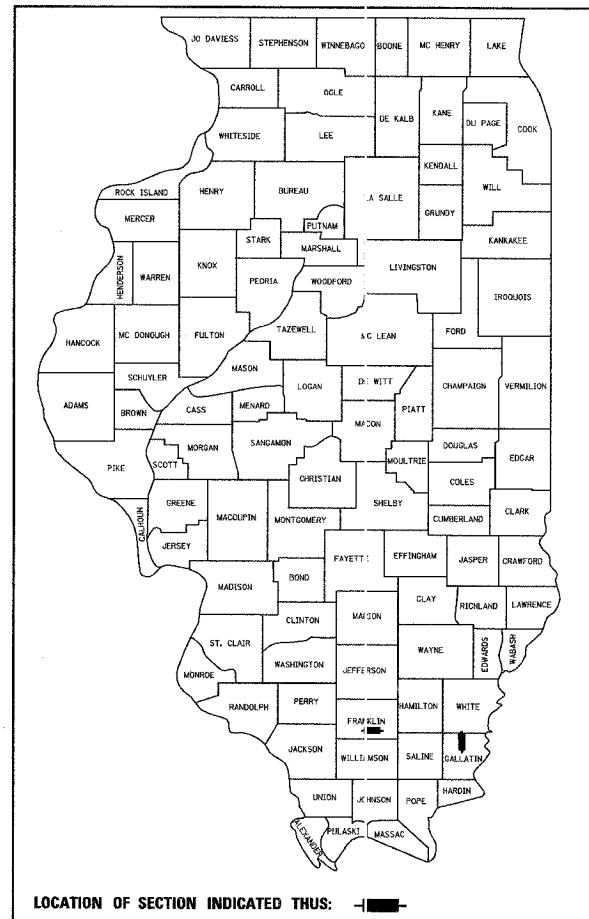


FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	73	1

• 873 & 782
 •• 107BR-1 & 111BR-1
 ••• FRANKLIN & GALLATIN
 P-
 D-97-014-08



FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL (RURAL)
DESIGN SPEED: 55 mph
POSTED SPEED: 55 mph
ADT: (IL 149; IL 1) 1990; 1630 (2007)
PV: (IL 149; IL 1) 93%; 76%
SU: (IL 149; IL 1) 5%; 10%
MU: (IL 149; IL 1) 2%; 14%

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED May 1 20 08
Max C. Lamm
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

June 27 2008
Eric F. Haro
 ENGINEER OF DESIGN AND ENVIRONMENT

June 27 20 08
Christine M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

DESIGN DESIGNATION N.A.

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS
PROPOSED HIGHWAY PLANS

FAP RTE'S 873 & 782 (IL 149 & IL 1)
 SECTION 107BR-1 & 111BR-1
 PROJECT: *BHF-000S(595)*
 FRANKLIN & GALLATIN COUNTIES

C - 99 - 014 - 08

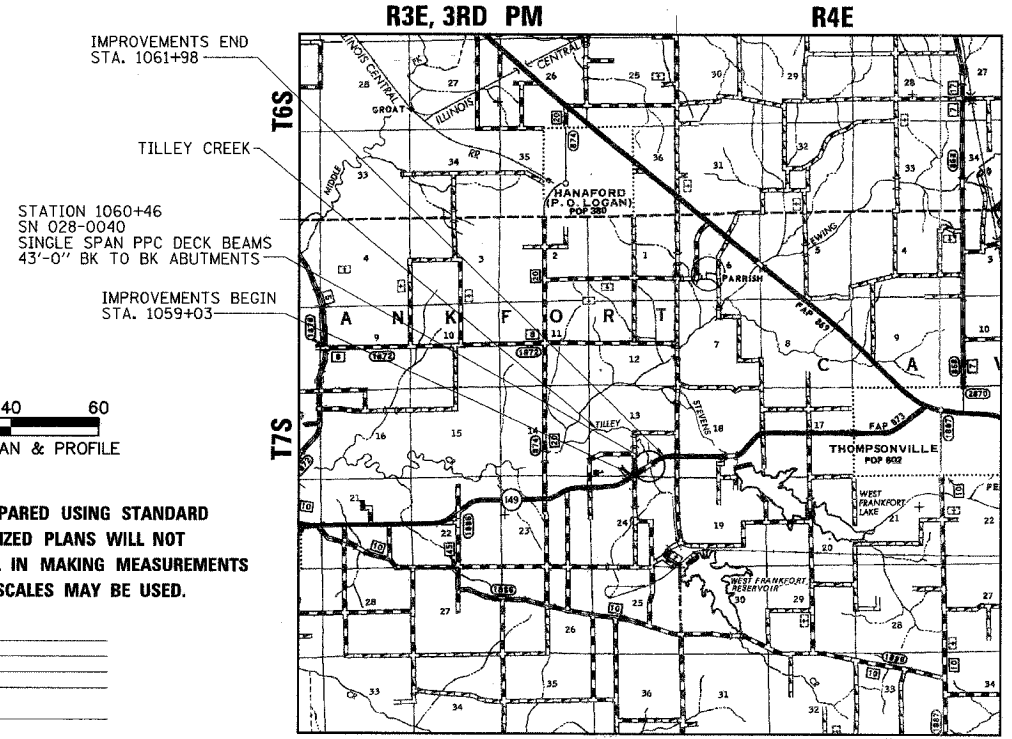
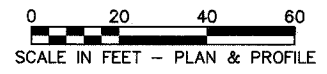
PPC DECK BEAM SUPERSTRUCTURE REPLACEMENTS
 OVER TILLEY CREEK AND CANE CREEK

INDEX OF SHEETS

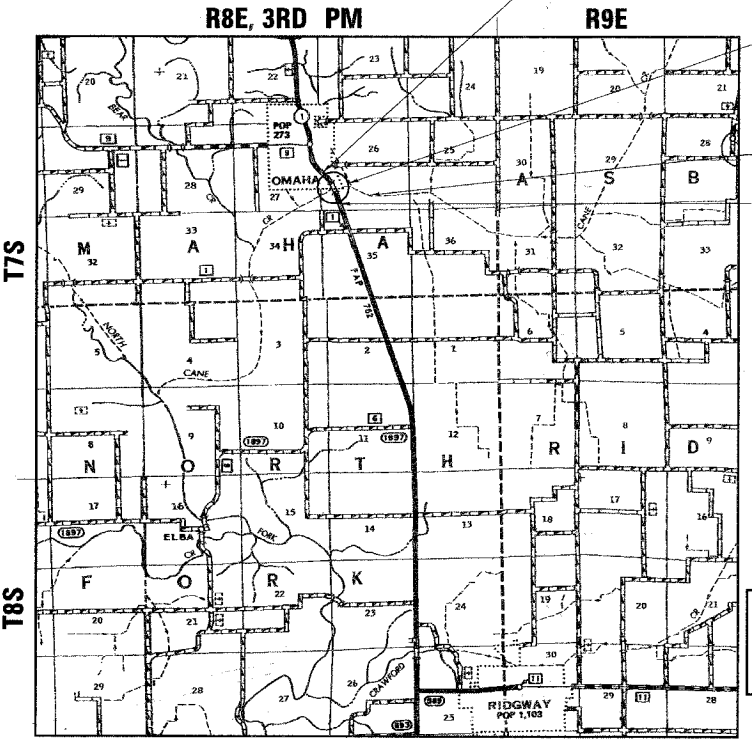
SHEET NO.	DESCRIPTION
ROADWAY PLANS	
SN 028-0040	
1.	COVER SHEET
2.	GENERAL NOTES AND STANDARDS
3.	SUMMARY OF QUANTITIES
4.	TYPICAL SECTIONS
5.	SCHEDULES OF QUANTITIES
6.	FAP RTE 873 (IL 149) PLAN AND PROFILE
7.-8.	STAGE CONSTRUCTION PLANS
9.	WIDE LOAD DETOUR
10.	EROSION CONTROL AND DRAINAGE PLANS
11.	MISCELLANEOUS DETAILS
STRUCTURE PLANS	
SN 028-0040	
12.	GENERAL PLAN
13.	GENERAL DATA
14.	STAGE CONSTRUCTION DETAILS
15.	TEMPORARY CONCRETE BARRIER
16.	SUPERSTRUCTURE
17.-18.	SUPERSTRUCTURE DETAILS
19.	APPROACH DETAILS
20.	SUPERSTRUCTURE AND APPROACH DETAILS
21.	STEEL RAILING, TYPE SM
22.	STRIP SEAL EXPANSION JOINT
23.	WEST ABUTMENT
24.	WEST ABUTMENT DETAILS
25.	EAST ABUTMENT
26.	EAST ABUTMENT DETAILS
27.	BAR SPLICER ASSEMBLY DETAILS
EXISTING STRUCTURE PLANS	
SN 028-0040	
28.-36.	EXISTING STRUCTURE PLANS
CROSS SECTIONS	
SN 028-0040	
37.-40.	FAP RTE 873 (IL 149) CROSS SECTIONS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
ROADWAY PLANS	
SN 030-0018	
41.	TYPICAL SECTIONS
42.-43.	SCHEDULE OF QUANTITIES
44.	FAP RTE 782 (IL 1) PLAN AND PROFILE
45.	BENCHMARKS AND CROSS-TIES
46.	STAGE CONSTRUCTION PLANS
47.	WIDE LOAD DETOUR
48.	EROSION CONTROL PLAN
49.	MISCELLANEOUS DETAILS
STRUCTURE PLANS	
SN 030-0018	
50.	GENERAL PLAN AND ELEVATION
51.	STAGE CONSTRUCTION
52.	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
53.	SUPERSTRUCTURE
54.	PREFORMED JOINT STRIP SEAL
55.-56.	BEAM DETAILS
57.	STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE
58.	ABUTMENT CONCRETE REMOVAL
59.	ABUTMENT DETAILS
60.	PIER DETAILS
61.	ABUTMENT REPAIR DETAILS
62.	PIER REPAIR DETAILS
63.	BAR SPLICER ASSEMBLY DETAILS
EXISTING STRUCTURE PLANS	
SN 030-0018	
64.-70.	EXISTING STRUCTURE PLANS
CROSS SECTIONS	
SN 030-0018	
71.-73.	FAP RTE 782 (IL 1) CROSS SECTIONS



FRANKLIN COUNTY LOCATION MAP



GALLATIN COUNTY LOCATION MAP



107BR-1 111BR-1
 GROSS LENGTH = 295 FT. = 0.056 MI.; 409 FT. = 0.077 MI.
 NET LENGTH = 295 FT. = 0.056 MI.; 409 FT. = 0.077 MI.

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

DISTRICT 9 NO. (217) 549-2171
 PROJECT ENGINEER: DAVID PICHE
 UNIT CHIEF:
 TOWNSHIP: FRANKFORT & OMAHA
 CONTRACT NO.: 78034



THIS PROFESSIONAL ENGINEER'S SEAL APPLIES ONLY TO SHEETS 1-11 AND 28-40.
Richard D. Payne DATE: 04/18/08
 ILLINOIS PROFESSIONAL LICENSE NO. 37421
 (EXPIRATION DATE: 11-30-09)

ESCA CONSULTANTS, INC.



THIS PROFESSIONAL ENGINEER'S SEAL APPLIES ONLY TO SHEETS 41-49 AND 64-73.
Mary Coombe-Bloxdorf DATE: 04/18/08
 ILLINOIS PROFESSIONAL LICENSE NO. 43208
 (EXPIRATION DATE: 11-30-09)

COOMBE-BLOXDORF P.C.

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
• 107BR-1, 111BR-1		**	73	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
• 873 & 782		** FRANKLIN & GALLATIN		

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
515001-02	NAME PLATE FOR BRIDGES
630001-07	STEEL PLATE BEAM GUARDRAIL
631032-03	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 OPERATIONS, 2L, 2W, MORE THAN 4.5 m (15') AWAY
701006-02	OFF-RD OPERATIONS, 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
701011-01	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-02	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-02	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-02	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-09	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-02	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901	TRAFFIC CONTROL DEVICES
704001-04	TEMPORARY CONCRETE BARRIER
720001	SIGN PANEL MOUNTING DETAILS
720006-01	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

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

ALL HOT-MIX ASPHALT	2.016 TONS/CU YD
ALL AGGREGATE	2.05 TONS/CU YD
BITUMINOUS MATERIALS:	
ON PAVEMENT	0.09 GAL/SQ YD
INTERMEDIATE LIFTS (FOG COAT)	0.04 GAL/SQ YD
ON AGGREGATE SURFACE	0.32 GAL/SQ YD
AGGREGATE (PRIME COAT)	0.0015 TONS/SQ YD
- 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 PAVEMENT REMOVAL.
- 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.
- 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.
- EXISTING TRAFFIC BARRIER TERMINALS TO BE REMOVED SHALL BE PAID FOR AS GUARDRAIL REMOVAL.
- FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
- ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.
- TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER EXCEPT AS DESCRIBED IN NOTE 19. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.
- THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION EACH FOR THE INITIAL OPENING OF THE COMPLETED STRUCTURE TO TWO LANE TRAFFIC, THE PRIME COAT, BINDER COURSE, AND THE SURFACE COURSE.
- THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.
- THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.
- ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC AND THE TEMPORARY TRAFFIC SIGNALS SHALL BE TURNED OR COVERED.
- ALL OBSTRUCTIONS WHICH ARE WITHIN 30' OF THE CENTERLINE OF THE ROADWAY AND ARE NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED FROM STATION 1056+00 TO 1065+00 (IL 149) AND STATION 353+00 TO 359+00 (IL 1). TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ETC. WHICH PROJECT 4 IN. OR MORE ABOVE THE GROUNDLINE; AND TREES WHICH WILL MATURE TO A DIAMETER OF 4 IN. OR GREATER.

COMMITMENTS

- NONE AS OF MAY 9, 2008. REFER TO COMMITMENT FILE FOR ANY COMMITMENTS AFTER THIS DATE.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREPARED BY: Joe Polaniewicz
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: James J. Emen
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: Wesley Summers
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: Charles Lugin
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: Bruce W. Peckles
DISTRICT MATERIALS ENGINEER

EXAMINED BY: John Smithers
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: Samuel J. O'Brien
ASSISTANT REGIONAL ENGINEER

APPROVED BY: May C. Romo
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

DATE: May 1 2008

ESCA CONSULTANTS, INC.		
DESIGNED BY:	DAJ	02/08
DRAWN BY:	CJ/HAS	02/08
CHECKED BY:	MTD	03/08
APPROVED BY:	RDP	04/08

**GENERAL NOTES
AND STANDARDS**
FAP RTE'S 873 (IL 149) & 782 (IL 1)
SECTIONS 107BR-1 & 111BR-1
FRANKLIN & GALLATIN COUNTIES

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	HBP FUNDING 80% FEDERAL 20% STATE	CONSTRUCTION TYPE CODE	
				X080-2A FRANKLIN COUNTY SN 028- 0040	X081-2A GALLATIN COUNTY SN 030- 0018
20200500	EARTH EXCAVATION (WIDENING)	CU YD	247	40	207
25000210	SEEDING, CLASS 2A	ACRE	0.21	0.1	0.11
25000350	SEEDING, CLASS 7	ACRE	0.21	0.1	0.11
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	19.1	9	10.1
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	19.1	9	10.1
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	19.1	9	10.1
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.42	0.2	0.22
25100115	MULCH, METHOD 2	ACRE	0.42	0.2	0.22
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	42.43	20	22.43
28000400	PERIMETER EROSION BARRIER	FOOT	1162	580	582
35300720	PORTLAND CEMENT CONCRETE BASE COURSE 13"	SQ YD	18	18	-
35650500	BASE COURSE WIDENING 10"	SQ YD	401	180	221
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	154	94	60
40600300	AGGREGATE (PRIME COAT)	TON	3	2	1
40600645	LEVELING BINDER (MACHINE METHOD), N90	TON	68	56	12
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	789	220	569
40600990	TEMPORARY RAMP	SQ YD	265	184	81
40603320	HOT-MIX ASPHALT SURFACE COURSE, MIX "C" N90	TON	232	175	57
44000100	PAVEMENT REMOVAL	SQ YD	18	18	-
44000196	HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL	SQ YD	10	10	-
44004250	PAVED SHOULDER REMOVAL	SQ YD	221	-	221
48100500	AGGREGATE SHOULDERS, TYPE A 6"	SQ YD	194	-	194
48203100	HOT-MIX ASPHALT SHOULDERS	TON	57	34	23
50101700	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 1	EACH	1	1	-
50101800	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 2	EACH	1	-	1
50102400	CONCRETE REMOVAL	CU YD	6.6	1.0	5.6
50300225	CONCRETE STRUCTURES	CU YD	6.7	1.0	5.7
50300260	BRIDGE DECK GROOVING	SQ YD	779	199	580
50300300	PROTECTIVE COAT	SQ YD	797	217	580
50400105	PRECAST CONCRETE BRIDGE SLAB	SQ FT	299	299	-
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1397	1397	-
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	5210	-	5210
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	11050	2880	8170
50800515	BAR SPLICERS	EACH	222	50	172
50901050	STEEL RAILING, TYPE SM	FOOT	483	167	316
51500100	NAME PLATES	EACH	2	1	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	101	33	68
58700300	CONCRETE SEALER	SQ FT	512	57	455
59000200	EPOXY CRACK INJECTION	FOOT	100	70	30
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8	4	4

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	HBP FUNDING 80% FEDERAL 20% STATE	CONSTRUCTION TYPE CODE	
				X080-2A FRANKLIN COUNTY SN 028- 0040	X081-2A GALLATIN COUNTY SN 030- 0018
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	2	-
63200310	GUARDRAIL REMOVAL	FOOT	366	190	176
63301930	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	1	1	-
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	9	3	6
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	0.5	0.5
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	25	10	15
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1	1
70106700	TEMPORARY RUMBLE STRIP	EACH	12	6	6
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	14	6	8
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	550	160	390
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2415	790	1625
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1372	318	1054
70400100	TEMPORARY CONCRETE BARRIER	FOOT	750	325	425
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	725	325	400
70500100	TEMPORARY STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	37.5	37.5	-
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2415	790	1625
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	10	4	6
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	4	4	-
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	2	-
78300100	PAVEMENT MARKING REMOVAL	SQ FT	737	220	517
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	11	2	9
86200300	UNINTERRUPTIBLE POWER SUPPLY, EXTENDED	EACH	2	1	1
X0324744	REMOVAL OF EXISTING PRECAST CONCRETE UNITS	SQ FT	299	299	-
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	91	35	56
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	797	217	580
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	74	30	44
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	2	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	2	2

* SPECIALTY ITEM

CONTRACT NO. 78034				
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
* 107BR-1, 111BR-1	**	**	73	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*783 & 782				
**FRANKLIN & GALLATIN				

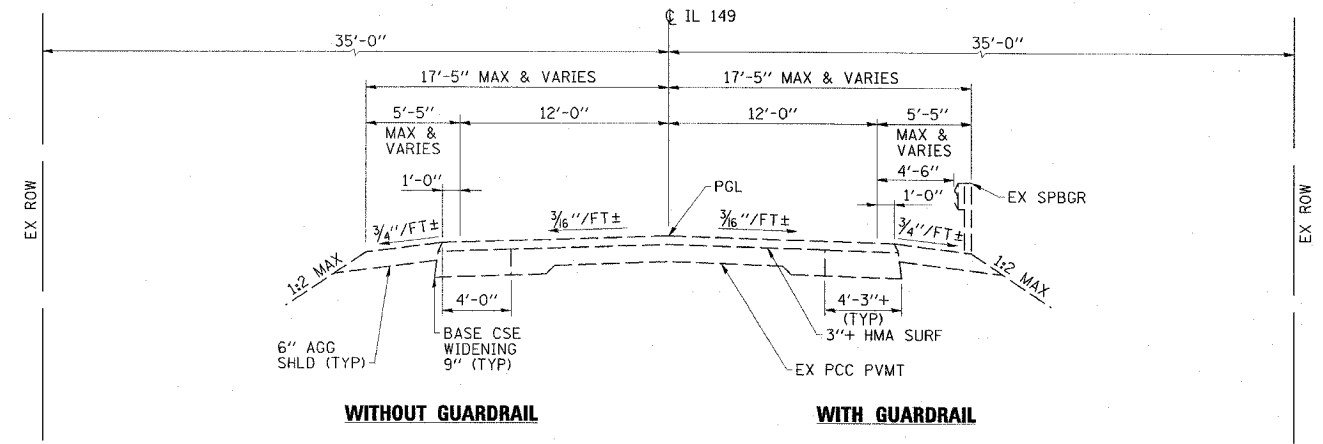
ESCA
CONSULTANTS, INC.

DESIGNED BY:	DAJ	02/08
DRAWN BY:	CJ/HAS	02/08
CHECKED BY:	MTD	03/08
APPROVED BY:	RDP	04/08

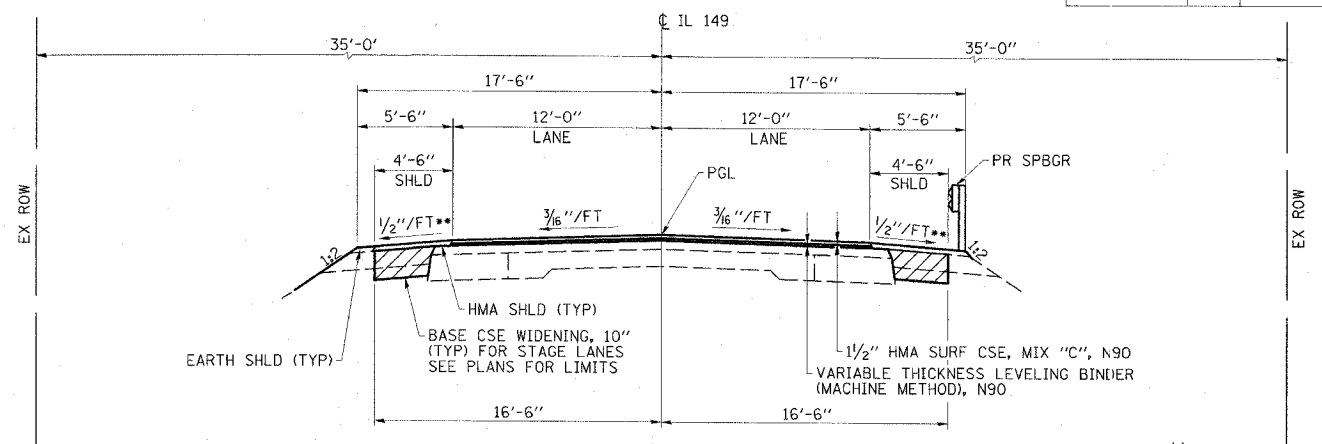
SUMMARY OF QUANTITIES
FAP RTE'S 783 (IL 149) & 782 (IL 1)
SECTIONS 107BR-1 & 111BR-1
FRANKLIN & GALLATIN COUNTIES



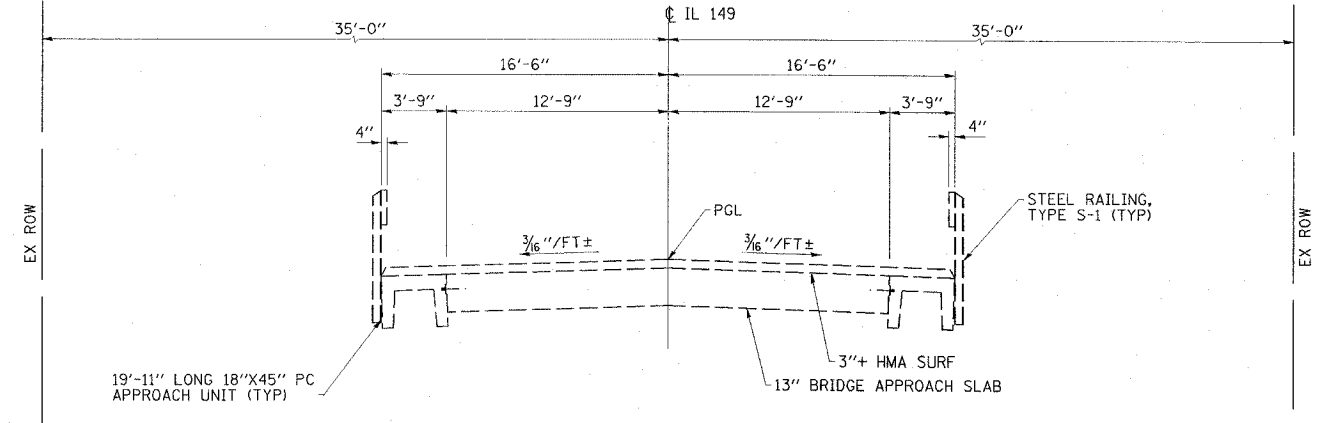
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
873	107BR-1	FRANKLIN	73	4
STA.		TO STA.		
FED. RD/D DIST. NO.		ILLINOIS FED. AID PROJECT		



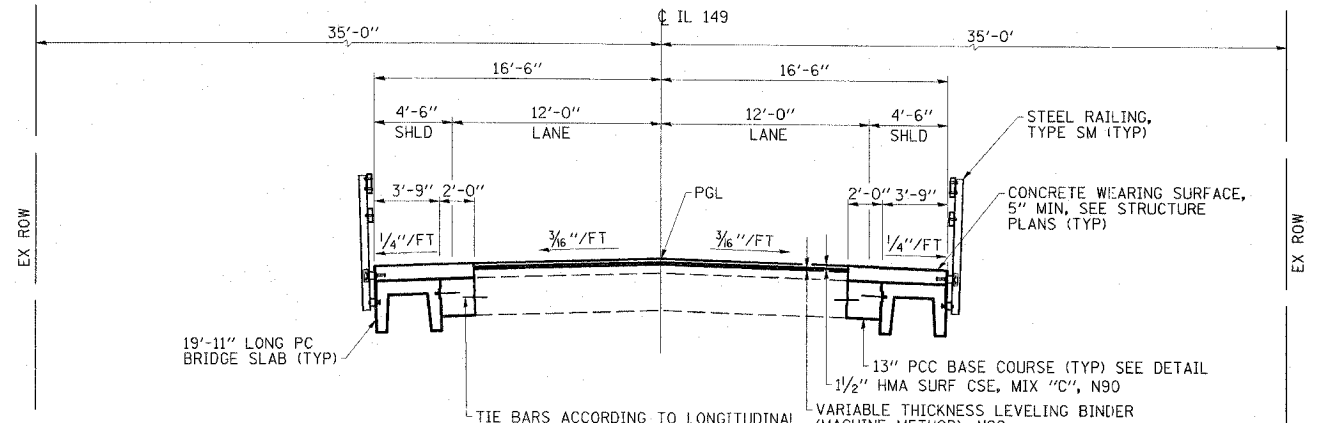
EXISTING TYPICAL ROADWAY SECTION
 STA 1057+00.00 TO 1063+00.00
 OMISSION STA 1060+03.83 TO 1060+87.21



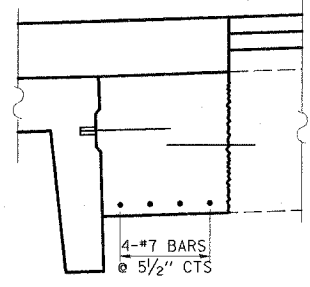
PROPOSED TYPICAL ROADWAY SECTION
 STA 1059+03.00 TO 1060+03.83 AND STA 1060+87.21 TO 1061+98.00
 ** TRANSITION TO 1/4"/FT NEAR BRIDGE APPROACHES



EXISTING BRIDGE APPROACH SECTION
 STA 1060+03.83 TO 1060+87.21
 BRIDGE OMISSION 1060+24.50 TO 1060+67.50



PROPOSED BRIDGE APPROACH SECTION
 STA 1060+03.83 TO 1060+87.21
 BRIDGE OMISSION 1060+24.50 TO 1060+67.50



PCC BASE COURSE DETAIL

HMA MIXTURES REQUIREMENTS

LOCATION(S):	HOT MIX ASPHALT SURFACE COURSE AND LEVELING BINDER	BASE COURSE WIDENING	HOT MIX ASPHALT SHOULDERS
MIXTURE USE(S):	HOT MIX ASPHALT SURFACE COURSE, MIX C, N90	HOT MIX ASPHALT BINDER COURSE, N90, IL-19.0	HOT MIX ASPHALT SHOULDERS
AC/PG:	PG64-22	PG64-22	PG58-22
RAP % (MAX): ***	10	10	50
DESIGN AIR VOIDS:	4.0%, 90 GYRATION DESIGN	4.0%, 90 GYRATION DESIGN	2.0%, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5 OR IL-12.5	IL-19.0	HMA SHOULDERS
FRICTION AGGREGATE:	C SURFACE	NONE	NONE

*** 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: DAJ 02/08
 DRAWN BY: CJ/HAS 02/08
 CHECKED BY: MTD 03/08
 APPROVED BY: RDP 04/08

TYPICAL SECTIONS
 FAP RTE 873 (IL 149)
 SECTION 107BR-1
 FRANKLIN COUNTY

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
873	107BR-1	FRANKLIN	73	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

LOCATION	SUITABLE EARTH EXCAVATION (WIDENING)	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
NE QUADRANT CUTS & FILLS	9.5	7.1		7.3		-0.2
NW QUADRANT CUTS & FILLS	11.5	8.6			4.0	+4.6
SE QUADRANT CUTS & FILLS	10.5	7.9			9.4	-1.5
SW QUADRANT CUTS & FILLS	8.5	6.4			9.1	-2.7
TOTALS	40.0	30.0			29.8	+0.2

NOTES:

1. EXCAVATION USED AS EMBANKMENT = (SUITABLE EARTH EXCAVATION + SUITABLE INCIDENTAL EXCAVATION)*0.75

LOCATION	PERIMETER EROSION BARRIER	TEMPORARY EROSION CONTROL SEEDING (2 APPLICATIONS)
	FOOT	POUND
NE QUADRANT	145	5
NW QUADRANT	145	5
SE QUADRANT	145	5
SW QUADRANT	145	5
TOTALS	580	20

LOCATION	SEEDING, CLASS 2A	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH, METHOD 2
	ACRE	ACRE	POUND	POUND	POUND	TON	ACRE
NE QUADRANT	0.025	0.025	2.25	2.25	2.25	0.05	0.025
NW QUADRANT	0.025	0.025	2.25	2.25	2.25	0.05	0.025
SE QUADRANT	0.025	0.025	2.25	2.25	2.25	0.05	0.025
SW QUADRANT	0.025	0.025	2.25	2.25	2.25	0.05	0.025
TOTALS	0.1	0.1	9	9	9	0.2	0.1

LOCATION	PAVEMENT REMOVAL SQ YD
NE QUADRANT	4.5
NW QUADRANT	4.5
SE QUADRANT	4.5
SW QUADRANT	4.5
TOTAL	18

LOCATION	FOOT
STRUCTURE NO. 028-0040 - NE	44
STRUCTURE NO. 028-0040 - NW	51
STRUCTURE NO. 028-0040 - SE	51
STRUCTURE NO. 028-0040 - SW	44
TOTAL	190

LOCATION	DESCRIPTION	SHORT-TERM PAVEMENT MARKING	PAINT PAVEMENT MARKING - LINE	TEMP PAVEMENT MARKING - LINE
		①	4"	4"
STA 1057+23.5 TO 1063+68.5 CENTERLINE	SKIP-DASH YELLOW CENTERLINE	FOOT	FOOT	FOOT
STA 1058+88.5 TO 1062+03.5, LT	SOLID WHITE EDGE LINE	160	160	160
STA 1058+88.5 TO 1062+03.5, RT	SOLID WHITE EDGE LINE		315	315
			315	315
TOTALS		160	790	790

① INCLUDES 3 ADDITIONAL APPLICATIONS FROM STA 1059+03 TO STA 1061+98

LOCATION	RRPM REMOVAL EACH
1059+74	1
1061+34	1
TOTAL	2

LOCATION	PAVEMENT MARKING DESCRIPTION	WORK ZONE PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL
		SQ FT	SQ FT
CENTERLINE	SHORT-TERM	54	44
EDGE LINE	TEMPORARY	210	
CENTERLINE	TEMPORARY	54	
STA 1058+93.5 TO 1061+98.5, RT	EDGE LINE		102
STA 1058+93.5 TO 1060+03.8, LT	EDGE LINE		37
STA 1060+87.2 TO 1061+98.5, LT	EDGE LINE		37
TOTALS		318	220

LOCATION	PCC BASE COURSE 13"	BASE COURSE WIDENING, 10"
	SQ YD	SQ YD
NE QUADRANT	4.5	45
NW QUADRANT	4.5	45
SE QUADRANT	4.5	45
SW QUADRANT	4.5	45
TOTALS	18	180

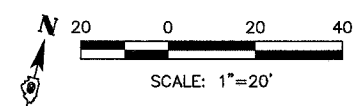
LOCATION	BUTT JOINT	SPECIAL
	SQ YD	SQ YD
1059+03	110	
1061+98	110	
WEST APPROACH		5
EAST APPROACH		5
TOTALS	220	10

LOCATION	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	TEMP SPBRG, TYPE A	TRAFFIC BARRIER TERMINAL, TYPE 6A	GUARDRAIL MARKERS, TYPE A	BARRIER WALL MARKERS, TYPE B	TERMINAL MARKER DIRECT APPLIED	STEEL RAILING, TYPE SM	REMOVE & RE-ERECT TBT TYPE 1
	EACH	FOOT	EACH	EACH	EACH	EACH	FOOT	EACH
STRUCTURE NO. 028-0040 - NE	1		1	1				
STRUCTURE NO. 028-0040 - NW	1	37.5	1	1				
STRUCTURE NO. 028-0040 - SE	1		1	1				
STRUCTURE NO. 028-0040 - SW	1		1	1				
STRUCTURE NO. 028-0040 - BRIDGE					4		167	
TOTALS	2	37.5	4	4	4	2	167	1

LOCATION	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT)	LEVELING BINDER (MACHINE METHOD), N90	HMA SURFACE COURSE, MIX "C", N90	HMA SHOULDERS
	GALLON	TON	TON	TON	TON
WEST APPROACH	45	1	25	84	15
EAST APPROACH	49	1	31	91	19
TOTALS	94	2	56	175	34

SCHEDULES OF QUANTITIES
 FAP RTE 873 (IL 149)
 SECTION 107BR-1
 FRANKLIN COUNTY

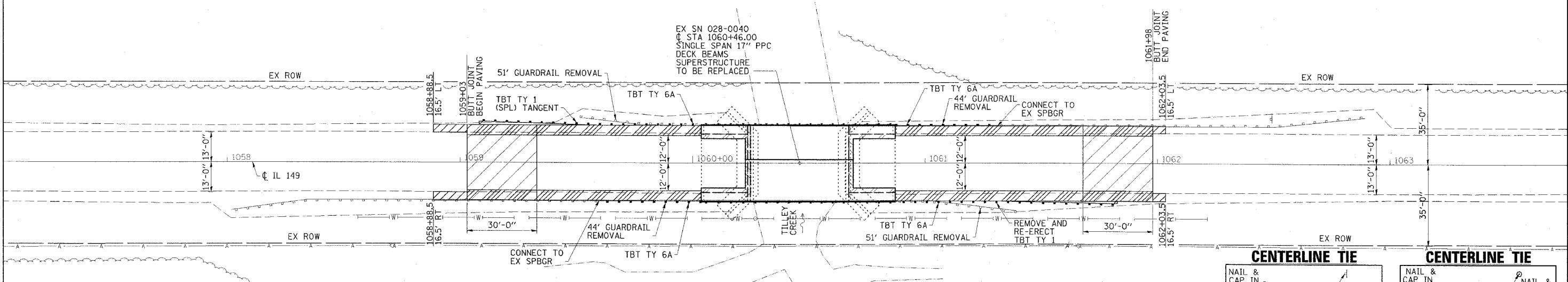
ESCA
 CONSULTANTS, INC.
 DESIGNED BY: DAJ 02/08
 DRAWN BY: CJ/HAS 02/08
 CHECKED BY: MTD 03/08
 APPROVED BY: RDP 04/08



SEC. 13, T7S, R3E, 3RD P.M.

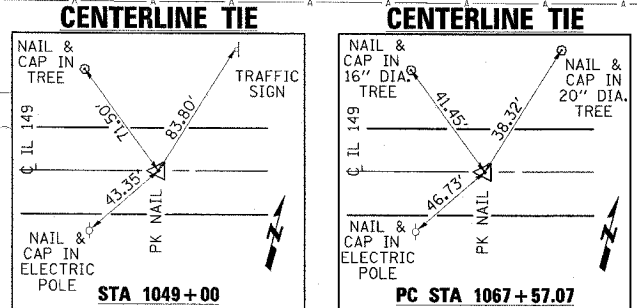
CONTRACT NO. 78034	
FAP RTE 873	SECTION 1078R-1
COUNTY FRANKLIN	TOTAL SHEETS 73
STA. 1057+00	TO STA. 1063+00
FED. ROAD DIST. NO. ILLINOIS	FED. AID PROJECT

PLAN	DATE
BY	
CHECKED	
DATE	

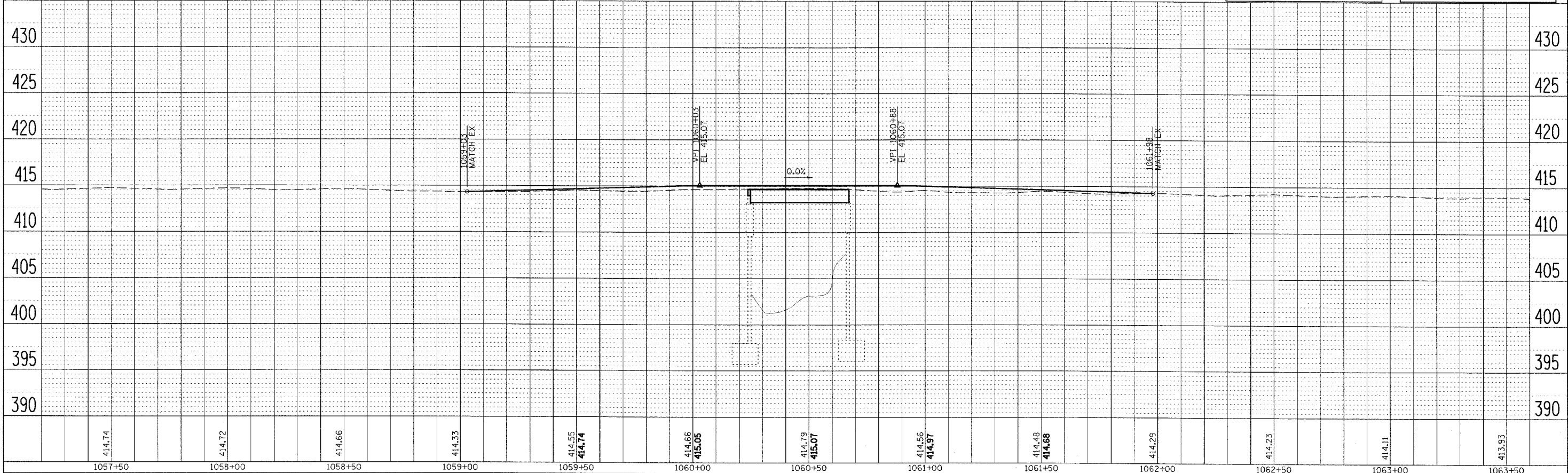


- LEGEND**
- HMA SHOULDER
 - HMA SURF REMOVAL - BUTT JOINT
 - PAVEMENT REMOVAL
 - HMA SURFACE REMOVAL, SPECIAL
 - BASE COURSE WIDENING, 10"

BENCHMARK
RAILROAD SPIKE IN POWER POLE SOUTH SIDE OF IL 149 AND FIRST POLE WSW OF SN 028-0040, STA 1058+72, 27' RT, EL 410.18

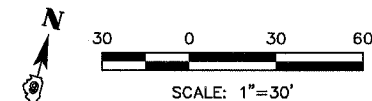


PROFILE	DATE
BY	
CHECKED	
DATE	



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FILE NAME = #FILE#
PLOT SCALE = #SCALE#
REFERENCE = #REF#

FAP RTE 873 (IL 149) PLAN & PROFILE
STA. 1057+00 TO STA. 1063+00



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. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
4. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.
5. THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-1102(O)-48) SHOWN ON STANDARD 701321 SHALL BE 11'-0" FOR STAGE I CONSTRUCTION.
6. THE EXISTING TBT AT THE SE CORNER OF THE BRIDGE MUST BE REMOVED AND REPLACED WITH NEW TBT TY 1 SPECIAL (TANGENT) PRIOR TO SHIFTING TRAFFIC TO THE STAGE I LANE.

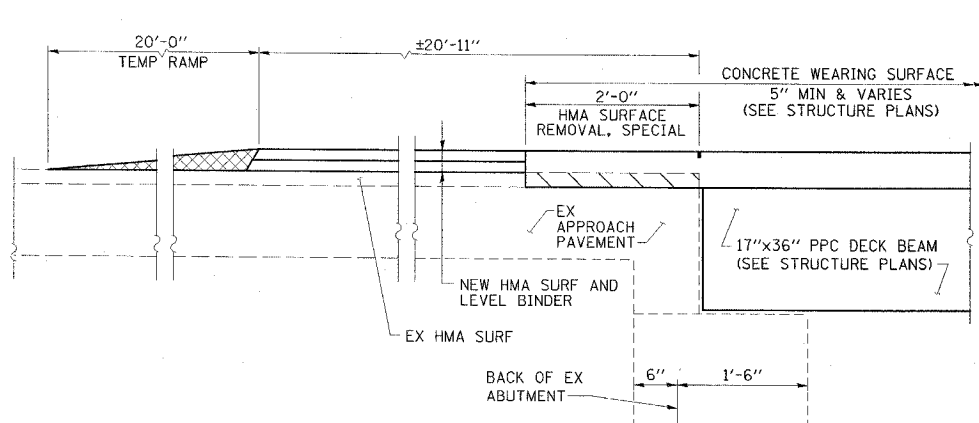
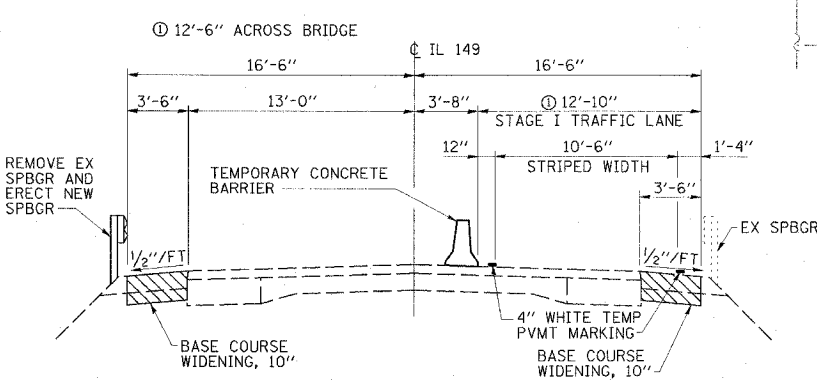
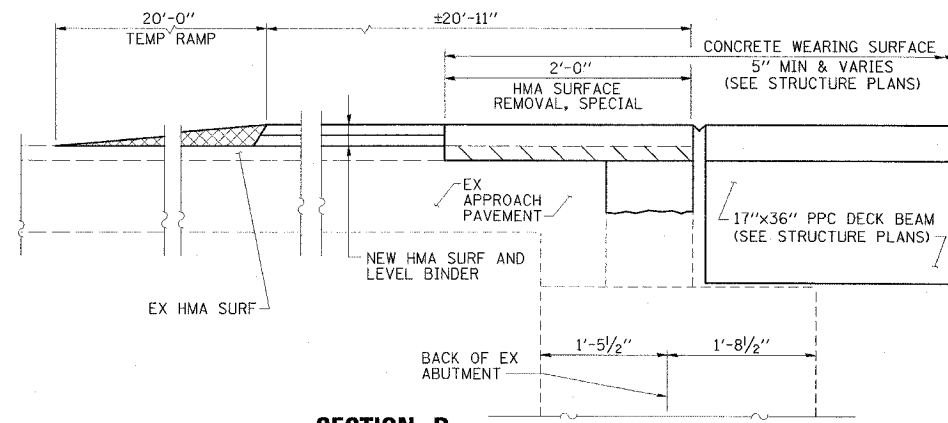
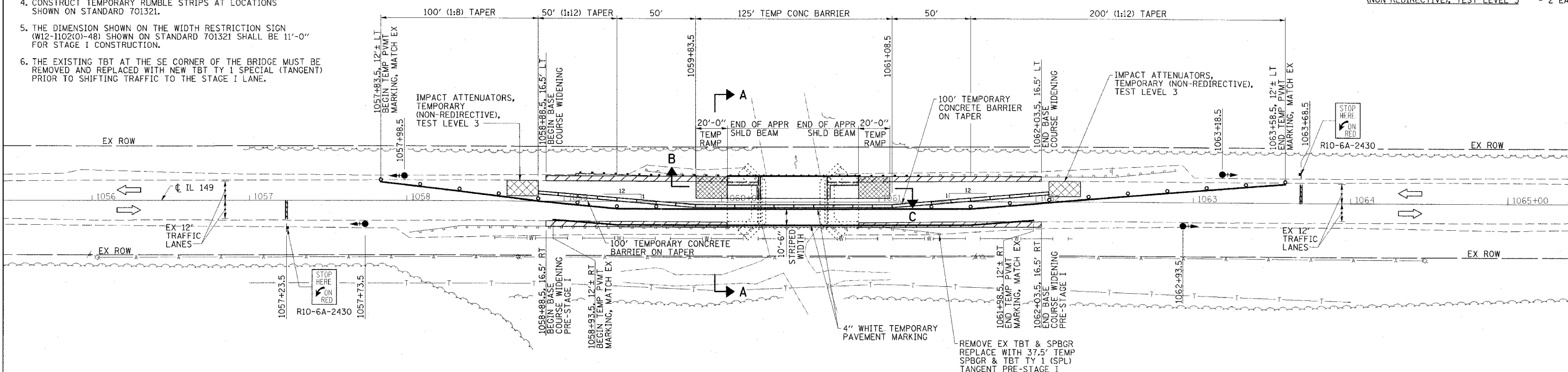
LEGEND

- TRAFFIC SIGNAL WITH BACKPLATE, SIGNAL DIRECTION INDICATED
- BASE COURSE WIDENING, 10"
- TEMPORARY RAMP
- PAVEMENT REMOVAL
- HMA SURFACE REMOVAL, SPECIAL

CONTRACT NO. 78034			
FAP RTE	SECTION	COUNTY	TOTAL SHEET NO.
873	107BR-1	FRANKLIN	73 7
STA. 1056+00		TO STA. 1065+00	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

SCHEDULE OF QUANTITIES

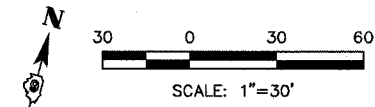
TEMPORARY CONCRETE BARRIER			
STATION TO	STATION	FEET	
1058+83.5	1062+08.5	325	
		TOTAL	325
TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH			
TEMPORARY RUMBLE STRIPS - 6 EACH			
IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH			



ESCA CONSULTANTS, INC.

DESIGNED BY:	DAJ	02/08
DRAWN BY:	CJ/HAS	02/08
CHECKED BY:	MTD	03/08
APPROVED BY:	RDP	04/08

STAGE I CONSTRUCTION
FAP RTE 873 (IL 149)
SECTION 107BR-1
FRANKLIN COUNTY



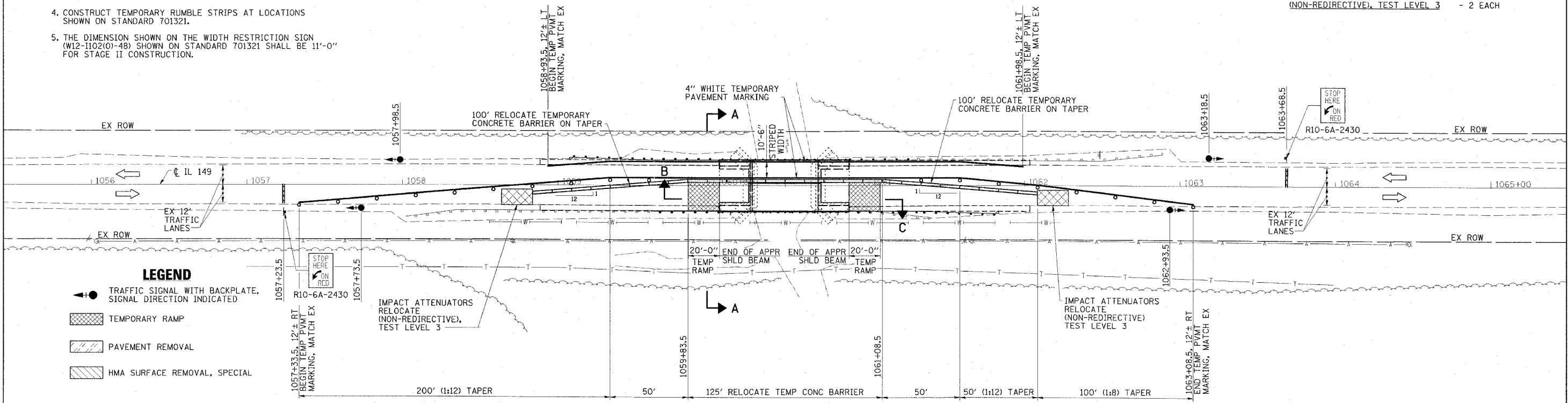
GENERAL NOTES

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. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
4. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.
5. THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-1102(O)-48) SHOWN ON STANDARD 701321 SHALL BE 11'-0" FOR STAGE II CONSTRUCTION.

CONTRACT NO. 78034				
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
873	107BR-1	FRANKLIN	73	8
STA. 1056+00		TO STA. 1065+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

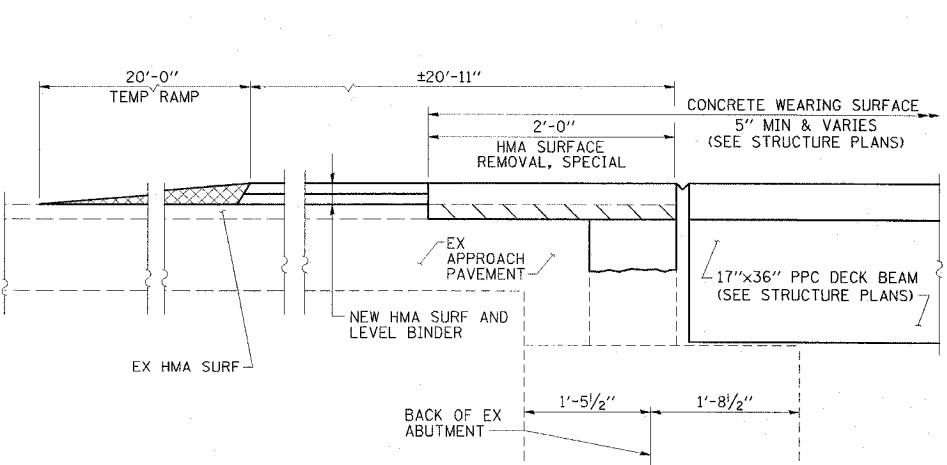
SCHEDULE OF QUANTITIES

RELOCATE TEMPORARY CONCRETE BARRIER			
STATION TO	STATION	FEET	
1058+83.5	1062+08.5	325	
		TOTAL	325
IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH			

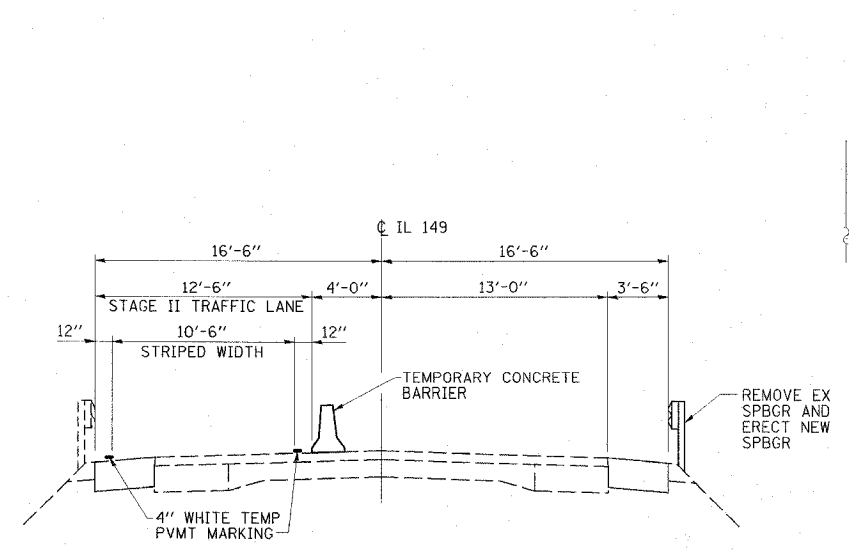


LEGEND

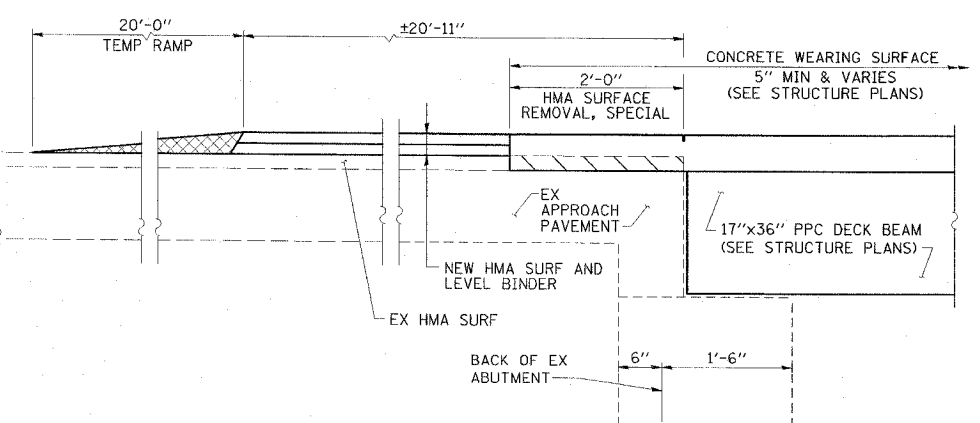
- TRAFFIC SIGNAL WITH BACKPLATE, SIGNAL DIRECTION INDICATED
- TEMPORARY RAMP
- PAVEMENT REMOVAL
- HMA SURFACE REMOVAL, SPECIAL



SECTION B



SECTION A-A



SECTION C

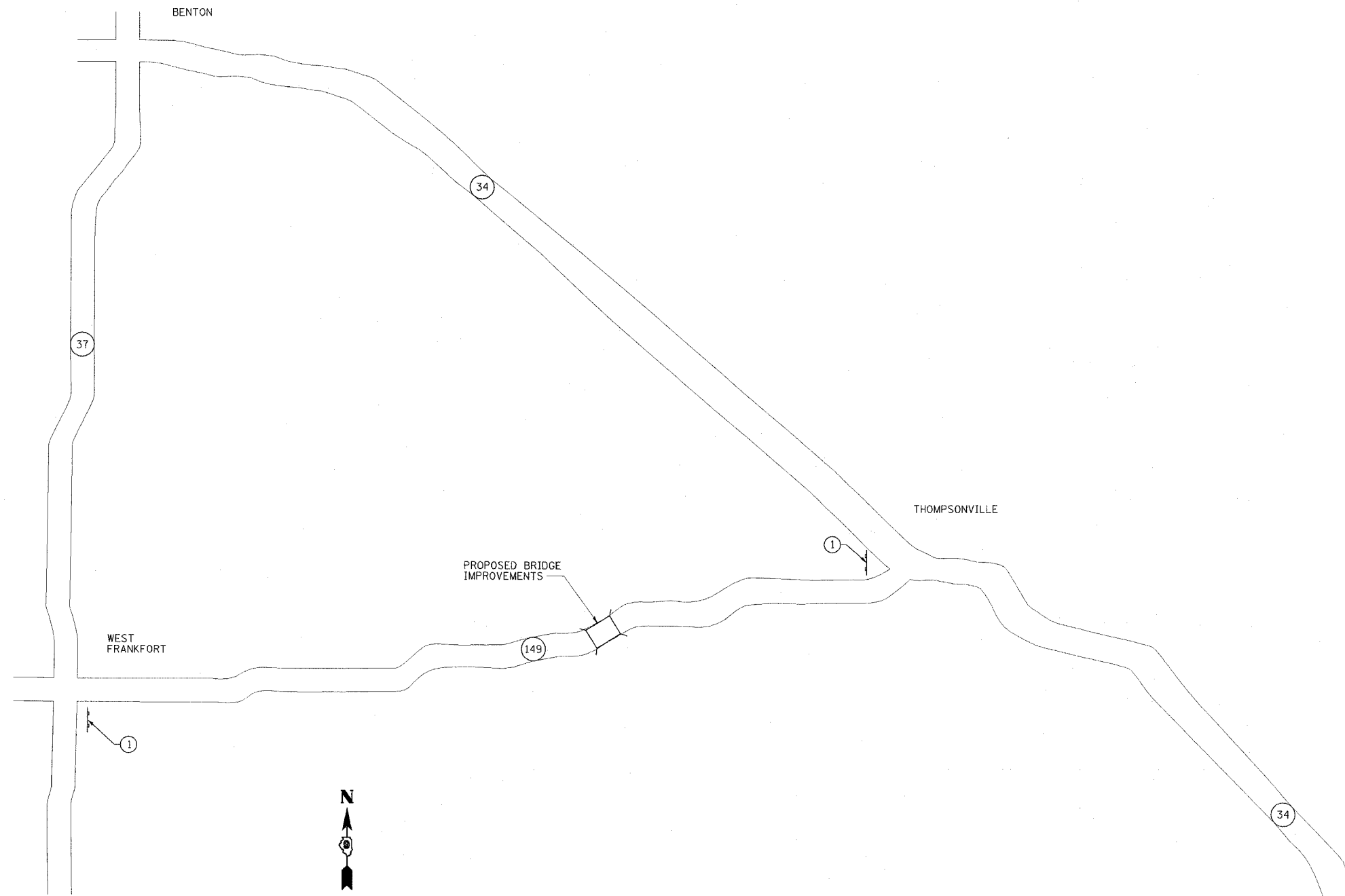
STAGE II CONSTRUCTION
FAP RTE 873 (IL 149)
SECTION 107BR-1
FRANKLIN COUNTY

ESCA CONSULTANTS, INC.

DESIGNED BY:	DAJ	02/08
DRAWN BY:	CJ/HAS	02/08
CHECKED BY:	MTD	03/08
APPROVED BY:	RDP	04/08

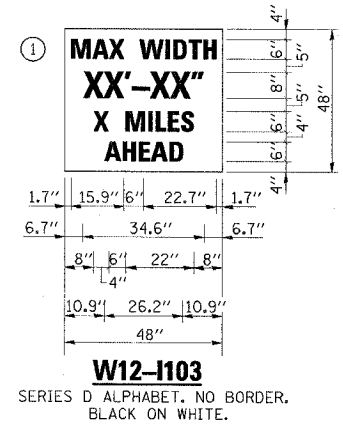
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FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
873	107BR-1	FRANKLIN	73	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



DETOUR SIGNING PLAN

SIGN LEGEND

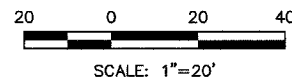


DETOUR NOTES

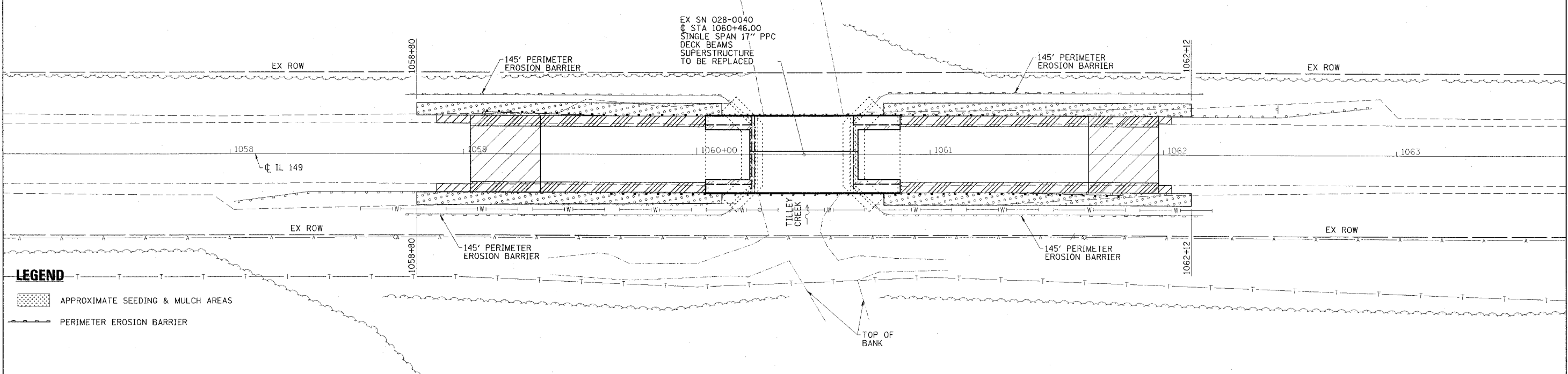
1. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT THE SIGNS AT THE LOCATIONS DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE, AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.
3. THE WIDTH SHOWN ON THE W12-1103 SIGN SHALL BE 11'-0" OR AS DIRECTED BY THE ENGINEER. THE "X" MILES AHEAD WILL BE DETERMINED BY THE ENGINEER.

ESCA CONSULTANTS, INC.		
DESIGNED BY:	DAJ	03/08
DRAWN BY:	HAS	03/08
CHECKED BY:	MTD	03/08
APPROVED BY:	RDP	04/08

WIDE LOAD DETOUR
FAP RTE 873 (IL 149)
SECTION 107BR-1,
FRANKLIN COUNTY



CONTRACT NO. 78034				
FAP	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
873	107BR-1	FRANKLIN	73	10
STA. 1057+00		TO STA. 1063+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EX SN 028-0040
 @ STA 1060+46.00
 SINGLE SPAN 17' PPC
 DECK BEAMS
 SUPERSTRUCTURE
 TO BE REPLACED

LEGEND

- APPROXIMATE SEEDING & MULCH AREAS
- PERIMETER EROSION BARRIER

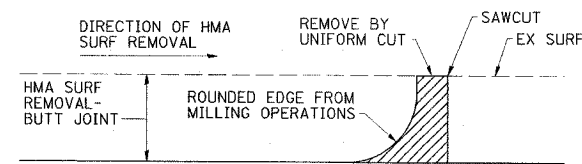
ESCA
 CONSULTANTS, INC.

DESIGNED BY:	DAJ	02/08
DRAWN BY:	CJ/HAS	02/08
CHECKED BY:	MTD	03/08
APPROVED BY:	RDP	04/08

*EROSION CONTROL
 AND DRAINAGE PLAN
 FAP RTE 873 (IL 149)
 SECTION 107BR-1
 FRANKLIN COUNTY*

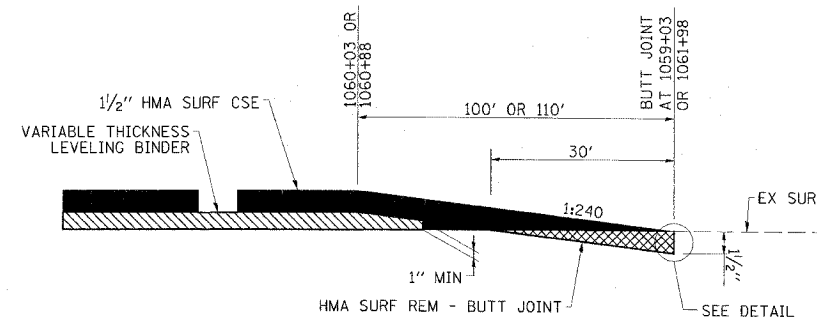
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 PLOT SCALE * SCALE *
 REFERENCE * REF *

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
873	107BR-1	FRANKLIN	73	11
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT AID		



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 HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.



TYPICAL BUTT JOINT SECTION

ESCA
CONSULTANTS, INC.

DESIGNED BY:	DAJ	02/08
DRAWN BY:	CJ/HAS	02/08
CHECKED BY:	MTD	03/08
APPROVED BY:	RDP	04/08

MISCELLANEOUS DETAILS
FAP RTE 873 (IL 149)
SECTION 107BR-1
FRANKLIN COUNTY

BENCHMARK: Railroad spike in power pole south side of IL 149 and first pole WSW of SN 028-0040, Sta. 1058+72, 27' Rt., Elev. 410.18

EXISTING STRUCTURE: SN 028-0040 was originally built in 1928 as S.B.I. Rte. 149, Section 107-B. The superstructure was replaced in 1982 and precast concrete bridge slabs were utilized to widen the approaches. The superstructure consists of one simple span, 17" PPC deck beams. The substructure consists of two reinforced concrete closed abutments on timber piles. The back-to-back abutments length is 43'-0", the out-to-out width is 33'-0". The existing superstructure and the existing approach shoulder bridge slabs shall be removed and replaced utilizing stage construction.

No salvage.

STATION 1060+46.00
REBUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 873 SEC. 107BR-1
LOADING HS20
STR. NO. 028-0040

NAME PLATE

See Std. 515001

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

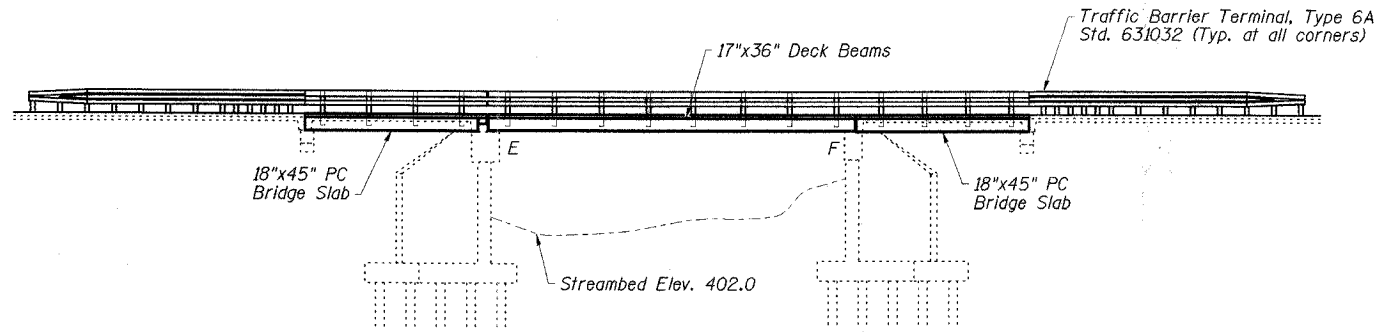
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.	SHEET NO.
FAP 873	107BR-1	FRANKLIN	73	12	16 SHEETS
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT-					

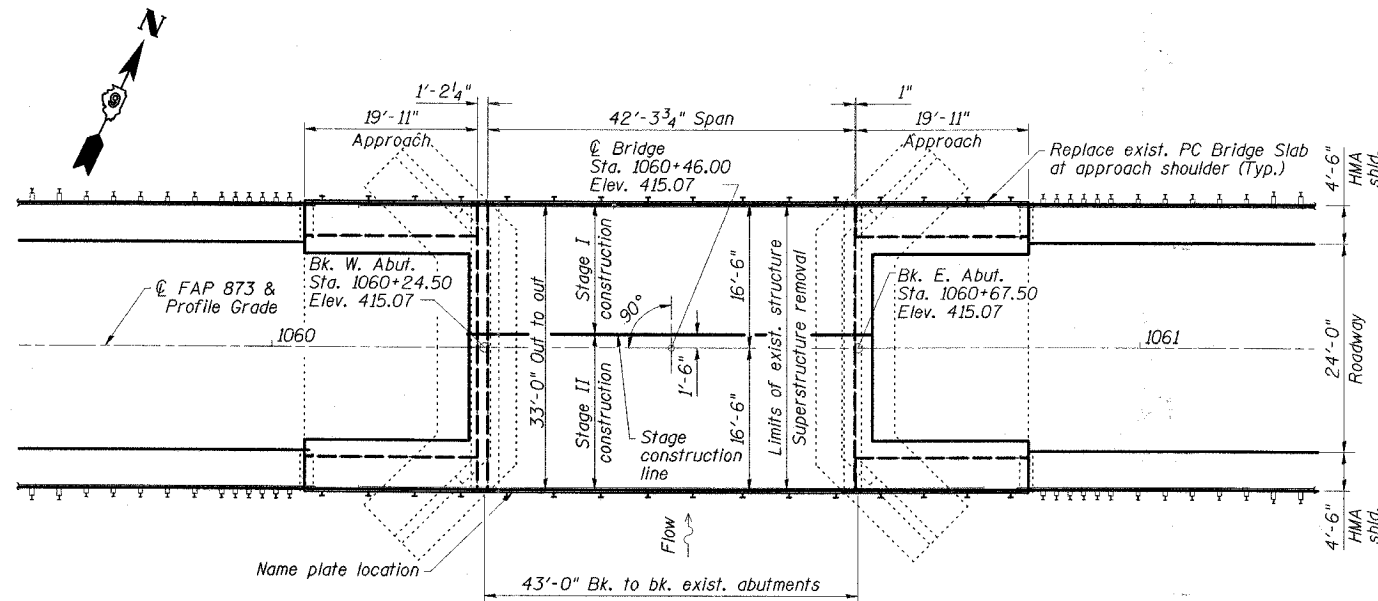
78034

STRUCTURE INDEX OF SHEETS

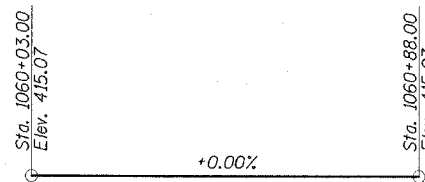
General Plan	Sht. No. 1 of 16
General Data	Sht. No. 2 of 16
Stage Construction Details	Sht. No. 3 of 16
Temporary Concrete Barrier	Sht. No. 4 of 16
Superstructure	Sht. No. 5 of 16
Superstructure Details	Sht. No. 6&7 of 16
Approach Details	Sht. No. 8 of 16
Superstructure and Approach Details	Sht. No. 9 of 16
Steel Railing, Type SM	Sht. No. 10 of 16
Strip Seal Expansion Joint	Sht. No. 11 of 16
West Abutment	Sht. No. 12 of 16
West Abutment Details	Sht. No. 13 of 16
East Abutment	Sht. No. 14 of 16
East Abutment Details	Sht. No. 15 of 16
Bar Splicer Assembly Details	Sht. No. 16 of 16



ELEVATION



PLAN



PROFILE GRADE
(Along ϕ Roadway)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



EXPIRES 11-30-08
R. L. D. P.
SIGNATURE
04/07/08
DATE

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	02/08
DRAWN BY:	HAS	02/08
CHECKED BY:	JMS	04/08
APPROVED BY:	RDP	04/08

SCOPE OF WORK

1. Remove existing surfacing, steel railing, deck beams, and approach shoulder bridge slabs.
2. Repair beam bearing seats and perform other repairs at abutments as required.
3. Reconstruct a single-span PPCD Beam superstructure with Concrete Wearing Surface and Steel Railing, Type SM. Reconstruct existing approach shoulders with Precast Concrete Bridge Slabs with Concrete Wearing Surface and Steel Railing, Type SM.

DESIGN SPECIFICATION

2002 AASHTO
LOADING HS20-44
No allowance for future wearing surface

DESIGN STRESSES

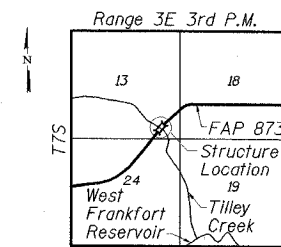
FIELD UNITS
 $f'_c = 5,000$ psi (Concrete Wearing Surface)
 $f'_c = 3,500$ psi (All concrete except CWS)
 $f_y = 60,000$ psi (reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi ($1/2\%$ low lax strands)
 $f_{sl} = 201,960$ psi (2% low lax strands)

PRECAST UNITS

$f'_c = 4,500$ psi
 $f_y = 60,000$ psi (reinf.)



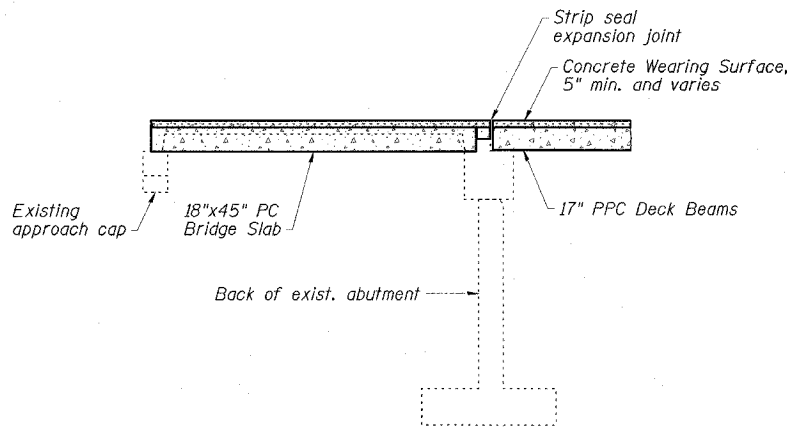
LOCATION SKETCH

GENERAL PLAN
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

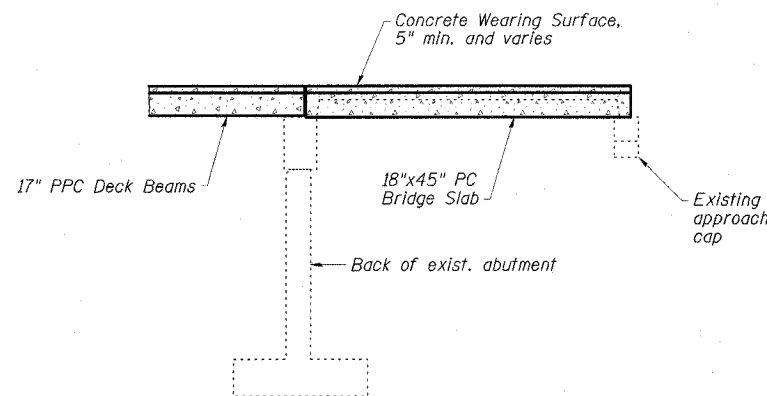
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAP 873	107BR-1	FRANKLIN	73	13
FED. ROAD DIST. NO. #		ILLINOIS	FED. AID PROJECT	

78034



SECTION THRU WEST ABUTMENT
@ OUTSIDE BEAM



SECTION THRU EAST ABUTMENT
@ OUTSIDE BEAM

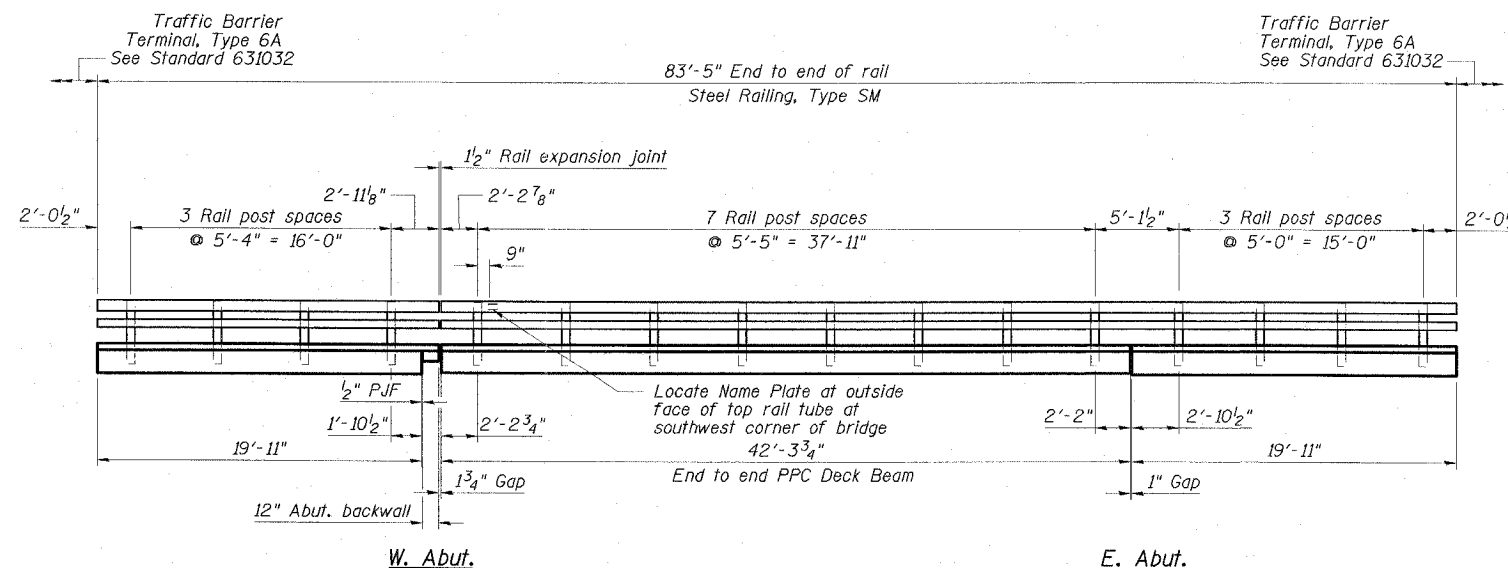
GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A706 Gr 60 (IL Modified). See Special Provisions.
2. Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work. However, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
3. Concrete Sealer shall be applied to abutment bearing seats and backwall where Structural Repair of Concrete is performed and also to the front face of new concrete backwall.
4. All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300 Type 1 unless noted otherwise.
5. Side retainers shall be AASHTO M270 Grade 36 minimum.
6. No in-stream work will be allowed on this project.
7. 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.
8. If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the new or existing deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Precast Prestressed Concrete Deck Beams (17" Depth).

9. The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber. Modify to meet field conditions as directed by the Engineer.
10. Repair of the substructure and removal of the existing expansion joint shall be completed prior to placement of the new deck beams. The cost of removing the existing expansion joint is included in Concrete Removal.
11. The existing expansion bearing pads contain asbestos. See Special Provisions for Asbestos Bearing Pad Removal.
12. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures No. 1	Each	1	-	1
Bridge Deck Grooving	Sq. Yd.	199	-	199
Protective Coat	Sq. Yd.	217	-	217
Precast Concrete Bridge Slab	Sq. Ft.	299	-	299
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1397	-	1397
Reinforcement Bars, Epoxy Coated	Pound	2780	100	2880
Bar Splicers	Each	48	2	50
Steel Railing, Type SM	Foot	167	-	167
Name Plates	Each	1	-	1
Preformed Joint Strip Seal	Foot	33	-	33
Concrete Sealer	Sq. Ft.	-	57	57
Epoxy Crack Injection	Foot	-	70	70
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	-	35	35
Asbestos Bearing Pad Removal	Each	-	30	30
Concrete Wearing Surface, 5"	Sq. Yd.	217	-	217
Concrete Structures	Cu. Yd.	-	1.0	1.0
Concrete Removal	Cu. Yd.	-	1.0	1.0
Removal of Existing Precast Concrete Units	Sq. Ft.	299	-	299



RAILING ELEVATION

(Showing Inside Face of North Railing;
South Railing Similar)

See Sht. No. 10 of 16
for railing details.

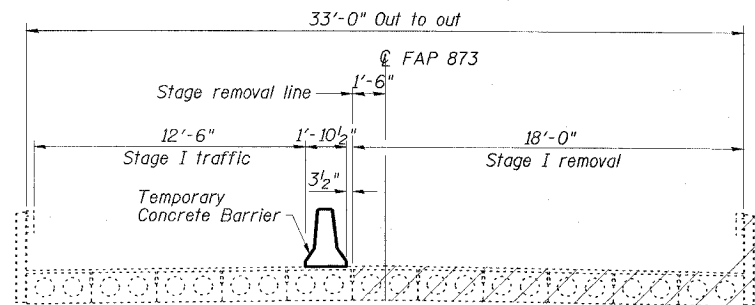
ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	02/08
DRAWN BY:	HAS	02/08
CHECKED BY:	JMS	04/08
APPROVED BY:	RDP	04/08

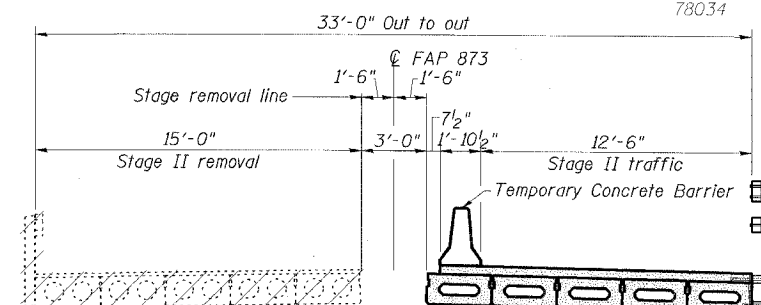
GENERAL DATA
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

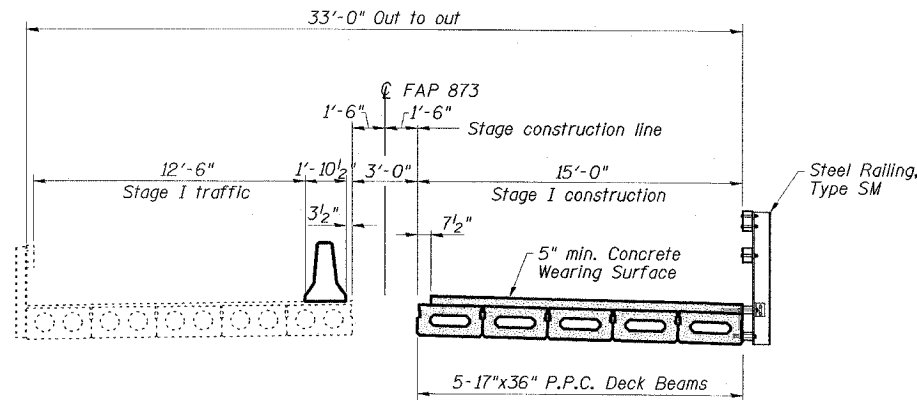
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FAP 873	107BR-1	FRANKLIN	73	14	
FED. ROAD DIST. NO. 4	ILLINOIS FEDERAL PROJECT				



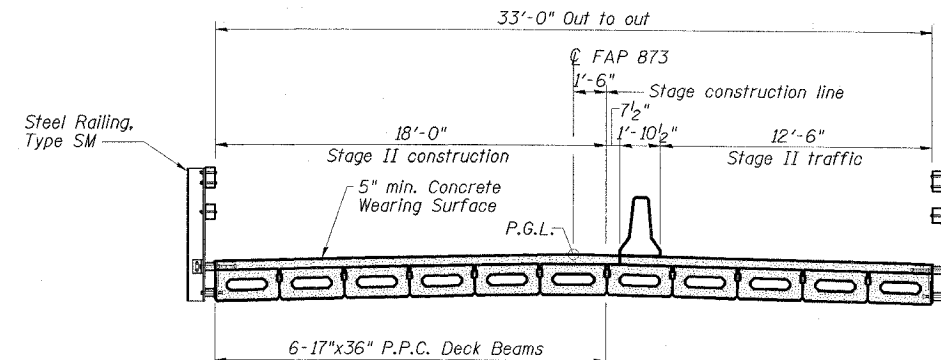
STAGE I REMOVAL



STAGE II REMOVAL



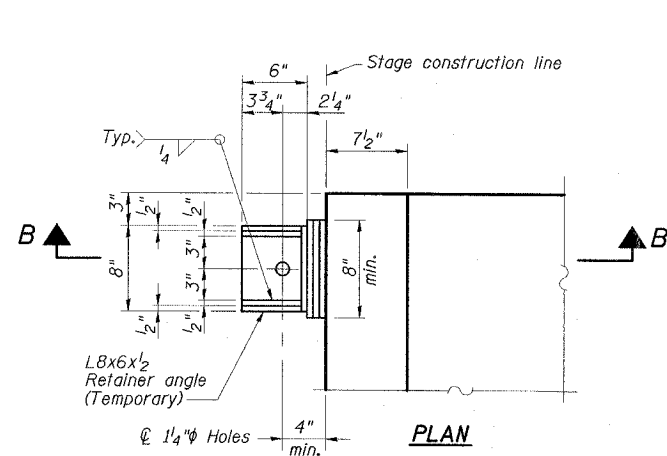
STAGE I CONSTRUCTION



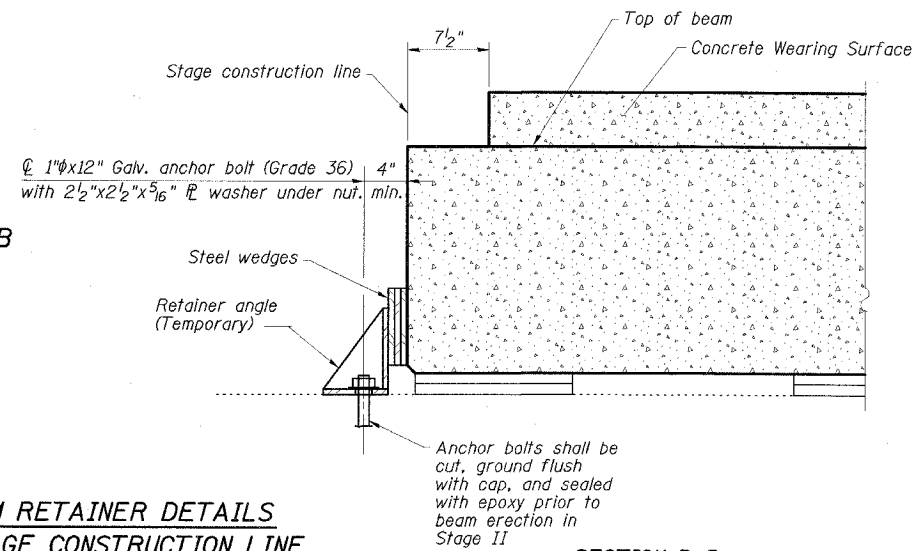
STAGE II CONSTRUCTION

STAGE CONSTRUCTION NOTES

1. All staging sections are looking west.
2. See Sht. No. 5 of 16 for shear key clamping details.
3. For quantity of Temporary Concrete Barrier, see Roadway Plans.



BEAM RETAINER DETAILS
AT STAGE CONSTRUCTION LINE
(1 Required at West Abutment)



SECTION B-B

Cost of retainer angles, anchor bolts & accessories is included with Precast Prestressed Concrete Deck Beams.

STAGE CONSTRUCTION DETAILS
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

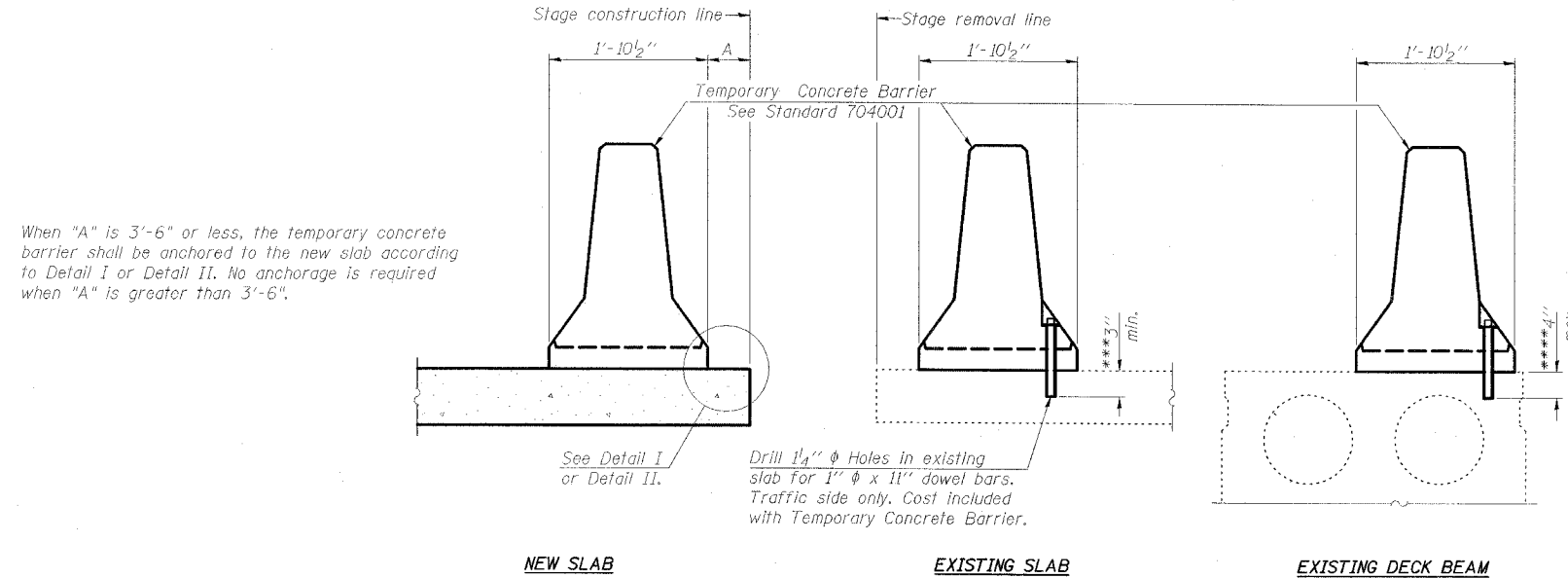
ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	02/08
DRAWN BY:	HAS	02/08
CHECKED BY:	JMS	02/08
APPROVED BY:	RDP	02/08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 873	107BR-1	FRANKLIN	73	15
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

78034

SHEET NO. 4
16 SHEETS

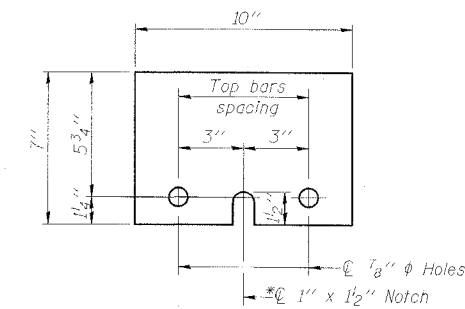
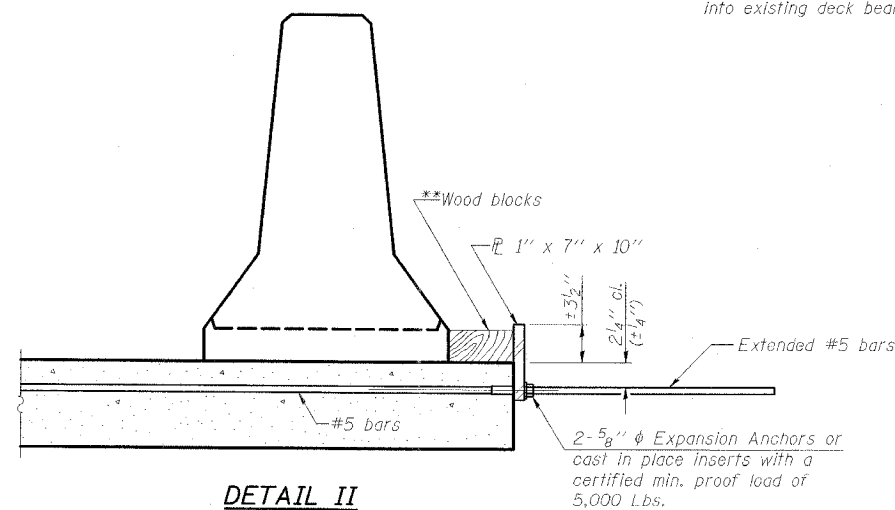
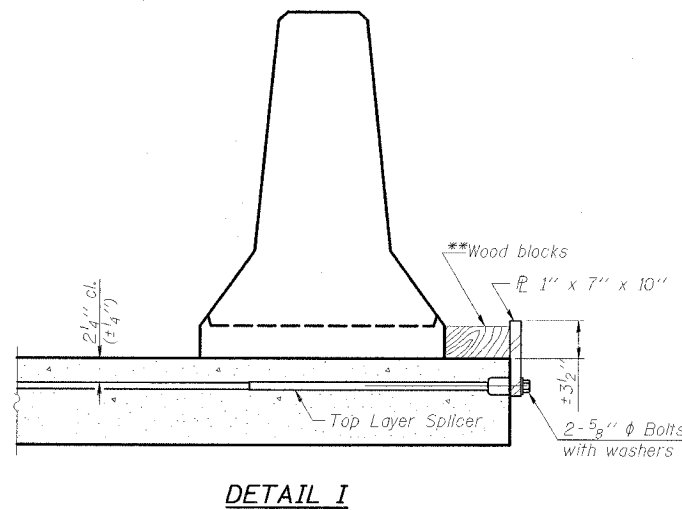


SECTIONS THRU SLAB OR DECK BEAM

NOTES

- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x 10" steel \bar{r} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{c} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x 10" steel \bar{r} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{c} of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

- ***Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- ****If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



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

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
IL 149 OVER TILLEY BRANCH
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

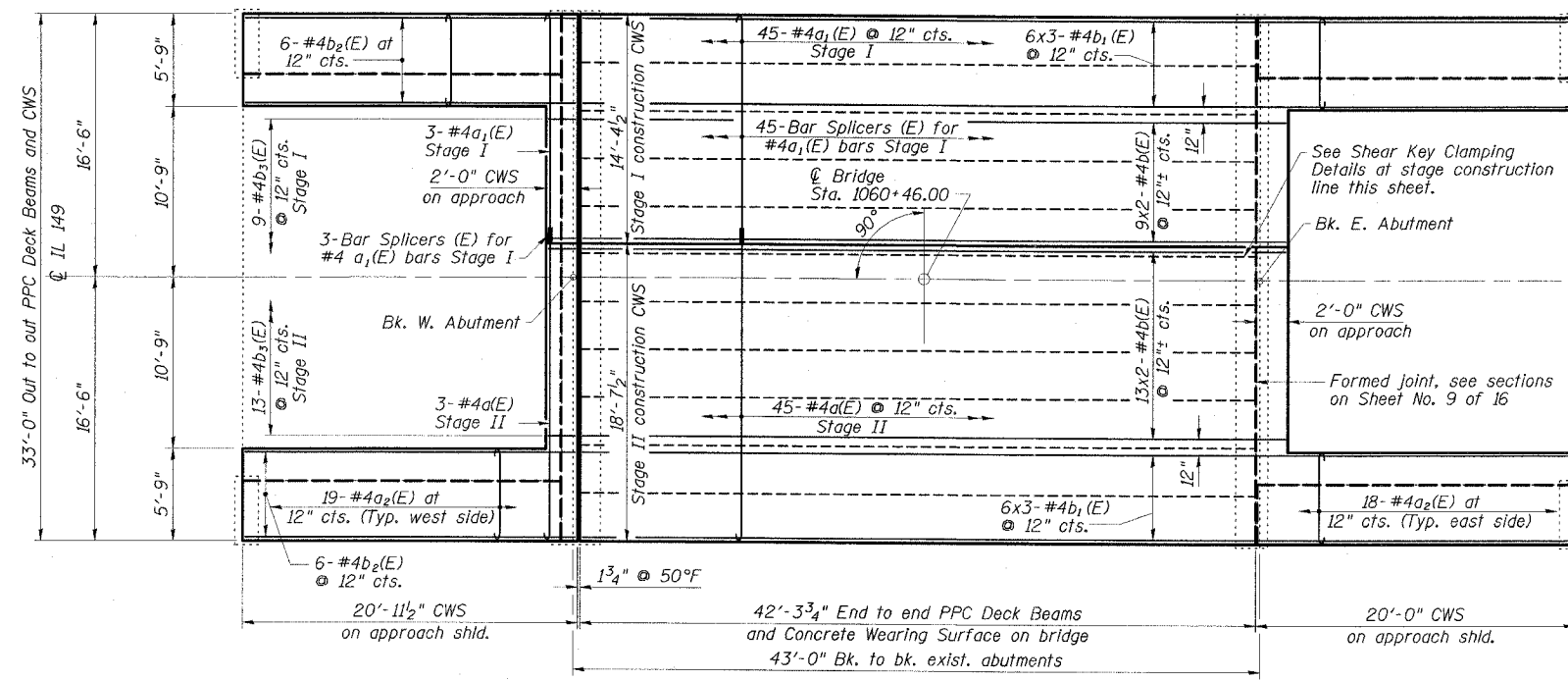
ESCA
CONSULTANTS, INC.

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CHECKED BY:	JMS	02/08
APPROVED BY:	RDP	02/08

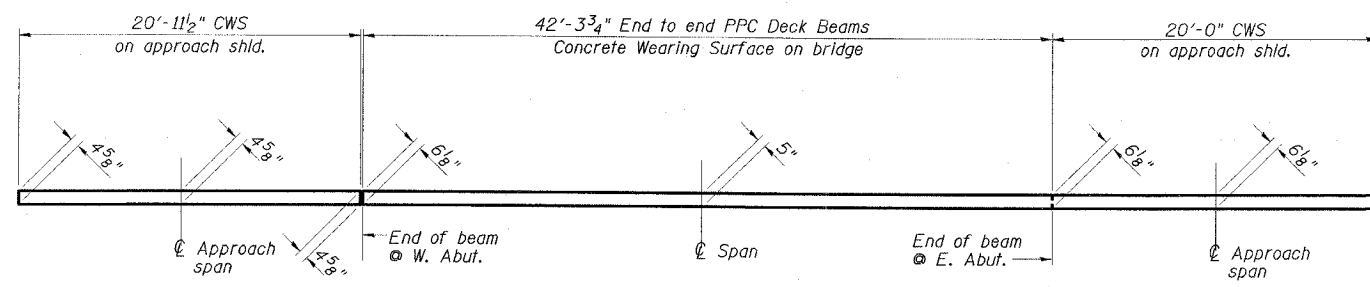
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 873	107BR-1	FRANKLIN	73	16
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

78034



PLAN-WEARING SURFACE



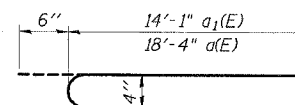
REINFORCED CONCRETE WEARING SURFACE PROFILE
(At edge of bridge deck)

CONCRETE WEARING SURFACE
BILL OF MATERIAL

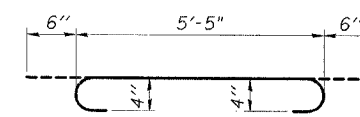
Bar	No.	Size	Length	Shape
a(E)	48	#4	18'-10"	
a1(E)	48	#4	14'-7"	
a2(E)	74	#4	6'-5"	
b(E)	44	#4	23'-0"	
b1(E)	36	#4	21'-10"	
b2(E)	12	#4	20'-8"	
b3(E)	22	#4	1'-8"	
Reinforcement Bars, Epoxy Coated			Pound	2780
Concrete Wearing Surface, 5"			Sq. Yd.	217
Bridge Deck Grooving			Sq. Yd.	199
Bar Splicers			Each	48
Protective Coat			Sq. Yd.	217

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

Note:
Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 13x2-#4 etc, indicates 13 lines of bars with 2 lengths per line. For remainder of superstructure details, see Sheet Nos. 6 thru 9 of 16.

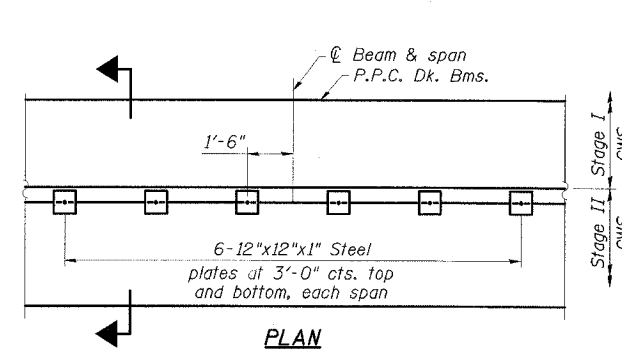


BARS a(E) & a1(E)

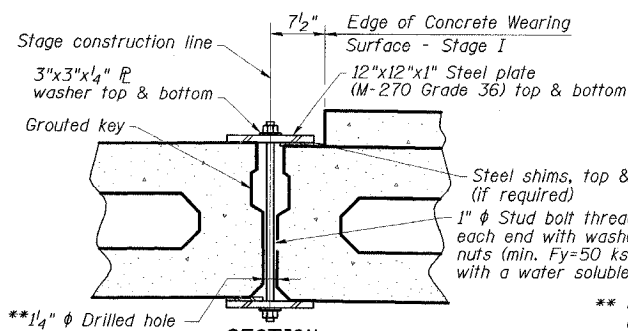


BAR a2(E)

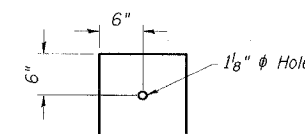
Note:
Greater thickness is required at centerline of superstructure to conform to cross section slopes shown on Sheet No. 7 of 16.



PLAN



SECTION
SHEAR KEY CLAMPING DETAILS



CLAMPING PLATE

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

** As an alternate to the drilled holes, the Contractor may request the Fabricator to cast 2" diameter semi-circular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate location for the clamping device bolts. If the Contractor elects to use this alternate, the details shall be identified on the shop drawings.

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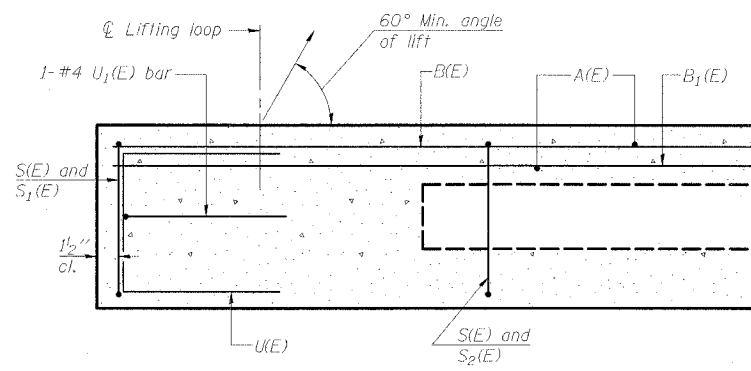
DESIGNED BY:	ELH	02/08
DRAWN BY:	HAS	02/08
CHECKED BY:	JMS	02/08
APPROVED BY:	RDP	02/08

SUPERSTRUCTURE
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

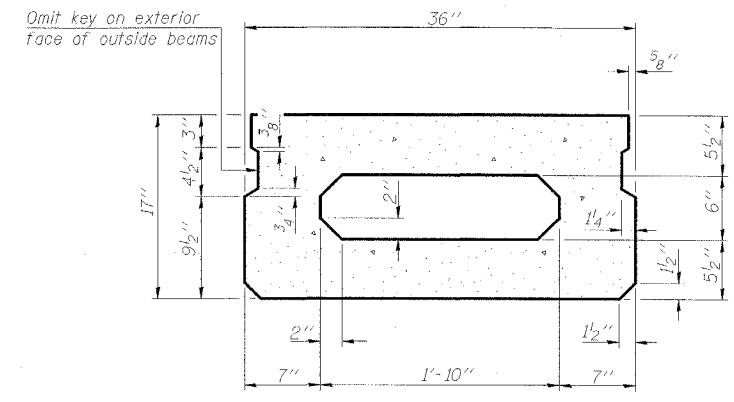
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. FAP 873	SECTION 107BR-1	COUNTY FRANKLIN	SHEET NO. 73	SHEET NO. 17	SHEET NO. 6 16 SHEETS
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT		

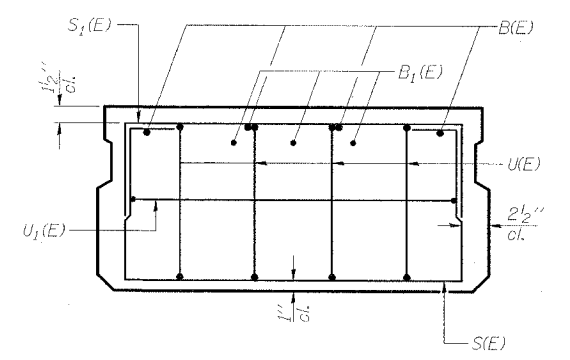
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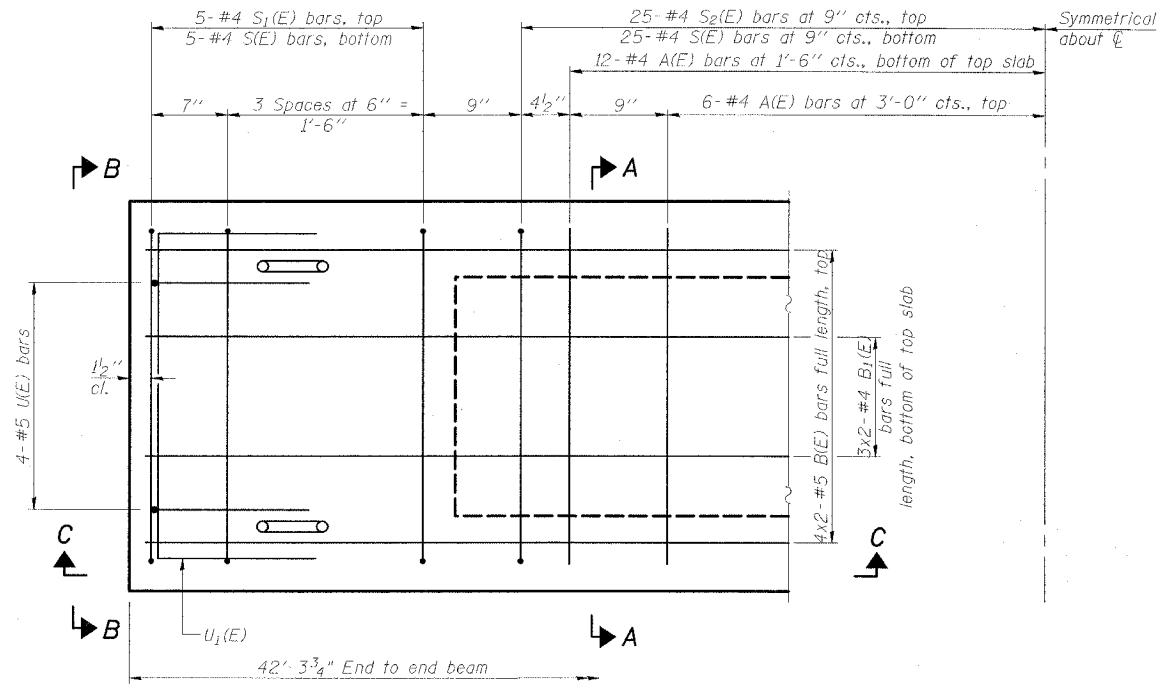
SECTION C-C



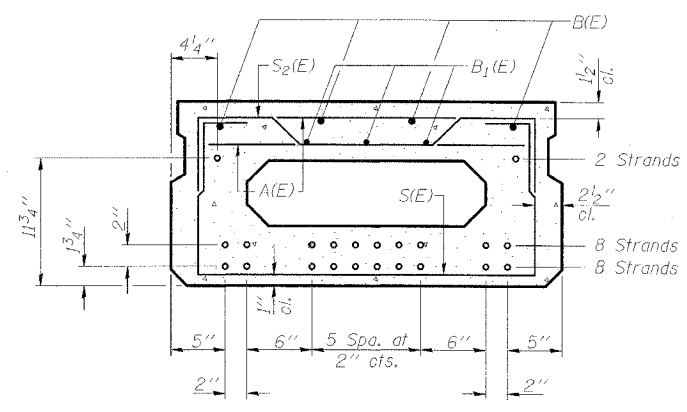
SECTION A-A
(Showing dimensions)



VIEW B-B



PLAN VIEW



SECTION A-A
(Showing reinforcement and permissible strand locations)

18-1/2" strands, each strand stressed to 30,900 lbs

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	36	#4	2'-7"	—
B(E)	8	#5	22'-2"	—
B1(E)	6	#4	21'-11"	—
S(E)	60	#4	5'-9"	□
S1(E)	10	#4	4'-11"	□
S2(E)	50	#4	5'-2"	□
U(E)	8	#5	3'-8"	□
U1(E)	2	#4	5'-0"	□

Note: See Sheet No. 7 of 16 for additional details and Bill of Material.

MIN. BAR LAP

#4 bar = 1'-8"
#5 bar = 2'-2"

- Notes:
1. Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.
 2. Adjust reinforcement locations to clear dowel holes at fixed ends.

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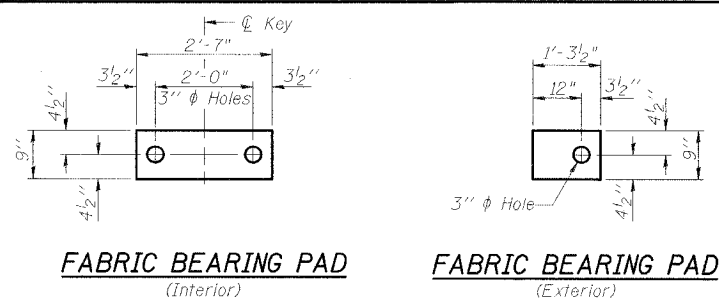
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DRAWN BY:	HAS	02/08
CHECKED BY:	JMS	02/08
APPROVED BY:	RDP	02/08

SUPERSTRUCTURE DETAILS
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	MILEAGE	SHEET NO.	SHEET NO. 7 16 SHEETS
FAP 873	107BR-1	FRANKLIN	73	18	
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT			

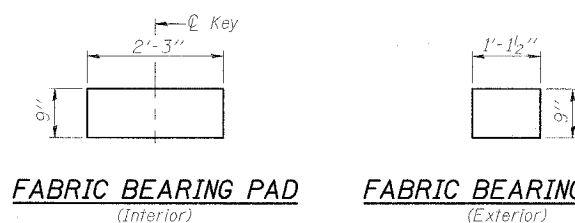
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FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

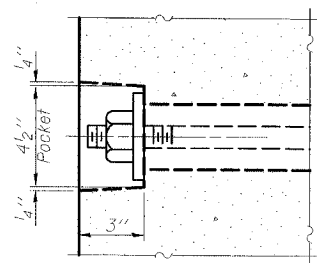
FIXED



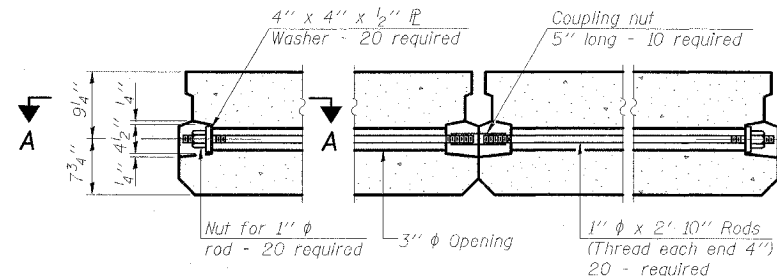
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

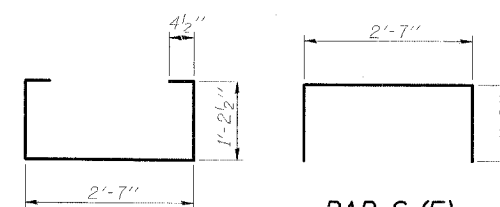
EXPANSION



SECTION A-A

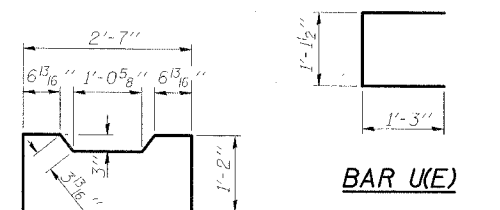


TYPICAL TRANSVERSE TIE ASSEMBLY



BAR S(E)

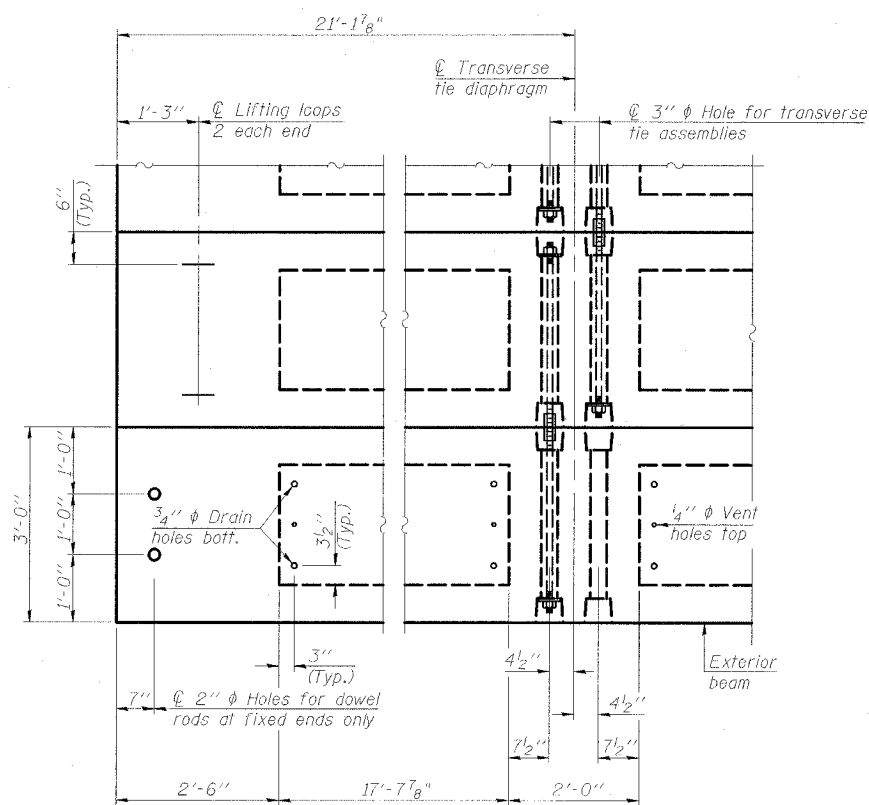
BAR S₁(E)



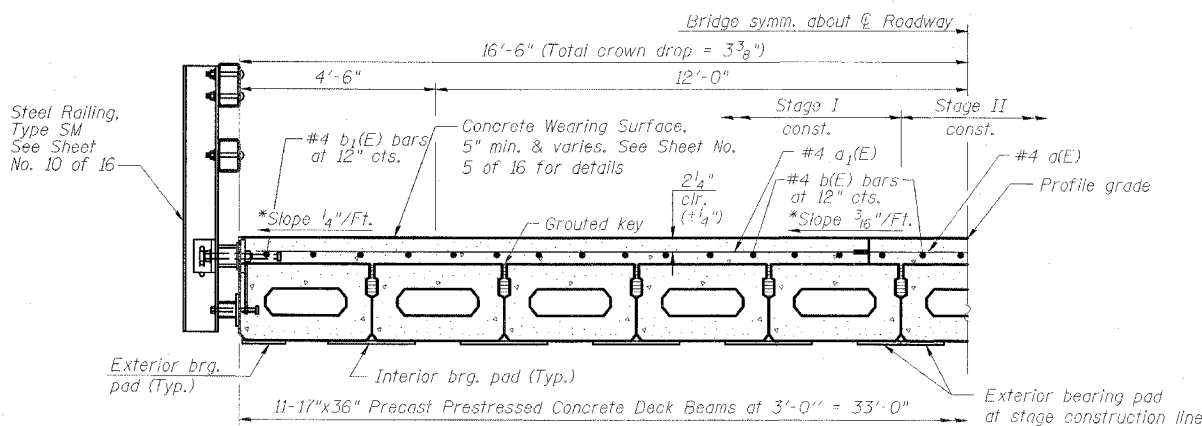
BAR S₂(E)

BAR U(E)

BAR U₁(E)



PLAN VIEW



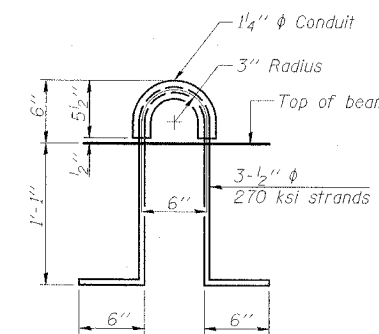
HALF CROSS SECTION

(Looking East)

*Cross slopes shown are applicable to CWS

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706 (IL MOD), Grade 60. (See Special Provisions)
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'cl, shall be 5000 psi.
- See Sheet No. 2 of 16 for location of rail anchors and additional notes.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Quantity
Precast Prestressed Conc. Deck Bms. (17" Depth)	Sq. Ft.	1397

SUPERSTRUCTURE DETAILS
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	02/08
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CHECKED BY:	JMS	04/08
APPROVED BY:	RDP	04/08

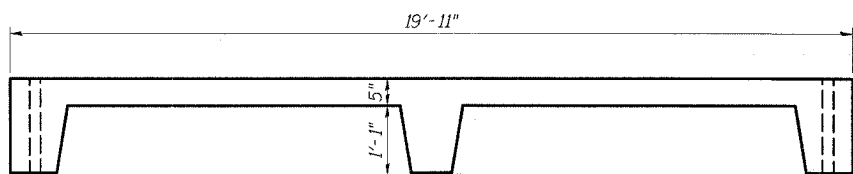
Note: Connect beams in pairs with the transverse tie configuration shown.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

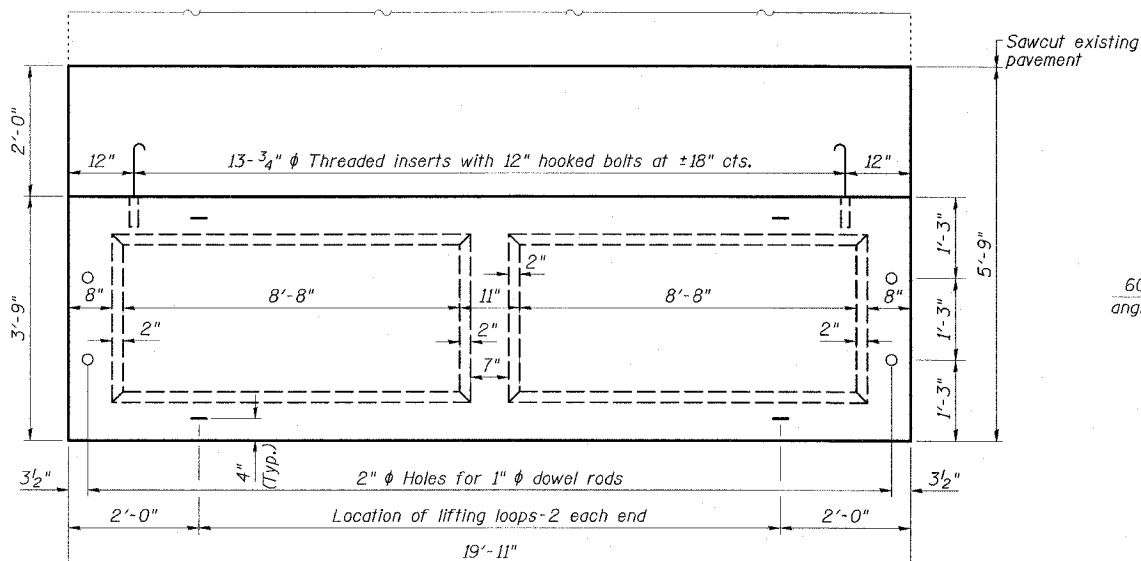
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FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT - AID	

78034

SHEET NO. 8
16 SHEETS

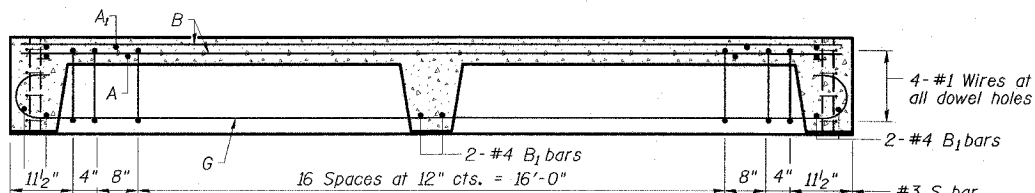


ELEVATION

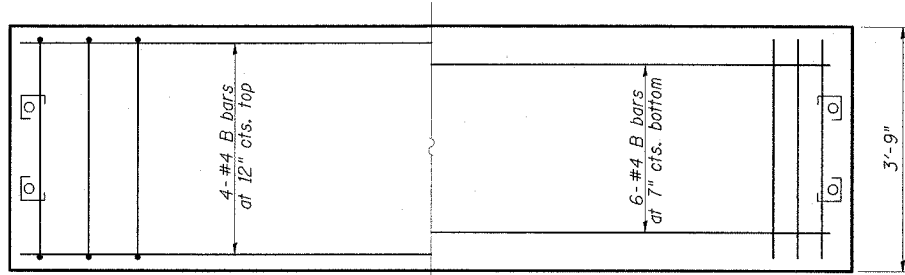


PARTIAL PLAN OF APPROACH

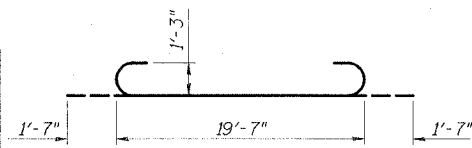
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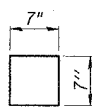
LONGITUDINAL SECTION



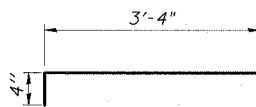
SLAB REINFORCEMENT



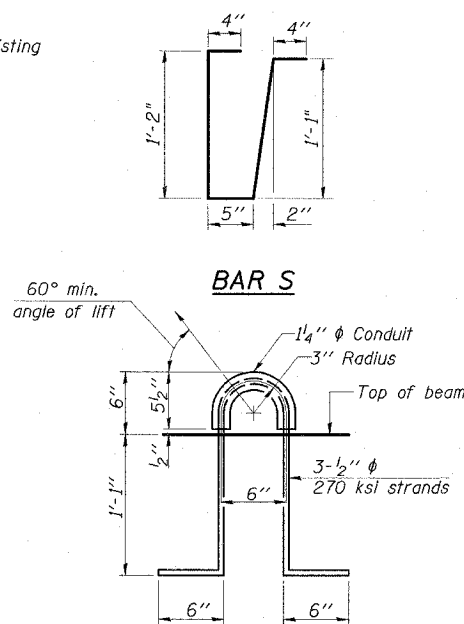
BAR G



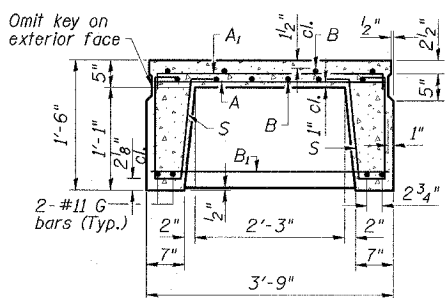
FABRIC BEARING PAD



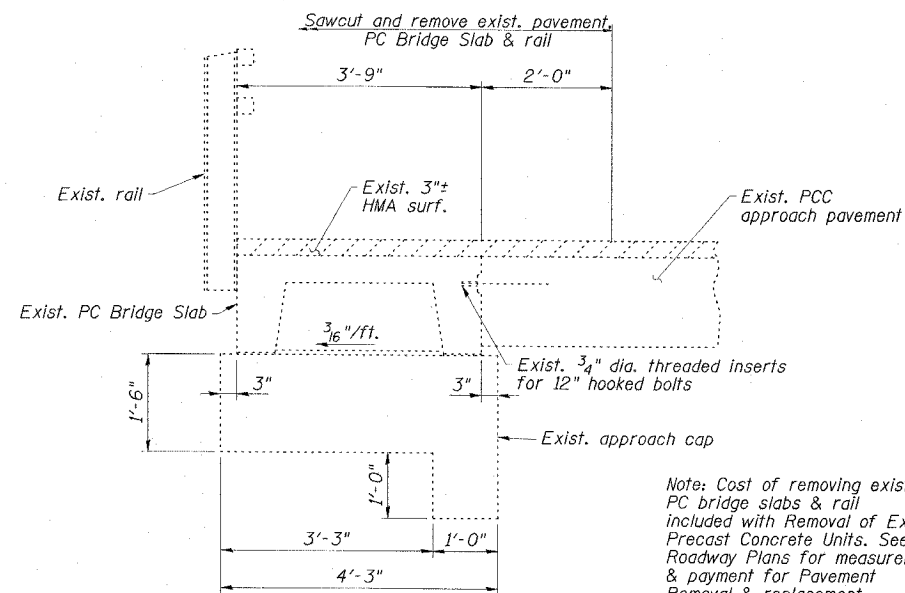
BAR A



LIFTING LOOP DETAIL

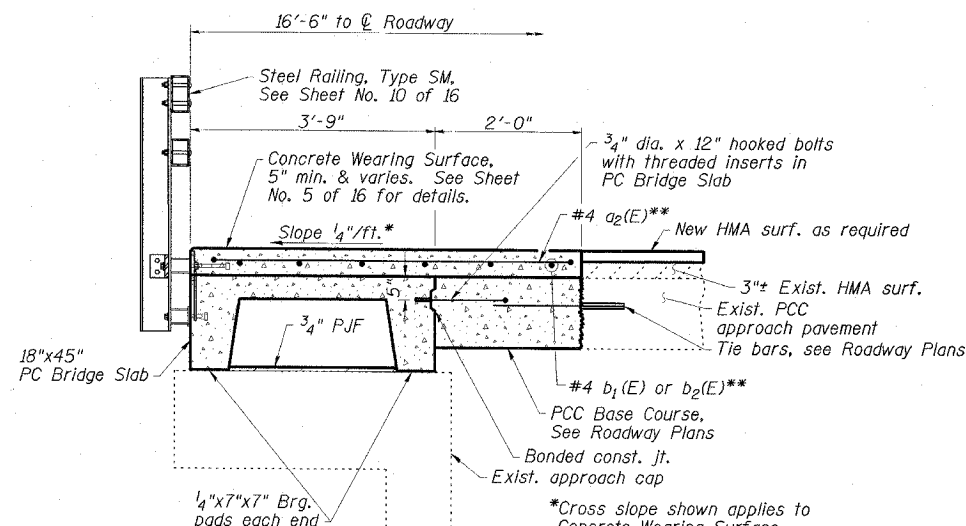


SECTION THRU PRECAST UNIT



EXISTING CROSS SECTION

Note: Cost of removing exist. PC bridge slabs & rail included with Removal of Exist. Precast Concrete Units. See Roadway Plans for measurement & payment for Pavement Removal & replacement.



PROPOSED CROSS SECTION

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	299

NOTES

Reinforcing steel shall conform to ASTM A 706 (IL MOD), Grade 60.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the 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 slabs. Cleaning shall be done by sandblasting the keyway areas between top of the slab and the bottom edge of the key.
Corrosion inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast concrete bridge slabs.
Required strength, f'c, shall be 4500 p.s.i.
See Sheet No. 2 of 16 for location of rail anchors and additional notes.
Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor rods and 3/4" diameter hooked bolts is included in contract unit price for Precast Concrete Bridge Slab.
The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior deck beam after deck beams are in final position.

APPROACH DETAILS
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

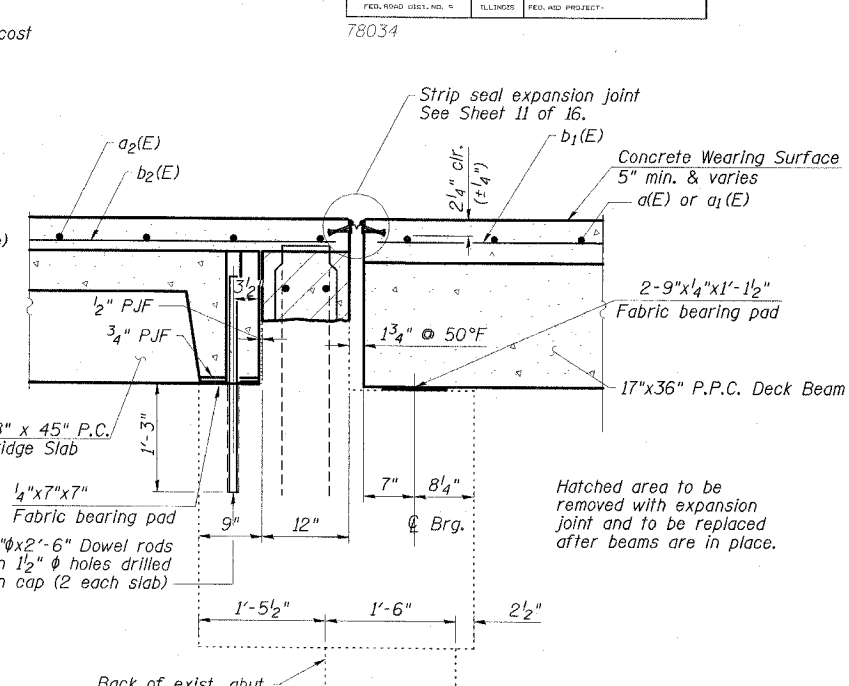
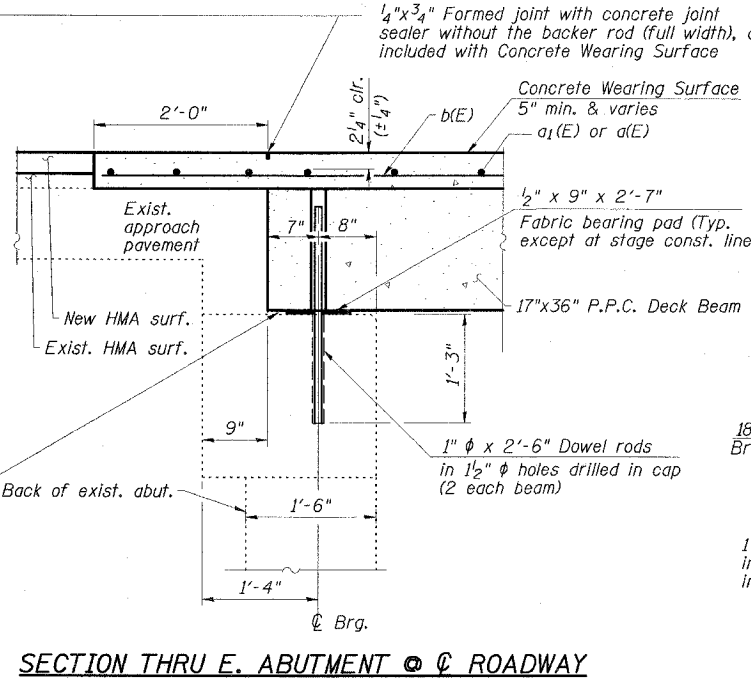
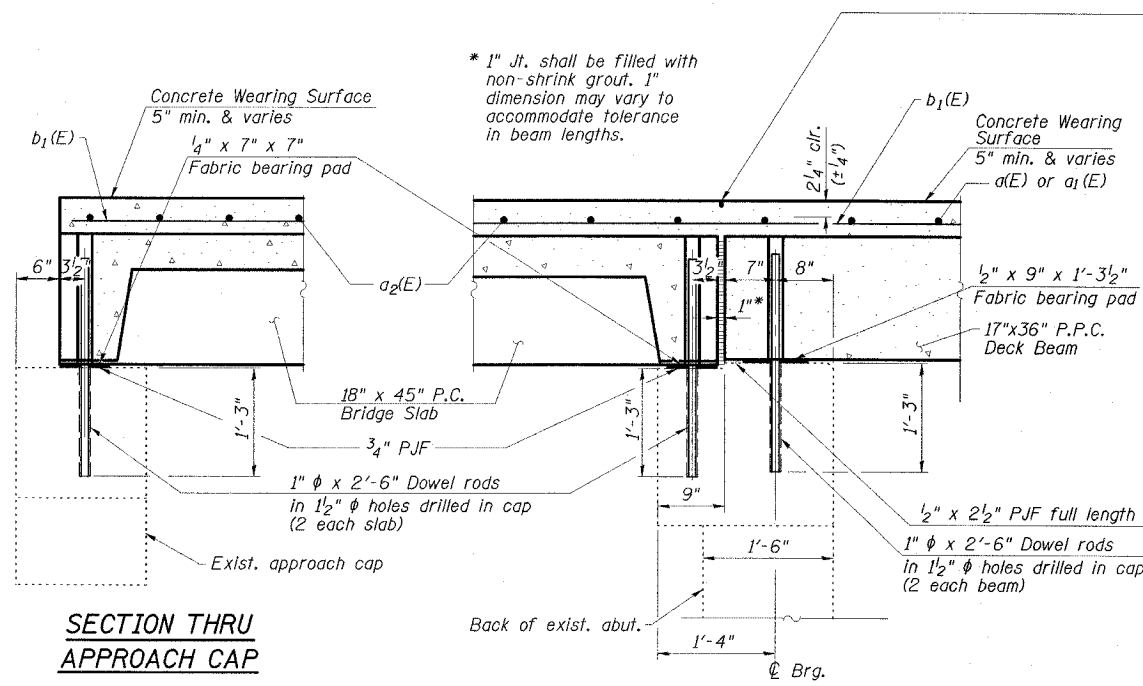
ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	02/08
DRAWN BY:	HAS	02/08
CHECKED BY:	JMS	04/08
APPROVED BY:	RDP	04/08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	LOCALITY	SHEET NO.	SHEET	SHEET NO.
FAP 873	107BR-1	FRANKLIN	73	20	16 SHEETS
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT			

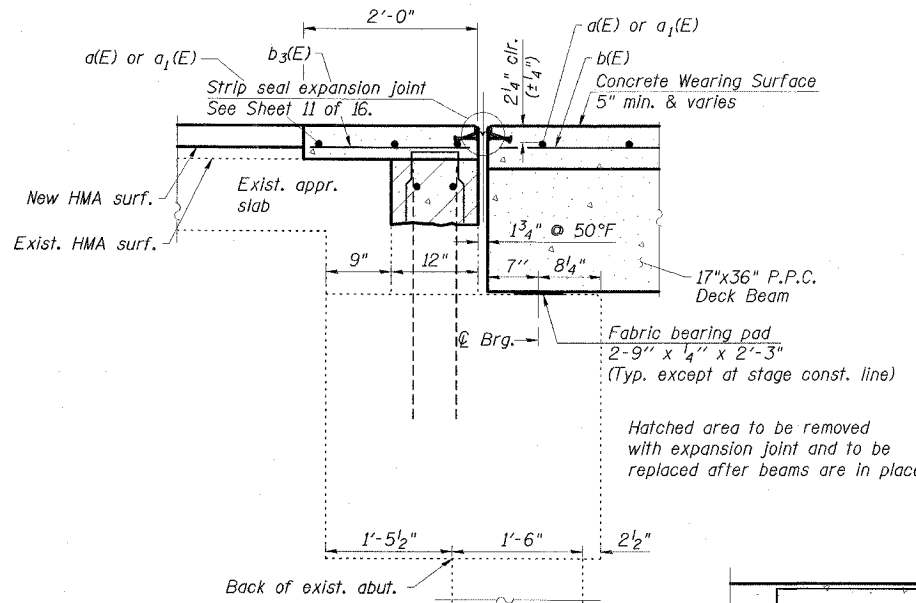
78034



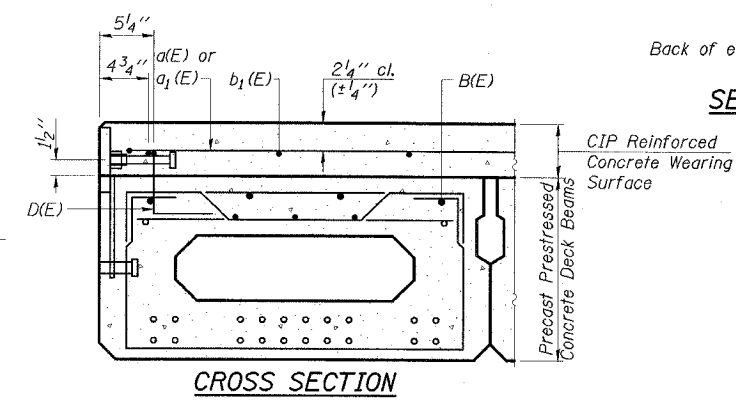
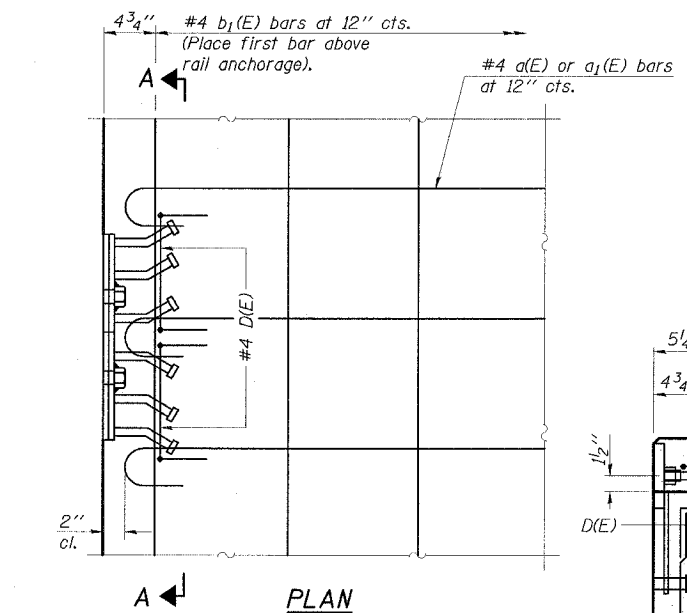
SECTION THRU E. ABUTMENT @ OUTSIDE BEAM

SECTION THRU E. ABUTMENT @ ROADWAY

SECTION THRU W. ABUTMENT @ OUTSIDE BEAM



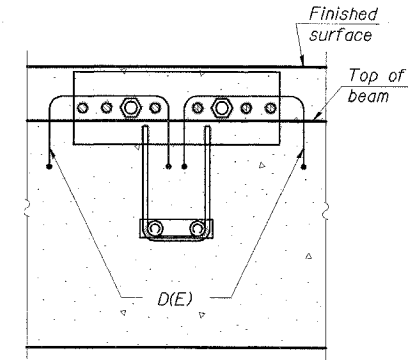
SECTION THRU W. ABUTMENT @ ROADWAY



CROSS SECTION



BAR D(E)



SECTION A-A

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 (17" Depth) or Precast Concrete Bridge Slabs.
- The rail anchorage shall be cast with the beam or slab 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 or slab. Drilling into the beam or slab will not be permitted.
- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

SUPERSTRUCTURE AND APPROACH DETAILS
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	02/08
DRAWN BY:	HAS	02/08
CHECKED BY:	JMS	02/08
APPROVED BY:	RDP	02/08

CONCRETE OVERLAY DETAILS
AT RAIL ANCHORAGE
(Bridge shown; approach similar)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
FAP 873	107BR-1	FRANKLIN	73	22
FED. ROAD DIST. NO. #	ILLINOIS	FED. AID PROJECT - AID		

SHEET NO. 11
16 SHEETS

78034

GENERAL NOTES

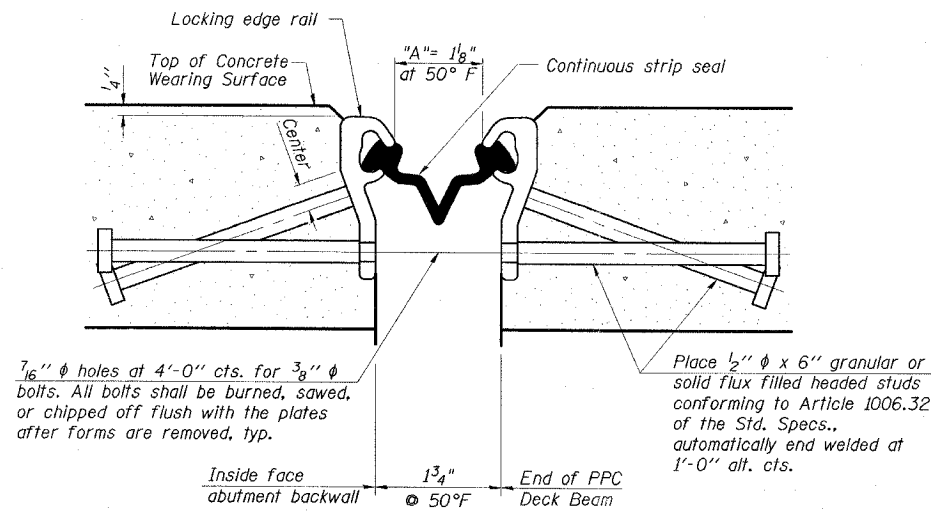
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the locking edge rails.

The height and thickness of the locking edge rails shown are minimum dimensions. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

Locking edge rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

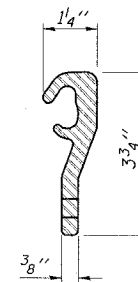


**SECTION THRU STRIP SEAL JOINT
FOR OVERLAY OVER DECK BEAMS**

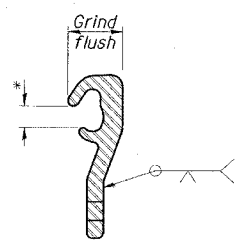
BILL OF MATERIAL

Item	Unit	Quantity
Preformed Joint Strip Seal	Foot	33

* Omit weld at seal opening.



LOCKING EDGE RAIL



LOCKING EDGE RAIL SPLICE

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	02/08
DRAWN BY:	HAS	02/08
CHECKED BY:	JMS	02/08
APPROVED BY:	RDP	02/08

**STRIP SEAL EXPANSION JOINT
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	MILE	POST	SHEET NO. 12 16 SHEETS
FAP 873	107BR-1	FRANKLIN	73	23	
FED. ROAD DIST. NO. 4		FED. AID PROJECT - AID			

78034

**WEST ABUTMENT
BILL OF MATERIAL**

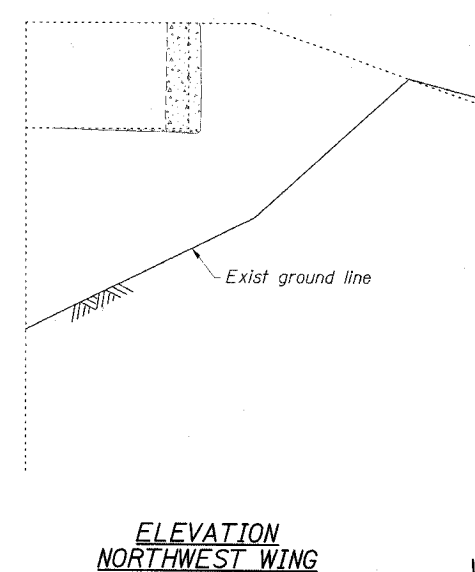
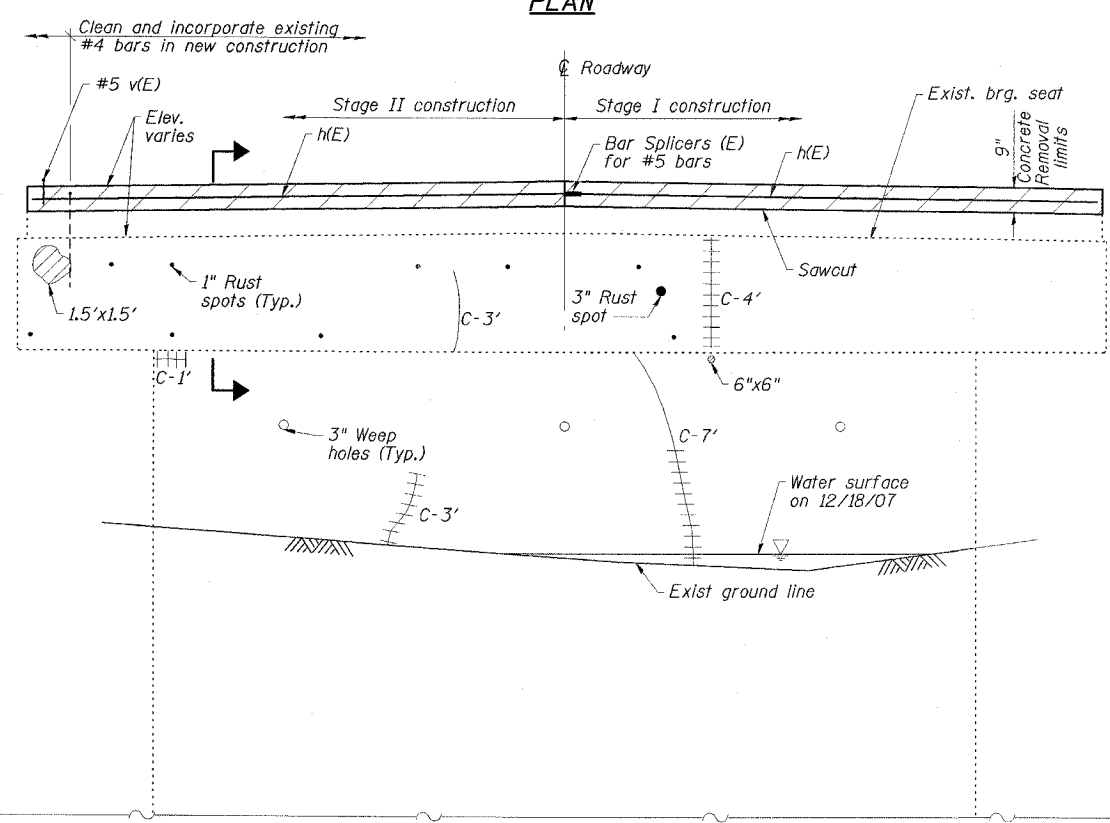
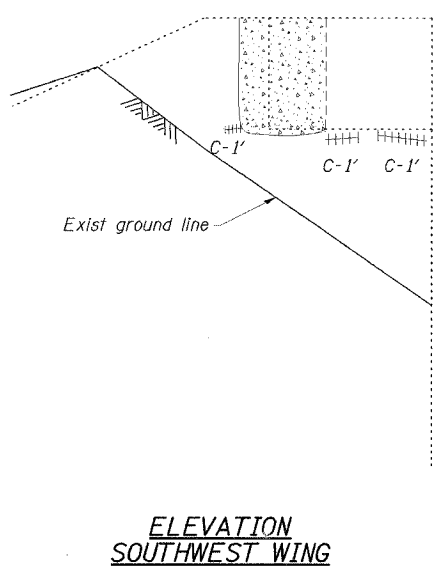
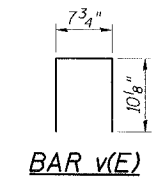
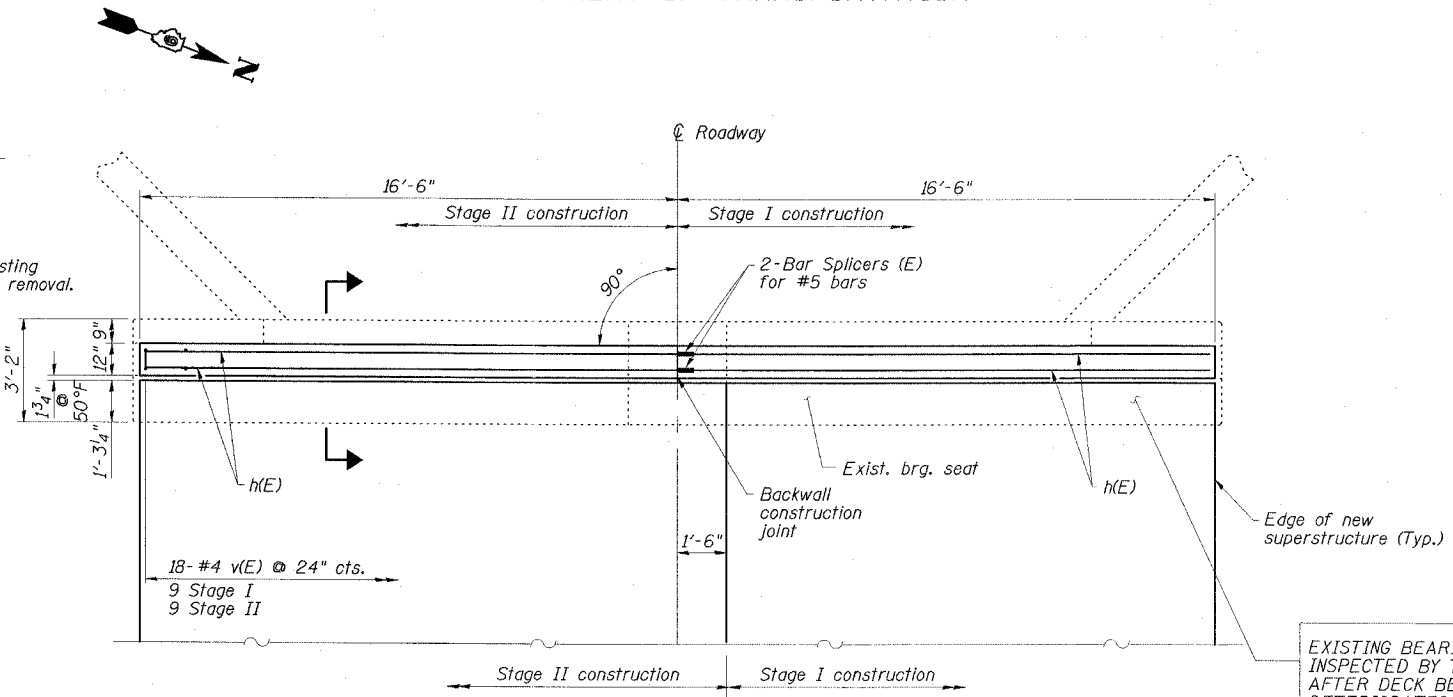
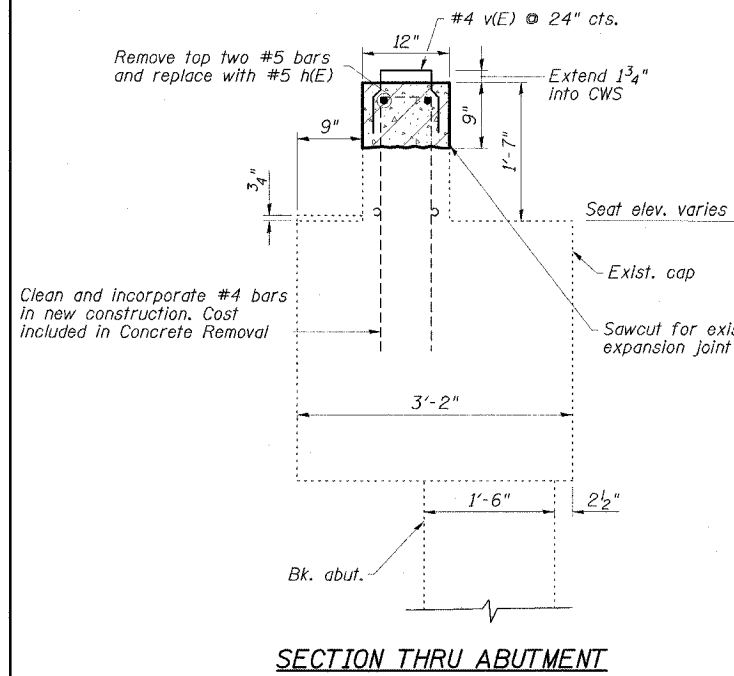
Bar	No.	Size	Length	Shape
h(E)	4	#5	16'-4"	
v(E)	18	#4	2'-4"	□
Concrete Sealer		Sq. Ft.	42	
Epoxy Crack Injection		Foot	41	
Structural Repair of Concrete (Depth Equal to or Less Than 5")		Sq. Ft.	18	
Concrete Removal		Cu. Yd.	1.0	
Concrete Structures		Cu. Yd.	1.0	
Reinforcement Bars, Epoxy Coated		Pound	100	
Asbestos Bearing Pad Removal		Each	30	
Bar Splicers		Each	2	

REPAIR LEGEND

Inspection Date: 12/18/07

- C-6' Crack to be epoxy injected
- Delaminated or spalled area - use Structural Repair of Concrete
- Patched area
- C-6' Efflorescent crack to be epoxy injected
- Rust spot

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



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CONSULTANTS, INC.

DESIGNED BY:	ELH	02/08
DRAWN BY:	JPC/HAS	02/08
CHECKED BY:	JMS	02/08
APPROVED BY:	RDP	02/08

ELEVATION
(Looking West)

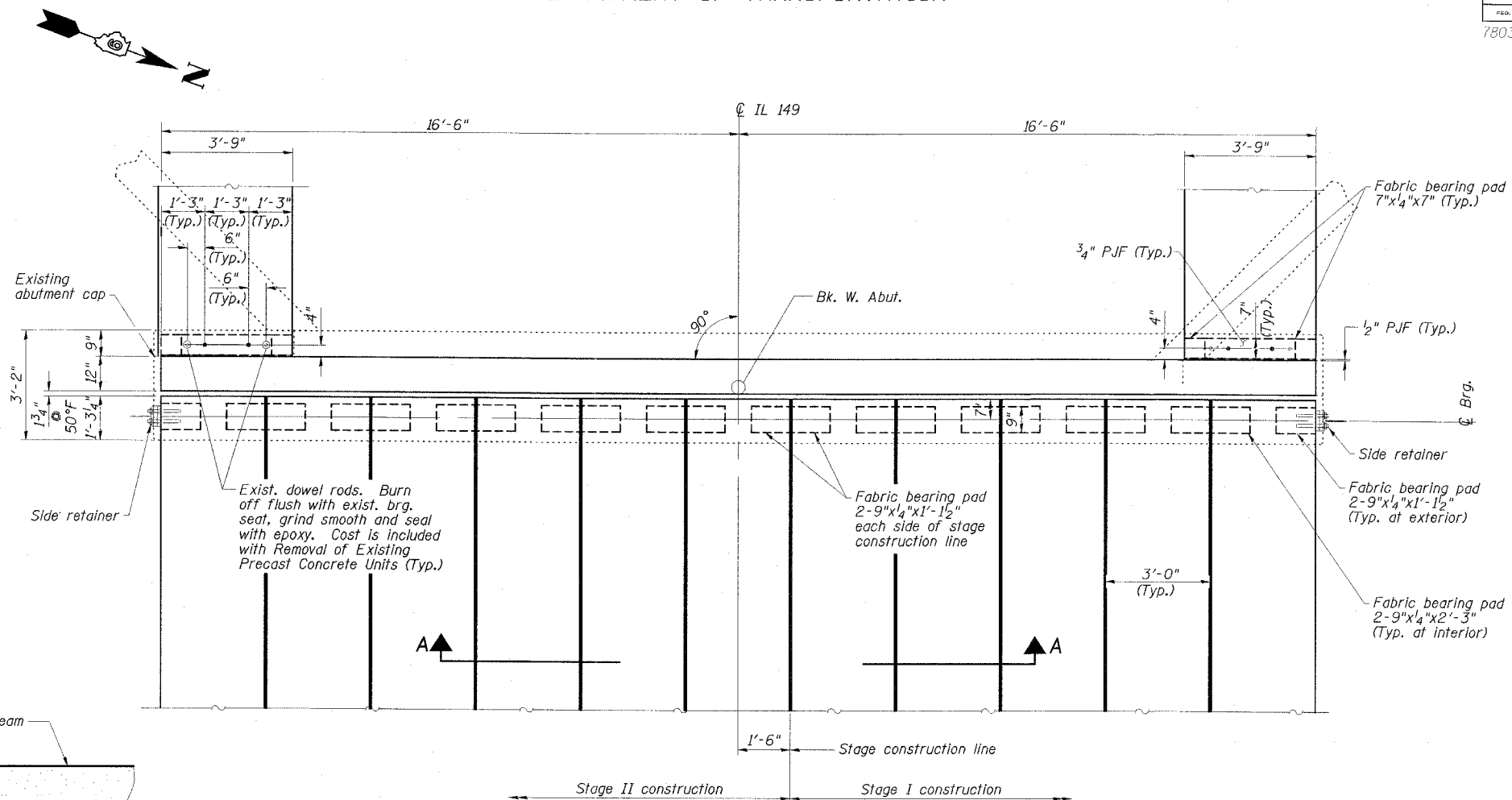
NOTE: ABUTMENT CRACK REPAIR LENGTHS AND STRUCTURAL REPAIR OF CONCRETE AREAS ARE ESTIMATED FROM 12-18-07 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

WEST ABUTMENT
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

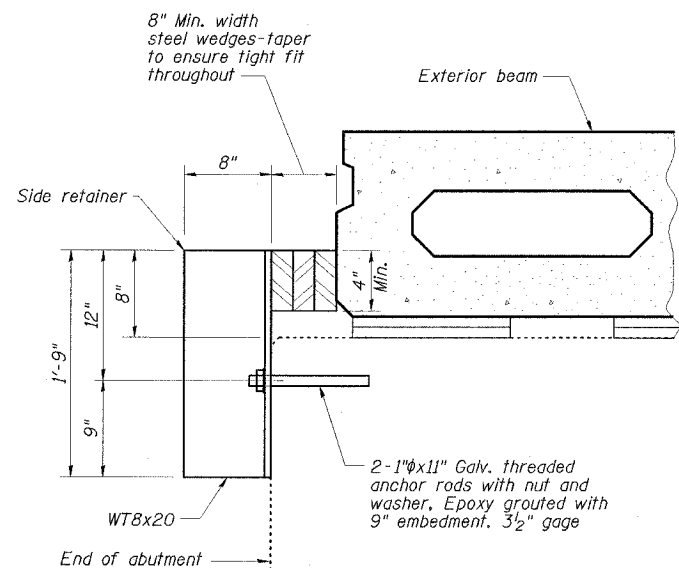
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. 873	SECTION 107BR-1	COUNTY FRANKLIN	SHEET NO. 73	SHEET NO. 24	SHEET NO. 13 16 SHEETS
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT		

78034

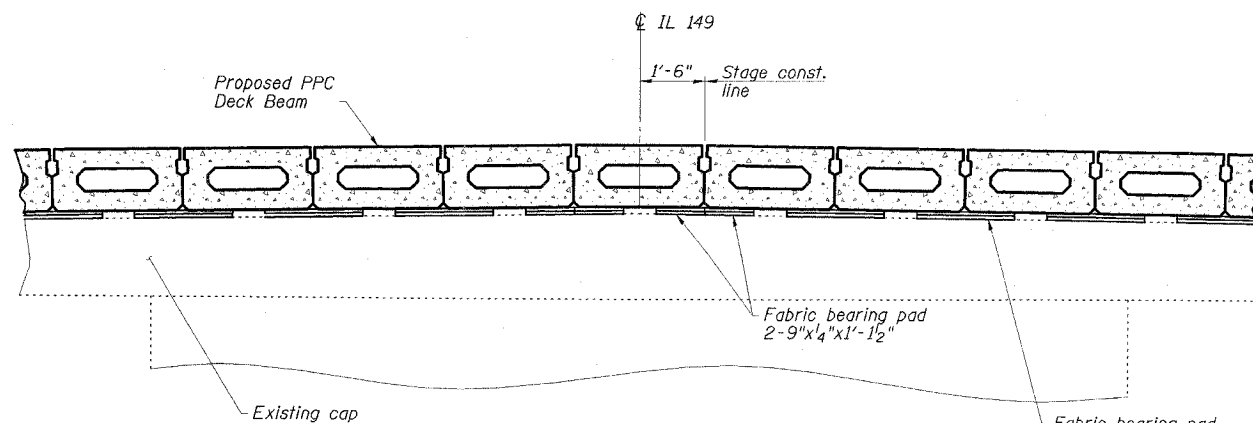


WEST ABUTMENT BEARING SEAT PLAN
(Concrete Wearing Surface and approach pavement not shown)



EXTERIOR BEAM SIDE RETAINER DETAILS
(2 Required)

Cost of retainer & accessories are included with Precast Prestressed Concrete Deck Beams.



SECTION A-A
(Concrete Wearing Surface not shown)

WEST ABUTMENT DETAILS
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

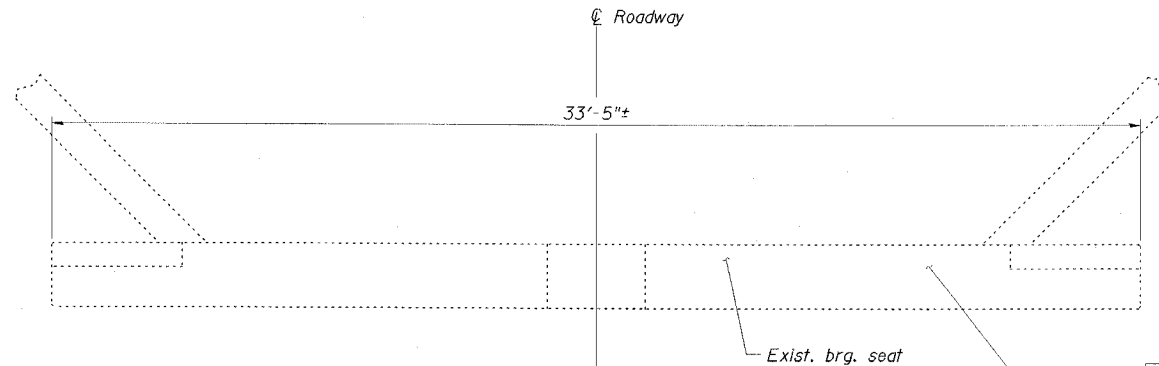
ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	02/08
DRAWN BY:	HAS	02/08
CHECKED BY:	JMS	02/08
APPROVED BY:	RDP	02/08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. 14
FAP 873	107BR-1	FRANKLIN	73	25	16 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT - AID			

78034



PLAN

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

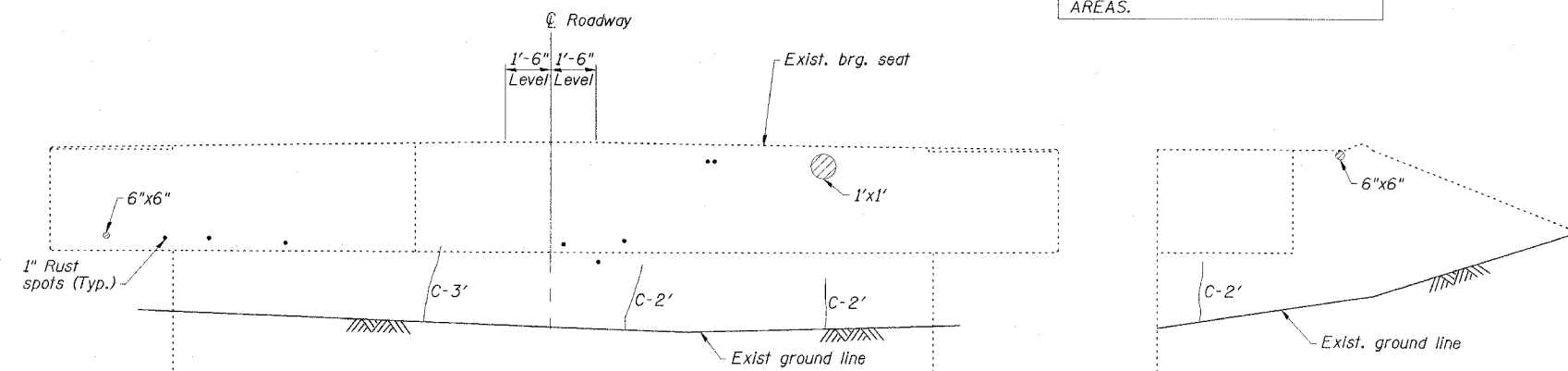
**EAST ABUTMENT
BILL OF MATERIAL**

Item	Unit	Quantity
Concrete Sealer	Sq. Ft.	15
Epoxy Crack Injection	Foot	29
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	17

REPAIR LEGEND

Inspection Date: 12/18/07

- C-6' Crack to be epoxy injected
- Delaminated or spalled area - use Structural Repair of Concrete
- Rust spot



ELEVATION
(Looking East)

ELEVATION
SOUTHEAST WING

NOTE: ABUTMENT CRACK REPAIR LENGTHS AND STRUCTURAL REPAIR OF CONCRETE AREAS ARE ESTIMATED FROM 12-18-07 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	02/08
DRAWN BY:	JPC/HAS	02/08
CHECKED BY:	JMS	02/08
APPROVED BY:	RDP	02/08

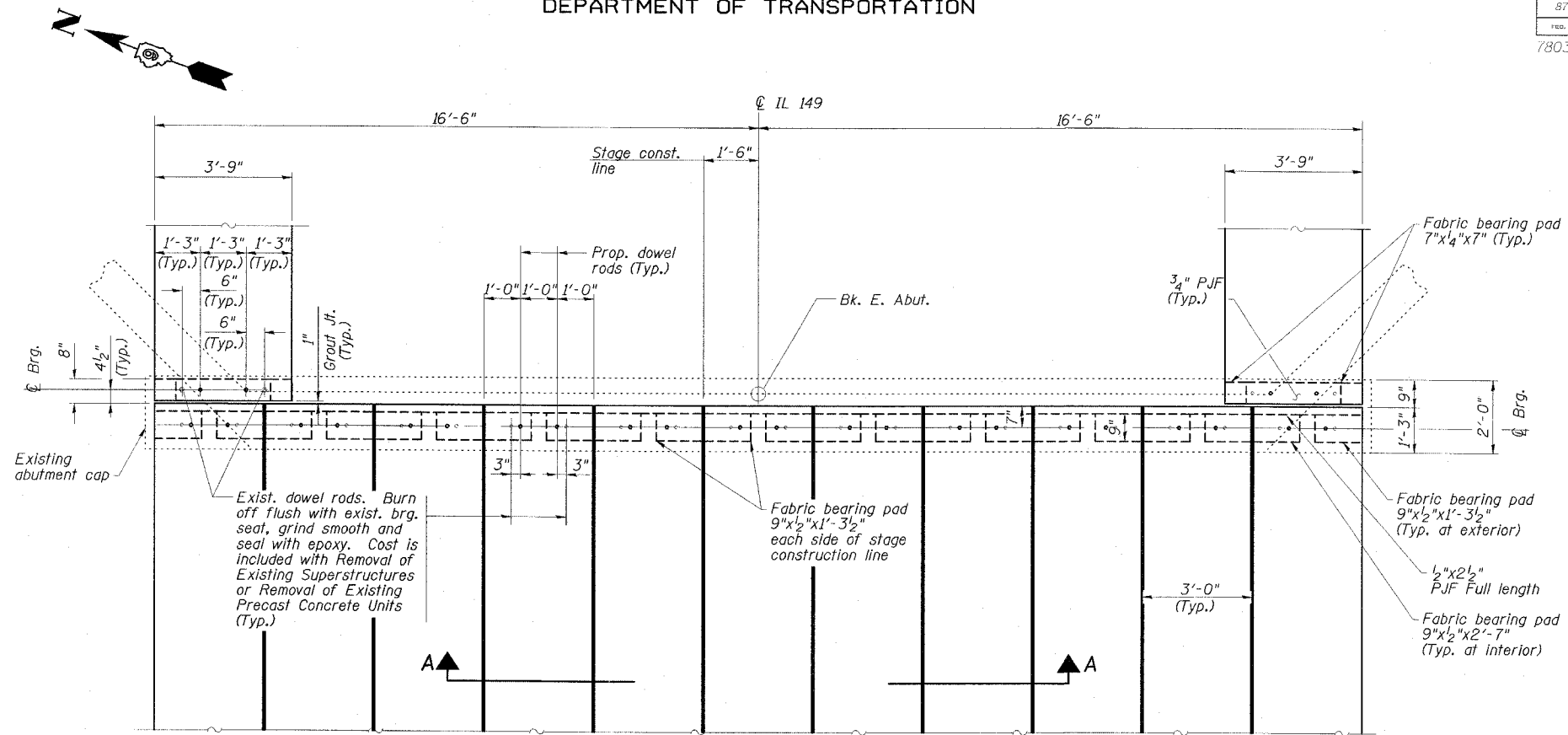
EAST ABUTMENT
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

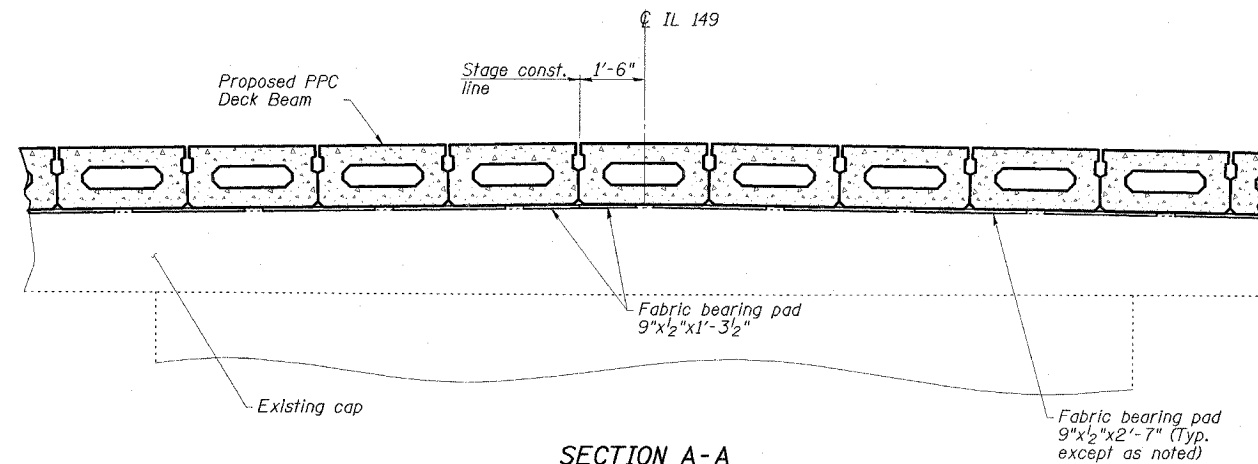
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 873	107BR-1	FRANKLIN	73	26
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

78034

SHEET NO. 15
16 SHEETS



EAST ABUTMENT BEARING SEAT PLAN
(Concrete Wearing Surface and approach pavement not shown)



SECTION A-A
(Concrete Wearing Surface not shown)

EAST ABUTMENT DETAILS
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	02/08
DRAWN BY:	HAS	02/08
CHECKED BY:	JMS	02/08
APPROVED BY:	RDP	02/08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	NO.	SHEET NO. 16
FAP 873	107BR-1	FRANKLIN	73	27	16 SHEETS
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT			

78034

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

The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

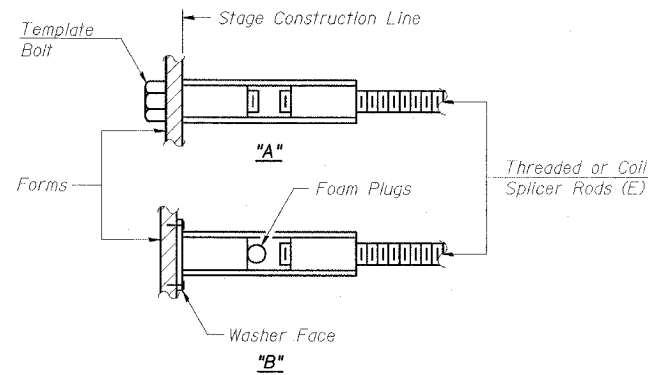
Wire Connector



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

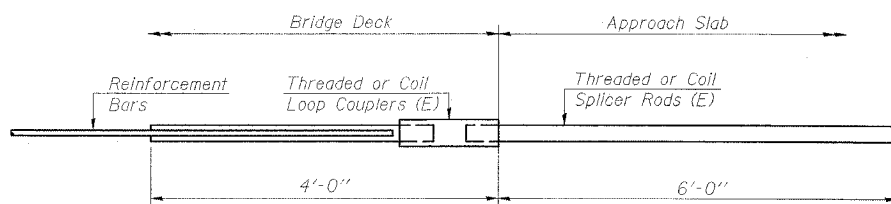
"A": Set bar splicer assembly by means of a template bolt.
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E): Indicates epoxy coating.

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:

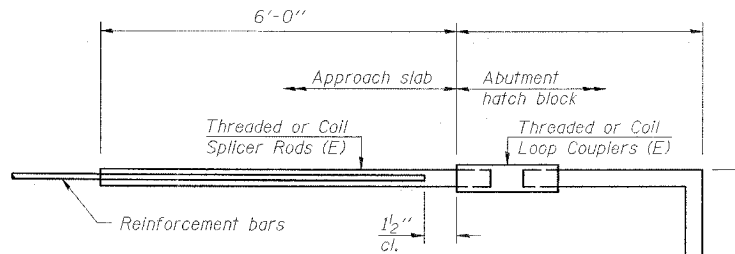
- Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
 - Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
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	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



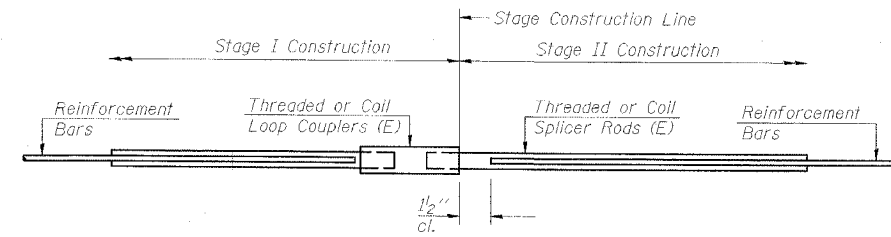
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar		
Min. Capacity =	23.0 kips - tension	
Min. Pull-out Strength =	12.3 kips - tension	
No. Required =	0	



FOR STUB ABUTMENTS

Bar Splicer for #5 bar		
Min. Capacity =	23.0 kips - tension	
Min. Pull-out Strength =	12.3 kips - tension	
No. Required =	0	



STANDARD

Bar Size	No. Assemblies Required	Location
#4	48	Concrete Wearing Surface
#5	2	West Abutment

BAR SPLICER ASSEMBLY DETAILS
IL 149 OVER TILLEY CREEK
FAP ROUTE 873 - SECTION 107BR-1
FRANKLIN COUNTY
STATION 1060+46.00
STRUCTURE NO. 028-0040

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	02/08
DRAWN BY:	HAS	02/08
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APPROVED BY:	RDP	02/08

BSD-1

11-1-06

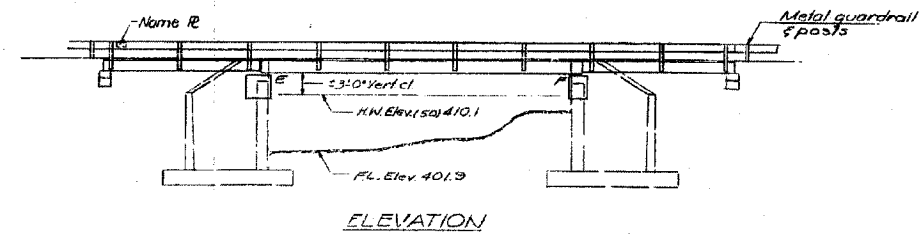
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

Benchmark located on west end of southwest wingwall of bridge, is right of Station 1060+22. Elevation 414.31.
 Existing structure 1028-0040. The existing structure built in 1928 as 33' 1/4" Section 107B is a 43' 0" Sk to the single span bridge. The existing superstructure consists of 4 reinforced concrete T girders with an cut to cut of 24' 6". The existing substructure is composed of E.R.C. closed abutments. The existing superstructure shall be removed and replaced with P.P.C. deck beams. The existing substructure shall be widened in order to support the proposed superstructure.
 Traffic shall be maintained at all times utilizing stage construction. No salvage.

FRANKLIN	30	12	9 SHEETS
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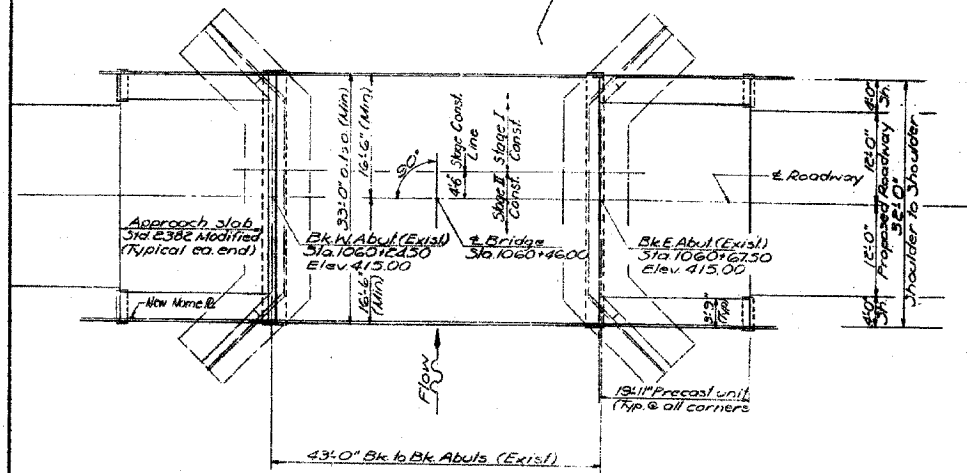
GENERAL NOTES

All structural steel shall be shop painted with two coats of basic lead silico chromate paint.
 Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503.07(c) of the Standard Specifications and are included in quantity of structural steel.
 Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to normal 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 of the unit price bid for the work.
 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, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
 Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53, Grade 60.
 Shoulder transition to wingwall shall be shaped with broken concrete. Cast incidental.
 Limits of Waterproofing Membrane System and Class I shall be two feet beyond east end of deck beams to west end of deck beams and out to out of deck beams.
 A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.



STATION 1060+46.00
 REBUILT BY
 STATE OF ILLINOIS
 FA RTE 873 SEC. 107B-D
 FA DRAW. 873-107B(10)
 LOADING 4520
 STR. NO. 028-0040

NAME PLATE
 (S&T. 2113)



WATERWAY INFORMATION

Drainage Area 372 sq. mi. Low Grade Elev. 413.5 @ Sta. 1066+00

Flood	Flow	Opening	Head	Headwater	Headwater
yr.	CFS	Exist. Prop.	Max. Exist. Prop.	Exist. Prop.	Exist. Prop.
Design	30 1750	251 251	410.1 1.52	1.52	411.62 411.62
Base	100 1750	259 259	410.3 1.90	1.90	412.2 412.2
Overlapping	500 2273	271 271	410.6 2.92	2.92	413.52 413.52
Max. Cof. E.	500				

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Removal of Existing Superstructures	Each	1		1
Bituminous Concrete Surface Course, Class I	Tons	22		22
Concrete Formwork	Sq. Yd.	4.3	217	221
Class I Concrete	Cu. Yd.	299		299
Precast Concrete Bridge Slab	Sq. Ft.	1396		1396
Precast Prestressed Concrete Deck Beams (17' Depth)	Sq. Ft.	2350		2350
Structural Steel	Pound	100	2800	2900
Reinforcement Bars	Each	1		1
Name Plates	Each	1		1
Pretreated Joint Seal 2"	Lin. Ft.	33		33
Portland Cement Mortar Fining Course	Lin. Ft.	423		423
Waterproofing Membrane System	Sq. Yd.	163		163
Temporary Bridge Rail	Lin. Ft.	42		42
Steel Rolling, Spcs. S-1	Lin. Ft.	167		167

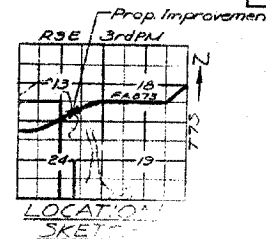
DESIGN STRESSES

FIELD UNITS
 $f_c = 3500 \text{ psi}$
 $f_y = 60,000 \text{ psi (Point)}$

PRECAST UNITS
 $f_c = 4500 \text{ psi}$
 $f_s = 180,000 \text{ psi}$
 $f_s = 20,000 \text{ psi}$

PRECAST PRESTRESSED UNITS
 $f_c = 5000 \text{ psi}$
 $f_c = 4000 \text{ psi}$
 $f_s = 270,000 \text{ psi (4# strands)}$
 $f_s = 180,000 \text{ psi (2# strands)}$

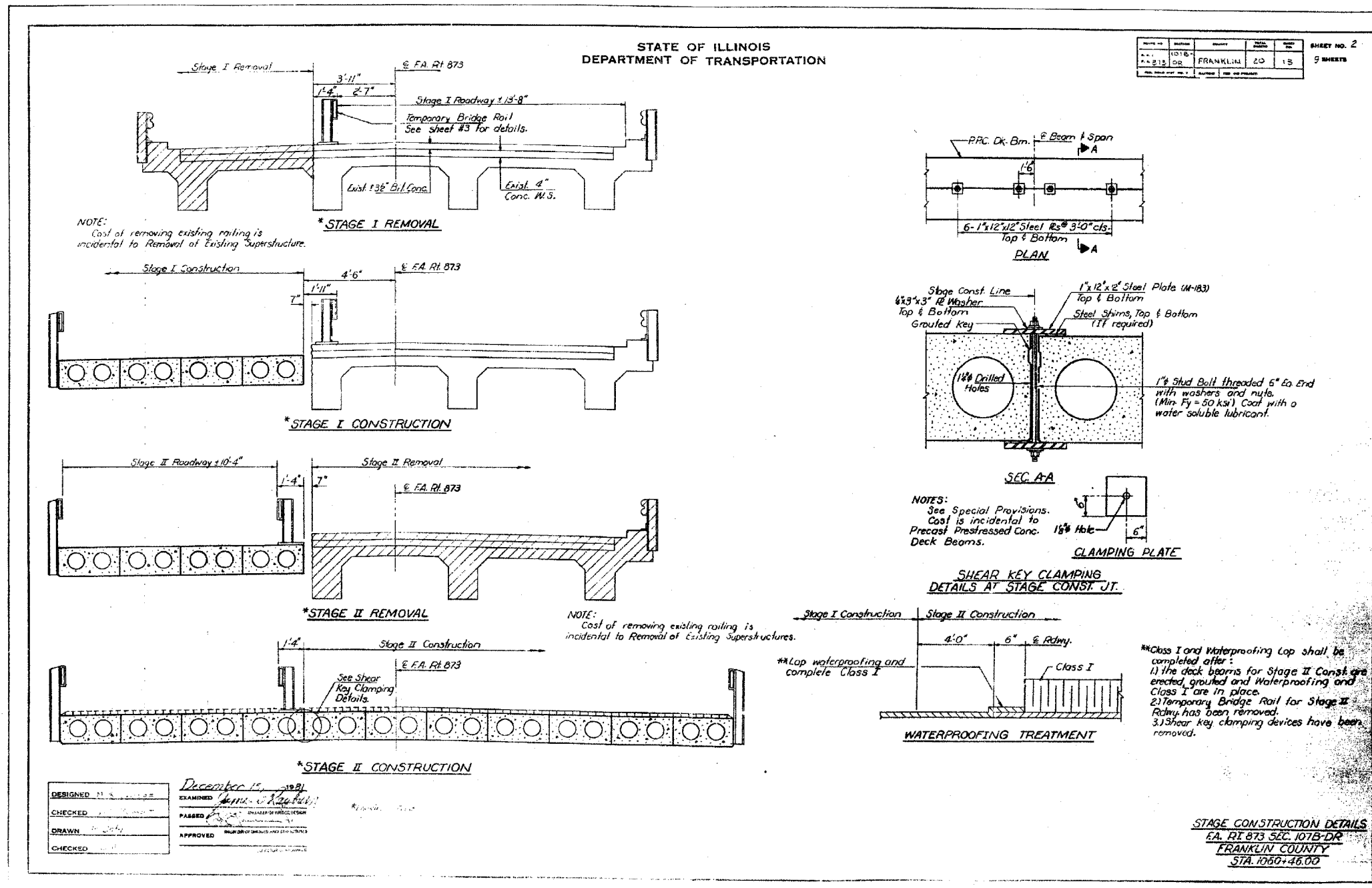
Allow 25% for future wearing surface
 Design Specifications 1977 AASHTO
 1982 AASHTO 1982 Interim Specs



GENERAL PLAN
 FA RTE 873 (ILL 149) OVER TILLEY CREEK
 EA ROUTE 873
 SECTION 107B-D
 FRANKLIN COUNTY
 STATION 1060+46.00

DESIGNED: M. R. ...
 CHECKED: J. F. ...
 DRAWN: J. F. ...
 EXAMINED: ...
 PASSED: ...
 APPROVED: ...

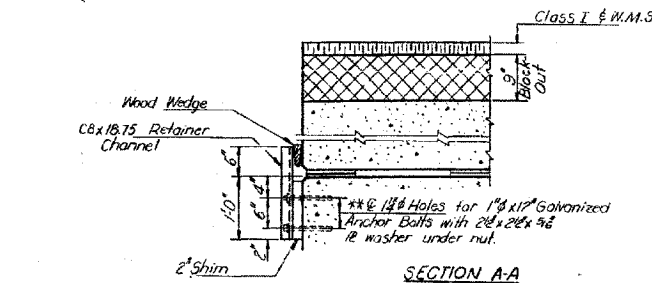
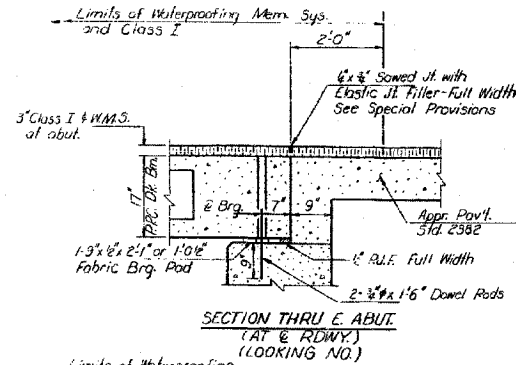
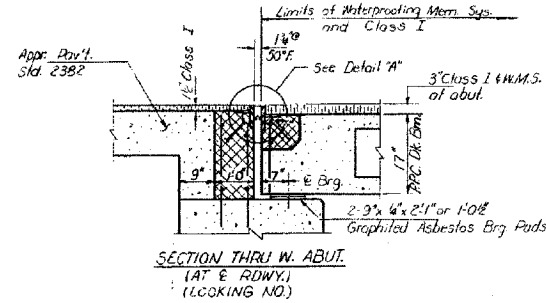
CONTRACT NO. 78034			
FAP	SECTION	COUNTY	TOTAL SHEETS
RTE	873	107BR-1	FRANKLIN 73
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	



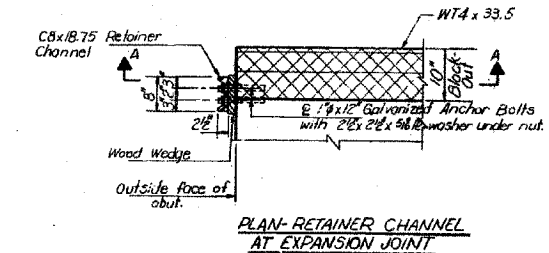
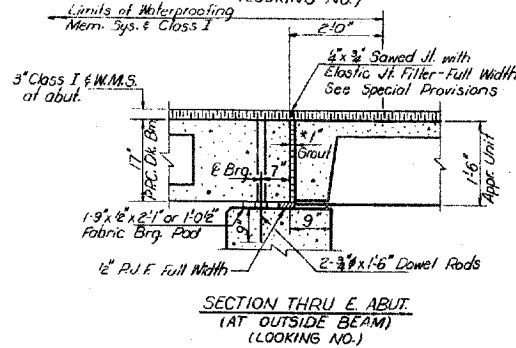
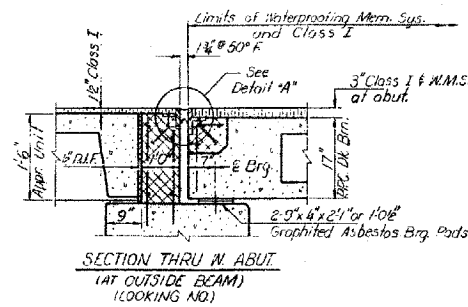
CONTRACT NO. 78034			
FAP RTE	SECTION	COUNTY	TOTAL SHEETS
873	107BR-1	FRANKLIN	73 32
STA.		TO STA.	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	

DATE	BY	CHKD	APP'D	SHEET NO.
12/15/81	DAJ	HAS	MTD	9
PROJECT				SHEETS
FRANKLIN CO				76

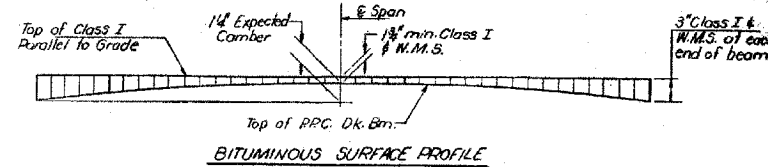
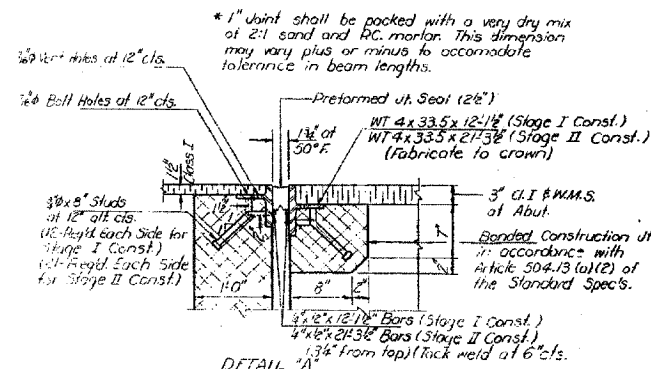
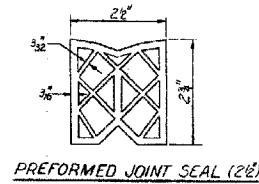
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



**Anchor bolts shall be cast into the masonry. Cost including Retainer Channel and accessories is incidental to deck beams.



Note: After block-outs are poured and cured, the Retainer Channels shall be removed. Anchor bolts may be left in place. (Cost for removal of channels shall be incidental).



SUPERSTRUCTURE DETAILS
FA. RT. 873 SEC. 107B.D.P.
FRANKLIN COUNTY
STA. 1066+46.00

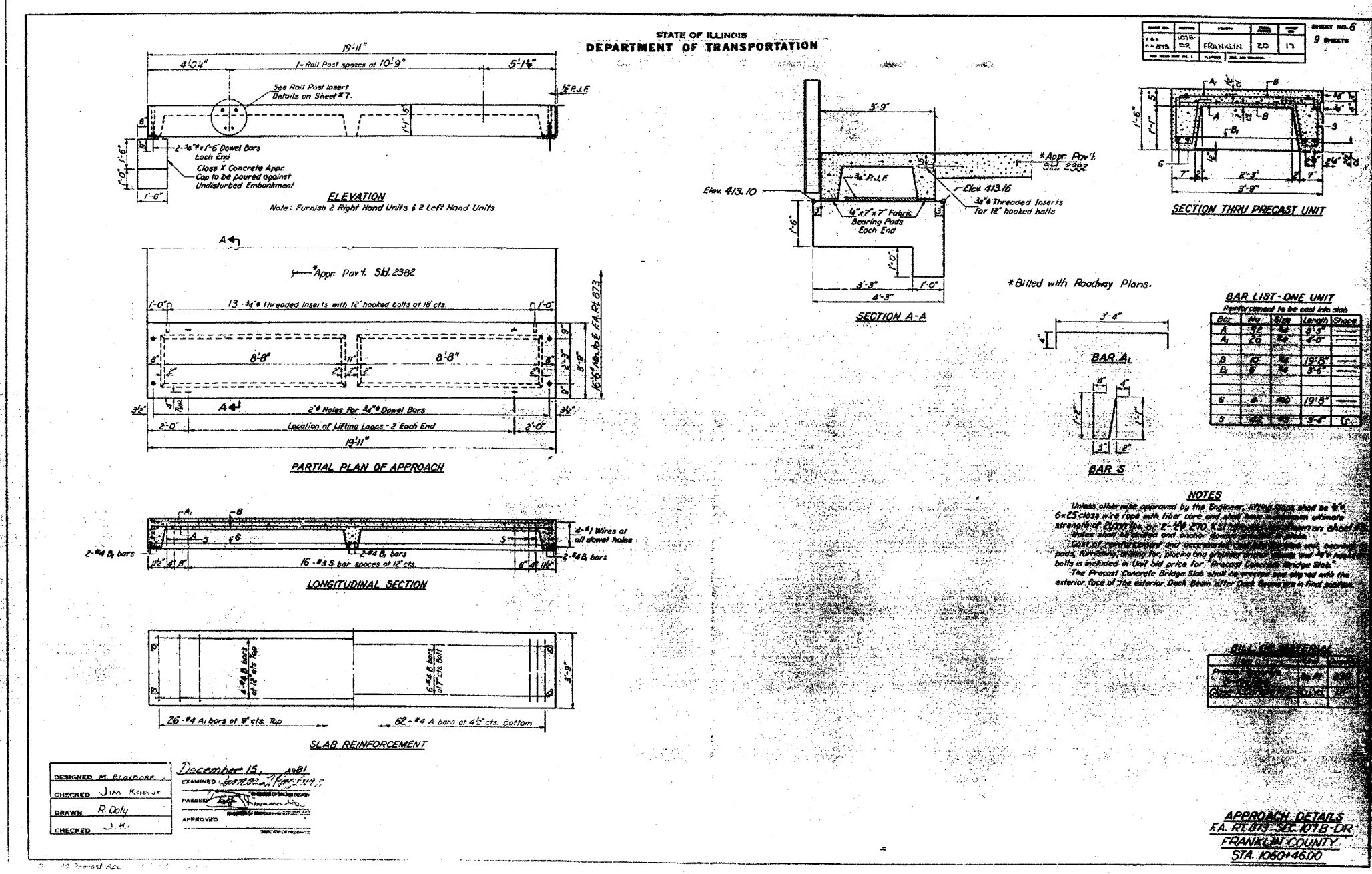
DESIGNED BY: M. Blackport	EXAMINED BY: M. Blackport	DATE: December 15, 1981
CHECKED BY: Jim K...	PASSED BY: M. Blackport	
DRAWN BY: R. Dufy	APPROVED BY: M. Blackport	
CHECKED BY: J.C.		

ESCA
CONSULTANTS, INC.

DESIGNED BY:	DAJ	03/08
DRAWN BY:	HAS	03/08
CHECKED BY:	MTD	03/08
APPROVED BY:	RDP	04/08

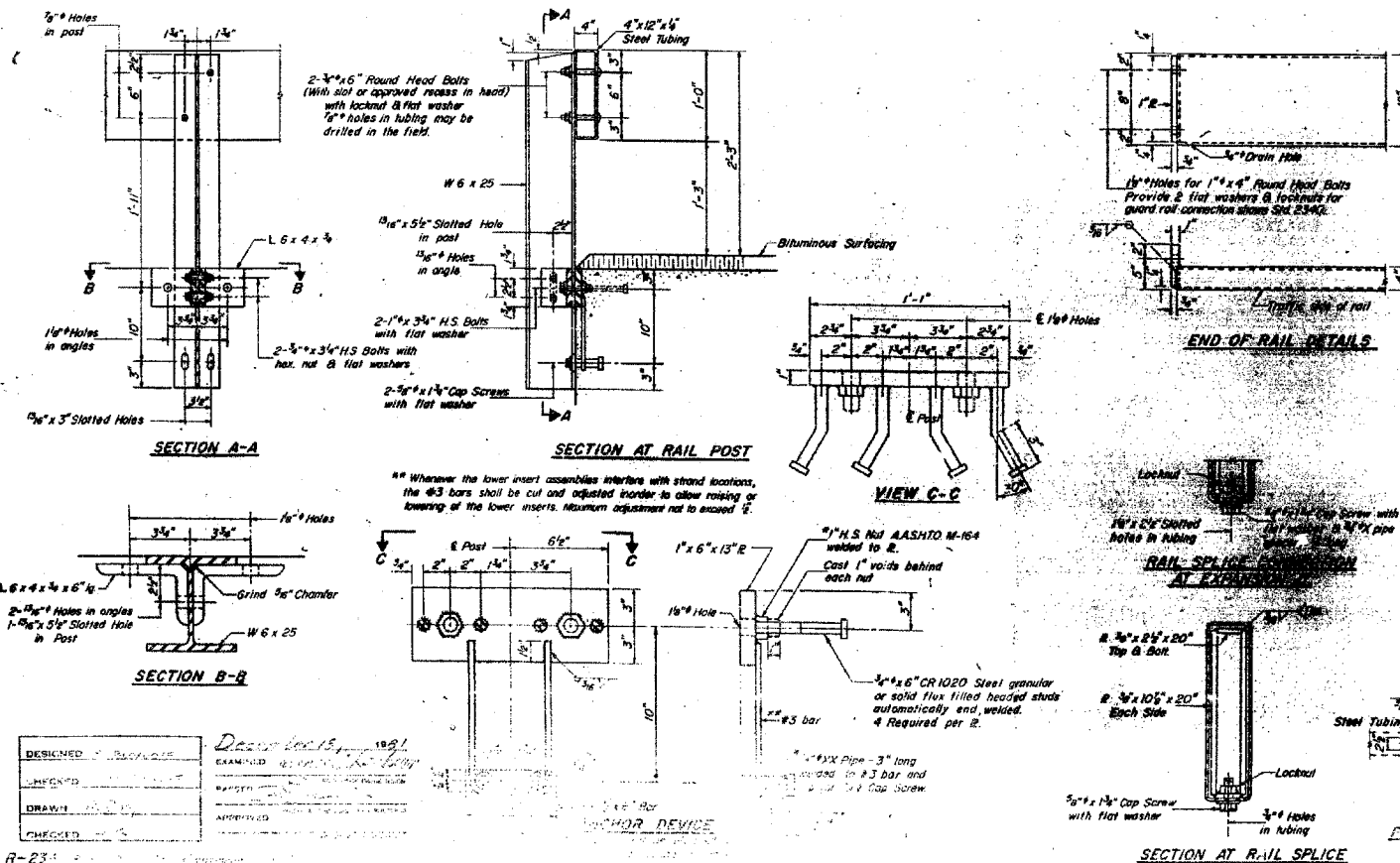
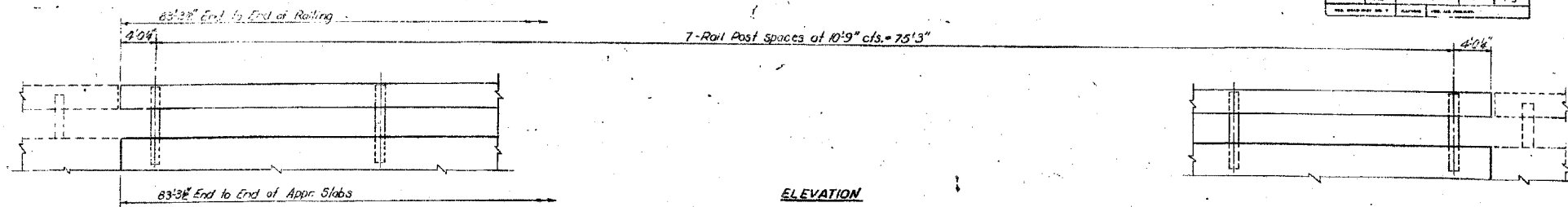
FOR INFORMATION ONLY

EXISTING STRUCTURE PLANS
FAP RTE 873 (IL 149)
SECTION 107BR-1
FRANKLIN COUNTY



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	BY	CHKD	APP'D	SHEET NO.
10/18/08	DAJ	HAS	MTD	9
PROJECT NO.				9 SHEETS



NOTES

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

All other steel shapes and plates shall conform to the requirements of AASHTO M-83 except posts and angles shall conform to AASHTO M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-594R.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-238.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-11 and ASTM A-305. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 500 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE S-1.

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

The lower portion of the post flange in contact with concrete shall receive two coats of epoxy paint conforming to Section 714.08 Type B or other 1/2" thick "epoxy joint filler" and "pre-preg" concrete.

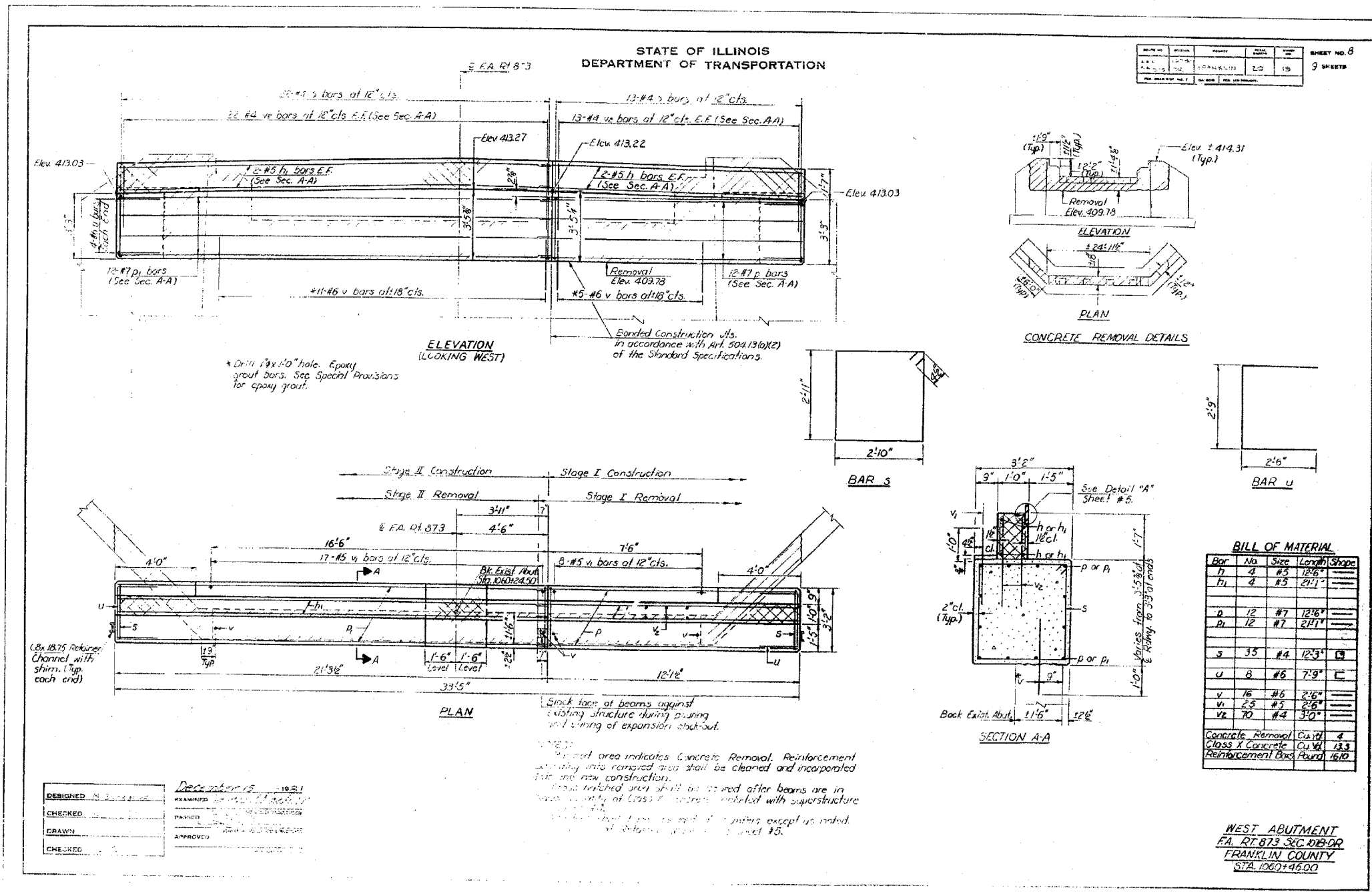
The 4" high strength bolts used to connect the 6" x 6" angles to the post shall be tightened in accordance with Article 502.02(1)(c) of the Standard Specifications. The 1/4" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and then an additional 1/4 turn. The 1/2" cap screws in bottom of posts shall be tightened to a snug fit only.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Lin. Ft.	167

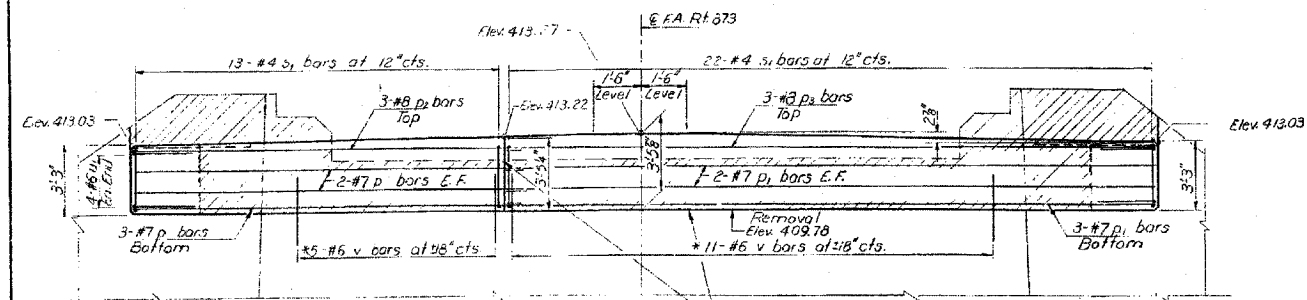
TYPE S-1
STEEL RAILING
FA. RT. 873 SEC. 107B-DR
FRANKLIN COUNTY
STA. 1060+46.00

DESIGNED BY: [Signature]	EXAMINED BY: [Signature]
DRAWN BY: HAS	CHECKED BY: MTD
CHECKED BY: MTD	APPROVED BY: RDP



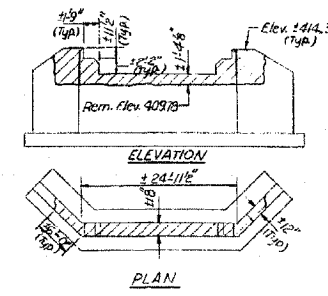
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE OF SHEET	REVISION	BY	DATE	NO. OF SHEETS
10/18/08	1	DAJ	10/18/08	9
11/13/08	2	DAJ	11/13/08	9

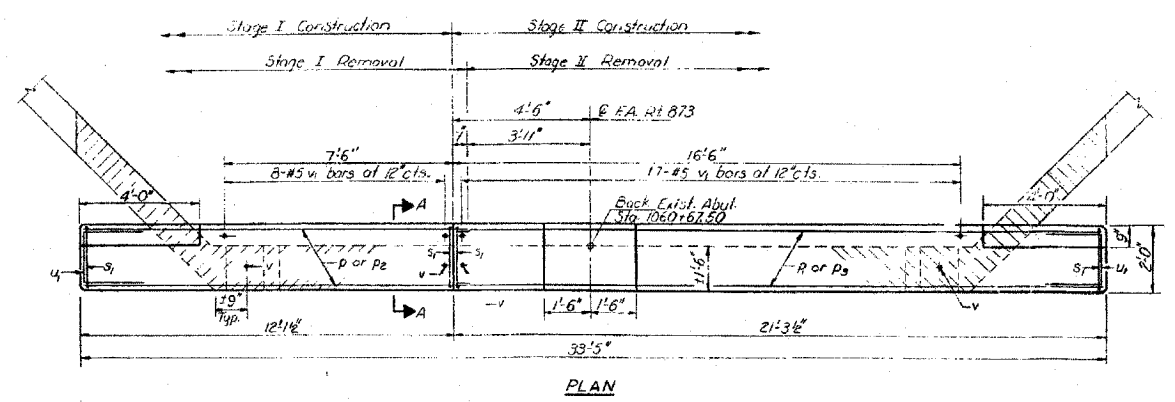
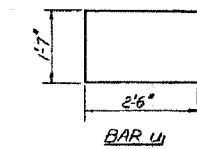
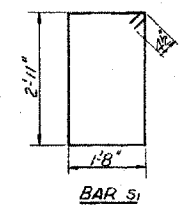


ELEVATION (LOOKING EAST)
Bridged Construction Jts. in accordance with Article 50413 (a)(2) of the Standard Specifications.

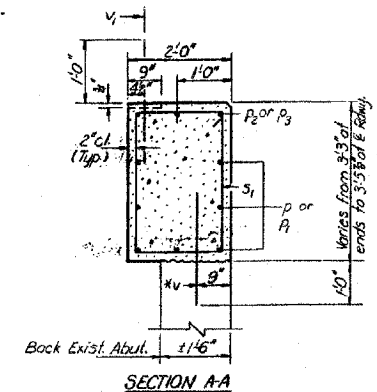
*Drill 1/2" x 10" hole. Epoxy grout bars. See Special Provisions for epoxy grout.



CONCRETE REMOVAL DETAILS



PLAN



SECTION A-A

BILL OF MATERIAL

Bar	No.	Size	Length	Stops
D	7	#7	12'6"	
D	7	#7	21'1"	
P2	3	#8	12'6"	
P2	3	#8	21'1"	
S1	35	#4	9'11"	14
U1	8	#5	6'7"	
V	16	#6	2'6"	
V	25	#5	2'6"	

Concrete Removal **CUWT** 4
Class II Concrete **CUWT** 8.4
Reinforcement Bars Poured **1130**

EAST ABUTMENT
E.A. RT. 873 SEC. 107B DR
FRANKLIN COUNTY
STA. 1060+46.00

DESIGNED BY: DAJ	DATE: December 15, 2008
CHECKED BY: MTD	EXAMINED BY: [Signature]
DRAWN BY: HAS	APPROVED BY: [Signature]
CHECKED BY: RDP	

NOTES:
Hatched area indicates Concrete Removal. Reinforcement bars in hatched area shall be removed and re-embedded in new concrete.

ESCA
CONSULTANTS, INC.

DESIGNED BY:	DAJ	03/08
DRAWN BY:	HAS	03/08
CHECKED BY:	MTD	03/08
APPROVED BY:	RDP	04/08

FOR INFORMATION ONLY

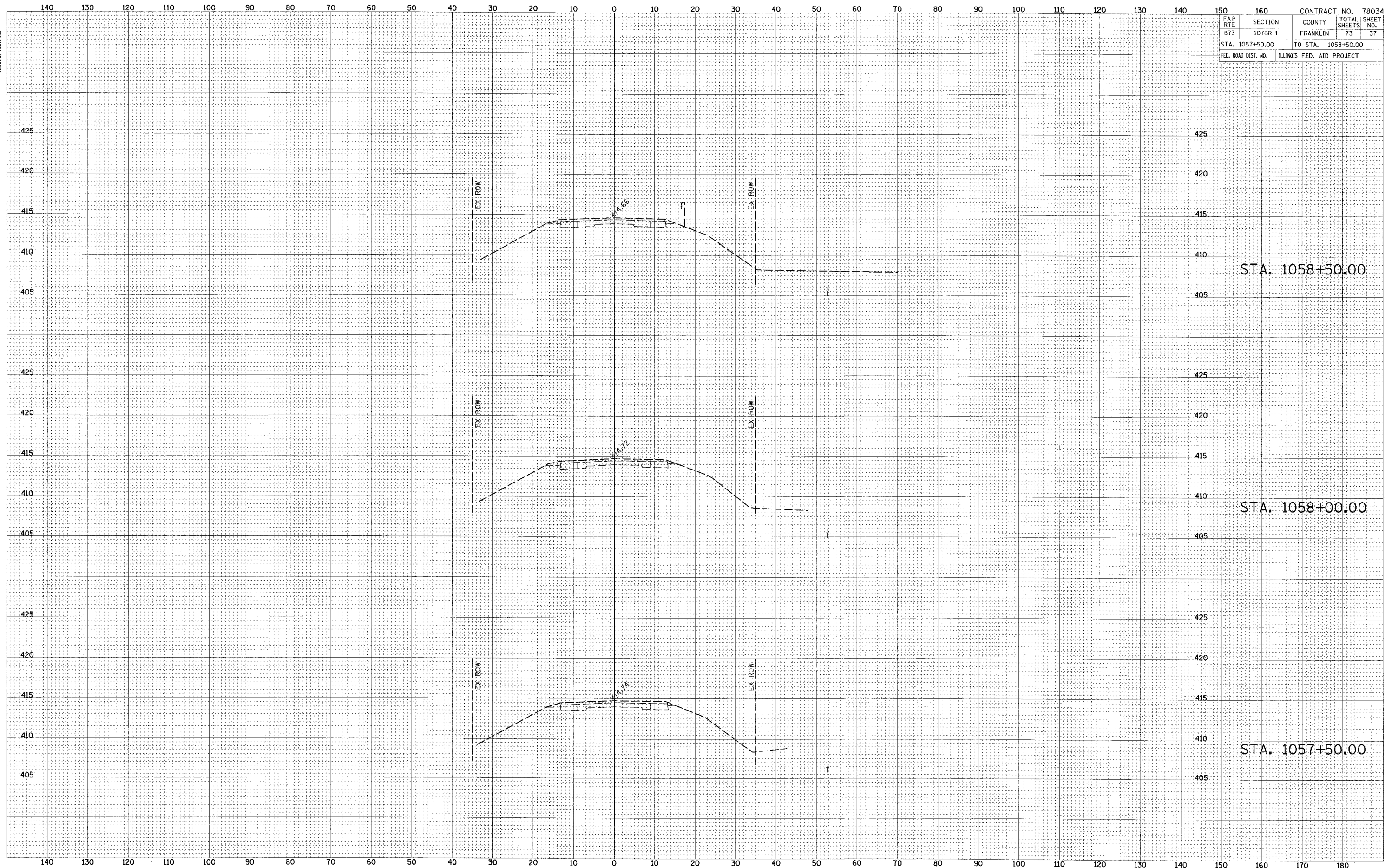
EXISTING STRUCTURE PLANS
FAP RTE 873 (IL 149)
SECTION 107BR-1
FRANKLIN COUNTY



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

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

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
873	1078R-1	FRANKLIN	73	37
STA. 1057+50.00		TO STA. 1058+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

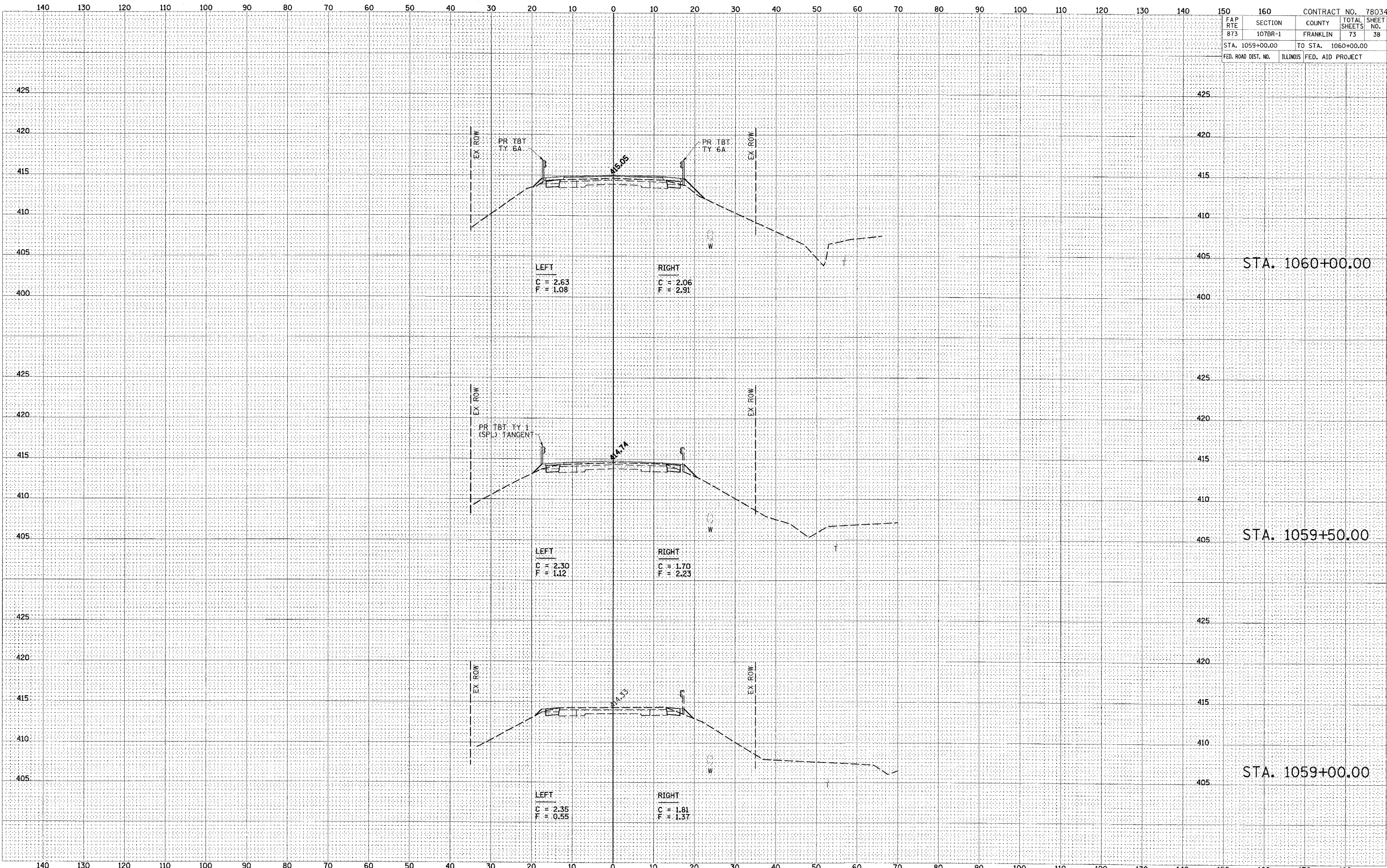




DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	CONTRACT NO.
873	107BR-1	FRANKLIN	73	78034
STA. 1059+00.00		TO STA. 1060+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
873	107BR-1	FRANKLIN	73	39
STA. 1060+50.00		TO STA. 1061+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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425 420 415 410 405

425 420 415 410 405

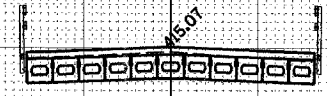
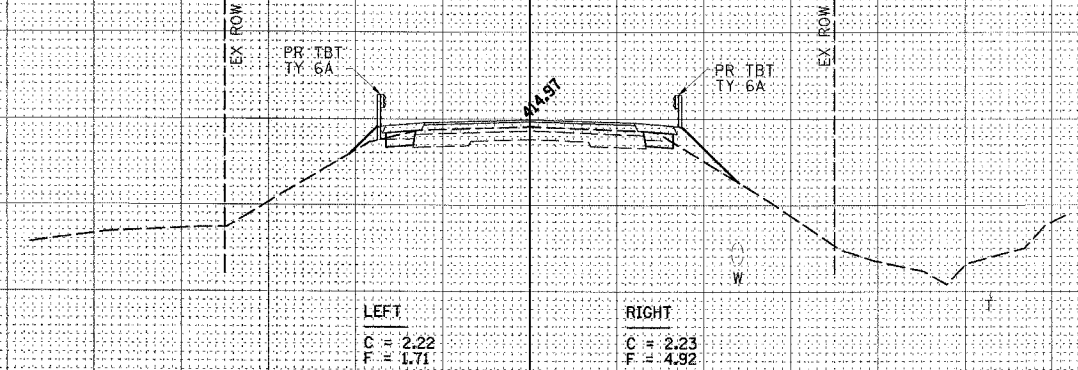
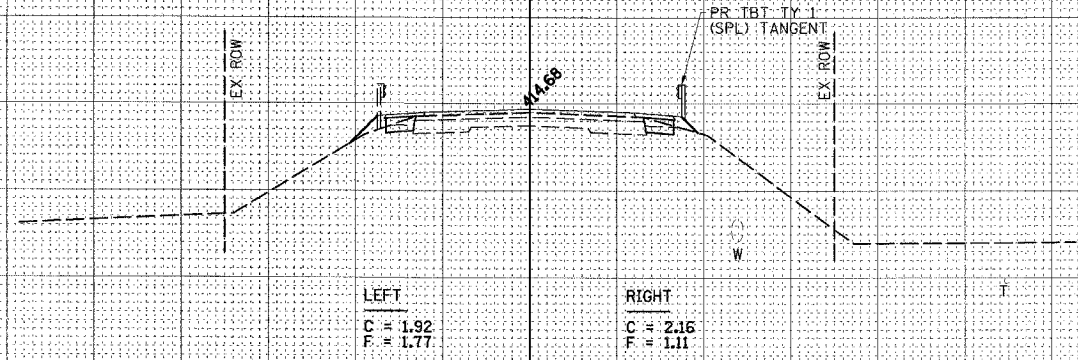
425 420 415 410

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STA. 1061+50.00

STA. 1061+00.00

STA. 1060+50.00





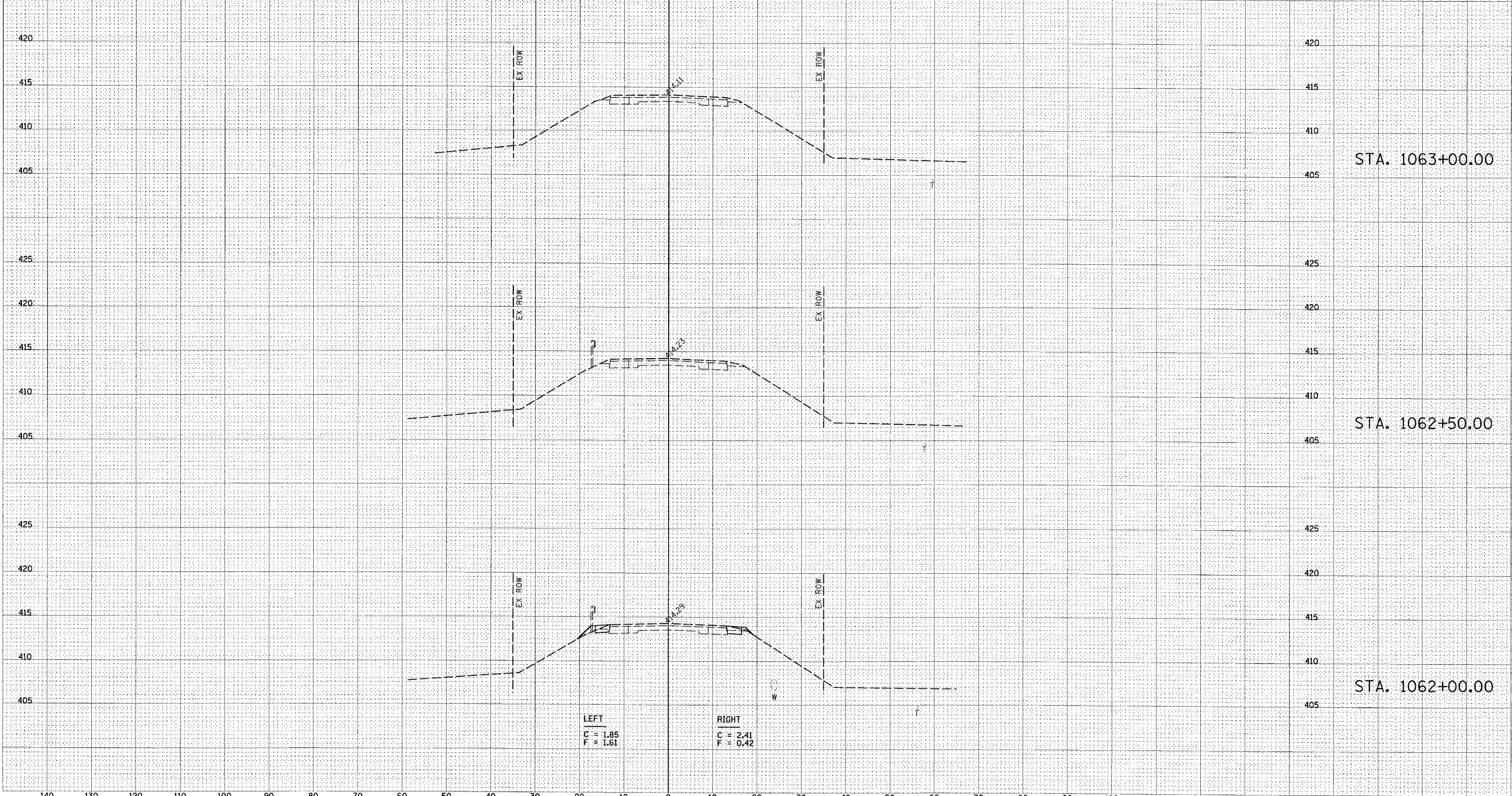
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BY	
NO.	
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PLOTTED	
NOTE BOOK	
AREAS CHECKED	

FAP RTE 873		SECTION 107BR-1		COUNTY FRANKLIN		TOTAL SHEETS 73		SHEET NO. 40	
STA. 1062+00.00				TO STA. 1063+00.00					
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT					

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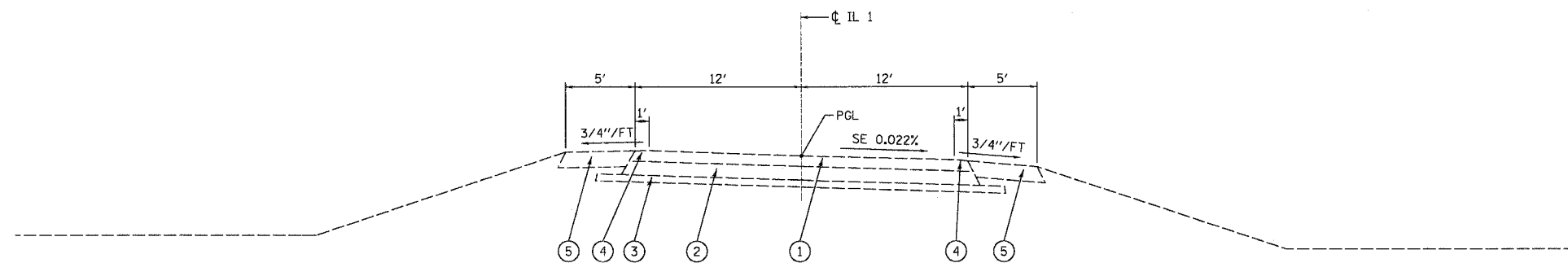
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STA. 1063+00.00

STA. 1062+50.00

STA. 1062+00.00

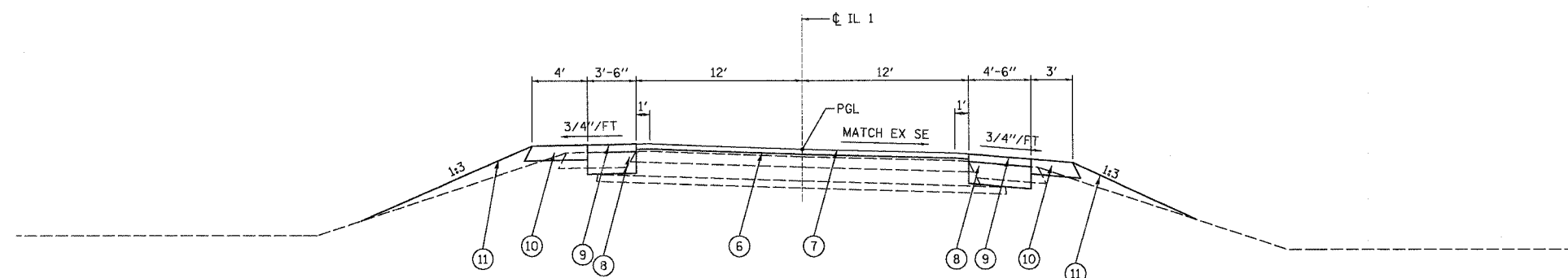
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	111BR-1	GALLATIN	73	41
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



EXISTING TYPICAL SECTION

STA 353+95.00 TO STA 358+04.00

BRIDGE OMISSION SN 030-0018
STA 355+14.97 TO STA 356+75.03



PROPOSED TYPICAL SECTION

STA 353+95.00 TO STA 358+04.00

BRIDGE OMISSION SN 030-0018
STA 355+14.97 TO STA 356+75.03

- ① EX HMA SURFACE - 3"
- ② EX HMA BASE COURSE - 8"
- ③ EX SUB BASE GRANULAR MATERIAL, TYPE A - 4"
- ④ EX 1' HMA SHOULDER
- ⑤ EX AGG SHOULDER
- ⑥ PR LEVELING BINDER (MACHINE METHOD) - VAR DEPTH
- ⑦ PR HOT-MIX ASPHALT SURFACE COURSE, 1-1/2"
- ⑧ PR BASE COURSE WIDENING, 10" (FOR STAGE LANES)
- ⑨ PR HOT-MIX ASPHALT SHOULDER
- ⑩ PR AGGREGATE SHOULDER TY A, 6"
- ⑪ PR EARTH SHOULDER

PLOT DATE = 04/17/2008
PLOT SCALE = 0.3827" / IN.
USER NAME = CFC

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
IL ROUTE 1 OVER CANE CREEK
FA ROUTE 782 SECTION 111BR-1
GALLATIN COUNTY

SCALE: NTS
DATE

DRAWN BY CFC
CHECKED BY MCB

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	111BR-1	GALLATIN	73	43
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

LOCATION STATION TO STATION	HMA SURF REM, BUTT JOINT	BIT (PRIME COAT)	AGG (PRIME COAT)	LVL BINDER MM N90	HMA SURF CSE SUPER, MIX C, N90 1-1/2"	
	SQ YD	GAL	TON	TON	TON	
353+95	354+85	320	21.60	0.36	0.00	20.16
354+85	354+95		2.40	0.04	0.00	2.8
354+95	355+14.97		4.79	0.08	3.09	4.47
BR. OMISSION STA 355+14.97 TO STA 356+75.03						
356+75.03	357+20		10.79	0.18	8.76	10.07
357+20	357+34		3.36	0.06	0	3.92
357+34	358+04	248.89	16.80	0.28	0.00	15.68
TOTALS		569	60	1	12	57

LOCATION	BASE COURSE WIDENING, 10"
	SQ YD
LT STA 353+95 TO LT STA 355+18.41	47.99
RT STA 353+95 TO RT STA 355+11.31	58.16
LT STA 356+78.47 TO LT STA 358+04	48.82
RT STA 356+71.37 TO RT STA 358+04	66.32
TOTAL	221

LOCATION	PAVED SHLD REM SQ YD
LT STA 353+95 TO LT STA 355+18.41	47.99
RT STA 353+95 TO RT STA 355+11.31	58.16
LT STA 356+78.47 TO LT STA 358+04	48.82
RT STA 356+71.37 TO RT STA 358+04	66.32
TOTAL	221

LOCATION	EARTH EXCAVATION (WIDENING)	EX * 0.75	EMBANKMENT	WASTE (BORROW)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD (1)	CU YD (2)	CU YD
STA 353+95 TO 355+14.46	100.5	75.4	33.23	42.17	42.17
STA TO BRIDGE OMISSION					
STA 356+75.54 TO 358+04	106.0	79.5	97.07	(17.57)	24.60
TOTAL	207	155	130	25	25

LOCATION	PERIMETER EROSION BARRIER FT
NE QUADRANT	131
SE QUADRANT	138
NW QUADRANT	134
SW QUADRANT	179
TOTALS	582

APPROX. LOCATION	WIDTH FT	LOCATION DESCRIPTION	TEMP RAMP SQ YD
353+95	24	BEGINNING OF JOB	13.33
355+14.97	24	BR. OMISSION	25.60
356+75.03	24	BR. OMISSION	28.80
358+04	24	END OF JOB	13.33
TOTAL			81

NOTES:

- 1- A 25% SHRINKAGE FACTOR APPLIED TO THE EMBANKMENT QUANTITY
- 2- NO PAYMENT WILL BE ALLOWED FOR OVERHAUL
- 3- EXCAVATION REQUIRED FOR HMA SHOULDERS, AGGREGATE SHOULDERS, AND GUARDRAIL IS MEASURED AND PAID FOR AS EARTH EXCAVATION WIDENING

LOCATION (STATION TO STATION)	AGG SHLD WIDTH FT	AGG SHLD, TY A, 6" SQ YD
LT STA 353+95 TO LT STA 355+18.41	4'	54.85
RT STA 353+95 TO RT STA 355+11.31	3'	38.77
LT STA 356+78.47 TO LT STA 358+04	4'	55.79
RT STA 356+71.37 TO RT STA 358+04	3'	44.21
TOTAL		194

LOCATION (STATION TO STATION)	HMA SHOULDER WIDTH	HMA SHOULDER DEPTH (AVG)	HMA SHOULDER, VAR. DEPTH
	FT	IN	TON
LT STA 353+95 TO LT STA 354+85	3.5	1.5	2.94
LT STA 354+85 TO LT STA 354+95	3.5	1.875	0.41
LT STA 354+95 TO LT STA 355+18.41	3.5	2.56	1.31
RT STA 353+95 TO RT STA 354+85	4.5	1.5	3.78
RT STA 354+85 TO RT STA 354+95	4.5	1.875	0.53
RT STA 354+95 TO RT STA 355+11.31	4.5	2.56	1.17
LT STA 356+78.47 TO LT STA 357+20	3.5	2.75	2.49
LT STA 357+20 TO LT STA 357+34	3.5	1.875	0.57
LT STA 357+34 TO LT STA 358+04	3.5	1.5	2.29
RT STA 356+71.37 TO RT STA 357+20	4.5	2.75	3.74
LT STA 357+20 TO LT STA 357+34	4.5	1.875	0.74
LT STA 357+34 TO LT STA 358+04	4.5	1.5	2.94
TOTAL			23

STATION TO STATION	SEEDING CLASS 2	SEEDING CLASS 2A	NITROGEN FERTILIZER	PHOSPHOROUS FERTILIZER	POTASSIUM FERTILIZER	AGRICULTURAL GROUND LIMESTONE	SEEDING CLASS 7	MULCH METHOD 2	TEMPORARY EROSION CONTROL SEEDING
	SQ FT	ACRES	LBS	LBS	LBS	TON	ACRES	ACRES	LBS
LT STA 353+91.24 TO 355+14.97	220.33	0.005	0.5	0.5	0.5	0.01	0.005	0.010	1.012
BR OMISSION STA 355+14.97 TO STA 356+75.03									
LT STA 356+75.03 TO 358+06.08	504.54	0.012	1.0	1.0	1.0	0.02	0.012	0.023	2.317
RT STA 353+83.92 TO 355+14.97	1383.06	0.032	2.9	2.9	2.9	0.06	0.032	0.064	6.350
BR OMISSION STA 355+14.97 TO STA 356+75.03									
RT STA 356+75.03 TO 358+04	2778.31	0.064	5.7	5.7	5.7	0.13	0.064	0.128	12.756
TOTALS	4886.24	0.11	10.10	10.10	10.10	0.22	0.11	0.22	22.43

PLOT DATE = 04/17/2008
 FILE NAME = \\s\8\schedule-quantities.dgn
 PLOT SCALE = 1:8000 // IN.
 USER NAME = DFC

COOMBE-BLOXDORF P.C.
 Engineers / Land Surveyors
 Springfield, Illinois
 Design Firm License No. 184-002703

NAME	DATE

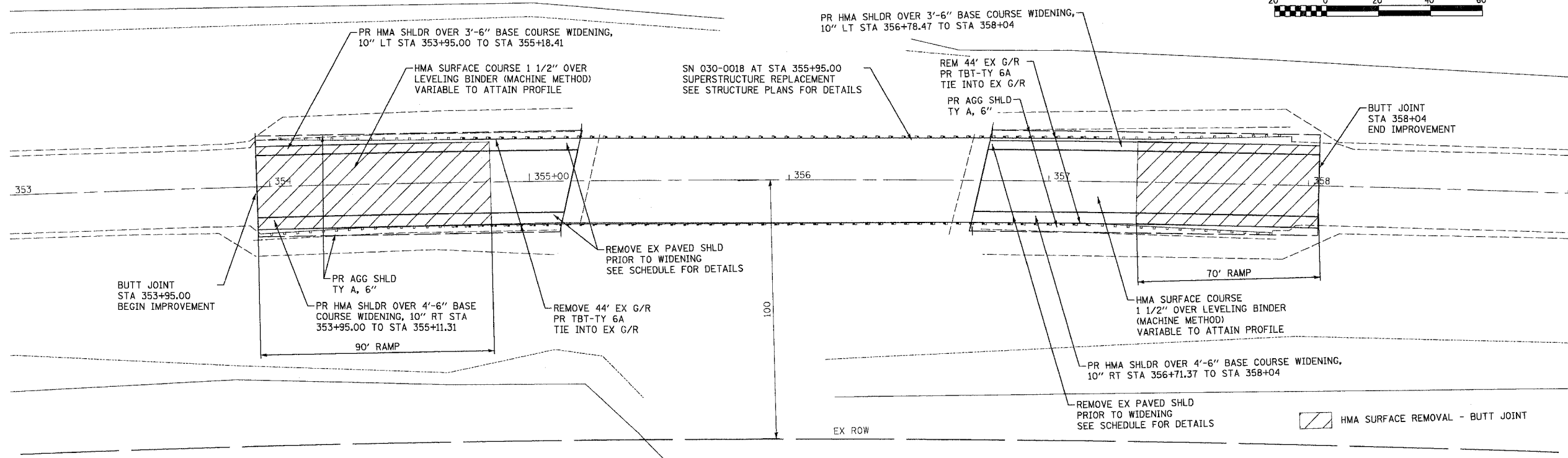
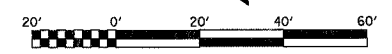
ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
 IL ROUTE 1 OVER CANE CREEK
 FAP RT 782 SECTION 111BR-1
 GALLATIN COUNTY

SCALE:
 DATE

DRAWN BY CCJ
 CHECKED BY MCB

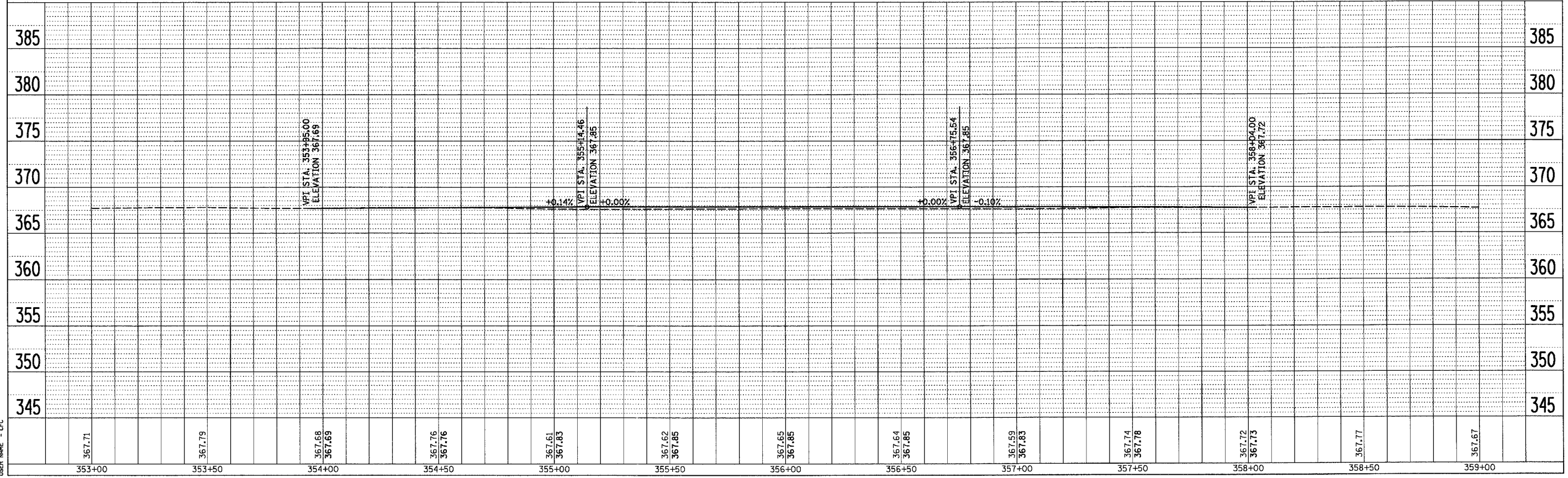
CONTRACT NO. 78034				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	111BR-1	GALLATION	73	44
STA. 353+00		TO STA. 359+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



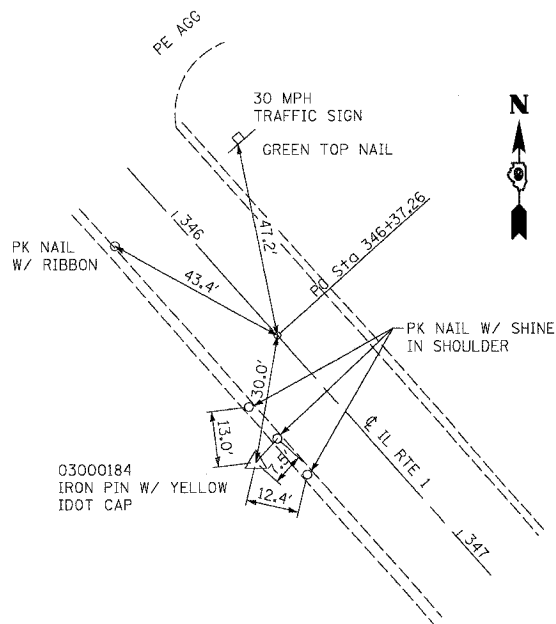
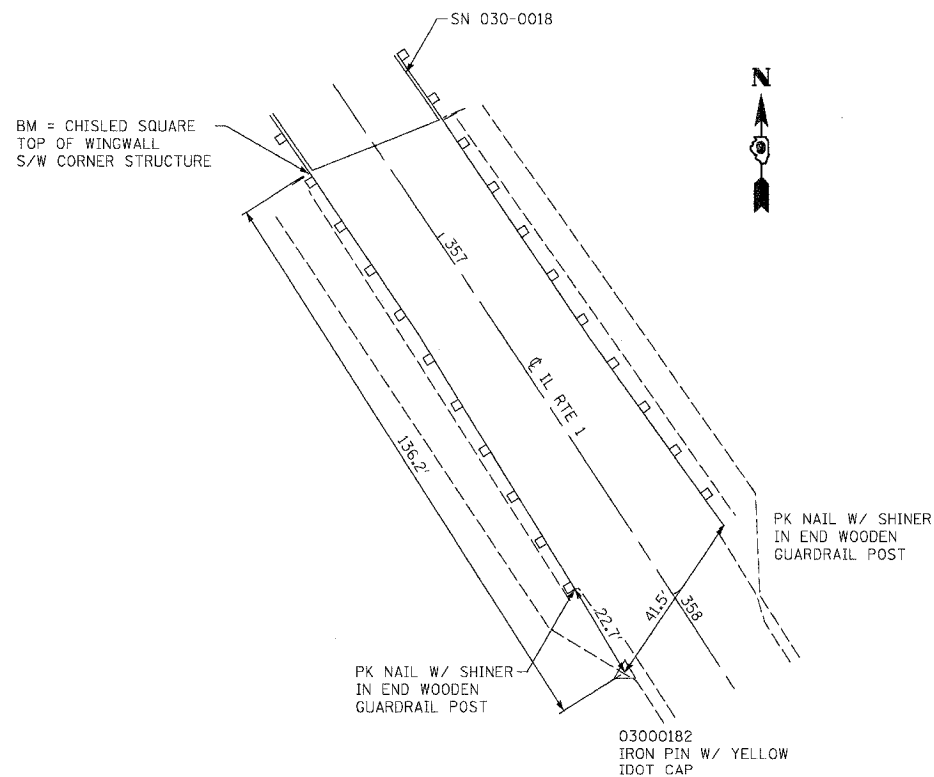
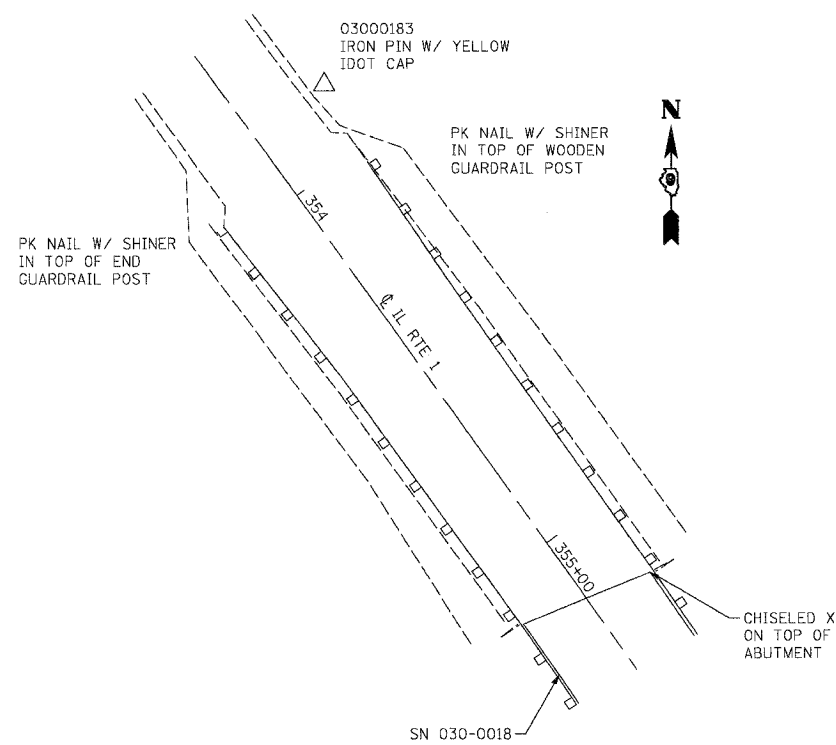
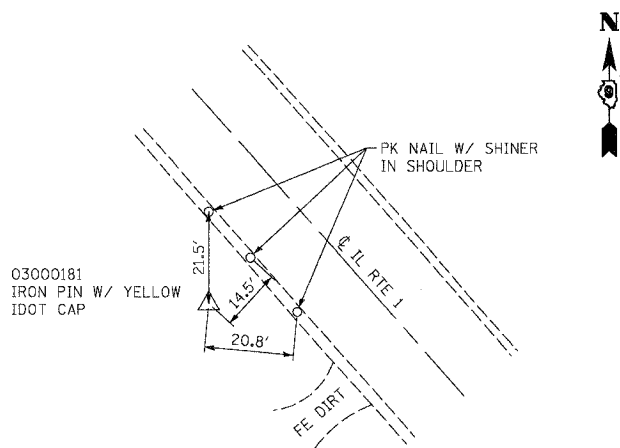
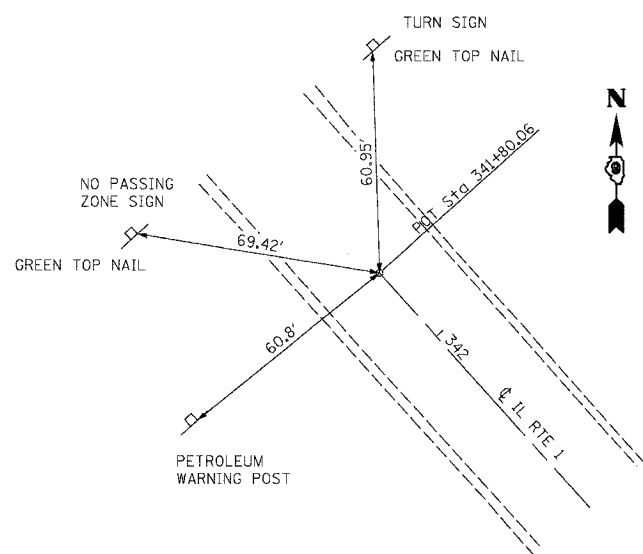
PLAN	DATE	BY
REVISIONS		
NO.		
DATE		
BY		
REVISIONS		
NO.		
DATE		
BY		

PROFILE	DATE	BY
REVISIONS		
NO.		
DATE		
BY		

PLOT DATE = 04/17/2008
 PLOT SCALE = 20/1" / IN.
 USER NAME = EFC



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	111BR-1	GALLATIN	73	45
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



BENCHMARKS

CW-17 ELEVATION 367.142 "88" ADJUSTED
10.0 MILES NORTH OF INT., WEST SIDE OF
RTE 1, CHISELED SQUARE ON S.W. WINGWALL
OF STRUCTURE NO 030-0018

CW-18 ELEVATION 362.423 "88" ADJUSTED
10.2 MILES NORTH OF INT., WEST SIDE OF RTE 1,
CHISELED SQUARE IN NORTH END OF CULVERT
HEADWALL STRUCTURE NO 030-7010

PLOT DATE = 04/17/2009
FILE NAME = h:\87\77856\07266-1\03\111br-1.dgn
PLOT SCALE = 20.4187 / IN.
USER NAME = CFC

REVISIONS	
NAME	DATE

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

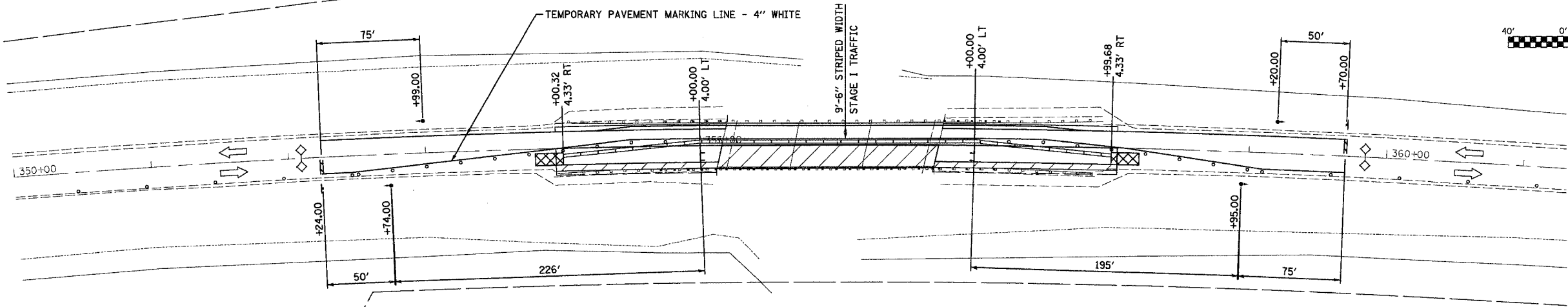
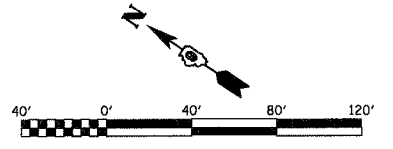
ILLINOIS DEPARTMENT OF TRANSPORTATION

BENCHMARKS AND CROSS-TIES
IL ROUTE 1 OVER CANE CREEK
FA ROUTE 782 SECTION 111BR-1
GALLATIN COUNTY

SCALE: NTS
DATE

DRAWN BY CFC
CHECKED BY MCB

CONTRACT NO. 78034				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	111BR-1	GALLATIN	73	46
STA. 350+00		TO STA. 362+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



PRIOR TO STAGE I CONSTRUCTION
 USING STANDARD 701326 CONSTRUCT BASE COURSE WIDENING, 10" AS SHOWN ON THE PLANS LT AND RT.

STAGE I SEQUENCE OF CONSTRUCTION
 PLACE STAGE I TRAFFIC CONTROL ACCORDING TO STANDARD 701321 AND AS SHOWN. ALSO PLACE TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.

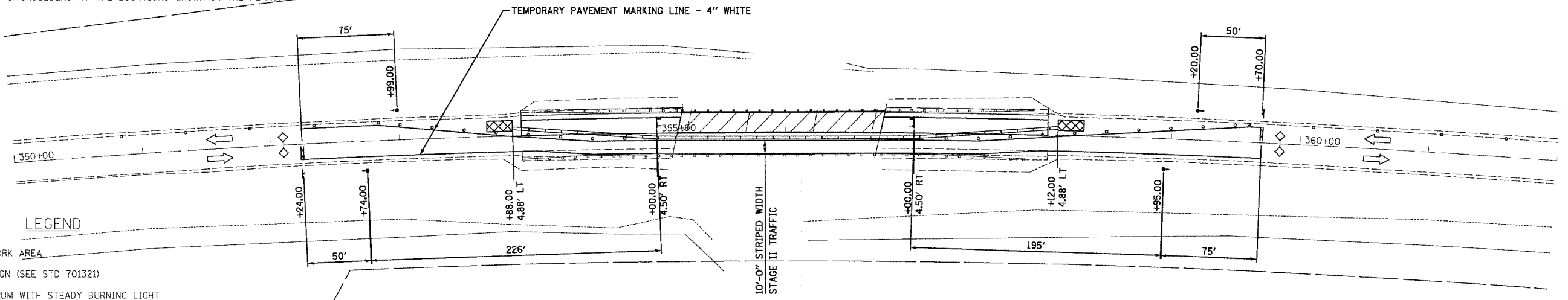
DIRECT TRAFFIC TO STAGE I ROADWAY AND COMPLETE STAGE I STRUCTURAL, GUARDRAIL, AND SHOULDER WORK.

STAGE I TRAFFIC CONTROL

STAGE II SEQUENCE OF CONSTRUCTION
 RELOCATE BARRIER WALL AND IMPACT ATTENUATORS AND PUT IN PLACE OTHER TRAFFIC CONTROL MEASURES FOR STAGE II AS REQUIRED BY 701321.

ONCE TRAFFIC IS DIRECTED TO STAGE II TRAFFIC LANES, COMPLETE STAGE II STRUCTURAL, GUARDRAIL, AND SHOULDER WORK.

REMOVE STAGE II TRAFFIC CONTROL AND COMPLETE PROFILE CORRECTION AND RESURFACING OF PAVEMENT & SHOULDERS AT THE LOCATIONS SHOWN IN THE PLANS.



LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE

DATE = 04/17/2008
 FILE NAME = N:\Projects\78034\111BR-1\TrafficControl.dgn
 PLOT SCALE = 1/4" = 40'
 USER NAME = CFC

REVISIONS	
NAME	DATE

COOMBE-BLOXDORF P.C.
 Engineers / Land Surveyors
 Springfield, Illinois
 Design Firm License No. 184-002703

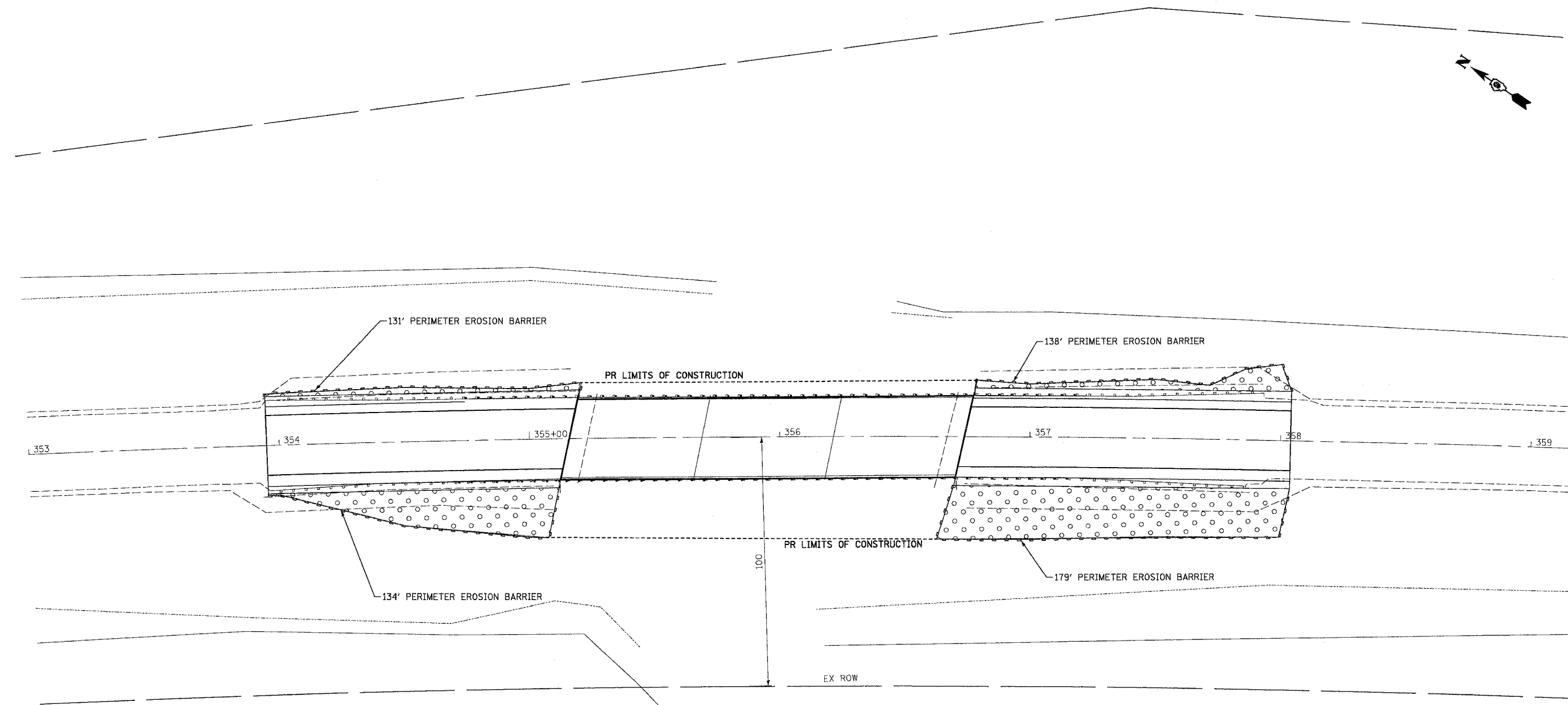
ILLINOIS DEPARTMENT OF TRANSPORTATION
 STAGE I & II TRAFFIC CONTROL PLAN
 IL ROUTE 1 OVER CANE CREEK
 FA ROUTE 782 SECTION 111BR-1
 GALLATIN COUNTY


SCALE: 1"=40'
 DATE

DRAWN BY CFC
 CHECKED BY MCB

STAGE II TRAFFIC CONTROL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	111BR-1	GALLATIN	73	48
STA. 353+00		TO STA. 359+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



 SEEDING AND MULCH AREAS

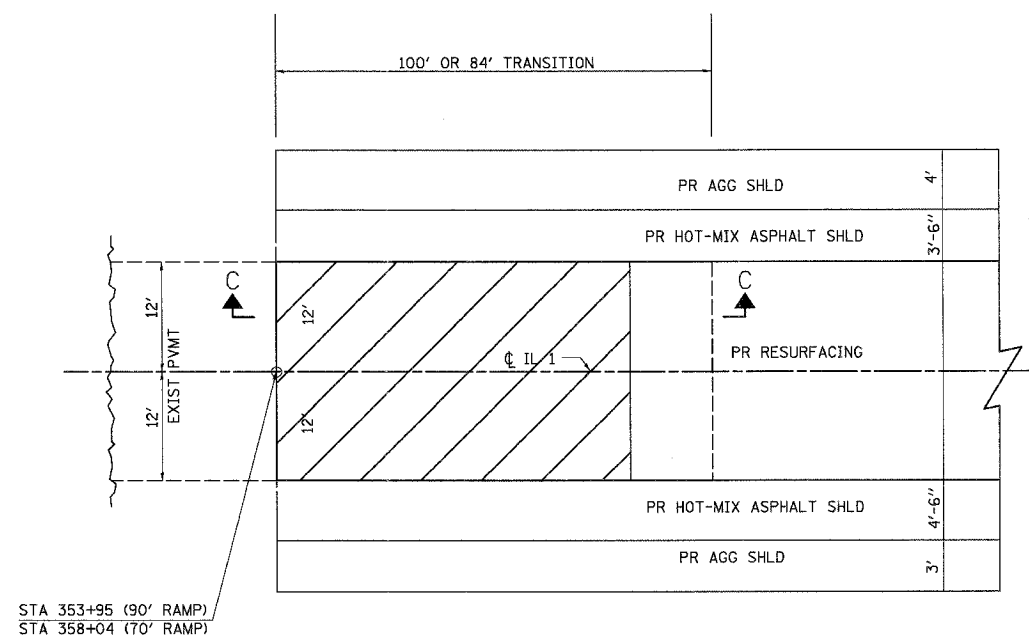
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 PLOT SCALE = 28.4187 / / IN.
 USER NAME = DFC

REVISIONS	
NAME	DATE

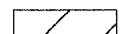
COOMBE-BLOXDORF P.C.
 Engineers / Land Surveyors
 Springfield, Illinois
 Design Firm License No. 184-002703

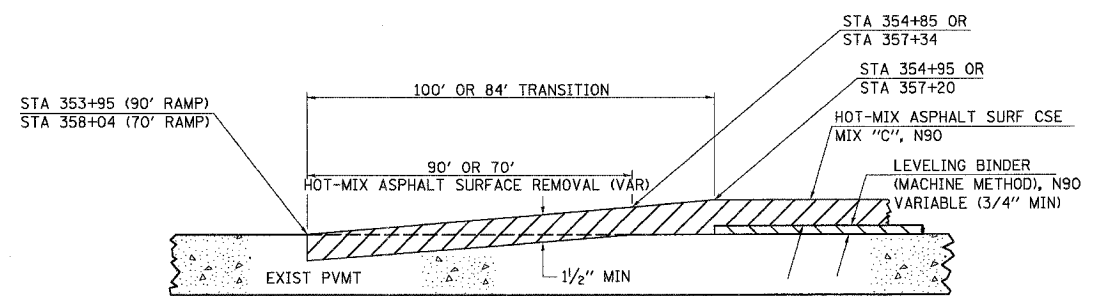
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EROSION CONTROL PLAN
 IL ROUTE 1 OVER CANE CREEK
 FA ROUTE 782 SECTION 111BR-1
 GALLATIN COUNTY
 SCALE: 1" = 20'
 DATE _____ DRAWN BY CFC
 CHECKED BY MCB

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	111BR-1	GALLATIN	73	49
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



BUTT JOINT

 HMA SURFACE REM - BUTT JOINT



SECTION C-C

PLOT DATE = 8/4/17/2018
 FILE NAME = \\s78034-1\8\misc\detail.dgn
 PLOT SCALE = 1/8" = 1'-0"
 USER NAME = CFC

COOMBE-BLOXDORF P.C.
 Engineers / Land Surveyors
 Springfield, Illinois
 Design Firm License No. 184-002703

REVISIONS	
NAME	DATE

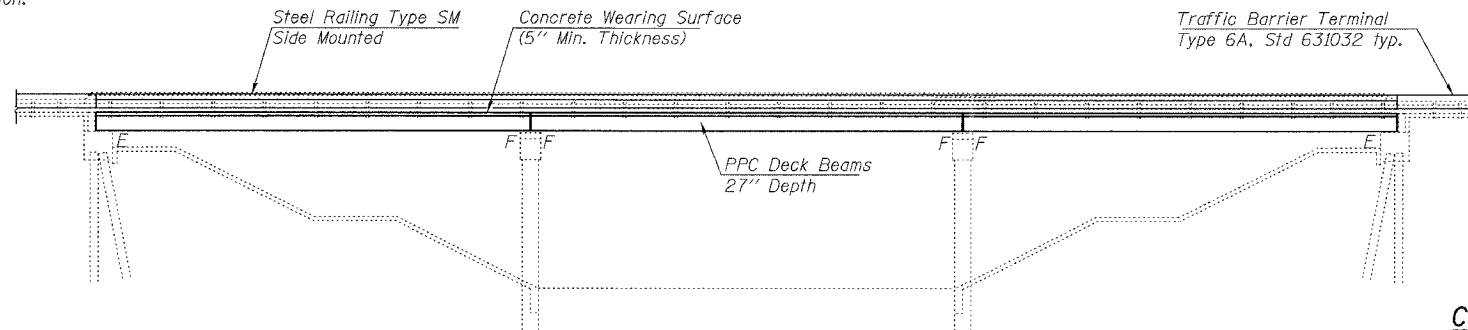
ILLINOIS DEPARTMENT OF TRANSPORTATION
 MISCELLANEOUS DETAILS
 IL ROUTE 1 OVER CANE CREEK
 FA ROUTE 782 SECTION 111BR-1
 GALLATIN COUNTY
 SCALE: _____ DRAWN BY CFC
 DATE _____ CHECKED BY MCB

Benchmark: CW-17, Chiseled square on Southwest wingwall of SN 030-0018, Elev. 367.142

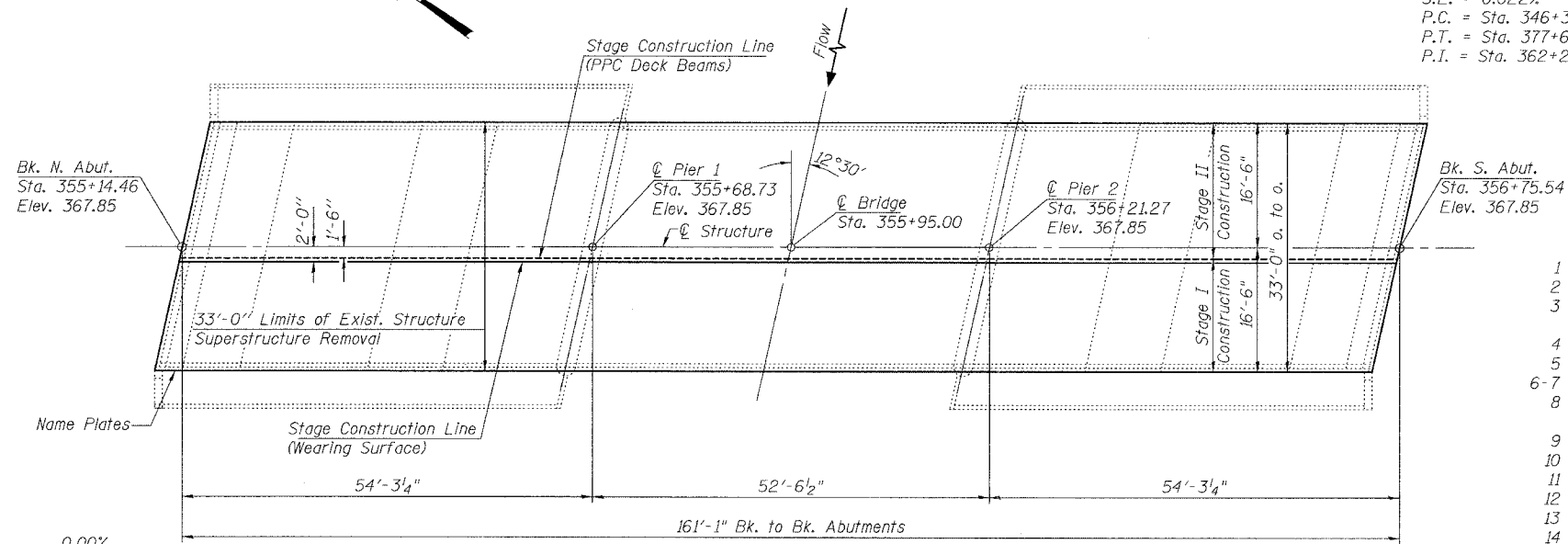
Existing Structure: SN 030-0018 built in 1973 Sta 355+95.00 as FA Rte 782
 Section 111B-1. Structure is a 3-span precast prestressed concrete deck beam superstructure 161'-1" bk to bk abutments and 33'-0" out to out deck on steel H pile supported stub abutments and solid wall concrete piers on steel H piles. 12°30' Skew LF.

Bridge superstructure shall be removed and replaced with new beams and reinforced concrete wearing surface. Stage construction shall be utilized allowing one lane of traffic during construction.

No salvage.



ELEVATION



PLAN

CURVE DATA

$\Delta = 23^\circ 25' 30''$
 $D = 0^\circ 45' 00''$
 $T = 1583.79'$
 $L = 3123.33'$
 $E = 162.45'$
 $R = 7639.44'$
 $S.E. = 0.022\%$
 $P.C. = \text{Sta. } 346+37.26$
 $P.T. = \text{Sta. } 377+60.59$
 $P.I. = \text{Sta. } 362+21.05$

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

Robert E. Anderson
 ENGINEER OF BRIDGES AND STRUCTURES

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 Staged Construction
- 3 Temporary Concrete Barrier for Staged Construction
- 4 Superstructure
- 5 Preformed Joint Strip Seal
- 6-7 Beam Details
- 8 Steel Railing, Type SM with Concrete Wearing Surface
- 9 Abutment Concrete Removal
- 10 Abutment Details
- 11 Pier Details
- 12 Abutment Repair Details
- 13 Pier Repair Details
- 14 Bar Splicer Assembly Details

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Exist. Superstructures No. 2	Each	1		1
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	5210		5210
Reinforcement Bars, Epoxy Coated	Pound	7300	870	8170
Steel Railing, Type SM	Foot	316		316
Name Plate	Each	1		1
Bar Splicers	Each	160	12	172
Concrete Wearing Surface, 5"	Sq. Yd.	580		580
Protective Coat	Sq. Yd.	580		580
Bridge Deck Grooving	Sq. Yd.	580		580
Preformed Joint Strip Seal	Foot	68		68
Structural Repair of Concrete (Depth Equal to or Less Than 5')	Sq. Ft.		56	56
Epoxy Crack Injection	Foot	30		30
Asbestos Bearing Pad Removal	Each		44	44
Concrete Structures	Cu. Yd.		5.7	5.7
Concrete Removal	Cu. Yd.		5.6	5.6
Concrete Sealer	Sq. Ft.		455	455



PROFILE GRADE

STATION 355+95.00
 RE-BUILT 20__ BY
 STATE OF ILLINOIS
 F.A. RTE. 782 SEC. 111B-1
 LOADING HS20
 STRUCTURE NO. 030-0018

NAME PLATE

See Std. 515001

The existing name plate shall be cleaned and relocated next to the new name plate. Cost included with Name Plates.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD

DESIGN STRESSES

FIELD UNITS - EXISTING

$f_c = 1,400$ psi (Substructure)
 $f_s = 20,000$ psi (Reinforcement)

DESIGN STRESSES

FIELD UNITS - PROPOSED

$f'_c = 3,500$ psi (Substructure)
 $f'_c = 5,000$ psi (Concrete wearing surface)
 $f_y = 60,000$ psi (Reinforcement)

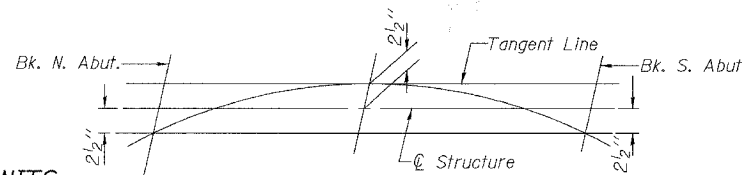
PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_t = 5,000$ psi
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ Low Relaxation Strands)
 $f_{sl} = 201,960$ psi ($\frac{1}{2}$ " ϕ Low Relaxation Strands)

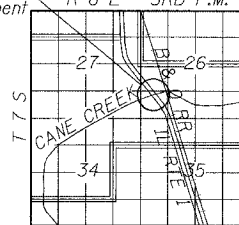
LOADING HL 93

No allowance for future wearing surface.

OFFSET SKETCH



Proposed Improvement R 8 E 3RD P.M.



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

F.A. RT. 782 SECTION 111B-1
 GALLATIN COUNTY
 STATION 355+95.00
 STRUCTURE NO. 030-0018

COOMBE-BLOXDORF P.C.
 Engineers / Land Surveyors
 Springfield, Illinois
 Design Firm License No. 184-002703

PROJECT NO. 07056-4
 DATE 4/17/08
 DRAWN BY TFG
 CHECKED BY CB/BD/MCB

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FA 782	111B-1	GALLATIN	73	50

14 SHEETS

Contract #78034

GENERAL NOTES

Concrete Removal and Structural Repair of Concrete shall occur prior to placement of the new deck beams.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

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.

No drilling shall be permitted into the existing precast deck beams to be used for Stage I traffic lane or the proposed deck beams.

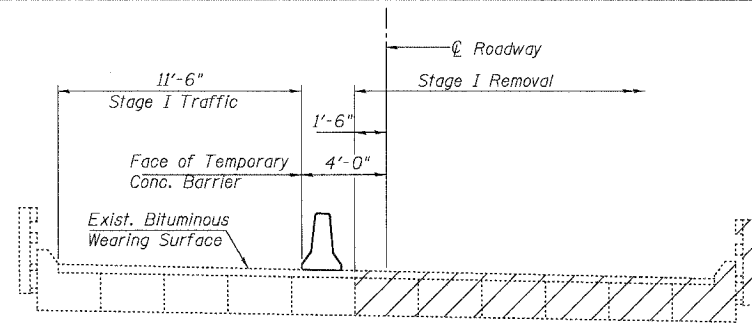
If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the new deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Precast Prestressed Concrete Deck Beams (27" Depth).

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of Removal of Existing Superstructures.

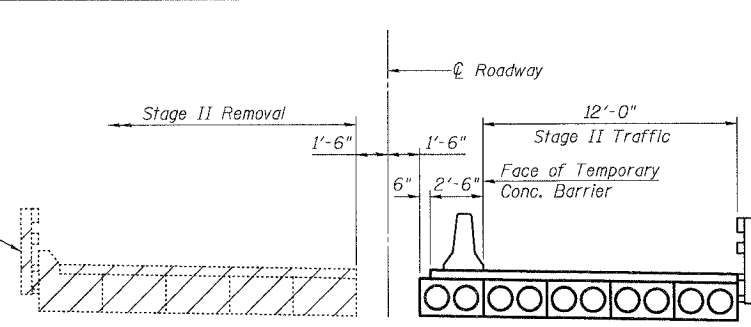
Reinforcement bars designated (E) shall be epoxy coated. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60 (IL Modified). See Special Provisions.

No in-stream work will be allowed on this project. The minimum thickness of concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

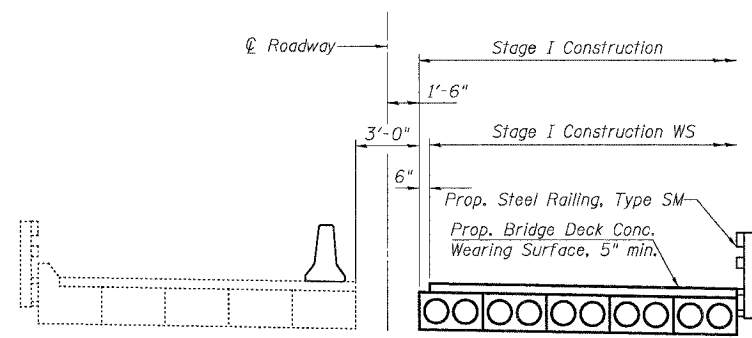
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 PLOT SCALE = 1"=100'-0"
 PLOT NAME = EFC



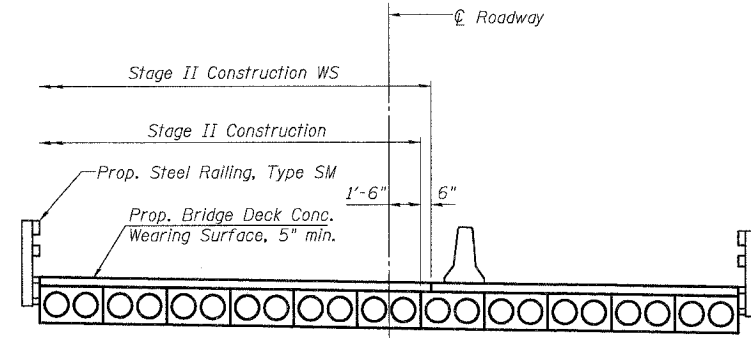
STAGE I REMOVAL



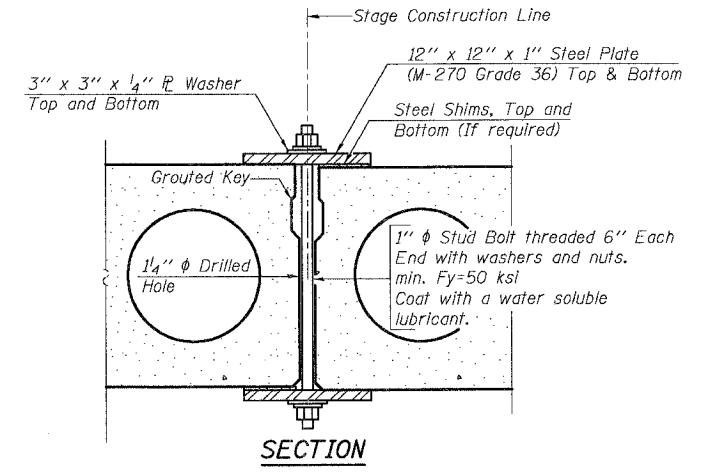
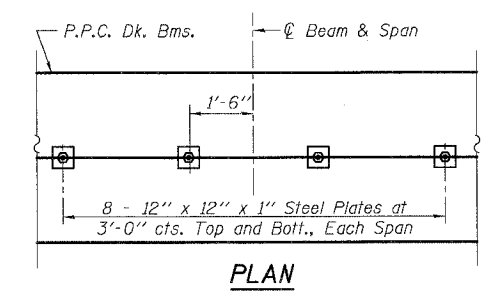
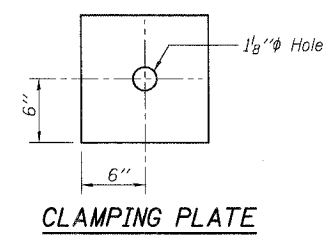
STAGE II REMOVAL



STAGE I CONSTRUCTION

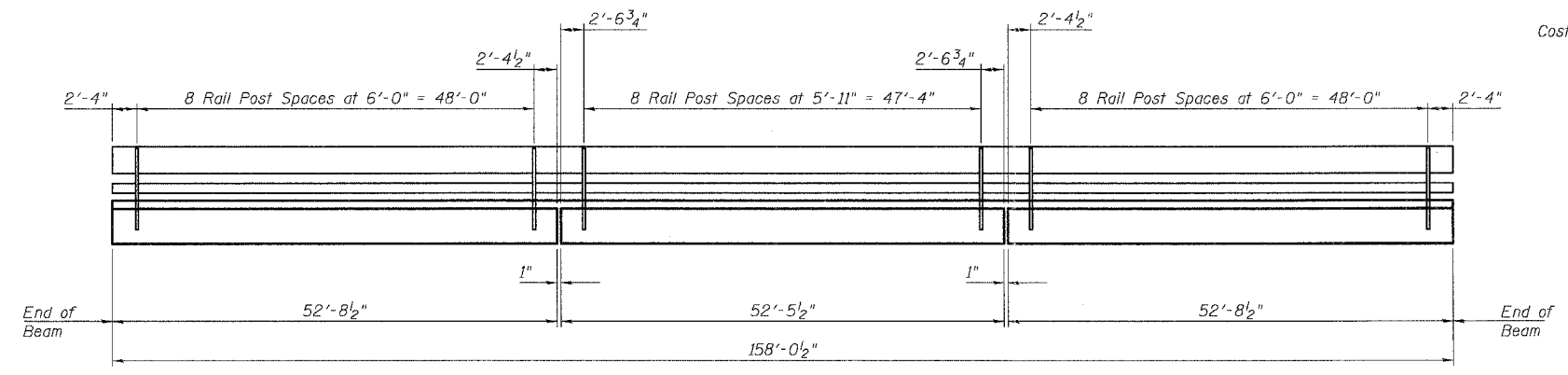


STAGE II CONSTRUCTION



SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.
Cost of clamping device included in the cost of Precast Prestressed Concrete Deck Beams.

Notes:
Hatched areas indicate Removal of Existing Superstructures.
See roadway plans for quantity of Temporary Concrete Barrier.
All Stage Cross Sections viewed looking Southeast.



STAGED CONSTRUCTION
F.A. RT. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

PROJECT NO. 07056-4
DATE 4/17/08
DRAWN BY TFG
CHECKED BY CB/BD/MCB

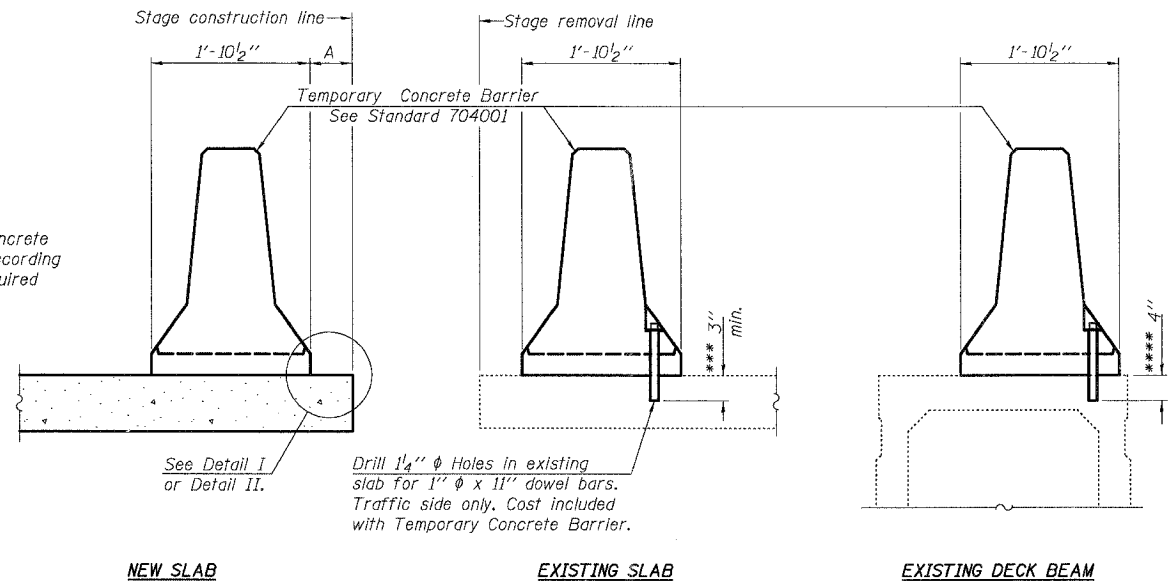
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PLOT SCALE = 1/4" = 1'-0"
USER NAME = CFC

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 782	111BR-1	GALLATIN	73	52
FED. ROAD DIST. NO. 7	DISTRICT	FED. AID PROJECT		

Contract #78034

SHEET NO. 3
14 SHEETS

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



SECTIONS THRU SLAB OR DECK BEAM

NOTES

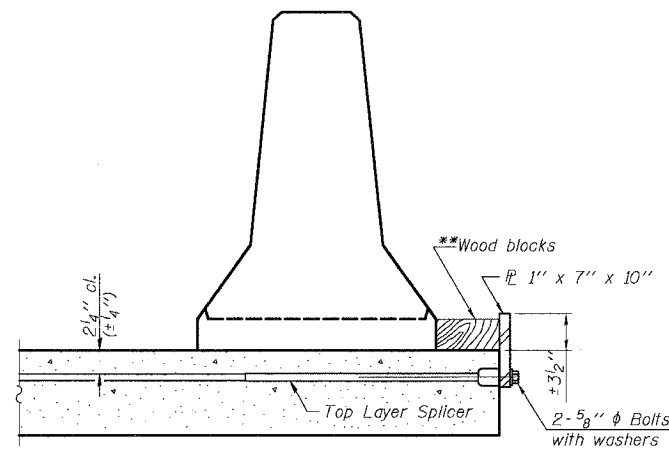
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

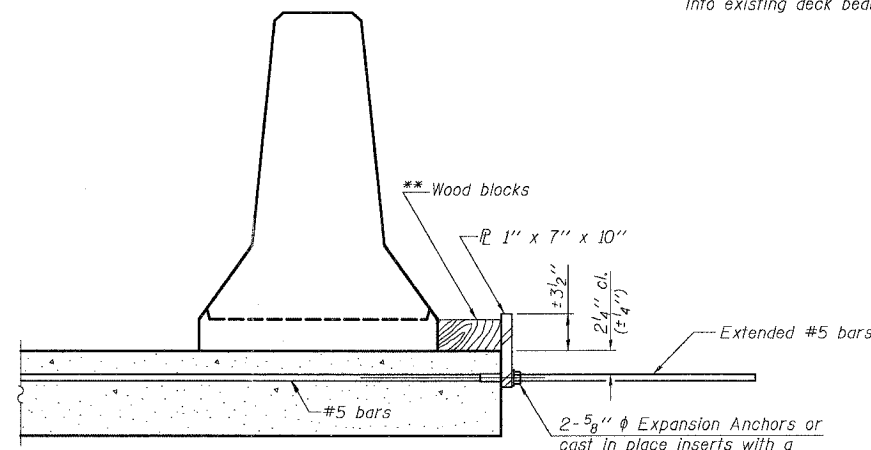
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

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

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

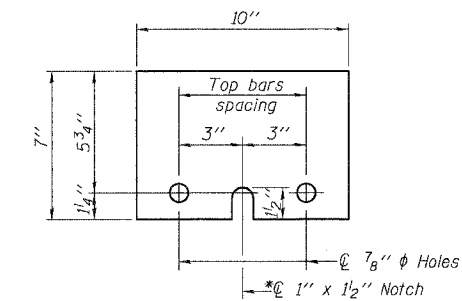


DETAIL I



DETAIL II

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



STEEL RETAINER \bar{L} 1" x 7" x 10"

* Required only with Detail II

**TEMPORARY CONCRETE BARRIER
FOR STAGED CONSTRUCTION
F.A. RT. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018**

PROJECT NO.	07056-4
DATE	4/17/08
DRAWN BY	TFG
CHECKED BY	GB/BD/MCB

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

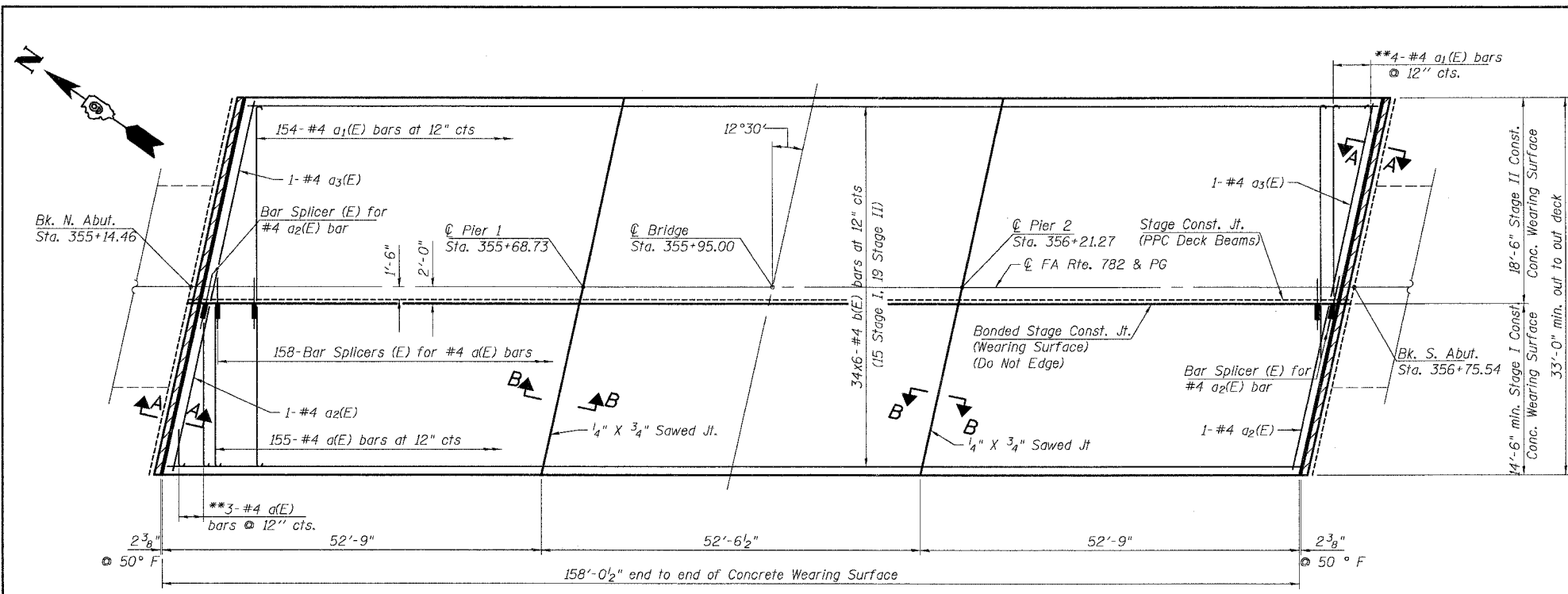
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USER NAME = CFC

R-27 9-3-07

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 782	11BR-1	GALLATIN	73	53
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

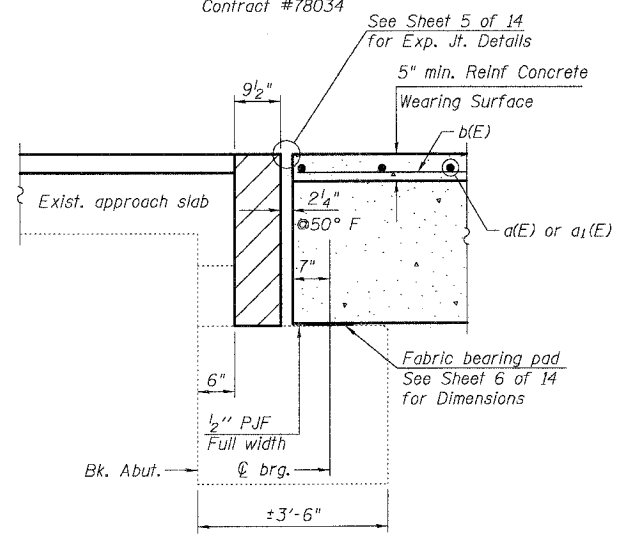
SHEET NO. 4
14 SHEETS

Contract #78034



PLAN
(Concrete Wearing Surface)

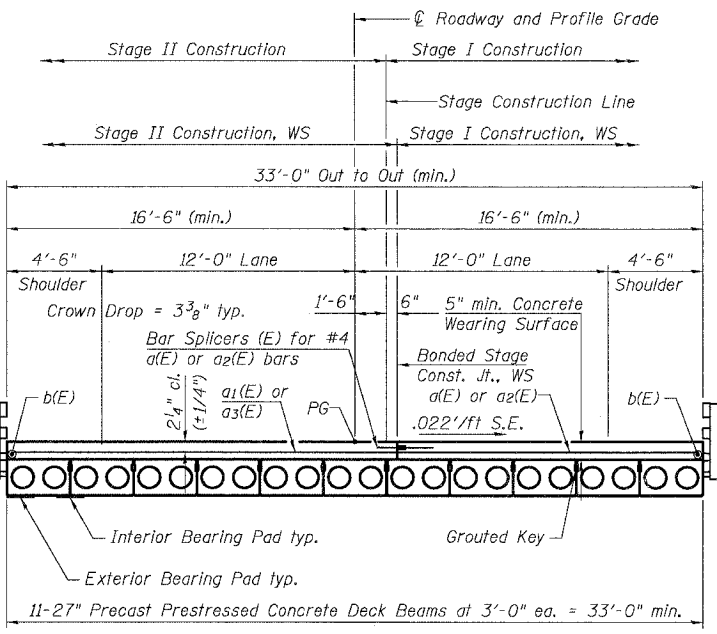
** Cut a(E) and a1(E) bars to fit skew. Use remainder at other end.



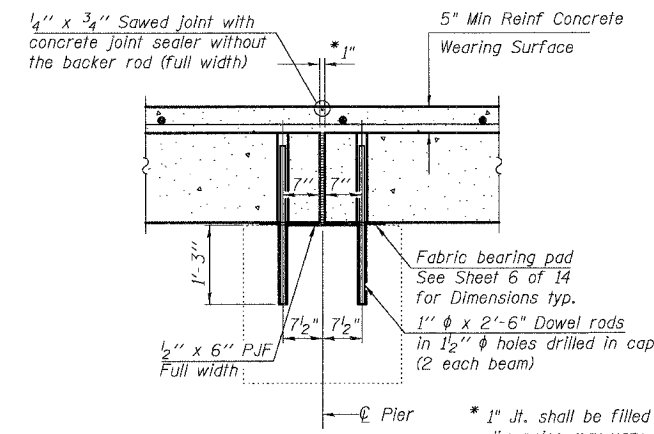
SECTION A-A
(Dim at right angles)

NOTES

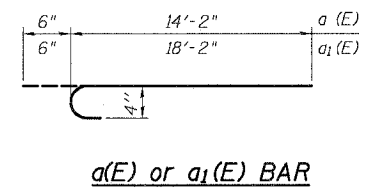
For details of hatched area see Sheet 10 of 14.
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
The 5" wearing surface shall be poured after the beams are erected and the joints have been grouted.
See Sheet 2 & 8 of 14 for rail details.
See Sheet 14 of 14 for bar splicer details.



CROSS SECTION
(Looking Southeast)



SECTION B-B
(Dim at right angles)



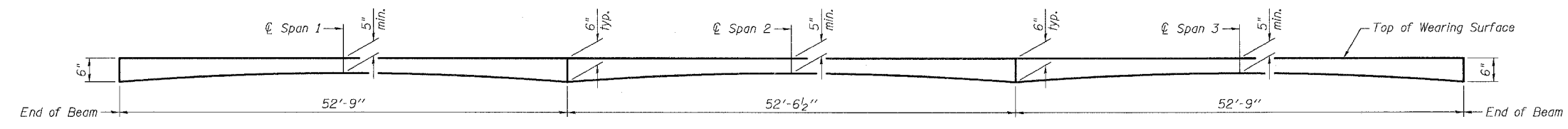
MIN LAP LENGTH
#4 Bars = 1'-4"

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	158	#4	14'-8"	U
a1(E)	158	#4	18'-8"	U
a2(E)	2	#4	14'-6"	—
a3(E)	2	#4	18'-7"	—
b(E)	204	#4	27'-5"	—
Concrete Wearing Surface, 5"		Sq. Yds.	580	
Reinforcement Bars, Epoxy Coated		Lbs.	7300	
Bar Splicers		Each	160	

Bars indicated thus 34x6-#4 etc. indicates 34 lines of bars with 6 lengths per line.

SUPERSTRUCTURE
F.A. RT. 782 SECTION 11BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018



REINFORCED CONCRETE WEARING SURFACE PROFILE

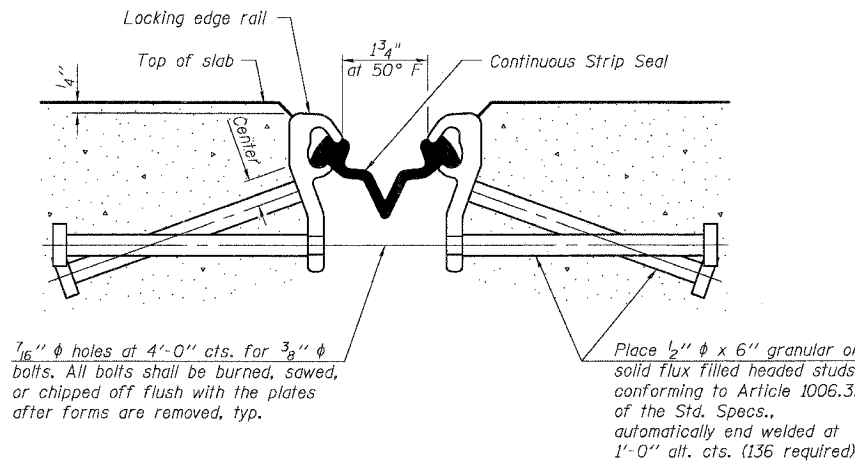
COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

PROJECT NO. 07056-4
DATE 4/17/08
DRAWN BY TFG
CHECKED BY GB/BD/MCB

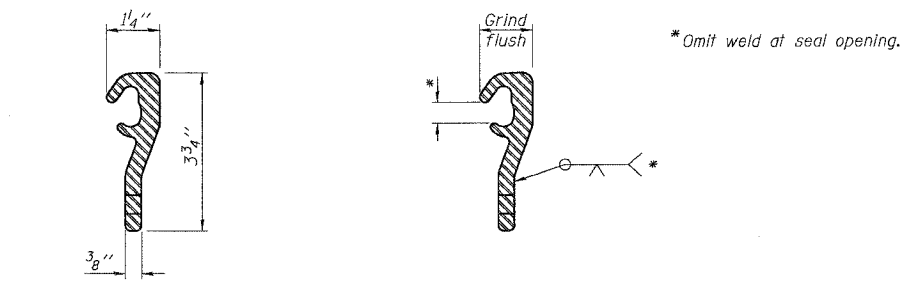
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FILE NAME = 07056-4br11br-1.dgn
LOT SCALE = 1" = 30'
USER NAME = TFG

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FA 782	11BR-1	GALLATIN	73	54	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78034



**SECTION THRU STRIP SEAL JOINT
FOR OVERLAY OVER DECK BEAMS**



LOCKING EDGE RAIL LOCKING EDGE RAIL SPLICE

NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
 The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
 The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
 The manufacturer's recommended installation methods shall be followed. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Preformed Joint Strip Seal	Foot	68

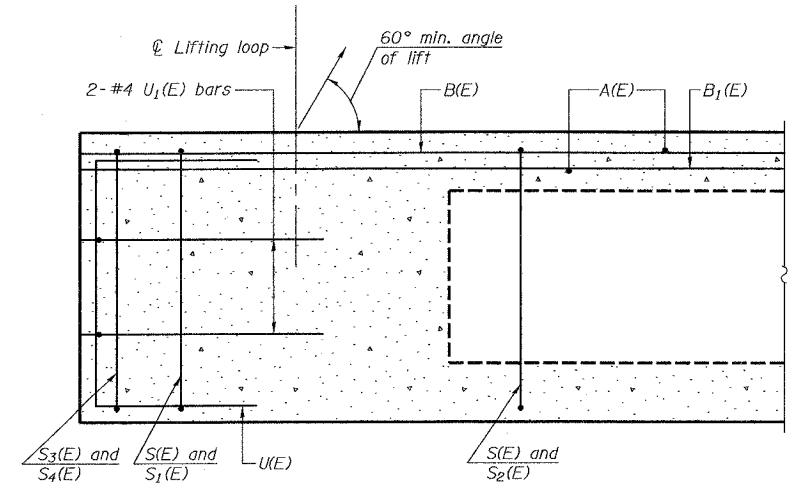
**PREFORMED JOINT STRIP SEAL
F.A. RT. 782 SECTION 11BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018**

COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	PROJECT NO.	07056-4
	DATE	4/17/08
	DRAWN BY	TFG
	CHECKED BY	GB/BD/MCB

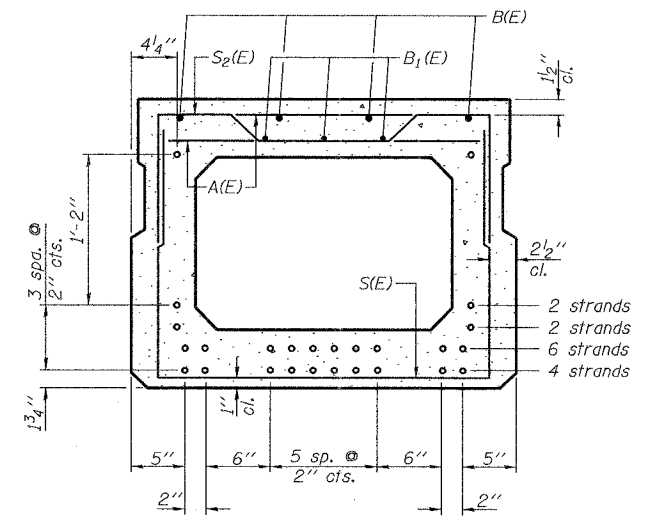
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FA 782	111BR-1	GALLATIN	73	55	14 SHEETS
FED. ROAD DIST. NO. 7		BILLINGS	FED. AID PROJECT-		

Contract #78034

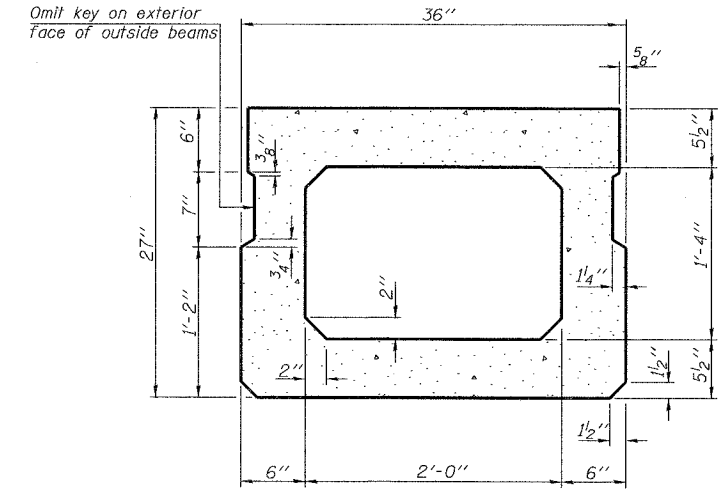


SECTION C-C



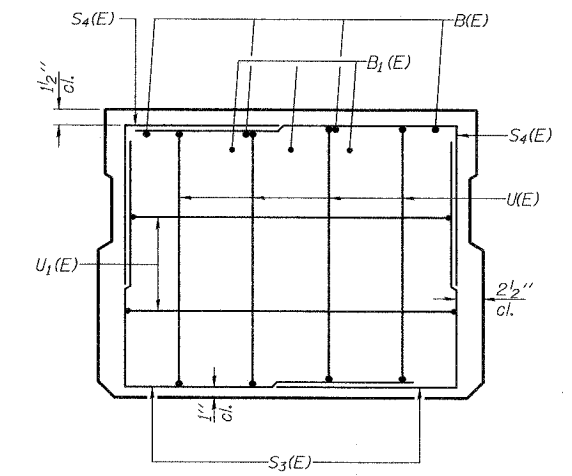
SECTION A-A

(Showing reinforcement and permissible strand locations)
Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

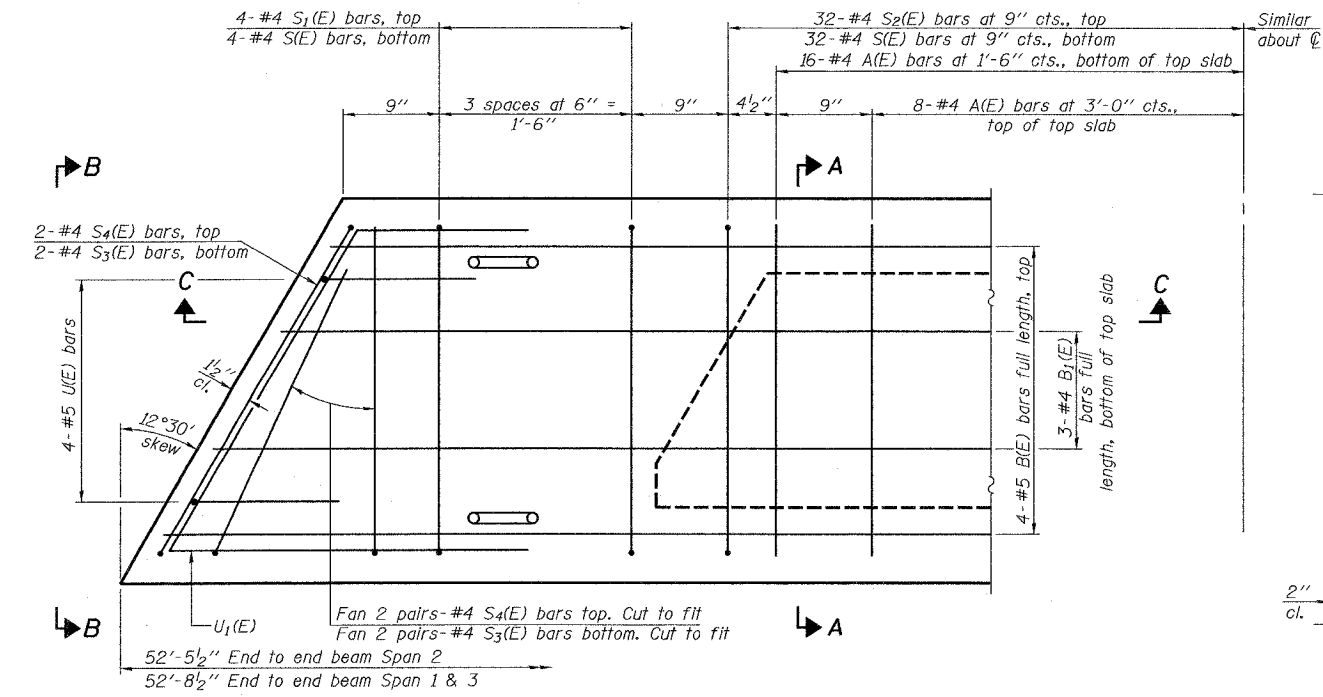


SECTION A-A

(Showing dimensions)

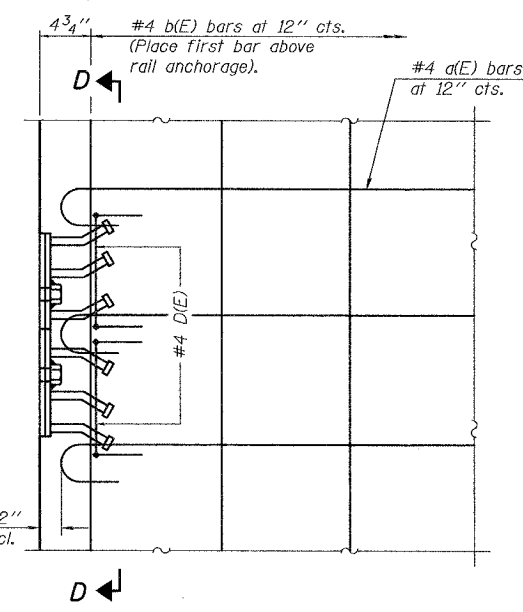


VIEW B-B



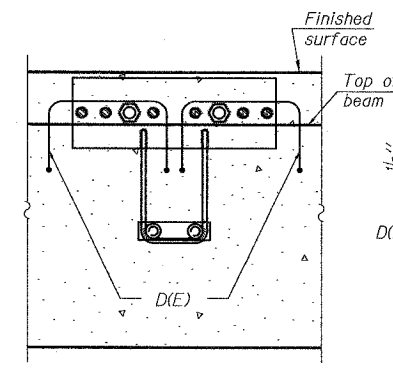
PLAN VIEW

Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



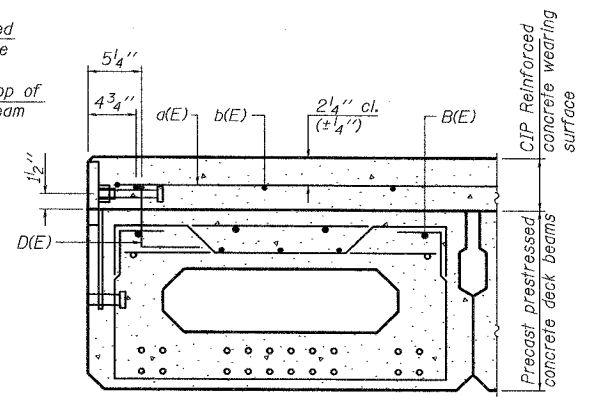
PLAN

Notes:
Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam.



SECTION D-D

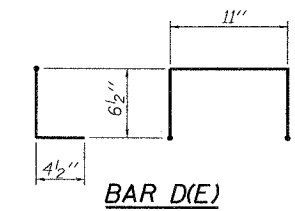
RAILING ANCHOR DEVICE DETAIL



CROSS SECTION

Showing Rail Anchor Detail

Note: See Sheet 7 of 14 for additional details and Bill of Material.
See Sheet 2 of 14 for rail post spacing and Sheet 8 of 14 for rail details.
See Sheet 4 of 14 for cross section.



BAR D(E)

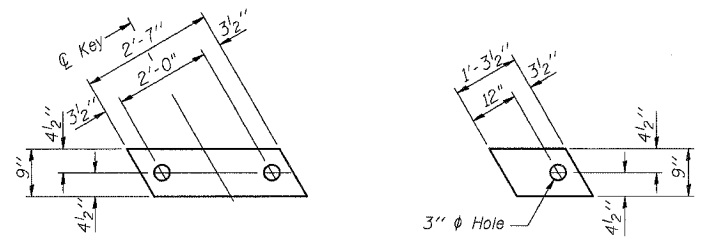
BEAM DETAILS
F.A. RT. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

PROJECT NO.	07056-4
DATE	4/30/08
DRAWN BY	TFG
CHECKED BY	GB/BD/MCB

PLOT DATE = 04/30/2008
FILE NAME = \\07056-48\vr\p1\cse\811-06.dgn
PLOT SCALE = 0:10000, 1" = 10'
USER NAME = TFC

PD-2736-L 8-29-07

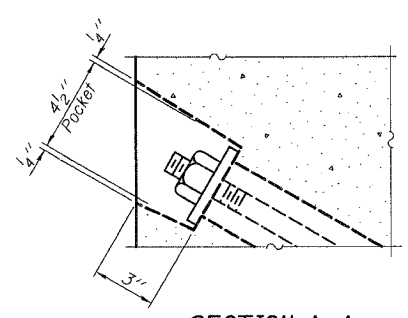
Contract #78034



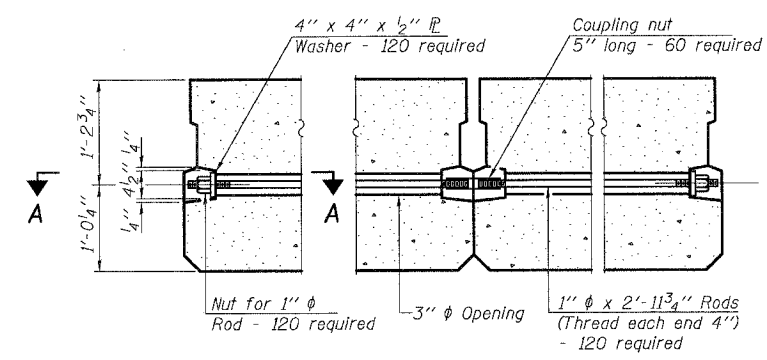
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

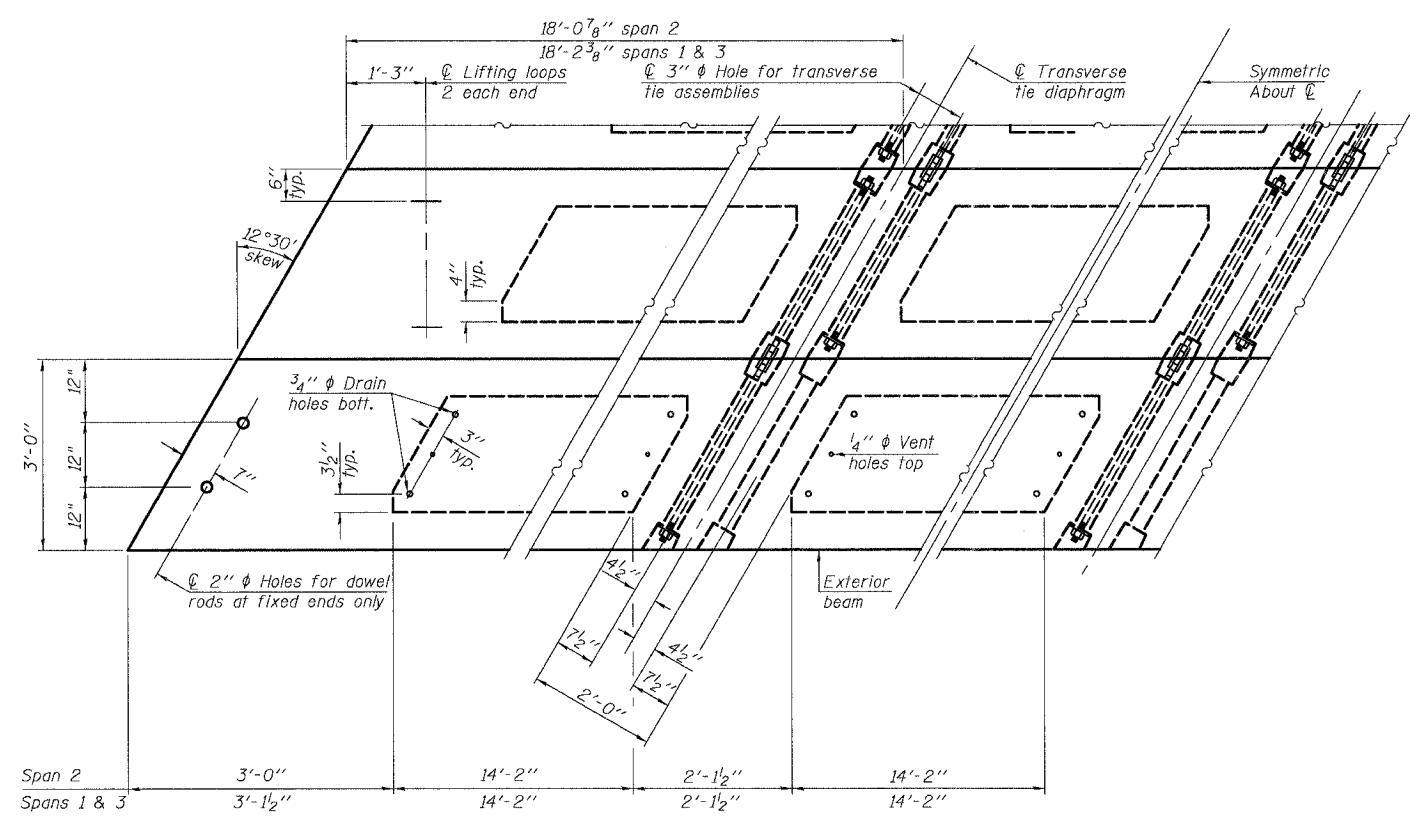
FIXED
Omit holes when using expansion bearings.



SECTION A-A

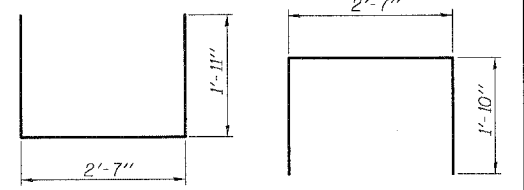


TYPICAL TRANSVERSE TIE ASSEMBLY

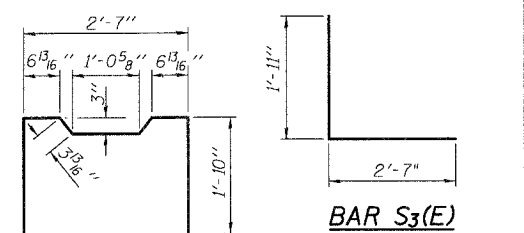


PLAN VIEW

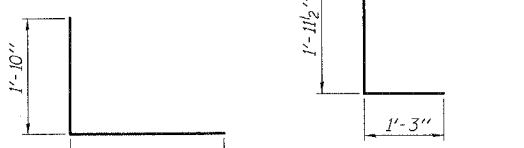
Connect beams in pairs with the transverse tie configuration shown.



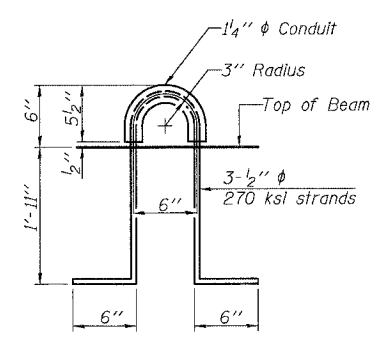
BAR S(E) **BAR S₁(E)**



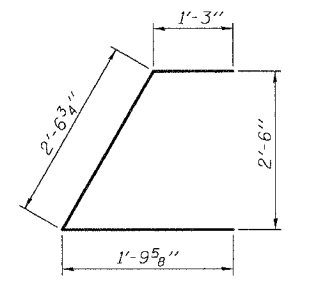
BAR S₂(E) **BAR S₃(E)**



BAR S₄(E) **BAR U(E)**



LIFTING LOOP DETAIL



BAR U₁(E)

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	5210
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BEAM DETAILS
F.A. RT. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

PROJECT NO. 07056-4
DATE 4/17/08
DRAWN BY TFG
CHECKED BY GB/BD/MCB

NOTES

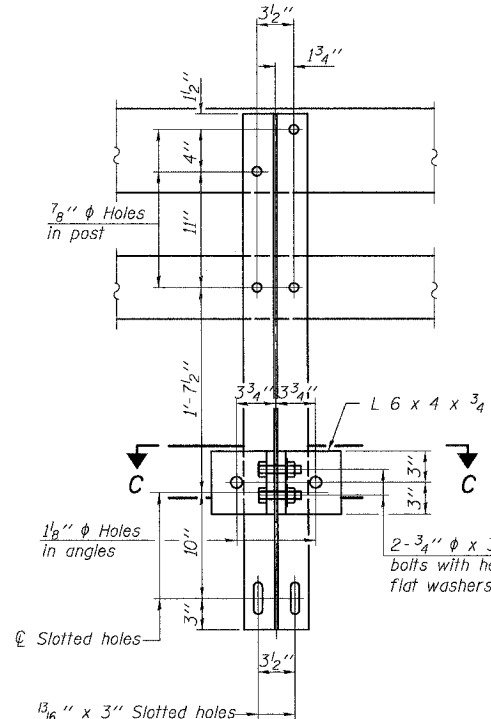
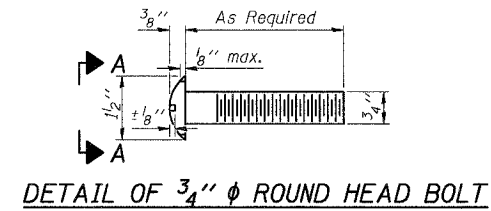
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706 (IL MOD), Grade 60. (See Special Provisions) Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

PLT DATE = 04/17/2008
PLT SCALE = 1/8" = 1'-0"
PLT USER = CALDERA, T. J.
USER NAME = DEC.

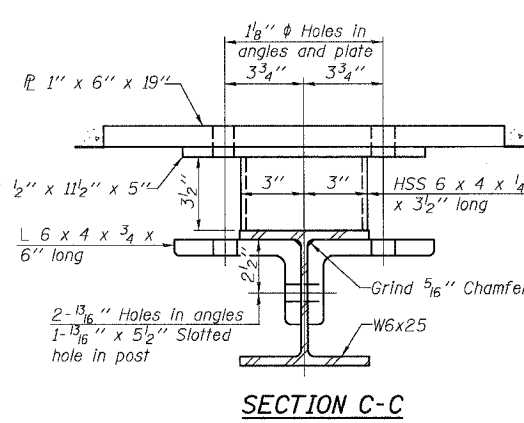
PD-2736-LD 8-29-07

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 8 14 SHEETS
FA 782	111BR-1	GALLATIN	73	57	
FED. ROAD DIST. NO. 7					

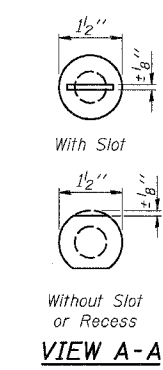
Contract #78034



SECTION B-B

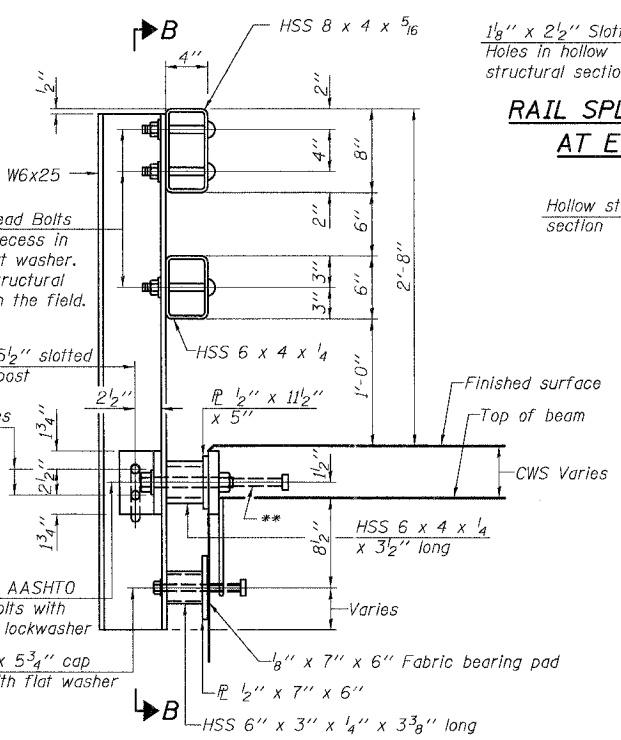


SECTION C-C

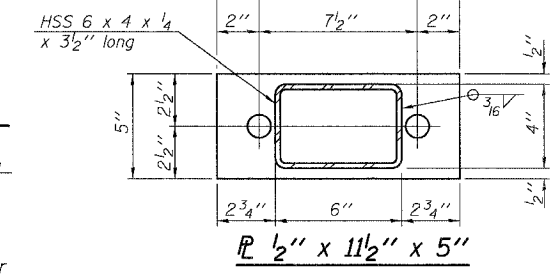


VIEW A-A

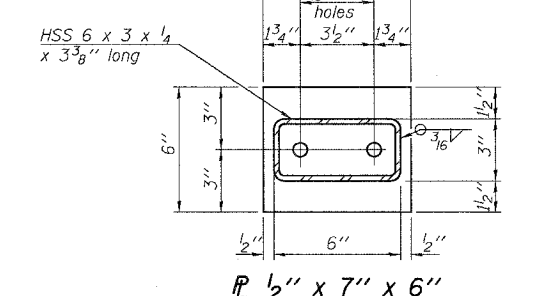
4-3/4" x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" holes in hollow structural section may be drilled in the field.



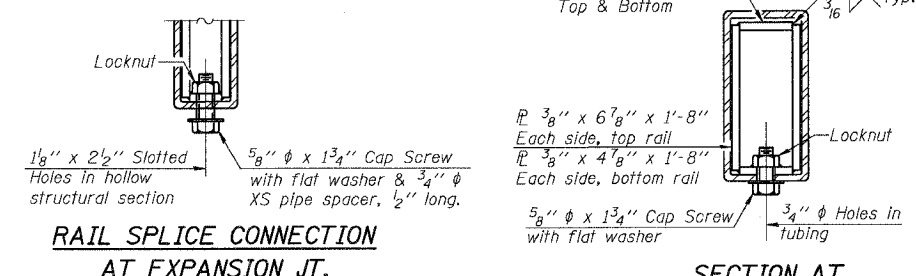
SECTION AT RAIL POST



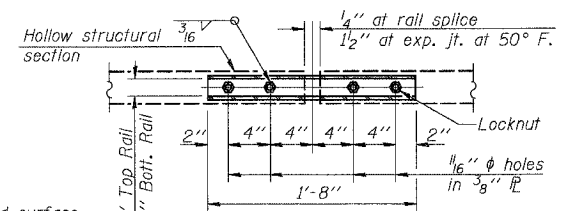
ANCHOR DEVICE



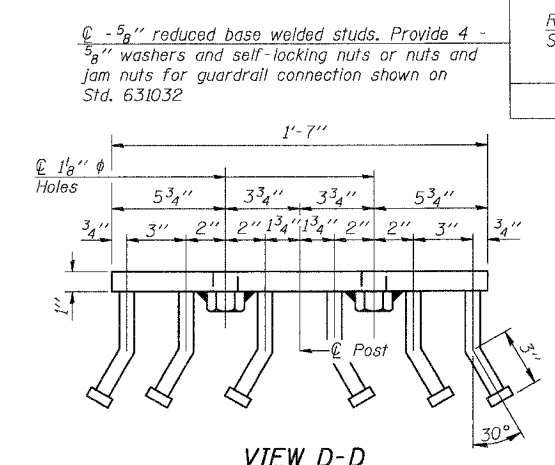
ANCHOR DEVICE



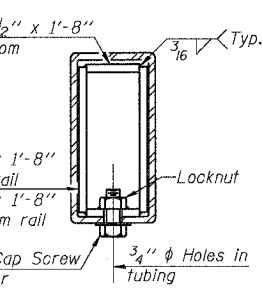
RAIL SPLICE CONNECTION AT EXPANSION JT.



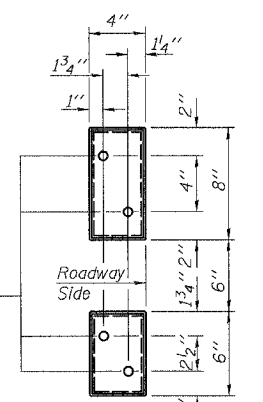
PLAN-BOTT. SPLICE P TYPICAL



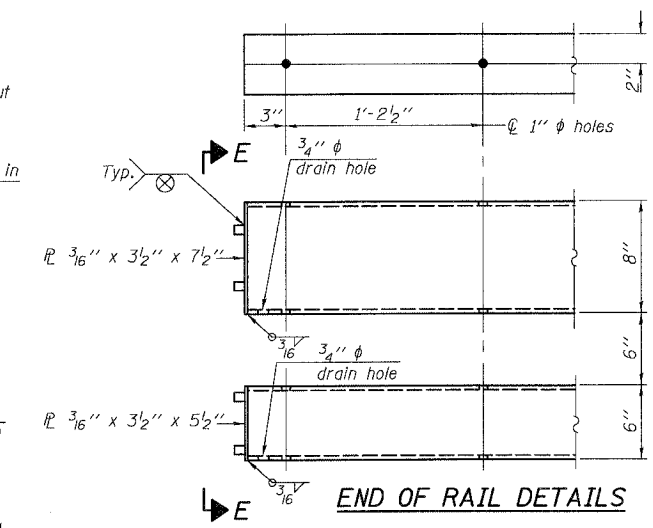
VIEW D-D



SECTION AT RAIL SPLICE



VIEW E-E



END OF RAIL DETAILS

Notes:
 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 Railing, Type SM.
 Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 **The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	316

STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE
 F.A. RT. 782 SECTION 111BR-1
 GALLATIN COUNTY
 STATION 355+95.00
 STRUCTURE NO. 030-0018

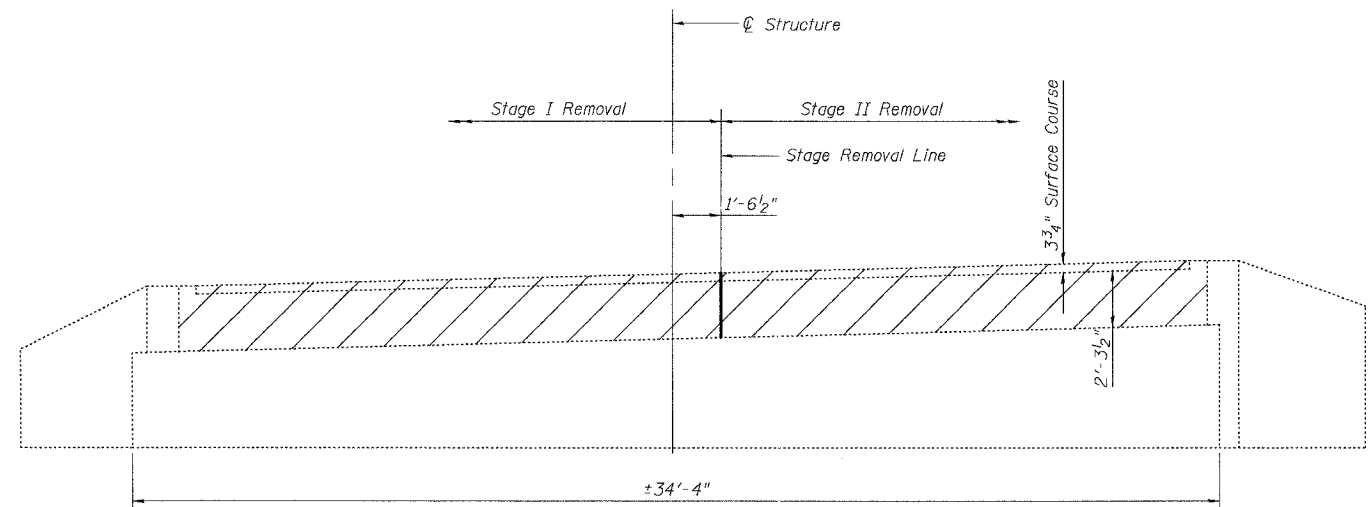
COOMBE-BLOXDORF P.C.
 Engineers / Land Surveyors
 Springfield, Illinois
 Design Firm License No. 184-002703

PLOT DATE = 04/17/2008
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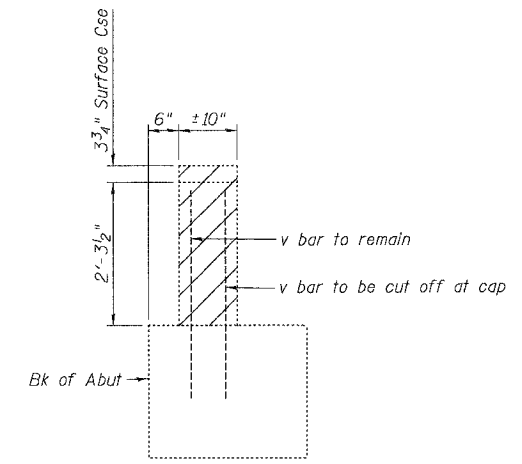
R-34CWS 9-3-07

(6'-3" Maximum Post Spacing) (5" minimum to 7/8" maximum CWS thickness)

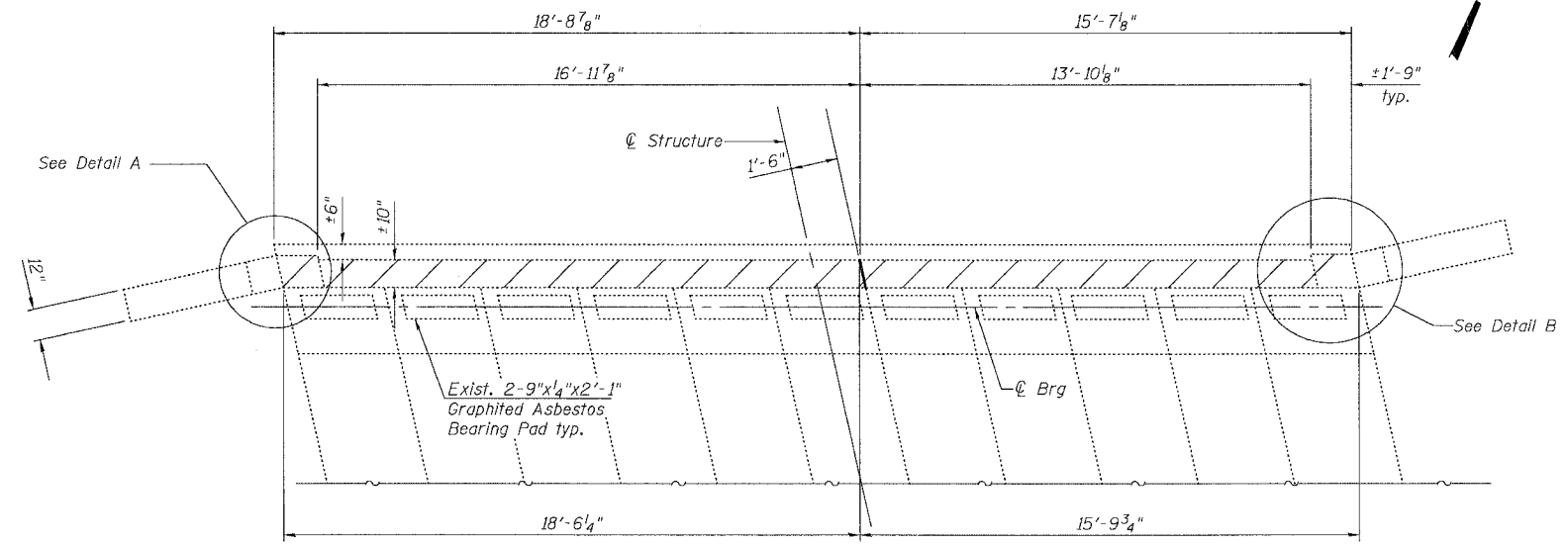
*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.



ELEVATION
(North Abutment Shown, South Abutment Opposite)



SECTION THRU ABUTMENT
(Dim at right angles)

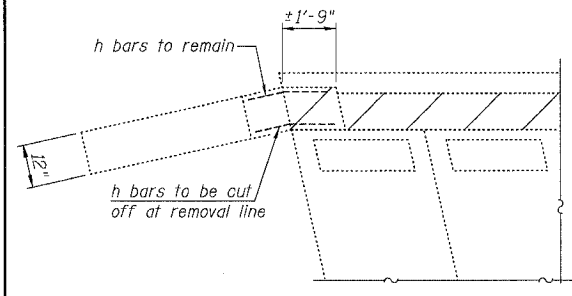


TOP VIEW
(North Abutment Shown, South Abutment Opposite)

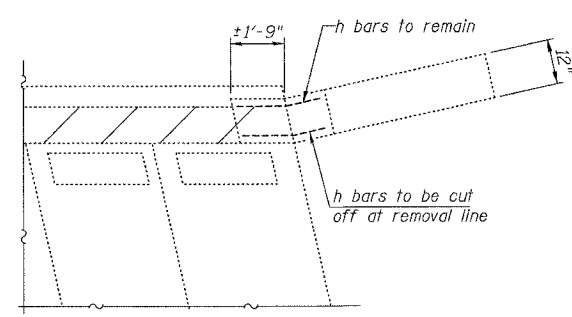
BILL OF MATERIAL 2-ABUTMENTS

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	5.6
Asbestos Bearing Pad Removal	Each	44

Notes:
 Hatched area indicates Concrete Removal.
 Existing v bars in front face of end block and h bars in front face of wingwalls shall be cut off at the removal line. Cost included with Concrete Removal.
 Existing v bars in back face of end block and h bars in back face of wingwalls shall be cleaned and straightened before incorporating into new construction. Any reinforcement bars damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.



DETAIL A



DETAIL B

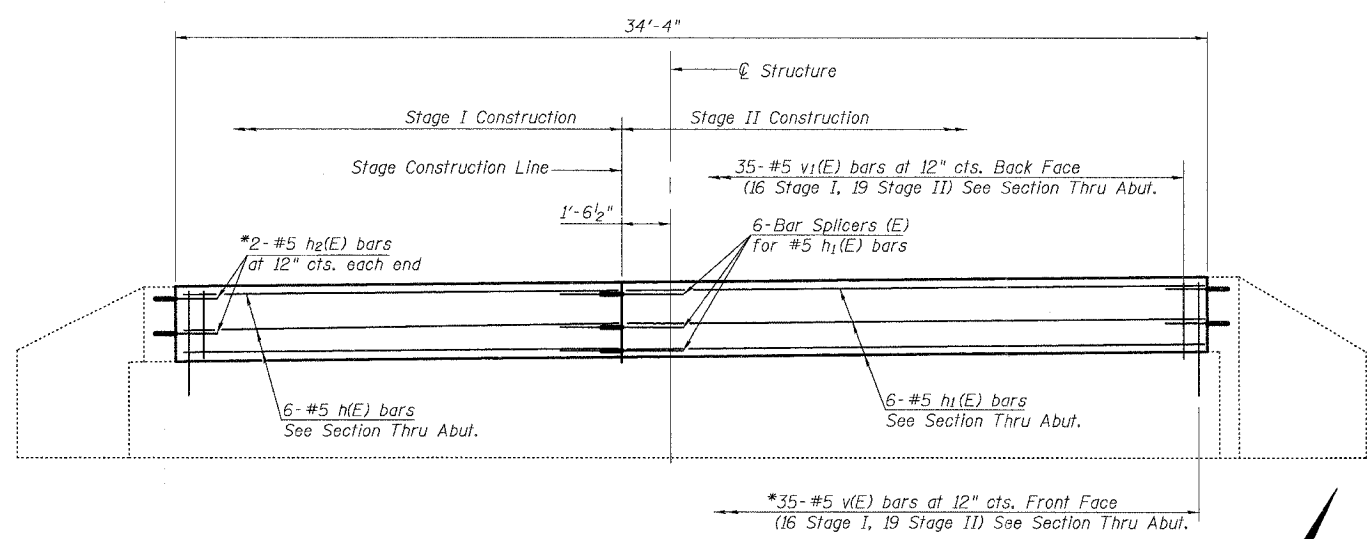
ABUTMENT CONCRETE REMOVAL
F.A. RT. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	PROJECT NO.	07056-4
	DATE	4/17/08
	DRAWN BY	TFG
	CHECKED BY	GS/BD/MCB

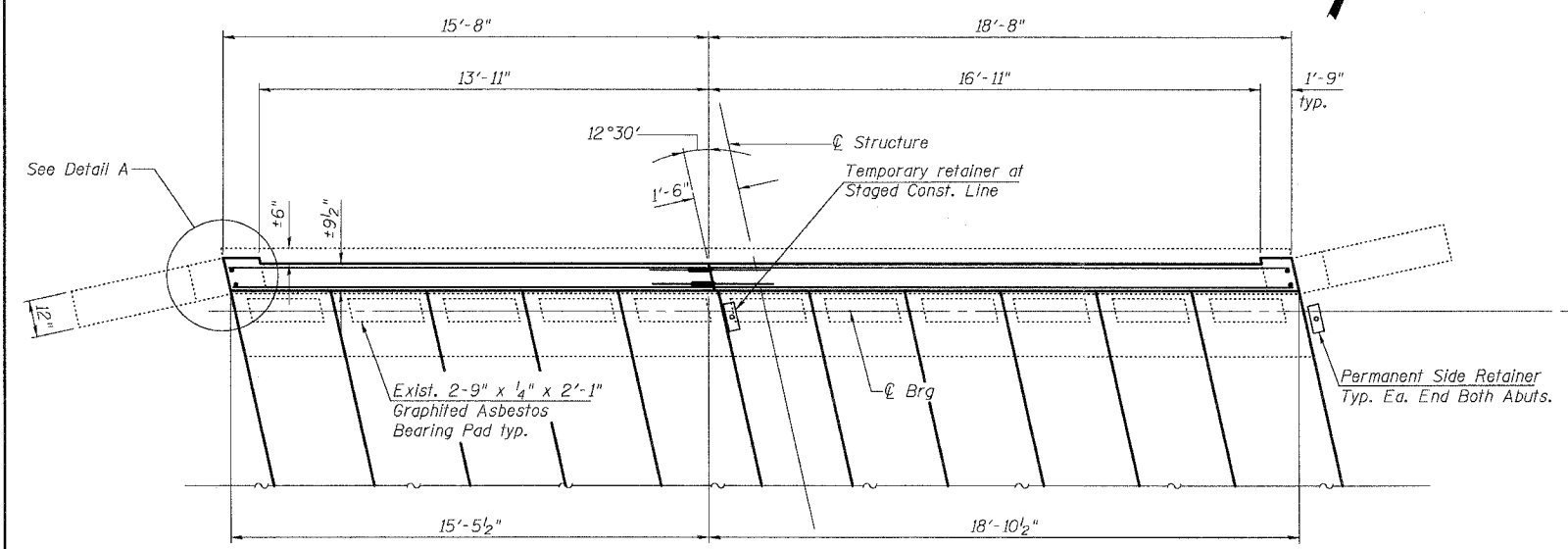
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 USER NAME = BCL

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
FA 782	111BR-1	GALLATIN	73	59	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

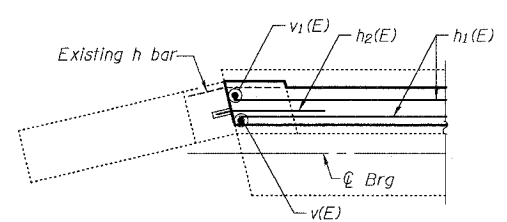
Contract #78034



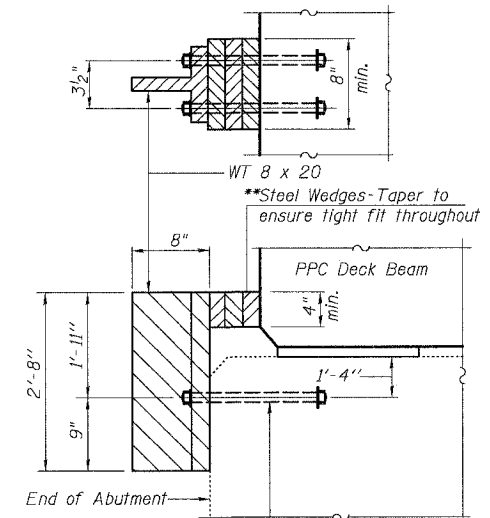
ELEVATION
(North Abutment Shown, South Abutment Opposite)



TOP VIEW
(North Abutment Shown, South Abutment Opposite)



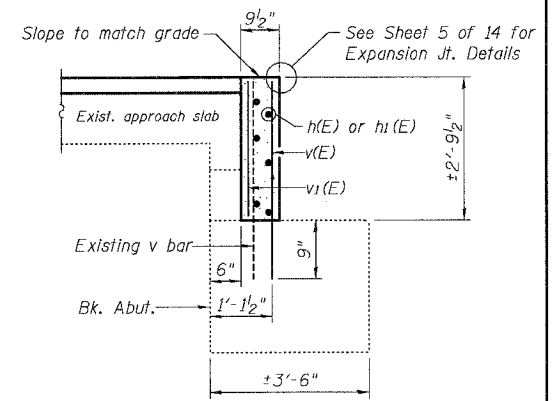
DETAIL A



PERMANENT RETAINER DETAILS

*Epoxy Grout v(E) & h2(E) bars in 9" deep min drilled holes according to Sec 584 of the Standard Specifications. The center of the hole for the h2(E) bars shall be drilled a min of 4" from the front face of the existing wingwall.

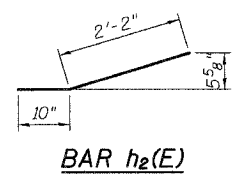
**Shim permanent retainers tight before grouting the shear keys and pouring the concrete wearing surface. Remove shims after the concrete wearing surface has cured.



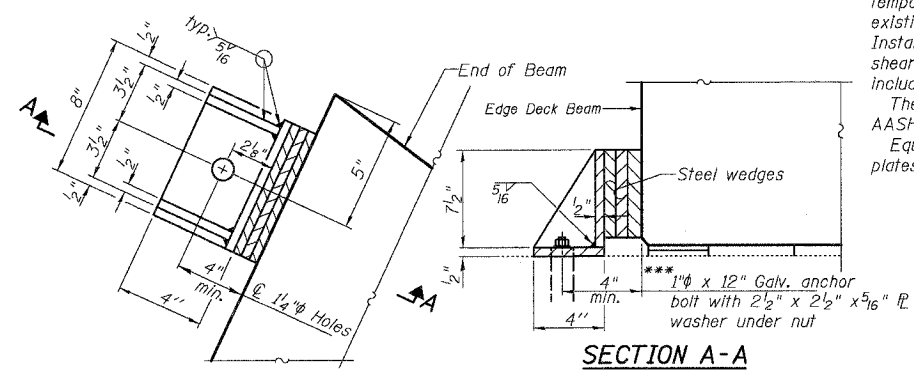
SECTION THRU ABUTMENT
(Dim at right angles)

BILL OF MATERIAL
2-ABUTMENTS

Bar	No.	Size	Length	Shape
h(E)	12	#5	15'-3"	
h1(E)	12	#5	18'-4"	
h2(E)	8	#5	3'-0"	
v(E)	70	#5	3'-4"	
v1(E)	70	#5	2'-5"	
Concrete Structures		Cu. Yd.	5.7	
Reinforcement Bars, Epoxy Coated		Pound	870	
Bar Splicers		Each	12	



BAR h2(E)



SECTION A-A

PLAN TEMPORARY SIDE RETAINERS

***Anchor bolts shall be approved threaded rods placed in drilled holes and grouted in place. Cost included with Precast Prestressed Concrete Deck Beams (27" deep).

NOTES

Install permanent retainers at abutment at west end of abutment cap and temporary retainer at Stage Line prior to grouting Stage I shear keys. After Stage I concrete and concrete wearing surface is poured and cured, the temporary retainer shall be removed. Burn existing anchor bolts flush with existing abutment surface. Grind anchor bolts smooth and seal with epoxy. Install permanent retainer at east end of abutment prior to grouting Stage II shear keys. Cost of retainers, accessories and removal of temporary retainer is included with Precast Prestressed Concrete Deck Beams (27" depth).

The side retainers shall be galvanized after shop fabrication according to AASHTO M111 and ASTM 385.

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

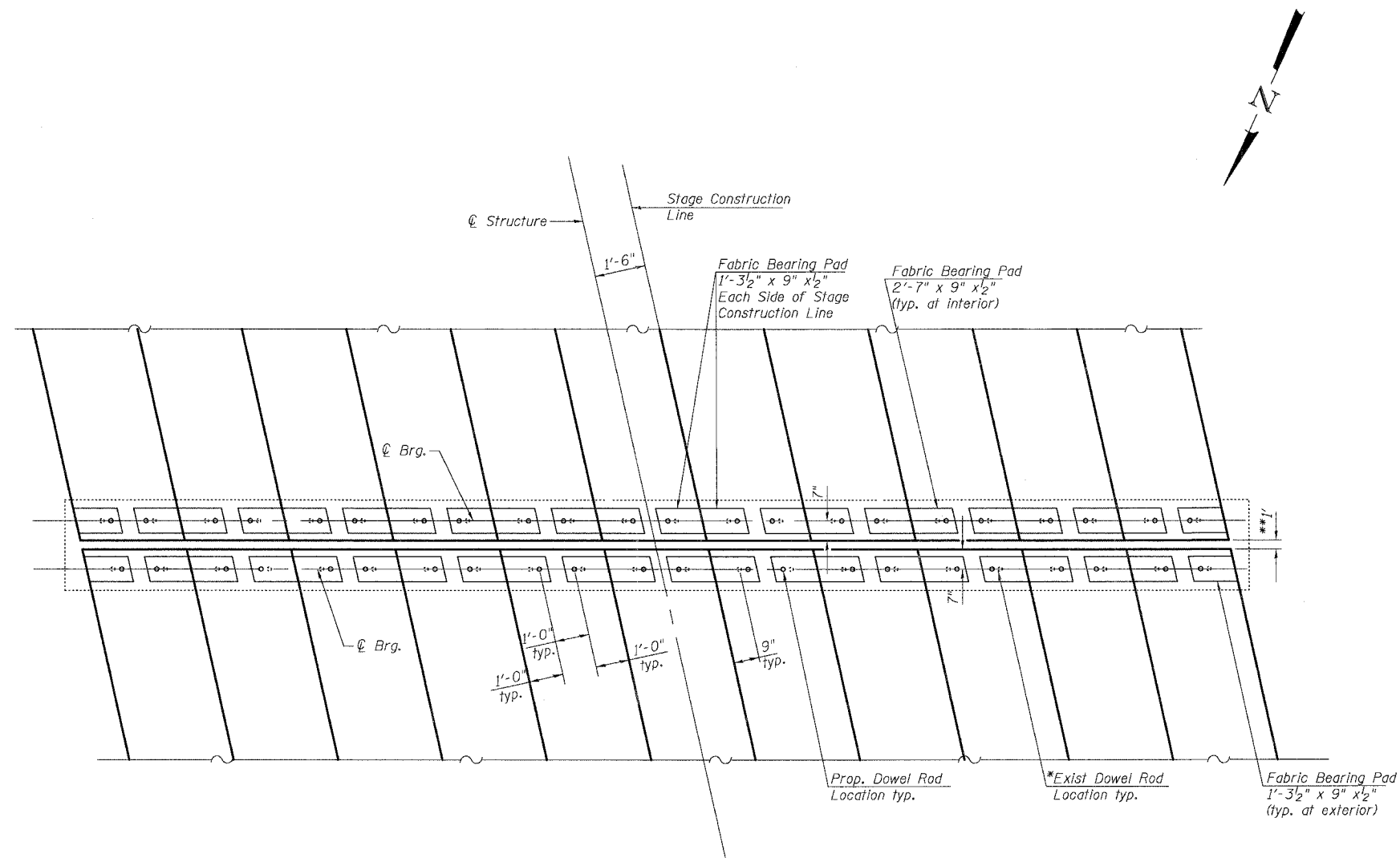
ABUTMENT DETAILS
F.A. RT. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

PROJECT NO.	07056-4
DATE	4/17/08
DRAWN BY	TFG
CHECKED BY	GB/BD/MCB

PLOT DATE = 04/17/2008
FILE NAME = J:\07056-4\111BR-1\111BR-1.dgn
PLOT SCALE = 1/8" = 1'-0"
PLOT NAME = 111BR-1.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 782	111BR-1	GALLATIN	73	60
FED. ROAD DIST. NO. 7	BILLINGS	FED. AID PROJECT		

Contract #78034



PIER PLAN
(Showing Dowel Rod and Bearing Locations)

* Burn existing dowel rods flush with top of existing pier cap. Grind existing dowel rods smooth and seal with epoxy. Cost is included with Removal of Existing Superstructures.

** Dimension may vary to accomodate tolerance in beam lengths.

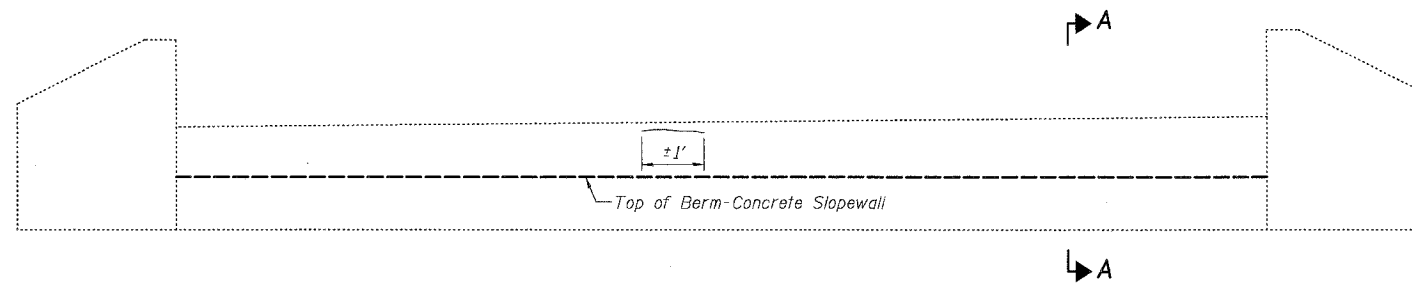
PIER DETAILS
F.A. RT. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	PROJECT NO.	07056-4
	DATE	4/17/08
	DRAWN BY	TFG
	CHECKED BY	CB/BD/MCB

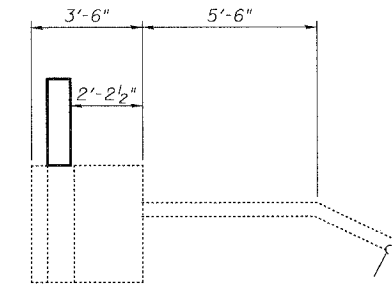
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PLOT SCALE = 1/8" = 1'-0"
USER NAME = CFC

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12
FA 782	111BR-1	GALLATIN	73	61	14 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

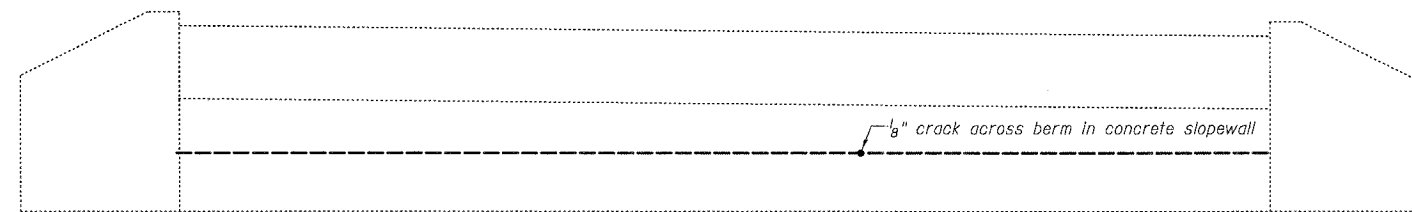
Contract #78034



NORTH ABUTMENT



SECTION A-A



SOUTH ABUTMENT

LEGEND

— Denotes Epoxy Crack Injection

BILL OF MATERIAL
TWO ABUTMENTS

Structural Repair of Concrete (Depth Equal to or Less Than 5 In.)	Sq. Ft.	10
Epoxy Crack Injection	Ft.	17
Concrete Sealer	Sq. Ft.	455

NOTES

Epoxy Crack Injection Lengths and Structural Repair of Concrete Areas are estimated from inspection. Actual locations and quantities of repairs shall be shown by the Engineer on the As-Built plans for this section.

The existing bearing seats shall be inspected by the Engineer after the beams are removed and deteriorated areas shall be repaired. Estimated 10 sq ft of Structural Repair of Concrete (Depth Equal to or Less Than 5 In.) and 10' of Epoxy Crack Injection. Concrete Sealer shall be applied to the front vertical face of the new backwalls, the horizontal abutment seat areas and the exposed vertical surface of the front face of the abutment caps.

ABUTMENT REPAIR DETAILS
F.A. RT. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

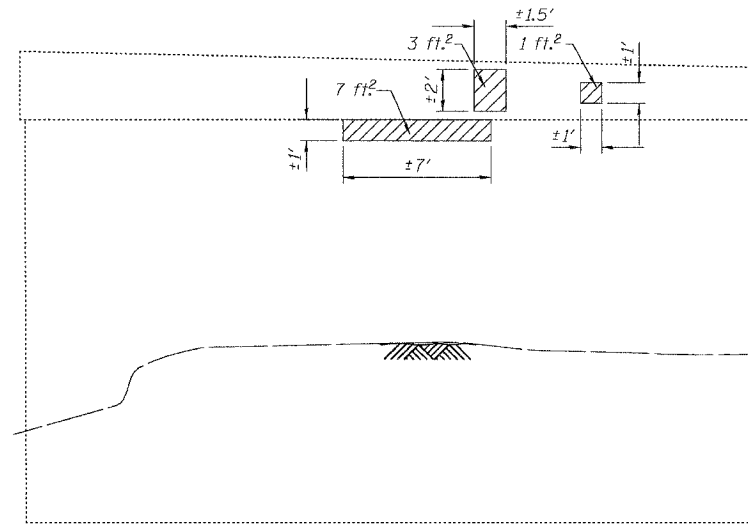
COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

PROJECT NO.	07056-4
DATE	4/17/08
DRAWN BY	TFG
CHECKED BY	CB/BD/MCB

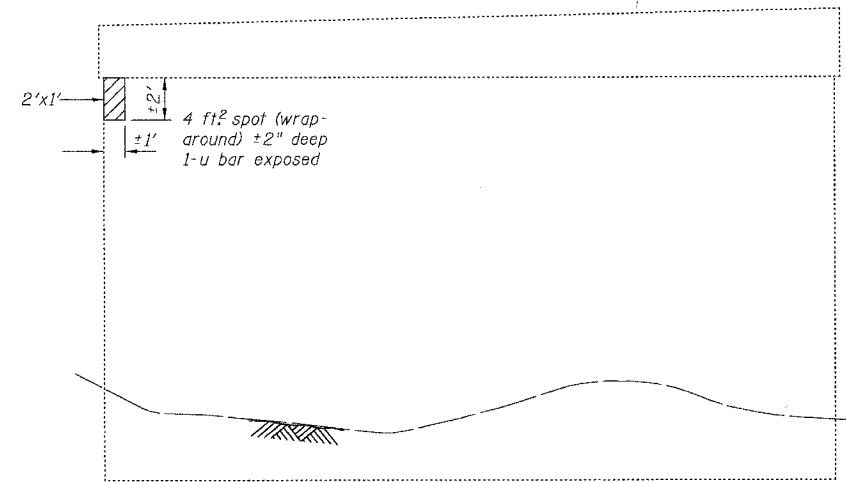
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PLOT SCALE = 1/8" = 1'-0"
PLOT SCALE = 1/8" = 1'-0"
USER NAME = CFC

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. 13
FA 782	111BR-1	GALLATIN	73	62	14 SHEETS
FED. ROAD DIST. NO. 7	BALDWIN	FED. AID PROJECT			

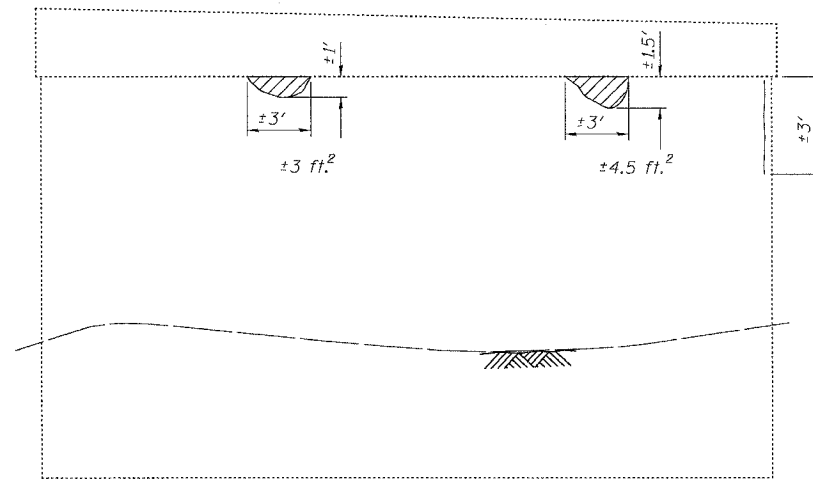
Contract #78034



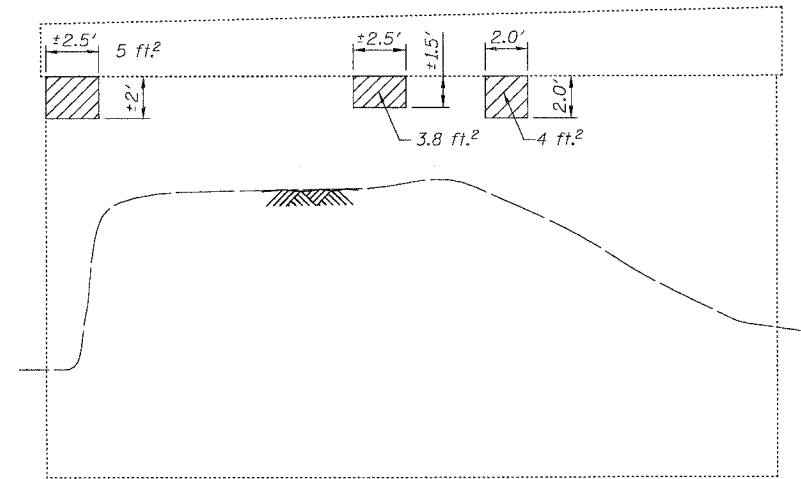
NORTH PIER, NORTH FACE



NORTH PIER, SOUTH FACE



SOUTH PIER, NORTH FACE



SOUTH PIER, SOUTH FACE

LEGEND

- Denotes Structural Repair of Concrete (Depth Less Than or Equal to 5')
- Denotes Epoxy Crack Injection

**BILL OF MATERIAL
TWO PIERS**

Structural Repair of Concrete (Depth Equal to or Less Than 5 In.)	Sq. Ft.	46
Epoxy Crack Injection	Ft.	13

NOTES

Epoxy Crack Injection Lengths and Structural Repair of Concrete Areas are estimated from inspection. Actual locations and quantities of repairs shall be shown by the Engineer on the As-Built plans for this section. The existing bearing seats shall be inspected by the Engineer after the beams are removed and deteriorated areas shall be repaired. Estimated 10 sq ft of Structural Repair of Concrete (Depth Equal to or Less Than 5 In.) and 10' of Epoxy Crack Injection.

**PIER REPAIR DETAILS
F.A. RT. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018**

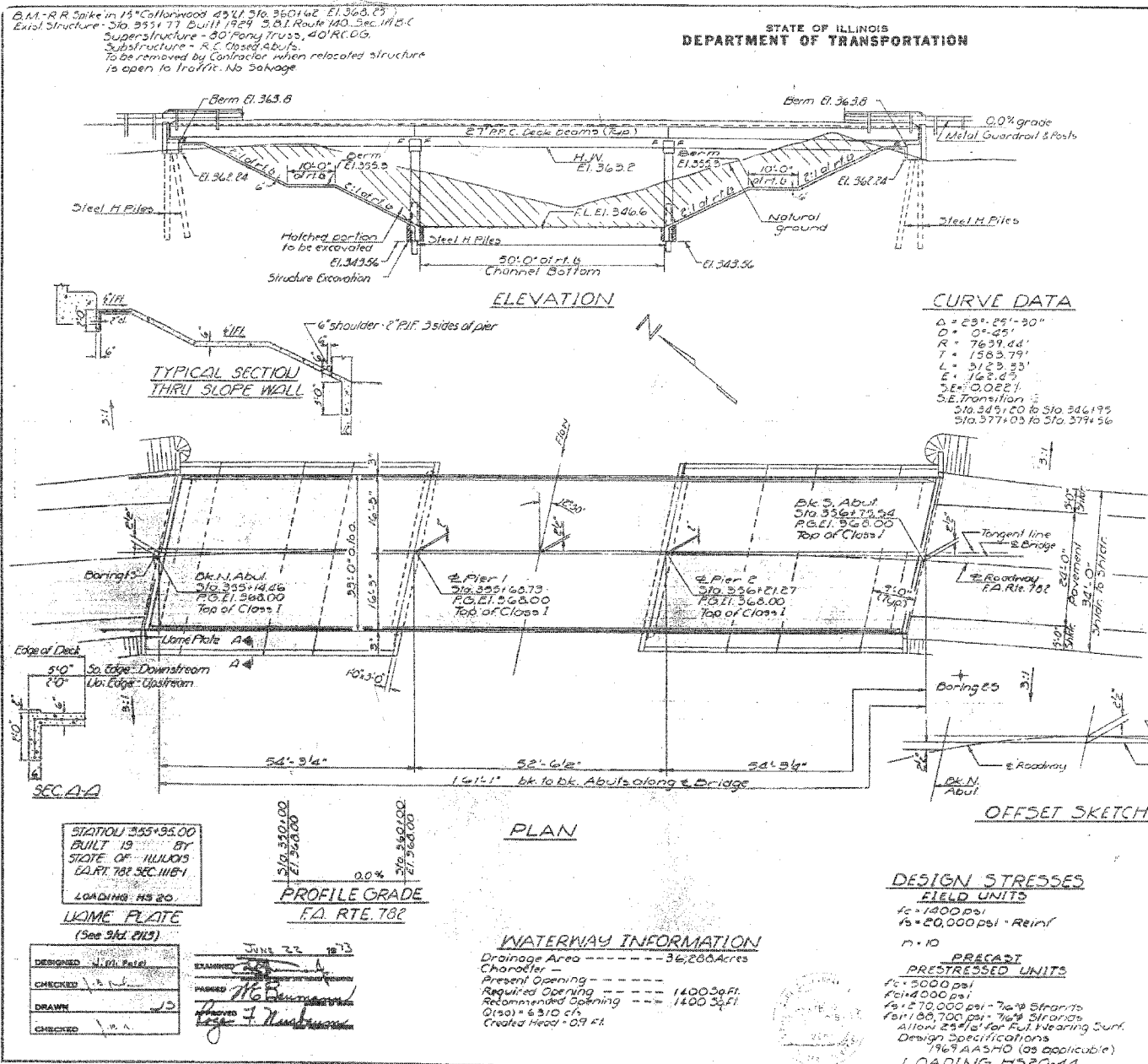
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	PROJECT NO. 07056-4
	DATE 4/17/08
	DRAWN BY TFG
	CHECKED BY GB/BD/MCB

PLOT DATE = 04/17/2008
PLOT SCALE = 1/8" = 1'-0"
USER NAME = CFC

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
782	111BR-1	GALLATIN	73	64
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract #78034

07056-84 365.412 365.375
364.681 364.681



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
782	111BR-1	GALLATIN	73	64

GENERAL NOTES

All reinforcement bars shall be lapped 4d diameters unless otherwise shown.
All structural steel shall be shop primed with two coats of basic lead silico-chromate paint.
Expansion guards which are not cast in the precast shall be fabricated and erected in accordance with Article 903.07(c) of the Standard Specifications and are included in quantity of structural steel.
Slope wall shall be reinforced with wadded wire fabric 6"x6 mesh weighing 58# per 100 sq. ft.
Layout of slope walls may be varied in the field to suit ground conditions as directed by the Engineer.
Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
The contractor shall drive two steel test piles in permanent locations, one in the South Abut. and one in Pier 1, as directed by the Engineer before ordering the remainder of piles.
The top surface of the beams shall be finished in accordance with Article 903.06 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.

CURVE DATA

$\Delta = 29^{\circ} 25' 30''$
 $D = 0^{\circ} 25'$
 $R = 7639.44'$
 $T = 1583.79'$
 $L = 5123.33'$
 $E = 128.85'$
 $S.E. = 0.0021$
S.E. Transition:
Sta. 345+00 to Sta. 346+95
Sta. 377+05 to Sta. 379+56

TOTAL BILL OF MATERIAL

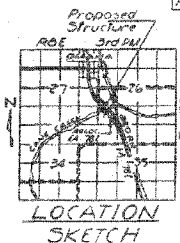
Item	Unit	Super	Sub.	Total
Diluminous Concrete	Tons	90		90
Surface Course Class 1				
Removal of Existing				
Structures	Each			
Class 1 Concrete	Cu. Yds.	12.3	151.4	163.7
P.P.C. Deck Beams 27"	Sq. Ft.	2210		2210
Structural Steel	Lbs.	4520		4520
Steel Piling (Type 1)	Lin. Ft.	320		320
Reinforcement Bars	Lbs.	900	10210	11110
Lane Plates	Each	1		1
Protective Coat	Sq. Yds.	53		53
Waterproofing Membrane System	Sq. Yds.	552		552
Prefabricated Joint Sealer P.V.	Lin. Ft.	66		66
Channel Excavation	Cu. Yds.			1934
Steel Piles 12" Dia.	Lbs. Ft.			1934
Test Piles Steel HP 12x42	Each			2
Slope Wall G.	Sq. Yds.			451
Structure Excavation	Cu. Yds.			70
Portland Cement Mortar	Lin. Ft.	1579		1579
Fairing Course				

DESIGN STRESSES

FIELD UNITS
 $f_c = 1400 \text{ psi}$
 $f_s = 20,000 \text{ psi} - \text{Reinf}$
 $n = 10$
PRECAST
PRESTRESSED UNITS
 $f_c = 5000 \text{ psi}$
 $f_s = 4000 \text{ psi}$
 $f_s = 270,000 \text{ psi} - 7/8" \text{ Strands}$
 $f_s = 180,700 \text{ psi} - 7/8" \text{ Strands}$
Allow 25% for P.L. Wearing Surf.
Design Specifications
1969 AASHTO (as applicable)
LOADING H-20-44

WATERWAY INFORMATION

Drainage Area ----- 36,260 Acres
Character -----
Present Opening -----
Required Opening ----- 1400 Sq. Ft.
Recommended Opening ----- 1400 Sq. Ft.
0.150' x 3.10' c/c
Crested Head - 09 ft.



PROJECT F-782 (1)
GENERAL PLAN AND ELEVATION
CANE CREEK
F.A. ROUTE 782
SECTION 111B-1
GALLATIN COUNTY
STATION 355+95

B.M. - RR Spike in 15" Collarwood 45' W. Sta. 360+62. El. 363.67
Exist. Structure - Sta. 355+77 Built 1924 S.B.I. Riv. 100 Sec. 11B-C
Superstructure - 80' Long Truss, 40' R.C.G.
Substructure - R.C. Closed Abut.
To be removed by Contractor when relocated structure is open to traffic. No Salvage

STATION 355+95.00
BUILT 19 BY
STATE OF ILLINOIS
G.A.R.T. 782 SEC. 11B-1
LOADING: HS 20
LANE PLATE
(See Sht. 2113)

DESIGNED	N. G. Patel
CHECKED	J. S. [Signature]
DRAWN	J. S. [Signature]
CHECKED	J. S. [Signature]

JUN 22 1973
EXAMINED [Signature]
PAVED [Signature]
Checked [Signature]

Revised 3-5-75 W.L.L.

PLOT DATE = 04/17/2008
PLOT SCALE = 1/8" = 1'-0"
USER NAME = CFC

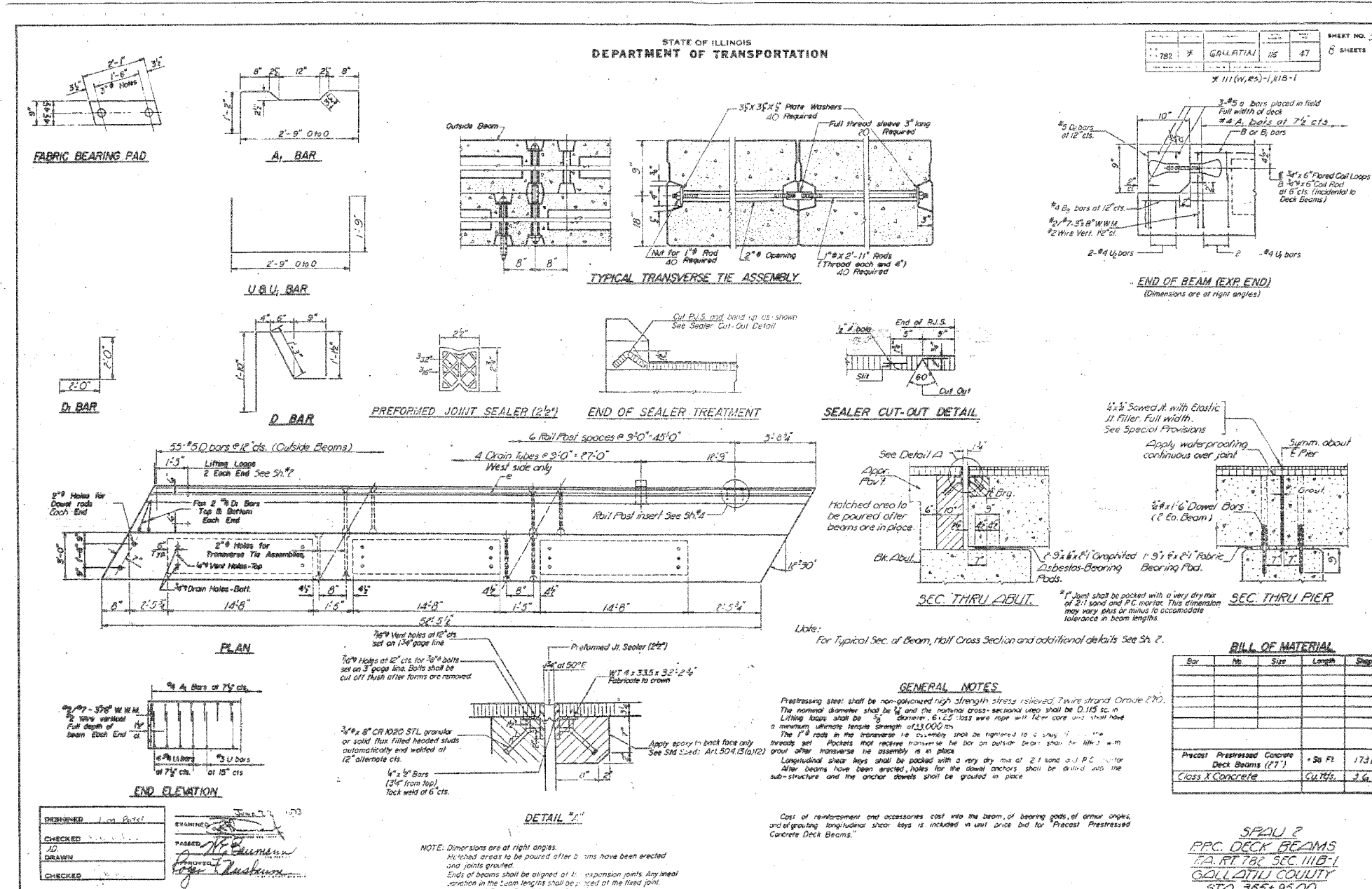
EXISTING STRUCTURE PLANS
F.A. RTE. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

PROJECT NO. 07056-4
COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	111BR-1	GALLATIN	73	66
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract #78034

SHEET NO. 3
7 SHEETS



PLOT DATE = 04/17/2008
 PLOT SCALE = 1/8" = 1'-0"
 USER NAME = CFC

EXISTING STRUCTURE PLANS
F.A. RTE. 782 SECTION 111BR-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

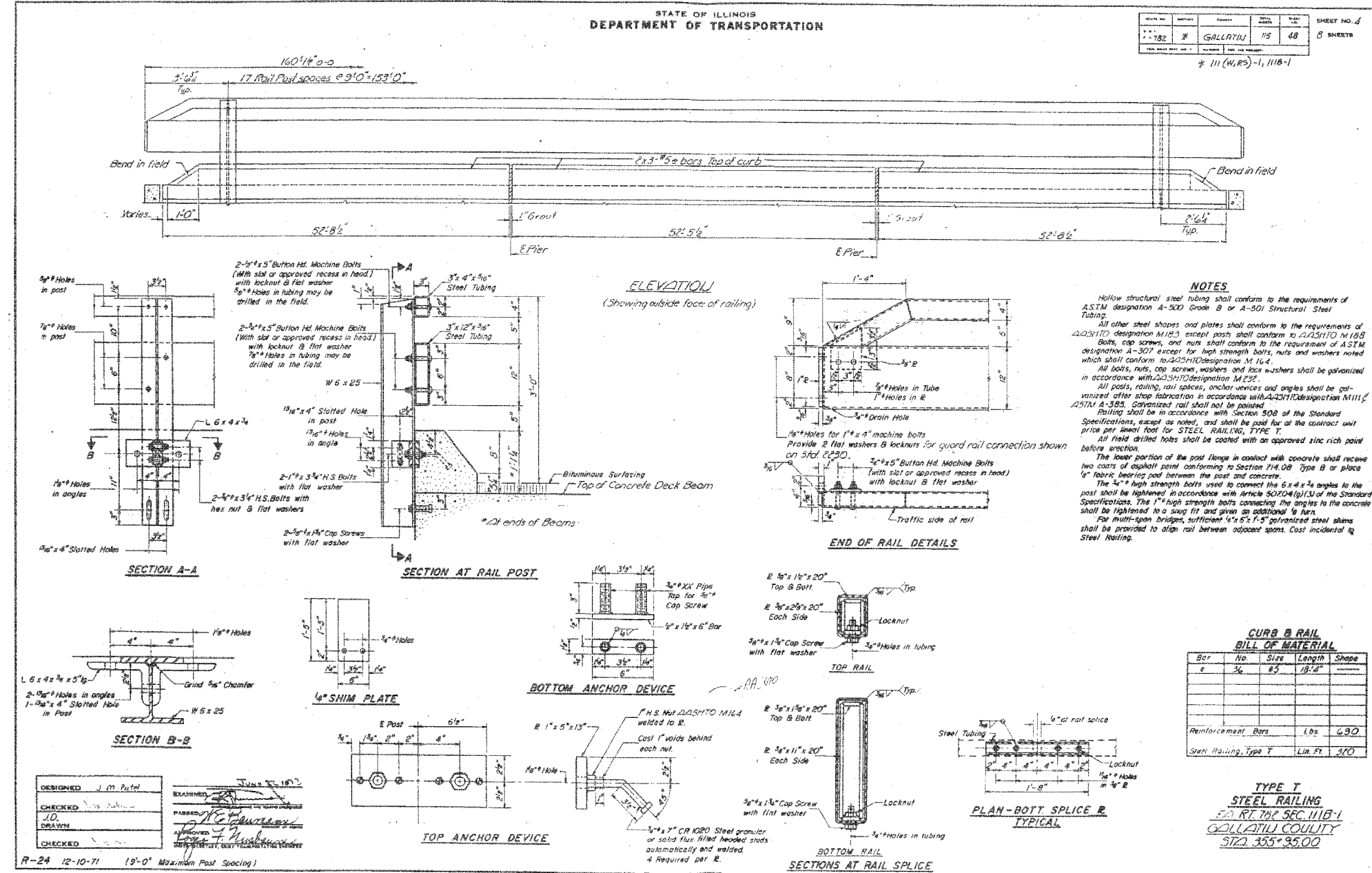
COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

PROJECT NO.	07056-4
SCALE	
DATE	/ /
DRAWN BY	
CHECKED BY	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	1118R-1	GALLATIN	73	67
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

11 (H,RS)-1, 11B-1



CURB & RAIL
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
6	36	85	18'-6"	
Reinforcement Bars			Lbs	690
Steel Railing, Type T			Lin. Ft.	370

TYPE T
STEEL RAILING
EA. RT. 782 SEC. 1118-1
GALLATIN COUNTY
ST. 355+95.00

DESIGNED: J. M. Patel
CHECKED: [Signature]
DRAWN: [Signature]
DATE: 12-10-71

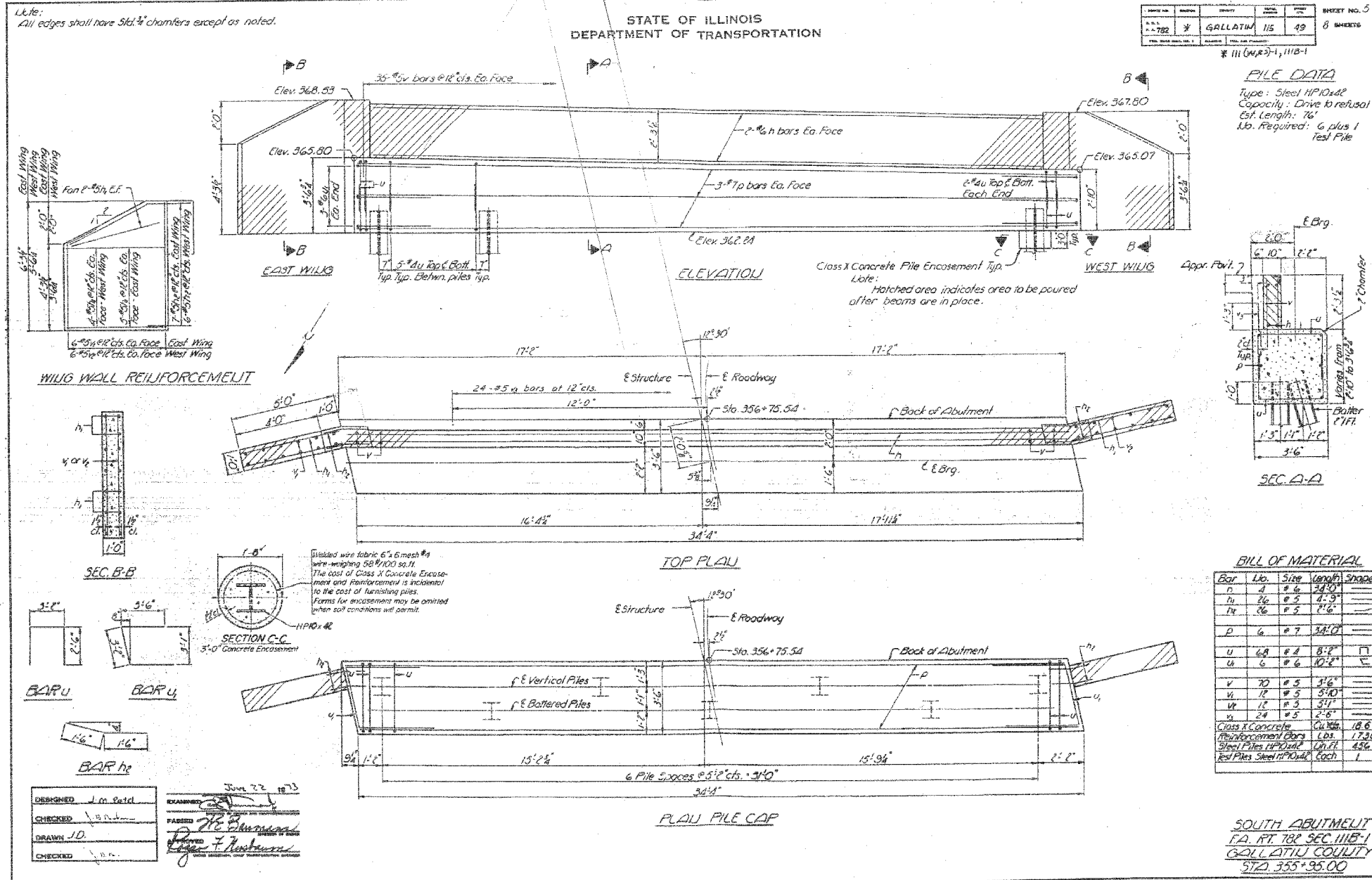
EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]
DATE: 12-10-71

PLAT DATE = 04/17/2008
PLAT SCALE = AS SHOWN
USER NAME = EC

EXISTING STRUCTURE PLANS
F.A. RTE. 782 SECTION 1118R-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

PROJECT NO. 07056-4
DATE / /
DRAWN BY
CHECKED BY

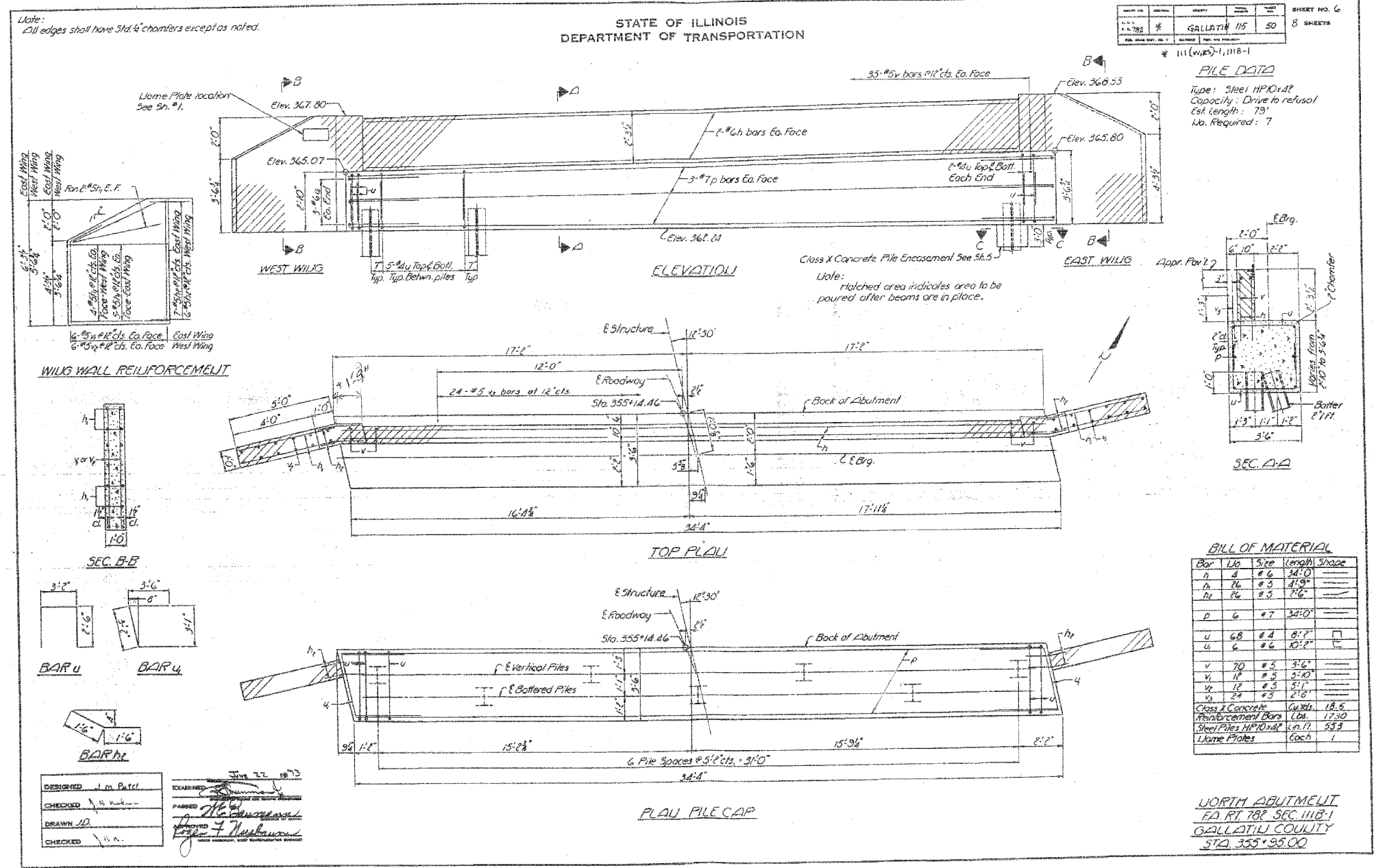


EXISTING STRUCTURE PLANS
F.A. RTE. 782 SECTION 111B-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

PROJECT NO.	07056-4
SCALE	
DATE	/ /
DRAWN BY	
CHECKED BY	

PLOT DATE = 04/17/2008
PLOT SCALE = 1" = 10'-0"
PLOT USER = J.D.
PLOT USER NAME = J.D.



EXISTING STRUCTURE PLANS
F.A. RTE. 782 SECTION 1118-1
GALLATIN COUNTY
STATION 355+95.00
STRUCTURE NO. 030-0018

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

PROJECT NO. 07056-4
SCALE: / /
DATE: / /
DRAWN BY: / /
CHECKED BY: / /

PLOT DATE = 04/17/2008
PLOT SCALE = 0.10000 1" = 1'-0"
USER NAME = CFC

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	111BR-1	GALLATIN	73	73
STA. 358+00		TO STA. 358+50		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FINAL SURVEY NOTE BOOK NO. _____
 SURVEYED _____
 PLANNED _____
 CHECKED _____

FINAL SURVEY NOTE BOOK NO. _____
 SURVEYED _____
 PLANNED _____
 CHECKED _____

PLOT DATE = 04/17/2009
 FILE NAME = \\sbs\er11-101-8808.dgn
 PLOT SCALE = 1/8" = 20' / IN.
 USER NAME = DFC

