

SHEET NO. DESCRIPTION

- ROADWAY PLANS**
- COVER SHEET
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- GENERAL PLAN & ELEVATION
 - GENERAL DATA
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 - SOIL BORINGS
- EXISTING STRUCTURE PLANS**
SN 035-2000
- EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY
- CROSS SECTIONS**
- FAP 782 (IL 1) CROSS SECTIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

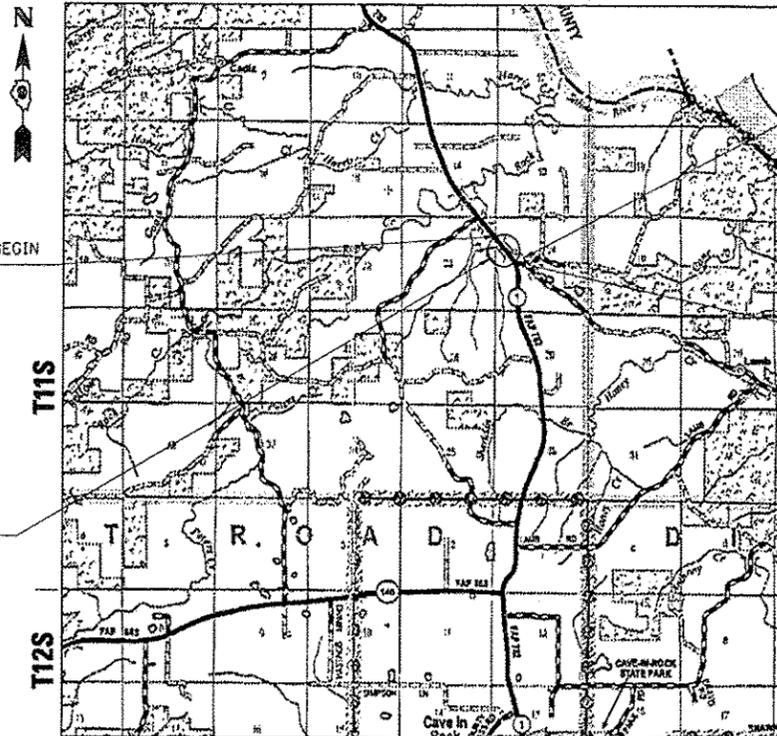
**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 782 (IL 1)
SECTION 115B-2
PROJECT ACF-0782 (014)
HARDIN COUNTY

C - 99 - 050 - 13

BOX CULVERT REPLACEMENT
OVER TRIBUTARY TO ROCK CREEK

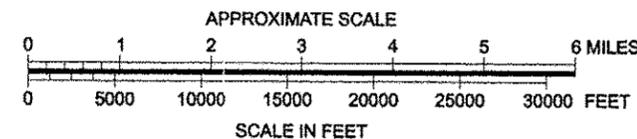
R9E, 3RD PM | R10E



LOCATION MAP

EXISTING STRUCTURE NO. 035-2000
STATION 1035+43.70
PROPOSED STRUCTURE NO. 035-2005
STATION 1035+43.70
PROPOSED STRUCTURE IS A
DOUBLE 12'Sx9'R BOX CULVERT
SKEWED 60° LEFT FORWARD

DESIGN
DESIGNATION
N.A.



GROSS LENGTH = 524 FT. = 0.099 MI.
NET LENGTH = 524 FT. = 0.099 MI.



FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL (NON URBAN)
DESIGN SPEED: 55 mph
POSTED SPEED: 55 mph
ADT: 1,328 (2011)
PV: 78.5%
TRUCKS: 21.5%
TOWNSHIP: ROAD DISTRICT NO. 1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED December 10, 2014

[Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Jan 30 2015
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 30 2015
[Signature]
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

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

DISTRICT 9 NO. (618) 549-2171
PROJECT ENGINEER: DAVID PICHE

CONTRACT NO. 78378



[Signature] DATE: 11/2014
ILLINOIS PROFESSIONAL LICENSE NO. 37421
(EXPIRATION DATE: 11/30-15)

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-06	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
420001-08	PAVEMENT JOINTS
420601-05	24' (7.2 m) PCC PAVEMENT
420701-02	PAVEMENT FABRIC
515001-03	NAME PLATE FOR BRIDGES
630001-10	STEEL PLATE BEAM GUARDRAIL
630201-06	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-08	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001-01	DELINEATORS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-14	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-04	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-05	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

- THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.
- EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
- TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING NEW BASE COURSE.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
- THE THICKNESS OF HMA MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA MIXTURE IS PLACED.
- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THIS SHEET OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
- FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT-MIX ASPHALT	2.016 TONS/CU YD
ALL AGGREGATE	2.05 TONS/CU YD
BITUMINOUS MATERIALS:	
ON PAVEMENT	0.05 LB/SQ FT
INTERMEDIATE LIFTS (FOG COAT)	0.025 LB/SQ FT
ON AGGREGATE SURFACE	0.25 LB/SQ FT
AGGREGATE (PRIME COAT)	0.0015 TONS/SQ YD
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED.
- ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS SHALL BE FERTILIZED AND SEEDED. SEEDING SHALL BE CLASS 2A ACCORDING TO THE APPLICABLE ARTICLES OF SECTION 250 OF THE STANDARD SPECIFICATIONS. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
- TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER EXCEPT AS DESCRIBED IN NOTE 12. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.
- ALL OBSTRUCTIONS WHICH ARE WITHIN 30' OF THE CENTERLINE OF THE ROADWAY AND ARE NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED FROM STATION 1032+36 TO 1038+50. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ETC. WHICH PROJECT 4 IN. OR MORE ABOVE THE GROUNDLINE; AND TREES WHICH WILL MATURE TO A DIAMETER OF 4 IN. OR GREATER.

- THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION FOR THE INITIAL OPENING OF THE COMPLETED STRUCTURE TO TWO LANE TRAFFIC, AND ONE ADDITIONAL APPLICATION.
- EXISTING TRAFFIC BARRIER TERMINALS TO BE REMOVED SHALL BE PAID FOR AS GUARDRAIL REMOVAL.
- FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
- ALL ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.
- AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.
- PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHOULD CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.
- RECLAIMED ASPHALT PAVEMENT (RAP) WILL NOT BE ALLOWED FOR USE AS AGGREGATE IN AGGREGATE SHOULDERS, TYPE B.
- IF THE CONTRACTOR ELECTS TO USE P.C.C. BASE COURSE WIDENING, SUCH WIDENING SHALL BE PRIMED ACCORDING TO ARTICLE 406.02, EXCEPT THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WIDENING.
- ATTAINMENT OF PROPER CROWN OR SUPERELEVATION SHALL BE FULLY ACCOMPLISHED WITH THE HOT MIX ASPHALT SURFACE REMOVAL OR HOT MIX ASPHALT BINDER COURSE OR LEVELING BINDER, WHEN SPECIFIED.

COMMITMENTS

- REFER TO COMMITMENT FILE FOR ANY COMMITMENTS AFTER DECEMBER 1, 2014.
- DUE TO THE PRESENCE OF THE INDIANA BAT AND GRAY BAT, CLEARING OF TREES SHALL BE PROHIBITED FROM APRIL 1 THROUGH SEPTEMBER 30.

HMA MIXTURES REQUIREMENTS

LOCATION(S):	HMA SURFACING	LEVELING BINDER	BASE COURSE	HMA SHOULDERS
MIXTURE USE(S):	HMA SURFACE CSE, MIX C, N90	LEVELING BINDER (MM) N90	HMA BINDER CSE, N90, IL-19.0	HMA SHOULDERS
AC/PG GRADE:	PG64-22	PG64-22	PG64-22	PG58-22
RAP % (MAX.): ***	SEE SPECIAL PROVISIONS	SEE SPECIAL PROVISIONS	SEE SPECIAL PROVISIONS	SEE SPECIAL PROVISIONS
DESIGN AIR VOIDS:				
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5	IL-9.5	IL-19.0	HMA SHOULDERS
FRICTION AGGREGATE:	C SURFACE	NONE	NONE	NONE

*** IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED AS DETERMINED BY THE ENGINEER.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREPARED BY: Joe Zdaniewicz
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: [Signature]
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: Carrie Helson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: Kul [Signature]
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: [Signature]
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: _____
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: [Signature]
DISTRICT MATERIALS ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES & STANDARDS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	2

CONTRACT NO. 78378

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

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



USER NAME = keh	DESIGNED - NHP	REVISED -
ESCA PROJECT NO. 1838.84	DRAWN - HAS	REVISED -
PLOT SCALE = 8.1667' / IN.	CHECKED - JMS	REVISED -
PLOT DATE = 11/28/2014 10:02:19 AM	DATE - 11/14	REVISED -

SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE
				0004	0011
				ROADWAY	S. N. 035-2005
20200100	EARTH EXCAVATION	CU YD	1235	1235	
20700220	POROUS GRANULAR EMBANKMENT	CU YD	760	264	496
25000210	SEEDING, CLASS 2A	ACRE	0.50	0.50	
25000350	SEEDING, CLASS 7	ACRE	0.50	0.50	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45	45	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	45	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	45	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1.0	1.0	
25100115	MULCH, METHOD 2	ACRE	0.50	0.50	
25100630	EROSION CONTROL BLANKET	SQ YD	2221	2221	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	100	100	
28000400	PERIMETER EROSION BARRIER	FOOT	1054	1054	
28100109	STONE RIPRAP, CLASS A5	SQ YD	353		353
28200200	FILTER FABRIC	SQ YD	353		353

14

⊗ SPECIALTY ITEM

ESCA CONSULTANTS, INC.
 11/24/2014 1:26:39 PM



USER NAME = kah
 ESCA PROJECT NO. 1035.04
 PLOT SCALE = 0.1667" / 1"
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DESIGNED - NHP
 DRAWN - HAS
 CHECKED - JMS
 DATE - 11/14

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE SHEET NO. 1 OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	1158-2	HARDIN	43	3
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	

SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE ROADWAY 0004	80% FEDERAL 20% STATE BRIDGE 0011
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	S. N. 035-2005
35650500	BASE COURSE WIDENING 10"	SQ YD	199	199	
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	972	972	
40600645	LEVELING BINDER (MACHINE METHOD), N90	TON	54	54	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	174	174	
40600990	TEMPORARY RAMP	SQ YD	30	30	
40603320	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	125	125	
42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	608	608	
42001200	PAVEMENT FABRIC	SQ YD	608	608	
44000100	PAVEMENT REMOVAL	SQ YD	384	384	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	339	339	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	159		159
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	57480		57480
50800515	BAR SPLICERS	EACH	390		390

14

⊕ SPECIALTY ITEM

ESCA CONSULTANTS, INC.
 1000 N. W. 10th St.
 Ft. Lauderdale, FL 33304
 TEL: 954.575.1100 FAX: 954.575.1101



USER NAME - kah	DESIGNED - NHP	REVISED -
ESCA PROJECT NO. 1035.04	DRAWN - HAS	REVISED -
PLOT SCALE - 0.1667" / 1"	CHECKED - JMS	REVISED -
PLOT DATE - 12/5/2014	DATE - 11/14	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE SHEET NO. 2 OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	1158-2	HARDIN	43	4
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	

SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE
				0004	0011
				ROADWAY	S. N. 035-2005
50900200	STEEL RAILING, TYPE 2399	FOOT	111		111
51500100	NAME PLATES	EACH	1		1
54003000	CONCRETE BOX CULVERTS	CU YD	300.0		300.0
⊗ 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	200	200	
⊗ 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4	
⊗ 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	658	658	
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	12	12	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	8	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	6	6	

⊗ SPECIALTY ITEM

14
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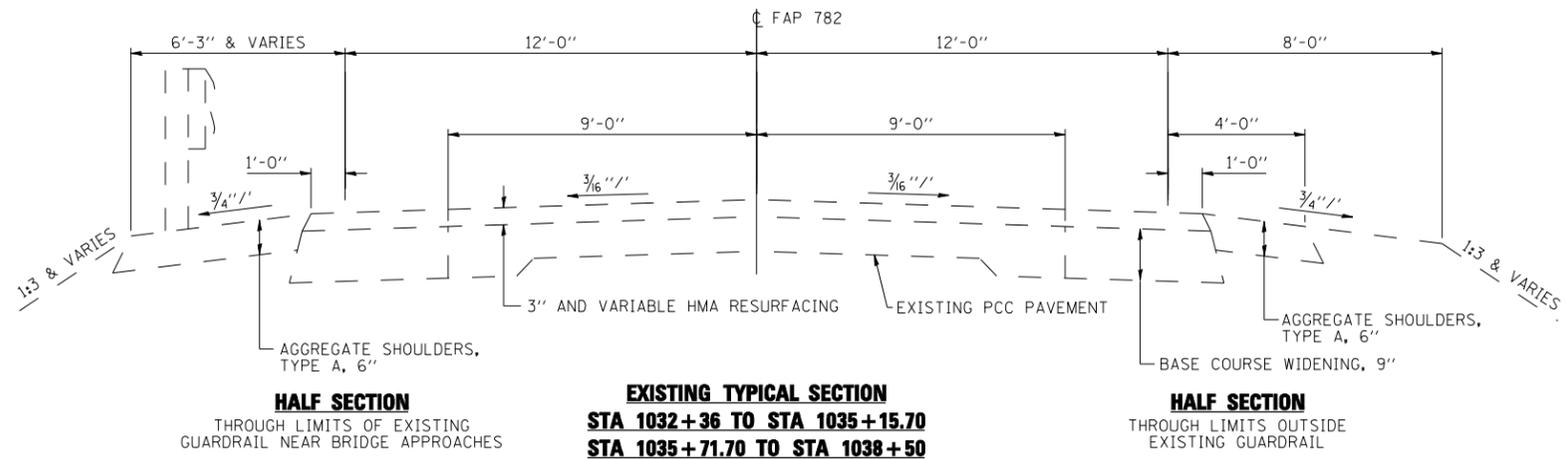
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

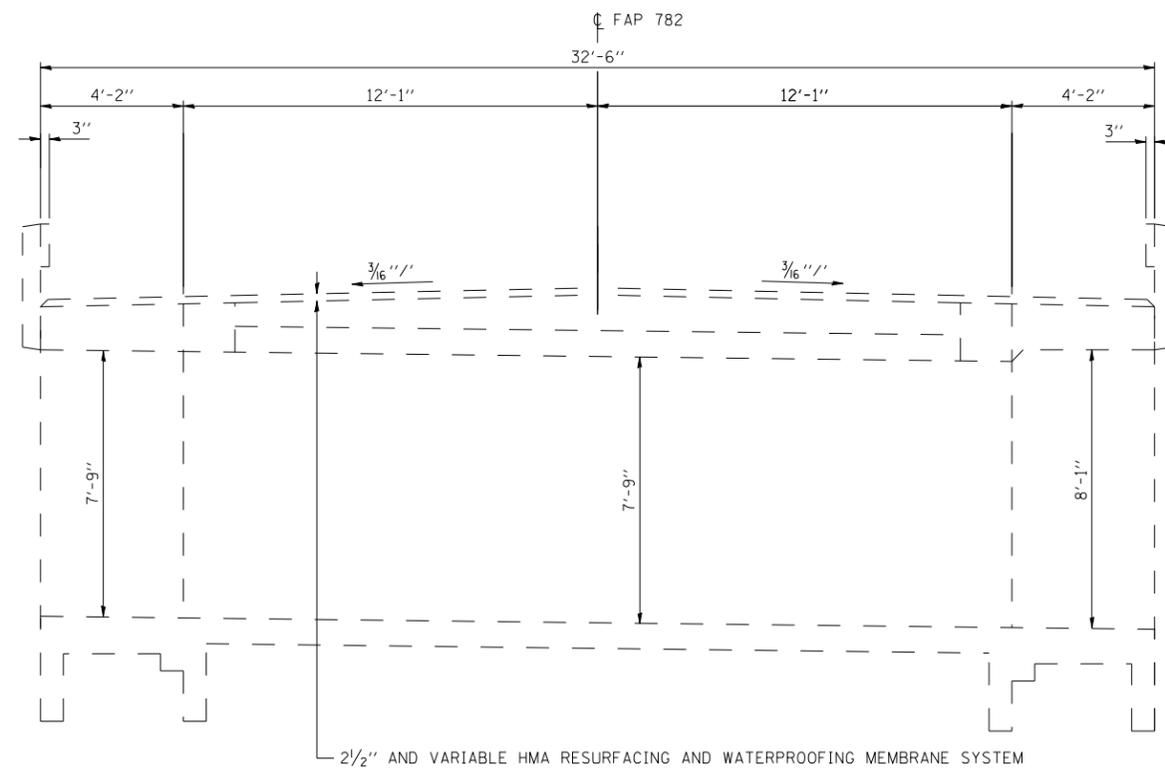
SUMMARY OF QUANTITIES

SCALE SHEET NO. 3 OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
762	115B-2	HARDIN	43	5
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 78378	



NOTE: EXISTING PCC PAVEMENT VARIES FROM 18' WIDTH TO 21' WIDTH STA 1034+00 TO 1035+15.70 AND STA 1035+71.70 TO 1036+57



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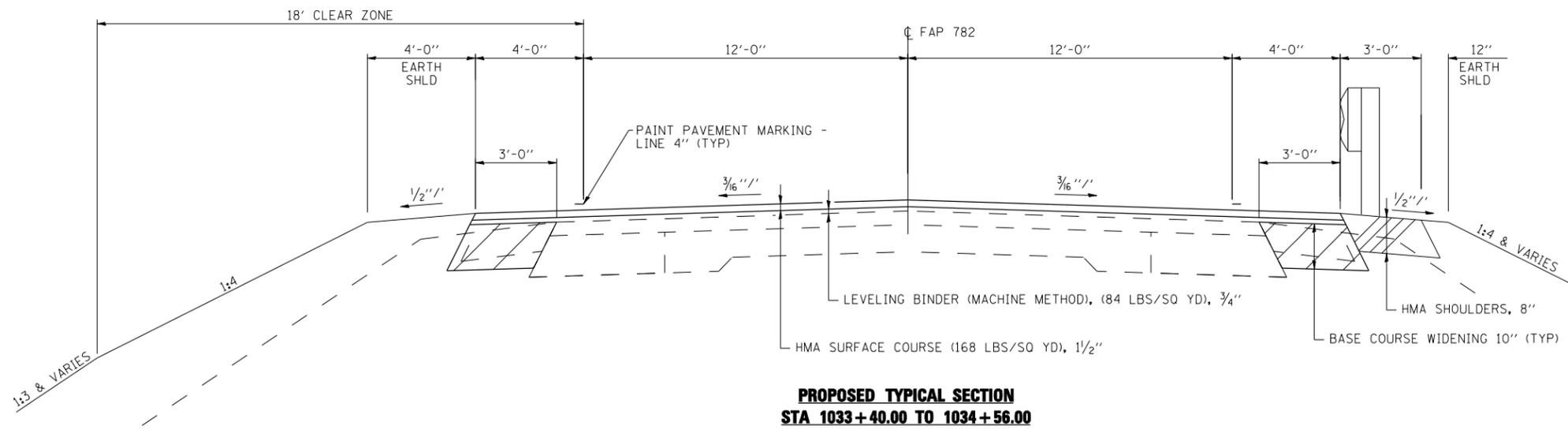
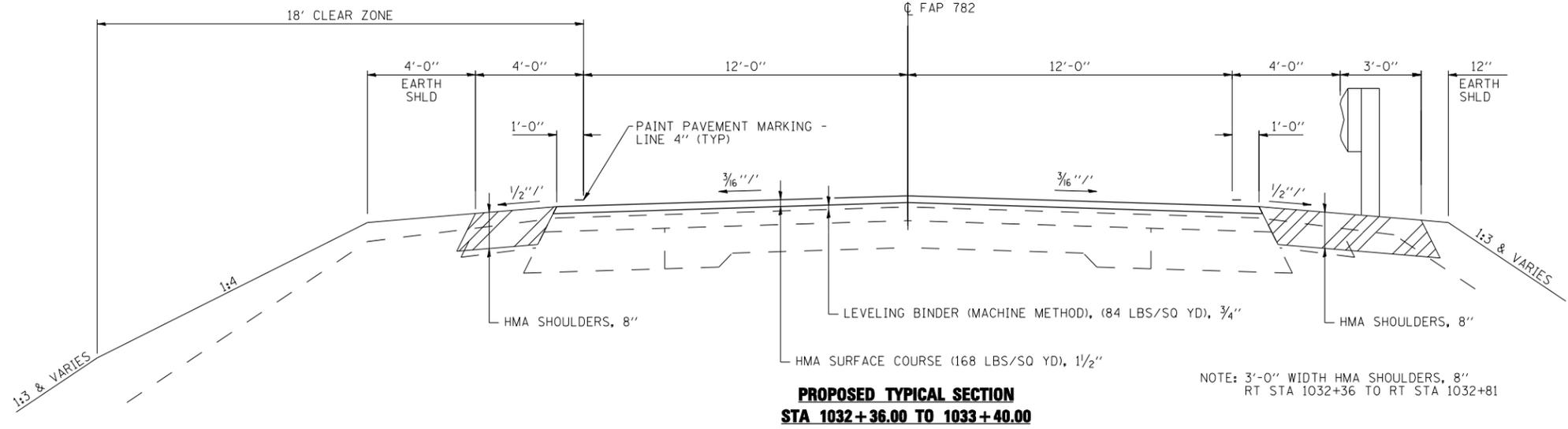
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	8
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	



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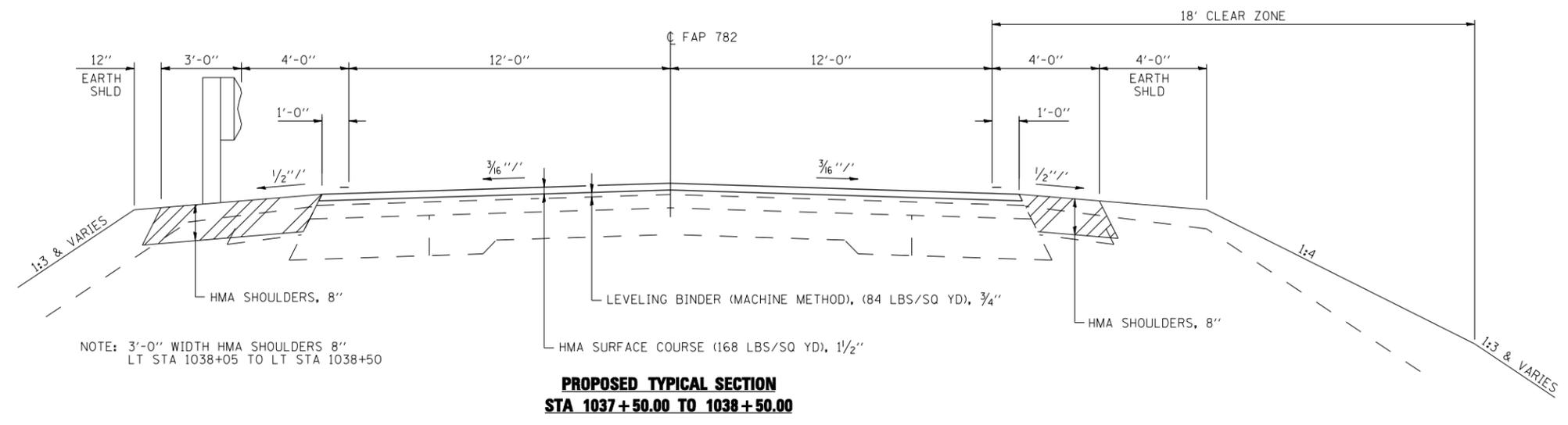
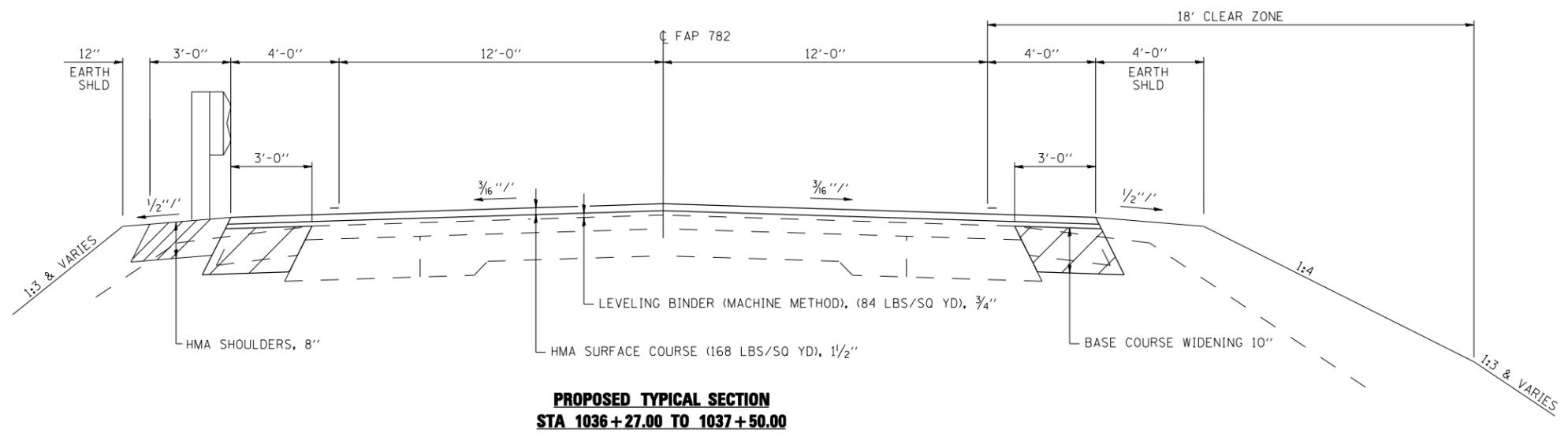
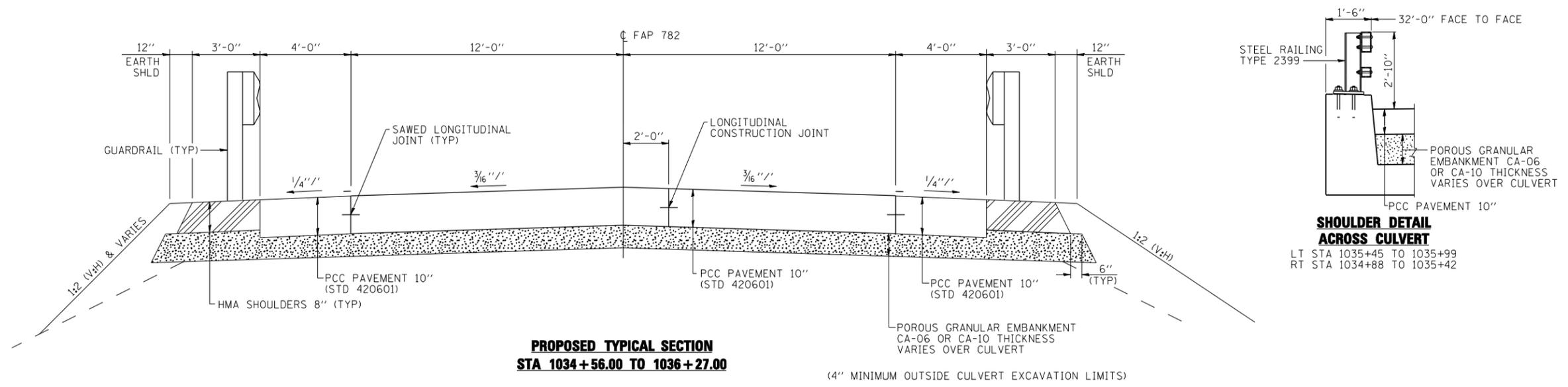
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	9
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS	
SCALE:	SHEET NO. 3 OF 3 SHEETS STA. TO STA.

F.A.P. RTE. 782	SECTION 115B-2	COUNTY HARDIN	TOTAL SHEETS 43	SHEET NO. 10
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	

EARTHWORK SCHEDULE						
LOCATION	EARTH EXCAVATION	SUITABLE EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	RIPRAP EXCAVATION MATERIAL	SUITABLE RIPRAP EXC. MATERIAL ADJUSTED FOR SHRINKAGE	EMBANKMENT (NOT A PAY ITEM)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
LT STA 1032+35 TO 1035+45	236	177			95	82
RT STA 1032+35 TO 1035+00	18	13			12	1
STA 1034+30 TO 1036+57	635	352	295	SEE NOTE 5		352
LT STA 1036+00 TO 1038+51	20	15			19	-4
RT STA 1035+42 TO 1039+00	326	245			138	107
TOTALS	1235	802	295		264	538

NOTES:

- EXCAVATION USED AS EMBANKMENT = (SUITABLE EXCAVATION)*0.75
- RIPRAP EXCAVATION IS NOT A PAY ITEM AND IT IS INCLUDED IN THE COST OF STONE RIPRAP CLASS A5.
- THE EARTHWORK SCHEDULE DOES NOT REFLECT THE EARTHWORK AND EARTHWORK BALANCE FOR THE VARIOUS STAGES.
- THE EARTHWORK SCHEDULE HAS ASSUMED THAT 165 CU YD OF EARTH EXCAVATION FROM STA 1034+30 TO STA 1036+57 MAY NOT BE SUITABLE FOR USE AS EMBANKMENT.
- THE EARTHWORK SCHEDULE HAS ASSUMED THE RIPRAP EXCAVATION MAY NOT BE SUITABLE FOR USE AS EMBANKMENT.
- EXCAVATION FOR CONCRETE BOX CULVERTS WILL NOT BE PAID FOR AS A SEPARATE ITEM IN ACCORDANCE WITH ARTICLE 502.13 OF THE STANDARD SPECIFICATIONS. THE EARTHWORK SCHEDULE DOES REFLECT EXCAVATION NEEDED FOR POROUS GRANULAR EMBANKMENT AND CHANNEL EXCAVATION NEEDED WITHIN THE RIGHT-OF-WAY.

EROSION CONTROL SCHEDULE			
LOCATION	TEMPORARY EROSION CONTROL SEEDING (2 APPLICATIONS)	PERIMETER EROSION BARRIER	EROSION CONTROL BLANKET
	POUND	FOOT	SQ YD
NE QUADRANT		306	796
NW QUADRANT		206	154
SW QUADRANT		346	1141
SE QUADRANT		196	130
JOBSITE	100		
TOTALS	100	1054	2221

SEEDING SCHEDULE							
LOCATION	SEEDING, CLASS 2A	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH, METHOD 2
	ACRE	ACRE	POUND	POUND	POUND	TON	ACRE
NE QUADRANT	0.17	0.17	15	15	15	0.3	0.17
NW QUADRANT	0.04	0.04	4	4	4	0.1	0.04
SW QUADRANT	0.26	0.26	23	23	23	0.5	0.26
SE QUADRANT	0.03	0.03	3	3	3	0.1	0.03
TOTALS	0.50	0.50	45	45	45	1.0	0.50

REMOVAL SCHEDULE		
LOCATION	PAVEMENT REMOVAL	HMA SURFACE REMOVAL - BUTT JOINT
	SQ YD	SQ YD
STA 1032+36 TO 1032+66		87
STA 1034+56 TO 1035+43.41	213	
STA 1035+43.91 TO 1036+27	171	
STA 1038+20 TO 1038+50		87
TOTALS	384	174

PCC PAVEMENT SCHEDULE		
LOCATION	PCC PAVEMENT 10' (STD 420601)	PAVEMENT FABRIC
	SQ YD	SQ YD
STA 1034+56 TO 1036+27	608	608
TOTALS	608	608

F&E ROW MARKERS SCHEDULE	
LOCATION	F&E ROW MARKERS
	EACH
STA 1034+00, 40' LT	1
STA 1034+00, 57' LT	1
STA 1034+50, 40' RT	1
STA 1034+50, 50' RT	1
STA 1035+00, 50' RT	1
STA 1035+00, 60' RT	1
STA 1036+50, 40' LT	1
STA 1036+50, 57' LT	1
STA 1036+50, 50' RT	1
STA 1036+50, 60' RT	1
STA 1039+00, 40' RT	1
STA 1039+00, 50' RT	1
TOTAL	12

RAISED REFLECTIVE PAVEMENT MARKER SCHEDULE		
LOCATION	RRPM	RRPM REMOVAL
	EACH	EACH
STA 1032+36 TO 1038+50	8	8
TOTALS	8	8

BASE COURSE WIDENING 10" SCHEDULE	
LOCATION	BASE COURSE WIDENING 10"
	SQ YD
LT STA 1033+40 TO 1035+43.41	67
LT STA 1035+94.21 TO 1037+50	52
RT STA 1033+40 TO 1034+56	39
RT STA 1036+27 TO 1037+50	41
TOTAL	199

HMA SHOULDERS, 8" SCHEDULE	
LOCATION	HMA SHOULDERS, 8"
	SQ YD
RT STA 1032+36 TO 1034+87.98	103
LT STA 1032+36 TO 1035+43.41	69
RT STA 1035+43.98 TO 1038+50	66
LT STA 1035+99.41 TO 1038+50	101
TOTAL	339

GUARDRAIL REMOVAL SCHEDULE	
LOCATION	FOOT
STRUCTURE NO. 035-2000 NE	115
STRUCTURE NO. 035-2000 NW	215
STRUCTURE NO. 035-2000 SW	114
STRUCTURE NO. 035-2000 SE	214
TOTAL	658

PAVEMENT MARKING SCHEDULE				
LOCATION	DESCRIPTION	SHORT-TERM PAVEMENT MARKING	PAINT PAVEMENT MARKING - LINE	TEMP PAVEMENT MARKING - LINE
		①	4"	4"
		FOOT	FOOT	FOOT
CL STA 1031+44 TO 1039+39	YELLOW SKIP-DASH	160	200	200
CL STA 1031+44 TO 1039+39	YELLOW CENTER		795	795
RT STA 1032+26 TO 1038+60	WHITE EDGE		634	634
LT STA 1032+26 TO 1038+60	WHITE EDGE		634	634
TOTALS		160	2263	2263

① INCLUDES 2 APPLICATIONS

WORK ZONE AND PAVEMENT MARKING REMOVAL SCHEDULE			
LOCATION	PAVEMENT MARKING DESCRIPTION	WORK ZONE PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL
		SQ FT	SQ FT
CL STA 1031+44 TO 1039+39	YELLOW SKIP-DASH	53 ②	67
CL STA 1031+44 TO 1039+39	YELLOW SKIP-DASH	67 ③	
CL STA 1031+44 TO 1039+39	YELLOW CENTER	265 ③	265
RT STA 1032+26 TO 1038+60	WHITE EDGE	212 ③	
LT STA 1032+26 TO 1038+60	WHITE EDGE	212 ③	
RT STA 1033+43 TO 1037+40	WHITE EDGE		76
LT STA 1033+43 TO 1037+40	WHITE EDGE		133
TOTALS		809	541

- ② REMOVAL OF SHORT-TERM PAVEMENT MARKING
 ③ REMOVAL OF TEMP PAVEMENT MARKING - LINE

PAVING SCHEDULE					
LOCATION	LEVELING BINDER (MM), N90	HMA SURFACE COURSE, MIX "C", N90	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT) ④	TEMPORARY RAMP
	TON	TON	POUND	TON	SQ YD
STA 1032+36 TO 1032+41					15
STA 1032+36 TO 1034+56		62	482	1.5	
STA 1032+81 TO 1034+56	27				
STA 1036+27 TO 1038+05	27				
STA 1036+27 TO 1038+50		63	490	1.5	
STA 1038+45 TO 1038+50					15
TOTALS	54	125	972	3	30

④ INCLUDED FOR INFORMATION ONLY; NOT A PAY ITEM

GUARDRAIL SCHEDULE					
LOCATION	SPBGR, TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL		GUARDRAIL MARKERS, TYPE A	TERMINAL MARKER - DIRECT APPLIED
		TYPE 6A	TYPE 1 (SPECIAL) TANGENT		
	FOOT	EACH	EACH	EACH	EACH
NE QUADRANT		1	1		1
NW QUADRANT	100	1	1		1
SW QUADRANT		1	1		1
SE QUADRANT	100	1	1		1
RT STA 1032+87 TO 1036+38				5	
LT STA 1034+49 TO 1037+99				5	
TOTALS	200	4	4	10	4

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES

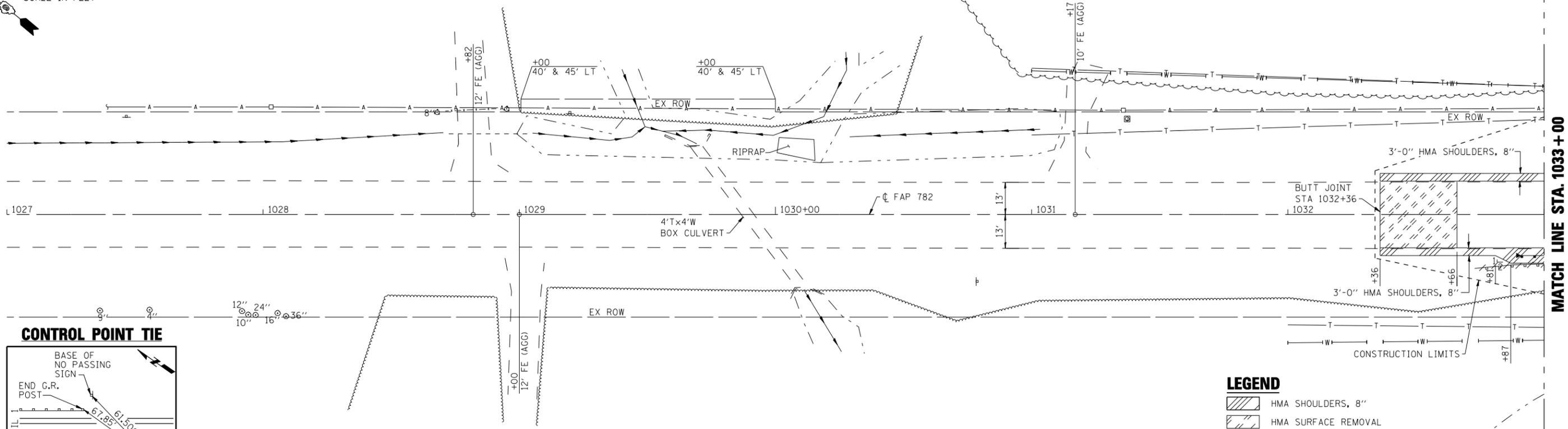
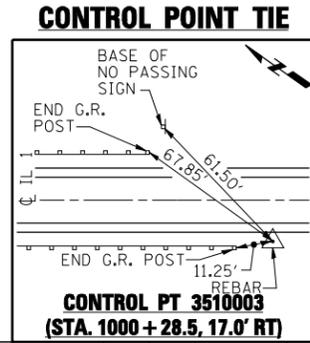
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	11
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	



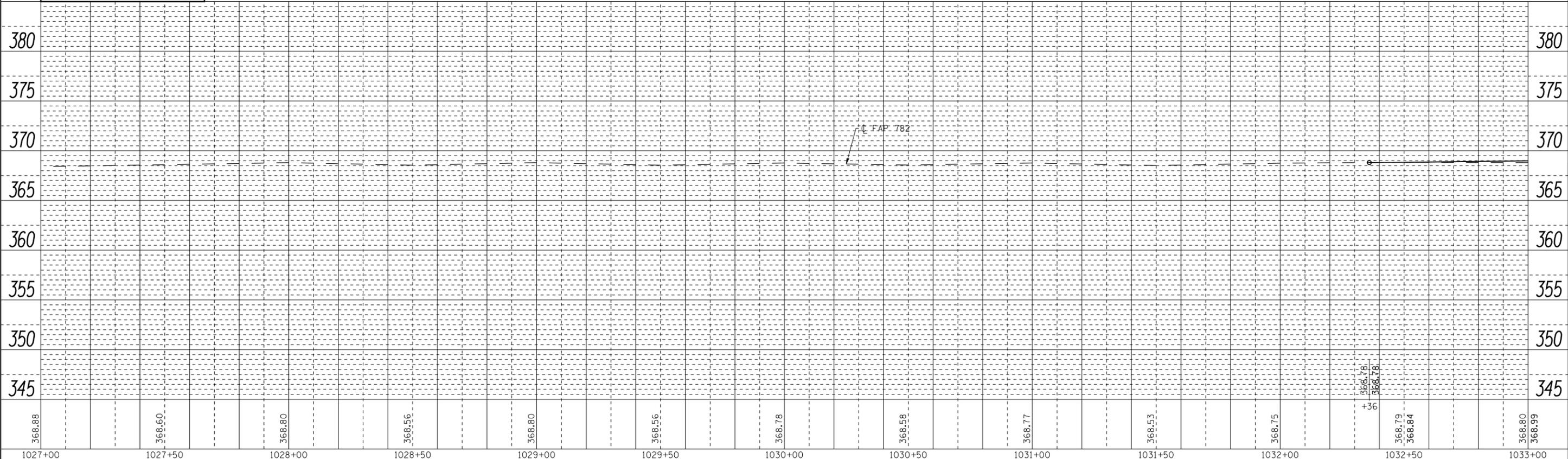
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	PLOTTED		
	GRADES CHECKED		
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LEGEND

	HMA SHOULDERS, 8"
	HMA SURFACE REMOVAL



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAP 782 (IL 1) PLAN & PROFILE

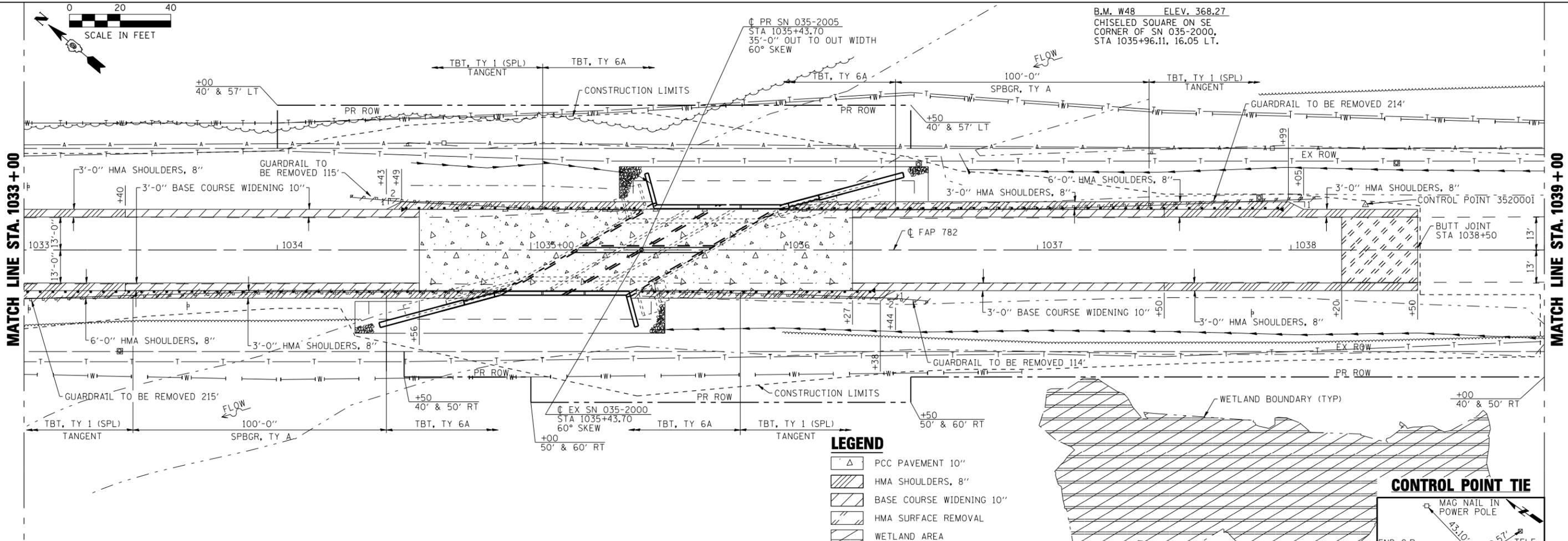
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FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 78378		

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	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
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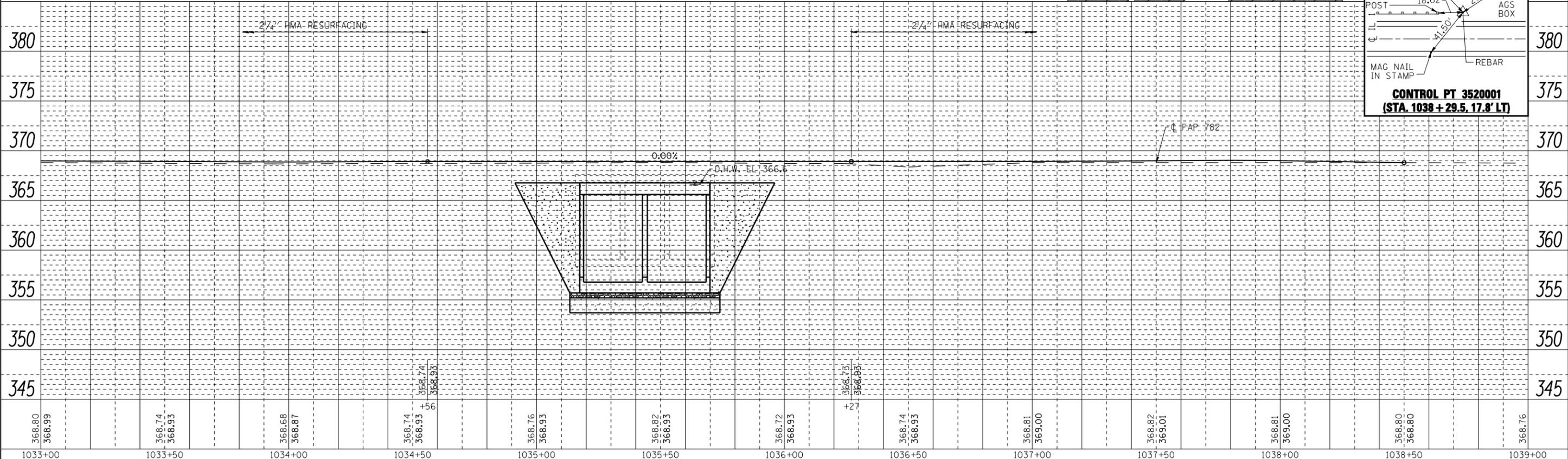
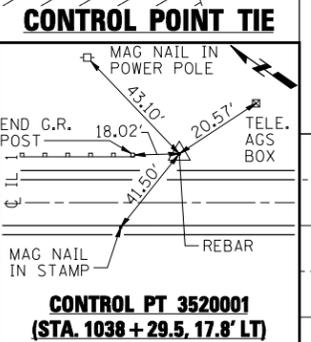
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LEGEND

	PCC PAVEMENT 10"
	HMA SHOULDERS, 8"
	BASE COURSE WIDENING 10"
	HMA SURFACE REMOVAL
	WETLAND AREA

B.M. W48 ELEV. 368.27
 CHISELED SQUARE ON SE
 CORNER OF SN 035-2000,
 STA 1035+96.11, 16.05 LT.



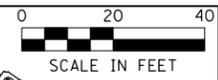
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

FAP 782 (IL 1) PLAN & PROFILE

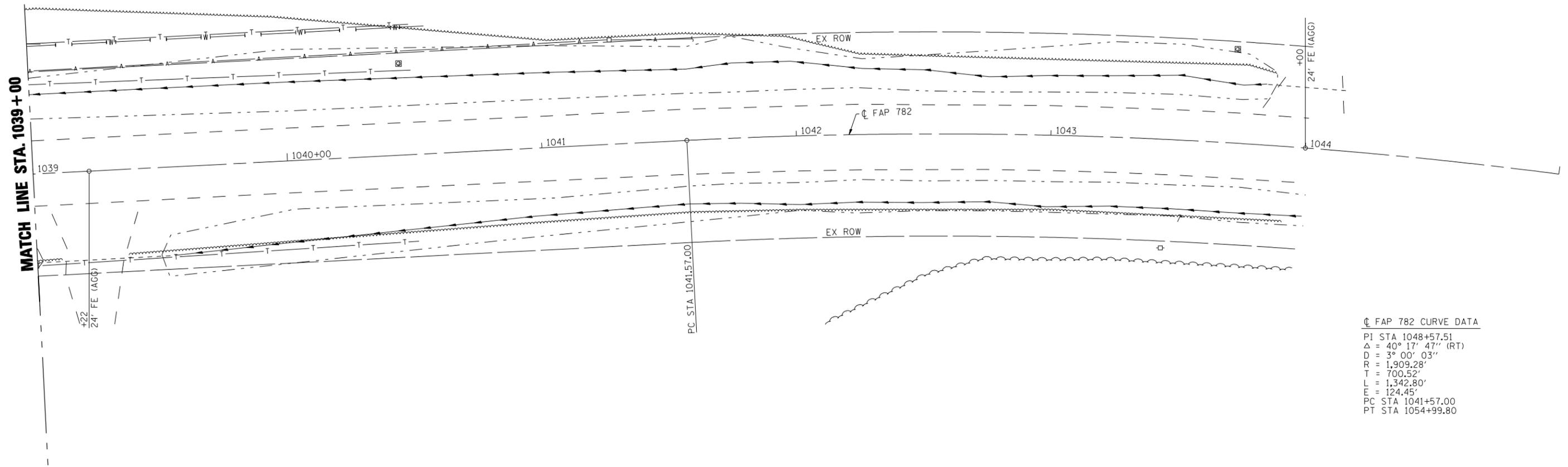
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F.A.P. RTE. 782	SECTION 115B-2	COUNTY HARDIN	TOTAL SHEETS 43	SHEET NO. 13
CONTRACT NO. 78378			ILLINOIS FED. AID PROJECT	



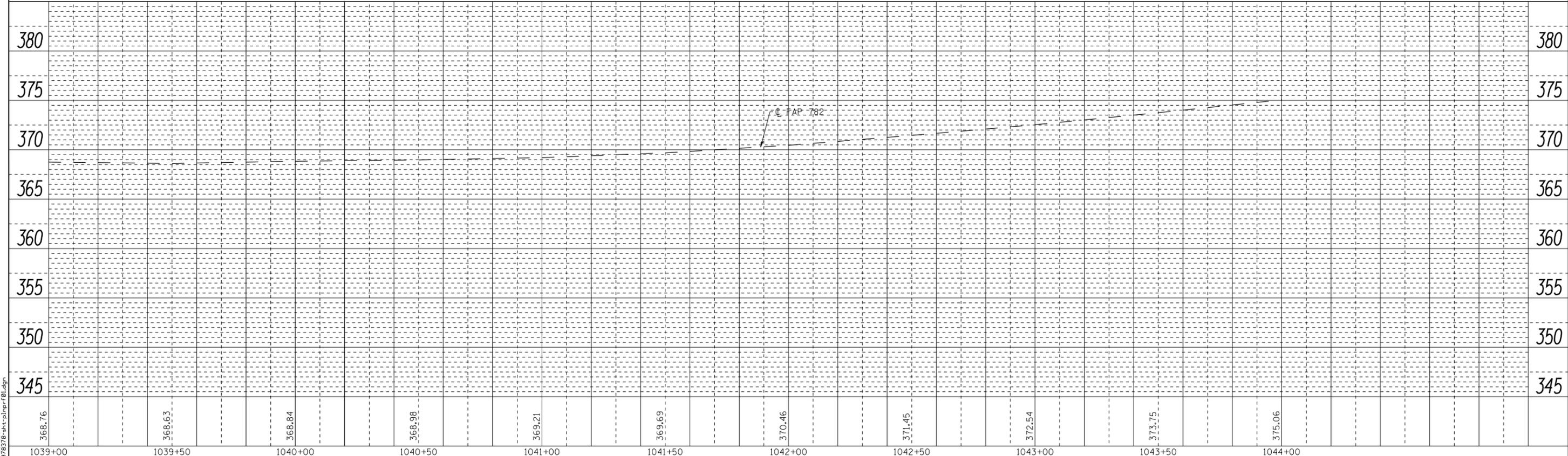
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MATCH LINE STA. 1039 + 00



FAP 782 CURVE DATA
 PI STA 1048+57.51
 $\Delta = 40^\circ 17' 47''$ (RT)
 D = $3^\circ 00' 03''$
 R = 1,909.28'
 T = 700.52'
 L = 1,342.80'
 E = 124.45'
 PC STA 1041+57.00
 PT STA 1054+99.80

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		



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368.76	368.63	368.84	368.98	369.21	369.69	370.46	371.45	372.54	373.75	375.06	380
1039+00	1039+50	1040+00	1040+50	1041+00	1041+50	1042+00	1042+50	1043+00	1043+50	1044+00	380
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SCALE: AS SHOWN						SHEET NO. 3 OF 3 SHEETS		STA. 1039+00 TO STA. 1044+00			

SCHEDULE OF QUANTITIES

TEMPORARY CONCRETE BARRIER	STATION TO	STATION	FEET
	1033+29	1037+54	425

TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH

TEMPORARY RUMBLE STRIPS - 6 EACH

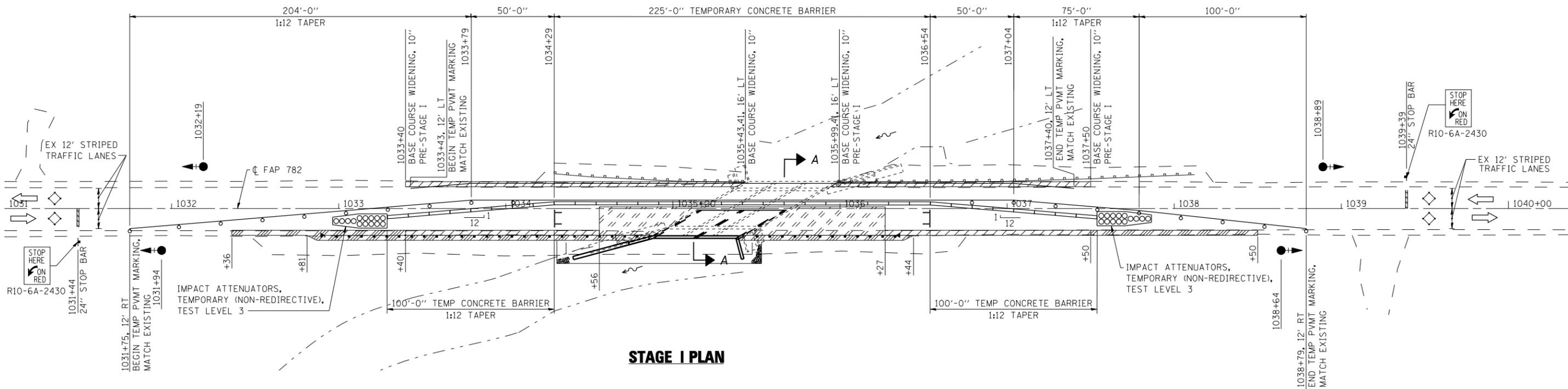
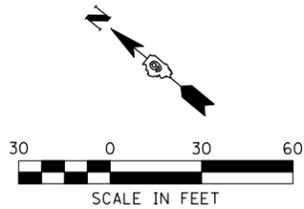
IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH

LEGEND

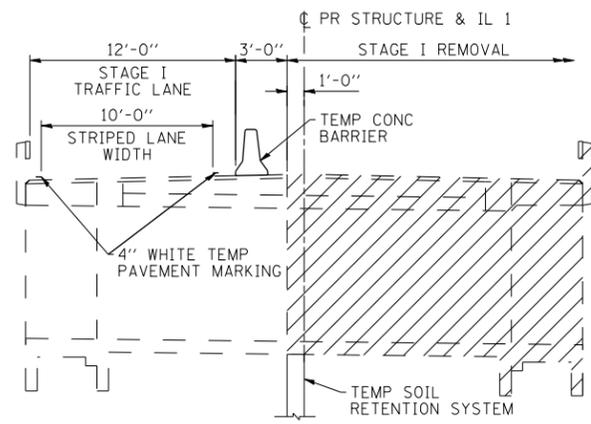
- TRAFFIC SIGNAL WITH BACKPLATE, SIGNAL DIRECTION INDICATED
- DETECTOR LOOP
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TYPE III BARRICADE
- BASE COURSE WIDENING, 10"
- PAVEMENT REMOVAL
- HMA SHOULDERS, 8"

GENERAL NOTES

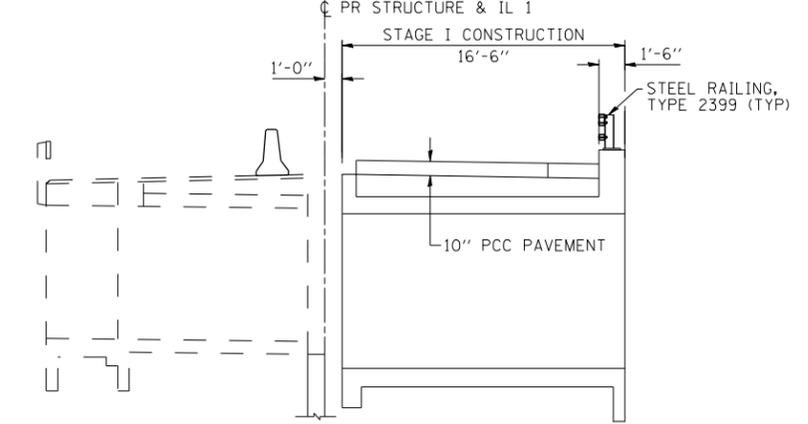
- PRE-STAGE I: CONSTRUCT THE BASE COURSE FROM LT. STA. 1033+40 TO LT. STA. 1037+50 AS SHOWN ON THIS SHEET PRIOR TO PLACING THE SIGNALS IN OPERATION AND PLACEMENT OF THE TEMPORARY BARRIERS.
- TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO TRAFFIC CONTROL AND PROTECTION, STANDARD 701321. SEE STANDARD 701321 FOR THE COMPLETION OF THE STAGE CONSTRUCTION TRAFFIC CONTROL THAT IS NOT SHOWN THAT INCLUDES, BUT IS NOT LIMITED TO, ADVANCE SIGNING, ADVANCE LOOP PLACEMENT, DRUMS WITH STEADY BURNING LIGHTS, DOUBLE VERTICAL PANELS AND BARRIER WALL/ GUARDRAIL MARKERS.
- SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
- COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
- CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.
- ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321.
- THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-I102(0)-48) SHOWN ON STANDARD 701321 AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN ON SHEET 16 SHALL BE 10'-6" FOR STAGE I CONSTRUCTION.
- VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW STEEL RAILING, TYPE 2399. THE GUARDRAIL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.
- THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.
- THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.
- ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC AND THE TEMPORARY TRAFFIC SIGNALS SHALL BE TURNED OFF OR COVERED.
- THE STAGE I CONSTRUCTION SHALL INCLUDE COMPLETION OF THE EARTHWORK, BASE COURSE, PCC PAVEMENT, HMA SHOULDERS, GUARDRAIL AND TRAFFIC BARRIER TERMINALS FROM RT. STA. 1032+81 TO RT. STA. 1037+50 AS REFERENCED ON THIS SHEET AND DESCRIBED IN DETAIL ON THE PLAN AND PROFILE SHEETS. THE LEVELING BINDER (MACHINE METHOD) AND THE HMA SURFACE COURSE SHALL ALSO BE PLACED ON THE TRAFFIC LANE ADJACENT TO THE PROPOSED HMA SHOULDERS TO ALLOW COMPLETION OF THE HMA SHOULDERS PRIOR TO THE INSTALLATION OF THE GUARDRAIL TERMINALS. PLACEMENT OF THE LEVELING BINDER AND HMA SURFACE AS INDICATED MAY REQUIRE RELOCATION OF THE TEMPORARY BARRIERS AND THE IMPACT ATTENUATORS DURING THE DAYTIME HOURS AND ALSO PLACEMENT OF A TEMPORARY RAMP IN ACCORDANCE WITH ARTICLE 406.08 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT A WRITTEN PLAN TO THE ENGINEER FOR APPROVAL THAT DETAILS THE STAGING OF THE HMA RESURFACING FOR STAGE I CONSTRUCTION TO MEET THESE REQUIREMENTS. THE COST ASSOCIATED WITH THE STAGING OF THE HMA RESURFACING, INCLUDING THE TEMPORARY RAMP, WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE VARIOUS HMA PAY ITEMS INCLUDED IN THE PLANS.



STAGE I PLAN



**SECTION A-A
REMOVAL**



**SECTION A-A
CONSTRUCTION**

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PLOT DATE = 11/20/2014 10:06:28 AM	DATE - 11/14	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION PLAN AND DETAILS
STRUCTURE NO. 035-2005**

SCALE: AS SHOWN SHEET NO. 1 OF 2 SHEETS STA. 1031+00 TO STA. 1040+40

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	15
CONTRACT NO. 78378				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SCHEDULE OF QUANTITIES

RELOCATE TEMPORARY CONCRETE BARRIER

STATION	TO	STATION	FEET
1033+29		1037+54	425

IMPACT ATTENUATORS, RELOCATE

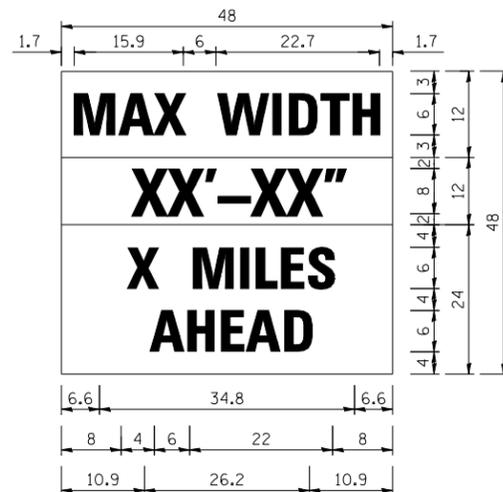
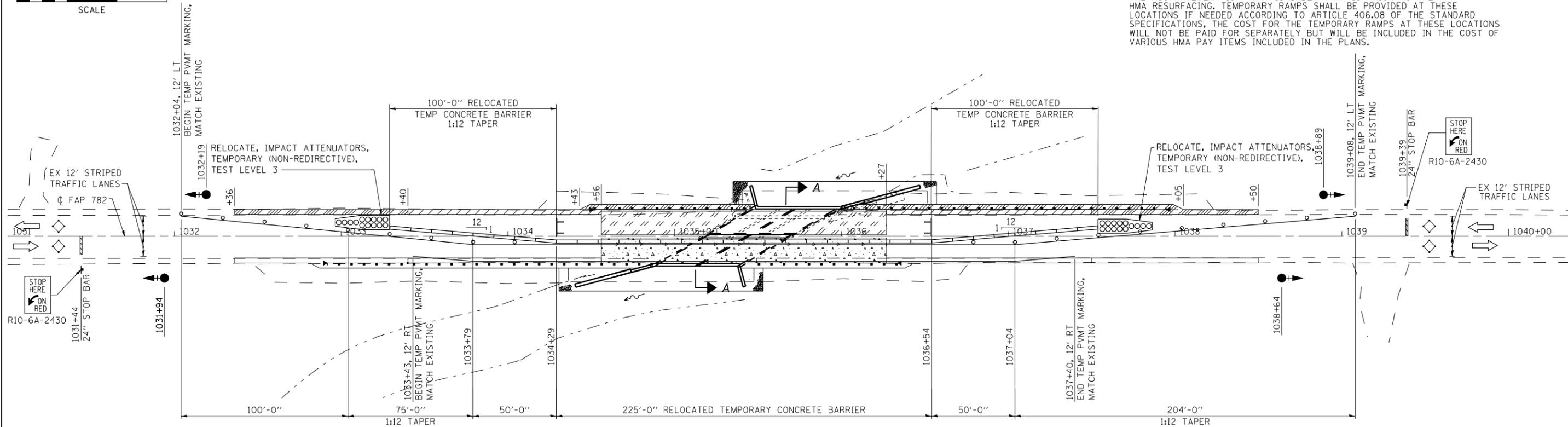
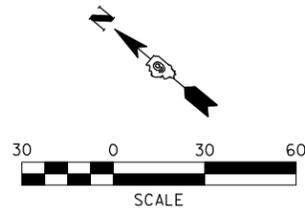
(NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH

LEGEND

- TRAFFIC SIGNAL WITH BACKPLATE, SIGNAL DIRECTION INDICATED
- DETECTOR LOOP
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TYPE III BARRICADE
- BASE COURSE WIDENING, 10"
- PAVEMENT REMOVAL
- HMA SHOULDERS, 8"
- PCC PAVEMENT, 10"

GENERAL NOTES

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO TRAFFIC CONTROL AND PROTECTION, STANDARD 701321. SEE STANDARD 701321 FOR THE COMPLETION OF THE STAGE CONSTRUCTION TRAFFIC CONTROL THAT IS NOT SHOWN THAT INCLUDES, BUT IS NOT LIMITED TO, ADVANCE SIGNING, ADVANCE LOOP PLACEMENT, DRUMS WITH STEADY BURNING LIGHTS, DOUBLE VERTICAL PANELS AND BARRIER WALL/ GUARDRAIL MARKERS.
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
4. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.
5. ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321.
6. THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-I102(O)-48) SHOWN ON STANDARD 701321 AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN ON THIS SHEET SHALL BE 10'-6" FOR STAGE II CONSTRUCTION.
7. THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.
8. THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.
9. VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW STEEL RAILING, TYPE 2399. THE GUARDRAIL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.
10. ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC AND THE TEMPORARY TRAFFIC SIGNALS SHALL BE TURNED OFF OR COVERED.
11. THE TEMPORARY SIGNALS WILL REMAIN IN OPERATION AND THE TEMPORARY BARRIERS WILL REMAIN IN PLACE UNTIL THE CONCRETE BOX CULVERT AND PCC PAVEMENT 10" IS COMPLETE INCLUDING STEEL RAILING, TYPE 2399. THE REMAINING HMA RESURFACING, HMA SHOULDERS, GUARDRAIL, AND TRAFFIC BARRIER TERMINALS SHALL BE COMPLETED USING THE APPROPRIATE STANDARDS INCLUDED IN THE PLANS AND TRAFFIC SHALL BE OPEN TO BOTH LANES DURING NON-WORKING HOURS. THE CONTRACTOR SHALL SCHEDULE THEIR OPERATIONS SO THERE IS NO MORE THAN TWO WEEKS BETWEEN THE REMOVAL OF THE TEMPORARY BARRIERS AND THE START OF GUARDRAIL AND TERMINAL INSTALLATION.
12. THE CONTRACTOR'S OPERATION MAY RESULT IN A DROP-OFF AT THE END OF THE PCC PAVEMENT 10" THAT IS UNDER TRAFFIC PRIOR TO THE HMA RESURFACING. TEMPORARY RAMPS SHALL BE PROVIDED AT THESE LOCATIONS IF NEEDED ACCORDING TO ARTICLE 406.08 OF THE STANDARD SPECIFICATIONS, THE COST FOR THE TEMPORARY RAMPS AT THESE LOCATIONS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF VARIOUS HMA PAY ITEMS INCLUDED IN THE PLANS.

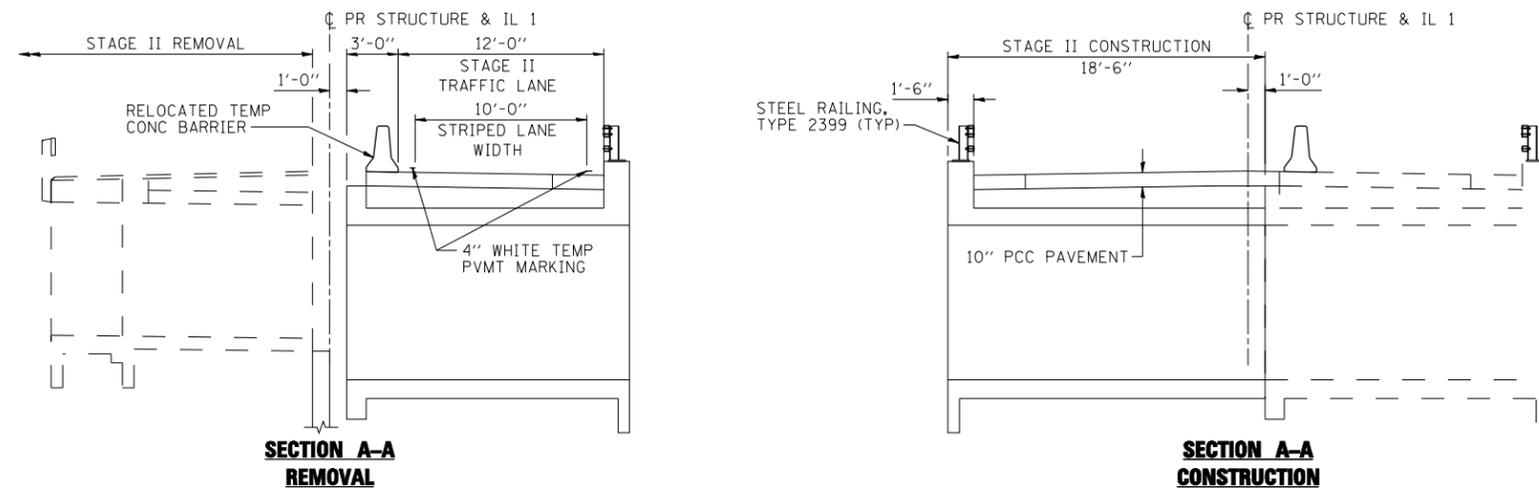


W12-I103

W12-I103 (Width is 8D);
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 "MAX WIDTH" D;
 No border, Black on Orange;
 "XX'-XX" D;
 No border, Black on White;
 "X MILES" D; "AHEAD" D

NOTE: THIS SIGN SHALL BE LOCATED AS DIRECTED BY THE ENGINEER. ONE SIGN SHALL BE PROVIDED FOR EACH APPROACH TO THE SITE.

STAGE II PLAN



**SECTION A-A
REMOVAL**

**SECTION A-A
CONSTRUCTION**

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION PLAN AND DETAILS
 STRUCTURE NO. 035-2005

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	16
CONTRACT NO. 78378				

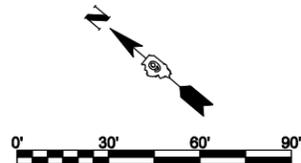
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FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

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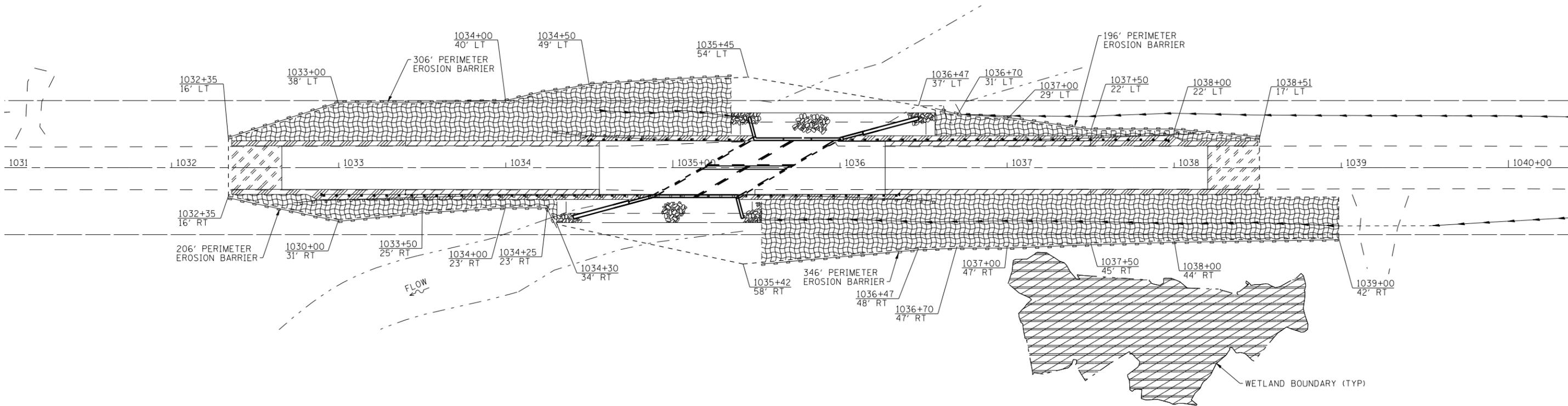


LEGEND

- SEEDING, CLASS 2A AND EROSION CONTROL BLANKET
- PERIMETER EROSION BARRIER
- STONE RIPRAP, CLASS A5
- WETLAND AREA

STATIONS AND OFFSETS SHOWN ARE TO THE CONSTRUCTION LIMITS. THE PERIMETER EROSION BARRIER WILL BE PLACED 1'-0" OUTSIDE THE CONSTRUCTION LIMITS. THE SEEDING, CLASS 2A AND EROSION CONTROL BLANKET WILL BE PLACED TO THE LIMITS OF THE PERIMETER EROSION BARRIER.

WETLAND SITES OUTSIDE OF CONSTRUCTION LIMITS ARE NOT TO BE DISTURBED.



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 PLOT SCALE = 0.1667" / IN.
 PLOT DATE = 11/24/2014 4:51:38 PM



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PLOT DATE = 11/24/2014 4:51:38 PM	DATE - 04/14	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EROSION CONTROL PLAN

SCALE: AS SHOWN SHEET NO. 1 OF 1 SHEETS STA. 1031+00 TO STA. 1040+40

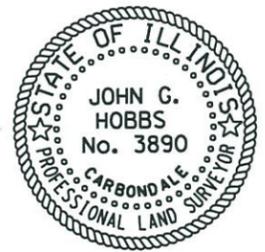
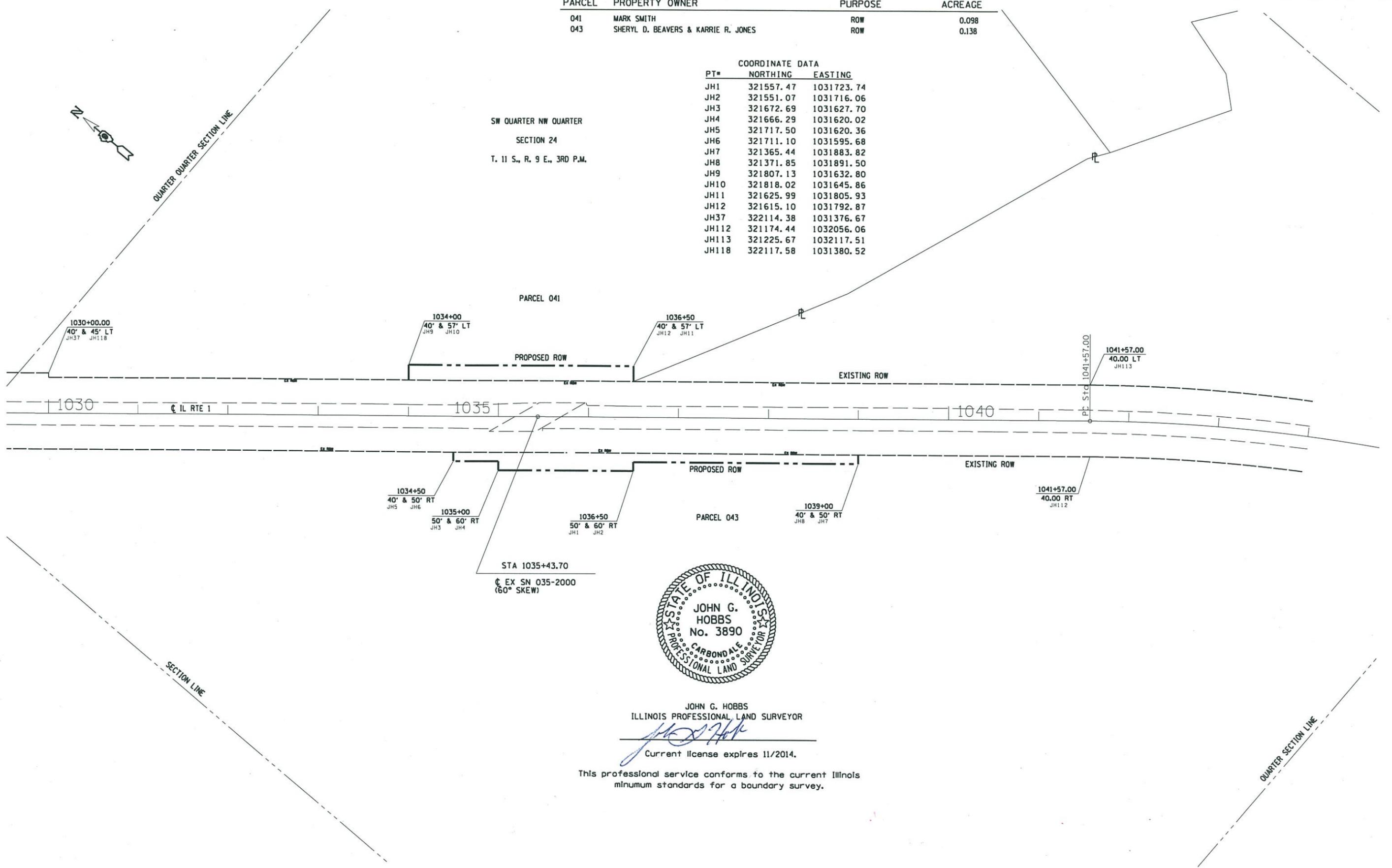
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	17
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	

PARCEL	PROPERTY OWNER	PURPOSE	ACREAGE
041	MARK SMITH	ROW	0.098
043	SHERYL D. BEAVERS & KARRIE R. JONES	ROW	0.138

COORDINATE DATA

PT#	NORTHING	EASTING
JH1	321557.47	1031723.74
JH2	321551.07	1031716.06
JH3	321672.69	1031627.70
JH4	321666.29	1031620.02
JH5	321717.50	1031620.36
JH6	321711.10	1031595.68
JH7	321365.44	1031883.82
JH8	321371.85	1031891.50
JH9	321807.13	1031632.80
JH10	321818.02	1031645.86
JH11	321625.99	1031805.93
JH12	321615.10	1031792.87
JH37	322114.38	1031376.67
JH112	321174.44	1032056.06
JH113	321225.67	1032117.51
JH118	322117.58	1031380.52

SW QUARTER NW QUARTER
SECTION 24
T. 11 S., R. 9 E., 3RD P.M.

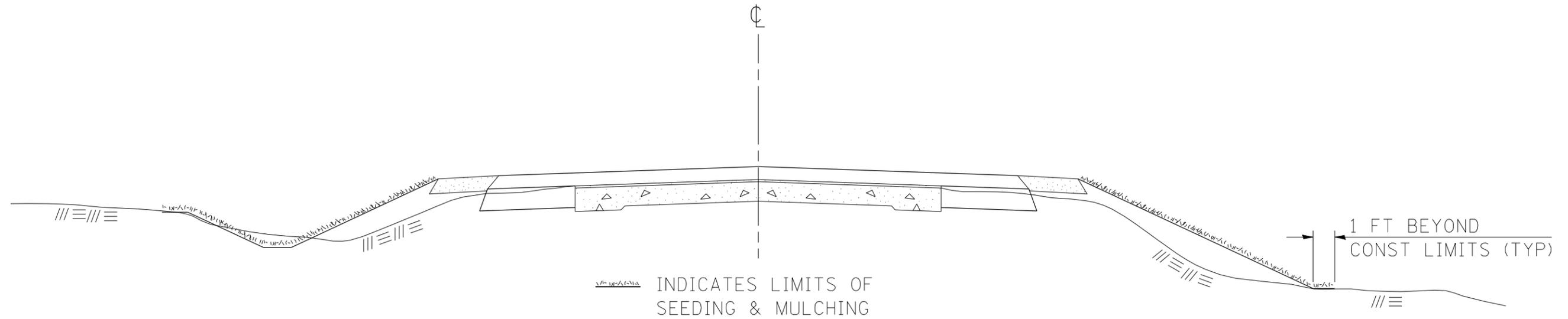


JOHN G. HOBBS
ILLINOIS PROFESSIONAL LAND SURVEYOR
John G. Hobbs
Current license expires 11/2014.

This professional service conforms to the current Illinois minimum standards for a boundary survey.

FILE NAME =	USER NAME = hobbsjg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 035-2000 RIGHT OF WAY PLANS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwork\pwork\hobbsjg\0374917\7826	ahf-row-00512.dgn	DRAWN -	REVISED -			IL 1	1158-2	HARDIN		
MODELNAME =	PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED -			R-99-005-12				CONTRACT NO. 78378
	PLOT DATE = 6/18/2014	DATE -	REVISED -			SCALE: 1" = 100'	SHEET 1 OF 1 SHEETS	STA. 1030+00.00 TO STA. 1042+00.00	ILLINOIS FED. AID PROJECT	

SEEDING & MULCHING



GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

REVISIONS

REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

STD. 9-12

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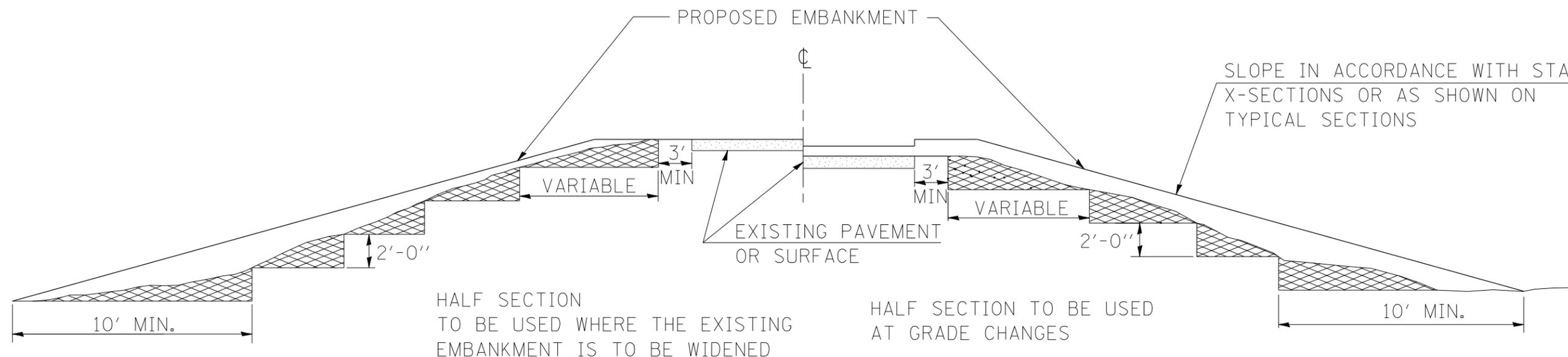
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SEEDING AND MULCHING DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	19
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL



MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08

STD. 9-16

PRINT DRIVER = LUD-ER-BAJAL
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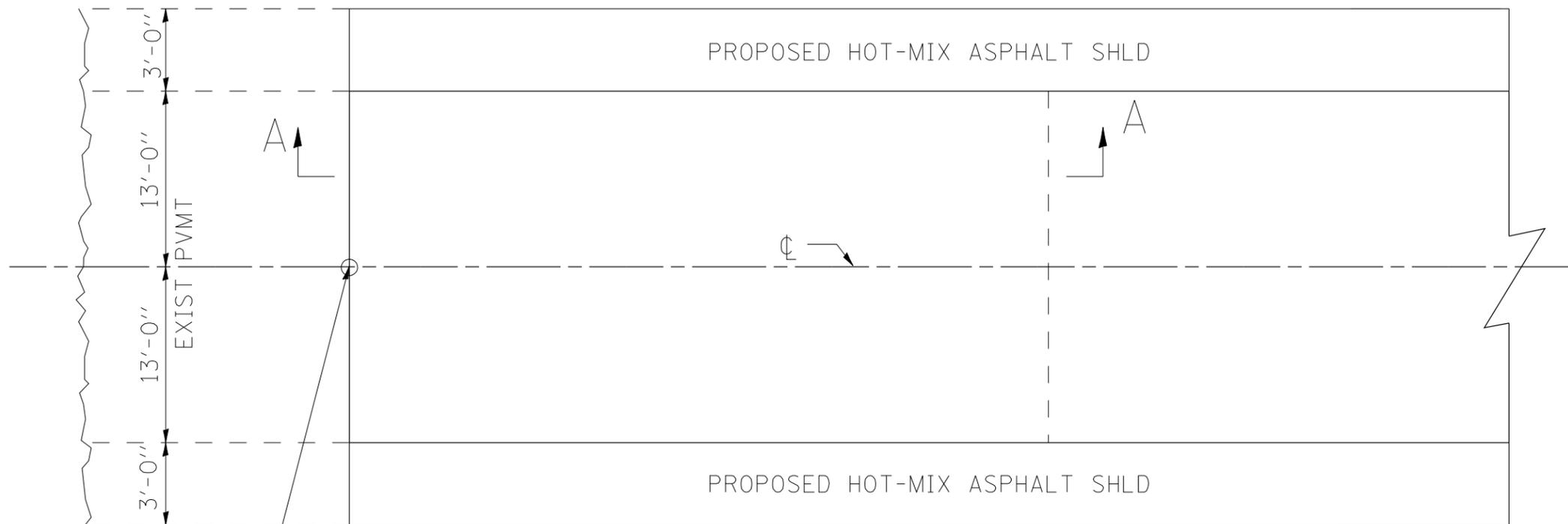
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STEP CONSTRUCTION ON EXISTING FILL DETAILS

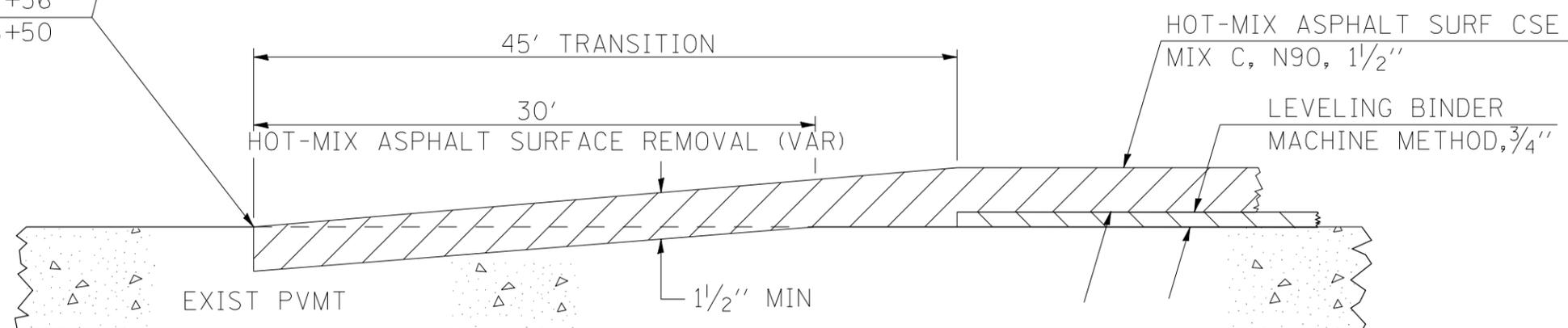
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	20
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	

BUTT JOINT



STA 1032+36
STA 1038+50



SECTION A-A

REVISIONS

DRAWN	10-17-90
REVISED	01-11-07
REVISED	3-25-08
REVISED	

STD. 9-86

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT DETAIL

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	21
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	

Benchmark: BM W-4B - Chiseled square on SE corner of headwall SN 035-2000. Elev. 368.27 (NAVD 86)

Existing Structure: SN 035-2000 was originally built in 1935 under SBI Rte. 140, Section 115A. The structure was widened in 1980 under FA Rte. 782, Section 115A-BY. It is a triple barrel 8'-0" x 7'-9" reinforced concrete box culvert with L-Type wing walls and side mounted steel railings. The barrel length is 65'-0" o. to o. headwalls. There is a 60° left ahead skew. One lane traffic shall be maintained utilizing stage construction.

No salvage.

DESIGN SPECIFICATIONS
2012 AASHTO LRFD Bridge Design Specifications
with 2013 Interim Revisions

LOADING HL-93
Allow 50 psf for future wearing surface.

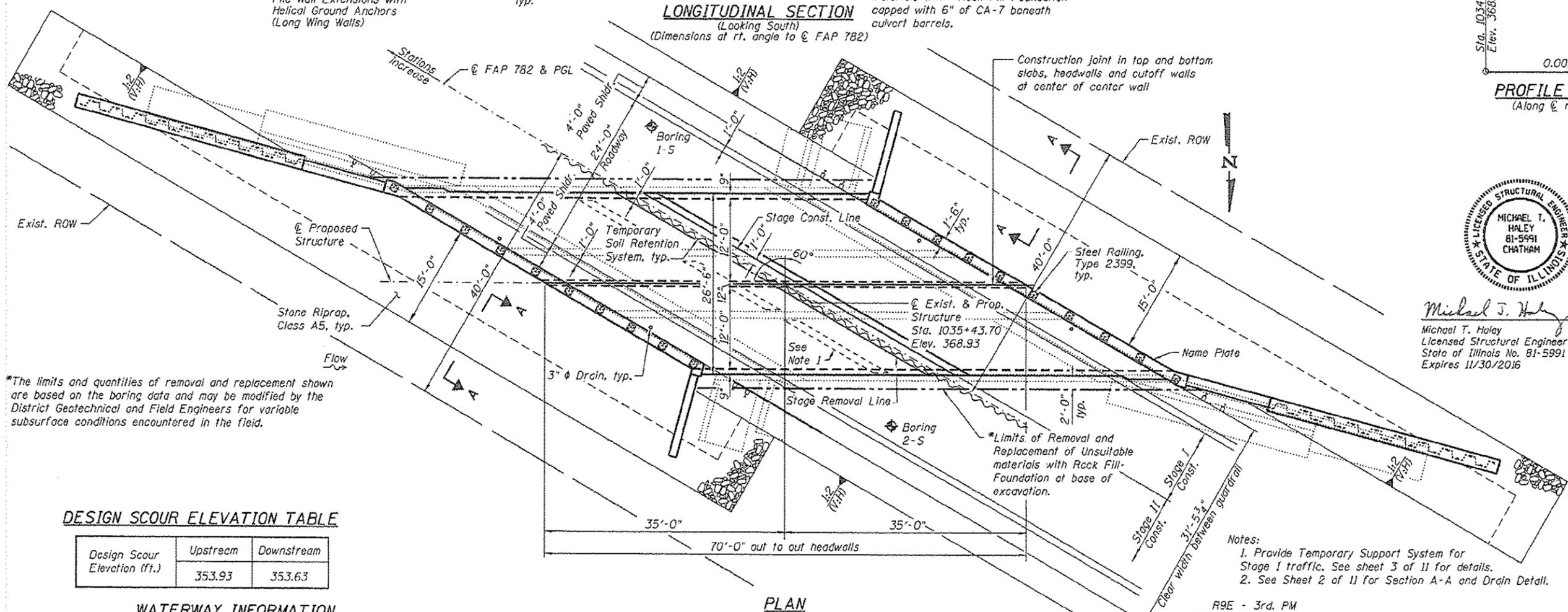
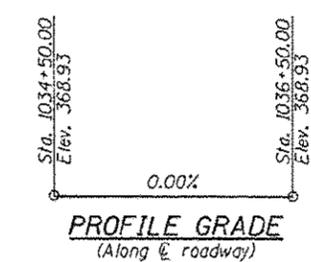
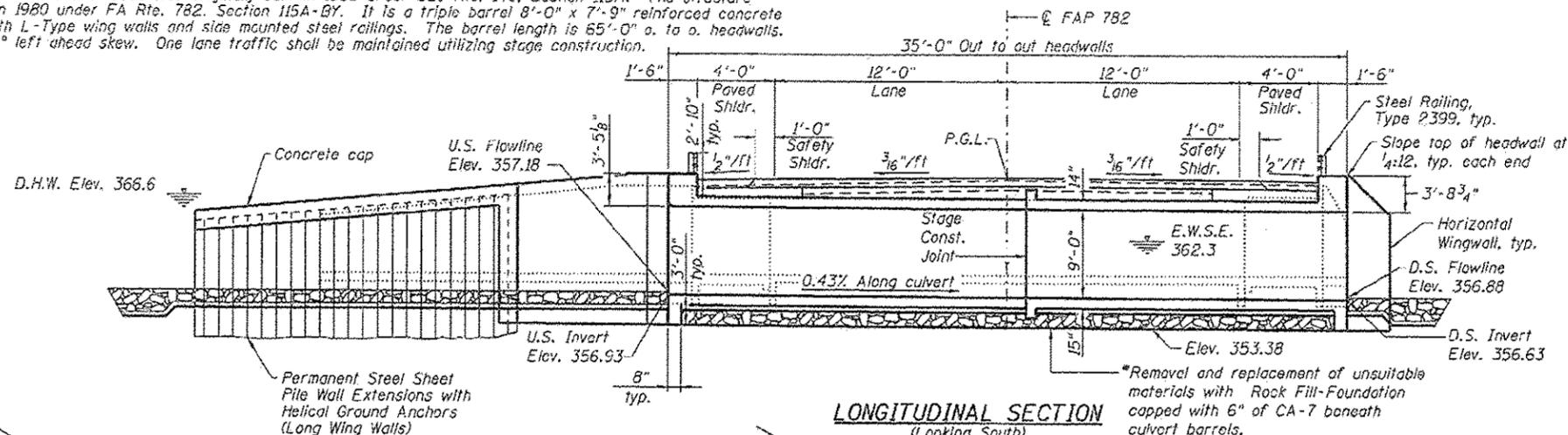
DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (ASTM A572, Grade 50)
(Sheet Piling)

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Stage Construction Details
4. Temporary Concrete Barrier
- 5-7. Culvert Details
8. Steel Railings, Type 2.399
9. Bar Splicer Details
- 10-11. Soil Borings



Michael J. Haley 12-5-14 Date
Michael T. Haley
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2016

*The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	353.93	353.63

WATERWAY INFORMATION

Drainage Area = 1.17 Sq. Mi. Exist. Low Grade Elev. 368.68 @ Sta. 1034+00
Prop. Low Grade Elev. 368.68 @ Sta. 1034+00

Freq. Yr.	C.F.S.	Opening-Sq. Ft.		Nat. Head-Ft.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
10	876	140	188	365.0	0.0	365.0	365.0
Design	50	1500	178	366.6	0.8	367.4	366.7
Overtop	90	1698	183	366.8	1.9	368.7	-
Base	100	1780	186	366.9	1.8	368.7	367.6
Overtop	120	1860	-	367.0	1.7	-	368.7

10 Year Velocity through Existing Structure: 6.8 ft/s
10 Year Velocity through Proposed Structure: 5.0 ft/s

APPROVED
For Structural Adequacy Only
De Carl...
Engineer of Bridges & Structures



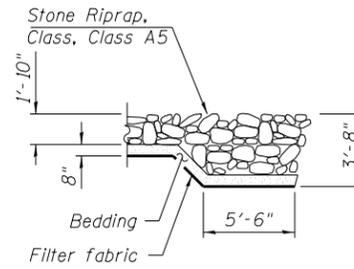
GENERAL PLAN & ELEVATION
IL 1 OVER TRIBUTARY TO ROCK CREEK
FAP ROUTE 782 - SECTION 115B-2
HARDIN COUNTY
STATION 1035+43.70
STRUCTURE NO. 035-2005

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 Precast alternate is not allowed.
 Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications. Cost shall be included with Concrete Box Culverts.
 Waterproofing membrane shall cover the top surface of the culvert, including the top and both faces of the beam at stage line, and extend 6 inches up the inside face of the headwall. The waterproofing membrane shall extend to 6 inches below the construction joint between the culvert sidewall and the top slab on the outside face of the sidewalls.

STATION 1035+43.70
 BUILT BY
 STATE OF ILLINOIS
 F.A.P. RT. 782 SEC. 115B-2
 LOADING HL-93
 STRUCTURE NO. 035-2005

NAME PLATE
 See Std. 515001



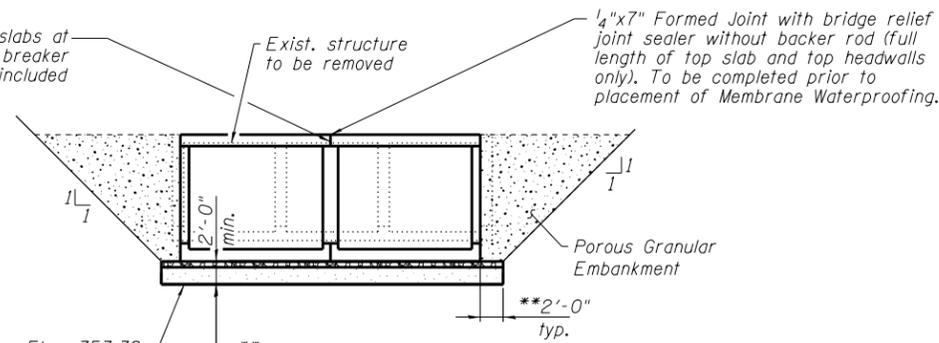
SECTION A-A

TOTAL BILL OF MATERIAL

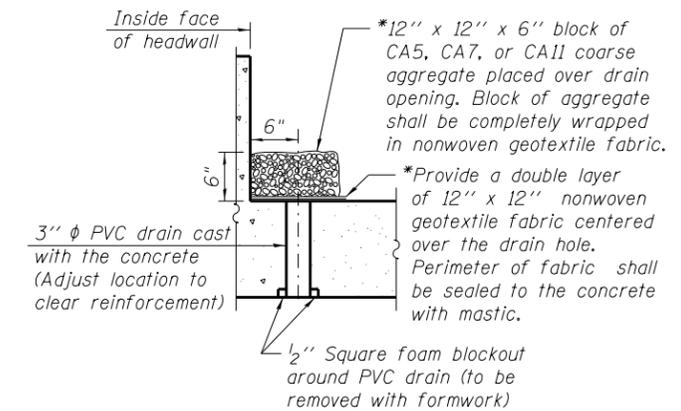
ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	496
Stone Riprap, Class A5	Sq. Yd.	353
Filter Fabric	Sq. Yd.	353
Removal of Existing Structures	Each	1
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	159
Reinforcement Bars, Epoxy Coated	Pound	57480
Bar Splicers	Each	390
Steel Railing, Type 2399	Foot	111
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	300.0
Helical Ground Anchors	Each	16
Membrane Waterproofing for Culverts	Sq. Yd.	231
Permanent Steel Sheet Piling	Sq. Ft.	1589
Rock Fill-Foundation	Ton	241
Temporary Soil Retention System	Sq. Ft.	982
Temporary Support System	L Sum	1

**The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.

Construction joint in top and bottom slabs at center of center wall. Provide bond breaker on vertical surfaces of slabs. Cost included with Concrete Box Culverts.



SECTION THRU BARREL
 (Dimensions Perpendicular to ϕ Culvert)



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.)

*Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



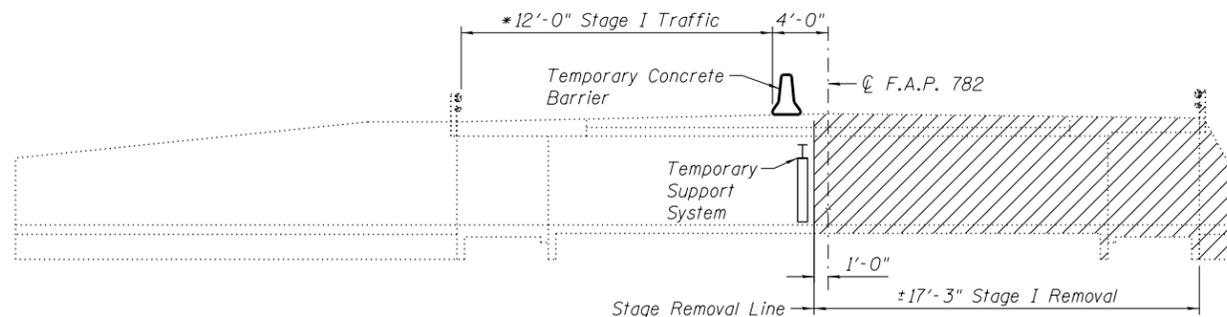
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PLOT DATE =	CHECKED - MTH	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

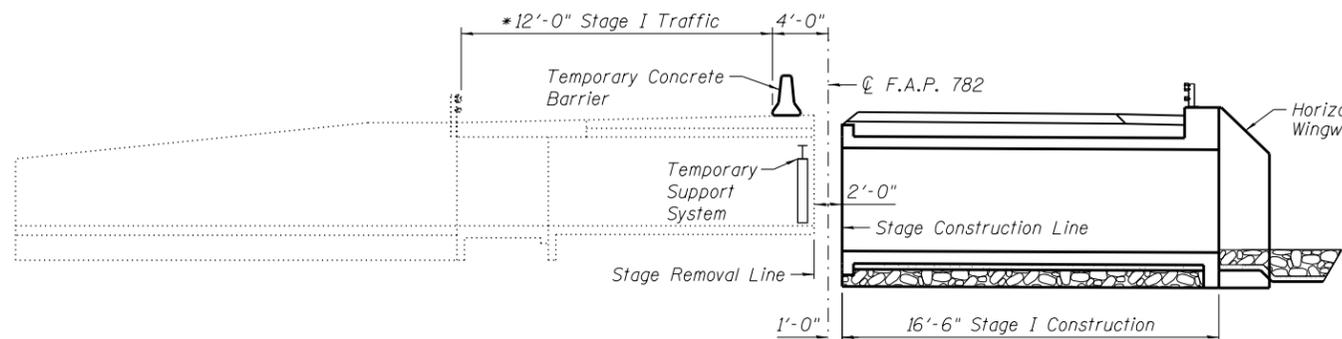
**GENERAL DATA
 STRUCTURE NO. 035-2005**

SHEET NO. 2 OF 11 SHEETS

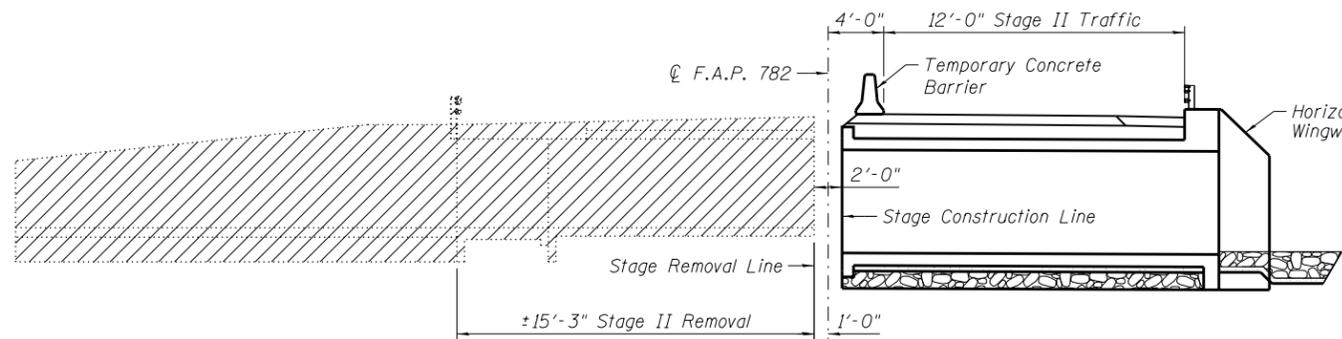
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	23
CONTRACT NO. 78378				
ILLINOIS FED. AID PROJECT				



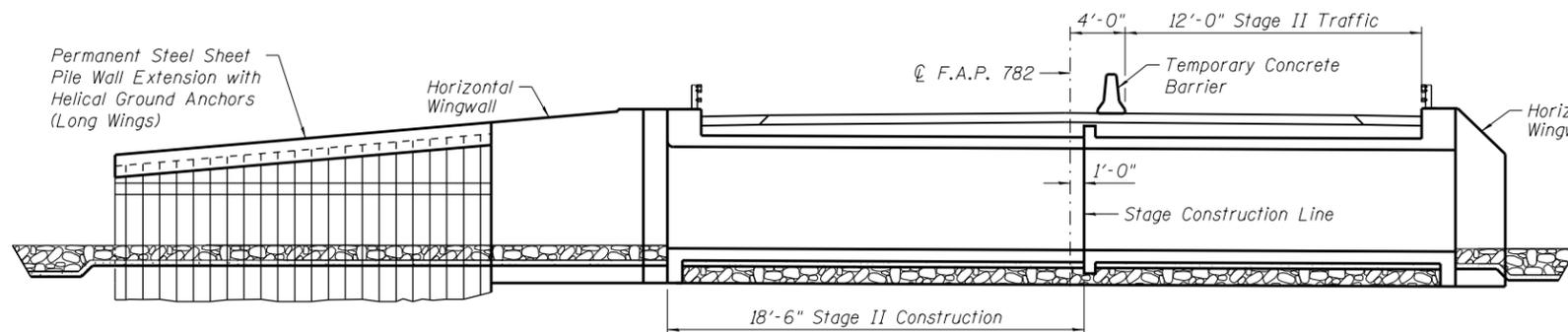
STAGE I REMOVAL



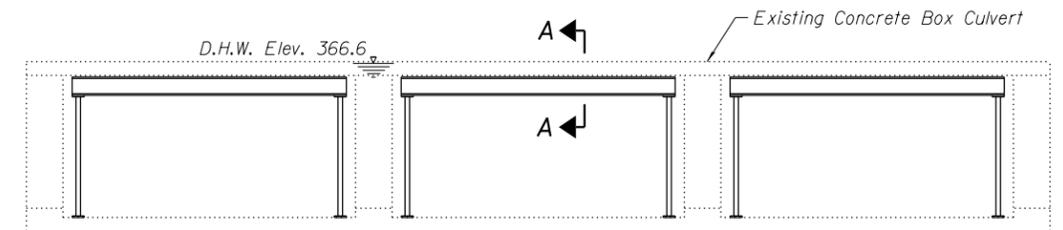
STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION

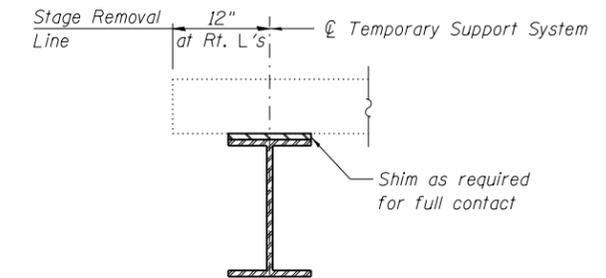


TEMPORARY SUPPORT SYSTEM

* Stage I traffic based on 03/12/09 Structure Core Results and 06/10/09 Damage Inspection Report.

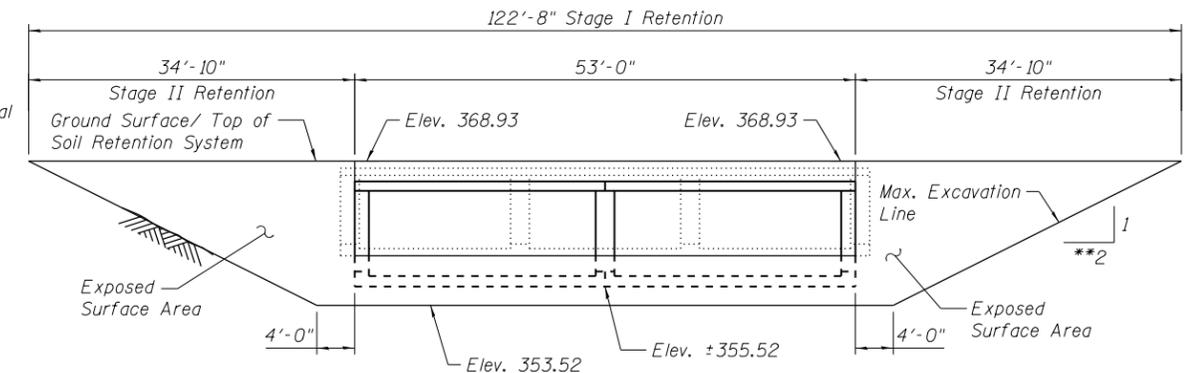
Notes:

1. Place Temporary Support prior to Stage I Removal
2. Place Temporary Support along skew.
3. Temporary Support System shall not be painted.



SECTION A - A

**Excavation shown is along the face of the Temporary Soil Retention System. The 2:1 slope shown is consistent with the 1:1 construction excavation shown in the Section Thru Barrel detail on sheet 2.



TEMPORARY SOIL RETENTION SYSTEM

(Looking West) (Dimensions along Stage Construction Line)

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

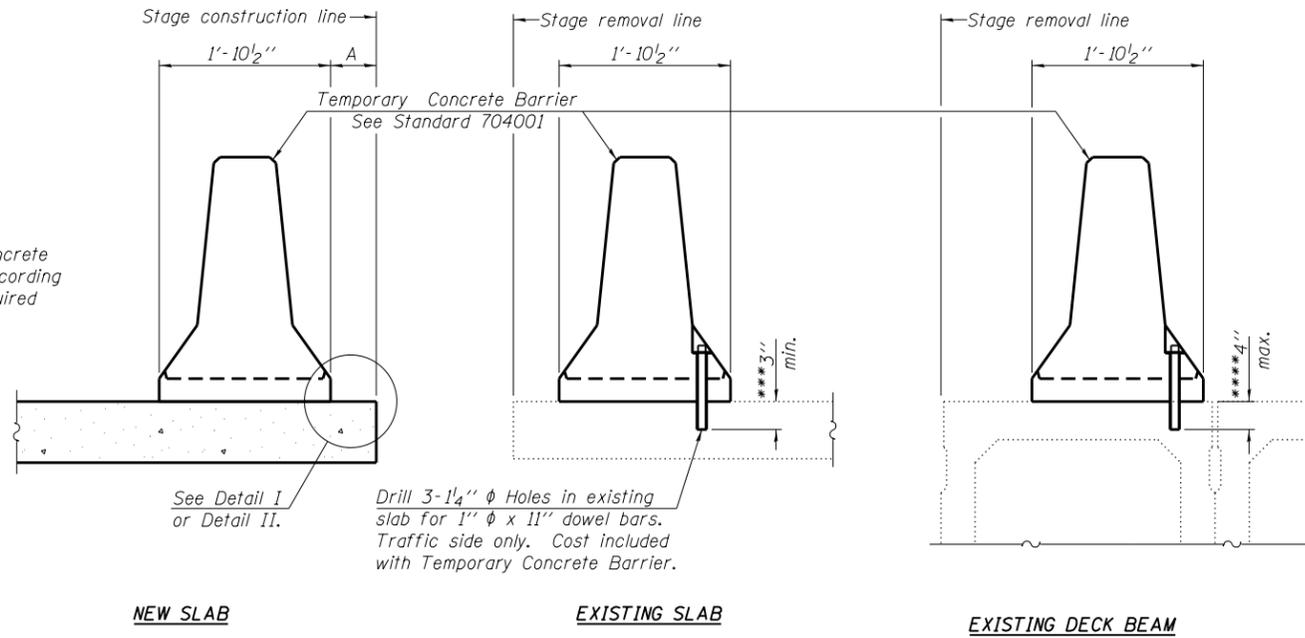
Notes:

1. Hatched area indicates Removal of Existing Structures.
2. All staging cross sections are looking south.
3. All dimensions are perpendicular to C.L. F.A.P. 782 unless noted otherwise.
4. For details of Temporary Concrete Barrier, see Sheet 4 of 11.
5. For quantity of Temporary Concrete Barrier, see Roadway Plans.
6. The Contractor shall brace the Rock Fill - Foundation if required during excavation for stage II construction. Cost included with Rock Fill-Foundation.
7. The existing structure shall be removed in its entirety at all locations where it lies within the footprint of the proposed structure and wingwalls.
8. Removal of existing railing is included in the cost of Removal of Existing Structures.

USER NAME =	DESIGNED - HP	REVISED -
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PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	24
CONTRACT NO. 78378				

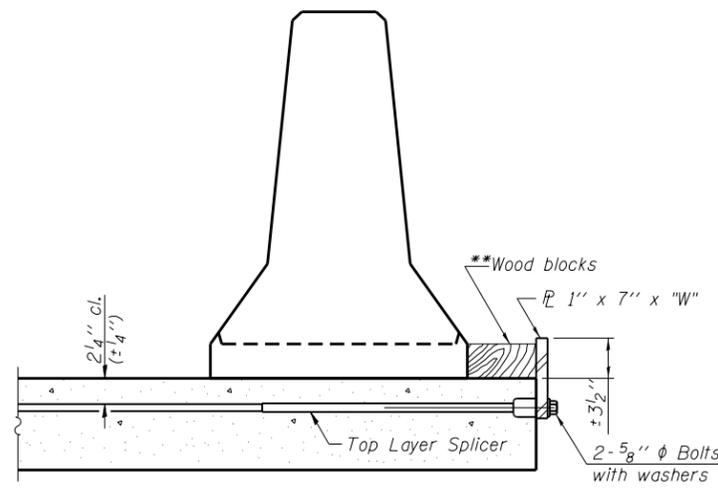
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



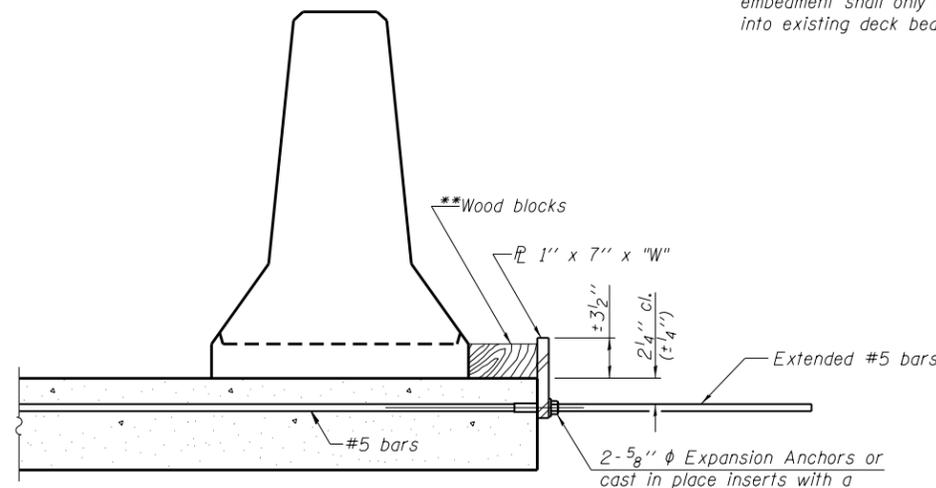
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete.
If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

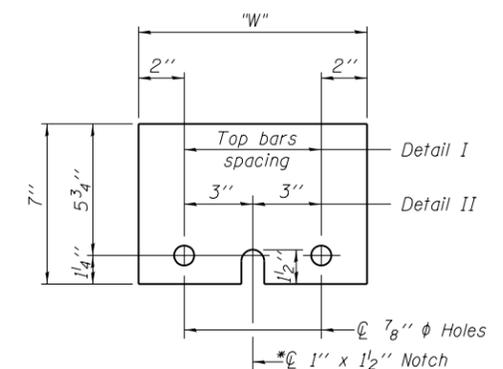
"W" = Top bars spacing + 4"

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.
The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



STEEL RETAINER \bar{L} 1" x 7" x "W"

* Required only with Detail II

R-27 7-1-10



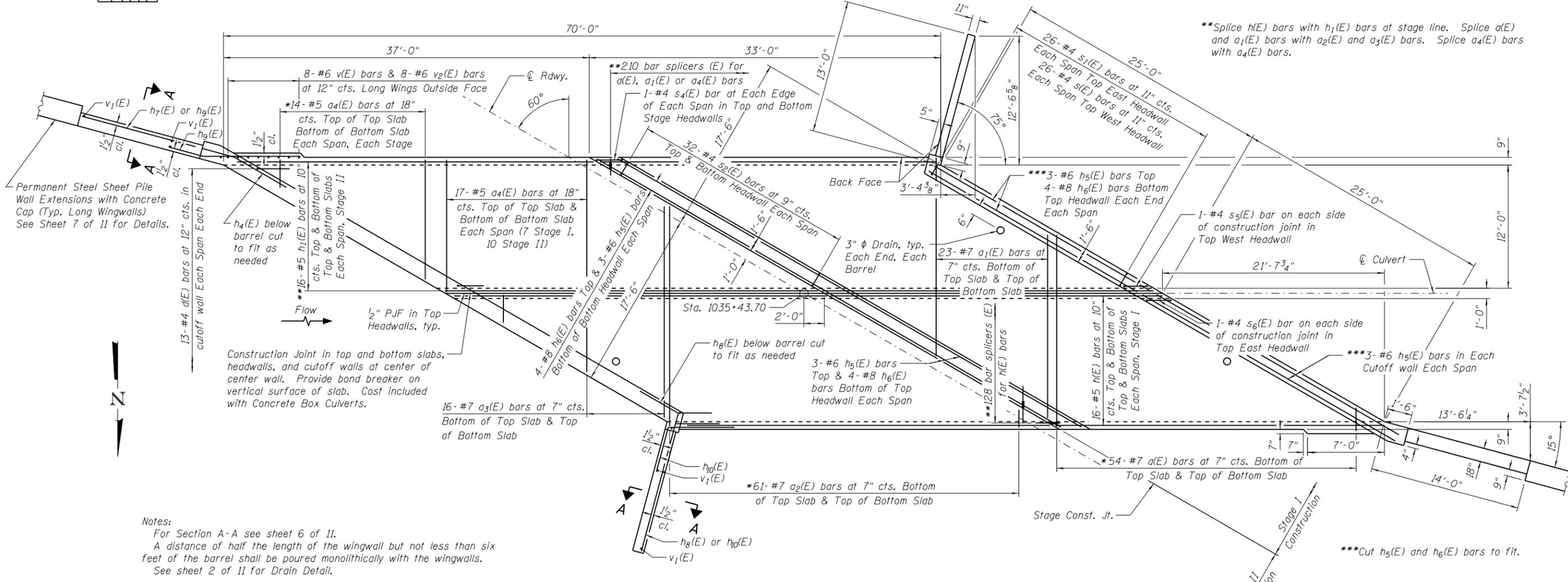
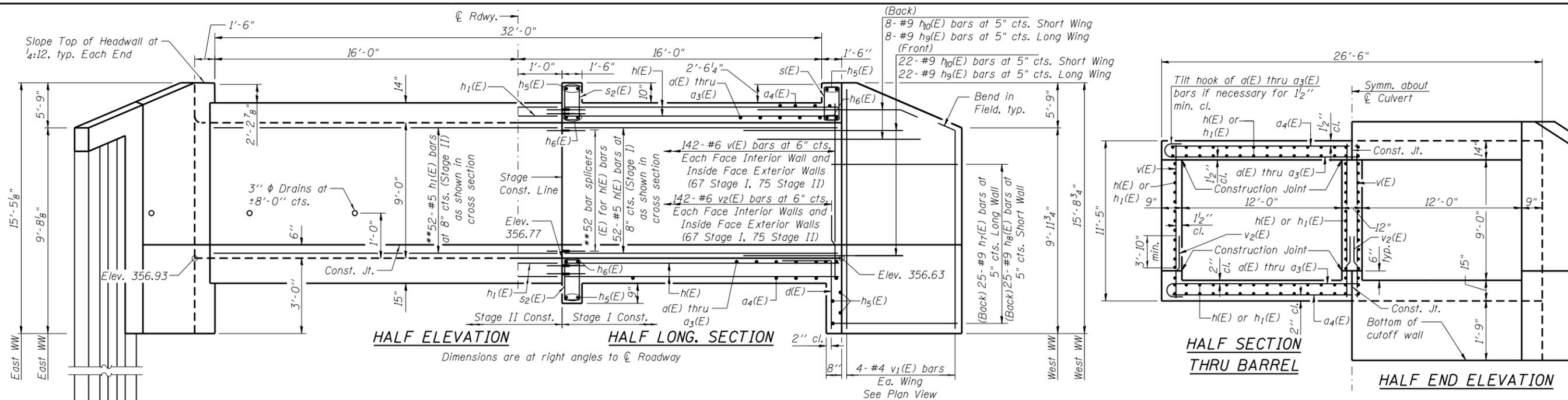
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PLOT DATE =	CHECKED - MTH	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 035-2005**

SHEET NO. 4 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	25
CONTRACT NO. 78378				
ILLINOIS FED. AID PROJECT				



Notes:
 For Section A-A see sheet 6 of 11.
 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.
 See sheet 2 of 11 for Drain Detail.

*Cut a(E), a2(E) and a4(E) bars to fit skew. Use balance of bar in opposite end of stage. Alternate hooked ends for placement in southeast and northwest corner.

PLAN

(Sheet 1 of 3)



USER NAME =	DESIGNED - HP	REVISED -
FILE NAME =	CHECKED - LMS	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

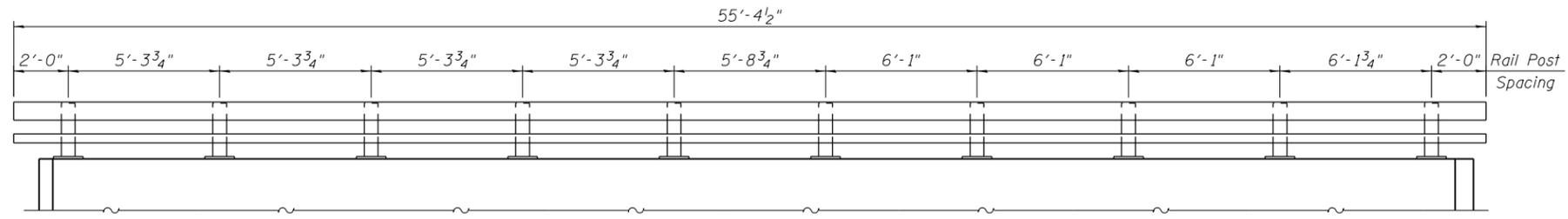
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS
 STRUCTURE NO. 035-2005**

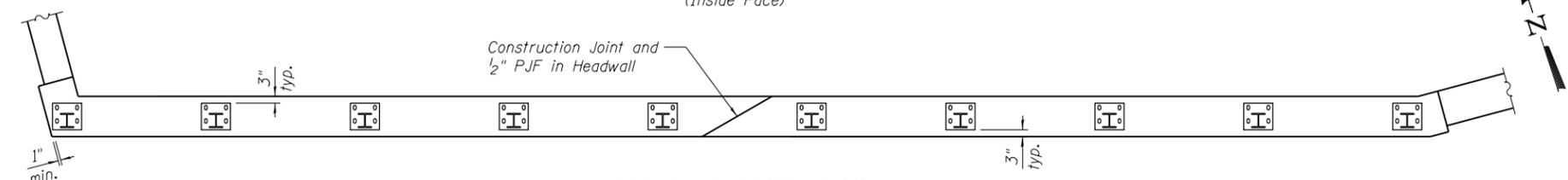
SHEET NO. 5 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	26
CONTRACT NO. 78378				

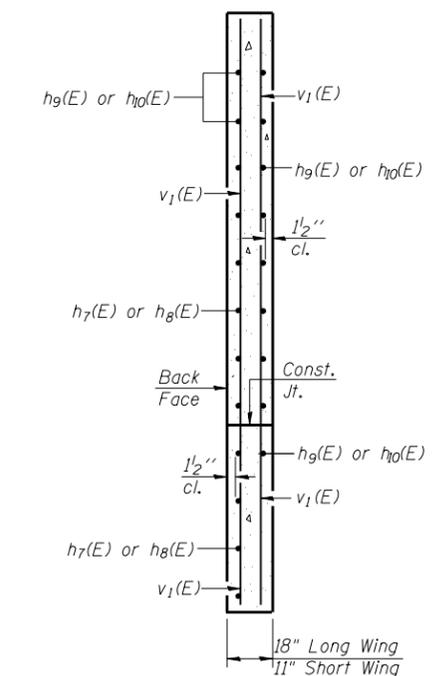
ILLINOIS FED. AID PROJECT



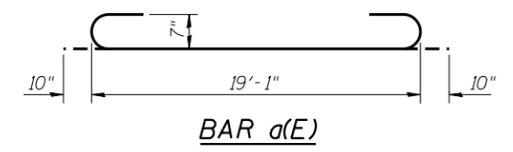
RAIL POST ELEVATION
(Inside Face)



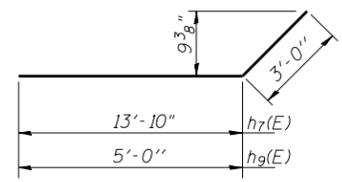
EAST RAIL POST PLAN
(West Similar)



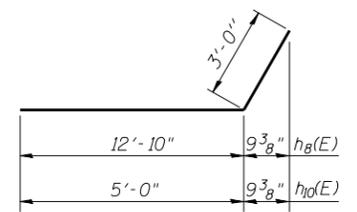
SECTION A-A



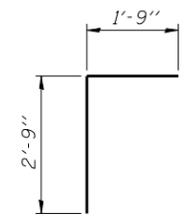
BAR a(E)



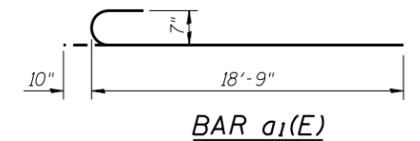
BARS h7(E) & h9(E)



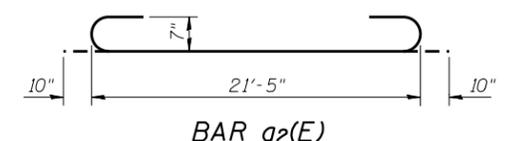
BARS h8(E) & h10(E)



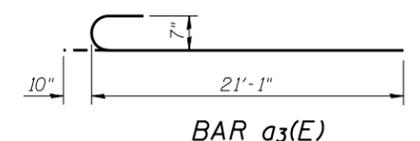
BAR d(E)



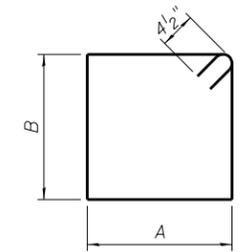
BAR a1(E)



BAR a2(E)

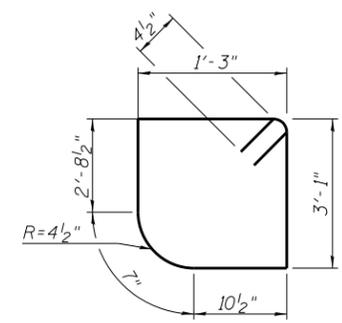


BAR a3(E)



**BARS s(E), s2(E)
AND s4(E) THRU s6(E)**

Bar	A	B
s(E)	1'-3"	3'-4"
s2(E)	1'-3"	1'-9"
s4(E)	2'-6"	1'-9"
s5(E)	2'-6"	3'-4"
s6(E)	2'-6"	3'-1"



BAR s1(E)



BAR s3(E)



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	108	#7	20'-9"	U
a1(E)	46	#7	19'-7"	U
a2(E)	122	#7	23'-1"	U
a3(E)	32	#7	21'-11"	U
a4(E)	180	#5	13'-0"	U
d(E)	52	#4	4'-6"	T
h(E)	180	#5	32'-8"	U
h1(E)	180	#5	36'-8"	U
h5(E)	36	#6	26'-2"	U
h6(E)	32	#8	26'-2"	U
h7(E)	50	#9	16'-10"	U
h8(E)	50	#9	15'-10"	U
h9(E)	60	#9	8'-0"	U
h10(E)	60	#9	8'-0"	U
h11(E)	14	#5	35'-1"	U
s(E)	52	#4	9'-11"	U
s1(E)	52	#4	9'-3"	U
s2(E)	128	#4	6'-9"	U
s3(E)	26	#5	4'-6"	U
s4(E)	8	#4	9'-3"	U
s5(E)	2	#4	12'-5"	U
s6(E)	2	#4	11'-11"	U
u(E)	72	#5	5'-6"	U
v(E)	584	#6	9'-4"	U
v1(E)	16	#4	15'-4"	U
v2(E)	584	#6	5'-7"	U
v3(E)	8	#6	13'-8"	U
Concrete Box Culverts		Cu. Yd.	300.0	
Reinforcement Bars, Epoxy Coated		Pound	57480	
Permanent Steel Sheet Piling		Sq. Ft.	1589	
Helical Ground Anchors		Each	16	
Bar Splicers		Each	390	

(Sheet 2 of 3)



USER NAME =	DESIGNED - HP	REVISED -
FILE NAME =	CHECKED - LMS	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

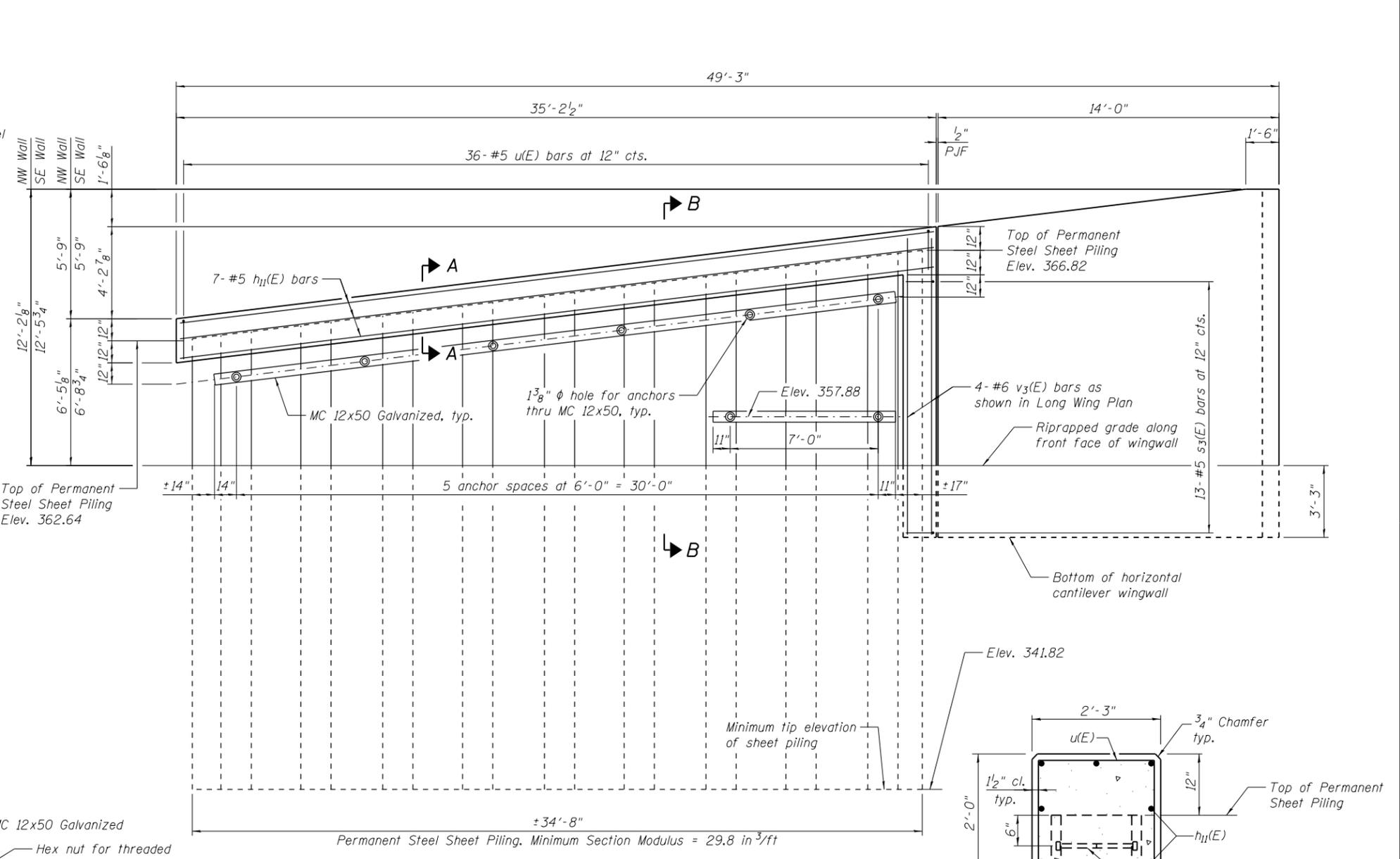
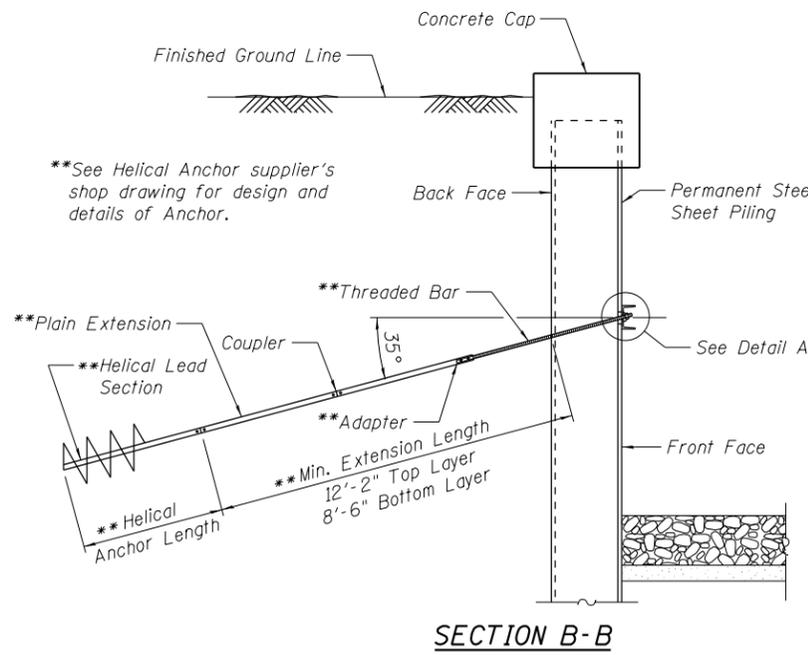
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS
STRUCTURE NO. 035-2005**

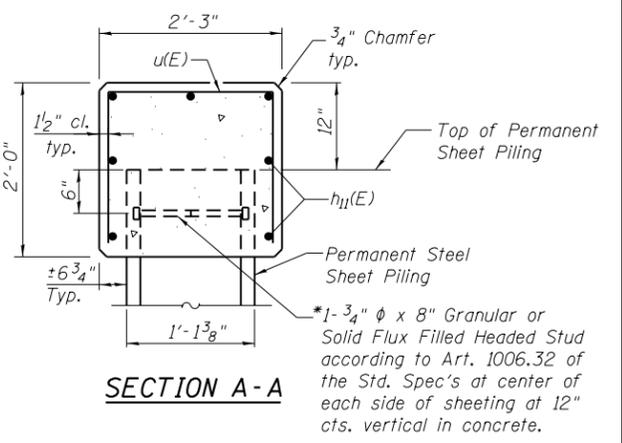
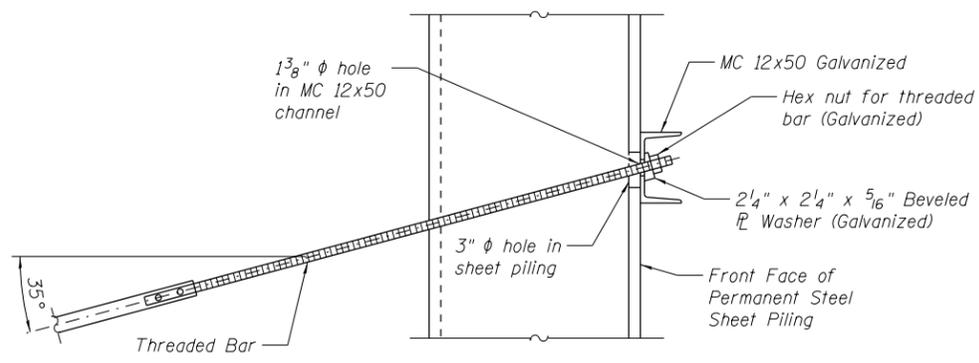
SHEET NO. 6 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	27
CONTRACT NO. 78378				

ILLINOIS FED. AID PROJECT



Notes:
 The details for the concrete cap and reinforcement, and the required number of stud shear connectors are based on section SCZ 22 sheet piling. If the Contractor chooses to use any other section, then the Contractor shall submit revised concrete cap and reinforcement configuration for approval by the Engineer. Such changes shall not be cause for additional compensation.
 The quantity of concrete for the sheet piling cap is included in Concrete Box Culverts. The cost of supplying and installing the studs is included in Permanent Steel Sheet Piling.
 Horizontal dimensions measured along face of wingwall.
 For details of Reinforcement Bars and Bill of Material, see sheet 6 of 11.
 Helical Anchor shall be designed by manufacturer. (See Special Provisions).
 The Contractor shall submit design calculations and shop drawing for the proposed Helical Ground Anchor to the Engineer for review and approval.
 Helical Anchor design load = 24.1 K/Anchor.
 Cost of channel MC 12x50, washers and nuts included in the cost of Helical Ground Anchors.



CONSTRUCTION SEQUENCE

1. Drill holes in sheet pile wall at the location shown in the plans.
2. Install the first plane extension thru holes and connect to helical lead section placed behind the wall.
3. Rotate the plain extension to install helical lead section until the first extension approaches to the front face of the wall.
4. Attach second plain extension and repeat step #4 until the number of plane extensions reach beyond the min. extension length of 10'-3" as shown on the plans.
5. Place thread bar adapter, thread bar and connect to plane extension. Connect channel, washers and nut.
6. Backfill and compact soil behind the wall to the ground surfaces. Cost included with Helical Anchors.
7. Test the anchors. (See Special Provisions).

DETAIL A

LONG WING ELEVATION
(Looking at front face)

SECTION A-A

LONG WING PLAN

(Sheet 3 of 3)



USER NAME =	DESIGNED - HP	REVISED -
FILE NAME =	CHECKED - LMS	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

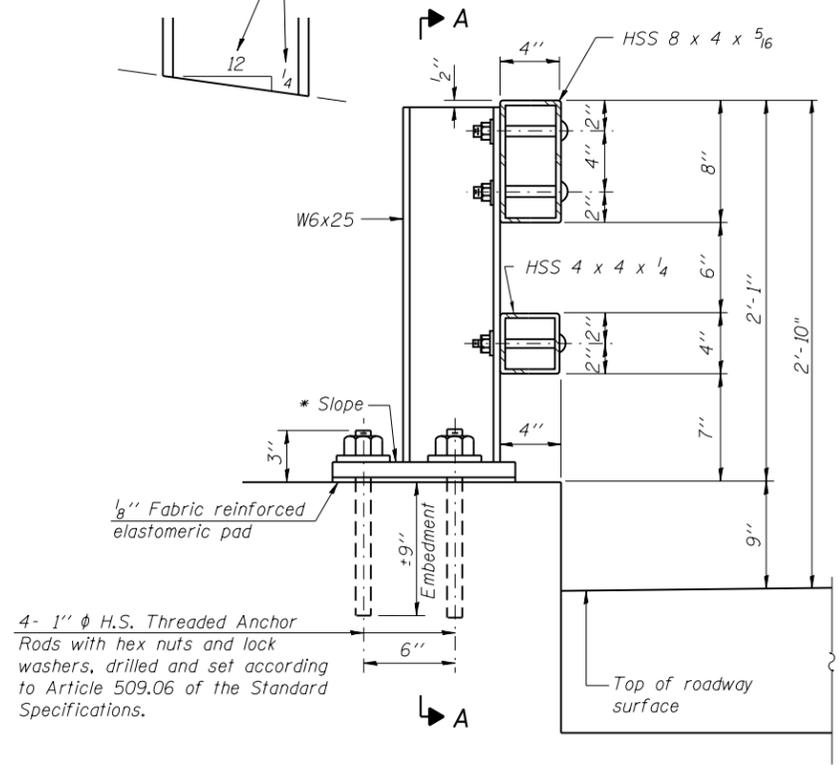
CULVERT DETAILS
STRUCTURE NO. 035-2005

SHEET NO. 7 OF 11 SHEETS

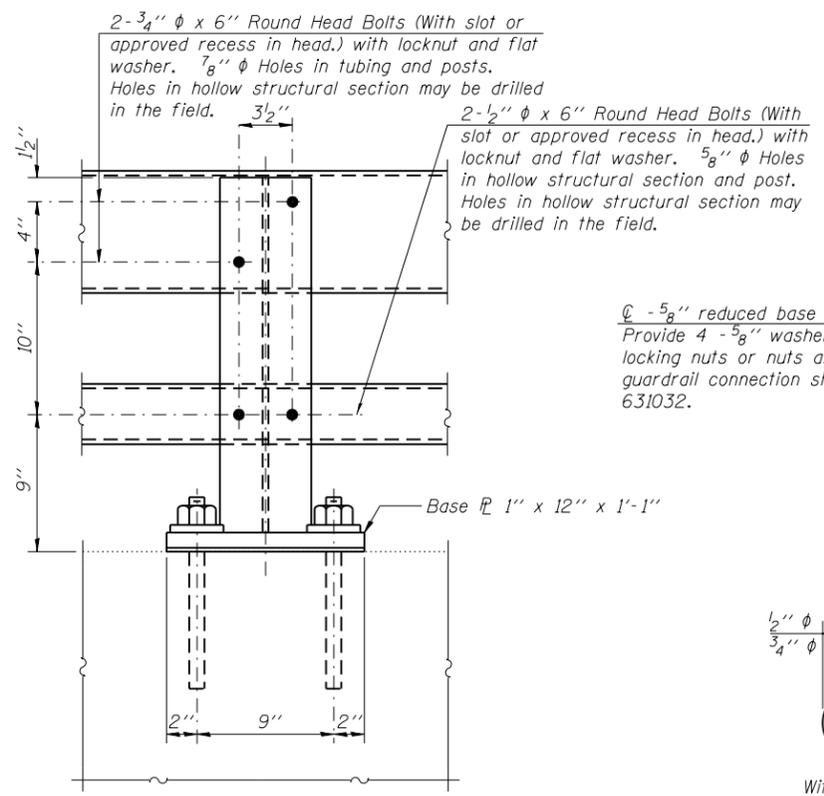
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	28
CONTRACT NO. 78378				
ILLINOIS FED. AID PROJECT				

*Included in cost of Permanent Steel Sheet Piling

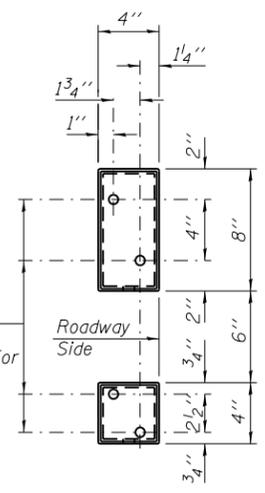
* Cut bottom end of post to curb slope.



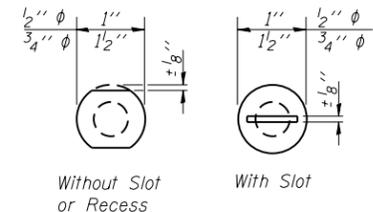
SECTION AT RAIL POST



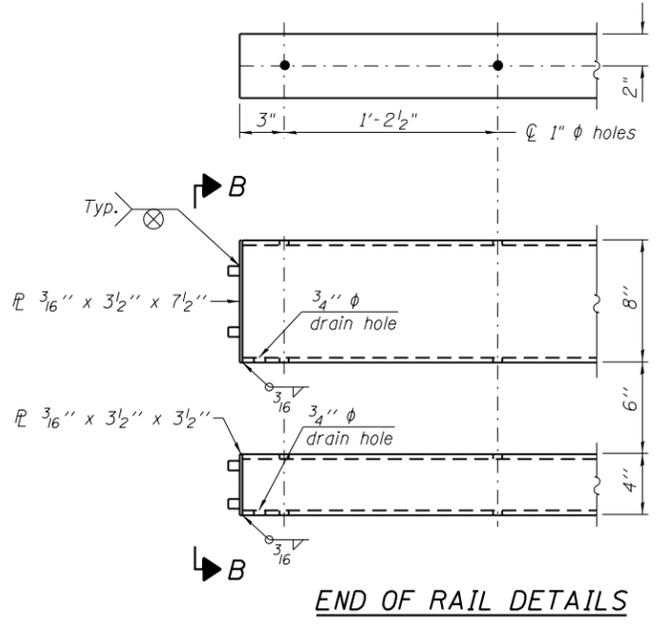
SECTION A-A



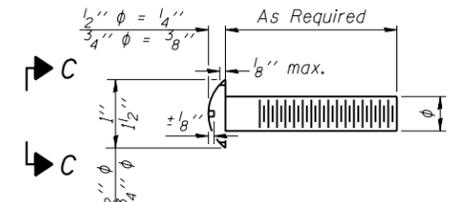
VIEW B-B



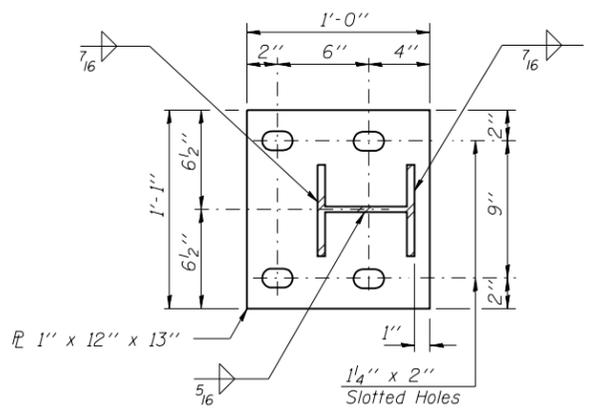
VIEW C-C



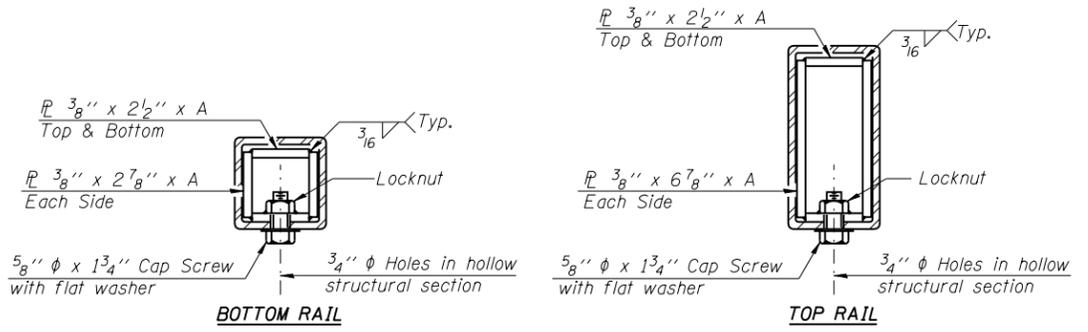
END OF RAIL DETAILS



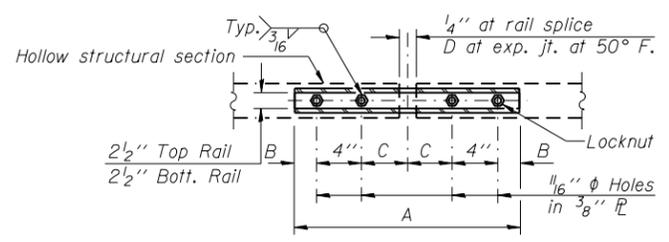
DETAIL OF 1/2 inch diameter & 3/4 inch diameter ROUND HEAD BOLTS



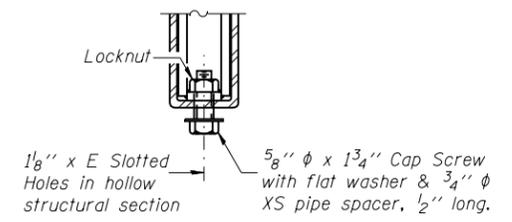
BASE PLATE DETAIL



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE RAIL TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	111

R-31

7-1-10

(6'-3" Maximum Post Spacing)



USER NAME =
 FILE NAME =
 PLOT SCALE =
 PLOT DATE =

DESIGNED - HP
 CHECKED - LMS
 DRAWN - AJF
 CHECKED - MTH

REVISED -
 REVISED -
 REVISED -
 REVISED -

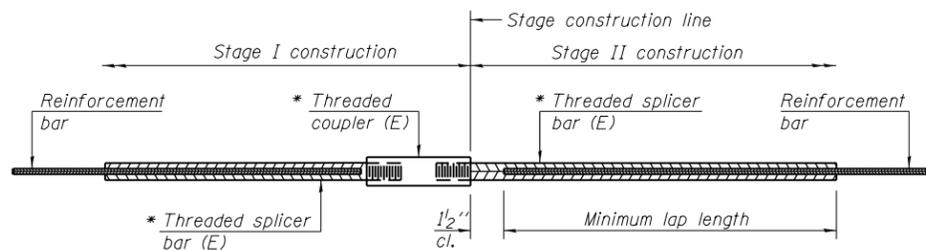
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STEEL RAILINGS, TYPE 2399
 STRUCTURE NO. 035-2005**

SHEET NO. 8 OF 11 SHEETS

F.A.P. RT. SECTION COUNTY TOTAL SHEETS SHEET NO.
 782 115B-2 HARDIN 43 29
 CONTRACT NO. 78378

ILLINOIS FED. AID PROJECT



STANDARD BAR SPLICER ASSEMBLY

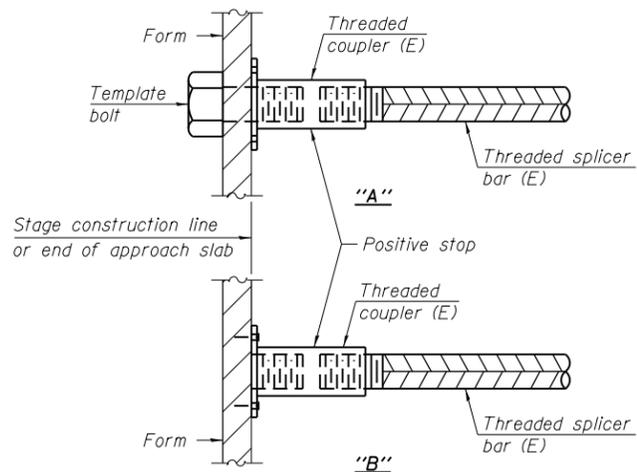
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

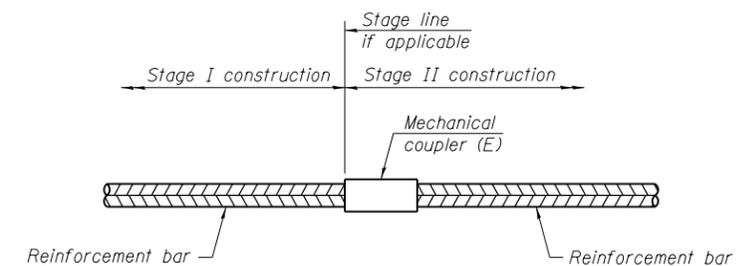
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Barrel	#5	236	3
Barrel	#7	154	3



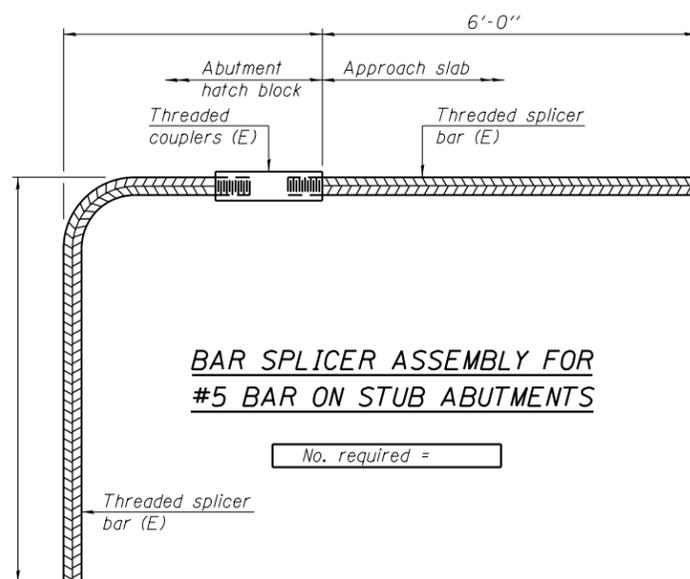
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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

8-31-12



USER NAME =	DESIGNED - HP	REVISED -
FILE NAME =	CHECKED - LMS	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER DETAILS
STRUCTURE NO. 035-2005

SHEET NO. 9 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	30
CONTRACT NO. 78378				
ILLINOIS FED. AID PROJECT				

B.M. Square Cut in NE Corner NW Wingwall 16' FT
 Sta 1034+80 Elev 368.52
 Existing Structure Built as SB1 140 Sec 115A Sta 1035+43
 in 1933. Triple Box Culvert to be widened, utilizing stage
 construction, traffic to be maintained at all times.
 No temporary bridge road.

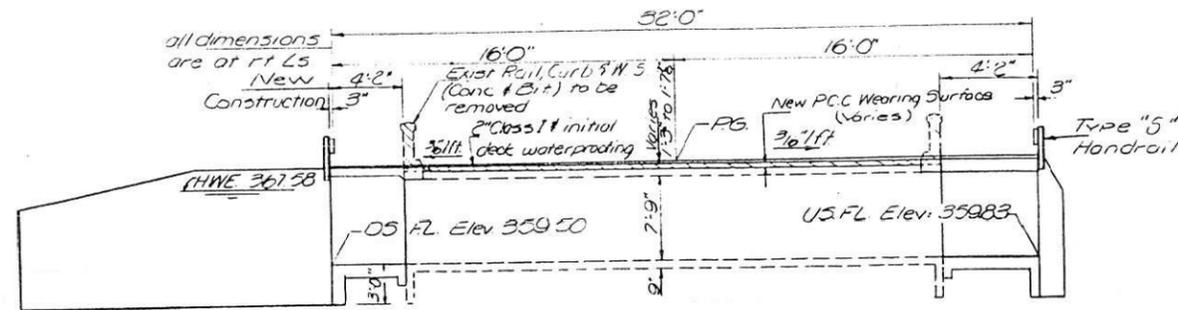
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
26	115A-8Y	HARDIN	35	29
SHEETS				

GENERAL NOTES

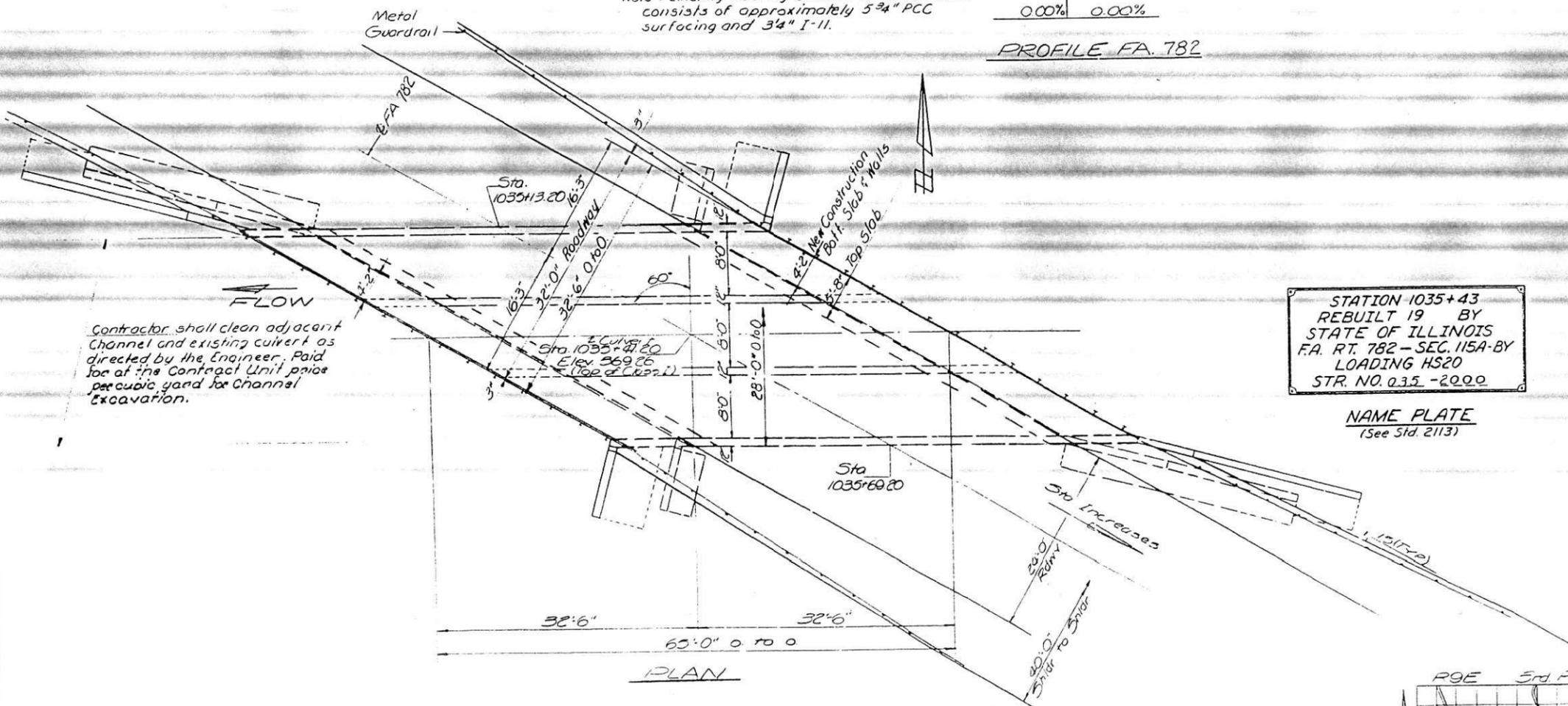
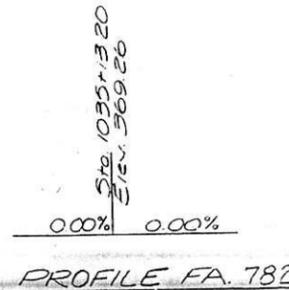
Porous granular embankment shall be placed behind sidewalks and wing walls after the superstructure has been poured and the falsework removed. See Article 502.11 of the Standard Specifications.
 It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

Expansion bolts shall consist of self drilling expansion anchors and 3/4" x 12" hooked bolts.
 Exposed edges shall be beveled 2/4" except as shown.
 Class X Concrete shall be used throughout.
 Reinforcement shall conform to the requirements of AASHTO M-31 or M-53, Grade 60.



LONGITUDINAL SECTION

Note: Existing wearing surface to be removed consists of approximately 5-3/4" PCC surfacing and 3/4" I-11.



PLAN

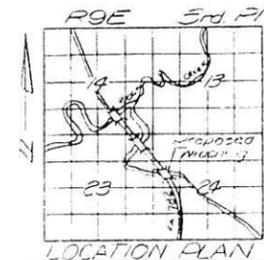
STATION 1035+43
 REBUILT BY
 STATE OF ILLINOIS
 F.A. RT. 782 - SEC. 115A-BY
 LOADING HS20
 STR. NO. 035-2000

NAME PLATE
 (See Std. 2113)

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Porous Granular Embankment	Cu. Yds.	41
Bit Concrete Surface Course, Class	Tons	22
Waterproofing Membrane System	Sq. Yds.	202
Concrete Removal	Cu. Yds.	23
Expansion Bolts 3/4" x 12"	Each	226
Class X Concrete Box Culverts	Cu. Yds.	152.3
Steel Railing Type '5'	Lin. Ft.	110
Reinforcement Bars	Lbs.	25,350
Temporary Bridge Rail	Lin. Ft.	66
Bridge Wearing Surface Removal	Sq. Yds.	130
Name Plates	Each	1

GENERAL PLAN & ELEVATION
 FA 782 over TRIBUTARY OF ROCK CK
 FA, RTE. 782 SEC. 115A-BY
 HARDIN COUNTY,
 STA. 1035+43



LOCATION PLAN

DESIGNED	J.M. Aydel
CHECKED	Ferrando
DRAWN	Ferrando
CHECKED	

EXAMINED
 PASSED
 APPROVED
 DIRECTOR OF HIGHWAYS

DESIGN STRESSES

f_c = 3500 psi
 f_y = 60,000 psi (Reinforcement)

WATERWAY INFORMATION

Drainage Area: 124.50 Mi.
 Character: hilly, clay, wooded, cultivated
 Present Opening: 186 Sq. Ft.
 Road Opening: 186 Sq. Ft.
 Proposed Opening: 186 Sq. Ft.
 Q (150) 1928 cfs.

LOADING HS20-44

Design Specifications 1977 AASHTO & 1978, 1979 Interim Specifications as applicable.

FOR INFORMATION ONLY

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY
 STRUCTURE NO. 035-2000

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	33
CONTRACT NO. 78378			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	



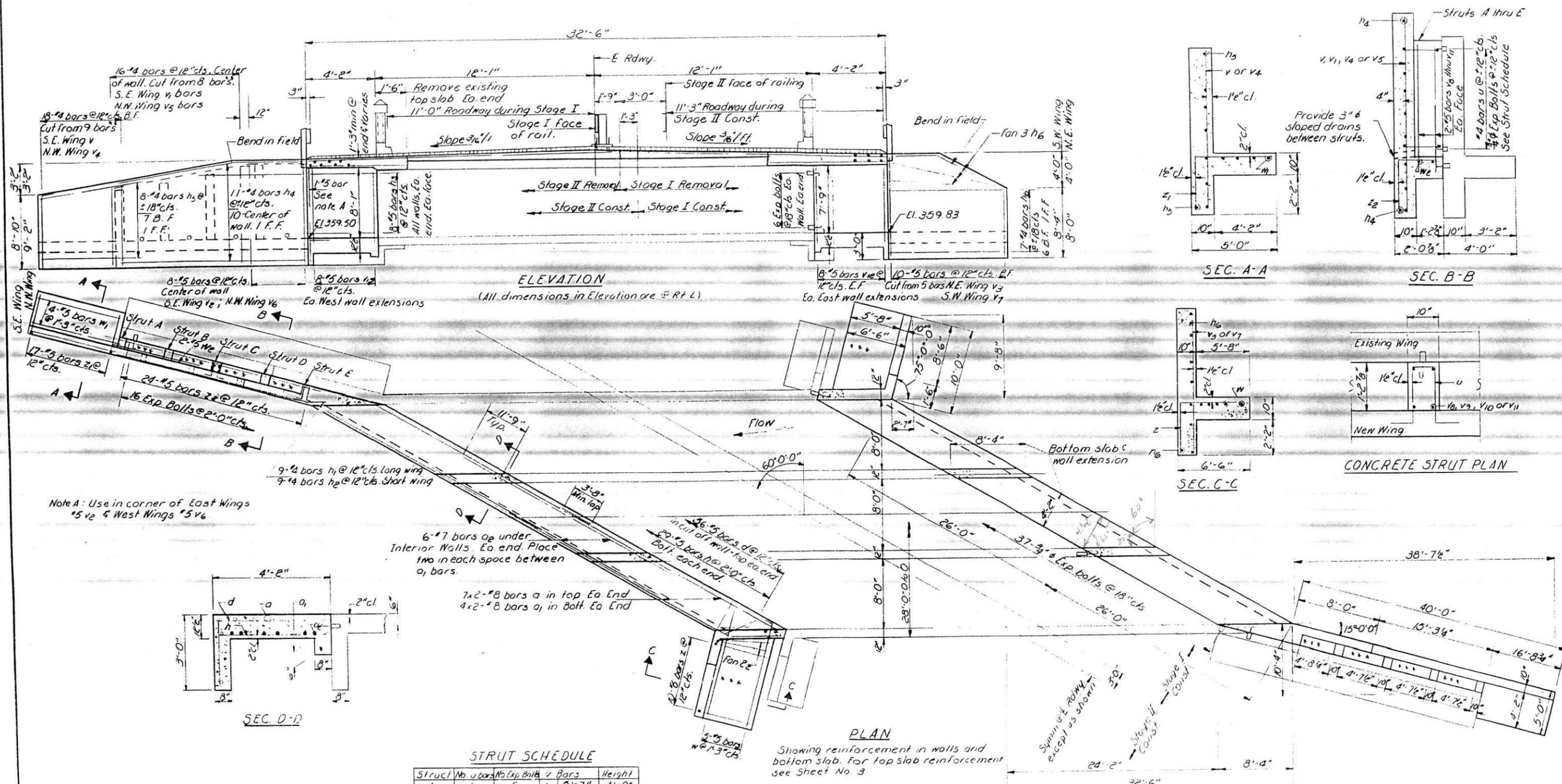
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PLOT DATE = 11/20/2014 10:07:38 AM	DATE - 06/14	REVISED -

SCALE: SHEET NO. 1 OF 6 SHEETS STA. TO STA.

REV. 10-25-77

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
26	115A-BY	HARDIN	35	30
5 SHEETS				



ELEVATION
(All dimensions in Elevation are @ Rt L)

SEC. A-A
SEC. B-B

SEC. C-C
CONCRETE STRUT PLAN

STRUT SCHEDULE

Strut	No. of bars	No. Exp. Balls	v Bars	Height
A	5	5	18	5'-7"
B	6	6	19	6'-10"
C	8	7	10	8'-1"
D	7	7	11	9'-4"
E	7	9	11	9'-4"

Showing reinforcement in walls and bottom slab. For top slab reinforcement see Sheet No. 3
For reinforcement bar bending and cutting details see sheet #4
Order bars full length and cut in field as shown in the cutting diagram. All portions of bars shall be used in the same wing
Use corrus reinforcement for treatment bed and 1.5' v wing walls

FOR INFORMATION ONLY

CULVERT
FA RT 782 SEC 115A-BY
HARDIN COUNTY
STA 1035+43

DESIGNED J.M. Palel
CHECKED [Signature]
DRAWN Bev Robinson
CHECKED [Signature]
EXAMINED [Signature]
PASSED [Signature]
APPROVED [Signature]



USER NAME = kah	DESIGNED - NHP	REVISED -
ESCA PROJECT NO. 1035-04	DRAWN - HAS	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

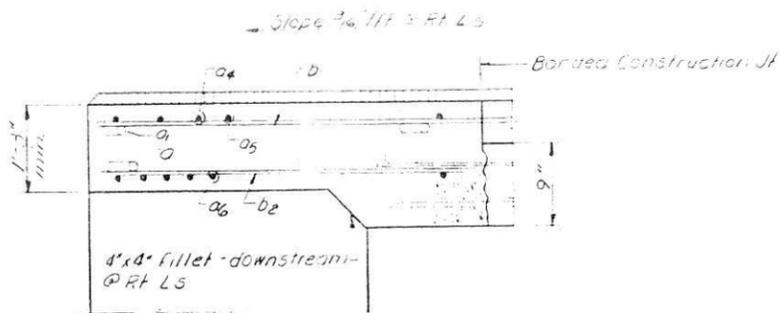
EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY
STRUCTURE NO. 035-2000

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	34
CONTRACT NO. 78378				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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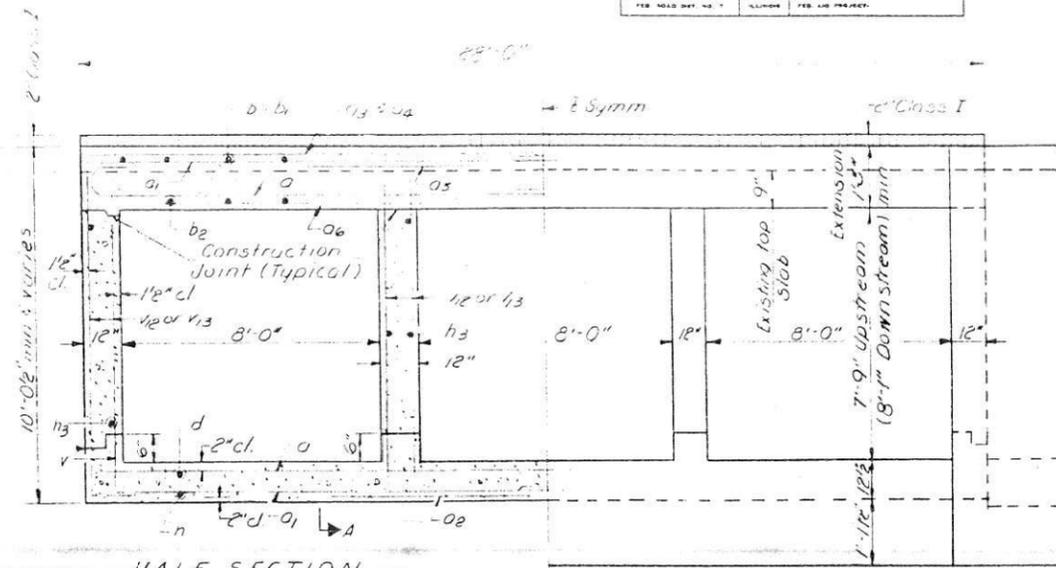
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
26	115A	HARDIN	35	31
SHEETS				



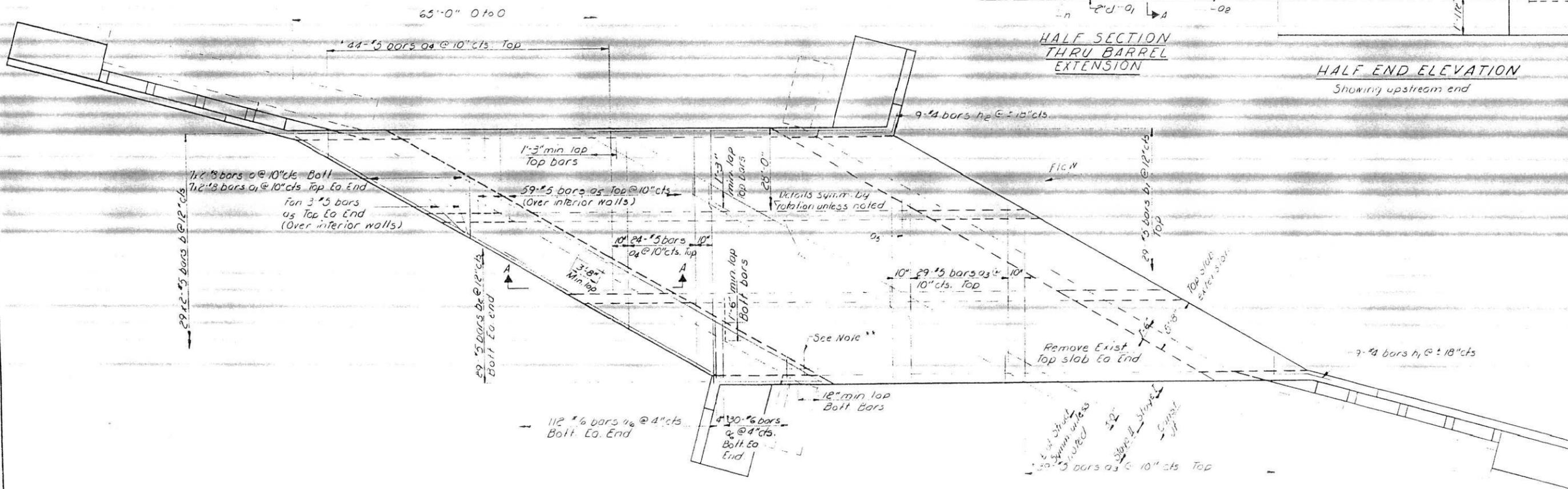
SECTION A-A

Remove overlay on existing culvert for slab 5" P.C.C. wearing surface and 3/4" Bituminous surfacing.
Proposed concrete slab over existing culvert top slab thickness min. 4.5" slope to crown, 10" @ 6" E



HALF SECTION THRU BARREL EXTENSION

HALF END ELEVATION
Showing upstream end



TOP SLAB REINFORCEMENT

Notes: * Order bars with lengths and cut to fit
balance of bar to be cut in triangle at
opposite end of bar.
* Existing reinforcement to be retained,
straightened and re-anchored in new slab.
The reinforcement bar bar cutting
details see sheet #4

DESIGNED	M. J. Zaleski
CHECKED	
DRAWN	Ben Robinson
CHECKED	

EXAMINED	MA 24 1972
PASSED	M. J. Zaleski
APPROVED	Richard J. Holt

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY
STRUCTURE NO. 035-2000

SCALE: SHEET NO. 3 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	35
CONTRACT NO. 78378				

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

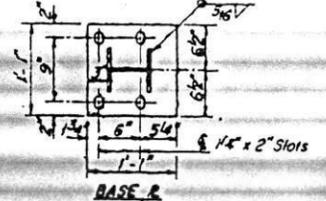
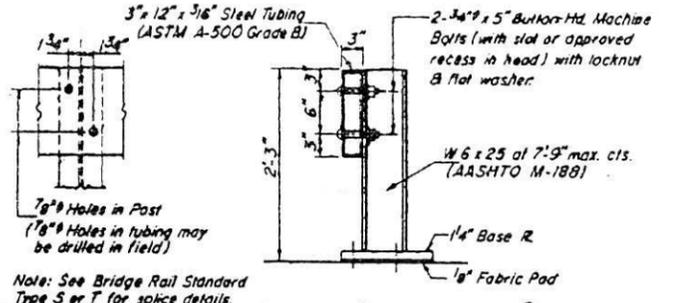
TOP SLAB
PART 782 SEC. 115A BY
HARDIN COUNTY
STA 1035+83



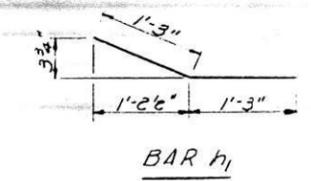
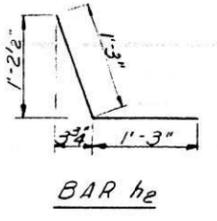
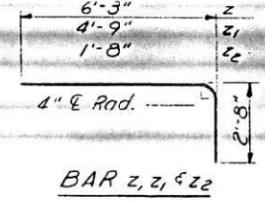
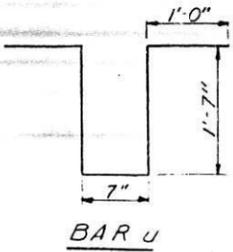
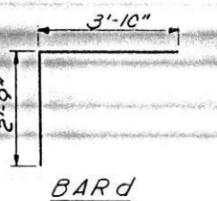
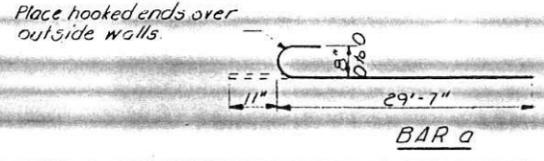
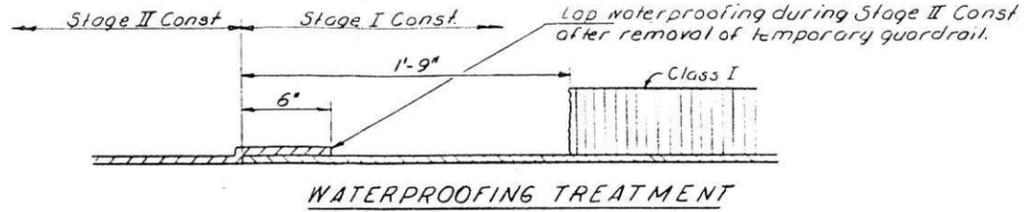
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ESCA PROJECT NO. 1035.04	DRAWN - HAS	REVISED -
PLOT SCALE = 0.1667' / IN.	CHECKED - JMS	REVISED -
PLOT DATE = 11/20/2014 10:07:50 AM	DATE - 06/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

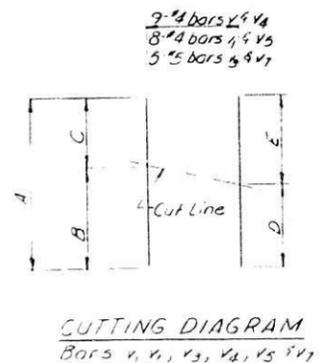
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
26	115A	HARDIN	35	32
SHEETS				



TEMPORARY BRIDGE RAIL DETAILS
(See Special Provisions)



Bar	A	B	C	D	E
v	18'-9"	10'-2"	8'-7"	9'-5"	9'-4"
v1	22'-0"	11'-9"	10'-3"	11'-1"	10'-11"
v2	9'-6"	11'-9"	7'-9"	9'-11"	9'-7"
v3	19'-6"	10'-7"	8'-11"	9'-10"	9'-8"
v4	22'-9"	12'-1"	10'-8"	11'-5"	11'-4"
v7	20'-2"	12'-1"	8'-1"	10'-3"	9'-11"



Bar	No.	Size	Length	Shape
a	36	#8	30'-6"	U
a1	44	#8	29'-6"	U
a2	24	#7	20'-6"	U
a3	68	#5	16'-4"	U
a4	68	#5	22'-0"	U
a5	170	#5	8'-0"	U
a6	284	#6	6'-3"	U
b	58	#5	19'-9"	U
b1	29	#5	27'-9"	U
b2	58	#5	11'-0"	U
d	112	#5	6'-7"	U
h	58	#5	3'-9"	U
h1	18	#4	2'-6"	U
h2	18	#4	2'-6"	U
h3	128	#5	8'-1"	U
h4	22	#4	23'-0"	U
h5	16	#4	18'-6"	U
h6	20	#4	9'-9"	U
u	74	#4	5'-9"	U
v	9	#4	18'-9"	U
v1	8	#4	22'-0"	U
v2	10	#5	11'-9"	U
v3	5	#4	19'-6"	U
v4	9	#4	19'-6"	U
v5	8	#4	22'-9"	U
v6	10	#5	12'-1"	U
v7	5	#5	20'-2"	U
v8	8	#5	5'-7"	U
v9	8	#5	6'-10"	U
v10	8	#5	8'-1"	U
v11	16	#5	9'-4"	U
v12	64	#5	9'-9"	U
v13	64	#5	10'-0"	U
z	10	#5	12'-6"	U
z1	8	#5	17'-9"	U
z2	4	#5	27'-6"	U
z	24	#6	8'-11"	U
z1	34	#5	7'-5"	U
z2	48	#5	4'-4"	U

DETAILS
F.A. RT. 782 SEC 115A-BY
HARDIN COUNTY
STA 1035+43

DESIGNED	J.M. Bickel
CHECKED	J.M. Bickel
DRAWN	Ben Robinson
CHECKED	J.M.A.

May 26 1973

EXAMINED [Signature]

PASSED [Signature]

APPROVED [Signature]

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY
STRUCTURE NO. 035-2000

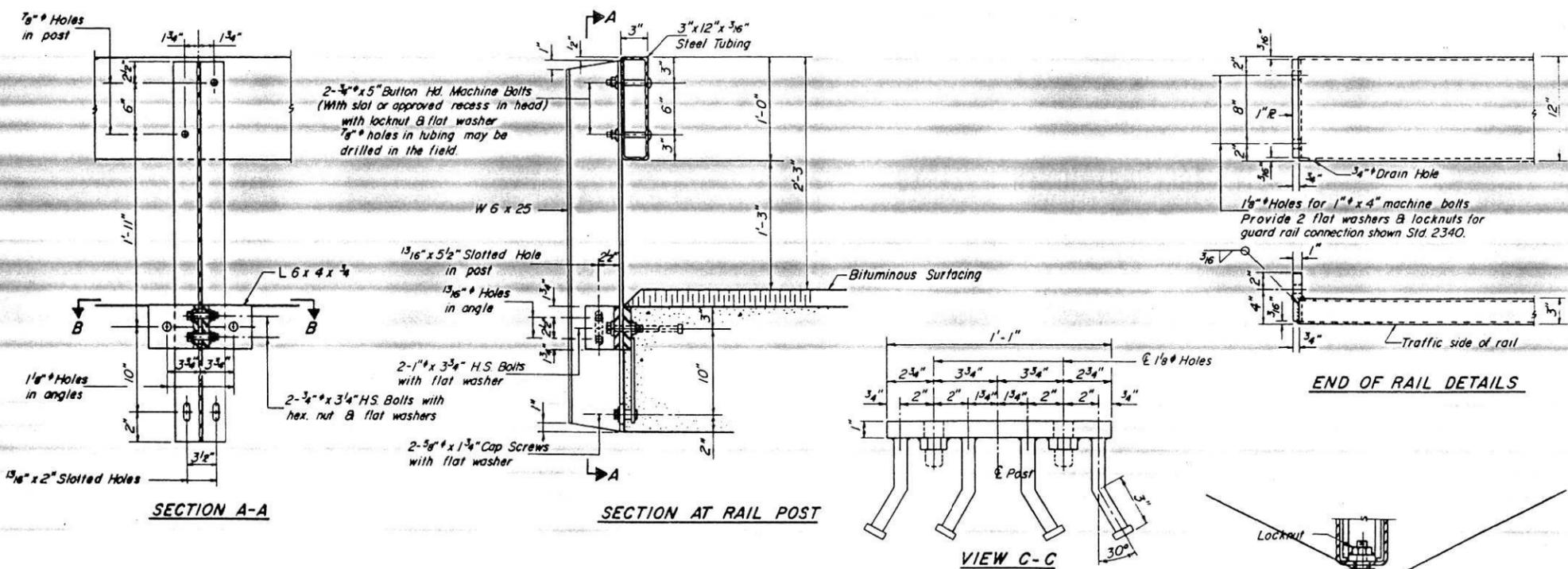
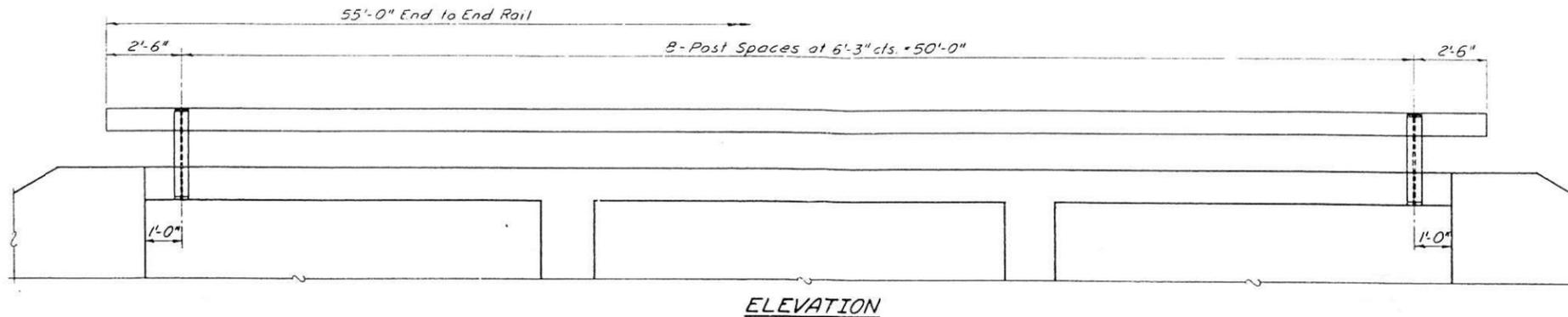
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	36
CONTRACT NO. 78378				



USER NAME = kah	DESIGNED - NHP	REVISED -
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PLOT SCALE = 0.1667' / IN.	CHECKED - JMS	REVISED -
PLOT DATE = 11/20/2014 10:07:55 AM	DATE - 06/14	REVISED -

SCALE: SHEET NO. 4 OF 6 SHEETS STA. TO STA.

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



NOTES

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

All other steel shapes and plates shall conform to the requirements of AASHTO M-183 except posts and angles shall conform to AASHTO M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

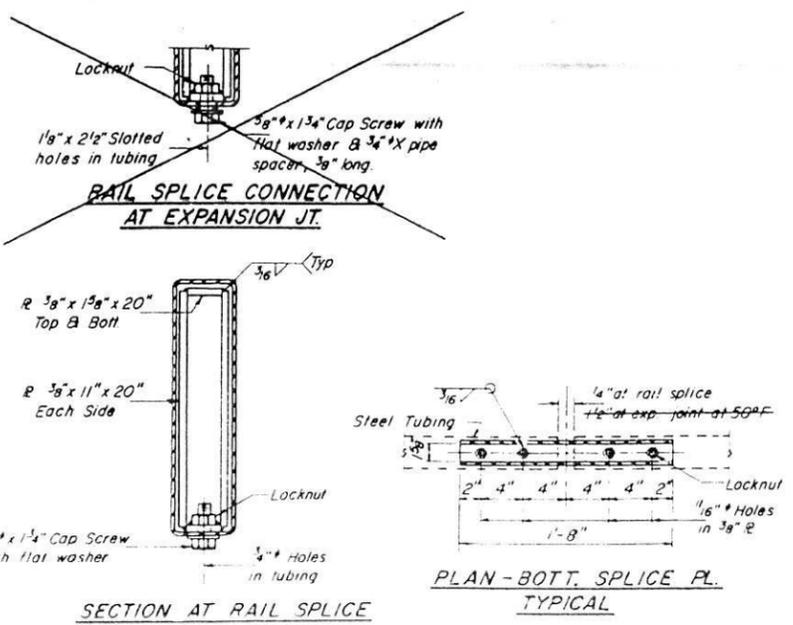
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per linear foot for STEEL RAILING, TYPE S.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/2" fabric bearing pad between the post and concrete.

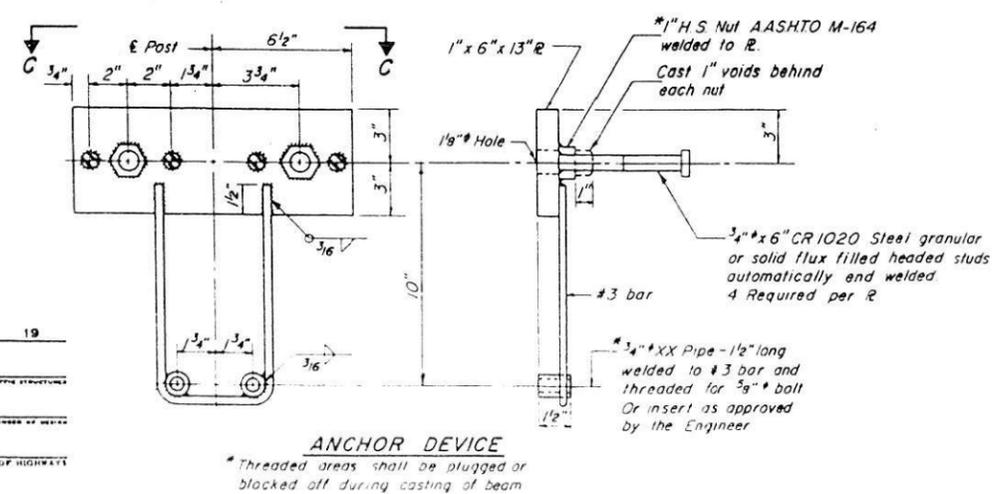
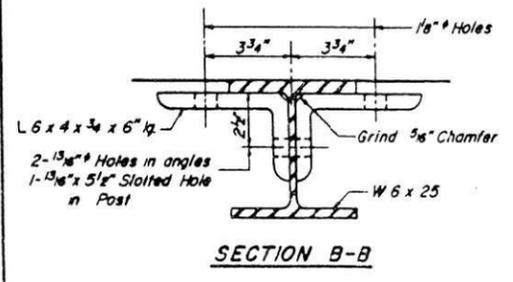
The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 507.04 (g)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.



BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S	Lin. Ft.	110

**TYPE S
STEEL RAILING**
F.A. RT. 782 - SEC. 115A-BY
HARDIN COUNTY
STA. 1035+43



DESIGNED	QCS	EXAMINED	19
CHECKED	BAK	PASSED	
DRAWN	BAK	APPROVED	
CHECKED	QTC		

R-23 4-1-79 (6'-3" Maximum Post Spacing)

FOR INFORMATION ONLY

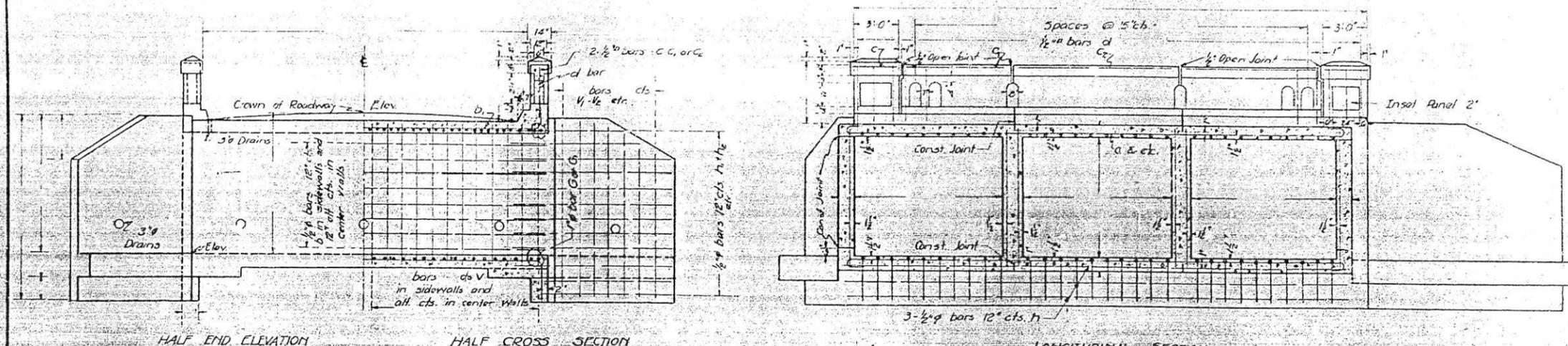
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PLOT DATE	= 11/20/2014 10:08:01 AM	DATE	- 06/14	REVISED	-

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

SHEET NO. 1
1 SHEETS



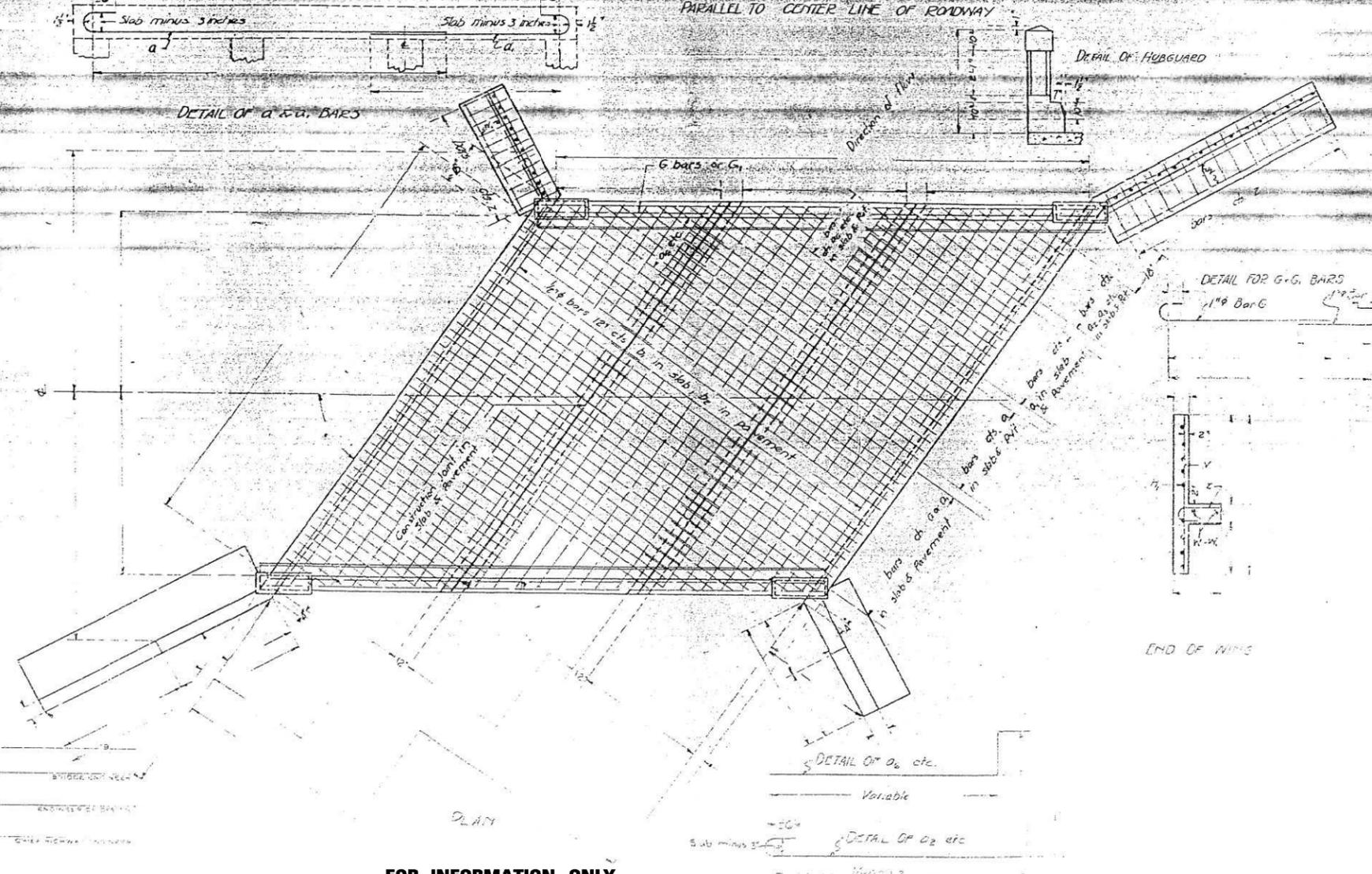
BILL OF MATERIAL

Bars	No.	Size	Length
a			
a ₁			
a ₂			
a ₃			
a ₄			
b		1/2" φ	
b ₁		1/2" φ	
b ₂		1/2" φ	
c		1/2" φ	
c ₁		1/2" φ	
c ₂		1/2" φ	
d		1/2" φ	
d ₁		1/2" φ	
d ₂		1/2" φ	
d ₃		1/2" φ	
d ₄		1/2" φ	
e		1/2" φ	
e ₁		1/2" φ	
f		1/2" φ	
f ₁		1/2" φ	
f ₂		1/2" φ	
f ₃		1/2" φ	
f ₄		1/2" φ	
g		1" φ	
g ₁		1" φ	

Hand Rail Concrete Curbs
Class X Concrete C_v 1/2s
Reinforcing Steel lbs

Class X Concrete to be used throughout.
All reinforcing steel to be wired securely in place before concrete is poured.

COMPLETED	—	EXAMINED	—
CHECKED	—	PASSED	—
DRAWN	— HAROLD B. BROWN	APPROVED	—
CHECKER	—		
SPECIAL	—		
ASSEMBLED	—		
CHECKED	—		



FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY
STRUCTURE NO. 035-2000

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-2	HARDIN	43	38
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	

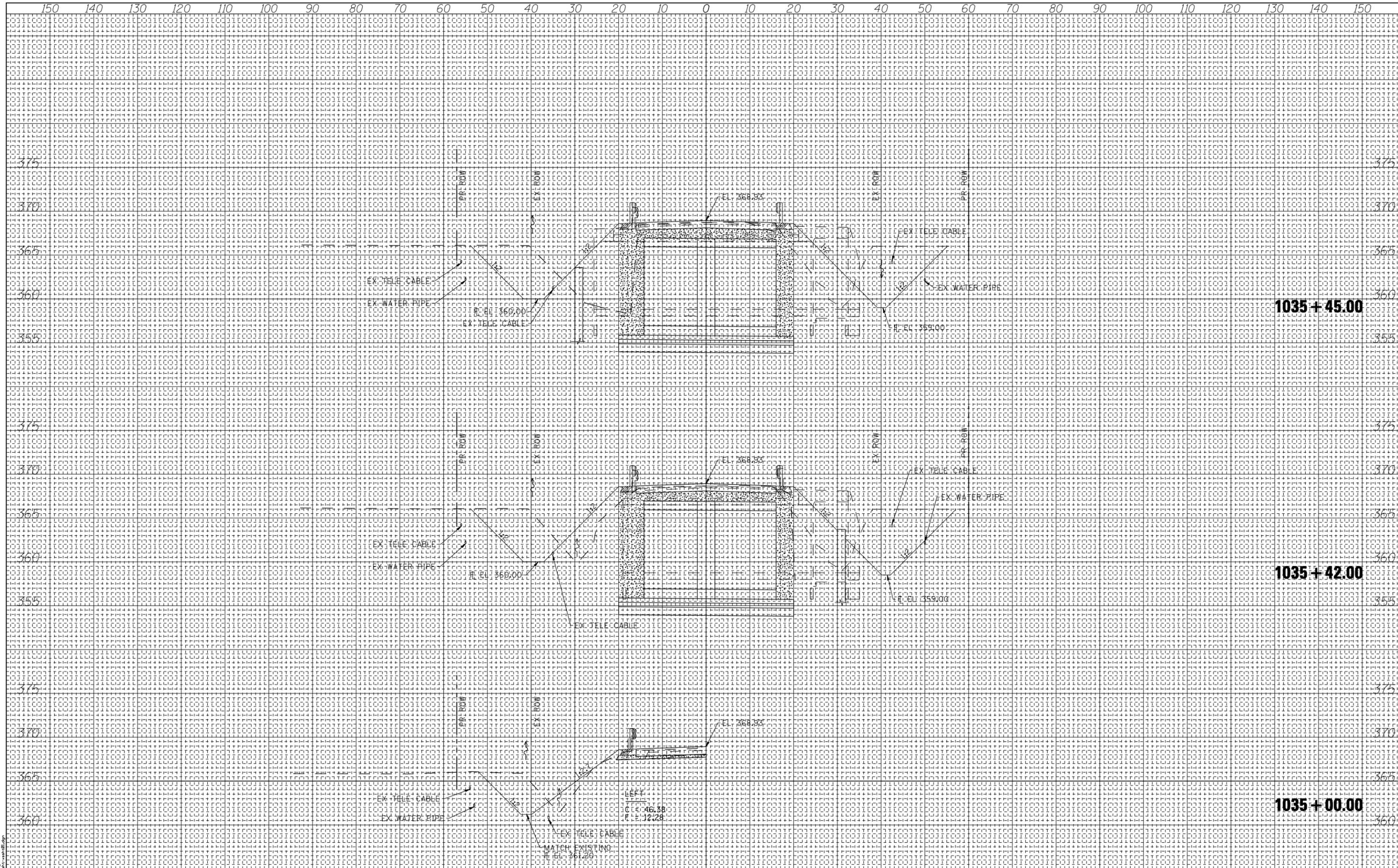
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PLOT SCALE = 0.1667' / IN.	CHECKED - JMS	REVISED -
PLOT DATE = 11/20/2014 10:08:07 AM	DATE - 06/14	REVISED -

DATE	
BY	
FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED	
NO.	



1035+45.00

1035+42.00

1035+00.00



USER NAME = kah	DESIGNED - JMS/NHP	REVISED -
ESCA PROJECT NO. 1035.04	DRAWN - HAS	REVISED -
SCALEs: (HORIZ) 1"=10' (VERT) 1"=5'	CHECKED - RDP	REVISED -
PLOT DATE = 11/20/2014 10:08:59 AM	DATE - 04/14	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FAP 782 (IL 1) CROSS SECTIONS

SCALE: AS SHOWN SHEET NO. 3 OF 5 SHEETS STA. 1035+00.00 TO STA. 1035+45.00

F.A.P. RTE. 782	SECTION 115B-2	COUNTY HARDIN	TOTAL SHEETS 43	SHEET NO. 41
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78378	

