

76863

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
817	106BR-1	WASHINGTON	23	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

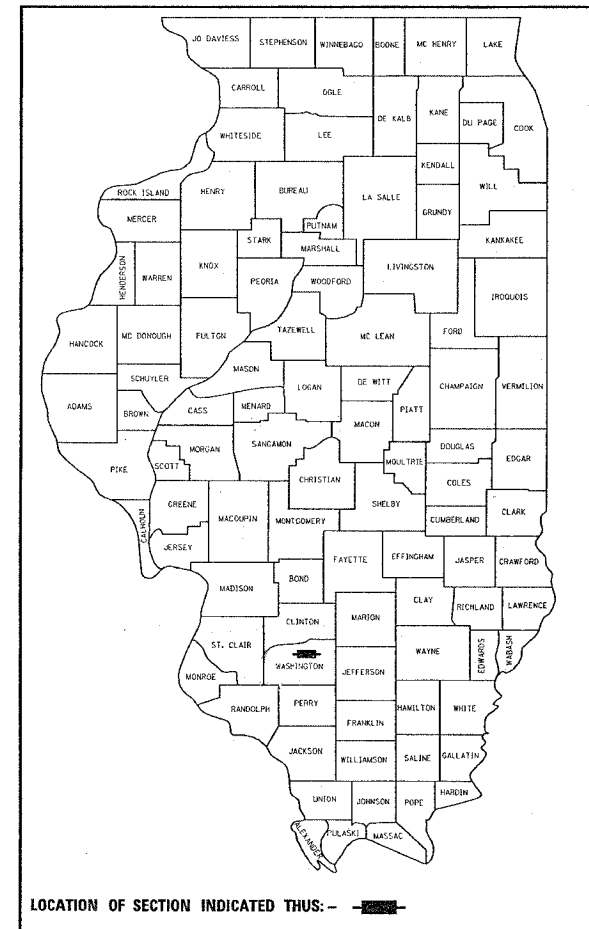
**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 817 (IL 15)
SECTION 106BR-1
PROJECT: BHF-0817(005)
SUPERSTRUCTURE REPLACEMENT
OVER ELKHORN CREEK
WASHINGTON COUNTY

C-98-031-05

FOR INDEX OF SHEETS, SEE SHEET NO. 2

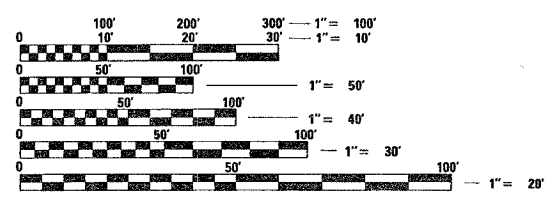
D-98-013-05



LOCATION OF SECTION INDICATED THIS: - [shaded box] -

PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179
SQUAD CONTACT: ART MUEHLFELD (618) 346-3209

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

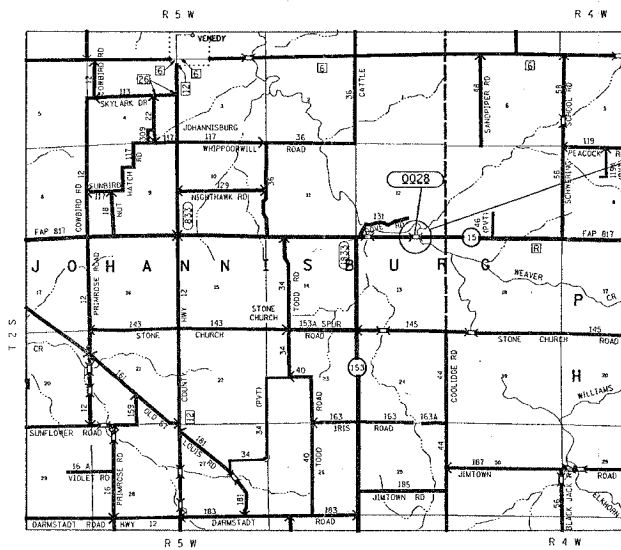


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

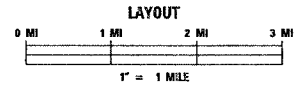
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 76863

TRAFFIC DATA
ADT: 180J (2006)
ADT: 2500 (2026)
SU: 8.8Z
MU: 7.4Z



PROJECT LOCATION
IL 15 OVER ELKHORN CREEK
(SN: 095-0028)
STA 690+00.00



LATITUDE: 38.364886 LONGITUDE: 89.59943

GROSS LENGTH = 339.5 FT = 0.064 MILES
NET LENGTH = 339.5 FT = 0.064 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec 20 2005

Mary C. Jones
DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER

February 3, 20 06
Mike Hine /RD
ENGINEER OF DESIGN AND ENVIRONMENT

February 3, 20 06
Milton R. Sees, P.E. /RD
DIRECTOR, DIVISION OF HIGHWAYS

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
817	106BR-1	WASHINGTON	23	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 76863				

INDEX OF SHEETS

1. COVER PAGE
2. INDEX OF SHEETS/HIGHWAY STANDARDS/GENERAL NOTES
3. SUMMARY OF QUANTITIES
4. TYPICAL SECTIONS/MIXTURE REQUIREMENTS/MILLING DETAIL
5. SCHEDULES & DETECTOR LOOP IN TRENCH DETAIL
6. WIDE LOAD SIGNING
- 7 - 8. STAGING PLAN
9. PLAN AND PROFILE SHEETS
- 10 - 23. BRIDGE PLANS

HIGHWAY STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH OF A FOOT
515001-02	NAME PLATE FOR BRIDGES
630001-05	STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-01	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701006-02	OFF-ROAD OPERATIONS, 2L, 2W, 4.5m (15') TO 600m (24') FROM PAVEMENT EDGE
701011-01	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-02	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701306-01	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >= 45 MPH
701311-02	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-08	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
702001-05	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

1. THE STANDARDS AND REVISION NUMBERS SHALL APPLY TO THIS PROJECT.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
3. THE THICKNESS OF THE BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS MAY OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.
4. SAW CUTTING ON ALL EDGES FOR REMOVAL ITEMS SHALL BE INCLUDED IN THE COST OF THE REMOVAL ITEM AS INDICATED AND ACCORDING TO SECTION 440 OF THE STANDARD SPECIFICATIONS. SAW CUTTING FOR ALL REMOVAL ITEMS SHALL BE FULL-DEPTH IN ORDER TO AVOID DAMAGE TO THOSE ITEMS REMAINING IN PLACE.
5. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING BY CALLING J.U.L.I.E. AND BY NOTIFYING NON-J.U.L.I.E. MEMBERS INDIVIDUALLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
 - EGYPTIAN TELEPHONE CO-OP. ASSN.
 - TRI-COUNTY ELECTRIC COOPERATIVE, INC.
 MEMBERS OF J.U.L.I.E. (800) 892-0123 ARE INDICATED BY *. NON-MEMBERS MUST BE NOTIFIED INDIVIDUALLY.
6. IF ANY SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED OR RESURFACED OVER. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
7. A SURVEY MONUMENT IS LOCATED ON THE SOUTHWEST TOP WINGWALL OF THE STRUCTURE.
8. THE CONTRACTOR SHALL NOT ALLOW ANY DEBRIS TO FALL INTO ELKHORN CREEK.
9. ALL EXISTING CONCRETE IN THE CREEK, UNDER THE BRIDGE, MUST BE REMOVED. THIS WORK WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCLUDED IN THE COST OF STONE RIPRAP.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEDING, FERTILIZING, AND MULCHING ANY AREAS DISTURBED BY THE CONTRACTOR. THIS WORK WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT. THE SEEDING SHALL BE CLASS 2. THE APPLICATION OF THE SEEDING, FERTILIZER, AND MULCH SHALL BE TO THE SATISFACTION OF THE ENGINEER. FINAL SEEDING SHALL BE PERFORMED AS SOON AS POSSIBLE.
11. AN ESTIMATED QUANTITY OF 100 CU YD OF FURNISHED EXCAVATION HAS BEEN ADDED TO THE CONTRACT FOR ADDITIONAL EARTH BEHIND THE GUARDRAIL.
12. A QUANTITY OF 900 FEET OF TEMPORARY PAVEMENT MARKING - LINE 6" HAS BEEN ADDED IN THE PLANS FOR PAINTING THE BOTTOM 6" OF THE TEMPORARY CONCRETE BARRIER.
13. THE CONTRACTOR HAS THE OPTION OF DISPOSING OF THE BITUMINOUS MILLINGS AND CRUSHED CONCRETE AT MR. BINSBACHER'S FARM LOCATED LESS THAN ONE MILE FROM THE JOB SITE. THE CONTRACTOR CAN CONTACT EITHER MR. VALROY BINSBACHER AT (618) 566-4300 OR MR. RAMZY BINSBACHER AT (618) 980-1634.

COMMITMENTS

NONE

PLOT DATE = 12/16/2008
 FILE NAME = c:\p\106br1\106br1.dgn
 PLOT SCALE = 50.0000 / 1 IN.
 REFERENCE = #REF#

REVISIONS		DATE
NAME		

ILLINOIS DEPARTMENT OF TRANSPORTATION
**INDEX OF SHEETS/GENERAL
 NOTES/HIGHWAY STANDARDS**

FAP ROUTE 817
 SECTION 106BR-1
 WASHINGTON COUNTY

SCALE: VERT. DRAWN BY
 HORIZ. CHECKED BY
 DATE

SUMMARY OF QUANTITIES

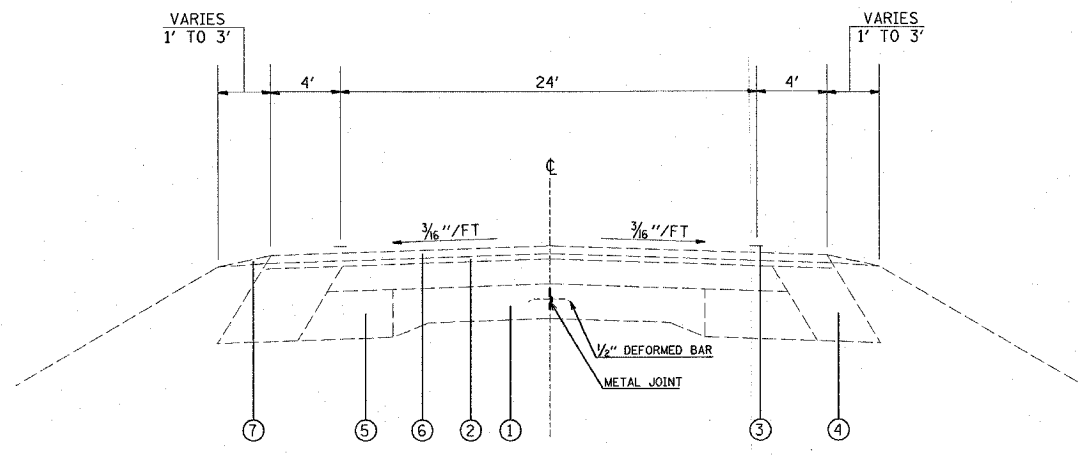
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
817	106BR-1	WASHINGTON	23	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 76863				

SUMMARY OF QUANTITIES			80% FED. 20% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		ROADWAY	STRUCTURE	
				X080-2A	X080-2A	SFTY-3N
20400800	FURNISHED EXCAVATION	CU YD	100	100		
25000210	SEEDING, CLASS 2A	ACRE	0.1	0.1		
25100105	MULCH, METHOD 1	ACRE	0.1	0.1		
28100109	STONE RIPRAP, CLASS A5	SQ YD	1137		1137	
28200200	FILTER FABRIC	SQ YD	1137		1137	
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	0.2	0.2		
40600300	AGGREGATE (PRIME COAT)	TON	0.8	0.8		
40600990	TEMPORARY RAMP	SQ YD	20	20		
44000030	BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	535	535		
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	301	301		
48101200	AGGREGATE SHOULDERS, TYPE B	TON	16	16		
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1		1	
50102400	CONCRETE REMOVAL	CU YD	0.9		0.9	
50300130	PREFORMED JOINT SEAL 4"	FOOT	66		66	
50300225	CONCRETE STRUCTURES	CU YD	0.9		0.9	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	3		3	
50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	223.6		223.6	
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	6168		6168	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	5170		5170	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	500		500	
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	378		378	
51500100	NAME PLATES	EACH	1		1	
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	693		693	
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	1875		1875	
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4		
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	2	2		
* 63100169	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	EACH	1	1		
63200305	STEEL PLATE BEAM GUARD RAIL REMOVAL	FOOT	257	257		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6		
67100100	MOBILIZATION	L SUM	1	1		
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1		
70101205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	1		1	

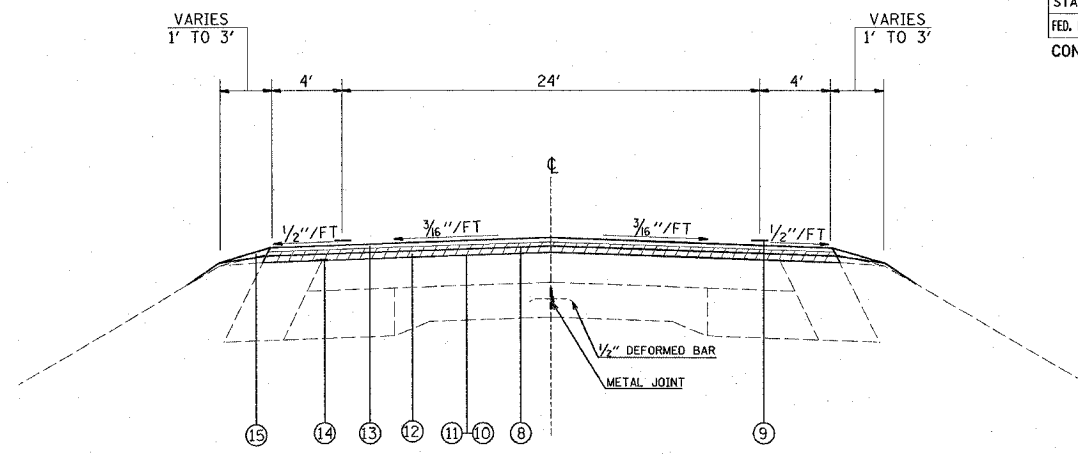
SUMMARY OF QUANTITIES			80% FED. 20% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		ROADWAY	STRUCTURE	
				X080-2A	X080-2A	SFTY-3N
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1		1	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1488	1110	378	
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	900	522	378	
70400500	TEMPORARY CONCRETE BARRIER (STATE OWNED)	FOOT	450	450		
70400600	RELOCATE TEMPORARY CONCRETE BARRIER (STATE OWNED)	FOOT	450	450		
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	764	338.6	425.4	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	2	2		
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	3		3	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	6	6		
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	4		4	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3	3		
78300100	PAVEMENT MARKING REMOVAL	SQ FT	496	496		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	2	2		
X4066416	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N70	TON	132	45	87	
X4066770	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70	TON	23	23		
X7200200	WIDE LOAD SIGNING	L SUM	1	1		
Z0002600	BAR SPLICERS	EACH	12		12	
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2			2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2			2

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Rev



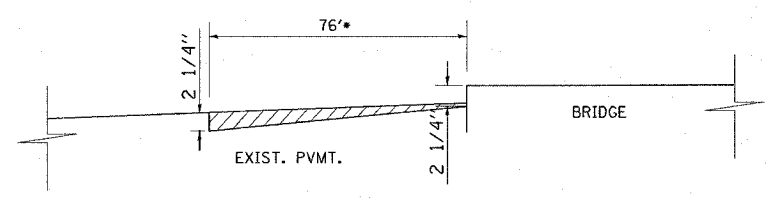
EXISTING TYPICAL SECTION
 STA. 688+29.5 TO STA. 689+05.5
 STA. 690+94.5 TO STA. 691+69.0



PROPOSED TYPICAL SECTION
 STA. 688+29.5 TO STA. 689+05.5
 STA. 690+94.5 TO STA. 691+69.0

LEGEND

- ① EXISTING PAVEMENT 9-6-9
- ② EXISTING BITUMINOUS BINDER, 3/4"
- ③ EXISTING PAVEMENT MARKING
- ④ EXISTING BITUMINOUS WIDENING, 12"
- ⑤ EXISTING BITUMINOUS WIDENING, 9"
- ⑥ EXISTING BITUMINOUS SURFACE COURSE, 1 1/2"
- ⑦ EXISTING AGGREGATE SHOULDER
- ⑧ PROPOSED MILLING
- ⑨ PROPOSED PAVEMENT MARKING
- ⑩ PROPOSED BITUMINOUS MATERIAL (PRIME COAT)
- ⑪ PROPOSED AGGREGATE (PRIME COAT)
- ⑫ LEVELING BINDER (MACHINE METHOD), 3/4"
- ⑬ PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, 1 1/2"
- ⑭ PROPOSED STRIP REFLECTIVE CRACK CONTROL
- ⑮ PROPOSED AGGREGATE SHOULDER



•SEE PLAN & PROFILE FOR BEGINNING AND END STATION OF RESURFACING

MILLING DETAIL

MIXTURE REQUIREMENTS

MIXTURE USE	SURFACE	LEVELING BINDER
AC/PG	PG 64-22	PG 64-22
RAP % (MAX)	10%	10%
DESIGN AIR VOIDS	4% @ Ndes=70	4% @ Ndes=70
MIX COMPOSITION		
(GRADATION MIXTURE)		
FRICTION AGGREGATE	MIXTURE "C"	MIXTURE "C"

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL SECTIONS/ MIXTURE REQUIREMENTS/MILLING DETAIL
 FAP ROUTE 817
 SECTION 106BR-1
 WASHINGTON COUNTY
 SCALE: VERT. _____
 DATE _____ HORIZ. _____
 DRAWN BY _____
 CHECKED BY _____

PLOT DATE = 12/16/2005
 FILE NAME = c:\pvc\jct\106br\106br.dgn
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 REFERENCE = 0864

PAVING SCHEDULE

STATION	BIT. MAT'L PRIME COAT (TON)	AGG. PRIME COAT (TON)	LEVELING BINDER MIX "C" (TON)	BIT. CONC. SURF. CSE., SUPER., MIX "C", N70 (TON)	BIT. SURF. REMOVAL (SQ YD)	AGG. SHLD TYPE B (TON)	STRIP REFL CRACK CTL TREATMENT (FT)
688+29.5 TO 689+05.5	0.085	0.4	13.35	27.71	270.4	8.02	152.0
689+05.5 TO 690+94.5				87.00			
690+94.5 TO 691+69.0	0.083	0.4	11.11	22.21	264.4	7.86	149.0
TOTAL	0.167	0.8	22.46	131.92	534.80	15.88	301.00

PAVEMENT MARKING SCHEDULE

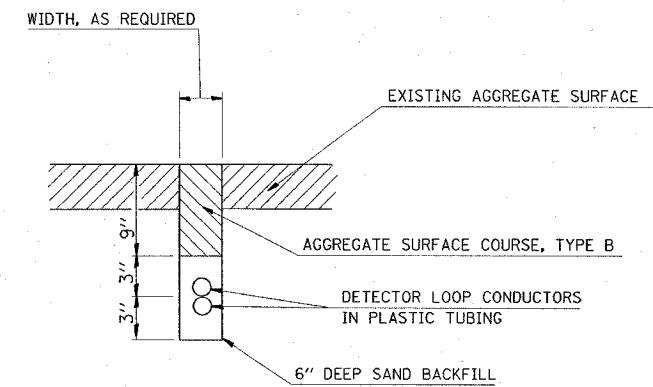
STATION		PAVEMENT		BRIDGE	
		WHITE LINE (FT)	YELLOW SKIP DASH LINE 4" (FT)	WHITE LINE (FT)	YELLOW SKIP DASH LINE 4" (FT)
688+29.5 TO 689+05.5	RT/LT	152.0			
688+29.5 TO 689+05.5	∅		19.0		
689+05.5 TO 690+94.5	RT/LT			378.0	
689+05.5 TO 690+94.5	∅				47.25
690+94.5 TO 691+69.0	RT/LT	149.0			
690+94.5 TO 691+69.0	∅		18.6		
687+80.9 TO 692+19.7					
SUB-TOTAL		301.0	37.6	378.0	47.3
TOTAL			338.6		425.3

TEMPORARY PAVEMENT MARKING SCHEDULE

STATION		PAVEMENT	BRIDGE	PAVEMENT	BRIDGE	PVMT MRKG REMOVAL (SQ FT)
		TEMP PVMT MRKG- LINE 4" (FT)	TEMP PVMT MRKG- LINE 4" (FT)	TEMP PVMT MRKG- LINE 6" (FT)	TEMP PVMT MRKG- LINE 6" (FT)	
686+81.0 TO 693+89.8	∅	519.8	189.0			236.3
688+50.5 TO 692+20.0	WALL			180.5	189.0	
686+11.0 TO 693+89.8	∅	589.8	189.0			259.6
687+81.0 TO 692+20.0	WALL			250.0	189.0	
SUB-TOTAL		1109.6	378.0	430.5	378.0	
TOTAL			1487.6		808.5	495.9

GUARDRAIL SCHEDULE

STATION			SPBGR REMOVAL (FT)	TBT - T1 (SPECIAL) (EA)	TBT - T1 (FLARED) (EA)	TBT - T6A (EA)
688+74	TO	689+05.5	31.5			1
688+15	TO	689+05.5	62.5		1	1
690+94.5	TO	691+26.0	31.5			1
690+94.5	TO	691+26.0	31.5			1
691+64.5	TO	692+14.5	50.0	1		
691+77.5	TO	692+27.5	50.0	1		
TOTAL			257.0	2	1	4



DETAIL

DETECTOR LOOP INSTALLED IN TRENCH

INSTALLATION IS TO BE DONE IN CONFORMANCE WITH THE REQUIREMENTS OF THE PLANS AND SECTION 886 OF THE STANDARD SPECIFICATIONS WITH THE FOLLOWING EXCEPTIONS:

1. SLOTS ARE TO BE TRENCHED INSTEAD OF SAWED.
2. THIS WORK SHALL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE COST OF TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**SCHEDULE OF QUANTITIES AND
DETECTOR LOOP IN TRENCH DETAIL**
FAP ROUTE 817
SECTION 106BR-1
WASHINGTON COUNTY

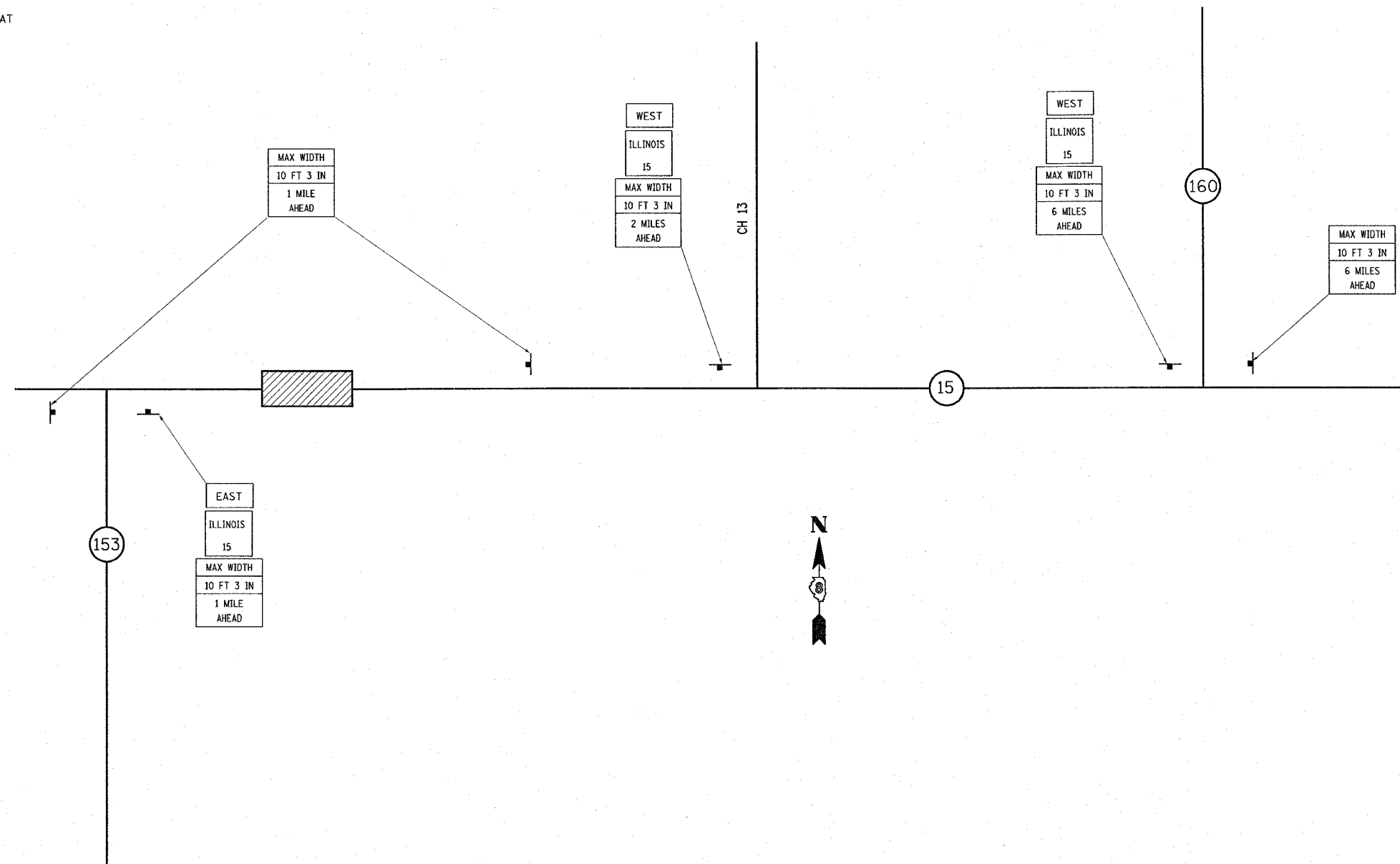
SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
817	106BR-1	WASHINGTON	23	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 76863				

NOTES

1. ALL SIGNS REQUIRED WILL BE SUPPLIED TO THE CONTRACTOR BY I.D.O.T.
2. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THIS SHEET, AS DIRECTED BY THE RE/RT. THE POSTS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL GIVE ILLINOIS DEPARTMENT OF TRANSPORTATION, BUREAU OF OPERATIONS TWO WEEKS NOTICE FOR SIGNS. THE CONTRACTOR SHALL PICK UP THE SIGNS AT THE T.M. BUILDING IN FAIRVIEW HEIGHTS, AND RETURN THEM UPON COMPLETION OF THE CONTRACT. ANY SIGNS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
4. THE ABOVE NOTED WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, LUMP SUM, FOR WIDE LOAD SIGNING AND NO OTHER COMPENSATION WILL BE ALLOWED.
5. SIGN SPACING WILL BE 400' OR TO FIT FIELD CONDITIONS.
6. THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT BE LESS THAN 6'.



SIGNS REQUIRED	
MAX WIDTH 10 FT 3 IN 1 MILE AHEAD	(3)
MAX WIDTH 10 FT 3 IN 2 MILES AHEAD	(1)
MAX WIDTH 10 FT 3 IN 6 MILES AHEAD	(2)
ILLINOIS 15	(3)
EAST	(1)
WEST	(2)

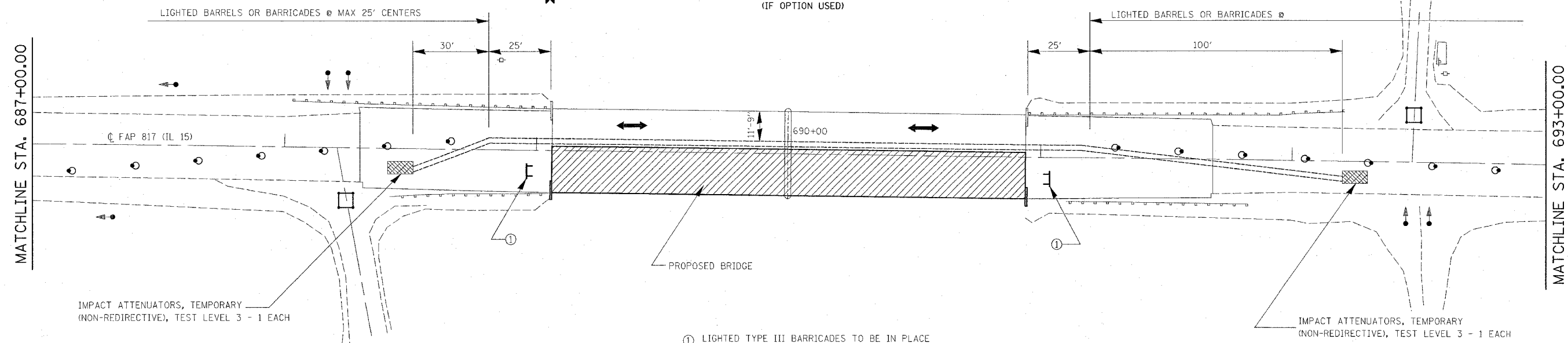
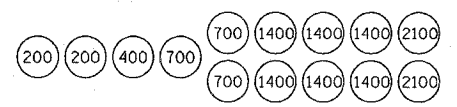
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FILE NAME = c:\projects\106BR-1\106BR-1.dgn
REFERENCE = 06863

REVISIONS		DATE
NAME		

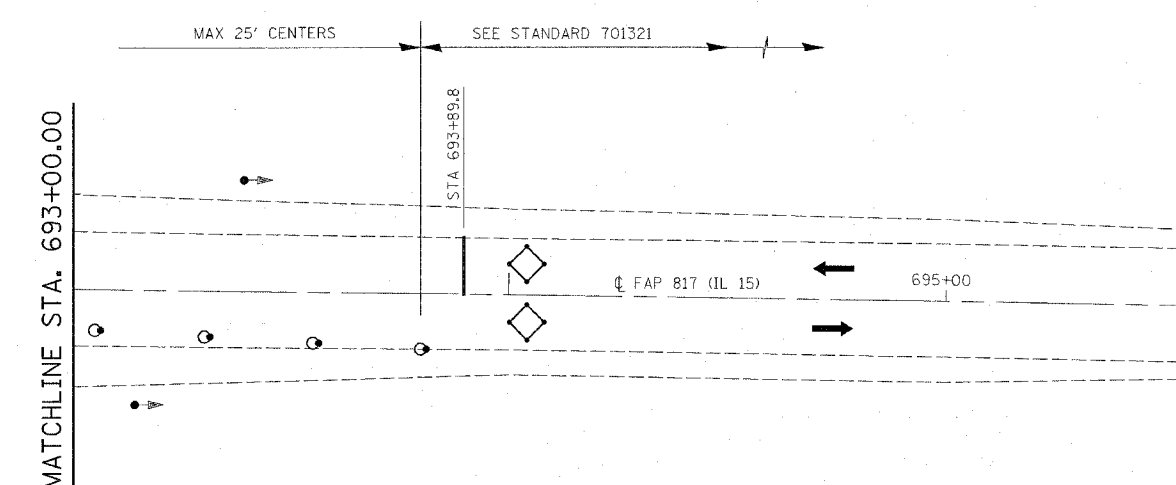
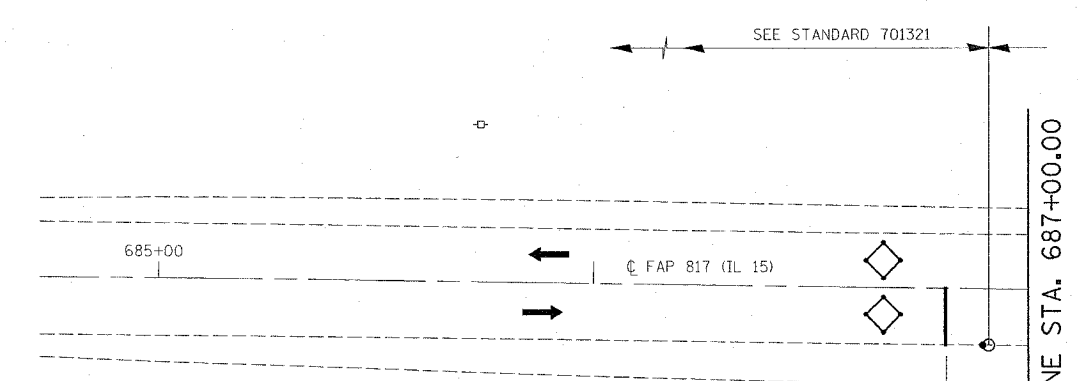
ILLINOIS DEPARTMENT OF TRANSPORTATION
WIDE LOAD SIGNING
FAP ROUTE 817
SECTION 106BR-1
WASHINGTON COUNTY

SCALE: VERT. _____
HORIZ. _____
DATE _____ DRAWN BY _____
CHECKED BY _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
817	106BR-1	WASHINGTON	23	7
STA. 685+00.0		TO STA. 695+00.0		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 76863				



① LIGHTED TYPE III BARRICADES TO BE IN PLACE WHEN NO WORK IS BEING PERFORMED AT LEAST TWO EACH END



STAGE I CONSTRUCTION:

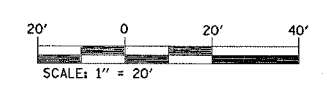
1. STAGE I CONSTRUCTION SHALL CONSIST OF STAGE I REMOVAL OF THE EXISTING SUPERSTRUCTURE, AND STAGE I CONSTRUCTION OF THE REPLACEMENT STRUCTURE. STAGE I CONSTRUCTION SHALL BE DONE ACCORDING TO STAGE CONSTRUCTION AS DETAILED IN THE BRIDGE PLANS. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF STANDARD 701321 AND AS DETAILED IN THE STAGE CONSTRUCTION PLANS. THIS TRAFFIC CONTROL SHALL BE PAID FOR AS TRAFFIC CONTROL AND PROTECTION 701321 (SPECIAL).

NOTES:

1. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE AND FIELD ENTRANCES LOCATED WITHIN THE LIMITS OF THE PROJECT.
2. TRAFFIC CONTROL & PROTECTION, STANDARD 701321 (SPECIAL) INCLUDES BOTH STAGE I & II AND ANY ADDITIONAL SIGNING OR TRAFFIC CONTROL DEVICES SHOWN ON THE STAGE CONSTRUCTION PLANS.
3. THE FINAL BITUMINOUS WEARING SURFACE MUST BE IN PLACE ON THE STRUCTURE PRIOR TO OPENING A LANE TO TRAFFIC.
4. REFER TO PLAN AND PROFILE SHEET TO DETERMINE LIMITS OF MILLING AND RESURFACING AREA.
5. ALL ADDITIONAL TRAFFIC SIGNAL HEADS, LOOP DETECTORS AND ASSOCIATED EQUIPMENT REQUIRED TO MAINTAIN ACCESS AT THE FIELD AND DRIVEWAY ENTRANCES SHALL BE INCLUDED IN THE COST OF "TEMPORARY BRIDGE TRAFFIC SIGNALS"

LEGEND:

- STRUCTURE REMOVAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- INDUCTION LOOP DETECTOR
- DRUM WITH STEADY BURNING LIGHT
- SIGNALIZED TWO-WAY TRAFFIC LANE
- TEMPORARY BRIDGE TRAFFIC SIGNAL
- TYPE III BARRICADE



REVISIONS		DATE
NAME		

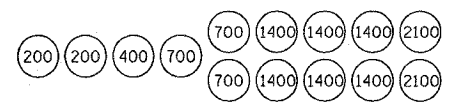
ILLINOIS DEPARTMENT OF TRANSPORTATION
STAGE I CONSTRUCTION
 FAP ROUTE 817
 SECTION 106BR-1
 WASHINGTON COUNTY

SCALE: VERT. _____
 HORIZ. _____
 DATE _____

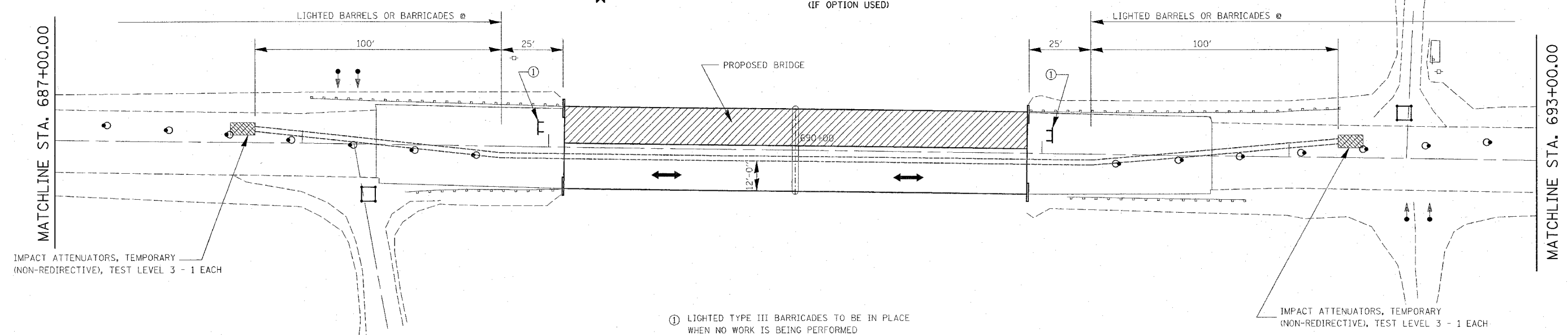
DRAWN BY _____
 CHECKED BY _____

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 REFERENCE = \$REF\$

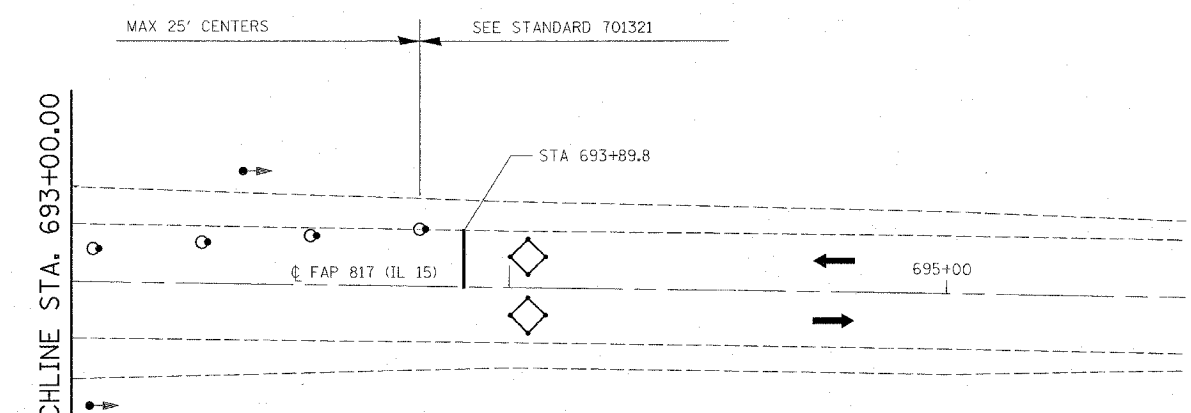
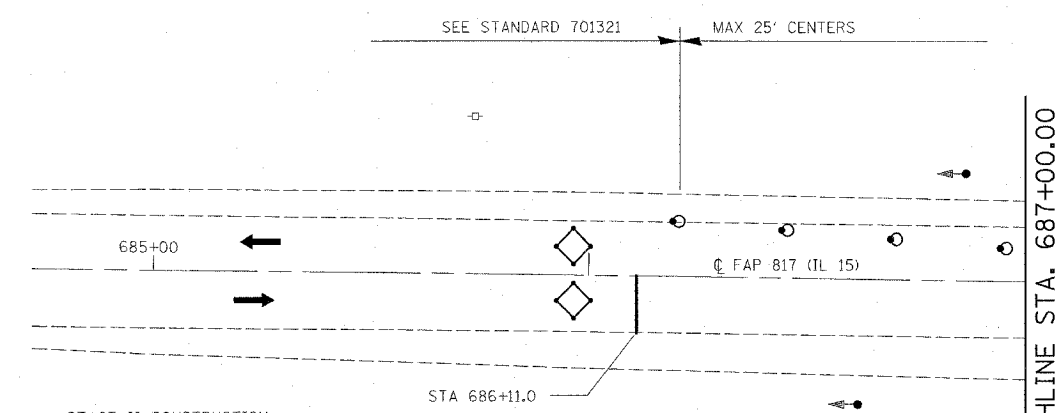
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
817	106BR-1	WASHINGTON	23	8
STA. 685+00.0		TO STA. 695+00.0		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76863				



SAND MODULE IMPACT ATTENUATOR LAYOUT (IF OPTION USED)



① LIGHTED TYPE III BARRICADES TO BE IN PLACE WHEN NO WORK IS BEING PERFORMED AT LEAST TWO EACH END



STAGE II CONSTRUCTION:

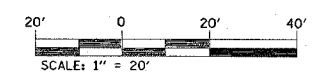
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NOTES:

1. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE AND FIELD ENTRANCES LOCATED WITHIN THE LIMITS OF THE PROJECT.
2. TRAFFIC CONTROL & PROTECTION, STANDARD 701321 (SPECIAL) INCLUDES BOTH STAGE I & II AND ANY ADDITIONAL SIGNING OR TRAFFIC CONTROL DEVICES SHOWN ON THE STAGE CONSTRUCTION PLANS.
3. THE FINAL BITUMINOUS WEARING SURFACE MUST BE IN PLACE ON THE STRUCTURE PRIOR TO OPENING A LANE TO TRAFFIC.
4. REFER TO PLAN AND PROFILE SHEET TO DETERMINE LIMITS OF MILLING AND RESURFACING AREA.
5. ALL ADDITIONAL TRAFFIC SIGNAL HEADS, LOOP DETECTORS AND ASSOCIATED EQUIPMENT REQUIRED TO MAINTAIN ACCESS AT THE FIELD AND DRIVEWAY ENTRANCES SHALL BE INCLUDED IN THE COST OF "TEMPORARY BRIDGE TRAFFIC SIGNALS"

LEGEND:

	STRUCTURE REMOVAL
	TEMPORARY CONCRETE BARRIER
	IMPACT ATTENUATOR
	INDUCTION LOOP DETECTOR
	DRUM WITH STEADY BURNING LIGHT
	SIGNALIZED TWO-WAY TRAFFIC LANE
	TEMPORARY BRIDGE TRAFFIC SIGNAL
	TYPE III BARRICADE



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STAGE II CONSTRUCTION
 FAP ROUTE 817
 SECTION 106BR-1
 WASHINGTON COUNTY
 SCALE: VERT. HORIZ.
 DATE
 DRAWN BY
 CHECKED BY

PLOT DATE = 12/16/2005
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 PLOT SCALE = 1/8" = 1' IN.
 PREFERENCE = 4REF

TIE POINT
STA 685+00.0

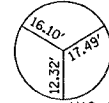
MAG. NAIL & FLG. @ EP



MAG. NAIL & FLG. @ EP

TIE POINT
STA 695+00.0

MAG. NAIL & FLG. @ EP



MAG. NAIL & FLG. @ EP



PROPOSED MILLING & RESURFACING AREA
2 1/4" (SEE MILLING DETAIL PG 4)

BEGIN PROJECT
STA 688+29.5

PMNT. AREA
270.4 SQ YD

BK. W. ABUT.
STA 689+05.50
ELEV. 428.74

STRUCTURE
STA 690+00.00
ELEV. 428.75

BK. E. ABUT.
STA 690+94.50
ELEV. 428.84

PROPOSED MILLING & RESURFACING AREA
2 1/4" (SEE MILLING DETAIL PG 4)

END PROJECT
STA 691+69.0

¢ FAP 817 (IL 15)

TBT-T6A
2 EACH

TBT-T6A
2 EACH

TBT-T1 (SPECIAL)
2 EACH

TBT-T1 (FLARED)
1 EACH

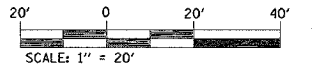
EXIST. SPBGR
TBR

PMNT. AREA
264.4 SQ YD

EXISTING R.O.W

EXISTING R.O.W

MILLING & RESURFACING AREA



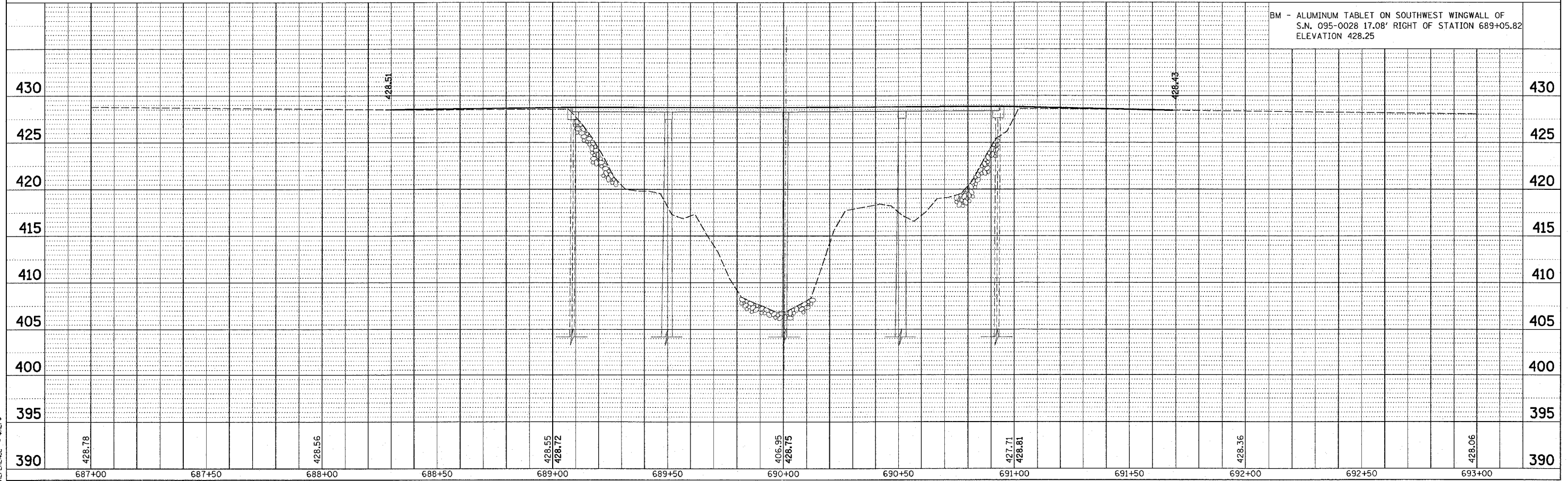
BM - ALUMINUM TABLET ON SOUTHWEST WINGWALL OF
S.N. 095-0028 17.08' RIGHT OF STATION 689+05.82
ELEVATION 428.25

PLAN

DATE	
BY	
REVISED	
NOTED	
ALIGNED	
CHECKED	
DRAWN	
FILE NAME	
NO.	

PROFILE

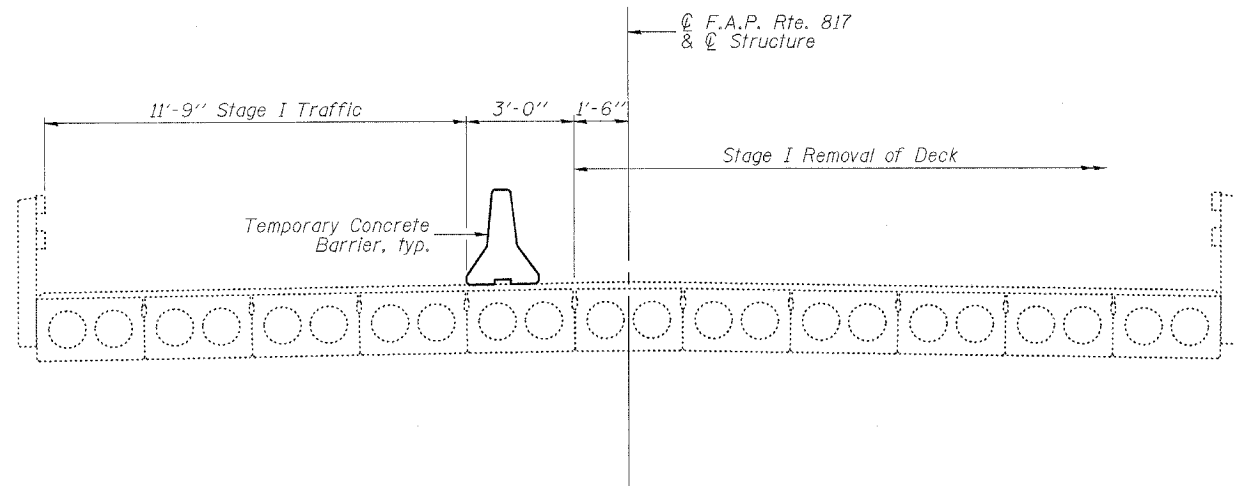
DATE	
BY	
REVISED	
NOTED	
ALIGNED	
CHECKED	
DRAWN	
FILE NAME	
NO.	



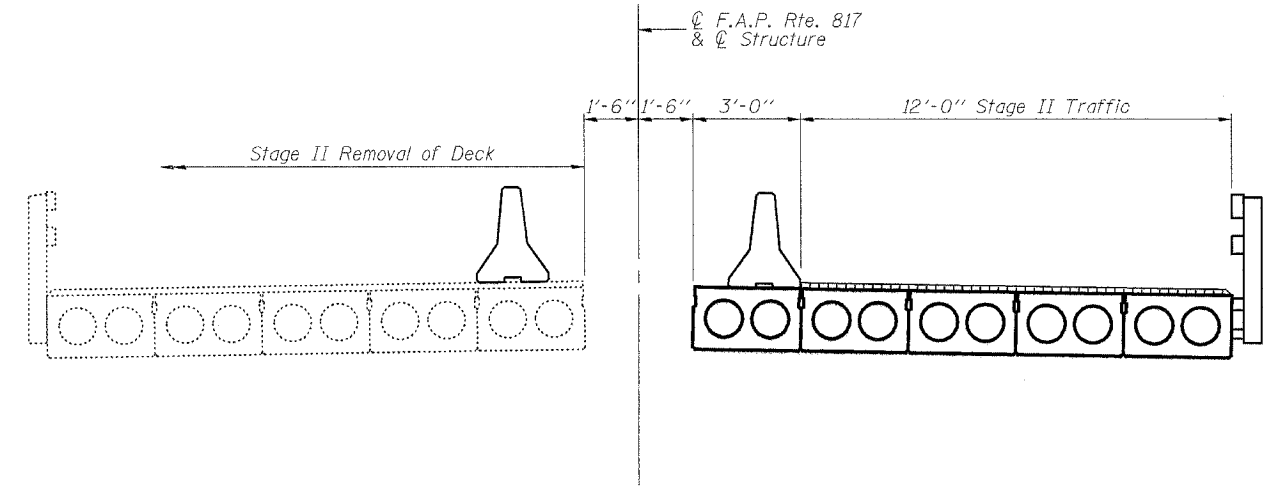
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 817	106BR-1	WASHINGTON	11	11
FED. ROAD DIST. NO. 7	ALWAYS	FED. AID PROJECT		

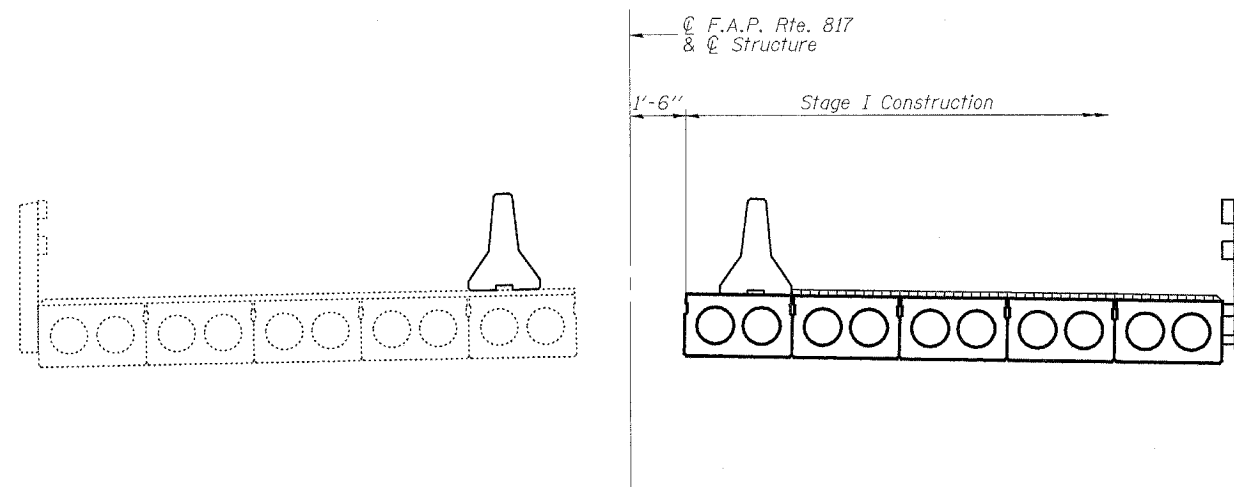
SHEET NO. 2
14 SHEETS



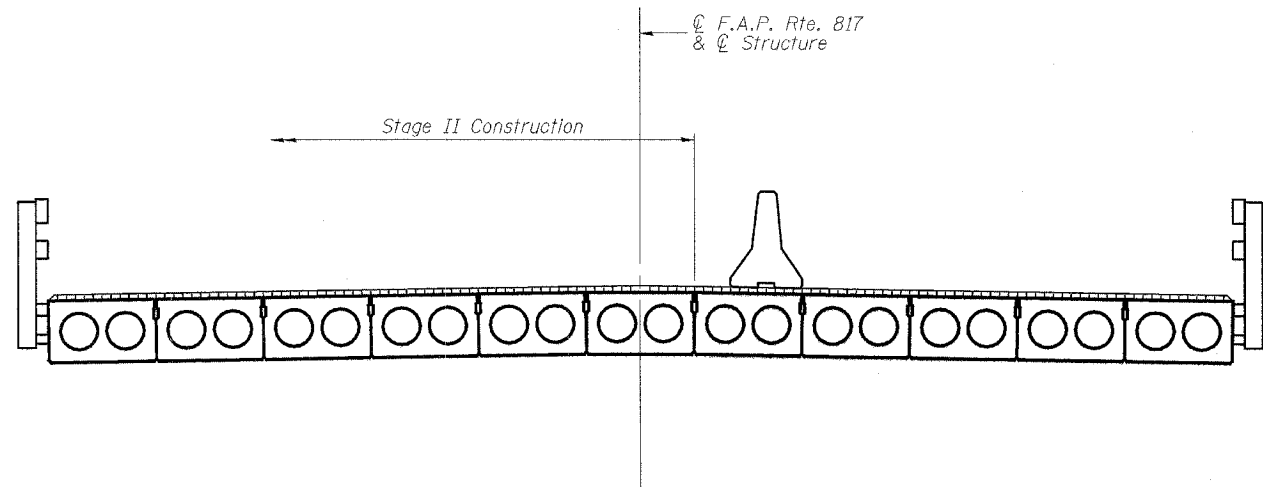
STAGE I REMOVAL



STAGE II REMOVAL



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION

Notes:
All sections are looking East.
For quantity of Temporary Concrete Barrier, see roadway plans.
For details of Temporary Concrete Barrier, see sheet 3 of 14.
For requirements for lapping waterproofing membrane, see notes on sheet 3 of 14.

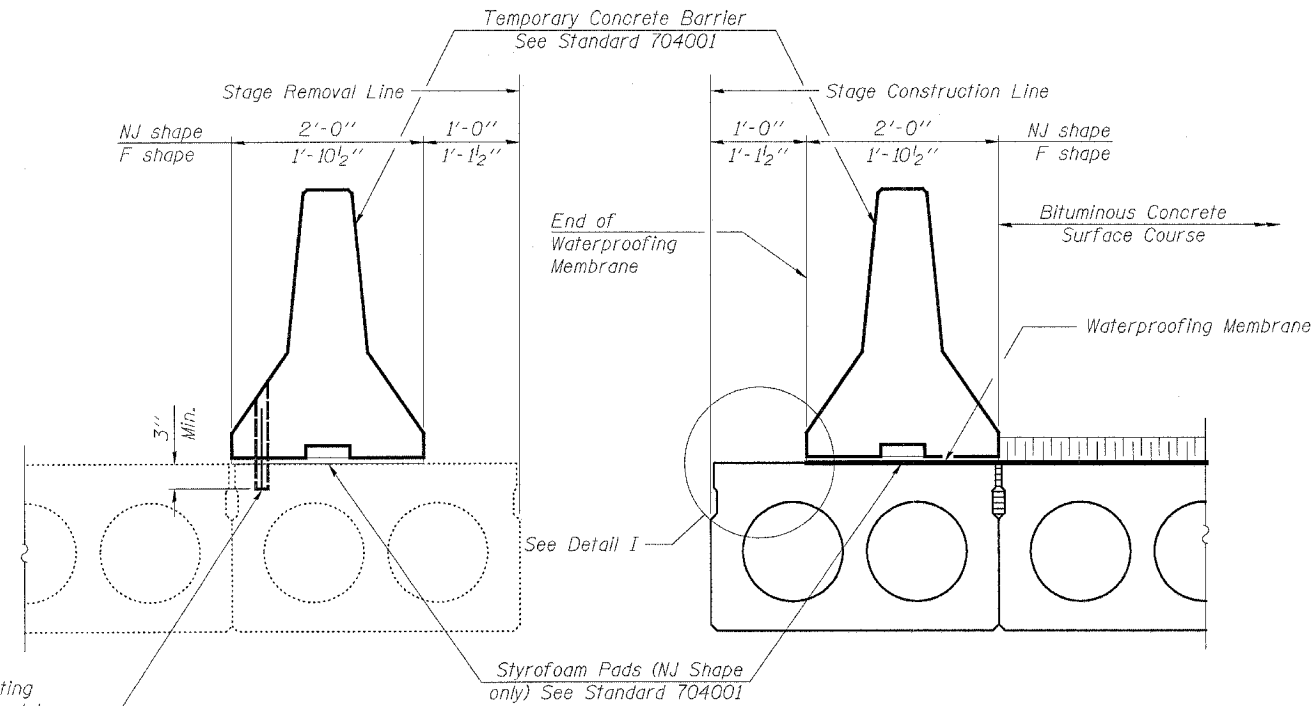
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CHECKED	NJM
DRAWN	EML
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS

STAGE CONSTRUCTION DETAILS
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
F.A.P. 817	106BR-1	WASHINGTON		12	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

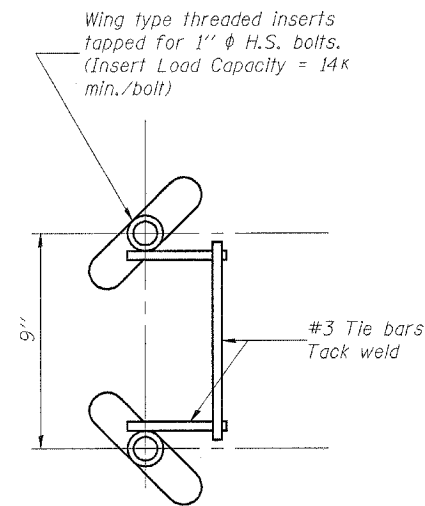


Drill 1/4" ϕ Holes in existing beam for 1" ϕ x 10" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

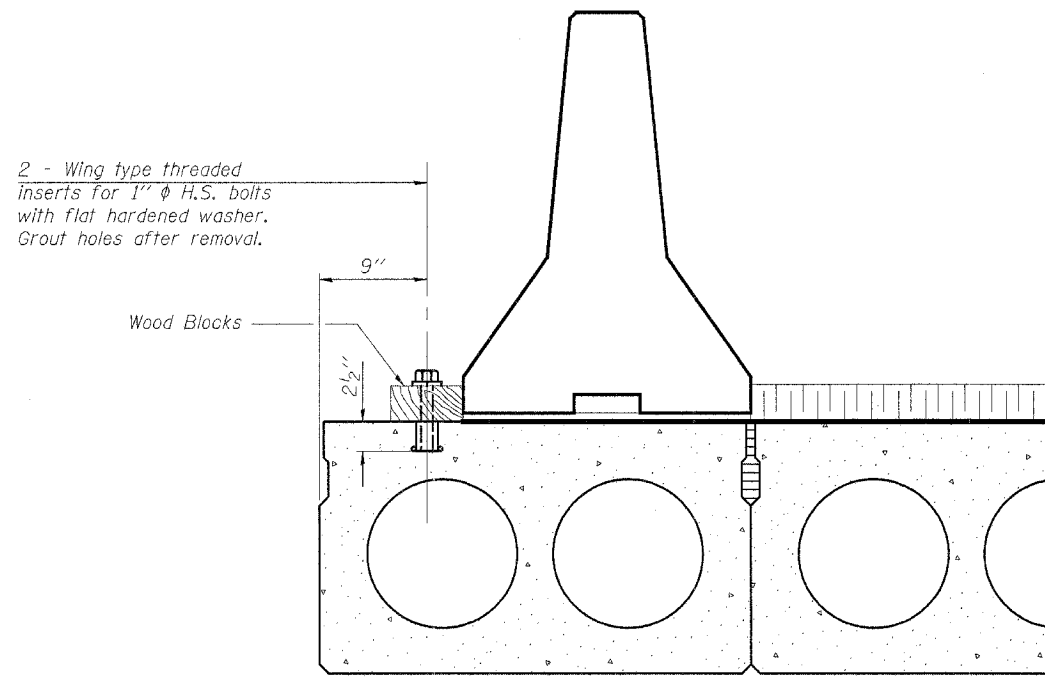
EXISTING PPC DECK BEAMS

NEW PPC DECK BEAMS

SECTIONS THRU PPC DECK BEAMS



INSERT DETAIL



DETAIL I

The Temporary Concrete Barrier and wood blocks shall not be removed until Stage II Construction PPC Deck Beams have been placed and shear keys grouted.

NOTES

The 1" ϕ high strength bolts used to connect the wood blocks shall be tightened to a snug fit without crushing the wood block.
The wing type threaded insert assembly shall be spaced 6'-0" longitudinally.
The Waterproofing Membrane shall extend under the Temporary Concrete Barrier without the asphalt sand seal protection layer. Once the Temporary Concrete Barrier has been removed, and the penetrating primer, coal tar emulsion, coal tar emulsion and fiberglass fabric, and coal tar emulsion slurry layers of the Waterproofing Membrane is lapped 6", the asphalt sand seal protection layer shall be applied according to Article 581 of the Standard Specifications.
The cost for H.S. bolts, flat headed washers, and wood block is included with Temporary Concrete Barrier.
The cost for wing type threaded inserts is included with Precast Prestressed Concrete Deck Beams (21" Depth).

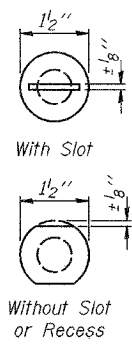
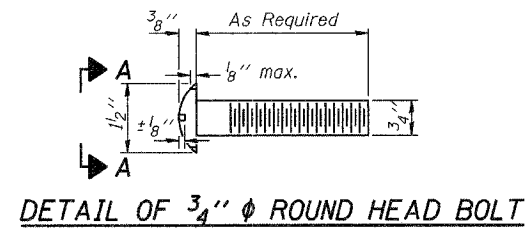
DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

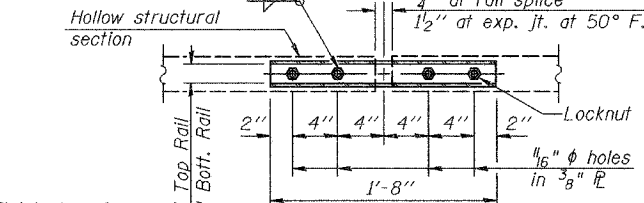
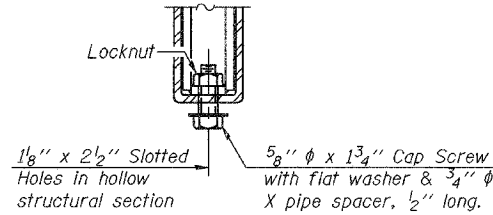
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 817	106BR-1	WASHINGTON	13	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



VIEW A-A

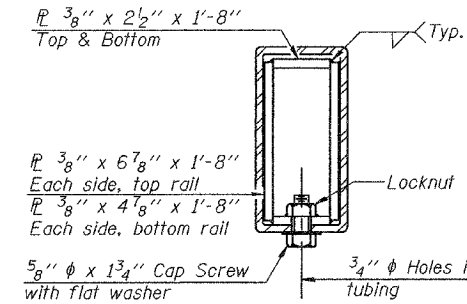
4-3/4" ϕ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" ϕ holes in hollow structural section may be drilled in the field.

RAIL SPLICE CONNECTION AT EXPANSION JT.

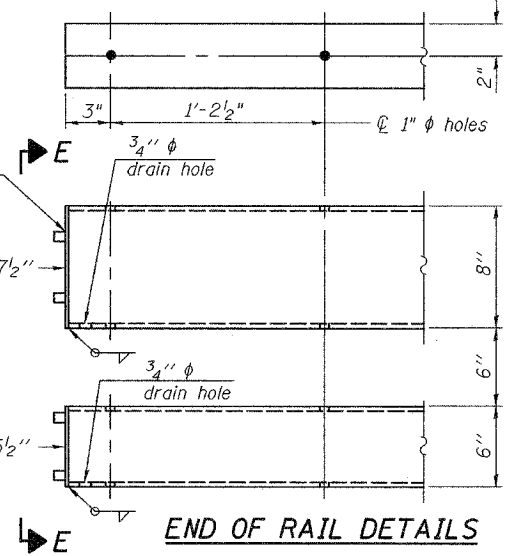
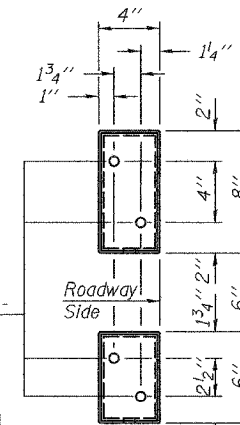


PLAN-BOTT. SPLICE AT TYPICAL

SECTION AT RAIL SPLICE



VIEW E-E



NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.
All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.
Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.
All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.
The 3/4" ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.
For rail post spacing, see sheet 5 of 14.

BILL OF MATERIAL

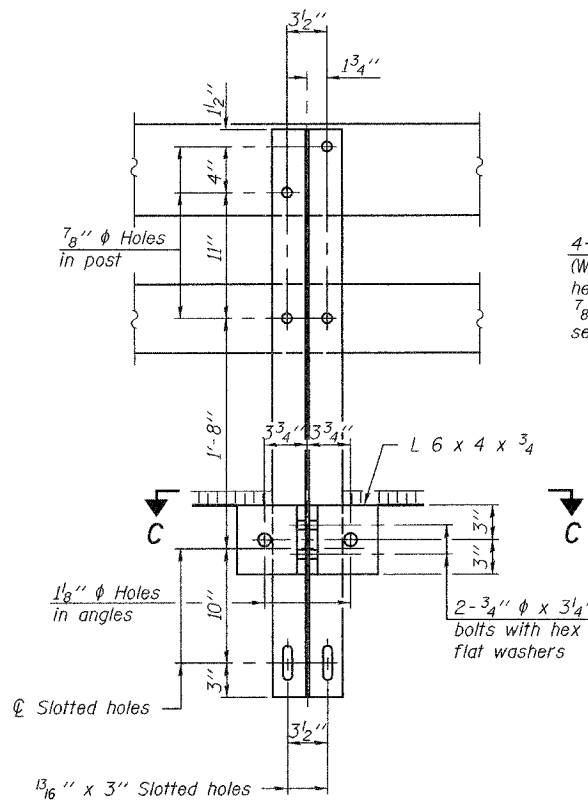
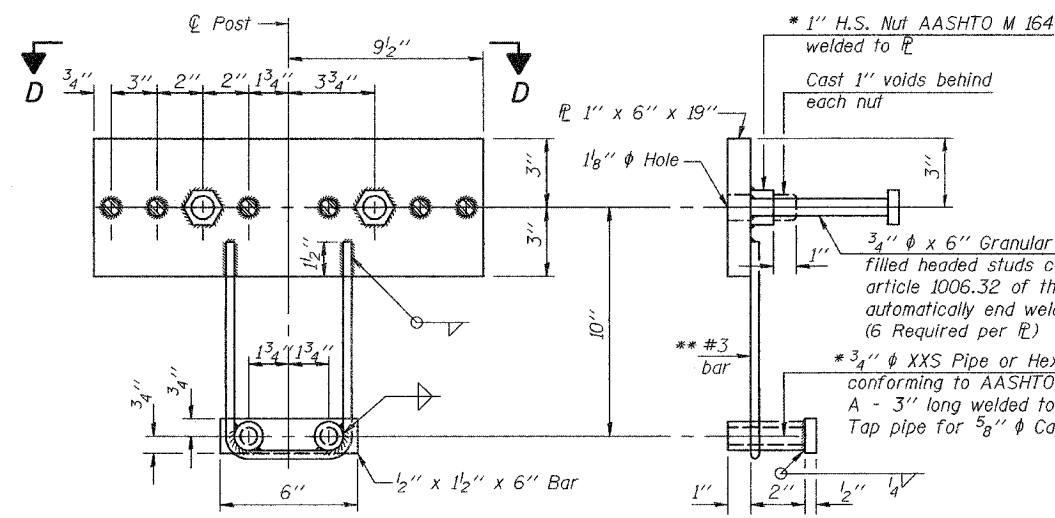
Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	378

TYPE SM
STEEL BRIDGE RAIL SIDE MOUNTED WITH BITUMINOUS WEARING SURFACE
FAP ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

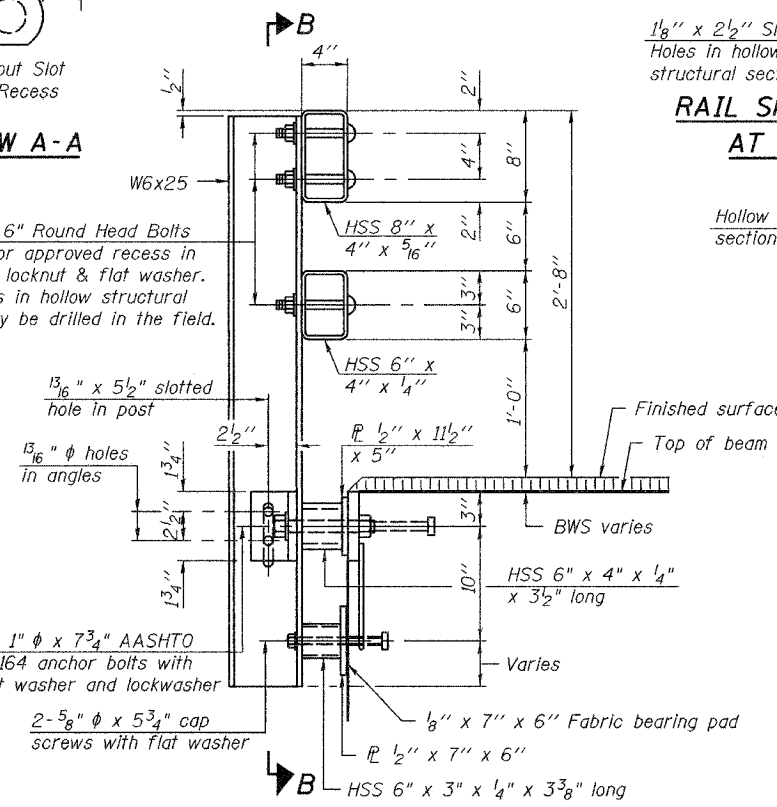
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

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

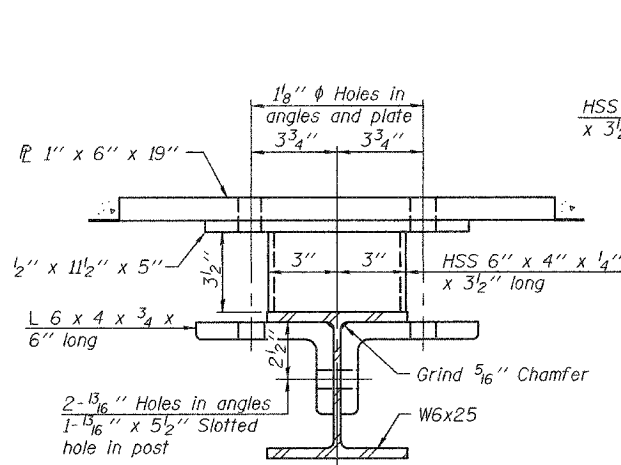
ANCHOR DEVICE



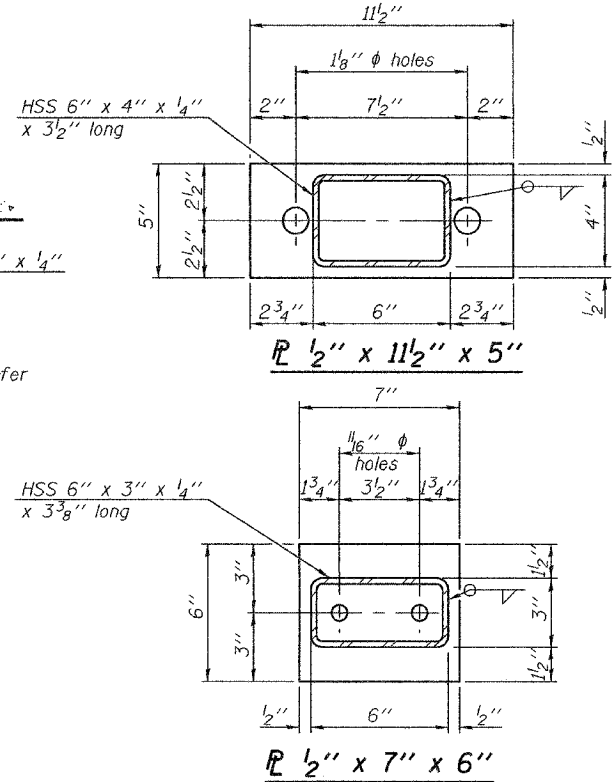
SECTION B-B



SECTION AT RAIL POST



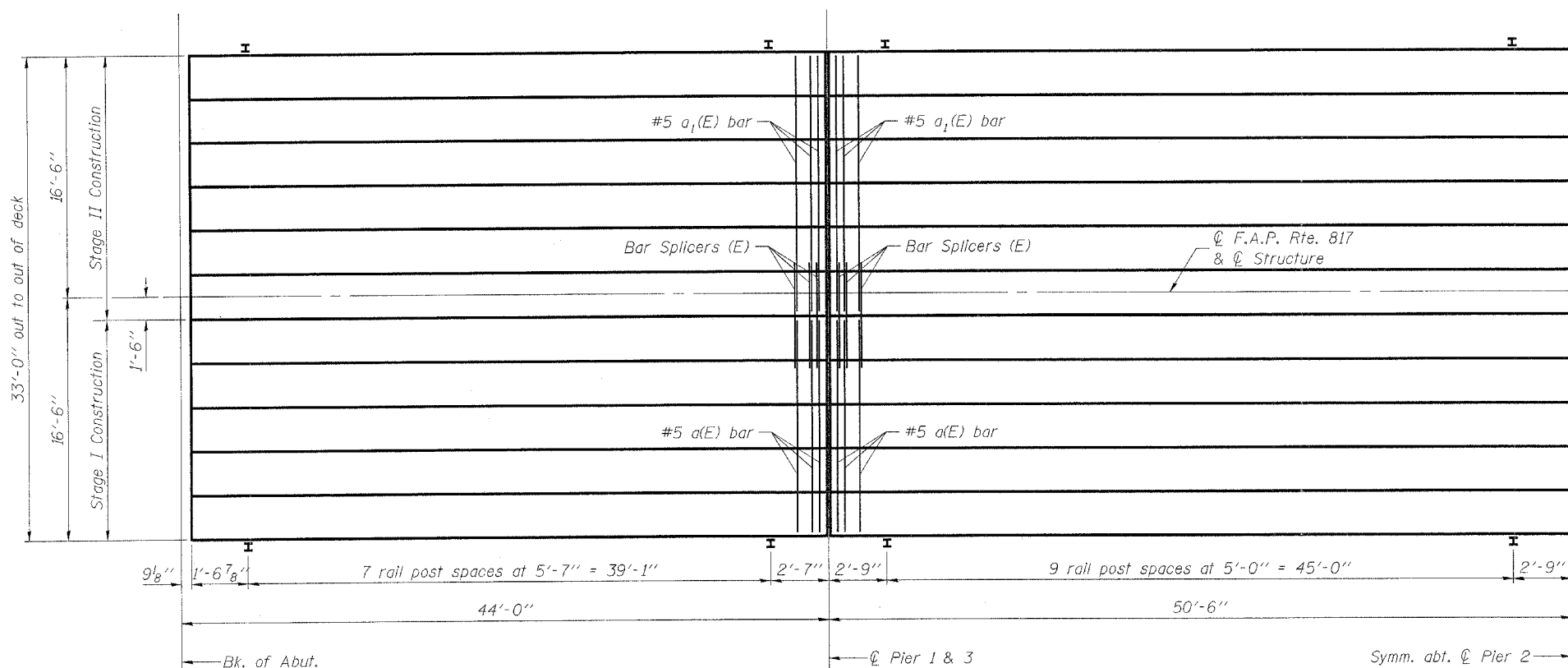
SECTION C-C



DESIGNED
CHECKED
DRAWN
CHECKED

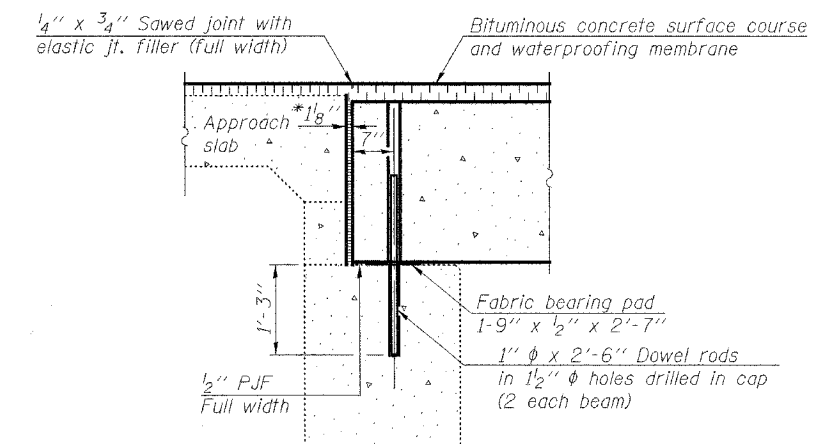
R-34BWS

10-28-05 (6'-3" Maximum Post Spacing) (1/4" minimum to 3/8" maximum BWS thickness)



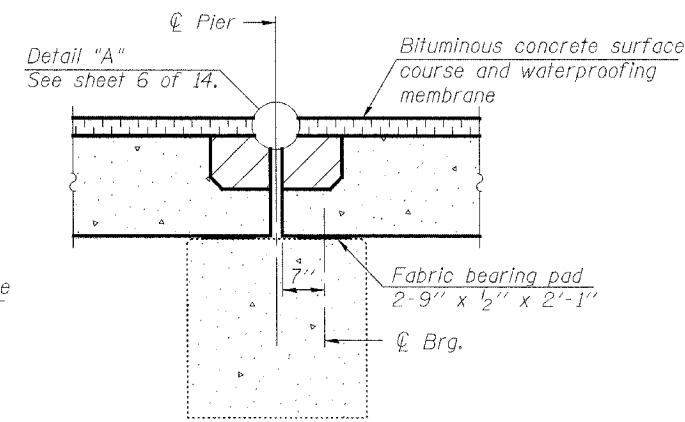
Note:
Rail spacing the same on both sides of the bridge.

HALF PLAN

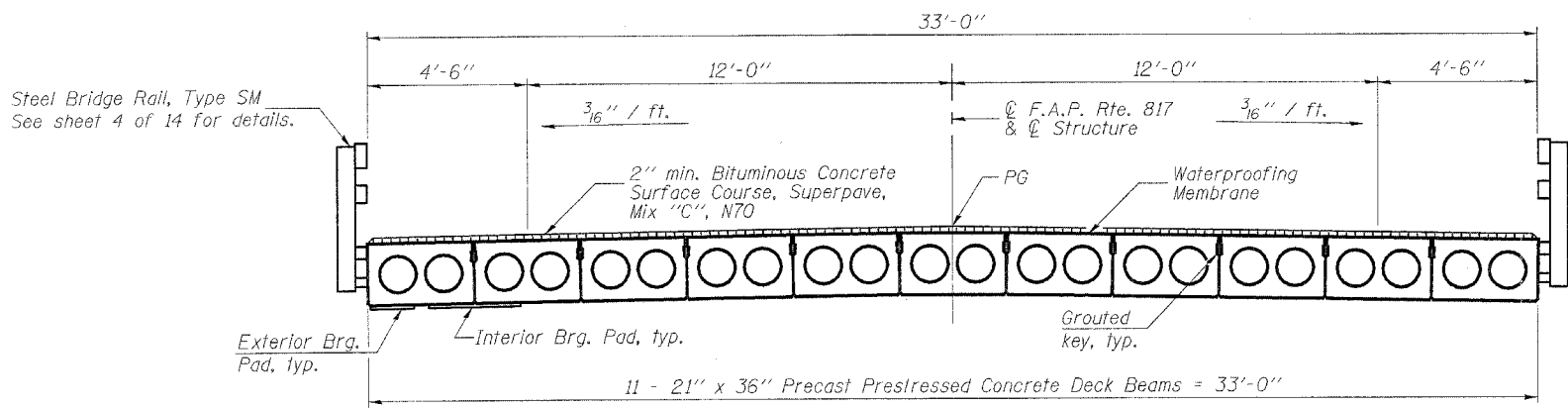


SECTION THRU ABUTMENT

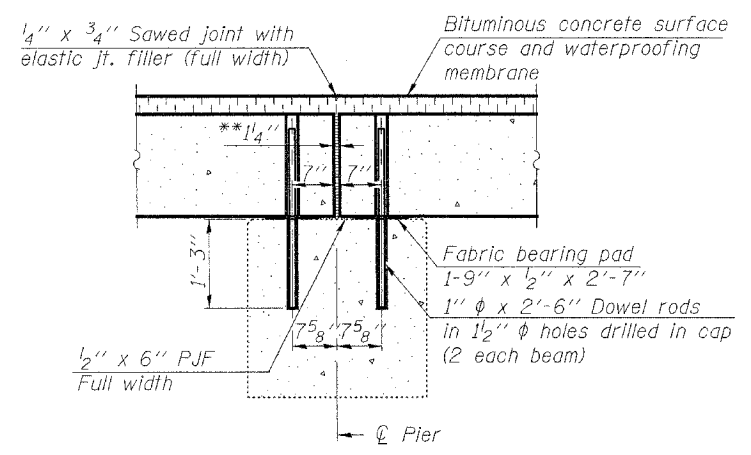
*1/8" Jt. shall be filled with non-shrink grout. 1/8" dimension may vary to accommodate tolerance in beam lengths.



SECTION THRU EXPANSION PIER



CROSS SECTION



SECTION THRU FIXED PIER

**1/4" Jt. shall be filled with non-shrink grout. 1/4" dimension may vary to accommodate tolerance in beam lengths.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	12	#5	14'-9"	—	
a1(E)	12	#5	17'-9"	—	
Reinforcement Bars, Epoxy Coated				Pound	410

Notes:
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.
All horizontal dimensions are at right angles to beam ends.
Hatched area to be poured after beams are in place.
See sheets 7 & 8 of 14 for bearing pad details.
See "End of Beam (Exp. End)" detail on sheets 7 & 8 of 14 for placement of a(E) and a1(E) bars.
See sheet 14 of 14 for Bar Splicer Detail.

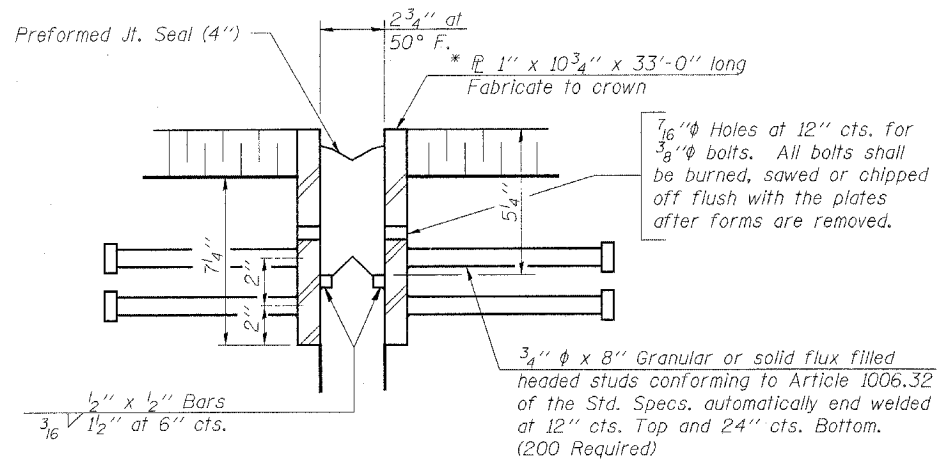
DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

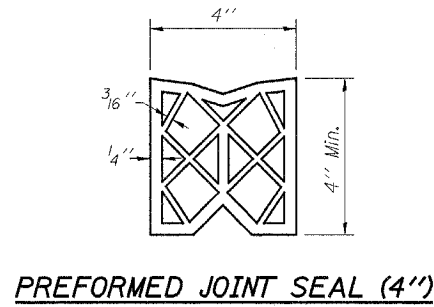
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 817	106BR-1	WASHINGTON	15	6
REVISION	DATE	BY	PROJECT	

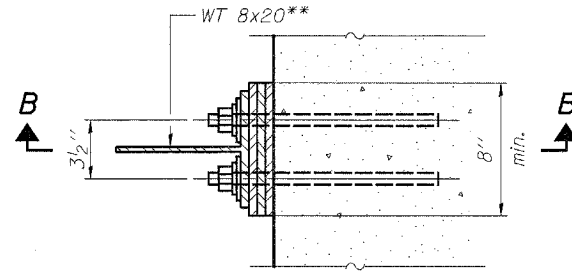


DETAIL A

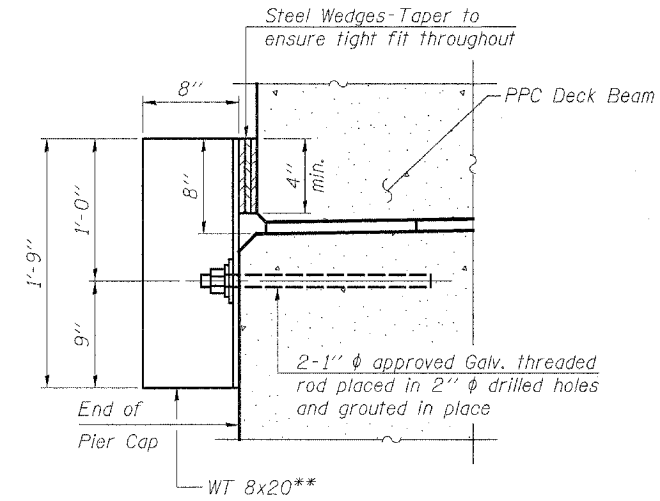
* Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16 inch. Seal space with Silicone Sealant suitable for Structural Steel.



PREFORMED JOINT SEAL (4'')

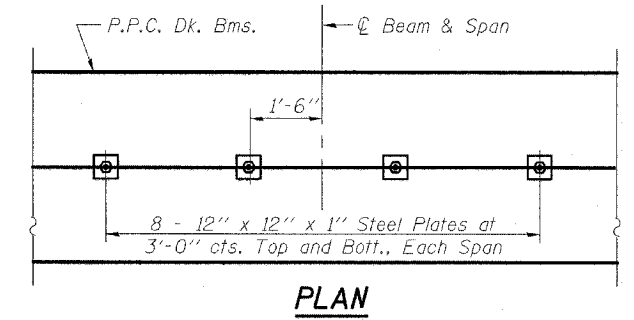


PLAN - EXP. JT. RETAINER

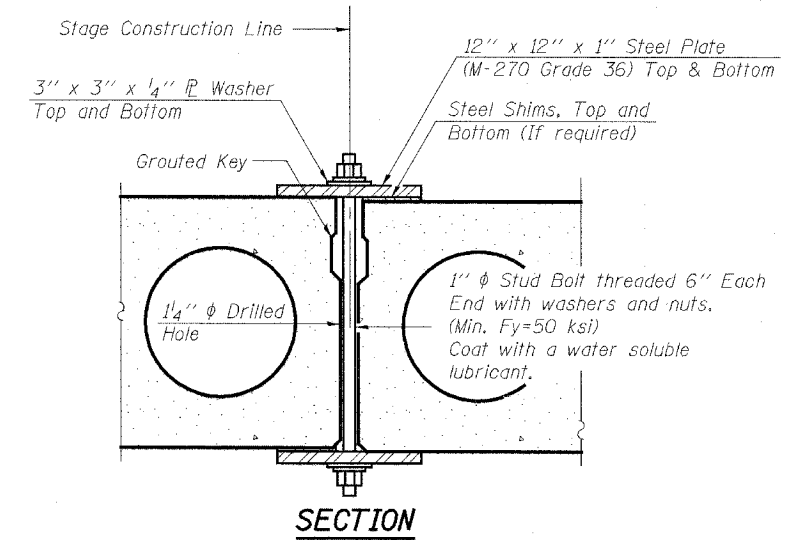


SECTION B-B

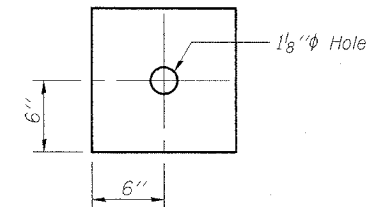
** WT 8x20 and accessories shall be galvanized. Only the Steel wedges shall be removed. Cost of retainer and accessories are included with "Precast Prestressed Concrete Deck Beams".



PLAN



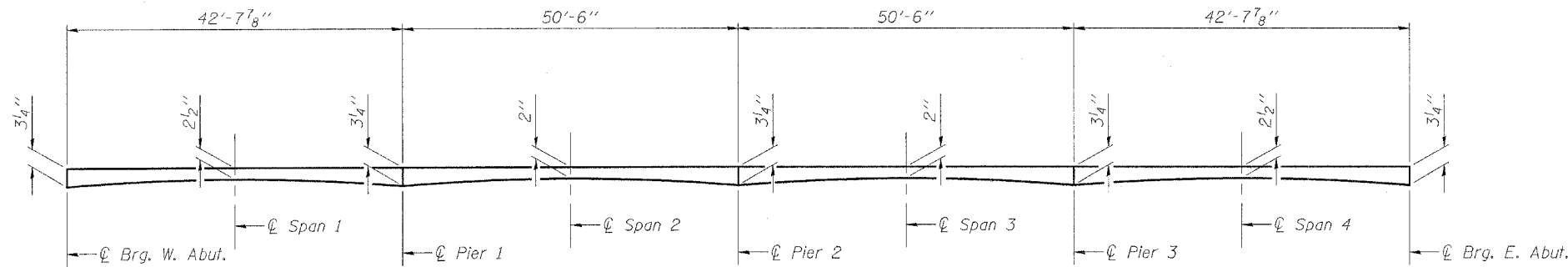
SECTION



CLAMPING PLATE

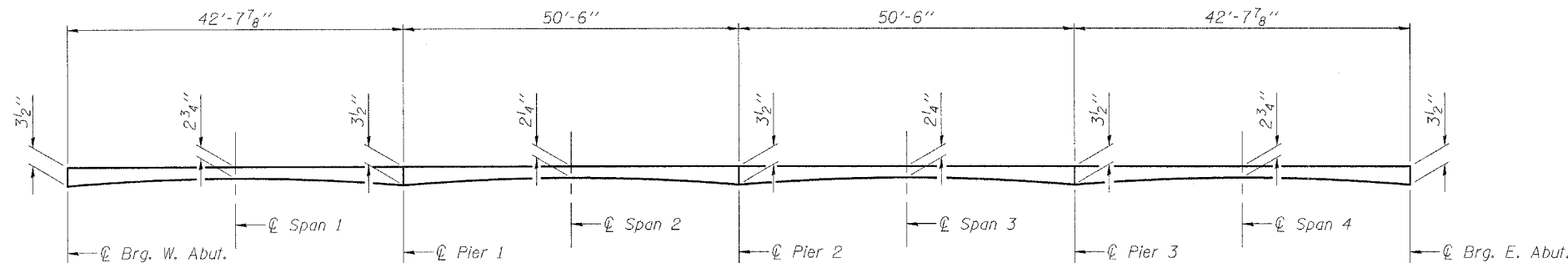
SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

See Special Provisions for Stage Construction of Precast Prestressed Concrete Deck Beams. Cost included with "Precast Prestressed Concrete Deck Beams". See Stage Construction Details for traffic lanes.



BITUMINOUS CONCRETE SURFACE COURSE PROFILE

(Bituminous concrete surface course along edge of beams)



BITUMINOUS CONCRETE SURFACE COURSE PROFILE

(Bituminous concrete surface course along Roadway)

Note:
Bituminous Concrete Surface Course Profile dimensions include 1/2 inch for waterproofing membrane thickness.

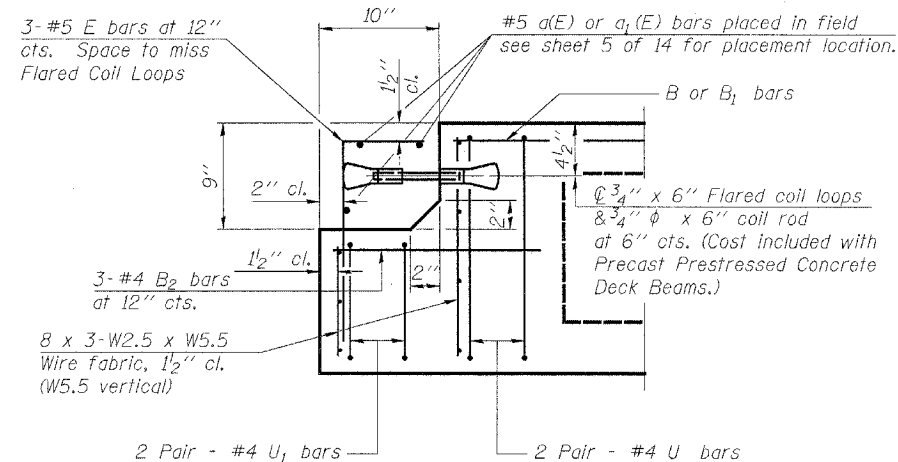
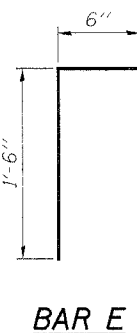
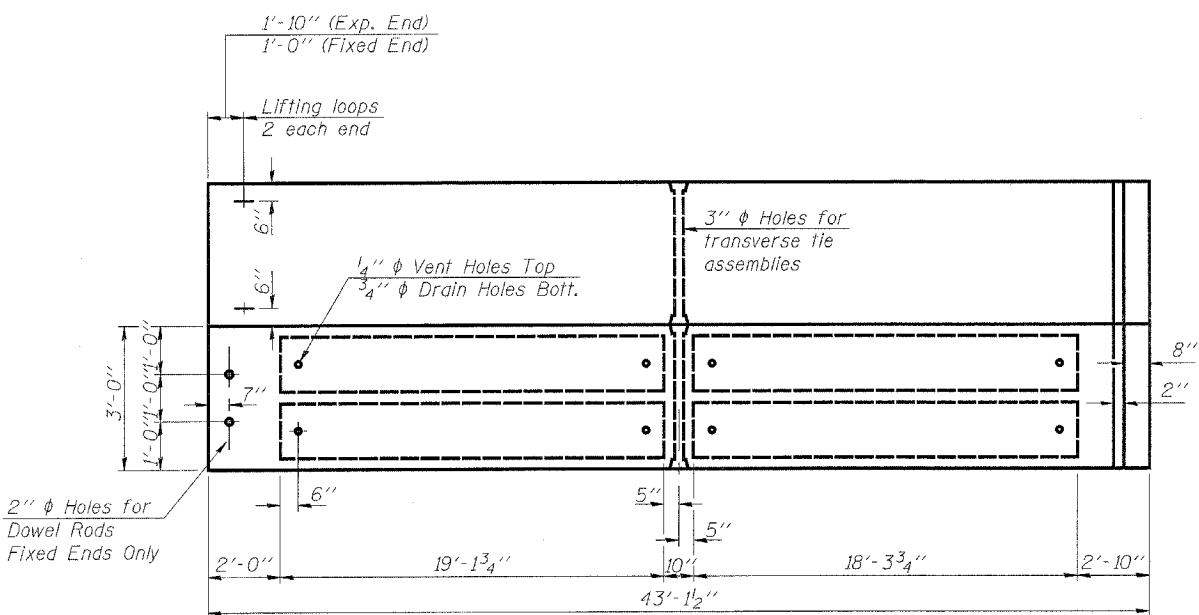
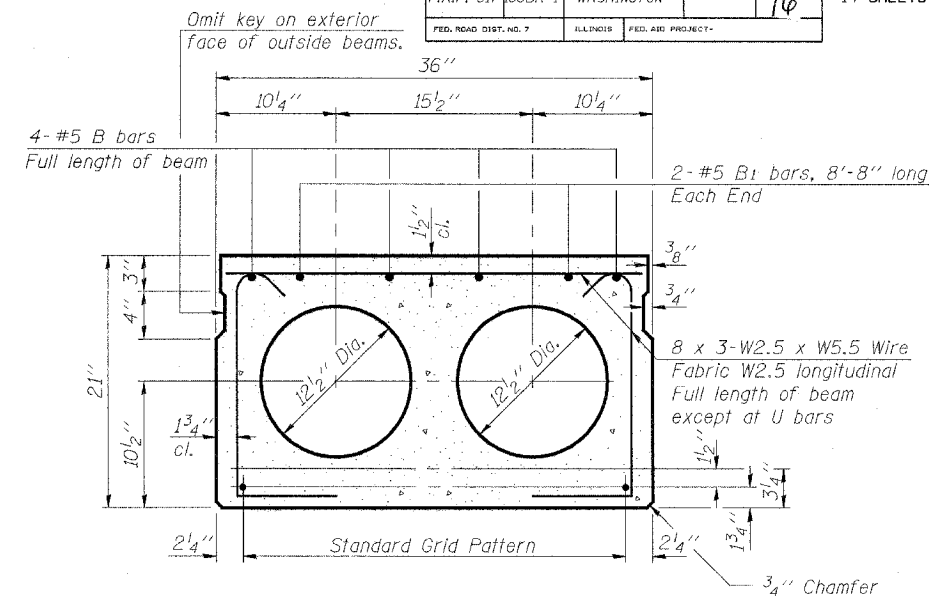
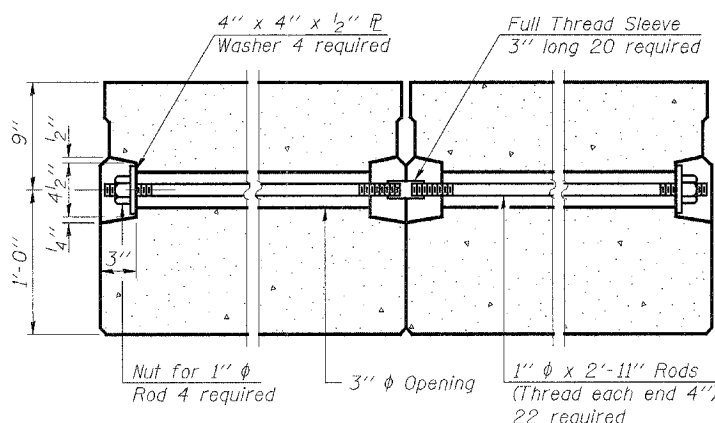
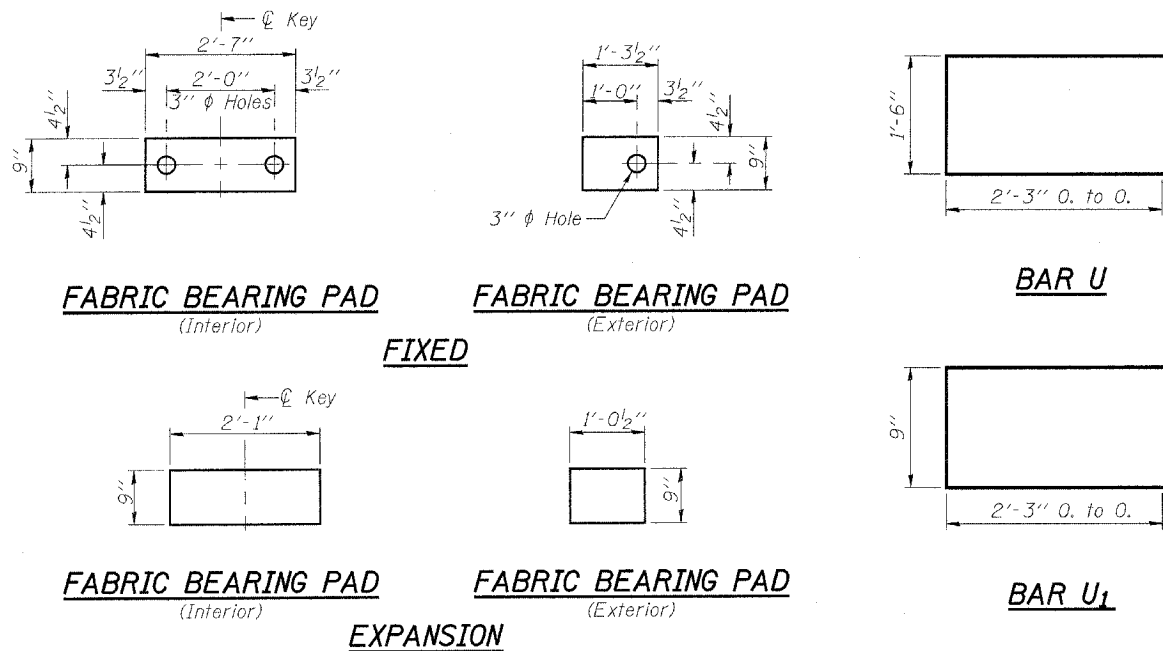
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CHECKED	NJM
DRAWN	EML
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

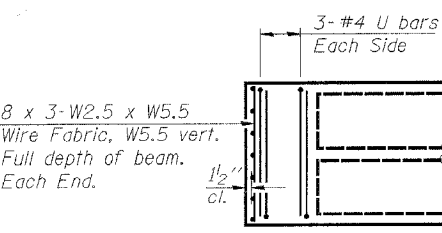
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 817	106BR-1	WASHINGTON	14	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

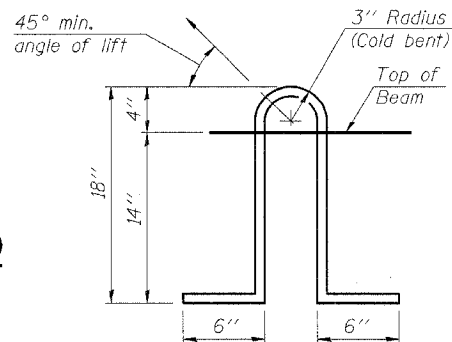
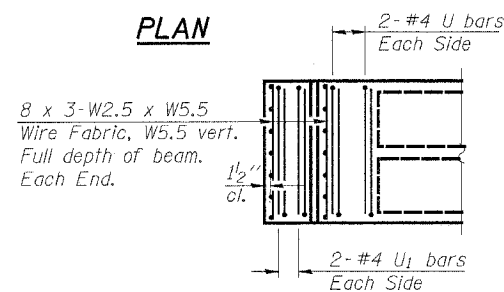


BAR LIST (ONE BEAM)

Bar	No.	Size	Length	Shape
B	4	#5	42'-0"	—
B1	4	#5	8'-8"	—
B2	3	#4	2'-7"	—
E	3	#5	2'-0"	┌
U	10	#4	6'-0"	—
U1	4	#4	5'-3"	—



PLAN



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. Lifting loops shall be 2-1/2" φ-270 ksi strands, as shown.

The 1" φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place, and only during Stage II Construction.

Non prestressing steel shall conform to AASHTO M-31, or M-322 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 Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

Required Release Strength, f'ci, shall be 4,000 p.s.i.

See sheet 5 of 14 for spacing of rail post.

See sheet 4 of 14 for rail anchor device to be cast in precast beams.

See sheet 6 of 14 for Shear Key Clamping Details at Stage Const. Jt.

See sheet 3 of 14 for Wing Type Threaded Insert location and spacing.

BILL OF MATERIAL

Item	Unit	Total
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	2846

SUPERSTRUCTURE DETAILS-SPANS 1 & 4
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

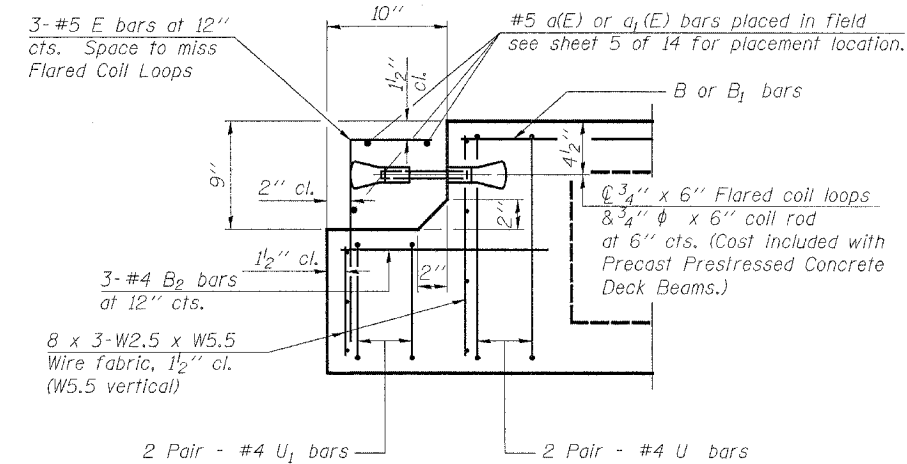
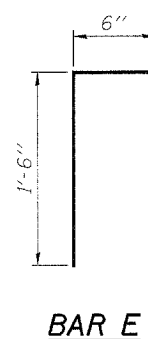
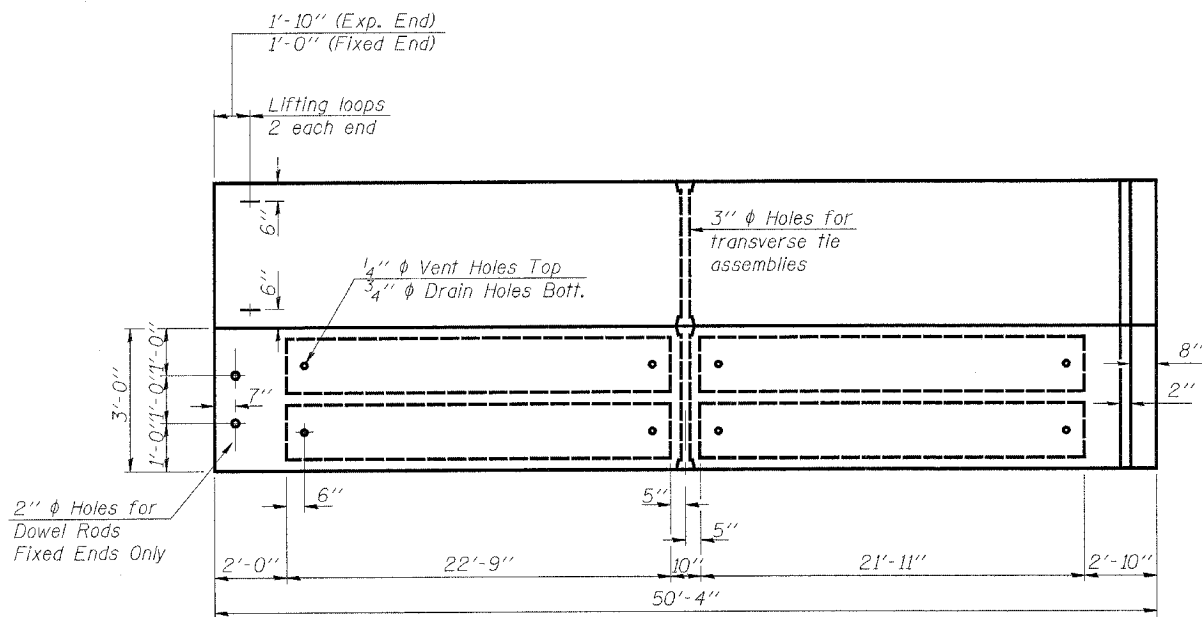
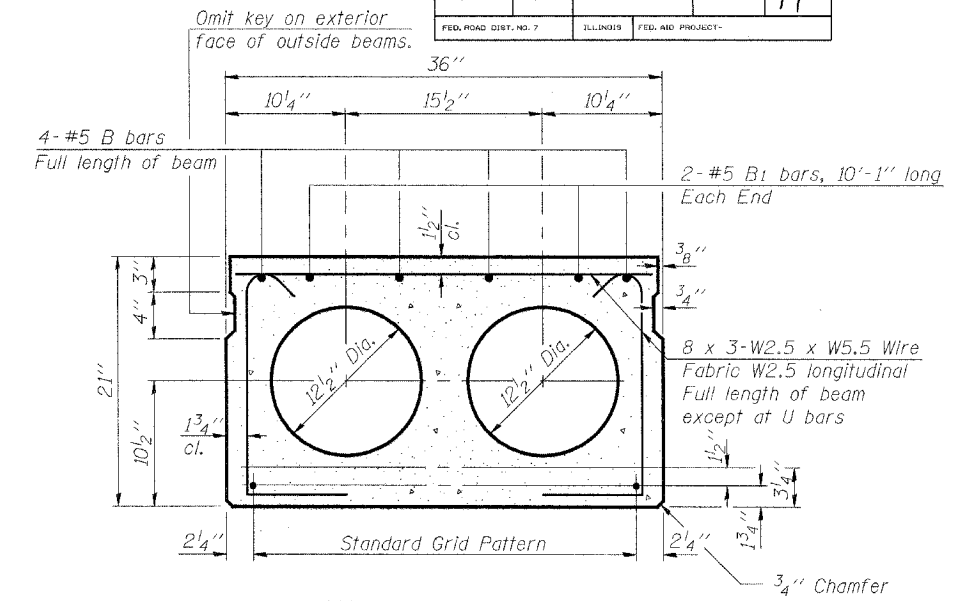
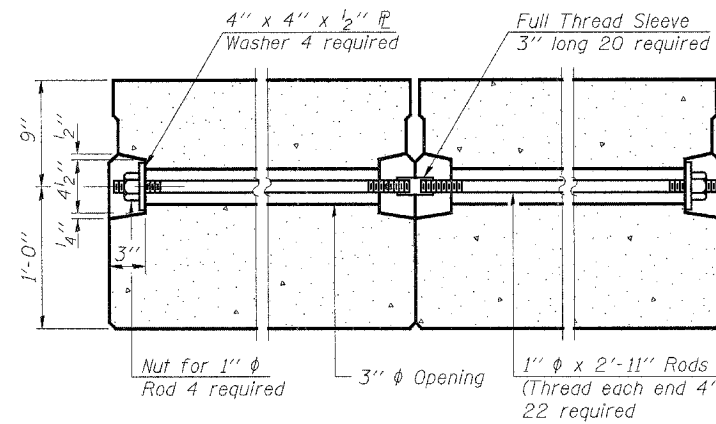
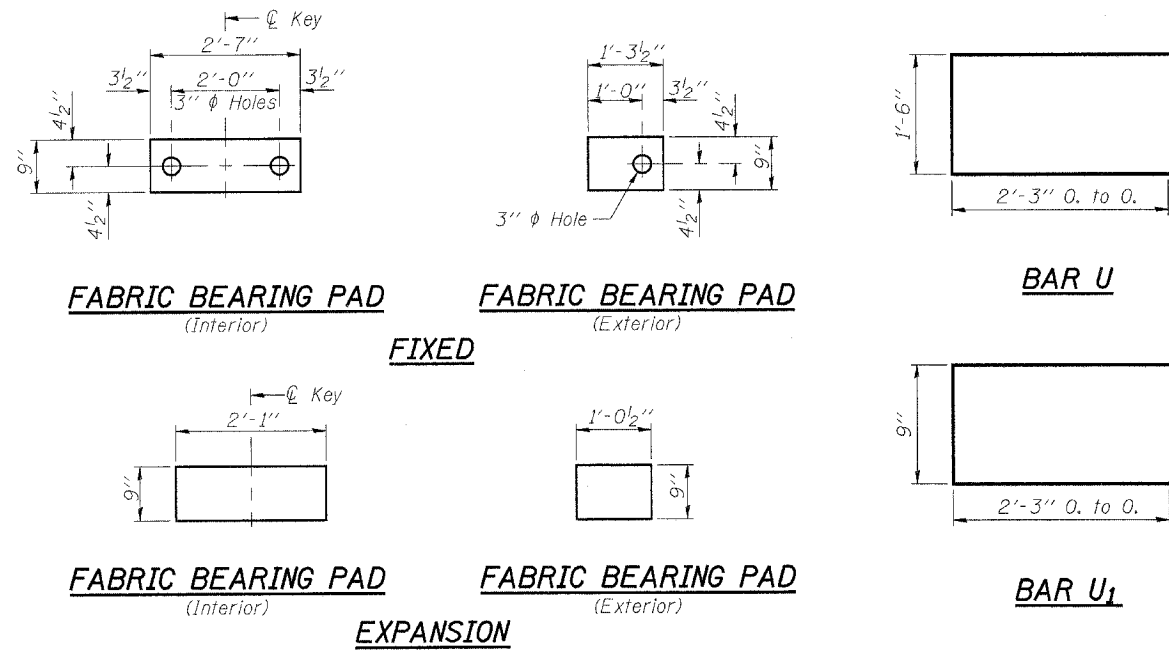
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CHECKED	NJM
DRAWN	EML
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS ARCHITECTS PLANNERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

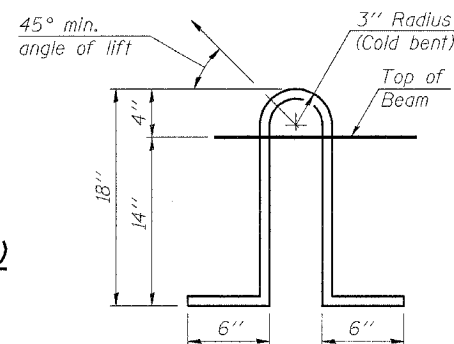
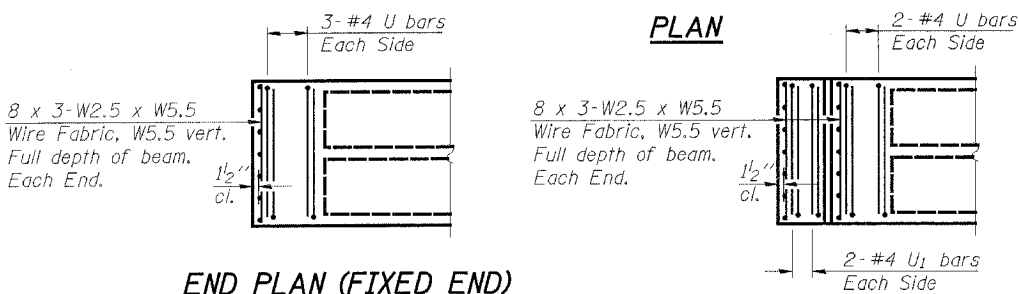
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 817	106BR-1	WASHINGTON	17	17
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 8
14 SHEETS



BAR LIST (ONE BEAM)

Bar	No.	Size	Length	Shape
B	4	#5	49'-3"	—
B1	4	#5	10'-1"	—
B2	3	#4	2'-7"	—
E	3	#5	2'-0"	┌
U	10	#4	6'-0"	—
U1	4	#4	5'-3"	—



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. Lifting loops shall be 2-1/2" φ-270 ksi strands, as shown.

The 1" φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place, and only during Stage II Construction.

Non prestressing steel shall conform to AASHTO M-31, or M-322 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 Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

Required Release Strength, f'ci, shall be 4,000 p.s.i.

See sheet 5 of 14 for spacing of rail post.

See sheet 4 of 14 for rail anchor device to be cast in precast beams.

See sheet 6 of 14 for Shear Key Clamping Details at Stage Const. Jt.

See sheet 3 of 14 for Wing Type Threaded Insert location and spacing.

BILL OF MATERIAL

Item	Unit	Total
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	3322

SUPERSTRUCTURE DETAILS-SPANS 2 & 3
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

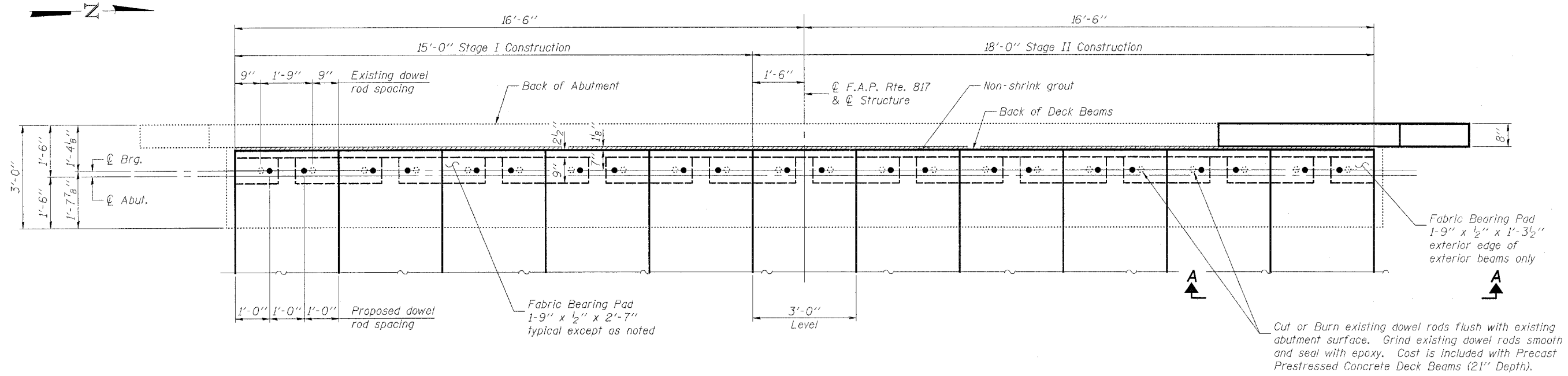
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DRAWN	EML
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS ARCHITECTS PLANNERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

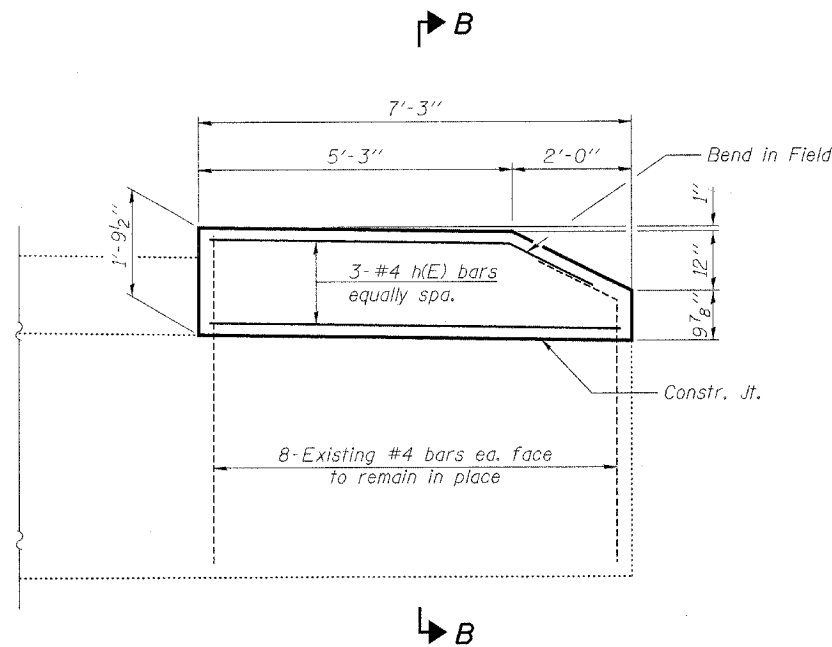
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 817	106BR-1	WASHINGTON	18	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

14 SHEETS



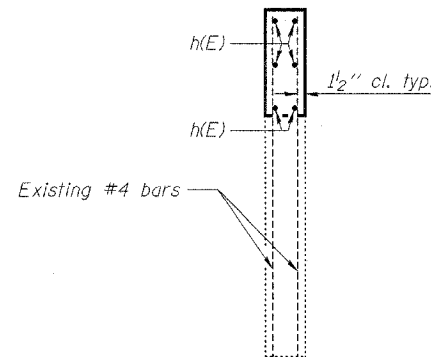
PLAN

(Bituminous concrete surface course not shown)



VIEW A-A

(Deck beams, bituminous concrete surface course not shown)



SECTION B-B

Notes:
Concrete Structures shown are to be poured before Precast Prestressed Concrete Deck Beams are in place.
For Abutment Repair and Concrete Removal details see sheet 11 of 14.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	6	#4	7'-0"	
Reinforcement Bars, Epoxy Coated			Pound	30
Concrete Structures			Cu. Yd.	0.3

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

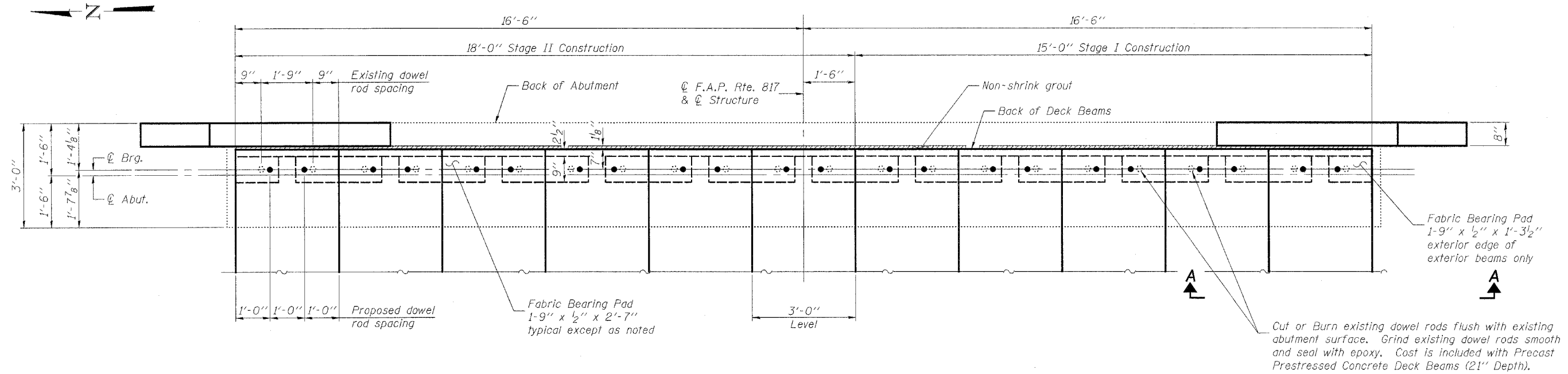
HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS

WEST ABUTMENT
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 817	106BR-1	WASHINGTON	19	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

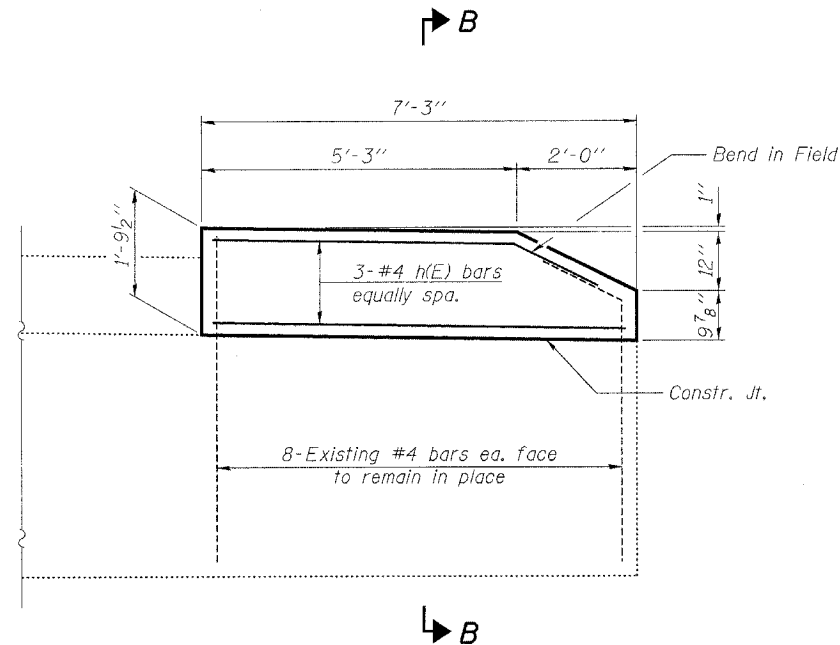
SHEET NO. 10
14 SHEETS



Cut or Burn existing dowel rods flush with existing abutment surface. Grind existing dowel rods smooth and seal with epoxy. Cost is included with Precast Prestressed Concrete Deck Beams (21" Depth).

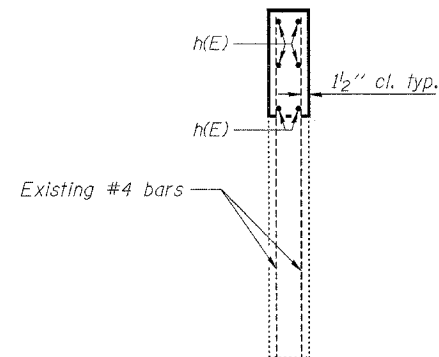
PLAN

(Bituminous concrete surface course not shown)



VIEW A-A

(Deck beams, bituminous concrete surface course not shown. South side shown, North side similar)



SECTION B-B

Notes:

Concrete Structures shown are to be poured before Precast Prestressed Concrete Deck Beams are in place. For Abutment Repair and Concrete Removal details see sheet 11 of 14.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	12	#4	7'-0"	—
Reinforcement Bars, Epoxy Coated			Pound	60
Concrete Structures			Cu. Yd.	0.6

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

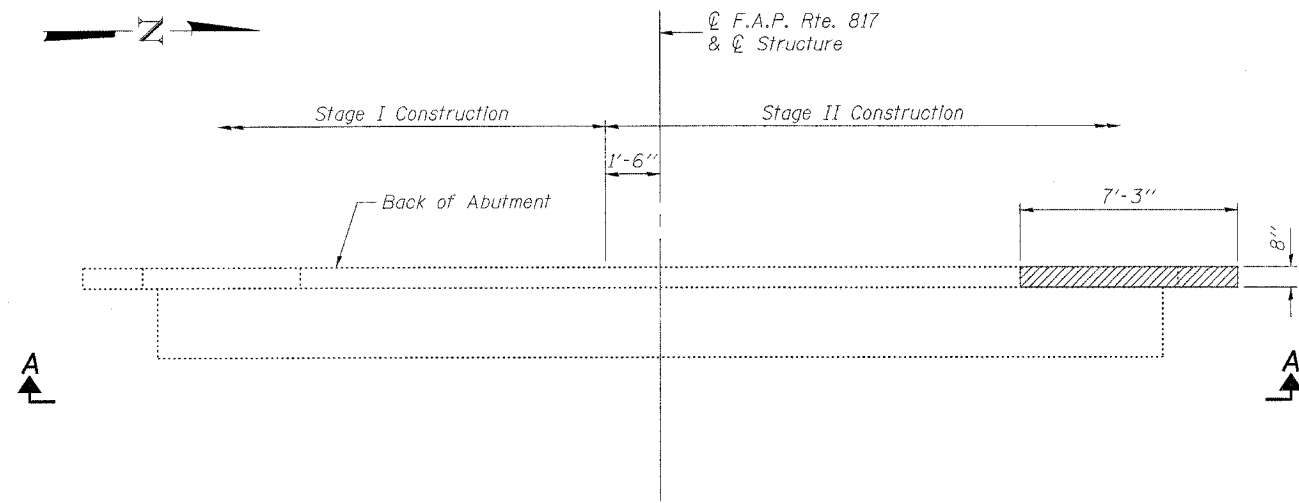
HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS

EAST ABUTMENT
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

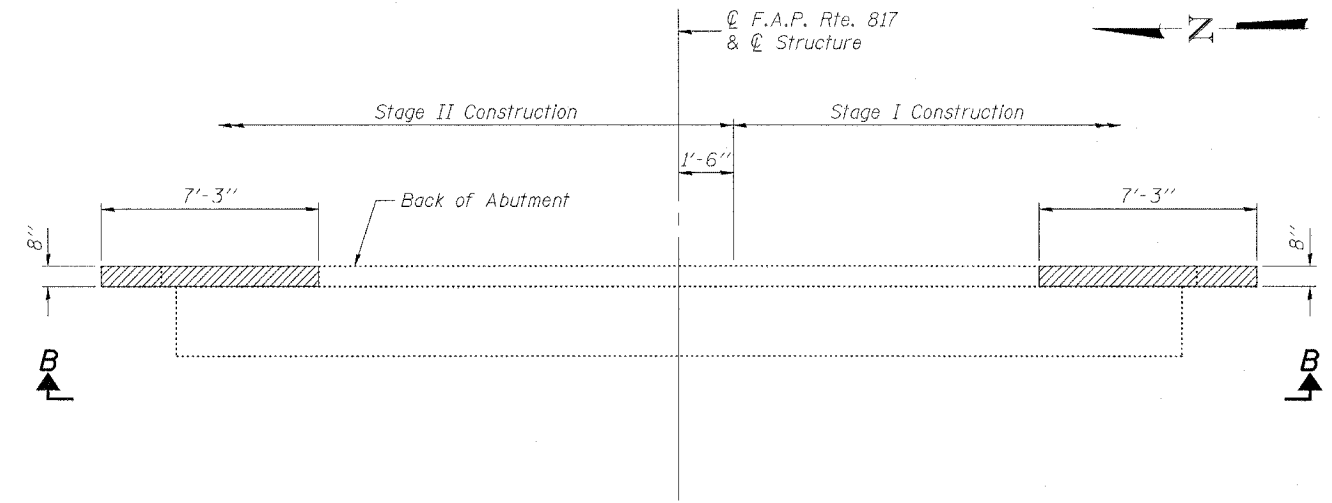
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

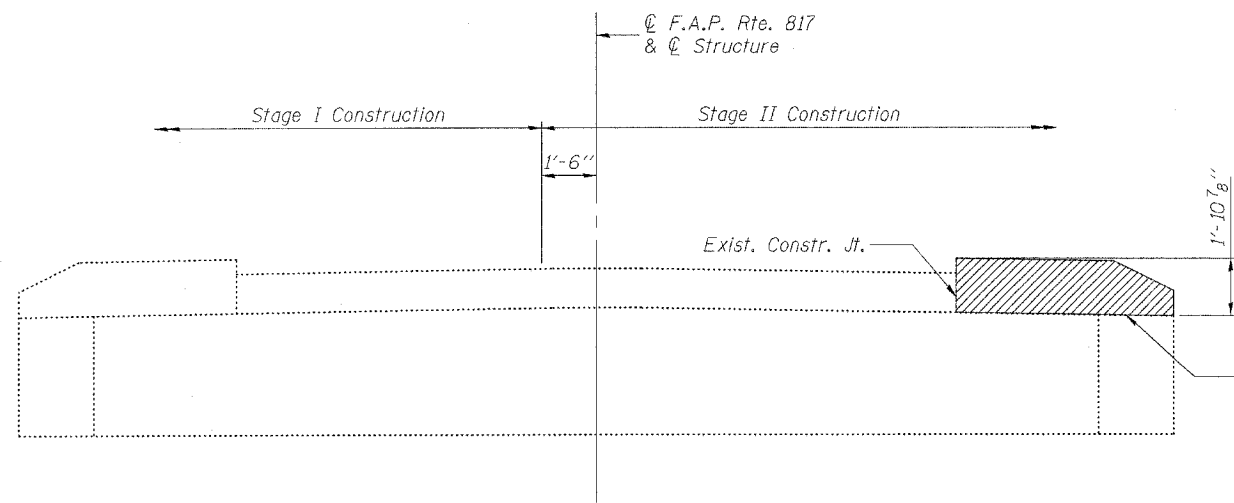
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14 SHEETS



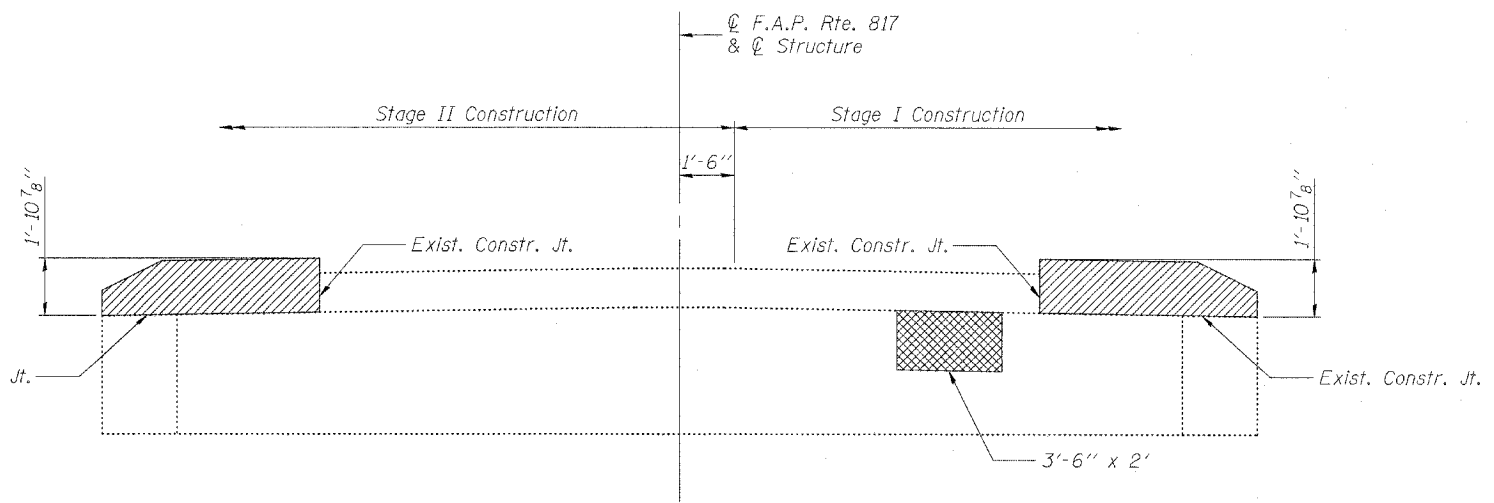
PLAN - WEST ABUTMENT



PLAN - EAST ABUTMENT



VIEW A-A



VIEW B-B

Notes:
Existing reinforcement extending into Concrete Removal shall be cleaned and incorporated into Concrete Structures.
Concrete Removal and Formed Concrete Repair shall occur during its respective stage construction and prior to placement of the new deck beams.
See Special Provisions for Formed Concrete Repair.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	0.9
Formed Concrete Repair (Depth Equal to or less than 5")	Sq. Ft.	7.0

LEGEND

- Concrete Removal
- Formed Concrete Repair

DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

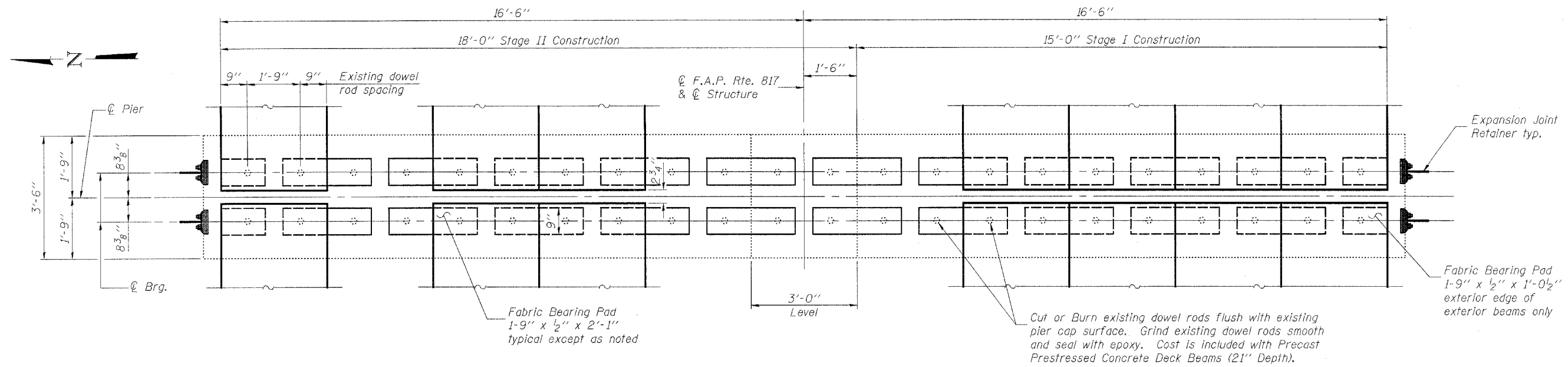
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**ABUTMENT REPAIR AND
CONCRETE REMOVAL DETAILS
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

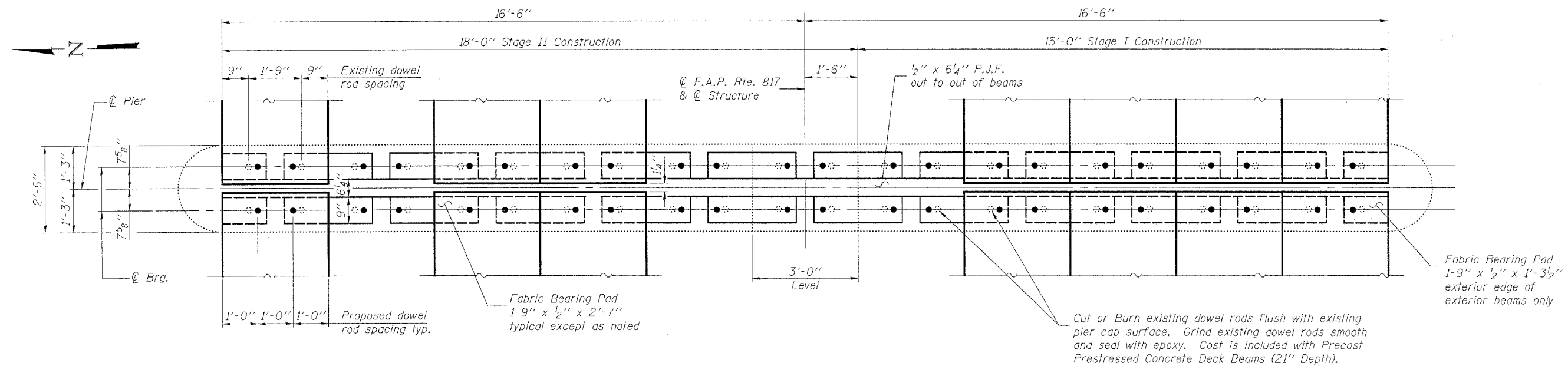
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12 14 SHEETS
F.A.P. 817	106BR-1	WASHINGTON		2	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Notes:
See sheet 6 of 14 for details of Expansion Joint Retainer located at Piers 1 & 3.
See sheet 13 of 14 for Formed Concrete Repair details.



PLAN - PIERS 1 & 3

(Not all deck beams are shown)
(Bituminous concrete surface course and expansion joint not shown)



PLAN - PIER 2

(Not all deck beams are shown)
(Bituminous concrete surface course not shown)

DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

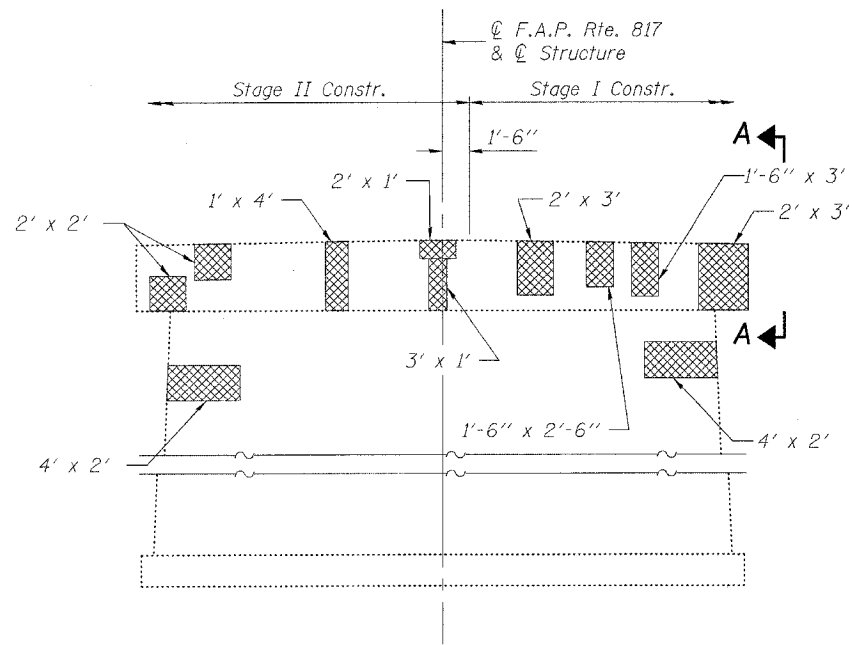
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PIERS
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

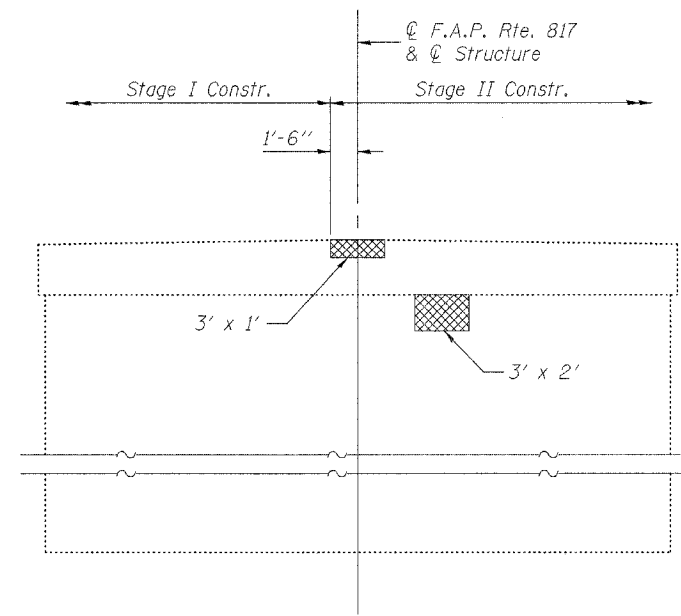
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 817	106BR-1	WASHINGTON	22	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		14 SHEETS

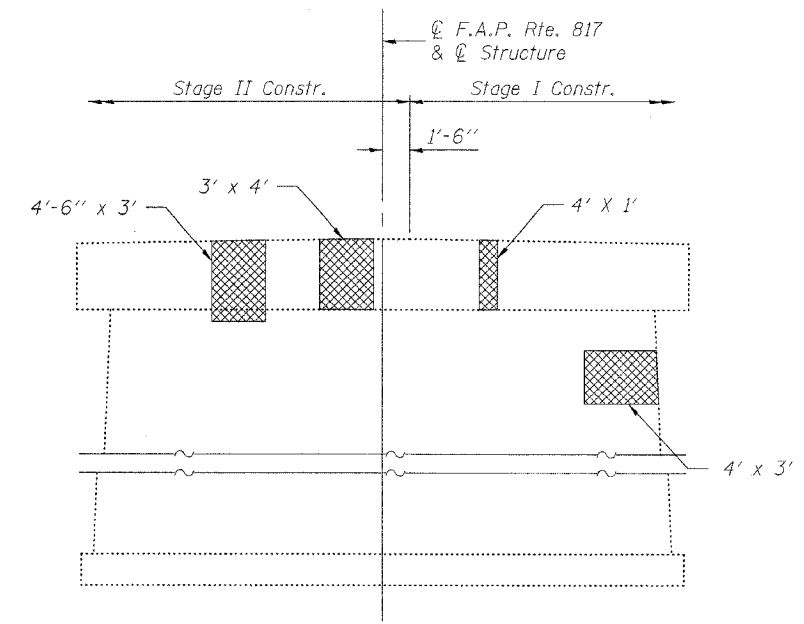
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14 SHEETS



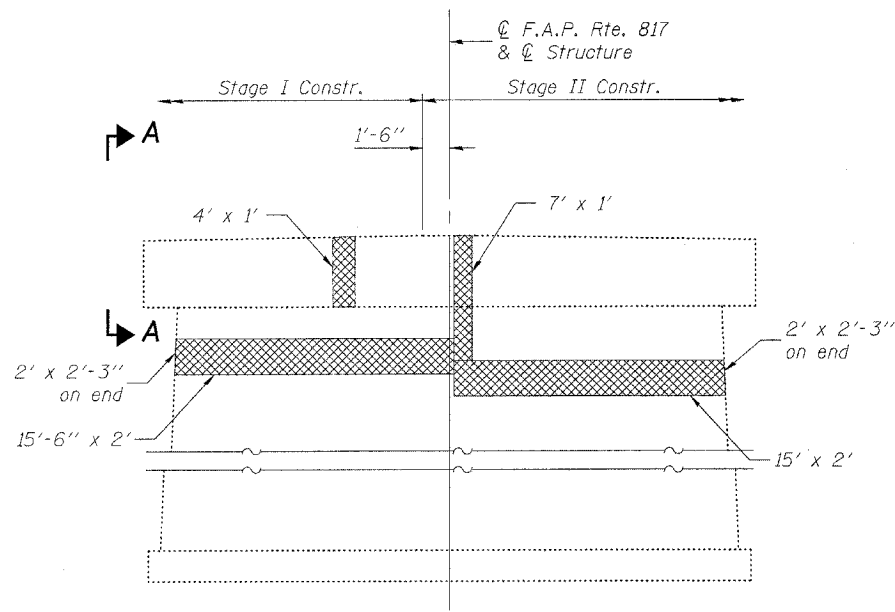
ELEVATION-PIER 1
(Looking East)



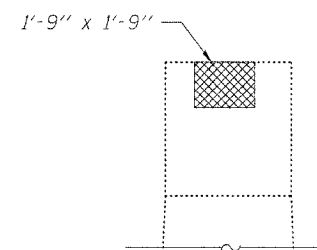
ELEVATION-PIER 2
(Looking West)



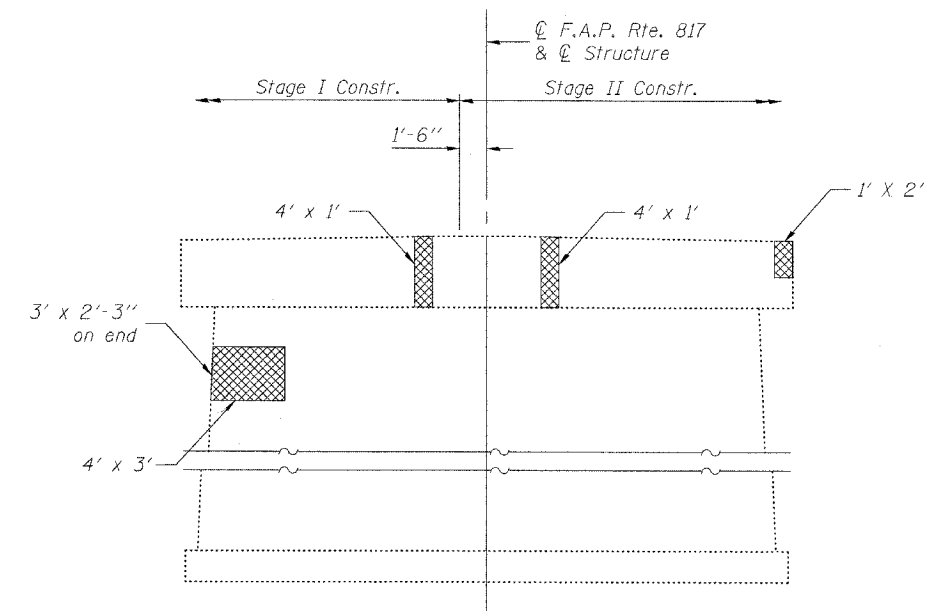
ELEVATION-PIER 3
(Looking East)



ELEVATION-PIER 1
(Looking West)



VIEW A-A



ELEVATION-PIER 3
(Looking West)

Notes:
Formed Concrete Repair shall occur during its respective stage construction and prior to placement of the new deck beams.
See Special Provisions for Formed Concrete Repair.

LEGEND

Formed Concrete Repair

BILL OF MATERIAL

Item	Unit	Total
Formed Concrete Repair (Depth Equal to or less than 5")	Sq. Ft.	216.6

PIER REPAIR
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS

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:

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{s_{allow}} \times A_t$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.

$f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

A_t = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

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

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

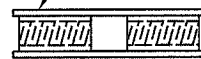
The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

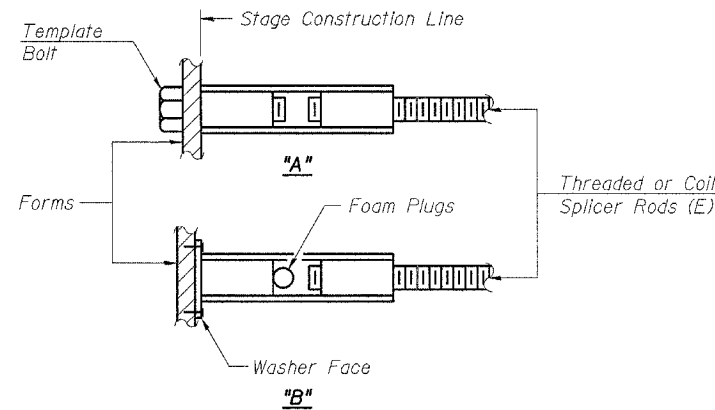
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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

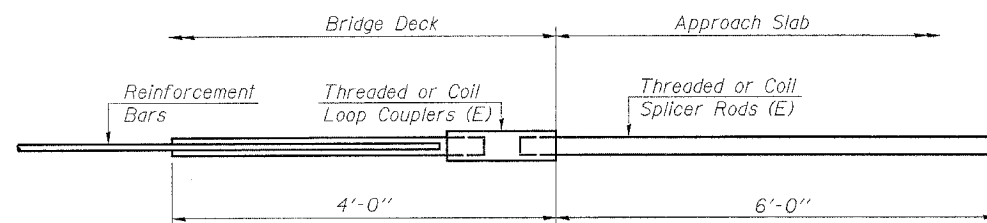


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

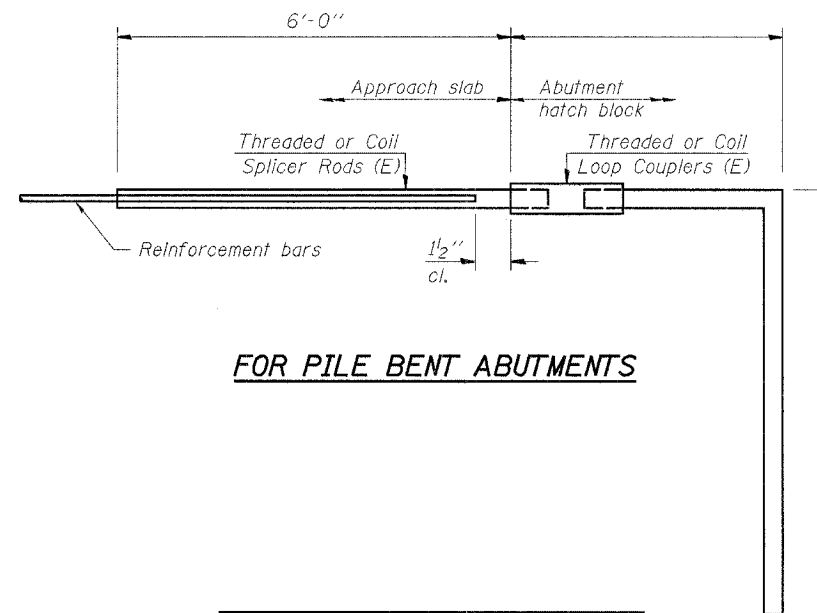
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



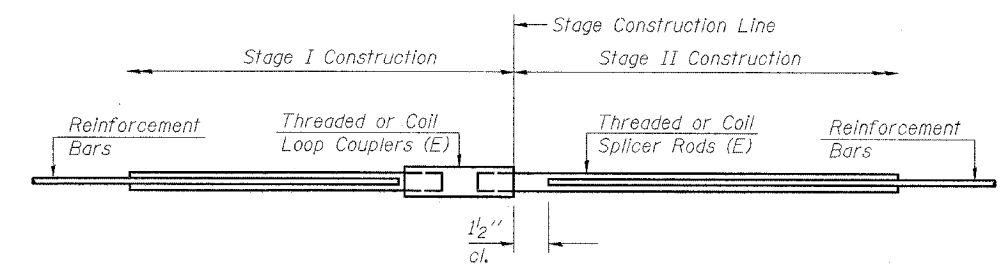
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR PILE BENT ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	12	Expansion Joint

BAR SPLICER ASSEMBLY DETAILS
F.A.P. ROUTE 817 - SECTION 106BR-1
WASHINGTON COUNTY
STATION 690+00.00
STRUCTURE NO. 095-0028

DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

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