

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 78263	

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## SHEET NO. DESCRIPTION

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- EXISTING STRUCTURE PLANS**  
SN 035-0002
- 52.-61. EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY

- CROSS SECTIONS**
- 62.-69. FAP 782 (IL 1) CROSS SECTIONS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

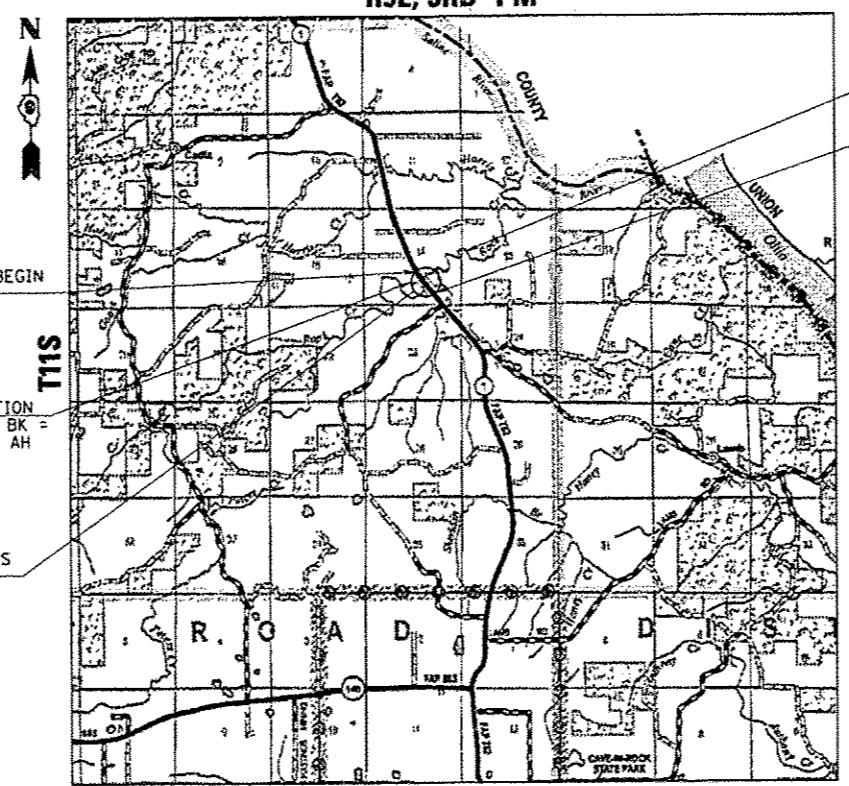
# PROPOSED HIGHWAY PLANS

FAP ROUTE 782 (IL 1)  
SECTION 115B-1  
PROJECT ACF-0782 (013)  
HARDIN COUNTY

C - 99 - 051 - 11

BRIDGE REPLACEMENT  
OVER ROCK CREEK

R9E, 3RD PM



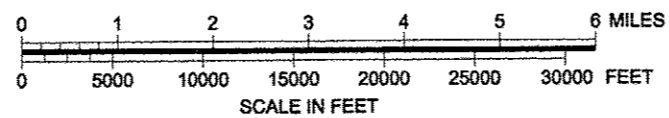
EXISTING SN 035-0002  
STA. 997+00  
PROPOSED SN 035-0017  
STA. 997+40.30  
35'-2" OUT TO OUT WIDTH  
131'-5 1/4" BACK TO BACK ABUTMENTS  
(45° SKEW)

STATION EQUATION  
STA 996+31.40 BK =  
STA 996+38.64 AH

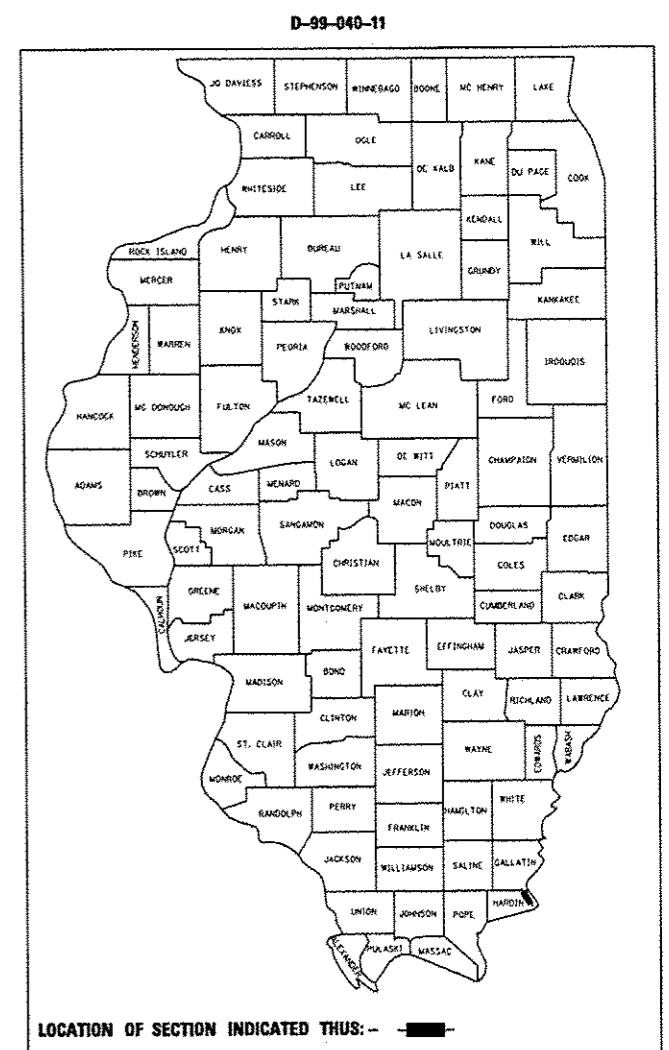
IMPROVEMENTS BEGIN  
STA. 995+06

ROCK CREEK  
IMPROVEMENTS END  
STA. 999+70

LOCATION MAP



GROSS LENGTH = 456.76 FT. = 0.087 MI.  
NET LENGTH = 456.76 FT. = 0.087 MI.



FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL (NON URBAN)  
DESIGN SPEED: 55 mph  
POSTED SPEED: 55 mph  
ADT: 1,328 (2011)  
PV: 78%  
TRUCKS: 22%  
TOWNSHIP: ROAD DISTRICT NO. 1

DESIGN  
DESIGNATION  
N.A.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED December 10, 2014

*John J. Ryan*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

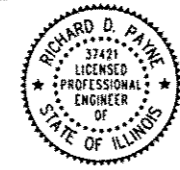
Jan 30 2015  
*John D. Baranzelli PE, EIT*  
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 30 2015  
*Omer Osman PE, EIT*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
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. 78263



*Richard D. Payne* DATE: 10/4/2014  
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
420401-11	BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03	NAME PLATE FOR BRIDGES
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
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
631031-13	TRAFFIC BARRIER TERMINAL, TYPE 6
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 994+61 TO 1000+15. 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.
- THE ALGEBRAIC DIFFERENCE BETWEEN THE PAVEMENT AND HMA SHOULDER SLOPES SHALL NOT EXCEED 8%. THE SHOULDER ON THE OUTSIDE OF SUPERELEVATED CURVES SHALL BE FLATTENED ACCORDINGLY.
- 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.
- IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.
- RECLAIMED ASPHALT PAVEMENT (RAP) WILL NOT BE ALLOWED FOR USE AS AGGREGATE IN AGGREGATE SHOULDERS, TYPE B.
- ON ALL SUPERELEVATED CURVES, THE PROPOSED BASE COURSE WIDENING SHALL BE CONSTRUCTED WITH A SLOPE CONFORMING TO THE RATE OF SUPERELEVATION OF THE EXISTING PAVEMENT.
- 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 FEBRUARY 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.
- MONITOR EROSION AND SEDIMENT CONTROL DAILY TO PREVENT SILT FROM ENTERING THE STREAM.

**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:	IL-9.5	IL-9.5	IL-19.0	HMA SHOULDERS
(GRADATION MIXTURE)				
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 Zlaniewicz*  
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: *[Signature]*  
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: *Carrie Nelson*  
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: *Carl N...*  
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: *[Signature]*  
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: \_\_\_\_\_  
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: *Dave W. Podes*  
DISTRICT MATERIALS ENGINEER

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES & STANDARDS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	1158-1	HARDIN	69	2
CONTRACT NO. 78263				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

USER NAME = jlf	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 1835.83	DRAWN - HAS	REVISED -
PLOT SCALE = 0.1867" / 1"	CHECKED - NHP	REVISED -
PLOT DATE = 18/24/2014	DATE - 10/14	REVISED -



ESCA CONSULTANTS, INC.  
 1000 N. WASHINGTON ST.  
 SUITE 200  
 DECATUR, IL 62521  
 TEL: 217/243-1100  
 FAX: 217/243-1101  
 WWW.ESCA-CONSULTANTS.COM



SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE ROADWAY 0004	80% FEDERAL 20% STATE BRIDGE 0011 S. N. 035-0017
CODE NO.	ITEM	UNIT	TOTAL QUANTITY		
20200100	EARTH EXCAVATION	CU YD	81	81	
20300100	CHANNEL EXCAVATION	CU YD	2100	2100	
25000210	SEEDING, CLASS 2A	ACRE	0.27	0.27	
25000350	SEEDING, CLASS 7	ACRE	0.27	0.27	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	25	25	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	25	25	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	25	25	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.6	0.6	
25100115	MULCH, METHOD 2	ACRE	0.27	0.27	
25100630	EROSION CONTROL BLANKET	SQ YD	1320	1320	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	110	110	
28000400	PERIMETER EROSION BARRIER	FOOT	813	813	
28100109	STONE RIPRAP, CLASS A5	SQ YD	1534		1534
28200200	FILTER FABRIC	SQ YD	1534		1534

⊗ SPECIALTY ITEM

PRINT DATE: 1/20/14 10:48 AM  
 USER: JLF  
 PLOT SCALE: 8.1667" / 1" IN.  
 PLOT DATE: 12/24/2014 11:29:49 AM



USER NAME: JLF  
 ESCA PROJECT NO. 1029.03  
 PLOT SCALE: 8.1667" / 1" IN.  
 PLOT DATE: 12/24/2014 11:29:49 AM

DESIGNED: NHP  
 DRAWN: JLF  
 CHECKED: JMS  
 DATE: 10/14

REVISED: -  
 REVISED: -  
 REVISED: -  
 REVISED: -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	1158-1	HARDIN	89	3
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

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. 035-0017
35650500	BASE COURSE WIDENING 10"	SQ YD	178	178	
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	777	777	
40600645	LEVELING BINDER (MACHINE METHOD), N90	TON	63	63	
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	97	97	
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	46	46	
44000100	PAVEMENT REMOVAL	SQ YD	445	445	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	8	8	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	303	303	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50200100	STRUCTURE EXCAVATION	CU YD	186		186
50200300	COFFERDAM EXCAVATION	CU YD	180		180
50201101	COFFERDAM (TYPE 1) (LOCATION - 1)	EACH	1		1

⊗ SPECIALTY ITEM

PRINT DESIGN: JLF, JLF, JLF  
 CHECK: JLF, JLF, JLF  
 DATE: 10/14/14



USER NAME = JLF  
 ESCA PROJECT NO. 1035.03  
 PLOT SCALE = 0.1667 1/8" IN.  
 PLOT DATE = 10/24/2014 2:05:39 PM

DESIGNED - NHP  
 DRAWN - JLF  
 CHECKED - JMS  
 DATE - 10/14

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE SHEET NO. 2 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
792	1158-1	HARDIN	69	4
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE ROADWAY 0004	80% FEDERAL 20% STATE BRIDGE 0011 S. N. 035-0017
CODE NO.	ITEM	UNIT	TOTAL QUANTITY		
50201102	COFFERDAM (TYPE 1) (LOCATION - 2)	EACH	1		1
50300225	CONCRETE STRUCTURES	CU YD	314.1		314.1
50300255	CONCRETE SUPERSTRUCTURE	CU YD	289.6		289.6
50300260	BRIDGE DECK GROOVING	SO YD	632		632
50300300	PROTECTIVE COAT	SO YD	858	46	812
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
50500505	STUD SHEAR CONNECTORS	EACH	3258		3258
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	94960		94960
50800515	BAR SPLICERS	EACH	718		718
51201900	FURNISHING STEEL PILES HP14X89	FOOT	1188		1188
51202305	DRIVING PILES	FOOT	308		308
51203900	TEST PILE STEEL HP14X89	EACH	2		2
51500100	NAME PLATES	EACH	1		1
52100505	ANCHOR BOLTS, 5/8"	EACH	48		48

⊗ SPECIALTY ITEM

PRINTED ON: 10/24/2014 2:07:18 PM  
 USER: JLF  
 PLOT SCALE: 0.1867" / 1"



USER NAME = JLF  
 ESCA PROJECT NO. 1235.03  
 PLOT SCALE = 0.1867" / 1"  
 PLOT DATE = 10/24/2014 2:07:18 PM

DESIGNED - NHP  
 DRAWN - JLF  
 CHECKED - JMS  
 DATE - 10/14

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	5
CONTRACT NO. 78263			ILLINOIS FED. AID PROJECT	

SUMMARY OF QUANTITIES				CONSTRUCTION CODE	
				80% FEDERAL 20% STATE ROADWAY 0004	80% FEDERAL 20% STATE BRIDGE 0011 S. N. 035-0017
CODE NO.	ITEM	UNIT	TOTAL QUANTITY		
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	90		90
⊗ 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	300	300	
⊗ 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
⊗ 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3	3	
⊗ 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	1	1	
63200310	GUARDRAIL REMOVAL	FOOT	790	790	
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	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6	

⊗ SPECIALTY ITEM

NOT BE USED FOR CONSTRUCTION OF ANY KIND WITHOUT THE WRITTEN PERMISSION OF ESCA CONSULTANTS, INC.



USER NAME * JLF	DESIGNED - NHP	REVISIONS -
ESCA PROJECT NO. 1035.03	DRAWN - JLF	REVISIONS -
PLOT SCALE * 3/16" = 1' IN.	CHECKED - JMS	REVISIONS -
PLOT DATE * 10/24/2014 2:10:07 PM	DATE - 10/14	REVISIONS -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

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

F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	1198-1	HARDIN	59	6
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 78263	



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. 035-0017
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2	2	
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	160	160	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2341	2341	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	834	834	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	425	425	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	425	425	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3	EACH	2	2	
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
⊗ 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2341	2341	
⊗ 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	4	
⊗ 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	3	3	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	8	8	
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	8	8	
⊗ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
	⊗ SPECIALTY ITEM				

15



USER NAME: <i>holstend</i>	DESIGNED - NHP	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - JLF	REVISED -
PLOT SCALE: 0.1667" / 1"	CHECKED - JMS	REVISED -
PLOT DATE: 11/12/2014 11:44:00 AM	DATE - 10/14	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE SHEET NO. 5 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	7
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

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. 035-0017
78300100	PAVEMENT MARKING REMOVAL	SQ FT	779	779	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	7	7	
* 86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1	1	
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	165	165	
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	165		165
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	22		22
Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	6		6
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	203		203
Z0065000	SETTING PILES IN ROCK	EACH	27		27
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SO FT	1708		1708
∅ Z0076600	TRAINEES	HOOR	500	500	
∅ Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOOR	500	500	

⊕ SPECIALTY ITEM ∅ 004Z

PRINT ESCA - 10/14/14  
 ESCA PROJECT NO. 1035.03  
 PLOT SCALE = 3/16" = 1' IN.  
 PLOT DATE = 10/24/2014 2:14:55 PM



USER NAME = JLF  
 ESCA PROJECT NO. 1035.03  
 PLOT SCALE = 3/16" = 1' IN.  
 PLOT DATE = 10/24/2014 2:14:55 PM

DESIGNED - RHP  
 DRAWN - JLF  
 CHECKED - JMS  
 DATE - 10/14

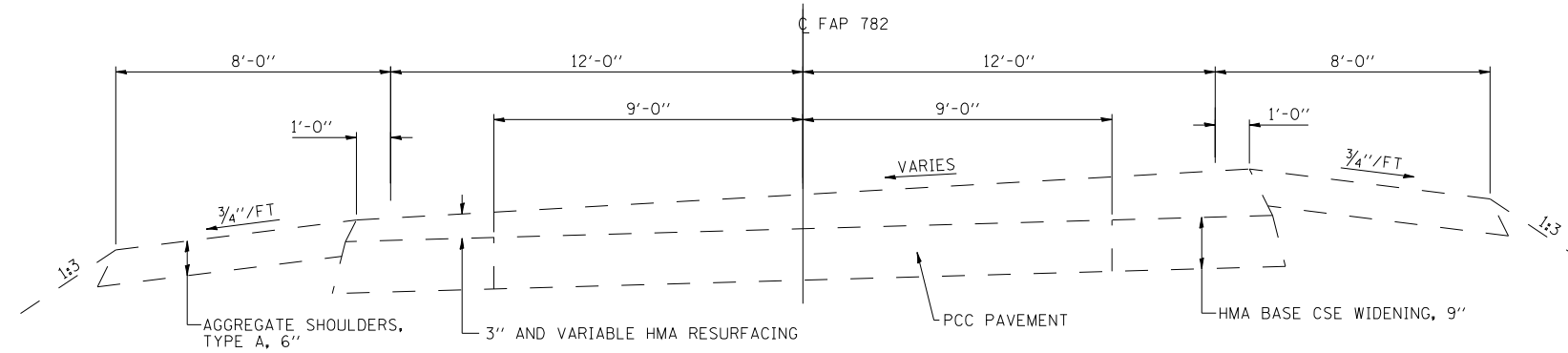
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

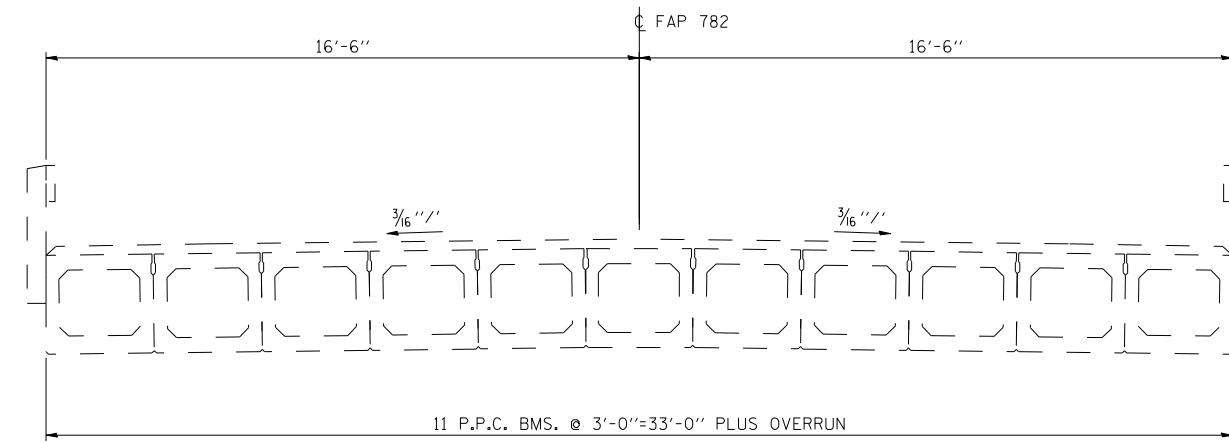
SUMMARY OF QUANTITIES

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

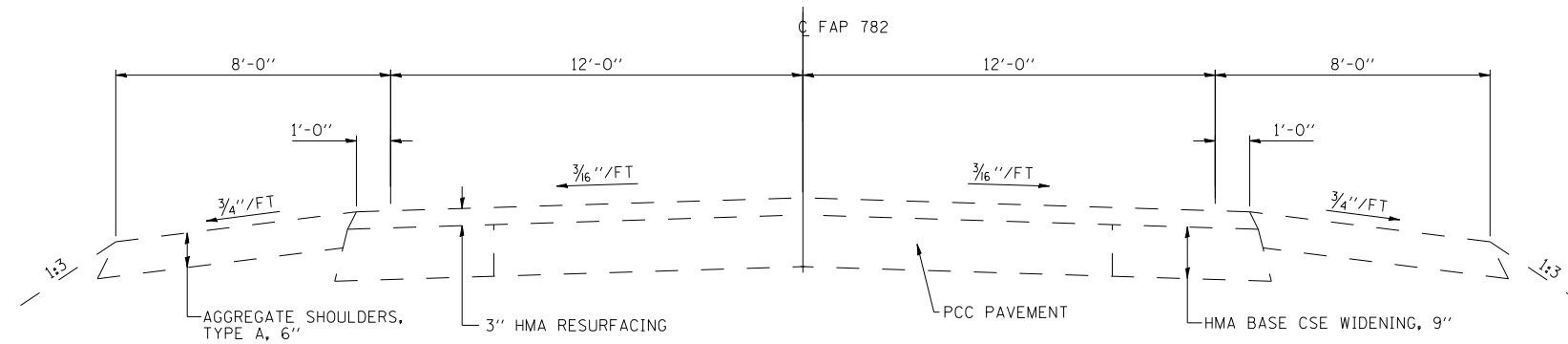
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	8
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 78263	



**EXISTING TYPICAL SECTION  
STA 994+61 TO STA 996+25.44**



**EXISTING BRIDGE TYPICAL SECTION  
CENTERLINE OF STRUCTURE STA 997+00**



**EXISTING TYPICAL SECTION  
STA 997+66.27 TO STA 1000+15**

PRINT DRIVER = LUD-ER-BAUL  
 SCALE NAME = PLOT  
 FILE NAME = D:\2013\11\13\10001010.dwg



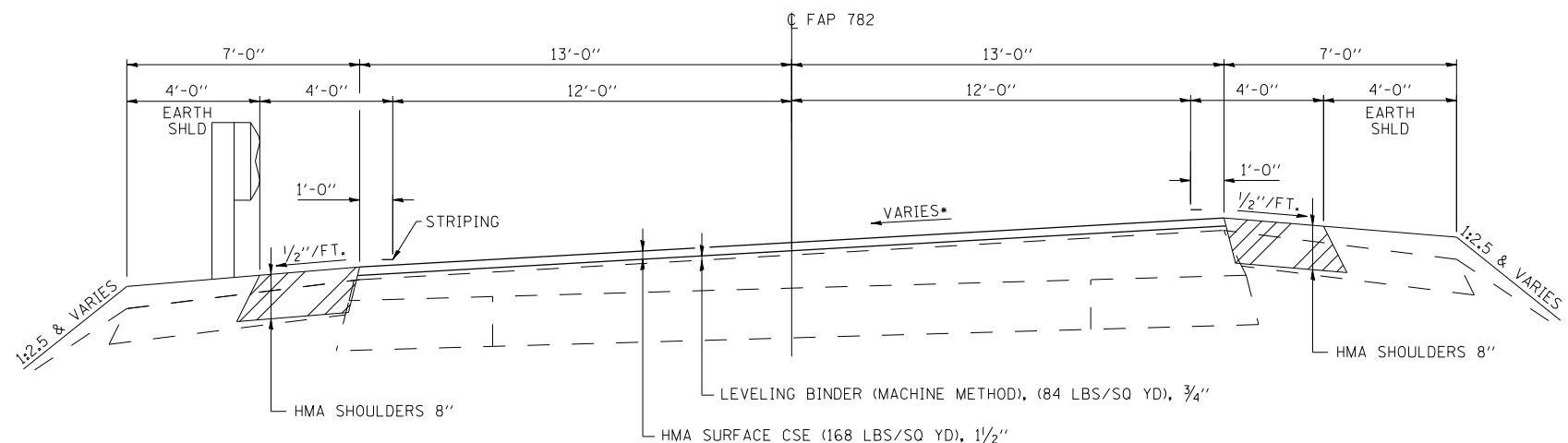
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PLOT SCALE = 0.1667' / IN.	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 2:17:19 PM	DATE - 11/13	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS**

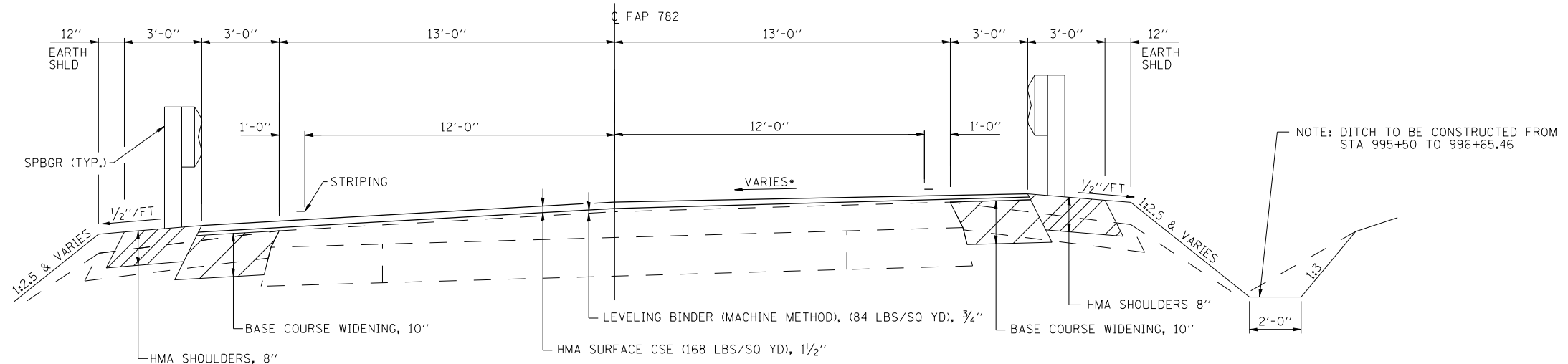
SCALE: SHEET NO. 1 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	9
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	



**PROPOSED TYPICAL SECTION  
STA 994+61 TO STA 995+20**

NOTE: SUPERELEVATION TRANSITION 994+56 TO 996+31  
\*SEE SUPERELEVATION TRANSITION TABLE ON SHEET NO. 14



**PROPOSED TYPICAL SECTION  
STA 995+20 TO STA 996+31.40 BK**

NOTE: SUPERELEVATION TRANSITION 994+56 TO 996+31  
\*SEE SUPERELEVATION TRANSITION TABLE ON SHEET NO. 14

NOTE: THICKNESS OF LEVELING BINDER (MACHINE METHOD) IS VARIABLE DEPTH STA 995+25 TO 996+31.40 BK

PRINT DRIVER = LUD-ER-BAR-ILL  
 SCALE NAME = PLOT  
 FILE NAME = D:\PROJECTS\115B-1\115B-1.dwg



USER NAME = JIF	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
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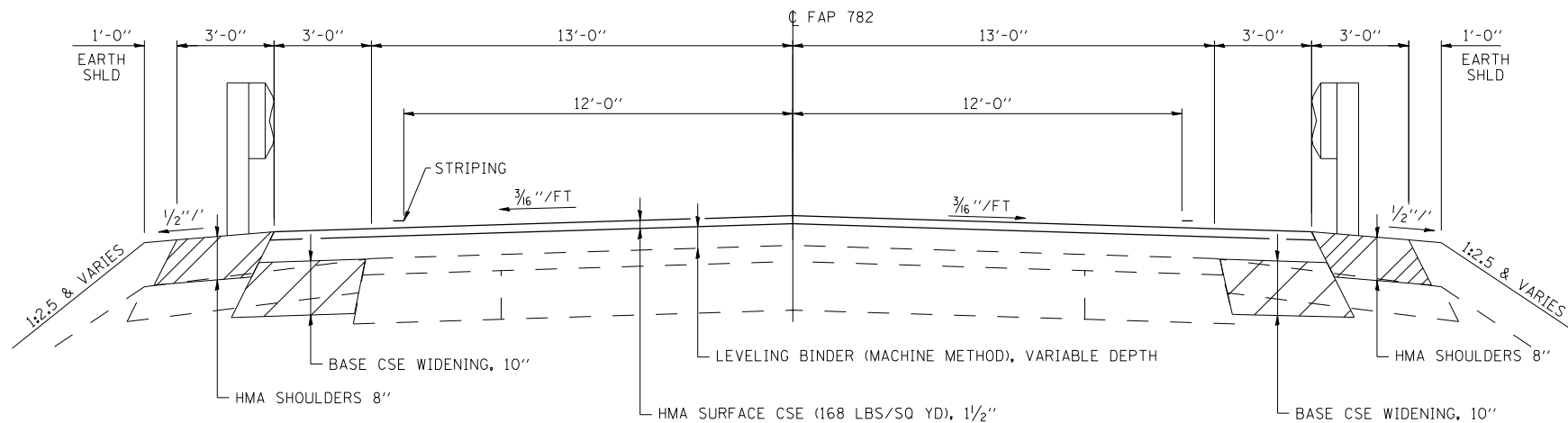
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>TYPICAL SECTIONS</b>	
SCALE:	SHEET NO. 2 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	10
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	



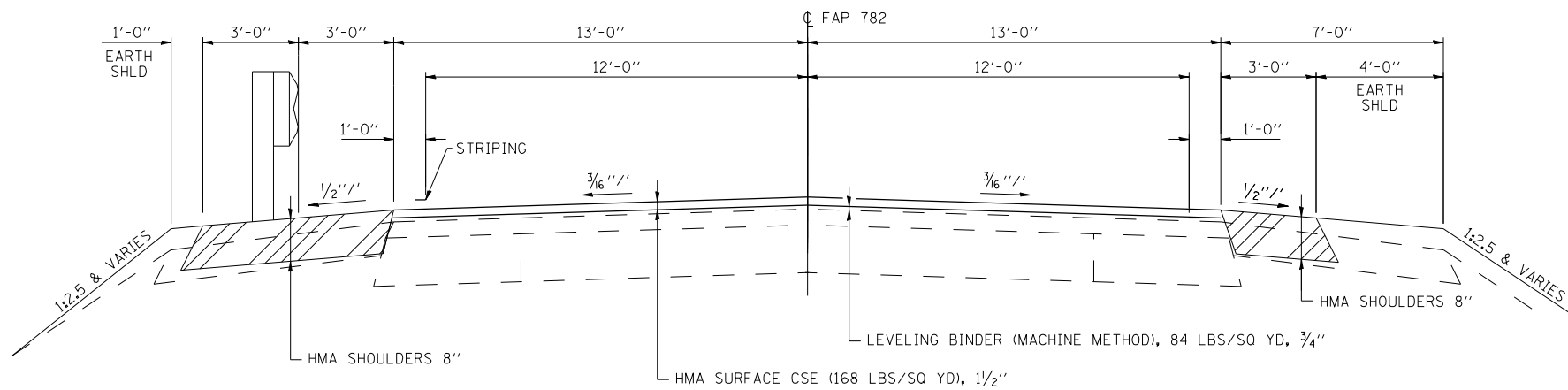




NOTE: LEVELING BINDER (MACHINE METHOD) IS A 3/4" THICKNESS FROM STA 999+00 TO 999+53.

**PROPOSED TYPICAL SECTION**  
**STA 996+38.64 AH TO 996+45.99**  
**STA 998+34.61 TO 999+53**

NOTE: BRIDGE APPROACH CONNECTOR (PCC)  
 STA. 996+39.99 TO 996+45.99  
 STA. 998+34.61 TO 998+40.61



**PROPOSED TYPICAL SECTION**  
**STA 999+53 TO STA 1000+15**

PRINT DRIVER = LUD-ER-BAWIL  
 ESCA PROJECT NO. 1035.03  
 SCALE: 1/8" = 1'-0"  
 FILE NAME = D:\PROJECTS\115B-1\115B-1.dwg



USER NAME = JIF	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
PLOT SCALE = 0.1667' / IN.	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 2:18:58 PM	DATE - 11/13	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	12
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

EARTHWORK SCHEDULE								
LOCATION	EARTH EXCAVATION	SUITABLE EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	CHANNEL EXCAVATION	SUITABLE CHANNEL 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	CU YD	CU YD
RT STA 994+55 TO 996+75	34	26					78	-52
LT STA 994+61 TO 996+45	11	8					198	-190
STA 996+45 TO 998+36					1280	SEE NOTE 5		
STA 996+65 TO 997+24 (N. ABUTMENT)							620	-620
STA 997+37 TO 997+98			2100	1181				1181
RT STA 998+36 TO 1000+30	18	13					29	-16
LT STA 998+03 TO 1000+30	18	14					37	-23
TOTALS	72	54	2100	1181	1280		962	280

**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 75% OF CHANNEL EXCAVATION MAY BE SUITABLE FOR USE AS EMBANKMENT.
- THE EARTHWORK SCHEDULE HAS ASSUMED THE RIPRAP EXCAVATION MAY NOT BE SUITABLE FOR USE AS EMBANKMENT.

EROSION CONTROL SCHEDULE			
LOCATION	TEMPORARY EROSION CONTROL SEEDING (4 APPLICATIONS)	PERIMETER EROSION BARRIER	EROSION CONTROL BLANKET
	POUND	FOOT	SQ YD
NW QUADRANT		189	437
NE QUADRANT		218	310
SW QUADRANT		216	340
SE QUADRANT		190	233
JOBSITE	110		
TOTALS	110	813	1320

SEEDING SCHEDULE							
LOCATION	SEEDING, CLASS 2A	SEEDING, CLASS 7	NITROGEN FERTILIZER	PHOSPHORUS FERTILIZER	POTASSIUM FERTILIZER	AGRICULTURAL GROUND LIMESTONE	MULCH, METHOD 2
	ACRE	ACRE	POUND	POUND	POUND	TON	ACRE
NW QUADRANT	0.09	0.09	8	8	8	0.20	0.09
NE QUADRANT	0.06	0.06	6	6	6	0.15	0.06
SW QUADRANT	0.07	0.07	6	6	6	0.15	0.07
SE QUADRANT	0.05	0.05	5	5	5	0.10	0.05
TOTALS	0.27	0.27	25	25	25	0.6	0.27

REMOVAL SCHEDULE			
LOCATION	PAVEMENT REMOVAL	HMA SURFACE REMOVAL - VARIABLE DEPTH	HMA SURFACE REMOVAL - BUTT JOINT
	SQ YD	SQ YD	SQ YD
STA 994+61 TO 994+91			87
RT STA 995+25 TO 996+52.99		165	
STA 999+85 TO 1000+15			87
STA 996+39.99 TO 996+63.15	67		
STA 997+35.96 TO 998+40.61	351		
LT STA 997+47.38 TO 998+26.11	27		
TOTALS	445	165	174

PAVEMENT MARKING SCHEDULE				
LOCATION	DESCRIPTION	SHORT-TERM PAVEMENT MARKING ①	PAINT PAVEMENT MARKING - LINE	TEMP PAVEMENT MARKING - LINE
		FOOT	4"	4"
CL STA 993+44 TO 1001+29	YELLOW SKIP-DASH	160	200	200
CL STA 993+44 TO 999+15	YELLOW CENTER		564	564
CL STA 999+68 TO 1001+29	YELLOW CENTER		161	161
RT STA 993+54 TO 1000+69	WHITE EDGE		708	708
LT STA 994+04 TO 1001+19	WHITE EDGE		708	708
TOTALS		160	2341	2341

① INCLUDES 2 APPLICATIONS

RAISED REFLECTIVE PAVEMENT MARKER SCHEDULE			
LOCATION	RRPM	RRPM (BRIDGE)	RRPM REMOVAL
	EACH	EACH	EACH
STA 994+61 TO 1000+15	4	3	7
TOTALS	4	3	7

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 993+44 TO 1001+29	YELLOW SKIP-DASH		65
CL STA 993+44 TO 999+15	YELLOW CENTER	188 ③	188
CL STA 999+68 TO 1001+29	YELLOW CENTER	54 ③	54
RT STA 993+54 TO 1000+69	WHITE EDGE	236 ③	236
LT STA 994+04 TO 1001+19	WHITE EDGE	236 ③	236
CL STA 993+44 TO 1001+29	YELLOW SKIP-DASH	53 ②	
CL STA 993+44 TO 1001+29	YELLOW SKIP-DASH	67 ③	
TOTALS		834	779

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

BASE COURSE WIDENING 10" SCHEDULE	
LOCATION	BASE COURSE WIDENING, 10"
	SQ YD
LT STA 995+20 TO 996+19.75	33
LT STA 997+46 TO 999+53	69
RT STA 995+20 TO 996+55.99	43
RT STA 998+56.61 TO 999+53	33
TOTAL	178

HMA SHOULDERS 8" SCHEDULE	
LOCATION	HMA SHOULDERS, 8"
	SQ YD
LT STA 994+61 TO 996+44.07	62
LT STA 998+02.69 TO 1000+15	74
RT STA 994+61 TO 996+77.91	110
RT STA 998+36.53 TO 1000+15	65
TOTAL	311

PAVING SCHEDULE						
LOCATION	LEVELING BINDER (MM), N90	HMA SURFACE COURSE, MIX "C", N90	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT) ④	TEMPORARY RAMP	AGGREGATE SHOULDERS, TYPE B
	TON	TON	POUND	TON	SQ YD	TON
LT STA 993+60 TO 994+61						6
STA 994+91 TO 996+55.99	28					
STA 998+24.61 TO 999+85	35					
STA 994+61 TO 996+55.99		48	386	1		
STA 998+24.61 TO 1000+15		49	391	1		
STA 994+61 TO 994+66					15	
STA 1000+10 TO 1000+15					15	
RT STA 994+80						
RT STA 995+06						2
TOTALS	63	97	777	2	30	8

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	BARRIER WALL MARKERS, TYPE B	TERMINAL MARKER, DIRECT APPLIED
		TYPE 6	TYPE 1 (SPECIAL) TANGENT	TYPE 1 (SPECIAL) FLARED			
	FOOT	EACH	EACH	EACH	EACH	EACH	EACH
NW QUADRANT	175	1	1			1	
NE QUADRANT	62.5	1	1			1	
SE QUADRANT	12.5	1	1			1	
SW QUADRANT	50	1		1		1	
LT STA 993+93 TO 998+80					5	4	
RT STA 996+04 TO 999+31					3	4	
TOTALS	300	4	3	1	8	4	

GUARDRAIL REMOVAL SCHEDULE	
LOCATION	FOOT
STRUCTURE NO. 035-0017 NW	225
STRUCTURE NO. 035-0017 NE	223
STRUCTURE NO. 035-0017 SW	114
STRUCTURE NO. 035-0017 SE	228
TOTAL	790

PRINT DRIVER = L:\05-ESCA\041  
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 DATE = 10/24/2014 2:36:20 PM



USER NAME = jif	DESIGNED - NHP	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
PLOT SCALE = 0.1667' / IN.	CHECKED - JMS	REVISED -
PLOT DATE = 10/24/2014 2:36:20 PM	DATE - 10/14	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	13
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	



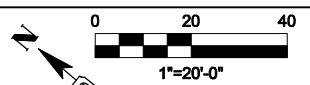




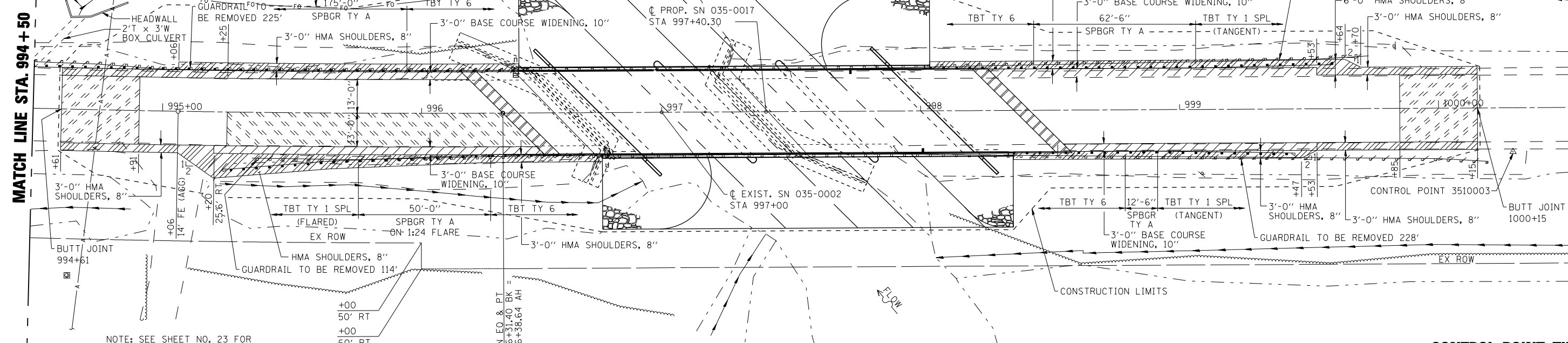
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PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOT AT THIS OFFICE		
	NOTE BOOK NO.		
	CADD FILE NAME		

B.M. W46 ELEV. 356.873  
 CHISELED SQUARE ON TOP OF  
 SW WINGWALL SN 035-0002,  
 STA 996+97, 17.59 RT.



	BASE CSE, 10"		HMA SURFACE REMOVAL
	HMA SHOULDERS, 8"		HMA SURFACE REMOVAL VARIABLE DEPTH
	BR APPR PVT CON (PCC)		

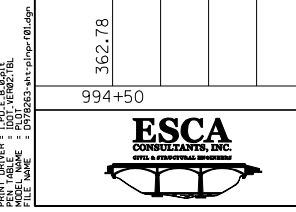
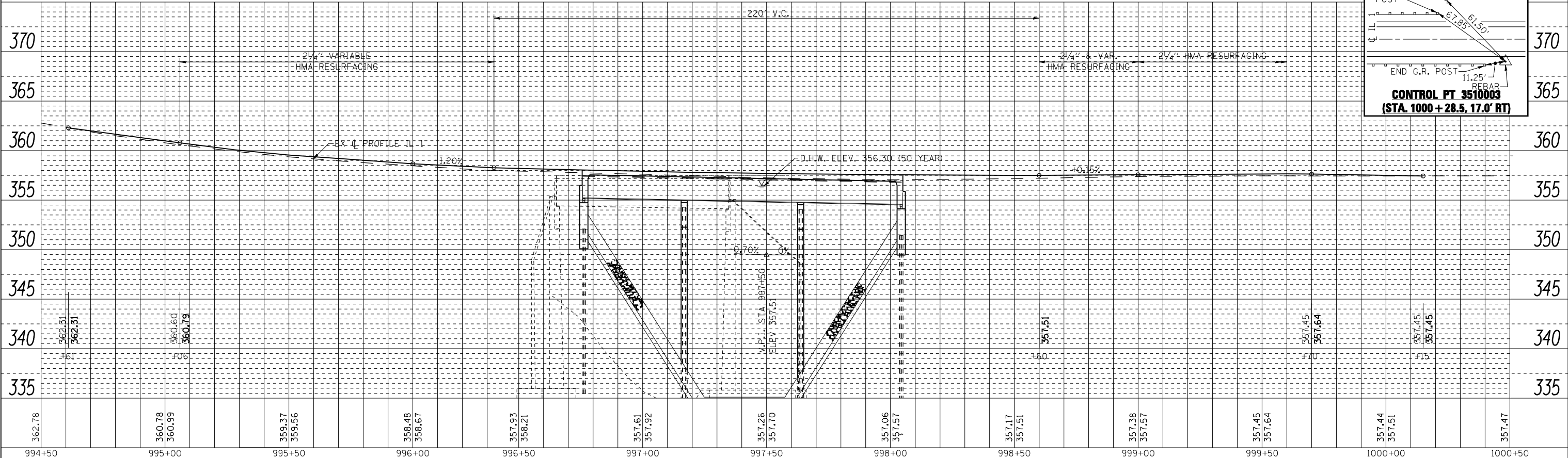
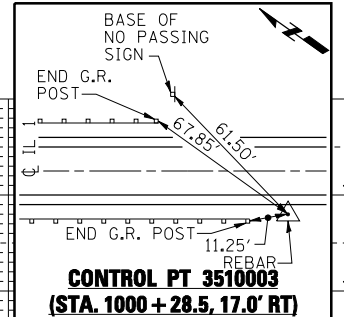


NOTE: SEE SHEET NO. 23 FOR  
 DETAIL OF FLARED TBT AND SHOULDER.

SUPERELEVATION TRANSITION STA 994+56 TO 996+31  
 SEE SHEET NO. 14 FOR TABLE OF PAVEMENT  
 ELEVATIONS, HMA RESURFACING THICKNESS  
 AND VARIABLE DEPTH HMA SURFACE REMOVAL

REMOVE THE EXISTING HMA APRON FOR THE AGGREGATE PRIVATE ENTRANCE AT  
 RT. STA. 995+06. PLACE AGGREGATE SHOULDERS, TYPE B ADJACENT TO THE PROPOSED  
 HMA SHOULDERS AS NEEDED TO PROVIDE A TRANSITION TO THE EXISTING AGGREGATE SURFACE.

**CONTROL POINT TIE**



USER NAME = rhp	DESIGNED - JMS/NHP	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
SCALEs: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -
PLOT DATE = 10/25/2014 11:41:00 PM	DATE - 10/14	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**FAP 782 (IL 1) PLAN & PROFILE**

SCALE: AS SHOWN SHEET NO. 2 OF 3 SHEETS STA. 994+50 TO STA. 1000+50

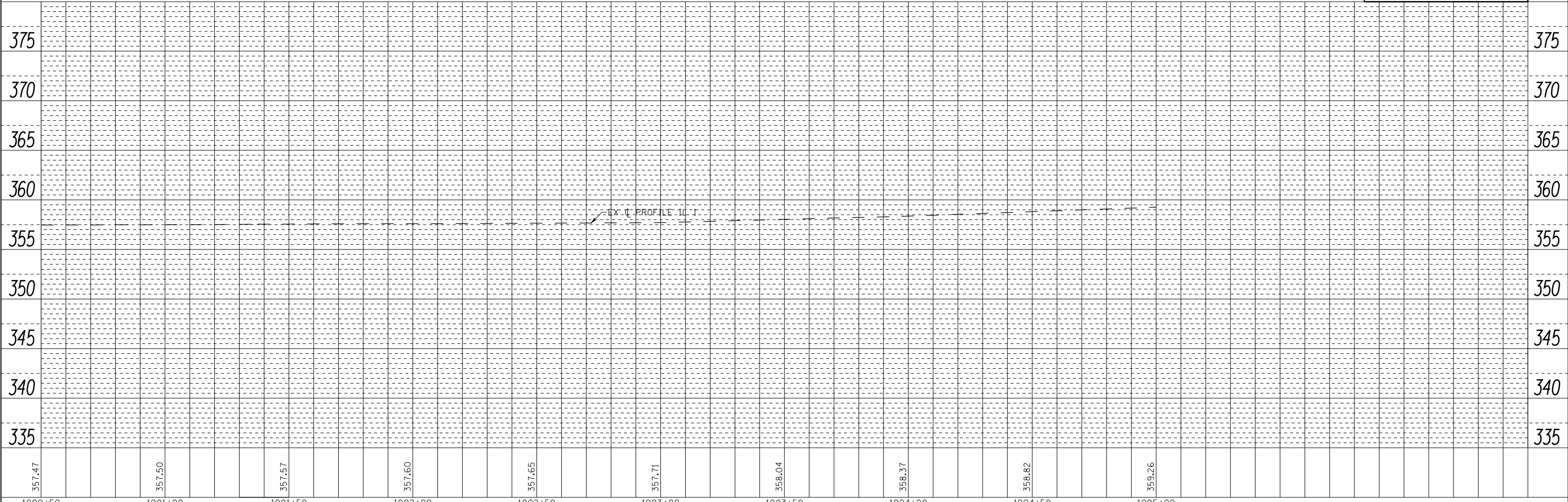
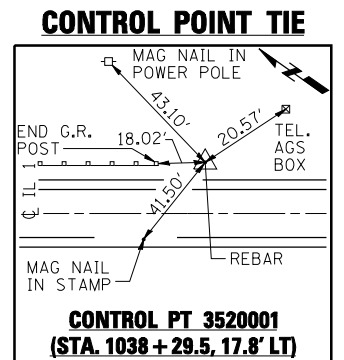
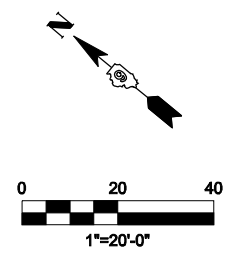
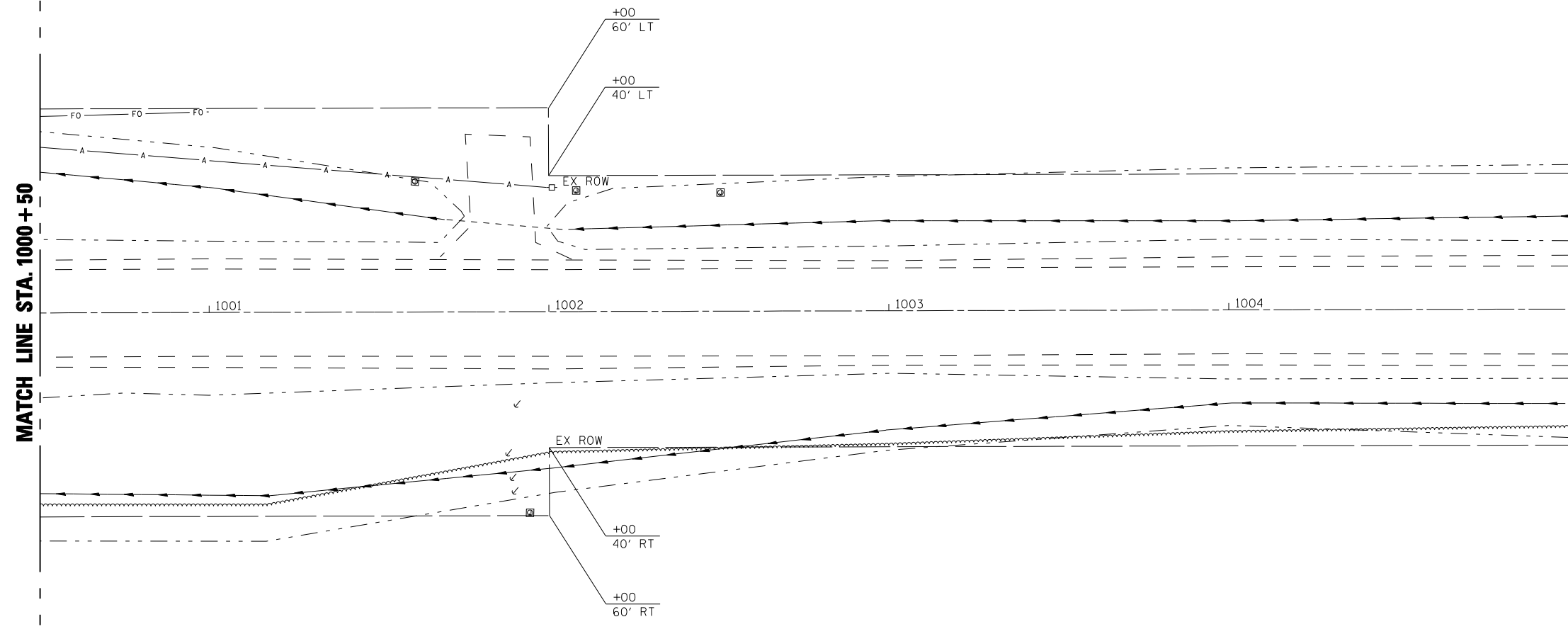
F.A.P. RTE. 782	SECTION 115B-1	COUNTY HARDIN	TOTAL SHEETS 69	SHEET NO. 15
CONTRACT NO. 78263				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



PLAN	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOT AT THIS CHFD	
	NOTE BOOK NO.	
	CADD FILE NAME	

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

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 PLOT DATE = 10/24/2014 2:40:25 PM  
 PLOT FILE NAME = D:\7823-INT-210-01.dgn



357.47	357.50	357.57	357.60	357.65	357.71	358.04	358.37	358.82	359.26
1000+50	1001+00	1001+50	1002+00	1002+50	1003+00	1003+50	1004+00	1004+50	1005+00



USER NAME = jif	DESIGNED - JMS/NHP	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
SCALEs: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -
PLOT DATE = 10/24/2014 2:40:25 PM	DATE - 11/13	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

FAP 782 (IL 1) PLAN & PROFILE

SCALE: AS SHOWN SHEET NO. 3 OF 3 SHEETS STA. 1000+50 TO STA. 1005+00

F.A.P. RTE. 782	SECTION 115B-1	COUNTY HARDIN	TOTAL SHEETS 69	SHEET NO. 16
CONTRACT NO. 78263			ILLINOIS FED. AID PROJECT	

**SCHEDULE OF QUANTITIES**

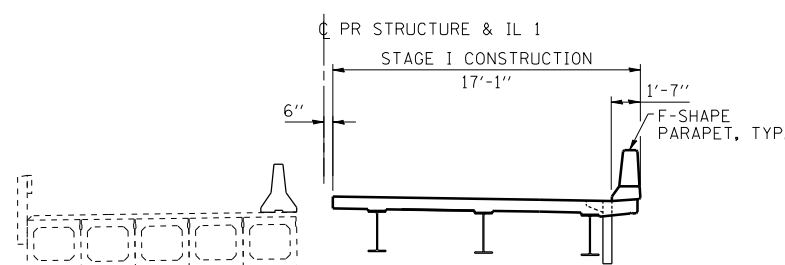
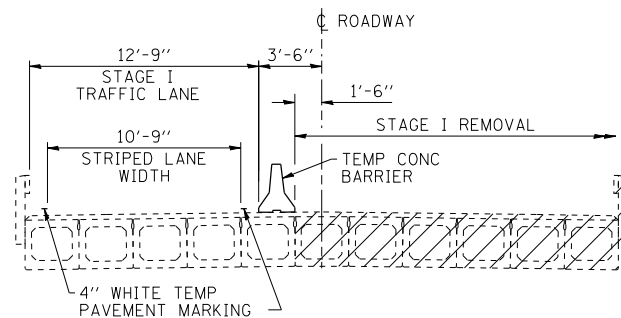
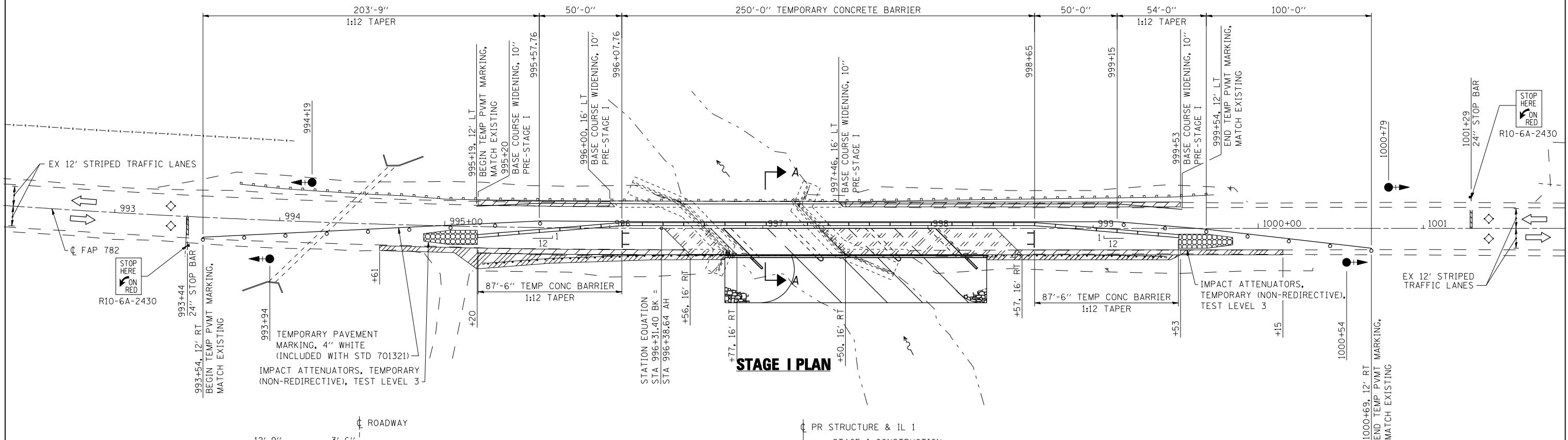
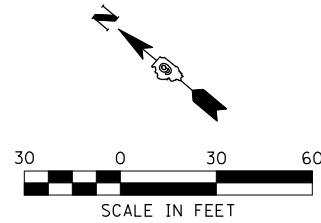
TEMPORARY CONCRETE BARRIER		
STATION TO	STATION	FEET
995+20	999+52	425
TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH		
TEMPORARY RUMBLE STRIPS - 6 EACH		
IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH		

**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 SHOULDER, 8"
- ▣ IMPACT ATTENUATORS (TEMPORARY NON-REDIRECTIVE) TEST LEVEL 3

**GENERAL NOTES**

- PRE-STAGE I: CONSTRUCT THE BASE COURSE FROM LT. STA. 995+20 TO LT. STA. 999+53 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(O)-48) SHOWN ON STANDARD 701321 AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN ON SHEET 18 SHALL BE 11'-3" FOR STAGE I CONSTRUCTION.
- 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.
- VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW BRIDGE PARAPET. THE BARRIER WALL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.
- 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, HMA SHOULDERS, GUARDRAIL AND TRAFFIC BARRIER TERMINALS FROM RT. STA. 995+01 TO RT. STA. 999+53 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 AND 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 WILL 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.
- THE CONTRACTOR AND THE ENGINEER SHALL COORDINATE ACCESS WITH THE PROPERTY OWNER DURING CONSTRUCTION FOR THE FIELD ENTRANCE AT RT. STA. 995+06.



**SECTION A-A  
REMOVAL**

**SECTION A-A  
CONSTRUCTION**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION PLAN AND DETAILS  
STRUCTURE NO. 035-0017

SCALE: 1"=30'-0" SHEET NO. 1 OF 2 SHEETS STA. 992+00 TO STA. 1001+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	17
CONTRACT NO. 78263				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PRINT DRIVER: LUD-ER-BAU  
 SCALE: 1"=30'-0"  
 FILE NAME: C:\PROJETS\115B-1\115B-1.dwg



USER NAME = jif	DESIGNED - NHP	REVISED -
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PLOT SCALE = 0.1667' / IN.	CHECKED - JMS	REVISED -
PLOT DATE = 10/24/2014 2:40:59 PM	DATE - 11/13	REVISED -

**SCHEDULE OF QUANTITIES**

RELOCATE  
TEMPORARY CONCRETE BARRIER

STATION TO	STATION	FEET
995+20	999+52	425

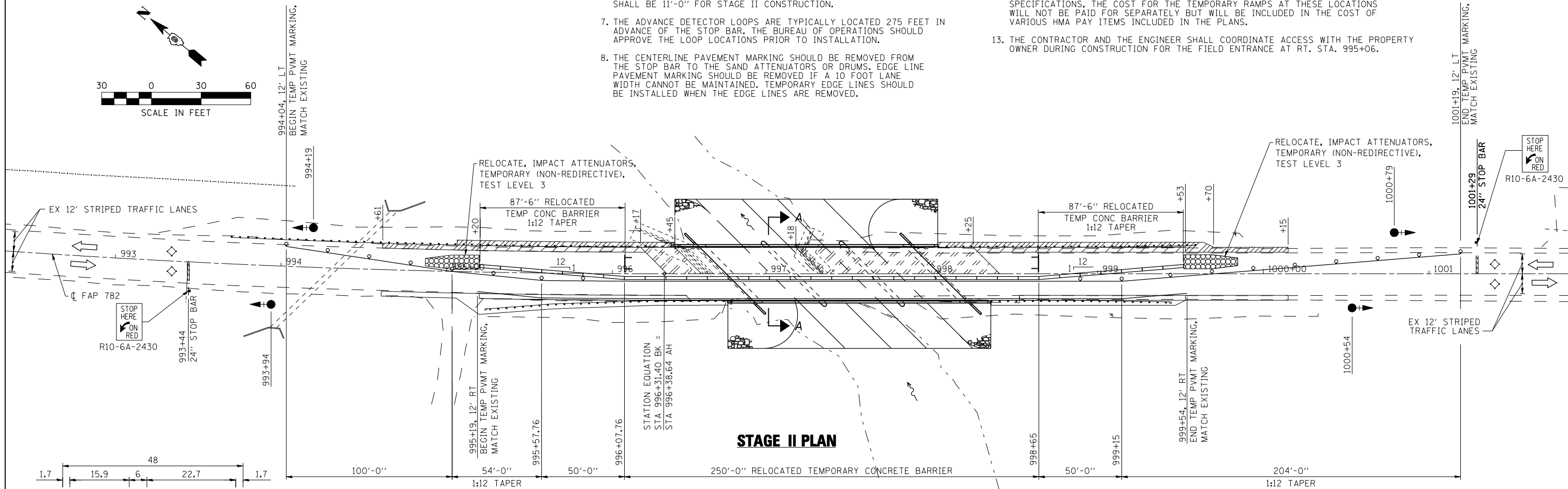
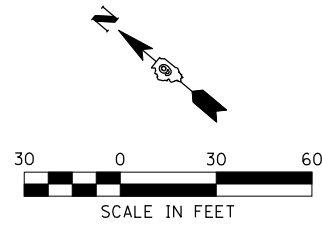
IMPACT ATTENUATORS, RELOCATE  
(NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH

**LEGEND**

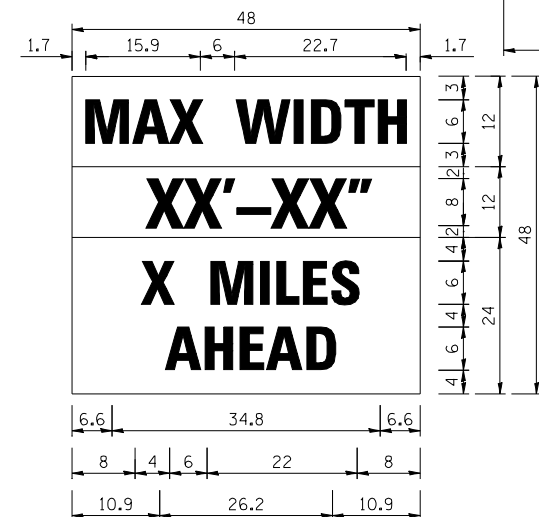
- TRAFFIC SIGNAL WITH BACKPLATE, SIGNAL DIRECTION INDICATED
- ◇ DETECTOR LOOP
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- ⊥ TYPE III BARRICADE
- ▨ BASE COURSE WIDENING, 10"
- ▩ PAVEMENT REMOVAL
- ▧ HMA SHOULDER, 8"
- ▩ IMPACT ATTENUATORS (TEMPORARY NON-REDIRECTIVE) TEST LEVEL 3

**GENERAL NOTES**

- 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-I103(0)-48) SHOWN ON STANDARD 701321 AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN ON THIS SHEET SHALL BE 11'-0" FOR STAGE II CONSTRUCTION.
- 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.
- VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW BRIDGE PARAPET. THE BARRIER WALL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.
- 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 TEMPORARY SIGNALS WILL REMAIN IN OPERATION AND THE TEMPORARY BARRIERS WILL REMAIN IN PLACE UNTIL THE BRIDGE SUPERSTRUCTURE IS COMPLETE INCLUDING PARAPETS AND APPROACH PAVEMENT. 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.
- THE CONTRACTOR'S OPERATION MAY RESULT IN A DROP-OFF AT THE END OF THE BRIDGE APPROACH PAVEMENT 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.
- THE CONTRACTOR AND THE ENGINEER SHALL COORDINATE ACCESS WITH THE PROPERTY OWNER DURING CONSTRUCTION FOR THE FIELD ENTRANCE AT RT. STA. 995+06.



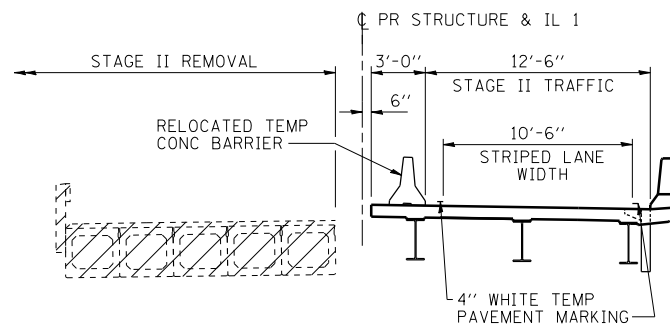
**STAGE II PLAN**



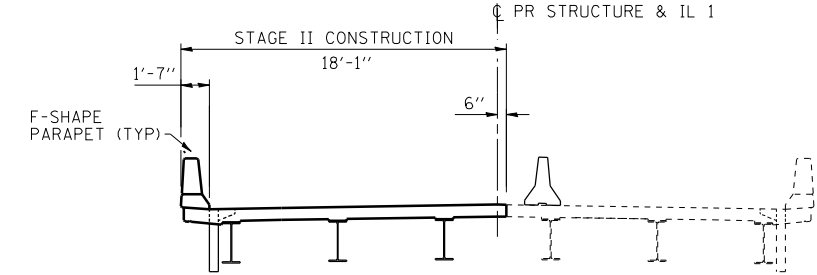
**W12-I103**

W12-I103 (Width is 8D);  
No border, Black on White;  
"MAX WIDTH" D;  
No border, Black on Orange;  
"XX'-XX\"/>

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



**SECTION A-A  
REMOVAL**



**SECTION A-A  
CONSTRUCTION**

PRINT DRIVER: LUD-ER-BAR-BA...  
SCALE: 1/8\"/>



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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**




**STAGE CONSTRUCTION PLAN AND DETAILS  
STRUCTURE NO. 035-0017**

SCALE: 1"=30'-0" SHEET NO. 2 OF 2 SHEETS STA. 992+00 TO STA. 1001+00

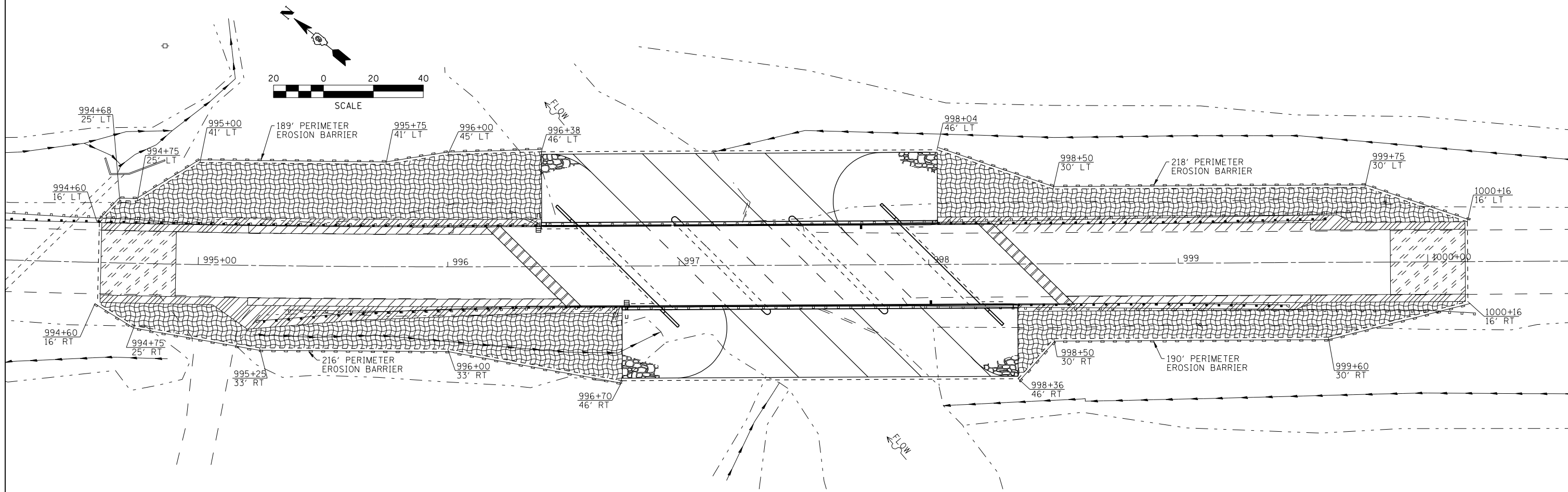
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	18
CONTRACT NO. 78263				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



**LEGEND**

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

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.



PRINT DRIVER = LUD-ER-BA-01  
 SCALE NAME = PLOT  
 FILE NAME = D:\PROJECTS\115B-1\115B-1.dwg



USER NAME = jif	DESIGNED - JMS	REVISED -
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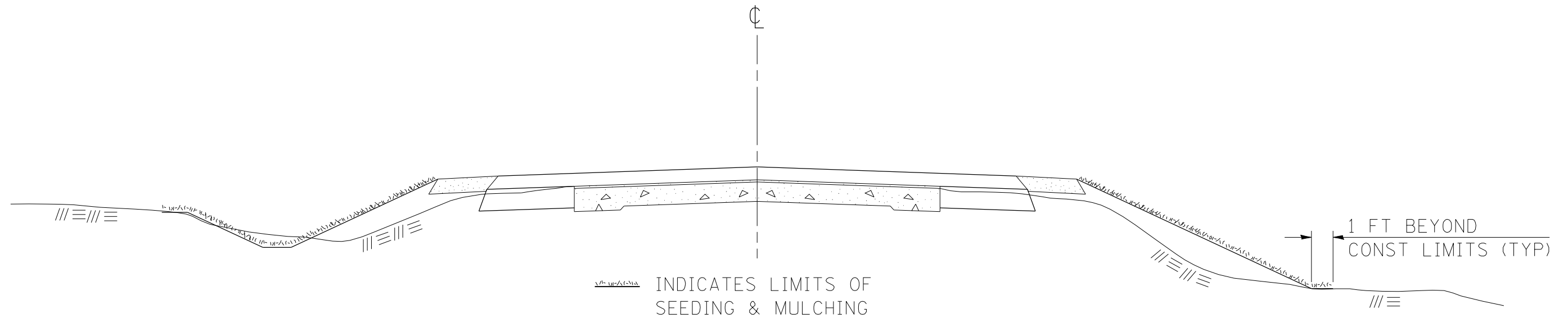
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL PLAN**

SCALE: 1"=20'-0" SHEET NO. 1 OF 1 SHEETS STA. 994+00 TO STA. 1001+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	19
CONTRACT NO. 78263				
FED. ROAD DIST. NO. 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

ESCA CONSULTANTS, INC. 10/24/2014 2:42:58 PM 11/13



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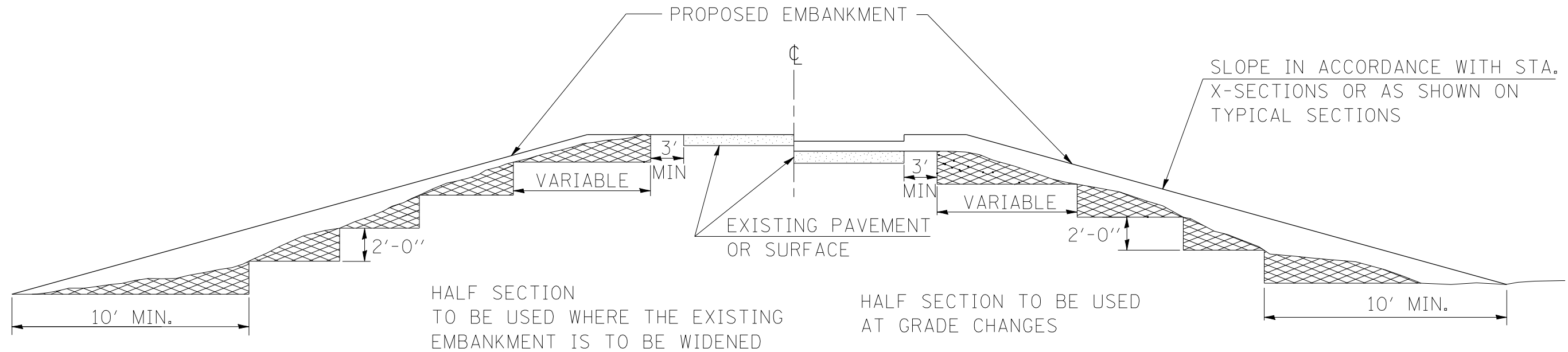
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

### 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-1	HARDIN	69	20
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

# 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



USER NAME = jif	DESIGNED - JMS	REVISED -
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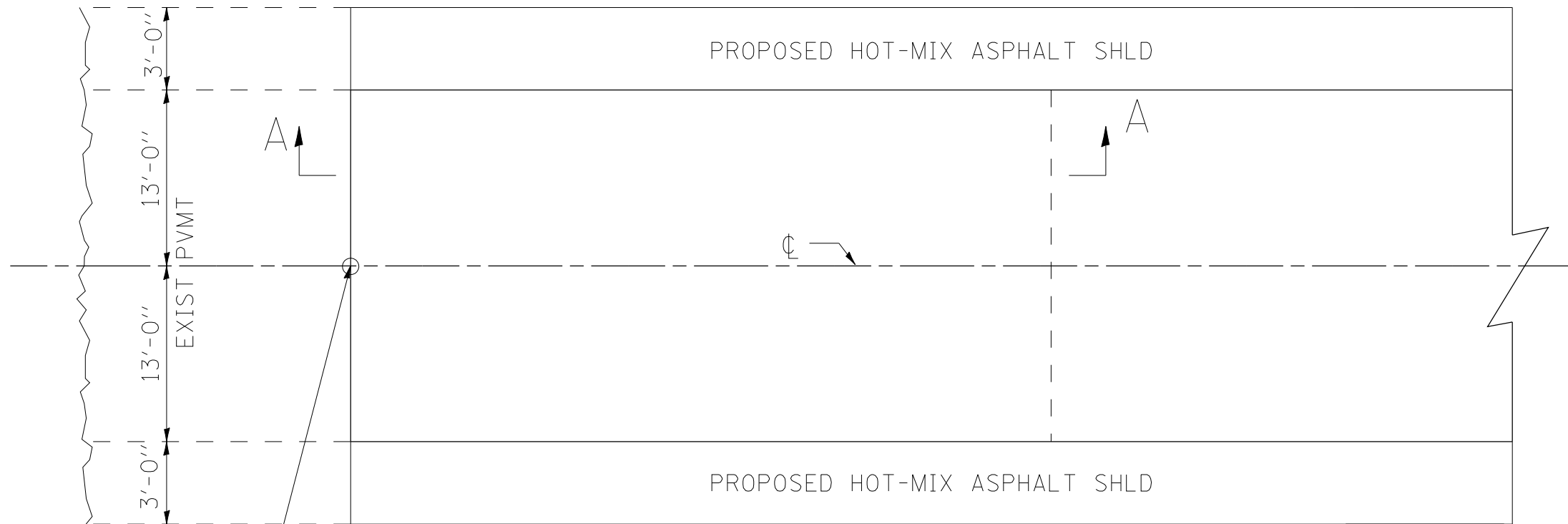
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STEP CONSTRUCTION ON EXISTING FILL DETAILS**

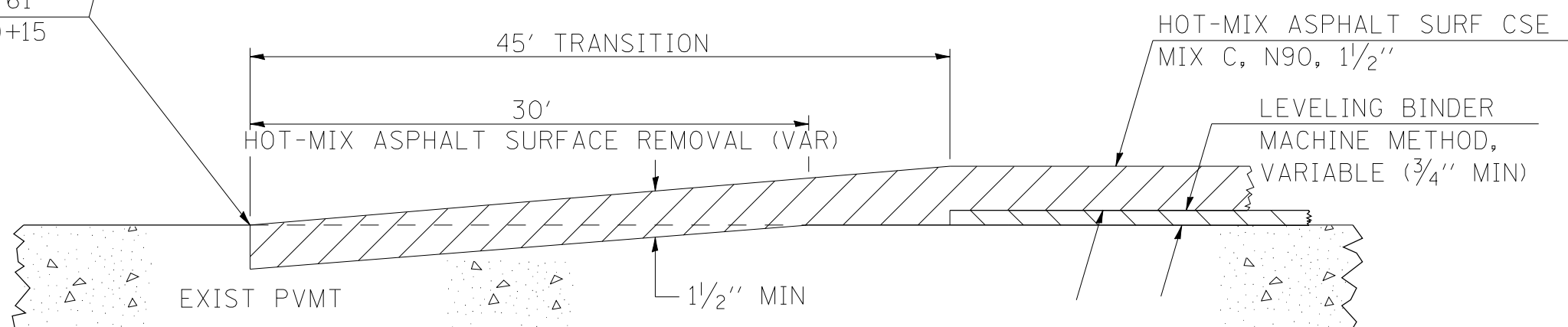
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	21
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

# BUTT JOINT



STA 994+61  
STA 1000+15



## SECTION A-A

REVISIONS

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

STD. \_9-86



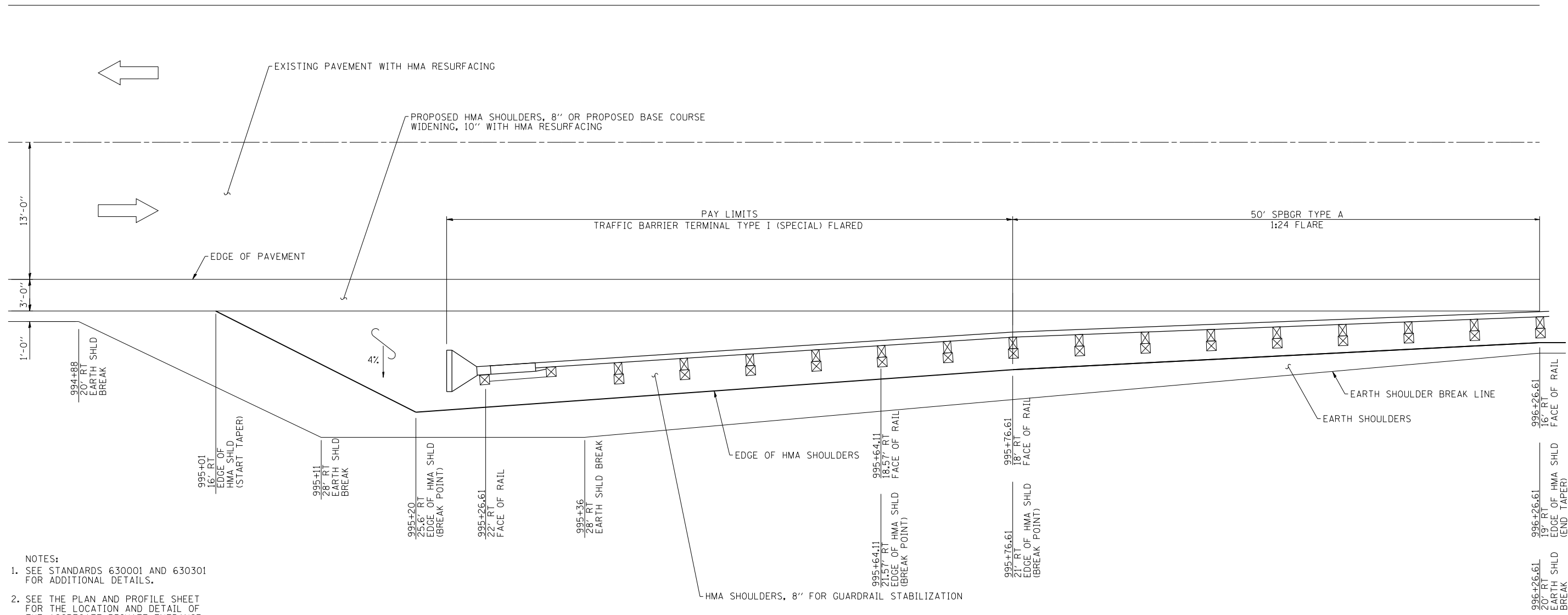
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**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-1	HARDIN	69	22
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	



- NOTES:
- SEE STANDARDS 630001 AND 630301 FOR ADDITIONAL DETAILS.
  - SEE THE PLAN AND PROFILE SHEET FOR THE LOCATION AND DETAIL OF THE AGGREGATE PRIVATE ENTRANCE AT RT STA 995+06.

USER = jif DATE = 10/24/2014  
 FILE NAME = D:\78263\hrt-details\104.dgn



USER NAME = jif	DESIGNED - JMS	REVISED -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FLARED TRAFFIC BARRIER TERMINAL DETAIL**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. 995+24 TO STA. 996+27

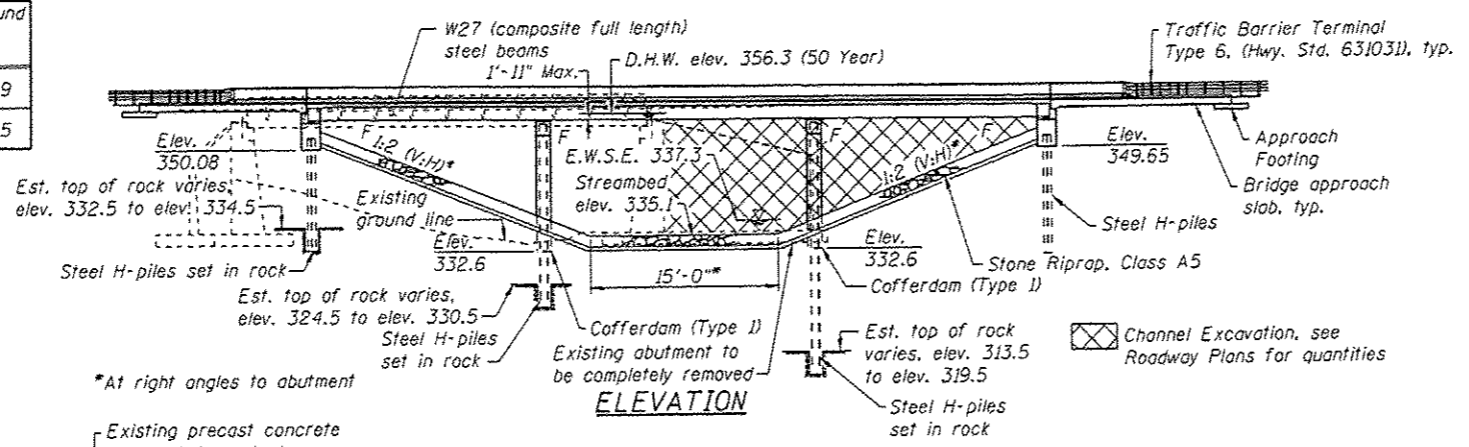
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782	115B-1	HARDIN	69	23
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

BENCHMARK: BM W-46, Chiseled square on SW corner of SN 035-0002. Elev. 356.87 (NAVD 88)

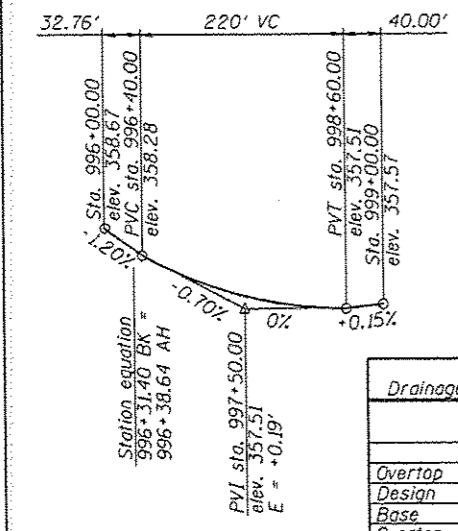
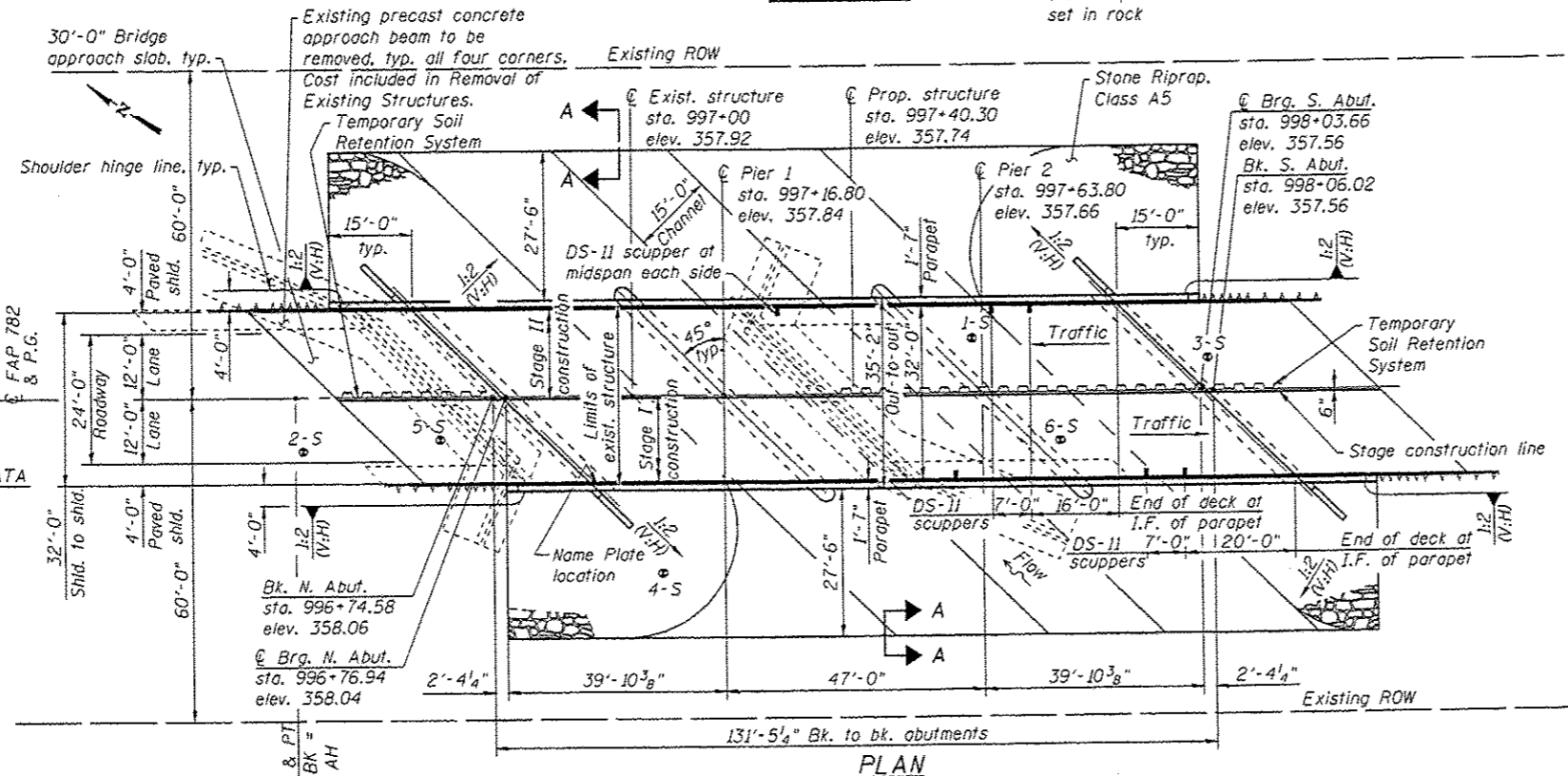
EXISTING STRUCTURE: SN 035-0002 was originally built in 1933 as SBI Rte. 140, Section 115-A. It is a PPC deck beam superstructure on timber pile supported abutments. The superstructure consists of one-span (66'-2 1/4"). The out to out deck width is 33'-0" and the length is 75'-2 1/2" back to back of abutments. The abutments were widened in 1979. The structure was constructed with a 43°-58'-29" rt. twd. skew. Traffic shall be maintained utilizing stage construction.

No salvage.

Pier	Elevation at Piers
Pier 1	339.9
Pier 2	339.5



© FAP ROUTE 782 CURVE DATA  
 $\Delta = 18^\circ 32' 51''$  (LT)  
 $R = 0^\circ 59' 56''$   
 $D = 5,735.61'$   
 $T = 936.54'$   
 $L = 1,856.70'$   
 $E = 75.96'$   
 $S.E. = 0.0285'/'$   
 $PC \text{ sta.} = 977+74.70$   
 $PT \text{ sta.} = 996+31.40$   
 $PI \text{ sta.} = 987+11.24$   
 $\text{Superelevation transition sta.} = 994+56 \text{ to } 996+31$



DESIGN SCOUR ELEVATION TABLE (ft.)

	N. Abut.	Pier 1	Pier 2	S. Abut.
0100	350.0	331.8	329.5	349.5
0500	350.0	326.9	326.8	349.5

WATERWAY INFORMATION

Prop. Low Grade Elev.	Exist. Low Grade Elev.	Sta.
357.45	357.05	1000+15
357.45	357.05	998+00

Drainage Area	6.50 Sq. Mi.
Prop. Opening	2710
Exist. Opening	722
Prop. Head-Ft.	0.3
Exist. Head-Ft.	0.2
Prop. Headwater El.	356.5
Exist. Headwater El.	356.4

Freq. Yr.	Q	Opening	Sq. Ft.	Nat.	Head-Ft.	Headwater El.
10	2710	722	986	356.2	0.3	356.5
37	4210	722	986	356.3	0.8	357.1
50	4570	722	986	356.3	0.9	357.2
100	5420	722	986	356.3	1.2	357.5
Overtop	320	6800	986	356.4	-	357.4

10 Year Velocity through Existing Bridge 3.8 ft/s  
 10 Year Velocity through Proposed Bridge 2.8 ft/s

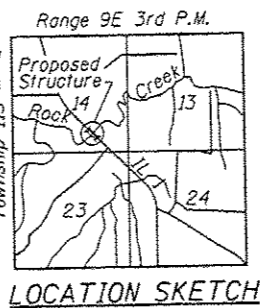
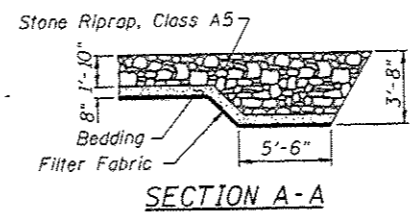
STATION 997+40.30  
 BUILT 2011 BY  
 STATE OF ILLINOIS  
 F.A.P. RT. 782 SEC. 115B-1  
 LOADING HL-93  
 STR. NO. 035-0017

NAME PLATE  
 (See Hwy. Std. 515001)

DESIGN SPECIFICATIONS  
 2012 AASHTO LRFD  
 Bridge Design Specifications  
 LOADING HL-93  
 Allow 50 psf for future wearing surface

DESIGN STRESSES  
 FIELD UNITS  
 $f_c = 3,500 \text{ psi}$   
 $f_y = 60,000 \text{ psi}$  (reinforcement)  
 $f_y = 50,000 \text{ psi}$  (M270 Grade 50) (Primary)  
 $f_y = 36,000 \text{ psi}$  (M270 Grade 36)

SEISMIC DATA  
 Seismic Performance Zone (SPZ) = 3  
 Design Spectral Acceleration at 1.0 sec. ( $S_{d1}$ ) = 0.325g  
 Design Spectral Acceleration at 0.2 sec. ( $S_{d5}$ ) = 0.755g  
 Soil Site Class = D



STRUCTURE INDEX OF SHEETS

General Plan & Elevation	Sheet No. 1 of 28
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Stage Construction Details	Sheet No. 3 of 28
Temporary Concrete Barrier for Stage Construction	Sheet No. 4 of 28
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Top of North Approach Slab Elevations	Sheet No. 7 of 28
Top of South Approach Slab Elevations	Sheet No. 8 of 28
Superstructure	Sheet No. 9 of 28
Superstructure Details	Sheet No. 10 of 28
Drainage Scupper, DS-II	Sheet No. 11 of 28
Diaphragm Details	Sheet No. 12 of 28
Bridge Approach Slab Details	Sheet No. 13-14 of 28
Steel Framing Plan	Sheet No. 15 of 28
Steel Framing Details	Sheet No. 16 of 28
Bearing Details	Sheet No. 17 of 28
North Abutment	Sheet No. 18 of 28
South Abutment	Sheet No. 19 of 28
Pier 1	Sheet No. 20 of 28
Pier 2	Sheet No. 21 of 28
HP Pile Details	Sheet No. 22 of 28
Bar Splicer Assembly and Mechanical Splicer Details	Sheet No. 23 of 28
Cantilever Forming Brackets for Superstructures with W27 Beams and Smaller	Sheet No. 24 of 28
Boring Logs	Sheet No. 25-28 of 28

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.	-	1534	1534
Filter Fabric	Sq. Yd.	-	1534	1534
Removal of Existing Structures	Each	-	-	1
Structure Excavation	Cu. Yd.	-	186	186
Cofferdam Excavation	Cu. Yd.	-	180	180
Cofferdam (Type I) (Location-1)	Each	-	1	1
Cofferdam (Type I) (Location-2)	Each	-	1	1
Concrete Structures	Cu. Yd.	289.6	-	289.6
Concrete Superstructure	Cu. Yd.	632	-	632
Bridge Deck Grooving	Sq. Yd.	812	-	812
Protective Coat	L Sum	1	-	1
Furnishing and Erecting Structural Steel	Each	3258	-	3258
Stud Shear Connectors	Pound	64280	30680	94960
Reinforcement Bars, Epoxy Coated	Each	522	196	718
Bar Splicers	Foot	-	1188	1188
Furnishing Steel Piles HP14x89	Foot	-	308	308
Driving Piles	Each	-	2	2
Test Pile Steel HP14x89	Each	-	1	1
Name Plates	Each	-	48	48
Anchor Bolts, 5/8"	Sq. Yd.	-	90	90
Geocomposite Wall Drain	Cu. Yd.	-	165	165
Granular Backfill for Structures	Each	22	-	22
Asbestos Bearing Pad Removal	Each	6	-	6
Drainage Scuppers, DS-II	Foot	-	203	203
Pipe Underdrains for Structures 4"	Each	-	27	27
Setting Piles in Rock	Sq. Ft.	-	1708	1708
Temporary Soil Retention System				

APPROVED  
 For Structural Adequacy Only  
  
 Engineer of Bridges & Structures

GENERAL PLAN & ELEVATION  
 IL 1 OVER ROCK CREEK  
 FAP ROUTE 782 - SECTION 115B-1  
 HARDIN COUNTY  
 STATION 997+40.30  
 STRUCTURE NO. 035-0017

STATE OF ILLINOIS  
 BOARD OF PROFESSIONAL ENGINEERS  
 No. 4647  
 EXPIRES 11-30-14  
  
 SIGNATURE  
 10/24/2014  
 DATE



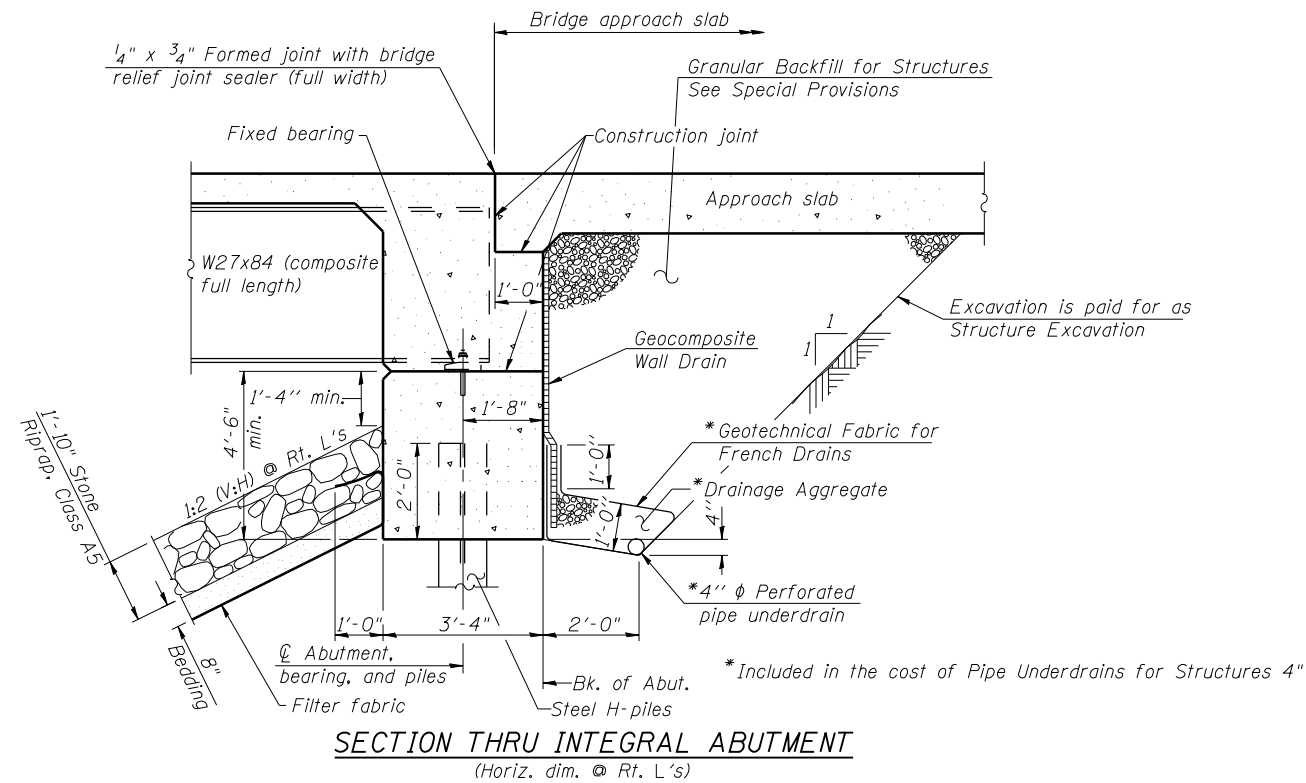
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

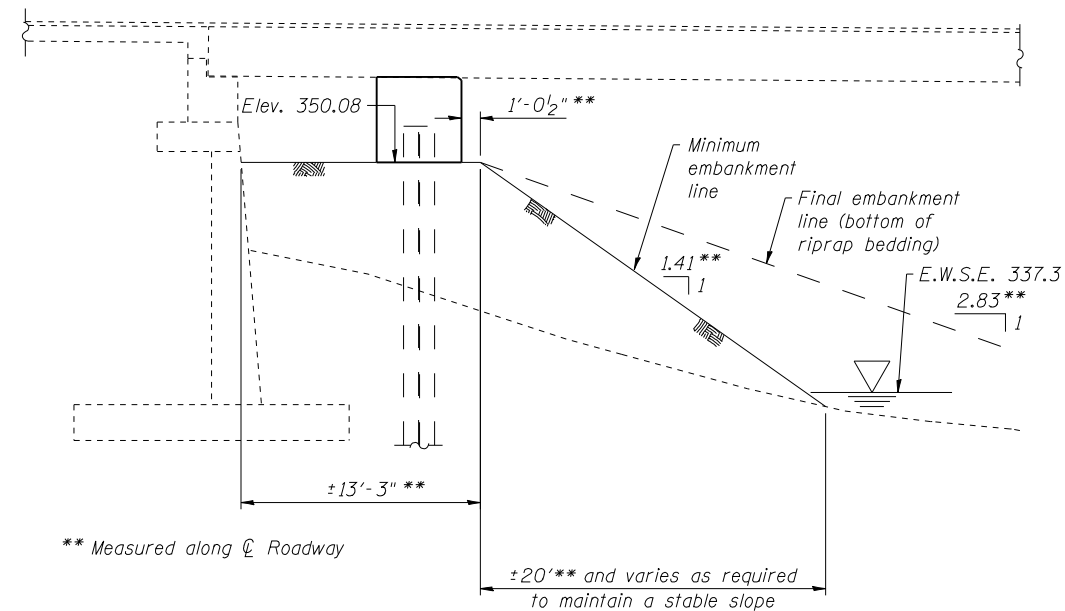
SHEET NO. 1 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	24

CONTRACT NO. 78263  
 ILLINOIS FED. AID PROJECT



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



EMBANKMENT DETAIL AT N. ABUT.

**GENERAL NOTES**

- Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts  $\frac{7}{8}$ "  $\phi$ , holes  $\frac{15}{16}$ "  $\phi$ , unless otherwise noted.
- Calculated weight of structural steel = 68130 lbs. (Grade 50)  
= 10220 lbs. (Grade 36)
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars designated (E) shall be epoxy coated.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of  $\frac{1}{8}$  inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
- The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the North Abutment.
- The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.
- Excavation behind existing 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 1 removal to ensure the remaining portion will not be prematurely damaged.
- The existing bearing pads at the expansion end of the deck beams contain asbestos. See Special Provisions.
- The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures.
- If the Contractor's procedure for existing deck beam removal or placement of new steel beams involves placement of cranes or other heavy equipment on deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the deck beams.
- Slipforming of the parapets is not allowed.

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 LUD-EB-BAJL  
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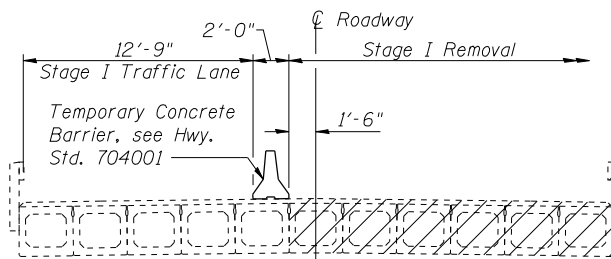
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA  
STRUCTURE NO. 035-0017**

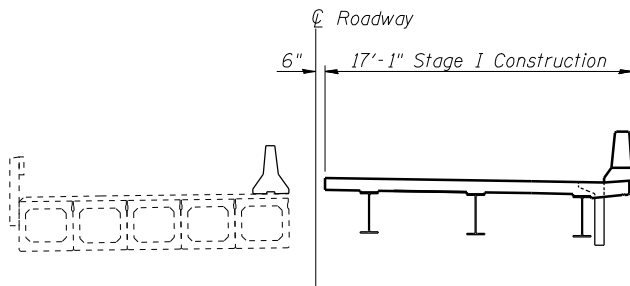
SHEET NO. 2 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	25
CONTRACT NO. 78263				

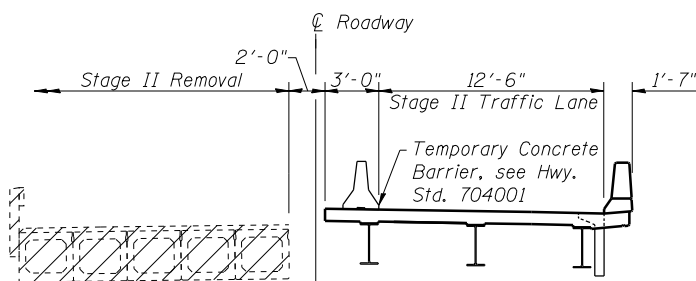
ILLINOIS FED. AID PROJECT



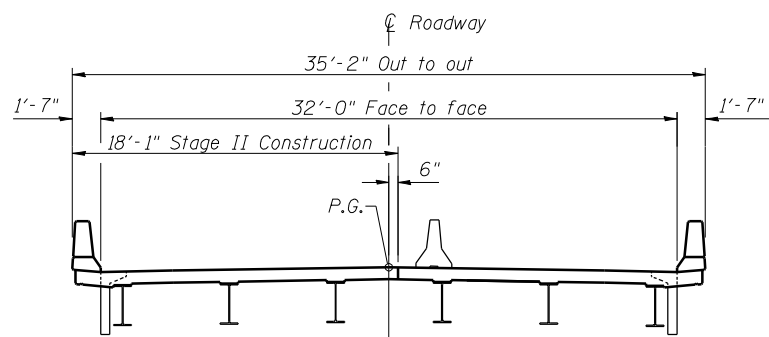
**STAGE I REMOVAL**



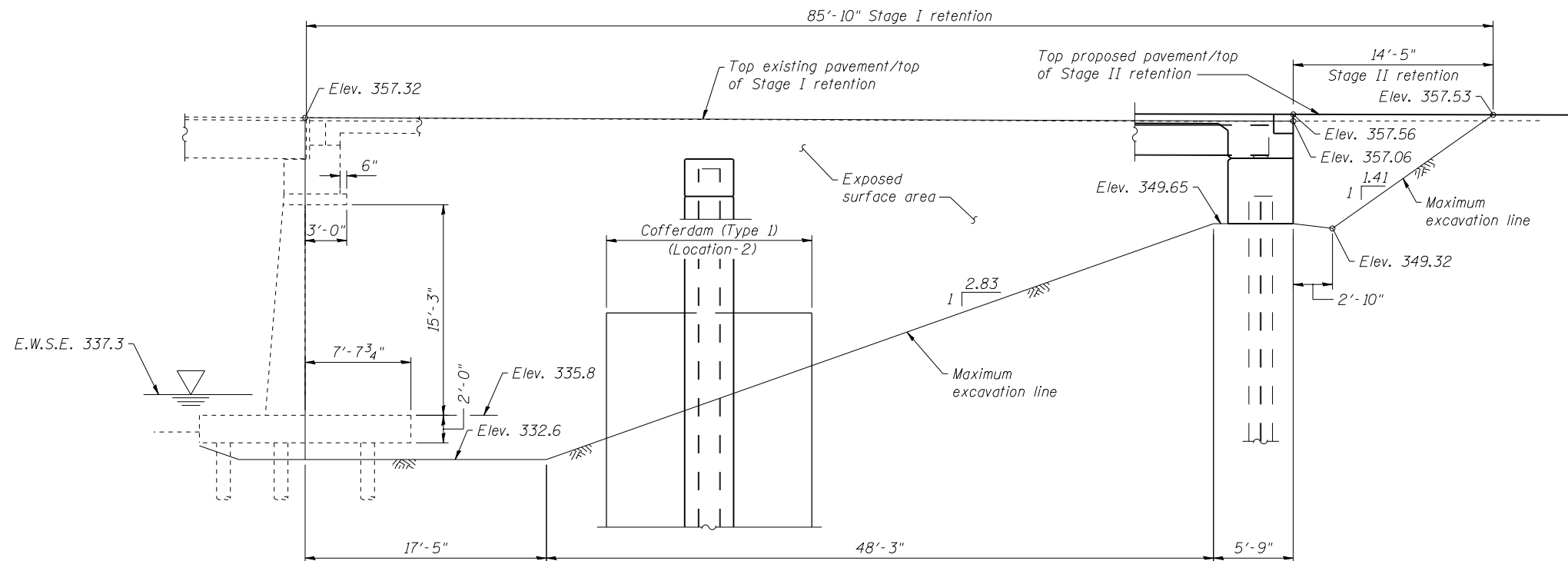
**STAGE I CONSTRUCTION**



**STAGE II REMOVAL**



**STAGE II CONSTRUCTION**



**TEMPORARY SOIL RETENTION SYSTEM**  
(at South Abutment)

**BILL OF MATERIAL**

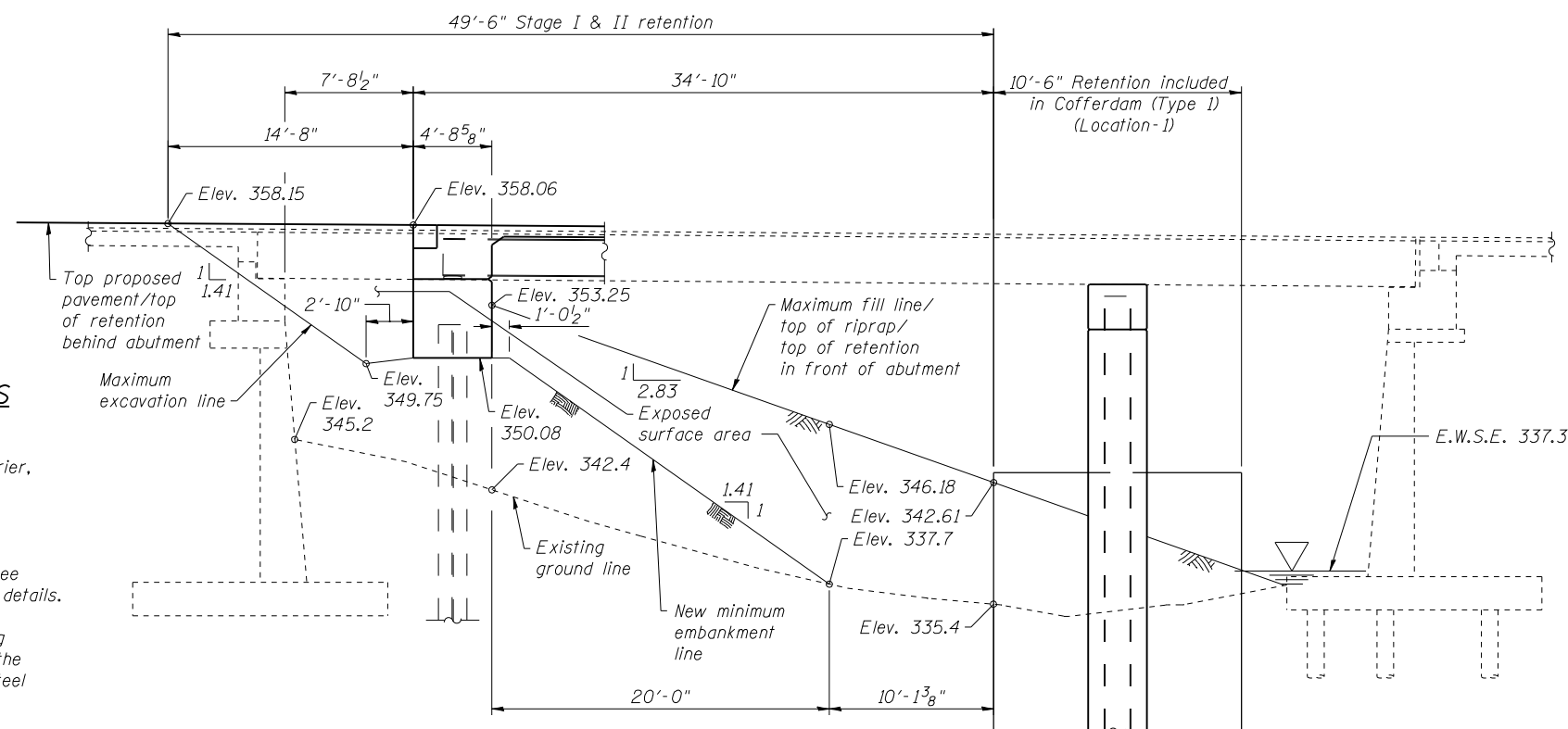
Item	Unit	Total
Temporary Soil Retention System	Sq. Ft.	1708

**TEMPORARY SOIL RETENTION SYSTEM NOTES**

- At both abutments, 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.
- Dimensions and slopes are shown along the temporary soil retention unless otherwise noted.

**STAGE CONSTRUCTION NOTES**

- All staging sections are looking South.
- For quantities of Temporary Concrete Barrier, see Roadway Plans.
- The stage construction lines for the substructure units differ from the stage construction line for the superstructure, see substructure sheets 18 thru 21 of 28 for details.
- Hatched areas indicate Removal of Existing Structures which shall include removal of the existing bituminous wearing surface and steel bridge rail.



**TEMPORARY SOIL RETENTION SYSTEM**  
(at North Abutment)

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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS**  
**STRUCTURE NO. 035-0017**

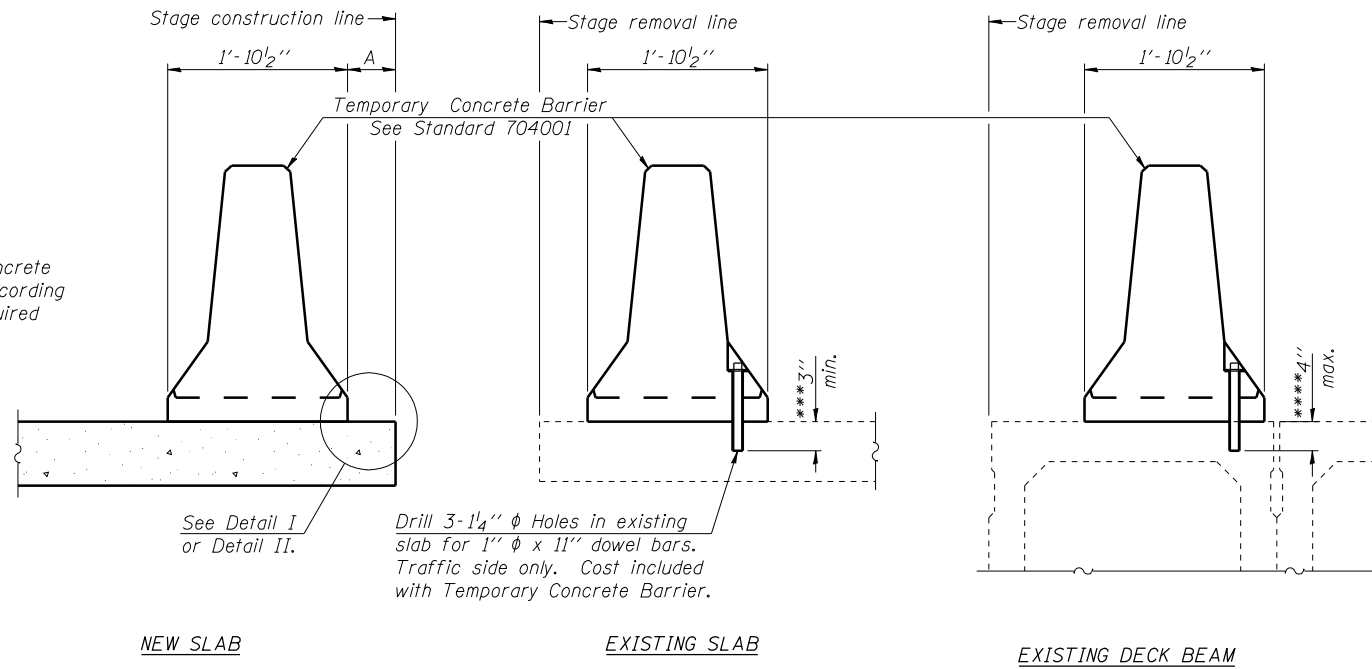
SHEET NO. 3 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	26
CONTRACT NO. 78263				

ILLINOIS FED. AID PROJECT



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**

**NOTES**

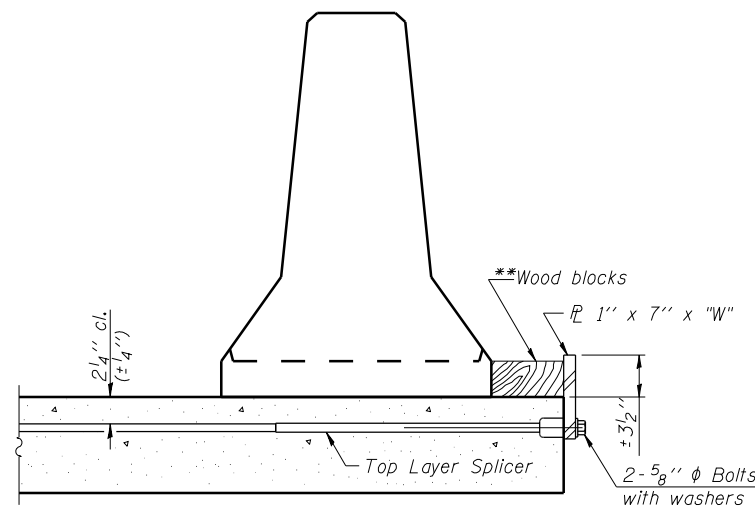
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7" x "W" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1" x 7" x "W" steel PL 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 C of each barrier panel.

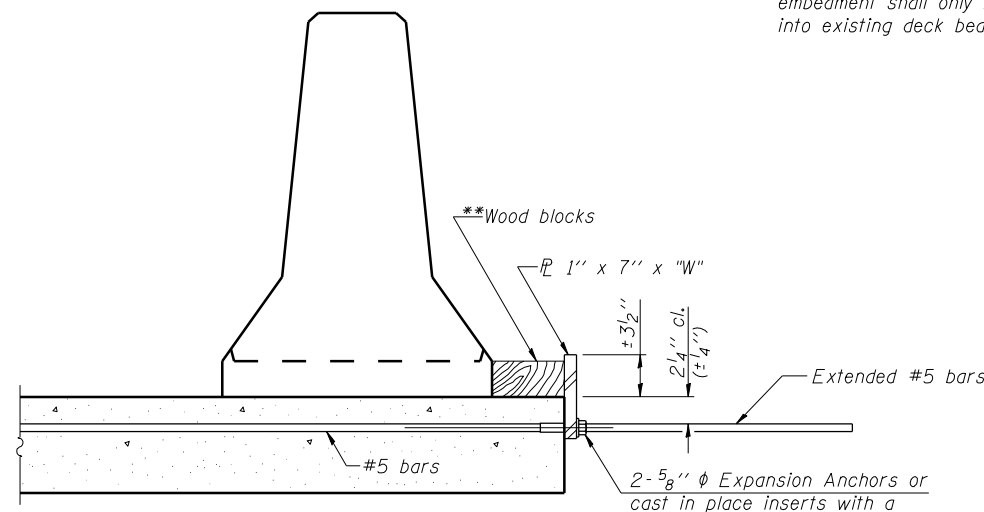
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\* 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.

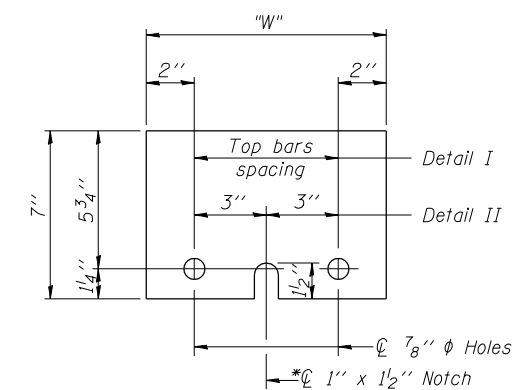
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**DETAIL I**



**DETAIL II**



**STEEL RETAINER PL 1" x 7" x "W"**

\* Required only with 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"

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R-27

7-1-10



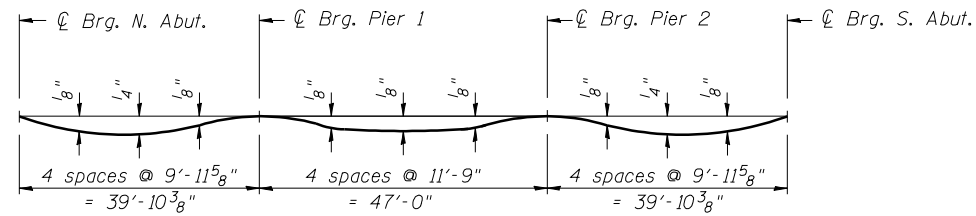
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
STRUCTURE NO. 035-0017**

SHEET NO. 4 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	27
			CONTRACT NO. 78263	
ILLINOIS FED. AID PROJECT				

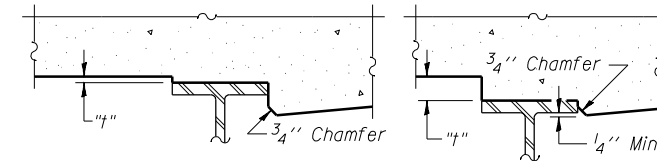


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

**Note:**

The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 6 of 28.

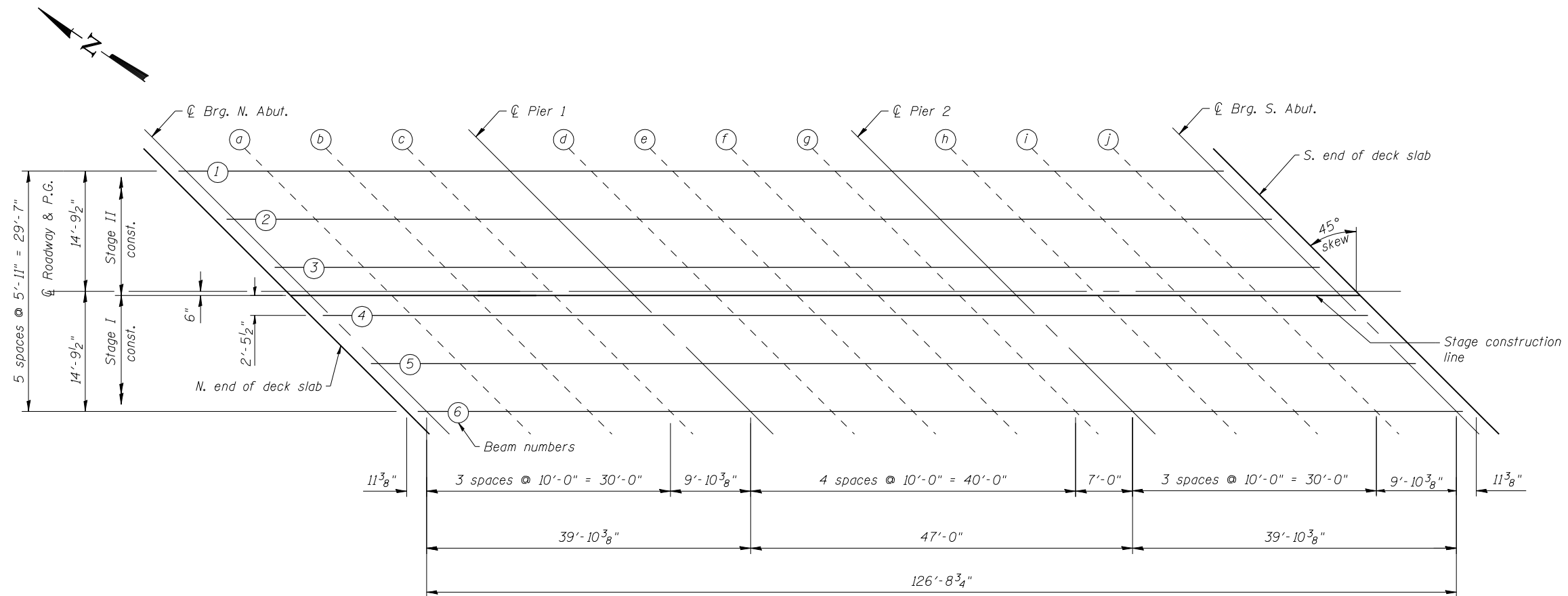


At Minimum Fillet

At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 6 of 28, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**FILLET HEIGHTS**



**PLAN**

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 035-0017**

SHEET NO. 5 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	28
CONTRACT NO. 78263				

ILLINOIS FED. AID PROJECT

**BEAM 1**

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
N. end of slab	996+61.20	-14.79	357.89	357.89
☉ Brg. N. Abut.	996+62.15	-14.79	357.89	357.89
a	996+72.15	-14.79	357.83	357.84
b	996+82.15	-14.79	357.77	357.79
c	996+92.15	-14.79	357.71	357.72
☉ Pier 1	997+02.01	-14.79	357.66	357.66
d	997+12.01	-14.79	357.61	357.62
e	997+22.01	-14.79	357.57	357.58
f	997+32.01	-14.79	357.52	357.53
g	997+42.01	-14.79	357.49	357.50
☉ Pier 2	997+49.01	-14.79	357.46	357.46
h	997+59.01	-14.79	357.43	357.44
i	997+69.01	-14.79	357.40	357.42
j	997+79.01	-14.79	357.37	357.38
☉ Brg. S. Abut.	997+88.87	-14.79	357.34	357.34
S. end of slab	997+89.82	-14.79	357.34	357.34

**BEAM 2**

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
N. end of slab	996+67.11	-8.88	357.96	357.96
☉ Brg. N. Abut.	996+68.06	-8.88	357.96	357.96
a	996+78.06	-8.88	357.90	357.91
b	996+88.06	-8.88	357.84	357.86
c	996+98.06	-8.88	357.79	357.80
☉ Pier 1	997+07.92	-8.88	357.74	357.74
d	997+17.92	-8.88	357.69	357.70
e	997+27.92	-8.88	357.65	357.66
f	997+37.92	-8.88	357.61	357.62
g	997+47.92	-8.88	357.57	357.58
☉ Pier 2	997+54.92	-8.88	357.55	357.55
h	997+64.92	-8.88	357.51	357.52
i	997+74.92	-8.88	357.49	357.51
j	997+84.92	-8.88	357.46	357.47
☉ Brg. S. Abut.	997+94.78	-8.88	357.44	357.44
S. end of slab	997+95.73	-8.88	357.44	357.44

**BEAM 3**

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
N. end of slab	996+73.03	-2.96	358.02	358.02
☉ Brg. N. Abut.	996+73.98	-2.96	358.01	358.01
a	996+83.98	-2.96	357.96	357.97
b	996+93.98	-2.96	357.90	357.92
c	997+03.98	-2.96	357.85	357.86
☉ Pier 1	997+13.84	-2.96	357.80	357.80
d	997+23.84	-2.96	357.76	357.77
e	997+33.84	-2.96	357.72	357.73
f	997+43.84	-2.96	357.68	357.69
g	997+53.84	-2.96	357.64	357.65
☉ Pier 2	997+60.84	-2.96	357.62	357.62
h	997+70.84	-2.96	357.59	357.60
i	997+80.84	-2.96	357.56	357.58
j	997+90.84	-2.96	357.54	357.55
☉ Brg. S. Abut.	998+00.70	-2.96	357.52	357.52
S. end of slab	998+01.65	-2.96	357.52	357.52

**☉ ROADWAY & PROFILE GRADE**

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
N. end of slab	996+75.99	0.00	358.05	358.05
☉ Brg. N. Abut.	996+76.94	0.00	358.04	358.04
a	996+86.94	0.00	357.99	358.00
b	996+96.94	0.00	357.93	357.95
c	997+06.94	0.00	357.88	357.89
☉ Pier 1	997+16.80	0.00	357.84	357.84
d	997+26.80	0.00	357.79	357.80
e	997+36.80	0.00	357.75	357.76
f	997+46.80	0.00	357.71	357.72
g	997+56.80	0.00	357.68	357.68
☉ Pier 2	997+63.80	0.00	357.66	357.66
h	997+73.80	0.00	357.63	357.64
i	997+83.80	0.00	357.60	357.62
j	997+93.80	0.00	357.58	357.59
☉ Brg. S. Abut.	998+03.66	0.00	357.56	357.56
S. end of slab	998+04.61	0.00	357.56	357.56

**STAGE CONSTRUCTION LINE**

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
N. end of slab	996+76.49	0.50	358.04	358.04
☉ Brg. N. Abut.	996+77.44	0.50	358.03	358.03
a	996+87.44	0.50	357.98	357.99
b	996+97.44	0.50	357.92	357.94
c	997+07.44	0.50	357.87	357.88
☉ Pier 1	997+17.30	0.50	357.83	357.83
d	997+27.30	0.50	357.78	357.79
e	997+37.30	0.50	357.74	357.75
f	997+47.30	0.50	357.70	357.71
g	997+57.30	0.50	357.67	357.68
☉ Pier 2	997+64.30	0.50	357.65	357.65
h	997+74.30	0.50	357.62	357.63
i	997+84.30	0.50	357.59	357.61
j	997+94.30	0.50	357.57	357.58
☉ Brg. S. Abut.	998+04.16	0.50	357.55	357.55
S. end of slab	998+05.11	0.50	357.55	357.55

**BEAM 4**

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
N. end of slab	996+78.95	2.96	357.99	357.99
☉ Brg. N. Abut.	996+79.90	2.96	357.98	357.98
a	996+89.90	2.96	357.92	357.93
b	996+99.90	2.96	357.87	357.89
c	997+09.90	2.96	357.82	357.83
☉ Pier 1	997+19.76	2.96	357.78	357.78
d	997+29.76	2.96	357.73	357.74
e	997+39.76	2.96	357.69	357.70
f	997+49.76	2.96	357.66	357.67
g	997+59.76	2.96	357.62	357.63
☉ Pier 2	997+66.76	2.96	357.60	357.60
h	997+76.76	2.96	357.57	357.58
i	997+86.76	2.96	357.55	357.57
j	997+96.76	2.96	357.53	357.54
☉ Brg. S. Abut.	998+06.62	2.96	357.51	357.51
S. end of slab	998+07.57	2.96	357.51	357.51

**BEAM 5**

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
N. end of slab	996+84.87	8.88	357.86	357.86
☉ Brg. N. Abut.	996+85.82	8.88	357.85	357.85
a	996+95.82	8.88	357.80	357.81
b	997+05.82	8.88	357.75	357.77
c	997+15.82	8.88	357.70	357.71
☉ Pier 1	997+25.68	8.88	357.66	357.66
d	997+35.68	8.88	357.62	357.63
e	997+45.68	8.88	357.58	357.59
f	997+55.68	8.88	357.54	357.55
g	997+65.68	8.88	357.51	357.52
☉ Pier 2	997+72.68	8.88	357.49	357.49
h	997+82.68	8.88	357.47	357.48
i	997+92.68	8.88	357.44	357.46
j	998+02.68	8.88	357.42	357.43
☉ Brg. S. Abut.	998+12.54	8.88	357.41	357.41
S. end of slab	998+13.49	8.88	357.41	357.41

**BEAM 6**

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
N. end of slab	996+90.78	14.79	357.72	357.72
☉ Brg. N. Abut.	996+91.73	14.79	357.71	357.71
a	997+01.73	14.79	357.66	357.67
b	997+11.73	14.79	357.61	357.63
c	997+21.73	14.79	357.57	357.58
☉ Pier 1	997+31.59	14.79	357.53	357.53
d	997+41.59	14.79	357.49	357.50
e	997+51.59	14.79	357.45	357.46
f	997+61.59	14.79	357.42	357.43
g	997+71.59	14.79	357.39	357.40
☉ Pier 2	997+78.59	14.79	357.37	357.37
h	997+88.59	14.79	357.35	357.36
i	997+98.59	14.79	357.32	357.34
j	998+08.59	14.79	357.31	357.32
☉ Brg. S. Abut.	998+18.45	14.79	357.29	357.29
S. end of slab	998+19.40	14.79	357.29	357.29

PRINT DRIVER = L:\05-EB-03-01  
 SCALE NAME = PLOT  
 FILE NAME = 030317-2825-06-151-06-00.dwg



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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS  
 STRUCTURE NO. 035-0017**

SHEET NO. 6 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	29
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

**EAST EDGE OF SHOULDER**

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end N. appr. slab	996+22.75	-16.00	358.13
A1	996+39.99	-16.00	358.01
A2	996+49.99	-16.00	357.94
S. end N. appr. slab	996+59.99	-16.00	357.88

**EAST EDGE OF ROADWAY**

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end N. appr. slab	996+26.75	-12.00	358.16
A1	996+43.99	-12.00	358.06
A2	996+53.99	-12.00	358.00
S. end N. appr. slab	996+63.99	-12.00	357.93

**☐ ROADWAY & PROFILE GRADE**

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end N. appr. slab	996+45.99	0.00	358.24
A1	996+55.99	0.00	358.17
A2	996+65.99	0.00	358.11
S. end N. appr. slab	996+75.99	0.00	358.05

**STAGE CONSTRUCTION LINE**

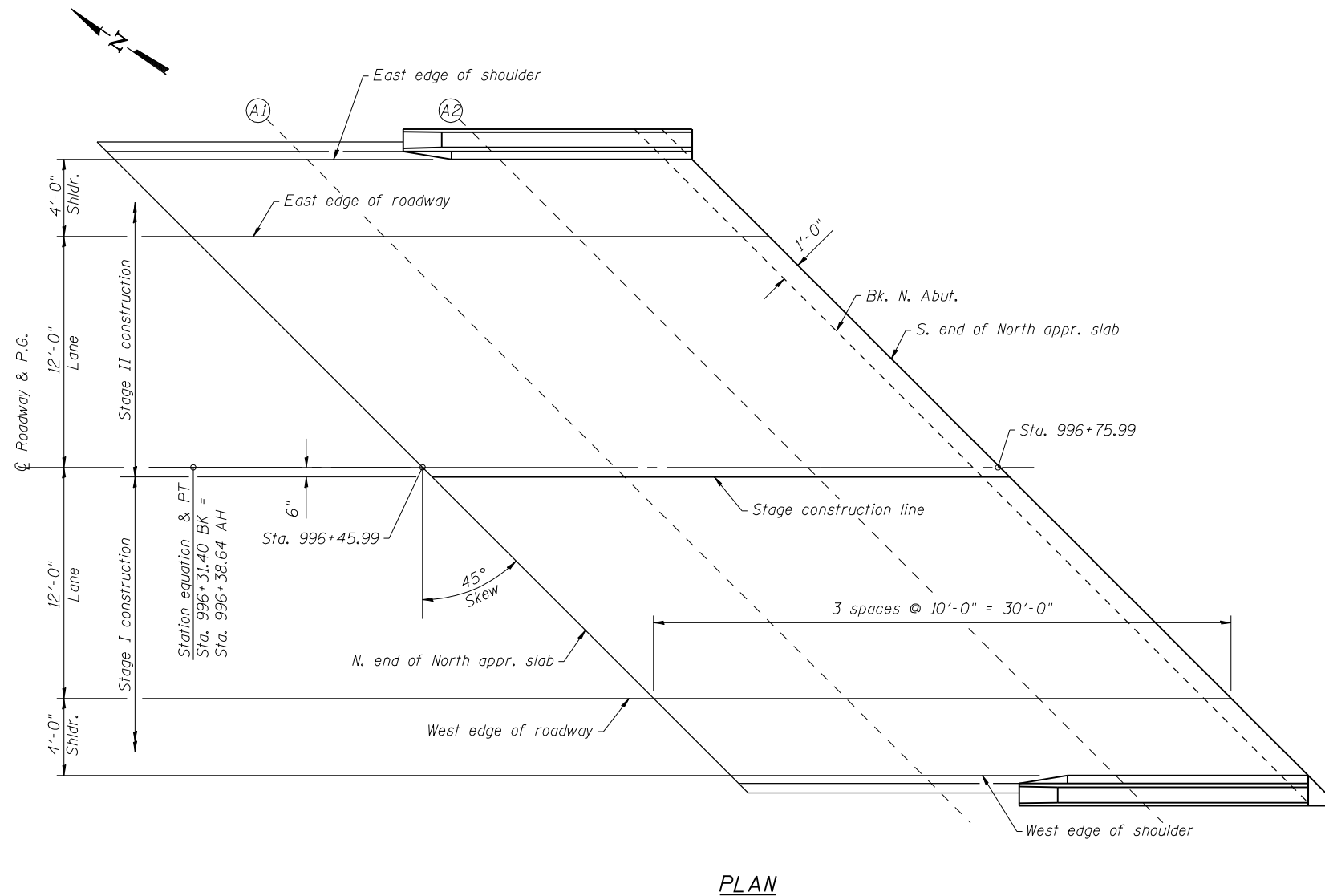
Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end N. appr. slab	996+46.49	0.50	358.23
A1	996+56.49	0.50	358.16
A2	996+66.49	0.50	358.10
S. end N. appr. slab	996+76.49	0.50	358.04

**WEST EDGE OF ROADWAY**

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end N. appr. slab	996+57.99	12.00	357.97
A1	996+67.99	12.00	357.91
A2	996+77.99	12.00	357.85
S. end N. appr. slab	996+87.99	12.00	357.79

**WEST EDGE OF SHOULDER**

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end N. appr. slab	996+61.99	16.00	357.86
A1	996+71.99	16.00	357.80
A2	996+81.99	16.00	357.74
S. end N. appr. slab	996+91.99	16.00	357.69



**PLAN**

PRINT DRIVER = LUD-ER-BAR-JUL  
 ESCA PROJECT NO. 1035.03  
 PLOT SCALE = 0.25" = 1'-0"  
 PLOT DATE = 10/24/2014 2:58:00 PM



USER NAME = JIF	DESIGNED - SHL 07/13	REVISD -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF NORTH APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 035-0017**

SHEET NO. 7 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	30
CONTRACT NO. 78263			ILLINOIS FED. AID PROJECT	

**EAST EDGE OF SHOULDER**

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end S. appr. slab	997+88.61	-16.00	357.32
A3	997+98.61	-16.00	357.30
A4	998+08.61	-16.00	357.28
S. end S. appr. slab	998+18.61	-16.00	357.27

**EAST EDGE OF ROADWAY**

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end S. appr. slab	997+92.61	-12.00	357.39
A3	998+02.61	-12.00	357.37
A4	998+12.61	-12.00	357.36
S. end S. appr. slab	998+22.61	-12.00	357.34

**☐ ROADWAY & PROFILE GRADE**

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end S. appr. slab	998+04.61	0.00	357.56
A3	998+14.61	0.00	357.54
A4	998+24.61	0.00	357.53
S. end S. appr. slab	998+34.61	0.00	357.52

**STAGE CONSTRUCTION LINE**

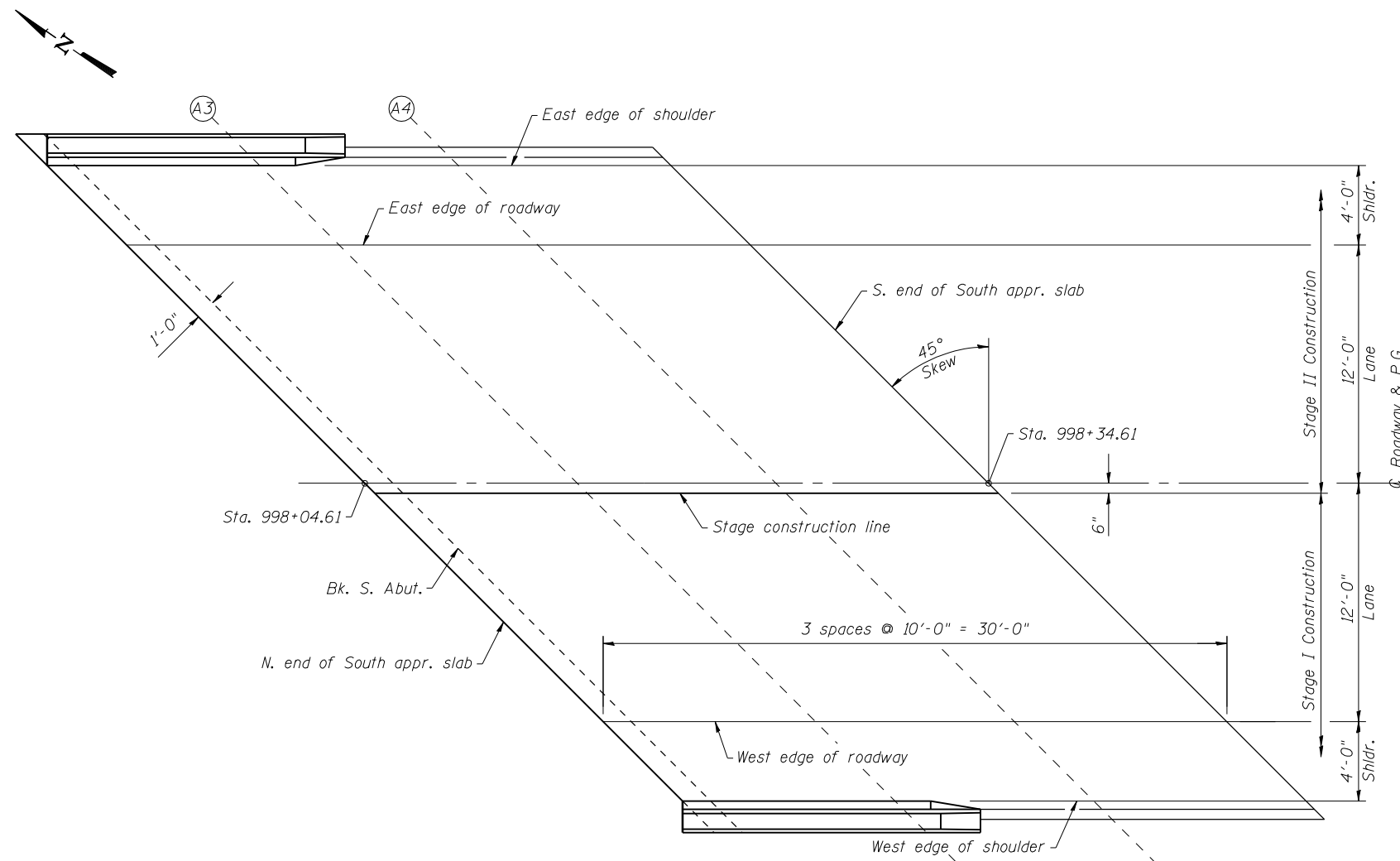
Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end S. appr. slab	998+05.11	0.50	357.55
A3	998+15.11	0.50	357.53
A4	998+25.11	0.50	357.52
S. end S. appr. slab	998+35.11	0.50	357.51

**WEST EDGE OF ROADWAY**

Location	Station	Offset (ft.)	Theoretical Grade Elevations
N. end S. appr. slab	998+16.61	12.00	357.35
A3	998+26.61	12.00	357.34
A4	998+36.61	12.00	357.33
S. end S. appr. slab	998+46.61	12.00	357.32

**WEST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
N. end S. appr. slab	998+20.61	16.00	357.26
A3	998+30.61	16.00	357.25
A4	998+40.61	16.00	357.24
S. end S. appr. slab	998+50.61	16.00	357.24



**PLAN**

PRINT DRIVER = LUD-ER-BAR-JUL  
 ESCA PROJECT NO. 1035.03  
 PLOT SCALE = 0.25" = 1' IN.  
 PLOT DATE = 10/24/2014 2:58:32 PM



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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

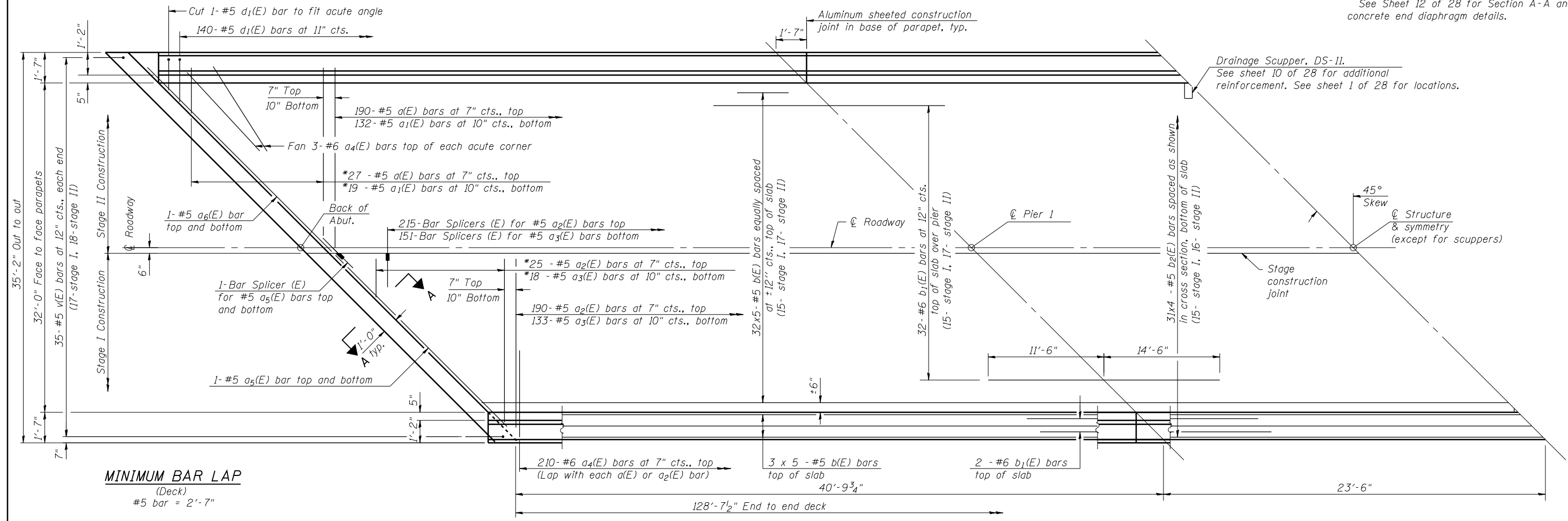
**TOP OF SOUTH APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 035-0017**

SHEET NO. 8 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	31
CONTRACT NO. 78263			ILLINOIS FED. AID PROJECT	

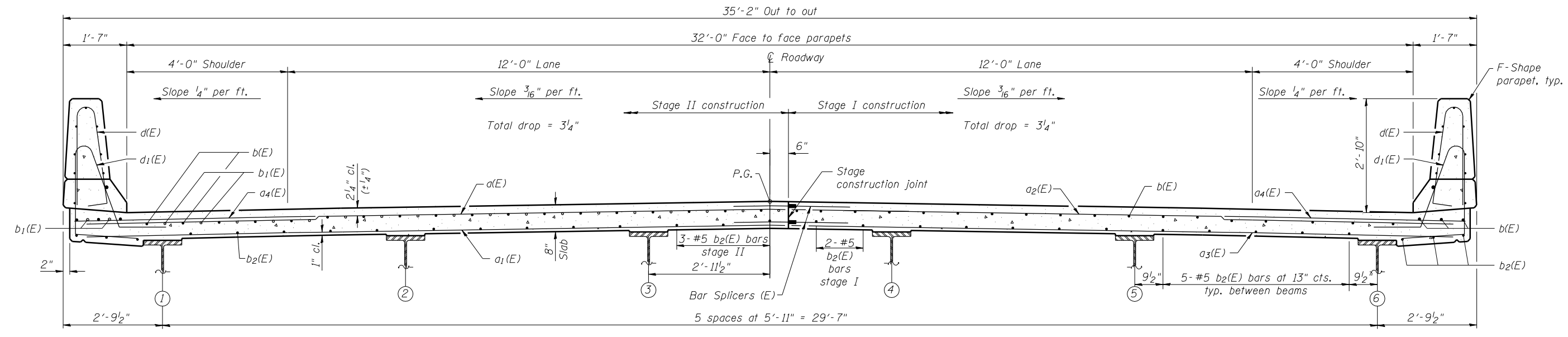
\* Order a(E), a<sub>1</sub>(E), a<sub>2</sub>(E) and a<sub>3</sub>(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

Notes:  
 See Sheet 10 of 28 for superstructure details and Bill of Material.  
 Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.  
 See Sheet 10 of 28 for parapet reinforcement.  
 See Sheet 12 of 28 for Section A-A and concrete end diaphragm details.



**MINIMUM BAR LAP**  
 (Deck)  
 #5 bar = 2'-7"

**PARTIAL PLAN**



**NEAR PIER**

**CROSS SECTION**  
 (Looking South)

**NEAR MIDSPAN**

PRINT DRIVER = LUD-ER-BAR-JUL  
 SCALE NAME = PLOT  
 FILE NAME = 030317-28282-09-28.dwg



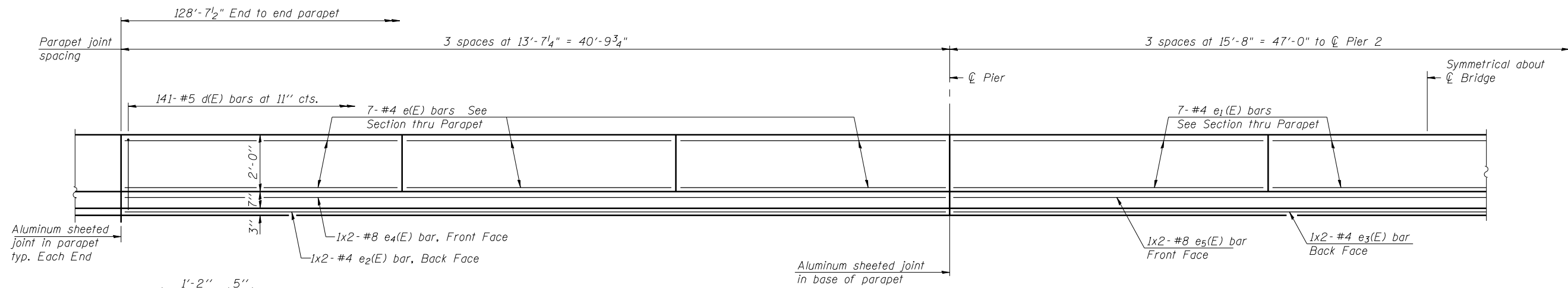
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

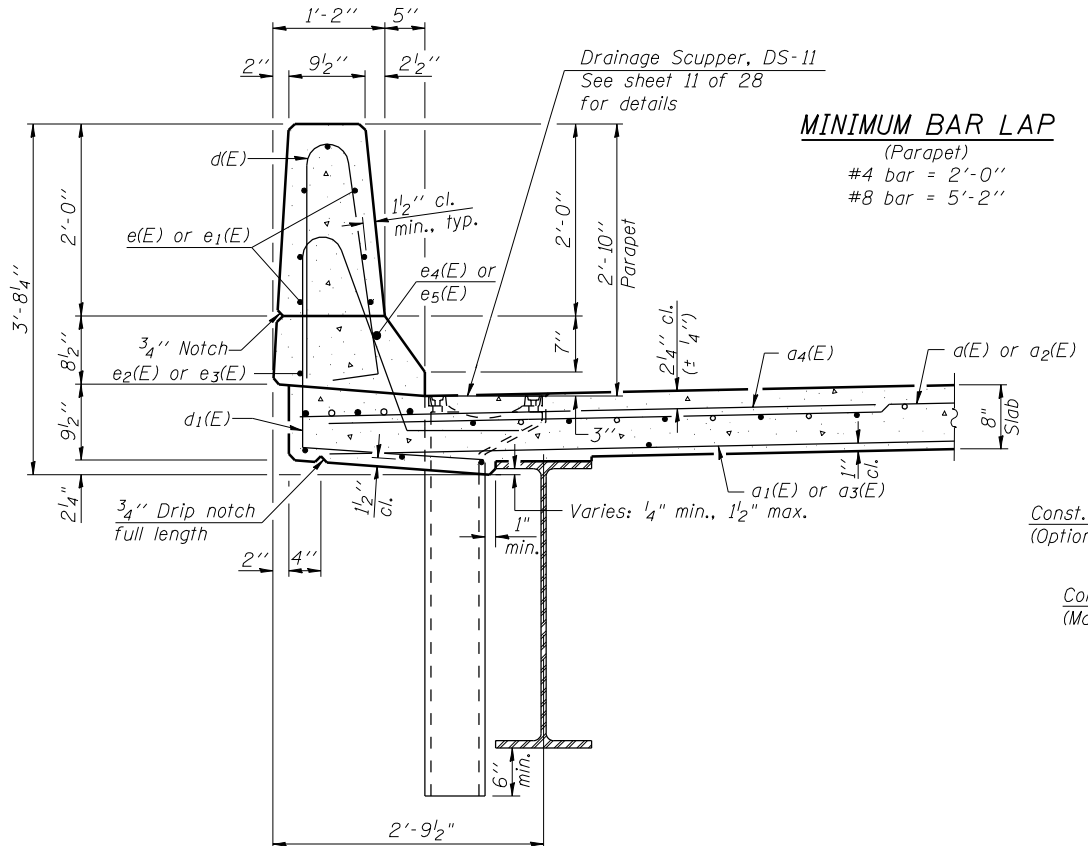
**SUPERSTRUCTURE**  
**STRUCTURE NO. 035-0017**

SHEET NO. 9 OF 28 SHEETS

F.A.P. RTE. 782	SECTION 115B-1	COUNTY HARDIN	TOTAL SHEETS 69	SHEET NO. 32
CONTRACT NO. 78263			ILLINOIS FED. AID PROJECT	

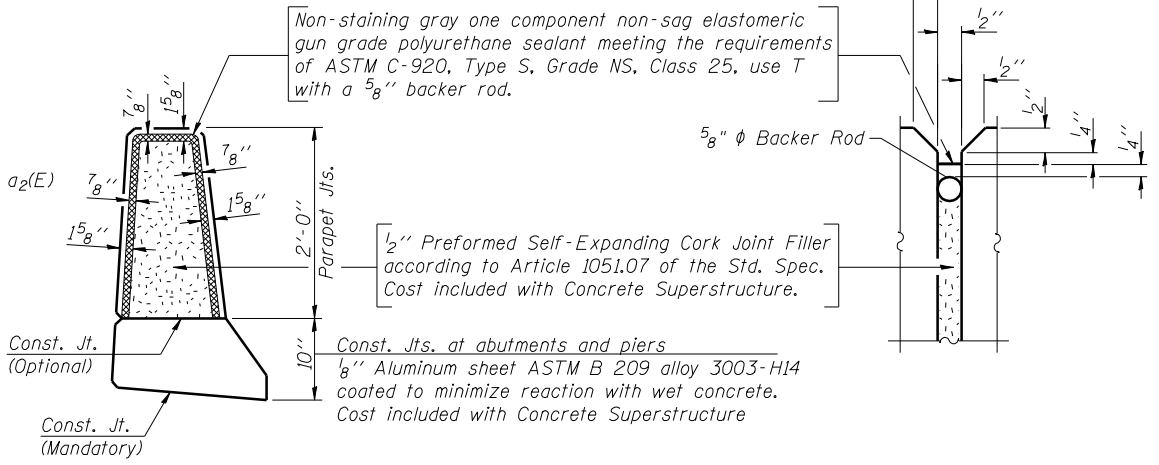


INSIDE ELEVATION OF PARAPET

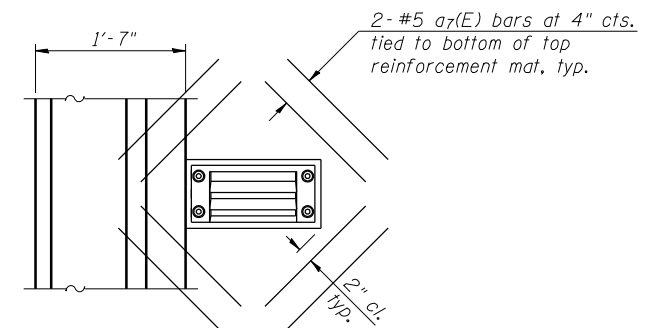


SECTION THRU PARAPET

**MINIMUM BAR LAP**  
(Parapet)  
#4 bar = 2'-0"  
#8 bar = 5'-2"

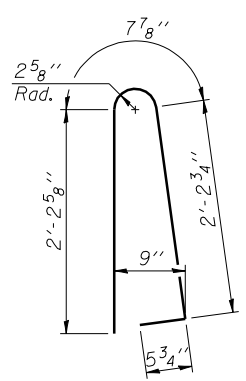


PARAPET JOINT DETAILS

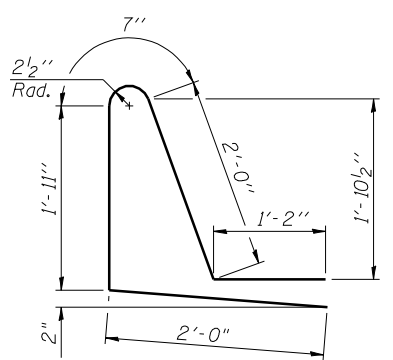


PLAN AT DRAINAGE SCUPPER

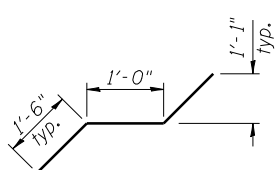
Note:  
Cut longitudinal reinforcement to clear drainage scuppers.



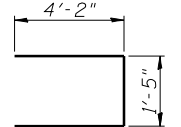
BAR d(E)



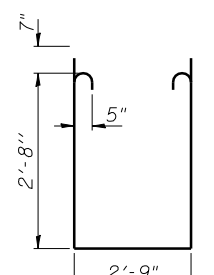
BAR d1(E)



BAR m6(E)



BAR s(E)



BAR s1(E)

**SUPERSTRUCTURE**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	217	#5	17'-8"	—
a1(E)	151	#5	17'-1"	—
a2(E)	215	#5	16'-8"	—
a3(E)	151	#5	16'-1"	—
a4(E)	426	#6	6'-6"	—
a5(E)	4	#5	23'-9"	—
a6(E)	4	#5	25'-2"	—
a7(E)	48	#5	1'-6"	—
b(E)	190	#5	27'-9"	—
b1(E)	72	#6	26'-0"	—
b2(E)	124	#5	34'-0"	—
d(E)	282	#5	5'-7"	U
d1(E)	282	#5	7'-8"	U
e(E)	84	#4	13'-4"	—
e1(E)	42	#4	15'-5"	—
e2(E)	8	#4	21'-3"	—
e3(E)	4	#4	24'-5"	—
e4(E)	8	#8	22'-10"	—
e5(E)	4	#8	26'-0"	—
m(E)	6	#6	23'-8"	—
m1(E)	6	#6	25'-1"	—
m2(E)	8	#6	3'-5"	—
m3(E)	16	#6	7'-10"	—
m4(E)	4	#6	3'-3"	—
m5(E)	4	#6	4'-8"	—
m6(E)	24	#5	4'-0"	—
s(E)	74	#5	9'-9"	□
s1(E)	62	#5	9'-3"	□
v(E)	70	#5	3'-1"	Γ

Reinforcement Bars, Epoxy Coated Pound 38520  
Concrete Superstructure Cu. Yds. 178.0

Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

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SCALE NAME = PLOT...  
FILE NAME = 030217-2825-10-Str-03.dwg



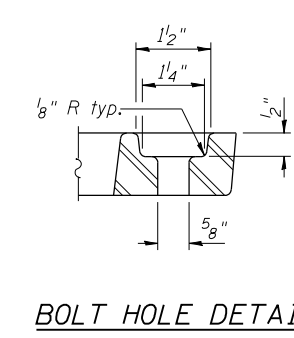
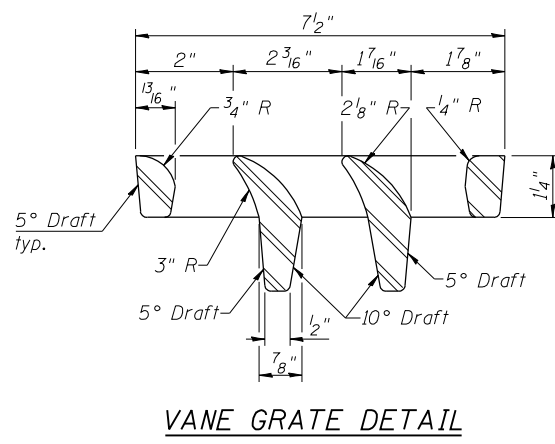
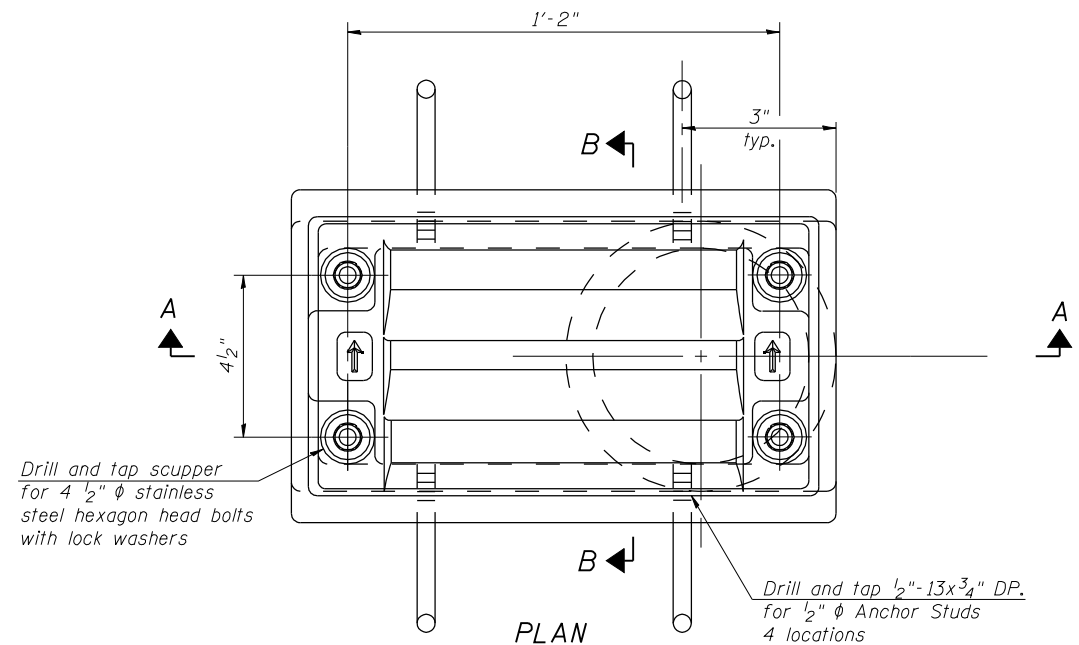
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS**  
**STRUCTURE NO. 035-0017**

SHEET NO. 10 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	33
CONTRACT NO. 78263			ILLINOIS FED. AID PROJECT	



Notes:

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

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

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

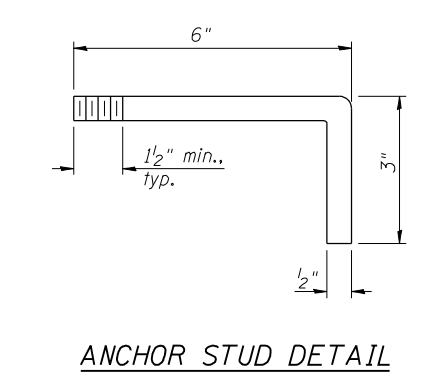
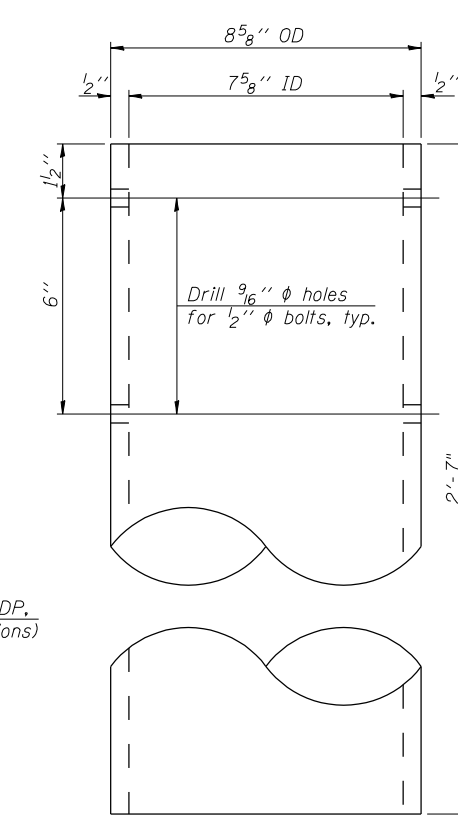
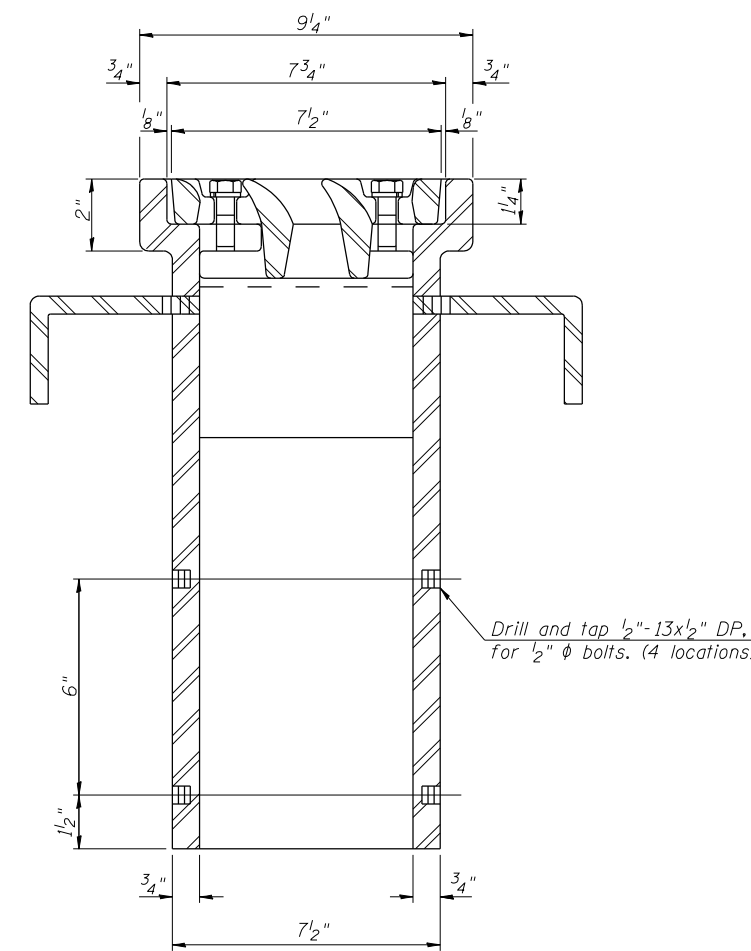
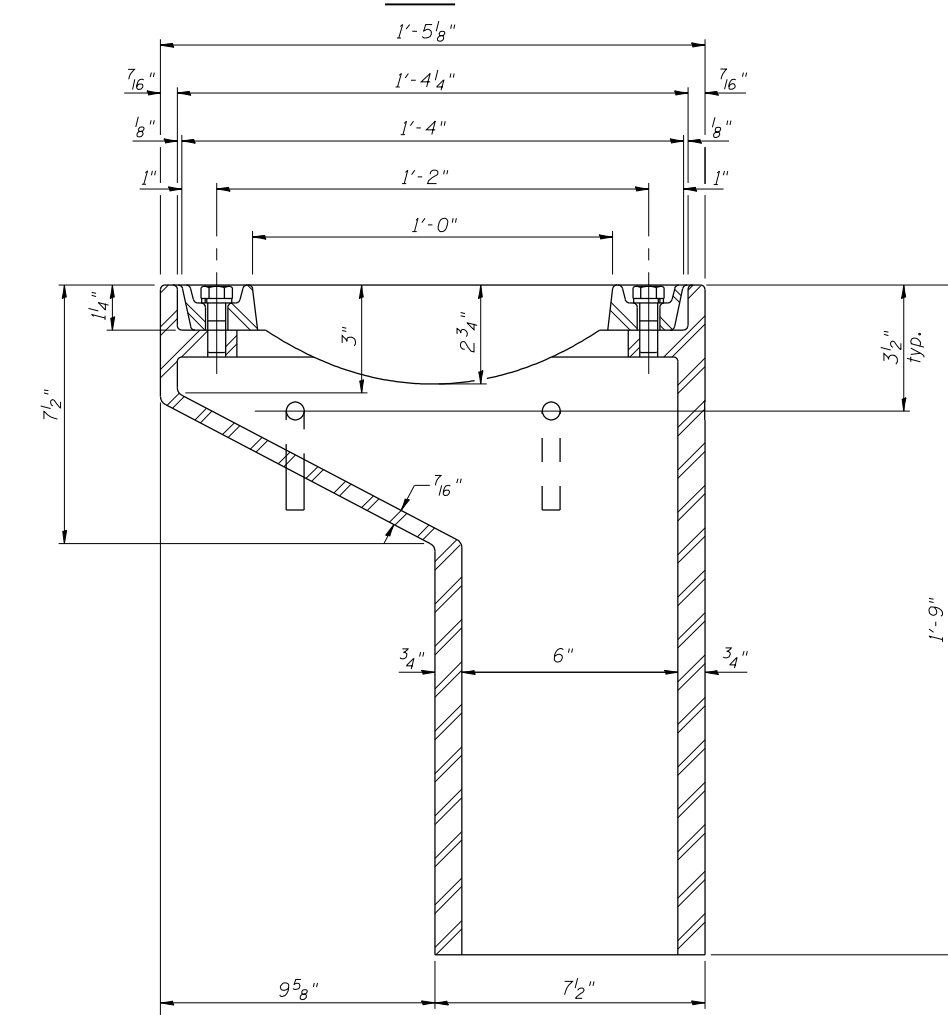
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

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

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

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

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



See sheet 10 of 28 for scupper location relative to parapet.

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	6

PRINT DRIVER = LUD-ER-BARON  
 PLOT DATE = 10/24/2014 3:02:45 PM  
 SCALE NAME = 0.25  
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DS-11

7-1-10



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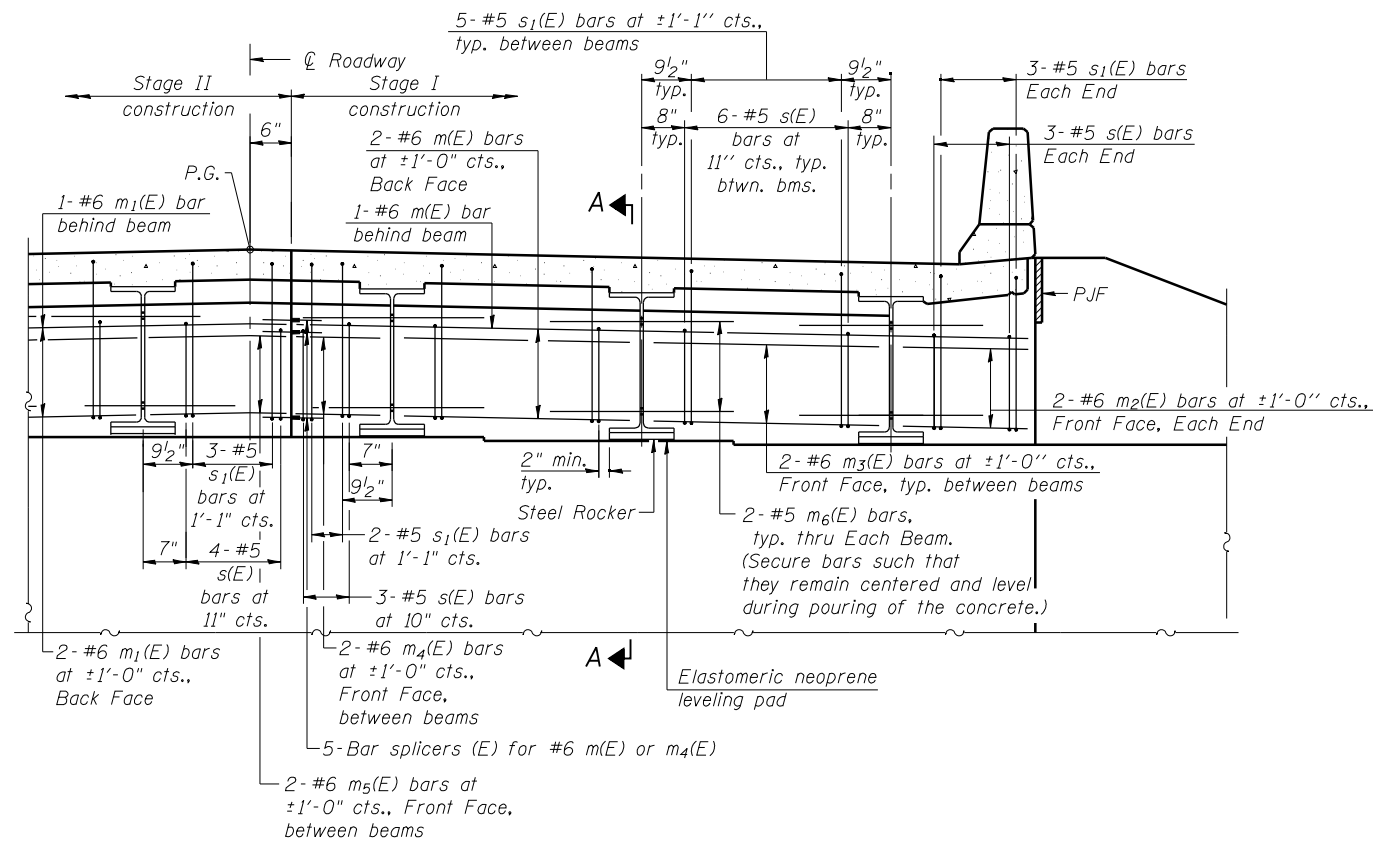
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SCUPPER, DS-11  
 STRUCTURE NO. 035-0017**

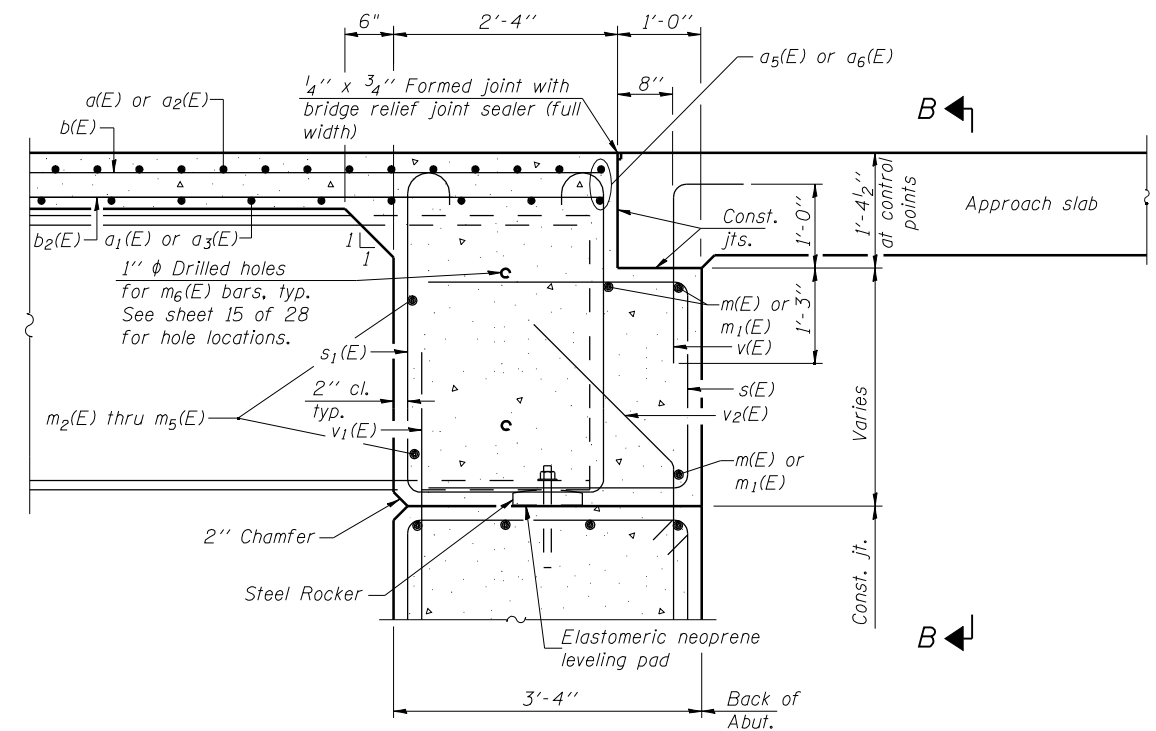
SHEET NO. 11 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	34
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

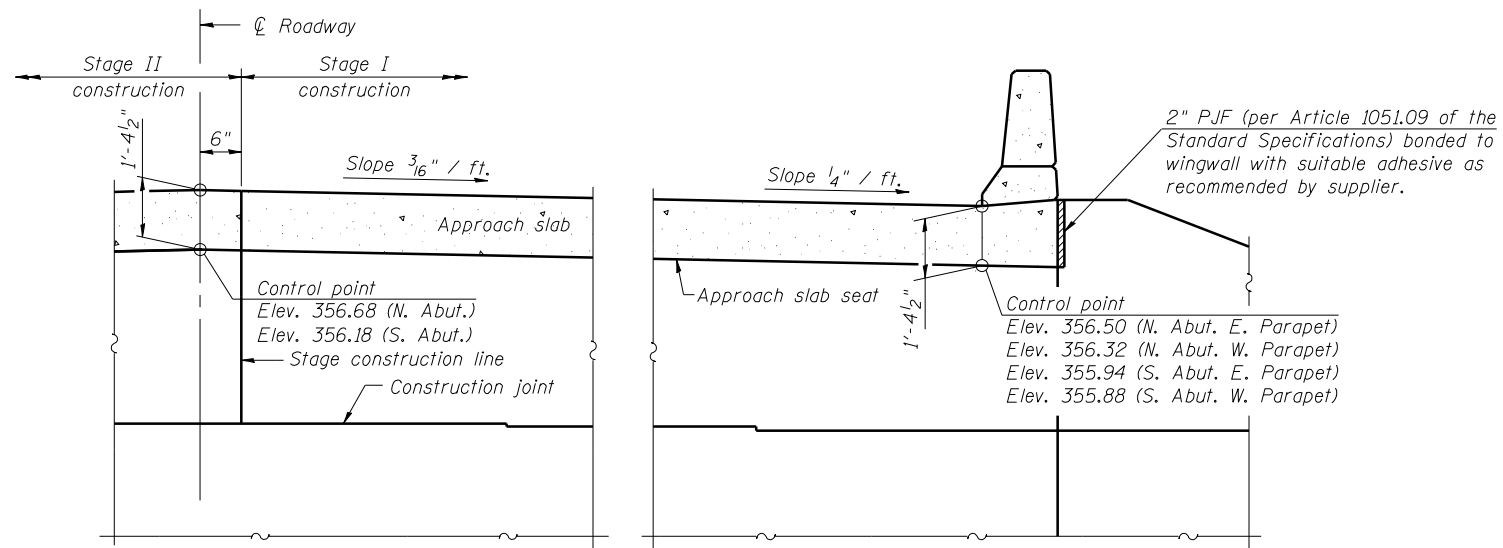




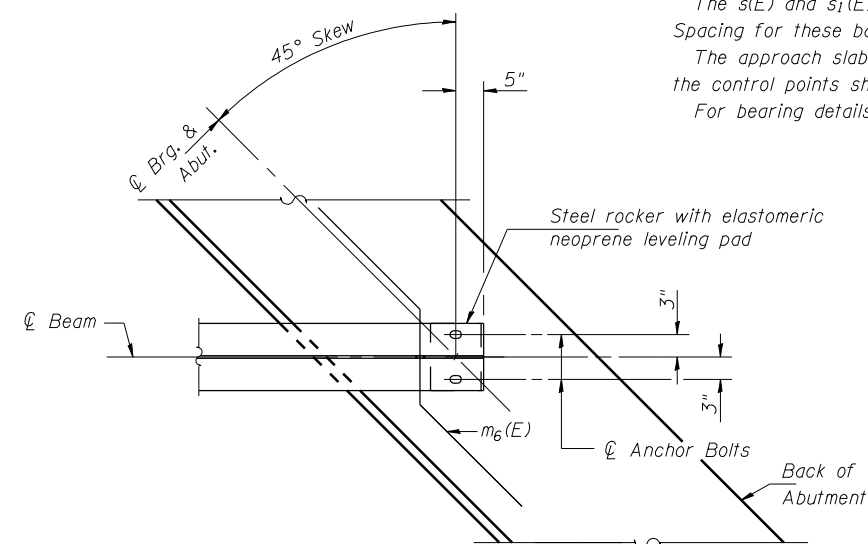
**DIAPHRAGM ELEVATION AT ABUTMENT**  
(Looking South)



**SECTION A-A**  
(at Rt. L's)



**SECTION B-B**  
(Looking South)



**PARTIAL PLAN AT ABUTMENT**  
(Showing bottom flange of beam)

**Notes:**  
 Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 28.  
 Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 28.  
 For details of bars s(E), s<sub>1</sub>(E) and v(E) see sheet 10 of 28.  
 The s(E) and s<sub>1</sub>(E) bars shall be placed parallel to the beams.  
 Spacing for these bars shall be at right angles to the beams.  
 The approach slab seat shall have a constant slope determined from the control points shown.  
 For bearing details see sheet 17 of 28.

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 LAYOUT = L:\05-ESCA\B\11  
 SCALE = 1/8\"/>



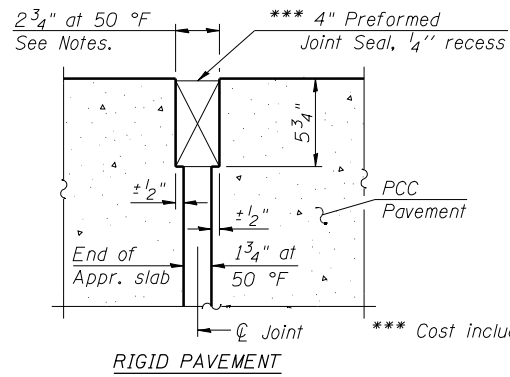
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

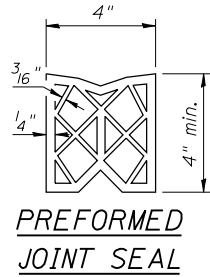
**DIAPHRAGM DETAILS**  
**STRUCTURE NO. 035-0017**

SHEET NO. 12 OF 28 SHEETS

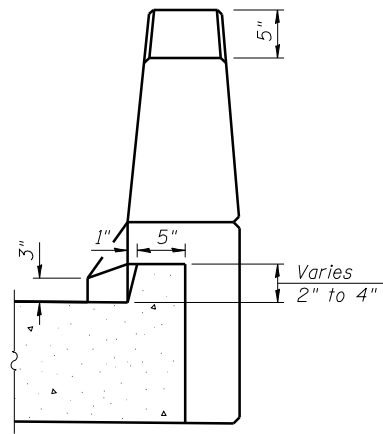
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	35
CONTRACT NO. 78263				
ILLINOIS FED. AID PROJECT				



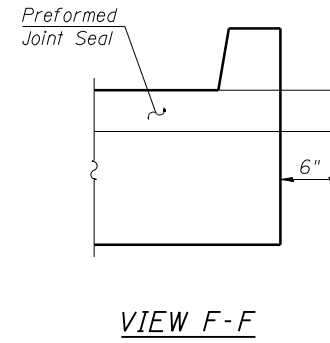
**DETAIL A**



**PREFORMED JOINT SEAL**

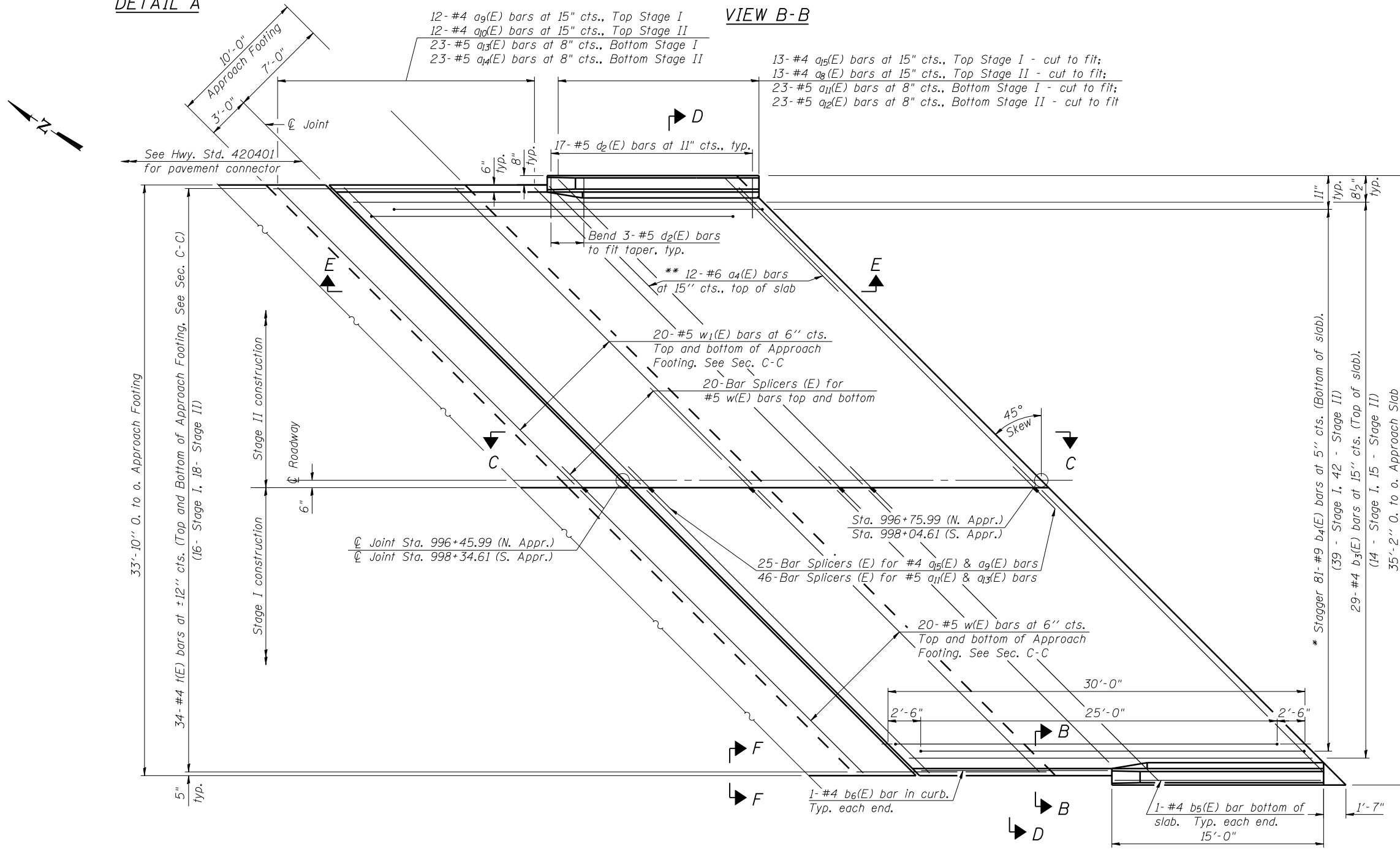


**VIEW B-B**



**VIEW F-F**

Notes:  
 See sheet 14 of 28 for Sections C-C & D-D and View E-E.  
 $a_4(E)$  and  $a_8(E)$  thru  $a_{15}(E)$  bar spacings measured along  $\perp$  Rdwy.  
 The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be  $1\frac{1}{2}$ " for installation purposes.



**PLAN AT NORTH APPROACH**  
 (South Approach opposite hand)

\* Tilt #9  $b_4(E)$  bars as required to maintain clearance.  
 \*\* Space between  $a_8(E)$  or  $a_{15}(E)$  bars, typ. each parapet.

(Sheet 1 of 2)

PRINT DRIVER = L:\0-EB\B\A\1  
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 FILE NAME = 035017-2825-13-App-01.dwg



USER NAME = jif	DESIGNED - SHL 07/13	REVISED -
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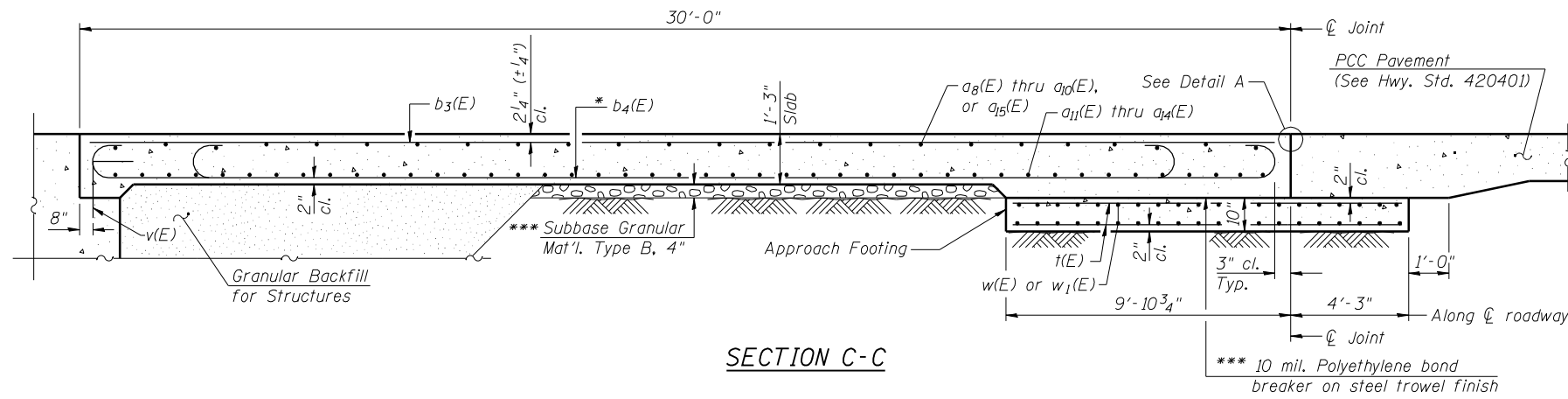
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS**  
**STRUCTURE NO. 035-0017**

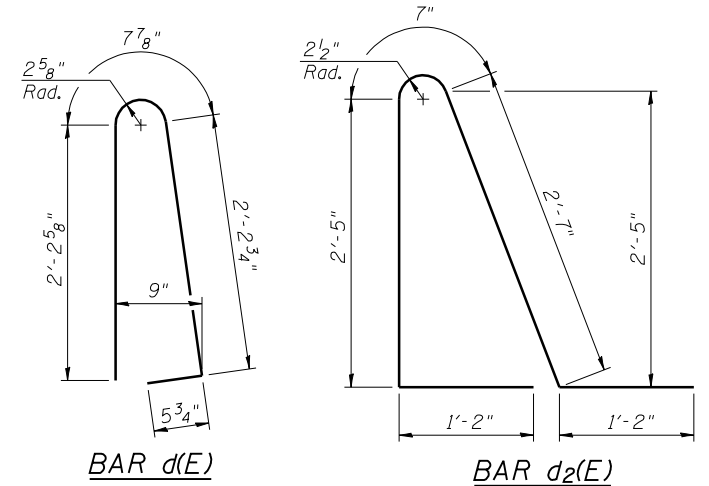
SHEET NO. 13 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	36
CONTRACT NO. 78263				

ILLINOIS FED. AID PROJECT



Notes:  
 See sheet 13 of 28 for Detail A, View B-B and View F-F.  
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
 Approach footing concrete shall be paid for as Concrete Structures.  
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
 For v(E) bar details, see sheet 10 of 28.  
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
 For bar splicer details, see sheet 23 of 28.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 28.  
 For additional parapet details, see sheet 10 of 28.

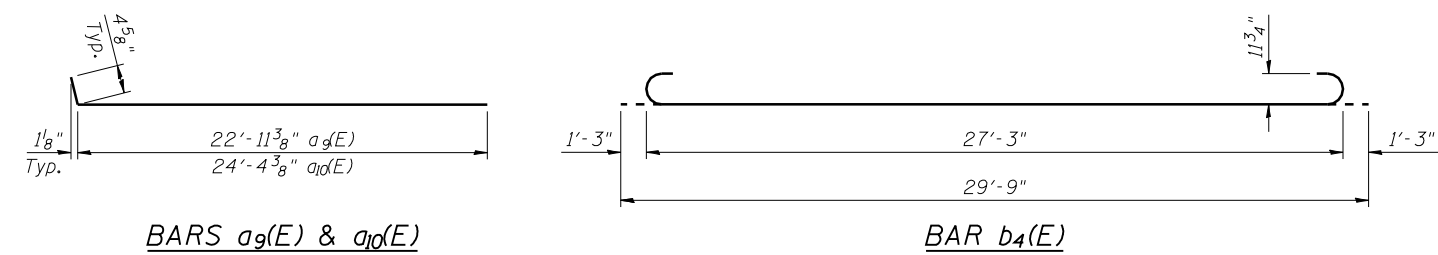
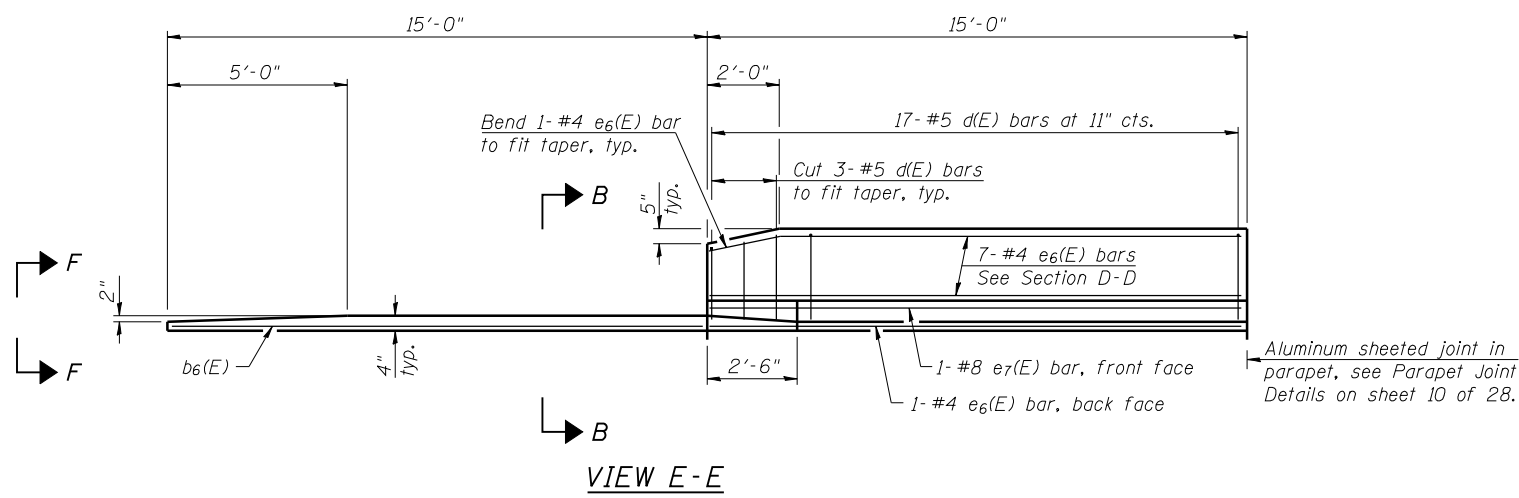
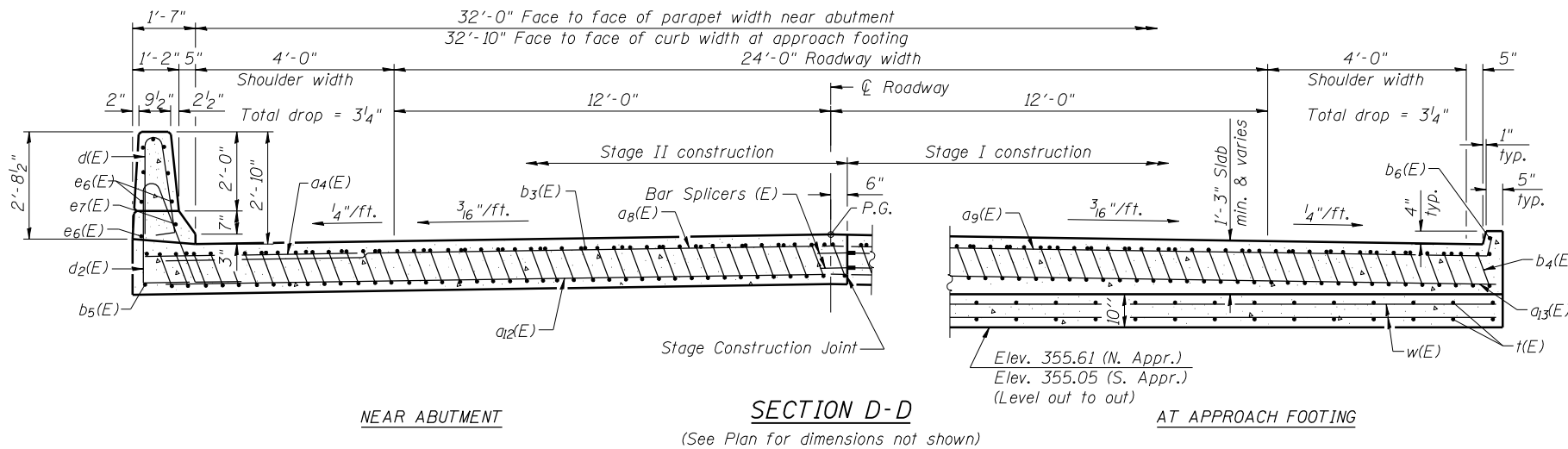


\* Tilt #9 b4(E) bars as required to maintain clearance.

\*\*\* Cost included with Concrete Superstructure.

**TWO APPROACHES  
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a4(E)	48	#6	6'-6"	—
a8(E)	26	#4	25'-2"	—
a9(E)	24	#4	23'-4"	—
a10(E)	24	#4	24'-9"	—
a11(E)	46	#5	23'-9"	—
a12(E)	46	#5	25'-2"	—
a13(E)	46	#5	23'-0"	—
a14(E)	46	#5	24'-5"	—
a15(E)	26	#4	23'-9"	—
b3(E)	58	#4	29'-8"	—
b4(E)	162	#9	29'-9"	—
b5(E)	4	#4	14'-8"	—
b6(E)	4	#4	14'-9"	—
d(E)	68	#5	5'-7"	—
d2(E)	68	#5	7'-11"	—
e6(E)	32	#4	14'-8"	—
e7(E)	4	#8	14'-8"	—
t(E)	136	#4	13'-10"	—
w(E)	80	#5	23'-0"	—
w1(E)	80	#5	24'-5"	—
Concrete Superstructure		Cu. Yd.	111.6	
Concrete Structures		Cu. Yd.	29.5	
Reinforcement Bars, Epoxy Coated		Pound	30970	



(Sheet 2 of 2)

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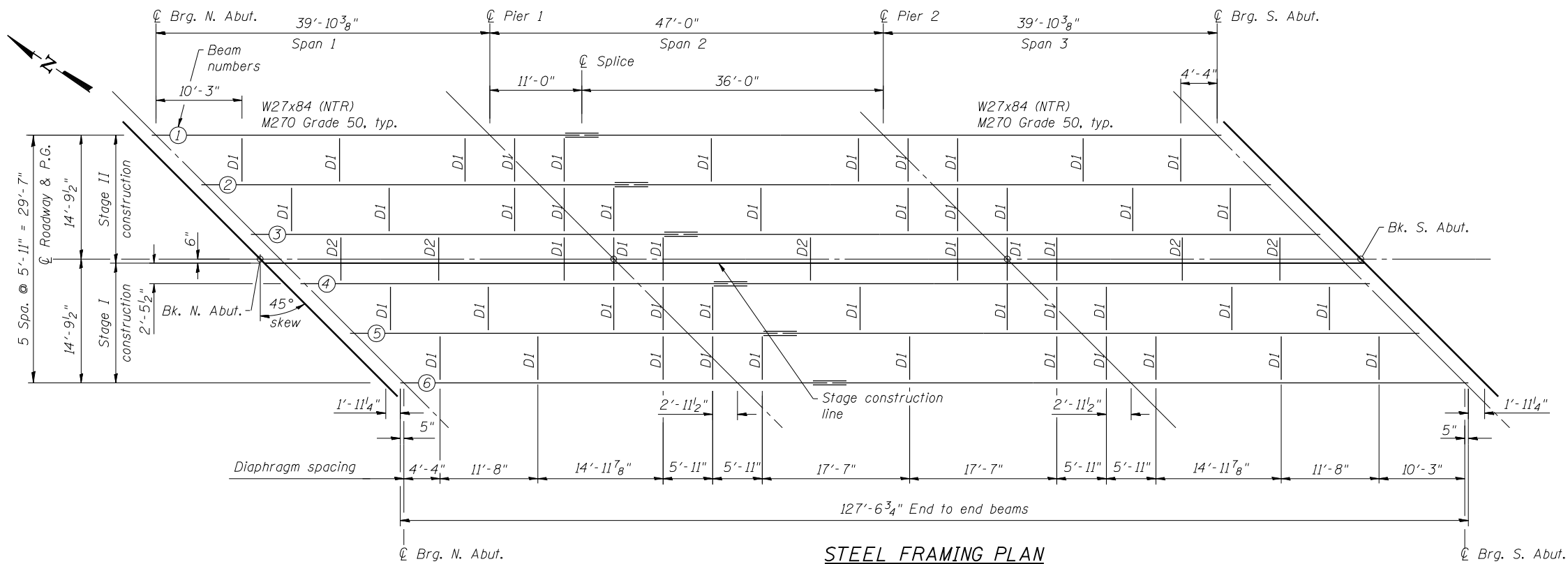
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS  
 STRUCTURE NO. 035-0017**

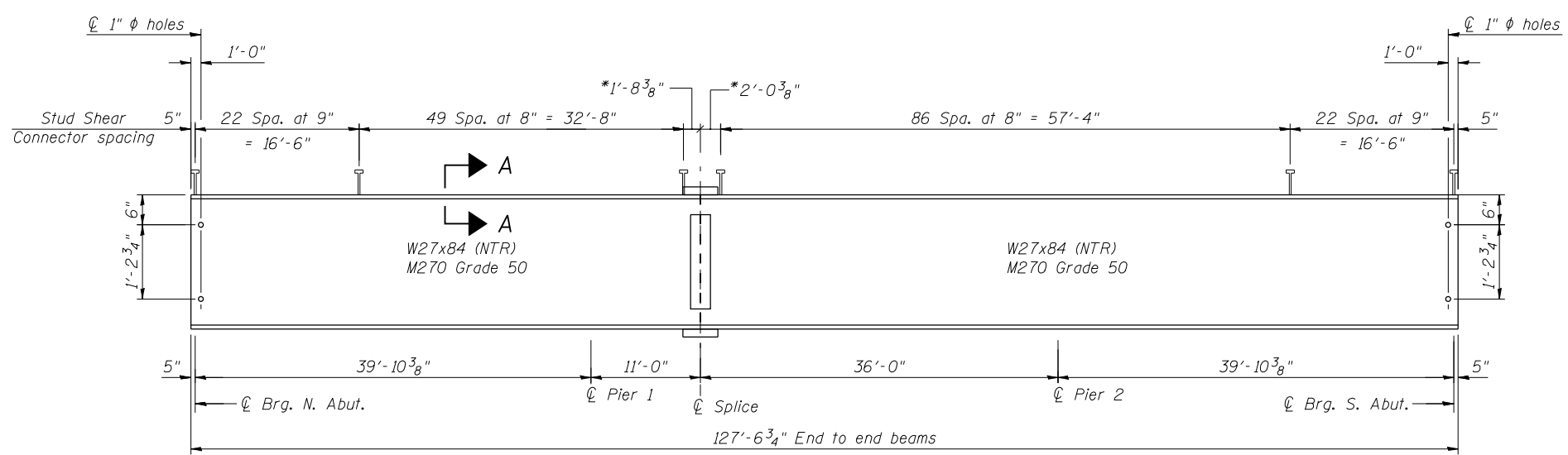
SHEET NO. 14 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	37
				CONTRACT NO. 78263
ILLINOIS FED. AID PROJECT				



Notes:  
 See sheet 16 of 28 for additional steel details.  
 All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.  
 Load carrying components designated (NTR) shall conform to the Impact Testing Requirement, Zone 2.

**STEEL FRAMING PLAN**



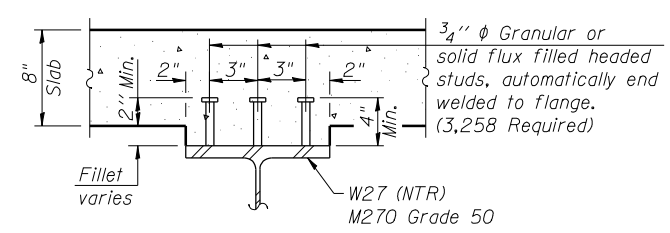
**BEAM ELEVATION**

\* Omit shear connectors over splices

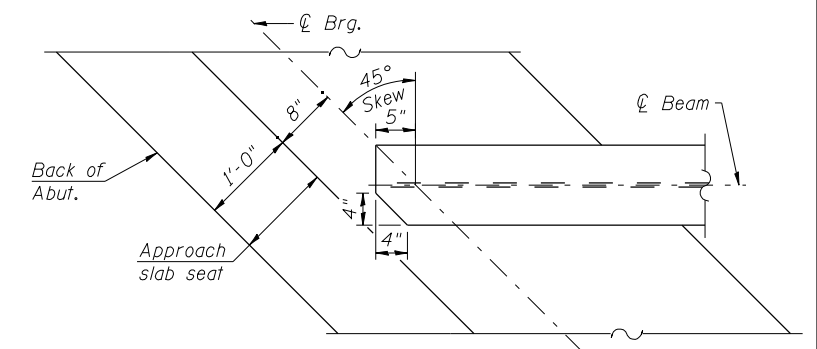
**TOP OF BEAM ELEVATIONS**  
 (For fabrication only)

Beam	☐ Brg. N. Abut.	☐ Pier 1	☐ Splice	☐ Pier 2	☐ Brg. S. Abut.
1	357.15	356.90	356.83	356.73	356.61
2	357.23	356.98	356.91	356.82	356.70
3	357.29	357.04	356.97	356.89	356.78
4	357.25	357.02	356.96	356.87	356.77
5	357.12	356.90	356.84	356.76	356.67
6	356.98	356.77	356.71	356.64	356.55

Notes:  
 Elevations shown do not include deflection and are intended only for use in fabrication of steel beams.  
 Elevations at splice locations are top of flange (not splice plate).



**SECTION A-A**



**TOP FLANGE PLAN - CLIPPED**  
 (Showing top flange of steel beam at integral abutment)

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 FILE NAME = 030317-2825-15-STA-FR-01.dwg



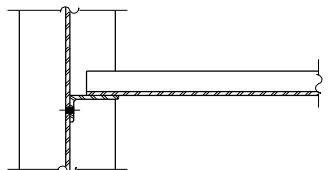
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

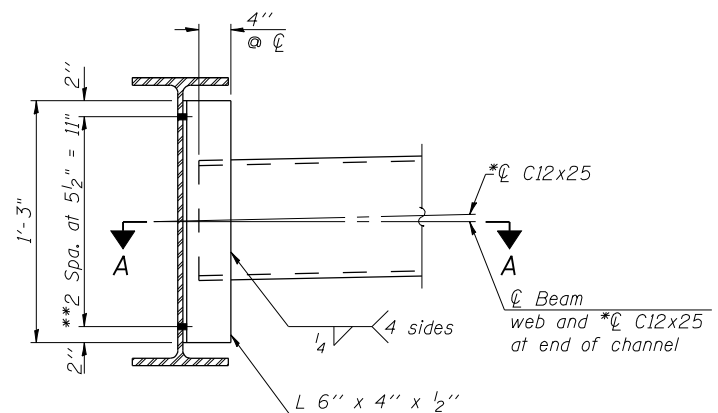
**STEEL FRAMING PLAN**  
**STRUCTURE NO. 035-0017**

SHEET NO. 15 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	38
CONTRACT NO. 78263			ILLINOIS FED. AID PROJECT	



**SECTION A-A**



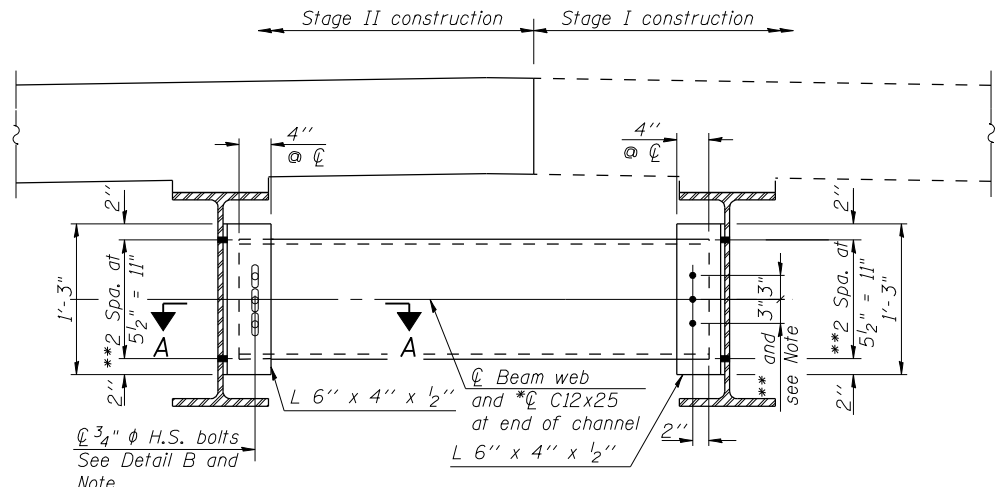
**INTERIOR DIAPHRAGM-D1**  
(50 Required)

Notes:  
Two hardened washers required for each set of oversized holes.  
\*Alternate C12x30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.  
\*\*\*3/4" φ HS bolts, 1 5/16" φ holes

INTERIOR BEAM REACTION TABLE			
		Abut.	Pier
R <sub>DC1</sub>	(k)	10.8	34.8
R <sub>DC2</sub>	(k)	2.3	7.2
R <sub>DW</sub>	(k)	4.0	12.8
R <sub>Σ + IM</sub>	(k)	65.2	81.7
R <sub>Total</sub>	(k)	82.3	136.6

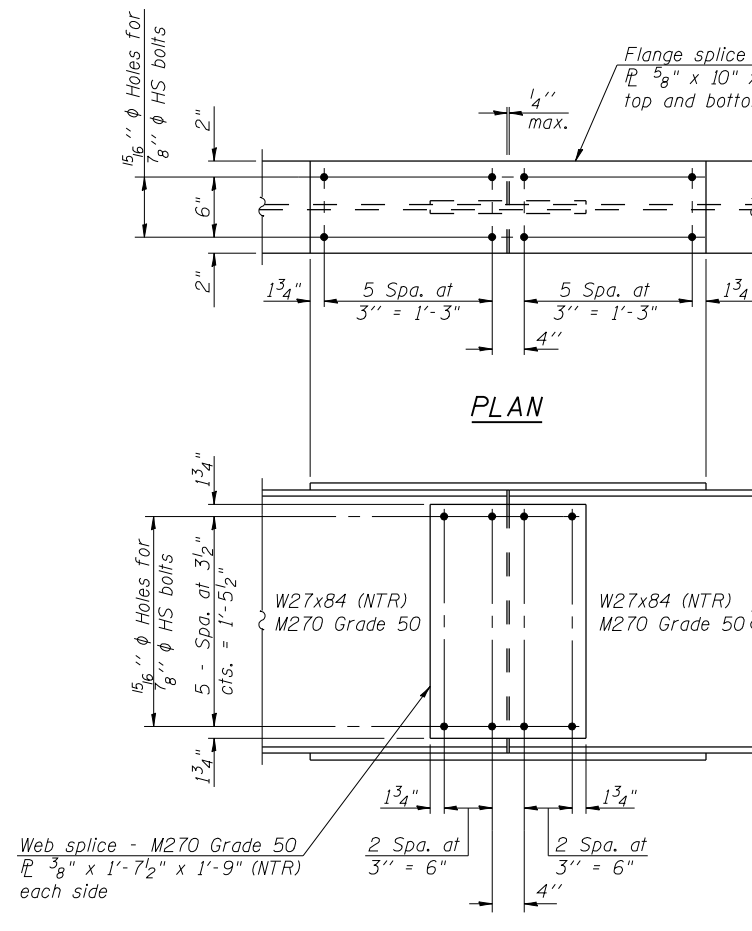
INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier	0.5 Sp. 2
I <sub>s</sub>	(in <sup>4</sup> )	2,850	2,850	2,850
I <sub>c(n)</sub>	(in <sup>4</sup> )	8,859	8,859	8,859
I <sub>c(3n)</sub>	(in <sup>4</sup> )	6,589	6,589	6,589
I <sub>c(cr)</sub>	(in <sup>4</sup> )	-	4,185	-
S <sub>s</sub>	(in <sup>3</sup> )	213	213	213
S <sub>c(n)</sub>	(in <sup>3</sup> )	339	339	339
S <sub>c(3n)</sub>	(in <sup>3</sup> )	306	306	306
S <sub>c(cr)</sub>	(in <sup>3</sup> )	-	257	-
DC1	(k/')	0.715	0.715	0.715
M <sub>DC1</sub>	('k)	82.0	136.0	62.2
DC2	(k/')	0.150	0.150	0.150
M <sub>DC2</sub>	('k)	17.3	28.4	13.0
DW	(k/')	0.267	0.267	0.267
M <sub>DW</sub>	('k)	30.7	50.5	23.1
M <sub>Σ + IM</sub>	('k)	353.5	297.0	334.5
M <sub>u</sub> (Strength I)	('k)	788.8	800.9	714.2
φ <sub>r</sub> M <sub>n</sub>	('k)	1,746.3	1,353.9	1,767.8
f <sub>s</sub> DC1	(ksi)	4.62	7.66	3.50
f <sub>s</sub> DC2	(ksi)	0.68	1.11	0.51
f <sub>s</sub> DW	(ksi)	1.21	1.98	0.91
f <sub>s</sub> (Σ+IM)	(ksi)	12.53	10.52	11.86
f <sub>s</sub> (Service II)	(ksi)	22.79	24.44	20.34
0.95R <sub>n</sub> F <sub>yf</sub>	(ksi)	47.50	47.50	47.50
V <sub>f</sub>	(k)	21.72	20.77	20.77

I<sub>s</sub>, S<sub>s</sub>: Non-composite moment of inertia and section modulus of the steel section used for computing f<sub>s</sub> (Service II) due to non-composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).  
I<sub>c(n)</sub>, S<sub>c(n)</sub>: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f<sub>s</sub> (Service II) in uncracked sections due to short-term composite live loads (in.<sup>4</sup> and in.<sup>3</sup>).  
I<sub>c(3n)</sub>, S<sub>c(3n)</sub>: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f<sub>s</sub> (Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).  
I<sub>c(cr)</sub>, S<sub>c(cr)</sub>: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f<sub>s</sub> (Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).  
DC1: Un-factored non-composite dead load (kips/ft.).  
M<sub>DC1</sub>: Un-factored moment due to non-composite dead load (kip-ft.).  
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).  
M<sub>DC2</sub>: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).  
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).  
M<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).  
M<sub>Σ + IM</sub>: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).  
M<sub>u</sub> (Strength I): Factored design moment (kip-ft.).  
1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75 M<sub>Σ + IM</sub>  
φ<sub>r</sub>M<sub>n</sub>: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).  
f<sub>s</sub> DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).  
M<sub>DC1</sub> / S<sub>nc</sub>  
f<sub>s</sub> DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).  
M<sub>DC2</sub> / S<sub>c(3n)</sub> or M<sub>DC2</sub> / S<sub>c(cr)</sub> as applicable.  
f<sub>s</sub> DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).  
M<sub>DW</sub> / S<sub>c(3n)</sub> or M<sub>DW</sub> / S<sub>c(cr)</sub> as applicable.  
f<sub>s</sub> (Σ+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).  
M<sub>Σ + IM</sub> / S<sub>c(n)</sub> or M<sub>DW</sub> / S<sub>c(cr)</sub> as applicable.  
f<sub>s</sub> (Service II): Sum of stresses as computed below (ksi).  
f<sub>sDC1</sub> + f<sub>sDC2</sub> + f<sub>sDW</sub> + 1.3 f<sub>s</sub> (Σ + IM)  
0.95R<sub>n</sub>F<sub>yf</sub>: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).  
V<sub>f</sub>: Maximum factored shear range in span computed according to Article 6.10.10.

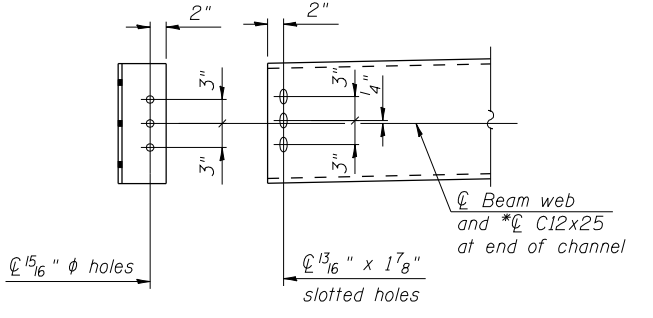


**INTERIOR DIAPHRAGM - D2**  
(5 Required)

Note:  
Bolts in \*C12x25 shall be finger tightened prior to stage II deck pour to permit differential displacement of beams. Fully tighten after stage II deck pour is complete.



**SPLICE DETAIL**  
(6 Required)



**DETAIL B**

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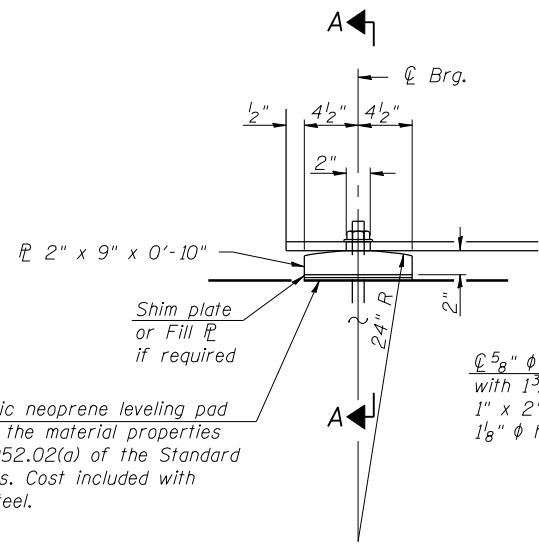
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STEEL FRAMING DETAILS  
STRUCTURE NO. 035-0017**

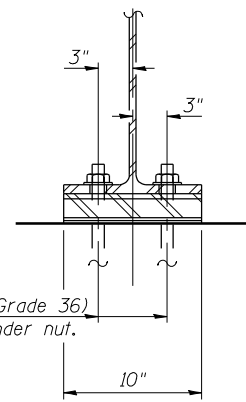
SHEET NO. 16 OF 28 SHEETS

F.A.P. RTE. 782	SECTION 115B-1	COUNTY HARDIN	TOTAL SHEETS 69	SHEET NO. 39
CONTRACT NO. 78263				

ILLINOIS FED. AID PROJECT

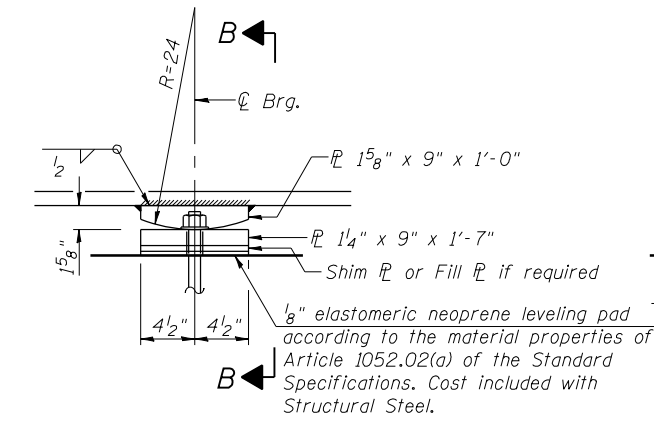


ELEVATION AT ABUTMENT

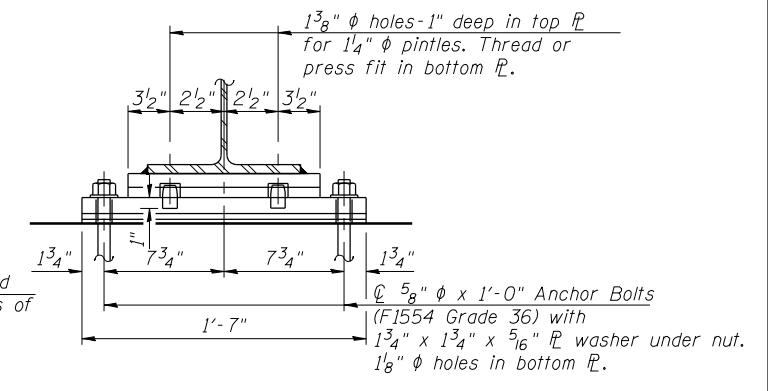


SECTION A-A

FIXED BEARING

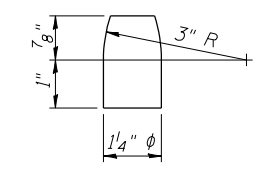


ELEVATION AT PIER



SECTION B-B

FIXED BEARING



PINTLE

BEARING FILL PLATES

Location	Beam	Thickness
North Abutment	Beam 3	5/8"
North Abutment	Beam 4	1/4"
Pier 1	Beam 3	3/4"
Pier 1	Beam 4	1/2"
Pier 2	Beam 3	7/8"
Pier 2	Beam 4	5/8"
South Abutment	Beam 3	1/8"

Notes:  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Fill plates are required at the locations shown in the table on this sheet and shall be placed as shown on bearing details.  
 Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.  
 The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.  
 The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 5/8"	Each	48

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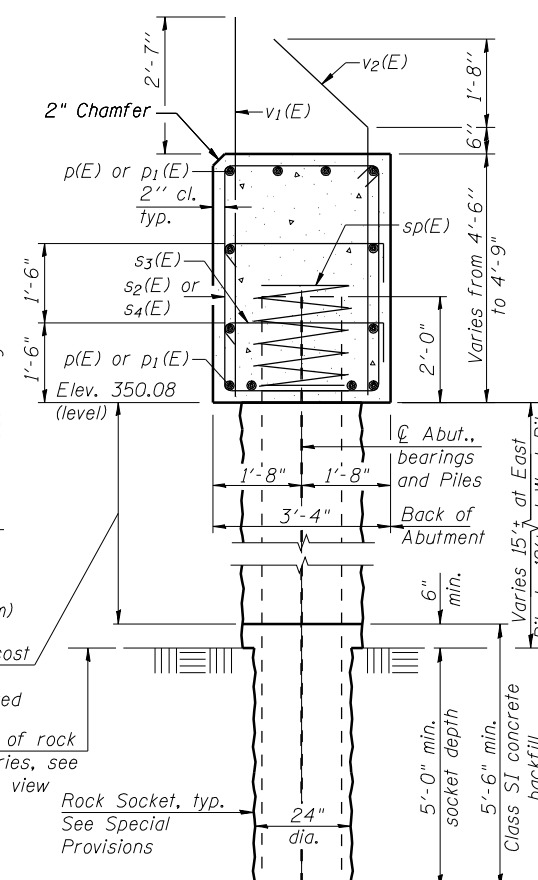
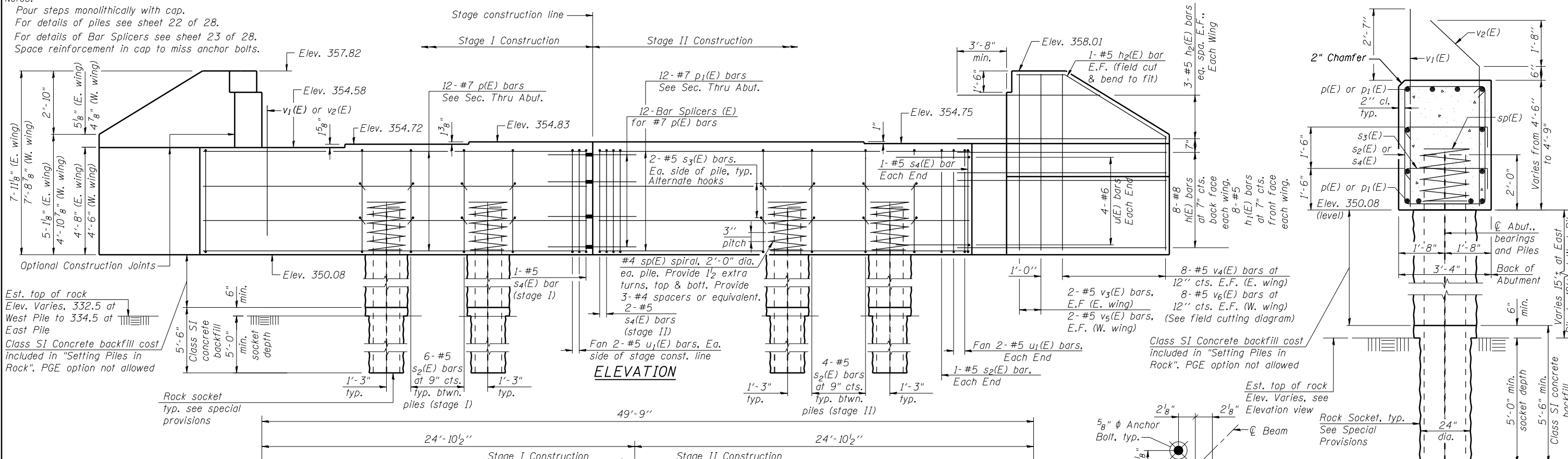
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS  
 STRUCTURE NO. 035-0017**

SHEET NO. 17 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	40
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

Notes:  
 Pour steps monolithically with cap.  
 For details of piles see sheet 22 of 28.  
 For details of Bar Splicers see sheet 23 of 28.  
 Space reinforcement in cap to miss anchor bolts.

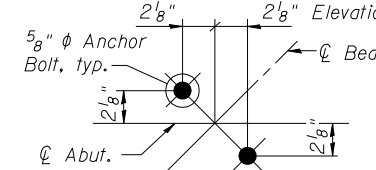


Optional Construction Joints  
 Est. top of rock  
 Elev. Varies, 332.5 at West Pile to 334.5 at East Pile  
 Class SI Concrete backfill cost included in "Setting Piles in Rock". PGE option not allowed

Class SI Concrete backfill cost included in "Setting Piles in Rock". PGE option not allowed

Est. top of rock  
 Elev. Varies, see Elevation view  
 Rock Socket, typ. See Special Provisions

ANCHOR BOLT LAYOUT



SEC. THRU ABUT.  
 Dimensions at right angles to abutment.

BILL OF MATERIAL

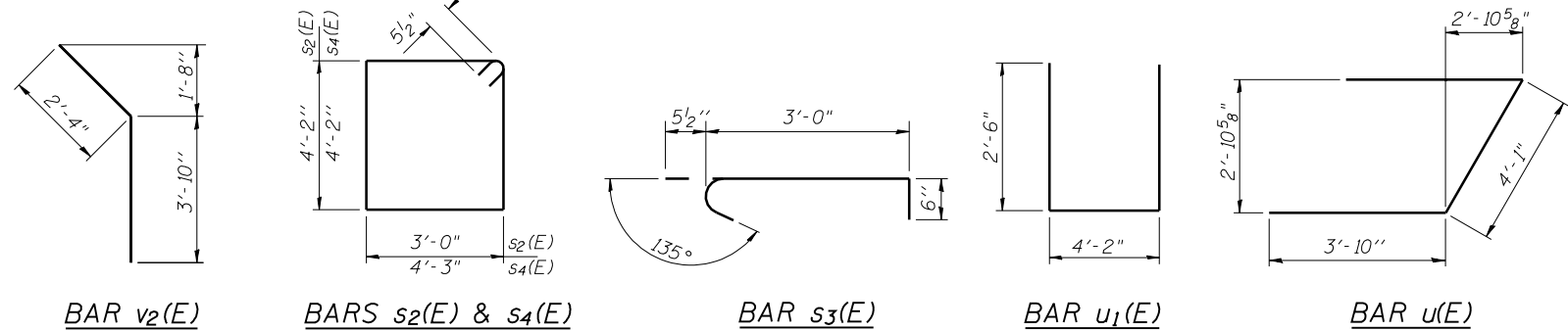
Bar	No.	Size	Length	Shape
h(E)	16	#8	13'-6"	—
h1(E)	16	#5	13'-6"	—
h2(E)	16	#5	13'-8"	—
p(E)	12	#7	23'-8"	—
p1(E)	12	#7	25'-1"	—
s2(E)	36	#5	15'-3"	□
s3(E)	36	#5	4'-0"	□
s4(E)	5	#5	17'-9"	□
* sp(E)	9	#4	2'-0"	WWM
u(E)	8	#6	11'-9"	—
u1(E)	8	#5	9'-2"	—
v1(E)	48	#8	5'-11"	—
v2(E)	48	#8	6'-2"	—
v3(E)	4	#5	7'-7"	—
v4(E)	16	#5	12'-4"	—
v5(E)	4	#5	7'-5"	—
v6(E)	16	#5	12'-0"	—
Concrete Structures			Cu. Yd.	33.3
Reinforcement Bars, Epoxy Coated			Pound	5580
Furnishing Steel Piles HP14x89			Foot	215
Setting Piles in Rock			Each	9

\*Length is height of spiral.

PILE DATA

Type: HP14x89  
 Nominal Required Bearing: 705 kips  
 Factored Resistance Available: 388 kips  
 Est. Length: \*\*  
 No. Production Piles: 9  
 No. Test Piles: 0

\*\*Varies, 22.6'± at East Pile to 24.6'± at West Pile



FIELD CUTTING DIAGRAM  
 Order v4(E) and v6(E) full length. Cut as shown and use remainder of bars in opposite face.

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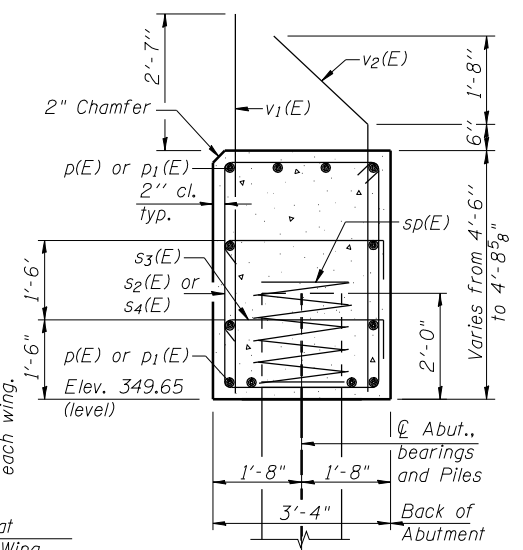
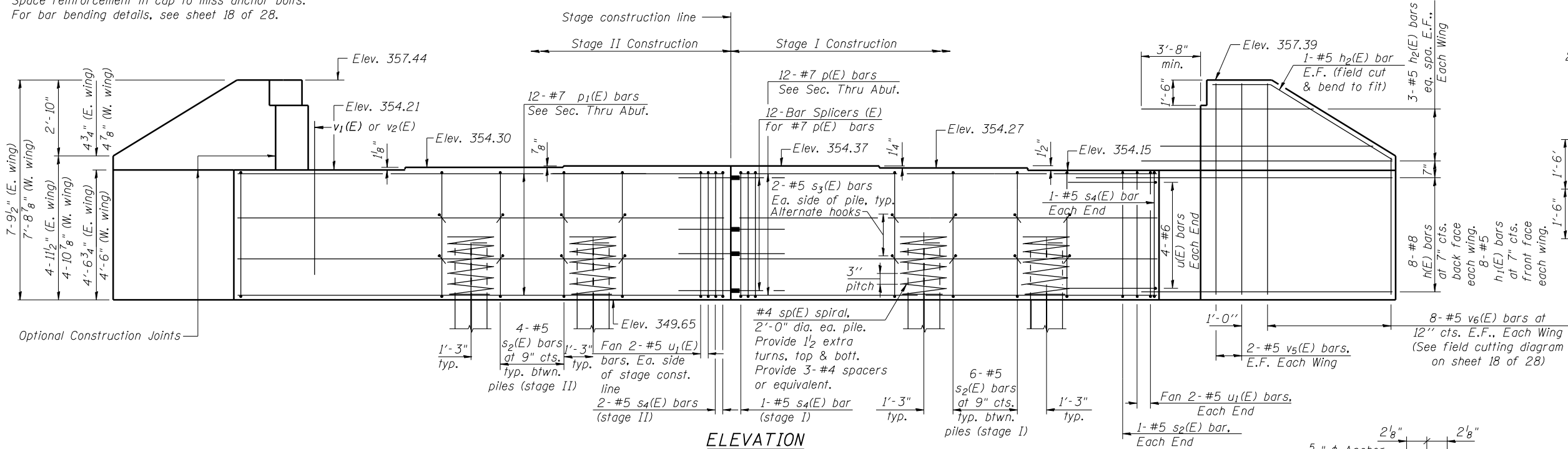
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT  
 STRUCTURE NO. 035-0017

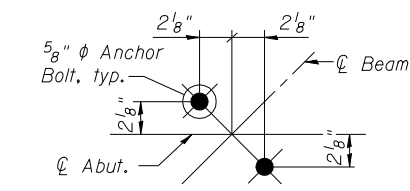
SHEET NO. 18 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	41
CONTRACT NO. 78263			ILLINOIS FED. AID PROJECT	

Notes:  
 Pour steps monolithically with cap.  
 For details of piles see sheet 22 of 28.  
 For details of Bar Splicers see sheet 23 of 28.  
 Space reinforcement in cap to miss anchor bolts.  
 For bar bending details, see sheet 18 of 28.



**SEC. THRU ABUT.**  
 Dimensions at right angles to abutment.

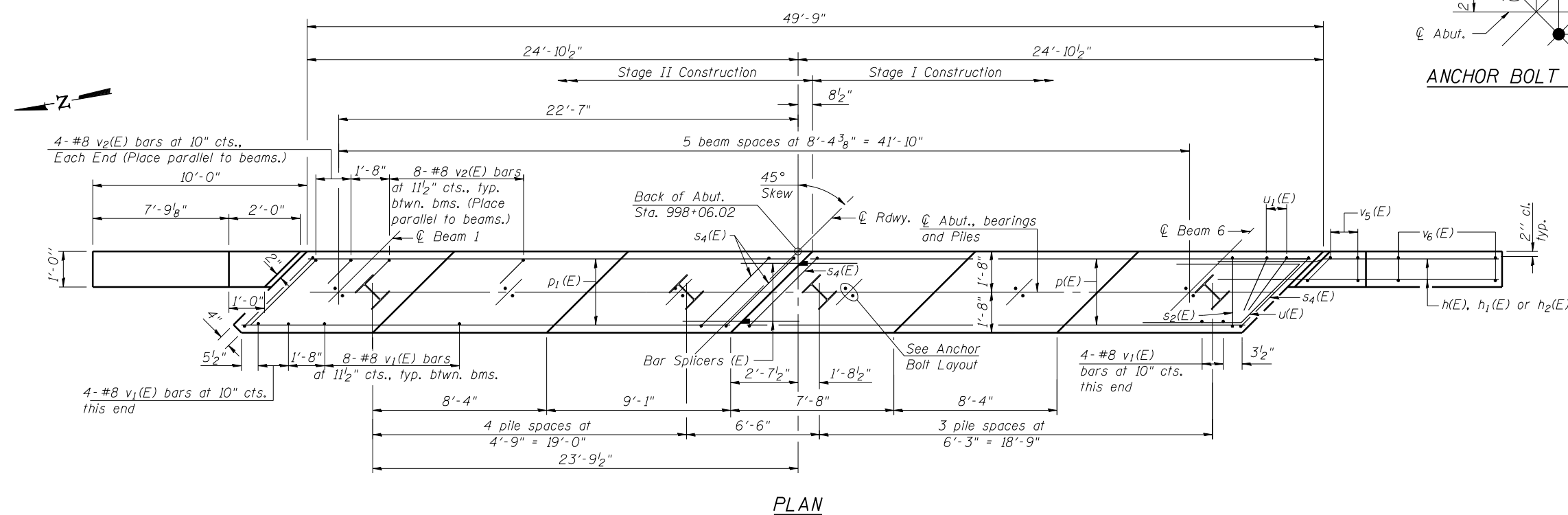


**ANCHOR BOLT LAYOUT**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	16	#8	13'-6"	
h1(E)	16	#5	13'-6"	
h2(E)	16	#5	13'-8"	
p(E)	12	#7	23'-8"	
p1(E)	12	#7	25'-1"	
s2(E)	36	#5	15'-3"	□
s3(E)	36	#5	4'-0"	◁
s4(E)	5	#5	17'-9"	□
* sp(E)	9	#4	2'-0"	WWW
u(E)	8	#6	11'-9"	▱
u1(E)	8	#5	9'-2"	▱
v1(E)	48	#8	5'-11"	
v2(E)	48	#8	6'-2"	
v5(E)	8	#5	7'-5"	
v6(E)	32	#5	12'-0"	
Structure Excavation		Cu. Yd.	186	
Concrete Structures		Cu. Yd.	32.9	
Reinforcement Bars, Epoxy Coated		Pound	5580	
Furnishing Steel Piles HP14x89		Foot	308	
Driving Piles		Foot	308	
Test Pile Steel HP14x89		Each	2	

\*Length is height of spiral.



**PLAN**

**PILE DATA**

Type: HP14x89  
 Nominal Required Bearing: 705 kips  
 Factored Resistance Available: 388 kips  
 Est. Length: 44 feet  
 No. Production Piles: 7  
 No. Test Piles: 2 (1 at each end)

PRINT DRIVER: LEO E. BARAJAN  
 LAYOUT: LEO E. BARAJAN  
 SCALE: AS SHOWN  
 FILE NAME: 20200722ESD-FS-SOUTH.ABUT



USER NAME = jif	DESIGNED - SHL 10/14	REVISED -
ESCA PROJECT NO. 1035.03	CHECKED - RDP 10/14	REVISED -
PLOT SCALE = 0.2' / IN.	DRAWN - HAS 08/13	REVISED -
PLOT DATE = 10/24/2014 3:12:59 PM	CHECKED - SHL 10/14	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SOUTH ABUTMENT  
 STRUCTURE NO. 035-0017**

SHEET NO. 19 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	42
			CONTRACT NO. 78263	
ILLINOIS FED. AID PROJECT				

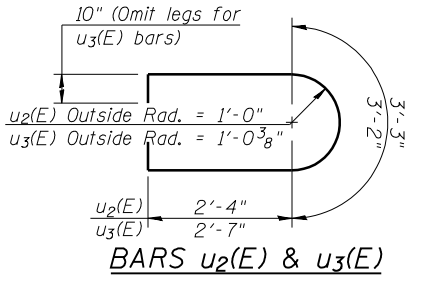
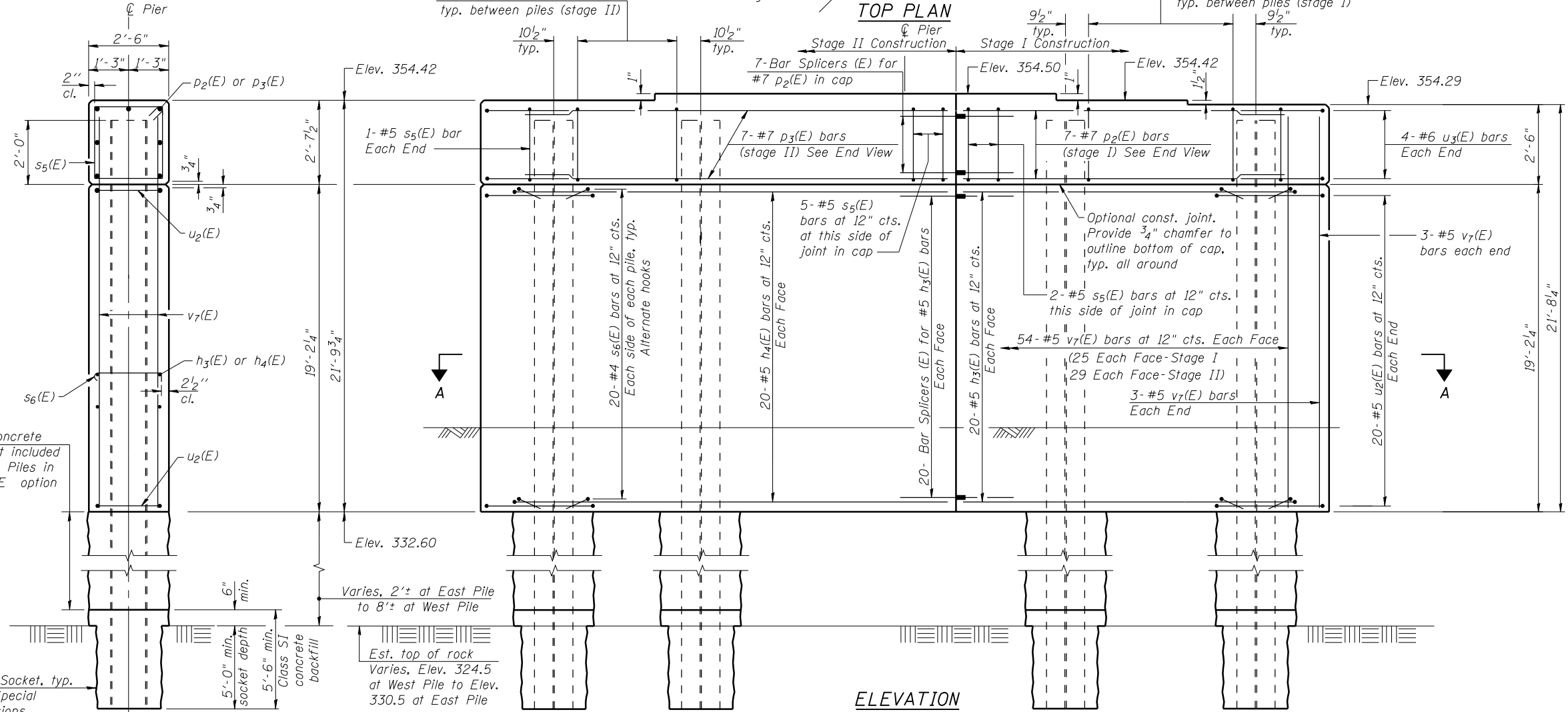
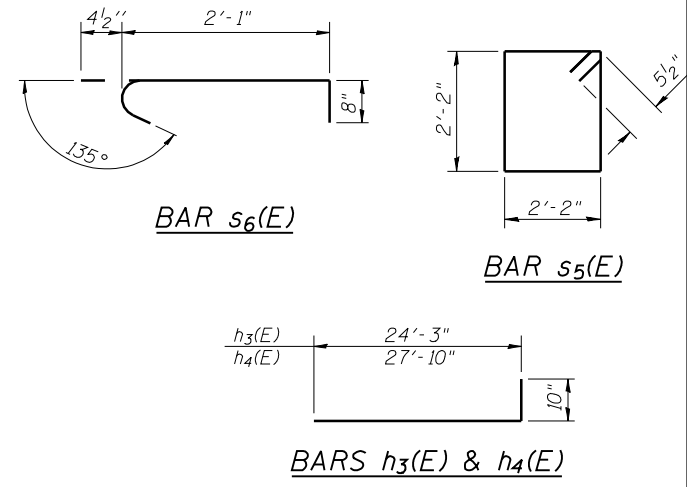
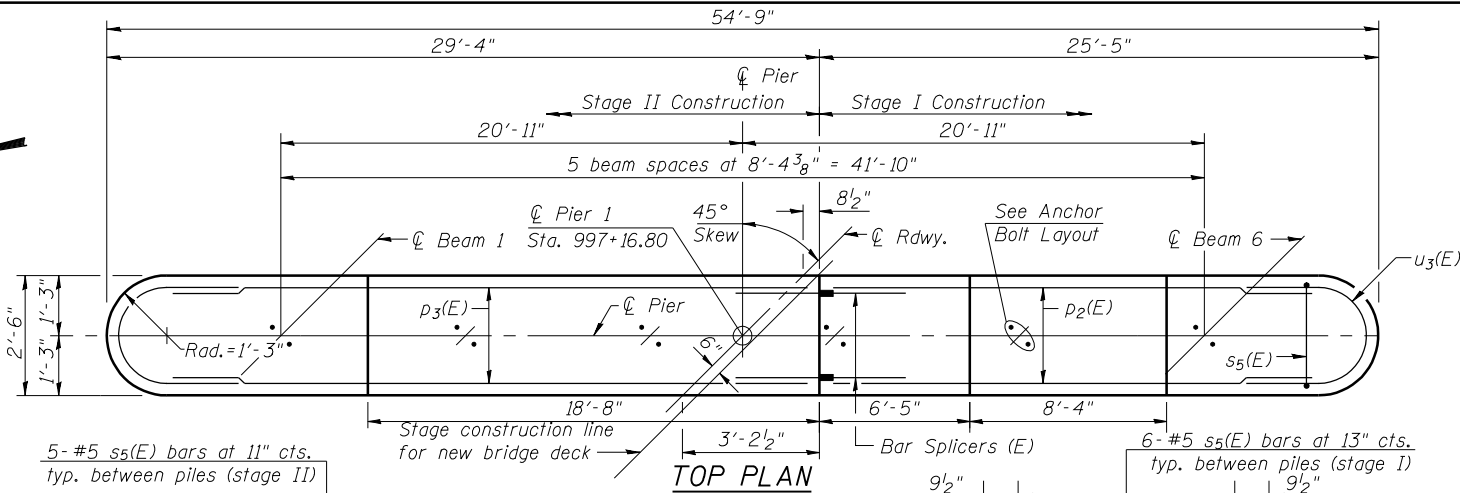


Notes:  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 For details of piles, see sheet 22 of 28.  
 For details of Bar Splicers, see sheet 23 of 28.

**PILE DATA**

Type: HP14x89  
 Nominal Required Bearing: 705 kips  
 Factored Resistance Available: 388 kips  
 Est. Length: \*  
 No. Production Piles: 9  
 No. Test Piles: 0

\*Varies, 28.3'± at East Pile, 34.3'± at West Pile

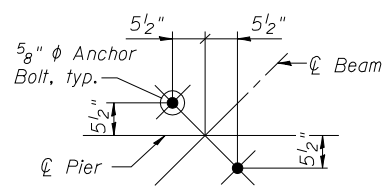


**BILL OF MATERIAL**

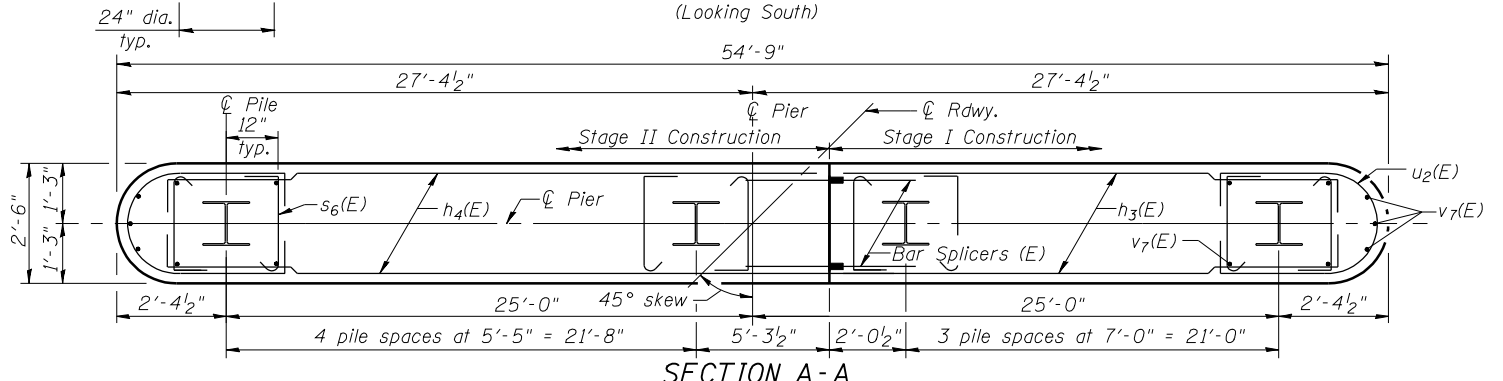
Bar	No.	Size	Length	Shape
h3(E)	40	#5	25'-1"	—
h4(E)	40	#5	28'-8"	—
p2(E)	7	#7	24'-5"	—
p3(E)	7	#7	28'-0"	—
s5(E)	47	#5	9'-7"	□
s6(E)	360	#4	3'-2"	┌
u2(E)	40	#5	9'-6"	U
u3(E)	8	#6	8'-5"	U
v7(E)	114	#5	21'-2"	—
Cofferdam Excavation		Cu. Yd.	70	
Cofferdam (Type I) (Location-1)		Each	1	
Concrete Structures		Cu. Yd.	109.6	
Reinforcement Bars, Epoxy Coated		Pound	7240	
Furnishing Steel Piles HP14x89		Foot	285	
Setting Piles in Rock		Each	9	

Class SI Concrete backfill cost included in "Setting Piles in Rock". PGE option not allowed.

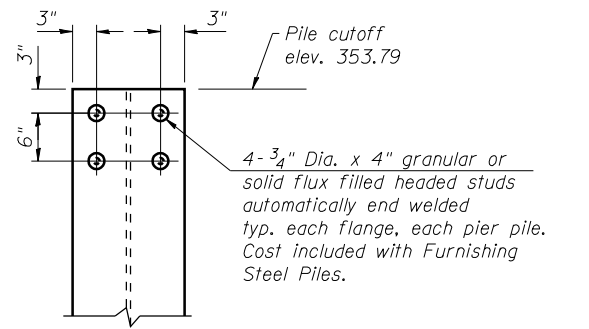
**END VIEW**



**ANCHOR BOLT LAYOUT**



**SECTION A-A**



**TOP OF PILE DETAIL**

PRINT DRIVER: L:\05-ESCAPAL...  
 SCALE: 1/8" = 1'-0"  
 FILE NAME: 035017-2825-28-01.dwg



USER NAME = jif	DESIGNED - SHL	10/14	REVISED -
ESCA PROJECT NO. 1035.03	CHECKED - RDP	10/14	REVISED -
PLOT SCALE = 0/2" = 1' / IN.	DRAWN - KAH	07/13	REVISED -
PLOT DATE = 10/24/2014 3:13:28 PM	CHECKED - SHL	10/14	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PIER 1  
 STRUCTURE NO. 035-0017**

SHEET NO. 20 OF 28 SHEETS

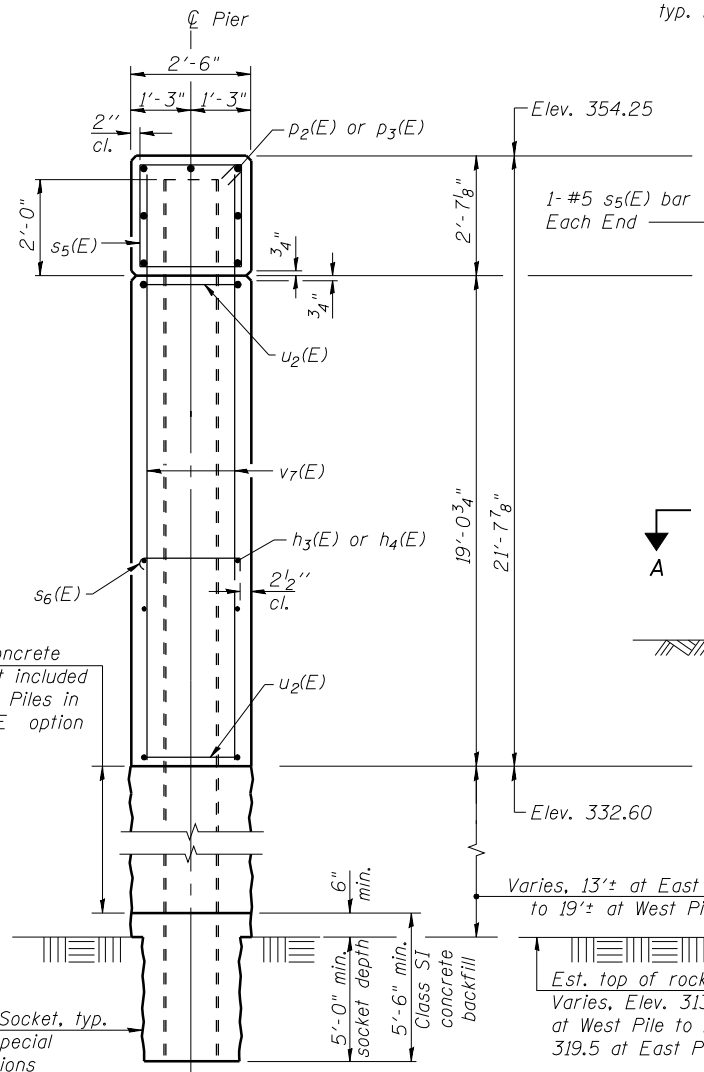
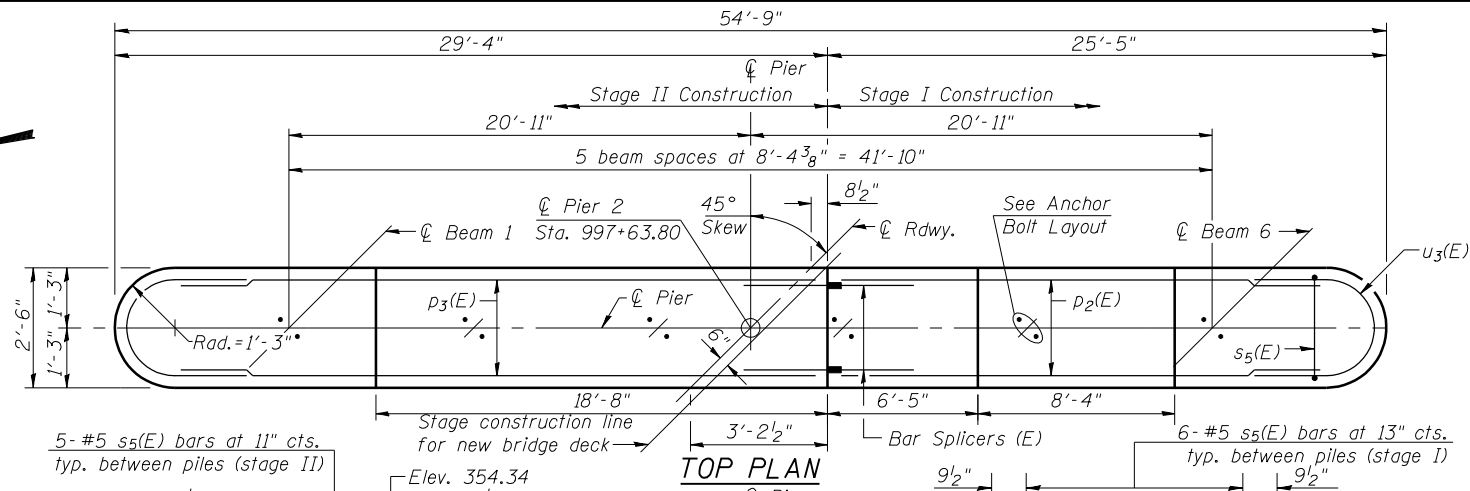
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	43
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

Notes:  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 For details of piles, see sheet 22 of 28.  
 For details of Bar Splicers, see sheet 23 of 28.

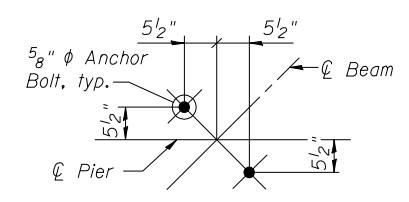
**PILE DATA**

Type: HP14x89  
 Nominal Required Bearing: 705 kips  
 Factored Resistance Available: 388 kips  
 Est. Length: \*  
 No. Production Piles: 9  
 No. Test Piles: 0

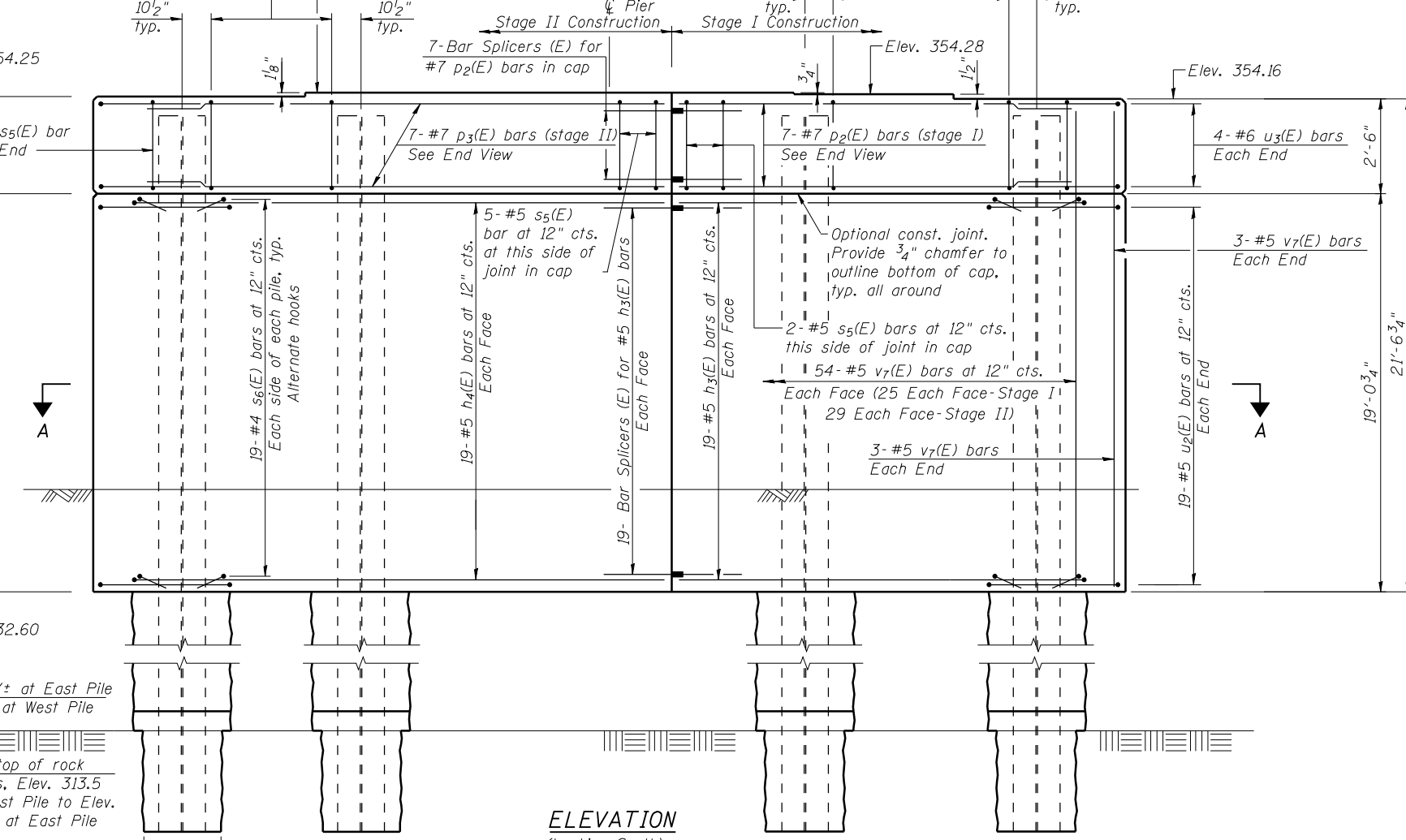
\*Varies, 39.2'± at East Pile, 45.2'± at West Pile



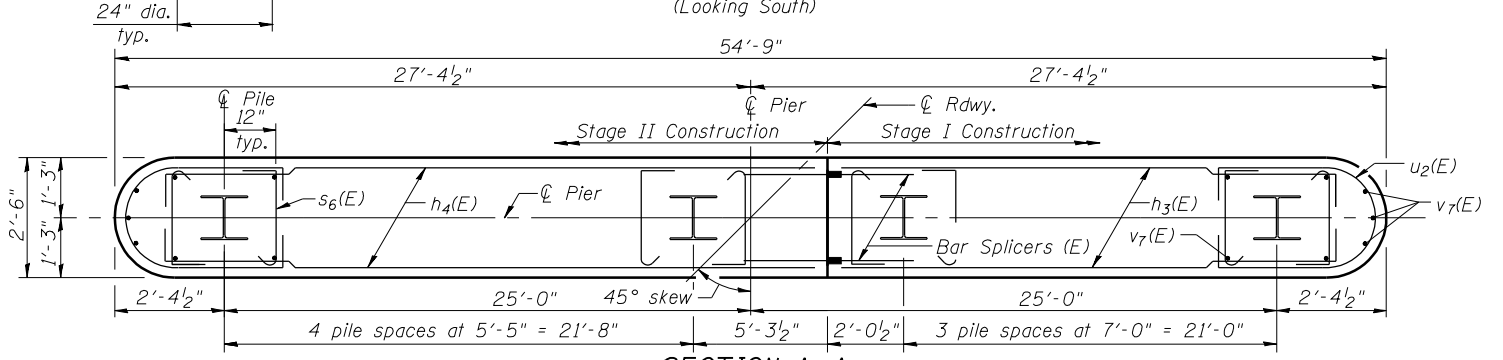
**END VIEW**



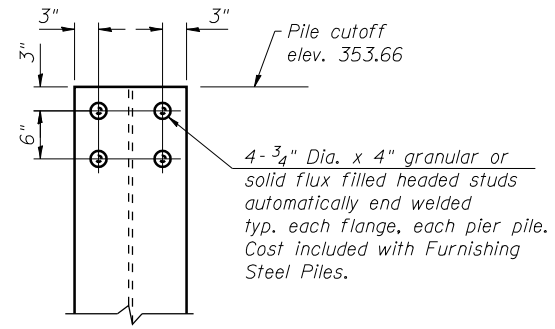
**ANCHOR BOLT LAYOUT**



**ELEVATION**  
(Looking South)



**SECTION A-A**



**TOP OF PILE DETAIL**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h3(E)	38	#5	25'-1"	U
h4(E)	38	#5	28'-8"	U
p2(E)	7	#7	24'-5"	—
p3(E)	7	#7	28'-0"	—
s5(E)	47	#5	9'-7"	□
s6(E)	342	#4	3'-2"	U
u2(E)	38	#5	9'-6"	U
u3(E)	8	#6	8'-5"	U
v7(E)	114	#5	21'-2"	—
Cofferdam Excavation		Cu. Yd.	110	
Cofferdam (Type 1) (Location-2)		Each	1	
Concrete Structures		Cu. Yd.	108.8	
Reinforcement Bars, Epoxy Coated		Pound	7070	
Furnishing steel piles HP14x89		Foot	380	
Setting Piles in Rock		Each	9	

PRINT DRIVER = LEO E. BARNETT  
 SCALE: 1/4" = 1'-0"  
 FILE NAME = 035017-035017-21-01-21.dwg  
 DATE = 10/24/2014 3:13:58 PM



USER NAME = jif	DESIGNED - SHL	10/14	REVISED -
ESCA PROJECT NO. 1035.03	CHECKED - RDP	10/14	REVISED -
PLOT SCALE = 0/2" = 1' / IN.	DRAWN - KAH	07/13	REVISED -
PLOT DATE = 10/24/2014 3:13:58 PM	CHECKED - SHL	10/14	REVISED -

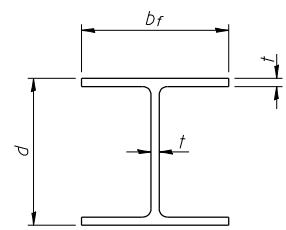
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PIER 2  
 STRUCTURE NO. 035-0017**

SHEET NO. 21 OF 28 SHEETS

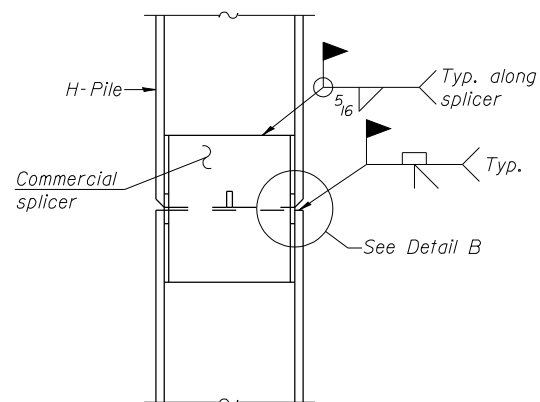
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	44
CONTRACT NO. 78263				

ILLINOIS FED. AID PROJECT

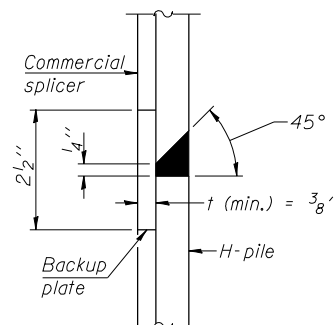


**STEEL PILE TABLE**

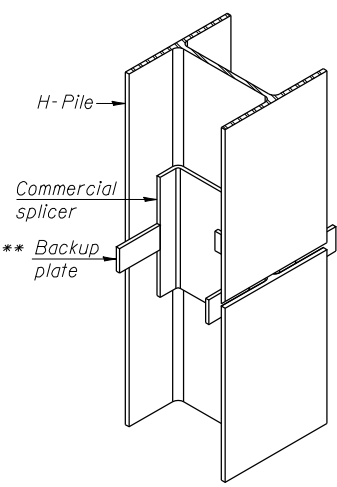
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	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**

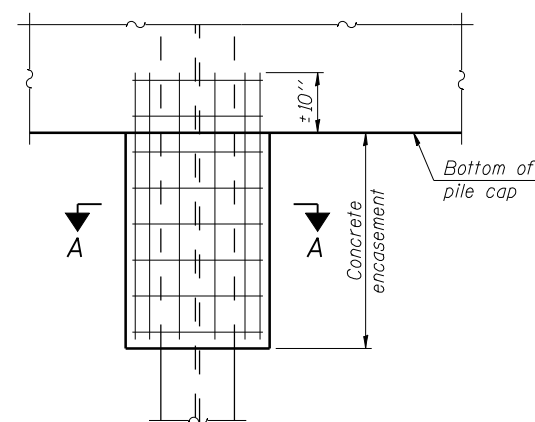


**DETAIL "B"**



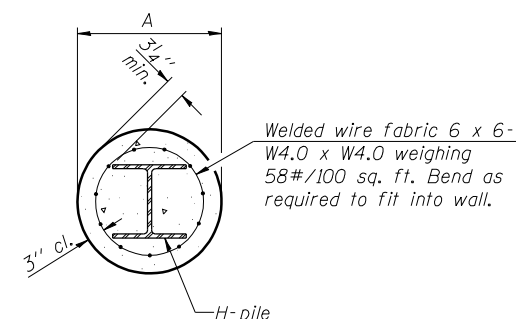
**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE**



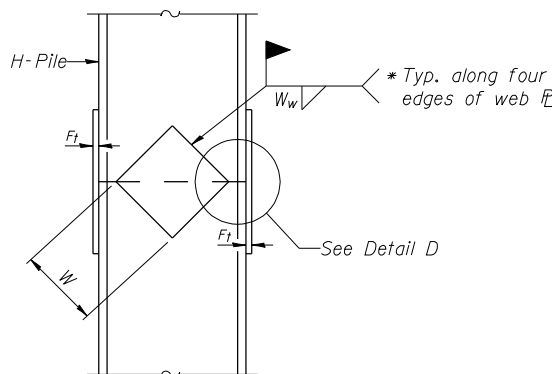
**ELEVATION**

**PILE ENCASEMENT**

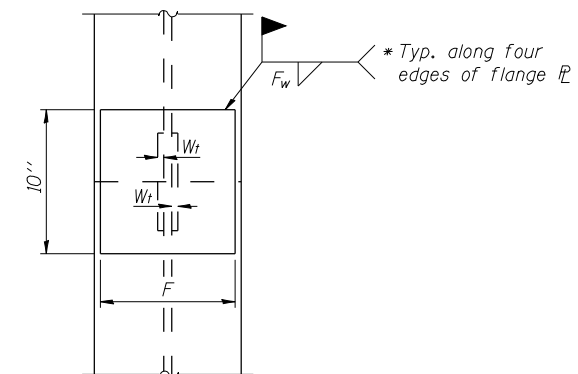


**SECTION A-A**

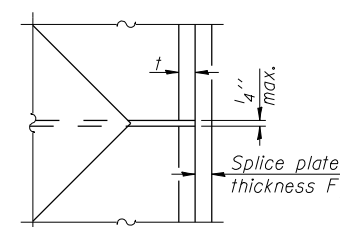
Note:  
Forms for encasement may be omitted when soil conditions permit.



**ELEVATION**



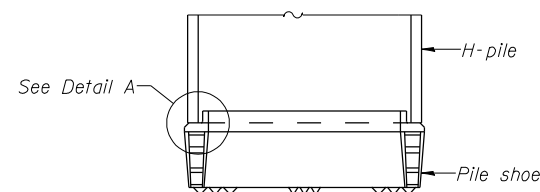
**END VIEW**



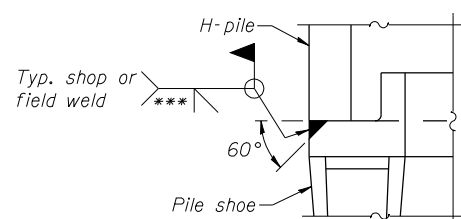
**DETAIL D**

**WELDED PLATE FIELD SPLICE**

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"	1/16"	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"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	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"

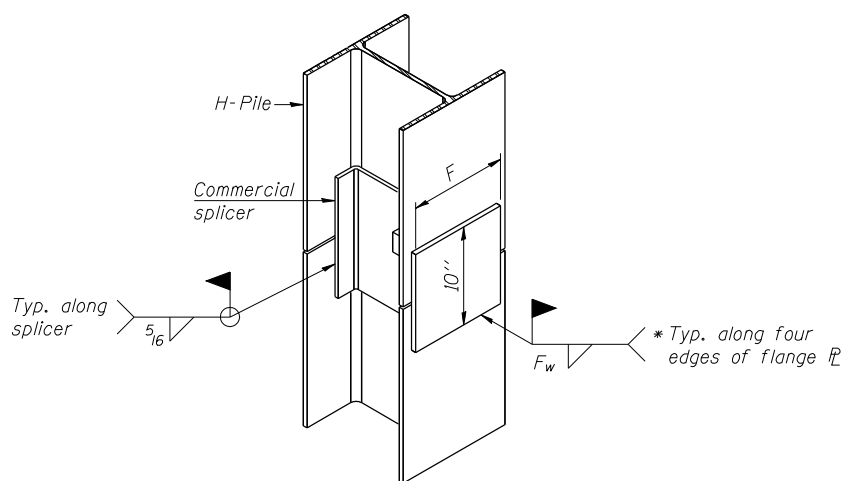


**ELEVATION**



**DETAIL A**

**H-PILE SHOE ATTACHMENT**



**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 (5/16" min.).

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

PRINT DRIVER = L:\D-ESCAP\PLT  
 SCALE NAME = PLOT  
 FILE NAME = 820017-2828-22-WPCL.dwg

F-HP

1-27-12



USER NAME = jif	DESIGNED - SHL	07/13	REVISED -
ESCA PROJECT NO. 1035.03	CHECKED - RDP	09/13	REVISED -
PLOT SCALE = 0/2" = 1" / IN.	DRAWN - KAH	07/13	REVISED -
PLOT DATE = 10/24/2014	CHECKED - SHL	08/13	REVISED -

DESIGNED - SHL	07/13	REVISED -
CHECKED - RDP	09/13	REVISED -
DRAWN - KAH	07/13	REVISED -
CHECKED - SHL	08/13	REVISED -

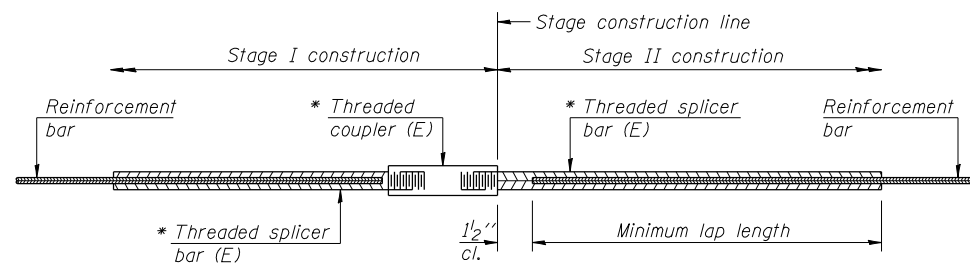
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS  
STRUCTURE NO. 035-0017**

SHEET NO. 22 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	45
CONTRACT NO. 78263				

ILLINOIS FED. AID PROJECT



**STANDARD BAR SPLICER ASSEMBLY**

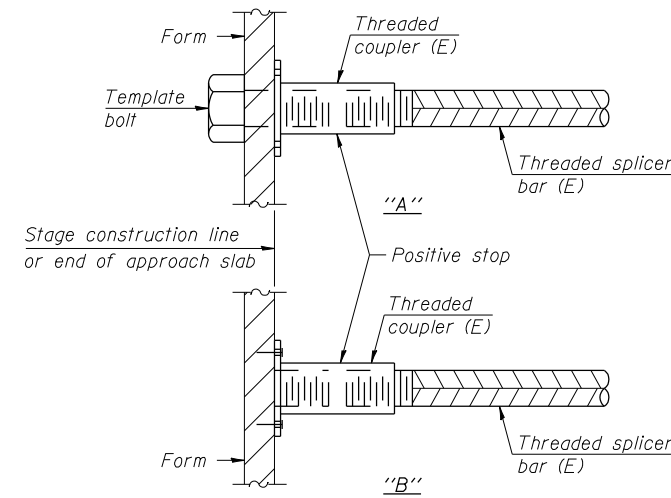
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

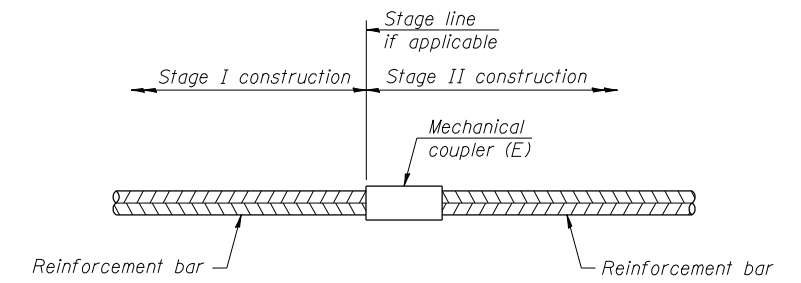
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Approach footing	#5	80	3
Approach slabs	#5	92	3
Approach slabs	#4	50	4
Deck	#5	370	3
End diaphragm	#6	10	3
Pier caps	#7	14	4
Pier stems	#5	78	3
Abutment caps	#7	24	4



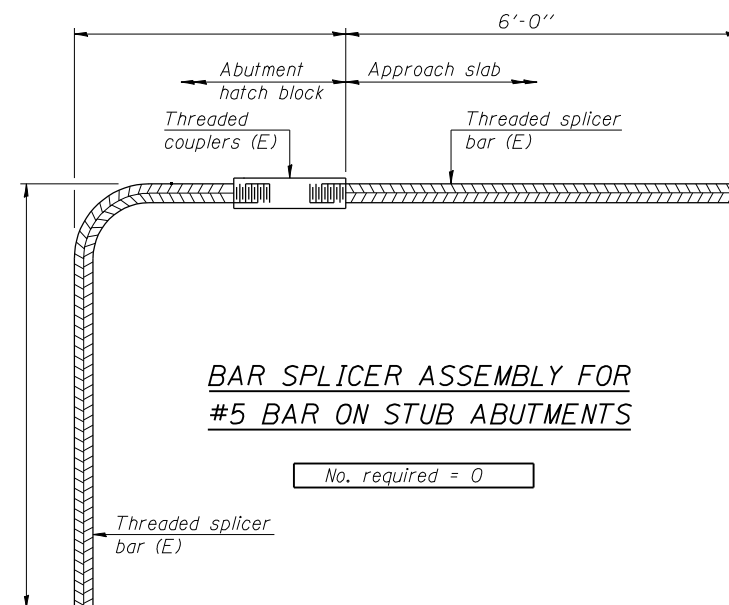
**INSTALLATION AND SETTING METHODS**

"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 = 0

**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

PRINT DRIVER = L:\D-E\B\B\A\H  
 ESCA PROJECT NO. 1035.03  
 PLOT SCALE = 0.2" = 1' / IN.  
 PLOT DATE = 10/24/2014 3:15:02 PM



USER NAME = JIF	DESIGNED - SHL 07/13	REVISED -
ESCA PROJECT NO. 1035.03	CHECKED - RDP 09/13	REVISED -
PLOT SCALE = 0.2" = 1' / IN.	DRAWN - KAH 07/13	REVISED -
PLOT DATE = 10/24/2014 3:15:02 PM	CHECKED - SHL 08/13	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 035-0017**

SHEET NO. 23 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	46
CONTRACT NO. 78263				

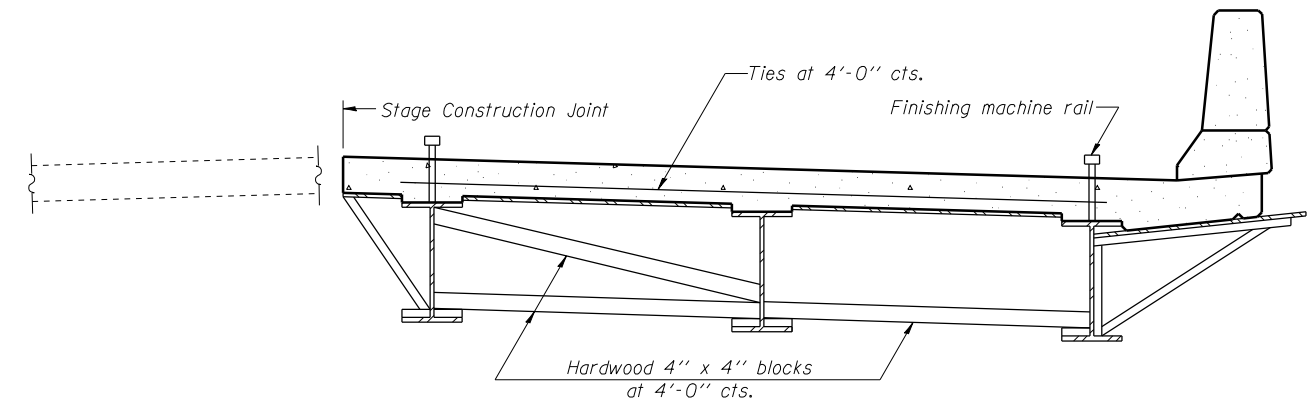
ILLINOIS FED. AID PROJECT

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

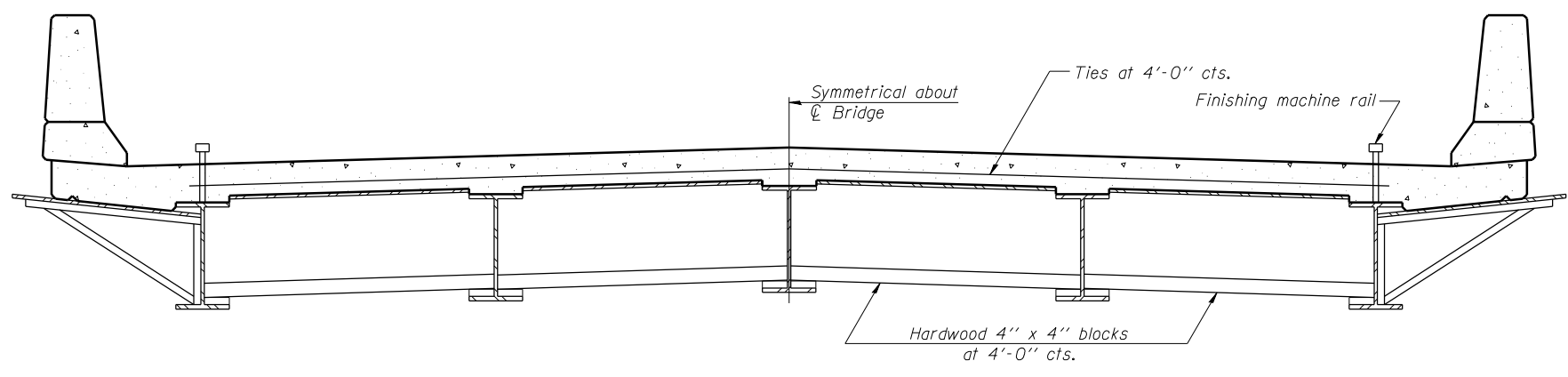
The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



**FORM BRACES FOR  
STAGE CONSTRUCTION**



**FORM BRACES FOR  
STANDARD CONSTRUCTION**

PRINT DRIVER = L:\02-ESCA\014  
 USER NAME = JIF  
 PLOT DATE = 10/24/2014 3:18:21 PM  
 PLOT SCALE = 0.25" = 1'-0" IN.  
 FILE NAME = 820017-78263-24-CantFrm-08-13.dwg

SB-1

7-1-10



USER NAME = JIF	DESIGNED - SHL	07/13	REVISED -
ESCA PROJECT NO. 1035.03	CHECKED - RDP	09/13	REVISED -
PLOT SCALE = 0.25" = 1'-0" IN.	DRAWN - KAH	07/13	REVISED -
PLOT DATE = 10/24/2014 3:18:21 PM	CHECKED - SHL	08/13	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES WITH  
W27 BEAMS AND SMALLER  
STRUCTURE NO. 035-0017**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	47
CONTRACT NO. 78263			ILLINOIS FED. AID PROJECT	

SHEET NO. 24 OF 28 SHEETS







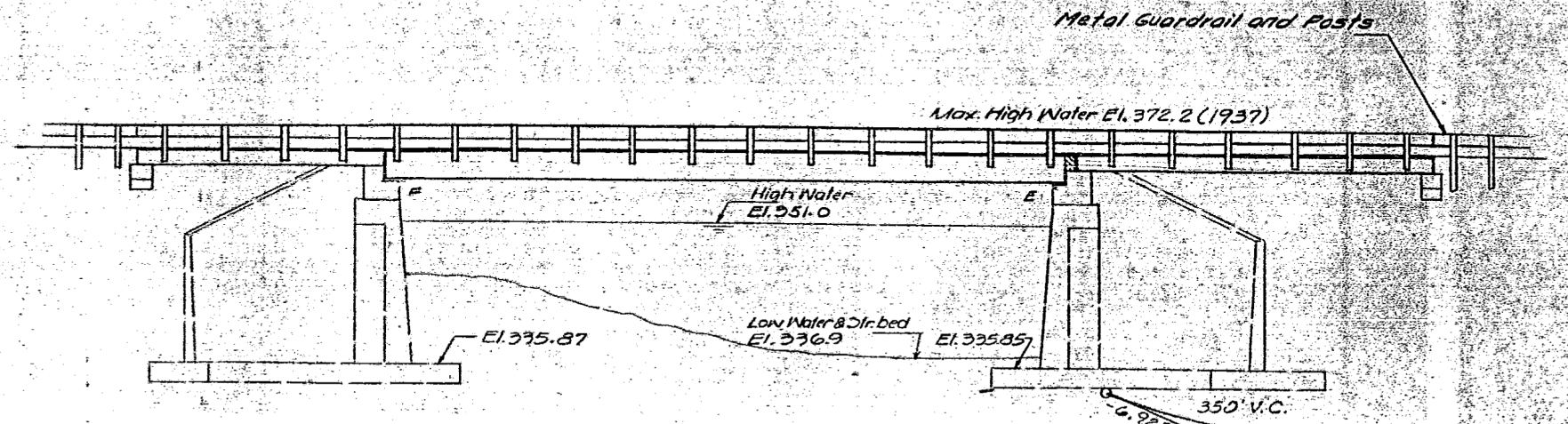




B.M. RR Spike in RR 34' L. Sta. 991+54 L. 380.15  
 Exst. Structure Built in 1933 as S.D.I. Rt. 140 Sec. 115A  
 Sta. 996+97, Superstr. Pony Truss, Closed RC Abut.  
 The Contractor shall remove Superstr. No Salvage  
 Traffic detour to be determined by the District  
 Eq. Sta. 996+31.4 Bk. Sta. 996+36.7 Ahead.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
782	115A	HARDIN	22	14
SHEETS				



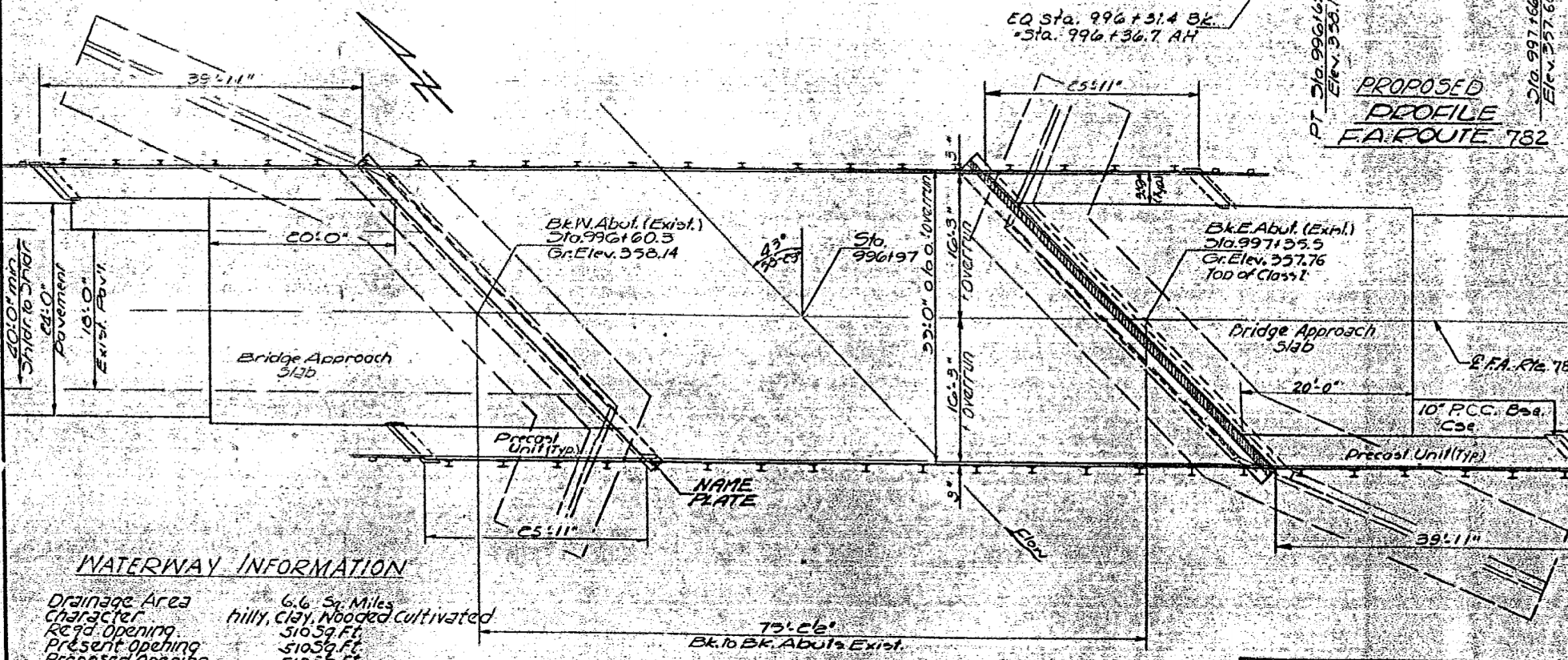
GENERAL NOTES

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. Shoulder transition to wingwall shall be shaped with broken concrete, cast incidental. Hooked bolts shall extend a minimum of 12" into new concrete except as otherwise shown.

The top surface of the beams shall be finished in accordance with Article 505.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners.

ELEVATION



TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Concrete Removal	Cu.Yds		24.6	24.6
Expansion Bolts (3/4" x 12")	Eq.		39	39
Class X Concrete	Cu.Yds	1.1	30.2	31.3
Precast Concrete Bridge Slab	Sq.Ft.	435		435
Precast Prest. Conc. Deck Em. 33"	Sq.Ft.	2234		2234
Reinforcement Bars	Lbs.	150	4370	4520
Removal of Existing Superstructure	Eq.	1		1
Steel Railing Type S	Lin.Ft.	274		274
Waterproofing Membrane System	Sq.Yds	281		281
Bit. Concrete Surface Course Cl. I	Tons	32		32
Portland Cement Mortar Fairing Course	Lin.Ft.	690		690
Name Plates	Eq.	1		1
Neoprene Expansion Joint (2")	Lin.Ft.	49		49

WATERWAY INFORMATION

Drainage Area 6.6 Sq. Miles  
 Character hilly, clay, wooded cultivated  
 Reg'd. Opening 510 Sq. Ft.  
 Present Opening 510 Sq. Ft.  
 Proposed Opening 510 Sq. Ft.  
 Design discharge 3670 cfs  
 Created Hd. for Design Flood 1.02'  
 100 Year Discharge 3670 cfs  
 Created Hd. for 100 Year Flood 1.51'

PLAN

DESIGN SPECIFIED

FIELD UNITS  
 f<sub>c</sub> = 1400 psi - 50b  
 f<sub>s</sub> = 20,000 psi - 40b  
 n = 10

PRECAST  
 PREDESIGNED UNIT  
 f<sub>c</sub> = 3000 psi  
 f<sub>s</sub> = 4000 psi  
 f<sub>s</sub> = 270,000 psi - Strands 7/8"  
 f<sub>s</sub> = 188,700 psi - Strands 7/8"

STATION 996+97  
 RESULT IS BY  
 STATE OF ILLINOIS  
 F.A. RT. 782, SEC. 115A-DR-1  
 F.A. PROJ. BR-F-782(4)  
 LOADING HS 20  
 STR. NO. (See Std. 2113)

\* structure number to be supplied by District.

Allow 25' / Sq. Ft. for future H.S.  
 Design Specifications 1969 MASHO  
 (As Applicable)  
 LOADING H50'44



LOCATION SKETCH

GENERAL PLAN & ELEVATION  
 OVER ROCK CREEK  
 F.A. ROUTE 782  
 SECTION 115ADR-1  
 HARDIN COUNTY  
 STATION 996+97

DESIGNED JOHN A MORRIS	EXAMINED
CHECKED Paul S. G.	PASSED
DRAWN Leona Haeren	APPROVED
CHECKED Paul S. G.	

Rev 8-6-71 Rev 3-11-75 Cms #119. Rev 7-19-78 RFR Rev 9-28-78 RFR

FOR INFORMATION ONLY

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
 STRUCTURE NO. 035-0002

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	52
CONTRACT NO. 78263				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



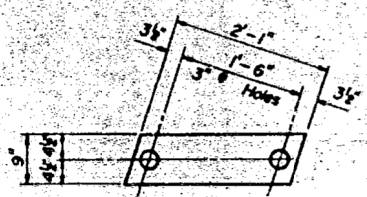
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ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
PLOT SCALE = 0.1667' / IN.	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 3:22:35 PM	DATE - 08/13	REVISED -

SCALE: SHEET NO. 1 OF 10 SHEETS STA. TO STA.

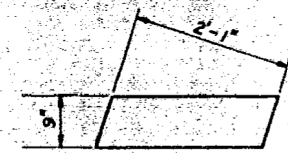


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

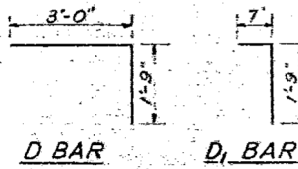
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	22	15
SHEETS				



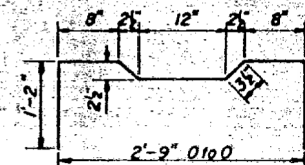
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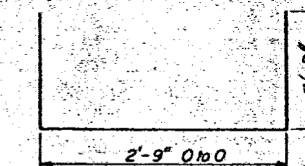
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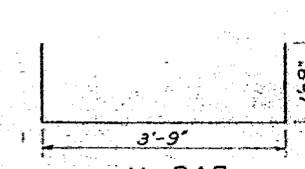
D BAR D1 BAR



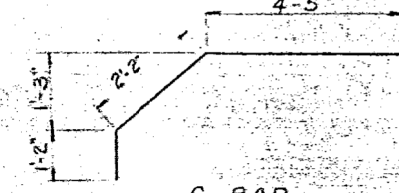
A1 BAR



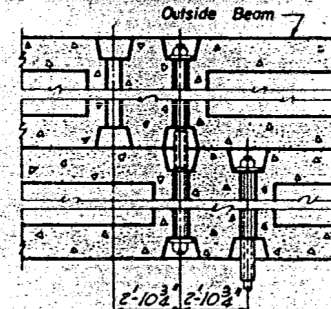
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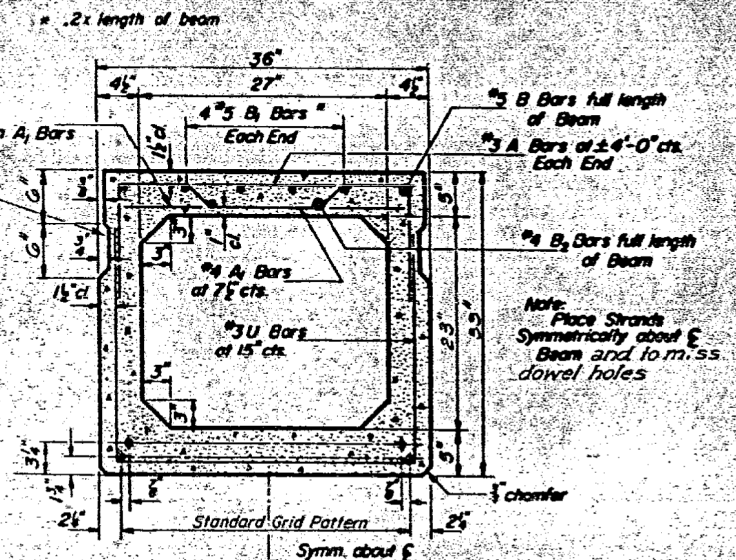
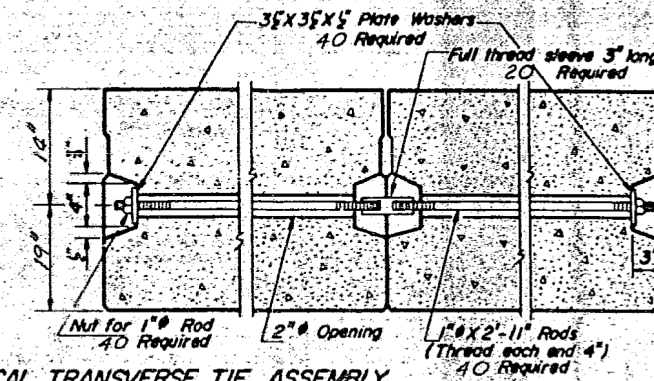
U3 BAR



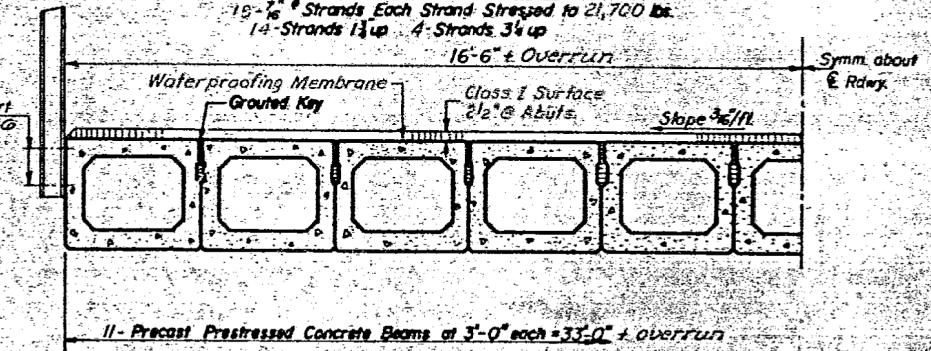
C BAR



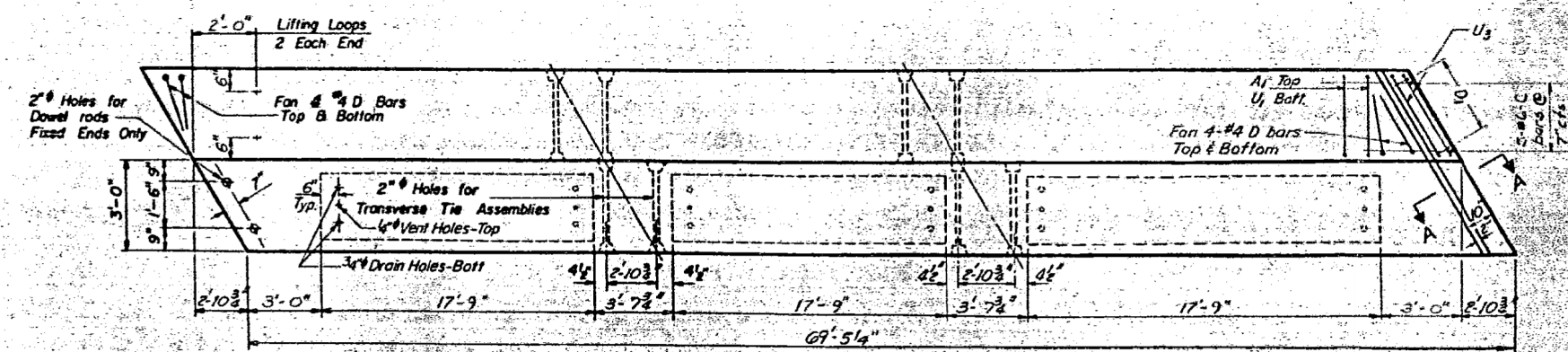
TYPICAL TRANSVERSE TIE ASSEMBLY



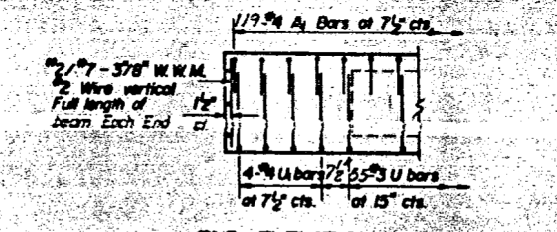
TYPICAL SECTION



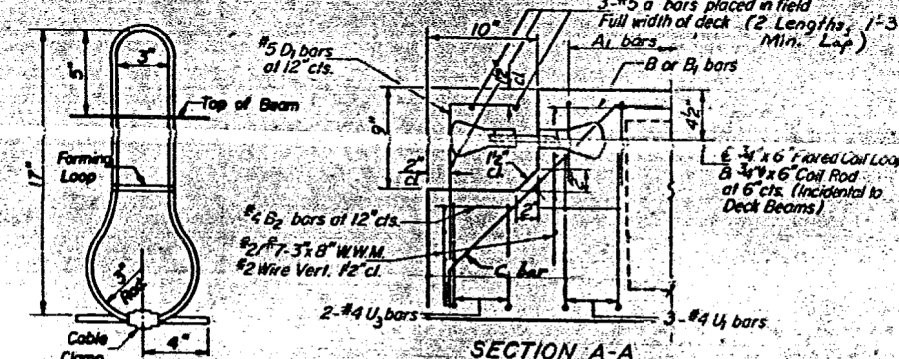
HALF CROSS SECTION



PLAN



END ELEVATION FIXED END



SECTION A-A  
END OF BEAM (EXP END)  
(Dimensions are at right angles)

LIFTING LOOP DETAIL

GENERAL NOTES

Prestressing steel shall be non-galvanized, high strength, stress-relieved 7-wire strand. The nominal diameter shall be 7/8" and the nominal cross-sectional area shall be 0.115 sq. in. Lifting loops shall be 3/4" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 46,000 lbs. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads and pockets that receive transverse tie bar on outside beam shall be filled with grout after transverse tie assembly is in place. Longitudinal shear keys shall be packed with a very dry mix of 2-1 sand and P.C. mortar. After beams have been erected, holes for the dowel anchors shall be drilled into the sub-structure and the anchor dowels shall be grouted in place. Dowel rods shall be AASHTO M227 or M31 Transverse tie rods shall be AASHTO M227 Grade 70-80. After fabrication the transverse tie assemblies (the rods, nuts, washers and sleeves) shall be hot-dipped galvanized in accordance with AASHTO A153E. Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for Precast Prestressed Concrete Deck Beams.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	6	#5	24'-0"	—
Reinforcement Bars				Lbs. 150
Class X Concrete				Cu Yds. 1.1
Precast Prestressed Concrete Deck Beams				Sq Ft 2,294

**SUPERSTRUCTURE**  
EA. RT. 782 SEC. 115A-DR-1  
HARDIN COUNTY  
STATION 996+97

DESIGNED JOHN A. MORRIS  
CHECKED Paul S. W.  
DRAWN J.M.  
CHECKED Paul S. W.  
APPROVED  
DIRECTOR OF HIGHWAYS

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
STRUCTURE NO. 035-0002



USER NAME = JIF	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
PLOT SCALE = 0.1667' / IN.	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 3:23:11 PM	DATE - 08/13	REVISED -

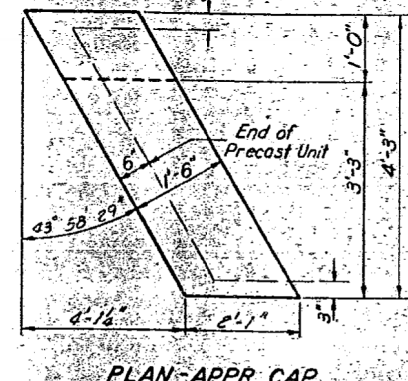
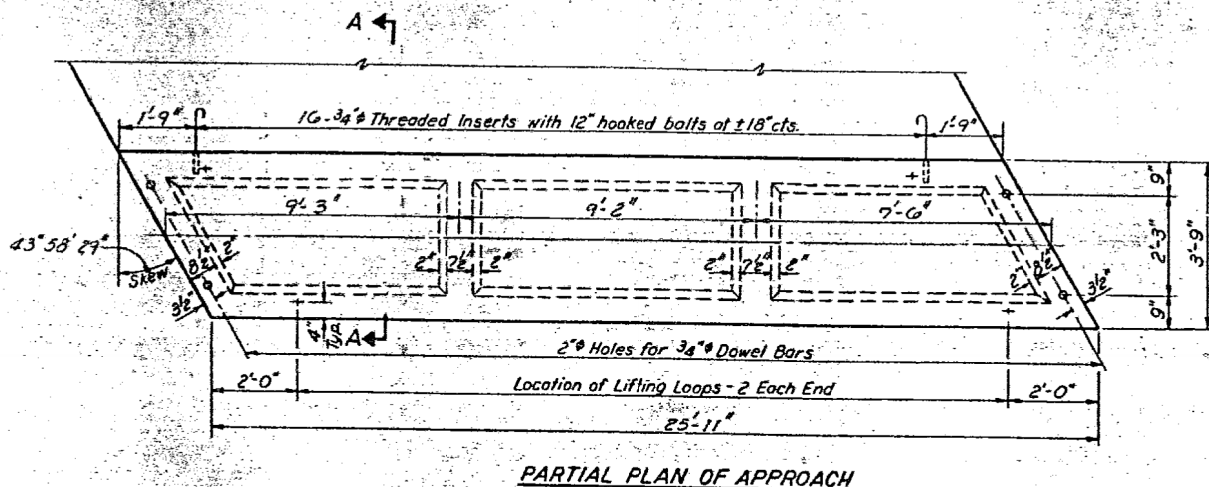
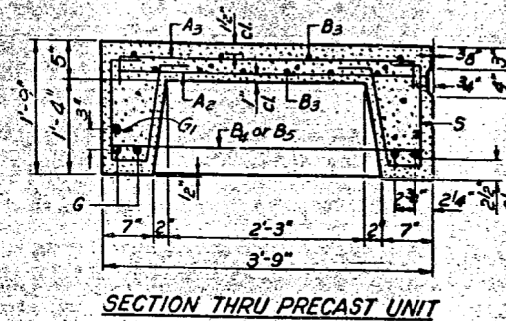
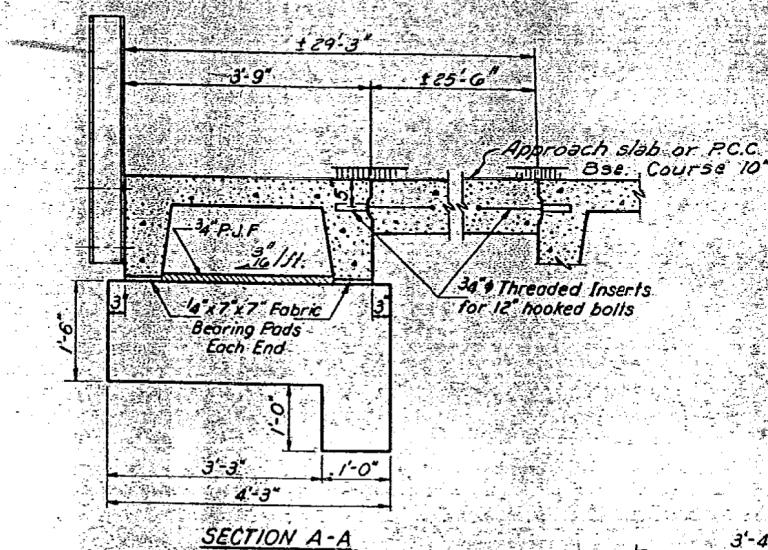
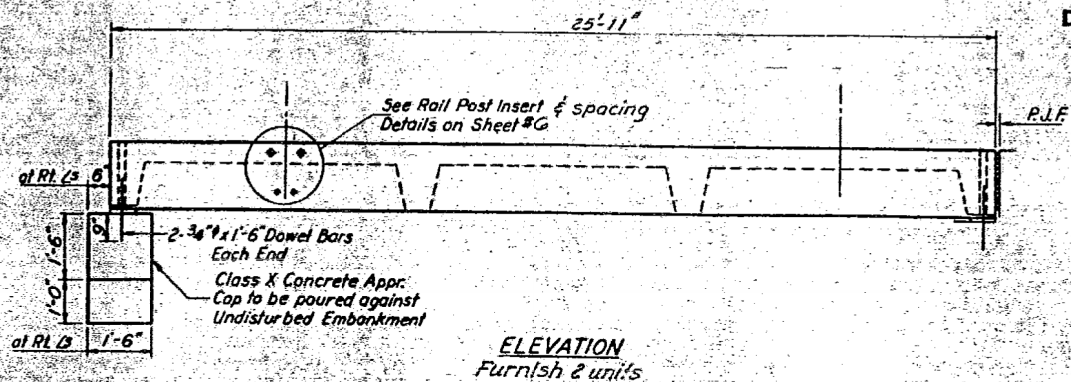
SCALE: SHEET NO. 2 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	53
CONTRACT NO. 78263				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



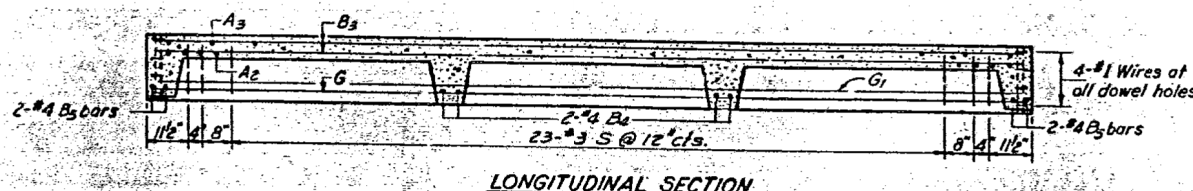
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DATE	ISSUED	BY	NO.	REV.	SHEET NO. 3
7-8-78	115A	HARDIN	22	16	8 SHEETS
P.L.C. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	



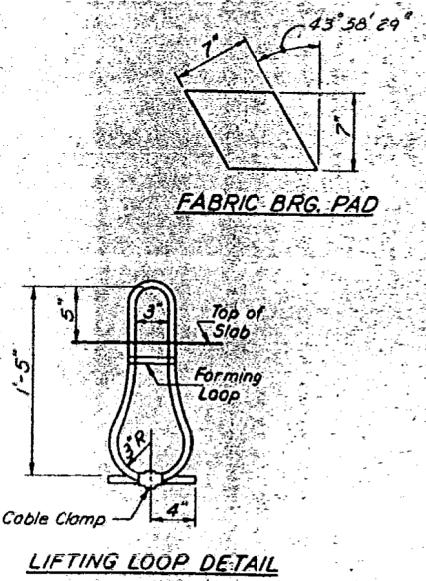
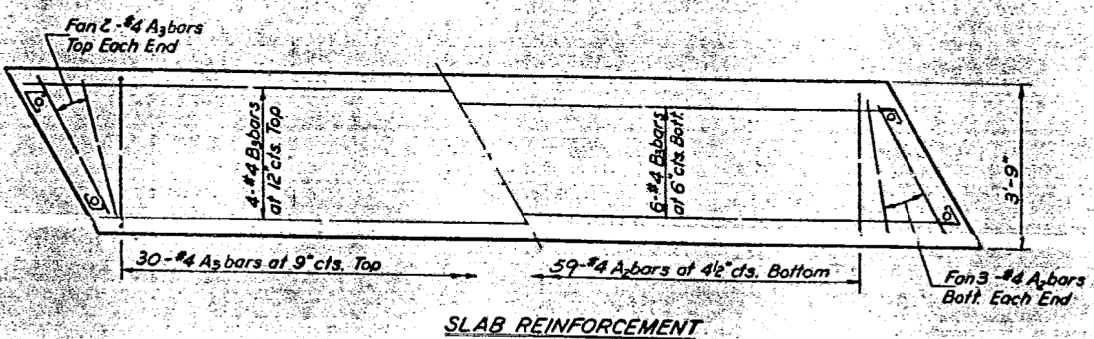
**BAR LIST - ONE UNIT**  
Reinforcement to be cast into slab

Bar No	Size	Length	Shape
A2	#5	3'-3"	—
A3	#4	4'-0"	—
B3	#4	25'-6"	—
B4	#4	3'-6"	—
B5	#4	4'-11"	—
G	#11	25'-6"	—
G1	#8	25'-6"	—
S	#3	3'-10"	U



**NOTES**

Unless otherwise approved by the Engineer, lifting loops shall be 1/2" 6x19 class wire rope with fiber core and shall have a minimum ultimate strength of 18,700 lbs. Loops shall be burned off after slab has been erected. Holes shall be drilled and anchor dowels grouted in place. Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor dowels and 3/4" hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab." The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.



**2 UNITS**  
**BILL OF MATERIAL**

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	195
	Sq. Yds.	
	Sq. Yds.	
	Each	
Class X Concrete	Cu. Yds.	1.1

**STRESSES**  
f'c = 4,500 psi.  
f'c = 1,800 psi.  
f's = 20,000 psi.  
n = 8

**LOADING HS-20**

**APPROACH DETAILS**  
E.A. RT. 781 SEC. 115A-DRT  
HARDIN COUNTY  
STATION 996+97

DESIGNED JOHN A. MORRIS  
P3L  
CHECKED Patrick S. W.  
DRAWN J.M.  
CHECKED Patrick S. W.

EXAMINED [Signature]  
PASSED [Signature]  
APPROVED [Signature]  
DIRECTOR OF HIGHWAYS

AP-2 20' Precast Appr. Unit (Skewed R.F.) (5-15-71)

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
STRUCTURE NO. 035-0002

SCALE: SHEET NO. 3 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	54
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	

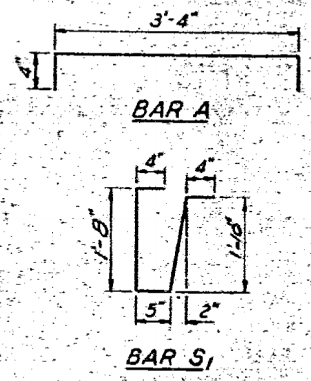
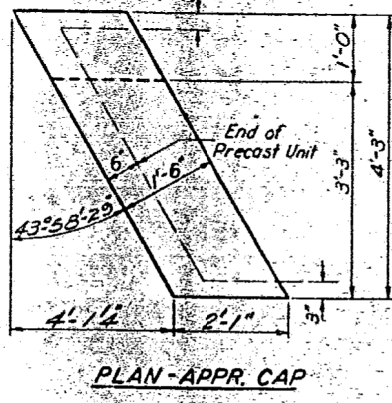
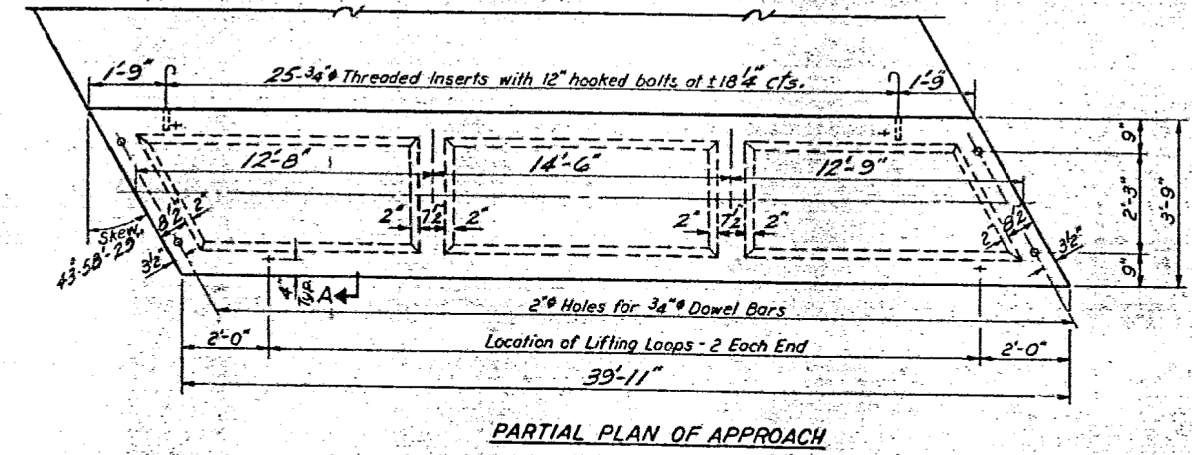
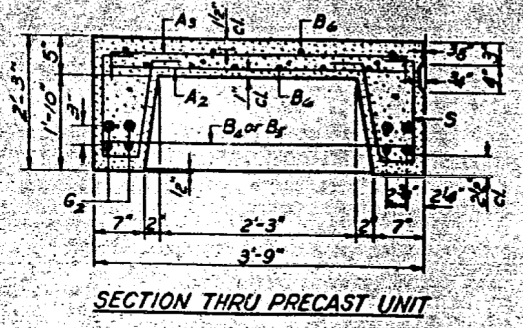
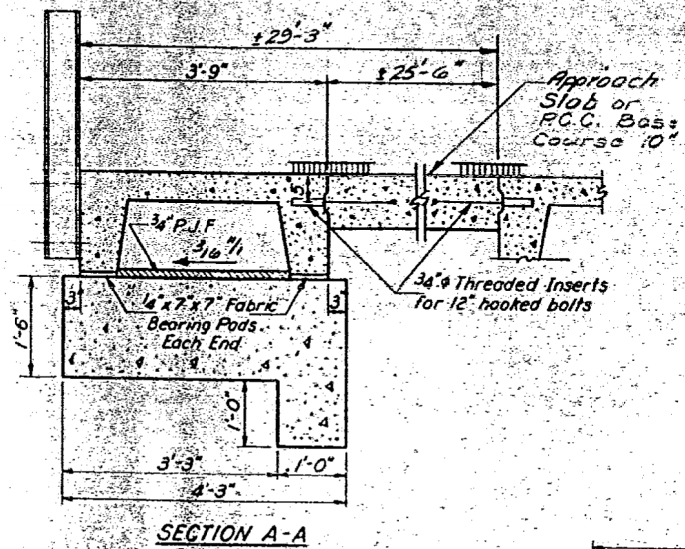
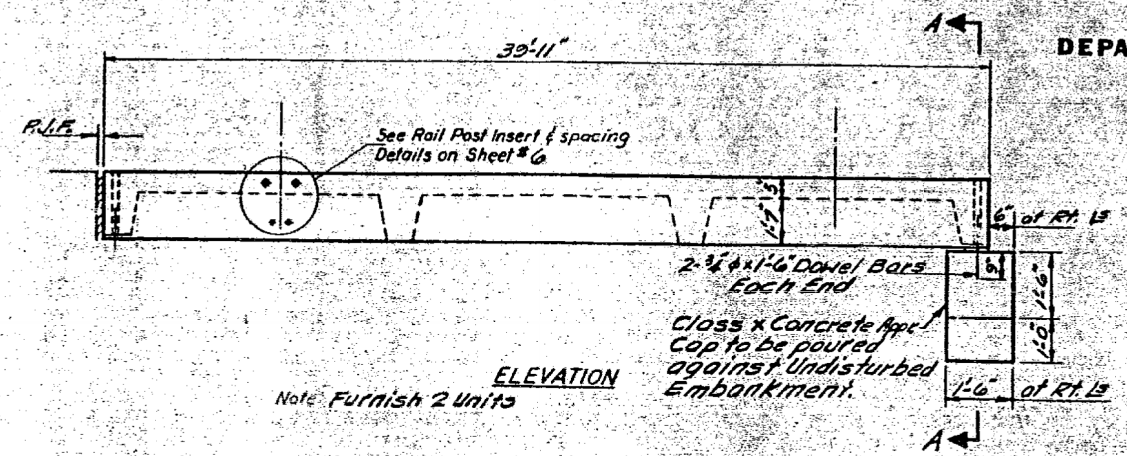


USER NAME = JIF	DESIGNED - JMS	REVISED -
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PLOT SCALE = 0.1667' / IN.	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 3:23:44 PM	DATE - 08/13	REVISED -



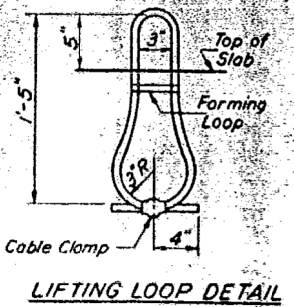
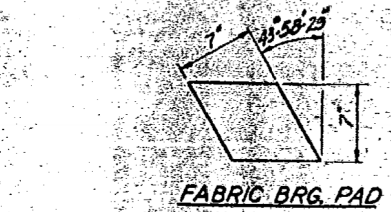
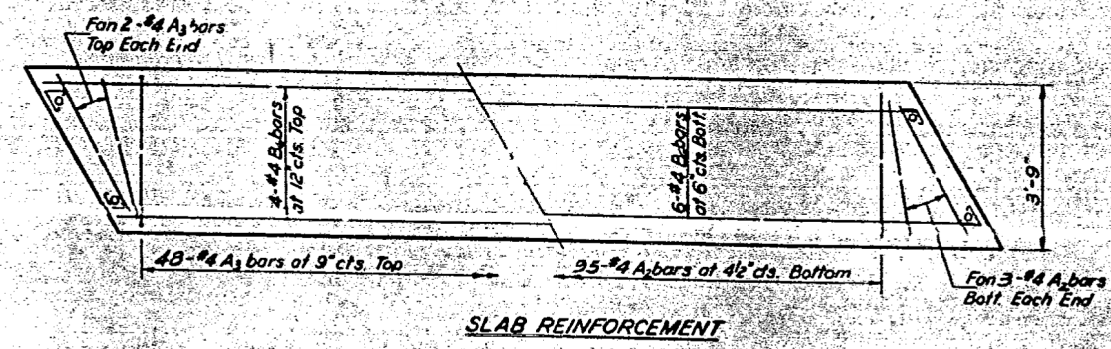
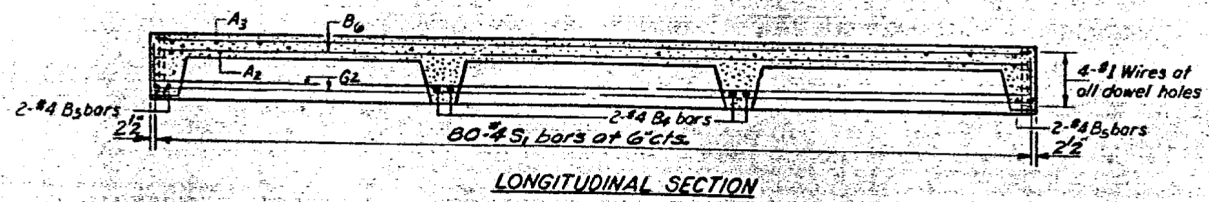
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
782	115B-1	HARDIN	22	17



BAR LIST - ONE UNIT  
Reinforcement to be cast into slab

Bar	No	Size	Length	Shape
A2	101	#4	3'-3"	—
A3	52	#4	4'-0"	—
B4	4	#4	3'-6"	—
B5	4	#4	4'-11"	—
B6	10	#4	39'-7"	—
G2	8	#11	39'-7"	—
S1	160	#4	4'-10"	U



NOTES  
Unless otherwise approved by the Engineer, lifting loops shall be 1/2" 6x19 class wire rope with fiber core and shall have a minimum ultimate strength of 18,700 lbs. Loops shall be burned off after slab has been erected. Holes shall be drilled and anchor dowels grouted in place. Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor dowels and 3/4" hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab." The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam, after Deck Beams are in final position.

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	300
Class X Concrete	Cu. Yds.	1.1

STRESSES  
f'c = 4,500 psi.  
f'c = 1,800 psi.  
f's = 20,000 psi.  
n = 8  
LOADING HS-20

APPROACH DETAILS  
FA RT. 782, SEC. 115A-DRI  
HARDIN COUNTY  
STA. 996+97

DESIGNED JOHN A. MORRIS  
CHECKED Paul S. Lewis  
DRAWN Leona Heeren  
CHECKED Paul S. Lewis

EXAMINED  
PASSED  
APPROVED

DESIGNER  
CHECKER  
DRAWER  
CHECKER

DATE: Dec 10 1971

DIRECTOR OF HIGHWAYS

AP-2 20' Precast Appr. Unit (Skewed R.F.) (15-15-71)

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
STRUCTURE NO. 035-0002

SCALE: SHEET NO. 4 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	55
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 78263	

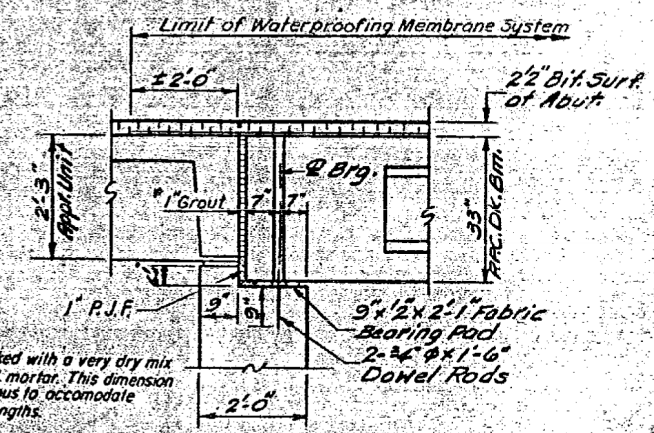


USER NAME = JIF	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
PLOT SCALE = 0.1667' / IN.	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 3:24:24 PM	DATE - 08/13	REVISED -



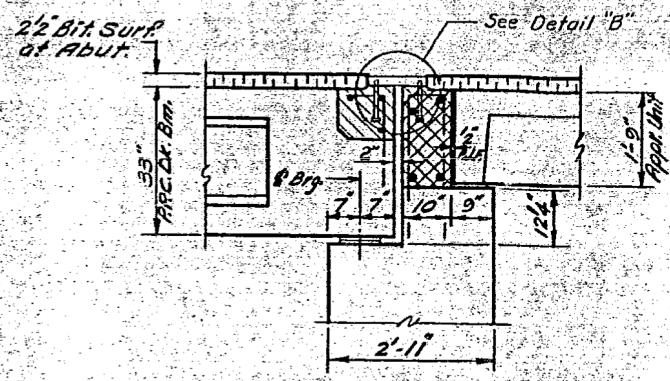
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STATE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	DR-1	HARDIN	22	18
SHEET NO. 5 8 SHEETS				

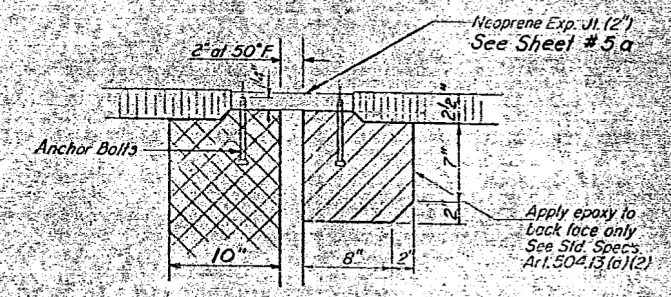


**SECTION THRU WEST ABUT.  
AT NORTH OUTSIDE BEAM**

\*1' Joint shall be packed with a very dry mix of 2-1 sand and P.C. mortar. This dimension may vary plus or minus to accommodate tolerance in beam lengths.

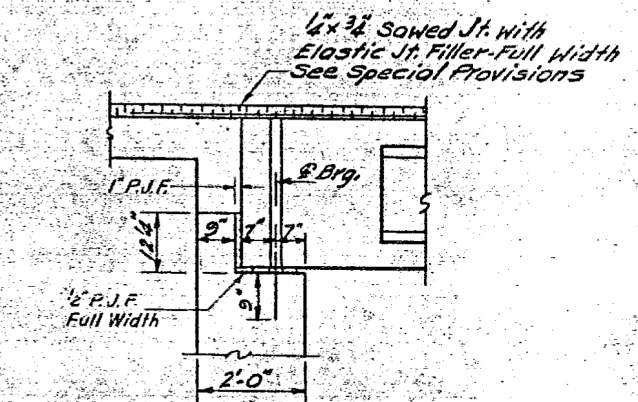


**SECTION THRU EAST ABUT.  
AT NORTH OUTSIDE BEAM**

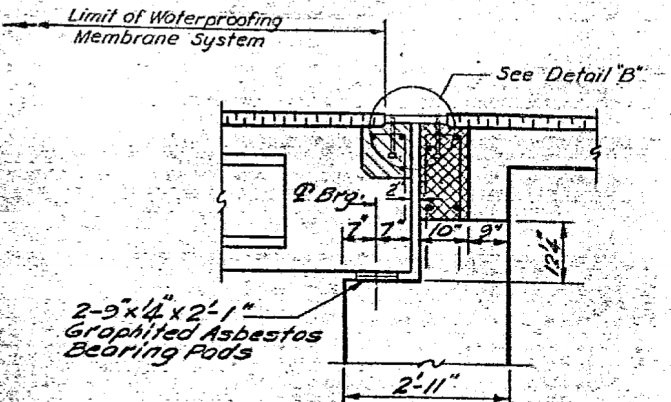


**DETAIL "B"**

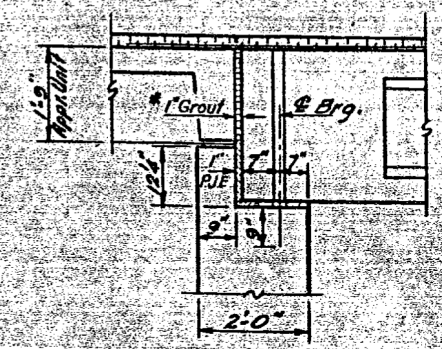
NOTE: Dimensions are at right angles.  
Hatched areas to be poured after beams have been erected and joints grouted.  
Ends of beams shall be aligned at the expansion joints. Any lined variation in the beam lengths shall be placed at the fixed joint.  
See End of Beam Detail for reinforcement on sheet #2.



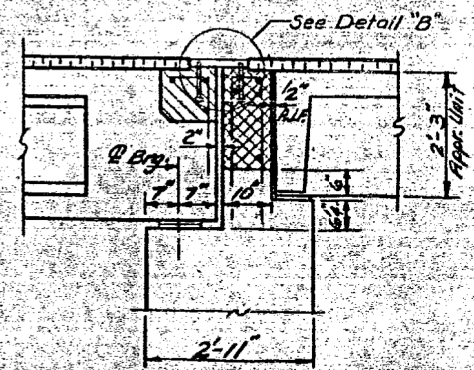
**SECTION THRU WEST ABUT.  
AT RDWY.**



**SECTION THRU EAST ABUT.  
AT RDWY.**



**SECTION THRU WEST ABUT.  
AT SOUTH OUTSIDE BEAM**



**SECTION THRU EAST ABUT.  
AT SOUTH OUTSIDE BEAM**

Note: All Dimensions on Sections thru Abutments are at Right Angles to Abutment.

NOTE: Hatched Area quantities are billed on Superstructure sheet #2.  
Cross Hatched Area quantities are billed on Abutment sheet #8.

DESIGNED JOHN A. MORRIS P.S.C.	EXAMINED <i>Dec 10 1991</i> <i>Paul E. [Signature]</i>
CHECKED Prakash S. W.	PASSED
DRAWN Leona Heeren	APPROVED
CHECKED Prakash S. W.	DIRECTOR OF HIGHWAYS

**SUPERSTRUCTURE**  
**FR. RT. 782 SEC. 115A-DR-1**  
**HARDIN COUNTY**  
**STA. 996+97**

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
STRUCTURE NO. 035-0002

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	56
CONTRACT NO. 78263			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	



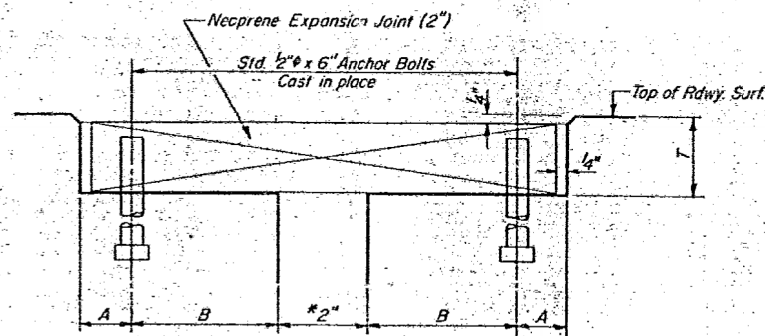
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ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
PLOT SCALE = 0.1667' / IN.	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 3:24:56 PM	DATE - 08/13	REVISED -

SCALE: SHEET NO. 5 OF 10 SHEETS STA. TO STA.



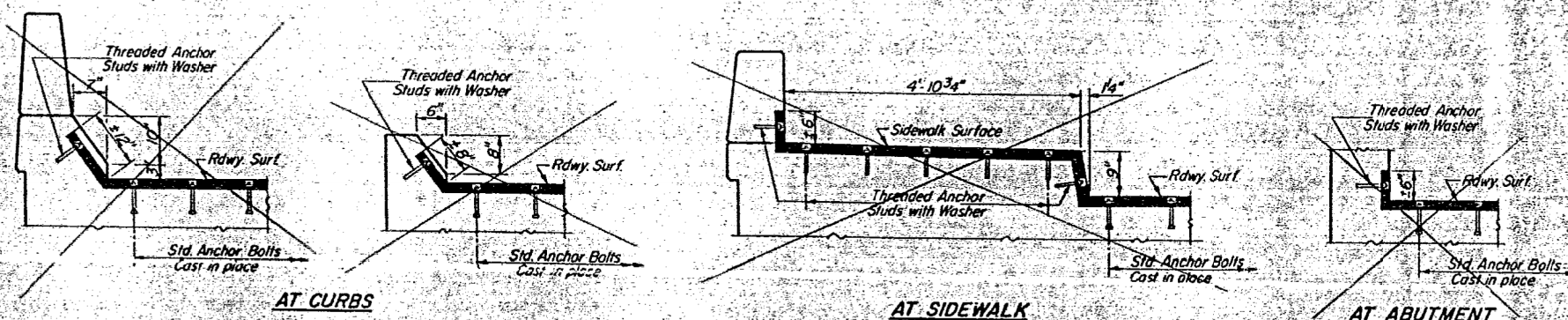
**ALTERNATE NEOPRENE EXPANSION JOINTS (2")**  
(See Special Provisions)

Model	Supplier	Blockout Dimensions
TRANSFLEX, MODEL 200A	General Tire Company	$T = 1\frac{3}{16}"$ , $A = 1\frac{1}{8}"$ , $B = 3\frac{5}{16}"$
WABOFLEX, MODEL SR-2	Watson Bowman Associates, Inc.	$T = 1\frac{3}{16}"$ , $A = 1\frac{1}{4}"$ , $B = 3\frac{3}{16}"$
FEL-SPAN, MODEL T-30 Set joint seal 1 <sup>5</sup> / <sub>8"</sub> at 50°F.	Fel-Pro Building Products Inc.	$T = 1\frac{3}{4}"$ , $A = 2\frac{1}{4}"$ , $B = 2\frac{13}{16}"$
WABO ELASTODAM, TYPE 300 Set joint seal 1 <sup>5</sup> / <sub>8"</sub> at 50°F.	Watson Bowman Associates, Inc.	$T = 1\frac{3}{4}"$ , $A = 2\frac{1}{4}"$ , $B = 2\frac{13}{16}"$
WABO ALU-STRIP, TYPE III-S300 Set joint seal 1 <sup>1</sup> / <sub>2"</sub> at 50°F. Permitted for 0° skew only.	Watson Bowman Associates, Inc.	$T = 1\frac{3}{4}"$ , $A = 1\frac{5}{8}"$ , $B = 2\frac{3}{4}"$
LOW PROFILE ONFLEX-25 Set joint seal 1 <sup>1</sup> / <sub>2"</sub> at 50°F. Roadway bolt channel shall be filled with approved grout. Permitted for up to 50° skew.	Structural Accessories, Inc.	$T = 1\frac{3}{4}"$ , $A = 1\frac{5}{8}"$ , $B = 2\frac{3}{8}"$



**CROSS SECTION**  
At 50°F  
Dimensions are at right angles.

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



**TYPICAL END TREATMENTS**

**NEOPRENE EXPANSION JOINTS (2")**  
FOR EXPANSION LENGTH OF DECK = 0 to 160 ft.

*EA. RT. 782 SEC. 115A-DR-1*  
*HARDIN COUNTY*  
*STA. 996+97*

DESIGNED	<i>John A. Moore</i>	19
CHECKED	<i>R. F. Rolle</i>	MEMBER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN	<i>KAM</i>	ENGINEER OF DESIGN
CHECKED	<i>R. F.</i>	DIRECTOR OF HIGHWAYS

EJ-1 2-10-77

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
STRUCTURE NO. 035-0002

SCALE: SHEET NO. 6 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	57
CONTRACT NO. 78263			ILLINOIS FED. AID PROJECT	



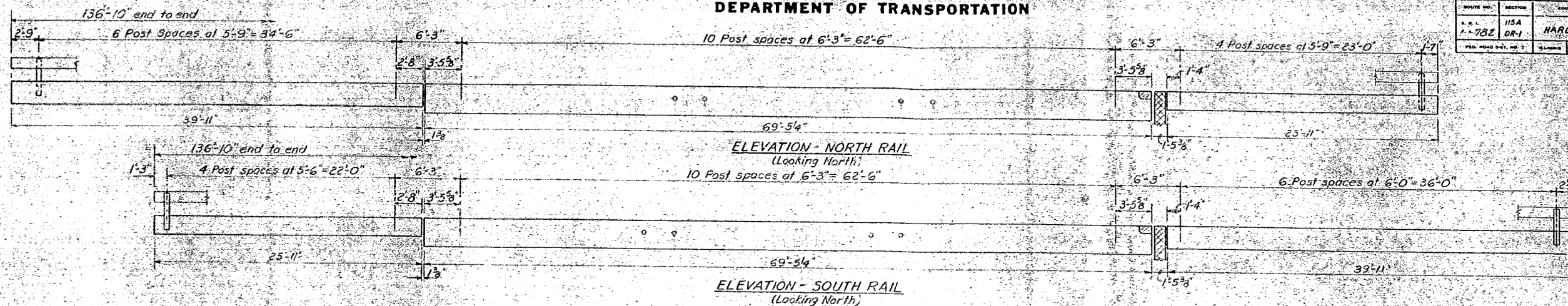
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PLOT SCALE = 0.1667' / IN.	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 3:25:28 PM	DATE - 08/13	REVISED -



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115A DR-1	HARDIN	69	58

8 SHEETS



**NOTES**

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

All other steel shapes and plates shall conform to the requirements of A.S.T.M. designation A-36, except posts shall conform to A.S.T.M. A-441.

Bolts, cap screws, and nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.S.T.M. designation A-325.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with A.S.T.M. designation A-153.

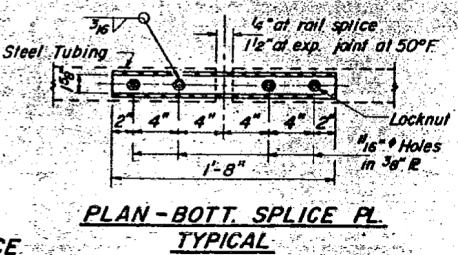
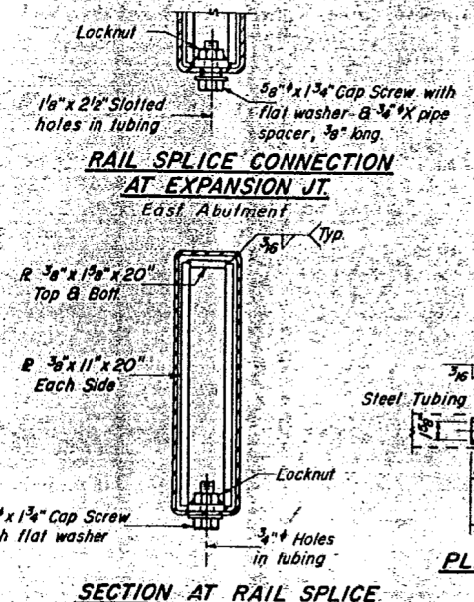
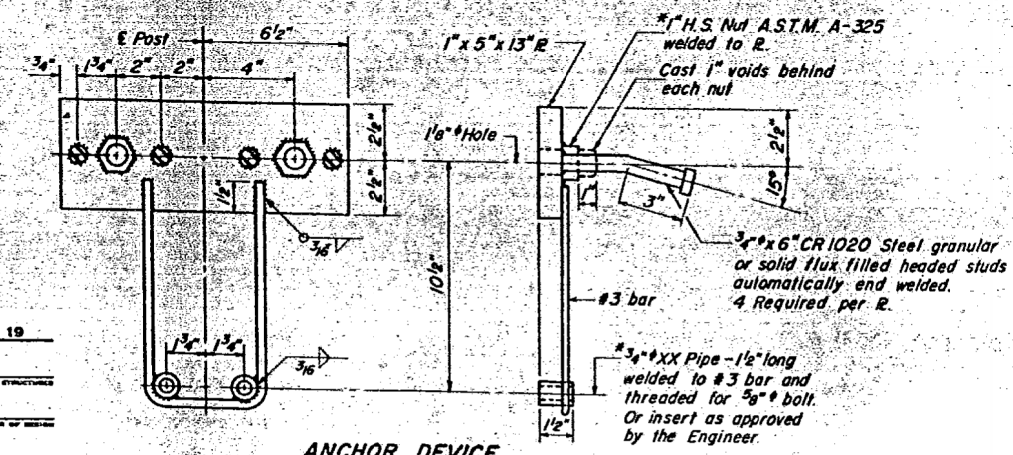
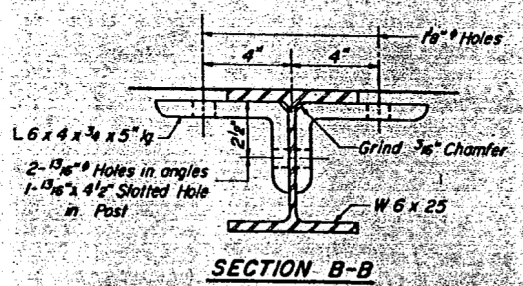
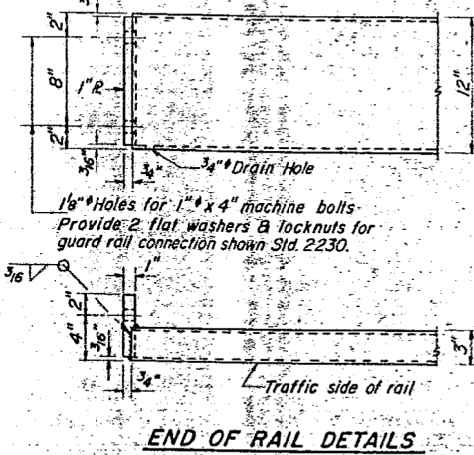
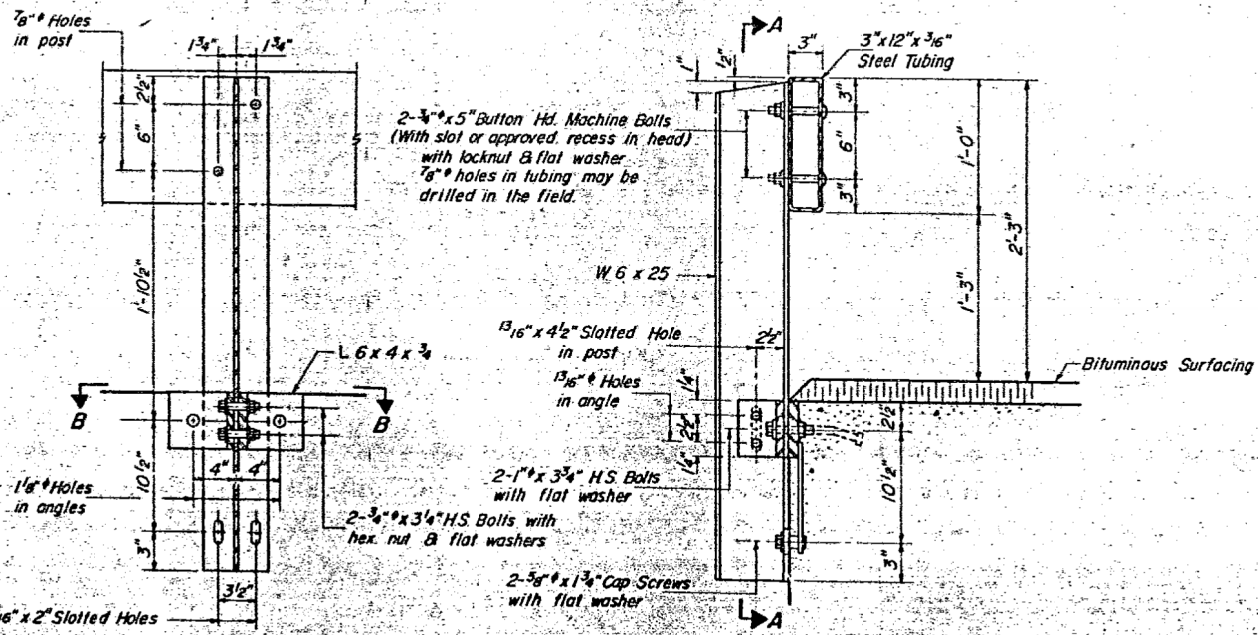
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.S.T.M. designation A-123 and A-395. Galvanized rail shall not be painted.

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 lineal 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 1/2 turn.



**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S	Lin. Ft.	274'

**TYPE S STEEL RAILING**

F.A. RT. 782 SEC. 115A-DR-1  
HARDIN COUNTY  
STA. 996+97

DESIGNED	Cus	19
CHECKED	J.L.A.	
DRAWN	J.L.A.	
CHECKED	Chris Strane	

R-23 12-10-71 (6'-3" Maximum Post Spacing)

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
STRUCTURE NO. 035-0002



USER NAME = JIF	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
PLOT SCALE = 0.1667 / IN.	CHECKED - NHP	REVISED -
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SCALE: SHEET NO. 7 OF 10 SHEETS STA. TO STA.

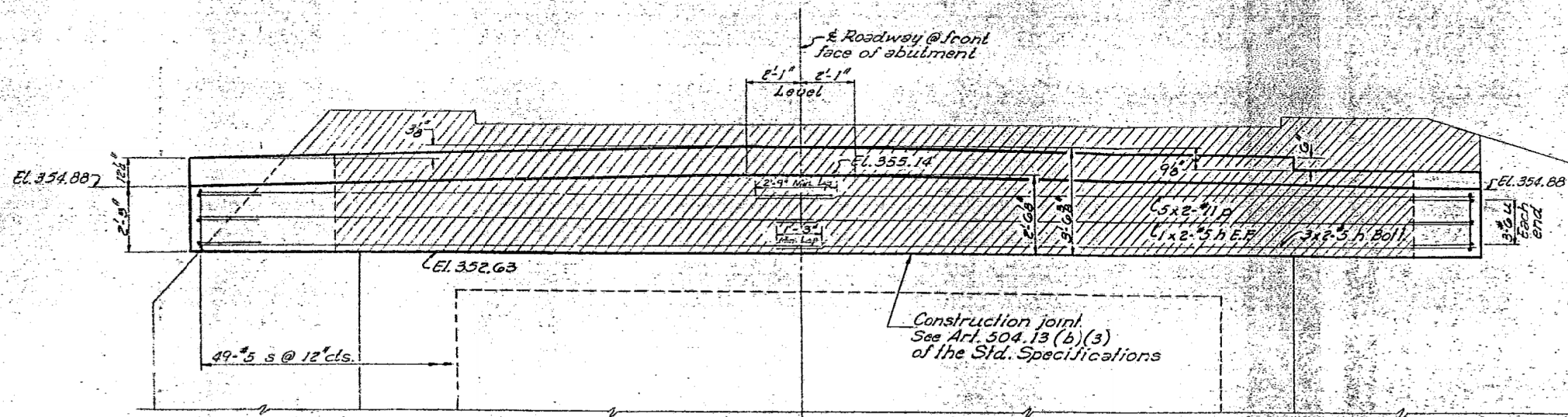
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	58
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 78263		



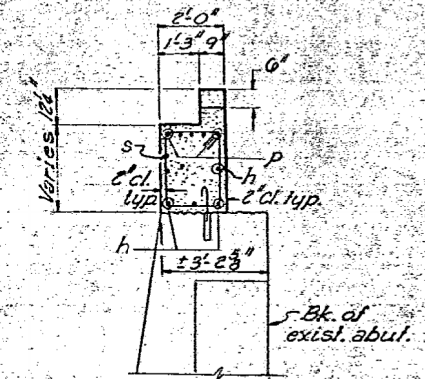
Note: Bars indicated thus 3 x 2-#10 etc. designates 3 lines of bars with 2 lengths per line.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

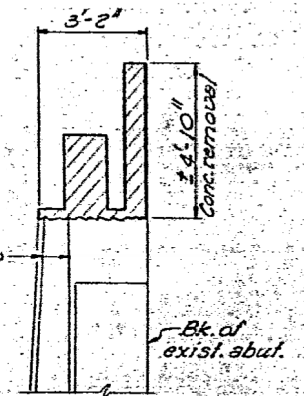
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782	DR-1	HARDIN	22	21
SHEET NO. 7 8 SHEETS				



ELEVATION

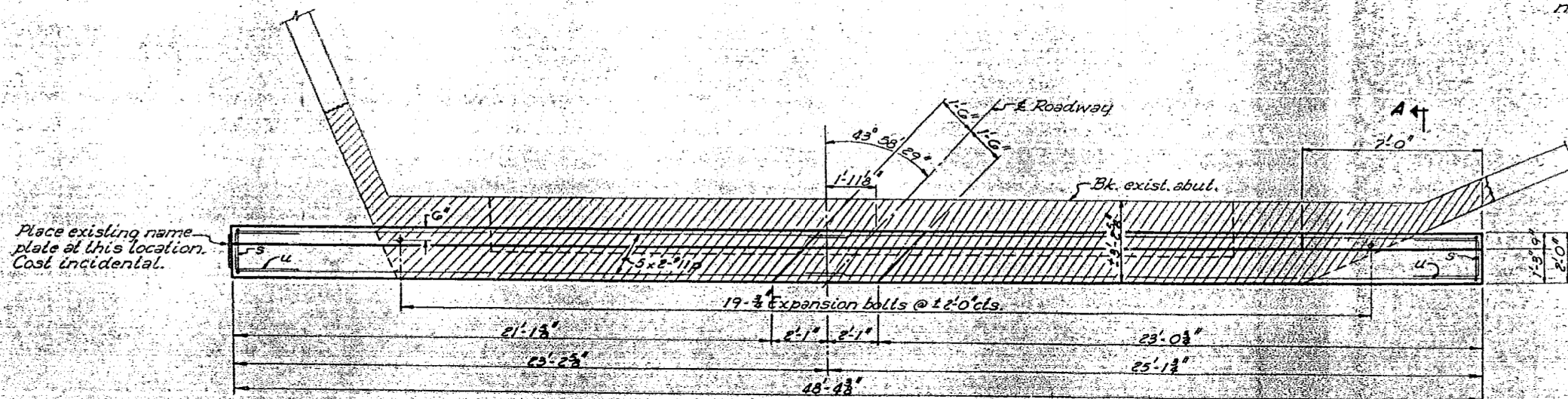


SEC. A-A

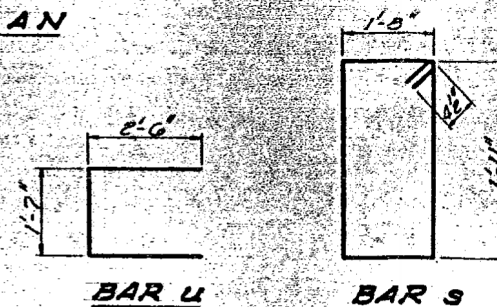


SEC. THRU CENTER OF EXIST. ABUT.

Exist. reinforcement to be cleaned & incorporated into new cap.



PLAN



Notes:  
 Expansion bolts shall be anchored into sound concrete.  
 All edges shall have standard 3/4" chamfers, except as noted.

Hatched areas indicates concrete removal.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	10	#5	24'-0"	—
p	10	#1	25'-5"	—
s	49	#4	7'-11"	□
u	6	#6	6'-7"	□
Class X Concrete		Cu yds	9.8	
Reinforcement Bars		Lbs.	1930	
Concrete Removal		Cu yds	11.3	
#3 Expansion Bolts		Each	19	

DESIGNED JOHN A MORRIS  
 P32  
 CHECKED Ponkash S. Co  
 DRAWN J. Mullerix  
 CHECKED Ponkash S. Co

EXAMINED [Signature]  
 PASSED [Signature]  
 APPROVED [Signature]  
 DIRECTOR OF HIGHWAYS

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
STRUCTURE NO. 035-0002

SCALE: SHEET NO. 8 OF 10 SHEETS STA. TO STA.

WEST ABUTMENT  
F.A.R.T. 782 SEC. 1154-DR-1  
HARDIN COUNTY  
STATION 996+92

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	59
CONTRACT NO. 78263				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



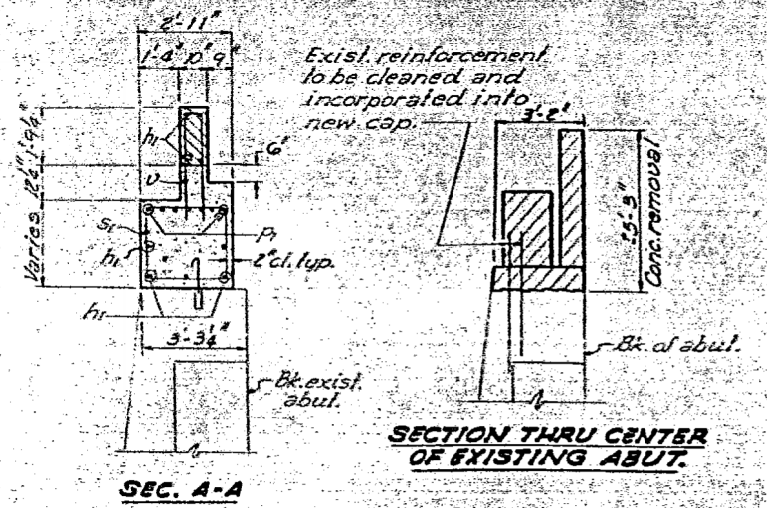
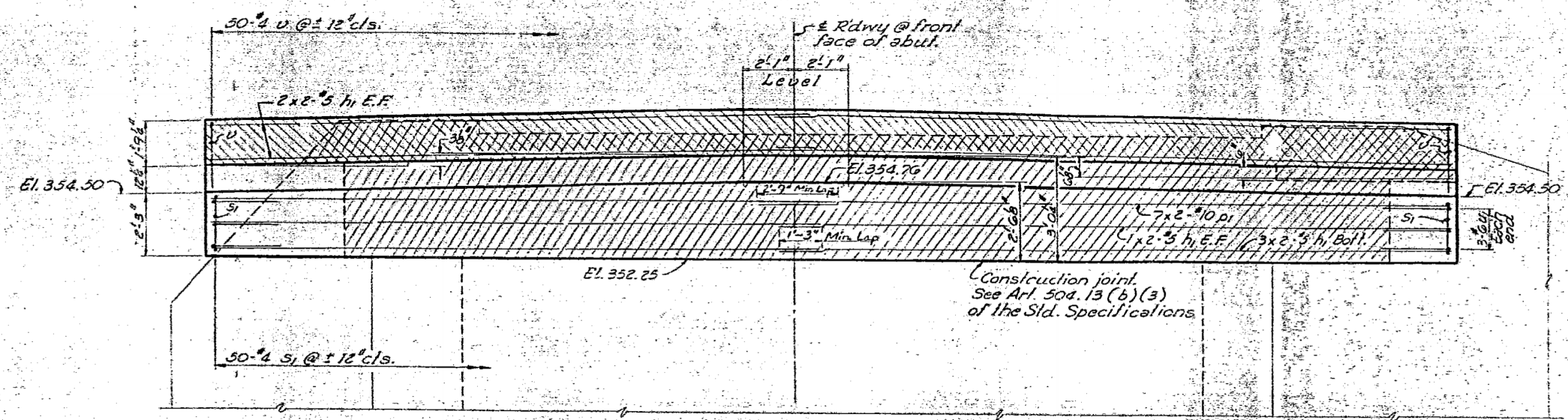
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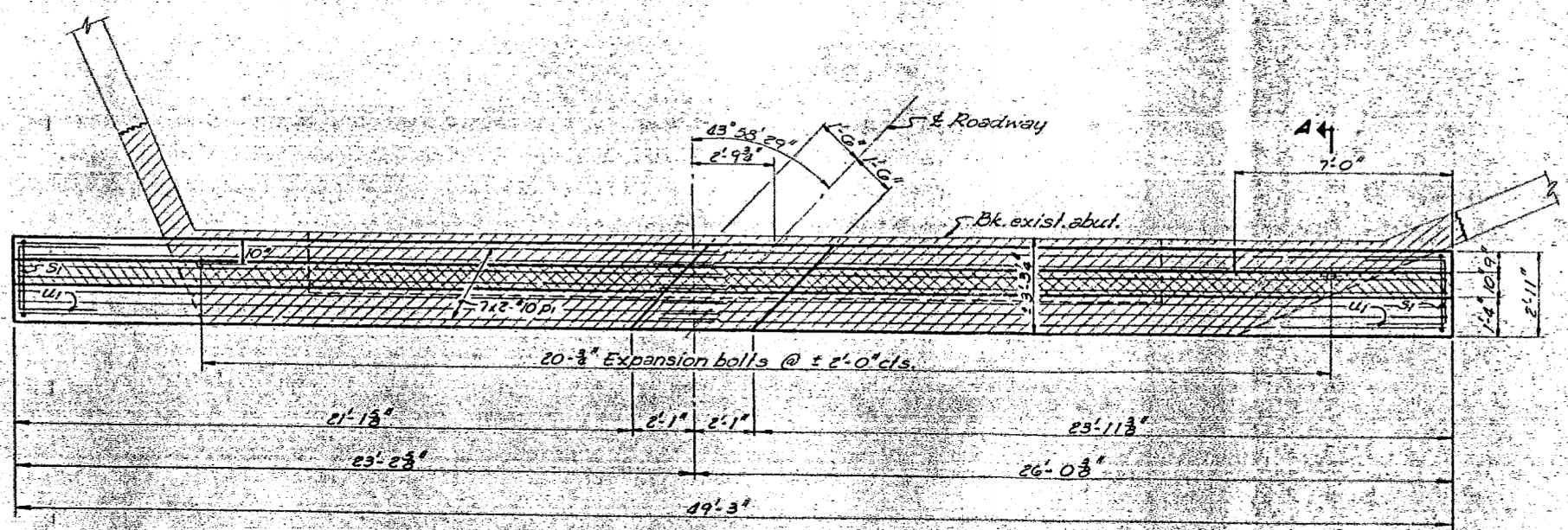
Note - Bars indicated thus 3 x 2" 10 etc., designates 3 lines of bars with 2 lengths per line.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATION	SHEET NO.
782	115A DR-1	HARDIN	22	22
				8 SHEETS



ELEVATION



PLAN

**BILL OF MATERIAL**

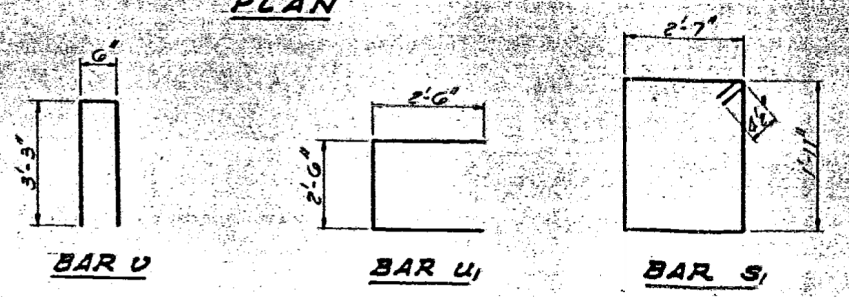
Bar No.	Size	Length	Shape
h1	10	95	25-3'
p1	18	90	25-9'
s1	50	98	9-9'
u1	6	90	7-6'
v	50	98	7-0'
Class X Concrete		Cu yds	18.2
Reinforcement Bars		Lbs	2440
Concrete Removal		Cu yds	18.3
Expansion Bolts		Each	20

**SYMBOLS**

Hatched area indicating portion of conc. removal.

Hatched area indicating portion of conc. to be poured after beams are in place.

Notes - Expansion bolts shall be anchored into sound concrete. All edges shall have standard 3/8" chamfers, except as noted.



DESIGNED JOHN A. MOORE  
CHECKED Pankrat S. W.  
DRAWN J. Mullerix  
CHECKED Pankrat S. W.

EXAMINED Dec 10 1971  
PASSED  
APPROVED  
DIRECTOR OF HIGHWAYS

FOR INFORMATION ONLY

**EAST ABUTMENT**  
H.A.R.T. 782 SEC. 115A-DR-1  
HARDIN COUNTY  
STATION 996+97



USER NAME = JIF	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
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PLOT DATE = 10/24/2014 3:26:44 PM	DATE - 08/13	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
STRUCTURE NO. 035-0002

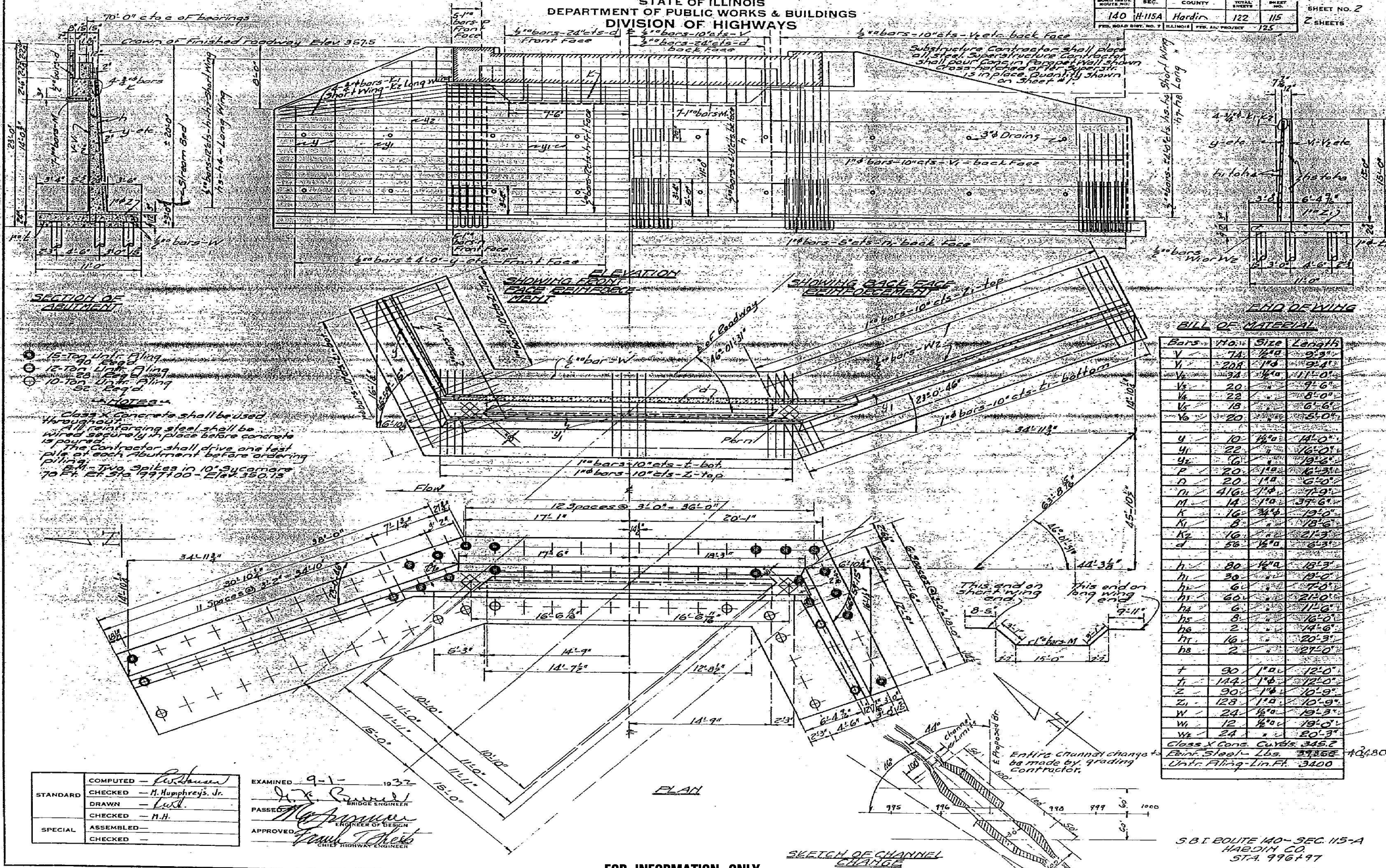
SCALE: SHEET NO. 9 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	60
			CONTRACT NO. 78263	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



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

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
140	H-115A	Hardin	122	115	2 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT 125		



- SECTION OF ABUTMENT**
- 15-Ton Unit Piling
  - 12-Ton Unit Piling
  - 10-Ton Unit Piling
- NOTES**
- Class X concrete shall be used throughout. All reinforcing steel shall be wired securely in place before concrete is poured. The Contractor shall drive one test pile of each abutment before ordering piling. E.M. - Two spikes in 10" sycamore 70 Ft. E. Sta. 997+00 - Elev. 350.15

**BILL OF MATERIAL**

Bars	No.	Size	Length
V	74	1/2"	2'-3"
V1	208	1/2"	2'-4"
V2	34	1/2"	11'-0"
V3	20		7'-6"
V4	22		8'-0"
V5	18		6'-6"
V6	20		5'-0"
Y	10	1/2"	14'-0"
Y1	22		16'-0"
Y2	16		19'-6"
P	20	1/2"	6'-3"
D	20	1/2"	6'-0"
D1	416	1/2"	7'-0"
M	14	1/2"	37'-6"
K	16	3/4"	10'-0"
K1	8		18'-6"
K2	16		21'-3"
d	56	1/2"	8'-3"
h	80	1/2"	15'-3"
h1	30		19'-0"
h2	60		7'-0"
h3	60		21'-0"
h4	6		11'-6"
h5	8		16'-0"
h6	2		14'-6"
h7	16		20'-3"
h8	2		27'-0"
f	90	1/2"	12'-0"
f1	144	1/2"	12'-0"
Z	90	1/2"	10'-9"
Z1	128	1/2"	10'-9"
W	24	1/2"	19'-3"
W1	12	1/2"	19'-0"
W2	24		20'-3"
Class X Conc. cu Yds. 345.2			
Reinf. Steel - Lbs. 29,858			
Unit Piling - Lin. Ft. 3400			

STANDARD	COMPUTED - <i>R. Johnson</i>
	CHECKED - <i>M. Humphreys, Jr.</i>
	DRAWN - <i>L. K. L.</i>
SPECIAL	CHECKED - <i>M. H.</i>
	ASSEMBLED -
	CHECKED -

EXAMINED *9-1-1932*

*J. E. Burrell*  
BRIDGE ENGINEER

PASSED *[Signature]*  
ENGINEER OF DESIGN

APPROVED *[Signature]*  
CHIEF HIGHWAY ENGINEER

FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS - FOR INFORMATION ONLY  
STRUCTURE NO. 035-0002

SCALE: SHEET NO. 10 OF 10 SHEETS STA. TO STA.

S.B.T. ROUTE 140 - SEC. 115-A  
HARDIN CO.  
STA. 996+97

(See Sheet 122 for Sheet 1 of 2)

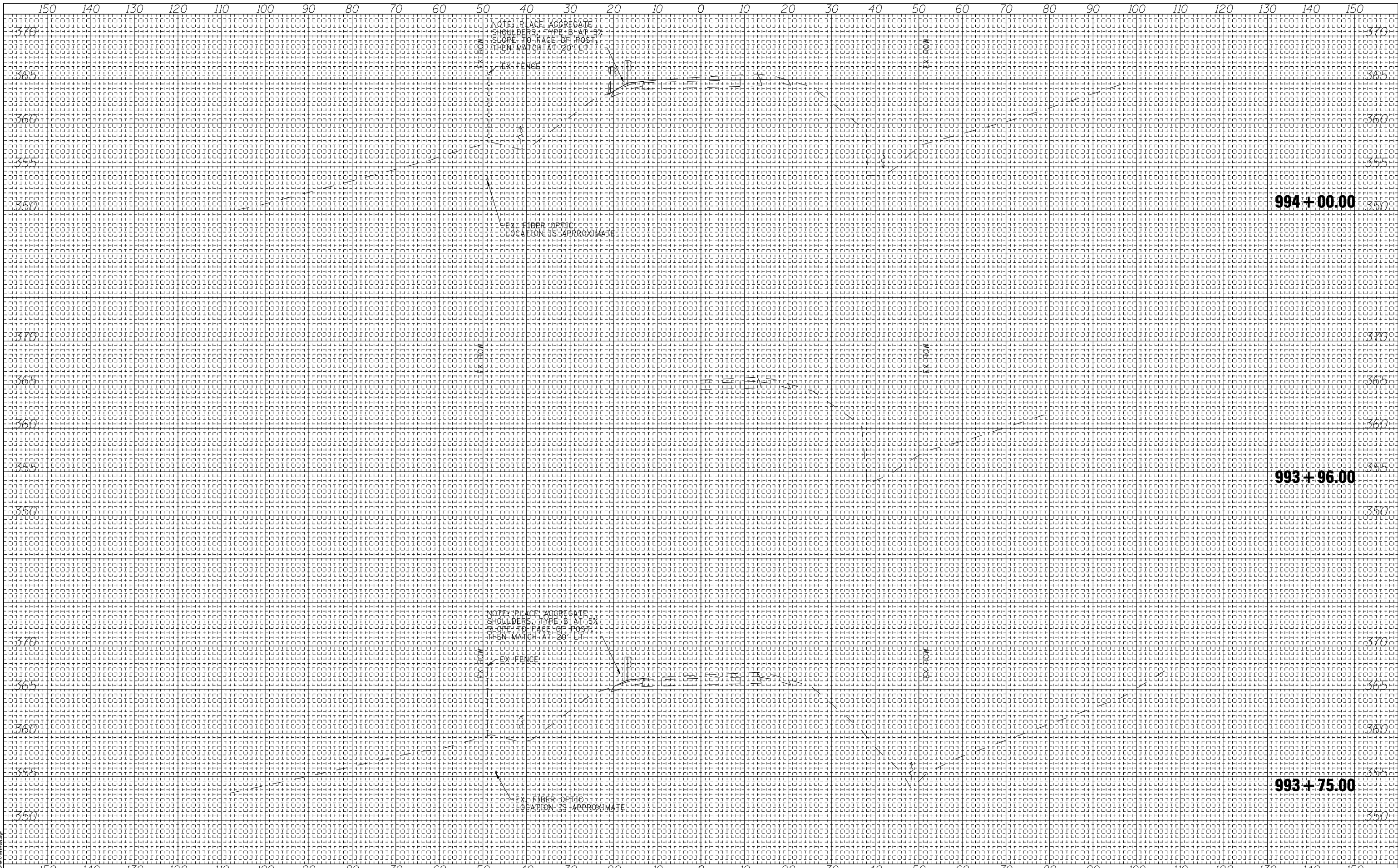


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DESIGNED - JMS  
DRAWN - HAS  
CHECKED - NHP  
DATE - 08/13

REVISED -  
REVISED -  
REVISED -  
REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	61
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	



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

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

PRINT DRIVER: JLD, L.B., B.O.B., M.C., M.H., M.W., M.Z., N.H., P.H., R.H., S.H., T.H., V.H., W.H., X.H., Y.H., Z.H.



USER NAME = jif	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
SCALEs: (HORIZ) 1"=10' (VERT) 1"=5'	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 3:28:24 PM	DATE - 12/13	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FAP 782 (IL 1) CROSS SECTIONS**

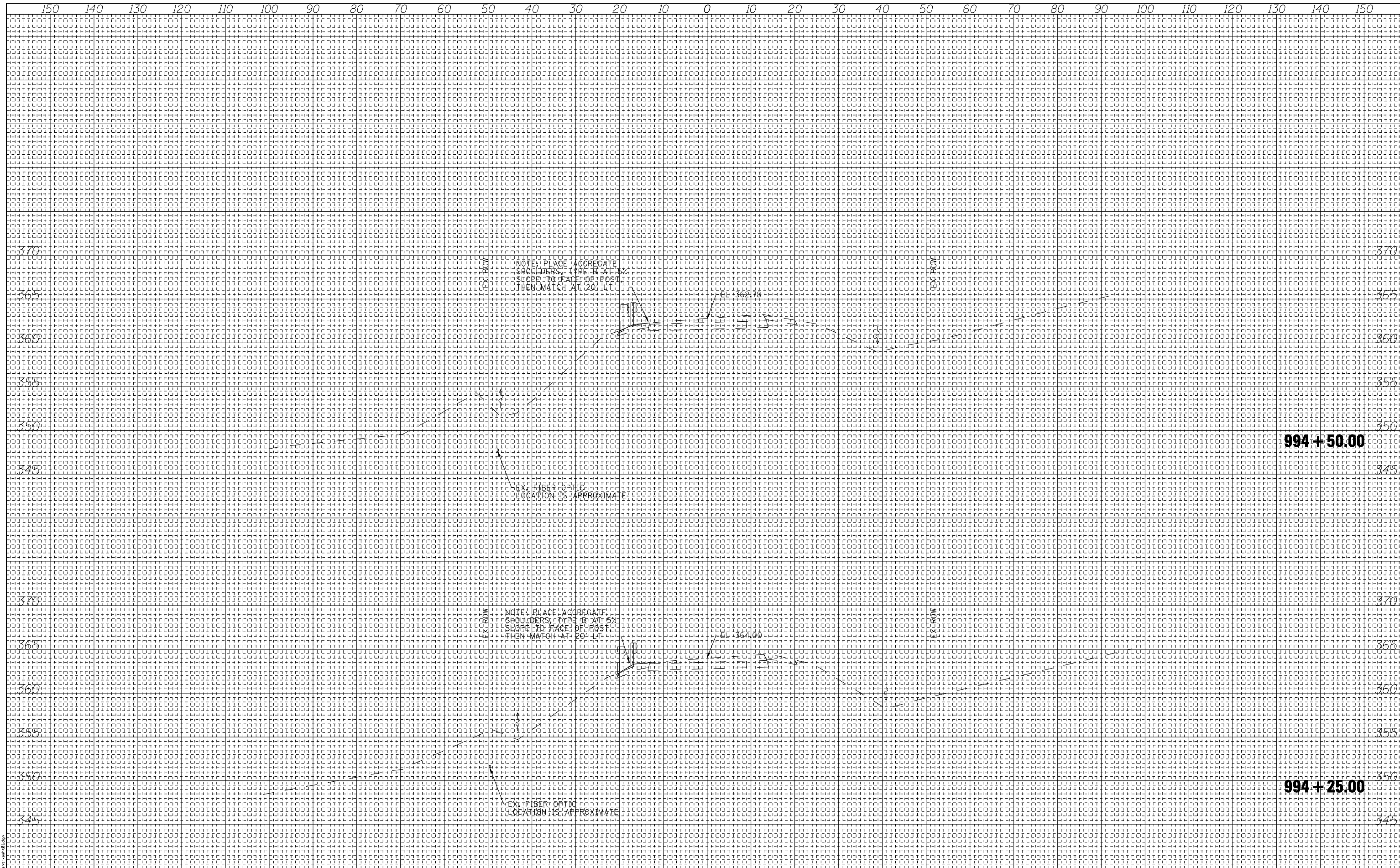
SCALE: AS SHOWN SHEET NO. 1 OF 8 SHEETS STA. 993+75.00 TO STA. 994+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115B-1	HARDIN	69	62
CONTRACT NO. 78263				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



DATE	BY
NO.	NO.
AREAS CHECKED	AREAS CHECKED
TEMPLATE	TEMPLATE
NOTE BOOK	NOTE BOOK
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AREAS CHECKED	AREAS CHECKED
PLATE	PLATE
NO.	NO.
NO.	NO.

DATE	BY
NO.	NO.
AREAS CHECKED	AREAS CHECKED
TEMPLATE	TEMPLATE
NOTE BOOK	NOTE BOOK
NO.	NO.
AREAS CHECKED	AREAS CHECKED
PLATE	PLATE
NO.	NO.
NO.	NO.



NOTE: PLACE AGGREGATE SHOULDERS - TYPE B AT 5% SLOPE TO FACE OF POST THEN MATCH AT 20% SLOPE

EX. FIBER OPTIC LOCATION IS APPROXIMATE

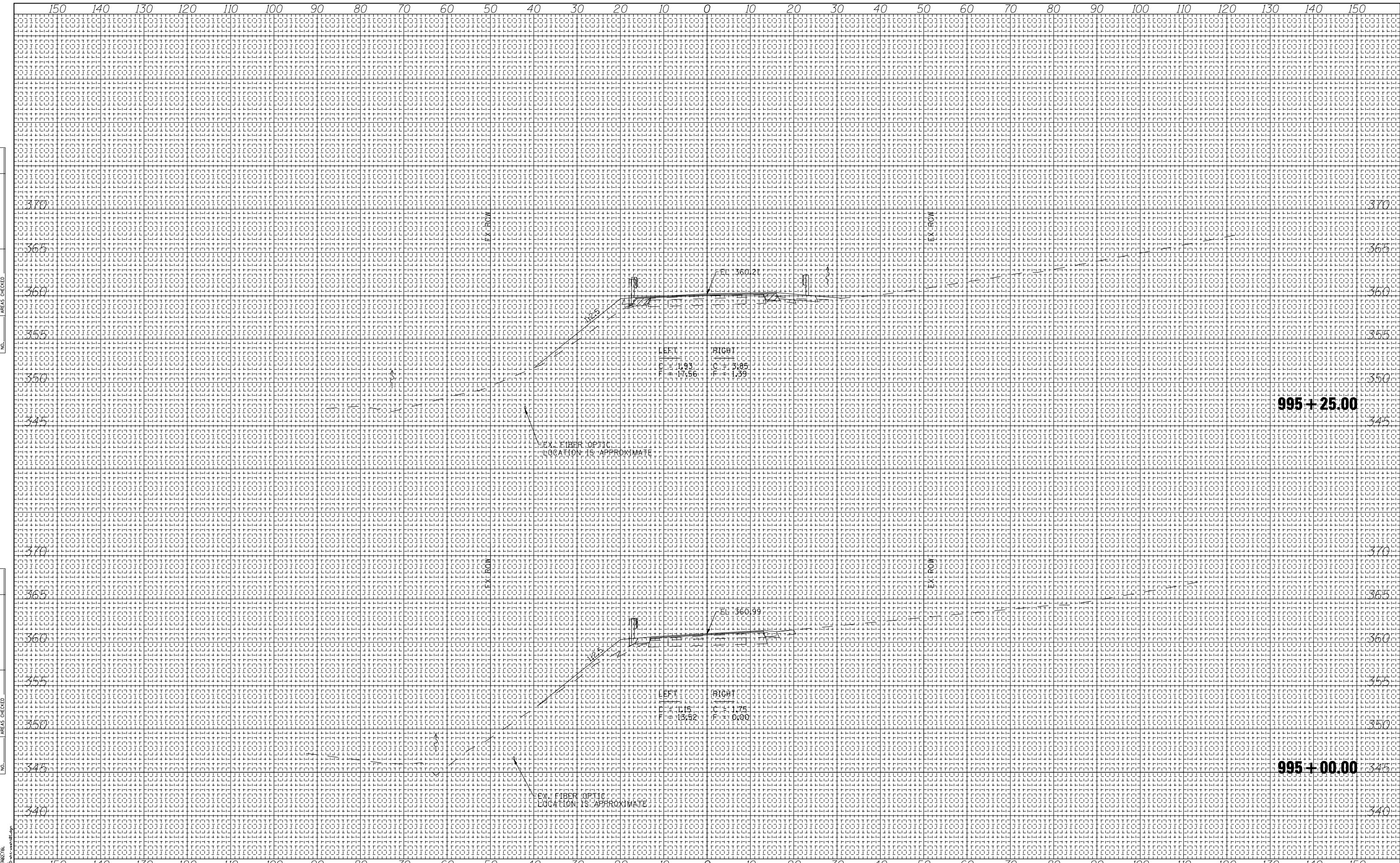
NOTE: PLACE AGGREGATE SHOULDERS - TYPE B AT 5% SLOPE TO FACE OF POST THEN MATCH AT 20% SLOPE

EX. FIBER OPTIC LOCATION IS APPROXIMATE



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

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED PLOTTED  
 TEMPLATE AREAS CHECKED  
 ORIGINAL SURVEY NOTE BOOK NO. \_\_\_\_\_



USER NAME = jif	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
SCALEs: (HORIZ) 1"=10' (VERT) 1"=5'	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 3:30:10 PM	DATE - 12/13	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**FAP 782 (IL 1) CROSS SECTIONS**

SCALE: AS SHOWN    SHEET NO. 4 OF 8 SHEETS    STA. 995+00.00 TO STA. 995+25.00

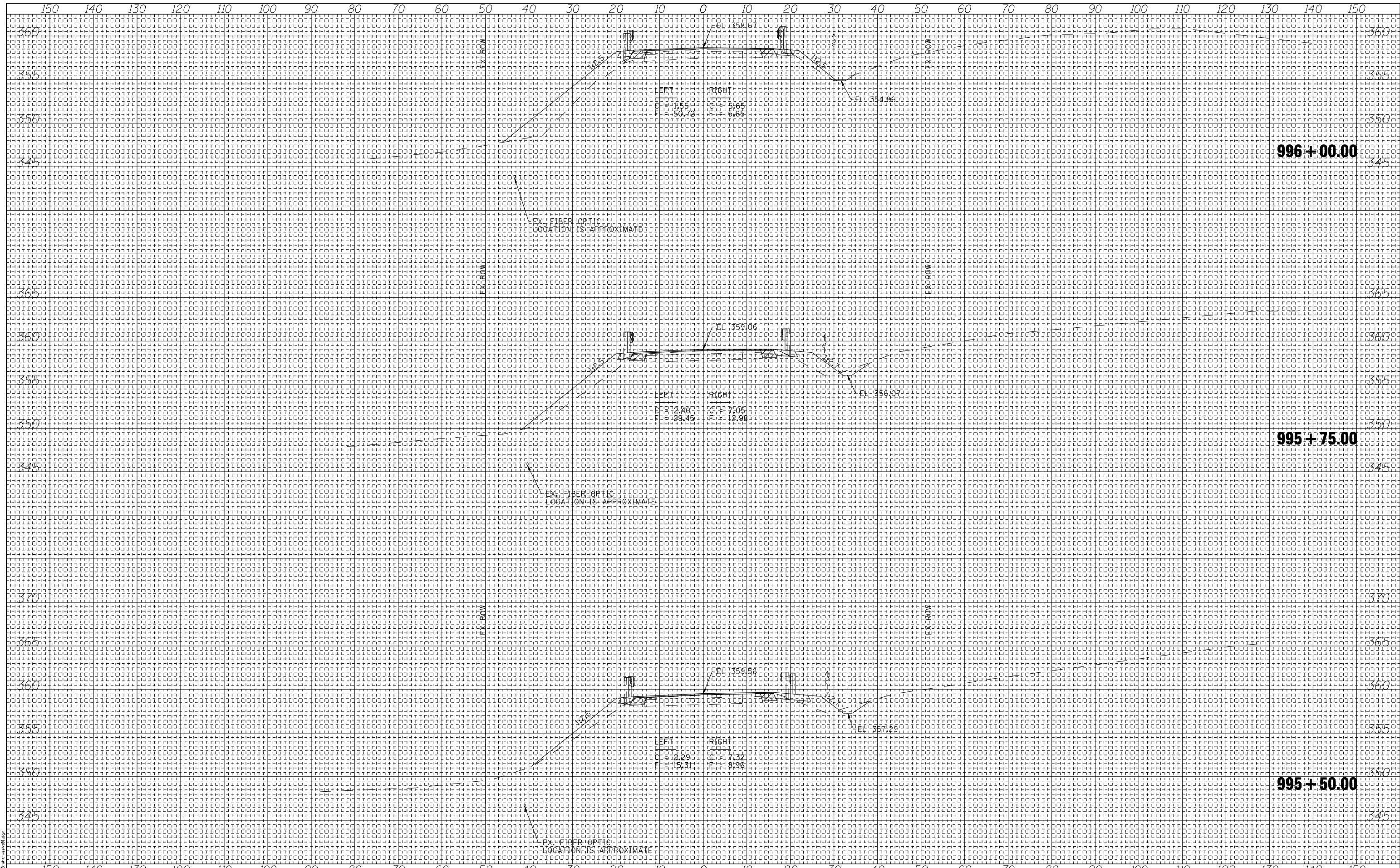
F.A.P. RTE. 782	SECTION 115B-1	COUNTY HARDIN	TOTAL SHEETS 69	SHEET NO. 65
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				CONTRACT NO. 78263

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BY	DATE

ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED	NO.

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USER NAME = jif	DESIGNED - JMS	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>FAP 782 (IL 1) CROSS SECTIONS</b>	F.A.P. R.T.E. = 782	SECTION = 115B-1	COUNTY = HARDIN	TOTAL SHEETS = 69	SHEET NO. = 66	
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -			SCALE: AS SHOWN	SHEET NO. 5 OF 8 SHEETS	STA. 995+50.00	TO STA. 996+00.00	CONTRACT NO. 78263	
SCALES: (HORIZ) 1"=10' (VERT) 1"=5'	CHECKED - NHP	REVISED -			FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT				
PLOT DATE = 10/24/2014 3:30:53 PM	DATE = 12/13	REVISED -								

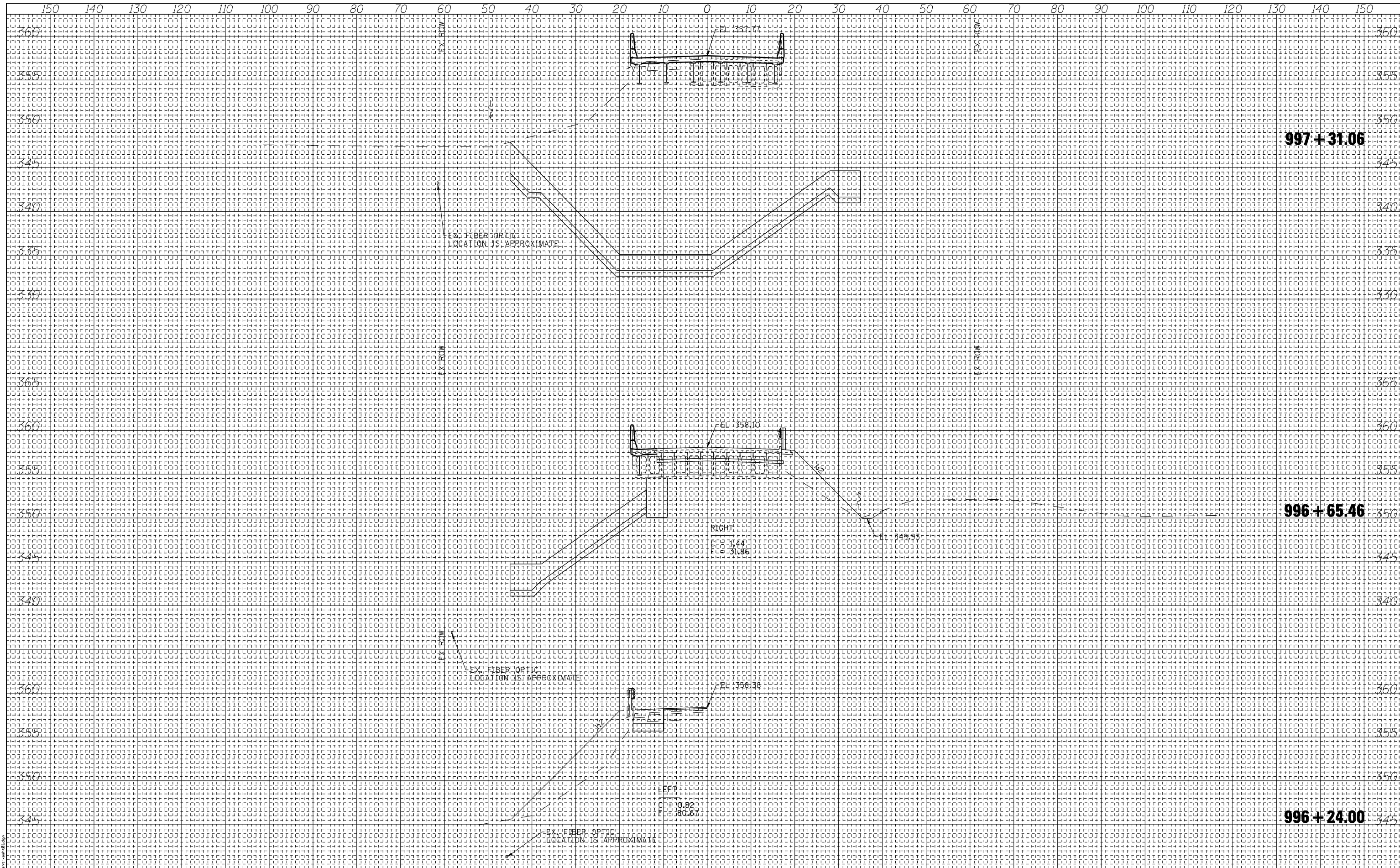




DATE	
BY	
FINAL SURVEY NO.	
SURVEYED PLOTTED TEMPLATE AREAS CHECKED	
NOTE BOOK NO.	

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

PRINT DRIVER: L:\DLS\B011\WORK\1155\1155.DWG  
 FILE NAME: 1155.DWG  
 DATE: 10/24/2014 3:31:30 PM



USER NAME = jif	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 1035.03	DRAWN - HAS	REVISED -
SCALEs: (HORIZ) 1"=10' (VERT) 1"=5'	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 3:31:30 PM	DATE - 12/13	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FAP 782 (IL 1) CROSS SECTIONS**

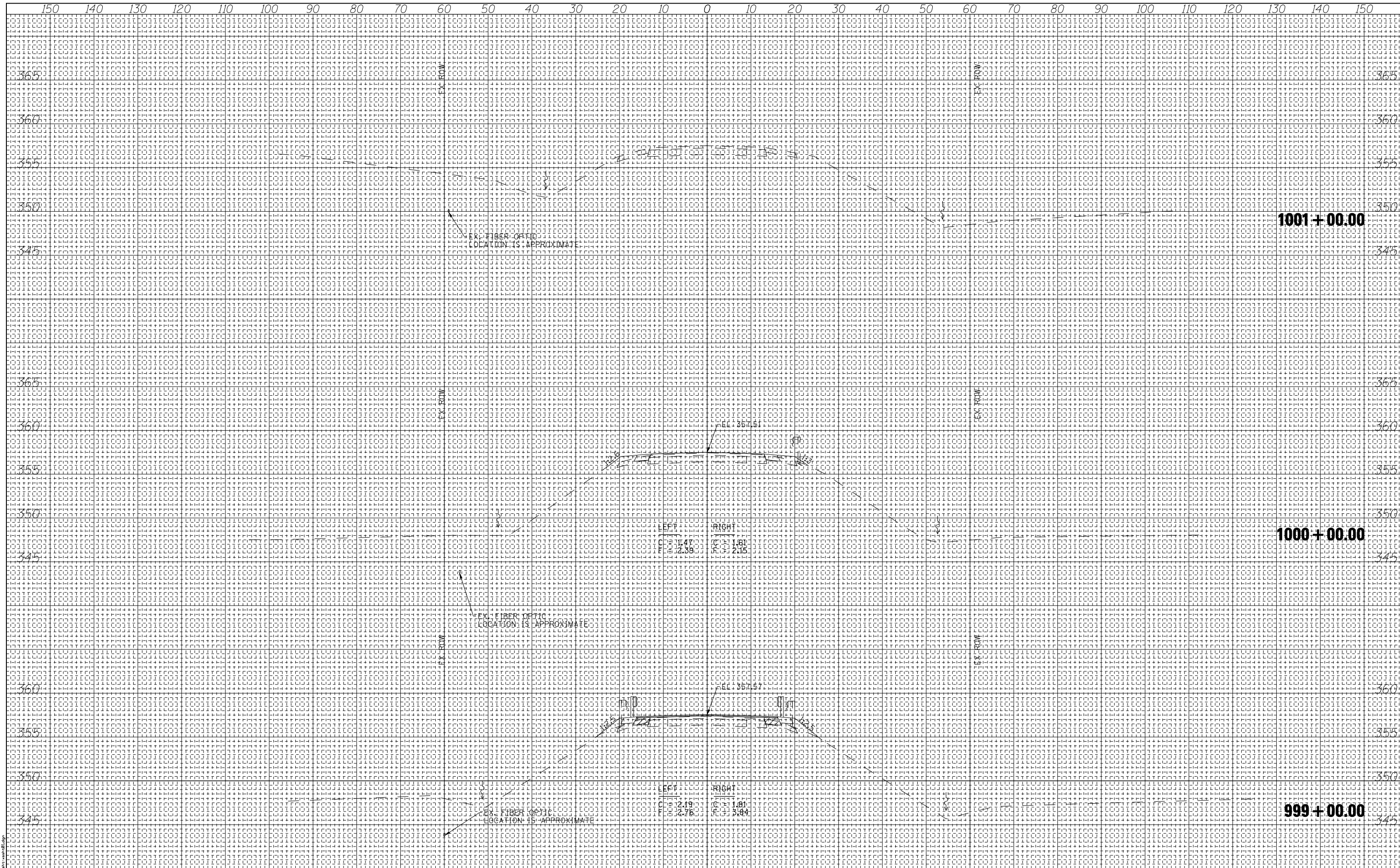
SCALE: AS SHOWN    SHEET NO. 6 OF 8 SHEETS    STA. 996+24.00 TO STA. 997+31.06

F.A.P. RTE. 782	SECTION 115B-1	COUNTY HARDIN	TOTAL SHEETS 69	SHEET NO. 67
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78263	



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

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



PRINT DRIVER: L:\DLS\B\0411...  
 FILE NAME: D:\ESCA\10335\10335.dwg



USER NAME = jif	DESIGNED - JMS	REVISED -
ESCA PROJECT NO. 10335.03	DRAWN - HAS	REVISED -
SCALE(S): (HORIZ) 1"=10' (VERT) 1"=5'	CHECKED - NHP	REVISED -
PLOT DATE = 10/24/2014 3:32:26 PM	DATE - 12/13	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**FAP 782 (IL 1) CROSS SECTIONS**

SCALE: AS SHOWN SHEET NO. 8 OF 8 SHEETS STA. 999+00.00 TO STA. 1001+00.00

F.A.P. RTE. 782	SECTION 115B-1	COUNTY HARDIN	TOTAL SHEETS 69	SHEET NO. 69
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				CONTRACT NO. 78263