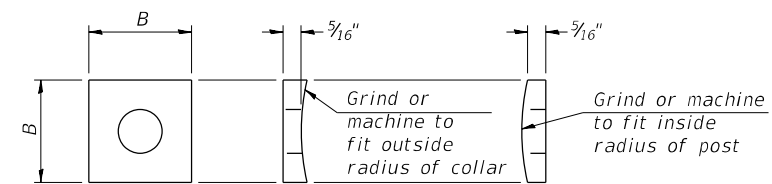


④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8" (±1/16"). Maximum gap between post and collar at any location equals 1/8" before tightening bolts.

SECTION B-B
Bolts, washers (including contoured washers), and locknuts shall be stainless steel.



DETAIL A
(Two locations)
3/16" - 45° chamfer on inside of collar to facilitate field assembly

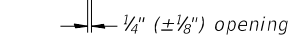


CONTOURED WASHERS

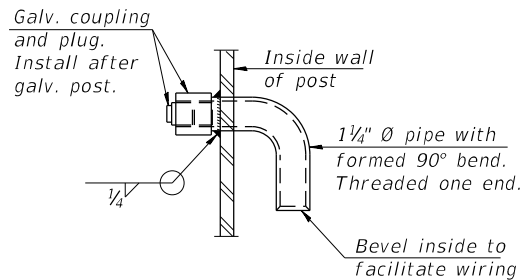
Bolt Size	Contoured Washers	
	Hole Dia.	B
7/8"	1"	2 1/2"
1"	1 1/8"	3"
1 1/4"	1 3/8"	3 1/4"

DETAIL OF STAINLESS STEEL SLEEVE

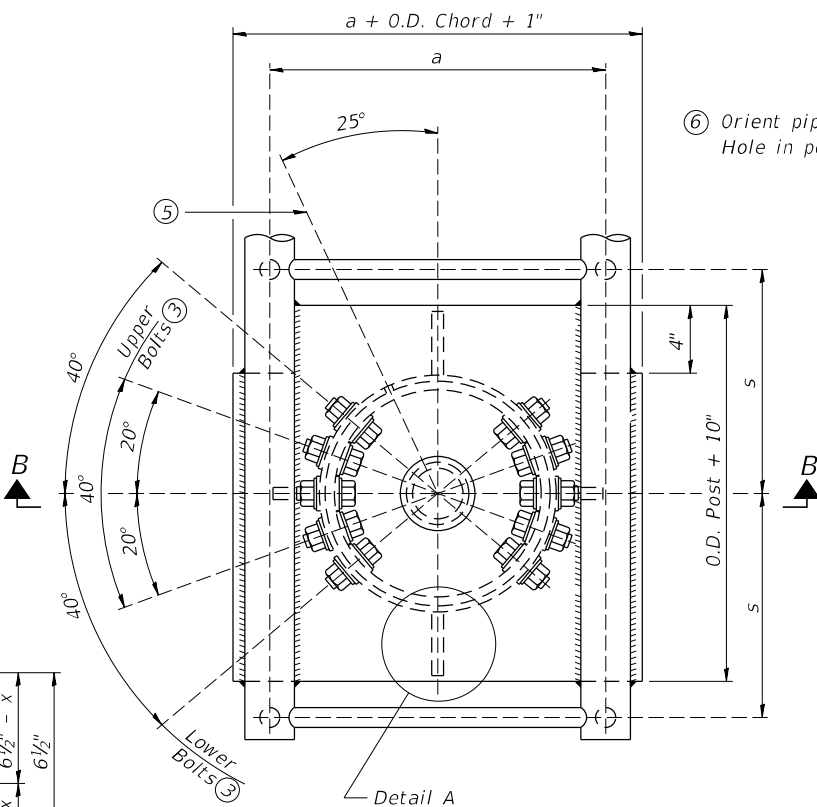
Weld to post after galvanizing. (Prepare post surface to insure tight, uniform fit and allow welding.) Welds to be 1 1/2" long at 6" cts. along top edge and at 1/4" opening.



DETAIL D

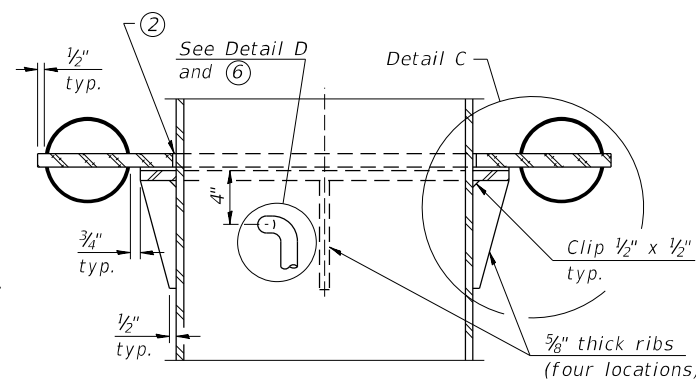


DETAIL B
Two locations
(For details not shown, see Detail C)

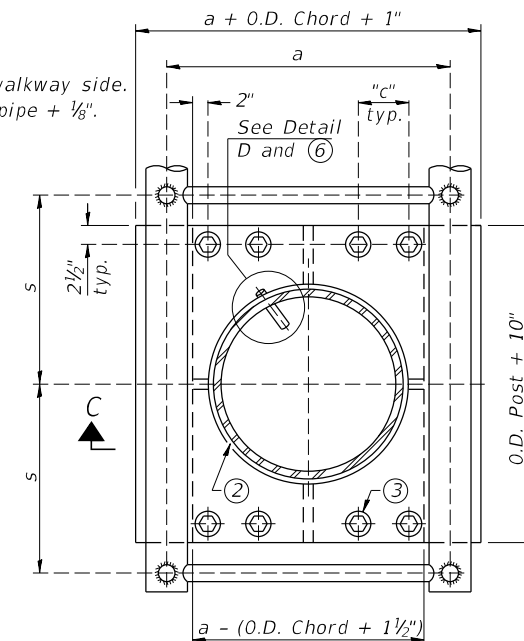


PLAN VIEW - TOP OF COLUMN

⑤ Optional full penetration weld in collar. (Two locations maximum....(180° apart)....X-ray or UT 100%)

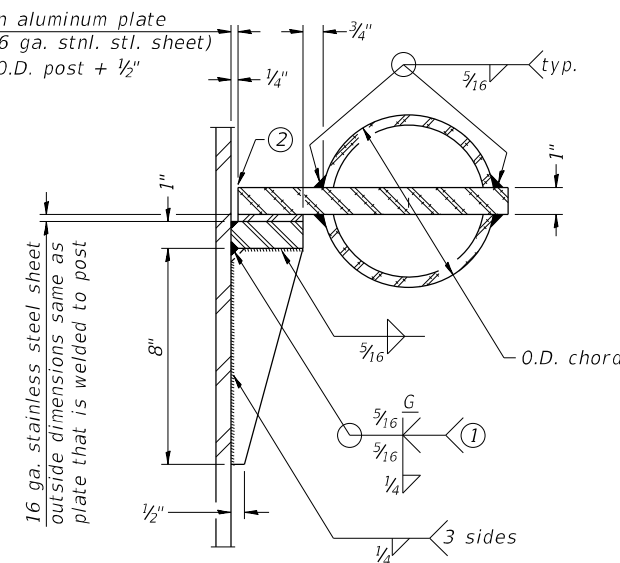


SECTION C-C



SECTION THRU POST ABOVE LOWER CHORDS

Hole in aluminum plate (and 16 ga. stnl. stl. sheet) to be O.D. post + 1/2"



DETAIL C

- ① Grind top if required to fully seat aluminum plate and stainless steel sheet.
- ② After tightening lower connection bolts, fill gap with non-hardening, silicone caulk suitable for exterior exposure and acceptable to the Engineer. Cost is included in Overhead Sign Structure Cantilever.
- ③ Upper and lower connection bolts in collar and bolts at lower chord connection shall be high strength with matching locknuts. Connection bolts shall have 2 stainless steel flat washers each.

Truss Type	Post Size	Upper & Lower Connection Bolt Diameter ③	Lower Juncture Bolt Spacing Dimension "c" ③	Opening in Cap Plate "HH"	Collar Thickness (t)	Side Ribs	
						x	y
I-C-A	16" Ø (83#/'')	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-C-A	24" Ø (125#/'')	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-C-A (35' max.)	24" Ø (125#/'')	1 1/4"	3 1/2"	12"	7/8"	2"	1"
III-C-A (>35' to 40')	24" Ø (171#/'')	1 1/4"	3 1/2"	12"	7/8"	2"	1"

OSC-A-3

2-17-2017



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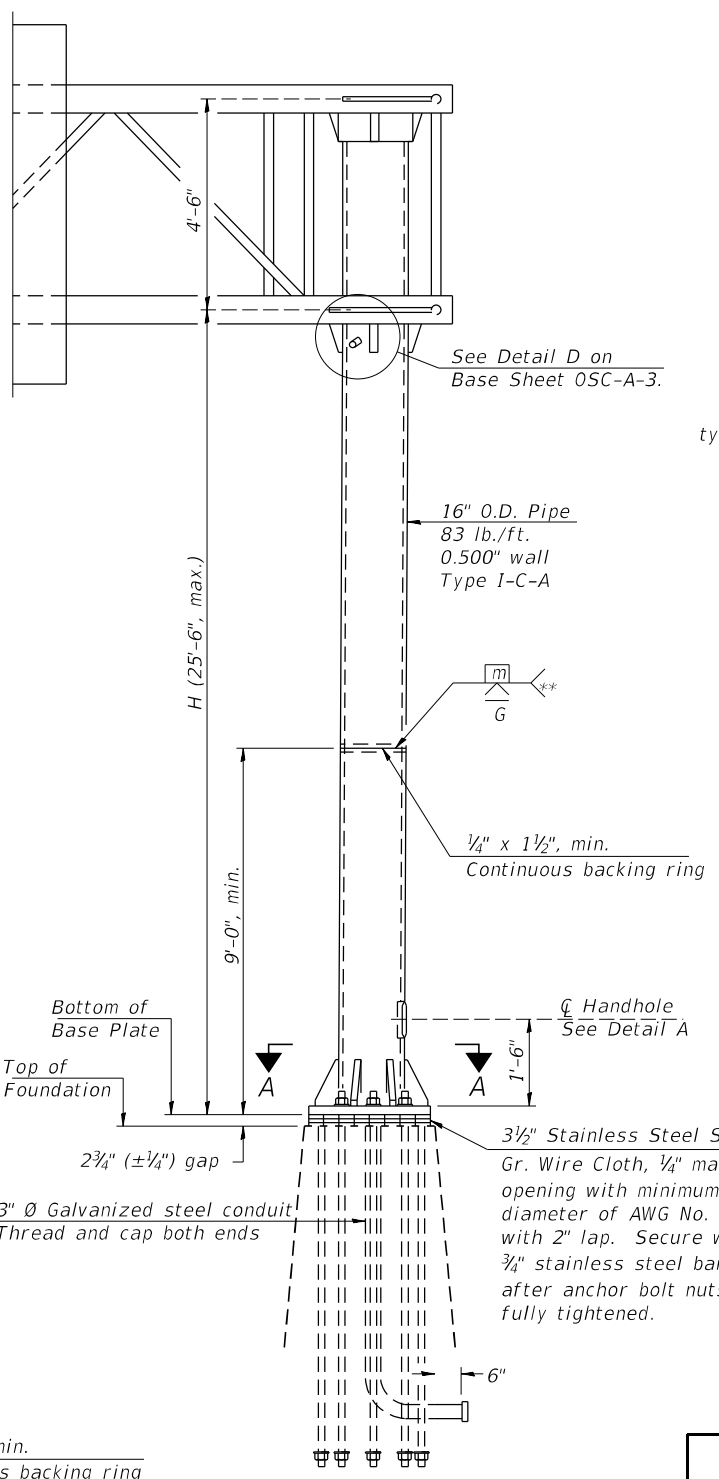
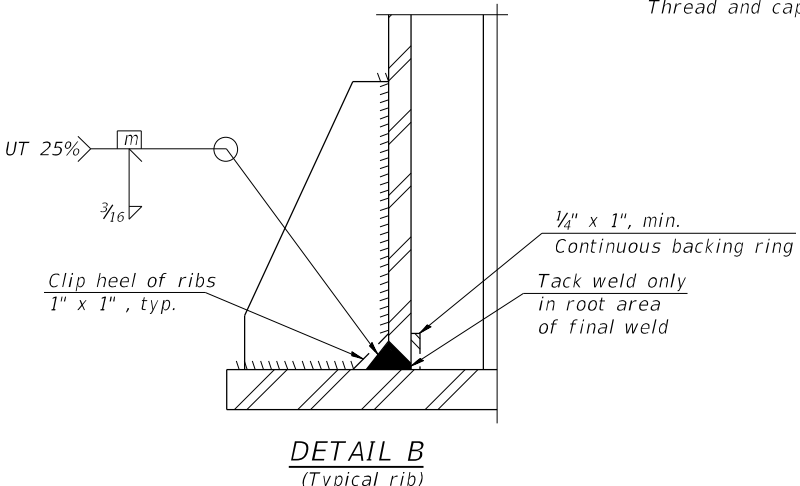
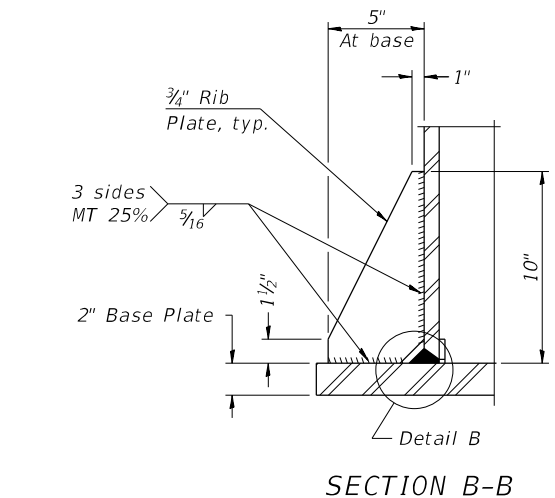
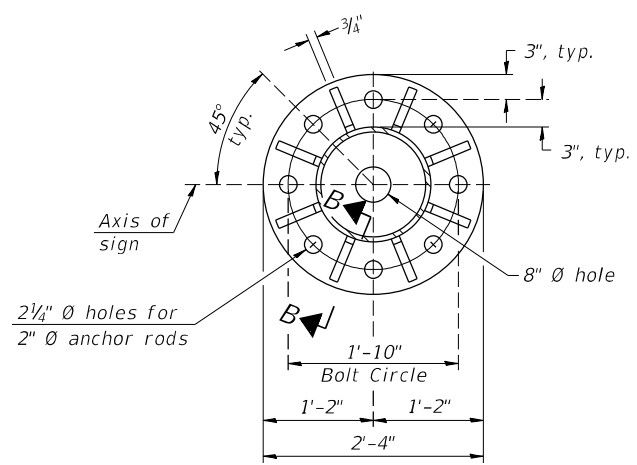
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PLOT SCALE =	CHECKED - FH	REVISED -
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STATE OF ILLINOIS
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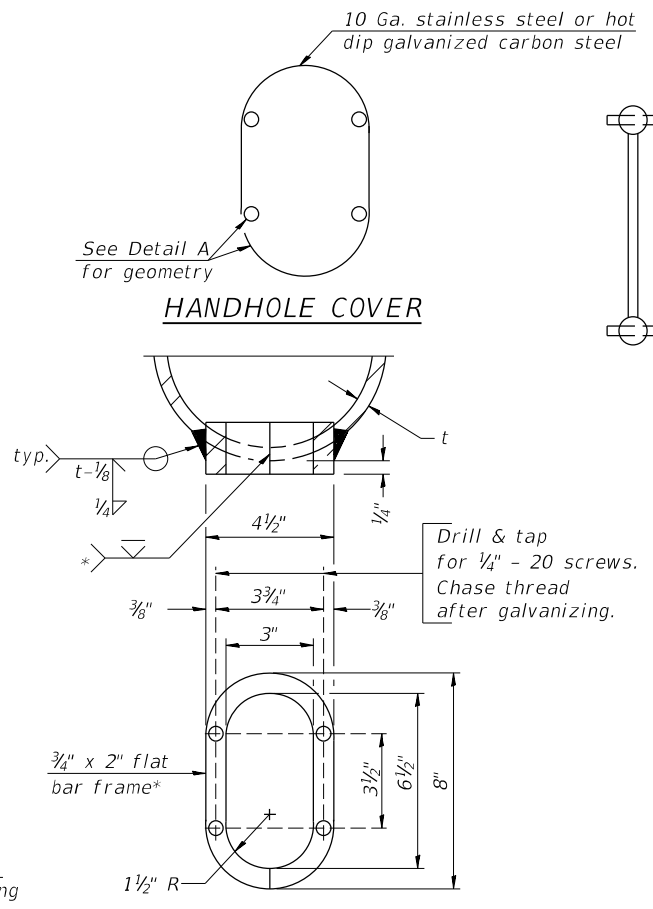
CANTILEVER SIGN STRUCTURES - JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	433
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

SHEET OSG7-06 OF OSG7-11 SHEETS



FRONT ELEVATION
For Foundation Details see Sheet OSG7-10.



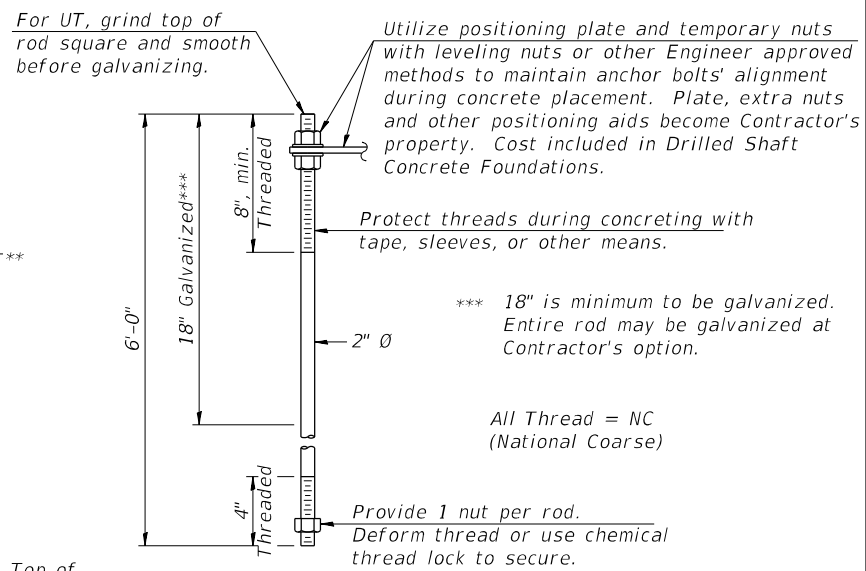
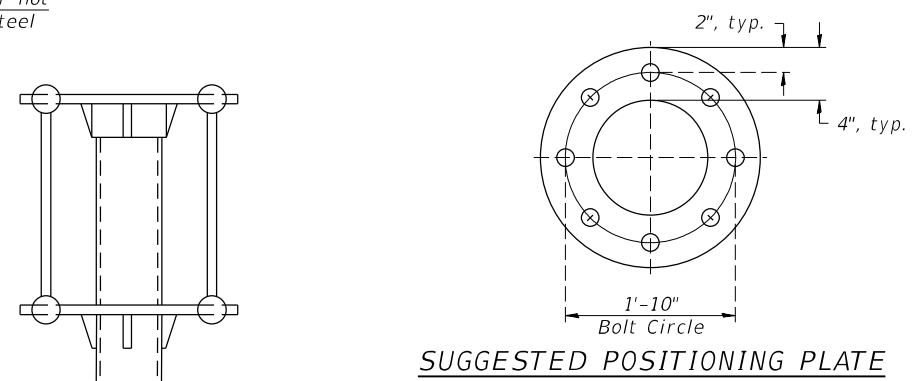
Provide 8" x 4 1/2" cover. Outside corners = 2 1/4" radius. Provide 4-5/16" Ø holes in cover for 1/4" - 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

DETAIL A

- * Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500µ in or less.
- ** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H
1C0161094L043.7	659+43.87 (Rev)	19'-9"

Note: "H" based on 15'-0" or actual sign height, whichever is greater.



ANCHOR ROD DETAIL

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize the upper 18" (minimum***) and associated AASHTO M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide a nut at bottom, a hexagon locknut and washer above base plate and a leveling nut and washer below base plate. Nuts shall each be tightened with 200 lb.-ft. minimum torque against base plate. Before or after threading, but before galvanizing, each anchor rod shall be ultrasonically tested (UT) by a Level II or III inspector, qualified in accord with ANSI guidelines, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

SIDE ELEVATION

OSC-A-4 2-17-2017



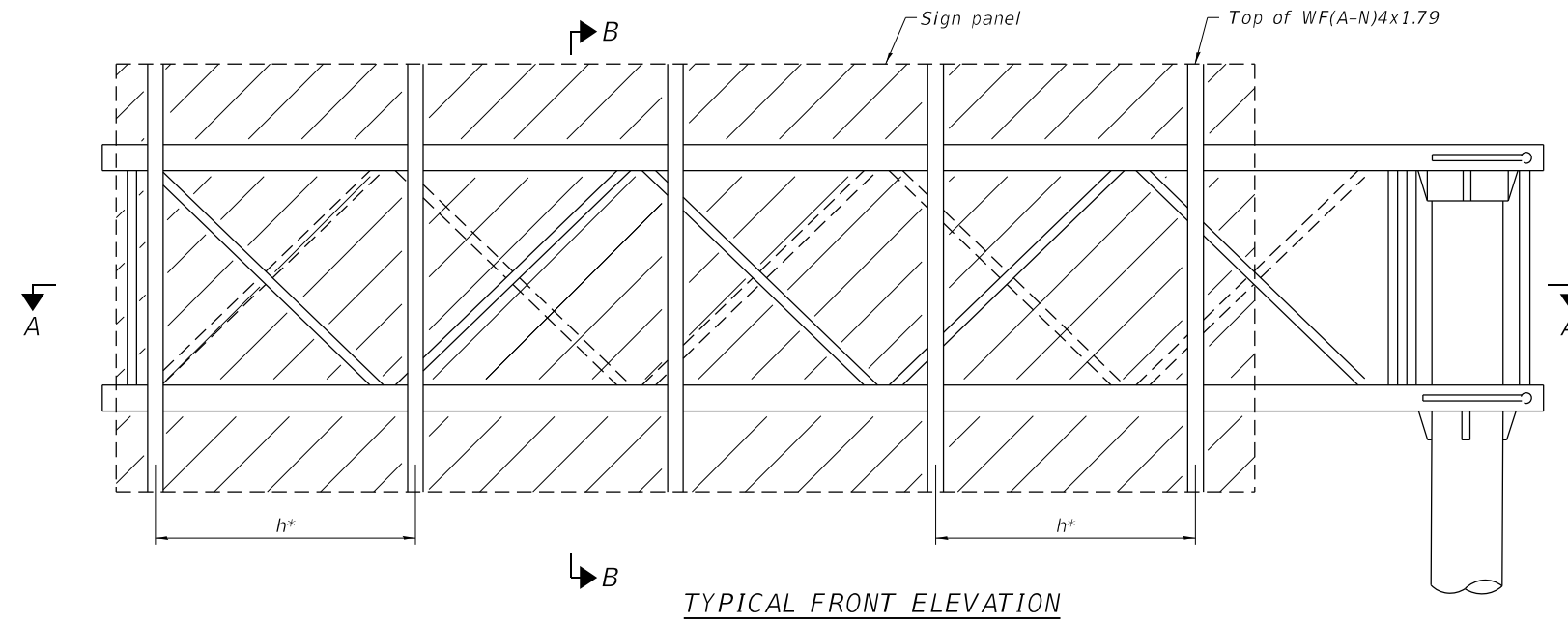
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PLOT SCALE =	DRAWN - MBJ	REVISED -
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STATE OF ILLINOIS
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CANTILEVER SIGN STRUCTURES - TYPE I-C-A TRUSS
SUPPORT POST - ALUMINUM TRUSS & STEEL POST

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	434
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

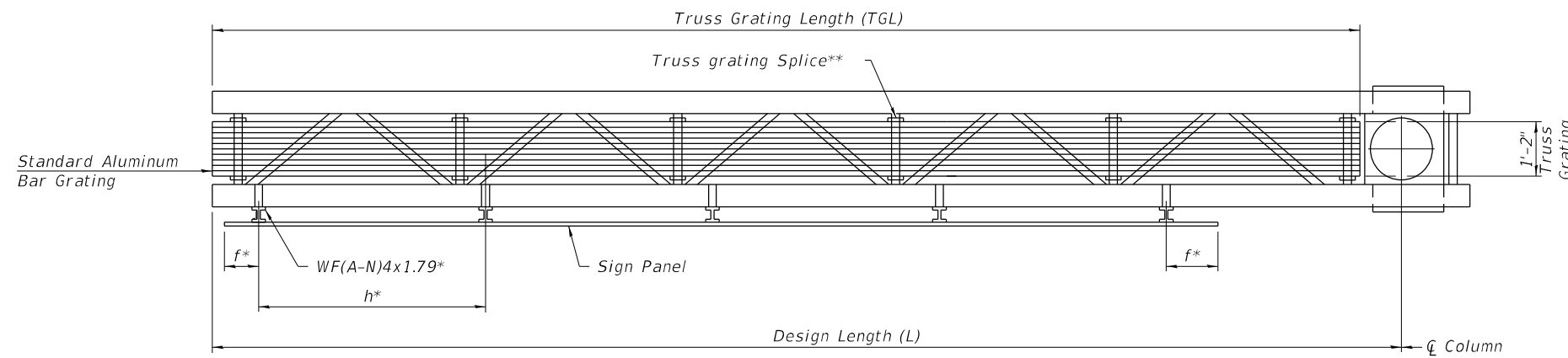


TYPICAL FRONT ELEVATION

BRACKET TABLE

WF(A-N)4x1.79 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
8'-0"	8'-0"	2
14'-0"	14'-0"	3
20'-0"	20'-0"	4
26'-0"	26'-0"	5
32'-0"	32'-0"	6

Sign No.	Structure Number	Station	TGL
2	1C0161094L043.7	659+43.87 (Rev)	21'-10"



SECTION A-A

$$TGL = L - \left(\frac{\text{Post O.D.}}{2} + 6'' \right)$$

- * Space sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
 $f = 12''$ maximum, $4''$ minimum (End of sign to ϕ of nearest bracket)
 $h = 6'-0''$ maximum (ϕ to ϕ sign support brackets, WF(A-N)4x1.79)
- ** Use and location of grating splices are optional, based on lengths needed and material availability.

Notes:
 For details of sign placement, sign brackets, truss gratings, grating splices, and Section B-B, see Base Sheet OSC-A-7-NW.
 Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.
 Truss grating dimensions are nominal and may vary (width $\frac{1}{2}'' \pm$, depth $\frac{1}{2}'' \pm$) based on available standard widths.

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OSC-A-6-NW 4-1-2020



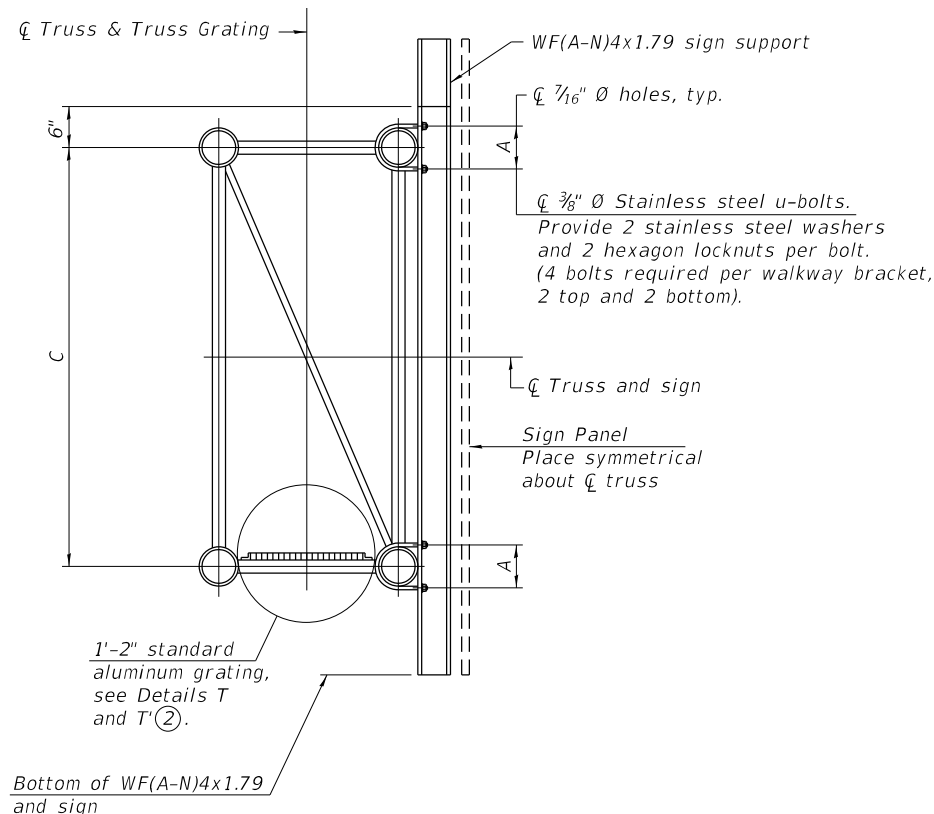
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CHECKED - FH	REVISED -	
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PLOT DATE =	CHECKED - 7/13/2022	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

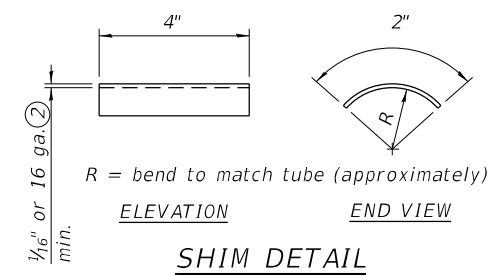
CANTILEVER SIGN STRUCTURES – ALUMINUM WALKWAY
 DETAILS – ALUMINUM TRUSS & STEEL POST

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	435
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		

SHEET OSG7-08 OF OSG7-11 SHEETS



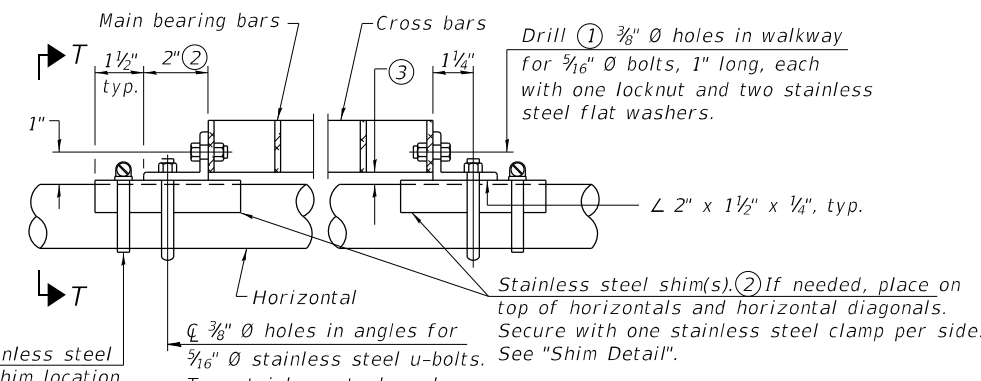
SECTION B-B



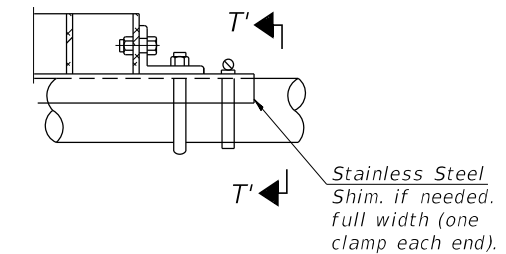
SHIM DETAIL

- ① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- ② Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- ③ Tube to grating gap may vary from 0 to 1/2 inch, max. to align walkway, allow for camber, etc.

Sign shall be even with the top of the bracket, but it may extend no more than 6 inch above the top of the bracket for field adjustments.



DETAIL T
(Continuous Truss grating)



DETAIL T'

(Truss grating splice)
Details not shown same as Detail T.
Alternate materials may be used subject to the Engineer's review and approval.

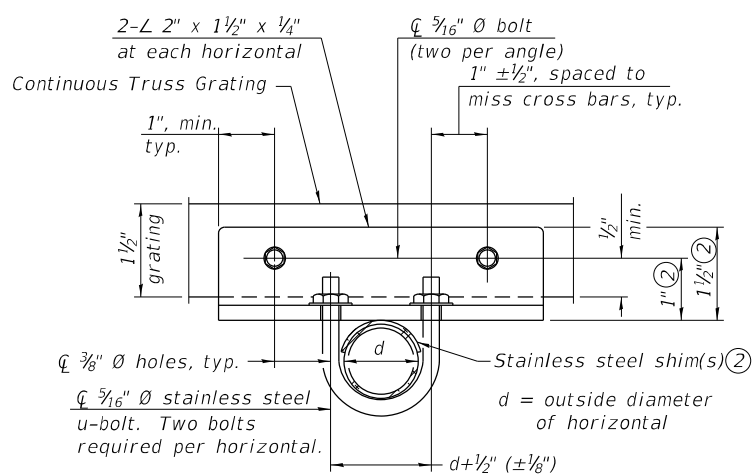
SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars (MBB) shall be 3/16 inch x 1 1/2 inch on 1 3/16 inch centers and conform to ASTM B211 Alloy 6061-T6.
Cross bars (CB) shall be 3/16 inch x 1 1/2 inch on 4 inch centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

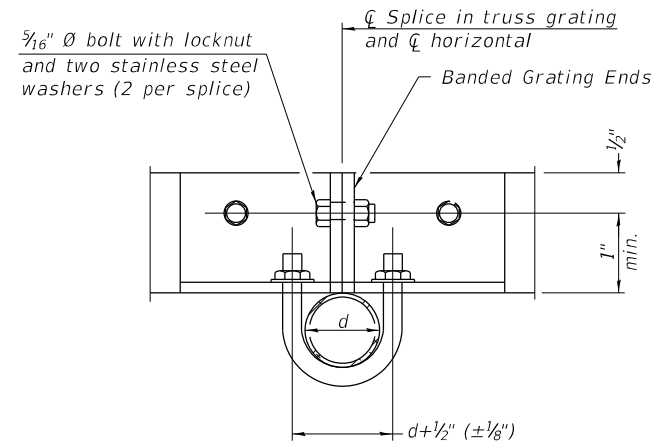
OR

Aluminum Grating with modified "t" sections for main bearing bars shall meet the following requirements:
Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2 inch, spaced on 1 3/16 inch centers.
Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4 inch centers.

Sign No.	Structure Number	Station	A	C
2	1C0161094L043.7	659+43.87 (Rev)	5 1/2"	4'-6"



SECTION T-T



SECTION T'-T'

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN2.dgn

OSC-A-7-NW 4-1-2020



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PLOT SCALE =	DRAWN - MBJ	REVISED -
PLOT DATE =	CHECKED - 7/13/2022	REVISED -

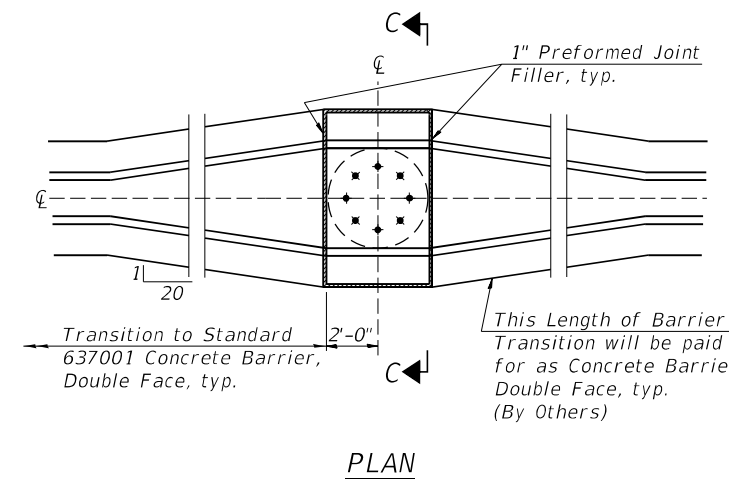
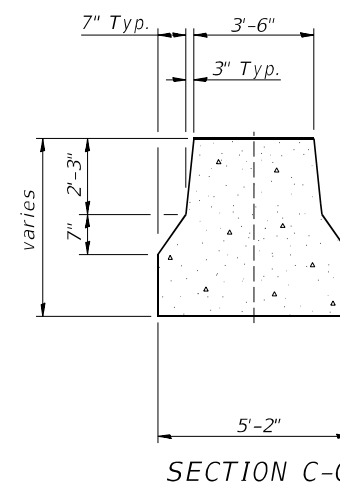
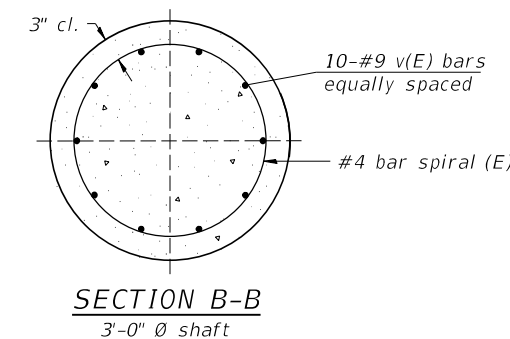
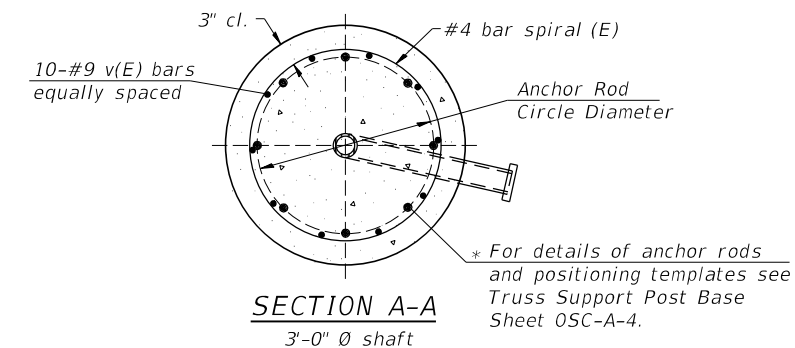
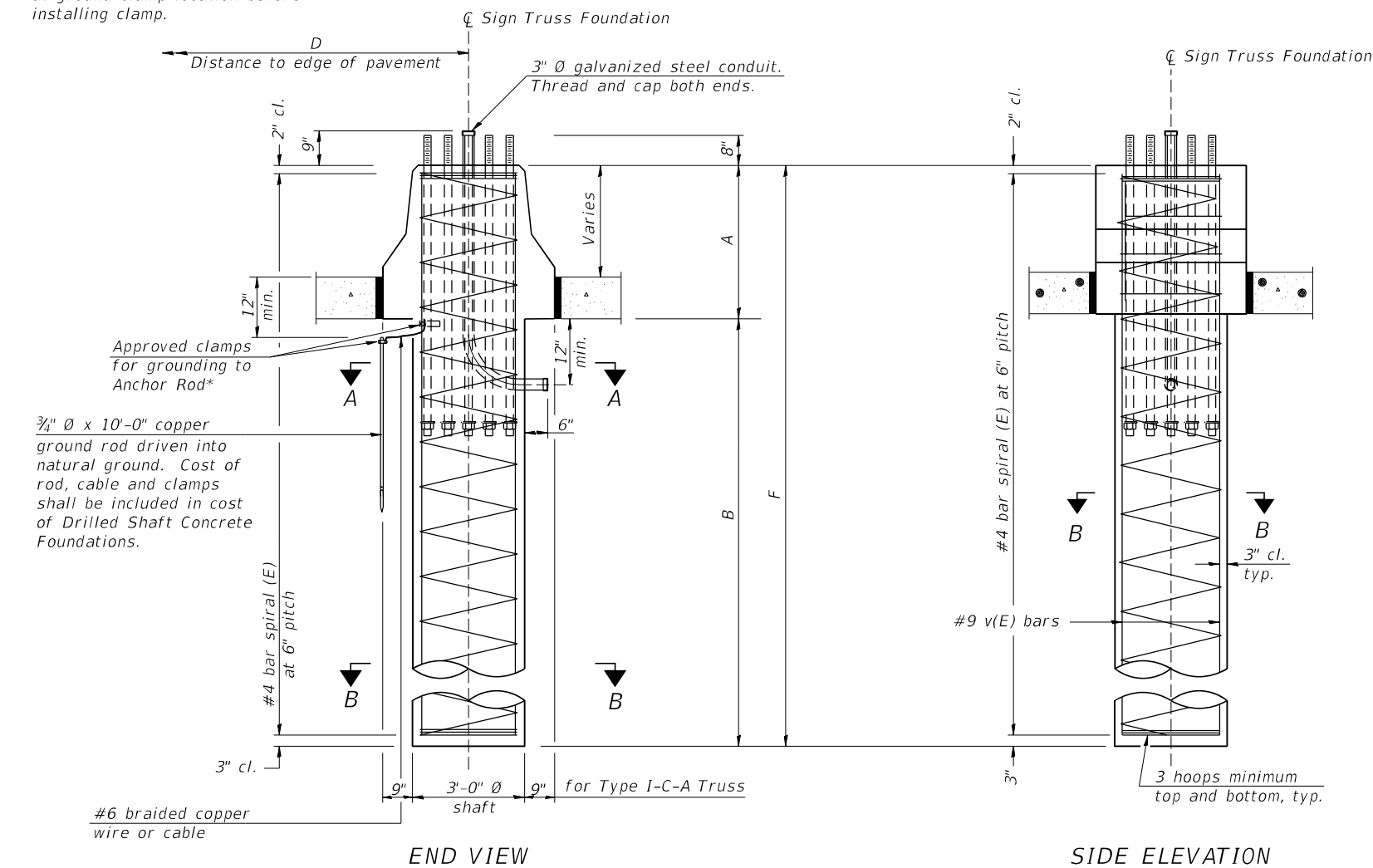
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CANTILEVER SIGN STRUCTURES - WALKWAY DETAILS
ALUMINUM TRUSS & STEEL POST

SHEET OSG7-09 OF OSG7-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	436
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

* Grind anchor rod to bright finish at ground clamp location before installing clamp.



NOTES:

The foundation dimensions shown in the Foundation Design Table are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown in the Foundation Data Table will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in "Drilled Shaft Concrete Foundation".

FOUNDATION DESIGN TABLE								
Truss Type	Post Base Sheet	Maximum Cantilever Length (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	"B" Depth (ft)	Anchor Rods		Anchor Rod Circle Diameter (in)
						No.	Diameter (in)	
I-C-A	OSC-A-4	25	170	3.0	16.0	8	2	22
II-C-A	OSC-A-5	30	170	3.5	17.0	12	2	30
II-C-A	OSC-A-5	30	340	3.5	21.5	12	2	30
III-C-A	OSC-A-5	35	170	3.5	19.0	12	2	30
III-C-A	OSC-A-5	35	250	3.5	22.5	12	2	30
III-C-A	OSC-A-5	35	400	3.5	26.5	12	2	30
III-C-A	OSC-A-5	40	400	3.5	32.0	12	2	30

FOUNDATION DATA TABLE											
Sign No.	Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Qu	A	B	F	Class DS Concrete Cubic Yards
2	1C0161094L043.7	659+43.87 (Rev)	I-C-A	3'-0"	615.64	595.58	1.95	4'-0 ³ / ₄ "	16'-0"	20'-0 ³ / ₄ "	6.8

OSC-A-9 2-17-2017

FILE NAME: J:\2021\6083\Cadd\Design\21-6083_SHEETS_SIGN2.dgn



745 McClintock Drive
Suite 210
Burr Ridge, IL 60527
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Fax: 773-239-3728

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PLOT DATE =	CHECKED - 7/13/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER OVERHEAD SIGN STRUCTURES
MEDIAN SUPPORT FOUNDATION DETAILS

SHEET OSG7-10 OF OSG7-11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	437
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



GSI Job No. 19079-B

SOIL BORING LOG

Page 1 of 1

Date 10/18/21

PROJECT PTB 185-012, WO #32
 LOCATION I-90 & I-94 Tollway
 COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

CLIENT HBM
 BORING NO. OSB-01
 Northing 1928136
 Easting 1145644
 Ground Surface Elev. 611.5 ft

Surface Water Elev.	ft				
Stream Bed Elev.	ft				
Groundwater Elev.:					
First Encounter	598.5 ft	▼			
Upon Completion	590.5 ft	▼			
After Hrs.					

DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)	DRY DENSITY (pcf)	SOIL DESCRIPTION	DEPTH (ft)	BLOW COUNT (blows/6")	UCS (tsf)	MOISTURE (%)	DRY DENSITY (pcf)
610.6					10.0" CONCRETE					
	7				CRUSHED STONE-medium dense (Fill)		7			
	8	2					8	2.00	16	
	10						13	B		
606.5					CINDERS & WOOD-black-medium dense (Fill)					
	4						8			
	7	68					10	1.70	17	
	10					11	B			
606.0					SILTY CLAY-dark brown & gray-very stiff					
	3						6			
	6	2.00	23				7	2.50	20	
	8	P				10	P			
603.5					CLAY LOAM-brown & gray-stiff to very stiff					
	4						6			
	4	1.80	16				8	2.00	22	
	5	B				12	B			
	10					-30				
	4				becoming gray @ -15.5'					
	4	1.80	19							
	9	B								
	4									
	6	1.80	17							
	9	B								
	15									
	4									
	6	2.00	17							
	8	B								
	4									
	9	2.50	20							
	12	P								
	20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

Z:\PROJECTS\2021\19079-B EFK_IDOT_192-007-WO#15 KENNEDY PROJECTS 62K73&62K41\19079-B BORING LOGS\19079-B LOG.GPJ_11/22/21



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STATE OF ILLINOIS
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BORING LOGS
 S.N. 1C016I094L043.7 (SIGN 2)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	438
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.
The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

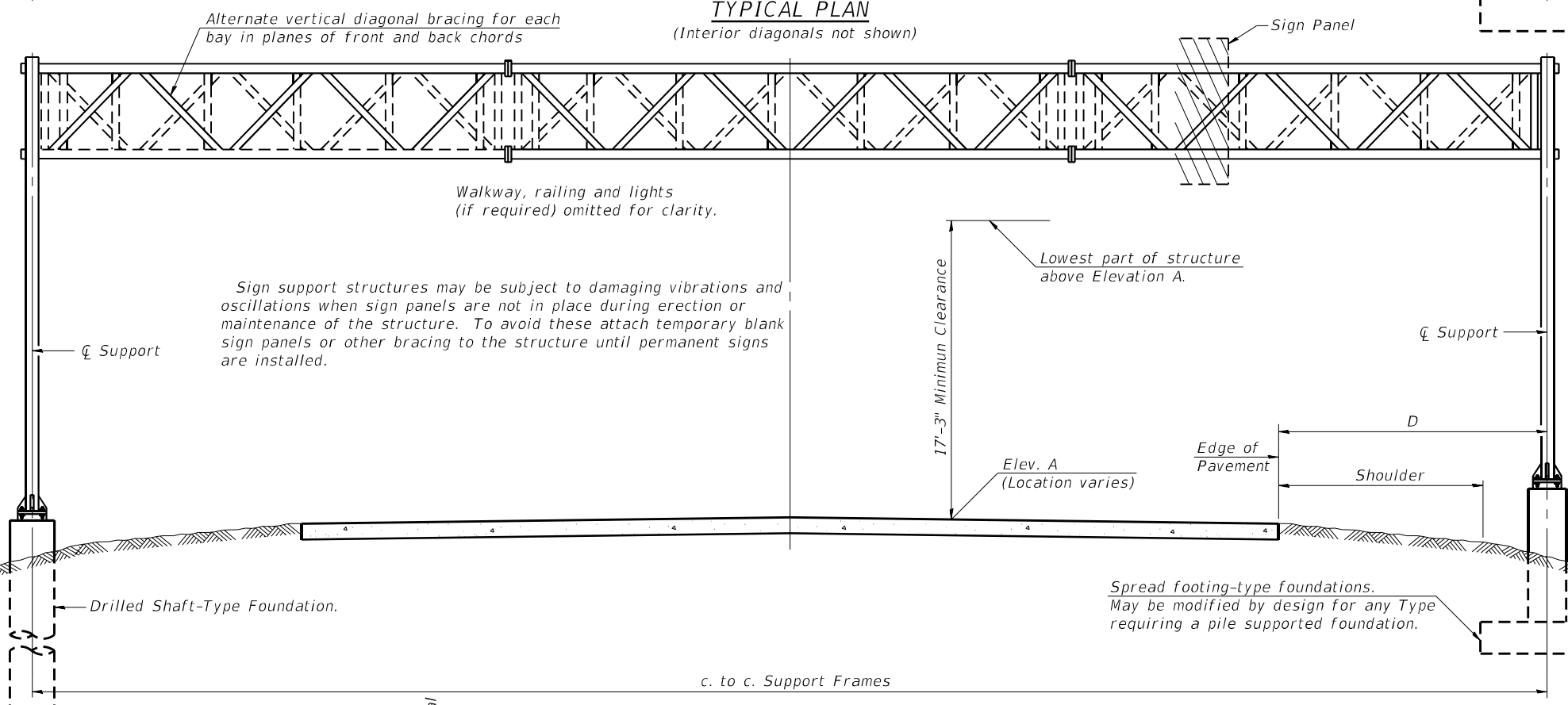
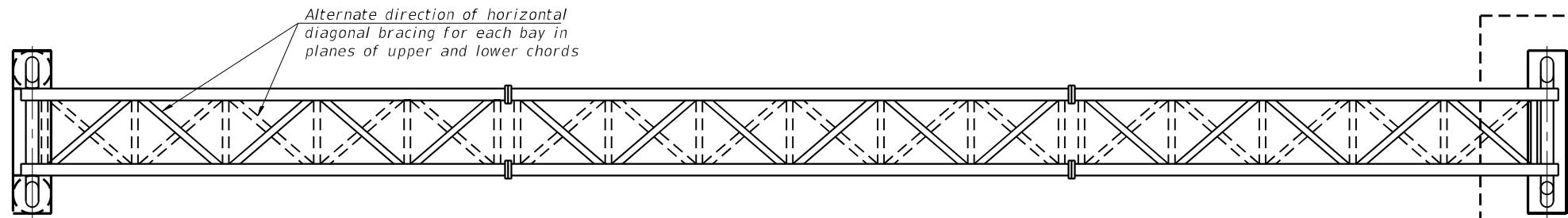
CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
CONCRETE BARRIER REMOVAL	Foot	52
CONCRETE REMOVAL	Cu. Yd.	4.7
STRUCTURE EXCAVATION	Cu. Yd.	27
CONCRETE BARRIER TRANSITION	Foot	40
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A (5'-0" X 7'-0")	Foot	78
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	75
CONCRETE FOUNDATIONS	Cu. Yd.	15.1
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yd.	17.5
REMOVE OVERHEAD SIGN STRUCTURE - SPAN	Each	1



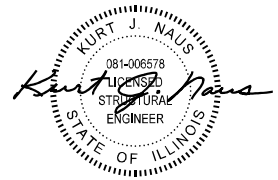
TYPICAL ELEVATION
(Looking at Face of Signs**)

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

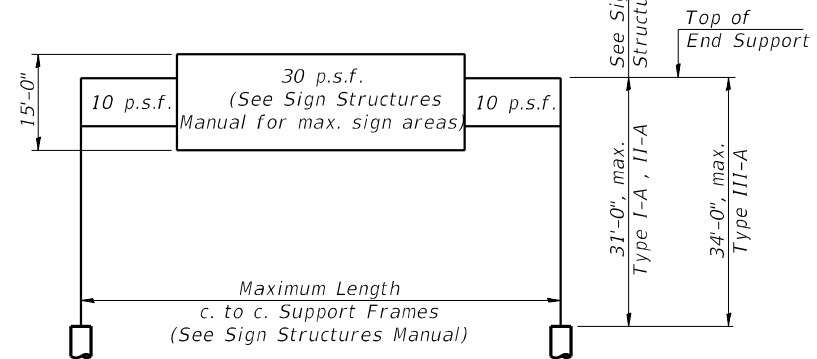
Sign #	Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
Sign 5	1S0161094L047.5	460+57.35 (NB)	III-A	77'-7"	612.99	19.33'	13'-8 ³ / ₈ "	522.69

**Looking upstation for structures with signs both sides.
* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

Benchmarks: TBM "A" Square cut on top of SE edge of light pole foundation (Pole # N03) along I-90/94 at Station 459+69.58 Offset 37.54' RT measured along \bar{C} NB I-90/94. Elev. 615.88. (Sign 5)



EXPIRATION DATE 11-30-2024
DATE: 12-05-2022
For Sheets 1 thru 15
(Total of 15 Sheets)



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

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35 West Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10805.03

05-A-1 2-17-2017

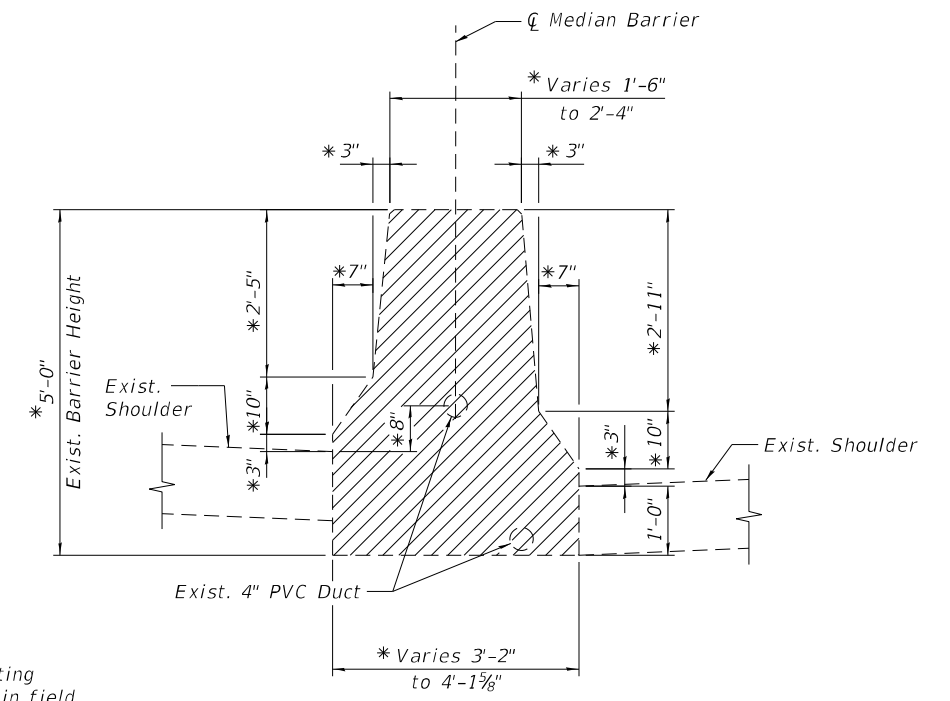
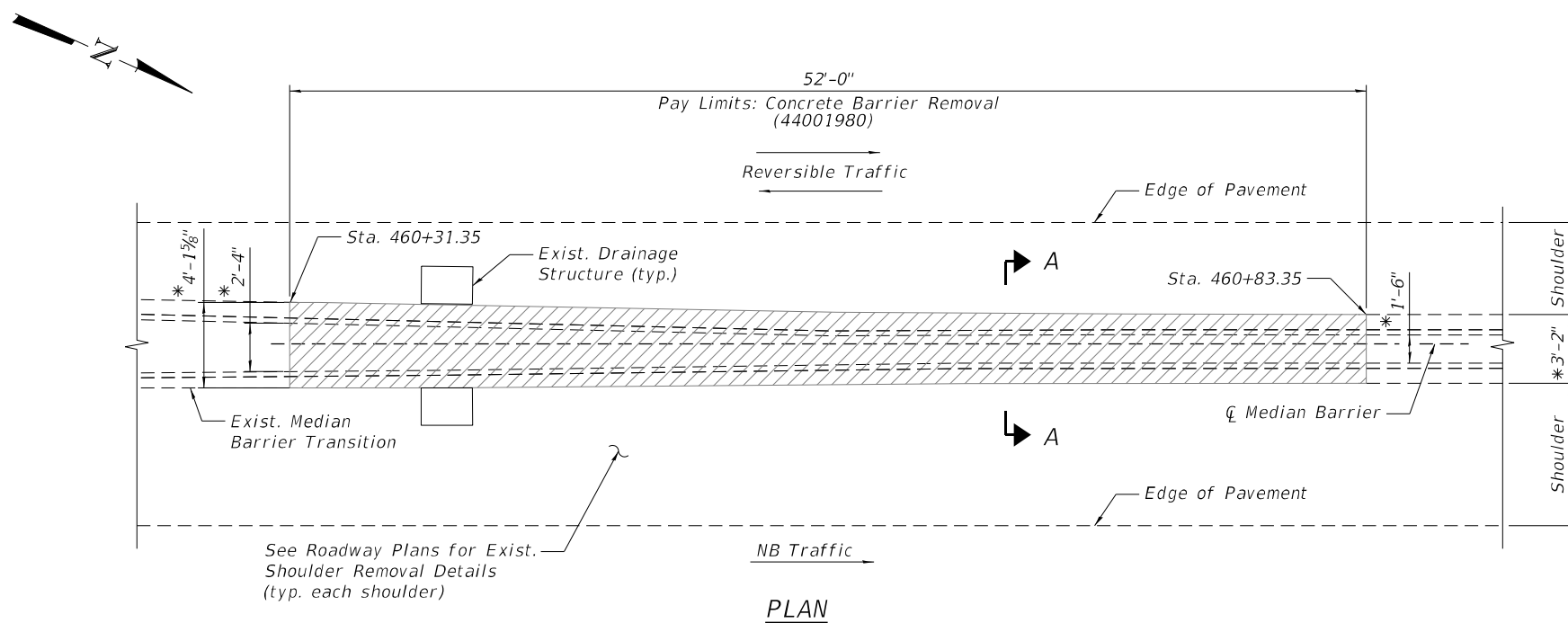
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PLOT DATE =	CHECKED - WKK	REVISED -

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DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION - ALUMINUM TRUSS & STEEL SUPPORTS
SN 1S0161094L47.5

SHEET 1 OF 15 SHEETS

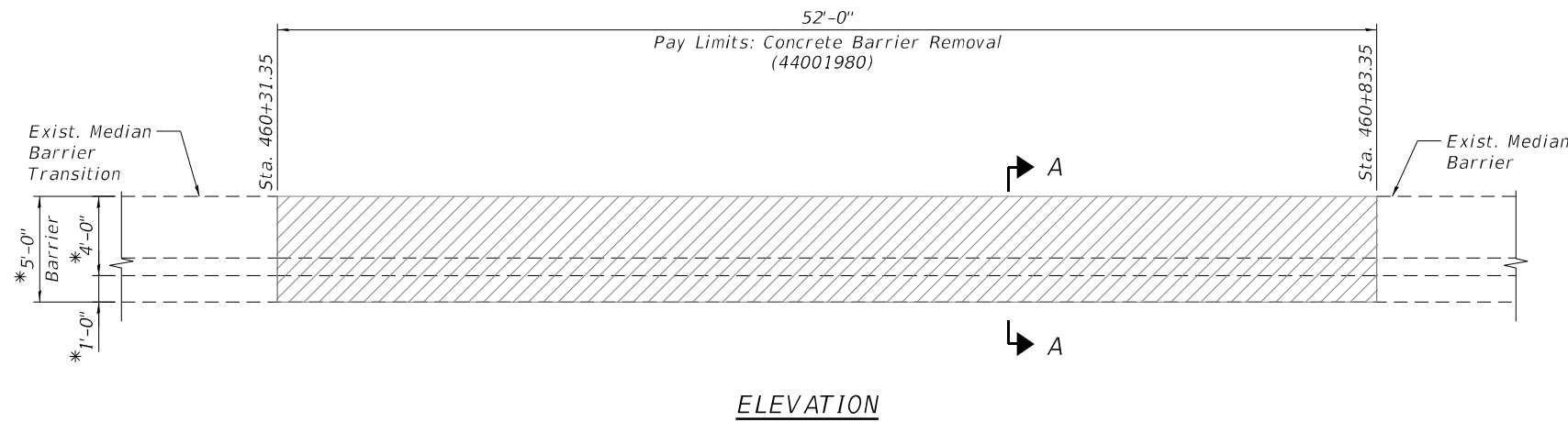
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	439
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



SECTION A-A

LEGEND

Concrete Barrier Removal



ELEVATION

MEDIAN BARRIER REMOVAL AT I-90/94
SIGN TRUSS FOUNDATION - SIGN 5 - 1S0161094L047.5 (N.T.S.)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Barrier Removal	Foot	52

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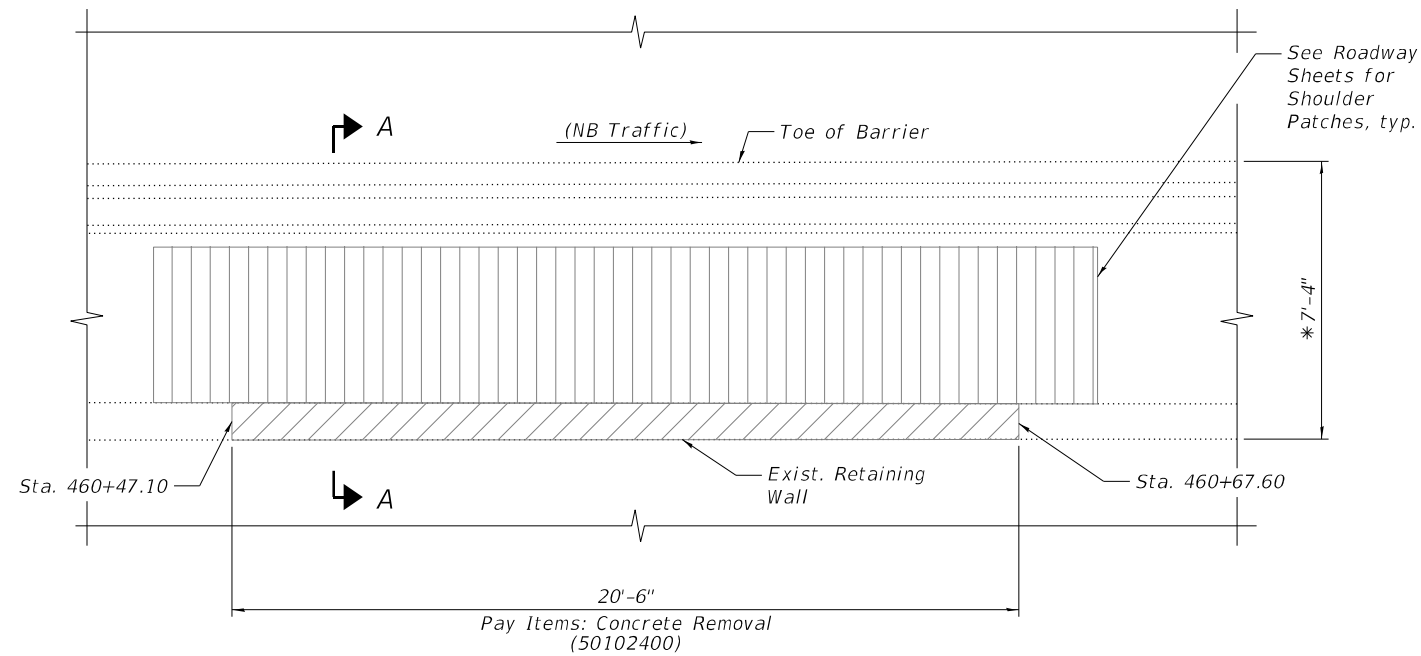
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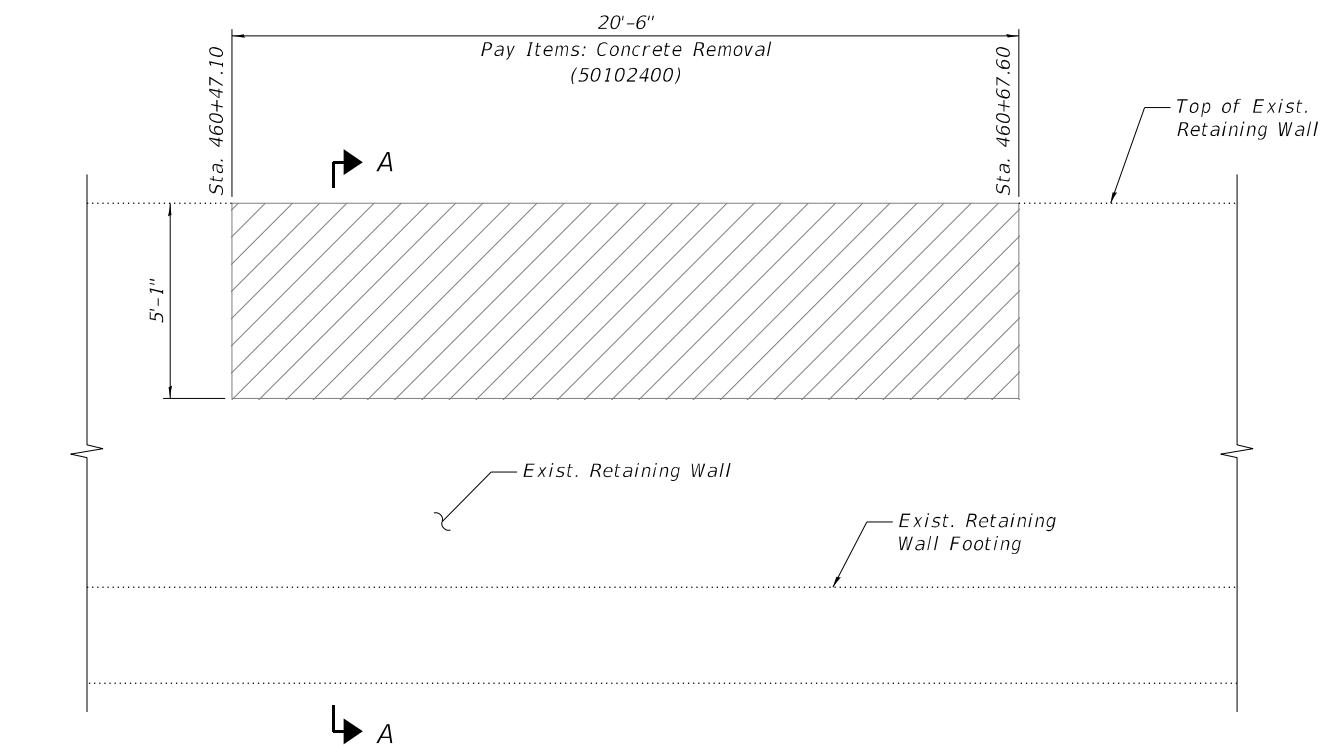
MEDIAN BARRIER REMOVAL DETAILS
SN 1S0161094L047.5

SHEET 2 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	440
			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	

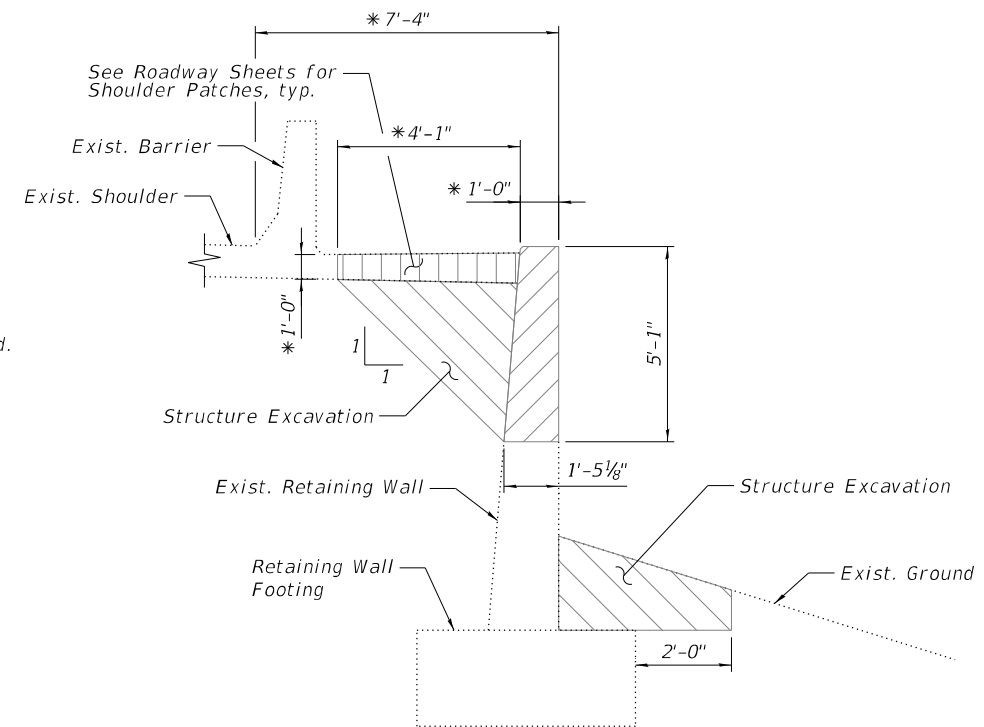


PLAN



ELEVATION

* Verify existing dimensions in field.



SECTION A-A

LEGEND

- Concrete Removal
- Structural Excavation
- Class B Pavement Patch

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	4.7
Structure Excavation	Cu. Yd.	27

**RETAINING WALL REMOVAL AT I-90/94
SIGN TRUSS FOUNDATION - SIGN 5 - 1S016I094L047.5**

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Chicago, Illinois 60601
312-565-0450 Job No. 10805.03

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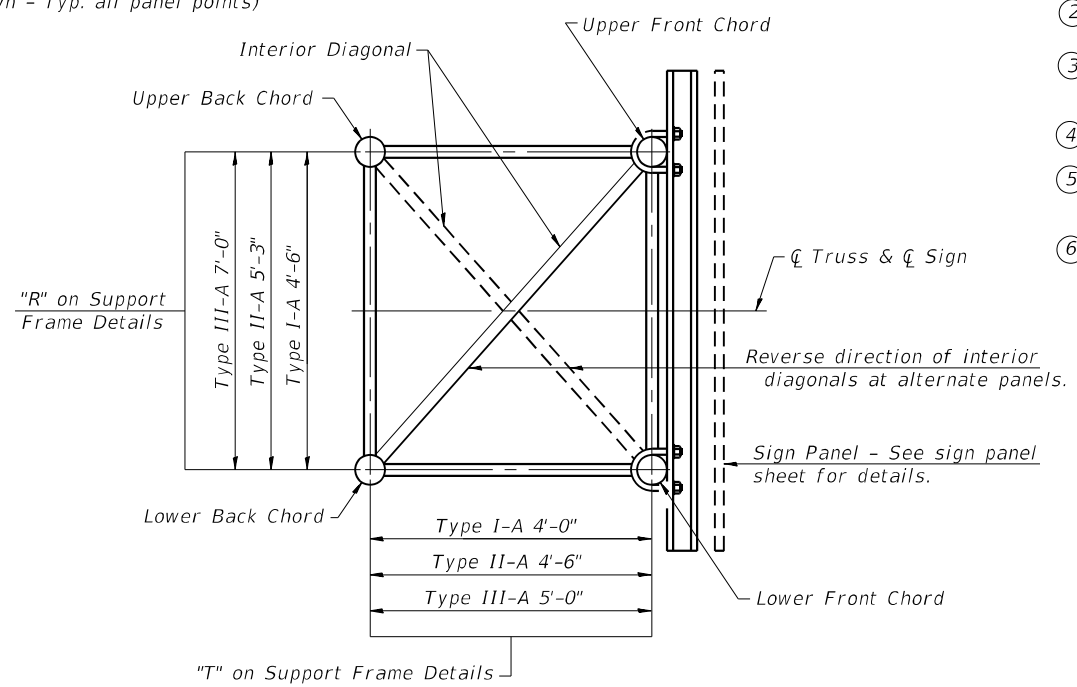
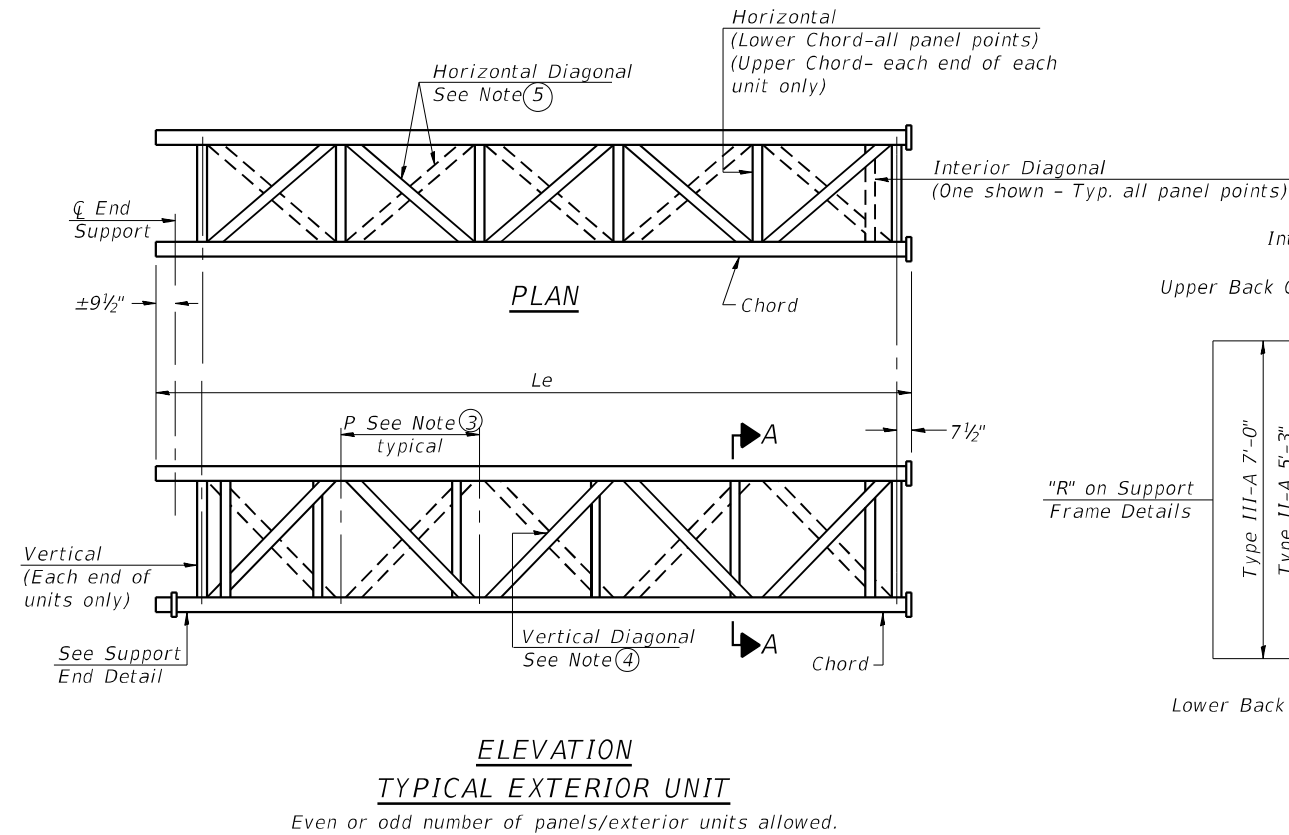
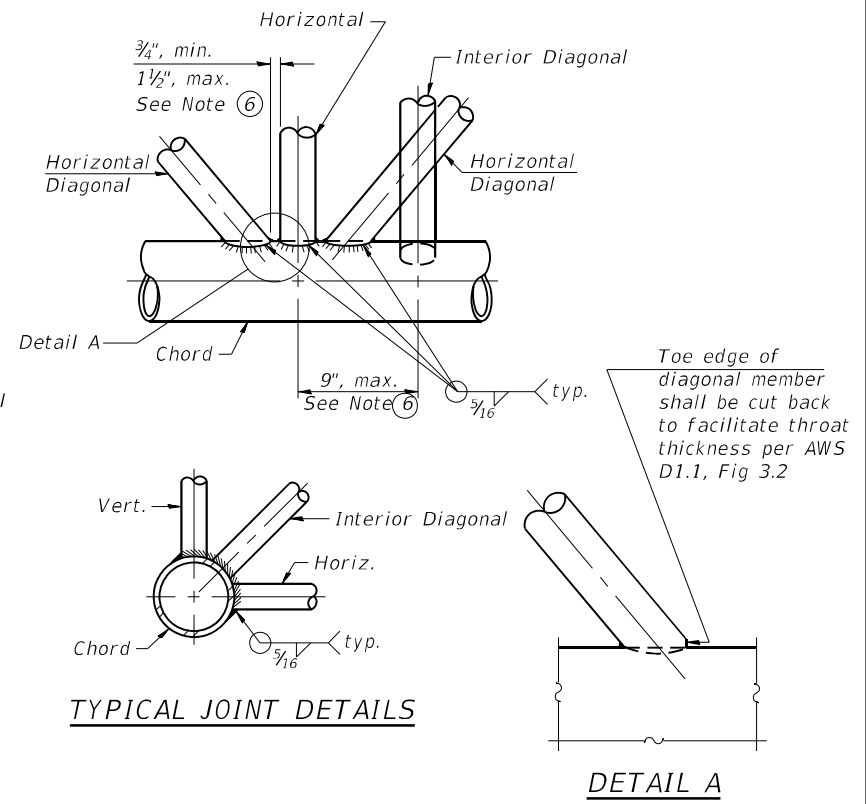
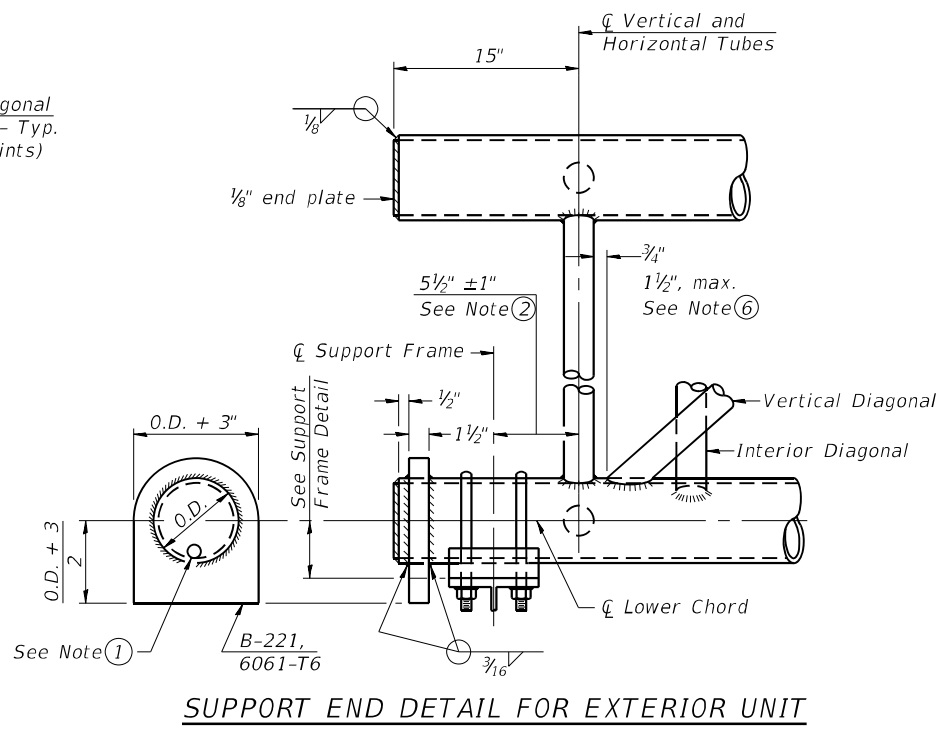
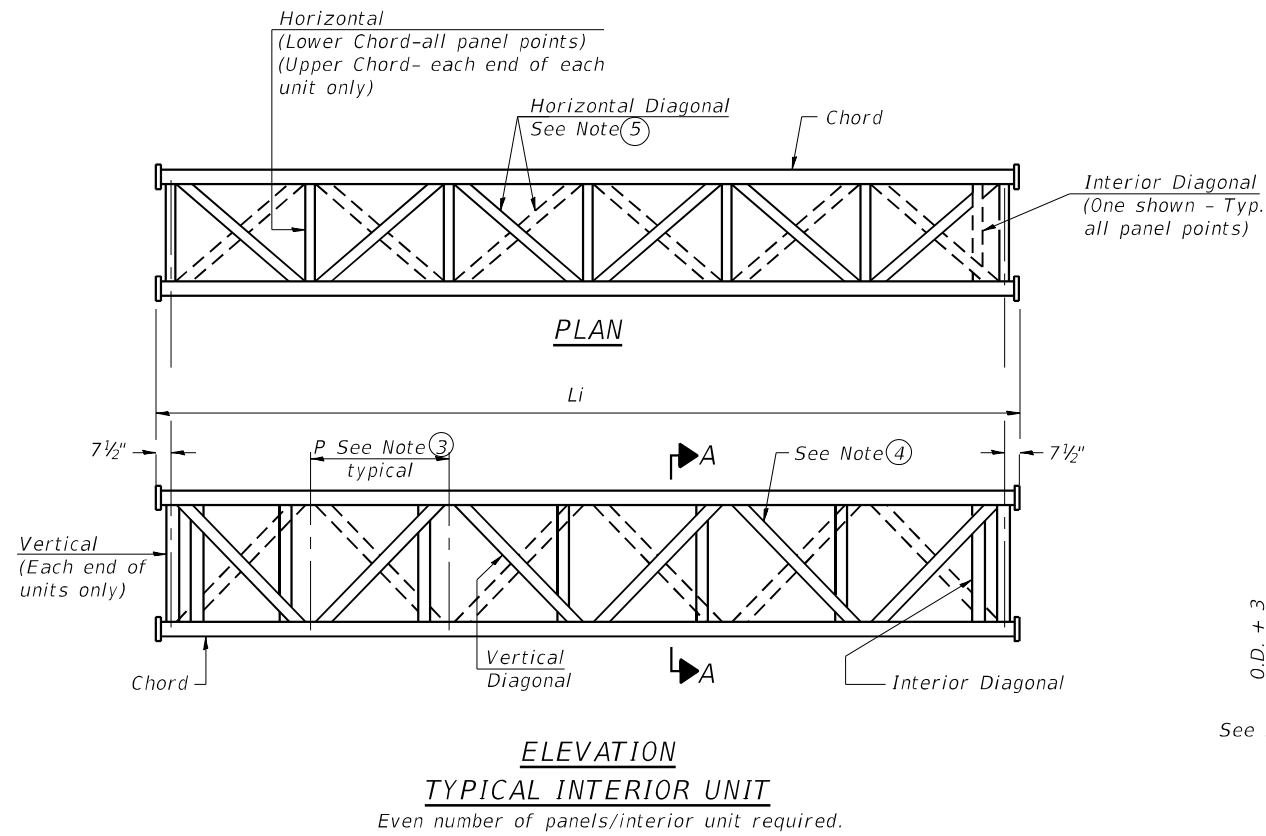
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RETAINING WALL REMOVAL DETAILS
SN 1S016I094L047.5**

SHEET 3 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	441
			CONTRACT NO. 62K74	
		ILLINOIS FED. AID PROJECT		

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- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" Ø drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" end dimension may vary by ±1" to provide uniform panel spacing (P).
- ③ Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
- ④ Vertical Diagonals in front and back face shall alternate.
- ⑤ Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
- ⑥ All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a 3/4" minimum to 1 1/2" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.



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 DEPARTMENT OF TRANSPORTATION

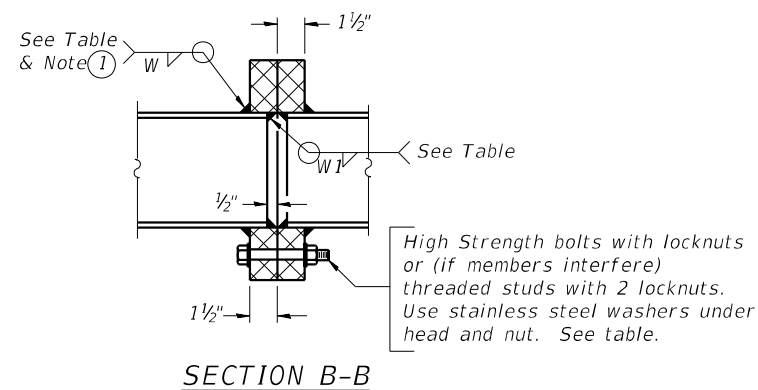
ALUMINUM TRUSS DETAILS FOR
 TRUSS TYPES I-A, II-A AND III-A (1 OF 2)

SHEET 4 OF 15 SHEETS

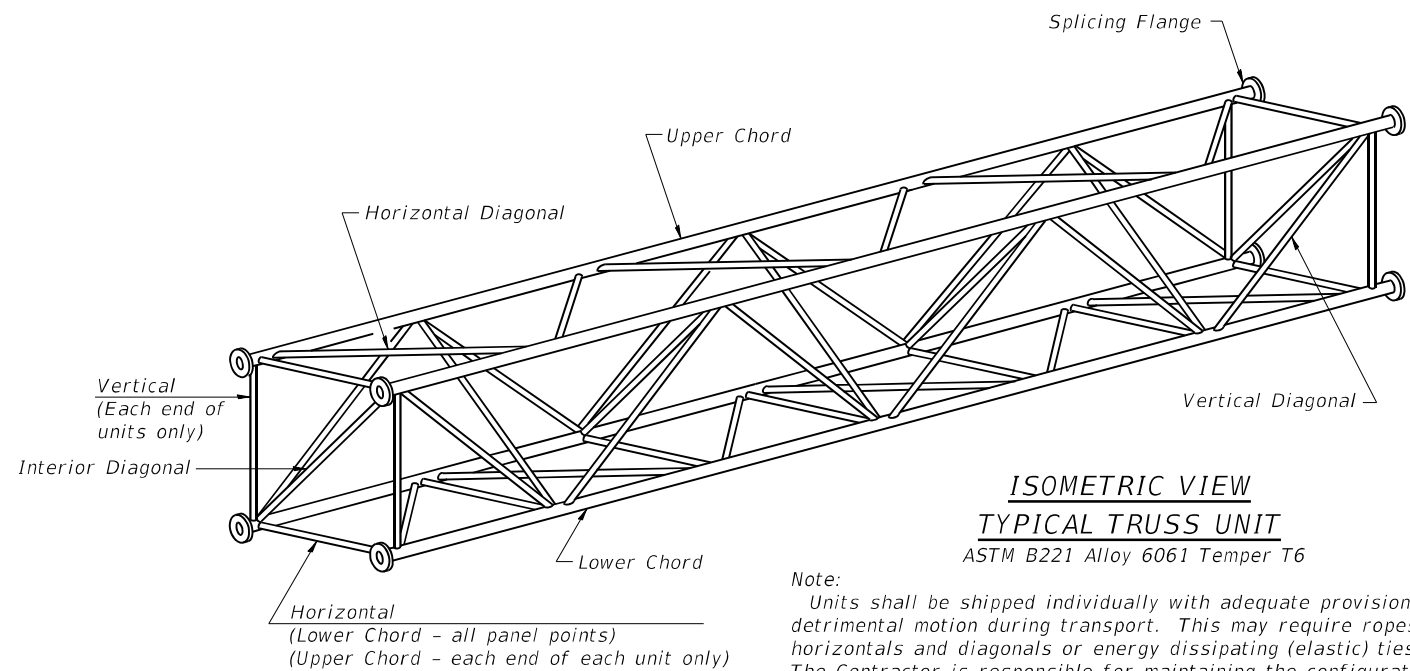
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	442
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

TRUSS UNIT TABLE

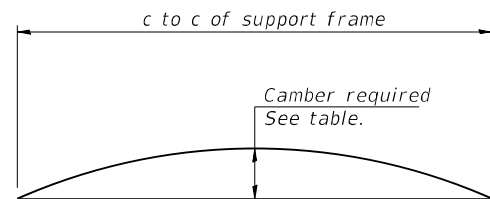
Sign #	Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
				No. Panels per Unit	Unit Lgth.(Le)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(Li)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
																No./Splice	Dia.	W	WI		
5	1S0161094L047.5	460+57.35 (NB)	III-A	7	39'-9 1/2"	5'-5"	-	-	-	-	7	5/16"	3 3/4"	5/16"	1"	6	1"	7/16"	5/16"	11 1/2"	15"



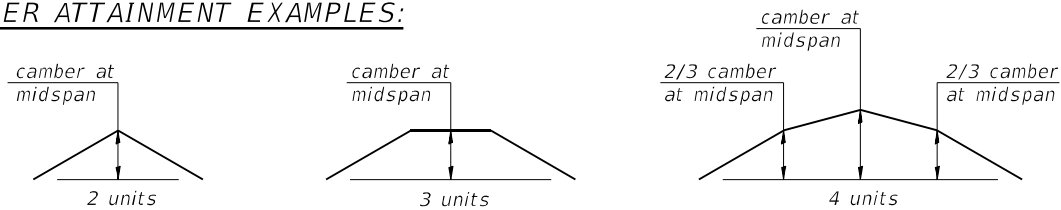
① Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.



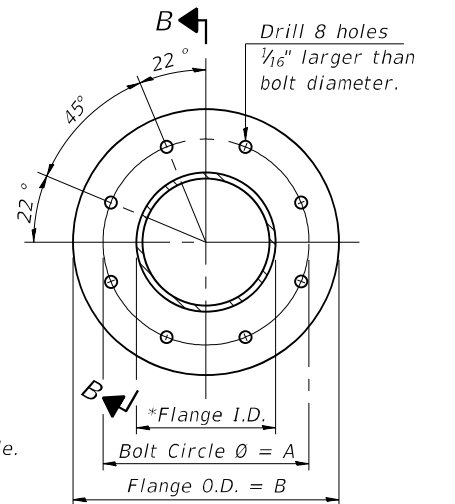
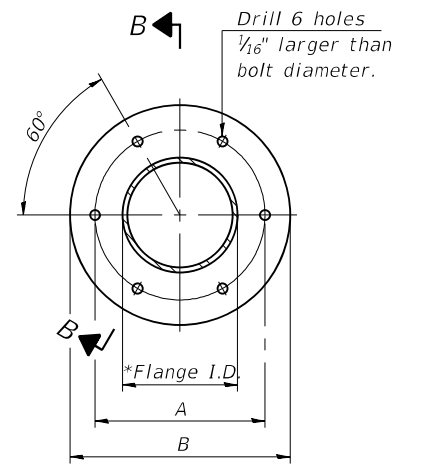
Note: Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection of the units.



CAMBER ATTAINMENT EXAMPLES:



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)



SPLICING FLANGES

ASTM B221, Alloy 6061-T6 or ASTM B209, Alloy 6061-T651
*To fit O.D. of Chord with maximum gap of 1/16".

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312-565-0450 Job No. 10805.03

054-A-2 2-17-2017

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PLOT DATE =	CHECKED - WKK	REVISED -

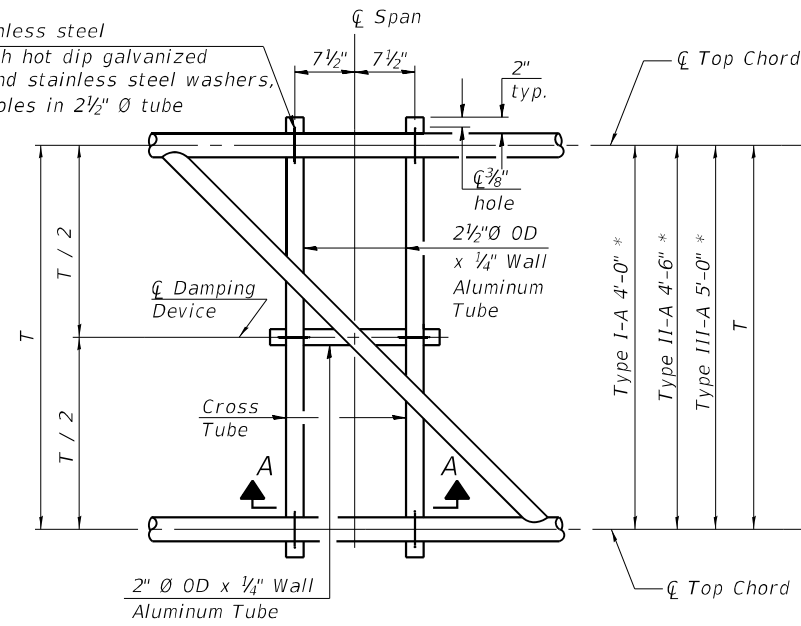
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ALUMINUM TRUSS DETAILS FOR
TRUSS TYPES I-A, II-A AND III-A (2 OF 2)**

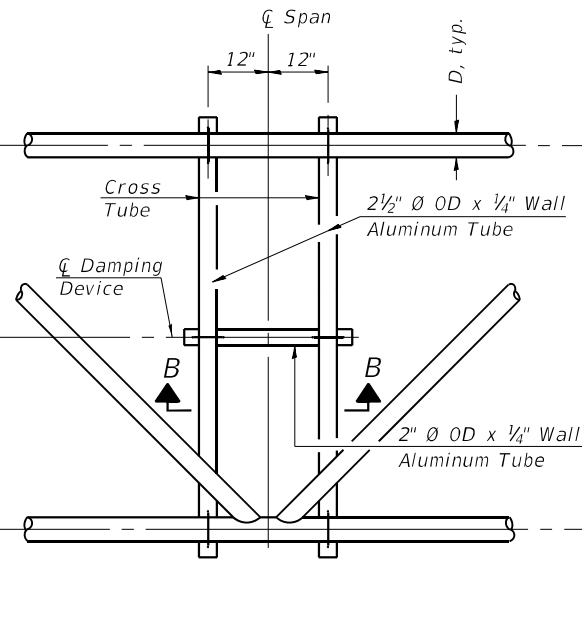
SHEET 5 OF 15 SHEETS

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

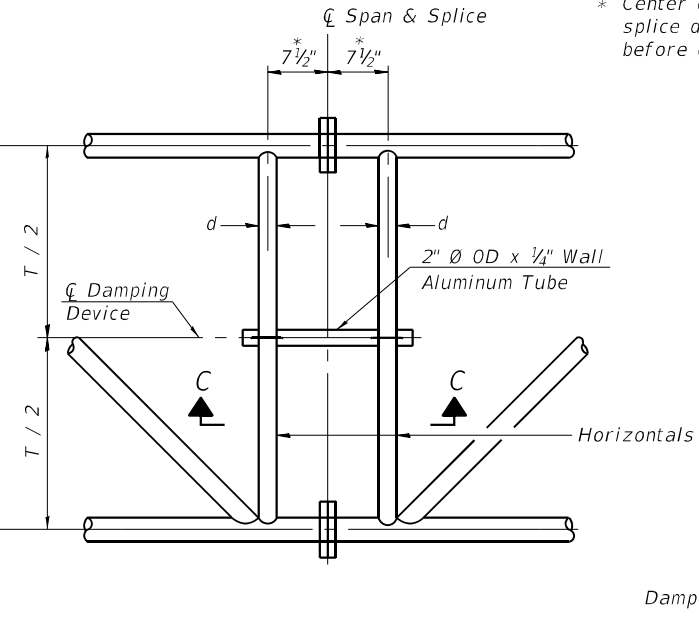
5/16" Ø stainless steel
U-bolt with hot dip galvanized
locknuts and stainless steel washers,
typ. 3/8" Ø holes in 2 1/2" Ø tube



PLAN DETAIL "A"
☐ Span between Panel Points



PLAN DETAIL "B"
☐ Span at Panel Point



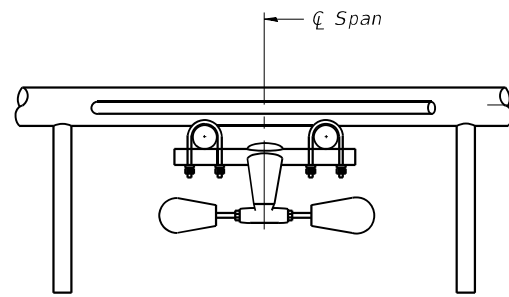
PLAN DETAIL "C"
☐ Span at ☐ Chord Splice

* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

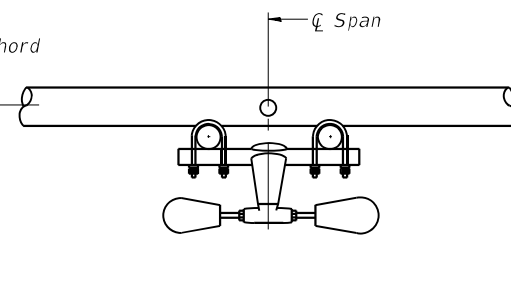
NOTES

Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...

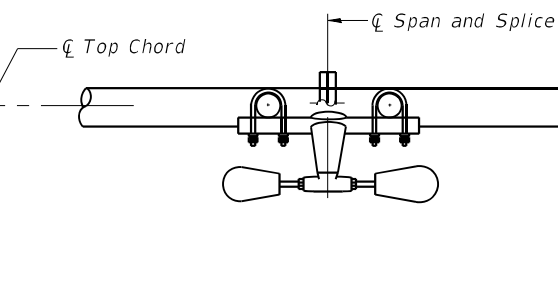
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



SECTION A-A

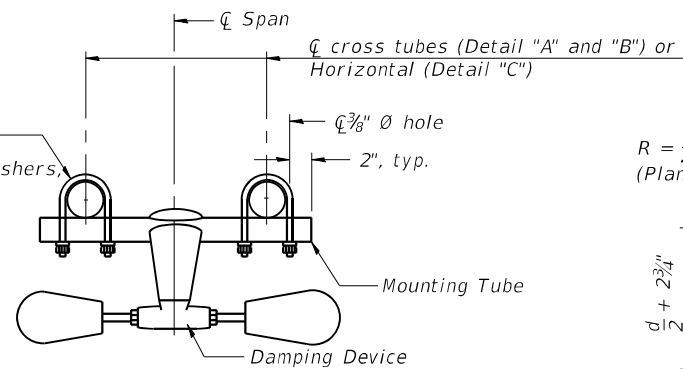


SECTION B-B

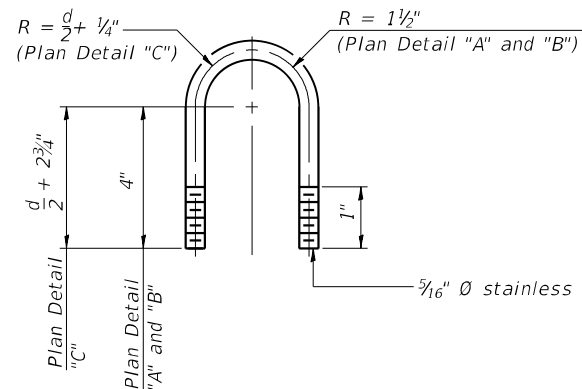


SECTION C-C

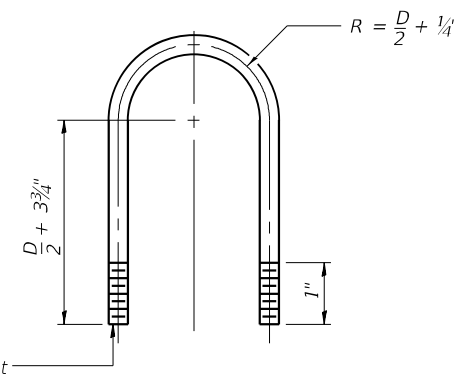
5/16" Ø stainless steel
U-bolt with hot dip galvanized
locknuts and stainless steel washers,
typ. 3/8" Ø holes in mounting tube



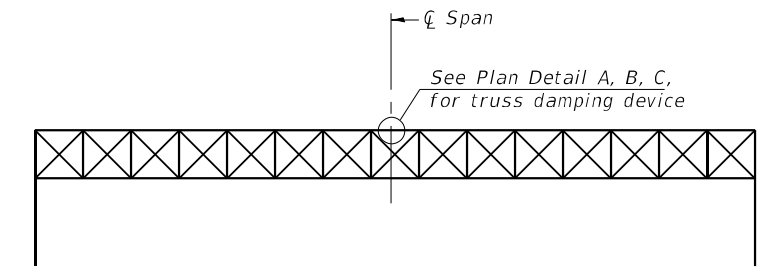
**TRUSS DAMPING
DEVICE CONNECTION DETAIL**
(Typical)



**DAMPING DEVICE MOUNTING
TUBE U-BOLT DETAIL**
(Typical)



**TOP CHORD TO CROSS TUBE
U-BOLT DETAIL**
(Typical - Detail "A" and "B")



ELEVATION
Aluminum Overhead
Sign Truss

MODEL: Default
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35 West Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10805.03

05-A-D

2-17-2017

USER NAME =	DESIGNED - WKK	REVISED -
CHECKED - JHG	REVISIONS -	
PLOT SCALE =	DRAWN - RMG	REVISED -
PLOT DATE =	CHECKED - WKK	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

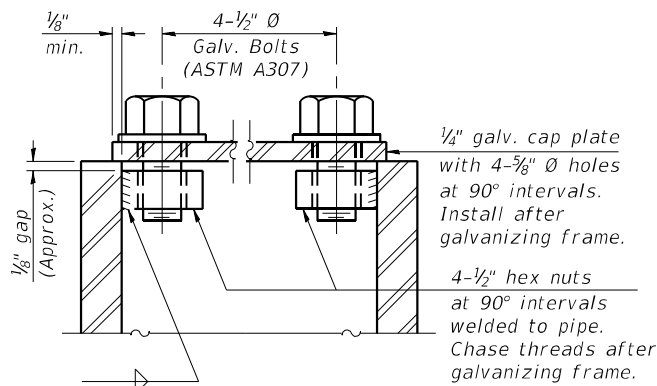
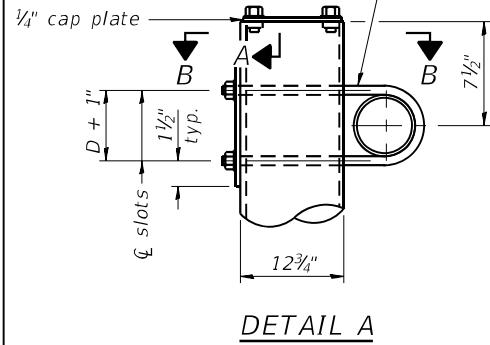
DAMPING DEVICE

SHEET 6 OF 15 SHEETS

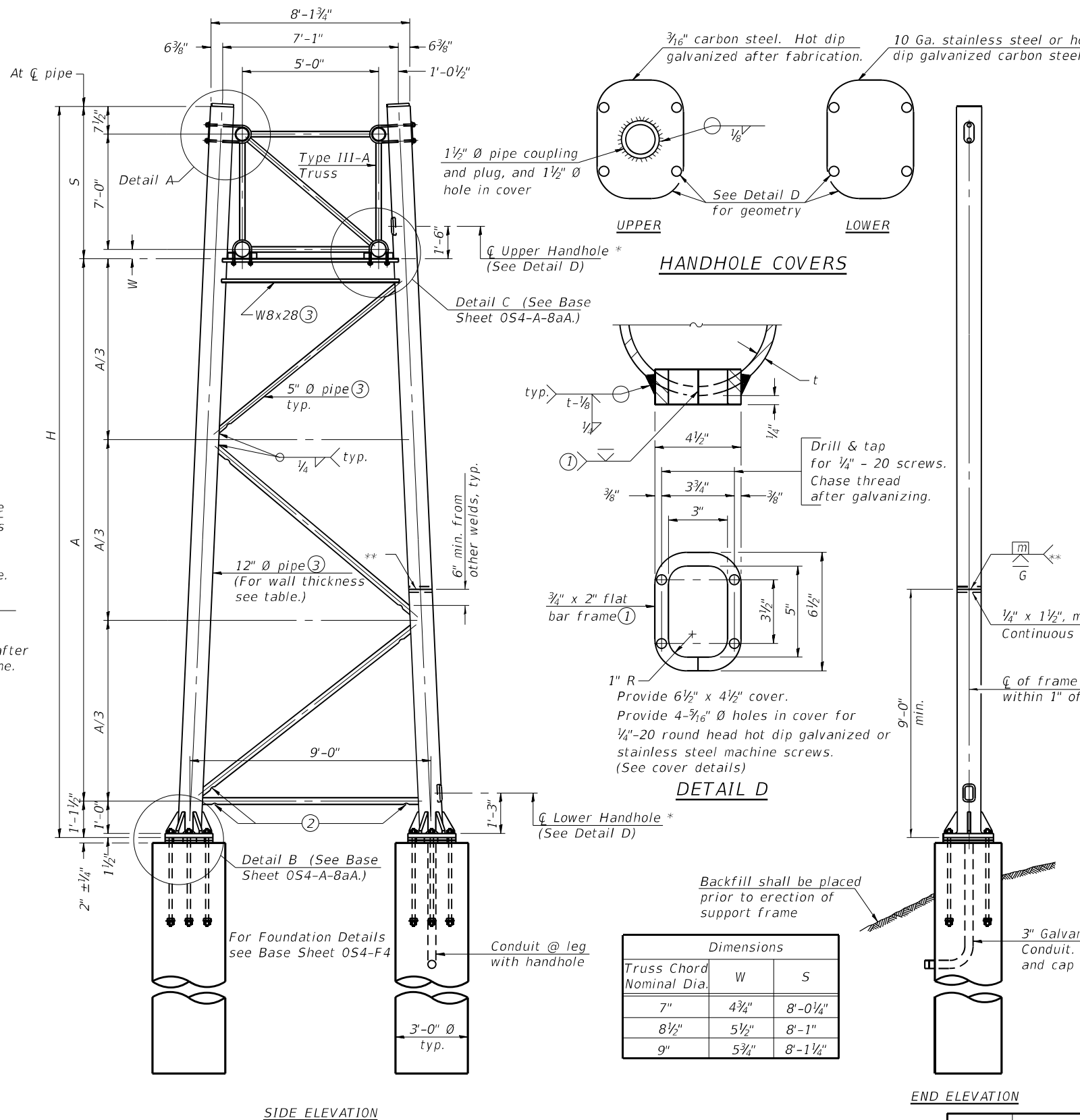
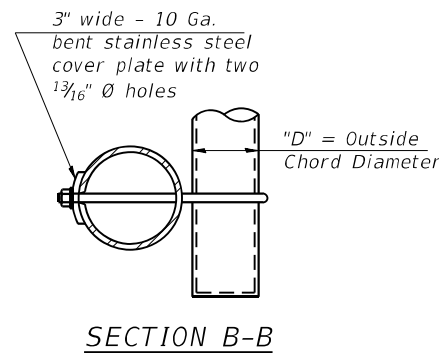
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	444
			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	

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$\frac{3}{4}$ " \emptyset stainless steel U-bolt.
 Provide two washers and two hexagon locknuts. (4)
 $1\frac{3}{16}$ " x 2" slots on \emptyset 12" \emptyset pipe.
 (4 slots required per pipe)



SECTION A-A
 As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



Dimensions		
Truss Chord Nominal Dia.	W	S
7"	4 3/4"	8'-0 1/4"
8 1/2"	5 1/2"	8'-1"
9"	5 3/4"	8'-1 1/4"

TRUSS SUPPORT DETAILS

(12" \emptyset Pipe-Type III-A Truss)
 ** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Support Design Loads: See Base Sheet 05-A-1 for design and loading criteria.
 Load combinations checked include deadload plus:
 a) 100% wind normal to sign, 20% parallel to sign
 b) 60% wind normal to sign, 30% parallel to sign

- In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μ m or less.
- Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet 05-A-1.
- See General Notes for fasteners.
- Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- "H" based on 15'-0" or actual sign height, whichever is greater.

* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Sign #	Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H (6)	A
			Left	Right				
Sign 5	1S0161094L047.5	460+57.35 (NB)	✓		III-A	0.33"	26.20'	17.05'
Sign 5	1S0161094L047.5	460+57.35 (NB)		✓	III-A	0.33"	30.20'	21.05'

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054-A-8a 2-17-2017

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PLOT DATE =	DRAWN - RMG	REVISED -
	CHECKED - WKK	REVISED -

STATE OF ILLINOIS
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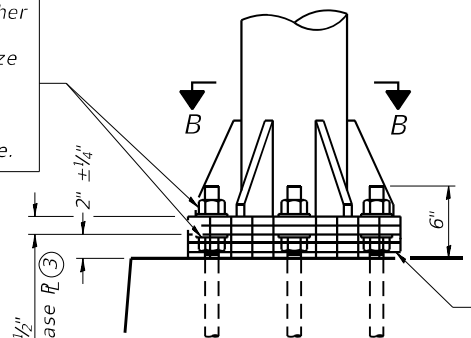
SUPPORT FRAME FOR ALUMINUM TRUSS
 SN 1S0161094L047.5 (1 OF 2)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	445
CONTRACT NO. 62K74				

SHEET 7 OF 15 SHEETS

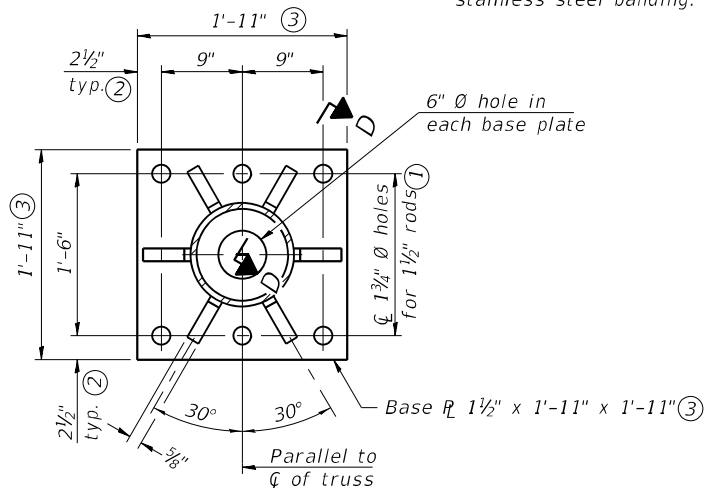
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Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.

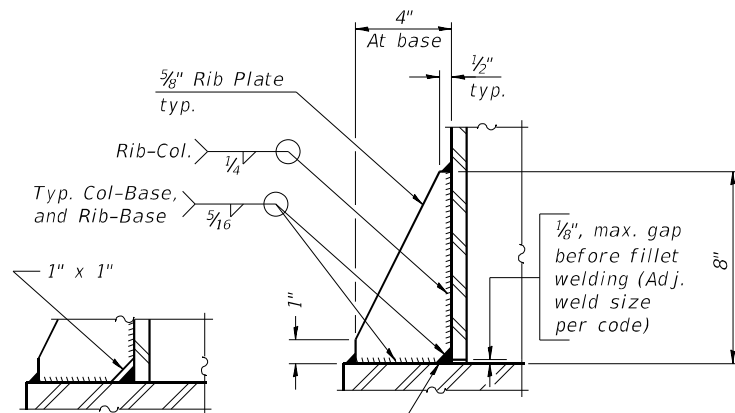


DETAIL B
Ribs shall be cut to fit slope of pipe.

Stainless Steel Standard Grade Wire Cloth, 3" wide, 1/4" maximum opening with a minimum wire diameter of AWG. No. 16 with a minimum 2" lap. Secure to base plate after erection with 3/4" stainless steel banding.



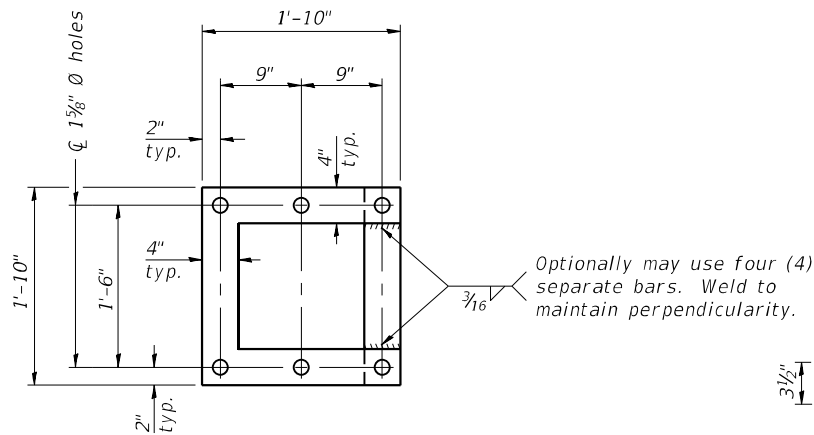
SECTION B-B



** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.

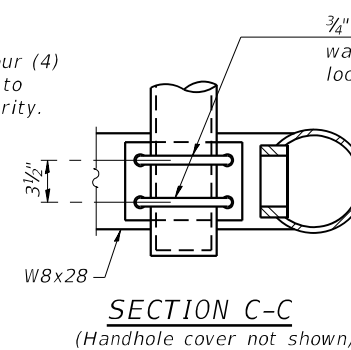
SECTION D-D

No snip req'd. at rib inside corner if placed before col. to base plate welding.**



POSITIONING PLATE(S)

Optionally may use four (4) separate bars. Weld to maintain perpendicularity.



SECTION C-C
(Handhole cover not shown)

3/4" Ø U-bolts. Provide washers and hexagon locknuts. (2 required)

Field drill 1 5/16" Ø holes. Touch up holes with galvanizing paint.

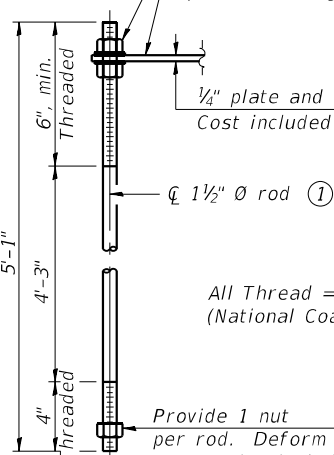
Drain hole (See Base Sheet 05-A-2.)

1/8" fabric or neoprene pad.

DETAIL C

1 1/2" Ø pipe coupling for conduit attachment (plug for shipping)

At each location, provide 1/4" thick positioning plate(s) and six (6) additional nuts to be used with leveling nuts to maintain anchor bolts position during concrete placement.



1/4" plate and extra nuts become Contractor's property. Cost included in "Drilled Shaft Concrete Foundation".

All Thread = NC (National Coarse)

Provide 1 nut per rod. Deform thread or use chemical thread lock to secure.

ANCHOR ROD DETAIL

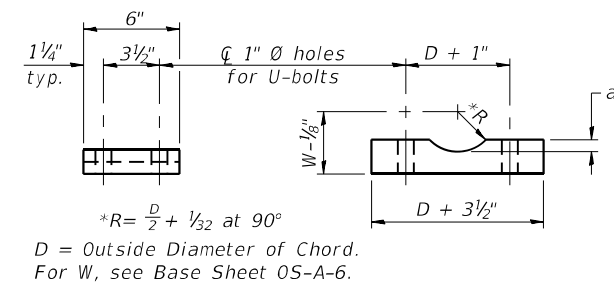
Anchor rods shall conform to ASTM F1554 Grade 105 Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

TYPE III-A TRUSS

12" Ø PIPE SUPPORT FRAME DETAILS

Notes:
For Type III-A Truss spans greater than 150 ft, and up to 160 ft.:

- ① 1 3/4" Ø rod, 2" Ø holes
- ② 2 3/4" edge distance
- ③ Base Pl 1 5/8" x 1'-11 1/2" x 1'-11 1/2"



*R = D/2 + 1/2 at 90°

D = Outside Diameter of Chord.
For W, see Base Sheet 05-A-6.

Truss Chord Nominal Dia.	a
7"	1"
8 1/2"	1 1/4"
9"	1 3/8"

SADDLE SHIM DETAIL

ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

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054-A-8aA

2-17-2017

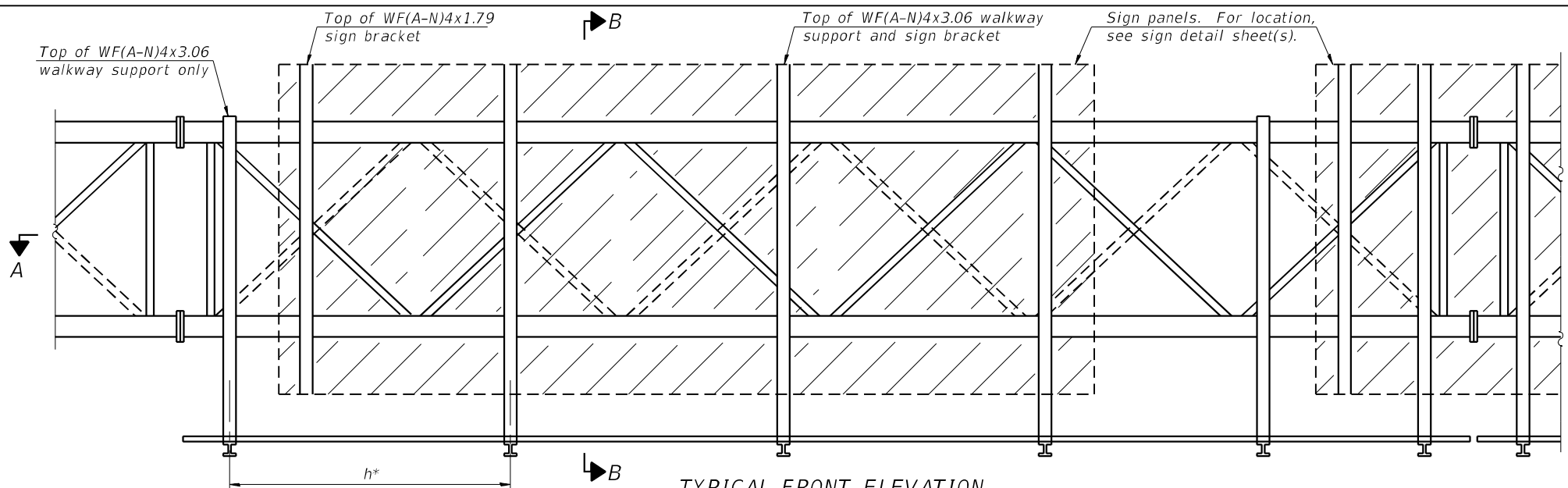
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CHECKED - JHG	REVISED -	
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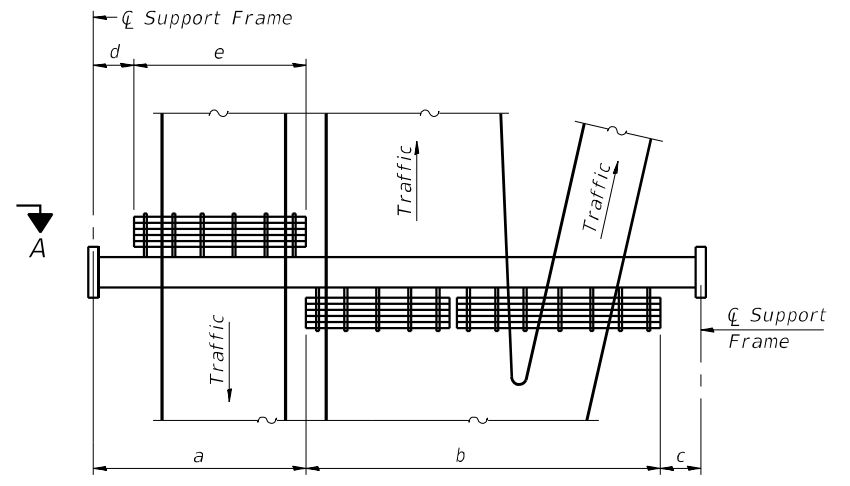
SUPPORT FRAME FOR ALUMINUM TRUSS
SN 1S016I094L047.5 (2 OF 2)

SHEET 8 OF 15 SHEETS

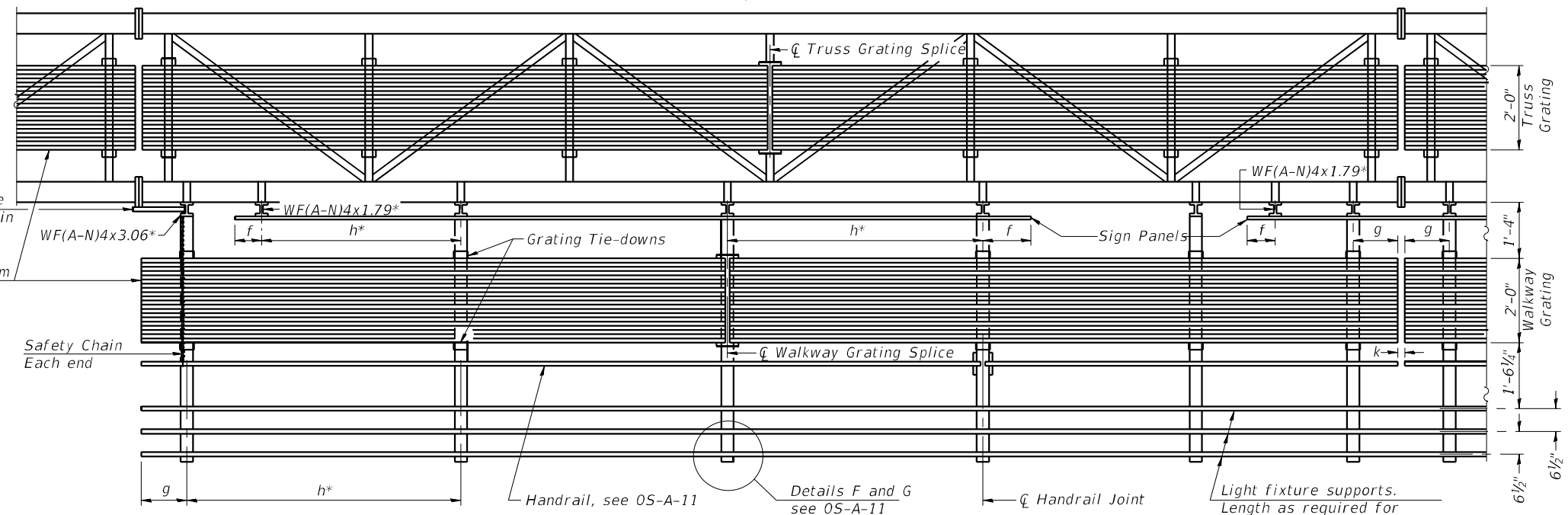
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	446
			CONTRACT NO. 62K74	
ILLINOIS		FED. AID PROJECT		



TYPICAL FRONT ELEVATION
 With lights and handrail omitted for clarity.
 For Section B-B, see Base Sheet 05-A-10.



PLAN WALKWAY AND HANDRAIL SKETCH
 (Road plan beneath truss varies)



SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints.
 Place all sign and walkway brackets as close to panel points as practical.
 Handrail joints, grating, and light support splices placed as needed.

BRACKET TABLE

Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Notes:
 * Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
 f = 12" maximum, 4" minimum (End of sign to ϕ of nearest bracket)
 g = 12" maximum, 4" minimum (End of walkway grating to ϕ of nearest support bracket)
 h = 6'-0" maximum (ϕ to ϕ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
 k = 2" maximum gap between adjacent walkway grating sections and handrail ends
 ** If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet 05-A-11.
 For Details T and W, Section B-B and Grating Splice Details see Base Sheet 05-A-10.
 For Handrail Details see Base Sheet 05-A-11.

Lighting is not included in this contract. Information shown on this sheet shall be used for truss grating, walkway grating, walkway supports, handrail, and sign brackets only.

Sign #	Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
Sign 5	1S0161094L047.5	460+57.35 (NB)	1.50'	74.58'	1.50'	0.00'	0.00'	74.58'

Truss grating to facilitate inspection shall run full length (center to center of support frames) $\pm 12"$ on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

Walkway and Truss Grating width dimensions are nominal and may vary $\pm 1/2"$ based on available standard widths.

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05-A-9 2-17-2017

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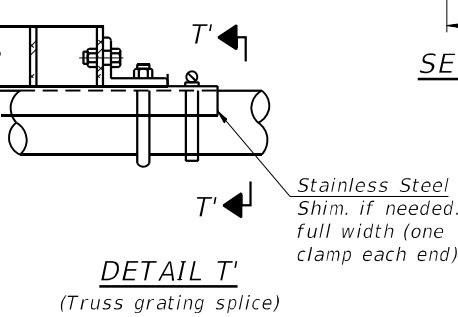
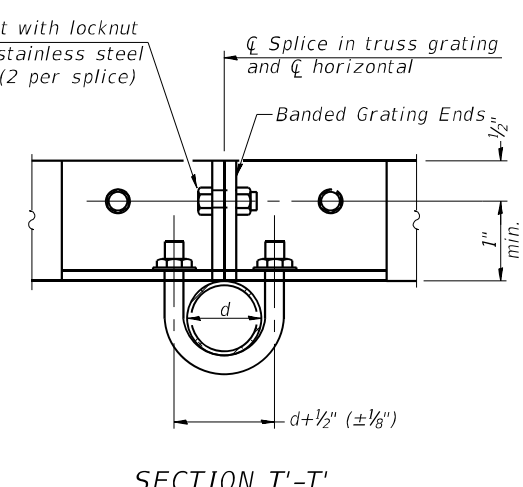
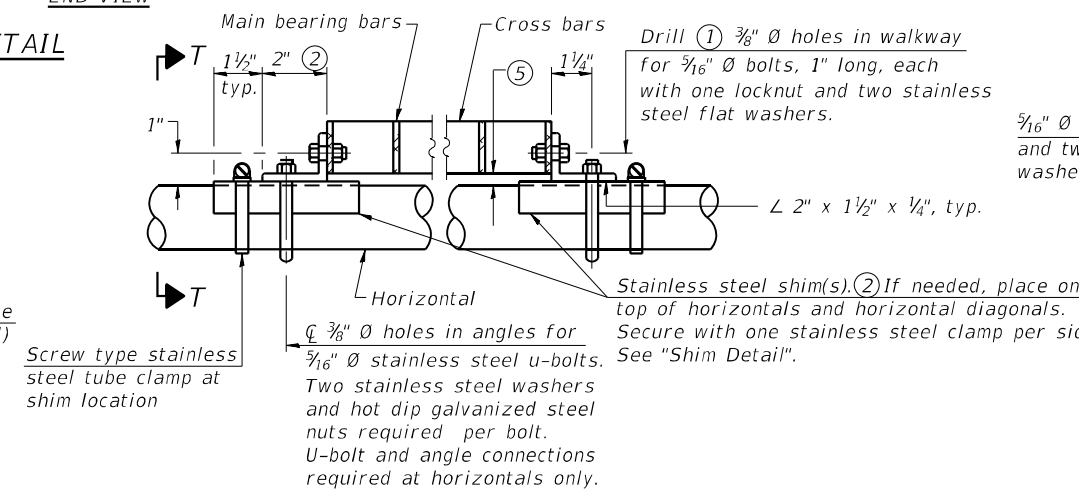
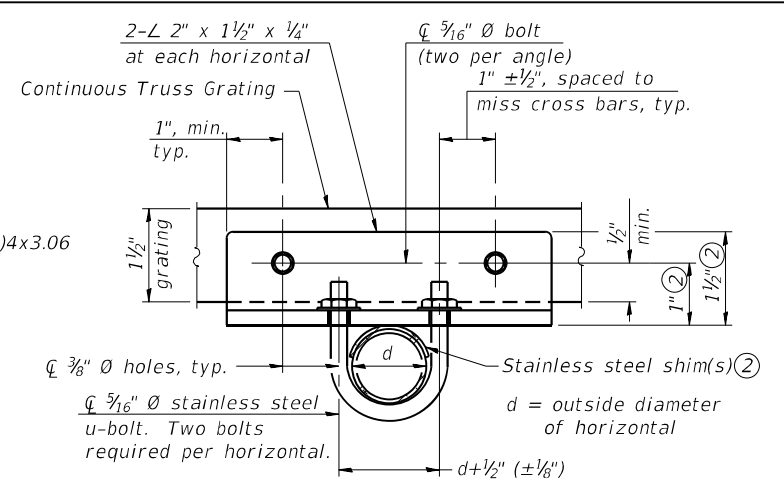
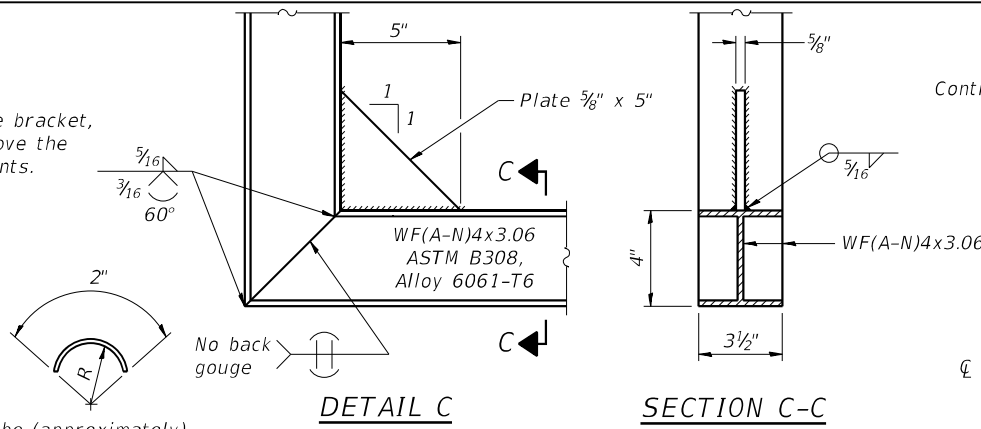
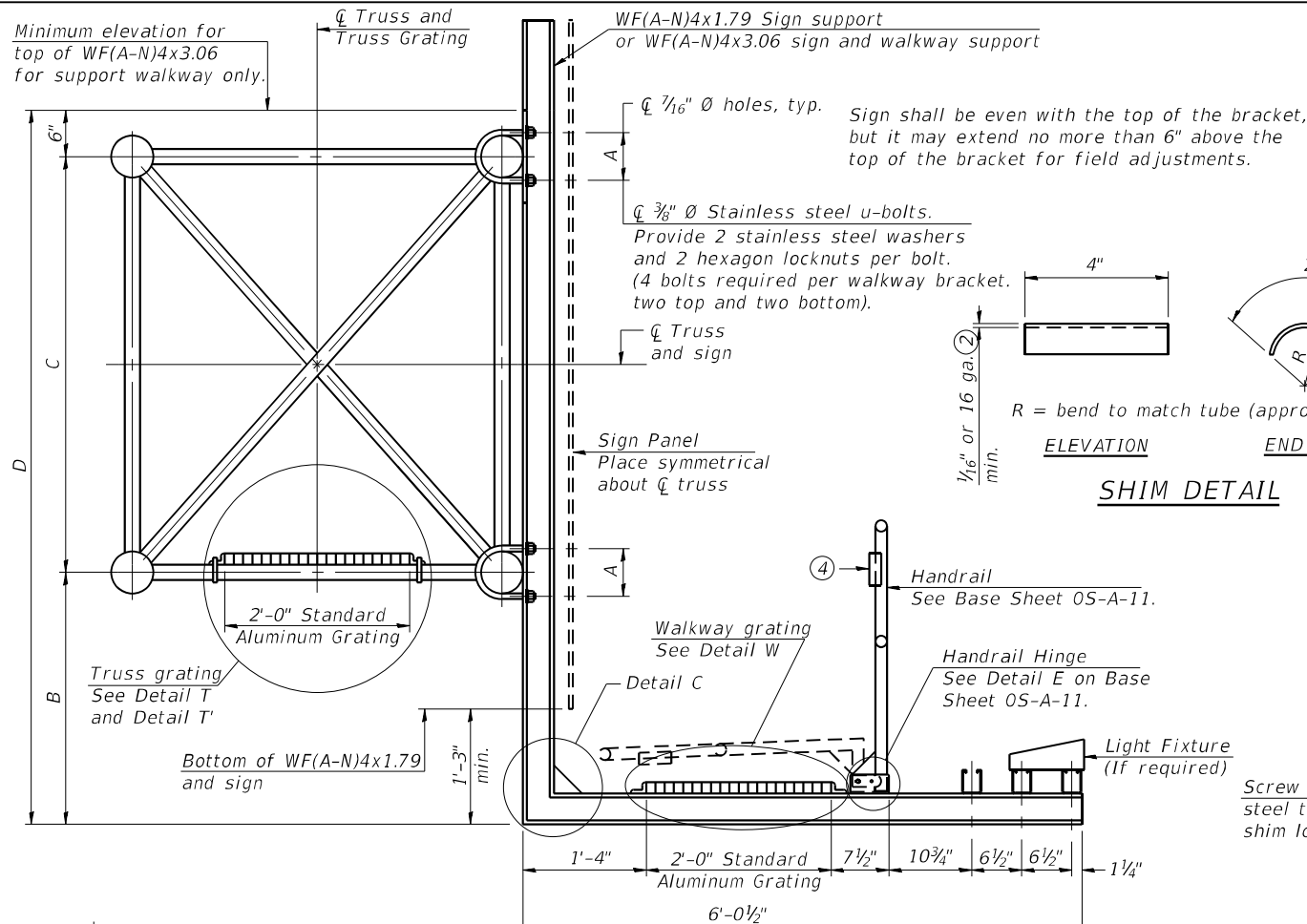
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS
 SN 1S0161094L047.5 (1 OF 3)**

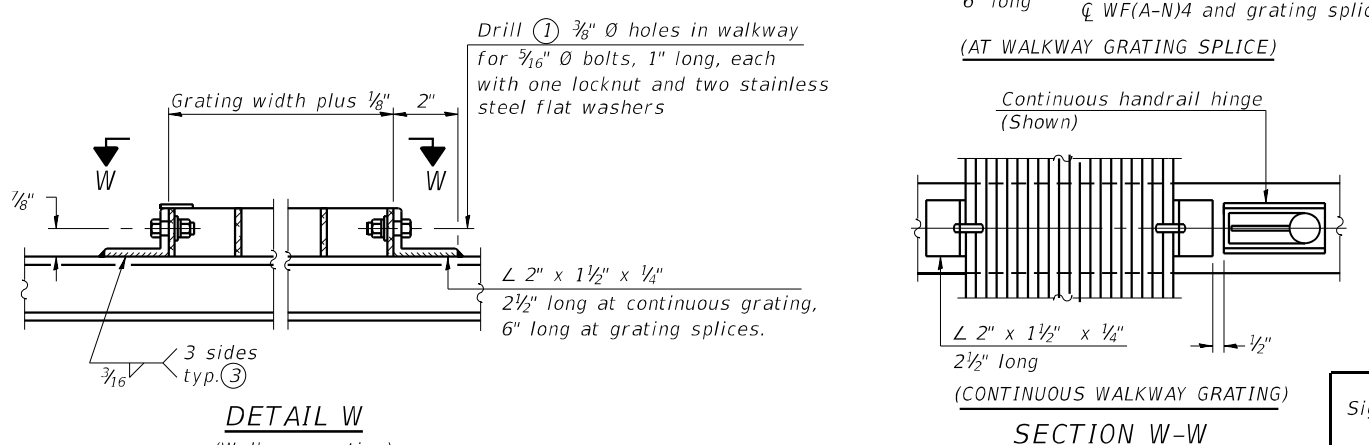
SHEET 9 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	447
CONTRACT NO. 62K74				

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DETAIL T'
(Truss grating splice)
Details not shown same as Detail T.
Alternate materials may be used subject to the Engineer's review and approval.



DETAIL W
(Walkway grating)

SECTION W-W
(CONTINUOUS WALKWAY GRATING)

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.
Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.
OR
Aluminum Grating with modified "t" sections for main bearing bars shall meet the following requirements:
Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

- ① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- ② Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- ③ If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)
- ④ R 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- ⑥ Based on actual height of tallest sign given on OS-A-1.

Sign #	Structure Number	Station	A	⑥ B	C	⑥ D
Sign 5	150161094L047.5	460+57.35 (NB)	7 3/8"	4'-7 1/4"	7'-0"	12'-1 1/4"

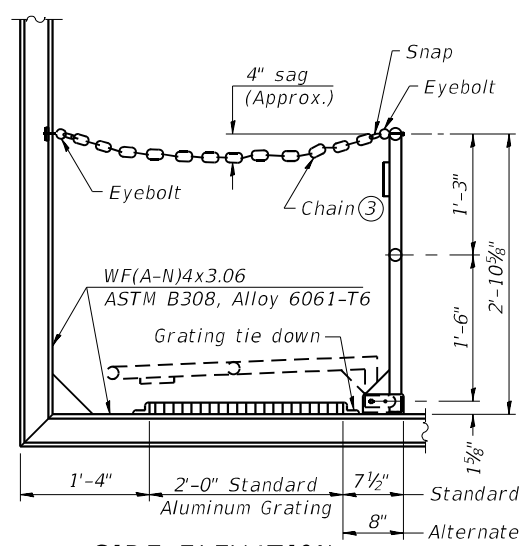
Lighting is not included in this contract. Information shown on this sheet shall be used for truss grating, walkway grating, walkway supports, handrail, and sign brackets only.

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Chicago, Illinois 60601
312-565-0450 Job No. 10805.03
OS-A-10 2-17-2017

USER NAME =	DESIGNED - WKK	REVISED -
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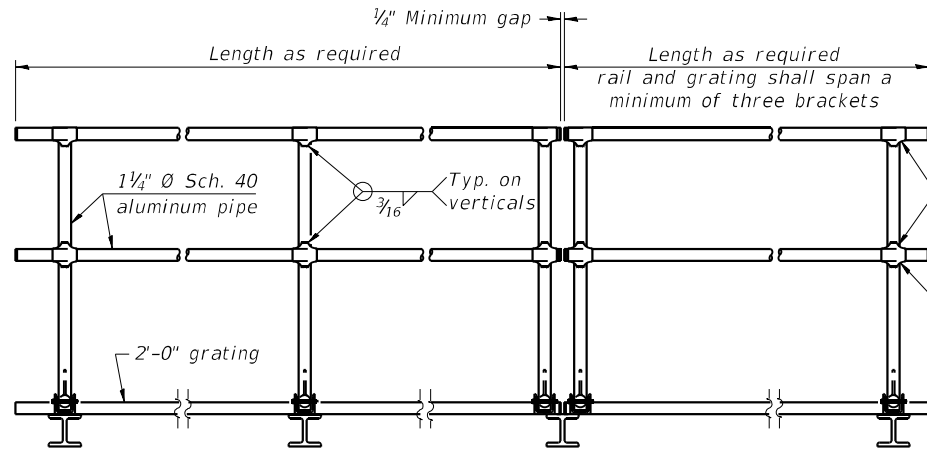
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS SN 150161094L047.5 (2 OF 3)			
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
90	2020-004-BR	COOK	1492	448			
CONTRACT NO. 62K74							
SHEET 10 OF 15 SHEETS							
ILLINOIS FED. AID PROJECT							

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SIDE ELEVATION

(Showing safety chain w/o sign)

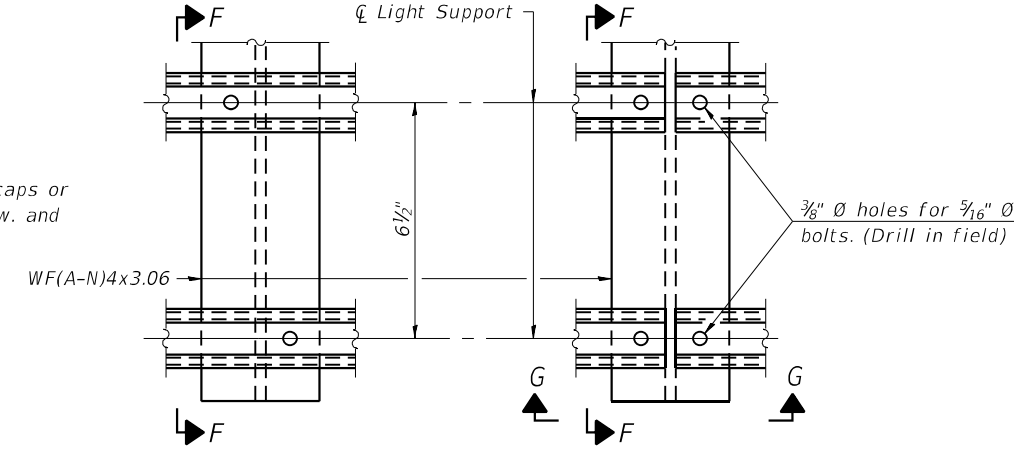


FRONT ELEVATION

HANDRAIL DETAILS

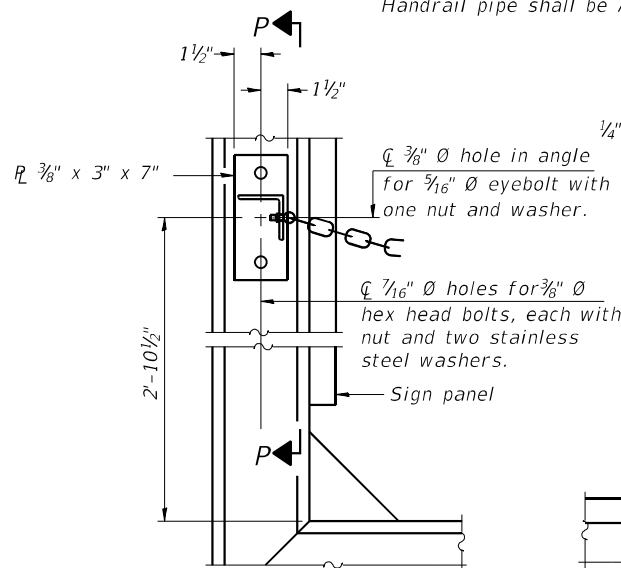
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

- ① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)
- ② Horizontal handrail member shall be continuous thru fitting. Provide 7/16" Ø hole in fitting for 3/8" Ø bolt. Field drill 7/16" Ø hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 7/16" Ø holes on top rail at ends only.)



DETAIL F

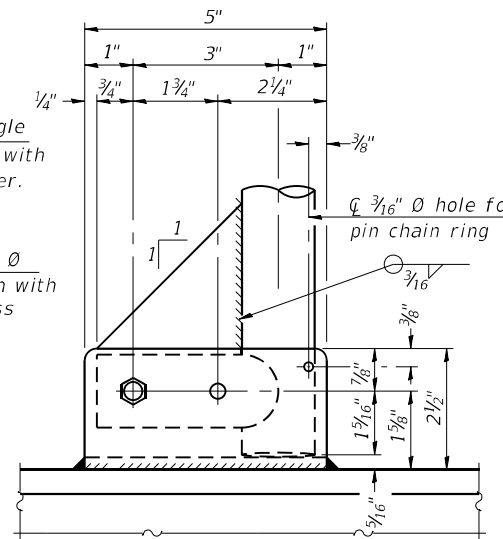
DETAIL G



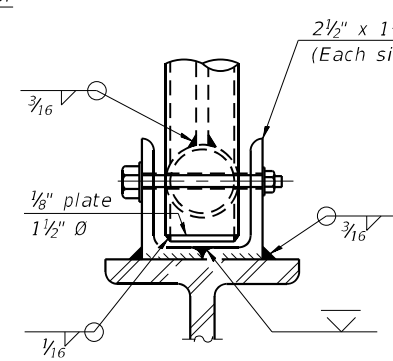
ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)

Items not shown same as "Side Elevation" of "Handrail Details"

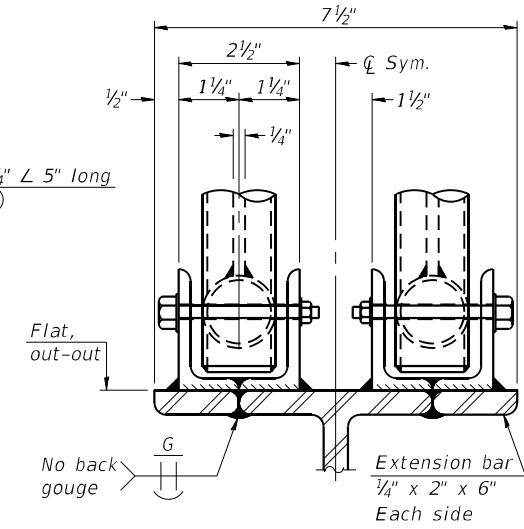


SIDE ELEVATION

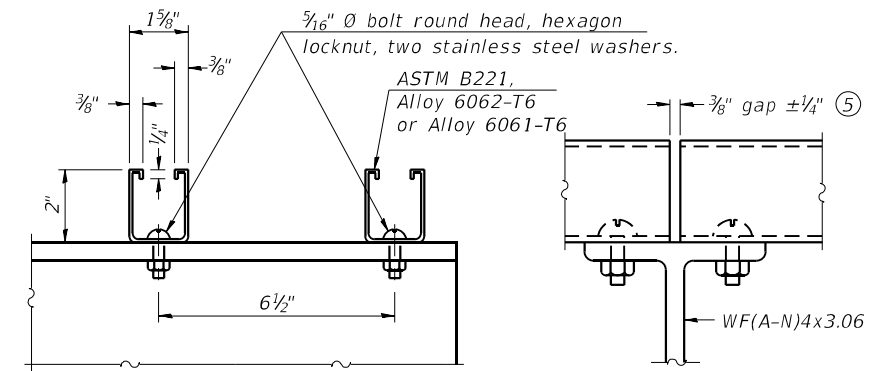


FRONT ELEVATION

See "Elevation" at right for dimensions.



ELEVATION AT HANDRAIL JOINT ④

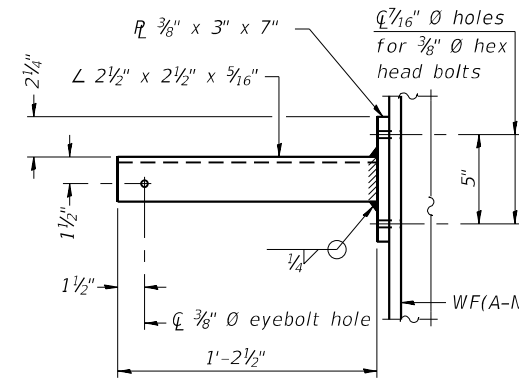


SECTION F-F

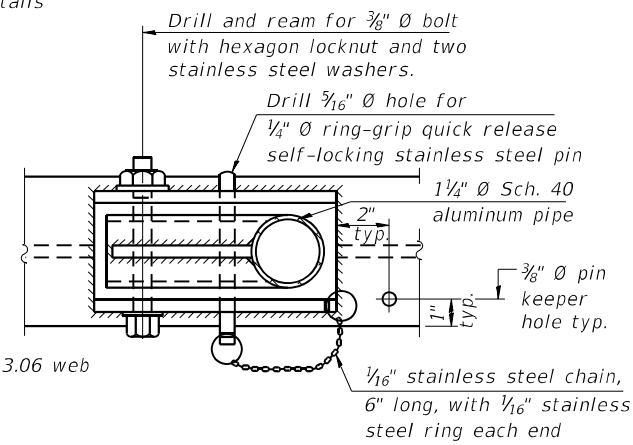
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

- ⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

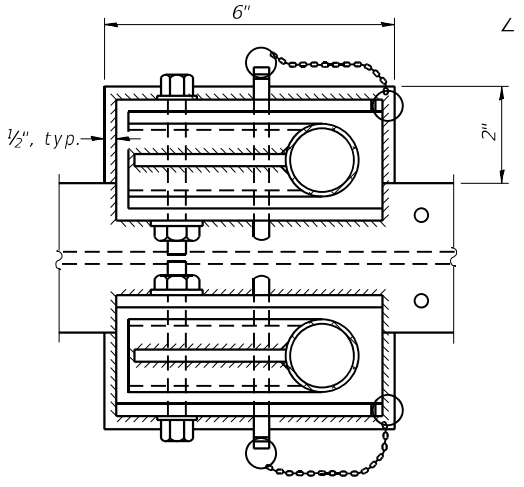


SECTION P-P



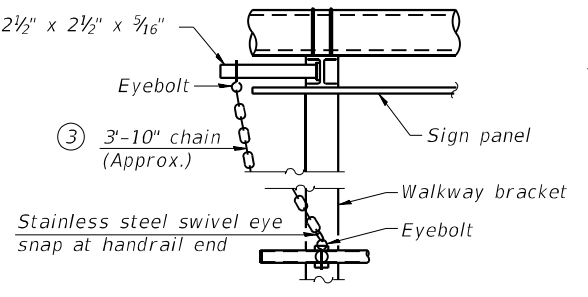
PLAN

DETAIL E HANDRAIL HINGE



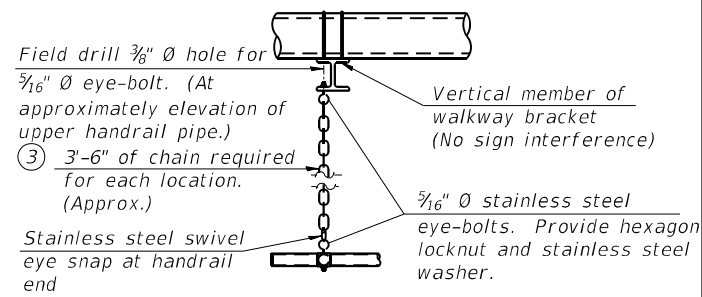
PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT

Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)



SAFETY CHAIN

One required for each end of each walkway.

- ③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.
- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.

Lighting is not included in this contract. Information shown on this sheet shall be used for truss grating, walkway grating, walkway supports, handrail, and sign brackets only.

MODEL: Default
FILE NAME: p:\w\benesch-pw-bentley.com\benesch-pw-01\Documents\10805.03\Eng_Docs_Phase_1\Overhead_Span_Sign_Structures\Final\Sign_510517_all_alum_walk_det_47.5_003.dgn

Alfred Benesch & Company
35 West Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10805.03

05-A-11 2-17-2017

USER NAME =	DESIGNED - WKK	REVISED -
PLOT SCALE =	CHECKED - JHG	REVISED -
PLOT DATE =	DRAWN - RMG	REVISED -
	CHECKED - WKK	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

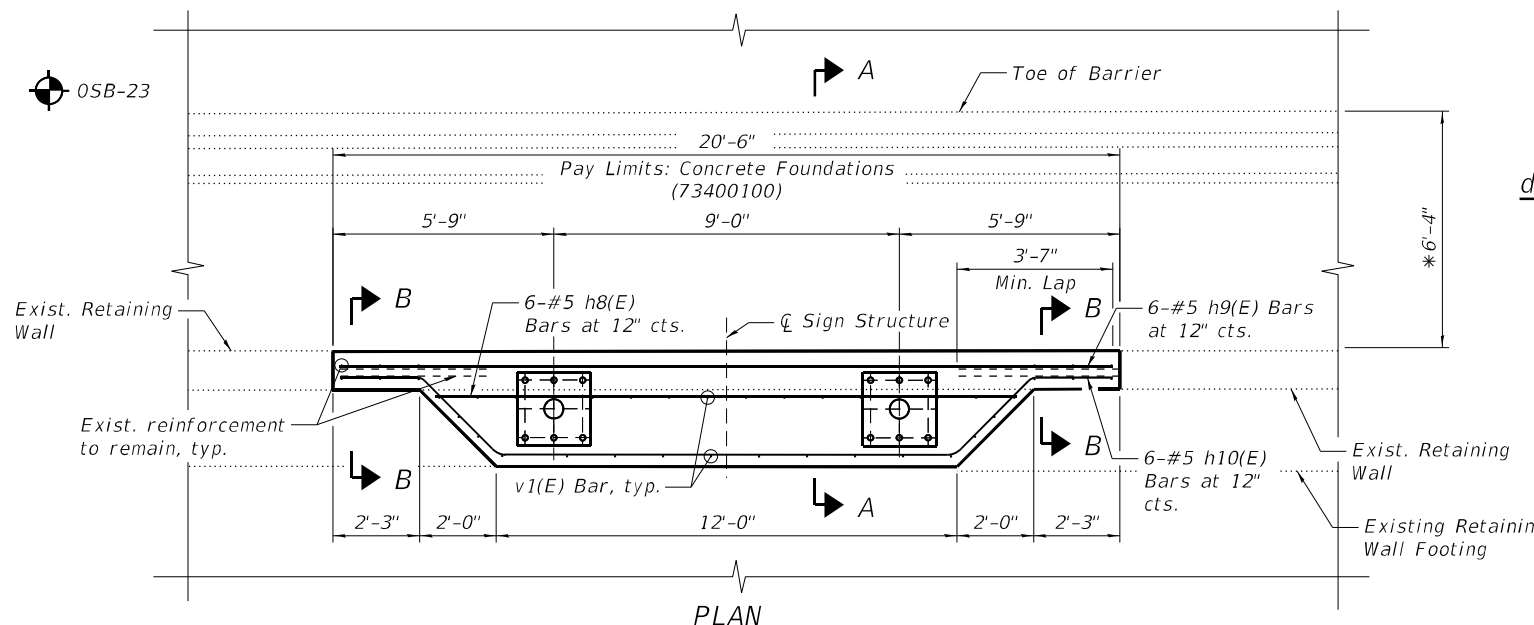
**ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS
SN 1S0161094L047.5 (3 OF 3)**

SHEET 11 OF 15 SHEETS

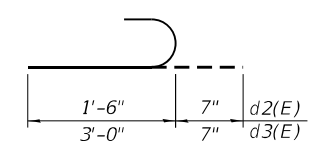
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	449
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

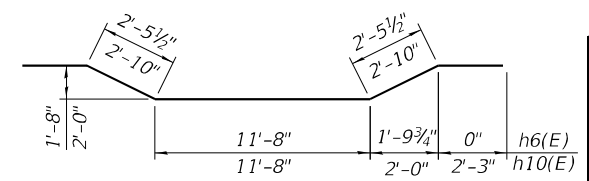
Bar	No.	Size	Length	Shape
d2(E)	11	#5	2'-1"	U
d3(E)	17	#5	3'-7"	U
h6(E)	5	#5	16'-8"	U
h7(E)	5	#5	15'-6"	U
h8(E)	6	#5	15'-6"	U
h9(E)	6	#5	20'-2"	U
h10(E)	6	#5	21'-10"	U
v1(E)	34	#5	10'-4"	U
Reinforcement Bars, Epoxy Coated			Pound	990
Concrete Foundations			Cu. Yd.	15.1



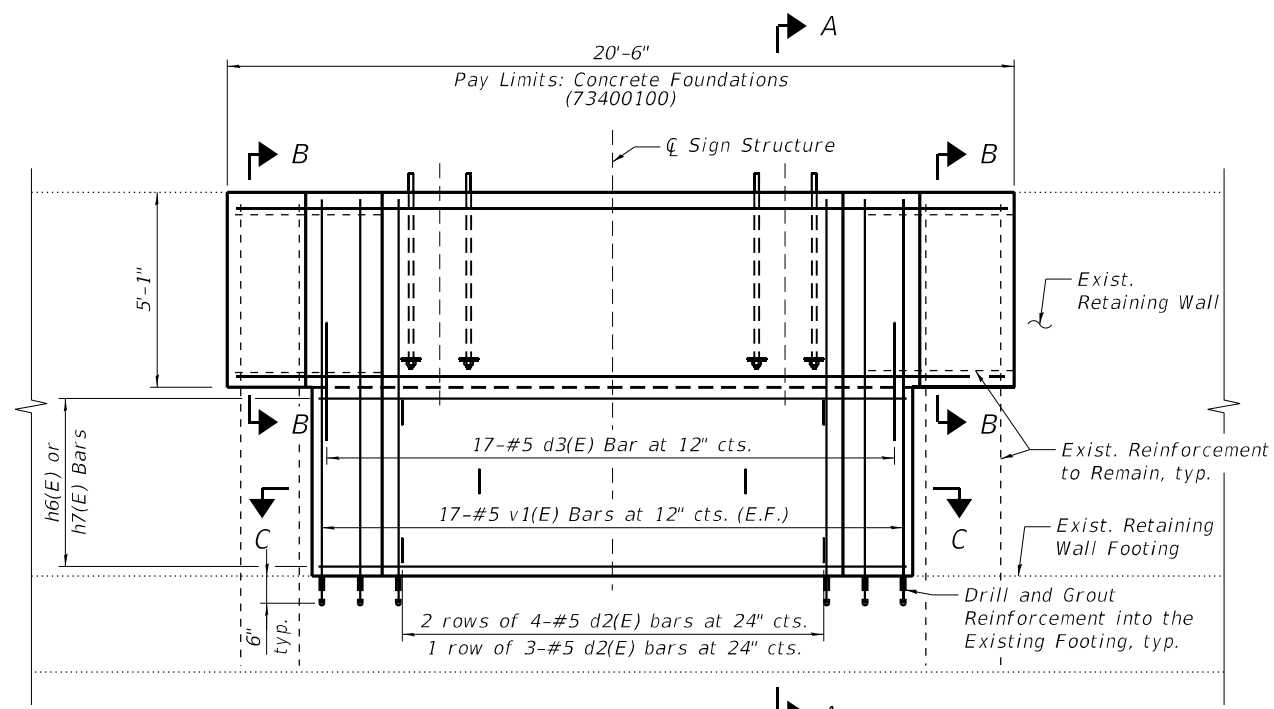
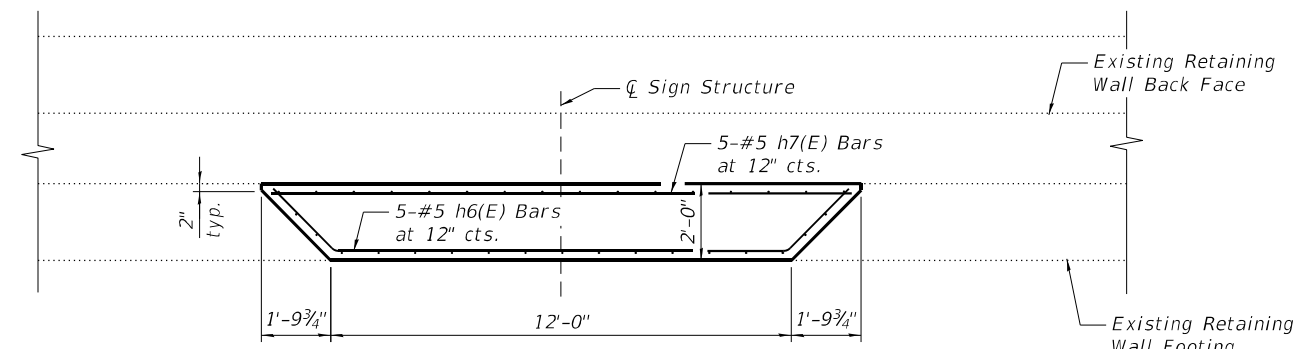
d2(E) and d3(E) BARS



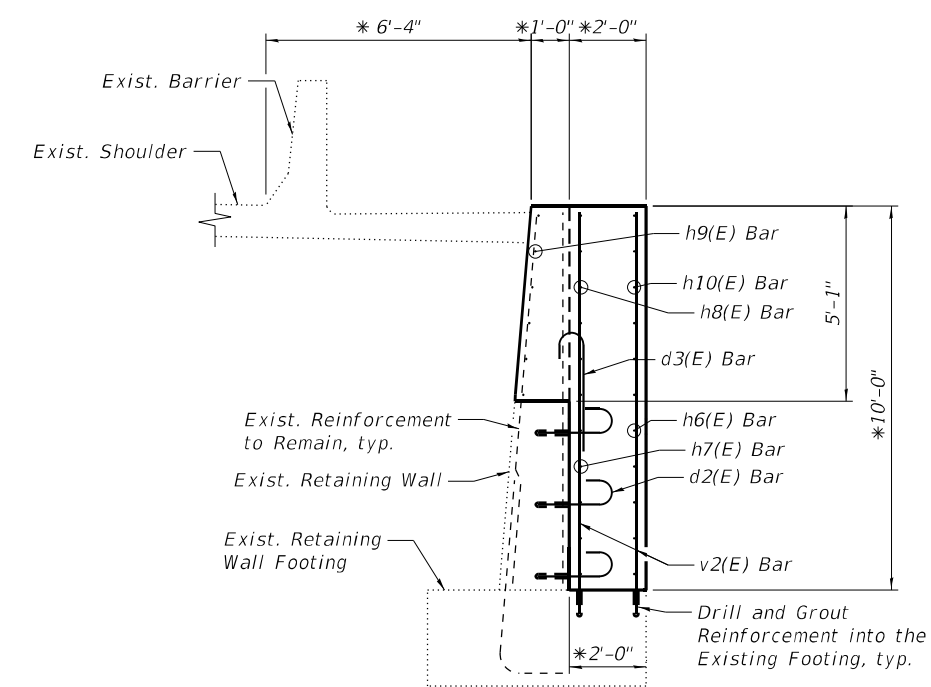
h6(E) and h10(E) BARS



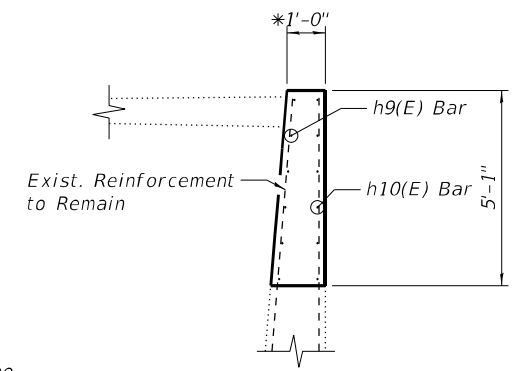
* Verify dimensions in field match existing.



**RETAINING WALL AT I-90/94
SIGN TRUSS FOUNDATION - SIGN 5 - 1S016I094L047.5**



SECTION A-A



SECTION B-B

NOTES:

1. Reinforcement bars, dowels, and drilling and grouting are included with pay item "Concrete Foundations".
2. Boring locations are not shown to scale.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RETAINING WALL SUPPORT FOUNDATION DETAILS
SN 1S016I094L047.5**

SHEET 12 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	450
CONTRACT NO. 62K74				

ILLINOIS FED. AID PROJECT

benesch
Alfred Benesch & Company
35 West Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10805.03

USER NAME =	DESIGNED - WKK	REVISED -
PLOT SCALE =	CHECKED - JHG	REVISED -
PLOT DATE =	DRAWN - RMG	REVISED -
	CHECKED - WKK	REVISED -

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* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

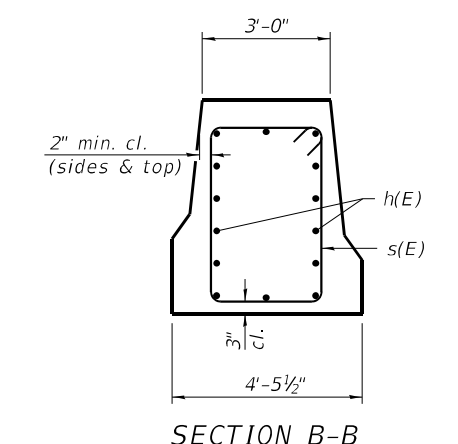
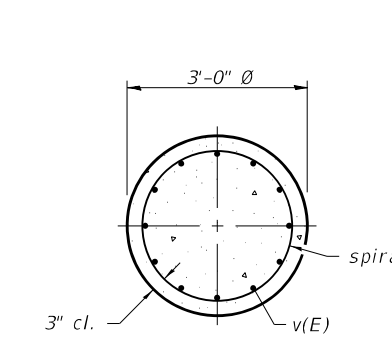
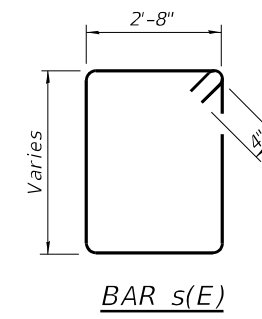
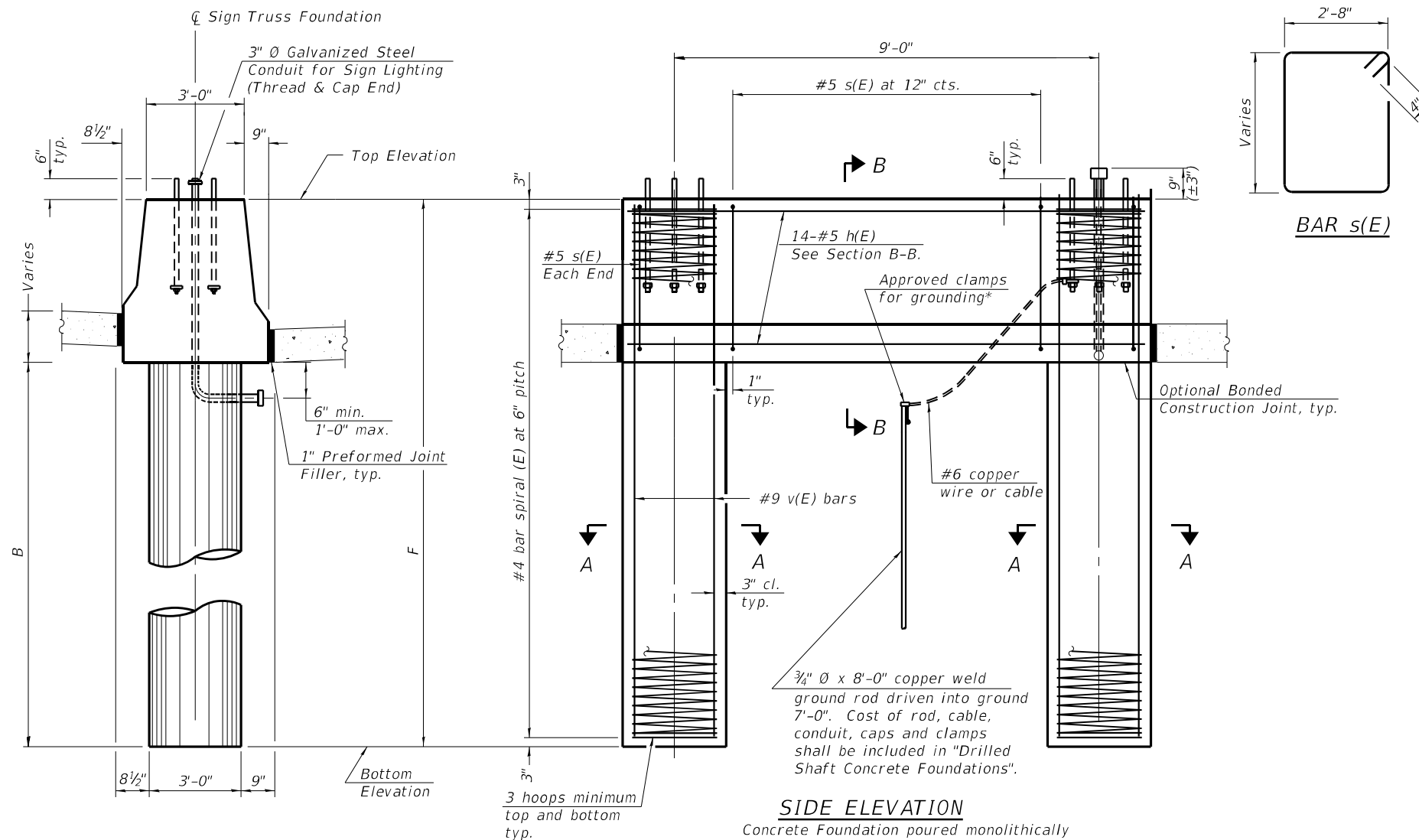
Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
h(E)	14	#5	11'-8"	—
s(E)	Varies	#5	Varies	□
v(E)	24	#9	22'-7"	—
#4(E) bar spiral. See Side Elevation				

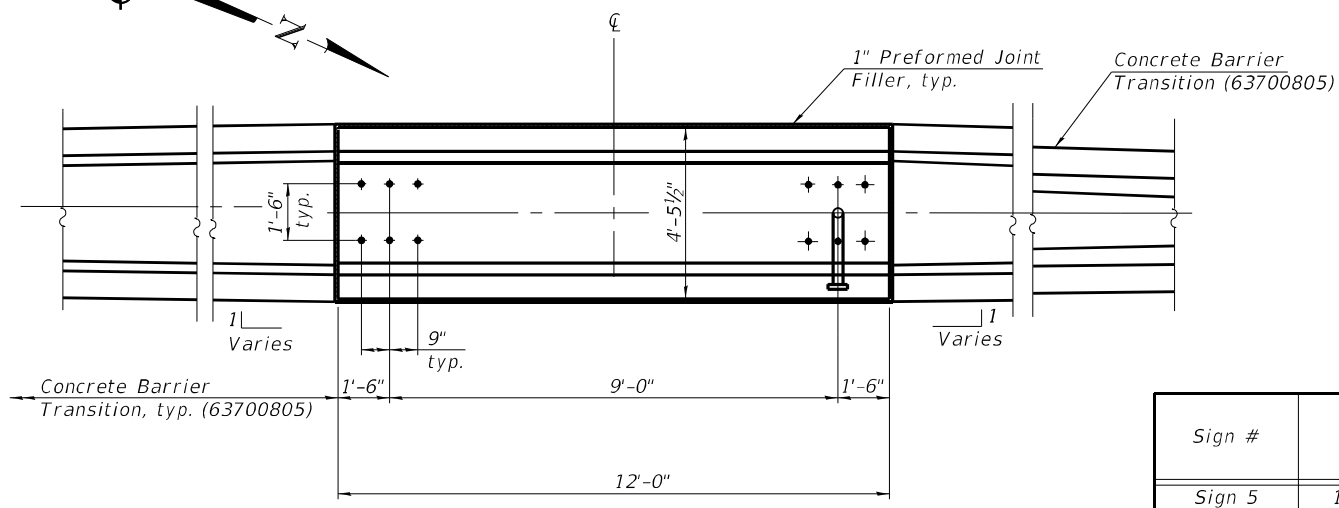


END VIEW

OSB-22



SIDE ELEVATION
Concrete Foundation poured monolithically with no construction joint.



Sign #	Structure Number	Station	Left Foundation				Right Foundation				Class DS Concrete (Cu. Yds.)
			Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	
Sign 5	1S0161094L047.5	460+57.35	616.00	593.00	18'-0"	23'-0"					17.5

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35 West Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10805.03

USER NAME =	DESIGNED - WKK	REVISED -
CHECKED - JHG	REVISED -	
PLOT SCALE =	DRAWN - RMG	REVISED -
PLOT DATE =	CHECKED - WKK	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

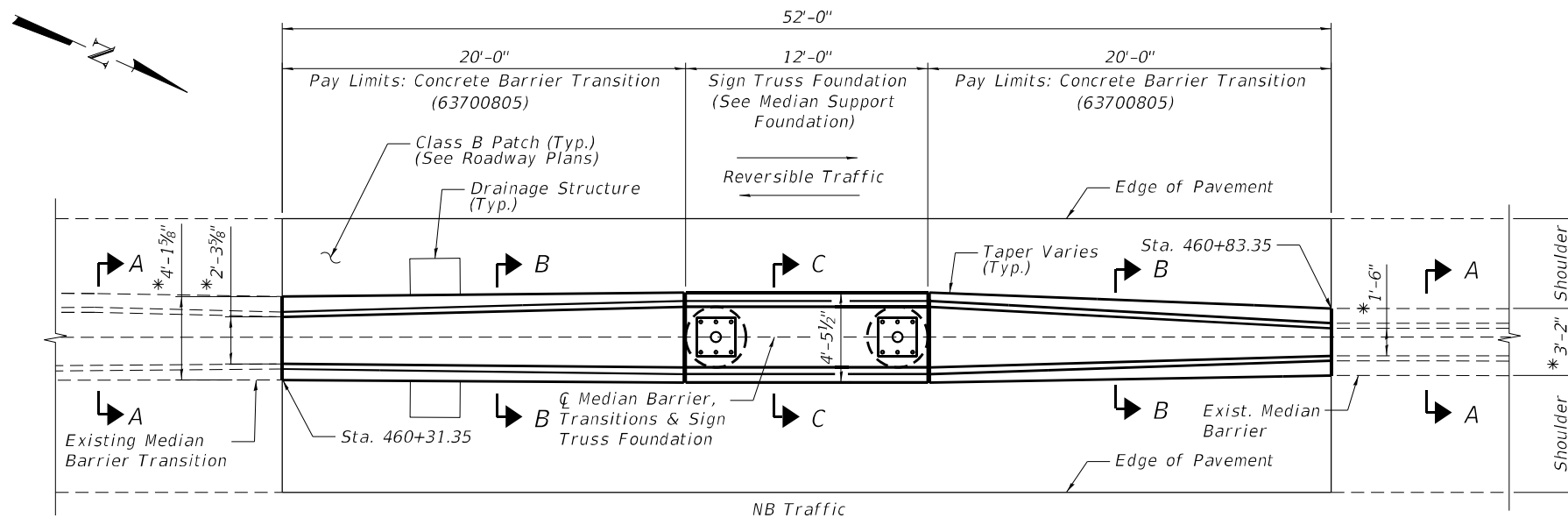
**MEDIAN SUPPORT FOUNDATION DETAILS
SN 1S0161094L047.5**

SHEET 13 OF 15 SHEETS

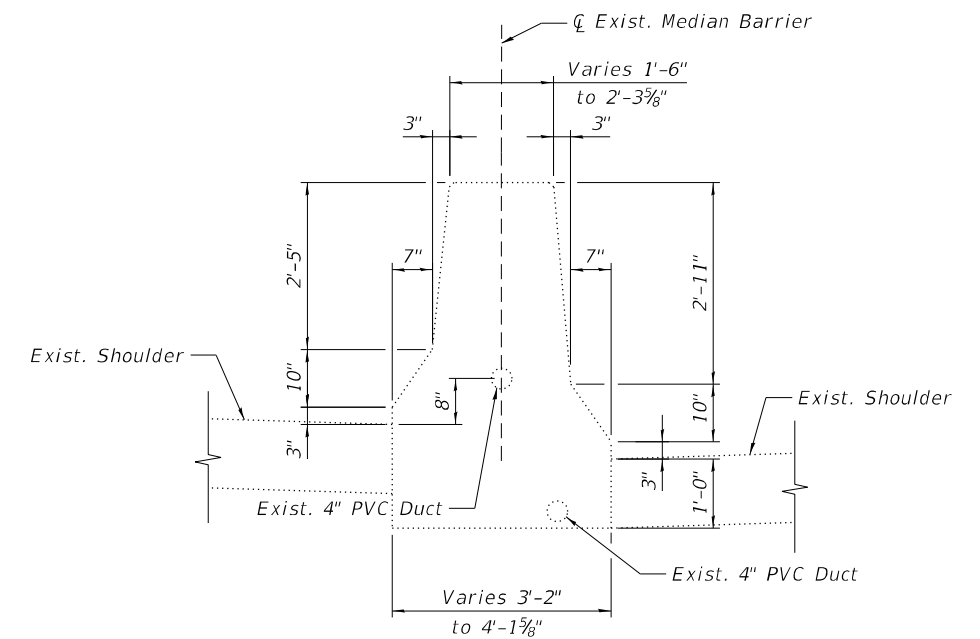
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	451
CONTRACT NO. 62K74				

ILLINOIS FED. AID PROJECT

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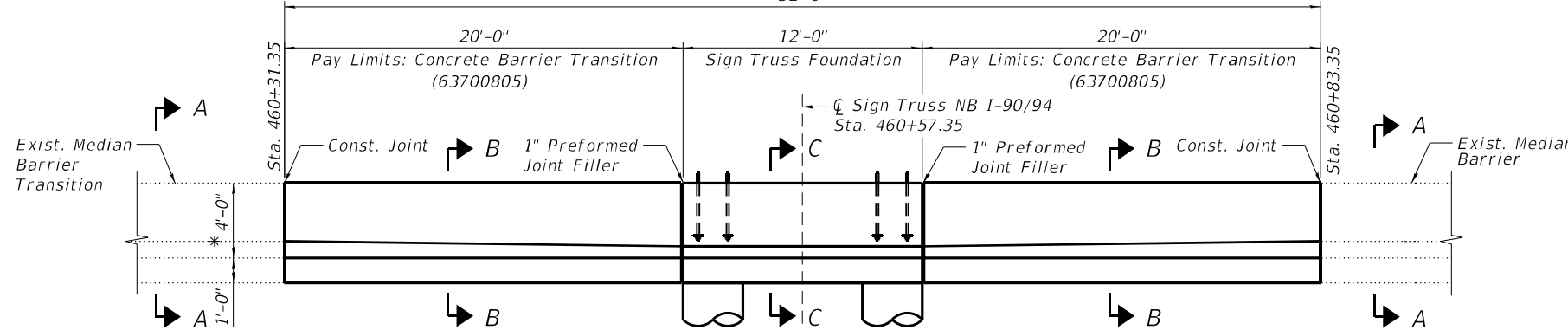


PLAN



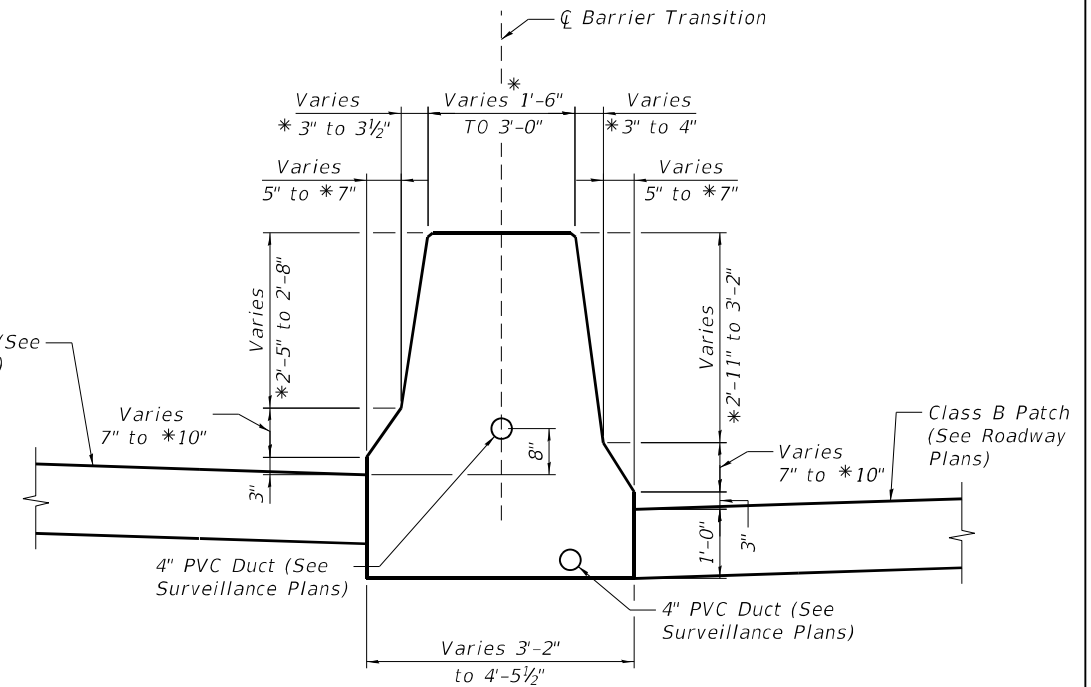
SECTION A-A

(Verify all existing dimensions in field)



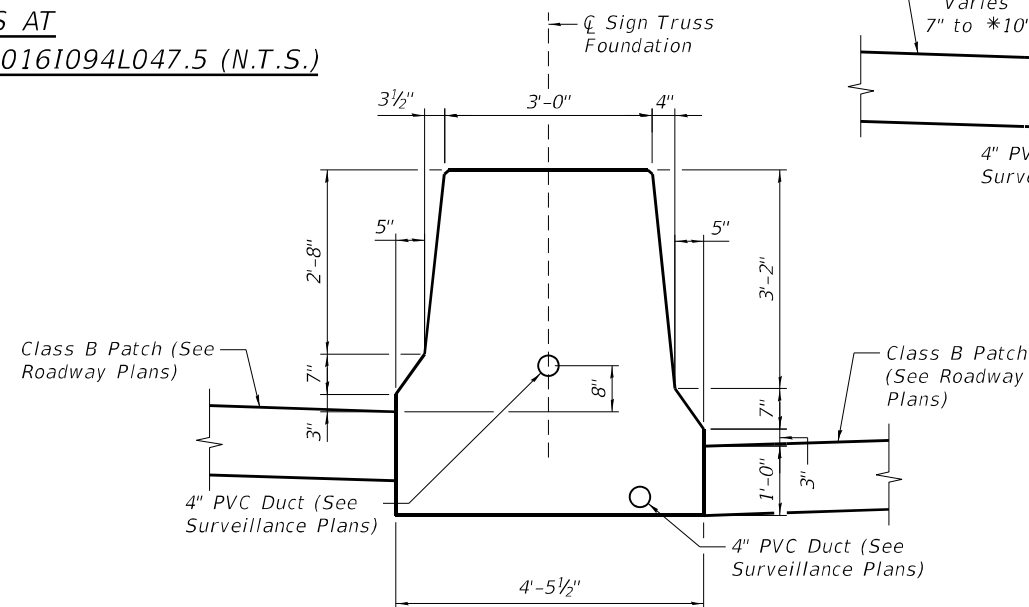
ELEVATION

MEDIAN BARRIER TRANSITIONS AT I-90/94 SIGN TRUSS FOUNDATION - SIGN 5 - 1S0161094L047.5 (N.T.S.)



SECTION B-B

(Verify all existing dimensions in field)



SECTION C-C

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Barrier Transition	FOOT	40

MODEL: Default
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benesch
Alfred Benesch & Company
35 West Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10805.03

USER NAME =	DESIGNED - WKK	REVISED -
	CHECKED - JHG	REVISED -
PLOT SCALE =	DRAWN - RMG	REVISED -
PLOT DATE =	CHECKED - WKK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MEDIAN BARRIER TRANSITION DETAILS
SN 1S0161094L047.5

SHEET 14 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	452
CONTRACT NO. 62K74				

ILLINOIS FED. AID PROJECT



SOIL BORING LOG

GSI Job No. 19079-B

Page 1 of 2

Date 10/20/21

PROJECT PTB 185-012, WO #32

LOCATION I-90 & I-94 Tollway

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

CLIENT HBM

BORING NO. OSB-22

Northing 1916027

Easting 1161157

Ground Surface Elev. 612.1 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UNIFIED SOIL CLASSIFICATION	MOISTURE (%)	COMPACTION (%)
0				
10				
9				
6				
609.1				
2				
1				
1				
608.6				
3				
8				
8				
3				
4				
6				
-10				
3				
4				
7				
4				
8				
7				
-15				
3				
4				
6				
2				
3				
7				
-20				

DEPTH (ft)	BLOW COUNT (blows/ft)	UNIFIED SOIL CLASSIFICATION	MOISTURE (%)	COMPACTION (%)
0				
3				
4				
9				
589.1				
4				
6				
9				
-25				
588.6				
5				
5				
5				
4				
4				
6				
▼30				
3				
4				
6				
-30				
4				
6				
5				
4				
6				
5				
572.1				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

GSI Job No. 19079-B

Page 2 of 2

Date 10/20/21

PROJECT PTB 185-012, WO #32

LOCATION I-90 & I-94 Tollway

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

CLIENT HBM

BORING NO. OSB-22

Northing 1916027

Easting 1161157

Ground Surface Elev. 612.1 ft

DEPTH (ft)	BLOW COUNT (blows/ft)	UNIFIED SOIL CLASSIFICATION	MOISTURE (%)	COMPACTION (%)
0				
3				
4				
9				
589.1				
4				
6				
9				
-25				
588.6				
5				
5				
5				
4				
4				
6				
▼30				
3				
4				
6				
-30				
4				
6				
5				
4				
6				
5				
572.1				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

MODEL: Default
FILE NAME: pw:\benesch-pw-bentley.com\benesch-pw-01\Documents\10805.03\Eng_Docs_Phase_1\Overhead_Span_Sign_Structures\Final\Sign_50524_bor_logs.dgn



Alfred Benesch & Company
35 West Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10805.03

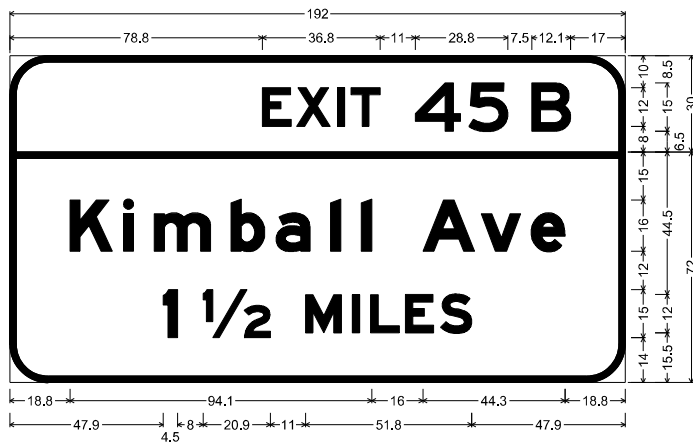
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PLOT SCALE =	CHECKED - JHG	REVISED -
PLOT DATE =	DRAWN - RMG	REVISED -
	CHECKED - WKK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
SN 1S016I094L047.5

SHEET 15 OF 15 SHEETS

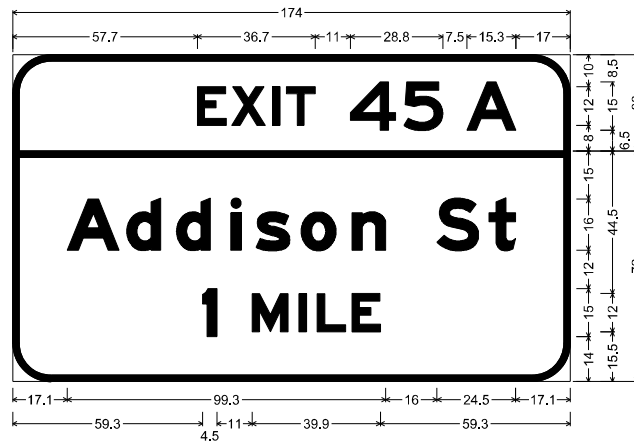
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	453
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "45", E 2K; "B", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "Kimball Ave", E Mod 2K; "1", E Mod 2K; "1/2", E Mod 2K; "MILES", E Mod 2K;
 Table of letter and object lefts

E	X	I	T	4	5	B			
78.8	89.5	102.3	106.6	126.6	143.2	162.9			
K	i	m	b	a	l	l	A	v	e
18.8	35.4	45.0	69.0	83.1	100.1	109.7	128.9	147.1	162.6
1	1/2	M	I	L	E	S			
47.9	60.4	92.3	106.8	112.6	123.4	134.4			

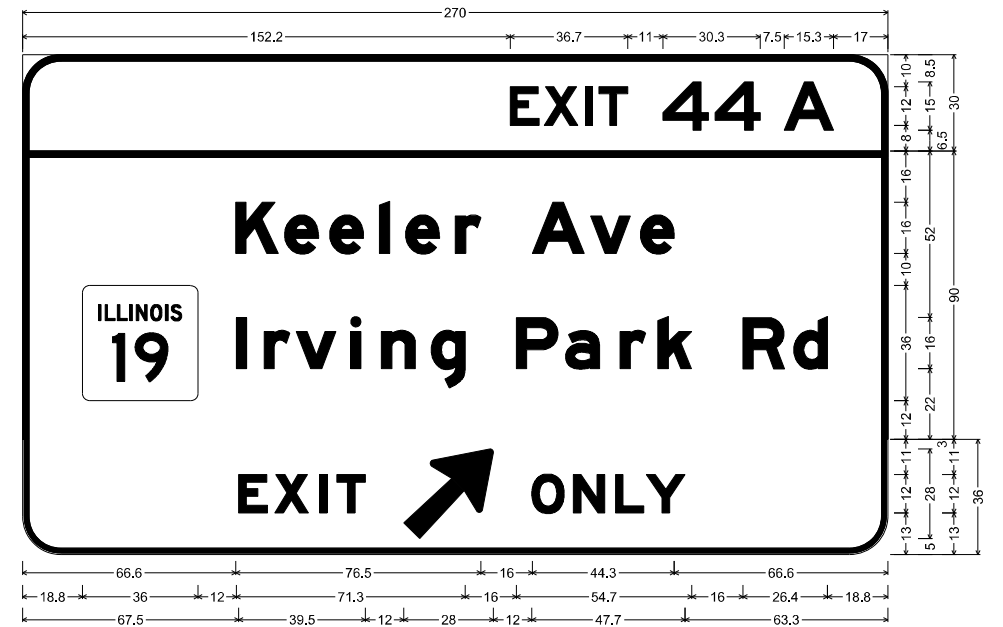
STRUCTURE NUMBER	1S016I094R044.2-00016
WIDTH x HEIGHT	16'-0" x 8'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE



E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "45", E 2K; "A", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "Addison St", E Mod 2K; "1", E Mod 2K; "MILE", E Mod 2K;
 Table of letter and object lefts

E	X	I	T	4	5	A		
57.7	68.4	81.2	85.4	105.4	122.1	141.7		
A	d	d	t	s	o	n	S	t
17.1	35.8	51.2	68.1	76.0	90.0	105.9	132.4	148.6
1	M	I	L	E				
59.3	74.8	89.3	95.0	105.8				

STRUCTURE NUMBER	1S016I094R044.2-000
WIDTH x HEIGHT	14'-6" x 8'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE



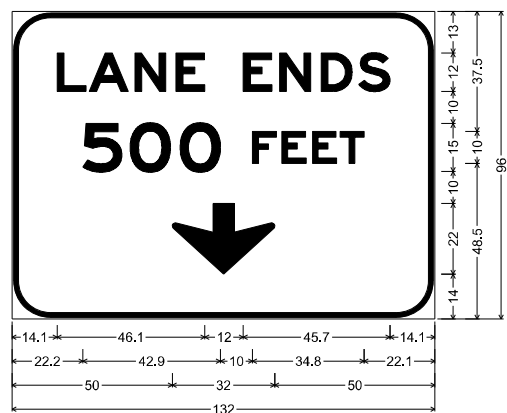
E1-5P(3)_138x30;
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 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "Keeler Ave", E Mod 2K; "Irving Park Rd", E Mod 2K;

E1-1-d_174x36;
 12.0" Radius, 1.5" Border, 0.5" Indent, Black on, Yellow;
 "EXIT", E Mod 2K specified length; Arrow Custom - 35.6" 45"; "ONLY", E Mod 2K specified length;

Table of letter and object lefts

E	X	I	T	4	4	A						
152.2	162.9	175.7	179.9	199.9	216.1	237.7						
K	e	e	e	r	A	v	e					
66.6	81.8	95.9	111.4	119.6	135.1	159.1	177.3	192.8				
18.8	66.8	75.4	85.5	102.4	112.0	127.6	154.1	169.5	186.4	198.3	224.8	240.7
E	X	I	T	O	N	L	Y					
67.5	78.8	92.7	98.2	119.0	159.0	171.9	185.0	194.6				

STRUCTURE NUMBER	1S016I094R044.2-000
WIDTH x HEIGHT	22'-6" x 13'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE



W19-1_MOD;
 1.5" Border, 0.5" Indent, Black on, Yellow;
 "LANE ENDS", E 2K; "500", E 2K; "FEET", E 2K;
 Down Arrow 22.0" 270";

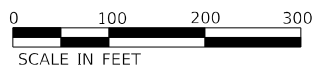
Table of letter and object lefts

L	A	N	E	E	N	D	S
14.1	24.1	38.3	51.2	72.2	83.6	96.4	108.2
5	0	0	F	E	E	T	
22.2	36.9	52.5	75.1	84.3	93.8	102.4	
50.0							

STRUCTURE NUMBER	1S016I094R044.2-000
WIDTH x HEIGHT	11'-0" x 8'-0"
BORDER WIDTH	1.5"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE

SYMBOL	ROT	X	Y	WID	HT
AR_TYPE A	315	-	-	22.3	35.6
AR_DOWN	0	-	-	32	22

NOTE:
 ALL ARROWS (DOWN OR 45°) USED
 ON OVERHEAD SIGNS SHALL BE
 DEMOUNTABLE AND INCLUDED IN
 THE COST OF THE SIGN PANEL.



FILE NAME = par\VANVAQIP\INT\Illinois State Documents\DOT_HBM_Task_Order\Work_Order_12_Bg_1-9881ash94_Sign_Replacements\40_Sign_Replacements\190_Signing_sht_Bldg



USER NAME = 35361
 PLOT SCALE =
 PLOT DATE = 7/5/2022

DESIGNED - JAB
 CHECKED - HAA
 DRAWN - JAB
 DATE - 06/10/2022

REVISED -
 REVISED -
 REVISED -
 REVISED -

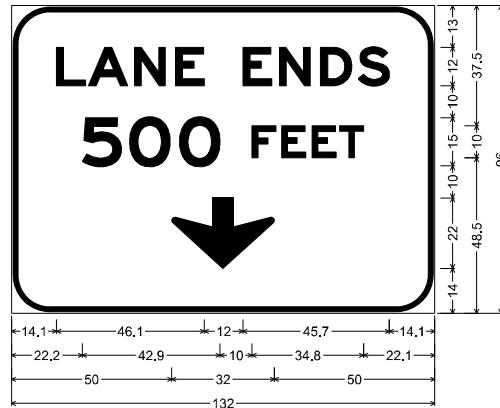
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SIGN PANEL DETAIL
 SIGN 1 S.N. 1S016I094R044.2-000

SHEET OF SHEETS

F.A.U. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	454
CONTRACT NO. 62K74			ILLINOIS FED. AID PROJECT	

FILE NAME = par\VAN\QIP\INT\Illinois_State\Documents\Illinois_State\Documents\DOT_HBM_Task_Order\Work_Order_12.dwg 1-98‐1‐94_Sign_Replacements\40 - Design\CAD\Signs\Sheets\190_Signing_sht.dwg



W19-1_MOD:
 1.5" Border, 0.5" Indent, Black on, Yellow;
 "LANE ENDS", E 2K; "500", E 2K; "FEET", E 2K;
 Down Arrow 22.0" 270";

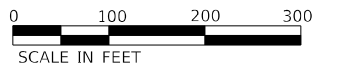
Table of letter and object lefts

L	A	N	E	E	N	D	S
14.1	24.1	38.3	51.2	72.2	83.6	96.4	108.2
S	O	O	F	E	E	T	
22.2	36.9	52.5	75.1	84.3	93.8	102.4	
↓							
50.0							

STRUCTURE NUMBER	1C016I094L043.7-000
WIDTH x HEIGHT	11'-0" x 8'-0"
BORDER WIDTH	1.5"
CORNER RADIUS	12"
MOUNTING	OVERHEAD / CANTILEVER
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE

SYMBOL	ROT	X	Y	WID	HT
AR_DOWN	0	-	-	32	22

NOTE:
 ALL ARROWS (DOWN OR 45°) USED
 ON OVERHEAD SIGNS SHALL BE
 DEMOUNTABLE AND INCLUDED IN
 THE COST OF THE SIGN PANEL.



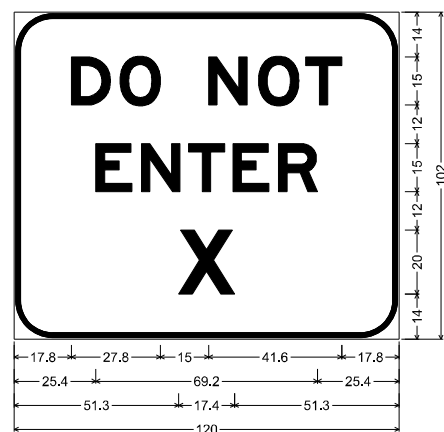
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	CHECKED - HAA	REVISED -
PLOT SCALE =	DRAWN - JAB	REVISED -
PLOT DATE = 7/5/2022	DATE - 06/10/2022	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SIGN PANEL DETAIL
 SIGN 2 S.N. 1C016I094L043.7-000

SHEET OF SHEETS

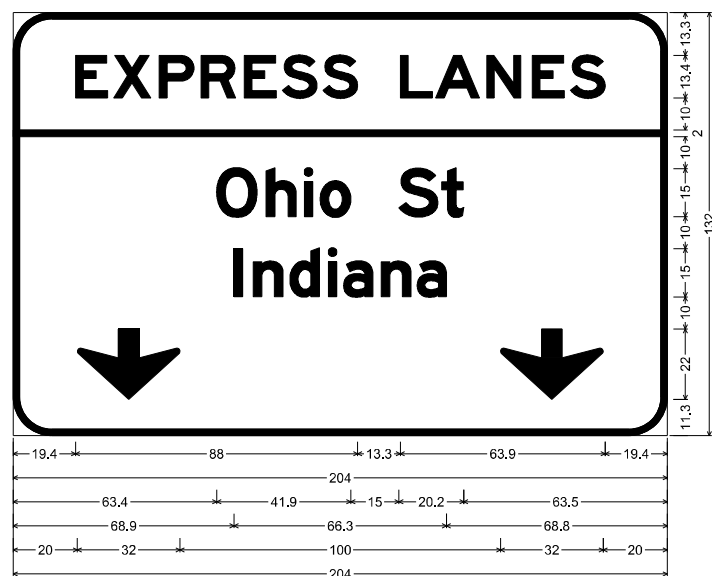
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	455
CONTRACT NO. 62K74			ILLINOIS FED. AID PROJECT	



12.0" Radius, 1.5" Border, 0.5" Indent, Black on, White;
 "DO NOT", E 2K; "ENTER", E 2K; "X" Red, E 2K;

Table of letter and object lefts

D	O	N	O	T
17.8	33.0	60.6	76.2	90.9
E	N	T	E	R
25.4	39.7	54.4	68.2	82.4
X				
51.3				

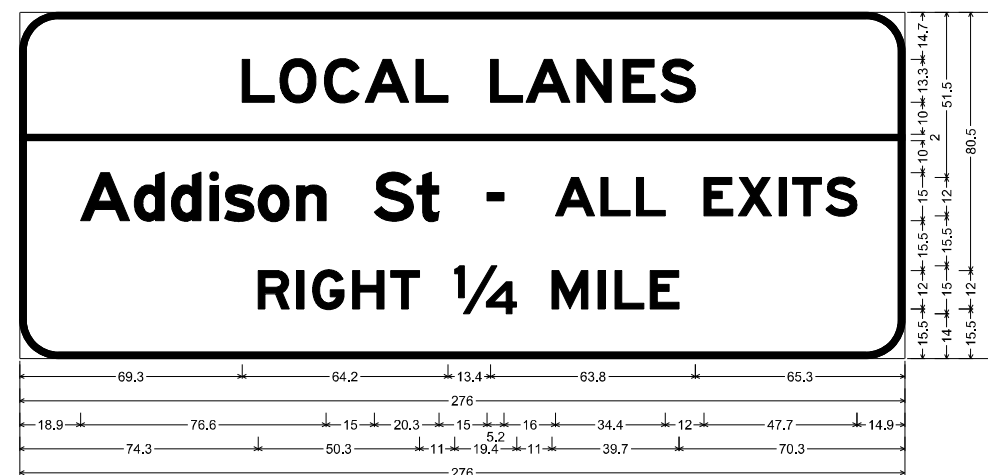


E8-8;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXPRESS LANES", E 2K; "Ohio St", E 2K; "Indiana", E 2K; Down Arrow 22 - 22.0" 270";
 Down Arrow 22 - 22.0" 270";

Table of letter and object lefts

E	X	P	R	E	S	S	L	A	N	E	S
19.4	31.3	45.5	58.6	72.1	83.9	96.6	120.7	131.8	147.7	161.9	173.8
0.0											
O	h	i	o	S	i						
63.4	78.9	90.8	95.7	120.3	133.7						
I	n	d	i	a	n	a					
68.9	74.9	86.3	98.3	103.1	114.8	126.0					
↓	↓										
20.0	152.0										

STRUCTURE NUMBER	1S016I094L046.8-000
WIDTH x HEIGHT	17'-0" x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE



E8-8;
 12.0" Radius, 2.0" Border, White on, Green;
 "LOCAL LANES", E 2K; "Addison St -", E 2K; "ALL EXITS", E 2K; "RIGHT", E 2K; "1/4", E 2K; "MILE", E 2K;

Table of letter and object lefts

L	O	C	A	L	L	A	N	E	S								
69.3	81.1	95.0	107.7	123.5	146.9	157.9	173.8	188.1	199.9								
0.0																	
A	d	d	i	s	o	n	S	t	-	A	L	L	E	X	I	T	S
18.9	35.7	47.2	59.2	63.9	74.4	86.2	110.5	123.9	145.8	167.0	181.3	192.4	213.4	224.0	236.9	241.1	251.4
R	I	G	H	T	1/4	M	I	L	E								
74.3	86.4	91.4	103.8	115.6	135.6	166.0	180.4	185.6	196.7								

STRUCTURE NUMBER	1S016I094L046.8-000
WIDTH x HEIGHT	23'-0" x 9'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE

STRUCTURE NUMBER	1S016I094L046.8-000
WIDTH x HEIGHT	10'-0" x 8'-6"
BORDER WIDTH	1.5"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE

SYMBOL	ROT	X	Y	WID	HT
AR_DOWN	0	-	-	32	22

NOTE:
 ALL ARROWS (DOWN OR 45°) USED
 ON OVERHEAD SIGNS SHALL BE
 DEMOUNTABLE AND INCLUDED IN
 THE COST OF THE SIGN PANEL.



FILE NAME = par\VAN\QIP\INT\Illinois_State\Documents\11001_HBM_Task_Order\Work_Order_12.dgn 1-988\11001.dgn - Design\CAD\Signs\Sheets\190_Signing_sht.dgn



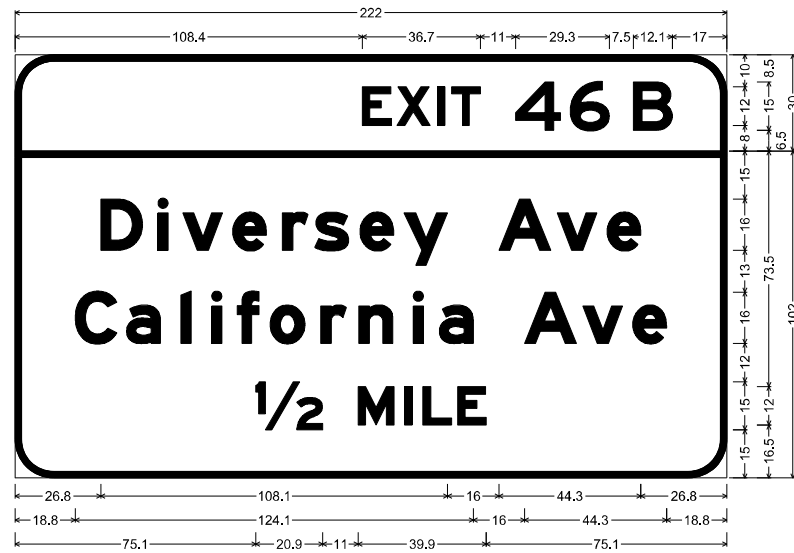
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PLOT SCALE =	CHECKED - HAA	REVISED -
PLOT DATE = 7/5/2022	DRAWN - JAB	REVISED -
	DATE - 06/10/2022	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SIGN PANEL DETAIL
 SIGN 3 S.N. 1S016I094L046.8-000

SHEET OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	456
ILLINOIS FED. AID PROJECT				CONTRACT NO. 62K74

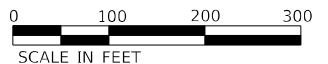


STRUCTURE NUMBER	1S0161094L047.5-000
WIDTH x HEIGHT	18'-6" x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE

E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "46", E 2K; "B", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "Diversey Ave", E Mod 2K; "California Ave", E Mod 2K; "1/2", E Mod 2K; "MILE", E Mod 2K;

Table of letter and object lefts

E	X	I	T	4	6	B						
108.4	119.1	131.9	136.1	156.1	173.2	192.9						
D	i	v	e	r	s	e	y	A	v	e		
26.8	44.5	52.4	67.9	83.4	93.5	107.6	121.3	150.9	169.2	184.7		
C	a	I	i	f	o	r	n	i	a	A	v	e
18.8	34.8	51.7	61.3	69.3	79.6	95.4	107.2	124.2	132.4	158.9	177.2	192.7
1/2	M	I	L	E								
75.1	107.0	121.5	127.3	138.1								



FILE NAME = par\VAN\QIP\IN\IN\Illinois_State\Documents\DOT_HBM_Task_Order\Work_Order_12.dwg 1-98&aleah94_Sign_Replacements\40 - Design\CAD\Signs\Sheets\90_Signing_sht.dwg

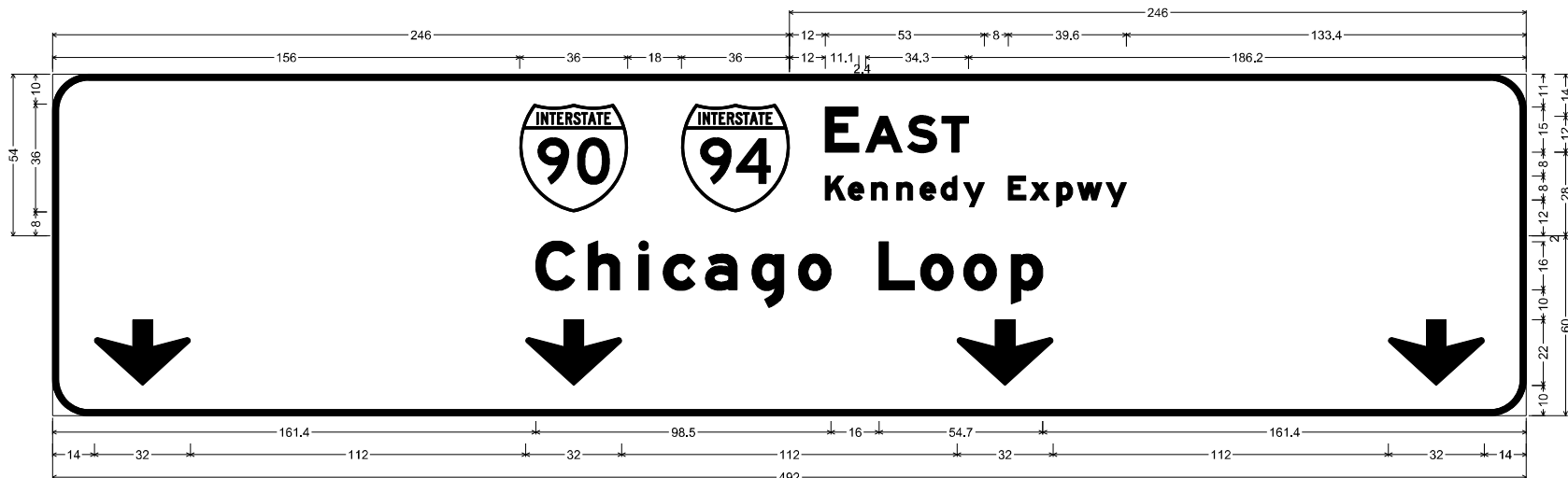


USER NAME = p005687B	DESIGNED - JAB	REVISED -
PLOT SCALE =	CHECKED - HAA	REVISED -
PLOT DATE = 7/27/2022	DRAWN - JAB	REVISED -
	DATE - 07/29/2022	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SIGN PANEL DETAIL
 SIGN 5 S.N. 1S0161094L047.5-000

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	457
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



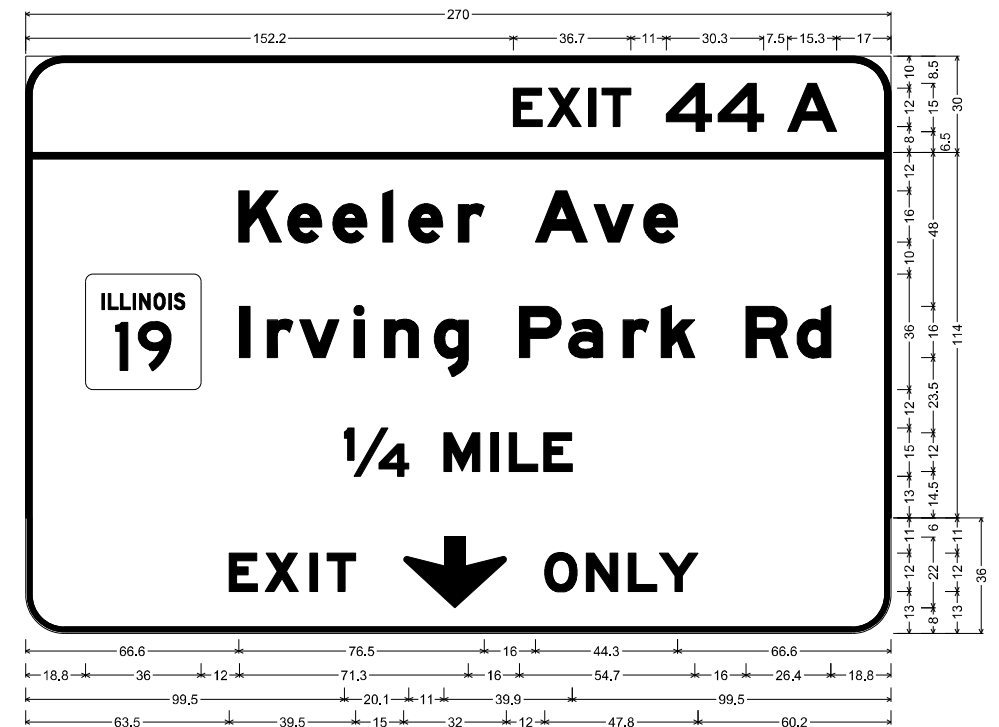
E6-3/OVERHEAD/1 DESTINATION/2 ARROWS;
12.0" Radius, 2.0" Border, White on, Green;
E6-3/OVERHEAD/1 DESTINATION/2 ARROWS;
12.0" Radius, 2.0" Border, White on, Green;
"E AST", E Mod 2K; "Kennedy Expwy", E Mod 2K;
E6-3/OVERHEAD/1 DESTINATION/2 ARROWS;
12.0" Radius, 2.0" Border, White on, Green;
"Chicago Loop", E Mod 2K; Down Arrow 22.0" 270"; Down Arrow 22.0" 270"; Down Arrow 22.0" 270"; Down Arrow 22.0" 270";
Table of letter and object lefts

156.0	210.0										
E	A	S	T								
12.0	25.5	39.4	50.9								
K	e	n	n	e	d	y	E	x	p	w	y
12.0	19.6	27.4	35.8	43.6	50.6	58.2	73.0	80.4	89.3	96.2	105.8
C	h	i	c	a	g	o	L	o	o	p	
161.4	178.8	195.8	203.9	218.0	233.5	249.0	275.9	289.8	304.2	320.1	
↓	↓	↓	↓								
14.0	158.0	302.0	446.0								

STRUCTURE NUMBER	1S0161094R043.8-000
WIDTH x HEIGHT	41'-0" x 9'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE

SYMBOL	ROT	X	Y	WID	HT
AR_DOWN	0	-	-	32	22

NOTE:
ALL ARROWS (DOWN OR 45°) USED
ON OVERHEAD SIGNS SHALL BE
DEMOUNTABLE AND INCLUDED IN
THE COST OF THE SIGN PANEL.



E1-5P(3)_138x30;
12.0" Radius, 2.0" Border, White on, Green;
"EXIT", E 2K; "44", E 2K; "A", E 2K;
E1-3a/FREEWAY/1 DESTINATION;
12.0" Radius, 2.0" Border, White on, Green;
"Keeler Ave", E Mod 2K; "Irving Park Rd", E Mod 2K; "1/4", E Mod 2K; "MILE", E Mod 2K;
E11-1_174x36;
12.0" Radius, 1.5" Border, 0.5" Indent, Black on, Yellow;
"EXIT", E Mod 2K specified length; Down Arrow 22.0" 270"; "ONLY", E Mod 2K specified length;
Table of letter and object lefts

E	X	I	T	4	4	A						
152.2	162.9	175.7	179.9	199.9	216.1	237.7						
K	e	e	I	e	r	A	v	e				
66.6	81.8	95.9	111.4	119.6	135.1	159.1	177.3	192.8				
I	r	v	i	n	g	P	a	r	k	R	d	
18.8	66.8	75.4	85.5	102.4	112.0	127.6	154.1	169.5	186.4	198.3	224.8	240.7
1/4	M	I	L	E								
99.5	130.6	145.1	150.8	161.6								
E	X	I	T	↓	O	N	L	Y				
63.5	74.7	88.7	94.1	118.0	162.0	175.0	188.1	197.7				

STRUCTURE NUMBER	1S0161094R043.8-000
WIDTH x HEIGHT	22'-6" x 15'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE



FILE NAME = par\VAN\QIP\INT\Illinois_State\Documents\1111nos_State\Documents\1111nos_State\Work\Order 12.19g_1-9881a1ash194_Sign_Replacements\10_Sign_Replacements\190_Signing_sht.dgn



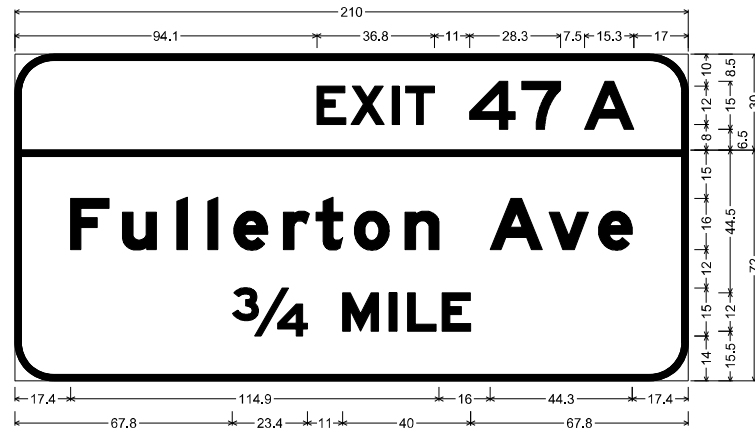
USER NAME = 35361	DESIGNED - JAB	REVISED -
PLOT SCALE =	CHECKED - HAA	REVISED -
PLOT DATE = 7/5/2022	DRAWN - JAB	REVISED -
	DATE - 06/10/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SIGN PANEL DETAIL
SIGN 6 S.N. 1S0161094R043.8-000
SHEET OF SHEETS

F.A.U. RTE. 90/94	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 458
CONTRACT NO. 62K74			ILLINOIS FED. AID PROJECT	

FILE NAME = par\VANVA01P\INT\Illinois_State\Documents\Illinois_State\Documents\DOT_HBM_Task_Order\Work_Order_12_Bg_1-98‐94_Sign_Replacements\40 - Design\CAD\Signs\Sheets\90_Signing_sht_B1.dgn



E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "47", E 2K; "A", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "Fullerton Ave", E Mod 2K; "3/4", E Mod 2K; "MILE", E Mod 2K;

Table of letter and object lefts

E	X	I	T	4	7	A					
94.1	104.8	117.7	121.8	141.9	158.1	177.7					
F	u	l	l	e	r	t	o	n	A	v	e
17.4	33.6	50.5	60.1	68.3	83.8	93.9	105.9	121.7	148.3	166.5	182.0
3/4	M	I	L	E							
67.8	102.2	116.7	122.5	133.3							

STRUCTURE NUMBER	1S016I094R046.4-000
WIDTH x HEIGHT	17'-6" x 8'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE



E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "46", E 2K; "A", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "California Ave", E Mod 2K; "Diversey Ave", E Mod 2K;

E11-1d_174x36;
 12.0" Radius, 1.5" Border, 0.5" Indent, Black on, Yellow;
 "EXIT", E Mod 2K specified length; Arrow Custom - 35.6" 45"; "ONLY", E Mod 2K specified length;

Table of letter and object lefts

E	X	I	T	4	6	A						
105.2	115.9	128.8	132.9	152.9	170.1	189.7						
C	a	i	i	f	o	r	n	i	a	A	v	e
18.8	34.8	51.7	61.3	69.3	79.6	95.4	107.2	124.2	132.4	158.9	177.2	192.7
D	i	v	e	r	s	e	y	A	v	e		
26.8	44.5	52.4	67.9	83.4	93.5	107.6	121.3	150.9	169.2	184.7		
E	X	I	T	↗	O	N	L	Y				
43.5	54.8	68.7	74.2	95.0	135.0	147.9	161.0	170.6				

STRUCTURE NUMBER	1S016I094R046.4-000
WIDTH x HEIGHT	18'-6" x 11'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE

SYMBOL	ROT	X	Y	WID	HT
AR_TYPE A	315	-	-	22.3	35.6

NOTE:
 ALL ARROWS (DOWN OR 45°) USED
 ON OVERHEAD SIGNS SHALL BE
 DEMOUNTABLE AND INCLUDED IN
 THE COST OF THE SIGN PANEL.



USER NAME = 35361	DESIGNED - JAB	REVISED -
PLOT SCALE =	CHECKED - HAA	REVISED -
PLOT DATE = 7/5/2022	DRAWN - JAB	REVISED -
	DATE - 06/10/2022	REVISED -

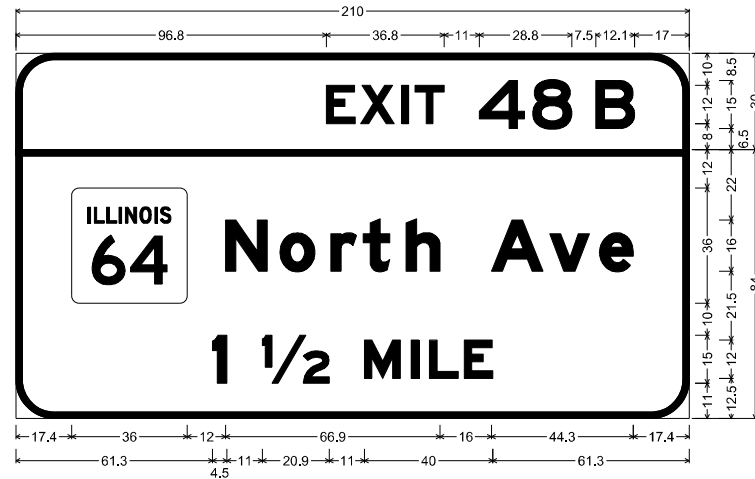
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SIGN PANEL DETAIL
 SIGN 7 S.N.1S016I094R046.4-000

SHEET OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	459
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

FILE NAME = par\VAN\QIP\INT\Illinois_State\Documents\DOT_HBM_Task_Order\Work_Order_12_09_1-98‐94_Sign_Replacements\40 - Design\CAD\Signs\Sheets\90_Signing_sht_01.dgn



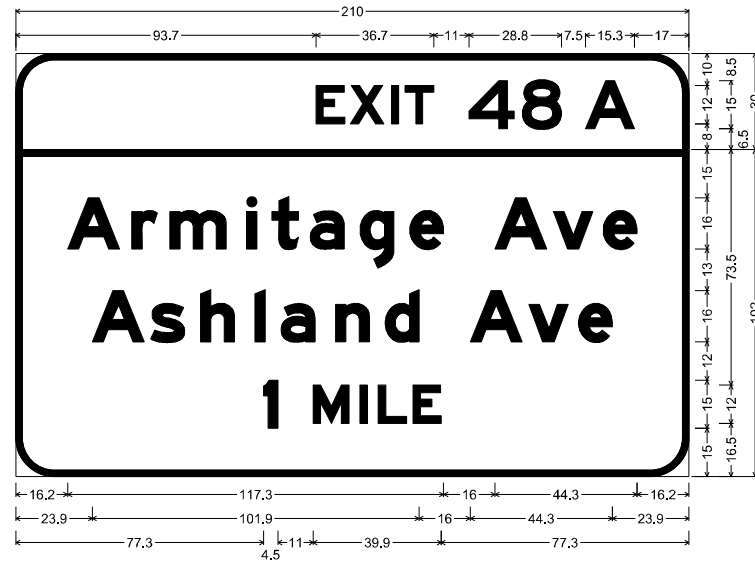
E1-5P(3)_138x30;
12.0" Radius, 2.0" Border, White on, Green;
"EXIT", E 2K; "48", E 2K; "B", E 2K;

E1-3a/FREEWAY/1 DESTINATION;
12.0" Radius, 2.0" Border, White on, Green;
"North Ave", E Mod 2K; "1", E Mod 2K; "1/2", E Mod 2K; "MILE", E Mod 2K;

Table of letter and object lefts

E	X	I	T	4	8	B		
96.8	107.5	120.3	124.6	144.6	161.2	180.9		
N	o	r	t	h	A	v	e	
17.4	65.4	82.4	98.2	108.3	121.7	148.3	166.5	182.0
1	1/2	M	I	L	E			
61.3	76.8	108.7	123.3	129.0	139.8			

STRUCTURE NUMBER	1S016I094R047.3-000
WIDTH x HEIGHT	17'-6" x 9'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE



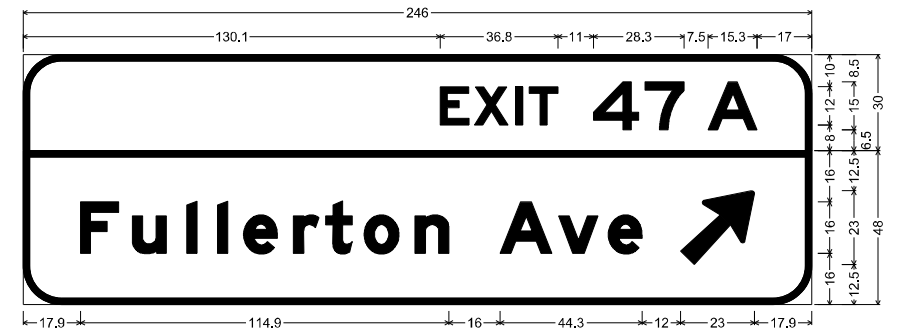
E1-5P(3)_138x30;
12.0" Radius, 2.0" Border, White on, Green;
"EXIT", E 2K; "48", E 2K; "A", E 2K;

E1-3a/FREEWAY/1 DESTINATION;
12.0" Radius, 2.0" Border, White on, Green;
"Armitage Ave", E Mod 2K; "Ashland Ave", E Mod 2K; "1", E Mod 2K; "MILE", E Mod 2K;

Table of letter and object lefts

E	X	I	T	4	8	A				
93.7	104.4	117.2	121.4	141.4	158.1	177.7				
A	r	m	i	t	a	g	e	A	v	e
16.2	36.2	48.0	72.0	79.9	91.9	107.4	122.9	149.5	167.7	183.2
A	s	h	a	n	d	A	v	e		
23.9	42.1	57.6	74.6	82.9	99.7	115.2	141.8	160.0	175.6	
1	M	I	L	E						
77.3	92.8	107.3	113.1	123.9						

STRUCTURE NUMBER	1S016I094R047.3-000
WIDTH x HEIGHT	17'-6" x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE



E1-5P(3)_138x30;
12.0" Radius, 2.0" Border, White on, Green;
"EXIT", E 2K; "47", E 2K; "A", E 2K;

E1-3a/FREEWAY/1 DESTINATION;
12.0" Radius, 2.0" Border, White on, Green;
"Fullerton Ave", E Mod 2K; Arrow A-13.33UC - 29.3" 45";

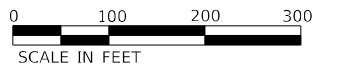
Table of letter and object lefts

E	X	I	T	4	7	A						
130.1	140.8	153.6	157.9	177.9	194.1	213.7						
F	u	l	l	e	r	t	o	n	A	v	e	↗
17.9	34.0	51.0	60.6	68.8	84.3	94.4	106.4	122.2	148.8	167.0	182.5	205.1

STRUCTURE NUMBER	1S016I094R047.3-000
WIDTH x HEIGHT	20'-6" x 6'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE

SYMBOL	ROT	X	Y	WID	HT
AR_TYPE A	315	-	-	22.3	35.6

NOTE:
ALL ARROWS (DOWN OR 45°) USED
ON OVERHEAD SIGNS SHALL BE
DEMOUNTABLE AND INCLUDED IN
THE COST OF THE SIGN PANEL.



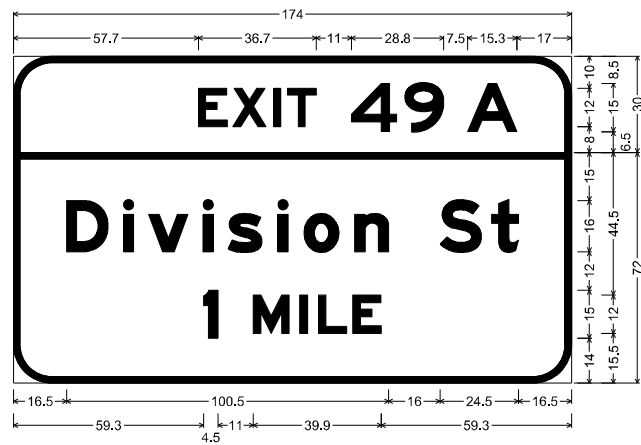
USER NAME = 35361	DESIGNED - JAB	REVISED -
PLOT SCALE =	CHECKED - HAA	REVISED -
PLOT DATE = 7/5/2022	DRAWN - JAB	REVISED -
	DATE - 06/10/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SIGN PANEL DETAIL
SIGN 8 S.N. 1S016I094R047.3-000

SHEET OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	460
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

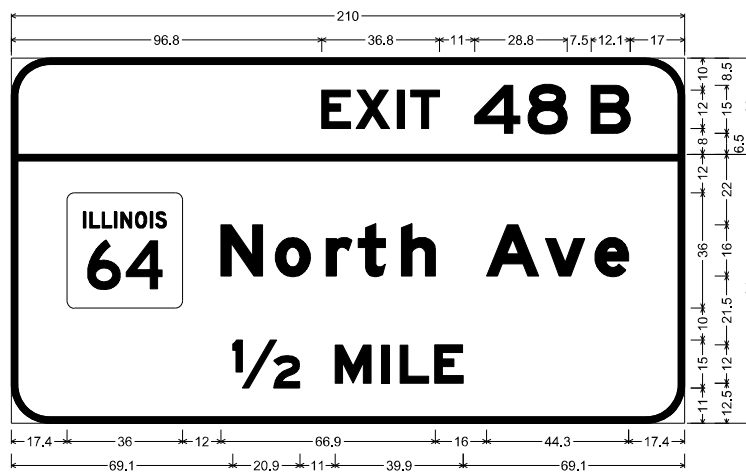


E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "49", E 2K; "A", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "Division St", E Mod 2K; "1", E Mod 2K; "MILE", E Mod 2K;

Table of letter and object lefts

E	X	I	T	4	9	A			
57.7	68.4	81.2	85.4	105.4	122.1	141.7			
D	i	v	i	s	i	o	n	S	t
16.5	34.3	42.1	59.1	66.9	82.4	90.6	106.4	133.0	149.2
1	M	I	L	E					
59.3	74.8	89.3	95.1	105.9					

STRUCTURE NUMBER	1S016I094R048.1-000
WIDTH x HEIGHT	14'-6" x 8'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE



E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "48", E 2K; "B", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "North Ave", E Mod 2K; "1/2", E Mod 2K; "MILE", E Mod 2K;

Table of letter and object lefts

E	X	I	T	4	8	B		
96.8	107.5	120.3	124.6	144.6	161.2	180.9		
17.4	65.4	82.4	98.2	108.3	121.7	148.3	166.5	182.0
1/2	M	I	L	E				
69.1	101.0	115.5	121.3	132.1				

STRUCTURE NUMBER	1S016I094R048.1-000
WIDTH x HEIGHT	17'-6" x 9'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE



E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "48", E 2K; "A", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "Armitage Ave", E Mod 2K; "Ashland Ave", E Mod 2K;

Table of letter and object lefts

E	X	I	T	4	8	A				
93.7	104.4	117.2	121.4	141.4	158.1	177.7				
A	r	m	i	t	a	g	e	A	v	e
16.2	36.2	48.0	72.0	79.9	91.9	107.4	122.9	149.5	167.7	183.2
A	s	h	I	a	n	d	A	v	e	
23.9	42.1	57.6	74.6	82.8	99.7	115.2	141.8	160.0	175.6	
E	X	I	T	O	N	L	Y			
37.5	48.8	62.7	68.2	89.0	129.0	141.9	155.0	164.6		

STRUCTURE NUMBER	1S016I094R048.1-000
WIDTH x HEIGHT	17'-6" x 11'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE

SYMBOL	ROT	X	Y	WID	HT
AR_TYPE A	315	-	-	22.3	35.6

NOTE:
 ALL ARROWS (DOWN OR 45°) USED
 ON OVERHEAD SIGNS SHALL BE
 DEMOUNTABLE AND INCLUDED IN
 THE COST OF THE SIGN PANEL.



FILE NAME = par\VAN\QIP\INT\Illinois_State\Documents\1111nos_State\Documents\1111nos_State\Sign_Replacements\40 - Design\CAD\Signs\Signs\190_Signing_sht_Bldg.dgn 1-98&aleah\94_Sign_Replacements\40 - Design\CAD\Signs\Signs\190_Signing_sht_Bldg.dgn

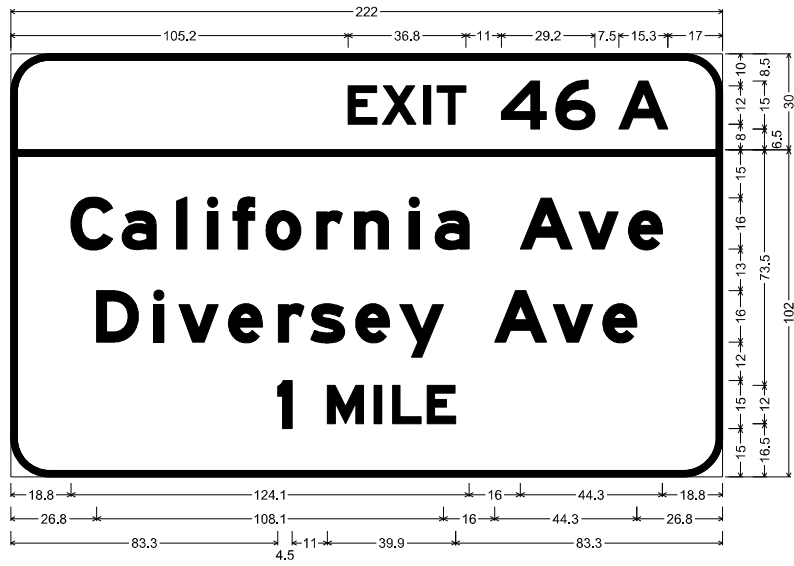


USER NAME = 35361	DESIGNED - JAB	REVISED -
PLOT SCALE =	CHECKED - HAA	REVISED -
PLOT DATE = 7/5/2022	DRAWN - JAB	REVISED -
	DATE - 06/10/2022	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

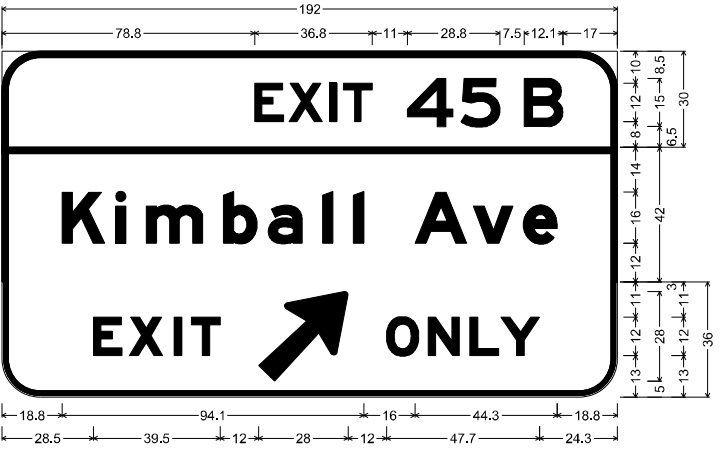
OVERHEAD SIGN STRUCTURES - SIGN PANEL DETAIL
 SIGN 9 S.N. 1S016I094R048.1-000

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	461
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "46", E 2K; "A", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "California Ave", E Mod 2K; "Diversey Ave", E Mod 2K; "1", E Mod 2K; "MILE", E Mod 2K;
 Table of letter and object lefts

E	X	I	T	4	6	A						
105.2	115.9	128.8	132.9	152.9	170.1	189.7						
C	a	i	f	o	r	n	a	A	v	e		
18.8	34.8	51.7	61.3	69.3	79.6	95.4	107.2	124.2	132.4	158.9	177.2	192.7
D	i	v	e	r	s	e	y	A	v	e		
26.8	44.5	52.4	67.9	83.4	93.5	107.6	121.3	150.9	169.2	184.7		
1	M	I	L	E								
83.3	98.8	113.3	119.1	129.9								



E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "45", E 2K; "B", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "Kimball Ave", E Mod 2K;
 E11-1d_174x36;
 12.0" Radius, 1.5" Border, 0.5" Indent, Black on, Yellow;
 "EXIT", E Mod 2K specified length; Arrow Custom - 35.6" 45";
 "ONLY", E Mod 2K specified length;
 Table of letter and object lefts

E	X	I	T	4	5	B			
78.8	89.5	102.3	106.6	126.6	143.2	162.9			
K	i	m	b	a	i	A	v	e	
18.8	35.4	45.0	69.0	83.1	100.1	109.7	128.9	147.1	162.6
E	X	I	T	O	N	L	Y		
28.5	39.8	53.7	59.2	80.0	120.0	132.9	146.0	155.6	

STRUCTURE NUMBER	1S016I094R045.4-000
WIDTH x HEIGHT	18'-6" x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE

STRUCTURE NUMBER	1S016I094R045.4-000
WIDTH x HEIGHT	16'-0" x 9'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ
	COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ
	COLOR: WHITE

SYMBOL	ROT	X	Y	WID	HT
AR_TYPE A	315	-	-	22.3	35.6

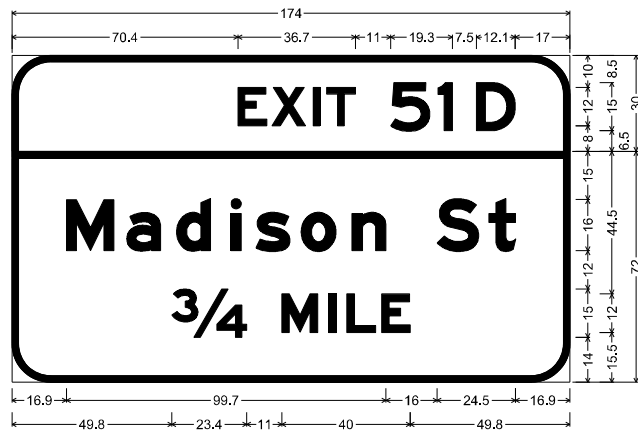
NOTE:
 ALL ARROWS (DOWN OR 45°) USED
 ON OVERHEAD SIGNS SHALL BE
 DEMOUNTABLE AND INCLUDED IN
 THE COST OF THE SIGN PANEL.



USER NAME = 35361	DESIGNED - JAB	REVISED -
PLOT SCALE =	CHECKED - HAA	REVISED -
PLOT DATE = 7/5/2022	DRAWN - JAB	REVISED -
	DATE - 06/10/2022	REVISED -

F.A.U. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	462
	CONTRACT NO. 62K74			
	ILLINOIS FED. AID PROJECT			

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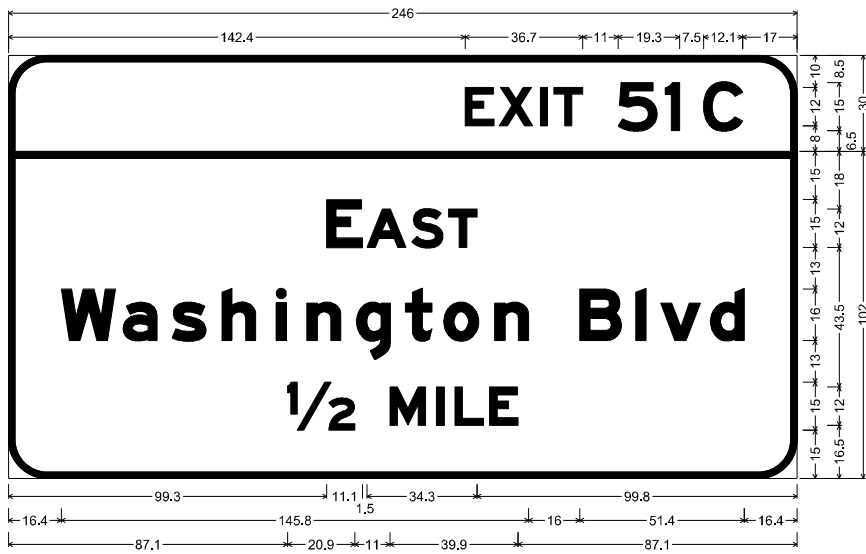


E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "51", E 2K; "D", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "Madison St", E Mod 2K; "3/4", E Mod 2K; "MILE", E Mod 2K;

Table of letter and object lefts

E	X	I	T	5	1	D		
70.4	81.1	93.9	98.2	118.2	132.9	144.9		
M	a	d	i	s	o	n	S	t
16.9	35.8	51.3	68.3	76.1	90.2	106.0	132.6	148.8
3/4	M	I	L	E				
49.8	84.2	98.7	104.5	115.3				

STRUCTURE NUMBER	1S016I094R050.4-000
WIDTH x HEIGHT	14'-6" x 8'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE

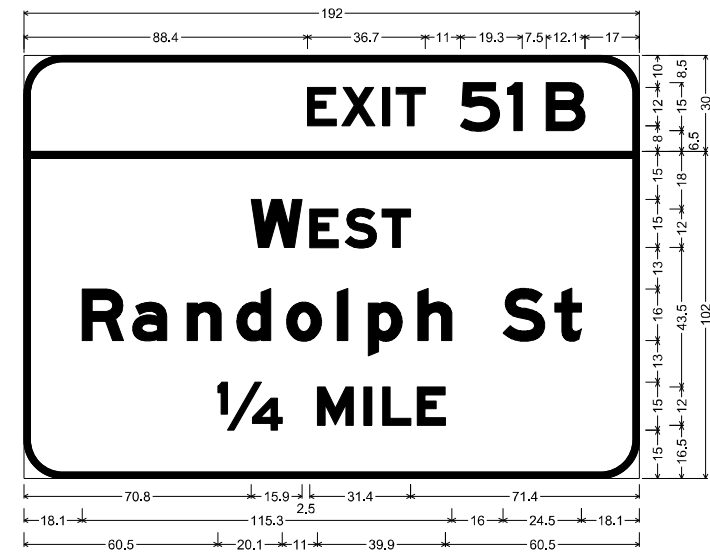


E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "51", E 2K; "C", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "EAST", E Mod 2K; "Washington Blvd", E Mod 2K; "1/2", E Mod 2K; "MILE", E Mod 2K;

Table of letter and object lefts

E	X	I	T	5	1	C							
142.4	153.1	165.9	170.1	190.1	204.9	216.9							
E	A	S	T										
99.3	111.9	125.8	137.3										
W	a	s	h	i	n	g	l	o	n	B	l	v	d
16.4	35.8	51.0	66.5	83.5	93.1	108.6	123.8	135.8	151.6	178.2	195.6	203.5	219.0
1/2	M	I	L	E									
87.1	119.0	133.5	139.3	150.1									

STRUCTURE NUMBER	1S016I094R050.4-000
WIDTH x HEIGHT	20'-6" x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE



E1-5P(3)_138x30;
 12.0" Radius, 2.0" Border, White on, Green;
 "EXIT", E 2K; "51", E 2K; "B", E 2K;
 E1-3a/FREEWAY/1 DESTINATION;
 12.0" Radius, 2.0" Border, White on, Green;
 "WEST", E Mod 2K; "Randolph St", E Mod 2K; "1/4", E Mod 2K; "MILE", E Mod 2K;

Table of letter and object lefts

E	X	I	T	5	1	B			
88.4	99.1	111.9	116.2	136.1	150.9	162.9			
W	E	S	T						
70.8	89.2	100.2	111.7						
R	a	n	d	o	l	p	h	S	t
18.1	33.9	50.9	66.4	81.9	97.8	107.4	122.9	149.4	165.6
1/4	M	I	L	E					
60.5	91.6	106.1	111.9	122.7					

STRUCTURE NUMBER	1S016I094R050.4-000
WIDTH x HEIGHT	16'-0" x 11'-0"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	OVERHEAD
BACKGROUND	TYPE: REFLECTIVE - ZZ COLOR: GREEN
LEGEND/BORDER	TYPE: REFLECTIVE - ZZ COLOR: WHITE



USER NAME = 35361	DESIGNED - JAB	REVISED -
PLOT SCALE =	CHECKED - HAA	REVISED -
PLOT DATE = 7/5/2022	DRAWN - JAB	REVISED -
	DATE - 06/10/2022	REVISED -

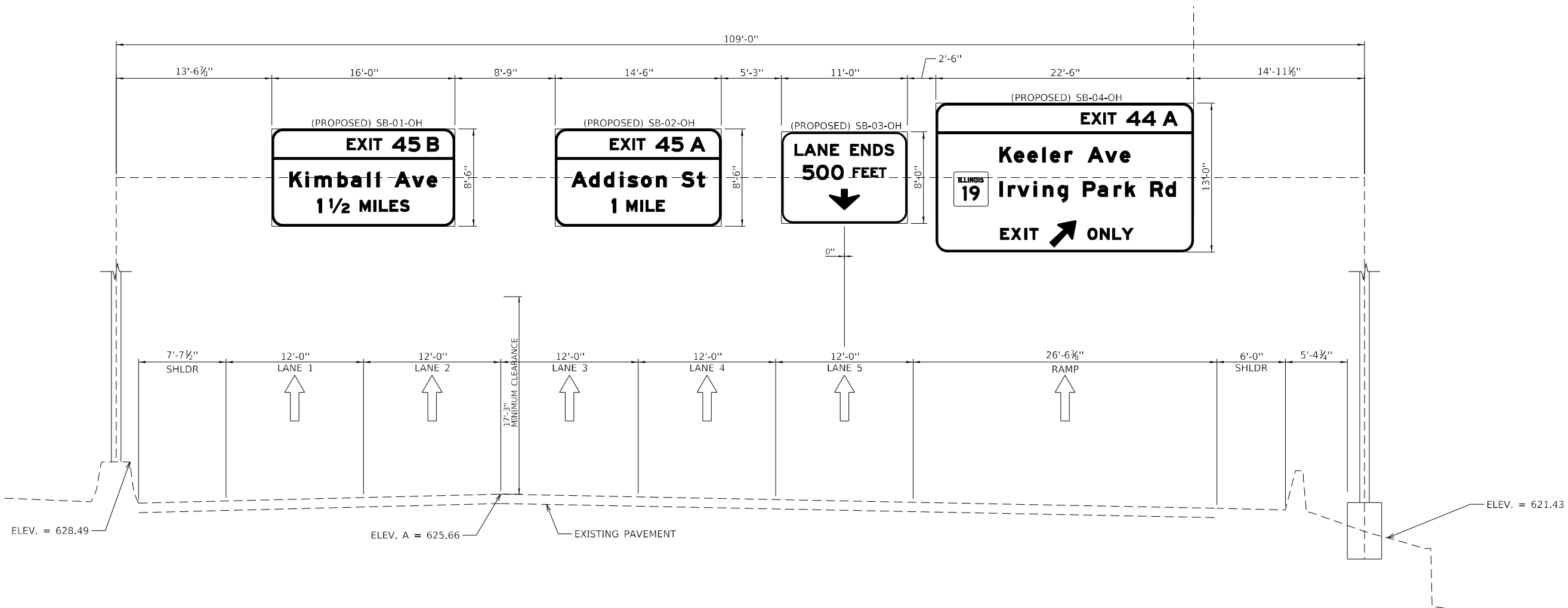
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES – SIGN PANEL DETAIL
 SIGN 15 S.N. 1S016I094R050.4-000

SHEET OF SHEETS

F.A.U. RT.E. 90/94	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 463
ILLINOIS FED. AID PROJECT				CONTRACT NO. 62K74

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SIGN 1 STA 644+79.47 - PROPOSED SIGN TRUSS MOUNT
(1S016I094R044.2)

- NOTES:**
1. SEE SHEET NO. ... TO ... FOR OVERHEAD SIGN PANEL DETAILS
 2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
 3. ALL HORIZONTAL DIMENSIONS ARE MEASURED ALONG CL OF TRUSS



USER NAME = 35361	DESIGNED - JAB	REVISED -
	CHECKED - HAA	REVISED -
PLOT SCALE =	DRAWN - JAB	REVISED -
PLOT DATE = 8/23/2022	DATE - 07/29/2022	REVISED -

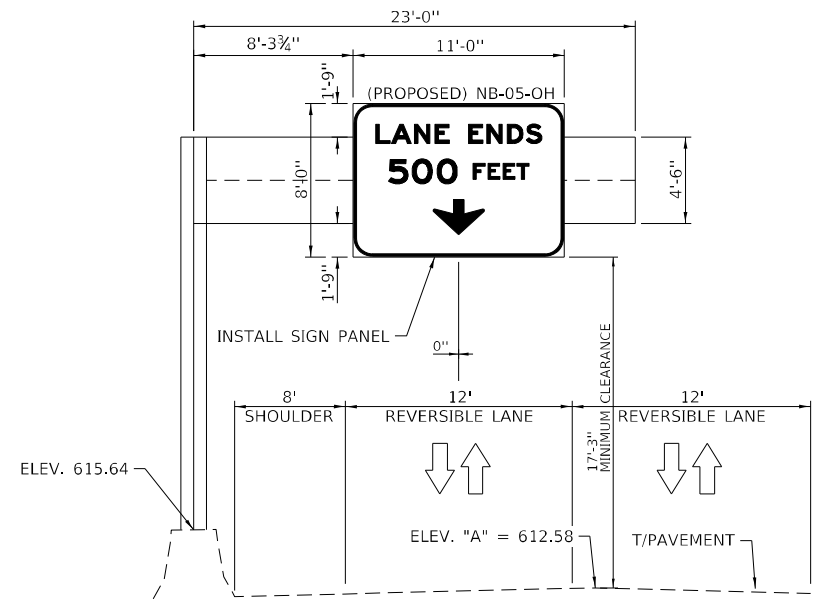
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT

SHEET OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	464
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

FILE NAME = par\VAN\01\PI\INT\01\Parsons.com\Illinois_State\Documents\DDT_HBM_Task_Order\Work_Order_12.dwg I-90&I-55\94_Sign_Replacements\40 - Design\CAD\Signs\Sheets\0162K73_I-90_Sign_02.dwg



SIGN 2 STA 659+43.87 (REV) - PROPOSED SIGN TRUSS MOUNT
(1C0161094L043.7)

NOTES:

1. SEE SHEET NO. ___ TO ___ FOR OVERHEAD SIGN PANEL DETAILS
2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
3. ALL HORIZONTAL DIMENSIONS ARE MEASURED ALONG C OF TRUSS



USER NAME = p007124D	DESIGNED - JAB	REVISED -
	CHECKED - HAA	REVISED -
PLOT SCALE =	DRAWN - JAB	REVISED -
PLOT DATE = 7/8/2022	DATE - 06/10/2022	REVISED -

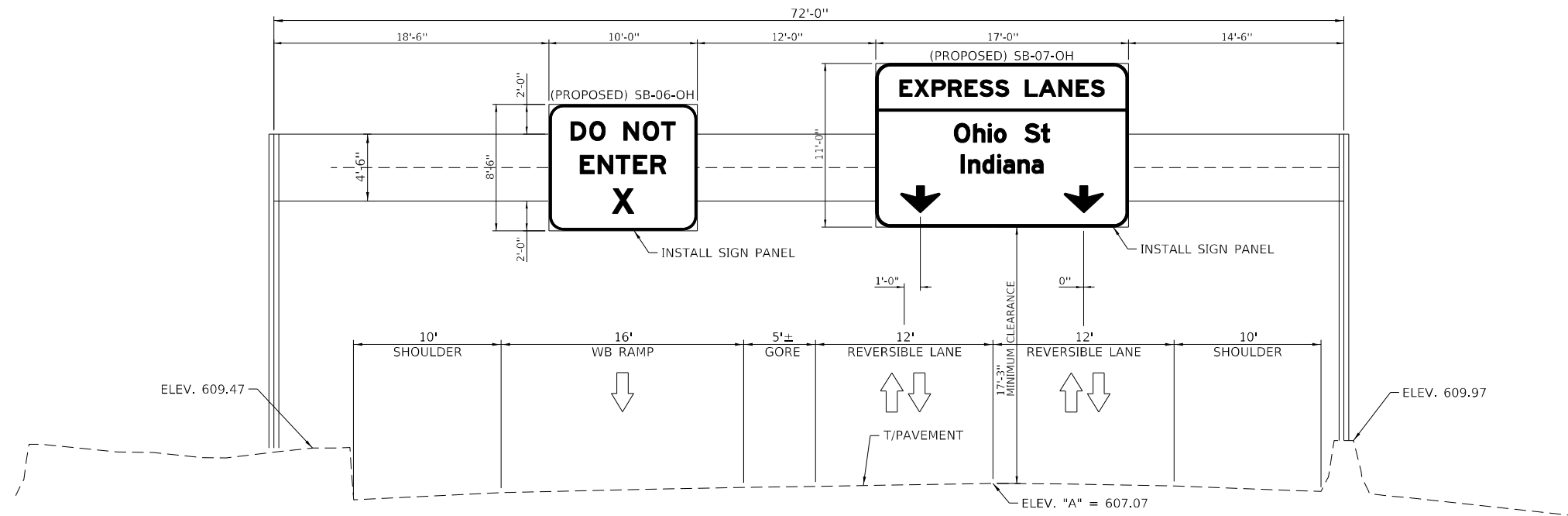
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT**

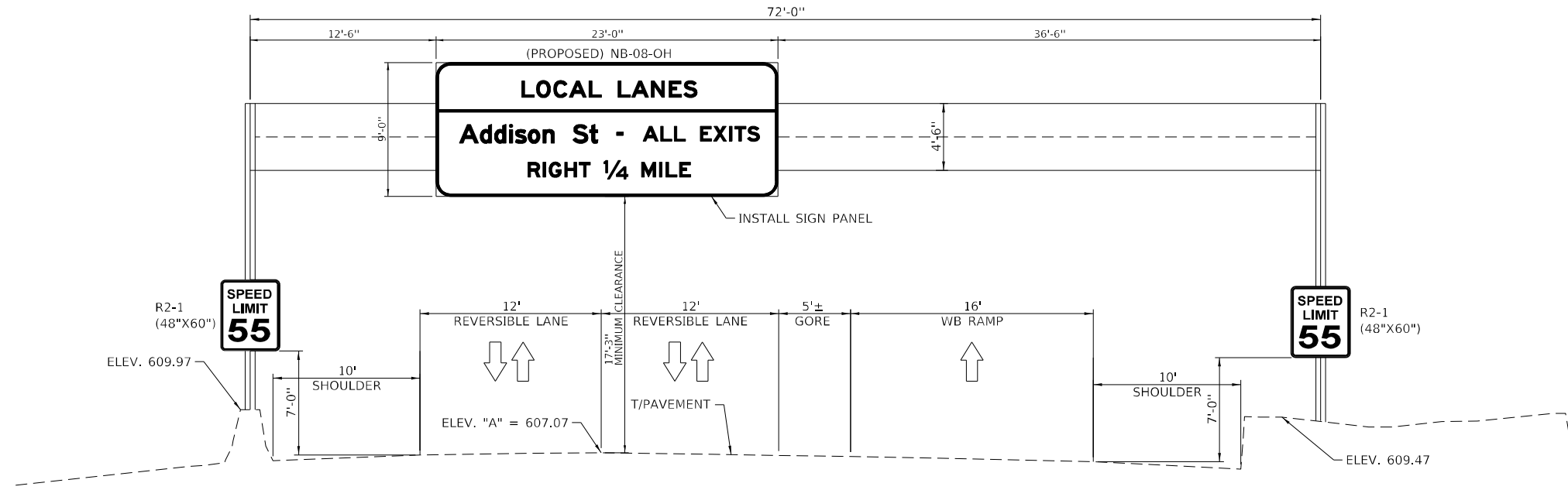
SHEET OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	465
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

FILE NAME = par\VAN\01\PI\INT\Illinois State Documents\DOT\HBM Task Order\Work Order 12 1-98811eb94_Sign_Replacements\40 - Design\CAD\Signs\Sheets\62K73_1-98_Sign_03.dgn



SIGN 3 STA 496+04.88 (REV) - PROPOSED SIGN TRUSS MOUNT (LOOKING SOUTH)
(150161094L046.8)



SIGN 3 STA 496+05.00 (REV) - PROPOSED SIGN TRUSS MOUNT (LOOKING NORTH)
(150161094L046.8)

- NOTES:**
1. SEE SHEET NO. ___ TO ___ FOR OVERHEAD SIGN PANEL DETAILS
 2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
 3. ALL HORIZONTAL DIMENSIONS ARE MEASURED ALONG C OF TRUSS



USER NAME = p007124D	DESIGNED - JAB	REVISED -
	CHECKED - HAA	REVISED -
PLOT SCALE =	DRAWN - JAB	REVISED -
PLOT DATE = 7/8/2022	DATE - 06/10/2022	REVISED -

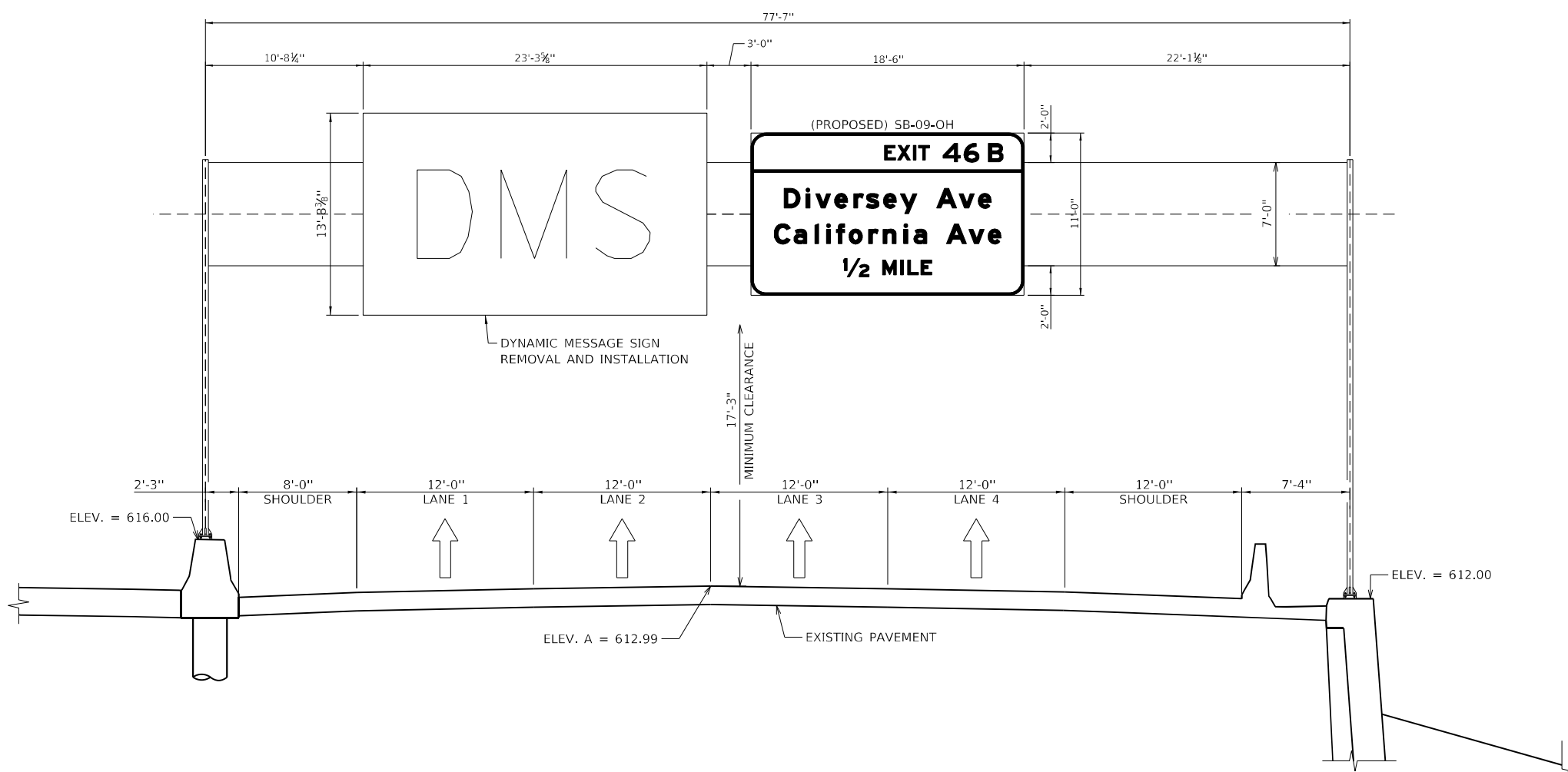
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT

SHEET OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	466
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

FILE NAME = par\VAN\QIP\INT\Illinois State Documents\Illinois State Documents\DOT HBM Task Order\Work Order 12 1-98‐Sign Replacements\40 - Design\CAD\Signs\Sheets\62K73_1-98_Sign_05.dgn



SIGN 5 (CM8) STA 460+57.35 (NB) - PROPOSED SIGN TRUSS MOUNT
(150161094L047.5)

- NOTES:**
1. SEE SHEET NO. --- TO --- FOR OVERHEAD SIGN PANEL DETAILS
 2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
 3. EXISTING DMS SIGNS TO BE REMOVED, STORED, AND RELOCATED TO THE LOCATION SHOWN
 4. ALL HORIZONTAL DIMENSIONS ARE MEASURED ALONG ϕ OF TRUSS



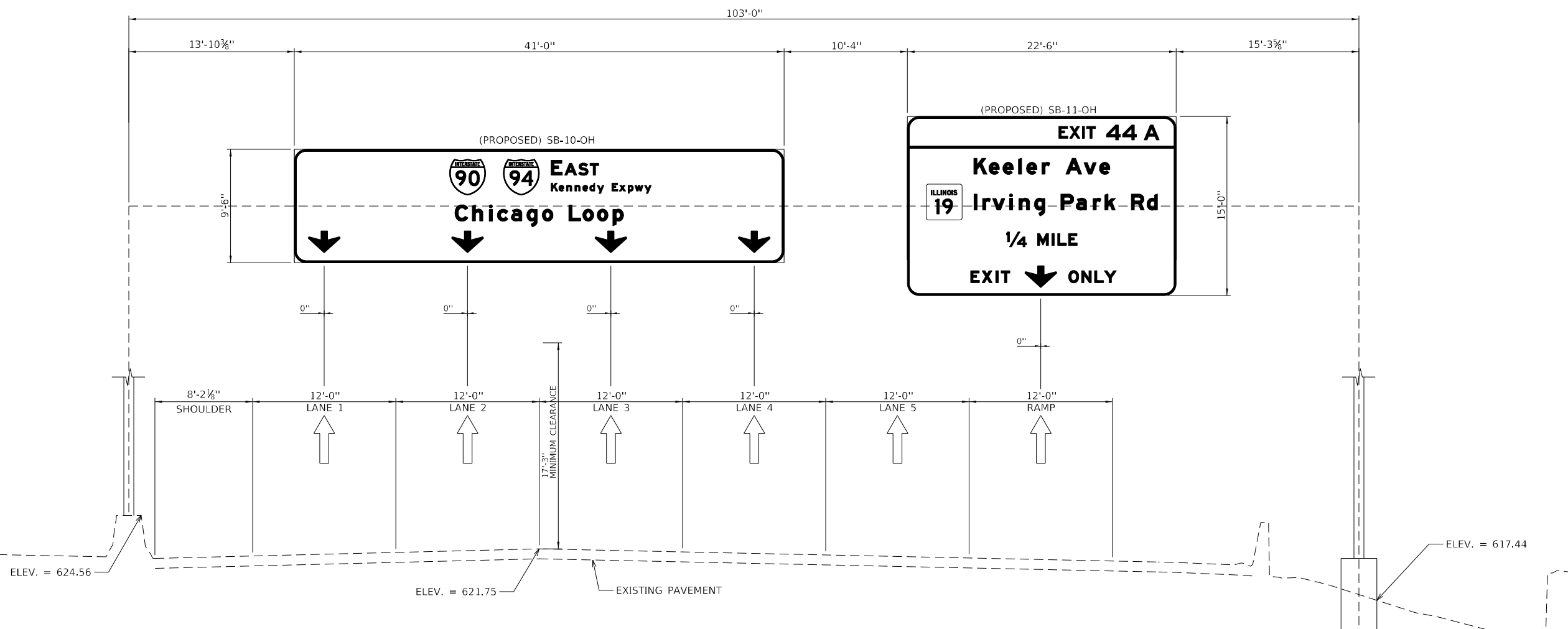
USER NAME = p005687B	DESIGNED - JAB	REVISED -
	CHECKED - HAA	REVISED -
PLOT SCALE =	DRAWN - JAB	REVISED -
PLOT DATE = 7/27/2022	DATE - 07/29/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT
SHEET 1 OF 4 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	467
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

FILE NAME = par\VAN\01\PI\INT\Illinois_State\Documents\Illinois_State\Documents\DOT_HBM_Task_Order\Work_Order_12_Bg_1-98&11eb\94_Sign_Replacements\40 - Design\CAD\Signs\Sheets\0162K73_1-98_Sign_05.dgn



SIGN 6 STA 655+85.00 (SB) - PROPOSED SIGN TRUSS MOUNT
(150161094R043.8)

NOTES:

1. SEE SHEET NO. ___ TO ___ FOR OVERHEAD SIGN PANEL DETAILS
2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
3. ALL HORIZONTAL DIMENSIONS ARE MEASURED ALONG C OF TRUSS



USER NAME = p007124D	DESIGNED - JAB	REVISED -
PLOT SCALE =	CHECKED - HAA	REVISED -
PLOT DATE = 7/8/2022	DRAWN - JAB	REVISED -
	DATE - 06/10/2022	REVISED -

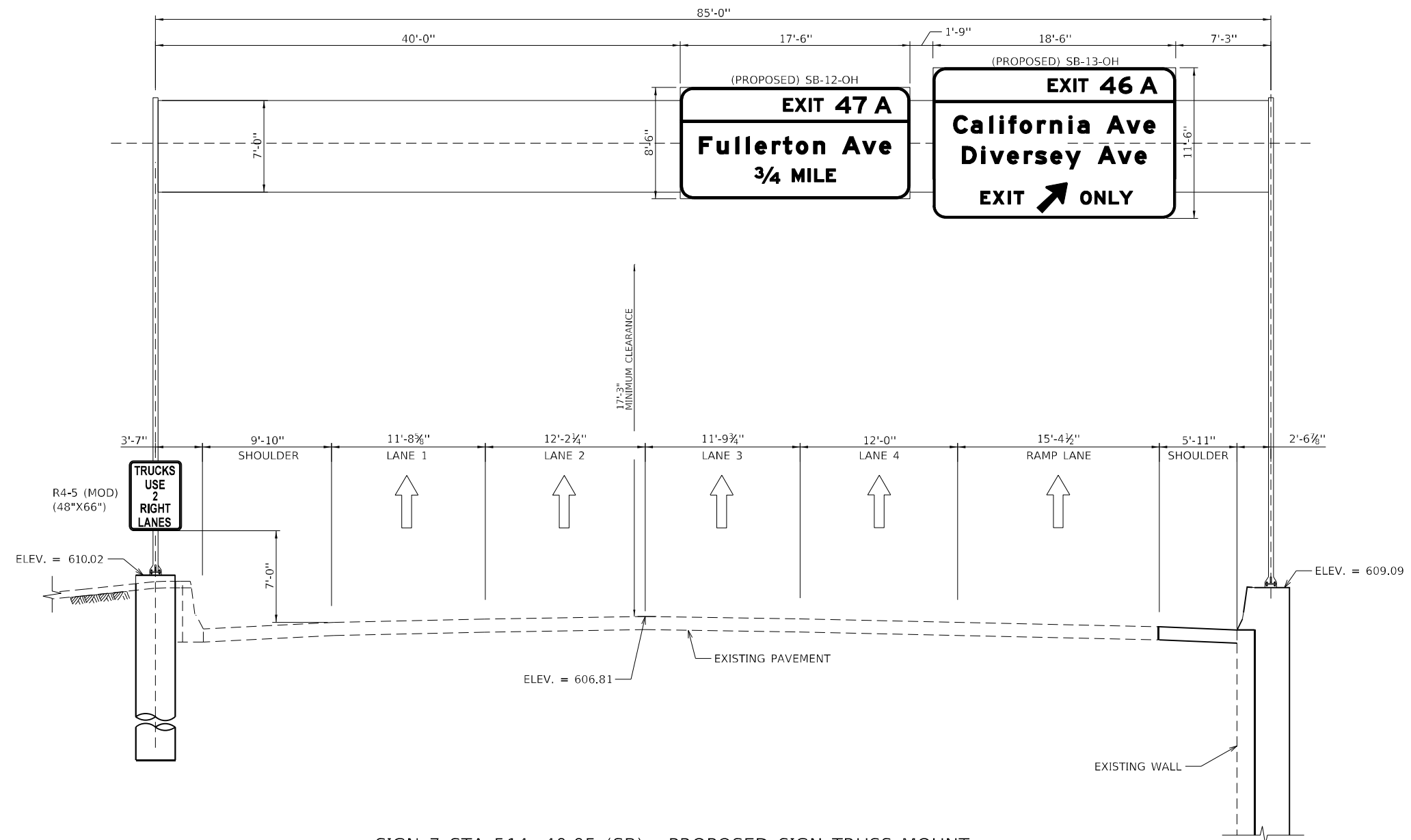
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT

SHEET OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	468
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

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SIGN 7 STA 514+40.05 (SB) - PROPOSED SIGN TRUSS MOUNT
(15016109R046.4)

- NOTES:**
1. SEE SHEET NO. ___ TO ___ FOR OVERHEAD SIGN PANEL DETAILS
 2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
 3. ALL HORIZONTAL DIMENSIONS ARE MEASURED ALONG C OF TRUSS



USER NAME = p007124D	DESIGNED - JAB	REVISED -
CHECKED - HAA	REVISIONS	REVISED -
PLOT SCALE =	DRAWN - JAB	REVISED -
PLOT DATE = 7/8/2022	DATE - 06/10/2022	REVISED -

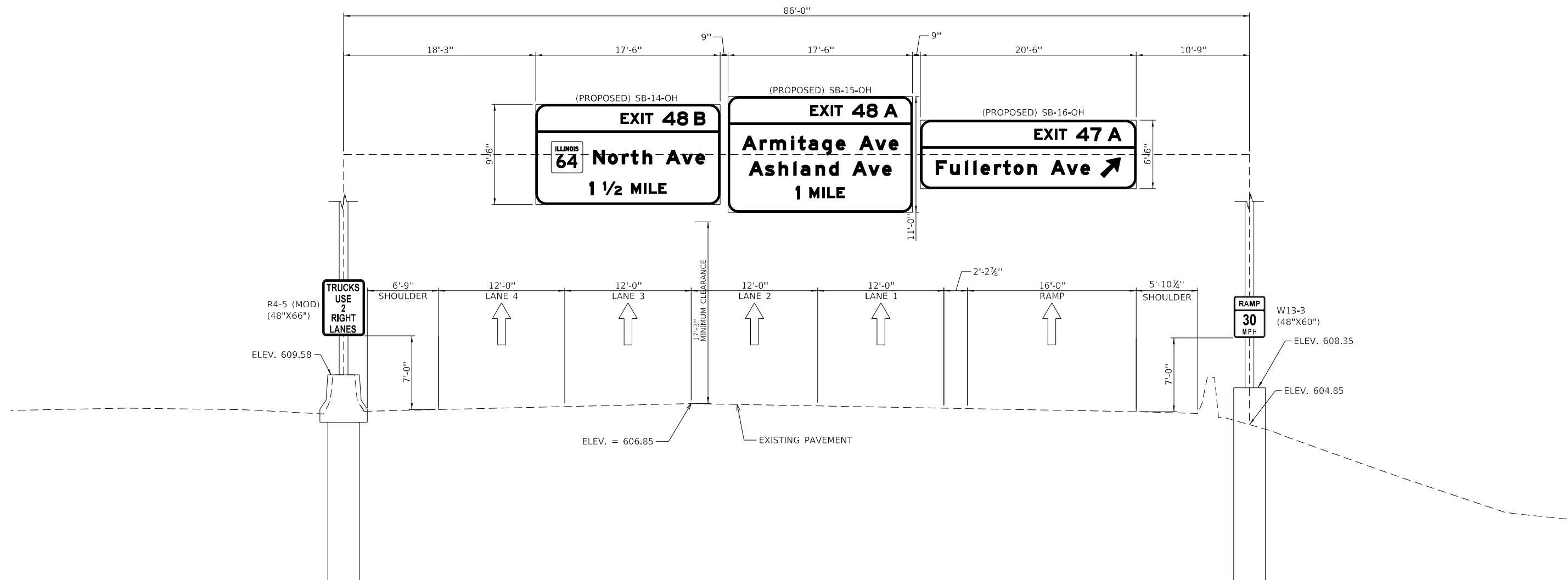
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT

SHEET OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	469
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

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SIGN 8 STA 471+82.88 (SB) - PROPOSED SIGN TRUSS MOUNT
(150161094R047.3)

- NOTES:**
1. SEE SHEET NO. ... TO ... FOR OVERHEAD SIGN PANEL DETAILS
 2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
 3. ALL HORIZONTAL DIMENSIONS ARE MEASURED ALONG C OF TRUSS



USER NAME = p007124D	DESIGNED - JAB	REVISED -
	CHECKED - HAA	REVISED -
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PLOT DATE = 7/8/2022	DATE - 06/10/2022	REVISED -

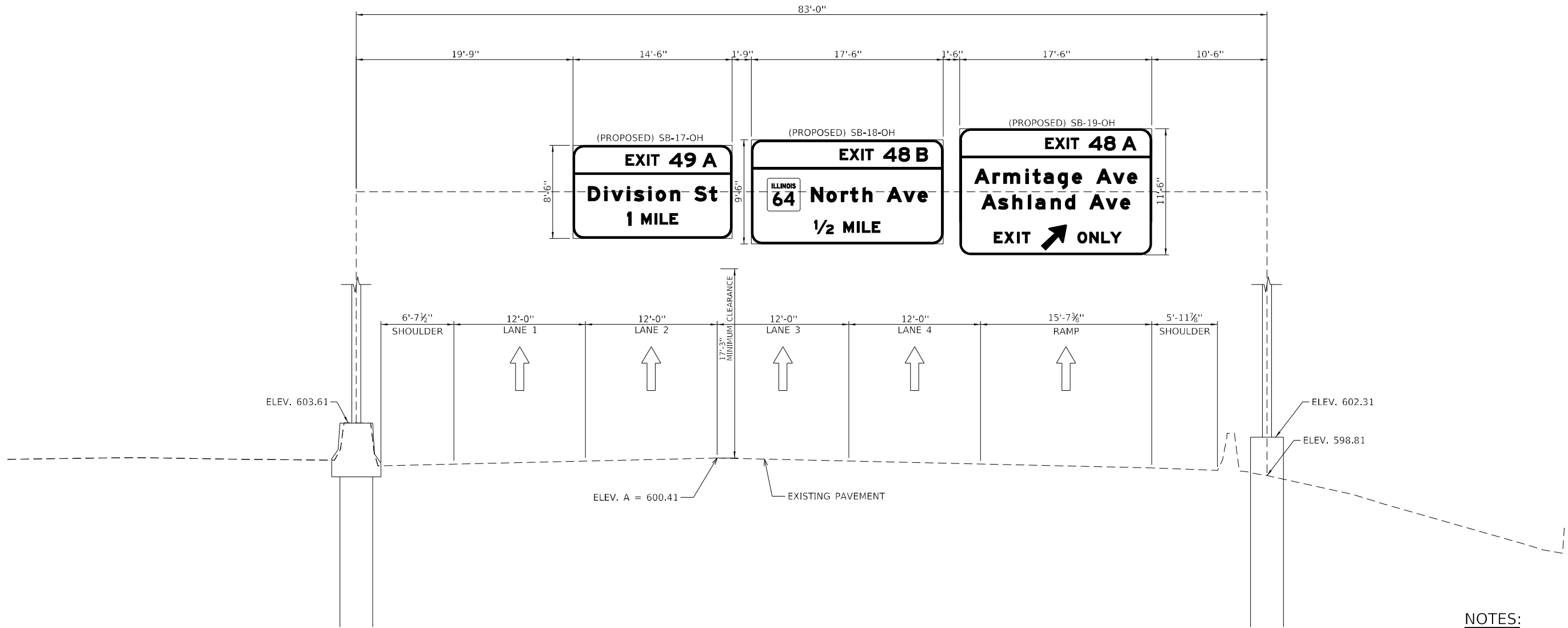
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT

SHEET OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	470
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

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SIGN 9 STA 425+40.12 (SB) - PROPOSED SIGN TRUSS MOUNT
(150161094R048.1)

- NOTES:**
1. SEE SHEET NO. ... TO ... FOR OVERHEAD SIGN PANEL DETAILS
 2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
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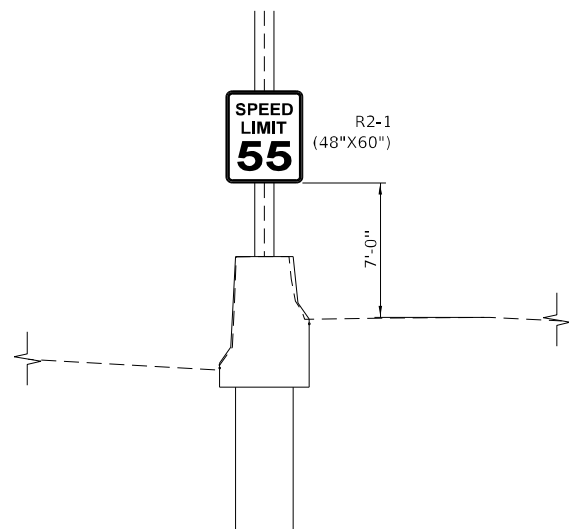


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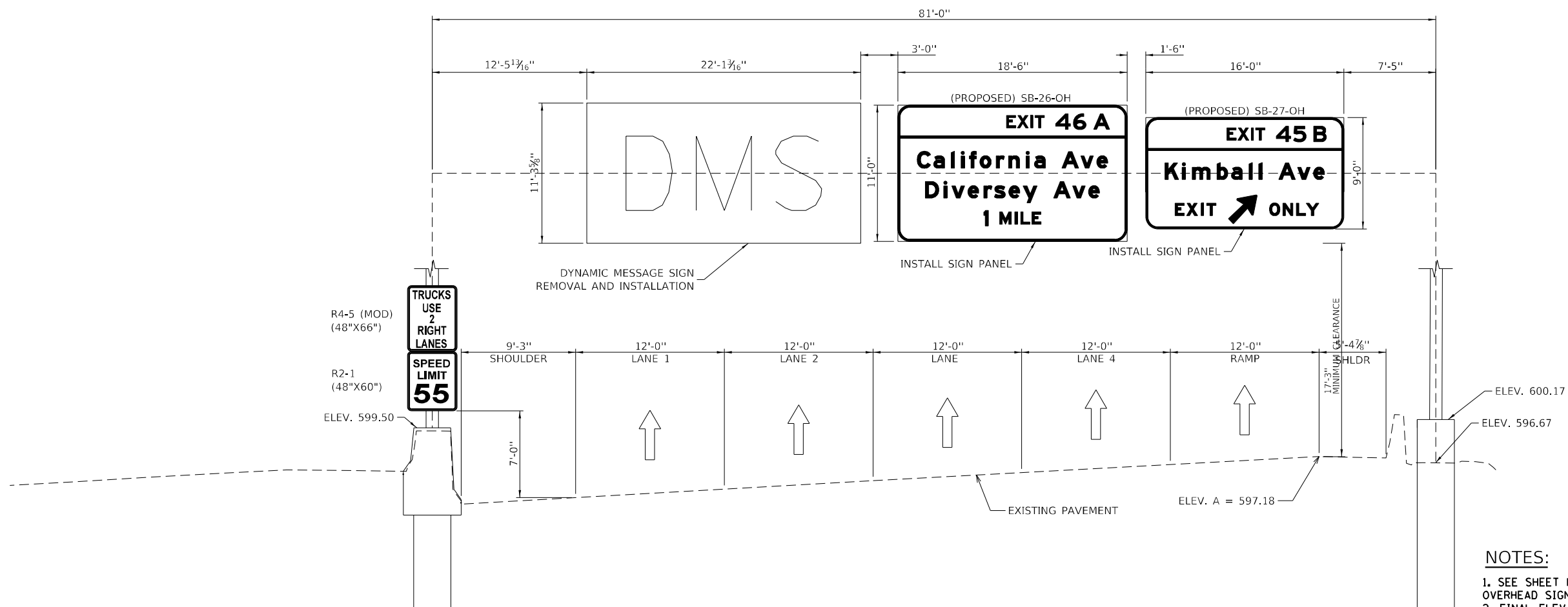
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT
SHEET OF SHEETS

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90/94	2020-004-BR	COOK	1492	471
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



SIGN 12 STA 568+94.52 (SB) - PROPOSED SIGN TRUSS MOUNT (LOOKING NORTH)
(150161094R045.4)



SIGN 12 (CM11) STA 568+94.52 (SB) - PROPOSED SIGN TRUSS MOUNT (LOOKING SOUTH)
(150161094R045.4)

- NOTES:**
1. SEE SHEET NO. ... TO ... FOR OVERHEAD SIGN PANEL DETAILS
 2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
 3. EXISTING DMS SIGNS TO BE REMOVED, STORED, AND RELOCATED TO THE LOCATION SHOWN
 4. ALL HORIZONTAL DIMENSIONS ARE MEASURED ALONG C OF TRUSS

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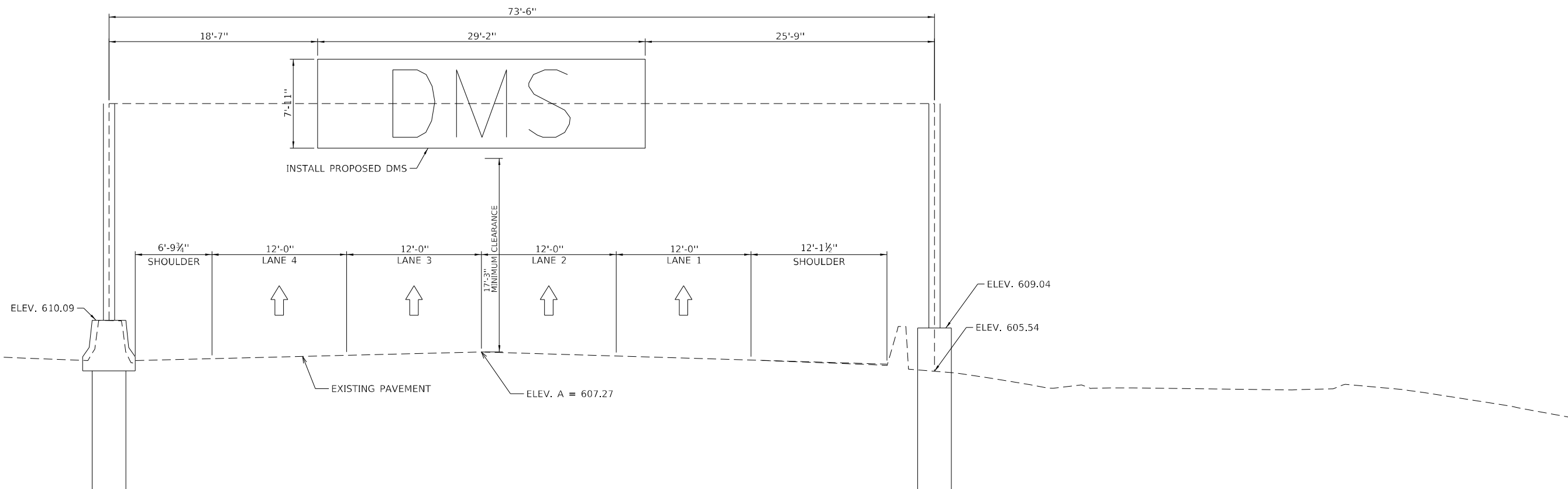
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	DATE - 06/10/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT

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

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STATION 611+60.67 (SB) - PROPOSED SIGN TRUSS MOUNT
(SIGN NO. 14 - 150161094R044.6)

NOTES:

1. SEE SHEET NO. ___ TO ___ FOR OVERHEAD SIGN PANEL DETAILS
2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER



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PLOT DATE = 6/10/2022	DATE - 06/10/2022	REVISED -

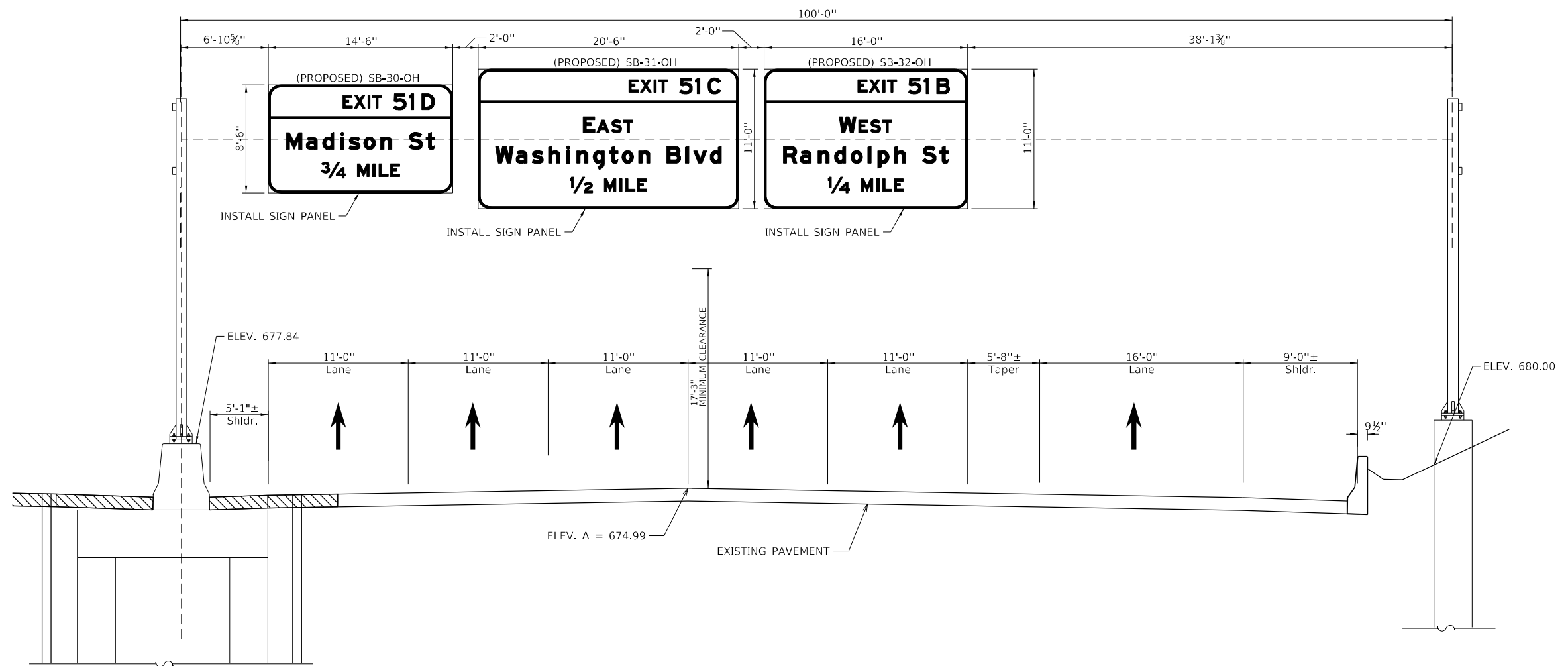
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT

SHEET OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	473
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

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SIGN 15 STA 302+87.00 (SB) - PROPOSED SIGN TRUSS MOUNT
(150161094R050.4)

- NOTES:**
1. SEE SHEET NO. ... TO ... FOR OVERHEAD SIGN PANEL DETAILS
 2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
 3. ALL HORIZONTAL DIMENSIONS ARE MEASURED ALONG C OF TRUSS



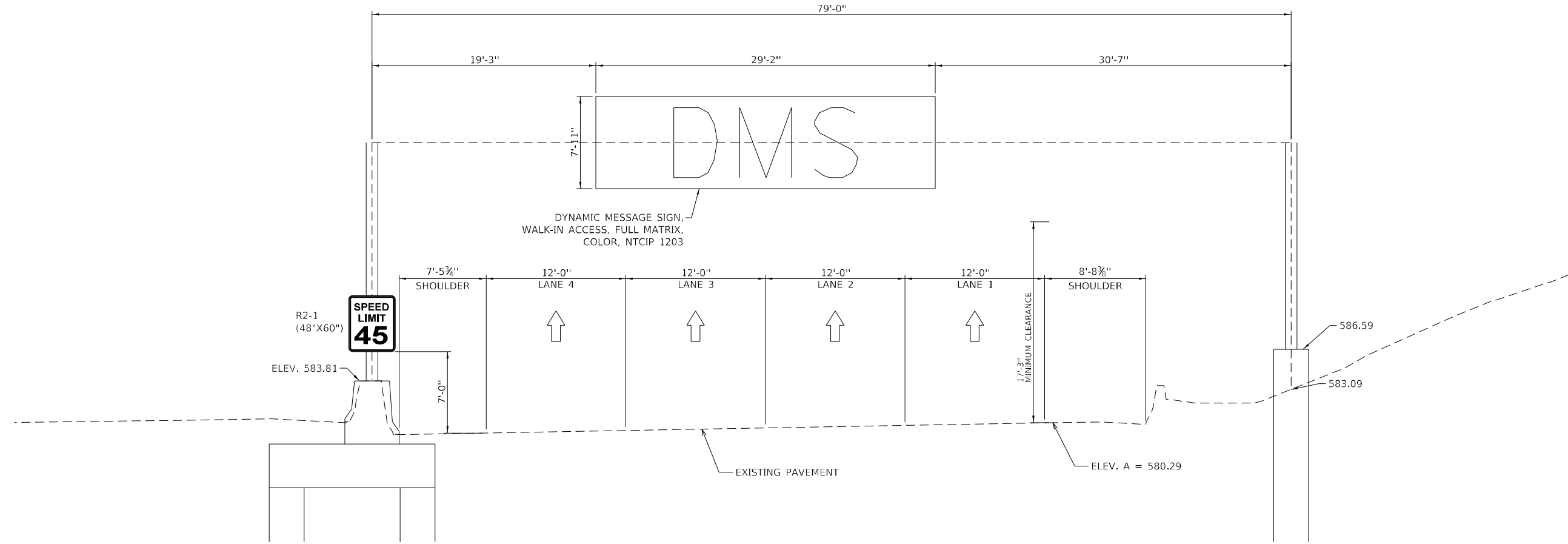
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PLOT DATE = 7/8/2022	DRAWN - JAB	REVISED -
	DATE - 06/10/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-004-BR	COOK	1492	474
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				

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SIGN 16 (CM13) STA 344+53.87 (SB) - PROPOSED SIGN TRUSS MOUNT
(150161094R049.6)

- NOTES:**
1. SEE SHEET NO. ... TO ... FOR OVERHEAD SIGN PANEL DETAILS
 2. FINAL ELEVATION OF CENTERLINE OF TRUSS TO BE DETERMINED BY SIGN TRUSS DESIGNER
 3. ALL HORIZONTAL DIMENSIONS ARE MEASURED ALONG ϕ OF TRUSS

PARSONS TRANSPORTATION GROUP <small>ENGINEERS & PLANNERS 15 SOUTH RIVER BRIDGE PLAZA, SUITE 400 CHICAGO, IL 60606 Telephone: 312.460.8110 Fax: 312.460.8110</small>	USER NAME = p007124D	DESIGNED - JAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES SIGN PANEL PLACEMENT	F.A.U. RTE. = 90/94	SECTION = 2020-004-BR	COUNTY = COOK	TOTAL SHEETS = 1492	SHEET NO. = 475
	PLOT SCALE =	DRAWN - JAB	REVISED -			SHEET OF SHEETS	CONTRACT NO. 62K74			
	PLOT DATE = 7/8/2022	DATE - 06/10/2022	REVISED -			ILLINOIS FED. AID PROJECT				

Existing Structure: S.N. 016-0204 was originally built in 1961 from BCR. The bridge was redecked between 1990 and 1993, and steel girder repairs were performed in 2004 and 2017. The structure has a back-to-back abutment length of 295'-10¹/₈" and an out-to-out deck width of 42'-9". The superstructure consists of a 7¹/₂" thick reinforced concrete deck supported on four spans of simply supported and continuous steel beams having span lengths of 40'-6", 102'-8³/₁₆", 102'-8³/₁₆" and 45'-6". The substructure consists of reinforced concrete piers supported by steel piles and caissons, and abutments supported by cast-in-place metal shell piles.

Traffic will be maintained utilizing stage construction.

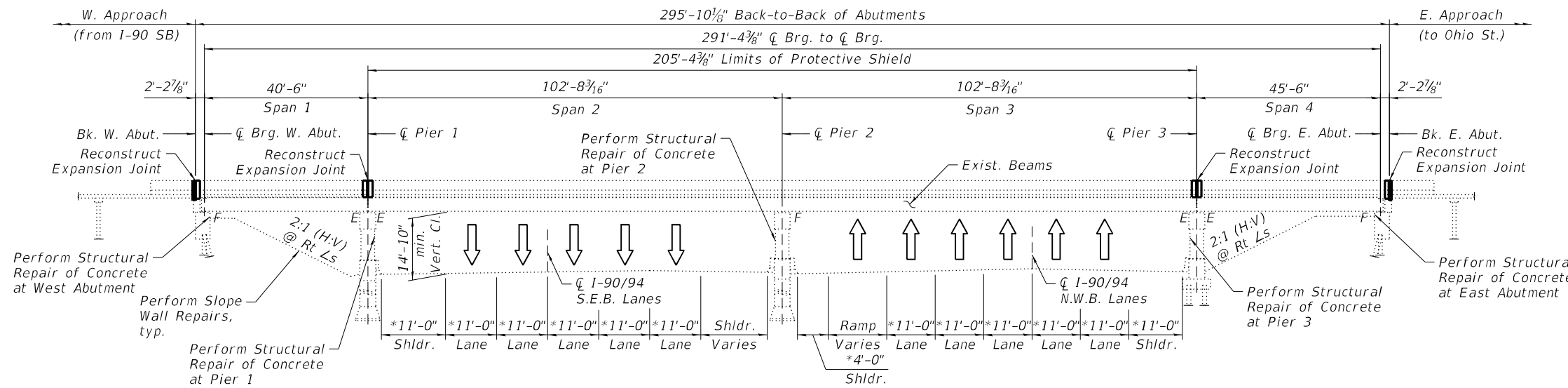
No salvage.

LOADING

HS20-44 and alternate military loading

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification for Highway Bridges, 17th Edition

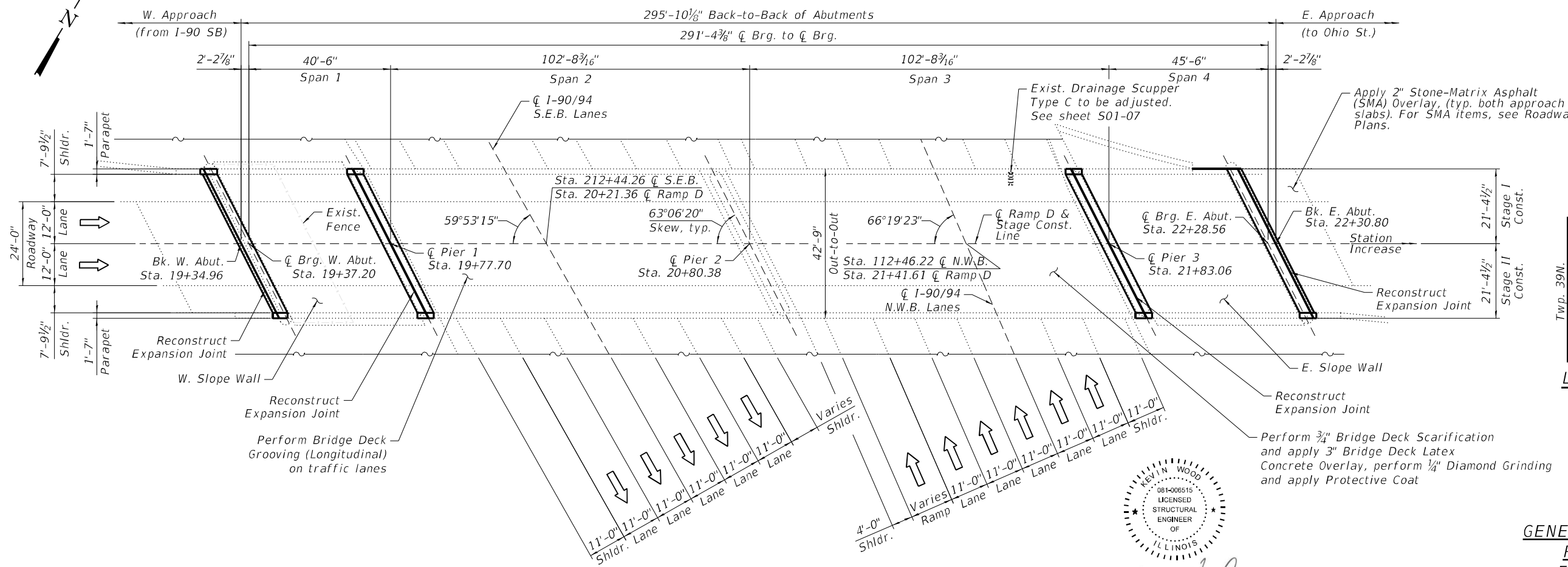


ELEVATION

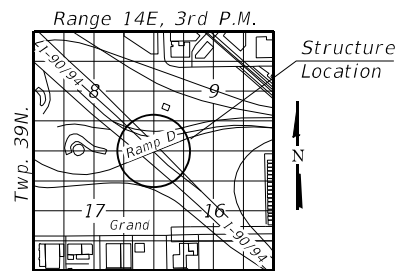
* Dimension at right angle

NOTE:

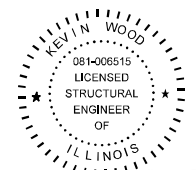
- All stations are to the C Ramp D Roadway and taken from existing plans.
- No Future Wearing Surface is allowed.



PLAN



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

RAMP D OVER I-90/94

F.A.I. SEC 2020-004-BR

COOK COUNTY

STATION: 20+80.38

STRUCTURE NO. 016-0204

MODEL: SMODELNAME5
 FILE NAME: X:\OH\2020\20200221-03\Design\Structural\Design Files\CADD\SH\T016-0204_Ohio_Ramp\16-0204-62K74-5001-GPES.dgn

GR&E
 8501 W. Higgins Road, Suite 280
 Chicago, Illinois 60631; (773) 399-0112

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 -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SHEET S01-01 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	476
			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.
- 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

- S01-01 General Plan & Elevation
- S01-02 General Data
- S01-03-S01-04 Stage Construction Details I & II
- S01-05 Temporary Concrete Barrier
- S01-06 Bridge Deck Repair Plan and Details
- S01-07 Drainage Scupper Type C Adjustment Details
- S01-08-S01-10 West Abutment Joint Details I, II & III
- S01-11-S01-12 Pier 1 Expansion Joint Details I & II
- S01-13-S01-14 Pier 3 Expansion Joint Details I & II
- S01-15-S01-18 West Abutment Joint Details I, II, III & IV
- S01-19 Preformed Joint Strip Seal
- S01-20 Framing Plan
- S01-21 Structural Steel Repair Details
- S01-22 West Abutment Repairs
- S01-23 East Abutment Repairs
- S01-24 Pier 1 Repairs
- S01-25 Pier 2 Repairs
- S01-26 Pier 3 Repairs
- S01-27 Slope Wall Repairs
- S01-28 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.
- Perform deck repairs.
- Remove and reconstruct expansion joints at piers and abutments and install new Preformed Joint Strip Seals.
- Repair steel diaphragms as shown on the plans.
- Adjust drainage scupper.
- 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, abutment hatched blocks and pier hatched blocks.
- 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.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu Yd	31.3		31.3
Protective Shield	Sq Yd	976		976
Concrete Superstructure	Cu Yd	38.5		38.5
Protective Coat	Sq Yd	1,582		1,582
Furnishing and Erecting Structural Steel	Pound	1,970		1,970
Reinforcement Bars, Epoxy Coated	Pound	5,390		5,390
Bar Splicers	Each	72		72
Preformed Joint Seal 1"	Foot	14		14
Preformed Joint Strip Seal	Foot	185		185
Concrete Sealer	Sq Ft		808	808
Protect and Maintain Existing Underpass Luminaire	L Sum		0.022	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	784		784
Structural Steel Removal	Pound	1,970		1,970
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,269		1,269
Cleaning Drainage System	L Sum	0.05		0.05
Bridge Deck Scarification 3/4"	Sq Yd	1,269		1,269
Structural Repair of Concrete (Depth Equal to or less than 5 Inches)	Sq Ft		370	370
Deck Slab Repair (Full Depth, Type I)	Sq Yd	0.4		0.4
Deck Slab Repair (Full Depth, Type II)	Sq Yd	3.7		3.7
Drainage Scuppers to be Adjusted	Each	1		1
Diamond Grinding (Bridge Section)	Sq Yd	1,293		1,293
Maintenance of Lighting System	Cal Mo		6	6

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8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631; (773) 399-0112

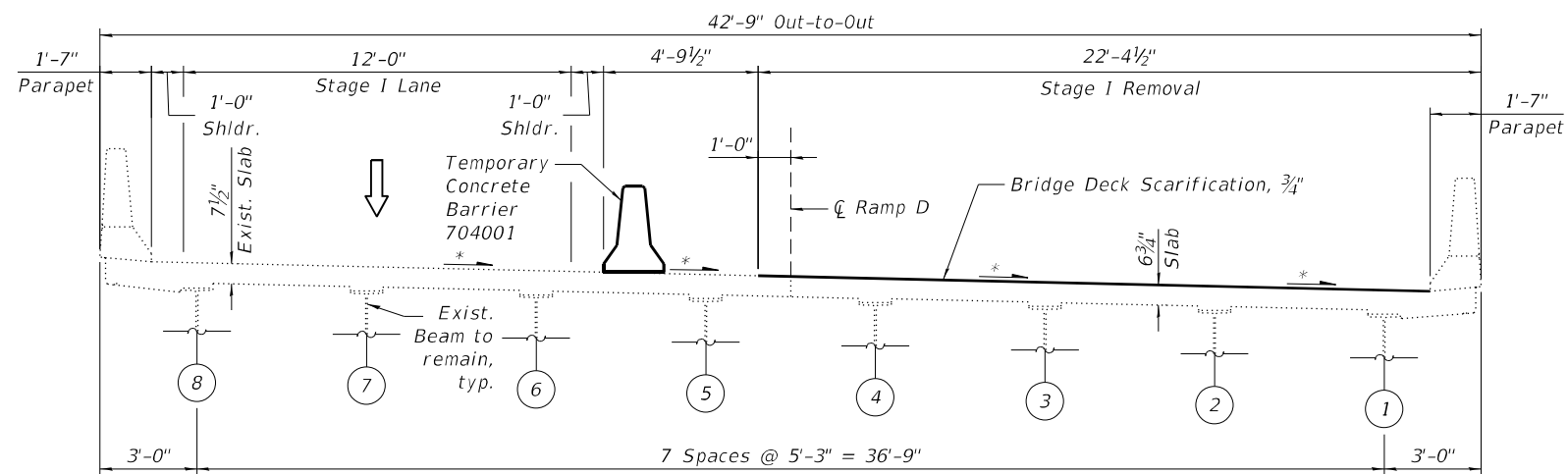
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	CHECKED -	K.G.W.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

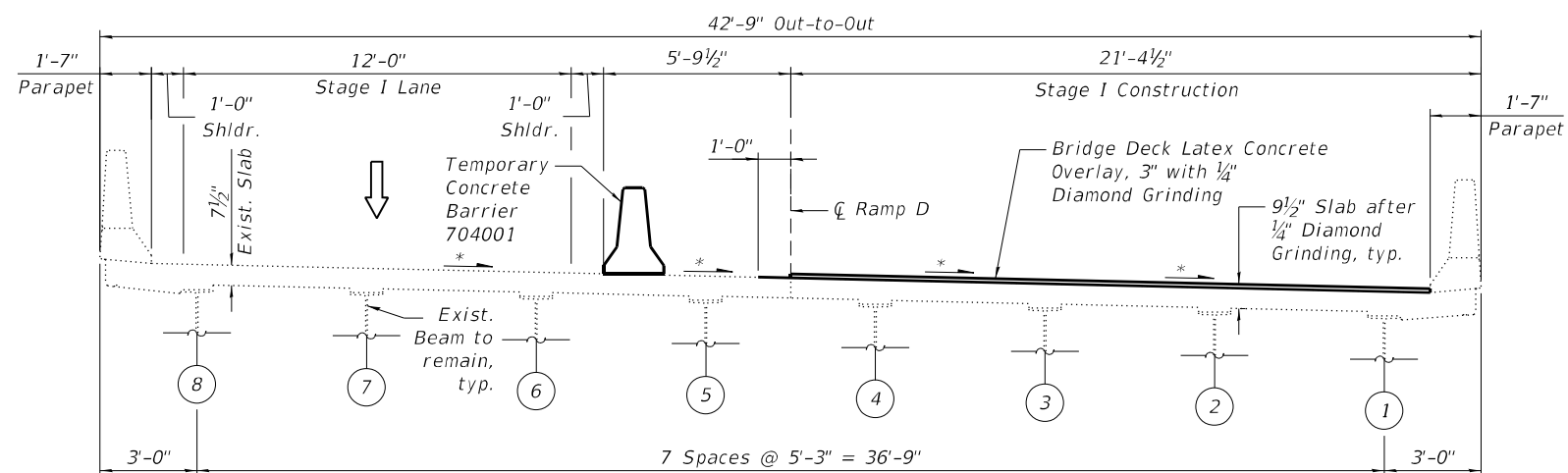
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SN 016-0204**

SHEET S01-02 OF S01-28 SHEETS

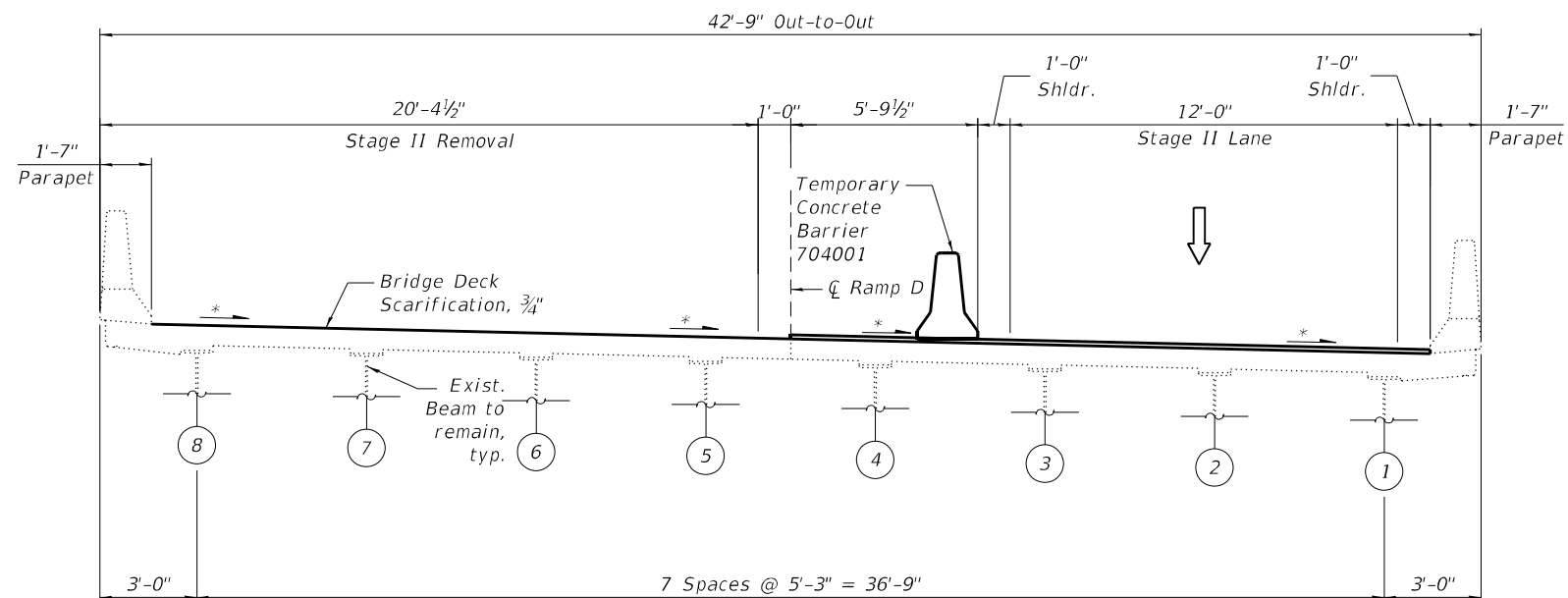
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90	2020-004-BR	COOK	1492	477
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



STAGE I REMOVAL
(Looking West)



STAGE I CONSTRUCTION
(Looking West)



STAGE II REMOVAL
(Looking West)

* Match existing deck surface profile

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 and piers 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 abutments and piers 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.
5. Perform $\frac{1}{4}$ " diamond grinding to bridge deck, abutment hatched block and pier hatched block.
6. Perform Bridge Deck Grooving (Longitudinal) for the 3" Bridge Deck Latex Concrete Overlay and reconstructed abutment and pier 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.

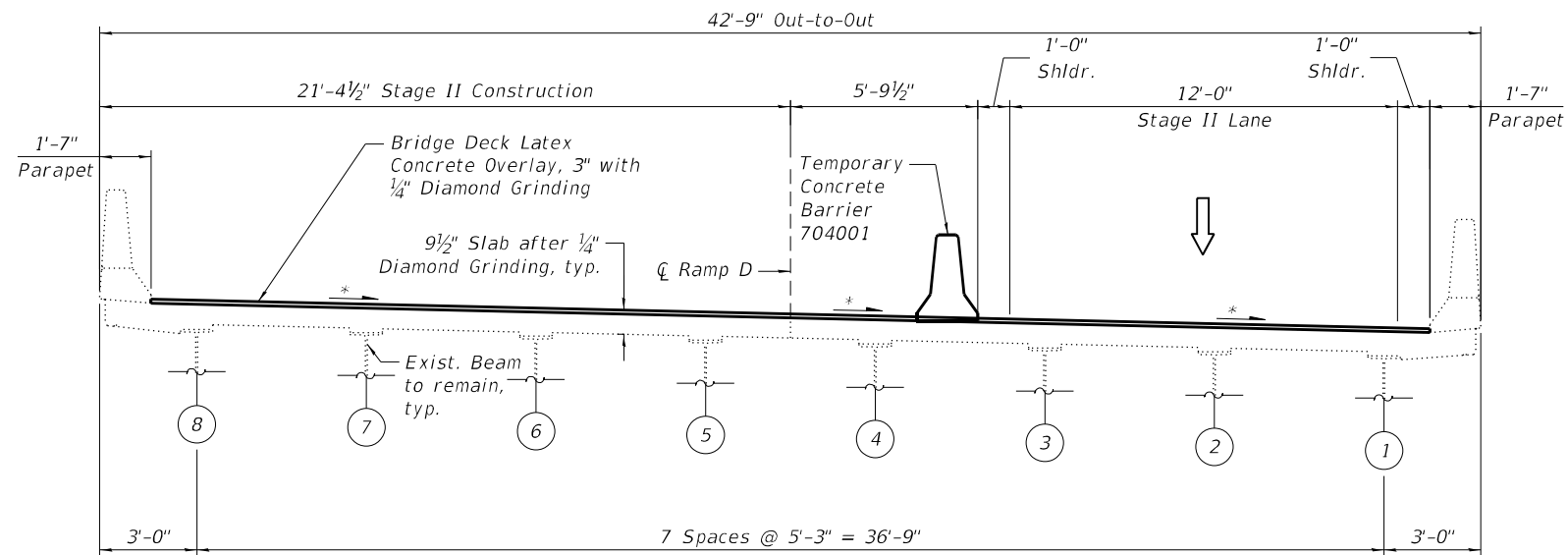
STAGE II REMOVAL

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 and pier joints, as shown in the plans.

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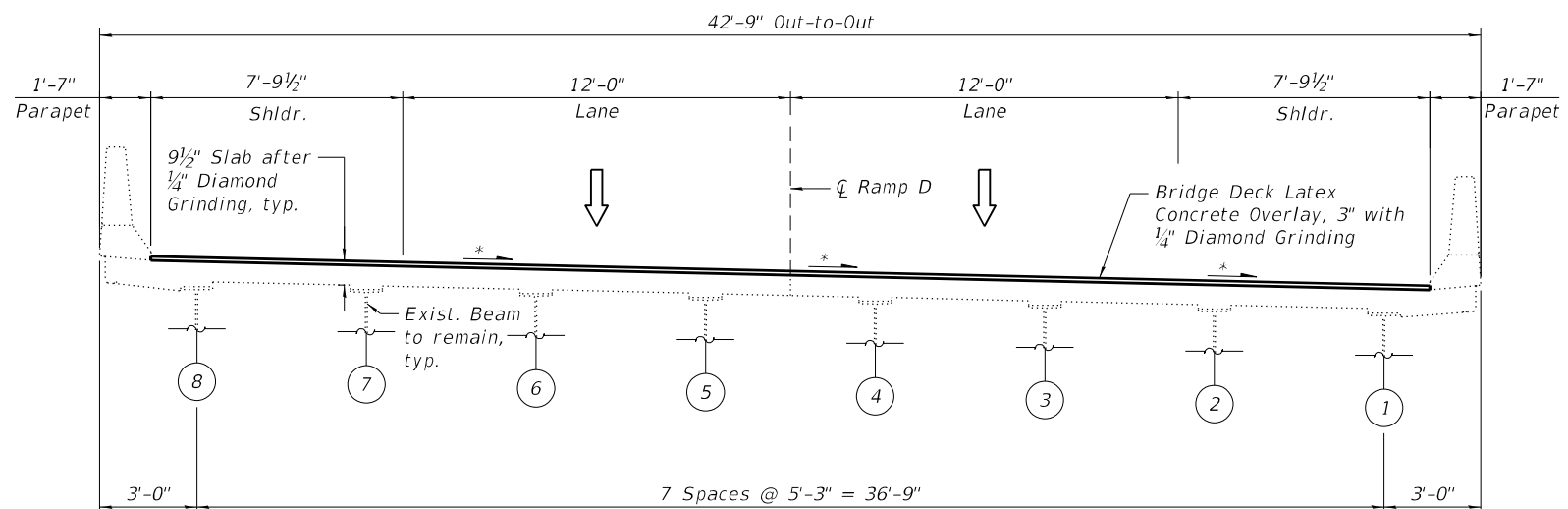
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	478
ILLINOIS			CONTRACT NO. 62K74	
FED. AID PROJECT				



STAGE II CONSTRUCTION

(Looking West)



FINAL CROSS SECTION

(Looking West)

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 abutments and piers 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, and pier hatched block.
6. Perform Bridge Deck Grooving (Longitudinal) for the 3" Bridge Deck Latex Concrete Overlay and reconstructed abutment and pier 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

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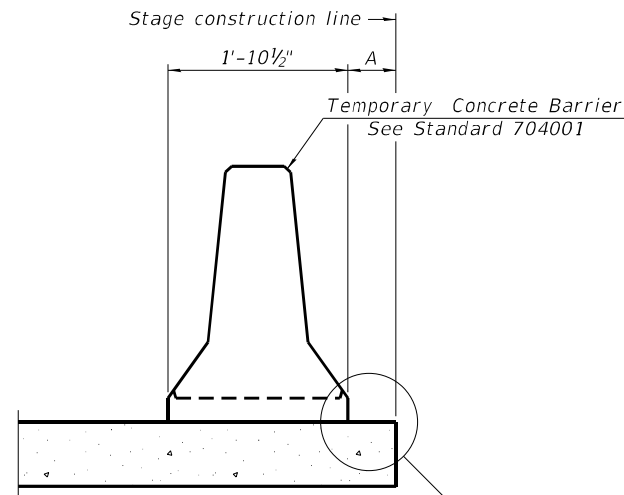
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PLOT DATE =	CHECKED -	K.G.W.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS II
SN 016-0204**

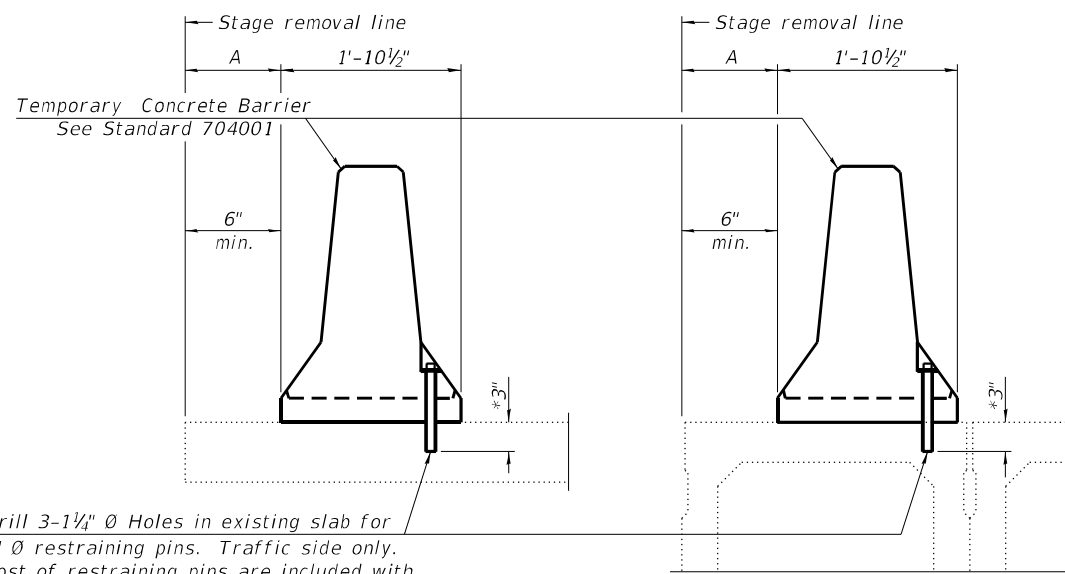
SHEET S01-04 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	479
			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



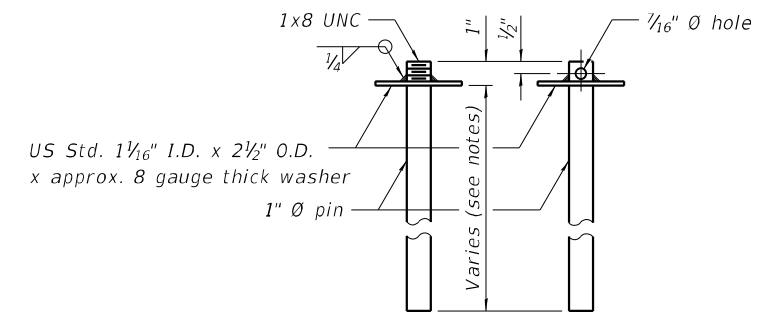
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

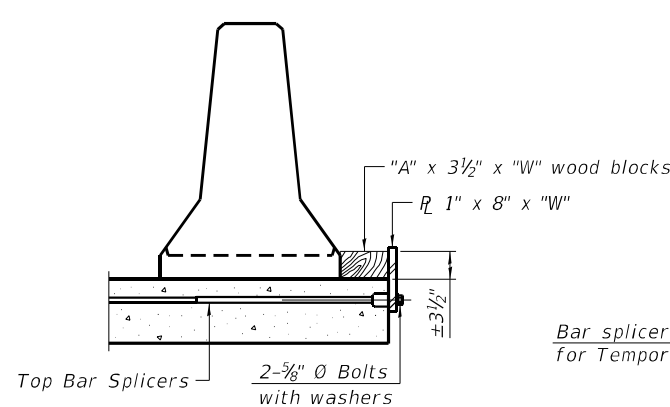
EXISTING DECK BEAM

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

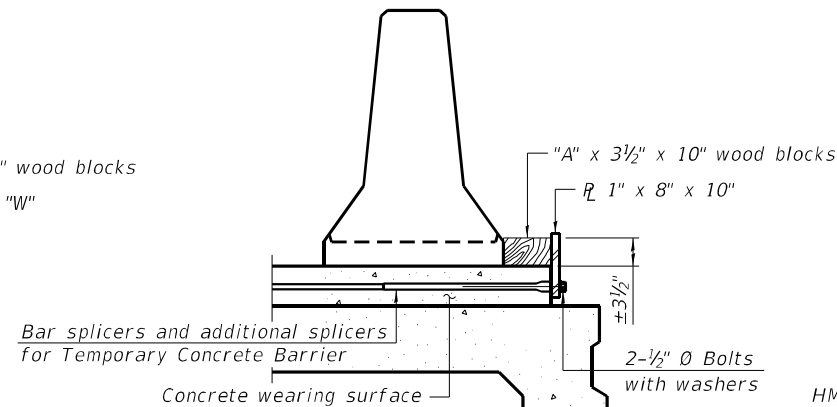
SECTIONS THRU SLAB OR DECK BEAM



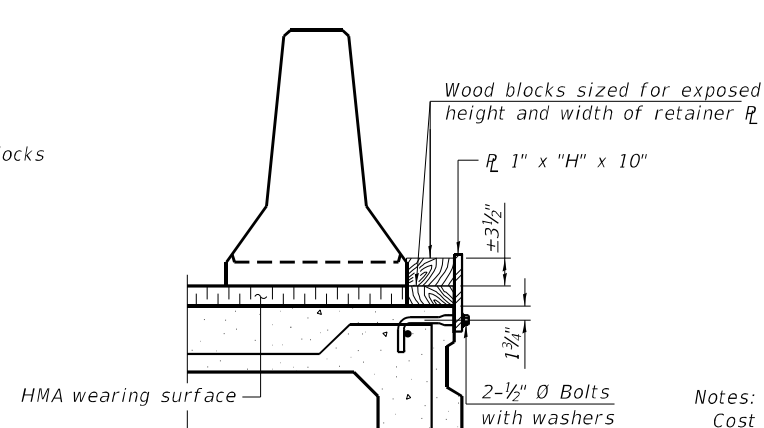
RESTRAINING PIN



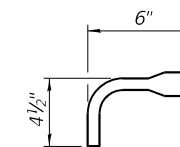
DETAIL I



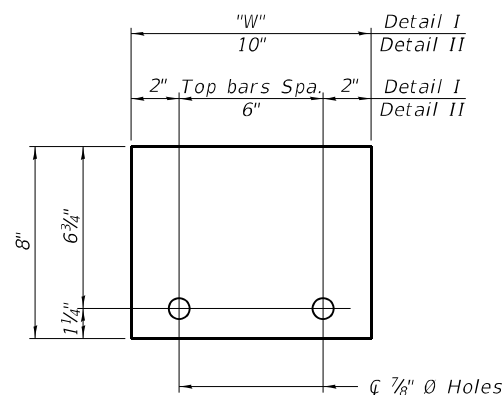
DETAIL II



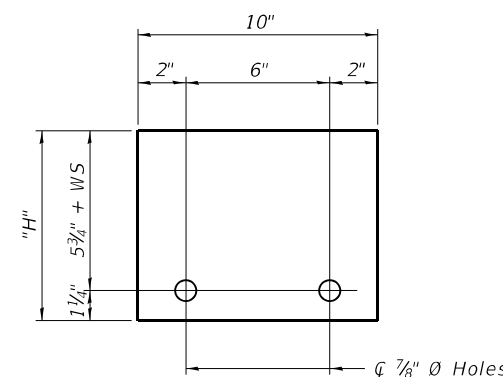
DETAIL III



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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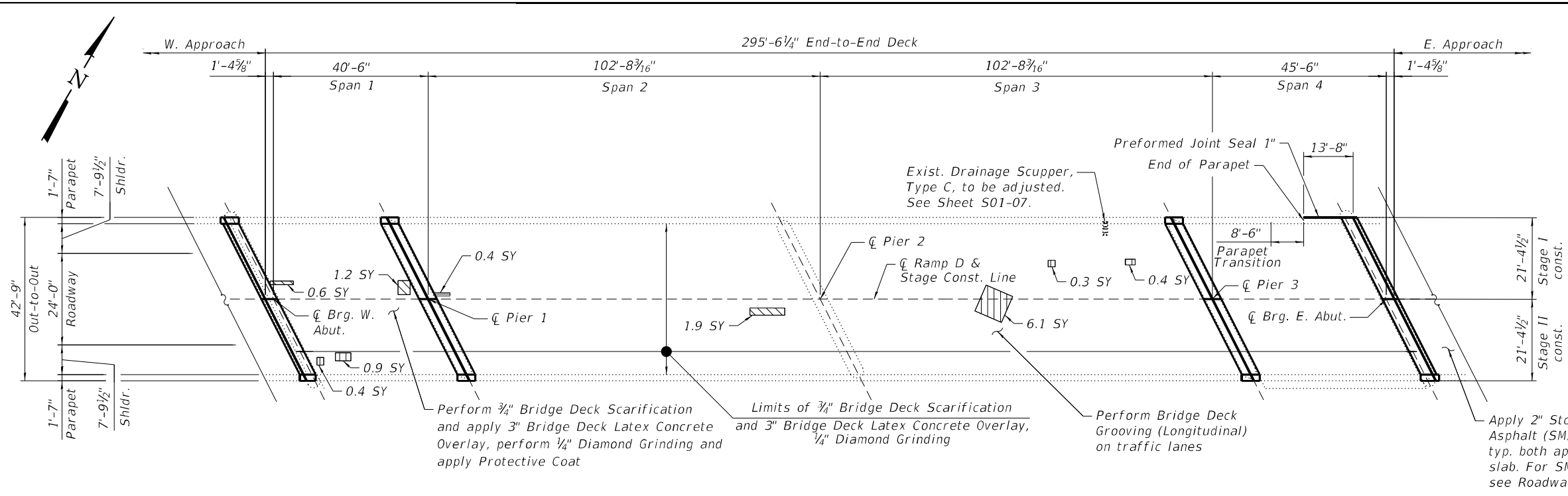
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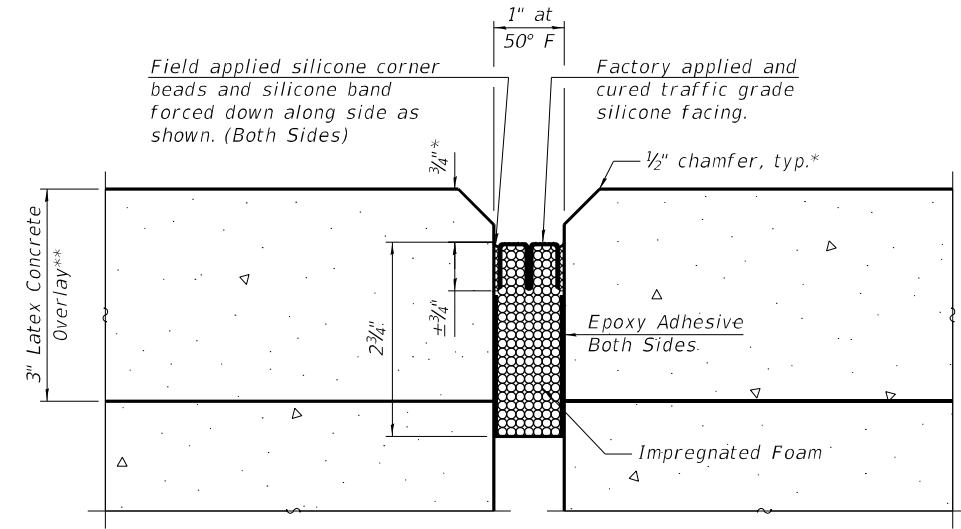
TEMPORARY CONCRETE BARRIER
 SN 016-0204

SHEET S01-05 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	480
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



DECK PLAN



PERFORMED JOINT SEAL 1"

(at East Abutment)

**Before 1/4" diamond grinding

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 S01-04.
3. For West and East transverse joint removal and reconstruction, see Sheets S01-08 thru S01-10 and S01-15 thru S01-18. For Pier 1 and Pier 3 joint removal and reconstruction, see Sheets S01-11 thru S01-14.
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. The cost of repair or replacement shall be included in the cost of 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.

LEGEND

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

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Shield	Sq Yd	976
Protective Coat	Sq Yd	1,582
Preformed Joint Seal 1"	Foot	14
Protect and Maintain Existing Underpass Luminaire	L Sum	0.022
Bridge Deck Grooving (Longitudinal)	Sq Yd	784
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,269
Bridge Deck Scarification 3/4"	Sq Yd	1,269
Deck Slab Repair (Full Depth, Type I)	Sq Yd	0.4
Deck Slab Repair (Full Depth, Type II)	Sq Yd	3.7
Diamond Grinding (Bridge Section)	Sq Yd	1,293
Maintenance of Lighting System	Cal Mo	6

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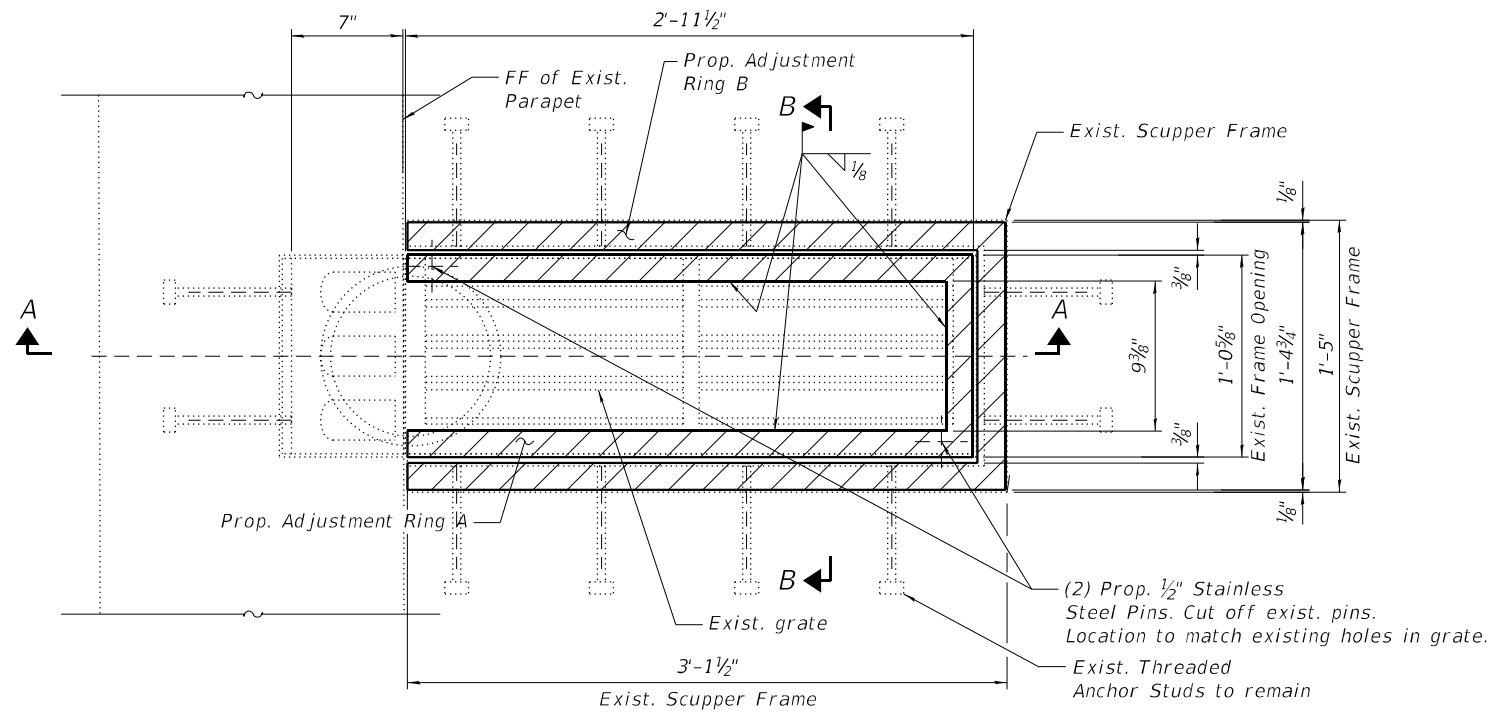
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DEPARTMENT OF TRANSPORTATION**

**BRIDGE DECK REPAIR PLAN AND DETAILS
SN 016-0204**

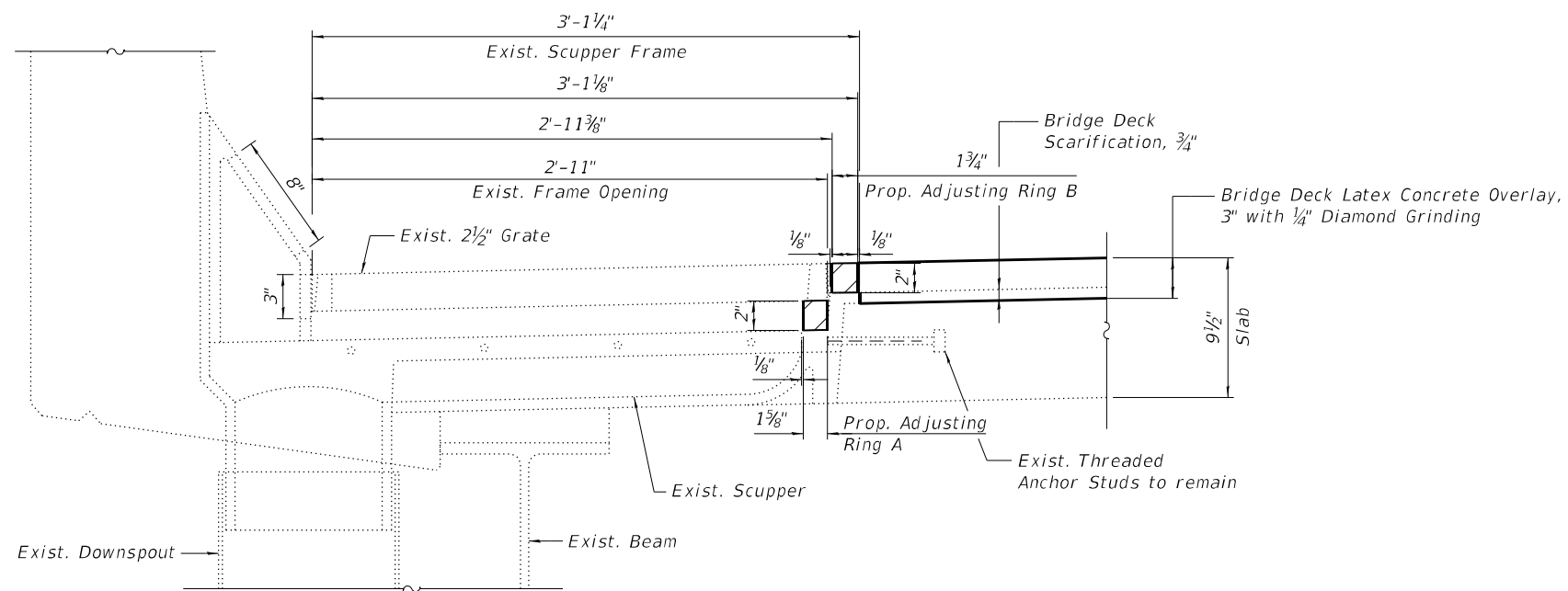
SHEET S01-06 OF S01-28 SHEETS

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

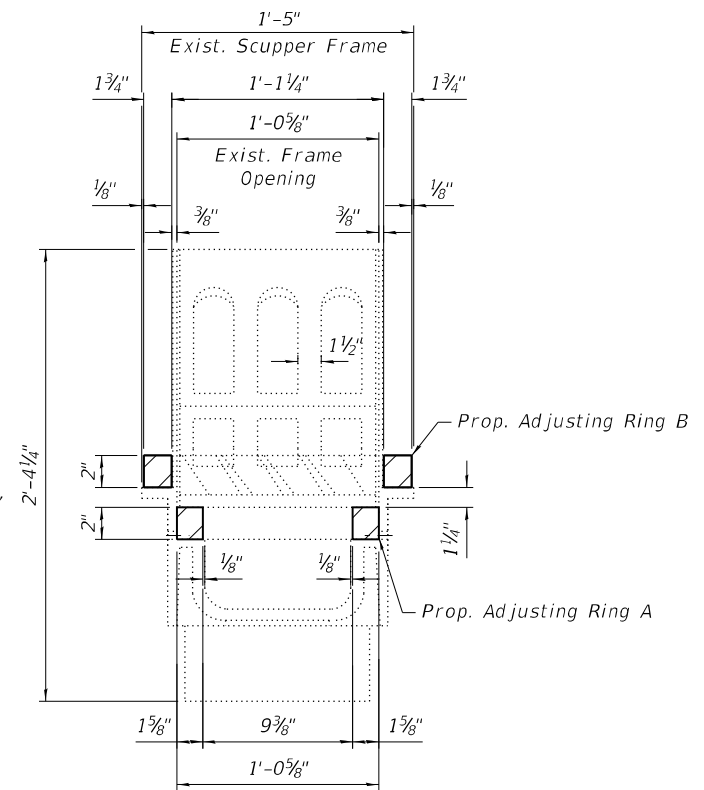


TYPICAL SCUPPER TYPE A PLAN

(xx 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 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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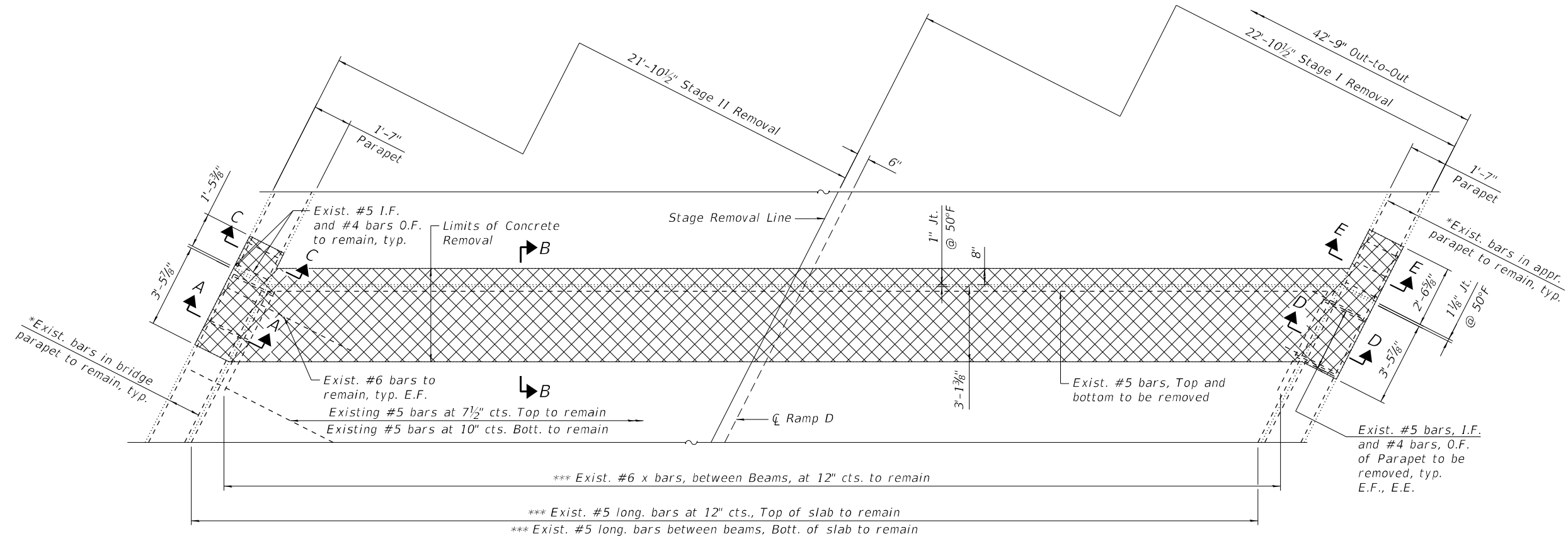
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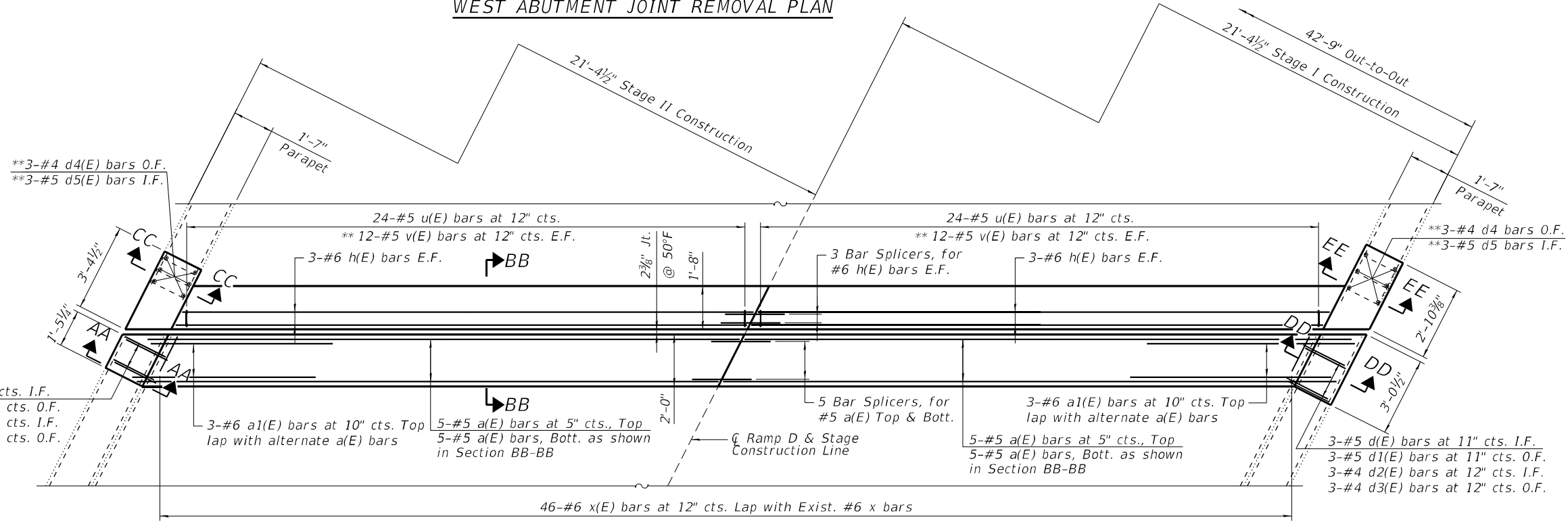
DRAINAGE SCUPPER TYPE C ADJUSTMENT DETAILS
SN 016-0204

SHEET S01-07 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	482
			CONTRACT NO. 62K74	
		ILLINOIS	FED. AID PROJECT	



WEST ABUTMENT JOINT REMOVAL PLAN



WEST ABUTMENT JOINT RECONSTRUCTION PLAN

NOTES:

- For sections A-A, B-B, C-C, D-D, E-E, AA-AA, BB-BB, CC-CC, DD-DD, and EE-EE see Sheets S01-09 and S01-10.

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

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

*** Existing reinforcement shall be cut in the field as required to incorporate new joint opening.

LEGEND

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

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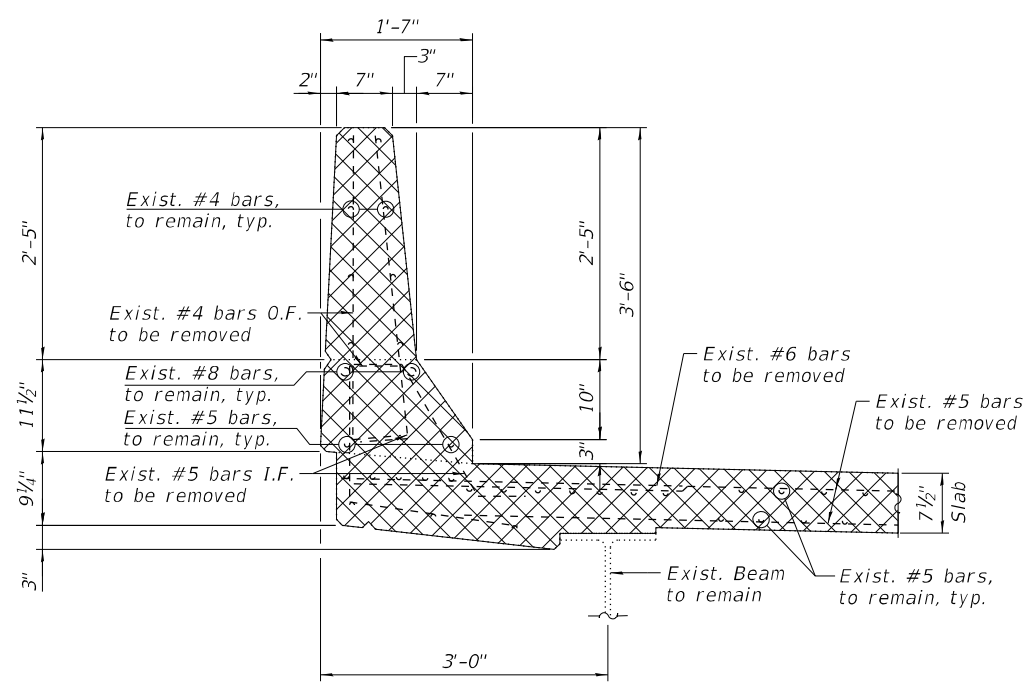
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT EXPANSION JOINT DETAILS I
SN 016-0204**

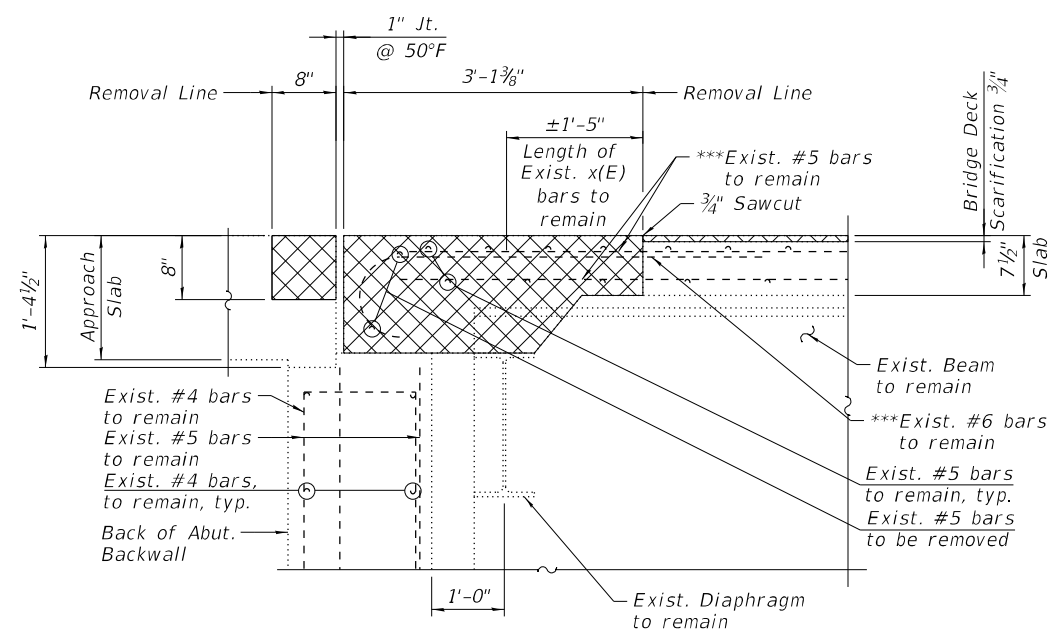
SHEET S01-08 OF S01-28 SHEETS

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

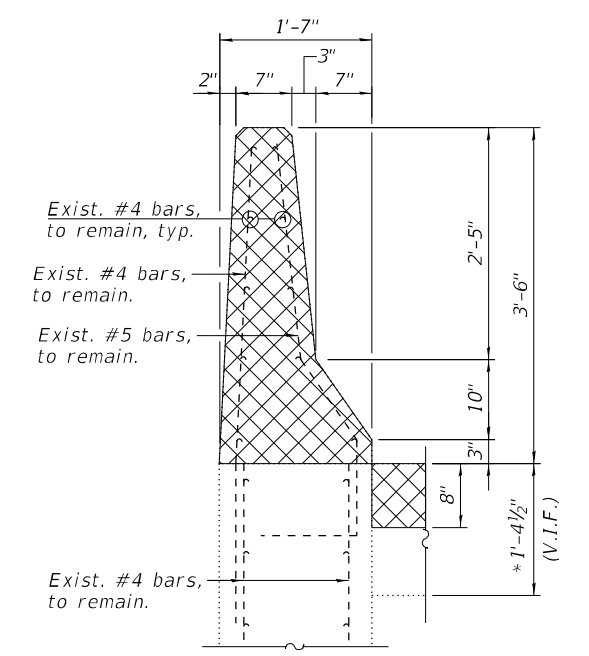
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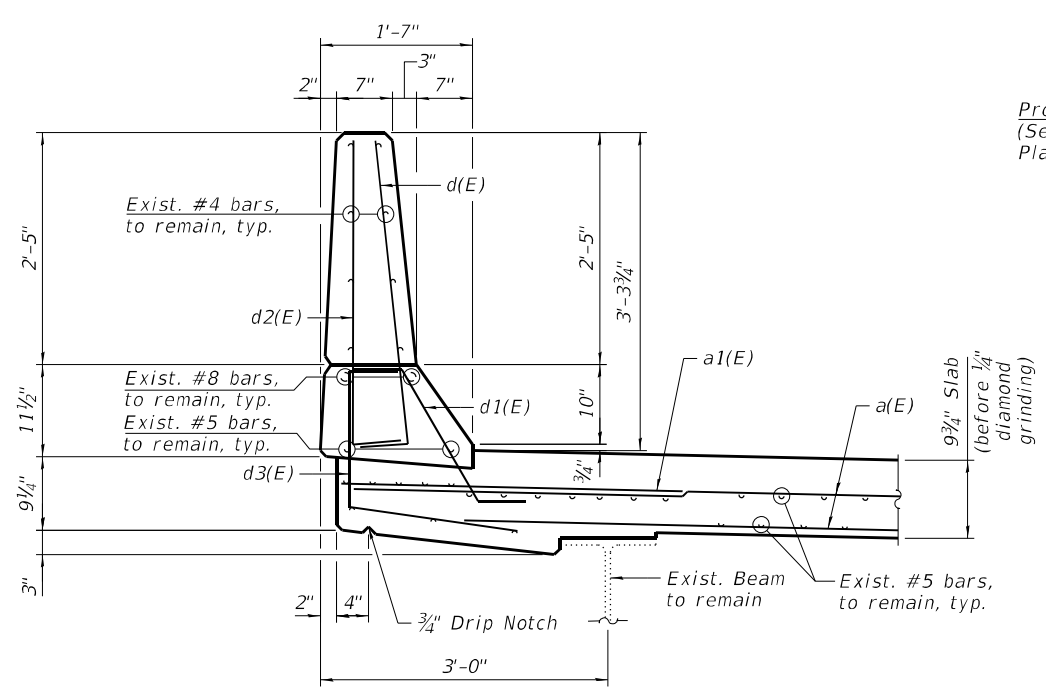
SECTION A-A
(South parapet removal)



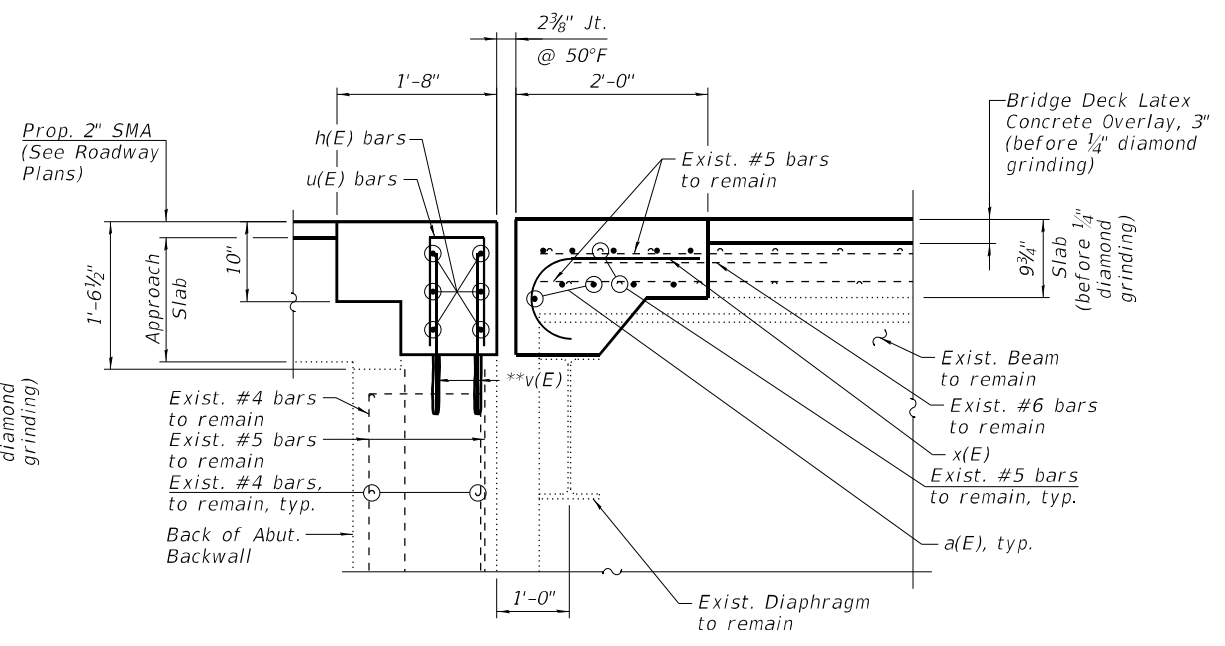
SECTION B-B *** Existing reinforcement shall be cut in the field as required to incorporate new joint opening.



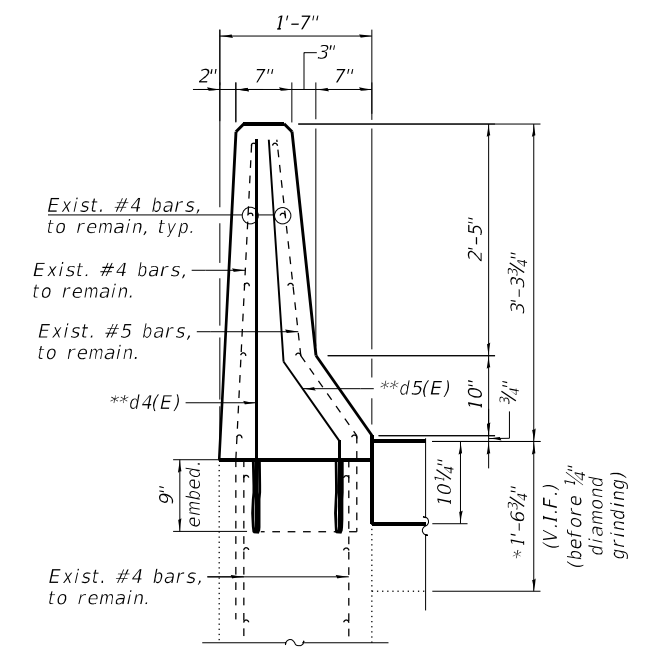
SECTION C-C
(South parapet removal)



SECTION AA-AA
(South parapet reconstruction)



SECTION BB-BB



SECTION CC-CC
(South parapet reconstruction)

LEGEND

- * Dimension is taken at the Back of Abutment
- ** Epoxy grout #4 d4(E) & #5 d5(E) and v(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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WEST ABUTMENT EXPANSION JOINT DETAILS II
 SN 016-0204

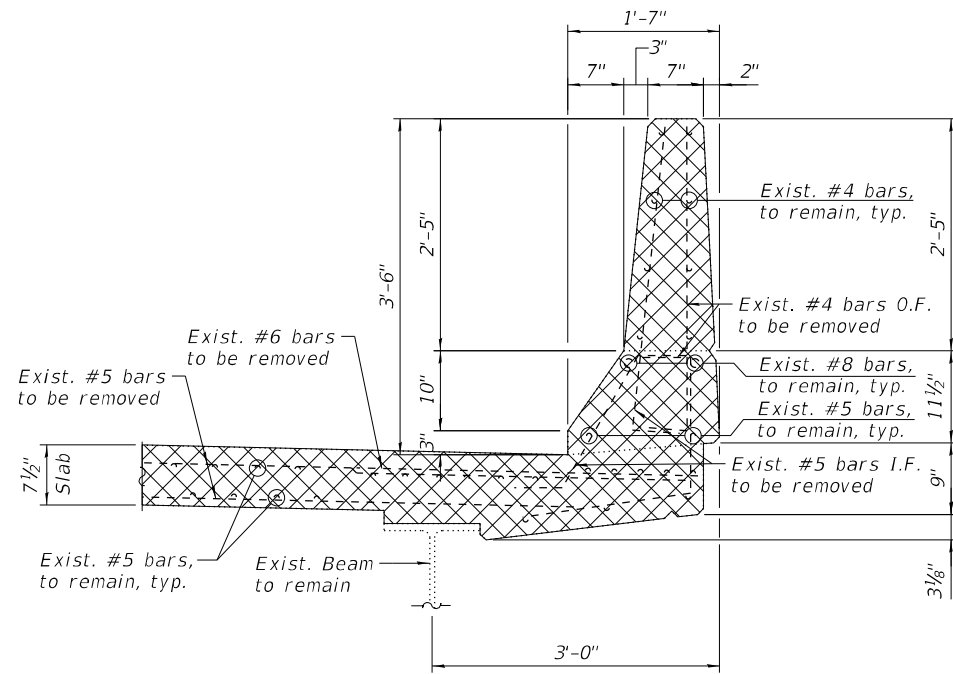
SHEET S01-09 OF S01-28 SHEETS

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CONTRACT NO. 62K74				

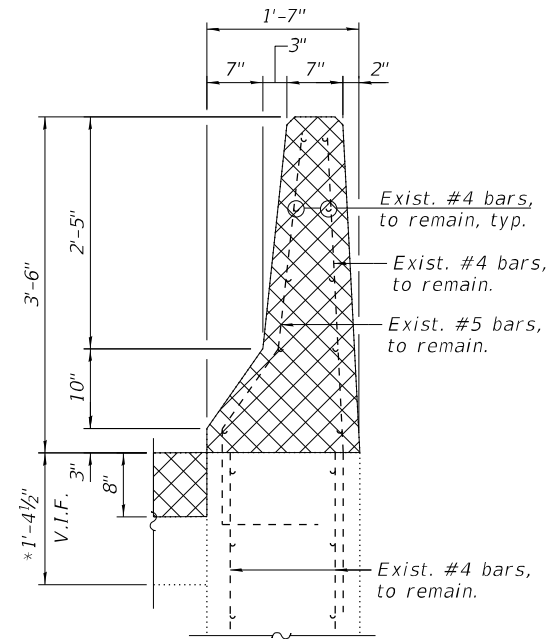
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**BILL OF MATERIAL
WEST ABUTMENT**

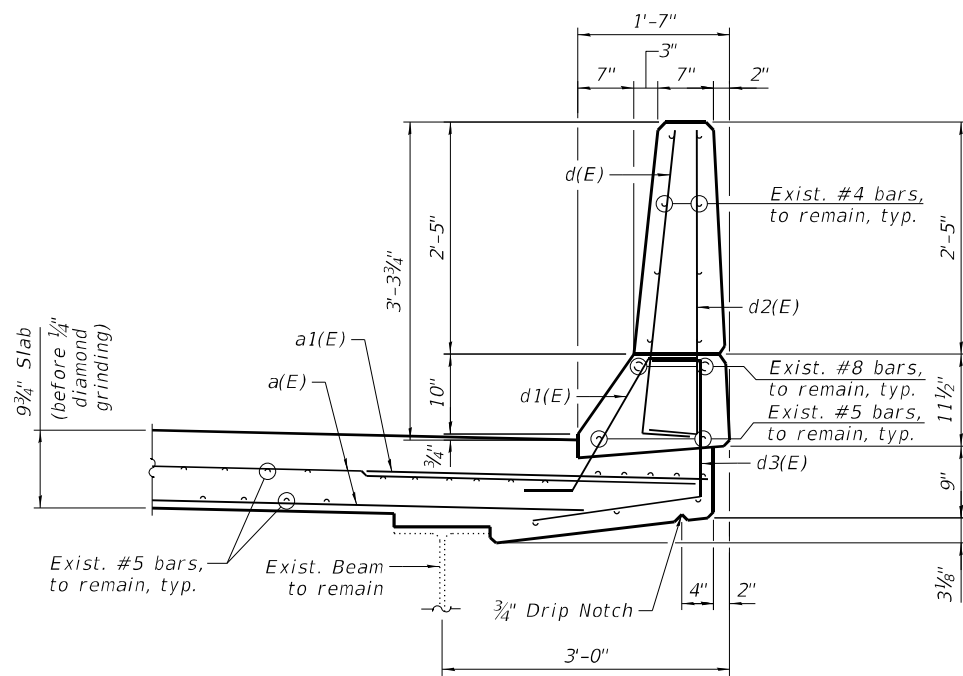
Bar	No.	Size	Length	Shape
a(E)	20	#5	23'-6"	—
a1(E)	6	#6	6'-6"	—
d(E)	5	#5	3'-8"	┌┐
d1(E)	5	#5	2'-7"	┌┐
d2(E)	5	#4	3'-8"	┌┐
d3(E)	5	#4	3'-8"	┌┐
d4(E)	6	#4	4'-2"	┌┐
d5(E)	6	#5	4'-4"	┌┐
h(E)	12	#6	23'-6"	—
u(E)	48	#5	2'-10"	┌┐
v(E)	48	#5	2'-1"	—
x(E)	46	#6	2'-7"	┌┐
Concrete Removal			Cu Yd	7.9
Reinforcement Bars, Epoxy Coated			Pound	1,500
Concrete Superstructure			Cu Yd	10.3



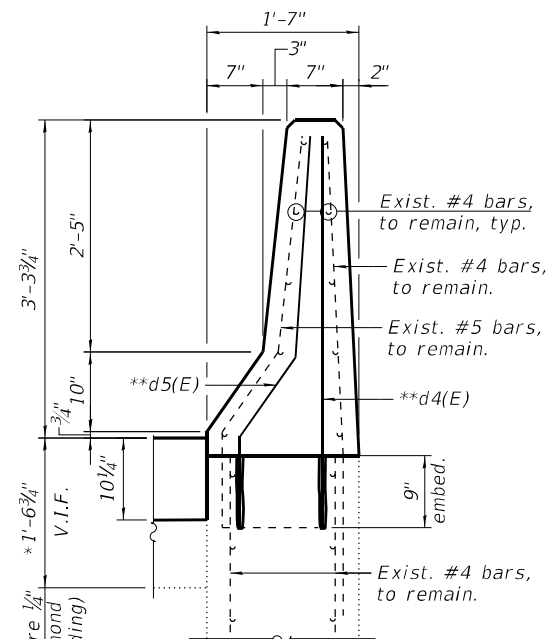
SECTION D-D
(North parapet removal)



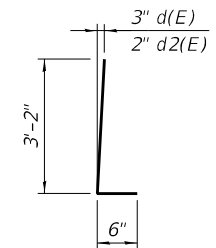
SECTION E-E
(North parapet removal)



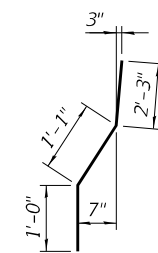
SECTION DD-DD
(North parapet reconstruction)



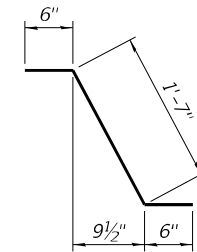
SECTION EE-EE
(North parapet reconstruction)



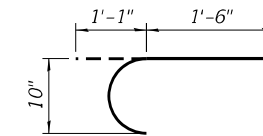
BARS d(E) & d2(E)



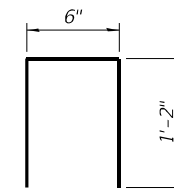
BAR d5(E)



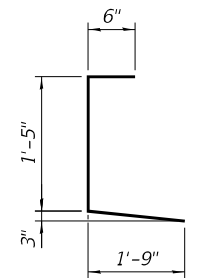
BAR d1(E)



BAR x(E)



BAR u(E)



BAR d3(E)

NOTES:

- For Preformed Joint Strip Seal details, see sheet S01-19.
- For Bar Splicer Assembly details, see sheet S01-28.
- 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 Abutment

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

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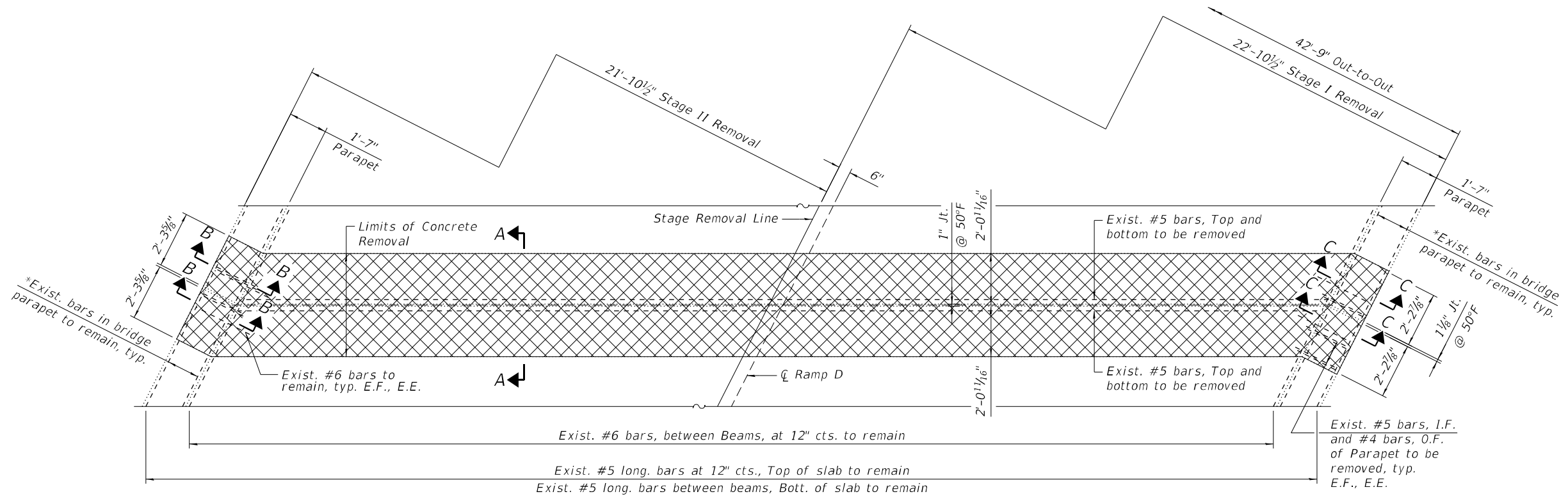
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**WEST ABUTMENT EXPANSION JOINT DETAILS III
SN 016-0204**

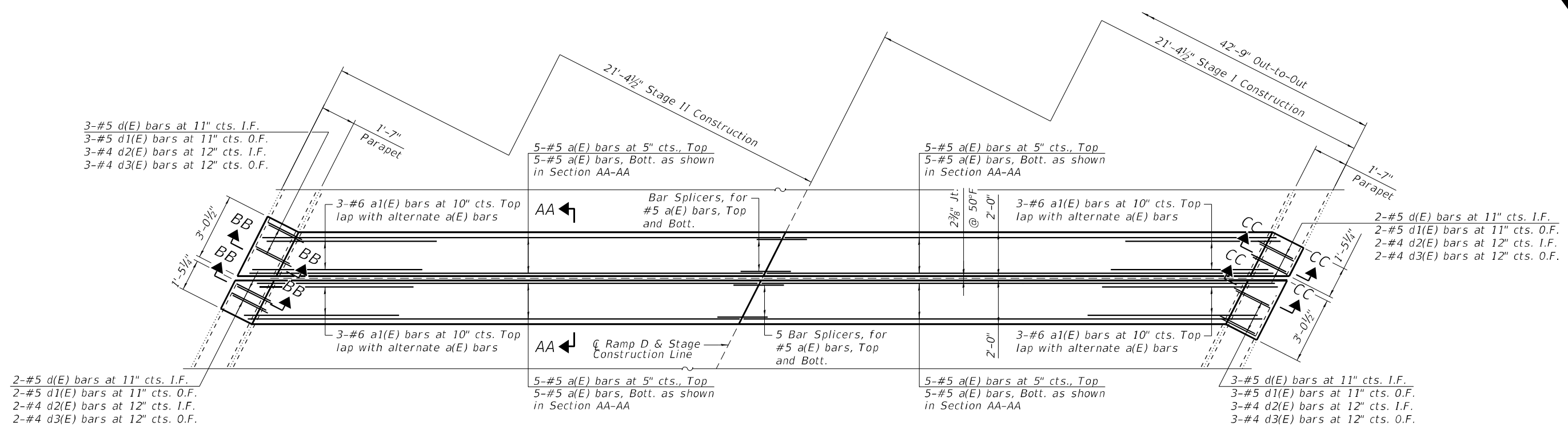
SHEET S01-10 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	485
			CONTRACT NO. 62K74	

ILLINOIS FED. AID PROJECT



PIER 1 JOINT REMOVAL PLAN



PIER 1 JOINT RECONSTRUCTION PLAN

NOTES:

- For sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, see sheet S01-12.

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

LEGEND

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

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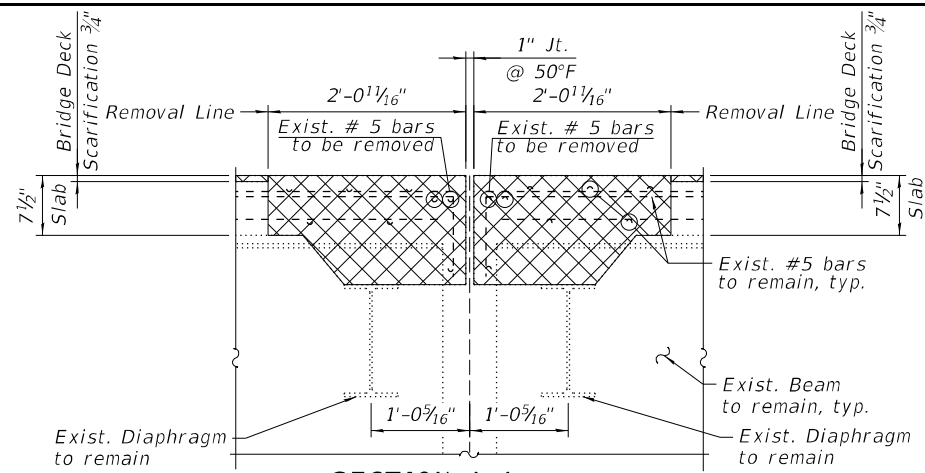
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	486
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	

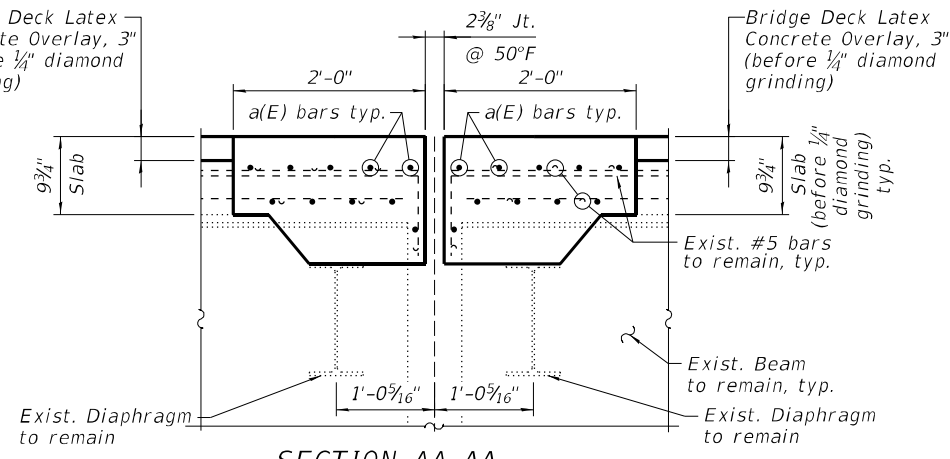
BILL OF MATERIAL

PIER 1

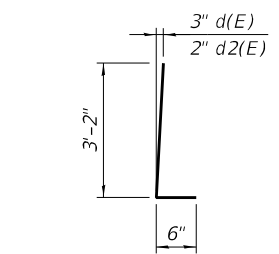
Bar	No.	Size	Length	Shape
a(E)	40	#5	23'-6"	—
a1(E)	12	#6	6'-6"	—
d(E)	10	#5	3'-8"	┌
d1(E)	10	#5	2'-7"	┌
d2(E)	10	#4	3'-8"	┌
d3(E)	10	#4	3'-8"	┌
Concrete Removal			Cu Yd	8.2
Reinforcement Bars, Epoxy Coated			Pound	1,220
Concrete Superstructure			Cu Yd	9.4



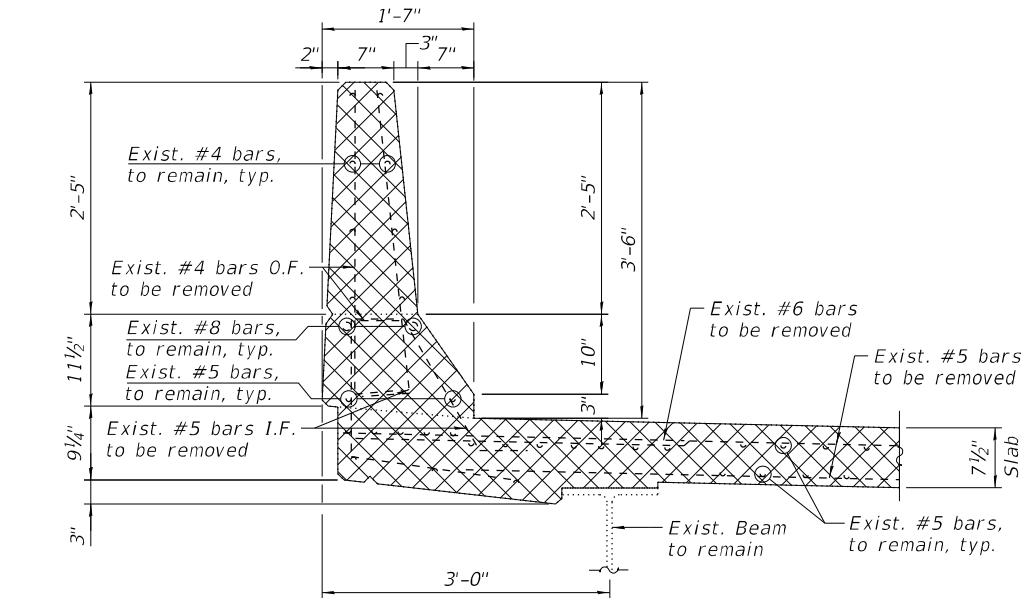
SECTION A-A



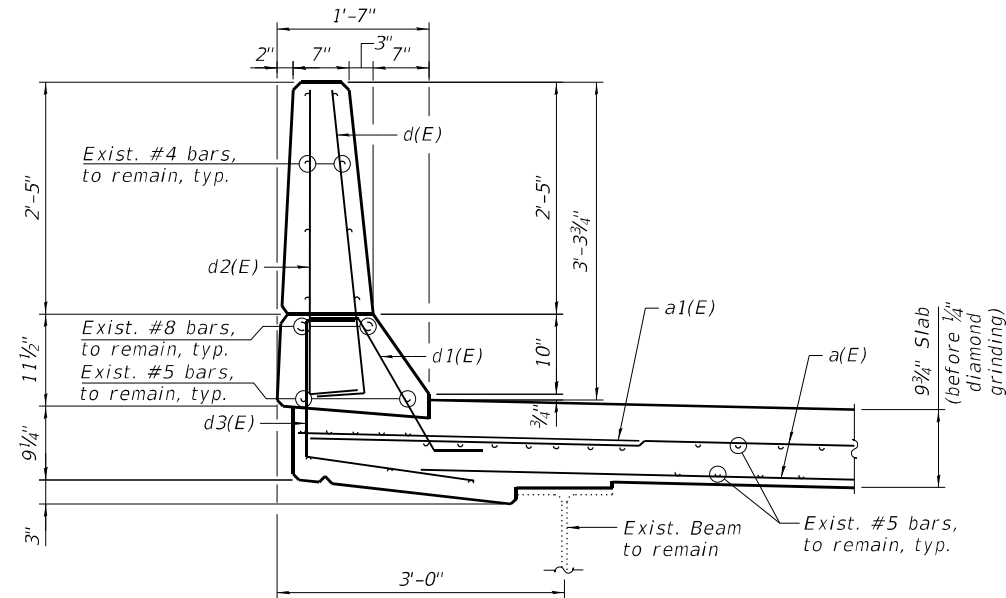
SECTION AA-AA



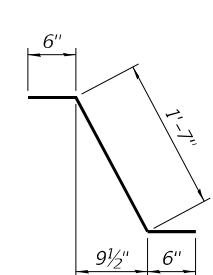
BARS d(E) & d2(E)



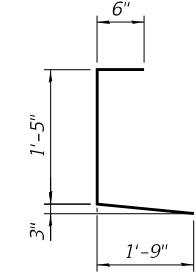
SECTION B-B
(South parapet removal)



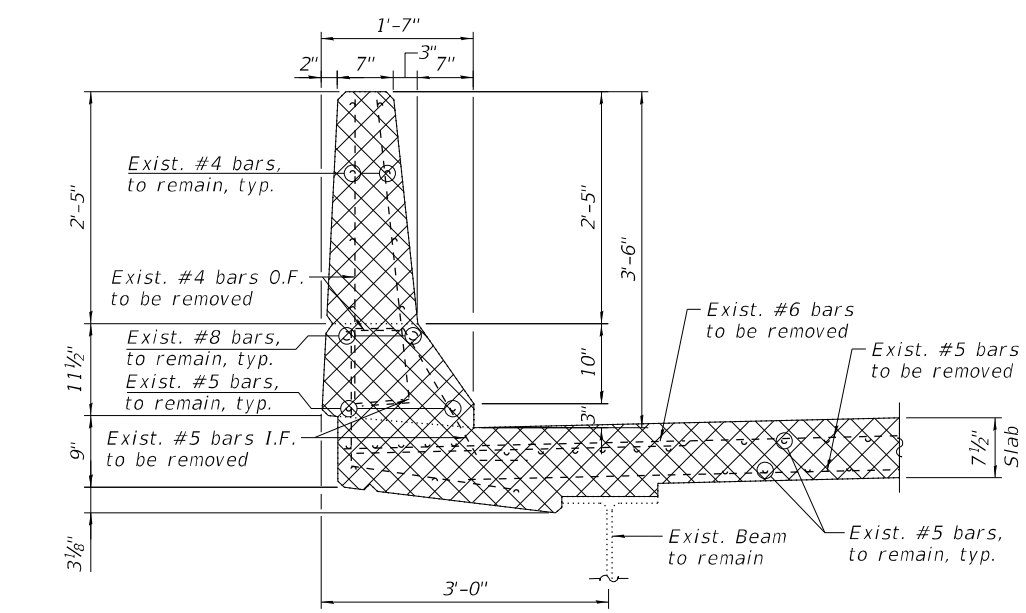
SECTION BB-BB
(South parapet reconstruction)



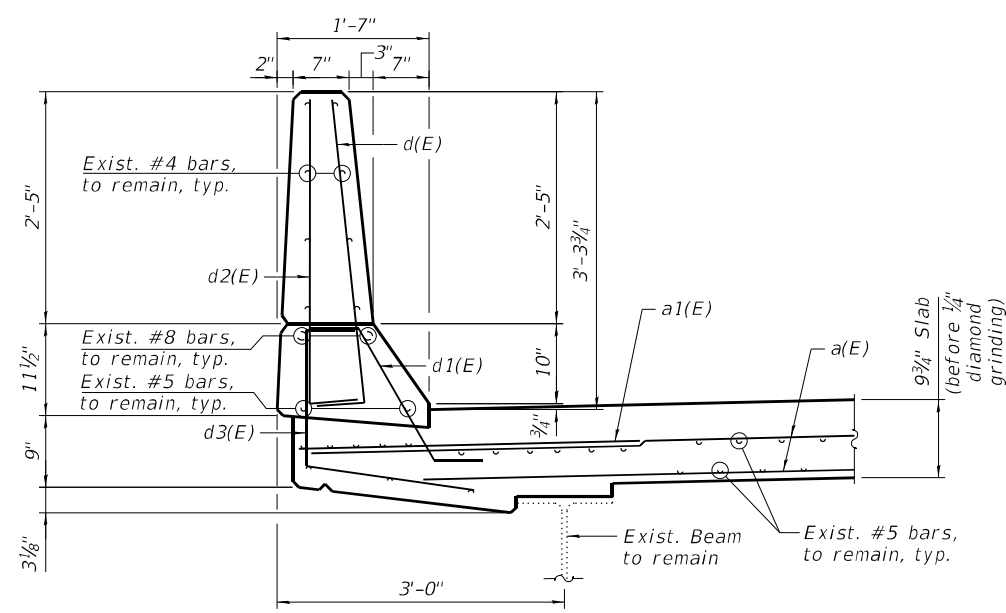
BAR d1(E)



BAR d3(E)



SECTION C-C
(North parapet removal)



SECTION CC-CC
(North parapet reconstruction)

NOTES:

- For Preformed Joint Strip Seal details, see sheet S01-19.
- For Bar Splicer Assembly details, see sheet S01-28.
- 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
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GRAEF
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631; (773) 399-0112

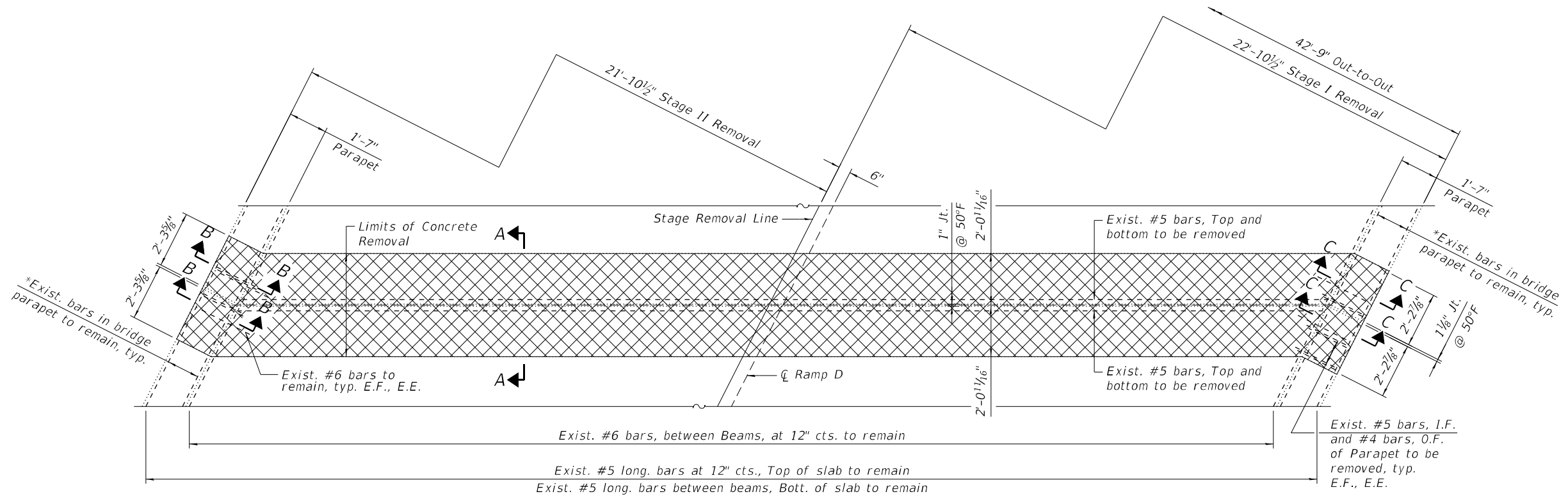
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	CHECKED -	K.G.W.	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

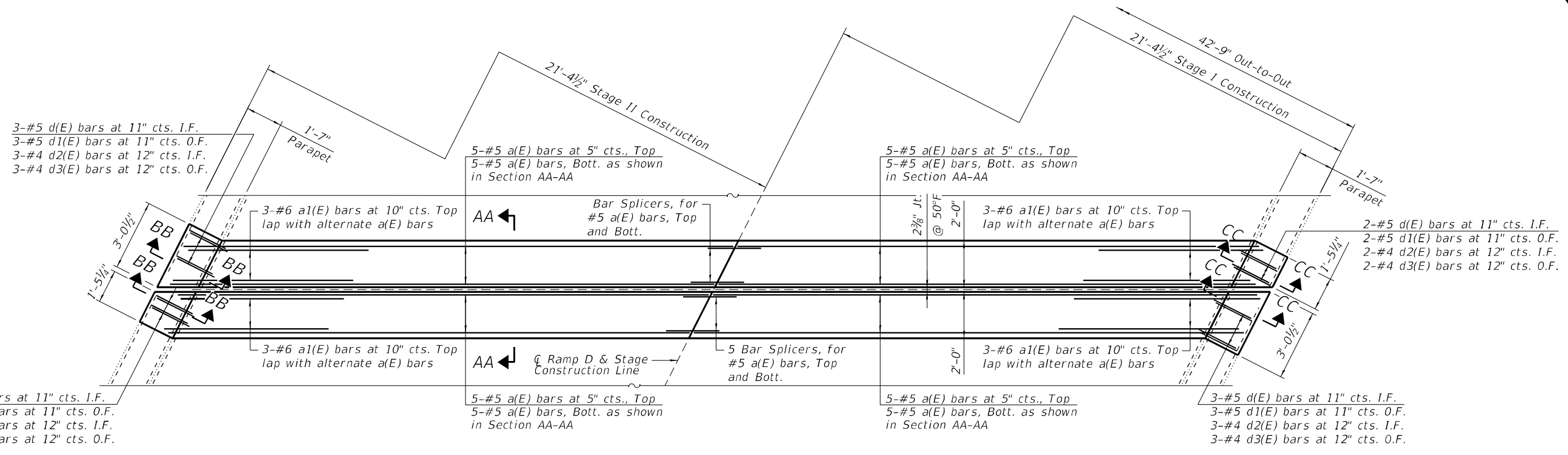
PIER 1 EXPANSION JOINT DETAILS II
SN 016-0204

SHEET S01-12 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	487
CONTRACT NO. 62K74				
ILLINOIS		FED. AID PROJECT		



PIER 3 JOINT REMOVAL PLAN



PIER 3 JOINT RECONSTRUCTION PLAN

NOTES:

- For sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, see sheet S01-14.

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

LEGEND

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

MODEL: SMOELNAME5
FILE NAME: X:\OH\2020\20200221-03\Design\Structural\Design Files\CADD\SH1016-0204_Ohio_Ramp\Ramp\0160204-62K74-5013-EXP.S.dgn



USER NAME =	DESIGNED - J.T.B.	REVISED -
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	CHECKED - K.G.W.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

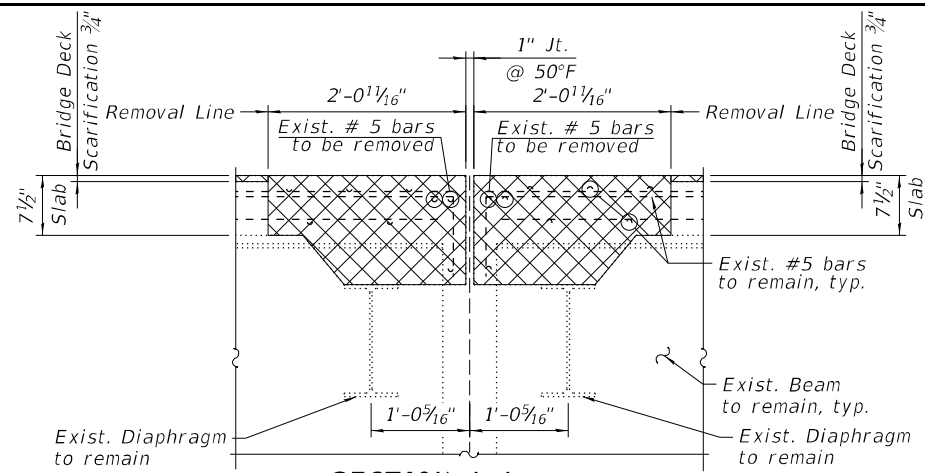
**PIER 3 EXPANSION JOINT DETAILS I
SN 016-0204**

SHEET S01-13 OF S01-28 SHEETS

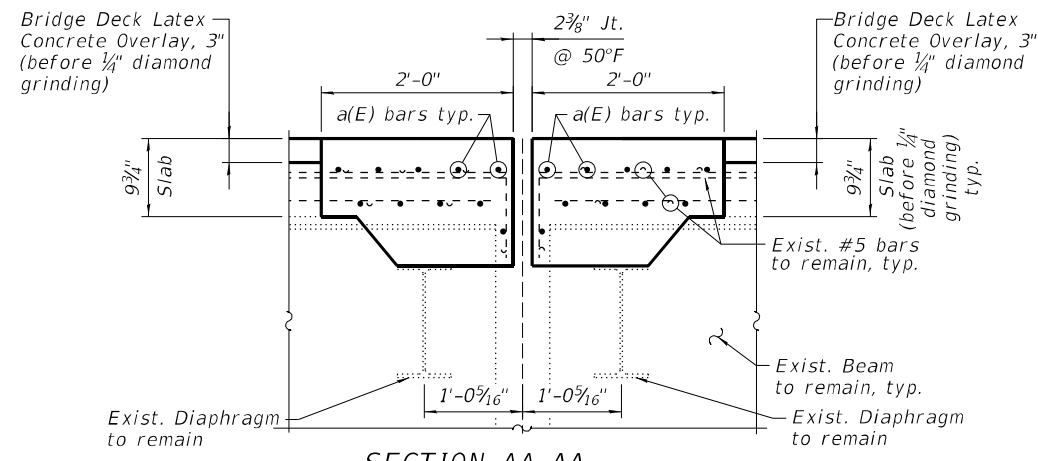
F.A.I. RTE. 90	SECTION 2020-004-BR	COUNTY COOK	TOTAL SHEETS 1492	SHEET NO. 488
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	

BILL OF MATERIAL
PIER 3

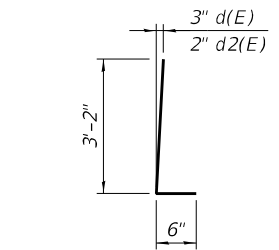
Bar	No.	Size	Length	Shape
a(E)	40	#5	23'-6"	—
a1(E)	12	#6	6'-6"	—
d(E)	10	#5	3'-8"	┌
d1(E)	10	#5	2'-7"	┌
d2(E)	10	#4	3'-8"	┌
d3(E)	10	#4	3'-8"	┌
Concrete Removal			Cu Yd	8.2
Reinforcement Bars, Epoxy Coated			Pound	1,220
Concrete Superstructure			Cu Yd	9.4



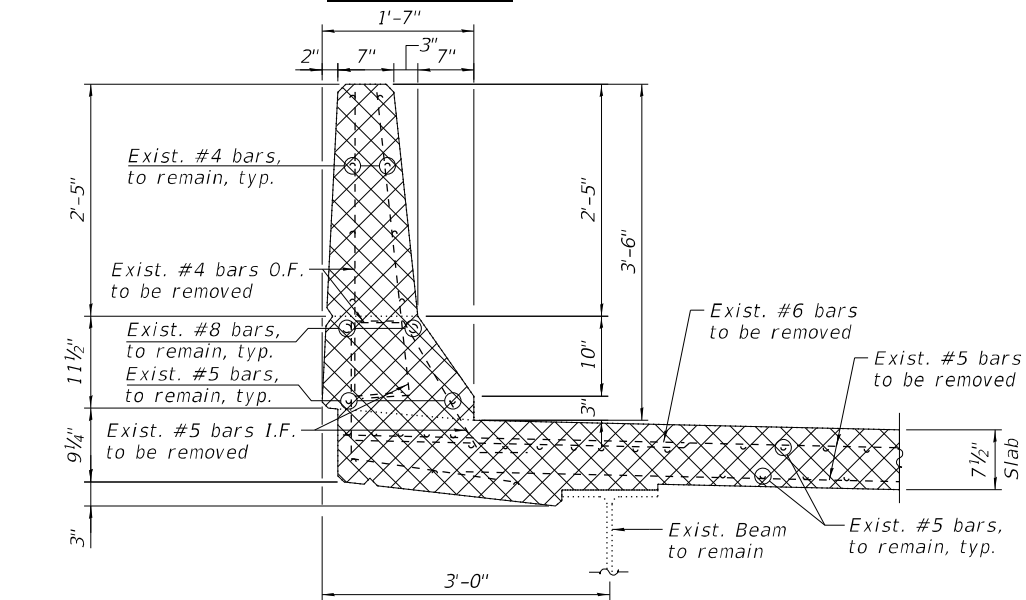
SECTION A-A



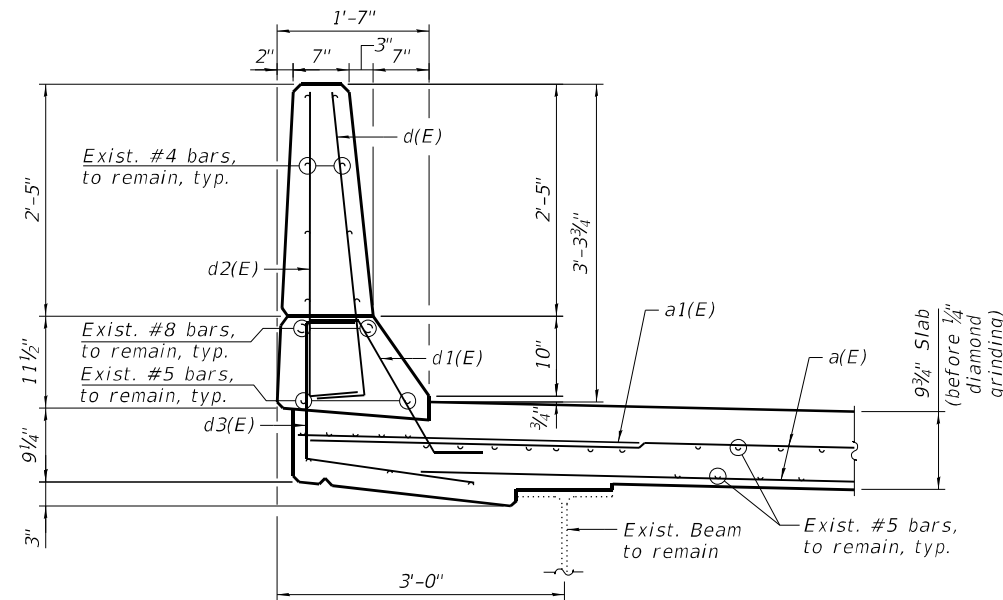
SECTION AA-AA



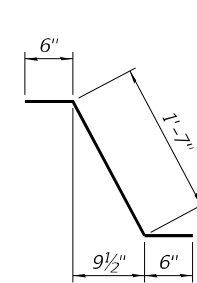
BARS d(E) & d2(E)



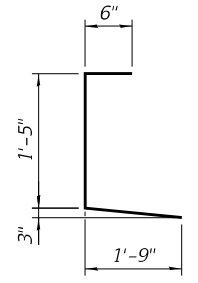
SECTION B-B
(South parapet removal)



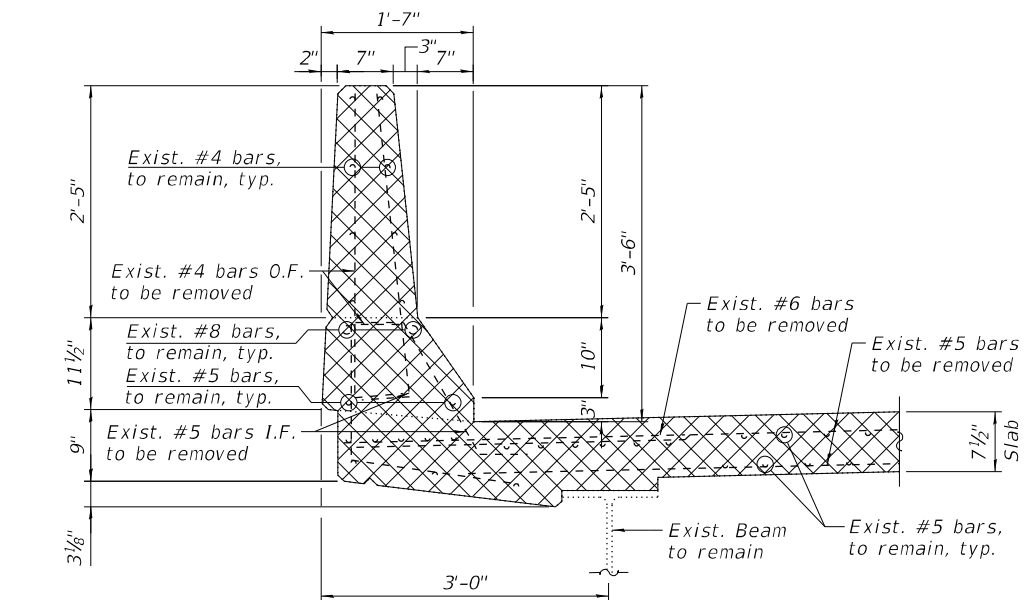
SECTION BB-BB
(South parapet reconstruction)



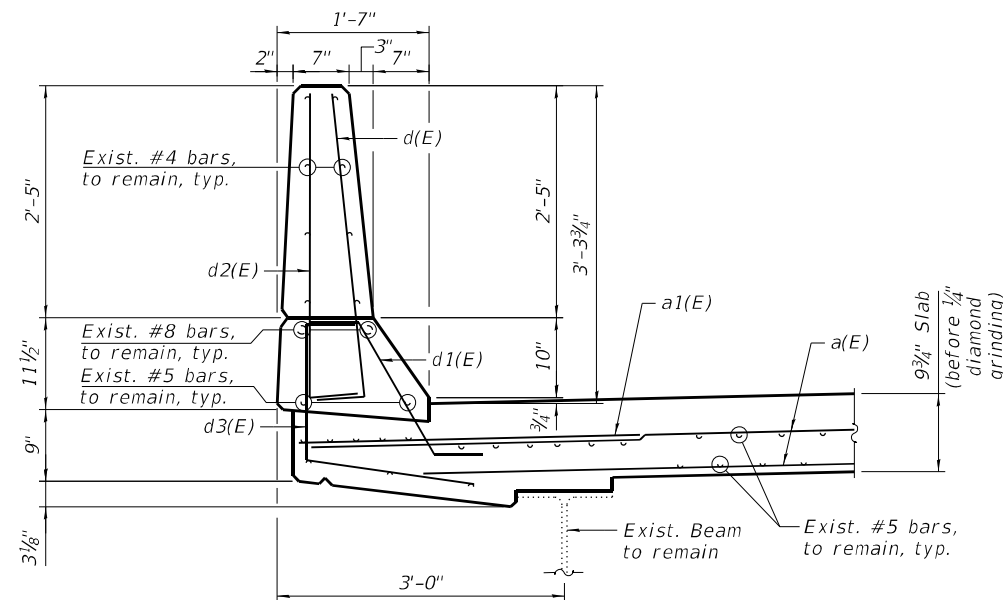
BAR d1(E)



BAR d3(E)



SECTION C-C
(North parapet removal)



SECTION CC-CC
(North parapet reconstruction)

NOTES:

- For Preformed Joint Strip Seal details, see sheet S01-19.
- For Bar Splicer Assembly details, see sheet S01-28.
- 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

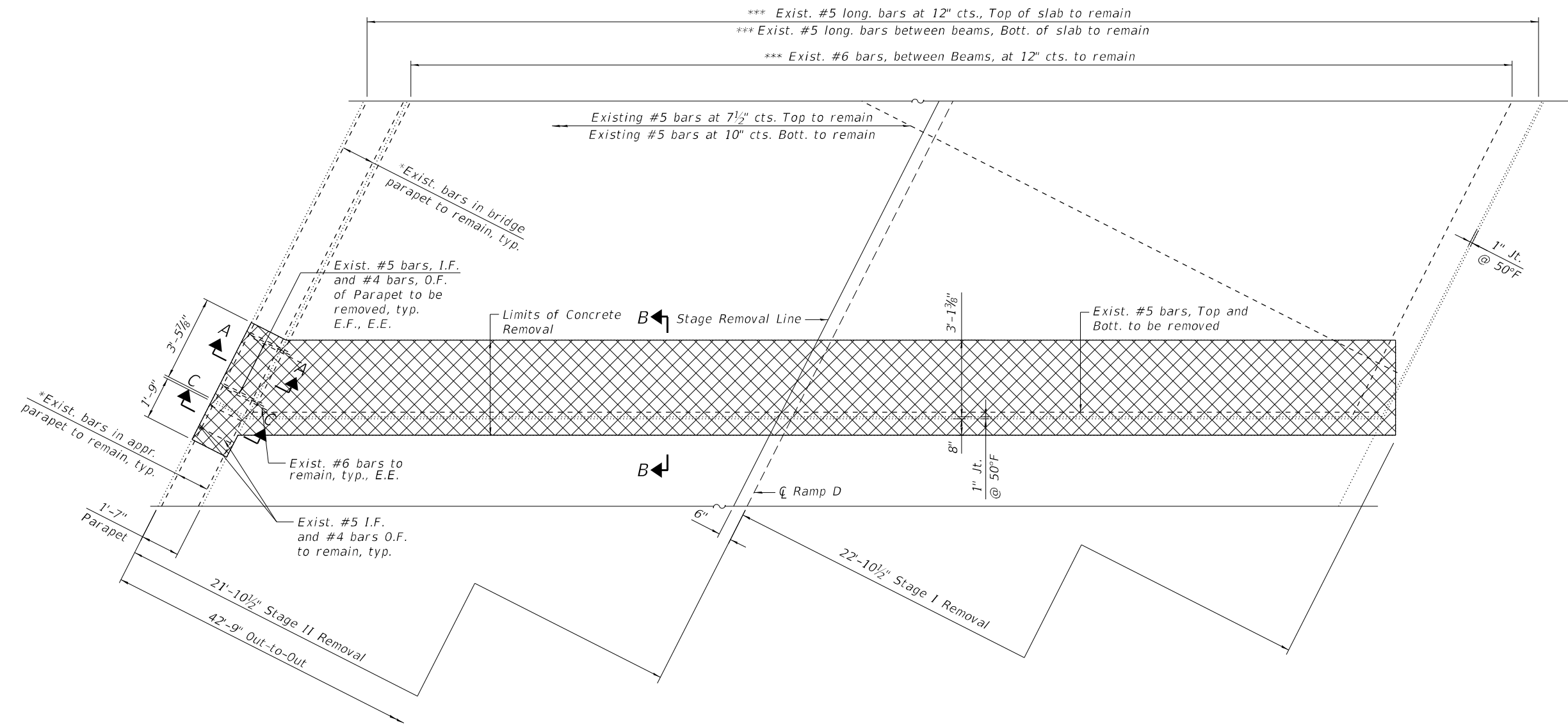
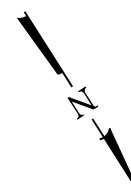
MIN BAR LAPS

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

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PLOT SCALE =	CHECKED -	H.A.	REVISED -
PLOT DATE =	DRAWN -	J.T.B.	REVISED -
	CHECKED -	K.G.W.	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	489
CONTRACT NO. 62K74				



EAST ABUTMENT JOINT REMOVAL PLAN


NOTES:

1. For sections A-A, B-B, C-C, see sheets S01-17 and S01-18.

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

*** Existing reinforcement shall be cut in the field as required to incorporate new joint opening.

LEGEND

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

MODEL: SMODELNAME5
FILE NAME: X:\OH\2020\20200221-03\Design\Structural\Design Files\CADD\SH\T016-0204_Ohio_Ramp\160204-62K74-5015-EXPS.dgn

GR&EF
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631; (773) 399-0112

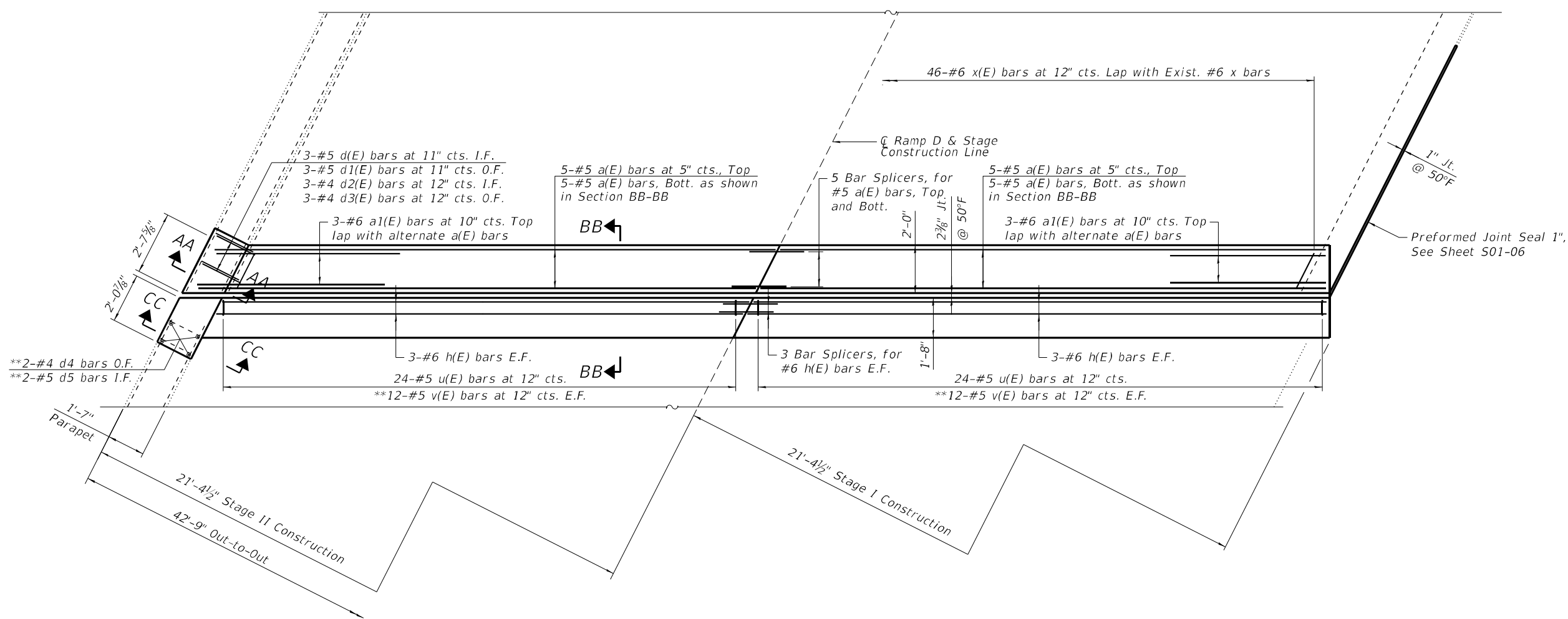
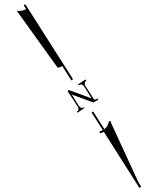
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PLOT DATE =	CHECKED -	K.G.W.	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EAST ABUTMENT EXPANSION JOINT DETAILS I
SN 016-0204**

SHEET S01-15 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	490
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



EAST ABUTMENT JOINT RECONSTRUCTION PLAN

NOTES:

- For sections AA-AA, BB-BB and CC-CC, see sheets S01-17 and S01-18.

** Epoxy grout #4 d4(E) and #5 d5(E) & 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
- E.E. Each End

MODEL: SMODELNAME5
FILE NAME: X:\OH\2020\20200221-03\Design\Structural\Design Files\CADD\SH\16-0204_Ohio_Ramp\160204-62K74-5016-ExpS.dgn

GRāEF
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Chicago, Illinois 60631; (773) 399-0112

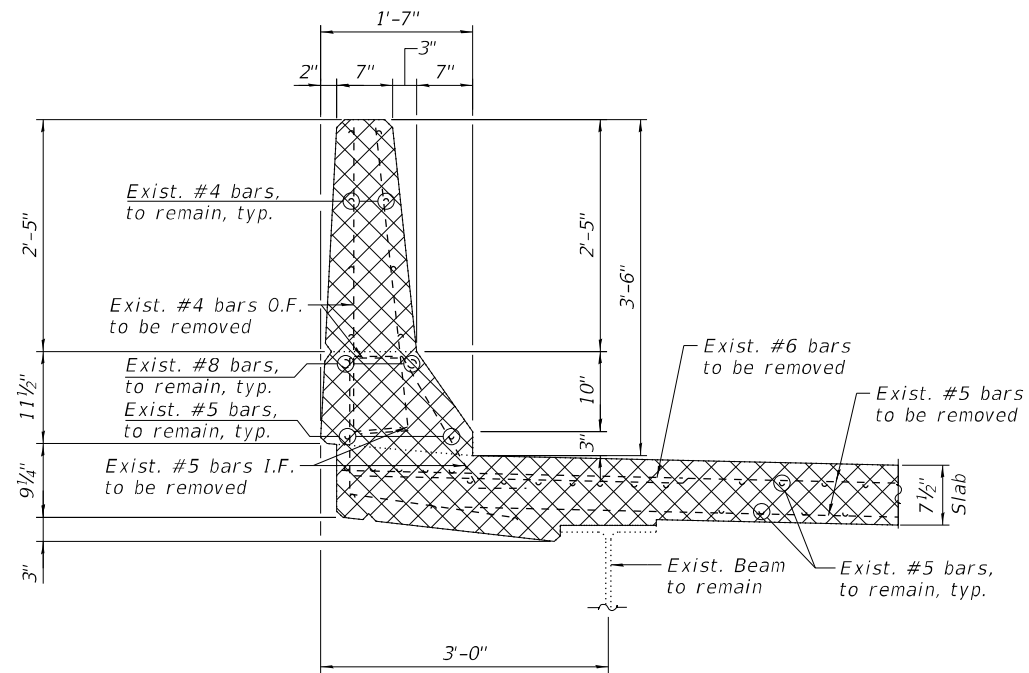
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

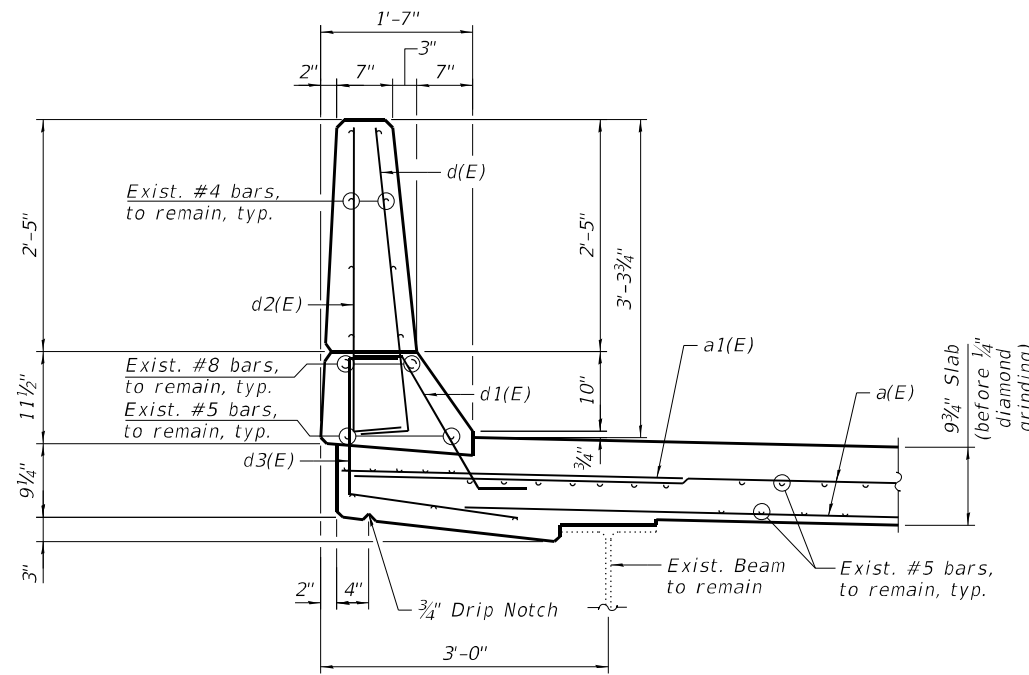
**EAST ABUTMENT EXPANSION JOINT DETAILS II
SN 016-0204**

SHEET S01-16 OF S01-28 SHEETS

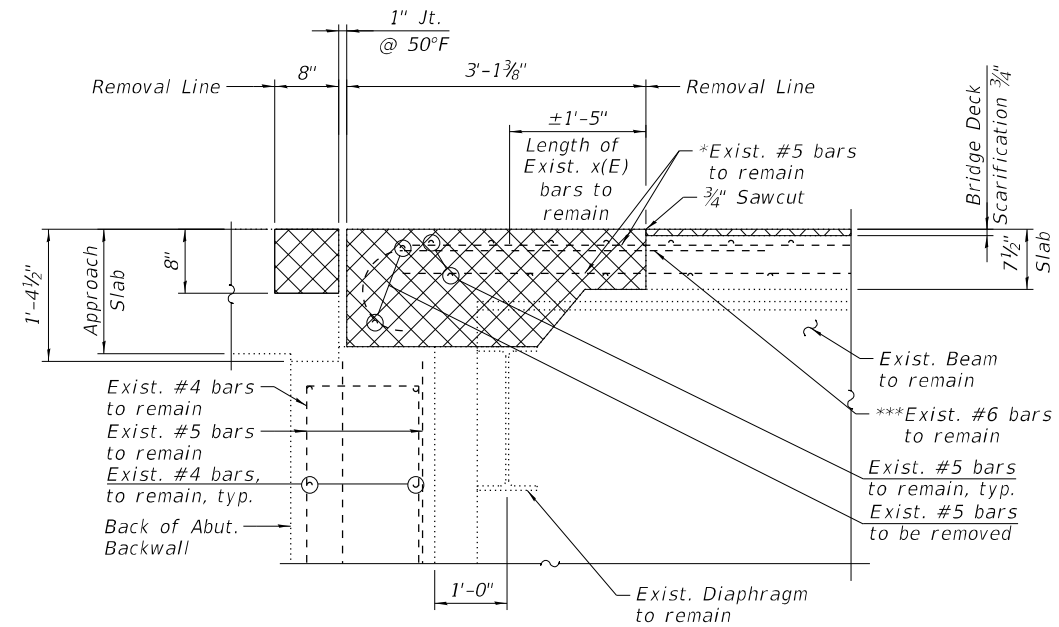
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90	2020-004-BR	COOK	1492	491
CONTRACT NO. 62K74				
ILLINOIS FED. AID PROJECT				



SECTION A-A
(South parapet removal)

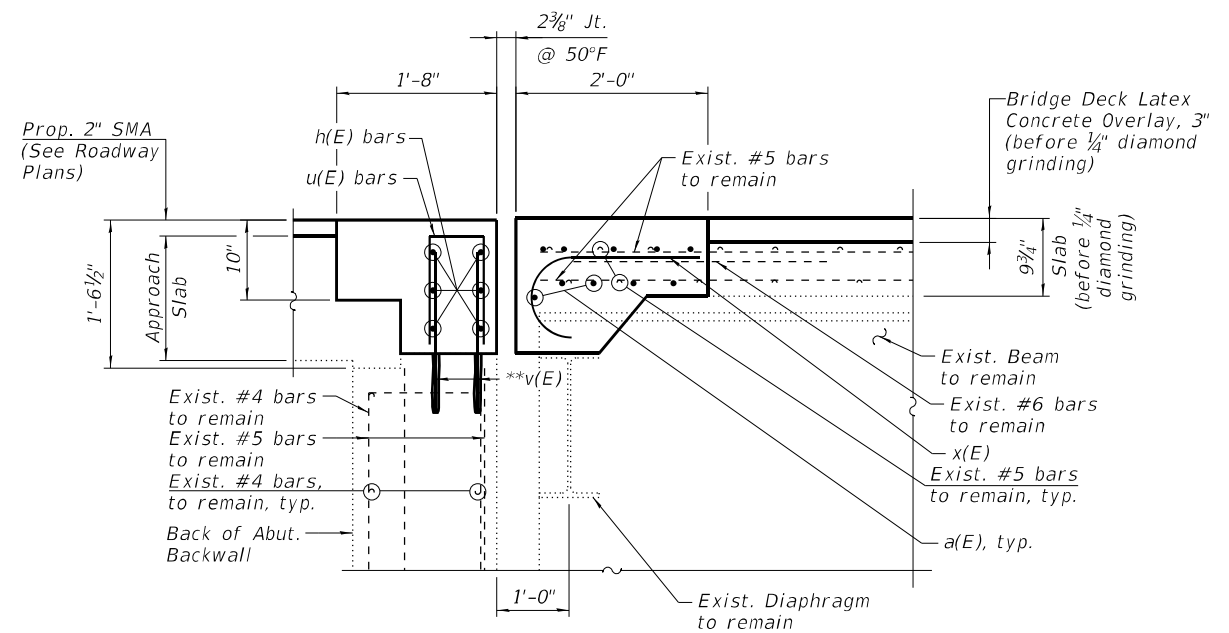


SECTION AA-AA
(West parapet reconstruction)



SECTION B-B

* Existing reinforcement shall be cut in the field as required to incorporate new joint opening.



SECTION BB-BB

LEGEND

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

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GR&E
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631; (773) 399-0112

USER NAME =	DESIGNED - J.T.B.	REVISED -
PLOT SCALE =	CHECKED - H.A.	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

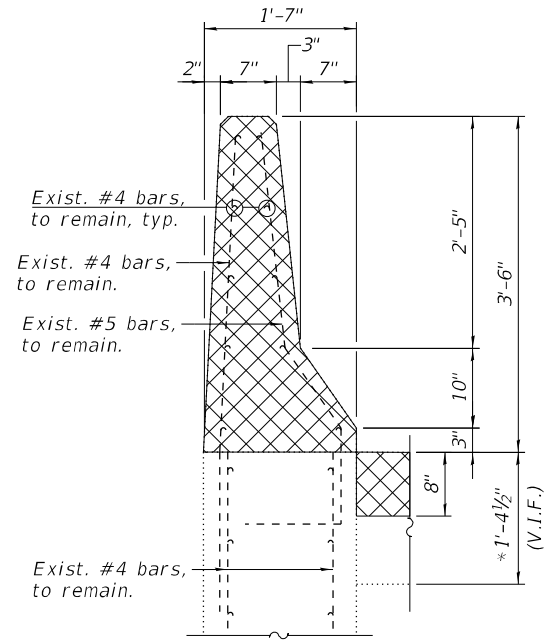
**EAST ABUTMENT EXPANSION JOINT DETAILS III
SN 016-0204**

SHEET S01-17 OF S01-28 SHEETS

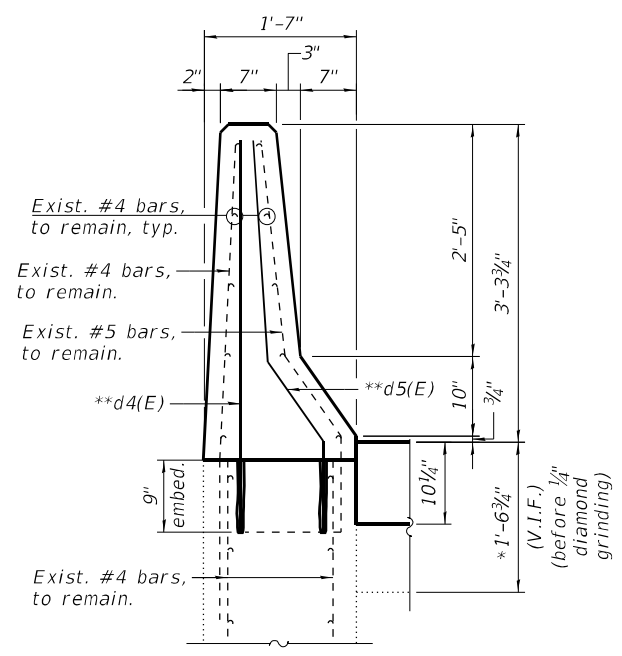
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	492
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	

**BILL OF MATERIAL
EAST ABUTMENT**

Bar	No.	Size	Length	Shape
a(E)	20	#5	23'-6"	—
a1(E)	6	#6	6'-6"	—
d(E)	3	#5	3'-8"	┌┐
d1(E)	3	#5	2'-7"	┌┐
d2(E)	3	#4	3'-8"	┌┐
d3(E)	3	#4	3'-8"	┌┐
d4(E)	2	#4	4'-2"	┌┐
d5(E)	2	#5	4'-4"	┌┐
h(E)	12	#6	23'-6"	—
u(E)	48	#5	2'-10"	┌┐
v(E)	48	#5	2'-1"	—
x(E)	46	#6	2'-7"	┌┐
Concrete Removal			Cu Yd	7.0
Reinforcement Bars, Epoxy Coated			Pound	1,450
Concrete Superstructure			Cu Yd	9.4



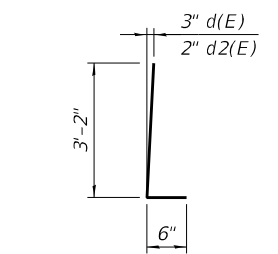
SECTION C-C
(South parapet removal)



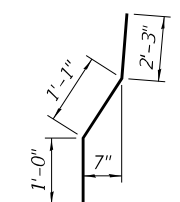
SECTION CC-CC
(South parapet reconstruction)

* Dimension is taken at the Back of Abut.

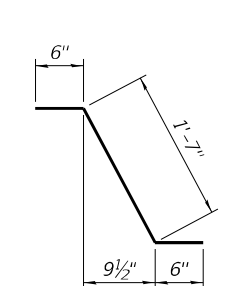
** Epoxy grout #4 d4(E) & #5 d5(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.



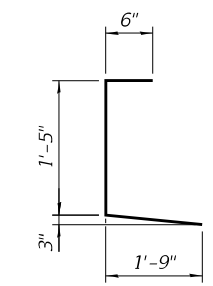
BARS d(E) & d2(E)



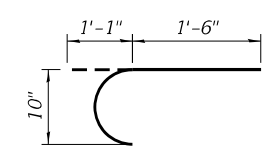
BAR d5(E)



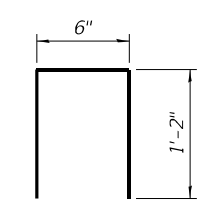
BAR d1(E)



BAR d3(E)



BAR x(E)



BAR u(E)

NOTES:

- For Preformed Joint Strip Seal details, see sheet S01-19.
- For Bar Splicer Assembly details, see sheet S01-28.
- 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.

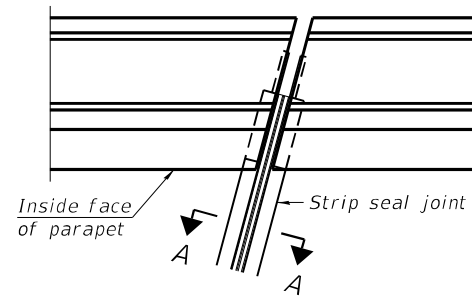
LEGEND

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

MIN BAR LAPS

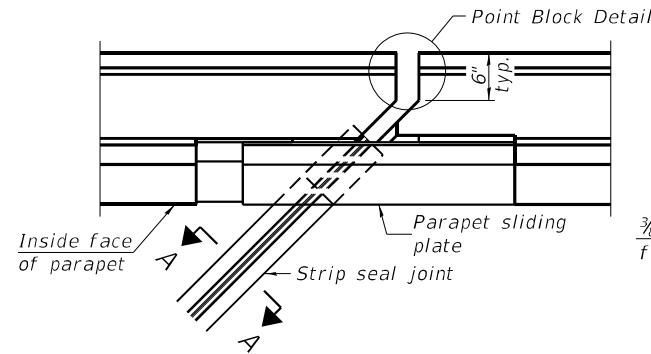
- #5 3'-6"
- #6 4'-0"

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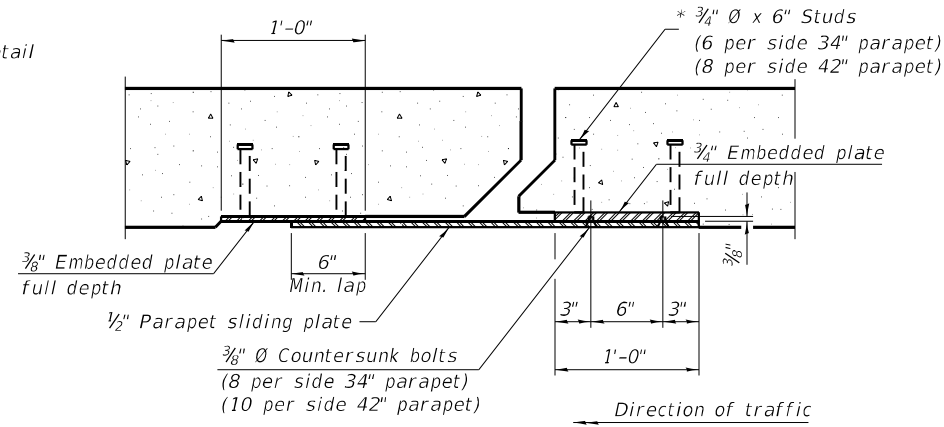


FOR SKEWS $\leq 30^\circ$

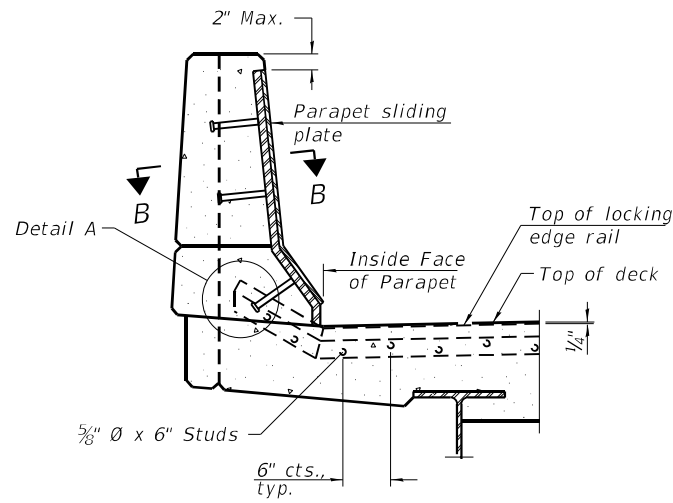
PLAN AT PARAPET



FOR SKEWS $> 30^\circ$

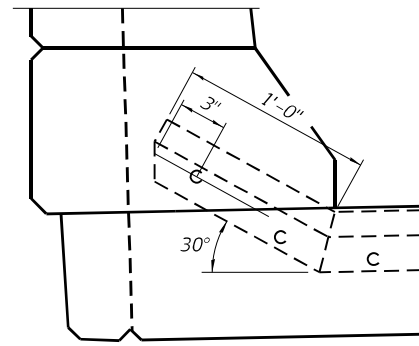


SECTION B-B

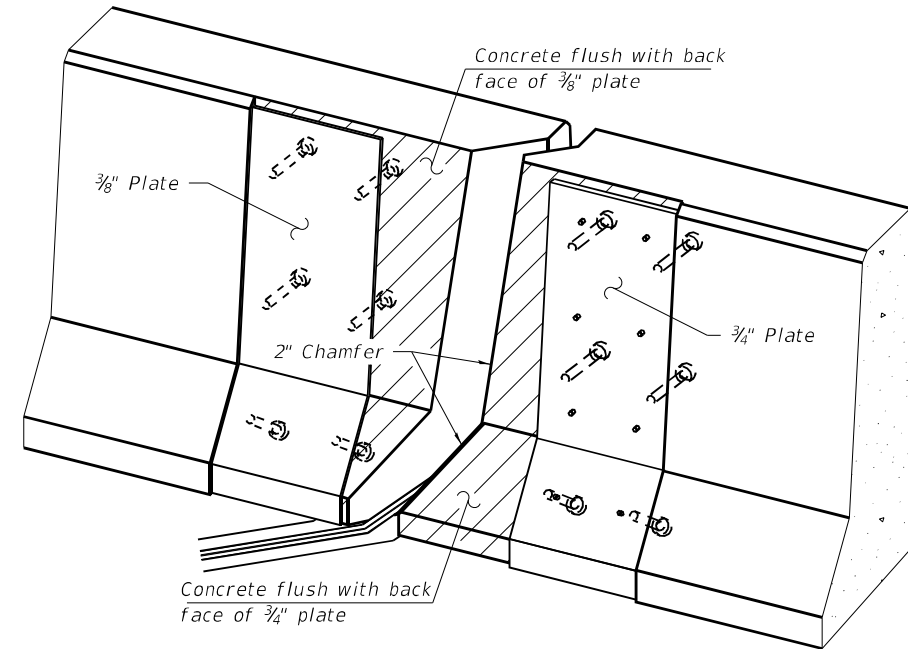


ELEVATION AT PARAPET

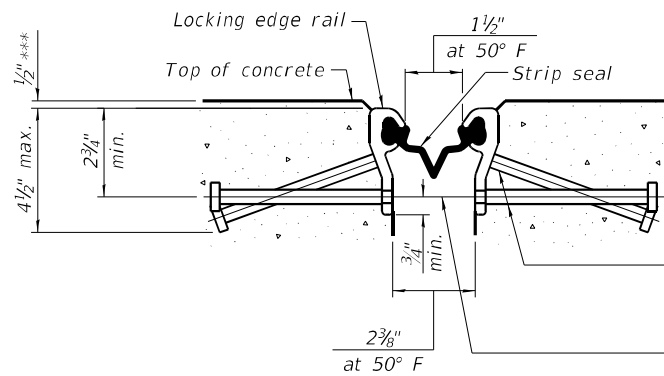
(Skews $> 30^\circ$ shown. Skews $\leq 30^\circ$ similar except as shown in plan view.)



DETAIL A



TRIMETRIC VIEW
(Showing embedded plates only)



SHOWING ROLLED RAIL JOINT

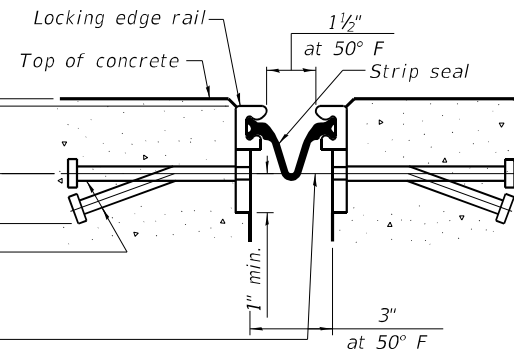
* $5/8"$ ϕ x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

$3/8"$ 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.

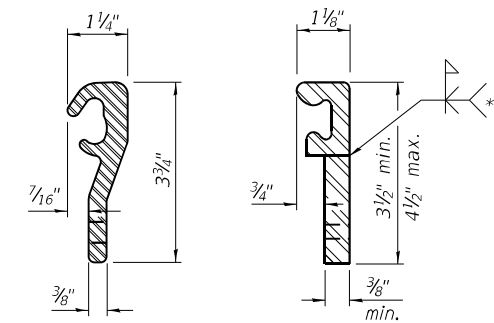
SECTION A-A

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

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

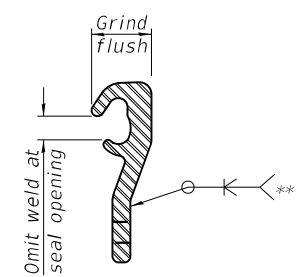


SHOWING WELDED RAIL JOINT



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	185

MODEL: sMODELNAME5
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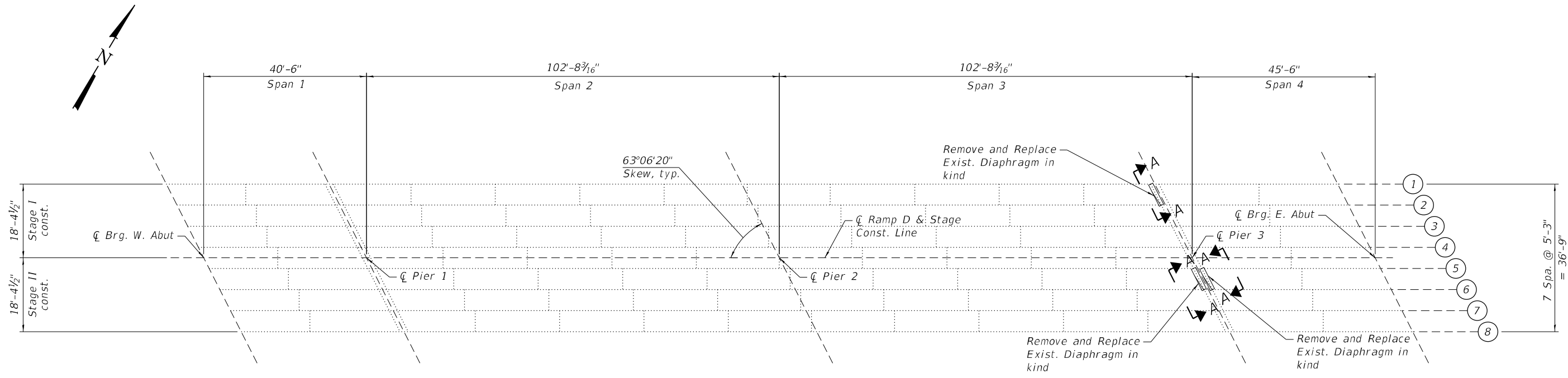
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PREFORMED JOINT STRIP SEAL
SN 016-0204

SHEET S01-19 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	494
			CONTRACT NO. 62K74	
ILLINOIS		FED. AID PROJECT		



FRAMING PLAN

NOTES:

1. All work is to be performed utilizing staged construction. See Sheets S01-03 and S01-04 for details.
2. For Section A-A, see Sheet S01-21.

LEGEND

Remove and Replace Exist. Diaphragm

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	1,970
Structural Steel Removal	Pound	1,970

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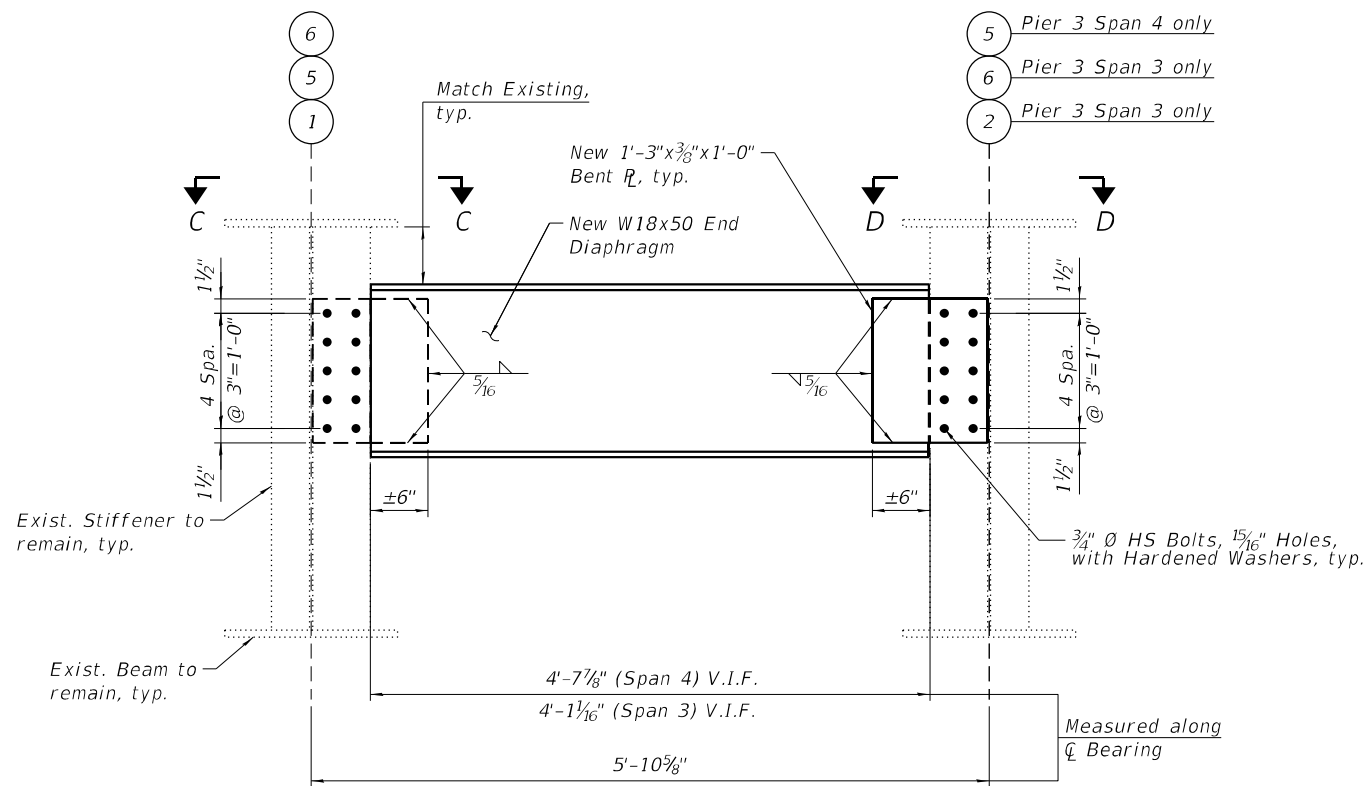
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN
SN 016-0204**

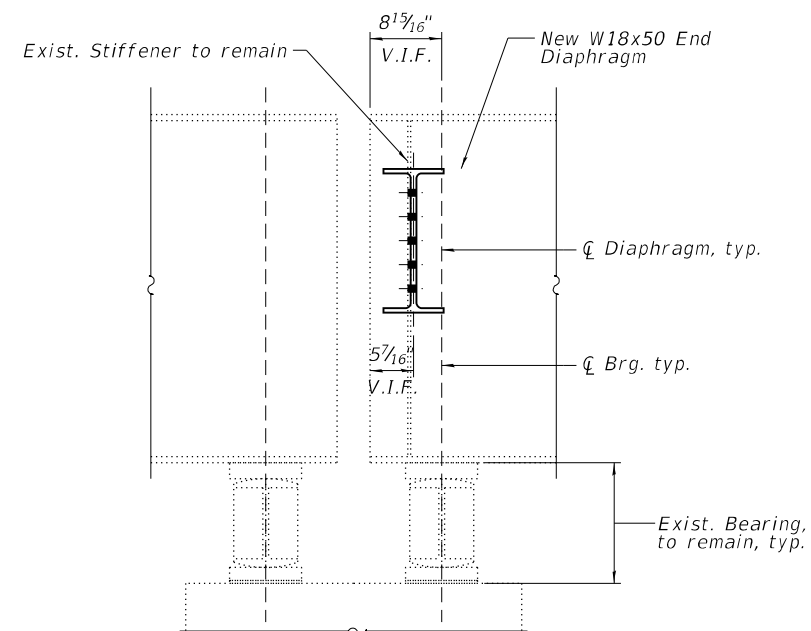
SHEET S01-20 OF S01-28 SHEETS

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

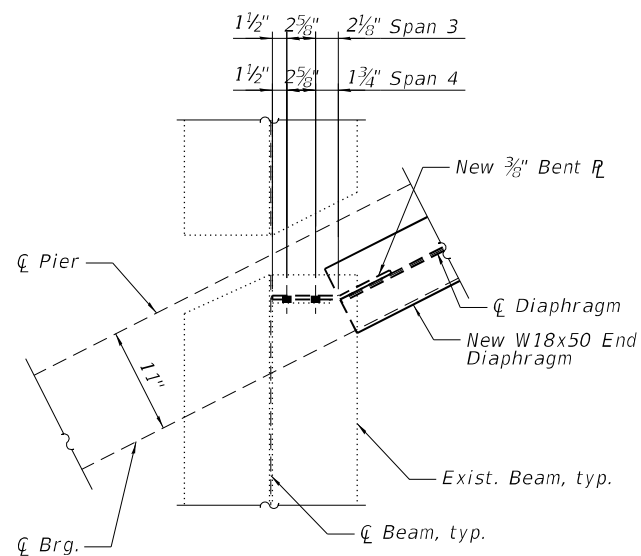


SECTION A-A

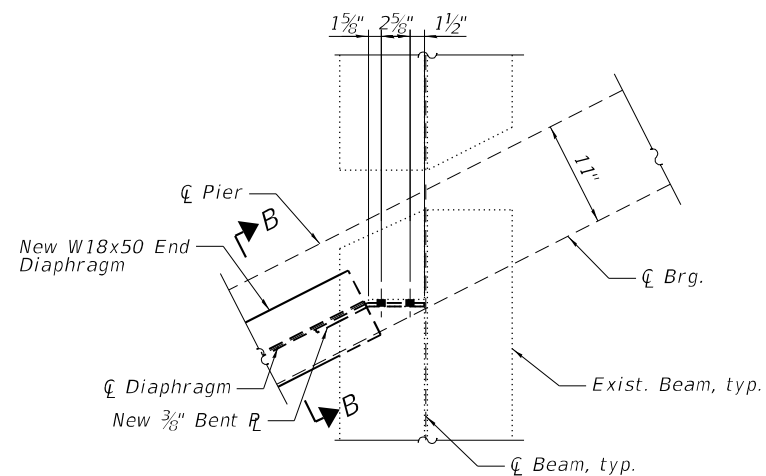
Pier 3 Span 3 shown, Pier 3 Span 4 similar and opposite hand. (3 Required)



SECTION B-B



SECTION C-C



SECTION D-D

NOTES

1. For location of Diaphragm Repair and Bill of Material, see Sheet S01-20.
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.

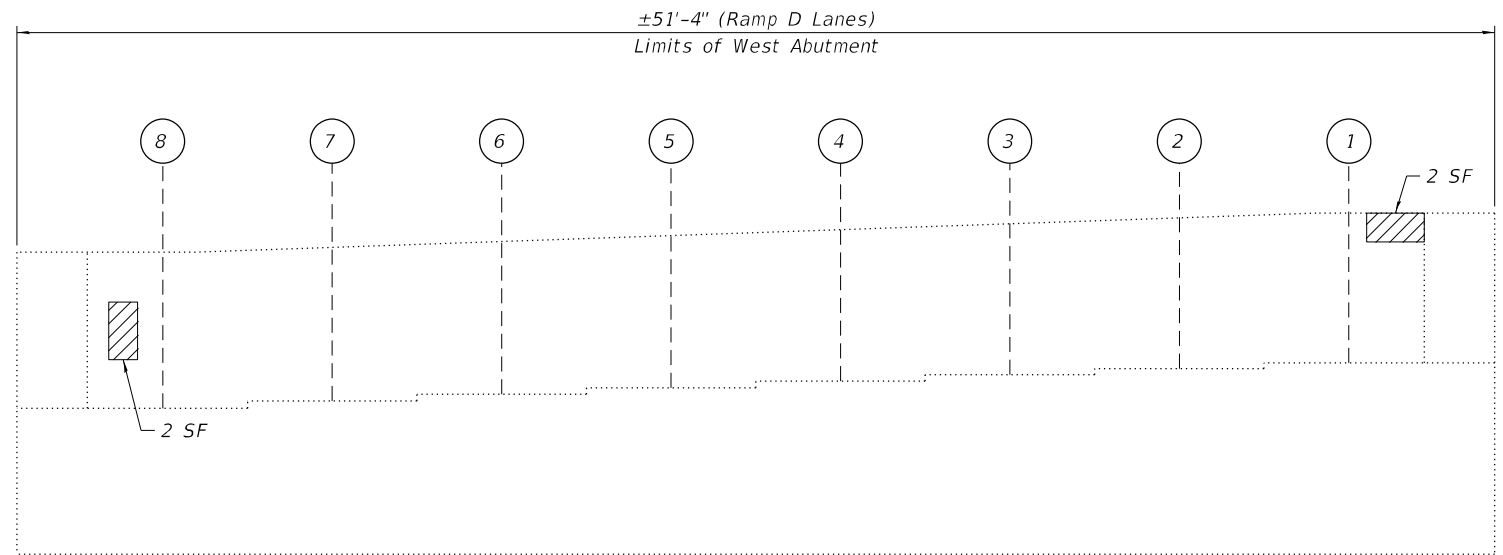
LEGEND

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

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	496
CONTRACT NO. 62K74				



ELEVATION - WEST ABUTMENT
(Looking West)

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.

LEGEND

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

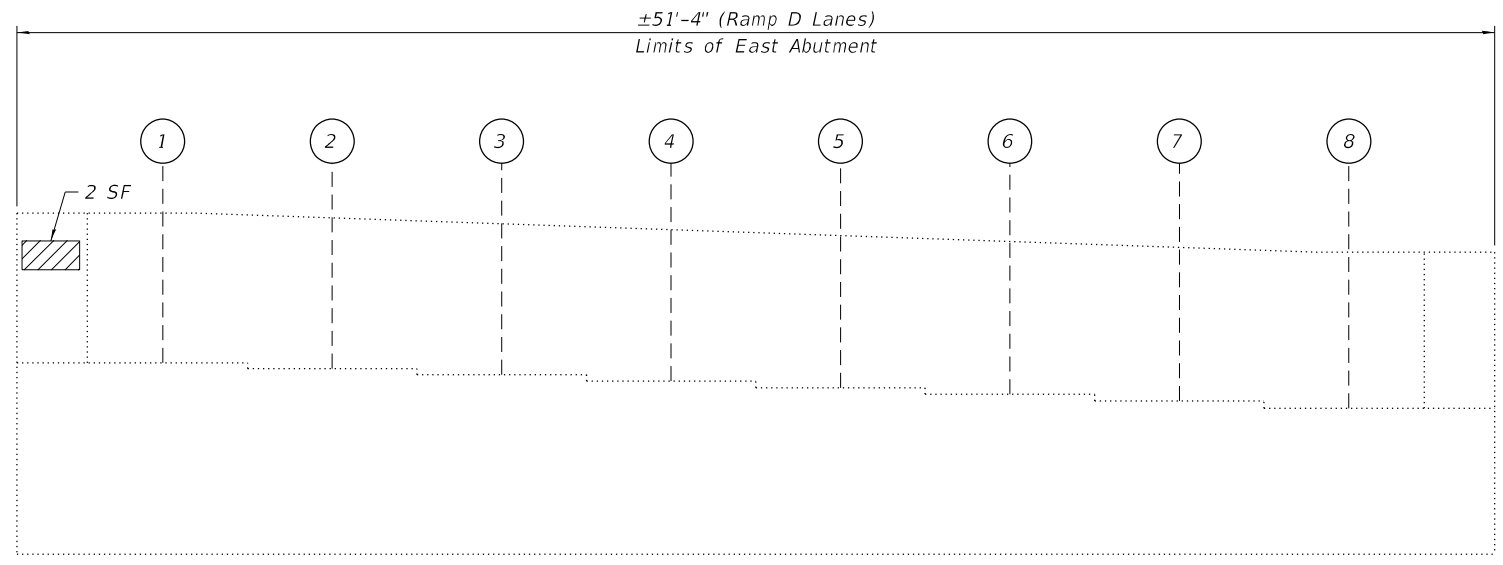
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	240
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	4

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	497
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



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 is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.

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	240
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	2

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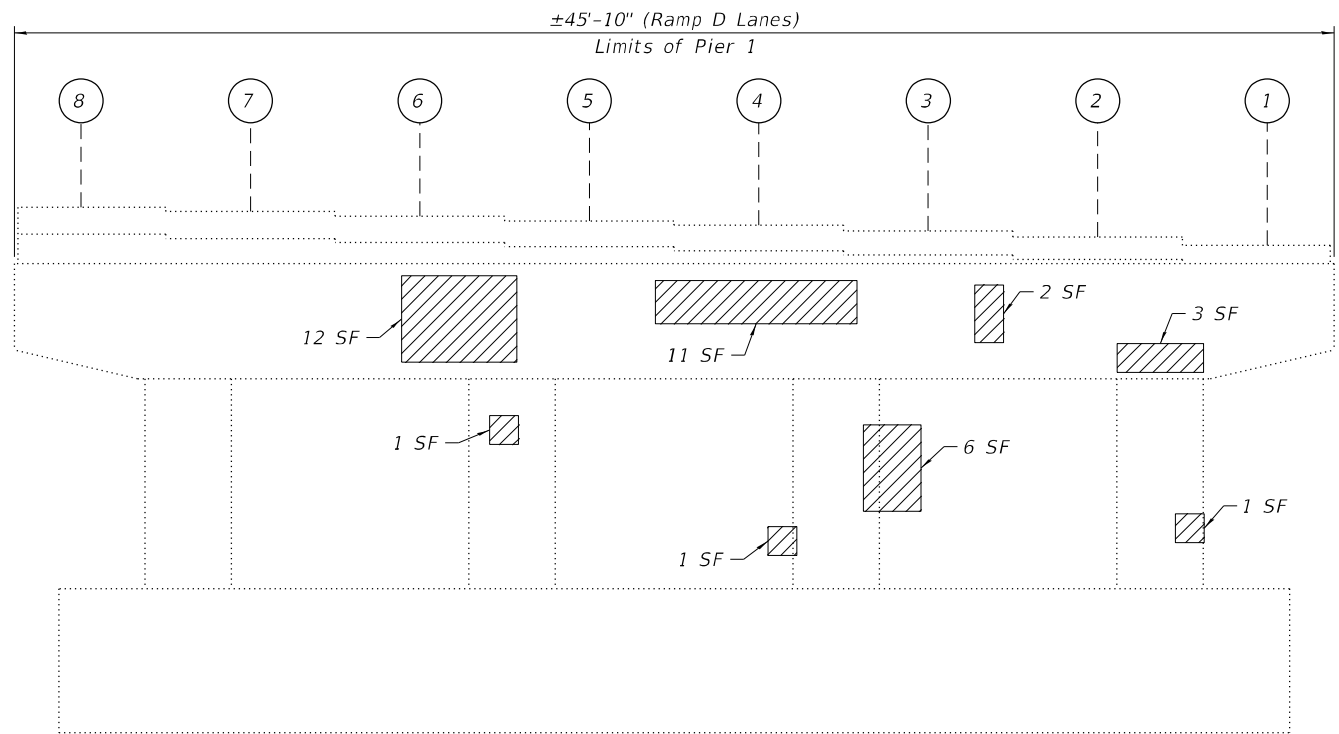
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DEPARTMENT OF TRANSPORTATION**

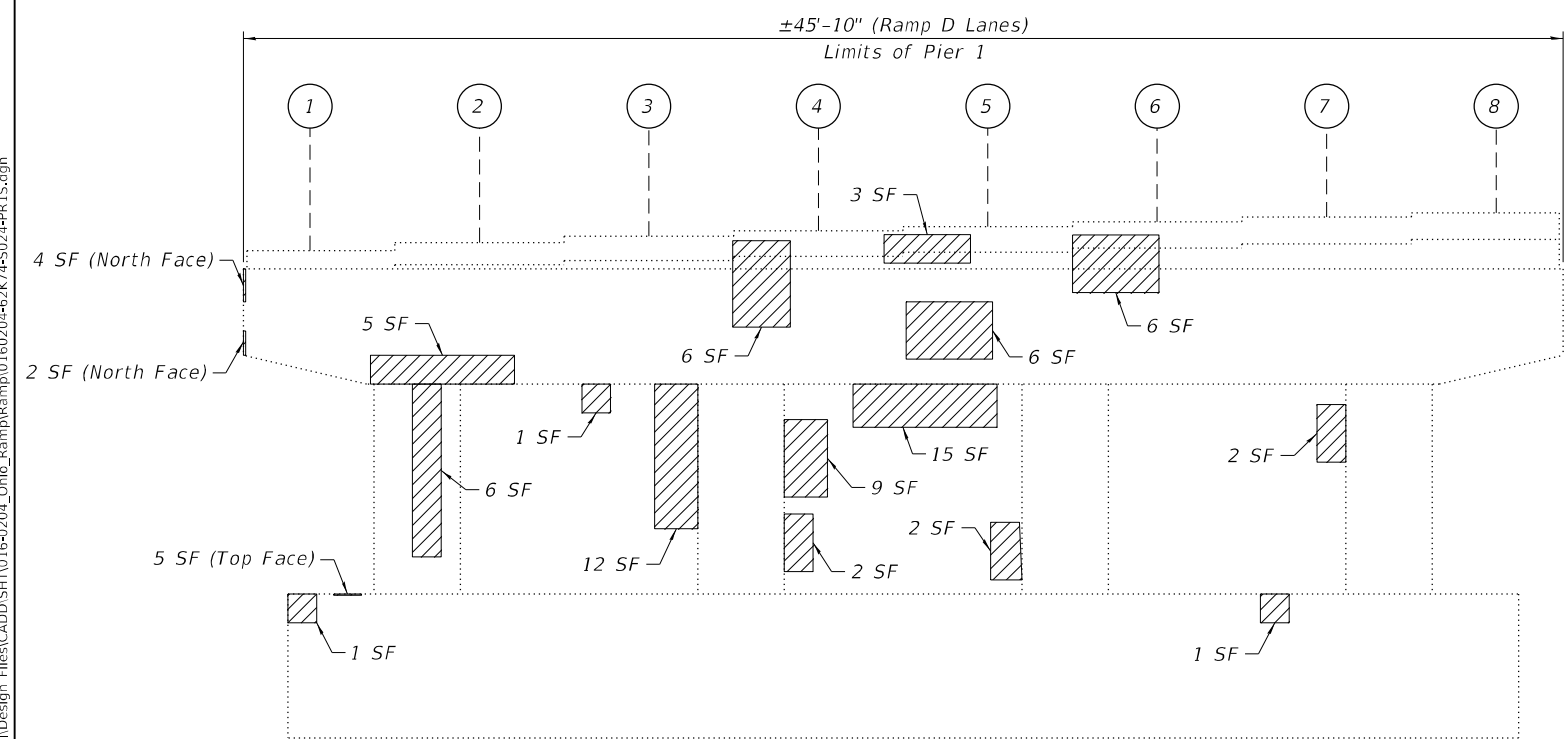
**EAST ABUTMENT REPAIRS
SN 016-0204**

SHEET S01-23 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	498
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



ELEVATION - PIER 1
(Looking West)



ELEVATION - PIER 1
(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 is to be applied to the seats of the piers.

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	164
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq Ft	125

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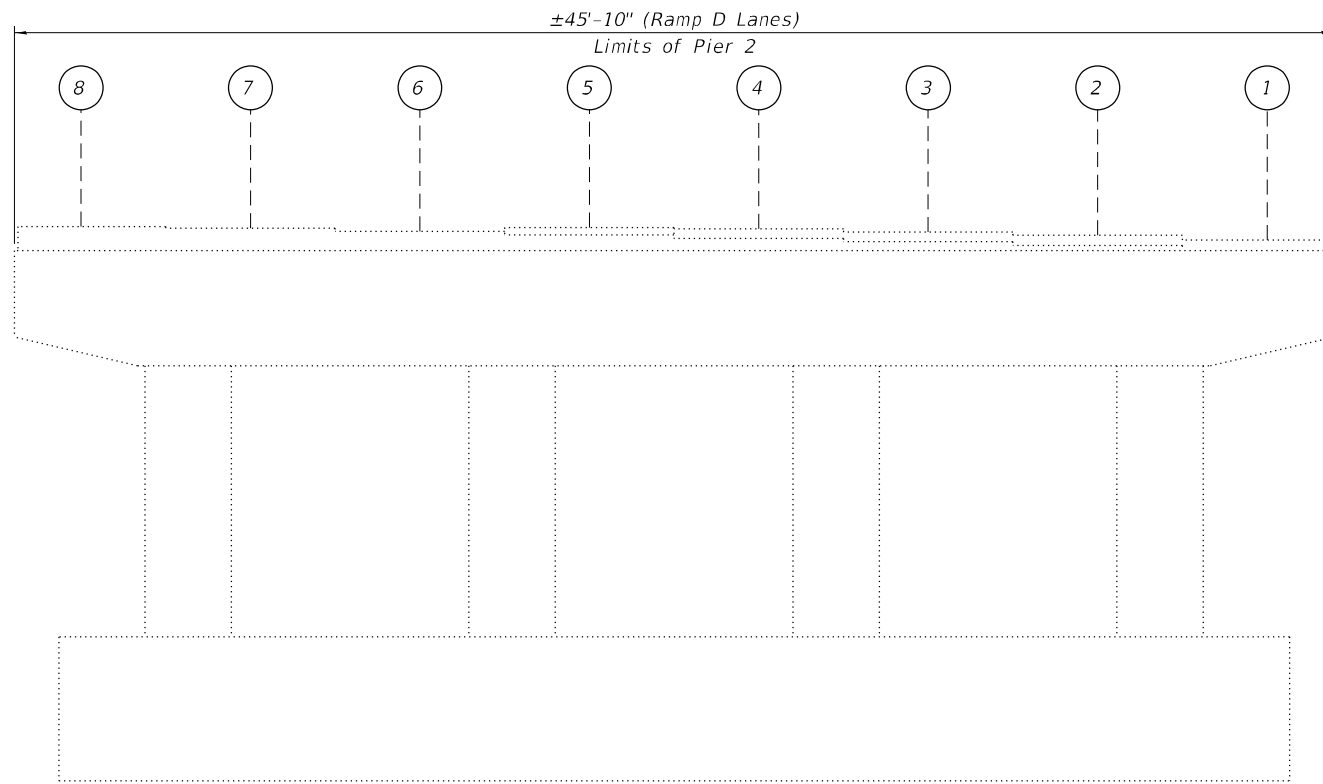
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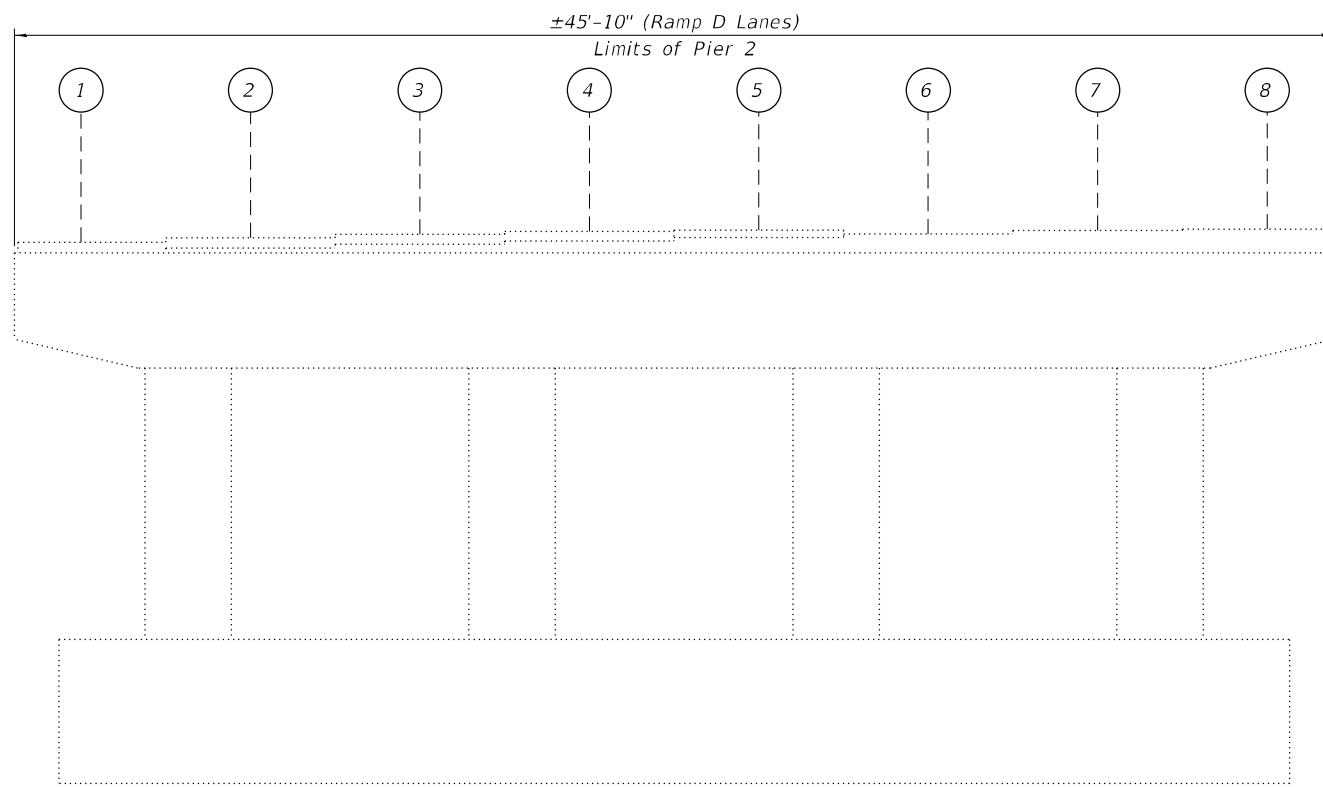
PIER 1 REPAIRS
SN 016-0204

SHEET S01-24 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	499
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	



ELEVATION - PIER 2
(Looking West)



ELEVATION - PIER 2
(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.

MODEL: sMODELNAME5
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DEPARTMENT OF TRANSPORTATION**

**PIER 2 REPAIRS
SN 016-0204**

SHEET S01-25 OF S01-28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2020-004-BR	COOK	1492	500
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K74	