11–5–2021 LETTING ITEM 042

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	1
	ILLINOIS	CONTRACT NO. 70905		

INDEX OF SHEETS

1	COVER SHEET
2	HIGHWAY STANDARDS, GENERAL NOTES, AND COMMITMENTS
3 - 8	SUMMARY OF QUANTITIES
9 - 11	TYPICAL SECTIONS
12 - 15	SCHEDULES OF QUANTITIES
16	PLAN & PROFILE SHEET
17 - 18	TRAFFIC CONTROL & PROTECTION
19 - 20	STAGING DETAIL
21	EROSION & SEDIMENT CONTROL PLAN
22	GUARDRAIL PLAN SHEET
23 - 42	STRUCTURE PLANS
43 - 48	AS BUILT PLAN SN 092-0060
49	POROUS GRANULAR EMBANKMENT DETAIL
50	DISTRICT 5 DETAIL NO. 61101011A FIELD TILE SYSTEMS (TREATMENT OF EXISTING)
51 - 54	DISTRICT 5 DETAIL NO.7800AAAA PAVEMENT MARKING & MARKERS (RURAL & URBAN TYPICAL APPLICATIONS)
55	DISTRICT 5 DETAIL NO.X7200201 WIDTH RESTRICTION SIGNING
56	DISTRICT 5 DETAIL NO. XZ193AAA SURVEY MARKERS TYPE 1&2 (SPECIAL)
57 - 61	CROSS SECTIONS
62 - 63	DITCH CROSS SECTIONS

CURRENT TRAFFIC DATA FOR F.A.P. 840
RURAL MINOR ARTERIAL
2019 ADT = 1,900
P.U. = 88.5%
S.U. = 2.6%
M.U. = 8.9%

DESIGN DESIGNATION: N/A

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

F.A.P. ROUTE 840 (IL 49)
SECTION 121BR
PROJECT STP-6560(853)
BRIDGE REPLACEMENT
VERMILION COUNTY

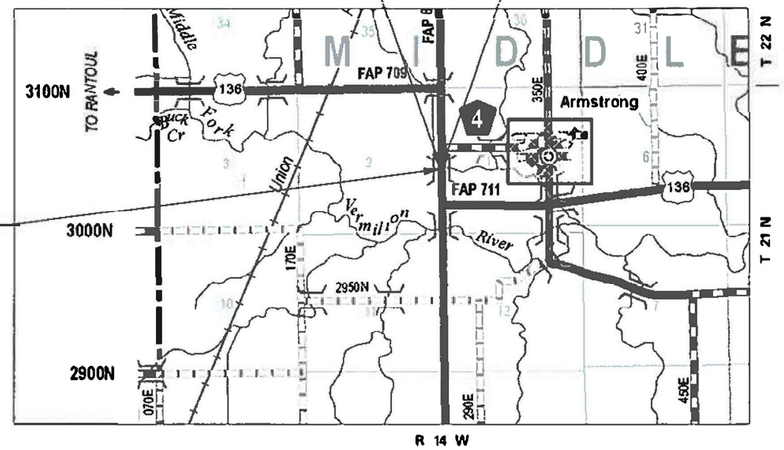
C–95–037–16

DRAINAGE DITCH 0.5 MI N OF US 136 (E)

BRIDGE REPLACEMENT
EXISTING SN 092–0060 AT STA. 730 + 98.68
PROPOSED SN 092–2045 AT STA. 731 + 00.25
DOUBLE 10' X 11' X 61'–4¼" CAST IN PLACE BOX CULVERT
29'–8⅜" BACK TO BACK ALONG 40 DEGREE LEFT FORWARD SKEW

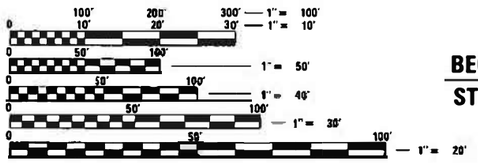
END SECTION 121BR
STA. 732 + 50.00

BEGIN SECTION 121BR
STA. 729 + 50.00



SCALE
0 1 2 3 4 5 Miles
0 5,000 10,000 15,000 20,000 25,000 Feet

GROSS LENGTH = 300.00 FT. = 0.057 MILE
NET LENGTH = 300.00 FT. = 0.057 MILE



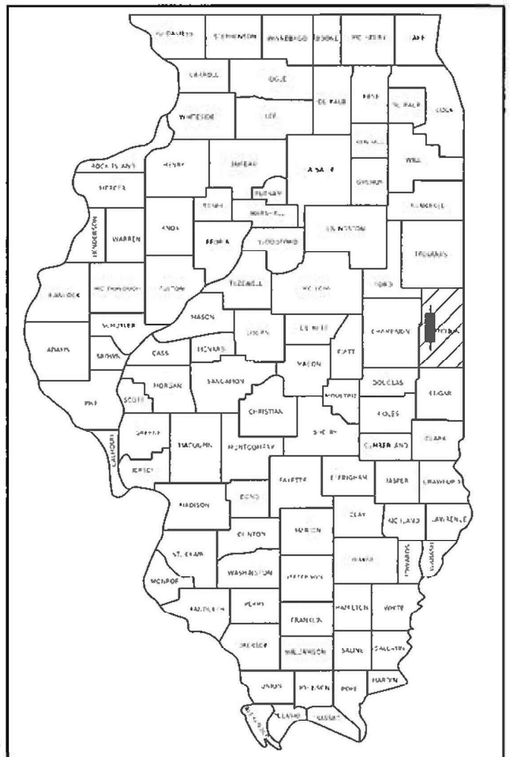
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: JASON W. STULTS, P.E.
DESIGN SQUAD LEADER: DAVID F. JAYME, P.E.
DESIGNERS: RAFAEL R. MONJARDIN, JASON C. HELANDER
PHONE NUMBER (217)465–4181

CONTRACT NO. 70905

P-95-037-16



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 8/11 2021
Kendra Garnett
REGIONAL ENGINEER

October 1 2021
ENGINEER OF DESIGN AND ENVIRONMENT

October 2 2021
Stephen M Travis
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. 8/27/21

HIGHWAY STANDARDS

STANDARD	DESCRIPTION
000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-09	PAVEMENT JOINTS
442201-03	CLASS C AND D PATCHES
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-04	NAME PLATE FOR BRIDGES
630001-12	STEEL PLATE BEAM GUARDRAIL
630006	NON-BLOCKED STEEL PLATE BEAM GUARDRAIL
630101-10	STRONG POST GUARDRAIL ATTACHED TO CULVERT
630106-02	LONG-SPAN GUARDRAIL OVER CULVERT
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
635001-02	DELINEATORS
667101-02	PERMANENT SURVEY MARKERS
701001-02	OFF-RD OPERATIONS, 2L, 2W MORE THAN 15' (4.5m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS 45 ≥ MPH
701206-05	LANE CLOSURE, 2L, 2W, NIGHT ONLY, FOR SPEEDS 45 ≥ MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
725001-01	OBJECT AND TERMINAL MARKERS
729001-01	APPLICATION OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

GENERAL NOTES

G.N.-100B

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 SOLE 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.

G.N.-105.09A

ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

GENERAL NOTES (cont.)

G.N.-406H

MIXTURE REQUIREMENTS

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

Location	FAP 840 (IL 49)	FAP 840 (IL 49)
Mixture Use	Class D, Var.Depth Binder, Base Cse Option, Bottom 9" HMA Shldr.	Surface*, Top 1 1/2" HMA Shldr.
AC/PG	PG 64-22	PG 64-22
Design Air Voids	4.0% @ Ndes=50	4.0% @ Ndes=50
Mix Comp(Gradation)	IL 19.0	IL 9.5
Friction Aggregate	N.A.	Mix C
Mixture Weight	112	112
Quality Management Program	QC/QA	QC/QA
Sublot Size	N.A.	N.A.

* Shoulder to be placed concurrently with mainline

G.N.-703A

SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING: COLD MILLING AND/OR PLACING BITUMINOUS MATERIALS (PRIME COAT), LEVELING BINDER (MACHINE METHOD), BINDER AND SURFACE COURSES. SHORT TERM PAVEMENT MARKING PLACED ON THE SURFACE, SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING. SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS. USE 4 FEET PER 40 FEET (OR 10% PER STATION).

COMMITMENTS

NO COMMITMENTS

SUMMARY OF QUANTITIES

LOCATION OF WORK:	F.A.P. 840 (IL 49)
	RURAL 2L 2W
	MINOR ARTERIAL
	STA. 729+50 TO STA. 732+50
	VERMILION COUNTY
FUNDING BREAKOUT:	STP - 80% FED/20% STATE
CONSTRUCTION TYPE CODE:	0010

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
20200100	EARTH EXCAVATION	CU YD	360.0
20300100	CHANNEL EXCAVATION	CU YD	205.0
20700220	POROUS GRANULAR EMBANKMENT	CU YD	840.0
21301052	EXPLORATION TRENCH 52" DEPTH	FOOT	142.0
25000210	SEEDING, CLASS 2A	ACRE	0.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	22.5
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	22.5
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	22.5
25100115	MULCH, METHOD 2	ACRE	0.25
25100630	EROSION CONTROL BLANKET	SQ YD	240.0
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	393.0
28000400	PERIMETER EROSION BARRIER	FOOT	287.0
28100101	STONE RIPRAP, CLASS A1	SQ YD	521.0
28100107	STONE RIPRAP, CLASS A4	SQ YD	521.0

* DENOTES SPECIALTY ITEM

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	DRAWN -	REVISED -
PLOT SCALE = 40.0002 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/11/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 1 OF 5 SHEETS | STA. 729+50 | TO STA. 732+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	3
		CONTRACT NO. 70905		
		ILLINOIS	FED. AID PROJECT	

SUMMARY OF QUANTITIES

		LOCATION OF WORK:		F.A.P. 840 (IL 49)
				RURAL 2L 2W
				MINOR ARTERIAL
				STA. 729+50 TO STA. 732+50
				VERMILION COUNTY
		FUNDING BREAKOUT:		STP - 80% FED/20% STATE
		CONSTRUCTION TYPE CODE:		0010
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
	28200200	FILTER FABRIC	SQ YD	521.0
	31102100	SUBBASE GRANULAR MATERIAL, TYPE C 4"	SQ YD	314.0
	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	240.0
	40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	580.0
	40600990	TEMPORARY RAMP	SQ YD	46.0
	40604050	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	TON	72.0
	44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	1,265.0
	44004250	PAVED SHOULDER REMOVAL	SQ YD	120.0
	44201759	CLASS D PATCHES, TYPE IV, 9 INCH	SQ YD	307.0
	48101200	AGGREGATE SHOULDERS, TYPE B	TON	72.5
	48203003	HOT-MIX ASPHALT SHOULDERS, 1 1/2"	SQ YD	413.0
	48203033	HOT-MIX ASPHALT SHOULDERS, 9"	SQ YD	142.0
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1.0
	50300225	CONCRETE STRUCTURES	CU YD	25.1

* DENOTES SPECIALTY ITEM

SUMMARY OF QUANTITIES

LOCATION OF WORK:	F.A.P. 840 (IL 49)
	RURAL 2L 2W
	MINOR ARTERIAL
	STA. 729+50 TO STA. 732+50
	VERMILION COUNTY
FUNDING BREAKOUT:	STP - 80% FED/20% STATE
CONSTRUCTION TYPE CODE:	0010

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY
	50500505		STUD SHEAR CONNECTORS	EACH	118.0
	50800105		REINFORCEMENT BARS	POUND	59,330.0
	50800515		BAR SPLICERS	EACH	184.0
	51500100		NAME PLATES	EACH	1.0
	52200010		TEMPORARY SHEET PILING	SQ FT	970.0
	52200100		FURNISHING SOLDIER PILES(HP SECTION)	FOOT	306.0
	52200150		DRIVING SOLDIER PILES	FOOT	306.0
	52200250		UNTREATED TIMBER LAGGING	SQ FT	442.0
	54003000		CONCRETE BOX CULVERTS	CU YD	120.7
	59100100		GEOCOMPOSITE WALL DRAIN	SQ YD	202.0
*	63000003		STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	555.0
*	63000030		STRONG POST GUARDRAIL ATTACHED TO CULVERT	FOOT	60.0
*	63100045		TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.0
*	63100167		TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0

* DENOTES SPECIALTY ITEM

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	DRAWN -	REVISED -	
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PLOT DATE = 8/11/2021	DATE -	REVISED -	

SUMMARY OF QUANTITIES

SCALE: | SHEET 3 OF 5 SHEETS | STA. 729+50 | TO STA. 732+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	5
		CONTRACT NO. 70905		
		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

LOCATION OF WORK:	FAP 840 (IL 49)
	RURAL 2L 2W
	MINOR ARTERIAL
	STA. 729+50 TO STA. 732+50
	VERMILION COUNTY
FUNDING BREAKOUT:	STP - 80% FED/20% STATE
CONSTRUCTION TYPE CODE:	0010

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY
	63200310		GUARDRAIL REMOVAL	FOOT	880.0
	67000500		ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	10.0
	67100100		MOBILIZATION	L SUM	1.0
	70100405		TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1.0
	70100450		TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1.0
	70106500		TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1.0
	70107025		CHANGEABLE MESSAGE SIGN	CAL DA	14.0
	70300100		SHORT TERM PAVEMENT MARKING	FOOT	828.0
	70300150		SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	273.0
	70400100		TEMPORARY CONCRETE BARRIER	FOOT	300.0
	70400200		RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	300.0
	70600250		IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2.0
	70600350		IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2.0
*	72501000		TERMINAL MARKER - DIRECT APPLIED	EACH	3.0

*= SPECIALTY ITEM

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PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 4 OF 5 SHEETS | STA. 729+50 | TO STA. 732+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	6
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		

REV. 9/1/21

SUMMARY OF QUANTITIES

LOCATION OF WORK:	FAP 840 (IL 49)
	RURAL 2L 2W
	MINOR ARTERIAL
	STA. 729+50 TO STA. 732+50
	VERMILION COUNTY
FUNDING BREAKOUT:	STP - 80% FED/20% STATE
CONSTRUCTION TYPE CODE:	0010

	CODE NO.		ITEM	UNIT	TOTAL QUANTITY
*	72501100		TERMINAL MARKER - POST MOUNTED	EACH	1.0
*	78100100		RAISED REFLECTIVE PAVEMENT MARKER	EACH	35.0
*	78200005		GUARDRAIL REFLECTORS, TYPE A	EACH	14.0
	78300200		RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	35.0
	78300202		PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	889.0
	X0323360		WOODEN POLE REMOVAL	EACH	1.0
	X0900064		MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	175.0
	X1200294		TRIAL BATCH	EACH	4.0
*	X2300009		LONG-SPAN GUARDRAIL OVER CULVERT, 18 FT 9 IN SPAN (SPECIAL)	FOOT	18.8
	X4401198		HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1,265.0
	X5400001		CONCRETE BOX CULVERTS (RHEOLOGY-CONTROLLING ADMIXTURE)	CU YD	96.6
*	X6330725		STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	25.0
	X7200201		WIDTH RESTRICTION SIGNING	L SUM	1.0
*	XZ193400		SURVEY MARKER, TYPE 2 (SPECIAL)	EACH	9.0

* DENOTES SPECIALTY ITEM

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PLOT DATE = 8/11/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 5 OF 5 SHEETS | STA. 729+50 | TO STA. 732+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	7
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		

REV. 9/1/21

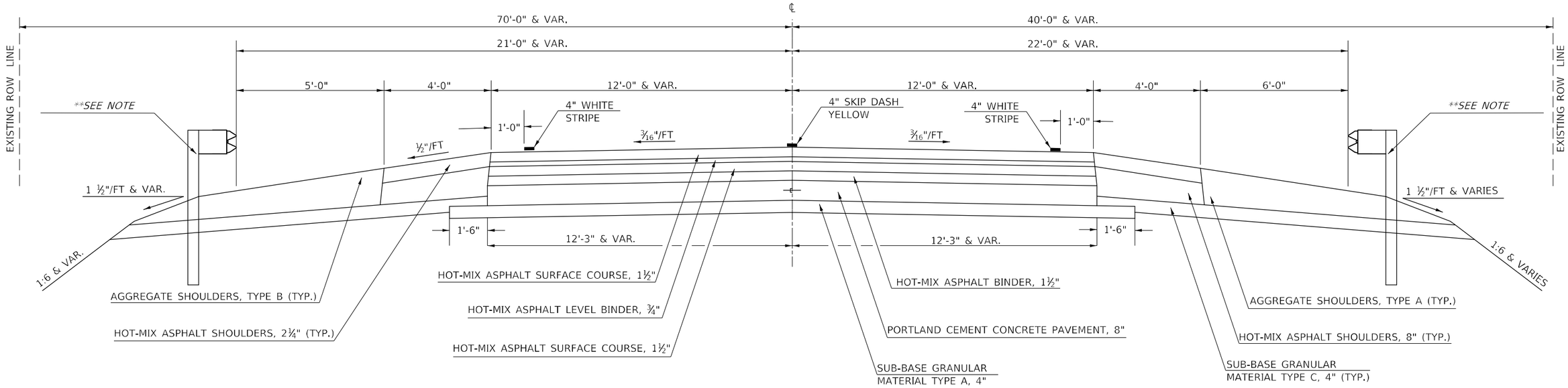
SUMMARY OF QUANTITIES

			LOCATION OF WORK:		FAP 840 (IL 49)
					RURAL 2L 2W
					MINOR ARTERIAL
					STA. 729+50 TO STA. 732+50
					VERMILION COUNTY
			FUNDING BREAKOUT:		STP - 80% FED/20% STATE
			CONSTRUCTION TYPE CODE:		0010
	CODE NO.		ITEM	UNIT	TOTAL QUANTITY
	Z0002900		BASE COURSE (OPTION)	SQ YD	294.0
	Z0013798		CONSTRUCTION LAYOUT	L SUM	1.0
*	Z0038700		PERMANENT BENCH MARKS	EACH	1.0

* DENOTES SPECIALTY ITEM

(A) EXISTING TYPICAL CROSS SECTION

	STATION	TO	STATION	
	729+50.00		730+53.95	(2)
(2)	731+43.41		732+50.00	

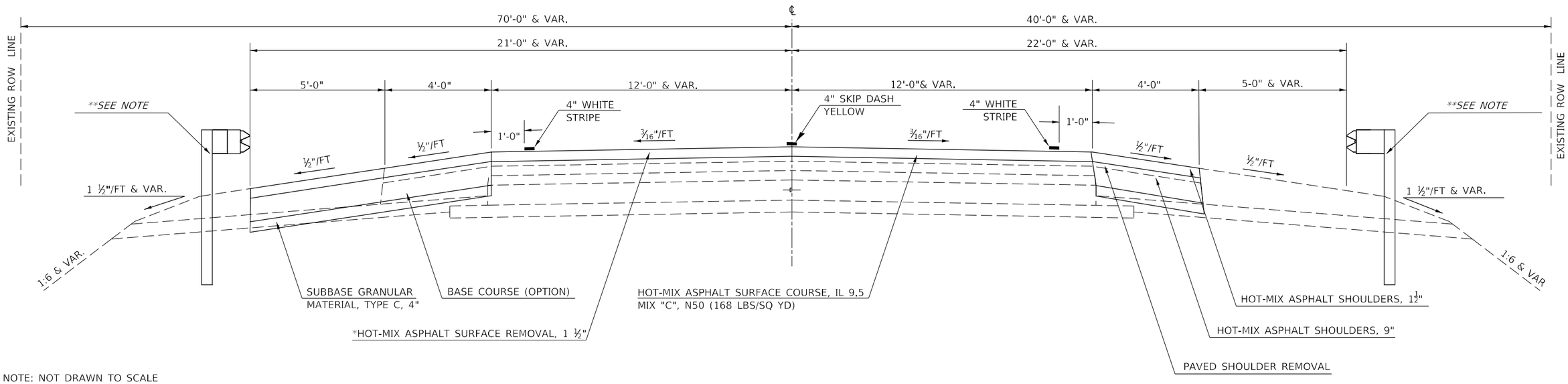


*VARIABLE DEPTH MILLING FROM STA. 729+50.00 TO STA. 732+50.00. THE USE OF A STRINGLINE WILL BE REQUIRED TO ACHIEVE THE CORRECT MILL DEPTH.

**GUARDRAIL REMOVAL (EXISTING GUARDRAIL TO BE REMOVED)
STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS (NEW TO BE INSTALLED)
GUARDFAIL FACE TO FACE IS 36 FT FROM STA. 732+50 TO STA. 731+81.
RIGHT APPROACH GUARDRAIL FLARED FROM 24.17 TO 18 FT. FROM STA. 729+33.79 TO STA. 730+68.79

(1) PROPOSED TYPICAL CROSS SECTION

	STATION	TO	STATION	
	729+50.00		730+42.56	(2)
(2)	731+57.66		732+50.00	



NOTE: NOT DRAWN TO SCALE

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	DRAWN - JASON HELANDER	REVISED -	
PLOT SCALE = 40.0070 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

SCALE: NO SCALE | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	9
		CONTRACT NO. 70905		
		ILLINOIS	FED. AID PROJECT	

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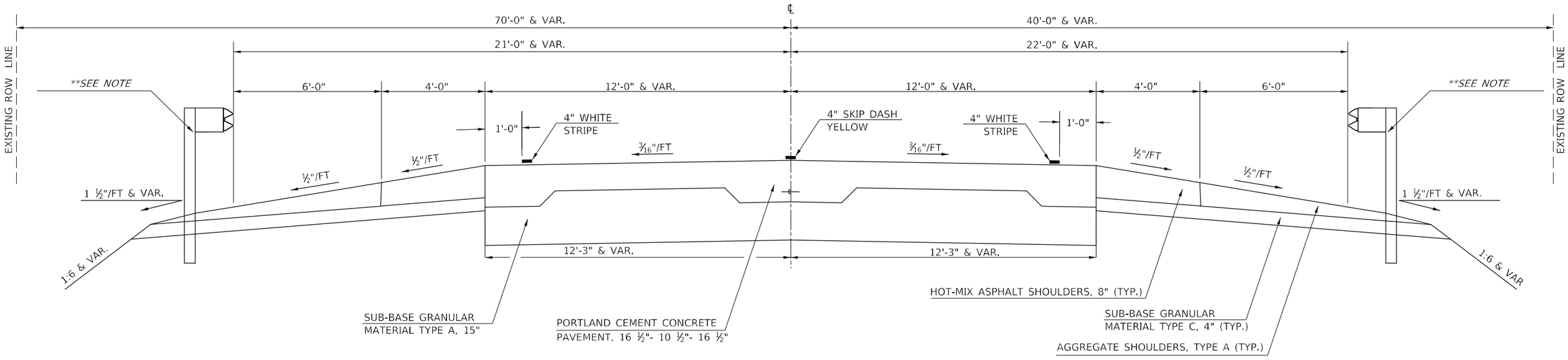
(B) EXISTING TYPICAL CROSS SECTION

	STATION	TO	STATION	
(1)	730+53.95		730+85.95	(3)
(3)	731+11.41		731+43.41	(1)

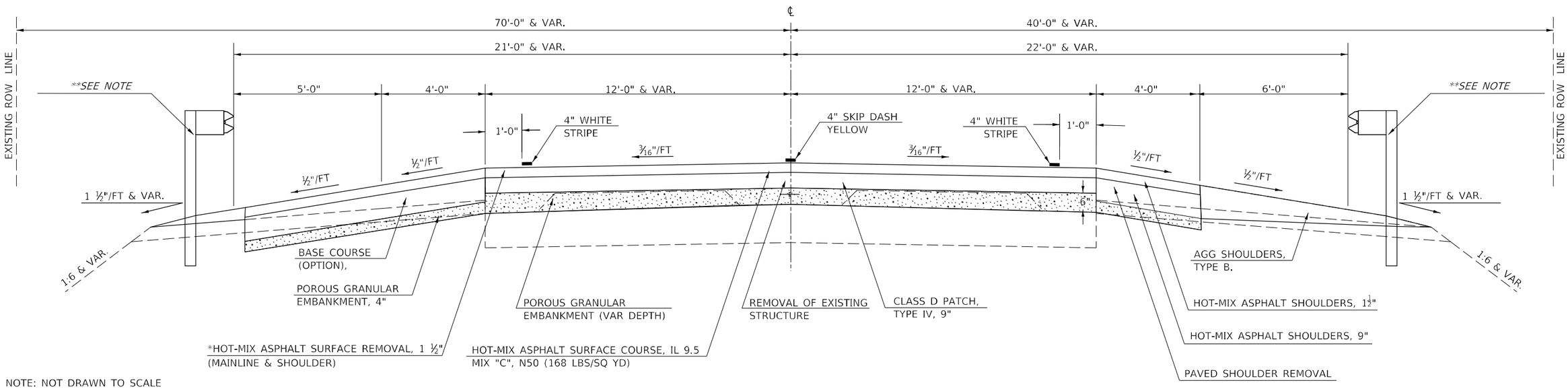


*VARIABLE DEPTH MILLING FROM STA. 729+50.00 TO STA. 732+50.00. THE USE OF A STRINGLINE WILL BE REQUIRED TO ACHIEVE THE CORRECT MILL DEPTH.

**GUARDRAIL REMOVAL (EXISTING GUARDRAIL TO BE REMOVED)
STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS (NEW TO BE INSTALLED)
LEFT GUARDRAIL FLARED FROM 18 FT TO 20 FROM STA.731+81.02
TO STA. 732+18.47

(2) PROPOSED TYPICAL CROSS SECTION

	STATION	TO	STATION	
(1)	730+42.56		730+85.32	(3)
(3)	731+14.08		731+57.66	(1)



NOTE: NOT DRAWN TO SCALE

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FILE NAME: pw:\\plotroom.ceei.illinois.gov:PWDOTDocuments\IDOT Offices\District 5\Projects\D5709905\CADData\CADsheets\D5709905-sht-typical.dgn

USER NAME = monjardinrt	DESIGNED - JASON HELANDER	REVISED -	
	DRAWN - JASON HELANDER	REVISED -	
PLOT SCALE = 40.0345 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

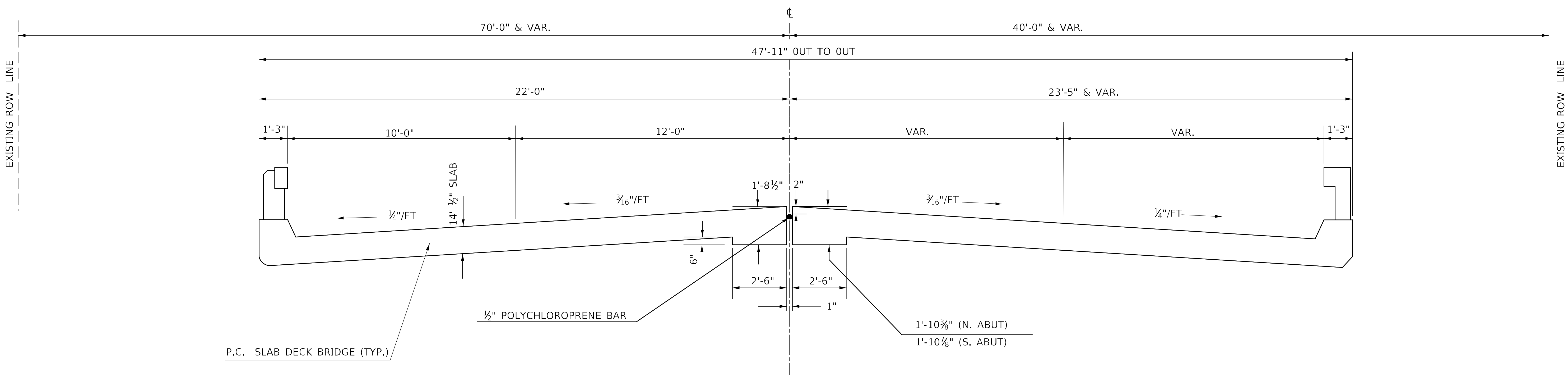
TYPICAL CROSS SECTIONS

SCALE: NO SCALE | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	10
		CONTRACT NO. 70905		
		ILLINOIS FED. AID PROJECT		

Ⓒ EXISTING TYPICAL CROSS SECTION

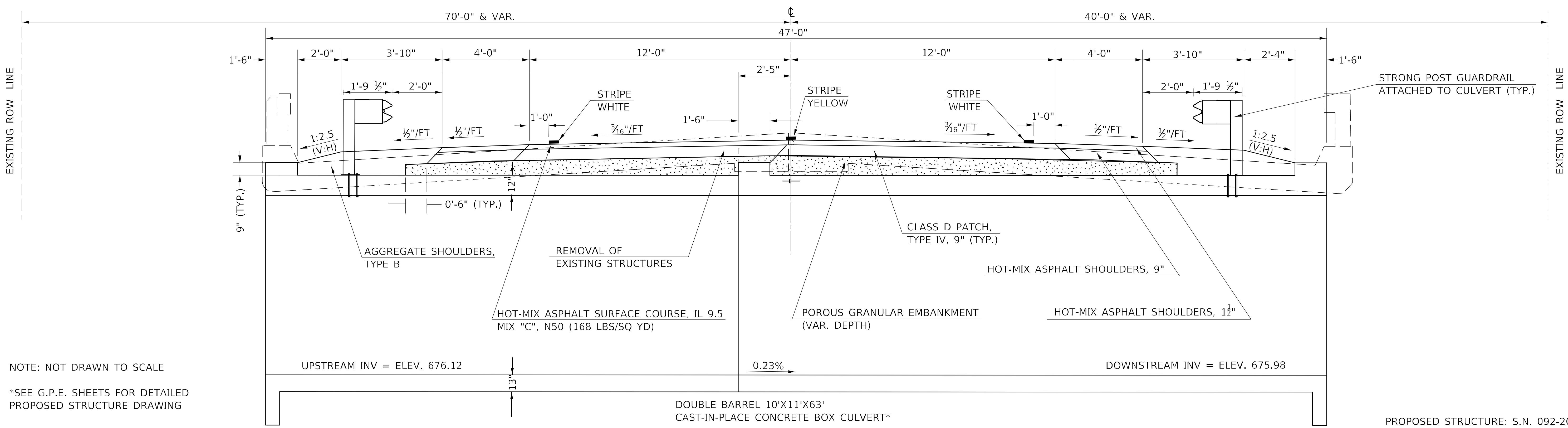
STATION ② 730+85.95 TO STATION 731+11.41 ②



EXISTING STRUCTURE: S.N. 092-0060

③ PROPOSED TYPICAL CROSS SECTION

STATION ② 730+85.32 TO STATION 731+14.08 ②



NOTE: NOT DRAWN TO SCALE

*SEE G.P.E. SHEETS FOR DETAILED PROPOSED STRUCTURE DRAWING

PROPOSED STRUCTURE: S.N. 092-2045

USER NAME = morijardinrt	DESIGNED - JASON HELANDER	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - JASON HELANDER	REVISED -	
PLOT SCALE = 40.0001 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/11/2021	DATE -	REVISED -	

TYPICAL CROSS SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	11
CONTRACT NO. 70905				
ILLINOIS FED. AID PROJECT				

MODEL: $MODELNAME$
FILE NAME: pw:\\planroom.dot.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570905\CADData\CADsheets\D570905-sht-typical.dgn

SCHEDULES OF QUANTITIES

HMA REMOVAL AND SURFACE COURSE SCHEDULE

							44000155	X4401198	40604050
DIRECTION	STATION	TO	STATION	LENGTH (FT)	AVERAGE WIDTH (FT)	AREA (SQ FT)	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2" (SQ YD)	HMA SURFACE REMOVAL, VARIABLE DEPTH (SQ YD)	HMA SURFACE COURSE, IL 9.5 MIX "C" , N50 (1.5 INCHES) (TON)
SB	729+50.00	TO	730+52.85	102.85	13.25	1,362.76	151.42	151.42	12.72
SB	730+52.85	TO	730+85.14	32.29	12.78	412.50	45.83	45.83	3.85
SB	730+85.14	TO	731+15.14	30.00	12.86	385.80	42.87	42.87	3.60
SB	731+15.14	TO	731+43.32	28.18	12.83	361.55	40.17	40.17	3.37
SB	731+43.32	TO	732+50.00	106.68	12.74	1,358.57	150.95	150.95	12.68
NB	729+50.00	TO	730+52.98	102.98	14.00	1,441.72	160.19	160.19	13.46
NB	730+52.98	TO	730+85.14	32.16	12.56	403.77	44.86	44.86	3.77
NB	730+85.14	TO	731+15.14	30.00	12.13	363.90	40.43	40.43	3.40
NB	731+15.14	TO	731+43.32	28.18	11.78	331.96	36.88	36.88	3.10
NB	731+43.32	TO	732+50.00	106.68	11.70	1,247.62	138.62	138.62	11.64
						TOTAL:	852.24	852.24	71.59
						ROUNDED TOTAL:	852.0	852.0	72.0

BITUMINOUS MATERIALS SCHEDULE

								40600275	40600290
DIRECTION	STATION	TO	STATION	SHOULDER/ MAINLINE	LENGTH (FT)	WIDTH (FT)	AREA (SQ YD)	BITUMINOUS MATERIALS (PRIME COAT) (POUND)	BITUMINOUS MATERIALS (TACK COAT) (POUND)
HMA MIXES PLACED ON POROUS GRANULAR EMBANKMENT & SHOULDERS									
SB	730+85.40	TO	731+15.10	LT SHOULDER	29.70	4	13.2	29.7	
SB	730+85.40	TO	731+15.10	LT MAINLINE	29.70	12	39.6	89.1	
NB	730+85.40	TO	731+15.10	RT MAINLINE	29.70	12	39.6	89.1	
NB	730+85.40	TO	731+15.10	RT SHOULDER	29.70	4	13.2	29.7	
HMA SURFACE MIX*									
SB	729+50.00	TO	732+50.00	MAINLINE & SHLDRS	300	16 & VAR	704.8		317.15
NB	729+50.00	TO	732+50.00	MAINLINE & SHLDRS	300	16 & VAR	571.1		257.02
							TOTAL:	237.6	574.17
							ROUNDED TOTAL:	240.0	580.0

*AREA MEASURED FROM CAD

TEMPORARY RAMP SCHEDULE

							40600990
LOCATION*	STATION	TO	STATION	LENGTH (FT)	WIDTH (FT)	AREA (SQ FT)	TEMPORARY RAMP (SQ YD)
SOUTH SIDE OF STRUCTURE	730+50.00	TO	730+56.00	6	34.75	208.50	23.2
NORTH SIDE OF STRUCTURE	731+41.44	TO	731+47.44	6	34.75	208.50	23.2
						TOTAL:	46.3
						ROUNDED TOTAL:	46.0

AGGREGATE SHOULDERS, TYPE B SCHEDULE

							48101200
DIRECTION	STATION	TO	STATION	LENGTH (FT)	WIDTH* (FT)	THICKNESS* (FT)	AGGREGATE SHOULDERS, TYPE B (TON)
SB	729+66.00		730+94.55	128.55	2	0.17	2.86
SB	731+03.72		731+33.29	29.57	5.8	1.33	15.23
SB	731+67.99		732+50.00	82.01	2	0.17	1.86
SB	732+50.00		736+00.00	350.00	4	0.17	15.87
NB	728+76.53		729+23.79	47.26	5	0.25	3.94
NB	729+23.79		729+33.79	10.00	12	0.25	2.00
NB	729+33.79		729+50.00	16.21	8	0.21	1.82
NB	729+50.00		730+35.55	85.55	2	0.17	1.94
NB	730+35.55		730+66.94	31.39	2	0.17	0.71
NB	730+66.94		730+96.51	29.57	6.2	1.33	16.26
NB	730+96.51		731+04.83	8.32	2	0.17	0.19
NB	731+04.83		731+33.39	28.56	2	0.17	0.65
NB	731+33.39		731+48.79	15.40	7	0.25	1.80
NB	731+48.79		731+58.79	10.00	10	0.25	1.67
NB	731+58.79		731+67.99	9.20	6	0.21	0.77
NB	731+67.99		732+50.00	82.01	4	0.21	4.59
							72.14
							72.5

*AVERAGE

REMOVAL - HMA SHOULDERS & BASE COURSE OPTION

							X4401198	44004250	44000155	Z0002900	48203003	48203033
DIRECTION	STATION	TO	STATION	LENGTH (FT)	WIDTH (FT)	AREA (SQ FT)	HMA SURFACE REMOVAL, VARIABLE DEPTH (SQ YD)	PAVED SHOULDER REMOVAL (SQ YD)	HMA SURFACE REMOVAL, 1 1/2" (SQ YD)	BASE COURSE (OPTION) (SQ YD)	HMA SHOULDERS, 1 1/2" (SQ YD)	HMA SHOULDERS, 9" (SQ YD)
SB	729+21.27	TO	729+50.00	28.73	4*	114.92	12.77			12.77		
SB	729+50.00	TO	729+65.00	15.00	4*	118.50	13.17		13.17	13.17	13.17	
SB	729+65.00	TO	730+96.29	131.29	9	1,181.61	131.29		131.29	131.29	131.29	
SB	730+96.29	TO	731+02.06	5.77	4.5*	25.97	2.89		2.89	2.89	2.89	
SB	731+02.06	TO	731+25.74	23.68	4	94.72	10.52		10.52	10.52	10.52	10.52
SB	731+25.74	TO	731+34.14	8.40	4.5	37.80	4.20		4.20	4.20	4.20	
SB	731+34.14	TO	732+25.19	91.05	9	819.45	91.05		91.05	91.05	91.05	
SB	732+25.19	TO	732+50.00	24.81	8.15*	202.20	22.47		22.47	22.47	22.47	
SB	732+50.00	TO	732+62.78	12.78	3.65*	46.65	5.18		5.18	5.18	5.18	
NB	729+50.00	TO	729+58.98	8.98	4	35.92	3.99	3.99	3.99		3.99	3.99
NB	729+58.98	TO	729+76.06	17.08	4	68.32	7.59	7.59	7.59		7.59	7.59
NB	729+76.06	TO	730+71.68	95.62	4	382.48	42.50	42.50	42.50		42.50	42.50
NB	730+71.68	TO	730+74.99	3.31	2*	6.62	0.74	0.74	0.74		0.74	0.74
NB	730+74.99	TO	731+01.33	26.34	4	105.36	11.71		11.71		11.71	11.71
NB	731+01.33	TO	731+04.95	3.62	2*	7.24	0.80	0.80	0.80		0.80	0.80
NB	731+04.95	TO	732+25.05	120.10	4	480.4	53.38	53.38	53.38		53.38	53.38
NB	732+25.05	TO	732+50.00	24.95	4	99.8	11.09	11.09	11.09		11.09	11.09
						TOTAL:	412.56	120.09	412.56	293.53	412.56	142.32
						ROUNDED TOTAL:	413.0	120.0	413.0	294.0	413.0	142.0

*AVERAGE WIDTH

HMA PATCHING SCHEDULE

						44201759
DIRECTION	STATION	TO	STATION	LENGTH (FT)	WIDTH (FT)	CLASS D PATCH TYPE IV, 9 INCH (SQ YD)
SB	730+42.56	TO	731+57.66	115.10	12.0	153.5
NB	730+42.56	TO	731+57.66	115.10	12.0	153.5
					TOTAL:	306.9
					ROUNDED TOTAL:	307.0

EXPLORATION TRENCH, 52" DEPTH SCHEDULE

						21301052
						EXPLORATION TRENCH, 52" DEPTH
LOCATION	STATION	TO	STATION	LENGTH (FT)	OFFSET (FT)*	(FT)
SB	730+95.73		731+68.10	72.4	47	72.4
NB	730+35.17		731+04.83	69.7	31	69.7
					TOTAL:	142.0
					ROUNDED TOTAL:	142.0

* MEASURED IN CADD, SEE PLAN AND PROFILE SHEET

MODEL: $MODELNAME5
FILE NAME: pw:\\dimroom.dot.illinois.gov:PWIDOT1\Documents\IDOT Offices\District 5\Projects\05 70905\CADD\Sheets\05 70905-sht-schedule.dgn

USER NAME = monjardinrt	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0128 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

SCALE: | SHEET 1 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	12
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		

SCHEDULES OF QUANTITIES CONT.

EARTHWORK SCHEDULE

LOCATION	STATION	TO	STATION	CUT EARTH EXCAVATION CU YD	EARTH EX ADJ. FOR SHRINKAGE	FILL EMBANKMENT CU YD	EARTHWORK BALANCE WASTE(+) SHORTAGE (-) CU YD	20200100 EARTH EXCAVATION CU YD
LT	729+50.00		729+66.00	4.61	3.46	0.08	3.38	3.38
LT	729+66.00		730+00.00	13.57	10.18	0.28	9.90	9.90
LT	730+00.00		730+35.50	13.79	10.34	0.23	10.11	10.11
LT	730+35.50		730+66.85	12.59	9.44	0.70	8.74	8.74
LT	730+66.85		730+81.72	6.7	5.03	0.45	4.58	4.58
LT	730+81.72		730+94.55	13.83	10.37	0.14	10.23	10.23
LT CULVERT SECTION*	730+94.55		731+00.25	9.72	7.29	0.00	7.29	7.29
LT CULVERT SECTION*	731+00.25		731+04.83	5.96	4.47	0.00	4.47	4.47
LT CULVERT SECTION*	731+04.83		731+11.32	13.22	9.92	0.00	9.92	9.92
LT CULVERT SECTION*	731+11.32		731+18.50	11.51	8.63	0.00	8.63	8.63
LT CULVERT SECTION*	731+18.50		731+33.39	0	0.00	0.00	0.00	0.00
LT CULVERT SECTION*	731+33.39		731+50.00	38.11	28.58	0.00	28.58	28.58
LT CULVERT SECTION*	731+50.00		731+67.99	67.18	50.39	0.00	50.39	50.39
LT	731+67.99		732+00.00	74.8	56.10	0.07	56.03	56.03
LT	732+00.00		732+50.00	16.29	12.22	1.97	10.25	10.25
LT	732+50.00		736+00.00	0	0.00	26.19	-26.19	-26.19
RT	729+23.79		729+33.79	0.9	0.68	1.06**	0.68	0.68
RT	729+33.79		729+50.00	2.91	2.18	2.13**	2.18	2.18
RT	729+50.00		729+66.00	3.53	2.65	1.19	1.46	1.46
RT	729+66.00		730+00.00	6.06	4.55	0.00	4.55	4.55
RT	730+00.00		730+35.50	33.82	25.37	0.00	25.37	25.37
RT CULVERT SECTION*	730+35.50		730+66.85	61.18	45.89	0.00	45.89	45.89
RT CULVERT SECTION*	730+66.85		730+81.72	16.17	12.13	0.00	12.13	12.13
RT CULVERT SECTION*	730+81.72		730+94.55	32.22	24.17	0.00	24.17	24.17
RT CULVERT SECTION*	730+94.55		731+00.25	22.00	16.50	0.00	16.50	16.50
RT CULVERT SECTION*	731+00.25		731+04.83	10.50	7.88	0.00	7.88	7.88
RT	731+04.83		731+11.42	6.55	4.91	0.11	4.80	4.80
RT	731+11.42		731+18.50	0.93	0.70	0.31	0.39	0.39
RT	731+18.50		731+33.39	1.89	1.42	0.73	0.69	0.69
RT	731+33.39		731+48.79	2.22	1.67	0.68	0.99	0.99
RT	731+48.79		731+50.00	0.20	0.15	0.07	0.08	0.08
RT	731+50.00		731+58.79	1.44	1.08	0.62**	1.08	1.08
RT	731+58.79		731+67.99	1.51	1.13	0.71**	1.13	1.13
RT	731+67.99		732+00.00	5.21	3.91	1.32**	3.91	3.91
RT	732+00.00		732+50.00	8.13	6.10	0.00	6.10	6.10
			TOTAL:	519.25		33.20	356.24	356.24
			ROUNDED TOTAL:	519.5		33.5	360.0	360.0

*SEE CROSS SECTIONS FOR DETAILS

** FILL WILL BE AGGREGATE SHOULDERS, TYPE B

NOTE: SHRINKAGE FACTOR USED IS 25%

STONE RIPRAP, CLASS A4 WITH A1 BEDDING MATERIAL SCHEDULE

LOCATION*	STATION	TO	STATION	OFFSET (FT)	AREA (SQ FT)	28100107 STONE RIPRAP, CLASS A4 (SQ YD)	28100101 STONE RIPRAP CLASS A1 (SQ YD)	28200200 FILTER FABRIC (SQ YD)
LT	730+94.55	TO	731+67.99	21.8 TO 61.0	2,914.29	323.8	323.8	323.8
RT	730+35.55	TO	731+04.83	22.2 TO 46.7	1,774.80	197.2	197.2	197.2
					TOTAL:	521.0	521.0	521.0
					ROUNDED TOTAL:	521.0	521.0	521.0

CHANNEL EXCAVATION SCHEDULE

LOCATION	STATION	OFFSET FT	TO	STATION	OFFSET FT	AVE AREA* SQ FT	20300100 CHANNEL EXCAVATION CU YD
LT CULVERT SECTION	731+11.32	23.5 TO 45		731+18.50	23.5 TO 61	76.5	20.3
LT CULVERT SECTION	731+18.50	23.5 TO 61		731+33.39	23.5 TO 50	100.56	55.5
LT CULVERT SECTION	731+33.39	23.5 TO 50		731+50.00	37 TO 50	67.00	41.2
LT CULVERT SECTION	731+50.00	37 TO 50		731+67.99	37 TO 50	35.15	23.4
RT CULVERT SECTION	730+66.85	23.67 TO 47		730+81.72	23.67 TO 47	67.34	37.1
RT CULVERT SECTION	730+81.72	23.67 TO 47		730+94.55	23.67 TO 35	48.48	23.0
						TOTAL:	200.50
						ROUNDED TOTAL:	205.00

*SEE CROSS SECTION FOR DETAILS, AREA MEASURED IN CADD

EROSION CONTROL SCHEDULE

LOCATION	STATION	TO	STATION	LENGTH (FT)	28000400 PERIMETER EROSION BARRIER OFFSET (FT)	(FT)	25100630 EROSION CONTROL BLANKET OFFSET (FT)	(SQ YD)
SB	729+73.44		730+79.54	106.1	38	106.1		
SB	730+79.54		730+88.33	8.8	38 to 63	8.8		
SB	730+88.33		730+92.00	3.7	63	3.7		
SB	730+92.55		730+94.55	2.0	63	2.0		
SB	730+94.55		731+01.73	7.2	63	7.2		
SB	731+01.73		731+65.99	64.3	63	64.3		
SB	731+65.99		731+67.99	2.0	63	2.0		
SB	731+67.99		731+73.00	5.0	63	5.0		
SB	731+67.99		736+00.00	432.0			23 TO 28	240.0
NB	730+33.50		731+06.03	72.5	61.67	72.5		
NB	731+06.03		731+20.96	14.9	61.67	14.9		
					TOTAL:	286.5		240.0
					ROUNDED TOTAL:	287.0		240.0

* MEASURED IN CADD, SEE EROSION AND SEDIMENT CONTROL PLAN

RAISED REFLECTIVE PAVEMENT MARKER

STATION	TO	STATION	LENGTH (FT)	REFLECTOR TYPE	78300200 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL (EACH)	78100100 RAISED REFLECTIVE PAVEMENT MARKER (EACH)
725+58.07	TO	729+87.74	429.7	One-way Amber Marker[1]	22.0	22.0
729+87.74	TO	733+75.00	387.3	Two-way Amber Marker[2]	10.0	10.0
733+75.00	TO	735+45.06	170.1	Two-way Amber Marker[3]	3.0	3.0
				TOTAL:	35.0	35.0
				ROUNDED TOTAL:	35.0	35.0

Note 1: ONE-WAY AMBER EVERY 40' FPR EACH DIRECTION OF TRAFFIC

Note 2: TWO-WAY AMBER EVERY 40' ON ONE SIDE OF LINES

Note 3: TWO-WAY AMBER EVERY 80'

SCHEDULES OF QUANTITIES CONT.

EMBANKMENT SCHEDULE

AREA / LOCATION	STATION	TO	STATION	LENGTH (FT)	WIDTH (FT)	HEIGHT (AVE FT)	VOLUME (CU FT)	20700220 POROUS GRANULAR EMBANKMENT (CU YD)	31102100 SUBBASE GRANULAR MATERIAL, TYPE C, 4" (SQ YD)
1- TOP OF CULVERT	730+42.56		731+57.66	115.10	32.0	0.875	3,222.80	119.36	
2- EMBANKMENT ON SIDE OF CULVERT (SOUTH)									
NB EOS STATIONS	730+44.56		730+66.87	22.31	65.0	13.08	9,483.98	351.26	
SB EOS STATIONS	730+81.34		731+03.65	22.31	65.0	13.08			
2- EMBANKMENT ON SIDE OF CULVERT (NORTH)									
NB EOS STATIONS	730+96.57		731+18.88	22.31	65.0	13.08	9,483.98	351.26	
SB EOS STATIONS	731+33.35		731+55.66	22.31	65.0	13.08			
HMA SHOULDERS AND BASE COURSE OPTION*									
NB STATIONS	729+50.00		730+52.85	102.85	4.0	0.33	135.76		45.71
NB STATIONS	730+52.85		731+73.33	120.48	4.0	0.33	159.03	5.89	
NB STATIONS	731+02.42		731+44.26	41.84	4.0	0.33	55.23	2.05	
NB STATIONS	731+44.26		732+50.00	105.74	4.0	0.33	139.58		47.00
SB STATIONS	729+50.00		730+52.85	102.85	9.0	0.33	305.46		102.85
SB STATIONS	730+52.85		730+97.88	45.03	9.0	0.33	133.74	4.95	
SB STATIONS	731+32.68		731+44.26	11.58	9.0	0.33	34.39	1.27	
SB STATIONS	731+44.26		732+62.78	118.52	9.0	0.33	352.00		118.52
							TOTAL:	836.04	314.08
							ROUNDED TOTAL:	840.0	314.0

SEE DETAIL OF POROUS GRANULAR EMBANKMENT SHEET

*SEE HMA SHOULDERS SCHEDULE

SEEDING SCHEDULE

LOCATION	STATION	TO	STATION	LENGTH		AREA TO BE SEEDED WITH CLASS 2A*	25000210 SEEDING CLASS 2A	25000400 NITROGEN FERTILIZER NUTRIENT	25000500 PHOSPOROUS FERTILIZER NUTRIENT	25000600 POTASSIUM FERTILIZER NUTRIENT	AREA TO BE SEEDED WITH TEMP EROSION CONTROL SEEDING*	28000250 TEMPORARY EROSION CONTROL SEEDING**	25100115 MULCH, METHOD 2
				FT		SQ FT	ACRE	POUND	POUND	POUND	ACRE	POUND	ACRE
SB	729+50.00		729+66.00	16.0	32.0	32.0	0.001	0.1	0.1	0.1	0.006	5.0	0.001
SB	729+66.00		730+79.54	113.5	227.1	227.1	0.005	0.5	0.5	0.5	0.039	35.2	0.005
SB	730+79.54		730+81.72	2.2	4.4	4.4	0.000	0.0	0.0	0.0	0.002	1.8	0.000
SB	730+81.72		730+94.55	12.8	32.1	32.1	0.001	0.1	0.1	0.1	0.012	10.6	0.001
SB	730+94.55		731+01.28	6.7	83.2	83.2	0.002	0.2	0.2	0.2	0.006	5.6	0.002
SB	731+01.28		731+67.99	66.7	2,795.1	2,795.1	-	-	-	-	0.061	55.1	-
SB	731+67.99		731+81.98	14.0	42.0	42.0	0.001	0.1	0.1	0.1	0.013	11.6	0.001
SB	731+81.98		732+00.00	18.0	54.1	54.1	0.001	0.1	0.1	0.1	-	-	0.001
SB	732+00.00		736+00.00	400.0		2,000.0	0.046	4.1	4.1	4.1	-	-	0.046
NB	729+00.00		729+23.79	23.8	118.9	118.9	0.003	0.2	0.2	0.2	-	-	0.003
NB	729+23.79		729+50.00	26.2	131.1	131.1	0.003	0.3	0.3	0.3	0.009	16.2	0.003
NB	729+50.00		730+21.00	71.0	106.5	106.5	0.002	0.2	0.2	0.2	0.024	44.0	0.002
NB	730+21.00		730+35.50	14.5	21.8	21.8	0.000	0.0	0.0	0.0	0.005	9.0	0.000
NB	730+35.50		731+04.83	69.3	1,684.4	1,684.4	-	-	-	-	0.062	111.7	-
NB	731+04.83		731+20.78	15.9	47.8	47.8	0.001	0.1	0.1	0.1	0.014	25.7	0.001
NB	731+20.78		731+58.79	38.0	114.0	114.0	0.003	0.2	0.2	0.2	0.034	61.3	0.003
NB	731+58.79		731+67.99	9.2	2,224.5	92.0	0.002	0.2	0.2	0.2	-	-	0.002
						TOTAL:	0.071	6.4	6.4	6.4	0.288	392.7	0.071
						ROUNDED TOTAL:	0.25	22.5	22.5	22.5		393.0	0.25

NOTE: SEEDING AND MULCH HAVE MINIMUM 0.25 ACRE QUANTITY

* MEASURED IN CADD, SEE CROSS SECTIONS FOR WIDTHS

**100 POUND/ACRE @ APPLICATION FREQUENCY NB = 18 & SB= 9

SCHEDULES OF QUANTITIES CONT.

GUARDRAIL SCHEDULE

				63000003	63000030	63100167	X6330725	X2300009	63100045	63200310	72501000	72501100	78200005
LOCATION	STATION	TO	STATION	SPBGR TY A 9 FT POSTS (FT)	STRONG POST GUARDRAIL ATTACHED TO CULVERT (FT)	TBT TYP 1 (SPECIAL) TANGENT (EACH)	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS) (FT)	LONG-SPAN GUARDRAIL OVER CULVERT, 18 FT 9 IN SPAN (SPECIAL) (FT)	TRAFFIC BARRIER TERMINAL, TYPE 2 (EACH)	GUARDRAIL REMOVAL (FT)	TERMINAL MARKER - DIRECT APPLIED (EACH)	TERMINAL MARKER - POST MOUNTED (EACH)	GUARDRAIL REFLECTORS, TYPE A (EACH)
RIGHT	729+33.79	TO	729+83.79			1.0					1.0		2.0
RIGHT	729+83.79	TO	730+68.79	85.0									1.0
RIGHT	730+68.79	TO	730+98.79		30.0								1.0
RIGHT	730+98.79	TO	731+48.79			1.0					1.0		1.0
LEFT	730+52.70	TO	731+02.70			1.0					1.0		
LEFT	731+02.70	TO	731+32.70		30.0								
LEFT	731+32.70	TO	736+02.70	470.0									9.0
LEFT	736+02.70	TO	736+15.63				25.0		1.0			1.0	
LEFT	736+15.63	*(OFFSET 36.5 TO 55.25)*						18.75					
LEFT	730+06.63	TO	736+00.00							593.37			
LEFT	736+00.00	TO	736+15.63							50.00			
RIGHT	729+52.40	TO	731+88.77							236.37			
			TOTAL:	555.00	60.00	3.00	25.00	18.75	1.0	879.74	3.0	1.0	14.0
			ROUNDED TOTAL:	555.0	60.0	3.0	25.0	18.75	1.0	880.0	3.0	1.0	14.0

SHORT TERM PAVEMENT MARKING SCHEDULE

				78300202			70300100				70300150
							SHORT TERM PAVEMENT MARKING				
STATION	TO	STATION	STA TO STA LENGTH (FT)	PAVEMENT MARKING REMOVAL- WATER BLASTING			NO. OF 4 FT STRIPES	LENGTH	NO. OF APPLICATIONS	4 FT STRIPES	SHORT TERM PAVEMENT MARKING REMOVAL
				DESCRIPTION	LENGTH (FT)	SQ FT	EACH	FT		FOOT	SQ FT
725+58.07		729+87.74	429.67	4" SOLID YELLOW LINES	1,718.7	572.9	44*	176.0	3	528.0	174.2
725+58.07		729+87.74	429.67	12" SOLID DIAGONAL LINES	140.0	140.0					
729+87.74		733+75.00	387.3	SOLID YELLOW LINE	387.3	129.1	20**	80.0	3	240.0	79.2
729+87.74		733+75.00	387.3	DASHED YELLOW LINE	96.8	32.3					
733+75.00		735+45.06	170.1	DASHED YELLOW LINE	42.5	14.2	5**	20.0	3	60.0	19.8
					TOTAL:	888.4				828.0	273.2
					ROUNDED TOTAL:	889.0				828.0	273.0

*MULTIPLIED BY 4 LINES

**MULTIPLIED BY 2 LINES

WOODEN POLE REMOVAL SCHEDULE

			X0323360
LOCATION	STATION	OFFSET (LT)	WOODEN POLE REMOVAL (EACH)
SB LANE	735+98.13	21.5	1.0
		TOTAL:	1.0
		ROUNDED TOTAL:	1.0

SURVEY MARKER, TYPE 2 (SPECIAL) SCHEDULE

					XZ193400
STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	SURVEY MARKER, TYPE 2 (SPECIAL) (EACH)
725+45.54	0.00'	PC CURVE	1324873.829	1107405.64	1.0
726+59.16	0.48' LT	PI CURVE	1324987.436	1107403.585	1.0
727+72.78	0.00'	PRC	1325101.062	1107403.453	1.0
728+86.41	0.48'RT	PI CURVE	1325214.687	1107403.321	1.0
730+00.03	0.00'	PT CURVE	1325328.295	1107401.266	1.0
738+06.38	2.06'LT	PI CURVE	1326134.51	1107386.681	1.0
746+80.60	0.38' RT	PI CURVE	1327008.728	1107381.246	1.0
747+94.23	0.00'	PRC	1327122.339	1107379.032	1.0
749+07.86	0.37'LT	PI CURVE	1327235.951	1107376.818	1.0
				TOTAL:	9.0
				ROUNDED TOTAL:	9.0

TEMPORARY CONCRETE BARRIER SCHEDULE

				70400100	70400200	70600250	70600350
STATION	TO	STATION	LENGTH (FT)	TEMPORARY CONC BARRIER (FT)	RELOCATE TEMPORARY CONCRETE BARRIER (FT)	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 (EACH)	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 (EACH)
729+38.90						1.0	1.0
730+50.00		730+25.57	75.0*	75.0	75.0		
730+25.57		731+75.08	150.0	150.0	150.0		
731+75.08		732+50.00	75.0*	75.0	75.0		
732+60.45						1.0	1.0
731+41.44		731+47.44	6.0				
			TOTAL:	300.0	300.0	2.0	2.0
			ROUNDED TOTAL:	300.0	300.0	2.0	2.0

*DIAGONAL, 1:8 TAPER

NOTE: RELOCATE TEMP CONC. BARRIER & IMPACT ATTENUATORS, STAGE 1 TO STAGE 2

SEE TRAFFIC CONTROL AND PROTECTION PLAN SHEETS,

MODEL: SMODELNAMES
FILE NAME: pw:\\pk:\\room.dot.illinois.gov:PWIDOT Documents\IDOT Offices\District 5\Projects\057090\CADData\CADSheets\057090-sht-schedule.dgn

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	DRAWN -	REVISED -	
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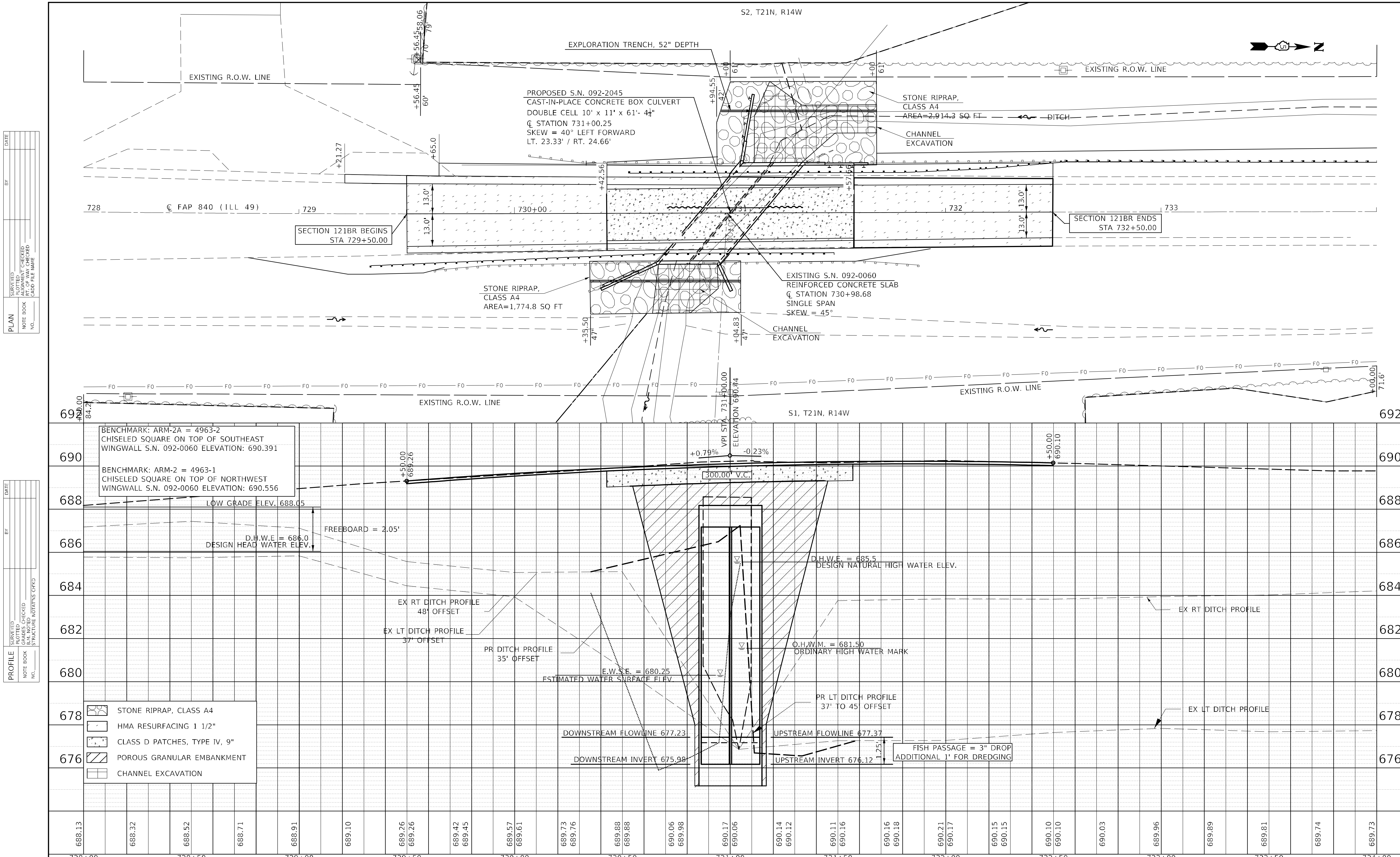
PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

SCALE: | SHEET 4 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	15
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE SHEET
S.N.092-2045

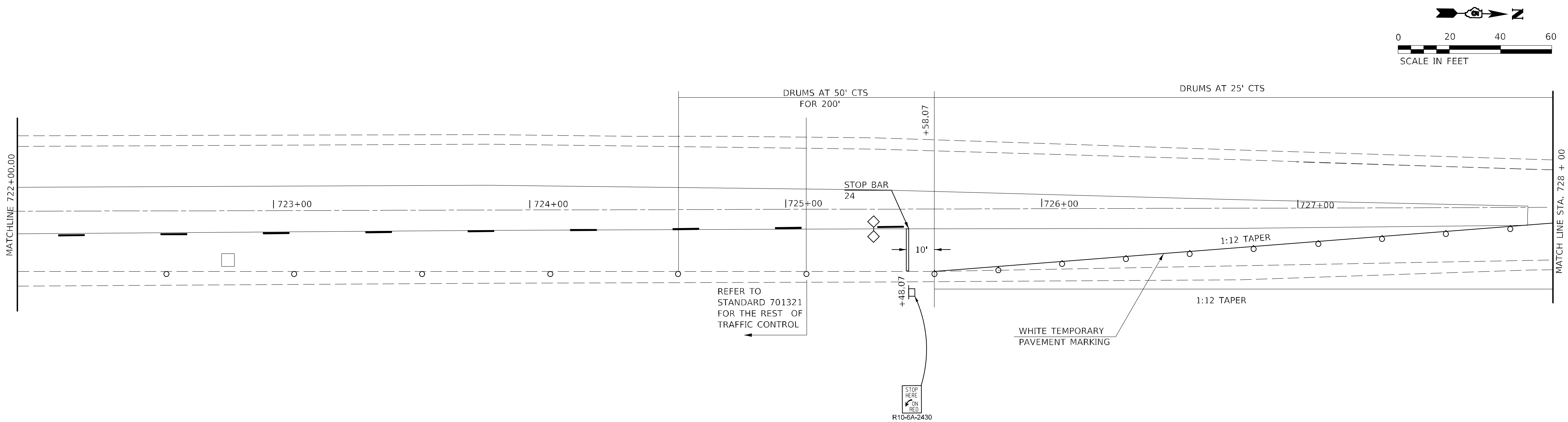
SCALE: 1:20 | SHEET 1 OF 1 SHEETS | STA. 728+00 TO STA. 734+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	16

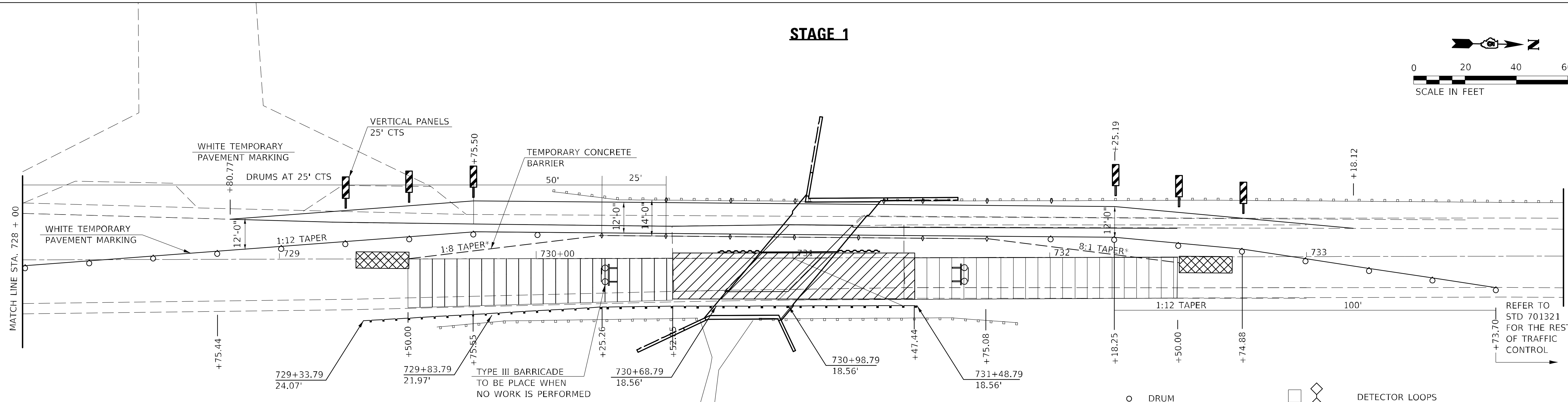
CONTRACT NO. 70905

ILLINOIS | FED. AID PROJECT

STAGE 1



STAGE 1



Symbol	Legend
○	DRUM
	DOUBLE VERTICAL PANEL
◊	CRYSTAL BI-DIRECTIONAL
○	DRUM WITN STEADY BURNING BI-DIRECTIONAL LIGHT
	SIGN
□ ◊	DETECTOR LOOPS
	TEMPORARY CONCRETE BARRIER
	TEMPORARY IMPACT ATTENUATOR NON-DIRECTIVE, TL3
	WORK ZONE- STRUCTURE & PATCHING
	WORK ZONE- FINAL RESURFACING

* STAGE 1 TEMP. CONC BARRIER TAPER WILL BE MOVED TO 1:12 DURING FINAL RESURFACING, IMPACT ATTENTUATOR WILL BE ADJUSTED TO MATCH 1:12 TAPER

TRAFFIC CONTROL DETAILS NOT SHOWN SHALL BE ACCORDING TO THE APPLICABLE TRAFFIC CONTROL STANDARD 701321

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	DRAWN - MATTHEW KEYS	REVISED - 7/16/19	
PLOT SCALE = 40.0133 ' / in.	CHECKED - 7/23/2019	REVISED -	
PLOT DATE = 8/11/2021	DATE - ____	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL & PROTECTION
STAGE 1

SCALE: 1:20 | SHEET 1 OF 2 SHEETS | STA. 722+00.00 TO STA. 734+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	17

CONTRACT NO. 70905

ILLINOIS | FED. AID PROJECT

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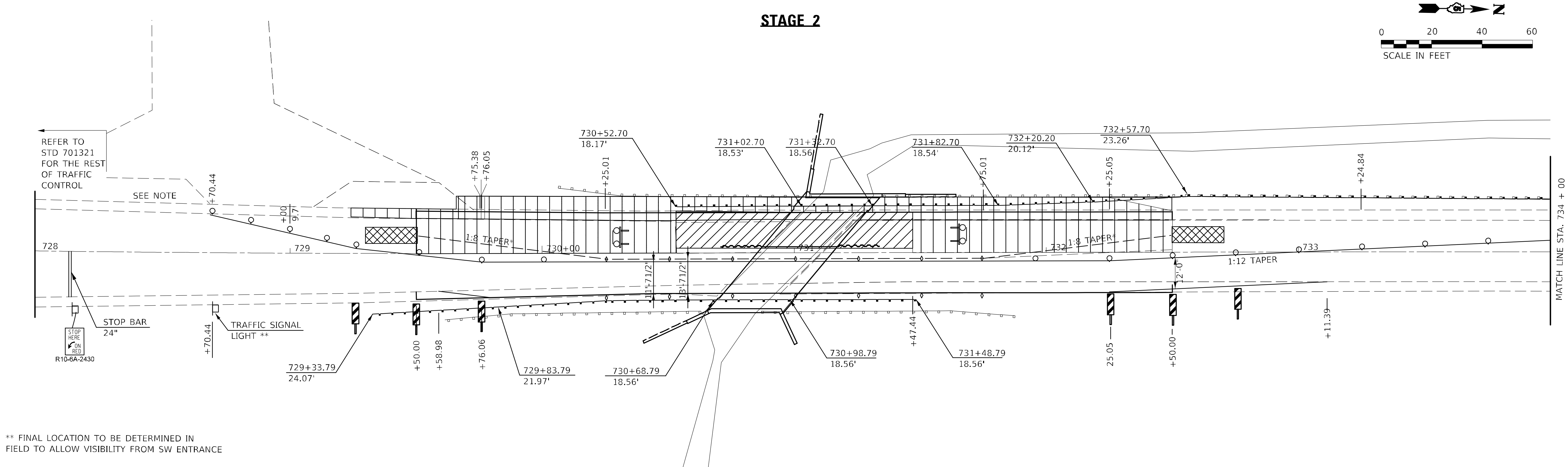
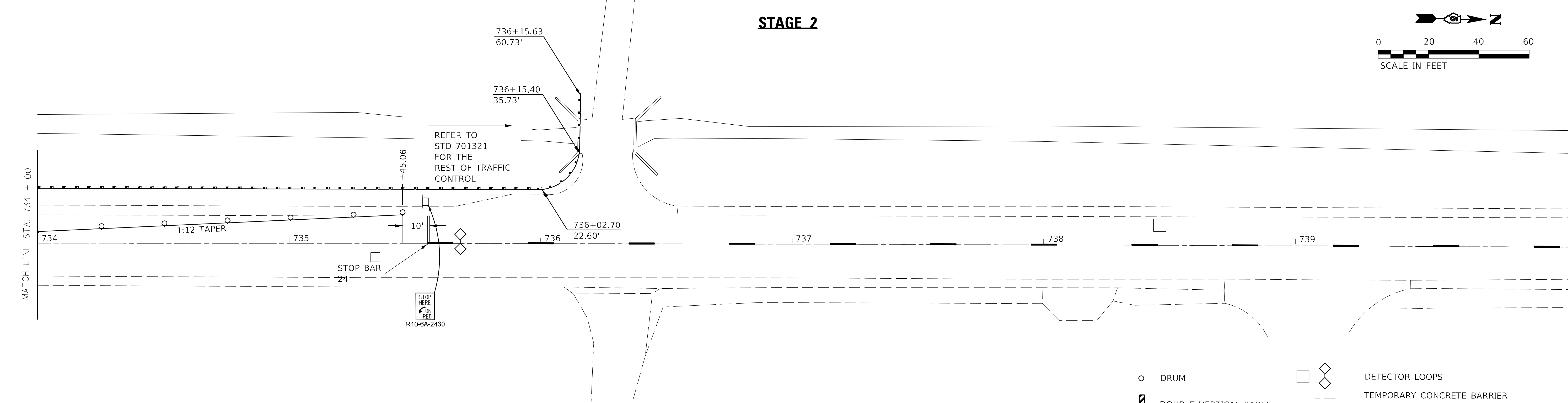
STAGE 2



** FINAL LOCATION TO BE DETERMINED IN FIELD TO ALLOW VISIBILITY FROM SW ENTRANCE

STAGE 2



TRAFFIC CONTROL DETAILS NOT SHOWN SHALL BE ACCORDING TO THE APPLICABLE TRAFFIC CONTROL STANDARD 701321

Symbol	Description	Symbol	Description
○	DRUM	□ ◇	DETECTOR LOOPS
▮	DOUBLE VERTICAL PANEL	— —	TEMPORARY CONCRETE BARRIER
◊	CRYSTAL BI-DIRECTIONAL	▩	TEMPORARY IMPACT ATTENUATOR NON-DIRECTIVE, TL3
○	DRUM WITN STEADY BURNING BI-DIRECTIONAL LIGHT	▨	WORK ZONE- STRUCTURE & PATCHING
⊏	SIGN	▯	WORK ZONE- FINAL RESURFACING

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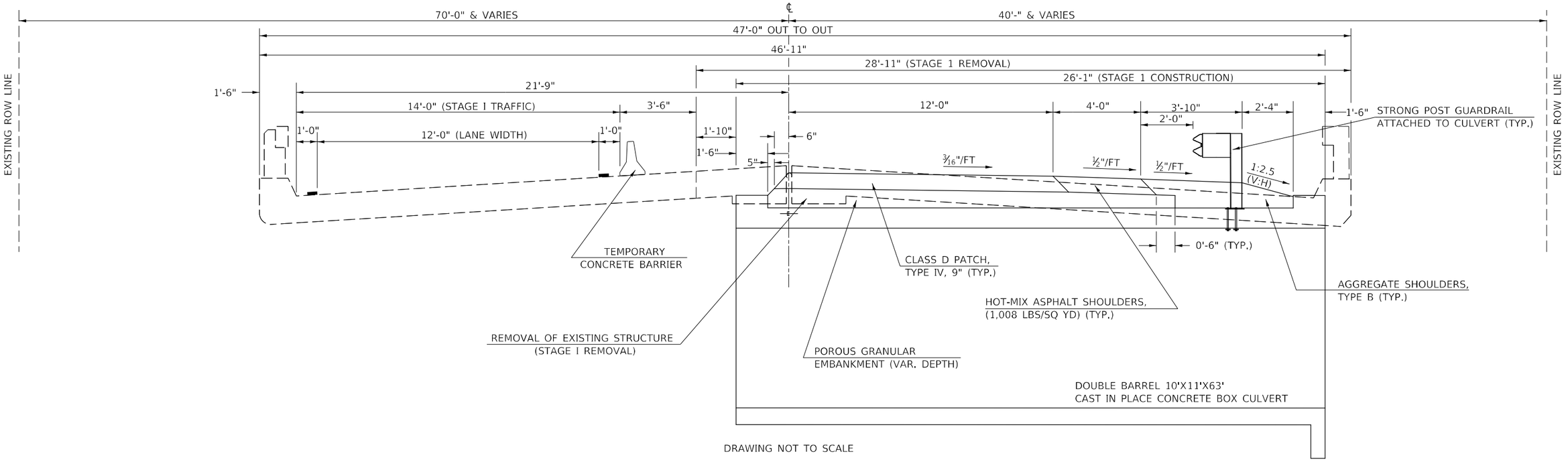
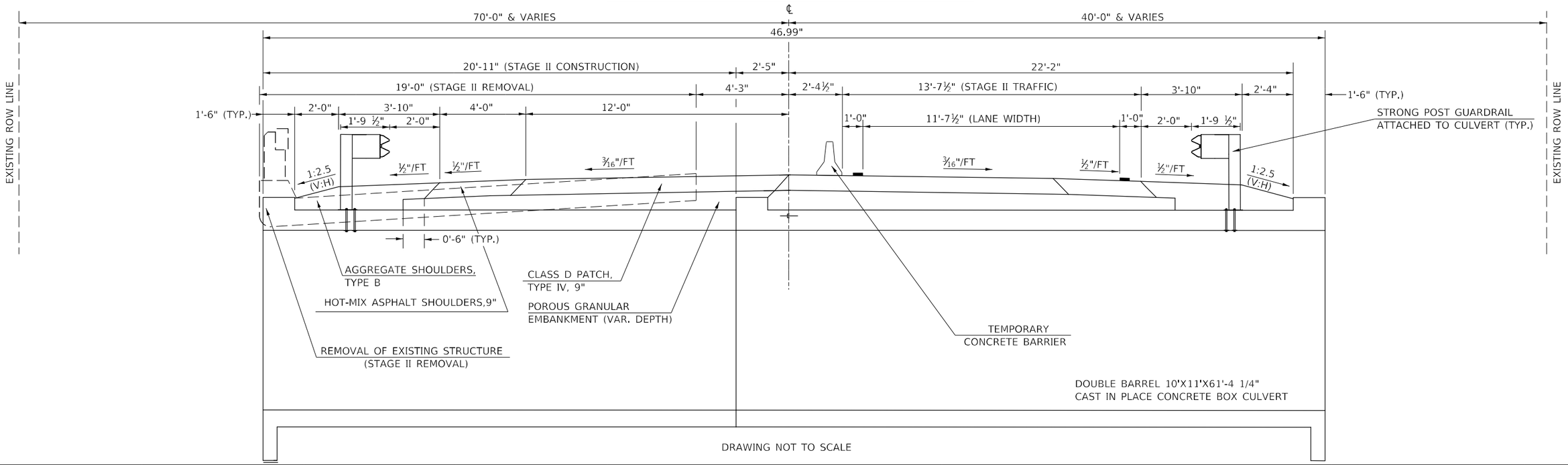
PLOT DATE = 8/11/2021	DATE -	REVISED -		SCALE: 1:20 SHEET 2 OF 2 SHEETS STA. 728+00.00 TO STA. 735+45.06	ILLINOIS FED. AID PROJECT				

TYPICAL STAGING DETAIL S.N. 092–2045 STAGE I



DRAWING NOT TO SCALE

TYPICAL STAGING DETAIL S.N. 092–2045 STAGE II



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PLOT DATE = 8/11/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

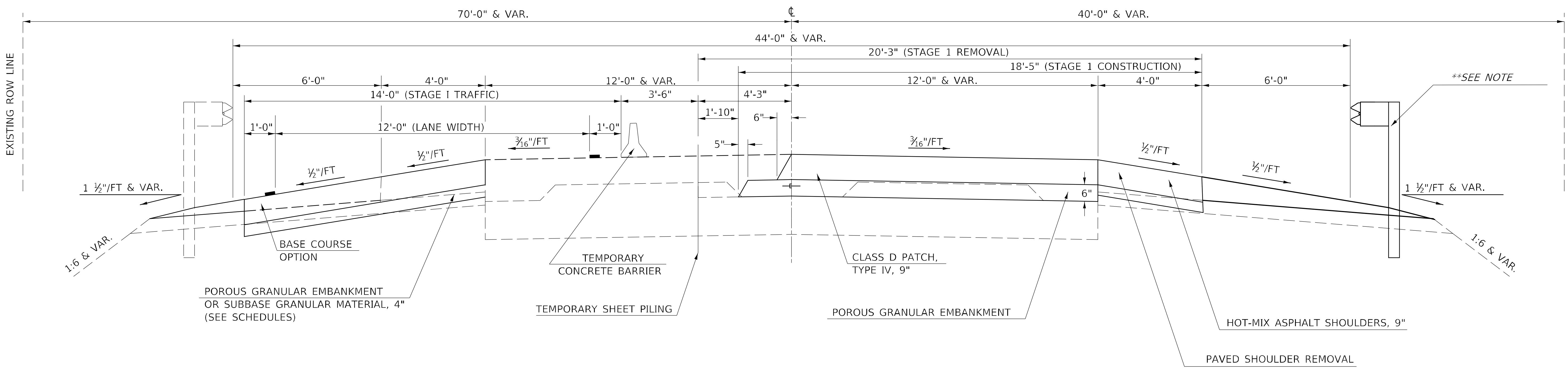
STAGING DETAIL S.N. 092–2045

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	19
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		

**GUARDRAIL REMOVAL (EXISTING GUARDRAIL TO BE REMOVED)
STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS (NEW TO BE INSTALLED)

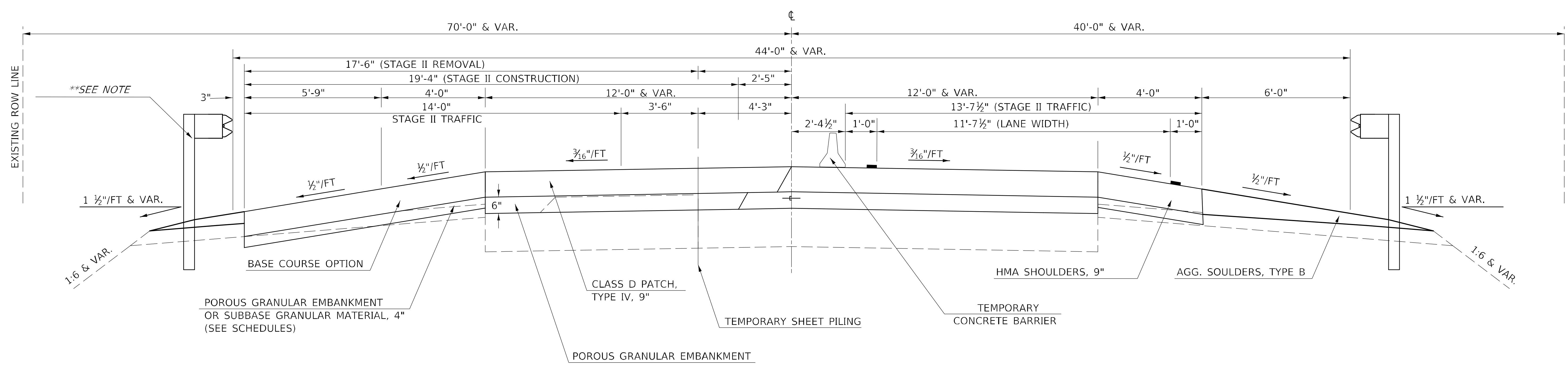
TYPICAL STAGING DETAIL STAGE I



DRAWING NOT TO SCALE

**GUARDRAIL REMOVAL (EXISTING GUARDRAIL TO BE REMOVED)
STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS (NEW TO BE INSTALLED)

TYPICAL STAGING DETAIL STAGE II



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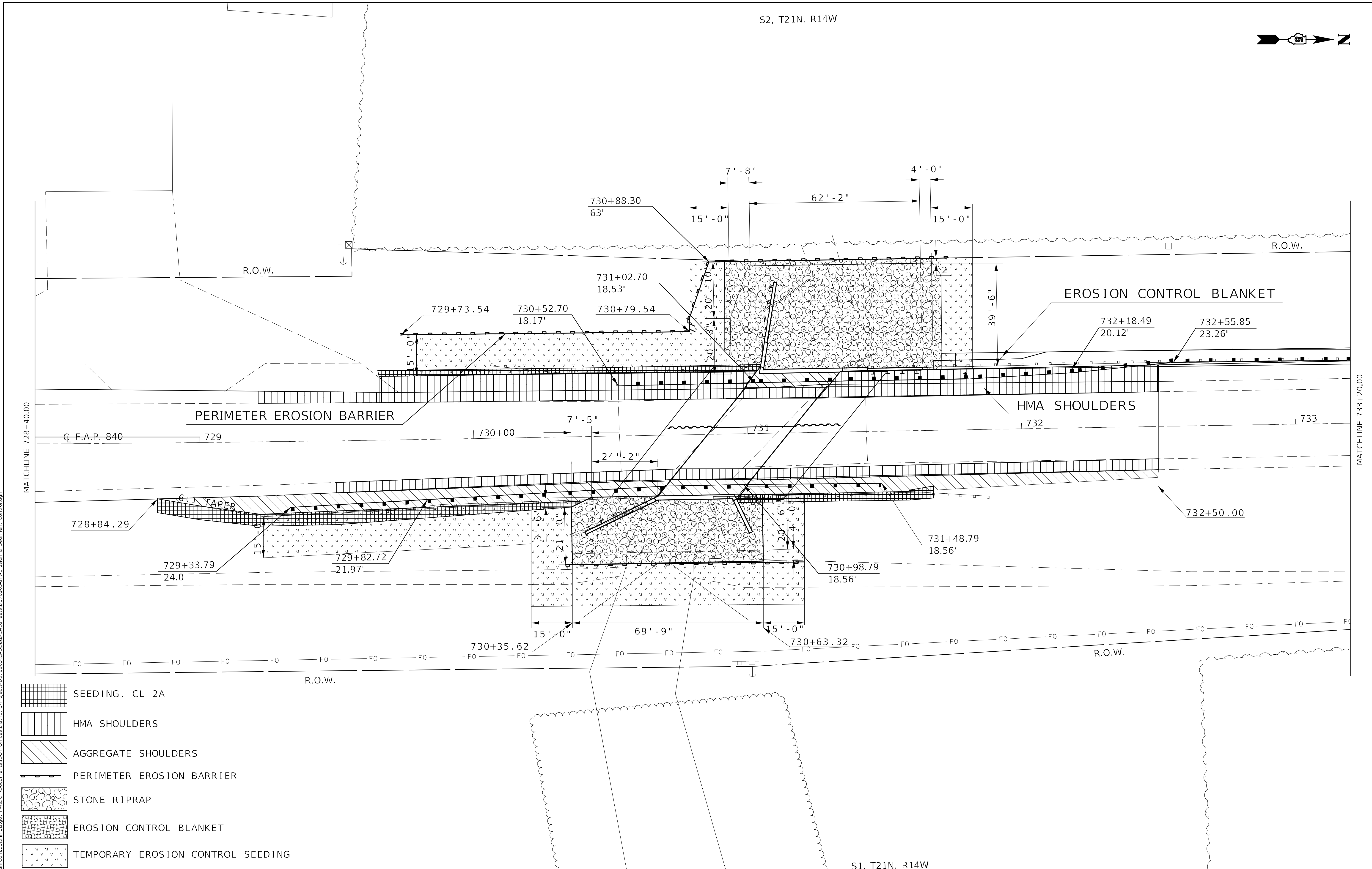
PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING DETAIL

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	20
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		



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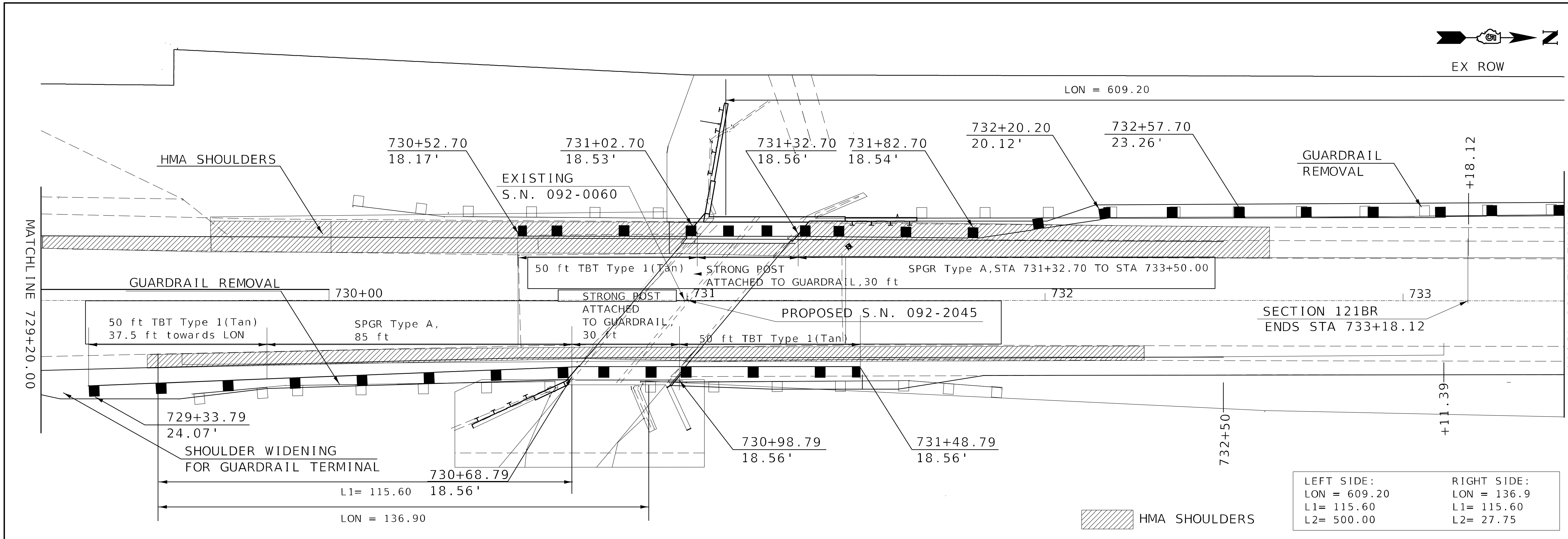
PLOT DATE = 8/11/2021	DATE -	REVISED -	

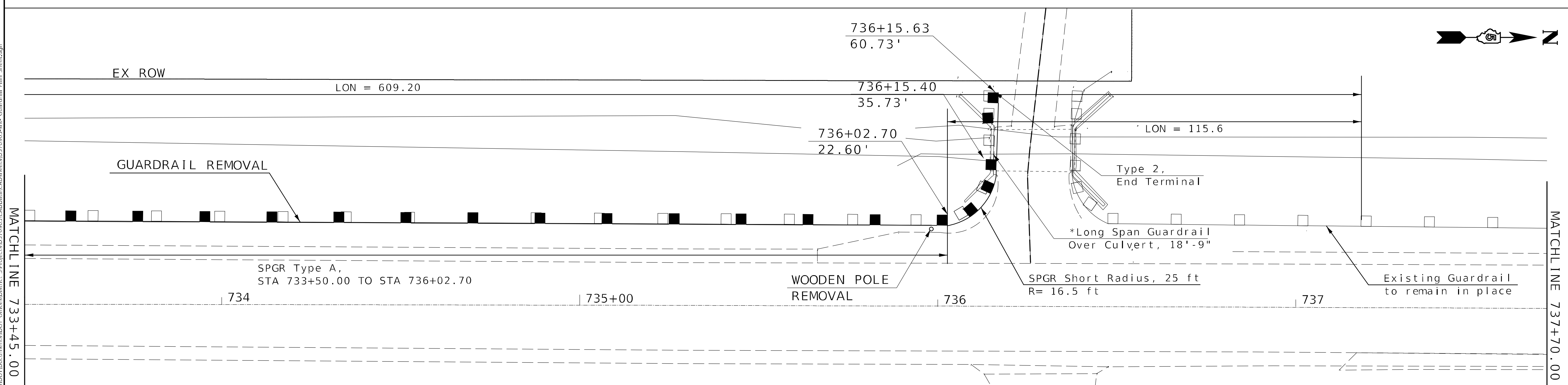
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION & SEDIMENT CONTROL SHEET

SCALE: 1:20 | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	21
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		





*NOTE: The Contractor shall verify all dimensions and modifications in the field prior to ordering materials.

USER NAME = monjardinrt	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
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PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL PLAN SHEET
S.N.092–2045

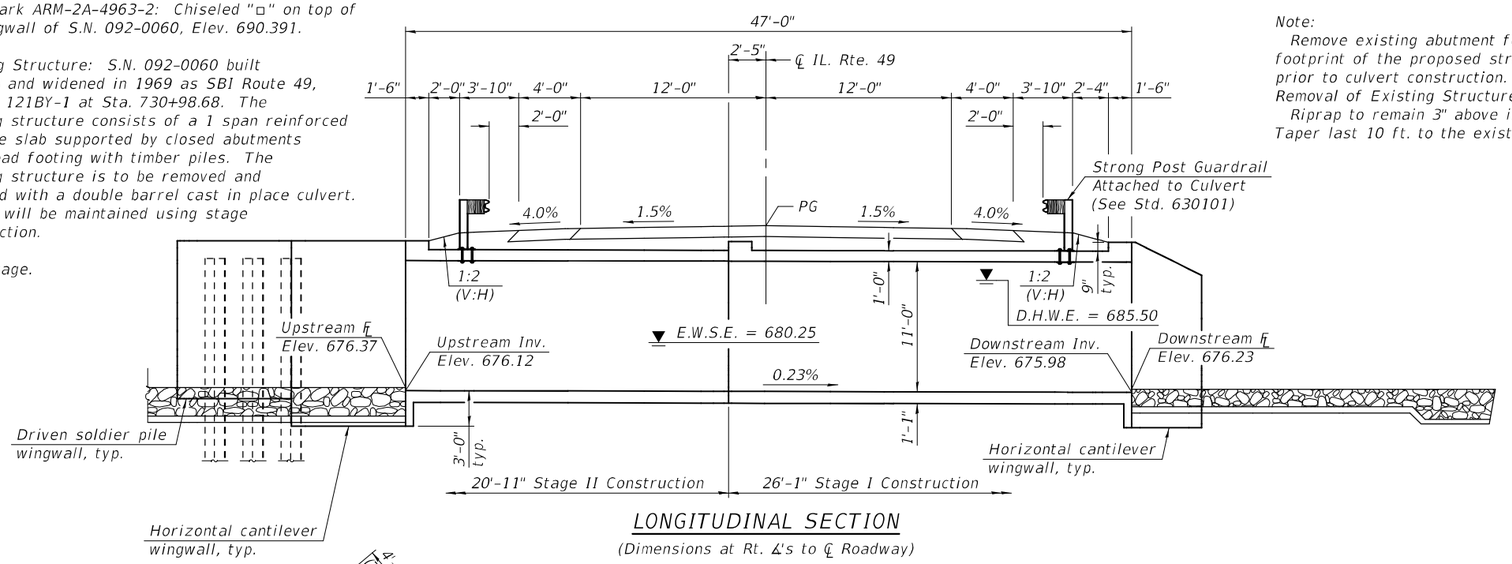
SCALE: 1:20 | SHEET 1 OF 1 SHEETS | STA. 729+33.79 TO STA. 736+15.63

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	22
		CONTRACT NO. 70905		
		ILLINOIS FED. AID PROJECT		

Benchmark ARM-2A-4963-2: Chiseled "□" on top of SE wingwall of S.N. 092-0060, Elev. 690.391.

Existing Structure: S.N. 092-0060 built in 1928 and widened in 1969 as SBI Route 49, Section 121BY-1 at Sta. 730+98.68. The existing structure consists of a 1 span reinforced concrete slab supported by closed abutments on spread footing with timber piles. The existing structure is to be removed and replaced with a double barrel cast in place culvert. Traffic will be maintained using stage construction.

No Salvage.



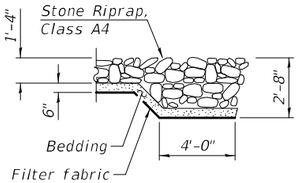
LONGITUDINAL SECTION

(Dimensions at Rt. ∠'s to ℄ Roadway)

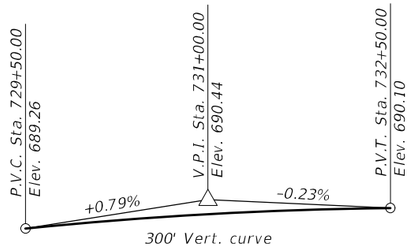
Note:
Remove existing abutment footings within the footprint of the proposed structure and wingwalls prior to culvert construction. Cost included with Removal of Existing Structures.
Riprap to remain 3" above invert elevation. Taper last 10 ft. to the existing streambed elevation.

INDEX OF SHEETS

1	General Plan and Elevation
2	General Data
3	Stage Construction Details
4	Temporary Sheet Piling
5	Temporary Concrete Barrier for Stage Construction
6	Culvert Details - Top Slab
7	Culvert Details - Bottom Slab
8-11	Culvert Details
12-13	Northwest Soldier Pile Wingwall
14-15	Southwest Soldier Pile Wingwall
16-17	Southeast Soldier Pile Wingwall
18	HP Pile Details
19	Bar Splicer Assembly and Mechanical Splicer Details
20	Soil Boring Logs



SECTION A-A



PROFILE GRADE

(Along ℄ IL. Rte. 49)

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

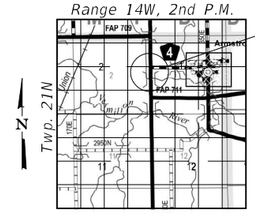
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

LOADING HL-93

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



LOCATION SKETCH

PLAN

ENGINEER'S STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

EXPIRES 11-30-2022

GENERAL PLAN & ELEVATION
IL. RTE. 49 OVER DRAINAGE DITCH
F.A.P. RTE. 840 - SEC. (121)BR
VERMILION COUNTY
STATION 731+00.25
STRUCTURE NO. 092-2045

DESIGNED -	HAMEED S. SALIH
CHECKED -	RAY AHANCHI
DRAWN -	DENNIS A. POP
CHECKED -	G.R.A. / H.S.S.

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - 9-10-2021
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	23
		CONTRACT NO. 70905		
		ILLINOIS FED. AID PROJECT		

MODEL: 092045-70905-001
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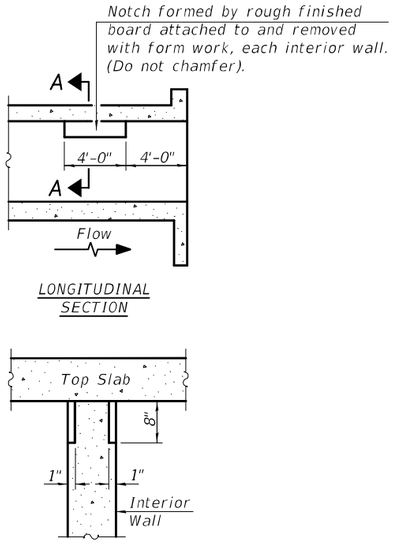

LONGITUDINAL SECTION

SECTION A-A

PHOEBE NESTING SITE DETAILS

(Downstream End Only)

GENERAL NOTES

Contractor has the option to use Precoring in lieu of the complete Removal of Existing Structures at areas where the existing footing may interfere with the proposed piles for the wingwall construction. This work shall consist of providing all labor, materials, and equipment necessary to precore through the new and/or existing embankment materials or other obstructions as required to install the piles. The approximate location(s) required for precoring and the material to be cored through is shown by the limits of the existing structure on the Contract documents. It is the Contractor's responsibility to furnish and utilize appropriate coring equipment for the material anticipated by the Contract documents.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

Precast alternate not allowed.

Excavation behind the abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.

The removal of existing approach slabs are included in the cost of Removal of Existing Structures.

WATERWAY INFORMATION

Drainage Area = 1.36 Sq. Mi. Low Grade Elev. 688.05 @ Sta. 727+89.80

Flood	Freq. Yr.	Q C.F.S.	Opening Ft² Exist.	Opening Ft² Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	540	84	144	684.3	0.8	0.1	685.1	684.4
Design	50	910	103	168	685.5	1.5	0.5	687.0	686.0
Base	100	1080	111	176	685.9	2.1	0.6	688.0	686.5
Overtopping	100	1080	111	-	685.9	2.1	-	688.0	-
Scour	200	1261	119	186	686.4	1.9	0.8	688.3	687.2
Max. Calc.	500	1500	123	192	686.7	1.7	1.1	688.4	687.8

10-year velocity through existing bridge = 6.43 ft/s
10-year velocity through proposed culvert = 3.75 ft/s

TOTAL BILL OF MATERIAL

	ITEM	UNIT	TOTAL
	Stone Riprap, Class A4	Sq. Yd.	521
	Filter Fabric	Sq. Yd.	521
	Removal of Existing Structures	Each	1
	Concrete Structures	Cu. Yd.	25.1
	Reinforcement Bars	Pound	58,980
	Bar Splicers	Each	184
	Furnishing Soldier Piles (HP Section)	Foot	306
	Driving Soldier Piles	Foot	306
	Name Plates	Each	1
*	Concrete Box Culverts	Cu. Yd.	120.7
	Temporary Sheet Piling	Sq. Ft.	970
	Geocomposite Wall Drain	Sq. Yd.	202
	Membrane Waterproofing System for Buried Structures	Sq. Yd.	175
	Strong Post Guardrail Attached to Culvert	Foot	60
	Stud Shear Connectors	Each	118
	Untreated Timber Lagging	Sq. Ft.	442
*	Concrete Box Culverts (Rheology-Controlling Admixture)	Cu. Yd.	96.6
	Trial Batch	Each	4

* Concrete Box Culverts shall be for stage I construction and Concrete Box Culverts (Rheology-Controlling Admixture) shall be for stage II. See Special Provisions for "Cast-in-Place Box Culvert Concrete (Class SI - Short Cure Period (SCP))".

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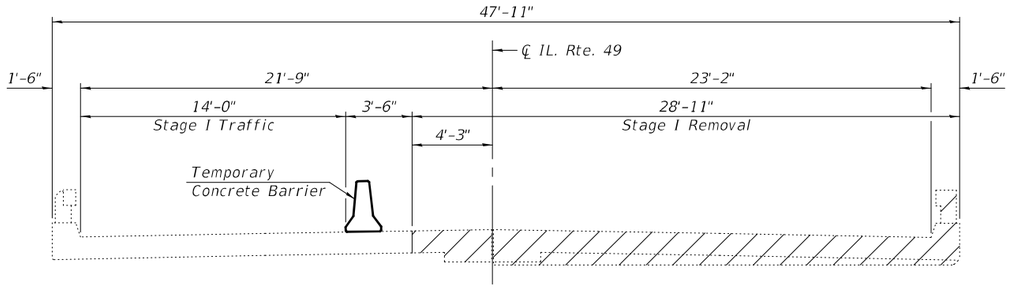
DESIGNED -	HAMEED S. SALIH	EXAMINED	DATE - SEPTEMBER 10, 2021
CHECKED -	RAY AHANCHI		
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	G.R.A. / H.S.S.	ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

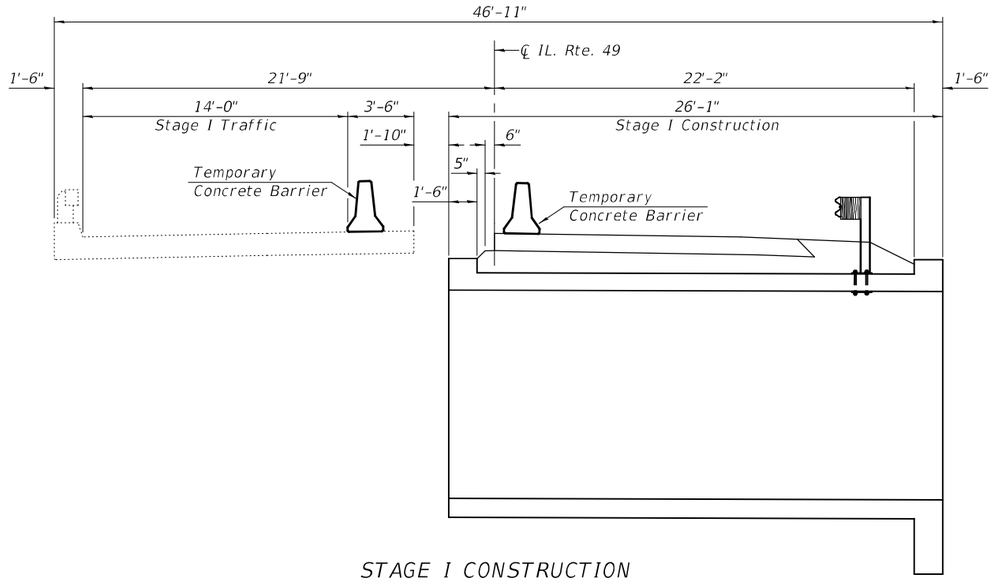
GENERAL DATA
STRUCTURE NO. 092 - 2045
SHEET 2 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	24
		CONTRACT NO. 70905		
		ILLINOIS	FED. AID PROJECT	



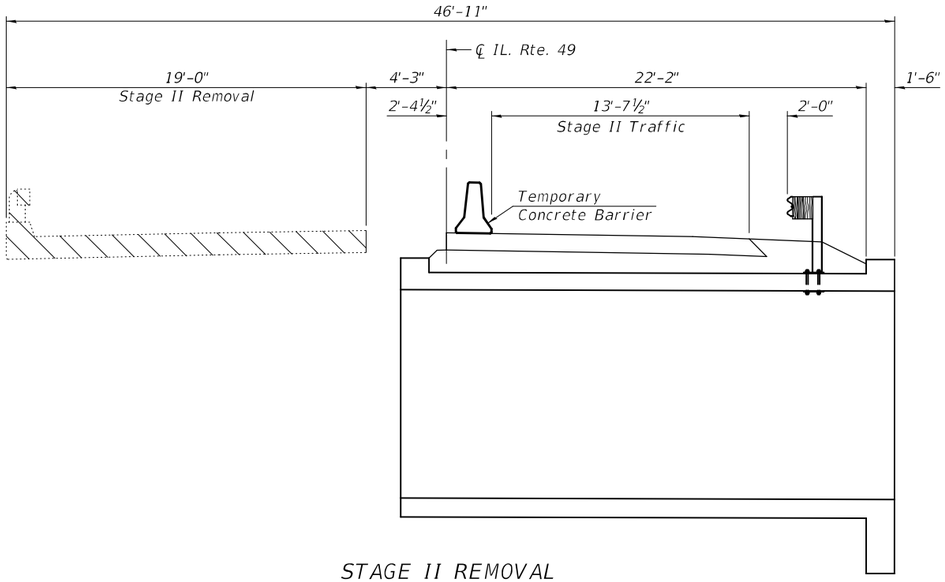
STAGE I REMOVAL

(Dimensions at Rt. ∠'s to ℄ Roadway)



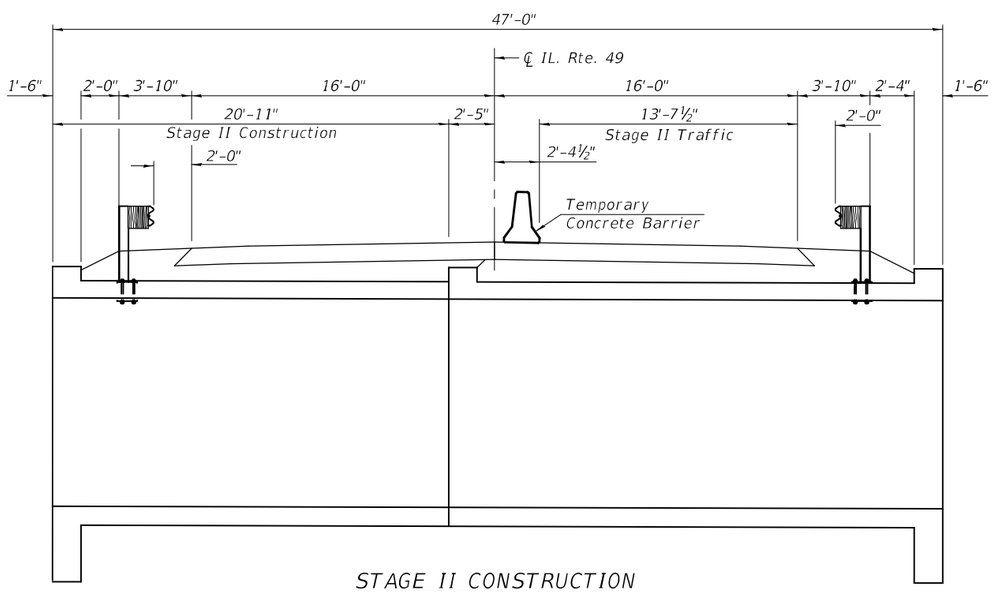
STAGE I CONSTRUCTION

(Dimensions at Rt. ∠'s to ℄ Roadway)



STAGE II REMOVAL

(Dimensions at Rt. ∠'s to ℄ Roadway)



STAGE II CONSTRUCTION

(Dimensions at Rt. ∠'s to ℄ Roadway)

Notes:
All staging cross sections are looking North.
Hatched area indicates Removal of Existing Structures.
Horizontal dimensions in staging cross sections are at right angles to the ℄ of Il. Rte. 49.
For quantity of Temporary Concrete Barrier, see roadway plans.

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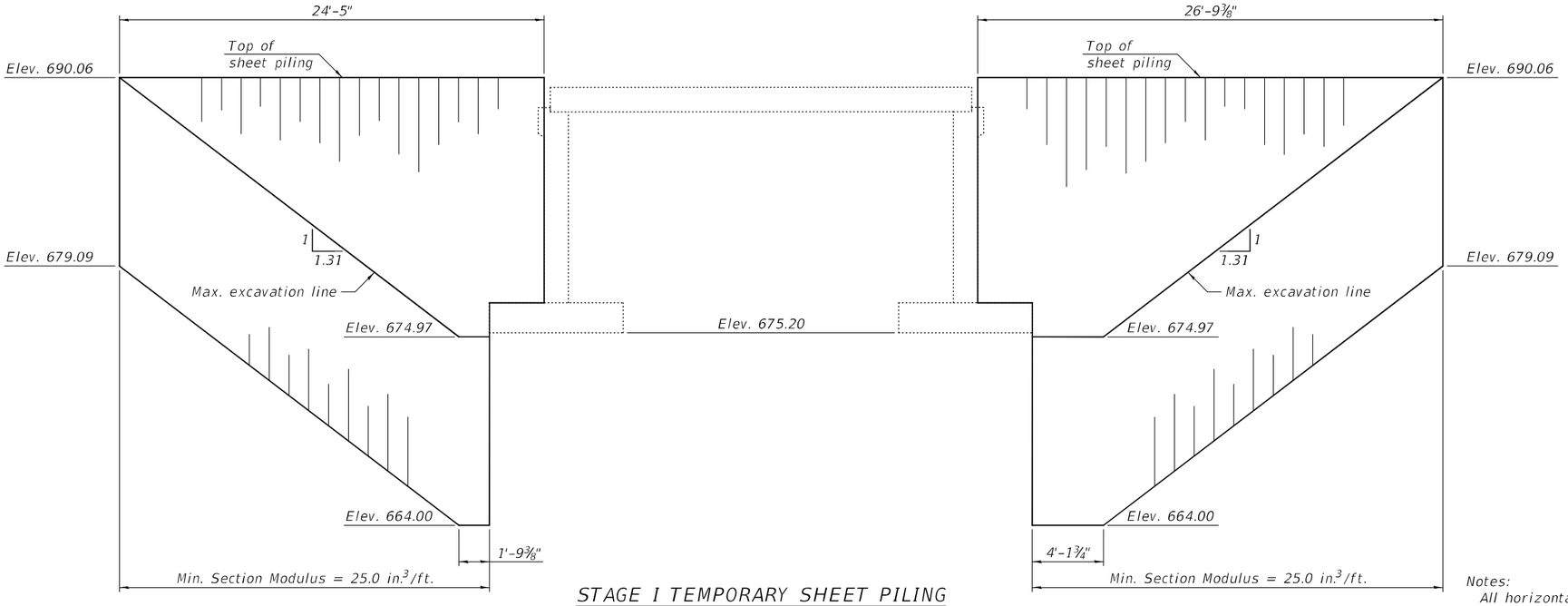
DESIGNED -	HAMEED S. SALIH	
CHECKED -	RAY AHANCHI	
DRAWN -	DENNIS A. POP	
CHECKED -	G.R.A. / H.S.S.	

EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
DATE - SEPTEMBER 10, 2021
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 092 - 2045
SHEET 3 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	25
		CONTRACT NO. 70905		
		ILLINOIS	FED. AID PROJECT	

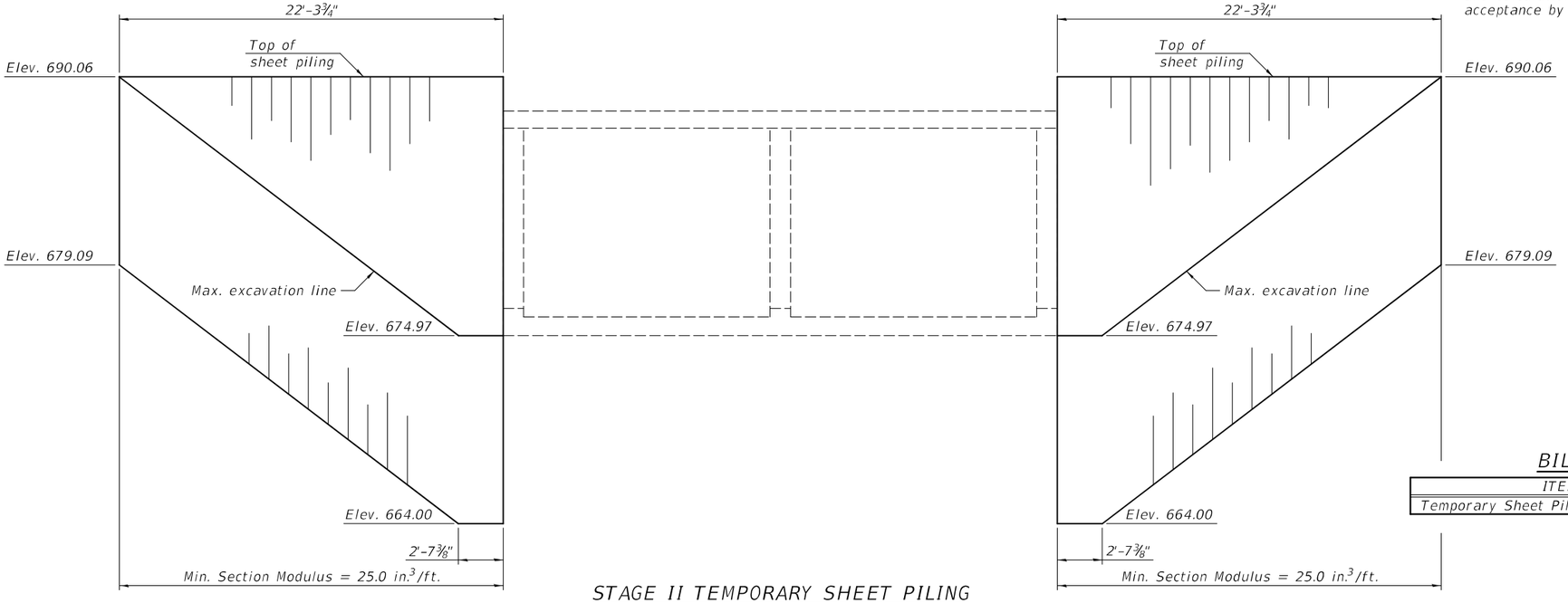


STAGE I TEMPORARY SHEET PILING

(Looking West)

Notes:

All horizontal dimensions shown are along the skew. If the Contractor chooses to alter the temporary cantilevered 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.



STAGE II TEMPORARY SHEET PILING

(Looking West)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Temporary Sheet Piling	Sq. Ft.	970

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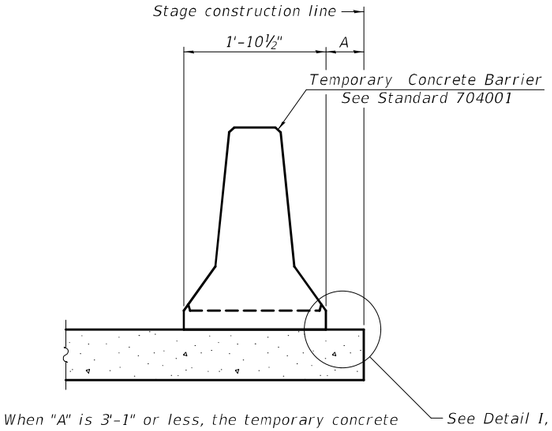
DESIGNED - HAMEED S. SALIH	EXAMINED	DATE - SEPTEMBER 10, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - RAY AHANCHI		REVISED -	
DRAWN - DENNIS A. POP	PASSED	REVISED -	
CHECKED - G.R.A. / H.S.S.	ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES		

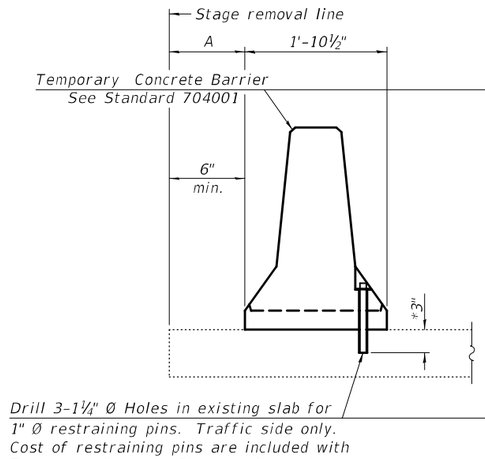
TEMPORARY SHEET PILING
STRUCTURE NO. 092 - 2045
SHEET 4 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	26
		CONTRACT NO. 70905		
		ILLINOIS FED. AID PROJECT		



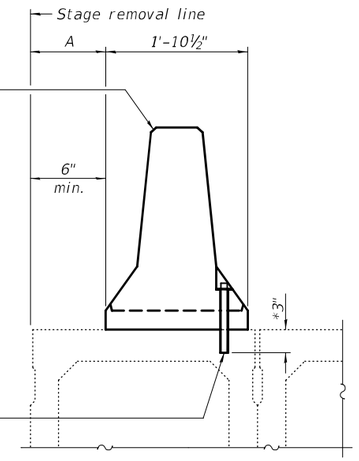
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

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".

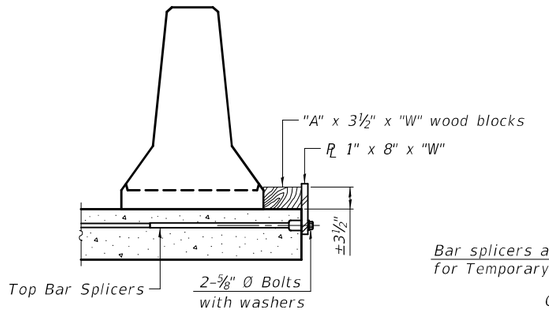
EXISTING SLAB



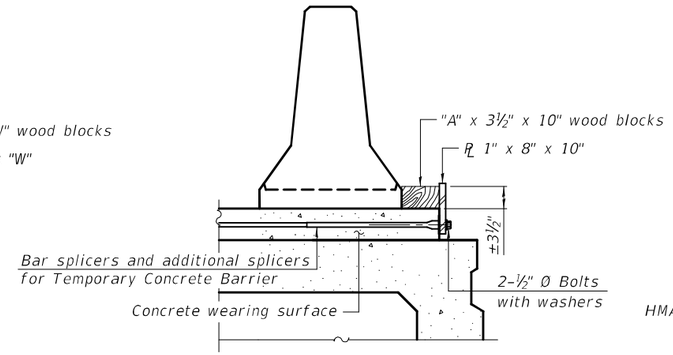
* When hot-mix asphalt wearng surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

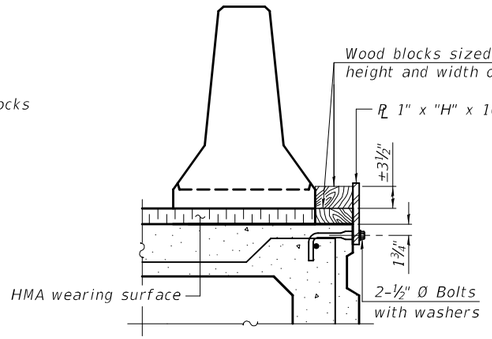
SECTIONS THRU SLAB OR DECK BEAM



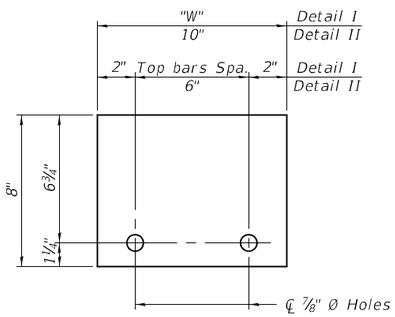
DETAIL I



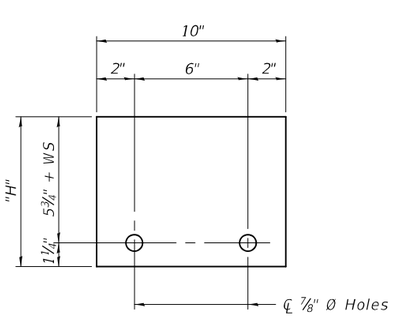
DETAIL II



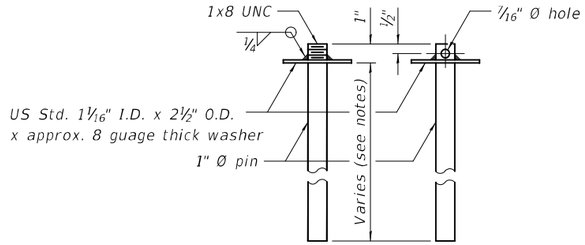
DETAIL III



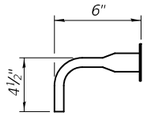
STEEL RETAINER ℄ 1" x 8" x "W"
(Detail I and II)



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

DESIGNED - HAMEED S. SALIH	EXAMINED	DATE - SEPTEMBER 10, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 092 - 2045**	F.A.P. RTE. 840 / SECTION (121)BR / COUNTY VERMILION / TOTAL SHEETS 63 / SHEET NO. 27
CHECKED - RAY AHANCHI	PASSED	REVISED -		SHEET 5 OF 20 SHEETS	CONTRACT NO. 70905
DRAWN - DENNIS A. POP	ENGINEER OF BRIDGE DESIGN	REVISED -			ILLINOIS FED. AID PROJECT
CHECKED - G.R.A. / H.S.S.	ENGINEER OF BRIDGES AND STRUCTURES				

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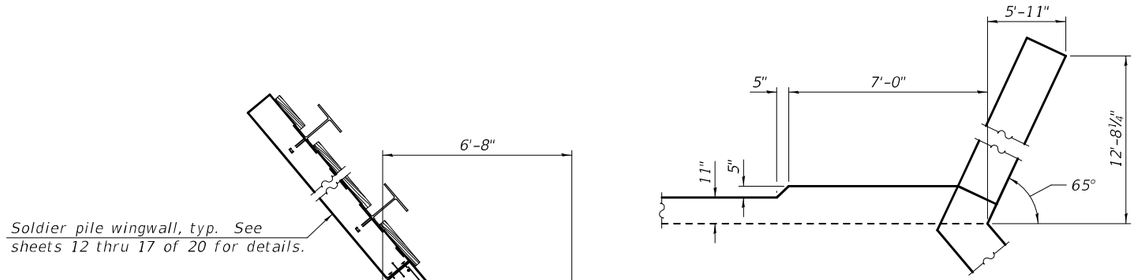
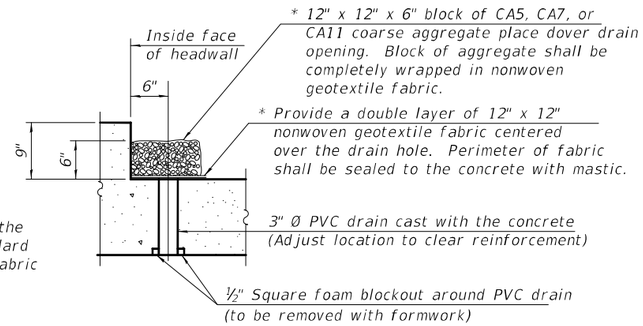


NORTHEAST WINGWALL

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.02 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard



DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

SOUTHEAST WINGWALL

PLAN

DESIGNED - HAMEED S. SALIH	EXAMINED	DATE - SEPTEMBER 10, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CULVERT DETAILS - TOP SLAB STRUCTURE NO. 092 - 2045	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RAY AHANCHI	PASSED	REVISED -		SHEET 6 OF 20 SHEETS	840	(121)BR	VERMILION	63	28
DRAWN - DENNIS A. POP	ENGINEER OF BRIDGE DESIGN	REVISED -					CONTRACT NO. 70905		
CHECKED - G.R.A. / H.S.S.	ENGINEER OF BRIDGES AND STRUCTURES						ILLINOIS FED. AID PROJECT		

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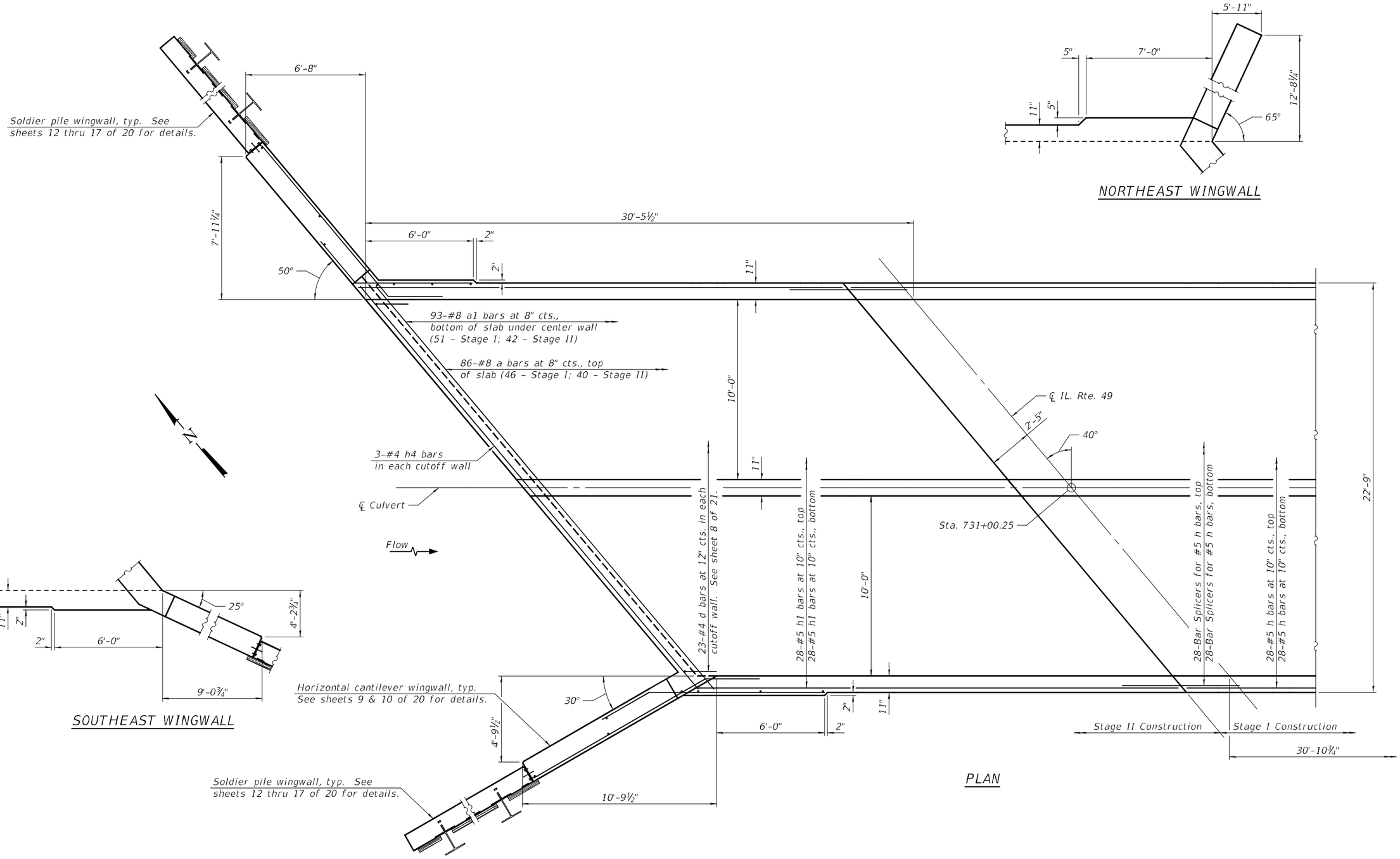

DESIGNED - HAMEED S. SALIH	EXAMINED	DATE - SEPTEMBER 10, 2021	**STATE OF ILLINOIS**	**CULVERT DETAILS - BOTTOM SLAB**	F.A.P. RTE. 840
CHECKED - RAY AHANCHI			**DEPARTMENT OF TRANSPORTATION**	**STRUCTURE NO. 092 - 2045**	SECTION (121)BR
DRAWN - DENNIS A. POP	PASSED	REVISED -		SHEET 7 OF 20 SHEETS	COUNTY VERMILION
CHECKED - G.R.A. / H.S.S.	ENGINEER OF BRIDGE DESIGN	REVISED -			TOTAL SHEETS 63
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					CONTRACT NO. 70905
					ILLINOIS FED. AID PROJECT

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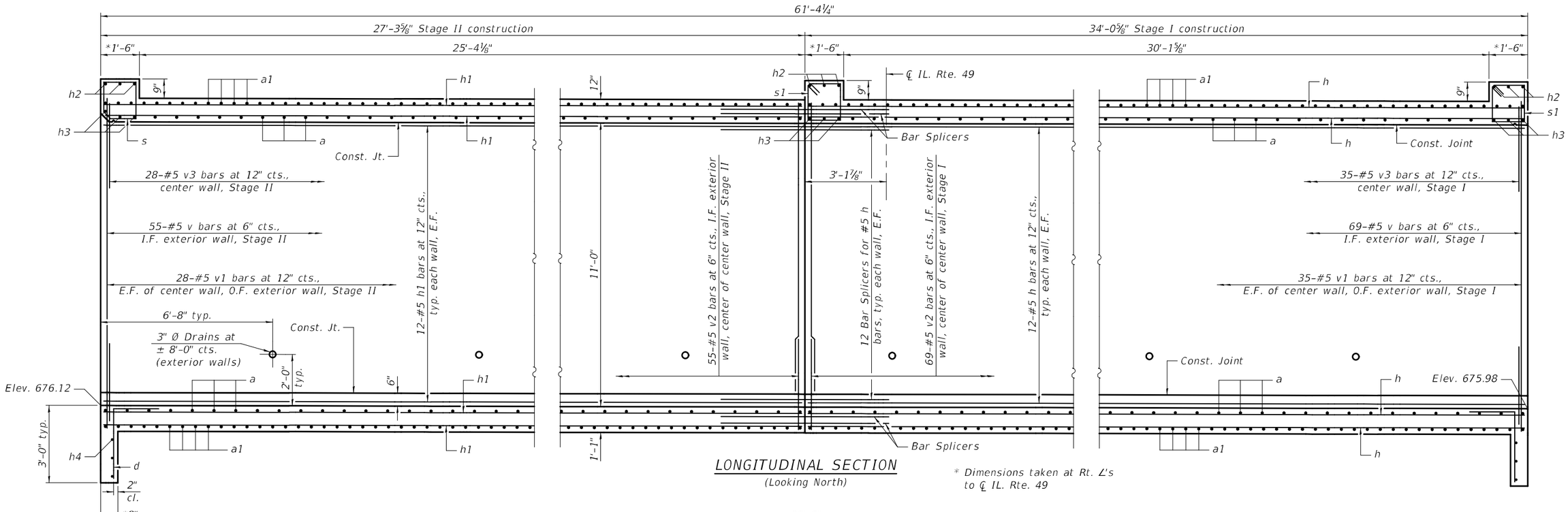
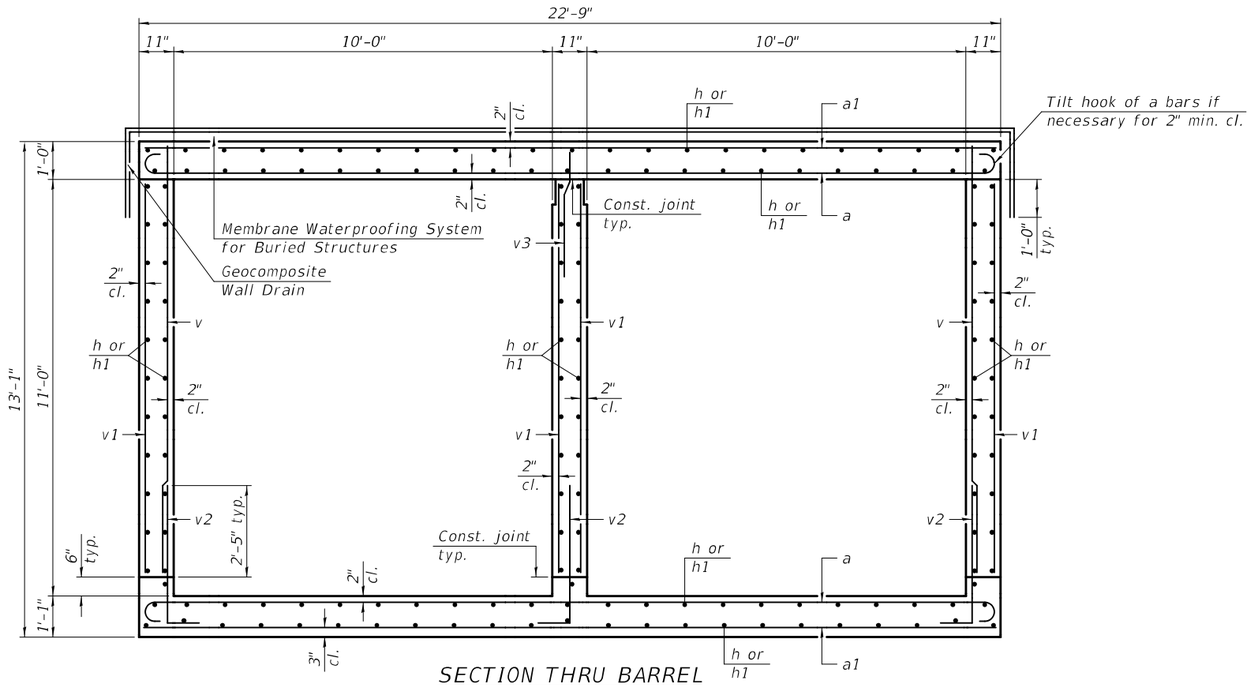


LONGITUDINAL SECTION

(Looking North)

* Dimensions taken at Rt. ℄'s to ℄ IL. Rte. 49



SECTION THRU BARREL

(Horizontal dimensions at Rt. ℄'s unless otherwise noted)

DESIGNED - HAMEED S. SALIH	EXAMINED		DATE - SEPTEMBER 10, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**CULVERT DETAILS STRUCTURE NO. 092 - 2045**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RAY AHANCHI	PASSED	ENGINEER OF BRIDGE DESIGN	REVISED -			840	(121)BR	VERMILION	63	30
DRAWN - DENNIS A. POP		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET 8 OF 20 SHEETS			CONTRACT NO. 70905		
CHECKED - G.R.A. / H.S.S.								ILLINOIS FED. AID PROJECT		

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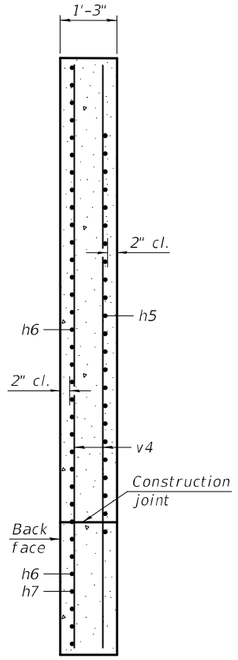
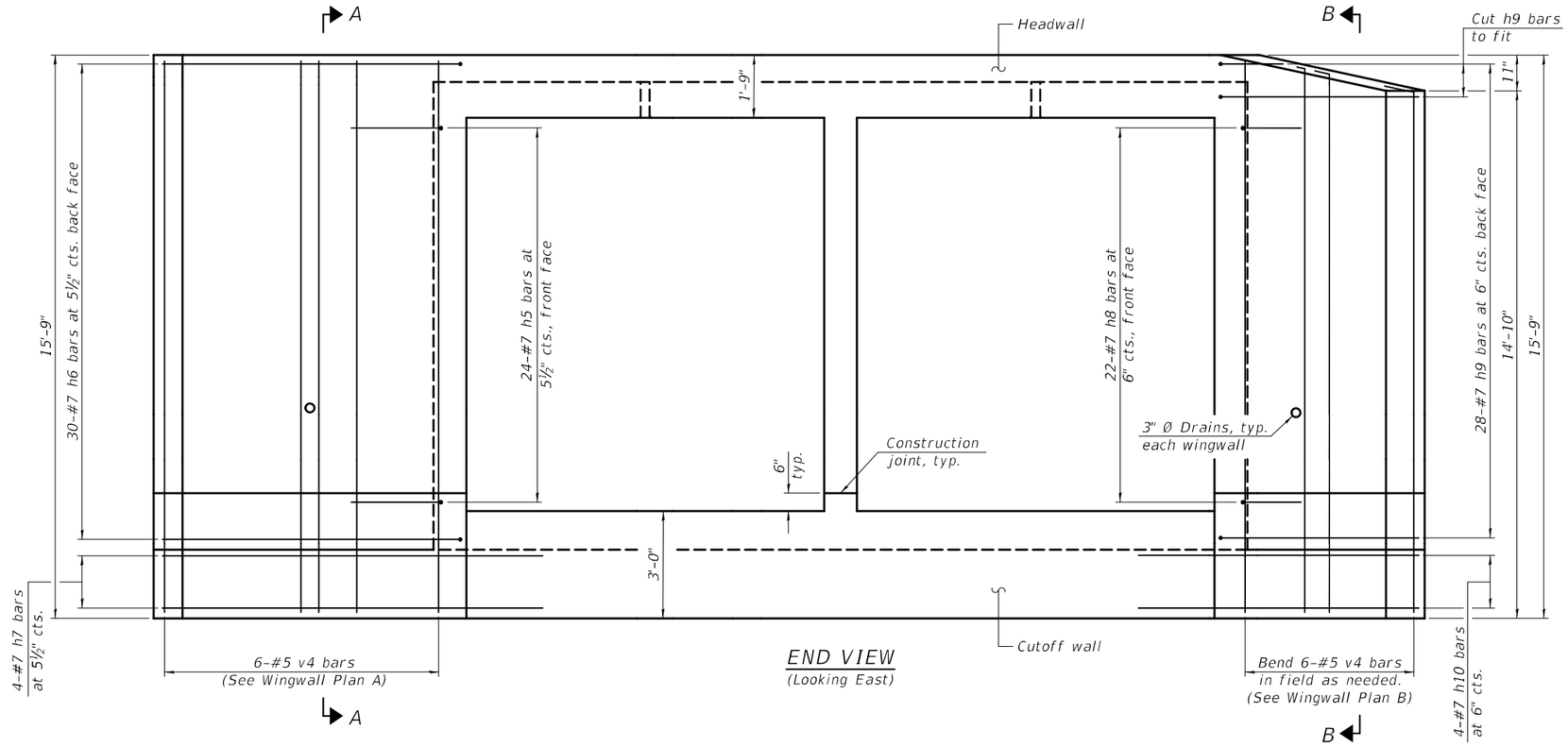
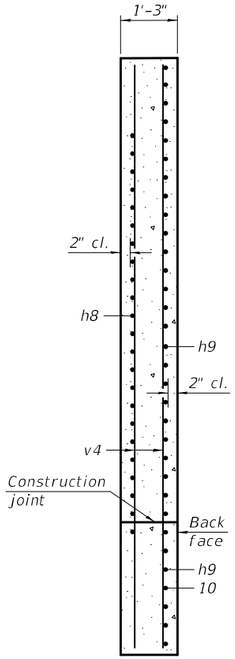


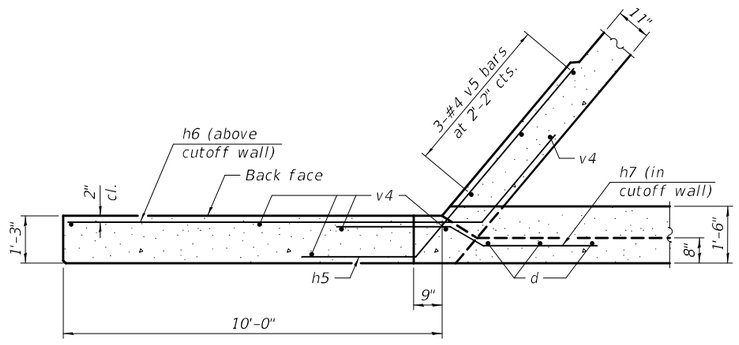
SECTION A-A



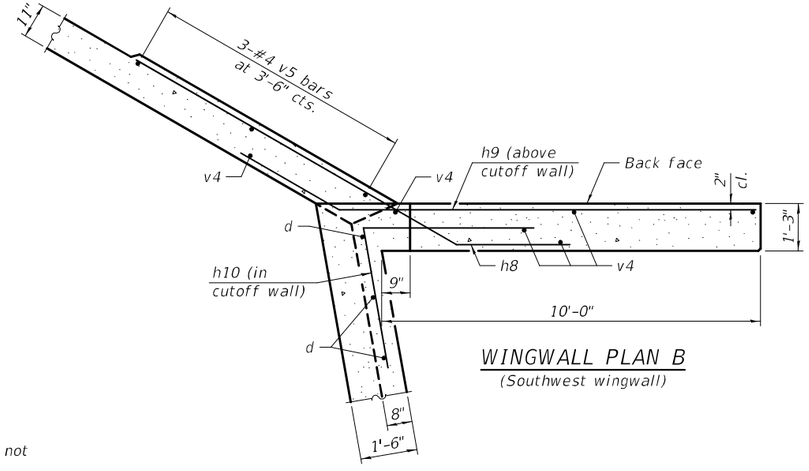
END VIEW
(Looking East)



SECTION B-B



WINGWALL PLAN A
(Northwest wingwall)



WINGWALL PLAN B
(Southwest wingwall)

Notes:
A distance of half the length of the wingwall, but not less than six feet of the barrel, shall be poured monolithically with the wingwalls.

MODEL: 0922045-70905-009
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DESIGNED - HAMEED S. SALIH	EXAMINED		DATE - SEPTEMBER 10, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**CULVERT DETAILS STRUCTURE NO. 092 - 2045**
CHECKED - RAY AHANCHI		ENGINEER OF BRIDGE DESIGN			SHEET 9 OF 20 SHEETS
DRAWN - DENNIS A. POP	PASSED		REVISED -		
CHECKED - G.R.A. / H.S.S.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	31
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		

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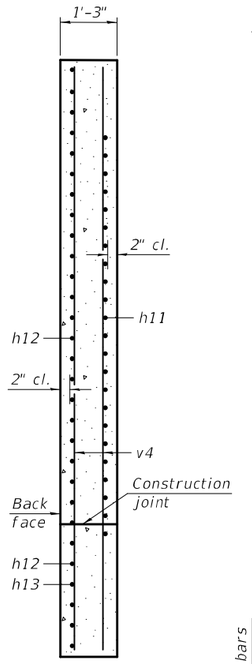
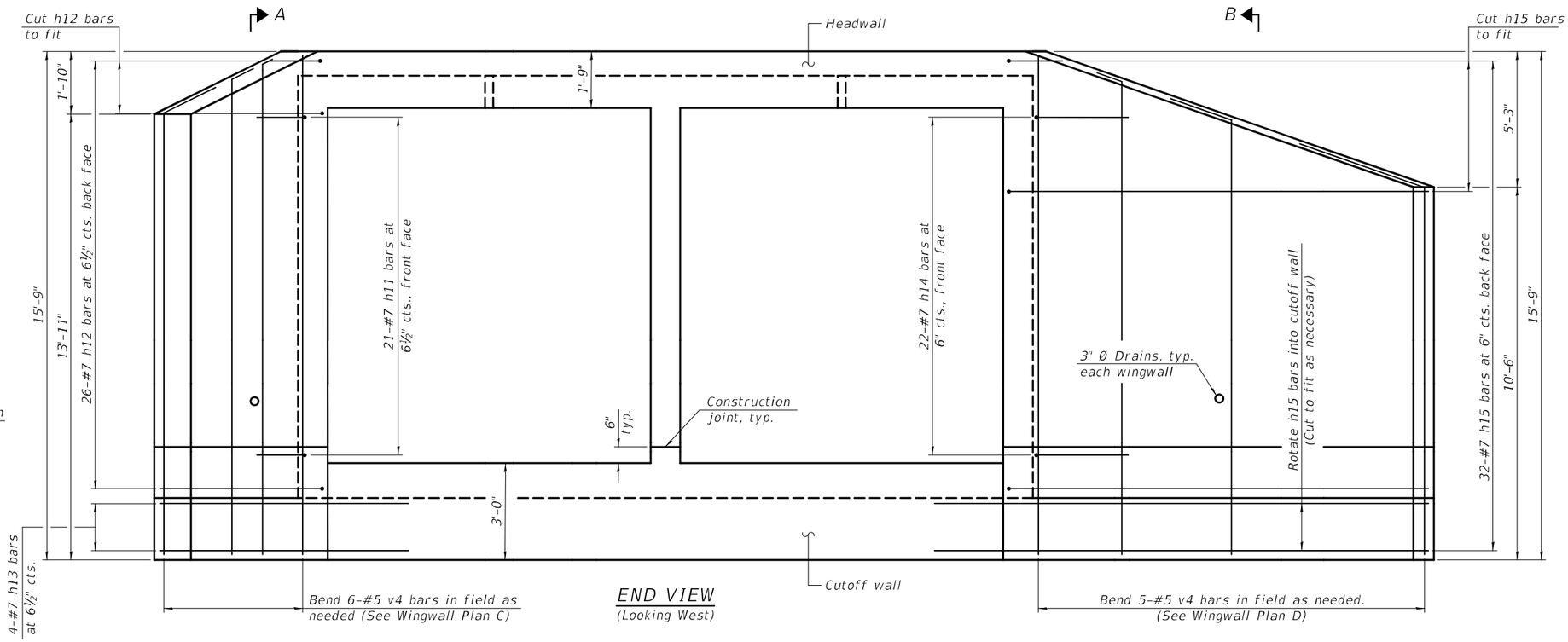
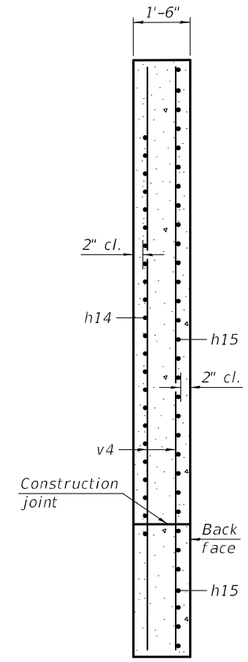


SECTION A-A



END VIEW
(Looking West)



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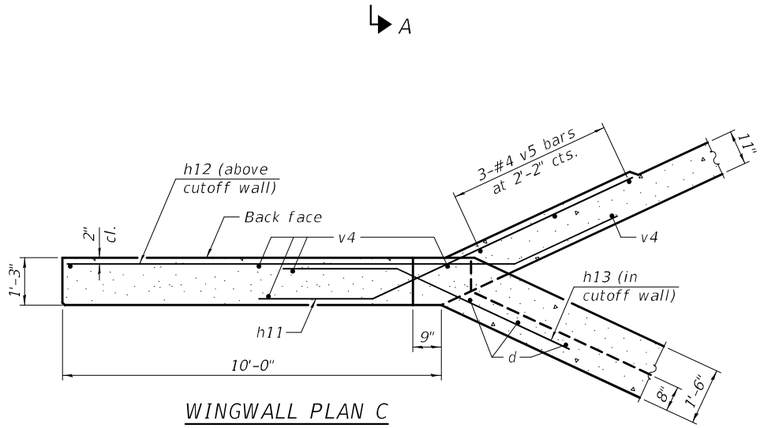
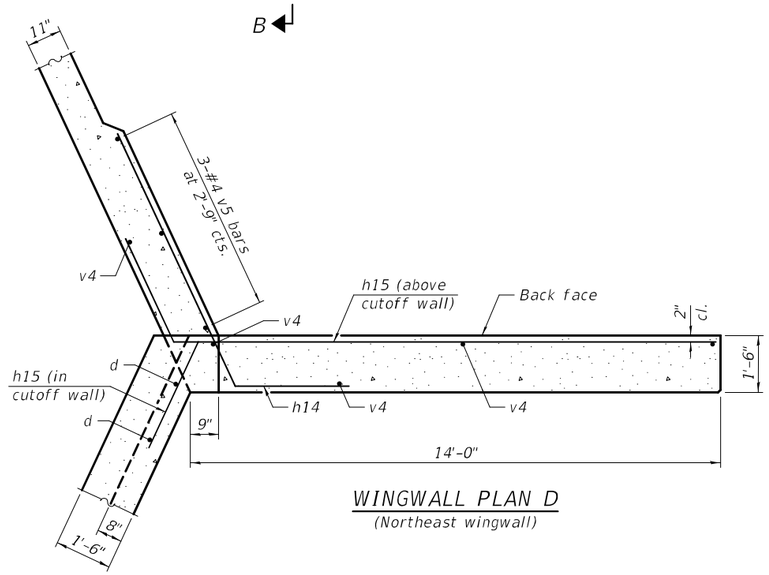


WINGWALL PLAN C
(Southeast wingwall)



WINGWALL PLAN D
(Northeast wingwall)

Notes:
A distance of half the length of the wingwall, but not less than six feet of the barrel, shall be poured monolithically with the wingwalls.

DESIGNED - HAMEED S. SALIH	EXAMINED		DATE - SEPTEMBER 10, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CULVERT DETAILS STRUCTURE NO. 092 - 2045	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RAY AHANCHI	PASSED	ENGINEER OF BRIDGE DESIGN	REVISED -		SHEET 10 OF 20 SHEETS	840	(121)BR	VERMILION	63	32
DRAWN - DENNIS A. POP		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					CONTRACT NO. 70905		
CHECKED - G.R.A. / H.S.S.								ILLINOIS FED. AID PROJECT		

MODEL: 0922045-70905-010
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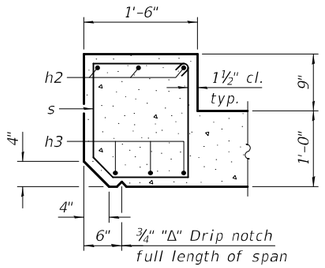
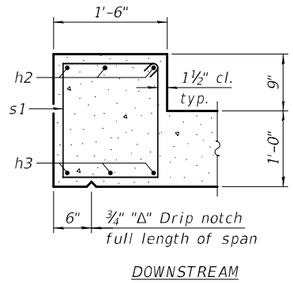
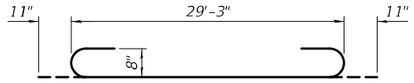


UPSTREAM

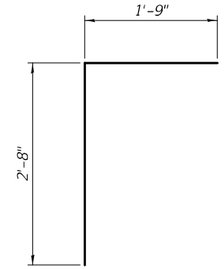


DOWNSTREAM

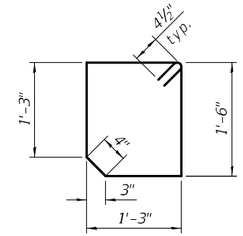
SECTION THRU HEADWALL



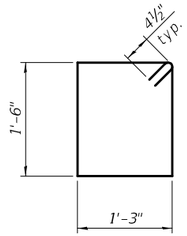
BAR a



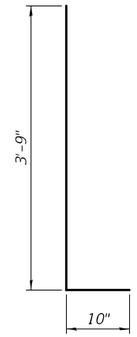
BAR d



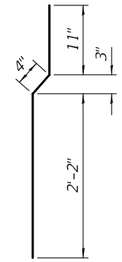
BAR s



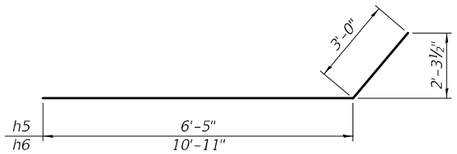
BAR s1



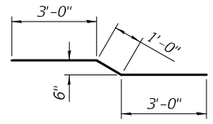
BAR v2



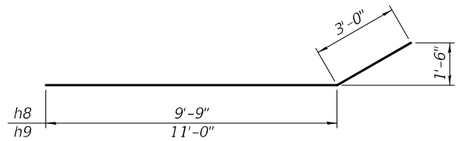
BAR v3



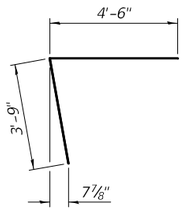
BAR h5 & h6



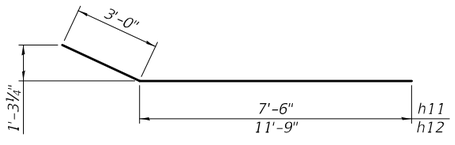
BAR h7



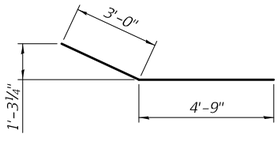
BAR h8 & h9



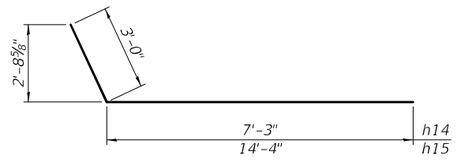
BAR h10



BAR h11 & h12



BAR h13



BAR h14 & h15

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	172	#8	31'-1"	
a1	186	#8	29'-3"	
d	46	#4	4'-5"	
h	184	#5	33'-8"	
h1	184	#5	26'-11"	
h2	9	#7	29'-3"	
h3	9	#6	29'-3"	
h4	6	#4	29'-4"	
h5	24	#7	9'-5"	
h6	30	#7	13'-11"	
h7	4	#7	7'-0"	
h8	22	#7	12'-9"	
h9	28	#7	14'-0"	
h10	4	#7	8'-3"	
h11	21	#7	10'-6"	
h12	26	#7	14'-9"	
h13	4	#7	7'-9"	
h14	22	#7	10'-3"	
h15	32	#7	17'-4"	
s	29	#4	6'-1"	
s1	58	#4	6'-3"	
v	248	#5	11'-2"	
v1	252	#5	10'-9"	
v2	372	#5	4'-7"	
v3	63	#5	3'-5"	
v4	23	#5	15'-5"	
v5	12	#4	11'-2"	

* Concrete Box Culverts	Cu. Yd.	120.7
Reinforcement Bars	Pound	55,860
Geocomposite Wall Drain	Sq. Yd.	175
* Concrete Box Culverts (Rheology-Controlling Admixture)	Cu. Yd.	96.6

* Concrete Box Culverts shall be for stage I construction and Concrete Box Culverts (Rheology-Controlling Admixture) shall be for stage II. See Special Provisions for "Cast-in-Place Box Culvert Concrete (Class SI - Short Cure Period (SCP))".

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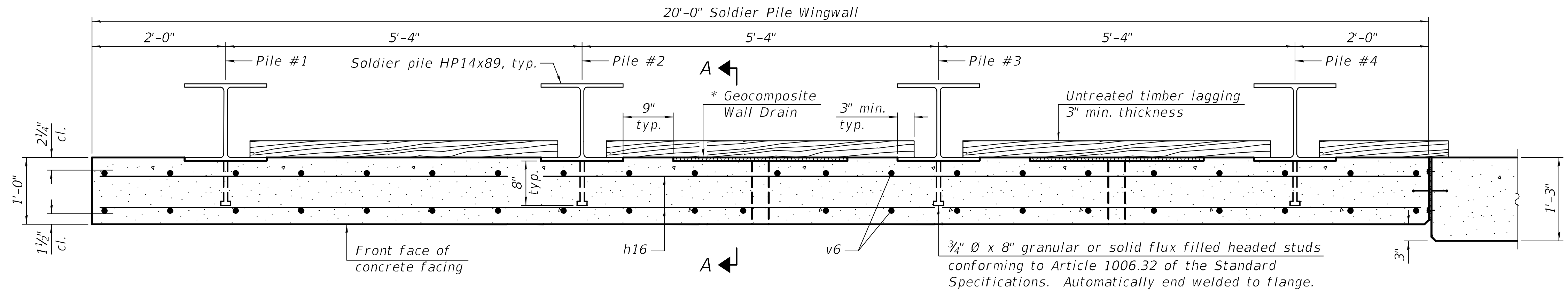
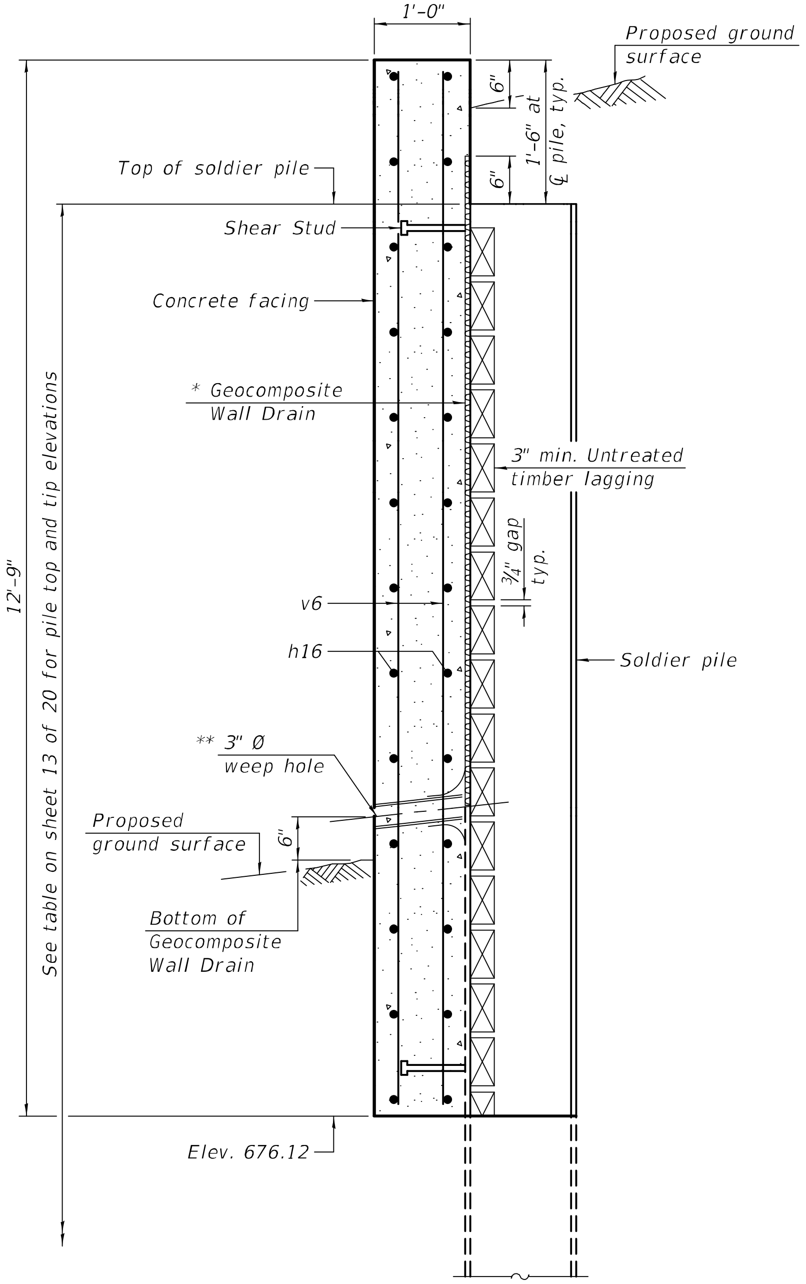
DESIGNED - HAMEED S. SALIH	EXAMINED	DATE - SEPTEMBER 10, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - RAY AHANCHI			
DRAWN - DENNIS A. POP	PASSED	REVISED -	
CHECKED - G.R.A. / H.S.S.	ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

CULVERT DETAILS
STRUCTURE NO. 092 - 2045
SHEET 11 OF 20 SHEETS

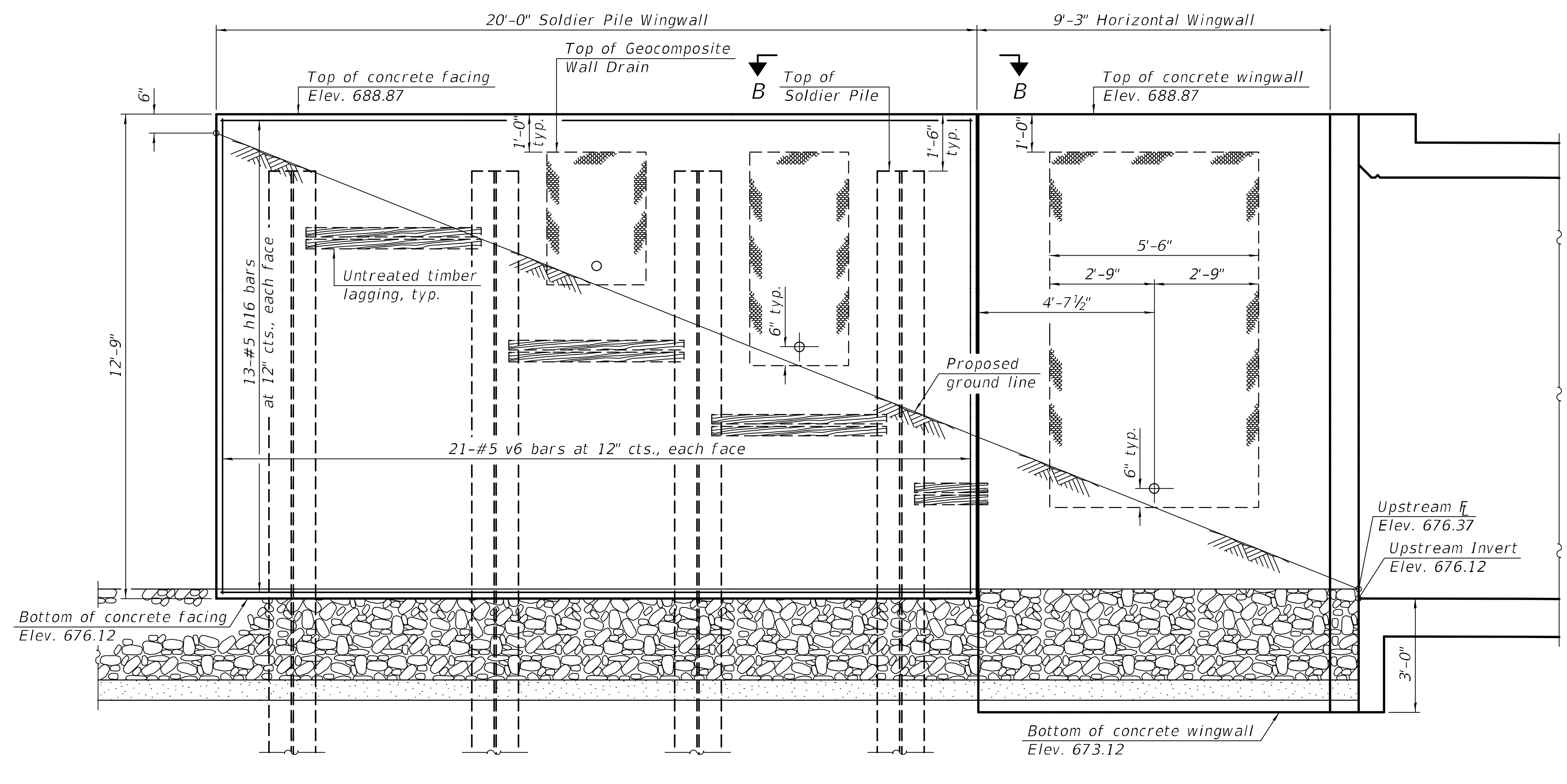
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	33
		CONTRACT NO. 70905		
		ILLINOIS	FED. AID PROJECT	



PLAN - NORTHWEST SOLDIER PILE WALL



SECTION A-A



ELEVATION - NORTHWEST SOLDIER PILE WALL
(Showing F.F.)

DESIGNED - HAMEED S. SALIH	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - SEPTEMBER 10, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NORTHWEST SOLDIER PILE WINGWALL STRUCTURE NO. 092 - 2045
CHECKED - RAY AHANCHI					
DRAWN - DENNIS A. POP	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		
CHECKED - G.R.A. / H.S.S.			REVISED -		SHEET 12 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	34
		CONTRACT NO. 70905		
		ILLINOIS FED. AID PROJECT		

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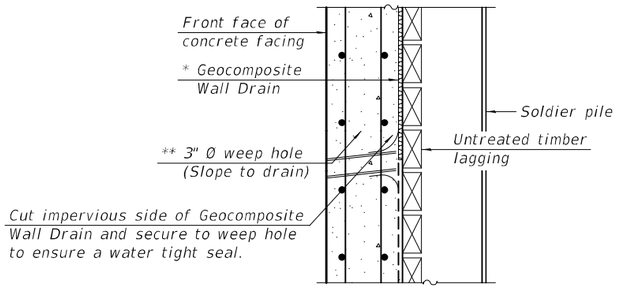
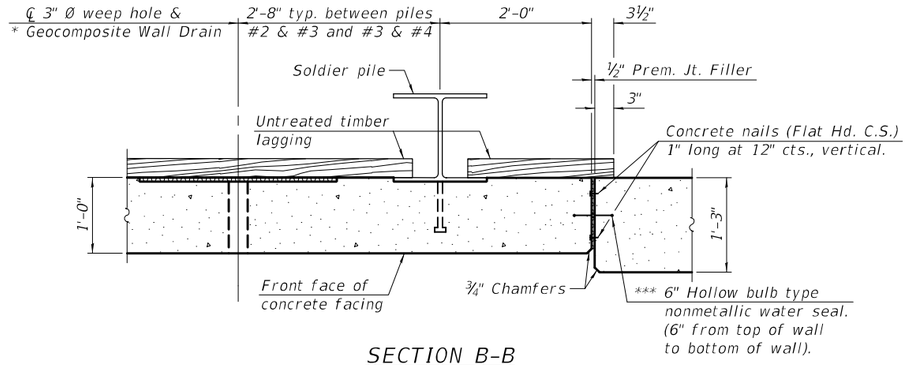
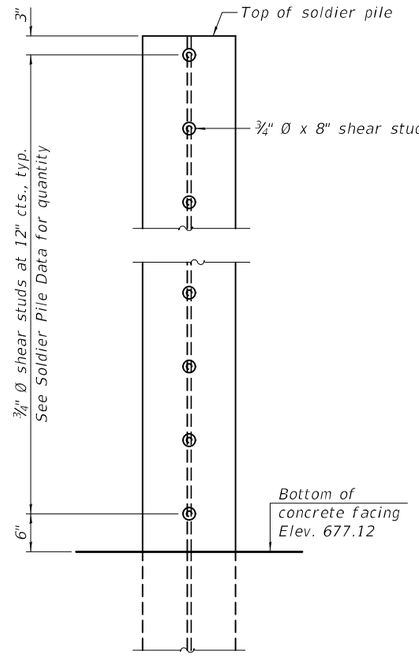


WEEP HOLE DRAIN DETAIL



SECTION B-B

* Geocomposite Wall Drain not to exceed thickness of ¾".
** Cost of the weep hole drain and connection to the Geocomposite Wall Drain are included in the cost of Concrete Structures.
*** Cost included with the Concrete Structures.



SHEAR STUD DETAIL

(Elevation of pile shown)

Notes:

Excavation for construction of soldier pile concrete facing included with the cost of Concrete Box Culverts (Rheology-Controlling Admixture).

In order to minimize excessive deflection and/or stresses in the soldier piles, compaction equipment used within 4 ft of the back face of the timber lagging shall be limited to lightweight mechanical tampers, rollers, or vibratory systems.

The Contractor is responsible for the design and performance of the timber lagging using no less than a 3 inch nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

Concrete in soldier pile wall facing shall be paid for as Concrete Structures.

SOLDIER PILE WINGWALL CONSTRUCTION SEQUENCE

1. Construct concrete box culvert and wingwalls.
2. Drive soldier piles.
3. Install timber lagging and geocomposite wall drains.
4. Place and compact backfill behind wingwall and box culvert as much as possible.
5. Install shear stud connectors.
6. Place reinforcement and form concrete facing.
7. Cast concrete facing.
8. Place remainder of backfill to proposed ground surface elevations on both sides of wall.

SOLDIER PILE DATA

Pile No.	Pile Size	Top Elev.	Tip Elev.	Length (ft.)	No. Studs/ Pile
1	HP14x89	687.37	660.00	27'-5"	11
2	HP14x89	687.37	660.00	27'-5"	11
3	HP14x89	687.37	660.00	27'-5"	11
4	HP14x89	687.37	660.00	27'-5"	11

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h16	26	#5	19'-8"	———
v6	42	#5	12'-5"	———
Concrete Structures		Cu. Yd.	9.4	
Reinforcement Bars		Pound	1,080	
Furnishing Soldier Piles (HP Section)		Foot	110	
Driving Soldier Piles		Foot	110	
Untreated Timber Lagging		Sq. Ft.	161	
Geocomposite Wall Drain		Sq. Yd.	9	
Stud Shear Connectors		Each	44	

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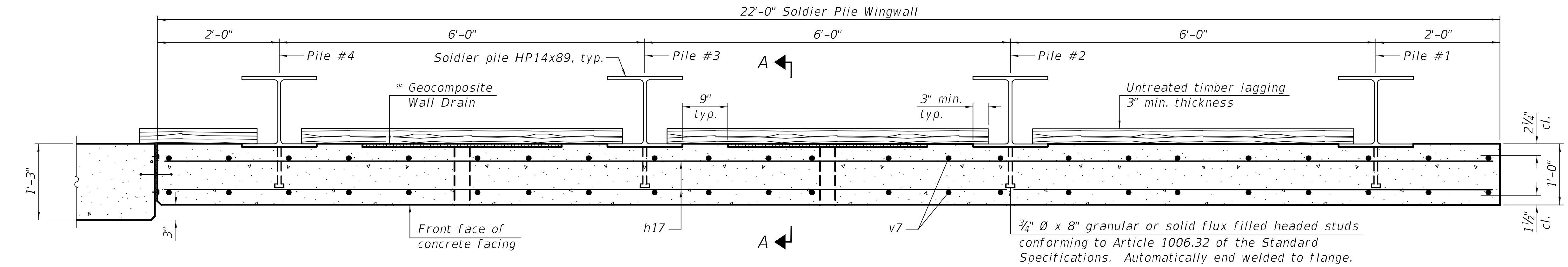
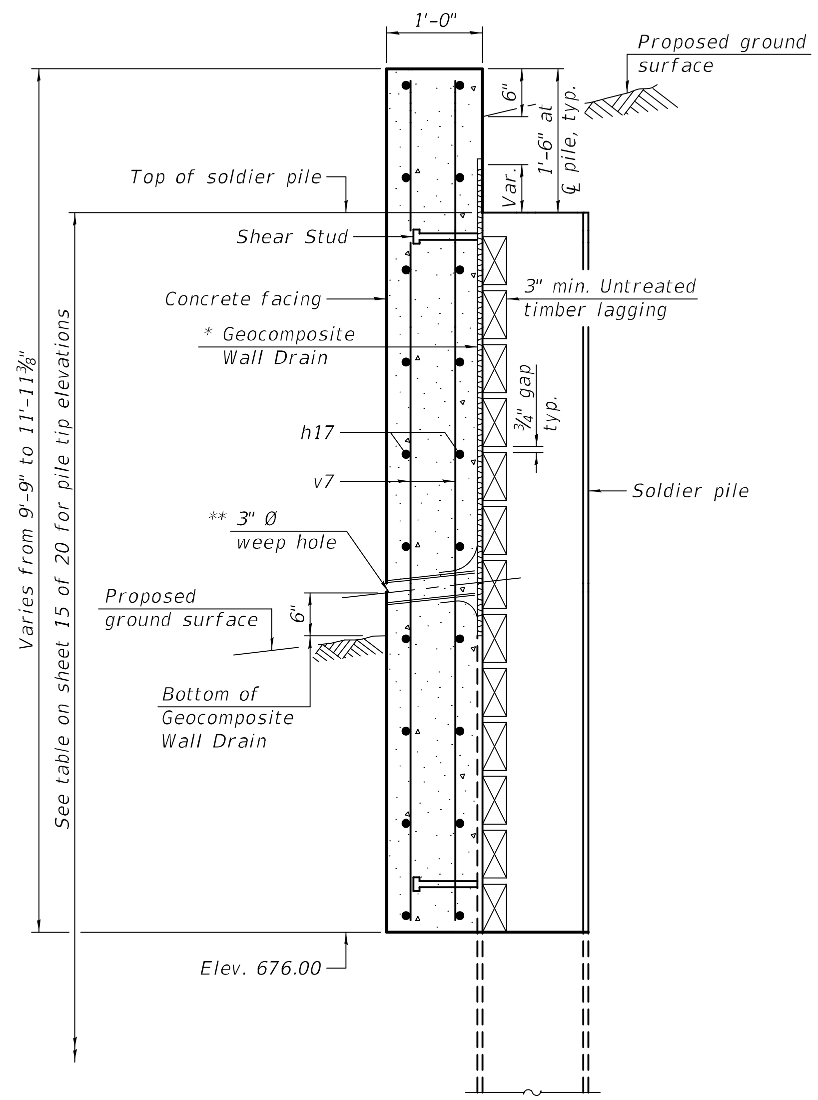
DESIGNED - HAMEED S. SALIH	EXAMINED		DATE - SEPTEMBER 10, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CULVERT DETAILS - NORTHWEST SOLDIER PILE WINGWALL STRUCTURE NO. 092 - 2045
CHECKED - RAY AHANCHI		ENGINEER OF BRIDGE DESIGN			SHEET 13 OF 20 SHEETS
DRAWN - DENNIS A. POP	PASSED		REVISED -		
CHECKED - G.R.A. / H.S.S.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		

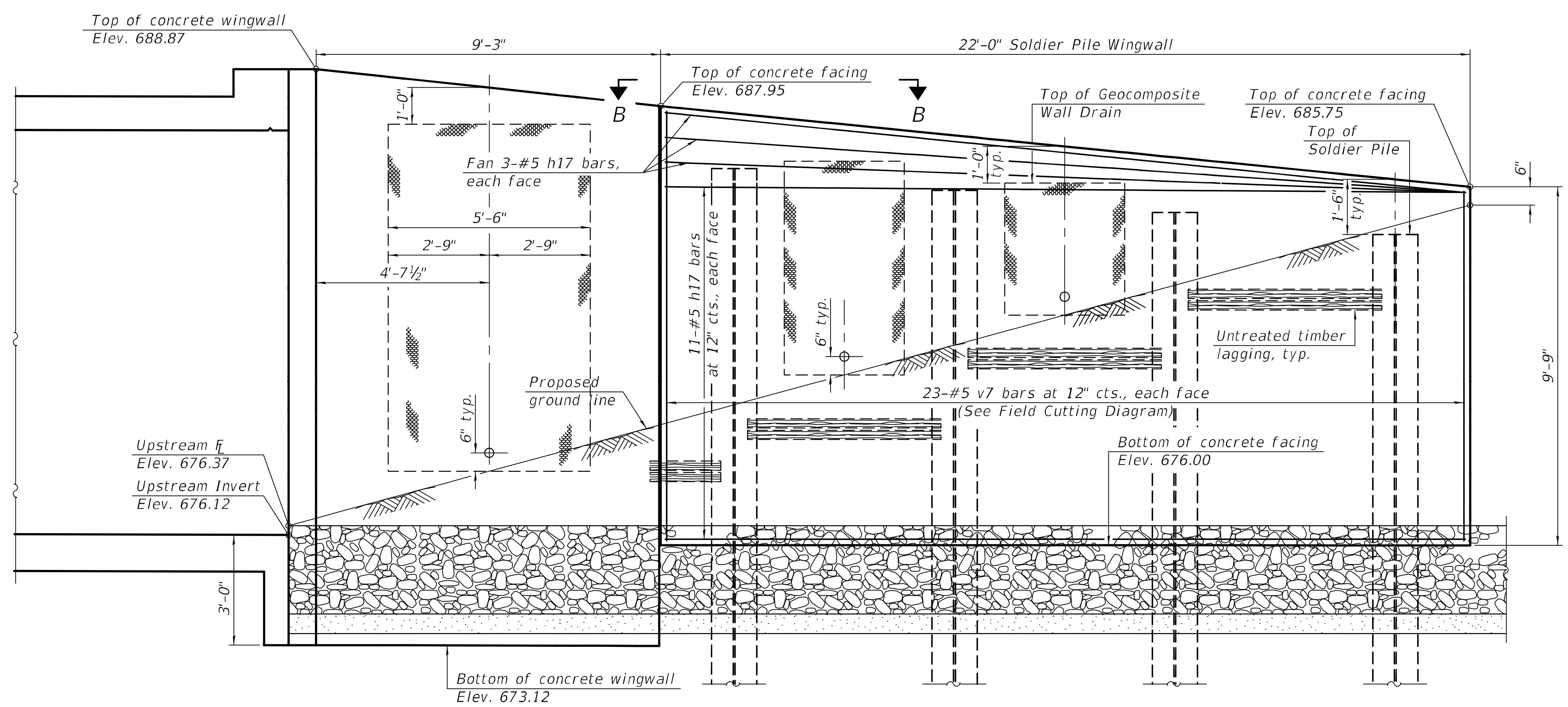
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	35
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		



PLAN - SOUTHWEST SOLDIER PILE WALL



SECTION A-A



ELEVATION - SOUTHWEST SOLDIER PILE WALL
(Showing F.F.)

DESIGNED - HAMEED S. SALIH	EXAMINED	ENGINEER OF BRIDGE DESIGN	DATE - SEPTEMBER 10, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - RAY AHANCHI				
DRAWN - DENNIS A. POP	PASSED		REVISED -	
CHECKED - G.R.A. / H.S.S.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

SOUTHWEST SOLDIER PILE WINGWALL
STRUCTURE NO. 092 - 2045
SHEET 14 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	36
		CONTRACT NO. 70905		
		ILLINOIS FED. AID PROJECT		

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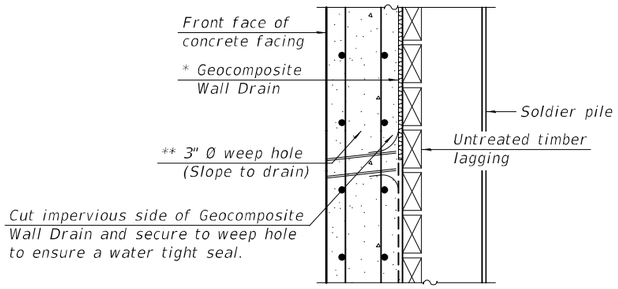
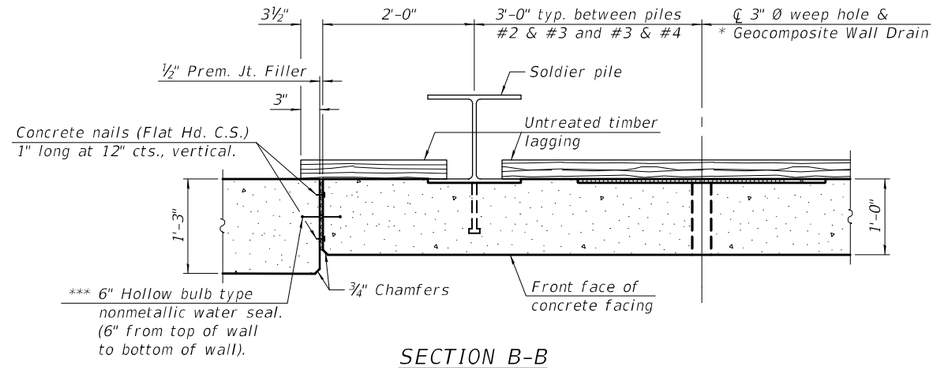
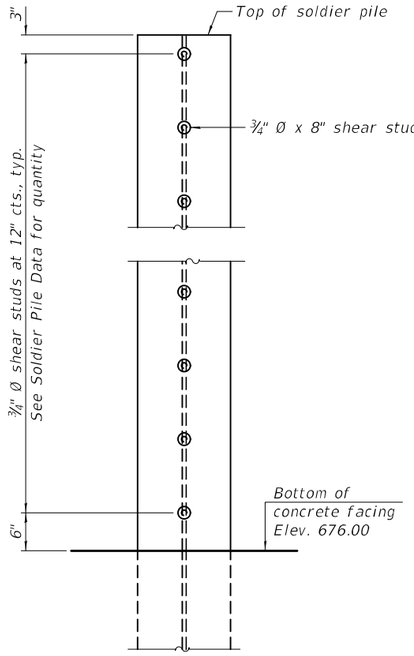


WEEP HOLE DRAIN DETAIL



SECTION B-B

* Geocomposite Wall Drain not to exceed thickness of ¾".
** Cost of the weep hole drain and connection to the Geocomposite Wall Drain are included in the cost of Concrete Structures.
*** Cost included with the Concrete Structures.



SHEAR STUD DETAIL

(Elevation of pile shown)

Notes:

Excavation for construction of soldier pile concrete facing included with the cost of Concrete Box Culverts (Rheology-Controlling Admixture).

In order to minimize excessive deflection and/or stresses in the soldier piles, compaction equipment used within 4 ft of the back face of the timber lagging shall be limited to lightweight mechanical tampers, rollers, or vibratory systems.

The Contractor is responsible for the design and performance of the timber lagging using no less than a 3 inch nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

Concrete in soldier pile wall facing shall be paid for as Concrete Structures.

SOLDIER PILE WINGWALL CONSTRUCTION SEQUENCE

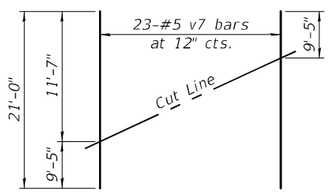
1. Construct concrete box culvert and wingwalls.
2. Drive soldier piles.
3. Install timber lagging and geocomposite wall drains.
4. Place and compact backfill behind wingwall and box culvert as much as possible.
5. Install shear stud connectors.
6. Place reinforcement and form concrete facing.
7. Cast concrete facing.
8. Place remainder of backfill to proposed ground surface elevations on both sides of wall.

SOLDIER PILE DATA

Pile No.	Pile Size	Top Elev.	Tip Elev.	Length (ft.)	No. Studs/ Pile
1	HP14x89	684.45	660.00	24'-6"	9
2	HP14x89	685.05	660.00	25'-1"	10
3	HP14x89	685.65	660.00	25'-8"	10
4	HP14x89	686.25	660.00	26'-3"	11

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h17	28	#5	21'-8"	———
v7	23	#5	21'-0"	———
Concrete Structures		Cu. Yd.	8.8	
Reinforcement Bars		Pound	1,140	
Furnishing Soldier Piles (HP Section)		Foot	102	
Driving Soldier Piles		Foot	102	
Untreated Timber Lagging		Sq. Ft.	163	
Geocomposite Wall Drain		Sq. Yd.	10	
Stud Shear Connectors		Each	40	

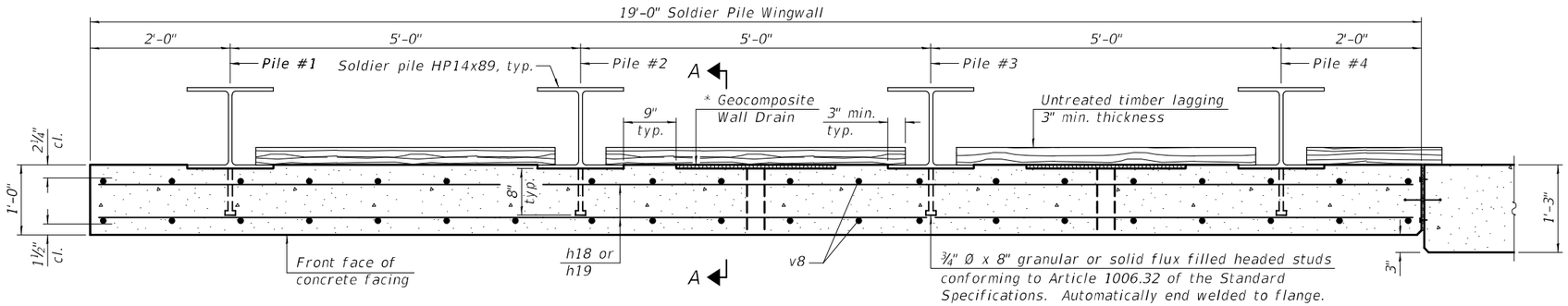


FIELD CUTTING DIAGRAM

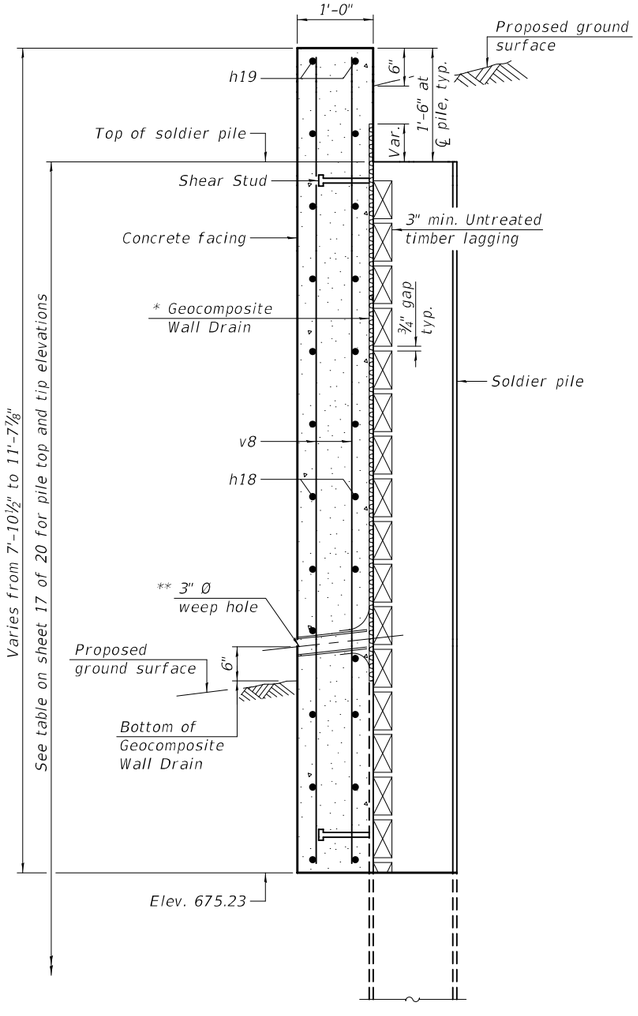
Order v7 full length. Cut as shown and use remainder of bars in opposite face.

DESIGNED - HAMEED S. SALIH	EXAMINED		DATE - SEPTEMBER 10, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**CULVERT DETAILS - SOUTHWEST SOLDIER PILE WINGWALL STRUCTURE NO. 092 - 2045**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RAY AHANCHI						840	(121)BR	VERMILION	63	37
DRAWN - DENNIS A. POP	PASSED	ENGINEER OF BRIDGE DESIGN	REVISED -		SHEET 15 OF 20 SHEETS			CONTRACT NO. 70905		
CHECKED - G.R.A. / H.S.S.		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					ILLINOIS	FED. AID PROJECT	

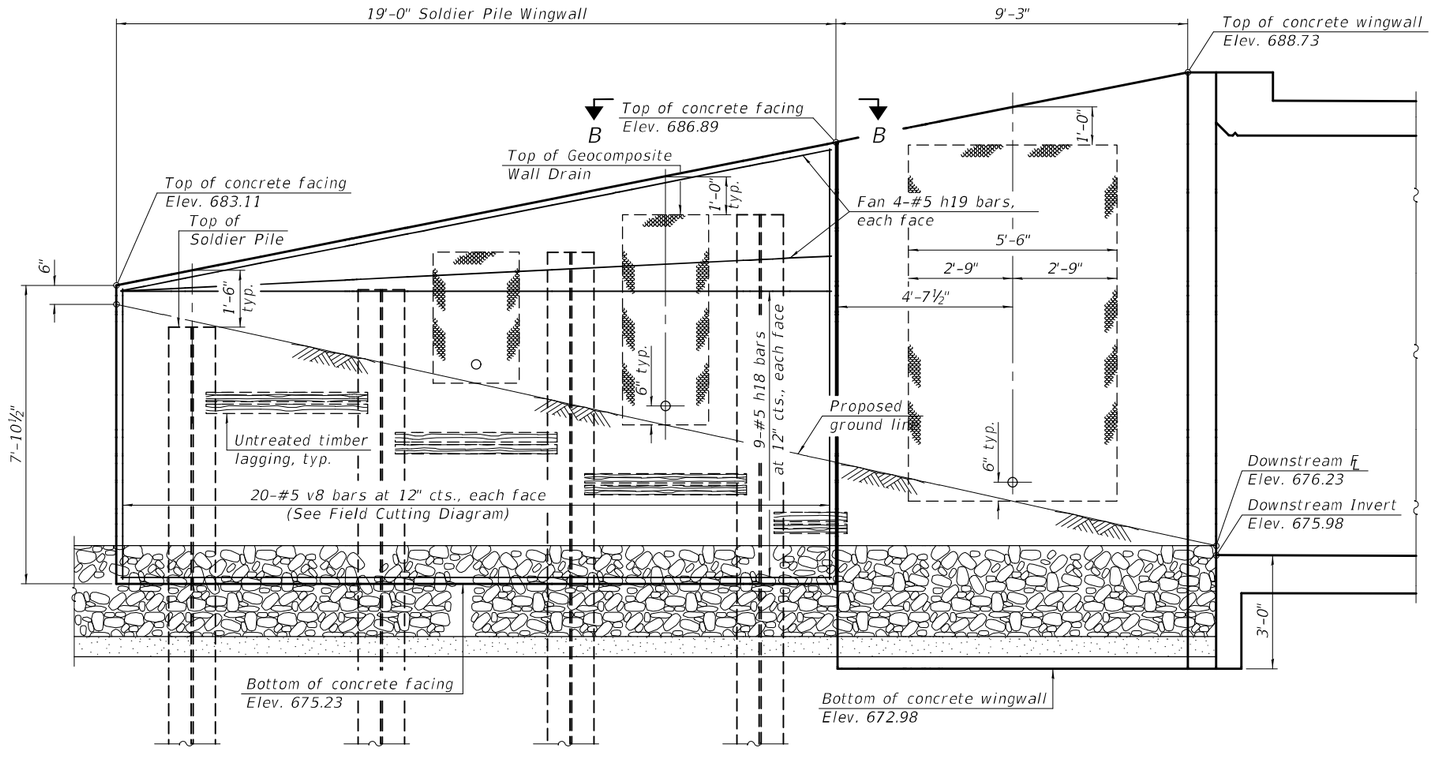
MODEL: 092045-70905-015
FILE NAME: pw:\\ildot-pw.bentley.com:PWIDOT\Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\0922045\CADD Plans\092045-70905.dgn
9/20/2021 2:33:10 PM



PLAN – SOUTHEAST SOLDIER PILE WALL



SECTION A-A



ELEVATION – SOUTHEAST SOLDIER PILE WALL
(Showing F.F.)

DESIGNED - HAMEED S. SALIH	EXAMINED	DATE - SEPTEMBER 10, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SOUTHEAST SOLDIER PILE WINGWALL STRUCTURE NO. 092 - 2045**	F.A.P. RTE. 840 / SECTION (121)BR / COUNTY VERMILION / TOTAL SHEETS 63 / SHEET NO. 38
CHECKED - RAY AHANCHI	PASSED	REVISED -		SHEET 16 OF 20 SHEETS	CONTRACT NO. 70905
DRAWN - DENNIS A. POP	ENGINEER OF BRIDGE DESIGN	REVISED -			ILLINOIS FED. AID PROJECT
CHECKED - G.R.A. / H.S.S.	ENGINEER OF BRIDGES AND STRUCTURES				
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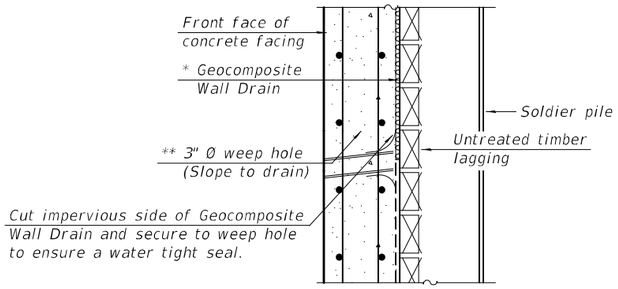
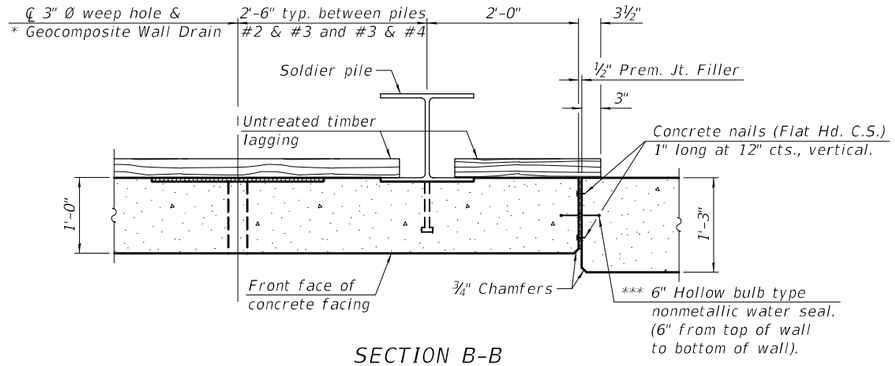
MODEL: 0922045-70905-016
FILE NAME: pw:\\dot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\0922045\CADD Plans\0922045-70905.dgn

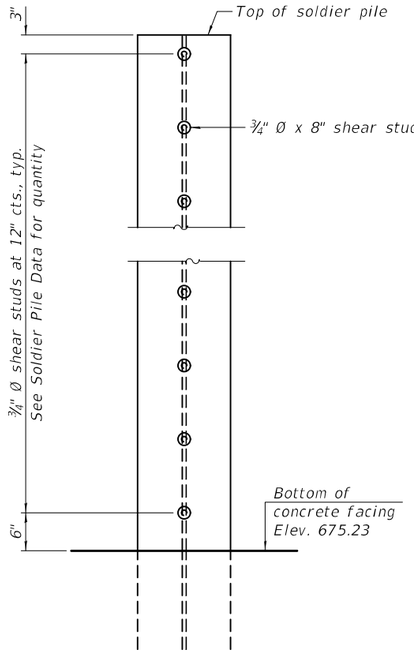


WEEP HOLE DRAIN DETAIL



SECTION B-B

* Geocomposite Wall Drain not to exceed thickness of ¾".
** Cost of the weep hole drain and connection to the Geocomposite Wall Drain are included in the cost of Concrete Structures.
*** Cost included with the Concrete Structures.



SHEAR STUD DETAIL

(Elevation of pile shown)

Notes:

Excavation for construction of soldier pile concrete facing included with the cost of Concrete Box Culverts.

In order to minimize excessive deflection and/or stresses in the soldier piles, compaction equipment used within 4 ft of the back face of the timber lagging shall be limited to lightweight mechanical tampers, rollers, or vibratory systems.

The Contractor is responsible for the design and performance of the timber lagging using no less than a 3 inch nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

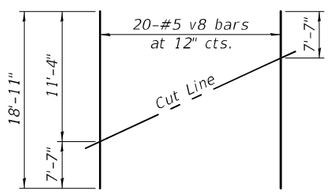
Concrete in soldier pile wall facing shall be paid for as Concrete Structures.

SOLDIER PILE WINGWALL CONSTRUCTION SEQUENCE

1. Construct concrete box culvert and wingwalls.
2. Drive soldier piles.
3. Install timber lagging and geocomposite wall drains.
4. Place and compact backfill behind wingwall and box culvert as much as possible.
5. Install shear stud connectors.
6. Place reinforcement and form concrete facing.
7. Cast concrete facing.
8. Place remainder of backfill to proposed ground surface elevations on both sides of wall.

SOLDIER PILE DATA

Pile No.	Pile Size	Top Elev.	Tip Elev.	Length (ft.)	No. Studs/ Pile
1	HP14x89	682.01	660.00	22'-0"	7
2	HP14x89	683.00	660.00	23'-0"	8
3	HP14x89	684.00	660.00	24'-0"	9
4	HP14x89	684.99	660.00	25'-0"	10



FIELD CUTTING DIAGRAM

Order v8 full length. Cut as shown and use remainder of bars in opposite face.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h18	18	#5	18'-8"	———
h19	8	#5	19'-0"	———
v8	20	#5	18'-11"	———
Concrete Structures		Cu. Yd.	6.9	
Reinforcement Bars		Pound	900	
Furnishing Soldier Piles (HP Section)		Foot	94	
Driving Soldier Piles		Foot	94	
Untreated Timber Lagging		Sq. Ft.	118	
Geocomposite Wall Drain		Sq. Yd.	8	
Stud Shear Connectors		Each	34	

DESIGNED -	HAMEED S. SALIH	EXAMINED	DATE - SEPTEMBER 10, 2021
CHECKED -	RAY AHANCHI		
DRAWN -	DENNIS A. POP	PASSED	REVISED -
CHECKED -	G.R.A. / H.S.S.	ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS - SOUTHEAST SOLDIER PILE WINGWALL
STRUCTURE NO. 092 - 2045
SHEET 17 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	39
		CONTRACT NO. 70905		
	ILLINOIS FED. AID PROJECT			

MODEL: 0922045-70905-017
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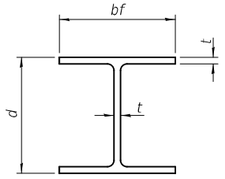
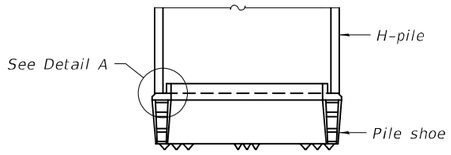
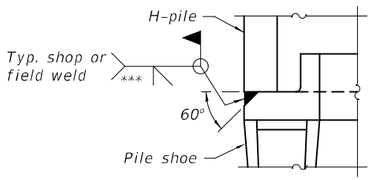


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



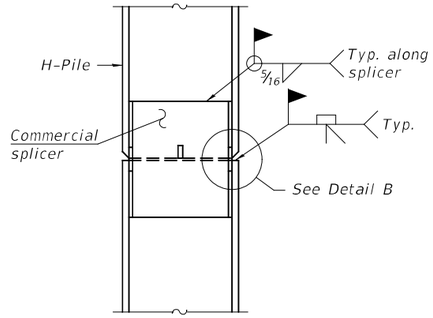
ELEVATION



DETAIL A

SHOE ATTACHMENT

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



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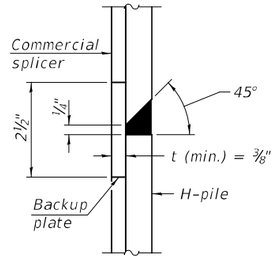
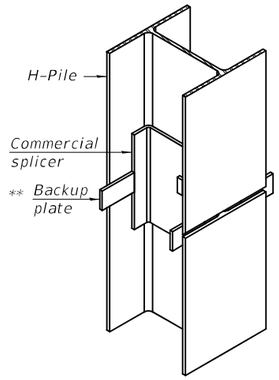
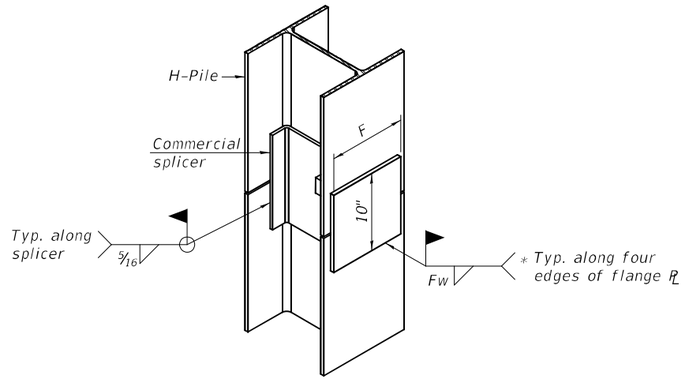


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



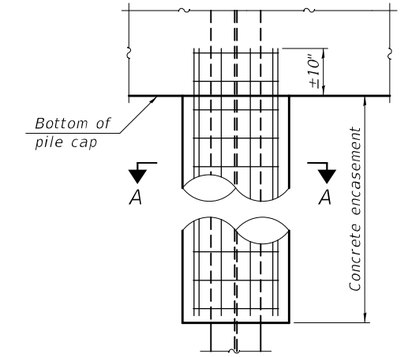
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

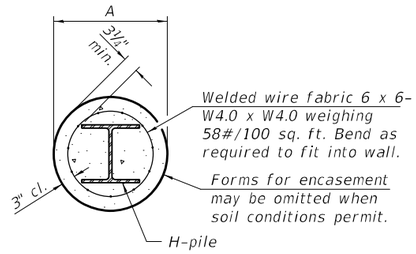
* Interrupt welds 1/4" from end of web and/or each flange.

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

*** Weld size per pile shoe manufacturer (3/16" min.).



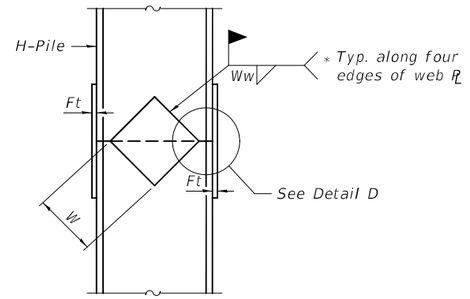
ELEVATION



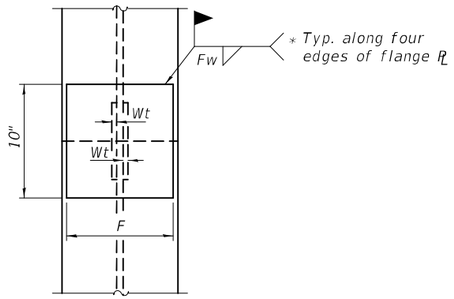
SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

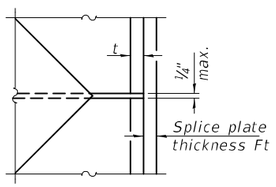
(when specified)



ELEVATION



END VIEW



DETAIL D

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	3/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

F-HP 1-1-2020

DESIGNED - HAMEED S. SALIH	EXAMINED		DATE - SEPTEMBER 10, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**HP PILE DETAILS STRUCTURE NO. 092 - 2045**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - RAY AHANCHI	PASSED	ENGINEER OF BRIDGE DESIGN	REVISED -			840	(121)BR	VERMILION	63	40
DRAWN - DENNIS A. POP			REVISED -					CONTRACT NO. 70905		
CHECKED - G.R.A. / H.S.S.		ENGINEER OF BRIDGES AND STRUCTURES			SHEET 18 OF 20 SHEETS			ILLINOIS FED. AID PROJECT		

MODEL: 092045-70905-018
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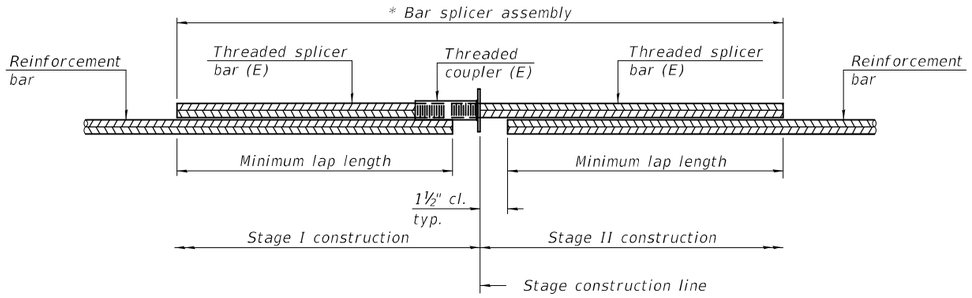


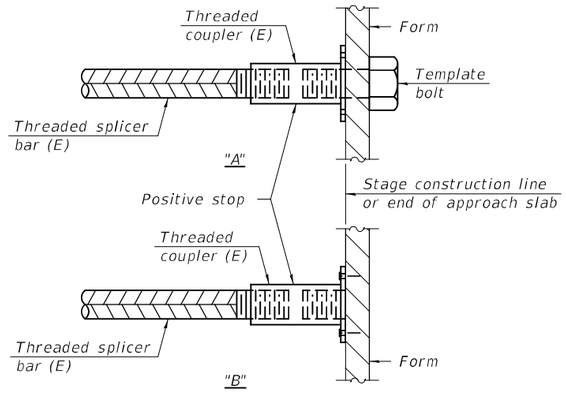
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

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

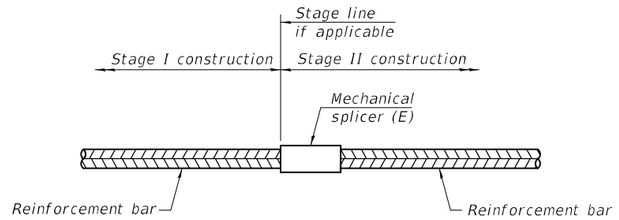
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Top Slab	#5	56	2'-2"
Walls	#5	72	2'-9"
Bottom Slab	#5	56	2'-2"



INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

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

BSD-1 1-1-2020

DESIGNED - HAMEED S. SALIH	EXAMINED	DATE - SEPTEMBER 10, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - RAY AHANCHI	PASSED	REVISED -	**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 092 - 2045**
DRAWN - DENNIS A. POP	ENGINEER OF BRIDGE DESIGN	REVISED -	SHEET 19 OF 20 SHEETS
CHECKED - G.R.A. / H.S.S.	ENGINEER OF BRIDGES AND STRUCTURES		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	41
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		

MODEL: 0922045-70905-019
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Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 5/27/17

ROUTE US 49 over Vermilion Creek DESCRIPTION NW Corner of Existing Structure LOGGED BY TLM

SECTION 121BR LOCATION , SEC. , TWP. , RNG. , Latitude , Longitude

COUNTY Vermilion DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. _____
Station _____

BORING NO. SB-1
Station 731+45.18
Offset 15.0 ft Lt.
Ground Surface Elev. 689.69 ft

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

Groundwater Elev.:
First Encounter 664.2 ft ▼
Upon Completion 664.2 ft ▽
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material Description
				Medium Stiff Brown and Black Clay Loam, Fill moist
	2			
	2	0.8	13	
	4	B		
686.69				
				Stiff Brown Silty Clay Loam w/ 2" sand layers, Fill moist
	2			
	2	2.0	16	
-5	2	P		
	2			
682.69	2	0.7	21	
	3	B		Stiff Black Topsoil, Silty Clay Loam moist (original ground)
680.69	2			
	2	0.8	17	Medium Stiff Brown/Gray Silty Clay Loam w/ bits of rock moist
-10	2	B		
679.19				
				Very Stiff Brown/Gray Silty Clay w/ trace sand moist
	2			
	4	2.5	19	
	5	B		
	2			
	4	3.7	21	
-15	7	S		
674.19				
				Very Stiff Gray Silty Clay Loam Till moist
	4			
	6	2.5	13	
	9	B		
671.69				
				Very Stiff Gray Silty Clay moist
	3			
670.19	5	3.3	18	
-20	11	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material Description
				Very Stiff Gray (w/ purple) Silty Clay Loam Till w/ silt & sand seams moist (continued)
	6			
	10	2.7	12	
	11	B		
	5			
	9	3.3	10	
-25	13	S		
664.19 ▽▼				
				Dense Gray Silty Fine Sand wet
	14			
	16	-	22	
	18			
	5			
660.19	4	4.5	16	
-30	8	P		Very Hard Gray Clay Loam Till moist
656.69				
				Medium Dense Gray Fine Sand moist
	6			
655.19	7	3.0	13	
654.69 -35	12	P		Very stiff Gray Clay Loam Till moist
				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

SOIL BORING LOG

Date 5/27/17

ROUTE US 49 over Vermilion Creek DESCRIPTION SE Corner of Existing Structure LOGGED BY TLM

SECTION 121BR LOCATION , SEC. , TWP. , RNG. , Latitude , Longitude

COUNTY Vermilion DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. _____
Station _____

BORING NO. SB-2
Station 730+51.68
Offset 15.0 ft Rt.
Ground Surface Elev. 689.64 ft

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

Groundwater Elev.:
First Encounter 676.6 ft ▼
Upon Completion 666.6 ft ▽
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material Description
				9" HMA Shoulder
688.89				
				Stiff Black Silty Clay, Fill moist
	7			
	4	1.5	15	
	4	B		
	3			
685.64				
	2	1.0	10	Loose Gray Sand & Gravel, fill moist
-5	2	P		
684.14				
	1			Medium Stiff Dark Gray Clay Loam, some gravel moist
	1	0.7	20	
	1	B		
681.64				
	1			Soft Blue-Gray and Brown Silty Clay Loam, some gravel moist
	2	0.4	21	
-10	2	B		
679.14				
	2			Loose Gray Silty Medium Sand, trace gravel moist
	2	-	23	
	2			
676.64 ▼				
	1			Loose Brown Silty Medium Sand wet
675.14	2	-	25	
-15	5			Medium Dense Brown/Gray Silt moist
673.64				
	3			Very Stiff Gray Clay Loam Till
	7	2.9	18	
	11	B		
	5			
670.14	8	2.7	22	
Medium Dense Gray Silty Medium 669.64 -20	7	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material Description
				Sand wl layers of silt
	6			Very Stiff Gray Sandy Clay Loam
	8	2.4	11	
	6	B		
666.64 ▽				
	7			Medium Dense gray Fine Sand wet
	12	-	22	
-25	14			
	11			
663.14				
	15	8.2	10	Very Hard Gray Clay Loam Till moist
	17	B		
661.64				
	6			Dense Gray Fine Sand w/ trace gravel wet
	19	-	20	
-30	12			
656.64				
	7			Medium Dense Gray Fine Sand wet
	16	-	19	
654.64 -35	10			
				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)

DESIGNED - HAMEED S. SALIH	EXAMINED	DATE - SEPTEMBER 10, 2021	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - RAY AHANCHI		REVISED -	
DRAWN - DENNIS A. POP	PASSED	REVISED -	
CHECKED - G.R.A. / H.S.S.	ENGINEER OF BRIDGE DESIGN / ENGINEER OF BRIDGES AND STRUCTURES		

SOIL BORING LOGS
STRUCTURE NO. 092 - 2045
SHEET 20 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	(121)BR	VERMILION	63	42
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		

MODEL: 0922045-70905-020
FILE NAME: pw:\\ildot-pw.bentley.com:PWIDOT Documents\IDOT Offices\Bureau of Bridges and Structures\Projects\0922045\CADD Plans\0922045-70905.dgn

9/20/2021 2:33:13 PM

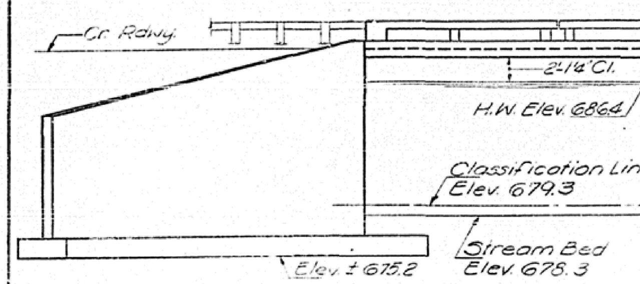
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 119 F.A.	121 BY-1	VERMILION	175	50
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT- RF-219(28)		

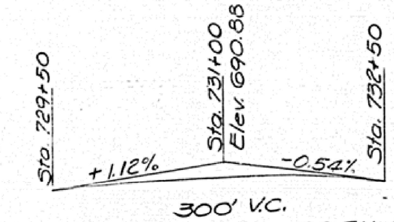
SHEET NO. 1
6 SHEETS

B.M. "a" Top of South East Wingwall Elev. 688.66

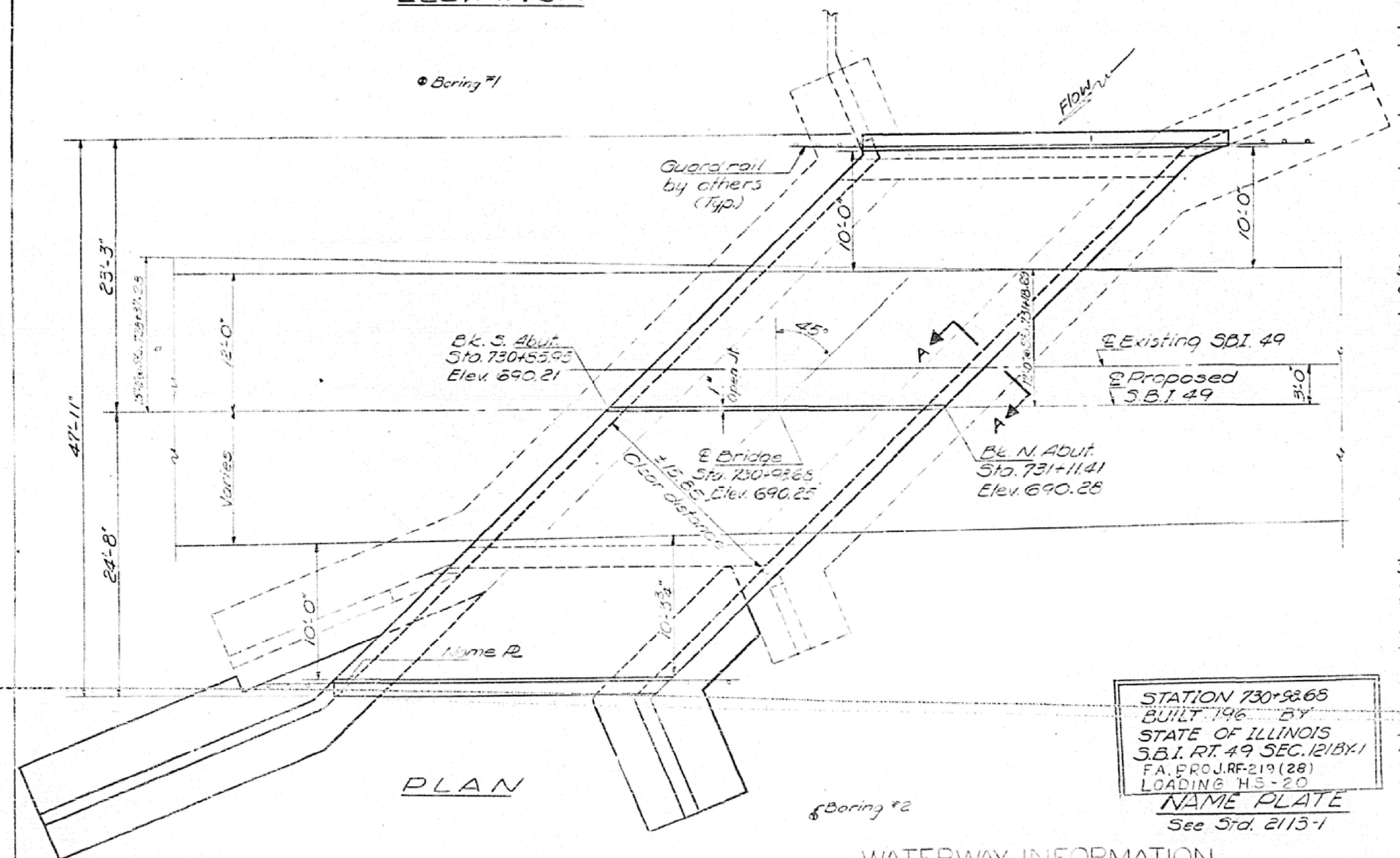
Note:
The contractor shall remove existing 12'2" R.C. Slab, 1 span 22'-5" by 36'-3"



ELEVATION



PROPOSED PROFILE
S.B.I. RTE. 49



PLAN

STATION 730+98.68
BUILT 196 BY
STATE OF ILLINOIS
S.B.I. RT. 49 SEC. 121BY-1
F.A. PROJ. RF-219 (28)
LOADING H.S-20

NAME PLATE
See Std. 2113-1

BORING DATA

Boring No. 1 Sta. 729+93 Offset 30' Lt.	Elevation	N.	Qu. t/sf.	W(%)
Ground Surface	685.6			
Stiff Black to Dark Brown Silty Clay	681.6			
Stiff Dark Brown to Gray Brown Mottled Clay	-5	9	1.25	20
		7	1.08	20
	676.6			
Hard Gray Clay Till	-10	15	5.18	16
		18	4.38	13
	670.1 -15	22	6.08	17
Gray Silt Loam	669.1			
Very stiff Gray Clay Till		16	3.75	11
	665.1 -20	12	3.78	12
Dense Gray Sand		39	–	–
	662.1			
Very Dense Gray Sand	660.1 -25	55	–	–
Limit of Boring				

Boring #2 Sta. 731+02 Offset 33' Rt	Elevation	N	Qu. t/sf.	W(%)
Ground Surface	685.5			
Stiff Black to Dark Brown Silty Clay	680.5 -5			
Very stiff to hard Gray Brown Clay		21	3.98	21
	675.0 -10	18	5.88	18
Hard Gray Clay Till		24	7.88	17
	671.5			
Stiff Gray Brown Silt Loam with lense of Clay Loam Till	-15	16	1.98	–
	669.0			
Very stiff Brown Gray Sandy Clay Loam Till		14	2.38	12
	666.5			
Hard Gray Brown Clay Loam Till	-20	20	5.65	11
	664.5			
Very Dense Brown Gray Fine Sand		52	–	–
Free Water	661.5			
Dense Gray Brown Fine Sand	-25 660.0	46	–	–
Limit of Boring				

GENERAL NOTES

Handrail concrete shall be used in the rail and rail post. Rail shall be poured in separate operation from interior rail post.

All reinforcement bars shall be lapped a minimum of 24 diameters unless otherwise shown.

All exposed concrete edges shall have ¾" chamfer unless otherwise shown.

The back of bridge abutments and wingwalls, from the ground line to the footing shall be waterproofed.

Waterproofing shall be done in accordance with Art. 503.12 of the Standard Specifications.

The existing superstructure and parts of existing Abuts. as indicated on the plans shall be removed in accordance with section 501.03 of the Standard Specifications.

The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection.

Nonmetallic water seal used in the wingwall joints shall extend from the top of the footing to within 6" of the top of the wall.

It shall be the responsibility of the contractor to verify all dimensions & conditions existing in the field prior to construction & ordering of materials.

Adequate bracing should be provided by the contractor before removing superstructure and shoud be maintained during construction. Cost incidental to the structure.

TOTAL BILL OF MATERIAL

		Super	Sub	Total
Class X Concrete	Cu. Yds.	59.9	84.5	144.4
Handrail Concrete	Cu. Yds.	1.7		1.7
Reinforcement Bars	Lbs.	16,280	7030	23,310
Class "B" Exc. for Struc.	Cu. Yds.		115	115
* Protective Coat	Sq. Yds.	161		161
Name Plates	Ea.	1		1
Expansion Bolts (¾"φ)	Ea.		49	49
Concrete Removal	Cu. Yds.		11	11
Class "A" Exc. for Struct.	Cu. Yds.		80	80
Removal of Existing Superstrure.	Ea.	1		1

* Includes inside vertical face & top of handrail

DESIGNED	J.M. Patel
CHECKED	
DRAWN	A. Barraza
CHECKED	

April 30 1969
EXAMINED
PASSED
APPROVED Richard H. Golterman

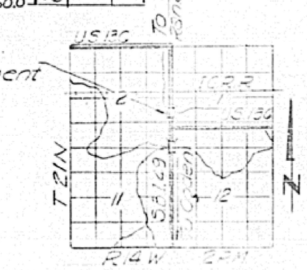
WATERWAY INFORMATION

Drainage Area	876 Acres
Character	Level & Cultivated
Req'd Opening (30 Yr. Fl)	116 Sq. Ft.
Present Opening	133 Sq. Ft.
Proposed Opening	133 Sq. Ft.
Ordinary Water Elev.	678.8
Low Water Elev.	678.3

DESIGN STRESSES

fc = 1,000 psi (Sub)
fc = 1,400 psi (Super)
fs = 20000 psi (Reinf.)
fs = 20000 psi (Struct)
vc = 75 psi (Ftgs)
n = 10

LOADING HS20-44



LOCATION PLAN

PROJ. RF-219(28)
GENERAL PLAN & ELEVATION
S.B.I. RTE 49 SEC. 121 BY-1
VERMILION COUNTY
STA 730+98.68

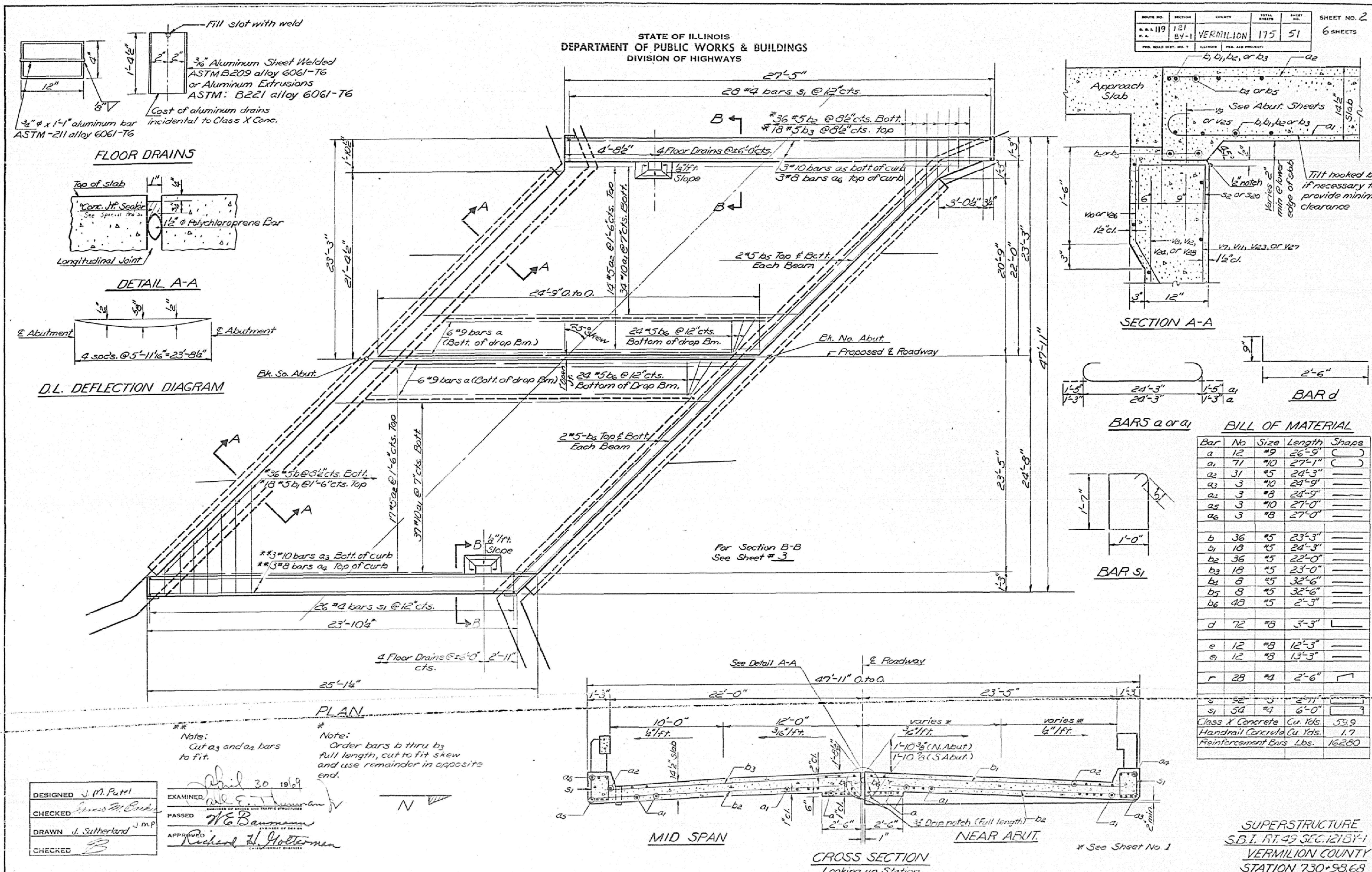
AS BUILT PLAN SN 092–0060

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 119 F.A.	121 BY-1	VERMILION	175	51

SHEET NO. 2
6 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



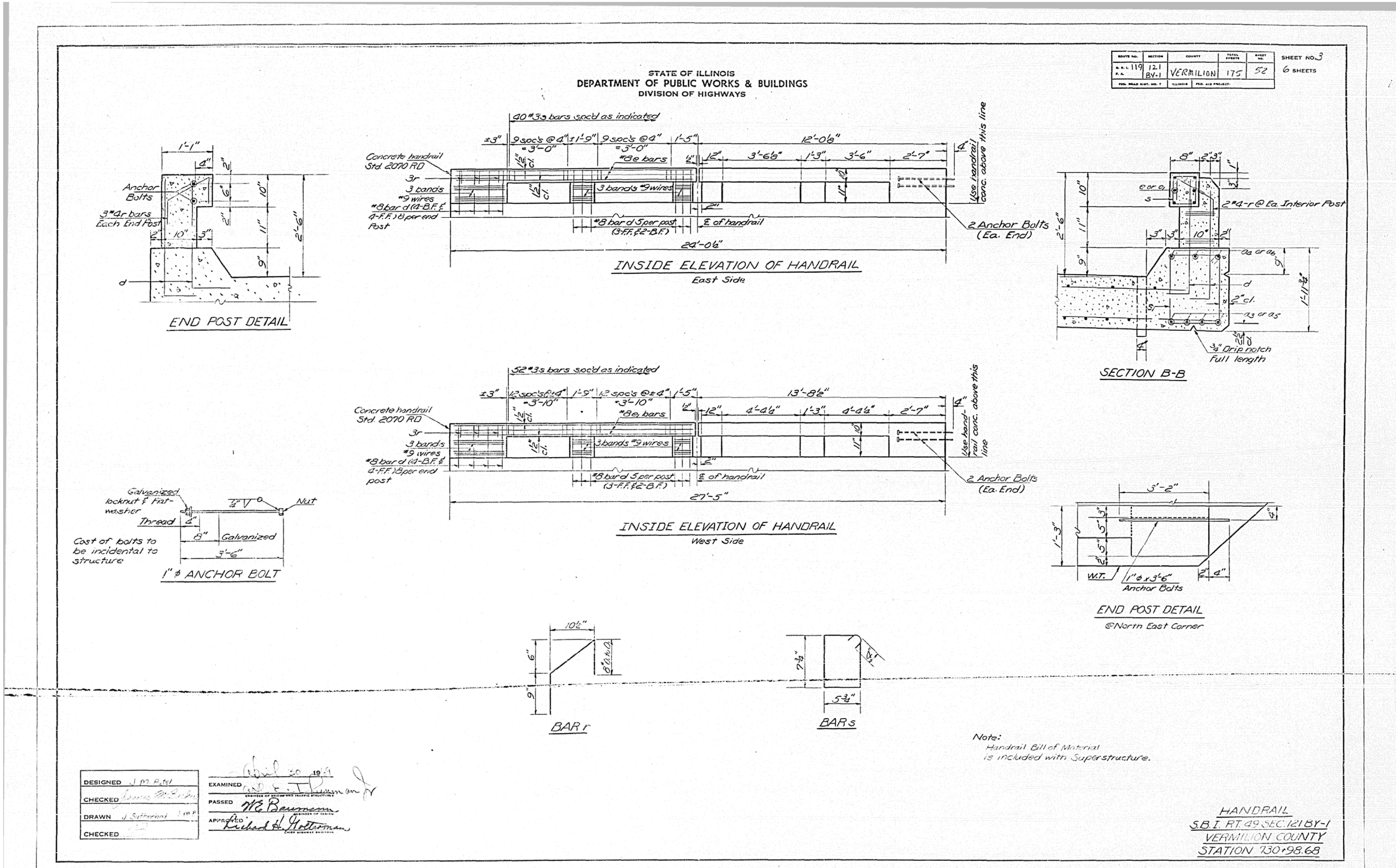
BILL OF MATERIAL

Bar	No	Size	Length	Shape
a	12	#9	26'-9"	
a1	71	#10	27'-1"	
a2	31	#5	24'-3"	
a3	3	#10	24'-9"	
a4	3	#8	24'-9"	
a5	3	#10	27'-0"	
a6	3	#8	27'-0"	
b	36	#5	23'-3"	
b1	18	#5	24'-3"	
b2	36	#5	22'-0"	
b3	18	#5	23'-0"	
b4	8	#5	32'-6"	
b5	8	#5	32'-6"	
b6	48	#5	2'-3"	
d	72	#8	3'-3"	
e	12	#8	12'-3"	
e1	12	#8	13'-3"	
r	28	#4	2'-6"	
s	32	[illegible]	2'-11"	
s1	54	#4	6'-0"	
Class X Concrete			Cu. Yds.	59.9
Handrail Concrete			Cu. Yds.	1.7
Reinforcement Bars			Lbs.	16280

SUPERSTRUCTURE
S.B.I. RT. 49 SEC. 121BY-1
VERMILION COUNTY
STATION 730+98.68

DESIGNED J. M. Puttl
CHECKED
DRAWN J. Sutherland
CHECKED
EXAMINED April 30 1969
PASSED W. E. Baumann
APPROVED Richard H. Golterman

AS BUILT PLAN SN 092–0060
FOR INFORMATION ONLY



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	DRAWN -	REVISED -	
PLOT SCALE = 40.0051 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/11/2021	DATE -	REVISED -	

AS BUILT PLAN SN 092–0060

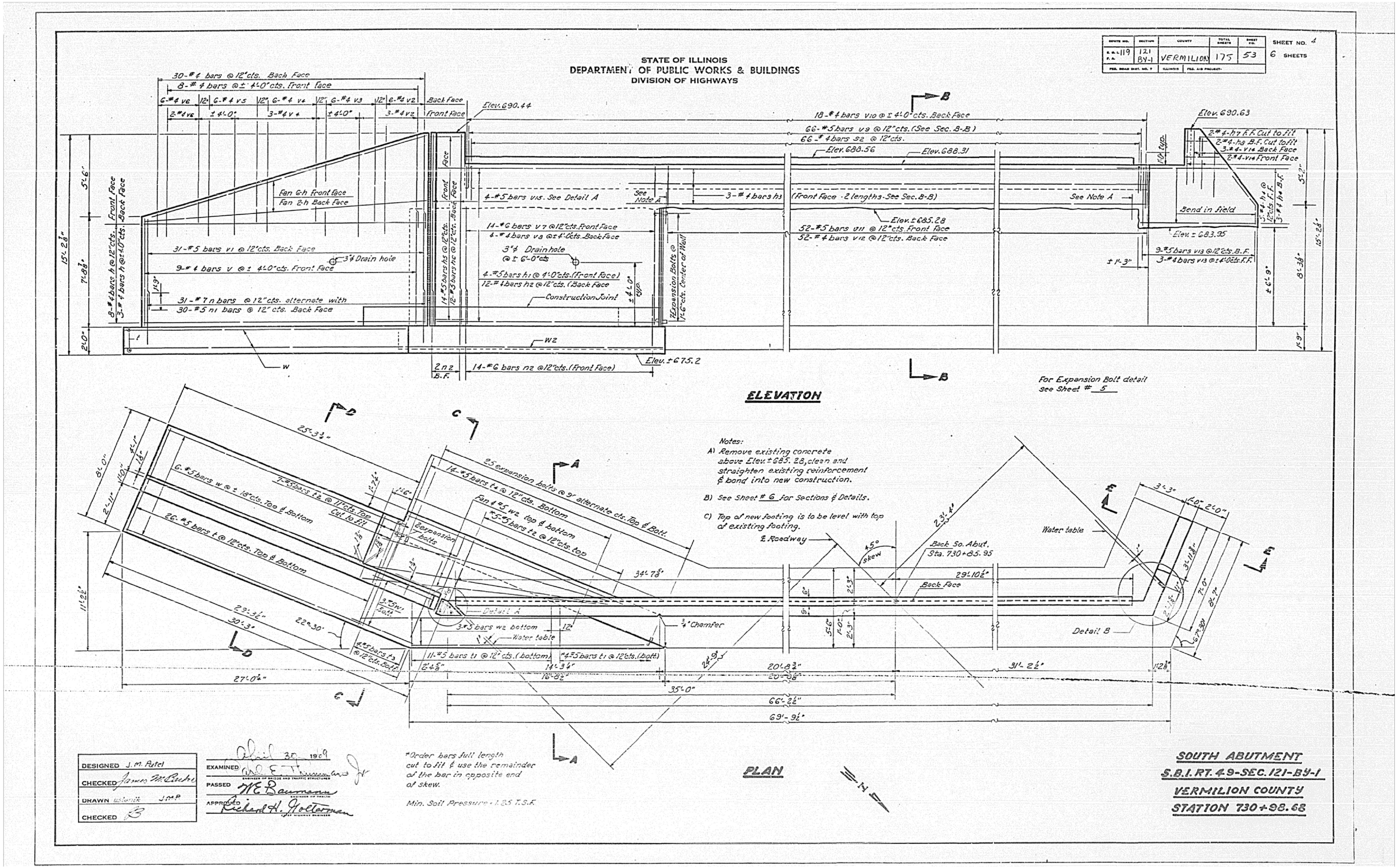
SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	45

CONTRACT NO. 70905

ILLINOIS FED. AID PROJECT

AS BUILT PLAN SN 092–0060
FOR INFORMATION ONLY



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	DRAWN -	REVISED -	
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PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS BUILT PLAN SN 092–0060

SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	46

CONTRACT NO. 70905

ILLINOIS FED. AID PROJECT

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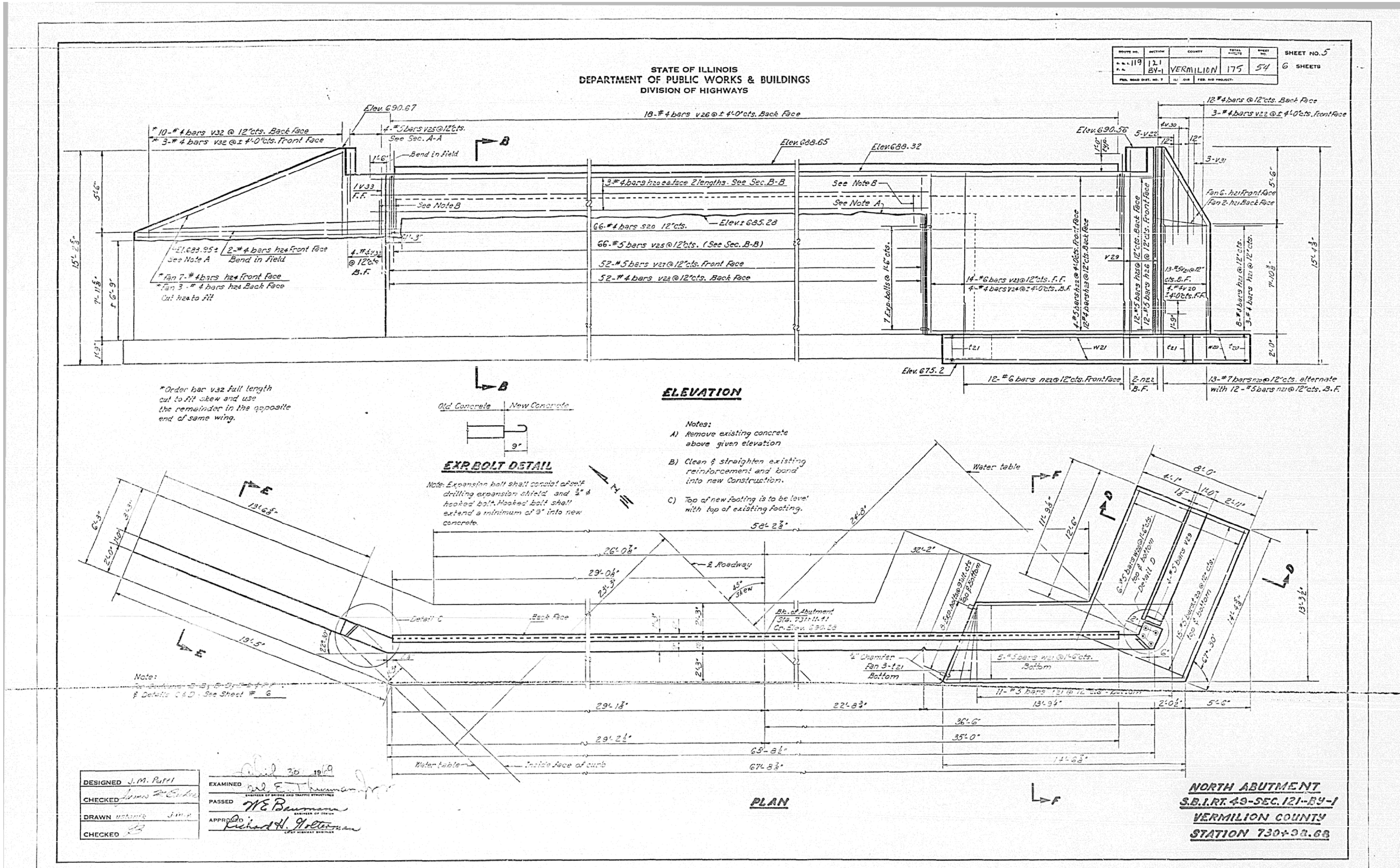
FILE NAME: pw:\\illinoisdot.bentley.com:illinoisdot-pw-01\Documents\IDOT Offices\District 5\Projects\D570905\CADData\CADsheets\D570905 sht- As Built SN092-0060

AS BUILT PLAN SN 092–0060

FOR INFORMATION ONLY



USER NAME = monjardinrt	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	AS BUILT PLAN SN 092–0060	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			840	121BR	VERMILION	63	47
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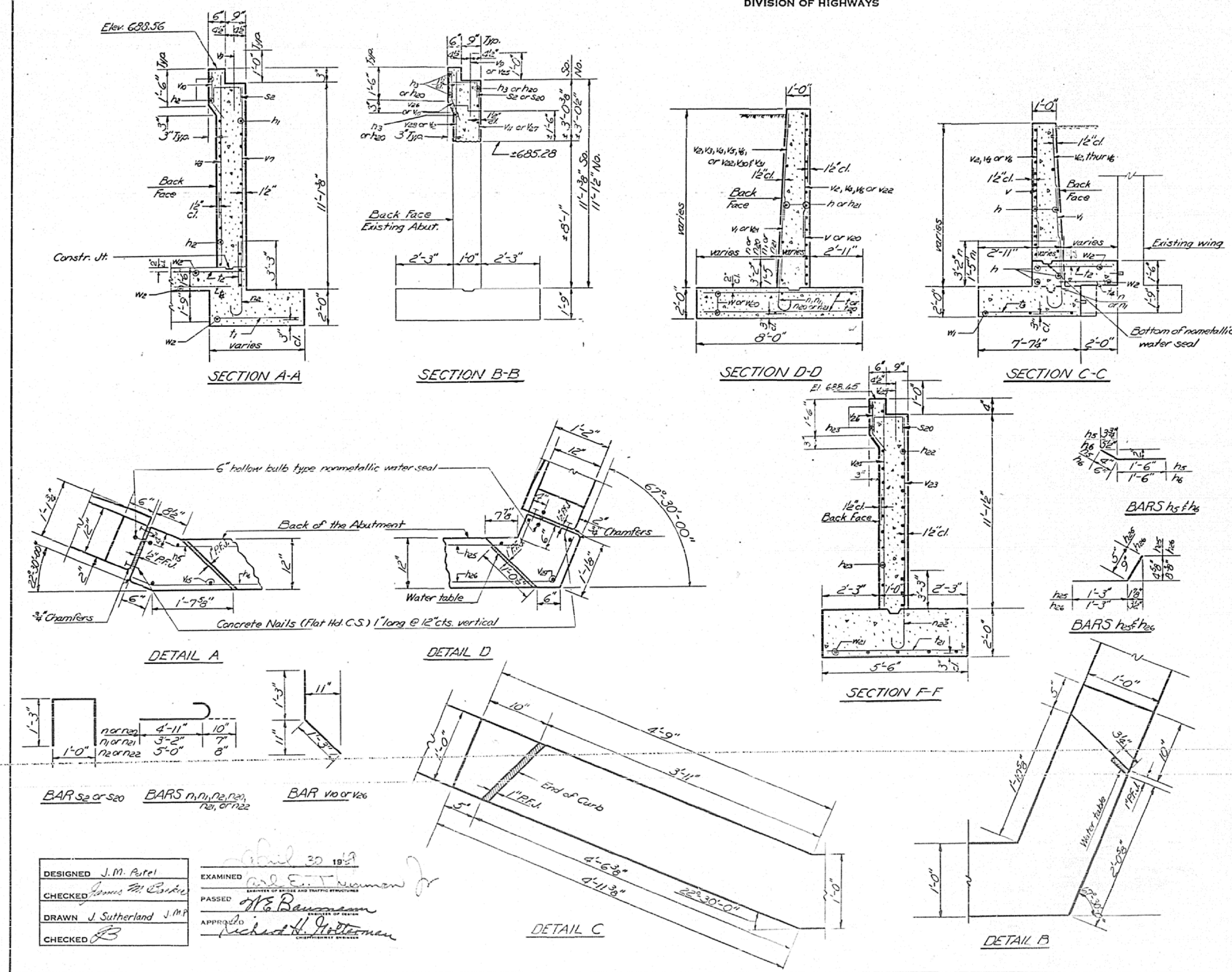
PLOT DATE = 8/11/2021	DATE -	REVISED -		SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

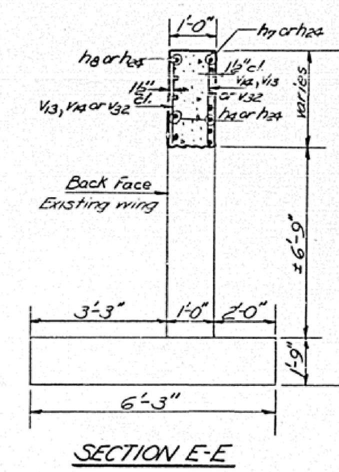
AS BUILT PLAN SN 092–0060
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 119	121 BY-1	VERMILION	175	55

SHEET NO. 6
6 SHEETS





BILL OF MATERIAL

NORTH ABUTMENT

Bar	No.	Size	Length	Shape
h20	12	#4	60'-0"	—
h21	19	#4	11'-9"	—
h22	4	#5	13'-6"	—
h23	12	#4	16'-6"	—
h24	14	#4	18'-0"	—
h25	12	#5	1'-8"	
h26	12	#5	2'-0"	
n20	13	#7	5'-9"	
n21	12	#5	3'-9"	
n22	14	#6	5'-8"	
S20	66	#4	3'-6"	⊓
t20	30	#5	7'-9"	—
t21	14	#5	5'-3"	—
v20	4	#4	7'-6"	—
v21	13	#5	6'-9"	—
v22	8	#4	6'-9"	—
v23	14	#6	11'-0"	—
v24	4	#4	11'-0"	—
v25	66	#5	4'-9"	—
v26	18	#4	2'-6	
v27	52	#5	3'-0"	—
v28	52	#4	3'-3"	—
v29	4	#5	13'-3"	—
v30	4	#4	4'-6"	—
v31	3	#4	2'-6"	—
v32	13	#4	6'-3"	—
v33	5	#4	4'-0"	—
w20	12	#5	14'-0"	—
w21	5	#5	14'-3"	—
Reinforcement Bars			Lbs.	2970
Expansion Bolts (3/4")			Ea.	15
Class X Concrete			Cu. Yds.	32.9
Concrete Removal			Cu. Yds.	6

SOUTH ABUTMENT

Bar	No	Size	Length	Shape
h	19	#4	29'-6"	—
h1	4	#5	14'-0"	—
h2	12	#4	13'-0"	—
h3	12	#4	27'-0"	—
h4	8	#4	8'-3"	—
h5	14	#5	1'-10"	
h6	12	#5	2'-0"	
h7	2	#4	1'-9"	—
h8	2	#4	1'-3"	—
n	31	#7	5'-9"	
n1	30	#5	3'-9"	
n2	16	#6	5'-8"	
S2	66	#4	3'-6"	⊓
t	52	#5	7'-9"	—
t1	15	#5	3'-0"	—
t2	12	#5	6'-3"	—
t3	4	#5	7'-3"	—
t4	14	#5	3'-3"	—
v	9	#4	7'-6"	—
v1	31	#5	6'-3"	—
v2	9	#4	6'-9"	—
v3	6	#4	6'-0"	—
v4	9	#4	4'-9"	—
v5	6	#4	3'-6"	—
v6	8	#4	2'-6"	—
v7	14	#6	9'-6"	—
v8	4	#4	9'-6"	—
v9	66	#5	4'-9"	—
v10	18	#4	2'-6"	
v11	52	#5	3'-0"	—
v12	52	#4	3'-3"	—
v13	12	#4	4'-0"	—
v14	5	#4	3'-6"	—
v15	4	#5	13'-0"	—
w	12	#5	25'-3"	—
w1	3	#5	5'-9"	—
w2	11	#5	13'-0"	—
Reinforcement Bars			Lbs.	4060
Expansion Bolts (3/4")			Ea.	34
Class X Concrete			Cu. Yds.	51.6
Concrete Removal			Cu. Yds.	5

ABUTMENT DETAILS
S.B.I. RT. 49 SEC. 121-BY-1
VERMILION COUNTY
STATION 730+98.68

Rev. 3-29-71

DESIGNED	J. M. Patel
CHECKED	James M. Larkin
DRAWN	J. Sutherland J.M.P.
CHECKED	J.B.

April 30 1969

EXAMINED — Engineer of Bridges and Traffic Structures

PASSED — Engineer of Design

APPROVED — Chief Highway Engineer

USER NAME = monjarcinrrt	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0394 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/11/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS BUILT PLAN SN 092–0060

SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.

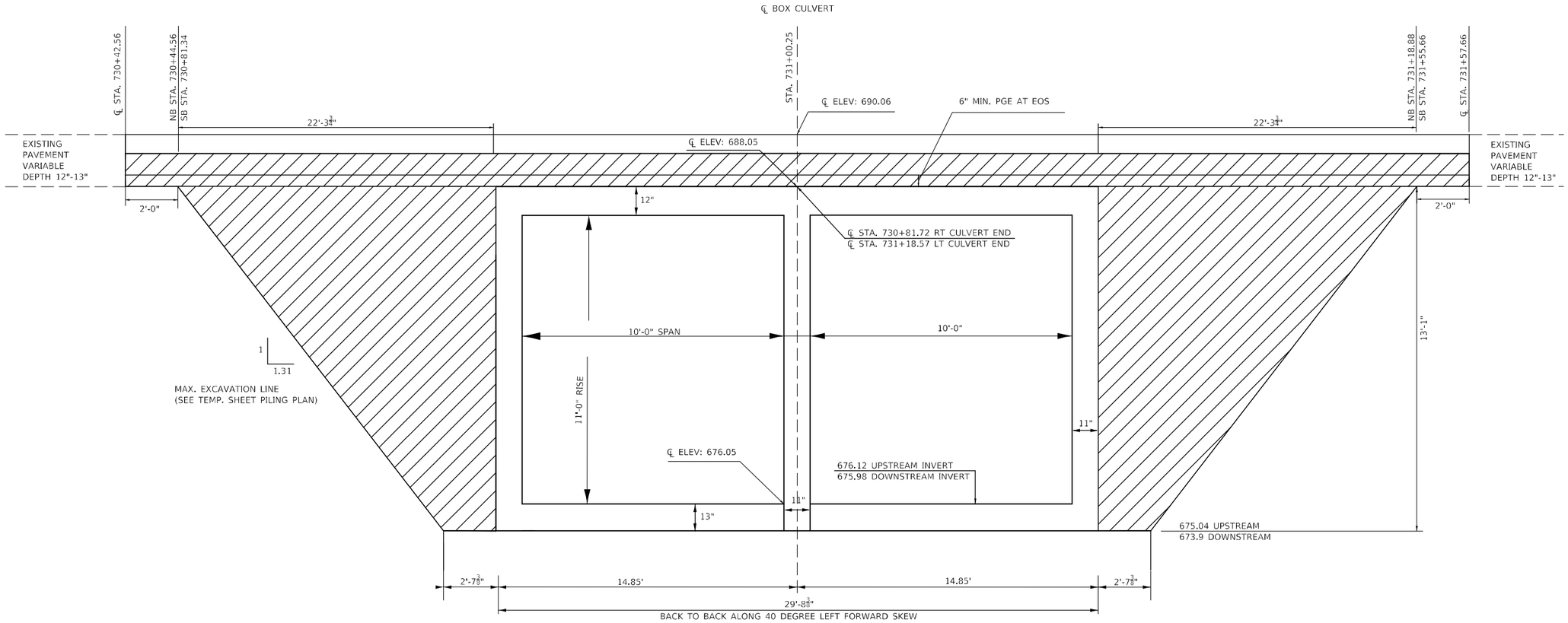
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	48

CONTRACT NO. 70905

ILLINOIS FED. AID PROJECT

MODEL: $MODELNAME$
FILE NAME: pw://idotwrem.dot.illinois.gov:PWIDOT/Documents/IDOT Offices/District 5/Projects/D570905/CADData/CADSheets/D570905 sht- As Built SN092-0060

DETAIL OF POROUS GRANULAR EMBANKMENT
CULVERT S.N. 092–2045



(NOT DRAWN TO SCALE)

NOTE: LENGTH OF EXCAVATION BASED ON STRUCTURE PLANS, SEE TEMPORARY SHEET PILING DETAIL (STAGE II)

POROUS GRANULAR EMBANKMENT

POROUS GRANULAR EMBANKMENT SHALL EXTEND 2 FT. BEYOND THE AGGREGATE SHOULDER.

THE WORK SHOWN IN THE DETAIL SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 207 AND SECTION 540 OF THE STANDARD SPECIFICATIONS.

THE COARSE AGGREGATE QUALITY SHALL BE CLASS D OR BETTER AND THE GRADATION SHALL BE CA-6 OR CA-10.

POROUS GRANULAR EMBANKMENT WILL BE MEASURED FOR PAYMENT IN CUBIC YARDS, IN PLACE AS SHOWN. IF THE CONTRACTOR CHOOSES TO EXCAVATE BEYOND THE LIMITS SHOWN, ADDITIONAL QUANTITIES OF POROUS GRANULAR EMBANKMENT WILL BE AT HIS/HER OWN EXPENSE.

THE AREA TO BE EXCAVATED FOR THE PROPOSED BOX CULVERT AND END SECTIONS SHALL NOT BE MEASURED FOR PAYMENT.

BILL OF MATERIAL

Item	Unit	Total
POROUS GRANULAR EMBANKMENT	CU YD	840.0

POROUS GRANULAR EMBANKMENT

MODEL: SMODELNAMES
FILE NAME: pw:\\dparoom.dot.illinois.gov:PWIDOT\Documents\IDOT Office\sDistrict 5\Projects\D5709805\CADD\cad\CADsheets\D5709805-sht-PGE_092-2045

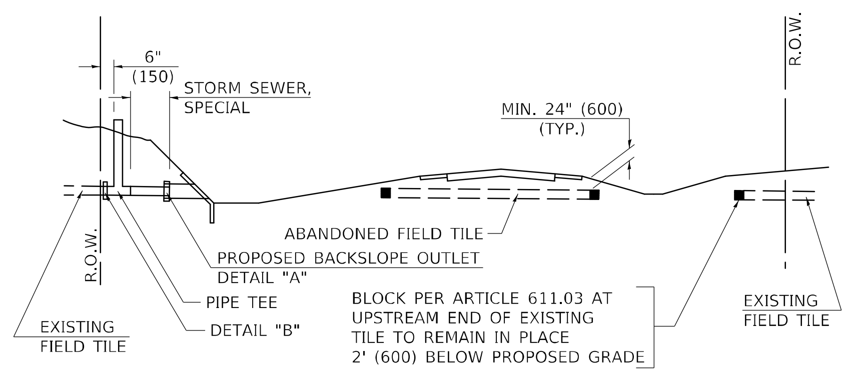
USER NAME = monjardinirt	DESIGNED -	REVISED -	TJB
	DRAWN -	REVISED -	TJB
PLOT SCALE = 44.0196 ' / in.	CHECKED -	REVISED -	TJB
PLOT DATE = 8/11/2021	DATE -	REVISED -	05/2020

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL OF POROUS GRANULAR EMBANKMENT
S.N. 092– 2045

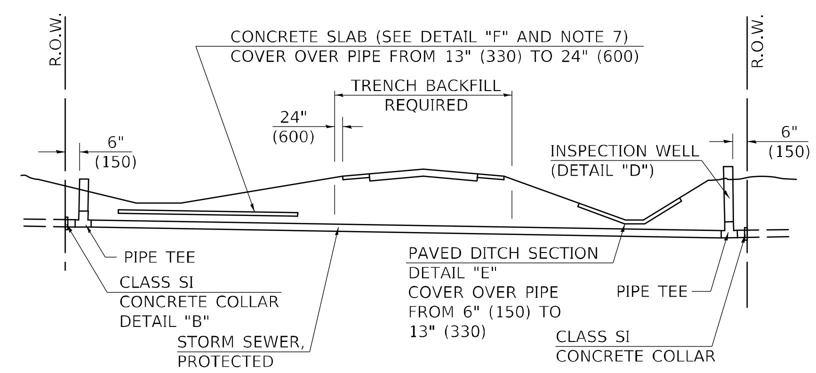
SCALE: | SHEET 2 OF 2 SHEETS | STA. 730+52.85 | TO STA. 731+44.26

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	49
		CONTRACT NO. 70905		
		ILLINOIS	FED. AID PROJECT	



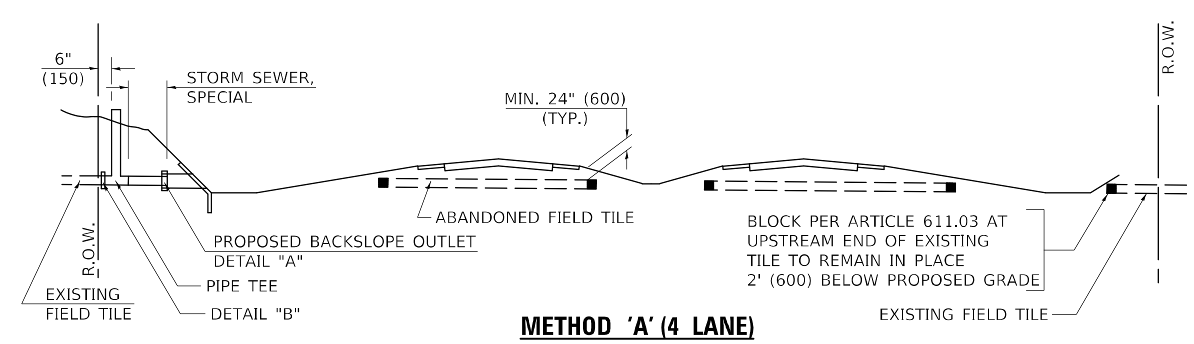
METHOD 'A' (2 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



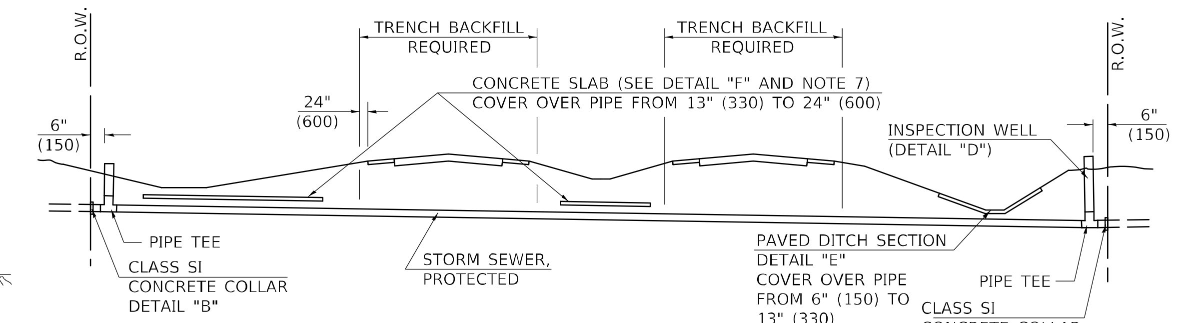
METHOD 'B' (2 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENT AND PAVED DITCH



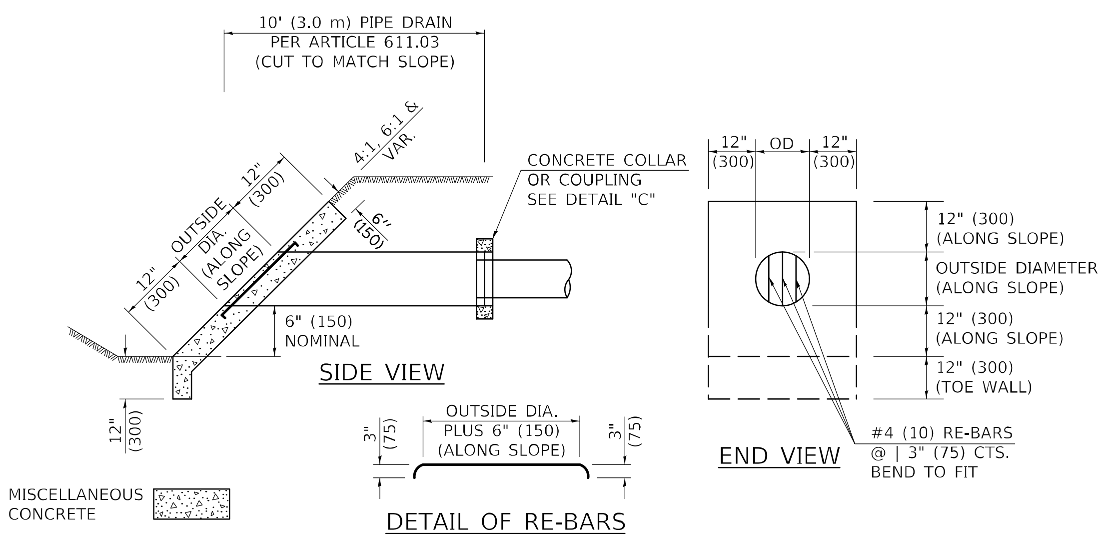
METHOD 'A' (4 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



METHOD 'B' (4 LANE)

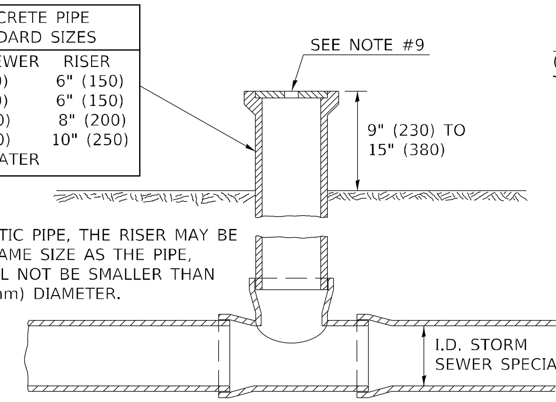
STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENTS AND PAVED DITCHES



HEADWALL FOR BACKSLOPE OUTLET

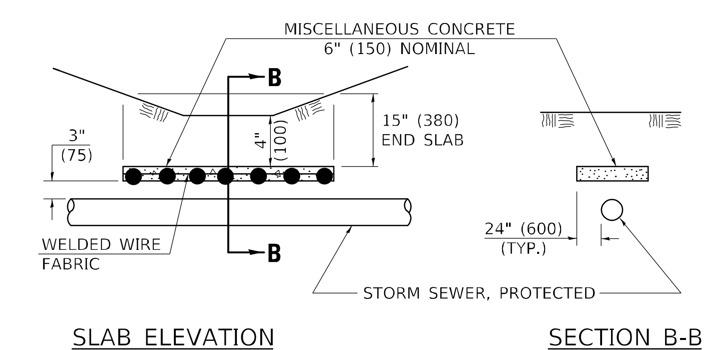
DETAIL "A"

CONCRETE PIPE STANDARD SIZES	
STORM SEWER	RISER
6" (150)	6" (150)
8" (200)	6" (150)
10" (250)	8" (200)
12" (300) OR GREATER	10" (250)



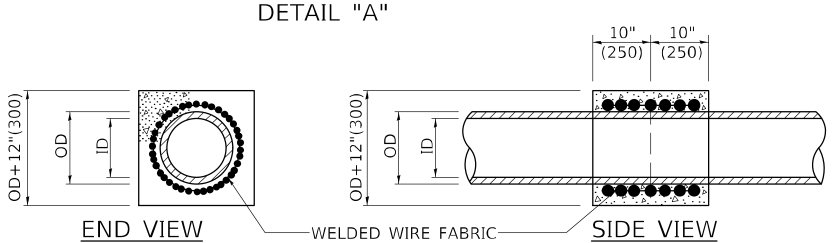
INSPECTION WELL

DETAIL "D"



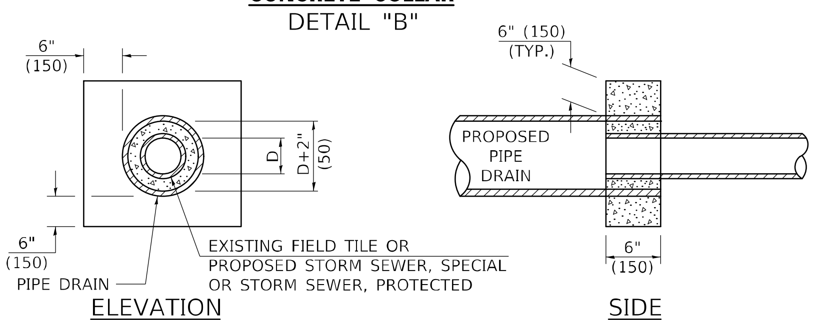
CONCRETE SLAB

DETAIL "F"



CONCRETE COLLAR

DETAIL "B"

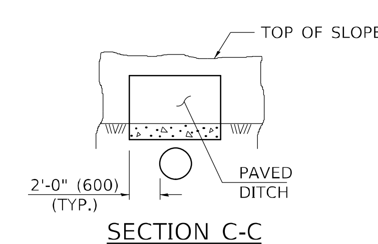


CLASS SI COLLAR

DETAIL "C"

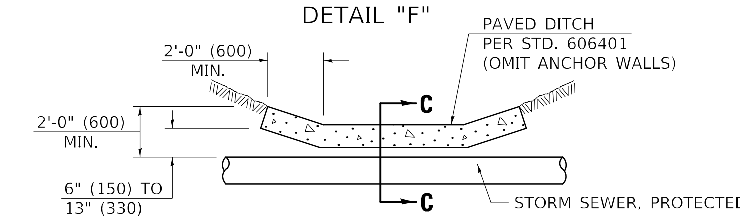
GENERAL NOTES

1. EXISTING FIELD TILE ENCOUNTERED BY EXPLORATION TRENCH SHALL BE INSPECTED BY THE ENGINEER FOR UNOBSTRUCTED FLOW WITHIN THE LIMITS OF THE RIGHT-OF-WAY.
2. ONLY FIELD TILE THAT DOES NOT HAVE SATISFACTORY FLOW AND OR HAS VISIBLE SIGNS OF DETERIORATION (SINK HOLES, ETC.) SHALL BE REPLACED WITHIN THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH METHOD "B".
3. INSPECTION WELLS SHALL BE CONSTRUCTED APPROXIMATELY 6" (150 mm) INSIDE OF BOTH RIGHT-OF-WAY LINES AT ALL FIELD TILE LOCATIONS.
4. EXISTING FIELD TILE ABANDONED UNDER EXISTING PAVEMENTS OR PAVED SHOULDERS SHALL BE FILLED WITH FLOWABLE GROUT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.
5. NON-CIRCULAR FIELD TILE SHALL BE REPLACED WITH STORM SEWER, SPECIAL OF AT LEAST THE SAME CROSS SECTIONAL AREA. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE MINIMUM DEPTH OF COVER.
6. THE 6" (150 mm) CONCRETE SLAB OR DITCH LINING SHALL BE POURED THE LENGTH OF THE TRENCH AT ALL DITCH FLOW LINE LOCATIONS WITHIN THE RIGHT-OF-WAY WITH LESS THAN 2' (600 mm) OF EARTH COVER. MISCELLANEOUS CONCRETE SHALL BE USED ACCORDING TO SECTION 611.
7. ALL MISCELLANEOUS SLABS, APRONS AND DITCH LININGS SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN FOR PAVED DITCH IN STANDARD 606401.
8. HEADWALL FOR BACKSLOPE OUTLET MAY BE USED FOR PIPE DRAIN DIAMETERS UP TO 10" (250 mm). SPECIAL DESIGNS WILL BE REQUIRED FOR LARGER SIZES.
9. THE INSPECTION WELL LID FOR P.C.C. PIPE SHALL BE CONSTRUCTED OF 3/8" (10 mm) CAST IRON AND PROVIDED WITH A 1" (25 mm) DIAMETER HOLE IN CENTER. THE LID FOR THE OTHER PIPE MATERIALS SHALL BE A GRATE ASSEMBLY PREFABRICATED FOR AND COMPATIBLE WITH THE PIPE SYSTEM.



PAVED DITCH

DETAIL "E"



PAVED DITCH ELEVATION

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 61101011A

USER NAME = piersonbr	DESIGNED -	REVISED - 11/06
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 3/12/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIELD TILE SYSTEMS (TREATMENT OF EXISTING)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	50

CONTRACT NO. 70905

ILLINOIS FED. AID PROJECT

MODEL: $MODELNAME$
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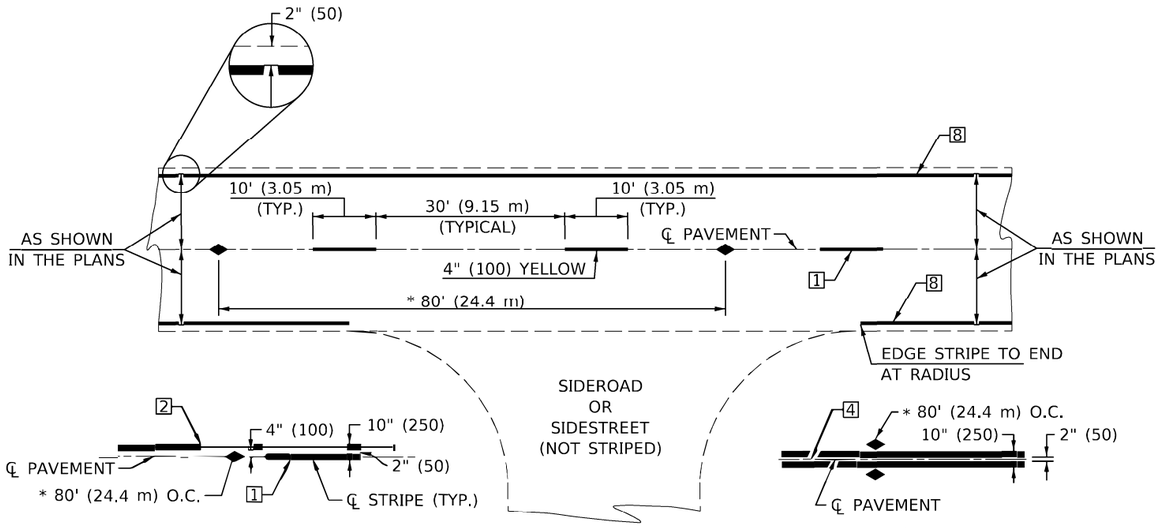


SINGLE NO PASSING

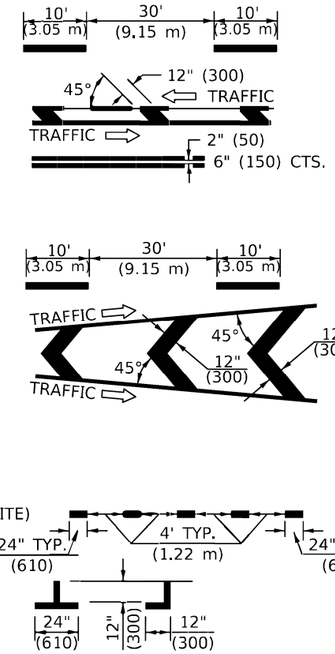
DOUBLE NO PASSING

* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

TWO LANE/TWO WAY

TYPICAL PAVEMENT MARKING LEGEND

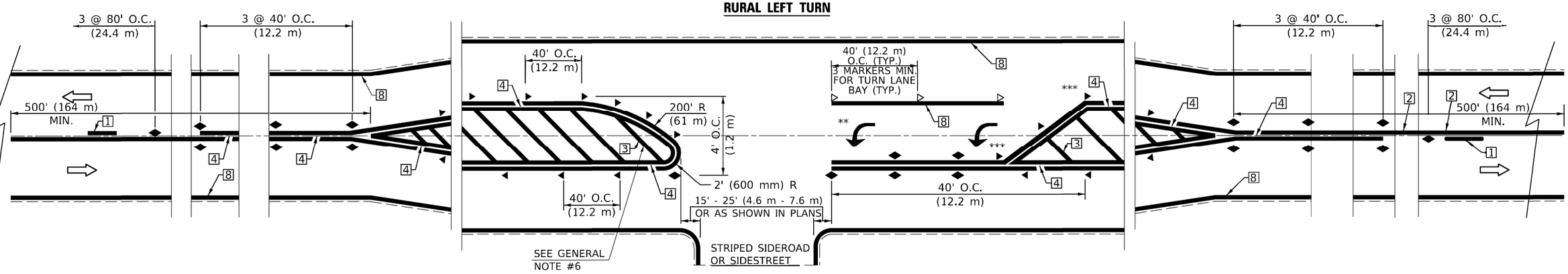
1. 4" (100) SKIP-DASH (YELLOW)
2. 4" (100) SOLID (YELLOW)
3. 12" (300) DIAGONAL (YELLOW)
4. 4" (100) DOUBLE YELLOW (NARROW)
5. RESERVED
6. RESERVED
7. 4" (100) SKIP-DASH (WHITE)
8. 4" (100) SOLID (WHITE)
9. 12" (300) DIAGONAL (WHITE)
10. 6" (150) SOLID (WHITE)
11. 24" (600) STOP BAR (WHITE)
12. 8" (200) SOLID (WHITE)
13. 4" (100) LANE LINE EXTENSIONS (WHITE)
14. 4" (100) PARKING WHITE



TYPICAL PAVEMENT MARKERS LEGEND

- TWO-WAY AMBER MARKER
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER

RURAL LEFT TURN



*** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

** TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

USER NAME = cearlockjd	DESIGNED -	REVISED -	11/06
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PLOT DATE = 3/14/2019	DATE -	REVISED -	3/2019 SWN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS)

SCALE: | SHEET 1 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	51
		CONTRACT NO. 70905		
		ILLINOIS FED. AID PROJECT		

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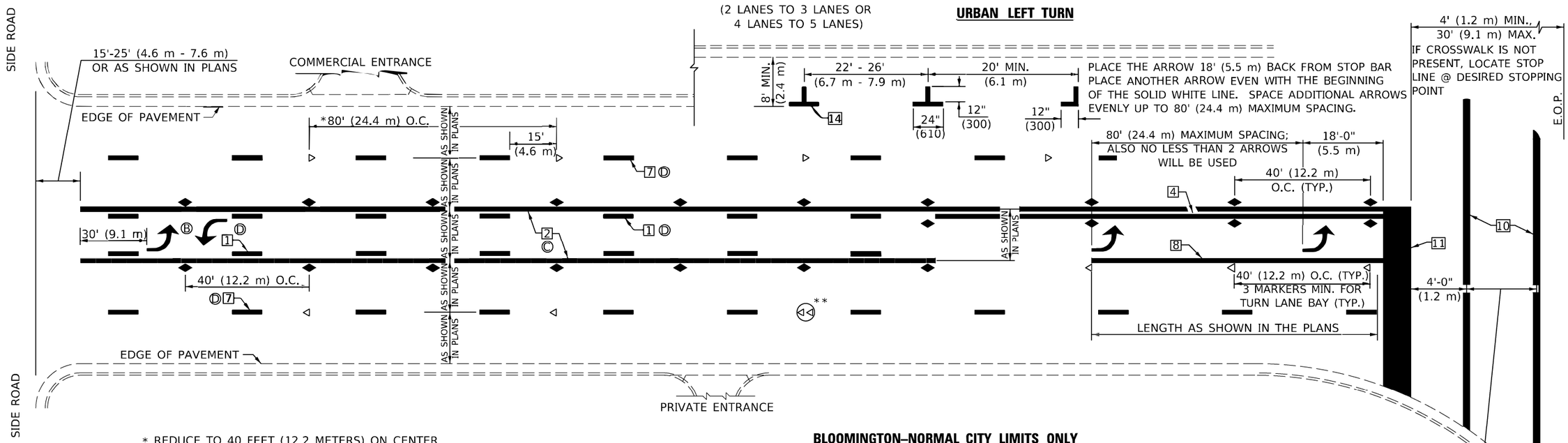
URBAN LEFT TURN



* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

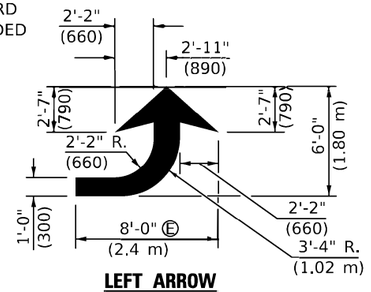
GENERAL NOTES:

Ⓑ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.

Ⓒ THE SOLID YELLOW PAVEMENT MARKINGS 2 SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.

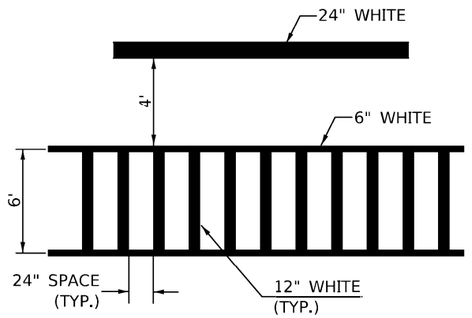
Ⓓ THE SKIP-DASH PAVEMENT MARKINGS 1 OR 7 SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.

Ⓔ USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)

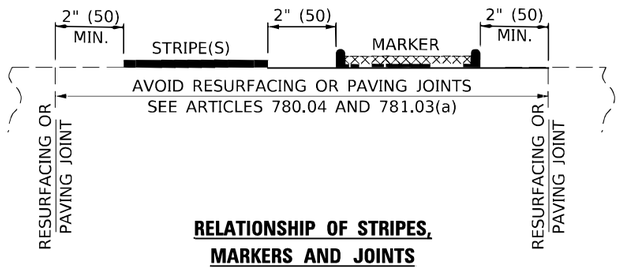


LEFT ARROW
REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m^2)
(WHITE)

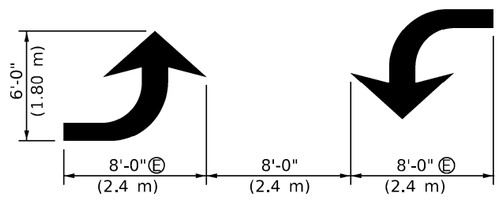
BLOOMINGTON–NORMAL CITY LIMITS ONLY



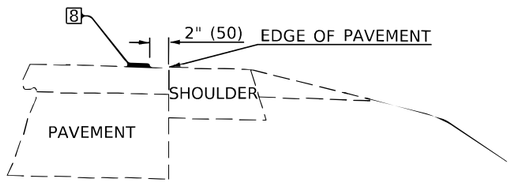
TYPICAL SPACING FOR CROSSWALKS & STOP BARS



RELATIONSHIP OF STRIPES, MARKERS AND JOINTS



TYPICAL DOUBLE TURN ARROWS (WHITE)



RELATIONSHIP OF EDGE LINE TO EDGE OF PAVEMENT
(SAFETY SHOULDER OR PAVED SURFACE)
SEE ARTICLE 780.04

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

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PLOT DATE = 3/14/2019	DATE -	REVISED -	3/2019 SWN

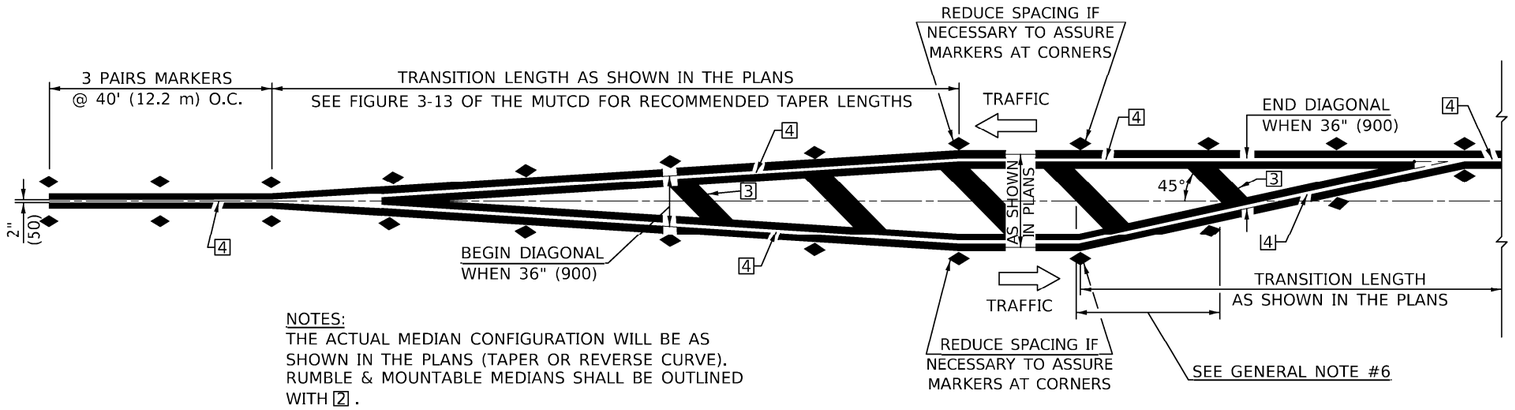
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS)

SCALE: | SHEET 2 OF 4 SHEETS | STA. | TO STA.

DISTRICT 5 DETAIL NO. 7800AAAA

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	52
		CONTRACT NO. 70905		
		ILLINOIS FED. AID PROJECT		

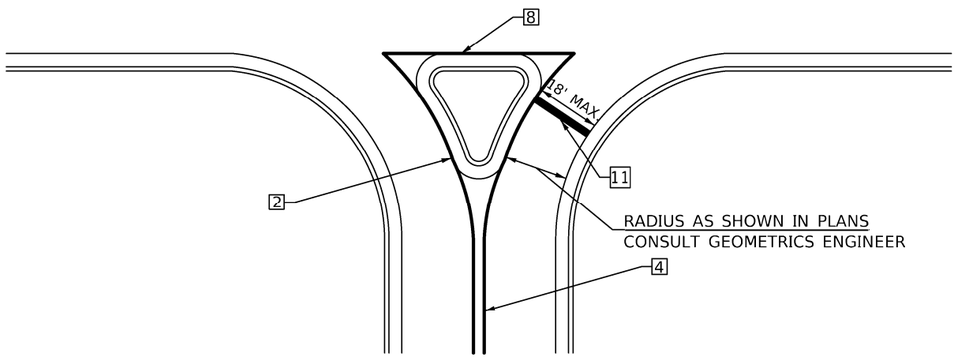


NOTES:
THE ACTUAL MEDIAN CONFIGURATION WILL BE AS SHOWN IN THE PLANS (TAPER OR REVERSE CURVE). RUMBLE & MOUNTABLE MEDIANS SHALL BE OUTLINED WITH [2] .

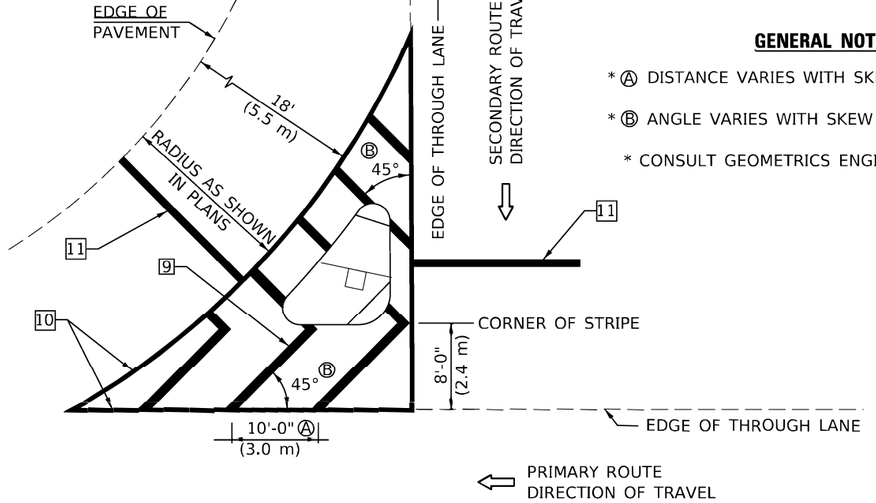
TYPICAL MEDIAN TRANSITIONS

GENERAL NOTES

1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,
   <30 MPH USE 15' (<50 km/h USE 4.5 m)
   30-45 MPH USE 20' (50-75 km/h USE 6.0 m)
   >45 MPH USE 30' (>75 km/h USE 9.0 m)



RIGHT IN – RIGHT OUT ACCESS



GENERAL NOTES

* Ⓐ DISTANCE VARIES WITH SKEW OF INTERSECTION.
* Ⓑ ANGLE VARIES WITH SKEW OF INTERSECTION.
* CONSULT GEOMETRICS ENGINEER

ISLAND

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

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PLOT DATE = 3/14/2019	DATE -	REVISED -	3/2019 SWN

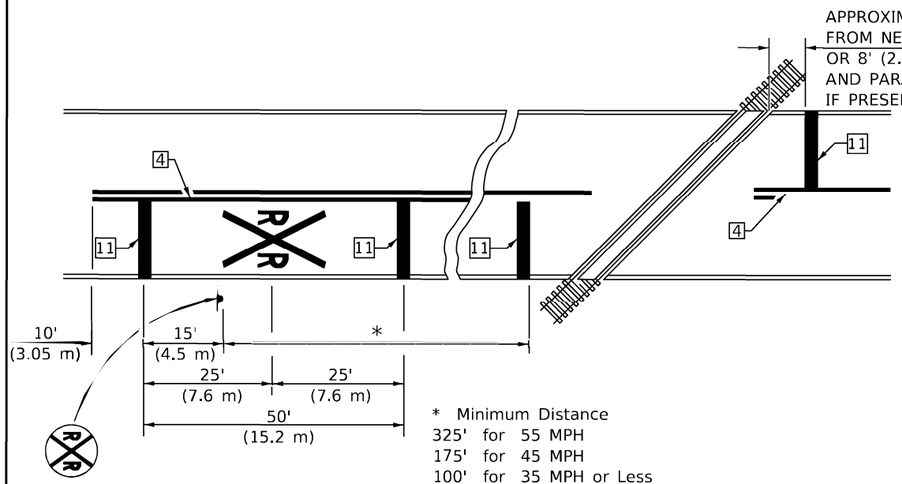
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

SCALE: | SHEET 3 OF 4 SHEETS | STA. | TO STA.

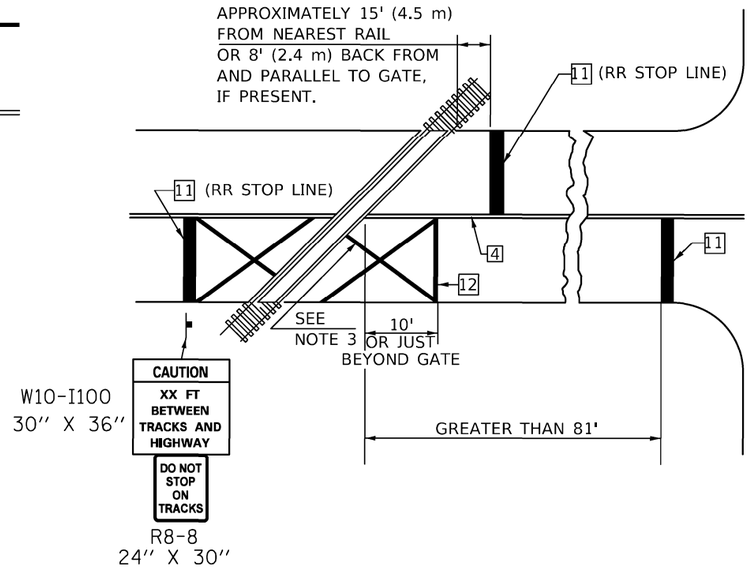
DISTRICT 5 DETAIL NO. 7800AAAA

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	53
		CONTRACT NO. 70905		
		ILLINOIS	FED. AID PROJECT	

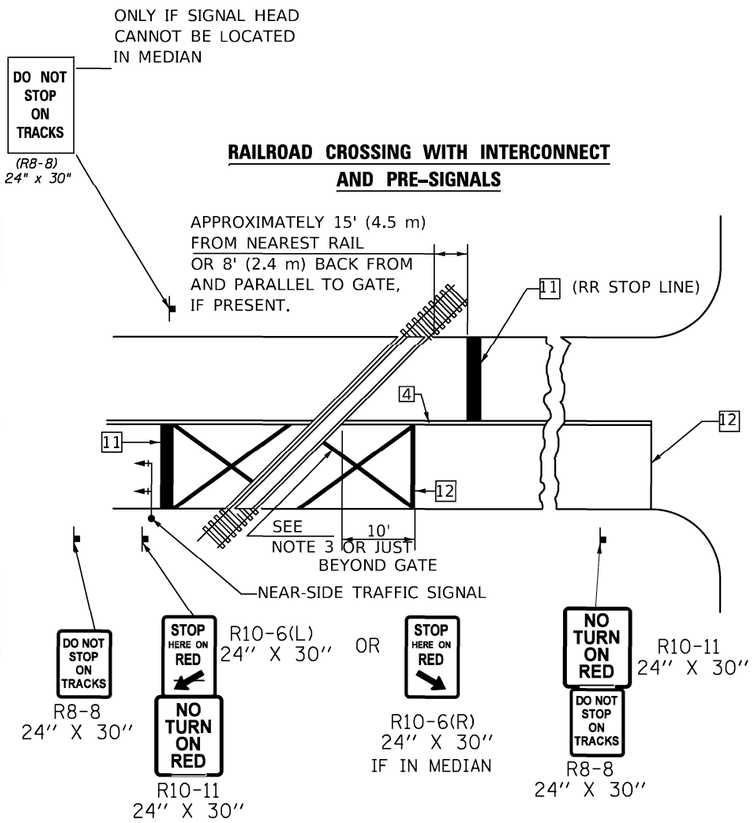


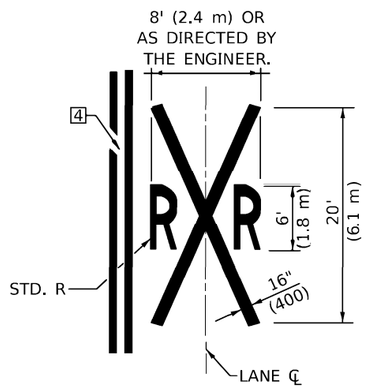
PAVEMENT MARKINGS AT
RAILROAD–HIGHWAY GRADE CROSSING

RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT
AND PRE–SIGNALS





GENERAL NOTES

1. SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.

2. EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.

3. 6" WHITE PAVEMENT MARKINGS AT 45° TO PAVEMENT, 8' CENTER TO CENTER.

4. XX DISTANCE TO BE SHOWN ON SIGN MEASURED FROM A POINT 6 FEET FROM THE RAIL CLOSEST TO THE INTERSECTION OR FROM THE CLOSEST POINT ALONG THE EXIT GATE IF PRESENT OVER THE ROADWAY WHEN IN THE LOWERED POSITION TO THE STOP BAR OR CROSSWALK, WHICH EVER IS CLOSEST, ROUNDED DOWN TO NEAREST 5 FEET. WHERE THERE IS NO STOP LINE, MEASURE TO POINT WHERE DRIVER HAS A VIEW OF APPROACHING TRAFFIC.

5. THE CLEARANCE SIGN IS ALSO TO BE USED AS AN INTERIM MEASURE AT LOCATIONS WITH INTERCONNECTED INTERSECTION TRAFFIC SIGNALS WHERE IT IS PLANNED TO CHANGE THEM TO NEAR-SIDE SIGNALS AT A FUTURE TIME. IN THIS CASE, THE DISTANCE TO BE SHOWN ON THE SIGN IS MEASURED FROM THE EDGE OF THE STRIPED-OUT AREA INSTEAD OF 6 FEET FROM THE RAIL. THE SIGN IS TO BE REMOVED WHEN THE NEAR-SIDE SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS EXTENDED TO THE INTERSECTION.

SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR
RAILROAD–HIGHWAY GRADE CROSSING

ALTERNATE SIGNS

NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DESIGNER NOTE: SEE TABLE 2C-4 OF THE MUTCD FOR ADDITIONAL INFORMATION

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PLOT DATE = 3/14/2019	DATE -	REVISED -	3/2019 SWN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

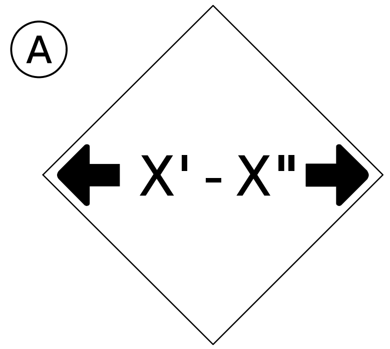
SCALE: | SHEET 4 OF 4 SHEETS | STA. | TO STA.

DISTRICT 5 DETAIL NO. 7800AAAA

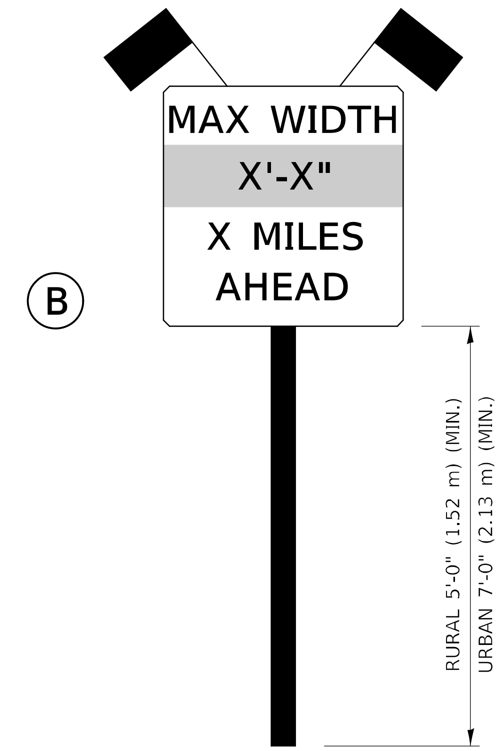
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	54
		CONTRACT NO. 70905		
	ILLINOIS FED. AID PROJECT			

DESIGNER NOTE: PROVIDE MAP WITH SIGN LOCATIONS (A, B, ETC.) AND COORDINATE WITH TRAFFIC OPERATIONS ENGINEER.

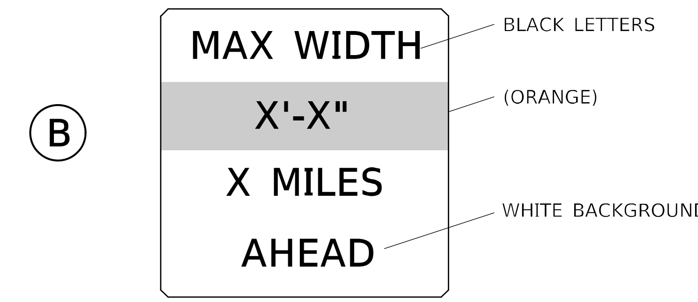
INCLUDE DISTRICT SPECIAL PROVISION -"WIDTH RESTRICTION SIGNING"



W12-2(0)-48"x48"(1200x1200)



SIGN PANEL, TYPE II



W12-I103(O)-48"x48"(1200x1200)
"D" LETTERS/NUMBERS

SIGN (A) 2 SIGNS - W12-2(O)-48"x48"(1200x1200) ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

SIGN (B) 2 SIGNS - (SIGN PANEL, TYPE II) AS SHOWN ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
2. ALL (B) SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
5. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
6. ALL SIGNS SHOWN ORANGE (O) SHALL BE FLUORESCENT ORANGE.
7. ALL SIGNS SHOWN SHALL CONSIST OF THE CURRENT RETROREFLECTIVE SHEETING REQUIREMENTS AS OUTLINED IN SECTION 1106.01 OF THE STANDARD SPECIFICATIONS BOOK.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

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	DRAWN -	REVISED - 10/08 KJT	
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PLOT DATE = 8/11/2021	DATE -	REVISED - 03/11 KJT	

WIDTH RESTRICTION SIGNING

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

DISTRICT 5 DETAIL NO. X7200201

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	55

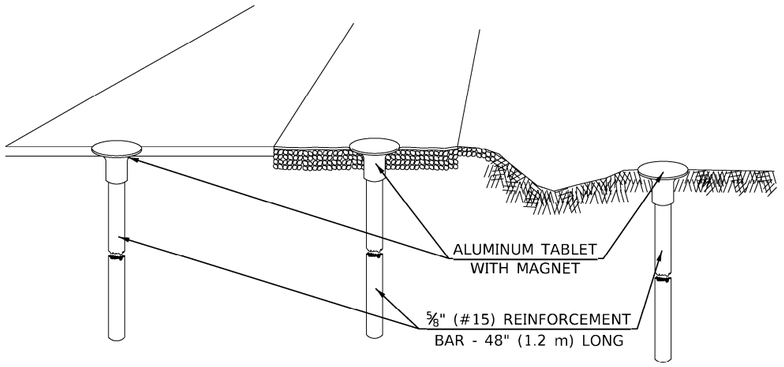
CONTRACT NO. 70905

ILLINOIS FED. AID PROJECT

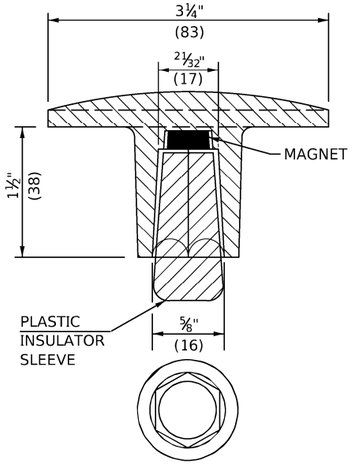
DESIGNER NOTE: BDE 58-8.02 "PLACE MARKERS AT THE PT'S AND PC'S OF ALL HORIZONTAL CURVES AND SPACE THEM ALONG TANGENTS SO THAT TWO MARKERS ARE ALWAYS INTERVISIBLE."

XZ193300 – SURVEY MARKER, TYPE 1 (SPECIAL)

TO BE INSTALLED IN FLEXIBLE PAVEMENT OR SHOULDER, BITUMINOUS TREATED SURFACE AND TURF AREAS WITHIN THE RIGHT-OF-WAY FOR PRESERVING PERMANENT SURVEY MARKERS (PI'S, PT'S, PC'S, POC'S, & POT'S)



IN FLEXIBLE PAVEMENT OR SHOULDER | IN BITUMINOUS TREATED SURFACE | IN TURF AREAS WITHIN R.O.W.



THE DIMENSIONS SHOWN SHALL BE EXACT, OTHERS MAY VARY, BUT SHALL BE SHOWN ON SHOP DRAWINGS.

GENERAL NOTES

1. THE CONTRACT UNIT PRICE, EACH, FOR SURVEY MARKER, TYPE 1 (SPECIAL) SHALL BE PAYMENT IN FULL FOR FURNISHING THE REINFORCEMENT BAR AND ALUMINUM TABLET AND FOR ALL LABOR AND MATERIAL REQUIRED TO SET THE MARKER IN PLACE.
2. ALL SURVEY MARKERS, TYPE 1 (SPECIAL) SHALL BE PLACED ±1/4" (6 mm) BELOW THE FINAL SURFACE.
3. WHEN THE TABLET AND REBAR ARE PLACED AS PART OF A SURVEY MARKER VAULT, THEY SHALL BE CONSIDERED AS INCLUDED IN THAT PAY ITEM AND THERE WILL BE NO PAYMENT FOR THE SURVEY MARKER, TYPE 1 (SPECIAL).

SPECIFICATIONS FOR ALUMINUM TABLET

SURVEY CAP FOR REBAR. 3¼" (83 mm) CONVEX SURVEY CAP FOR ⅝" (15 mm) REBAR WITH ILLINOIS DEPARTMENT OF TRANSPORTATION LOGO. THIS LOGO SHALL PROVIDE LETTERS RECESSED INTO THE SURFACE A MINIMUM OF 1/32" (0.8 mm) FOR EASY AND LONG-TERM LEGIBILITY. THE ALUMINUM CAP FOR REBAR SHALL BE PRODUCED BY THE PROCESS OF ORBITAL FORGING TO PRODUCE A HIGH-STRENGTH AND DURABLE MARKER CAP WHICH WILL NOT CHIP OR BREAK AND PROVIDE A SMOOTH FINISH FOR STAMPING OF DATA IN THE FIELD. THE ALUMINUM CAP FOR REBAR SHALL BE TAPERED FOR A PERFECT COMPRESSION FIT. A SPECIAL PLASTIC INSULATOR SHALL BE INSTALLED TO PREVENT DISSIMILAR METAL CONTACT AND CORROSION. THE PLASTIC INSULATOR SHALL FORM READILY TO THE OUTER SHAPE OF THE REBAR AND TO THE INNER SHAPE OF THE ALUMINUM CAP SOCKET. THE PLASTIC INSULATOR SHALL BE LOW DENSITY POLYETHYLENE, A MINIMUM 1½" (38 mm) LONG AND CONFORM TO FEDERAL SPECIFICATION L-P 390.

COMPOSITION: ALUMINUM 98.3-98.7%; OTHER 1.3-1.7%; STRENGTH: YIELD 28 KSI (193 MPa), ULTIMATE 32 KSI (221 MPa). ELONGATION 15% [IN 2" (50 mm)]. SPECIFICATIONS: ALUMINUM ALLOY 6101-0; ASTM B317-83 (EXCEPT TEMPER) AS FORGED. NO EXCEPTIONS.

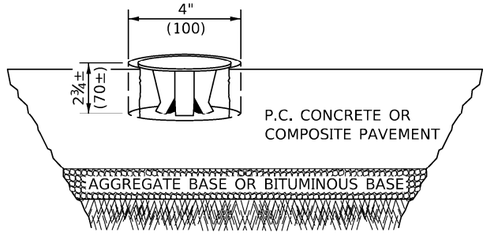
SPECIFICATIONS FOR REBAR

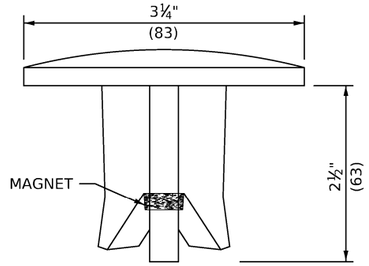
REBAR FOR ALUMINUM TABLET. REINFORCEMENT BAR SHALL BE ⅝" (#15) X 48" (1.2 m) (DEFORMED).

INSPECTION OF REINFORCEMENT BAR ⅝" (#15) SHALL BE DONE BY DISTRICT PERSONNEL OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS.

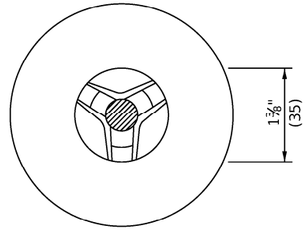
XZ193400 – SURVEY MARKER, TYPE 2 (SPECIAL)

TO BE INSTALLED IN RIGID OR COMPOSITE PAVEMENT FOR PRESERVING PERMANENT SURVEY MARKERS (PI'S, PT'S, PC'S, POC'S, & POT'S)





SIDE VIEW



BOTTOM VIEW

THE DIMENSIONS SHOWN SHALL BE EXACT, OTHERS MAY VARY, BUT SHALL BE SHOWN ON SHOP DRAWINGS.

SPECIFICATIONS FOR ALUMINUM TABLET (FORKED)

ALUMINUM TABLET (FORKED) FOR USE WITH "SURVEY MARKER, TYPE 2, (SPECIAL)" SHALL BE AS SHOWN ON THE DETAIL FOR THE 3¼" (83 mm) CONVEX SURVEY TABLET WITH ILLINOIS DEPARTMENT OF TRANSPORTATION LOGO. THIS LOGO SHALL PROVIDE FOR LETTERS RECESSED INTO THE SURFACE A MINIMUM OF 1/32" (0.8 mm) FOR EASY AND LONG-TERM LEGIBILITY. THE ALUMINUM TABLET SHALL BE PRODUCED BY THE PROCESS OF ORBITAL FORGING TO PRODUCE A HIGH-STRENGTH AND DURABLE MARKER CAP WHICH WILL NOT CHIP OR BREAK AND PROVIDE A SMOOTH FINISH FOR STAMPING OF DATA IN THE FIELD. THE ALUMINUM TABLET SHALL BE DESIGNED NOT TO TURN OR ROTATE. THREE PRONGS ON A 2½" (63 mm) STEM SHALL BE SUCH THAT THE ALUMINUM TABLET CANNOT BE EASILY REMOVED.

COMPOSITION: ALUMINUM 92-93%; MAGNESIUM 6.5-7.5%. STRENGTH: YIELD 19,000-21,000 PSI (131-145 MPa); TENSILE 38,000-44,000 PSI (262-303 MPa); ELONGATION 10-15% [IN 2" (50 mm)]. SPECIFICATIONS: ALLOY 535.0; QQ-A-601ES. NO EXCEPTIONS.

GENERAL NOTES

1. WORK ON THIS ITEM SHALL NOT START UNTIL THE FINAL SURFACE IS COMPLETED.
2. THE ALUMINUM TABLET (FORKED) SHALL REST UPON THE BOTTOM OF THE 4" (100 mm) CORE HOLE. IF THE HOLE IS TOO DEEP, EPOXY GROUT MUST BE USED TO DECREASE THE DEPTH AND ALLOWED TO HARDEN BEFORE PROCEEDING.
3. THE ALUMINUM TABLET SHALL BE ANCHORED IN THE 4" (100 mm) DIAMETER HOLE IN THE NEW PAVEMENT WITH TWO-COMPONENT EPOXY CONFORMING TO APPLICABLE PORTIONS OF ARTICLE 1025.01 OF THE STANDARD SPECIFICATIONS.
4. THE 4" (100 mm) CORE HOLE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
5. THE CONTRACT PRICE, EACH, FOR SURVEY MARKER, TYPE 2 (SPECIAL) SHALL BE PAYMENT IN FULL FOR FURNISHING THE ALUMINUM TABLET AND FOR ALL LABOR AND MATERIAL REQUIRED TO SET THE MARKER IN PLACE, AS SPECIFIED, INCLUDING CORING THE NEW PAVEMENT.
6. ALL SURVEY MARKERS, TYPE 2 (SPECIAL) SHALL BE PLACED ± 1/4" (6 mm) BELOW THE FINAL SURFACE.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

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	DRAWN -	REVISED -	11/10
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PLOT DATE = 3/12/2018	DATE -	REVISED -	

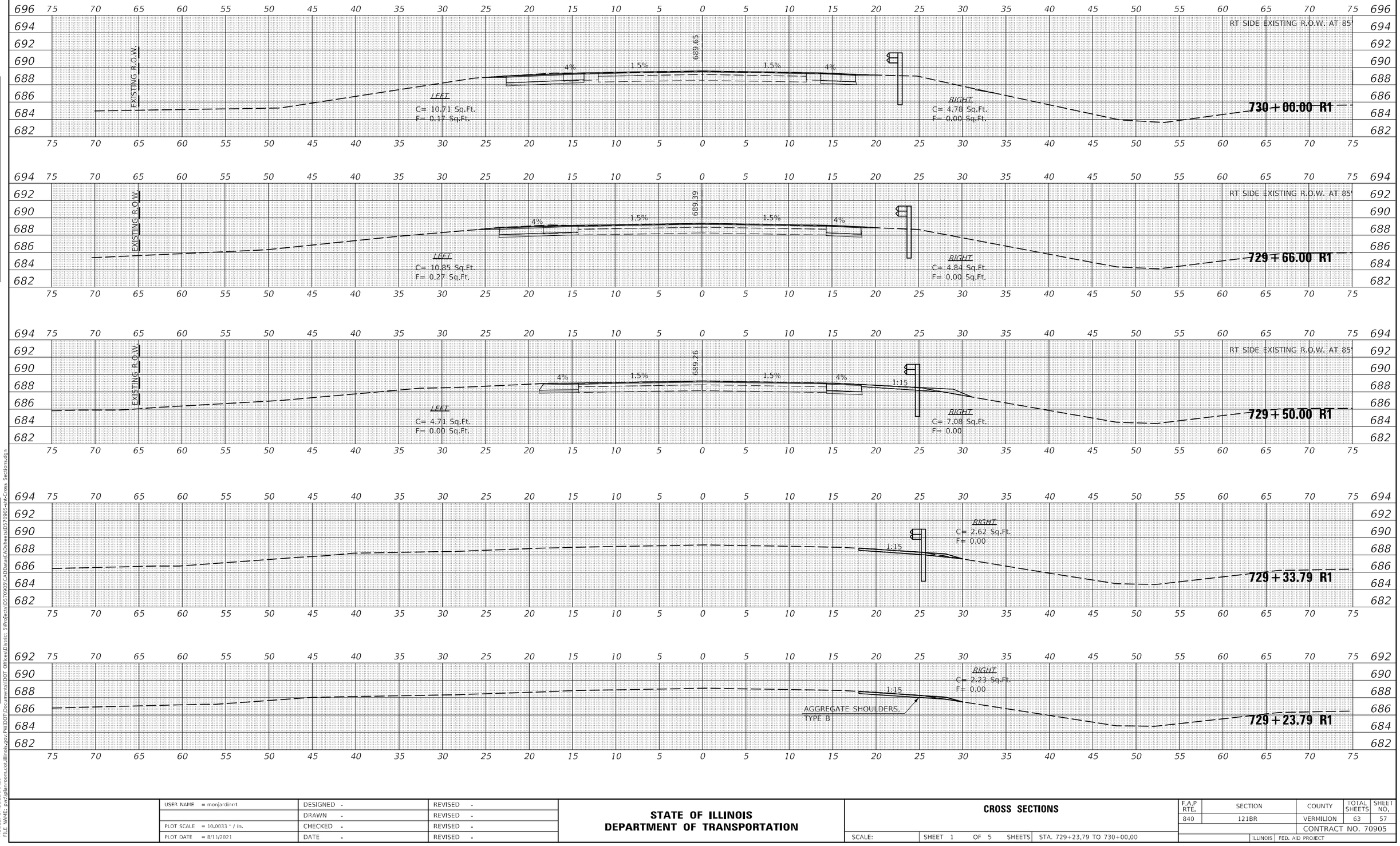
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SURVEY MARKERS TYPE 1 & 2 (SPECIAL)

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

DISTRICT 5 DETAIL NO. XZ193AAA

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	56
		CONTRACT NO. 70905		
	ILLINOIS FED. AID PROJECT			



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

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	DRAWN -	REVISED -	
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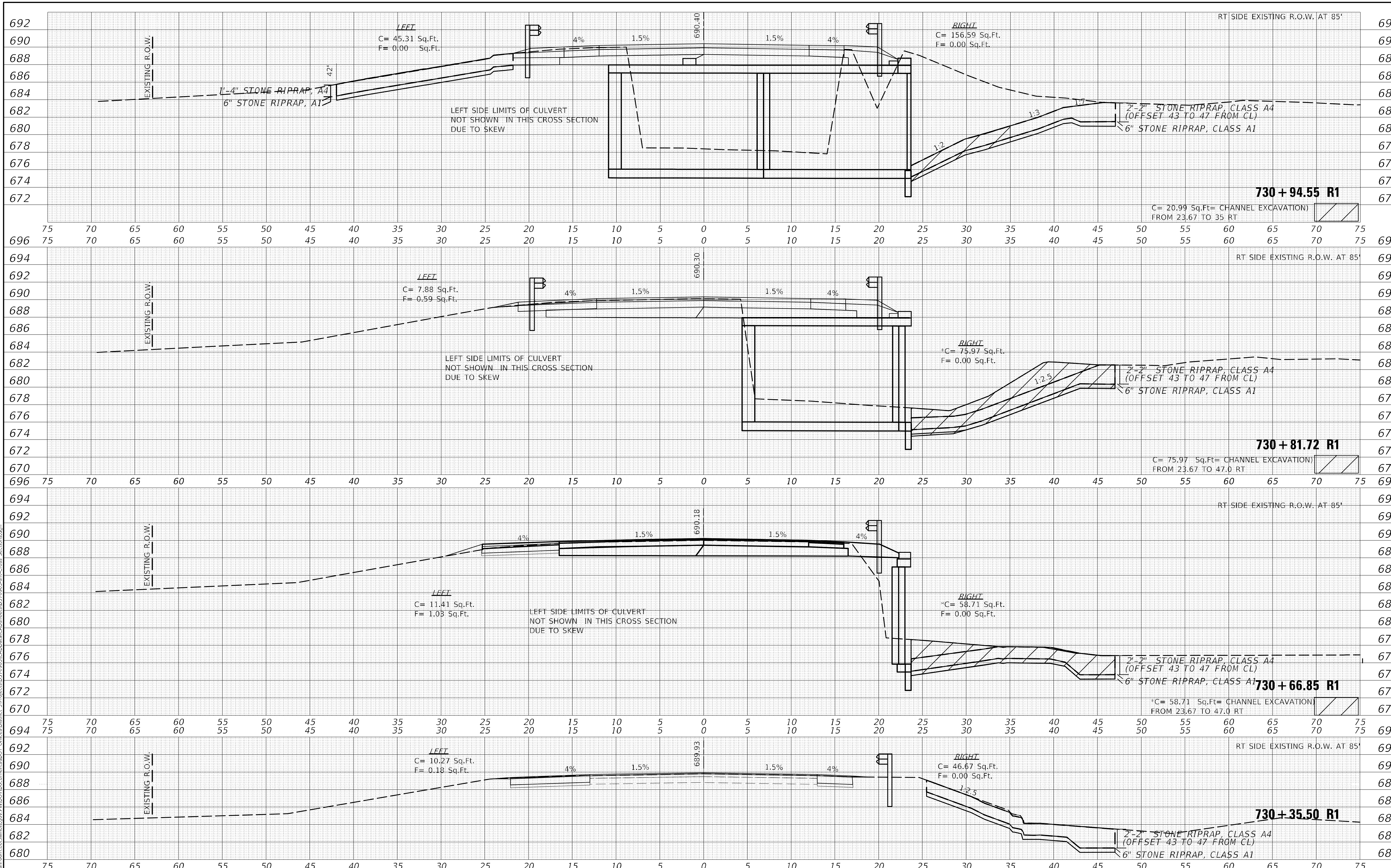
PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET 1 OF 5 SHEETS | STA. 729+23.79 TO 730+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	57
		CONTRACT NO. 70905		
		ILLINOIS	FED. AID PROJECT	



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

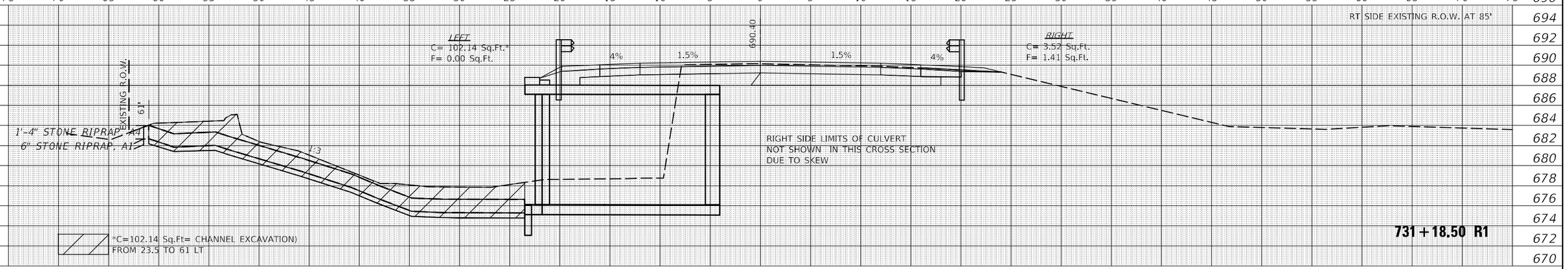
CROSS SECTIONS

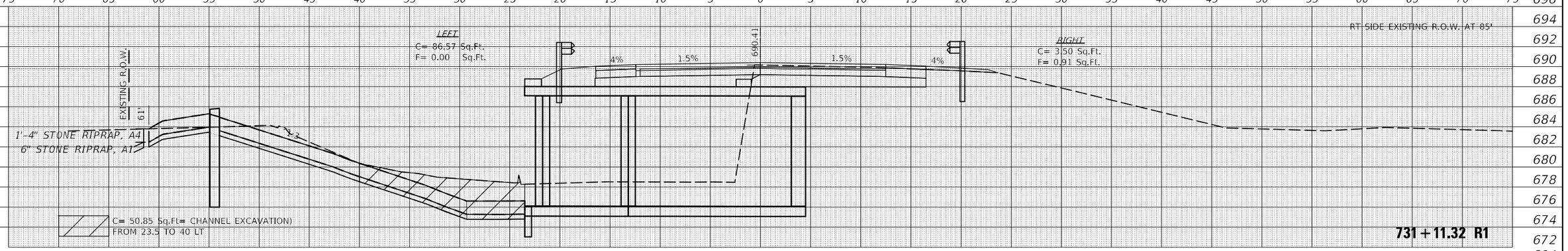
SCALE: SHEET 2 OF 5 SHEETS STA. 730+35.50 TO 730+94.55

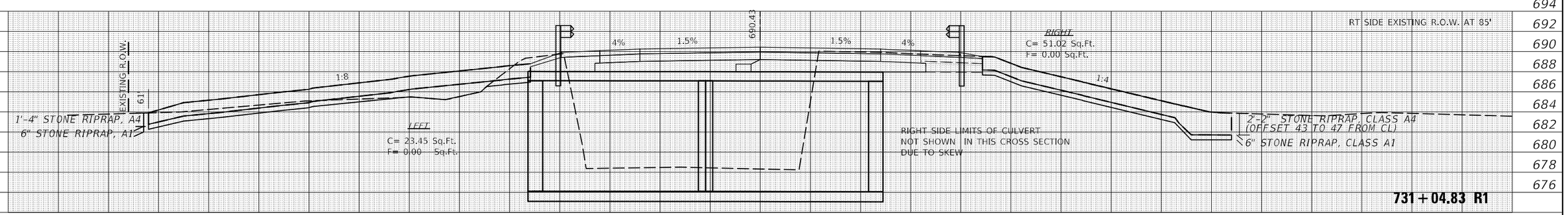
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	58

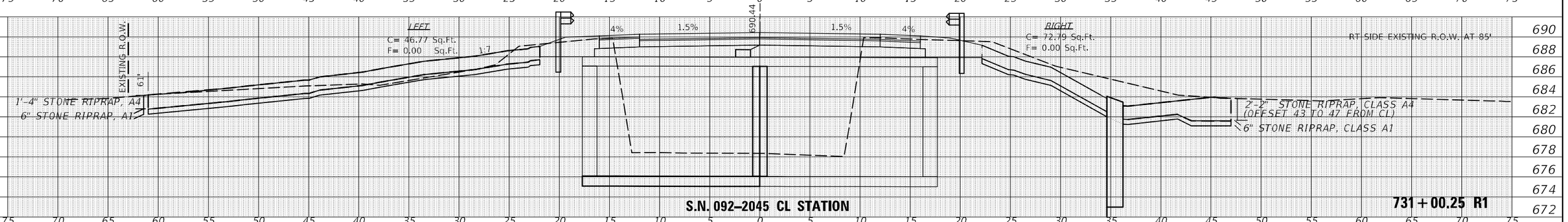
CONTRACT NO. 70905

ILLINOIS FED. AID PROJECT









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	DRAWN -	REVISED -	
PLOT SCALE = 10.0038 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/11/2021	DATE -	REVISED -	

CROSS SECTIONS

SCALE: | SHEET 3 OF 5 SHEETS | STA. 731+11.32 TO 731+33.39

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	59
		CONTRACT NO. 70905		
		ILLINOIS FED. AID PROJECT		

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

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

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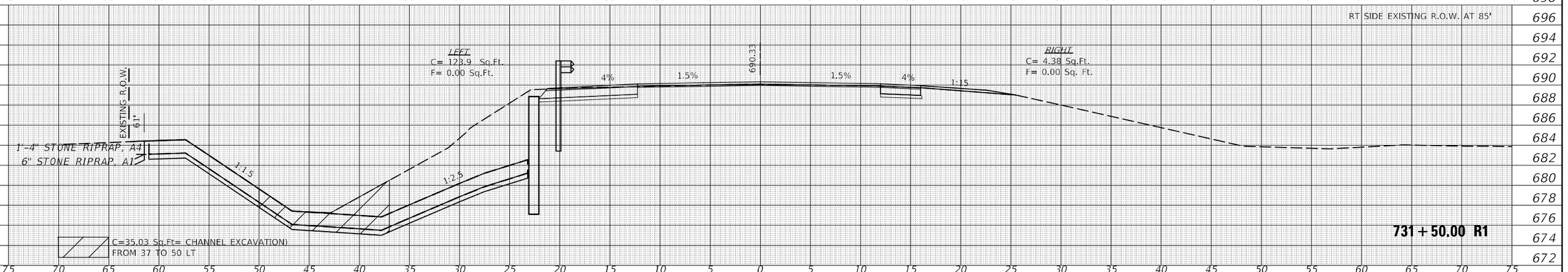

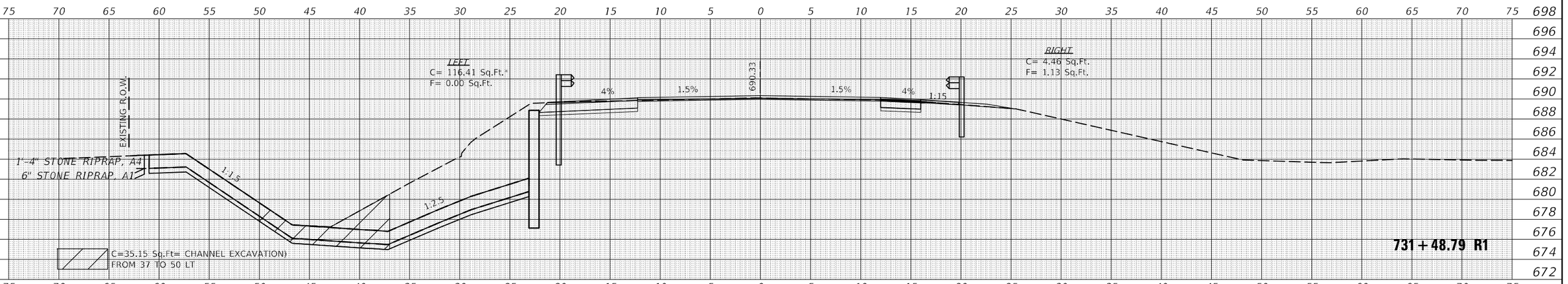

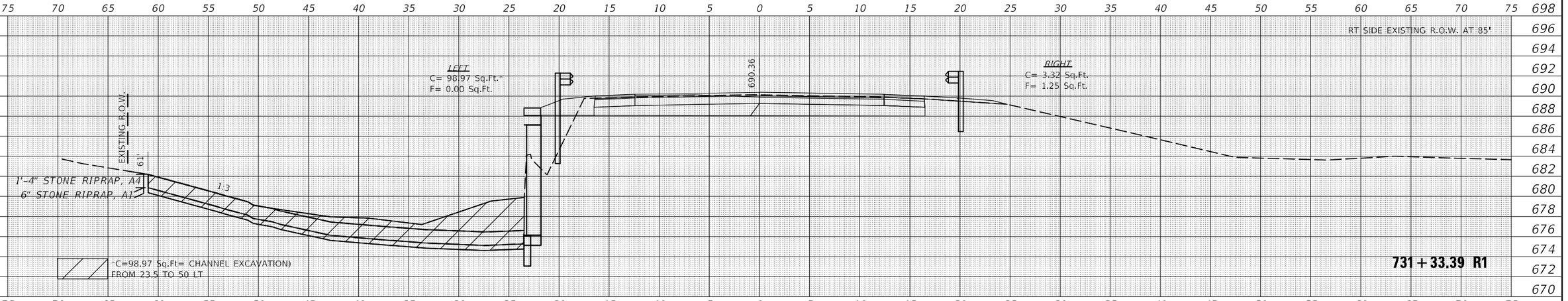

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PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET 4 OF 5 SHEETS | STA. 731+33.39 TO 731+58.79

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	60
		CONTRACT NO. 70905		
	ILLINOIS	FED. AID PROJECT		

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

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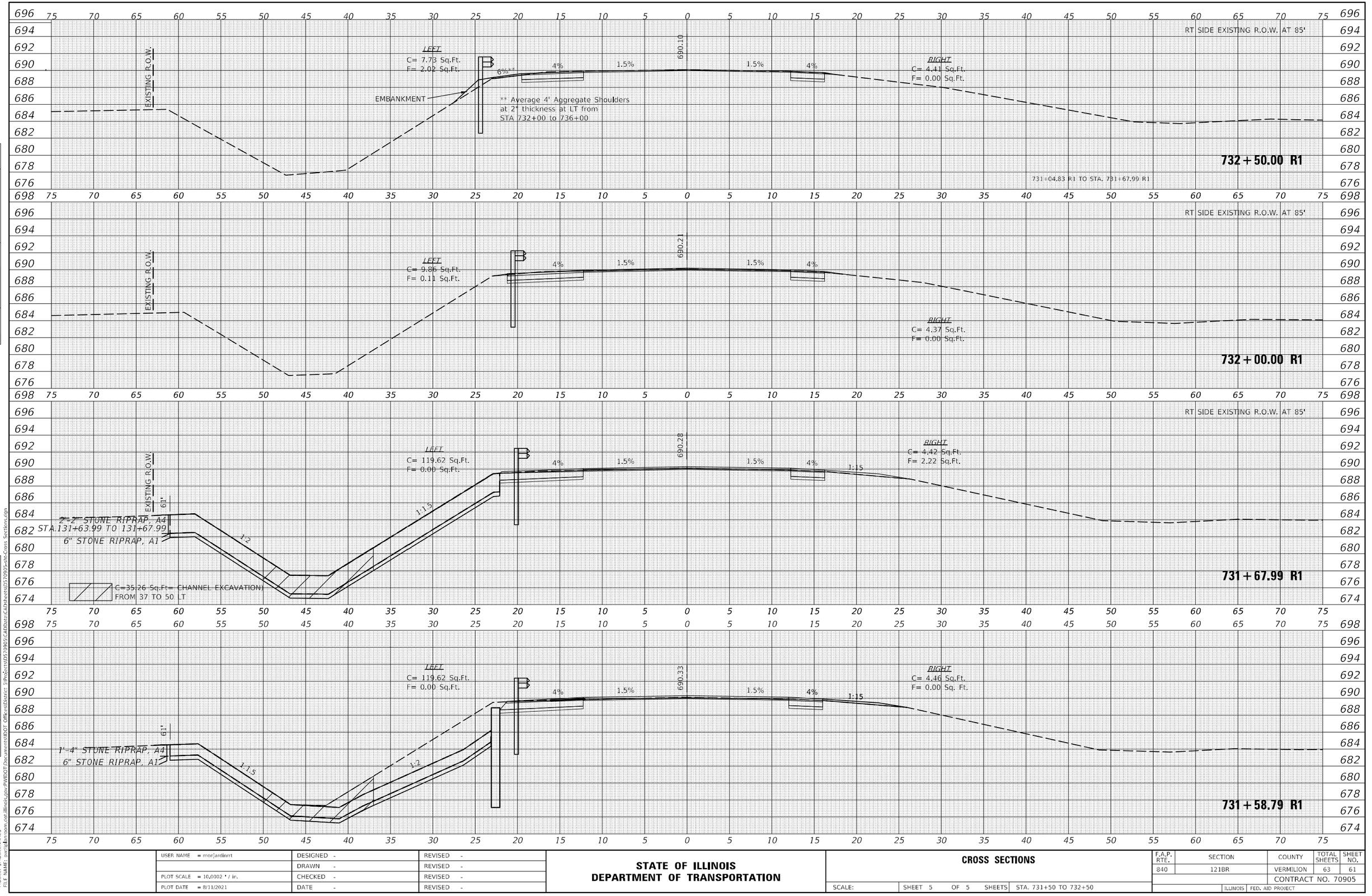

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET 5 OF 5 SHEETS | STA. 731+50 TO 732+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	61
		CONTRACT NO. 70905		
		ILLINOIS	FED. AID PROJECT	

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

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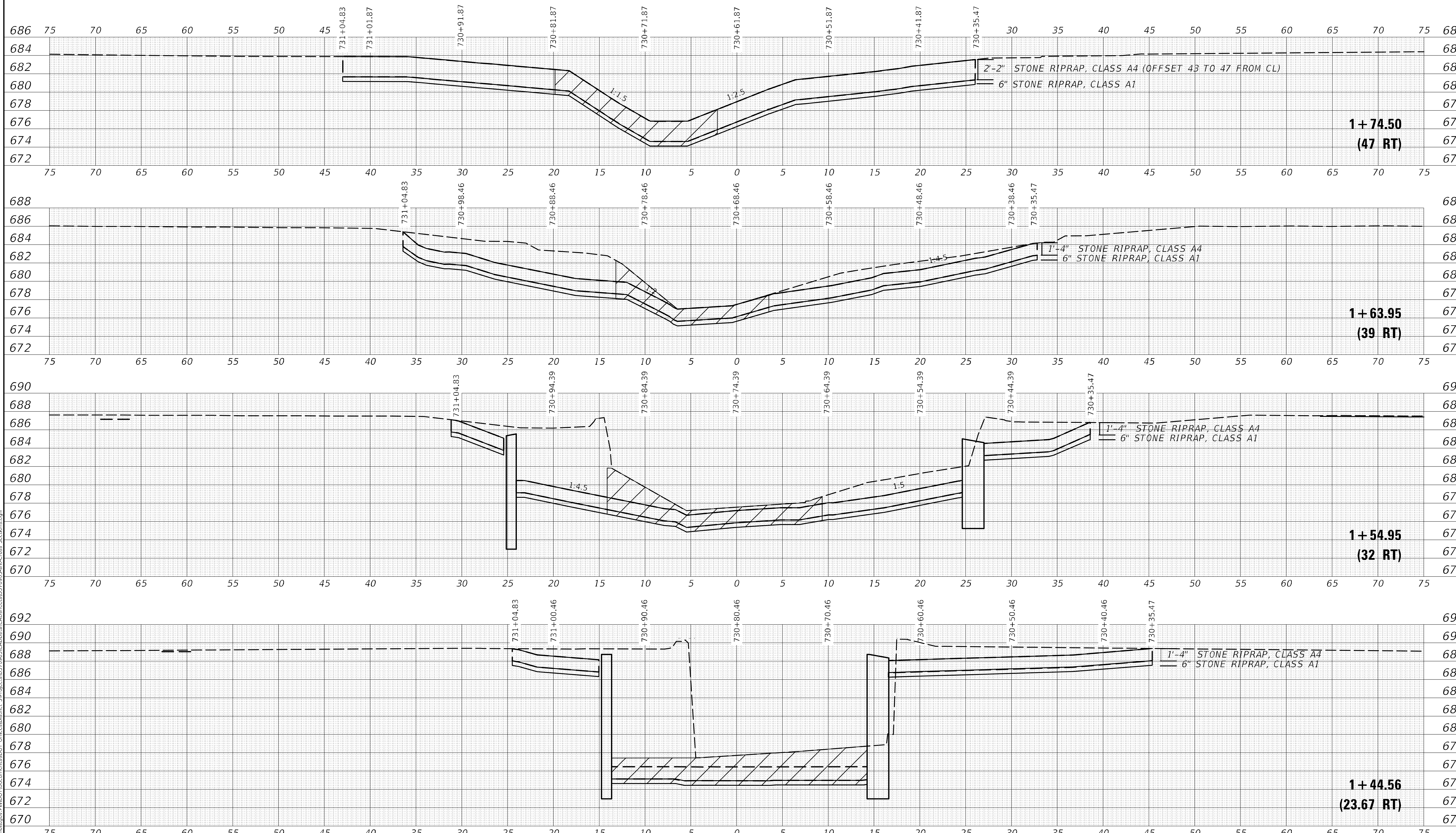

CHANNEL EXCAVATION

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PLOT SCALE = 10.0039 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

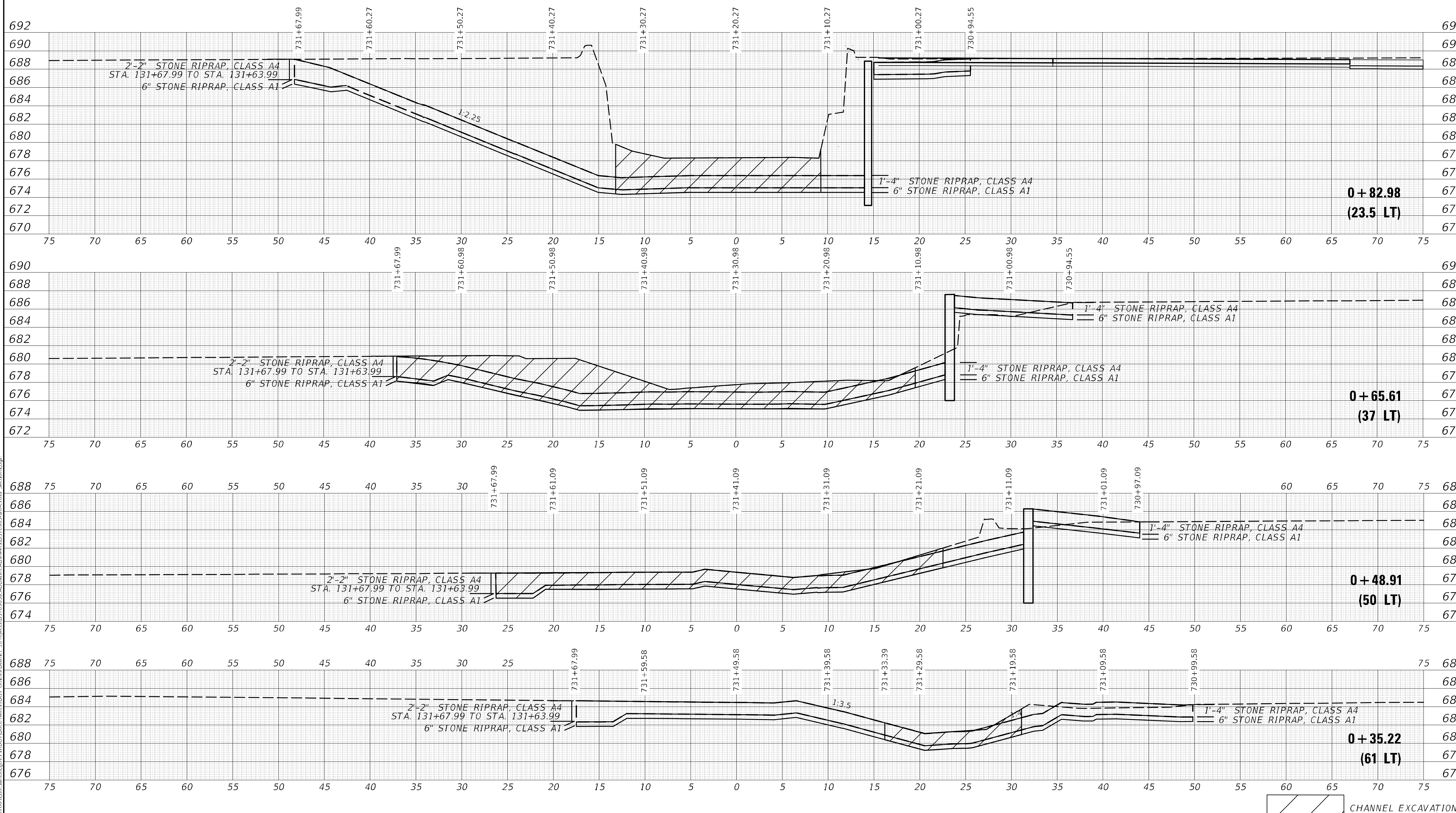
DITCH CROSS SECTIONS
RIGHT SIDE FROM 23.67 TO 47 FROM IL 49 CL

SCALE: SHEET 1 OF 2 SHEETS STA. RT 1+44.56 TO 1+74.50

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	62

CONTRACT NO. 70905

ILLINOIS FED. AID PROJECT



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PLOT DATE = 8/11/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DITCH CROSS SECTIONS
LEFT SIDE FROM 23.5 TO 61 FROM IL 49 CL

SCALE: SHEET 2 OF 2 SHEETS STA. LT 0+35.2 TO 0+82.98

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	121BR	VERMILION	63	63

CONTRACT NO. 70905

ILLINOIS FED. AID PROJECT

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