F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	1
	ILLINOIS	CONTRACT NO. 68F67		

03-05-2021 LETTING ITEM 017

INDEX OF SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAS ROUTE 1412 (IL 94)
SECTION [(106C)BR]BDR,BJR
PROJECT STP–H95B(902)
BRIDGE DECK OVERLAY & JOINT REPAIR
HENDERSON COUNTY

C–94–089–20

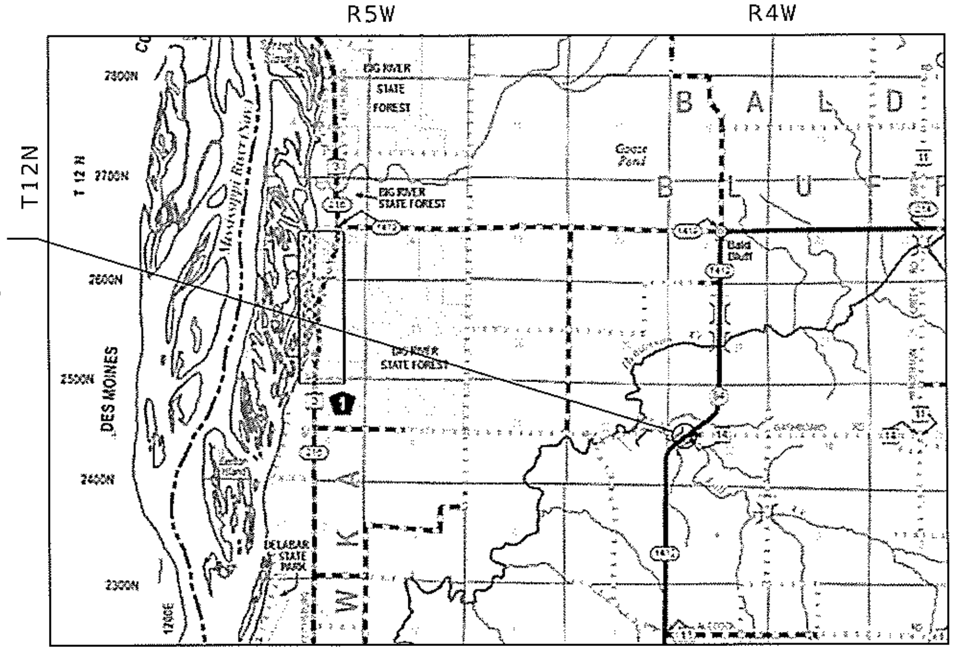
D-94-057-20

HIGHWAY STANDARDS

000001–07
001001–02
101006
630001–12
630301–09
631031–17
701001–02
701201–05
701311–03
701321–18
701901–08
704001–08
781001–04
782006–01

FUNCTIONAL CLASSIFICATION
MAJOR COLLECTOR
2019 ADT: 350
PV: 80.28% SU: 8.29% MU: 11.43%

SN 036-0042
IL 94 OVER FALL CREEK
STA 415+95 TO 423+55



DESCRIPTION OF WORK:

THIS PROJECT CONSISTS OF BRIDGE DECK OVERLAY & BRIDGE JOINT REPLACE/REPAIR AT SN 036–0042 CARRIYING IL 94 OVER FALL CREEK, 4.3 MILES NORTH OF IL 164.

100' 200' 300' — 1" = 100'
10' 20' 30' — 1" = 10'
50' 100' — 1" = 50'
50' 100' — 1" = 40'
50' 100' — 1" = 30'
50' 100' — 1" = 20'

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

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1–800–892–0123
OR 811

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Dec 11 20 20
Kensil A Garnett FSD
REGIONAL ENGINEER

January 29, 2021
ENGINEER OF DESIGN AND ENVIRONMENT

January 29, 2021
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

GROSS LENGTH = 760 FT. = 0.15 MILE
NET LENGTH = 760 FT. = 0.15 MILE

PROJECT ENGINEER: RICH DOTSON (309)671–3455
PROJECT MANAGER: TRAVIS WALLENFANG (309)671–3474

CATALOG NO. 036067–00D
CONTRACT NO. 68F67

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GENERAL NOTES

COMMITMENTS

Commitments are not to be altered without the written approval of all parties to which the commitment was made.

PROPERTY OWNER ACCESS REQUIREMENT

Access must be maintained to all exisitng properties during the construction per Article 107.09 unless arrangements are made in writing by the Contractor with the property owners with a copy to the Engineer for short–term closures.

ENVIRONMENTAL REVIEWS

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run–arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

The required environmental resource documentation shall include the following:

* BDE Form 2289 (Borrow Site Review)
* BDE Form 2290 (Waste/Use Area Review)
* A location map showing the size limits and location of the use area
* Color photographs depicting the use area
* Borrow Area Entry Agreement form – D4 PI0101

Prior to any waste materials being removed from the construction site the required environmental resource surveys shall be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

Please note that a minimum of four weeks shall be allowed for the District to obtain the required waste site environmental clearances and six weeks for the required borrow site environmental clearances.

BRIDGE OVERLAY NOTIFICATION

After placement of the bridge deck overlay, the Resident Engineer shall notify the District Bridge Maintenance Engineer of the "as constructed" milling depth and overlay thickness for updating the Illinois Highway Information System.

POLYMERIZED BITUMINOUS MATERIALS (TACK COAT) RATES

Surface Type	Residual Rate
Milled (HMA or PCC)	0.08 lb /sq ft
Existing Pavement	0.08 lb /sq ft
Fog Coat (between lifts)	0.08 lb /sq ft

HOT–MIX ASPHALT MIXTURE REQUIREMENTS

Mixture Use(s):	HMA Surface Course
AC/PC:	PG 64–22
Design Air Voids:	4.0% @ N50
Mixture Composition: (Gradation Mixture):	IL 9.5
Friction Aggregate:	Mix C
Quality Management:	QC/QA

Notes:
1) For design purposes, mixture weight for all mixes is determined to be 112.0 lb./s.y./in., unless otherwise noted.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE 80% FEDERAL 20% STATE BRIDGE 0047 036-0042
28200200	FILTER FABRIC	SQ YD	71	71
35400475	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 9 3/4"	SQ YD	100	100
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	334	334
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	210	210
40604050	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	TON	45	45
50102400	CONCRETE REMOVAL	CU YD	8.8	8.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	9.4	9.4
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1080	1080
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1425	1425
50800515	BAR SPLICERS	EACH	16	16
50800530	MECHANICAL SPLICERS	EACH	20	20
52000110	PREFORMED JOINT STRIP SEAL	FOOT	106	106
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	10	10
52100520	ANCHOR BOLTS, 1"	EACH	20	20
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	775	775

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE 80% FEDERAL 20% STATE BRIDGE 0047 036-0042
	63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2	2
	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4
	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	2
	63200310	GUARDRAIL REMOVAL	FOOT	1072	1072
	67100100	MOBILIZATION	L SUM	1	1
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
*	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
	70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
	70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	3740	3740
	70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	1558	1558
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	475	475
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	475	475
	70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE 80% FEDERAL 20% STATE BRIDGE 0047 036-0042
	70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	2
	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	1144	1144
	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	9	9
	X0325749	FIBER WRAP	SQ FT	7.4	7.4
*	X0326344	GROUT SLURRY, SPECIAL	CU YD	7	7
*	X0326444	SURFACE FILLER (SPECIAL)	GALLON	3	3
*	X0800001	SHOULDER REMOVAL (SPECIAL)	SQ YD	134	134
*	X1700035	CLASS SI CONCRETE	CU YD	20	20
*	X2810128	STONE RIPRAP, CLASS B4 (SPECIAL)	SQ YD	71	71
*	X5030550	PROTECTIVE COAT (SPECIAL)	SQ YD	227	227
*	X6330725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	65	65
*	Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	215	215
*	Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	10	10
*	Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	411	411

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE 80% FEDERAL 20% STATE BRIDGE 0047 036-0042
*	Z0012164	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 1/2"	SQ YD	411	411
*	Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	2	2
	Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	2	2
*	Z0043800	PRECAST PRESTRESSED CONCRETE I-BEAM REPAIR	SQ FT	1.5	1.5

TRAFFIC CONTROL & PROTECTION								
	TC&P, STANDARD 701201	TC&P, STANDARD 701321	TEMPORARY CONCRETE BARRIER	TEMPORARY BRIDGE TRAFFIC SIGNALS	TEMPORARY RUMBLE STRIPS	IMPACT ATTN, TEMPORARY (NON-REDIRECTIVE) TL3	RELOCATE TCB	RELOCATE IMPACT ATTENUATORS
LOCATION	L SUM	L SUM	FT	EACH	EACH	EACH	FT	EACH
IL ROUTE 94	1	1	475	1	6	2	475	2

MOBILIZATION	
LOCATION	L SUM
JOBSITE	1

GUARDRAIL SCHEDULE												
LOCATION				GUARDRAIL REMOVAL	SPBGR TY A 6FT POSTS	TR BAR TRM TY 1 SPL TAN	TR BAR TRM TY 2	TR BAR TRM TY6	GUARDRAIL AGG EROS CONTROL	GUARDRAIL REF TY A	TERMINAL MARKER - DA	SPBGR TY A (SHORT RADIUS)
STA.	TO	STA.	LT/RT	FT	FT	EACH	EACH	EACH	TON	EACH	EACH	FT
416+90	TO	418+45	LT	155	75	1		1	32	2	1	
415+95	TO	418+86	RT	308	225		1	1	60.9	2		45
419+71	TO	422+30	LT	253	175	1		1	51.8	2	1	
420+09	TO	423+53	RT	356	300		1	1	70.7	3		20
TOTAL				1072	775	2	2	4	215.4	9	2	65

PAVING SCHEDULE								
LOCATION			LENGTH	WIDTH	AREA	HMA SURF REM, BUTT JT	BIT MATL (TACK COAT)	HMA SC IL-9.5 MIX C N50, 1 3/4"
STA.	TO	STA.	(FT)	(FT)	(SQ YD)	(SQ YD)	(LB)	(TON)
North Approach								
417+89	TO	418+24	35	27	105	105	75.6	10.3
418+24	TO	418+71.6	47.6	24	126.9		91.4	12.4
South Approach								
419+92.4	TO	420+40	47.6	24	126.9		91.4	12.4
420+40	TO	420+75	35	27	105	105	75.6	10.3
TOTAL						210	334	45

APPROACH SHOULDER												
LOCATION				LENGTH	WIDTH	AREA	SHOULDER REMOVAL (SPECIAL)	CLASS SI CONCRETE*	PCC BASE COURSE WIDENING 9 3/4"	GROUT SLURRY SPECIAL*	STONE RIPRAP, CLASS B4 (SPECIAL)	FILTER FABRIC
STA.	TO	STA.		FT	FT	SQ YD	SQ YD	CU YD	SQ YD	CU YD	SQ YD	SQ YD
North Approach												
417+89	TO	418+54	LT	65	4.75	34.3	34.3	5	25.6	1.7	17.8	17.8
418+27	TO	418+89	RT	62	4.75	32.7	32.7	5	24.2	1.7	17.8	17.8
South Approach												
419+75	TO	420+37	LT	62	4.75	32.7	32.7	5	25.6	1.7	17.8	17.8
420+10	TO	420+75	RT	65	4.75	34.3	34.3	5	24.2	2.0	17.8	17.8
TOTAL							134	20	100	7	71	71

* 10% Added to volumes estimated from existing plan dimensions

PAVEMENT MARKING BLACKOUT TAPE			
Location	Marking Type	5"	SHORT TERM PAVT MARKING REMOVAL
		FOOT	SQ FT
Sta. 413+55 to Sta. 417+90	Double Yellow CL	880	366.7
Sta. 415+00 to Sta. 424+25 LT	Edge Line (Stage I)	925	385.4
Sta. 415+00 to Sta. 424+25 RT	Edge Line (Stage II)	925	385.4
Sta. 420+75 to Sta. 425+80	Double Yellow CL	1010	420.8
TOTAL		3740	1558.3

Pavement Markings Schedule			
Location	Length	Modified Urethane	
		4" Line	
		Solid	Double Solid
		White	Yellow
Station	Foot	Foot	Foot
Sta. 417+89 to Sta. 420+75	286	572	286
Total		1144	

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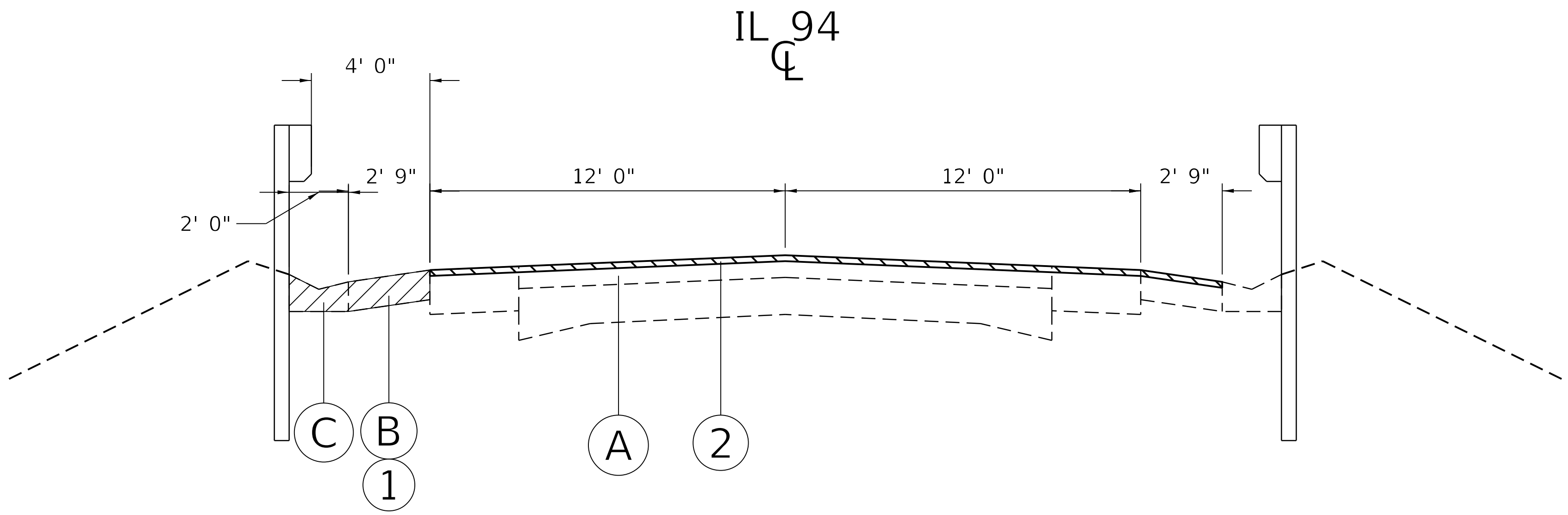
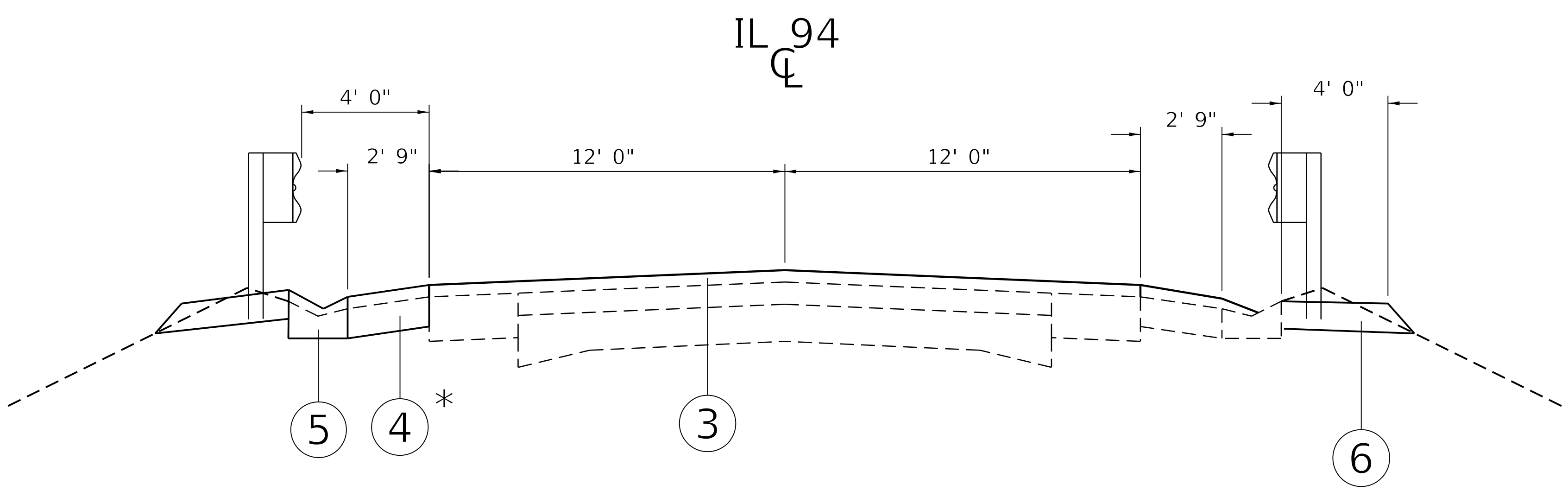
EXISTING



PROPOSED



LEGEND

- (A) EXISTING HMA PAVEMENT
- (B) EXISTING SHOULDER (HMA & PCC)
- (C) EXISTING PCC GUTTER

- (1) PR SHOULDER REMOVAL (SPECIAL)
- (2) PR HMA SURFACE REMOVAL - BUTT JOINT
- (3) PR HMA SURFACE COURSE - 1.75"
- (4) PR PCC BASE COURSE WIDENING - 9 3/4"
- (5) PR GUTTER OUTLET, TYPE B
- (6) PR GUARDRAIL AGG EROS CONTROL - 8"

*4' Wide between proposed gutter outlet and structure

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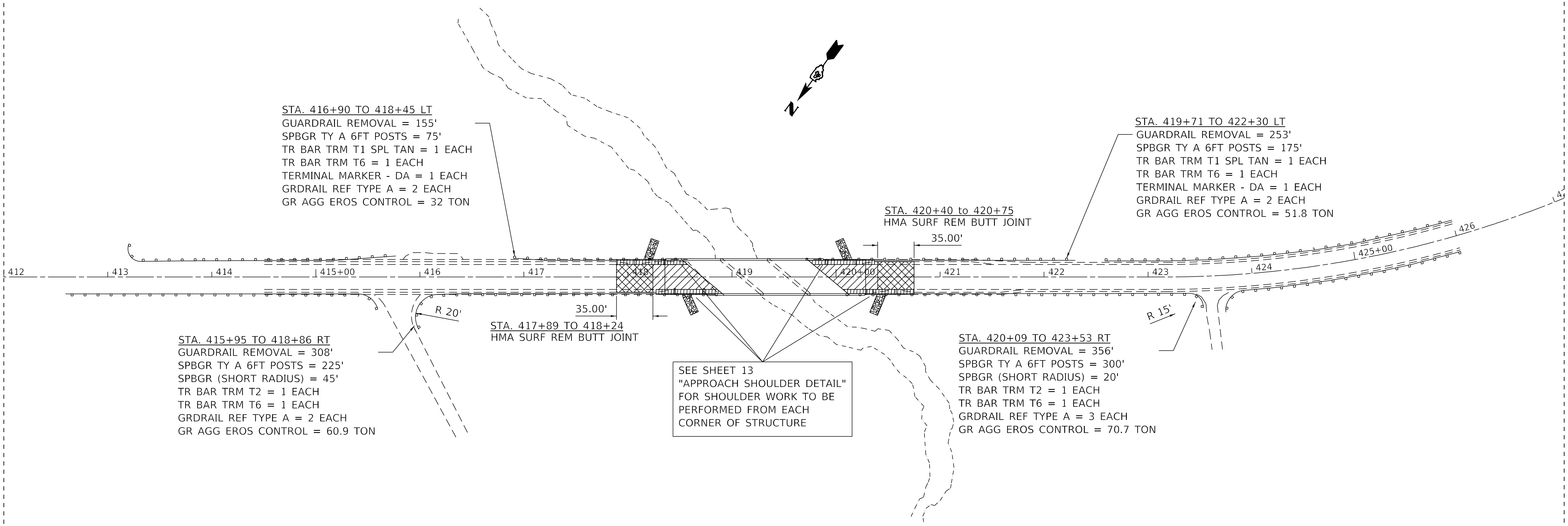
PLOT DATE = 12/11/2020	DATE -	REVISED -	

IL ROUTE 94 – TYPICAL SECTION

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	8
		CONTRACT NO. 68F67		
	ILLINOIS	FED. AID PROJECT		



HMA SURFACE COURSE, 1.75"

HMA SURFACE REMOVAL, BUTT JOINT

SHOULDER REMOVAL (SPECIAL) - SEE SHEET 13 FOR APPROACH SHOULDER DETAIL

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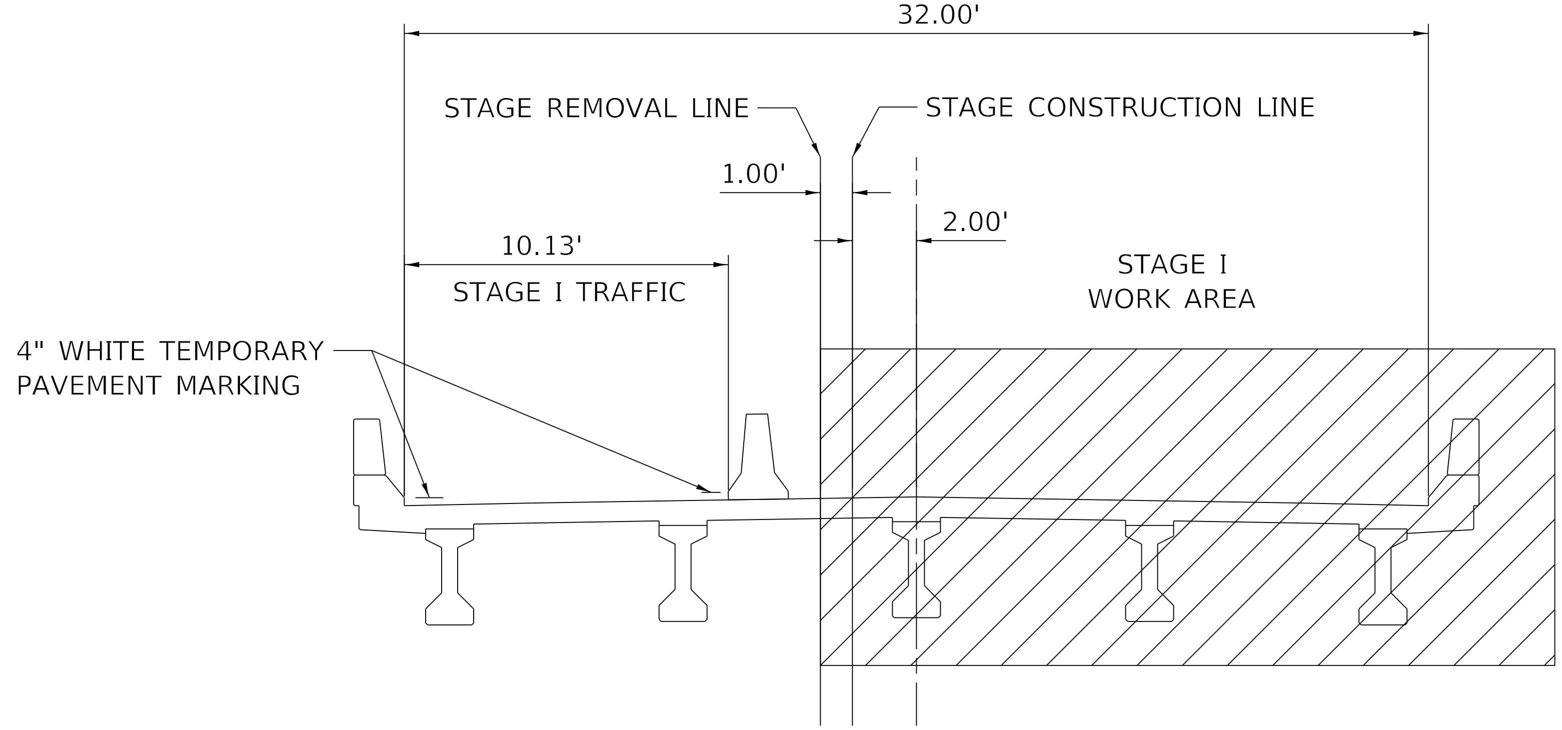
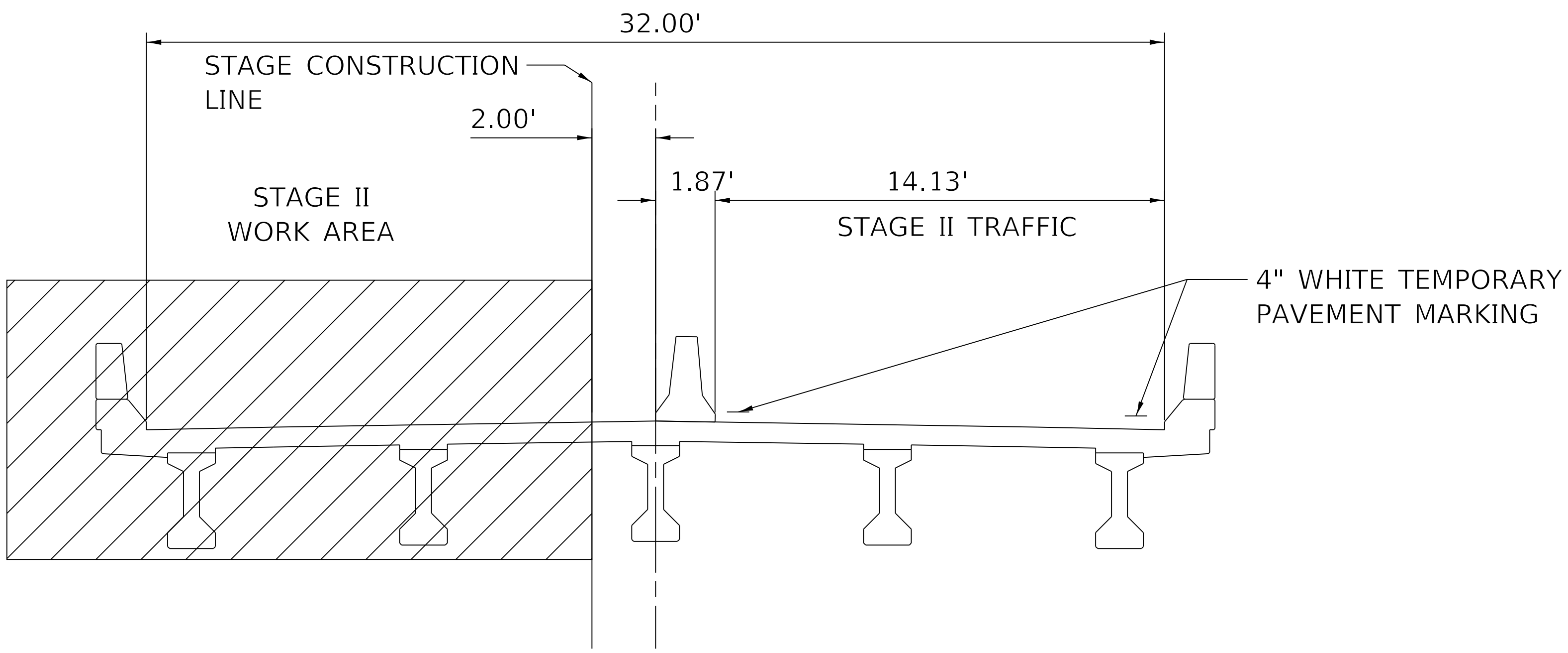
	DRAWN -	REVISED -			1412	[(106C)BR]BDR,BJR	HENDERSON	55	9
PLOT SCALE = 1:100	CHECKED -	REVISED -			CONTRACT NO. 68F67				
PLOT DATE = 12/11/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

STAGE I
(FACING SOUTH)



STAGE II
(FACING SOUTH)



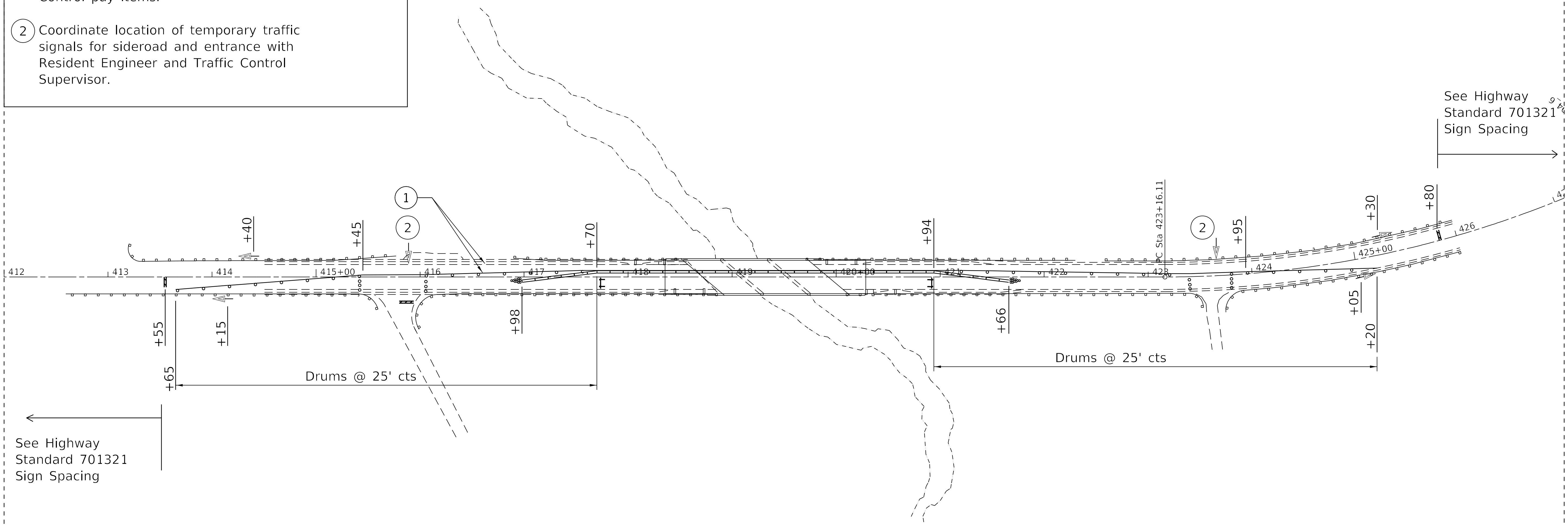
USER NAME = $USER$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Detail Staging Typicals	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
	DRAWN -	REVISED -			1412	[(106C)BR]BDR,BJR	HENDERSON	55 / 10
PLOT SCALE = 1:6	CHECKED -	REVISED -					CONTRACT NO. 68F67	
PLOT DATE = 12/11/2020	DATE -	REVISED -		SCALE: SHEET 1 OF 3 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT		

Traffic control shall adhere to Highway Standard 701321 with the addition of the extended lane closure shown on these plans.

Seven (7) W12-I103 will be required per the Special Provision "Width Restriction Signing". Location of signs will be coordinated with the Traffic Control Supervisor at the Pre-Construction meeting

1. Temporary pavement markings shall be Type III or Type IV temporary tape. The cost of placing and removing temporary pavement markings shall not be paid for separately but shall be included in the cost of the Traffic Control pay items.

2. Coordinate location of temporary traffic signals for sideroad and entrance with Resident Engineer and Traffic Control Supervisor.



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PLOT DATE = 12/11/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Traffic Control Detail
Stage I – SB Lane Closure

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	11

CONTRACT NO. 68F67

ILLINOIS | FED. AID PROJECT

Traffic control shall adhere to Highway Standard 701321 with the addition of the extended lane closure shown on these plans.

Seven (7) W12-I103 will be required per the Special Provision "Width Restriction Signing". Location of signs will be coordinated with the Traffic Control Supervisor at the Pre-Construction meeting

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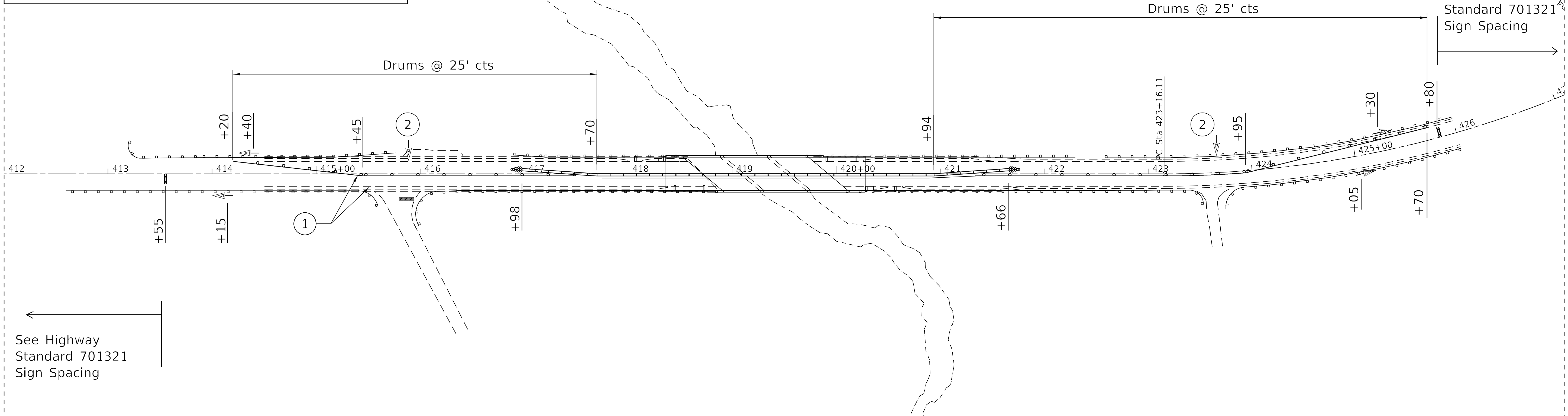

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	DRAWN -	REVISED -	
PLOT SCALE = 1:100	CHECKED -	REVISED -	
PLOT DATE = 12/11/2020	DATE -	REVISED -	

Traffic Control Detail
Stage II – NB Lane Closure

SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.

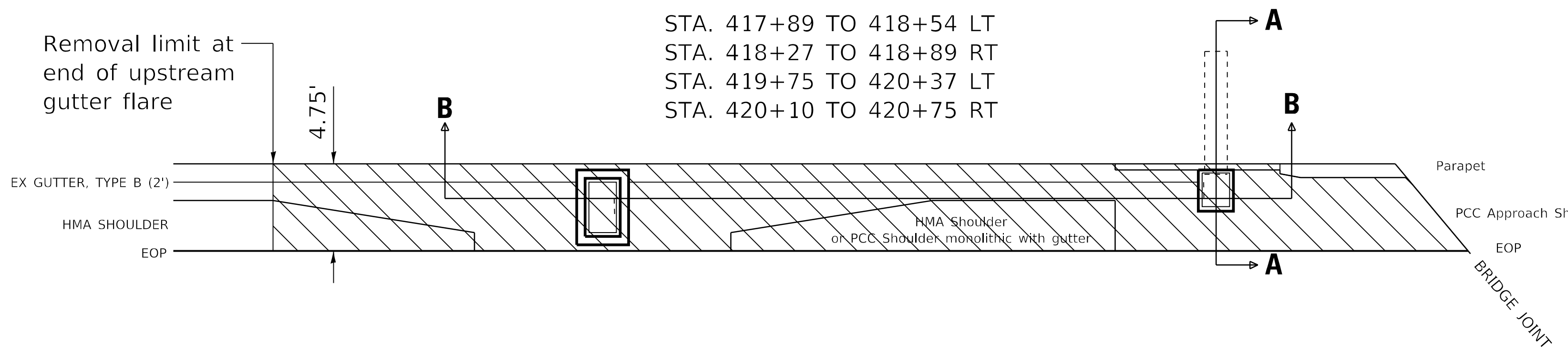
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	12

CONTRACT NO. 68F67

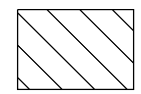
ILLINOIS FED. AID PROJECT

APPROACH SHOULDER – REMOVAL

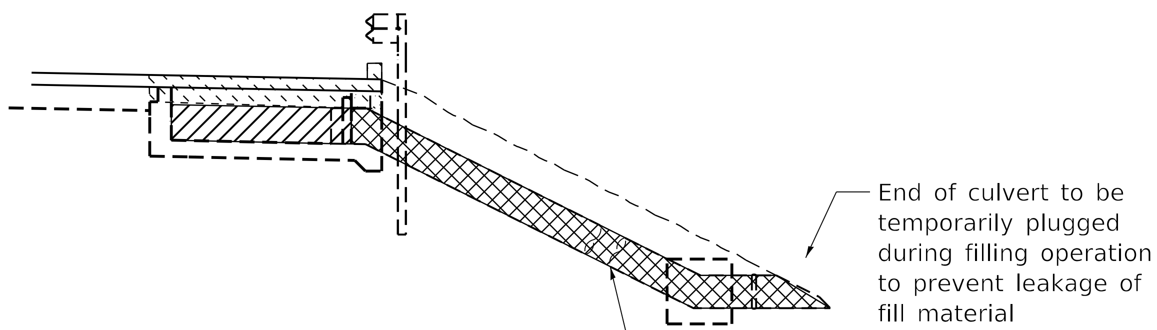
STA. 417+89 TO 418+54 LT
STA. 418+27 TO 418+89 RT
STA. 419+75 TO 420+37 LT
STA. 420+10 TO 420+75 RT



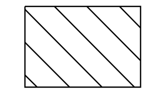
*Assumed depth of existing shoulder and PCC gutter (at the edge of shoulder) is 8"
Refer to Section 440.07(c) of Standard Specifications if actual depth differs

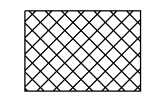

SHOULDER REMOVAL (SPECIAL)

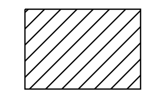
Section A–A



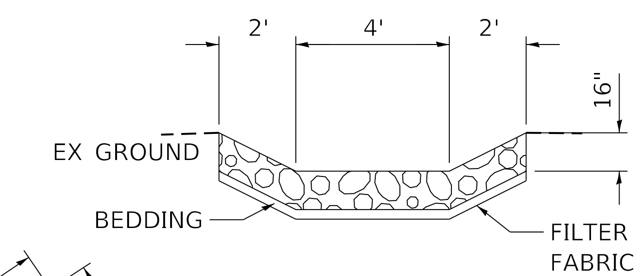
STA. 418+35 LT = 15'
STA. 418+73 RT = 15'
STA. 419+91 LT = 15'
STA. 420+29 RT = 20'


SHOULDER REMOVAL (SPECIAL)

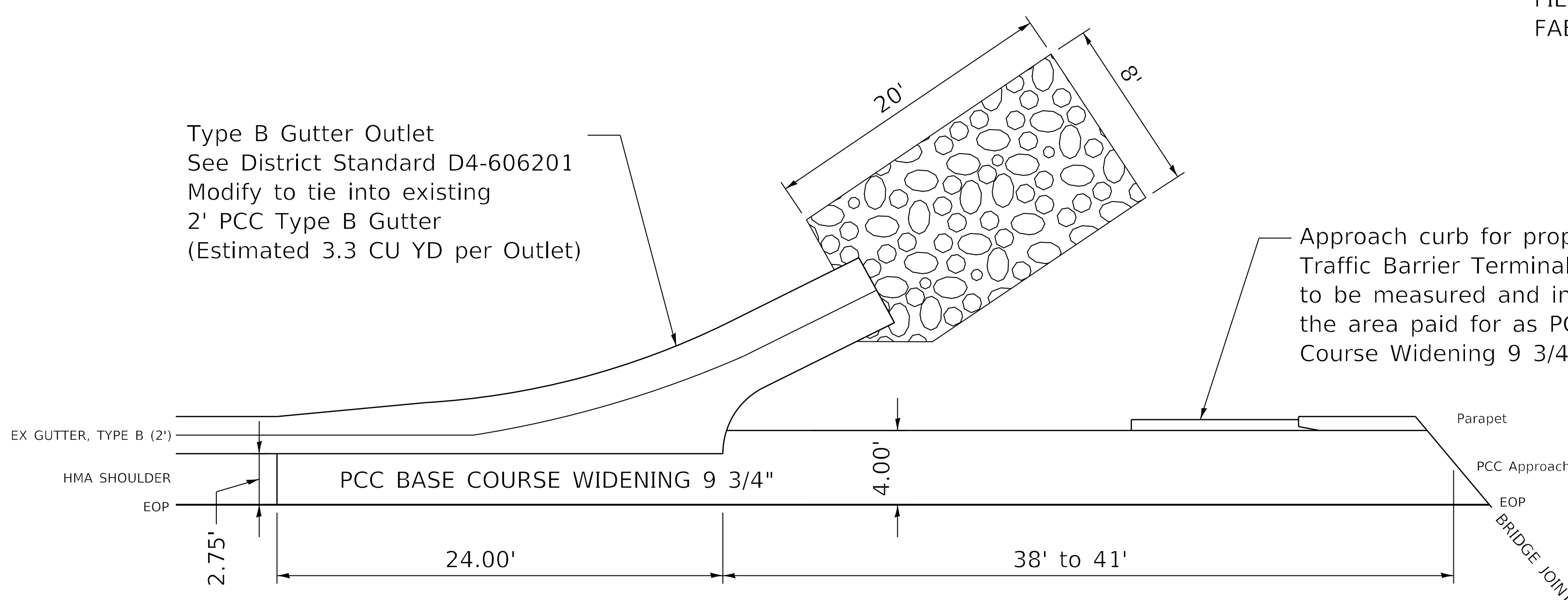

GROUT SLURRY SPECIAL


CLASS SI CONCRETE

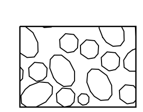
STONE RIPRAP, CLASS B4 (SPECIAL) TYPICAL



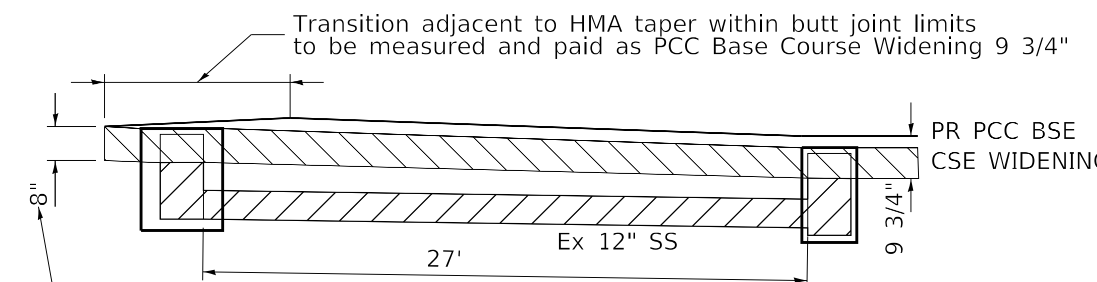
APPROACH SHOULDER – PROPOSED

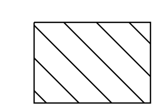


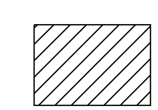
Coring of the proposed outlet may be required to ensure proper spacing of proposed guardrail posts. Any cores shall be filled with HMA after placement of the post and hand compacted. If required this work shall not be paid for separately but be considered incidental to the cost of the related pay items.


STONE RIPRAP, CLASS B4 (SPECIAL)

Section B–B




SHOULDER REMOVAL (SPECIAL)

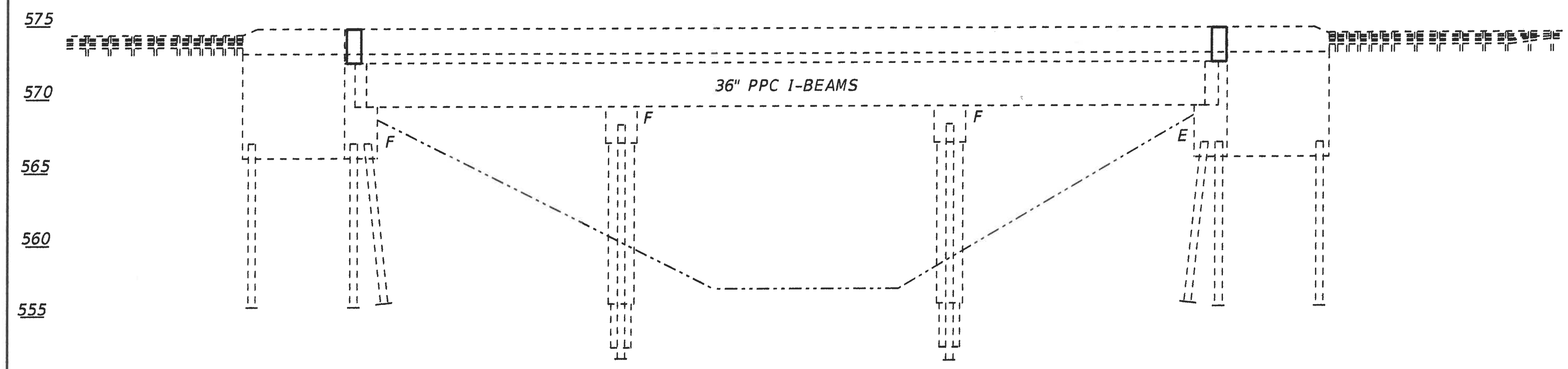

CLASS SI CONCRETE

SHEET NOT TO SCALE

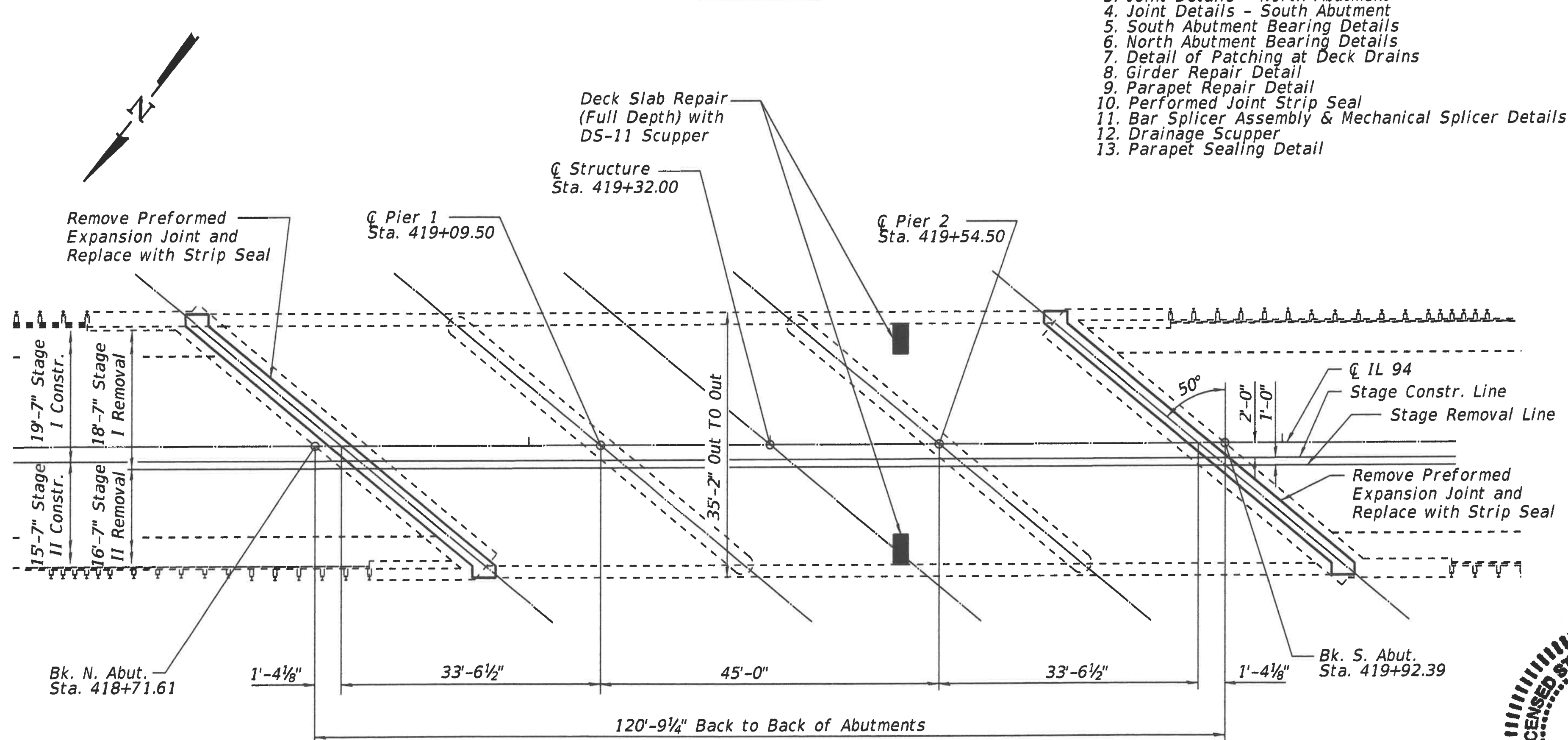
USER NAME = $USER$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	APPROACH SHOULDER DETAIL	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			1412	[(106C)BR]BDR,BJR	HENDERSON	55	13
PLOT SCALE = 1:10	CHECKED -	REVISED -			CONTRACT NO. 68F67				
PLOT DATE = 12/11/2020	DATE -	REVISED -		SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

Benchmark:
Top NW (Westernmost) wingwall of bridge Elevation 572.49

Existing Structure No. 036-0042:
The existing Structure is a 3 Span 36" PPC I-Beams supporting a cast in place concrete deck constructed in 1991 as Section (106C) BR. The superstructure is supported by open concrete abutments and pile bent concrete piers. It has an out to out deck width of 35'-2" and a 120'-9¼" back to back abutment length.



ELEVATION



PLAN

INDEX OF SHEETS

1. General Plan and Elevation
2. Cross Section
3. Joint Details - North Abutment
4. Joint Details - South Abutment
5. South Abutment Bearing Details
6. North Abutment Bearing Details
7. Detail of Patching at Deck Drains
8. Girder Repair Detail
9. Parapet Repair Detail
10. Performed Joint Strip Seal
11. Bar Splicer Assembly & Mechanical Splicer Details
12. Drainage Scupper
13. Parapet Sealing Detail

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	8.8
Concrete Superstructure	Cu. Yd.	9.4
Bridge Deck Grooving	Sq. Yd.	411
Furnishing and Erecting Structural Steel	Pound	1,080
Reinforcement Bars, Epoxy Coated	Pound	1,425
Bar Splicers	Each	16
Mechanical Splicers	Each	20
Preformed Joint Strip Seal	Foot	106
Elastomeric Bearing Assembly, Type I	Each	10
Anchor Bolts, 1"	Each	20
Fiber Wrap	Sq. Ft.	7.4
Surface Filler, Special	Gallon	3
Protective Coat, Special	Sq. Yd.	227
Jack and Remove Existing Bearings	Each	10
Bridge Deck Scarifcation, 3/4"	Sq. Yd.	411
Bridge Deck Microsilica Concrete Overlay, 2 1/2"	Sq. Yd.	411
Deck Slab Repair (Full Depth)	Sq. Yd.	2
Drainage Scuppers, DS-11	Each	2
Precast Prestressed Concrete I-Beam Repair	Sq. Ft.	1.5

SCOPE OF WORK

1. Setup Traffic Control with Drums
2. Perform Deck Slab Repair and Place Drainage Scuppers
3. Perform Joint Reconstructions
4. Perform Beam End Repairs
5. Replace Bearings at Abutments
6. Perform Bridge Deck Scarifcation, 3/4"
7. Place Deck Microsilica Concrete Overlay, 2 1/2"
8. Apply Protective Coat, Special and Surface Filler, Special
9. Switch Stages and repeat

GENERAL NOTES

All structural steel shall be AASHTO M-270 grade 36, unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck , all heavy and loose mill scale and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removalshall be accomplished by methods that will not damage the steel and the cost will be included in concrete removal.

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

Existing reinforcement bars extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with concrete removal.

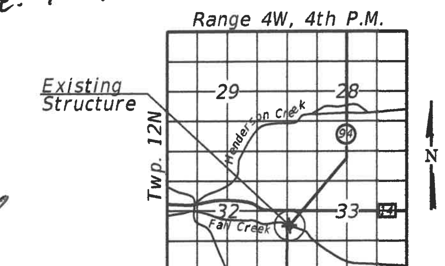
Joint openings shall be adjusted according to article 520.04 of the standard specifications when the deck is poured at an ambient temperature other than 50° fahrenheit.

Protective coat shall only be applied to the new concrete deck, parapets adjacent to joints, and the new overlay.

Date: 1/29/21

LICENSED STRUCTURAL ENGINEER
CHASE J. CONNOR
081-7200
STATE OF ILLINOIS

CHASE J. CONNOR, P.E., S.E.
ILLINOIS STRUCTURAL NO. 7200
EXPIRES: NOVEMBER 30, 2022



LOCATION SKETCH

BRIDGE REPAIRS
ILLINOIS ROUTE 94
OVER FALL CREEK
HENDERSON COUNTY
STATION 419+32.00
STRUCTURE NO. 036-0042

Hurst-Rosche, Inc. 1400 E. TREMONT ST. HILLSBORO, IL PH: 217.532.3959 JOB NO. 192-2050	USER NAME =	DESIGNED - CJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION STRUCTURE NO. 036-0042	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE =	CHECKED - CJC	REVISED -		SHEET 1 OF 13 SHEETS		ILLINOIS FED. AID PROJECT			

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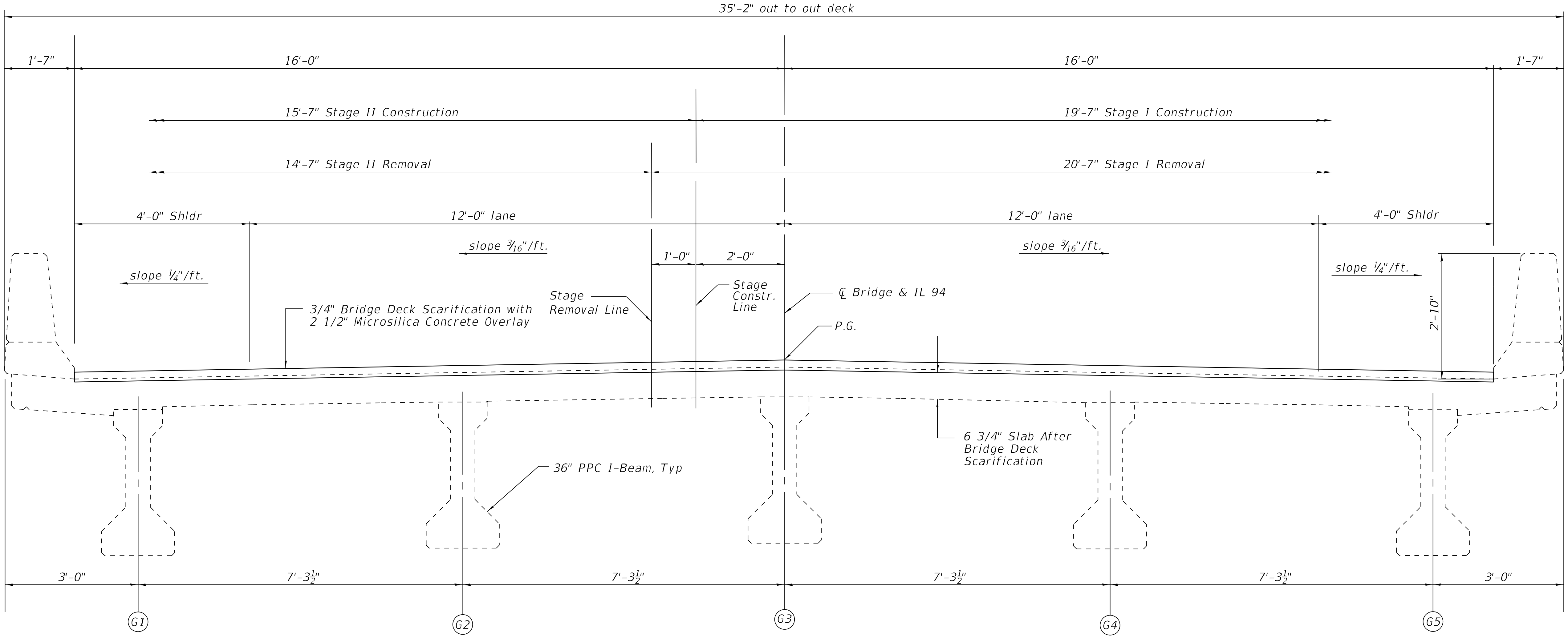

CROSS SECTION

(Looking North)

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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 68F67		
	ILLINOIS	FED. AID PROJECT		

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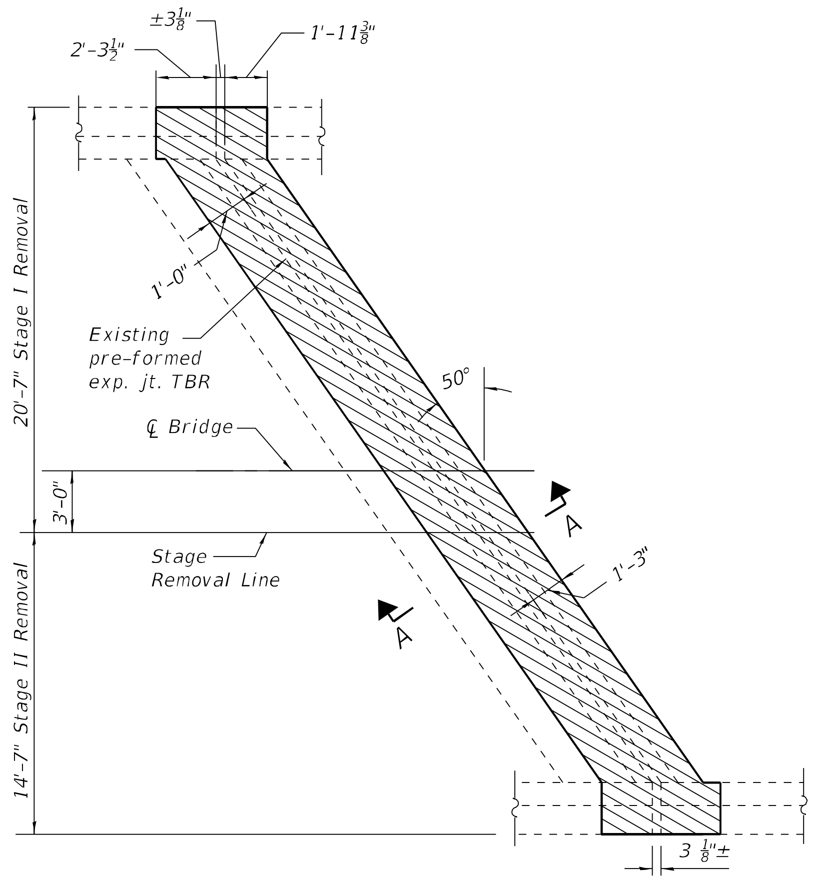
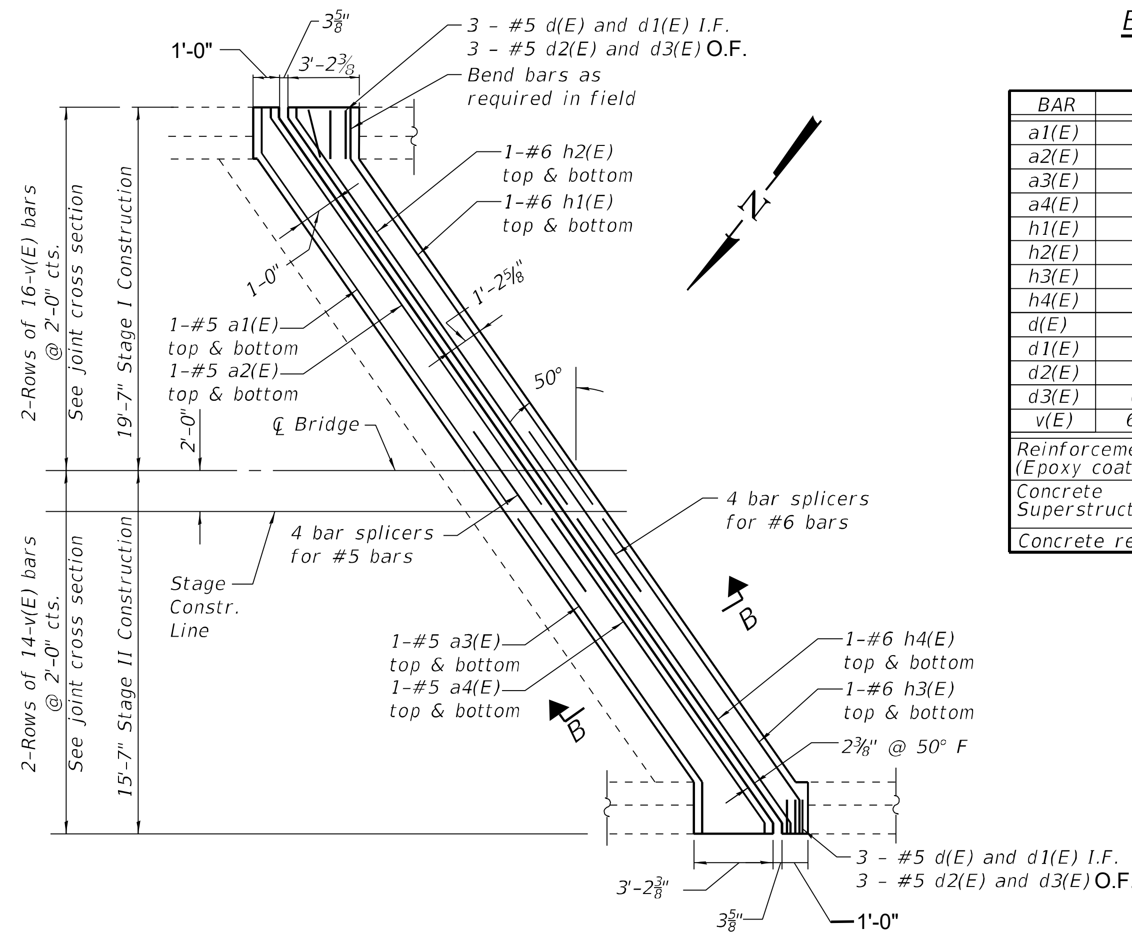


JOINT REMOVAL PLAN



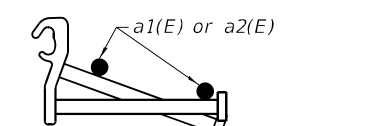
JOINT PLAN

BILL OF MATERIAL
(NORTH JOINT)

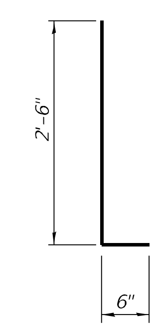
BAR	#	SIZE	LENGTH	SHAPE
a1(E)	2	#5	29'-8"	
a2(E)	2	#5	30'-3"	
a3(E)	2	#5	23'-4"	
a4(E)	2	#5	24'-0"	
h1(E)	2	#6	29'-8"	
h2(E)	2	#6	30'-3"	
h3(E)	2	#6	23'-4"	
h4(E)	2	#6	24'-0"	
d(E)	6	#5	3'-0"	
d1(E)	6	#5	2'-7"	
d2(E)	6	#4	3'-5"	
d3(E)	6	#4	3'-11"	
v(E)	60	#5	1'-4"	
Reinforcement Bars (Epoxy coated)		Pound	695	
Concrete Superstructure		Cu. Yd.	4.4	
Concrete removal		Cu. Yd.	4.1	

NOTES:

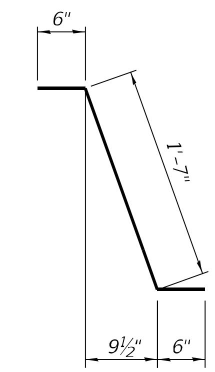
1. Removal of existing expansion joint shall be included in the cost of concrete removal.
2. A 6"X6" Blockout will be permitted in the base of the parapet at the expansion joint in order to facilitate joint seal installation.
3. The contractor shall use extreme care during concrete removal so as not to damage the PPC I-Beams.
4. In parapet removal areas, existing reinforceing shall remain and be re-incorporated into the new parapets.



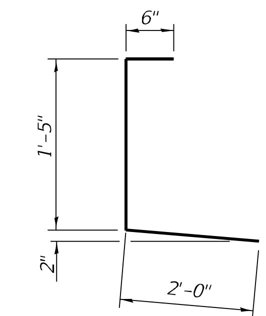
DETAIL A - a(E) & a2(E)
TOP MAT PLACEMENT



BARS d(E) & d2(E)

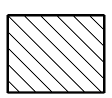


BAR d1(E)

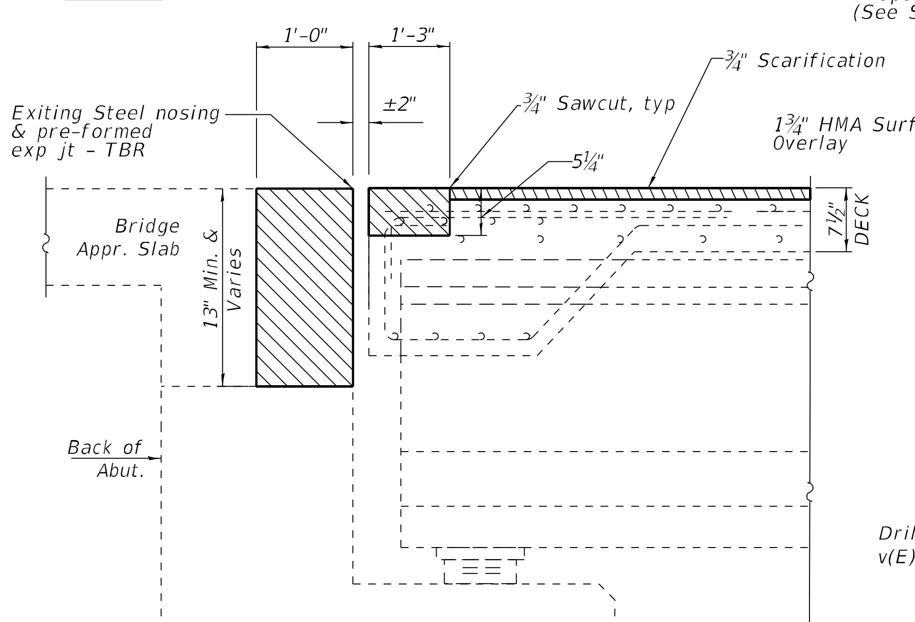


BAR d3(E)

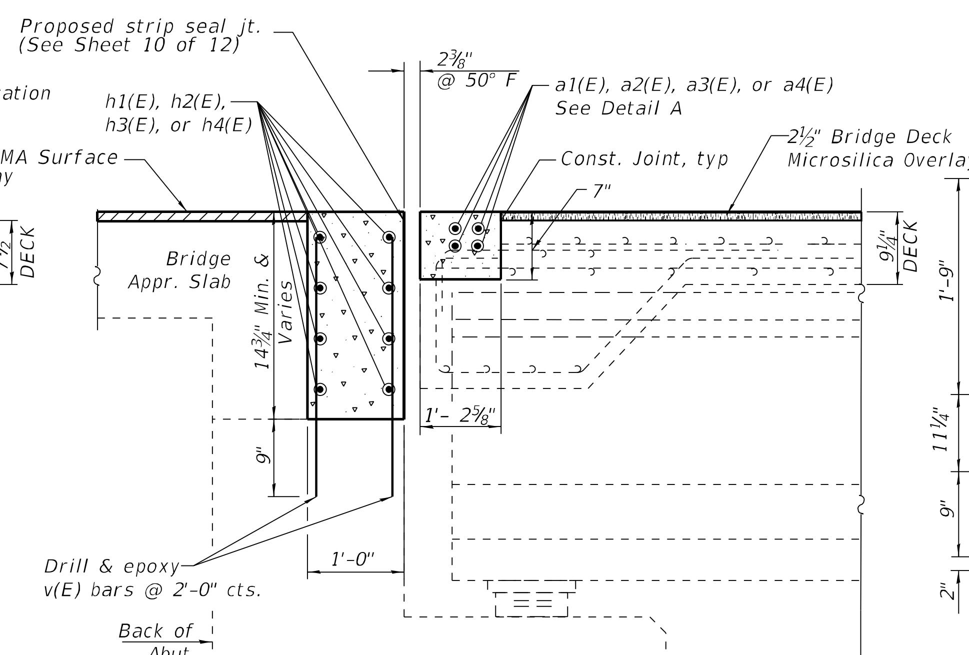
LEGEND



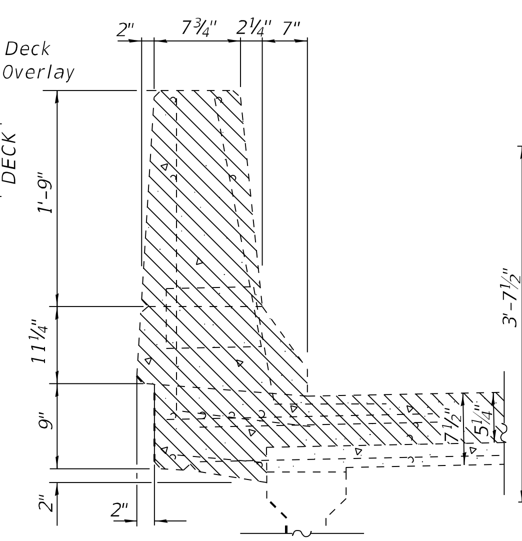
Removal Areas



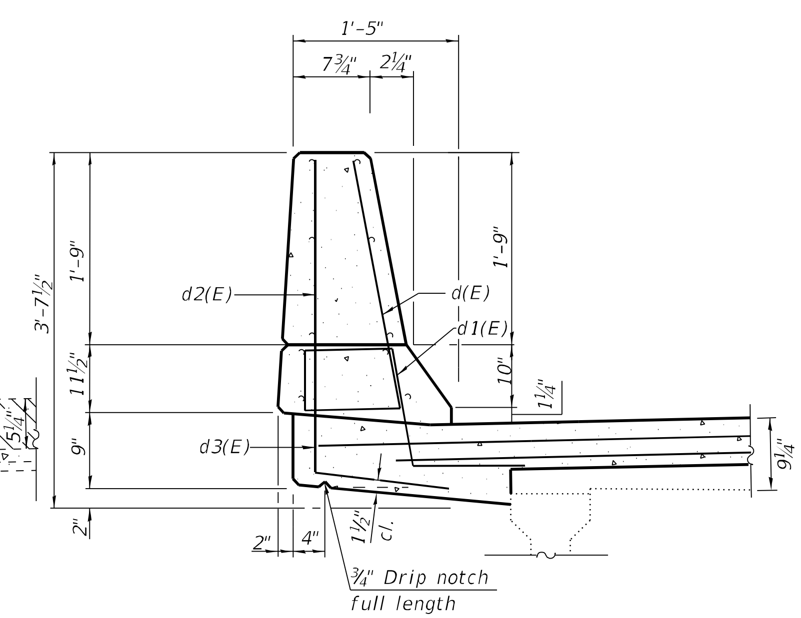
JOINT REMOVAL SECTION A-A



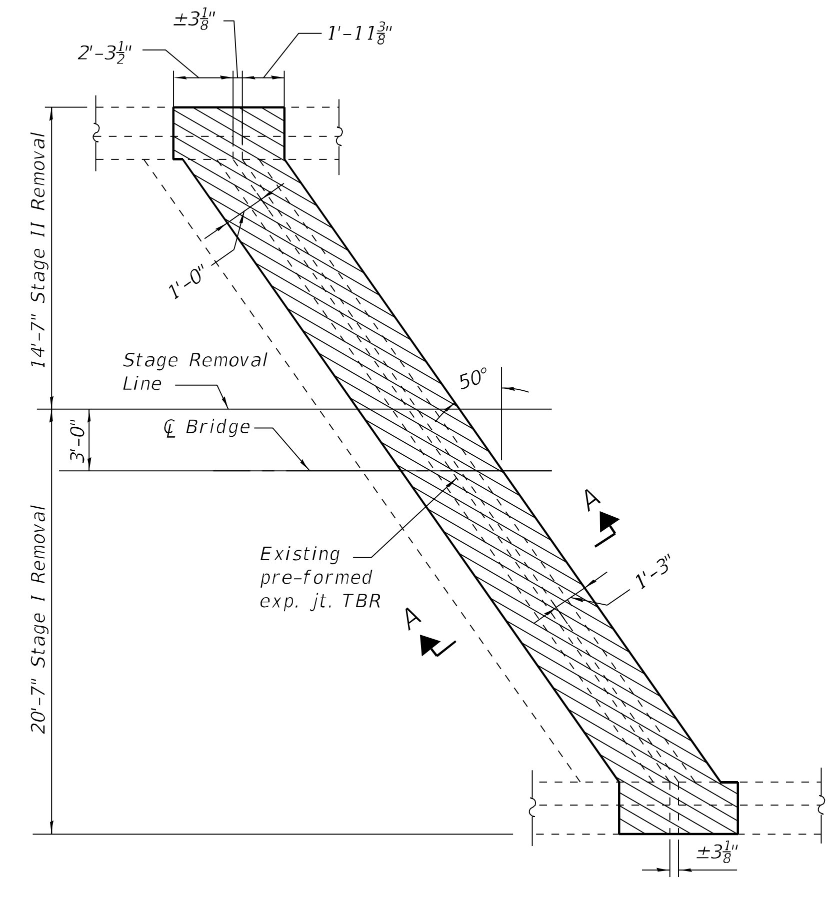
JOINT SECTION B-B



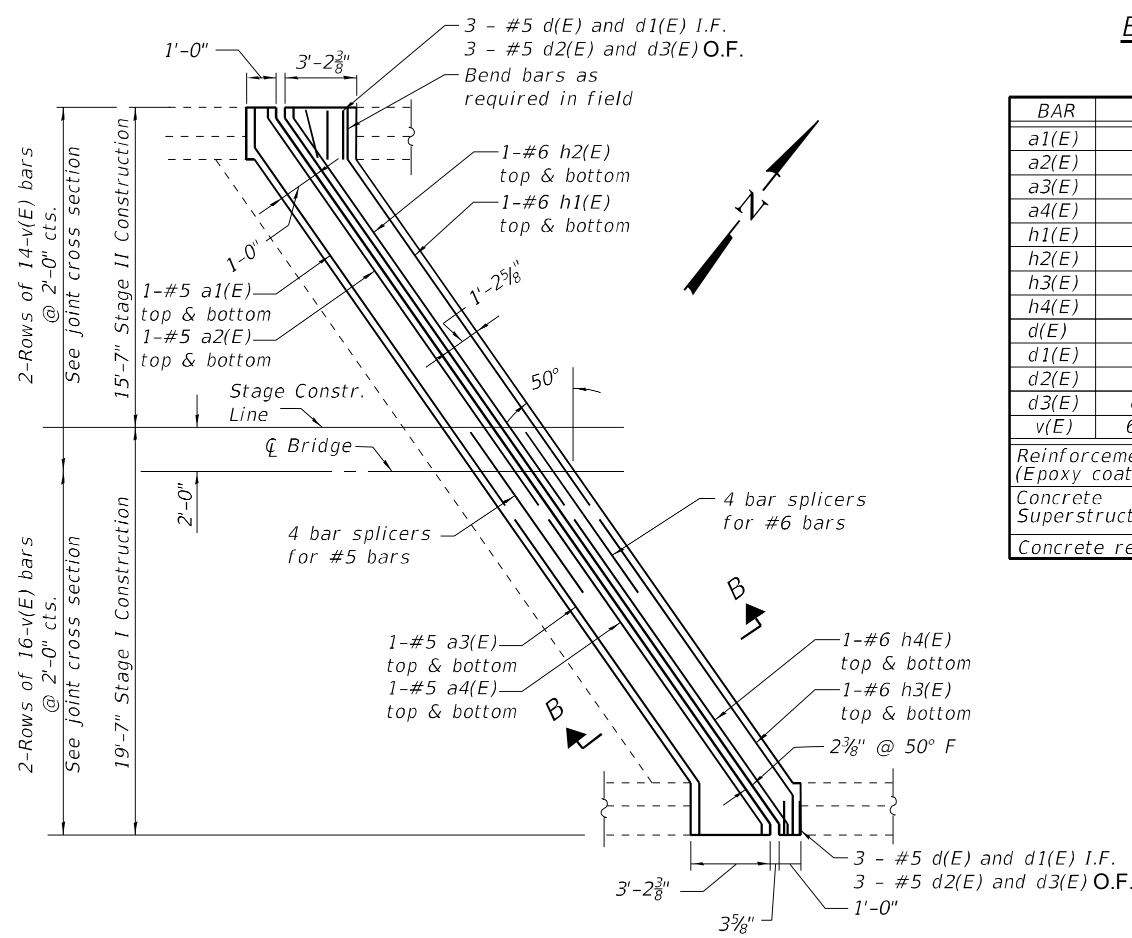
PARAPET REMOVAL CROSS SECTION



PARAPET REPLACEMENT CROSS SECTION



JOINT REMOVAL PLAN



JOINT PLAN

BILL OF MATERIAL
(NORTH JOINT)

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Concrete removal		Cu. Yd.	4.1	

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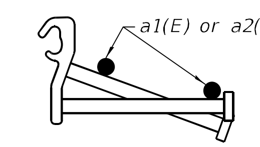
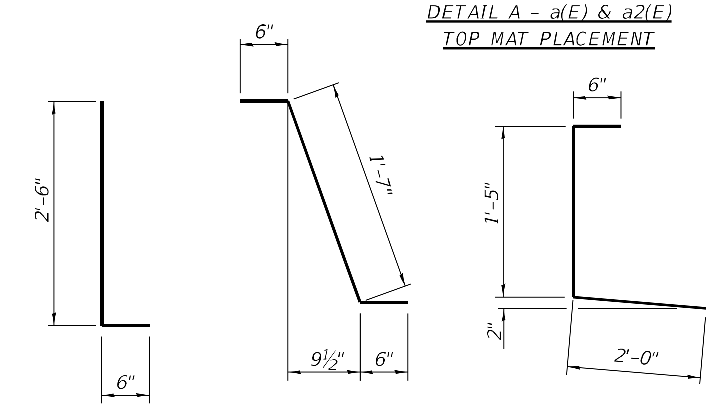


DETAIL A - a(E) & a2(E)
TOP MAT PLACEMENT

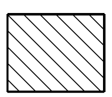


BARS d(E) & d2(E)

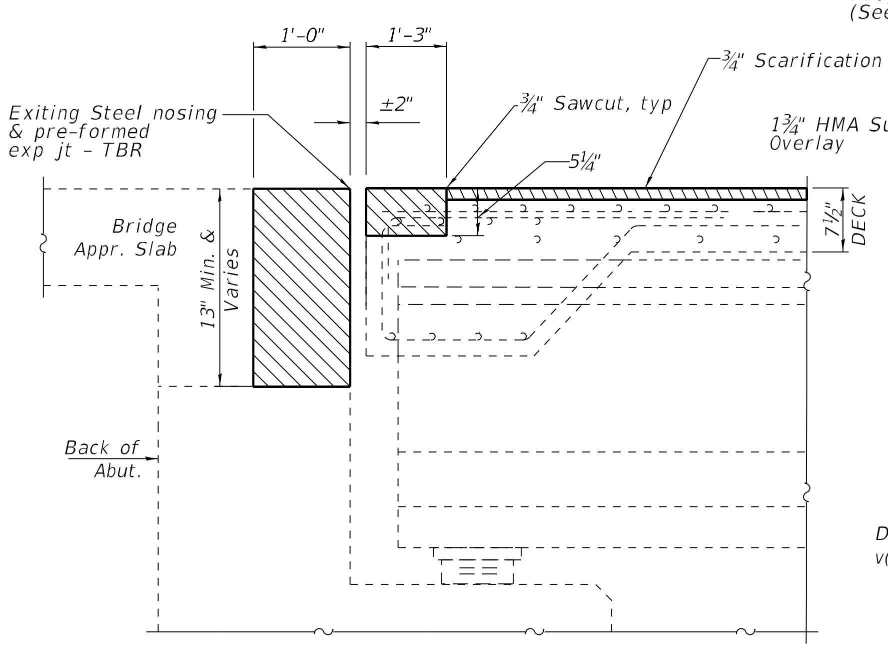
BAR d1(E)

BAR d3(E)

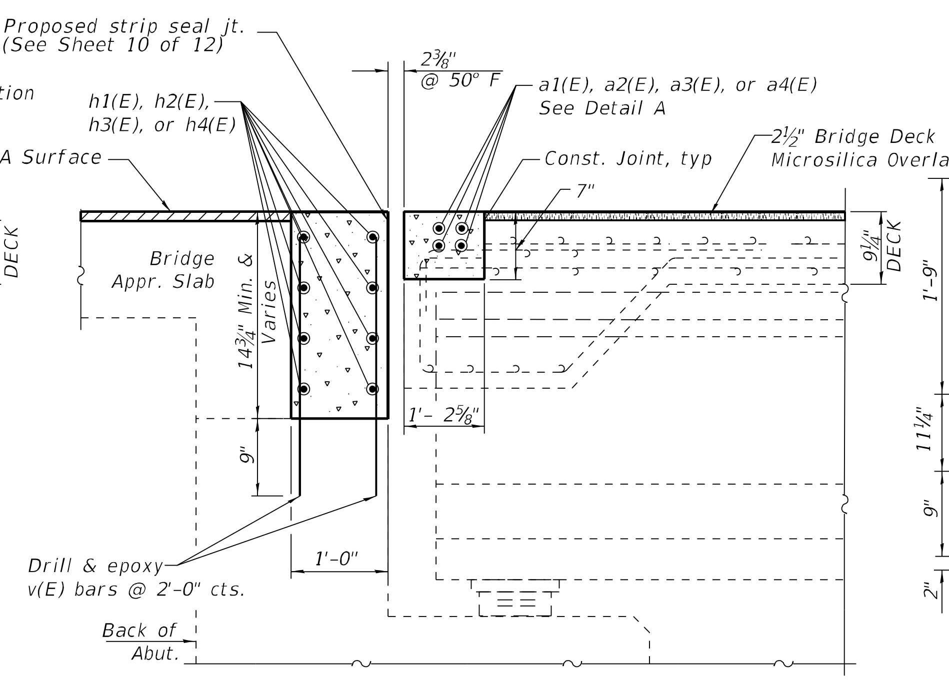
LEGEND



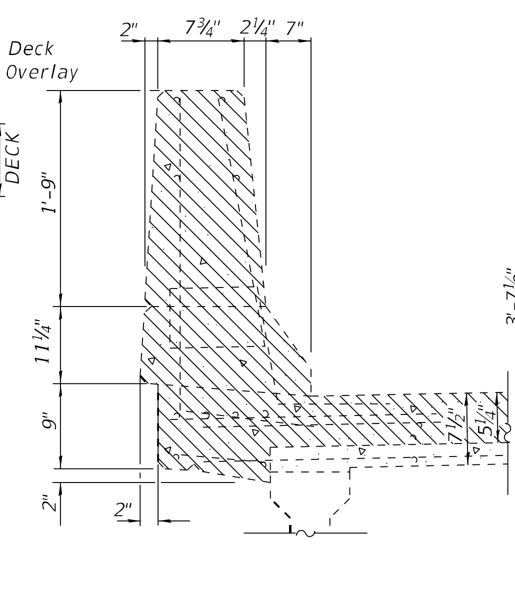
Removal Areas



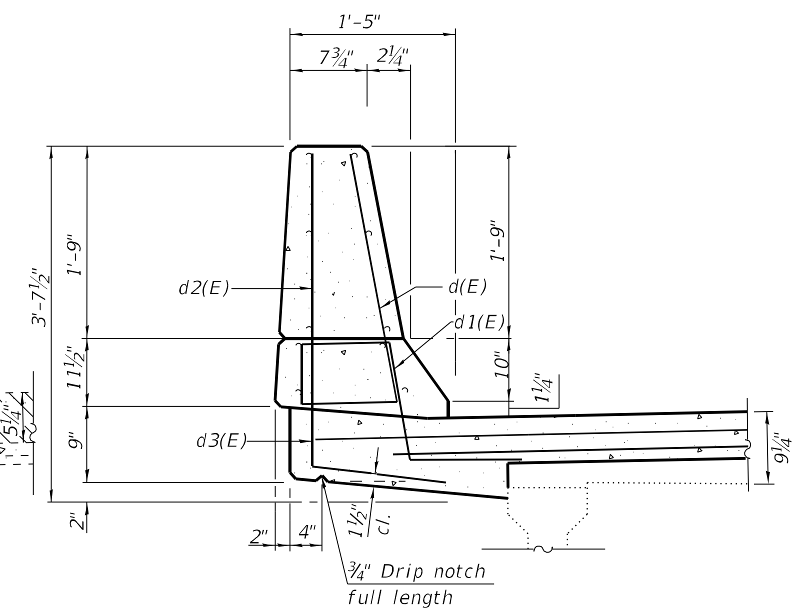
JOINT REMOVAL SECTION A-A



JOINT SECTION B-B



PARAPET REMOVAL CROSS SECTION



PARAPET REPLACEMENT CROSS SECTION

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		DRAWN - UJ	REVISED -		
	PLOT DATE =	CHECKED - CJC	REVISED -		SHEET 4 OF 13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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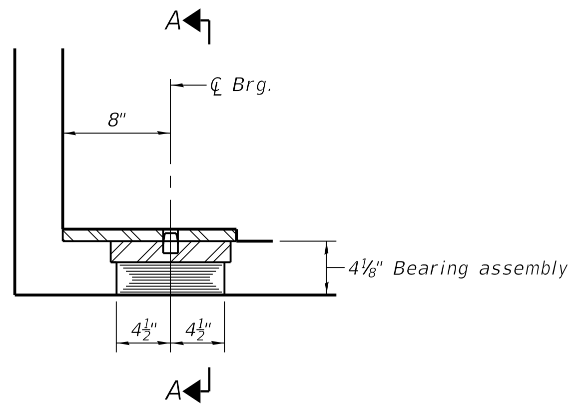
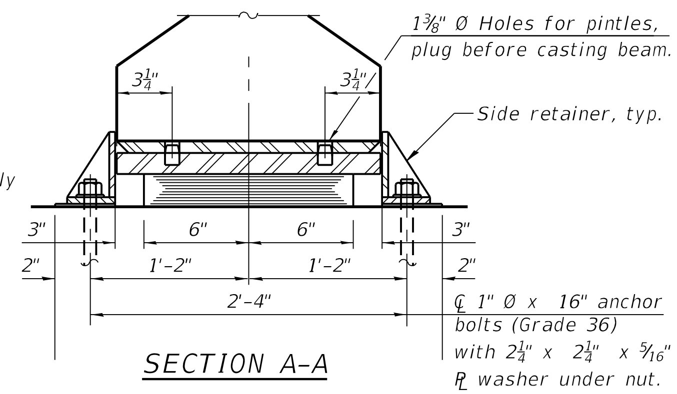
		CONTRACT NO. 68F67		
		ILLINOIS	FED. AID PROJECT	



ELEVATION AT ABUT.



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer approved alternate material) of grades and dimensions specified. ASTM A307 grade C anchor bolts may be used in lieu of ASTM F1554 grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of Standard Specifications.

Side retainers and ¼" stainless steel plates required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

The minimum jack capacity required is 35 tons.

Existing diaphragm removal and reinstallation may be required to facilitate drilling holes,cost to be included with jack and remove existing Bearings.

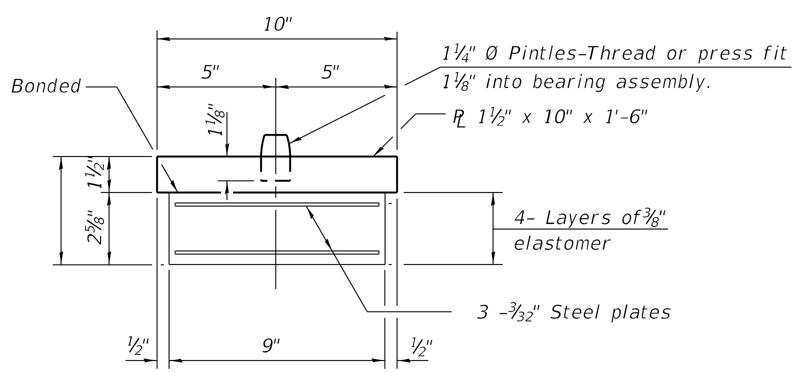
Prior to ordering any materials, the contractor shall verify in the field all bearings height and shim thickness dimensions.

Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

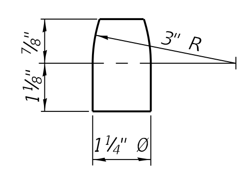
new steel extensions, connection bolts, fill plates and shim plates are included in furnishing and erecting structural steel.

All plate material for bearings shall be hot dip galvanized according to AASHTO M111.

All bolts and washers shall be galvanized according to AASHTO M232.



BEARING ASSEMBLY



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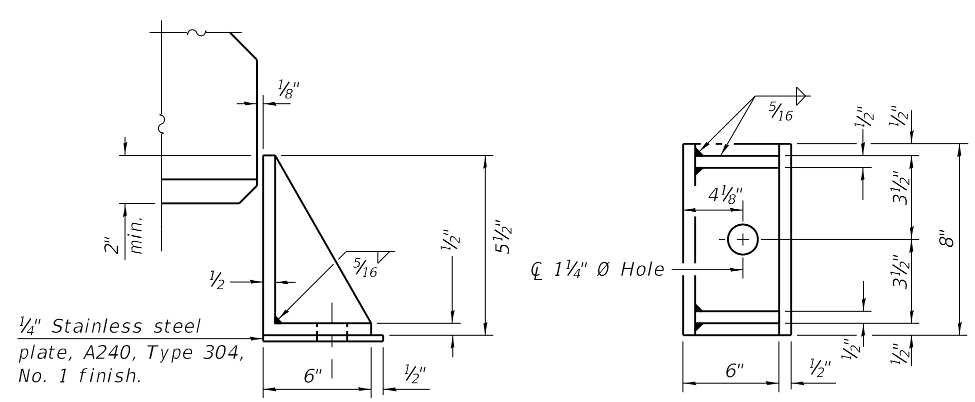
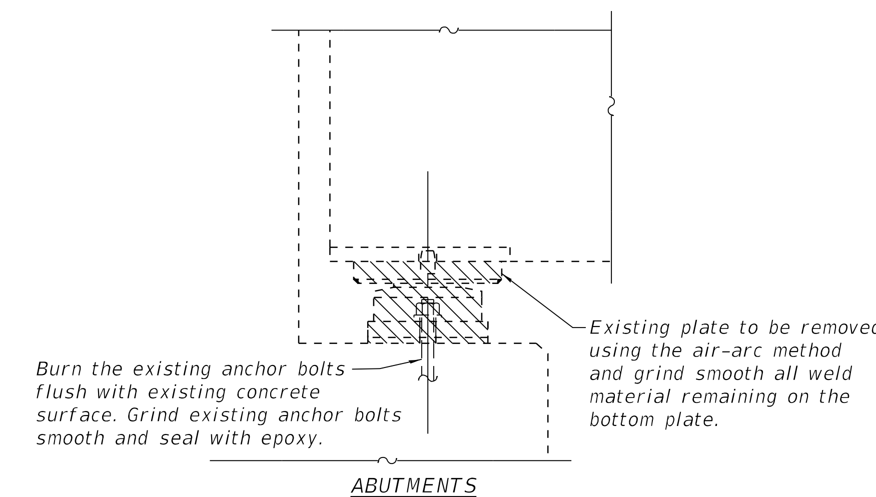


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



EXISTING BEARING REMOVAL DETAIL

Note:
Cost is included with jack & remove existing bearings.

GIRDER REACTIONS

RDL	(k)	23.7
RLL	(k)	34.5
Imp.	(k)	10.4
RTotal	(k)	68.6

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	5
Anchor Bolts	Each	10
Jack and Remove Existing Bearings	Each	5
Furnishing and Erecting Structural Steel	Pound	390

PI-2E-1 6-15-2019

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	PLOT DATE =	CHECKED - CJC	REVISED -		SHEET 5 OF 13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 68F67		
		ILLINOIS FED. AID PROJECT		

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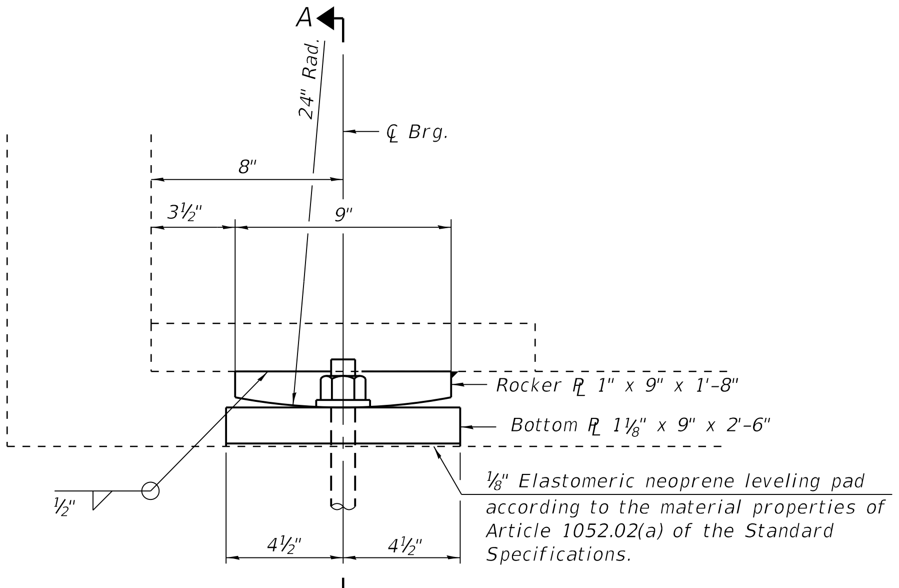
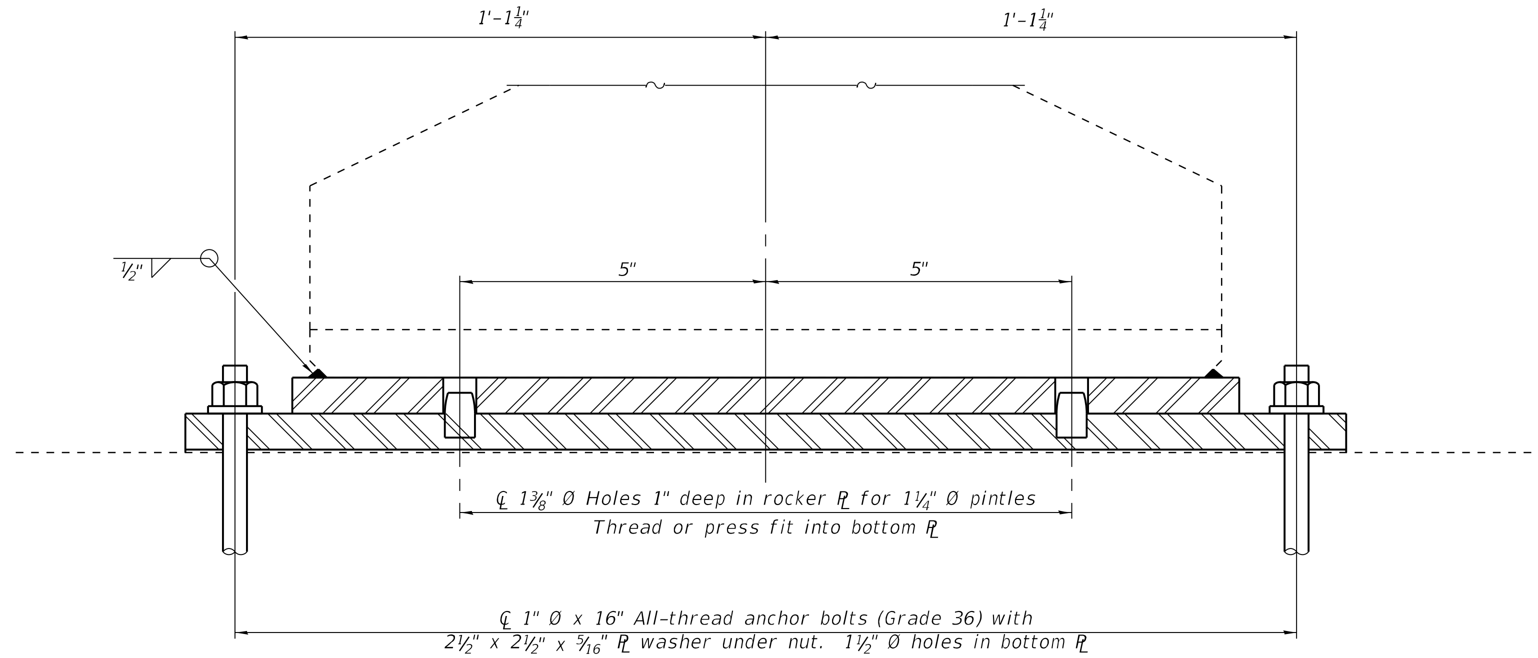


ELEVATION AT NORTH ABUTMENT



SECTION A-A

GIRDER REACTIONS

RDL	(k)	23.7
RLL	(k)	34.5
Imp.	(k)	10.4
RTotal	(k)	68.6

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer approved alternate material) of grades and dimensions specified. ASTM A307 grade C anchor bolts may be used in lieu of ASTM F1554 grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

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The minimum jack capacity required is 35 tons.

Existing diaphragm removal and reinstallation may be required to facilitate drilling holes,cost to be included with jack and remove existing Bearings.

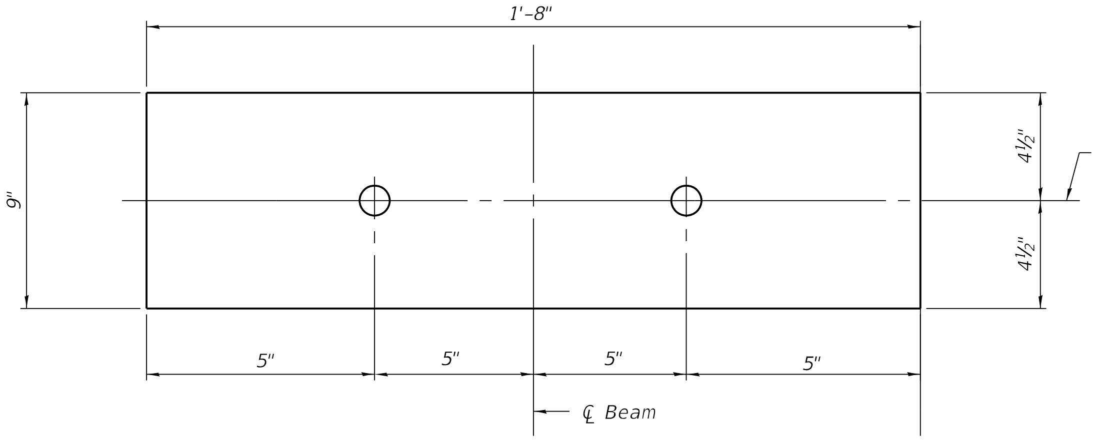
Prior to ordering any materials, the contractor shall verify in the field all bearings height and shim thickness dimensions.

Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

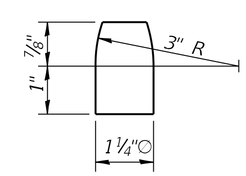
All plates, hardware, and leveling pads required for the bearings shall be included in the cost of anchor bolts, 1".

All plate material for bearings shall be hot dip galvanized according to AASHTO M111.

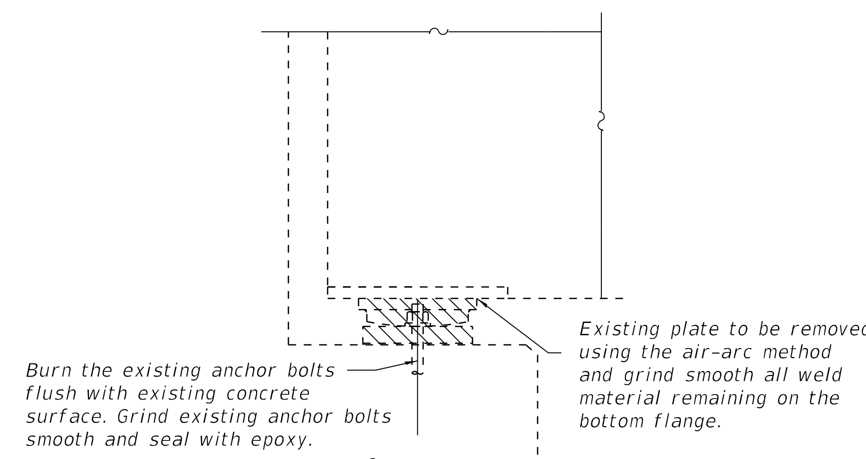
All bolts and washers shall be galvanized according to AASHTO M232.



PLAN OF ROCKER PLATE
(Looking from below at rocker plate only)



PINTLE

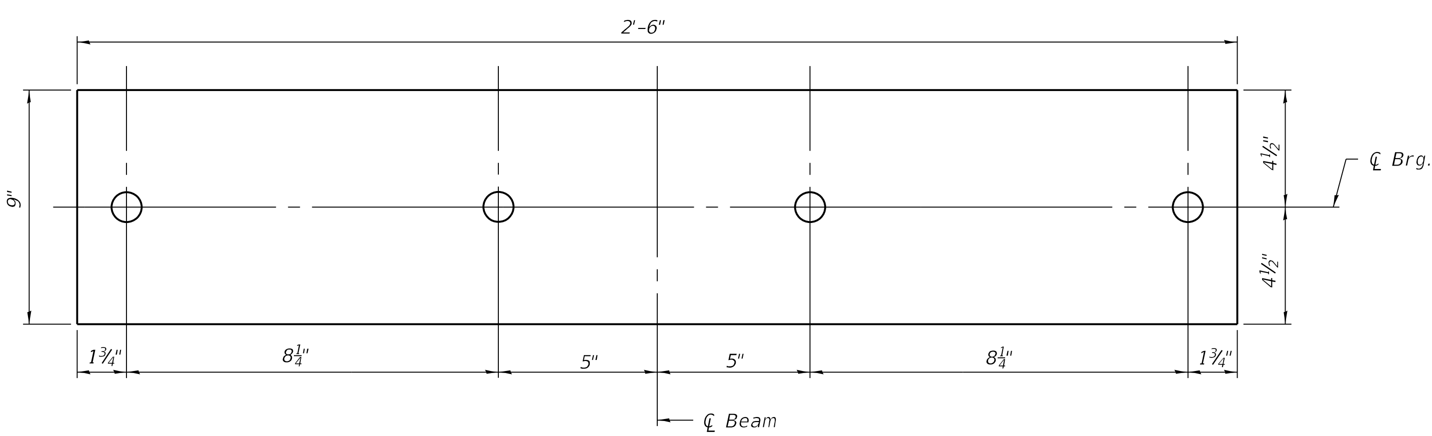


EXISTING BEARING REMOVAL DETAIL

Note:
Cost is included with jack & remove existing bearings.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	10
Jack and Remove Existing Bearings	Each	5
Furnishing and Erecting Structural Steel	Pound	690



PLAN OF BOTTOM PLATE

PI-2E-2 6-15-2019

MODEL: Default
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Hurst-Rosche, Inc. PROFESSIONAL DESIGN NUMBER 184-000256 1400 E. TREMONT ST. HILLSBORO, IL PH: 217.532.3959 JOB NO. 192-2050	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - CMV	REVISED -
	PLOT SCALE =	DRAWN - UJ	REVISED -
	PLOT DATE =	CHECKED - CJC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

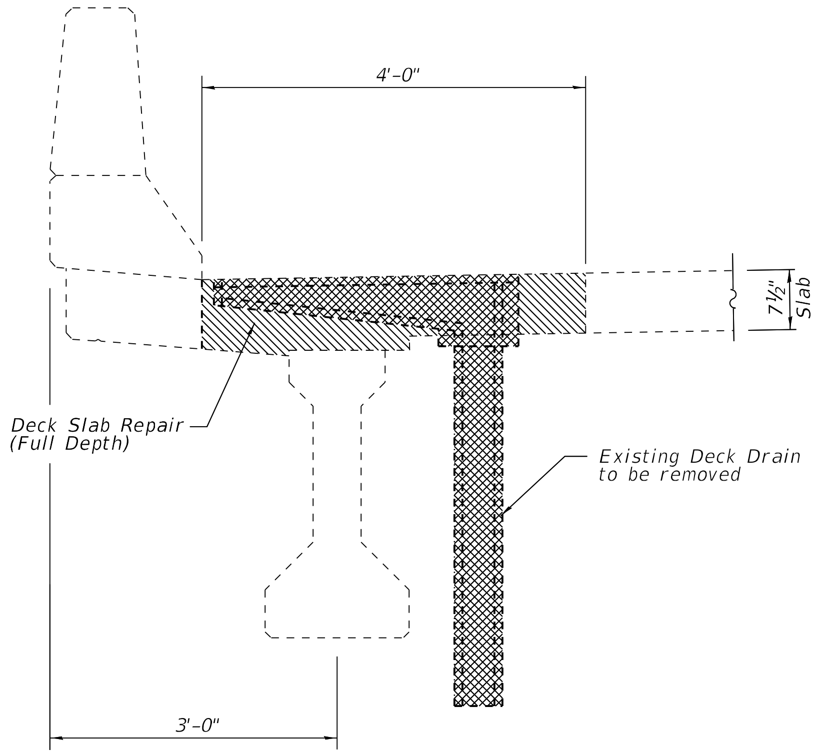
NORTH ABUTMENT BEARING DETAILS
STRUCTURE NO. 036-0042

SHEET 6 OF 13 SHEETS

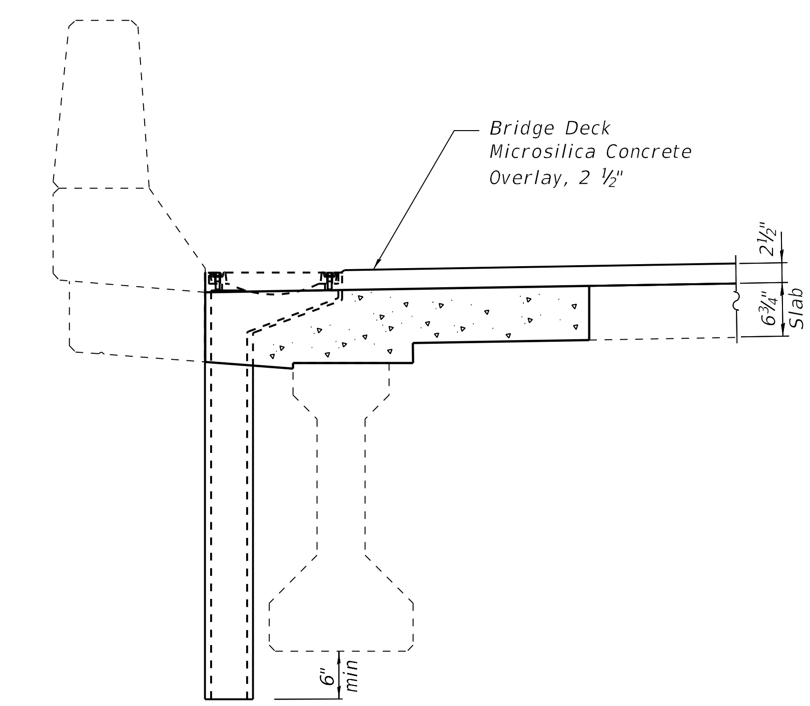
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	106C-BR	HENDERSON	55	19
		CONTRACT NO. 68F67		
		ILLINOIS	FED. AID PROJECT	

1/28/2021 11:30:00 AM

Notes:
Fiberglass alternative is not allowed for the downspouts.
The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.
All dimensions shall be field verified by the contractor prior to ordering of materials.
Cost of existing deck drain removal included in the deck slab repair (full depth).
The Contractor shall use extreme care during concrete removal so as not to damage the PPC I-Beam.



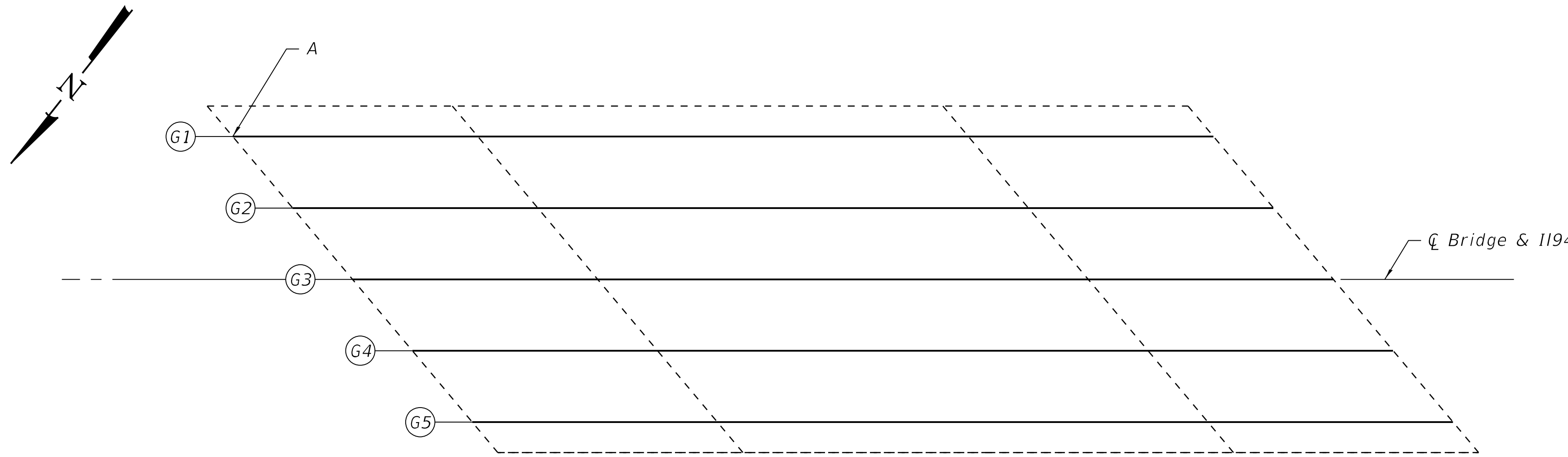
SECTION AT EXISTING DECK DRAIN



SECTION AT PROPOSED DRAINAGE SCUPPER

Hurst-Rosche, Inc. PROFESSIONAL DESIGN NUMBER: 184-000258 1400 E. TREMONT ST. HILLSBORO, IL PH: 217.532.3959 JOB NO. 192-2050	USER NAME =	DESIGNED - CJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF PATCHING DECK DRAINS STRUCTURE NO. 036-0042
		CHECKED - CMV	REVISED -		
	PLOT SCALE =	DRAWN - UJ	REVISED -		
	PLOT DATE =	CHECKED - CJC	REVISED -		SHEET 7 OF 13 SHEETS

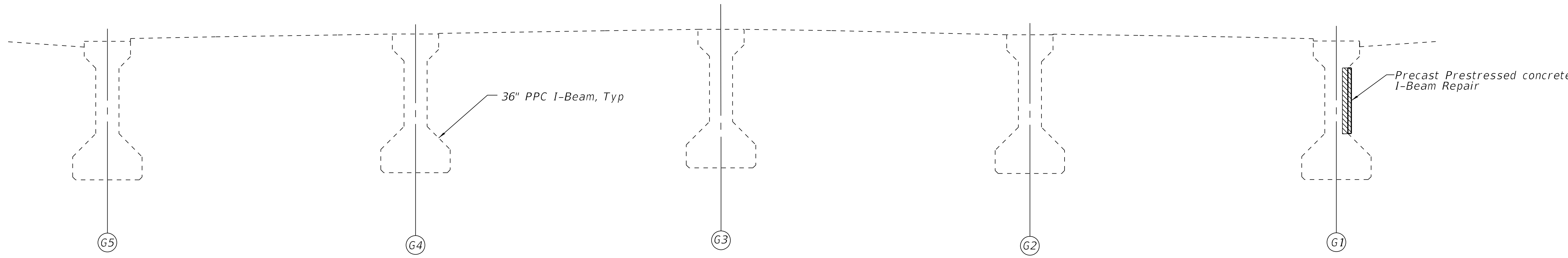
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	106C-BR	HENDERSON	55	20
		CONTRACT NO. 68F67		
		ILLINOIS	FED. AID PROJECT	



BEAM PLAN

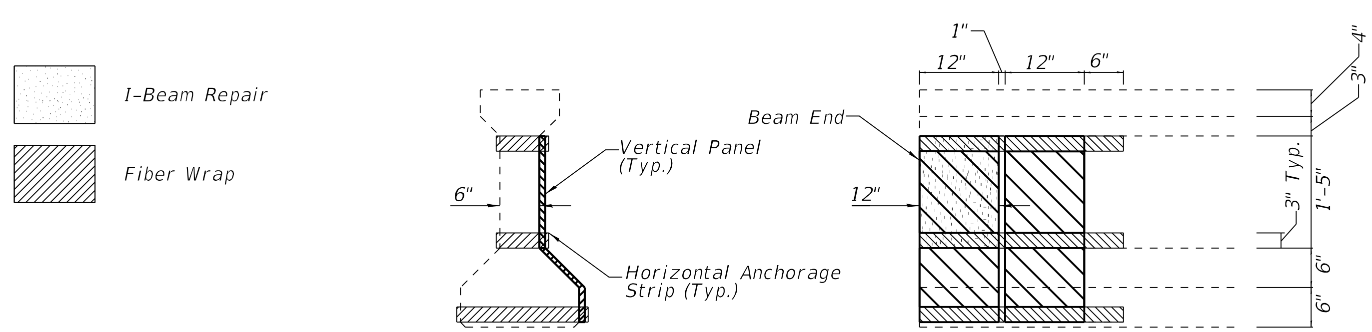
BILL OF MATERIAL

Item	Unit	Quanity
Fiber Wrap	Sq. Ft.	7.4
Precast Prestressed ConcreteI-Beam Repair	Sq. Ft.	1.5



NORTH ABUTMENT BEAM END CROSS SECTION

(Looking North)



LOCATION "A"

MODEL: Default
FILE NAME: X:\Projects\Current\192-2050 IDOT Dist 4 - WO 6 - IL 94 Bridges\DGN\036-0042\Bridge_Plans\0360042-08-Girder repair detail.dgn

HR Hurst-Rosche, Inc. 1400 E. TREMONT ST. HILLSBORO, IL PH: 217.532.3959 JOB NO. 192-2050	USER NAME =	DESIGNED - CJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GIRDER REPAIR DETAIL STRUCTURE NO. 036-0042
		CHECKED - CMV	REVISED -		
	PLOT SCALE =	DRAWN - UJ	REVISED -		
	PLOT DATE =	CHECKED - CJC	REVISED -		SHEET 8 OF 13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	106C-BR	HENDERSON	55	21
		CONTRACT NO. 68F67		
		ILLINOIS	FED. AID PROJECT	

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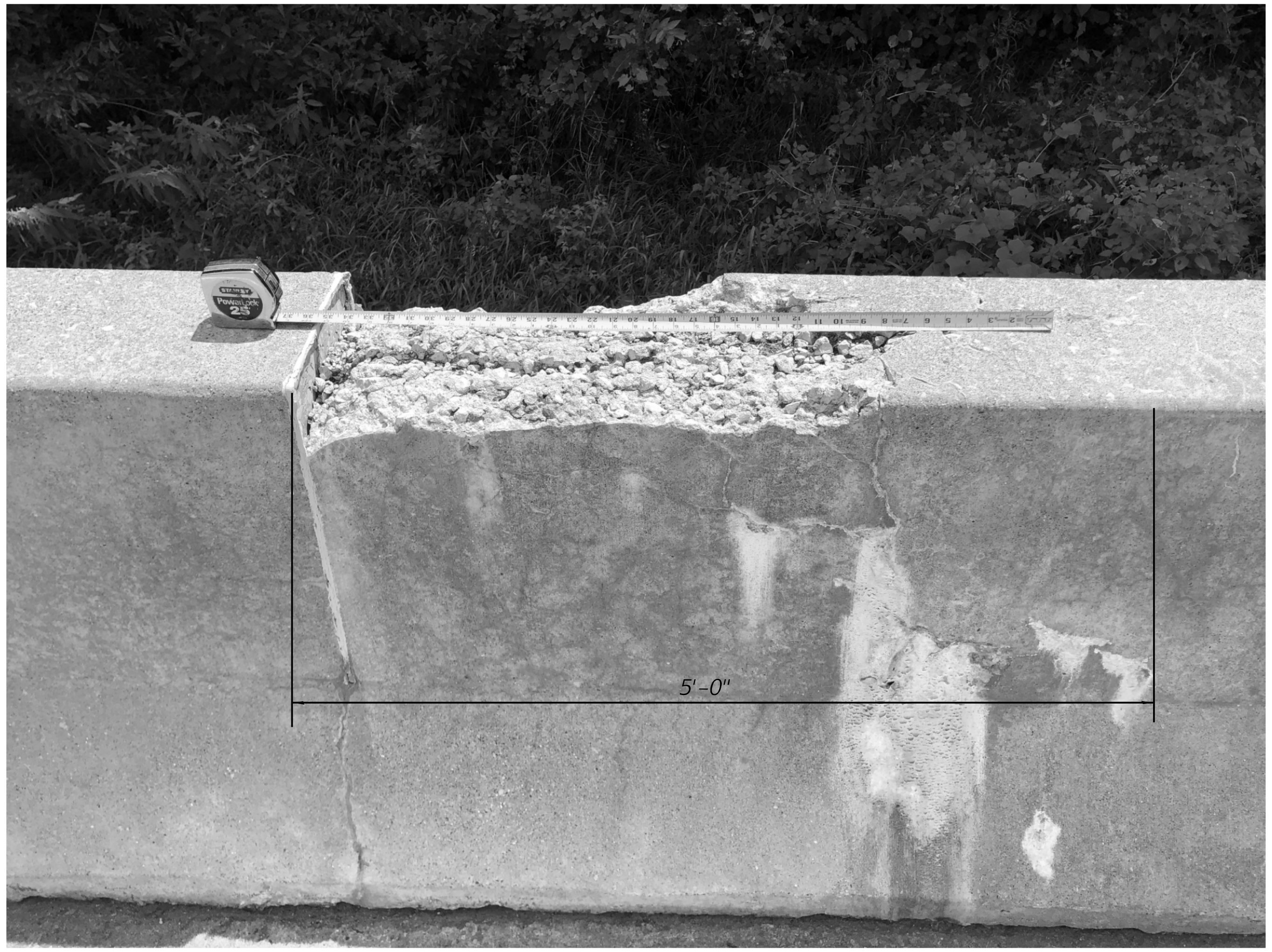
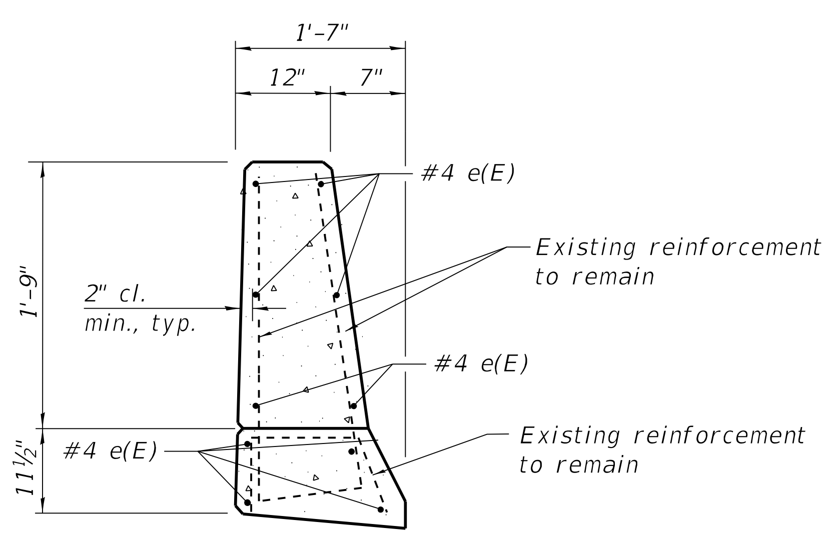


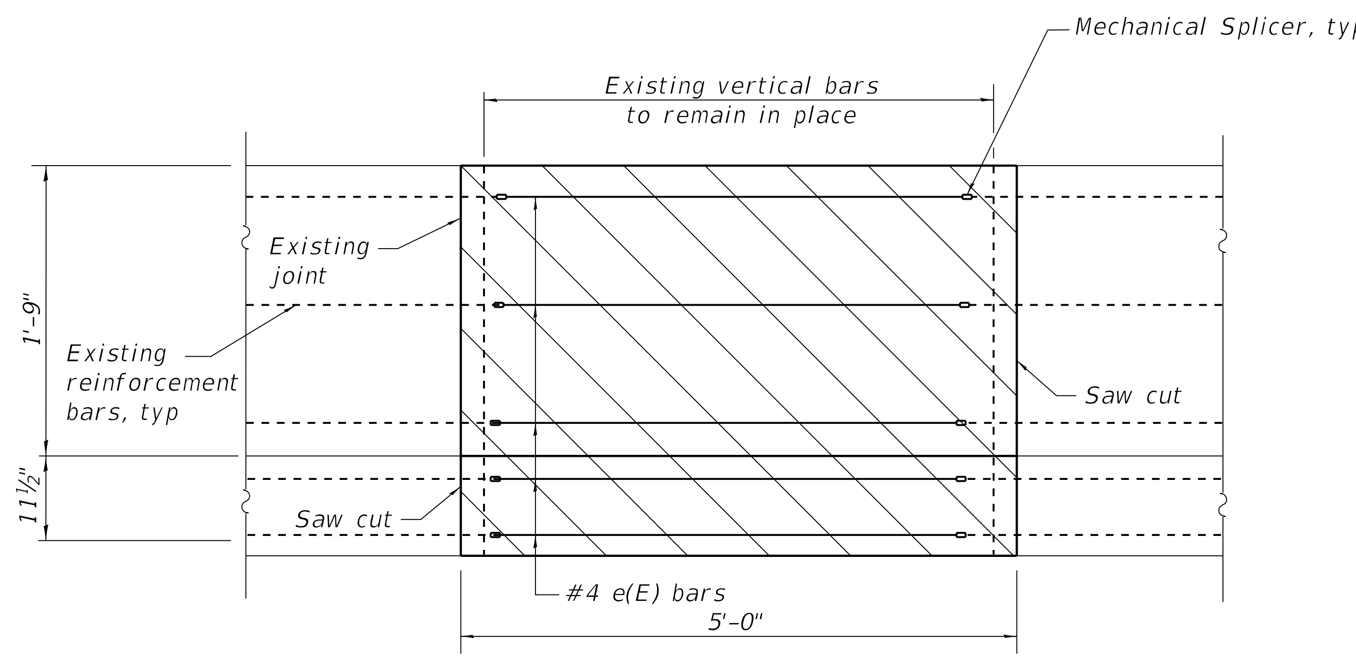
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e(E)	10	#4	4'-9"	———
Concrete removal			Cu. Yds.	0.5
Reinforcement Bars, Epoxy Coated			Lbs.	35
Concrete Superstructure			Cu. Yds.	0.5
Mechanical Splicers			Each	20

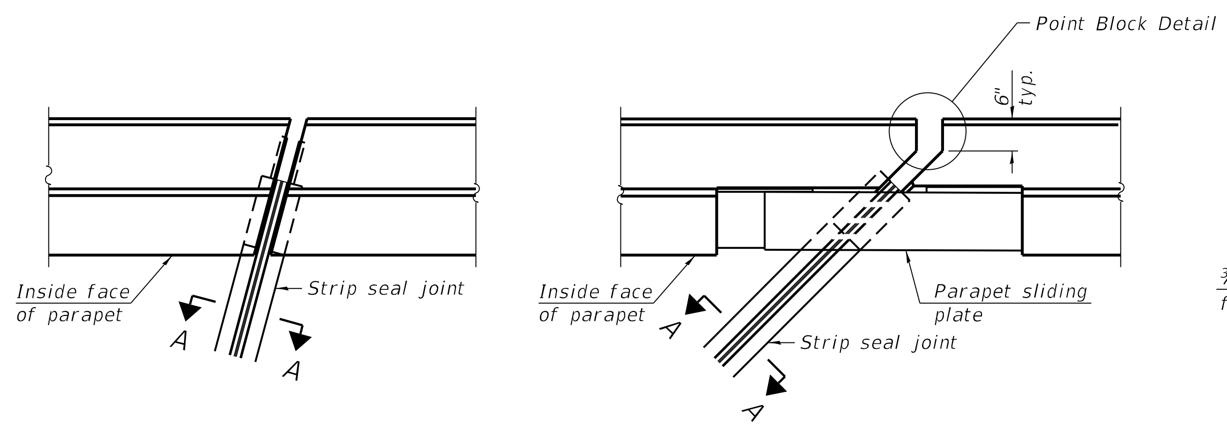
Notes:
Existing reinforcement bars extending into removal shall be cleaned, straightened and incorporated into the new construction.
Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with concrete removal.
All reinforcement bars shall be cut in field to fit existing shape and clearance.



SECTION THRU PARAPET



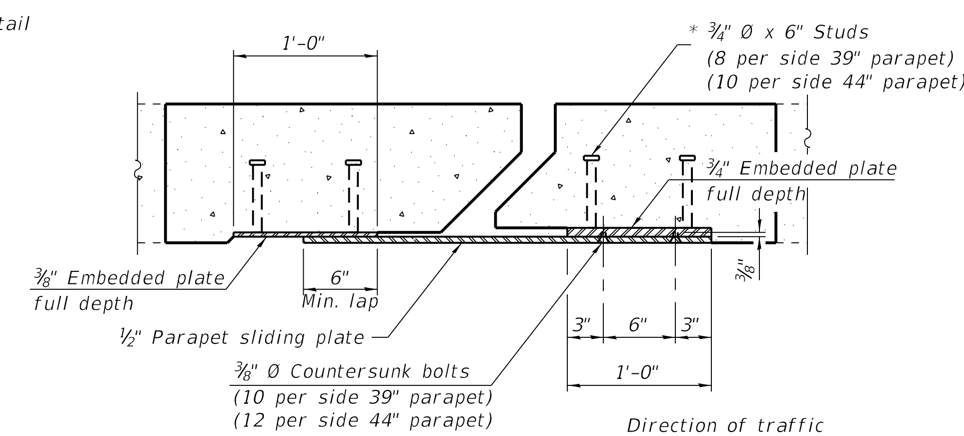
EAST PARAPET ELEVATION



FOR SKEWS ≤ 30°

FOR SKEWS > 30°

PLAN AT PARAPET



SECTION B-B

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

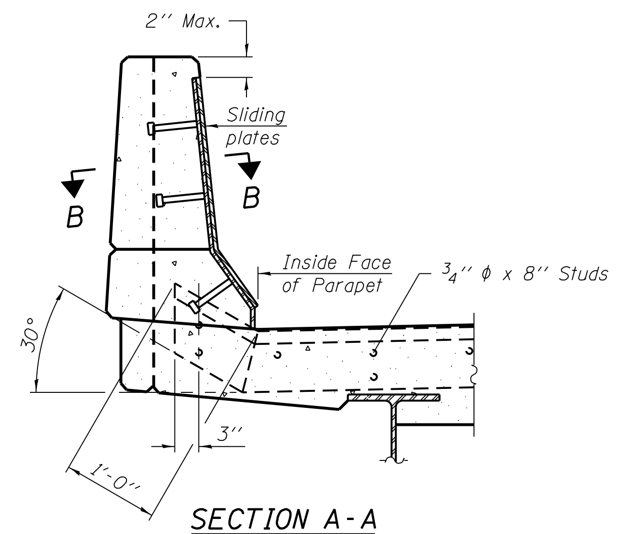
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

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

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

39" constant slope barrier shown, 44" constant slope barrier similar as noted.

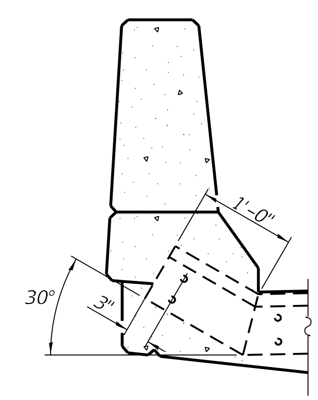
The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to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



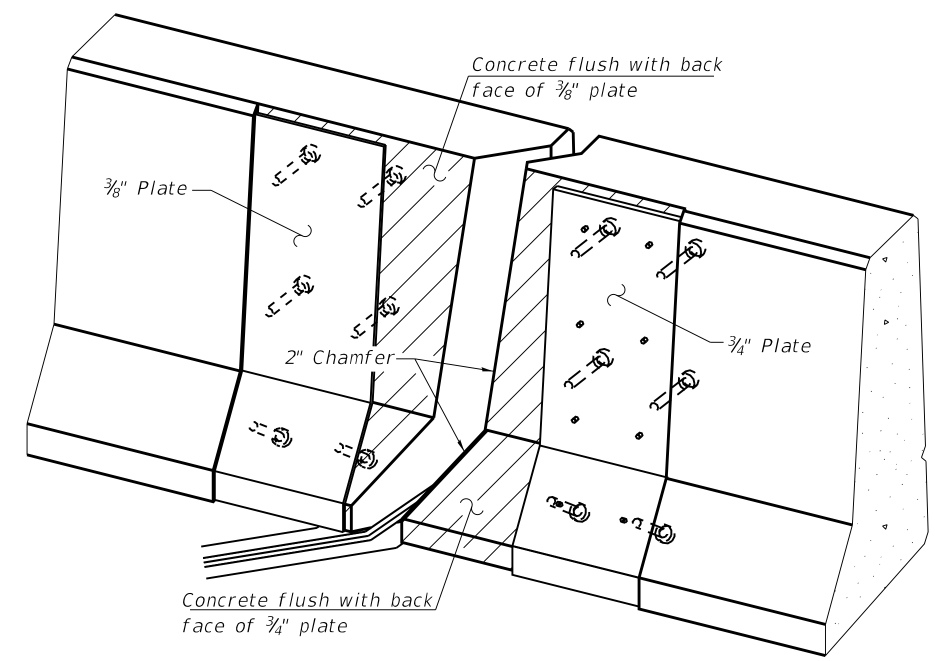
SECTION A-A

POINT BLOCK DETAILS

(for skews > 30°)

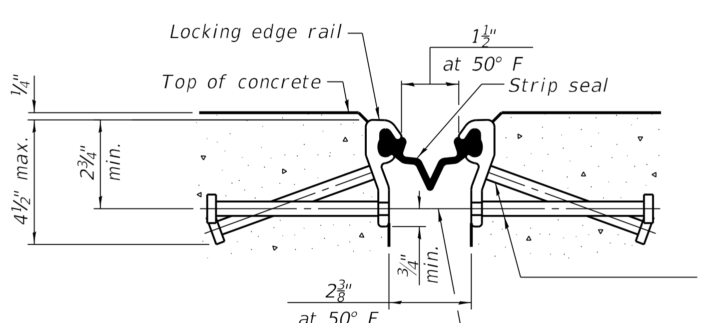


DETAIL A



TRIMETRIC VIEW

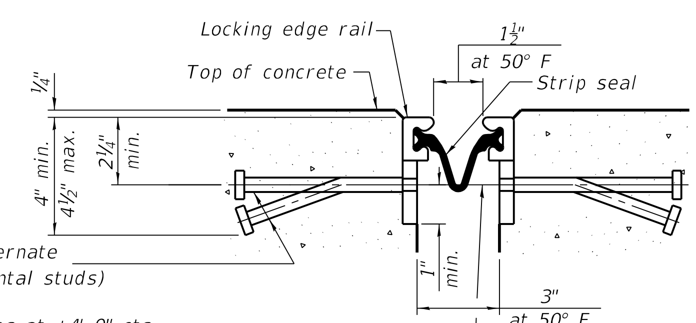
(Showing embedded plates only)



SHOWING ROLLED RAIL JOINT

* ⅝" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

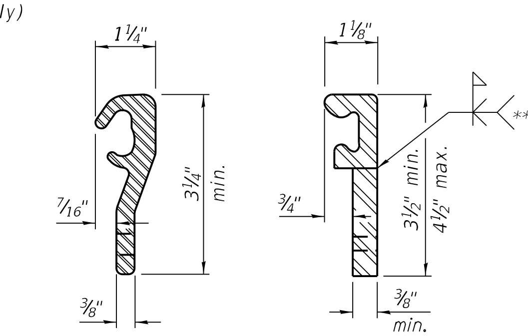
$^{3}/_{8}$" ϕ threaded rods in $^{7}/_{16}$" ϕ holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.



SHOWING WELDED RAIL JOINT

SECTION A-A

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

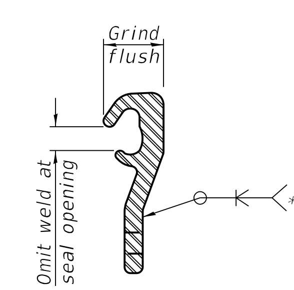


ROLLED (EXTRUDED) RAIL

WELDED RAIL

LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	106

EJ-SS 1-1-2020

MODEL: Default
FILE NAME: X:\Projects\Current\192-2050 IDOT Dist 4 - WO 6 - IL 94 Bridges\DGN\036-0042\Bridge_Plans\0360042-10-Preformed joint strip seal.dgn

Hurst-Rosche, Inc. 1400 E. TREMONT ST. HILLSBORO, IL PH: 217.532.3959 JOB NO. 192-2050	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - CMV	REVISED -
	PLOT SCALE =	DRAWN - UJ	REVISED -
	PLOT DATE =	CHECKED - CJC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 036-0042

SHEET 10 OF 13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	106C-BR	HENDERSON	55	23
		CONTRACT NO. 68F67		
		ILLINOIS FED. AID PROJECT		

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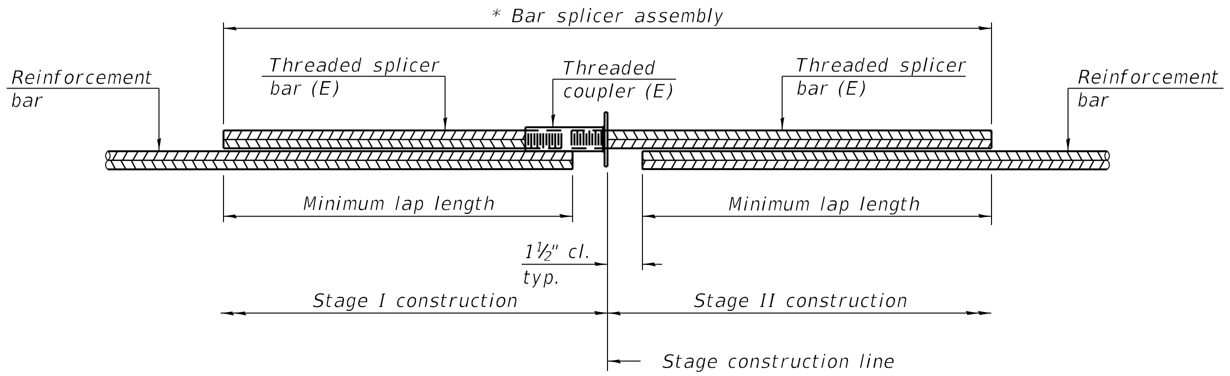


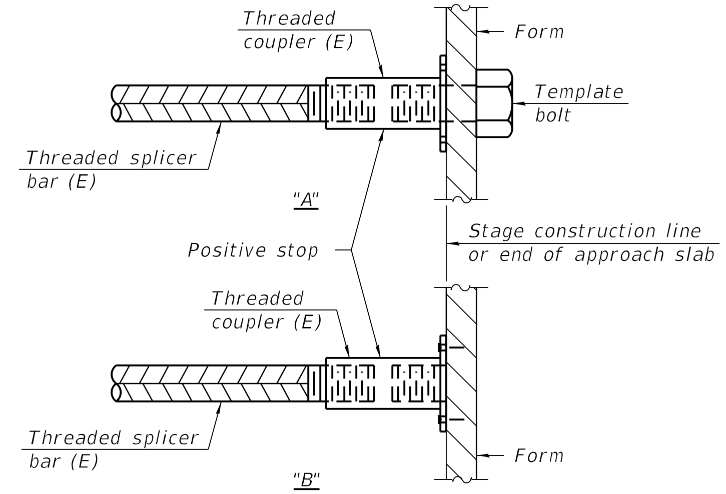
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1½" + thread length

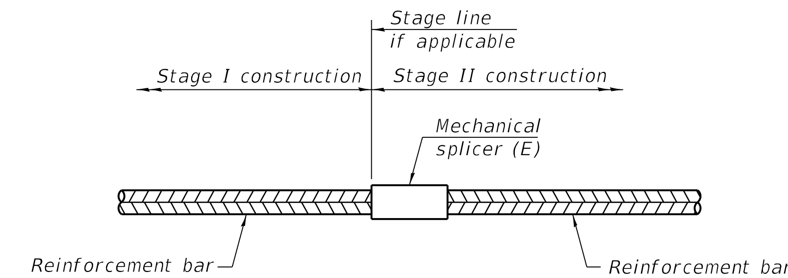
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
North Abutment	#5	4	3'-6"
North Abutment	#6	4	4'-10"
South Abutment	#5	4	3'-6"
South Abutment	#6	4	4'-10"



INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Parapet	#5	20

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 1-1-2020

Hurst-Rosche, Inc. 1400 E. TREMONT ST. HILLSBORO, IL PH: 217.532.3959 JOB NO. 192-2050	USER NAME =	DESIGNED - CJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY & MECHANICAL SPLICER DETAILS STRUCTURE NO. 036-0042
		CHECKED - CMV	REVISED -		
	PLOT SCALE =	DRAWN - UJ	REVISED -		
	PLOT DATE =	CHECKED - CJC	REVISED -		SHEET 11 OF 13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	106C-BR	HENDERSON	55	24
		CONTRACT NO. 68F67		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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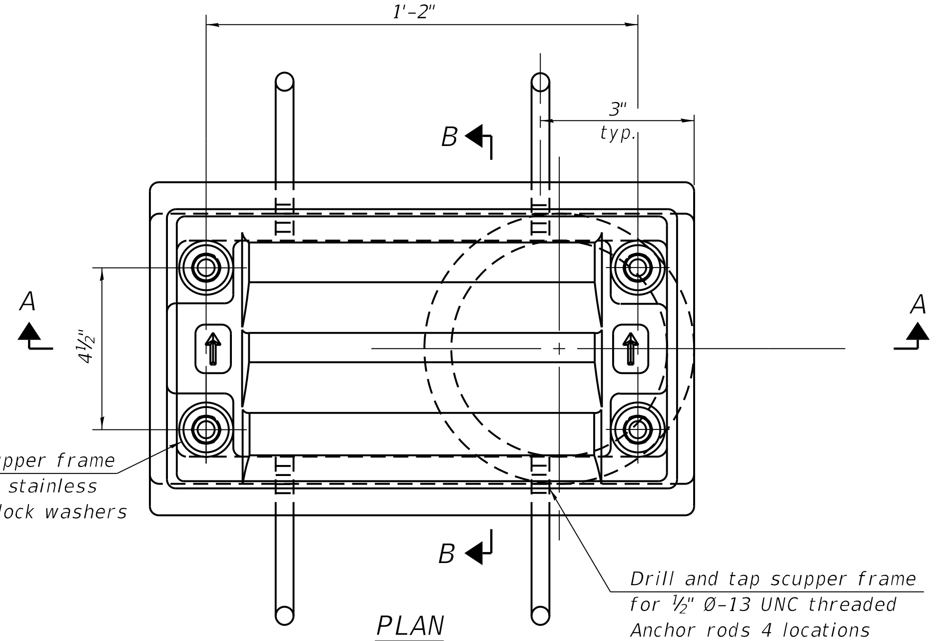
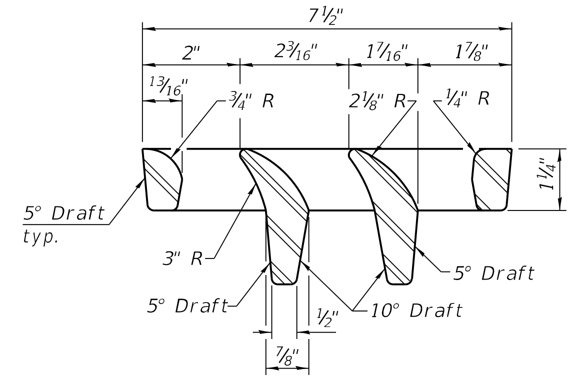
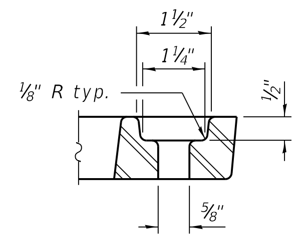
1/28/2021 11:35:08 AM



PLAN

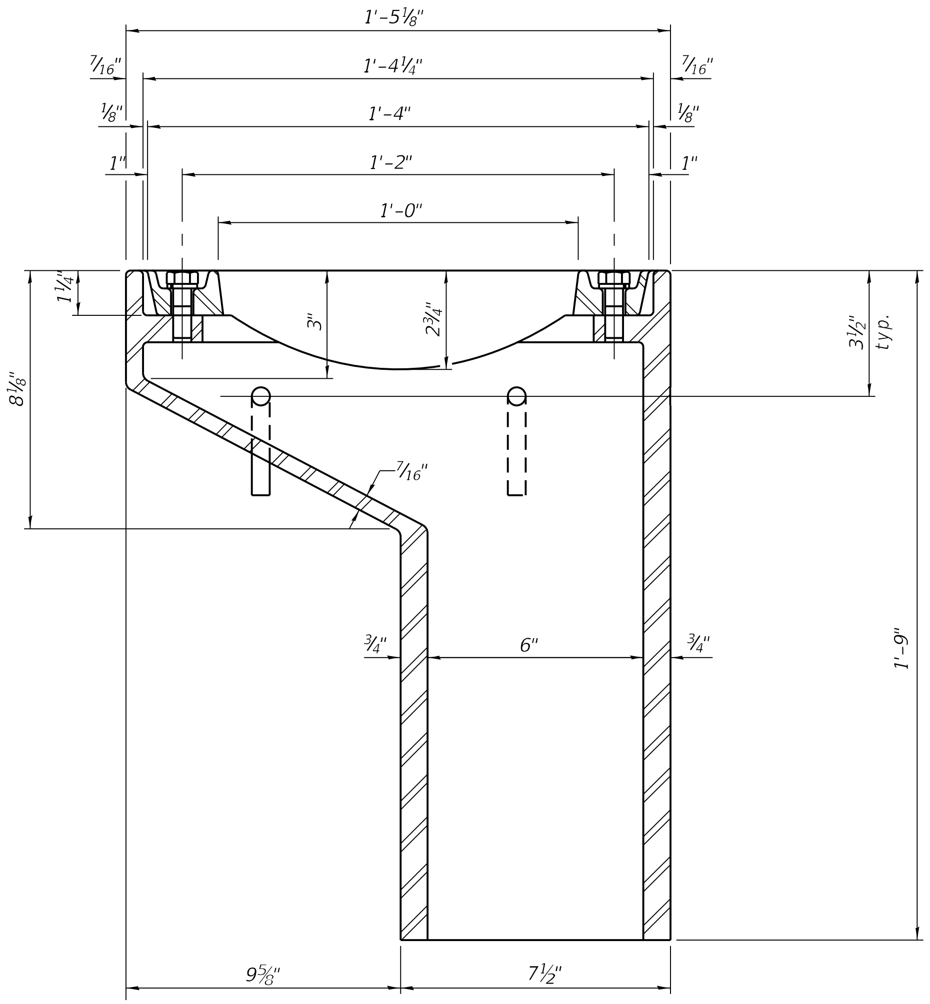


VANE GRATE DETAIL



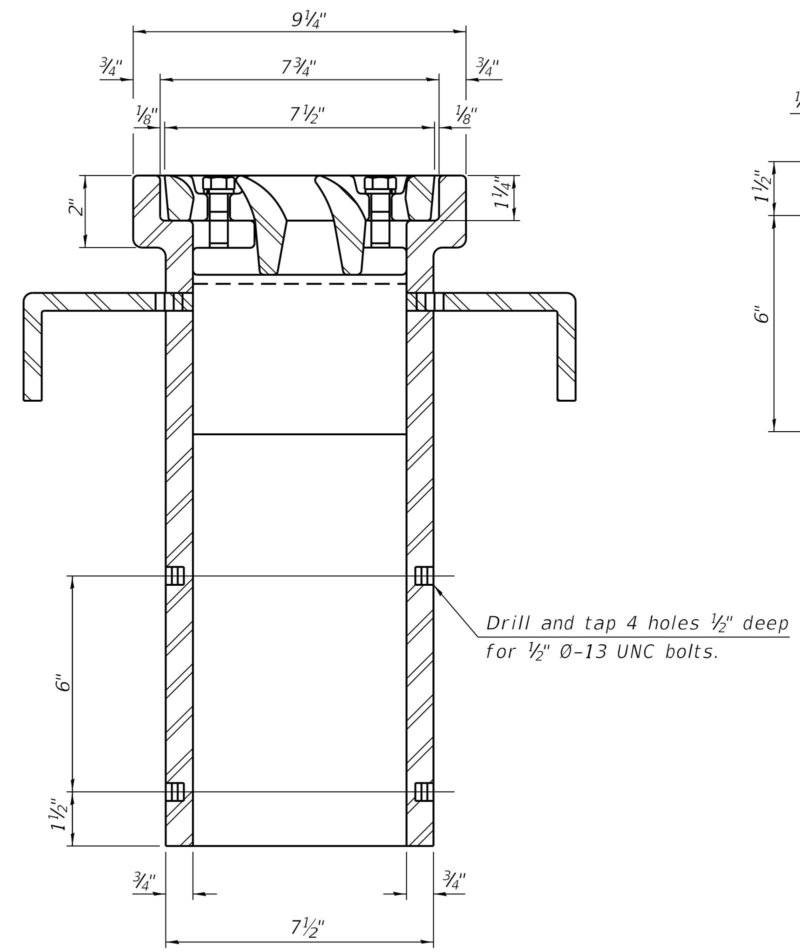
GRATE BOLT HOLE DETAIL

Notes:
All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 35B and AASHTO M306.
Bolts, anchor rods, nuts and washers shall be according to ASTM A307 and shall be galvanized according to AASHTO M232. As an alternate stainless steel may be used.
Stainless steel hardware shall be 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 frames and downspouts; however, the scupper grates shall remain cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.
Structural steel scupper frames and downspouts, when utilized, shall be galvanized according to AASHTO M111.
As an alternate, fiberglass is not allowed.
Exterior surfaces of downspouts and exterior exposed surfaces of the scupper frame below deck shall be hot dip galvanized.
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
Cost of the grate, frame, downspout, anchor rods, nuts and washers including complete installation of the scupper shall be paid for at the contract unit price for Drainage Scupper, DS-11.

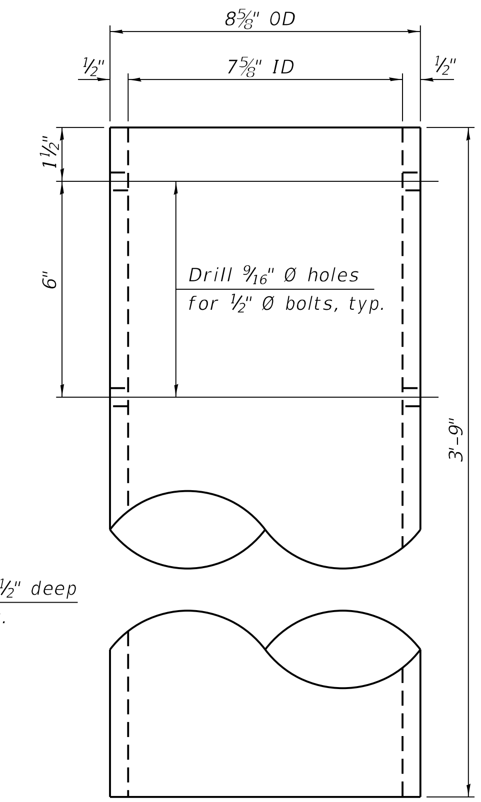


SECTION A-A

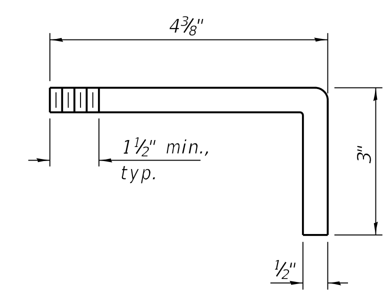
See sheet of for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR ROD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, DS-11	Each	2

DS-11 1-1-2020

MODEL: Default
FILE NAME: X:\Projects\Current\192-2050 IDOT Dist 4 - WO 6 - IL 94 Bridges\DGN\036-0042\Bridge_Plans\0360042-12-Drainage Scupper.dgn

Hurst-Rosche, Inc. PROFESSIONAL DESIGN NUMBER: 184-000256 1400 E. TREMONT ST. HILLSBORO, IL PH: 217.532.3959 JOB NO. 192-2050	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - VC	REVISED -
	PLOT SCALE =	DRAWN - UJ	REVISED -
	PLOT DATE =	CHECKED - CJC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCRUPPER, DS-11
STRUCTURE NO. 036-0042

SHEET 12 OF 13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	106C-BR	HENDERSON	55	25
		CONTRACT NO. 68F67		
		ILLINOIS FED. AID PROJECT		

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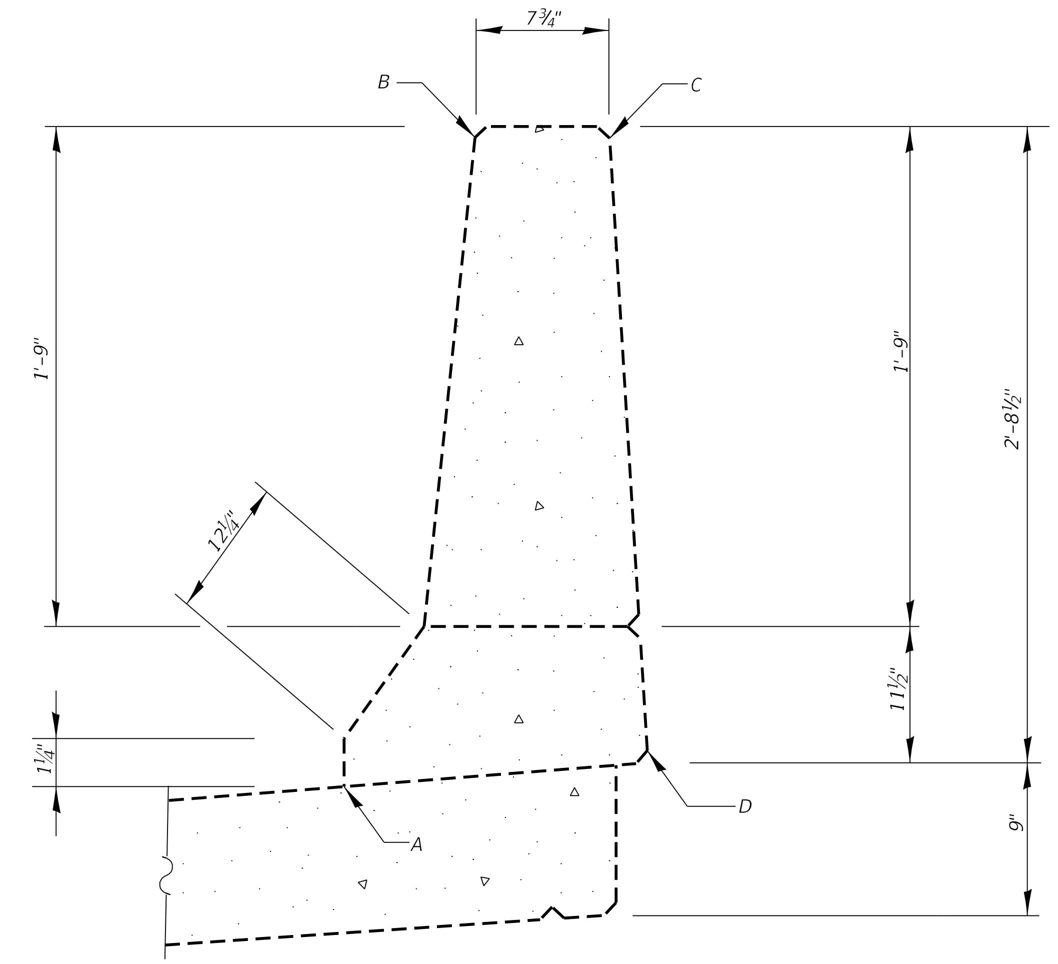


BRIDGE PARAPET

NOTE:

1. PROTECTIVE COAT (SPECIAL) TO COVER FROM POINT A THROUGH POINTS B, C, AND D OF THE PARAPET.

MODEL: Default
FILE NAME: X:\Projects\Current\192-2050 IDOT Dist 4 - WO 6 - IL 94 Bridges\DGN\036-0042\Bridge_Plans\0360042-13-Parapet sealing detail.dgn

Hurst-Rosche, Inc. PROFESSIONAL DESIGN NUMBER: 184-000256 1400 E. TREMONT ST. HILLSBORO, IL PH: 217.532.3959 JOB NO. 192-2050	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - CMV	REVISED -
	PLOT SCALE =	DRAWN - UJ	REVISED -
	PLOT DATE =	CHECKED - CJC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET SEALING DETAIL
STRUCTURE NO. 036-0042

SHEET 13 OF 13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	106C-BR	HENDERSON	55	26
		CONTRACT NO. 68F67		
		ILLINOIS FED. AID PROJECT		

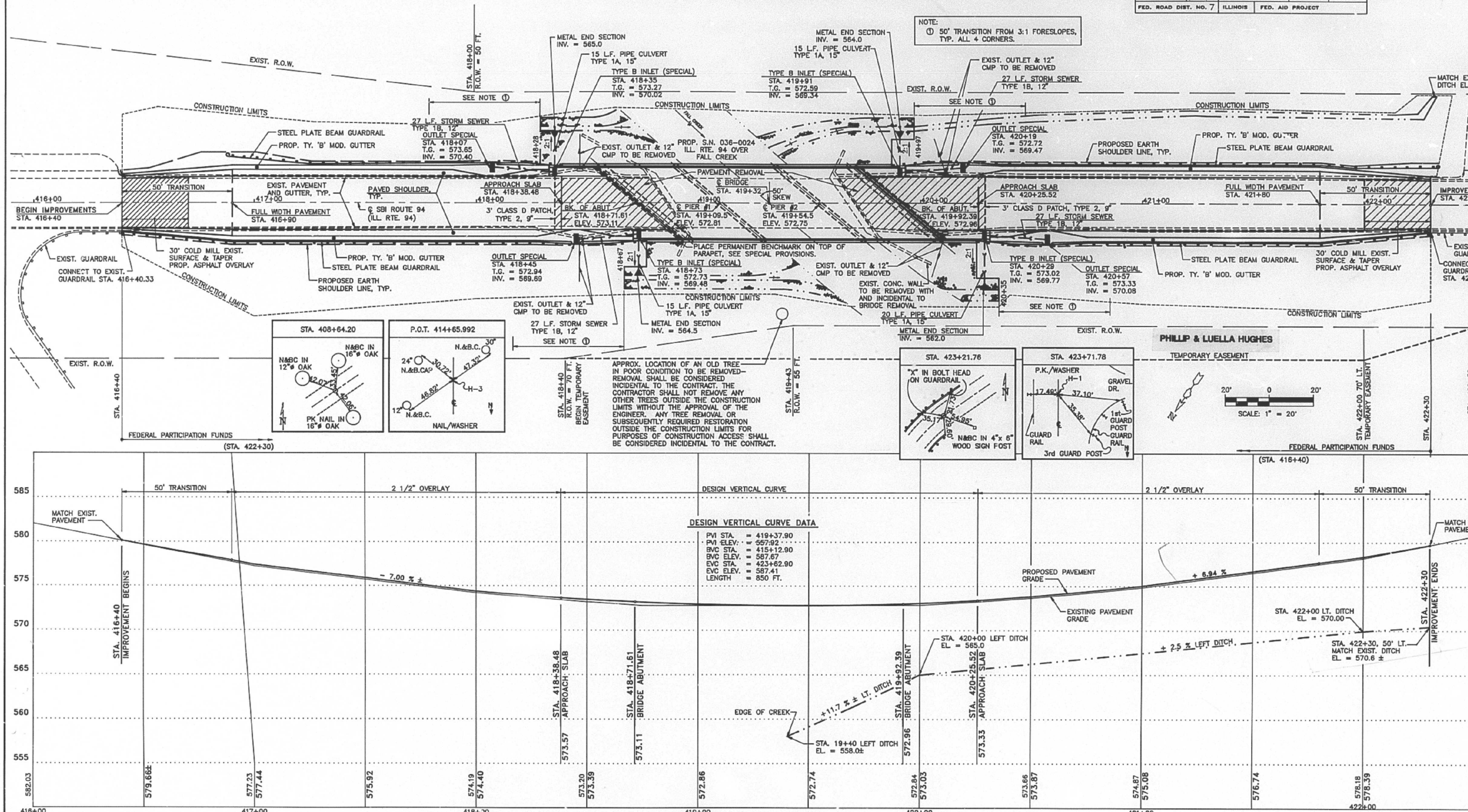
1/28/2021 11:36:59 AM

BENCH MARK
TOP N.W. (WESTERNMOST) WINGWALL
ELEVATION: 572.49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 94 F.A. 1412	(106BC)1 (106C-1)BR (106C)BR	HENDERSON	69	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

NOTE:
① 50' TRANSITION FROM 3:1 FORESLOPES, TYP. ALL 4 CORNERS.



BITUMINOUS SURFACE REMOVAL – BUTT JOINT

LOCATION	SQ YD
STA. 416+40 TO STA. 416+70	60
STA. 422+00 TO STA. 422+30	60

PAVEMENT REMOVAL

LOCATION	SQ YD
STA. 418+35.48 TO STA. 418+85	122
STA. 419+71 TO STA. 420+28.52	150

PROFILE SCALES:
HORIZ. – 1" = 20'
VERT. – 1" = 5'

DESIGNED	SRB
CHECKED	
DRAWN	DEH
CHECKED	

PLAN & PROFILE
ILLINOIS ROUTE 94
F.A.S. RTE. 1412
HENDERSON COUNTY

FALL CREEK SECTION (106C)BR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

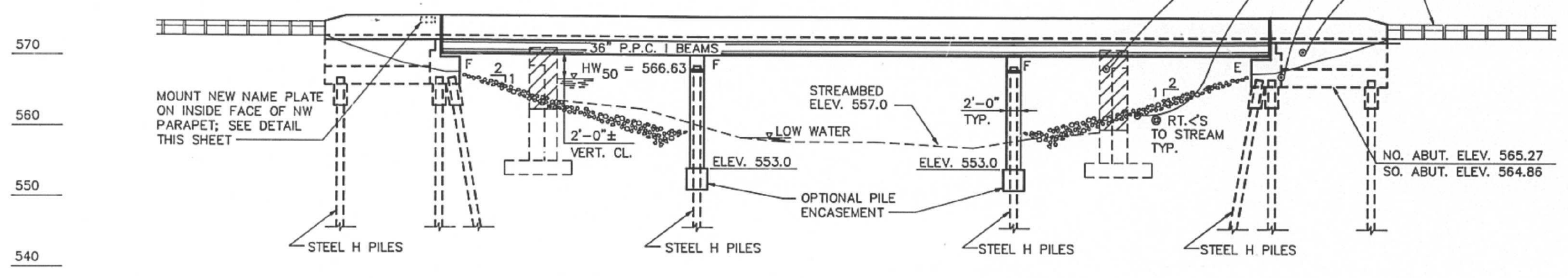
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 94 F.A. 1412	(106C)BR	HENDERSON	69	45
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
SHEETS 16

BENCHMARK:
TOP NW (WESTERNMOST) WINGWALL OF BRIDGE ELEV. 572.49

EXISTING STRUCTURE NO. 036-0024:
SINGLE SPAN R.C. DECK ON A PONY TRUSS SUPPORTED ON CLOSED R.C. ABUTS., 84.3 FT. LONG BK.-TO-BK. ABUTS. BY 23'-8" C.-TO-C. TRUSSES. NO SALVAGE. ROADWAY WILL BE CLOSED DURING CONSTRUCTION.

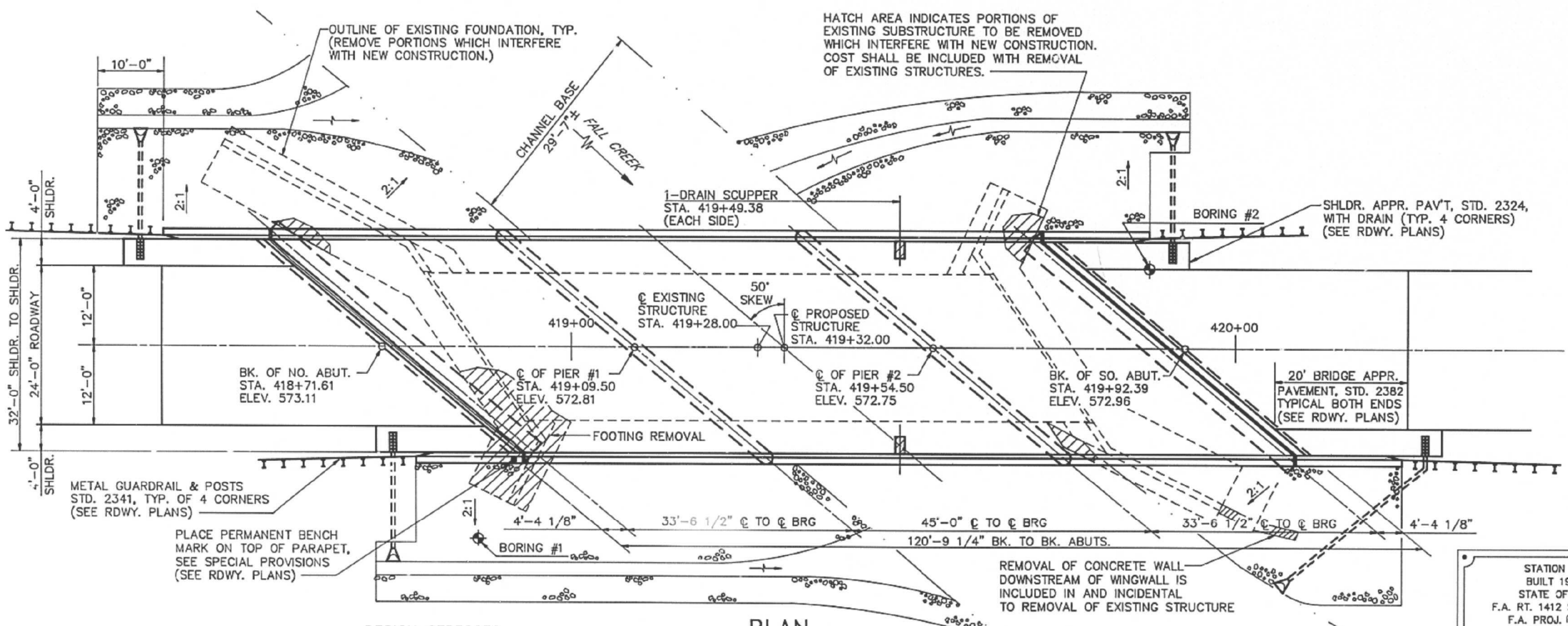
EXCAVATION PAY ITEMS AT ABUTMENTS
1. INCLUDED IN REMOVAL OF EXISTING STRUCTURE.
2. BELOW TOP OF RIPRAP, INCIDENTAL TO RIPRAP.
3. ALL AROUND PROPOSED ABUTMENTS WITHIN 2 FT. INCLUDED IN STRUCTURE EXCAVATION (SEE SHT. #10).
4. EXCAVATION BEHIND ABUTMENTS OUTSIDE LIMITS OF STRUCTURE EXCAVATION TO INSTALL PIPE UNDERDRAIN IS INCIDENTAL TO PIPE UNDERDRAIN (SEE SHT. #2)



ELEVATION

GENERAL NOTES

1. SEE PROPOSAL FOR BORING DATA.
2. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.
3. LAYOUT OF SLOPE PROTECTION SYSTEM MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
4. THE CONTRACTOR SHALL DRIVE 1 STEEL H-PILE AT THE SOUTH ABUTMENT IN A PERMANENT LOCATION AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
5. ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH ZINC-SILICATE AND VINYL PAINT SYSTEM. THE COLOR OF THE VINYL FINISH COATS SHALL BE MUNSELL No. 10B 3/6 BLUE.
6. CALCULATED WEIGHT OF STRUCTURAL STEEL = 570 LBS. **THIS STRUCTURAL STEEL IS INCLUDED IN THE COST OF FURNISHING AND ERECTING PRECAST ,PRESTRESSED CONCRETE I-BEAMS, 36".**



PLAN

TOTAL BRIDGE BILL OF MATERIAL				
ITEM	UNIT	SUPERSTR.	SUBSTR.	TOTAL
PIPE UNDERDRAIN 6" SPECIAL	LIN FT		42	42
REMOVAL OF EXISTING STRUCTURES	EACH	1		1
PIPE UNDERDRAIN, 6"	LIN. FT.		90	90
POROUS GRANULAR EMBANKMENT, SPECIAL	TON		343	343
STRUCTURE EXCAVATION	CU. YD.		408	408
CLASS X CONCRETE	CU. YD.		217.7	217.7
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	115.3		115.3
PROTECTIVE COAT	SQ. YD.	533		533
DRAINAGE SCUPPERS	EACH	2		2
NEOPRENE EXPANSION JOINT, 2"	LIN. FT.	104		104
ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	5		5
FURNISHING & ERECTING PRECAST, PRESTRESSED CONCRETE I-BEAMS, 36"	LIN. FT.	563		563
REINFORCEMENT BARS	LBS.	960		960
REINFORCEMENT BARS, EPOXY COATED	LBS.	33,930	22,260	56,190
FURNISHING STEEL PILES, HP 12x53	LIN. FT.		821	821
DRIVING STEEL PILES	LIN FT.		821	821
METAL SHOES	EACH		39	39
STEEL TEST PILES, HP12X53	EACH		1	1
NAME PLATES	EACH	1		1
STONE RIPRAP CLASS A5	SQ. YD.		803	803
FILTER FABRIC FOR USE WITH RIPRAP	SQ. YD.		803	803
CONC. HEADWALL FOR PIPE DRAINS	EACH		4	4

FALL-GPE 1=10

STATION 419+32
BUILT 199_ BY
STATE OF ILLINOIS
F.A. RT. 1412 SEC. (106C)BR
F.A. PROJ. RS-1412(104)
LOADING HS20
STR. NO. 036-0042

NAME PLATE DETAIL
SEE STD. 2113

DESIGN SPECIFICATIONS
1989 AASHTO
1983 SEISMIC GUIDE SPECIFICATIONS
WITH 1985 INTERIM

LOADING HS 20-44
ALLOW 25#/SQ. FT. FOR FUTURE WEARING SURFACE.

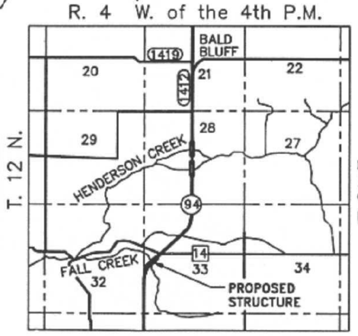
DESIGN STRESSES
f'c = 3,500 PSI
f'c = 5000 PSI (PRECAST PRESTRESSED UNITS)
fy = 60,000 PSI (REINF.)
f'ci = 4,000 PSI
f's = 270,000 PSI (1/2"ø STRANDS)
f'si = 189,000 PSI (1/2"ø STRANDS)

WATERWAY INFORMATION

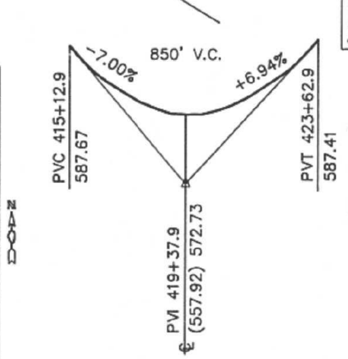
DRAINAGE AREA = 11.8 SQ. MILES LOW GRADE ELEV. 572.8 @ STA. 419+75

FLOOD	FREQ. YR.	Q C.F.S.	OPENING SQ. FT.		NAT. H.W.E.	HEAD - FT.		HEADWATER EL.	
			EXIST.	PROP.		EXIST.	PROP.	EXIST.	PROP.
DESIGN	50	2984	365	432	566.63	1.05	0.74	567.68	567.37
BASE	100	3431	377	457	566.92	1.44	1.0	568.36	567.92
MAX. CALC.	500	4486	401	489	567.51	2.53	1.70	570.04	569.21

DESIGNED	PJL
CHECKED	PJL
DRAWN	MHK
CHECKED	PJL



LOCATION SKETCH



PROFILE GRADE F.A.S. RTE. 1412
(ALONG ℄ ROADWAY)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

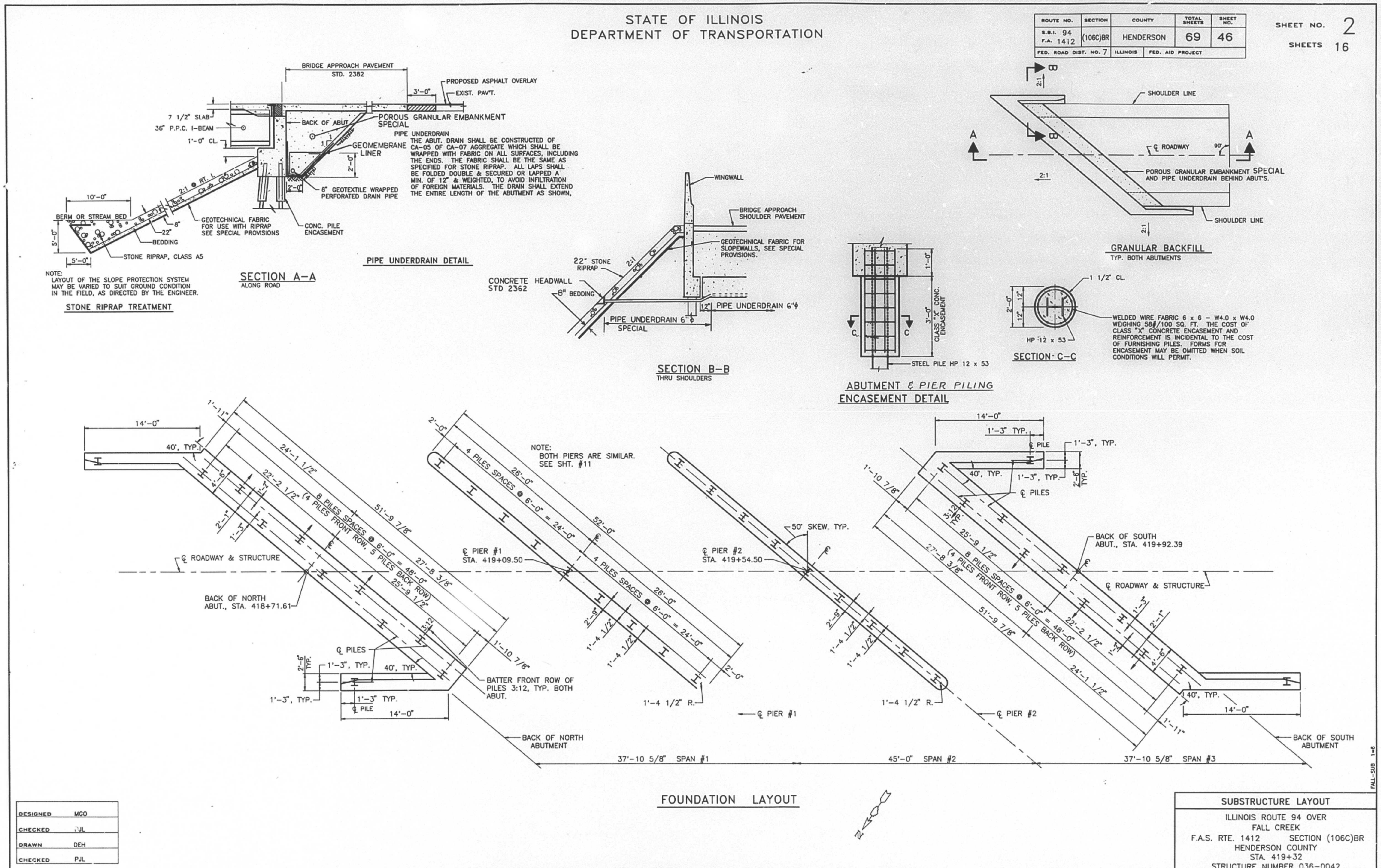
PHILIP J. LANE
ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 4084

STATE OF ILLINOIS
PHILIP J. LANE
4084
REGISTERED STRUCTURAL ENGINEER

1-30-91
DATE

CLARK ENGINEERS MW., INC.
205 MULLER RD., WASHINGTON, ILLINOIS

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 94 OVER
FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042



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USER NAME = SUSERS	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 1:100	CHECKED -	REVISED -	
PLOT DATE = 12/11/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS – FOR INFORMATION ONLY

SCALE: | SHEET 3 OF 19 SHEETS | STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	29

CONTRACT NO. 68F67

ILLINOIS | FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 94 F.A. 1412	(106C)BR	HENDERSON	69	47
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
SHEETS 16

GIRDER G1

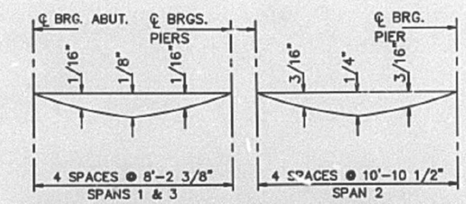
LOCATION	STATION	OFFSET LEFT	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUTMENT	418+54.230	14'-7"	573.089	573.089
℄ BEARING N. ABUTMENT	418+58.574	"	573.030	573.030
1	418+68.574	"	572.905	572.911
2	418+78.574	"	572.796	572.803
℄ BEARING	418+91.370	"	572.682	572.682
℄ PIER 1	418+92.120	"	572.676	572.676
℄ BEARING	418+82.870	"	572.670	572.670
3	419+02.870	"	572.601	572.616
4	419+12.870	"	572.549	572.571
5	419+22.870	"	572.513	572.532
℄ BEARING	419+36.370	"	572.491	572.491
PIER 2	419+37.120	"	572.490	572.490
℄ BEARING	419+37.870	"	572.490	572.490
6	419+47.870	"	572.495	572.501
7	419+57.870	"	572.517	572.524
℄ BEARING	419+70.677	"	572.568	572.568
BK. S. ABUTMENT	419+75.010	"	572.592	572.592

GIRDER G2

LOCATION	STATION	OFFSET LEFT	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUTMENT	418+62.920	7'-3 1/2"	573.101	573.101
℄ BEARING N. ABUTMENT	418+67.264	"	573.047	573.047
1	418+77.264	"	572.937	572.943
2	418+87.264	"	572.842	572.849
℄ BEARING	419+00.060	"	572.746	572.746
℄ PIER 1	419+00.810	"	572.741	572.741
℄ BEARING	419+01.560	"	572.736	572.736
3	419+11.560	"	572.682	572.697
4	419+21.560	"	572.644	572.666
5	419+31.560	"	572.622	572.641
℄ BEARING	419+45.060	"	572.619	572.619
PIER 2	419+45.810	"	572.620	572.620
℄ BEARING	419+46.560	"	572.621	572.621
6	419+56.560	"	572.640	572.646
7	419+66.560	"	572.676	572.683
℄ BEARING	419+79.357	"	572.745	572.745
BK. S. ABUTMENT	419+83.700	"	572.775	572.775

GIRDER G3 & ℄ RDWY.

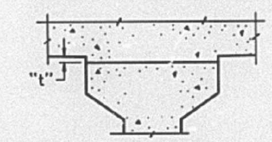
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUTMENT	418+71.610	℄	573.111	573.111
℄ BEARING N. ABUTMENT	418+75.954	"	573.064	573.064
1	418+85.954	"	572.968	572.974
2	418+95.954	"	572.888	572.895
℄ BEARING	419+08.750	"	572.809	572.809
℄ PIER 1	419+09.500	"	572.806	572.806
℄ BEARING	419+10.250	"	572.802	572.802
3	419+20.250	"	572.762	572.777
4	419+30.250	"	572.738	572.760
5	419+40.250	"	572.731	572.750
℄ BEARING	419+53.750	"	572.747	572.747
PIER 2	419+54.500	"	572.749	572.749
℄ BEARING	419+55.250	"	572.750	572.750
6	419+65.250	"	572.784	572.790
7	419+75.250	"	572.834	572.841
℄ BEARING	419+88.047	"	572.922	572.922
BK. S. ABUTMENT	419+92.390	"	572.958	572.958



DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN BELOW.



TO DETERMINE "t": AFTER ALL PRECAST PRESTRESSED BEAMS HAVE BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN BELOW. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS" MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGES OF BEAMS.

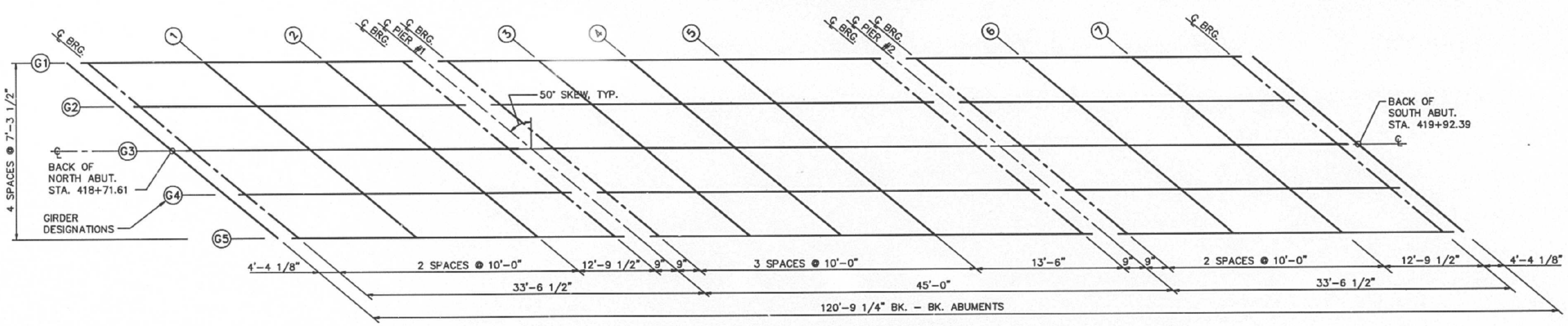
FILLET HEIGHTS

GIRDER G4

LOCATION	STATION	OFFSET RIGHT	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUTMENT	418+80.300	7'-3 1/2"	572.906	572.906
℄ BEARING N. ABUTMENT	418+84.644	"	572.866	572.866
1	418+94.644	"	572.783	572.789
2	419+04.644	"	572.718	572.725
℄ BEARING	419+17.440	"	572.657	572.657
℄ PIER 1	419+18.190	"	572.655	572.655
℄ BEARING	419+18.940	"	572.652	572.652
3	419+28.940	"	572.626	572.641
4	419+38.940	"	572.617	572.639
5	419+48.940	"	572.624	572.643
℄ BEARING	419+62.440	"	572.659	572.659
PIER 2	419+63.190	"	572.662	572.662
℄ BEARING	419+63.940	"	572.665	572.665
6	419+73.940	"	572.713	572.719
7	419+83.940	"	572.777	572.784
℄ BEARING	419+96.737	"	572.883	572.883
BK. S. ABUTMENT	420+01.080	"	572.925	572.925

GIRDER G5

LOCATION	STATION	OFFSET RIGHT	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
BK. N. ABUTMENT	418+88.990	14'-7"	572.701	572.701
℄ BEARING N. ABUTMENT	418+93.334	"	572.666	572.666
1	419+03.334	"	572.598	572.604
2	419+13.334	"	572.547	572.554
℄ BEARING	419+26.130	"	572.505	572.505
℄ PIER 1	419+26.880	"	572.503	572.503
℄ BEARING	419+27.630	"	572.502	572.502
3	419+37.630	"	572.490	572.505
4	419+47.630	"	572.495	572.517
5	419+57.630	"	572.516	572.535
℄ BEARING	419+71.130	"	572.570	572.570
PIER 2	419+71.880	"	572.574	572.574
℄ BEARING	419+72.630	"	572.578	572.578
6	419+82.630	"	572.641	572.647
7	419+92.630	"	572.719	572.726
℄ BEARING	420+05.427	"	573.844	573.844
BK. S. ABUTMENT	420+09.770	"	573.892	573.892

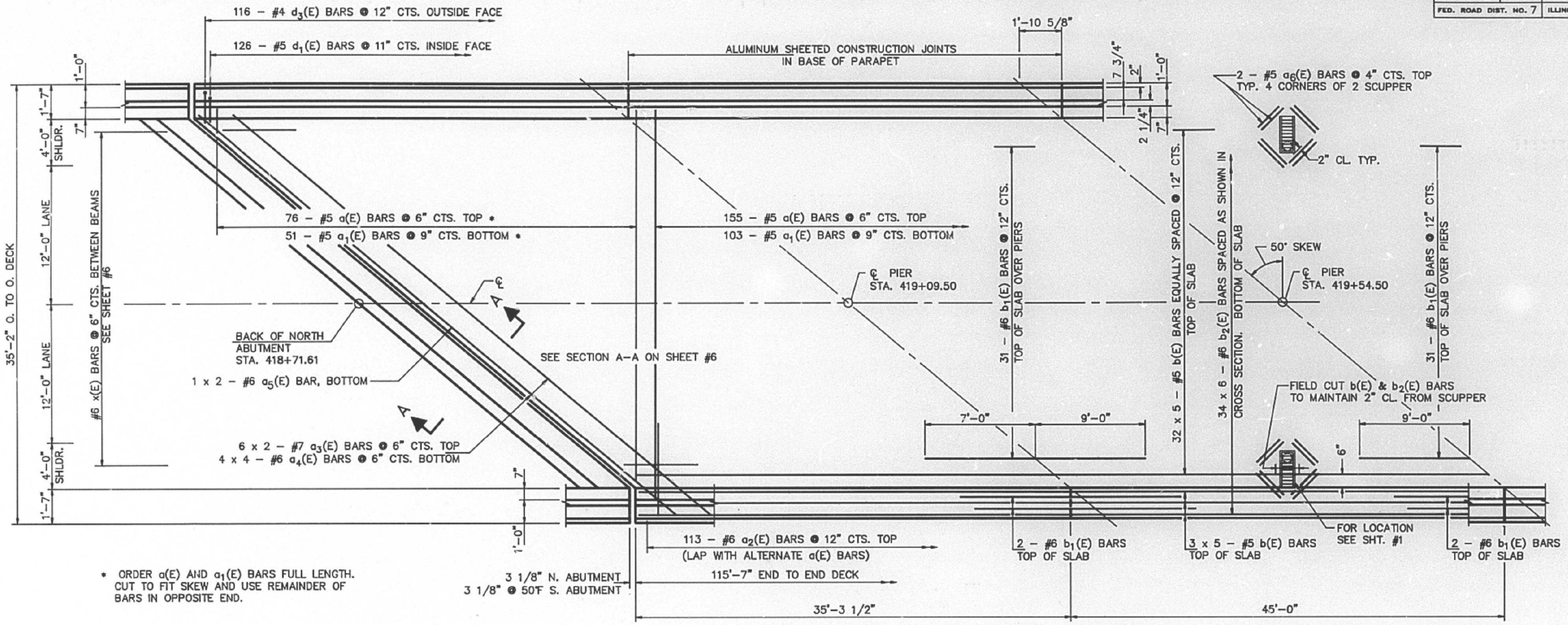


DECK PLAN

DESIGNED	MGO
CHECKED	PJL
DRAWN	DMF
CHECKED	PJL

E-S

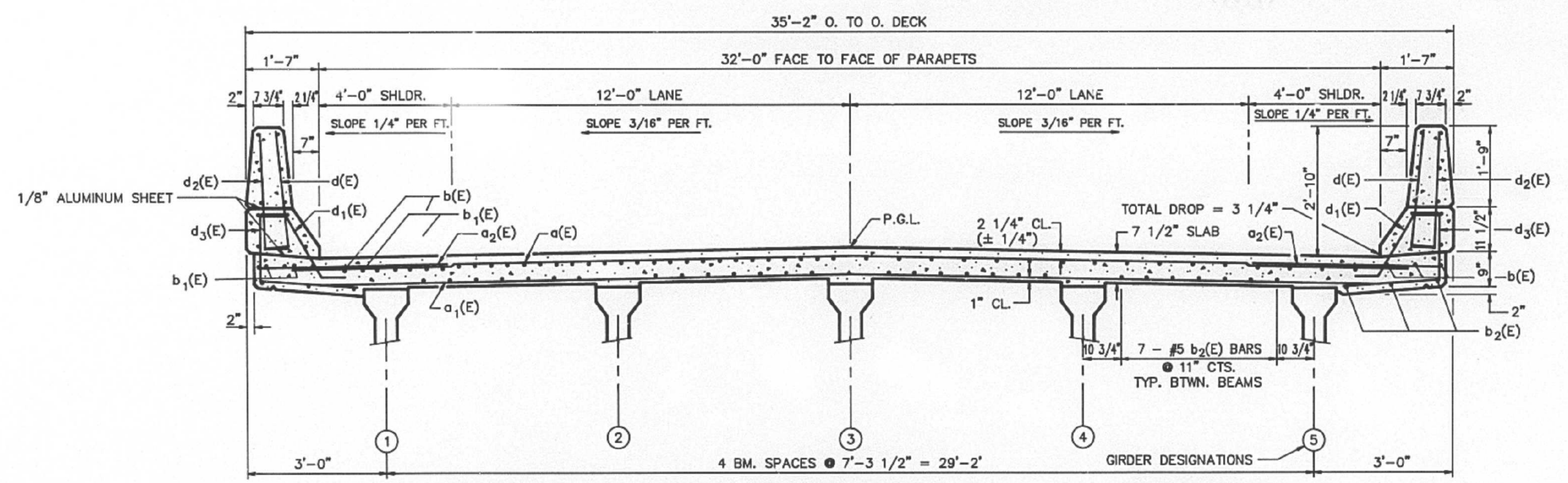
DECK ELEVATIONS
ILLINOIS ROUTE 94 OVER
FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042



• ORDER a(E) AND a_1(E) BARS FULL LENGTH. CUT TO FIT SKEW AND USE REMAINDER OF BARS IN OPPOSITE END.

PARTIAL PLAN

(SYMMETRICAL ABOUT ℄)



NEAR PIER | NEAR MIDSPAN

CROSS SECTION

(LOOKING SOUTH)

NOTE: LONGITUDINAL AND TRANSVERSE JOINTS IN BRIDGE DECK WILL NOT BE ALLOWED.

NOTES: SEE SHEET #5 FOR SUPERSTRUCTURE DETAILS AND BILL OF MATERIAL.

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EXPOXY COATED.

BARS INDICATED THUS 20 x 3 – #5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.

SEE SHEET #5 FOR PARAPET REINFORCEMENT.

FOR SECTION A-A SEE SHEET #6.

MIN. BAR LAPS

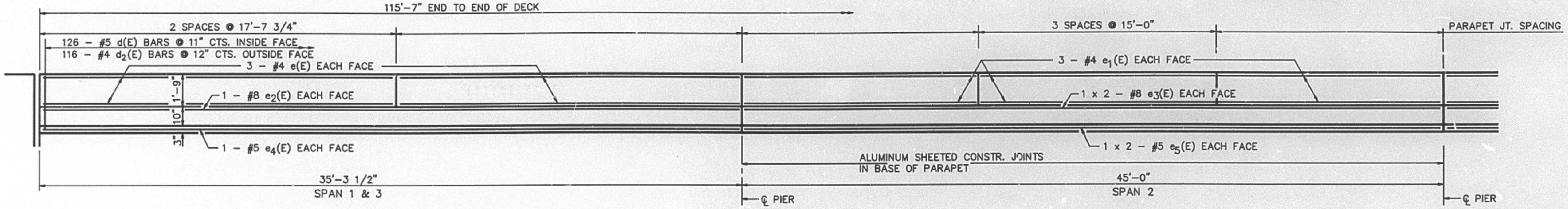
#4 = 1'-8" #7 = 3'-5"
#5 = 2'-2" #8 = 4'-6"
#6 = 2'-7"

DESIGNED	MGO
CHECKED	PJL
DRAWN	DEH
CHECKED	PJL

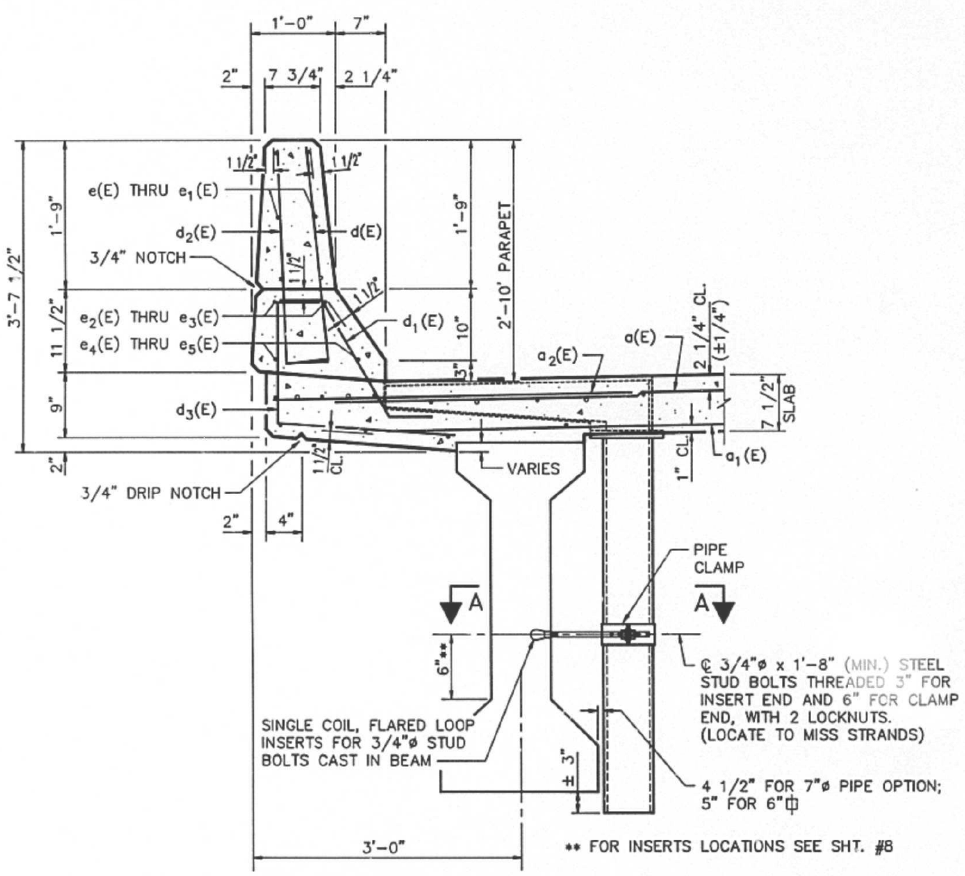
PI-1-R (>15°)

DECK DETAILS

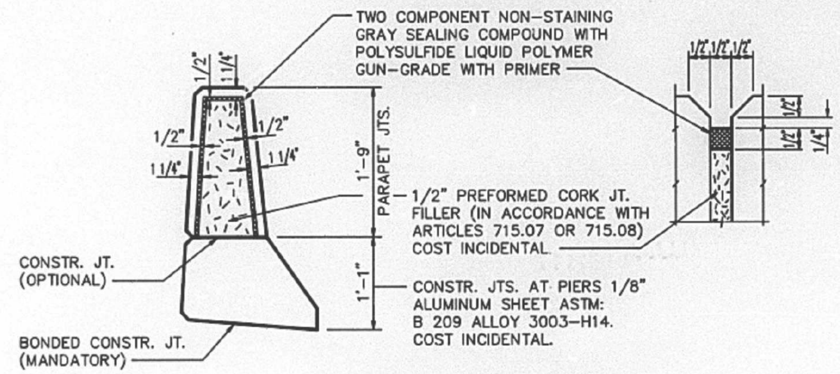
ILLINOIS ROUTE 94 OVER FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042



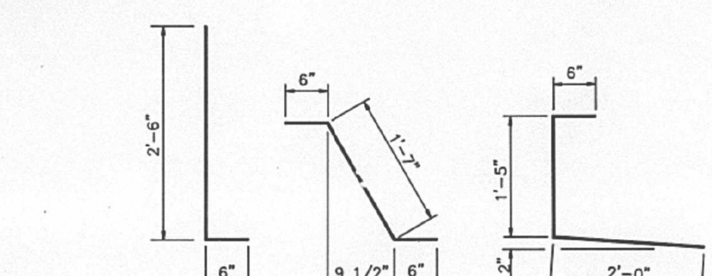
INSIDE ELEVATION OF PARAPET
(SYMMETRICAL ABOUT ℄)



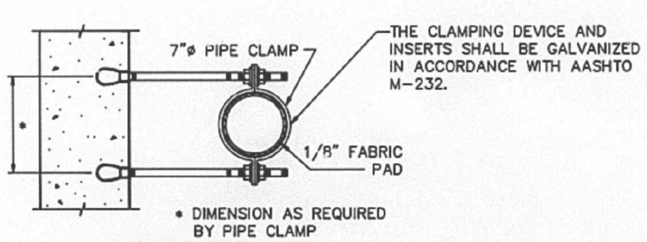
SECTION THRU PARAPET



PARAPET JOINT DETAILS



BARS d(E) & d2(E)   BAR d1(E)   BAR d3(E)



SECTION A–A
(7"ø ALTERNATE SHOWN; SIMILAR SQUARE CLAMP FOR 6"□ ALTERNATE)

SUPERSTRUCTURE BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	231	#5	33'-0"	
a_1(E)	154	#5	32'-0"	
a_2(E)	226	#6	4'-0"	
a_3(E)	24	#7	28'-6"	
a_4(E)	32	#6	9'-3"	
a_5(E)	4	#6	26'-8"	
a_6(E)	16	#5	2'-0"	
b(E)	190	#5	24'-8"	
b_1(E)	70	#6	16'-0"	
b_2(E)	204	#5	21'-0"	
d(E)	252	#5	3'-0"	
d_1(E)	252	#5	2'-7"	
d_2(E)	232	#4	3'-0"	
d_3(E)	232	#4	3'-11"	
e(E)	48	#4	17'-3"	
e_1(E)	36	#4	14'-8"	
e_2(E)	8	#8	34'-11"	
e_3(E)	8	#8	24'-7"	
e_4(E)	8	#5	34'-11"	
e_5(F.)	8	#5	23'-5"	
m	32	#4	10'-0"	
m_1	16	#6	8'-6"	
m_2	10	#8	5'-6"	
s	56	#4	10'-8"	
x(E)	104	#6	7'-8"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	33,930
REINFORCEMENT BARS			LBS.	960
CLASS X CONCRETE SUPERSTRUCTURE			CU. YDS.	115.3
NEOPRENE EXPANSION JOINT, 2"			LIN. FT.	104
DRAINAGE SCUPPERS			EACH	2

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

BARS INDICATED THUS 1 x 3 – #5 ETC. INDICATES 1 LINE OF BARS WITH 3 LENGTHS PER LINE.

DESIGNED	MGO
CHECKED	PJL
DRAWN	DEH
CHECKED	PJL

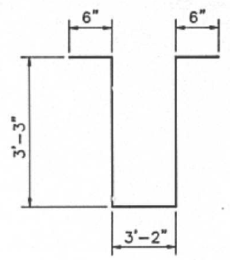
PI-1-D

DECK DETAILS

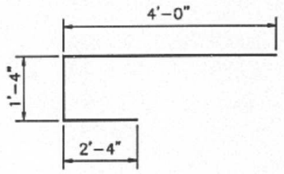
ILLINOIS ROUTE 94 OVER
FALL CREEK
F.A.S. RTE. 1412   SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 94 F.A. 1412	(106C)BR	HENDERSON	69	50
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

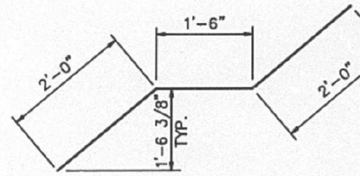
SHEET NO. 6
SHEETS 16



BAR s

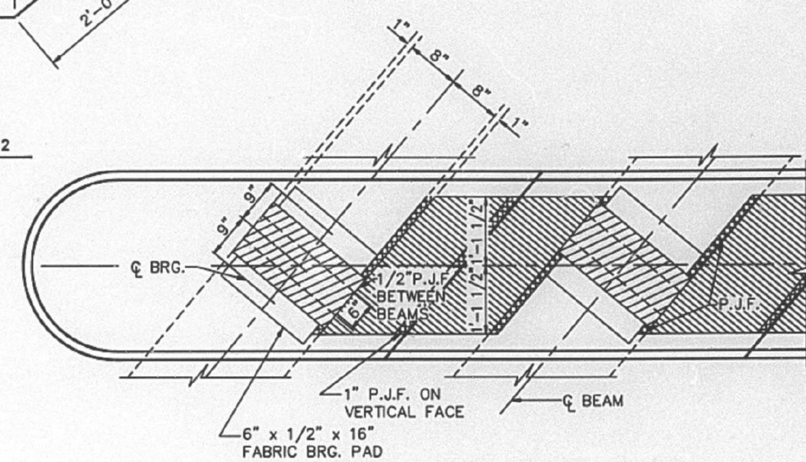


BAR x(E)

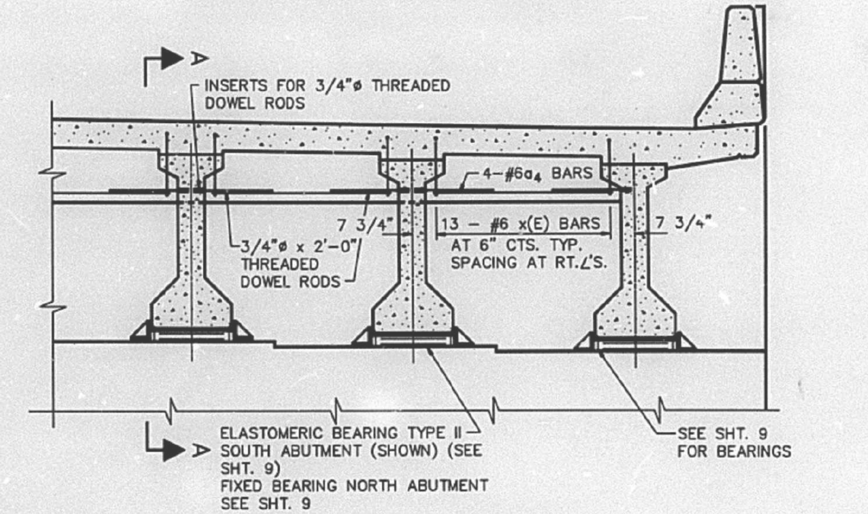


BAR m_2

NOTE: REINFORCEMENT BARS SHOWN ON THIS SHEET ARE INCLUDED IN BILL OF MATERIAL ON SHEET #5

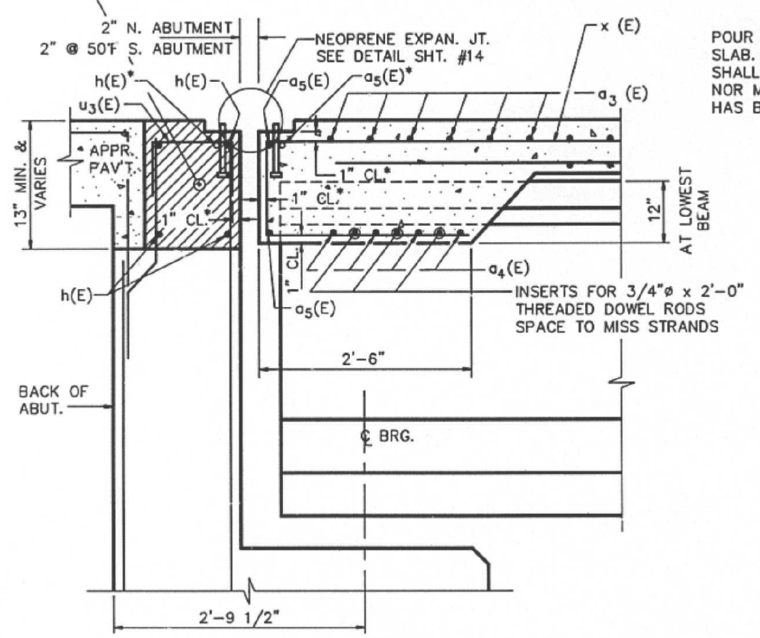


BEARING PADS AND P.J.F. AT PIERS
SECTION D-D



DIAPHRAGM AT ABUTMENTS

HATCHED AREA TO BE POURED AFTER SUPERSTUCTURE FORMS HAVE BEEN REMOVED. QUANTITY OF CLASS X CONCRETE INCLUDED WITH SUPERSTRUCTURE.

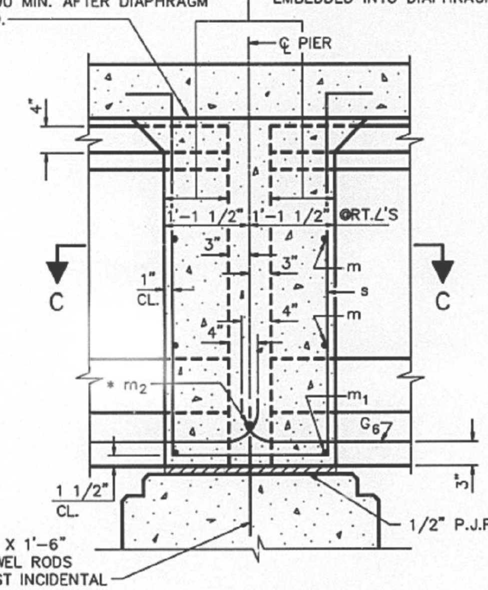


SECTION A-A
AT ABUTMENTS
(AT RT.∠'S)

* PLACED a_5(E) AND h(E) BARS IN BACK OF ANCHOR BOLT AS SHOWN IF REQUIRED TO MAINTAIN 1" CL. (+0-1/8"). ANCHOR BOLTS SHOULD BE TIED TO a_5(E) AND h(E) BARS. h(E) AND u_3(E) BARS INCLUDED IN ABUT. REINFORCEMENT.

POUR DIAPHRAGM FLUSH WITH BOTT. OF SLAB. CONCRETE IN SLAB ABOVE THIS LINE SHALL BE PLACED NOT LESS THAN 45 MIN. NOR MORE THAN 90 MIN. AFTER DIAPHRAGM HAS BEEN POURED.

ROOFING FELT SHALL BE BONDED TO SIDE OF BEAM EMBEDDED INTO DIAPHRAGM.

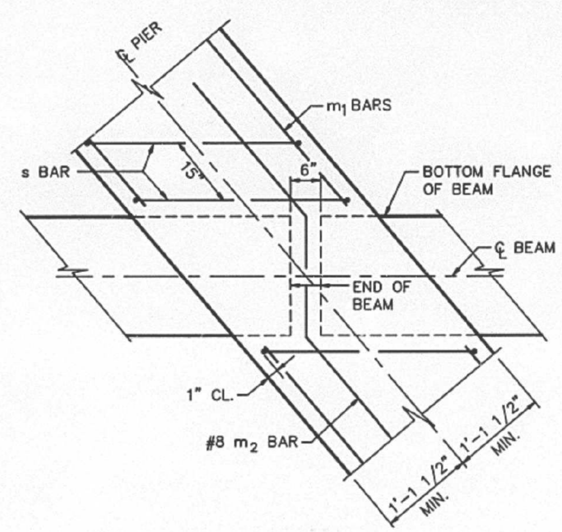


NOTE: HORIZONTAL DIMENSIONS FOR SEC. B-B ARE ALONG ℄ OF BEAMS UNLESS OTHERWISE NOTED.

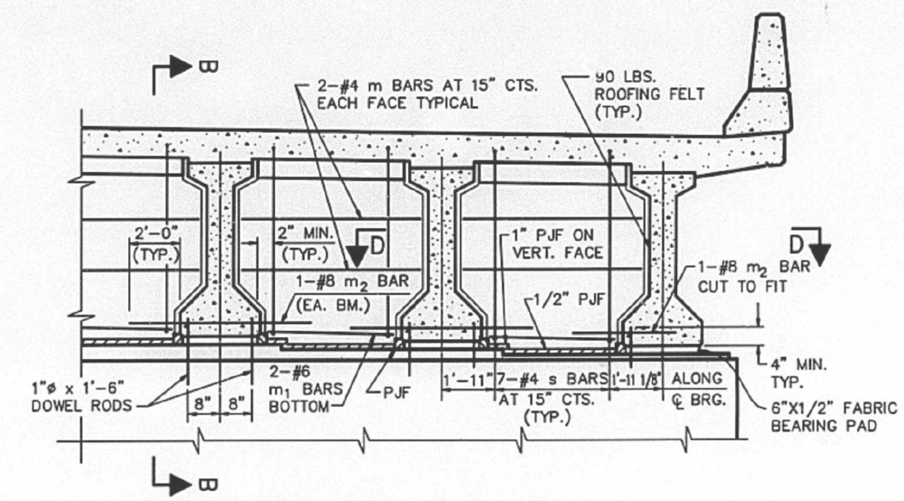
SECTION B-B
AT PIER #1 & #2
(FIXED)

* TIGHTLY FASTEN THE #8 BARS TOGETHER WITH NO. 9 WIRE TIES.

COST OF 90 LB. ROOFING FELT IS INCIDENTAL TO CLASS X CONCRETE.



SECTION C-C
DIAPHRAM DETAIL



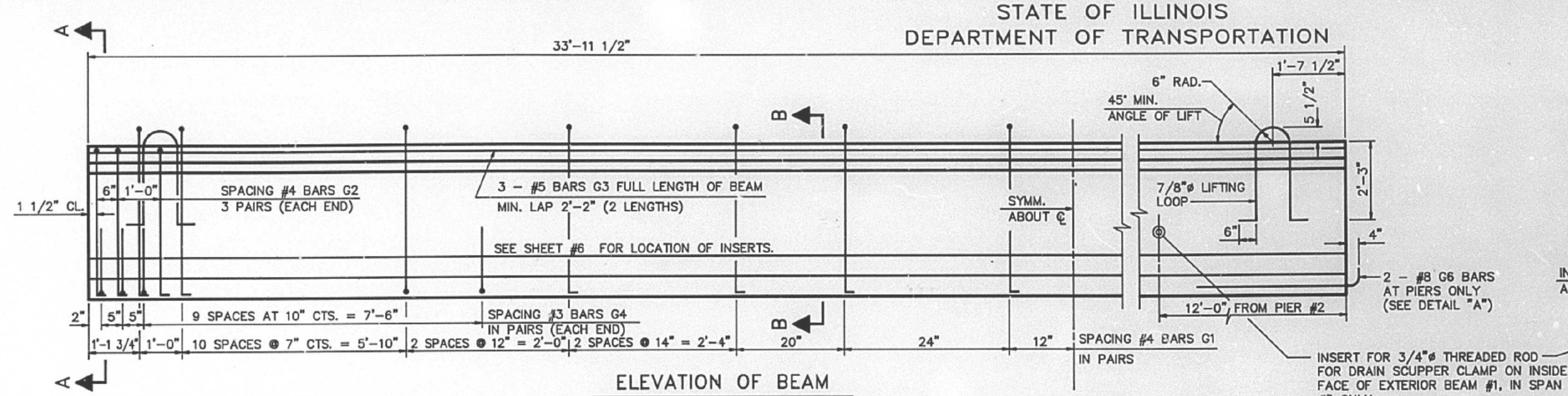
DIAPHRAGM AT PIER #1 & #2
(FIXED)

DESIGNED	MGO
CHECKED	PJL
DRAWN	MHK
CHECKED	PJL

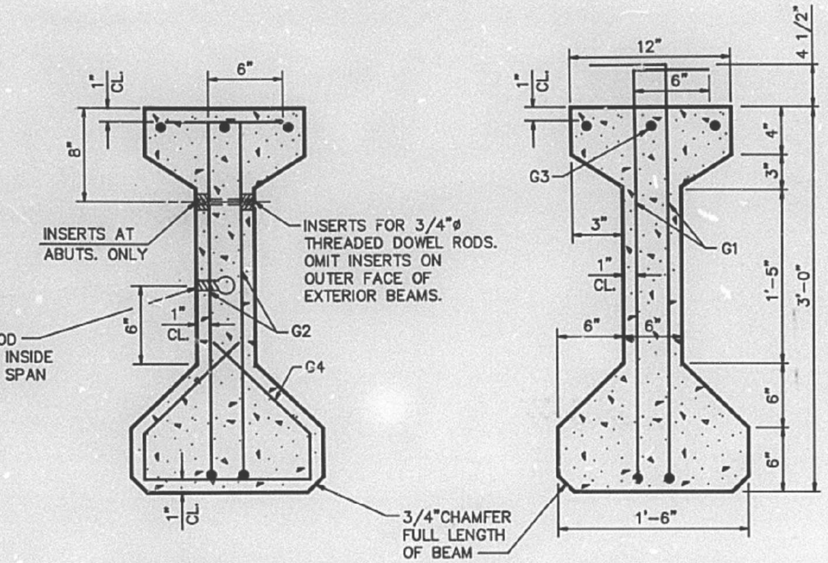
PI-2J

DECK DETAILS

ILLINOIS ROUTE 94 OVER
FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042

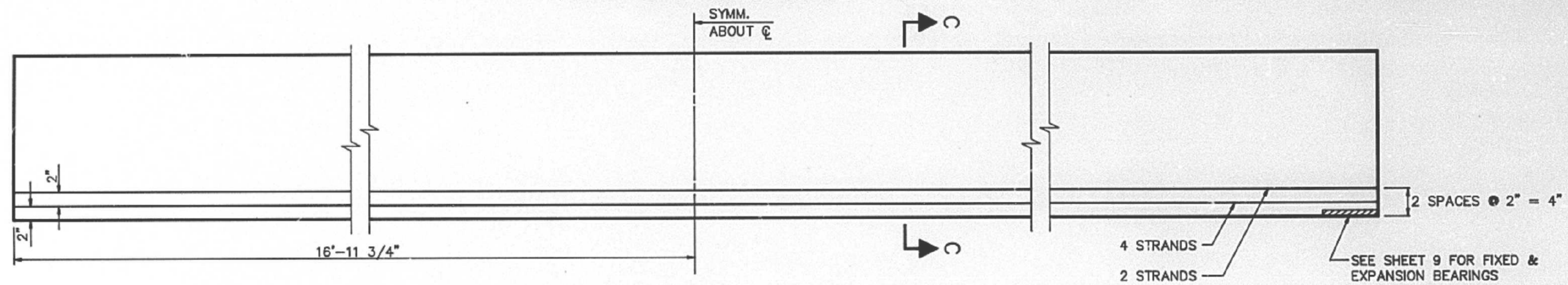


ELEVATION OF BEAM
(SHOWING REINFORCEMENT & DIMENSIONS)



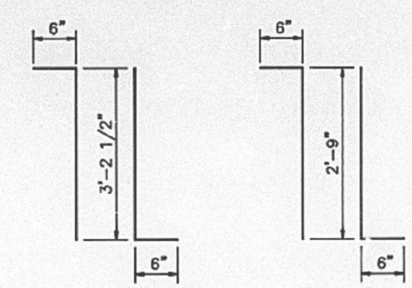
SECTION A-A

SECTION B-B



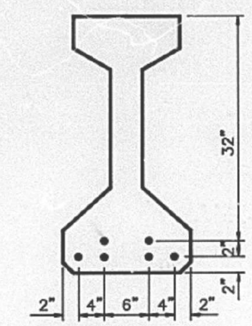
ELEVATION OF BEAM
(SHOWING PRESTRESSED STEEL)

6 ~ 1/2"ø STRANDS PER BEAM EACH STRAND STRESSED TO 28,900 LBS.; f'ci = 4,000 PSI.; f'c = 5,000 PSI.

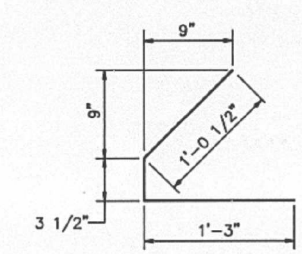


BAR G1

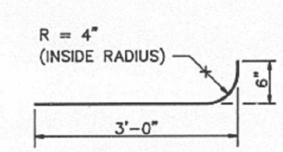
BAR G2



SECTION C-C



BAR G4

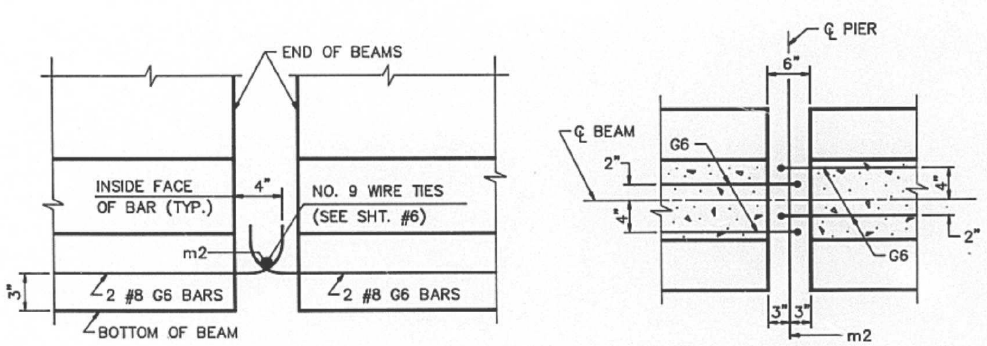


BAR G6

*** BAR LIST**

BAR	NO.	SIZE	LENGTH	SHAPE
G1	72	#4	4'-2 1/2"	
G2	12	#4	3'-9"	
G3	6	#5	17'-11"	
G4	48	#3	2'-7"	
G6	2	#8	3'-6"	

* FOR ONE BEAM ONLY.



ELEVATION

PLAN

DETAIL "A"

NOTES

ALL INSERTS AND THREADED DOWEL RODS FOR INSERTS, REINFORCING AND PRESTRESSING STEEL, AND OTHER ITEMS WHICH ARE CAST INTO THE PRECAST CONCRETE I-BEAMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LINEAL FOOT OF "FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36 IN."

INSERT FOR 3/4"ø THREADED DOWEL RODS ARE TO BE TWO STRUT, COIL TYPE FOR INTERIOR I-BEAMS AND SINGLE COIL, FLARED LOOP TYPE FOR EXTERIOR I-BEAMS.

PRESTRESSING STEEL SHALL BE NON-GALVANIZED HIGH STRENGTH, STRESS-RELIEVED 7-WIRE STRAND, GRADE 270.

THE NOMINAL DIAMETER SHALL BE 1/2" AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.153 SQ. IN.

NON-PRESTRESSING STEEL SHALL CONFORM TO AASHTO DESIGNATION M-31 OR M-53 GRADE 60.

STEEL FOR LIFTING LOOPS SHALL BE NON-DEFORMED BARS fy = 40,000 PSI.

REQUIRED RELEASE STRENGTH, f'ci, SHALL BE 4,000 PSI.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
FURNISHING & ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36"	LIN. FT.	340

PRECAST I-BEAMS (SPAN 1 & 3)
ILLINOIS ROUTE 94 OVER FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042

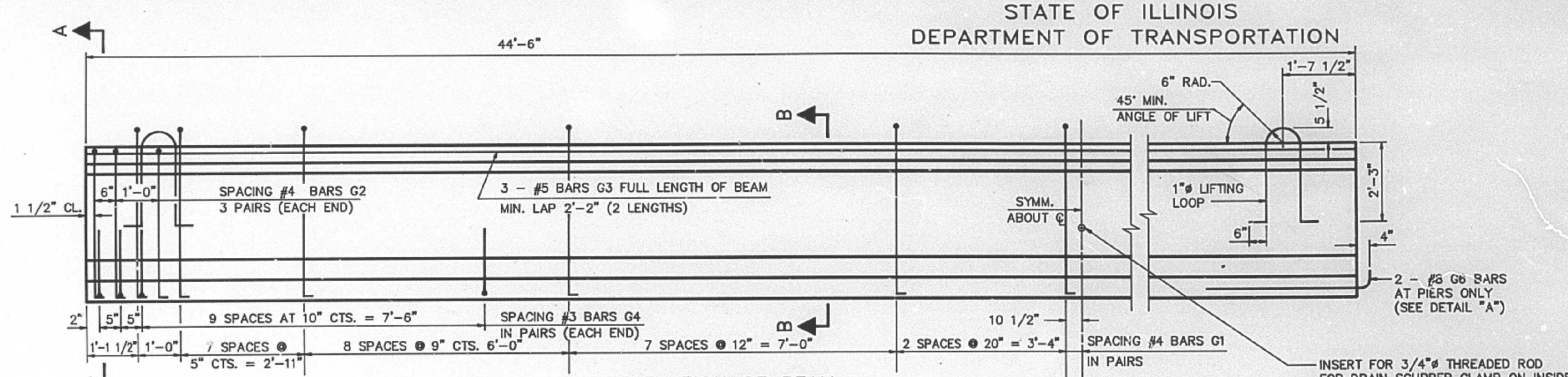
F-PI36-1 1-1

DESIGNED	MGO
CHECKED	PJL
DRAWN	DEH
CHECKED	PJL

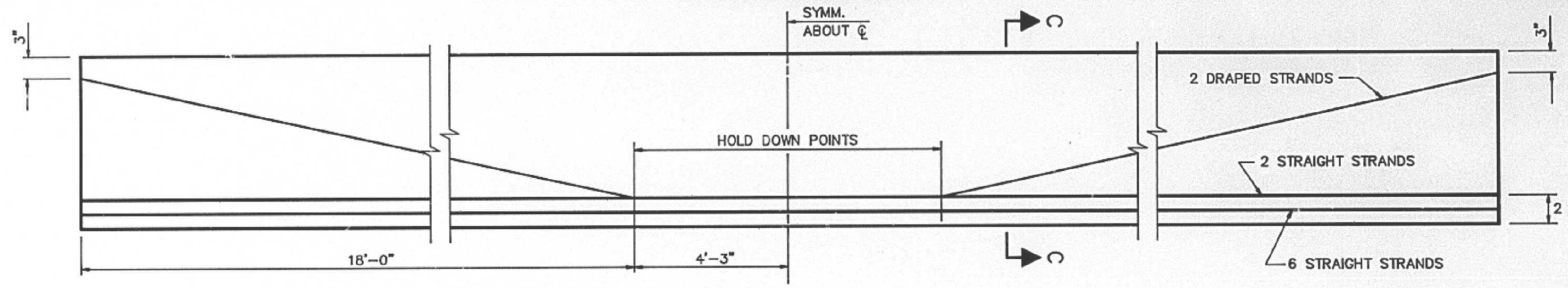
PI-4-36

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 94 F.A. 1412	(106C)BR	HENDERSON	69	52
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8
SHEETS 16

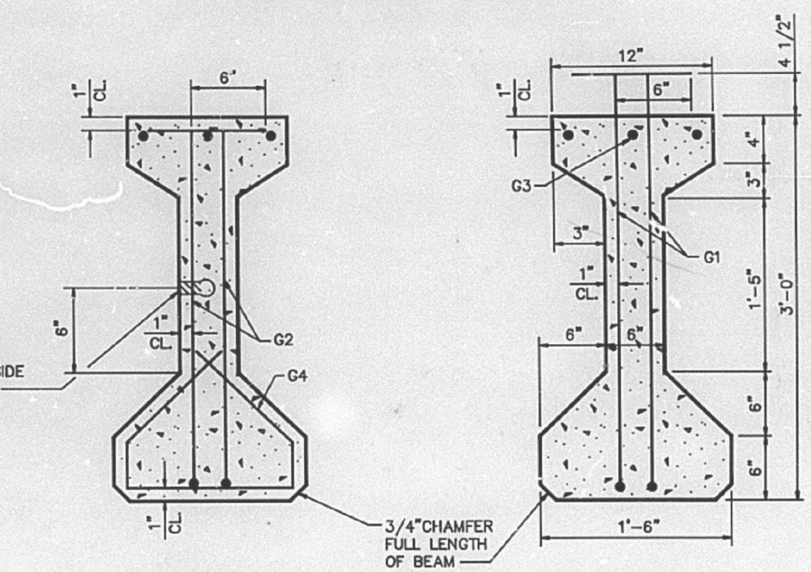


ELEVATION OF BEAM
(SHOWING REINFORCEMENT & DIMENSIONS)



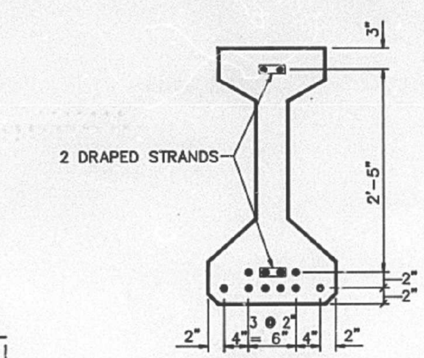
ELEVATION OF BEAM
(SHOWING PRESTRESSED STEEL)

10 ~ 1/2"ø STRANDS PER BEAM EACH STRAND STRESSED TO 28,900 LBS.; f'ci = 4,000 PSI.; f'c = 5,000 PSI.

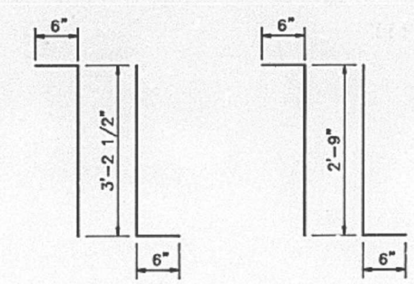


SECTION A–A

SECTION B–B

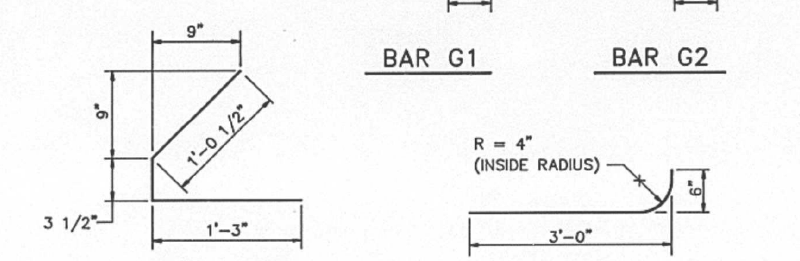


SECTION C–C



BAR G1

BAR G2



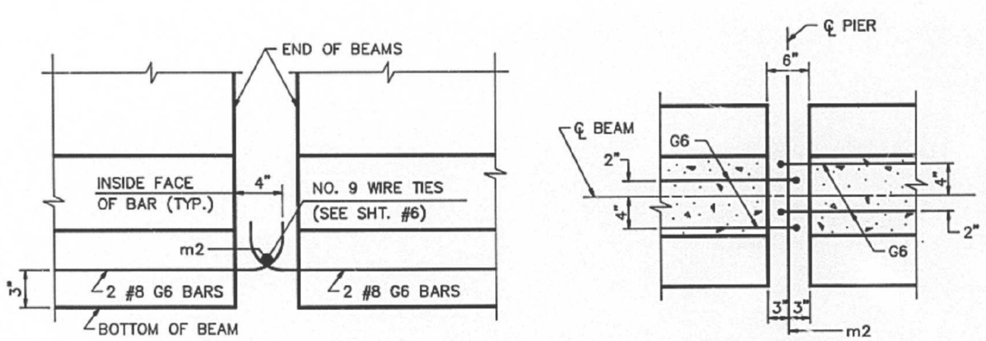
BAR G4

BAR G6

* BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE
G1	104	#4	4'-2 1/2"	
G2	12	#4	3'-9"	
G3	6	#5	23'-3"	
G4	48	#3	2'-7"	
G6	4	#8	3'-6"	

* FOR ONE BEAM ONLY.



ELEVATION

PLAN

DETAIL "A"

NOTES

ALL INSERTS AND THREADED DOWEL RODS FOR INSERTS, REINFORCING AND PRESTRESSING STEEL, AND OTHER ITEMS WHICH ARE CAST INTO THE PRECAST CONCRETE I-BEAMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LINEAL FOOT OF "FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36 IN."

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THE NOMINAL DIAMETER SHALL BE 1/2" AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.153 SQ. IN.

NON-PRESTRESSING STEEL SHALL CONFORM TO AASHTO DESIGNATION M-31 OR M-53 GRADE 60.

STEEL FOR LIFTING LOOPS SHALL BE NON-DEFORMED BARS fy = 40,000 PSI.

REQUIRED RELEASE STRENGTH, f'ci, SHALL BE 4,000 PSI.

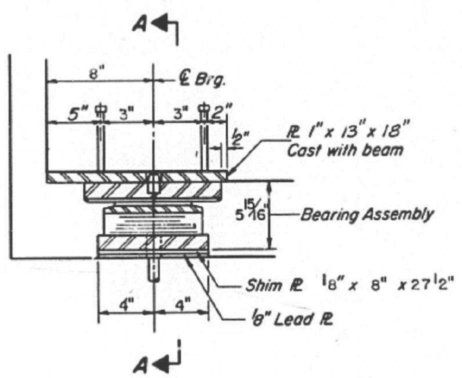
BILL OF MATERIAL

ITEM	UNIT	TOTAL
FURNISHING & ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36"	LIN. FT.	223

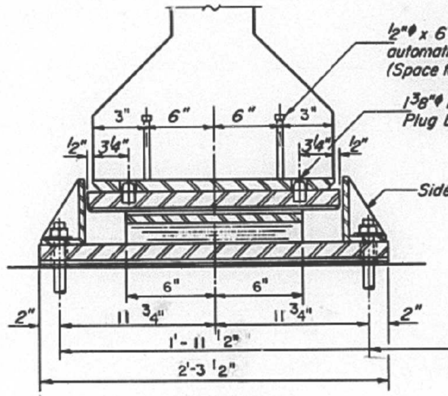
DESIGNED	MGO
CHECKED	PJL
DRAWN	DEH
CHECKED	PJL

PI-4-36

PRECAST I-BEAMS (SPAN 2)
ILLINOIS ROUTE 94 OVER
FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042



SECTION AT SOUTH ABUTMENT

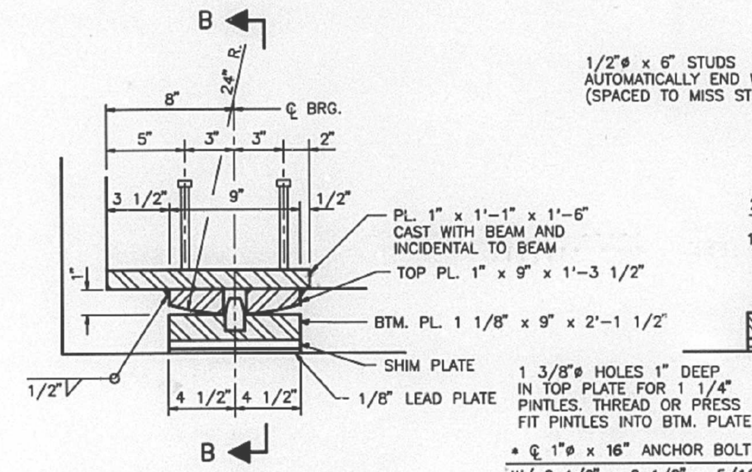


*℄ 1"φ x 16" Anchor bolts with 2½" x 2½" x 5/16" PL washer under nut. 1½"φ Holes in bottom PL

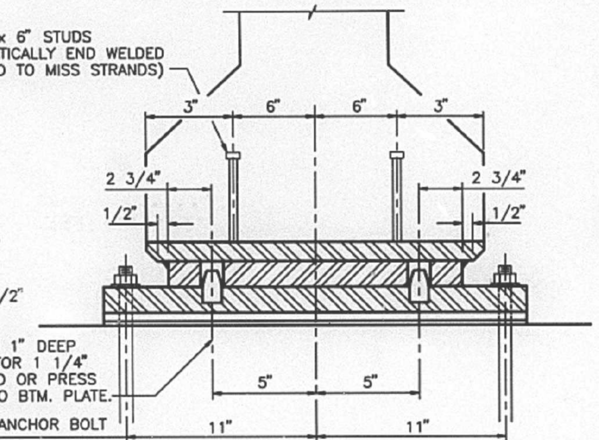
SECTION A-A

TYPE II TFE ELASTOMERIC EXP. BRG.

*Note: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. See Sheet # 13 for anchor bolt installation.

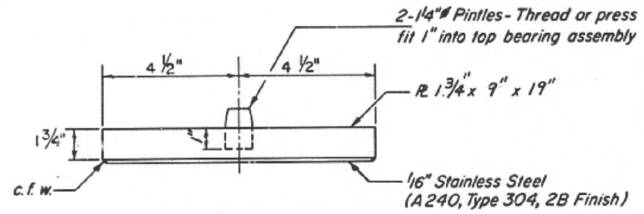


SECTION AT NORTH ABUTMENT

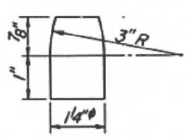


SECTION B-B

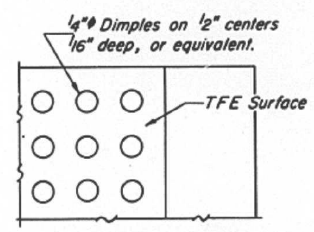
* ANCHOR BOLTS MAY BE BUILT INTO THE MASONRY OR DRILLED AND GROUTED IN PLACE AFTER ALL BEAMS HAVE BEEN ERECTED.
SEE SHEET #13 FOR ANCHOR BOLT INSTALLATION.



TOP BEARING ASSEMBLY

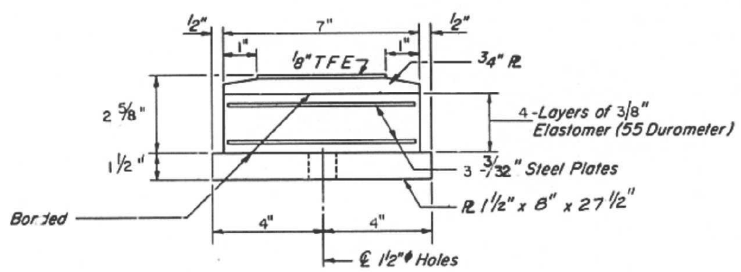


PINTLE

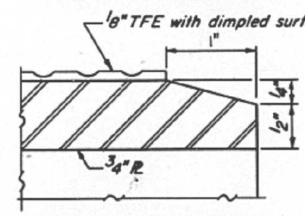


PLAN-TFE SURFACE

FIXED BEARING



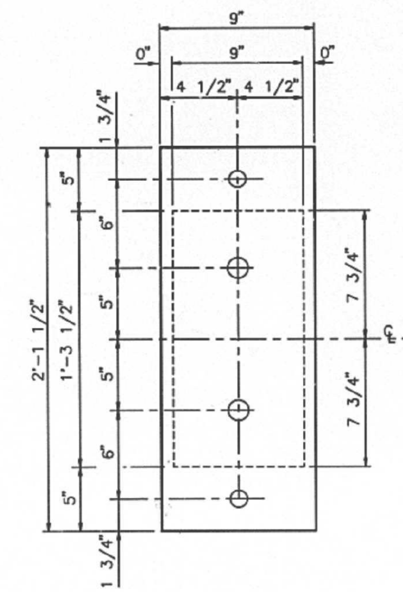
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

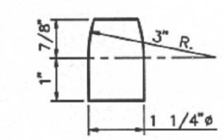
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



PLAN OF
TOP & BOTTOM PLATES

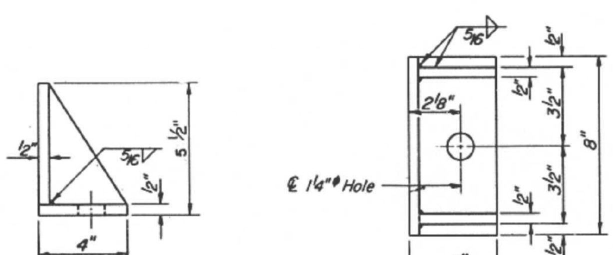
TOP AND BOTTOM PLATES OF FIXED BEARINGS ARE INCLUDED IN FURNISHING AND ERECTING PRECAST, PRESTRESSED CONCRETE I-BEAMS, 36" AND ARE LOCATED AT NORTH ABUTMENT.



PINTLE

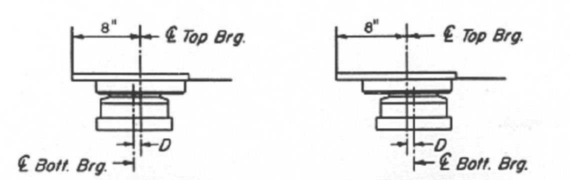
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	5



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50°F
(Move bott. brg. away from fixed brg.)

ABOVE 50°F
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.
(Located at South Abutment)

DESIGNED	MGO	EXAMINED	19
CHECKED	PJL	PASSED	ENGINEER OF BRIDGE DESIGN
DRAWN	DEH	APPROVED	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	PJL		DIRECTOR OF HIGHWAYS

PI-2E-2 12-31-85

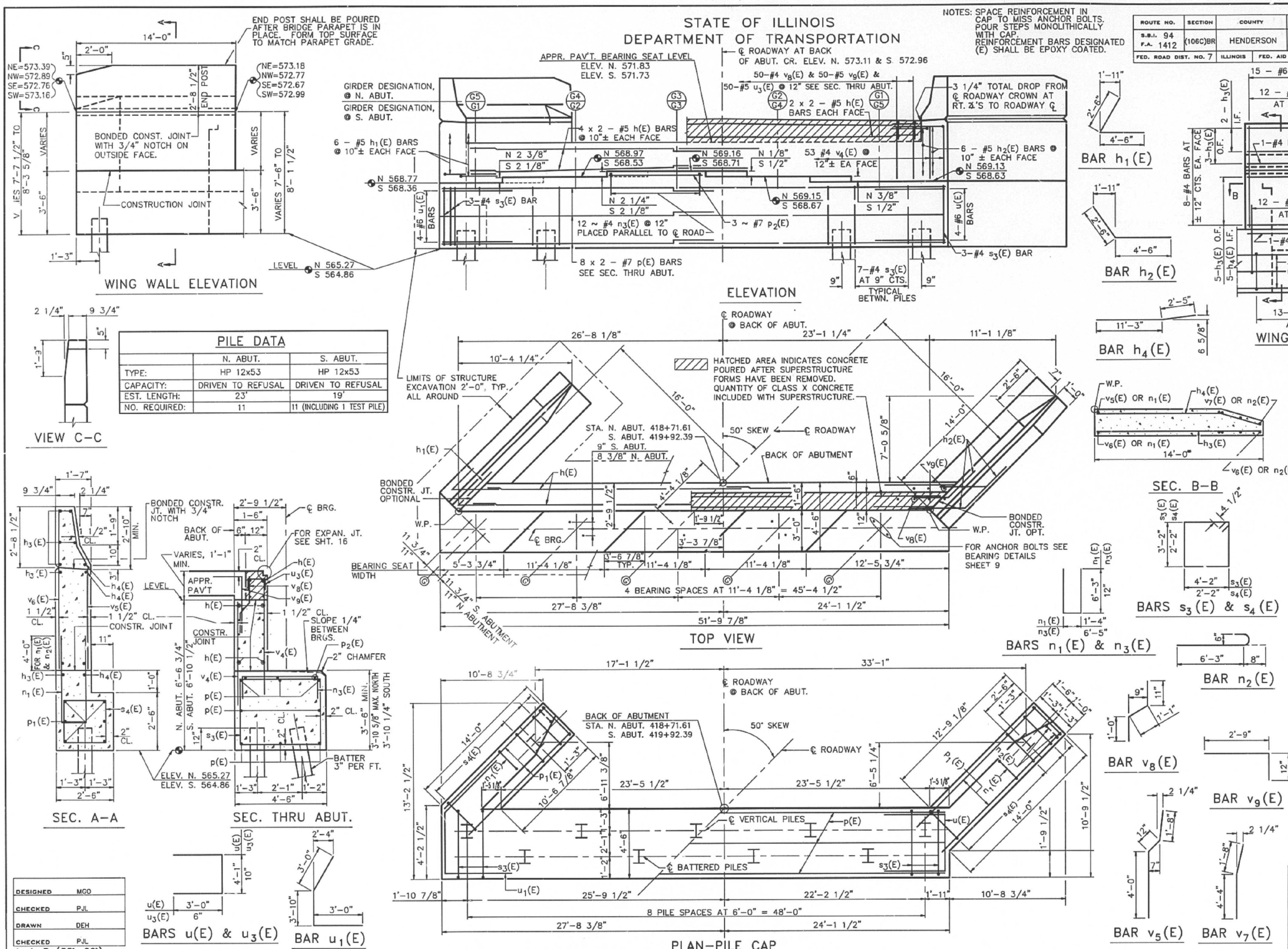
BEARING DETAILS
ILLINOIS ROUTE 94 OVER
FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOTES: SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS. POUR STEPS MONOLITHICALLY WITH CAP. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 94 F.A. 1412	(106C)BR	HENDERSON	69	54
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10
SHEETS 16



PILE DATA

	N. ABUT.	S. ABUT.
TYPE:	HP 12x53	HP 12x53
CAPACITY:	DRIVEN TO REFUSAL	DRIVEN TO REFUSAL
EST. LENGTH:	23'	19'
NO. REQUIRED:	11	11 (INCLUDING 1 TEST PILE)

TWO ABUTMENTS BILL OF MATERIAL

BARS	NO.	SIZE	LENGTH	SHAPE
h(E)	48	#5	26'-0"	
h_1(E)	24	#5	7'-0"	
h_2(E)	24	#5	7'-0"	
h_3(E)	44	#4	13'-8"	
h_4(E)	28	#4	13'-8"	
n_1(E)	48	#6	13'-10"	
n_2(E)	24	#6	6'-11"	
n_3(E)	24	#4	8'-5"	
p(F.)	32	#7	28'-0"	
p_1(E)	24	#7	14'-0"	
p_2(E)	6	#7	11'-0"	
s_3(E)	124	#4	15'-5"	
s_4(E)	64	#4	9'-5"	
u(E)	8	#6	10'-1"	
u_1(E)	8	#6	9'-10"	
u_3(E)	100	#5	1'-10"	
v_4(E)	212	#4	5'-10"	
v_5(E)	48	#6	6'-8"	
v_6(E)	60	#6	6'-5"	
v_7(E)	12	#6	6'-0"	
v_8(E)	100	#4	3'-0"	
v_9(E)	100	#5	3'-9"	
POROUS GRANULAR EMBANKMENT SPECIAL			CU. YD.	343
STRUCTURE EXCAVATION			CU. YD.	383
CLASS X CONCRETE			CU. YD.	113.9
REINFORCEMENT BARS (EPOXY COATED)			LBS.	11,000
FURNISHING STEEL PILES, HP 12 x 53			LIN. FT.	443
DRIVING STEEL PILES			LIN. FT.	443
METAL SHOES			EACH	21
STEEL TEST PILES, HP 12 x 53			EACH	1

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
BARS INDICATED THUS 20 x 3 – #5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGHTS PER LINE.

FALL-AIR 1=1

ABUTMENT DETAILS

ILLINOIS ROUTE 94 OVER FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042

DESIGNED	MGO
CHECKED	PJL
DRAWN	DEH
CHECKED	PJL

A-1-R (35'-60')

MODEL: Default
FILE NAME: pw:\\planroom.dot.illinois.gov:PWIDOT\Documents\IDOT Offices\District 4\Projects\D4 68F67\CAD\Data\CADsheets\D468F67-sht-ExPlans.dgn

USER NAME = SUSERS	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 1:100	CHECKED -	REVISED -
PLOT DATE = 12/11/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS – FOR INFORMATION ONLY

SCALE: SHEET 11 OF 19 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	37

CONTRACT NO. 68F67
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

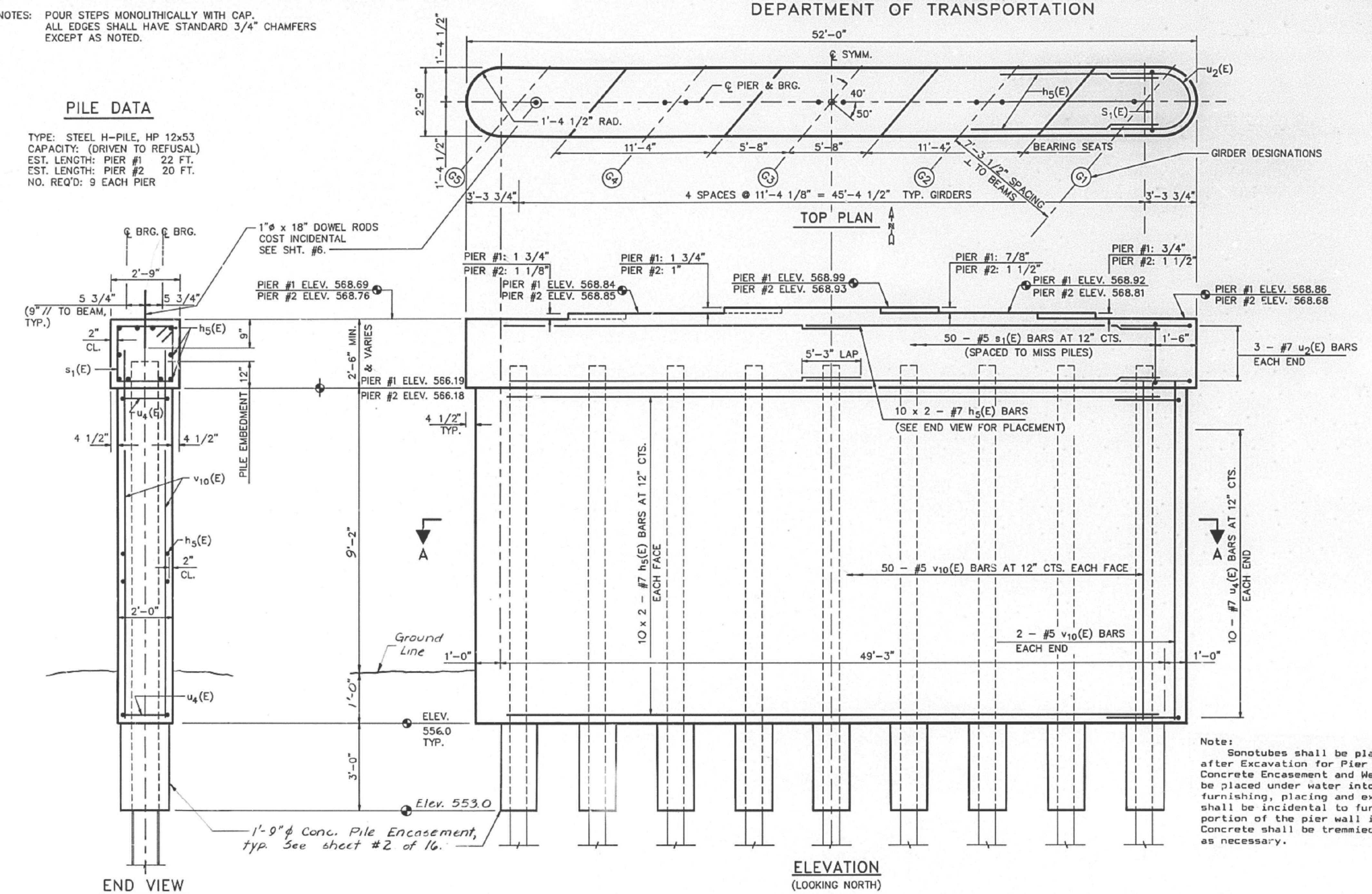
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 94 F.A. 1412	(106C)BR	HENDERSON	69	55
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11
SHEETS 16

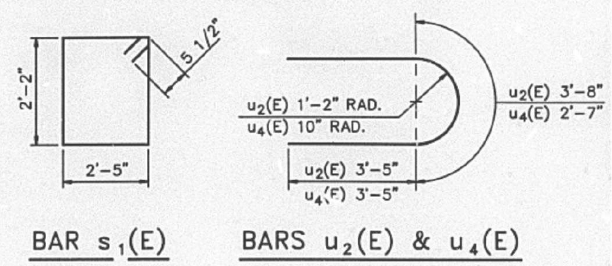
NOTES: POUR STEPS MONOLITHICALLY WITH CAP.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

PILE DATA

TYPE: STEEL H-PILE, HP 12x53
CAPACITY: (DRIVEN TO REFUSAL)
EST. LENGTH: PIER #1 22 FT.
EST. LENGTH: PIER #2 20 FT.
NO. REQ'D: 9 EACH PIER



Note:
Sonotubes shall be placed below Elev. 556.0 after Excavation for Pier Walls. Class X Concrete Encasement and Welded Wire Fabric shall be placed under water into sonotubes. Cost of furnishing, placing and excavation for sonotubes shall be incidental to furnishing piles. If a portion of the pier wall is under water, Class X Concrete shall be tremmied underwater into forms as necessary.

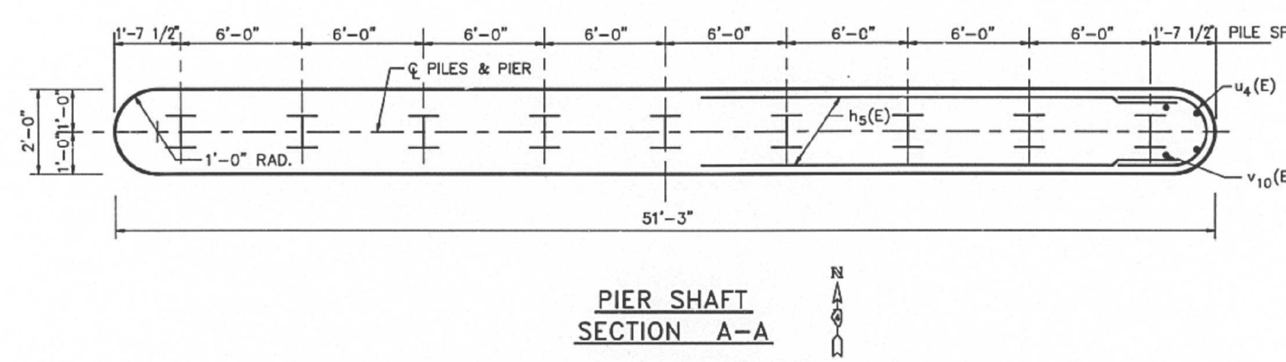


BILL OF MATERIAL
2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
h_5(E)	120	#7	27'-3"	——
s_1(E)	100	#5	10'-1"	◘
u_2(E)	12	#7	10'-6"	⊃
u_4(E)	40	#7	9'-5"	⊃
v_{10}(E)	208	#5	11'-6"	——
CLASS X CONCRETE			CU. YD.	103.8
FURNISHING STEEL PILES, HP 12x53			LIN. FT.	378
DRIVING STEEL PILES			LIN. FT.	378
METAL SHOES			EACH	18
REINFORCEMENT BARS EPOXY COATED			LBS.	11,260
STRUCTURE EXCAVATION			CU. YD.	25

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

BARS INDICATED THUS 20 x 3 – #5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.



DESIGNED	MGO
CHECKED	PJL
DRAWN	DEH
CHECKED	PJL

PIER DETAILS
ILLINOIS ROUTE 94 OVER FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042

FALL-PCL 1=1

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 94 F.A. 1412	(106C)BR	HENDERSON	69	56
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

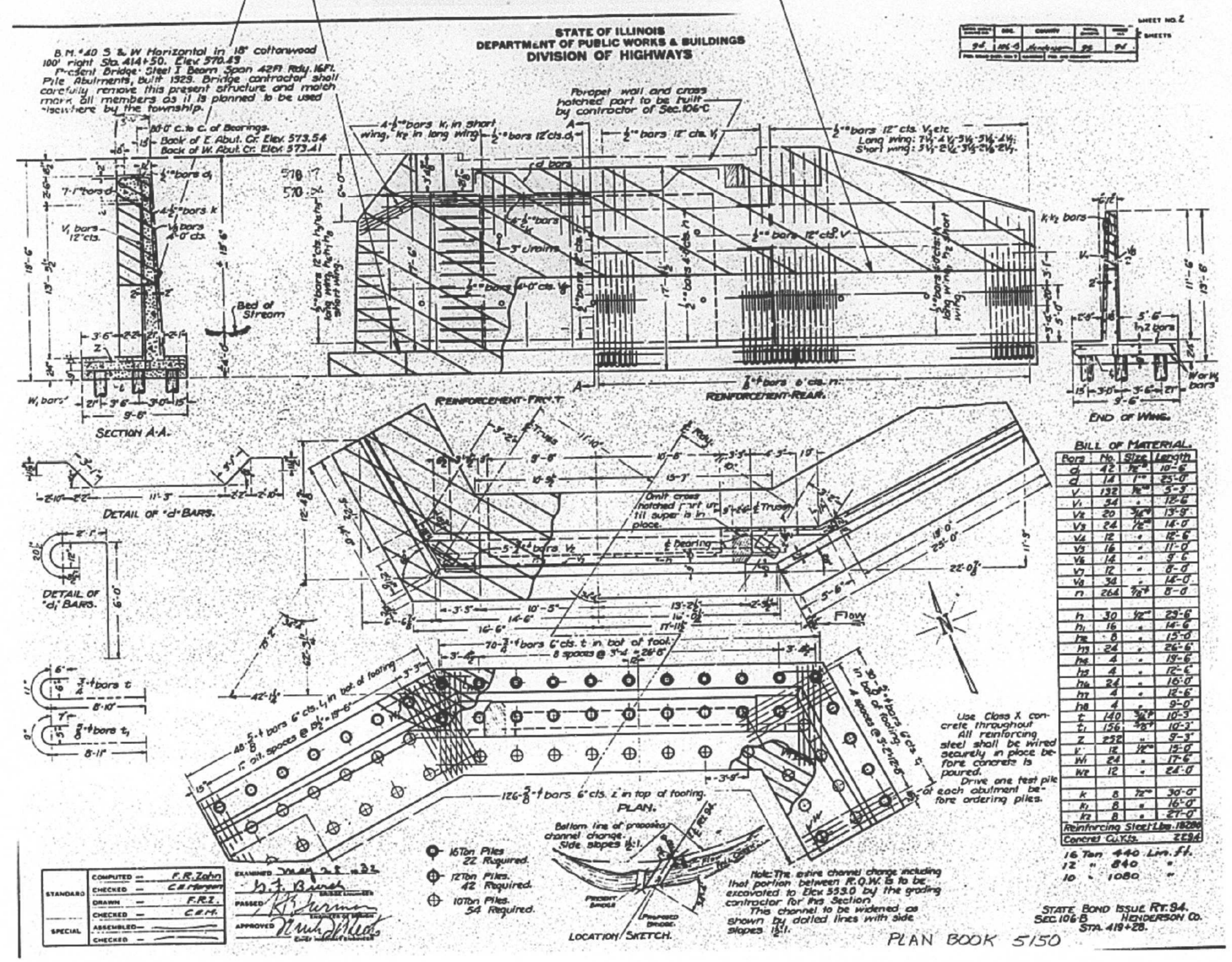
SHEET NO. 12
SHEETS 16

CROSS HATCH AREA INDICATES SUBSTRUCTURE TO BE REMOVED TO MIN. 1 FT. BELOW PROPOSED GRADE WHERE IT DOES NOT INTERFERE WITH PROPOSED WORK.

TO ELEV. 562 ± AT NORTH ABUTMENT

TO ELEV. 560 ± AT SOUTH ABUTMENT

AND TO LOWER ELEVATIONS WHERE NECESSARY TO DRIVE PROPOSED PILES.



SUBSTRUCTURE REMOVAL

ILLINOIS ROUTE 94 OVER
FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042

USER NAME = SUSERS	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLANS – FOR INFORMATION ONLY
	DRAWN -	REVISED -		
PLOT SCALE = 1:100	CHECKED -	REVISED -		
PLOT DATE = 12/11/2020	DATE -	REVISED -		SCALE: SHEET 13 OF 19 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	39
CONTRACT NO. 68F67				
ILLINOIS	FED. AID PROJECT			

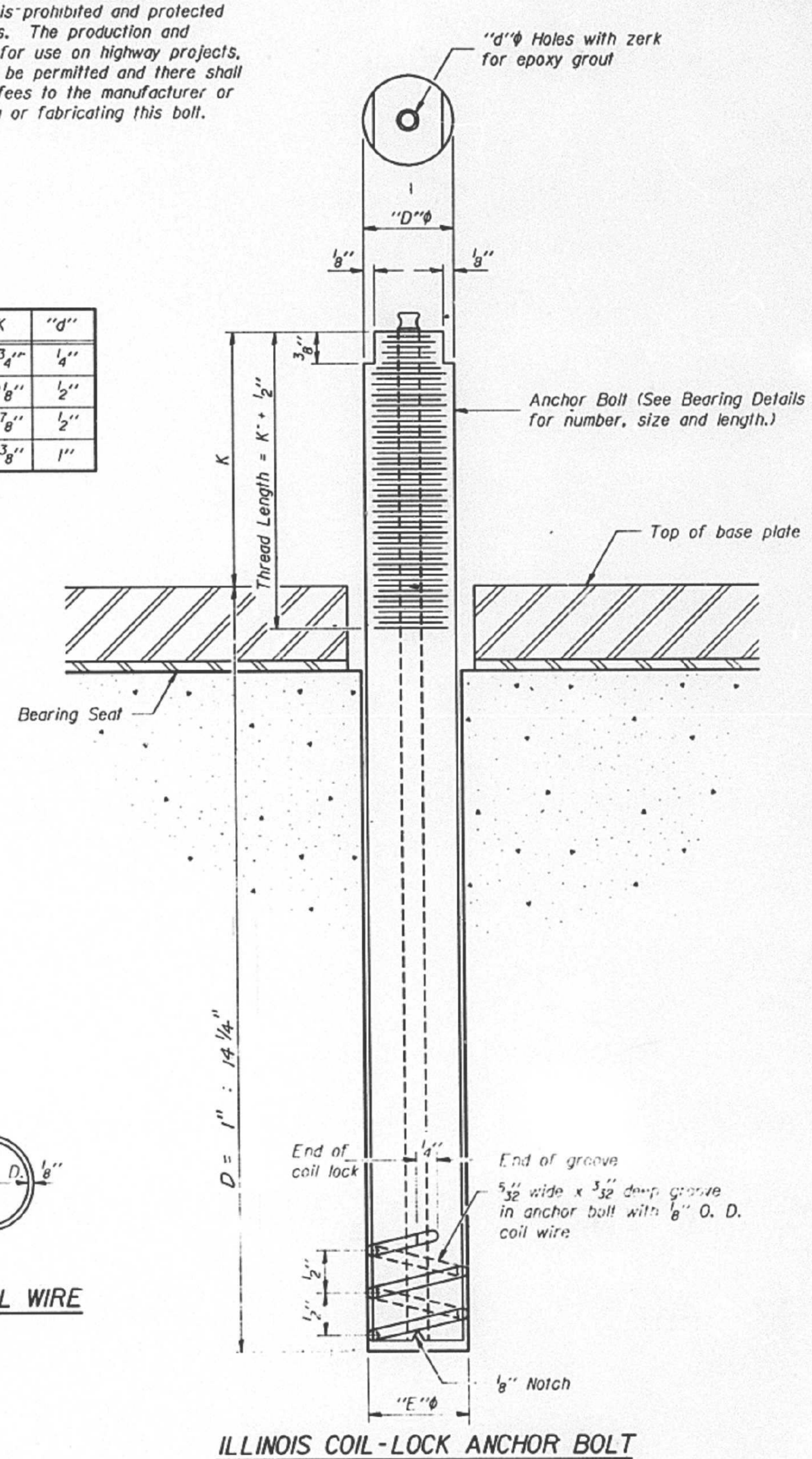
The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects, in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

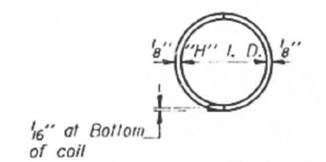
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 94 F.A. 1412	(106C)BR	HENDERSON	69	57
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 13
SHEETS 16

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

DESIGNED	P.J.L.
CHECKED	
DRAWN	D.E.H.
CHECKED	P.J.L.

ABB-1 12-1-83

ANCHOR BOLT DETAILS FOR BEARINGS
ILLINOIS ROUTE 94
F.A.S. RTE. 1412
HENDERSON COUNTY
FALL CREEK SECTION (106C)BR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
2½"	2½"	1¾" Min.
4"	3"	2½" Min.

INSTALLATION NOTES

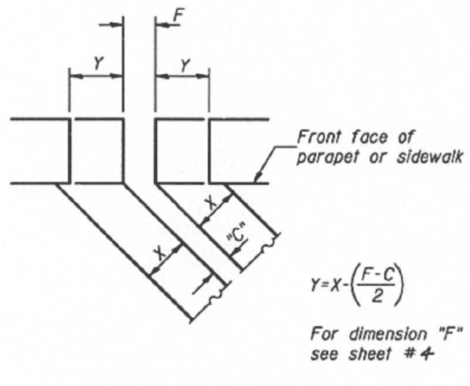
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

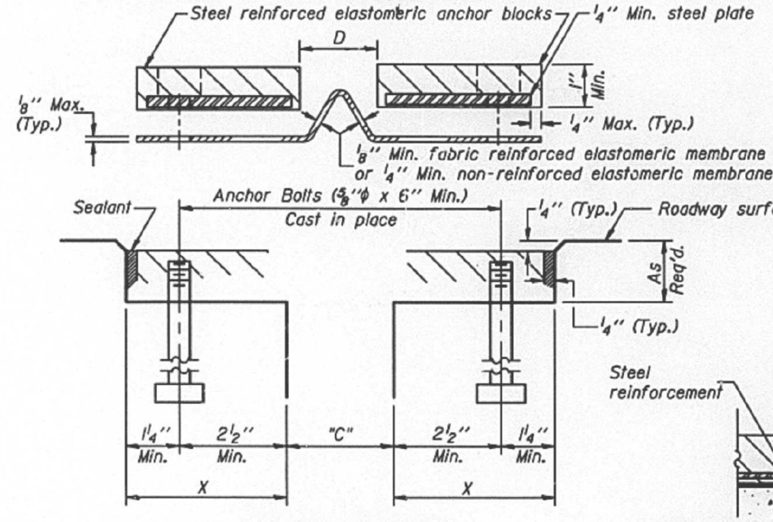
SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

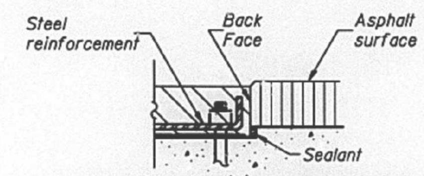
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



FORMING BLOCKOUT SKETCH



CROSS SECTION



ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

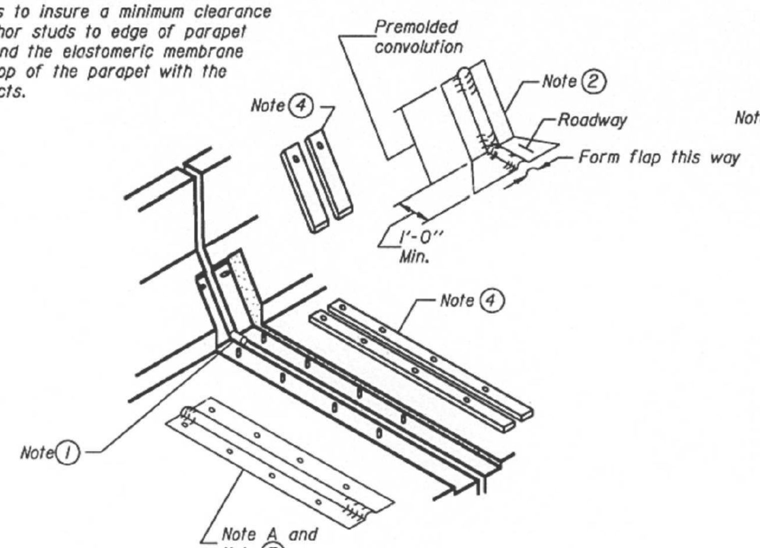
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

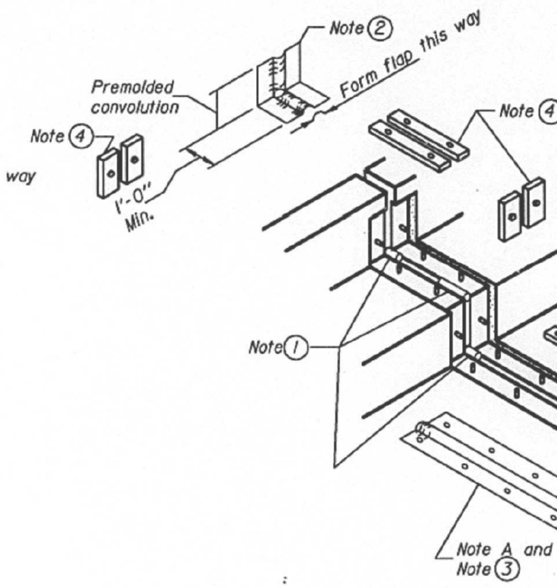
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

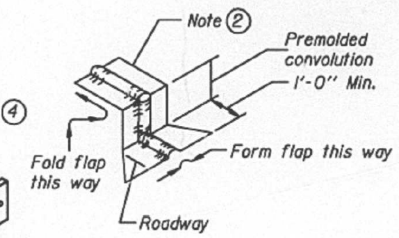
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

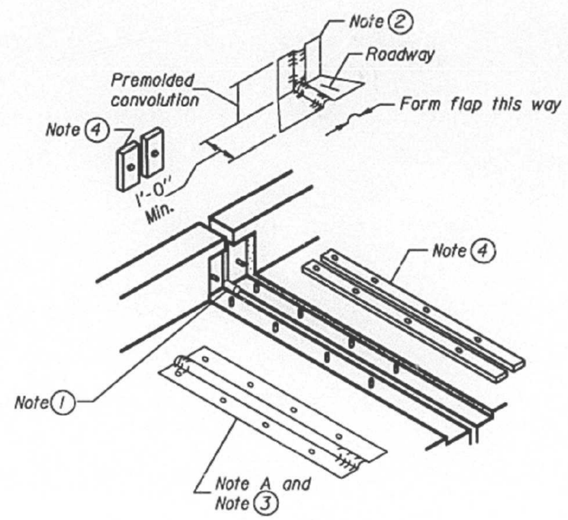


AT PARAPET

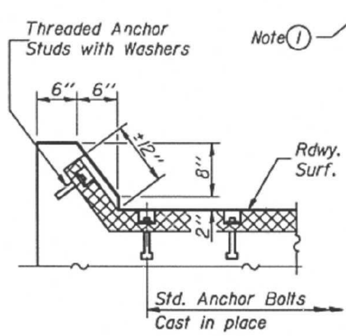


AT SIDEWALK OR MEDIAN

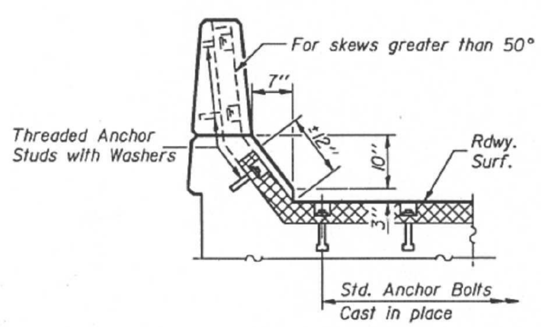




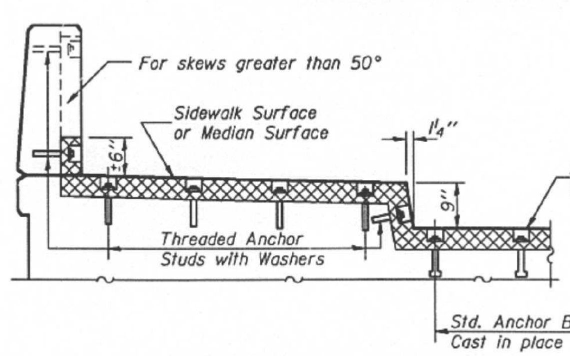
AT WALL



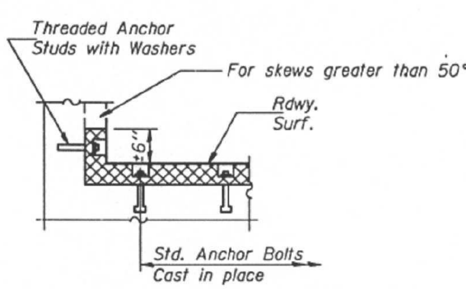
AT CURB



AT PAPAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL

CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS
For 2", 2½" and 4" Movement

ILLINOIS ROUTE 94
F.A.S. RTE. 1412
HENDERSON COUNTY

FALL CREEK SECTION (106C)BR

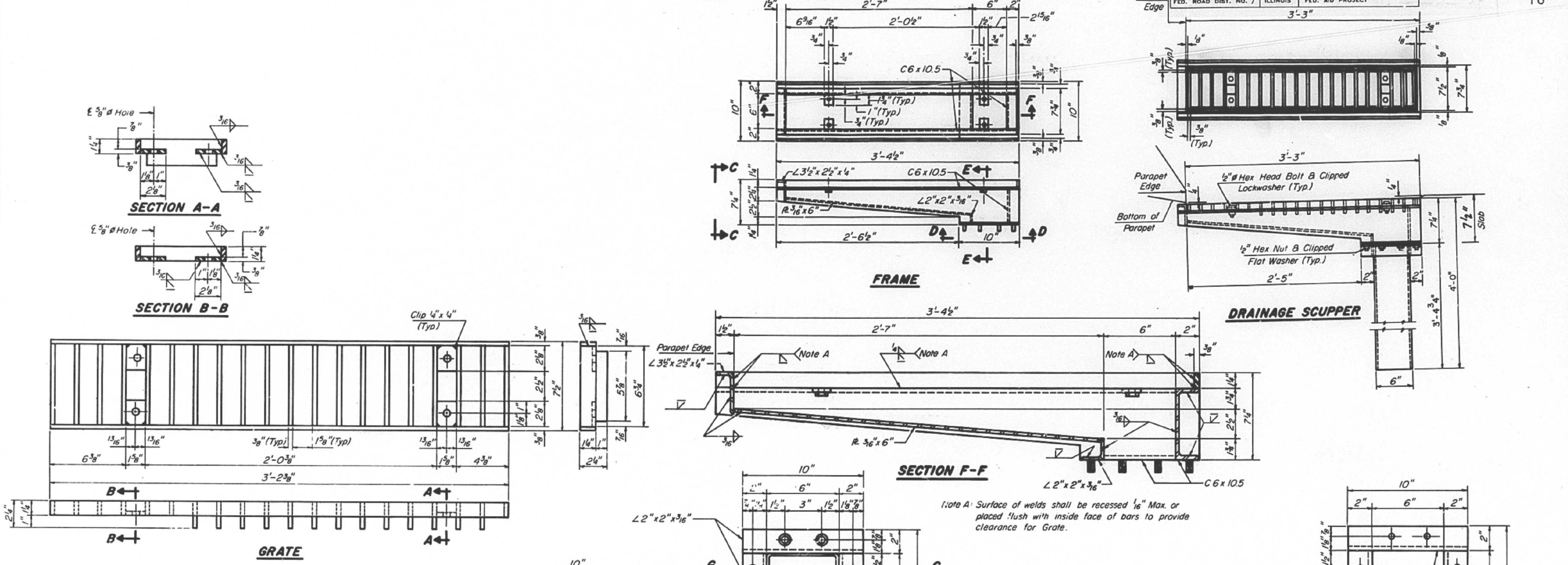
DESIGNED	P.J.L.
CHECKED	
DRAWN	D.E.H.
CHECKED	P.J.L.

EJ-CS 6-1-89

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 94 F.A. 1412	(106C)BR	HENDERSON	69	59
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 15
SHEETS 16



Notes:

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B, or A-501 Structural Steel Tubing.

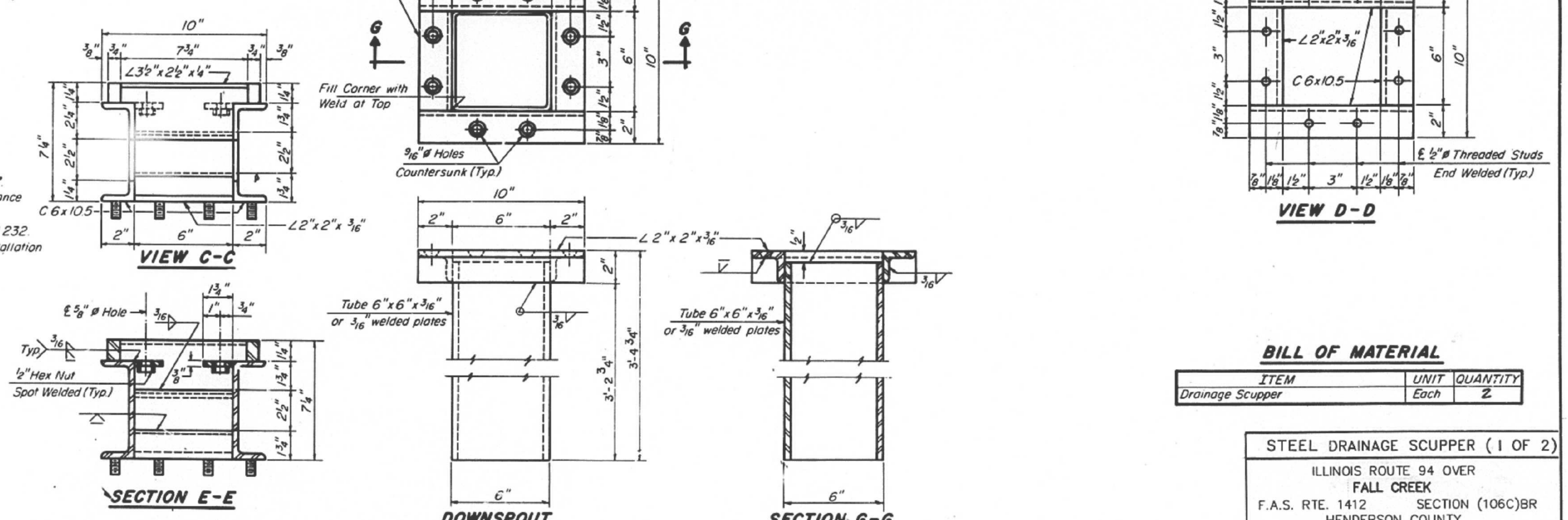
All other shapes, plates and bars shall conform to the requirements of A.A.S.H.T.O.: M 183.

Bolts, studs, washers and nuts shall conform to the requirements of A.S.T.M.: A-307.

The Grate, Frame, and Downspout shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O.: M-111 & A.S.T.M.: A-385.

All bolts, washers and nuts shall be galvanized in accordance with A.A.S.H.T.O.: M 232.

Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS".



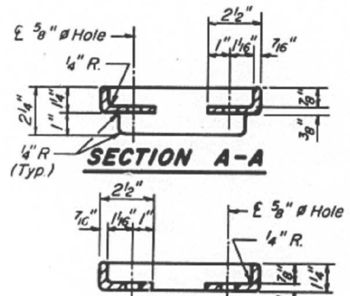
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper	Each	2

DESIGNED PJL	EXAMINED	19
CHECKED	ENGINEER OF BRIDGE DESIGN	
PB DRAWN	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED PJL	APPROVED	DIRECTOR OF HIGHWAYS

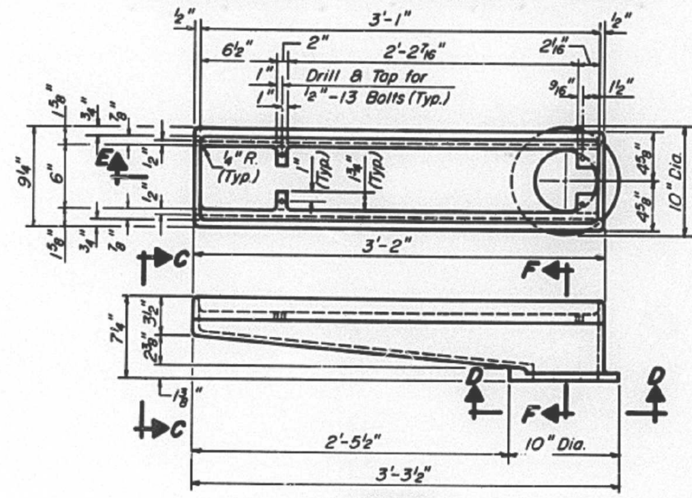
DS-3 12-1-83 (W.T. to inside of exterior stringer flange shall not be > 3'-11")

STEEL DRAINAGE SCUPPER (1 OF 2)
ILLINOIS ROUTE 94 OVER
FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 036-0042

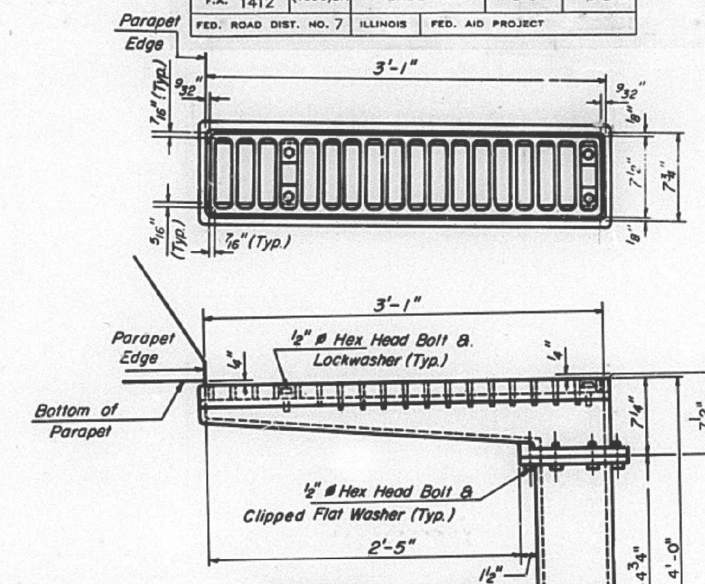


SECTION A-A

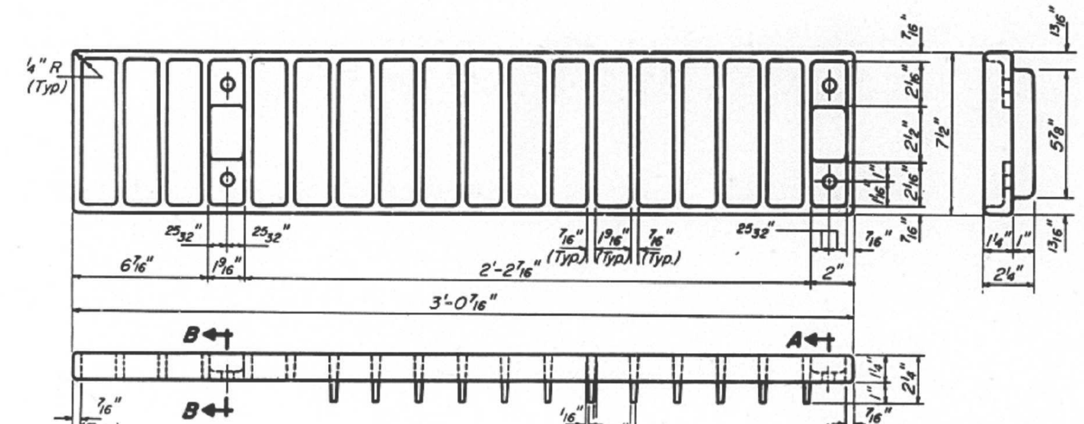
SECTION B-B



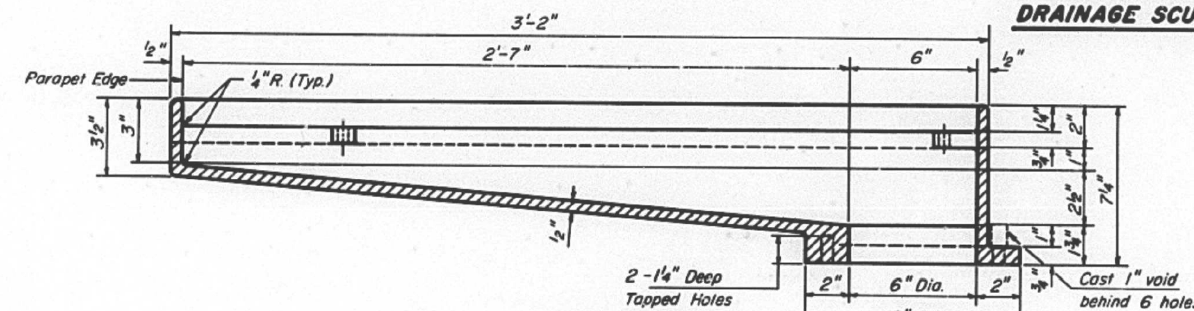
FRAME



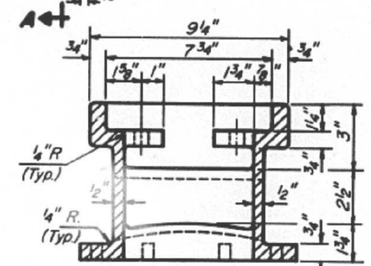
DRAINAGE SCUPPER



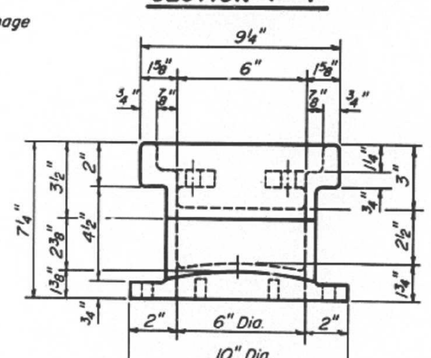
GRATE



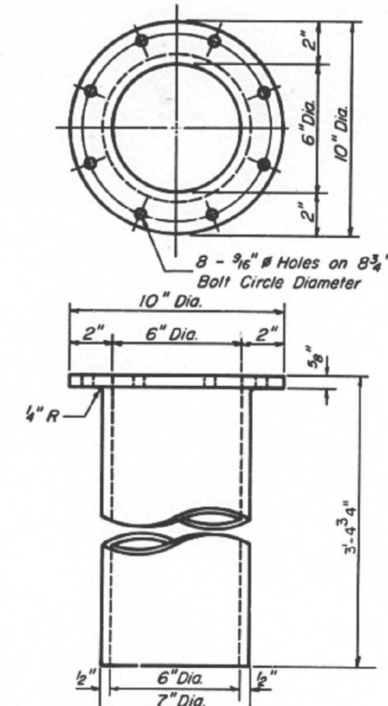
SECTION E-E



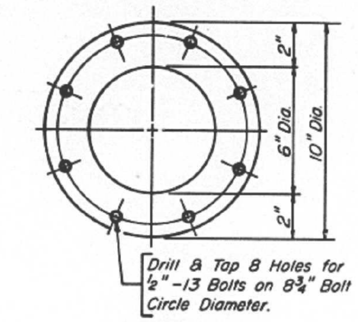
SECTION F-F



VIEW C-C



DOWNSPOUT



VIEW D-D

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M-105, Class 30.

Bolts and washers shall conform to the requirements of A.S.T.M.: A-307.

All bolts and washers shall be galvanized in accordance with A.A.S.H.T.O.: M-232.

As an alternate bolts and washers may be stainless steel conforming to the requirements of A.S.T.M.: A-193. Type 304.

Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS".

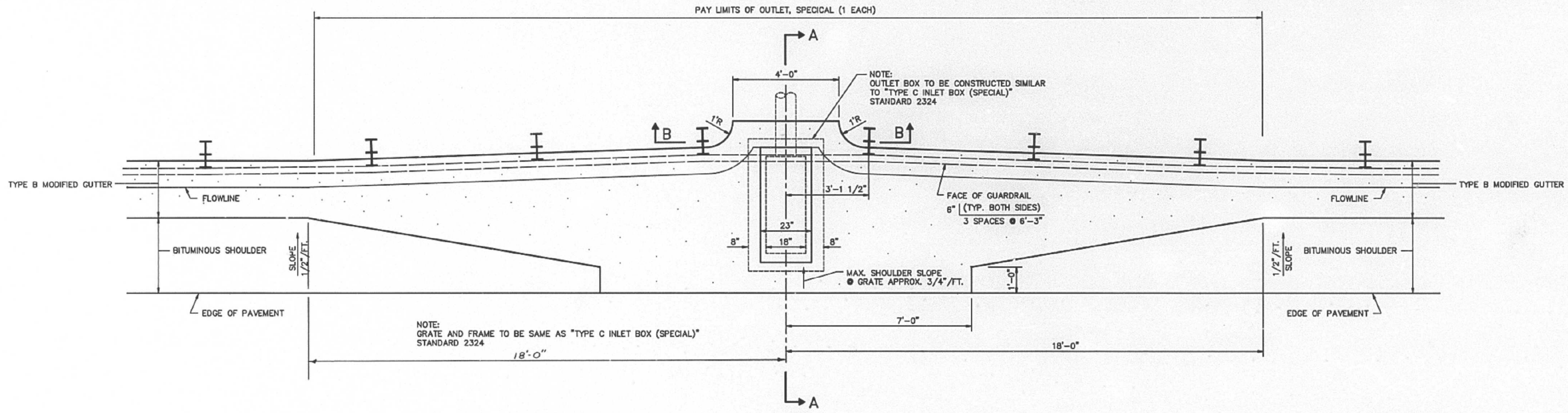
The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.

DESIGNED	PJL
CHECKED	
PB DRAWN	
CHECKED	PJL

19
EXAMINED ENGINEER OF BRIDGE DESIGN
PASSED ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

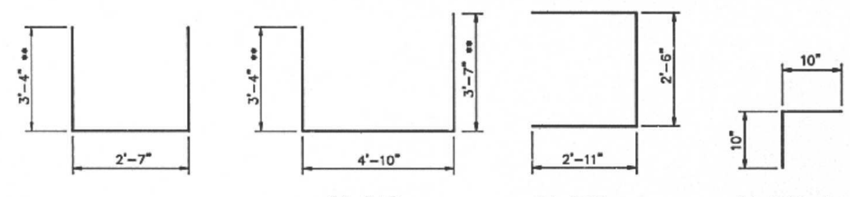
DS-4 6-1-89 (W.T. to inside of exterior stringer flange shall not be > 3'-11")

CAST IRON DRAINAGE SCUPPER (2 OF 2)
ILLINOIS ROUTE 94 OVER
FALL CREEK
F.A.S. RTE. 1412 SECTION (106C)BR
HENDERSON COUNTY
STA. 419+32
STRUCTURE NUMBER 035-0042



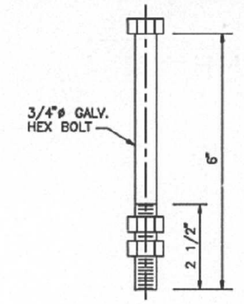
PLAN

SCALE: 1/2" = 1'-0"

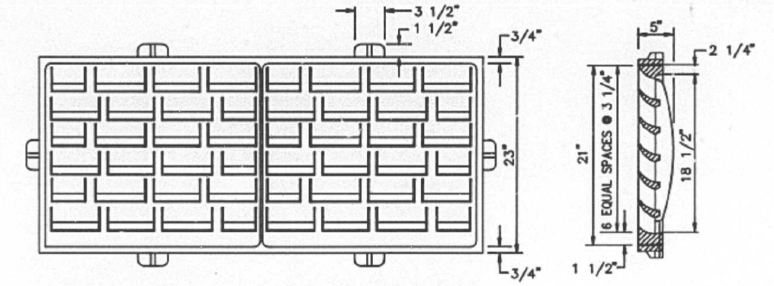


REINFORCEMENT SCHEDULE FOR ONE TYPE C INLET BOX

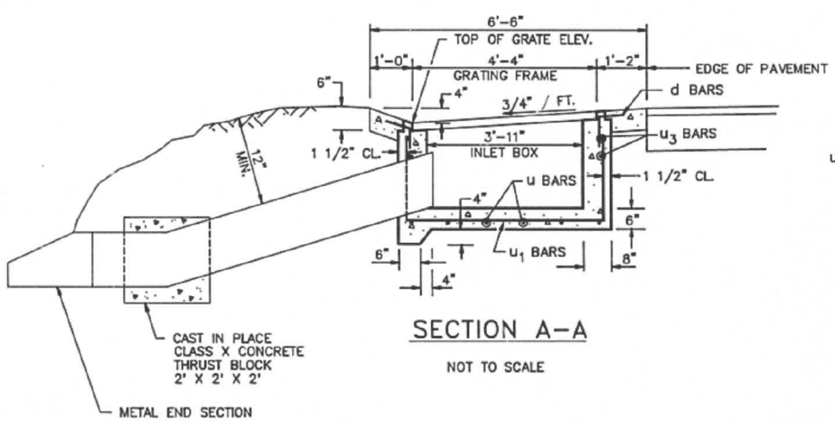
BAR	NO.	SIZE	LENGTH
u	6	#4	9'-3" **
u_1	3	#4	11'-9" **
u_3	4	#4	8'-4"
d	15	#4	1'-8"



6"x3/4"ø GALV. ANCHOR BOLT

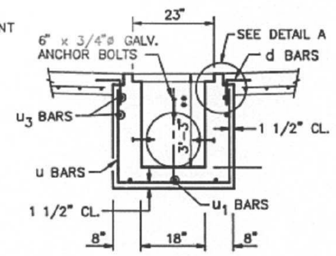


GRATING FOR TYPE C INLET BOX (SPECIAL)



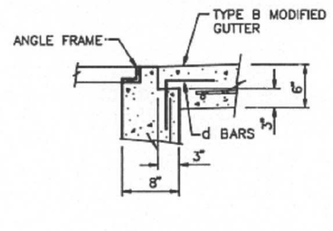
SECTION A-A

NOT TO SCALE



SECTION B-B

NOT TO SCALE



DETAIL A

NOT TO SCALE

NOTE:
** DIMENSION GIVEN APPLIES FOR MAXIMUM BOX DEPTH ON THIS PROJECT. BARS WILL BE CUT TO FIT INLET BOXES OF LESSER DEPTH. RE-BAR CUT LENGTH TO BE DETERMINED BY ENGINEER. RE-BAR CUT-OFF SHALL BE INCLUDED IN THE UNIT PRICE FOR OUTLET, SPECIAL.

CAST GRATING AND FRAMES SHALL CONFORM TO ARTICLE 710.07 OF THE STANDARD SPECIFICATIONS. GRATING AND FRAMES SHALL NOT BE GALVANIZED.

CLASS X CONCRETE OR PRECAST CONCRETE SHALL BE USED FOR THE OUTLET BOX. PRECAST CONCRETE SHALL BE IN ACCORDANCE WITH SECTIONS 505.01 THRU 505.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE CONCRETE STRENGTH SHALL BE 4000 PSI. AFTER 28 DAYS.

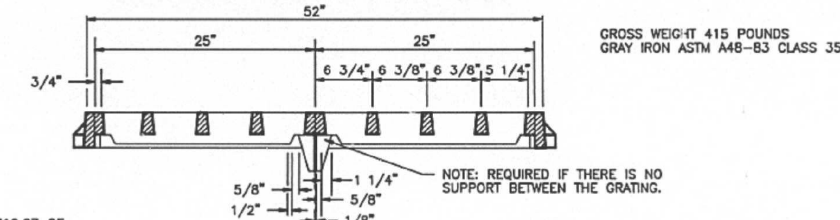
ALL EXPOSED EDGES OF THE OUTLET, EXCEPT THE UPPER PERIMETER, SHALL BE BEVELED 3/4".

SHOP DRAWINGS WILL NOT BE REQUIRED FOR PRECAST OUTLET BOXES.

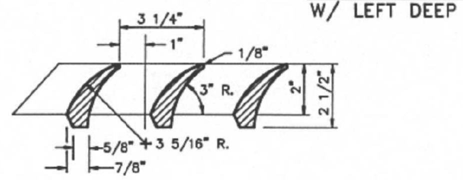
A 3" SAND BEDDING CONFORMING TO ARTICLE 703.01 (FA 1 OR FA 2) SHALL BE PROVIDED UNDER FULL LENGTH AND WIDTH OF PRECAST UNITS, AND ALL VOIDS AROUND PIPE DRAIN ENTRANCE, BOTH INSIDE AND OUTSIDE, SHALL BE SEALED WITH MORTAR.

THE CONTRACT UNIT PRICE "EACH" FOR OUTLET, SPECIAL SHALL INCLUDE THE FRAME AND GRATING, CLASS X CONCRETE OR PRECAST CONCRETE, REINFORCEMENT BARS, EXCAVATION, BEDDING WHEN REQUIRED, AND COMPACTED BACKFILL.

GROSS WEIGHT 415 POUNDS
GRAY IRON ASTM A48-83 CLASS 35B



SECTION THRU GRATE ONLY
W/ LEFT DEEP RIB REMOVED

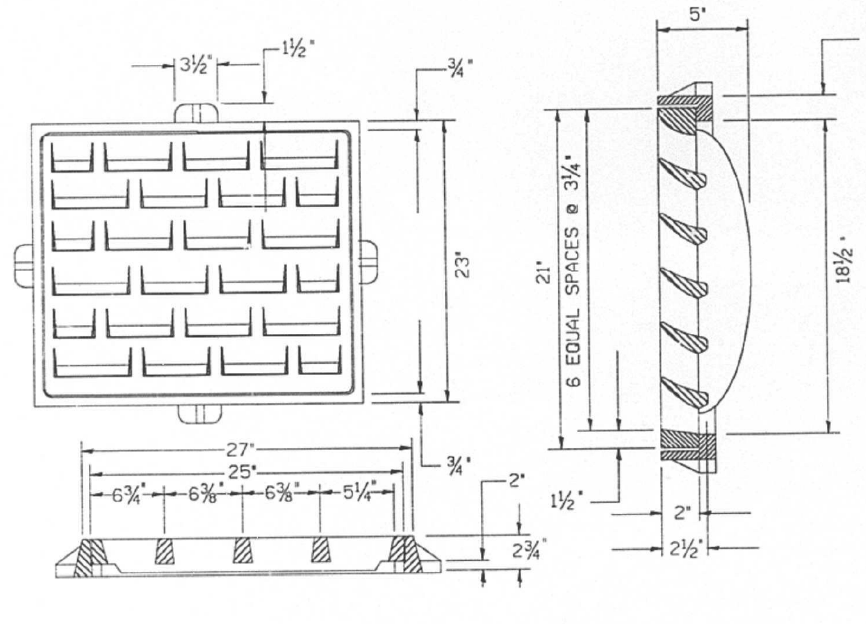


DESIGNED	SRB
CHECKED	
DRAWN	CEB
CHECKED	

OUTLET, SPECIAL

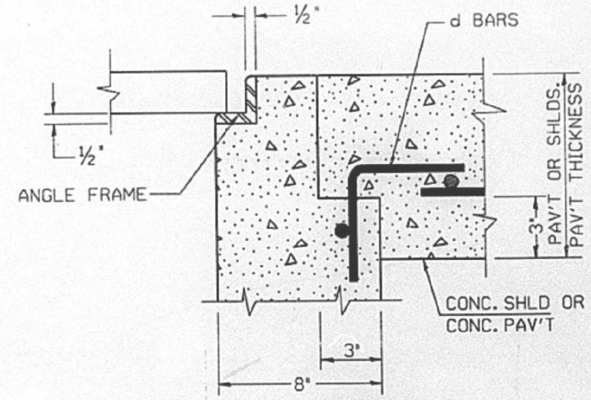
ILLINOIS ROUTE 94
F.A.S. RTE. 1412
HENDERSON COUNTY
HENDERSON CREEK OVERFLOW SECTION (106BC
HENDERSON CREEK SECTION (106BC-1)BR
FALL CREEK SECTION (106C)BR

GRATING FOR TYPE B INLET BOX (SPECIAL)

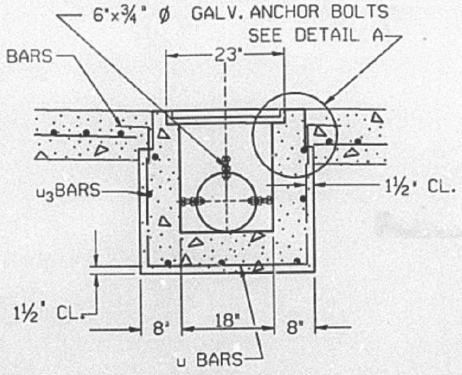


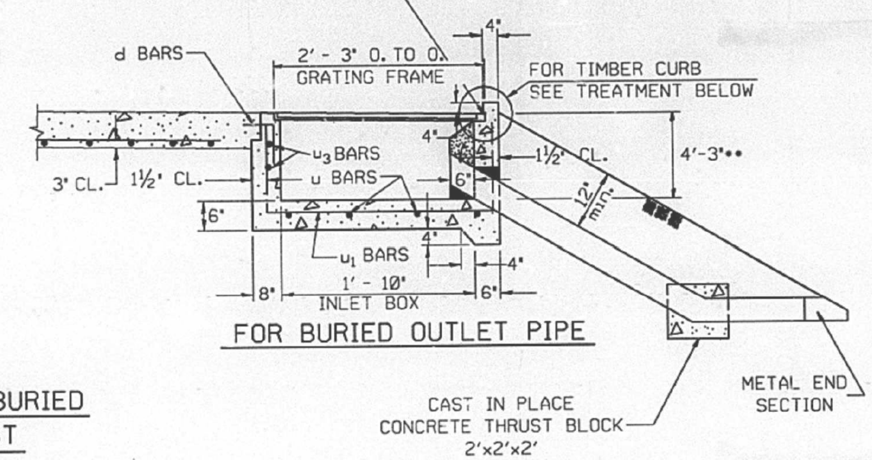
GROSS WEIGHT 130 POUNDS

GRAY IRON ASTM A48-83 CLASS 35B

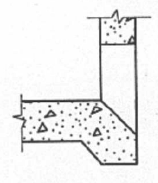


DETAIL A





FOR BURIED OUTLET PIPE



BOX OUTLET FOR BURIED PIPE WHEN PRECAST

CAST GRATING AND FRAMES SHALL CONFORM TO ARTICLE 710.17 OF THE STANDARD SPECIFICATIONS. CASE GRATING AND FRAMES SHALL NOT BE GALVANIZED.

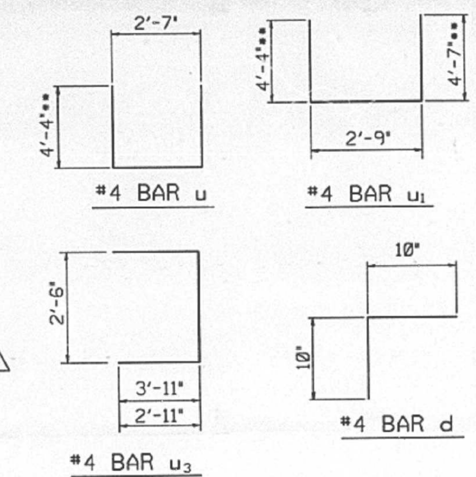
CLASS X CONCRETE OR PRECAST CONCRETE SHALL BE USED FOR THE INLET. PRECAST CONCRETE SHALL BE IN ACCORDANCE WITH SECTIONS 505.01 THRU 505.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE CONCRETE STRENGTH SHALL BE 4000 PSI AFTER 28 DAYS.

ALL EXPOSED EDGES OF THE INLET, EXCEPT THE UPPER PERIMETER, SHALL BE BEVELED ¾".

SHOP DRAWINGS WILL NOT BE REQUIRED FOR PRECAST INLET BOXES.

A 3" DEEP SAND BEDDING CONFORMING TO ARTICLE 703.01 (FA 1 OR FA 2) SHALL BE PROVIDED UNDER FULL LENGTH AND WIDTH OF PRECAST UNITS, AND ALL VOIDS AROUND THE PIPE DRAIN ENTRANCE, BOTH INSIDE AND OUTSIDE, SHALL BE SEALED WITH MORTAR.

THE CONTRACT UNIT PRICE "EACH" FOR TYPE B INLET BOX (SPECIAL) STANDARD 2324 IN PLACE, SHALL INCLUDE THE FRAME AND GRATING, CLASS X OR PRECAST CONCRETE, REINFORCEMENT BARS, EXCAVATION, BEDDING WHEN REQUIRED, AND COMPACTED BACKFILLING.



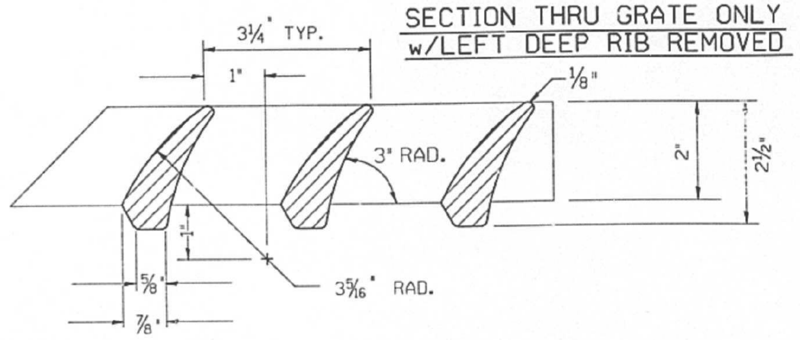
NOTE:
** DIMENSIONS GIVEN APPLY TO MAXIMUM BOX DEPTH. BARS SHALL BE CUT TO FIT INLET BOXES OF LESSER DEPTH. RE-BAR CUT LENGTH WILL BE DETERMINED BY ENGINEER. RE-BAR CUT-OFF LENGTH SHALL BE INCLUDED IN THE BID PRICE FOR TYPE B INLET BOX (SPECIAL).

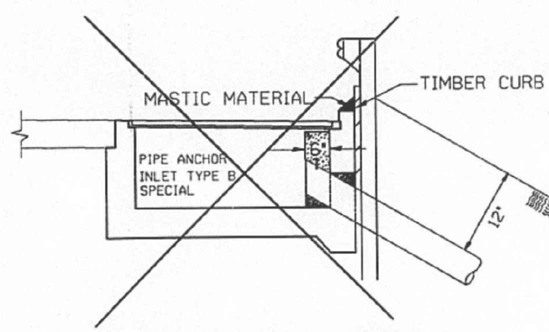
MATERIAL REQUIRED FOR ONE TYPE B INLET BOX

BAR	NO.	SIZE	LENGTH
u	4	#4	11' - 3" **
u_1	3	#4	11' - 8" **
u_3	4	#4	6' - 2"
d *	11	#4	1' - 8"
CONCRETE - CLASS X OR PRECAST		CU. YDS.	Ø 4
REINFORCEMENT BARS		LBS.	49(61)*
GRATING		SQ. FT.	3.7

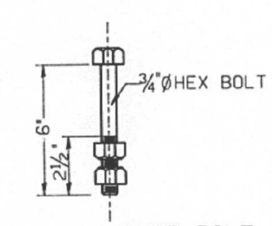
* ADJACENT TO CONCRETE SHOULDER OR CONCRETE PAVEMENT ONLY

SECTION THRU GRATE ONLY w/LEFT DEEP RIB REMOVED





~~TIMBER CURB TREATMENT~~



6"x¾" GALV. ANCHOR BOLT

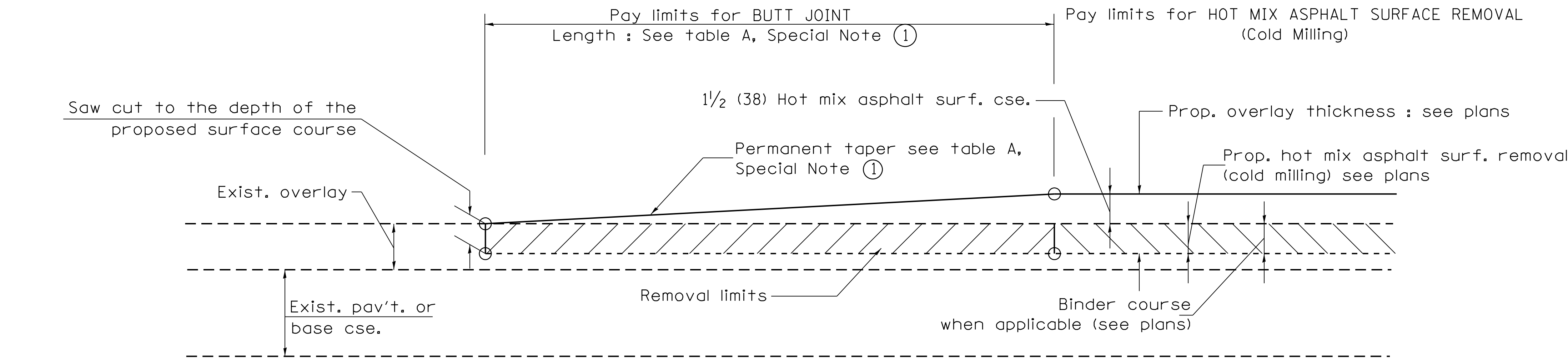
REVISIONS	
NAME	DATE
C. A. D. D.	12-90

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPE B INLET BOX (SPECIAL) STANDARD 2324

SCALE: NOT TO SCALE DRAWN BY C.A.D.D.

DATE CHECKED BY



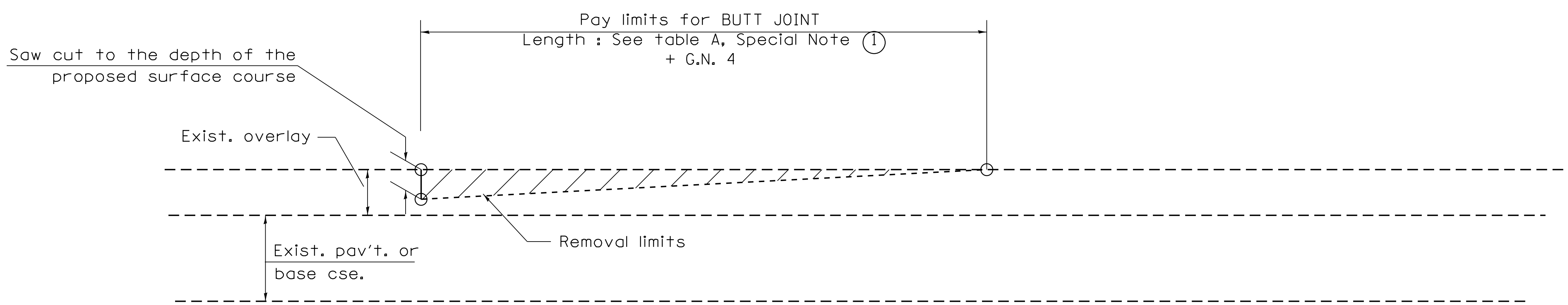
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

TABLE A
TAPER RATES

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
1	BUTT JOINT TAPER RATE	1:480	1:240
2	TEMPORARY RAMP TAPER RATE	1:80	1:40

GENERAL NOTES

1. The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.
2. The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.
3. The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.
4. The length of butt joint is based on the taper rate times change in cold milling depth within the butt joint pay limits, unless otherwise indicated.
5. Temporary ramps are paid for separately and not included in the cost of the butt joints.



CASE 2 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

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

01-01-97	RENUM. C-23.01, NEW REVISION BOX	T.P.	08-21-13	MAJOR MODIFICATIONS	R.D.
04-01-97	CORRECTION TO DEPTH	J.A.	04-12-16	MINOR CORRECTIONS	R.D.
09-15-05	REVISED DESIGNER NOTE	M.M.A.	02-14-17	ADDED NOTE 5	R.D.
10-16-06	REVISED TO 2007 SPEC.	M.A.	07-16-19	Wording and Spelling corrections	R.D.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

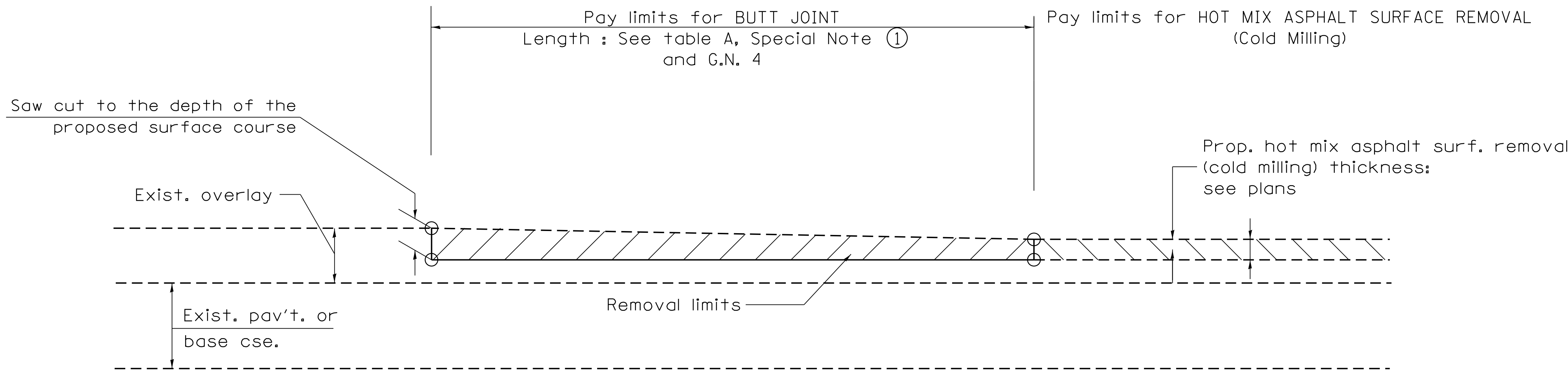
BUTT JOINTS

NOT TO SCALE 10 SHT. 1 OF 3
CADD STD. 406101-D4

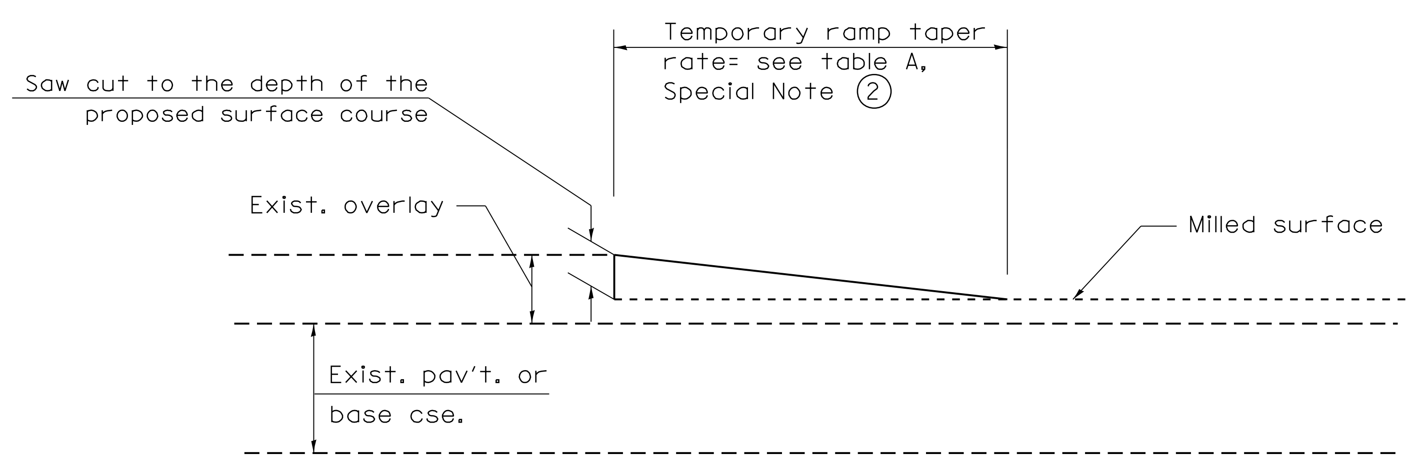
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	46

CONTRACT NO. 68F67

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



CASE 3 : HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER

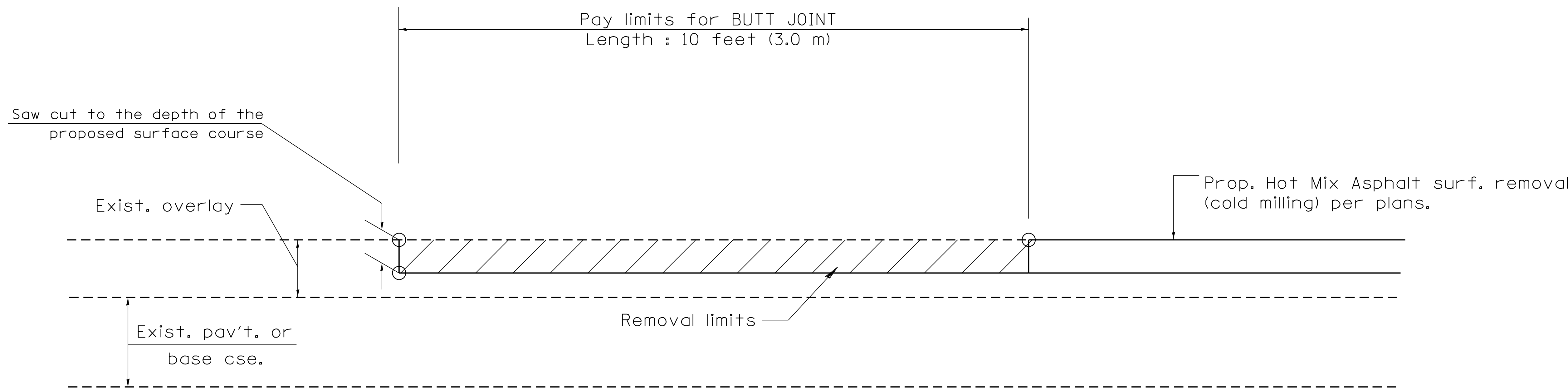


DETAIL TEMPORARY RAMP

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

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINTS	SHT. 2 OF 3 CADD STD. 406101-D4		
NOT TO SCALE	10			

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	47
		CONTRACT NO. 68F67		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CASE 4 : SINGLE LIFT OVERLAY WITH EQUIVALENT DEPTH
HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER

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

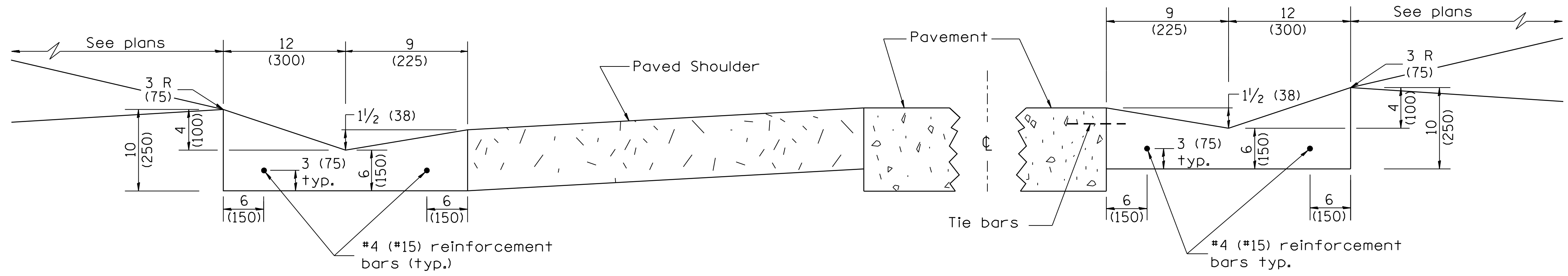
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE 10

SHT. 3 OF 3
CADD STD. 406101-D4

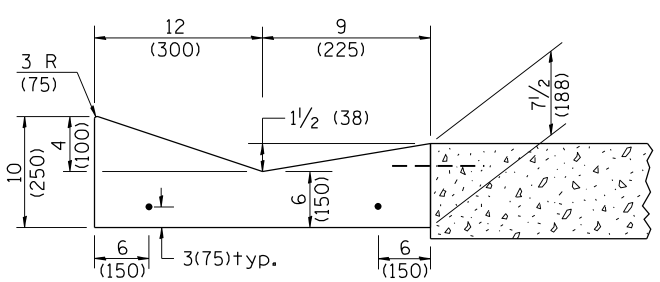
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	48
		CONTRACT NO. 68F67		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



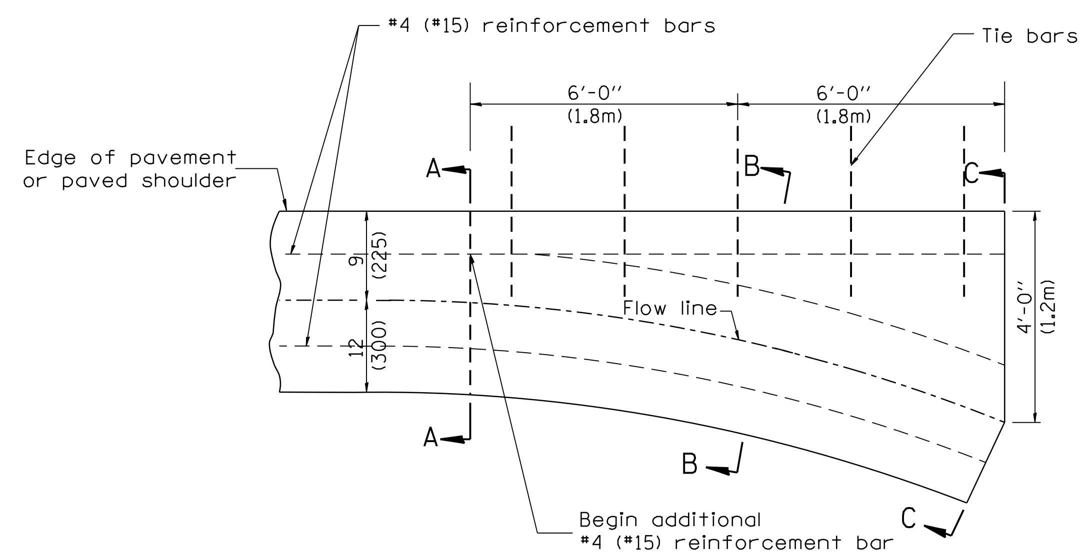
SHOULDER EDGE GUTTER

PAVEMENT EDGE GUTTER

CONCRETE GUTTER, TYPE B, (SPECIAL)



SECTION A-A

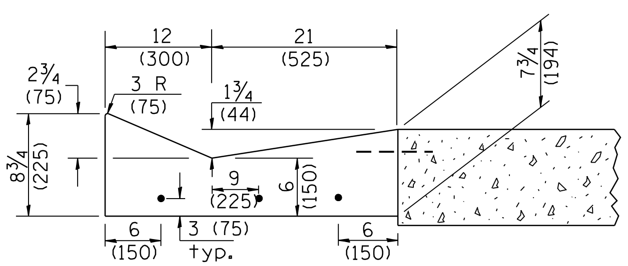


PLAN

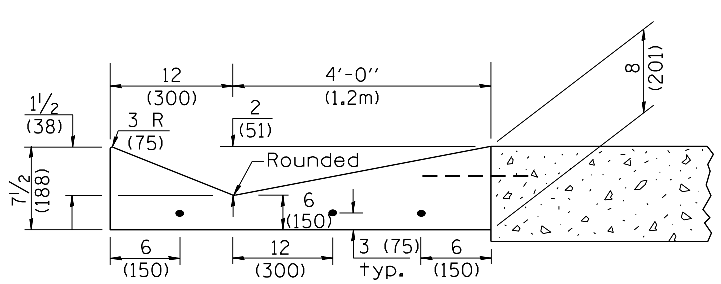
QUANTITY
Section C-C to A-A= 0.73 cu. yd. concrete.

GENERAL NOTES:

1. CONCRETE GUTTER, TYPE B (SPECIAL) shall conform to the the applicable portions of Section 606.
2. Tie bars shall be No. 6x24 (No. 19x600) at 36'' (900mm) centers unless otherwise shown.
3. Gutter, gutter inlets, gutter outlets, and gutter entrances shall be tied to rigid pavement in accordance with details shown on Standard 420001.
4. Joints shall be constructed in accordance with Article 606.06.
5. Welded wire fabric shall conform to Article 1006.10(c)(1), and shall not be less than 58 lbs/100 sq.ft. (2.83 kg/m²).



SECTION B-B



SECTION C-C

QUANTITIES	
CALC. BY: ___________	DATE:
CHECKED BY: ___________	DATE:

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

DESIGNER NOTES:
1. INCLUDE STATE std. 420001.

INLET

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

01-01-97	RENUM. A-1.01, NEW REVISION BOX, ELIMINATED	T.P.	10-16-06	REVISED TO 2007 SPEC.	M.A.
	EXPANSION ANCHOR TIES		11-16-07	REVISED QUANTITY	M.A.
03-06-98	CORRECT DIMENSIONING	J.A.	02-15-11	CHANGED MODIFIED TO SPECIAL	R.D.
03-10-06	REVISED QUANTITY	M.A.	01-31-18	REVISED TIE BAR SIZE & SPACING	R.D.

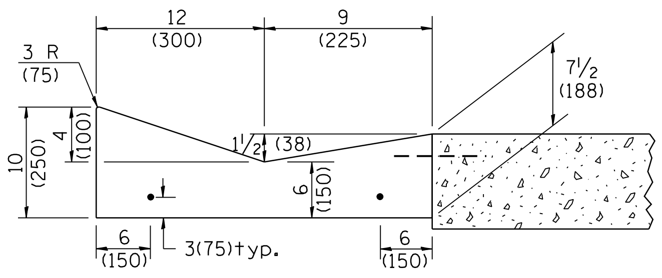
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOT TO SCALE

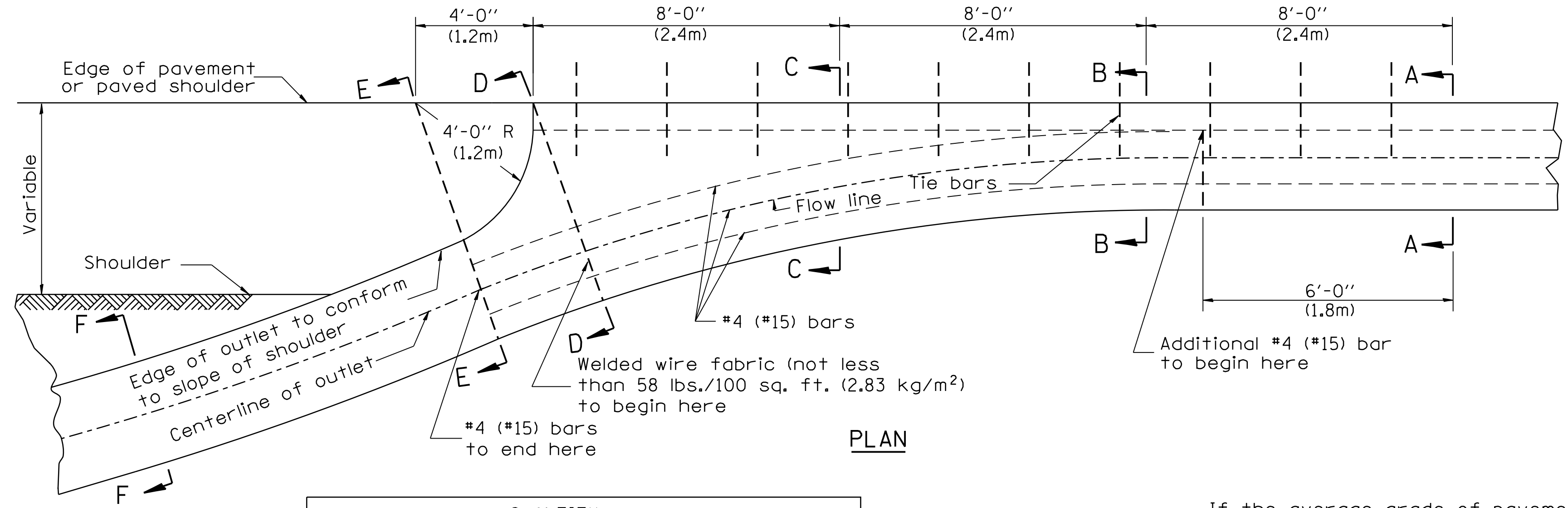
CONCRETE GUTTER, TYPE B, (SPECIAL)
(INLET, OUTLET & ENTRANCE)

SHT. 1 OF 3
CADD STD. 606201-D4

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	49
		CONTRACT NO. 68F67		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



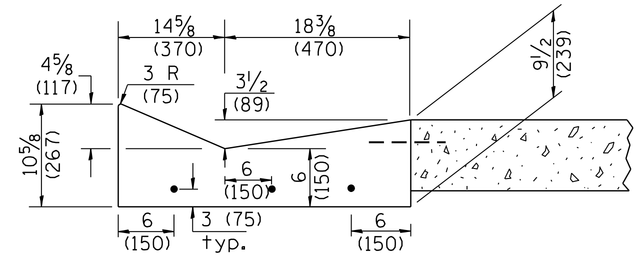
SECTION A-A



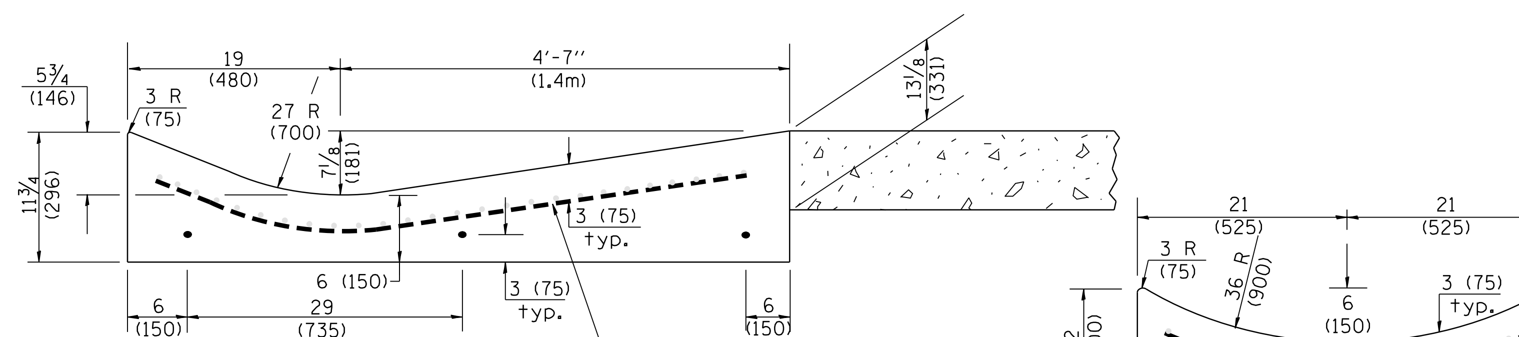
PLAN

QUANTITY
Section A-A to E-E= 2.81 cu. yd. concrete.
Section E-E to F-F= 0.09 cu. yd./ft. concrete.

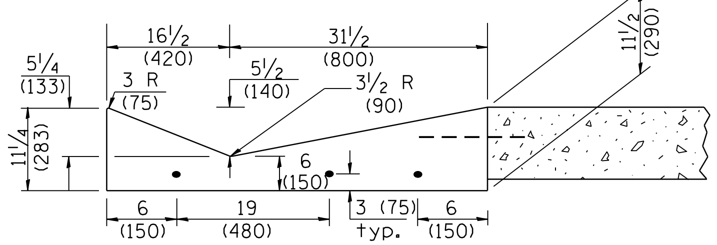
If the average grade of pavement for the distance from section A-A to section D-D exceeds 2%, this distance shall be increased 6 ft. (1.8m) for each 1% increase in grade. A quantity adjustment is required.



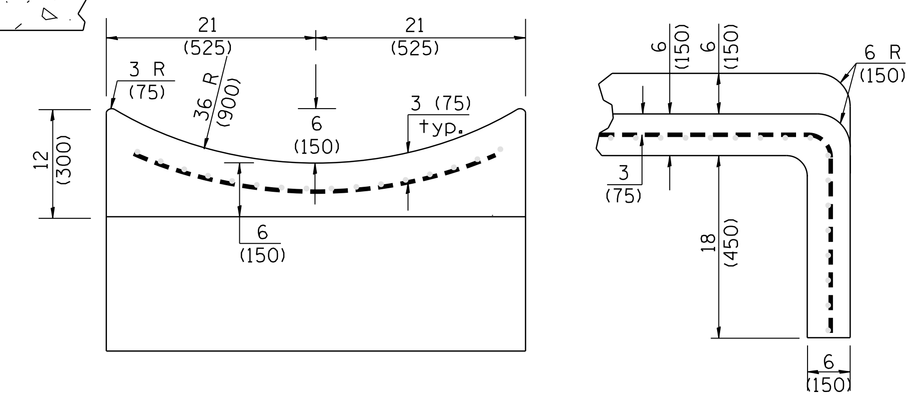
SECTION B-B



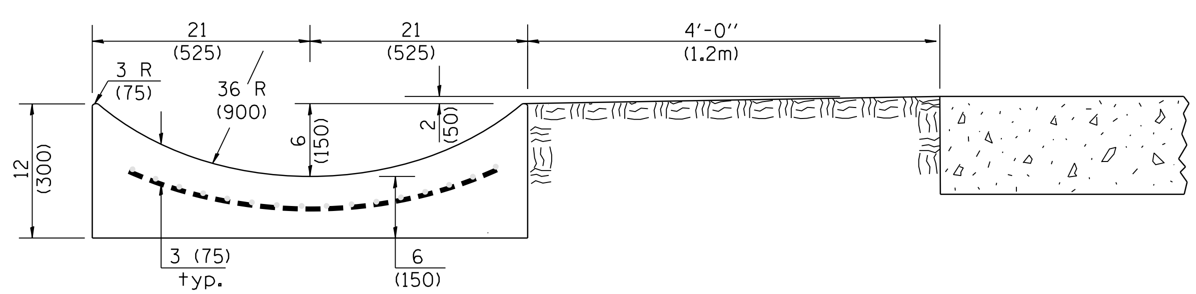
SECTION D-D



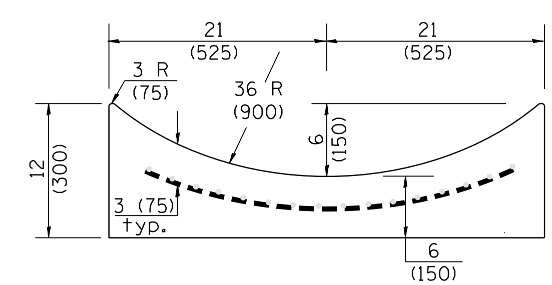
SECTION C-C



SECTIONS AT END OF OUTLET
(CURTAIN WALL)



SECTION E-E



SECTION F-F

QUANTITY
Curtain Wall = 0.1 cu. yd. concrete.

QUANTITIES	
CALC. BY: ____________	DATE:
CHECKED BY: ____________	DATE:

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

OUTLET

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

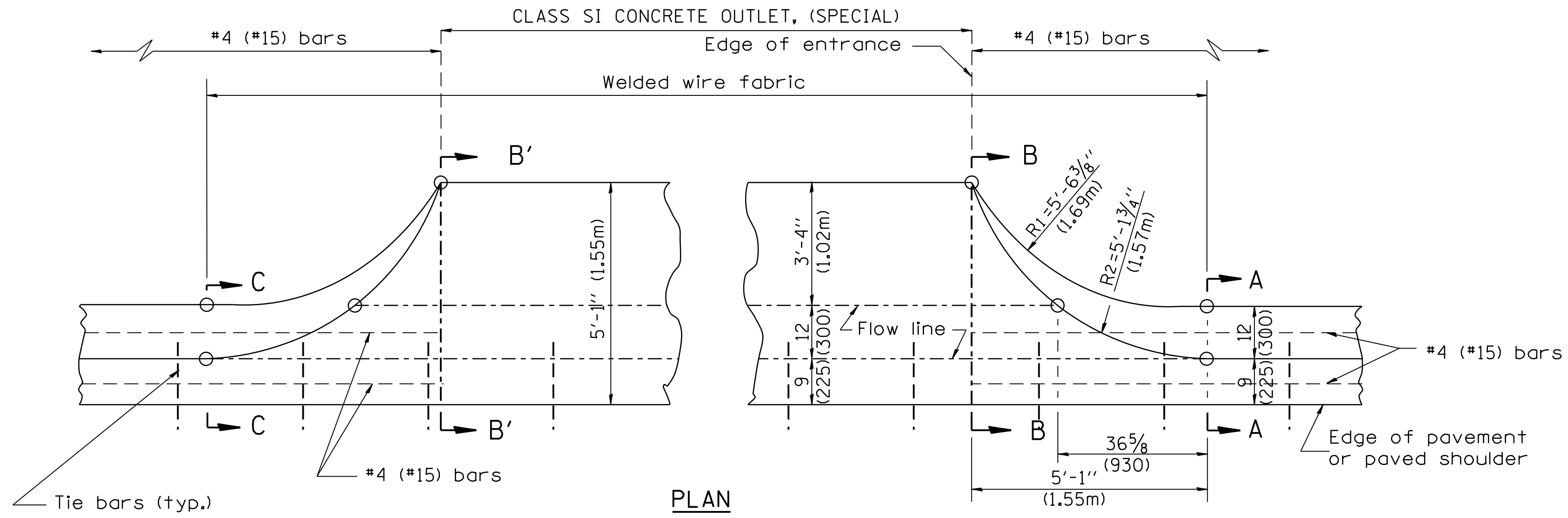
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOT TO SCALE

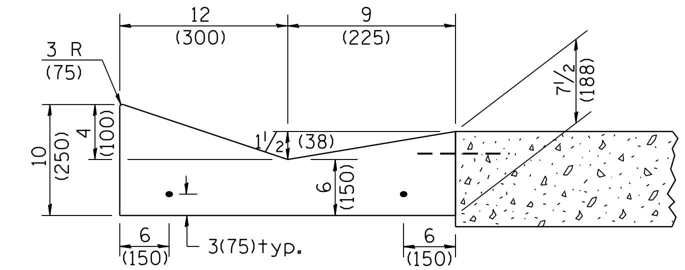
CONCRETE GUTTER, TYPE B, (SPECIAL)
(INLET, OUTLET & ENTRANCE)

SHT. 2 OF 3
CADD STD. 606201-D4

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	50
		CONTRACT NO. 68F67		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



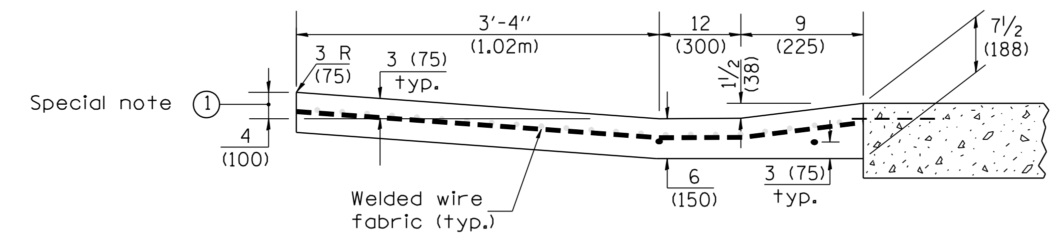
TYPICAL URBAN ENTRANCE



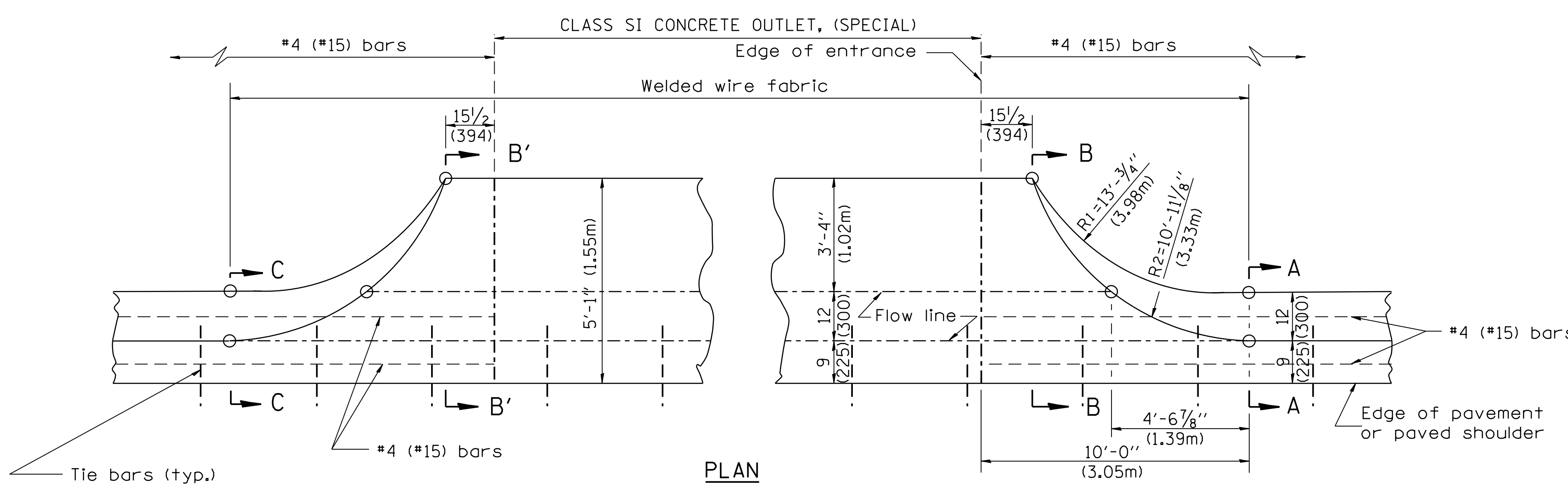
SECTION A-A & C-C

QUANTITY
URBAN ENTRANCE

Section B′-B′ to B-B=
0.1 cu. yd./ft.
Section C-C to B′-B′ + B-B to A-A=
0.69 cu. yd.



SECTION B-B & B′-B′



SPECIAL NOTES:

1. 4 (100) is the normal dimension. If specified in the plans, the following shall be used for improved entrance match-up: Minimum - 2 1/2 (65) Maximum - 5 (125)

TYPICAL RURAL ENTRANCE

QUANTITY
RURAL ENTRANCE

Section B′-B′ to B-B=
0.1 cu. yd./ft.
Section C-C to B′-B′ + B-B to A-A=
1.19 cu. yd.

QUANTITIES

CALC. BY: ____________ DATE:
CHECKED BY: ____________ DATE:

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE GUTTER, TYPE B, (SPECIAL)
(INLET, OUTLET & ENTRANCE)

NOT TO SCALE

SHT. 3 OF 3
CADD STD. 606201-D4

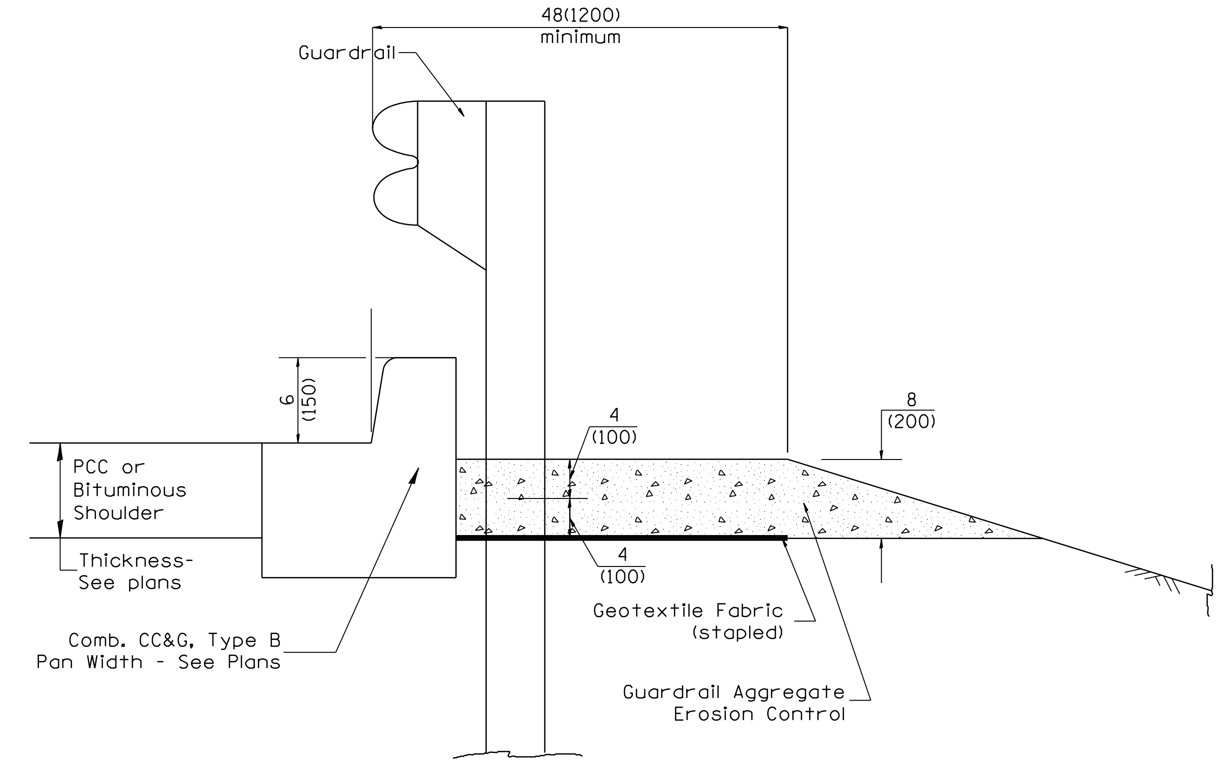
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	51

CONTRACT NO. 68F67

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

DESIGNER NOTES:

1. CONSIDER USING A "B" CURB PAY ITEM AT GUARDRAIL INSTALLATIONS WHERE GRADES ARE EQUAL TO OR GREATER THAN 1% AND AT INLETS. (INCLUDE DISTRICT SPECIAL PROVISION)
2. USE "GUARDRAIL AGGREGATE EROSION CONTROL" AT GUARDRAIL INSTALLATIONS WHERE GRADES ARE LESS THAN 1% (INCLUDE DISTRICT SPECIAL PROVISION).
3. INCLUDE STATE STANDARD 610001, IF APPLICABLE.
4. INCLUDE THE FOLLOWING DISTRICT CADD STANDARDS AS NEEDED: SLOPE DRAINS FOR EXPOSED PIPES; SLOPE DRAINS FOR BURIED PIPES; SEEPAGE COLLARS FOR BURIED PIPES SEEPAGE COLLARS FOR EXPOSED PIPES; CONCRETE THRUST BLOCKS AND PIPE ELBOW.
5. INCLUDE DISTRICT SPECIAL PROVISION - "AGGREGATE QUALITY" FOR PROJECTS LOCATED IN THE WESTERN AREA OF THE DISTRICT - APPROX. DIVIDING LINE IS IL 97.
6. DELETE DESIGNER NOTES WHEN INSERTING INTO PLAN FILES.
7. OPERATIONS PREFERS USE OF PIPE OUTLETTING ONTO FORESLOPE WITH RIPRAP. USE NON-METALLIC PIPE WHEN POSSIBLE BECAUSE OF FUTURE CORROSION ISSUES.
8. IF NO OTHER SEEDING IS PAID FOR ON THE CONTRACT, USE DISTRICT SPECIAL PROVISION FOR SEEDING, MINOR AREAS



TYPICAL SECTION WITH COMBINATION CONCRETE CURB & GUTTER

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.

2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.

3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.

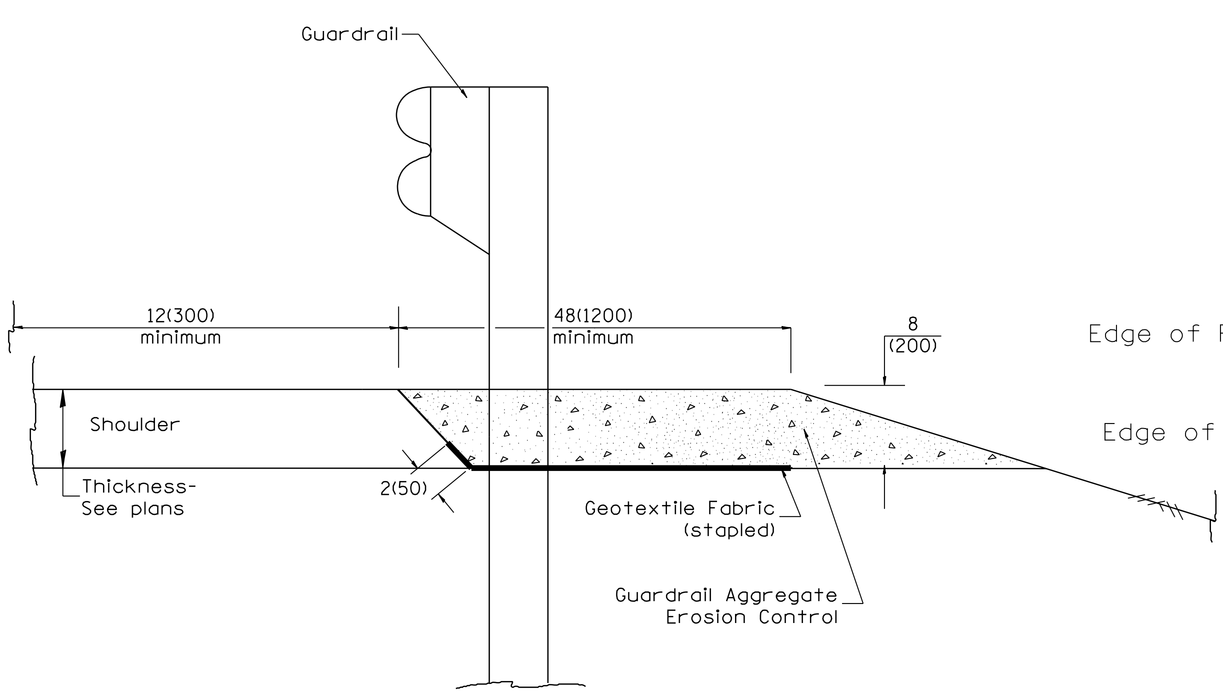
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.

5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.

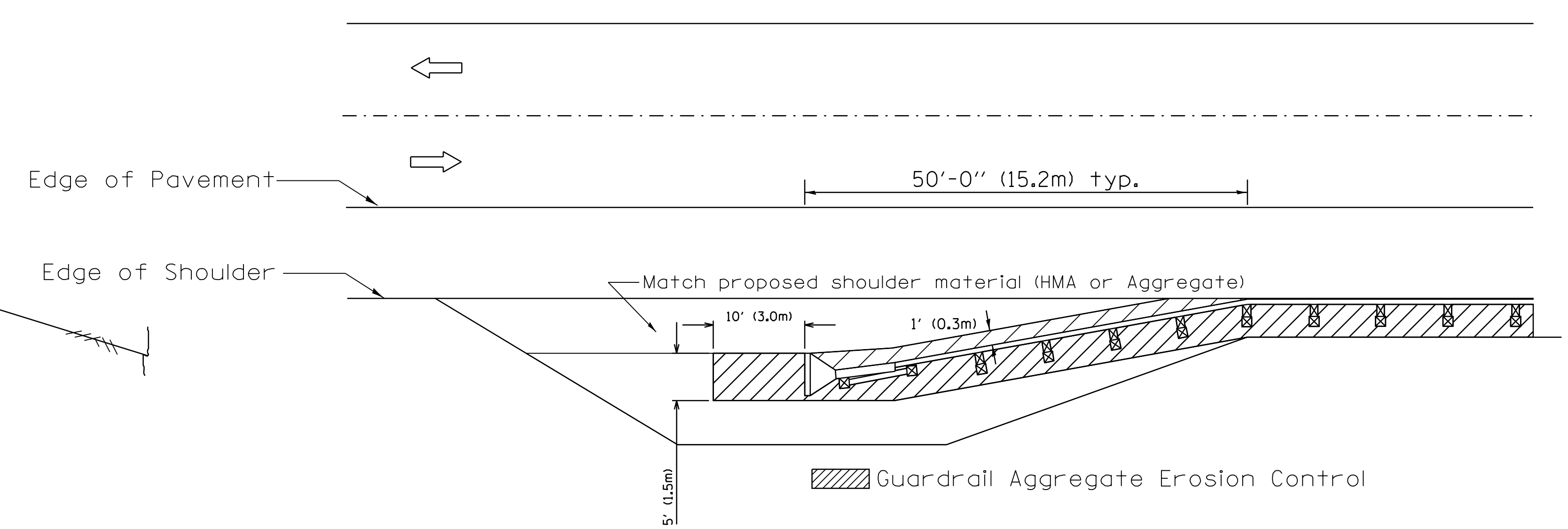
6. Materials shall meet the following requirements:

A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.

B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.



TYPICAL SECTION WITHOUT EROSION CONTROL CURB



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

03-07-11	ADDED DETAIL SHOWING PLAN VIEW	R.D.	5-30-18	CHANGE B CURB TO CC&G	R.D.
08-10-12	REVISED CURB "B" AND AGGREGATE	R.D.	07-16-19	SPELLING CORRECTIONS	R.D.
07-15-15	ADDRESSED SHOULDER INLET CURB	R.D.			
01-26-17	REVISED	R.D.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

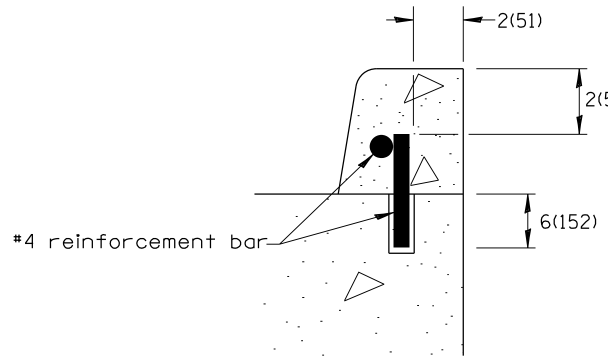
NOT TO SCALE

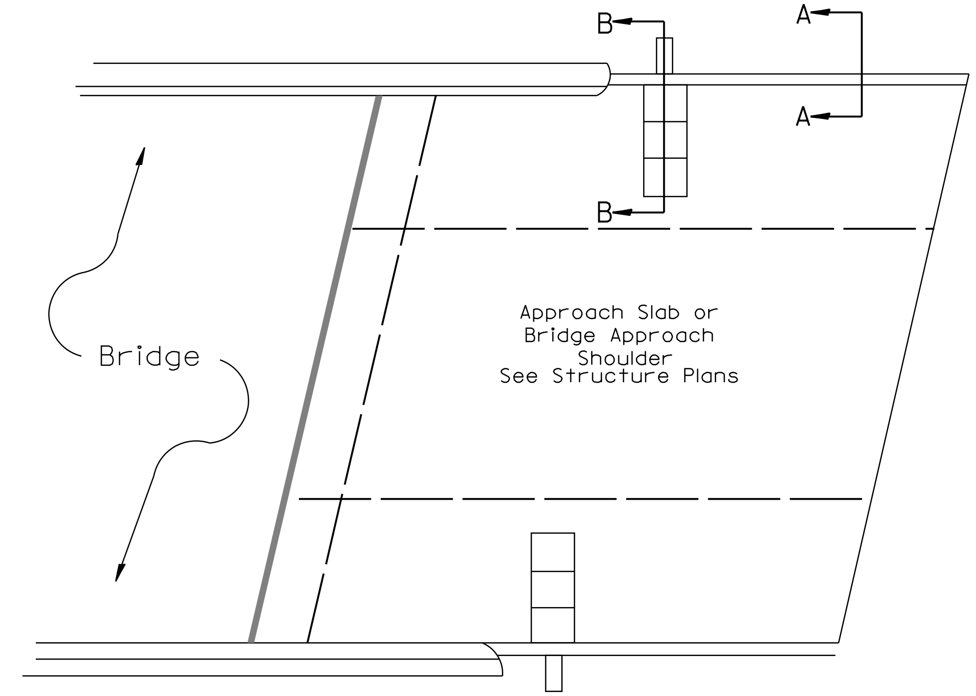
SHT. 1 OF 2
CADD STD. 630101-D4

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	52
		CONTRACT NO. 68F67		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DETAIL "A"

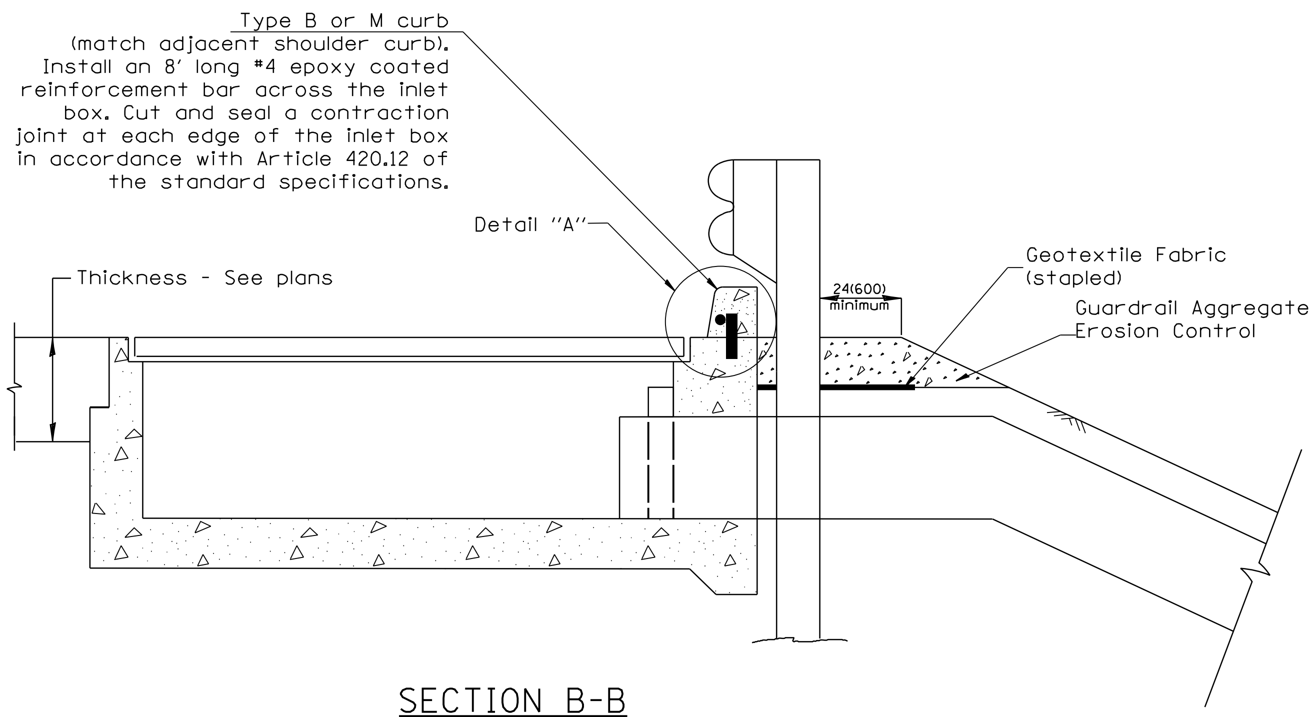
#4 reinforcement bars may be cast in PCC apron and precast inlet box or drilled and anchored with an approved chemical adhesive at 2' spacing. Cost of curb and reinforcement are included in the cost of shoulder inlet.





PLAN VIEW

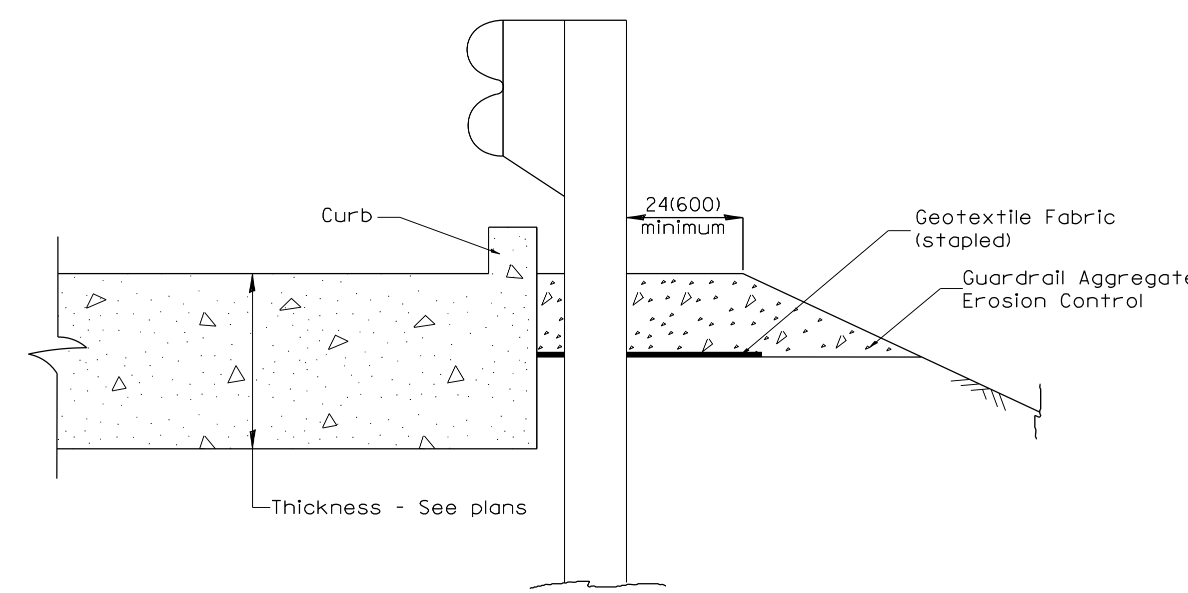
APPROACH SLAB OR SHOULDER PLACEMENT



SECTION B-B

TYPICAL SECTION AT INLETS

TYPE E, F & G (HIGHWAY STANDARD 610001)



SECTION A-A

TYPICAL SECTION WITH BRIDGE APPROACH CURB

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

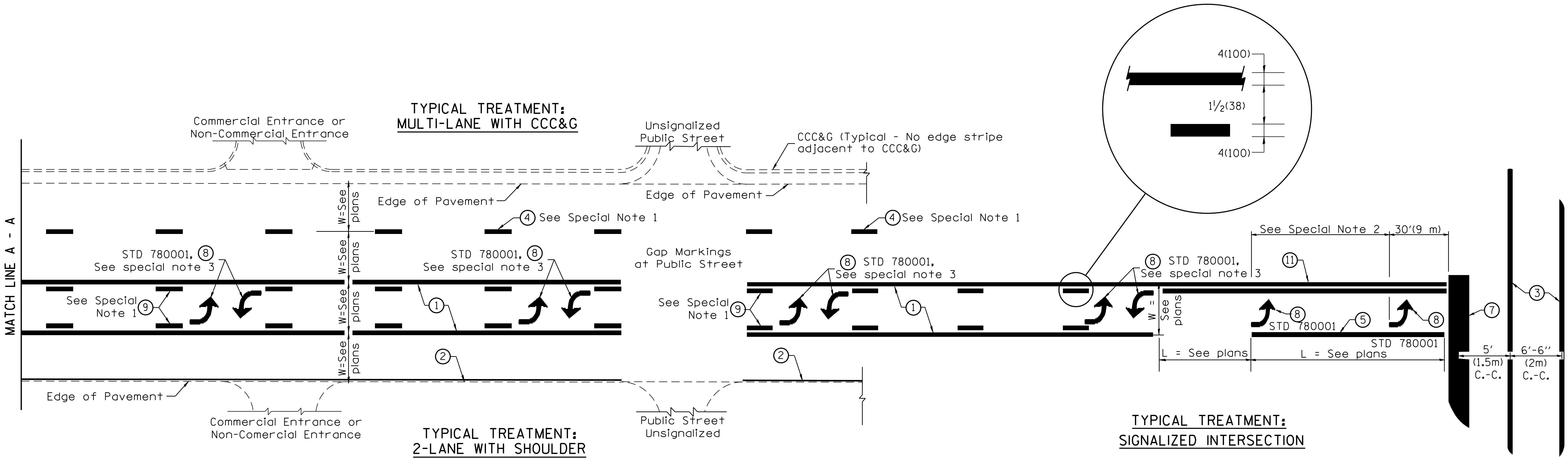
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

NOT TO SCALE

SHT. 2 OF 2
CADD STD. 630101-D4

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	53
		CONTRACT NO. 68F67		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

1. 4(100) Solid (Yellow)
2. 4(100) Solid (White)
3. 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
   2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
4. 6(150) Skip-Dash (White) — 10' (3.05m), 30' (9.14m), 10' (3.05m) (See Special Note 1)
5. 8(200) Solid (White)
6. 12(300) Diagonal (White) (Item 6 is shown on Std. 780001)
7. 24(600) Stop Bar (White)
8. Letters & Arrows — 33' (10m) (See Std. 780001 and Special Notes 2 & 3)
9. 4(100) Skip-Dash (Yellow) — 10' (3.05m), 30' (9.14m), 10' (3.05m) (See Special Note 1)
10. 12(300) Diagonal (Yellow) (See Table A) — 10, 45°, 10
11. 4(100) Double Solid (Yellow) — 11(280) C.-C., See Table A, 11

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
   A. A minimum of two (2) arrows is required.
   B. The maximum spacing between arrows is 80' (24 m).
   C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
   A. A minimum of two (2) arrow pairs is required.
   B. The maximum spacing between arrow pairs is 200' (61 m).
   C. Arrow pairs shall be evenly spaced if three (3) or more are required.
   D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.
3. Refer to Article 780.13 for letter, number and symbol areas (sq. ft.)
4. Areas are grooved 1" beyond each edge for the following symbols:
   Through Arrow= 14.8 sq. ft.
   Large Left or Right Arrow= 21.9 sq. ft.
   2 Arrow Combination Left (or Right) and Through= 34.9 sq. ft.
   Wrong Way Arrow= 29.5 sq. ft.
   Railroad Crossing Symbol= 69.8 sq. ft.
   (For further information, refer to BDE Special Provision: Grooving for Recessed Pavement Markings)

DESIGNER NOTES:
1. Include State Standard 780001 (Typical Pavement Markings)

01-01-97	RENUM. F-8.03, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.	
02-07-97	ADD BI DIRECTIONAL DIMENSION	J.A.	2/29/16	ADDED GROOVING AREAS	R.D.
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.	07-16-19	SPELLING CORRECTIONS	R.D.
08-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.			

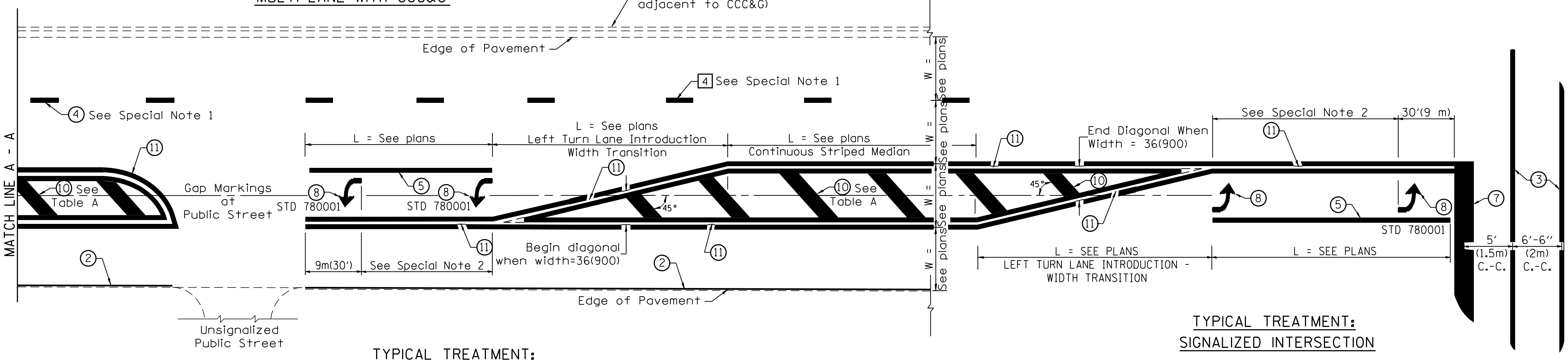
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS

NOT TO SCALE — SHT. 1 OF 2 — CADD STD. 780001-D4

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	54
		CONTRACT NO. 68F67		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TYPICAL TREATMENT:
MULTI-LANE WITH CCC&G



TYPICAL TREATMENT:
2-LANE WITH SHOULDER

TYPICAL MEDIAN TRANSITIONS

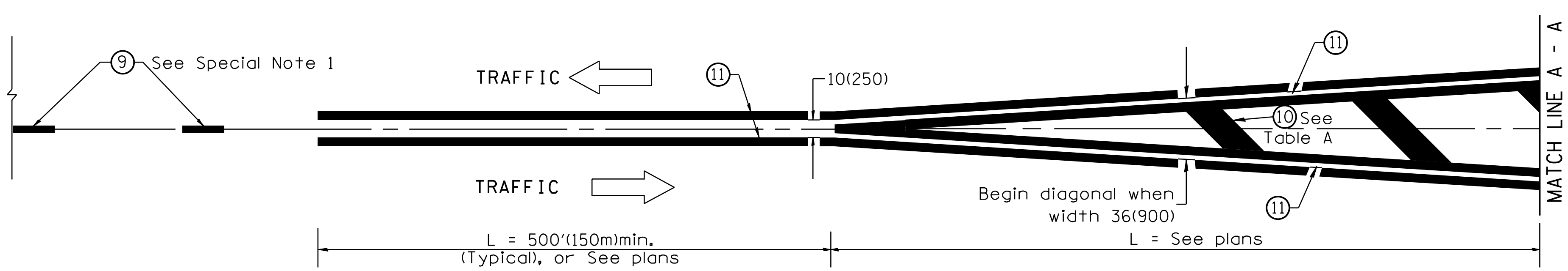
TYPICAL TREATMENT:
SIGNALIZED INTERSECTION

FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A

RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions)
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)



MEDIAN INTRODUCTION - WIDTH TRANSITIONS

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS

NOT TO SCALE

SHT. 2 OF 2
CADD STD. 780001-D4

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1412	[(106C)BR]BDR,BJR	HENDERSON	55	55
		CONTRACT NO. 68F67		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		