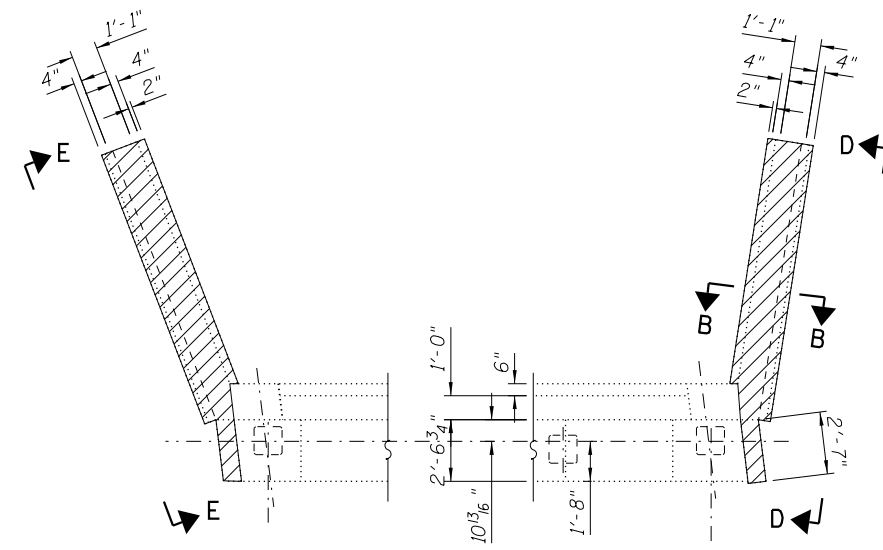


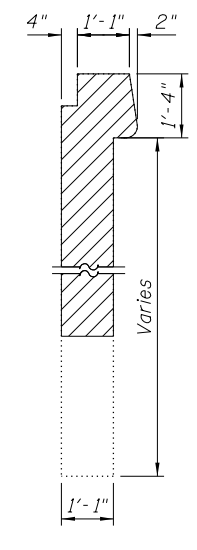
PARTIAL EAST & WEST ABUTMENT REMOVAL

BILL OF MATERIAL

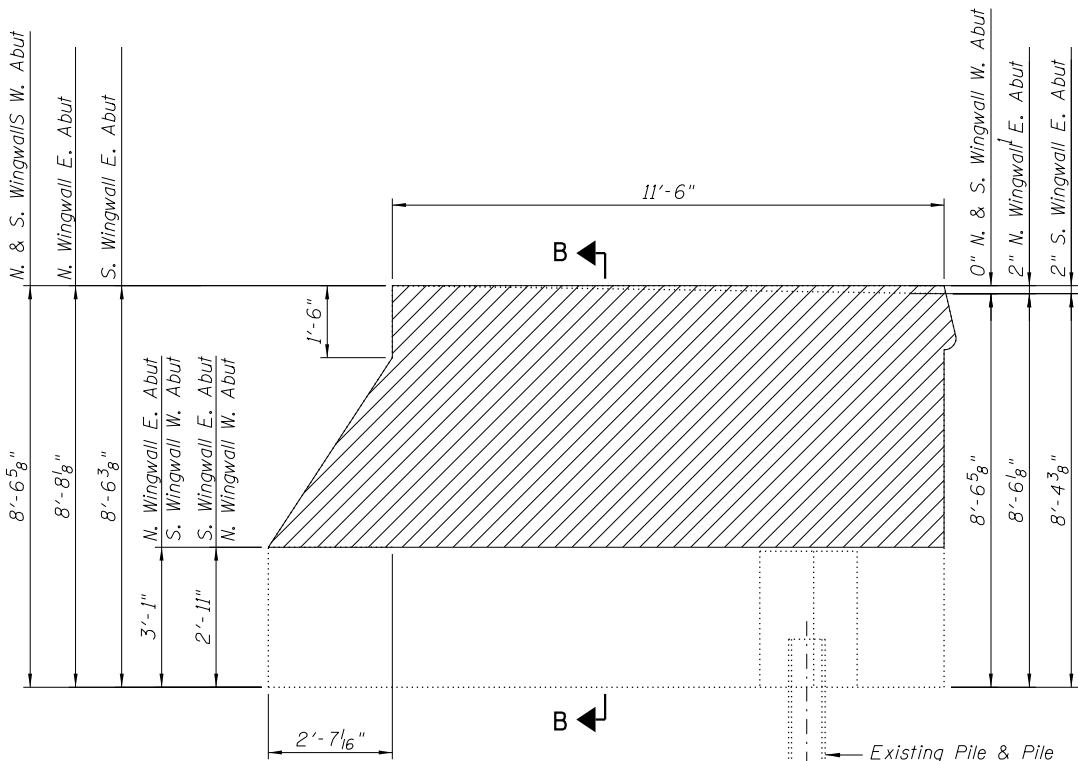
Item	Unit	Quantity
Concrete Removal	Cu. Yd.	48



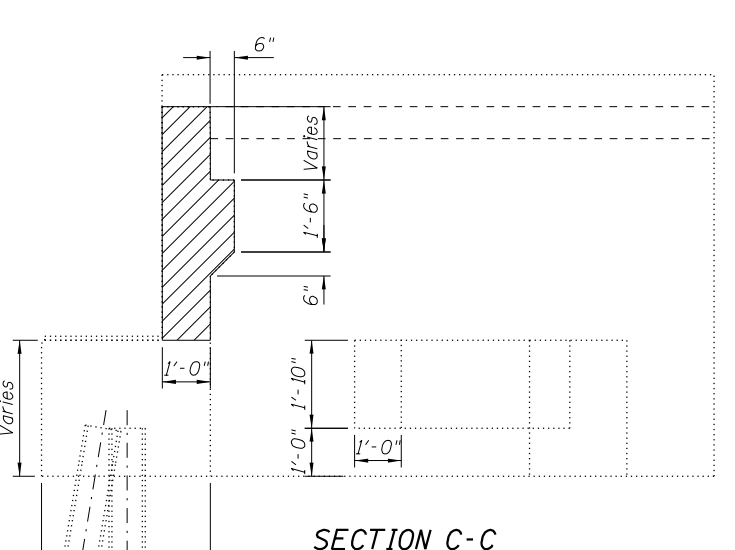
EAST & WEST WINGWALL REMOVAL PLAN



SECTION B-B

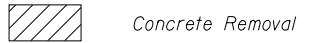


**SECTION VIEW D-D
SECTION VIEW E-E (OPP. HAND)**



SECTION C-C

LEGEND



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USER NAME =	DESIGNED - SMO	REVISED
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PLOT DATE = 3/3/2017	CHECKED - JPM, MMH, TPG	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ABUTMENTS & WINGWALLS REMOVAL
STRUCTURE NO.049-0051**

SHEET NO. 20 OF 29 SHEETS

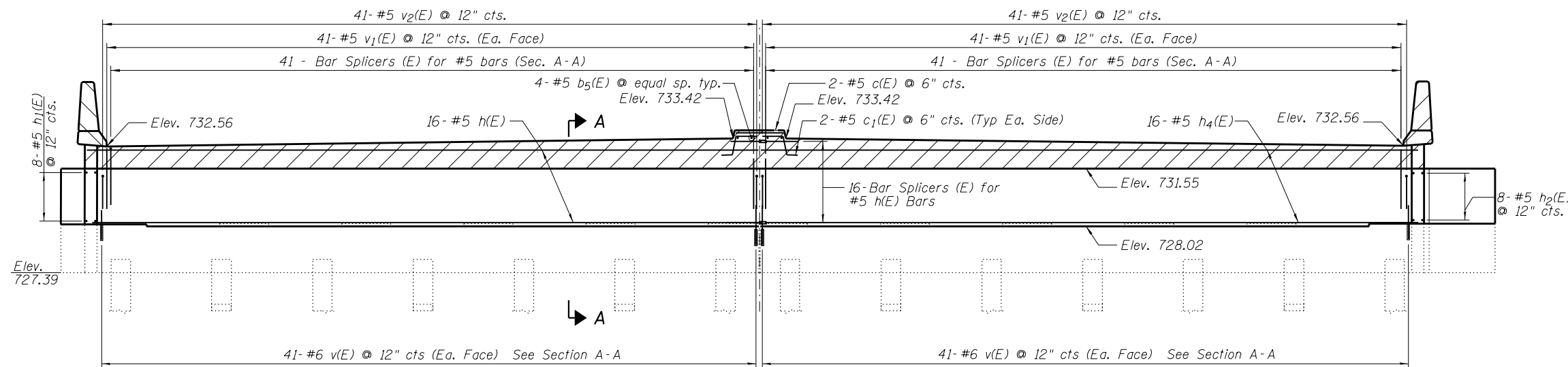
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	101
			CONTRACT NO. 60X39	

ILLINOIS FED. AID PROJECT

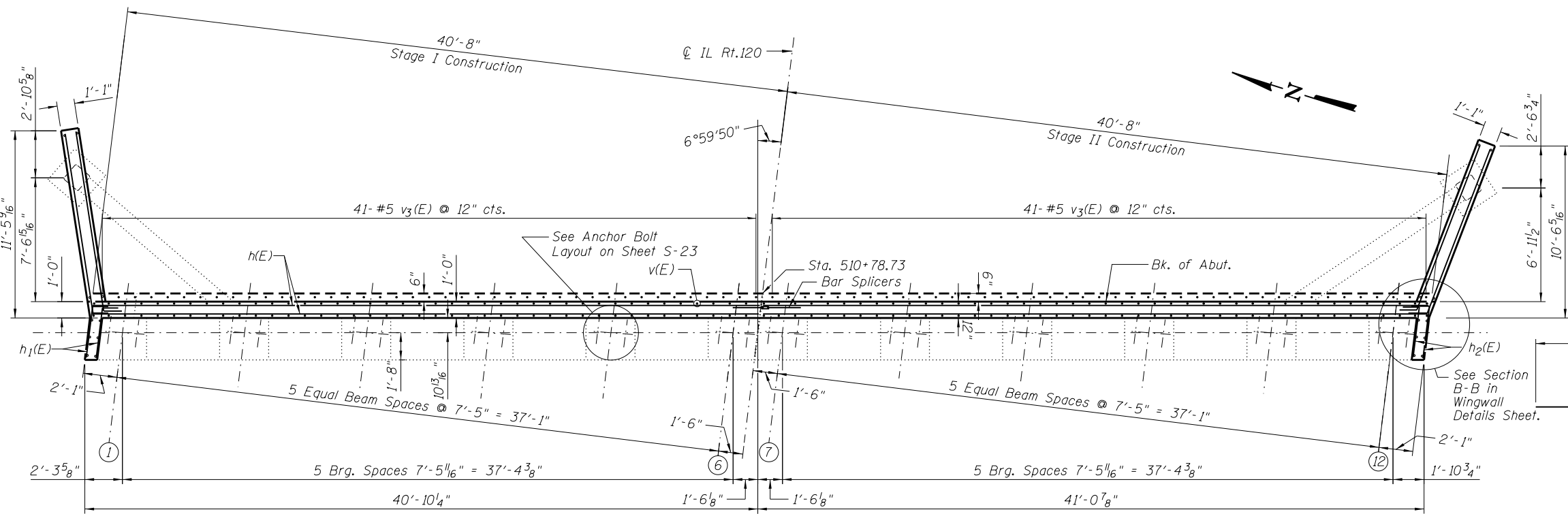
S-20

BILL OF MATERIAL

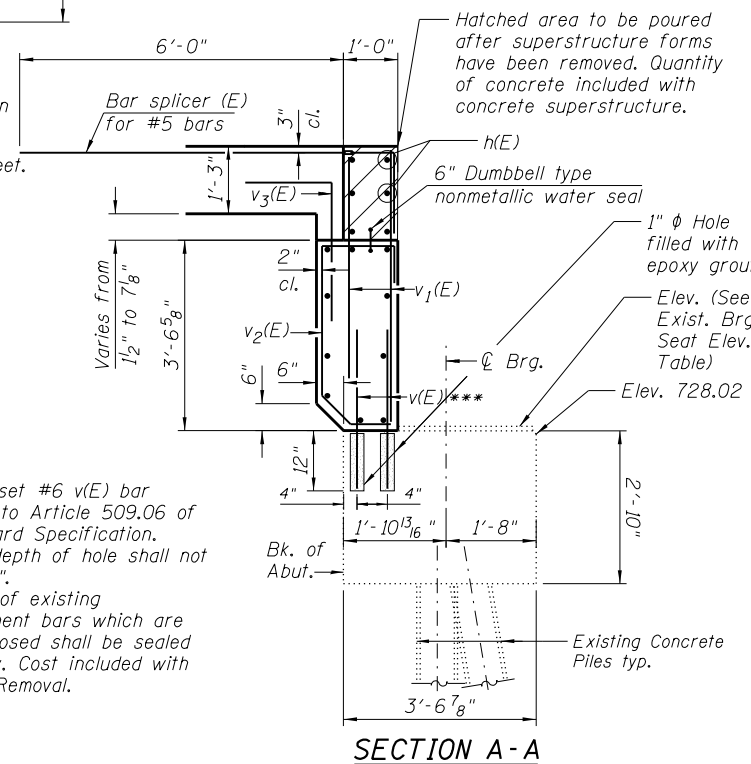
Bar	No.	Size	Length	Shape
b5(E)	4	#5	0'-9"	—
c(E)	2	#5	2'-6"	—
c1(E)	4	#5	2'-5"	—
d3(E)	16	#6	2'-0"	—
h(E)	16	#5	40'-9"	—
h1(E)	8	#5	4'-5"	—
h2(E)	8	#5	4'-5"	—
h3(E)	16	#5	11'-2"	—
v(E)	164	#6	3'-2"	—
v1(E)	164	#5	4'-6"	—
v2(E)	82	#5	6'-1"	—
v3(E)	82	#5	4'-5"	—
<hr/>				
Item	Unit	Total		
Reinforcement Bars, Epoxy Coated	Pound	3,460		
Concrete Structures	Cu. Yd.	18.8		
Concrete Superstructures	Cu. Yd.	5.7		
Concrete Sealer	Sq. Ft.	500		
Structure Excavation	Cu. Yd.	81		
Pipe Underdrains for Structures 4"	Foot	124		
Geocomposite Wall Drain	Sq. Yd.	66		
Bar Splicers	Each	16		



ELEVATION



Note:
Concrete Sealer shall be applied to the face of backwall and bearing seat.
Bill of Material includes Northwest and Southwest Wingwalls

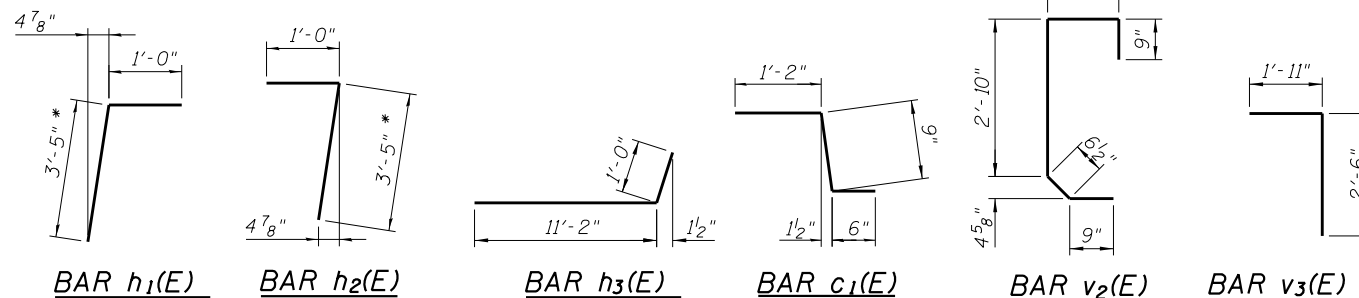


EXISTING BEARING SEAT ELEVATIONS**

Beam	℄ Bearing E. Abut.
1	727.75
2	727.81
3	727.85
4	727.89
5	727.94
6	728.00
7	728.00
8	727.92
9	727.83
10	727.76
11	727.69
12	727.59

** To be verified by Contractor

PLAN



*** Core and set #6 v(E) bar according to Article 509.06 of the Standard Specification. Maximum depth of hole shall not exceed 12". The ends of existing reinforcement bars which are cut & exposed shall be sealed with epoxy. Cost included with Concrete Removal.

Note:
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.

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PLOT DATE = 3/3/2017	DRAWN - MPS	REVISIONS
	CHECKED - JPM, MMH, TPG	REVISIONS

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

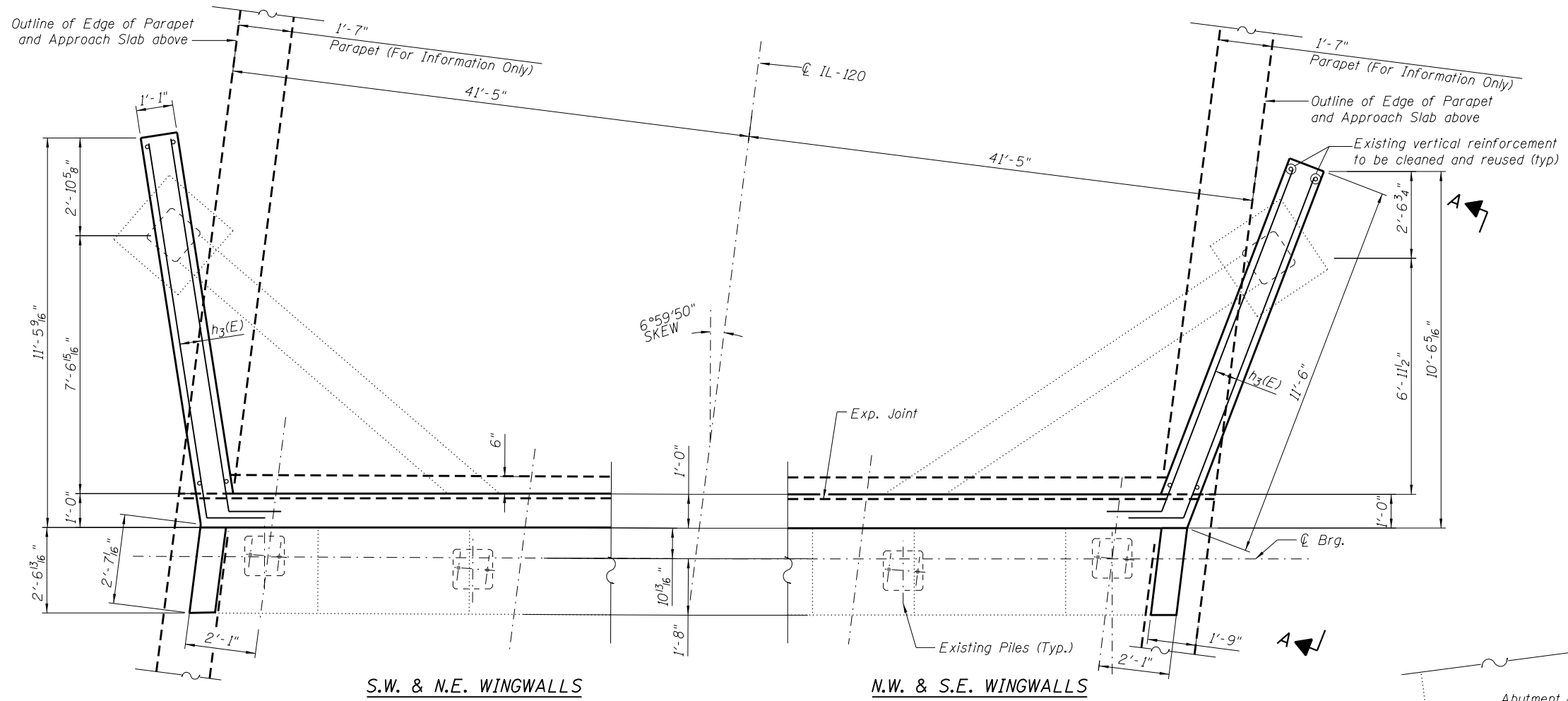
**EAST ABUTMENT REPAIR & MODIFICATION DETAILS
STRUCTURE NO.049-0051**

SHEET NO. 22 OF 29 SHEETS

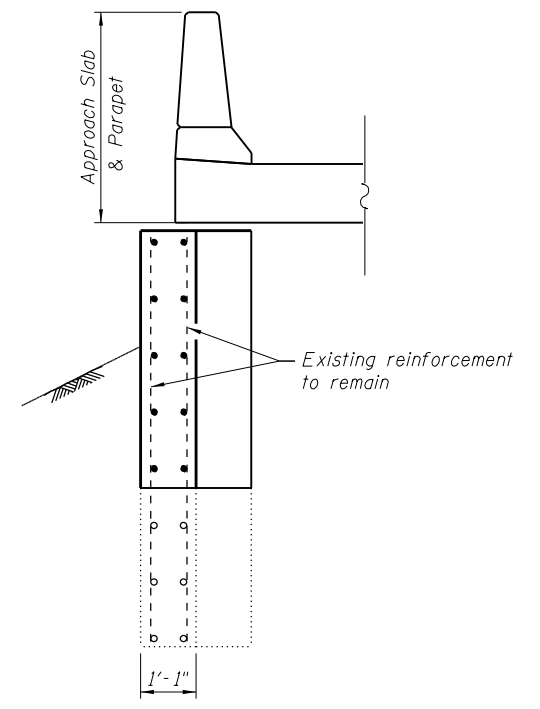
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)IBR & RS-7	LAKE	198	103
CONTRACT NO. 60X39				

ILLINOIS FED. AID PROJECT

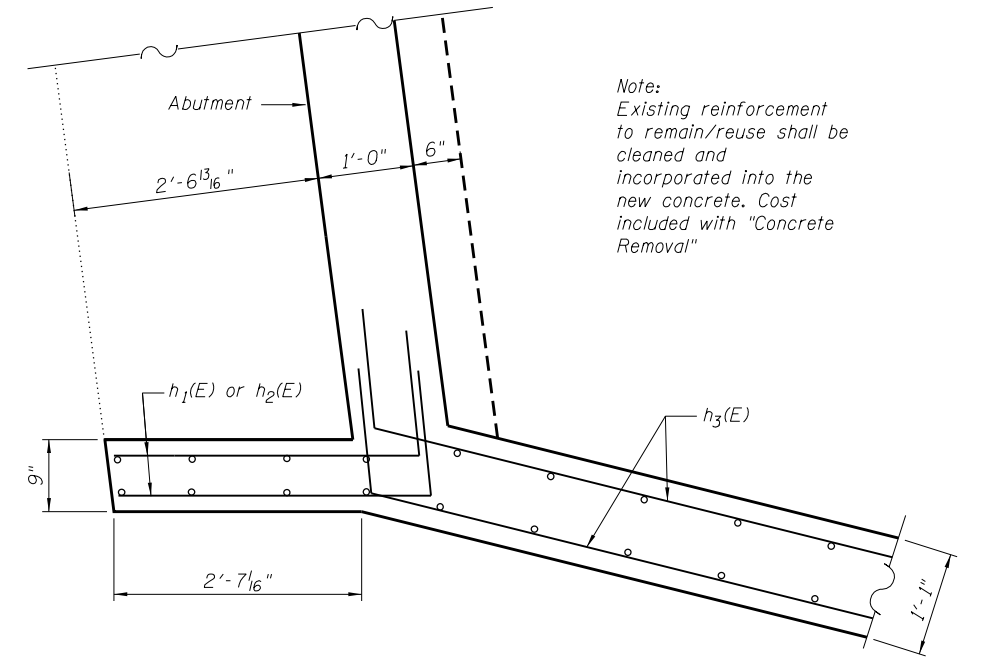
S-22



S.W. & N.E. WINGWALLS
WINGWALL PLAN
N.W. & S.E. WINGWALLS

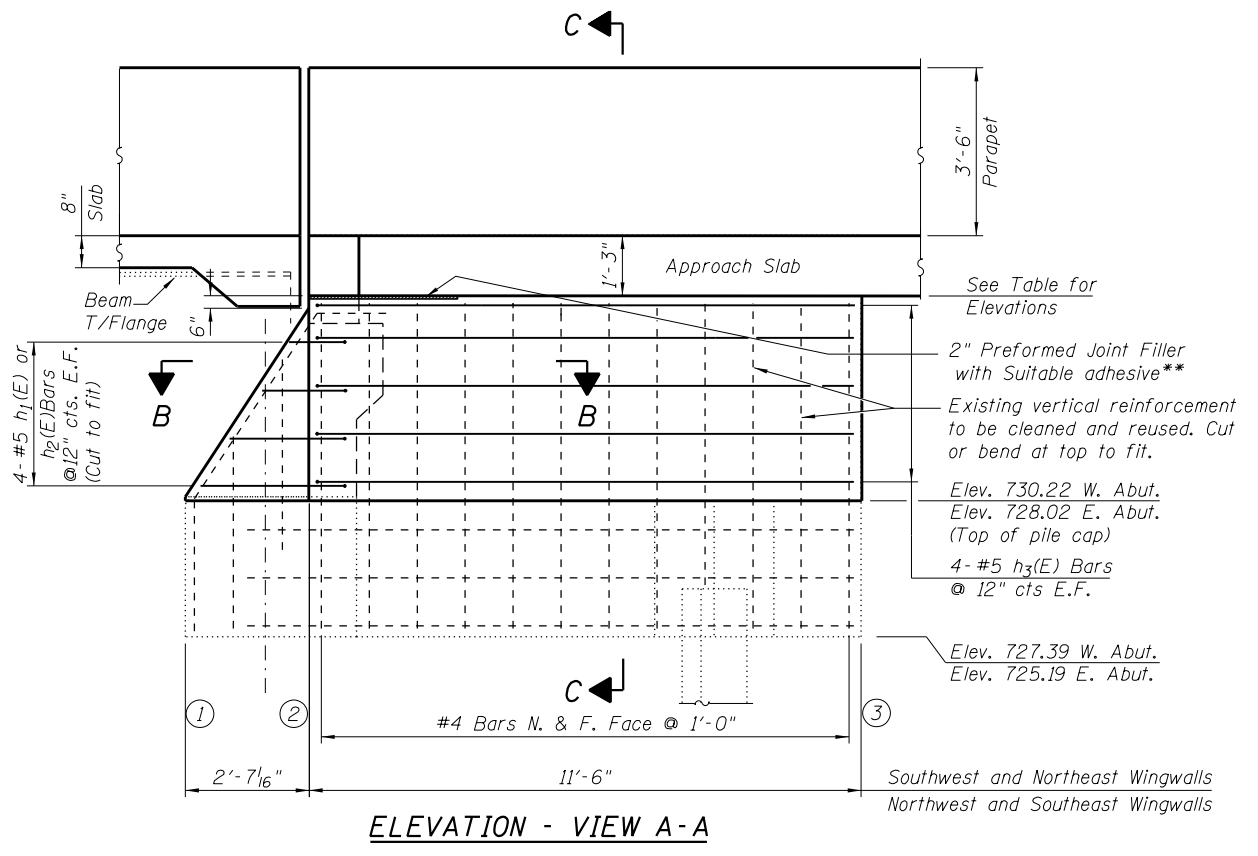


SECTION C-C

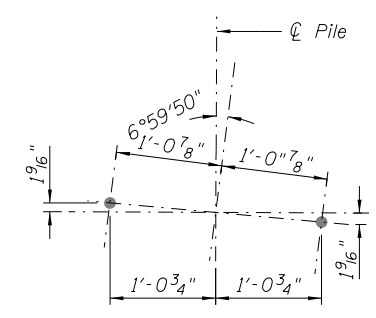


Note:
Existing reinforcement to remain/reuse shall be cleaned and incorporated into the new concrete. Cost included with "Concrete Removal"

PLAN AT CORNERS
SECTION B-B



ELEVATION - VIEW A-A



ANCHOR BOLT LAYOUT

- * Drill 6" and Epoxy grout d (E) bars. Cut to fit.
- **A suitable adhesive must be compatible with preformed joint filler material and concrete. Surface preparation shall be conducted in accordance with manufacturer's guidelines.

ELEVATIONS

	W. Abut.	E. Abut.
N. Wingwall	733.38	731.29
S. Wingwall	733.33	731.14

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PLOT DATE = 3/3/2017	DRAWN - MPS, SMO	REVISED
	CHECKED - JPM, MMH, TPG	REVISED

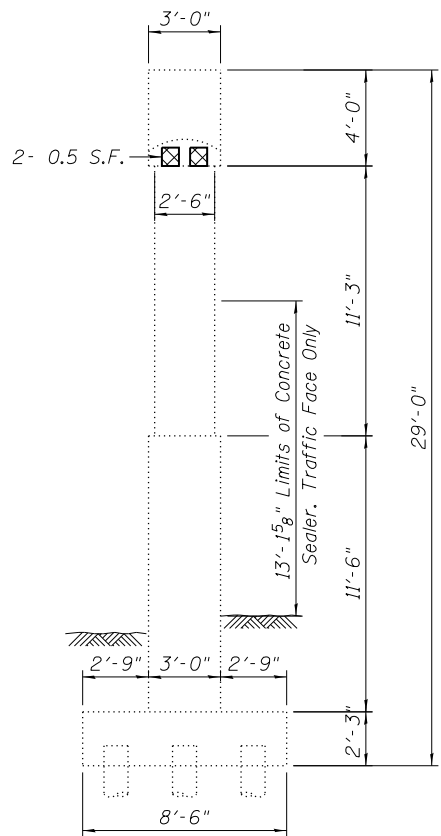
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST & WEST ABUTMENT & WINGWALL DETAILS
STRUCTURE NO.049-0051

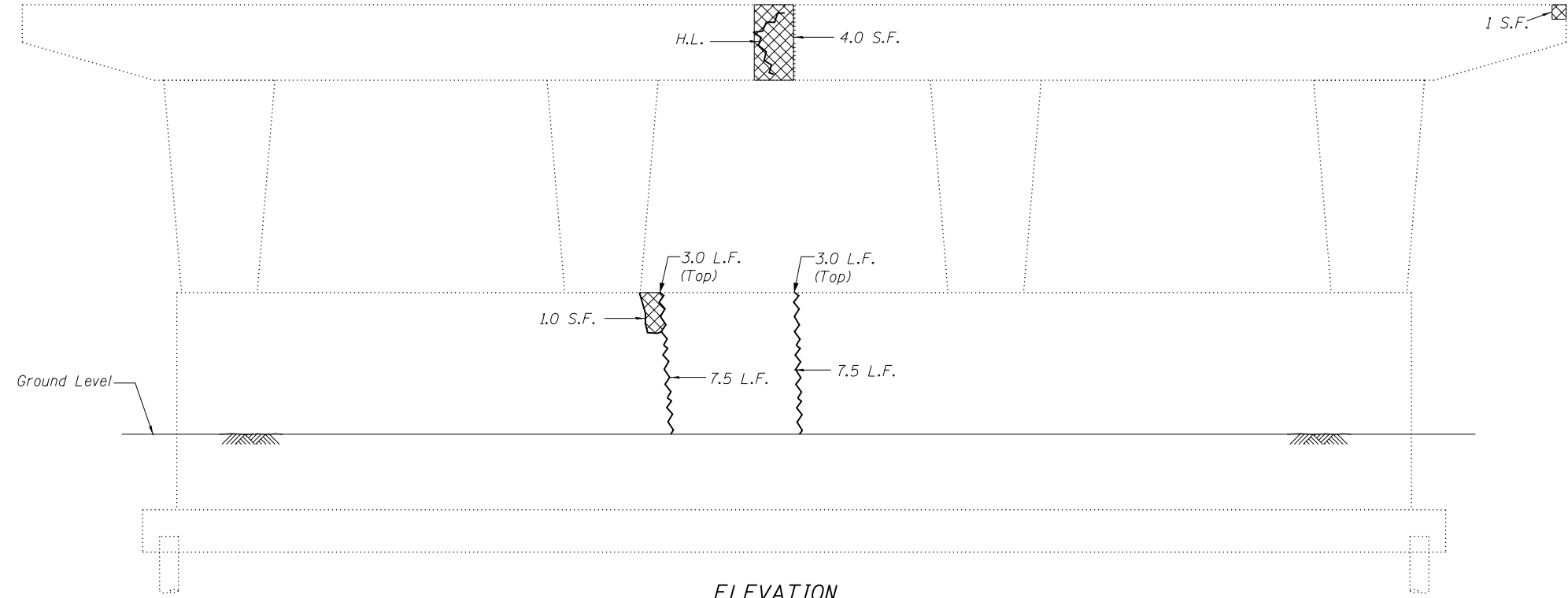
SHEET NO. 23 OF 29 SHEETS

F.A.P. RTE. 333	SECTION 12(HB&VB)BR & RS-7	COUNTY LAKE	TOTAL SHEETS 198	SHEET NO. 104
CONTRACT NO. 60X39				

ILLINOIS FED. AID PROJECT

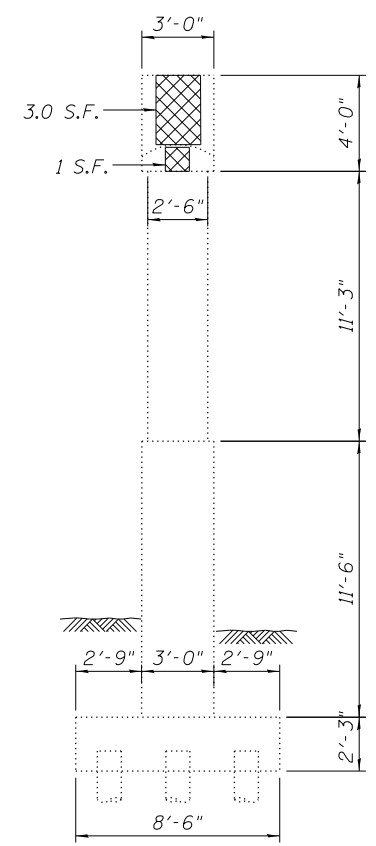


ELEVATION
(North End)

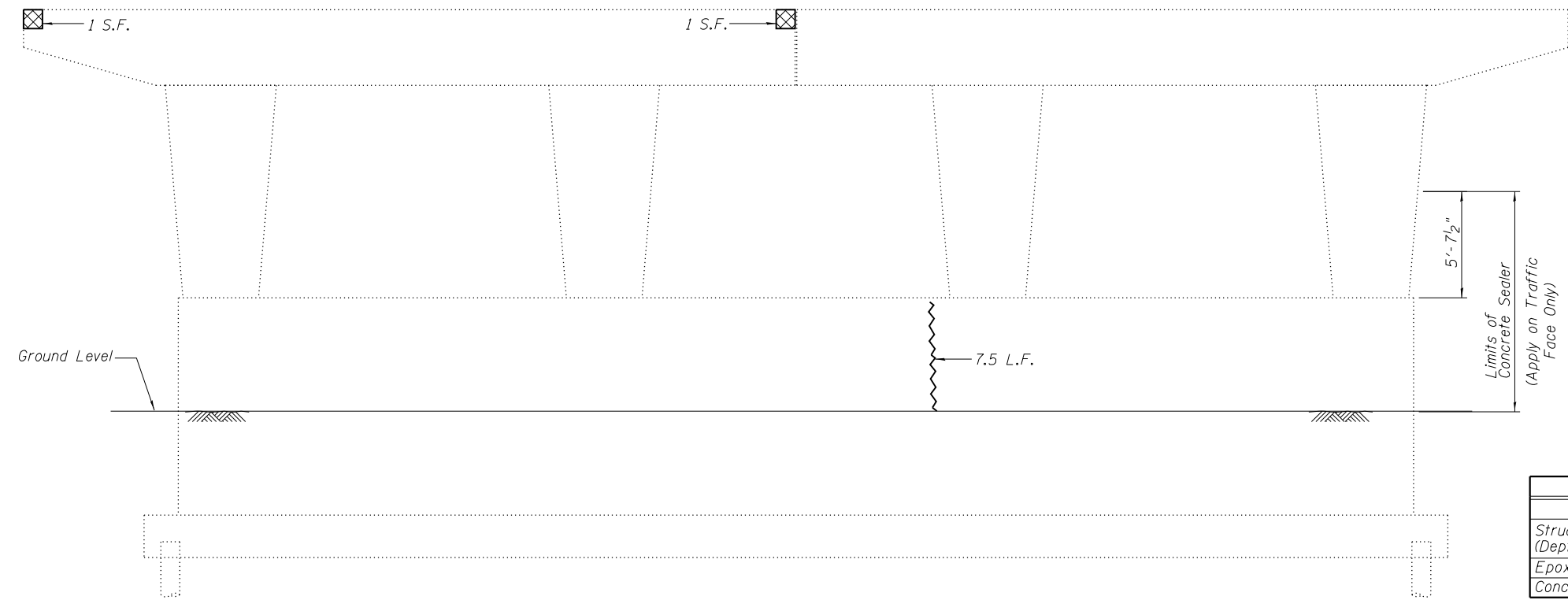


ELEVATION
(Looking East)

Note:
Repair of the existing pier shall include but not be limited to the areas shown. The actual area to be repaired will be determined by the Engineer at the time of construction.



ELEVATION
(South End)



ELEVATION
(Looking West)

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- L.F. Low Pressure Epoxy Injection/High Pressure Epoxy Injection (Diaphragm only)
- HL Hairline crack (For Information Only)
- Hairline crack with efflorescence

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	13.0
Epoxy Crack Injection	Ft.	29
Concrete Sealer	Sq. Ft.	13

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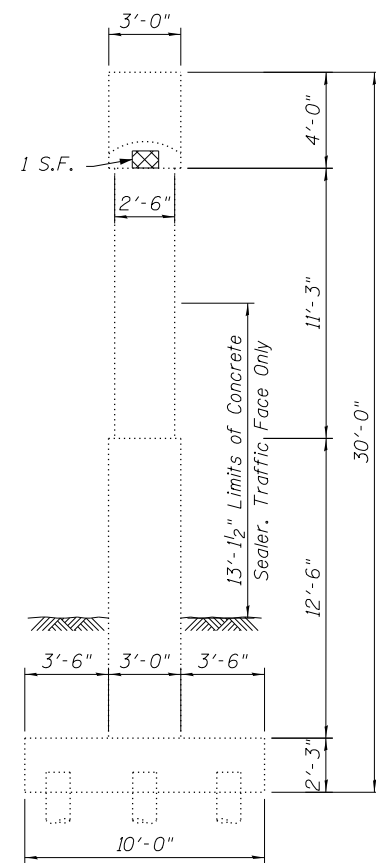
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PLOT SCALE =	DRAWN - MPS, SMO	REVISED
PLOT DATE = 3/3/2017	CHECKED - JPM, MMH, TPG	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

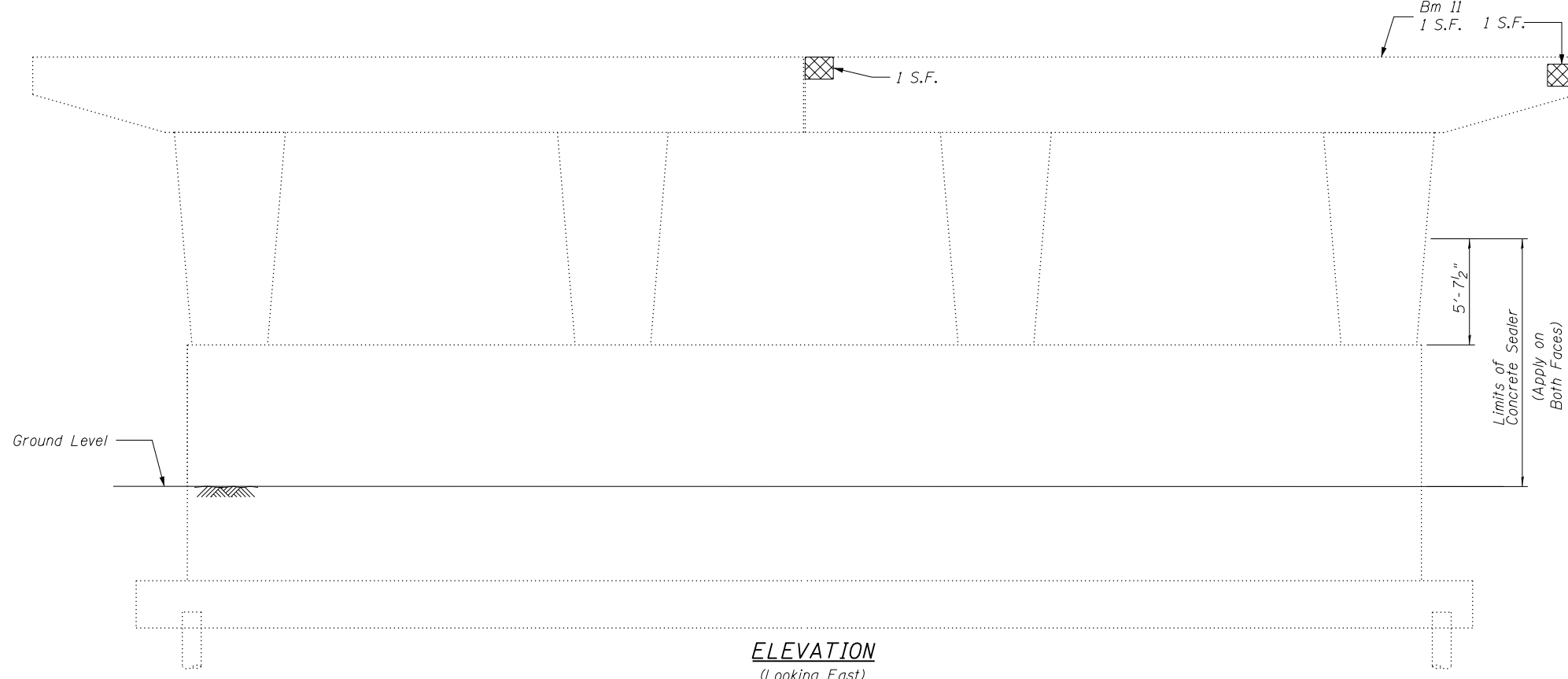
PIER 1 REPAIR DETAILS
STRUCTURE NO.049-0051

SHEET NO. 24 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	105
CONTRACT NO. 60X39				
ILLINOIS FED. AID PROJECT				

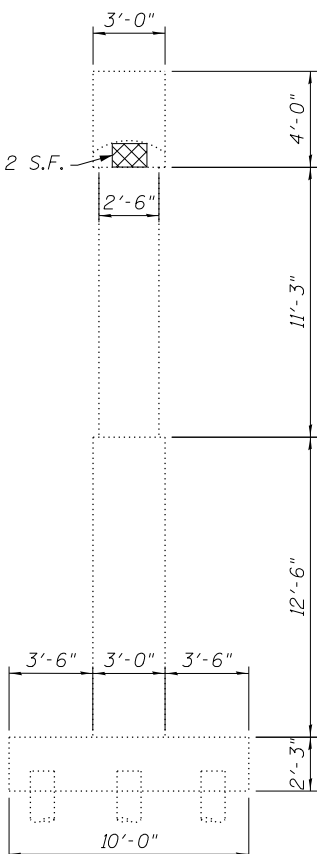


ELEVATION
(North End)

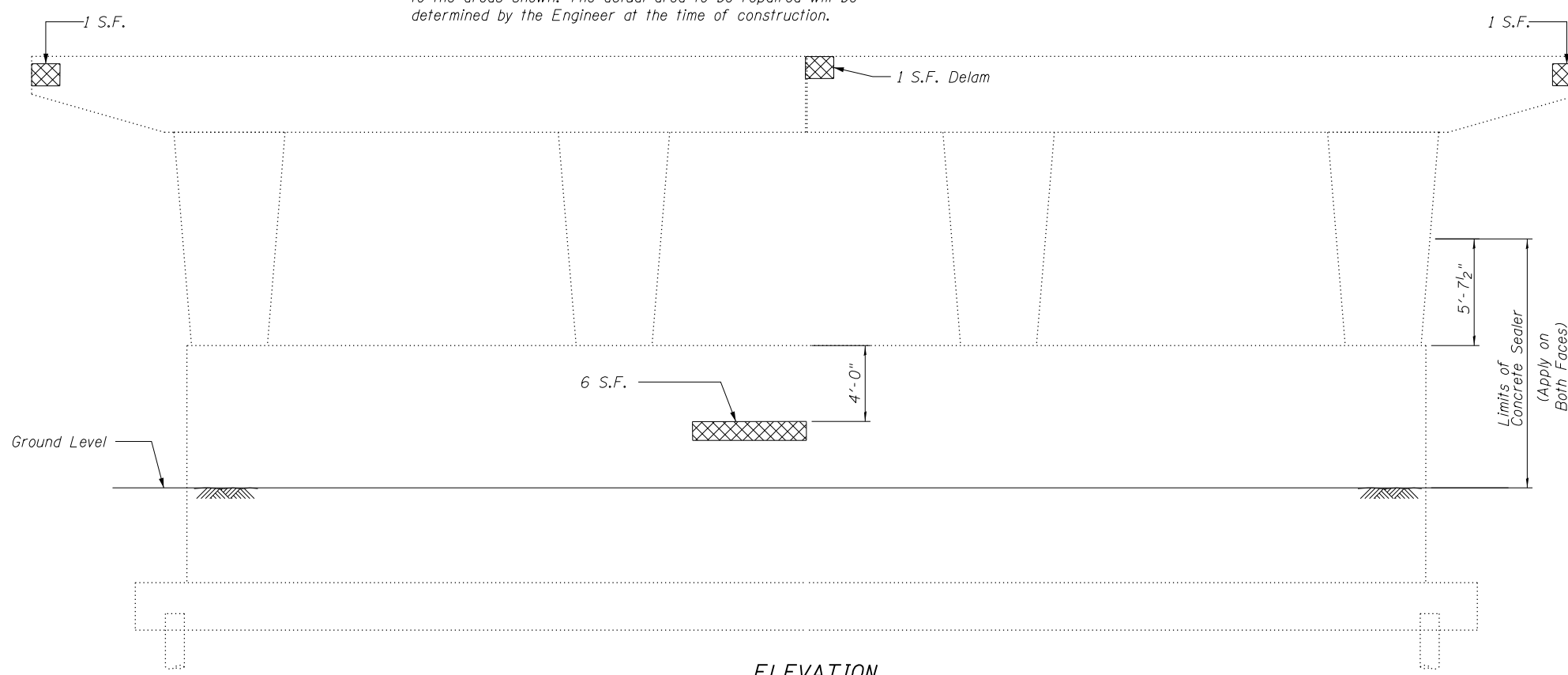


ELEVATION
(Looking East)

Note:
Repair of the existing pier shall include but not be limited to the areas shown. The actual area to be repaired will be determined by the Engineer at the time of construction.



ELEVATION
(South End)



ELEVATION
(Looking West)

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- L.F. Low Pressure Epoxy Injection/High Pressure Epoxy Injection (Diaphragm only)
- HL Hairline crack (For Information Only)
- Hairline crack with efflorescence

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	14.0
Concrete Sealer	Sq. Ft.	14.0

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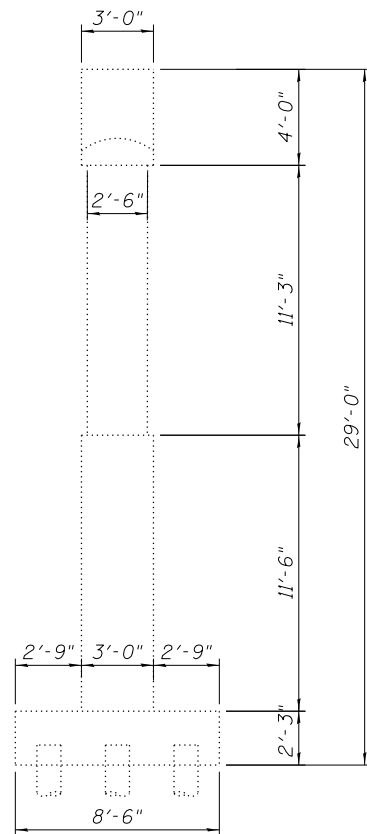
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PLOT SCALE =	DRAWN - SMO, MPS	REVISED
PLOT DATE = 3/3/2017	CHECKED - JPM, MMH, TPG	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

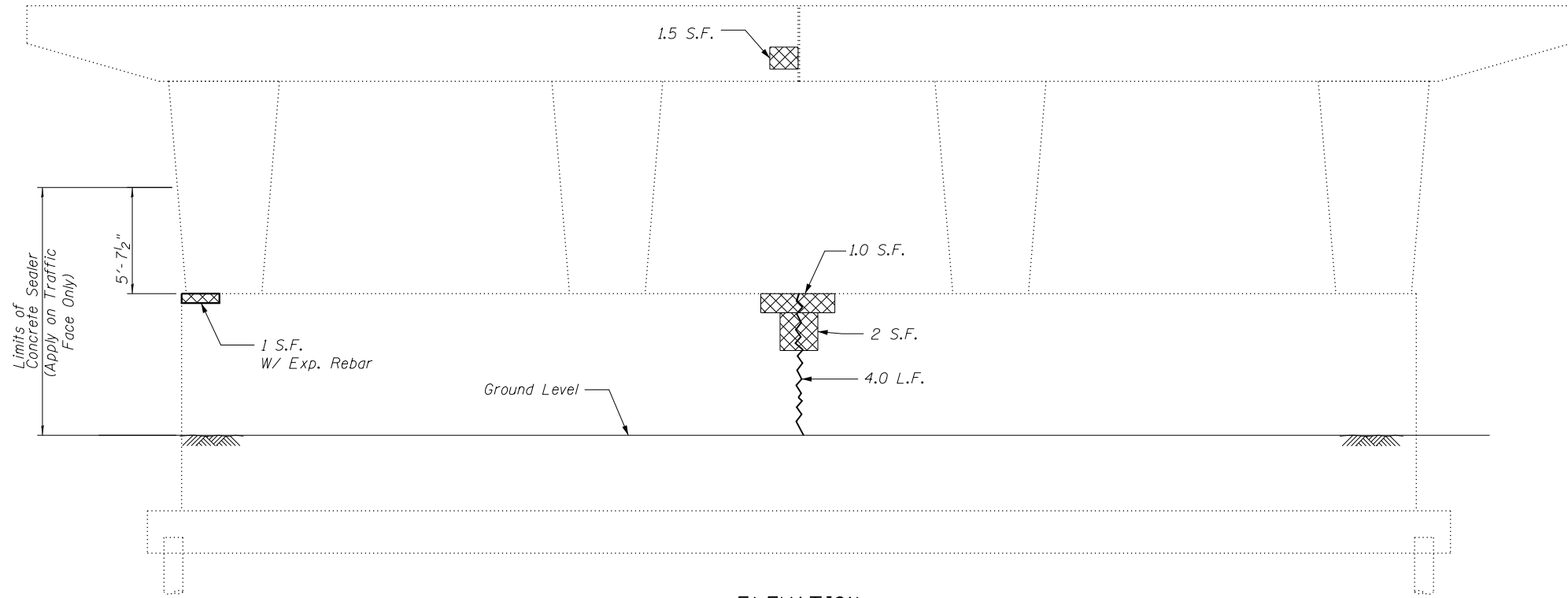
PIER 2 REPAIR DETAILS
STRUCTURE NO.049-0051

SHEET NO. 25 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	106
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X39	

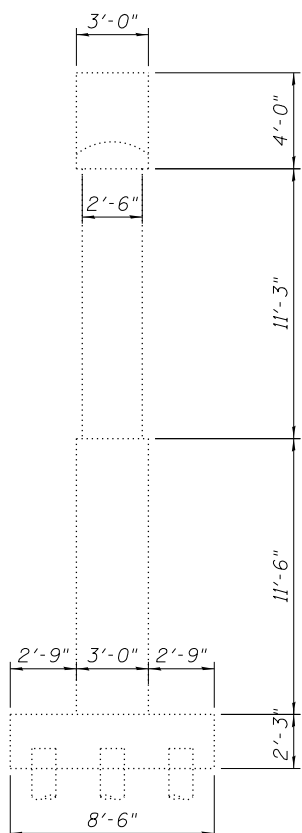


ELEVATION
(North End)

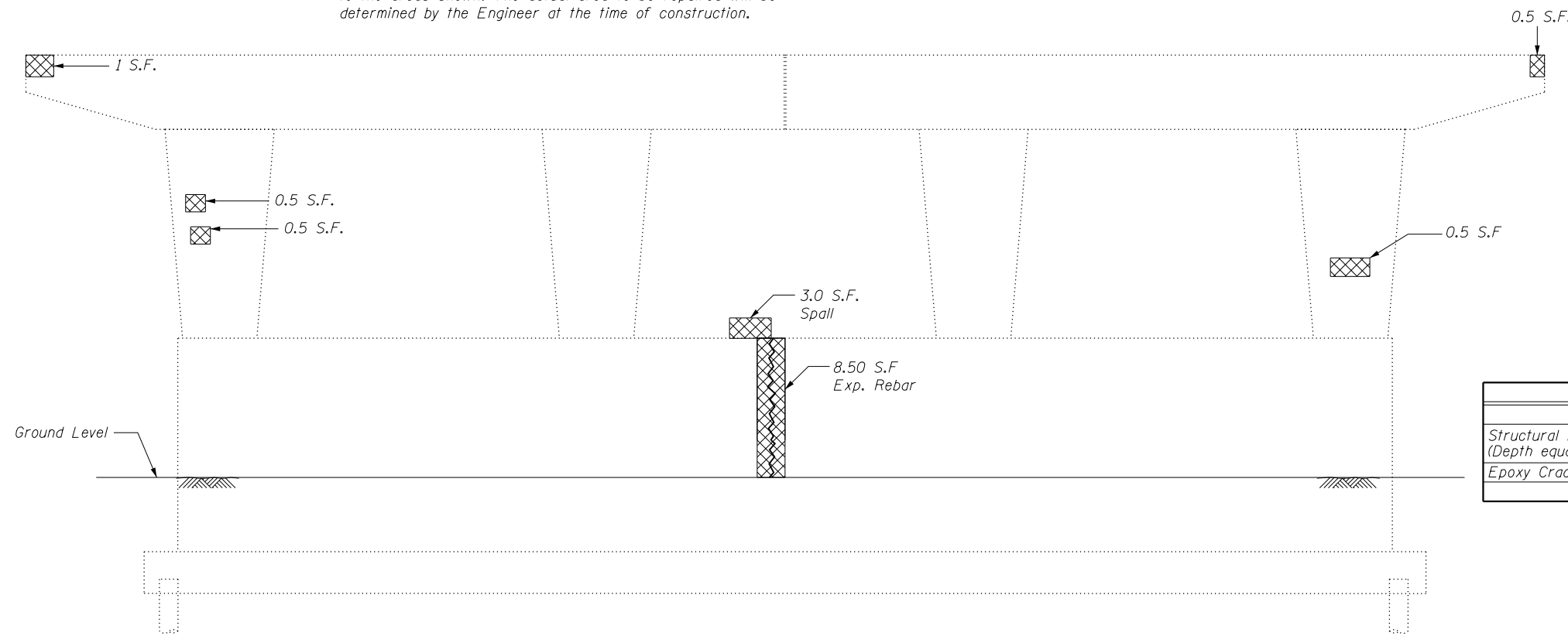


ELEVATION
(Looking East)

Note:
Repair of the existing pier shall include but not be limited to the areas shown. The actual area to be repaired will be determined by the Engineer at the time of construction.



ELEVATION
(South End)



ELEVATION
(Looking West)

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- L.F. Low Pressure Epoxy Injection/High Pressure Epoxy Injection (Diaphragm only)
- HL Hairline crack (For Information Only)
- Hairline crack with efflorescence

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	20.0
Epoxy Crack Injection	Foot	4.0

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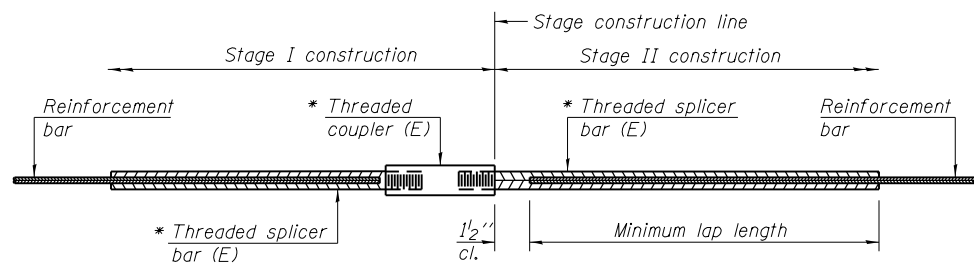
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PLOT SCALE =	DRAWN - MPS, SMO	REVISED
PLOT DATE = 3/3/2017	CHECKED - JPM, MMH, TPG	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 REPAIR DETAILS
STRUCTURE NO.049-0051

SHEET NO. 26 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	107
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X39	

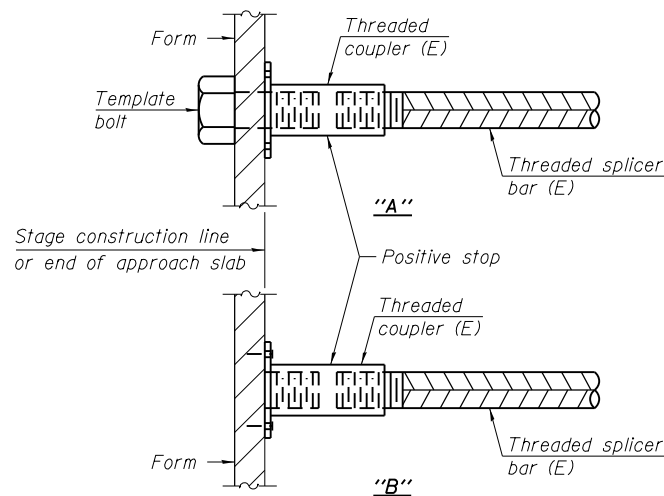


STANDARD BAR SPLICER ASSEMBLY

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

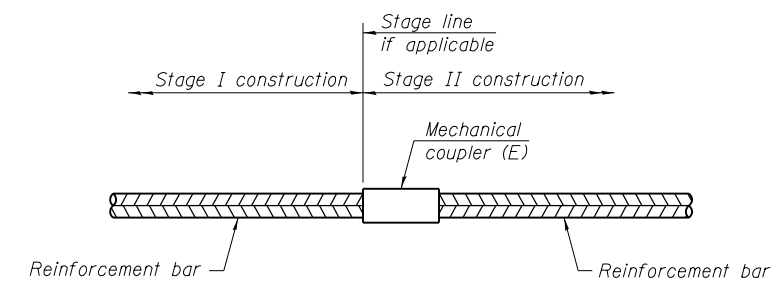
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck Slab	#5	823	3'-6"
Deck Edge Beam	#6	8	3'-10"
W. Abutment	#5	16	3'-7"
E. Abutment	#5	16	3'-7"
W. Approach Slab	#5	86	3'-2"
W. Approach Slab	#8	61	5'-1"
E. Approach Slab	#5	86	3'-2"
E. Approach Slab	#8	61	5'-1"



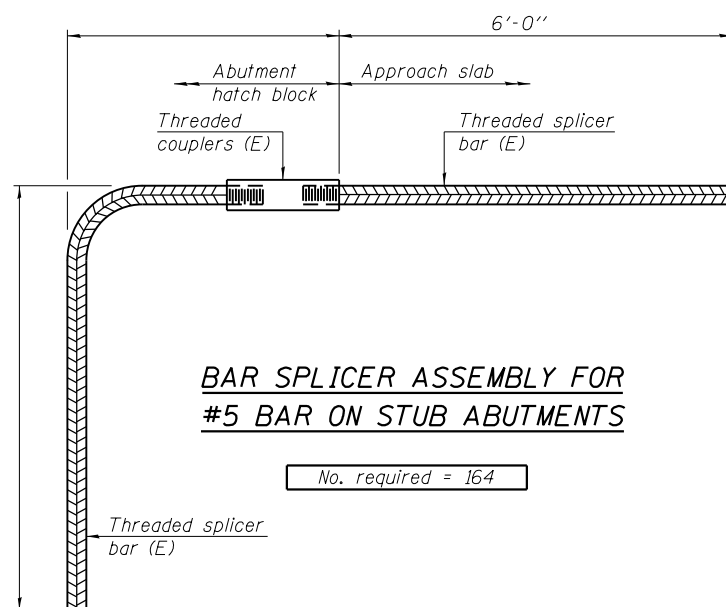
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 164

NOTES

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

BSD-1

11-22-2016



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STATE OF ILLINOIS
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BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO.049-0051

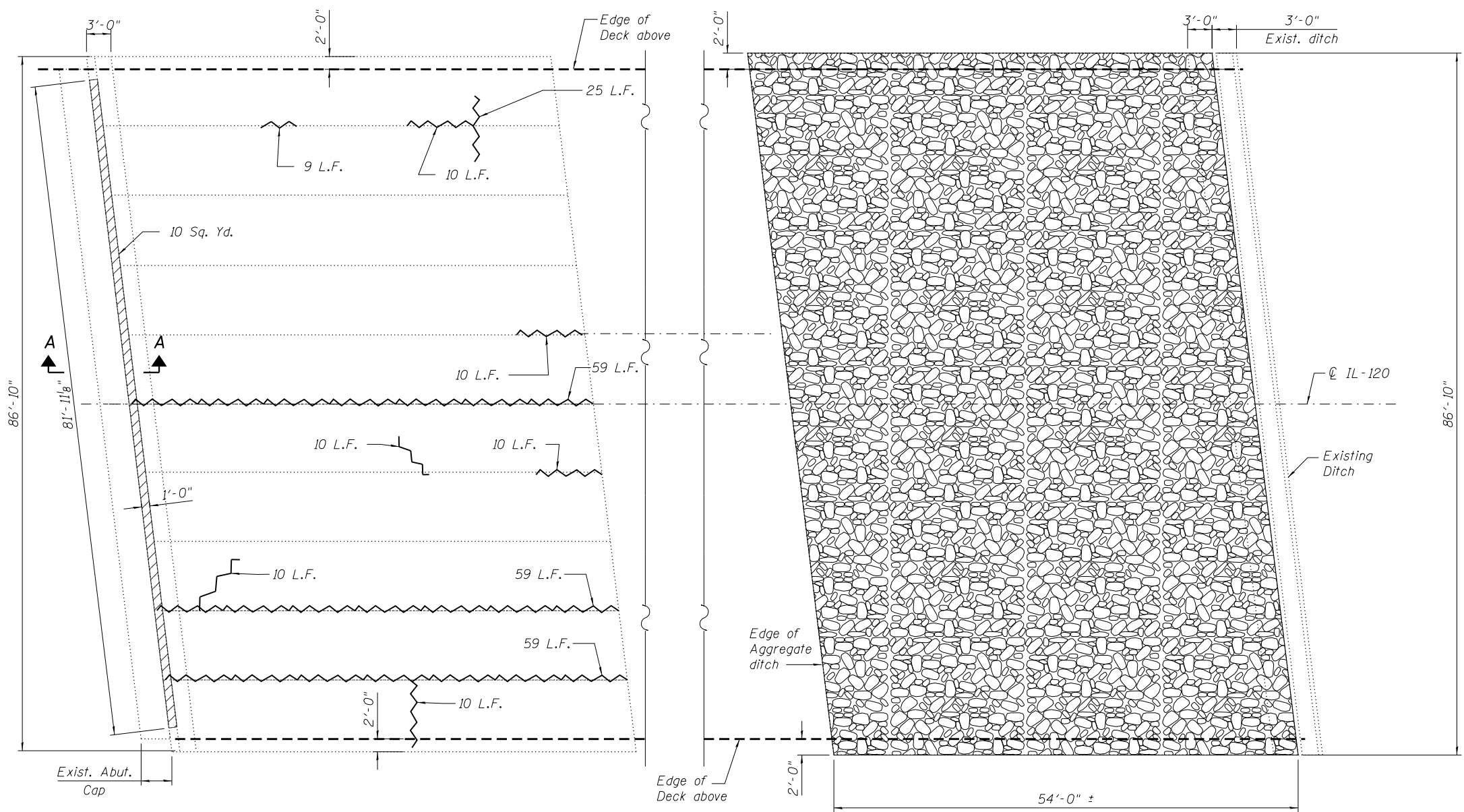
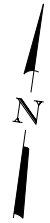
SHEET NO. 27 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	108
CONTRACT NO. 60X39				

ILLINOIS FED. AID PROJECT

S-27

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WEST ABUTMENT SLOPE WALL PLAN

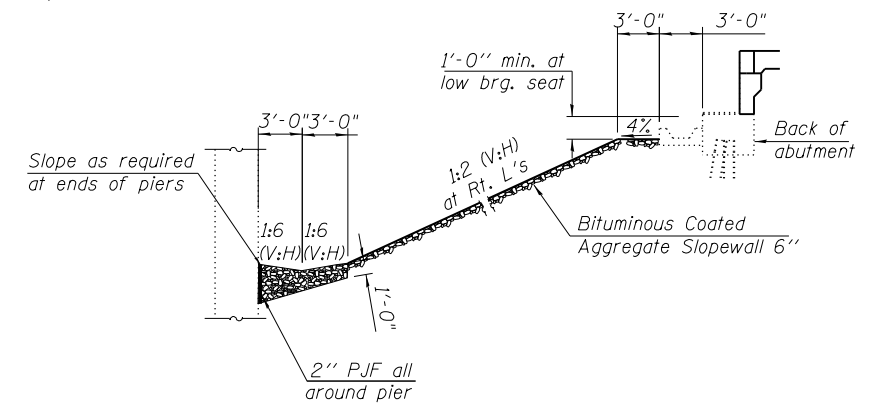
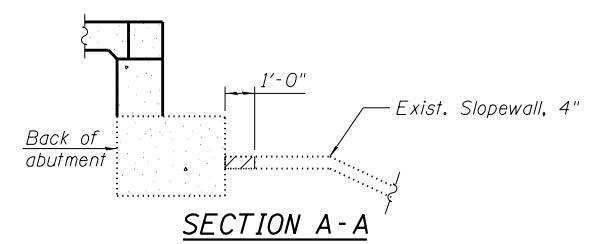
EAST ABUTMENT SLOPE WALL PLAN

BILL OF MATERIAL

Item	Unit	Quantity
Slope Wall Repair	Sq. Yd.	10.0
Slope Wall Crack Sealing	Foot	271

LEGEND

- Slope Wall Repair
- Bituminous Coated Aggregate Slopewall 6"
- L.F.
Slope Wall Crack Sealing



SECTION THRU BITUMINOUS COATED AGGREGATE SLOPEWALL
(East Abutment)

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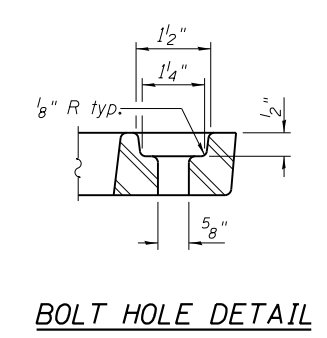
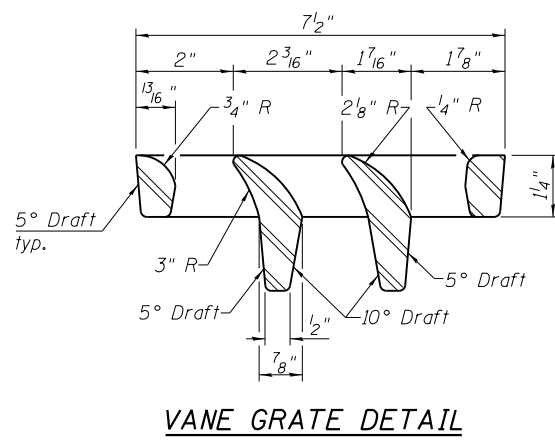
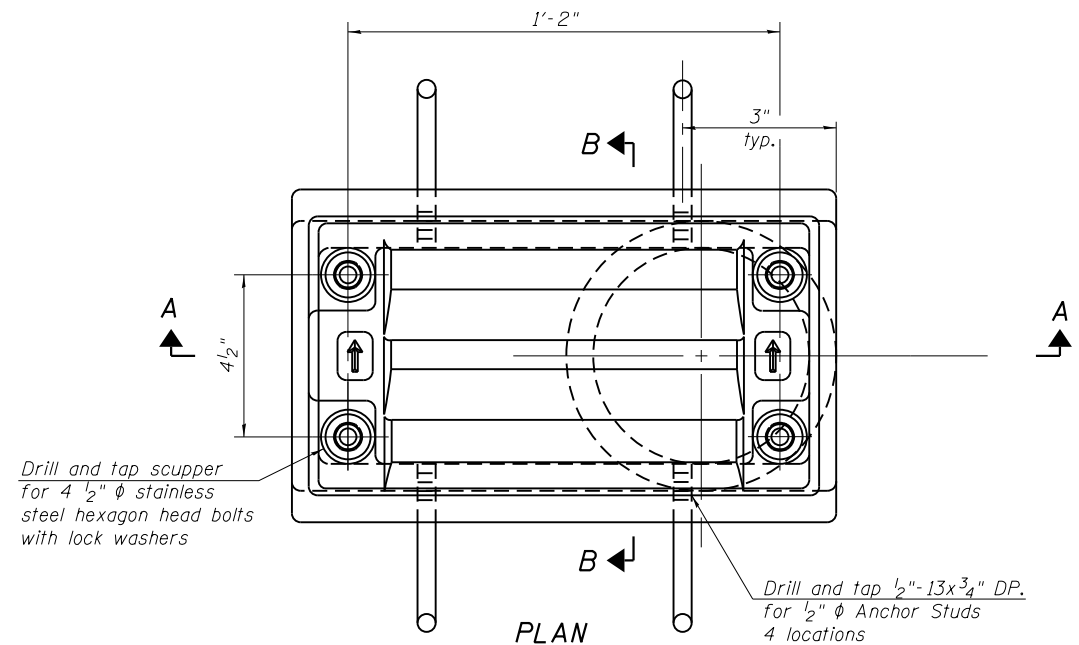


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PLOT DATE = 3/3/2017	CHECKED - JPM, MMH, TPG	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SLOPEWALL REPAIR DETAILS
STRUCTURE NO.049-0051**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	109
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X39	



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

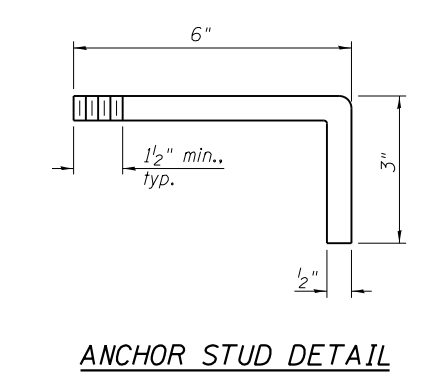
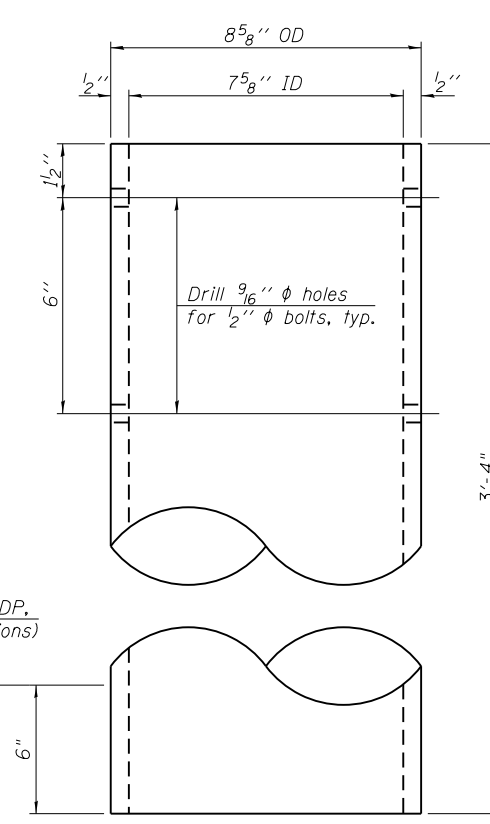
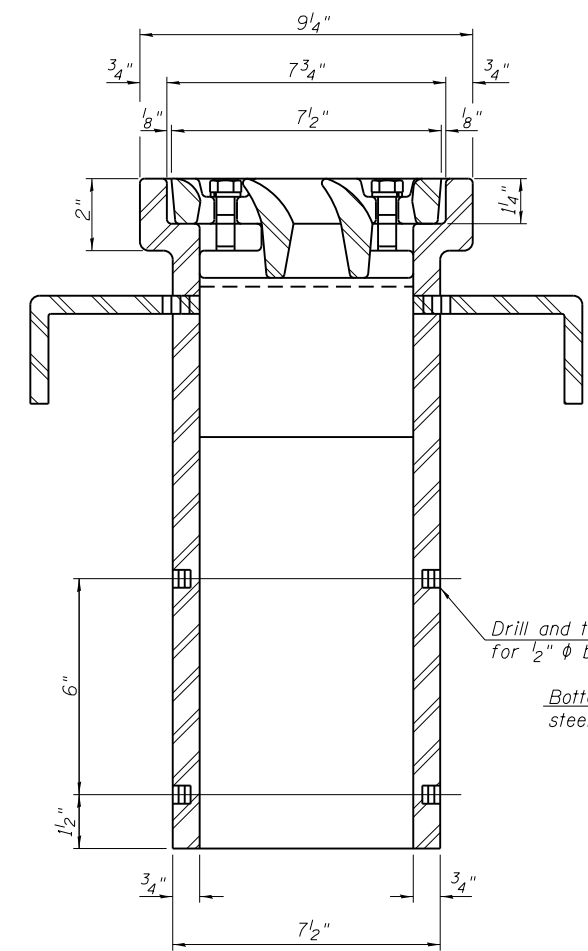
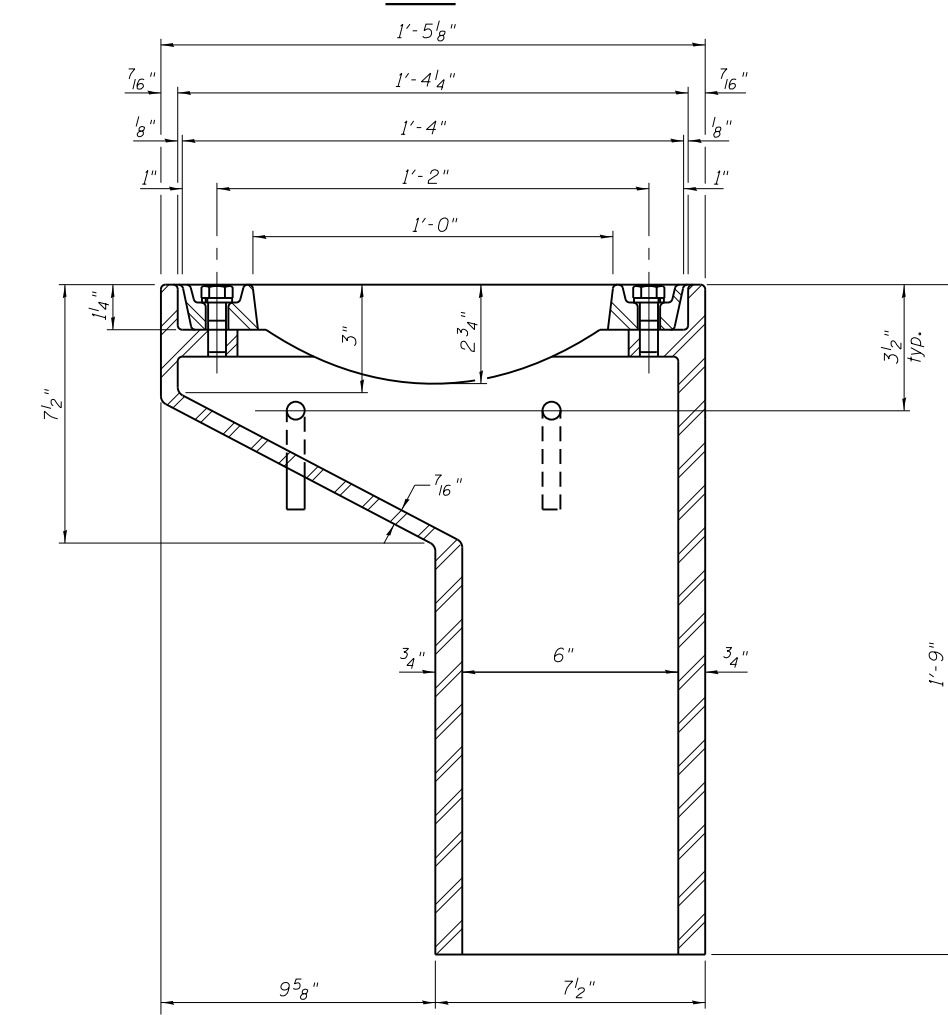
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	2

3/27/2017 11:32:03 AM G:\pwworking\primera\pwworking\drawing\ms06638\0490051-60x39-29-details-scupper.dgn

DS-11 11-22-2016

<p>100 S. WACKER DRIVE SUITE 700 CHICAGO IL 60606 P313-480-0910 P313-480-4815</p>	USER NAME =	DESIGNED - -	REVISED
		CHECKED - -	REVISED
	PLOT SCALE =	DRAWN - MPS	REVISED
	PLOT DATE = 3/3/2017	CHECKED - JPM, MMH, TPG	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

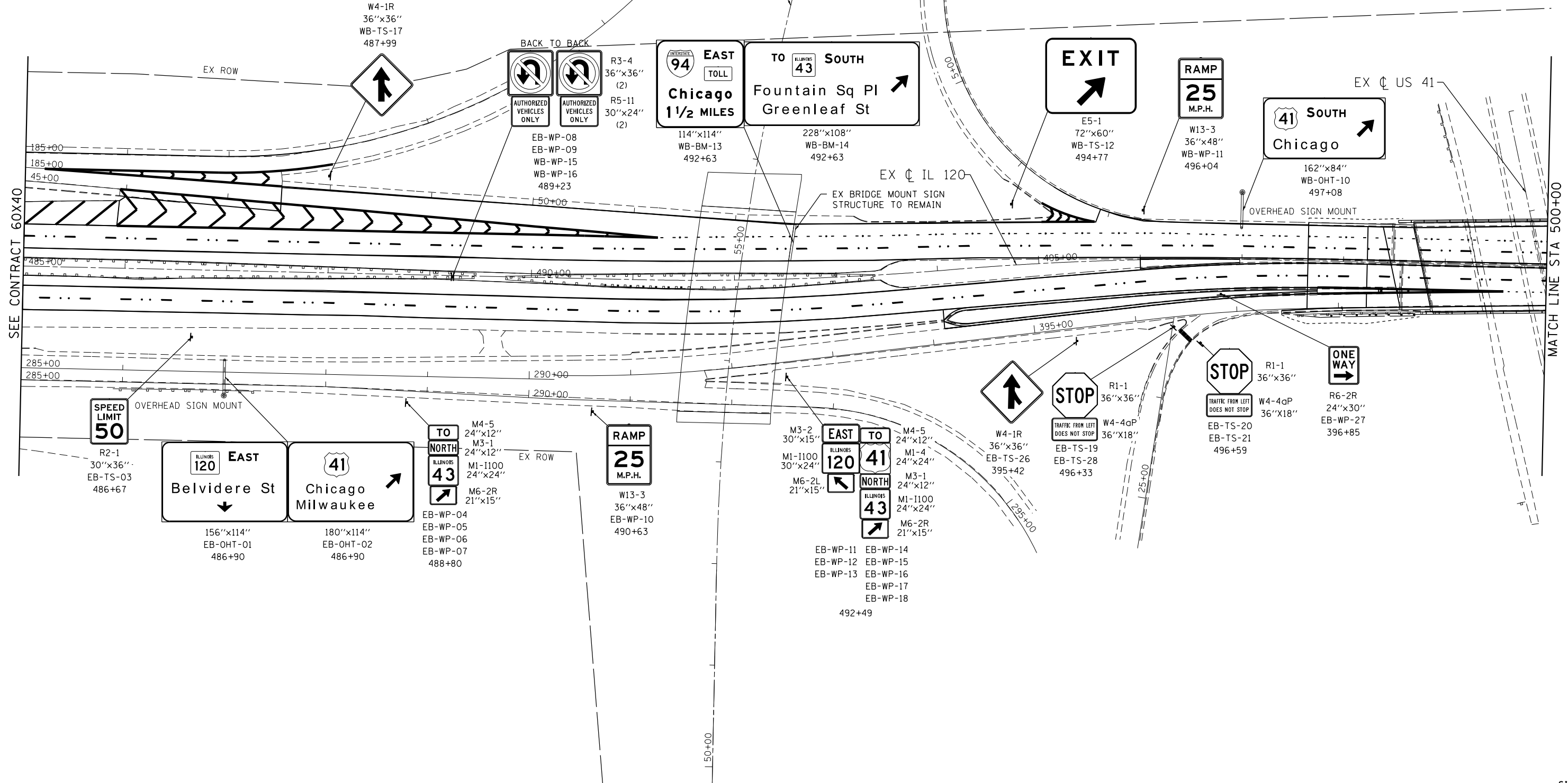
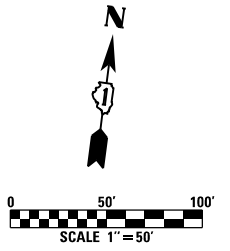
DRAINAGE SCUPPER, DS-11
STRUCTURE NO.049-0051
SHEET NO. 29 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	110
				CONTRACT NO. 60X39
ILLINOIS FED. AID PROJECT				

SIGN NAMING CONVENTION

DIRECTION OF TRAFFIC: XX-XX-XX
 EB - EASTBOUND
 WB - WESTBOUND

SIGN PANEL NUMBER
 MOUNTING TYPE
 WP - WOOD POSTS
 TS - TELESCOPING STEEL
 BM - BRIDGE MOUNTED
 OHT - OVERHEAD TRUSS



SEE CONTRACT 60X40

MATCH LINE STA 500+00



USER NAME = rdeming	DESIGNED - RC	REVISED -
DRAWN - RC	REVISED -	
PLOT SCALE = 100.0000' / in.	CHECKED - ST	REVISED -
PLOT DATE = 7/3/2014	DATE - 3/3/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
SIGNING PLAN**

SCALE: 1"=50' SHEET NO. 1 OF 3 SHEETS STA. 485+00 TO STA. 500+00

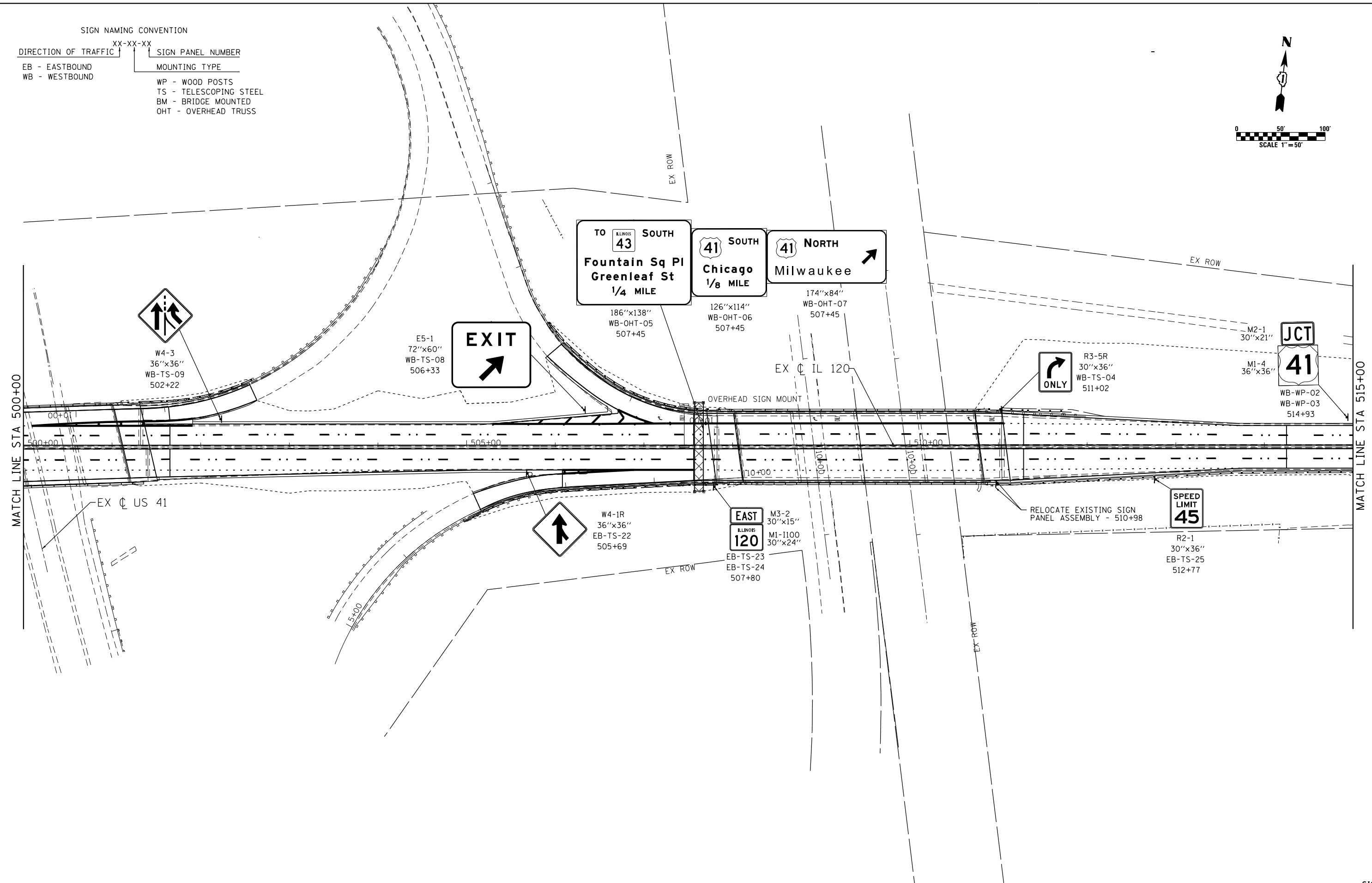
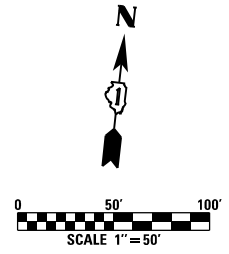
F.A.P. RTE. 333	SECTION 12(HB&VB)BR	COUNTY LAKE	TOTAL SHEETS 198	SHEET NO. 111
CONTRACT NO. 60X39				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SIG-1

SIGN NAMING CONVENTION

XX-XX-XX
 DIRECTION OF TRAFFIC | SIGN PANEL NUMBER
 EB - EASTBOUND | MOUNTING TYPE
 WB - WESTBOUND

WP - WOOD POSTS
 TS - TELESCOPING STEEL
 BM - BRIDGE MOUNTED
 OHT - OVERHEAD TRUSS



LE LIN ENGINEERING, LTD.
 Consulting Engineers
 Westmont, Illinois

USER NAME = rdeming	DESIGNED - RC	REVISED -
	DRAWN - RC	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - ST	REVISED -
PLOT DATE = 7/3/2014	DATE - 3/3/2017	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
 SIGNING PLAN

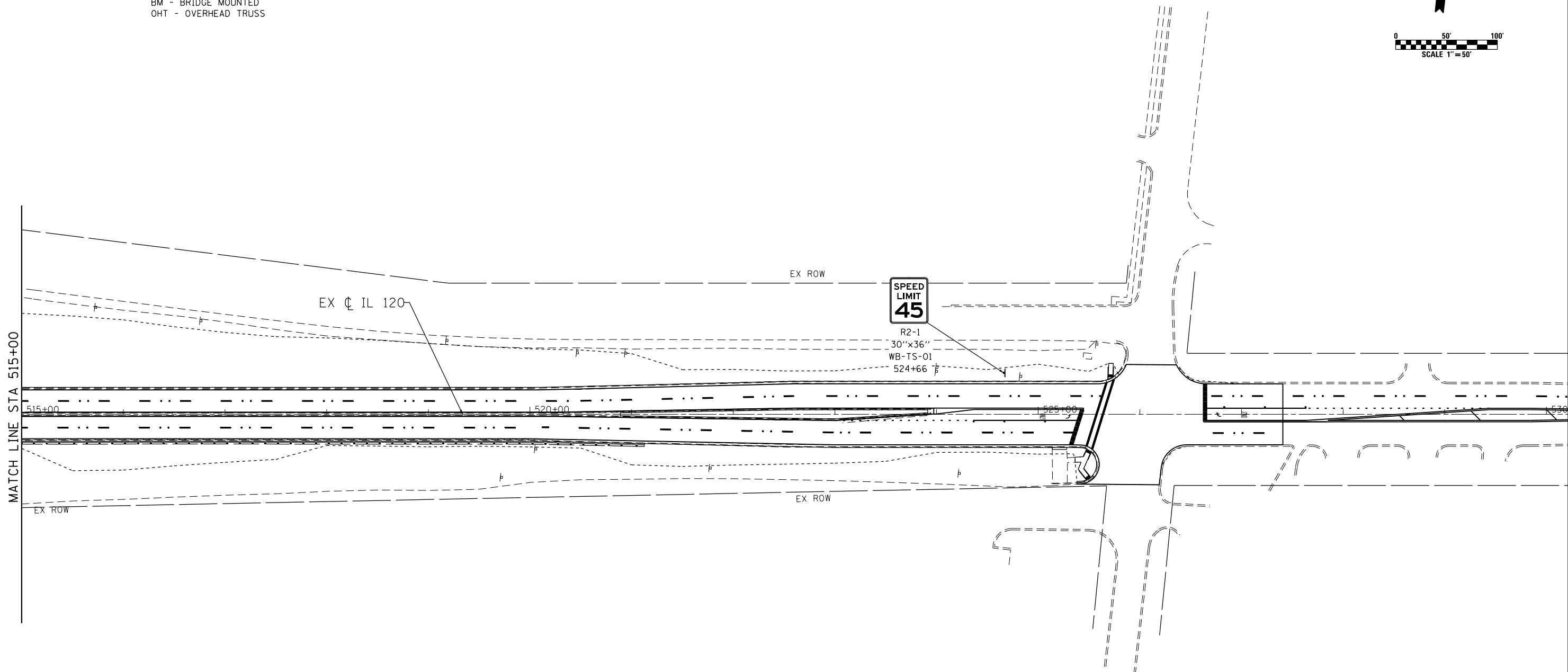
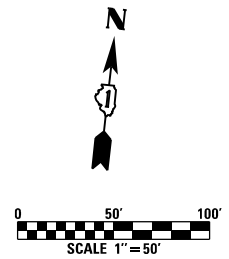
SCALE: 1"=50' SHEET NO. 2 OF 3 SHEETS STA. 500+00 TO STA. 515+00

F.A.P. RTE. 333	SECTION 12(HB&VB)BR	COUNTY LAKE	TOTAL SHEETS 198	SHEET NO. 112
CONTRACT NO. 60X39				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SIG-2

SIGN NAMING CONVENTION

DIRECTION OF TRAFFIC | XX-XX-XX | SIGN PANEL NUMBER
 EB - EASTBOUND | |
 WB - WESTBOUND | |
 MOUNTING TYPE
 WP - WOOD POSTS
 TS - TELESCOPING STEEL
 BM - BRIDGE MOUNTED
 OHT - OVERHEAD TRUSS



USER NAME = rdeming	DESIGNED - RC	REVISED -
	DRAWN - RC	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - ST	REVISED -
PLOT DATE = 7/3/2014	DATE - 3/3/2017	REVISED -

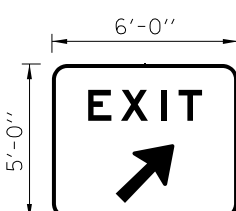
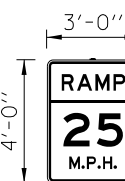
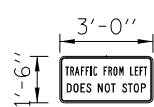
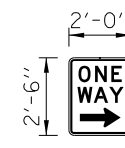
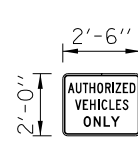
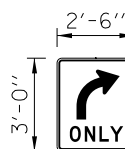
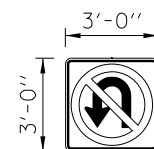
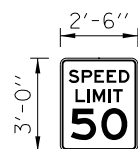
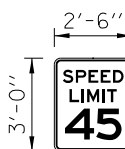
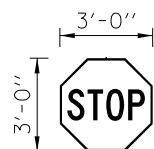
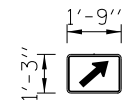
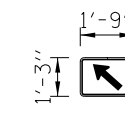
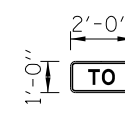
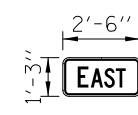
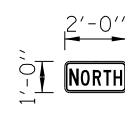
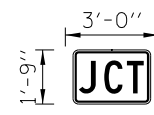
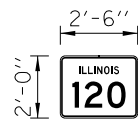
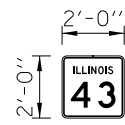
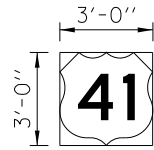
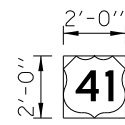
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
SIGNING PLAN

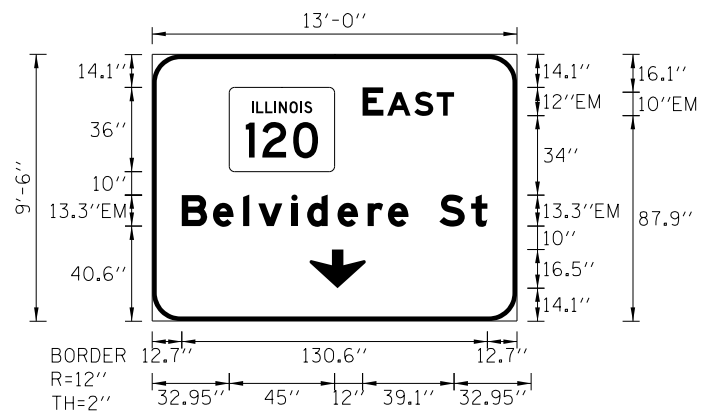
SCALE: 1"=50' SHEET NO. 3 OF 3 SHEETS STA. 515+00 TO STA. 521+13

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR	LAKE	198	113
CONTRACT NO. 60X39				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SIG-3



SIGN DETAIL
1:75



Panel Style: Guide_sign.ssi
M.U.T.C.D.: 2009 Edition

Panel Style: Guide_sign.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

SIGN NUMBER	EB-OHT-01, STA 486+90
WIDTH x HGHT.	13'-0" x 9'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ COLOR: Green
LEGEND/BORDER	TYPE: ZZ COLOR: WhiteWhite

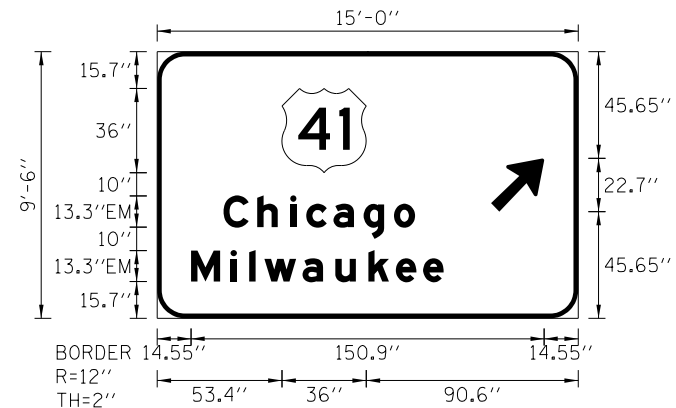
SYMBOL	ROT	X	Y	WID	HT
M1-I100	0	33	63.9	45	36
ARDOWN	0	67.3	13.3	24	16.5

LETTER POSITIONS (X)

														LENGTH	SERIES/SIZE	
E	A	S	T													EM 2000
90	100.4	112	121.6													39.1 12.10
B	e	l	v	i	d	e	r	e		S	t					EM 2000
12.7	26	38.9	45.4	59.5	66.3	79.2	92.1	100.7		122.8	136.4					130.6 13.310

SIGN DETAIL

1:75



Panel Style: Guide Sign.ssi
M.U.T.C.D.: 2009 Edition

Panel Style: Guide Sign.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

SIGN NUMBER	STA 486+90
WIDTH x HGHT.	15'-0" x 9'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ
	COLOR: Green
LEGEND/BORDER	TYPE: ZZ
	COLOR: White/White

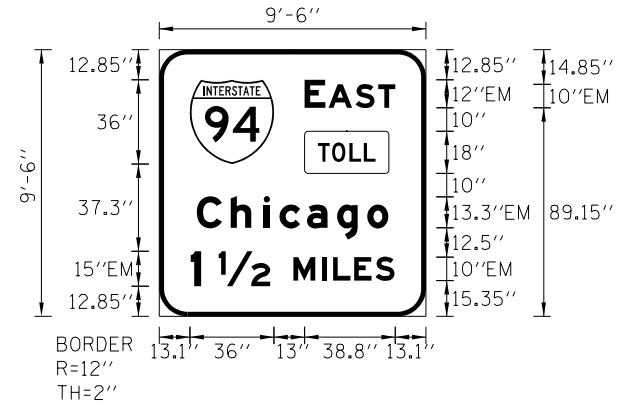
SYMBOL	ROT	X	Y	WID	HT
M1_4	0	53.4	62.3	36	36
ARMED	45	142.7	45.6	18.3	29.3

LETTER POSITIONS (X)

										LENGTH	SERIESSIZE
C	h	i	c	a	g	o					EM 2000
28.4	42.9	57	63.7	75.4	88.3	101.2				81.9	13.310
M	i	l	w	a	u	k	e	e			EM 2000
14.5	31.4	39.4	45.9	62.2	76.3	90.4	102.1	113.8		108	13.310

SIGN DETAIL

1:75



Panel Style: Guide_sign.ssi
 Dimensions are in inches.tenths

Panel Style: Guide_sign.ssi
 M.U.T.C.D.: 2009 Edition

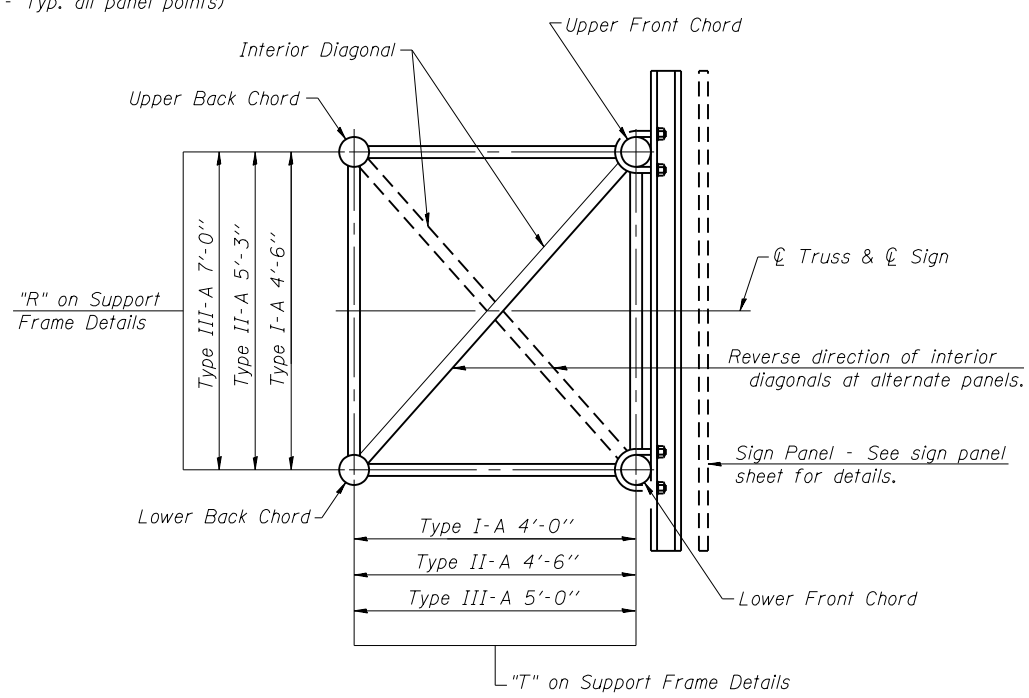
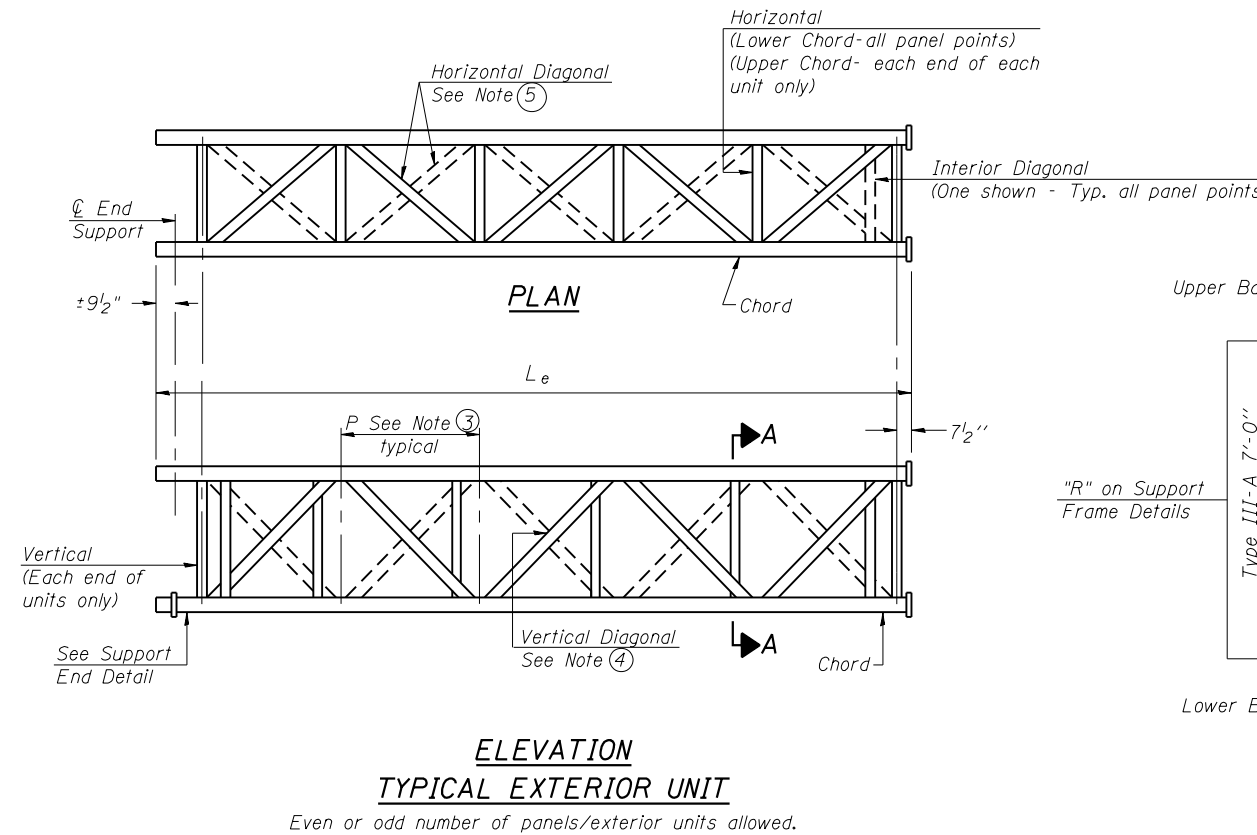
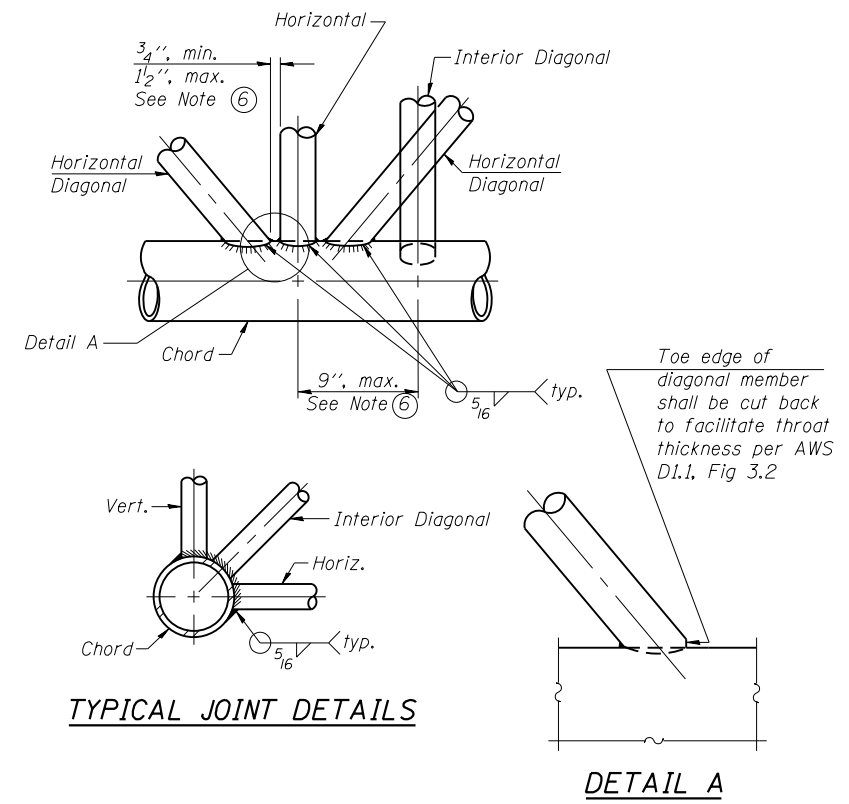
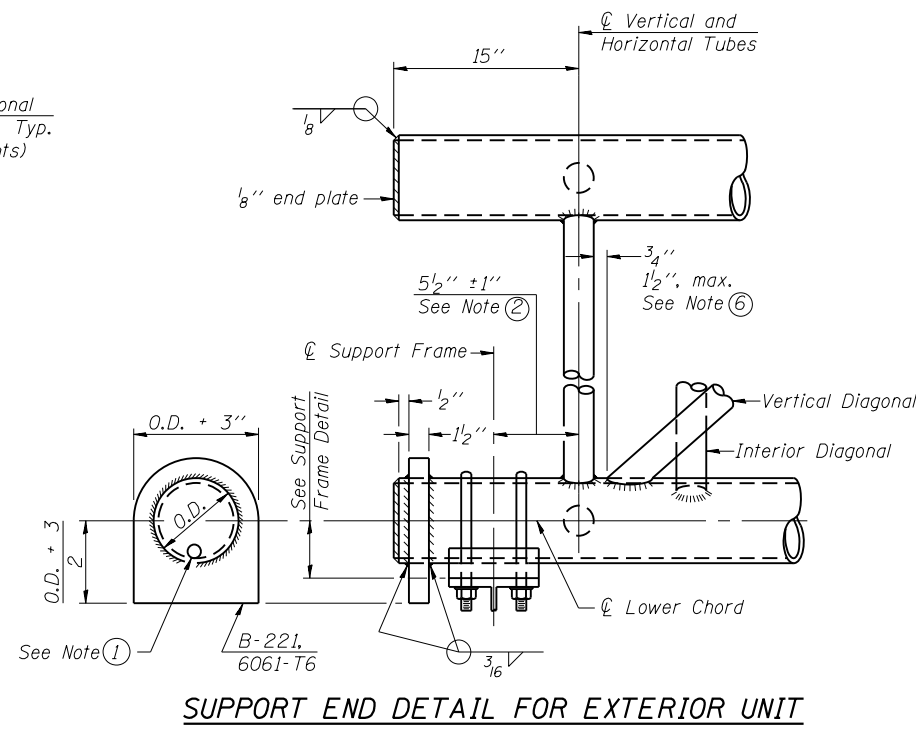
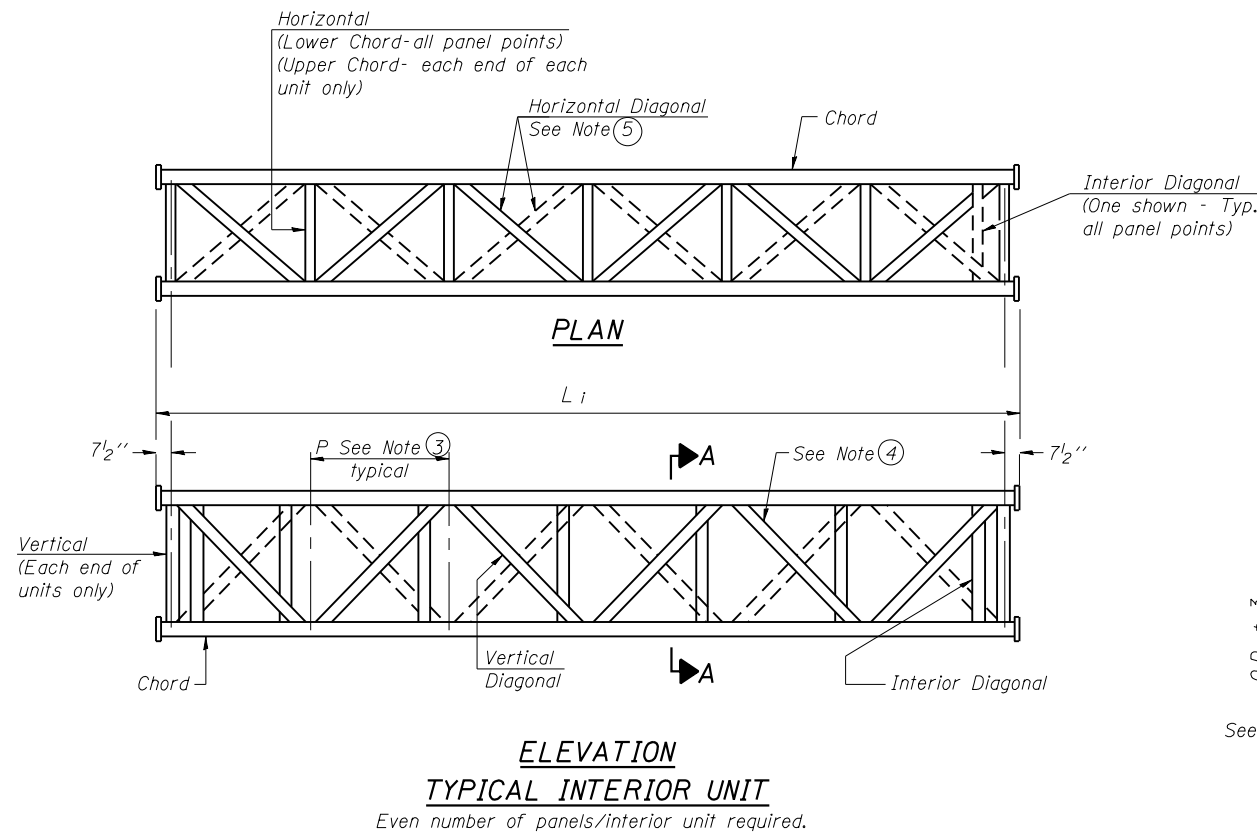
Letter locations are panel edge to lower left corner

SIGN NUMBER	WB-BM-13, STA 492+63
WIDTH x HGHT.	9'-6" x 9'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ
	COLOR: Green
LEGEND/BORDER	TYPE: ZZ
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
M1-1	0	13.1	65.2	36	36
M4-15	0	62.1	61.2	36	18

LETTER POSITIONS (X)

										LENGTH	SERIESIZE
E	A	S	T							38.8	EM 2000
62.2	72.3	83.9	93.5							12.10	
C	h	i	c	a	g	o				81.9	EM 2000
16	30.5	44.6	51.4	63.1	76	88.9				13.310	
1	1/2		M	I	L	E	S			87.2	EM 2000
13.4	25.4		57.4	69.5	74.3	83.3	92.5			15.10	



- Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" φ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- 5 1/2" end dimension may vary by ±1" to provide uniform panel spacing (P).
- 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.
- Vertical Diagonals in front and back face shall alternate.
- Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
- 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.

OS-A-2

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE	CHECKED - RB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(IHB&VB)BR & RS-7	LAKE	198	124
CONTRACT NO. 60X39				

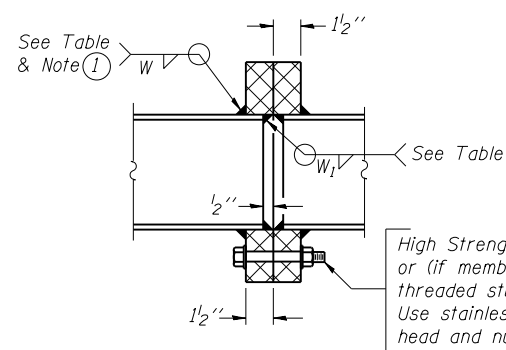
SHEET NO. 02 OF 10 SHEETS

ILLINOIS FED. AID PROJECT

SS-2

TRUSS UNIT TABLE

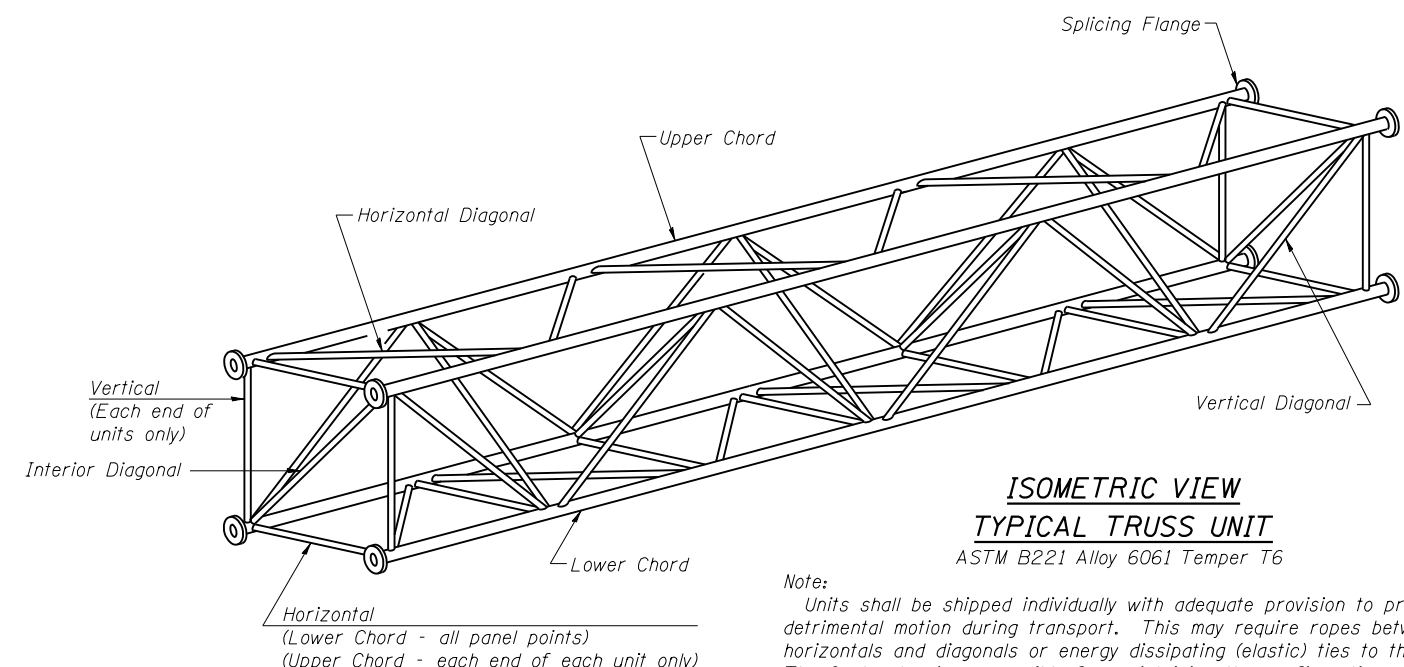
Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L _e)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L _i)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W ₁		
ISO49S120L000.0-000	507+45.00	II-A	6	34'-1 1/2"	5'-4 1/2"	1	6	33'-6"	5'-4 1/2"	6"	5/16"	3"	5/16"	3"	6	7/8"	3/8"	1/4"	10 1/4"	13 3/4"



High Strength bolts with locknuts or (if members interfere) threaded studs with 2 locknuts. Use stainless steel washers under head and nut. See table.

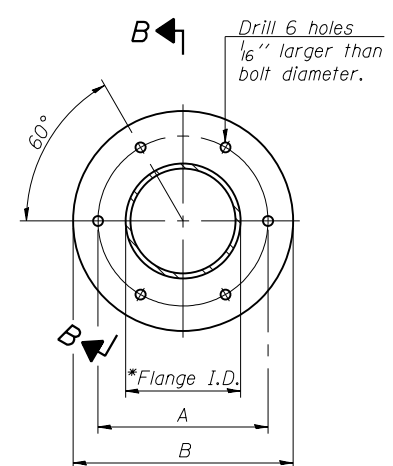
SECTION B-B

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.

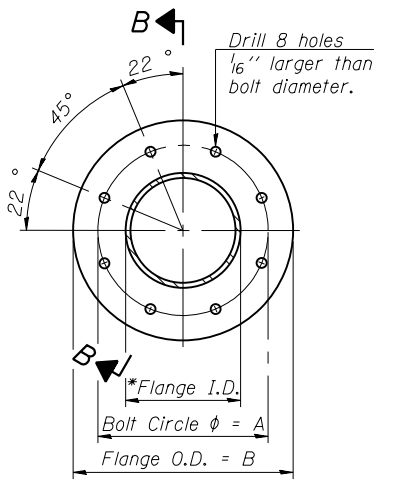


ISOMETRIC VIEW TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6

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.

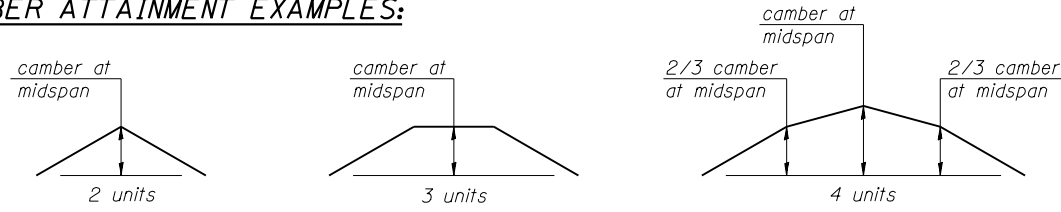


TRUSS TYPES I-A, II-A, & III-A



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".

CAMBER ATTAINMENT EXAMPLES:



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

OS4-A-2

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE =	CHECKED - RB	REVISED

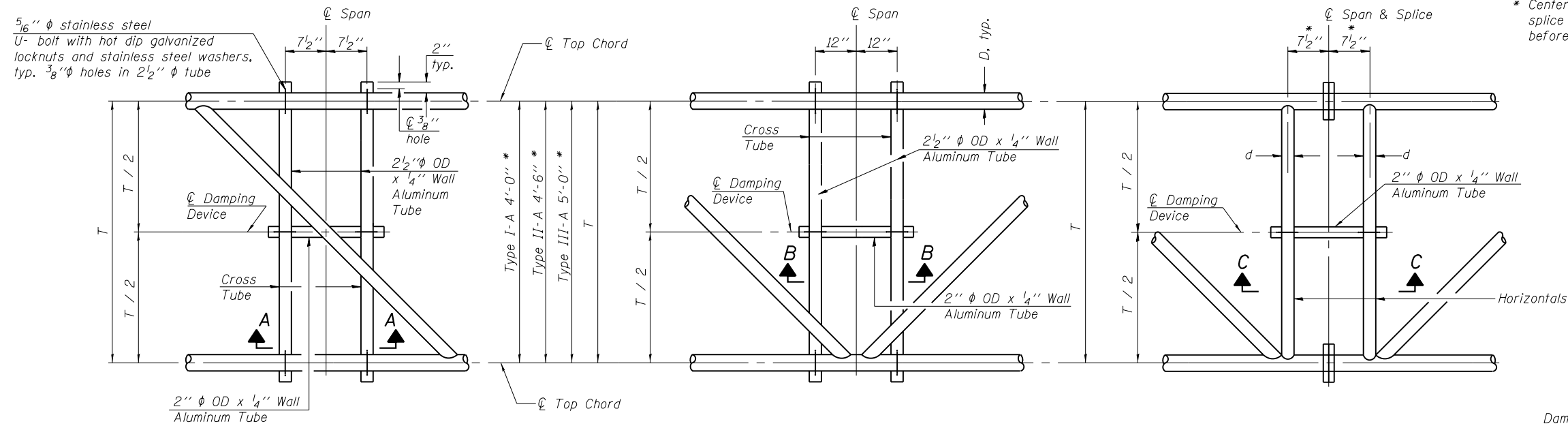
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

SHEET NO. 03 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	125
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X39	

SS-3



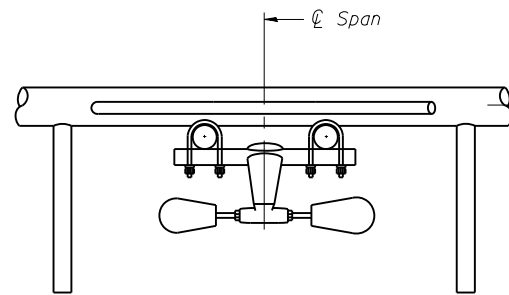
PLAN DETAIL "A"
 ☐ Span between Panel Points

PLAN DETAIL "B"
 ☐ Span at Panel Point

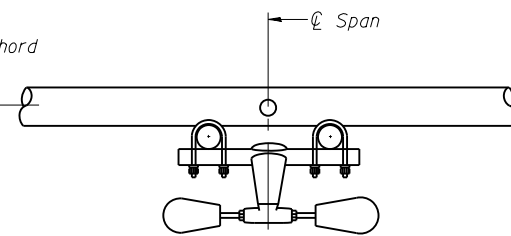
PLAN DETAIL "C"
 ☐ Span at ☐ Chord Splice

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

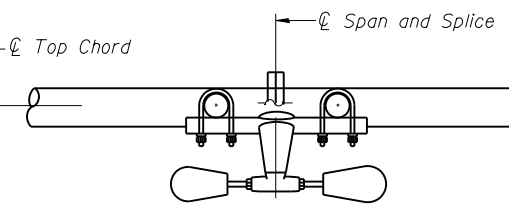
- NOTES**
- Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...
 - Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



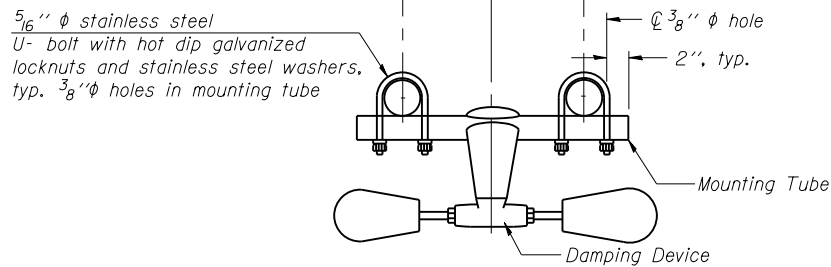
SECTION A-A



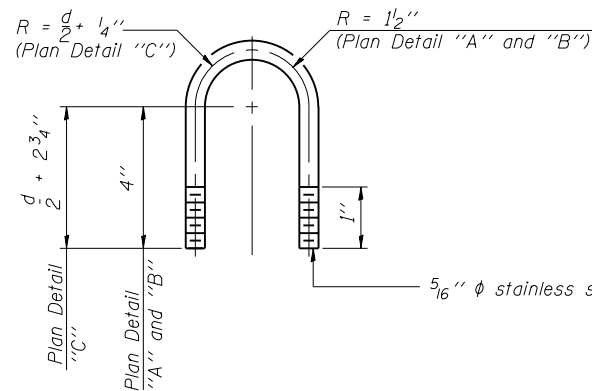
SECTION B-B



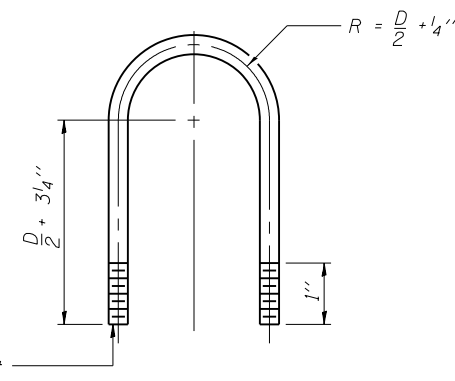
SECTION C-C



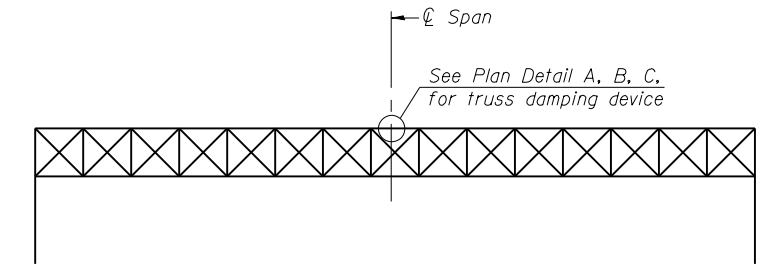
TRUSS DAMPING DEVICE CONNECTION DETAIL
 (Typical)



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

OS-A-D

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE =	CHECKED - RB	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE
 DAMPING DEVICE

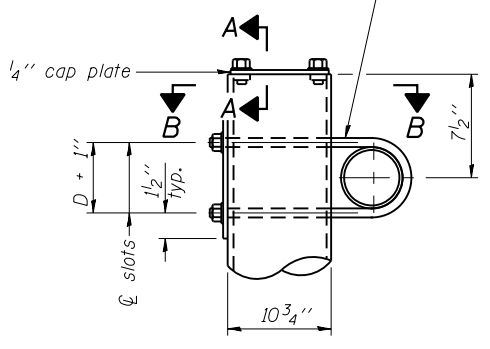
SHEET NO. 04 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	126
			CONTRACT NO. 60X39	

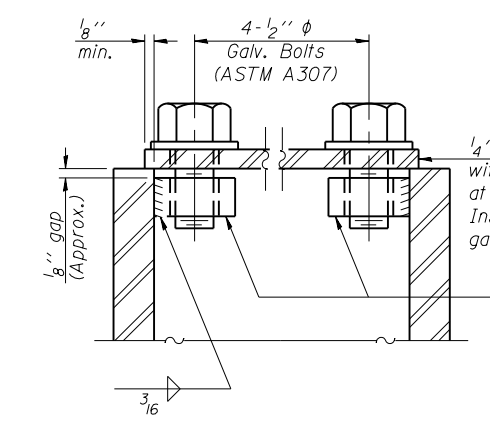
ILLINOIS FED. AID PROJECT

SS-4

3/4" φ stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
1 3/16" x 2" slots on 10" φ pipe.
(4 slots required per pipe)

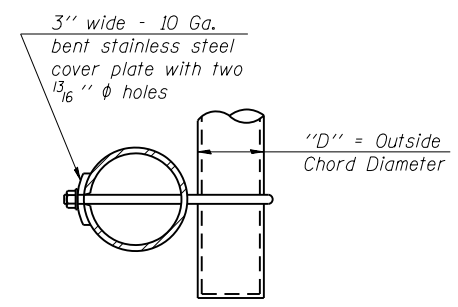


DETAIL A

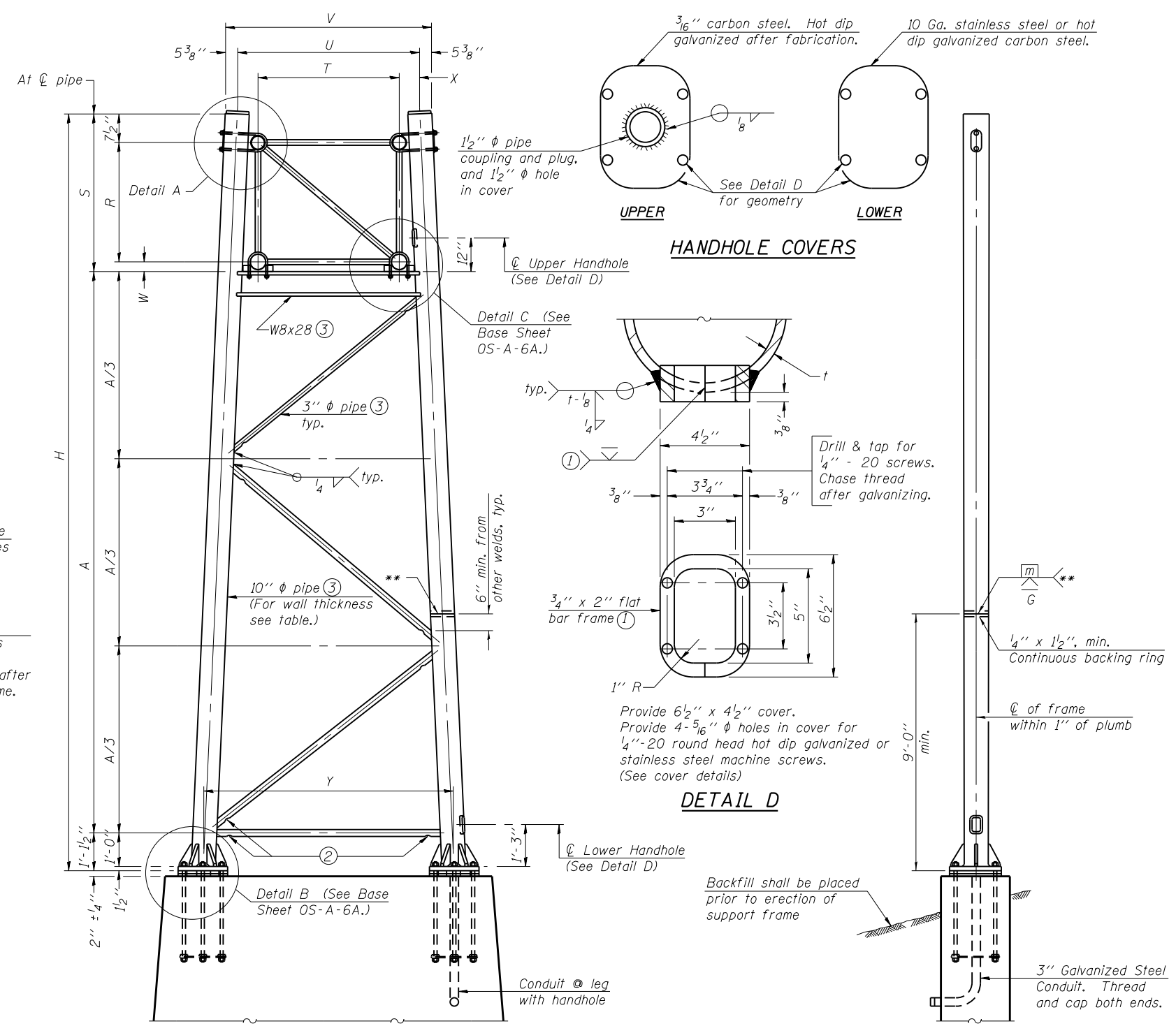


SECTION A-A

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

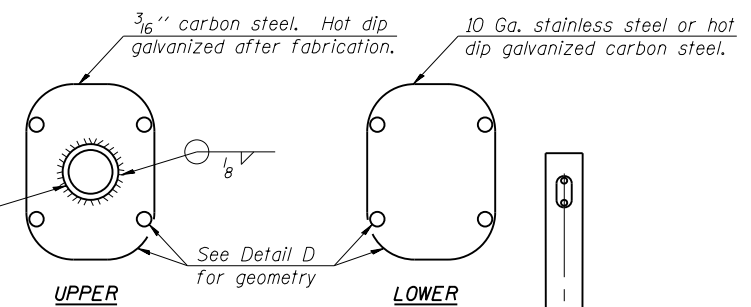


SECTION B-B

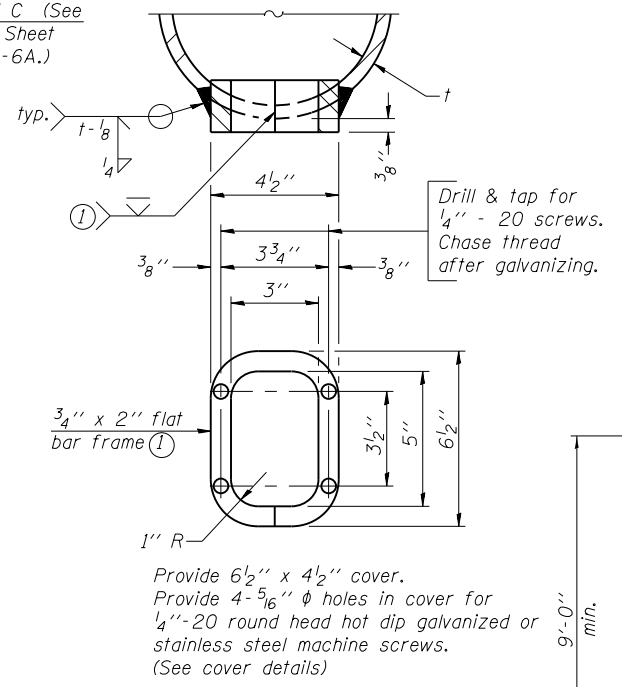


SIDE ELEVATION

For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).



HANDHOLE COVERS



DETAIL D

Provide 6 1/2" x 4 1/2" cover.
Provide 4 - 5/16" φ holes in cover for 1/4"-20 round head hot dip galvanized or stainless steel machine screws.
(See cover details)

Backfill shall be placed prior to erection of support frame

END ELEVATION

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 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 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.

Truss Type	Dimensions							
	R	S	T	U	V	W	X	Y
I-A	4'-6"	5'-5 1/2"	4'-0"	5'-6"	6'-4 3/4"	4"	9"	8'-3"
II-A ⑤	5'-3"	6'-3 1/4"	4'-6"	6'-1"	6'-11 3/4"	4 3/4"	9 1/2"	8'-3"

10" φ 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.

OS-A-6

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE	CHECKED - RB	REVISED

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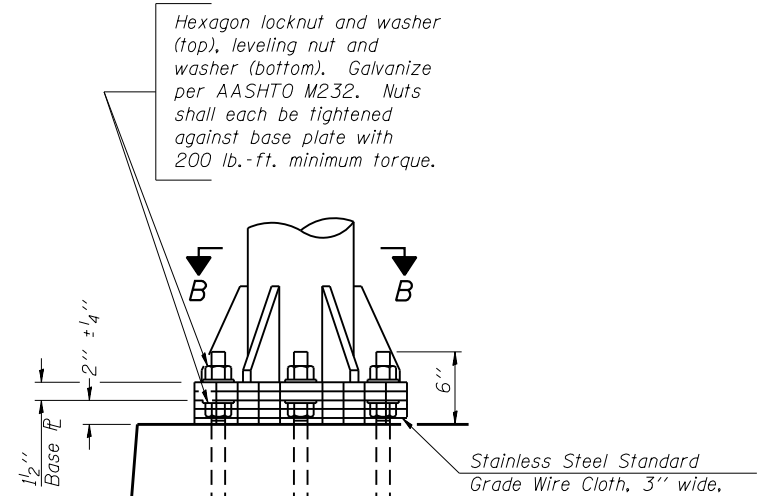
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS

SHEET NO. 05 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	127
CONTRACT NO. 60X39				

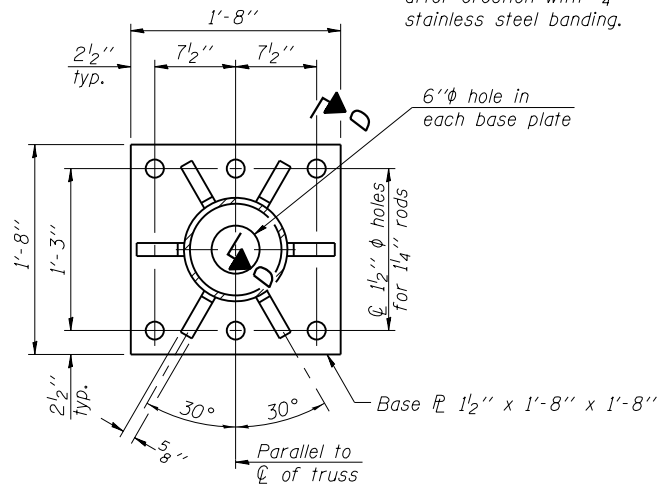
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SS-5

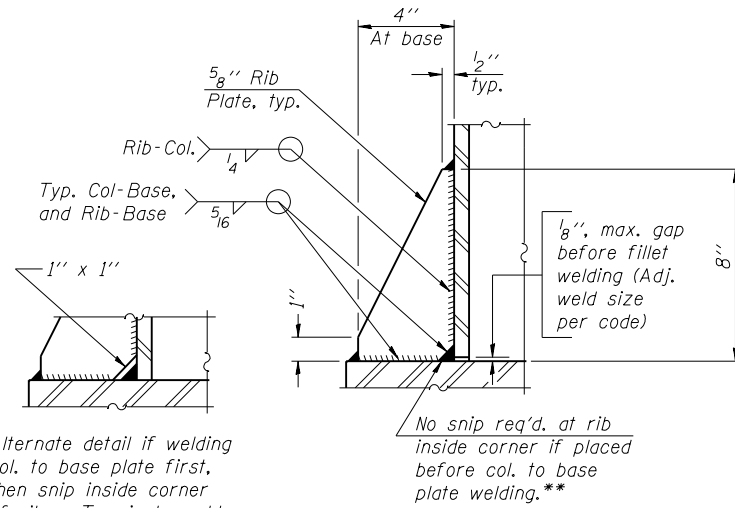


DETAIL B

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.

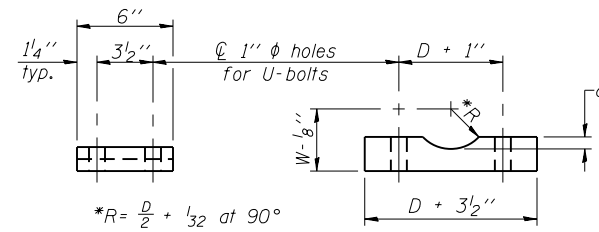


SECTION B-B



SECTION D-D

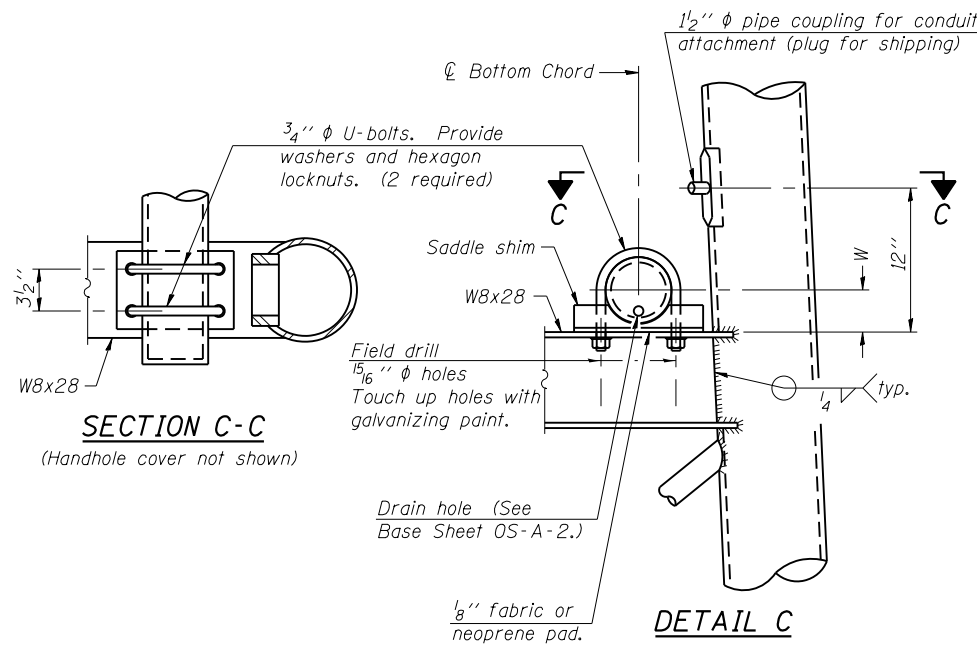
** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.



SADDLE SHIM DETAIL

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

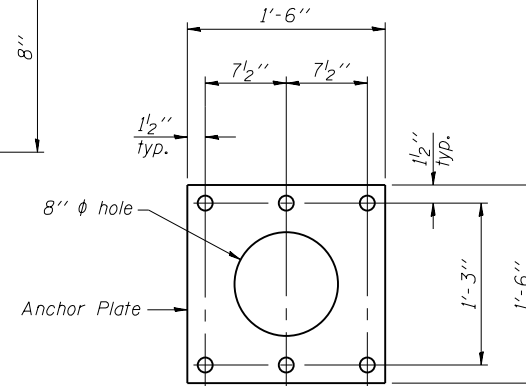
Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	13/16"
6"	7/8"
6 1/2"	15/16"
7"	1"



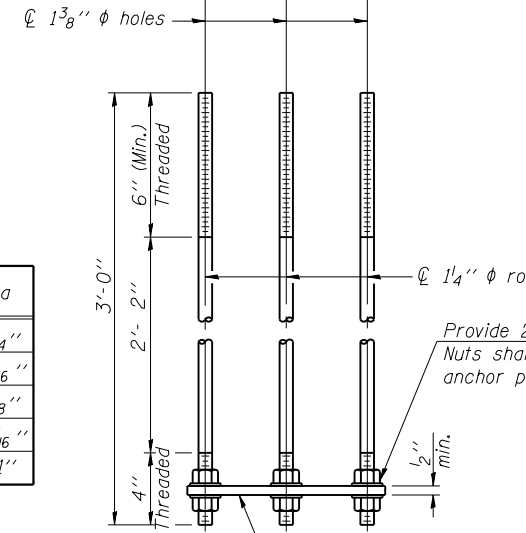
SECTION C-C

(Handhole cover not shown)

DETAIL C



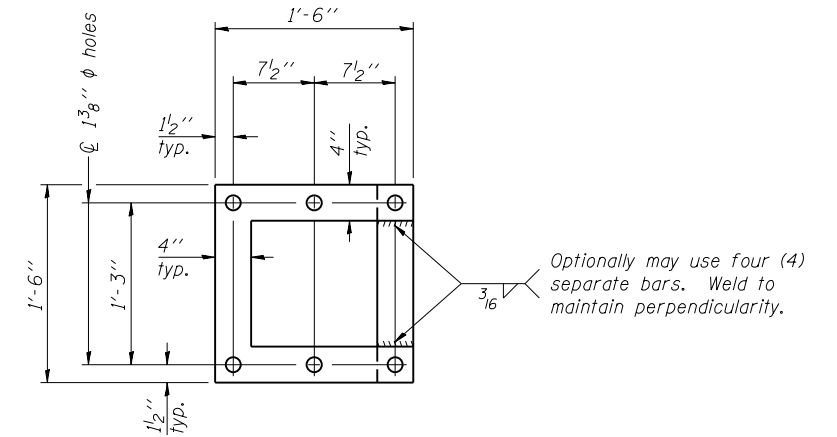
Anchor Plate



ANCHOR ROD DETAIL

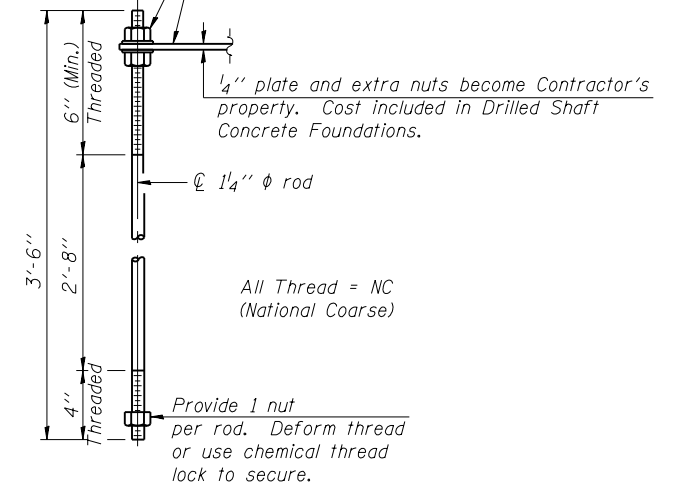
Spread Footing Foundation

All Thread = NC (National Coarse)



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.



ANCHOR ROD DETAIL

Drilled Shaft Foundation

All Thread = NC (National Coarse)

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

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

10" PH PIPE SUPPORT FRAME DETAILS

OS-A-6A

6-1-12

Primera

USER NAME =	DESIGNED -	REVISIONS
	JJA	
	RB	
	JJA	
	RB	

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DEPARTMENT OF TRANSPORTATION

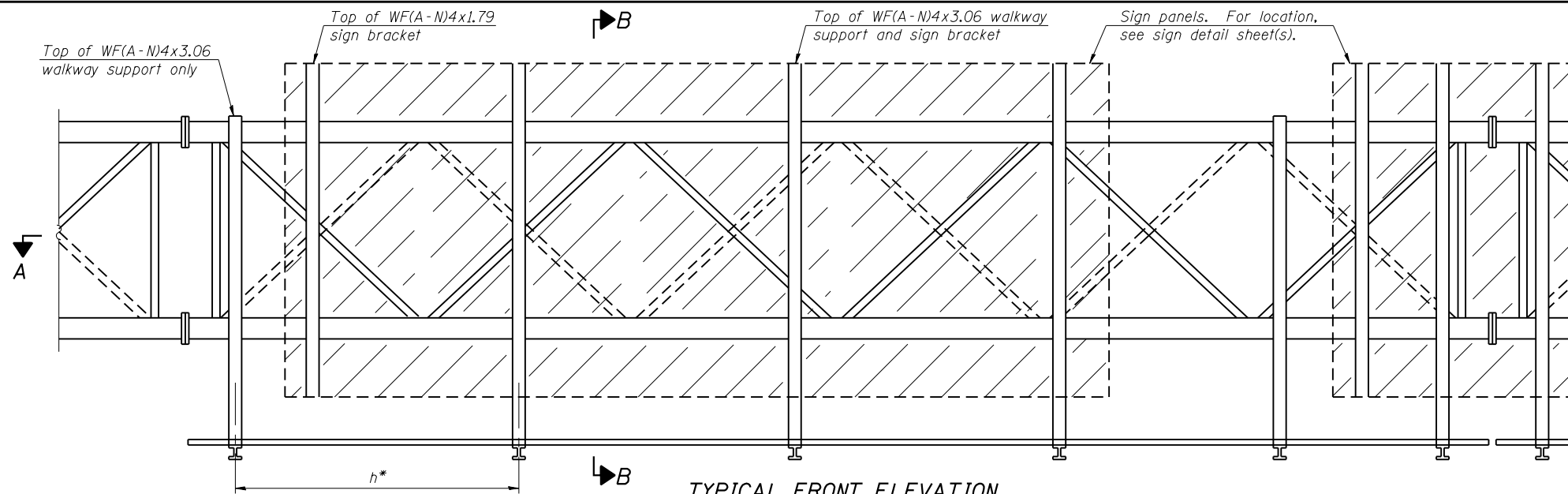
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS - ALUMINUM TRUSS

SHEET NO. 06 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(IH&VB)BR & RS-7	LAKE	198	128
				CONTRACT NO. 60X39

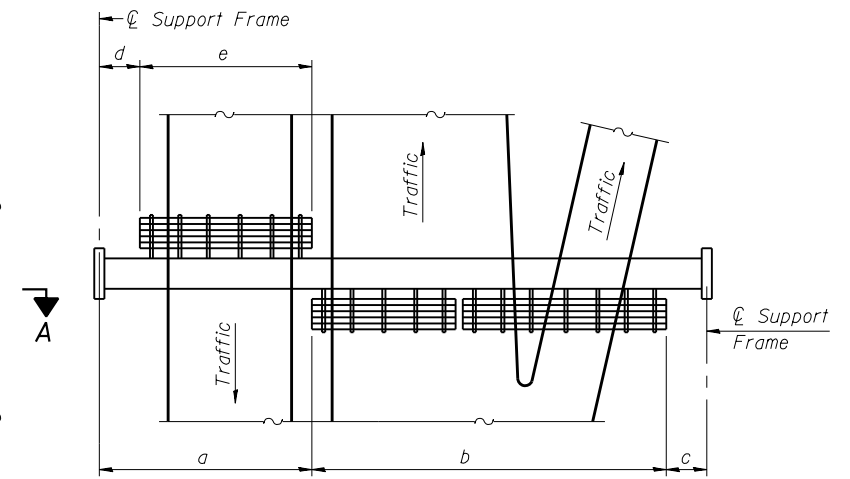
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SS-6



TYPICAL FRONT ELEVATION

With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.



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

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06 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

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)

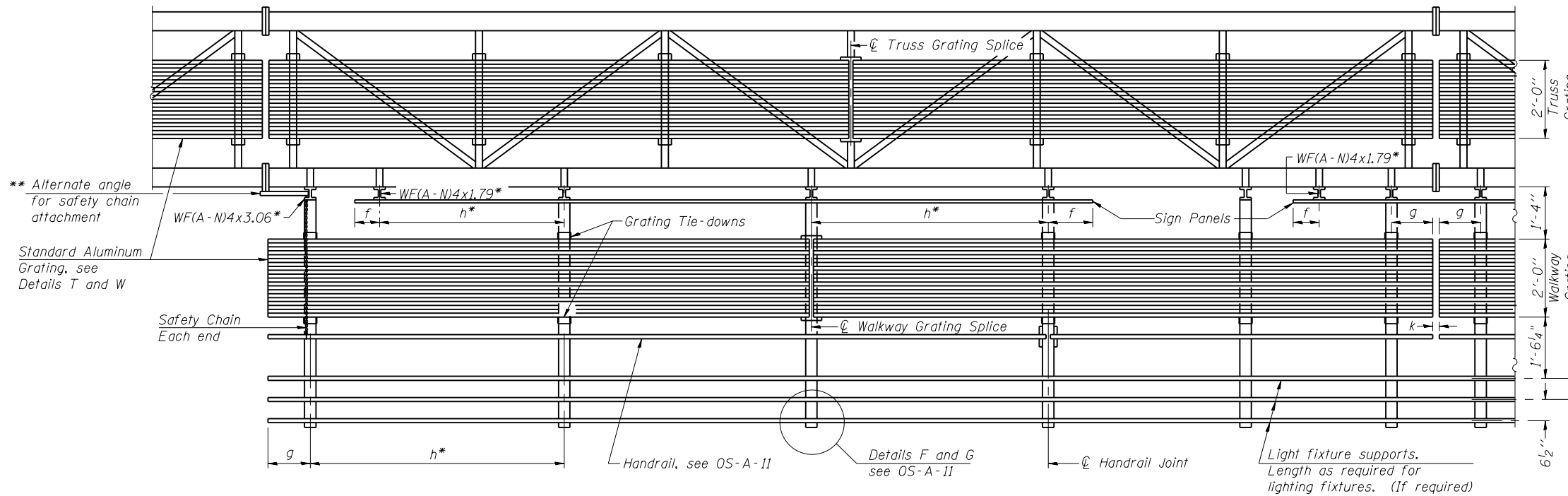
h = 6'-0" maximum (ϕ to ϕ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)

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 OS-A-11.

For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.

For Handrail Details see Base Sheet OS-A-11.



** Alternate angle for safety chain attachment

Standard Aluminum Grating, see Details T and W

Safety Chain Each end

Details F and G see OS-A-11

Light fixture supports. Length as required for lighting fixtures. (If required)

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.

WALKWAY GRATING, WALKWAY SUPPORTS, HANDRAIL AND LIGHTING ARE NOT INCLUDED IN THIS CONTRACT. INFORMATION SHOWN ON THIS SHEET SHALL BE USED FOR TRUSS GRATING AND SIGN BRACKETS ONLY.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths

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.

OS-A-9

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE	CHECKED - RB	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

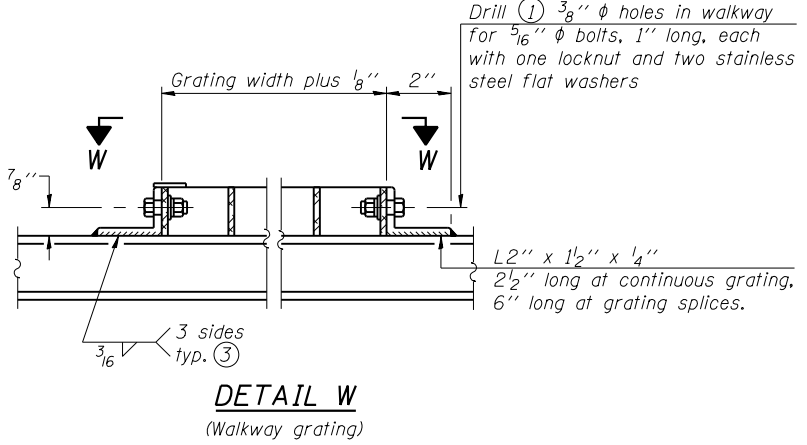
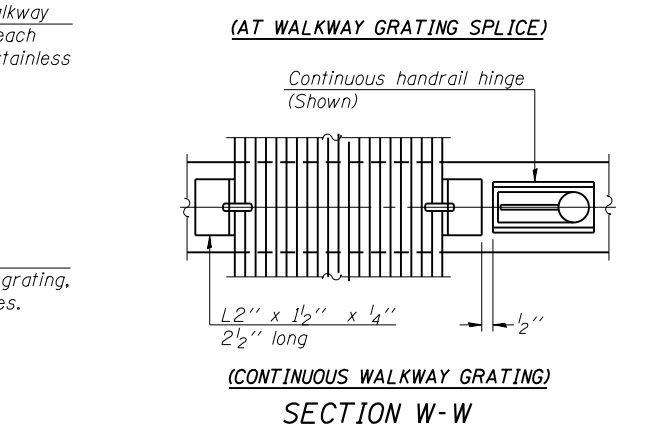
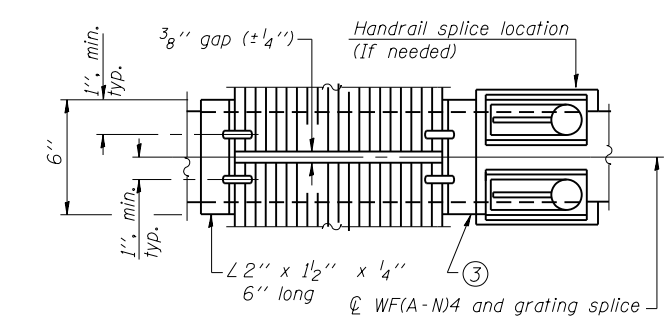
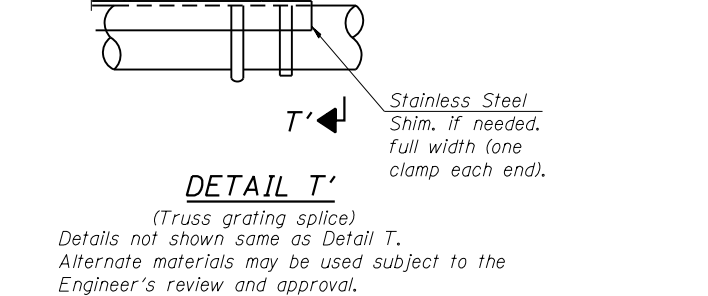
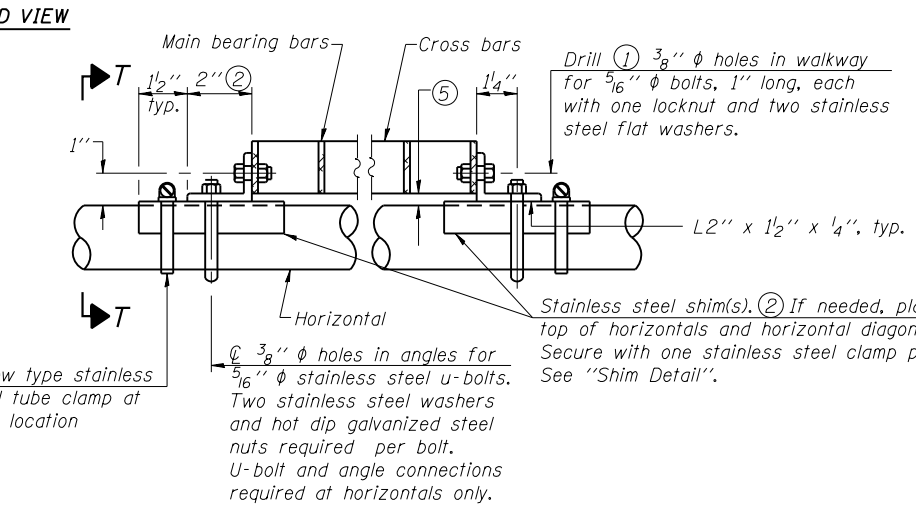
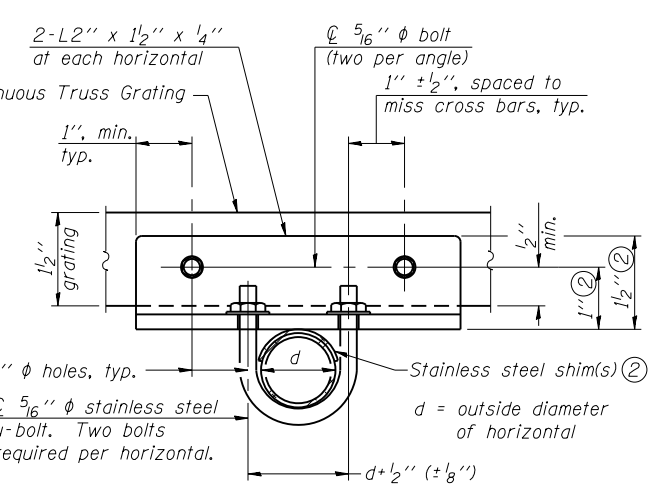
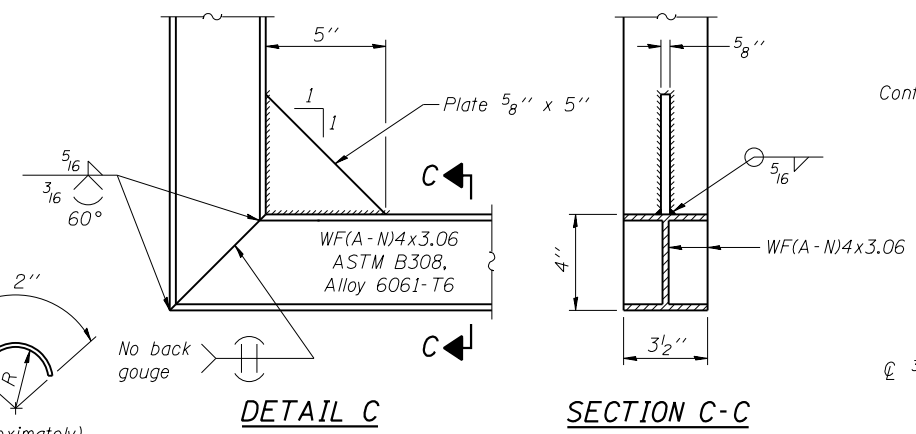
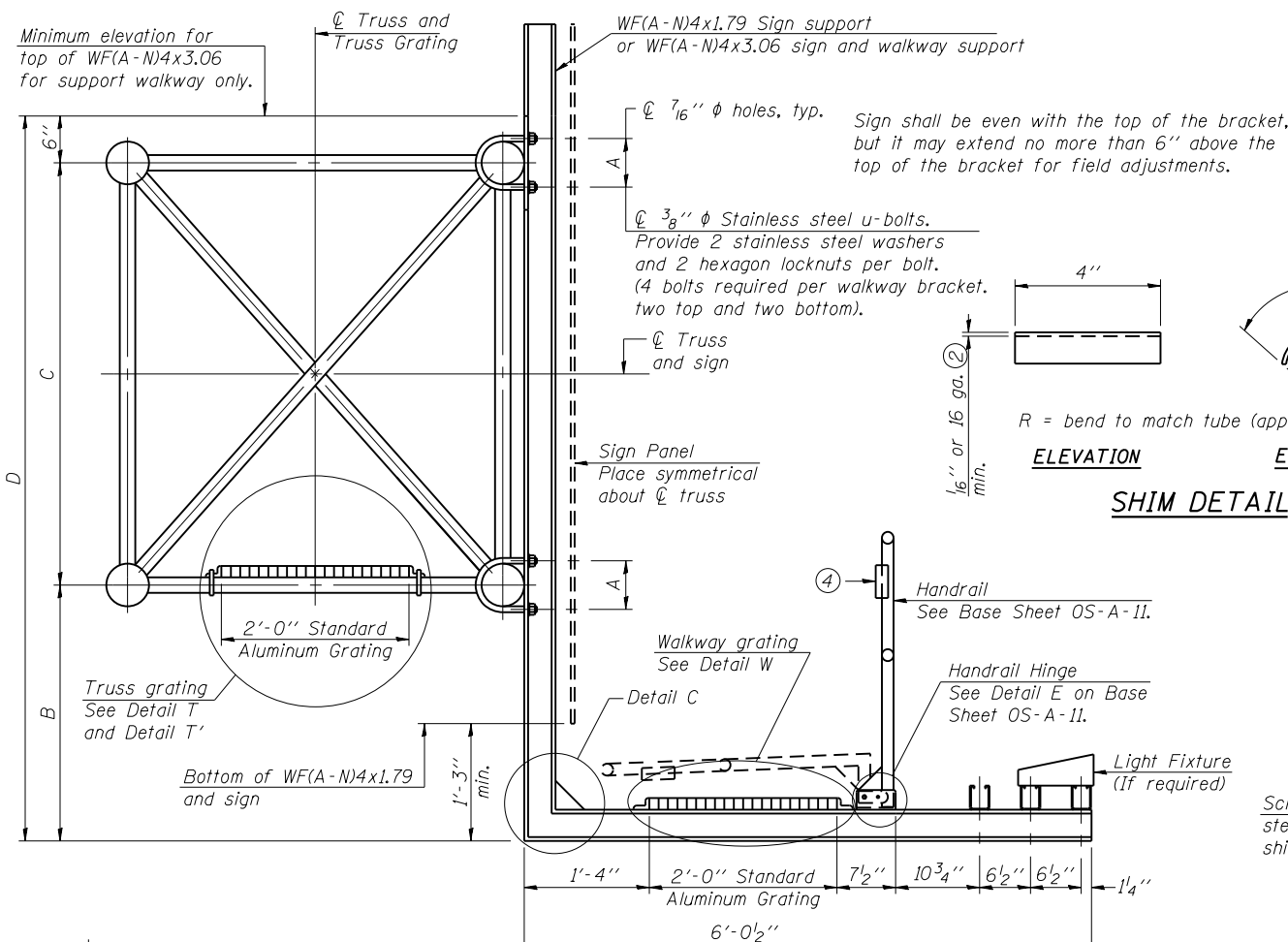
**OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS**

SHEET NO. 07 OF 10 SHEETS

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(H&V)BR & RS-7	LAKE	198	129
CONTRACT NO. 60X39				

ILLINOIS FED. AID PROJECT

SS-7



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 "4" 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.

Structure Number	Station	A	⑥ B	C	⑥ D
ISO49SI20L000.0-000	507+45.00	6 1/2"	2'-10 1/2"	5'-3"	8'-7 1/2"

- 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.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-II.)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- Based on actual height of tallest sign given on OS-A-1.

WALKWAY GRATING, WALKWAY SUPPORTS, HANDRAIL AND LIGHTING ARE NOT INCLUDED IN THIS CONTRACT. INFORMATION SHOWN ON THIS SHEET SHALL BE USED FOR TRUSS GRATING AND SIGN BRACKETS ONLY.

OS-A-10

6-1-12

	USER NAME =	DESIGNED - JJA	REVISED
		CHECKED - RB	REVISED
	PLOT SCALE =	DRAWN - JJA	REVISED
	PLOT DATE	CHECKED - RB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SHEET NO. 08 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	130
CONTRACT NO. 60X39			ILLINOIS FED. AID PROJECT	

SS-8

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	24	#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 (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.

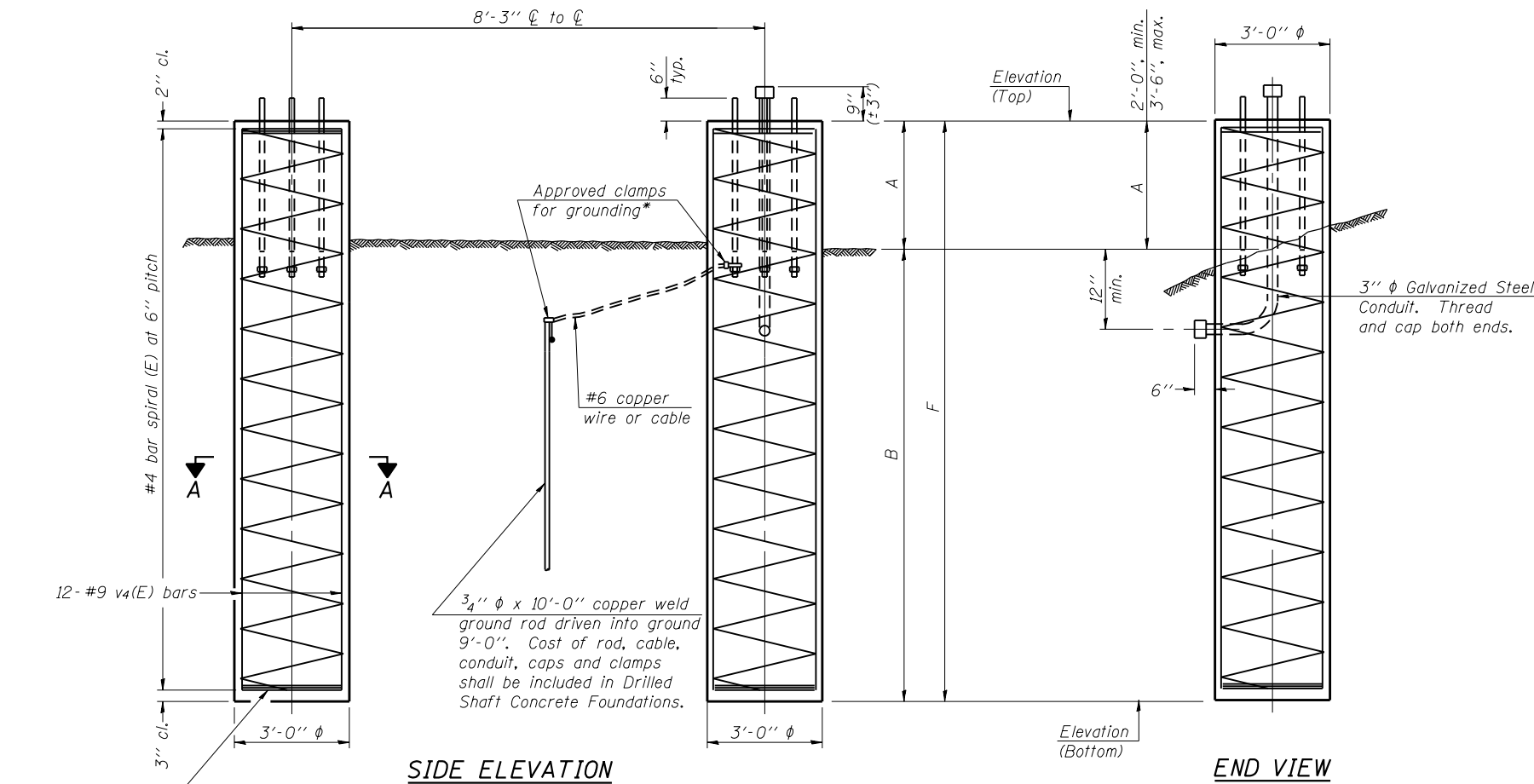
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District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

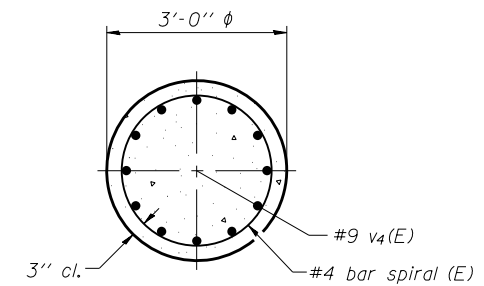
Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

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.

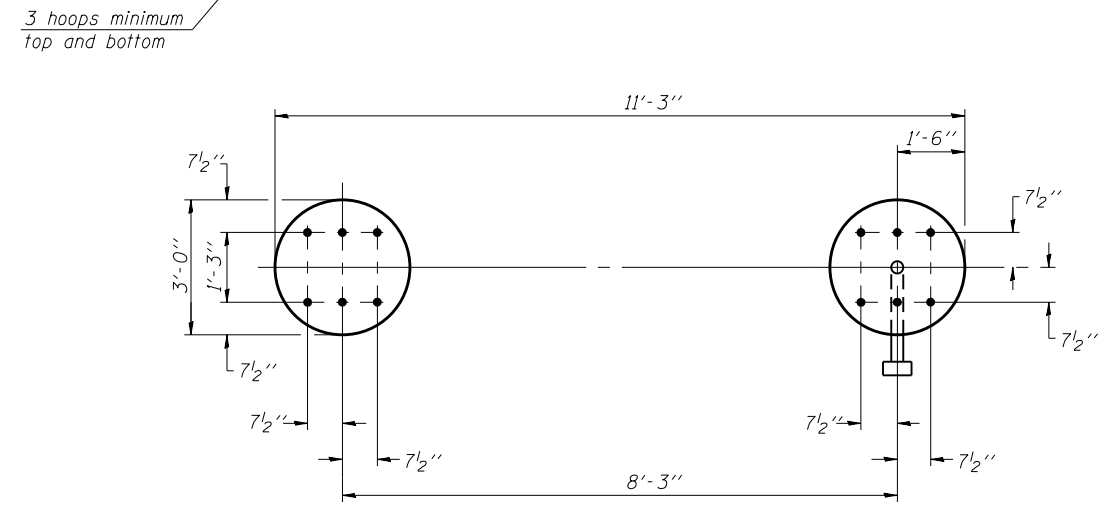


SIDE ELEVATION

END VIEW



SECTION A-A



PLAN

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 10" ϕ SUPPORT FRAME
TYPE I-A or II-A TRUSS**

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
ISO49S120L000.0-000	507+45.00	736.00	716.50	2.00'	17.50'	19.50'	736.00	716.50	2.00'	17.50'	19.50'	20.5

OS4-F3

8-21-13



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE =	CHECKED - RB	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS**

SHEET NO. 09 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	131
CONTRACT NO. 60X39				
ILLINOIS FED. AID PROJECT				

SS-9



SOIL BORING LOG

Date 3/28/14

ROUTE FAU 1225 (IL Rte. 120) DESCRIPTION IL Rt. 120 LOGGED BY JR

SECTION 12RS-4(82) LOCATION IL 120 Over UPRR and Old Skokie Hwy. SEC. 25, TWP. 45N, RNG. 11E, 3rd PM. Latitude N42°20'53.48", Longitude W87°53'22.05"

COUNTY Lake DRILLING METHOD HSA HAMMER TYPE AUTO

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil test results (D, B, U, M, O, I, S, T) with corresponding elevations and descriptions.

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



SOIL BORING LOG

Date 3/25/14

ROUTE FAU 1225 (IL Rte. 120) DESCRIPTION IL Rt. 120 LOGGED BY JR

SECTION 12RS-4(82) LOCATION IL 120 Over UPRR and Old Skokie Hwy. SEC. 25, TWP. 45N, RNG. 11E, 3rd PM. Latitude N42°20'53.02", Longitude W87°53'21.85"

COUNTY Lake DRILLING METHOD HSA HAMMER TYPE AUTO

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil test results (D, B, U, M, O, I, S, T) with corresponding elevations and descriptions.

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



Table with columns for USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, and REVISIONS.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES BORING LOGS SHEET NO. 10 OF 10 SHEETS

Table with columns for F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO., and 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.
 $f_y = 60,000$ 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)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.

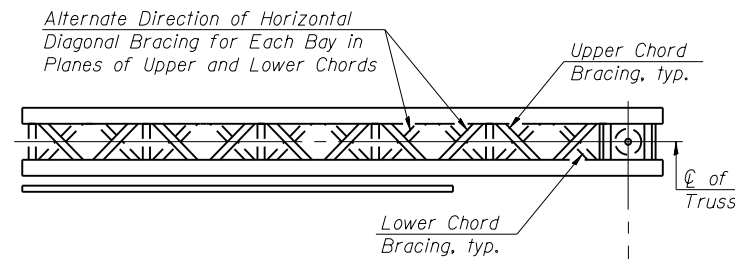
CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

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

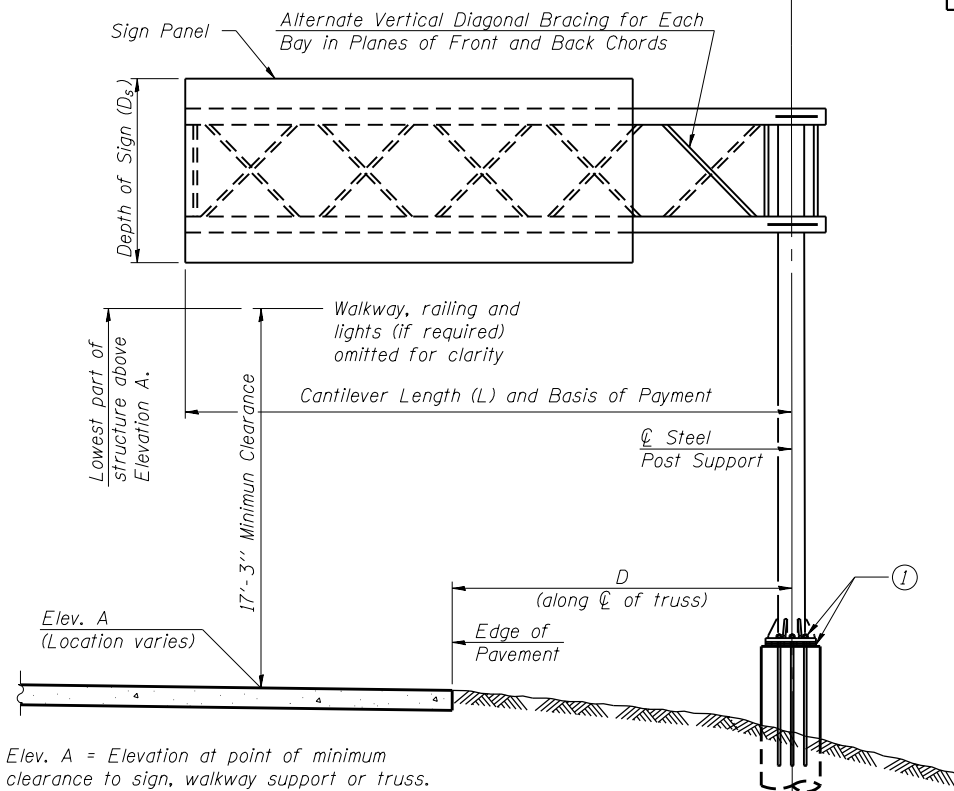
FOUNDATIONS: The contract unit price for Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D _s	Total Sign Area
IC049S120R000.0-001	486+90.00	III-C-A	40.00'	719.02	12.92'	9.50'	270.75 S.F.
IC049S120L000.0	497+08.00	III-C-A	40.00'	720.62	31.00'	7.00'	94.50 S.F.

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 PLAN
(Walkway not shown)



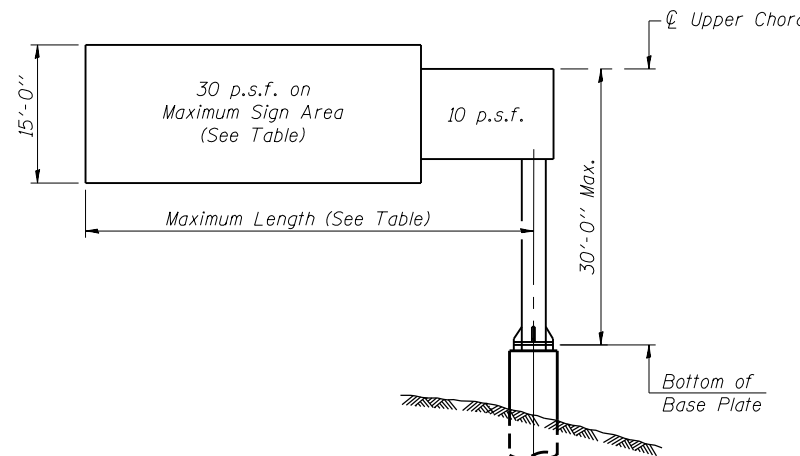
Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

TYPICAL ELEVATION
Looking in Direction of Traffic

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.

WALKWAY GRATING, WALKWAY SUPPORTS, HANDRAIL AND LIGHTING ARE NOT INCLUDED IN THIS CONTRACT.

The Contractor shall notify the Electrical Maintenance Department a minimum of 48 hours prior to the start of any excavation. The Contractor shall contact the IDOT Electrical Maintenance Department at 1-708-524-2145 for field locations of buried IDOT maintained electrical facilities. IDOT electrical facilities are separate from the utilities found using J.U.L.I.E. and therefore must be contacted in addition to contacting J.U.L.I.E.



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	Foot	
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE II-C-A	Foot	
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE III-C-A	Foot	80
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	24.4

OSC-A-1

8-21-13



USER NAME	DESIGNED	REVISION
JJA	JJA	REVISION
RB	RB	REVISION
JJA	JJA	REVISION
RB	RB	REVISION

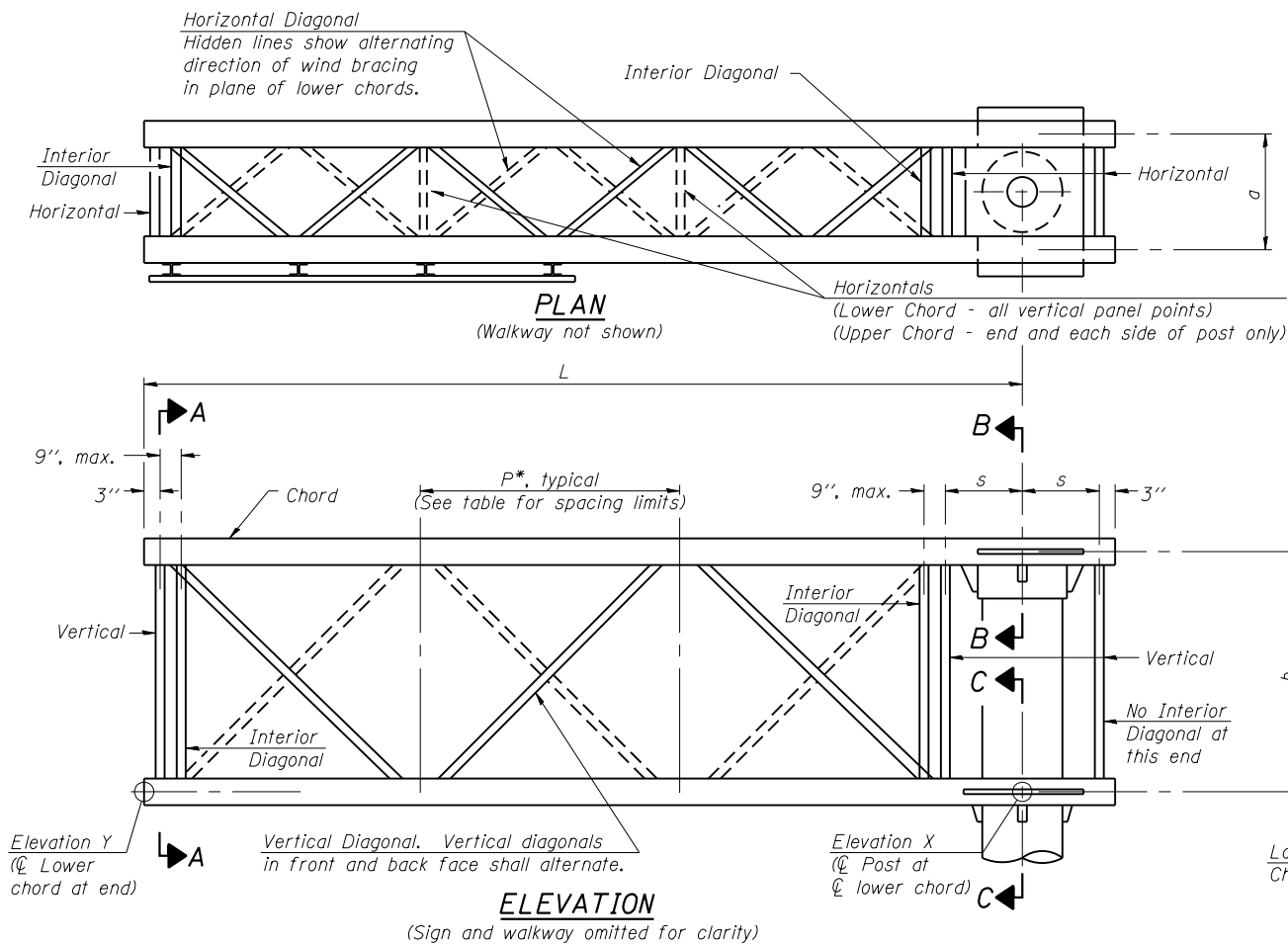
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	133
CONTRACT NO. 60X39				
ILLINOIS FED. AID PROJECT				

SHEET NO. 01 OF 11 SHEETS

CS1-1



TYPICAL TRUSS UNIT

(Sign and walkway omitted for clarity)

Note:

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

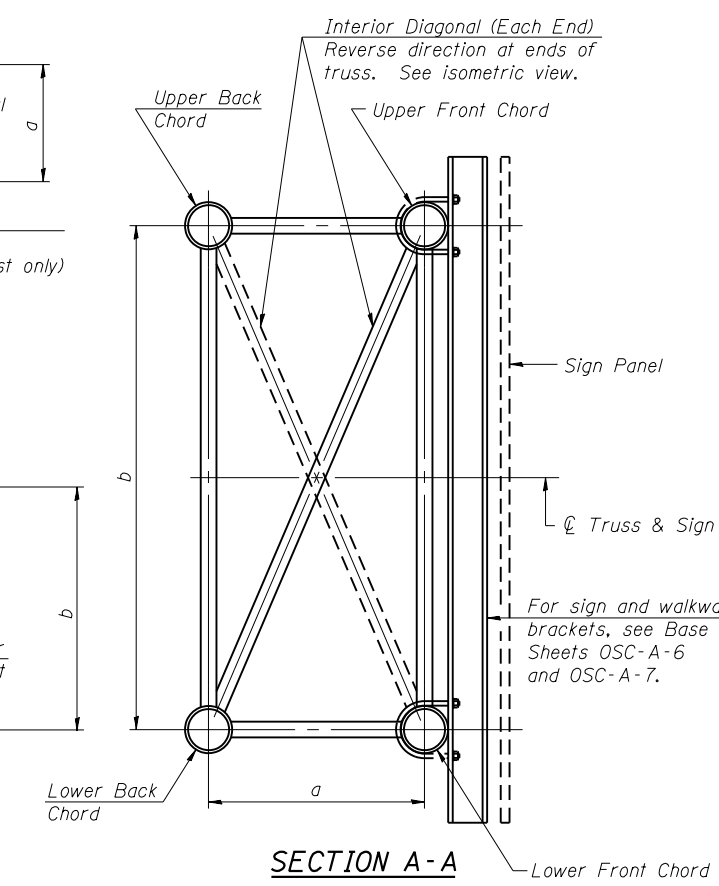
There are twice as many horizontal diagonals as there are vertical diagonals.

TRUSS UNIT TABLE

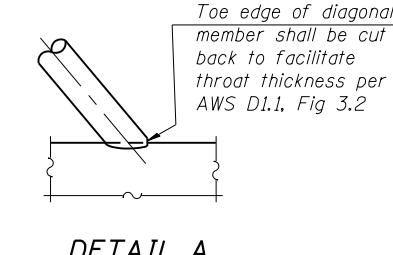
Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals	
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 1/2"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

$$*P = \frac{L - s - 3''}{\# \text{ Panels}}$$

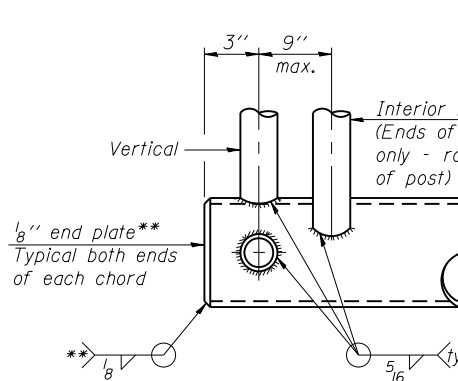
Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
IC049S120R000.0-001	486+90.00	III-C-A	40.00'	8	4.75'
IC049S120L000.0	497+08.00	III-C-A	40.00'	8	4.75'



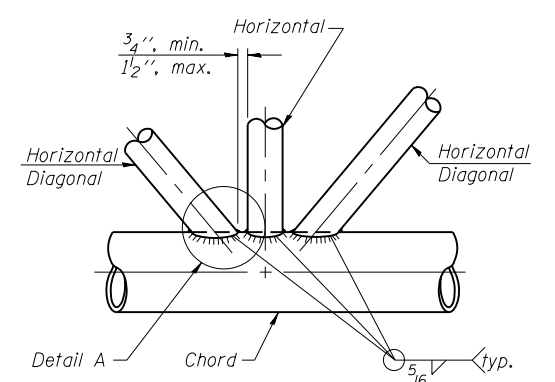
SECTION A-A



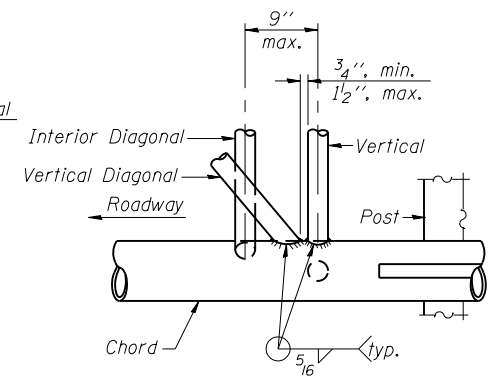
DETAIL A



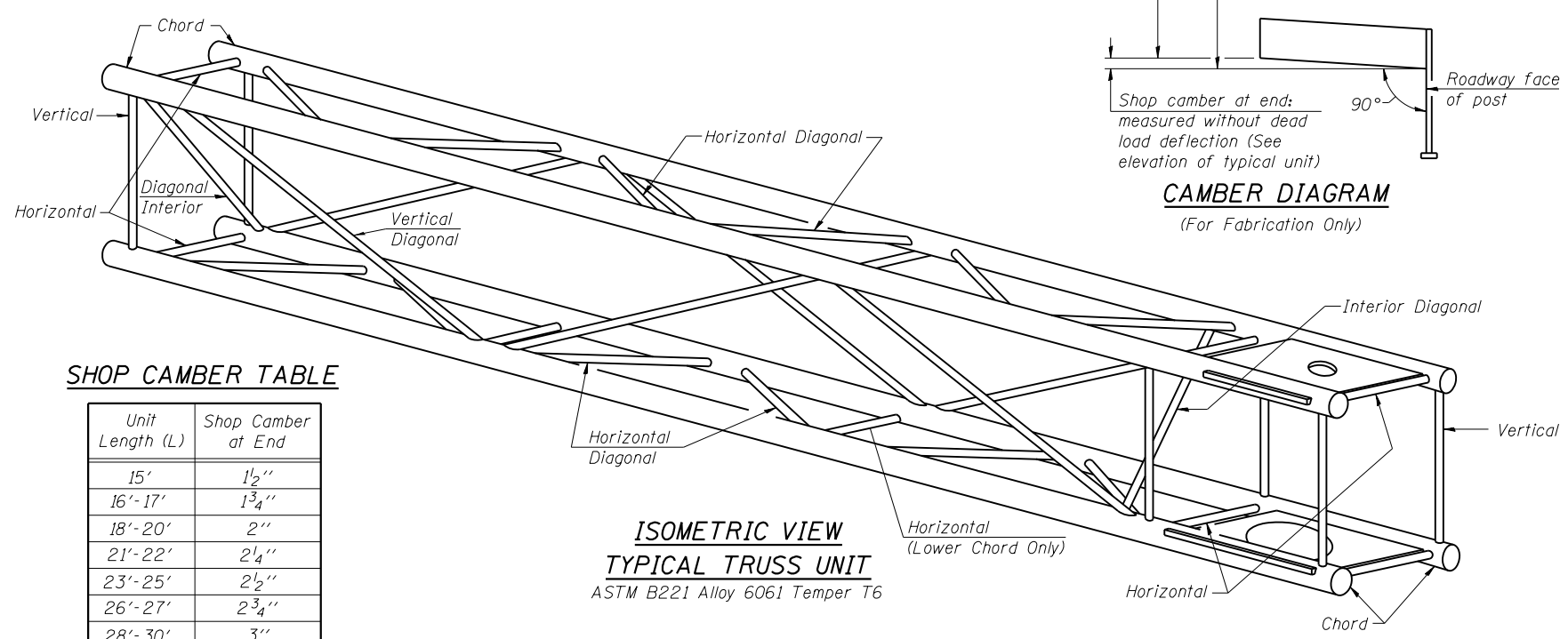
CANTILEVER END JOINT DETAIL



TRUSS INTERIOR JOINT DETAIL



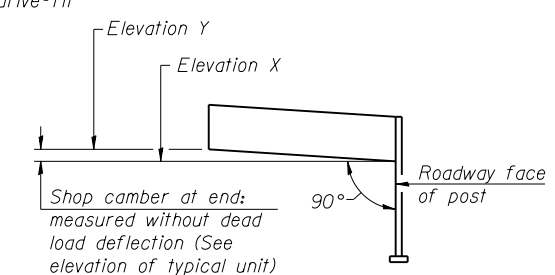
POST END JOINT DETAIL



**ISOMETRIC VIEW
TYPICAL TRUSS UNIT**
ASTM B221 Alloy 6061 Temper T6

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"



CAMBER DIAGRAM
(For Fabrication Only)

OSC-A-2

6-1-12



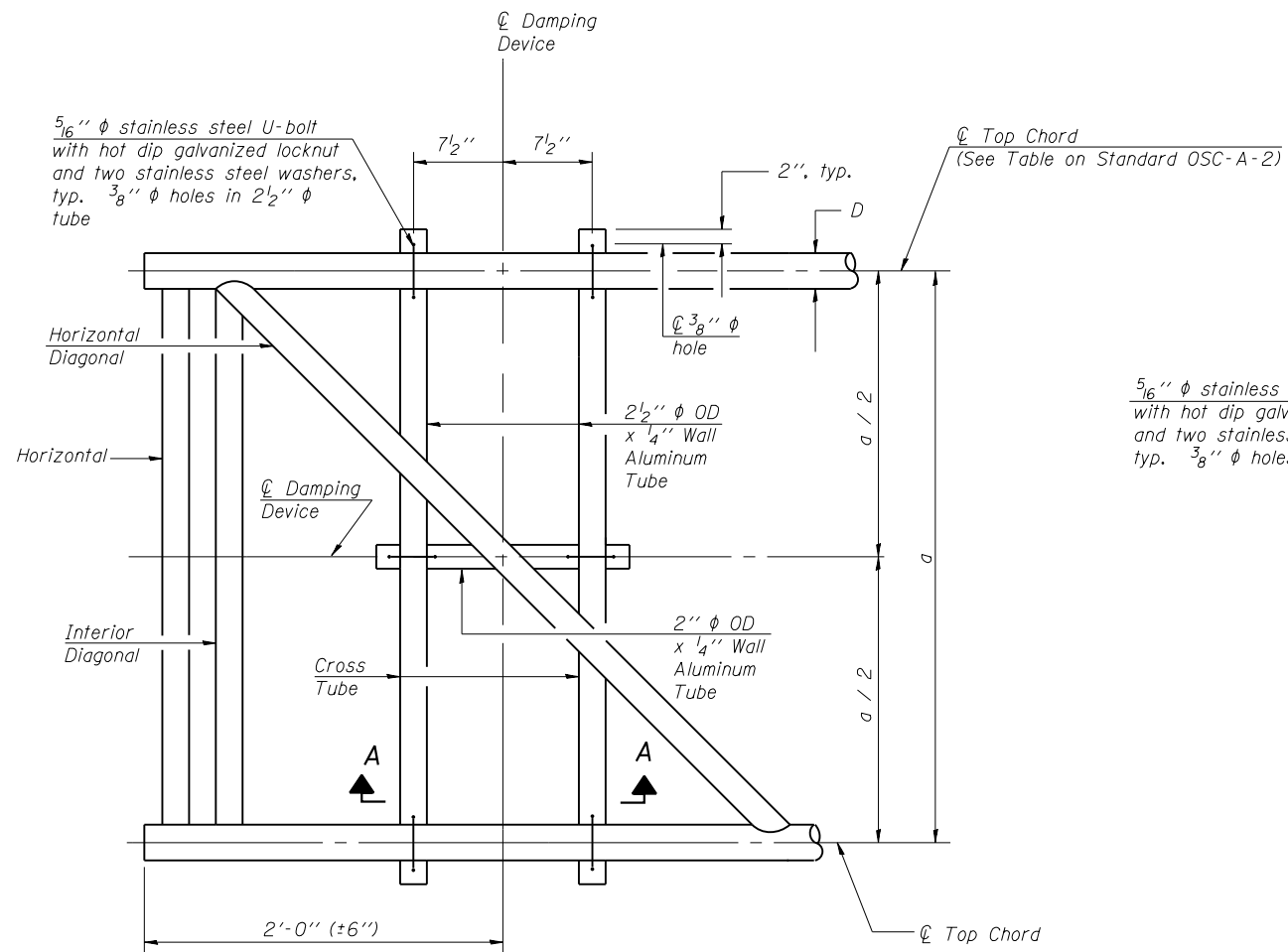
USER NAME =	DESIGNED - JJA	REVISED
PLOT SCALE =	CHECKED - RB	REVISED
PLOT DATE	DRAWN - JJA	REVISED
	CHECKED - RB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

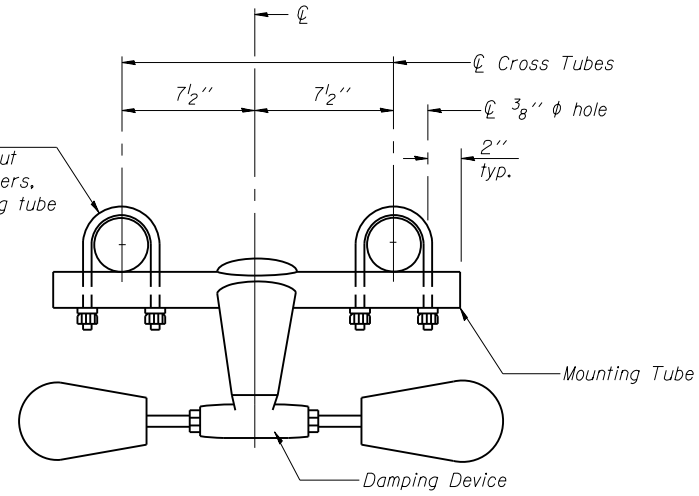
CANTILEVER SIGN STRUCTURES - TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST

SHEET NO. 02 OF 11 SHEETS

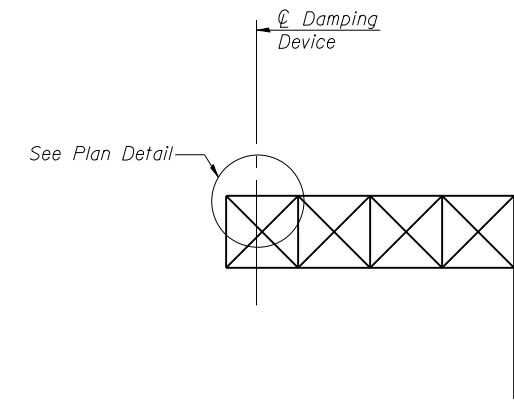
F.A.P. RFE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	134
CONTRACT NO. 60X39				CS1-2
ILLINOIS FED. AID PROJECT				



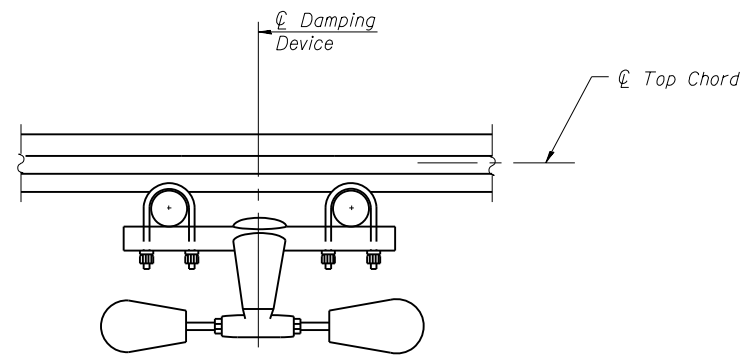
PLAN DETAIL



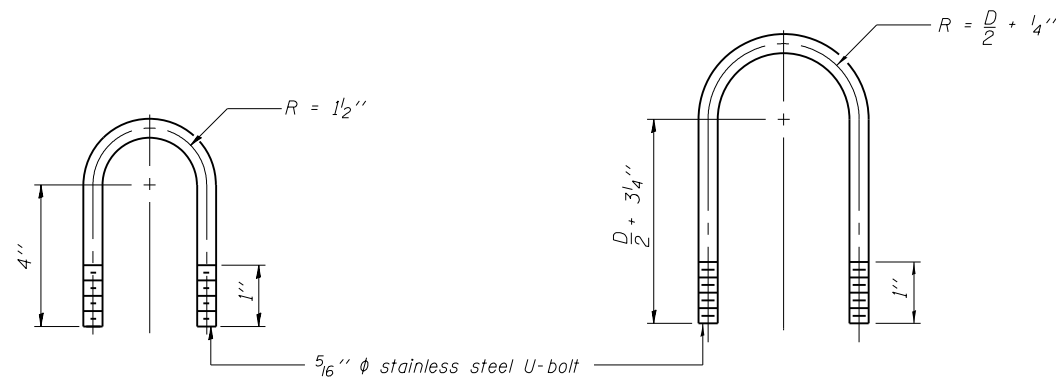
TRUSS DAMPING DEVICE CONNECTION DETAIL



ELEVATION
Aluminum Cantilever Sign Structure



SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)

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

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

OSC-A-D

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE =	CHECKED - RB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

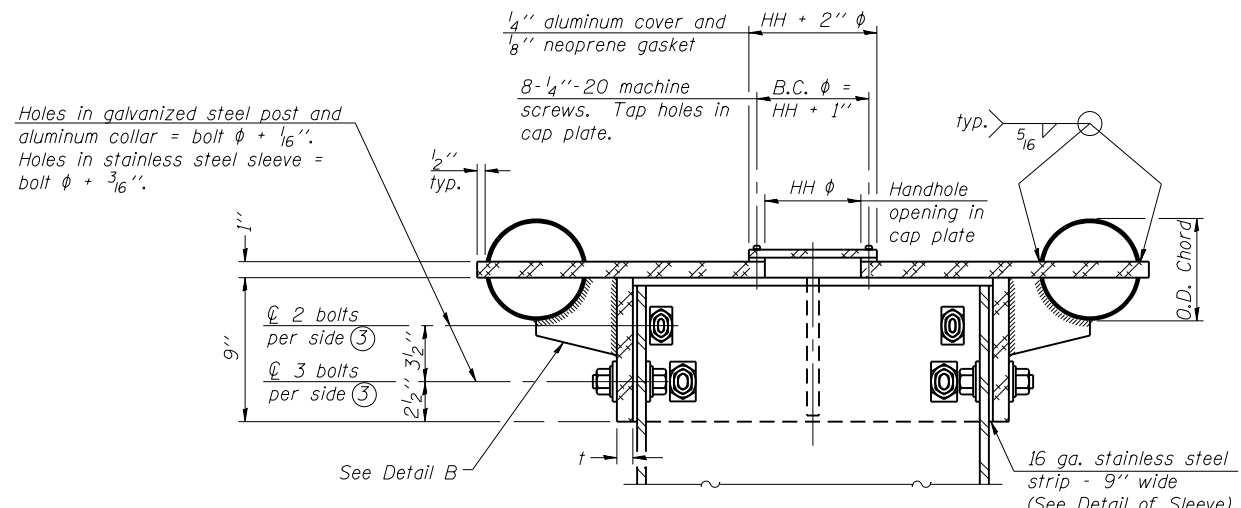
CANTILEVER SIGN STRUCTURE
DAMPING DEVICE

SHEET NO. 03 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	135
				CONTRACT NO. 60X39

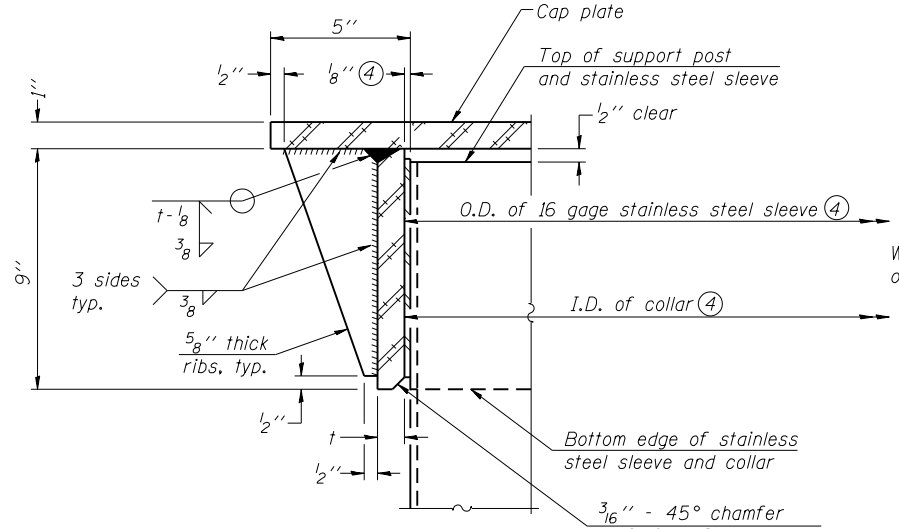
ILLINOIS FED. AID PROJECT

CSI-3

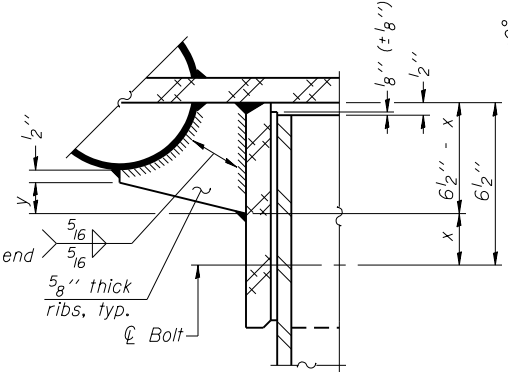


④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8" (±1/16"). Maximum gap between post and collar at any location equals 1/8" before tightening bolts.

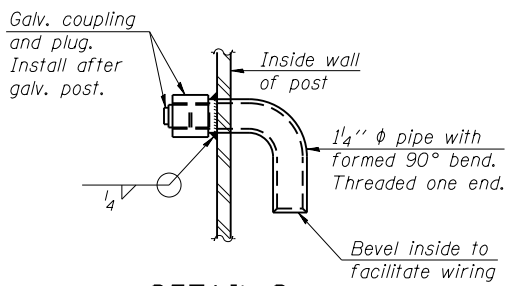
SECTION B-B
Bolts, washers (including contoured washers), and locknuts shall be stainless steel.



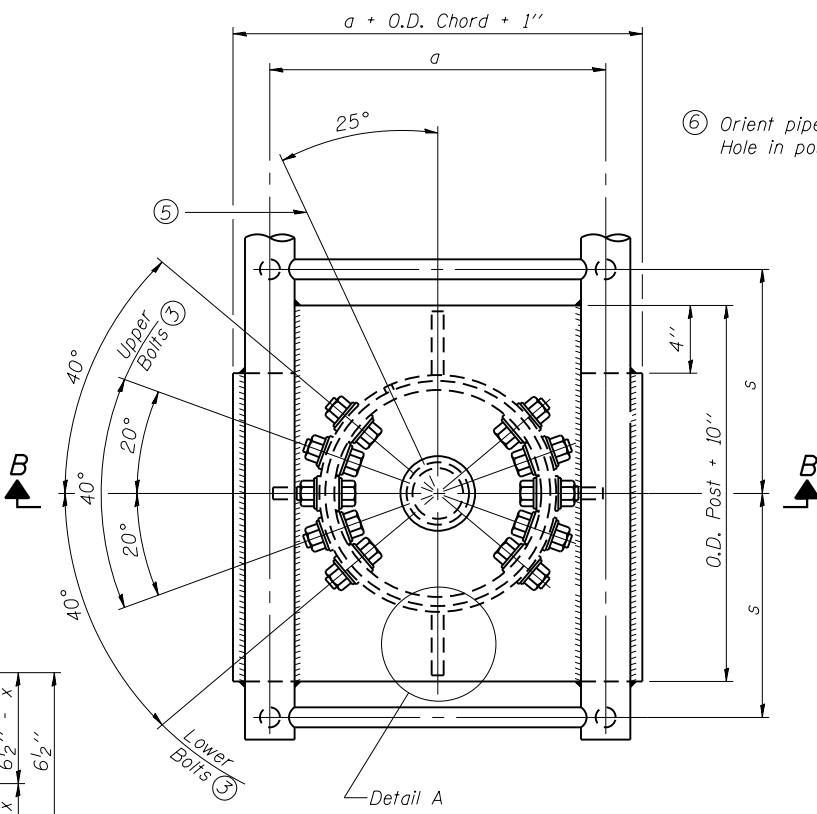
DETAIL A
(Two locations)
3/16" - 45° chamfer on inside of collar to facilitate field assembly



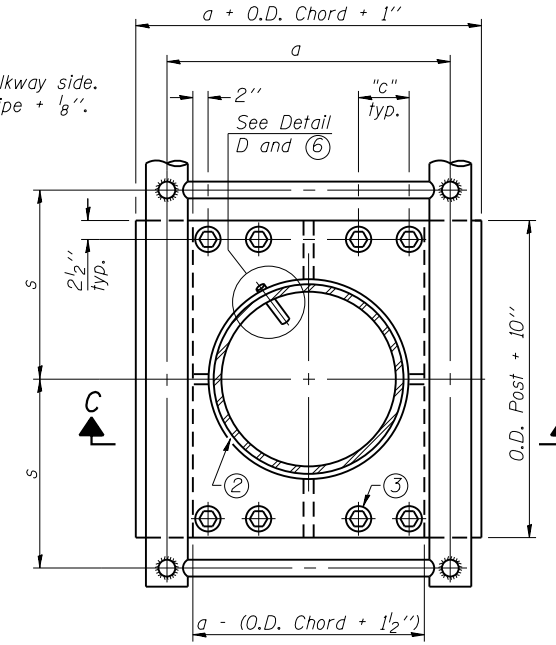
DETAIL B
Two locations
(For details not shown, see Detail C)



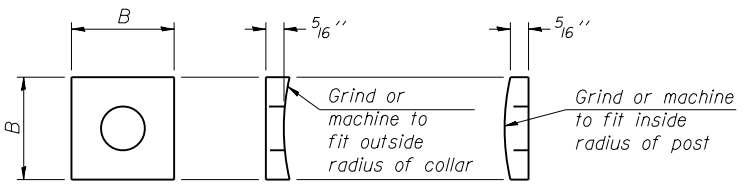
DETAIL D



PLAN VIEW - TOP OF COLUMN
⑥ Orient pipe toward walkway side. Hole in post = O.D. pipe + 1/8".
⑤ Optional full penetration weld in collar. (Two locations maximum....(180° apart)....X-ray or UT 100%)



SECTION THRU POST ABOVE LOWER CHORDS

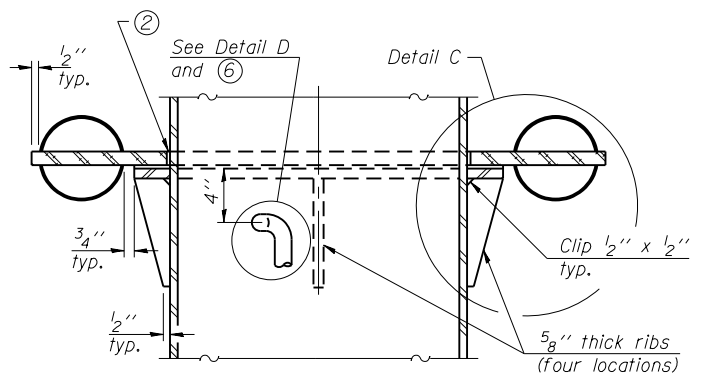


CONTOURED WASHERS

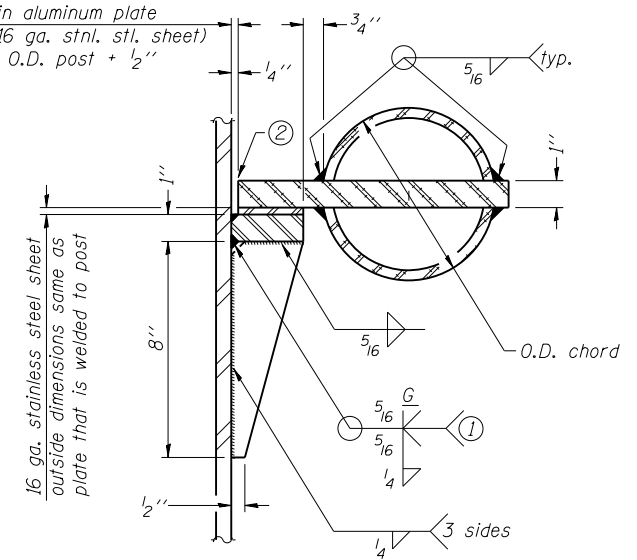
Bolt Size	Contoured Washers	
	Hole Dia.	B
7/8"	1"	2 1/2"
1"	1 1/8"	3"
1 1/4"	1 3/8"	3 1/4"

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.



SECTION C-C



DETAIL C

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" phi (83#/')	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-C-A	24" phi (125#/')	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-C-A (35' max.)	24" phi (125#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"
III-C-A (>35' to 40')	24" phi (171#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"

- 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.

OSC-A-3

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE	CHECKED - RB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

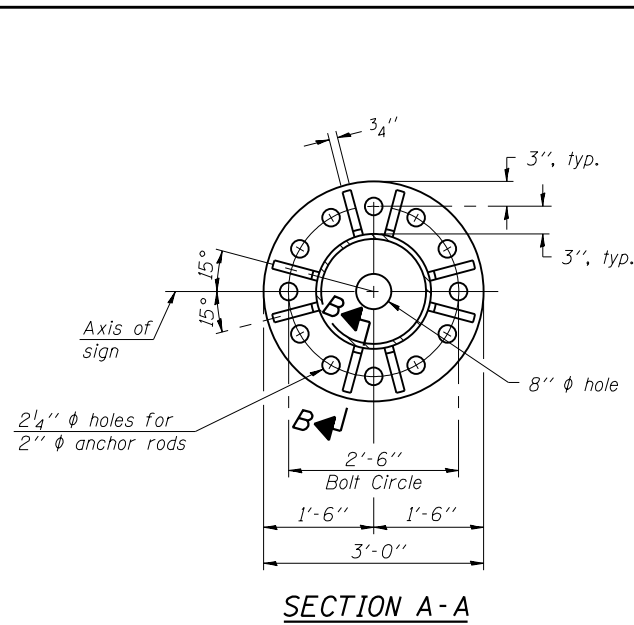
CANTILEVER SIGN STRUCTURES - JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

SHEET NO. 04 OF 11 SHEETS

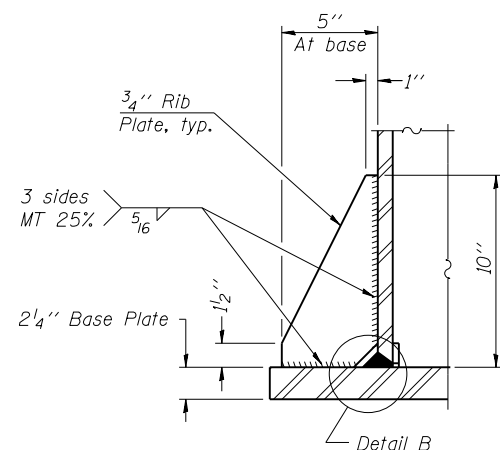
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	136
				CONTRACT NO. 60X39

ILLINOIS FED. AID PROJECT

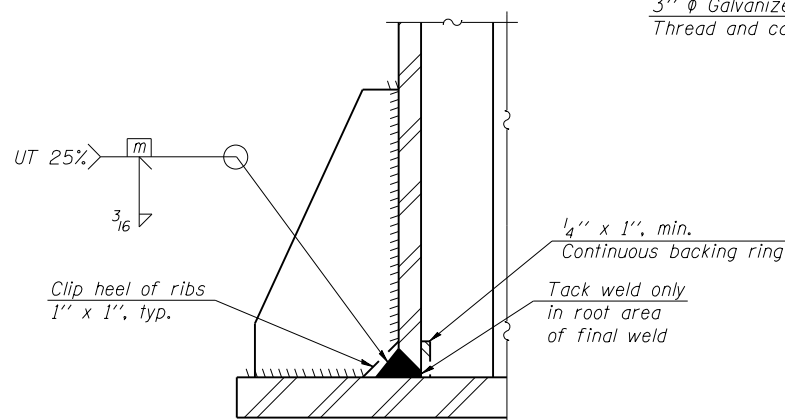
CSI-4



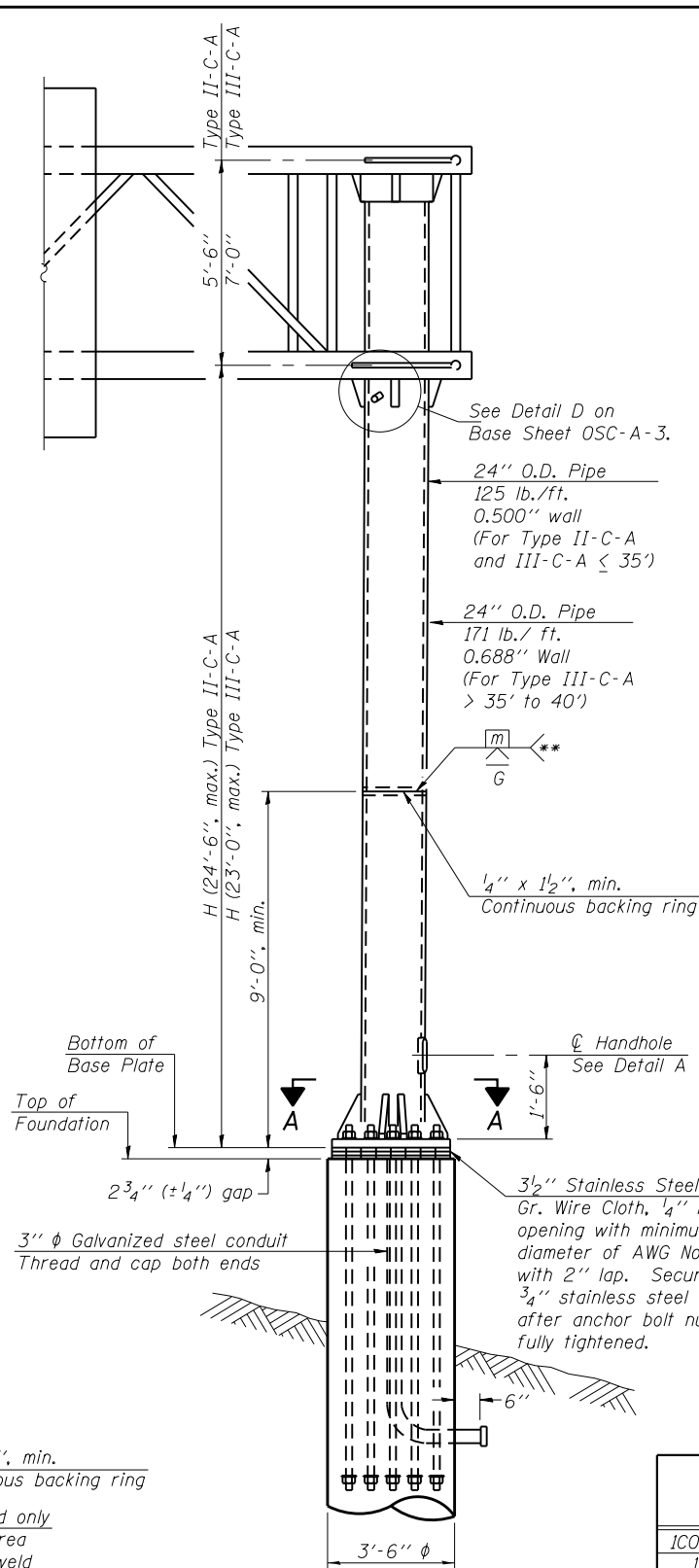
SECTION A-A



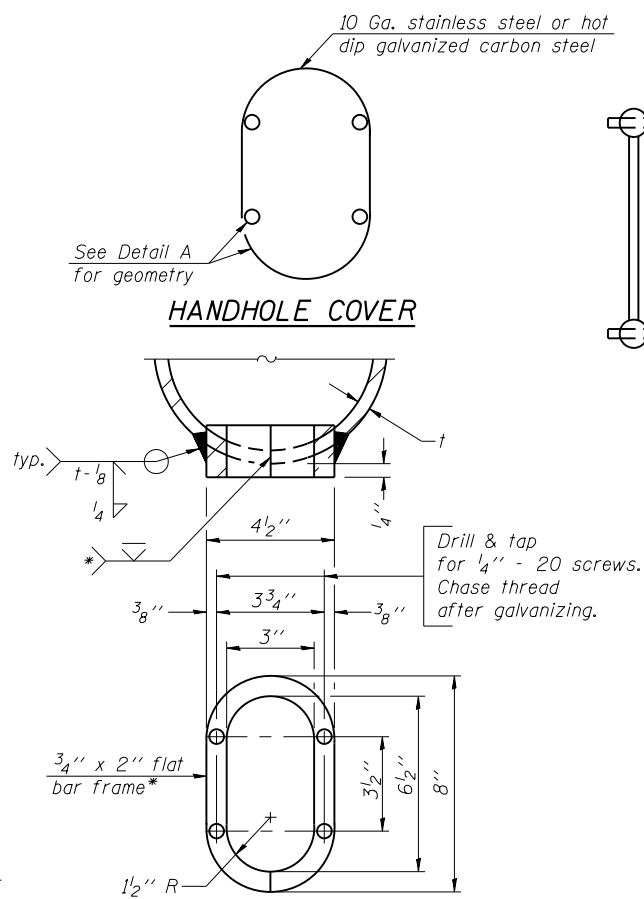
SECTION B-B



DETAIL B
(Typical rib)



FRONT ELEVATION
For Foundation Details
see Base Sheet OSC-A-9.

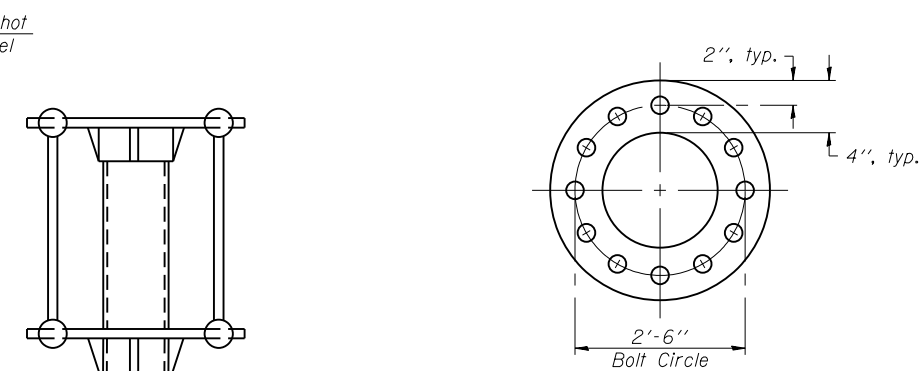


DETAIL A

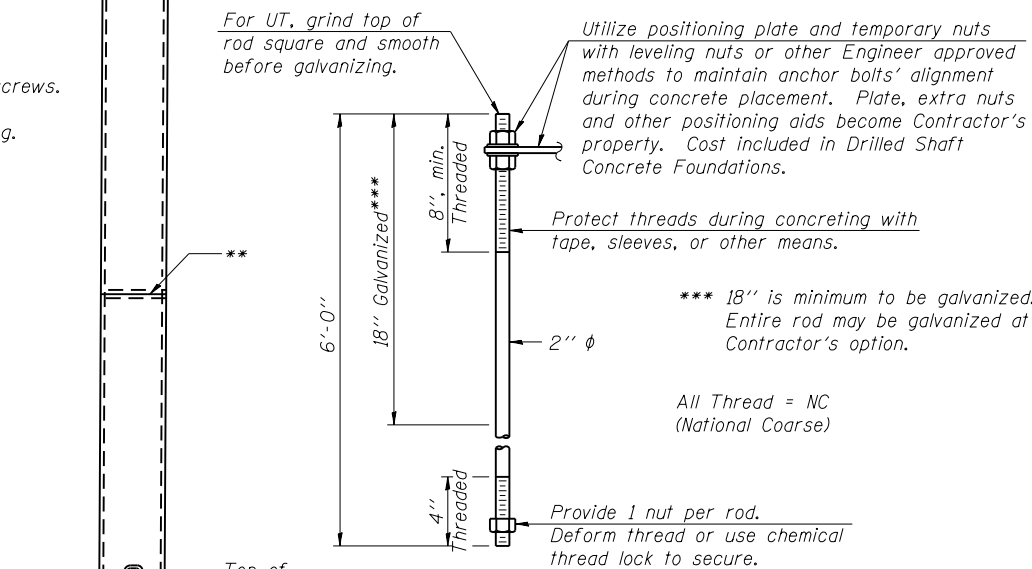
- * Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.
- ** Butt welded joint in post is only allowed for post heights (H) over 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
IC049S120R000.0-001	486+90.00	19.96'
IC049S120L000.0	497+08.00	21.92'

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



SUGGESTED POSITIONING PLATE



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.

OSC-A-5

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE	CHECKED - RB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

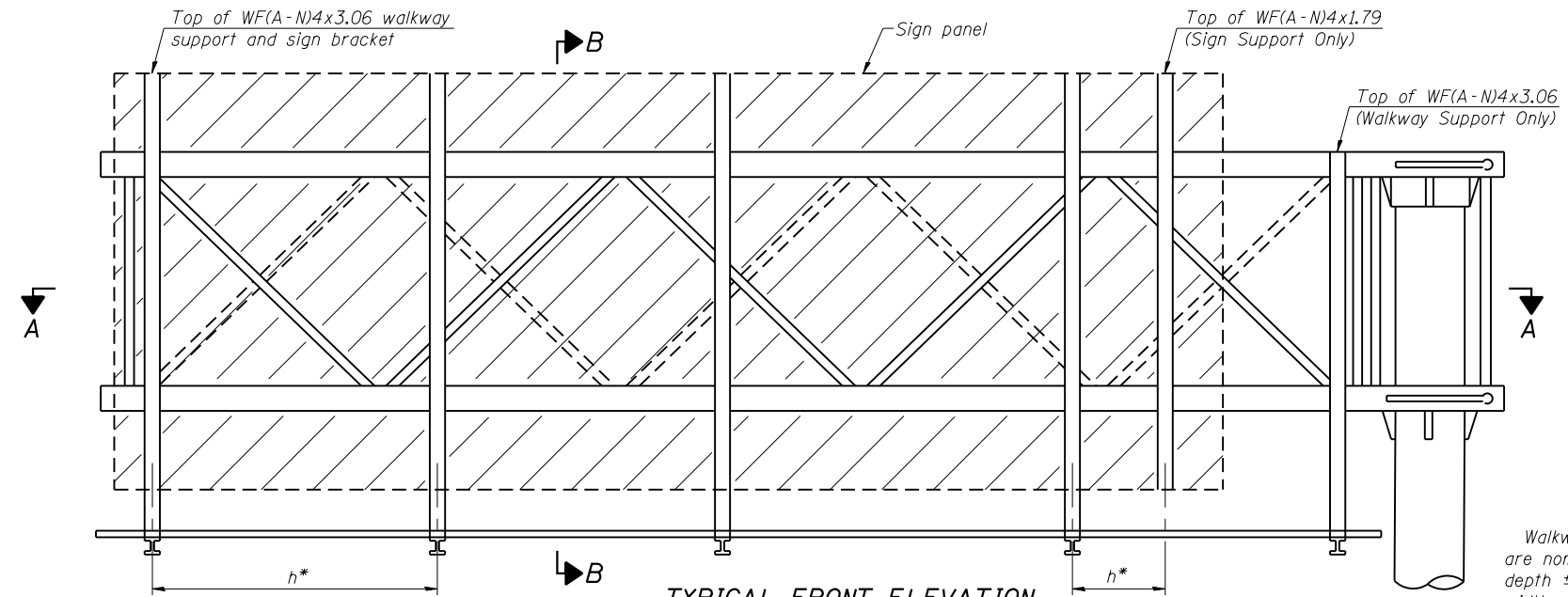
CANTILEVER SIGN STRUCTURES - TYPE II-C-A & III-C-A
TRUSS SUPPORT POST - ALUMINUM TRUSS & STEEL POST

SHEET NO. 05 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	137
CONTRACT NO. 60X39				

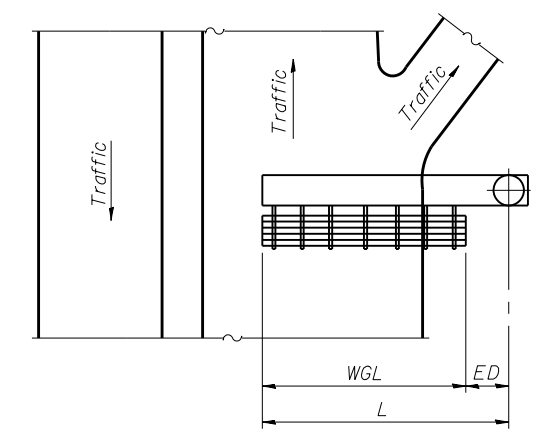
ILLINOIS FED. AID PROJECT

CSI-5

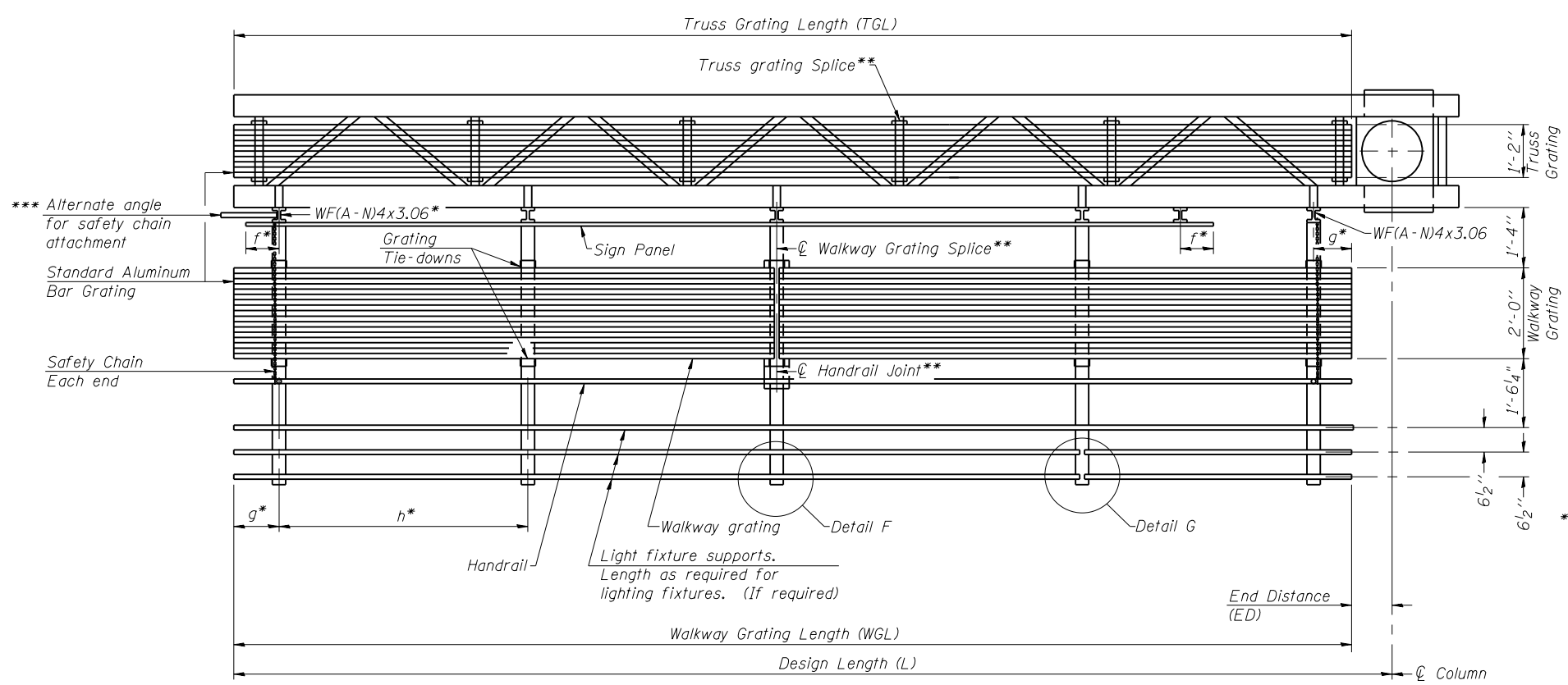


TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.

Walkway and truss grating dimensions are nominal and may vary (width ±1/2", depth ±1/2") based on available standard widths.



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



SECTION A-A

Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.

Handrail and walkway grating shall span a minimum of three brackets between splices.
** Use and location of handrail joints or grating splices are optional, based on lengths needed and material availability.

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

Structure Number	Station	WGL	ED	TGL
IC049S120R000.0-001	486+90.00	-	-	38.50'
IC049S120L000.0	497+08.00	-	-	38.50'

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 to ϕ of nearest 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)
*** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-8.
For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7.
For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-8.

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

WALKWAY GRATING, WALKWAY SUPPORTS, HANDRAIL AND LIGHTING ARE NOT INCLUDED IN THIS CONTRACT. INFORMATION SHOWN ON THIS SHEET SHALL BE USED FOR TRUSS GRATING AND SIGN BRACKETS ONLY.

OSC-A-6

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE	CHECKED - RB	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

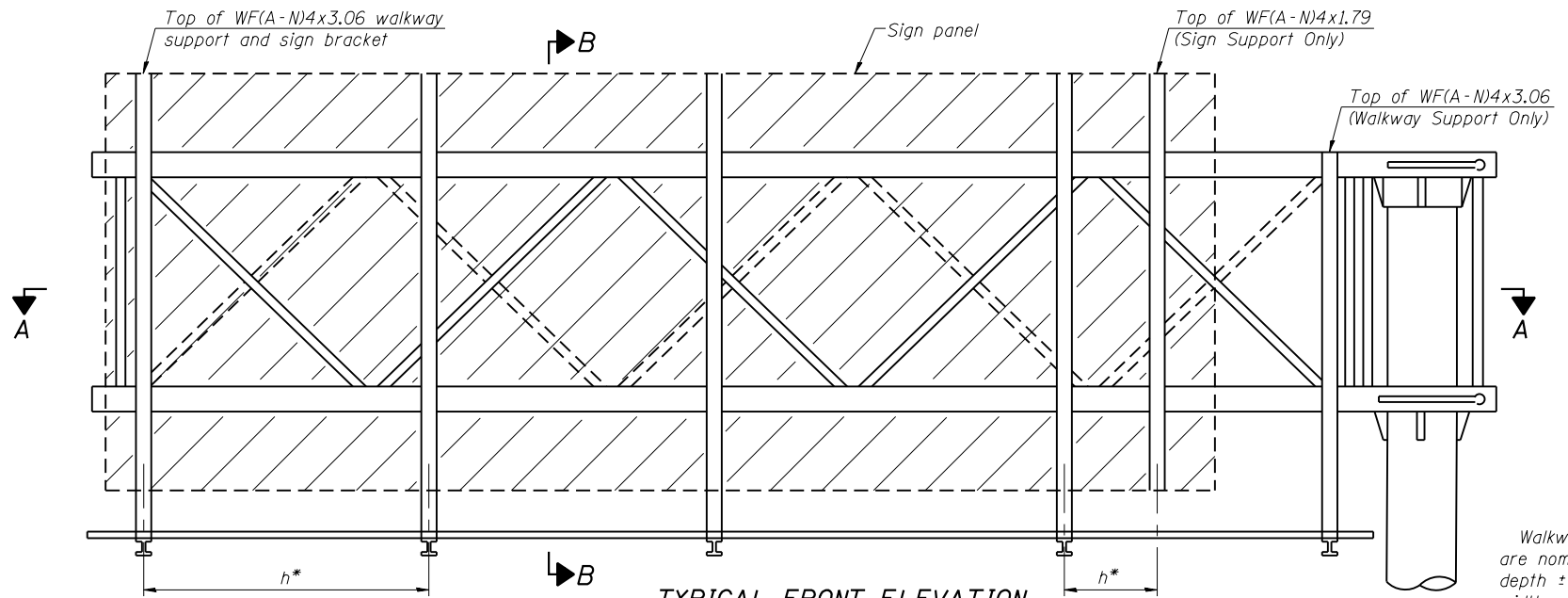
**CANTILEVER SIGN STRUCTURES - ALUMINUM WALKWAY
DETAILS - ALUMINUM TRUSS & STEEL POST**

SHEET NO. 06 OF 11 SHEETS

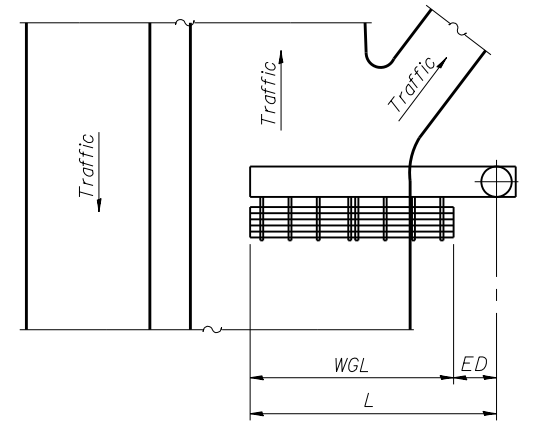
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	138
CONTRACT NO. 60X39				

CSI-6

ILLINOIS FED. AID PROJECT

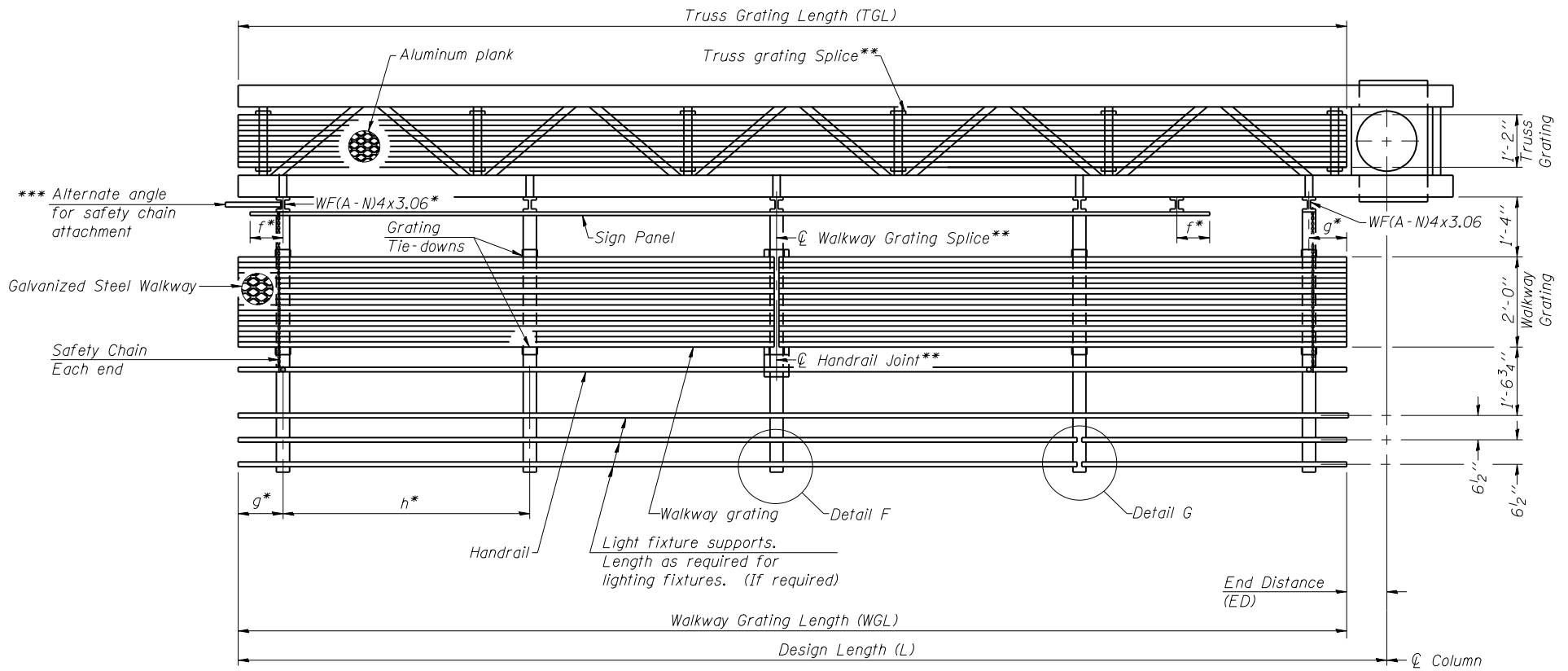


TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.



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

Walkway and truss grating dimensions are nominal and may vary (width ±1/2", depth ±1/2") based on available standard widths.



SECTION A-A

Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.

Handrail and walkway grating shall span a minimum of three brackets between splices.
** Use and location of handrail joints or grating splices are optional, based on lengths needed and material availability.

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

Structure Number	Station	WGL	ED	TGL
1C049S120R000.0-001	486+90.00	-	-	38.50'
1C049S120L000.0	497+08.00	-	-	38.50'

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 center of nearest bracket)
 g = 12" maximum, 4" minimum (End of walkway to center of nearest bracket)
 h = 6'-0" maximum (center to center sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
 *** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-8.
 For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7S.
 For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-8.

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

WALKWAY GRATING, WALKWAY SUPPORTS, HANDRAIL AND LIGHTING ARE NOT INCLUDED IN THIS CONTRACT. INFORMATION SHOWN ON THIS SHEET SHALL BE USED FOR TRUSS GRATING AND SIGN BRACKETS ONLY.

OSC-A-6S

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE	CHECKED - RB	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

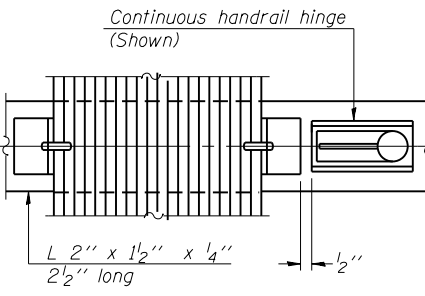
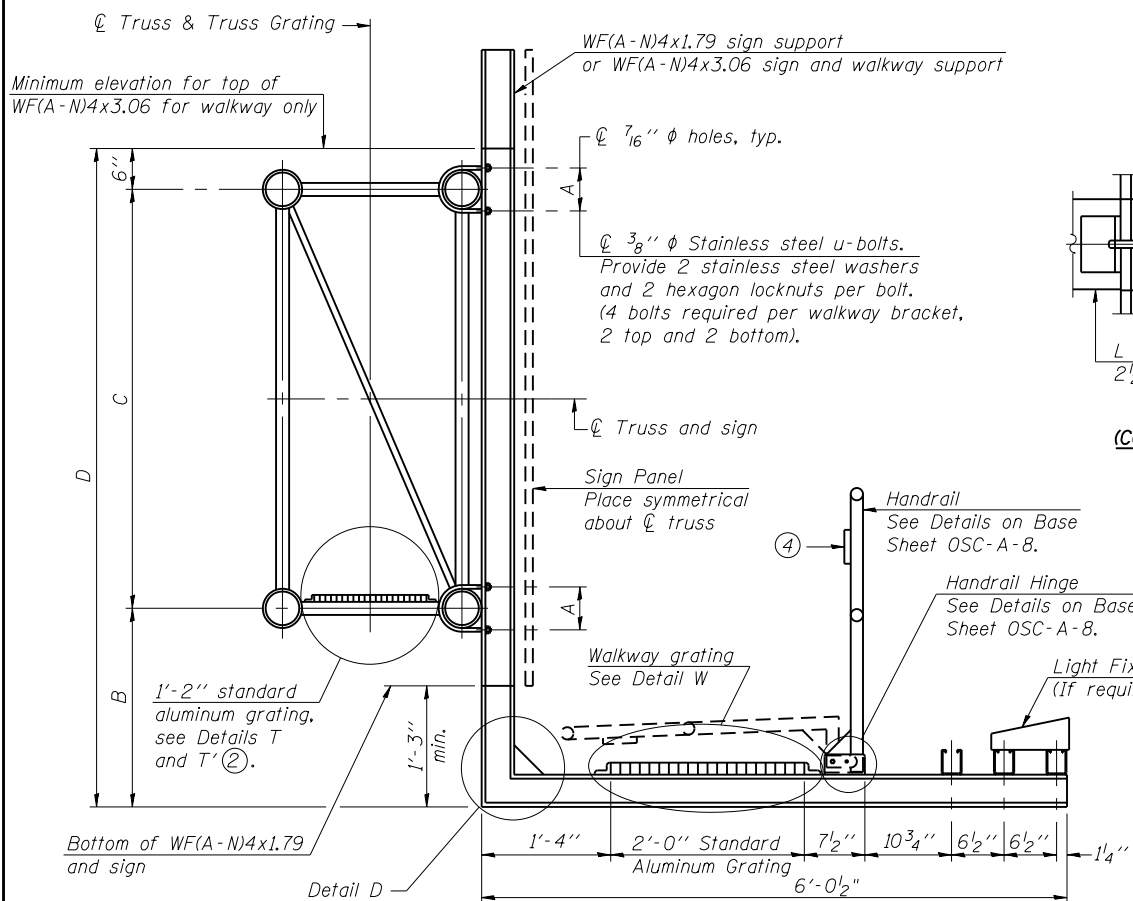
**CANTILEVER SIGN STRUCTURES - ALTERNATE STEEL
WALKWAY DETAILS - ALUMINUM TRUSS & STEEL POST**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	139
CONTRACT NO. 60X39				

SHEET NO. 07 OF 11 SHEETS

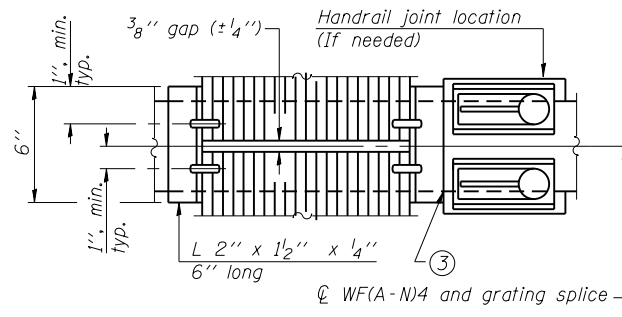
ILLINOIS FED. AID PROJECT

CSI-7

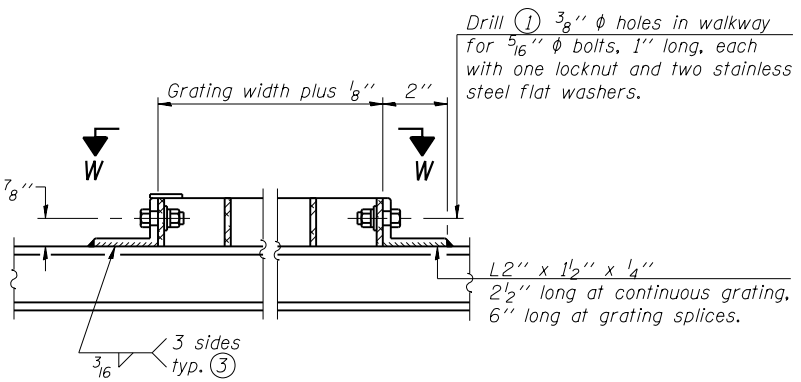


(CONTINUOUS WALKWAY GRATING)

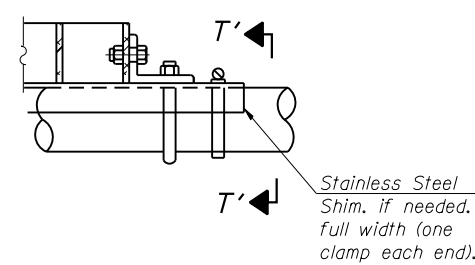
SECTION W-W



(AT WALKWAY GRATING SPLICE)

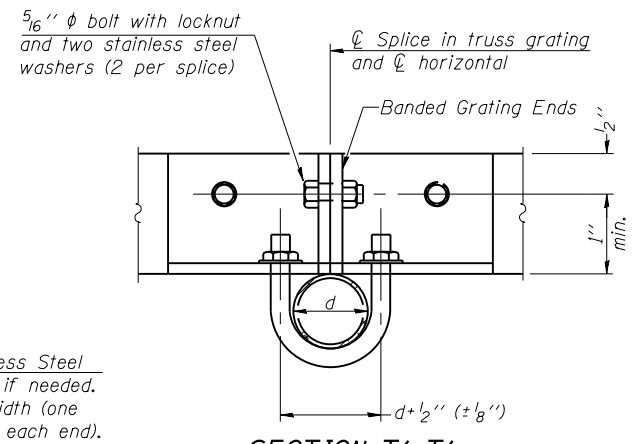


DETAIL W (Walkway grating)

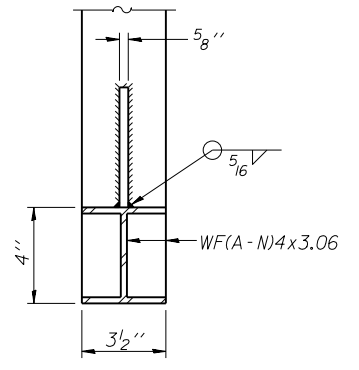
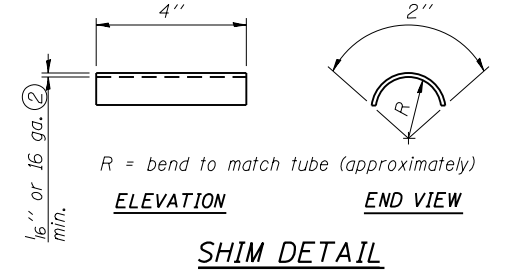


DETAIL T' (Truss grating splice)

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

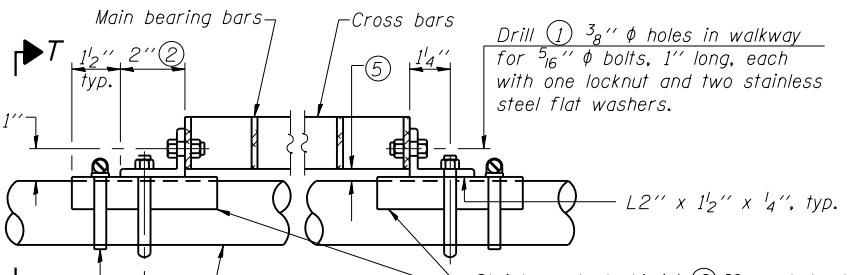


SECTION T'-T'



SECTION B-B

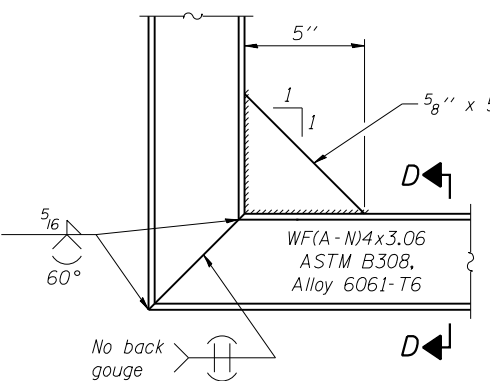
Sign shall be even with the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.



SECTION D-D

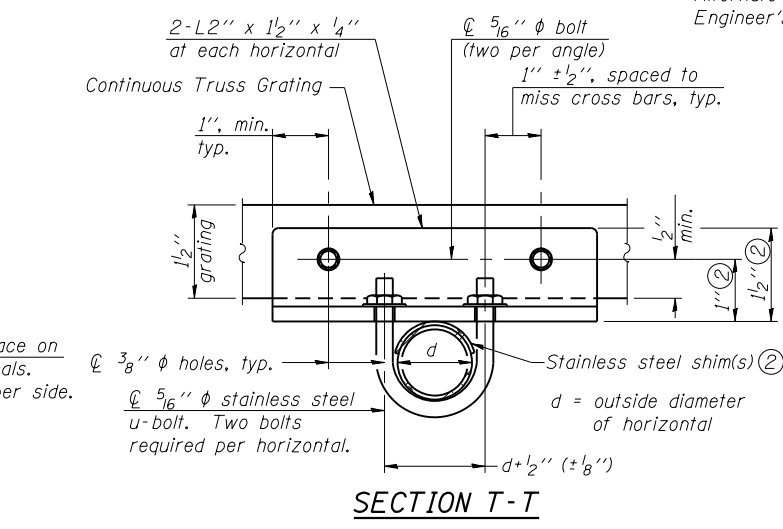
Screw type stainless steel tube clamp at shim location

Drill (1) 3/8" phi holes in angles for 5/16" phi stainless steel u-bolts. Two stainless steel washers and hot dip galvanized steel nuts required per bolt. U-bolt and angle connections required at horizontals only.



DETAIL T (Continuous Truss grating)

DETAIL D



SECTION T-T

Structure Number	Station	A	(6) B	C	(6) D
1C049S120R000.0-001	486+90.00	8 1/2"	1'-3"	7'-0"	8'-9"
1C049S120L000.0	497+08.00	8 1/2"	0'-0"	7'-0"	7'-6"

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING
 Main Bearing Bars (MBB) shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.
 Cross bars (CB) 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.

- 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.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OSC-A-8.)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- Based on actual sign height, D_s, given on OSC-A-1.

WALKWAY GRATING, WALKWAY SUPPORTS, HANDRAIL AND LIGHTING ARE NOT INCLUDED IN THIS CONTRACT. INFORMATION SHOWN ON THIS SHEET SHALL BE USED FOR TRUSS GRATING AND SIGN BRACKETS ONLY.

OSC-A-7

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
	CHECKED - RB	REVISED
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE	CHECKED - RB	REVISED

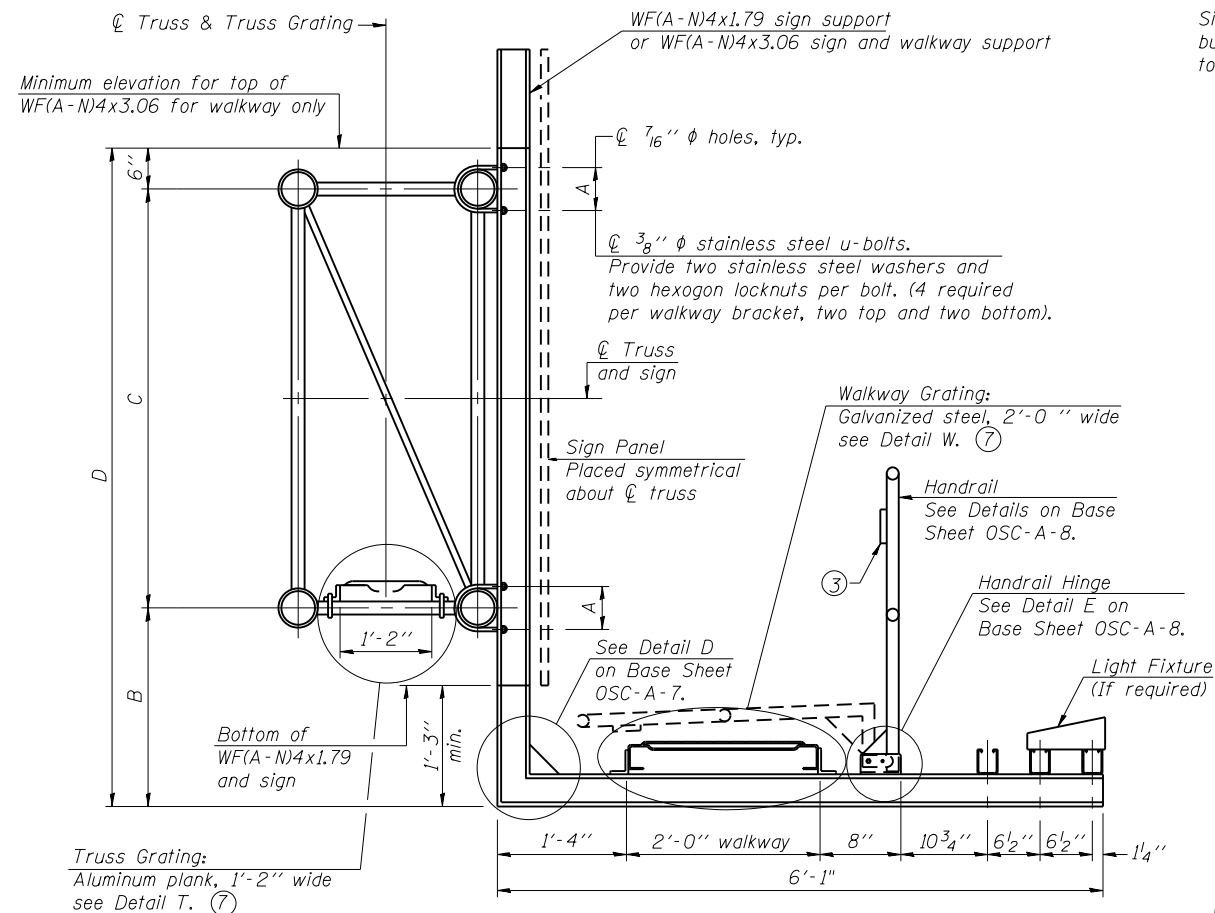
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - WALKWAY DETAILS
 ALUMINUM TRUSS & STEEL POST

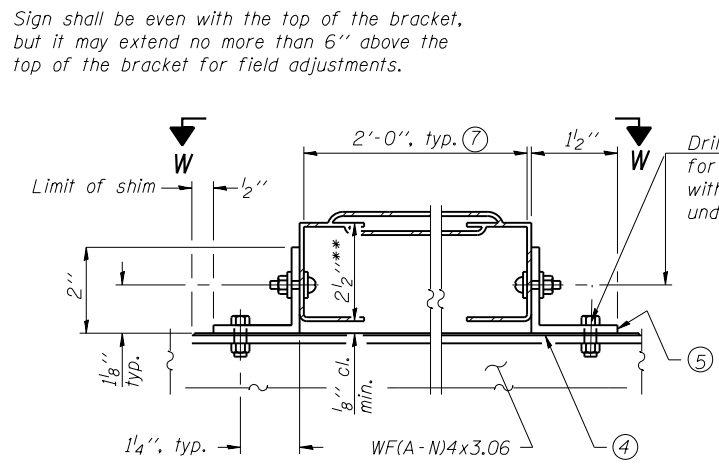
SHEET NO. 08 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	140
CONTRACT NO. 60X39				
ILLINOIS FED. AID PROJECT				

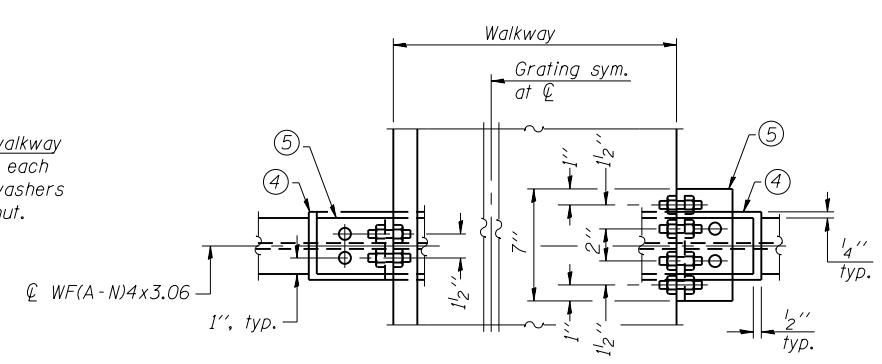
CSI-8



SECTION B-B

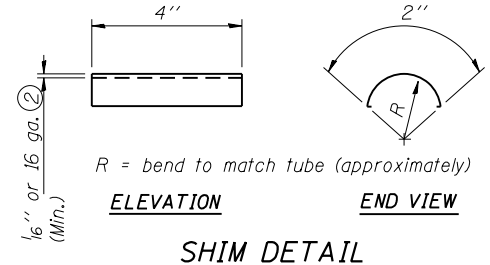


DETAIL W
GALVANIZED STEEL WALKWAY GRATING

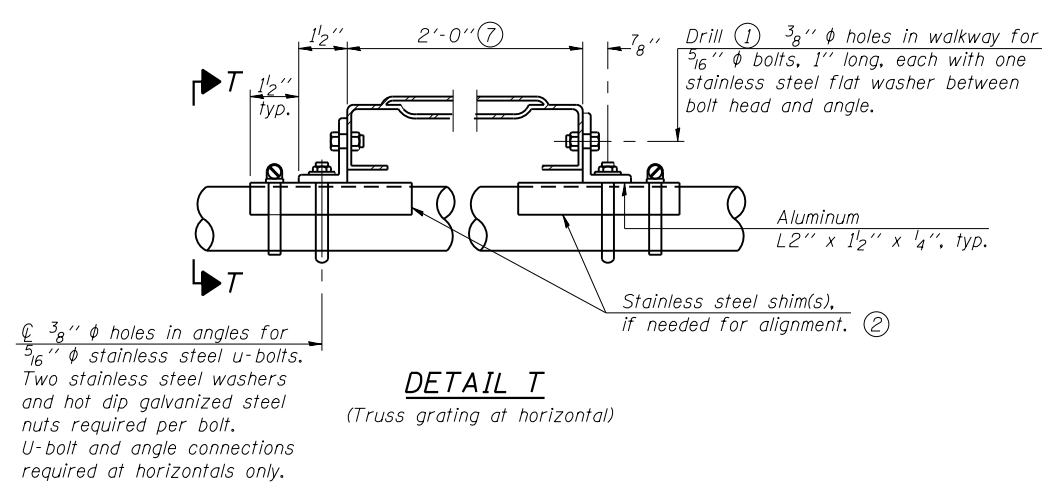


WALKWAY GRATING CONTINUOUS AT WALKWAY GRATING SPLICE

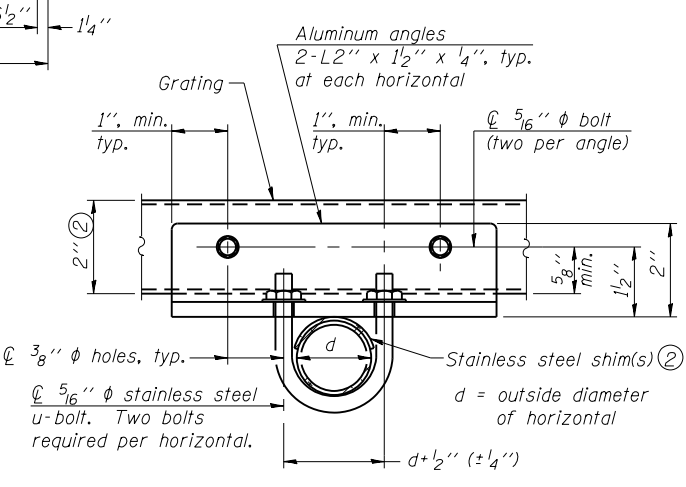
SECTION W-W



- 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 under angles at horizontals and horizontal diagonals if needed to compensate for alignment variations and differences in horizontal diagonal pipe sizes beyond adjustment provided by angles. Secure with one stainless steel clamp per location, see "Shim Detail". Thicker shim plates may be used when needed subject to shims performing properly.
- ③ 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ④ 1/16" (or 16 ga.) x 2 1/2" x 4" stainless steel shim adhered to top of WF(A-N)4x3.06 beneath each galvanized angle, typ. Adhesives for shims shall be suitable for materials joined and full exposure conditions.
- ⑤ Galvanized steel L2" x 2" x 1/4", 3 1/2" long with continuous grating 7" long at grating splice.
- ⑥ Details shown are considered equal alternatives to Aluminum Walkway Details and may be substituted by Contractor at no charge in contract cost.
- ⑦ Perforated or expanded metal grating providing a skid resistant (non-serrated) surface and capable of supporting a 500 pound concentrated load with a 6'-0" clear span. Walkway and truss grating dimensions are nominal and may vary (width ± 1/2", depth 1/2") based on available standard sizes. Cut ends of grating shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.
- ⑧ Based on actual sign height, Ds, given on OSC-A-1.

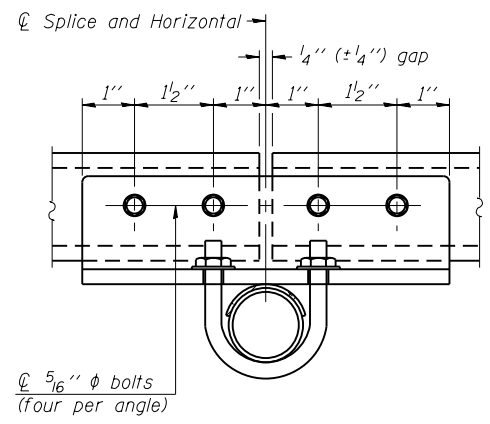


DETAIL T
(Truss grating at horizontal)



SECTION T-T
(Truss Grating Continuous)

ALUMINUM TRUSS GRATING



SECTION T-T
(Truss Grating Splice)

Alternate splice details and locations may be used subject to the Engineer's review and approval.

Structure Number	Station	A	(8) B	C	(8) D
IC049S120R000.0-001	486+90.00	8 1/2"	1'-3"	7'-0"	8'-9"
IC049S120L000.0	497+08.00	8 1/2"	0'-0"	7'-0"	7'-6"

WALKWAY GRATING, WALKWAY SUPPORTS, HANDRAIL AND LIGHTING ARE NOT INCLUDED IN THIS CONTRACT. INFORMATION SHOWN ON THIS SHEET SHALL BE USED FOR TRUSS GRATING AND SIGN BRACKETS ONLY.

OSC-A-7S

6-1-12



USER NAME =	DESIGNED - JJA	REVISED
PLOT SCALE =	CHECKED - RB	REVISED
PLOT DATE	DRAWN - JJA	REVISED
	CHECKED - RB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

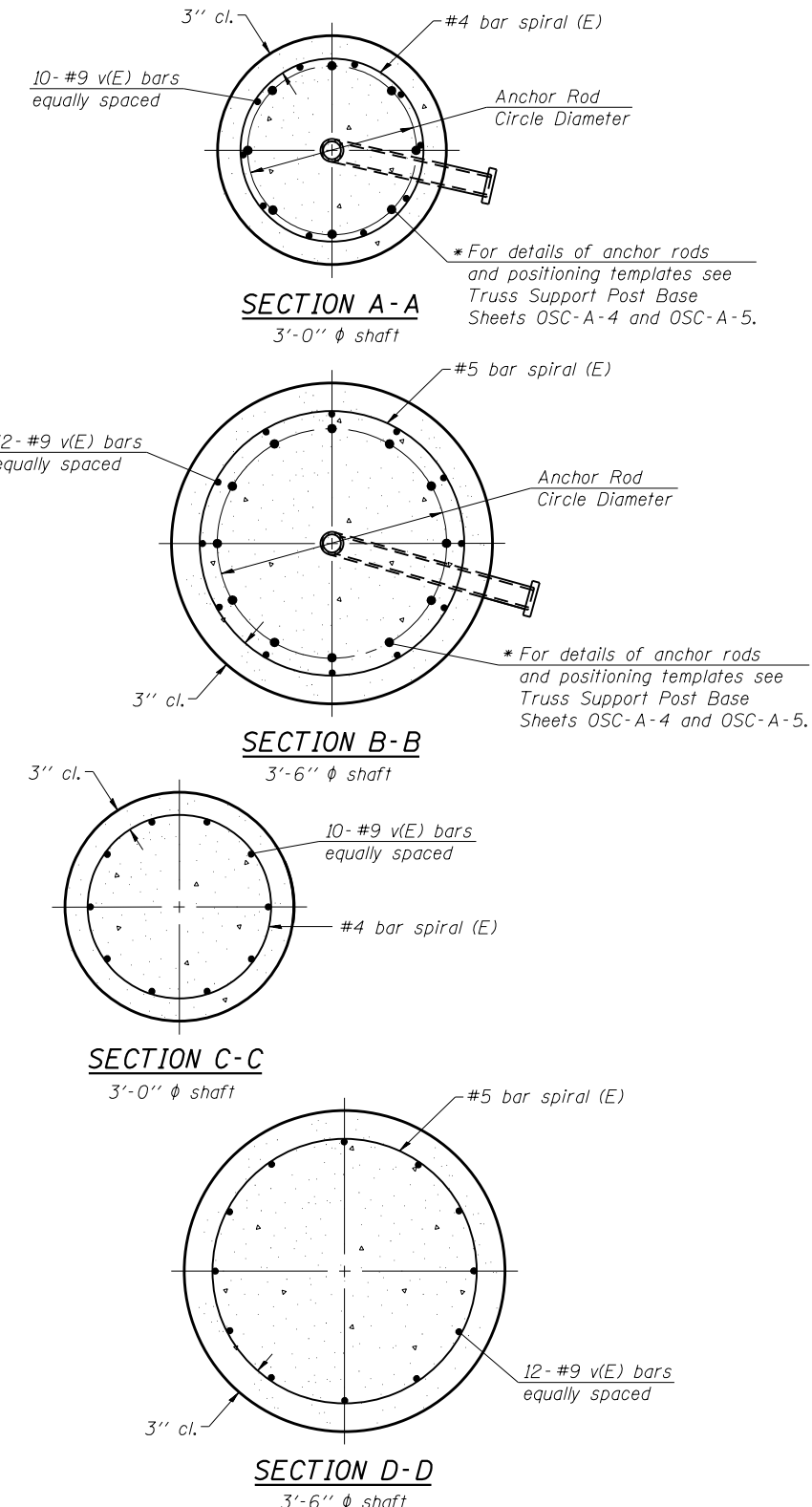
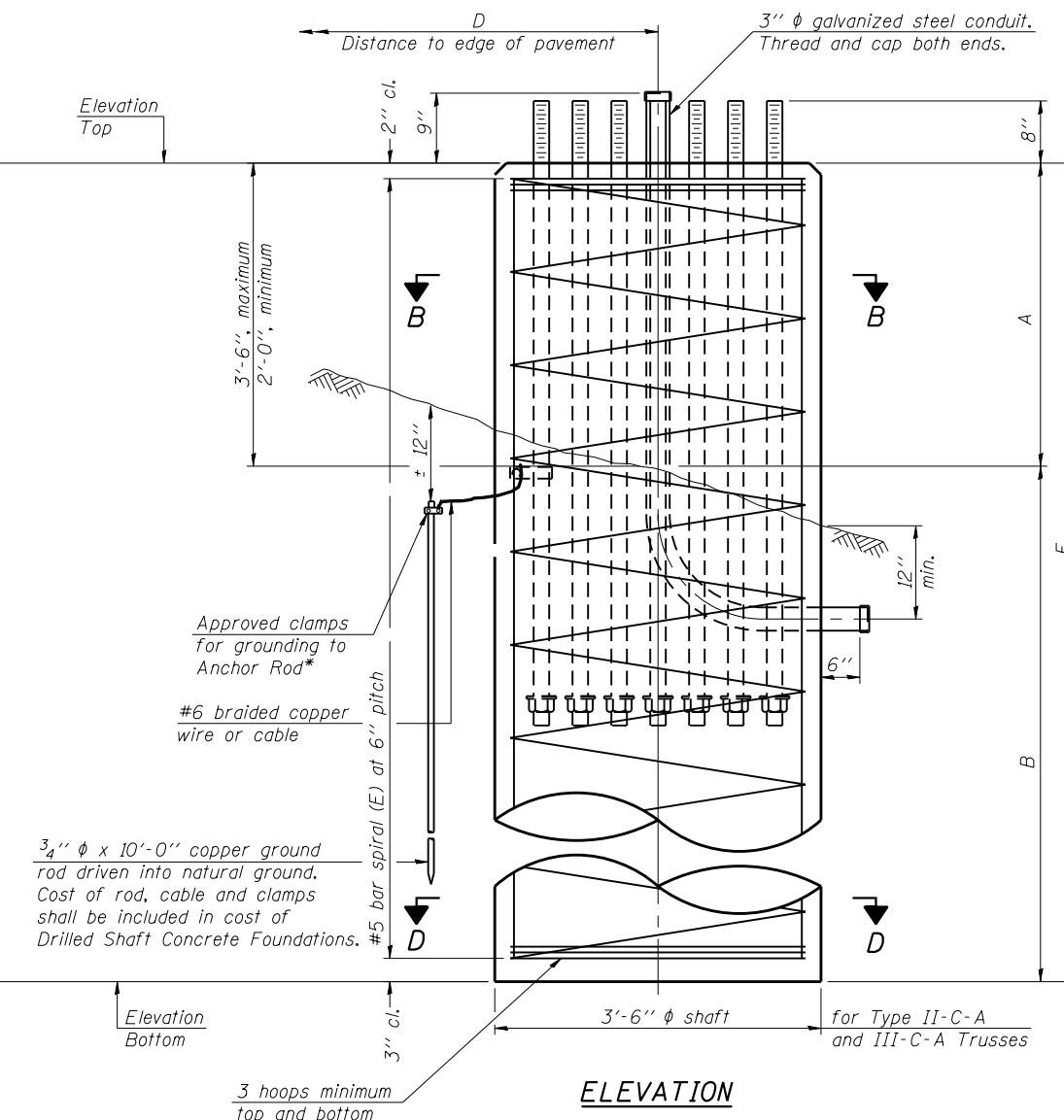
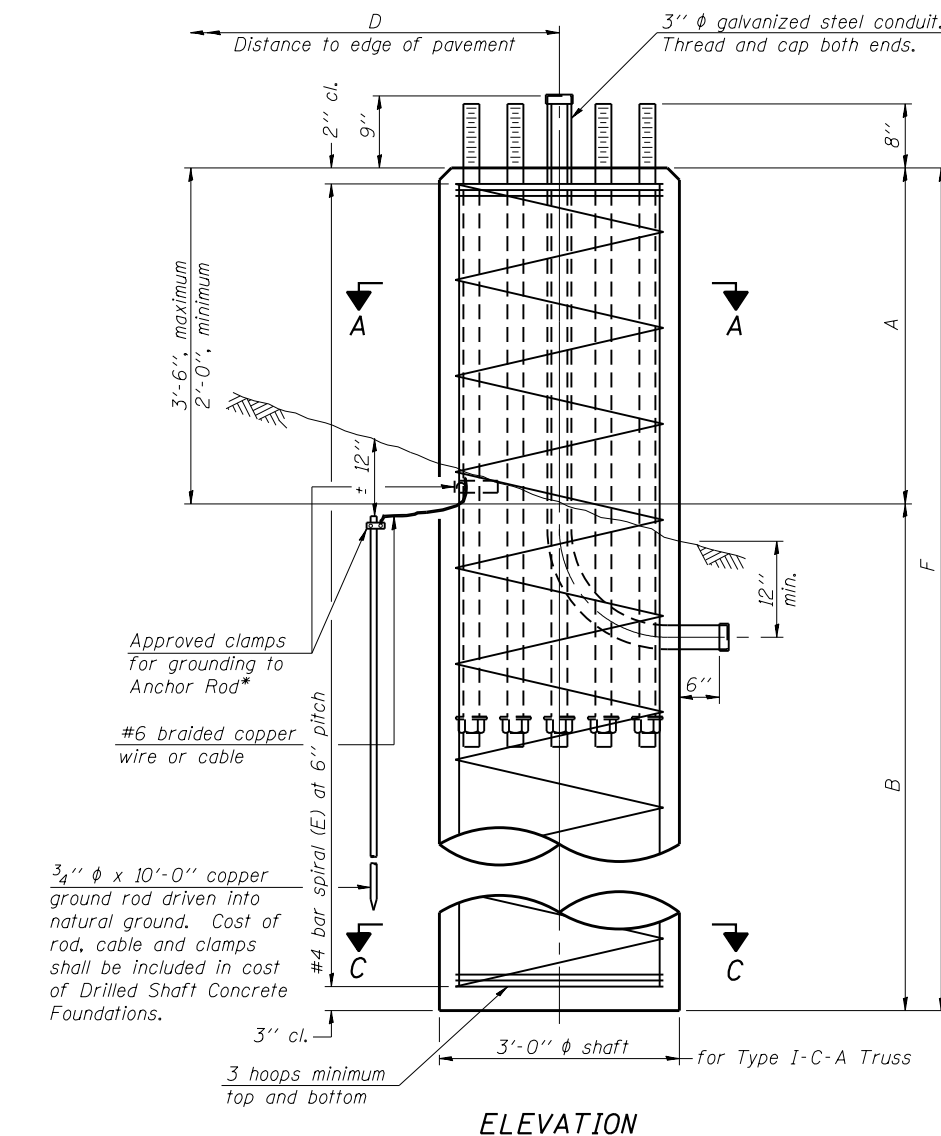
CANTILEVER SIGN STRUCTURES
ALTERNATE WALKWAY DETAILS

SHEET NO. 09 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	141
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X39	

CSI-9

* 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 (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 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										
Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Q_u (tsf)	A	B	F	Class DS Concrete Cubic Yards
IC049S120R000.0-001	486+90.00	III-C-A	3.50'	720.08	686.08	3.8	2.00'	32.00'	34.00'	12.2
IC049S120L000.0	497+08.00	III-C-A	3.50'	719.90	685.90	3.1	2.00'	32.00'	34.00'	12.2

OSC-A-9

8-21-13

	USER NAME =	DESIGNED - JJA	REVISED
		CHECKED - RB	REVISED
	PLOT SCALE =	DRAWN - JJA	REVISED
	PLOT DATE	CHECKED - RB	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - DRILLED SHAFT
 ALUMINUM TRUSS & STEEL POST

SHEET NO. 10 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	142
CONTRACT NO. 60X39				

CS1-10

ILLINOIS FED. AID PROJECT



SOIL BORING LOG

Date 3/19/14

ROUTE FAU 1225 (IL. Rte. 120) DESCRIPTION IL Rt. 120 LOGGED BY SLM
 SECTION 12RS-4(82) LOCATION On/Off ramp 120 E and US 41 S, SEC. 25, TWP. 45N, RNG. 11E, 3rd PM, Latitude N42°20'49.65", Longitude W87°53'49.20"
 COUNTY Lake DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. Station	D E P T H ft	B L O W S	U C S Qu	M O I S T	Surface Water Elev. NA ft	Stream Bed Elev. NA ft	Groundwater Elev.: First Encounter None ft Upon Completion None ft After NA Hrs.	D E P T H ft	B L O W S	U C S Qu	M O I S T
4 inches of Asphalt	718.67										
Gray, Moist FILL: SAND, some gravel	718.00	6						3			
Gray, Very Moist FILL: SANDY CLAY LOAM		7	5.8	25				3	1.7	20	
		8	P					5	B		
	715.00	3						3			
Brown and Gray, Very Moist FILL: SILTY CLAY		4	2.9	26				5	2.1	21	
		6	B					6	B		
	713.00	7						3			
Hard Brown, Moist SILTY CLAY (CL-ML)		10	6.3	18				5	1.7	18	
		15	B					5	B		
		4						3			
		11	7.5	19				4	2.1	19	
		15	B					6	B		
		-10					689.00	-30			
End of Boring											
		7									
		11	5.8	19							
		14	B								
		4									
		7	5.8	21							
		8	B								
		-15						-35			
	703.00	2									
Stiff to Very Stiff Gray, Moist CLAY, trace gravel (CL)		4	2.1	21							
		5	B								
		3									
		3	2.1	21							
		5	B								
		-20						-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)
 BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 3/17/14

ROUTE FAU 1225 (IL. Rte. 120) DESCRIPTION IL Rt. 120 LOGGED BY JR
 SECTION 12RS-4(82) LOCATION IL 120 Over US 41, SEC. 25, TWP. 45N, RNG. 11E, 3rd PM, Latitude N42°20'52.60", Longitude W87°53'36.27"
 COUNTY Lake DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. Station	D E P T H ft	B L O W S	U C S Qu	M O I S T	Surface Water Elev. NA ft	Stream Bed Elev. NA ft	Groundwater Elev.: First Encounter None ft Upon Completion None ft After NA Hrs.	D E P T H ft	B L O W S	U C S Qu	M O I S T
4 inches of Topsoil	719.67										
Brown, Moist FILL: SAND, trace gravel	719.00	4						3			
Brown and Gray, Moist FILL: SILTY CLAY, trace gravel		5	3.5	23				5	1.7	21	
		5	P					5	B		
		2						3			
		3	3.5	24				3	2.1	19	
		4	P					6	B		
		-5						-25			
	714.00	5						3			
Hard Brown, Moist SILTY CLAY, trace gravel (CL-ML)		9	6.3	18				5	2.5	21	
		14	B					7	B		
		6						3			
		9	6.3	15				5	2.5	21	
		13	S					7	B		
		-10					690.00	-30			
End of Boring											
	709.00	4									
Very Stiff Gray, Moist SILTY CLAY, trace gravel (CL-ML)		6	2.9	19							
		7	B								
	707.00	3									
Stiff to Very Stiff Gray, Moist CLAY, trace gravel (CL)		4	2.5	17							
		5	B								
		-15						-35			
		3									
		5	1.7	16							
		5	B								
		3									
		5	2.1	20							
		7	B								
		-20						-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)
 BBS, form 137 (Rev. 8-99)



USER NAME =	DESIGNED - JJA	REVISED
CHECKED - RB	REVISED	
PLOT SCALE =	DRAWN - JJA	REVISED
PLOT DATE =	CHECKED - RB	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURE
 BORING LOGS

SHEET NO. 11 OF 11 SHEETS

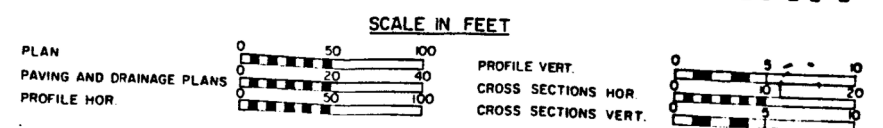
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	143
CONTRACT NO. 60X39			ILLINOIS FED. AID PROJECT	

INDEX OF SHEETS ON SHEET NO. 6

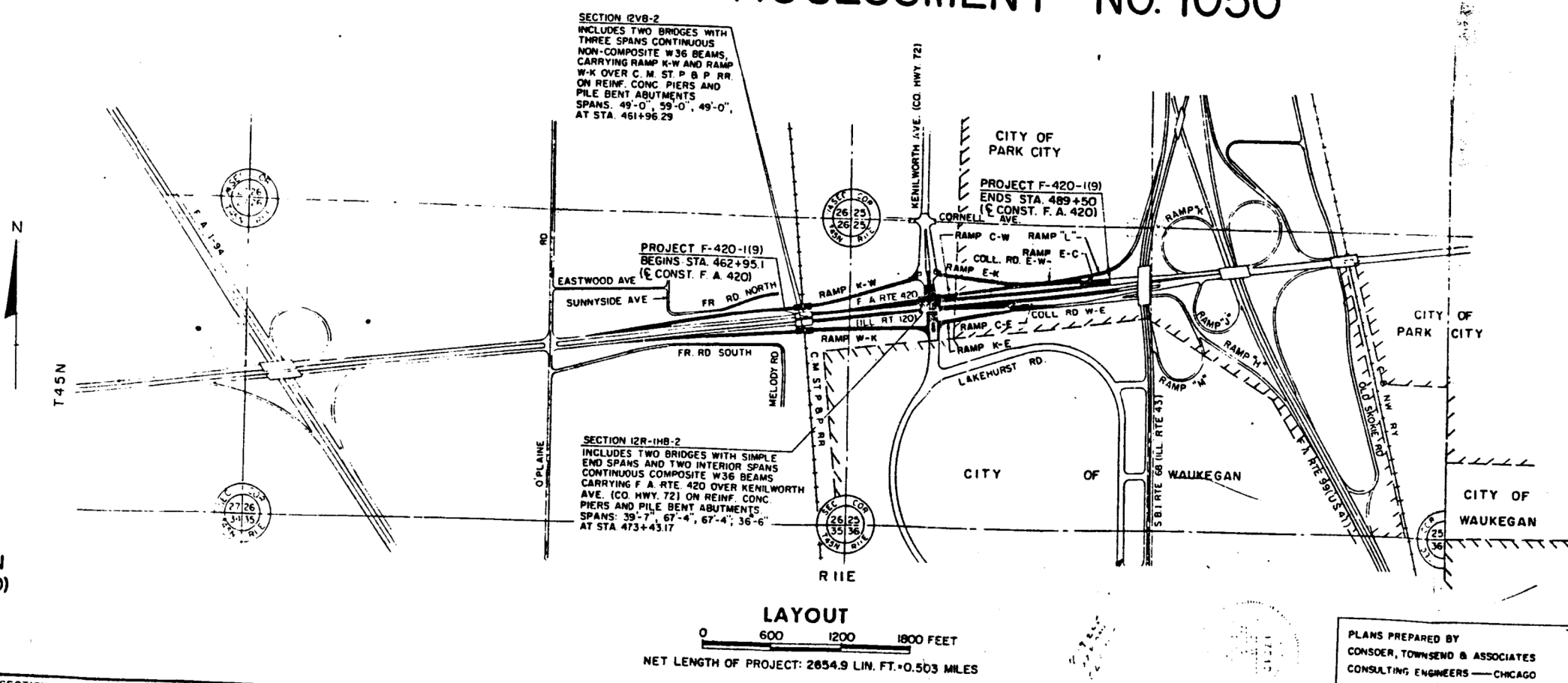
LIGHTING CONTROLLERS
 L2235-VA
 L2236-VB
 L2237-VC
 L2265-LO

DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID HIGHWAY

2217



F. A. ROUTE 420 (ILL. 120) SECTION 12R-2, 12R-1HB-2, 12VB-2, 12R-L&SG PROJECT F-420-1(9) LAKE COUNTY C-91-120-71 WAUKEGAN SECTION 76-00150-00-RP SPECIAL ASSESSMENT NO. 1050



D CLASSIFICATION
 1-(90) · T2 · (7.12)(PCC 20)

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUBMITTED _____ 19____
 EXAMINED _____ 19____
 PASSED _____ 19____
 APPROVED _____ 19____

DISTRICT ENGINEER
 ENGINEER OF PLANS AND CONTRACTS
 ENGINEER OF DESIGN
 DIRECTOR OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
 DISTRICT ADMINISTRATION

APPROVED _____
 DIVISION ENGINEER DATE

PLANS PREPARED BY
 CONSOER, TOWNSEND & ASSOCIATES
 CONSULTING ENGINEERS — CHICAGO
 Robert L. Munson
 ROBERT L. MUNSON

LE LIN ENGINEERING, LTD.
 Consulting Engineers
 Westmont, Illinois

USER NAME = rdeming	DESIGNED - RC	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN - RC	REVISED -
PLOT DATE = 7/3/2014	CHECKED - ST	REVISED -
	DATE - 3/3/2017	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
 LIGHTING AS-BUILTS

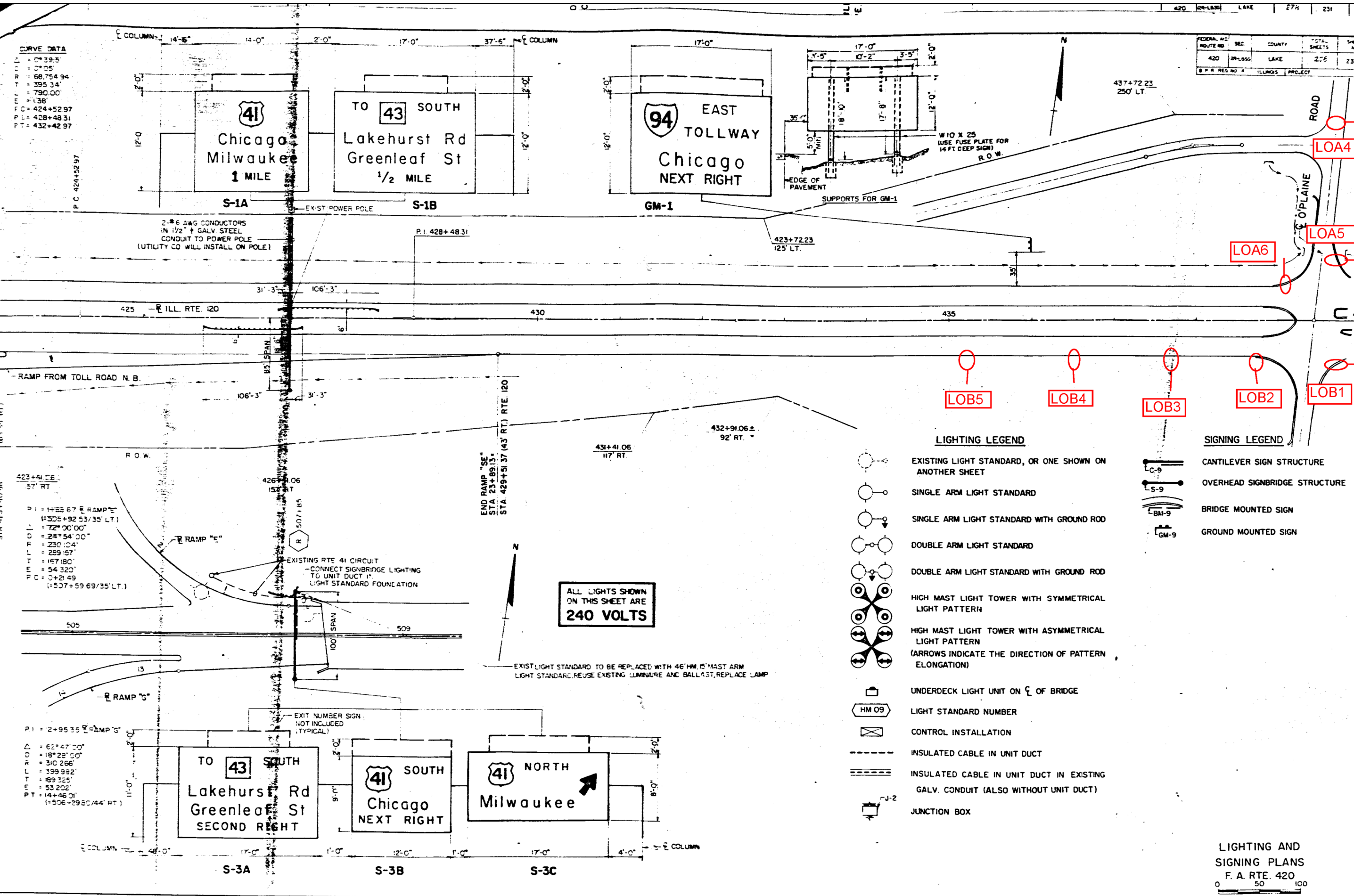
SCALE: SHEET NO. 1 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR	LAKE	198	144
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X39	

LT-01

FED. AID	ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
420	29-L-850	LAKE	274	230	230

CURVE DATA
 P.C. = 424+52.97
 P.T. = 432+42.97
 P.L. = 77.94
 Δ = 138°
 R = 790.00
 T = 395.34
 E = 68.75494
 O.C. = 428.4831



ALL LIGHTS SHOWN ON THIS SHEET ARE 240 VOLTS

LIGHTING LEGEND

- EXISTING LIGHT STANDARD, OR ONE SHOWN ON ANOTHER SHEET
- SINGLE ARM LIGHT STANDARD
- SINGLE ARM LIGHT STANDARD WITH GROUND ROD
- DOUBLE ARM LIGHT STANDARD
- DOUBLE ARM LIGHT STANDARD WITH GROUND ROD
- HIGH MAST LIGHT TOWER WITH SYMMETRICAL LIGHT PATTERN
- HIGH MAST LIGHT TOWER WITH ASYMMETRICAL LIGHT PATTERN (ARROWS INDICATE THE DIRECTION OF PATTERN ELONGATION)
- UNDERDECK LIGHT UNIT ON C OF BRIDGE
- LIGHT STANDARD NUMBER
- CONTROL INSTALLATION
- INSULATED CABLE IN UNIT DUCT
- INSULATED CABLE IN UNIT DUCT IN EXISTING GALV. CONDUIT (ALSO WITHOUT UNIT DUCT)
- JUNCTION BOX

SIGNING LEGEND

- CANTILEVER SIGN STRUCTURE
- OVERHEAD SIGNBRIDGE STRUCTURE
- BRIDGE MOUNTED SIGN
- GROUND MOUNTED SIGN

LIGHTING AND SIGNING PLANS
 F. A. RTE. 420
 0 50 100



USER NAME = rdeming	DESIGNED - RC	REVISED -
DESIGNED - RC	DRAWN - RC	REVISED -
DESIGNED - ST	CHECKED - ST	REVISED -
DATE - 3/3/2017	DATE -	REVISED -

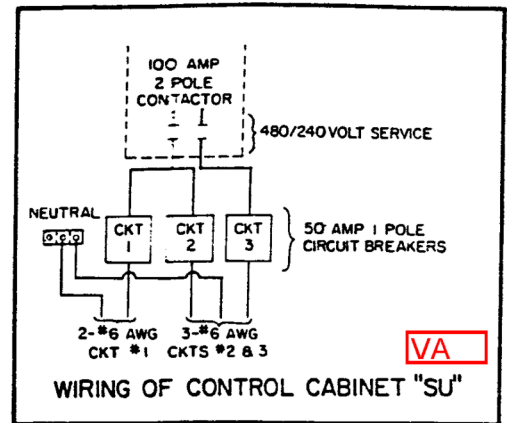
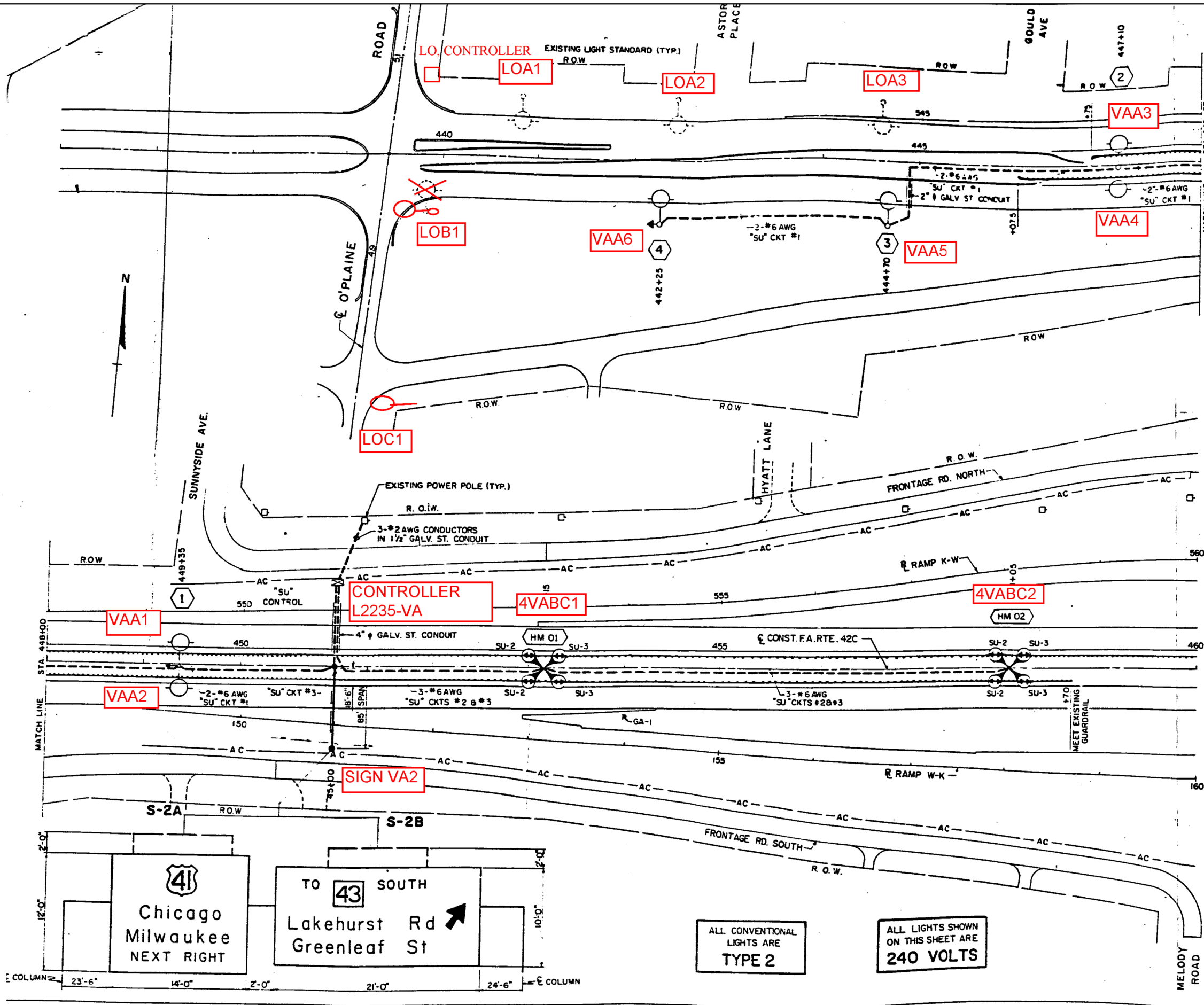
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ILL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
 LIGHTING AS-BUILTS

SCALE: SHEET NO. 3 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR	LAKE	198	146
CONTRACT NO. 60X39				

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT



NUMBER OF LAMPS PER CIRCUIT
(VOLTAGE = 240V)

LAMP SIZE	CKT 1	CKT 2	CKT 3
1000 W	0	4	4
400 W	6	0	0
85 W	12	0	0
TOTAL AMPS	18	19	19

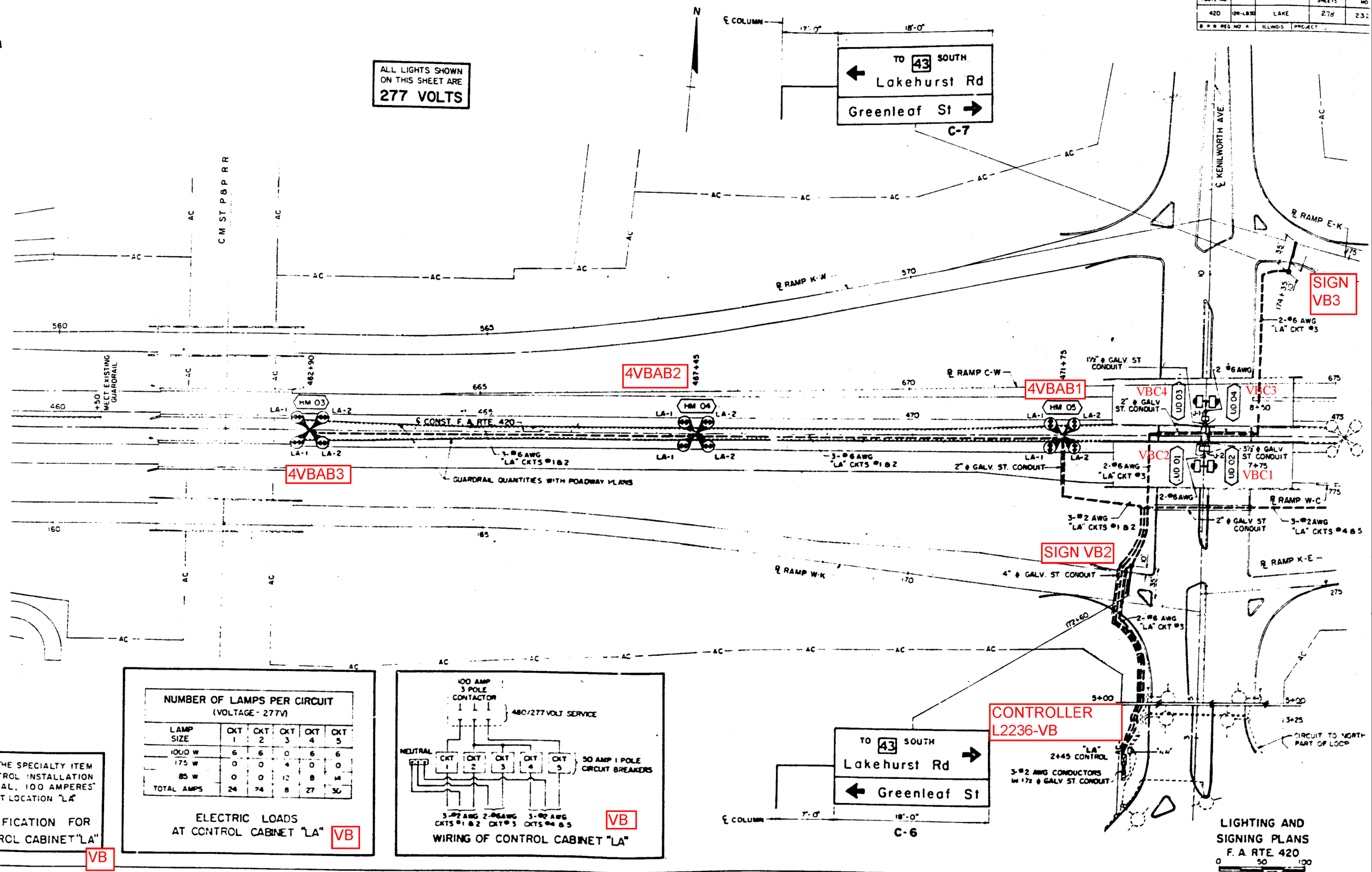
ELECTRIC LOADS
AT CONTROL CABINET "SU"

USE SPECIALTY ITEM "CONTROL INSTALLATION TYPE CB RCS 100-480, DUAL" AT LOCATION "SU"

SPECIFICATION FOR
CONTROL CABINET "SU"

LIGHTING AND
SIGNING PLANS
F. A. RTE. 420

ALL LIGHTS SHOWN ON THIS SHEET ARE 277 VOLTS



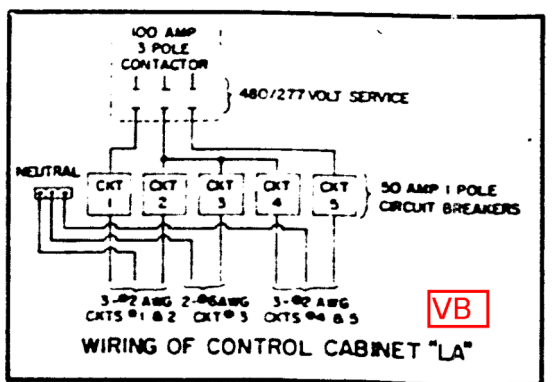
USE THE SPECIALTY ITEM "CONTROL INSTALLATION SPECIAL, 100 AMPERES" AT LOCATION "LA"

SPECIFICATION FOR CONTROL CABINET "LA" **VB**

NUMBER OF LAMPS PER CIRCUIT (VOLTAGE - 277V)

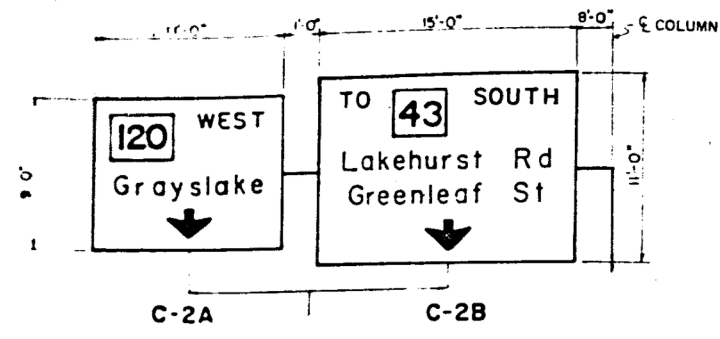
LAMP SIZE	CKT 1	CKT 2	CKT 3	CKT 4	CKT 5
1000 W	6	6	0	6	6
175 W	0	0	4	0	0
85 W	0	0	12	8	14
TOTAL AMPS	24	24	8	27	30

ELECTRIC LOADS AT CONTROL CABINET "LA" **VB**



FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS
420	24-056	LAKE	174
B.P. REG. NO. 4		ILLINOIS	PROJECT

ALL LIGHTS SHOWN ON THIS SHEET ARE 277 VOLTS



SIGN VB3

SIGN VB1

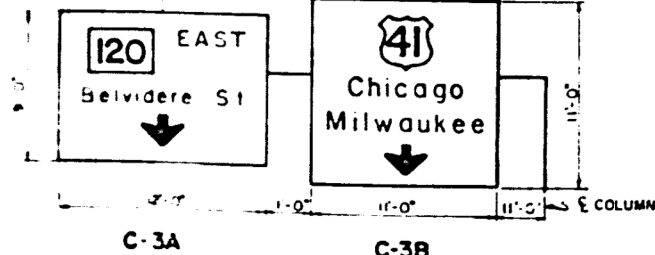
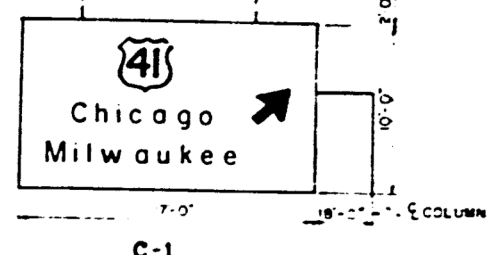
4VBDE1

4VBDE3

4VBDE2

SIGN VB4

SIGN VB6



LIGHTING AND SIGNING PLANS
F A RTE 420

69-302



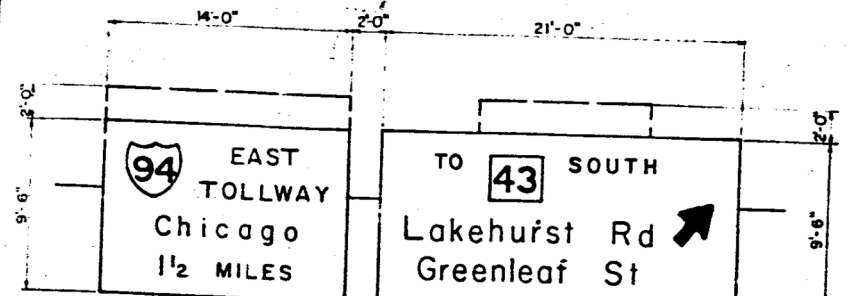
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DRAWN - RC	REVISIONS -	
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PLOT DATE = 7/3/2014	DATE - 3/3/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
LIGHTING AS-BUILTS

SCALE: SHEET NO. 6 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR	LAKE	198	149
CONTRACT NO. 60X39				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



BM-1A BM-1B

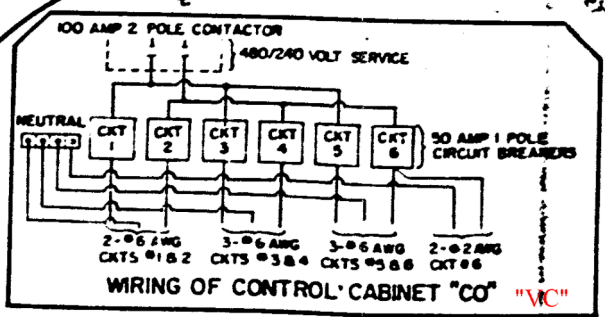
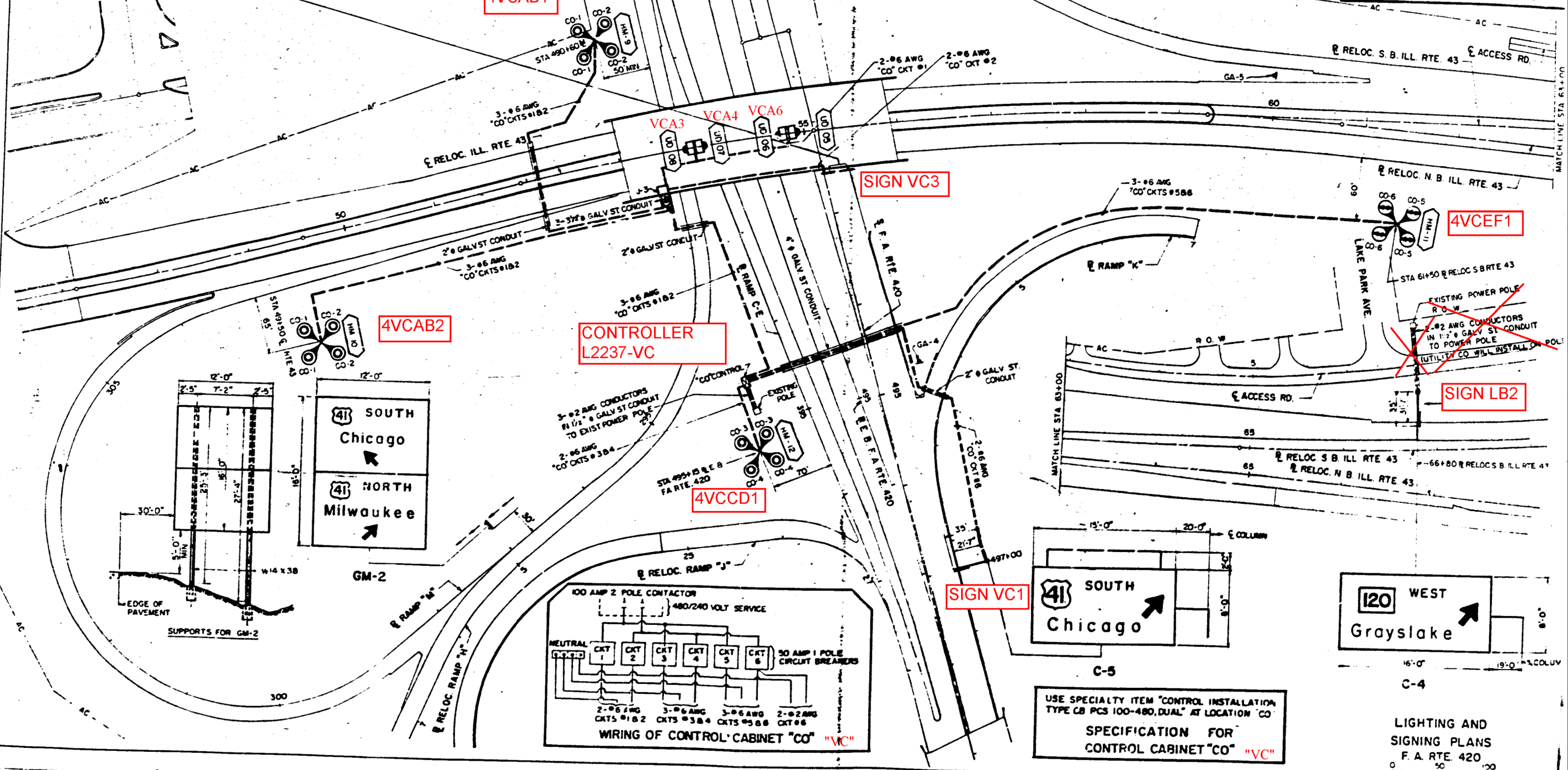
4VCAB1

ALL LIGHTS SHOWN ON THIS SHEET ARE 240 VOLTS

FEDERAL AID ROUTE NO	SEC	COUNTY	TOTAL SHEETS
420	12R-185G	LAKE	278
ILLINOIS PROJECT			

NUMBER OF LAMPS PER CIRCUIT (VOLTAGE = 240V)						
LAMP SIZE	CKT 1	CKT 2	CKT 3	CKT 4	CKT 5	CKT 6
1000 W	4	4	2	2	2	2
175 W	4	0	0	0	0	0
85 W	0	10	0	0	0	0
TOTAL AMPS	22	23	9	9	9	9

ELECTRIC LOADS "VC" AT CONTROL CABINET "CO"

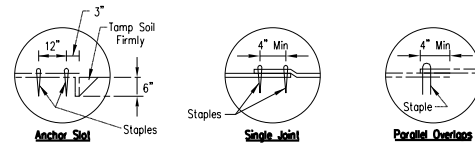
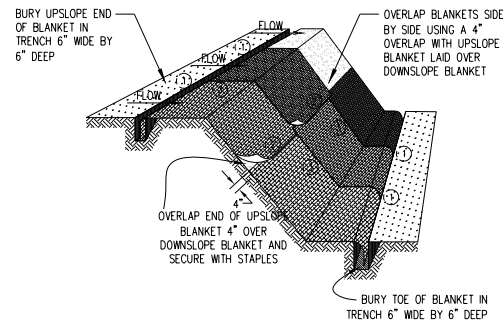


USE SPECIALTY ITEM "CONTROL INSTALLATION TYPE CB PCS 100-480, DUAL" AT LOCATION "CO"

SPECIFICATION FOR CONTROL CABINET "CO" "VC"

LIGHTING AND SIGNING PLANS F. A. RTE 420

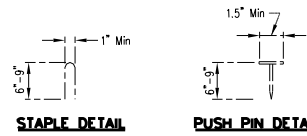
EROSION CONTROL BLANKET



DETAIL 1

DETAIL 2

DETAIL 3

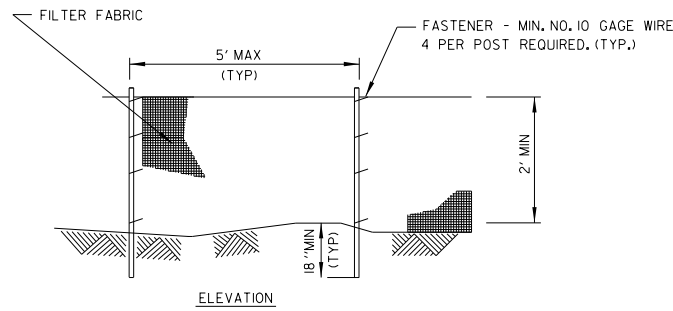


STAPLE DETAIL

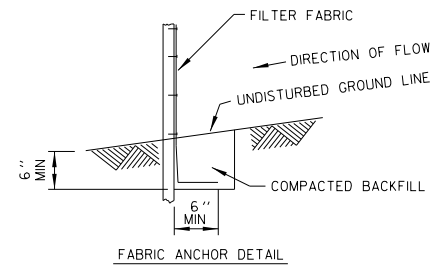
PUSH PIN DETAIL

- NOTES:
1. STAPLES SHALL BE PLACED IN A DIAMOND PATTERN AT 2 PER S.Y. FOR STICHED BLANKETS, NON-STICHED SHALL USE 4 STAPLES PER S.Y. OF MATERIAL. THIS EQUATES TO 200 STAPLES WITH STICHED BLANKET AND 400 STAPLES WITH NON-STICHED BLANKET PER 100 S.Y. OF MATERIAL.
 2. STAPLE OR PUSH PIN LENGTHS SHALL BE SELECTED BASED ON SOIL TYPE AND CONDITIONS. (MINIMUM STAPLE LENGTH IS 6")
 3. EROSION CONTROL MATERIAL SHALL BE PLACED IN CONTACT WITH THE SOIL OVER A PREPARED SEEDBED.
 4. ALL ANCHOR SLOTS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

SILT FENCE PLAN



ELEVATION



FABRIC ANCHOR DETAIL

- NOTES:
1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
 2. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 10R 2, CLASS I WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
 3. FENCE POSTS SHALL BE EITHER STANDARD STEEL POST OR WOOD POST WITH A MINIMUM CROSS-SECTIONAL AREA OF 3.0 SQ. IN.
 4. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
 5. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
 6. DRIVE BOTH POSTS A MINIMUM OF 18 INCHES INTO THE GROUND AND BURY THE FLAP.

FILE NAME
D160X39-sht-details-drainage-01.dgn
Default



DESIGNED -	CMD	REVISED -	
DRAWN -	VEA	REVISED -	
CHECKED -	RJD	REVISED -	
DATE -	3/3/2017	REVISED -	

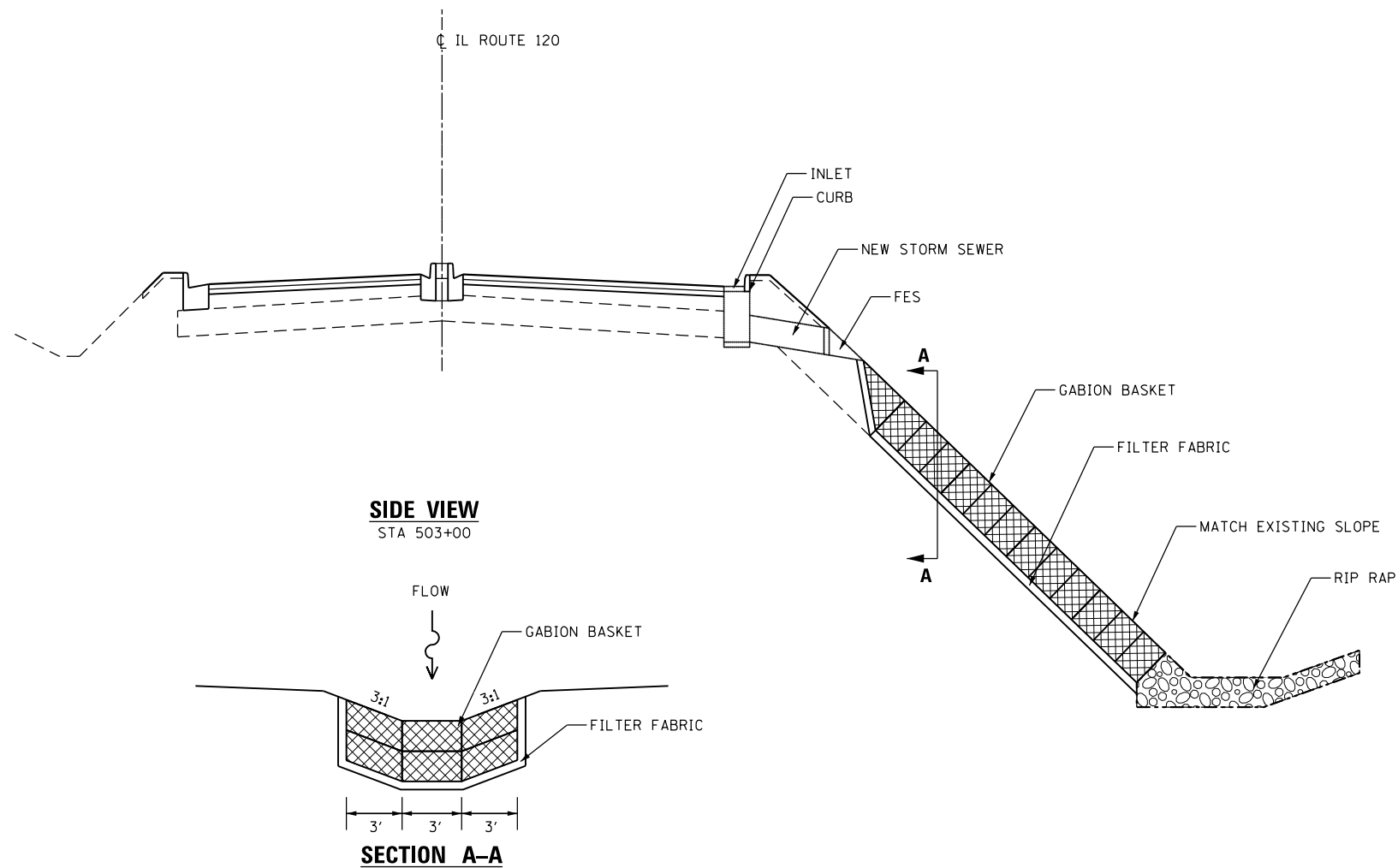
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
MISCELLANEOUS DETAILS

SCALE: NONE SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	151
			CONTRACT NO. 60X39	
ILLINOIS FED. AID PROJECT				

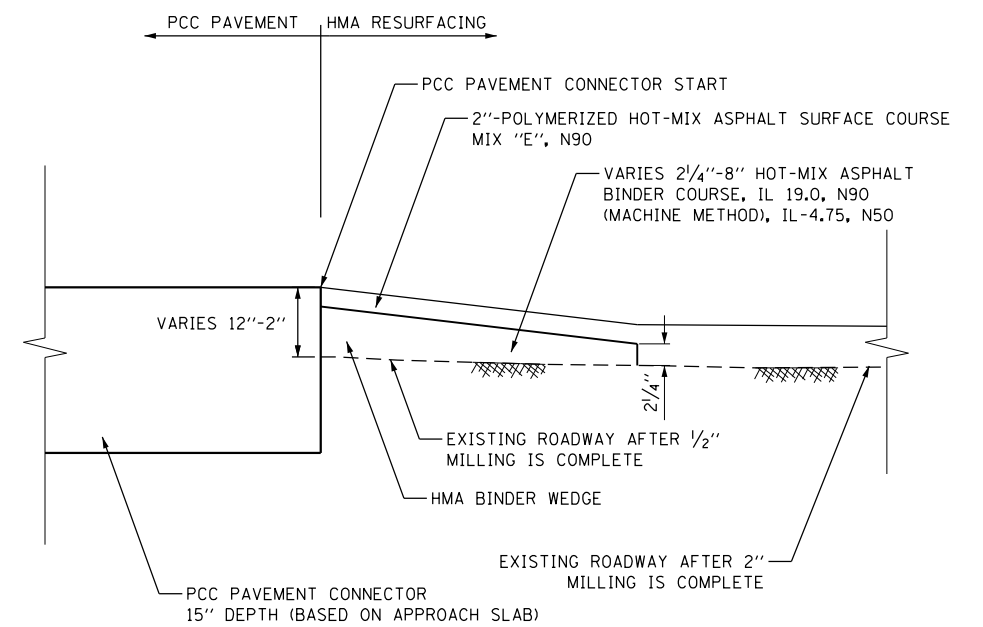
DDET-01



**REDESIGN OF STORM SEWER AT STEEP SIDE SLOPE
WITH AT-GRADE GABION BASKET**

NOTES:

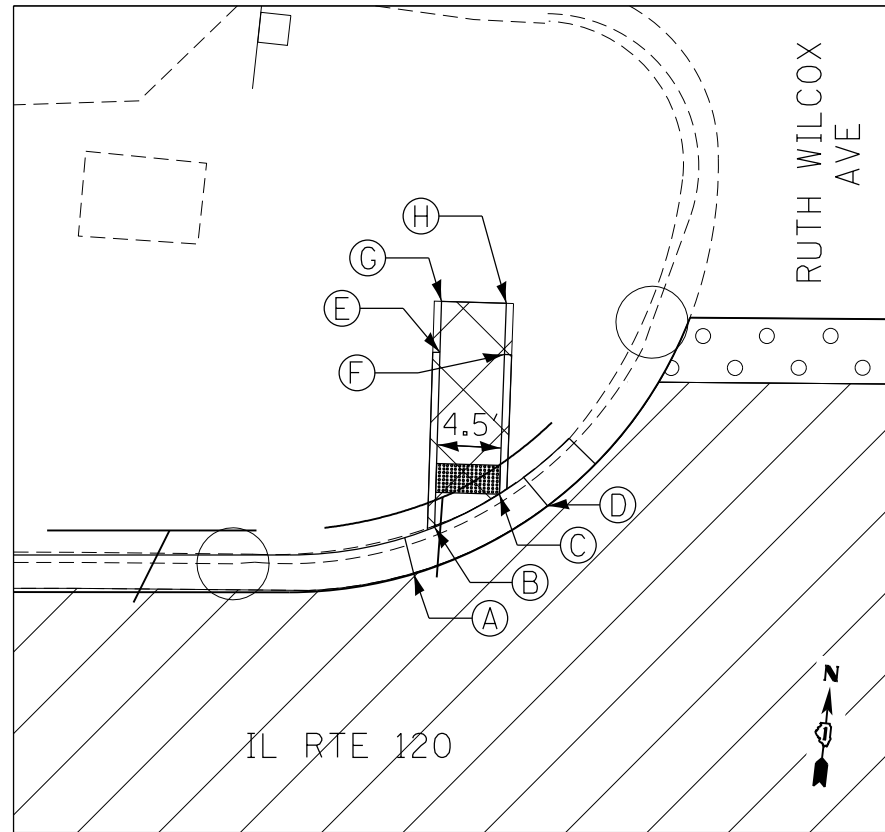
1. THE FILTER FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2 CLASS I, II OR III.
2. THE COARSE AGGREGATE BACKFILL SHALL MEET THE IDOT REQUIREMENT FOR THE FOLLOWING GRADATIONS CA-1, CA-3 OR RR-1.
3. THE GABIONS SHALL BE INSTALLED ACCORDING TO CONSTRUCTION SPECIFICATION 64 WIRE MESH GABIONS.
4. BASKETS WHICH ARE STACKED IN TIERS SHALL HAVE VERTICAL SEAMS STAGGERED FOR EACH ROW.
5. GABION BASKETS SHALL MEET THE REQUIREMENTS OF ARTICLE 284 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS.



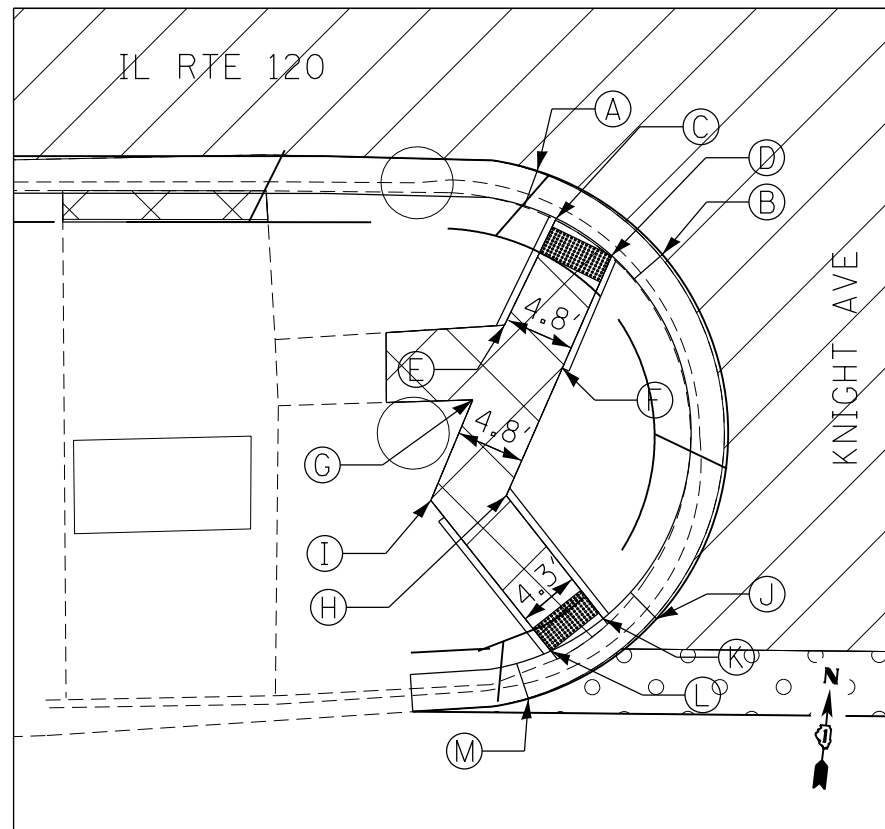
ASPHALT PAVEMENT WEDGE DETAIL

NOTE:

1. THIS DETAIL IS TO BE USED IN CONJUNCTION WITH THE ASPHALT DEPTH TABLE FOUND ON PAGE HMA-01



POINT	STATION	OFFSET	ELEVATION
A	525+67.50	31.3 LT	697.43
B	525+68.90	34.5 LT	697.76
C	525+73.40	36.8 LT	697.45
D	525+76.80	36.0 LT	697.31
E	525+69.30	46.7 LT	697.84
F	525+73.80	46.5 LT	697.88
G	525+69.40	50.2 LT	697.85
H	525+73.90	50.1 LT	697.81



POINT	STATION	OFFSET	ELEVATION
A	525+46.80	31.0 RT	697.24
B	525+55.50	36.8 RT	697.05
C	525+48.10	34.3 RT	697.20
D	525+52.00	36.9 RT	697.18
E	525+44.50	41.7 RT	697.19
F	525+48.50	44.7 RT	697.16
G	525+42.30	46.9 RT	697.24
H	525+44.70	53.6 RT	697.12
I	525+39.40	53.9 RT	697.15
J	525+55.10	62.1 RT	697.02
K	525+51.40	62.1 RT	697.01
L	525+47.80	64.4 RT	697.03
M	525+46.20	67.7 RT	697.00

FILE NAME
D160X39-sht-details-201.dgn
Default



100 S. BRACKER DRIVE SUITE 700 CHICAGO IL 60606 P312-406-0010 F312-406-0015

DESIGNED - CMD
DRAWN - JMR
CHECKED - RJD
DATE - 3/3/2017

REVISED -
REVISED -
REVISED -
REVISED -

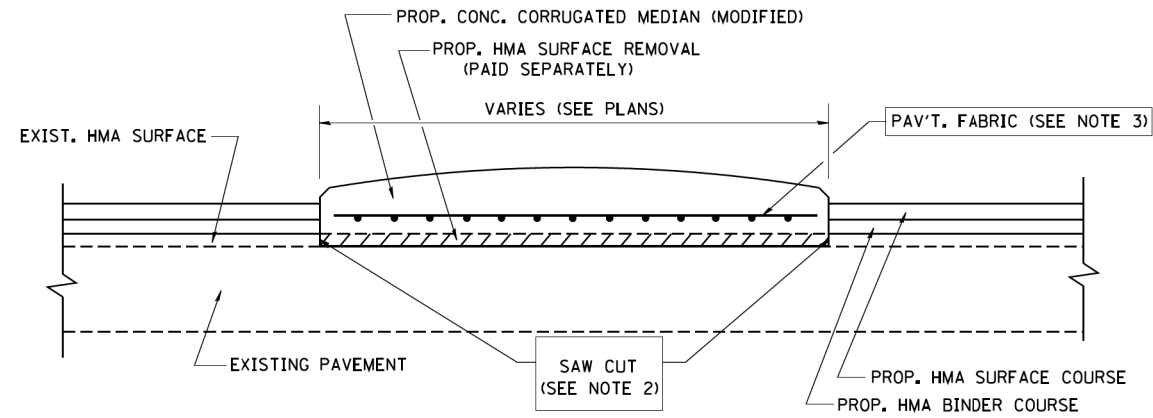
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
DETAIL - SIDEWALK & ADA RAMPS

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	12(HB&VB)BR & RS-7	LAKE	198	153
CONTRACT NO. 60X39				
ILLINOIS FED. AID PROJECT				

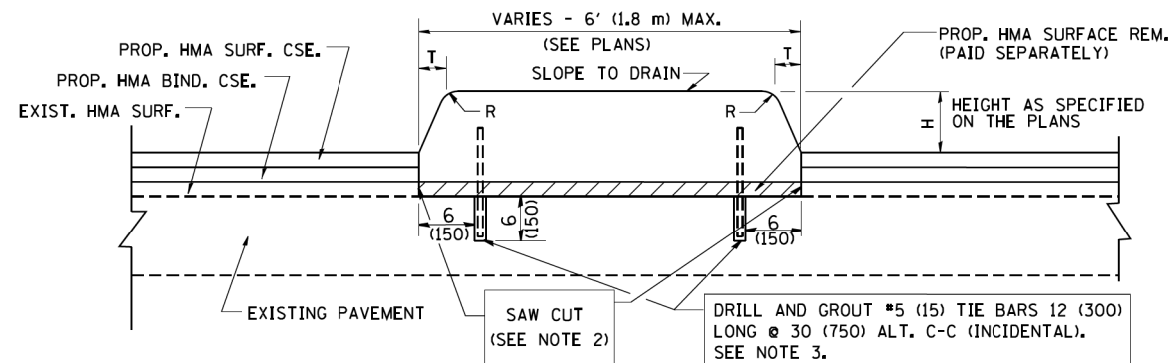
RDET-01



- NOTES:
1. CORRUGATED MEDIAN (MODIFIED) SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE PORTIONS OF STATE STANDARD 606306.
 2. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY DELETE THE SAW CUT IF A NEAT JOINT CAN BE OBTAINED BY MILLING THE HMA SURFACE TO BE REMOVED. SAW CUT WILL BE INCLUDED IN THE COST OF CORRUGATED MEDIAN (MODIFIED)
 3. PAVEMENT FABRIC WILL BE INCLUDED IN THE COST OF CORRUGATED MEDIAN (MODIFIED)

DETAILS FOR CORRUGATED MEDIAN (MODIFIED)

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT (SQUARE METER) FOR "CORRUGATED MEDIAN (MODIFIED)"



- NOTES:
1. CONCRETE MEDIAN TYPE SB (DOWELLED) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF STATE STANDARD 606301 AND SECTION 606 OF THE STANDARD SPECIFICATIONS.
 2. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY DELETE THE SAW CUT IF A NEAT JOINT CAN BE OBTAINED BY MILLING THE HMA SURFACE TO BE REMOVED. SAW CUT WILL BE INCLUDED IN THE COST OF "CONCRETE MEDIAN TYPE SB (DOWELLED)"
 3. FOR MEDIAN WIDTH LESS THAN 4' (1.2 m) USE ONE ROW OF #5 (15) BARS @ 30 (750) C-C ALONG THE MEDIAN CENTERLINE. TIE BARS WILL BE INCLUDED IN THE COST OF "CONCRETE MEDIAN TYPE SB (DOWELLED)"

H	R	T
6(150)	1(25)	1(25)
9(225)	1(25)	2(50)

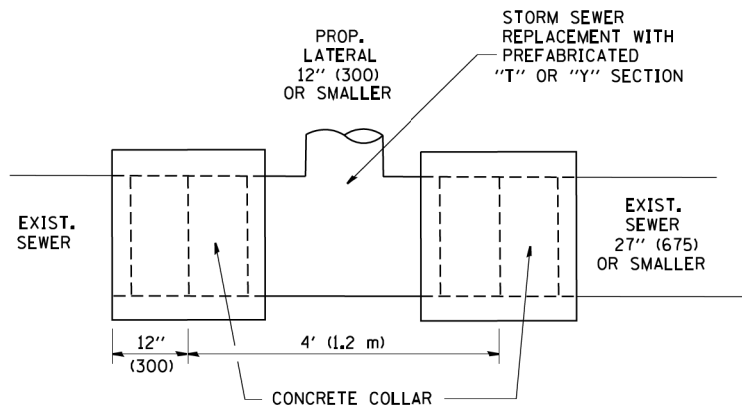
**DETAILS FOR CONCRETE MEDIAN
TYPE SB (DOWELLED)**

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT (SQUARE METER) FOR "CONCRETE MEDIAN TYPE SB (DOWELLED)"

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

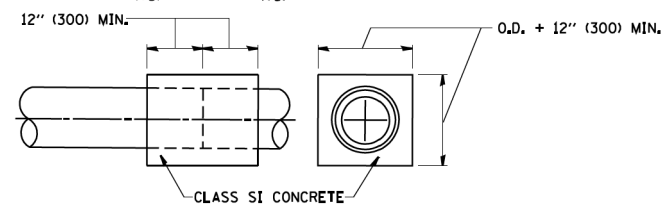
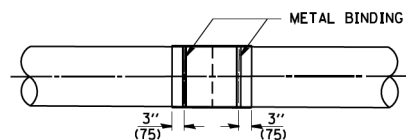
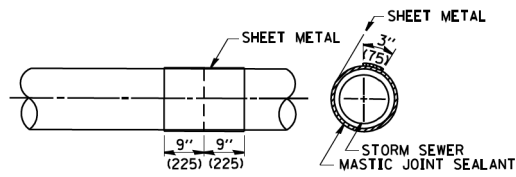
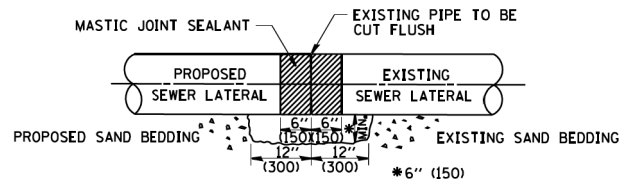
STD-1

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PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED - E. GOMEZ 08-28-00	SCALE: NONE			SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	BD600-02 (BD-5)		CONTRACT NO. 60X39	
PLOT DATE = 1/4/2008	DATE - 05-14-90	REVISED - R. BORO 01-01-07	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								



DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER

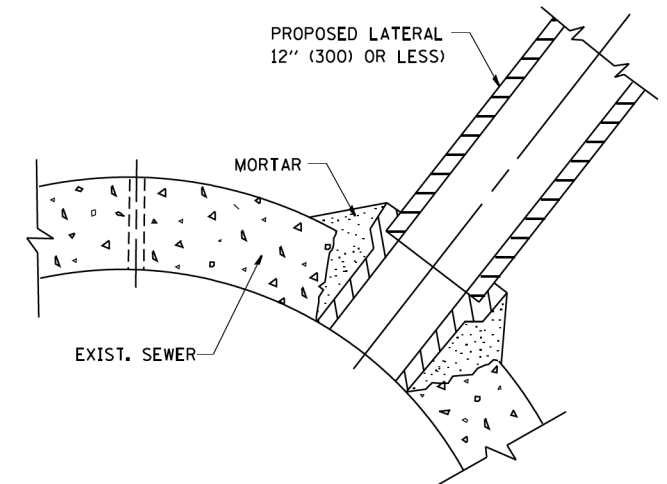


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12" x 6" (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN. STD-2

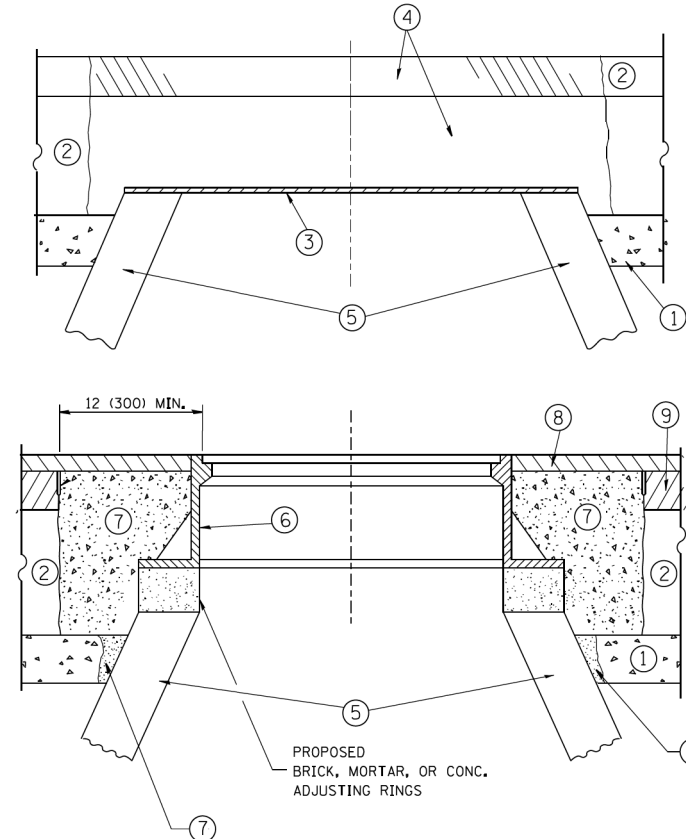
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	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - R. SHAH 10-25-94
	PLOT DATE = 1/4/2008	DATE - 07-25-90	REVISED - R. SHAH 06-12-96

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAIL OF STORM SEWER
CONNECTION TO EXISTING SEWER**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	155
BD500-01 (BD-7)			CONTRACT NO. 60X39	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

LEGEND

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS PP-1* CONCRETE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT:

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN. STD-3

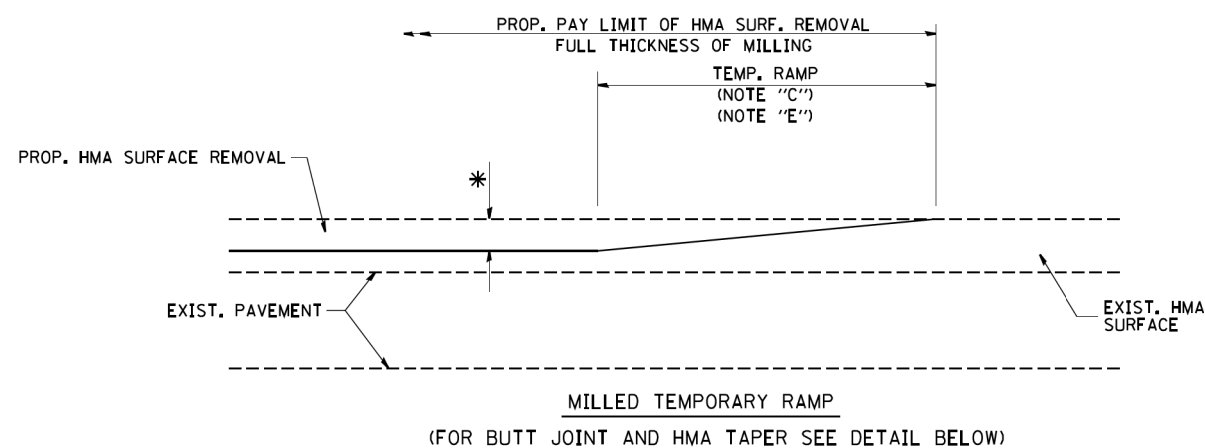
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

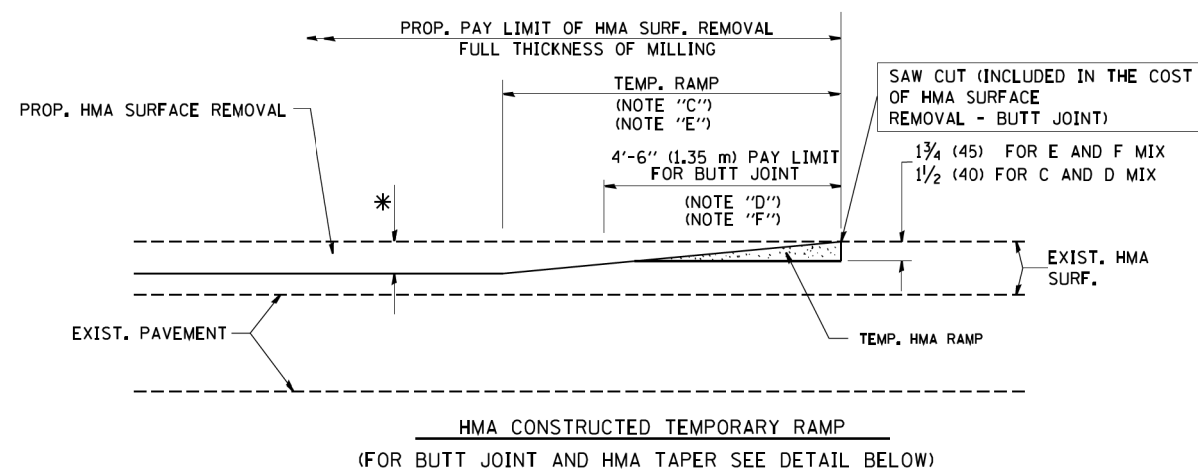
**DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	156
BD600-03 (BD-8)		CONTRACT NO. 60X39		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

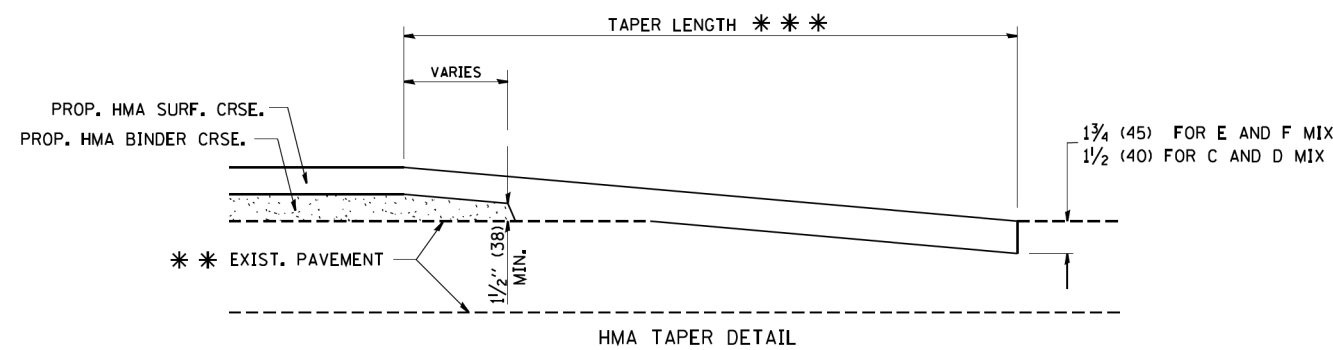
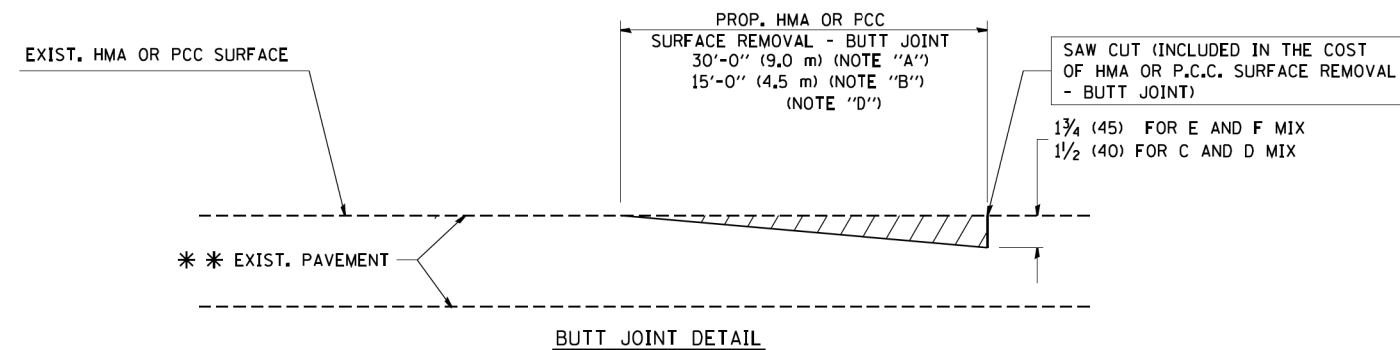


OPTION 1



OPTION 2

TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

STD-4

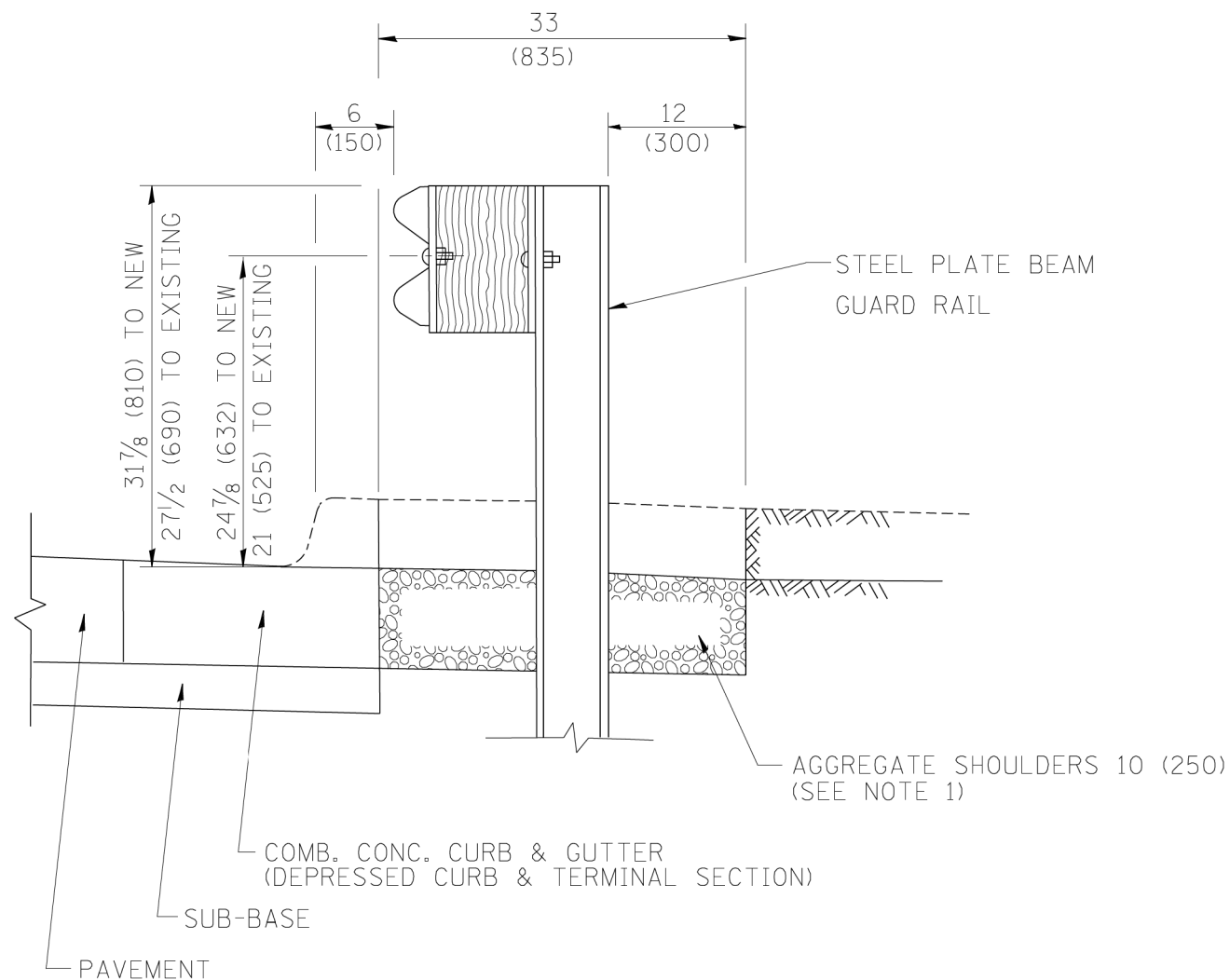
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	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND
HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

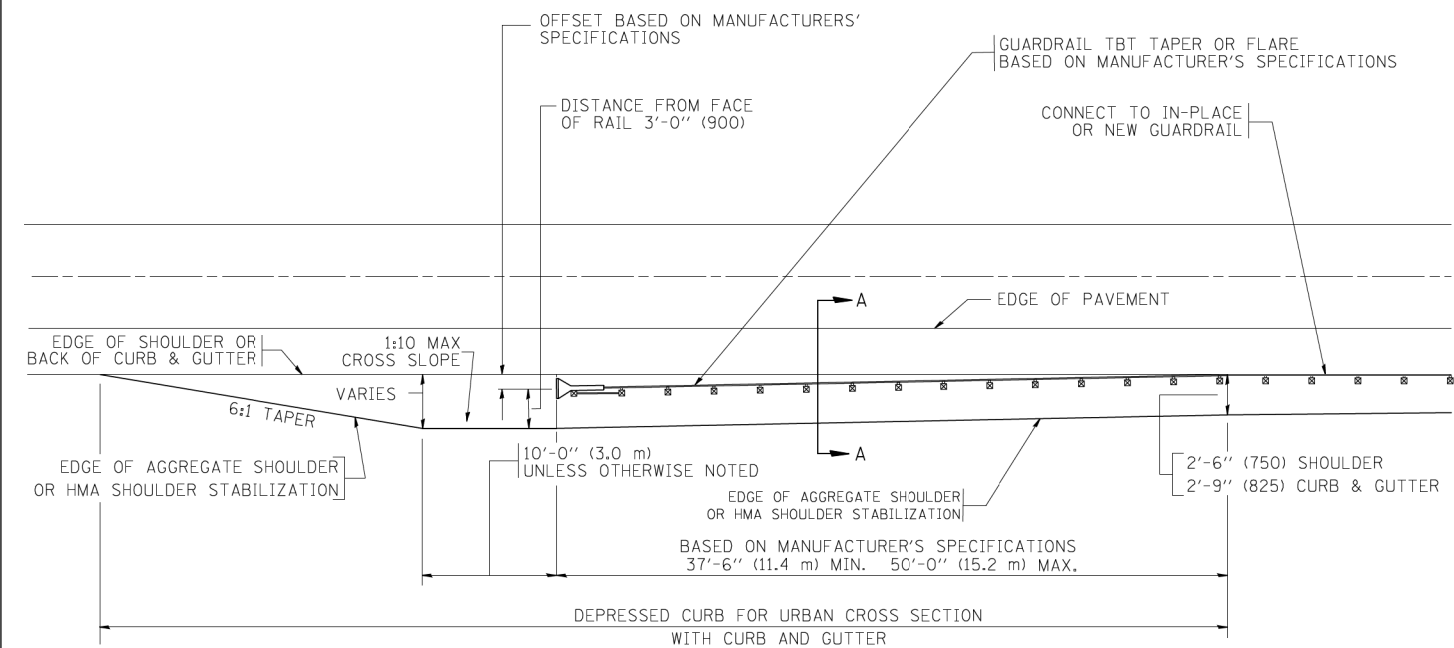
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BD400-05 BD32			CONTRACT NO. 60X39	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SECTION A-A

- NOTES:
1. THE AGGREGATE SHOULDER, 10" OR HMA SHOULDER, 6" (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
 2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
 3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

**DETAILS FOR STEEL PLATE BEAM
GUARD RAIL ADJACENT TO CURB AND GUTTER
[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]**



**DEPRESSED CURB AND GUTTER AND
SHOULDER TREATMENT AT TBT TY. 1 SPL.**

BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDERS 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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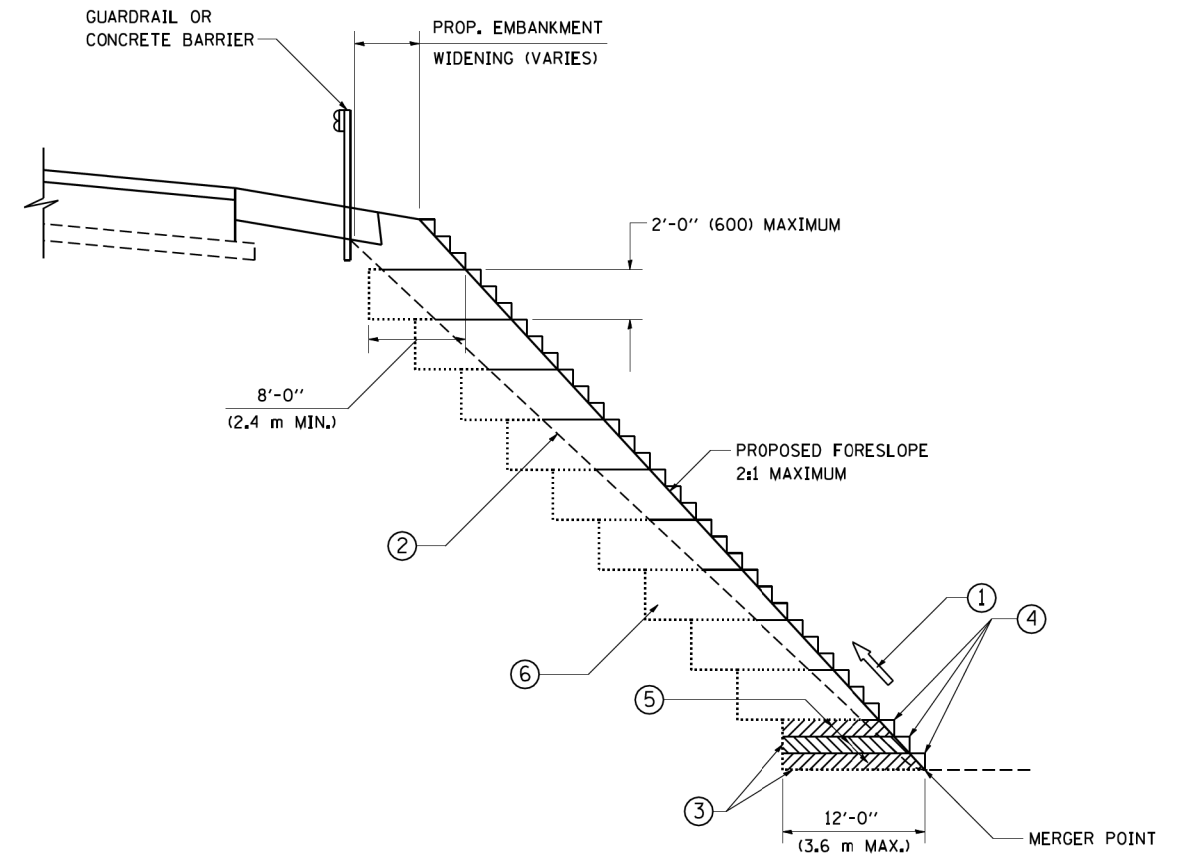
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAILS FOR DEPRESSED CURB & GUTTER AND
SHOULDER TREATMENT AT TBT TY 1 SPL.**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	158
BD600-10 (BD 34)		CONTRACT NO. 60X39		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STD-5



**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

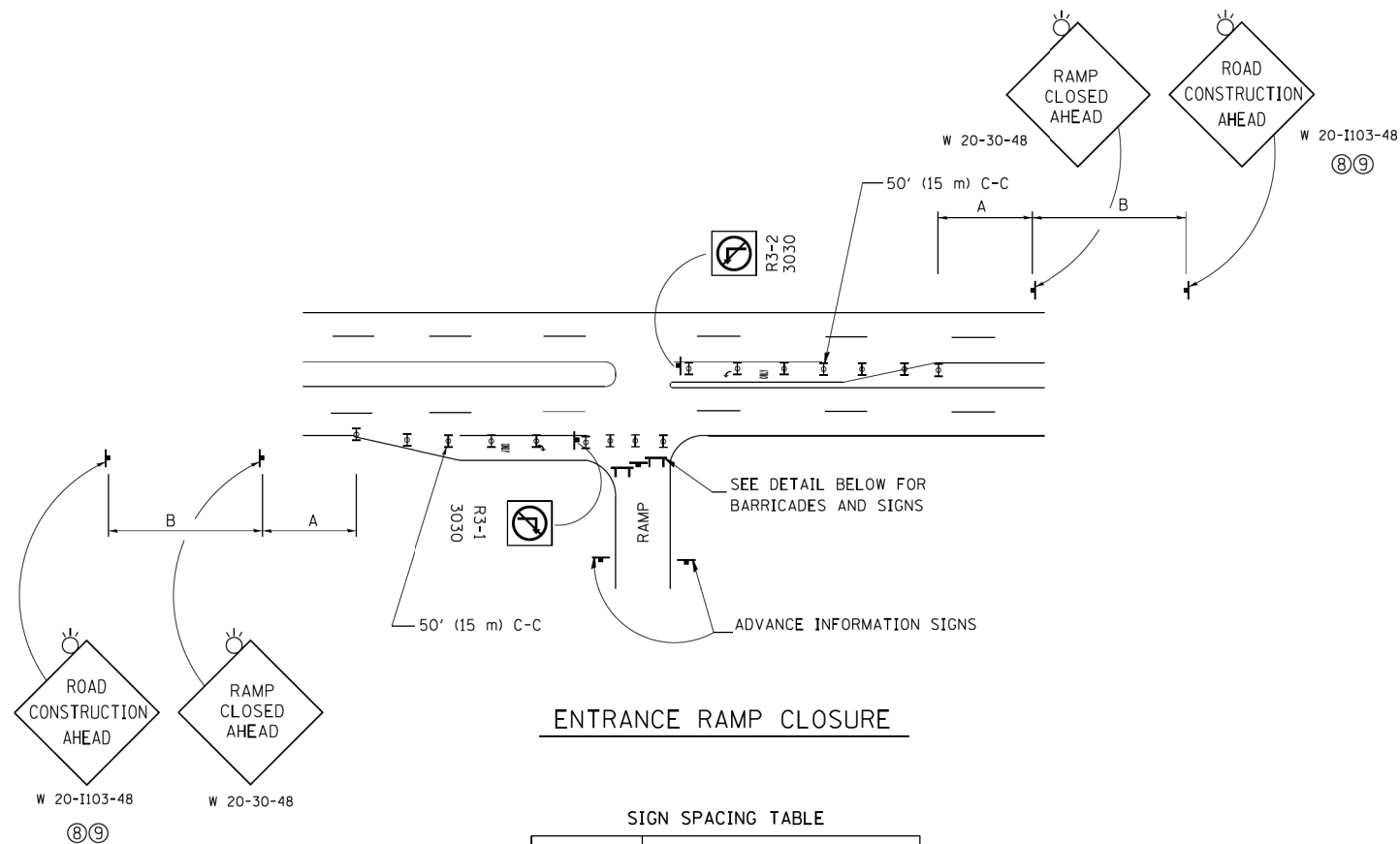
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN. STD-6

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BENCHING DETAIL FOR EMBANKMENT WIDENING			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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BD-51			CONTRACT NO. 60X39	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

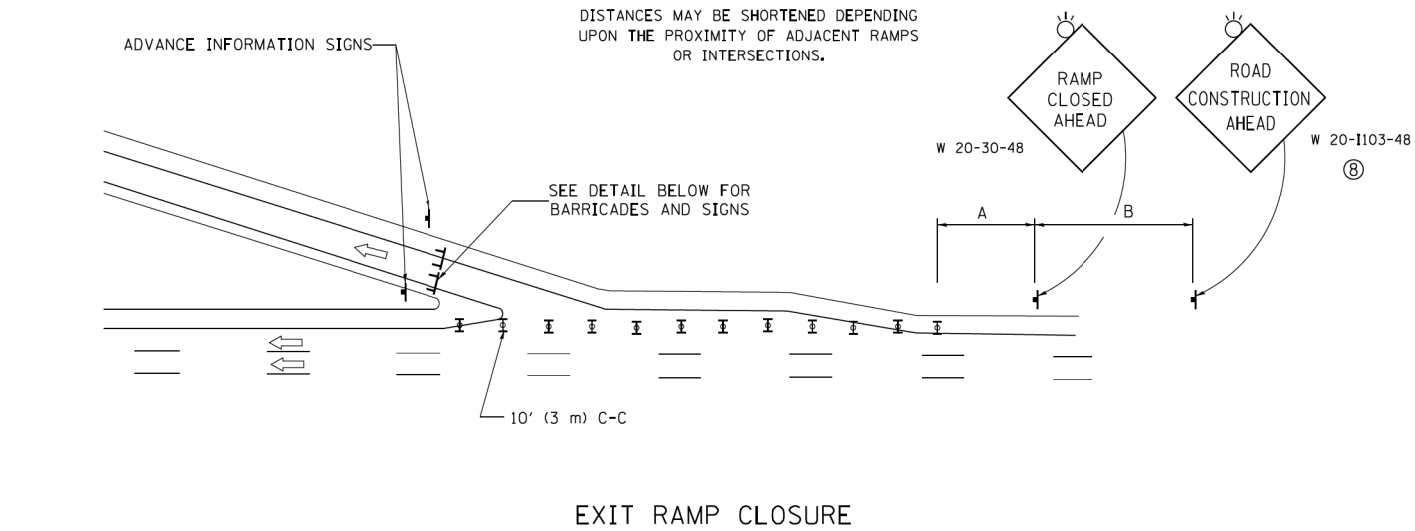


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

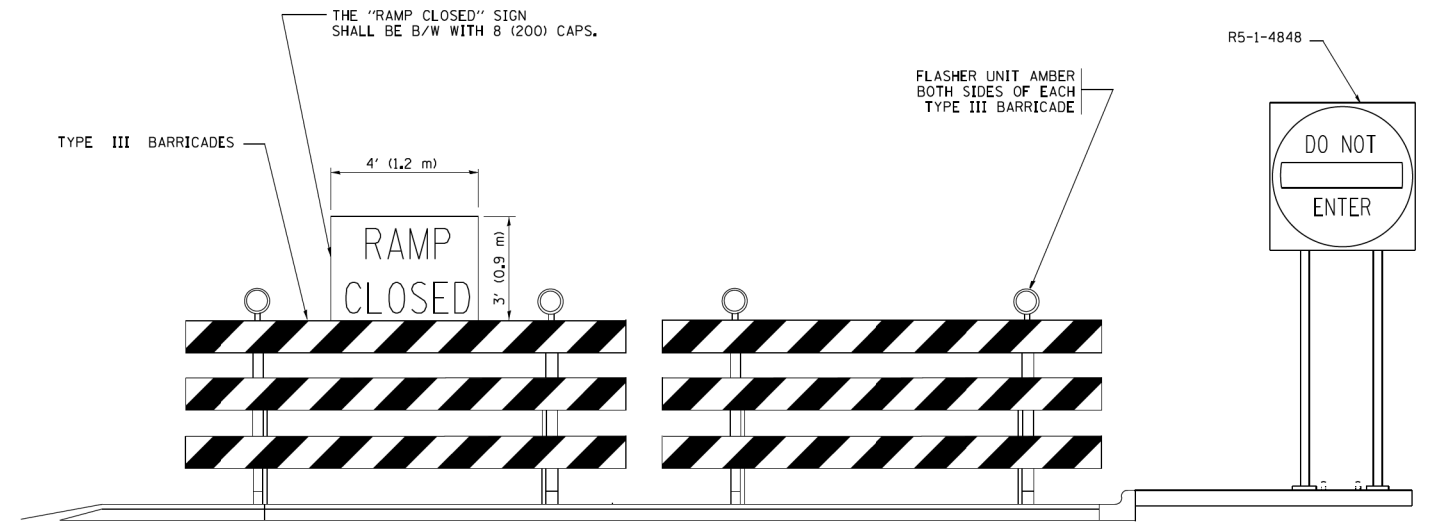
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

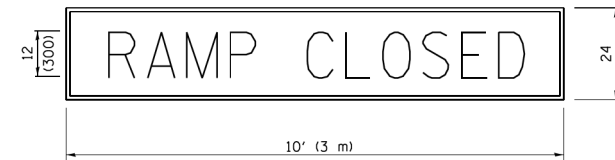
SYMBOLS

- ▬ TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- ▬ TYPE III BARRICADE WITH 2 FLASHING LIGHTS



DETAIL FOR REQUIRED BARRICADES & SIGNS

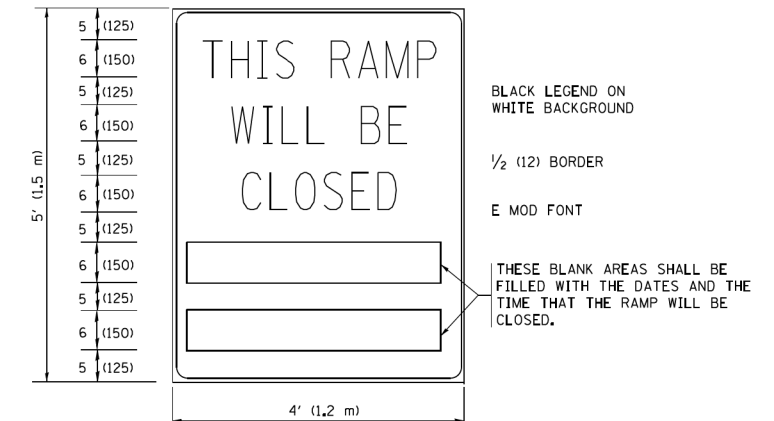
RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER

THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE BACKGROUND

1/2 (12) BORDER

E MOD FONT

THESE BLANK AREAS SHALL BE FILLED WITH THE DATES AND THE TIME THAT THE RAMP WILL BE CLOSED.

THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH.
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

STD-7

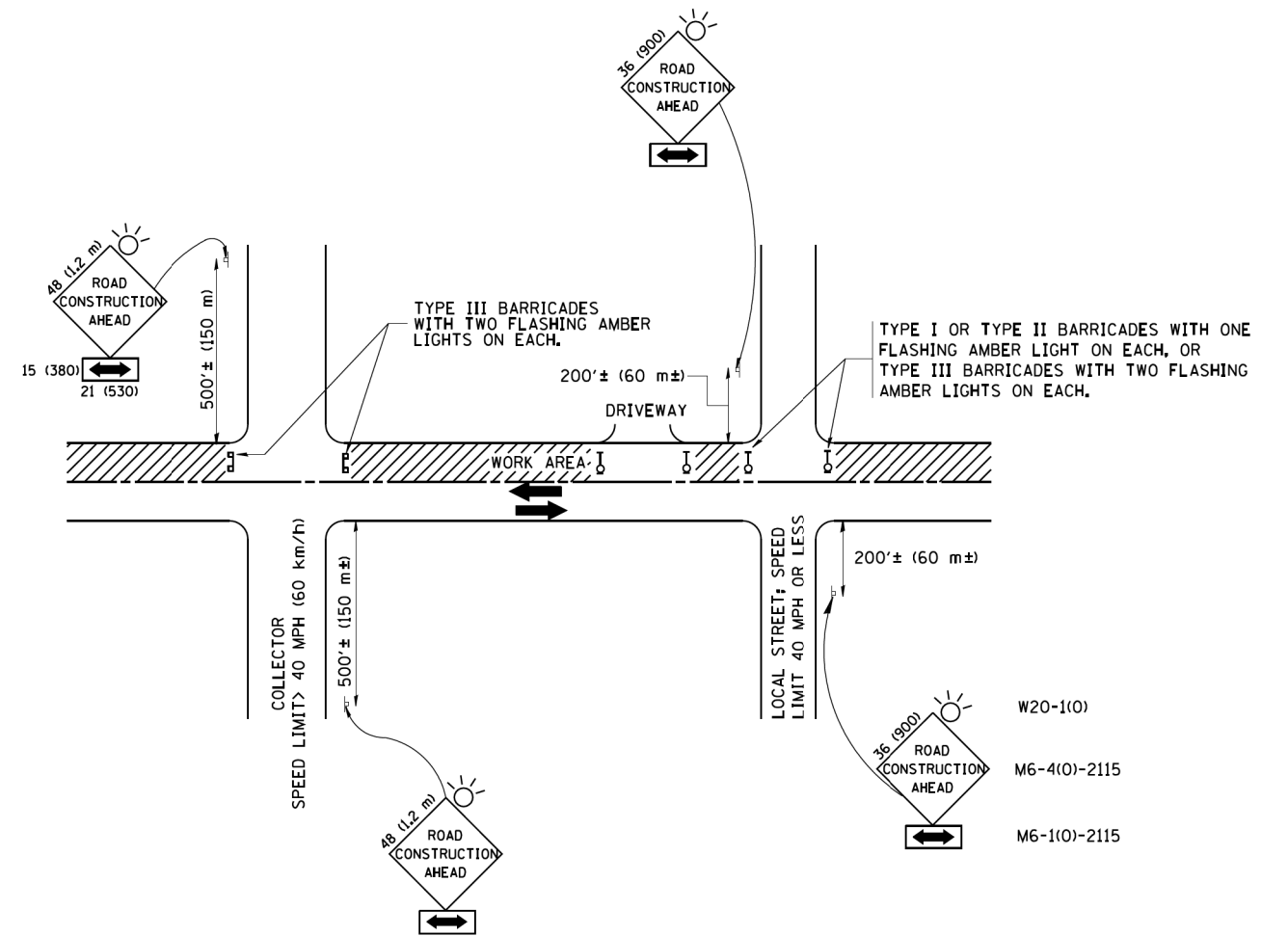
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ENTRANCE AND EXIT RAMP
CLOSURE DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	160
TC-08			CONTRACT NO. 60X39	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

STD-8

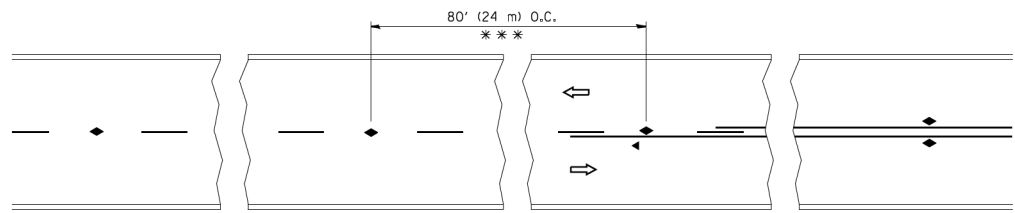
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	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

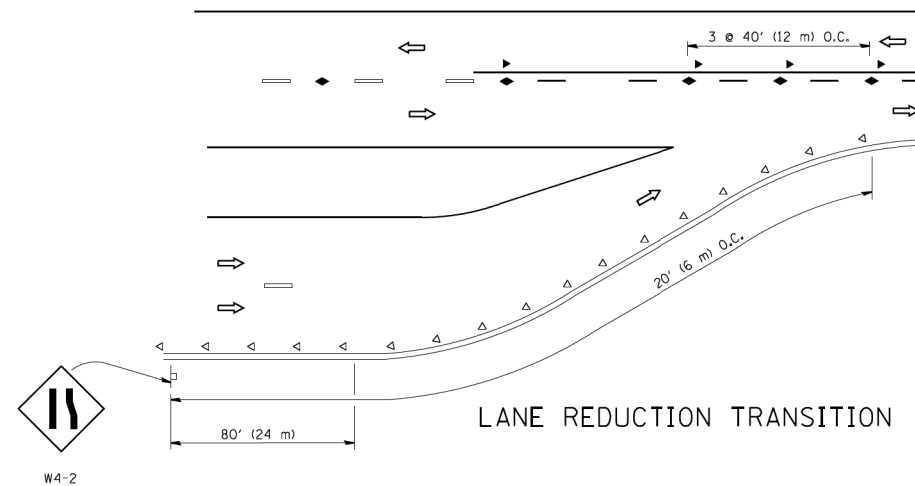
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-10			CONTRACT NO. 60X39	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

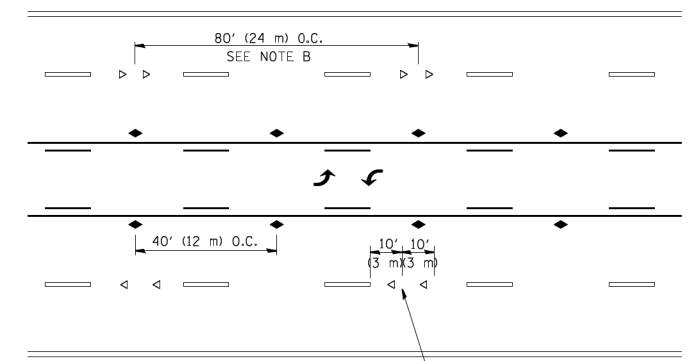


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

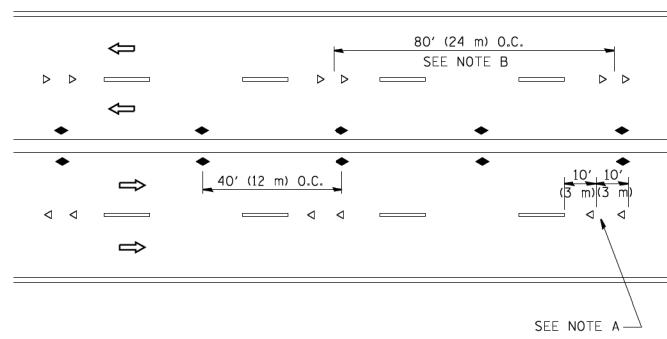
TWO-LANE/TWO-WAY



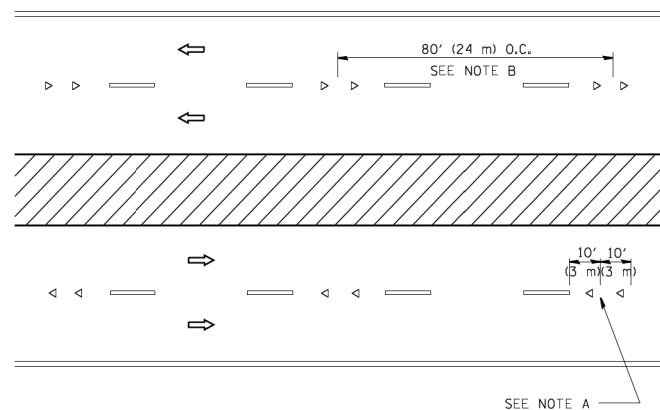
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

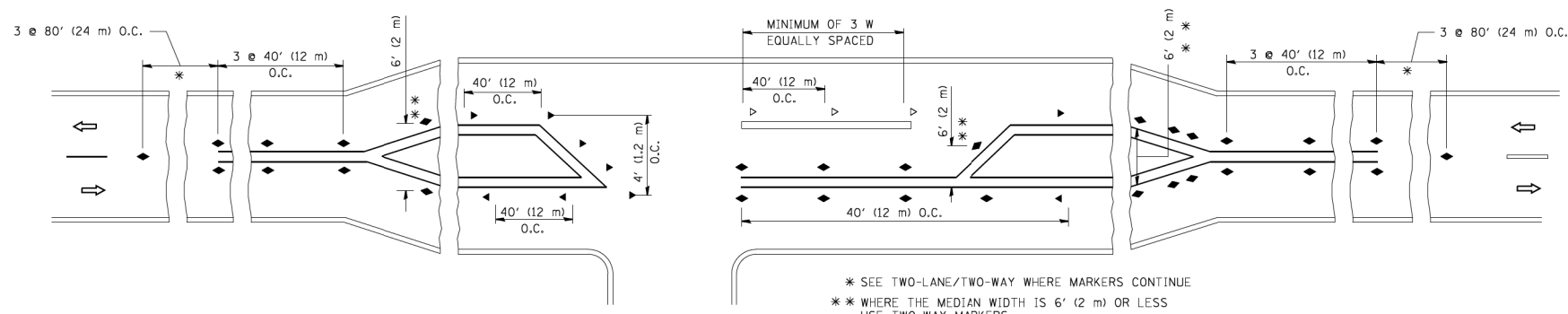
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

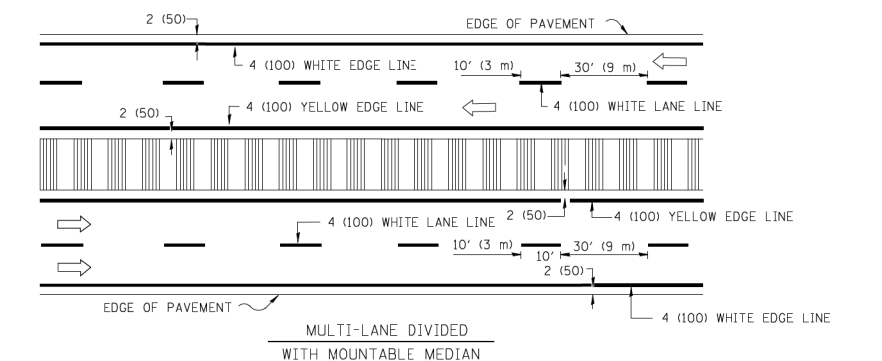
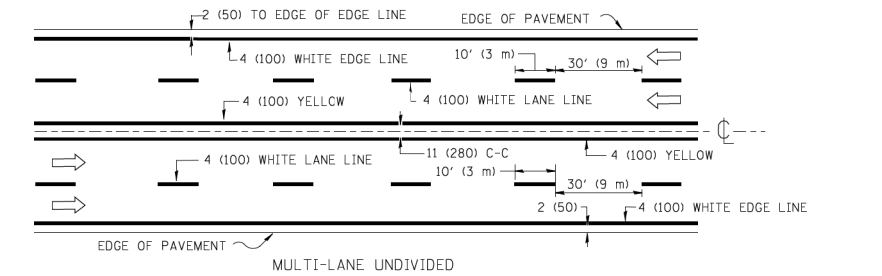
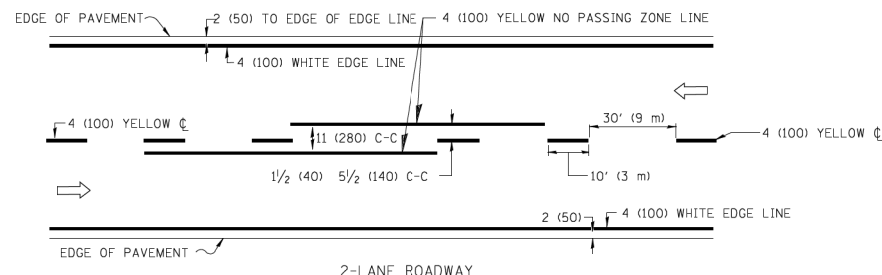


* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

LEFT TURN

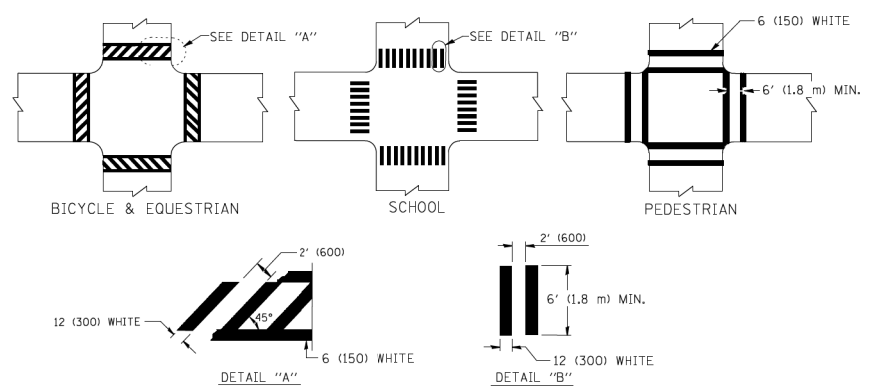
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = lveysa	DESIGNED -	REVISED - T. RAMMACHER 09-19-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL APPLICATIONS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca:\pki\work\pki\dot\lveysa\d0108315\tcl1.dgn		DRAWN -	REVISED - T. RAMMACHER 03-12-99		RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)			342	12(HB&VB)BR & RS-7	LAKE	198	162	
		CHECKED -	REVISED - T. RAMMACHER 01-06-00		SCALE: NONE	SHEET NO. 1	OF 1 SHEETS	STA.	TO STA.	TC-11			CONTRACT NO. 60X39
		DATE -	REVISED - C. JUCIUS 09-09-09					FED. ROAD DIST. NO. 1 ILLINOIS			FED. AID PROJECT		

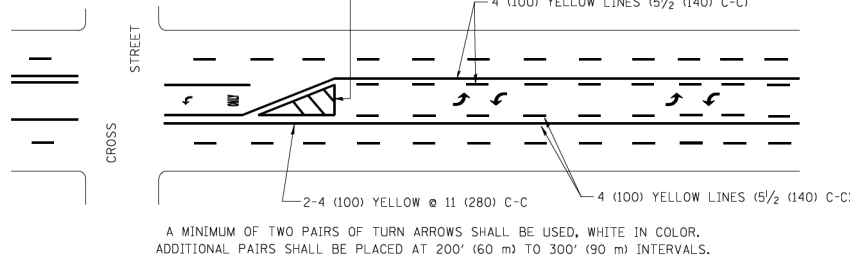
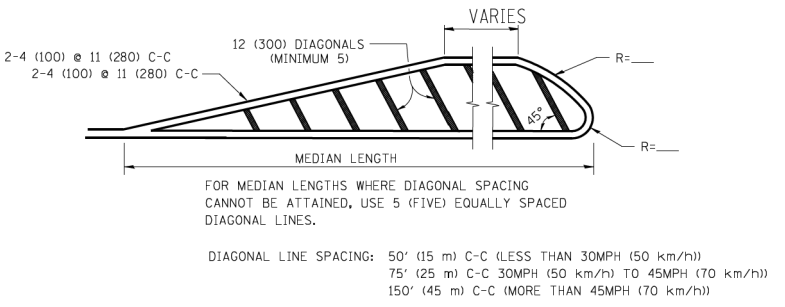
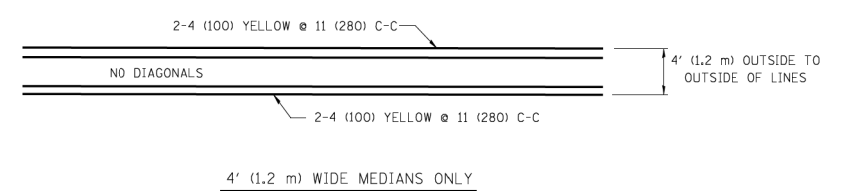


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

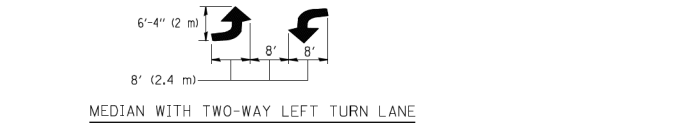
TYPICAL LANE AND EDGE LINE MARKING



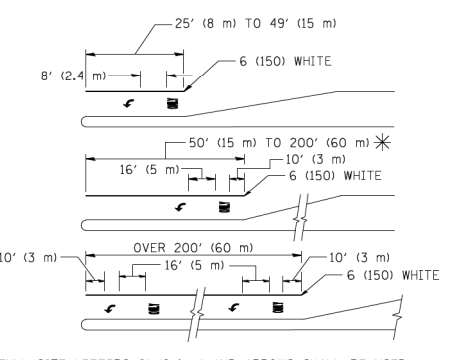
TYPICAL CROSSWALK MARKING



TYPICAL PAINTED MEDIAN MARKING



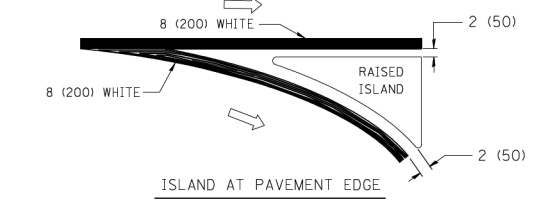
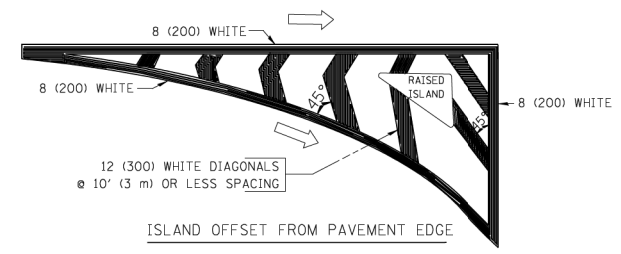
MEDIAN WITH TWO-WAY LEFT TURN LANE



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)
 * TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

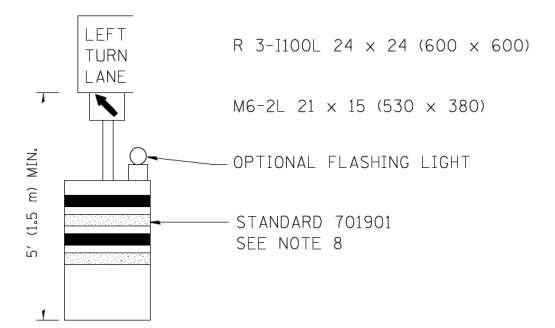
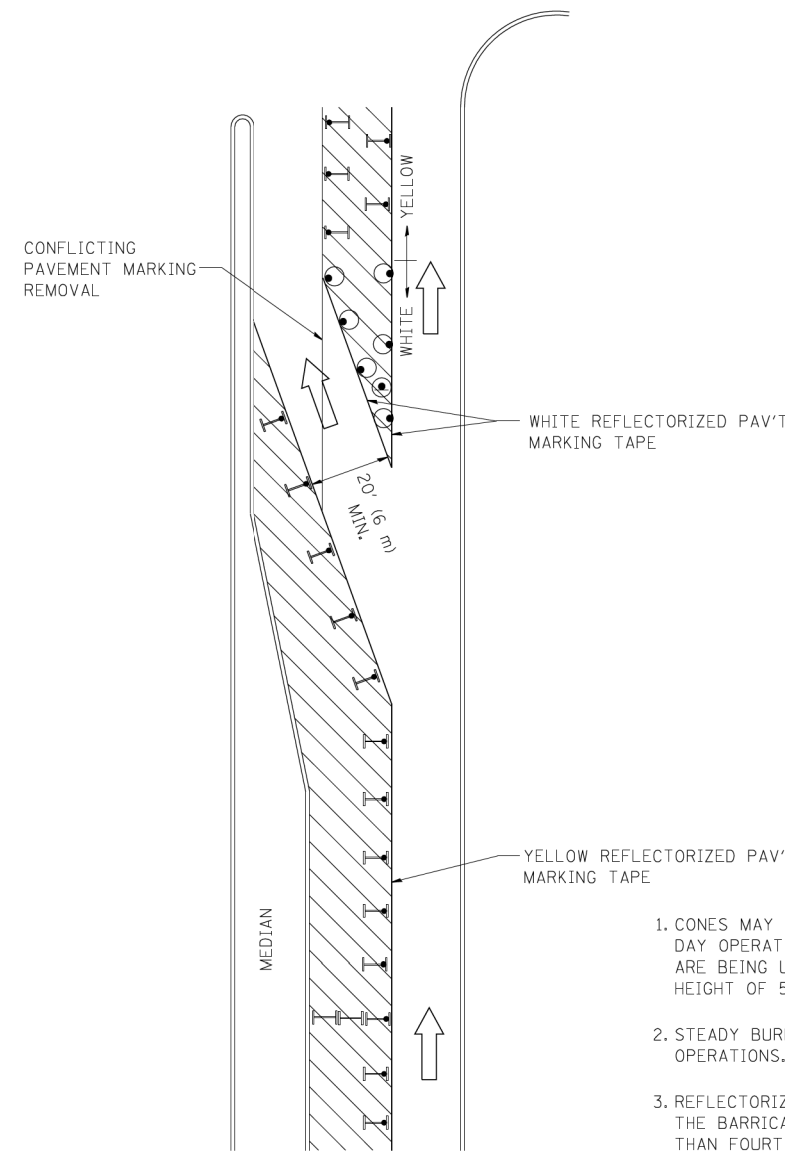


TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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









GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 PREQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

LEGEND

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

FILE NAME =	USER NAME = drivakosgn	REVISED -T, RAMMACHER 09-08-94	REVISED - R, BORO 09-14-09
ca:\p\work\PWIDOT\DRIVAKOSGN\d0108315\td14.dgn		REVISED - A, HOUSEH 11-07-95	REVISED -
		REVISED - A, HOUSEH 10-12-96	REVISED -
PLOT SCALE = 49.9999' / IN.		REVISED -T, RAMMACHER 01-06-00	REVISED -
PLOT DATE = 9/14/2009			

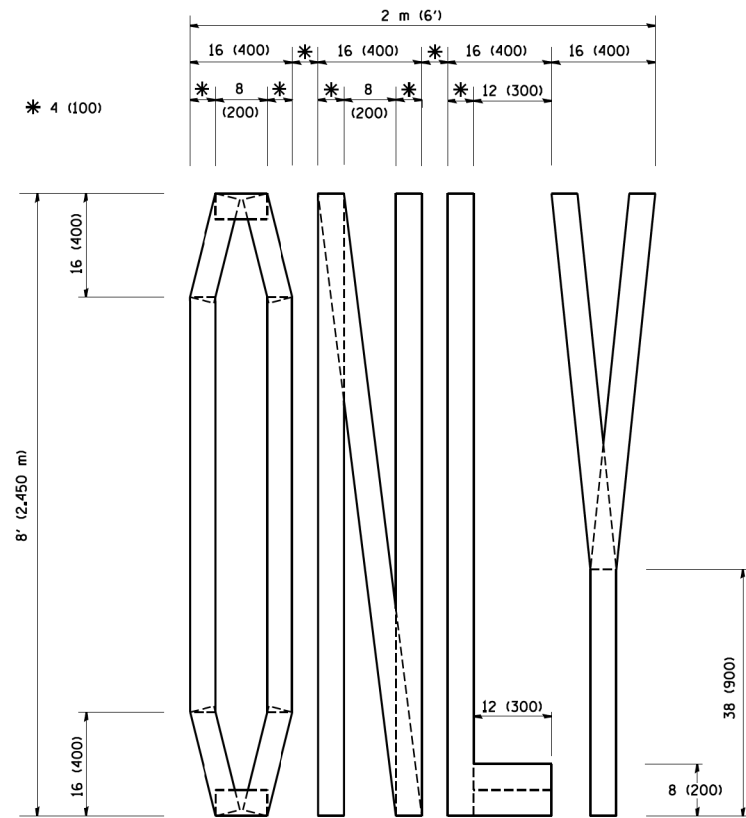
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)**

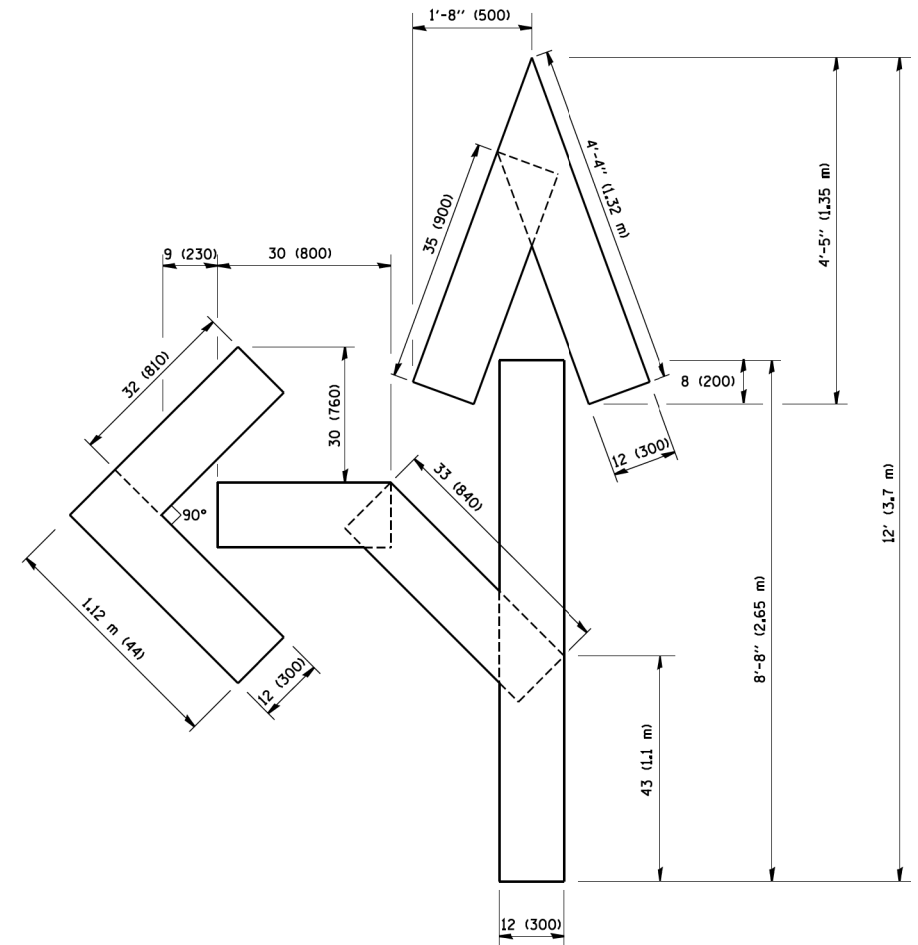
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	164
TC-14		CONTRACT NO. 60X39		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

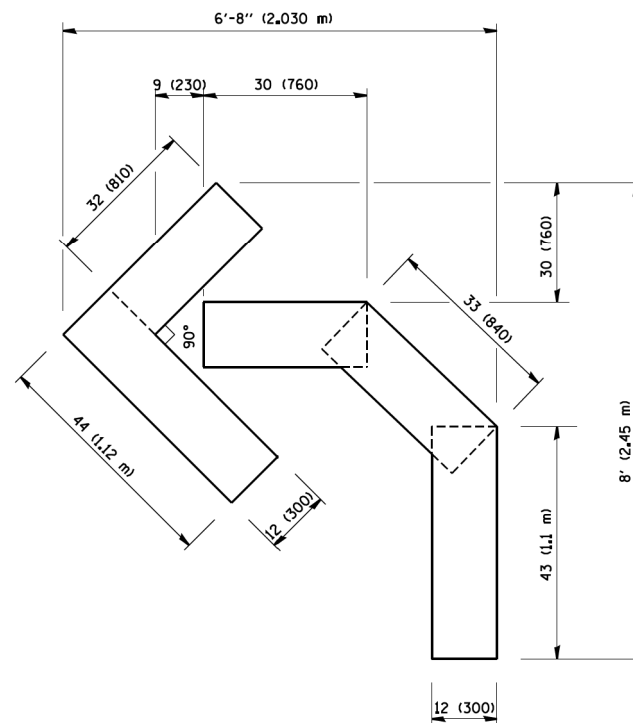
STD-11



QUANTITY
 4 (100) LINE = 64.1 ft. (19.7 m)
 21.1 sq. ft. (1.97 sq. m)



QUANTITY
 4 (100) LINE = 82.5 ft. (25.3 m)
 27.5 sq. ft. (2.53 sq. m)



QUANTITY
 4 (100) LINE = 45.5 ft. (13.9 m)
 15.2 sq. ft. (1.39 sq. m)

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

FILE NAME = W:\distata\22x34\ta16.dgn	USER NAME = geglantob	DESIGNED -	REVISED - T. RAMMACHER 06-05-96
		DRAWN -	REVISED - T. RAMMACHER 11-04-97
		CHECKED -	REVISED - T. RAMMACHER 03-02-98
		DATE - 09-18-94	REVISED - E. GOMEZ 08-28-00

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

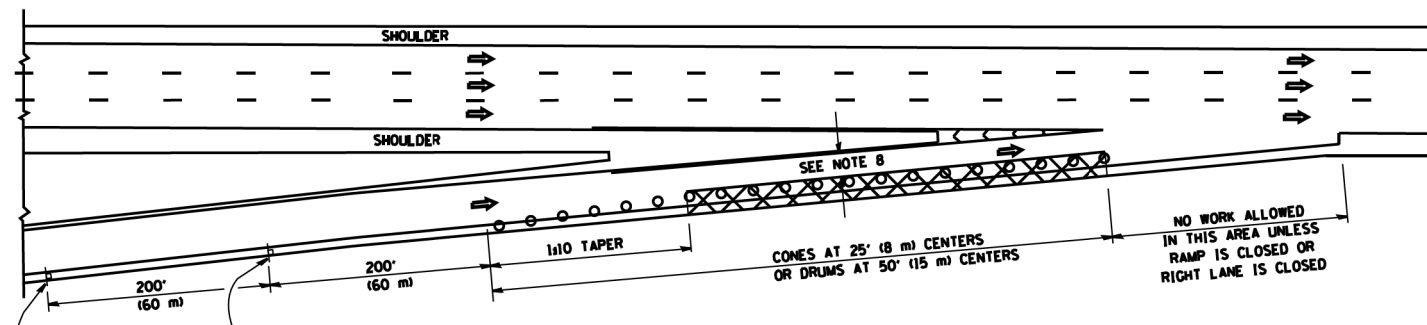
PAVEMENT MARKING LETTERS AND SYMBOLS
 FOR TRAFFIC STAGING

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

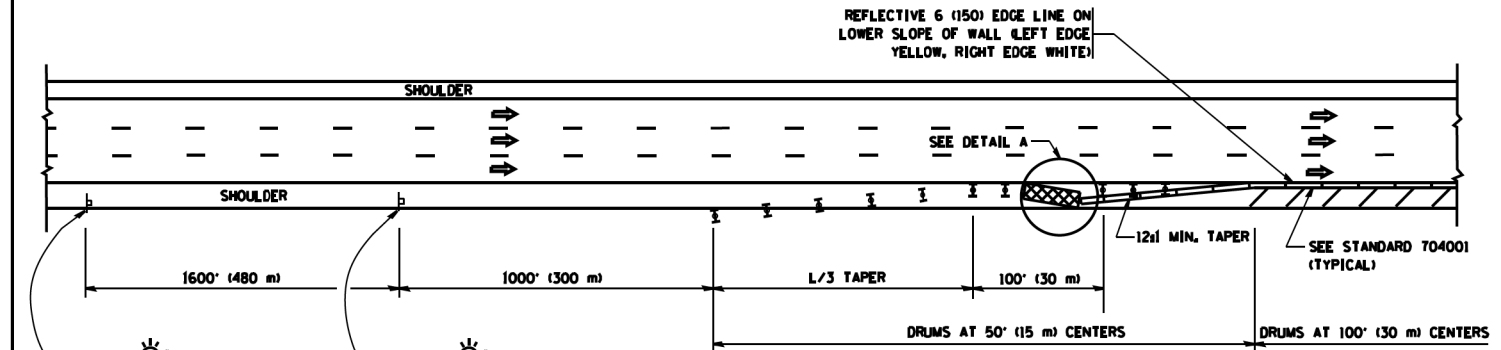
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342	12(HB&VB)BR & RS-7	LAKE	198	165
TC-16			CONTRACT NO. 60X39	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

PARTIAL RAMP CLOSURE DETAILS

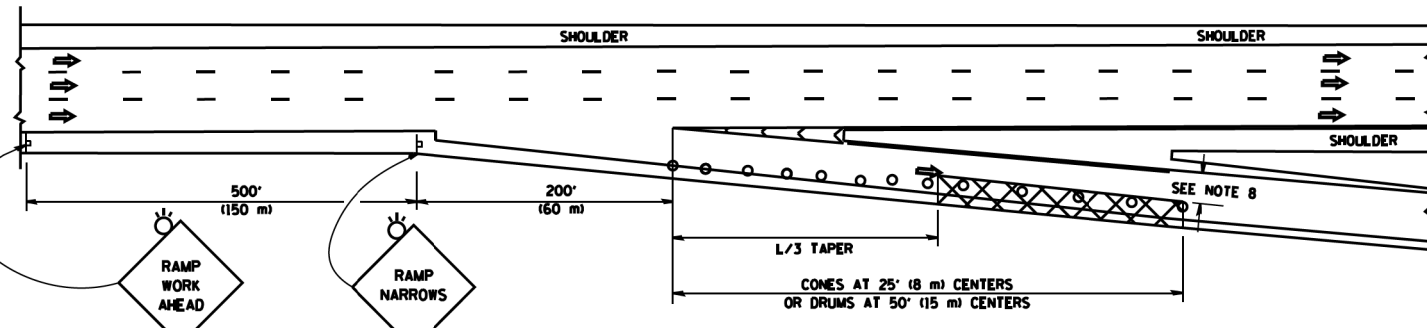
SHOULDER CLOSURE DETAILS



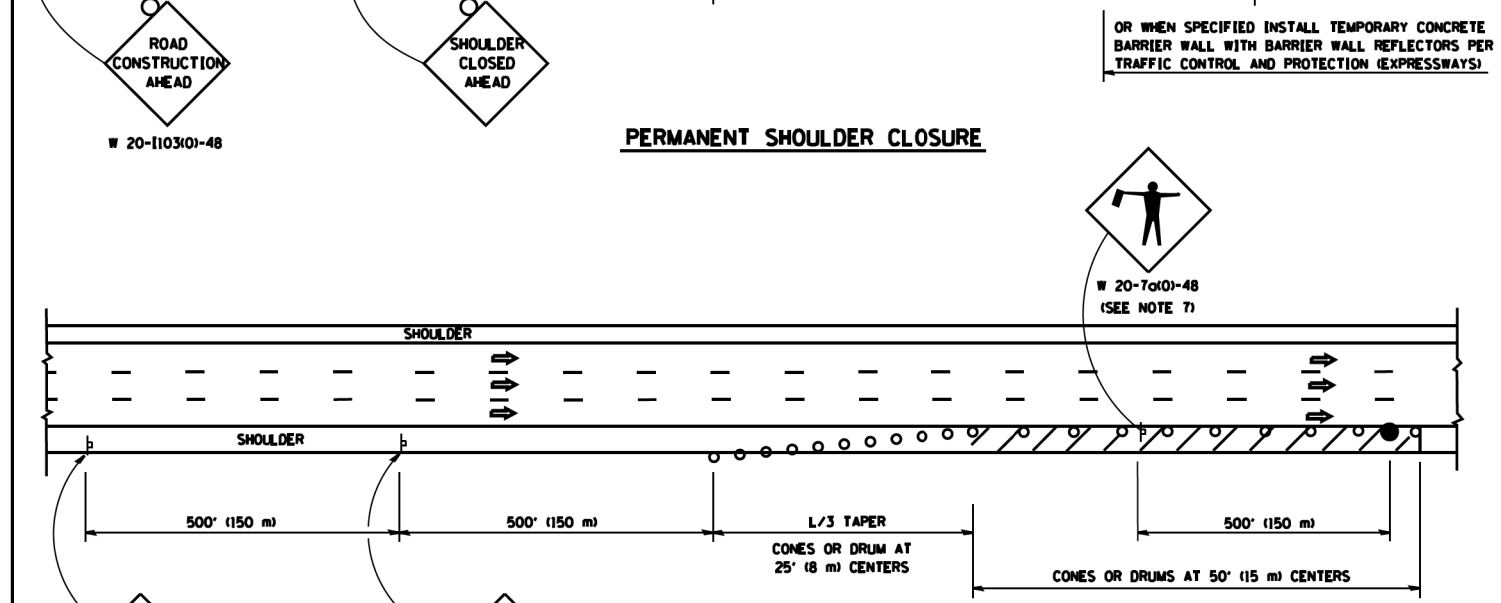
TYPICAL ENTRANCE RAMP



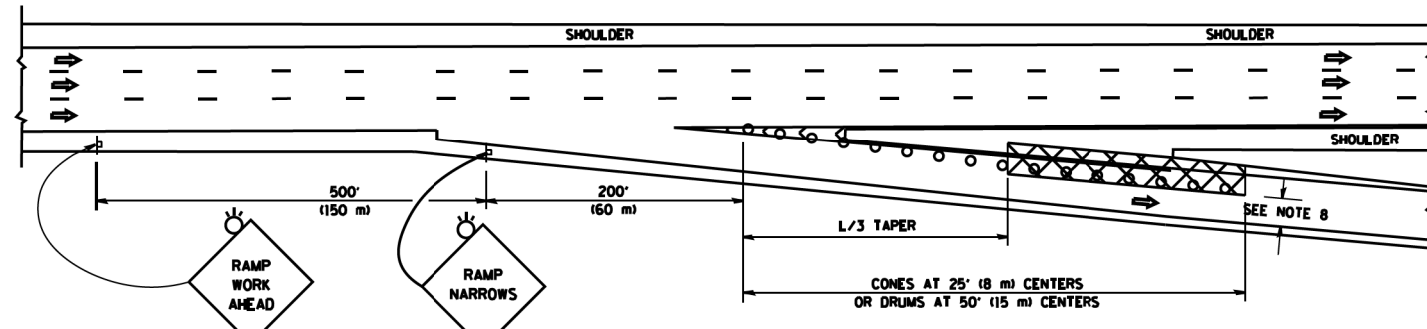
PERMANENT SHOULDER CLOSURE



TYPICAL EXIT RAMP



DAYTIME SHOULDER CLOSURE



TYPICAL EXIT RAMP

SYMBOLS

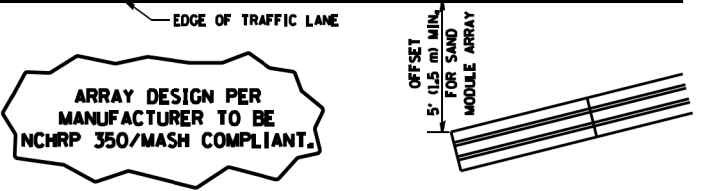
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER	METRIC ENGLISH L=0.65(WNS) L=(WNS)
W = WIDTH OF OFFSET IN FEET (METERS) S = NORMAL POSTED SPEED MPH (KM/H)	
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
 - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
 - b. THE WORK ACTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION
16' MIN. WIDTH CURVE SECTION.



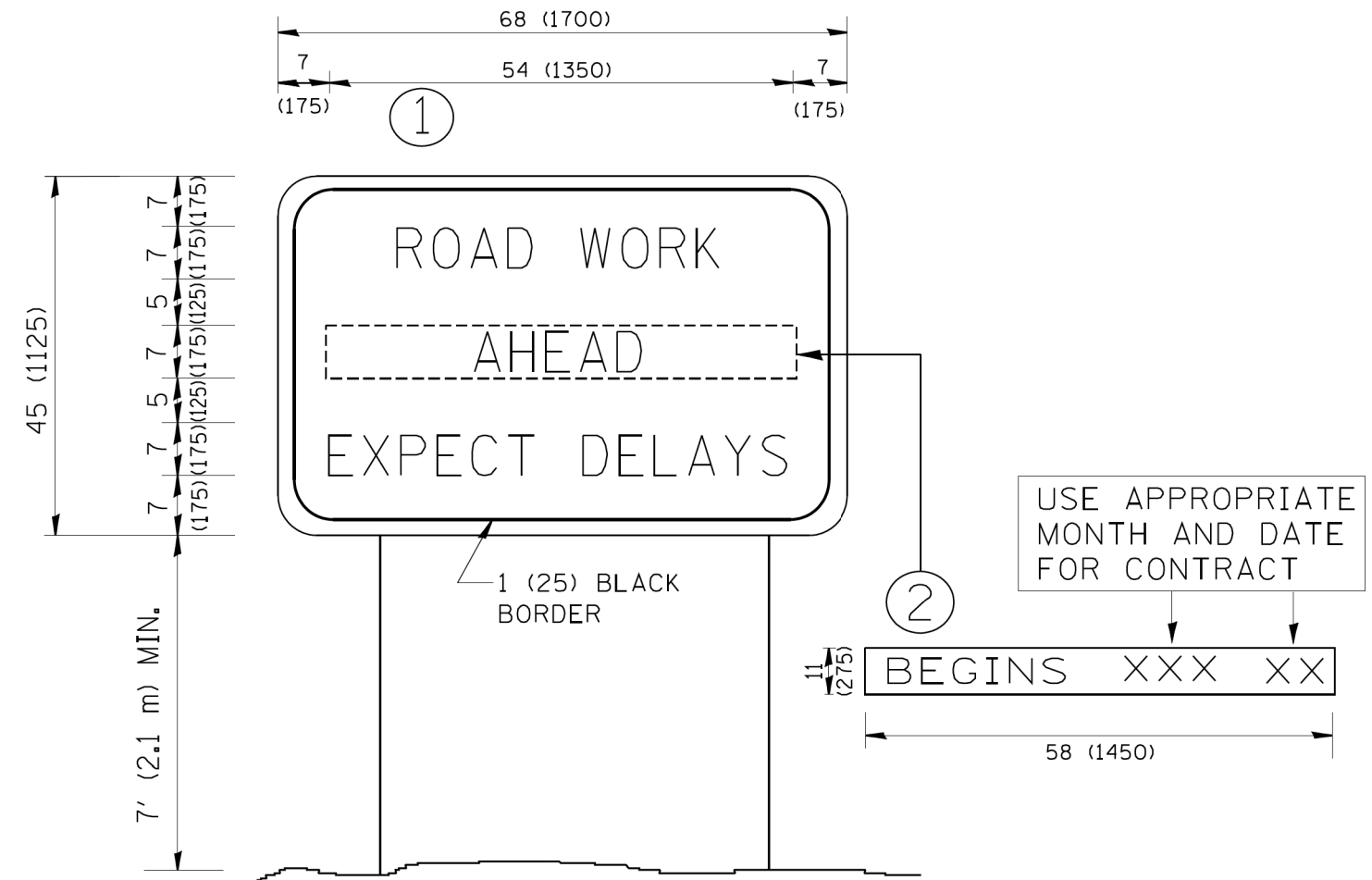
**DETAIL "A"
IMPACT ATTENUATOR, TEMPORARY
(SEE NOTE 5)**

THIS DETAIL IS USED WHERE:
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = lryso	DESIGNED -	REVISED - J.A.F. 12-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwork\pwork\lryso\0108315\tcl7.dgn		DRAWN - D.W.S.	REVISED - S.P.B. 01-07		342	12(HB&VB)BR & RS-7	LAKE	198	166			
PLOT SCALE = 100.0000' / 1" =		CHECKED -	REVISED - S.P.B. 12-09		TC-17		CONTRACT NO. 60X39					
PLOT DATE = 4/17/2014		DATE - 11-96	REVISED - M.D. 06-13		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STD-13



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\tc22.dgn	USER NAME = geglanoht	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

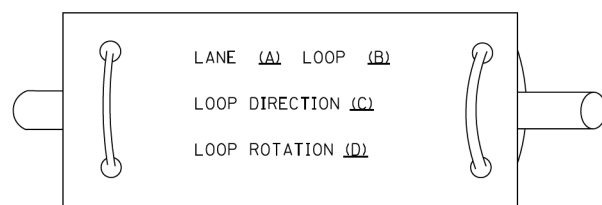
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	167
TC-22		CONTRACT NO. 60X39		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STD-14

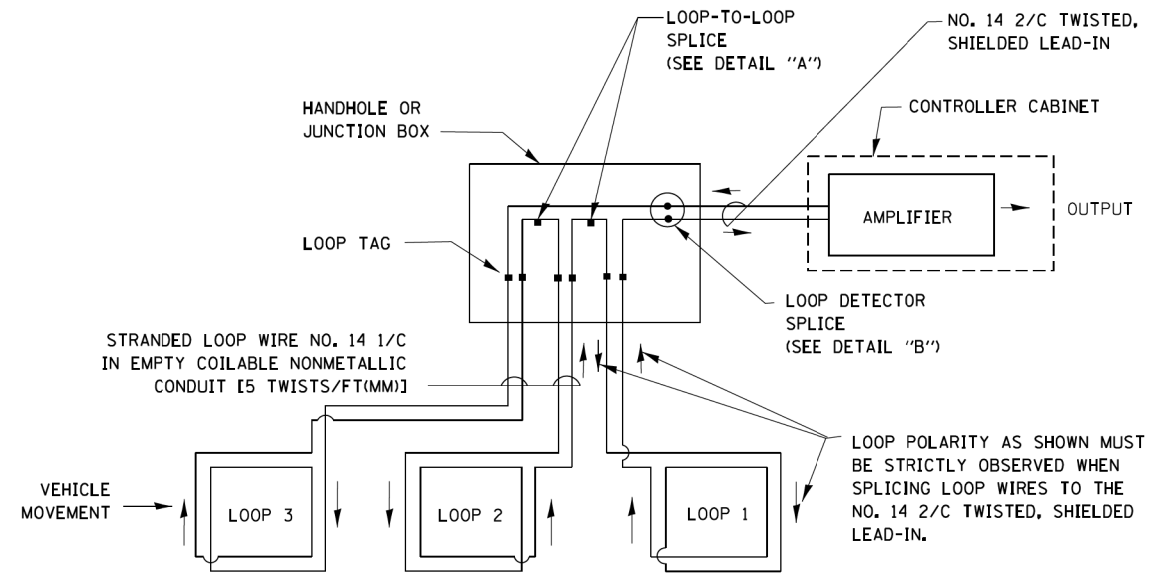
LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

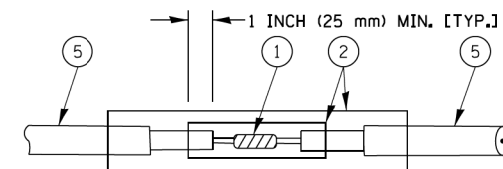


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

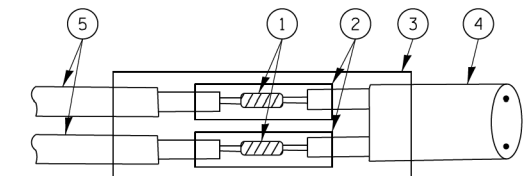


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

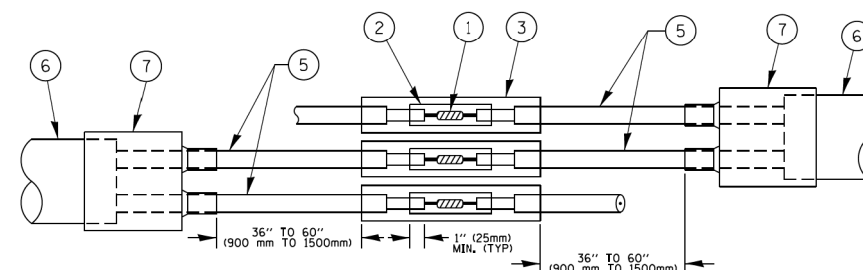


DETAIL "A"
LOOP-TO-LOOP SPLICE

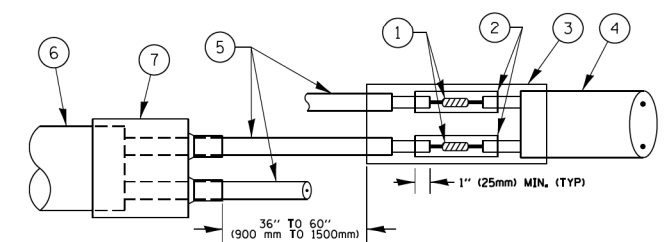


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

PREFORMED LOOP

LOOP DETECTOR SPLICE

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PREFORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = footemj	DESIGNED - DAD	REVISED - DAG 1-1-14
ca:\pwork\pwork\footemj\d0108315\ts05.dgn		DRAWN - BCK	REVISED -
	PLOT SCALE = 50.0000' / 1in.	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

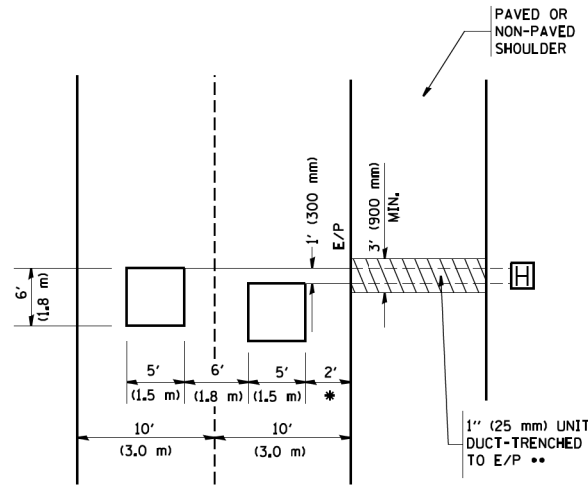
SCALE: NONE SHEET NO. 2 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	168
TS-05			CONTRACT NO. 60X39	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STD-15

LOOPS NEXT TO SHOULDERS

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.



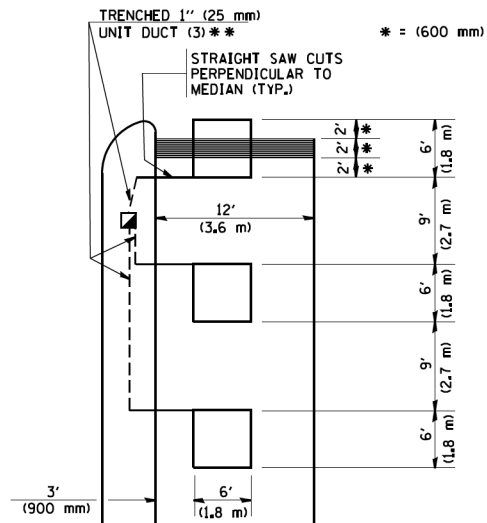
* = (600 mm)

** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

**LEFT TURN LANES WITH MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH**

(PROTECTED / PERMITTED LEFT TURN PHASING)

HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.

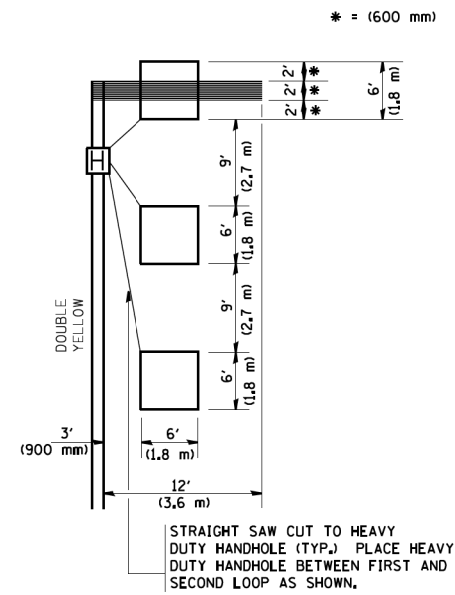


** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

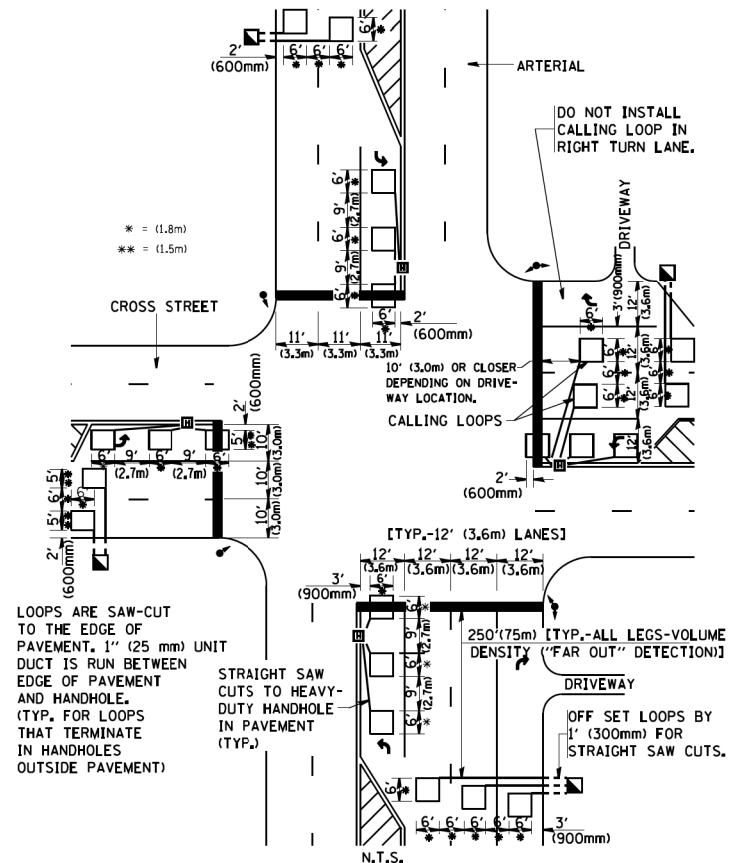
**LEFT TURN LANES WITHOUT MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH**

(PROTECTED / PERMITTED LEFT TURN PHASING)



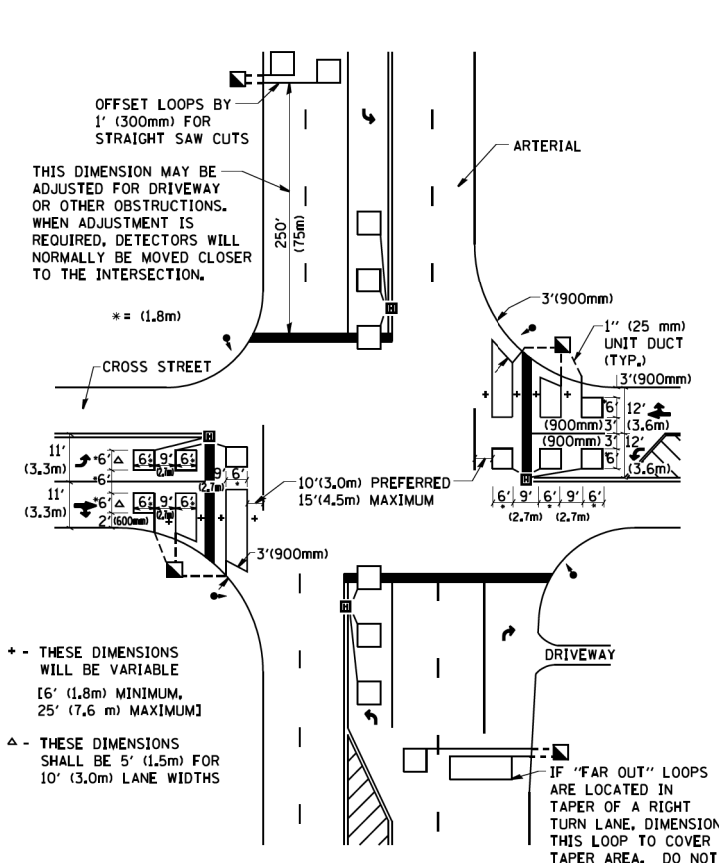
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)**



DETAIL 1
N.T.S.

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)**



DETAIL 2
N.T.S.

NOTES:

VEHICLES LOOP DETECTORS

- * ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATELY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- * ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- * EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- * WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
- * WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

NOTE:

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

FILE NAME = W:\diststd\22x34\ts07.dgn

USER NAME = gaglianobt
PLOT SCALE = 50.0000' / IN.
PLOT DATE = 1/4/2008

DESIGNED -
DRAWN -
CHECKED - R.K.F.
DATE -

REVISED -
REVISED -
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REVISED -

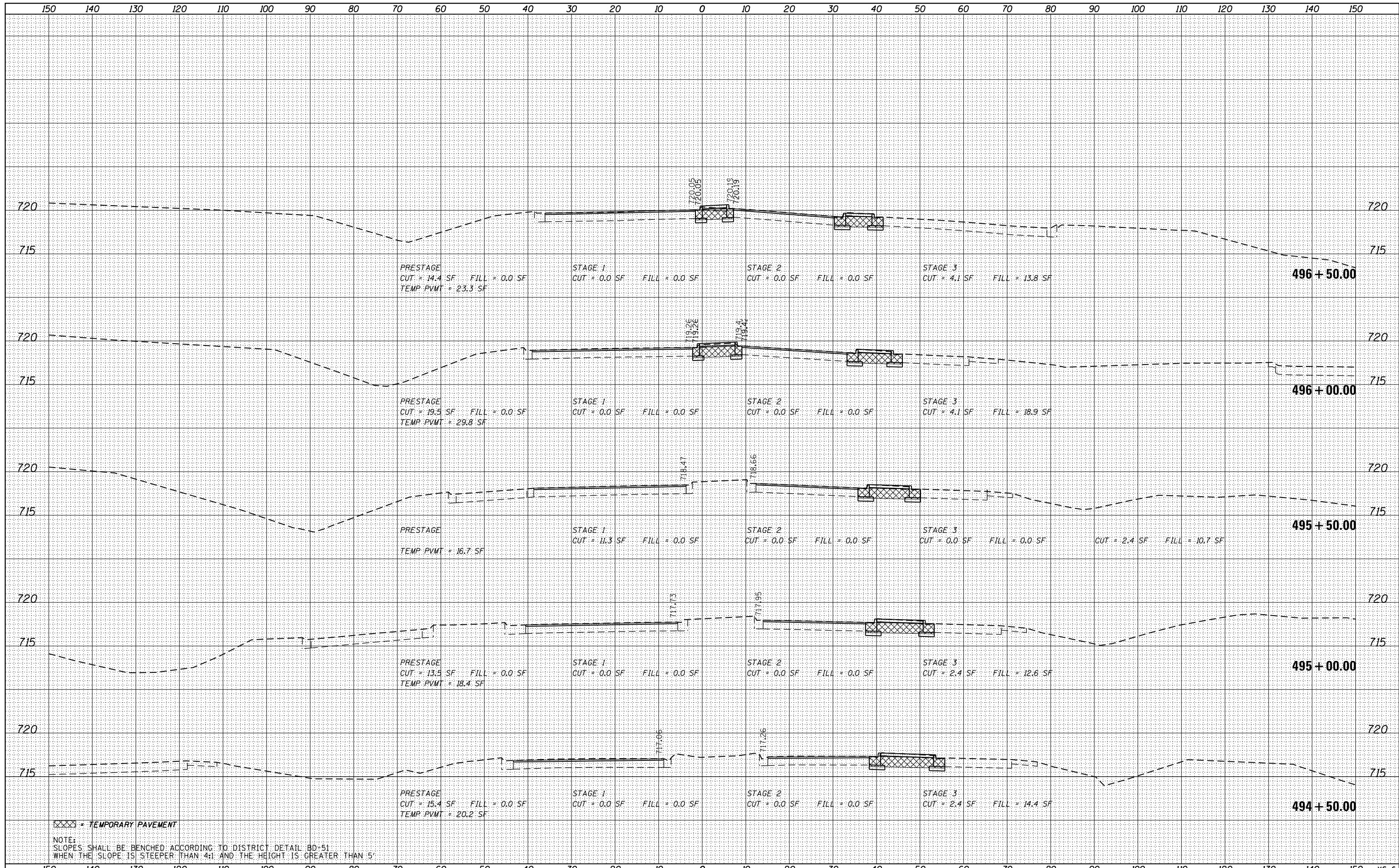
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1 - DETECTOR LOOP INSTALLATION
DETAILS FOR ROADWAY RESURFACING**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	169
TS-07			CONTRACT NO. 60X39	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STD-16



XXXX = TEMPORARY PAVEMENT

NOTE:
SLOPES SHALL BE BENCHED ACCORDING TO DISTRICT DETAIL BD-51
WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'

BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

BY	DATE
ORIGINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	
NO.	

FILE NAME
D160X39-shr-xssht.dgn



DESIGNED	- CMD	REVISED	-
DRAWN	- CMD	REVISED	-
CHECKED	- RJD	REVISED	-
DATE	- 3/3/2017	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
CROSS SECTIONS

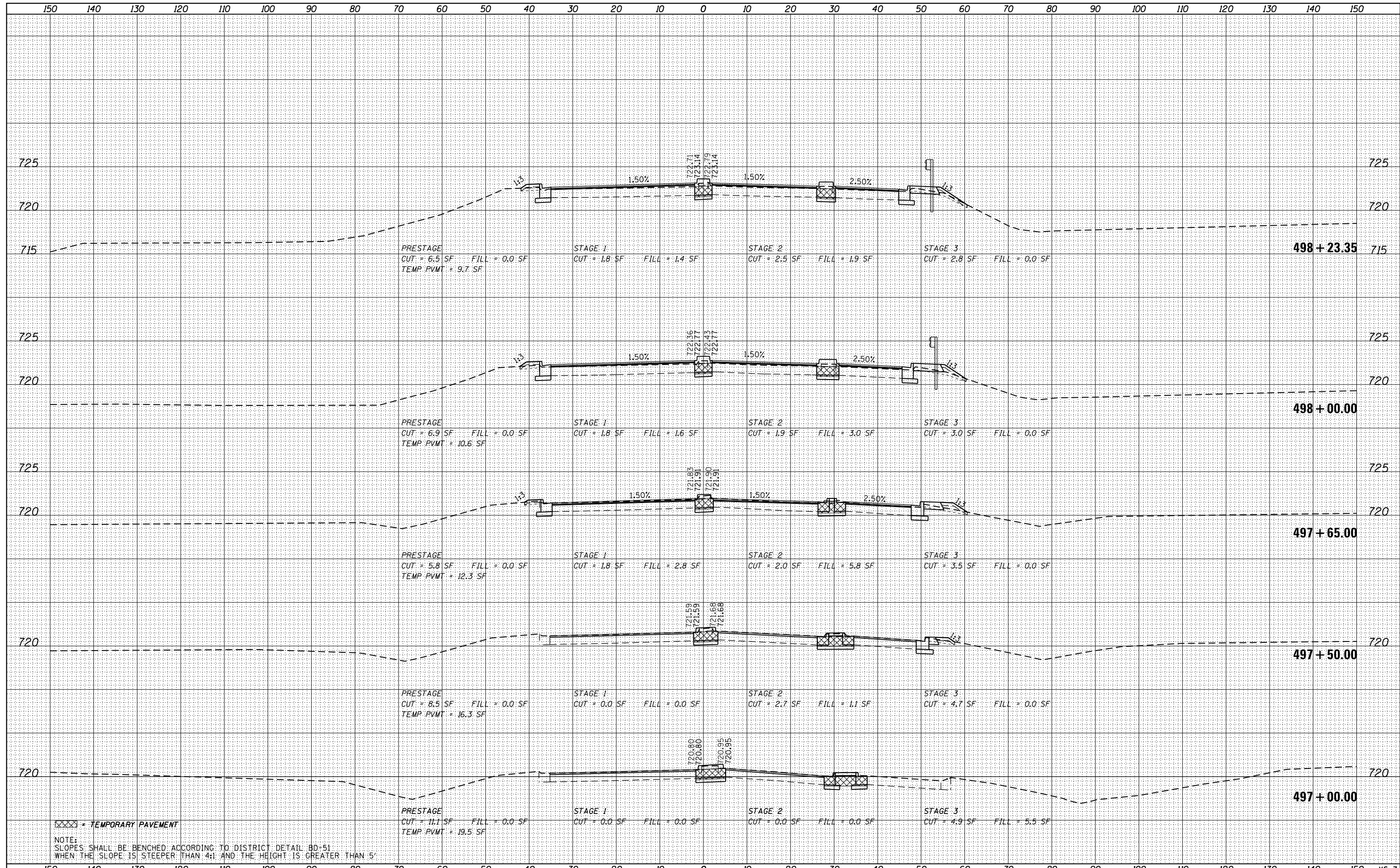
SCALE: 1"=10' (HORIZ.)
1"=5' (VERT.)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	175
CONTRACT NO. 60X39				
ILLINOIS FED. AID PROJECT				

XS-6

DATE	
BY	
FINISHED SURVEY	
PLOTTED	
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DATE	
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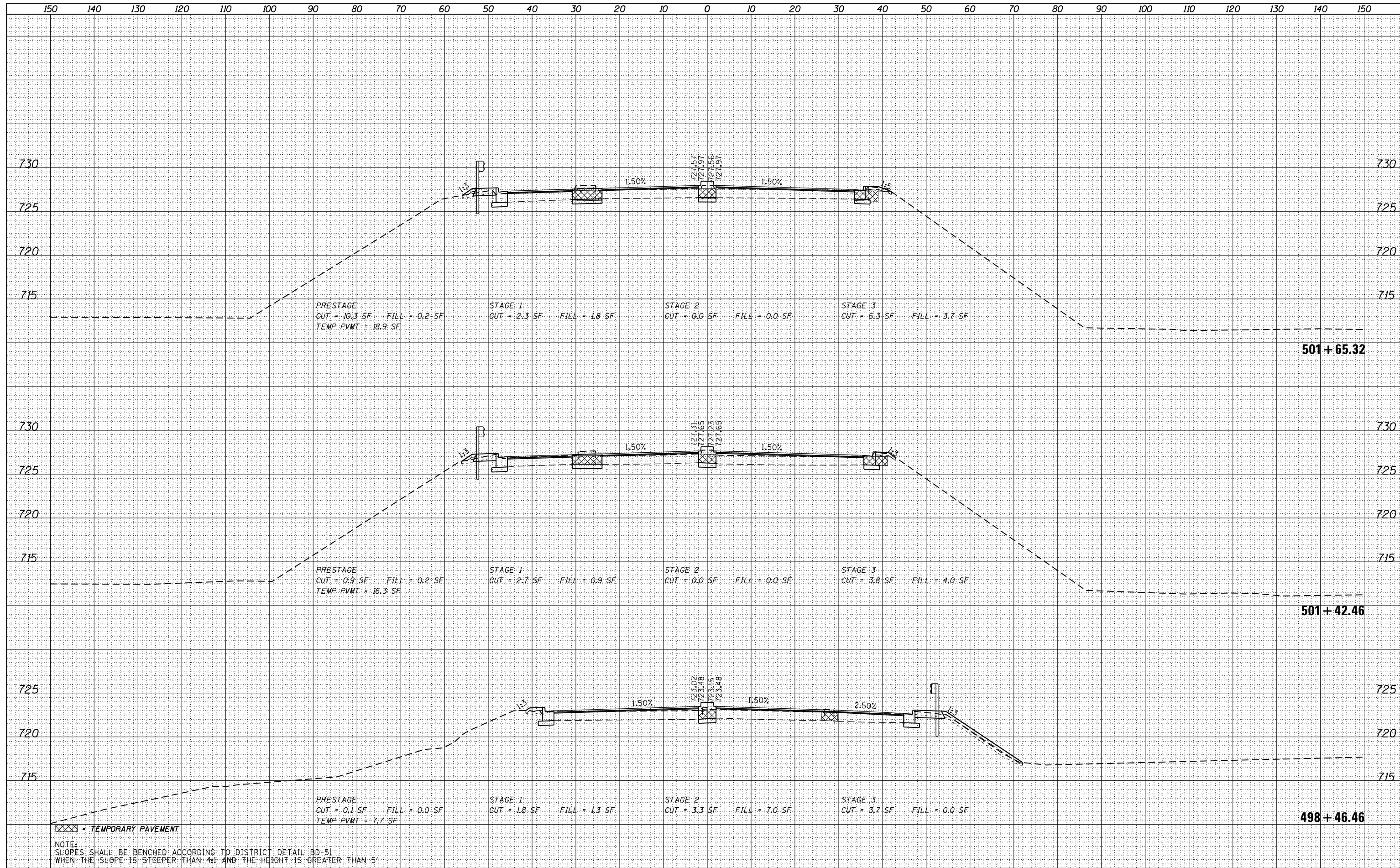


XXXX = TEMPORARY PAVEMENT

NOTE:
SLOPES SHALL BE BENCHED ACCORDING TO DISTRICT DETAIL BD-51
WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
FINISH SURVEY	
NOTE BOOK	
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DATE	
BY	
SURVEYED	
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NOTE BOOK	
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FILE NAME: D160X39-shr-xssht.dgn
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DESIGNED	- CMD	REVISED	-
DRAWN	- CMD	REVISED	-
CHECKED	- RJD	REVISED	-
DATE	- 3/3/2017	REVISED	-

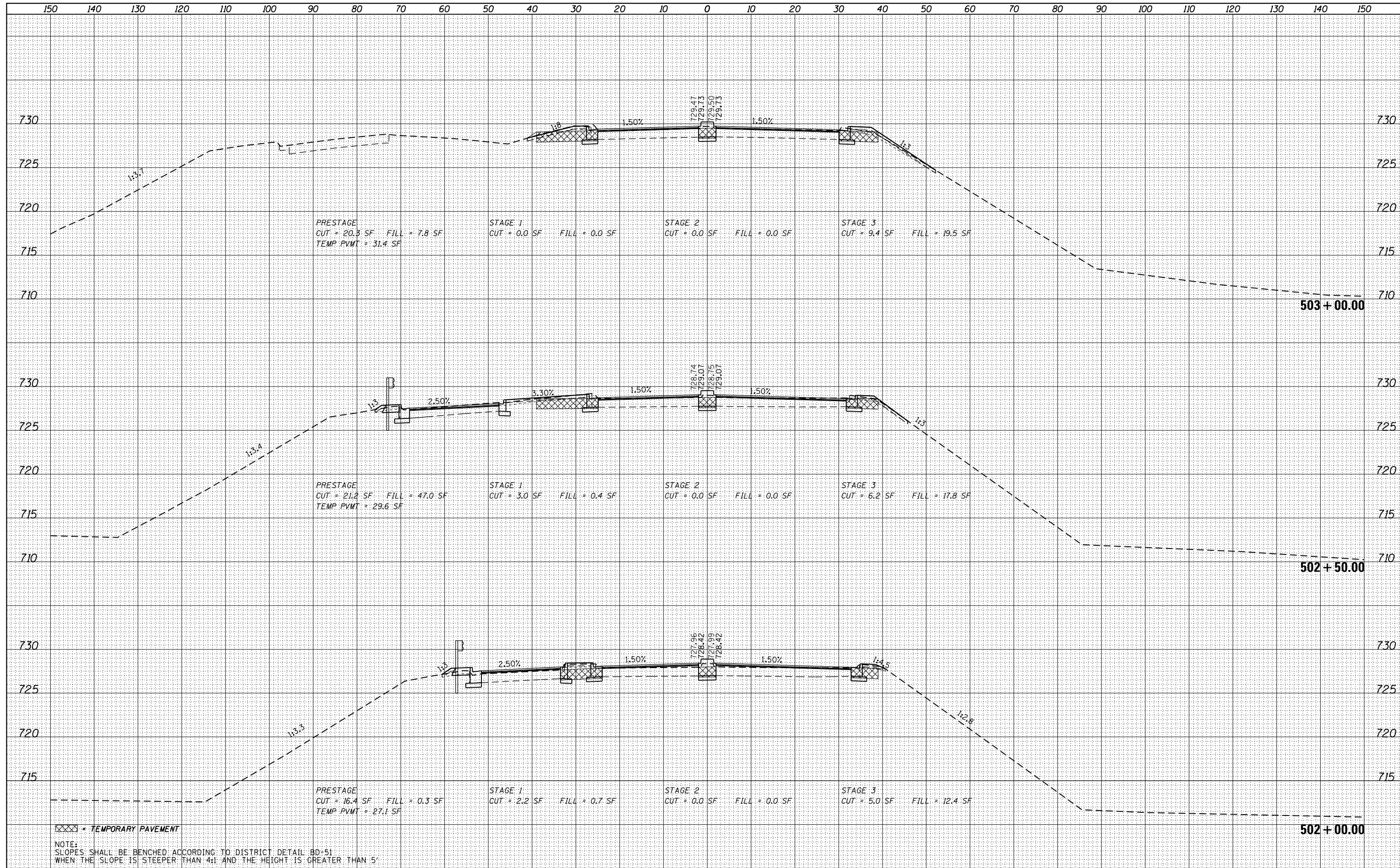
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
 CROSS SECTIONS
 SCALE: 1"=10' (HORIZ.)
 1"=5' (VERT.)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	177
CONTRACT NO. 60X39				XS-8
ILLINOIS FED. AID PROJECT				

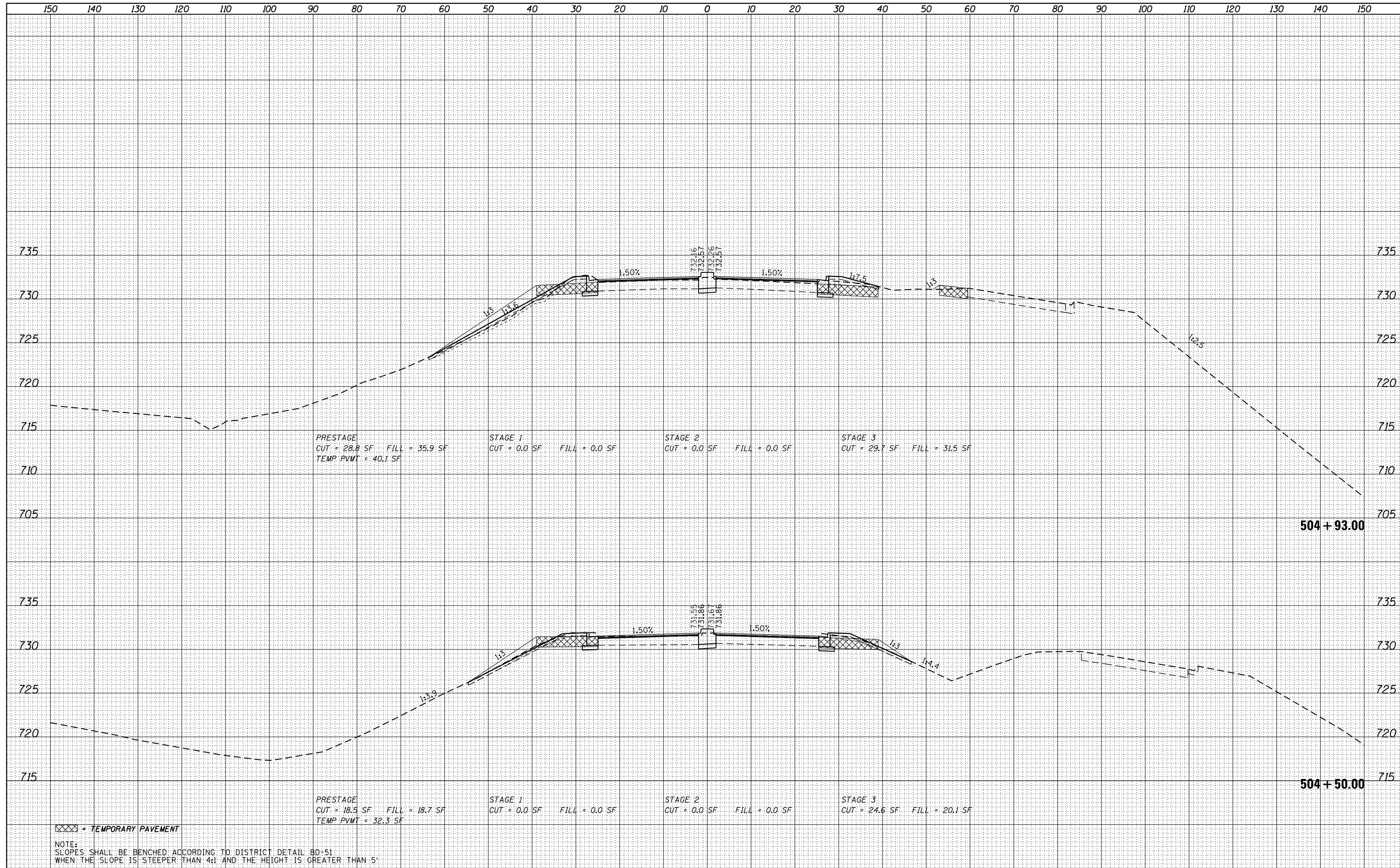
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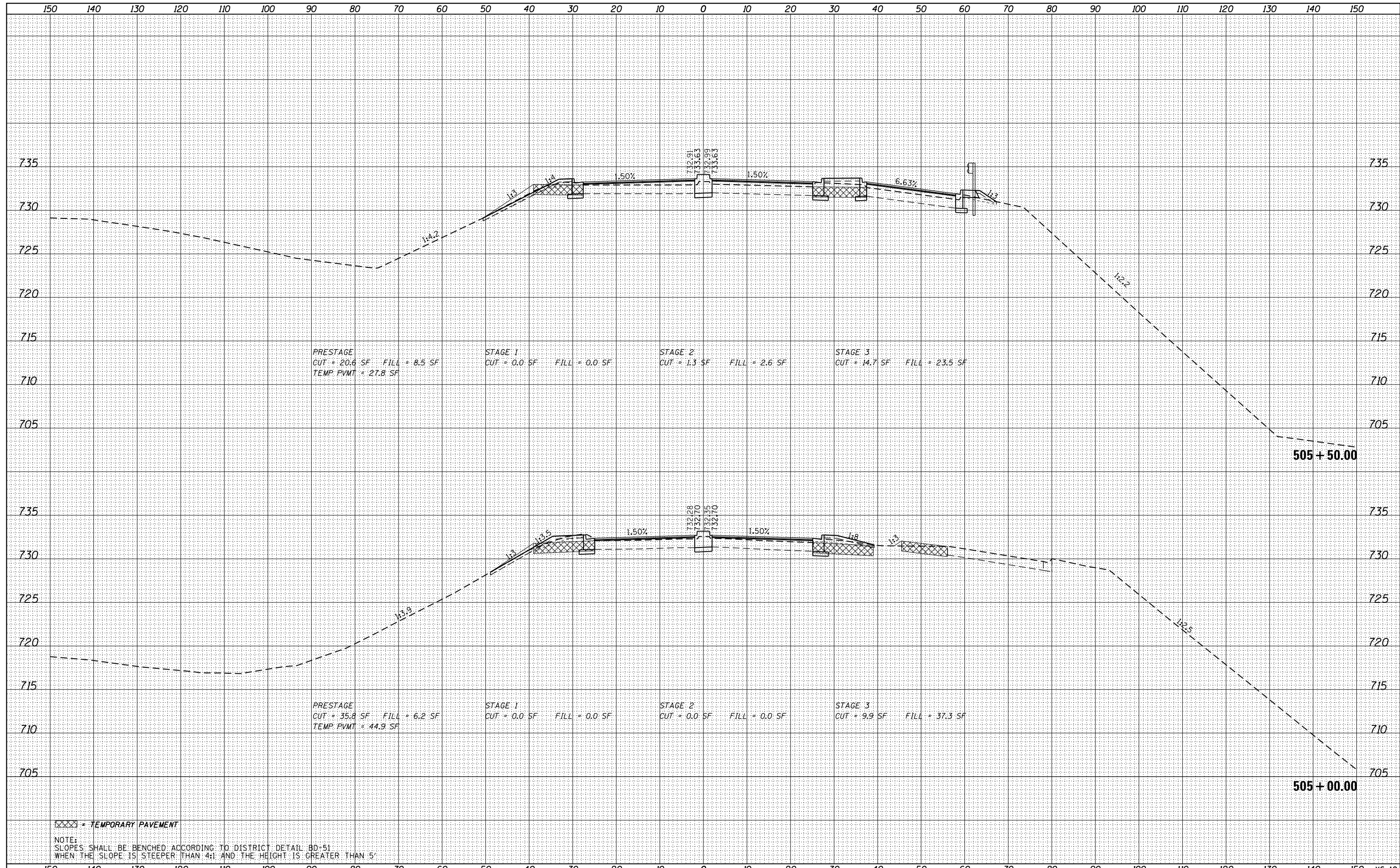
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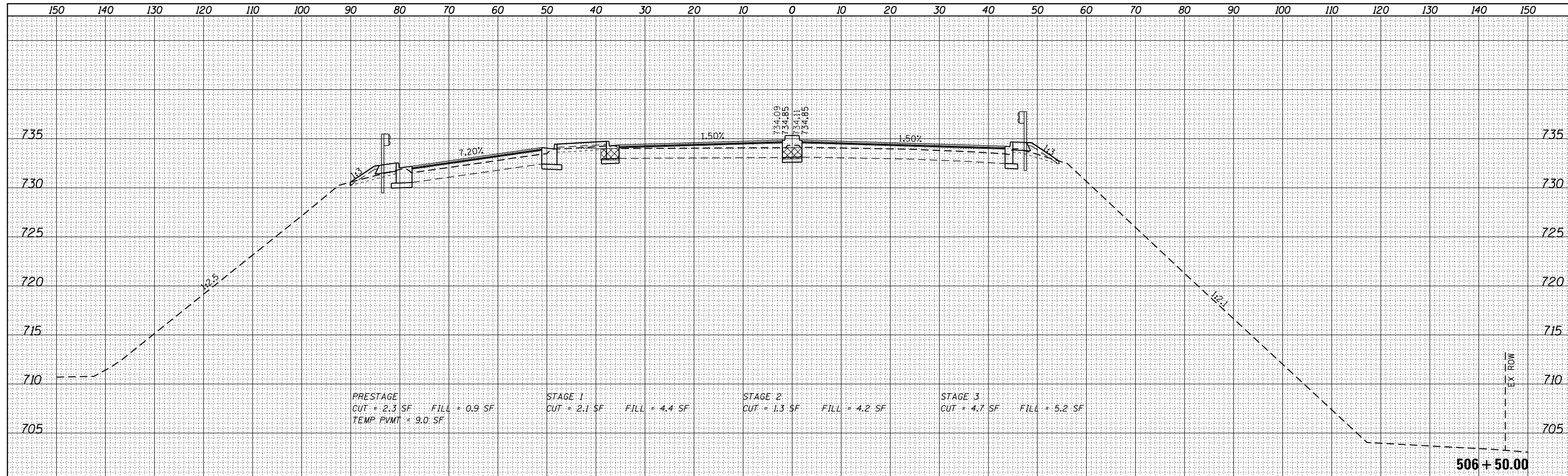
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NOTE BOOK NO.	
AREAS CHECKED	

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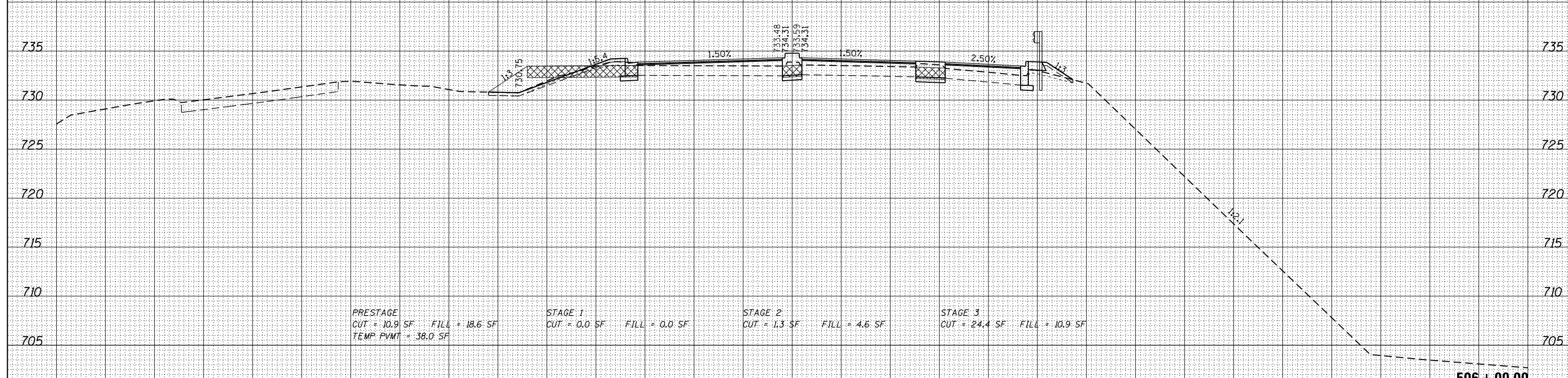


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PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINISH	
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PRESTAGE CUT = 2.3 SF FILL = 0.9 SF TEMP PVMT = 9.0 SF
 STAGE 1 CUT = 2.1 SF FILL = 4.4 SF
 STAGE 2 CUT = 1.3 SF FILL = 4.2 SF
 STAGE 3 CUT = 4.7 SF FILL = 5.2 SF



PRESTAGE CUT = 10.9 SF FILL = 18.6 SF TEMP PVMT = 38.0 SF
 STAGE 1 CUT = 0.0 SF FILL = 0.0 SF
 STAGE 2 CUT = 1.3 SF FILL = 4.6 SF
 STAGE 3 CUT = 24.4 SF FILL = 10.9 SF

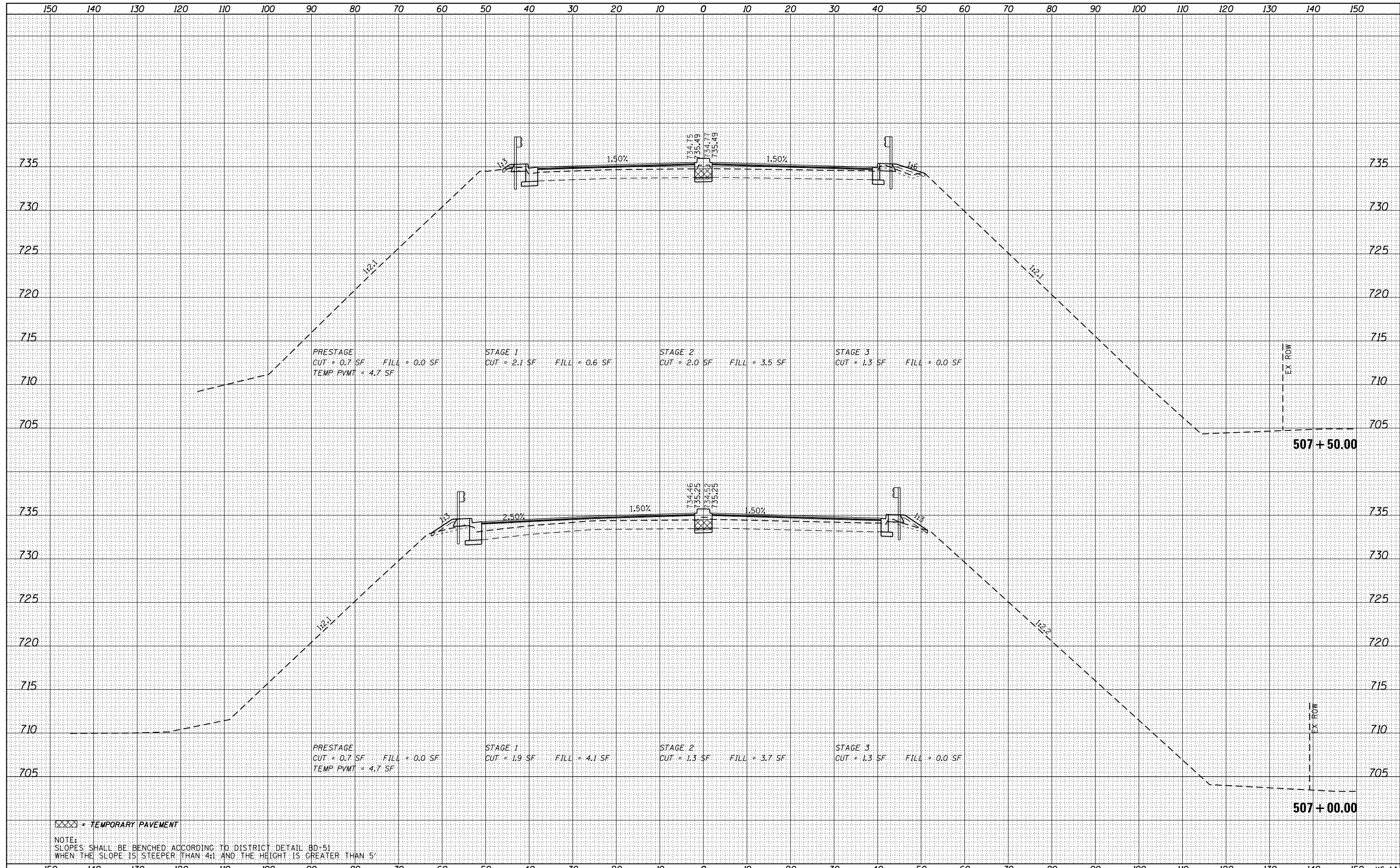
XXXX = TEMPORARY PAVEMENT

NOTE:
 SLOPES SHALL BE BENCHMARKED ACCORDING TO DISTRICT DETAIL BD-51
 WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
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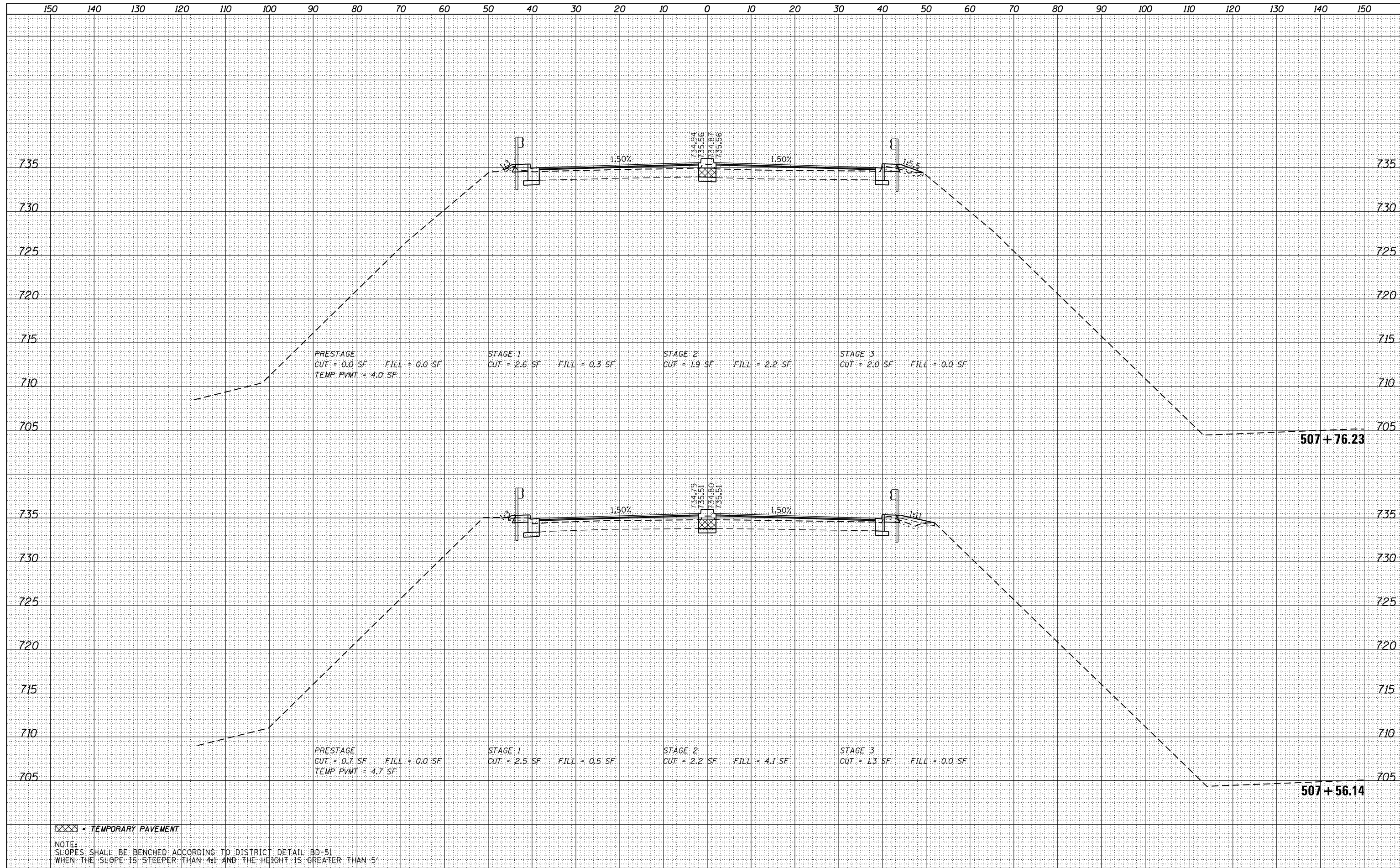
XXXX = TEMPORARY PAVEMENT

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WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'



DATE	
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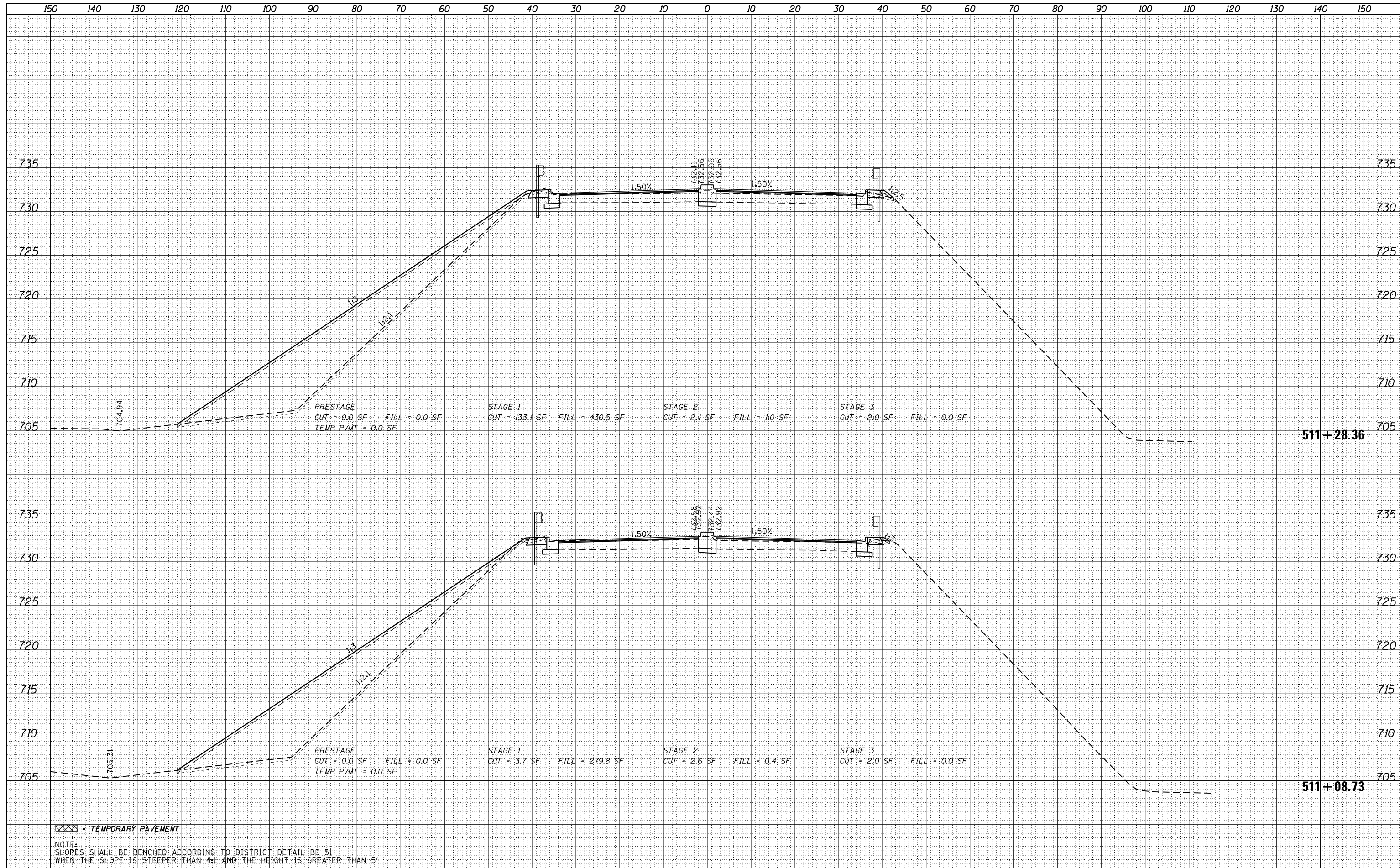
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NOTE:
SLOPES SHALL BE BENCHMARKED ACCORDING TO DISTRICT DETAIL BD-51
WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'



DATE	
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SURVEYED	
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TEMPLATE	
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XXXX = TEMPORARY PAVEMENT

NOTE:
SLOPES SHALL BE BENCHMARKED ACCORDING TO DISTRICT DETAIL BD-51
WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'

FILE NAME
D160X39-sht-xssht.dgn

Default



DESIGNED	-	CMD	REVISED	-
DRAWN	-	CMD	REVISED	-
CHECKED	-	RJD	REVISED	-
DATE	-	3/3/2017	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
CROSS SECTIONS

SCALE: 1"=10' (HORIZ.)
1"=5' (VERT.)

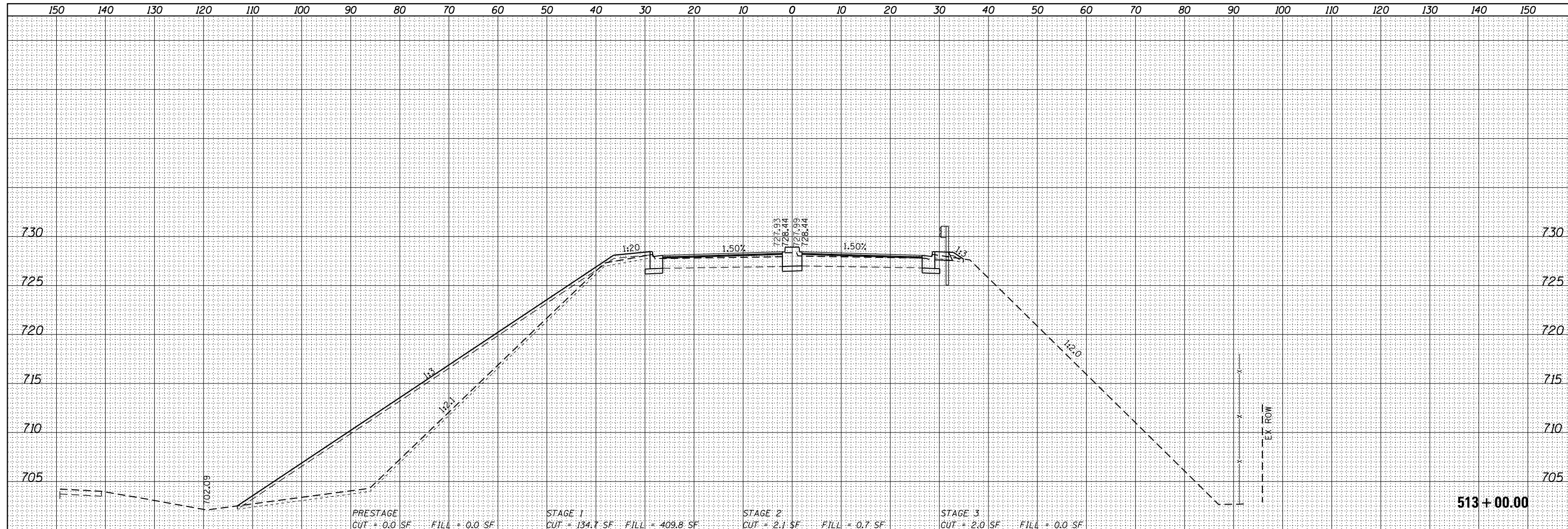
SHEET NO. 11 OF 24 SHEETS

STA. 511+08.73 TO STA. 511+28.36

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	185
CONTRACT NO. 60X39				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINISHED SURVEY	
PLOTTED TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
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DATE	
BY	
ORIGINAL SURVEY	
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NOTE BOOK	
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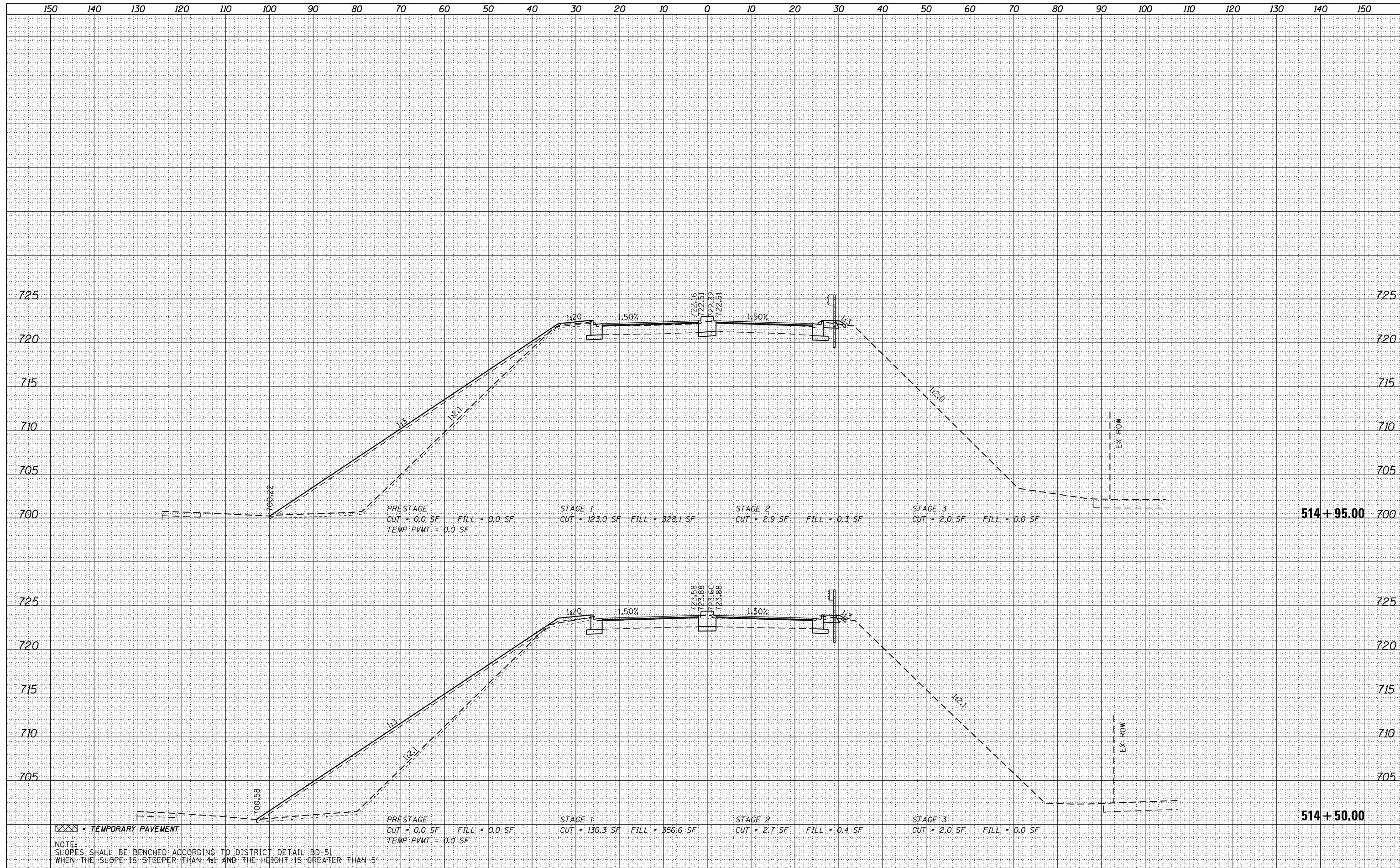
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NOTE:
SLOPES SHALL BE BENCHED ACCORDING TO DISTRICT DETAIL BD-51
WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'



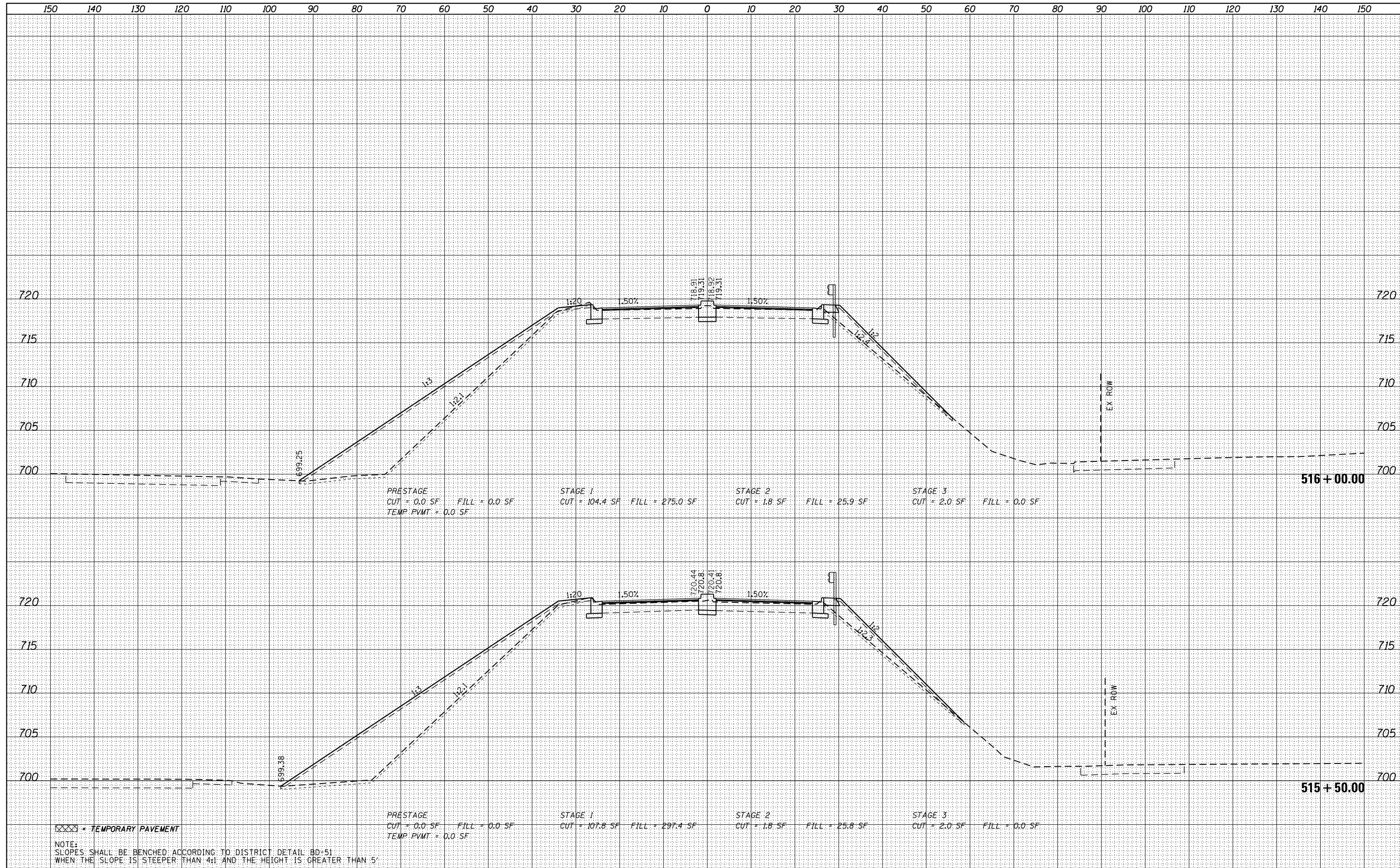
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BY	
FINISHED SURVEY	
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NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
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NOTE BOOK	
AREAS CHECKED	



DATE	
BY	
FINISHED SURVEY	
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NOTE BOOK	
AREAS CHECKED	
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DATE	
BY	
ORIGINAL SURVEY	
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AREAS CHECKED	
NO.	



XXXX = TEMPORARY PAVEMENT

NOTE:
SLOPES SHALL BE BENCHED ACCORDING TO DISTRICT DETAIL BD-51
WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'

FILE NAME	D160X39-sht-xssht.dgn
Default	



DESIGNED -	CMD	REVISED -	
DRAWN -	CMD	REVISED -	
CHECKED -	RJD	REVISED -	
DATE -	3/3/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
CROSS SECTIONS

SCALE: 1"=10' (HORIZ.)
1"=5' (VERT.)

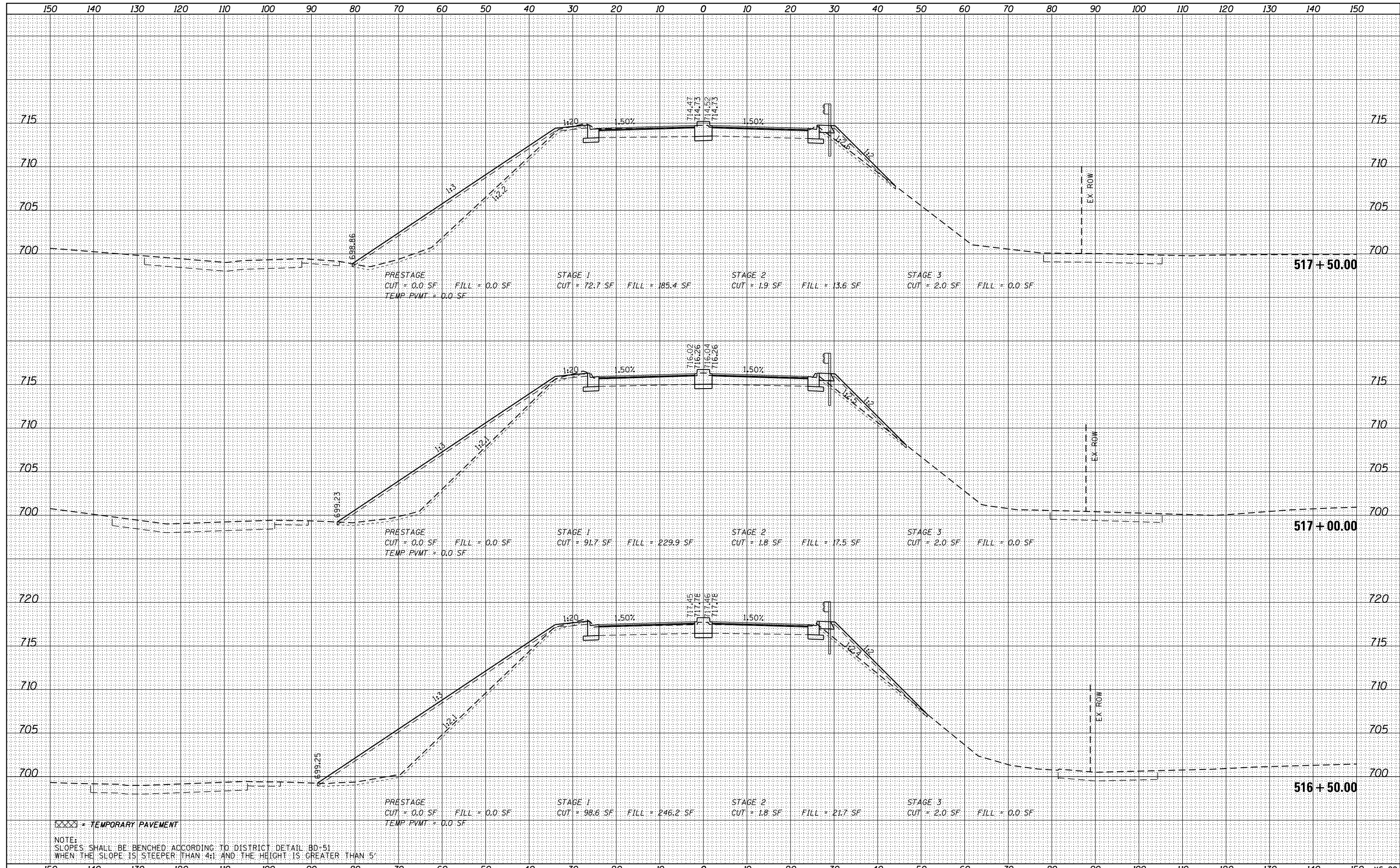
SHEET NO. 16 OF 24 SHEETS

STA. 515+50.00 TO STA. 516+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	190
CONTRACT NO. 60X39				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
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TEMPLATE	
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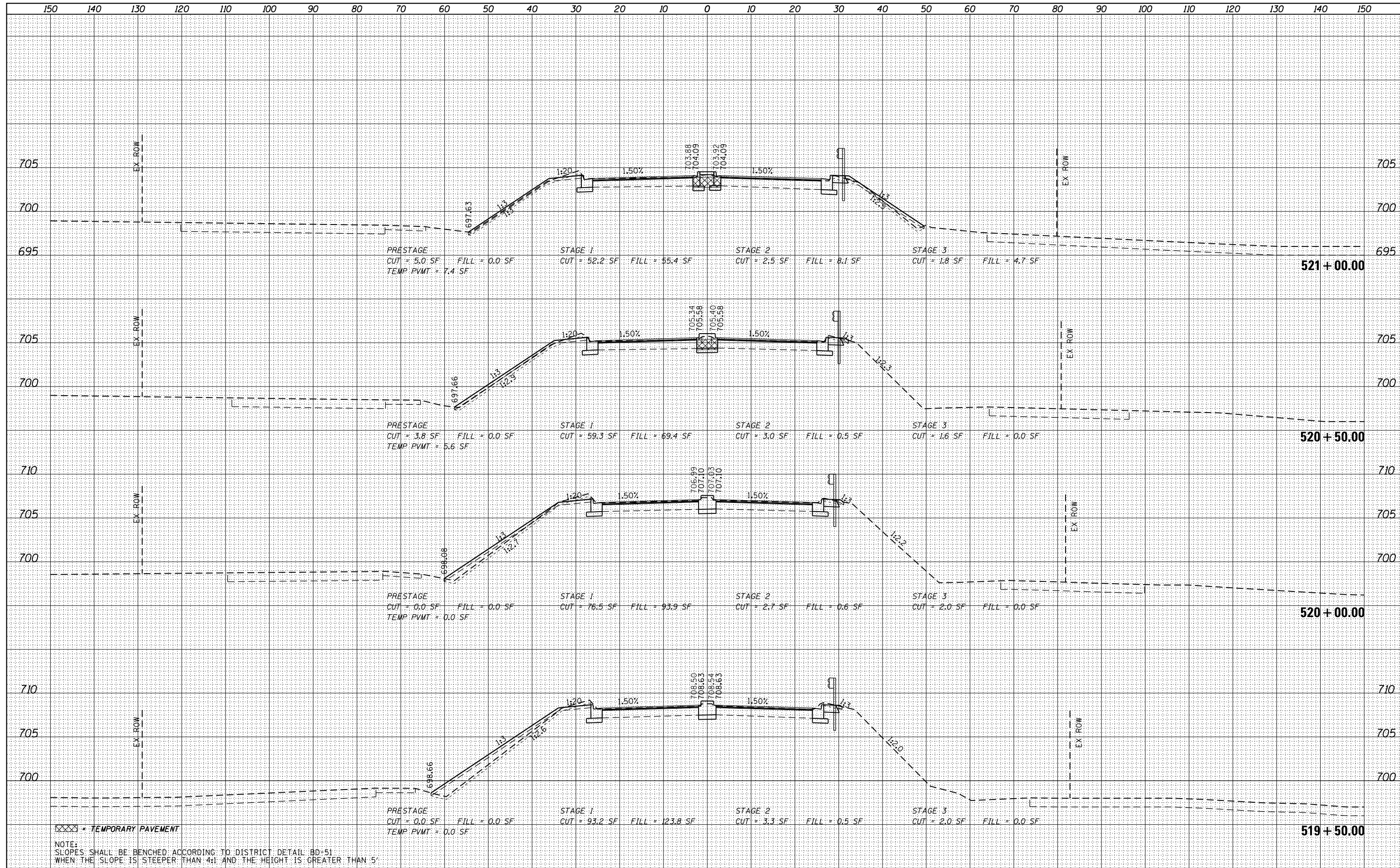
XXXX = TEMPORARY PAVEMENT

NOTE:
SLOPES SHALL BE BENCHMARKED ACCORDING TO DISTRICT DETAIL BD-51
WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'



DATE	
BY	
FINISHED SURVEY	
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NOTE BOOK	
AREAS CHECKED	
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DATE	
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ORIGINAL SURVEY	
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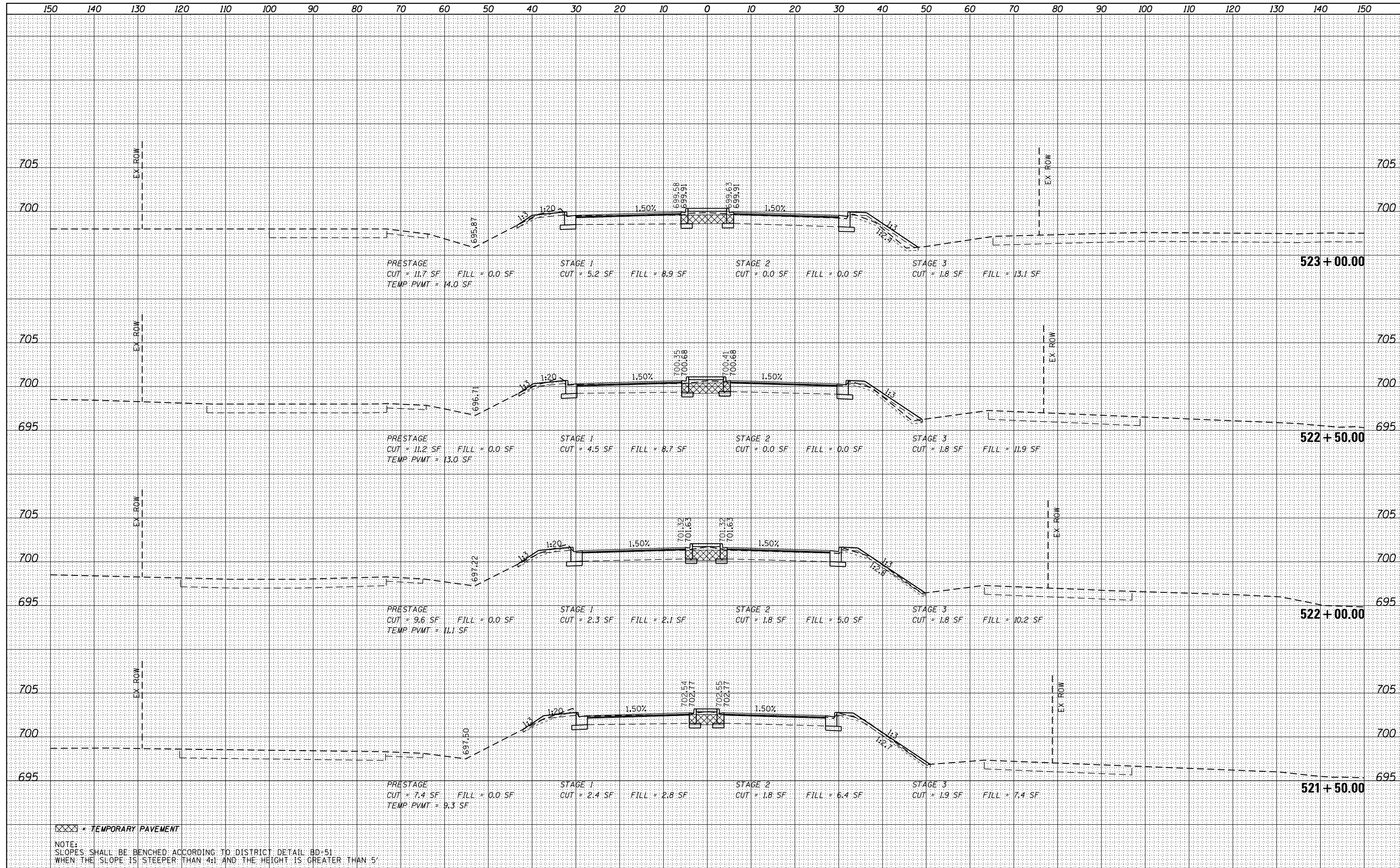


XXXX = TEMPORARY PAVEMENT

NOTE:
SLOPES SHALL BE BENCHMARKED ACCORDING TO DISTRICT DETAIL BD-51
WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'

DATE	
BY	
FINISHED SURVEY	
PLOTTED TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
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DATE	
BY	
ORIGINAL SURVEY	
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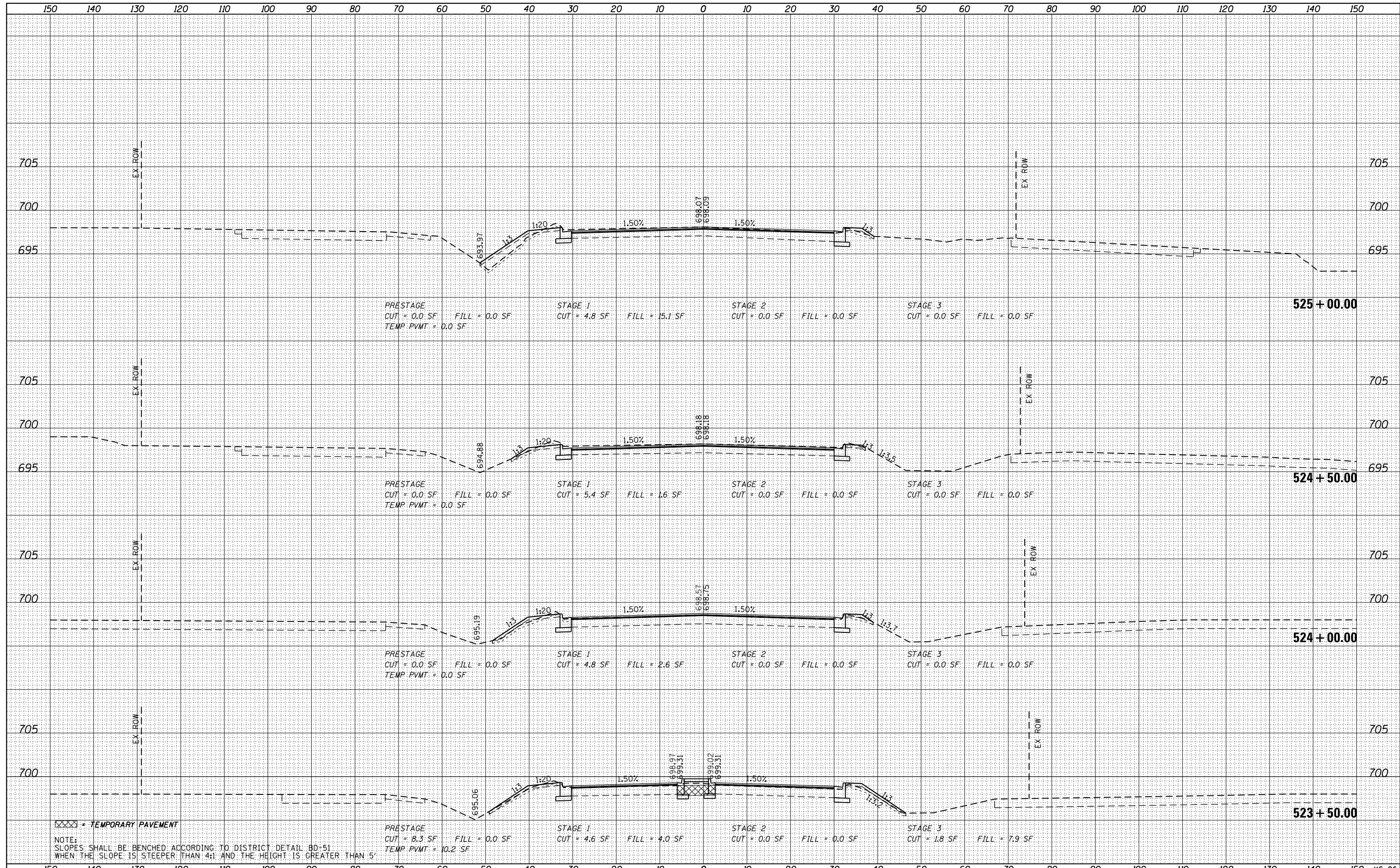


XXXX = TEMPORARY PAVEMENT

NOTE:
SLOPES SHALL BE BENCHMARKED ACCORDING TO DISTRICT DETAIL BD-51
WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'

DATE	
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NOTE BOOK	
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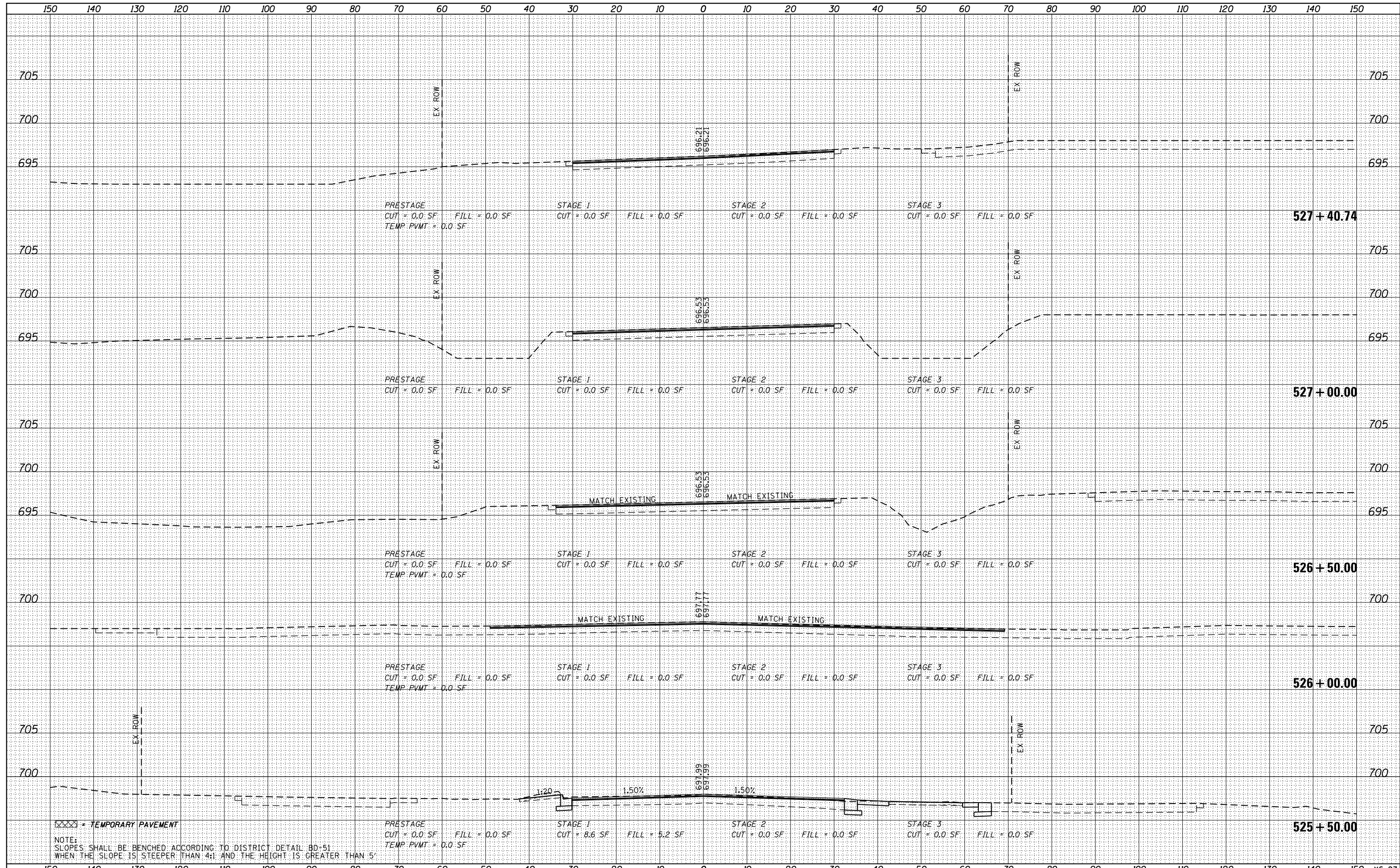
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NOTE BOOK	
AREAS CHECKED	
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XXXX = TEMPORARY PAVEMENT
 NOTE: SLOPES SHALL BE BENCHMARKED ACCORDING TO DISTRICT DETAIL BD-51 WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'

DATE	
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ORIGINAL SURVEY	
NOTE BOOK	
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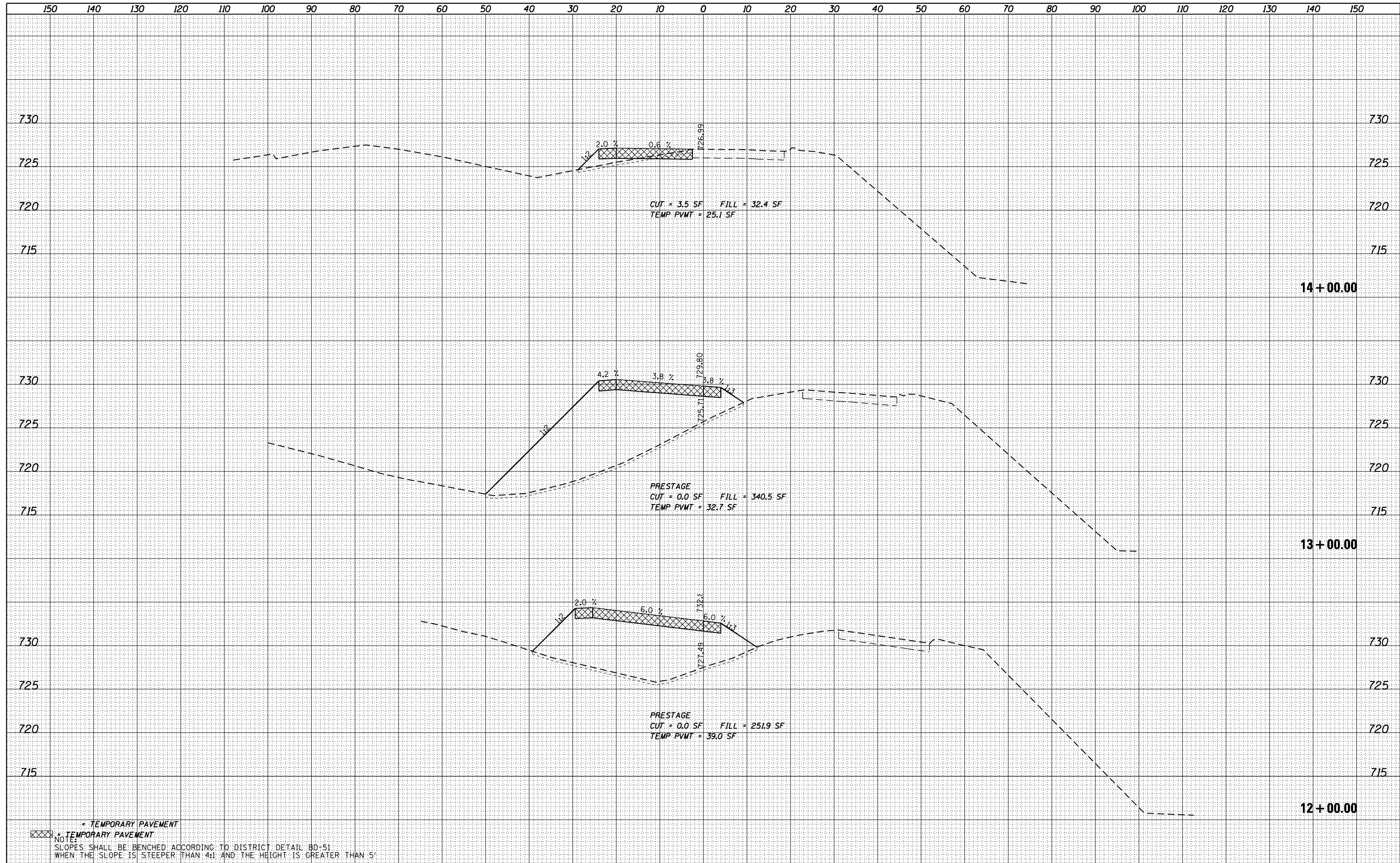


XXXX = TEMPORARY PAVEMENT
 NOTE: SLOPES SHALL BE BENCHED ACCORDING TO DISTRICT DETAIL BD-51 WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'

FILE NAME DI60X39-sht-xssht.dgn	DESIGNED - CMD	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD CROSS SECTIONS SCALE: 1"=10' (HORIZ.) 1"=5' (VERT.)	F.A.P. RTE. 342	SECTION 12(HB&VB)BR & RS-7	COUNTY LAKE	TOTAL SHEETS 198	SHEET NO. 196	CONTRACT NO. 60X39	XS-27
Default	DRAWN - CMD	REVISIED -		SHEET NO. 22 OF 24 SHEETS	STA. 525+50.00	TO STA. 527+40.74	ILLINOIS FED. AID PROJECT			
	CHECKED - RJD	REVISIED -								
	DATE - 3/3/2017	REVISIED -								

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

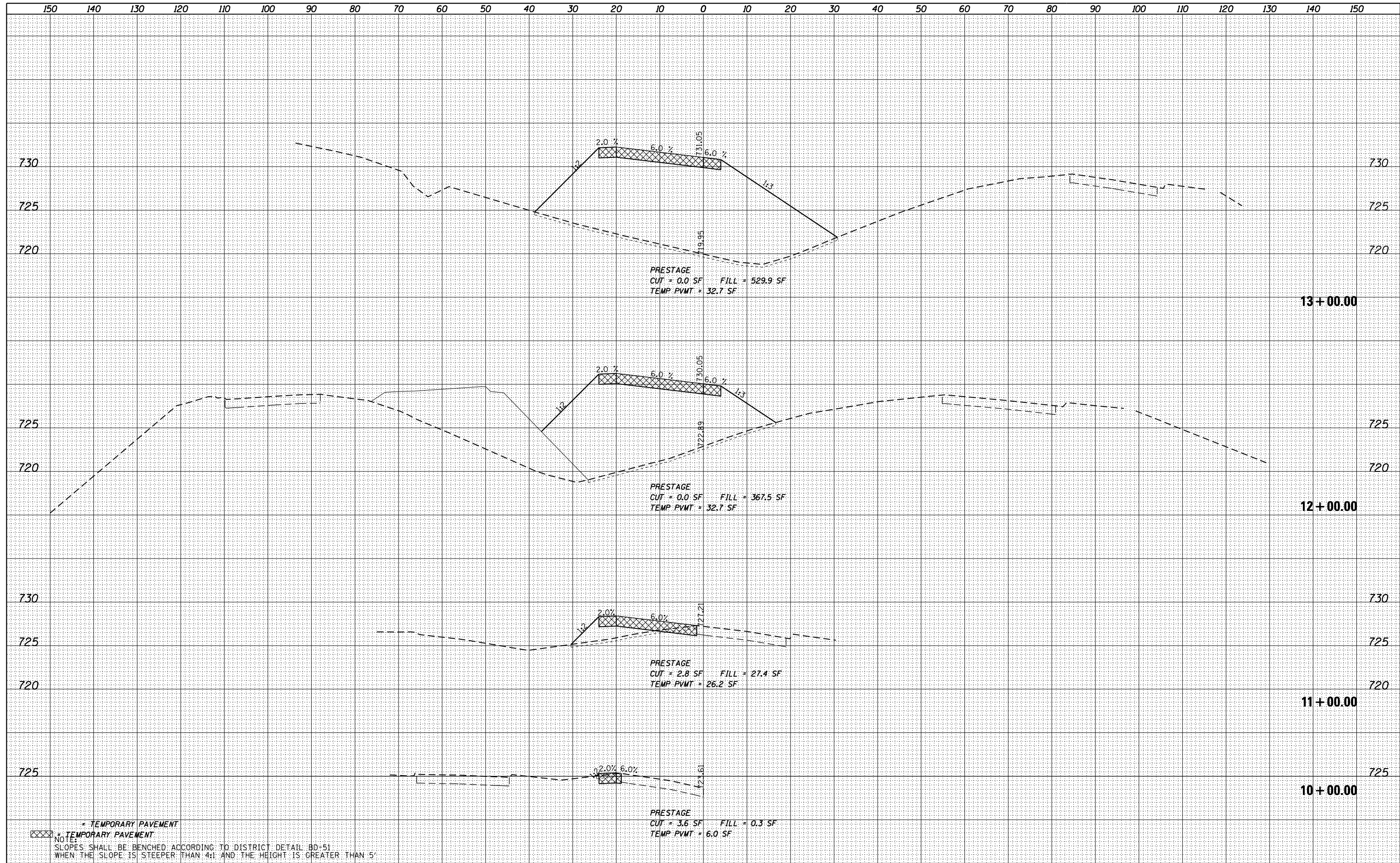
DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



--- TEMPORARY PAVEMENT
 [Cross-hatched pattern] TEMPORARY PAVEMENT
 NOTES:
 SLOPES SHALL BE BENCHED ACCORDING TO DISTRICT DETAIL BD-51
 WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



* TEMPORARY PAVEMENT
 SLOPES SHALL BE BENCHED ACCORDING TO DISTRICT DETAIL BD-51
 WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'

FILE NAME
 D160X39-shr-xssht_02.dgn
 Default



DESIGNED - CMD	REVISED -
DRAWN - ML	REVISED -
CHECKED - RJD	REVISED -
DATE - 3/3/2017	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL ROUTE 120 OVER US 41, UPRR & OLD SKOKIE ROAD
 TEMPORARY RAMP F CROSS SECTIONS

SCALE: 1"=10' (HORIZ.)
 1"=5' (VERT.)
 SHEET NO. 24 OF 24 SHEETS
 STA. 10+00.00 TO STA. 13+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	12(HB&VB)BR & RS-7	LAKE	198	198
CONTRACT NO. 60X39				
ILLINOIS FED. AID PROJECT				