

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	1

DIST. NO. ILLINOIS DEP. OF TRAN. CO.
 P-93-036-04
 D-93-007-06

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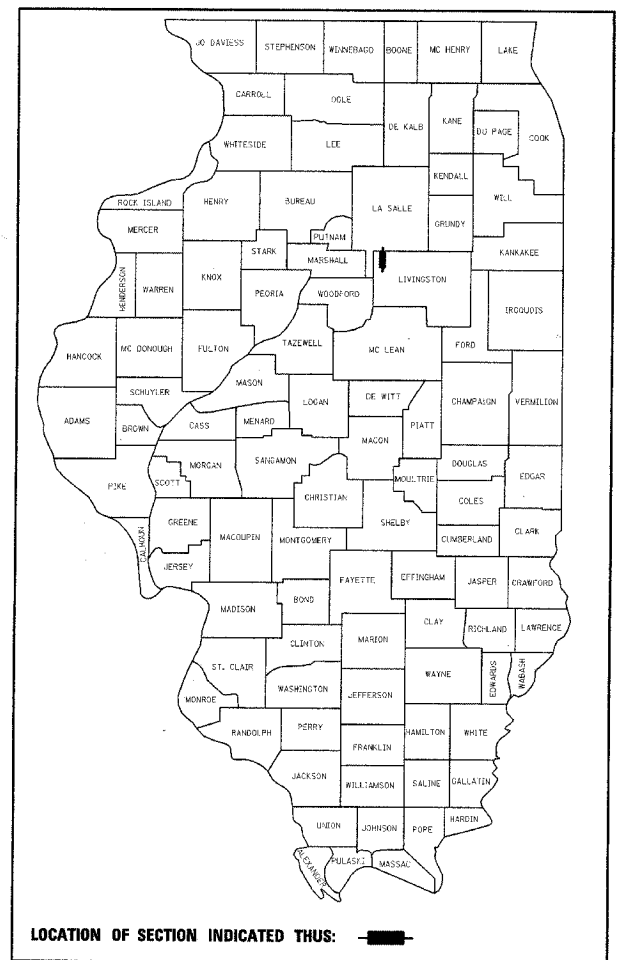
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

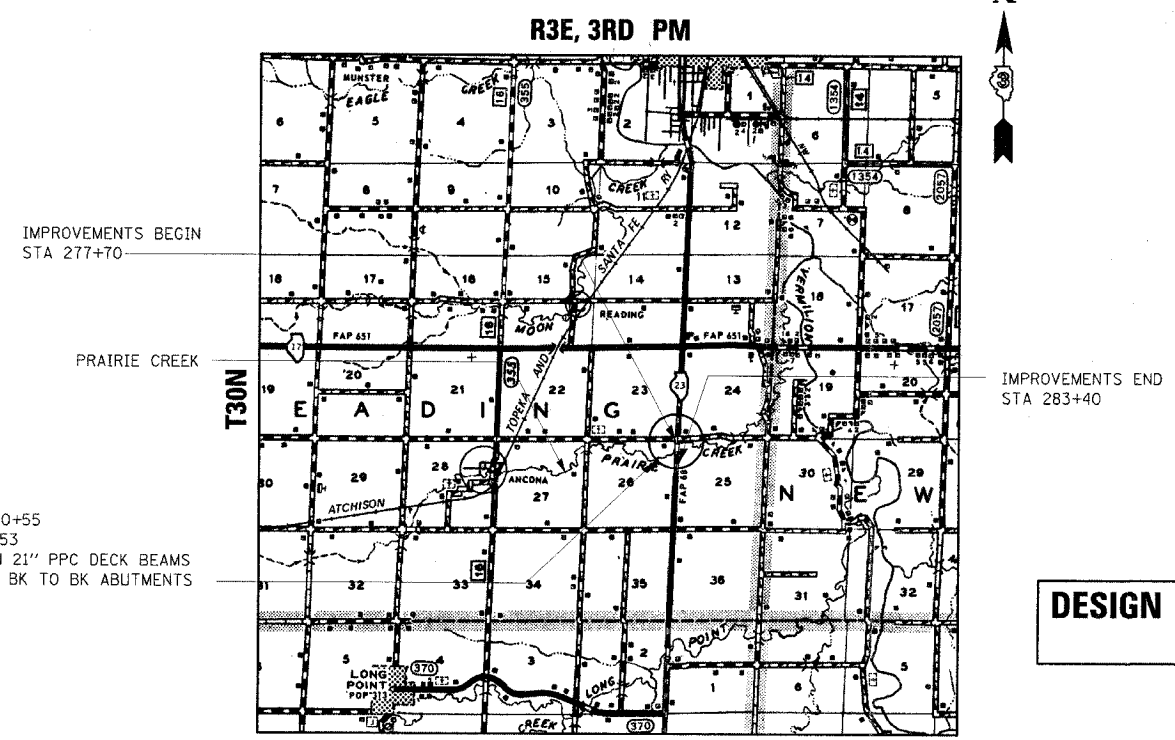
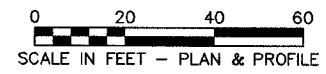
FAP ROUTE 68 (IL 23)
 SECTION 101BR
 PROJECT BHF-0068(098)
 LIVINGSTON COUNTY

C - 93 - 002 - 06

IL ROUTE 23 OVER PRAIRIE CREEK
 SUPERSTRUCTURE REPLACEMENT



FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL (NON-URBAN)
DESIGN SPEED: 55 mph
POSTED SPEED: 55 mph
ADT: 2060 (2006)
PV: 89.7%
SU: 6.2%
MU: 4.1%



STATION 280+55
 S.N. 053-0153
 THREE SPAN 21" PPC DECK BEAMS
 145'-4 1/4" BK TO BK ABUTMENTS

**DESIGN DESIGNATION
N.A.**

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED _____ 20

Amey P. Marton
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 3, 2006
Mike Hine
 ENGINEER OF DESIGN AND ENVIRONMENT

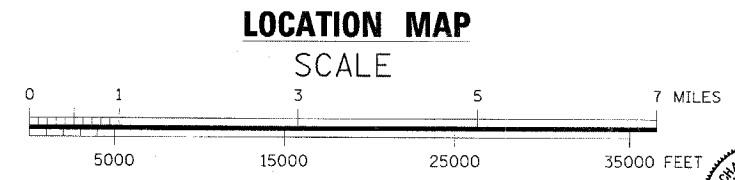
February 3, 2006
Milton R. Sear
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE
 ON THE FOLLOWING SHEETS _____

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

DISTRICT 3 NO. (815) 434-6131
 PROJECT ENGINEER: DAN DRAPER
 UNIT CHIEF: PAT BRABOY
 TOWNSHIP: READING
 CONTRACT NO.: 66606



GROSS LENGTH = 570 FT. = 0.108 MI.
 NET LENGTH = 570 FT. = 0.108 MI.



Richard D. Payne DATE: 12/21/2005
 ILLINOIS PROFESSIONAL LICENSE NO. 37421
 (EXPIRATION DATE: 11-30-05)

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OF THE STATE OF ILLINOIS**

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
420001-06	PAVEMENT JOINTS
420401-05	BRIDGE APPROACH PAVEMENT
421001-01	BAR REINFORCEMENT FOR CRC PAVEMENT
482011-01	INT. SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-02	NAME PLATE FOR BRIDGES
601001	SUB-SURFACE DRAINS
601101	CONCRETE HEADWALL FOR PIPE DRAIN
630001-05	STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-01	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701001-01	OFF-RD OPERATION 2L, 2W, 4.5 m (15') MIN. AWAY FOR SPEEDS > 45 MPH
701006-02	OFF-RD OPERATIONS 2L, 2W 4.5 m (15') TO PAVEMENT EDGE FOR SPEEDS > 45 MPH
701011-01	OFF-RD MOVING OPERATIONS 2L, 2W DAY ONLY FOR SPEEDS > 45 MPH
701301-02	LANE CLOSURE 2L, 2W SHORT TIME OPERATIONS
701306-01	LANE CLOSURE 2L, 2W SLOW MOVING OPERATIONS - DAY ONLY, FOR SPEEDS > 45 MPH
701311-02	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
701321-08	LANE CLOSURE 2L, 2W BRIDGE REPAIR WITH BARRIER
701326-02	LANE CLOSURE 2L, 2W PAVEMENT WIDENING FOR SPEEDS > 45 MPH
702001-05	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE BARRIER
720001	SIGN PANEL MOUNTING DETAILS
720006	SIGN PANEL ERECTION DETAILS
720011	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

1. THE TOP 6" OF TOPSOIL SHALL BE STRIPPED FROM ALL AREAS WITHIN THE CONSTRUCTION LIMITS OUTSIDE OF THE PROPOSED ABUTMENTS. THIS MATERIAL SHALL BE STOCKPILED AT A LOCATION APPROVED BY THE ENGINEER AND REPLACED AFTER MAJOR GRADING OPERATIONS ARE COMPLETE. THIS WORK WILL BE PAID FOR AS TOPSOIL EXCAVATION AND PLACEMENT.
2. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.
3. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
4. ALL SAWCUTTING OF EXISTING PAVEMENT SHALL BE CONSIDERED INCLUDED IN THE PAY ITEMS INVOLVED. THE MINIMUM SAW DEPTH IN THE PAVEMENT SHALL BE 1/2" UNLESS OTHERWISE NOTED.
5. 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.
6. THE THICKNESS OF BITUMINOUS 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 BITUMINOUS MIXTURE IS PLACED.
7. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
8. THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05 TON/CU YD
BITUMINOUS MATERIALS PRIME COAT	0.08 GAL/SQ YD
BITUMINOUS RESURFACING	112 LBS/SQ YD/INCH
SHORT TERM PAVEMENT MARKING	10 FT/100 FT OF APPLICATION
AGGREGATE PRIME COAT	0.002 TONS/SQ YD
9. 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.
10. 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.
11. 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.
12. EXISTING TRAFFIC BARRIER TERMINALS TO BE REMOVED SHALL BE PAID FOR AS GUARDRAIL REMOVAL.
13. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
14. ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.
15. ONLY THOSE TREES DESIGNATED BY THE ENGINEER SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.
16. SKIP-DASH LINES FOR PAINT PAVEMENT MARKING AND TEMPORARY PAVEMENT MARKING SHALL BE 6" WIDE.
17. THE CURBS SHOWN ON STANDARD 420401 ARE NOT REQUIRED AND SHALL NOT BE CONSTRUCTED.
18. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.
19. BASE COURSE WIDENING EXCEEDING 6' IN WIDTH WILL BE PAID FOR AS BASE COURSE WIDENING.
20. BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.
21. AGGREGATE (PRIME COAT): FA 20 MAY BE USED IN ADDITION TO THE GRADATIONS LISTED IN THE 2ND PARAGRAPH OF ARTICLE 1003.03(c).
22. NO IN STREAM WORK WILL BE ALLOWED.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: Paul Powell
DISTRICT STUDIES & PLANS ENGINEER

DATE: 12-29-05

EXAMINED BY: Harold J. Jorgensen
DISTRICT CONSTRUCTION ENGINEER

Ernest A. Heber
DISTRICT OPERATIONS ENGINEER

Kenneth R. Larson
DISTRICT MATERIALS ENGINEER

**GENERAL NOTES
AND STANDARDS
FAP RTE 68 (IL 23)
SECTION 101BR
LIVINGSTON COUNTY**

ESCA

CONSULTANTS, INC.

DESIGNED BY:	MTD	8/05
DRAWN BY:	HAG	8/05
CHECKED BY:	MTD	8/05
APPROVED BY:	RDP	9/05

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	80% FED 20% STATE CONSTRUCTION TYPE CODE ← X080-2A →	
20200100	EARTH EXCAVATION	CU YD	150	
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	105	
25000210	SEEDING, CLASS 2A	ACRE	0.3	
25000350	SEEDING, CLASS 7	ACRE	0.3	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	27	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	27	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	27	
25100115	MULCH, METHOD 2	ACRE	0.3	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	60	
28000400	PERIMETER EROSION BARRIER	FOOT	940	
35650500	BASE COURSE WIDENING 10"	SQ YD	455	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	99	
40600300	AGGREGATE (PRIME COAT)	TON	2.4	
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	676	
40600990	TEMPORARY RAMP	SQ YD	160	
42001185	BRIDGE APPROACH PAVEMENT	SQ YD	214	
42001300	PROTECTIVE COAT	SQ YD	214	
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	43	
44000100	PAVEMENT REMOVAL	SQ YD	669	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	170	
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	
50102400	CONCRETE REMOVAL	CU YD	11.8	
50200100	STRUCTURE EXCAVATION	CU YD	17.6	
50300150	NEOPRENE EXPANSION JOINT 2"	FOOT	92	
50300225	CONCRETE STRUCTURES	CU YD	14.0	
50300260	BRIDGE DECK GROOVING	SQ YD	469	
50300300	PROTECTIVE COAT	SQ YD	500	
50300505	CONCRETE WEARING SURFACE 5"	SQ YD	500	
50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	238.4	
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	4491	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	8060	
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	282	
51500100	NAME PLATES	EACH	1	
58700200	BRIDGE SEAT SEALER	SQ FT	30	
59000100	EPOXY CRACK SEALING	FOOT	430	
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	2	
60108200	PIPE UNDERDRAINS 6" (SPECIAL)	FOOT	67	
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	450	
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	
63100169	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	EACH	4	
63200310	GUARDRAIL REMOVAL	FOOT	802	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	1	

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	80% FED 20% STATE CONSTRUCTION TYPE CODE ← X080-2A →	
67100100	MOBILIZATION	L SUM	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	
70105815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	
70106700	TEMPORARY RUMBLE STRIP	EACH	6	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	252	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1140	
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	210	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	569	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	480	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	480	
72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	2	
72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	1	
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1140	
78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	210	
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6	
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2	
78200410	GUARDRAIL MARKERS, TYPE A	EACH	10	
78200520	BARRIER WALL MARKERS, TYPE B	EACH	2	
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	260	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	6	
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	95	
X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	TON	21	
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	48	
Z0002600	BAR SPLICERS	EACH	225	
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	

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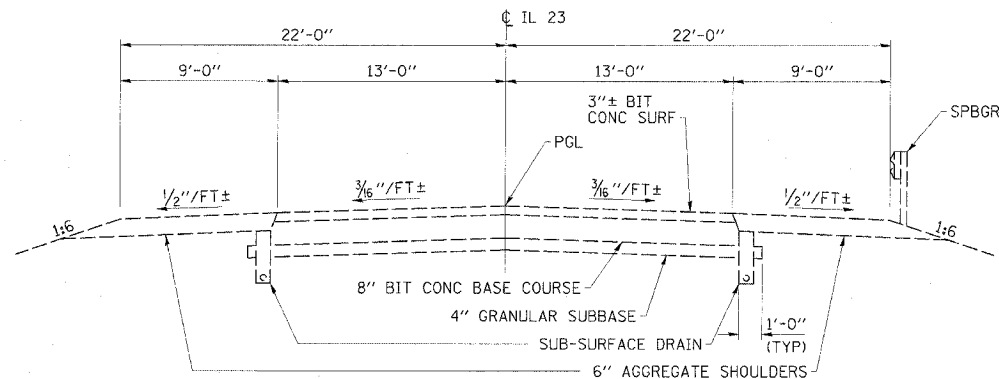
* SPECIALTY ITEM
Δ SFTY-3N

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	8/05
DRAWN BY:	JDK	8/05
CHECKED BY:	MTD	8/05
APPROVED BY:	RDP	9/05

SUMMARY OF QUANTITIES
FAP RTE 68 (IL 23)
SECTION 101BR
LIVINGSTON COUNTY

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



WITHOUT GUARDRAIL

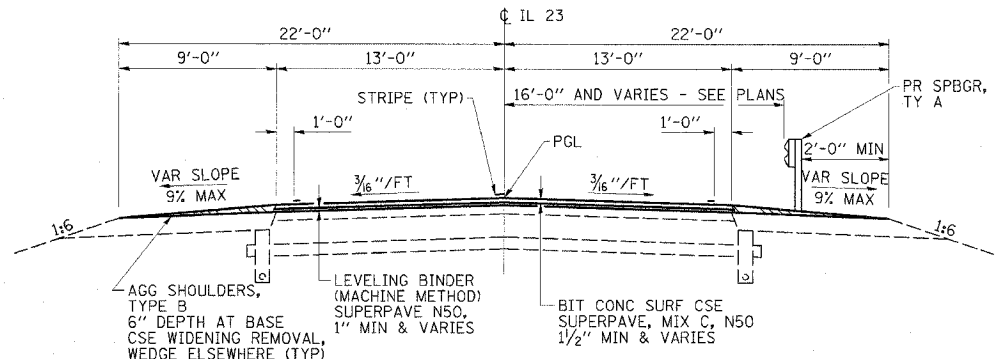
WITH GUARDRAIL

○ APPROACH PAVEMENT
STA 279+33.03 TO 279+82.32
STA 281+27.68 TO 281+76.97

EXISTING TYPICAL ROADWAY SECTION

STA 271+00 TO 289+00*

BRIDGE OMISSION STA 279+82.32 TO 281+27.68



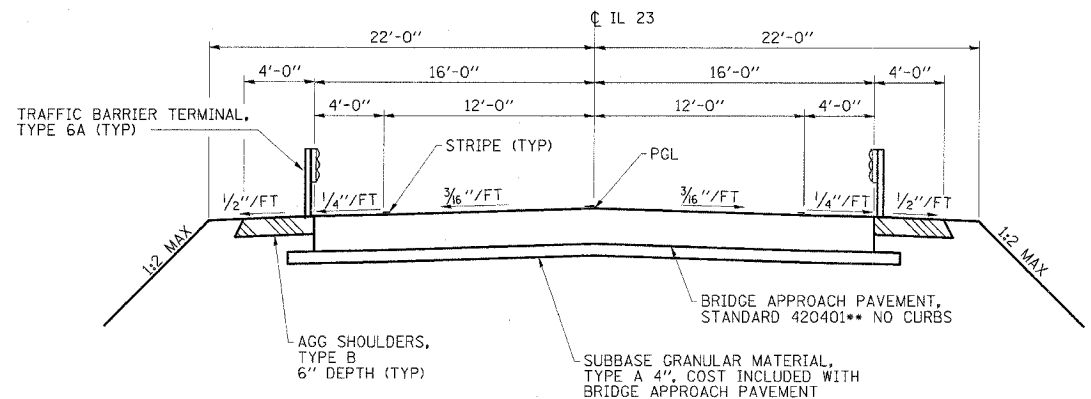
WITHOUT GUARDRAIL

WITH GUARDRAIL

PROPOSED TYPICAL ROADWAY SECTION

STA 277+70 TO 279+47.03

STA 281+27.68 TO 283+40



** WITH BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)

AT BRIDGE APPROACH PAVEMENT

PROPOSED TYPICAL ROADWAY SECTION

STA 279+47.03 TO 281+62.97

BRIDGE OMISSION STA 279+82.32 TO 281+27.68

BITUMINOUS MIXTURES REQUIREMENTS

	SUPERPAVE BINDER FOR BASE COURSE	SUPERPAVE LEVELING BINDER	SUPERPAVE SURFACE
PG GRADE	PG64-22	PG64-22	PG64-22
MAX % RAP ALLOWABLE ***	25%	25%	15%
DESIGN AIR Voids	4.0% @ N50	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION	IL 19.0	IL 9.5	IL 12.5 OR IL 9.5
FRICTION AGGREGATE	N.A.	N.A.	MIXTURE C
PLANT CONTROL LIMITS	CLASS I	CLASS I	CLASS I
DENSITY TEST METHOD	CORES/NUCLEAR	SATISFACTION OF THE ENGINEER	CORES/NUCLEAR

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

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	8/05
DRAWN BY:	HAG	8/05
CHECKED BY:	MTD	8/05
APPROVED BY:	RDP	9/05

TYPICAL SECTIONS
FAP ROUTE 68 (IL 23)
SECTION 101BR
LIVINGSTON COUNTY

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

LOCATION	SUITABLE EARTH EXCAVATION	SUITABLE EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	SUITABLE INCIDENTAL EXCAVATION MATERIAL	SUITABLE INCIDENTAL 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
NW QUADRANT CUTS & FILLS	7	5			13	-8
SW QUADRANT CUTS & FILLS	8	6			28	-22
NE QUADRANT CUTS & FILLS	5	4			21	-17
SE QUADRANT CUTS & FILLS	4	3			21	-18
CONC PAD UNDER PVMT CONNECTOR			12	9		+9
BASE COURSE WIDENING, RT	26	19			11	+8
BASE COURSE WIDENING, LT	100	75			40	+35
STRUCTURE EXCAVATION			17.6	13		-13
TOTALS	150	112	29.6	22	134	0

NOTES:
 1. EXCAVATION USED AS EMBANKMENT = (SUITABLE EARTH EXCAVATION + SUITABLE INCIDENTAL EXCAVATION)*0.75
 2. TOPSOIL EXCAVATION AND PLACEMENT NOT INCLUDED IN THE ABOVE NUMBERS

LOCATION	PERIMETER EROSION BARRIER	TEMPORARY EROSION CONTROL SEEDING (2 APPLICATIONS)
	FOOT	POUND
NW QUADRANT	250	20
SW QUADRANT	210	12
NE QUADRANT	210	12
SE QUADRANT	270	16
TOTALS	940	60

LOCATION	PAVEMENT REMOVAL SQ YD
STA 279+47.03 TO STA 279-84.09	107
STA 281+25.91 TO STA 281+62.97	107
BASE COURSE WIDENING	455
TOTAL	669

LOCATION	SEEDING, CLASS 2A	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH, METHOD 2
	ACRE	ACRE	POUND	POUND	POUND	ACRE
STA 277+55 TO BRIDGE, RT	0.10	0.10	9.0	9.0	9.0	0.10
STA 277+55 TO BRIDGE, LT	0.06	0.06	5.4	5.4	5.4	0.06
BRIDGE TO STA 283+55, RT	0.06	0.06	5.4	5.4	5.4	0.06
BRIDGE TO STA 283+75, LT	0.08	0.08	7.2	7.2	7.2	0.08
TOTALS	0.30	0.30	27.0	27.0	27.0	0.30

LOCATION	TON
STA 277+70 TO STA 279+66, LT	51
STA 277+70 TO STA 280+04, RT	25
STA 281+06 TO STA 283+40, LT	71
STA 281+44 TO STA 283+40, RT	23
TOTAL	170

LOCATION	REMOVE SIGN PANEL ASSEMBLY TYPE A	RELOCATE SIGN PANEL ASSEMBLY TYPE A
	EACH	EACH
STA 278+27, 27' RT	1	
STA 278+24, 27' LT		1
STA 282+94, 27' LT	1	
TOTALS	2	1

LOCATION	DESCRIPTION	TEMPORARY PAVEMENT MARKING - LINE		SHORT-TERM PAVEMENT MARKING (3 APPLICATIONS)	PAINT PAVEMENT MARKING - LINE	
		4" FOOT	6" FOOT		4" FOOT	6" FOOT
		STA 277+00 TO STA 285+20	SKIP-DASH YELLOW CENTERLINE		210	252
STA 277+00 TO STA 283+40, LT	SOLID WHITE EDGE LINE	570			570	
STA 277+00 TO STA 283+40, RT	SOLID WHITE EDGE LINE	570			570	
TOTALS		1140	210	252	1140	210

LOCATION	RRPM	RRPM (BRIDGE)	RRPM REMOVAL
	EACH	EACH	EACH
STA 278-02	1		1
STA 278-84	1		1
STA 279-40		1	
STA 280+01		1	
STA 280+81	1		1
STA 281+67	1		1
STA 282+45	1		1
STA 283+27	1		1
TOTALS	6	2	6

LOCATION	PAVEMENT MARKING DESCRIPTION	WORK ZONE PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL
		SQ FT	SQ FT
CENTERLINE	TEMPORARY - LINE 6"	105	
EDGE LINES	TEMPORARY - LINE 4"	380	
CENTERLINE	SHORT-TERM	84	
STA 277+00 TO STA 279+50	CENTERLINE SKIP-DASH		30
STA 282+00 TO STA 285+20	CENTERLINE SKIP-DASH		40
STA 278+50 TO STA 283+00, LT	SOLID EDGE LINE		150
STA 278+85 TO STA 279+24, RT	SOLID EDGE LINE		13
STA 281+83 TO STA 282+65, RT	SOLID EDGE LINE		27
TOTALS		569	260

LOCATION	BRIDGE APPROACH PAVEMENT	PROTECTIVE COAT	CONNECTOR (PCC)
	SQ YD	SQ YD	SQ YD
STRUCTURE NO. 053-0153 - NORTH APPROACH	107	107	21.5
STRUCTURE NO. 053-0153 - SOUTH APPROACH	107	107	21.5
TOTALS	214	214	43.0

LOCATION	CONCRETE HEADWALL FOR PIPE DRAINS	PIPE UNDERDRAINS 6" (SPECIAL)
	EACH	FOOT
STA 277+79.0, 53.0' LT	1	40
STA 277+88.5, 40.3' RT	1	27
TOTALS	2	67

LOCATION	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	SPBGR, TYPE A	TRAFFIC BARRIER TERMINAL, TYPE 6A	GUARDRAIL MARKERS, TYPE A	BARRIER WALL MARKERS, TYPE B	TERMINAL MARKER-DIRECT APPLIED	STEEL BRIDGE RAIL, TYPE SM
	EACH	FOOT	EACH	EACH	EACH	EACH	FOOT
STRUCTURE NO. 053-0153 - NORTHWEST	1	137.5	1	3			
STRUCTURE NO. 053-0153 - SOUTHWEST	1	87.5	1	2			
STRUCTURE NO. 053-0153 - NORTHEAST	1	87.5	1	2			
STRUCTURE NO. 053-0153 - SOUTHEAST	1	137.5	1	3			
STRUCTURE NO. 053-0153 - BRIDGE					2		282
TOTALS	4	450.0	4	10	2	4	282

LOCATION	SQ YD
STA 277+70 BUTT JOINT	22
STA 279+24 TO APPR CONNECTOR	66
APPR CONNECTOR TO STA 281+83	58
STA 283+40 BUTT JOINT	14
TOTAL	160

LOCATION	FOOT
STRUCTURE NO. 053-0153 - NORTHWEST	219
STRUCTURE NO. 053-0153 - SOUTHWEST	182
STRUCTURE NO. 053-0153 - NORTHEAST	182
STRUCTURE NO. 053-0153 - SOUTHEAST	219
TOTAL	802

LOCATION	SQ YD
STA 277+70 TO STA 278+35	230
STA 281+85 TO STA 283+10	446
TOTAL	676

LOCATION	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT)	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	BASE COURSE WIDENING 10"
	GALLON	TON	TON	TON	SQ YD
STA 277+70 TO STA 279+47.03	57.5	1.4	50	21	
STA 281+62.97 TO STA 283+40	41.5	1.0	45		
STA 278+05 TO BRIDGE, LT					150
STA 278+40 TO BRIDGE, RT					45
BRIDGE TO STA 283+45, LT					210
BRIDGE TO STA 283+10, RT					50
TOTALS	99.0	2.4	95	21	455

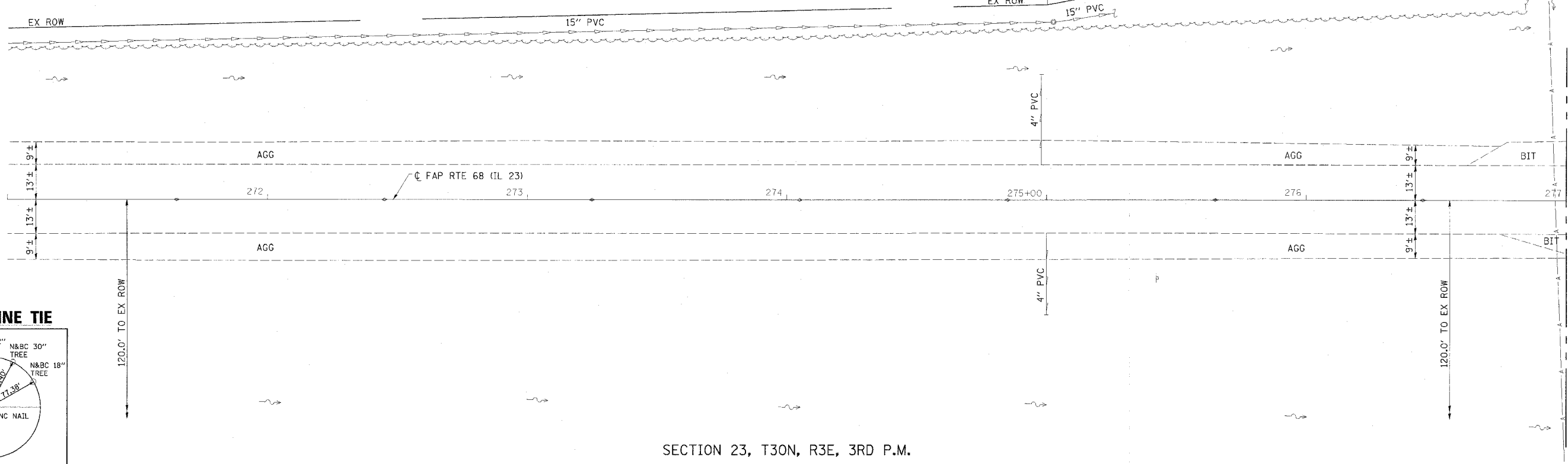
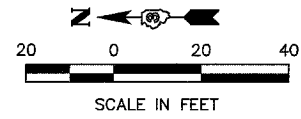
ESCA
CONSULTANTS, INC.

DESIGNED BY: MTD 8/05
 DRAWN BY: HAG 8/05
 CHECKED BY: MTD 8/05
 APPROVED BY: RDP 9/05

SCHEDULES OF QUANTITIES
 FAP RTE 68 (IL 23)
 SECTION 101BR
 LIVINGSTON COUNTY

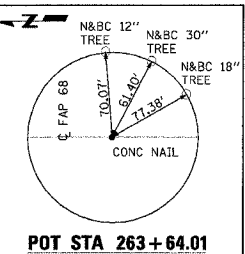
CONTRACT NO. 66606				
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	6
STA. 271+00		TO STA. 277+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SECTION 24, T30N, R3E, 3RD P.M.

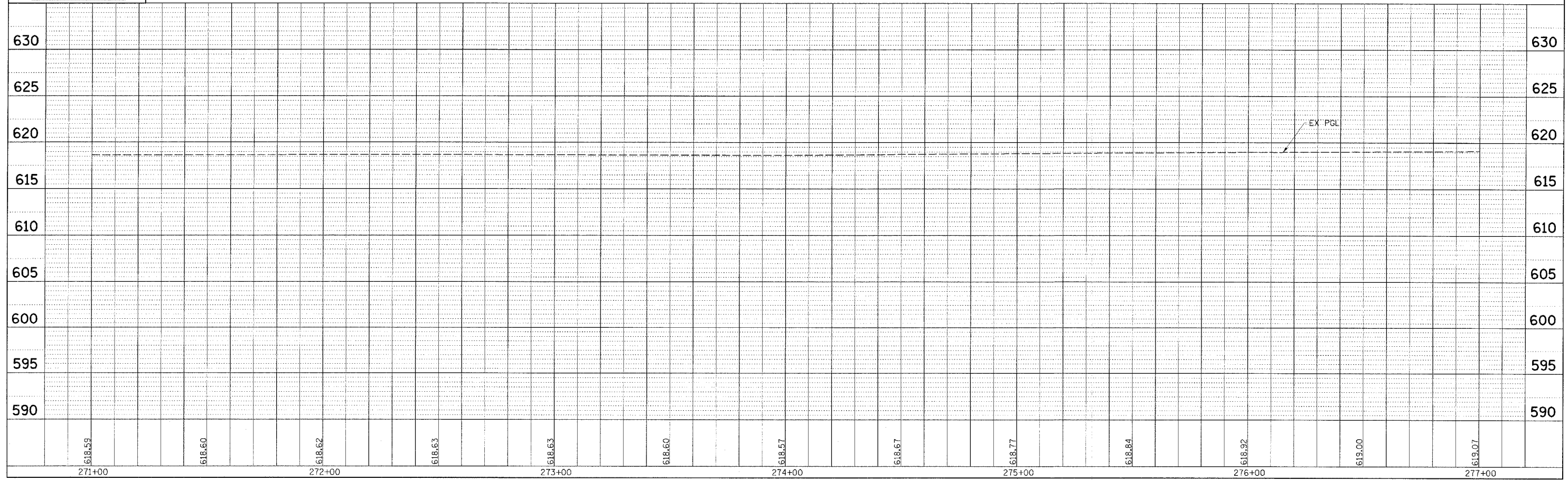


MATCH LINE - STA 277+00

CENTERLINE TIE



SECTION 23, T30N, R3E, 3RD P.M.



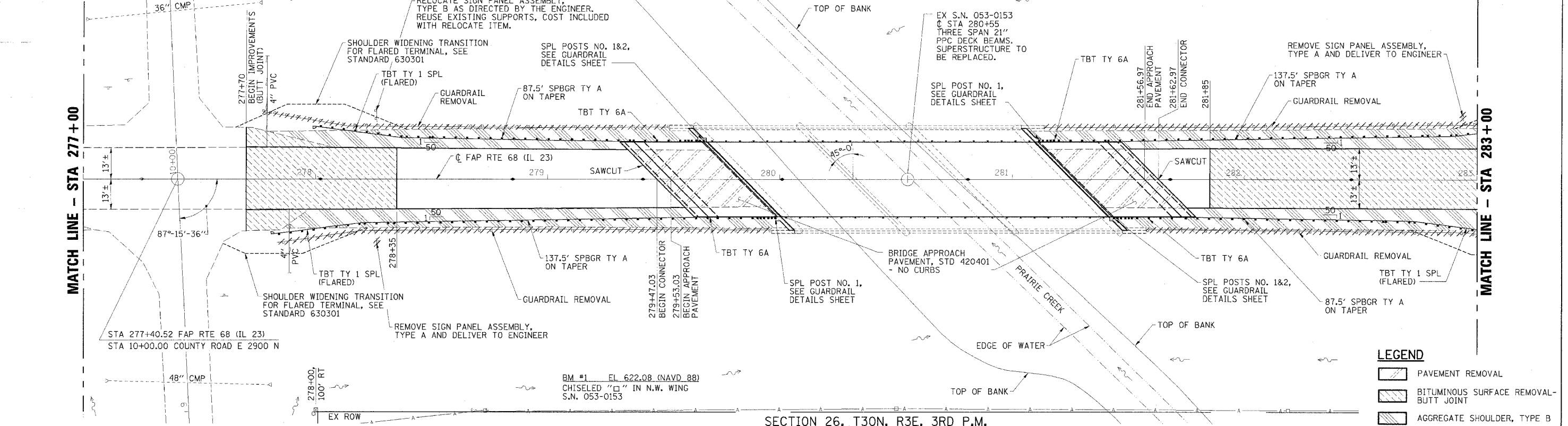
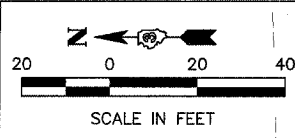
FAP RTE 68 (IL 23) PLAN & PROFILE
STA 271+00 TO STA 277+00

PLAN
DATE: _____ BY: _____
DESIGNED BY: _____
CHECKED BY: _____
DATE: _____ BY: _____
NOTE BOOK NO.: _____
DRAWN BY: _____
DATE: _____ BY: _____
CHECKED BY: _____
DATE: _____ BY: _____

PROFILE
DATE: _____ BY: _____
DESIGNED BY: _____
CHECKED BY: _____
DATE: _____ BY: _____
NOTE BOOK NO.: _____
DRAWN BY: _____
DATE: _____ BY: _____
CHECKED BY: _____
DATE: _____ BY: _____

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	7
STA. 277+00		TO STA. 283+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

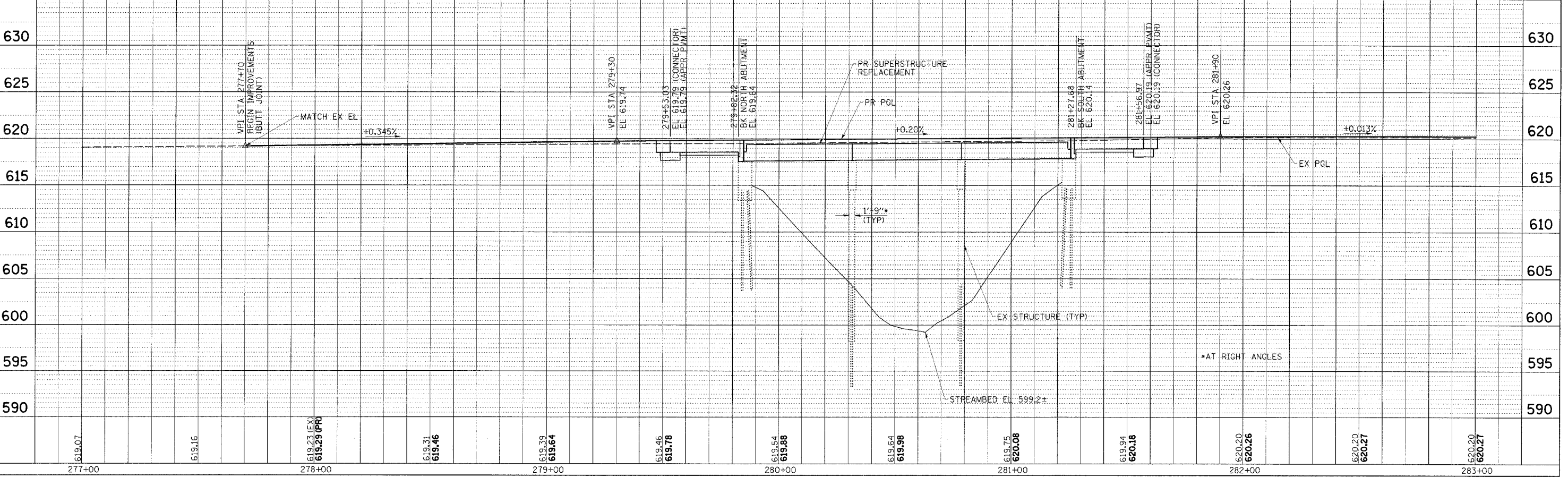
SECTION 25, T30N, R3E, 3RD P.M.



LEGEND

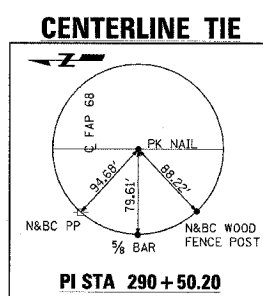
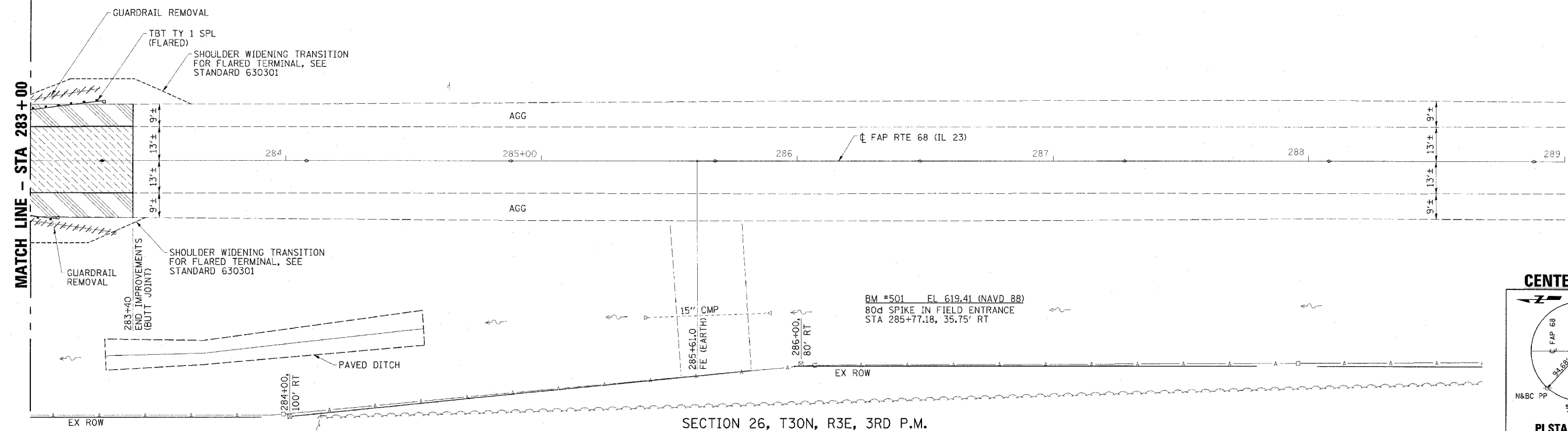
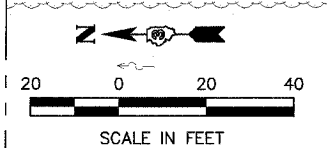
- PAVEMENT REMOVAL
- BITUMINOUS SURFACE REMOVAL-BUTT JOINT
- AGGREGATE SHOULDER, TYPE B

SECTION 26, T30N, R3E, 3RD P.M.

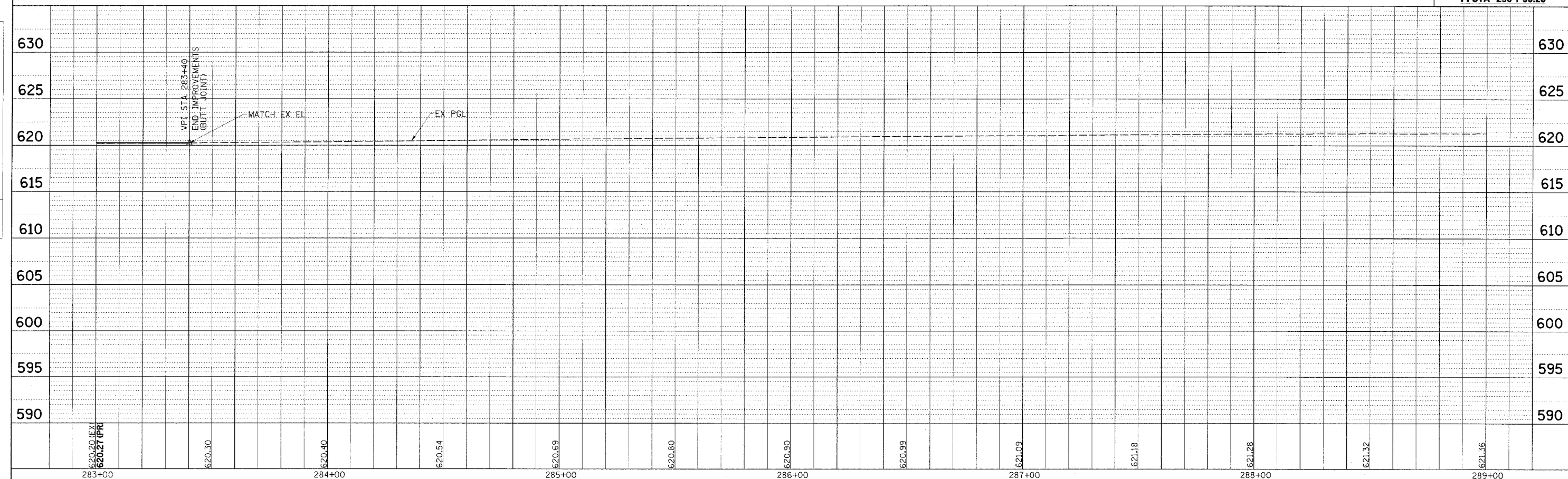


FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	8
STA. 283+00		TO STA. 289+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SECTION 25, T30N, R3E, 3RD P.M.



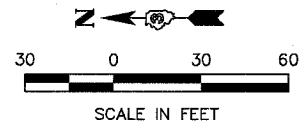
SECTION 26, T30N, R3E, 3RD P.M.



DATE: _____ BY: _____
 SURVEYED: _____
 PLOTTED: _____
 CHECKED: _____
 NOTE BOOK NO. _____
 CAD FILE NAME: _____

DATE: _____ BY: _____
 SURVEYED: _____
 PLOTTED: _____
 CHECKED: _____
 NOTE BOOK NO. _____
 STRUCTURE NOTATIONS: DRWD

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	9
STA. 275+00		TO STA. 285+50		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

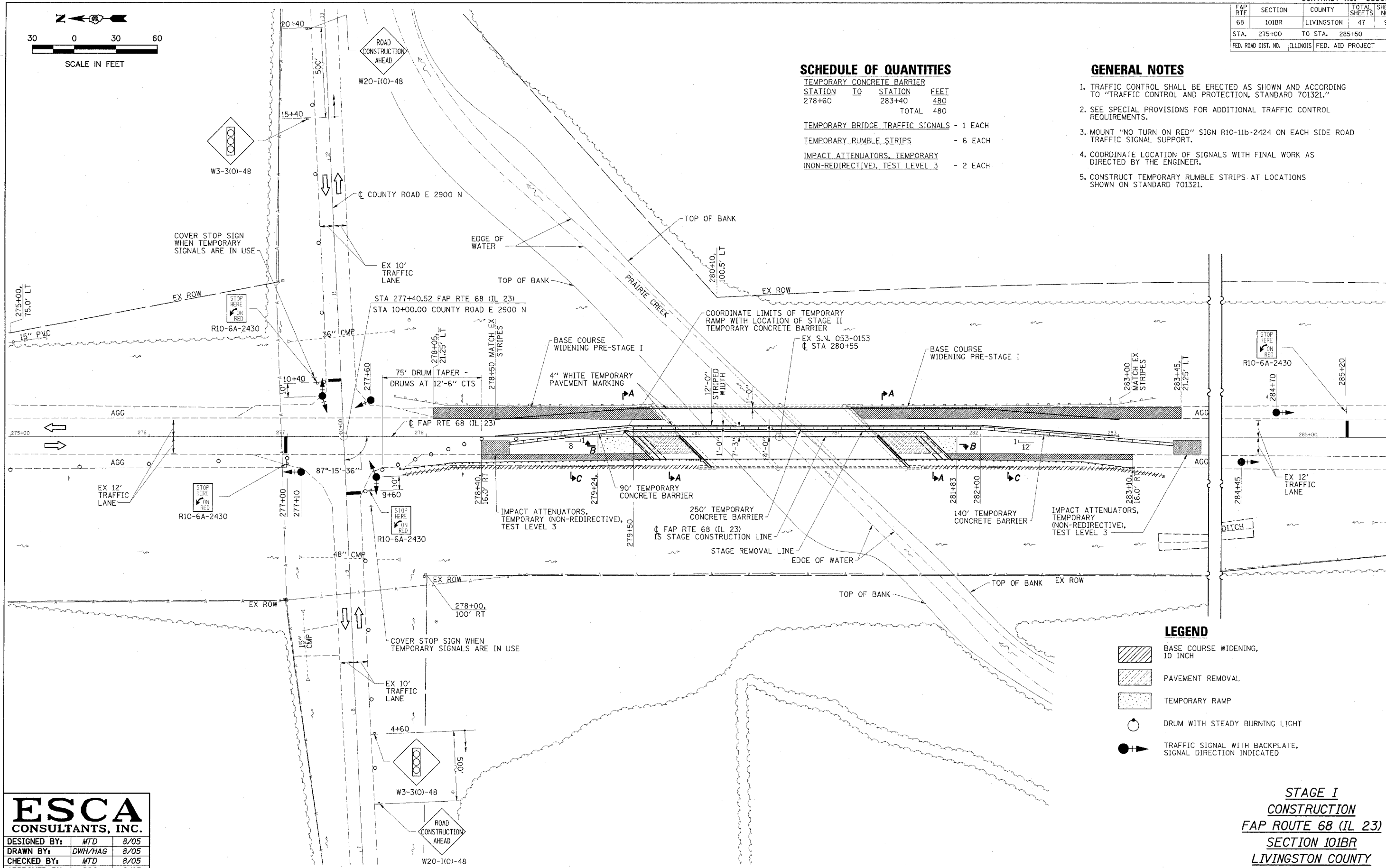


SCHEDULE OF QUANTITIES

TEMPORARY CONCRETE BARRIER	STATION TO	STATION	FEET
	278+60	283+40	480
			TOTAL 480
TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH			
TEMPORARY RUMBLE STRIPS - 6 EACH			
IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH			

GENERAL NOTES

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. MOUNT "NO TURN ON RED" SIGN R10-11b-2424 ON EACH SIDE ROAD TRAFFIC SIGNAL SUPPORT.
4. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
5. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.



LEGEND

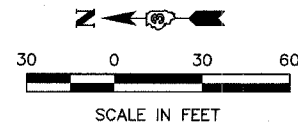
- BASE COURSE WIDENING, 10 INCH
- PAVEMENT REMOVAL
- TEMPORARY RAMP
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL WITH BACKPLATE, SIGNAL DIRECTION INDICATED

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	8/05
DRAWN BY:	DWH/HAG	8/05
CHECKED BY:	MTD	8/05
APPROVED BY:	RDP	9/05

STAGE I
CONSTRUCTION
FAP ROUTE 68 (IL 23)
SECTION 101BR
LIVINGSTON COUNTY

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	10
STA. 276+75		TO STA. 287+25		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



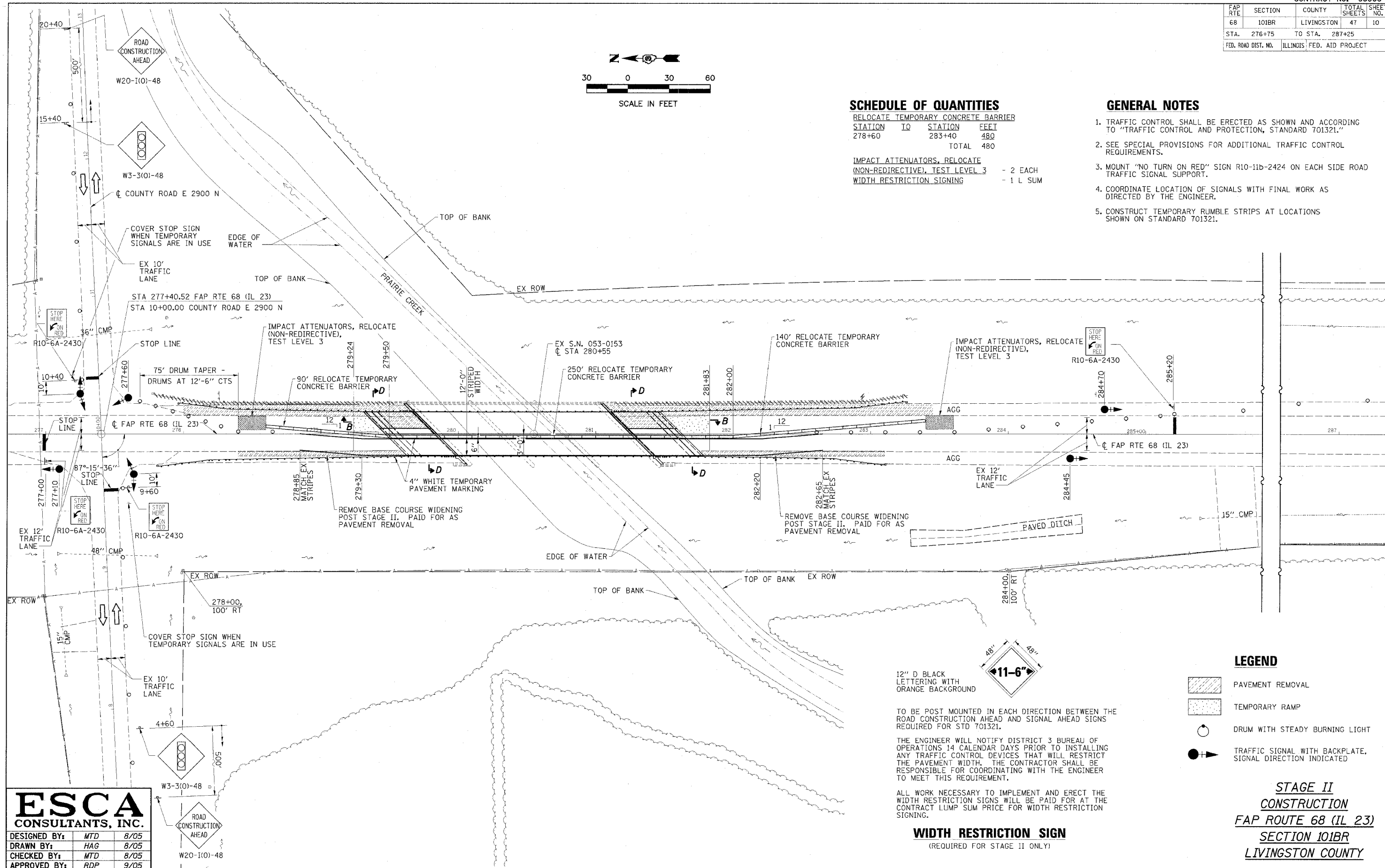
SCHEDULE OF QUANTITIES

RELOCATE TEMPORARY CONCRETE BARRIER	STATION TO	STATION	FEET
	278+60	283+40	480
			TOTAL 480

IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	QUANTITY
	- 2 EACH
WIDTH RESTRICTION SIGNING	QUANTITY
	- 1 L SUM

GENERAL NOTES

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. MOUNT "NO TURN ON RED" SIGN R10-11b-2424 ON EACH SIDE ROAD TRAFFIC SIGNAL SUPPORT.
4. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
5. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.



12" D BLACK LETTERING WITH ORANGE BACKGROUND

TO BE POST MOUNTED IN EACH DIRECTION BETWEEN THE ROAD CONSTRUCTION AHEAD AND SIGNAL AHEAD SIGNS REQUIRED FOR STD 701321.

THE ENGINEER WILL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO INSTALLING ANY TRAFFIC CONTROL DEVICES THAT WILL RESTRICT THE PAVEMENT WIDTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THIS REQUIREMENT.

ALL WORK NECESSARY TO IMPLEMENT AND ERECT THE WIDTH RESTRICTION SIGNS WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.

WIDTH RESTRICTION SIGN
(REQUIRED FOR STAGE II ONLY)

LEGEND

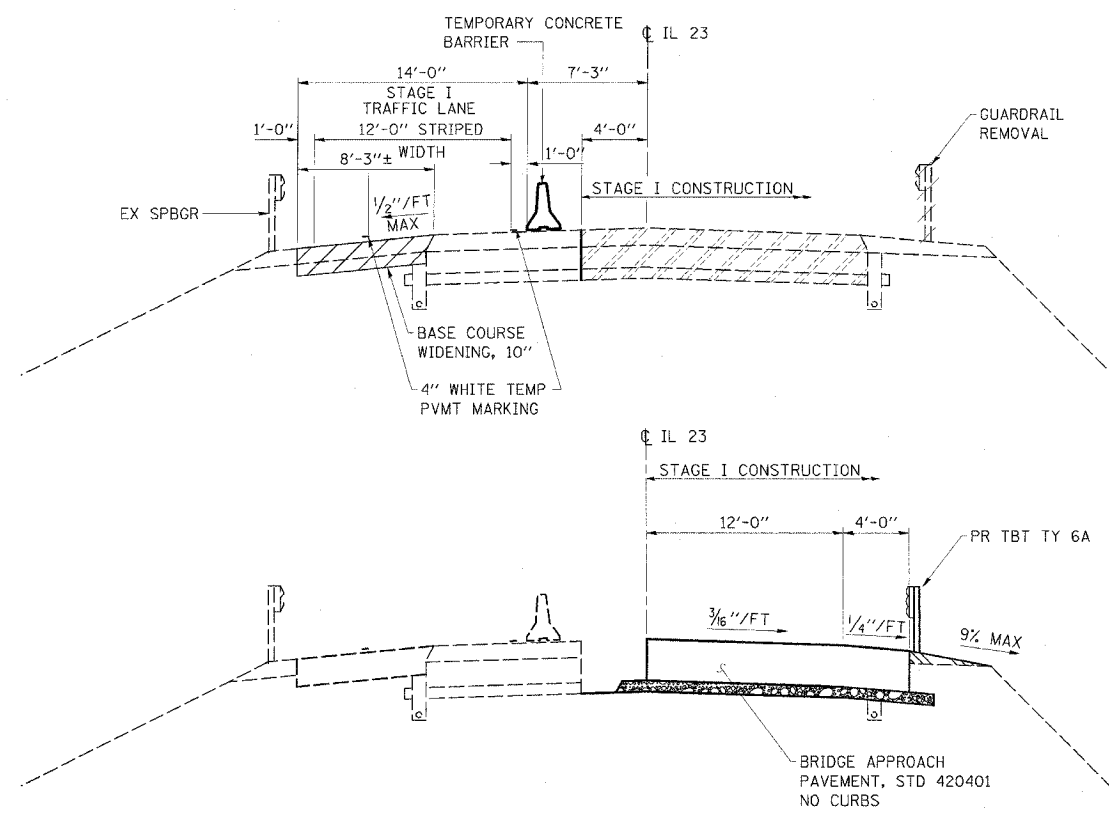
- PAVEMENT REMOVAL
- TEMPORARY RAMP
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL WITH BACKPLATE, SIGNAL DIRECTION INDICATED

STAGE II CONSTRUCTION
FAP ROUTE 68 (IL 23)
SECTION 101BR
LIVINGSTON COUNTY

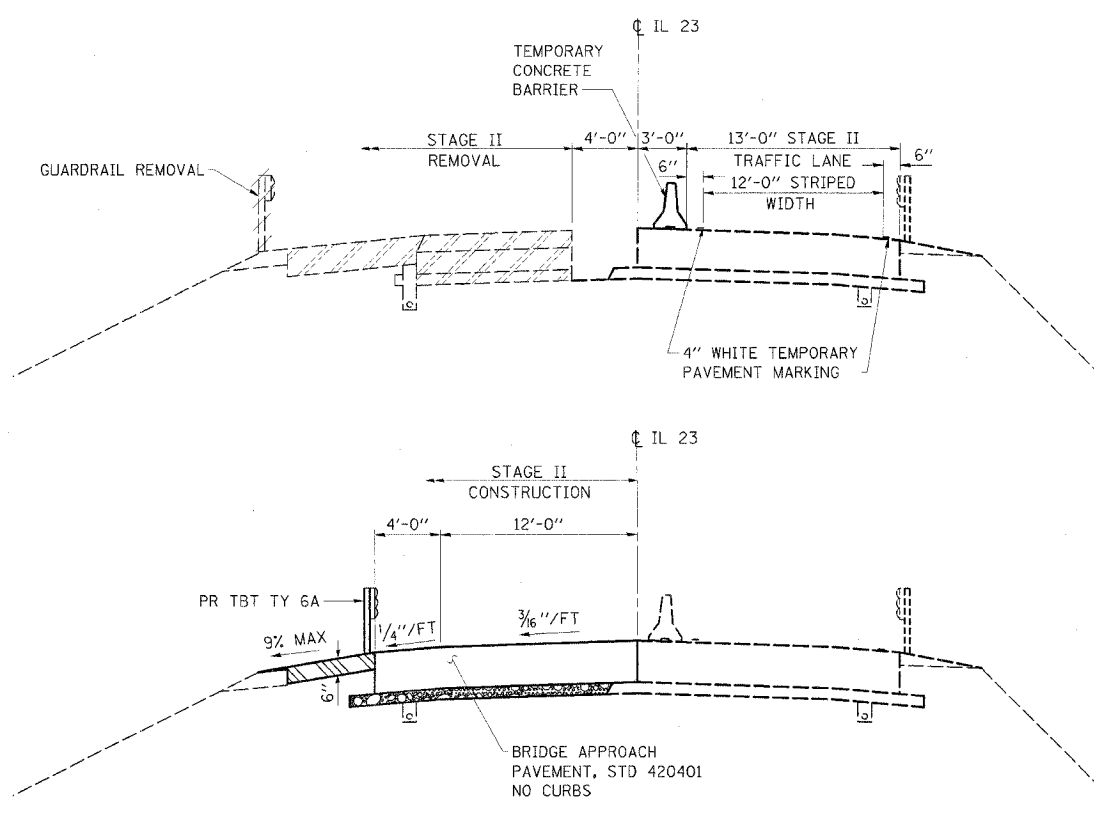
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CONSULTANTS, INC.

DESIGNED BY:	MTD	8/05
DRAWN BY:	HAG	8/05
CHECKED BY:	MTD	8/05
APPROVED BY:	RDP	9/05

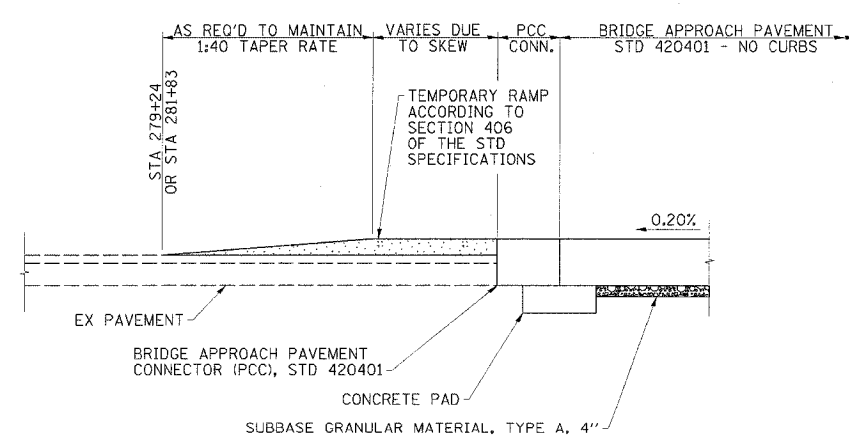
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	11
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



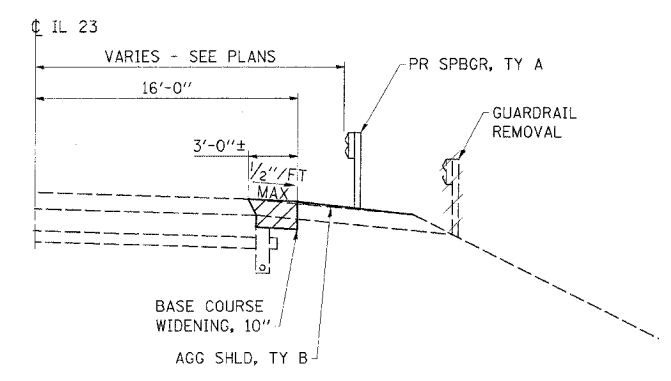
SECTION A-A



SECTION D-D



SECTION B



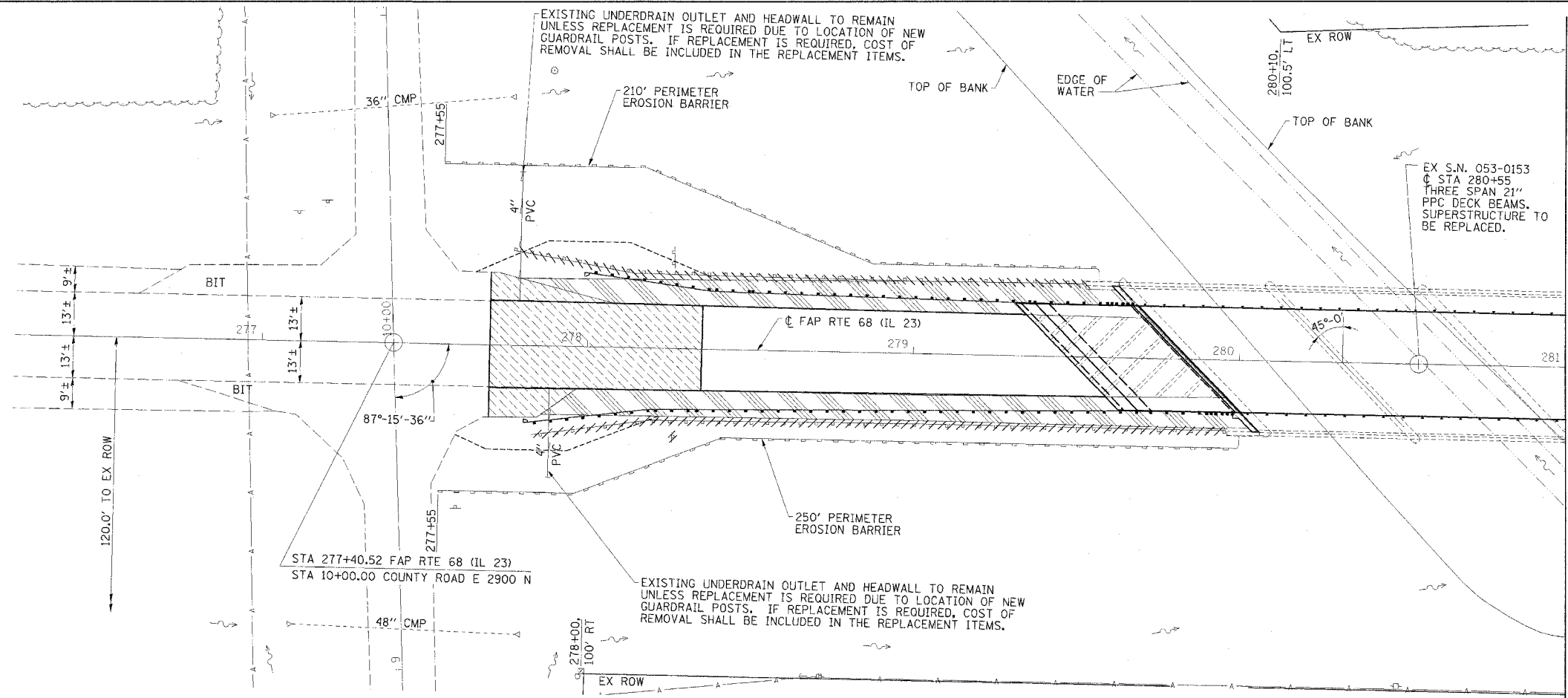
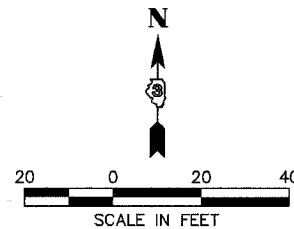
SECTION C

ESCA
CONSULTANTS, INC.

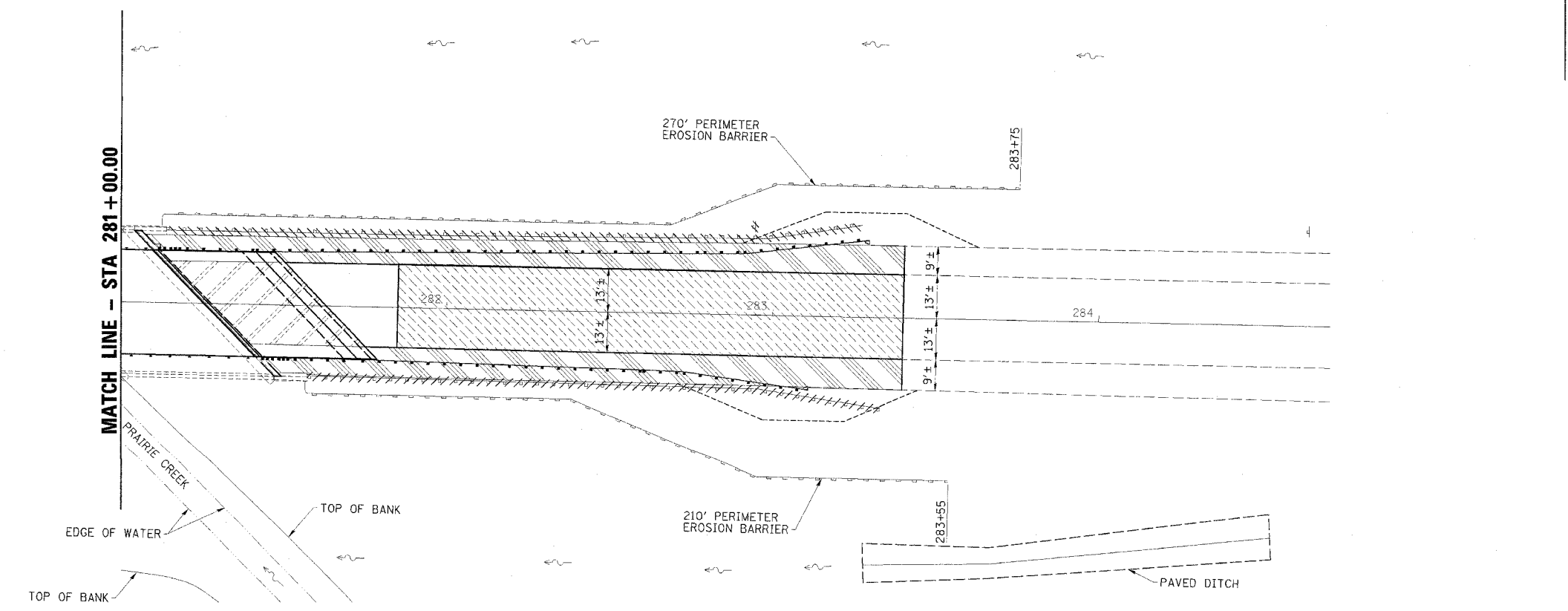
DESIGNED BY:	MTD	8/05
DRAWN BY:	HAG	9/05
CHECKED BY:	MTD	9/05
APPROVED BY:	RDP	9/05

STAGE CONSTRUCTION DETAILS
FAP RTE 68 (IL 23)
SECTION 101BR
LIVINGSTON COUNTY

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	12
STA. 277+00		TO STA. 284+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



MATCH LINE - STA 281 + 00.00



LEGEND

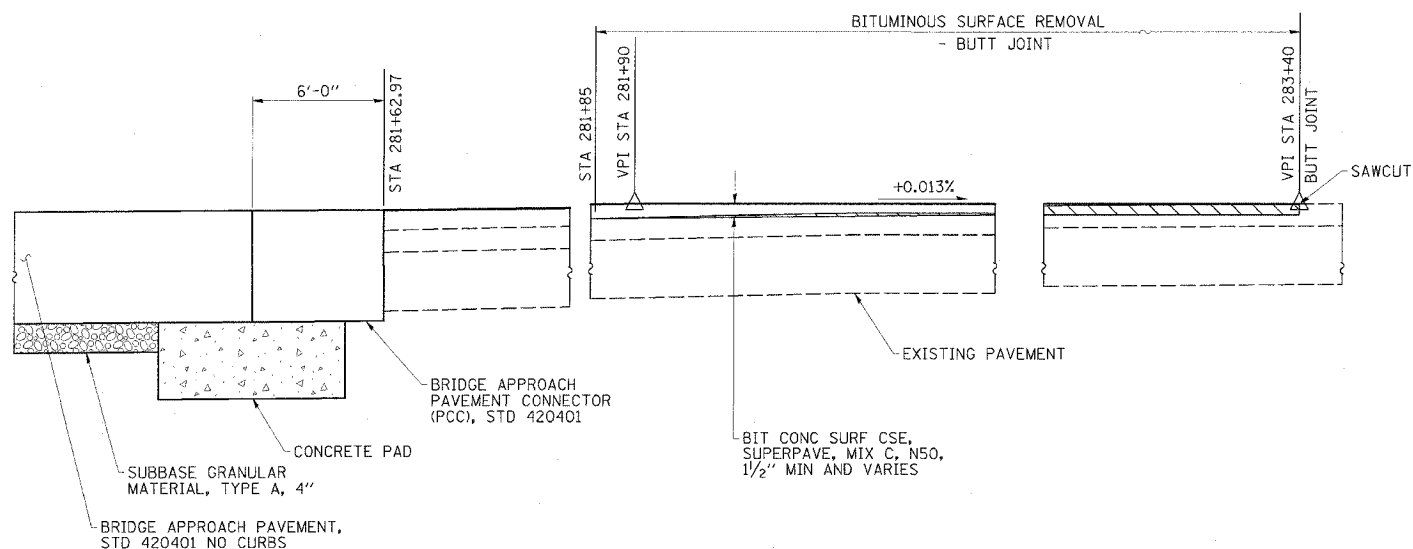
- PERIMETER EROSION BARRIER
- EXISTING DITCH FLOW

ESCA
CONSULTANTS, INC.

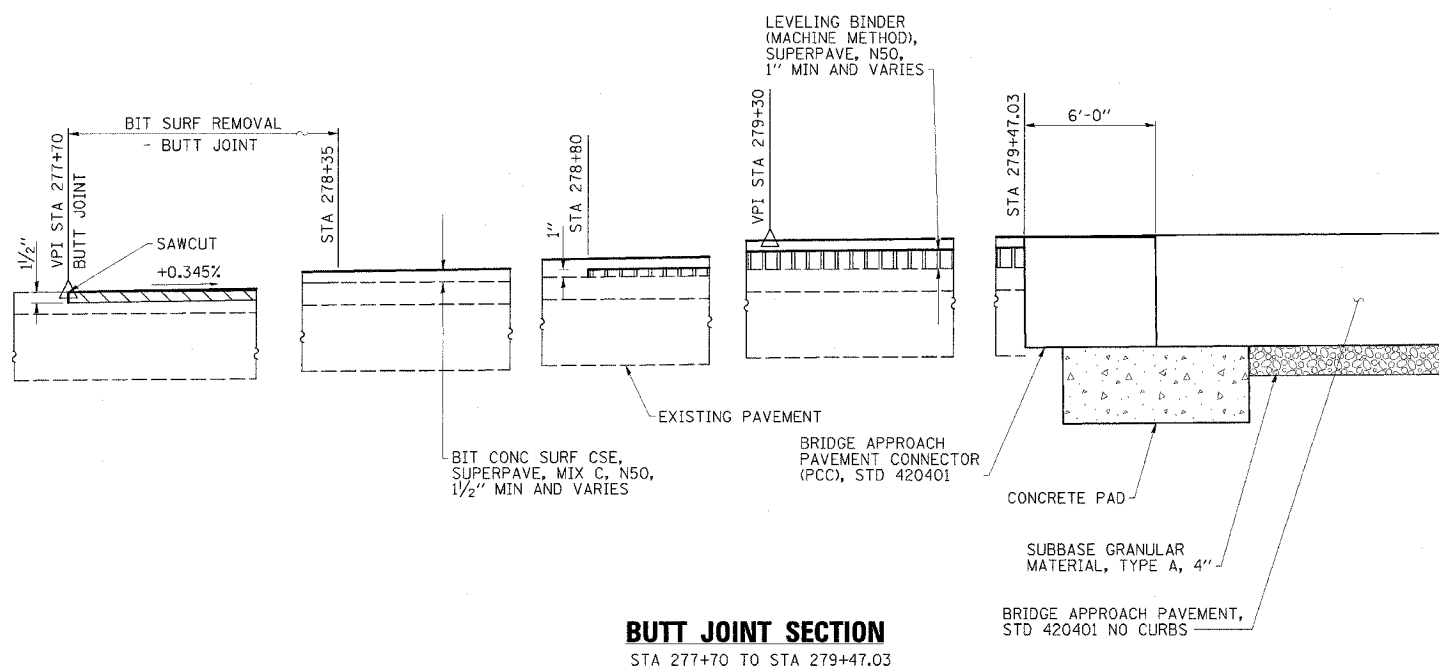
DESIGNED BY:	MTD	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	MTD	8/05
APPROVED BY:	RDP	9/05

**EROSION CONTROL
AND DRAINAGE PLAN
FAP RTE 68 (IL 23)
SECTION 101BR
LIVINGSTON COUNTY**

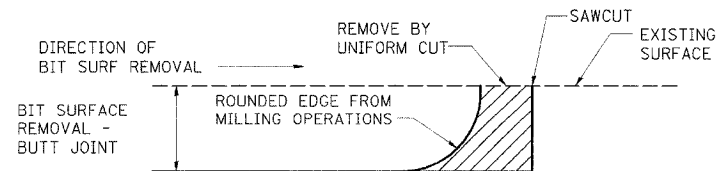
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	13
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



BUTT JOINT SECTION
STA 281+62.97 TO STA 283+40



BUTT JOINT SECTION
STA 277+70 TO STA 279+47.03

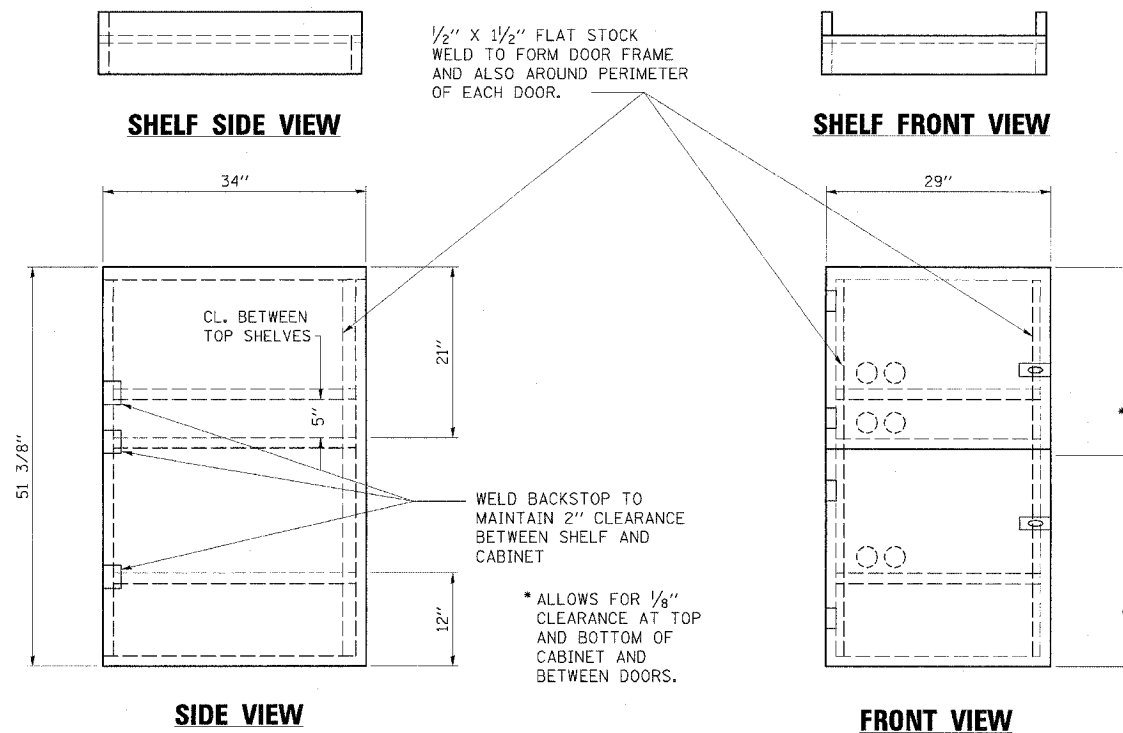


DETAIL AT BUTT JOINT

NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAWCUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE COST OF ALL WORK SHOWN IN THE DETAIL IS INCLUDED IN BITUMINOUS SURFACE REMOVAL - BUTT JOINT. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.

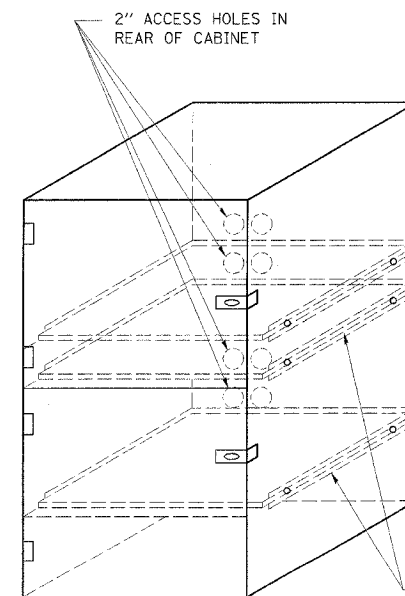
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CONSULTANTS, INC.

DESIGNED BY:	MTD	8/05
DRAWN BY:	HAG	8/05
CHECKED BY:	MTD	8/05
APPROVED BY:	RDP	9/05



- NOTES:
1. USE 16 GAUGE STEEL FOR CABINET.
 2. THE TOP SHELF SHALL SLIDE IN OR OUT WITH THE TOP DOOR OPEN.
 3. ALL HINGES AND HASPS WILL BE WELDED TO THE CABINET.
 4. ALL EDGES SHALL BE GROUND SMOOTH.
 5. TWO (2" DIA.) ACCESS HOLES WILL BE REQUIRED FOR EACH SHELF.
 6. CABINET SHALL BE PAINTED WITH TWO COATS OF FLAT PAINT.
 7. 2 EACH MATCHING KEY PADLOCKS, WITH 3 KEYS PROVIDED, MASTER MODEL 3 T OR EQUIVALENT.
 8. 4 EACH PLAIN STEEL, NON-REMOVABLE PIN, NO HOLE 4"X4" SQUARE CORNER HINGES TO BE WELDED ON.
 9. 2 EACH EXTRA HEAVY, PLAIN STEEL, FIXED STAPLE, NO HOLE, 7 1/4 " HASPS TO BE WELDED ON.

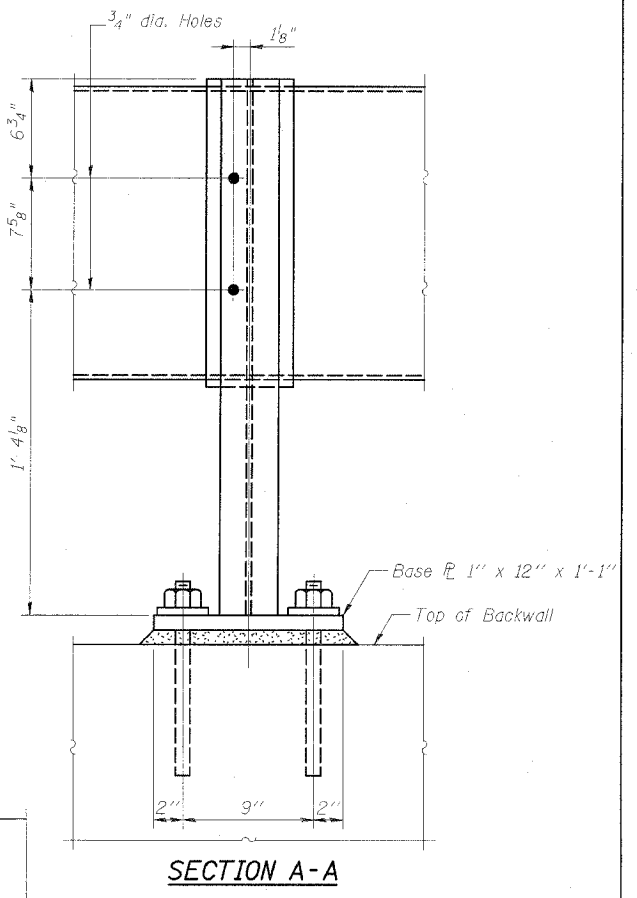
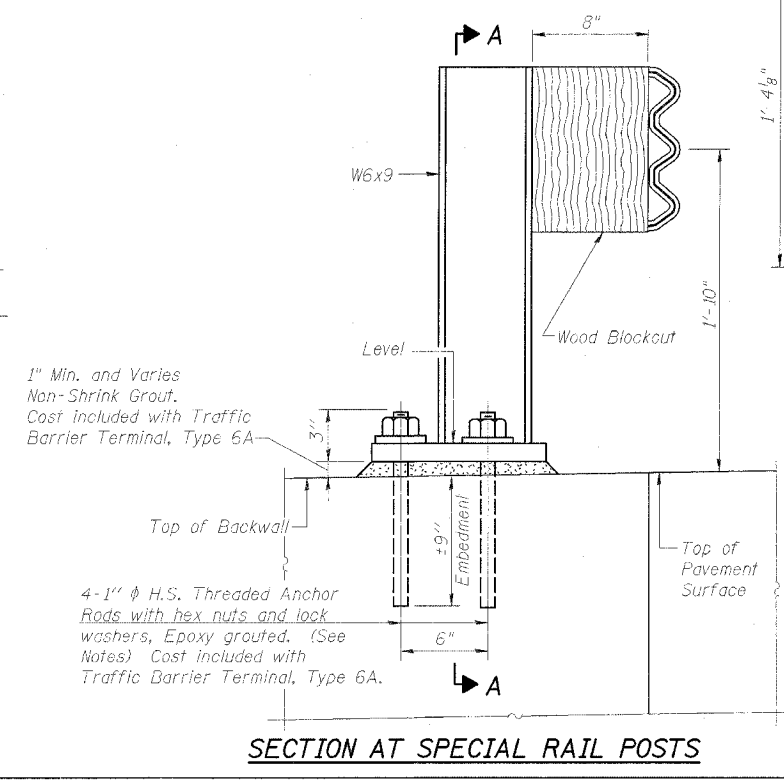
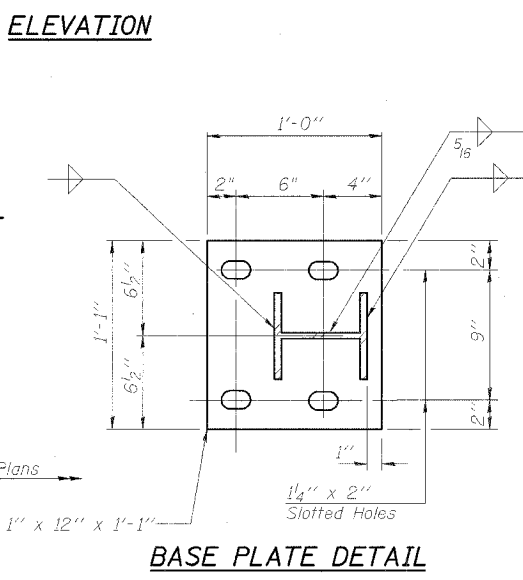
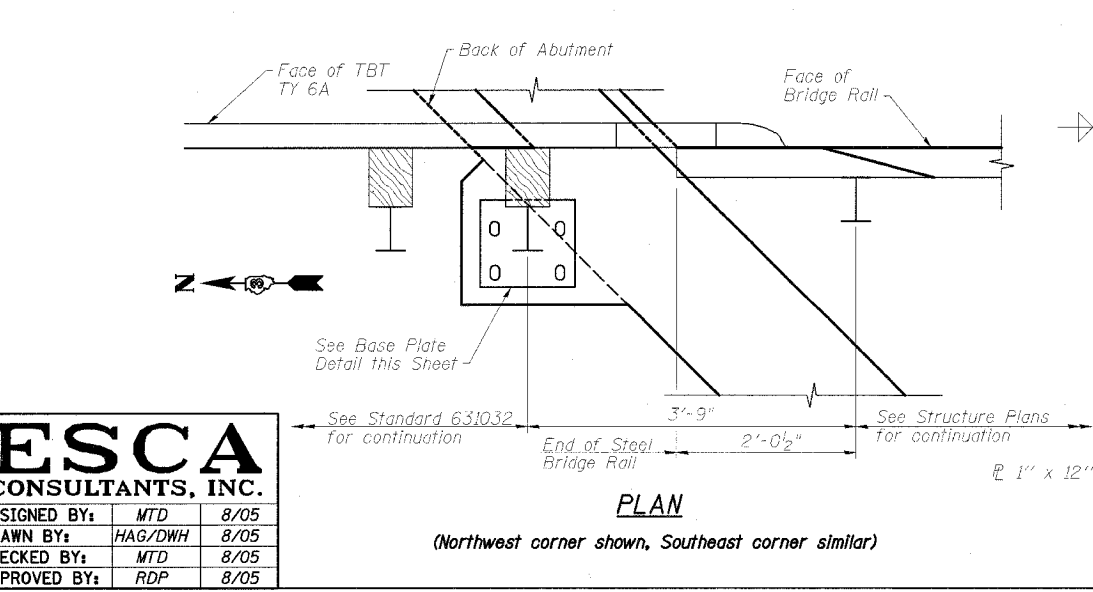
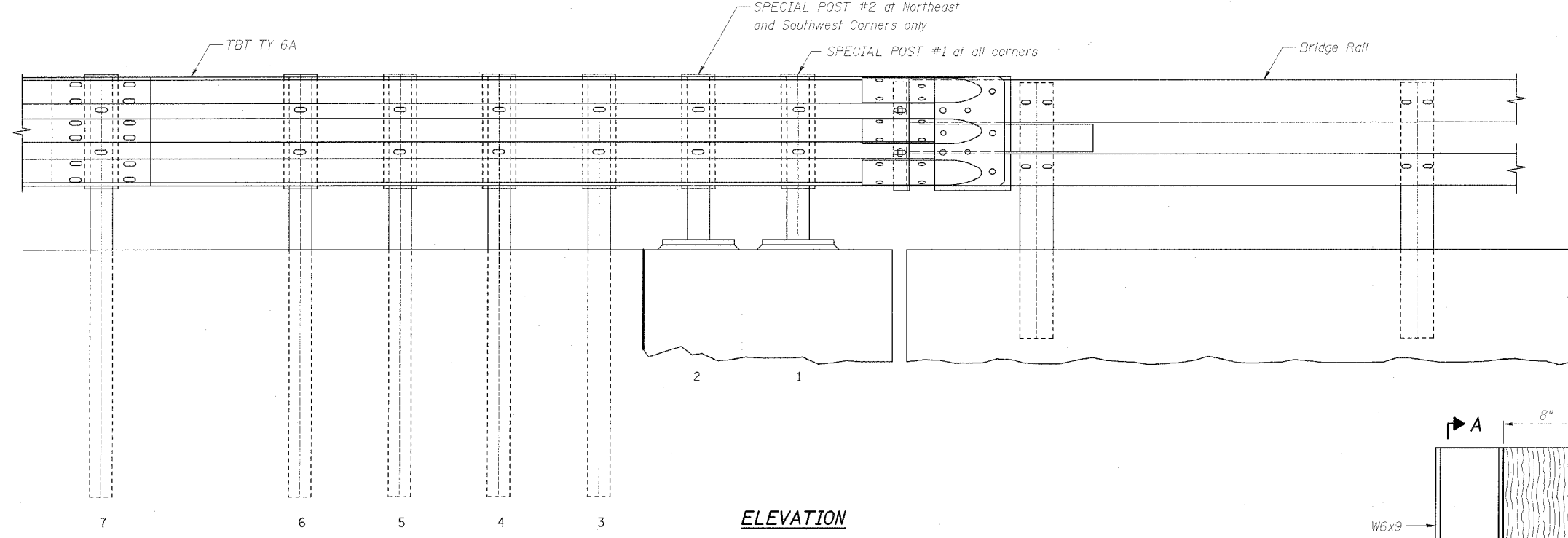
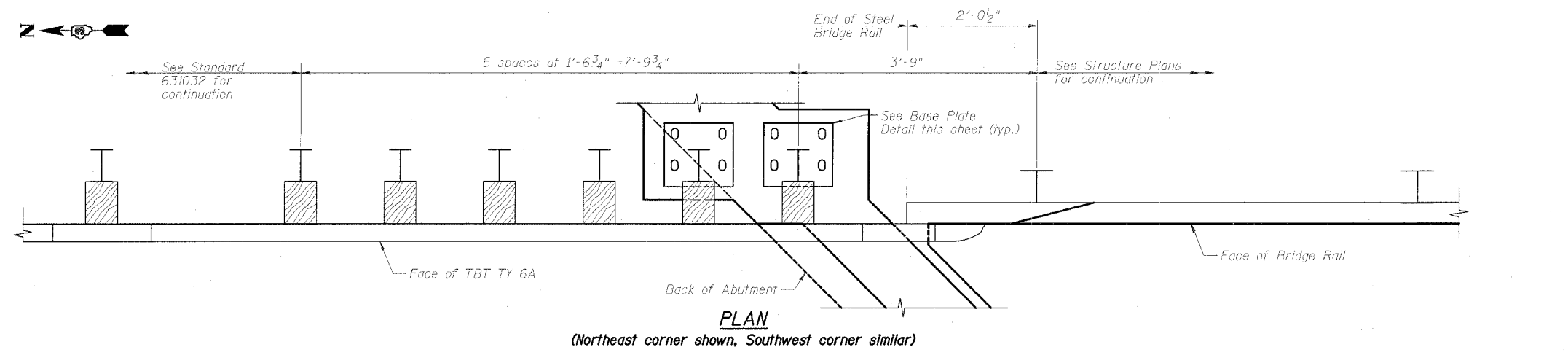
LOCKABLE COMPUTER CABINET



FLAT STOCK DIMENSIONS VARY DEPENDING ON TYPE OF ROLLER ASSEMBLY

MISCELLANEOUS DETAILS
FAP RTE 68 (IL 23)
SECTION 101BR
LIVINGSTON COUNTY

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	14
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



NOTES

1. Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A 307 except that threaded rods, nuts and washers shall conform to AASHTO M 164.
2. All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
3. All posts, railing, rail splices and anchor rods shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
4. The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.
5. Nuts for 1" phi threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional 1/8 turn.
6. See Standard 631032 for details of Traffic Barrier Terminal, Type 6A not shown. All material and work associated with the fabrication and installation of the special rail posts shall be included with the cost of Traffic Barrier Terminal, Type 6A.

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	8/05
DRAWN BY:	HAG/DWH	8/05
CHECKED BY:	MTD	8/05
APPROVED BY:	RDP	8/05

GUARDRAIL DETAILS
FAP RTE 68 (IL 23)
SECTION 101BR
LIVINGSTON COUNTY

BENCHMARK: Chiseled "Square" on top of Northwest Wingwall, SN 053-0153
Elev. 622.08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE: SN 053-0153 was originally built in 1982. The superstructure consists of 3 simple spans of 21" PPC deck beams on pile bent abutments and piers. The back-to-back abutments dimension measures 145'-4 1/4" while the out-to-out width measures 46'-0". The existing superstructure shall be removed and replaced utilizing stage construction.

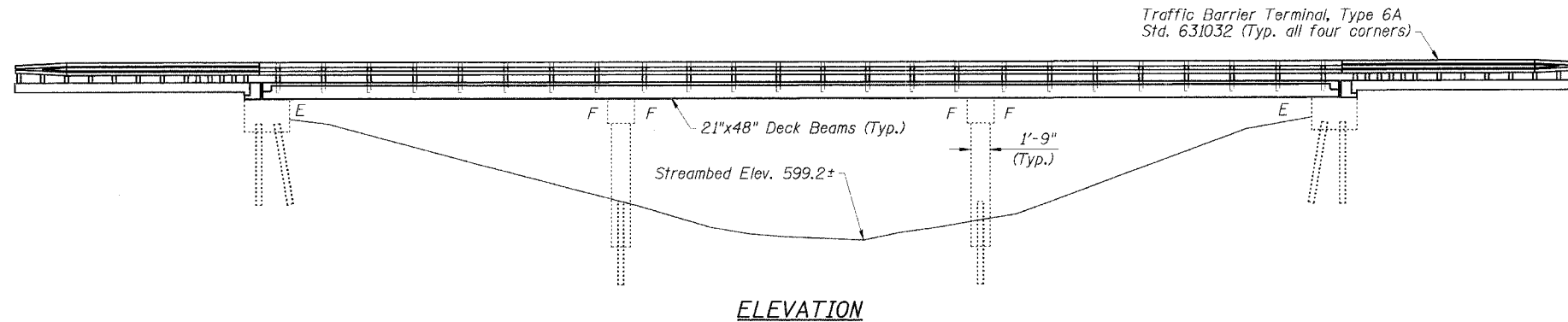
No salvage

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
DWG. NO. 1 OF 17				

CONTRACT NO. 66606

STRUCTURE INDEX OF SHEETS

General Plan	Dwg. No. 1 of 17
General Data	Dwg. No. 2 of 17
Stage Construction Details	Dwg. No. 3 of 17
Temporary Concrete Barrier	Dwg. No. 4 of 17
Superstructure	Dwg. No. 5 of 17
Superstructure Details	Dwg. No. 6-7 of 17
Type SM Steel Bridge Rail	Dwg. No. 8 of 17
Continuous Seal Type	
Neoprene Expansion Joints	Dwg. No. 9 of 17
Anchor Bolt Details	Dwg. No. 10 of 17
North Abutment	Dwg. No. 11 of 17
South Abutment	Dwg. No. 12 of 17
Abutment Details	Dwg. No. 13 of 17
Pier 1	Dwg. No. 14 of 17
Pier 2	Dwg. No. 15 of 17
Pier Details	Dwg. No. 16 of 17
Bar Splicer Assembly Details	Dwg. No. 17 of 17



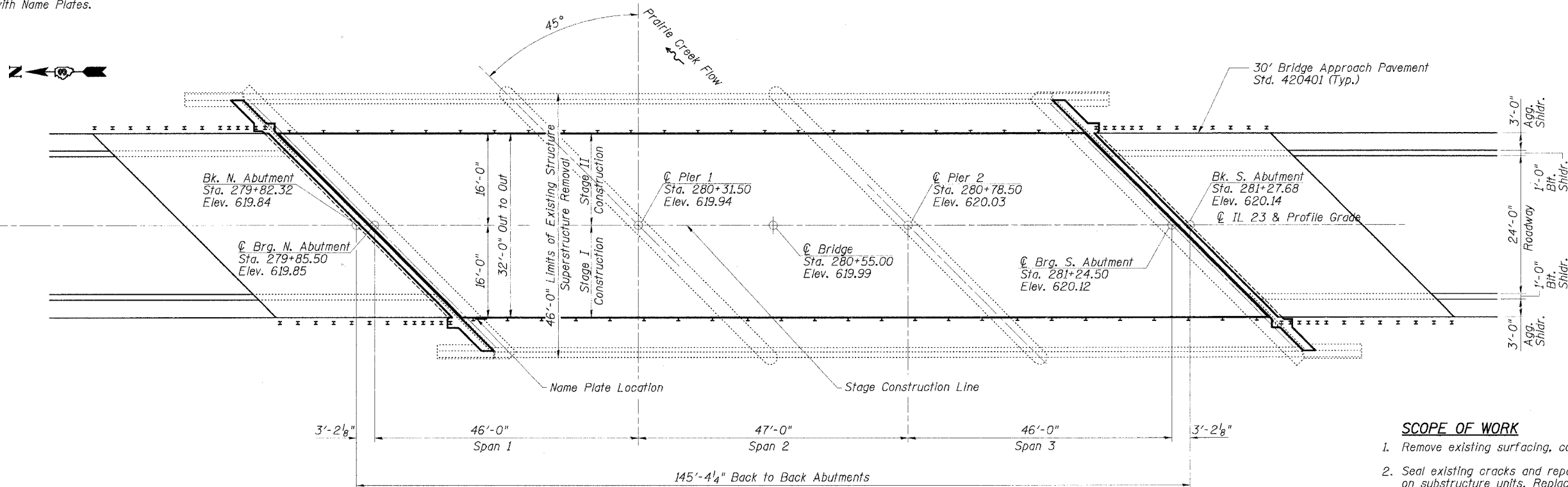
STATION 280+55
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RT. 68 SEC. 101BR
LOADING HS20
STR. NO. 053-0153

NAME PLATE

See Std. 515001

Note:
Existing Name Plate shall be cleaned and relocated adjacent to the new plate. Cost included with Name Plates.

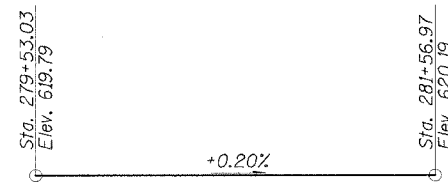
ELEVATION



PLAN

SCOPE OF WORK

1. Remove existing surfacing, concrete parapets, and deck beams.
2. Seal existing cracks and repair delaminated/spalled concrete areas on substructure units. Replace existing abutment backwalls.
3. Repair beam bearing seats at abutments and piers as required.
4. Reconstruct a three-span PPCD beam superstructure with concrete wearing surface and Steel Bridge Rail Type SM, and new bridge approach pavements.



PROFILE GRADE
(Along C Roadway)

DESIGN SPECIFICATION

2002 AASHTO

LOADING HS20-44

Allow 50 psf future wearing surface

DESIGN STRESSES

FIELD UNITS

f'c = 5,000 psi (Concrete Wearing Surface)
f'c = 3,500 psi (All concrete except CWS)
fy = 60,000 psi (reinf.)

PRECAST PRESTRESSED UNITS

f'c = 5,000 psi
f'cl = 4,000 psi
f's = 270,000 psi (1/2" low lax strands)
f'sl = 201,960 psi (1/2" low lax strands)

SEISMIC DATA

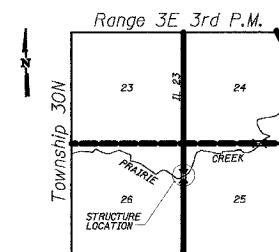
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.045g
Site Coefficient (S) = 1.2



EXPIRES 11-30-06

SIGNATURE
Richard D. Payne

DATE
12/21/05



LOCATION SKETCH

GENERAL PLAN
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	12/05
APPROVED BY:	RDP	12/05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	16
STA	TO STA			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DWG. NO. 2 OF 17
CONTRACT NO. 66606

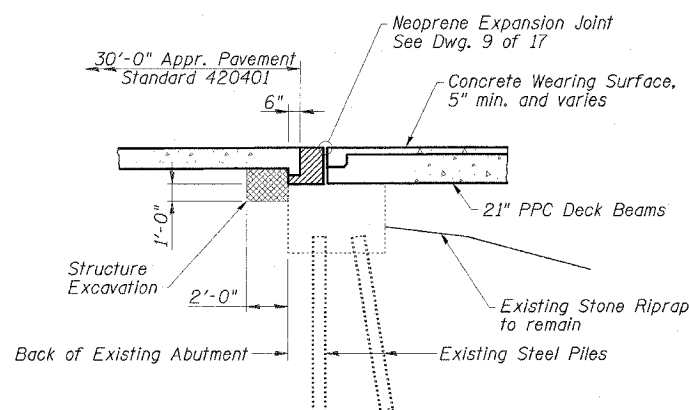
GENERAL NOTES

- Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
- All construction joints shall be bonded.
- Bridge Seat Sealer shall be applied to abutment bearing seats where formed concrete repairs are performed.
- All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300 Type 1 unless noted otherwise.
- Side retainers shall be AASHTO M270 Grade 36 minimum.
- No work will be allowed in the stream.
- 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 for removal and replacement of the superstructure.
- If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new 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 new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under the crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams. This work shall be considered included in the cost of Precast Prestressed Concrete Deck Beams.

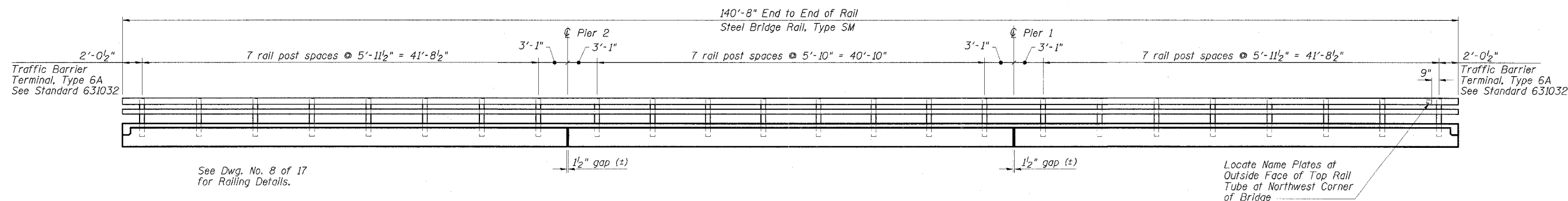
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.
- The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.
- Repair of the substructure shall be completed prior to placement of the new deck beams.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		11.8	11.8
Structure Excavation	Cu. Yd.		17.6	17.6
Concrete Structures	Cu. Yd.		14.0	14.0
Bridge Deck Grooving	Sq. Yd.	469		469
Concrete Wearing Surface, 5"	Sq. Yd.	500		500
Bridge Seat Sealer	Sq. Ft.		30	30
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.		238.4	238.4
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	4491		4491
Reinforcement Bars, Epoxy Coated	Pound	6840	1220	8060
Steel Bridge Rail, Type SM	Foot	282		282
Name Plates	Each	1		1
Epoxy Crack Sealing	Foot		430	430
Neoprene Expansion Joint 2"	Foot	92		92
Asbestos Bearing Pad Removal	Each		48	48
Bar Splicers	Each	147	78	225
Protective Coat	Sq. Yd.	500		500



SECTION THRU ABUTMENTS
(© Rt. Angles)



RAIL ELEVATION

(Showing Inside Face of West Railing;
East Railing Similar)

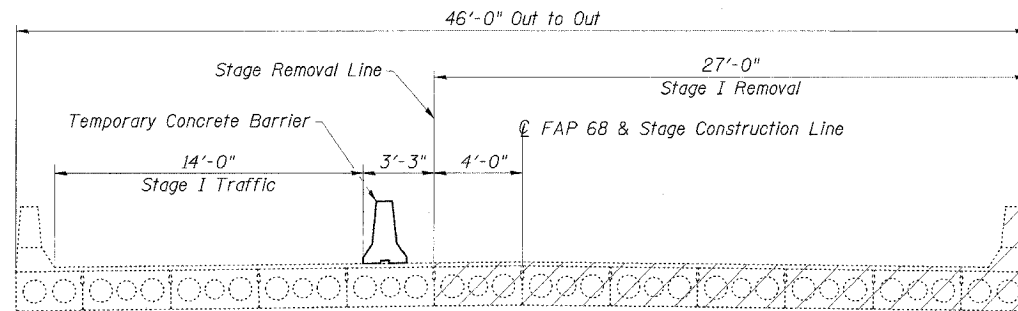
GENERAL DATA
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

ESCA
CONSULTANTS, INC.

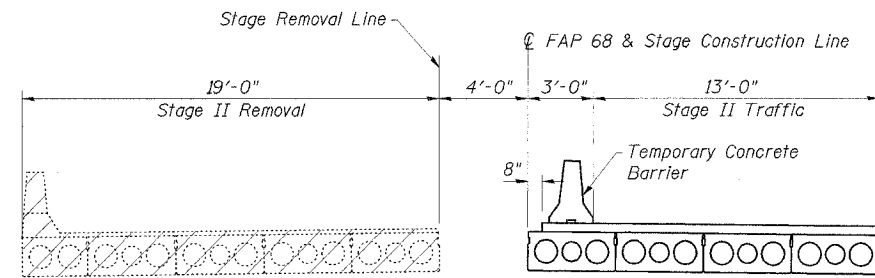
DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	12/05
APPROVED BY:	RDP	12/05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

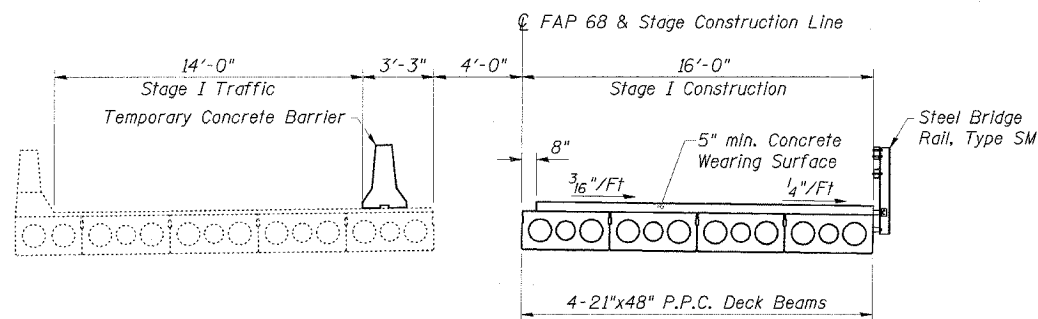
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
DWS. NO. 3 OF 17				
CONTRACT NO. 66606				



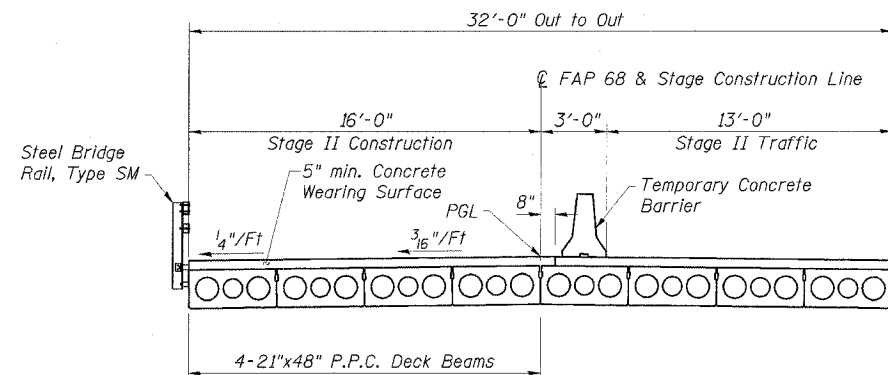
STAGE I REMOVAL



STAGE II REMOVAL



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION

STAGE CONSTRUCTION NOTES

1. All staging sections are looking South.
2. For quantity of Temporary Concrete Barrier, see roadway plans.
3. See Dwg. No. 5 of 17 for shear key clamping details.
4. See Dwg. No. 7 of 17 for temporary beam retainer details.

ESCA
CONSULTANTS, INC.

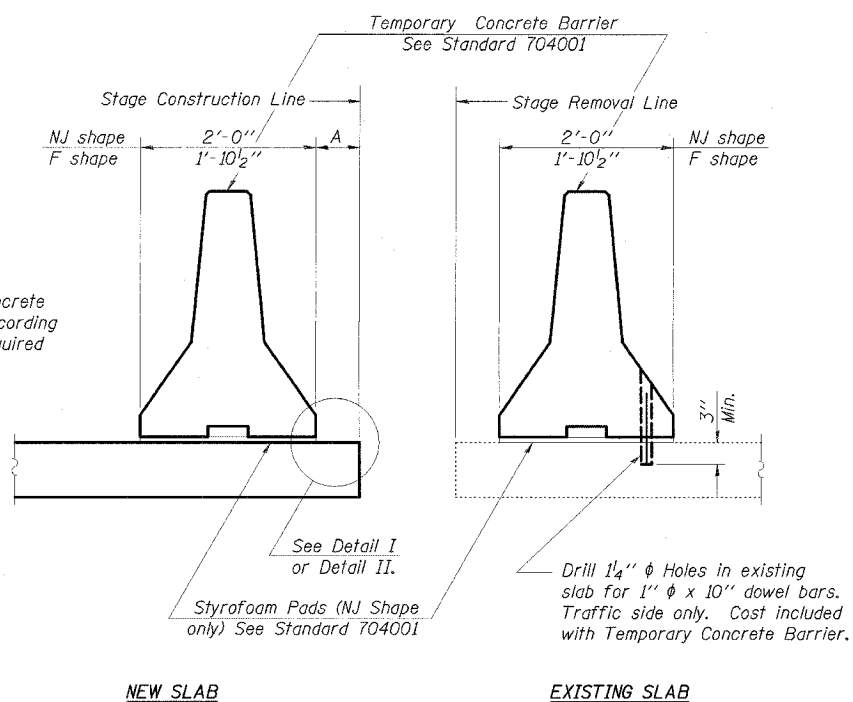
DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

STAGE CONSTRUCTION DETAILS
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILL. INDEX	FED. AID PROJECT		

DWG. NO. 4 OF 17
CONTRACT NO. 66606

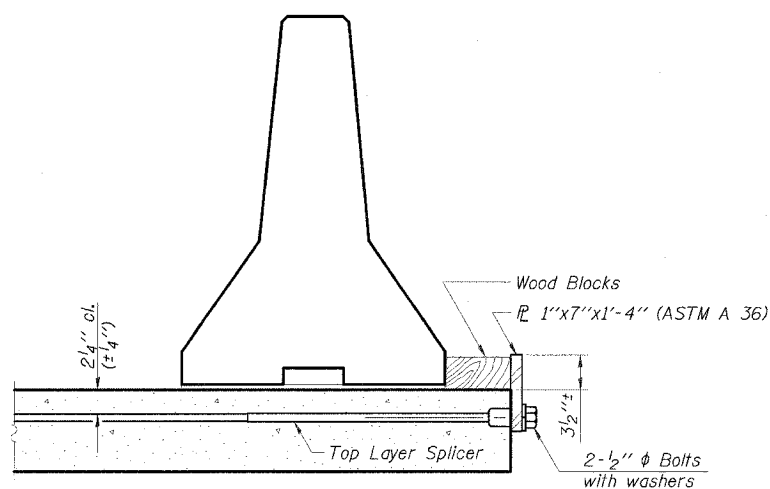


When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".

NOTES

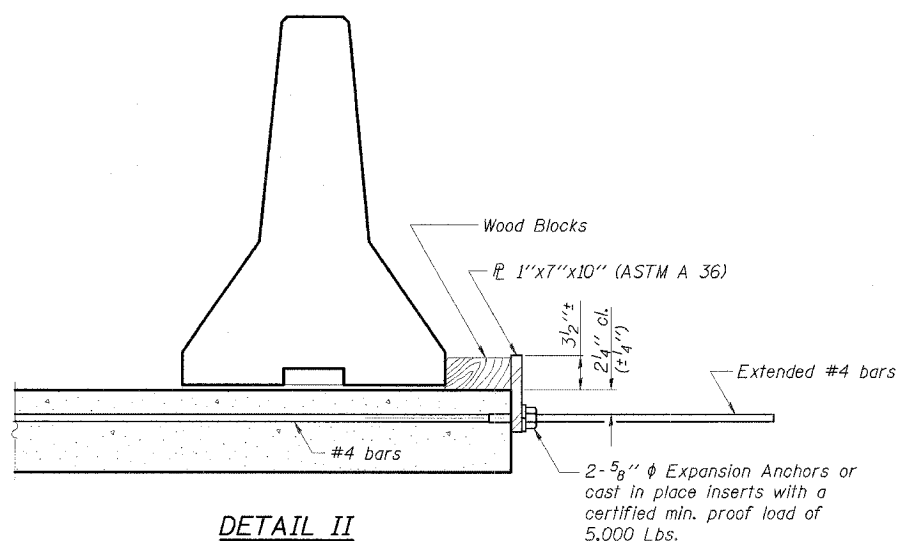
- Detail I - With Bar Splicer or Couplers:**
Connect one (1) 1"x7"x1'-4" steel \bar{P} to the top layer of couplers with 2-1/2" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:**
Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier.

SECTIONS THRU SLAB



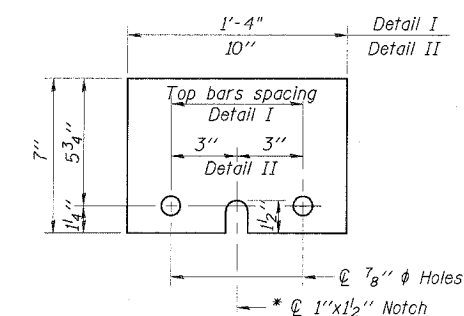
DETAIL I

The 1"x7"x1'-4" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" 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.



\bar{P} 1"x7"

* Required only with Detail II

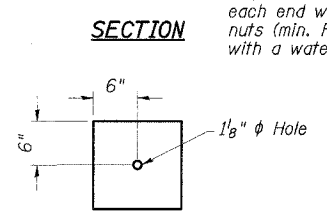
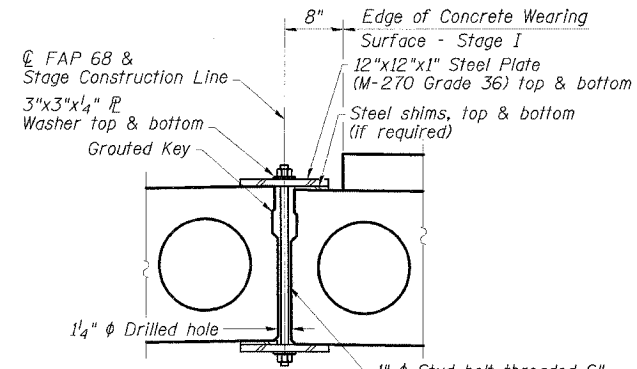
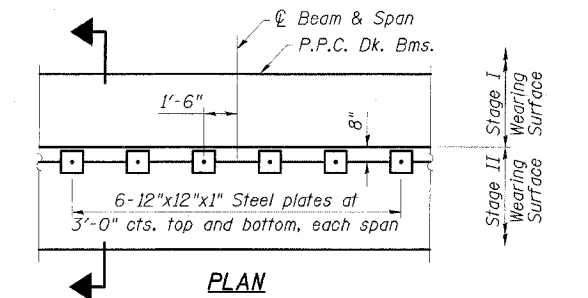
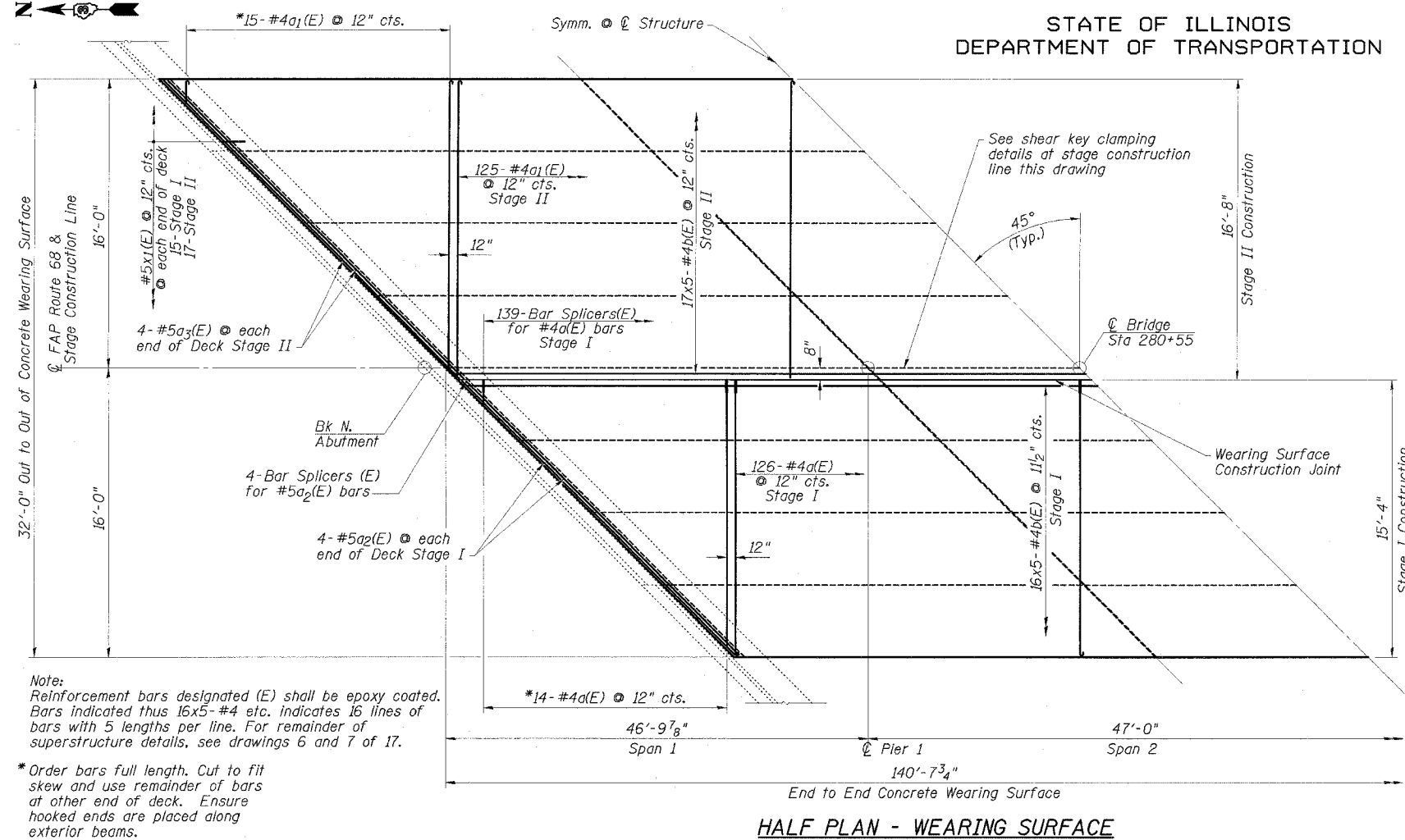
ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	19
STA	TO STA			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
DWG. NO. 5 OF 17				
CONTRACT NO. 66606				



Notes:
See Special Provisions for Stage Construction Precast Prestressed Concrete Deck Beams. See Stage Construction Details for traffic lanes. Cost is included with Precast Prestressed Concrete Deck Beams.

SHEAR KEY CLAMPING DETAILS

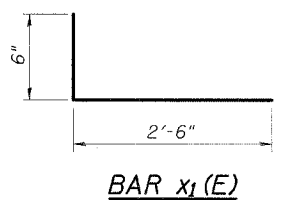
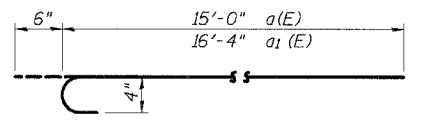
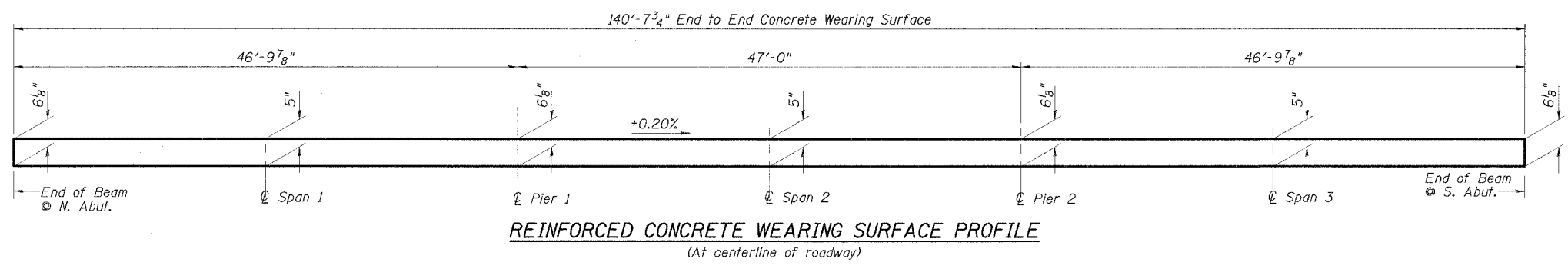
CONCRETE WEARING SURFACE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	140	#4	15'-6"	┌
a ₁ (E)	140	#4	16'-10"	┌
a ₂ (E)	8	#5	21'-4"	┌
a ₃ (E)	8	#5	23'-2"	┌
b(E)	165	#4	29'-5"	┌
x ₁ (E)	64	#5	3'-0"	┌
Reinforcement Bars, Epoxy Coated			Pound	6840
Concrete Wearing Surface, 5"			Sq. Yd.	500
Bridge Deck Grooving			Sq. Yd.	469
Bar Splicers			Each	147
Protective Coat			Sq. Yd.	500

Note:
Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 16x5-#4 etc. indicates 16 lines of bars with 5 lengths per line. For remainder of superstructure details, see drawings 6 and 7 of 17.

* Order bars full length. Cut to fit skew and use remainder of bars at other end of deck. Ensure hooked ends are placed along exterior beams.

MIN. BAR LAP
#4 bar = 1'-8"



SUPERSTRUCTURE
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

ESCA
CONSULTANTS, INC.

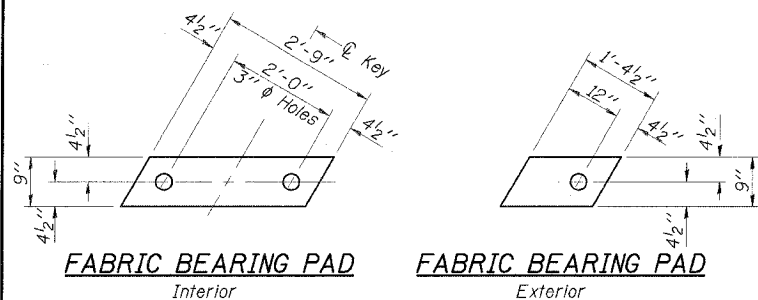
DESIGNED BY: ELH 8/05
DRAWN BY: DWH 8/05
CHECKED BY: ELH 12/05
APPROVED BY: RDP 12/05

Note:
Greater thickness is required at edges of superstructure to conform to cross slopes shown on Dwg. 6 of 17.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	10IBR	LIVINGSTON	47	20
STA	TO STA			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	
DWG. NO. 6 OF 17				

CONTRACT NO. 66606



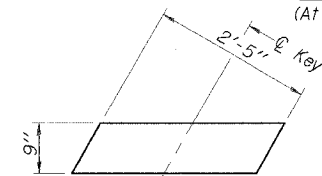
FABRIC BEARING PAD

Interior

FABRIC BEARING PAD

Exterior

FIXED
(At Piers)



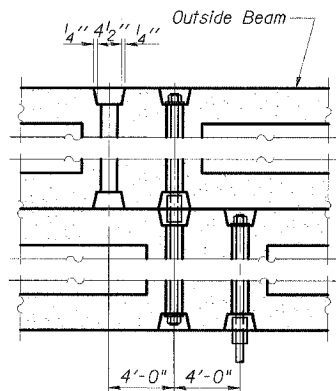
FABRIC BEARING PAD

Interior

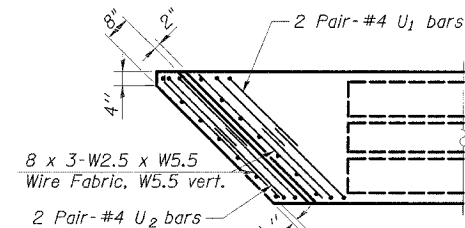
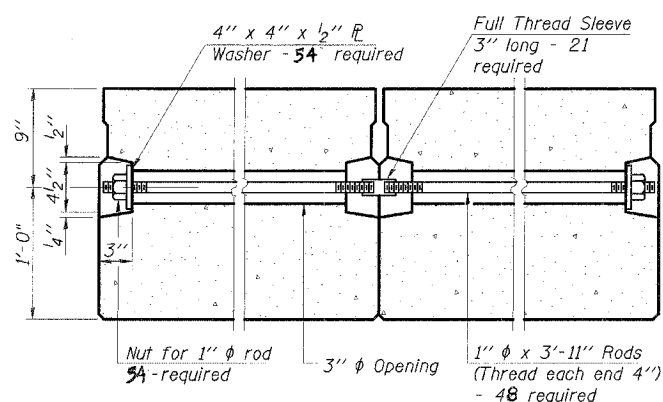
FABRIC BEARING PAD

Exterior

EXPANSION
(At Abutments)



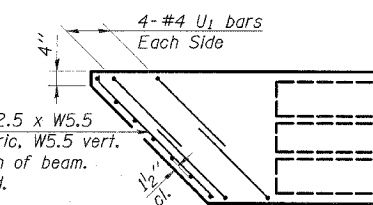
TYPICAL TRANSVERSE TIE ASSEMBLY



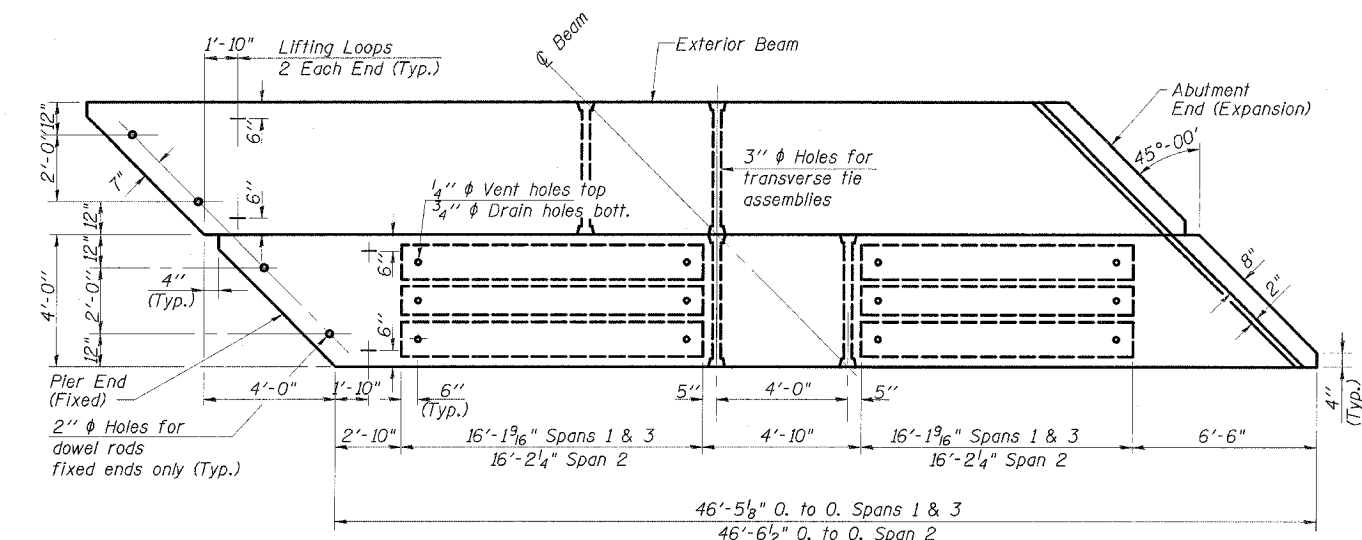
AT EXPANSION END

(See End of Beam detail on Dwg. 7 of 17 for reinforcement)

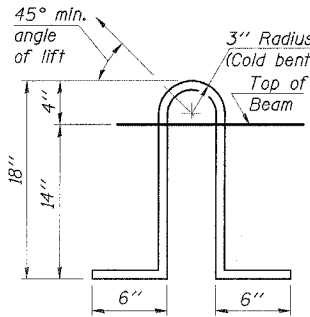
END PLANS



AT FIXED END



PLAN

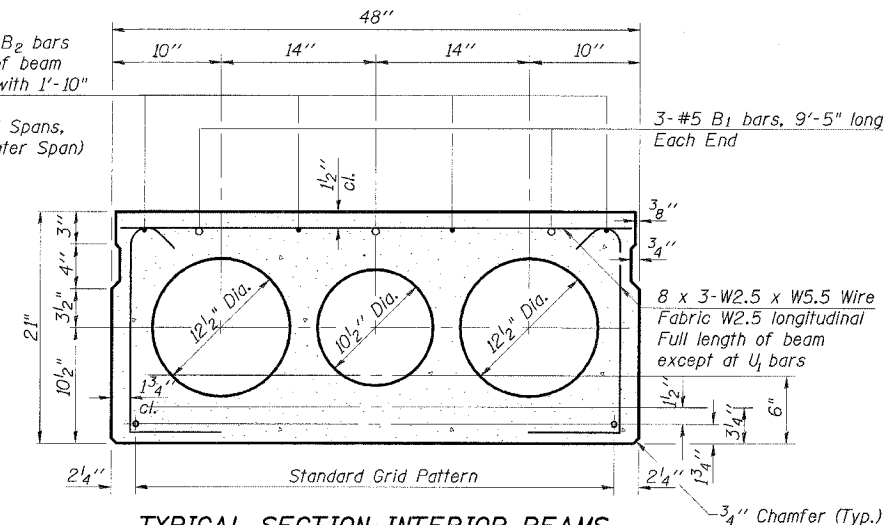


LIFTING LOOP DETAIL

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2 inch and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 3-1/2 inch diameter 270 ksi strands, as shown.
- The 1 inch diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.
- Non prestressing steel shall conform to AASHTO M-31 or M322 Grade 60.
- The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8 inch fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.
- Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
- Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
- Required Release Strength, f'cl, shall be 4,000 p.s.i.
- See Drawing 2 of 17 for location of rail anchors and additional notes.

4-#5 B or B2 bars
Full length of beam
-2 lengths with 1'-10"
min. lap
(B bars End Spans,
B2 bars Center Span)

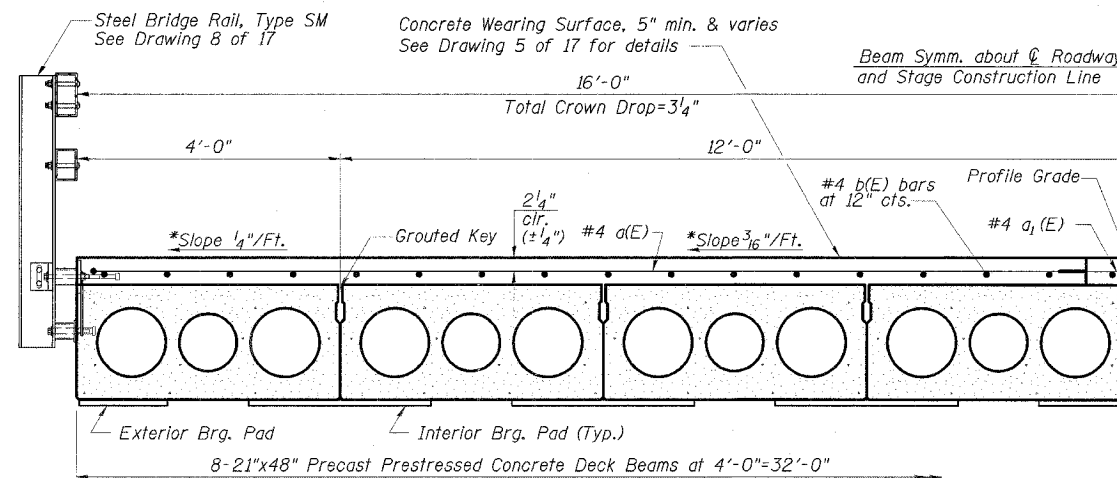


TYPICAL SECTION-INTERIOR BEAMS

17-1/2 inch diameter Strands, Each Strand Stressed to 30,900 Lbs.
8-Strands 1 3/4 inch up, 7-Strands 3/4 inch up, 2-Strands 6 inch up

Notes:

- 1. Place strands symmetrically about centerline of beam.
- 2. See Dwg. 7 of 17 for fascia beam details.



HALF CROSS SECTION

*Cross slopes shown are applicable to Concrete Wearing Surface.

SUPERSTRUCTURE DETAILS
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 10IBR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

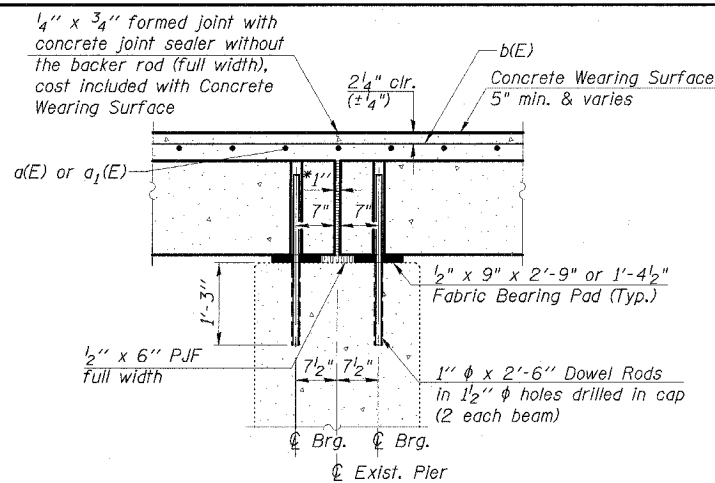
ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	12/05
APPROVED BY:	RDP	12/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	21
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
DWG. NO. 7 OF 17				

CONTRACT NO. 66606

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

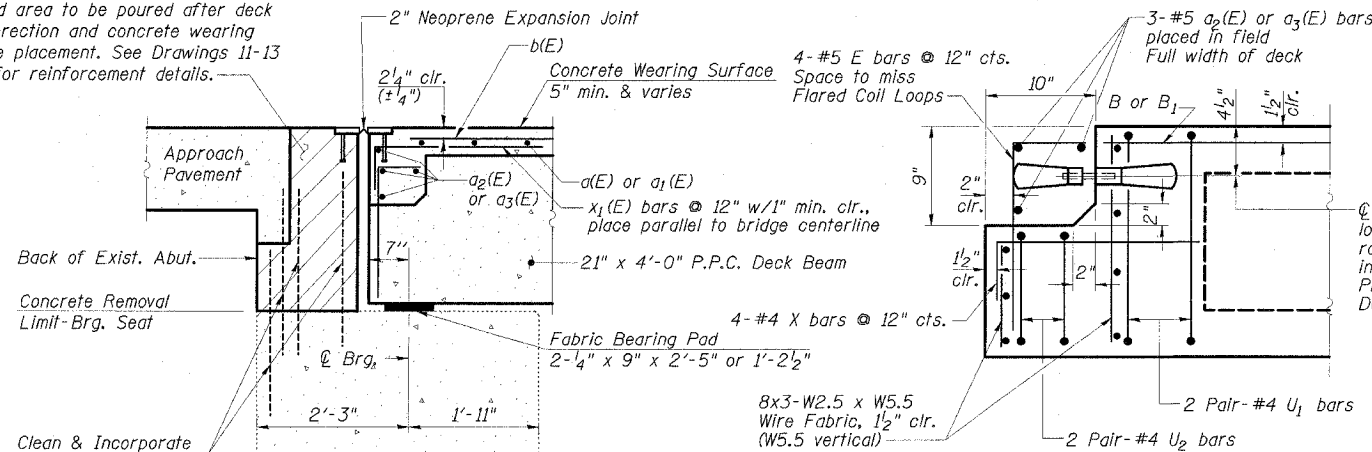


SECTION THRU PIER

(Horizontal dimensions are at right angles to beam ends)

*1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

Hatched area to be poured after deck beam erection and concrete wearing surface placement. See Drawings 11-13 of 17 for reinforcement details.

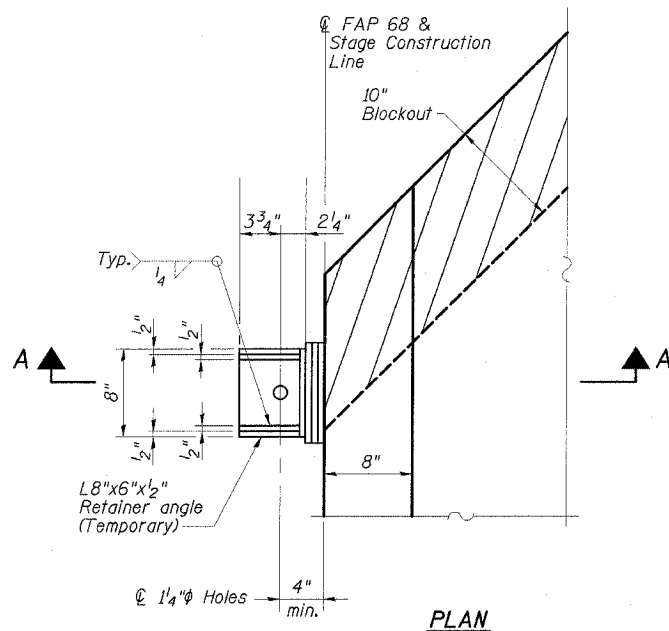


SECTION THRU ABUTMENT

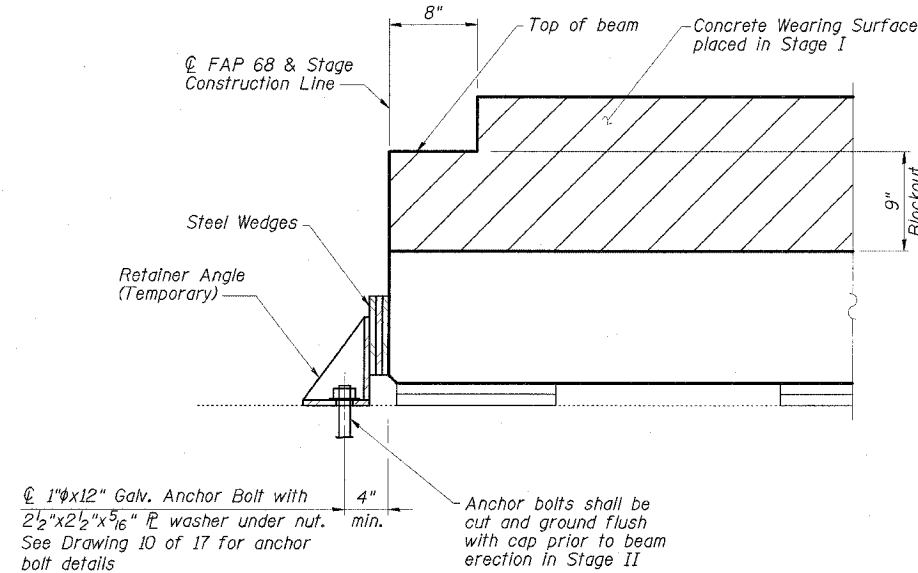
(Dimensions at right angles)

END OF BEAM (EXPANSION END)

(Dimensions at right angles)



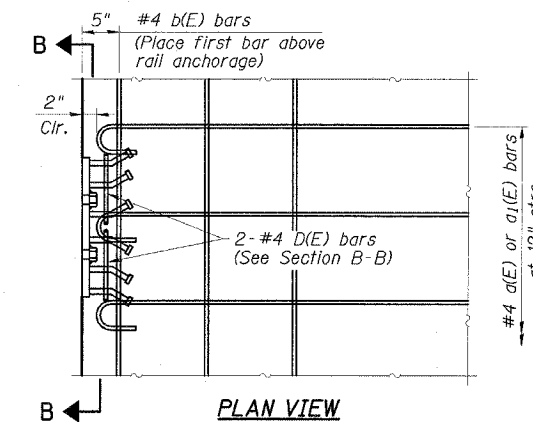
PLAN



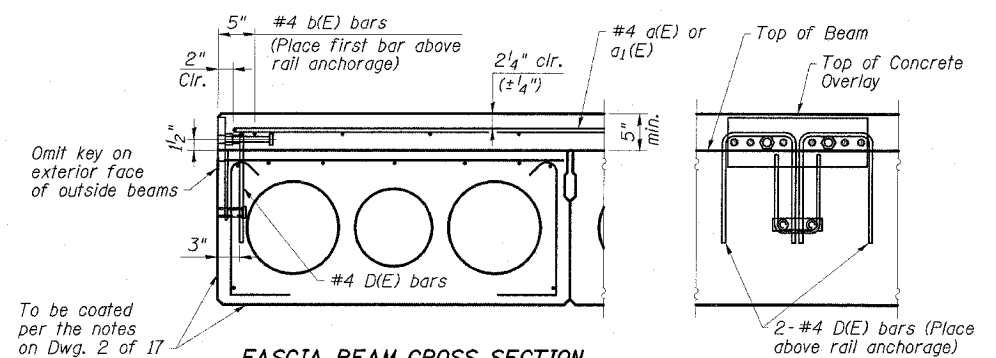
SECTION A-A

BEAM RETAINER DETAILS AT STAGE CONSTRUCTION LINE

(2 Required)
Cost of Retainer Angles, Anchor Bolts & accessories are included with Precast Prestressed Concrete Deck Beams. See Dwg. 13 of 17 for exterior beam retainer details.



PLAN VIEW



FASCIA BEAM CROSS SECTION

See Section Thru Interior Beams on Dwg. 6 of 17 for strand pattern, dimensions and bar call outs.

SECTION B-B

CONCRETE OVERLAY MODIFICATIONS FOR RAIL ANCHORAGE

NOTES

After beams have been erected, holes shall be drilled into substructure and dowels rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

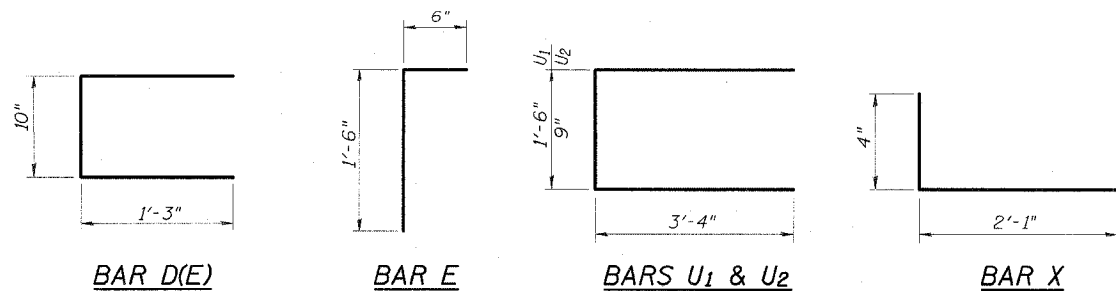
Concrete wearing surface to be poured after grouting the shear keys.

Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams (21" depth).

The rail anchorage shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	12/05
APPROVED BY:	RDP	12/05



BAR D(E)

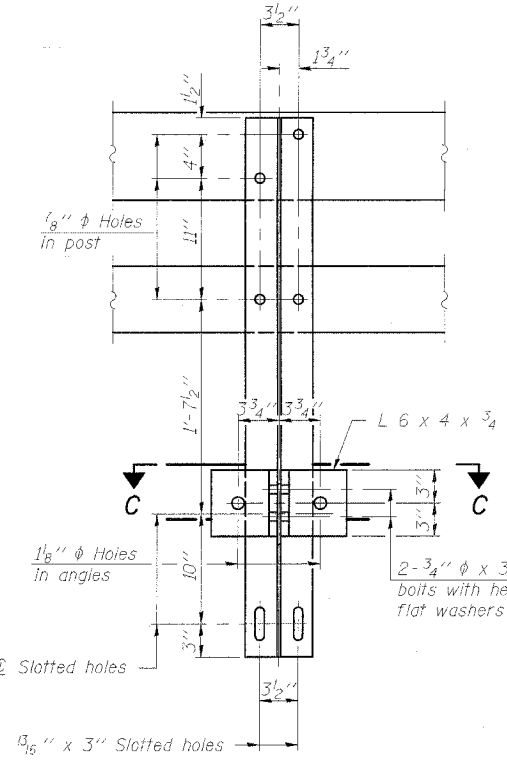
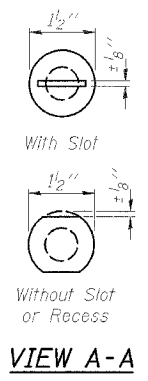
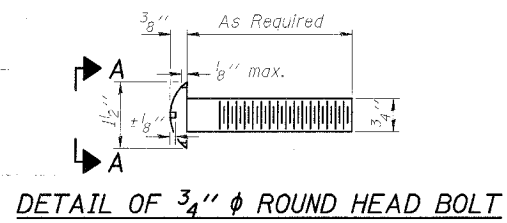
BAR E

BARS U₁ & U₂

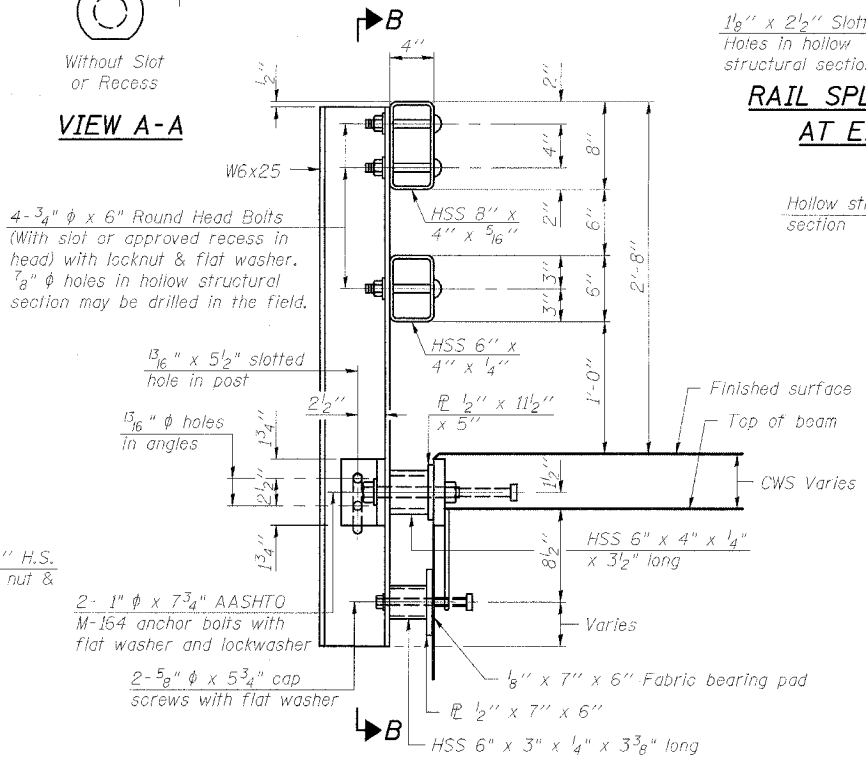
BAR X

**SUPERSTRUCTURE DETAILS
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153**

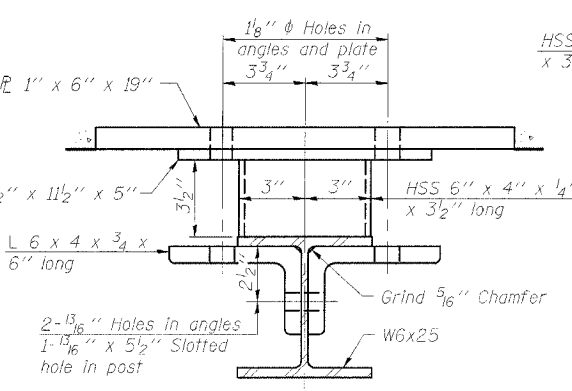
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FAP 68	101BR	LIVINGSTON	47	22
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
DWG. NO. 8 OF 17				
CONTRACT NO. 66606				



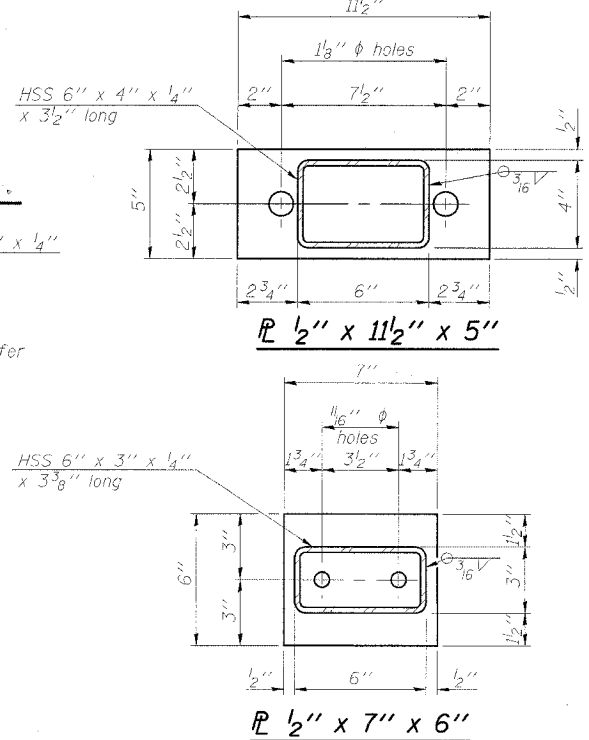
SECTION B-B



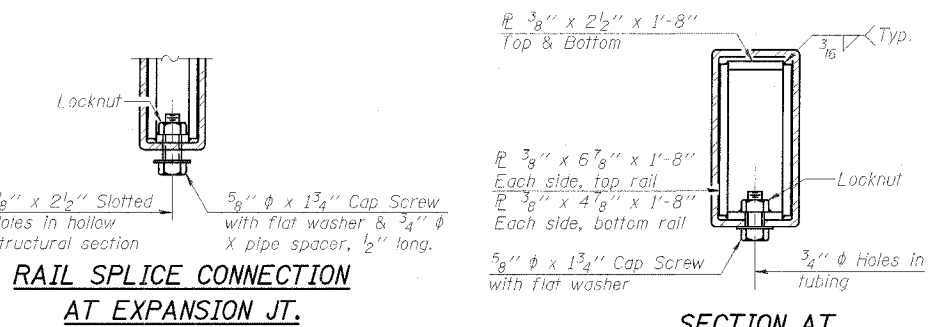
SECTION AT RAIL POST



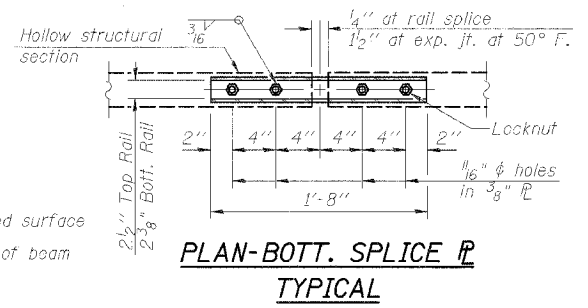
SECTION C-C



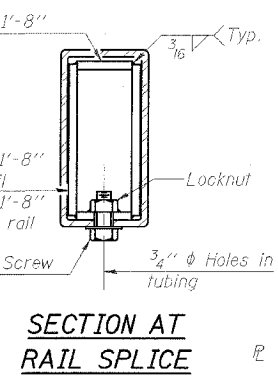
ANCHOR DEVICE



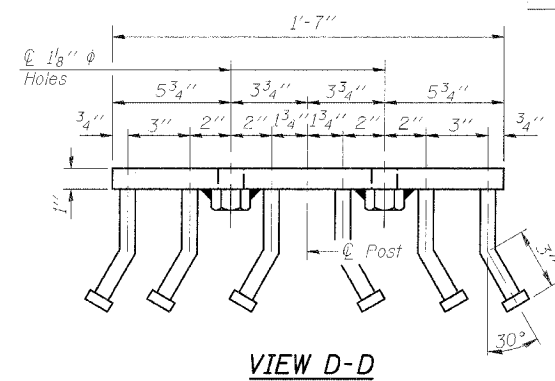
RAIL SPLICE CONNECTION AT EXPANSION JT.



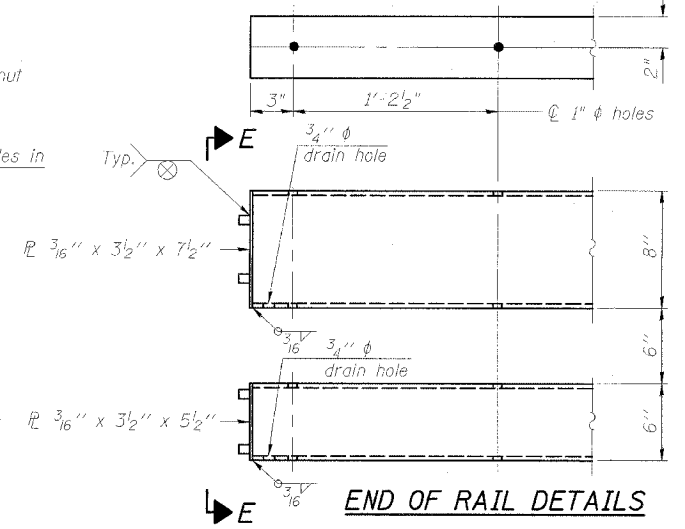
PLAN-BOTT. SPLICE P TYPICAL



SECTION AT RAIL SPLICE



VIEW D-D



END OF RAIL DETAILS

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F. All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50. Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164. All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232. All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted. Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM. All field drilled holes shall be coated with an approved zinc rich paint before erection. For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM. The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) 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. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	282

TYPE SM
STEEL BRIDGE RAIL
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

ESCA
CONSULTANTS, INC.
DESIGNED BY: ELH 12/05
DRAWN BY: DWH 12/05
CHECKED BY: ELH 12/05
APPROVED BY: RDP 12/05

(6'-3" Maximum Post Spacing) (5" minimum to 7 1/2" maximum CWS thickness)

* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

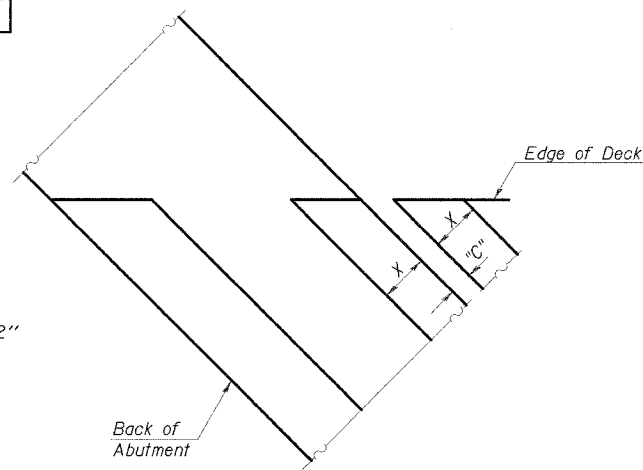
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	23
STA.	TO STA.		PROJECT-	
FED. ROAD DIST. NO.	ILL. ROAD	FED. ROAD PROJECT-	CONTRACT NO. 66606	
DWG. NO. 9 OF 17				

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

INSTALLATION NOTES

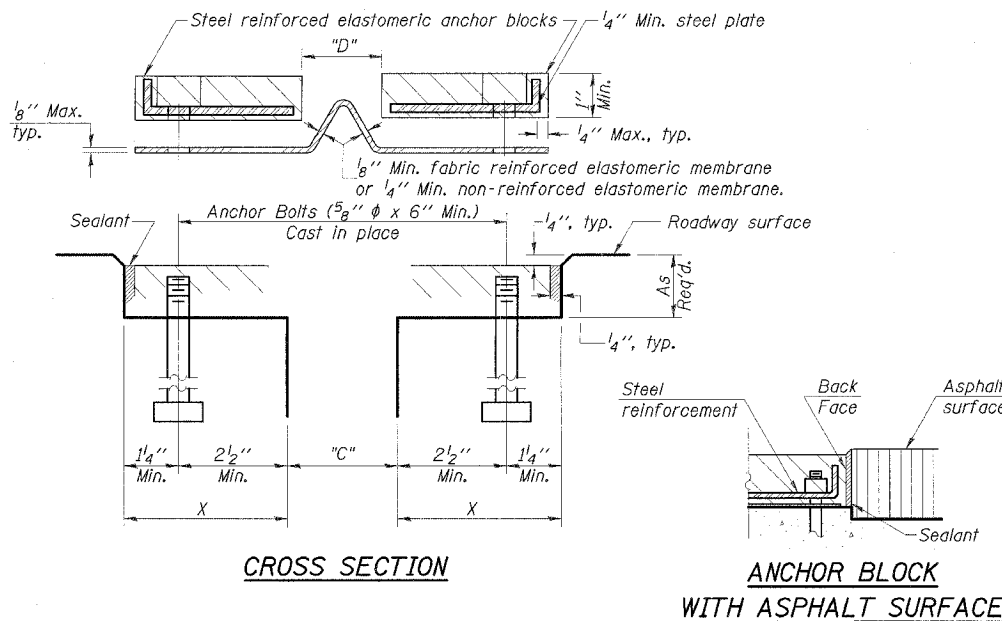
- ① Install continuous seal in roadway
- ② Install anchor blocks as indicated.

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



FORMING BLOCKOUT SKETCH

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

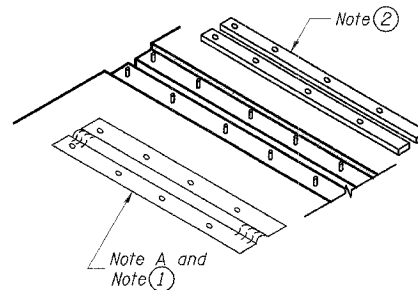


CROSS SECTION

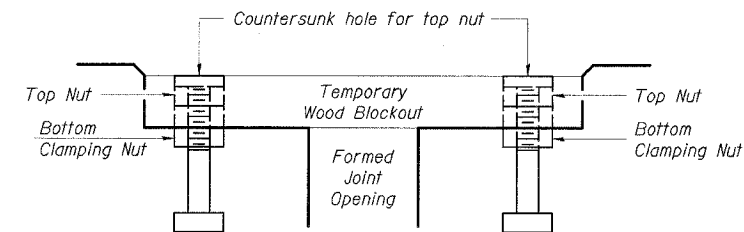
ANCHOR BLOCK WITH ASPHALT SURFACE

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.
 The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.
 The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.
 Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.
 The membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.



INSTALLATION DETAIL



Note:
Stud needs to be threaded lower to allow for use of clamping nut.

RECOMMENDED BLOCKOUT DETAIL

**CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153**

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

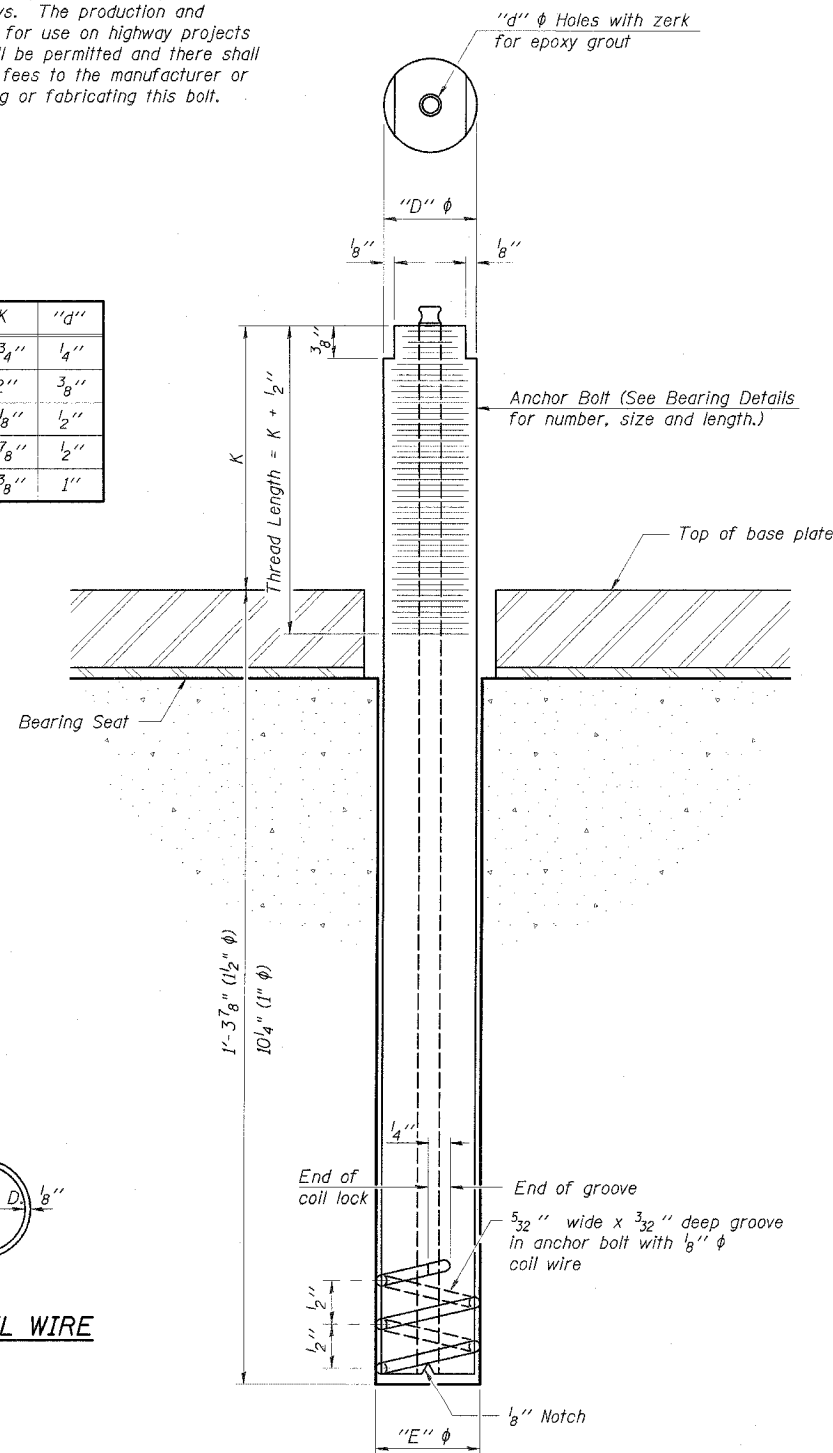
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	24
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
DWG. NO. 10 OF 17				

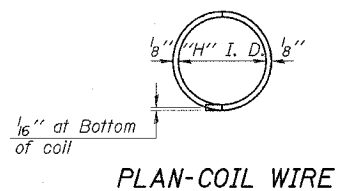
CONTRACT NO. 66606

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

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



ILLINOIS COIL-LOCK ANCHOR BOLT



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abutments	A-307 (Side Retainers)

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Precast Prestressed Concrete Deck Beams.

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

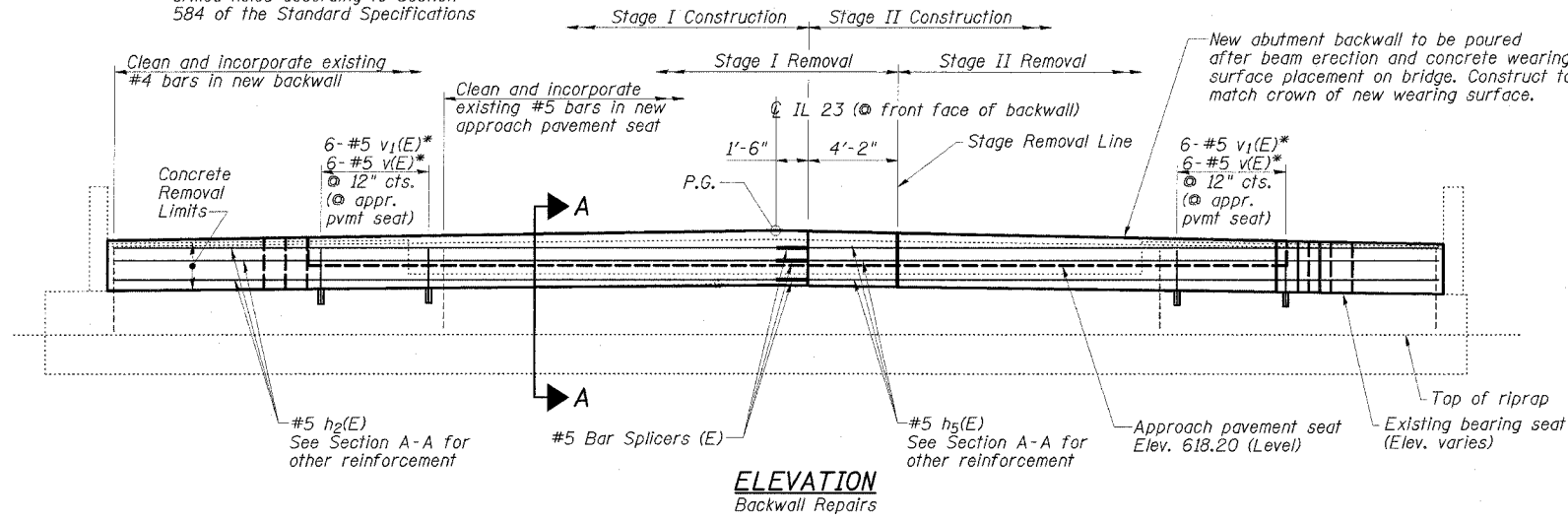
ANCHOR BOLT DETAILS
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

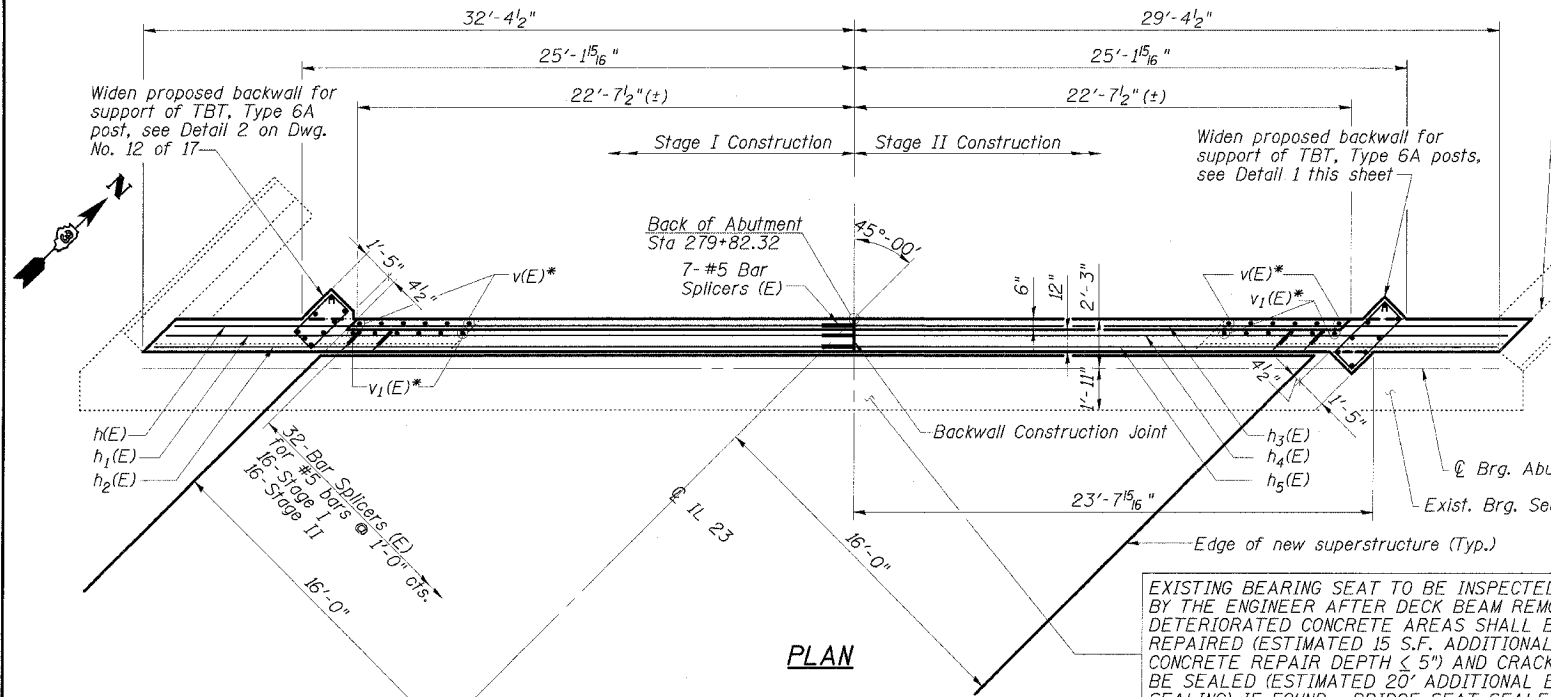
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	25
STA.	TO STA.			
	ILLINOIS		FED. AID PROJECT	
DWG. NO. 11 OF 17				

CONTRACT NO. 66606

* Epoxy grout bars in 8" min. depth drilled holes according to Section 584 of the Standard Specifications

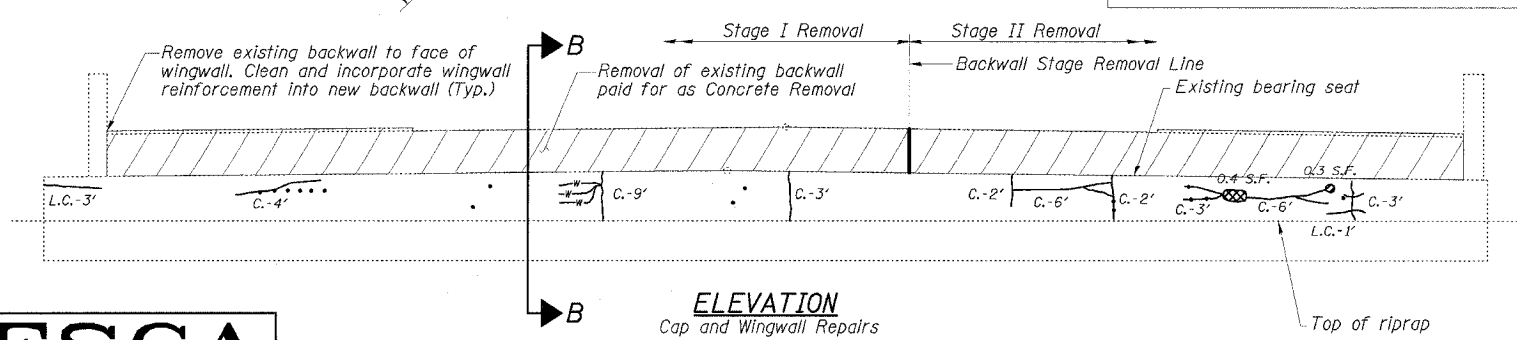


ELEVATION
Backwall Repairs



PLAN

EXISTING BEARING SEAT TO BE INSPECTED BY THE ENGINEER AFTER DECK BEAM REMOVAL. DETERIORATED CONCRETE AREAS SHALL BE REPAIRED (ESTIMATED 15 S.F. ADDITIONAL FORMED CONCRETE REPAIR DEPTH < 5") AND CRACKS SHALL BE SEALED (ESTIMATED 20' ADDITIONAL EPOXY CRACK SEALING) IF FOUND. BRIDGE SEAT SEALER SHALL BE APPLIED TO FORMED CONCRETE REPAIR AREAS.

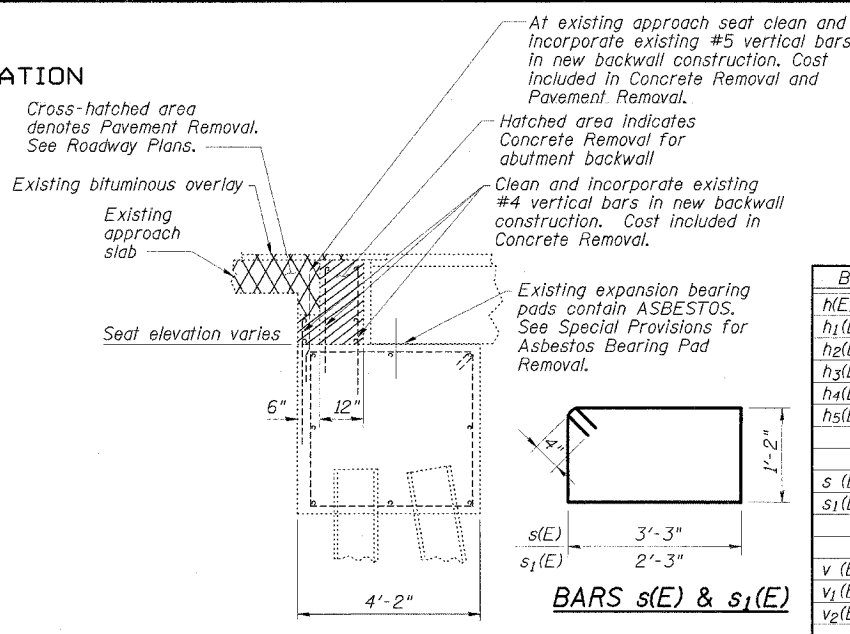


ELEVATION
Cap and Wingwall Repairs

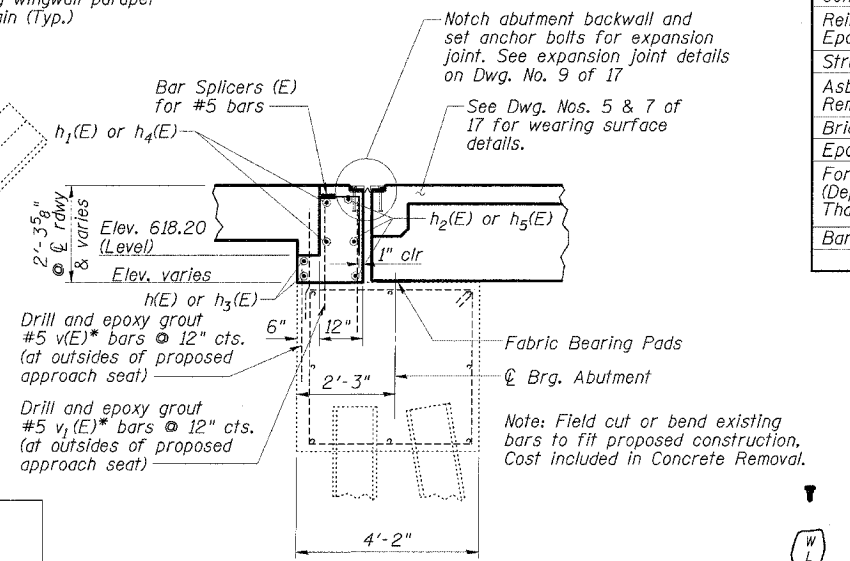
NOTE: ABUTMENT CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 3-31-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

ESCA
CONSULTANTS, INC.

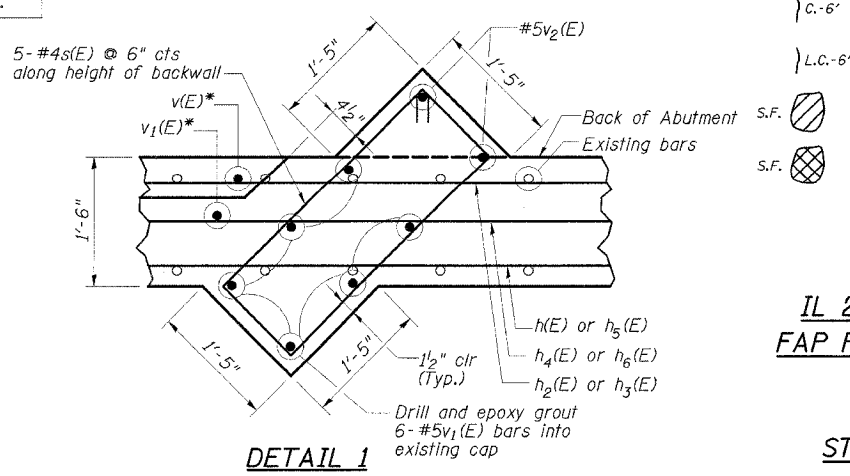
DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	12/05
APPROVED BY:	RDP	12/05



SECTION B-B
EXISTING



SECTION A-A
PROPOSED



DETAIL 1

NORTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	2	#5	30'-9"	
h1(E)	2	#5	31'-3"	
h2(E)	3	#5	31'-11"	
h3(E)	2	#5	30'-5"	
h4(E)	2	#5	29'-11"	
h5(E)	3	#5	29'-3"	
s(E)	5	#4	9'-6"	
s1(E)	5	#4	7'-6"	
v(E)	12	#5	2'-3"	
v1(E)	23	#5	2'-10"	
v2(E)	5	#5	2'-0"	
Concrete Removal		Cu. Yd.	5.9	
Concrete Structures		Cu. Yd.	7.0	
Reinforcement Bars, Epoxy Coated		Pound	610	
Structure Excavation		Cu. Yd.	8.8	
Asbestos Bearing Pad Removal		Each	24	
Bridge Seat Sealer		Sq. Ft.	15	
Epoxy Crack Sealing		Foot	62	
Formed Concrete Repair (Depth Equal to or Less Than 5")		Sq. Ft.	15.7	
Bar Splicers		Each	39	

REPAIR LEGEND

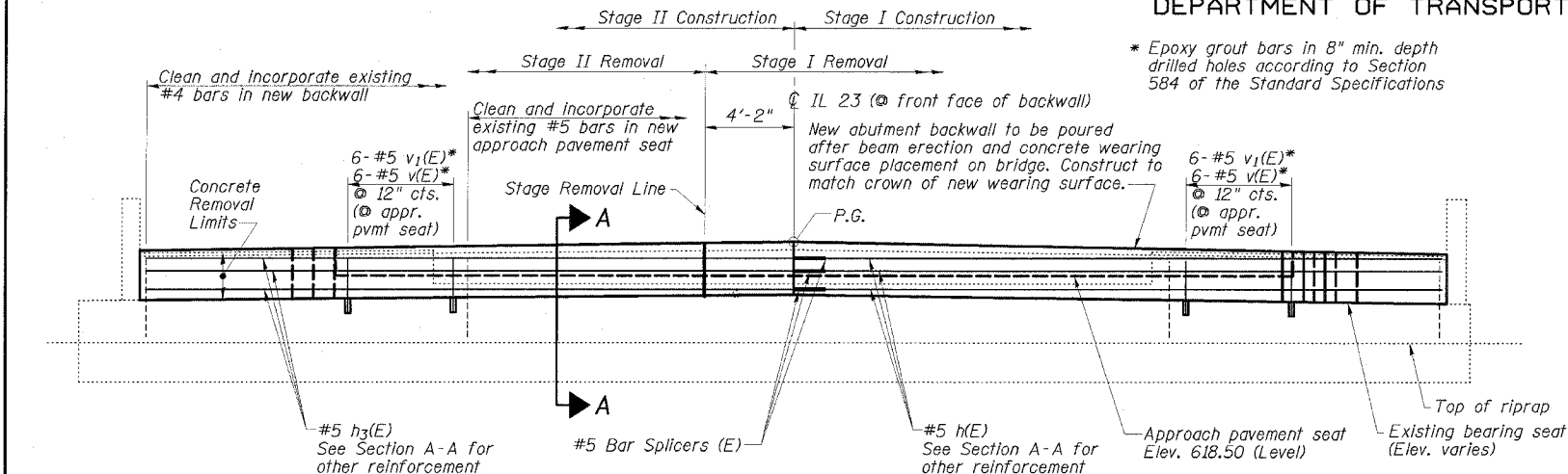
- Inspection Date: 3-31-05
- ⬇ Rust Stained Area
 - (W) Moisture Stained or Leached Area
 - HL Hairline Crack - Not to be Sealed
 - c-6' Crack (> 1/16" Width)
 - L.C.-6' Leached Crack (> 1/16" Width)
 - S.F. Delaminated Area
 - S.F. Spalled Area (Depth < 5")
- EPOXY CRACK SEALING**
- FORMED CONC. REPAIR**

NORTH ABUTMENT
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

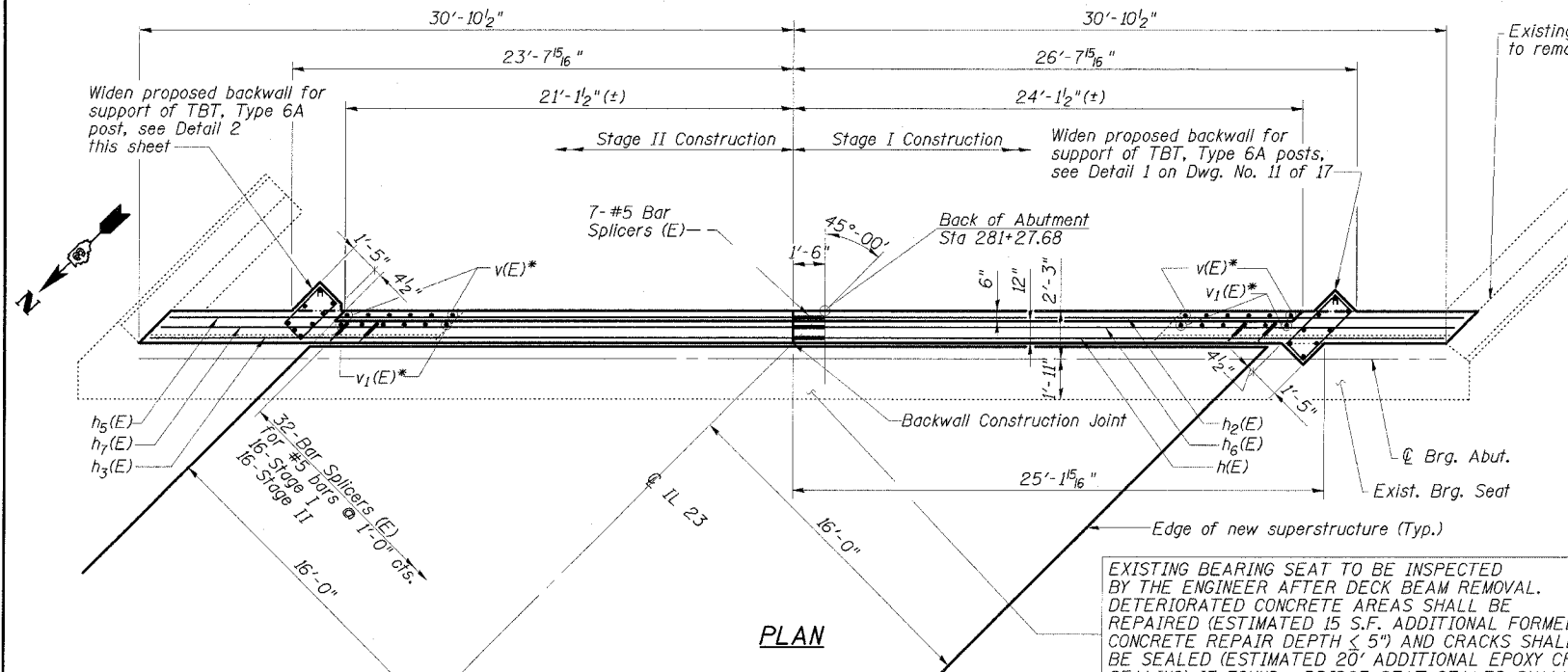
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	26
STA.	TO STA.			
	ILLINOIS		FED. AID PROJECT-	
DWG. NO. 12 OF 17				

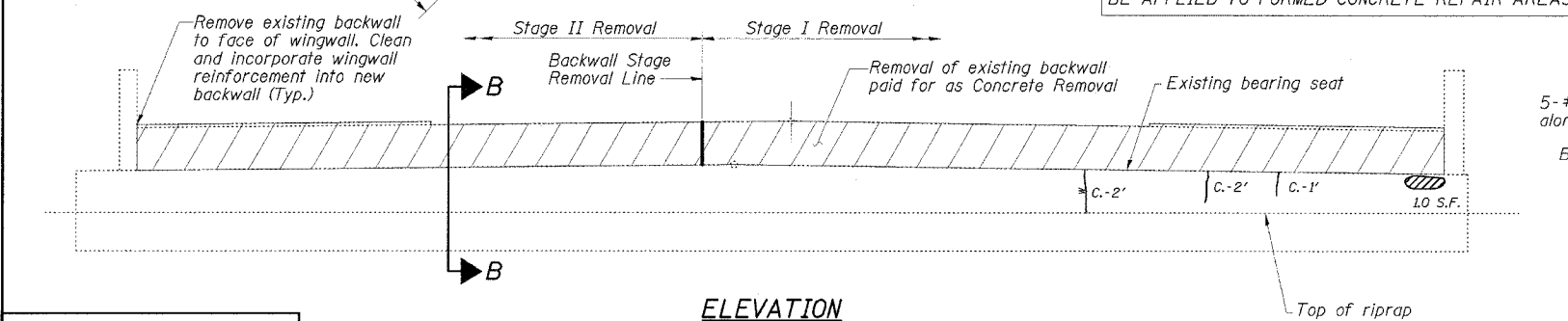
CONTRACT NO. 66606



ELEVATION
Backwall Repairs



PLAN

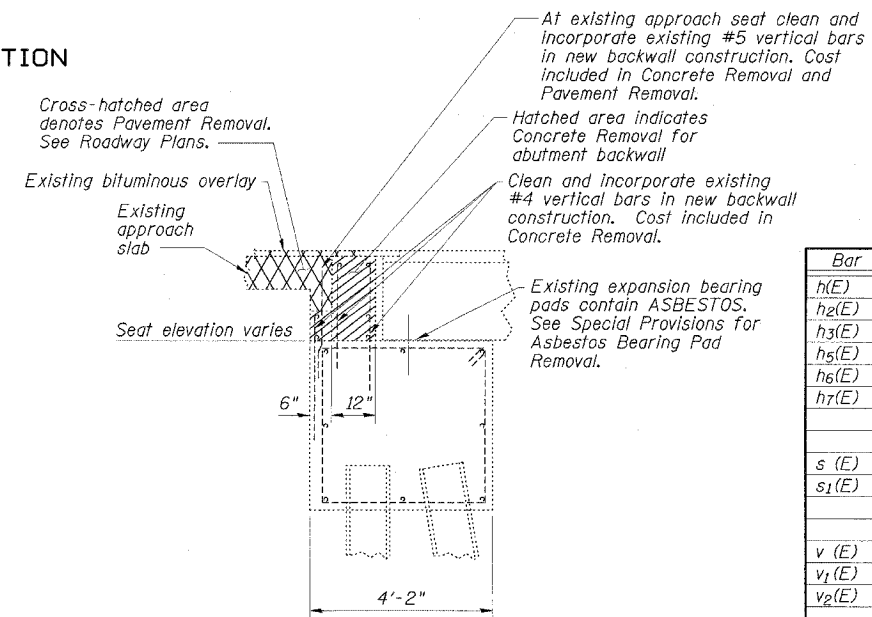


ELEVATION
Cap and Wingwall Repairs

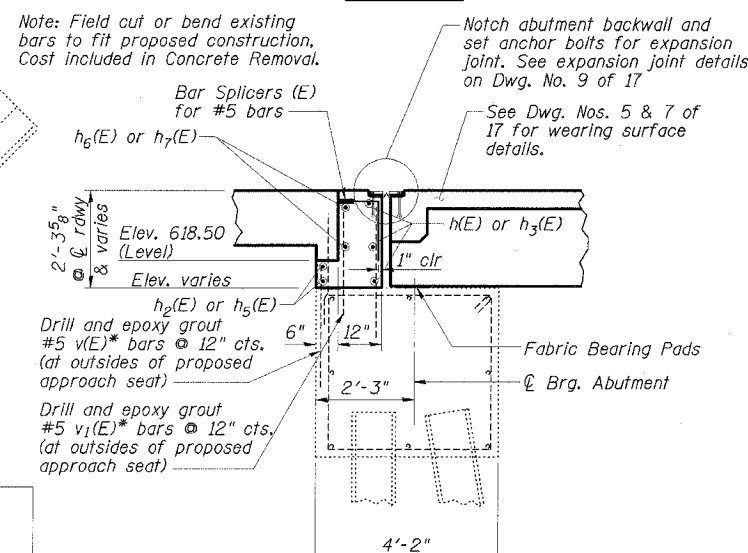
NOTE: ABUTMENT CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 3-31-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

ESCA
CONSULTANTS, INC.

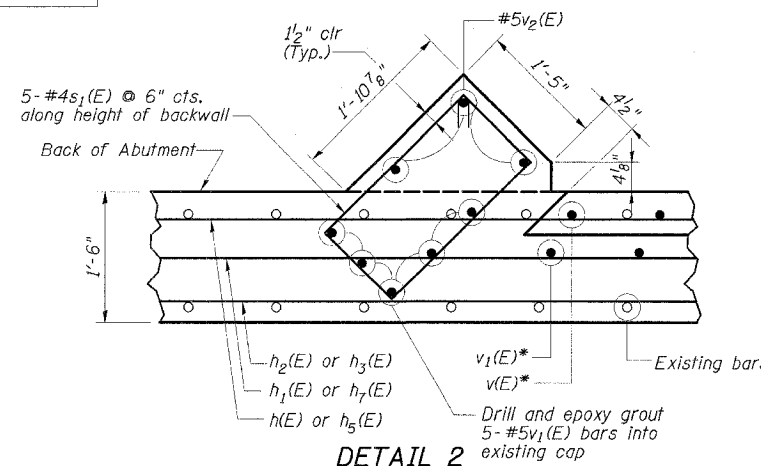
DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	12/05
APPROVED BY:	RDP	12/05



SECTION B-B
EXISTING



SECTION A-A
PROPOSED



DETAIL 2

SOUTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	3	#5	30'-9"	—
h2(E)	2	#5	31'-11"	—
h3(E)	3	#5	30'-5"	—
h5(E)	2	#5	29'-3"	—
h6(E)	2	#5	31'-5"	—
h7(E)	2	#5	29'-9"	—
s (E)	5	#4	9'-6"	□
s1(E)	5	#4	7'-6"	□
v (E)	12	#5	2'-3"	—
v1(E)	23	#5	2'-10"	—
v2(E)	5	#5	2'-0"	—
Concrete Removal		Cu. Yd.	5.9	
Concrete Structures		Cu. Yd.	7.0	
Reinforcement Bars, Epoxy Coated		Pound	610	
Structure Excavation		Cu. Yd.	8.8	
Asbestos Bearing Pad Removal		Each	24	
Bridge Seat Sealer		Sq. Ft.	15	
Epoxy Crack Sealing		Foot	25	
Formed Concrete Repair (Depth Equal to or Less Than 5")		Sq. Ft.	16.0	
Bar Splicers		Each	39	

See Dwg. No. 11 of 17 for bar bending details

REPAIR LEGEND

Inspection Date: 3-31-05

- Rust Stained Area
- Moisture Stained or Leached Area
- Hairline Crack - Not to be Sealed
- Crack (> 1/16" Width)
- Leached Crack (> 1/16" Width)
- Delaminated Area
- Spalled Area (Depth ≤ 5")

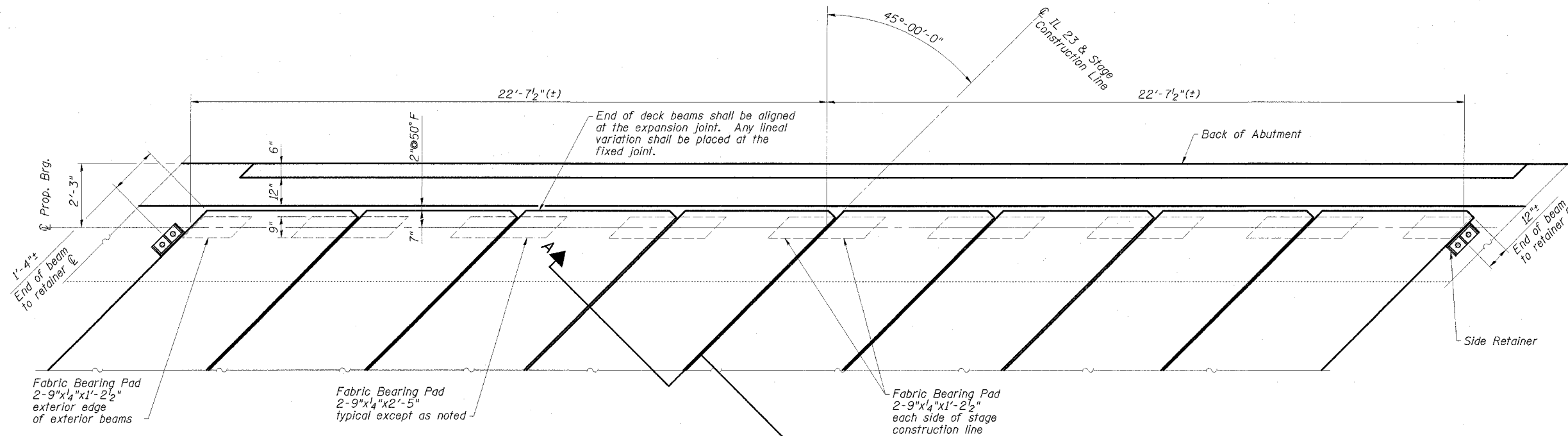
EPOXY CRACK SEALING

FORMED CONC. REPAIR

SOUTH ABUTMENT
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

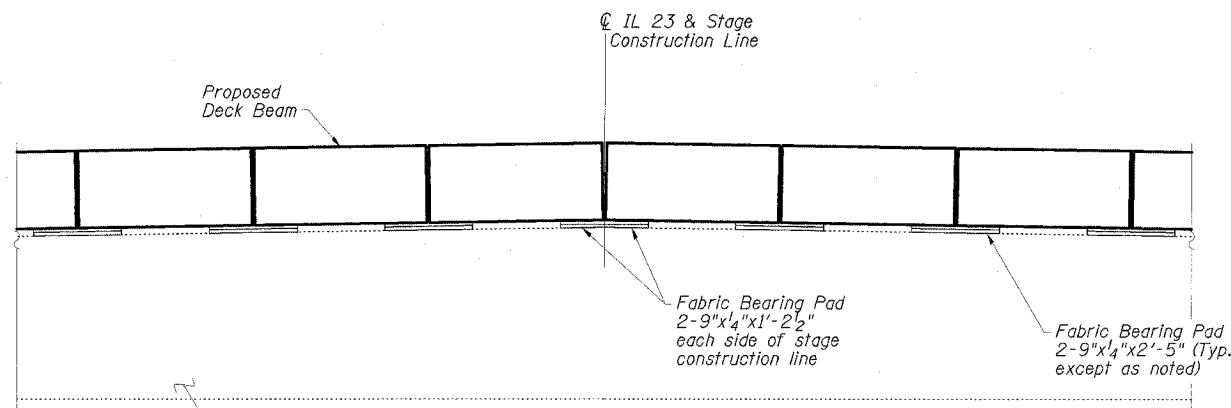
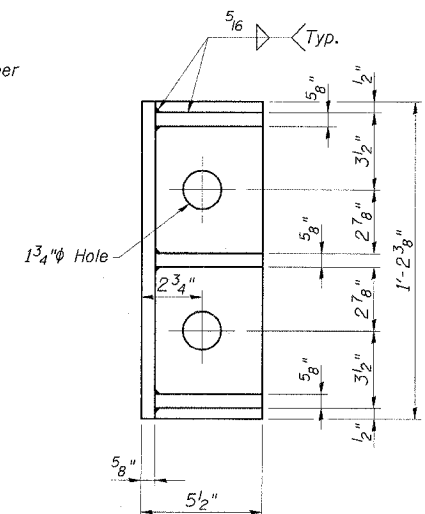
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	27
STA.	TO STA.			
FED. ROAD DIST. NO.	ILL. ROAD DIST. NO.	FED. AID PROJECT NO.		
DWG. NO. 13 OF 17				
CONTRACT NO. 66606				



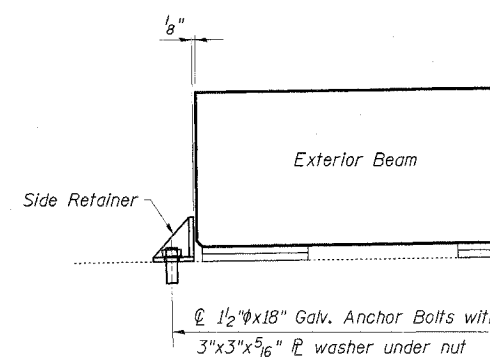
ABUTMENT BEARING SEAT PLAN

(Concrete wearing surface, expansion joint, backwall widening, and approach pavement not shown)



SECTION A-A

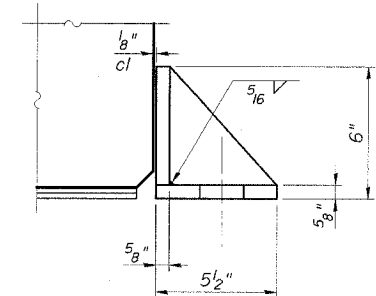
(Concrete wearing surface not shown)



EXTERIOR BEAM RETAINER DETAILS

(4 Required)
Cost of Retainer Angles, Anchor Bolts & accessories are included with Precast Prestressed Concrete Deck Beams.

Fill 1/8" gap with shim to provide temporary lateral support until shear keys have been grouted and concrete wearing surface has been placed.



SIDE RETAINER

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

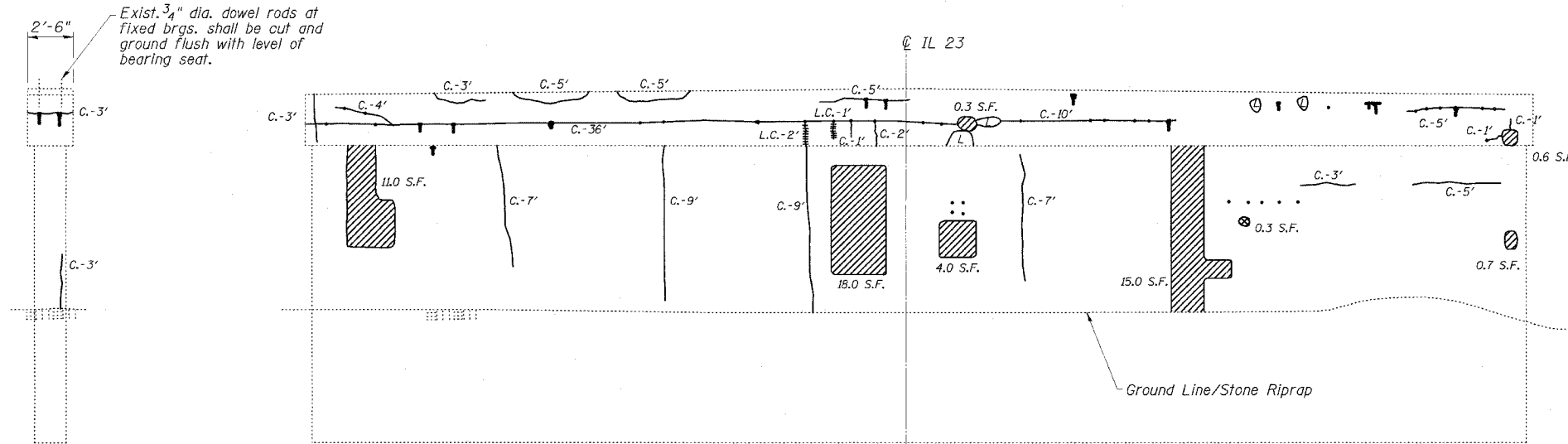
ABUTMENT DETAILS
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	28
STA	TO STA			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
DWG. NO. 14 OF 17				
CONTRACT NO. 66606				



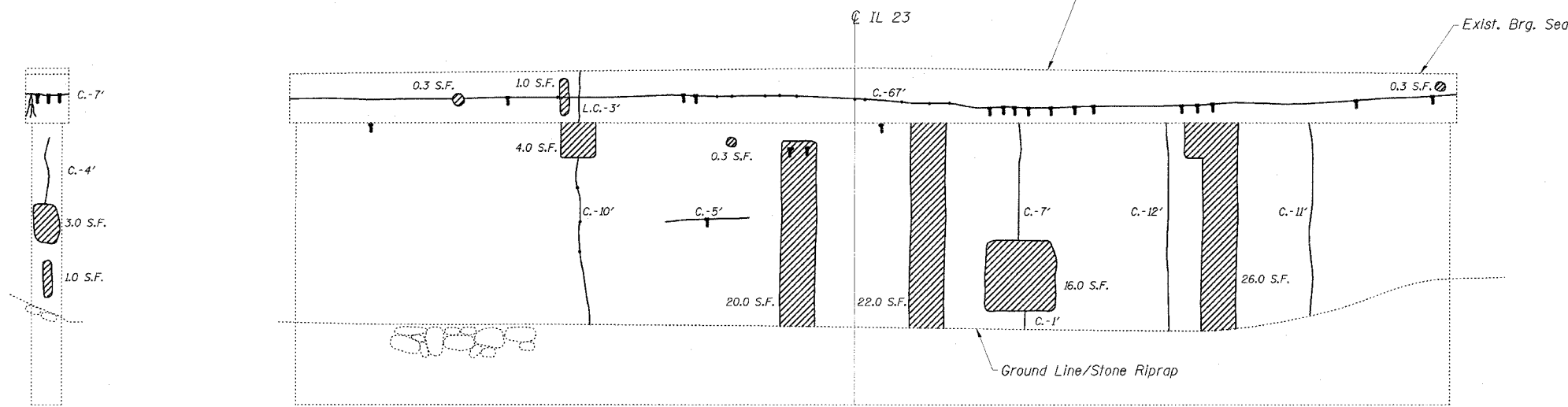
EAST END

NORTH ELEVATION

PIER 1
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Epoxy Crack Sealing	Foot	277
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	158.8

EXISTING BEARING SEAT TO BE INSPECTED BY THE ENGINEER AFTER DECK BEAM REMOVAL. DETERIORATED CONCRETE AREAS SHALL BE REPAIRED (ESTIMATED 15 S.F. ADDITIONAL FORMED CONCRETE REPAIR DEPTH < 5") AND CRACKS SHALL BE SEALED (ESTIMATED 20' ADDITIONAL EPOXY CRACK SEALING) IF FOUND.



WEST END

SOUTH ELEVATION

REPAIR LEGEND

Inspection Date: 3-31-05

- Rust Stained Area
- Moisture Stained or Leached Area
- Hairline Crack - Not to be Sealed
- Crack (> 1/16" Width) EPOXY CRACK SEALING
- Leached Crack (> 1/16" Width) FORMED CONC. REPAIR
- Delaminated Area
- Spalled Area (Depth < 5")

NOTE: PIER CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 3-31-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

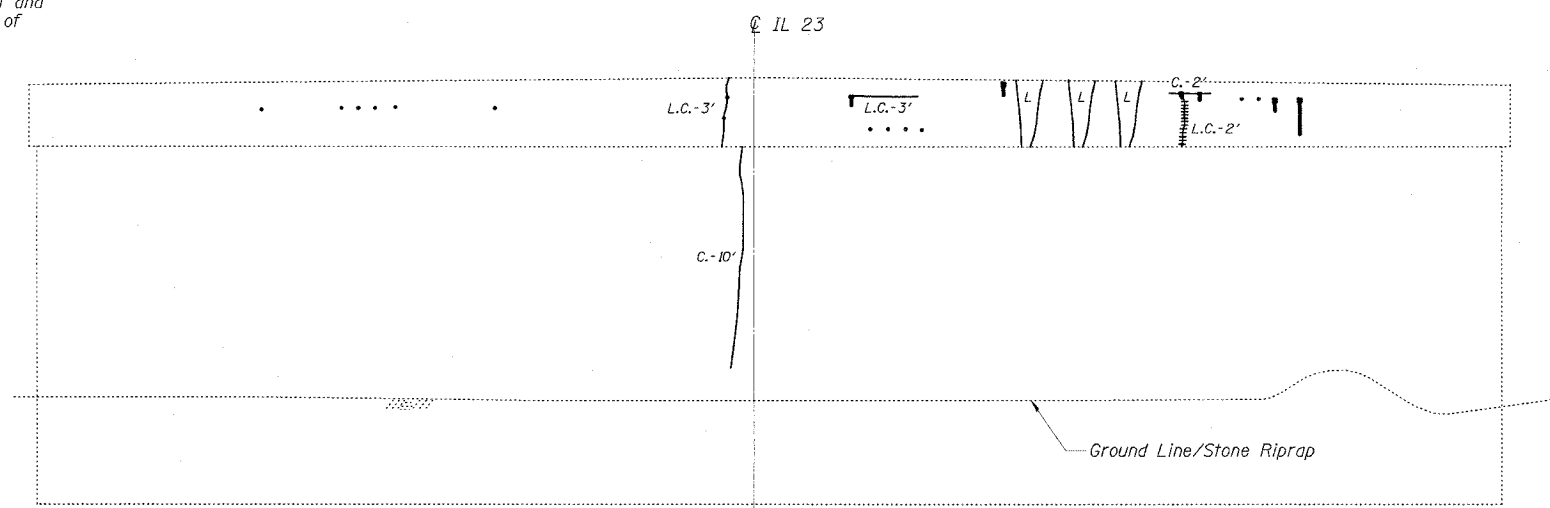
PIER 1
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	29
STA	TO STA			
FED. ROAD DIST. NO. *	ILLINOIS	FED. AID PROJECT		
DWG. NO. 15 OF 17				

CONTRACT NO. 66606

2'-6"
Exist. 3/4" dia. dowel rods at fixed brgs. shall be cut and ground flush with level of bearing seat.



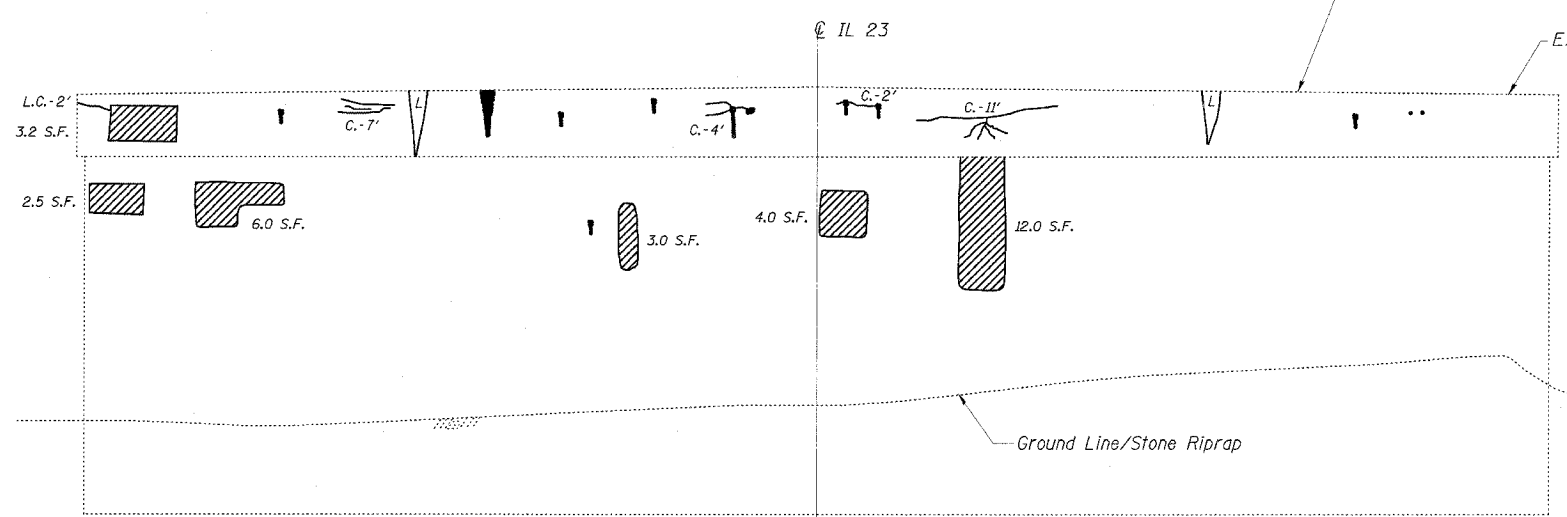
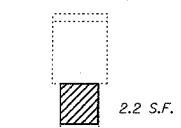
EAST END

NORTH ELEVATION

EXISTING BEARING SEAT TO BE INSPECTED BY THE ENGINEER AFTER DECK BEAM REMOVAL. DETERIORATED CONCRETE AREAS SHALL BE REPAIRED (ESTIMATED 15 S.F. ADDITIONAL FORMED CONCRETE REPAIR DEPTH < 5") AND CRACKS SHALL BE SEALED (ESTIMATED 20' ADDITIONAL EPOXY CRACK SEALING) IF FOUND.

PIER 2
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Epoxy Crack Sealing	Foot	66
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	47.9



WEST END

SOUTH ELEVATION

- REPAIR LEGEND**
Inspection Date: 3-31-05
- † Rust Stained Area
 - (W/L) Moisture Stained or Leached Area
 - HL Hairline Crack - Not to be Sealed
 - c.-6' Crack (> 1/16" Width) EPOXY CRACK SEALING
 - L.C.-6' Leached Crack (> 1/16" Width) EPOXY CRACK SEALING
 - S.F. (diagonal lines) Delaminated Area FORMED CONC. REPAIR
 - S.F. (cross-hatch) Spalled Area (Depth ≤ 5") FORMED CONC. REPAIR

NOTE: PIER CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 3-31-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

ESCA
CONSULTANTS, INC.

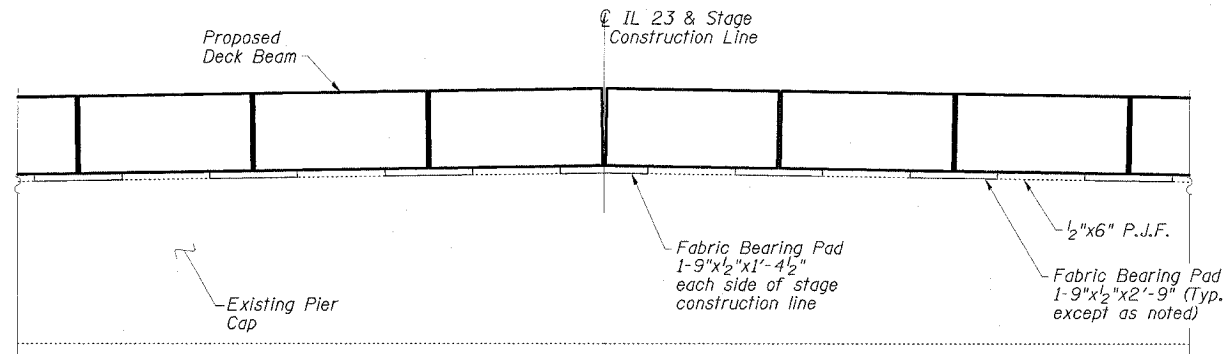
DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

PIER 2
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

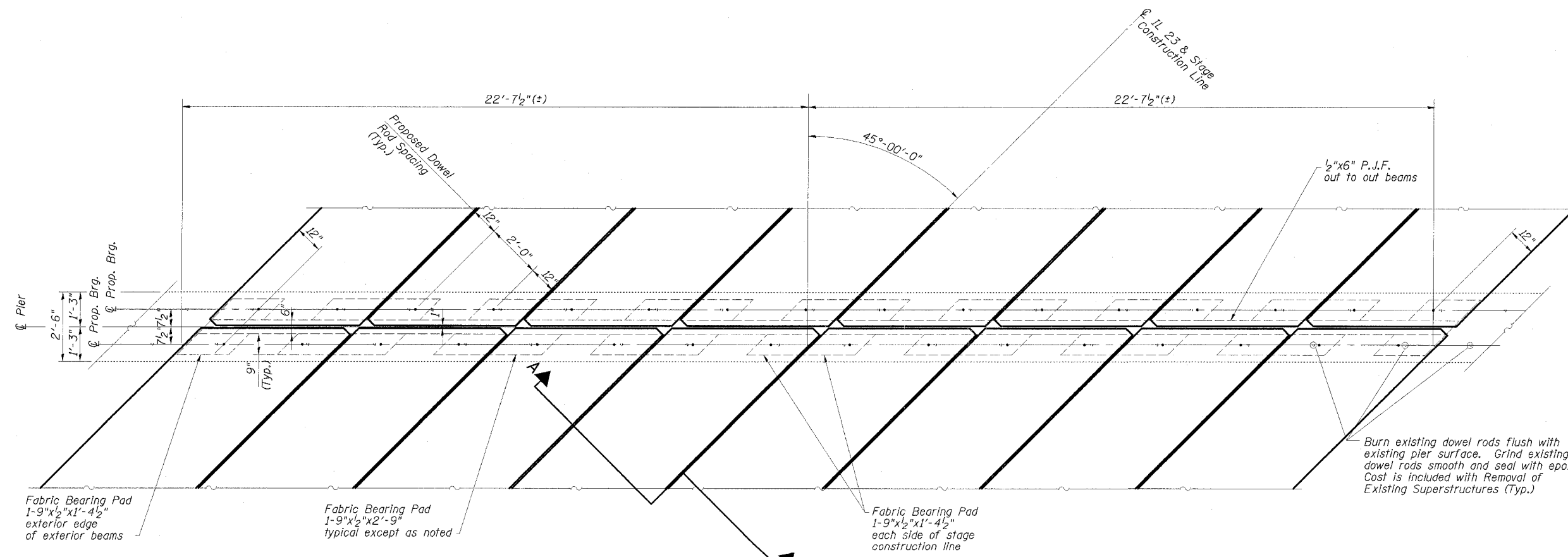
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	10IBR	LIVINGSTON	47	30
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
DWG. NO. 16 OF 17				

CONTRACT NO. 66606



SECTION A-A

(Concrete wearing surface and dowel rods not shown)



PIER BEARING SEAT PLAN

(Concrete wearing surface not shown)

PIER DETAILS
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 10IBR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

ESCA
CONSULTANTS, INC.

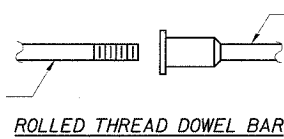
DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	101BR	LIVINGSTON	47	31
STA.	TO STA.	ILLINOIS	FED. AID PROJECT	
DWG. NO.		IT OF IT		

CONTRACT NO. 66606

The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



** ONE PIECE

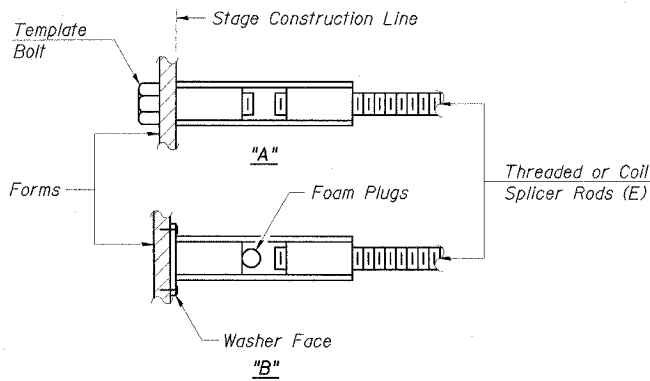
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



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.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

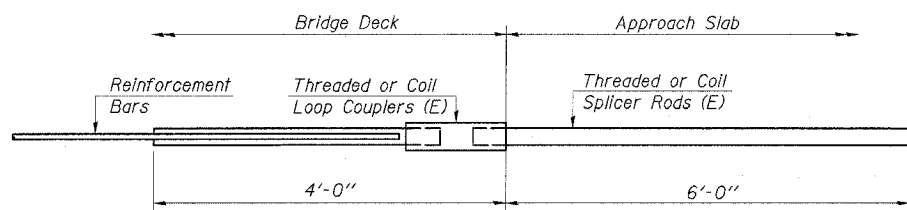
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- Minimum *Pull-out Strength = $1.25 \times f_{s_{allow}} \times A_t$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

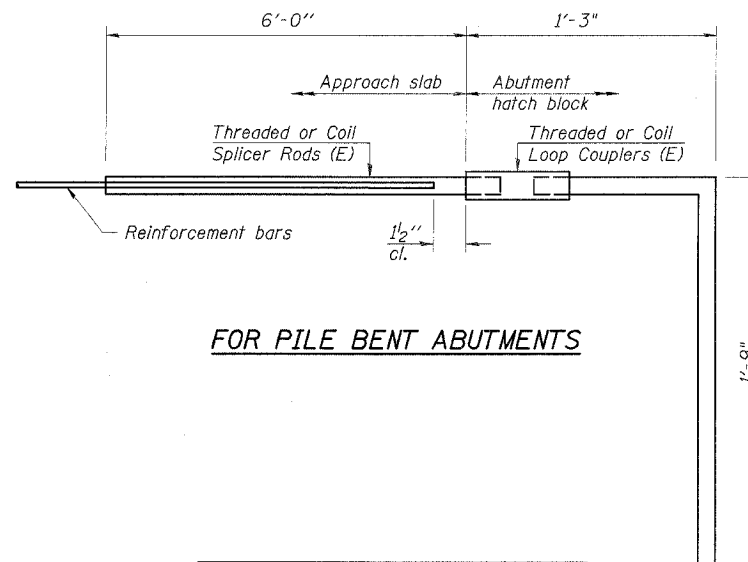
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



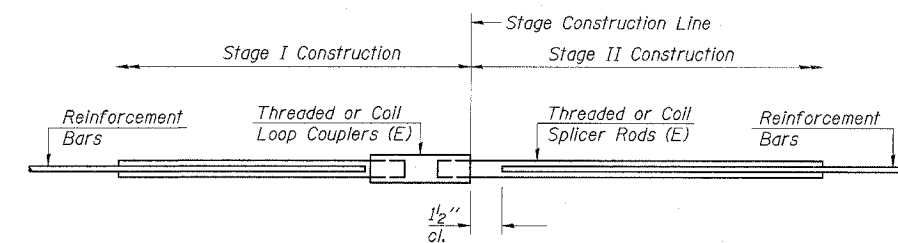
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	9.2 kips - tension
No. Required =	



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	9.2 kips - tension
No. Required =	64



STANDARD

Bar Size	No. Assemblies Required	Location
#4	139	Concrete Wearing Surface
#5	7	N. Abutment
#5	7	S. Abutment
#5	8	Joint Blockout

BAR SPLICER ASSEMBLY DETAILS
IL 23 OVER PRAIRIE CREEK
FAP ROUTE 68 - SECTION 101BR
LIVINGSTON COUNTY
STATION 280+55.00
STRUCTURE NO. 053-0153

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	8/05
DRAWN BY:	DWH	8/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

BSD-1 10-22-04

FAP	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	32
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

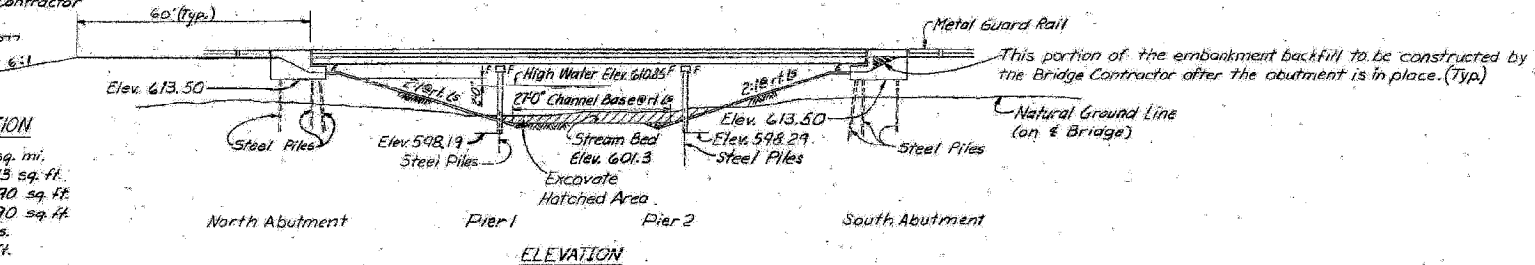
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101B	LIVINGSTON	39	14
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

B.M. #37 RR Spike in Power Pole 50' Left
Sta. 282+77 Elev. 620.21
Existing Structure: Built in 1914. Reinf. Concrete Deck Girders and Closed Abutments. Bridge to be removed by Contractor during Construction.
Inventory Number: 053-0017
Dimensions: 39'-1" x 19'-7"

WATERWAY INFORMATION

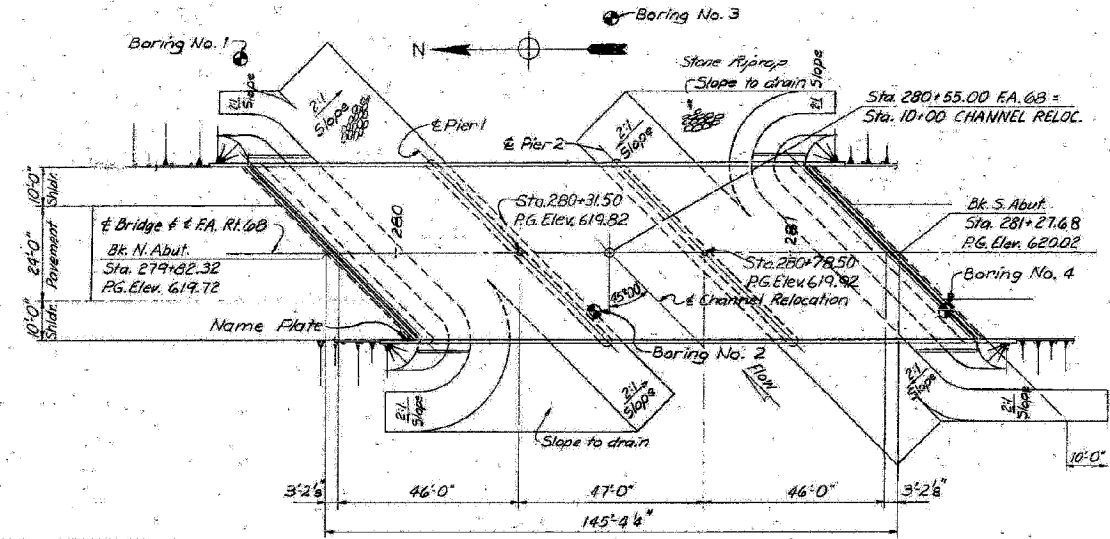
Drainage Area 25 sq. mi.
Present Opening 213 sq. ft.
Required Opening 390 sq. ft.
Proposed Opening 390 sq. ft.
Q(50) = 2,400 cfs.
Created Head 0.6 ft.



GENERAL NOTES

Protective coat shall not be applied to surfaces to which waterproofing membrane system is applied.
All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
The concrete curb and parapet section above the top of precast, prestressed concrete deck beams shall be constructed of Class X concrete except the aggregate shall conform to the requirement of Handrail Concrete.
Concrete in notched ends of deck beams, piers & abutments shall be Class X.
See Proposal for Boring Logs.
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, top edges to be rounded or chamfered 1/4" min.
Elevations are based on surface course thickness of 3" at centerline of bearings to provide for residual beam camber.
The embankment configuration shown shall be the minimum embankment that must be constructed prior to the construction of the abutments.
The Contractor shall drive two steel HP10x42 test piles in permanent locations, one at the N. Abut. and one at Pier 2, as directed by the Engineer prior to ordering the remainder of the piles.
A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the conc. for P.C.C. deck beams.

STATION 280+55
BUILT BY
STATE OF ILLINOIS
F.A. RT. 68 SEC. 101B
F.A. PROJ. BR-F-68(40)
LOADING HS20
Str. No. 053-0153
NAME PLATE
(See Std. 2113)



DESIGN STRESSES

FIELD UNITS
fc = 4,000 psi (Parapet, Curb & Sub)
fc = 20,000 psi (Reinf.)
vc = 50 psi (Footings)
n = 9

PRESTRESSED UNITS

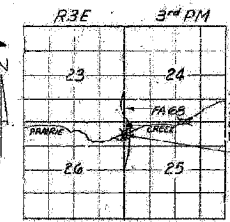
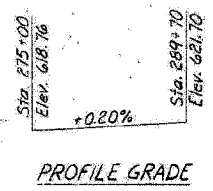
fc = 5,000 psi
fc1 = 4,000 psi
fs = 270,000 psi (1/8" Strands)
fs1 = 188,700 psi (1/8" Strands)

Allow 1/4" to 1/2" for bearing surf.

Design Specifications: AASHTO 1973 plus inferences as applicable.

LOADING HS-20-44

DESIGNED: H.A. Rehagen
CHECKED: W.O. Walden
DRAWN: J. De Wille
H.A. Rehagen



TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Removal of Existing Structure	Each	—	—	1
Structure Excavation	Cu. Yd.	—	132	132
Test Piles HP 10x42	Each	—	2	2
Steel Piles (HP 10x42)	Lin. Ft.	—	1495	1495
Class X Concrete	Cu. Yd.	34.3	258.5	322.8
Neoprene Expansion Joint-2"	Lin. Ft.	127	—	127
Reinforcement Bars	Lbs.	4,500	20,250	24,750
Precast Prestressed Concrete Deck Beams (21" depth)	Sq. Ft.	6458	—	6458
Waterproofing Membrane System	Sq. Yd.	664	—	664
Name Plate	Each	1	—	1
Stone Riprap	Sq. Yd.	—	1032	1032
Protective Coat	Sq. Yd.	123	—	123
*Bituminous Concrete Surface Course Class 1	Tons	72	—	72
Portland Cement Mortar Finishing Course	Lin. Ft.	1522	—	1522

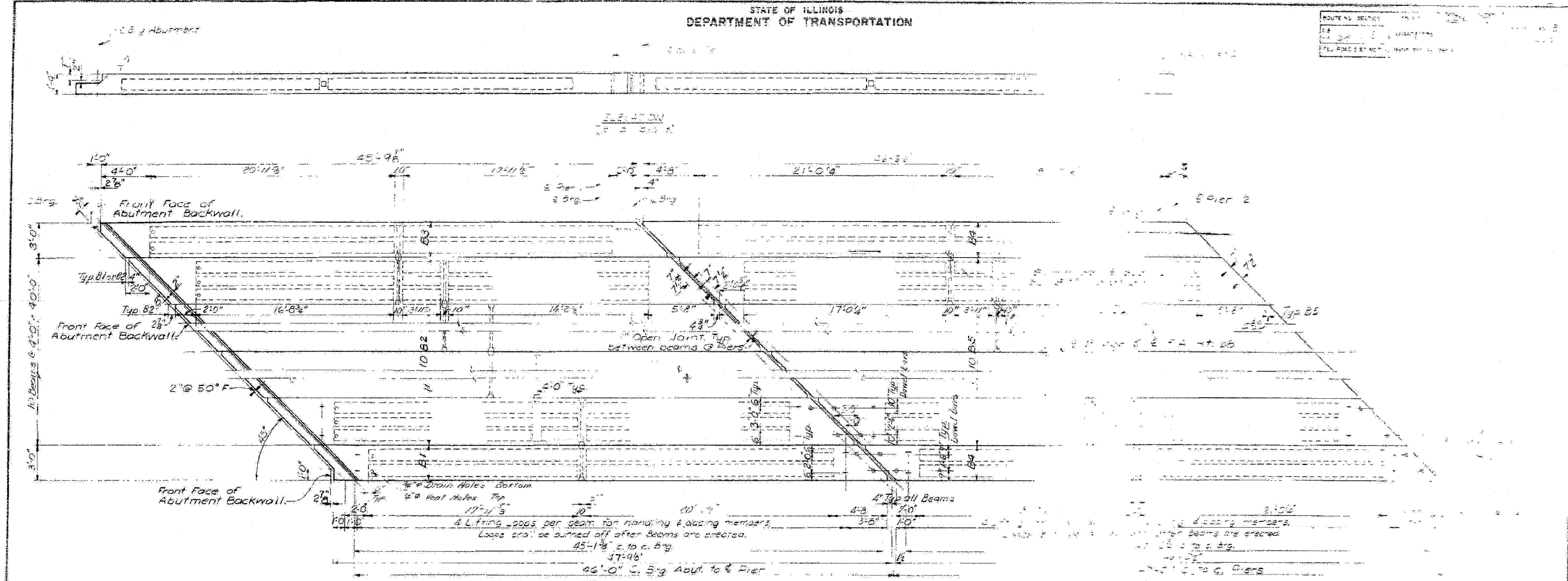
* Concrete Surface Course to be Mature D.

GENERAL PLAN & ELEVATION
F.A. ROUTE 68 (ILL. 23) OVER
PRAIRIE CREEK
F.A. RT. 68 SEC. 101 B
LIVINGSTON COUNTY
STATION 280+55

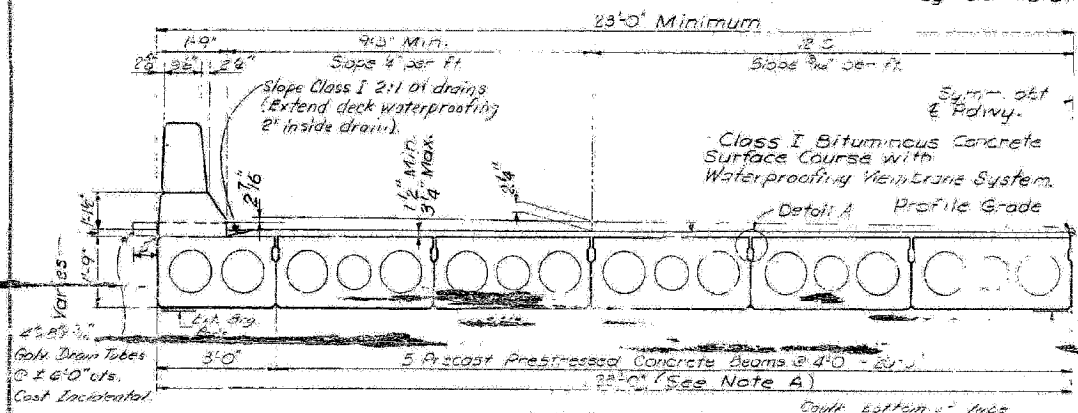
APPROVED
[Signature]
[Stamp: ILLINOIS DEPARTMENT OF TRANSPORTATION, DIVISION OF BRIDGE ENGINEERING, ST. LOUIS, MO. 63103]

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	34
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

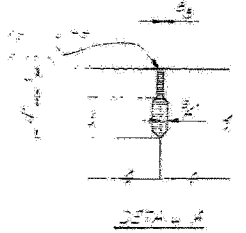


Span 1
(Span 3 same as Span 1 by 180° rotation)
PART PLAN

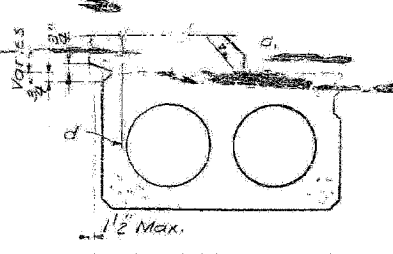


HALF CROSS SECTION

Note A:
Out to out dimension of beams may vary in accordance with maximum allowable dimensional tolerances as per Specification Art. 505.06 (d). If out to out dimension is greater than 46'-0", the 9'-3" shoulder shall be increased accordingly so that outside face of barrier curb is flush with outside edge of outside beam. Maximum out to out of beams may be 46'-5" and minimum out to out of beams may be 45'-9".



DETAIL A



CURB TREATMENT IF OUT TO OUT OF BEAMS < 46'-0"

NOTES

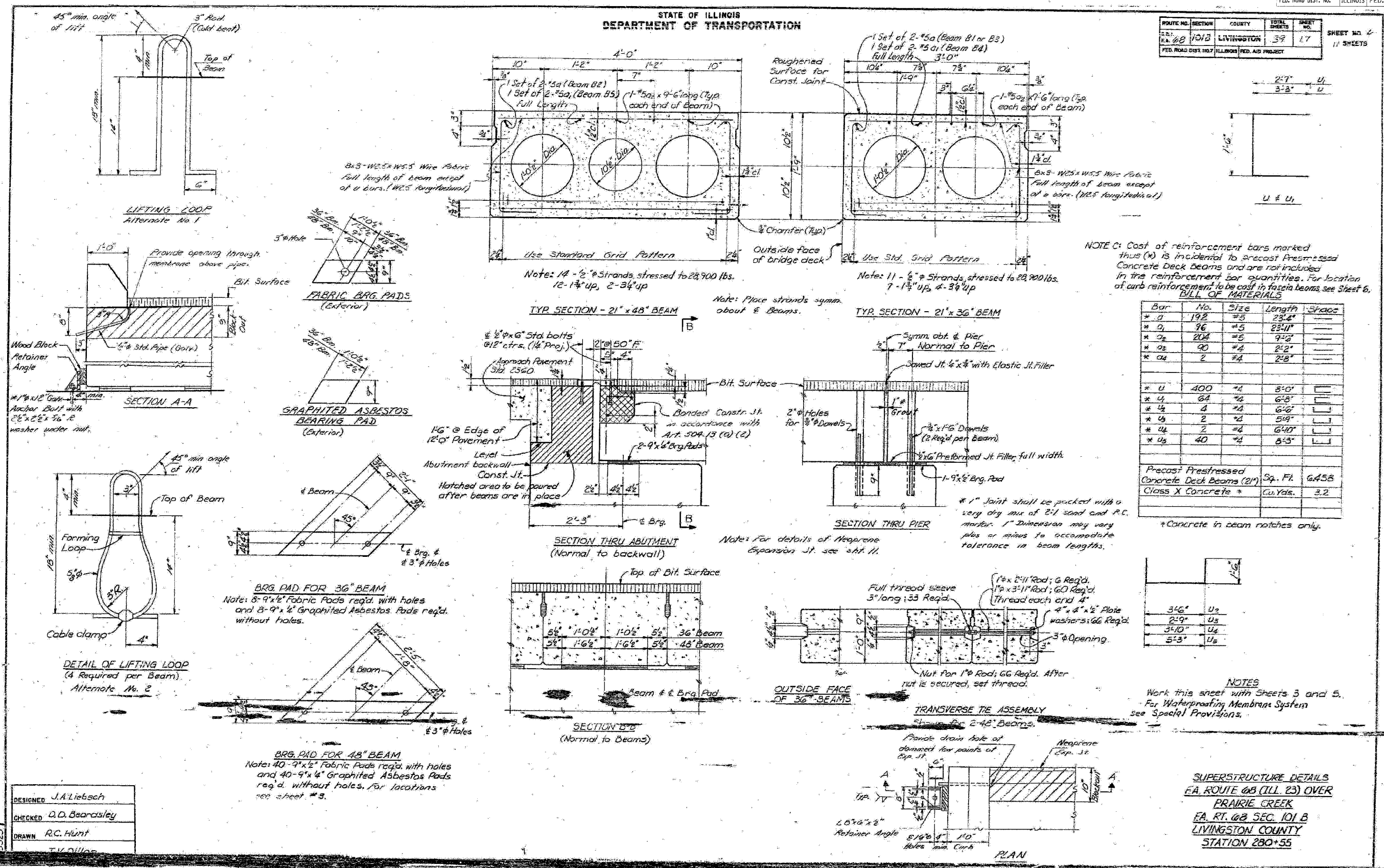
Refer to sheets 4 and 5 for Beams and Girders. Beams shall include furnishing of shown or noted items of beams, girders, joists, coil rods, reinforcement, water at bearing ends, and preformed

DESIGNED	J. Liebsch
CHECKED	D. Beardsley
DRAWN	R.C. Hunt
	T. Dillon

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	35
STA. TO STA.			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101B	LIVINGSTON	39	17
SHEET NO. 4 17 SHEETS				



NOTE C: Cost of reinforcement bars marked thus (*) is incidental to Precast Prestressed Concrete Deck Beams and are not included in the reinforcement bar quantities. For location of curb reinforcement, to be cast in fascia beams, see Sheet 6.

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
* 1	192	#5	23'-4"	—
* 2	96	#5	23'-11"	—
* 3	204	#5	9'-2"	—
* 4	90	#4	2'-2"	—
* 4a	2	#4	2'-8"	—
* U	400	#4	8'-0"	—
* U ₁	64	#4	6'-8"	—
* U ₂	4	#4	6'-0"	—
* U ₃	2	#4	5'-9"	—
* U ₄	2	#4	6'-10"	—
* U ₅	40	#4	8'-3"	—
Precast Prestressed Concrete Deck Beams (21')	Sq. Ft.	6,458		
Class X Concrete *	Cu. Yds.	3.2		

*Concrete in beam notches only.

3'-6"	U ₂
2'-9"	U ₃
3'-10"	U ₄
5'-3"	U ₅

NOTES
Work this sheet with Sheets 3 and 5.
For Waterproofing Membrane System see Special Provisions.

SUPERSTRUCTURE DETAILS
FA. ROUTE 68 (ILL. 23) OVER
PRAIRIE CREEK
FA. RT. 68 SEC. 101 B
LIVINGSTON COUNTY
STATION 280+55

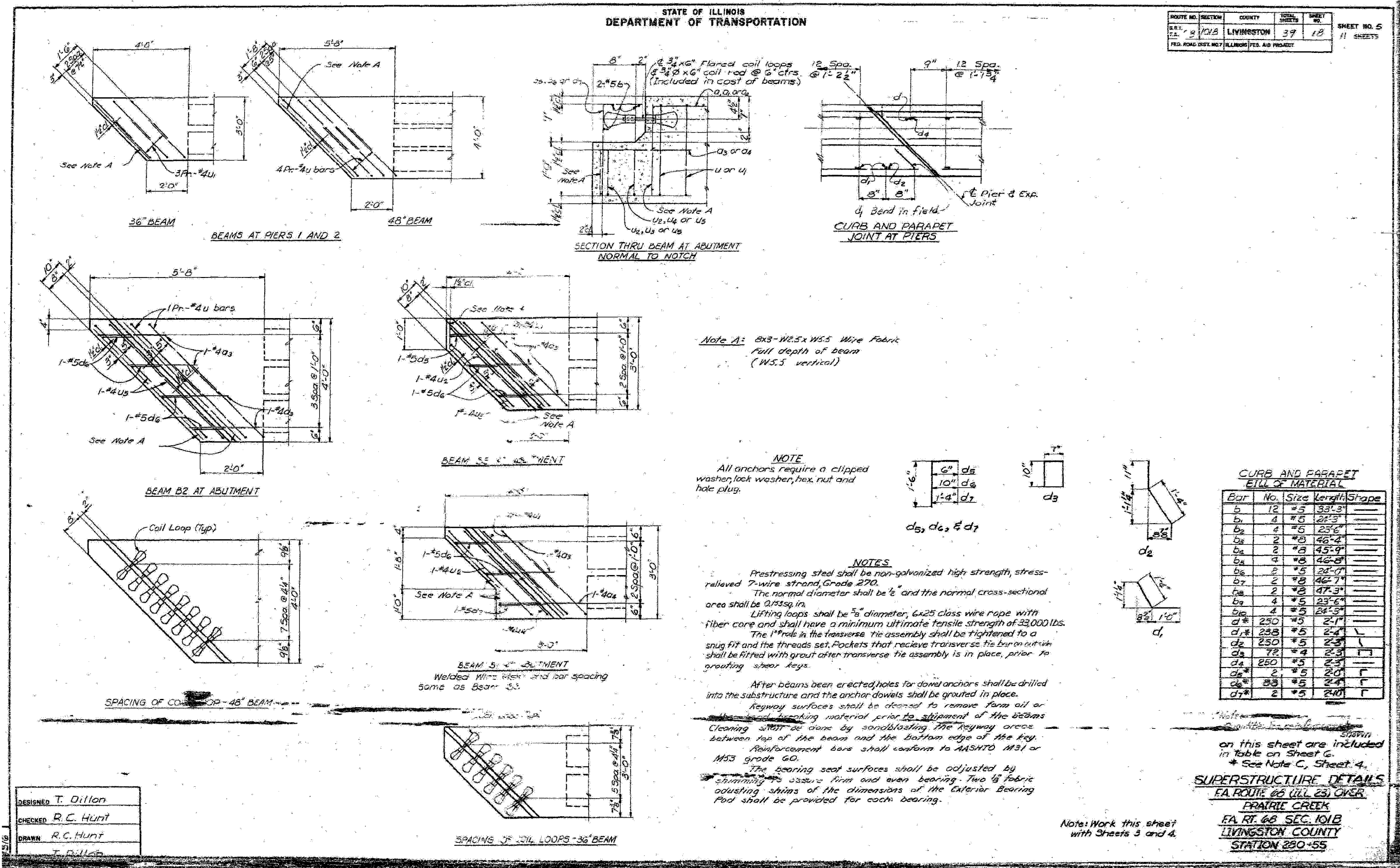
DESIGNED	J.A. Liebisch
CHECKED	D.D. Bearasley
DRAWN	R.C. Hunt
T.V. O'Neil	

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	36
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101B	LIVINGSTON	39	18
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. 5
11 SHEETS



Note A: 6x3-W2.5xW5.5 Wire Fabric
Full depth of beam
(W5.5 vertical)

NOTE
All anchors require a clipped washer, lock washer, hex. nut and hole plug.

NOTES
Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270.
The normal diameter shall be 1/2" and the normal cross-sectional area shall be 0.153sq. in.
Lifting loops shall be 7/8" diameter, 6x25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 33,000 lbs.
The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bars on outside shall be fitted with grout after transverse tie assembly is in place, prior to grouting shear keys.

After beams been erected holes for dowel anchors shall be drilled into the substructure and the anchor dowels shall be grouted in place.
Keyway surfaces shall be cleaned to remove form oil or other bonding material prior to shipment of the beams. Cleaning shall be done by sandblasting. The keyway areas between top of the beam and the bottom edge of the key.
Reinforcement bars shall conform to AASHTO M31 or M53 grade 60.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/2" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

CURB AND PARAPET
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b	12	#5	33'-3"	
b ₁	4	#5	24'-3"	
b ₂	4	#5	23'-6"	
b ₃	2	#8	46'-4"	
b ₄	2	#8	45'-9"	
b ₅	4	#8	46'-8"	
b ₆	8	#5	24'-0"	
b ₇	2	#8	46'-7"	
b ₈	2	#8	47'-3"	
b ₉	4	#5	24'-5"	
b ₁₀	4	#5	24'-5"	
d*	250	#5	2'-1"	
d ₁ *	238	#5	2'-4"	
d ₂	250	#5	2'-3"	
d ₃	72	#4	2'-3"	
d ₄	250	#5	2'-3"	
d ₅ *	2	#5	2'-0"	
d ₆ *	33	#5	2'-4"	
d ₇ *	2	#5	2'-0"	

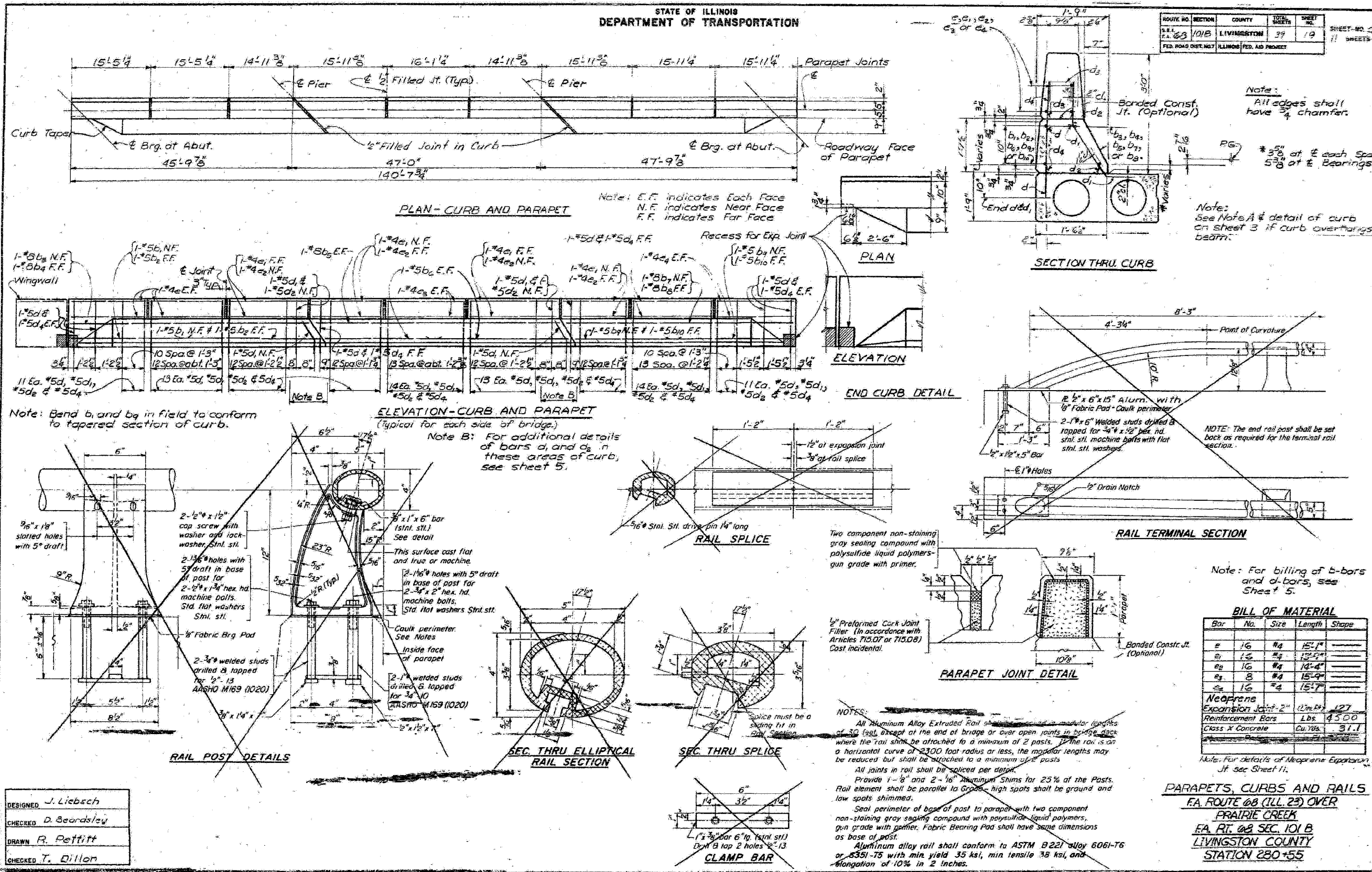
on this sheet are included in Table on Sheet 6.
* See Note C, Sheet 4.
SUPERSTRUCTURE DETAILS
FA. ROUTE 66 (ILL. 25) OVER
PRAIRIE CREEK
FA. RT. 68 SEC. 101B
LIVINGSTON COUNTY
STATION 280+55

Note: Work this sheet with Sheets 3 and 4.

DESIGNED T. Dillon
CHECKED R.C. Hunt
DRAWN R.C. Hunt
T. Dillon

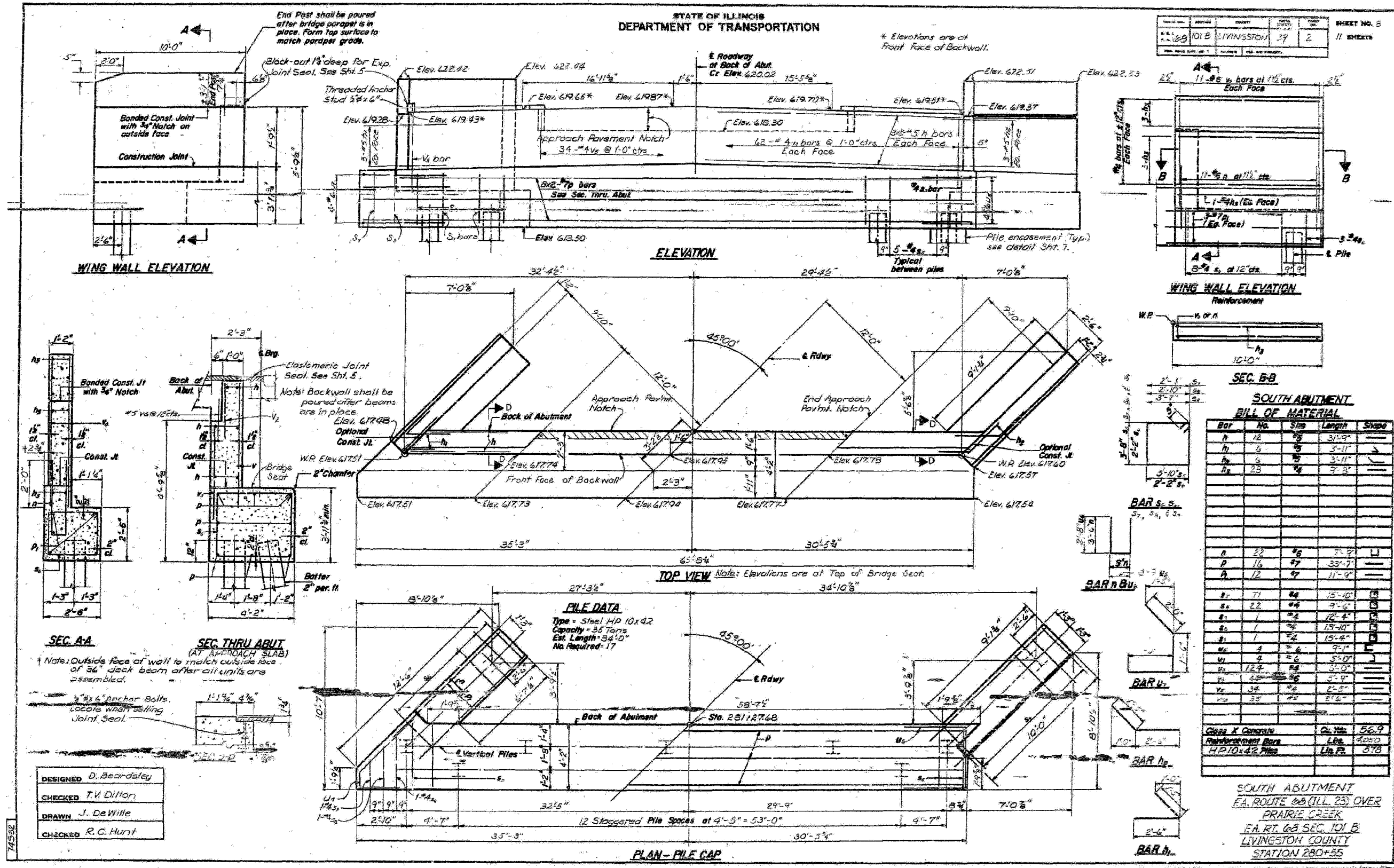
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101B	LIVINGSTON	47	37
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DESIGNED J. Liebsch
 CHECKED D. Beardstew
 DRAWN R. Pettitt
 CHECKED T. Dillon

FAP RTE	SECTION	COUNTY	TOTAL SHEET NO.
68	101B	LIVINGSTON	47 39
STA.		TO STA.	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	

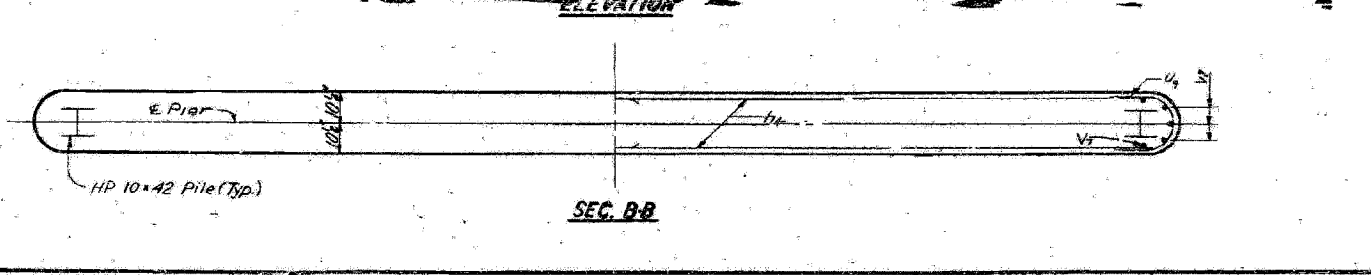
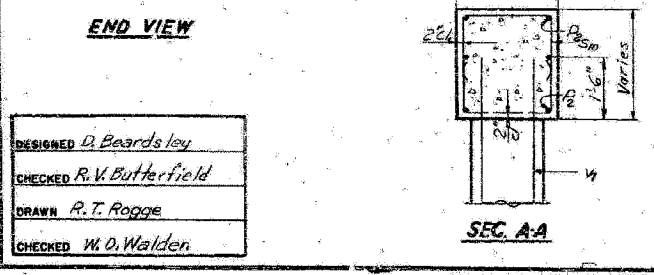
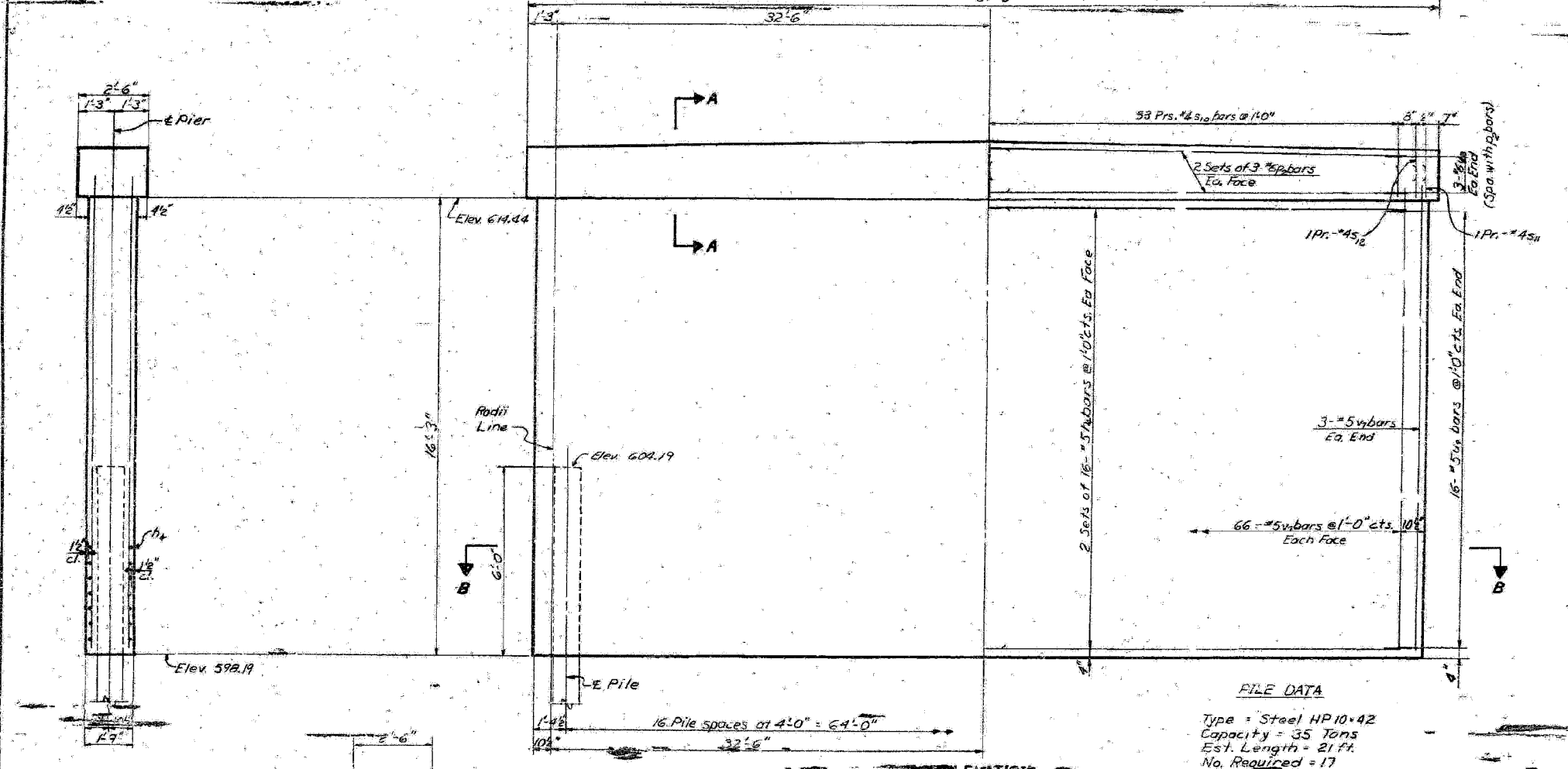
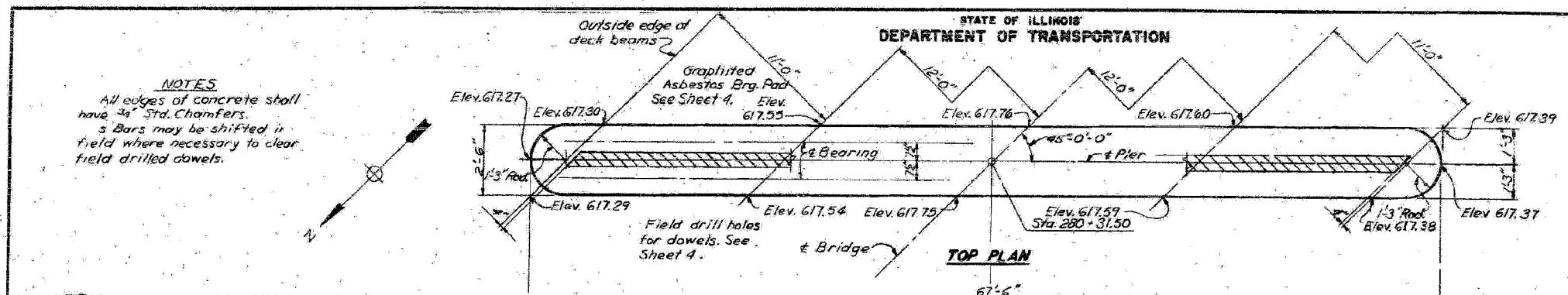


DESIGNED D. Beardstley
 CHECKED T.V. Dillon
 DRAWN J. DeWille
 CHECKED R.C. Hunt

PROJECT NO.	SECTION	COUNTY	SHEET NO.
68	101B	LIVINGSTON	39 2
STA.		TO STA.	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	40
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.
68	101B	LIVINGSTON	39	22
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



DESIGNED D. Beard's ley
CHECKED R. V. Butterfield
DRAWN R. T. Rogge
CHECKED W. D. Walden

DETAIL OF BARS

Bar	R	B
u ₆	11 3/8"	1'-6"
u ₄	6 3/8"	1'-3"

BAR S₁₀, S₁₁ & S₁₂

Bar	Size	Length	Shape
S ₁₀	2'-2"	S ₁₀	
S ₁₁	1'-9"	S ₁₁	
S ₁₂	2'-1"	S ₁₂	

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
u ₆	64	#5	33'-6"	
P ₁₂	12	#6	33'-8"	
S ₁₀	130	#4	6'-2"	
S ₁₁	4	#4	5'-5"	
S ₁₂	4	#4	5'-9"	
u ₆	6	#6	6'-3"	
u ₄	32	#5	4'-10"	
v ₇	138	#5	17'-3"	

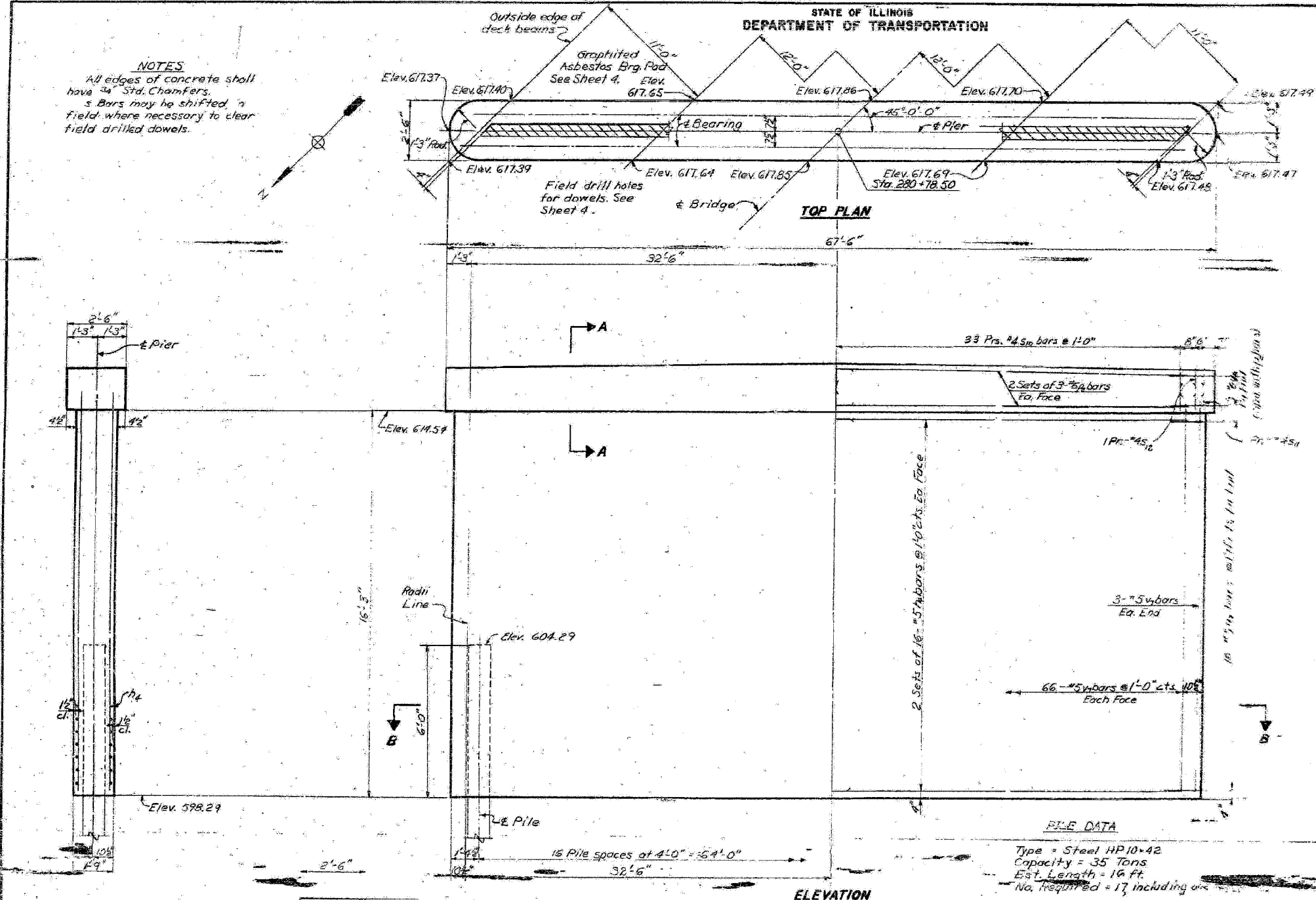
Class X Concrete Cu. Yds. 88.7
Reinforcement Bars Lbs. @110
Steel Piles HP10x42 Lbs. 557

PILE DATA
Type = Steel HP10x42
Capacity = 35 Tons
Est. Length = 21 ft.
No. Required = 17

PIER 1
EA. ROUTE 68 (ILL. 23) OVER
PRAIRIE CREEK
EA. RT. 68 SEC. 101 B
LIVINGSTON COUNTY
STATION 280+55

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	41
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

NOTES
 All edges of concrete shall have 3/4" Std. Chamfers.
 Bars may be shifted in field where necessary to clear field drilled dowels.

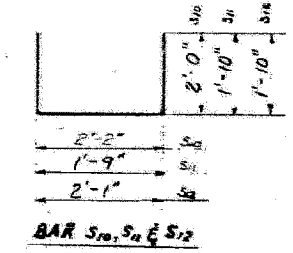


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101B	LIVINGSTON	47	41
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

DETAIL OF BARS

Bar	R	E
u ₆	11'-6"	1'-6"
u ₆	8'-3"	1'-3"

u₆ & u₉



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₆	64	#5	33'-6"	
Pr	12	#6	33'-8"	
S ₁₀	130	#4	6'-2"	
S ₁₁	4	#4	5'-5"	
S ₁₂	4	#4	5'-9"	
u ₆	6	#6	6'-3"	
u ₉	32	#5	4'-10"	
v ₇	138	#5	17'-2"	
Class X Concrete		Cu Yds. 88.9		
Reinforcement Bars		Lbs. 2400		
Steel Piles HP10x42		Lbs. 336		
Test Pile HP10x42		Each 1		

PILE DATA
 Type = Steel HP10x42
 Capacity = 35 Tons
 Est. Length = 16 ft.
 No. Required = 17 including one

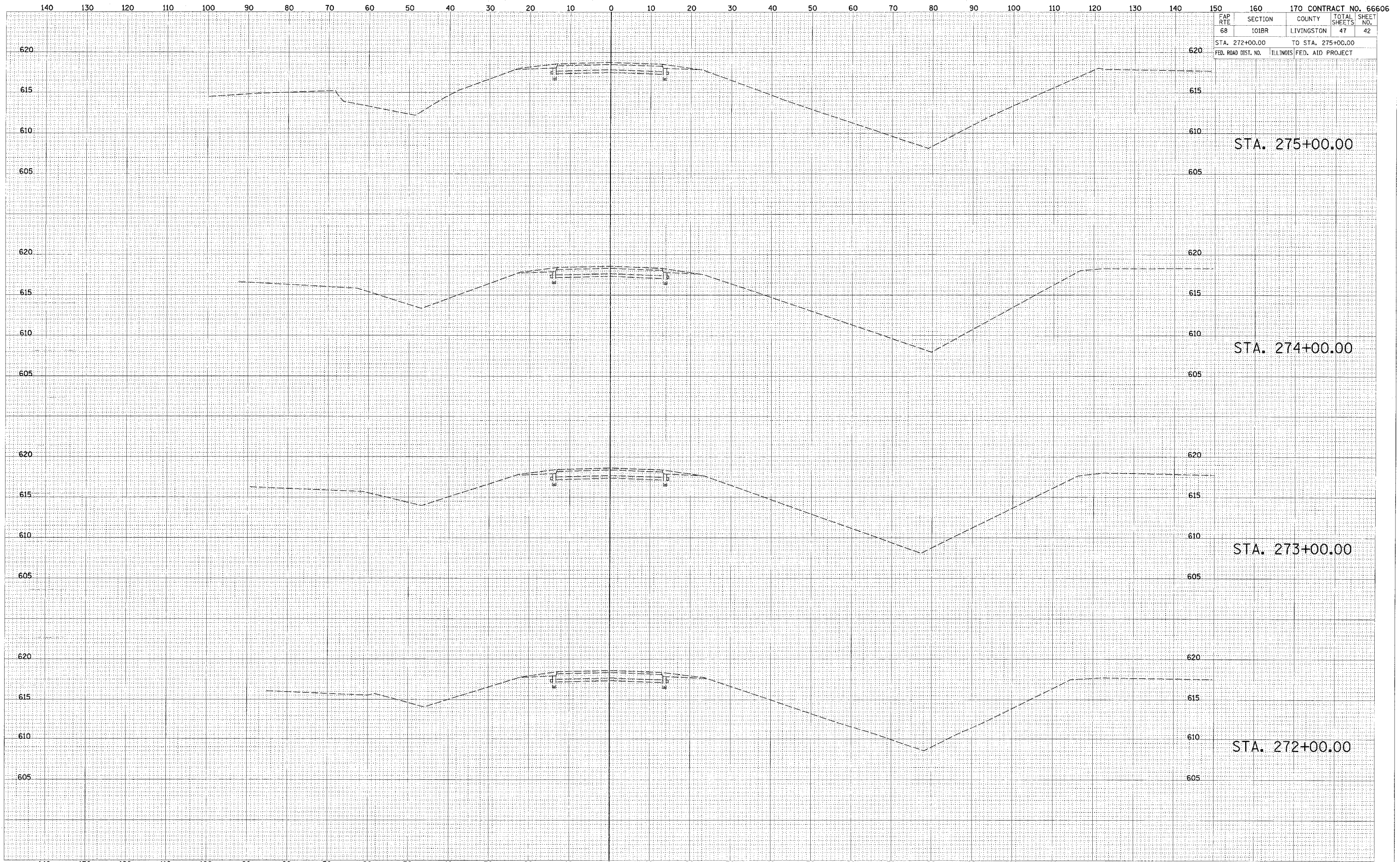
DESIGNED O. Bearseley
 CHECKED R.V. Butterfield
 DRAWN P.T. Rogge
 CHECKED L. Glaser

PIER 2
 E.A. ROUTE 68 (ILL. 23) OVER
 PRAIRIE CREEK
 E.A. RT. 68 SEC. 101 B
 LIVINGSTON COUNTY
 STATION 280+55



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

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



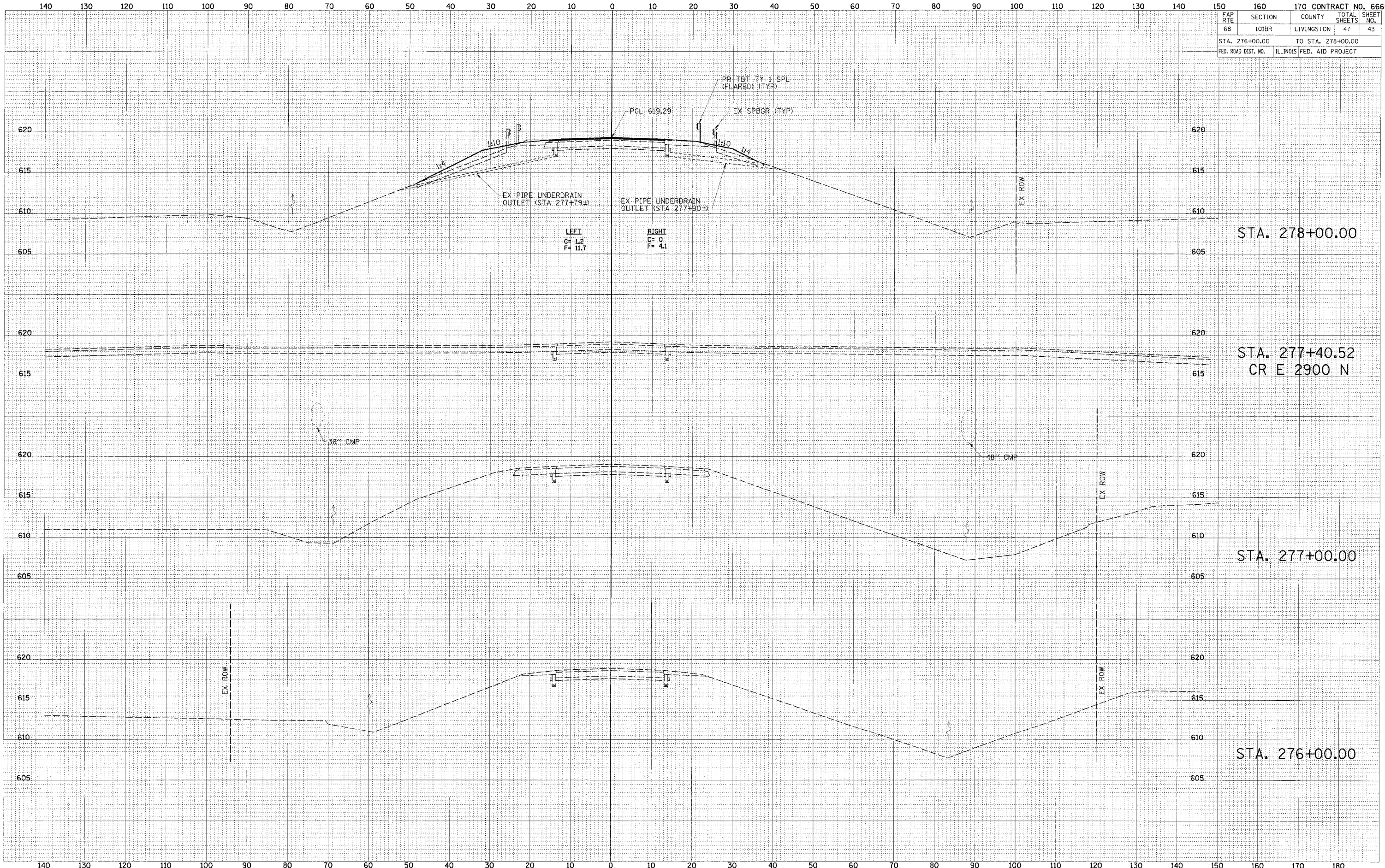
FAP RTE		SECTION		COUNTY		TOTAL SHEETS		SHEET NO.	
68		101BR		LIVINGSTON		47		42	
STA. 272+00.00				TO STA. 275+00.00					
FED. ROAD DIST. NO.				ILLINOIS FED. AID PROJECT					



FINAL SURVEY	SUBMITTED	DATE
NOTE BOOK	PLOTTED	
	TEMPERATURE	
	AREAS CHECKED	

ORIGINAL SURVEY	SUBMITTED	DATE
NOTE BOOK	PLOTTED	
	TEMPERATURE	
	AREAS CHECKED	

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	43
STA. 276+00.00		TO STA. 278+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

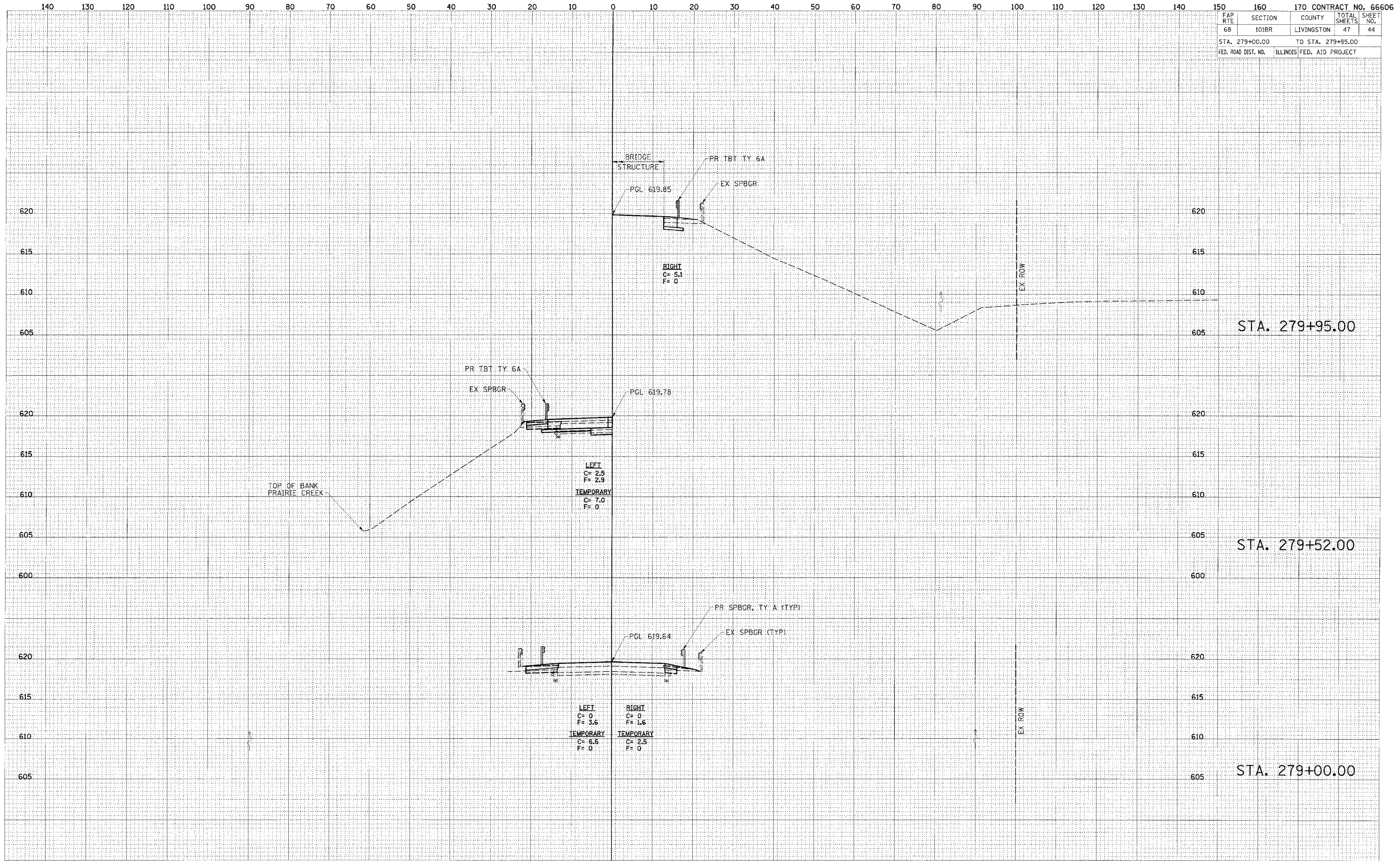




FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLU (1:10)	
	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLU (1:10)	
	TEMPLATE	
	AREAS CHECKED	

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	44
STA. 279+00.00		TO STA. 279+95.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

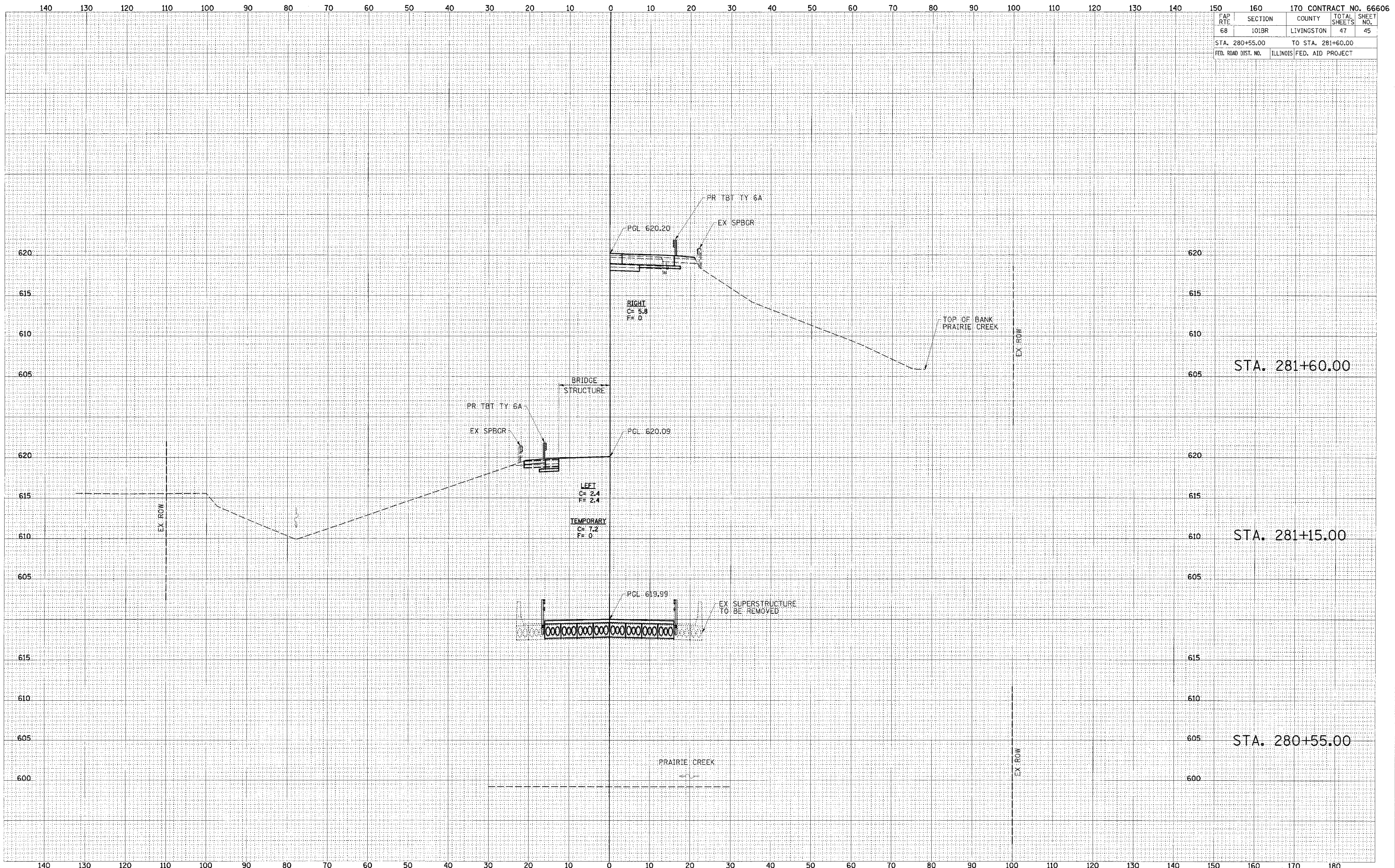




FINAL SURVEY	SCRIPTED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMP. PLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SCRIPTED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMP. PLATE	
	AREAS CHECKED	

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	45
STA. 280+55.00		TO STA. 281+60.00		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



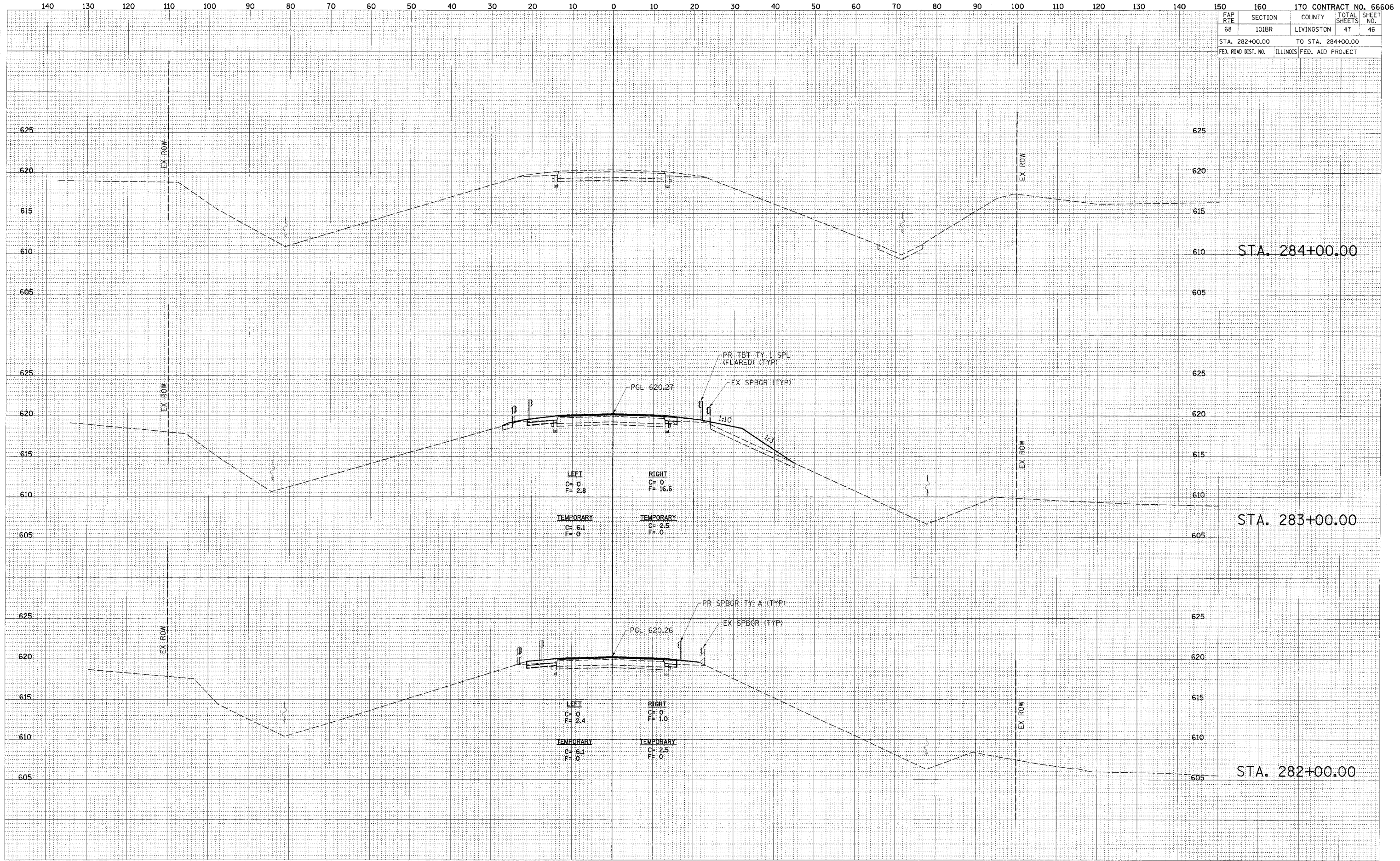
FAP RTE 68 (IL 23) CROSS SECTIONS
 STA 280+55.00 TO STA 281+60.00



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

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

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	46
STA. 282+00.00		TO STA. 284+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		





FINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
	TEMP. DATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
	TEMP. DATE	
	AREAS CHECKED	

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	101BR	LIVINGSTON	47	47
STA. 285+00.00		TO STA. 287+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

