F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	1
	ILLINOIS	CONTRACT NO. 68D95		

11–06–2020 LETTING ITEM 028

INDEX OF SHEETS:

HIGHWAY STANDARDS

000001–07	701402–12
001001–02	701406–12
280001–07	701426–09
420401–13	701901–08
515001–04	780001–05
630001–12	781001–04
631031–16	782006–01
642001–02	BLR 22–7
701101–05	
701106–02	
701400–09	

DESIGN DESIGNATION: INTERSTATE
CLASS I TRUCK ROUTE

ADT:	9,650	(2017)
HCV:	1,925	(19.95%)
SU:	525	(5.44%)
MU:	1,400	(14.51%)

100' 200' 300' — 1"= 100'
0 10' 20' 30' — 1"= 10'
0 50' 100' — 1"= 50'
0 50' 100' — 1"= 40'
0 50' 100' — 1"= 30'
0 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

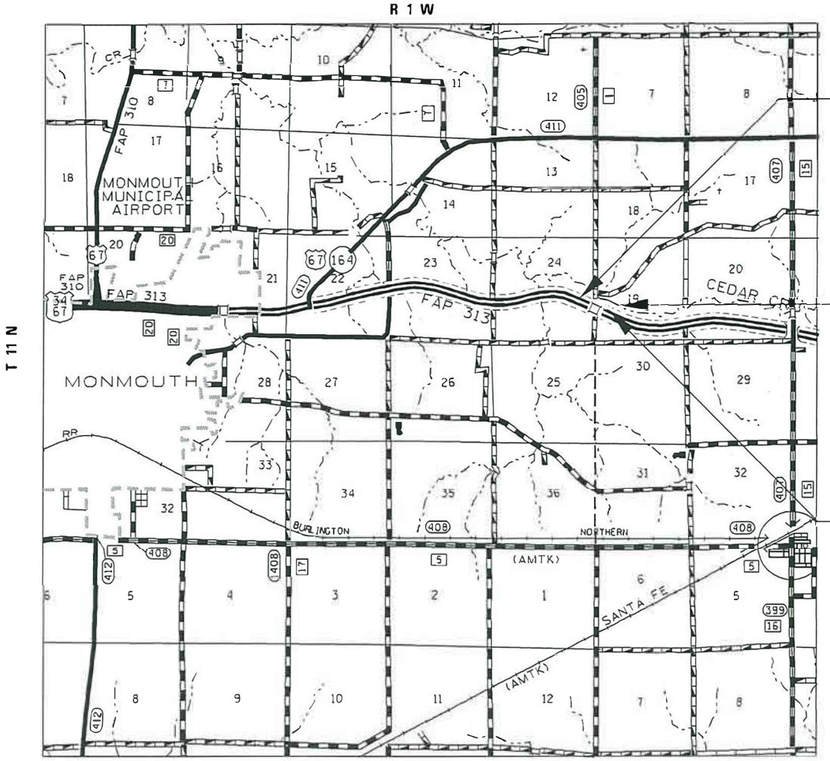
PROJECT ENGINEER: RICHARD DOTSON (309) 671–3455
PROJECT MANAGER: MICHAEL JACOBS (309) 671–3460

CATALOG NO. 035532–00D
CONTRACT NO. 68D95

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAP ROUTE 313 (US 34)
SECTION (94–16HB)BR
PROJECT NHPP–3AU3(547)
BRIDGE REPLACEMENT
WARREN COUNTY
C–94–010–18



GROSS LENGTH = 13,500 FT. = 2.557 MILE
NET LENGTH = 12,200 FT. = 2.311 MILE

D–94–008–18

LOCATION OF SECTION INDICATED THUS: –

PROJECT DESCRIPTION:

REPLACEMENT OF SN 094–0025 (NEW 094–0053), SN 094–0026 (NEW 094–0054) CARRYING US34/IL100 OVER 120TH ST (TR 162)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 19 20 20
David A. Gomez
REGIONAL ENGINEER

October 2, 2020
ENGINEER OF DESIGN AND ENVIRONMENT

October 2, 2020
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. 9/15/20

105.04 SOIL REPORT AVAILABILITY

The Soils Report and all soils data collected and processed in conjunction with the design of this improvement is on file at the District Office where it is available for inspection by Contractors or prospective bidders. By submitting a bid, the Contractor acknowledges that the Soils Report and data have been made available, that the Contractor is aware of the report contents and appendices, and that the Soils Report is part of the contract documents.

105.06 AVAILABILITY OF ELECTRONIC FILES

MicroStation and GEOPAK files of this project will be made available to the Contractor after contract award. If there is a conflict between the electronic files and the printed contract plans and documents, the printed contract plans and documents shall take precedence over the electronic files. The Contractor shall accept all risk associated with using the electronic files and shall hold the Department harmless for any errors or omissions in the electronic files and the data contained therein. Errors or delays resulting from the use of the electronic files by the Contractor shall not result in an extension of time for any interim or final completion date or shall not be considered cause for additional compensation. The Contractor shall not use, share, or distribute these electronic files except for the purpose of constructing this contract. Any claims by third parties due to use or errors shall be the responsibility of the Contractor. The Contractor shall include this disclaimer with the transfer of these electronic files to any other parties and shall include appropriate language binding them to similar responsibilities.

105.09A PLAN ELEVATIONS – U.S.G.S. MEAN SEA LEVEL DATUM

All elevations shown on the plans are established from U.S.G.S. mean sea level datum.

107.00 COMMITMENTS

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

108.02 CRITICAL PATH WORK SCHEDULE REQUIREMENT

The Contractor will submit to the Engineer a satisfactory progress schedule and critical path schedule which shall show the proposed sequence of work at the time of the pre–construction conference.

201.01 CLEARING

At locations where clearing is indicated on the plans beyond the limits of the proposed excavation or embankment, the Contractor shall restore the disturbed earth by blading and shaping to blend with the adjacent ground. The clearing will not be paid for separately but shall be included in the cost of the excavation pay items in the plans. Payment for reseeding or resodding will be as provided in the plans.

204.00 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 (Cultural and Natural Resources Review of Borrow Areas)
* 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 environmental clearances and six weeks for the required borrow site environmental clearances.

250.01 SEEDING – SIDESLOPE RIPPING

All slopes steeper than 3 to 1 and over 15 ft. (4.5 m) in height shall be ripped. This shall consist of ripping between 18 inches to 24 inches (450 mm to 600 mm) deep normal to the slope. The interval of ripping along the slope shall be 12 ft. (3.6 m). This work shall be done after the seed bed has been prepared but before any fertilizer or seed has been applied. The fertilizer and seed shall be applied within a 24–hour period after the ripping has been done. This work will not be paid for separately but will be included in the cost of the various items of seeding involved.

406.03 PAVEMENT STATIONING NUMBERS & PLACEMENT

The Contractor shall provide labor and materials required to imprint pavement station numbers in the finished surface of the pavement and/or overlay. The numbers shall be approximately 3/4 inch (20 mm) wide, 5 inches (125 mm) high and 5/8 inch (15 mm) deep.

The pavement station numbers shall be installed as specified herein:

Interval – 200 feet (English stationing) or 100 meters (metric stationing)

Bottom of Numbers – 6 inches (150 mm) from the inside edge of the pavement marking

Location:
- 2, 3, & 5 Lane Pavements – right edge of pavement in direction of increasing stations
- Multi–Lane Divided Roadways – outside edge of pavement in both directions
- Ramps – along baseline edge of pavement

Position – stations shall be placed so they can be read from the adjacent shoulder

Format – English (Metric) pavement stations shall use this format "XXX (XX + X00)", where X represents the pavement station

This work will not be paid for separately, but will be included in the cost of the associated pavement and/or overlay pay items.

406.05 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

406.18 BUTT JOINT CUTTING TIME RESTRICTION

Butt joints shall not be milled more than three (3) days prior to placement of the HMA surface course.

406.19 PAVING SURFACE COURSE

Continuous paving operations on the main roadway shall be maintained at all times during the construction of the hot–mix asphalt surface. No interruptions for side roads, entrances, turn lanes, etc. will be allowed.

720.00 SIGNING

Sign locations may vary from the stations shown on the plans in accordance with directions from the Engineer at the time of construction. Sign locations may be adjusted in the field to avoid any found utilities.

All wood post locations shall be verified with the Bureau of Operations, Traffic Section, before installation.

PROJECT SPECIFIC NOTES

1. For the payitems "GRANULAR BACKFILL FOR STRUCTURES – 58600101" and "PIPE UNDERDRAIN FOR STRUCTURES 4" – Z00073400", only CA 7 shall be used for backfilling.
2. For the pay item "PCC CONNECTOR FOR APPROACH SLAB – 42000080", the No. 10 x 18 tie bars shall be included in the cost.

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USER NAME = Jacobsmr	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.1215 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/14/2020	DATE -	REVISED -	

GENERAL & JOB SPECIFIC NOTES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	2
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

The following mixture requirements are applicable for this project:

Mixture Use(s):	Polymer Surface Course 1 3/4"	Polymer Binder Course 2"	Shoulders (Surface Lifts)	Shoulder (Lower Lifts)
AC/PG:	SBS or SBR 76-28	SBS or SBR 76-28	PG 64-22	PG 64-22
Design Air Voids:	4.0% @ N=70	4.0% @ N=70	4.0% @ N=50	4.0% @ N=50
Mixture Composition: (Mixture Gradation)	IL 9.5	IL 9.5	IL 9.5FG	IL 9.5
Friction Aggregate:	Mix D (Dolomite Only)	N.A.	Mix C	N.A.
Quality Management Program:	QCQA	QCQA	QCQA	QCQA

Note: 1) Individual lift thickness of each mix type will be no less than 3 times nominal maximum aggregate size and no more than 6 times nominal maximum aggregate size, unless otherwise approved by the Engineer.
2) For design purposes, mixture weight for all mixes is determined to be 112.0 lb/s.y./in., unless otherwise noted.
3) Sublot sizes for PFP and QCP mixes will be 1000 tons, unless otherwise agreed to by the Engineer and the paving contractor.

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STATUS OF UTILITIES &
HMA MIXTURE REQUIREMENTS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	3
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

			URBAN	CONSTRUCTION CODE		
				FED/STATE	FED/STATE	FED/STATE
				80/20	80/20	80/20
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE	BRIDGE
				0006	0010	0010
					SN 090-0053	SN 090-0054
21101615	TOPSOIL, FURNISH & PLACE, 4"	SQ YD	1250	1250		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	23.4	23.4		
25000500	PHOSPOURUS FERTILIZER NUTRIENT	POUND	23.4	23.4		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23.4	23.4		
25000210	SEEDING, CLASS 2A	ACRE	0.26	0.26		
25000750	MOWING	ACRE	1	1		
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	1250	1250		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	23.4	23.4		
28000400	PERIMETER EROSION BARRIER	FOOT	450	450		
35300300	PORTLAND CEMENT CONCRETE BASE COURSE, 8"	SQ YD	2572	2572		
40200100	AGGREGATE SURFACE COURSE, TY A	TON	85	85		
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	11523	11523		
40600985	PORTLAND CONCRETE SURFACE REMOVAL - BUTT JOINT	SQ YD	800	800		
40600990	TEMPORARY RAMP	SQ YD	507	507		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	4
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

REV. 9/15/20 REV. 8/17/20

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	CONSTRUCTION CODE		
				FED/STATE	FED/STATE	FED/STATE	
				80/20	80/20	80/20	
				ROADWAY	BRIDGE	BRIDGE	
				0006	0010	0010	
					SN 090-0053	SN 090-0054	
40603208	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N70	TON	517	517			
40604162	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	489	489			
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	472	472			
44000182	HOT-MIX ASPHALT SURFACE REMOVAL, 8"	SQ YD	2572	2572			
44213204	TIE BARS 3/4"	EACH	485	485			
48101200	AGGREGATE SHOULDERS, TYPE B	TON	73	73			
48203012	HOT-MIX ASPHALT SHOULDERS, 3 3/4"	SQ YD	3325	3325			
50100100	REMOVAL OF EXISTING STRUCTURES	L SUM	2		1	1	
50200100	STRUCTURE EXCAVATION	CU YD	1887		1034	853	
50300225	CONCRETE STRUCTURES	CY YD	725.7		376.7	349	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	473.9		233.3	240.6	
50300260	BRIDGE DECK GROOVING	SQ YD	1698		836	862	
50300300	PROTECTIVE COAT	SQ YD	2200		1082	1118	
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	241.3		121.6	119.7	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	5
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		

REV. 9/15/20 REV. 8/17/20

			URBAN	CONSTRUCTION CODE		
				FED/STATE	FED/STATE	FED/STATE
				80/20	80/20	80/20
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE	BRIDGE
				0006	0010	0010
					SN 090-0053	SN 090-0054
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		0.49	0.51
50500505	STUD SHEAR CONNECTORS	EACH	7992		3888	4104
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	302,200		151,070	151,130
50800515	BAR SPLICERS	EACH	1857		921	936
51100100	SLOPEWALL, 4 INCH	SQ YD	2007		1003.5	1003.5
51201500	FURNISHING STEEL PILES HP 10 X 57	FOOT	691		361	330
51202305	DRIVING PILES	FOOT	691		361	330
51203500	TEST PILE STEEL HP 10 X 57	EACH	2		1	1
51500100	NAME PLATES	EACH	2		1	1
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE 1	EACH	24		12	12
52100520	ANCHOR BOLTS, 1"	EACH	96		48	48
52200010	TEMPORARY SHEET PILING	SQ FT	803		416	387
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	7231		4160	3071
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	308		155	153

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	6
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		

REV. 10/9/20

				URBAN	CONSTRUCTION CODE		
					FED/STATE	FED/STATE	FED/STATE
					80/20	80/20	80/20
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE	BRIDGE
					0006	0010	0010
						SN 090-0053	SN 090-0054
	58700300	CONCRETE SEALER	SQ FT	1402		674	728
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	177		89	88
	60600605	CONCRETE CURB, TYPE B	FOOT	60	60		
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	550	550		
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE I (SPECIAL) TANGENT	EACH	4	4		
	63200310	GUARDRAIL REMOVAL	FOOT	1192	1192		
	64200116	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	3741	3741		
	67000400	ENGINEERS FIELD OFFICE, TYPE A	CAL MO	14	14		
	67100100	MOBILIZATION	L SUM	1	1		
	70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2	2		
	70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	EACH	1	1		
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	800	800		
	70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	240	240		

*= SPECIALTY ITEM

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	7
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

REV. 9/15/20

				URBAN	CONSTRUCTION CODE		
					FED/STATE	FED/STATE	FED/STATE
					80/20	80/20	80/20
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE	BRIDGE
					0006	0010	0010
						SN 090-0053	SN 090-0054
	70300220	TEMPORARY PAVEMENT MARKING-LINE 4"	FOOT	15149	15149		
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	915	915		
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	810	810		
	70600251	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2		
	70600352	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2		
*	72501000	TERMINAL MARKER, DIRECT APPLIED	EACH	4	4		
*	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	4800	4800		
*	78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	600	600		
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	30	30		
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	14	14		
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	30	30		
	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	1772	1772		
	X1700035	CLASS SI CONCRETE	CY YD	2	2		
	X4404400	PAVEMENT REMOVAL, SPECIAL	EACH	472	472		

*= SPECIALTY ITEM

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SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	8
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

REV. 9/15/20

				URBAN	CONSTRUCTION CODE		
					FED/STATE	FED/STATE	FED/STATE
					80/20	80/20	80/20
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE	BRIDGE
					0006	0010	0010
						SN 090-0053	SN 090-0054
	X6050065	REMOVING INLETS, SPECIAL	EACH	2	2		
	X7011801	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22	L SUM	1	1		
*	X7830070	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	4800	4800		
*	X7830074	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	600	600		
	Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	370	370		
	Z0004552	APPROACH SLAB REMOVAL	SQ YD	534	534		
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
	Z0034105	MATERIAL TRANSFER DEVICE	TON	489	489		
	Z0041500	PLUG EXISTING CULVERTS	EACH	4	4		
	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	390		196	194
	Z0073400	TEMPORARY SUPPORT SYSTEM	EACH	4		2	2
Ø	Z0076600	TRAINEES	HOUR	1,000	1,000		
Ø	Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOUR	1,000	1,000		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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313	(94-16HB)BR	WARREN	75	9
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		

REV. 9/15/20

GUARDRAIL ITEMS													
LOCATION						63000001	63100085	63100167	78200005	72501000	Z0001002	60600605
						STEEL PLATE BEAM GUARDRAIL, TY A, 6' POSTS	TRAFFIC BARRIER TERMINAL, TY 6	TRAFFIC BARRIER TERMINAL, TY 1 (SPECIAL) TANGENT	GUARDRAIL REFLECTORS, TY A	TERMINAL MARKER - DIRECT APPLIED	GUARDRAIL AGGREGATE EROSION CONTROL	CONCRETE CURB, TYPE B
						FT	EACH	EACH	EACH	EACH	TON	FT
WESTBOUND												
STA.	460+32.44	TO	STA.	460+69.94	LT		1		1.0		20.3	15
STA.	460+69.94	TO	STA.	461+82.44	LT	112.5			1.0		102.8	
STA.	461+82.44	TO	STA.	462+32.44	LT			1	1.0	1.0	75.7	
STA.	460+56.33	TO	STA.	460+93.83	RT		1		1.0		20.3	15
STA.	460+93.83	TO	STA.	462+56.33	RT	162.5			2.0		102.8	
STA.	462+56.33	TO	STA.	463+06.33	RT			1	1.0	1.0	75.7	
EASTBOUND												
STA.	456+79.06	TO	STA.	457+29.06	LT			1	1.0	1.0	20.3	
STA.	457+29.06	TO	STA.	458+91.56	LT	162.5			2.0		102.8	
STA.	458+91.56	TO	STA.	459+29.06	LT		1		1.0		75.7	15
STA.	457+63.27	TO	STA.	458+13.27	RT			1	1.0	1.0	20.3	
STA.	458+13.27	TO	STA.	459+25.77	RT	112.5			1.0		90.4	
STA.	459+25.77	TO	STA.	459+63.27	RT		1		1.0		80.5	15
TOTAL						550.0	4	4	14.0	4.0	370	60

GUARDRAIL REMOVAL - 63200310						
WESTBOUND						LENGTH
						FT
STA.	460+07.75	TO	STA.	463+78.22	LT	370.47
STA.	460+31.52	TO	STA.	462+68.02	RT	236.5
EASTBOUND						
STA.	457+30.95	TO	STA.	459+53.11	LT	222.16
STA.	456+14.72	TO	STA.	459+77.09	RT	372.37
TOTAL						1191.5

LOCATION						70400100	70400200	70600251	70600370
						TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW) TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE, NARROW) TEST LEVEL 3
						FOOT	FOOT	EACH	EACH
WESTBOUND									
STAGE I	STA.	458+40.00	TO	STA.	462+40.00	400.0		1	
STAGE II	STA.	458+35.00	TO	STA.	463+00.00	65.0	400.0		1
EASTBOUND									
STAGE I	STA.	457+10.00	TO	STA.	461+60.00	450.0		1	
STAGE II	STA.	457+40.00	TO	STA.	461+50.00		410.0		1
TOTAL						915.0	810.0	2	2

LOCATION					LENGTH	WIDTH	20101400	20101500	20101600	21101615	25000210	25100635	28000250	28000400
							NITROGEN FERTILIZER NUTRIENT	PHOSPHOROUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	TOPSOIL FURN & PLACE 4"	SEEDING, CL 2A	HEAVY DUTY EROSION CONTROL BLANKET	TEMPORARY EROSION CONTROL SEEDING	PERIMETER EROSION BARRIER
					FT	FT	POUND	POUND	POUND	SQ YD	ACRE	SQ YD	POUND	FOOT
EASTBOUND														
455+00.00	TO	459+50.00	RT		450.0	25	23.4	23.4	23.4	1250.0	0.26	1250.0	23.4	450.0
TOTALS							23.4	23.4	23.4	1250.0	0.26	1250.0	23.4	450.0

AGGREGATE SURFCE COURSE, TY A - 40200100						
TR 162						
						TON
STA.	98+00.00	TO	STA.	102+00.00		85

MODEL: Default
FILE NAME: pw:\\planroom.dot.illinois.gov:PWIDOT\Documents\IDOT Offices\District 4\Projects\D4_68D95\CADData\CADSheets\FINAL FOR SUBMITTAL.dgn

USER NAME = Jacobsmr	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.1215 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/14/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	10
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

LOCATION					MODIFIED URETHANE					78100100	78300200
					78009004		X7830070	78009006	X7830074	RAISED REFLECTIVE PAVEMENT MARKERS	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
					LINE 4"		GROOVING FOR RECESSED PAVT MARKING, 5"	LINE 6"	GROOVING FOR RECESSED PVT MKG 7"		
					WHITE SOLID	YELLOW SOLID		WHITE SKIP-DASH		1-WAY CRYSTALS	
					FT	FT	FT	FT	FT	EACH	EACH
WESTBOUND											
STA.	454+00.00	TO	STA.	466+00.00	1200.0	1200.0	2400.0	300.0	300.0	15.0	15.0
EASTBOUND											
STA.	680+44.28	TO	STA.	682+80.36	1200.0	1200.0	2400.0	300.0	300.0	15.0	15.0
TOTAL					2400.0	2400.0	4800.0	600.0	600.0	30.0	30.0

LOCATION		70300100	70300150	X0327980
		SHORT TERM PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL - WATER BLASTING
		4"WHITE		
		FOOT	SQ FT	SQ FT
STAGE I				
STA. 454+06 TO 465+25	WB	200.0	60.0	513.0
STA. 454+68 TO 466+00	EB	200.0	60.0	516.0
STAGE II				
STA. 454+05 TO 465+26	WB	200.0	60.0	373.0
STA. 454+96 TO 462+80	EB	200.0	60.0	370.0
TOTAL		800.0	240.0	1772.0

LOCATION						TEMPORARY PAVEMENT MARKING TYPE I TAPE		
						70300220		X7030005
						LINE 4"		TEMPORARY PAVEMENT MRK REMOVAL
						WHITE SOLID	YELLOW SOLID	
						FT	FT	FT
WESTBOUND								
STAGE I	STA.	454+06.00	TO	STA.	480+25.00	2588.0	1114.0	3702.0
STAGE II	STA.	439+68.00	TO	STA.	480+25.00	2692.0	1193.0	3885.0
EASTBOUND								
STAGE I	STA.	439+70.00	TO	STA.	466+00.00	1134.0	2686.0	3820.0
STAGE II	STA.	454+05.00	TO	STA.	480+26.00	1121.0	2621.0	3742.0
TOTAL						7535.0	7614.0	15149.0

LOCATION						35300300	44000182	44213204
						PCC BASECOURSE 8"	HMA SURFACE REMOVAL 8"	TIE BARS, 8"
						SQ YD	SQ YD	EACH
WESTBOUND								
LT	STA.	455+09.00	TO	STA.	458+77.00	364.0	364.0	40.0
LT	STA.	460+31.00	TO	STA.	465+25.00	460.0	460.0	80.0
RT	STA.	454+12.00	TO	STA.	459+14.00	285.0	285.0	45.0
RT	STA.	460+35.00	TO	STA.	465+29.00	235.0	235.0	86.0
EASTBOUND								
LT	STA.	454+87.00	TO	STA.	459+36.00	213.0	213.0	75.0
LT	STA.	461+00.00	TO	STA.	462+57.00	63.0	63.0	39.0
RT	STA.	454+74.00	TO	STA.	459+63.00	456.0	456.0	80.0
RT	STA.	461+14.00	TO	STA.	466+00.00	496.0	496.0	40.0
TOTAL						2572.0	2572.0	485.0

LOCATION						70400100	70400200	70600251	70600370
						TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW) TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE, NARROW) TEST LEVEL 3
						FOOT	FOOT	EACH	EACH
WESTBOUND									
STAGE I	STA.	458+40.00	TO	STA.	462+40.00	400.0		1	
STAGE II	STA.	458+35.00	TO	STA.	463+00.00	65.0	400.0		1
EASTBOUND									
STAGE I	STA.	457+10.00	TO	STA.	461+60.00	450.0		1	
STAGE II	STA.	457+40.00	TO	STA.	461+50.00		410.0		1
TOTAL						915.0	810.0	2	2

USER NAME = Jacobsmr	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.1215 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	11
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

LOCATION			LENGTH	WIDTH	AREA	40604162 POLY HMA SC, MIX "D", IL-9.5, N70 1.75"	40603208 POLY HMA BC, IL-9.5, N70 2"	40600990 TEMPORARY RAMP TAPER 1:80	40600985 PCC SURFACE REMOVAL - BUTT JOINT TAPER 1:480	Z0004552 APPROACH SLAB REMOVAL	42000080 PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	X4404400 PAVEMENT REMOVAL (SPECIAL)	48203100 HOT-MIX ASPHALT SHOULDERS	64200116 SHOULDER RUMBLE STRIPS, 16 INCH	40600295 POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)		Z0034105 MATERIAL TRANSFER DEVICE
															MILLED SURFACE 0.08 LB/ SQ FT	FOG COAT 0.08 LB/ SQ FT	
			FT	FT	SQ YD	TON	TON	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	TON	FOOT	POUND	POUND	TON
WESTBOUND																	
454+00.00	TO	454+70.00	70.0	24.0	186.7	18.3		66.7	186.7				124.4	140.0	224.0		18.3
454+70.00	TO	455+50.00	80.0	24.0	213.3	20.9	23.9	66.7	213.3				142.2	160.0	256.0	256.0	20.9
455+50.00	TO	458+39.00	289.0	24.0	770.7	75.5	86.3						513.8	579.0	924.8	924.8	75.5
458+39.00	TO	458+73.07	VAR	40.0	118.0			60.0			118.0	118.0					
458+73.07	TO	459+03.07	30.0	40.0	133.3					133.3							
460+37.26	TO	460+67.26	30.0	40.0	133.3					133.3							
460+67.26	TO	460+85.72	VAR	40.0	118.0			60.0			118.0	118.0					
460+85.72	TO	464+50.00	364.3	24.0	971.4	95.2	108.8						647.6	728.6	1165.7	1165.7	95.3
464+50.00	TO	465+30.00	80.00	24.0	213.3	20.9	23.9						142.2	160.0	256.0	256.0	20.9
465+30.00	TO	466+00.00	70.0	24.0	186.7	18.3	20.9						124.4	140.0	224.0	224.0	18.3
EASTBOUND																	
454+00.00	TO	454+70.00	70.0	24.0	186.7	18.3		66.7	186.7				124.4	140.0	224.0		18.3
454+70.00	TO	455+50.00	80.0	24.0	213.3	20.9	23.9	66.7	213.3				142.2	160.0	256.0	256.0	20.9
455+50.00	TO	458+72.00	322.0	24.0	858.7	84.2	96.2						572.4	644.0	1030.4	1030.4	84.2
458+72.00	TO	458+90.41	VAR	40.0	118.0			60.0			118.0	118.0					
458+90.41	TO	459+20.41	30.0	40.0	133.3					133.3							
460+90.14	TO	461+20.14	30.0	40.0	133.3					133.3							
461+20.14	TO	461+54.77	VAR	40.0	118.0			60.0			118.0	118.0					
461+54.77	TO	464+50.00	364.3	24.0	971.4	95.2	108.8						647.6	728.6	1165.7	1165.7	95.3
464+50.00	TO	465+30.00	80.00	24.0	213.3	20.9	23.9						142.2	160.0	256.0	256.0	20.9
465+30.00	TO	466+00.00	70.0	24.0	186.7	18.3	20.9						124.4	140.0	224.0	224.0	18.3
TOTALS:					5993.3	488.8	516.8	506.8	800.0	533.2	472.0	472.0	3325.4	3741.0	5985.6	5537.6	488.8

AGGREGATE SHOULDER, TYPE B 48101200						
WESTBOUND						TONS
STA.	454+00.00	TO	STA.	458+65.74	LT	9.8
STA.	462+34.92	TO	STA.	466+00.00	LT	7.7
STA.	454+00.00	TO	STA.	458+91.33	RT	10.3
STA.	461+01.82	TO	STA.	466+00.00	RT	10.5
EASTBOUND						
STA.	454+00.00	TO	STA.	456+79.39	LT	5.9
STA.	461+01.82	TO	STA.	466+00.00	LT	10.5
STA.	454+00.00	TO	STA.	457+54.24	RT	7.4
STA.	461+25.09	TO	STA.	466+00.00	RT	10.0
TOTAL						72.1

LOCATION	67100100 MOBILIZATION L SUM	25000750 MOWING ACRE	Z0013798 CONSTRUCTION LAYOUT L SUM	70100207 TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 EACH	70100700 TRAFFIC CONTROL AND PROTECTION, STANDARD 701406 LSUM	70101835 TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22-7 LSUM	67000400 ENGINEER'S FIELD OFFICE, TY A CAL MO
JOBSITE	1.0	1.0	1.0	2.0	1.0	1.0	14.0

LOCATION	X1700035 CLASS SI CONCRETE CY YD	X6050065 REMOVE INLETS SPECIAL EACH	Z0041500 PLUG EXISTING CULVERTS EACH
WESTBOUND			
STA 460+25.60 LT	1.0	1.0	2.0
EASTBOUND			
STA 460+94.07 LT	1.0	1.0	2.0
TOTAL	2.0	2.0	4.0

MODEL: Default
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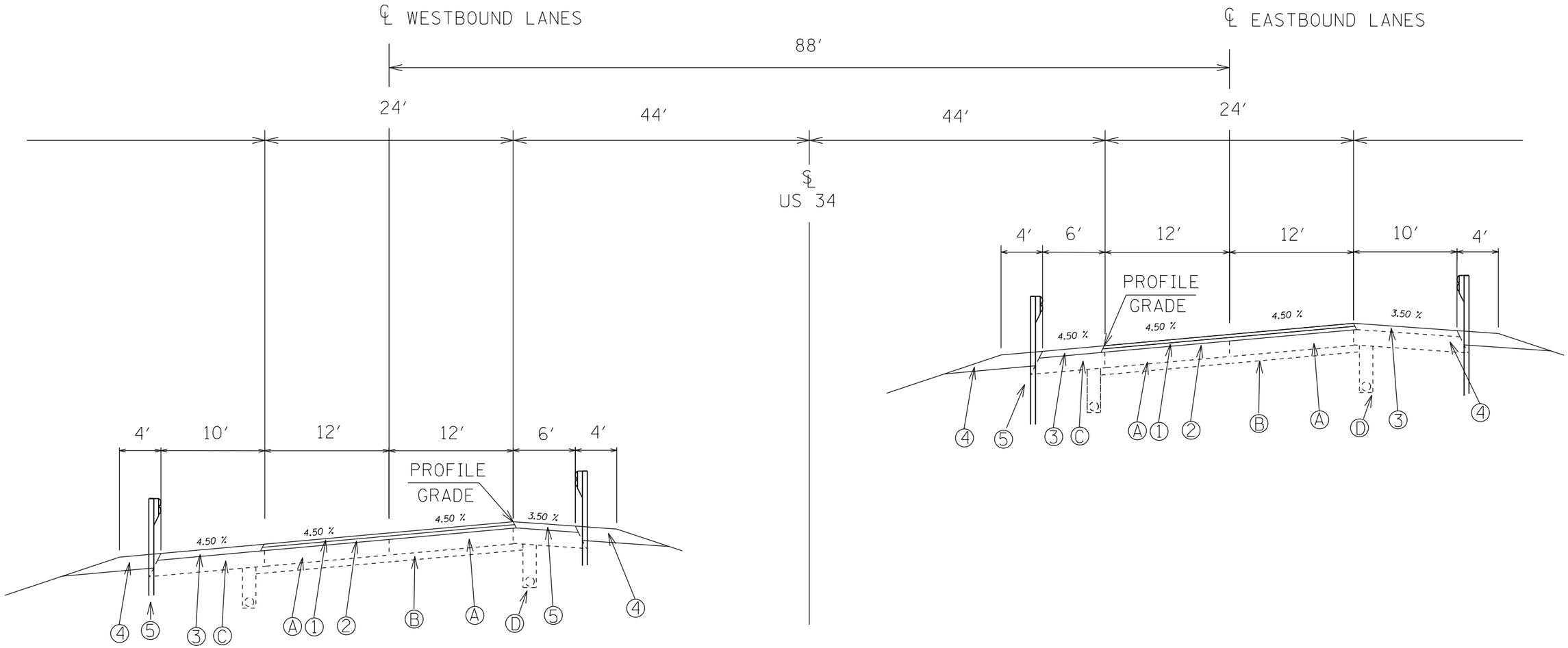
USER NAME = jacobsmr	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.1215 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	12
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		



Ⓐ CONTINOUSLY REINFORCED CONCRETE PAVEMENT - 9″
Ⓑ STABILIZED SUB-BASE - 4″
Ⓒ HMA SHOULDER - 9″
Ⓓ SUBSURFACE DRAIN - 4″

① POLY HMA SC, IL 9.5, MIX ″D″, N70 - 1 ¾″
② POLY HMA BINDER COURSE, IL-9.5, N70 - 2″
③ HMA SHOULDERS, 3 ¾″
④ GUARDRAIL AGG EROSION CONTROL/AGG SHOULDERS, TY B
⑤ STEEL PLATE BEAM GUARDRAIL

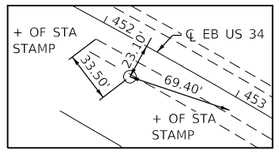
USER NAME = Jacobsmr	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.1215 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/14/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

US 34 PROPOSED TYPICAL SECTIONS

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

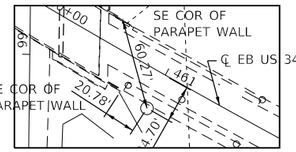
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	13
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		



CONTROL POINT #22

IRON PIN W/ IDOT CAP

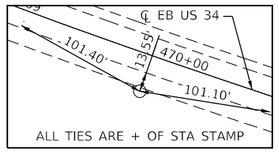
STA. 452+64.57, 77.74' RT.
℄ SURVEY US 34
N 1550810.9568
E 2189064.6175
EL. 714.948



CONTROL POINT #21

IRON PIN W/ IDOT CAP

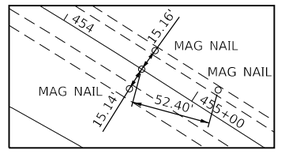
STA. 461+33.05, 81.04' RT.
℄ SURVEY US 34
N 1550354.6918
E 2189802.5390
EL. 713.212



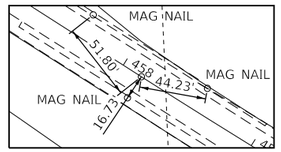
CONTROL POINT #20

IRON PIN W/ IDOT CAP

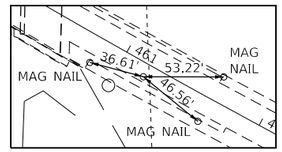
STA. 470+23.44, 78.66' RT.
℄ SURVEY US 34
N 1549981.7358
E 2190624.8347
EL. 707.378



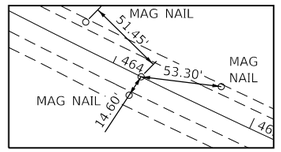
PT STA. 454 + 60.79
CL EB LANES US 34
MAG NAIL
POINT # 31



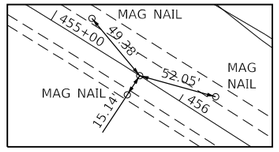
PC STA. 458 + 14.32
CL EB LANES US 34
MAG NAIL
POINT # 32



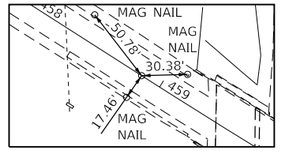
PI STA. 461 + 17.82
CL EB LANES US 34
MAG NAIL
POINT # 38



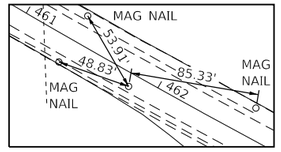
PCC STA. 464 + 20.64
CL EB LANES US 34
MAG NAIL
POINT # 33



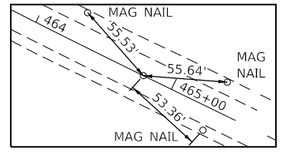
PT STA. 455 + 69.12
CL WB LANES US 34
MAG NAIL
POINT #34



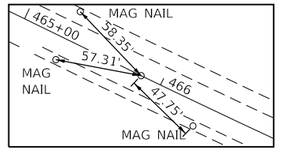
PC STA. 458 + 85.97
CL WB LANES US 34
MAG NAIL
POINT #35



PI STA. 461 + 83.01
CL WB LANES US 34
MAG NAIL
POINT #39



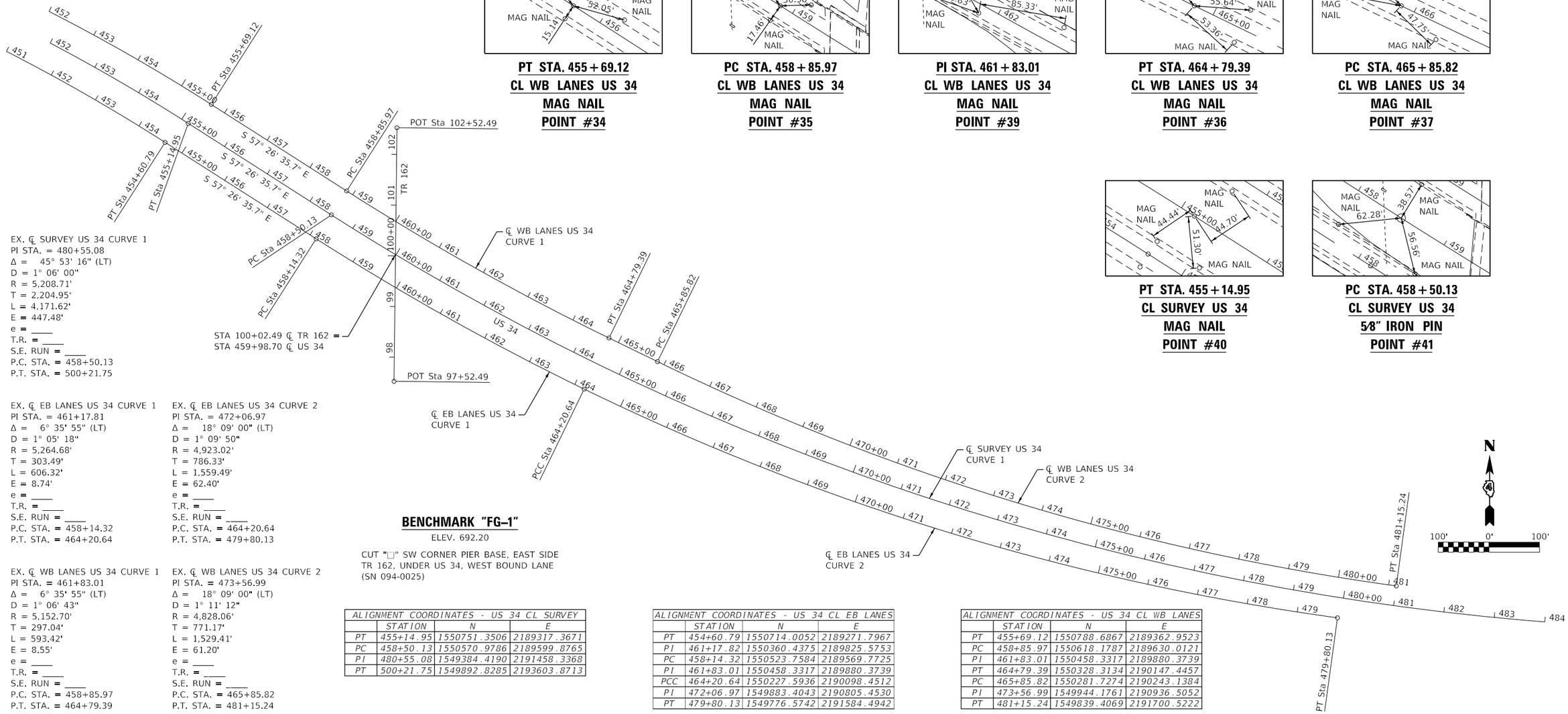
PT STA. 464 + 79.39
CL WB LANES US 34
MAG NAIL
POINT #36



PC STA. 465 + 85.82
CL WB LANES US 34
MAG NAIL
POINT #37

PT STA. 455 + 14.95
CL SURVEY US 34
MAG NAIL
POINT #40

PC STA. 458 + 50.13
CL SURVEY US 34
5/8" IRON PIN
POINT #41



EX. ℄ SURVEY US 34 CURVE 1
PI STA. = 480+55.08
Δ = 45° 53' 16" (LT)
D = 1° 06' 00"
R = 5,208.71'
T = 2,204.95'
L = 4,171.62'
E = 447.48'
e = ____
T.R. = ____
S.E. RUN = ____
P.C. STA. = 458+50.13
P.T. STA. = 500+21.75

EX. ℄ EB LANES US 34 CURVE 1
PI STA. = 461+17.81
Δ = 6° 35' 55" (LT)
D = 1° 05' 18"
R = 5,264.68'
T = 303.49'
L = 606.32'
E = 8.74'
e = ____
T.R. = ____
S.E. RUN = ____
P.C. STA. = 458+14.32
P.T. STA. = 464+20.64

EX. ℄ EB LANES US 34 CURVE 2
PI STA. = 472+06.97
Δ = 18° 09' 00" (LT)
D = 1° 09' 50"
R = 4,923.02'
T = 786.33'
L = 1,559.49'
E = 62.40'
e = ____
T.R. = ____
S.E. RUN = ____
P.C. STA. = 464+20.64
P.T. STA. = 479+80.13

EX. ℄ WB LANES US 34 CURVE 1
PI STA. = 461+83.01
Δ = 6° 35' 55" (LT)
D = 1° 06' 43"
R = 5,152.70'
T = 297.04'
L = 593.42'
E = 8.55'
e = ____
T.R. = ____
S.E. RUN = ____
P.C. STA. = 458+85.97
P.T. STA. = 464+79.39

EX. ℄ WB LANES US 34 CURVE 2
PI STA. = 473+56.99
Δ = 18° 09' 00" (LT)
D = 1° 11' 12"
R = 4,828.06'
T = 771.17'
L = 1,529.41'
E = 61.20'
e = ____
T.R. = ____
S.E. RUN = ____
P.C. STA. = 465+85.82
P.T. STA. = 481+15.24

BENCHMARK "FG–1"

ELEV. 692.20

CUT "□" SW CORNER PIER BASE, EAST SIDE TR 162, UNDER US 34, WEST BOUND LANE (SN 094-0025)

ALIGNMENT COORDINATES - US 34 CL SURVEY			
	STATION	N	E
PT	455+14.95	1550751.3506	2189317.3671
PC	458+50.13	1550570.9786	2189599.8765
PI	480+55.08	1549384.4190	2191458.3368
PT	500+21.75	1549892.8285	2193603.8713

ALIGNMENT COORDINATES - US 34 CL EB LANES			
	STATION	N	E
PT	454+60.79	1550714.0052	2189271.7967
PI	461+17.82	1550360.4375	2189825.5753
PC	458+14.32	1550523.7584	2189569.7725
PI	461+83.01	1550458.3317	2189880.3739
PCC	464+20.64	1550227.5936	2190098.4512
PI	472+06.97	1549883.4043	2190805.4530
PT	479+80.13	1549776.5742	2191584.4942

ALIGNMENT COORDINATES - US 34 CL WB LANES			
	STATION	N	E
PT	455+69.12	1550788.6867	2189362.9523
PC	458+85.97	1550618.1787	2189630.0121
PI	461+83.01	1550458.3317	2189880.3739
PT	464+79.39	1550328.3134	2190147.4457
PC	465+85.82	1550281.7274	2190243.1384
PI	473+56.99	1549944.1761	2190936.5052
PT	481+15.24	1549839.4069	2191700.5222

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER:

USER NAME = jacobsmr	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.1215 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/14/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES & BENCHMARKS
SN 094–0025 & SN 094–0026

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	14
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

PROJECT
BEGINS
STA 454+00

PROJECT
ENDS
STA 466+00

EX SN 094-0025
PR SN 094-0053

EX SN 094-0026
PR SN 094-0054

36" RCP

POT Sta 103+40.95

POT Sta 102+52.49

12" CMP

72" RCP

GRAVEL

US 34 WB LANES

US 34 EB LANES

℄ MEDIAN US 34

PI Sta 453+97.56

PT Sta 455+14.95

PC Sta 458+50.13

GR 456+79.39

GR 457+29.40

GR 457+54.24

GR 458+03.78

GR 458+91.56

GR 459+28.88

GR 459+25.77

GR 459+62.71

GR 460+31.85

GR 460+56.05

GR 460+69.94

GR 460+93.83

GR 461+84.18

GR 462+34.92

GR 462+57.51

GR 463+07.84

EB PROFILE

WB PROFILE

VPI STA. 459+00.00
ELEVATION 713.92

VPI STA. 461+50.00
ELEVATION 712.54

VPI STA. 458+50.00
ELEVATION 708.13

VPI STA. 461+00.00
ELEVATION 706.74

	454+00	455+00	456+00	457+00	458+00	459+00	460+00	461+00	462+00	463+00	464+00	465+00	466+00
WB PROFILE	710.34	709.82	709.25	708.70	708.15	707.55	691.14	706.41	705.85	705.46	704.93	704.49	703.84
	710.34	710.13	709.56	709.01	708.46	707.85	707.30	706.74	706.16	705.77	705.24	704.80	703.84
EB PROFILE	716.30	715.91	715.39	714.75	714.17	713.62	693.16	712.52	711.88	711.36	710.89	710.50	710.04
	716.30	716.22	715.70	715.06	714.48	713.92	713.37	712.82	712.19	711.67	711.16	710.81	710.04

720 715 710 705 700 695 690 685 680

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
DATE
BY

PROFILE
SURVEYED
PLOTTED
GRADE CHECKED
B.M. NOTED
STRUCTURE NO(S).
DATE
BY

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	DRAWN -	REVISED -	
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PLOT DATE = 8/14/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

US 34 PLAN AND PROFILE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	15
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

NOTES:

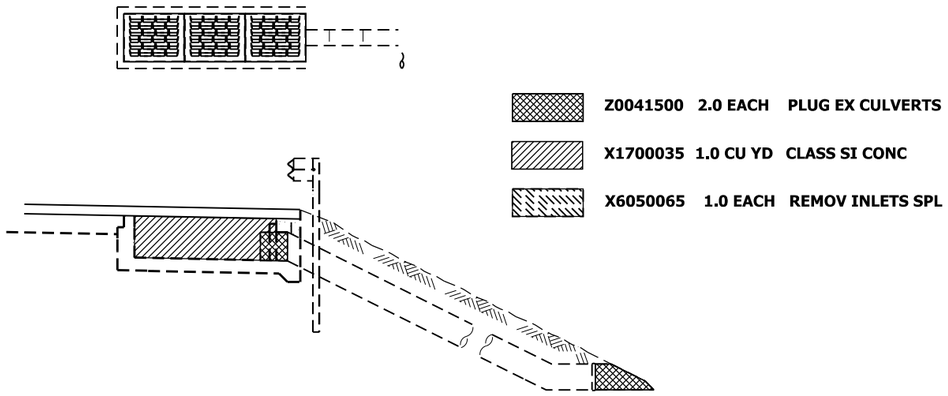
EXISTING SHOULDERS WILL BE REMOVED AND REPLACED WITH
PCC BASECOURSE - 8'' IN THE AREAS SHOWN

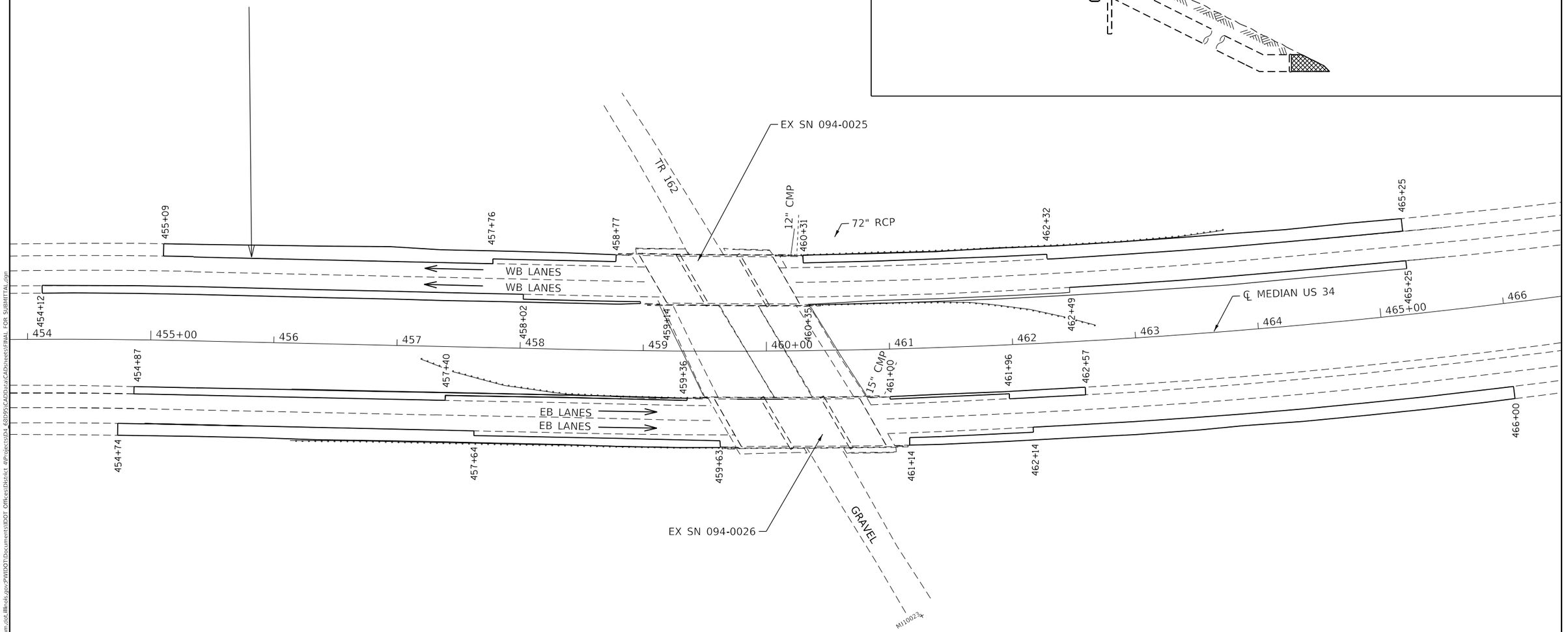
24'' TIE BARS (NO. 6 AT 36'' CENTERS) SHALL BE INSTALLED
ADJACENT TO EXISTING PCC WIDENING, DRILLED IN TO A DEPTH OF 8''.

DRAINAGE DETAIL

WB STA 460+25.60

EB STA 460+94.07





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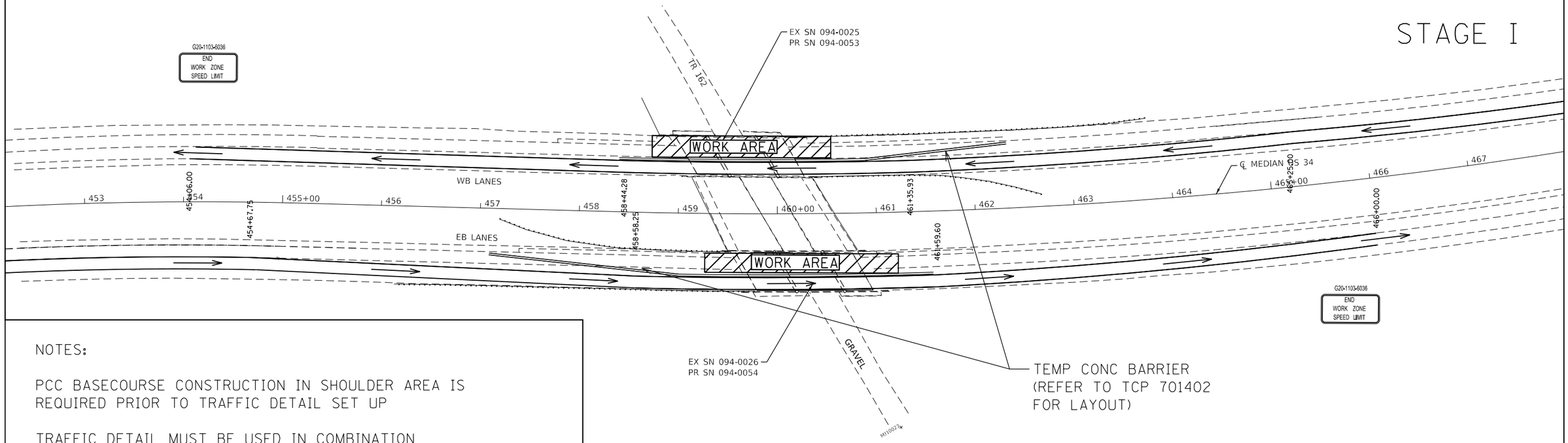
PLOT SCALE = 100.1215 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/14/2020	DATE -	REVISED -	

STAGE CONSTRUCTION DETAILS
SHOULDER PLAN

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	16
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

STAGE I



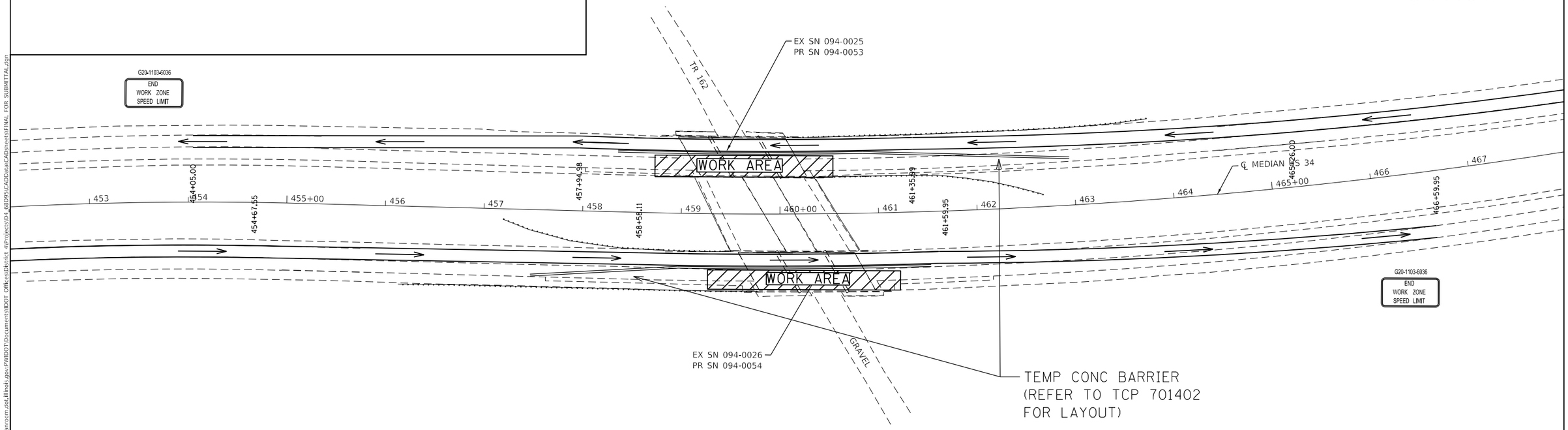
NOTES:

PCC BASECOURSE CONSTRUCTION IN SHOULDER AREA IS REQUIRED PRIOR TO TRAFFIC DETAIL SET UP

TRAFFIC DETAIL MUST BE USED IN COMBINATION WITH STANDARDS 701400 AND 701402

REFER TO STRUCTURE PLANS FOR STAGING TYPICAL SECTIONS

STAGE II



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	DRAWN -	REVISED -	
PLOT SCALE = 100.1215 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/14/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAIL

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	17
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

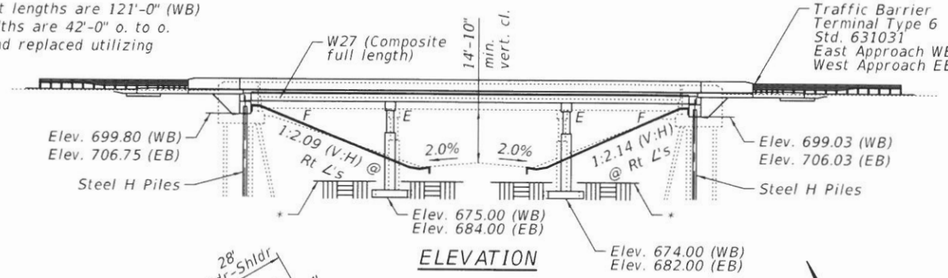
Bench Mark: Cut "□" SW corner pier base, East side TR 162 under US 34 WB lane (SN 094-0025)
Elev. 692.20

Existing Structures: SN 094-0025 (WB), SN 094-0026 (EB), originally built in 1979 as FAP Rte. 404, Sec. 94-16 HB. Each superstructure consists of a continuous conc. deck slab supported on 3 simple spans comprised of 36" precast prestressed I beams. Each substructure consists of open abutments on H-piles and multi-column piers on spread footings. The bk. to bk. of abutment lengths are 121'-0" (WB) and 132'-0" (EB). The structure widths are 42'-0" o. to o. Both structures will be removed and replaced utilizing staged construction.

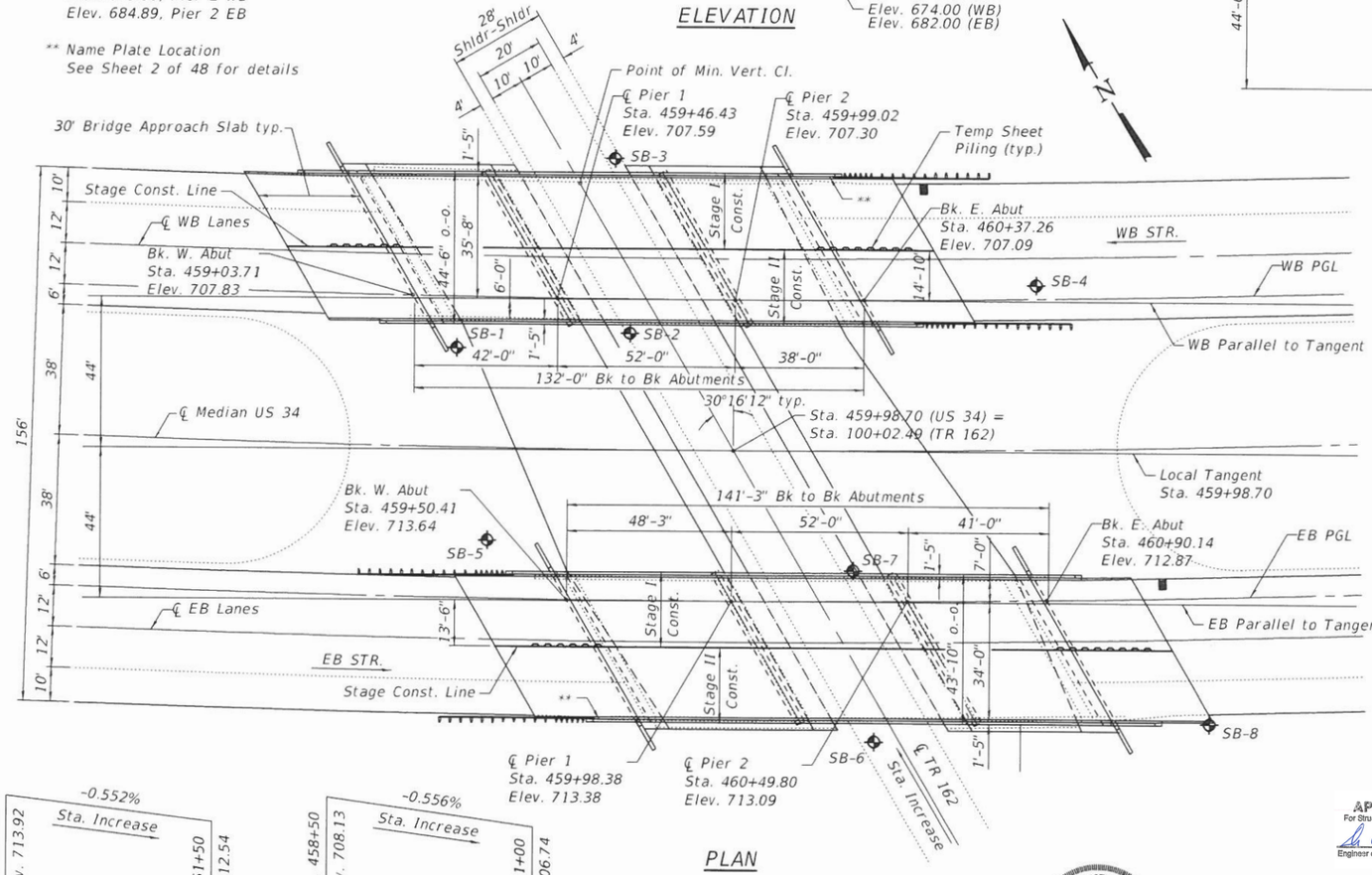
No Salvage.

* Estimated Top of Rock
Elev. 676.95, Pier 1 WB
Elev. 685.65, Pier 1 EB
Elev. 675.86, Pier 2 WB
Elev. 684.89, Pier 2 EB

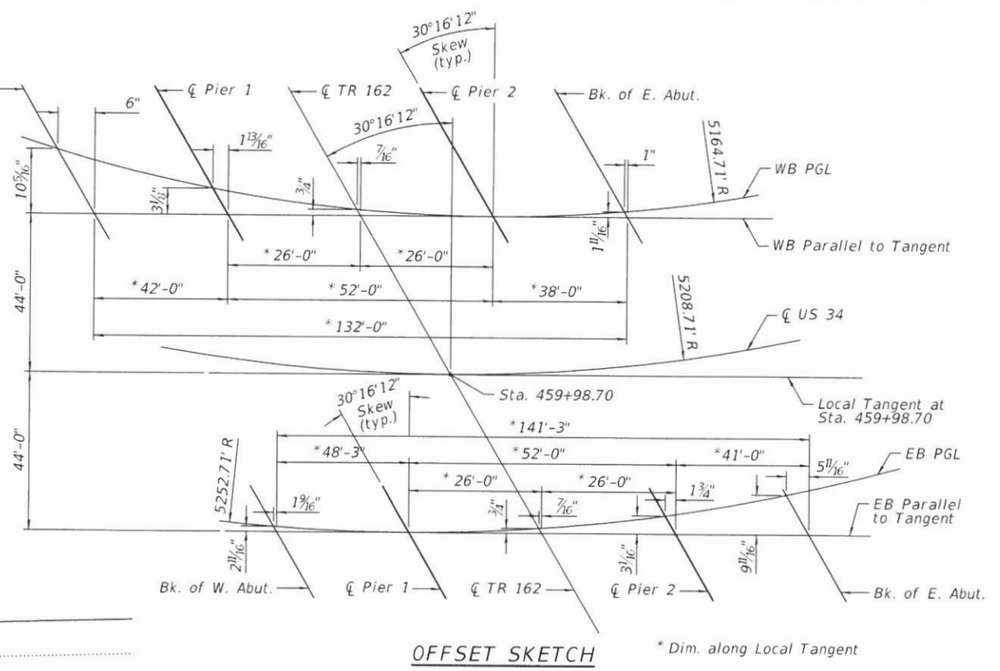
** Name Plate Location
See Sheet 2 of 48 for details



ELEVATION



PLAN



OFFSET SKETCH

* Dim. along Local Tangent

CURVE DATA

℄ FAP 313
PI STA. = 480+55.08
Δ = 45° 53' 16" (LT)
D = 1° 06' 00"
R = 5,208.71'
T = 2,204.95'
L = 4,171.62'
E = 447.48'
S.E. = 4.5%
S.A. = 456+90.13 to 459+30.13
499+41.75 to 501+81.75
P.C. STA. = 458+50.13
P.T. STA. = 500+21.75

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.07 g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.11 g
Soil Site Class = C

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
f'c = 4,000 psi (Superstructure concrete)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50) (Galvanized)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

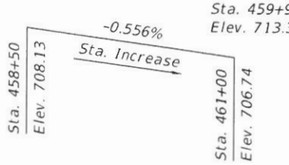
Sta. 98+70	Sta. 99+00	Sta. 99+60	Sta. 99+70	Sta. 100+40	Sta. 100+50	Sta. 100+60	Sta. 100+90
Elev. 696.38	Elev. 694.64	Elev. 691.81	Elev. 691.44	Elev. 688.85	Elev. 688.58	Elev. 688.47	Elev. 688.14

PROFILE GRADE

Along ℄ TR 162

PROFILE GRADE

US 34 (EB Str.)
(Along Inside Edge of Pavement)



PROFILE GRADE

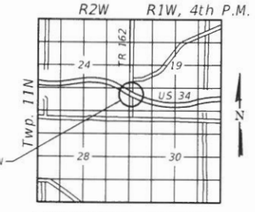
US 34 (WB Str.)
(Along Inside Edge of Pavement)

Note:
Temporary Soil Retention System to be provided for pier footing Excavations.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

LICENSED STRUCTURAL ENGINEER
MARY COOMBE BLOXDORF
4859
SPRINGFIELD
STATE OF ILLINOIS

ILLINOIS STRUCTURAL NO. 4859
EXPIRES 11/30/20
DATE: 08/19/2020



LOCATION SKETCH

GENERAL PLAN & ELEVATION
US 34 OVER TR 162
FAP ROUTE 313
SECTION (94-16 HB)BR
WARREN COUNTY
STATION 459+98.70
STRUCTURE NO. 094-0053 (WB)
STRUCTURE NO. 094-0054 (EB)

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 15-1016G

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	CHECKED - MSJ	REVISED -	
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PLOT DATE = 8/12/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	75	18
		CONTRACT NO. 68D95		
		ILLINOIS	FED. AID PROJECT	

GENERAL NOTES

1. All new structural steel shall be galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel".
2. Fasteners shall be ASTM F3125 Grade A325 Type I. Bolts 7/8" Ø & holes 15/16" Ø, unless noted otherwise. Fasteners shall be hot-dip galvanized. See special provision "Hot-Dip Galvanizing for Structural Steel".
3. Calculated weight of Structural Steel = 26,656 pounds M270, Grade 36 and 173,837 pounds M270, Grade 50.
4. No field welding is permitted except as specified in contract documents.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8"(.01 ft.). Adjustment shall be made by either grinding the surface or by shimming the bearings.
7. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
8. The finishing machine rails shall be placed on top of the top flange of the exterior beams within the deck pour. Beam blocks shall be placed between the beams at all tie locations in each bay for the full width of the deck pour.
9. Concrete Sealer shall be applied to the designated areas of the pier crashwalls.
10. Drainage Aggregate shall be CA-7 only.
11. Construction of the proposed footings will require removal of the existing footings at all Piers.

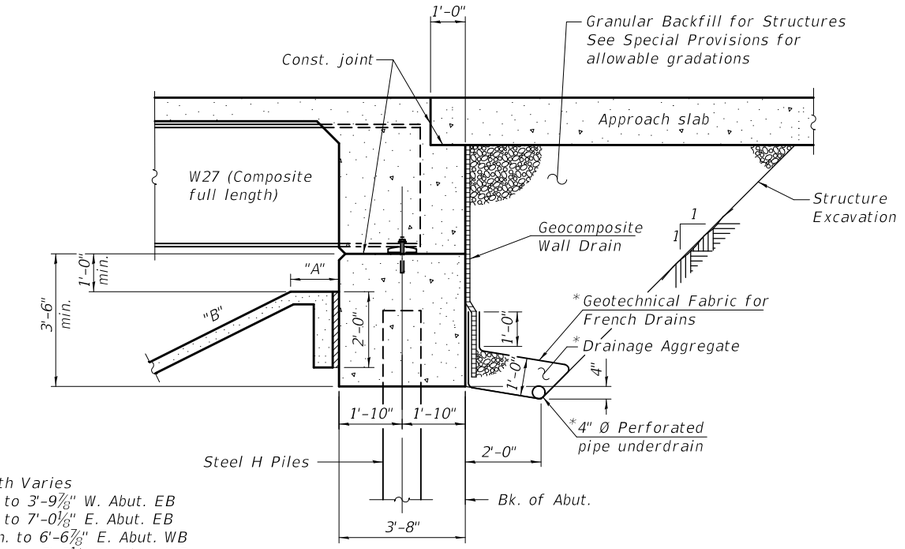
INDEX OF SHEETS

STATION 459+98.70
BUILT 202_ BY
STATE OF ILLINOIS
F.A.P. RTE. 313 SEC. (94-16HB)BR
LOADING HL-93
STRUCTURE NO. 094-0053

NAME PLATE (WB)
See Std. 515001

STATION 459+98.70
BUILT 202_ BY
STATE OF ILLINOIS
F.A.P. RTE. 313 SEC. (94-16HB)BR
LOADING HL-93
STRUCTURE NO. 094-0054

NAME PLATE (EB)
See Std. 515001



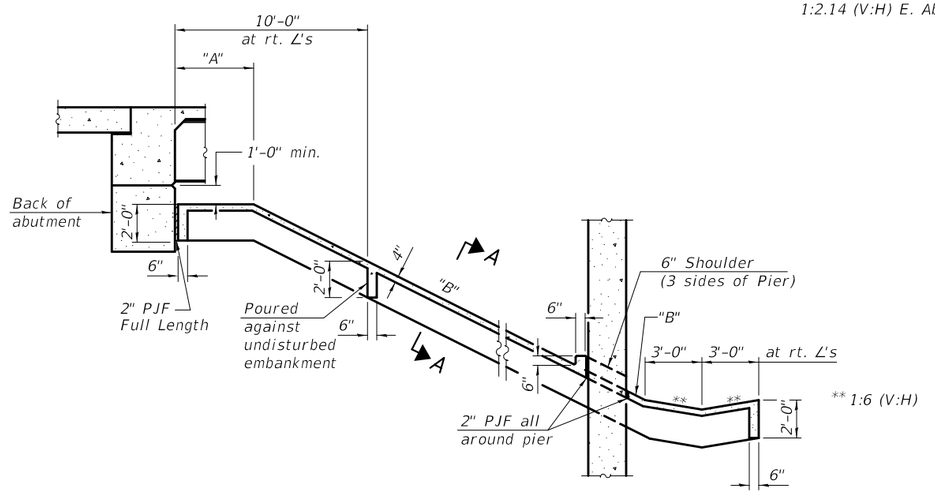
"A" - Berm width Varies
1'-0" min. to 3'-9 7/8" W. Abut. EB
1'-0" min. to 7'-0 1/8" E. Abut. EB
3'-9 1/2" min. to 6'-6 7/8" E. Abut. WB
3'-7 5/8" min. to 5'-2 1/4" W. Abut. WB

"B" - Slope at right angles
1:2.09 (V:H) W. Abut.
1:2.14 (V:H) E. Abut.

SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. ℄'s)

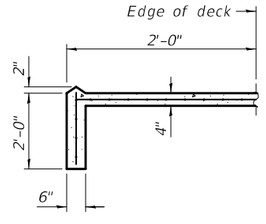
*Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



SECTION THRU CONCRETE SLOPEWALL

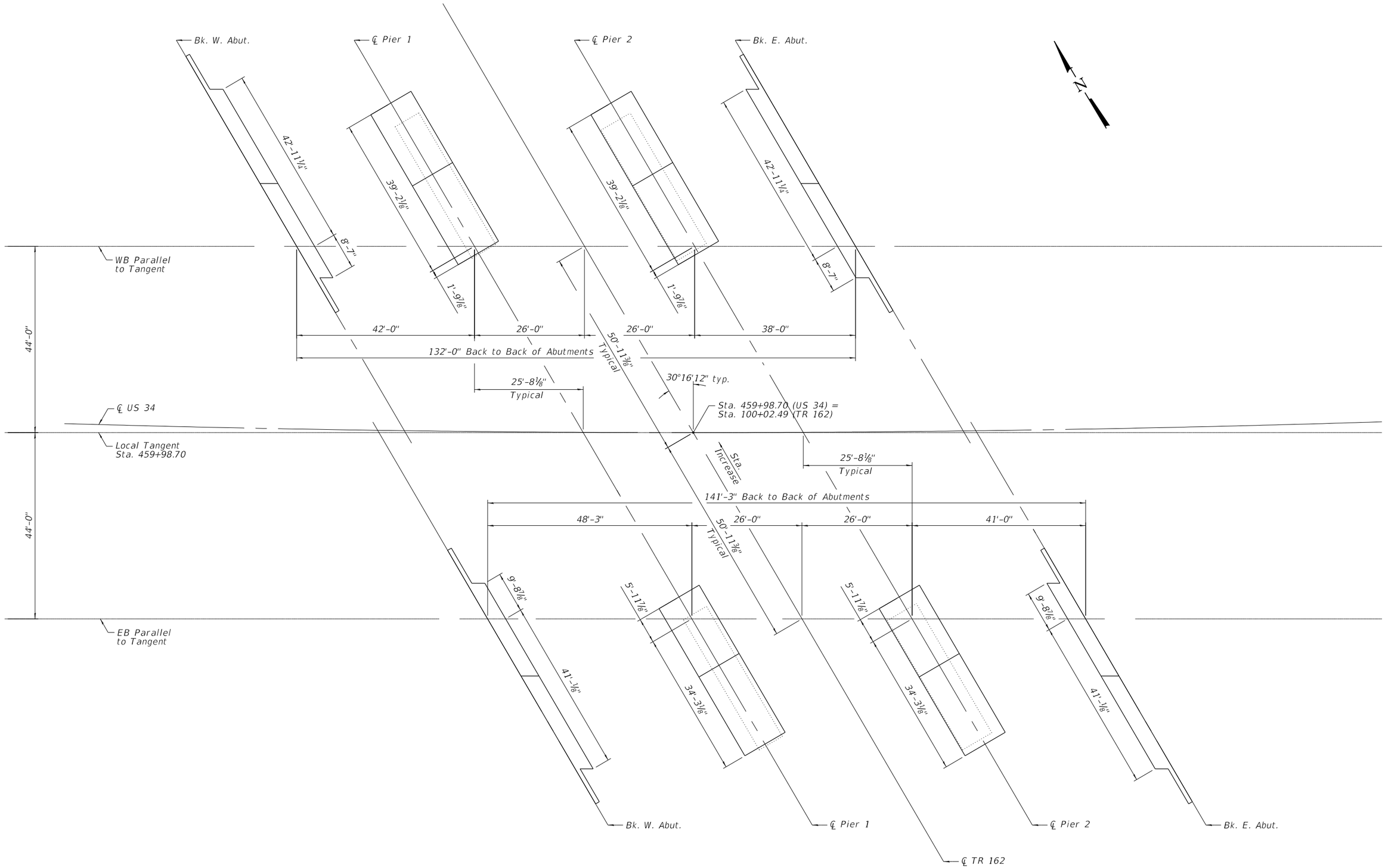
Slopewall shall be reinforced with welded wire fabric, 6"x6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft



SECTION A-A
(Typ. All four corners)
N. Edge WB
S. Edge EB

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			2
Structure Excavation	Cu. Yd.		1887	1887
Granular Backfill For Structures	Cu. Yd.		308	308
Concrete Structures	Cu. Yd.		725.7	725.7
Concrete Superstructure	Cu. Yd.	474.0		474.0
Concrete Superstructure (Approach Slab)	Cu. Yd.	241.3		241.3
Protective Coat	Sq. Yd.	2149	51	2200
Bridge Deck Grooving	Sq. Yd.	1698		1698
Stud Shear Connectors	Each	7992		7992
Reinforcement Bars, Epoxy Coated	Lb.	205,330	96,870	302,200
Name Plates	Each	2		2
Furnishing and Erecting Structural Steel	L.S.	1		1
Furnishing Steel Piles HP10x57	Foot		691	691
Driving Piles	Foot		691	691
Test Piles Steel HP10x57	Each		2	2
Pipe Underdrains for Structures 4"	Ft.		390	390
Geocomposite Wall Drain	Sq. Yd.		177	177
Bar Splicers	Each	1337	520	1857
Anchor Bolts, 1"	Each	96		96
Slope Wall 4 Inch	Sq. Yd.		2007	2007
Temporary Sheet Piling	Sq. Ft.		803	803
Temporary Soil Retention System	Sq. Ft.		7231	7231
Temporary Support System	Each		4	4
Elastomeric Bearing Assembly, Type 1	Each	24		24
Concrete Sealer	Sq. Ft.		1402	1402



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FEHR GRAHAM PROJECT NUMBER: 15-1016G

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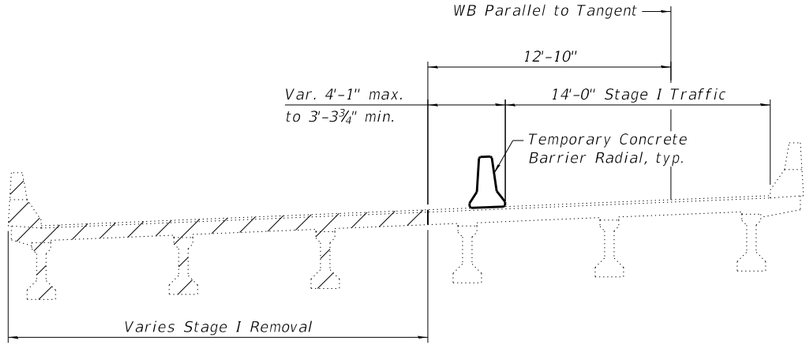
	PLOT DATE = 9/29/2020	CHECKED - MCB	REVISED -

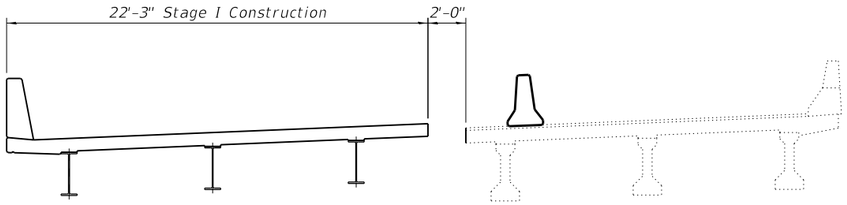
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOOTING LAYOUT
STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
SHEET 3 OF 48 SHEETS

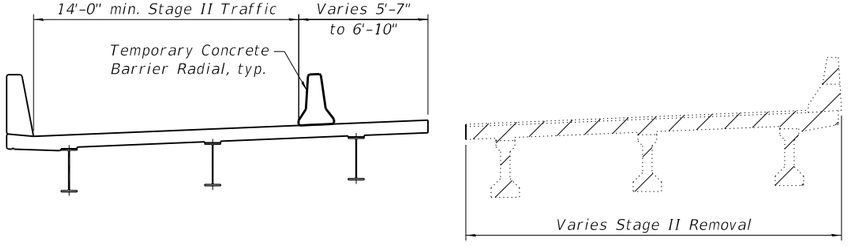
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	20	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			



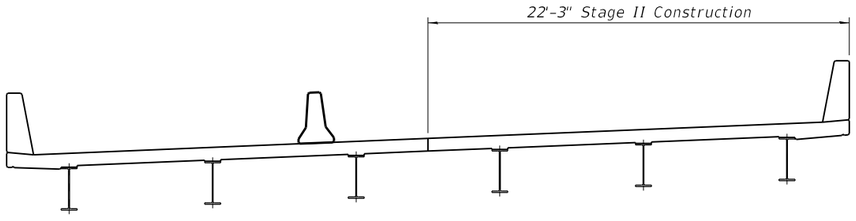
STAGE I REMOVAL



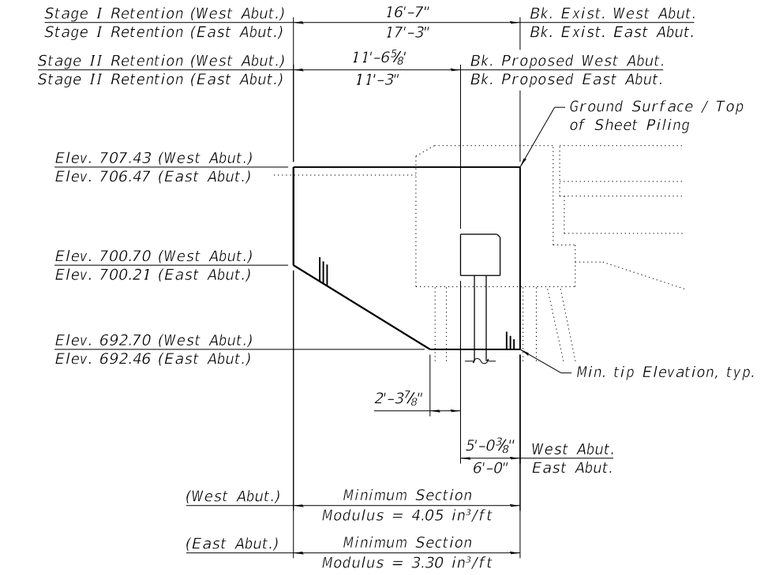
STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION



TEMPORARY SHEET PILING

(West Abutment shown – looking North,
East Abutment Similar – looking South)

Notes:

If the Contractor chooses to alter the temporary cantilever sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

See Roadway Plans for quantity of Temporary Concrete Barrier.

Hatched area indicates Removal of Existing Structures.

The dimensions to the stage removal and stage construction line for the Piers varies from the superstructure. See Pier Stage Removal sketch on sheet 6 of 48 and Pier sheets 38 and 39 of 48 for details.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

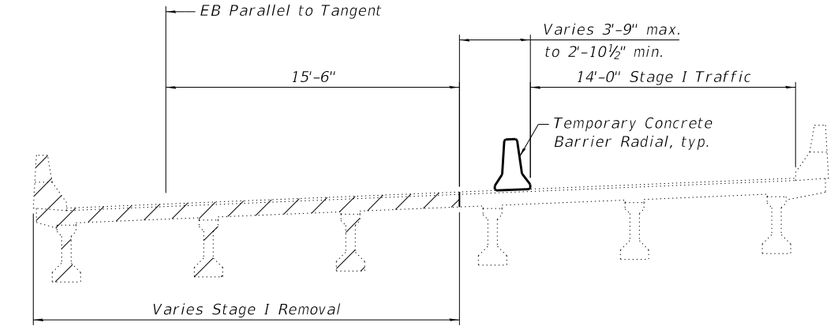
USER NAME = rmcjilton	DESIGNED - RJM	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 8:0.0000 ':' / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 10/3/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

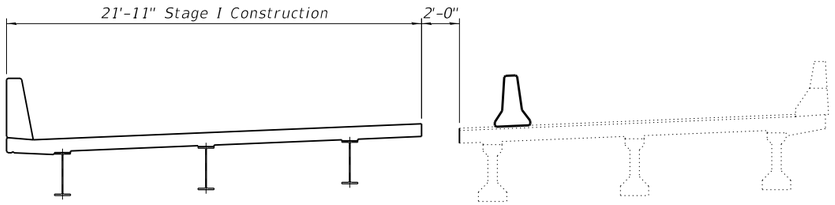
STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 094-0053 (WB)

SHEET 4 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	21	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

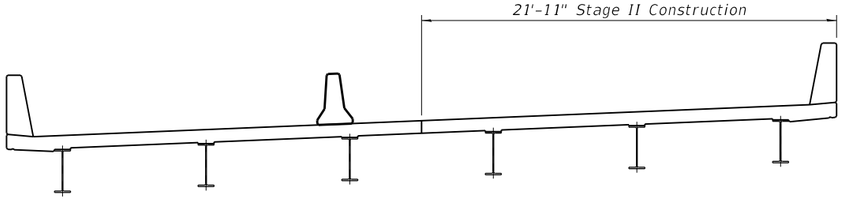


STAGE I REMOVAL

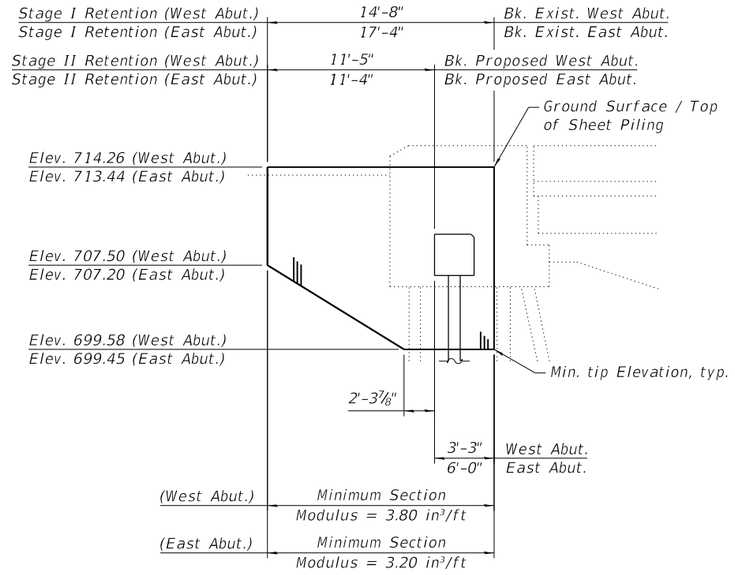


STAGE I CONSTRUCTION

STAGE II REMOVAL



STAGE II CONSTRUCTION



TEMPORARY SHEET PILING

(West Wbutment shown – looking North,
East Abutment Similar – looking South)

Notes:

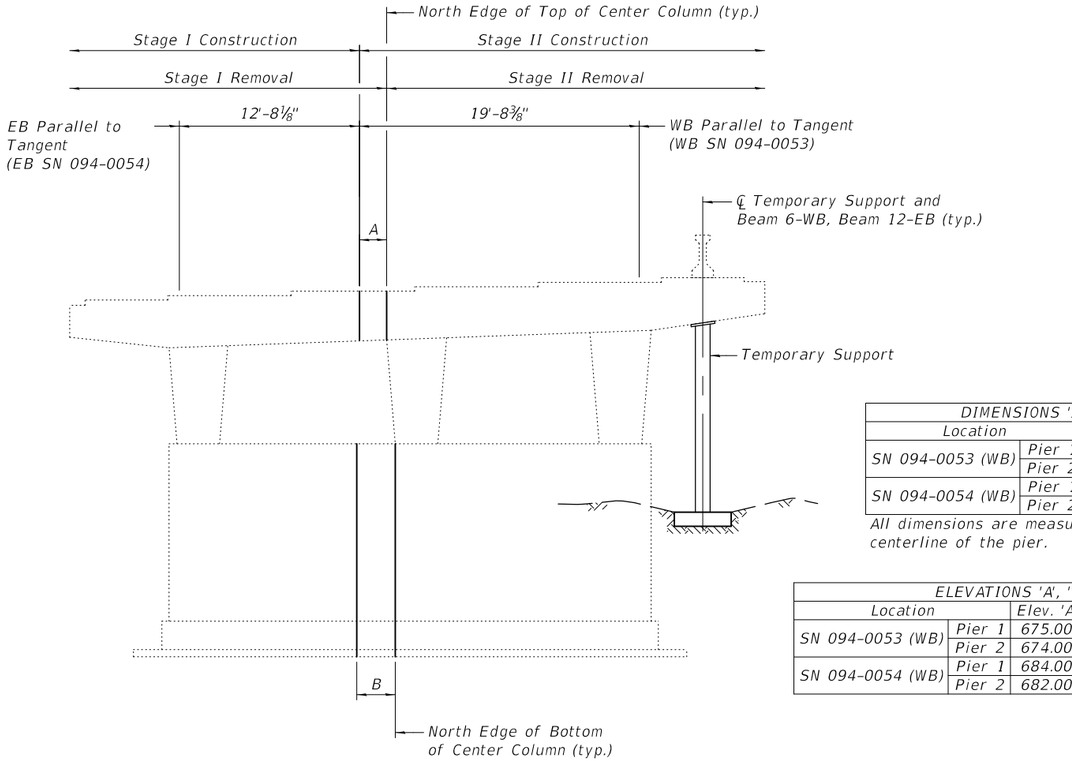
If the Contractor chooses to alter the temporary cantilever sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

See Roadway Plans for quantity of Temporary Concrete Barrier.

Hatched area indicates Removal of Existing Structures.

The dimensions to the stage removal and stage construction line for the Piers varies from the superstructure. See Pier Stage Removal sketch on sheet 6 of 48 and Pier sheets 40 and 41 of 48 for details.

Contractor shall take precautions to not expose piles adjacent to stage construction line under the portion of substructure to remain.



DIMENSIONS 'A', & 'B'			
Location		Dim 'A'	Dim 'B'
SN 094-0053 (WB)	Pier 1	±1'-8 1/4"	±2'-3 1/2"
	Pier 2	±0'-7 1/4"	±1'-1 3/4"
SN 094-0054 (WB)	Pier 1	±1'-11"	±2'-8 1/2"
	Pier 2	±0'-2 1/8"	±0'-10 1/4"

All dimensions are measured along the centerline of the pier.

ELEVATIONS 'A', 'B', 'C' & 'D'					
Location		Elev. 'A'	Elev. 'B'	Elev. 'C'	Elev. 'D'
SN 094-0053 (WB)	Pier 1	675.00	689.2	689.5	689.7
	Pier 2	674.00	689.8	690.3	690.8
SN 094-0054 (WB)	Pier 1	684.00	692.7	693.8	694.9
	Pier 2	682.00	693.9	695.2	696.4

PIER STAGE REMOVAL SKETCH

Note: (Looking East)

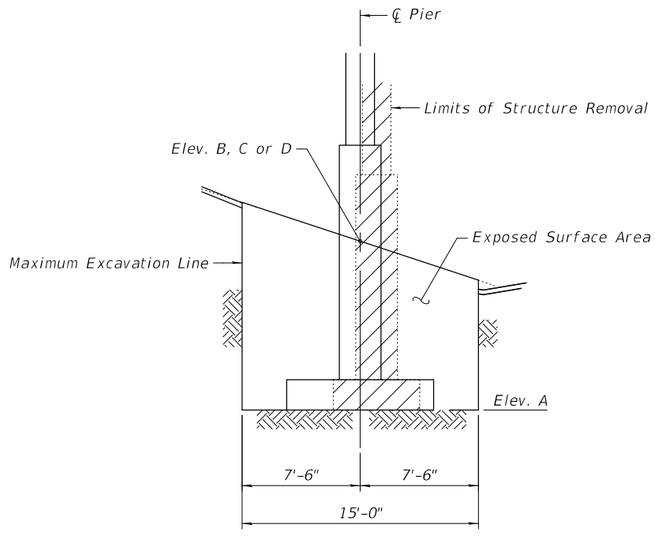
Stage Removal Line for Pier is not the same as Superstructure.

The Temporary Support System shall consist of one support at the south end of the existing pier cap to remain in place for Stage I Traffic and shall be in place prior to Stage I Removal.

Each Temporary Support shall be capable of supporting a vertical load of 150 kips and a lateral load of 15 kips.

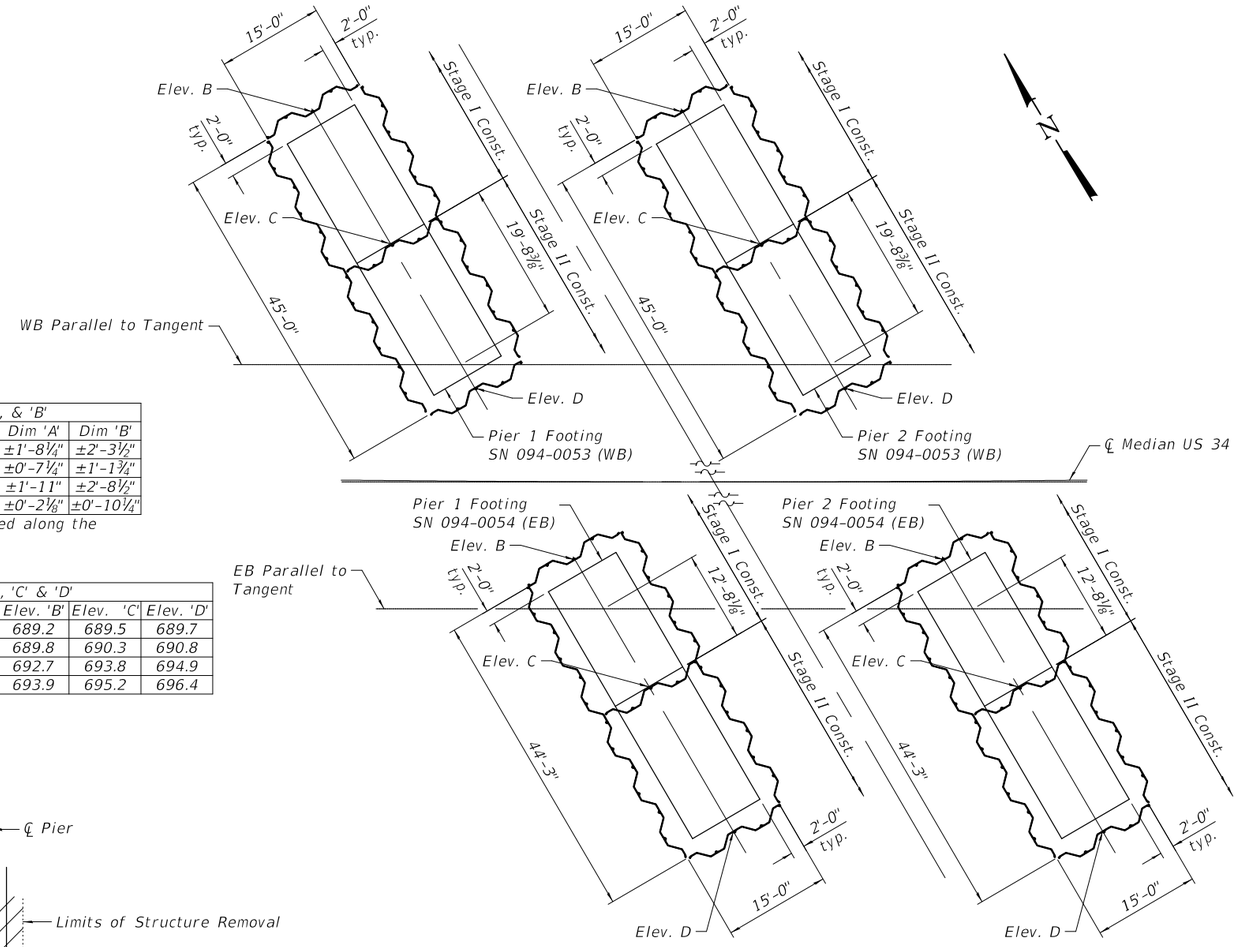
See Special Provisions for Temporary Support System.

Cost of furnishing and installing Temporary Support System is included with the pay item Temporary Support System.



TEMPORARY SOIL RETENTION SYSTEM – ELEVATION

(Pier 1 Shown – Looking North
Pier 2 Similar – Looking South)



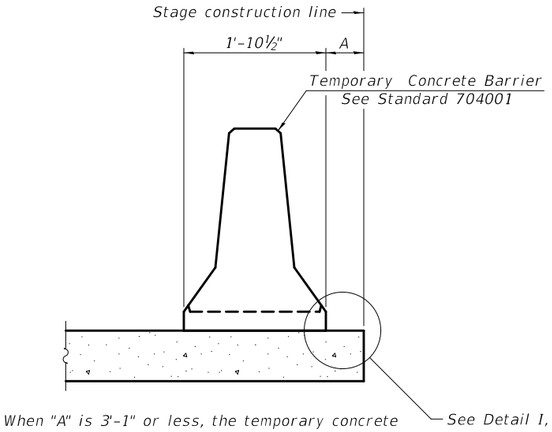
TEMPORARY SOIL RETENTION SYSTEM – PLAN

Note:
A cantilevered sheet piling design does not appear feasible for pier construction excavation and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

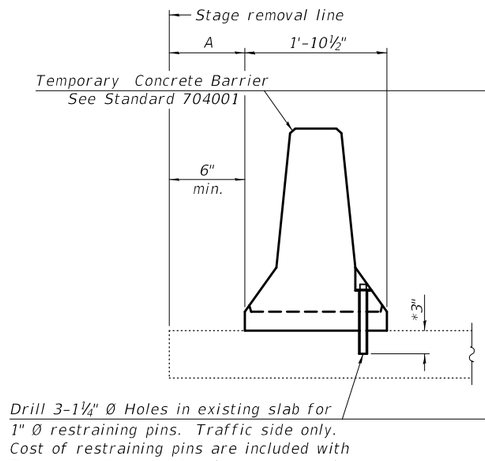
USER NAME = cconnor	DESIGNED - RJM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION DETAILS - PIERS STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
	CHECKED - MCB	REVISED -		
PLOT SCALE = 21:4.000000 ':" / in.	DRAWN - CFC	REVISED -		
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		SHEET 6 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	23	75
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		



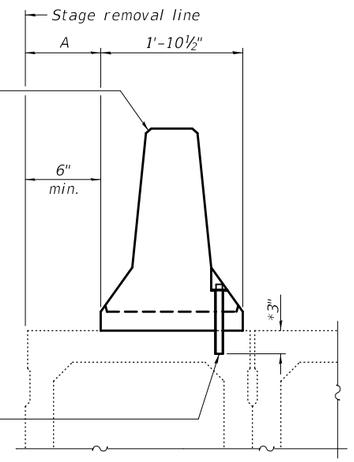
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

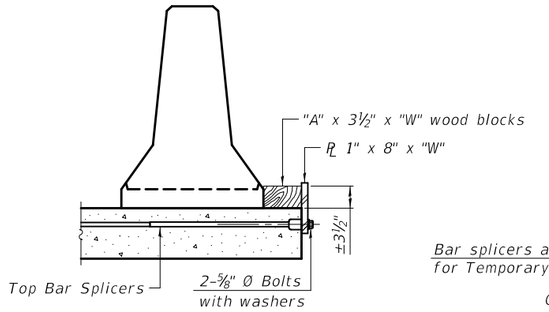
EXISTING SLAB



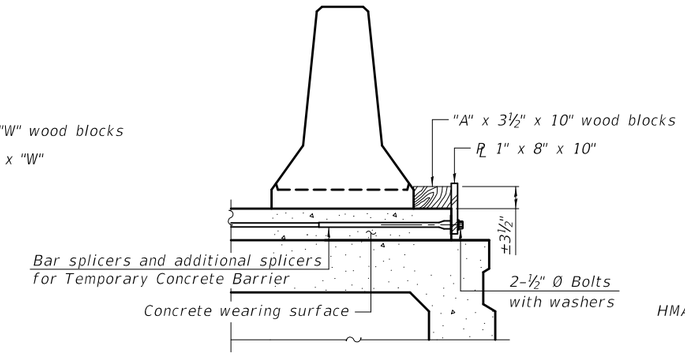
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

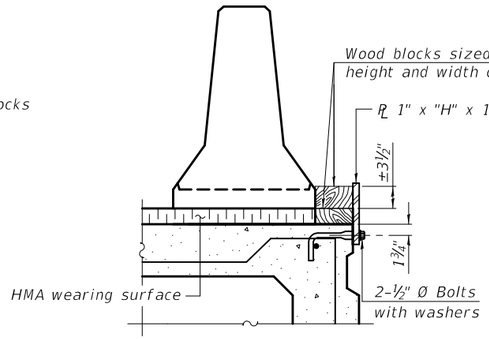
SECTIONS THRU SLAB OR DECK BEAM



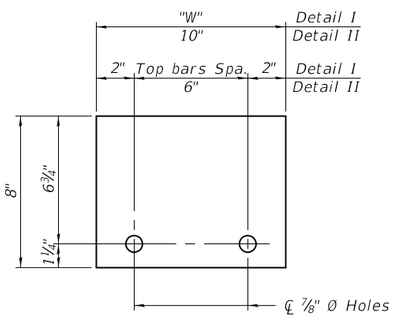
DETAIL I



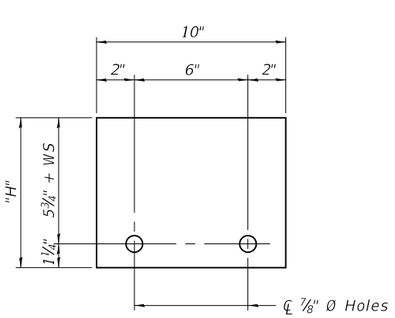
DETAIL II



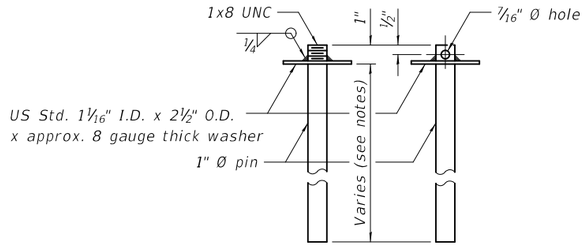
DETAIL III



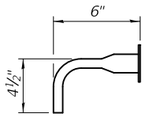
STEEL RETAINER ℄ 1" x 8" x "W"
(Detail I and II)



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



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

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

R-27

2-17-2017

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - MCB	REVISED -
	CHECKED - MSJ	REVISED -
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
SHEET 7 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	24	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

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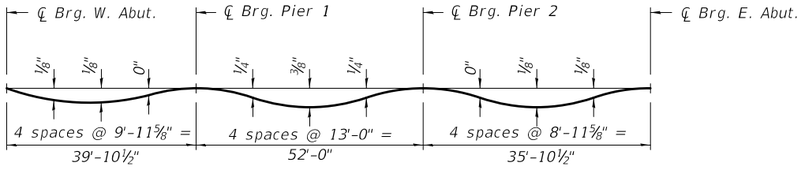
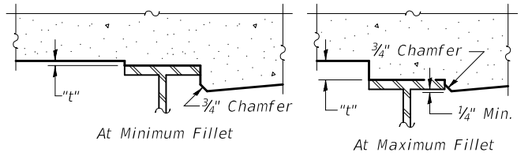


DEAD LOAD DEFLECTION DIAGRAM

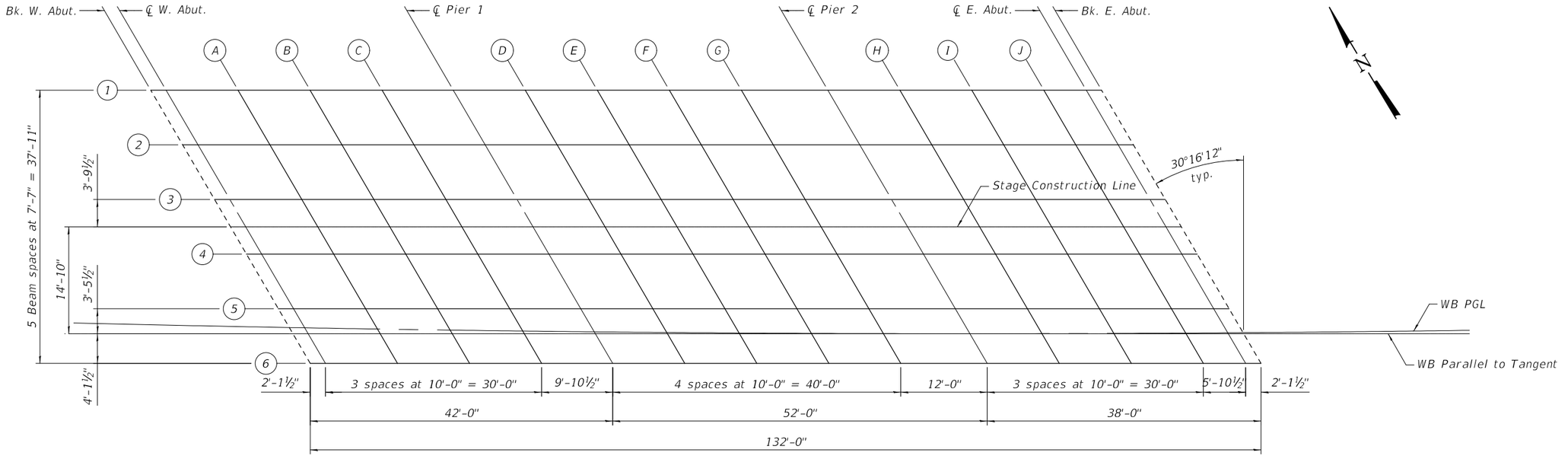
(Includes weight of concrete only.)

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 on sheet 9 & 10 of 48.



To determine "t": After all structural steel has 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 Deflection" shown on sheet 9 & 10 of 48, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



E-S

2-17-2017

FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = cconnor	DESIGNED - MCB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 094-0053 (WB) SHEET 8 OF 48 SHEETS
		CHECKED - MSJ	REVISED -		
	PLOT SCALE = 16:0.000000 ':" / in.	DRAWN - CFC	REVISED -		
	PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	25	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

FEHR GRAHAM PROJECT NUMBER: 15-1016G

MODEL: Default
FILE NAME: g:\e8i_ss4\15\15-1016g\bridge\094-0053_005-68D95-008-tos-0053-wb.dgn

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45883.59	-76.54	706.76	706.76
℄ Brg. W. Abut.	45885.75	-76.58	706.74	706.74
A	45895.89	-76.79	706.61	706.62
B	45906.04	-76.98	706.48	706.49
C	45916.19	-77.15	706.36	706.36
℄ Brg. Pier 1	45926.22	-77.29	706.23	706.23
D	45936.37	-77.42	706.15	706.16
E	45946.52	-77.53	706.08	706.11
F	45956.67	-77.62	706.02	706.05
G	45966.82	-77.70	705.96	705.98
℄ Brg. Pier 2	45979.00	-77.75	705.89	705.89
H	45989.15	-77.78	705.84	705.84
I	45999.30	-77.79	705.78	705.78
J	46009.46	-77.78	705.72	705.73
℄ Brg. E. Abut.	46015.42	-77.77	705.69	705.69
Bk. E. Abut.	46017.58	-77.76	705.68	705.68

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45888.25	-69.05	706.99	706.99
℄ Brg. W. Abut.	45890.40	-69.10	706.96	706.96
A	45900.53	-69.30	706.85	706.86
B	45910.67	-69.47	706.74	706.75
C	45920.80	-69.63	706.63	706.63
℄ Brg. Pier 1	45930.81	-69.77	706.52	706.52
D	45940.94	-69.89	706.46	706.47
E	45951.08	-69.99	706.40	706.42
F	45961.22	-70.08	706.34	706.36
G	45971.35	-70.14	706.28	706.29
℄ Brg. Pier 2	45983.51	-70.19	706.21	706.21
H	45993.65	-70.21	706.15	706.15
I	46003.79	-70.21	706.10	706.10
J	46013.93	-70.19	706.04	706.04
℄ Brg. E. Abut.	46019.88	-70.17	706.01	706.01
Bk. E. Abut.	46022.04	-70.16	706.00	706.00

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45892.89	-61.56	707.22	707.22
℄ Brg. W. Abut.	45895.04	-61.61	707.20	707.20
A	45905.15	-61.79	707.10	707.11
B	45915.27	-61.96	707.01	707.02
C	45925.39	-62.12	706.91	706.91
℄ Brg. Pier 1	45935.39	-62.24	706.83	706.83
D	45945.51	-62.36	706.77	706.78
E	45955.63	-62.45	706.71	706.74
F	45965.75	-62.52	706.65	706.68
G	45975.87	-62.58	706.59	706.61
℄ Brg. Pier 2	45988.02	-62.61	706.52	706.52
H	45998.14	-62.62	706.47	706.47
I	46008.26	-62.62	706.41	706.42
J	46018.38	-62.59	706.36	706.36
℄ Brg. E. Abut.	46024.33	-62.56	706.32	706.32
Bk. E. Abut.	46026.48	-62.55	706.31	706.31

STAGED CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45895.20	-57.82	707.35	707.35
℄ Brg. W. Abut.	45897.35	-57.86	707.33	707.33
A	45907.46	-58.04	707.24	707.25
B	45917.57	-58.21	707.15	707.16
C	45927.68	-58.35	707.06	707.06
℄ Brg. Pier 1	45937.67	-58.48	706.99	706.99
D	45947.79	-58.59	706.93	706.94
E	45957.90	-58.68	706.87	706.89
F	45968.01	-58.74	706.81	706.84
G	45978.13	-58.79	706.75	706.77
℄ Brg. Pier 2	45990.26	-58.83	706.68	706.68
H	46000.38	-58.83	706.63	706.63
I	46010.50	-58.82	706.57	706.58
J	46020.61	-58.79	706.51	706.52
℄ Brg. E. Abut.	46026.55	-58.76	706.48	706.48
Bk. E. Abut.	46028.70	-58.75	706.47	706.47

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -	
	CHECKED - MSJ	REVISED -	
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 094-0053 (WB)
SHEET 9 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	26	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45897.52	-54.07	707.47	707.47
℄ Brg. W. Abut.	45899.66	-54.11	707.46	707.46
A	45909.76	-54.29	707.37	707.38
B	45919.87	-54.45	707.29	707.30
C	45929.97	-54.59	707.21	707.21
℄ Brg. Pier 1	45939.95	-54.71	707.15	707.15
D	45950.06	-54.82	707.09	707.10
E	45960.17	-54.90	707.03	707.05
F	45970.27	-54.96	706.97	706.99
G	45980.38	-55.01	706.91	706.92
℄ Brg. Pier 2	45992.51	-55.04	706.84	706.84
H	46002.61	-55.04	706.78	706.78
I	46012.72	-55.02	706.73	706.73
J	46022.83	-54.99	706.67	706.68
℄ Brg. E. Abut.	46028.77	-54.96	706.64	706.64
Bk. E. Abut.	46030.91	-54.94	706.63	706.63

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45902.13	-46.57	707.74	707.74
℄ Brg. W. Abut.	45904.27	-46.61	707.72	707.72
A	45914.36	-46.78	707.65	707.66
B	45924.45	-46.93	707.59	707.60
C	45934.54	-47.07	707.52	707.52
℄ Brg. Pier 1	45944.51	-47.18	707.46	707.46
D	45954.60	-47.27	707.40	707.41
E	45964.69	-47.35	707.34	707.36
F	45974.78	-47.40	707.28	707.31
G	45984.87	-47.44	707.22	707.24
℄ Brg. Pier 2	45996.98	-47.46	707.16	707.16
H	46007.08	-47.45	707.10	707.10
I	46017.17	-47.43	707.04	707.05
J	46027.26	-47.38	706.99	706.99
℄ Brg. E. Abut.	46033.19	-47.35	706.96	706.96
Bk. E. Abut.	46035.33	-47.33	706.95	706.95

WB PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45903.71	-44.00	707.83	707.83
℄ Brg. W. Abut.	45905.87	-44.00	707.82	707.82
A	45916.06	-44.00	707.76	707.77
B	45926.24	-44.00	707.71	707.72
C	45936.40	-44.00	707.65	707.65
℄ Brg. Pier 1	45946.43	-44.00	707.59	707.59
D	45956.56	-44.00	707.54	707.55
E	45966.69	-44.00	707.48	707.50
F	45976.81	-44.00	707.42	707.45
G	45986.91	-44.00	707.37	707.38
℄ Brg. Pier 2	45999.02	-44.00	707.30	707.30
H	46009.10	-44.00	707.24	707.24
I	46019.17	-44.00	707.19	707.19
J	46029.23	-44.00	707.13	707.13
℄ Brg. E. Abut.	46035.13	-44.00	707.10	707.10
Bk. E. Abut.	46037.26	-44.00	707.09	707.09

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45906.73	-39.07	708.01	708.01
℄ Brg. W. Abut.	45908.87	-39.11	708.00	708.00
A	45918.94	-39.27	707.95	707.96
B	45929.02	-39.41	707.89	707.90
C	45939.09	-39.54	707.83	707.84
℄ Brg. Pier 1	45949.05	-39.64	707.77	707.77
D	45959.12	-39.73	707.71	707.72
E	45969.20	-39.79	707.65	707.68
F	45979.27	-39.84	707.60	707.62
G	45989.35	-39.87	707.54	707.55
℄ Brg. Pier 2	46001.45	-39.87	707.47	707.47
H	46011.52	-39.86	707.42	707.42
I	46021.60	-39.83	707.36	707.37
J	46031.68	-39.77	707.31	707.31
℄ Brg. E. Abut.	46037.60	-39.73	707.28	707.28
Bk. E. Abut.	46039.74	-39.71	707.27	707.27

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

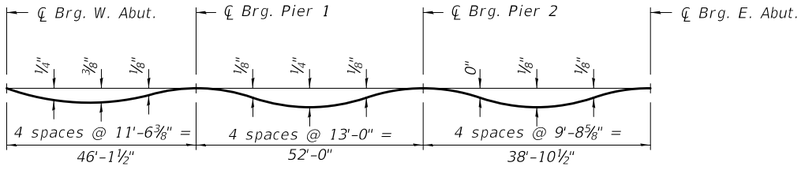
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -	
	CHECKED - MSJ	REVISED -	
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 094-0053 (WB)
SHEET 10 OF 48 SHEETS

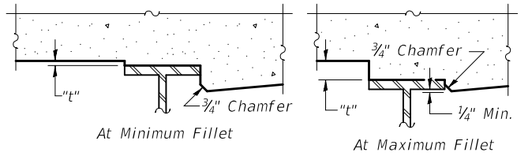
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	27	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			



DEAD LOAD DEFLECTION DIAGRAM

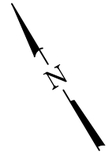
(Includes weight of concrete only.)

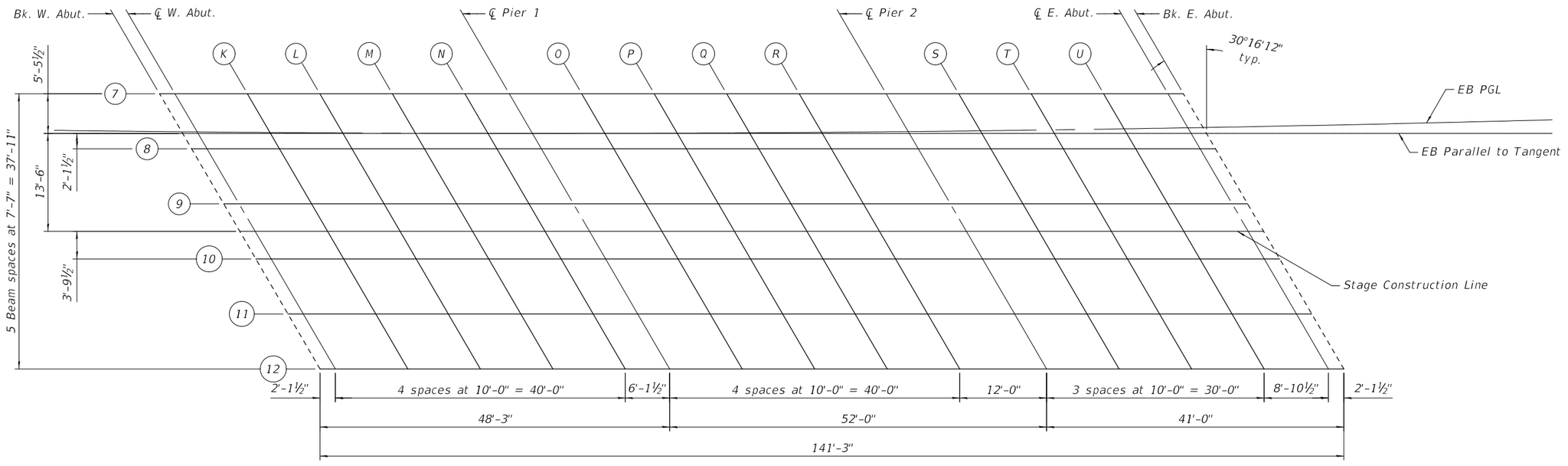
Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 12 & 13 of 48.



To determine "t": After all structural steel has 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 Deflection" shown on sheet 12 & 13 of 48, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS





E-S

2-17-2017

FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = cconnor	DESIGNED - MCB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 094-0054 (EB)
		CHECKED - MSJ	REVISED -		
	PLOT SCALE = 16:0.000000 ':" / in.	DRAWN - CFC	REVISED -		SHEET 11 OF 48 SHEETS
	PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	28	75
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		

FEHR GRAHAM PROJECT NUMBER: 15-1016G

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BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45947.33	38.80	713.42	713.42
℄ Brg. W. Abut.	45949.43	38.78	713.41	713.41
K	45959.36	38.69	713.35	713.37
L	45969.29	38.62	713.30	713.32
M	45979.21	38.58	713.24	713.26
N	45989.14	38.55	713.18	713.19
℄ Brg. Pier 1	45995.22	38.54	713.15	713.15
O	46005.15	38.55	713.09	713.10
P	46015.08	38.57	713.04	713.06
Q	46025.00	38.61	712.99	713.01
R	46034.93	38.67	712.94	712.95
℄ Brg. Pier 2	46046.84	38.77	712.87	712.87
S	46056.76	38.87	712.82	712.83
T	46066.69	38.99	712.77	712.79
U	46076.62	39.13	712.73	712.73
℄ Brg. E. Abut.	46085.43	39.27	712.68	712.68
Bk. E. Abut.	46087.53	39.30	712.67	712.67

EB PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45950.41	44.00	713.64	713.64
℄ Brg. W. Abut.	45952.52	44.00	713.63	713.63
K	45962.48	44.00	713.58	713.59
L	45972.44	44.00	713.52	713.55
M	45982.38	44.00	713.47	713.48
N	45992.31	44.00	713.41	713.42
℄ Brg. Pier 1	45998.38	44.00	713.38	713.38
O	46008.29	44.00	713.32	713.33
P	46018.19	44.00	713.27	713.29
Q	46028.08	44.00	713.21	713.23
R	46037.96	44.00	713.16	713.17
℄ Brg. Pier 2	46049.80	44.00	713.09	713.09
S	46059.66	44.00	713.04	713.04
T	46069.50	44.00	712.98	712.99
U	46079.34	44.00	712.93	712.94
℄ Brg. E. Abut.	46088.06	44.00	712.88	712.88
Bk. E. Abut.	46090.14	44.00	712.87	712.87

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45951.79	46.34	713.74	713.74
℄ Brg. W. Abut.	45953.89	46.32	713.73	713.73
K	45963.81	46.24	713.67	713.69
L	45973.72	46.19	713.61	713.64
M	45983.63	46.15	713.56	713.57
N	45993.54	46.13	713.50	713.50
℄ Brg. Pier 1	45999.62	46.12	713.47	713.47
O	46009.53	46.14	713.41	713.42
P	46019.44	46.17	713.36	713.38
Q	46029.35	46.22	713.31	713.33
R	46039.26	46.28	713.25	713.27
℄ Brg. Pier 2	46051.16	46.39	713.19	713.19
S	46061.07	46.50	713.14	713.15
T	46070.98	46.63	713.10	713.11
U	46080.89	46.78	713.05	713.06
℄ Brg. E. Abut.	46089.68	46.93	713.01	713.01
Bk. E. Abut.	46091.79	46.96	713.00	713.00

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45956.24	53.88	714.05	714.05
℄ Brg. W. Abut.	45958.34	53.87	714.04	714.04
K	45968.24	53.80	713.98	714.00
L	45978.13	53.75	713.93	713.95
M	45988.03	53.72	713.87	713.89
N	45997.93	53.71	713.82	713.82
℄ Brg. Pier 1	46004.00	53.71	713.78	713.78
O	46013.89	53.73	713.73	713.74
P	46023.79	53.77	713.68	713.70
Q	46033.69	53.83	713.62	713.65
R	46043.59	53.90	713.57	713.59
℄ Brg. Pier 2	46055.46	54.02	713.51	713.51
S	46065.36	54.14	713.46	713.47
T	46075.25	54.28	713.42	713.43
U	46085.15	54.43	713.37	713.38
℄ Brg. E. Abut.	46093.93	54.59	713.33	713.33
Bk. E. Abut.	46096.04	54.63	713.32	713.32

STAGED CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45958.46	57.66	714.21	714.21
℄ Brg. W. Abut.	45960.56	57.64	714.20	714.20
K	45970.45	57.58	714.14	714.16
L	45980.34	57.53	714.09	714.11
M	45990.23	57.51	714.03	714.05
N	46000.12	57.50	713.98	713.98
℄ Brg. Pier 1	46006.18	57.51	713.94	713.94
O	46016.07	57.53	713.89	713.90
P	46025.96	57.57	713.84	713.85
Q	46035.85	57.63	713.78	713.81
R	46045.74	57.71	713.73	713.74
℄ Brg. Pier 2	46057.61	57.84	713.67	713.67
S	46067.50	57.96	713.62	713.63
T	46077.39	58.10	713.58	713.59
U	46087.28	58.26	713.53	713.54
℄ Brg. E. Abut.	46096.05	58.42	713.49	713.49
Bk. E. Abut.	46098.15	58.46	713.48	713.48

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45960.67	61.43	714.37	714.37
℄ Brg. W. Abut.	45962.77	61.42	714.36	714.36
K	45972.65	61.36	714.30	714.32
L	45982.54	61.32	714.24	714.27
M	45992.42	61.30	714.19	714.21
N	46002.31	61.29	714.13	714.14
℄ Brg. Pier 1	46008.36	61.30	714.10	714.10
O	46018.25	61.33	714.05	714.05
P	46028.13	61.38	714.00	714.01
Q	46038.01	61.44	713.94	713.96
R	46047.90	61.53	713.89	713.90
℄ Brg. Pier 2	46059.75	61.65	713.83	713.83
S	46069.64	61.78	713.78	713.79
T	46079.52	61.93	713.74	713.75
U	46089.40	62.09	713.69	713.70
℄ Brg. E. Abut.	46098.17	62.25	713.65	713.65
Bk. E. Abut.	46100.27	62.29	713.64	713.64

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45965.09	68.98	714.69	714.69
℄ Brg. W. Abut.	45967.19	68.97	714.67	714.67
K	45977.06	68.92	714.62	714.63
L	45986.93	68.89	714.56	714.59
M	45996.80	68.88	714.51	714.52
N	46006.67	68.88	714.45	714.46
℄ Brg. Pier 1	46012.72	68.89	714.42	714.42
O	46022.58	68.93	714.37	714.37
P	46032.45	68.99	714.31	714.33
Q	46042.32	69.06	714.26	714.28
R	46052.19	69.15	714.21	714.22
℄ Brg. Pier 2	46064.03	69.29	714.15	714.15
S	46073.90	69.42	714.10	714.11
T	46083.77	69.58	714.06	714.07
U	46093.64	69.75	714.01	714.02
℄ Brg. E. Abut.	46102.39	69.92	713.97	713.97
Bk. E. Abut.	46104.49	69.96	713.96	713.96

BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	45969.51	76.54	715.00	715.00
℄ Brg. W. Abut.	45971.60	76.53	714.99	714.99
K	45981.45	76.49	714.93	714.95
L	45991.31	76.46	714.88	714.90
M	46001.16	76.46	714.82	714.84
N	46011.02	76.47	714.77	714.77
℄ Brg. Pier 1	46017.06	76.49	714.74	714.74
O	46026.91	76.54	714.68	714.69
P	46036.77	76.60	714.63	714.65
Q	46046.62	76.68	714.58	714.60
R	46056.48	76.78	714.53	714.54
℄ Brg. Pier 2	46068.30	76.93	714.47	714.47
S	46078.16	77.07	714.43	714.43
T	46088.01	77.24	714.38	714.39
U	46097.86	77.42	714.33	714.34
℄ Brg. E. Abut.	46106.61	77.59	714.29	714.29
Bk. E. Abut.	46108.70	77.64	714.28	714.28

FACE OF N. CURB / PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	45852.91	-78.07	707.07
A1	45863.06	-78.07	706.95
A2	45873.21	-78.18	706.83
E. End of W. Appr. Slab	45883.61	-78.41	706.69

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	45866.05	-57.16	707.61
A1	45876.16	-57.41	707.52
A2	45886.27	-57.63	707.43
E. End of W. Appr. Slab	45896.38	-57.84	707.34

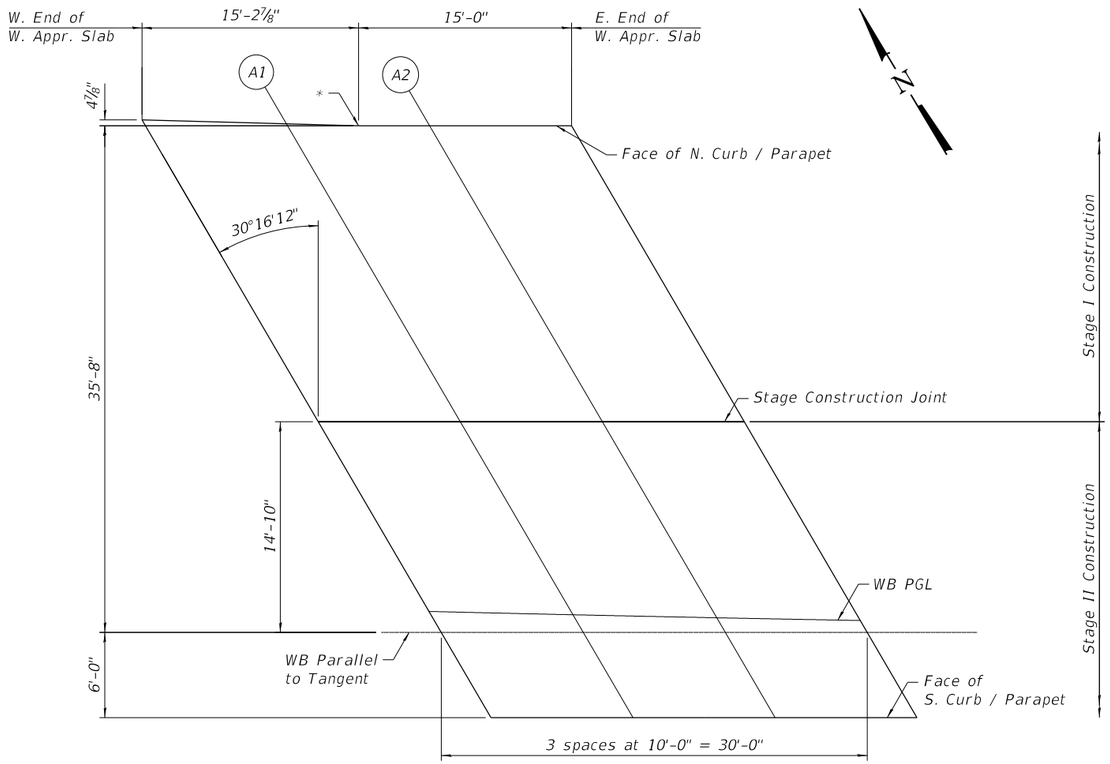
WB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	45874.25	-44.00	707.99
A1	45884.48	-44.00	707.94
A2	45894.69	-44.00	707.88
E. End of W. Appr. Slab	45904.89	-44.00	707.82

FACE OF S. CURB / PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	45878.82	-36.63	708.23
A1	45888.89	-36.85	708.18
A2	45898.96	-37.05	708.13
E. End of W. Appr. Slab	45909.03	-37.23	708.08

* Kink Point. Curb taper begins where curb meets parapet



PLAN

E-AS

2-17-2017

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = rmcjilton	DESIGNED - MCB/RJM	REVISED -	
	CHECKED - MSJ	REVISED -	
PLOT SCALE = 10:8.000000 ':" / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 10/3/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 094-0053 (WB)

SHEET 14 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	31	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

FACE OF N. CURB / PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	46015.30	-79.64	705.61
A3	46025.45	-79.60	705.55
A4	46035.61	-79.54	705.50
E. End of E. Appr. Slab	46045.76	-79.46	705.45

STAGE CONSTRUCTION JOINT

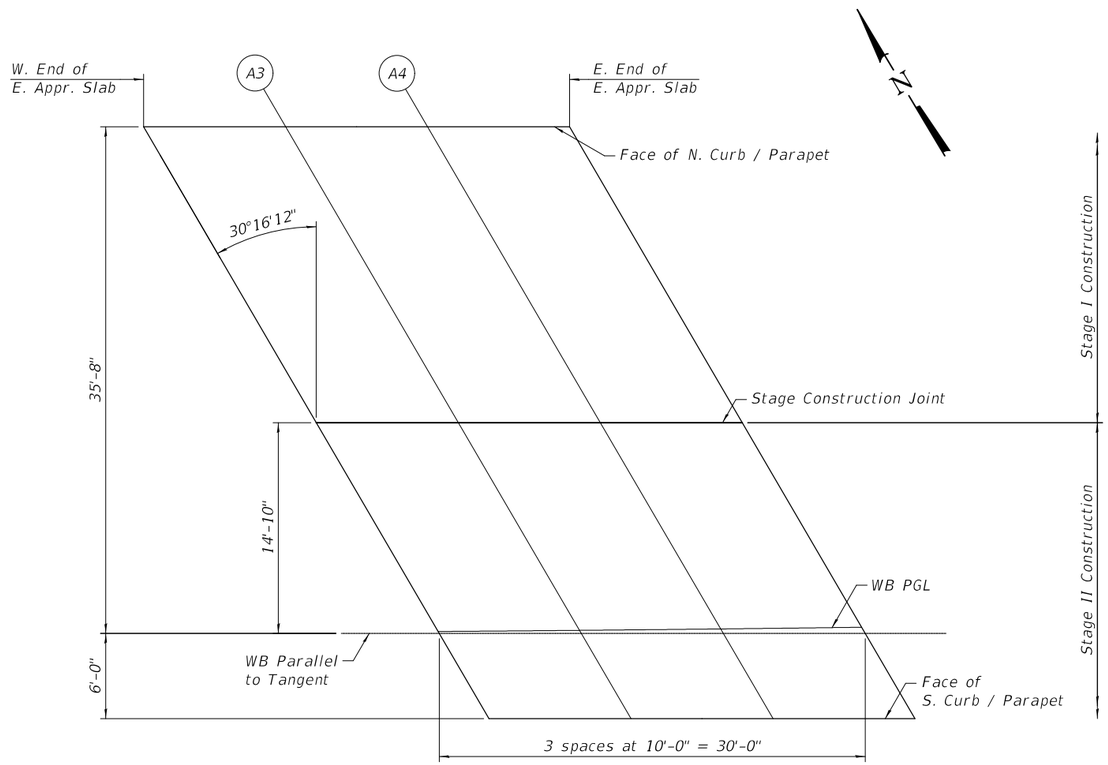
Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	46027.53	-58.75	706.48
A3	46037.64	-58.69	706.42
A4	46047.76	-58.60	706.37
E. End of E. Appr. Slab	46057.87	-58.50	706.32

WB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	46036.10	-44.00	707.09
A3	46046.14	-44.00	707.04
A4	46056.16	-44.00	706.98
E. End of E. Appr. Slab	46066.18	-44.00	706.93

FACE OF S. CURB / PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	46039.66	-37.84	707.35
A3	46049.74	-37.75	707.30
A4	46059.81	-37.64	707.25
E. End of E. Appr. Slab	46069.88	-37.52	707.20



PLAN

E-AS

2-17-2017

FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = cconnor	DESIGNED - MCB/RJM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF EAST APPROACH SLAB ELEVATIONS STRUCTURE NO. 094-0053 (WB)
		CHECKED - MSJ	REVISED -		
	PLOT SCALE = 10:8.000000 ':" / in.	DRAWN - CFC	REVISED -		SHEET 15 OF 48 SHEETS
	PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	32	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

FEHR GRAHAM PROJECT NUMBER: 15-1016G

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FACE OF N. CURB / PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	45917.78	37.63	713.55
B1	45927.71	37.49	713.48
B2	45937.64	37.36	713.41
E. End of W. Appr. Slab	45947.57	37.25	713.35

EB PGL

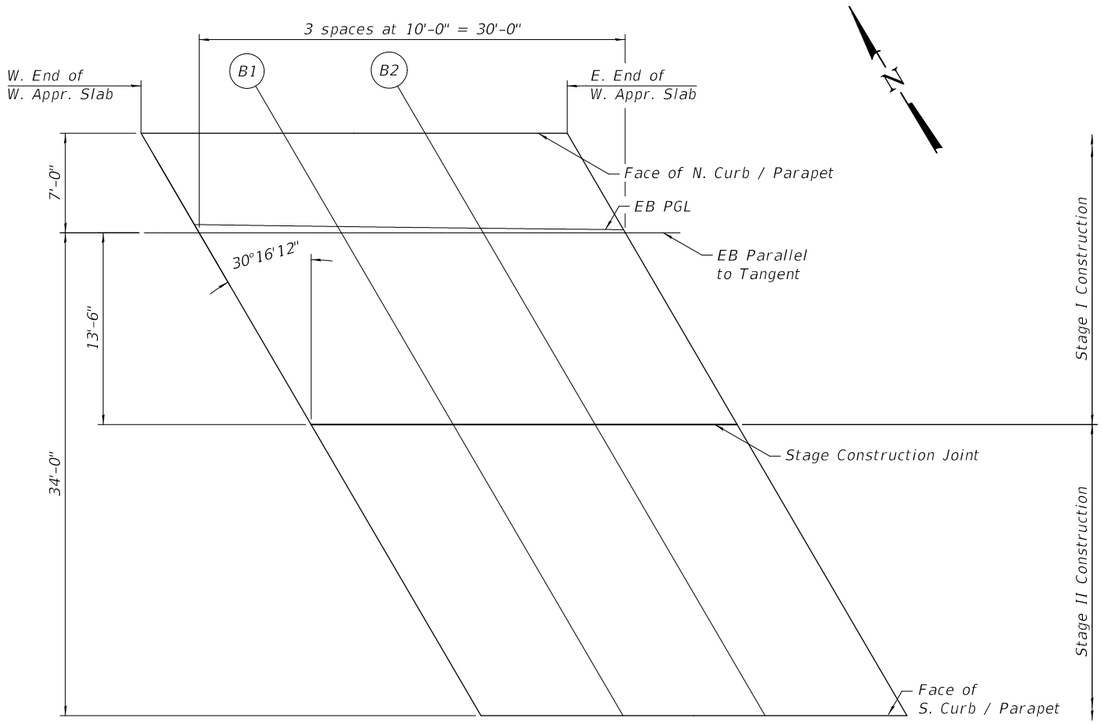
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	45921.60	44.00	713.80
B1	45931.60	44.00	713.75
B2	45941.59	44.00	713.69
E. End of W. Appr. Slab	45951.56	44.00	713.64

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	45929.93	57.96	714.38
B1	45939.82	57.84	714.32
B2	45949.71	57.73	714.26
E. End of W. Appr. Slab	45959.60	57.65	714.21

FACE OF S. CURB / PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	45941.98	78.31	715.23
B1	45951.83	78.21	715.17
B2	45961.69	78.13	715.12
E. End of W. Appr. Slab	45971.54	78.07	715.06



PLAN

E-AS

2-17-2017

MODEL: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - MCB/RJM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF WEST APPROACH SLAB ELEVATIONS STRUCTURE NO. 094-0054 (EB)
	CHECKED - MSJ	REVISED -		
PLOT SCALE = 10:8.000000 ':" / in.	DRAWN - CFC	REVISED -		SHEET 16 OF 48 SHEETS
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	33	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

FACE OF N. CURB / PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	46085.52	37.73	712.61
B3	46095.45	37.90	712.57
B4	46105.38	37.97	712.52
E. End of E. Appr. Slab	46115.08	37.92	712.46

EB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	46089.00	44.00	712.88
B3	46098.82	44.00	712.82
B4	46108.62	44.00	712.77
E. End of E. Appr. Slab	46118.41	44.00	712.71

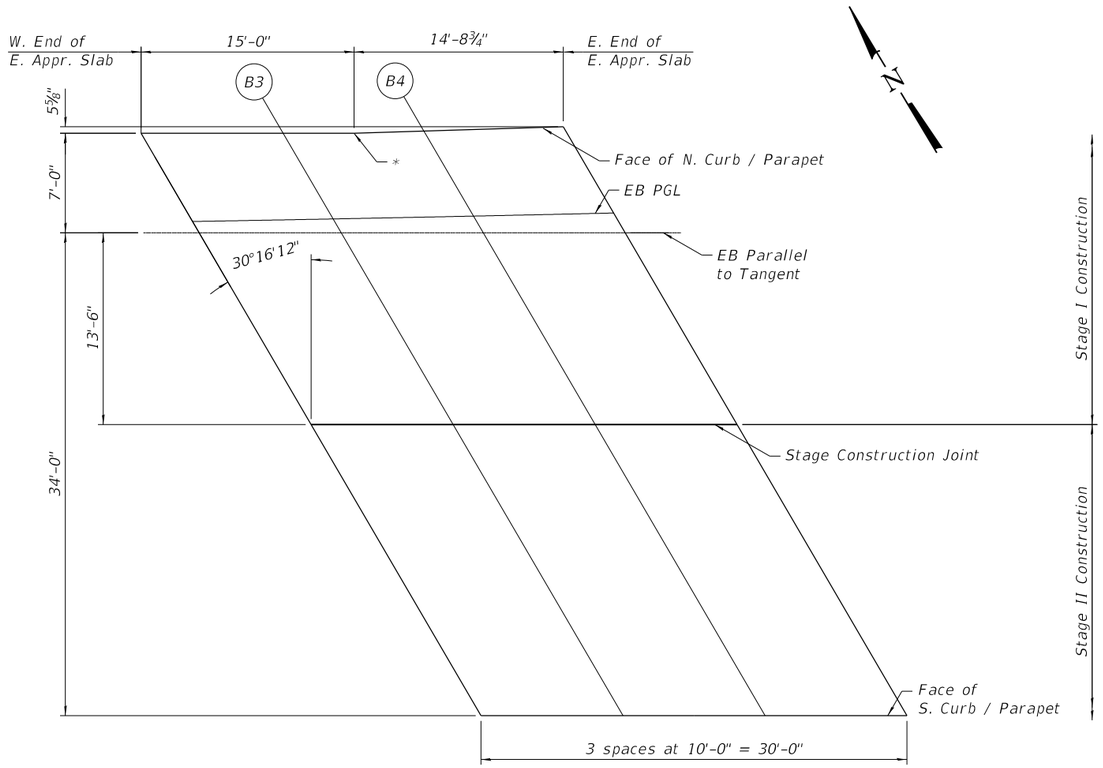
STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	46097.02	58.44	713.48
B3	46106.90	58.64	713.44
B4	46116.79	58.85	713.39
E. End of E. Appr. Slab	46126.68	59.09	713.35

FACE OF S. CURB / PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	46108.42	79.17	714.35
B3	46118.27	79.39	714.31
B4	46128.11	79.63	714.26
E. End of E. Appr. Slab	46137.96	79.89	714.22

* Kink Point. Curb taper begins where curb meets parapet



PLAN

E-AS 2-17-2017

MODEL: Default
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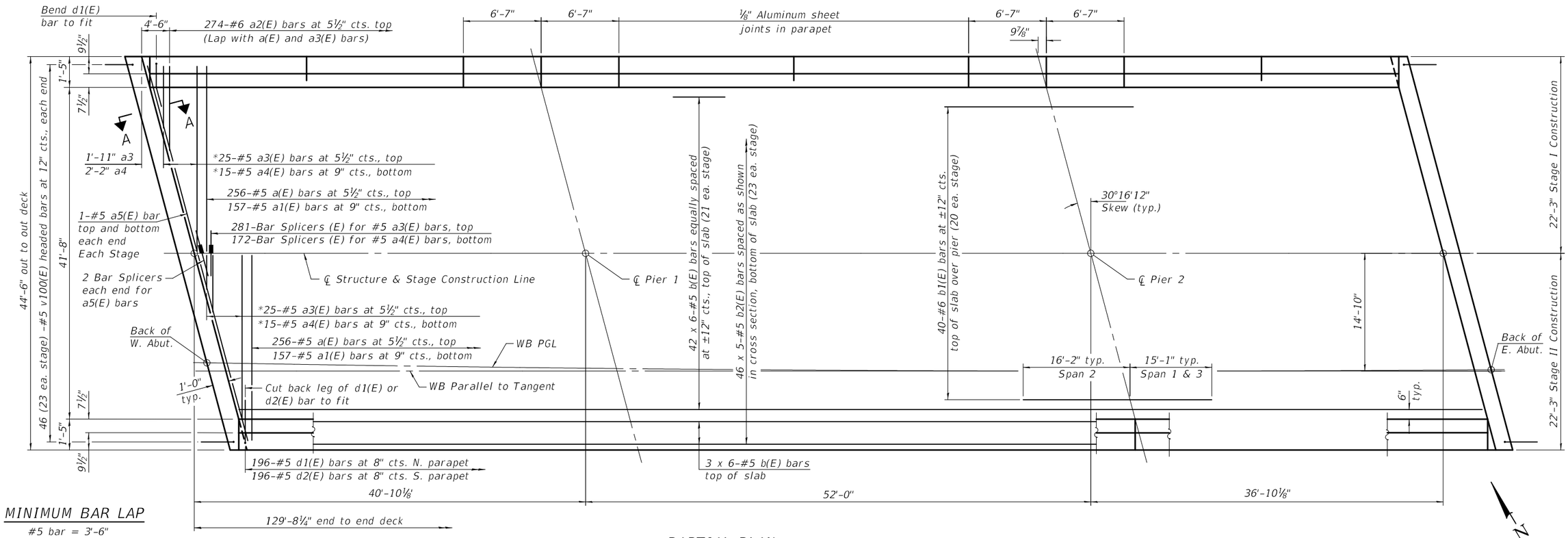
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = rmcjilton	DESIGNED - MCB/RJM	REVISED -
	CHECKED - MSJ	REVISED -
PLOT SCALE = 10:8.000000 ':" / in.	DRAWN - CFC	REVISED -
PLOT DATE = 10/3/2020	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 094-0054 (EB)
SHEET 17 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	34	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

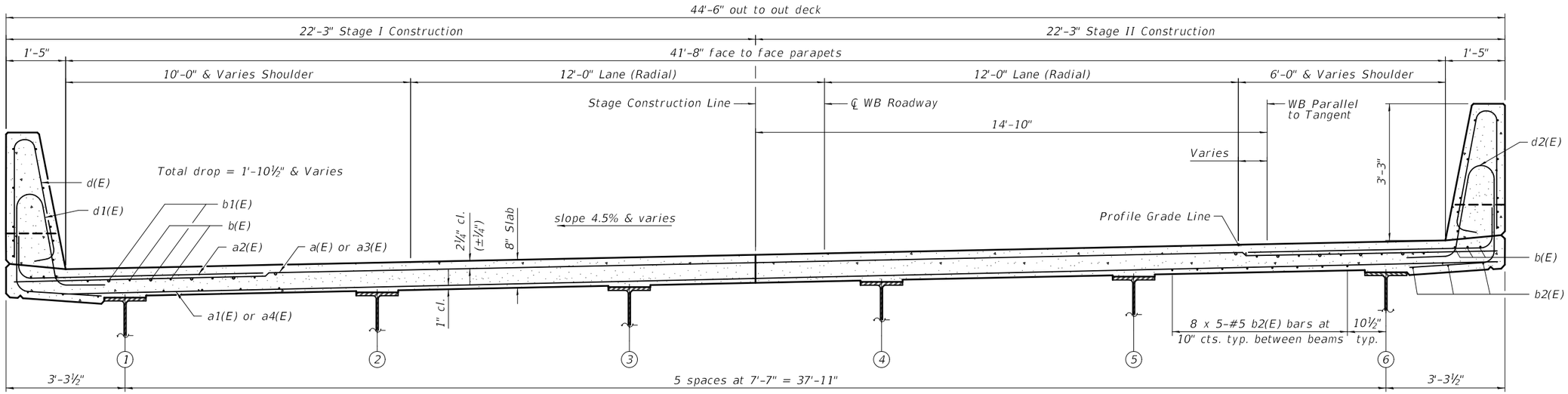


MINIMUM BAR LAP

#5 bar = 3'-6"

* See Field Cutting Diagram on sheet 19 of 48.

PARTIAL PLAN



NEAR PIER

CROSS SECTION

(Looking East)

NEAR MIDSPAN

Notes:
See sheet 19 of 48 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

SI-SB-2-R(≤30°) 6-15-2019

FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = cconnor	DESIGNED - TAR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - MCB	REVISED -	
	PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -	
	PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

SUPERSTRUCTURE
STRUCTURE NO. 094-0053 (WB)
SHEET 18 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	35	75
		CONTRACT NO. 68D95		
		ILLINOIS	FED. AID PROJECT	

FEHR GRAHAM PROJECT NUMBER: 15-1016G

MODEL: Default
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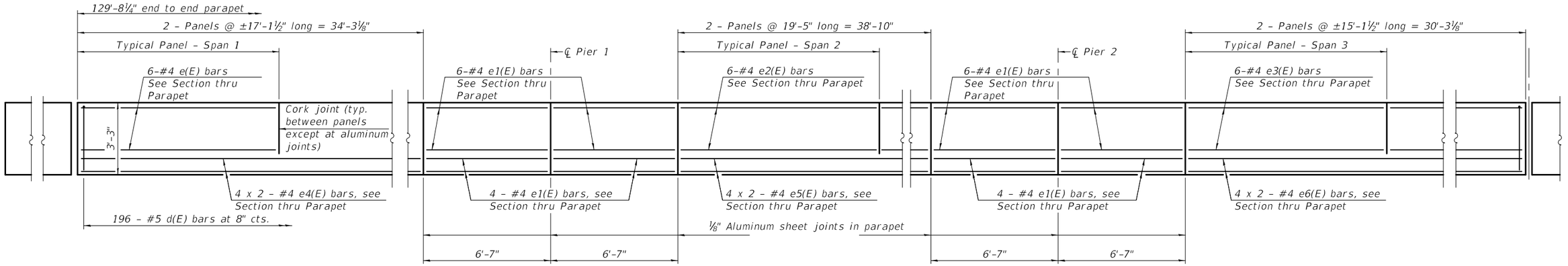
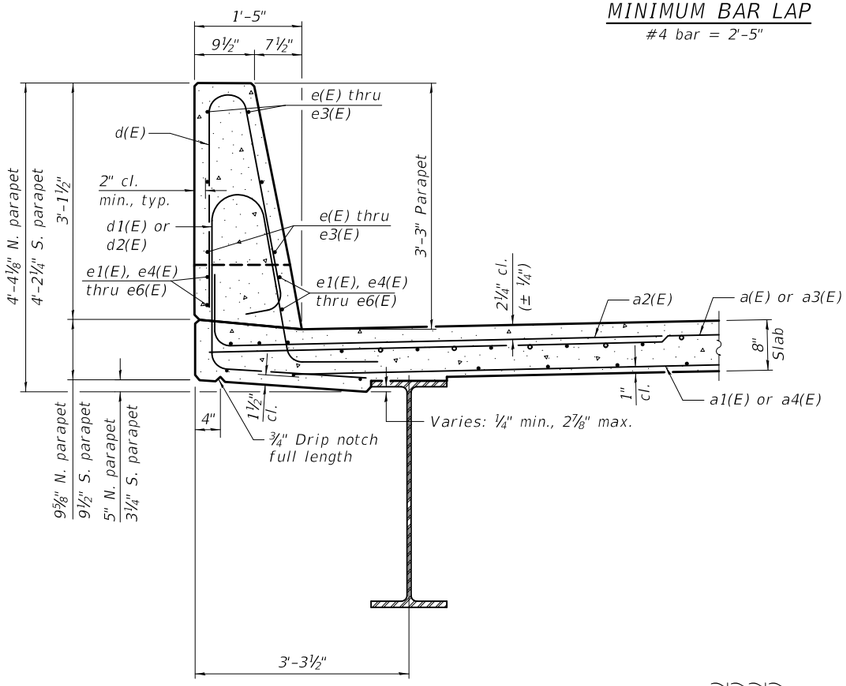


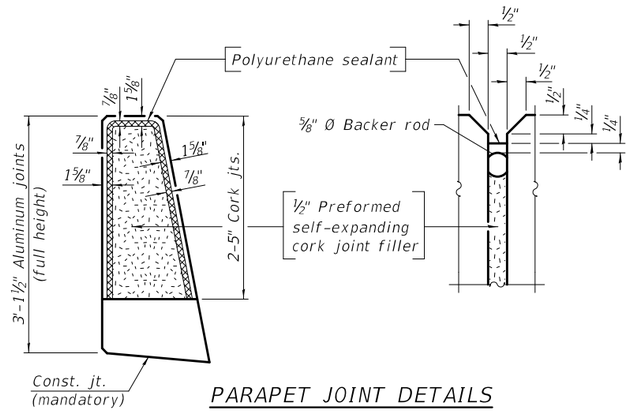
INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAP

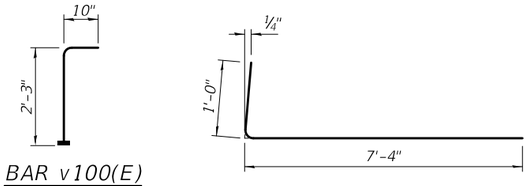
#4 bar = 2'-5"

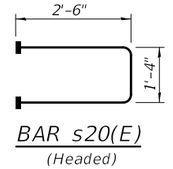


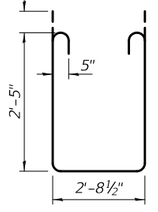
SECTION THRU PARAPET



PARAPET JOINT DETAILS







SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	512	#5	21'-11"	——
a1(E)	314	#5	21'-6"	——
a2(E)	548	#6	8'-4"	⌊——
a3(E)	50	#5	24'-10"	——
a4(E)	30	#5	24'-0"	——
a5(E)	8	#5	25'-5"	——
b(E)	288	#5	24'-6"	——
b1(E)	80	#6	31'-3"	——
b2(E)	230	#5	28'-8"	——
d(E)	392	#5	6'-5"	⌊
d1(E)	196	#5	8'-8"	⌊
d2(E)	196	#5	8'-8"	⌊
e(E)	24	#4	16'-9"	——
e1(E)	80	#4	6'-3"	——
e2(E)	24	#4	19'-1"	——
e3(E)	24	#4	14'-9"	——
e4(E)	16	#4	18'-2"	——
e5(E)	16	#4	20'-5"	——
e6(E)	16	#4	16'-2"	——
m20(E)	16	#6	25'-4"	——
m21(E)	24	#6	8'-4"	——
m22(E)	12	#6	3'-5"	——
s20(E)	82	#5	6'-4"	⌈⌉
s21(E)	82	#5	8'-9"	⌈⌉
v100(E)	92	#5	3'-1"	⌊
Reinforcement Bars, Epoxy Coated		Lbs.	56,310	
Concrete Superstructure		Cu. Yds.	217.3	

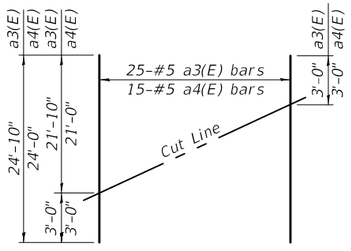
Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.

Notes:

The ⅛" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

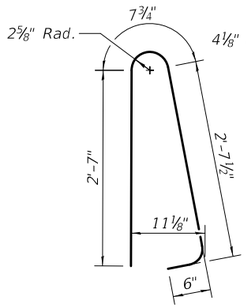
The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

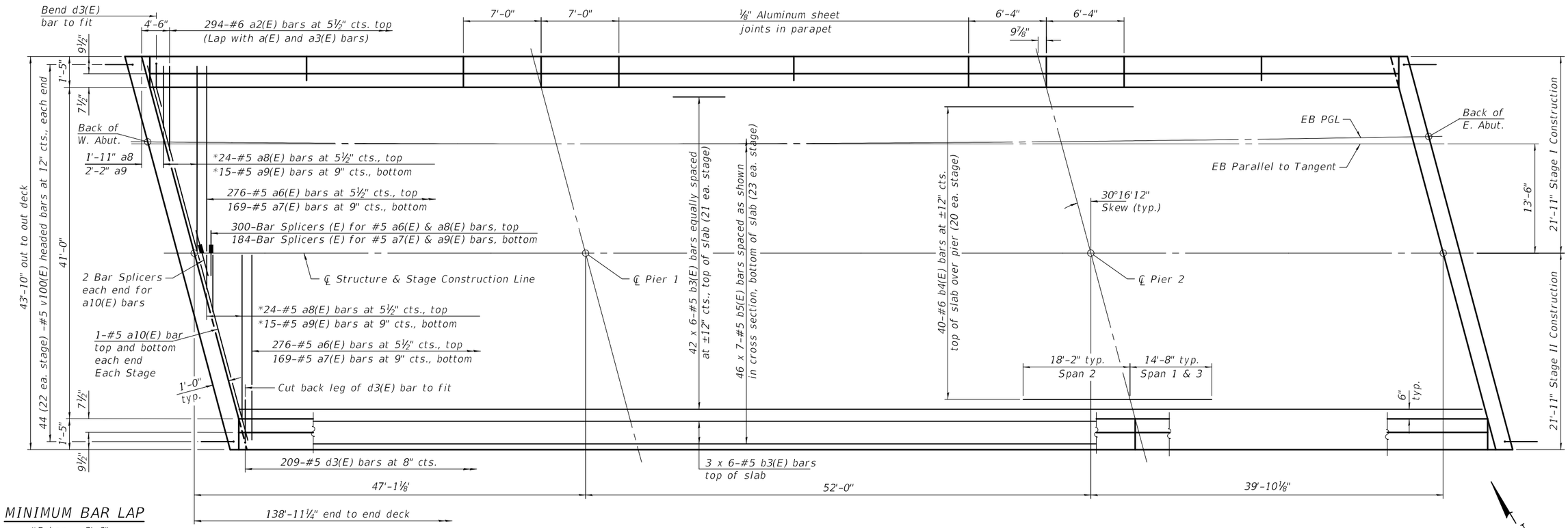


FIELD CUTTING DIAGRAM

Order a3(E) and a4(E) bars full length. Cut as shown and use remainder of bars in opposite end of deck.



SDI-SB-2 6-15-2019

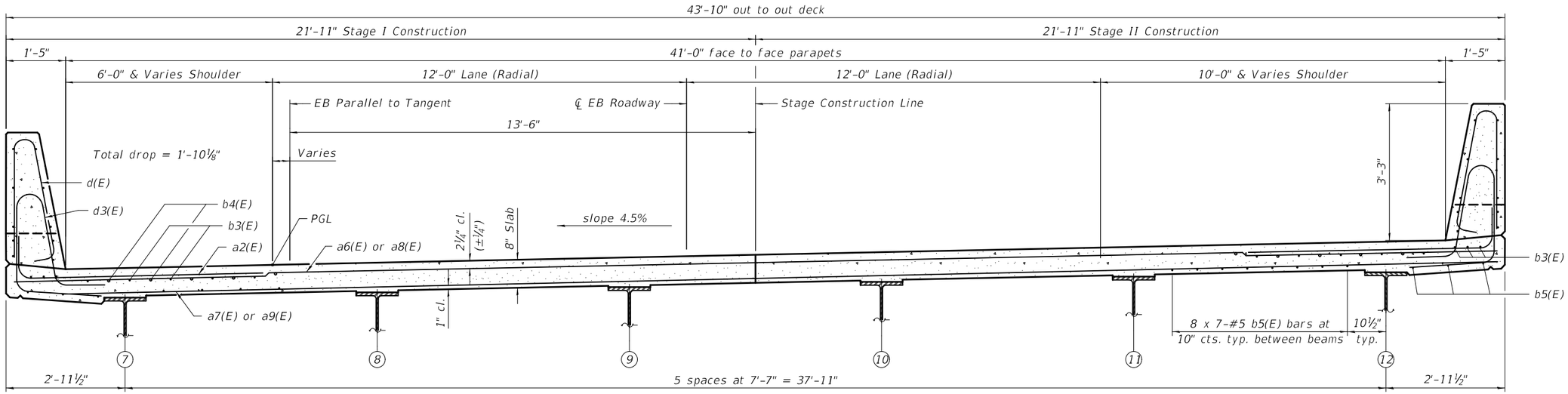


MINIMUM BAR LAP

#5 bar = 3'-6"

* See Field Cutting Diagram on sheet 21 of 48.

PARTIAL PLAN



NEAR PIER

NEAR MIDSPAN

CROSS SECTION

(Looking East)

Notes:
See sheet 21 of 48 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

SI-SB-2-R(≤30°) 6-15-2019

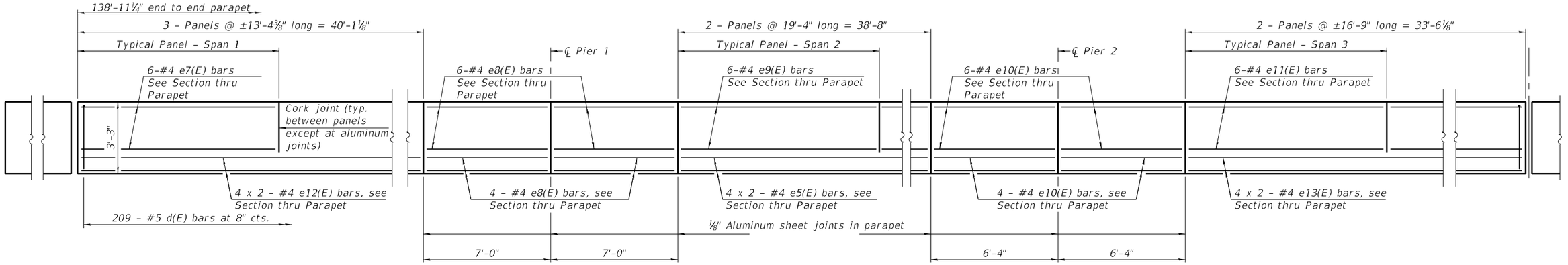
FEHR GRAHAM ENGINEERING & ENVIRONMENTAL ILLINOIS DESIGN FIRM NO. 184-003525	USER NAME = cconnor	DESIGNED - TAR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - MCB	REVISED -	
	PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -	
	PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

SUPERSTRUCTURE
STRUCTURE NO. 094-0054 (EB)
SHEET 20 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	37	75
		CONTRACT NO. 68D95		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
FILE NAME: g:\v8i_ss4\15\15-1016g\bridge\094-0054-68D95-020-super-0054-eb.dgn

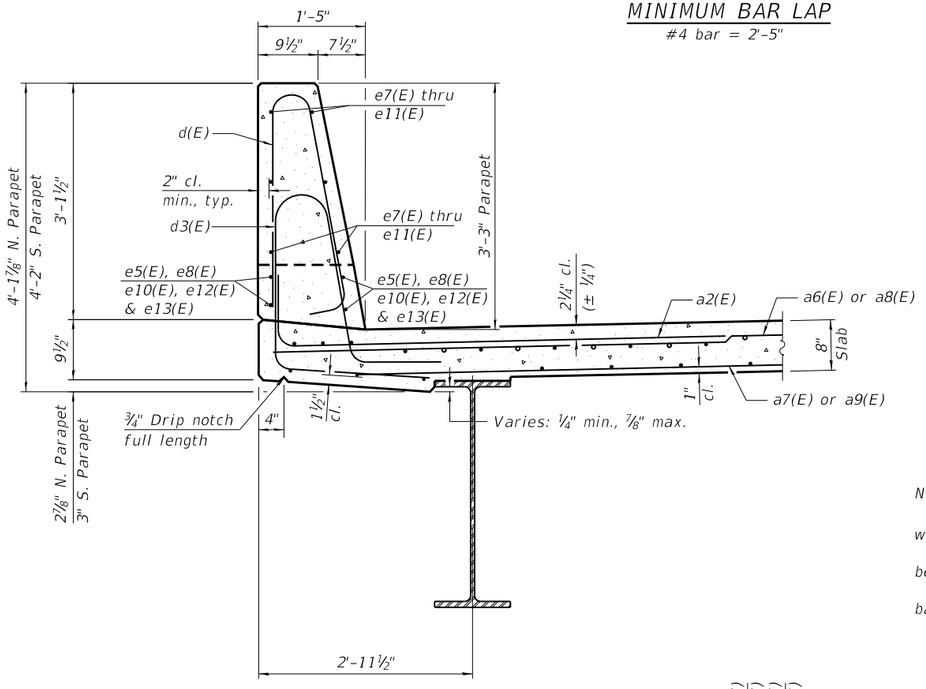
FEHR GRAHAM PROJECT NUMBER: 15-1016G



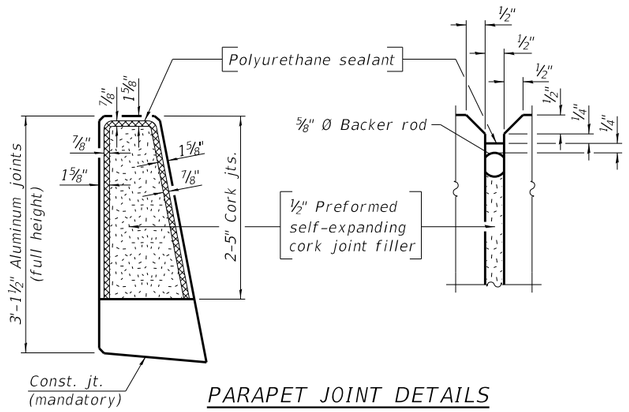
INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAP

#4 bar = 2'-5"



SECTION THRU PARAPET



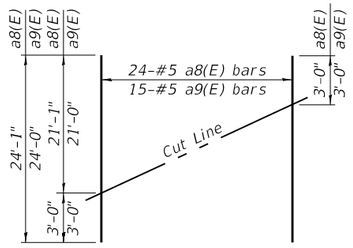
PARAPET JOINT DETAILS

Notes:

The ⅛" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

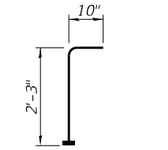
The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.



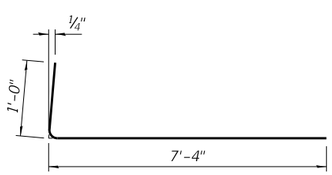
FIELD CUTTING DIAGRAM

Order a8(E) and a9(E) bars full length. Cut as shown and use remainder of bars in opposite end of deck.

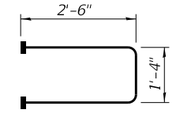


BAR v100(E)

(Headed)



BAR a2(E)



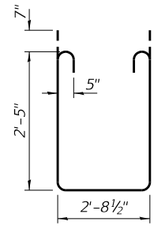
BAR s20(E)

(Headed)

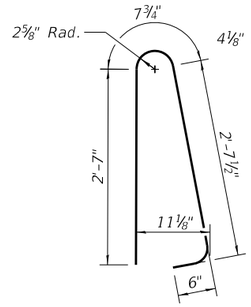
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2(E)	588	#6	8'-4"	
a6(E)	552	#5	21'-7"	
a7(E)	338	#5	21'-2"	
a8(E)	48	#5	24'-1"	
a9(E)	30	#5	24'-0"	
a10(E)	8	#5	25'-1"	
b3(E)	288	#5	26'-1"	
b4(E)	80	#6	32'-10"	
b5(E)	322	#5	22'-10"	
d(E)	418	#5	6'-5"	
d3(E)	418	#5	8'-4"	
e5(E)	16	#4	20'-5"	
e7(E)	36	#4	12'-11"	
e8(E)	40	#4	6'-8"	
e9(E)	24	#4	19'-0"	
e10(E)	40	#4	6'-0"	
e11(E)	24	#4	16'-5"	
e12(E)	16	#4	21'-1"	
e13(E)	16	#4	17'-10"	
m21(E)	24	#6	8'-4"	
m24(E)	16	#6	25'-1"	
m25(E)	12	#6	3'-0"	
s20(E)	82	#5	6'-4"	
s21(E)	82	#5	8'-9"	
v100(E)	88	#5	3'-1"	
Reinforcement Bars, Epoxy Coated		Lbs.	59,680	
Concrete Superstructure		Cu. Yds.	224.7	

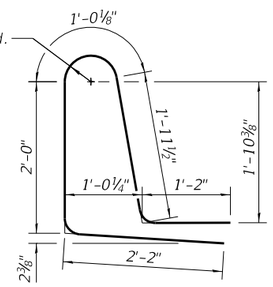
Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.



BAR s21(E)

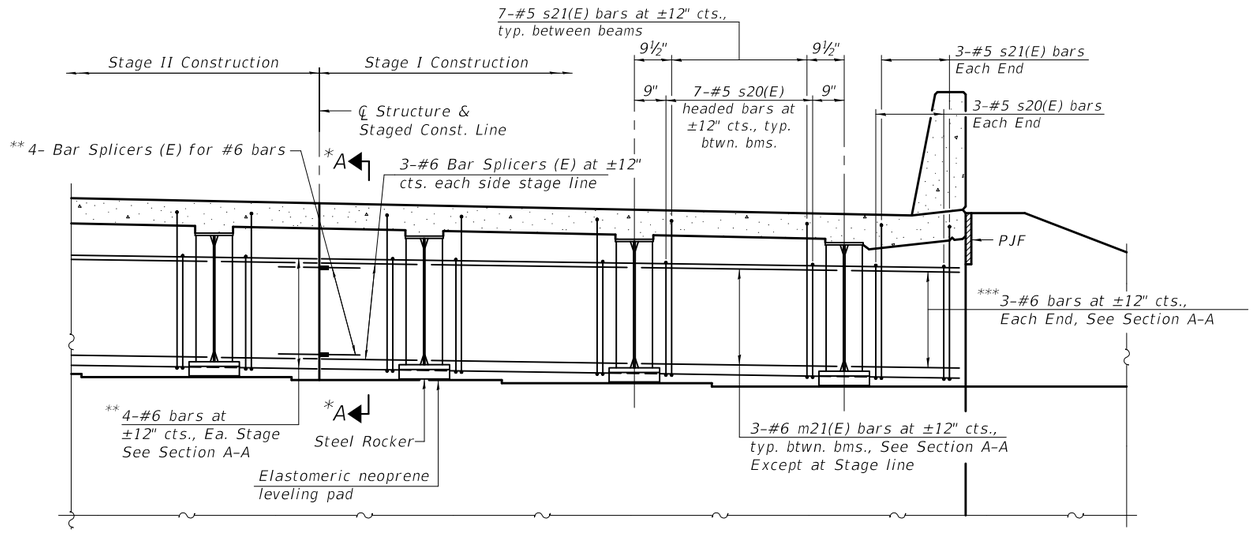


BAR d(E)



BAR d3(E)

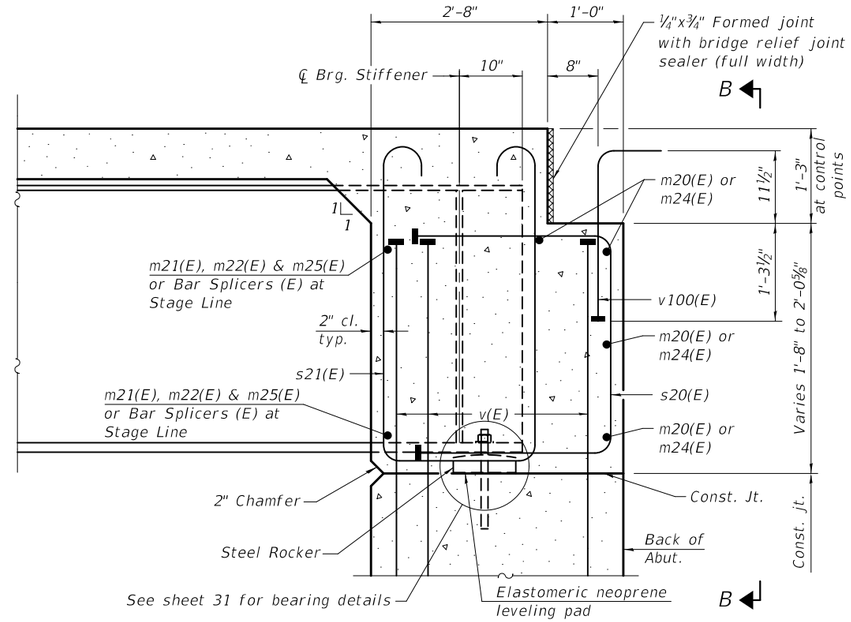
SDI-SB-2 6-15-2019



*Reverse for East Abutment
**m20(E) WB, m24(E) EB
***m22(E) WB, m25(E) EB

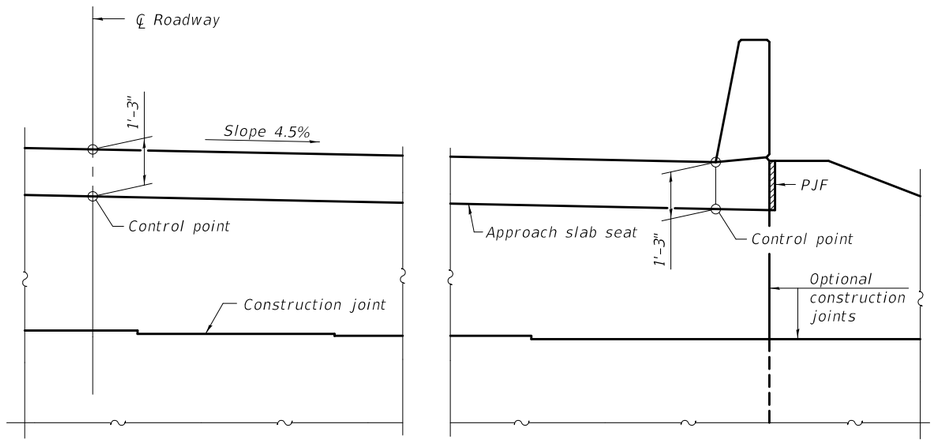
DIAPHRAGM AT ABUTMENT

(Looking West)

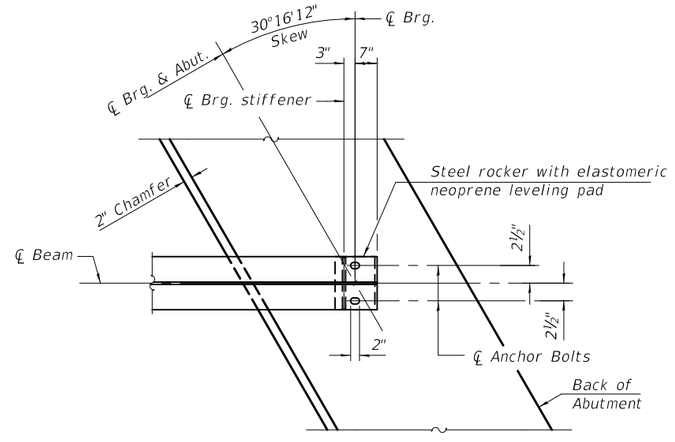


SECTION A-A

(at Rt. ℄'s)



VIEW B-B



PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:
See sheet 19 & 21 of 48 for superstructure details and Bill of Material.
See sheet 23, 24, 26 & 27 of 48 for PJF details.
The s20(E) and s21(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
The approach slab seat shall have a constant slope determined from the control points shown.
Concrete in diaphragm is included with Concrete Superstructure on sheet 19 & 21 of 48.
For bearing details see sheet 31 of 48.

DIA-SB-R 06-15-2019

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = cconnor		DESIGNED - TAR	REVISED -	
		CHECKED - MCB	REVISED -	
PLOT SCALE = 0:2.000000 ':' / in.		DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020		CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
SHEET 22 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	39	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

FEHR GRAHAM PROJECT NUMBER: 15-1016G

MODEL: Default
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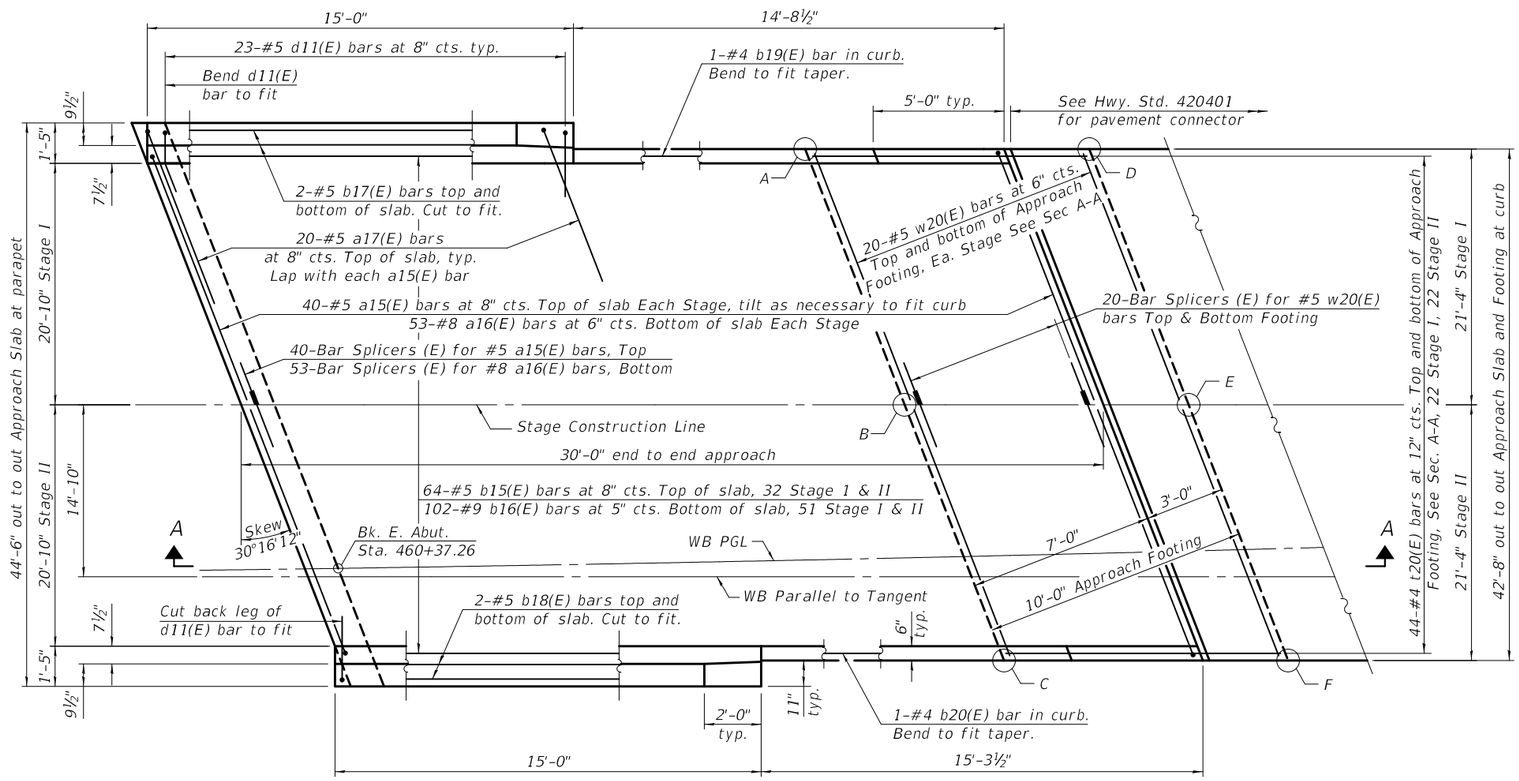
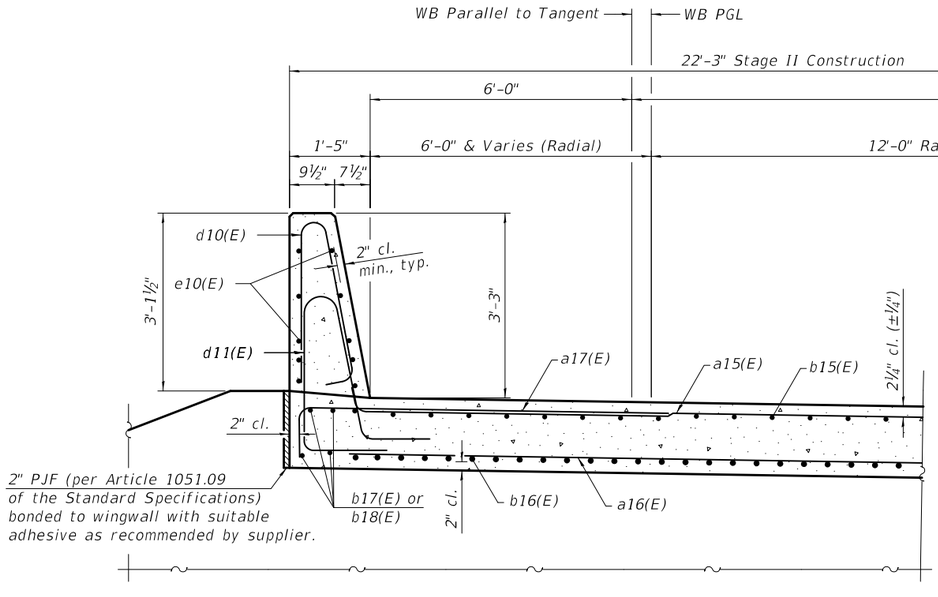


PLAN

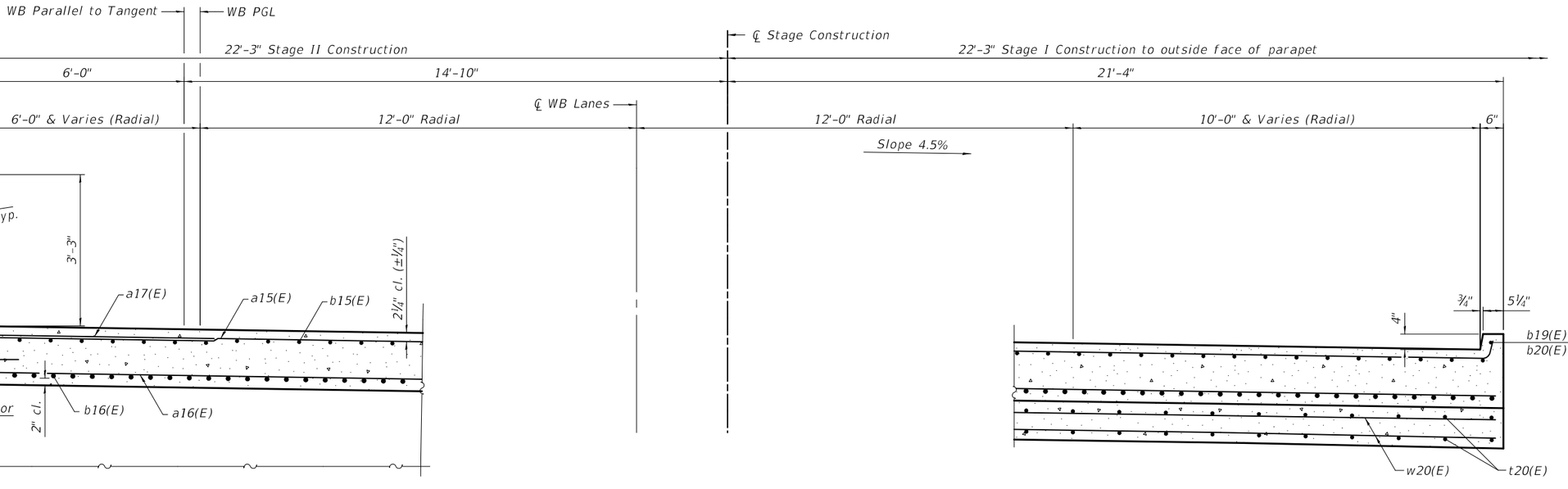
N

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	Approach	
Point	Top	Bottom
A	704.22	703.39
B	705.11	704.28
C	706.01	705.18
D	704.16	703.33
E	705.05	704.22
F	705.95	705.12



NEAR ABUTMENT



CROSS SECTION
(Looking West)

AT APPROACH FOOTING

BAIA-CIP-39CS-R(≤30°) 6-15-2019

MODEL: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

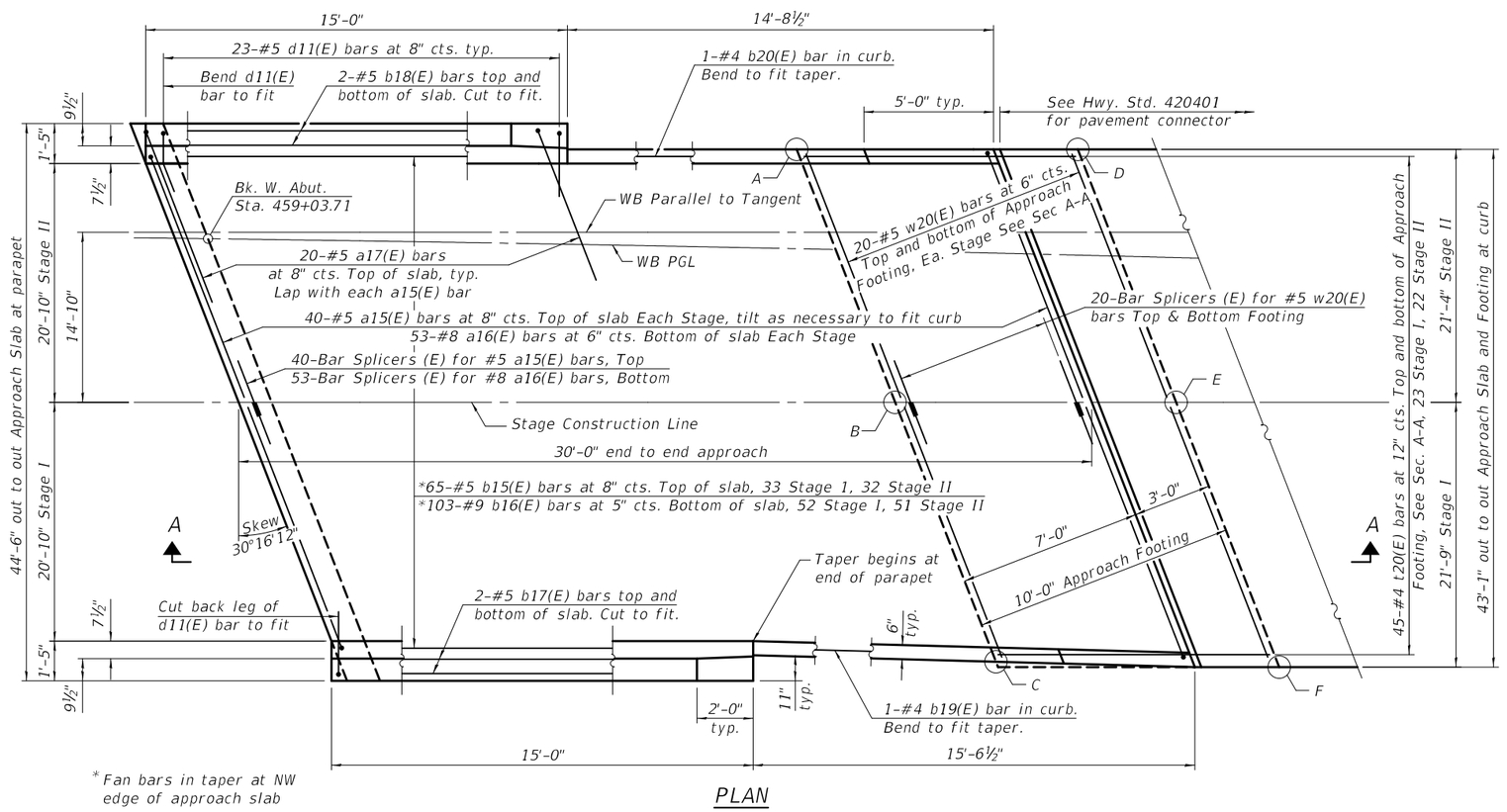
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -	
	CHECKED - TAR	REVISED -	
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS - EAST APPROACH
STRUCTURE NO. 094-0053 (WB)
SHEET 23 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	40	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

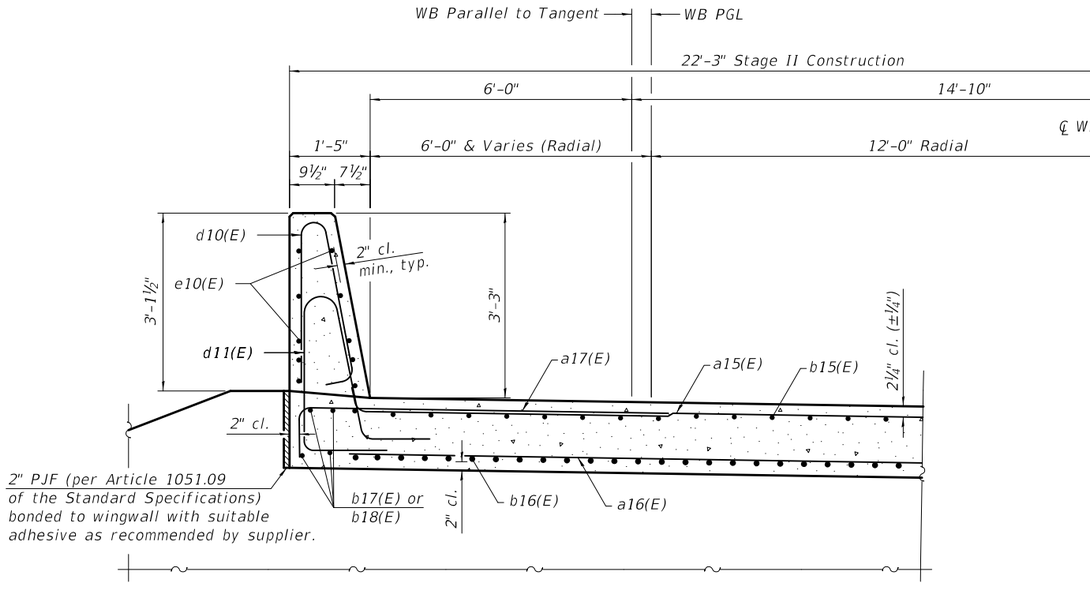


*Fan bars in taper at NW edge of approach slab

PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	Approach	
Point	Top	Bottom
A	706.95	706.12
B	706.28	705.45
C	705.71	704.88
D	706.99	706.16
E	706.39	705.56
F	705.86	705.03



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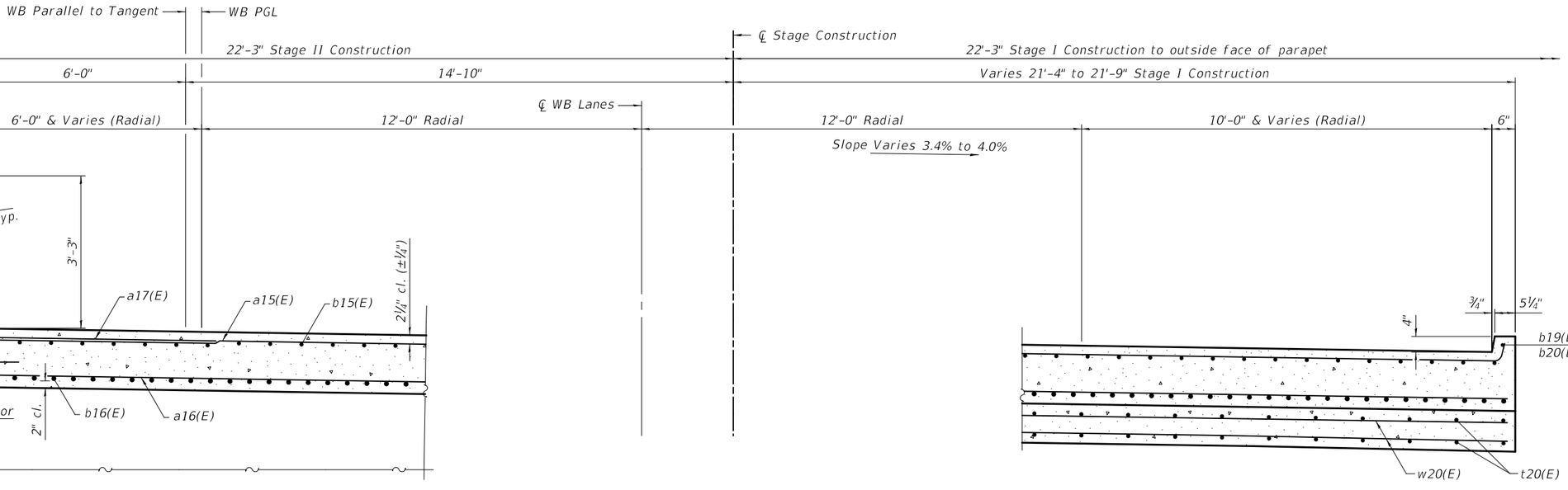

CROSS SECTION
(Looking West)

AT APPROACH FOOTING

BAIA-CIP-39CS-R(≤30°) 6-15-2019

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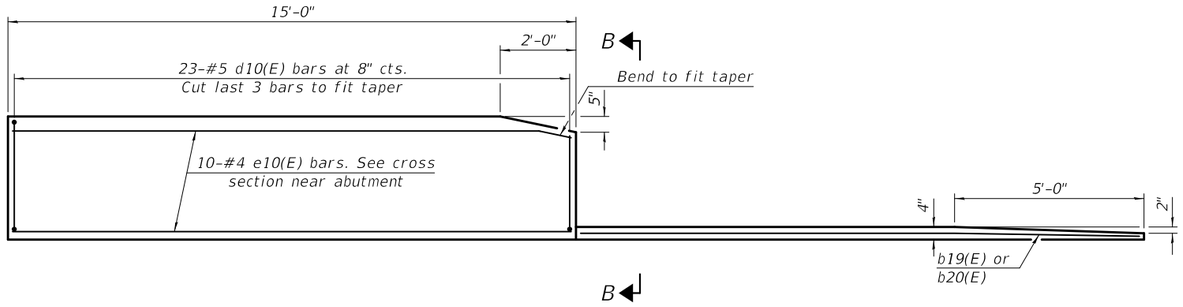
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

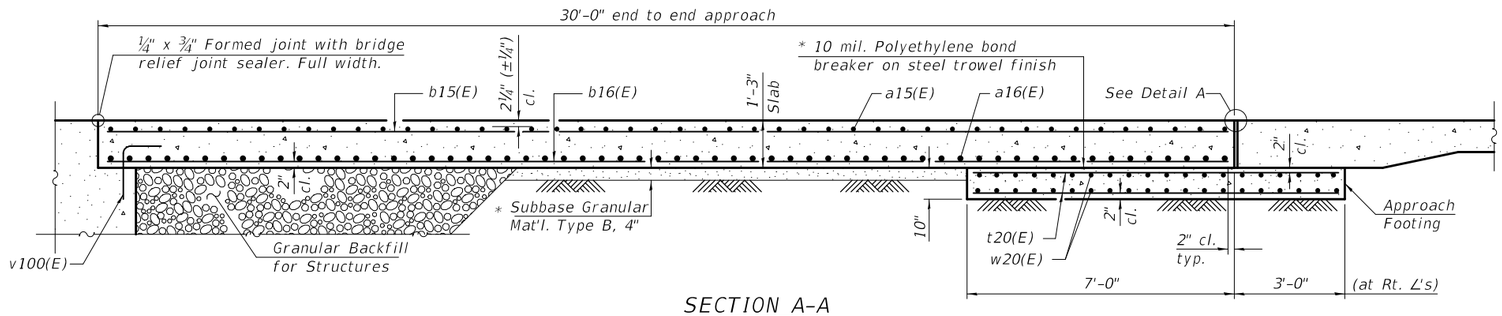
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS - WEST APPROACH STRUCTURE NO. 094-0053 (WB)
	CHECKED - TAR	REVISED -		
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -		SHEET 24 OF 48 SHEETS
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		

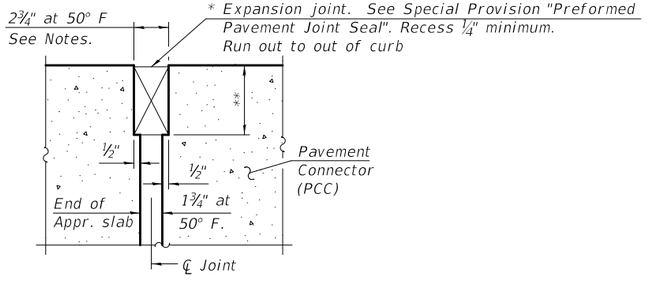
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	41	75
		CONTRACT NO. 68D95		
		ILLINOIS	FED. AID PROJECT	



INSIDE ELEVATION OF PARAPET AND CURB



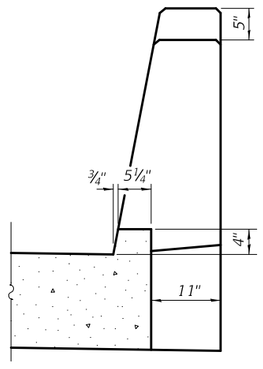
SECTION A-A



DETAIL A
(@ Rt. ℄'s)

* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations



VIEW B-B

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

Parapet concrete shall be paid for as Concrete Superstructure.

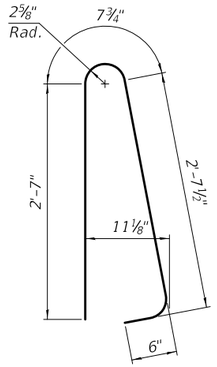
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

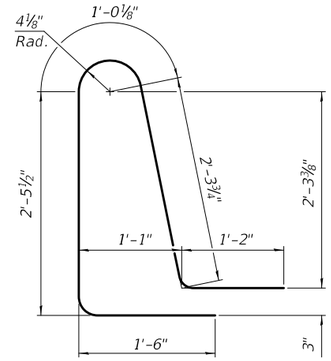
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 48.



BAR d10(E)



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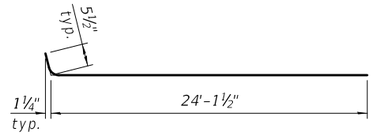
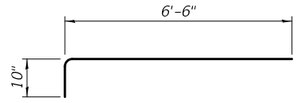


BAR a15(E)



BAR a17(E)

TWO APPROACHES
BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	a15(E)	160	#5	24'-7"	
	a16(E)	212	#8	24'-4"	
	a17(E)	80	#5	7'-4"	
	b15(E)	129	#5	29'-8"	
	b16(E)	205	#9	29'-8"	
	b17(E)	8	#5	15'-4"	
	b18(E)	8	#5	14'-6"	
	b19(E)	2	#4	14'-5"	
	b20(E)	2	#4	14'-9"	
	d10(E)	92	#5	6'-5"	
	d11(E)	92	#5	8'-6"	
	e10(E)	40	#4	14'-8"	
	t20(E)	178	#4	11'-3"	
	w20(E)	160	#5	24'-4"	
	Concrete Superstructure			Cu. Yd.	16.0
	Concrete Superstructure (Approach Slab)			Cu. Yd.	121.6
	Concrete Structures			Cu. Yd.	30.7
***	Reinforcement Bars, Epoxy Coated			Pound	50,670

***45,270 Superstructure, 5400 Substructure

BAIA-CIP-39CS-R(≤30°) 6-15-2019

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

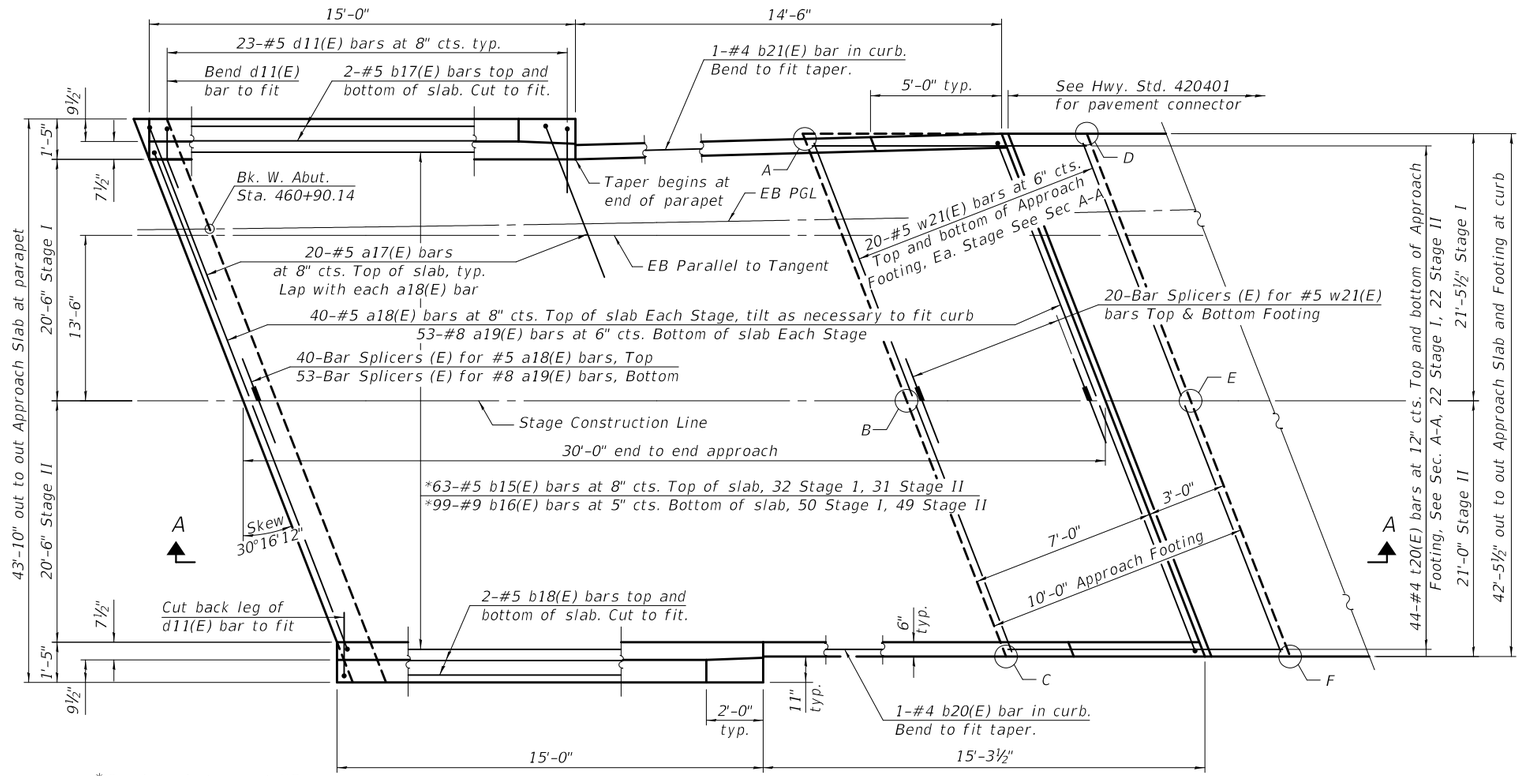
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -		
	CHECKED - TAR	REVISED -		
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -		
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 094-0053 (WB)
SHEET 25 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	42	75
		CONTRACT NO. 68D95		
		ILLINOIS	FED. AID PROJECT	

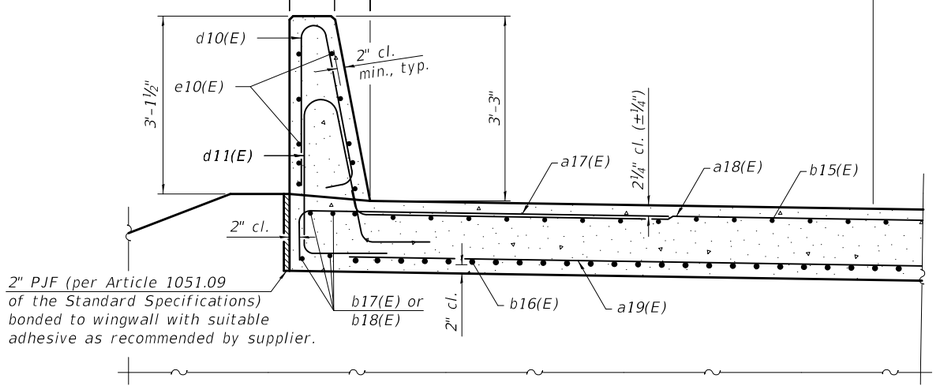


*Fan bars in taper at NE edge of approach slab

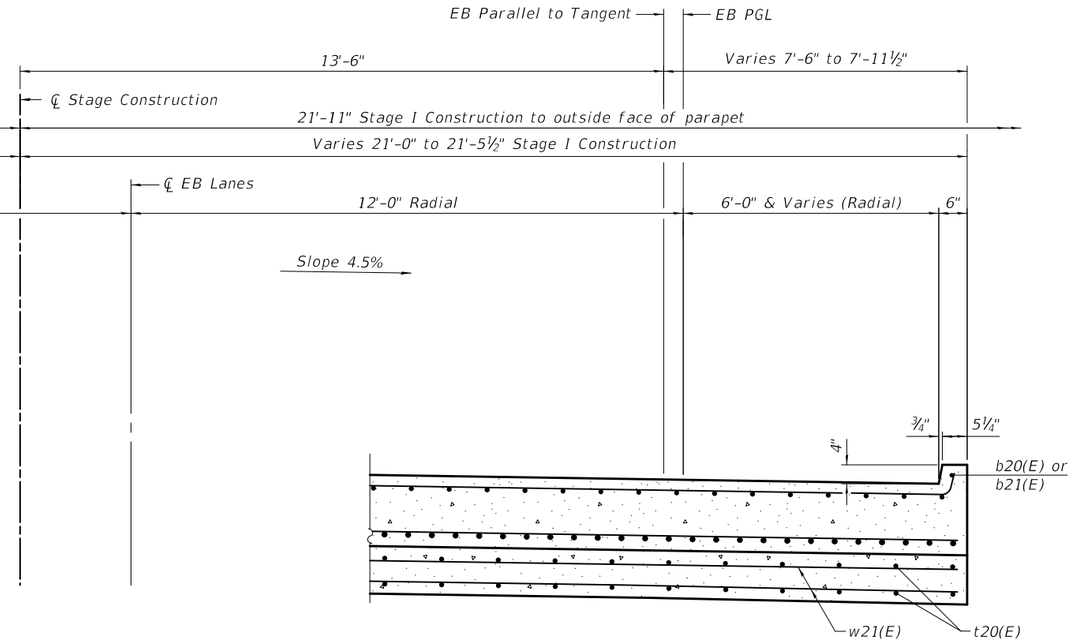
PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	Approach	
Point	Top	Bottom
A	711.23	710.40
B	712.13	711.30
C	713.03	712.20
D	711.17	710.34
E	712.08	711.25
F	712.98	712.15



NEAR ABUTMENT



CROSS SECTION
(Looking West)

AT APPROACH FOOTING

BAIA-CIP-39CS-R(≤30°) 6-15-2019

MODEL: Default
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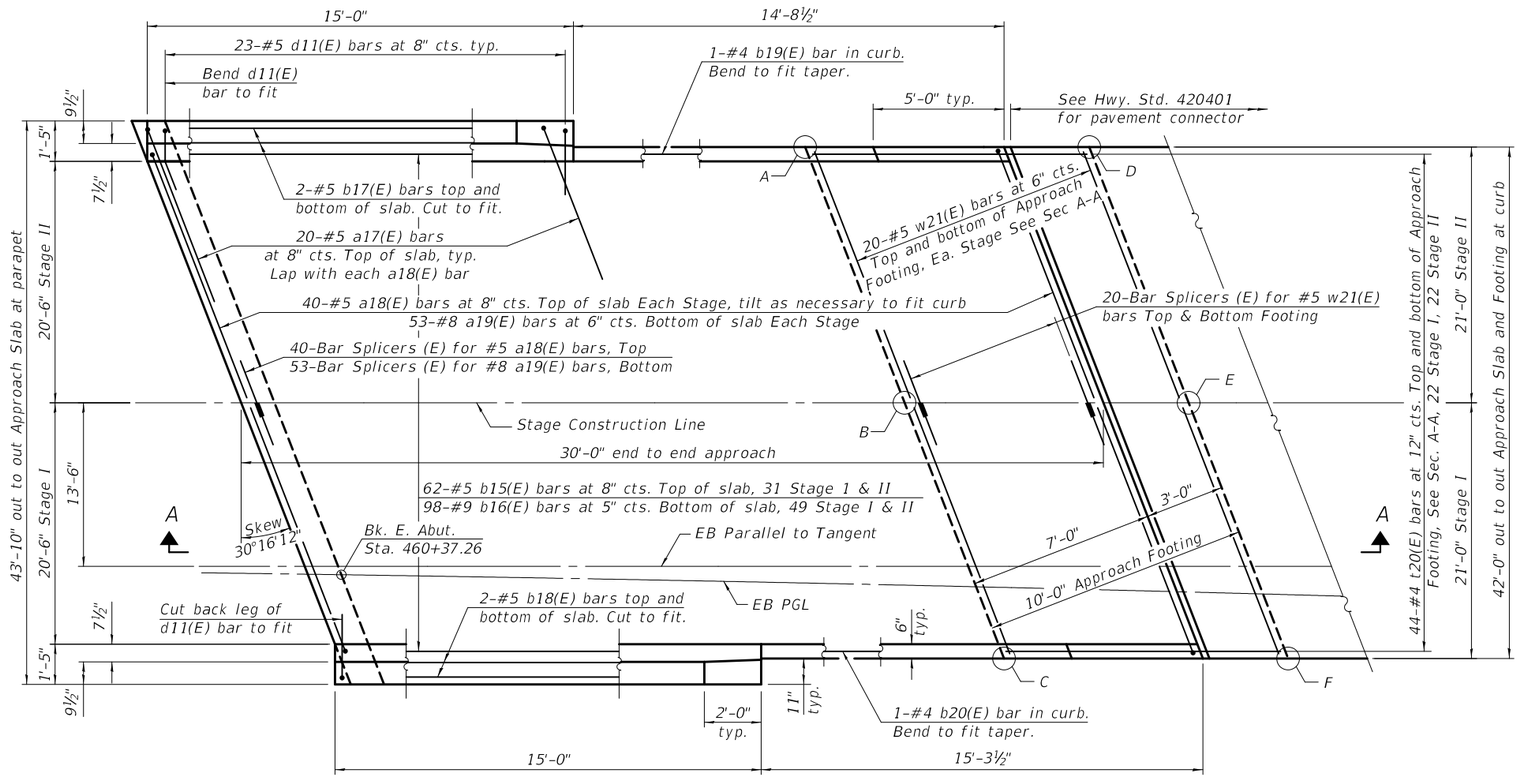
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS - EAST APPROACH STRUCTURE NO. 094-0054 (EB)	
	CHECKED - TAR	REVISED -			
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -			
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		SHEET 26 OF 48 SHEETS	

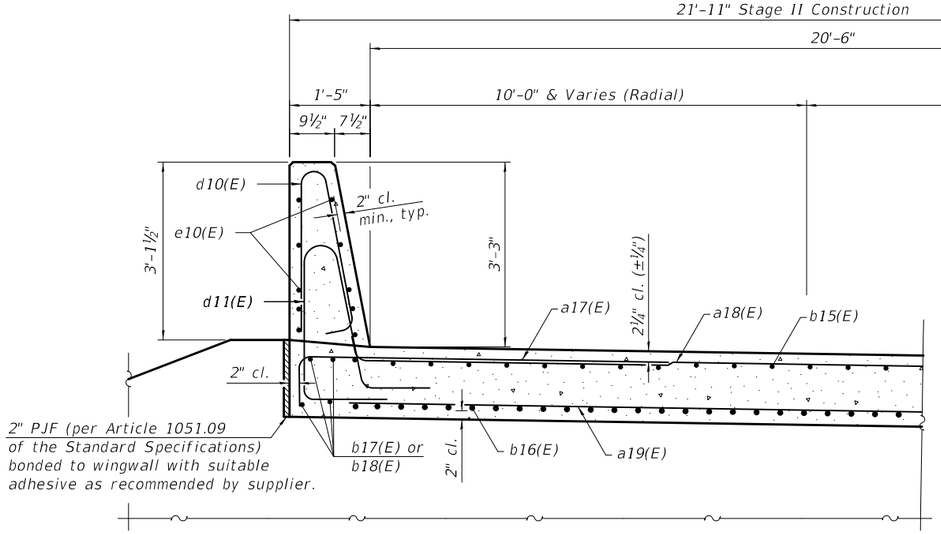
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	43	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			



PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	Approach	
Point	Top	Bottom
A	713.96	713.13
B	713.08	712.25
C	712.22	711.39
D	714.02	713.19
E	713.14	712.31
F	712.31	711.48



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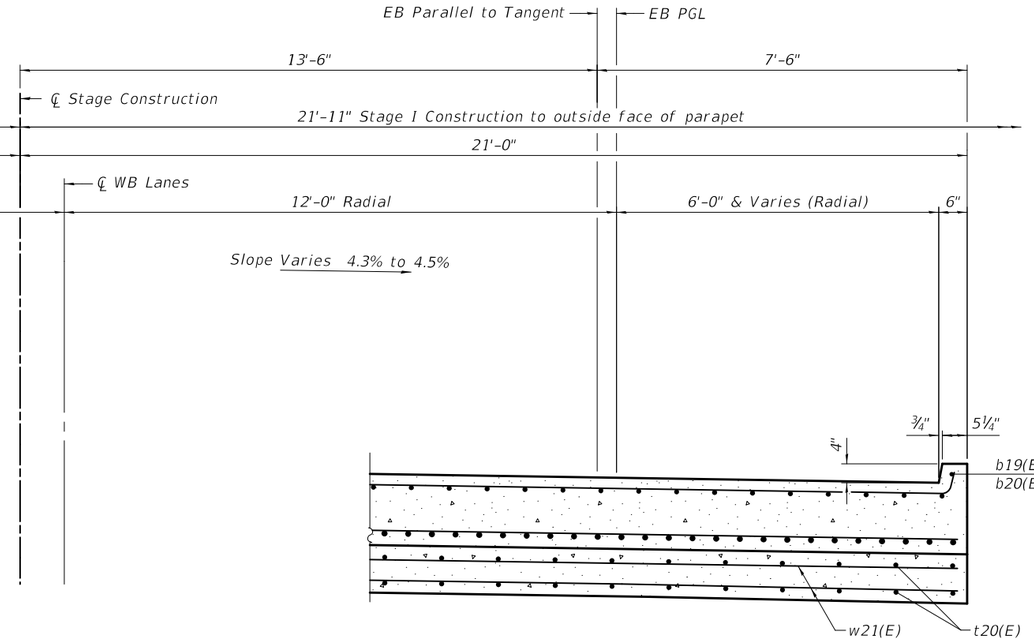

CROSS SECTION
(Looking West)

AT APPROACH FOOTING

BAIA-CIP-39CS-R(≤30°) 6-15-2019

(Sheet 5 of 6)

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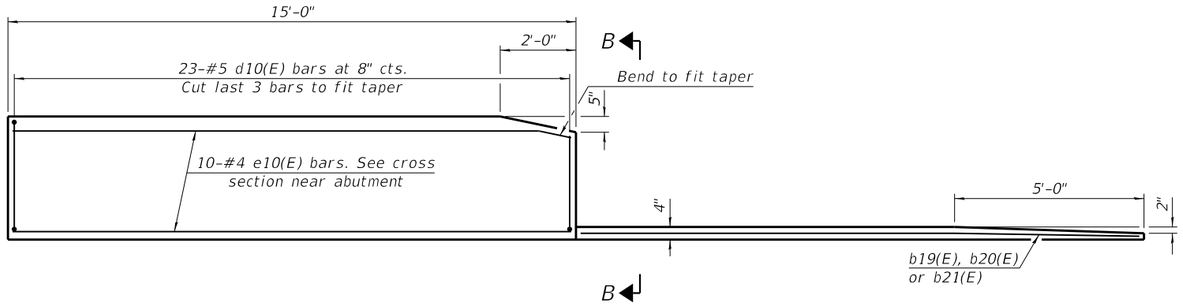
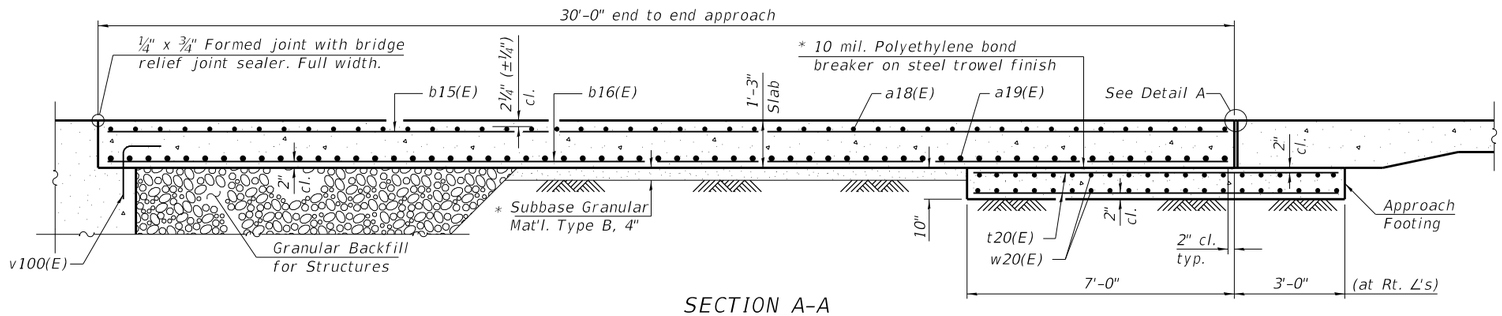
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS - WEST APPROACH STRUCTURE NO. 094-0054 (EB)	
	CHECKED - TAR	REVISED -			
PLOT SCALE = 0:2.000000 ':" / in.	DRAWN - CFC	REVISED -			
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		SHEET 27 OF 48 SHEETS	

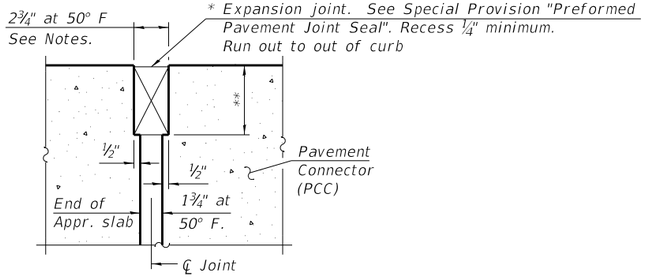
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	44	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			



INSIDE ELEVATION OF PARAPET AND CURB



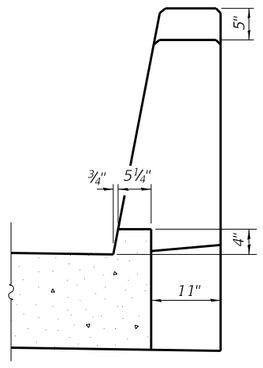
SECTION A-A



DETAIL A
(@ Rt. ℄'s)

* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations



VIEW B-B

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

Parapet concrete shall be paid for as Concrete Superstructure.

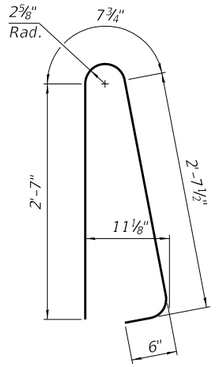
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

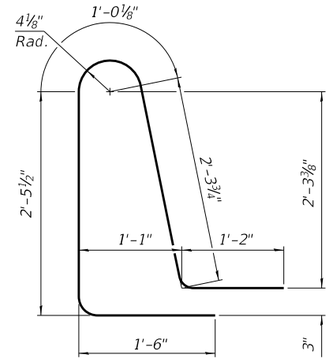
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

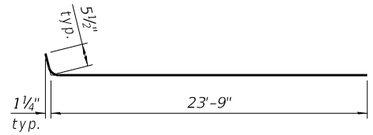
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 48.



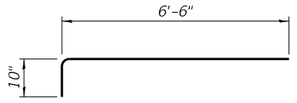
BAR d10(E)



BAR d11(E)



BAR a18(E)



BAR a17(E)

TWO APPROACHES
BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	a17(E)	80	#5	7'-4"	
	a18(E)	160	#5	24'-2"	
	a19(E)	212	#8	24'-0"	
	b15(E)	125	#5	29'-8"	
	b16(E)	197	#9	29'-8"	
	b17(E)	8	#5	15'-4"	
	b18(E)	8	#5	14'-6"	
	b19(E)	1	#4	14'-6"	
	b20(E)	2	#4	14'-9"	
	b21(E)	1	#4	14'-3"	
	d10(E)	92	#5	6'-5"	
	d11(E)	92	#5	8'-6"	
	e10(E)	40	#4	14'-8"	
	t20(E)	176	#4	11'-3"	
	w21(E)	160	#5	24'-0"	
	Concrete Superstructure			Cu. Yd.	16.0
	Concrete Superstructure (Approach Slab)			Cu. Yd.	119.7
	Concrete Structures			Cu. Yd.	30.2
***	Reinforcement Bars, Epoxy Coated			Pound	49,400

***44,070 Superstructure, 5330 Substructure

BAIA-CIP-39CS-R(≤30°) 6-15-2019

MODEL: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

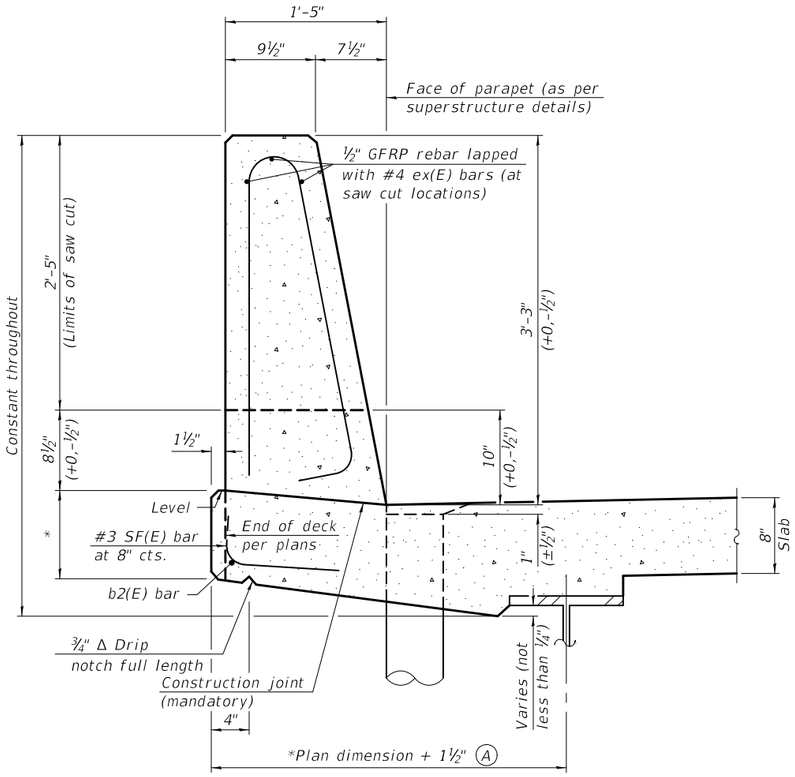
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = rmcjilton | DESIGNED - RJM | REVISED -
PLOT SCALE = 0:2.000000 ':" / in. | CHECKED - TAR | REVISED -
PLOT DATE = 8/26/2020 | DRAWN - CFC | REVISED -
CHECKED - MCB | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 094-0054 (EB)
SHEET 28 OF 48 SHEETS

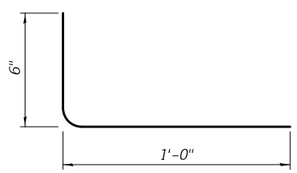
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	45	75
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		



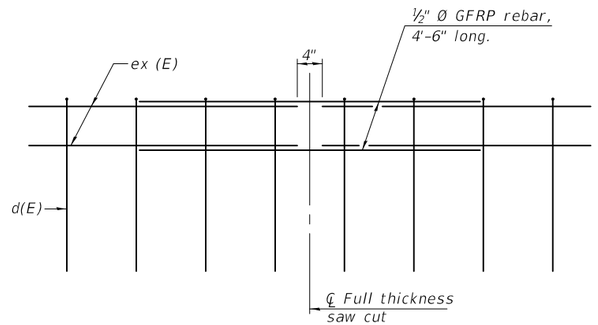
39" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and ½" Ø GFRP rebar)

*See Superstructure Details.



#3 (E) BAR



GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

Notes:

All dimensions shall remain the same as shown on superstructure details, except dimension A which is to be revised as shown. Additional concrete needed to revise dimension A = 0.00348 cu. yds./ft. for 39" and 44" parapets.

Place full depth aluminum sheets as shown on superstructure details.

Replace all cork joint filler locations with a full thickness saw cut.

Steel superstructure shown. Other superstructure types similar.

MODEL: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

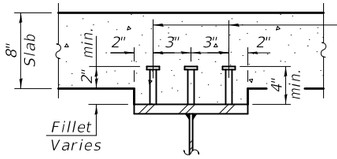
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

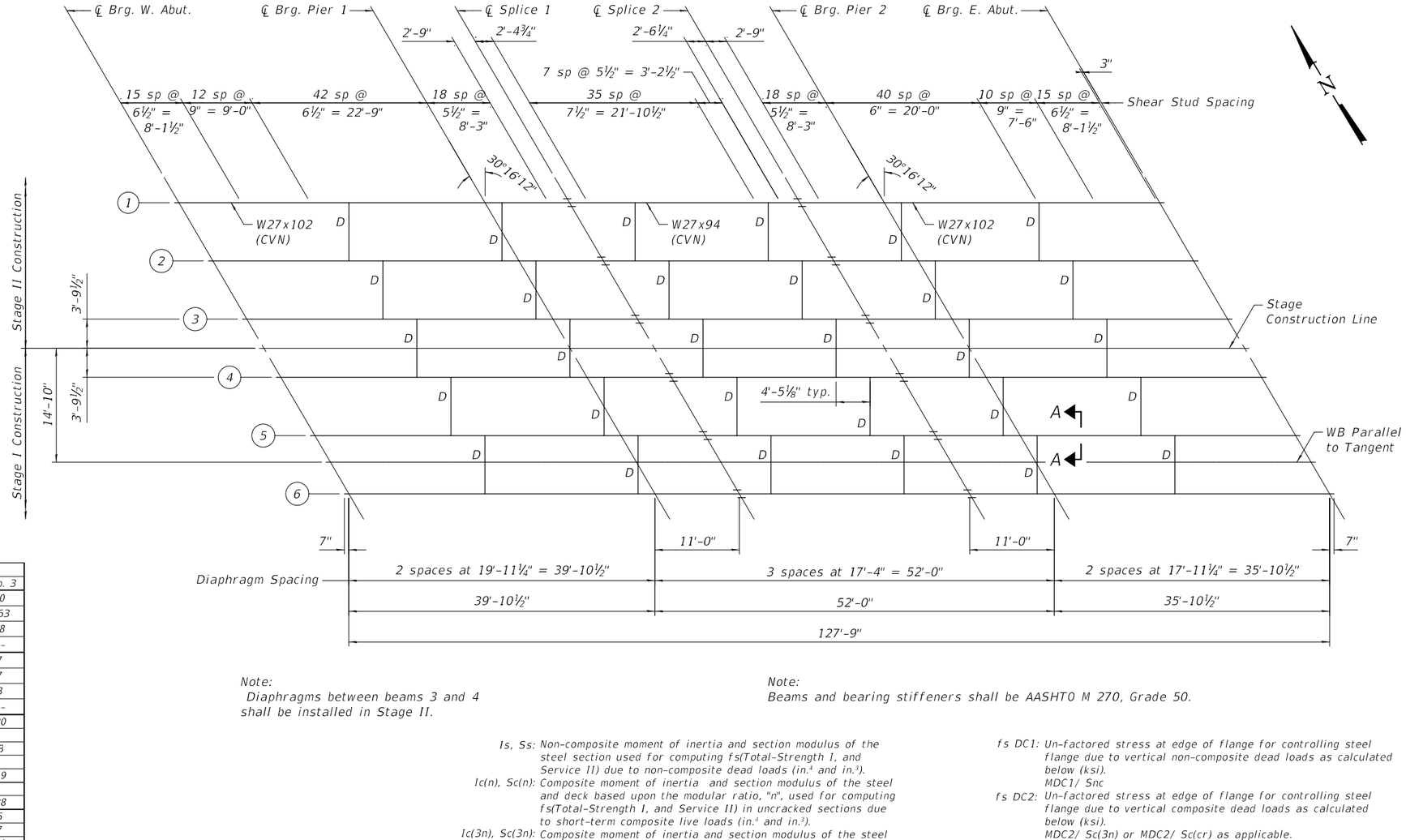
CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
SHEET 29 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	46	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			



¾" Ø Granular or solid flux filled headed studs, automatically end welded to flange. (3,870 Required)

SECTION A-A



*TOP OF BEAM ELEVATIONS

LOCATION	BM 1	BM 2	BM 3	BM 4	BM 5	BM 6
℄ Brg. W. Abut.	705.76	706.07	706.38	706.69	707.00	707.29
℄ Brg. Pier 1	705.45	705.76	706.08	706.39	706.70	707.00
℄ Brg. Splice 1	705.37	705.68	706.00	706.31	706.62	706.92
℄ Brg. Splice 2	705.19	705.50	705.82	706.13	706.45	706.74
℄ Brg. Pier 2	705.14	705.46	705.77	706.09	706.40	706.70
℄ Brg. E. Abut.	705.98	705.30	705.62	705.93	706.25	706.55

*Elevations are for fabrication only.

INTERIOR BEAM MOMENT TABLE

		0.4 Sp.1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
Is	(in^4)	3620	3620	3270	3620	3620
Ic(n)	(in^4)	11,763	11,763	10,873	11,763	11,763
Ic(3n)	(in^4)	8898	8898	8292	8898	8898
Ic(cr)	(in^4)	-----	-----	-----	-----	-----
Ss	(in^3)	267	267	243	267	267
Sc(n)	(in^3)	427	427	393	427	427
Sc(3n)	(in^3)	388	388	358	388	388
Sc(cr)	(in^3)	-----	-----	-----	-----	-----
DC 1	(k/')	0.920	0.920	0.916	0.920	0.920
MDC 1	('k)	94	203	115	185	68
DC 2	(k/')	0.18	0.18	0.18	0.18	0.18
MDC 2	('k)	18	40	23	36	13
DW	(k/')	0.379	0.379	0.379	0.379	0.379
MDW	('k)	39	84	48	76	28
LLDF		0.709	0.694	0.679	0.704	0.728
MLL + IM	('k)	434	376	437	388	396
Mu (Strength I)	('k)	958	1088	1009	1071	837
Ø Mn	('k)	2210	1301	1997	1306	2234
fs DC 1	(ksi)	4.2	9.1	5.7	8.3	3.1
fs DC 2	(ksi)	0.6	1.2	0.8	1.1	0.4
fs DW	(ksi)	1.2	2.6	1.6	2.4	0.9
fs (LL + IM)	(ksi)	12.2	!0.6	13.3	10.9	11.1
fs (Service II)	(ksi)	21.8	26.7	25.4	26.0	18.8
0.95Rh Fyf	(ksi)	47.5	47.5	47.5	47.5	47.5
fs (Total)(Strength I)	(ksi)	29.1	35.4	33.8	34.4	25.1
Ø Fn	(ksi)	-----	50	-----	50	-----
Vf	(k)	27.5	-----	26.9	-----	26.6

BEAM REACTION TABLE

	W. Abut.		Pier 1		Pier 2		E. Abut.	
	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior
LLDF	0.785	0.711	0.785	0.711	0.785	0.711	0.785	0.711
OCF	---	1.117	---	---	---	---	---	1.117
R_{DC1} ('k)	13.2	12.5	47.6	45.0	45.1	42.6	11.3	10.7
R_{DC2} ('k)	2.6	2.6	9.3	9.3	8.8	8.8	2.2	2.2
RDW ('k)	5.5	5.1	19.7	18.4	18.6	17.4	4.7	4.4
R_{LL} ('k)	50.9	51.2	81.0	72.8	80.4	72.3	47.0	47.3
R_{im} ('k)	13.8	14.2	17.8	15.9	17.9	16.1	12.7	13.1
R_{TOTAL} ('k)	86.0	85.5	175.4	161.5	170.8	157.2	78.0	77.7

Note:
Diaphragms between beams 3 and 4 shall be installed in Stage II.

Note:
Beams and bearing stiffeners shall be AASHTO M 270, Grade 50.

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

Ic(cr), Sc(cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing fs (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

Mu (Strength I): Factored design moment (kip-ft.).
$1.25\ (MDC1 + MDC2) + 1.5\ MDW + 1.75\ M_{L+IM}$

Ø Mn: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

fs DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
MDC1/ Snc

fs DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
MDC2/ Sc(3n) or MDC2/ Sc(cr) as applicable.

fs DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
MDW/ Sc(3n) or MDW/ Sc(cr) as applicable.

fs (℄+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
M_{L+IM} / Sc(n) or M_{L+IM} / Sc(cr) as applicable.

fs (Service II): Sum of stresses as computed below (ksi).
fsDC1 + fsDC2 + fsDW + 1.3 $fs_{(L+IM)}$

0.95RhFyf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

fs (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (fsDC1 + fsDC2) + 1.5 fsDW + 1.75 fs( )

Ø Fn: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

Vf: Maximum factored shear range in span computed according to Article 6.10.10.

Note:
M_{L} and R_{L} include the effects of centrifugal force and superelevation.

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

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	CHECKED - MSJ	REVISED -	
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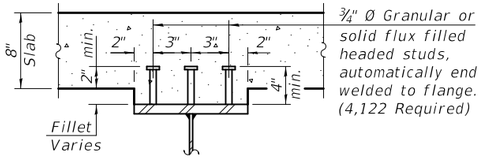
PLOT DATE = 10/8/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

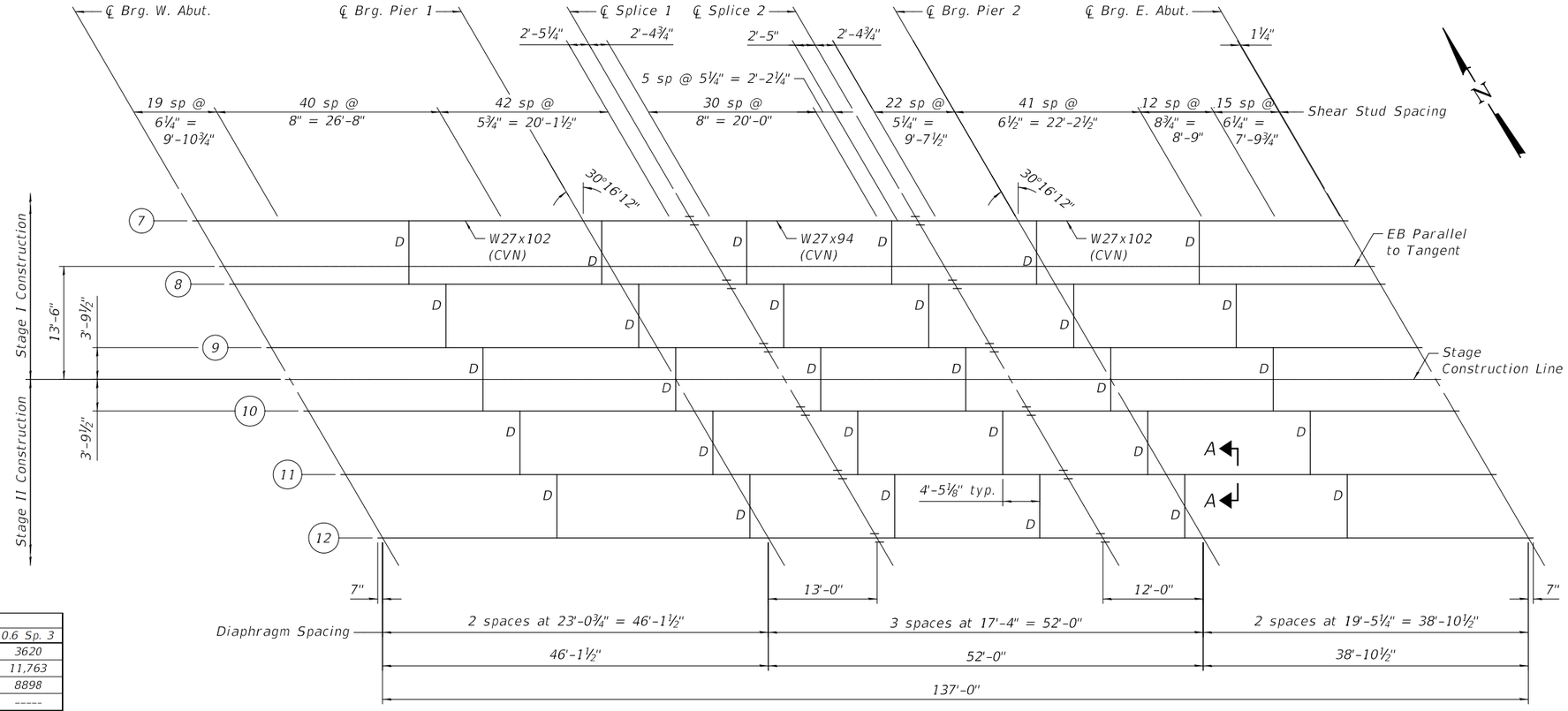
FRAMING PLAN
STRUCTURE NO. 094-0053 (WB)
SHEET 30 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	47	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			



¾" Ø Granular or solid flux filled headed studs, automatically end welded to flange. (4,122 Required)

SECTION A-A



*TOP OF BEAM ELEVATIONS

LOCATION	BM 7	BM 8	BM 9	BM 10	BM 11	BM 12
℄ Brg. W. Abut.	712.70	713.02	713.33	713.65	713.97	714.28
℄ Brg. Pier 1	712.39	712.71	713.03	713.35	713.66	713.98
℄ Brg. Splice 1	712.31	712.62	712.94	713.26	713.58	713.90
℄ Brg. Splice 2	712.16	712.48	712.80	713.12	713.44	713.76
℄ Brg. Pier 2	712.12	712.44	712.76	713.08	713.40	713.72
℄ Brg. E. Abut.	711.98	712.30	712.62	712.94	713.26	713.58

*Elevations are for fabrication only.

INTERIOR BEAM MOMENT TABLE

		0.4 Sp.1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
Is	(in^4)	3620	3620	3270	3620	3620
Ic(n)	(in^4)	11,763	11,763	10,873	11,763	11,763
Ic(3n)	(in^4)	8898	8898	8292	8898	8898
Ic(cr)	(in^4)	-----	-----	-----	-----	-----
Ss	(in^3)	267	267	243	267	267
Sc(n)	(in^3)	427	427	393	427	427
Sc(3n)	(in^3)	388	388	358	388	388
Sc(cr)	(in^3)	-----	-----	-----	-----	-----
DC 1	(k/')	0.920	0.920	0.918	0.920	0.920
MDC 1	('k)	143	230	103	184	94
DC 2	(k/')	0.180	0.180	0.180	0.180	0.180
MDC 2	('k)	28	45	21	36	18
DW	(k/')	0.379	0.379	0.379	0.379	0.379
MDW	('k)	59	95	42	77	38
LLDF		0.696	0.696	0.681	0.718	0.718
MLL + IM	('k)	512	402	455	394	427
Mu (Strength I)	('k)	1198	1189	1015	1080	944
Ø Mn	('k)	2156	1293	2013	1305	2211
fs DC 1	(ksi)	6.4	10.3	5.1	8.2	4.2
fs DC 2	(ksi)	0.9	1.4	0.7	1.1	0.6
fs DW	(ksi)	1.8	2.9	1.4	2.4	1.2
fs (LL + IM)	(ksi)	14.4	11.3	13.9	11.1	12.0
fs (Service II)	(ksi)	27.8	29.3	25.3	26.1	21.5
0.95Rh Fyf	(ksi)	47.5	47.5	47.5	47.5	47.5
fs (Total)(Strength I)	(ksi)	37.0	38.8	33.7	34.7	28.7
Ø Fn	(ksi)	-----	50	-----	50	-----
Vf	(k)	29.1	-----	26.6	-----	27.5

BEAM REACTION TABLE

		W. Abut.		Pier 1		Pier 2		E. Abut.	
		Interior	Exterior	Interior	Exterior	Interior	Exterior	interior	Exterior
LLDF		0.785	0.653	0.785	0.653	0.785	0.653	0.785	0.653
OCF		---	1.117	---	---	---	---	---	1.117
R_{DC1}	('k)	16.2	14.8	51.0	46.1	45.6	41.8	13.2	12.0
R_{DC2}	('k)	3.2	3.2	10.0	10.0	9.0	9.0	2.6	2.6
R_{DW}	('k)	6.7	6.0	21.0	18.7	18.9	16.8	5.4	4.8
R_{LL}	('k)	53.9	50.0	83.5	69.5	81.2	67.5	49.4	45.9
R_{im}	('k)	14.3	13.6	18.0	14.9	17.8	14.8	13.3	12.6
R_{TOTAL}	('k)	94.3	87.7	183.5	159.2	172.5	149.9	83.8	78.0

Note:
Diaphragms between beams 9 and 10 shall be installed in Stage II.

Note:
Beams and bearing stiffeners shall be AASHTO M 270, Grade 50.

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total-Strength I, and Service II) due to non-composite dead loads (in^4 and in^3).

Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in^4 and in^3).

Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in^4 and in^3).

Ic(cr), Sc(cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing fs (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in^4 and in^3).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

Mu (Strength I): Factored design moment (kip-ft.).
1.25 (MDC1 + MDC2) + 1.5 MDW + 1.75 M_{L+IM}

Ø Mn: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

fs DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
MDC1/ Snc

fs DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
MDC2/ Sc(3n) or MDC2/ Sc(cr) as applicable.

fs DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
MDW/ Sc(3n) or MDW/ Sc(cr) as applicable.

fs (LL+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
M_{L+IM} / Sc(n) or M_{L+IM} / Sc(cr) as applicable.

fs (Service II): Sum of stresses as computed below (ksi).
fsDC1 + fsDC2 + fsDW + 1.3 fs($_{L+IM}$)

0.95RhFyf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

fs (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (fsDC1 + fsDC2) + 1.5 fsDW + 1.75 fs( )

Ø Fn: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

Vf: Maximum factored shear range in span computed according to Article 6.10.10.

Note:
M_{L} and R_{L} include the effects of centrifugal force and superelevation.

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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

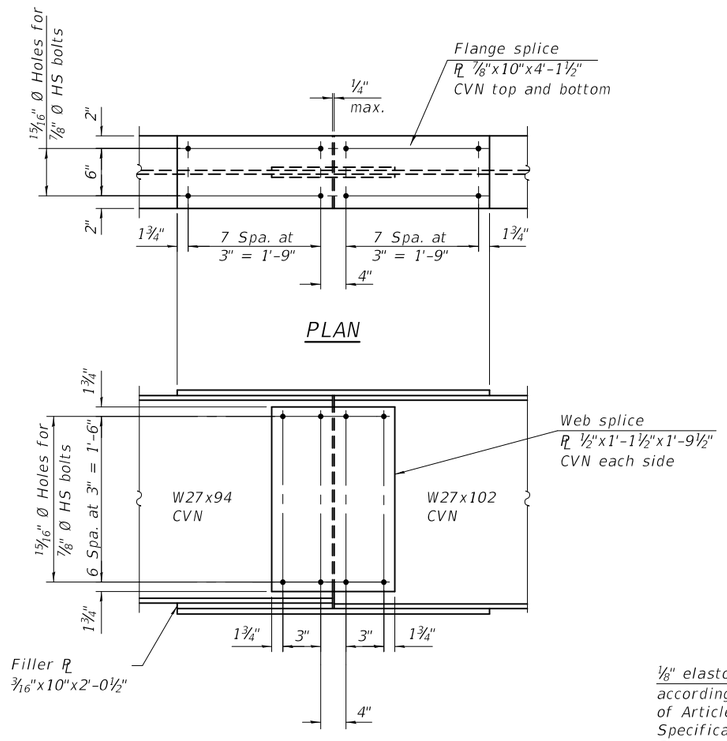
USER NAME = rmcjilton | DESIGNED - RJM | REVISED -
PLOT SCALE = 16:0.000000 ':" / in. | CHECKED - MSJ | REVISED -
PLOT DATE = 10/8/2020 | DRAWN - CFC | REVISED -
CHECKED - MCB | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 094-0054 (EB)
SHEET 31 OF 48 SHEETS

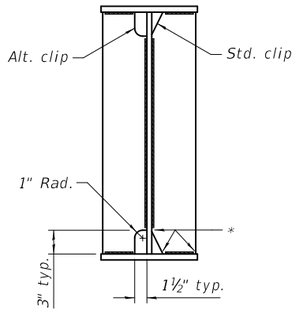
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	48	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

Notes:
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
"CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.
All Splice plates, excluding Filler plates, shall be AASHTO M270 Grade 50.

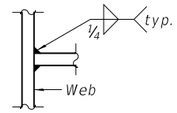


ELEVATION

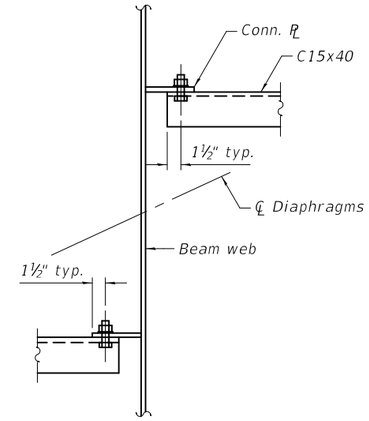
SPLICE DETAIL
(12 Required, each structure)
(24 Required, total)



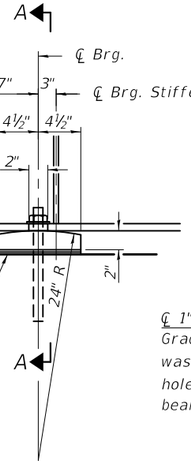
WELD LIMITS AND CLIP DETAILS
*Stop welds ¼" (±⅛") from edges as shown. Typical.



WEB WELD DETAIL

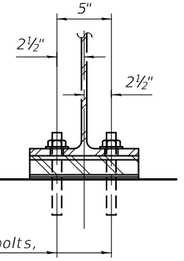


SECTION B-B



⅛" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

ELEVATION AT ABUTMENT

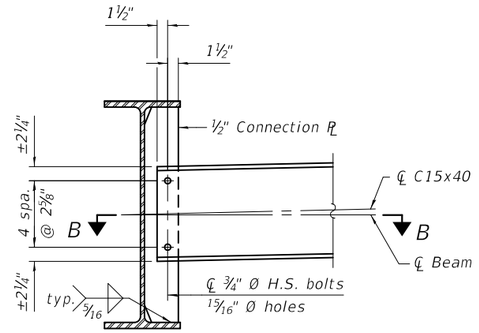


℄ 1" Ø x 12" All-thread anchor bolts, Grade 55 with 2¼"x2¼"x5/16" PL washer under nut. 1⅜"x2" slotted hole in flange. 1½" Ø holes in bearing plate.

SECTION A-A

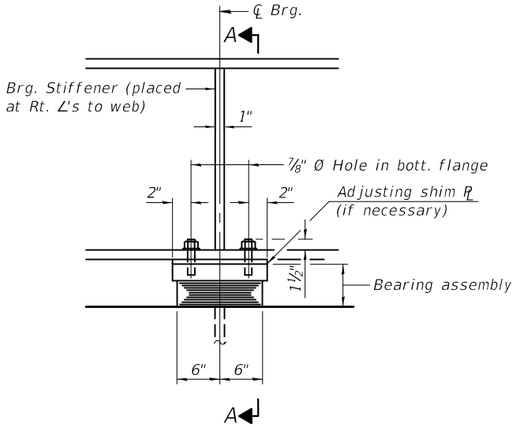
FIXED BEARING

Notes:
Anchor bolts shall be according to Article 521.06 of the Standard Specifications.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
See sheet 33 of 48 for bearing stiffener dimensions and details.

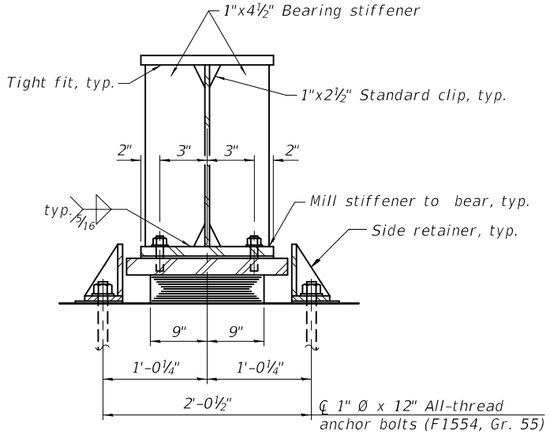


INTERIOR DIAPHRAGM

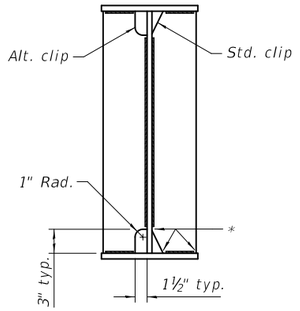
Notes:
Two hardened washers required for each set of oversized holes.
Alternate channels of equal depth and larger weight are permitted to facilitate material aquisition. Alternate channels, if utilized, shall be provided at no additional cost to the Department.
See Section B-B for connection plate orientation.



ELEVATION AT PIERS

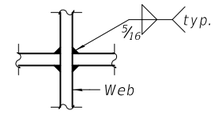


SECTION A-A



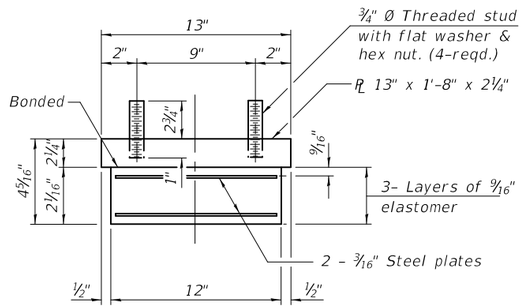
WELD LIMITS AND CLIP DETAILS

*Stop welds ¼" (±⅛") from edges as shown. Typical.



WEB WELD DETAIL

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

Notes:

Side retainers and stainless steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.

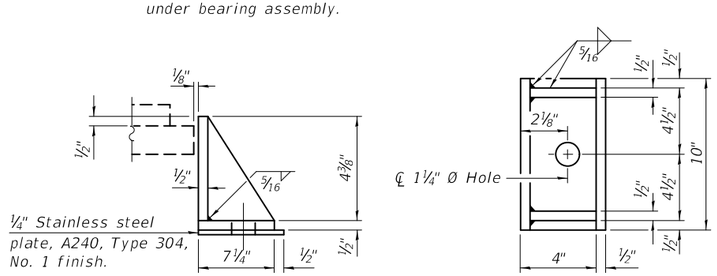
Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

Two ⅛" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details

All bearing plates, side retainers, anchor bolts nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

Note:

Shim plates shall not be placed under bearing assembly.



SIDE RETAINER

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	24
Anchor Bolts, 1"	Each	48

I-2E-1

6-15-2019

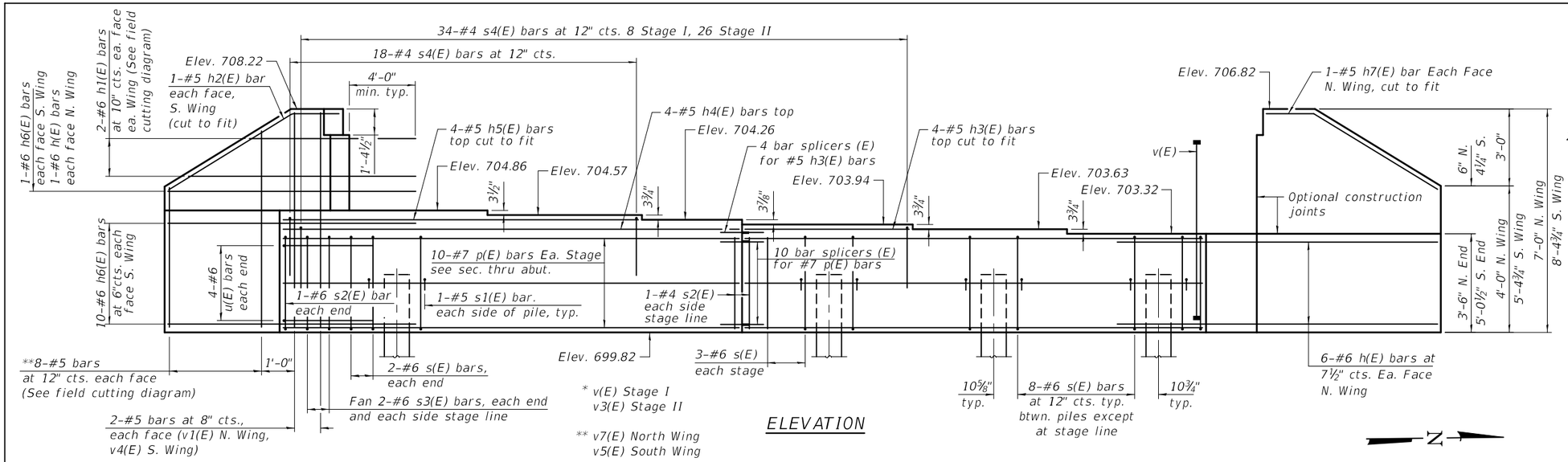
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

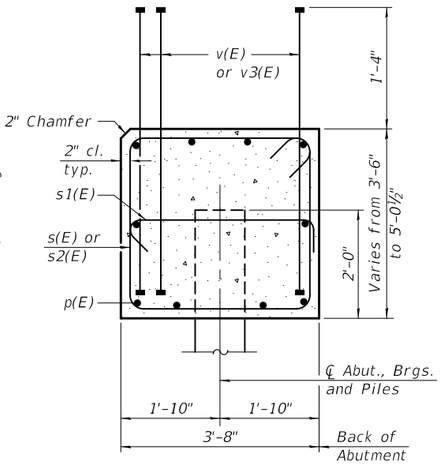
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING DETAILS STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
	CHECKED - MSJ	REVISED -		
PLOT SCALE = 0:2.000000 ':" / in.	DRAWN - CFC	REVISED -		
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		SHEET 33 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	50	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

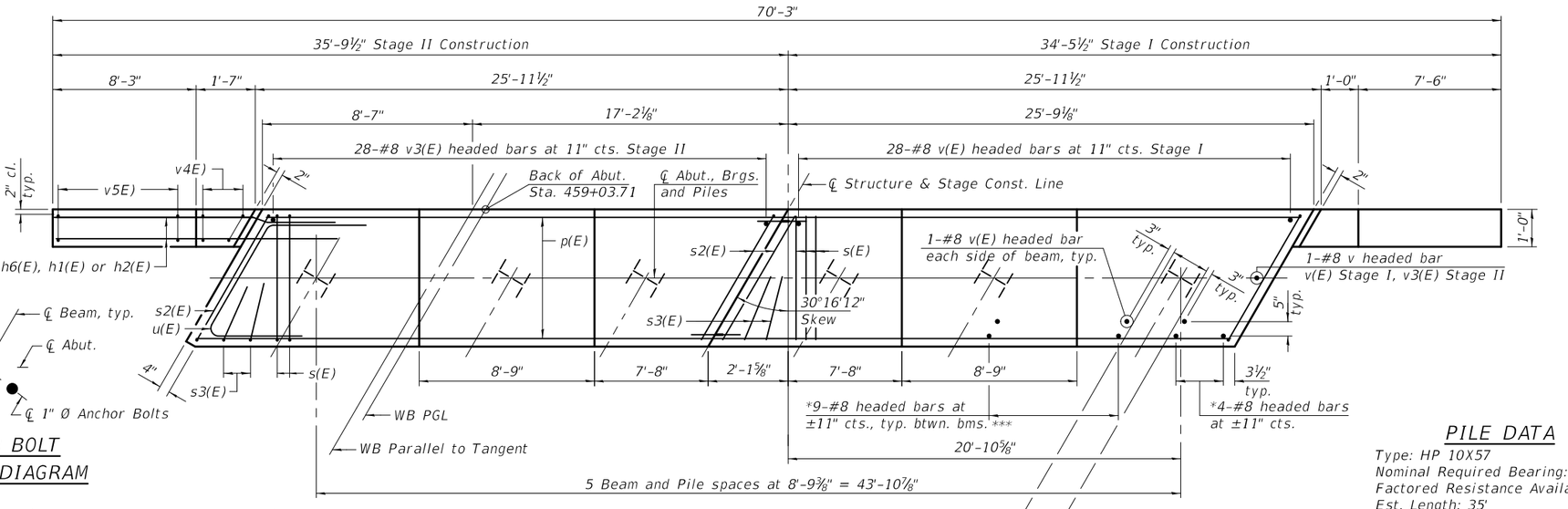
MODEL: Default
FILE NAME: g:\v8i_ss4\15\15-1016g\bridge\0940053_0054-68D95-033-bearing-details-0054-eb.dgn





SEC. THRU ABUT.

Dimensions at right angles to abutment.



ANCHOR BOLT LOCATION DIAGRAM

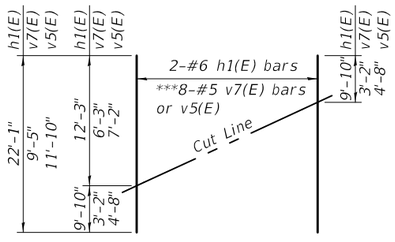
PILE DATA

Type: HP 10X57
Nominal Required Bearing: 454 kips
Factored Resistance Available: 250 kips
Est. Length: 35'
No. Production Piles: 5
No. Test Piles: 1

***5 Stage I, 4 Stage II between center beams

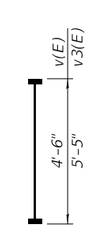
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	14	#6	13'-2"	
h1(E)	4	#6	22'-1"	
h2(E)	2	#5	9'-11"	
h3(E)	4	#5	9'-6"	
h4(E)	4	#5	25'-6"	
h5(E)	4	#5	17'-9"	
h6(E)	22	#6	14'-0"	
h7(E)	2	#5	9'-4"	
p(E)	20	#7	25'-6"	
s(E)	42	#6	14'-4"	
s1(E)	12	#5	4'-4"	
s2(E)	4	#6	15'-5"	
s3(E)	8	#6	6'-8"	
s4(E)	52	#4	6'-8"	
u(E)	8	#6	12'-4"	
v(E)	62	#8	4'-6"	
v3(E)	61	#8	5'-5"	
v4(E)	4	#5	8'-1"	
v5(E)	8	#5	11'-10"	
v6(E)	4	#5	6'-8"	
v7(E)	8	#5	9'-5"	
Structure Excavation			Cu. Yd.	153
Concrete Structures			Cu. Yd.	34.3
Reinforcement Bars, Epoxy Coated			Pound	5550
Furnishing Steel Piles, HP 10x57			Foot	175
Driving Piles			Foot	175
Test Pile, Steel HP 10x57			Each	1

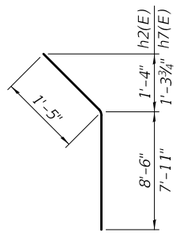


FIELD CUTTING DIAGRAM

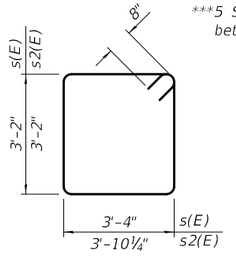
Order h1(E), v2(E) and v5(E) full length. Cut as shown and use remainder of bars in opposite wing.



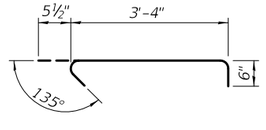
BAR v(E) or v3(E) (Headed)



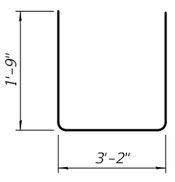
BAR h2(E) or h7(E)



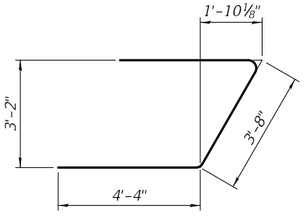
BAR s(E) & s2(E)



BAR s1(E)



BAR s3(E) or s4(E)



BAR u(E)

Notes:
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
For details of piles see sheet of .

AI-SB-R *6-15-2019*

MODEL: Default
FILE NAME: q:\v8i_ss4\15\15-1016gbridge\094-0053_0054-68D95-034-west-abut-0053-wb.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

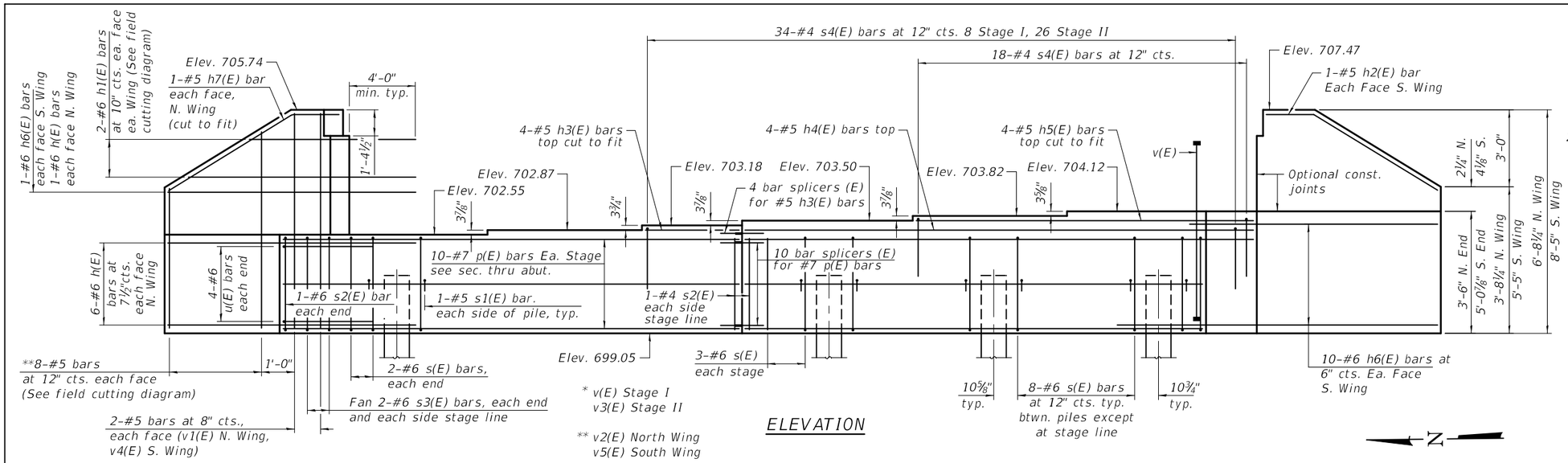
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor		DESIGNED - MCB	REVISED -	
		CHECKED - TAR	REVISED -	
PLOT SCALE = 0:2.000000 '=' / in.		DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020		CHECKED - MCB	REVISED -	

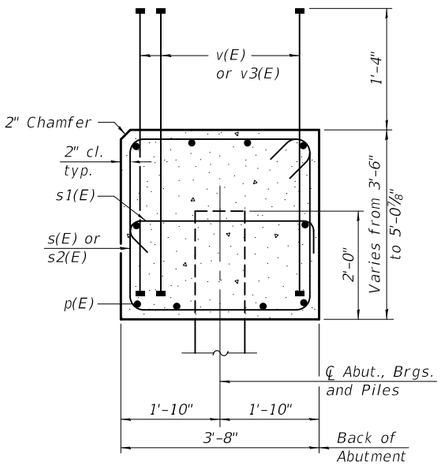
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 094-0053 (WB)
SHEET 34 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	51	75
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		

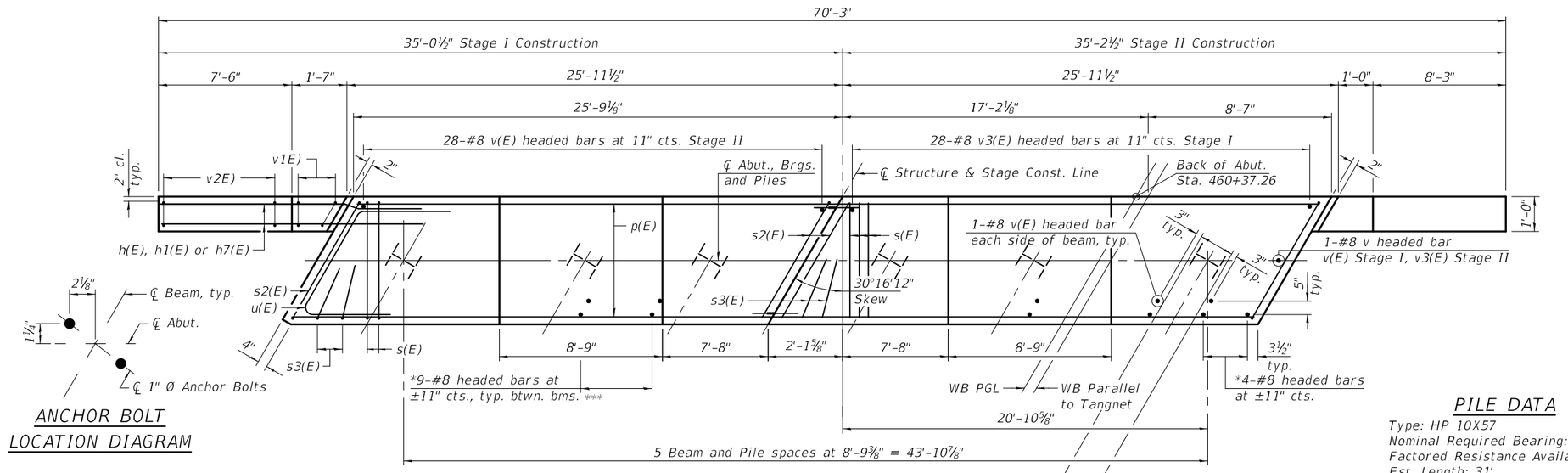


ELEVATION



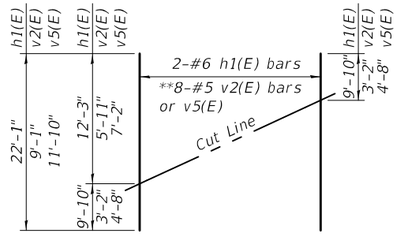
SEC. THRU ABUT.

Dimensions at right angles to abutment.



ANCHOR BOLT LOCATION DIAGRAM

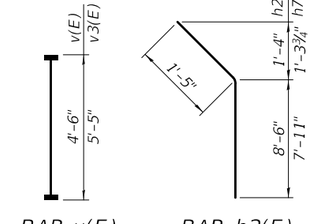
PLAN



FIELD CUTTING DIAGRAM

Order h1(E), v2(E) and v5(E) full length. Cut as shown and use remainder of bars in opposite wing.

***5 Stage I, 4 Stage II between center beams



BAR v(E) or v3(E) (Headed)

BAR h2(E) or h7(E)

BAR s(E) & s2(E)

BAR s1(E)

BAR s3(E) or s4(E)

BAR u(E)

PILE DATA

Type: HP 10X57
Nominal Required Bearing: 454 kips
Factored Resistance Available: 249 kips
Est. Length: 31'
No. Production Piles: 6

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	14	#6	13'-2"	
h1(E)	4	#6	22'-1"	
h2(E)	2	#5	9'-11"	
h3(E)	4	#5	9'-6"	
h4(E)	4	#5	25'-6"	
h5(E)	4	#5	17'-9"	
h6(E)	22	#6	14'-0"	
h7(E)	2	#5	9'-4"	
p(E)	20	#7	25'-6"	
s(E)	42	#6	14'-4"	
s1(E)	12	#5	4'-4"	
s2(E)	4	#6	15'-5"	
s3(E)	8	#6	6'-8"	
s4(E)	52	#4	6'-8"	
u(E)	8	#6	12'-4"	
v(E)	62	#8	4'-6"	
v1(E)	4	#5	6'-4"	
v2(E)	8	#5	9'-1"	
v3(E)	61	#8	5'-5"	
v4(E)	4	#5	8'-1"	
v5(E)	8	#5	11'-10"	
Structure Excavation		Cu. Yd.	162	
Concrete Structures		Cu. Yd.	34.3	
Reinforcement Bars, Epoxy Coated		Pound	5550	
Furnishing Steel Piles, HP 10x57		Foot	186	
Driving Piles		Foot	186	

Notes:
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
For details of piles see sheet of .

AI-SB-R 6-15-2019

MODEL: Default
FILE NAME: g:\e8i_sst\15\15-1016g\bridge\0940053_0054-68D95-035-east-abut-0053-wb.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

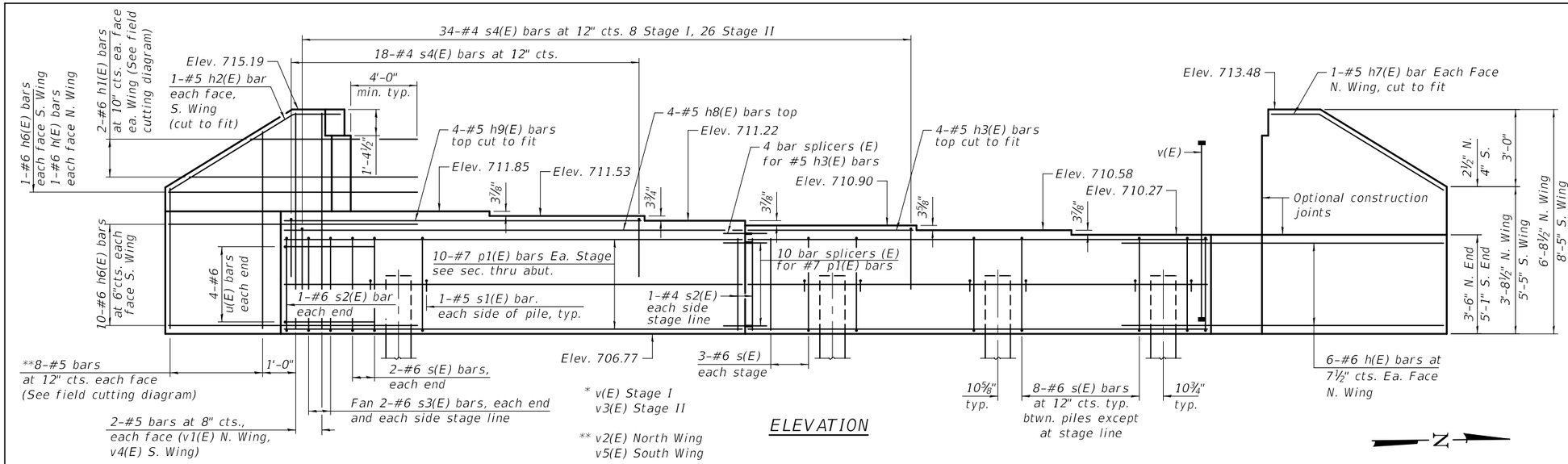
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - MCB	REVISED -	
	CHECKED - TAR	REVISED -	
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

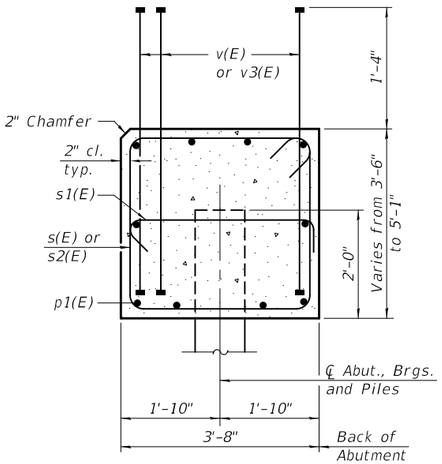
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT
STRUCTURE NO. 094-0053 (WB)
SHEET 35 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	52	75
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		

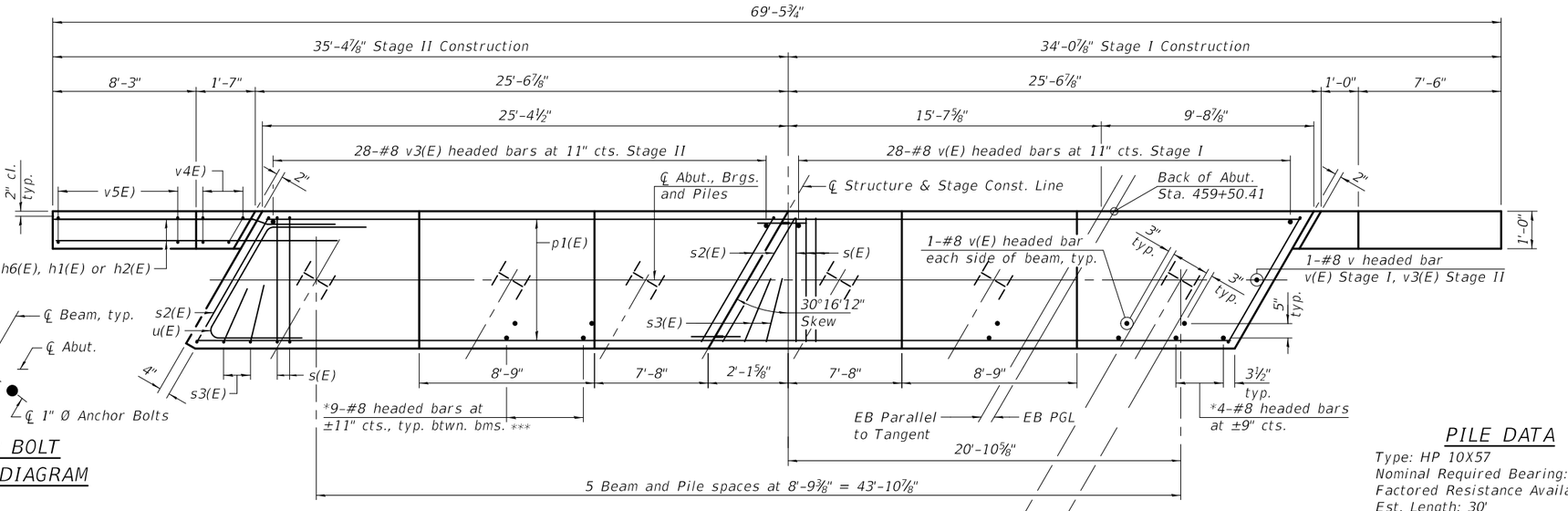


ELEVATION

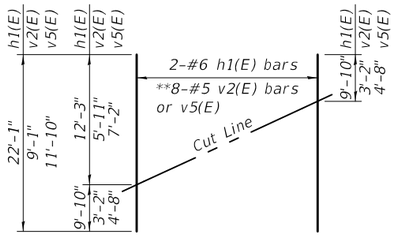


SEC. THRU ABUT.

Dimensions at right angles to abutment.



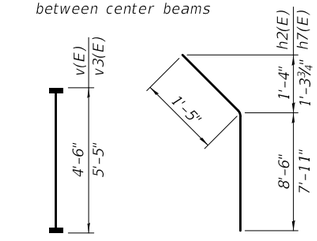
ANCHOR BOLT LOCATION DIAGRAM



FIELD CUTTING DIAGRAM

Order h1(E), v2(E) and v5(E) full length. Cut as shown and use remainder of bars in opposite wing.

***5 Stage I, 4 Stage II between center beams

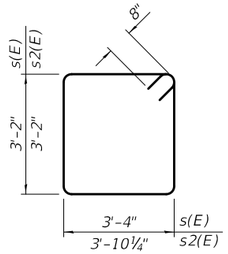


BAR v(E) or v3(E)

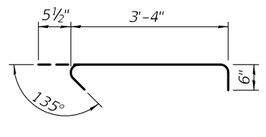
(Headed)

BAR h2(E) or h7(E)

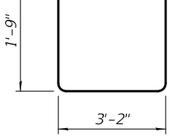
PLAN



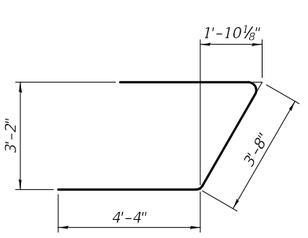
BAR s(E) & s2(E)



BAR s1(E)



BAR s3(E) or s4(E)



BAR u(E)

PILE DATA

Type: HP 10X57
Nominal Required Bearing: 454 kips
Factored Resistance Available: 250 kips
Est. Length: 30'
No. Production Piles: 6

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	14	#6	13'-2"	
h1(E)	4	#6	22'-1"	
h2(E)	2	#5	9'-11"	
h3(E)	4	#5	9'-6"	
h6(E)	22	#6	14'-0"	
h7(E)	2	#5	9'-4"	
h8(E)	4	#5	25'-1"	
h9(E)	4	#5	17'-4"	
p1(E)	20	#7	25'-1"	
s(E)	42	#6	14'-4"	
s1(E)	12	#5	4'-4"	
s2(E)	4	#6	15'-5"	
s3(E)	8	#6	6'-8"	
s4(E)	52	#4	6'-8"	
u(E)	8	#6	12'-4"	
v(E)	62	#8	4'-6"	
v1(E)	4	#5	6'-4"	
v2(E)	8	#5	9'-1"	
v3(E)	61	#8	5'-5"	
v4(E)	4	#5	8'-1"	
v5(E)	8	#5	11'-10"	
Structure Excavation		Cu. Yd.	126	
Concrete Structures		Cu. Yd.	34.0	
Reinforcement Bars, Epoxy Coated		Pound	5530	
Furnishing Steel Piles, HP 10x57		Foot	180	
Driving Piles		Foot	180	

Notes:
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
For details of piles see sheet of .

AI-SB-R 6-15-2019

MODEL: Default
FILE NAME: q:\v8i_gs4\15\15-1016gbridge\0940053_0054-68D95-036-west-abut-0054-eb.dgn

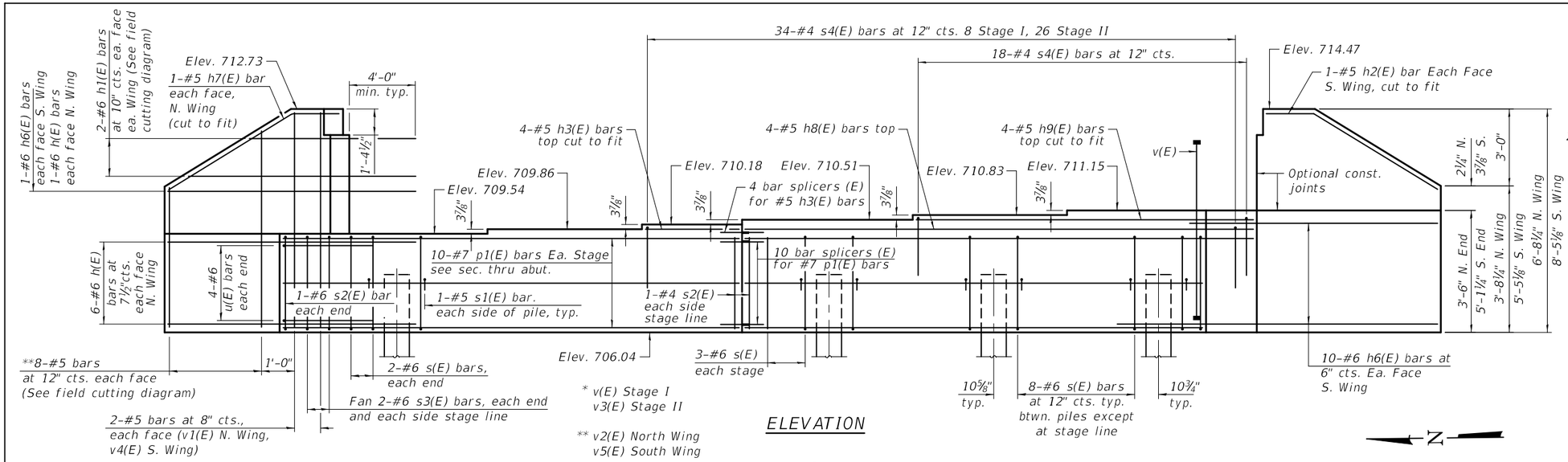
FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - MCB	REVISED -	
	CHECKED - TAR	REVISED -	
PLOT SCALE = 0:2.000000 '=' / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

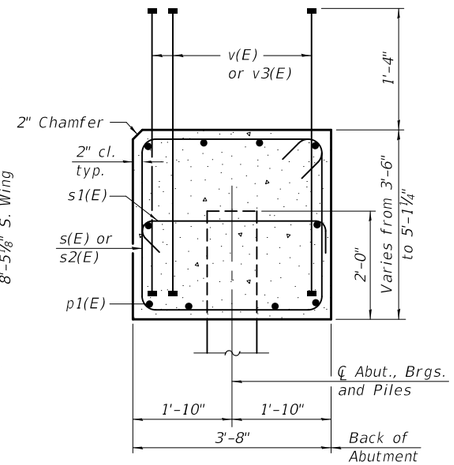
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 094-0054 (EB)
SHEET 36 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	53	75
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		

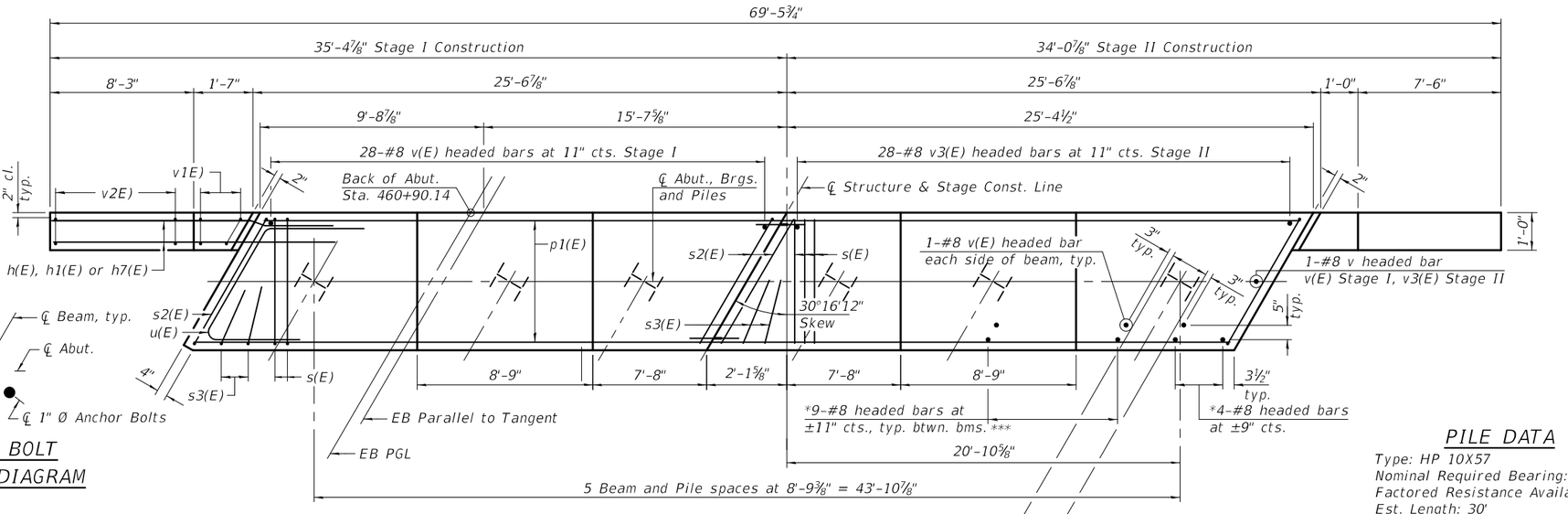


ELEVATION

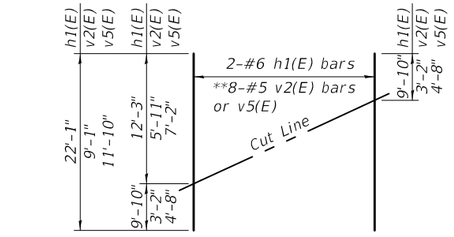


SEC. THRU ABUT.

Dimensions at right angles to abutment.



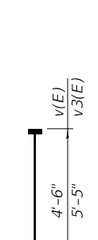
PLAN



ANCHOR BOLT LOCATION DIAGRAM

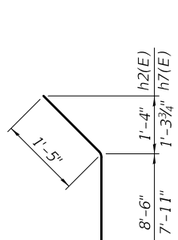
FIELD CUTTING DIAGRAM

Order h1(E), v2(E) and v5(E) full length. Cut as shown and use remainder of bars in opposite wing.

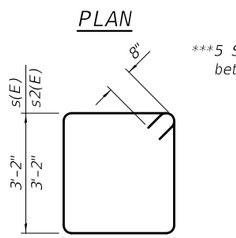


BAR v(E) or v3(E)

(Headed)

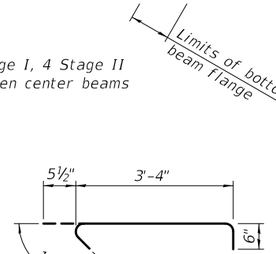


BAR h2(E) or h7(E)

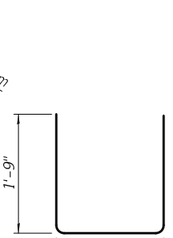


BAR s(E) & s2(E)

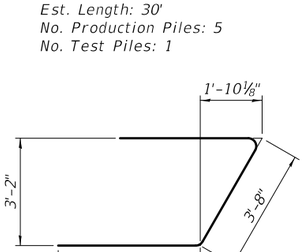
***5 Stage I, 4 Stage II between center beams



BAR s1(E)



BAR s3(E) or s4(E)



BAR u(E)

PILE DATA

Type: HP 10X57
Nominal Required Bearing: 454 kips
Factored Resistance Available: 249 kips
Est. Length: 30'
No. Production Piles: 5
No. Test Piles: 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	14	#6	13'-2"	
h1(E)	4	#6	22'-1"	
h2(E)	2	#5	9'-11"	
h3(E)	4	#5	9'-6"	
h6(E)	22	#6	14'-0"	
h7(E)	2	#5	9'-4"	
h8(E)	4	#5	25'-1"	
h9(E)	4	#5	17'-4"	
p1(E)	20	#7	25'-1"	
s(E)	42	#6	14'-4"	
s1(E)	12	#5	4'-4"	
s2(E)	4	#6	15'-5"	
s3(E)	8	#6	6'-8"	
s4(E)	52	#4	6'-8"	
u(E)	8	#6	12'-4"	
v(E)	62	#8	4'-6"	
v1(E)	4	#5	6'-4"	
v2(E)	8	#5	9'-1"	
v3(E)	61	#8	5'-5"	
v4(E)	4	#5	8'-1"	
v5(E)	8	#5	11'-10"	
Structure Excavation		Cu. Yd.	160	
Concrete Structures		Cu. Yd.	34.1	
Reinforcement Bars, Epoxy Coated		Pound	5530	
Furnishing Steel Piles, HP 10x57		Foot	150	
Driving Piles		Foot	150	
Test Pile, Steel HP 10x57		Each	1	

Notes:
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
For details of piles see sheet of .

AI-SB-R 6-15-2019

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = cconnor	DESIGNED - MCB	REVISED -	
	CHECKED - TAR	REVISED -	
PLOT SCALE = 0:2.000000 ':" / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

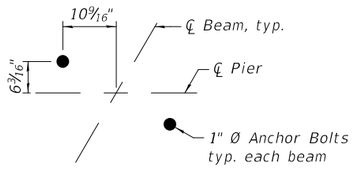
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT
STRUCTURE NO. 094-0054 (EB)
SHEET 37 OF 48 SHEETS

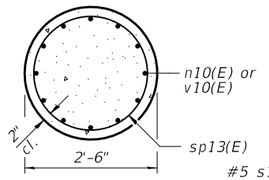
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	54	75
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		

MODEL: Default
FILE NAME: g:\e8i_ss4\15\15-1016gbridge\094-0053_0054-68D95-037-east-abut-0054-eb.dgn

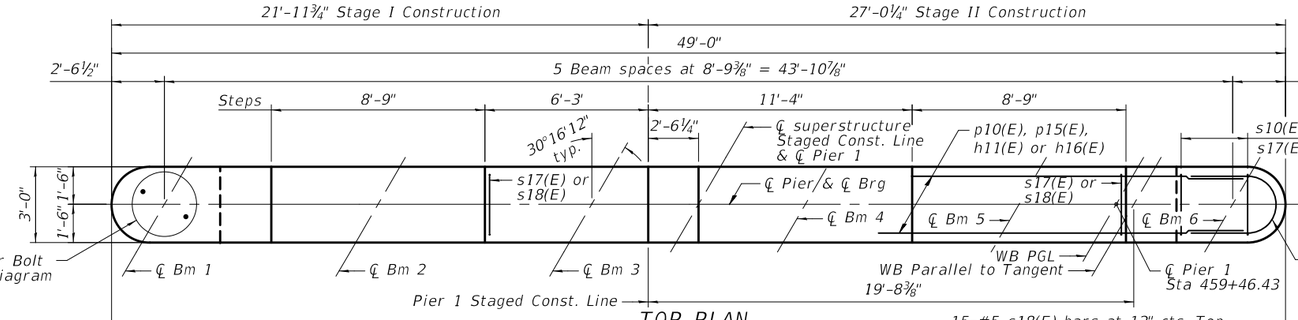
FEHR GRAHAM PROJECT NUMBER: 15-1016G



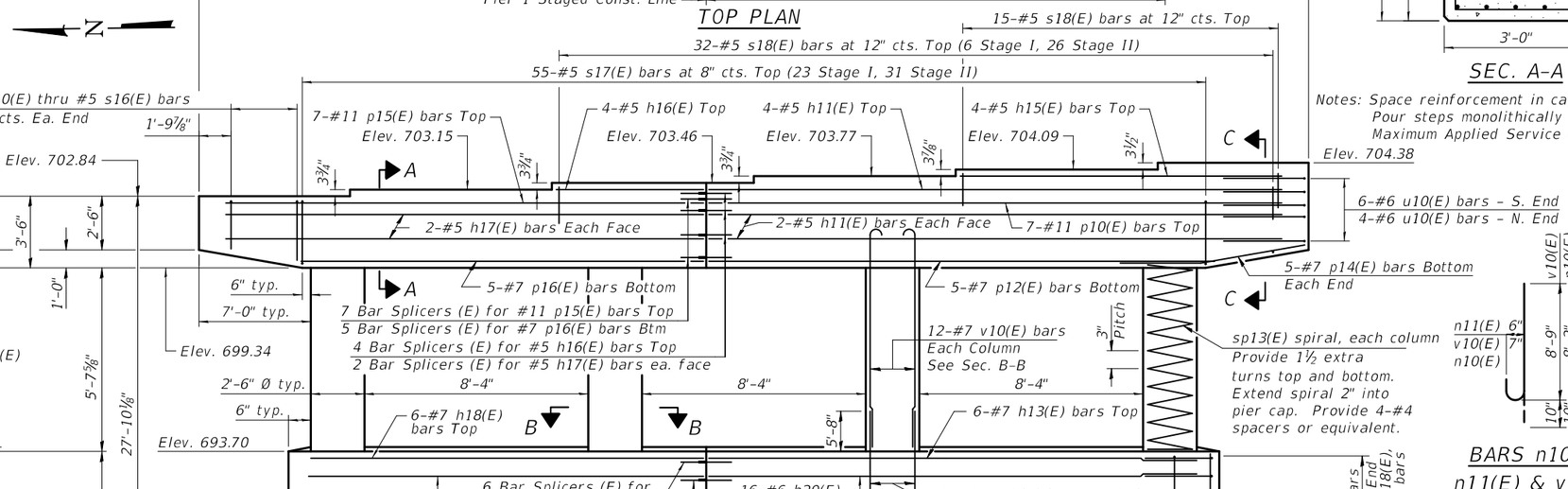
ANCHOR BOLT LOCATION DIAGRAM



SEC. B-B

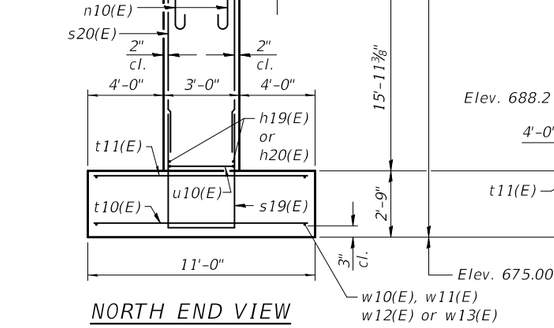


TOP PLAN



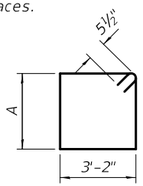
ELEVATION

(Looking East)



NORTH END VIEW

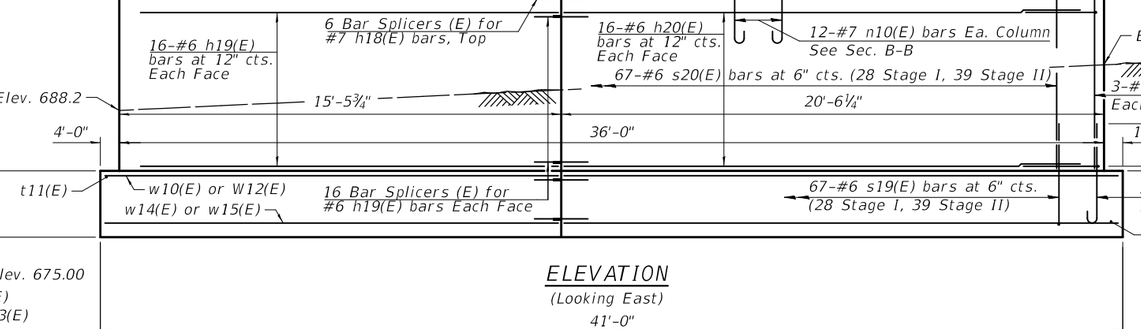
The bottom of footing elevation shall be adjusted to ensure a minimum embedment of 12 inches in non-weathered rock. The rock excavation shall be made with near-vertical sides at the plan dimensions to allow the sides and base of the embedded portion of the footing to be cast against undisturbed rock surfaces.



BAR s10(E) THRU s17(E)

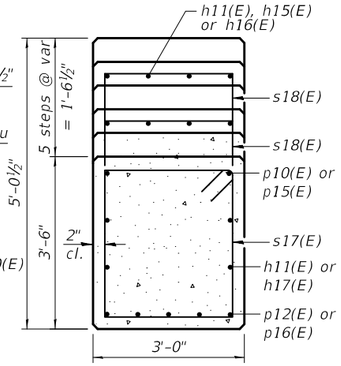
A DIMENSIONS

Bar	A
s10(E)	2'-5⅜"
s11(E)	2'-6⅜"
s12(E)	2'-7¾"
s13(E)	2'-9"
s14(E)	2'-10¼"
s15(E)	2'-11½"
s16(E)	3'-0¾"
s17(E)	3'-2"

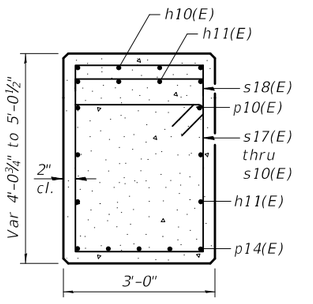


FOOTING PLAN

SEC. A-A



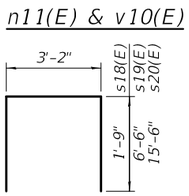
SEC. C-C



Notes: Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Maximum Applied Service Bearing Pressure, Qmax = 5.5 ksf (Stage II Traffic)
3.9 ksf (Construction Completion)

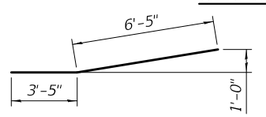
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h11(E)	8	#5	25'-5"	
h13(E)	6	#7	18'-11"	
h15(E)	4	#5	13'-11"	
h16(E)	4	#5	6'-0"	
h17(E)	4	#5	20'-4"	
h18(E)	6	#7	13'-10"	
h19(E)	32	#6	13'-10"	
h20(E)	32	#6	18'-11"	
n10(E)	48	#7	9'-0"	
n11(E)	6	#6	7'-2"	
p10(E)	7	#11	27'-0"	
p12(E)	5	#7	20'-5"	
p14(E)	10	#7	9'-10"	
p15(E)	7	#11	21'-11"	
p16(E)	5	#7	15'-4"	
s10(E)	2	#5	12'-2"	
s11(E)	2	#5	12'-4"	
s12(E)	2	#5	12'-6"	
s13(E)	2	#5	12'-9"	
s14(E)	2	#5	13'-0"	
s15(E)	2	#5	13'-2"	
s16(E)	2	#5	13'-5"	
s17(E)	55	#5	13'-7"	
s18(E)	47	#5	6'-8"	
s19(E)	67	#6	16'-2"	
s20(E)	67	#6	34'-2"	
** sp13(E)	4	#4	5'-10"	
t10(E)	50	#6	10'-8"	
t11(E)	22	#4	10'-8"	
u10(E)	44	#6	11'-8"	
v10(E)	48	#7	9'-7"	
v13(E)	6	#6	15'-6"	
w10(E)	12	#6	21'-2"	
w12(E)	7	#4	21'-2"	
w14(E)	12	#6	19'-0"	
w15(E)	7	#4	19'-0"	
Structure Excavation			Cu. Yd.	343
Concrete Structures			Cu. Yd.	135.1
Reinforcement Bars, Epoxy Coated			Pound	16,250

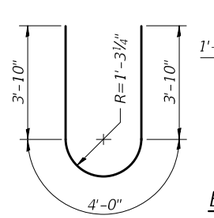


BARS n10(E), n11(E) & v10(E)

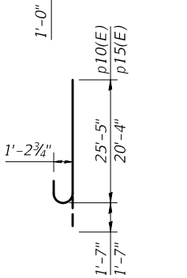
BAR s18(E), s19(E) & s20(E)



BAR p14(E)



BAR u10(E)



BARS p10(E), p15(E)

** Length is height of spiral.

P-24

2-17-2017

MODEL: Default
FILE NAME: g:\v8i_ss4\15\15-1016g\bridge\09400S3_0054-68D95-038-pier1-0053-wb.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

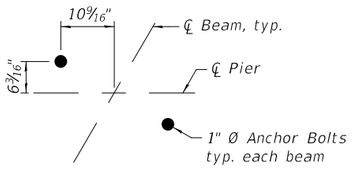
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -	
	CHECKED - MCB	REVISED -	
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

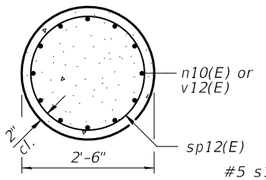
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1
STRUCTURE NO. 094-0053 (WB)
SHEET 38 OF 48 SHEETS

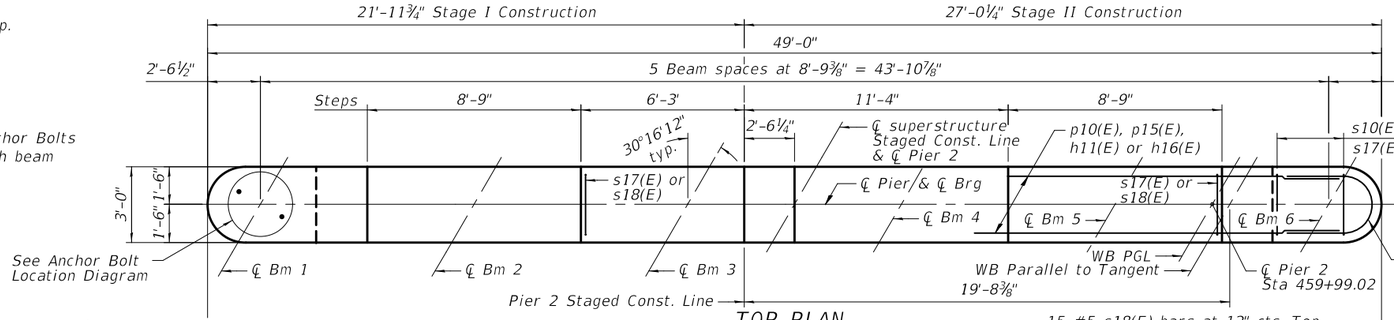
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	55	75
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		



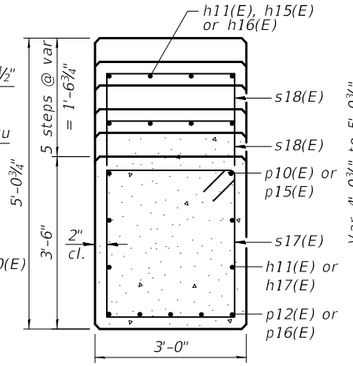
ANCHOR BOLT LOCATION DIAGRAM



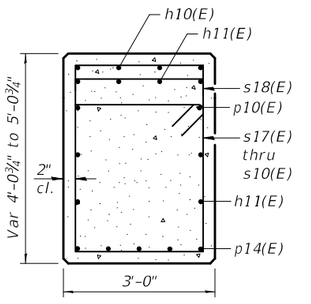
SEC. B-B



TOP PLAN

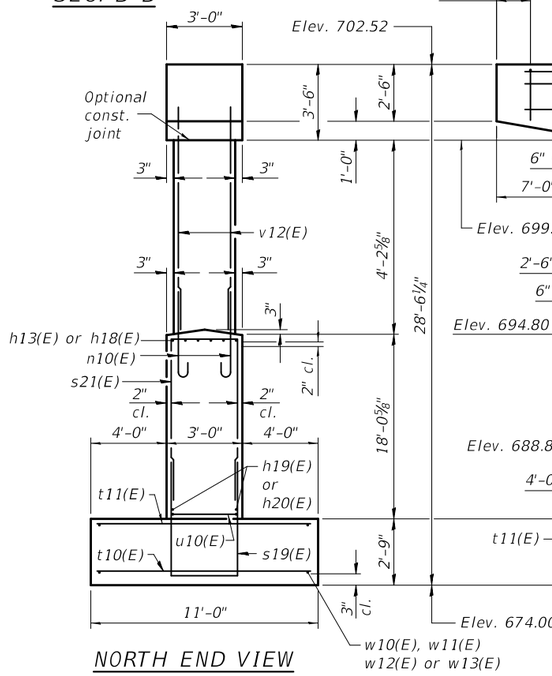


SEC. A-A

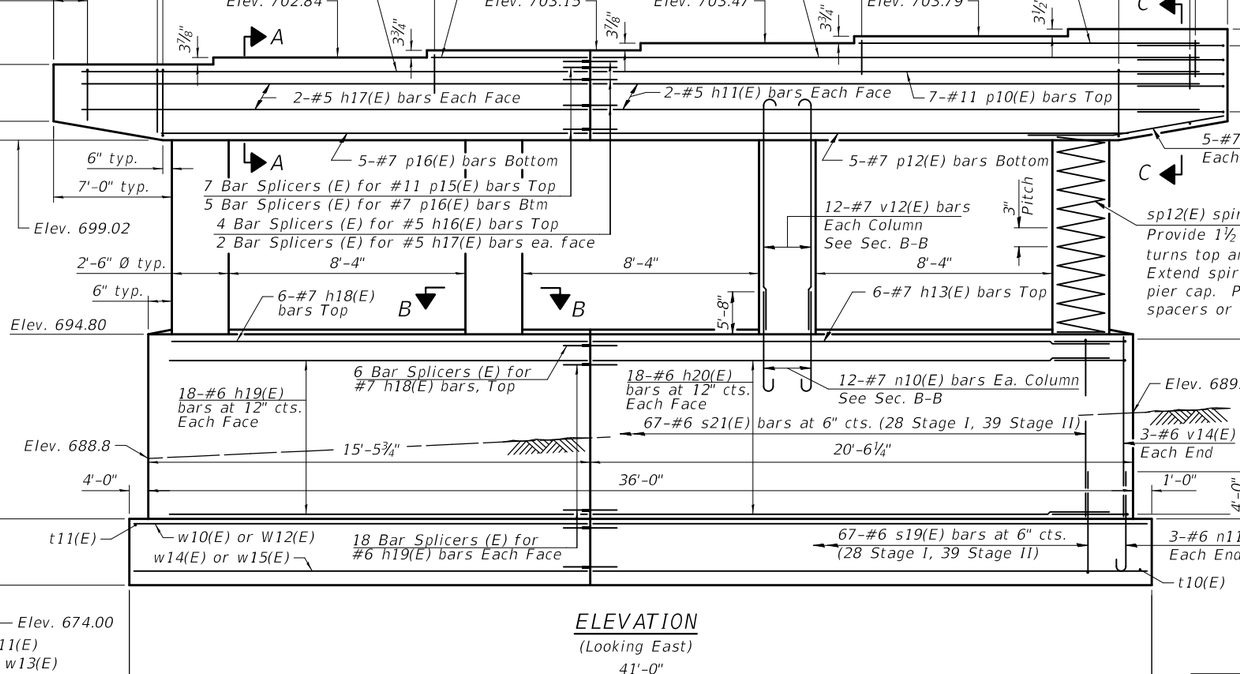


SEC. C-C

Notes: Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Maximum Applied Service Bearing Pressure, Qmax = 5.5 ksf (Stage II Traffic)
3.9 ksf (Construction Completion)



NORTH END VIEW

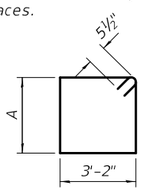


ELEVATION

(Looking East)

FOOTING PLAN

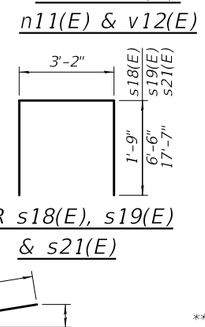
The bottom of footing elevation shall be adjusted to ensure a minimum embedment of 12 inches in non-weathered rock. The rock excavation shall be made with near-vertical sides at the plan dimensions to allow the sides and base of the embedded portion of the footing to be cast against undisturbed rock surfaces.



BAR s10(E) THRU s17(E)

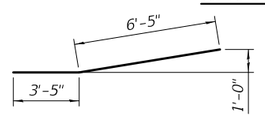
A DIMENSIONS

Bar	A
s10(E)	2'-5⅜"
s11(E)	2'-6⅜"
s12(E)	2'-7¾"
s13(E)	2'-9"
s14(E)	2'-10¼"
s15(E)	2'-11½"
s16(E)	3'-0¾"
s17(E)	3'-2"

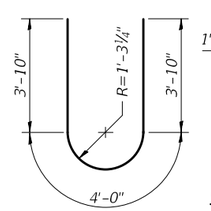


BARS n10(E), n11(E) & v12(E)

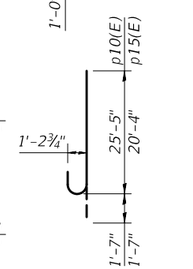
BAR s18(E), s19(E) & s21(E)



BAR p14(E)



BAR u10(E)



BARS p10(E), p15(E)

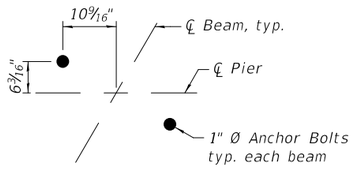
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h11(E)	8	#5	25'-5"	—
h13(E)	6	#7	18'-11"	—
h15(E)	4	#5	13'-11"	—
h16(E)	4	#5	6'-0"	—
h17(E)	4	#5	20'-4"	—
h18(E)	6	#7	13'-10"	—
h19(E)	36	#6	13'-10"	—
h20(E)	36	#6	18'-11"	—
n10(E)	48	#7	9'-0"	U
n11(E)	6	#6	7'-2"	U
p10(E)	7	#11	27'-0"	U
p12(E)	5	#7	20'-5"	—
p14(E)	10	#7	9'-10"	∫
p15(E)	7	#11	21'-11"	U
p16(E)	5	#7	15'-4"	—
s10(E)	2	#5	12'-2"	⊐
s11(E)	2	#5	12'-4"	⊐
s12(E)	2	#5	12'-6"	⊐
s13(E)	2	#5	12'-9"	⊐
s14(E)	2	#5	13'-0"	⊐
s15(E)	2	#5	13'-2"	⊐
s16(E)	2	#5	13'-5"	⊐
s17(E)	55	#5	13'-7"	⊐
s18(E)	47	#5	6'-8"	L
s19(E)	67	#6	16'-2"	L
s21(E)	67	#6	38'-4"	L
** sp12(E)	4	#4	4'-5"	∿∿
t10(E)	50	#6	10'-8"	—
t11(E)	22	#4	10'-8"	—
u10(E)	50	#6	11'-8"	U
v12(E)	48	#7	8'-2"	U
v14(E)	6	#6	17'-7"	—
w10(E)	12	#6	21'-2"	—
w12(E)	7	#4	21'-2"	—
w14(E)	12	#6	19'-0"	—
w15(E)	7	#4	19'-0"	—
Structure Excavation			Cu. Yd.	376
Concrete Structures			Cu. Yd.	142.3
Reinforcement Bars, Epoxy Coated			Pound	16,740

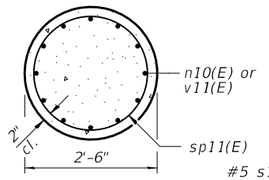
** Length is height of spiral.

P-24

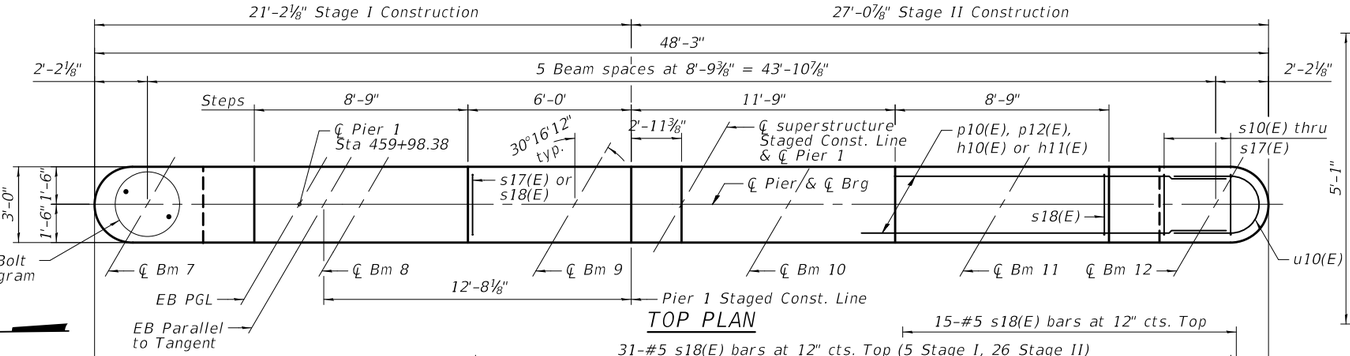
2-17-2017



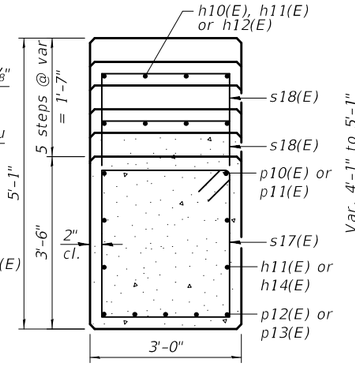
ANCHOR BOLT LOCATION DIAGRAM



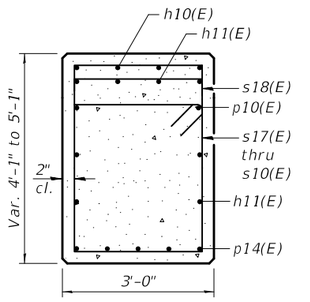
SEC. B-B



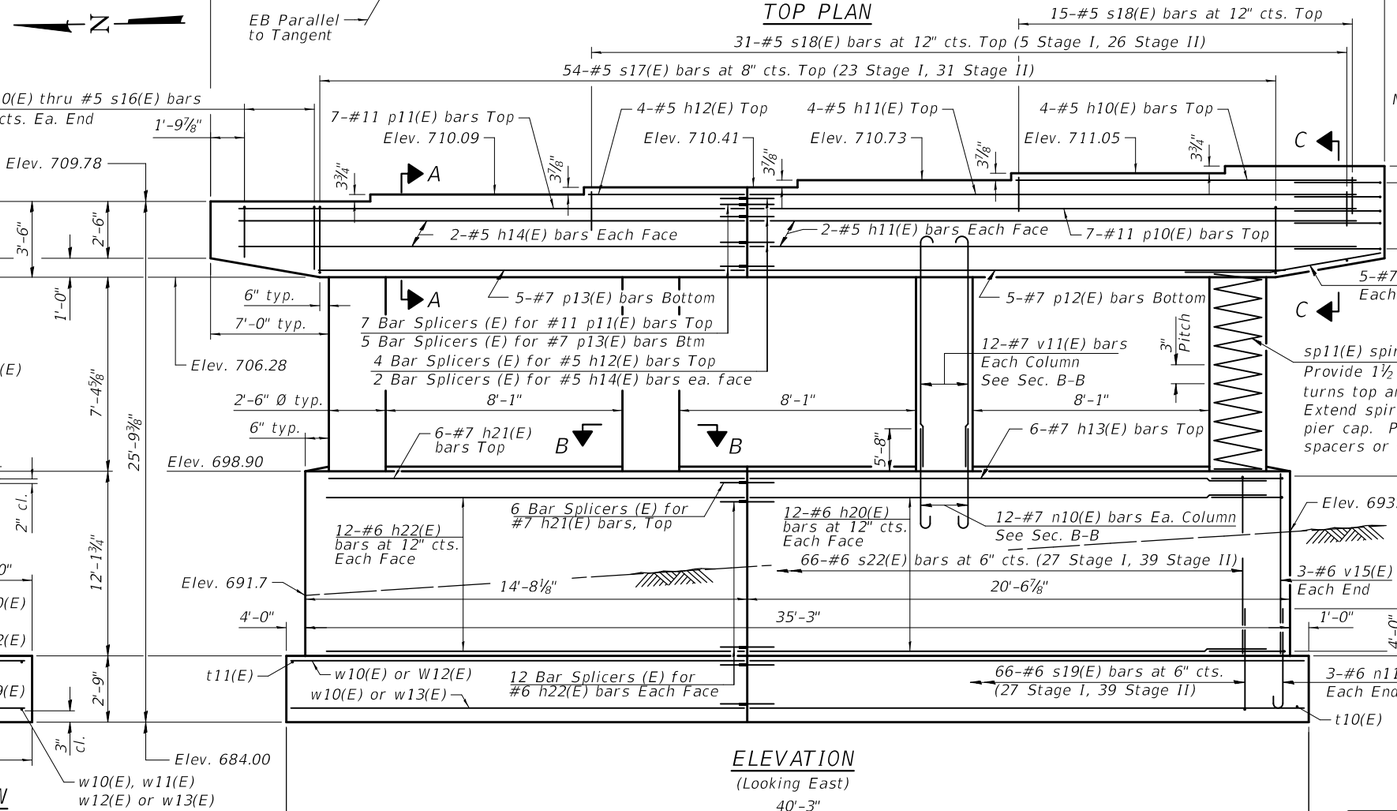
TOP PLAN



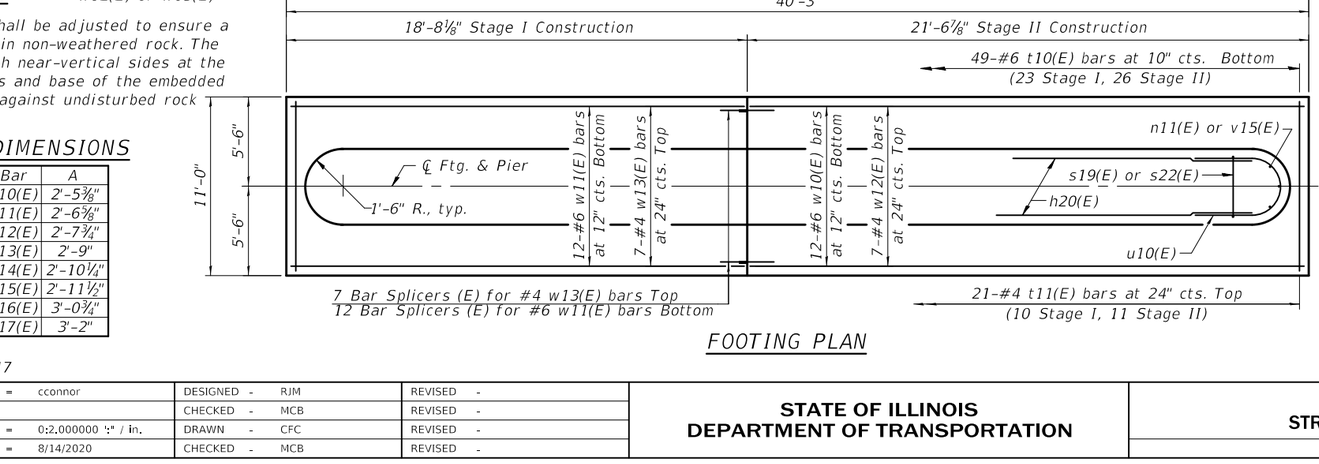
SEC. A-A



SEC. C-C

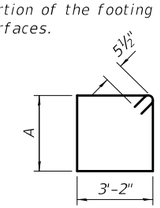


NORTH END VIEW



FOOTING PLAN

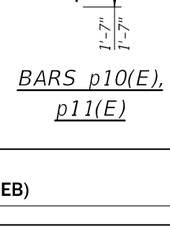
The bottom of footing elevation shall be adjusted to ensure a minimum embedment of 12 inches in non-weathered rock. The rock excavation shall be made with near-vertical sides at the plan dimensions to allow the sides and base of the embedded portion of the footing to be cast against undisturbed rock surfaces.



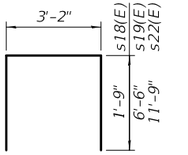
BAR s10(E) THRU s17(E)

A DIMENSIONS

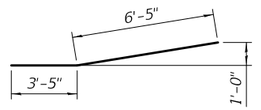
Bar	A
s10(E)	2'-5⅜"
s11(E)	2'-6⅝"
s12(E)	2'-7¾"
s13(E)	2'-9"
s14(E)	2'-10¼"
s15(E)	2'-11½"
s16(E)	3'-0¾"
s17(E)	3'-2"



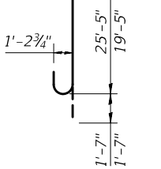
BARS n10(E), n11(E) & v11(E)



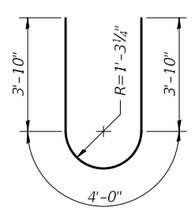
BAR s18(E), s19(E) & s22(E)



BAR p14(E)



BARS p10(E), p11(E)



BAR u10(E)

Notes: Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Maximum Applied Service Bearing Pressure, Qmax = 5.1 ksf (Stage II Traffic)
4.0 ksf (Construction Completion)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	4	#5	13'-8"	—
h11(E)	8	#5	25'-5"	—
h12(E)	4	#5	5'-9"	—
h13(E)	6	#7	18'-11"	—
h14(E)	4	#5	19'-5"	—
h20(E)	24	#6	18'-11"	—
h21(E)	6	#7	13'-0"	—
h22(E)	24	#6	13'-0"	—
n10(E)	48	#7	9'-0"	U
n11(E)	6	#6	7'-2"	U
p10(E)	7	#11	27'-0"	U
p11(E)	7	#11	21'-0"	U
p12(E)	5	#7	20'-5"	—
p13(E)	5	#7	14'-6"	—
p14(E)	10	#7	9'-10"	⌒
s10(E)	2	#5	12'-2"	⌐
s11(E)	2	#5	12'-4"	⌐
s12(E)	2	#5	12'-6"	⌐
s13(E)	2	#5	12'-9"	⌐
s14(E)	2	#5	13'-0"	⌐
s15(E)	2	#5	13'-2"	⌐
s16(E)	2	#5	13'-5"	⌐
s17(E)	54	#5	13'-7"	⌐
s18(E)	46	#5	6'-8"	L
s19(E)	66	#6	16'-2"	L
s22(E)	66	#6	26'-8"	L
** sp11(E)	4	#4	7'-7"	⌇
t10(E)	49	#6	10'-8"	—
t11(E)	21	#4	10'-8"	—
u10(E)	36	#6	11'-8"	U
v11(E)	48	#7	11'-4"	U
v15(E)	6	#6	11'-9"	—
w10(E)	12	#6	21'-2"	—
w11(E)	12	#6	18'-3"	—
w12(E)	7	#4	21'-2"	—
w13(E)	7	#4	18'-3"	—
Structure Excavation			Cu. Yd.	248
Concrete Structures			Cu. Yd.	119.3
Reinforcement Bars, Epoxy Coated			Pound	15,040

** Length is height of spiral.

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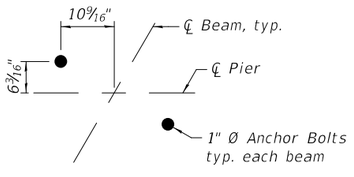
MODEL: Default
FILE NAME: g:\v8i_ss4\15\15-1016g\brldget\0940053_0054-68D95-040-pier1-0054-eb.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

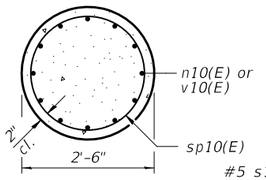
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - RJM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 1 STRUCTURE NO. 094-0054 (EB)	
	CHECKED - MCB	REVISED -			
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -			
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -		SHEET 40 OF 48 SHEETS	

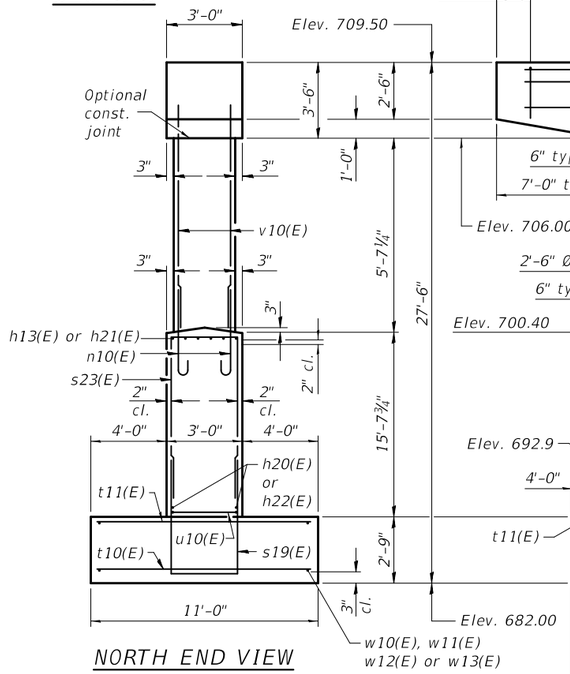
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	57	75
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		



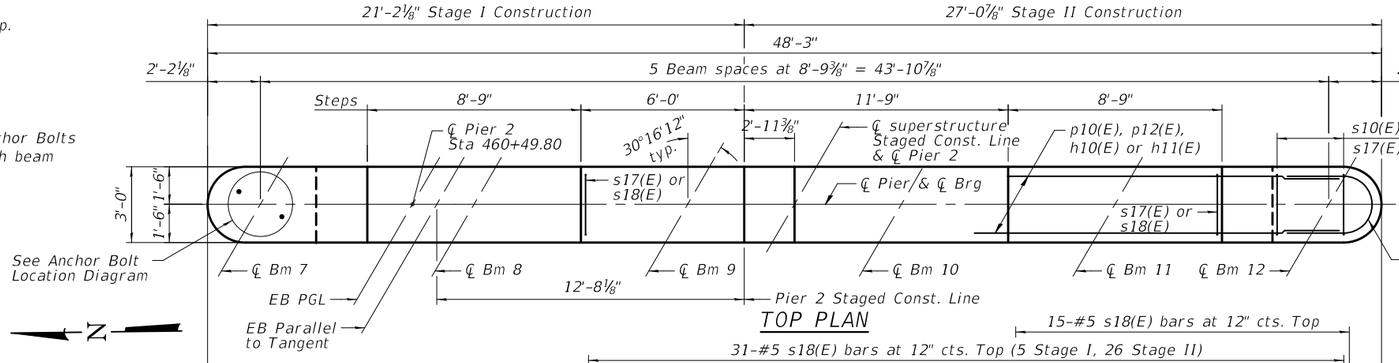
ANCHOR BOLT LOCATION DIAGRAM



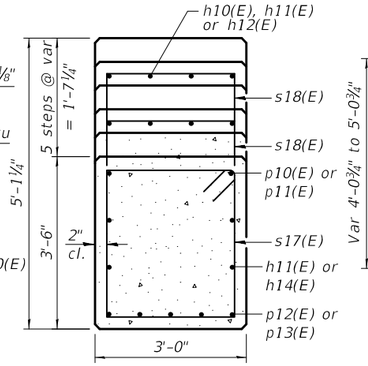
SEC. B-B



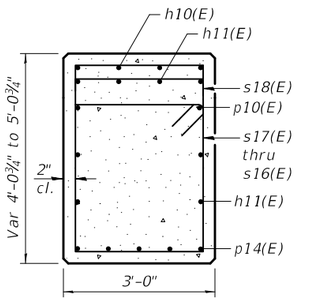
NORTH END VIEW



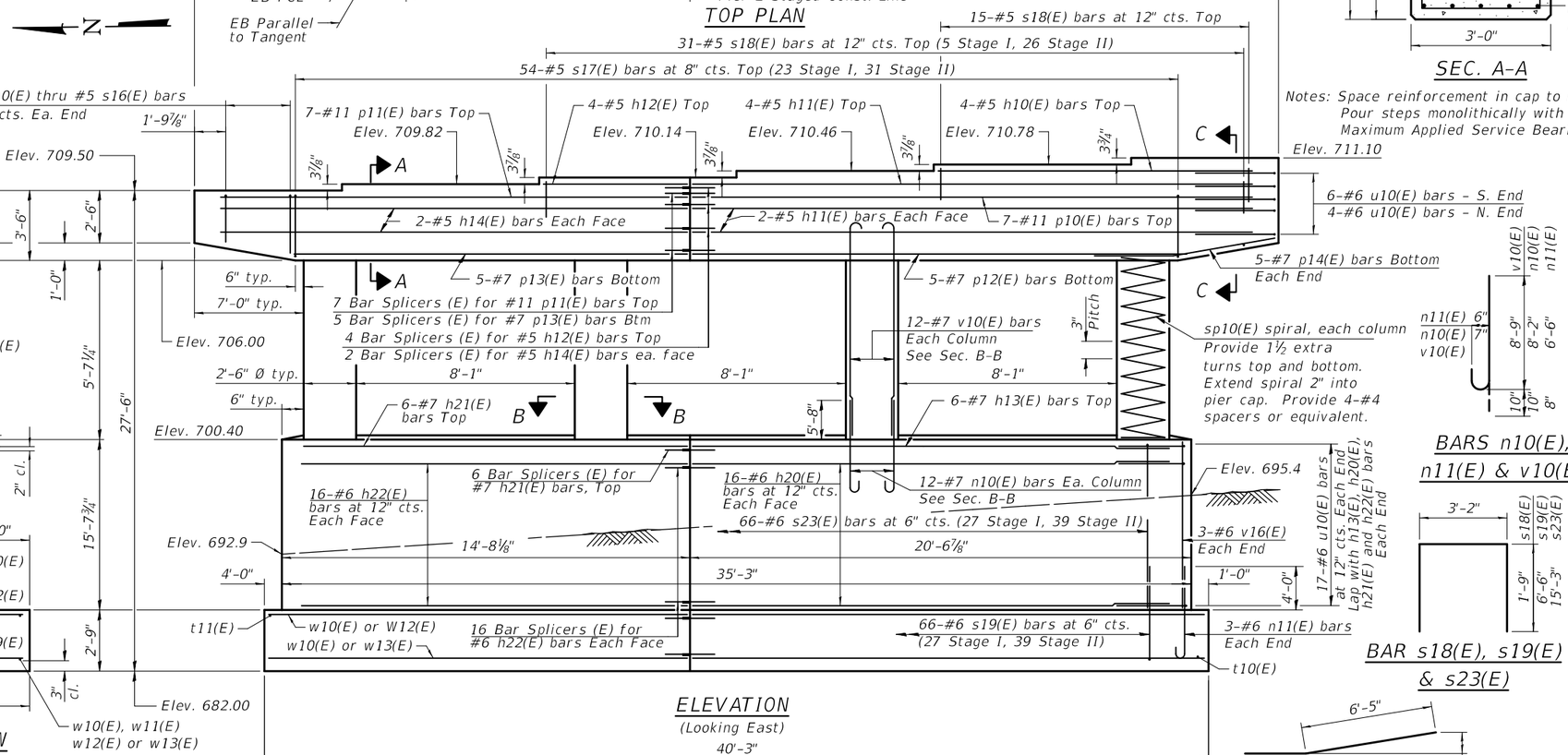
TOP PLAN



SEC. A-A



SEC. C-C

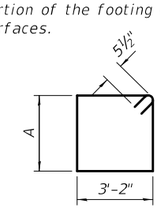


ELEVATION

(Looking East)

FOOTING PLAN

The bottom of footing elevation shall be adjusted to ensure a minimum embedment of 12 inches in non-weathered rock. The rock excavation shall be made with near-vertical sides at the plan dimensions to allow the sides and base of the embedded portion of the footing to be cast against undisturbed rock surfaces.



BAR s10(E) THRU s17(E)

A DIMENSIONS

Bar	A
s10(E)	2'-5⅜"
s11(E)	2'-6⅝"
s12(E)	2'-7¾"
s13(E)	2'-9"
s14(E)	2'-10¼"
s15(E)	2'-11½"
s16(E)	3'-0¾"
s17(E)	3'-2"

Notes: Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Maximum Applied Service Bearing Pressure, Qmax = 5.1 ksf (Stage II Traffic)
4.0 ksf (Construction Completion)

BAR u10(E)

BARS n10(E), n11(E) & v10(E)

BAR s18(E), s19(E) & s23(E)

BAR p14(E)

BARS p10(E), p11(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	4	#5	13'-8"	—
h11(E)	8	#5	25'-5"	—
h12(E)	4	#5	5'-9"	—
h13(E)	6	#7	18'-11"	—
h14(E)	4	#5	19'-5"	—
h20(E)	32	#6	18'-11"	—
h21(E)	6	#7	13'-0"	—
h22(E)	32	#6	13'-0"	—
n10(E)	48	#7	9'-0"	U
n11(E)	6	#6	7'-2"	U
p10(E)	7	#11	27'-0"	U
p11(E)	7	#11	21'-0"	U
p12(E)	5	#7	20'-5"	—
p13(E)	5	#7	14'-6"	—
p14(E)	10	#7	9'-10"	⌒
s10(E)	2	#5	12'-2"	⌐
s11(E)	2	#5	12'-4"	⌐
s12(E)	2	#5	12'-6"	⌐
s13(E)	2	#5	12'-9"	⌐
s14(E)	2	#5	13'-0"	⌐
s15(E)	2	#5	13'-2"	⌐
s16(E)	2	#5	13'-5"	⌐
s17(E)	54	#5	13'-7"	⌐
s18(E)	46	#5	6'-8"	L
s19(E)	66	#6	16'-2"	L
s23(E)	66	#6	33'-8"	L
** sp10(E)	4	#4	5'-9"	⌇
t10(E)	49	#6	10'-8"	—
t11(E)	21	#4	10'-8"	—
u10(E)	44	#6	11'-8"	U
v10(E)	48	#7	9'-7"	U
v16(E)	6	#6	15'-3"	—
w10(E)	12	#6	21'-2"	—
w11(E)	12	#6	18'-3"	—
w12(E)	7	#4	21'-2"	—
w13(E)	7	#4	18'-3"	—
Structure Excavation			Cu. Yd.	319
Concrete Structures			Cu. Yd.	131.4
Reinforcement Bars, Epoxy Coated			Pound	15,950

** Length is height of spiral.

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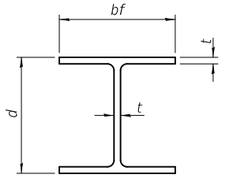
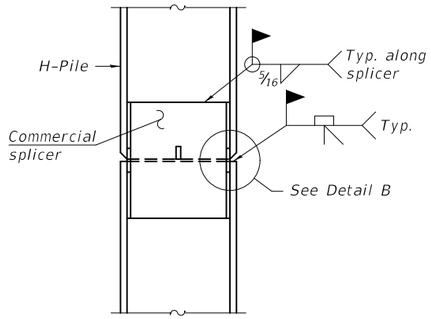
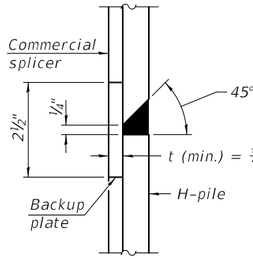


STEEL PILE TABLE

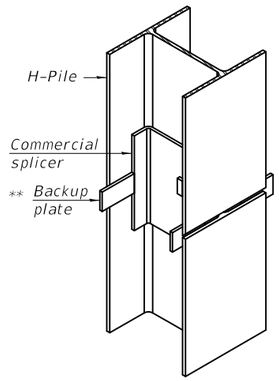
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14¼"	14⅞"	13/16"	30"
x102	14"	14¾"	1 1/16"	30"
x89	13⅞"	14¾"	⅝"	30"
x73	13⅝"	14⅝"	½"	30"
HP 12x84	12¼"	12¼"	1 1/16"	24"
x74	12⅛"	12¼"	⅝"	24"
x63	12"	12⅛"	½"	24"
x53	11¾"	12"	7/16"	24"
HP 10x57	10"	10¼"	9/16"	24"
x42	9¾"	10⅛"	7/16"	24"
HP 8x36	8"	8⅛"	7/16"	18"



ELEVATION

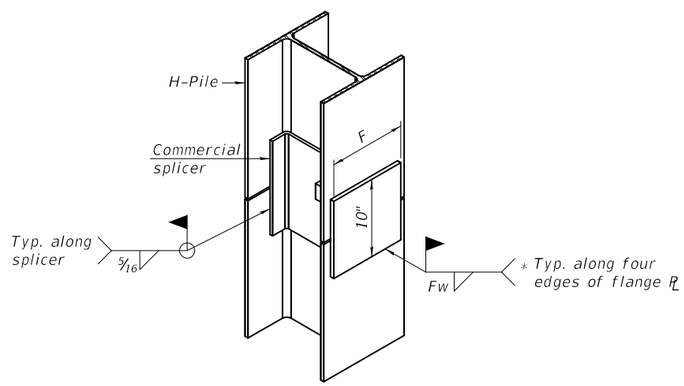


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



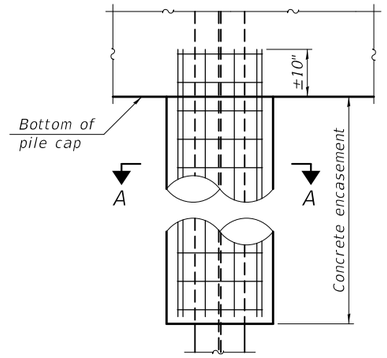
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

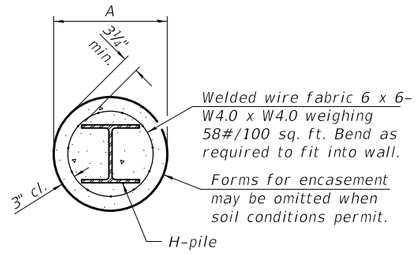
* Interrupt welds ¼" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



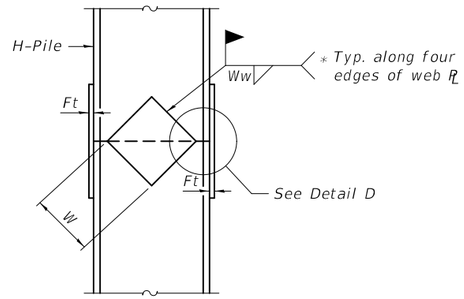
ELEVATION



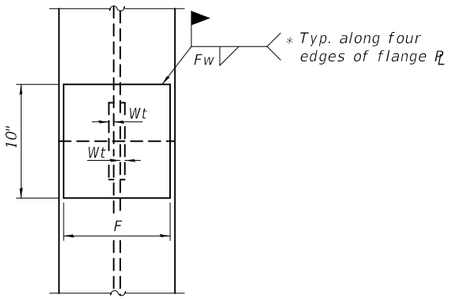
SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

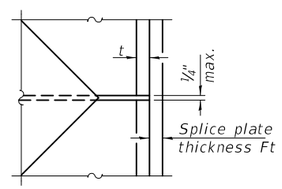
(when specified)



ELEVATION



END VIEW

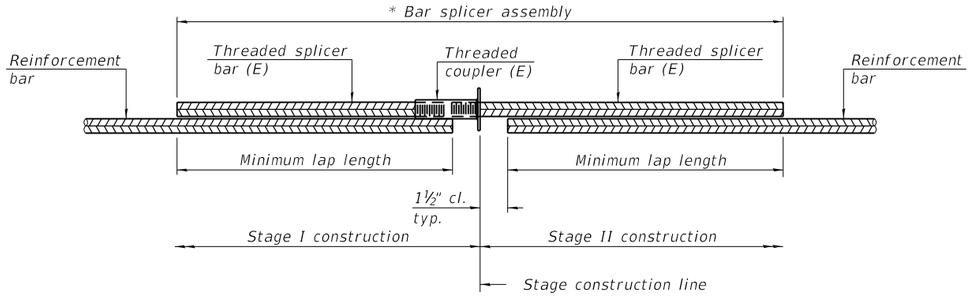


DETAIL D

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12½"	1"	⅞"	7¾"	⅝"	½"
x102	12½"	⅞"	¾"	7¾"	⅝"	½"
x89	12½"	¾"	1 1/16"	7¾"	⅝"	½"
x73	12½"	⅝"	9/16"	7¾"	⅝"	½"
HP 12x84	10"	⅞"	1 1/16"	6½"	⅝"	½"
x74	10"	⅞"	1 1/16"	6½"	⅝"	½"
x63	10"	⅝"	½"	6½"	½"	⅜"
x53	10"	⅜"	½"	6½"	½"	⅜"
HP 10x57	8"	¾"	9/16"	5¼"	½"	⅜"
x42	8"	⅝"	9/16"	5¼"	½"	⅜"
HP 8x36	7"	⅝"	7/16"	4¼"	½"	⅜"

WELDED PLATE FIELD SPLICE

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



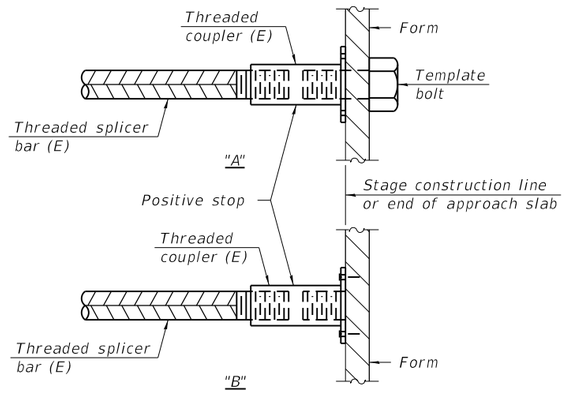
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

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

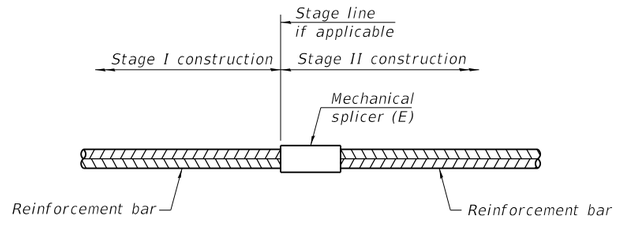
** Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.*

***Add 6" to the length of the Stage I threaded splicer bar for the splicers in the West Approach for WB SN 094-0053, and East Approach for EB SN 094-0054. The clearance to the stage line of the Stage I bars in the slab will vary due to the taper on the north edge.*



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

WB SN 094-0053

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#5	457	3'-6"
Diaphragm	#6	12	4'-0"
**Approach Slabs	#5	80	3'-4"
**Approach Slabs	#8	106	4'-9"
**Approach Footings	#5	80	3'-2"
West Abutment	#7	10	5'-0"
West Abutment	#5	4	3'-7"
East Abutment	#7	10	5'-0"
East Abutment	#5	4	3'-7"
Pier 1 Cap	#11	7	14'-2"
Pier 1 Cap	#7	5	4'-5"
Pier 1 Cap	#5	8	3'-7"
Pier 1 Crashwall	#7	6	5'-0"
Pier 1 Crashwall	#6	32	4'-4"
Pier 1 Footing	#4	7	2'-11"
Pier 1 Footing	#6	12	3'-10"
Pier 2 Cap	#11	7	14'-2"
Pier 2 Cap	#7	5	4'-5"
Pier 2 Cap	#5	8	3'-7"
Pier 2 Crashwall	#7	6	5'-0"
Pier 2 Crashwall	#6	36	4'-4"
Pier 2 Footing	#4	7	2'-11"
Pier 2 Footing	#6	12	3'-10"

EB SN 094-0054

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#5	484	3'-6"
Diaphragm	#6	12	4'-0"
**Approach Slabs	#5	80	3'-4"
**Approach Slabs	#8	106	4'-9"
**Approach Footings	#5	80	3'-2"
West Abutment	#7	10	5'-0"
West Abutment	#5	4	3'-7"
East Abutment	#7	10	5'-0"
East Abutment	#5	4	3'-7"
Pier 1 Cap	#11	7	14'-2"
Pier 1 Cap	#7	5	4'-5"
Pier 1 Cap	#5	8	3'-7"
Pier 1 Crashwall	#7	6	5'-0"
Pier 1 Crashwall	#6	24	4'-4"
Pier 1 Footing	#4	7	2'-11"
Pier 1 Footing	#6	12	3'-10"
Pier 2 Cap	#11	7	14'-2"
Pier 2 Cap	#7	5	4'-5"
Pier 2 Cap	#5	8	3'-7"
Pier 2 Crashwall	#7	6	5'-0"
Pier 2 Crashwall	#6	32	4'-4"
Pier 2 Footing	#4	7	2'-11"
Pier 2 Footing	#6	12	3'-10"

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

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

USER NAME = rmcjilton	DESIGNED - MCB	REVISED -	
	CHECKED -	REVISED -	
PLOT SCALE = 0:2.000000 ':" / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 10/3/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
SHEET 43 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	60	75
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

FEHR GRAHAM PROJECT NUMBER: 15-1016G

MODEL: Default
FILE NAME: G:\v8i_ss4\15\15-1016G\bridge\0940053_0054-68D95-043-bar-splicer-details.dgn

Illinois Department of Transportation
Division of Highways
IDOT District

SOIL BORING LOG

Date 11/15/18

ROUTE FAP Route 404 (US 34) **DESCRIPTION** Structure boring for West Abutment - WB bridge **LOGGED BY** GSI (DT)

SECTION 94-16 HB **LOCATION** US 34 over TR 162, **SEC.** 24, **TWP.** 11N, **RNG.** 2W, 4th **PM**,
Latitude 40°55'23.7504", **Longitude** -90°33'14.9256"

COUNTY Warren **DRILLING METHOD** CFA TO 10', THEN ROTARY **HAMMER TYPE** AUTO

STRUCT. NO. 094-0053 (WB)
Station 459+98.7

BORING NO. SB-1
Station 459+17
Offset 29.0 ft LT
Ground Surface Elev. 707.76 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

Groundwater Elev.:
First Encounter ____ ft
Upon Completion ____ ft
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL			
706.76		2.3	14
Brown, Moist, Stiff CLAY LOAM (FILL)	3	P	
	6	1.4	16
	5		
	3		
-5	5	1.6	16
	5		
	2		
	3	1.3	18
	3		
699.76			
Gray, Moist, Stiff SILTY CLAY (FILL)	2		
	6	1.3	16
-10	6		
	3		
	5	0.8	17
	5		
	3		
	5	1.7	21
-15	6		
691.76			
Gray, Moist, Very Stiff SILTY CLAY	4		
	6	2.6	20
	6		
	3		
	5	2.1	19
-20	5		
Gray, Moist, Very Stiff SILTY CLAY *(continued)*			
	4		
	11	2.6	18
	13		
	5		
	8	2.2	16
-25	10		
	5		
680.76			
	7	4.5	21
Black, Very Stiff SHALE	16	P	30
679.76			
Gray, Moist, Stiff SANDY CLAY	4		
	4	1.3	17
-30	5		
677.26			
Gray, Medium Dense SAND, trace gravel	5		
	6		
	6		
674.26			
Dark Gray to Black, Hard SHALE	17		
	50/4"		15
-35			
	18		
	24		19
	50/4"		
669.76			
Gray, Hard SILTSTONE	45		
	50/4"		13
-40			

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT District

SOIL BORING LOG

Date 11/15/18

ROUTE FAP Route 404 (US 34) **DESCRIPTION** Structure boring for West Abutment - WB bridge **LOGGED BY** GSI (DT)

SECTION 94-16 HB **LOCATION** US 34 over TR 162. **SEC.** 24, **TWP.** 11N, **RNG.** 2W, 4th **PM**,
Latitude 40°55'23.7504", **Longitude** -90°33'14.9256"

COUNTY Warren **DRILLING METHOD** CFA TO 10', THEN ROTARY **HAMMER TYPE** AUTO

STRUCT. NO. 094-0053 (WB)
Station 459+98.7

BORING NO. SB-1
Station 459+17
Offset 29.0 ft LT
Ground Surface Elev. 707.76 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

Groundwater Elev.:
First Encounter ____ ft
Upon Completion ____ ft
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray, Hard SILTSTONE *(continued)*			
Interval 41-42.5 skipped due to loss of daylight			
	22		
662.76 -45	45 50/4"		16
End of Boring			
-50			
-55			
-60			

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

BBS, form 137 (Rev. 8-99)

MODEL: Default
FILE NAME: g:\v8i_ss4\15\15-1016g\bridge\0940053_0054-68095-044-048-boring-logs.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - MCB	REVISED -	
	CHECKED - RJM	REVISED -	
PLOT SCALE = 0:2.000000 ':" / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
SHEET 44 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	61	75
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT District

SOIL BORING LOG

Page 1 of 1

Date 11/13/18

ROUTE FAP Route 404 (US 34) **DESCRIPTION** Structure boring for Pier 1 - WB bridge **LOGGED BY** GSI (DT)

SECTION 94-16 HB **LOCATION** US 34 over TR 162, **SEC.** 24, **TWP.** 11N, **RNG.** 2W, 4th **PM**,
Latitude 40°55'23.4912", **Longitude** -90°33'14.2992"

COUNTY Warren **DRILLING METHOD** CFA TO 10', THEN ROTARY **HAMMER TYPE** AUTO

STRUCT. NO. 094-0053 (WB)
Station 459+98.7

BORING NO. SB-2
Station 459+68
Offset 34.0 ft LT
Ground Surface Elev. 688.45 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown, Loose GRAVELLY SAND		3		11
686.45		3	2.0	9
Olive, Moist, Stiff CLAY with gravel		3		17
684.95				
Brown, Moist, Stiff SILTY CLAY with gravel		3		
	-5	5 7	1.9	19
682.95				
Tan, Moist, Very Stiff SILTY LOAM		7		
		12 13	4.5 P	18
		6		
	-10	10 13	2.9	30
677.45				
Tan SILT with black shale 676.95		46		
Borehole continued with rock coring.		50/5.5"		
	-15			
	-20			

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT District

SOIL BORING LOG

Page 1 of 1

Date 11/14/18

ROUTE FAP Route 404 (US 34) **DESCRIPTION** Structure boring for Pier 2 - WB bridge **LOGGED BY** GSI (DT)

SECTION 94-16 HB **LOCATION** US 34 over TR 162. **SEC.** 24, **TWP.** 11N, **RNG.** 1W, 4th **PM**,
Latitude 40°55'24.0456", **Longitude** -90°33'13.9752"

COUNTY Warren **DRILLING METHOD** CFA TO 10', THEN ROTARY **HAMMER TYPE** AUTO

STRUCT. NO. 094-0053 (WB)
Station 459+98.7

BORING NO. SB-3
Station 459+63
Offset 85.0 ft LT
Ground Surface Elev. 687.86 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 679.4 ft ▼
Upon Completion 684.4 ft ▽
After _____ **Hrs.** _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown/Gray, Moist, Medium Dense GRAVELLY SAND				10
686.36		12		
Tan, Moist, Loose SAND with gravel		5 3		8
684.86				
Olive/gray/black, Moist, Stiff SILTY CLAY ▽		3		
	-5	3 3	1.5	24
682.36				
Black, Moist, Stiff to Very Stiff SILTY CLAY with organics (buried topsoil?)		3		
		4 5	1.8	24
▼		2		
	-10	3 4	2.3	25
676.86				
Gray, Moist, Stiff CLAY LOAM with black weathered shale		1		
		7 50/5.5"	1.3	33 12
673.86		20		
Gray, Hard SILTSTONE with clay		50/5.5"	3.8 P	17 14
	-15			
		50/5"	4.3 P	11
		50/5"	4.3 P	11
	-20			

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray, Hard SILTSTONE with clay *(continued)*				
665.86		50/4"		
End of Boring		50/4"		30
	-25			
	-30			
	-35			
	-40			

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

BBS, form 137 (Rev. 8-99)

MODEL: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - MCB	REVISED -	
	CHECKED - RJM	REVISED -	
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
SHEET 45 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	62	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
IDOT District

SOIL BORING LOG

Date 11/15/18

ROUTE FAP Route 404 (US 34) **DESCRIPTION** Structure boring for East Abutment - WB bridge **LOGGED BY** GSI (DT)

SECTION 94-16 HB **LOCATION** US 34 over TR 162, **SEC.** 24, **TWP.** 11N, **RNG.** 1W, 4th **PM**,
Latitude 40°55'22.9656", **Longitude** -90°33'13.0104"

COUNTY Warren **DRILLING METHOD** CFA TO 10', THEN ROTARY **HAMMER TYPE** AUTO

STRUCT. NO. 094-0053 (WB)
Station 459+98.7

BORING NO. SB-4
Station 460+88
Offset 48.0 ft LT
Ground Surface Elev. 706.44 ft

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

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CONCRETE				4
705.44				
Brown, Moist, Very Stiff SILTY CLAY with sand/gravel (FILL)		3		
		4 5	3.3 P	14
703.44				
Gray, Moist, Stiff CLAY LOAM with sand/gravel (FILL)		3		
		4 6	1.9	17
	-5			
		3		
		5 9	1.7	17
		4		
trace wood		6 11	1.5	17
	-10			
		3		
		6 8	2.0	18
693.44				
Brown to Gray, Moist, Stiff CLAY LOAM with sand/gravel (FILL)		3		
		5 7	1.7	18
	-15			
		2		
Sand seam		3 4	1.3	18
689.44				
Brown to Gray, Moist, Medium Stiff to Stiff CLAY LOAM with sand/gravel		2		
		3 3	1.0	25
	-20			

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown to Gray, Moist, Medium Stiff to Stiff CLAY LOAM with sand/gravel *(continued)*		1		
		1 1		
		3		
Sand/shale seam		1 2	0.8 P	36 25
	-25			
680.44				
Gray, Moist, Stiff WEATHERED SHALE with limestone/chert gravel and trace sand		6		
		9 4		30
677.94				
Black, Hard SHALE with rounded pebbles		50/5"		21
	-30			
675.94				
Gray, Hard SILTSTONE		33		
674.94				
Black, Hard SHALE		50/5"		12 16
673.44				
Gray, Hard SILTSTONE		50/4"		10
	-35			
		29		
		50/5"		9
		50/3"		14
End of Boring 666.44	-40			

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT District

SOIL BORING LOG

Date 11/15/18

ROUTE FAP Route 404 (US 34) **DESCRIPTION** Structure boring for West Abutment - EB bridge **LOGGED BY** GSI (DT)

SECTION 94-16 HB **LOCATION** US 34 over TR 162. **SEC.** 24, **TWP.** 11N, **RNG.** 2W, 4th **PM**,
Latitude 40°55'23.2068", **Longitude** -90°33'15.1956"

COUNTY Warren **DRILLING METHOD** CFA TO 10', THEN ROTARY **HAMMER TYPE** AUTO

STRUCT. NO. 094-0054 (EB)
Station 459+98.7

BORING NO. SB-5
Station 459+27
Offset 27.0 ft RT
Ground Surface Elev. 712.32 ft

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

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL				24
711.32				
Brown, Moist, Stiff SILTY CLAY with gravel (FILL)		3		
		3 4	1.2	18
		3		
	-5	5 5	2.0	20
		2		
		3 6	2.0	20
703.82				
Brown, Moist, Stiff CLAY LOAM with gravel (FILL)		3		
	-10	5 8	1.9	21
701.32				
Gray, Moist, Very Stiff SILTY CLAY trace roots (FILL)		3		
		4 4	2.3 P	31
698.82				
Gray to brown, Moist, Very Stiff CLAY LOAM with sand/gravel (FILL)		2		
	-15	5 6	2.4	20
		5		
		6 7	2.4	18
692.82				
	-20	7 8	2.2	21

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray to brown, Moist, Stiff CLAY LOAM with sand/gravel *(continued)*		7		
		8 10	1.3 P	22
688.82				
Gray, Moist, Very Stiff SILTY CLAY with sand/gravel		3		
	-25	6 7	2.2	22
685.82				
Gray, Hard WEATHERED SILTSTONE		8		
		18 50/5"	4.5 P	17
		51/6"	2.5 P	15
	-30			
		15		
680.32		29		14
Black, Hard SHALE		50/5"		16
		17		
	-35	42 50/3"		13
675.82		50/3"		
Gray, Hard SILTSTONE				
674.82				12
End of Boring				
	-40			

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT District

SOIL BORING LOG

Page 1 of 1

Date 11/13/18

ROUTE FAP Route 404 (US 34) **DESCRIPTION** Structure boring for Pier 1 - EB bridge **LOGGED BY** GSI (DT)

SECTION 94-16 HB **LOCATION** US 34 over TR 162, **SEC.** 24, **TWP.** 11N, **RNG.** 2W, 4th **PM**,
Latitude 40°55'22.0908", **Longitude** -90°33'14.3496"

COUNTY Warren **DRILLING METHOD** CFA TO 10', THEN ROTARY **HAMMER TYPE** AUTO

STRUCT. NO. 094-0054 (EB)
Station 459+98.7

BORING NO. SB-6
Station 460+40
Offset 85.0 ft RT
Ground Surface Elev. 694.15 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 683.7 ft ▼
Upon Completion 688.9 ft ▽
After _____ **Hrs.** _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Tan, Stiff SILTY LOAM with gravel		4		8
692.15		6	1.6	7
Gray, Moist, Very Stiff SILTY CLAY with sand/gravel		6		22
		4		
	-5	9		13
		13		
▽ 688.15				
Gray, Hard WEATHERED SHALEY CLAY		14		
		50/5.5"		7
685.65				
Gray, Hard WEATHERED SHALE, vertical bedding		6		
		21		9
	-10	50/5.5"		
▼				
		40		
		50/5"		16
680.15		25		15
Black, Hard WEATHERED SHALE with COAL		50/5.5"		15
	-15			
		35		
677.15		50/4"		14
End of Boring				
	-20			

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT District

SOIL BORING LOG

Page 1 of 1

Date 11/14/18

ROUTE FAP Route 404 (US 34) **DESCRIPTION** Structure boring for Pier 2 - EB bridge **LOGGED BY** GSI (DT)

SECTION 94-16 HB **LOCATION** US 34 over TR 162. **SEC.** 24, **TWP.** 11N, **RNG.** 1W, 4th **PM**,
Latitude 40°55'22.6992", **Longitude** -90°33'13.9824"

COUNTY Warren **DRILLING METHOD** CFA TO 10', THEN ROTARY **HAMMER TYPE** AUTO

STRUCT. NO. 094-0054 (EB)
Station 459+98.7

BORING NO. SB-7
Station 460+34
Offset 35.0 ft RT
Ground Surface Elev. 691.39 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown, Loose SAND with gravel				
690.89				
Brown/gray, Moist, Very Stiff SILTY CLAY		2	2.0 P	8 14
		4	2.5	23
		5	P	
687.89				
Brown/gray, Moist, Hard SILTY CLAY with iron oxide		14		
		18	4.5	18
	-5	15	P	
685.39				
Gray, Hard WEATHERED SHALE 684.89		25		
Borehole continued with rock coring.		50/5.5"		
	-10			
	-15			
	-20			

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

BBS, form 137 (Rev. 8-99)

MODEL: Default
FILE NAME: g:\v8i_cs4\15\15-1016g\bridge\0940053_005\4-68D95-044-048-boring-logs.dgn

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

FEHR GRAHAM PROJECT NUMBER: 15-1016G

USER NAME = cconnor	DESIGNED - MCB	REVISED -	
	CHECKED - RJM	REVISED -	
PLOT SCALE = 0:2.000000 ':' / in.	DRAWN - CFC	REVISED -	
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
SHEET 47 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	64	75
		CONTRACT NO. 68D95		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT District

SOIL BORING LOG

Date 11/16/18

ROUTE FAP Route 404 (US 34) **DESCRIPTION** Structure boring for East Abutment - EB bridge **LOGGED BY** GSI (DT)

SECTION 94-16 HB **LOCATION** US 34 over TR 162, **SEC.** 24, **TWP.** 11N, **RNG.** 1W, 4th **PM**,
Latitude 40°55'21.72", **Longitude** -90°33'13.1796"

COUNTY Warren **DRILLING METHOD** CFA TO 10', THEN ROTARY **HAMMER TYPE** AUTO

STRUCT. NO. 094-0054 (EB)
Station 459+98.7

BORING NO. SB-8
Station 461+37
Offset 81.0 ft RT
Ground Surface Elev. 713.44 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material Description
			13	Brown SILTY CLAY TOPSOIL with gravel (FILL)
712.44	2			
	4	1.8	18	Brown, Moist, Stiff CLAY LOAM with sand/gravel (FILL)
	4			
710.44				
	3			Olive/gray, Moist, Stiff SILTY CLAY with sand/gravel, trace wood (FILL)
	5	1.4	19	
-5	9			
707.94				
	4			Brown to gray, Moist, Very Stiff SILTY CLAY with sand/gravel (FILL)
	5	2.2	16	
	6			
	3			
	4	2.1	19	
-10	5			
	4			
	7	2.3	17	
	9			
700.44				
	3			Brown to Gray, Moist, Stiff CLAY LOAM with sand/gravel, trace wood (FILL)
	6	1.9	19	
-15	8			
	2			
	5	1.4	18	
	6			
	3			
	4	1.3	23	
693.44 -20	5			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material Description
	2			Brown to Gray, Moist, Stiff CLAY LOAM with sand/gravel, trace wood
	3	0.9	29	
	4			
	3			
-25	5	1.8	23	
	6			
687.44				
	7			Gray, Moist, Very Stiff SILT/CLAY
	8	2.4	19	STONE
	9			
684.94				
	8			Gray, Hard SILTSTONE
	35		14	
-30	50/5"			
	17			
	42		14	
	50/5"			
	20			
678.94				
	43		14	Black, Hard SHALE
-35	50/1"		17	
	50/4"		18	
	32			
673.94	50/5.5"		13	
-40				End of Boring

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

BBS, form 137 (Rev. 8-99)

MODEL: Default
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
FEHR GRAHAM PROJECT NUMBER: 15-1016G

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	CHECKED - RJM	REVISED -	
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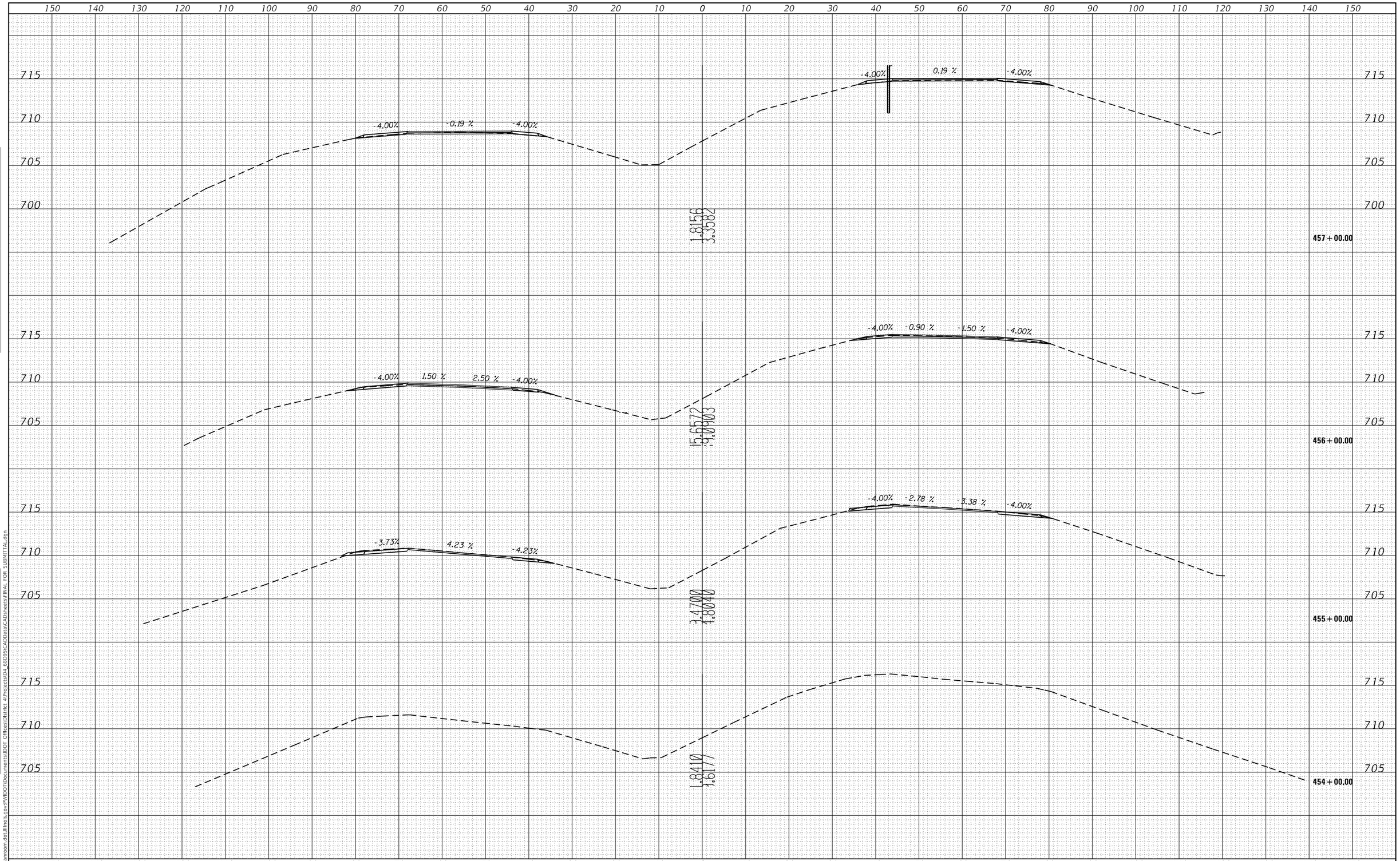
PLOT DATE = 8/14/2020	CHECKED - MCB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 094-0053 (WB) & 094-0054 (EB)
SHEET 48 OF 48 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16 HB) BR	WARREN	65	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			



FINAL SURVEY	NOTE BOOK	NO.
SURVEYED	PLOTTED	
TEMPLATE	AREAS	
AREAS CHECKED		

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED	PLOTTED	
TEMPLATE	AREAS	
AREAS CHECKED		

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	DRAWN -	REVISED -
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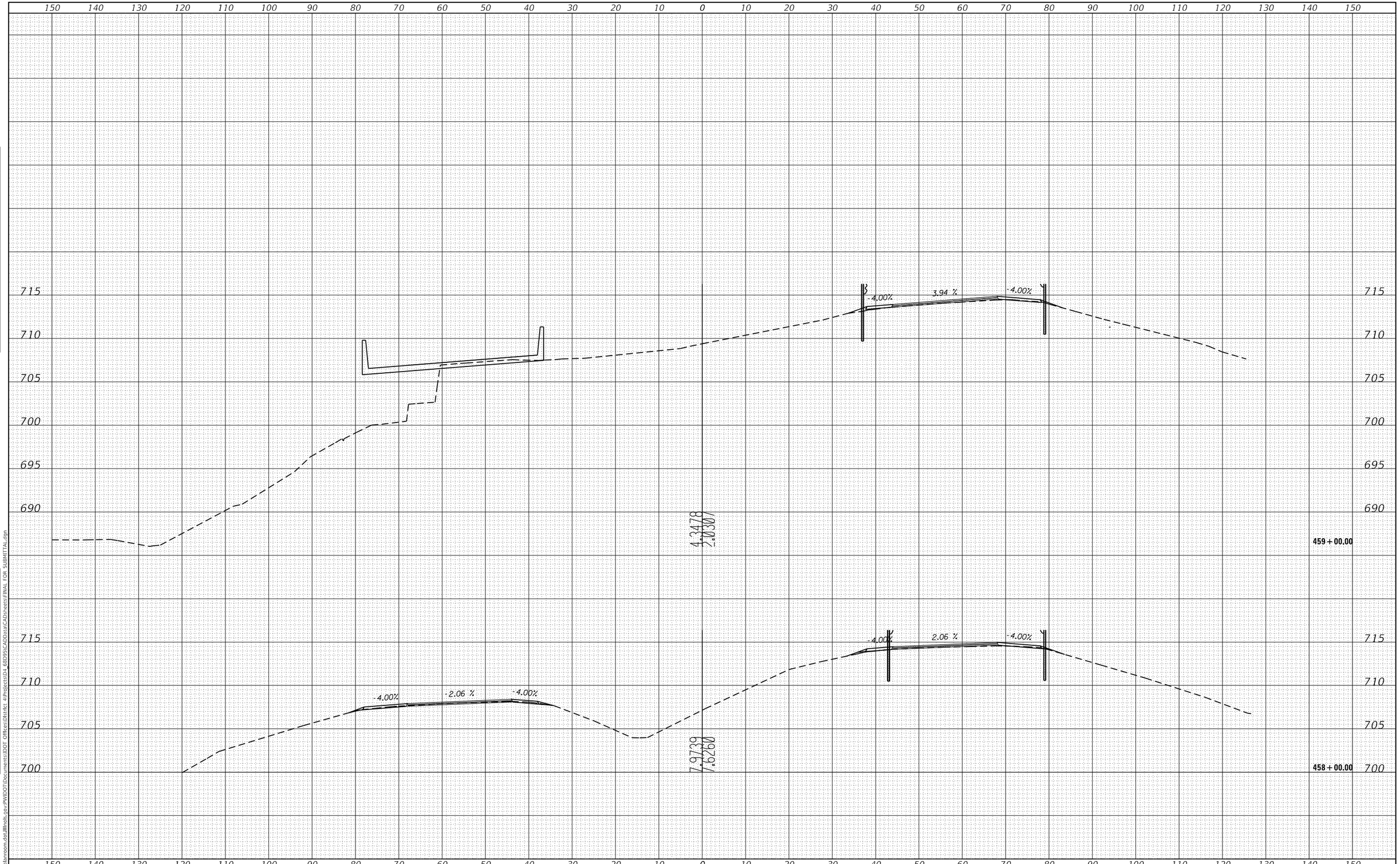
PLOT DATE = 8/14/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET OF SHEETS | STA. 454+00.00 | TO STA. 457+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	66
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY

NO.	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

ORIGINAL SURVEY

NO.	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

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PLOT DATE = 8/14/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET OF SHEETS | STA. 458+00.00 | TO STA. 459+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	67
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

715 710 705 700 695 690

WESTBOUND US 34
SN 094-0053
EAST ABUTMENT

EASTBOUND US 34
SN 094-0054
EAST ABUTMENT

21609
13314

21775
13605

460+00.00

459+25.70

DATE	BY	ORIGINAL SURVEY	FINAL SURVEY
		SURVEYED	
		PLOTTED	
		TEMPLATE	
		AREAS	
		AREAS CHECKED	
		NOTE BOOK	
		NO.	

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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET OF SHEETS | STA. 459+25.70 | TO STA. 460+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	68
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

710
705
715
710
705
700
715
710
705
695

-4.50%
-4.50 %
-3.50%
-4.50%
4.50 %
-3.50%
-4.50%
-4.50 %
-3.50%

WESTBOUND US 34
SN 094-0053
WEST ABUTMENT

EASTBOUND US 34
SN 094-0054
WEST ABUTMENT

462+00.00
461+00.00
460+63.56

2.7471
1.8595
41.6211
3.6183
479
396

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

DATE	BY

MODEL: Default
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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/14/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET OF SHEETS | STA. 460+63.56 | TO STA. 462+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	69
		CONTRACT NO. 68D95		
	ILLINOIS	FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

710
705
700

466+00.00

4.26%
8°17'49"

710
705

-4.50%
4.50 %
-3.50%

465+00.00

6.29%
17°48'58"

710
705

-4.50%
4.50 %
-3.50%

464+00.00

3.10684
3°33'56"

710
705

-4.50%
4.50 %
-3.50%

463+00.00

5.55570
9°30'20"

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

USER NAME = Jacobsmr	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/14/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET OF SHEETS | STA. 463+00.00 TO STA. 466+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	70
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
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PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

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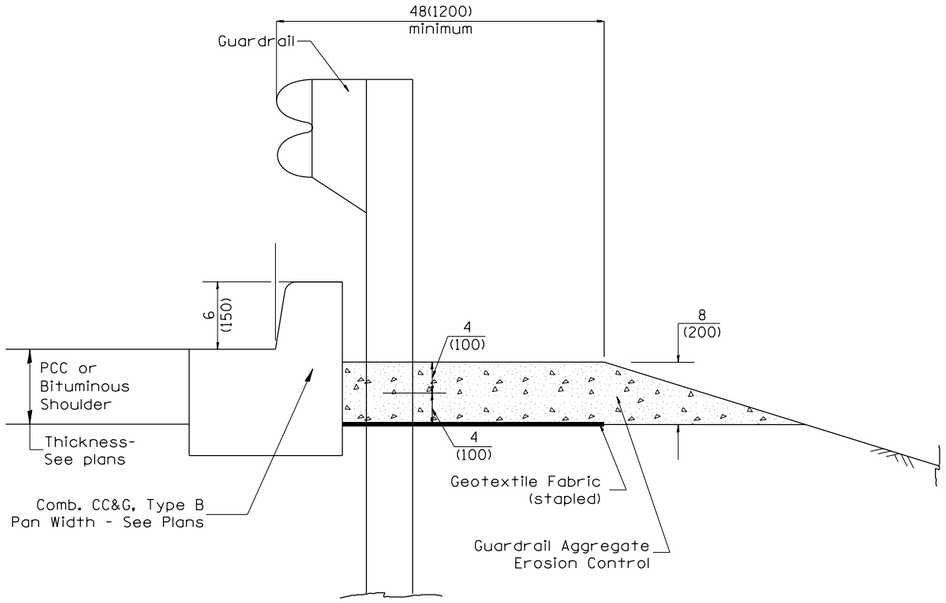
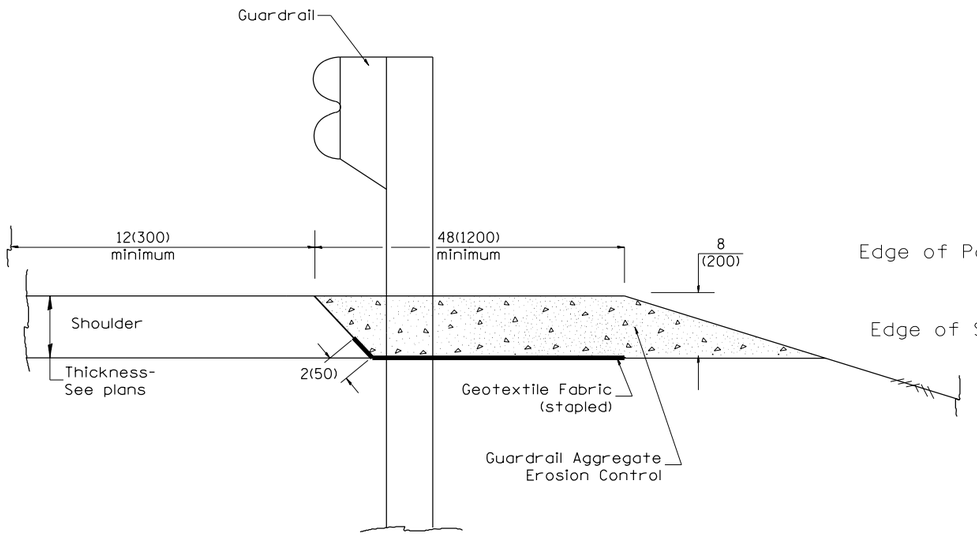
FILE NAME: pw:\\planroom.dot.illinois.gov:PWIDOT\Documents\IDOT Offices\Dist1dot 4\Projects\D4 68D95\CADData\CADSheets\FINAL FOR SUBMITTAL.dgn

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



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

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.

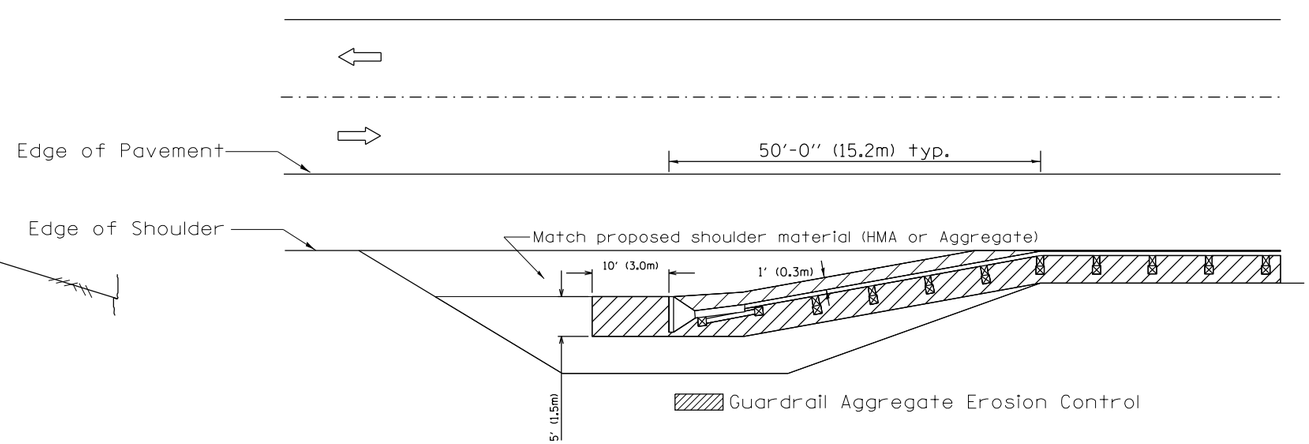
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.

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.



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

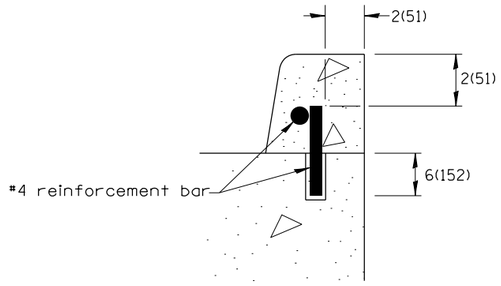
NOT TO SCALE

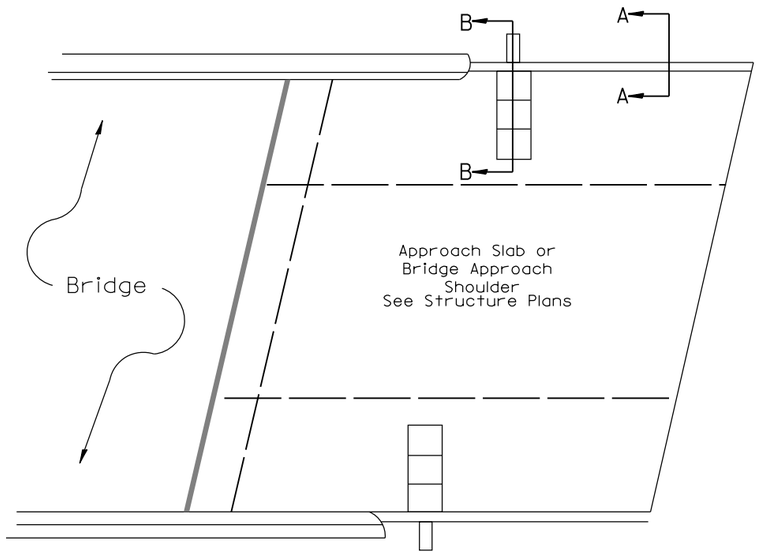
SHT. 1 OF 2
CADD STD. 630101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	71
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			

DETAIL ''A''

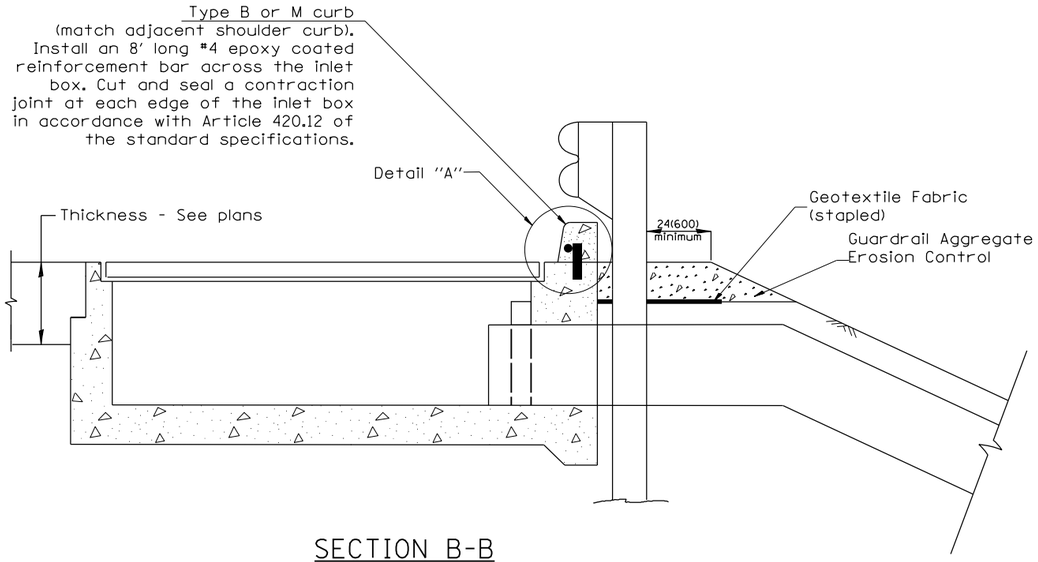
#4 reinforcement bars may be cast in PCC apron and precast inlet box or drilled and anchored with an approved chemical adhesive at 2' spacing. Cost of curb and reinforcement are included in the cost of shoulder inlet.





PLAN VIEW

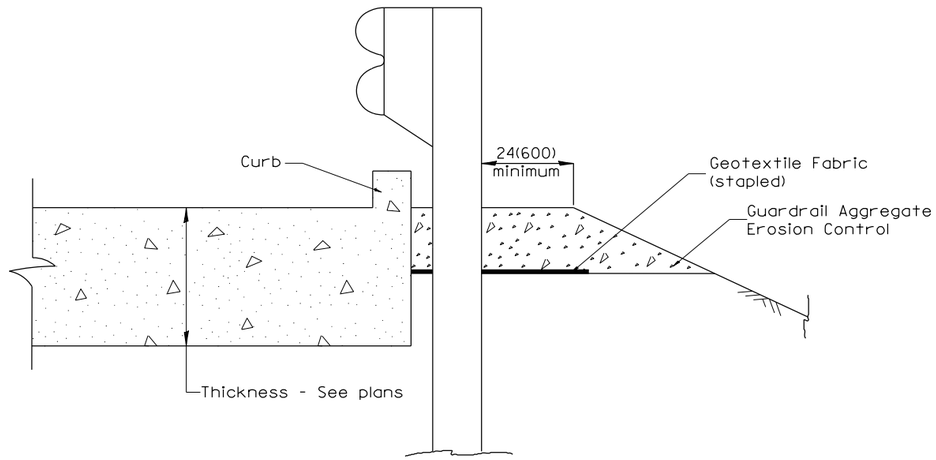
APPROACH SLAB OR SHOULDER PLACEMENT



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.

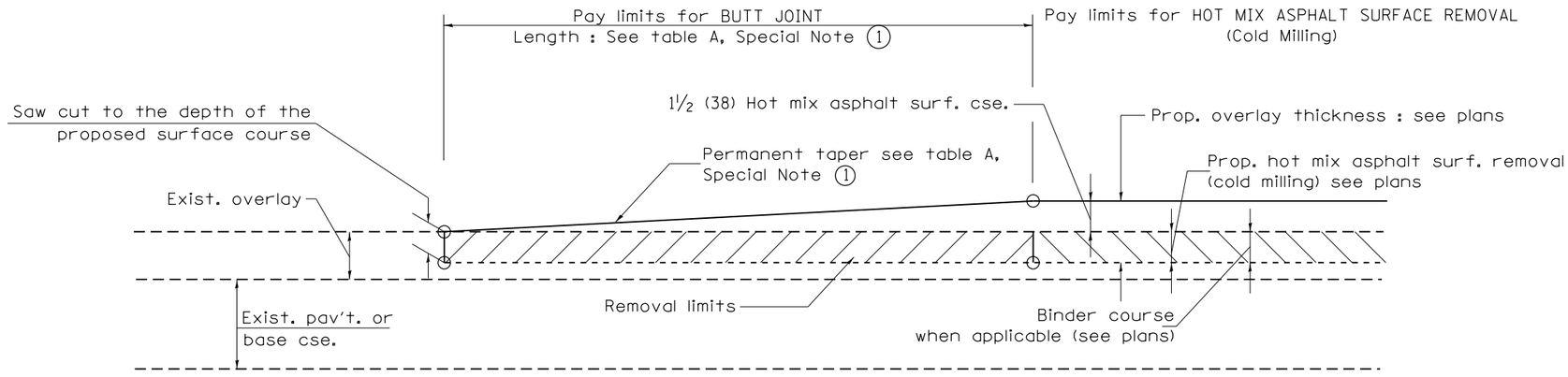
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

NOT TO SCALE

SHT. 2 OF 2
CADD STD. 630101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	72
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			



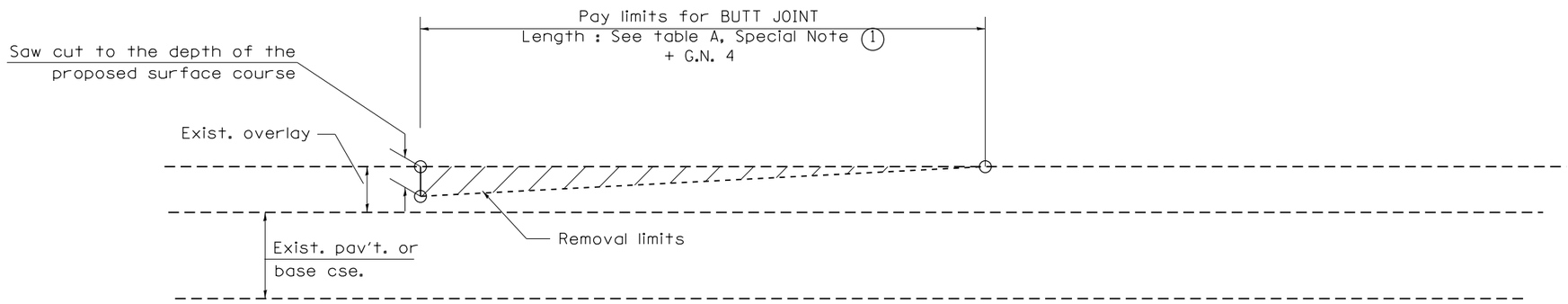
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

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

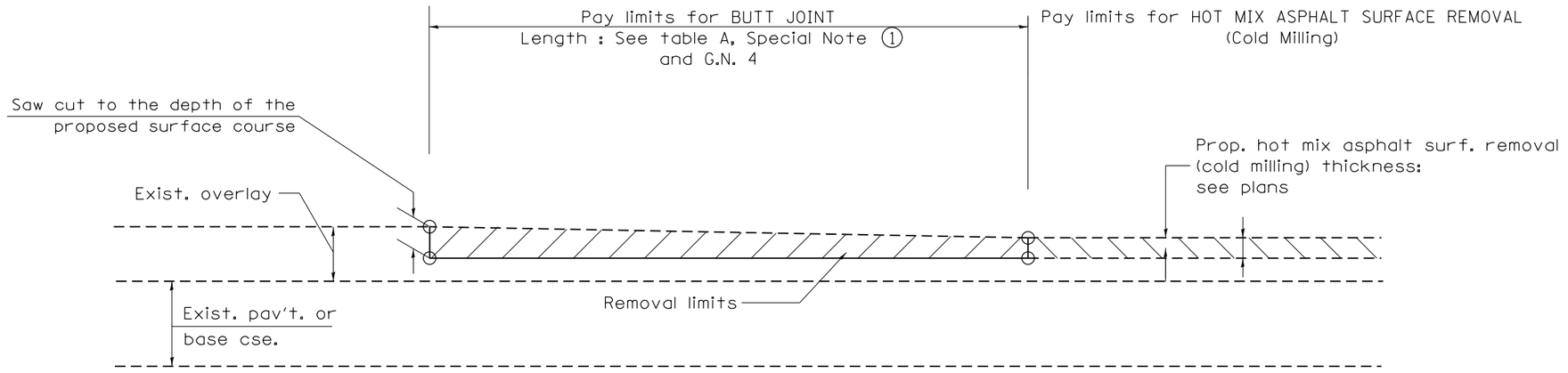
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

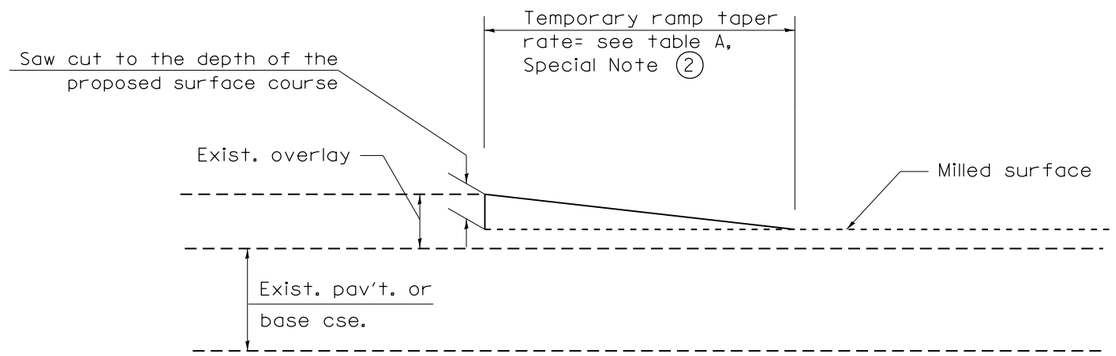
NOT TO SCALE

SHT. 1 OF 3
CADD STD. 406101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	73
		CONTRACT NO. 68D95		
	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.

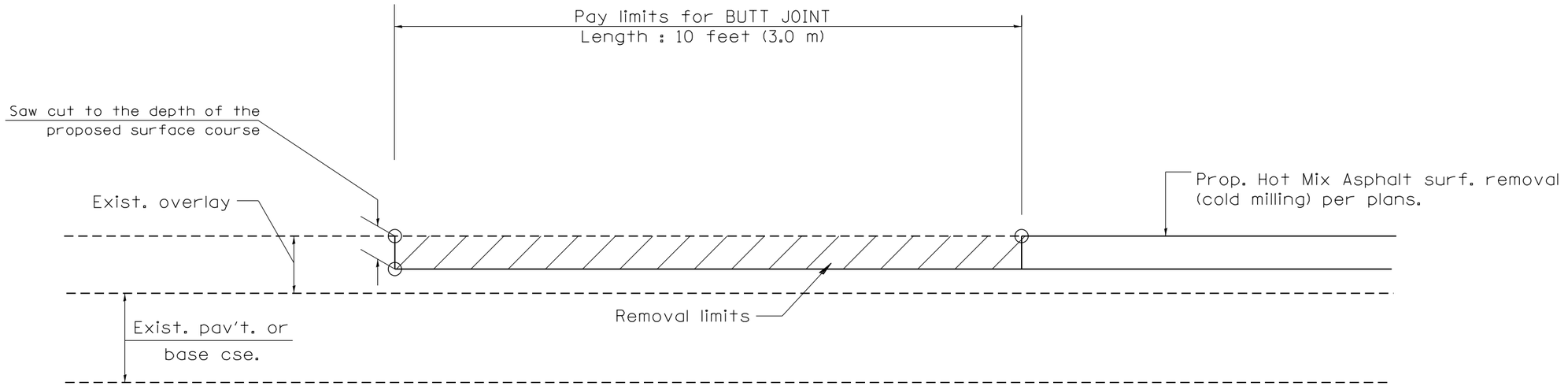
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE

SHT. 2 OF 3
CADD STD. 406101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	74
		CONTRACT NO. 68D95		
	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

SHT. 3 OF 3
CADD STD. 406101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-16HB)BR	WARREN	75	75
		CONTRACT NO. 68D95		
	ILLINOIS FED. AID PROJECT			