

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	126BR-1	RANDOLPH	27	1

CONTRACT NO. 76898

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

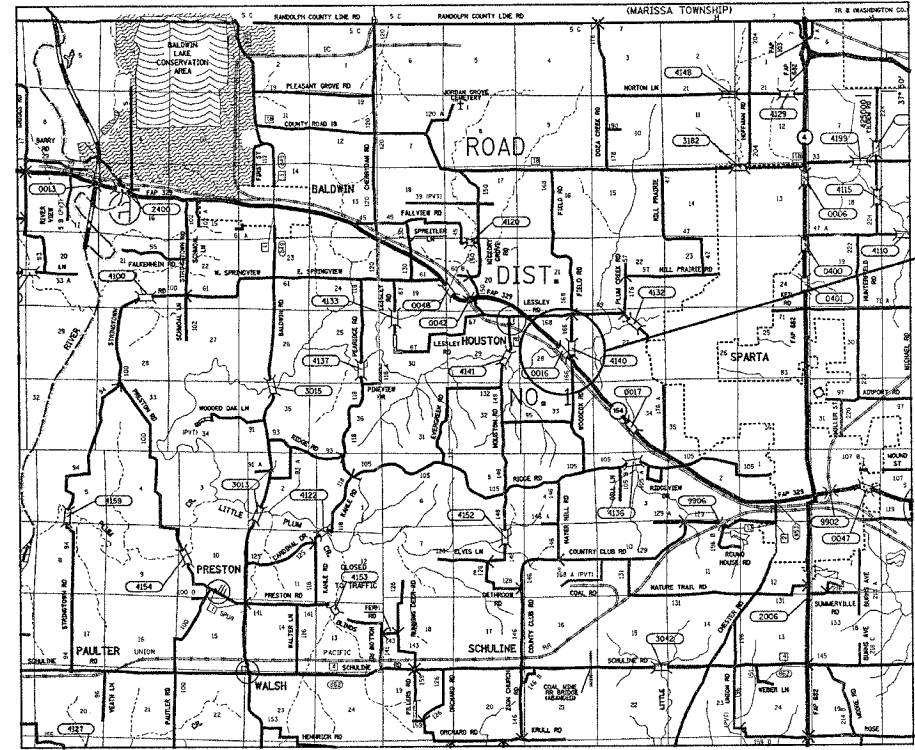
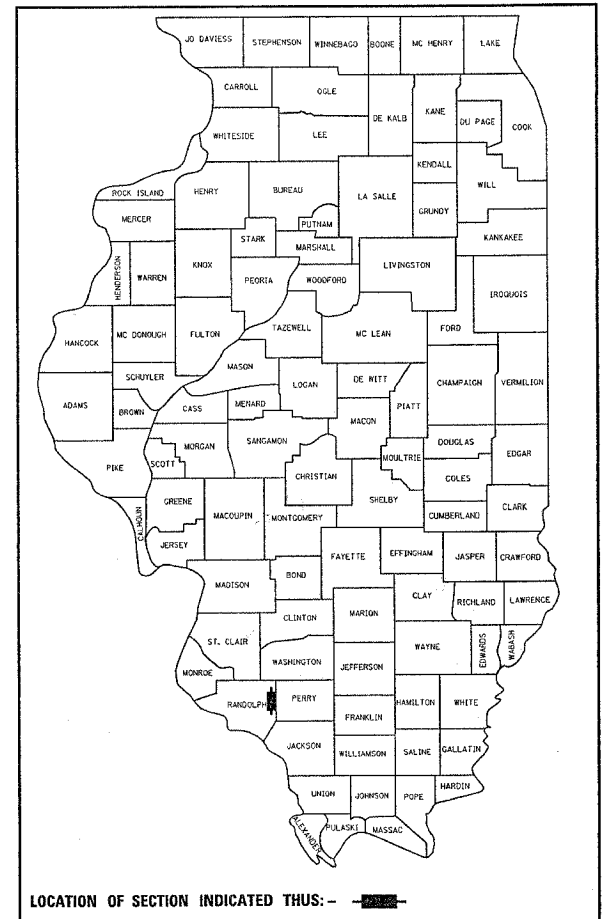
**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 329 (IL 154)  
SECTION 126BR-1  
PROJECT NO: BHF-0329(012)  
SUPERSTRUCTURE REPLACEMENT  
RANDOLPH COUNTY

**C-98-110-05**

FOR INDEX OF SHEETS, SEE SHEET NO. 2

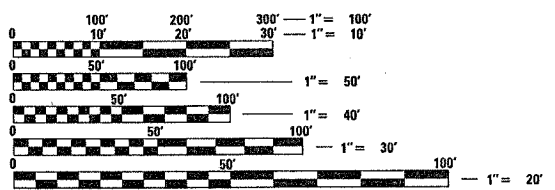
D-98-038-05



PROJECT LOCATION  
IL 154 OVER PLUM CREEK  
STA. 717+73.5 TO STA. 720+06.5  
(S.N. 079-0016)

PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179  
SQUAD LEADER: 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.

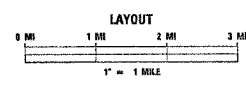
J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0122

CONTRACT NO. 76898



TRAFFIC DATA  
ADT = 3000 (2006)  
ADT = 3700 (2026)  
SU = 4.2%  
MU = 7.6%

LATITUDE X: 38.1518  
LONGITUDE Y: 89.7654



GROSS LENGTH = .044 MI.  
NET LENGTH = .044 MI.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED August 21, 2006  
*May C. Jamil*  
DEPUTY DIRECTOR OF HIGHWAYS  
REGION FIVE ENGINEER

October 13, 2006  
*Mike Nipe*  
ENGINEER OF DESIGN AND ENVIRONMENT

October 13, 2006  
*Milton R. Sepp*  
DIRECTOR, DIVISION OF HIGHWAYS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	126BR-1	RANDOLPH	27	2
STA. TO STA.			CONTRACT NO. 76898	

**INDEX OF SHEETS**

1. COVER SHEET
2. GENERAL NOTES AND BUTT JOINT DETAIL
- 3.-4. SUMMARY OF QUANTITIES
5. TYPICAL SECTIONS
6. TIE POINTS AND SECHEDULES
7. PLAN AND ELEVATION
8. DETOUR SIGNING SHEET
9. STAGE 1 SHEET
10. WIDE LOAD SIGNING SHEET
- 11.-12. STAGE 2 AND 3 SHEET
- 13.-14. CROSS SECTIONS
- 15.-27. BRIDGE PLANS S.N. 079-0016

**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. 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 COOP. ASSN.
  - VILLAGE OF SPARTA
  - VERIZON NORTH, INC.
  - AMEREN IP
 MEMBERS OF J.U.L.I.E. (800) 892-0122 ARE INDICATED BY \*. NON-MEMBERS MUST BE NOTIFIED INDIVIDUALLY.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL WOOD SIGN SUPPORTS IN ACCORDANCE WITH SECTION 730 OF THE STANDARD SPECIFICATIONS; HOWEVER, INSTALLATION BY METHOD 'A' (ARTICLE 730.04(g)) SHALL BE THE ONLY METHOD PERMITTED.
5. 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.
6. 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.
7. THE EXISTING BEAMS SHALL BE CAREFULLY REMOVED AND DISPOSED OF OUTSIDE OF THE JOB SITE.
8. THE COST OF THE BRIDGE RAIL REMOVAL SHALL BE INCLUDED IN THE COST OF REMOVAL OF THE EXISTING SUPERSTRUCTURE.
9. PRIOR TO INSTALLATION OF THE DETOUR, THE ENGINEER SHALL DOCUMENT THE CONDITION OF THE EXISTING ROAD. UPON REMOVAL OF THE DETOUR, THE ENGINEER SHALL COORDINATE WITH THE COUNTY ENGINEER TO DETERMINE ANY PATCHING, IF NECESSARY. THE CONTRACTOR SHALL PLACE ALL PATCHING IN AREAS DESIGNATED BY THE ENGINEER. THE COST OF THIS WORK WILL BE PAID AS DESIGNATED IN THE PATCHING SCHEDULE.
10. WIDE LOAD SIGNING WILL BE PROVIDED BY IDOT.
11. THE ENGINEER WILL SPECIFY THE LOCATION OF THE CHANGEABLE MESSAGE SIGNS AND THE MESSAGE TO BE PLACED ON THEM.
12. THE WIDTHS OF BITUMINOUS SURFACE REMOVAL SHOWN ON THE PLANS ARE THE NOMINAL WIDTHS. IRREGULARITIES IN THE SURFACE WIDTH MAY OCCUR THROUGHOUT THE LENGTH OF THE SECTION. BITUMINOUS SURFACE REMOVAL WILL BE PAID FOR IN SQUARE YARDS BASED UPON THE NOMINAL WIDTHS INDICATED.

**EROSION AND SEDIMENT CONTROL PLAN**

1. PLANS INCLUDE ESTIMATED QUANTITIES FOR TEMPORARY EROSION AND SEDIMENT CONTROL. THESE ARE WORST CASE ESTIMATES. DISTURBANCE OF AREAS BEYOND THE LIMITS OF ACTUAL IMPROVEMENT IS TO BE HELD TO A MINIMUM.
2. TEMPORARY SEEDING AND MULCH SHALL BE COMPLETED ON A WEEKLY BASIS ON EXPOSED GROUND AND SHALL BE IN ACCORDANCE WITH SECTION 280 OF THE STANDARD SPECIFICATIONS EXCEPT THAT MULCH AND TEMPORARY SEEDING SHALL BE PAID FOR AS TEMPORARY EROSION CONTROL SEEDING AND NO OTHER PAYMENT WILL BE PERMITTED.
3. ALL AREAS DISTURBED FOR ANY REASON SHALL BE SEEDED WITH CLASS 2 SEEDING AS DIRECTED BY THE ENGINEER. NUTRIENTS SHALL CONFORM TO ARTICLE 250.04 EXCEPT FERTILIZER NUTRIENTS WILL NOT BE PAID FOR SEPARATELY AS INCLUDED IN THE COST OF CLASS 2 SEEDING.
4. ALL EROSION CONTROL PRODUCTS FURNISHED SHALL BE SPECIFICALLY RECOMMENDED BY THE MANUFACTURER FOR THE USE SPECIFIED IN THE EROSION CONTROL PLAN. PRIOR TO APPROVAL AND USE OF THE PRODUCT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A NOTARIZED CERTIFICATION BY THE PRODUCER STATING THE INTENDED USE OF THE PRODUCT AND THAT THE PHYSICAL PROPERTIES REQUIRED FOR THIS APPLICATION ARE MET OR EXCEEDED. THE CONTRACTOR SHALL PROVIDE MANUFACTURER RECOMMENDED INSTALLATION PROCEDURES TO FACILITATE THE ENGINEER IN CONSTRUCTION INSPECTION.
5. EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN DAYS.
6. FINAL SEEDING SHALL BE PERFORMED AS SOON AS POSSIBLE.

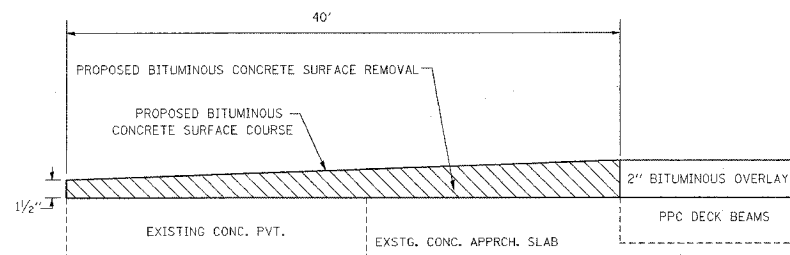
**HIGHWAY STANDARDS**

000001-04	635011-01
001001	701006-02
001006	701011-01
442201-01	701201-02
515001-02	701321-08
630001-06	702001-06
630301-03	704001-02
631032-02	780001-01
635006-02	781001-02
	B.L.R. 21-6

**COMMITMENTS**

1. THE BRIDGE WILL BE CLOSED AND A DETOUR IN PLACE FOR STAGE I CONSTRUCTION. THIS DETOUR IS LIMITED TO A MAXIMUM 7 DAYS, AND SHALL NOT INTERFERE WITH ANY SIGNIFICANT PLANNED EVENT AT THE WORLD SHOOTING COMPLEX, E.G. THE GRAND AMERICAN.
2. THE DEPARTMENT WILL NOTIFY MR. AND MRS. WILLIAM BOYD 2 WEEKS PRIOR TO THE CLOSURE OF THEIR ENTRANCE AT STATION 722+00± LEFT. AT THAT TIME THE DEPARTMENT WILL ADVISE THEM OF THE DATES THE CLOSURE WILL BE IN EFFECT.

**TRANSITION DETAIL**



MIXTURE USE	SURFACE	LEVELING BINDER	PARTIAL DEPTH PATCH	SHOULDERS	TOP LIFT SHOULDERS	BINDER/PATCH
AC/PG	PG 64-22	PG 64-22	PG 64-22	PG 58-22	PG 58-22	PG 64-22
RAP % (MAX)	10%	15%	10%	30%	30%	150%
DESIGN AIR VIODS	4% @ Ndes=70	4% @ Ndes=70	4% @ Ndes=70	2% @ Ndes=30	2% @ Ndes=30	4% @ Ndes=70
MIX COMPOSITION						IL 19.0
(GRADATION MIXTURE)						
FRICTION AGG	MIXTURE "C"	MIXTURE "C"	MIXTURE "C"	BAM	BAM	MIXTURE "B"

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**INDEX OF SHEETS, GEN. NOTES,  
 & STANDARDS**  
 FAP ROUTE 329 (IL 154)  
 SECTION 126BR-1  
 RANDOLPH COUNTY

PLOT DATE = 10/11/2005  
 FILE NAME = 10/11/2005\_126BR-1\_02.dgn  
 PLOT SCALE = 50.0000 / IN.  
 USER NAME = bjrchil

## SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	126BR-1	RANDOLPH	27	3
STA.		TO STA.		
CONTRACT NO. 76898				

SUMMARY OF QUANTITIES			80% FED. 20% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE	
CODE NO	ITEM	UNIT		BRIDGE X080-2A SN 079-0016	SFTY-3N
20200100	EARTH EXCAVATION	CU YD	46	46	
20400800	FURNISHED EXCAVATION	CU YD	1550	1550	
25000210	SEEDING, CLASS 2A	ACRE	0.5	0.5	
25100105	MULCH, METHOD 1	ACRE	0.5	0.5	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	250	250	
28100109	STONE RIPRAP, CLASS A5	SQ YD	925	925	
28200200	FILTER FABRIC	SQ YD	925	925	
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	0.1	0.1	
44000006	BITUMINOUS SURFACE REMOVAL 1 1/2"	SQ YD	231	231	
44200065	PAVEMENT PATCHING, TYPE II, 6 INCH	SQ YD	15	15	
44200069	PAVEMENT PATCHING, TYPE III, 6 INCH	SQ YD	29	29	
44200071	PAVEMENT PATCHING, TYPE IV, 6 INCH	SQ YD	37	37	
48202700	BITUMINOUS SHOULDERS SUPERPAVE 9"	SQ YD	53	53	
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1	
50102400	CONCRETE REMOVAL	CU YD	0.7	0.7	
50300225	CONCRETE STRUCTURES	CU YD	0.7	0.7	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	0.1	0.1	
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	4983	4983	
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	334	334	
51500100	NAME PLATES	EACH	1	1	
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	562	562	
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	1510	1510	
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	617	617	
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4	
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	500	500	
<del>63303290</del>	<del>REMOVE AND SALVAGE EXISTING TRAFFIC BARRIER TERMINAL, TYPE 1</del>	<del>EACH</del>	<del>1</del>	<del>1</del>	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	10	10	
67100100	MOBILIZATION	L SUM	1	1	
70101205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	1	1	
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1	
<del>70102015</del>	<del>TRAFFIC CONTROL SURVEILLANCE</del>	<del>CAL DA</del>	<del>10</del>	<del>10</del>	
70106700	TEMPORARY RUMBLE STRIP	EACH	6	6	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
<del>70300220</del>	<del>TEMPORARY PAVEMENT MARKING - LINE 4"</del>	<del>FOOT</del>	<del>1020</del>	<del>1020</del>	
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	1020	1020	

\* SPECIALTY ITEMS

Rev.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	126BR-1	RANDOLPH	27	4

STA. TO STA.  
CONTRACT NO. 76898

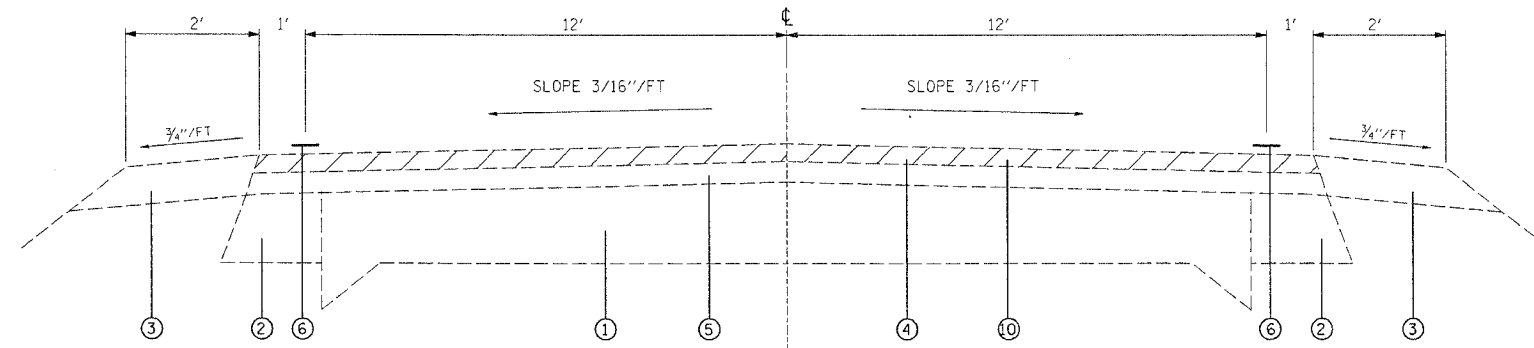
# SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES			80% FED. 20% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE	
CODE NO	ITEM	UNIT		BRIDGE X080-2A SN 079-0016	SFTY-3N
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1998	1998	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	510	510	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	510	510	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	667	667	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	2	2	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	16	16	
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	4	4	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	539	539	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	2	2	
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	151	151	
X0324952	DETOUR SIGNING	L SUM	1	1	
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	302	302	
<del>X0556100</del>	<del>PARTIAL DEPTH PATCHING (SPECIAL)</del>	<del>SQ YD</del>	<del>113</del>	<del>113</del>	
X4066416	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N70	TON	106	106	
<del>X4066770</del>	<del>LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70</del>	<del>TON</del>	<del>4</del>	<del>4</del>	
X7015000	CHANGEABLE MESSAGE SIGN	CAL MO	10	10	
X7200200	WIDE LOAD SIGNING	L SUM	1	1	
XX002194	EROSION AND SEDIMENT CONTROL	L SUM	1	1	
XX005495	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH), SPECIAL	SQ FT	151	151	
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2		2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2		2
X0325599	PARTIAL DEPTH PATCHING 2"	TON	82	82	
X4422025	PARTIAL DEPTH REMOVAL 2"	SQ YD	733	733	

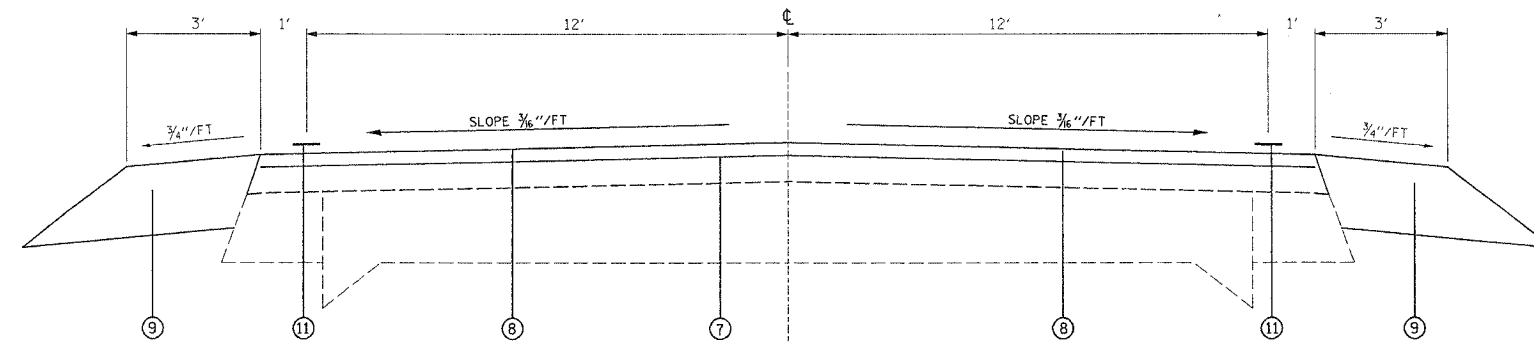
\* SPECIALTY ITEMS

Rev.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	126BR-1	RANDOLPH	27	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 76898				



**EXISTING TANGENT SECTION**  
 STA. 717+73.5 TO STA. 718+13.5  
 STA. 719+66.5 TO STA. 720+06.5



**PROPOSED TANGENT SECTION**  
 STA. 717+73.5 TO STA. 718+13.5  
 STA. 719+66.5 TO STA. 720+06.5

**LEGEND**

- ① EXISTING PAVEMENT 9-6-9
- ② EXISTING BASE COURSE WIDENING, 9"
- ③ EXISTING AGGREGATE SHOULDER
- ④ EXISTING BITUMINOUS CONCRETE SURFACE COURSE, 1 1/2"
- ⑤ EXISTING BINDER COURSE, 1 1/2"
- ⑥ EXISTING PAVEMENT MARKING
- ⑦ PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
- ⑧ PROPOSED BITUMINOUS SURFACE COURSE, SUPERPAVE, 1 1/2"
- ⑨ PROPOSED BITUMINOUS SHOULDER, 9"
- ⑩ PROPOSED BITUMINOUS SURFACE REMOVAL, 1 1/2"
- ⑪ PROPOSED PAVEMENT MARKING

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TYPICAL SECTIONS**  
 FAP ROUTE 329 (IL 154)  
 SECTION 126BR-1  
 RANDOLPH COUNTY

SCALE: VERT. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_  
 DATE \_\_\_\_\_ DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_

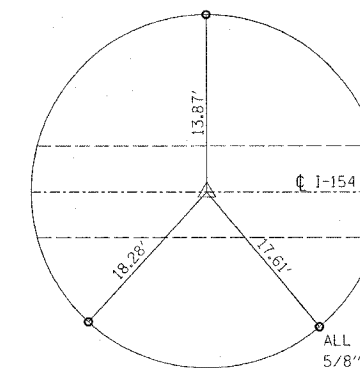
PAVEMENT PATCHING									
LOCATION STATION	LENGTH FT	WIDTH FT	AREA SQ YD	6 inches				PARTIAL DEPTH 2 inches	
				TYPE I	TYPE II	TYPE III	TYPE IV	REM / SQ YD	REPL / TONS
BALDWIN RD.									
0.41 SBL	10.00	11.00	12.22		12.22				
0.41 NBL	20.00	11.00	24.44			24.44			
0.62 SBL	40.00	5.00	22.22					22.22	2.49
1.23 NBL	6.00	6.00	4.00					4.00	0.45
3.15 SBL	10.00	11.00	12.22					12.22	1.37
3.23 SBL	15.00	11.00	18.33					18.33	2.05
3.24 SBL	8.00	4.00	3.56					3.56	0.40
3.28 SBL	10.00	11.00	12.22					12.22	1.37
3.33 SBL	8.00	11.00	9.78					9.78	1.10
3.33 NBL	15.00	11.00	18.33					18.33	2.05
3.35 SBL	12.00	11.00	14.67					14.67	1.64
3.40 SBL	20.00	11.00	24.44					24.44	2.74
3.48 SBL	15.00	6.00	10.00					10.00	1.12
3.60 SBL	12.00	11.00	14.67					14.67	1.64
3.62 SBL	10.00	11.00	12.22					12.22	1.37
3.75 SBL	6.00	11.00	7.33					7.33	0.80
3.79 SBL	10.00	11.00	12.22					12.22	1.37
3.82 SBL	6.00	11.00	7.33					7.33	0.82
3.85 SBL	6.00	15.00	10.00					10.00	1.12
3.88 SBL	8.00	11.00	9.78					9.78	1.10
3.90 SBL	6.00	15.00	10.00					10.00	1.12
3.96 NBL	20.00	11.00	24.44					24.44	2.74
3.98 SBL	6.00	10.00	6.67					6.67	0.75
4.06 NBL	25.00	11.00	30.56				30.56		
4.18 SBL	6.00	15.00	10.00					10.00	1.12
4.24 SBL	6.00	11.00	7.33					7.33	0.82
4.30 SBL	12.00	11.00	14.67					14.67	1.64
4.39 SBL	25.00	6.00	16.67					16.67	1.87
4.48 SBL	25.00	11.00	30.56					30.56	3.42
5.07 SBL	15.00	11.00	18.33					18.33	2.05
5.08 SBL	15.00	11.00	18.33					18.33	2.05
5.15 SBL	15.00	11.00	18.33					18.33	2.05
5.18 SBL	20.00	11.00	24.44					24.44	2.74
5.32 SBL	15.00	11.00	18.33					18.33	2.05
5.32 NBL	15.00	11.00	18.33					18.33	2.05
5.51 NBL	6.00	11.00	7.33					7.33	0.82
5.53 SBL	6.00	11.00	7.33					7.33	0.82
5.64 SBL	15.00	11.00	18.33					18.33	2.05
5.70 SBL	10.00	6.00	6.67					6.67	0.75
5.80 SBL	6.00	11.00	7.33					7.33	0.82
5.87 SBL	15.00	6.00	10.00					10.00	1.12
6.04 SBL	6.00	11.00	7.33					7.33	0.82
6.16 NBL	20.00	11.00	24.44					24.44	2.74
6.65 SBL	15.00	6.00	10.00					10.00	1.12
6.74 SBL	30.00	6.00	20.00					20.00	2.24
SCHULINE RD.									
5.15 EBL	10.00	11.00	12.22					12.22	1.37
7.48 EBL	30.00	6.00	20.00					20.00	2.24
SUB-TOTAL			678.00	0.00	12.22	24.44	30.56	610.73	68.38
ANTICIPATED FAILURES (20%)				0.00	2.44	4.89	6.11	122.15	13.68
TOTAL				0.00	14.67	29.33	36.67	732.87	82.06

LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE(+) OR SHORTAGE(-)
STA. 714+50 TO 718+00	26	19.5	838	-588
STA 720+00 TO 722+00	20	15	593	-578
TOTAL	46	34.5	1431	-1166

PAVEMENT MARKING SCHEDULE					
STATION		PAVEMENT		BRIDGE	
		WHITE LINE 4"	YELLOW SKIP DASH LINE 4"	WHITE LINE 4"	YELLOW SKIP DASH LINE 4"
720+06.5 TO 723+45.7	¢		85		
717+73.5 TO 718+13.5	RT/LT	80			
717+73.5 TO 718+13.5	¢		10		
718+13.5 TO 719+66.5	RT/LT			306	
718+13.5 TO 719+66.5	¢				40
719+66.5 TO 720+06.5	RT/LT	80			
719+66.5 TO 720+06.5	¢		10		
715+58.9 TO 717+73.5	¢		56		
SUB TOTALS		160	161	306	40
TOTAL			321		346

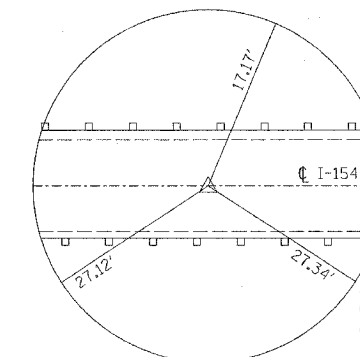
RESURFACING SCHEDULE					
STATION	TO	STATION	BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE MIX "C", N70		
			TON	BITUMINOUS MATERIALS (PRIME COAT) TON	BITUMINOUS SHOULDER SUPERPAVE TON
717+73.5	TO	718+13.5	9.71	0.4	113.3
718+13.5	TO	719+66.5	86.4		
719+66.5	TO	720+06.5	9.71	0.4	113.3
TOTALS			105.8	0.8	226.6

TEMPORARY PAVEMENT MARKING						
STATION	TO	STATION	PAVEMENT TEMPORARY MARKING LINE 6"		BRIDGE TEMPORARY PAVEMENT MARKING LINE 6"	PAVEMENT MARKING REMOVAL SQUARE FOOT
			FOOT	FOOT	FOOT	
715+58.9	TO	717+73.5	¢			65.5
715+58.9	TO	723+45.7	¢			-51
719+51.5	TO	720+28.5	WALL	357	153	
715+58.9	TO	723+45.8	¢			524
717+51.5	TO	720+28.4	WALL	357	153	
720+06.5	TO	723+45.7	¢			
SUB-TOTAL				714	306	538.5
TOTAL					1020	539



713+00.00  
SET 5/8" I.P.

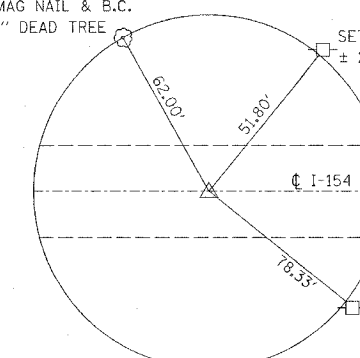
ALL THREE TIES ARE 5/8" I.P. SET FLUSH AND ±0.5" FROM E.P.



718+90  
SET MAG NAIL

ALL THREE TIES ARE CHISELED "X" IN GUARDRAIL BOLTS

SET MAG NAIL & B.C. IN 24" DEAD TREE



725+00  
SET 5/8" I.P.

SET MAG NAIL & B.C. ± 2' HIGH IN P.P.

SET MAG NAIL & B.C. ±6' HIGH IN P.P.

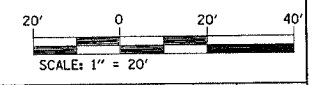
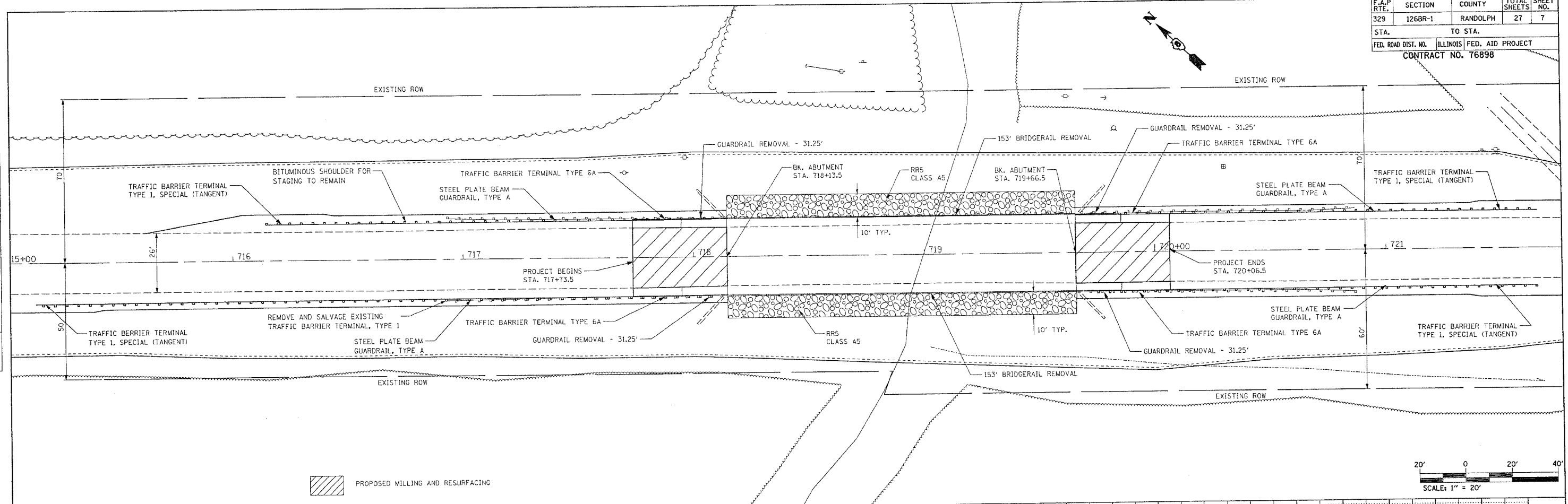
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
TIE POINTS AND SCHEDULE  
FAP ROUTE 329 (IL 154)  
SECTION 126BR-1  
RANDOLPH COUNTY

SCALE: VERT.  
HORIZ.  
DATE

DRAWN BY  
CHECKED BY

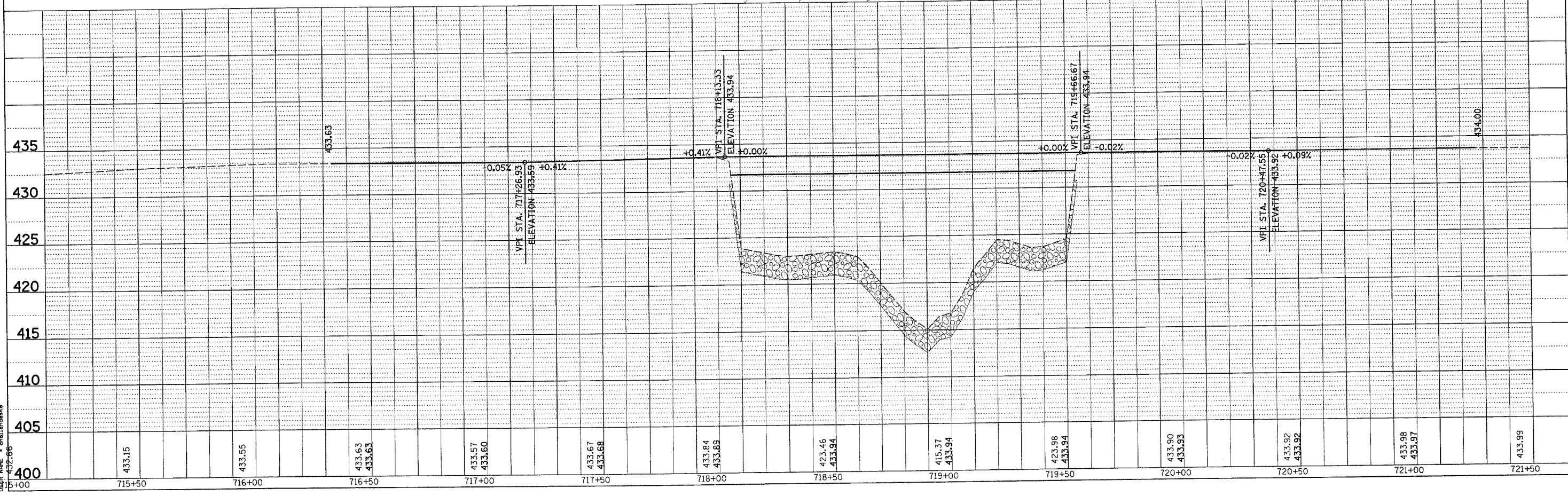
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	126BR-1	RANDOLPH	27	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 76898				



DATE	BY
DATE	BY
DATE	BY

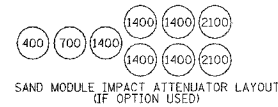
DATE	BY
DATE	BY
DATE	BY

PLOT DATE = 9/7/2006  
 PLOT SCALE = 20.0000 / IN.  
 USER NAME = ehallandake  
 432.06

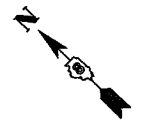
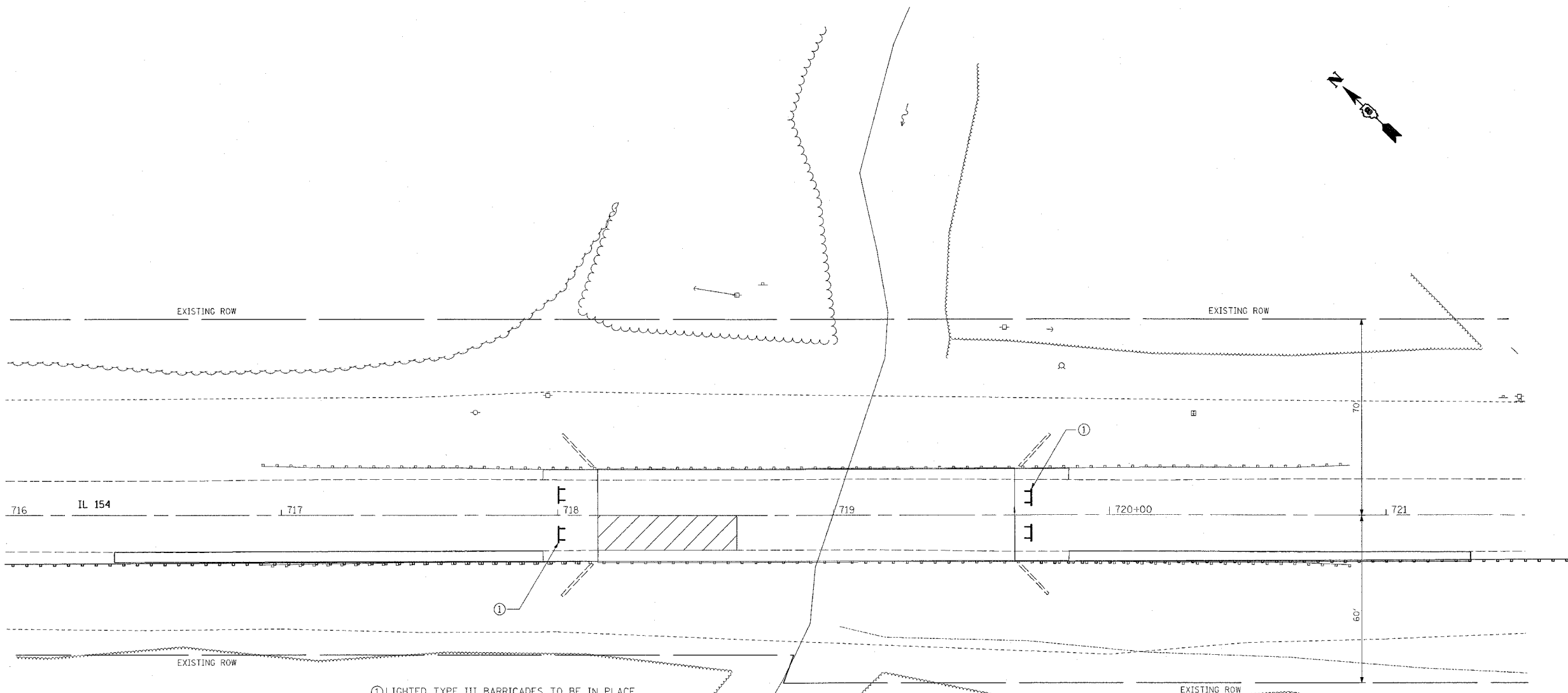








F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	126BR-1	RANDOLPH	27	9
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 76898				



**STAGE I CONSTRUCTION:**

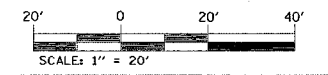
- STAGE I CONSTRUCTION SHALL CONSIST OF CLOSING THE ROADWAY, REMOVAL AND REPLACEMENT OF BEAM II IN SPAN 1, THE CONSTRUCTION OF THE 9" DEPTH SHOULDER, AND PROPOSED GUARDRAIL ON THE SOUTHEAST AND SOUTHWEST SIDE OF THE STRUCTURE. STAGE I CONSTRUCTION SHALL BE DONE ACCORDING TO STAGE CONSTRUCTION AS DETAILED IN THE BRIDGE PLANS. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF STANDARD 701321, BLR21-6 AND AS DETAILED IN THE STAGE CONSTRUCTION PLANS. THIS TRAFFIC CONTROL SHALL BE PAID FOR AS TRAFFIC CONTROL AND PROTECTION 701321 (SPECIAL).

**NOTES:**

- THE CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE AND FIELD ENTRANCES LOCATED WITHIN THE LIMITS OF THE PROJECT.
- THE FINAL BITUMINOUS WEARING SURFACE MUST BE IN PLACE ON THE STRUCTURE PRIOR TO OPENING A LANE TO TRAFFIC.

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

▨ REMOVAL AND REPLACEMENT OF BEAM II IN SPAN 1. REFER TO STAGE I DECK BEAM REPLACEMENT BRIDGE PLANS FOR DETAILS.



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		STAGE I CONSTRUCTION FAP ROUTE 329 (IL 154) SECTION 126BR-1 RANDOLPH COUNTY  SCALE: VERT.      DRAWN BY HORIZ.      CHECKED BY DATE

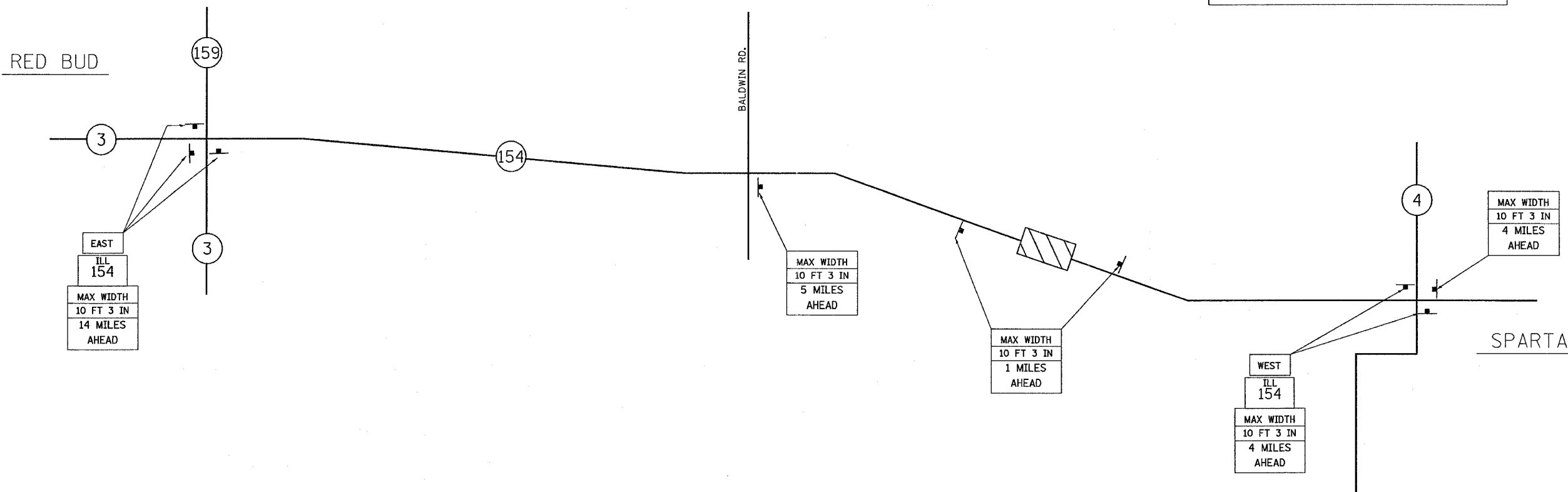
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 FILE NAME = \\s010005\plm\p\1083886.dgn  
 PLOT SCALE = 20,0000 / IN.  
 USER NAME = challandaska

## WIDE LOAD SIGNING IL 154 OVER PLUM CREEK

### NOTES:

1. ALL SIGNS REQUIRED WILL BE SUPPLIED TO THE CONTRACTOR BY I.D.O.T.
2. THE CONTRACTOR SHALL FURNISH THE POST AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THIS SHEET AS DIRECTED BY THE R.E./R.T. 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. CONTACT JEAN SLAPE AT 346-3289.
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'.
7. WIDE LOAD SIGNING SHALL BE NECESSARY FOR STAGES II AND III.

SIGNS REQUIRED		
ILL 154 (5)	MAX WIDTH 10 FT 3 IN 1 MILES AHEAD	(2)
EAST (3)	MAX WIDTH 10 FT 3 IN 4 MILES AHEAD	(3)
WEST (2)	MAX WIDTH 10 FT 3 IN 5 MILES AHEAD	(1)
	MAX WIDTH 10 FT 3 IN 14 MILES AHEAD	(3)



PLOT DATE = 8/19/2006  
 PLOT SCALE = 3/8" = 1'-0"  
 USER NAME = ehallandake

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

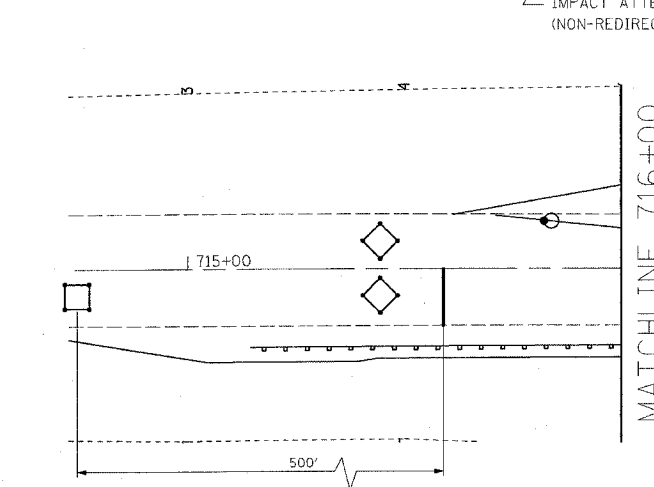
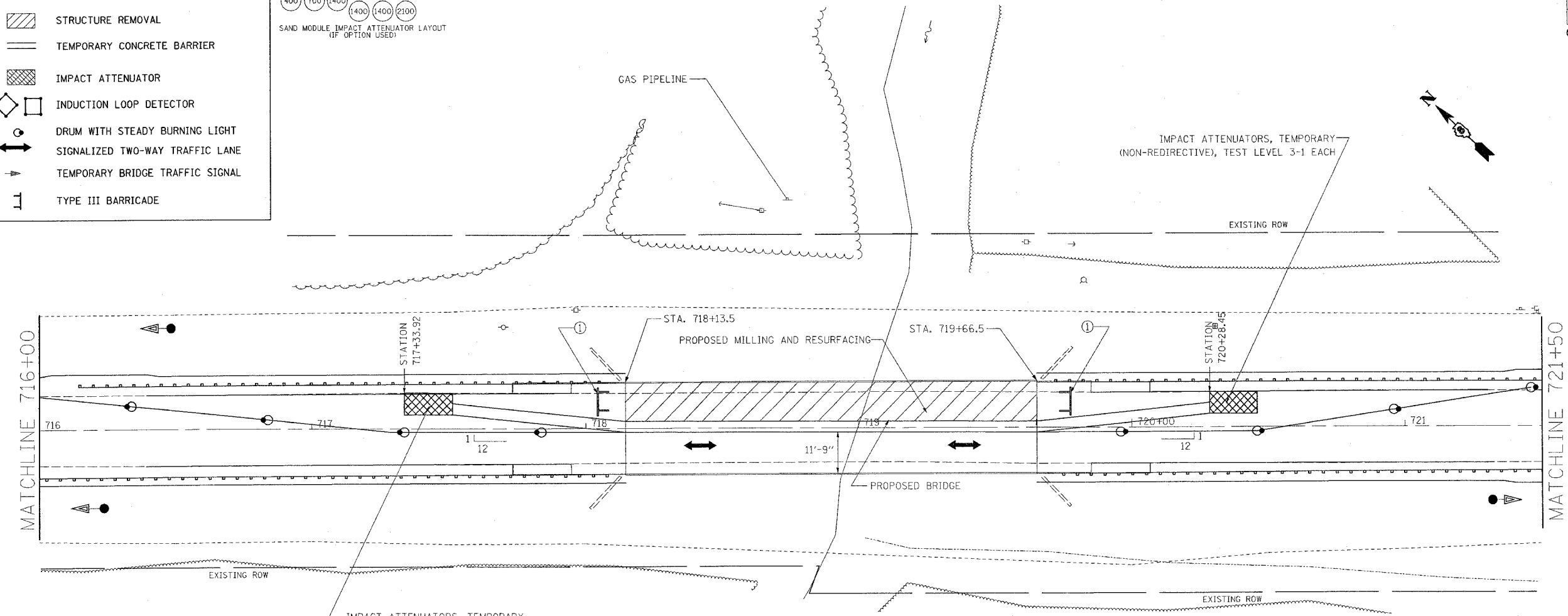
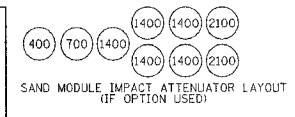
WIDE LOAD SIGNING  
S.N. 079-0016  
FAP ROUTE 329 (IL 154)  
SECTION 126BR-1  
RANDOLPH COUNTY

SCALE: VERT. \_\_\_\_\_  
HORIZ. \_\_\_\_\_  
DATE \_\_\_\_\_

DRAWN BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_

**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



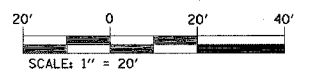
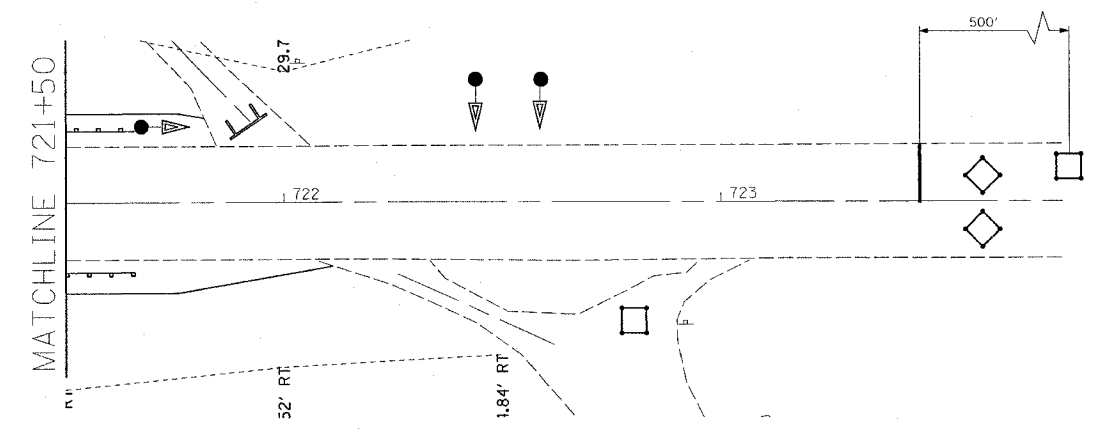
① LIGHTED TYPE III BARRICADES TO BE IN PLACE WHEN NO WORK IS BEING PERFORMED AT LEAST TWO AT EACH END.

**STAGE II CONSTRUCTION:**

- STAGE II CONSTRUCTION SHALL CONSIST OF STAGE II REMOVAL OF NORTH PORTION OF THE EXISTING SUPER STRUCTURE, CONSTRUCTION OF THE 9" DEPTH SHOULDER, PROPOSED GUARDRAIL IN THE N.W. AND N.E. QUAD. AND STAGE II CONSTRUCTION OF THE REPLACEMENT STRUCTURE. STAGE II 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:**

- THE CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE AND FIELD ENTRANCES LOCATED WITHIN THE LIMITS OF THE PROJECT.
- TRAFFIC CONTROL & PROTECTION, STANDARD 701321 (SPECIAL) INCLUDES STAGES I, II & III AND ANY ADDITIONAL SIGNING OR TRAFFIC CONTROL DEVICES SHOWN ON THE STAGE CONSTRUCTION PLANS.
- THE FINAL BITUMINOUS WEARING SURFACE MUST BE IN PLACE ON THE STRUCTURE PRIOR TO OPENING A LANE TO TRAFFIC.
- REFER TO PLAN AND PROFILE SHEET TO DETERMINE LIMITS OF MILLING AND RESURFACING AREA.
- 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"



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**STAGE II CONSTRUCTION**  
**FAP ROUTE 329 (IL 154)**  
**SECTION 126BR-1**  
**RANDOLPH COUNTY**

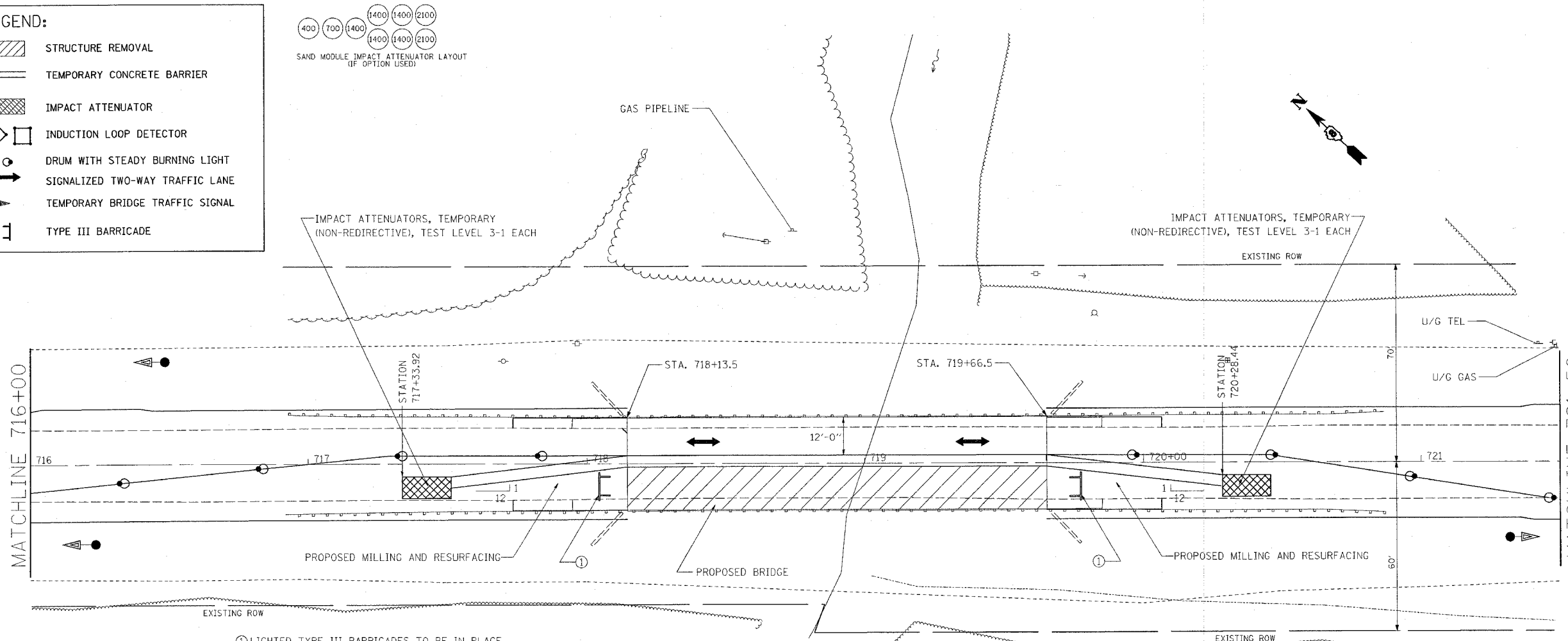
SCALE: VERT. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_

DATE \_\_\_\_\_ DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_

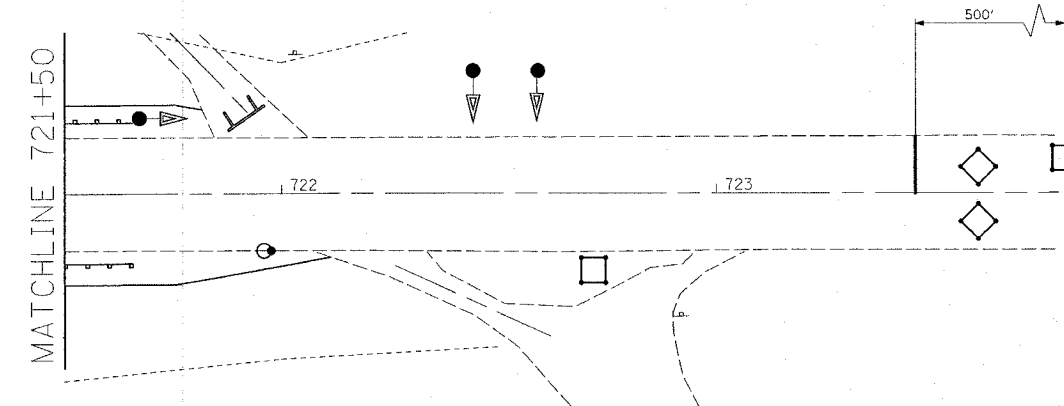
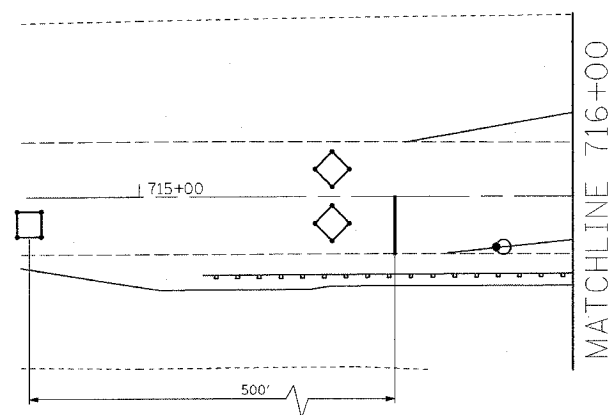
PLOT DATE: 10/11/2006  
 FILE NAME: c:\projects\126BR-1\plan\plg23895.dgn  
 PLOT SCALE: 1/8" = 1' / IN.  
 USER: NAME: g.dynal

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	126BR-1	RANDOLPH	27	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76898				

- 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



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

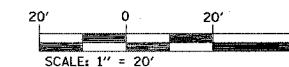


**STAGE III CONSTRUCTION:**

- STAGE III CONSTRUCTION SHALL CONSIST OF STAGE III REMOVAL OF SOUTH PORTION OF THE EXISTING SUPER STRUCTURE, AND STAGE III CONSTRUCTION OF THE REPLACEMENT STRUCTURE. STAGE III 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:**

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- THE FINAL BITUMINOUS WEARING SURFACE MUST BE IN PLACE ON THE STRUCTURE PRIOR TO OPENING A LANE TO TRAFFIC.
- REFER TO PLAN AND PROFILE SHEET TO DETERMINE LIMITS OF MILLING AND RESURFACING AREA.
- 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"



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGE III CONSTRUCTION  
FAP ROUTE 329 (IL 154)  
SECTION 126BR-1  
RANDOLPH COUNTY

SCALE: VERT.  
DATE

DRAWN BY  
CHECKED BY

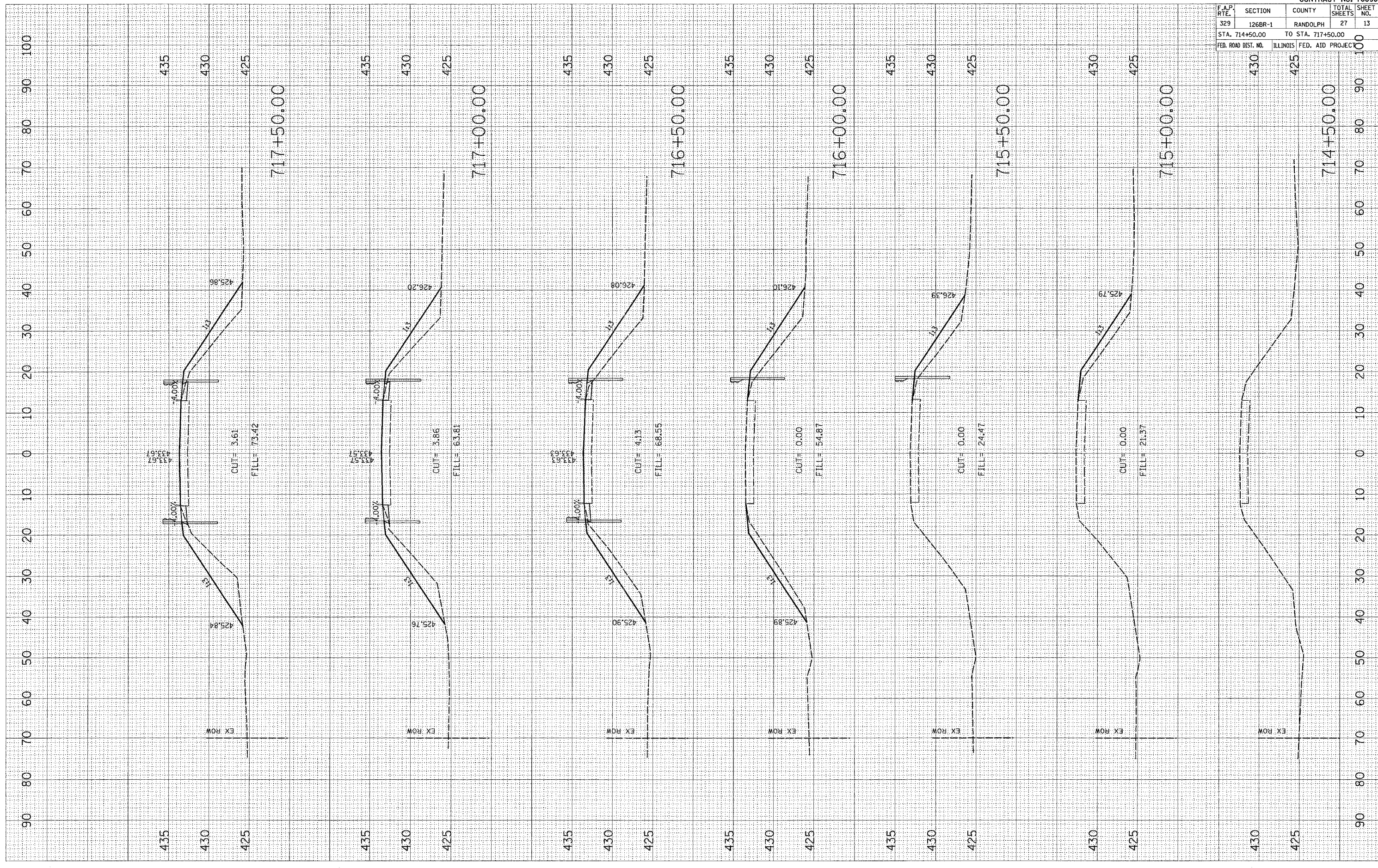
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USER NAME = bgrah1

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	126BR-1	RANDOLPH	27	13
STA. 714+50.00		TO STA. 717+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJEC		

FINAL SURVEY BY DATE  
 NOTE BOOK TEMPLATE AREAS CHECKED

ORIGINAL SURVEY BY DATE  
 NOTE BOOK TEMPLATE AREAS CHECKED

PLOT DATE = 8/18/2006  
 FILE NAME = c:\p\proj\126br\126br.dwg  
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 USER NAME = chellendaka

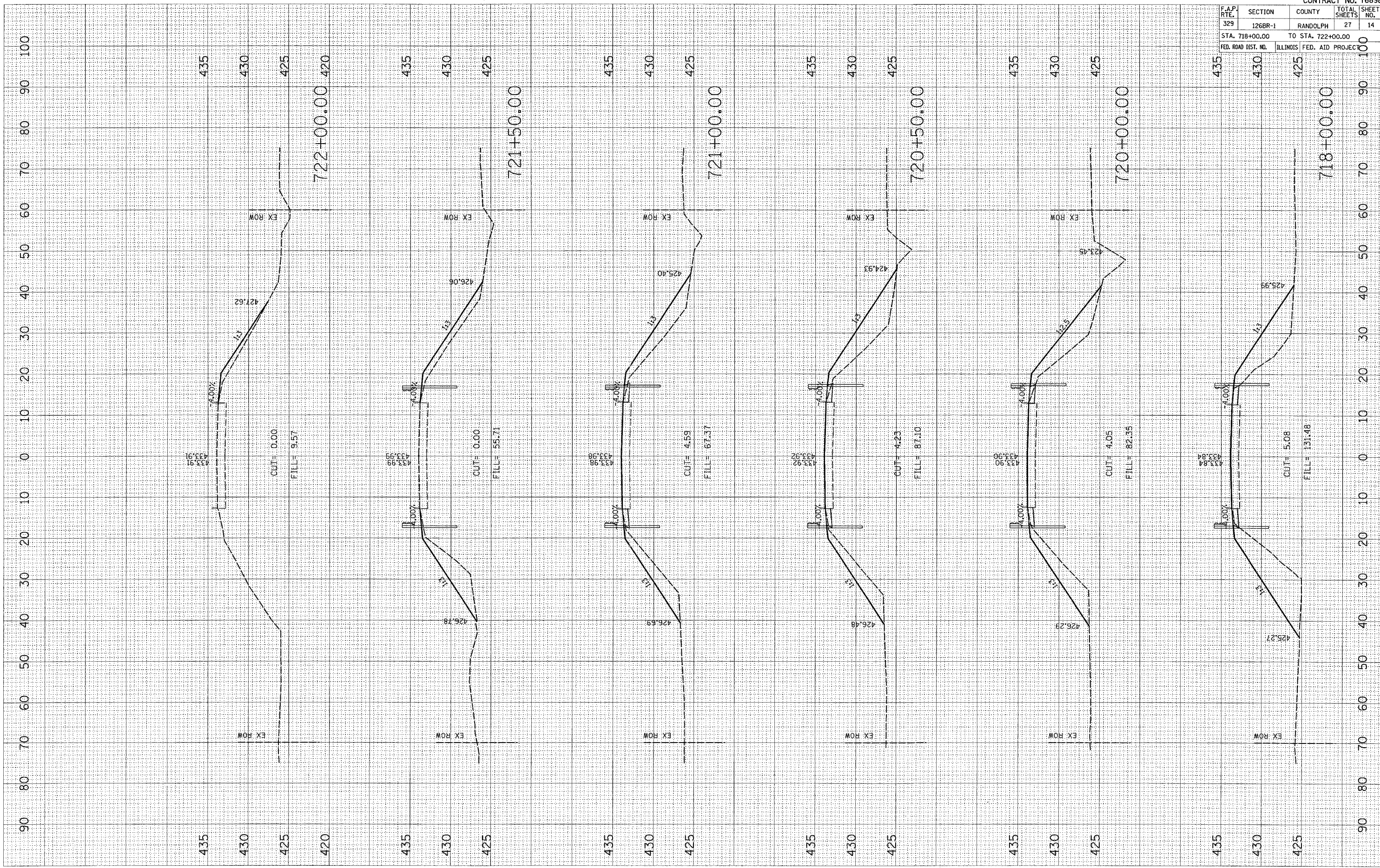




PLOT DATE = 8/18/2006  
 USER NAME = challandrake

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

BY DATE  
 SURVEYED PLOTTED DATE  
 NOTE BOOK NO.  
 AREAS CHECKED



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	126BR-1	RANDOLPH	27	14
STA. 718+00.00		TO STA. 722+00.00		100
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		100

CONTRACT NO. 76898

Bench Mark: BM#11 Railroad Spike in Power Pole near the Northeast corner of Structure. Elevation 427.76.  
 BM#13 Railroad Spike in Power Pole near intersection of Rte. 154 and Woodcox Road. Elevation 429.12.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

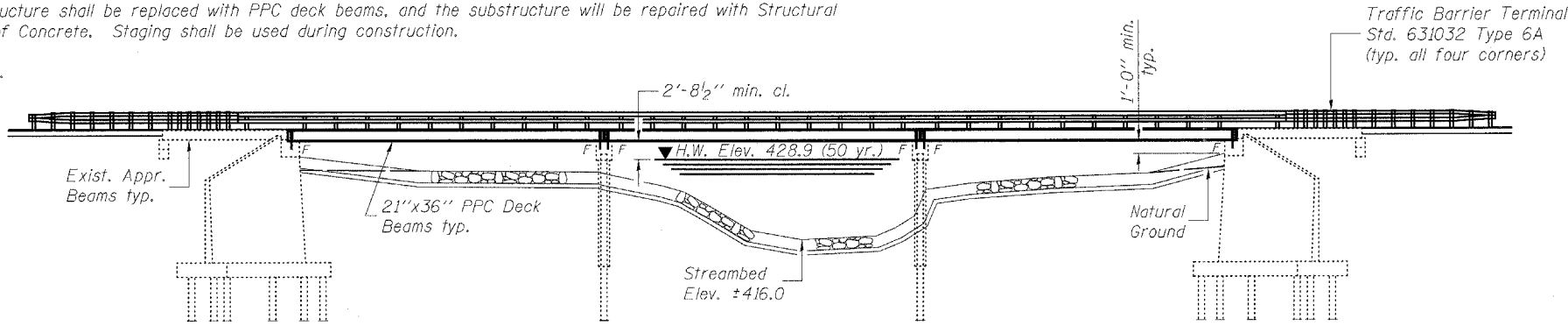
INDEX OF SHEETS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 329	126BR-1	RANDOLPH	27	15

SHEET NO. 1  
10 SHEETS

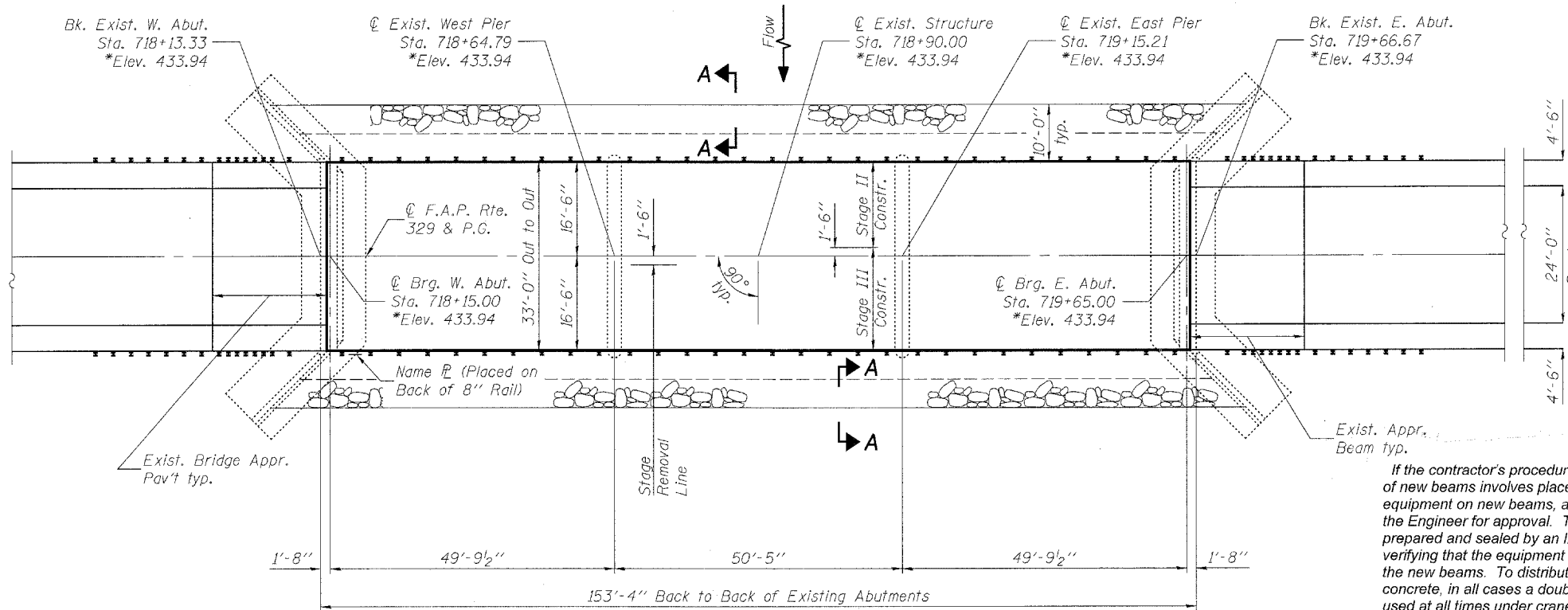
Existing Structure: S.N. 079-0016 was built in 1934 as S.B.I. Rte. 170 Sec. 126B&C at Sta. 718+90.00. In 1971 the superstructure was replaced, the substructure widened, and Piers were added. The existing three span structure consists of PPC deck beams on pile supported cantilever abutments, and wall type piers on pile. The bk. to bk. abutments dimension measures 153'-4" while the O.-O. width measures 33'-0". The existing superstructure shall be replaced with PPC deck beams, and the substructure will be repaired with Structural Repair of Concrete. Staging shall be used during construction.

No Salvage.



ELEVATION

\* Elevations are based off of existing beam seats.



PLAN

If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.

LOADING HS20-44 (New Construction)

No Allowance for future wearing surface.

DESIGN SPECIFICATIONS (New Construction)

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)

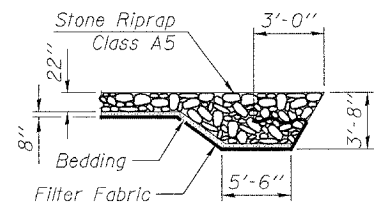
PRECAST PRESTRESSED UNITS

$f'_c = 5,000$  psi  
 $f'_{ci} = 4,000$  psi  
 $f'_s = 270,000$  psi ( $1/2$ "  $\phi$  low lax. strands)  
 $f_{sl} = 201,960$  psi ( $1/2$ "  $\phi$  low lax. strands)

STATION 718+90.00  
 REBUILT 200 BY  
 STATE OF ILLINOIS  
 FAP RT 329 - SEC 126BR-1  
 LOADING HS20  
 STR. NO. 079-0016

NAME PLATE

See Std. 515001



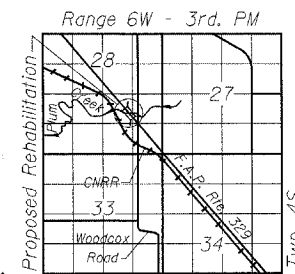
SECTION A-A

DESIGNED	NJM
CHECKED	EML
DRAWN	NJM
CHECKED	EML

HORNER & SHIFRIN, INC.  
 ENGINEERS ARCHITECTS PLANNERS



Eric Lagemann 8/10/06  
 Expires 11/30/2006



LOCATION SKETCH

GENERAL NOTES

The minimum thickness of Bituminous overlay shall be 2" and varies as required to adjust for the new profile grade and beam camber. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

The top surface of the beams shall be finished according to Article 504.06 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  $1/4$ ".

All construction joints shall be bonded.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

The contractor is advised that the existing Precast Prestressed Concrete 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.

Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".

Existing Name Plate is to be removed, cleaned, and relocated adjacent to new Name Plate. Cost is included in the cost of Name Plates.

Repair of the abutments and piers shall be completed prior to placement of the new deck beams.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		925	925
Filter Fabric	Sq. Yd.		925	925
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		0.7	0.7
Concrete Structures	Cu. Yd.		0.7	0.7
Concrete Superstructure	Cu. Yd.	0.1		0.1
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	4983		4983
Steel Bridge Rail, Type SM	Foot	334		334
Name Plates	Each	1		1
Waterproofing Membrane System	Sq. Yd.	562		562
Portland Cement Mortar Fairing Course	Foot	1510		1510
Removal of Existing P.P.C. Deck Beams	Sq. Ft.	151		151
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.		292.8	292.8
Bituminous Concrete Surface Course, Superpave, Mix "C", N70	Ton	87		87
Precast Prestressed Concrete Deck Beams (21" Depth) Special	Sq. Ft.	151		151

GENERAL PLAN

ILLINOIS ROUTE 154 OVER

PLUM CREEK

F.A.P. ROUTE 329 - SECTION 126BR-1

RANDOLPH COUNTY

STATION 718+90.00

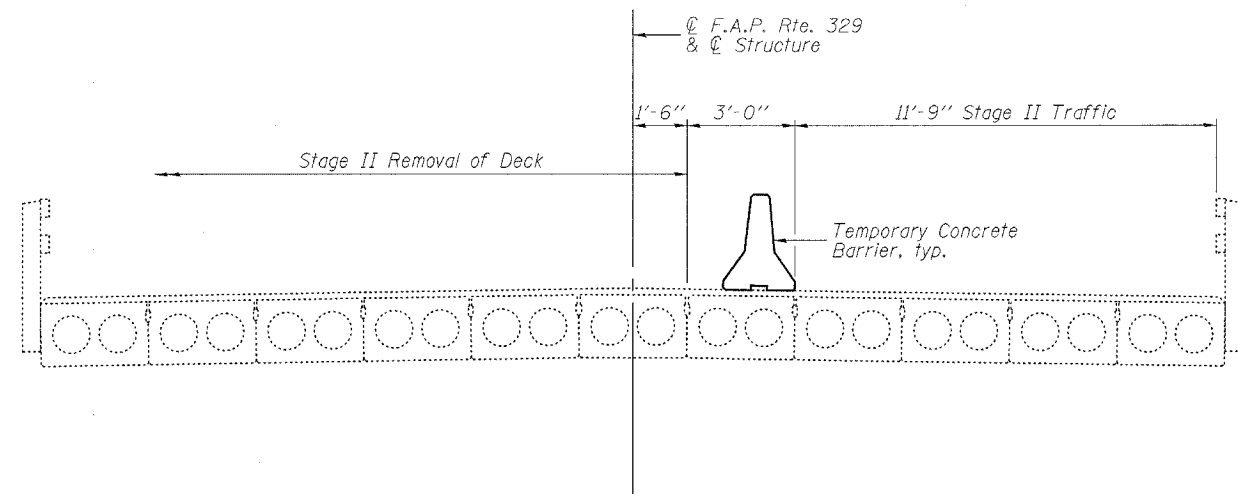
STRUCTURE NO. 079-0016

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

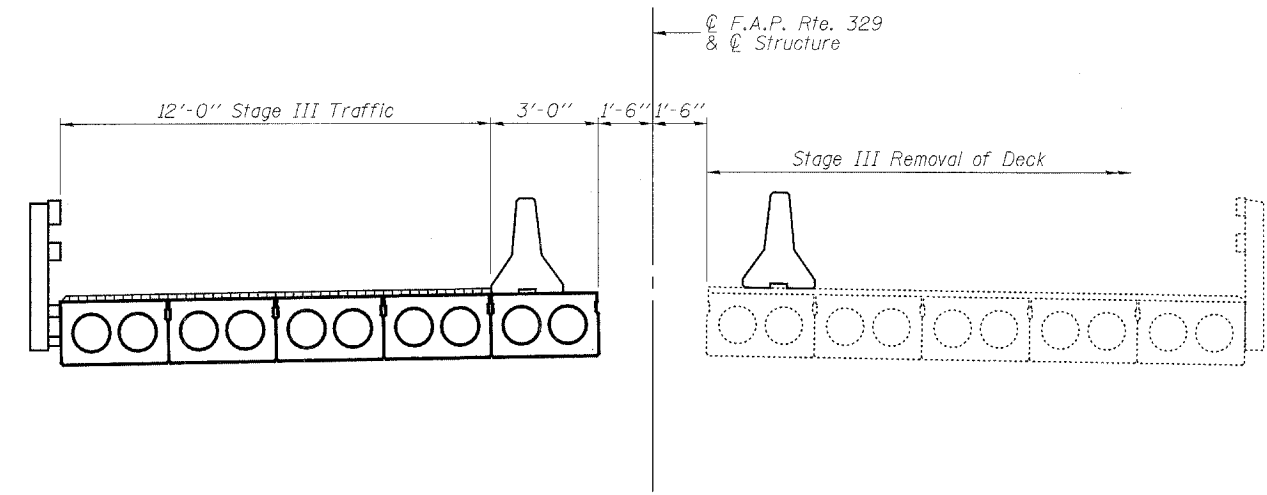
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 329	126BR-1	RANDOLPH	27	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2  
10 SHEETS

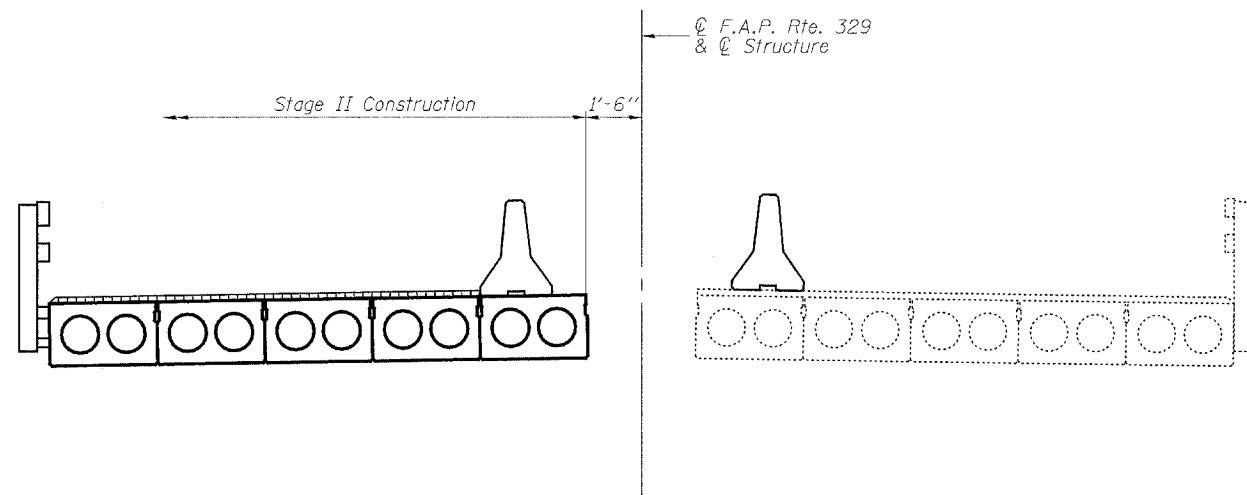
Contract #76898



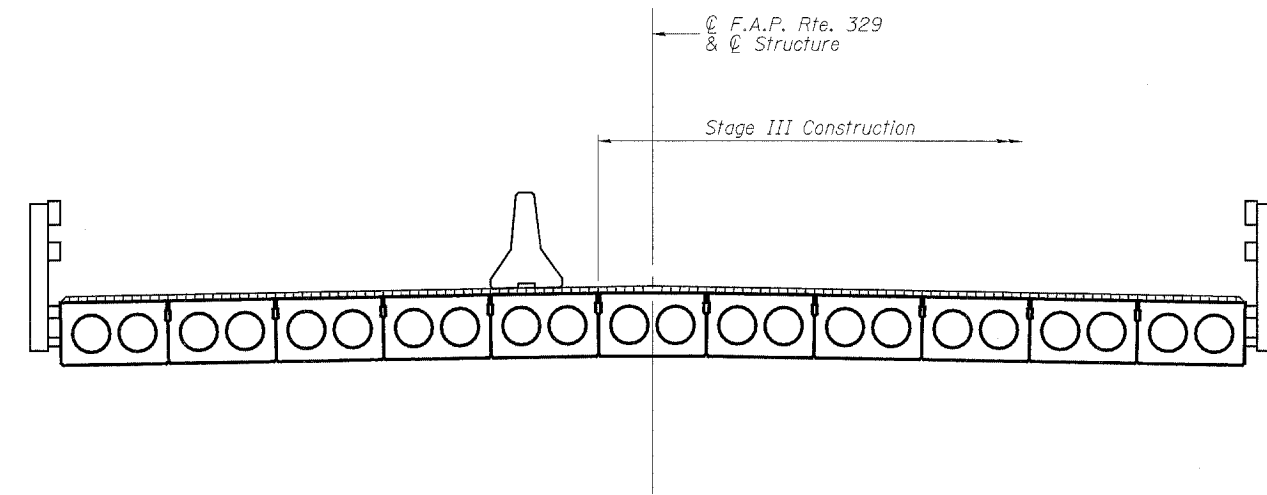
STAGE II REMOVAL



STAGE III REMOVAL



STAGE II CONSTRUCTION



STAGE III 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 10.  
For requirements for lapping waterproofing membrane, see notes on sheet 3 of 10.  
For Stage 1 details, see sheets 1 thru 3 of 3 of Stage I Deck Beam Replacement Details.

DESIGNED	NJM
CHECKED	EML
DRAWN	NJM
CHECKED	EML

**HORNER & SHIFRIN, INC.**  
ENGINEERS ■ ARCHITECTS ■ PLANNERS

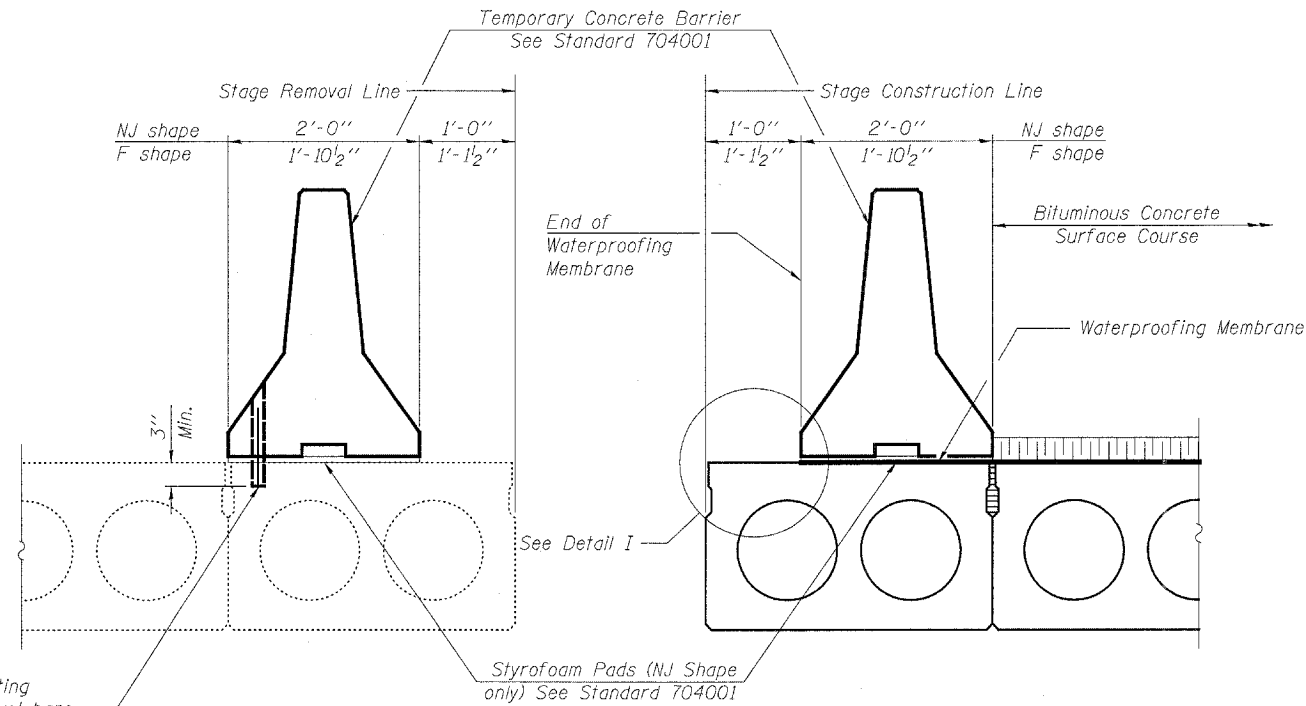
STAGE CONSTRUCTION DETAILS  
F.A.P. ROUTE 329 - SECTION 126BR-1  
RANDOLPH COUNTY  
STATION 718+90.00  
STRUCTURE NO. 079-0016



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
F.A.P. 329	126BR-1	RANDOLPH	27	17	10 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #76898

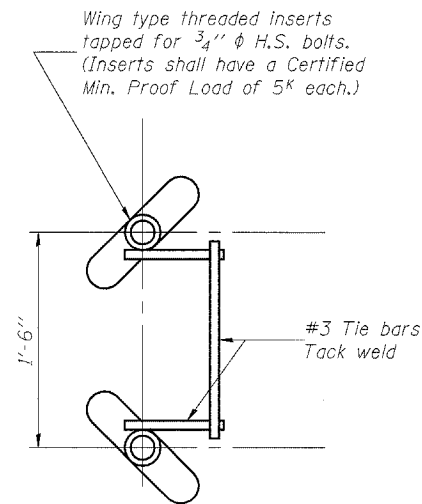


Drill 1/4"  $\phi$  Holes in existing beam for 1"  $\phi$  x 10" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

EXISTING PPC DECK BEAMS

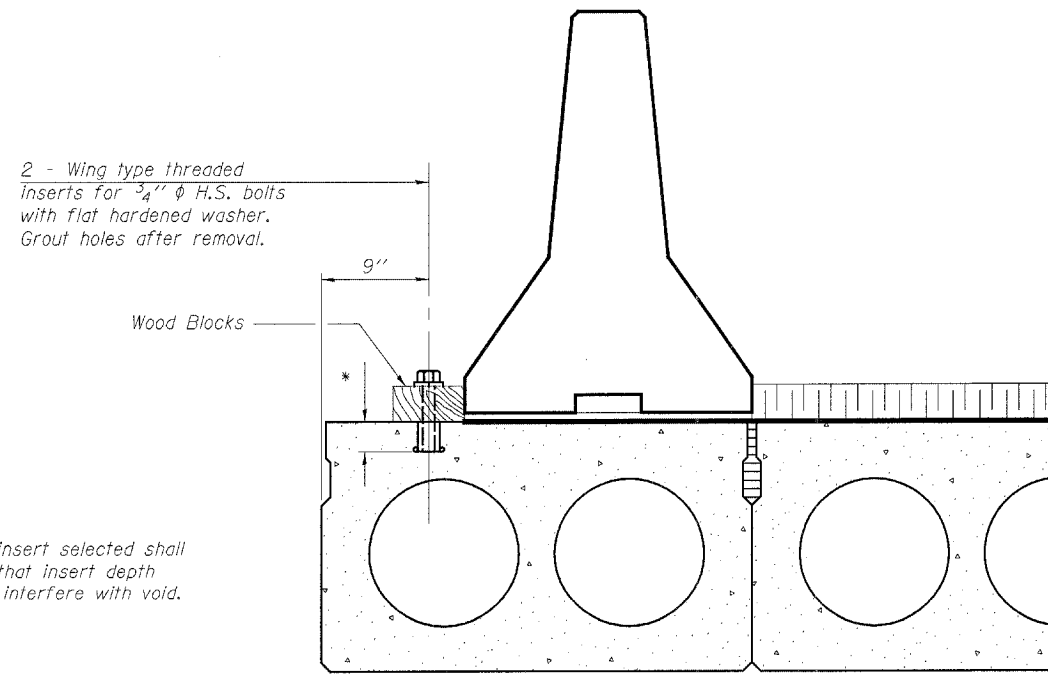
NEW PPC DECK BEAMS

SECTIONS THRU PPC DECK BEAMS



INSERT DETAIL

\*Type of insert selected shall be such that insert depth does not interfere with void.



DETAIL I

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

NOTES

- The 3/4"  $\phi$  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 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	NJM
CHECKED	EML
DRAWN	NJM
CHECKED	EML

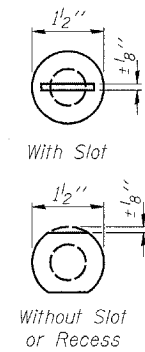
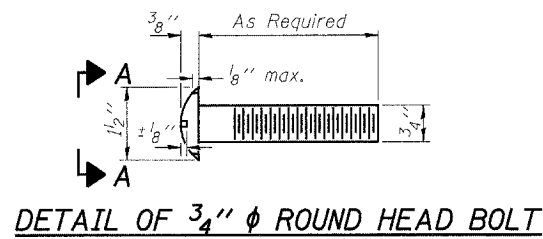
**HORNER & SHIFRIN, INC.**  
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TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION  
F.A.P. ROUTE 329 - SECTION 126BR-1  
RANDOLPH COUNTY  
STATION 718+90.00  
STRUCTURE NO. 079-0016

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
F.A.P. 329	126BR-1	RANDOLPH	27	18	10 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #76898

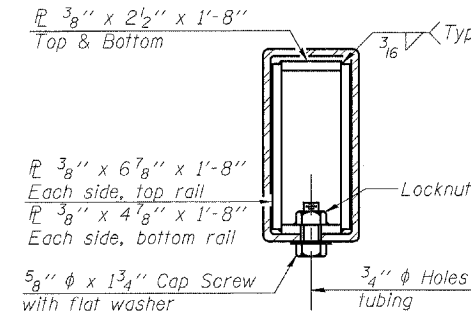
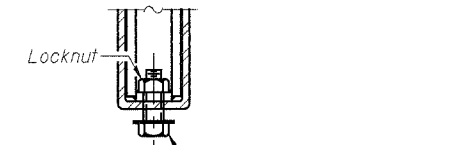


VIEW A-A

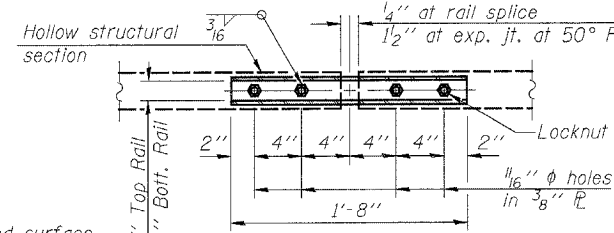
4-3/4"  $\phi$  x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8"  $\phi$  holes in hollow structural section may be drilled in the field.

RAIL SPLICE CONNECTION AT EXPANSION JT.

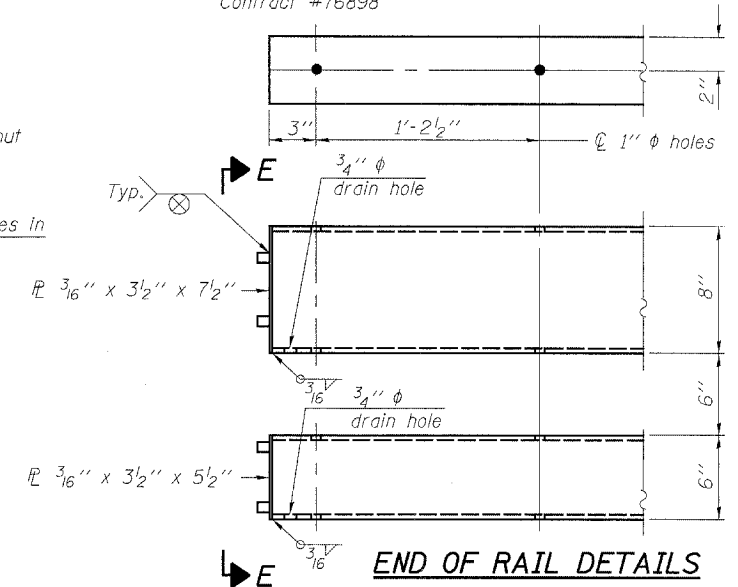
1/8" x 2 1/2" Slotted Holes in hollow structural section



SECTION AT RAIL SPLICE

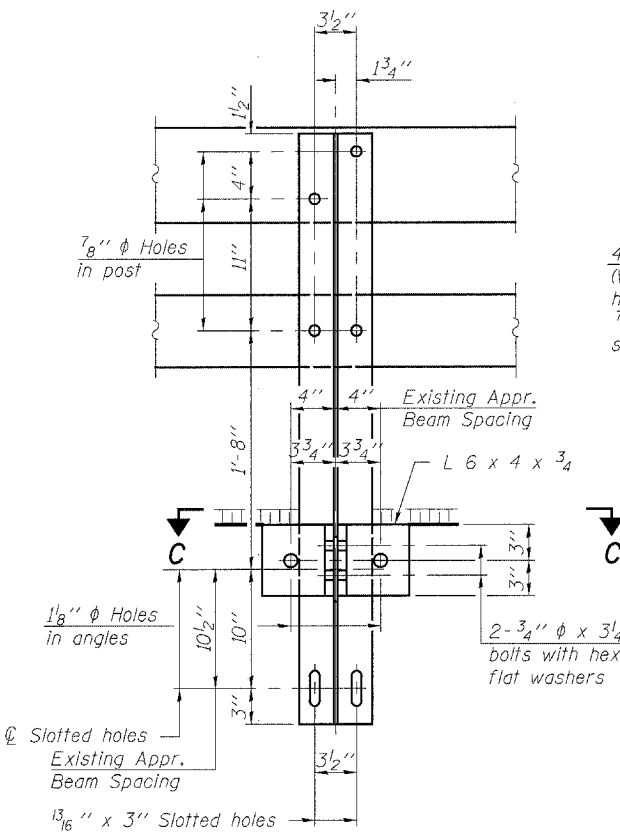


PLAN-BOTT. SPLICE R TYPICAL

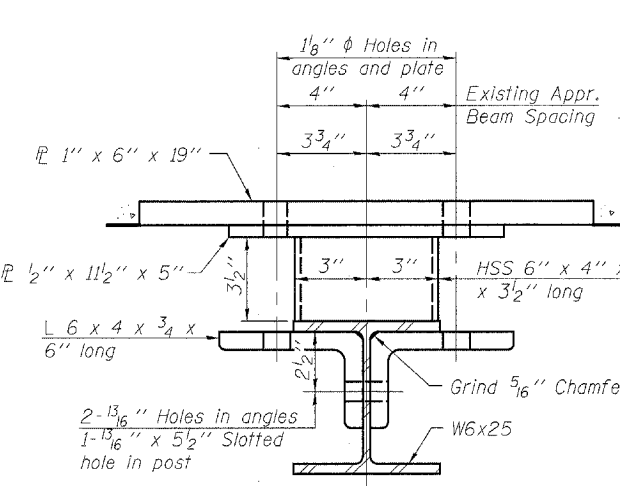


END OF RAIL DETAILS

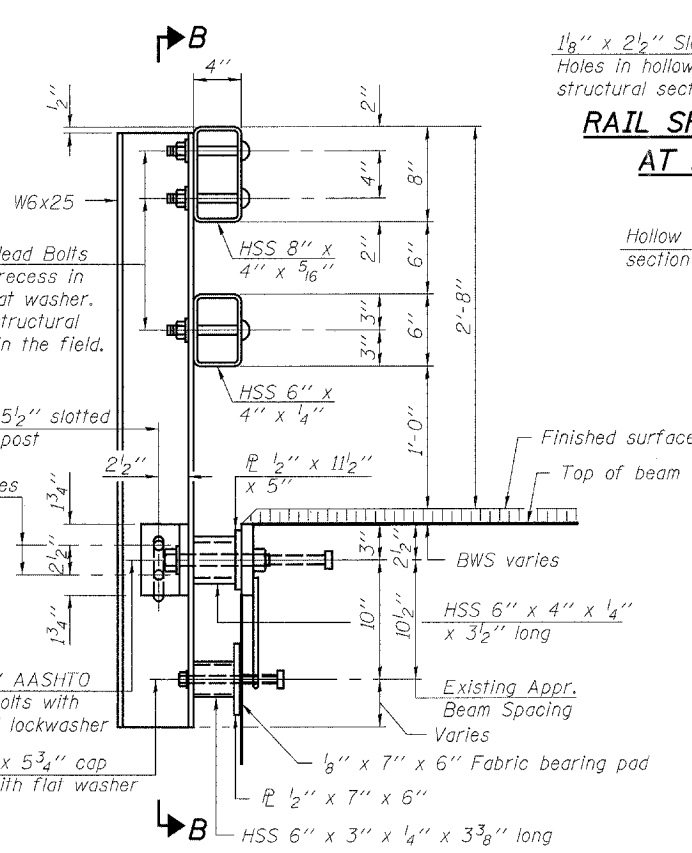
**NOTES**  
Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.  
All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.  
Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.  
All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.  
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.  
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
For multi-span bridges, sufficient 1/2" 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"  $\phi$  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"  $\phi$  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"  $\phi$  cap screws in bottom of posts shall be tightened to a snug fit only.  
One post shall be attached to the existing approach beam at each corner of the structure as shown on sheet 5 of 10. The existing anchor device in the approach beams shall be used and shall not be removed or altered in any way.  
For rail post spacing, see sheet 5 of 10.



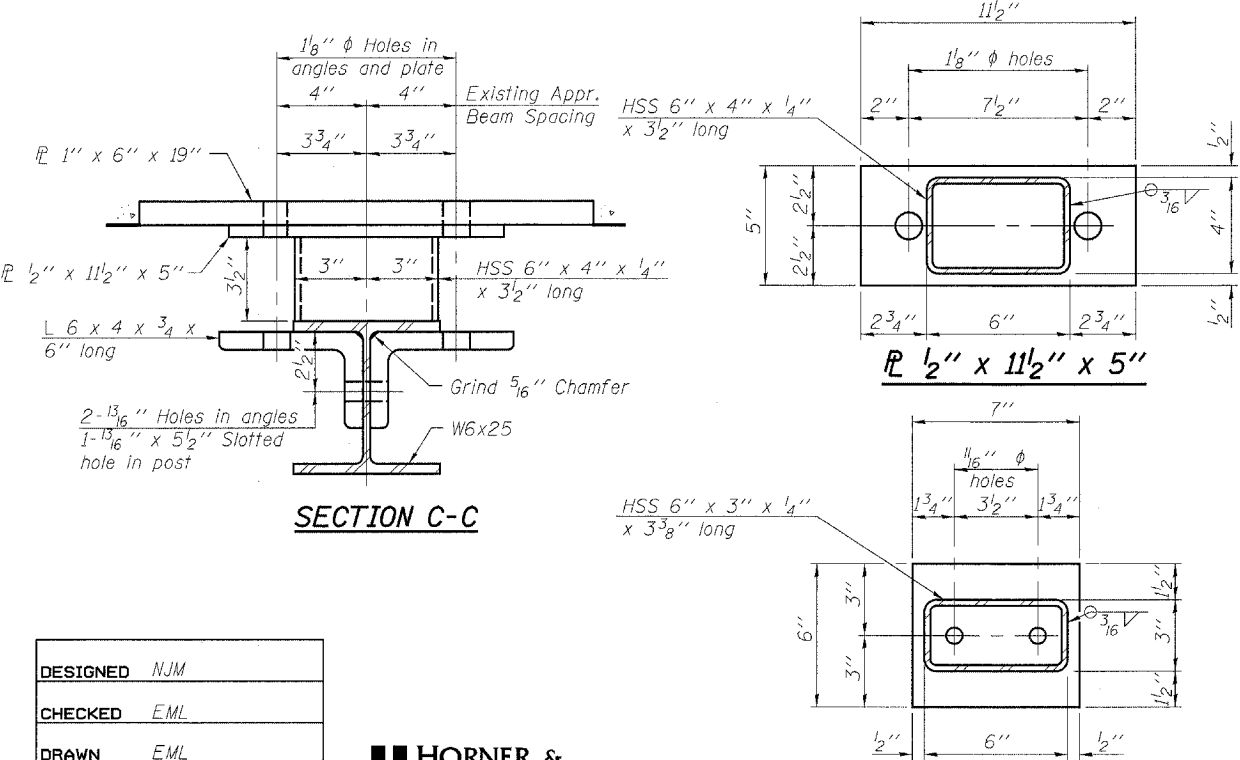
SECTION B-B



SECTION C-C

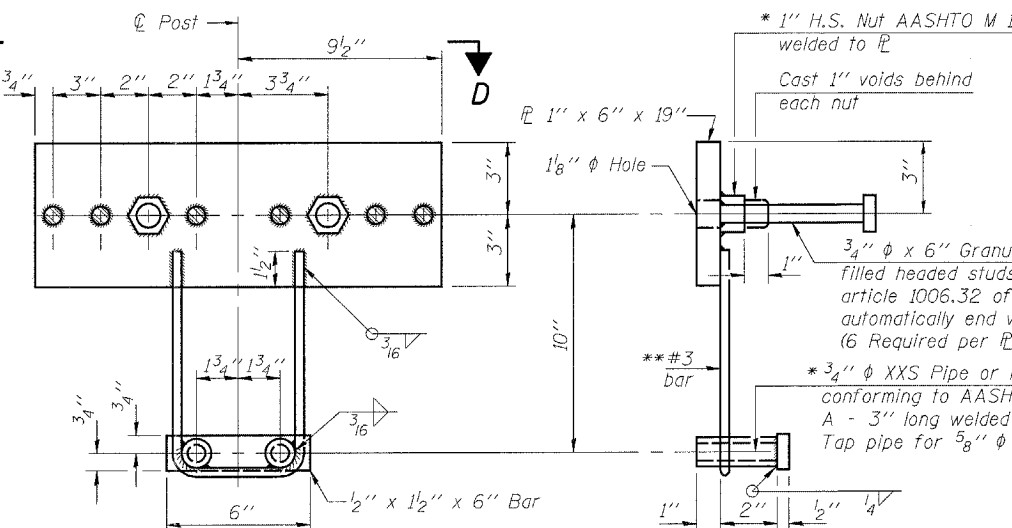


SECTION AT RAIL POST



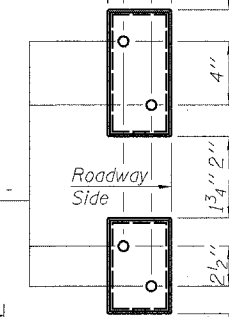
ANCHOR DEVICE

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



VIEW D-D

VIEW E-E



**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	334

**TYPE SM**  
**STEEL BRIDGE RAIL SIDE MOUNTED**  
**F.A.P. ROUTE 329 - SECTION 126BR-1**  
**RANDOLPH COUNTY**  
**STATION 718+90.00**  
**STRUCTURE NO. 079-0016**

DESIGNED	NJM
CHECKED	EML
DRAWN	EML
CHECKED	NJM

**HORNER & SHIFRIN, INC.**  
ENGINEERS ■ ARCHITECTS ■ PLANNERS

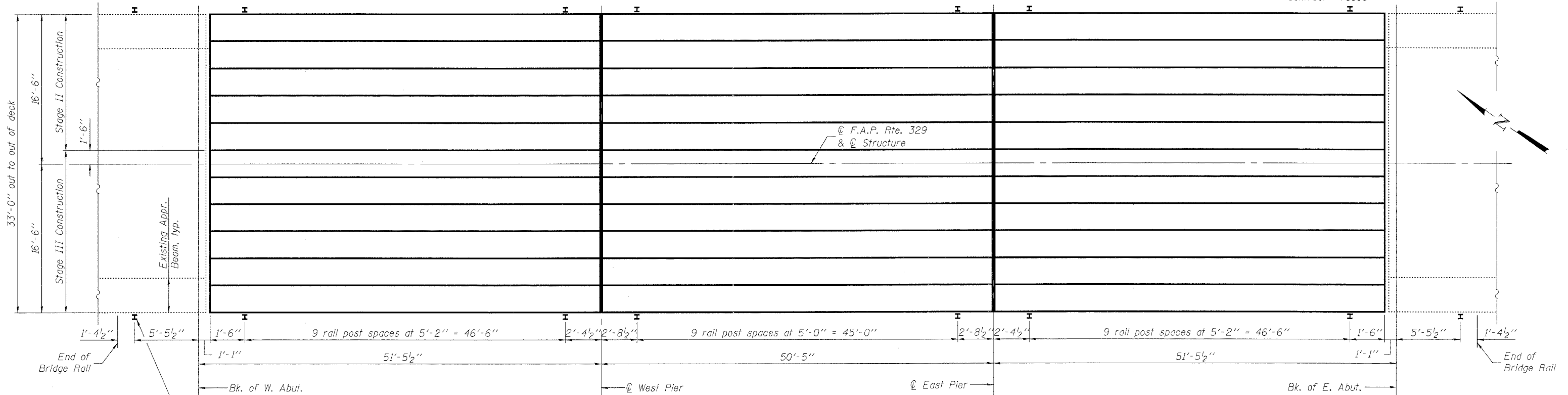
R-34BWS

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

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

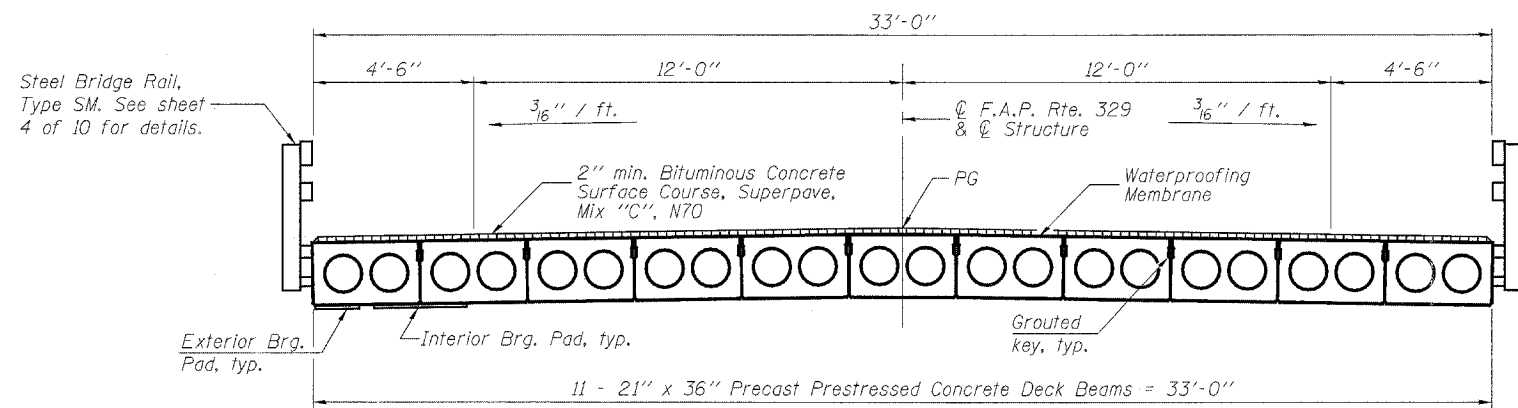
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5 10 SHEETS
F.A.P. 329	126BR-1	RANDOLPH	27	19	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #76898

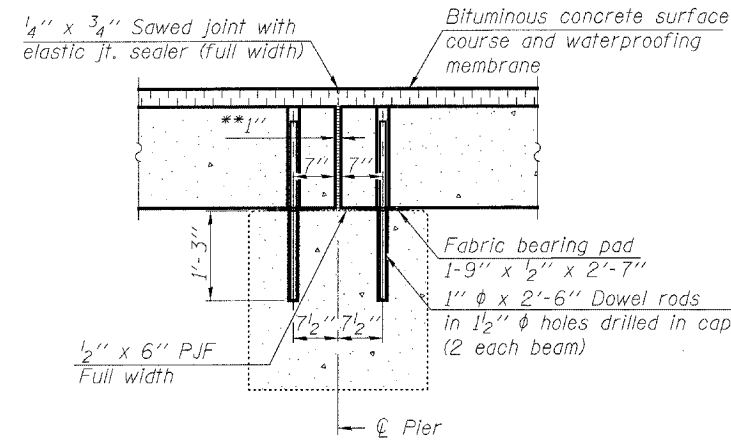


Note:  
Rail spacing the same on both sides of the bridge.

PLAN

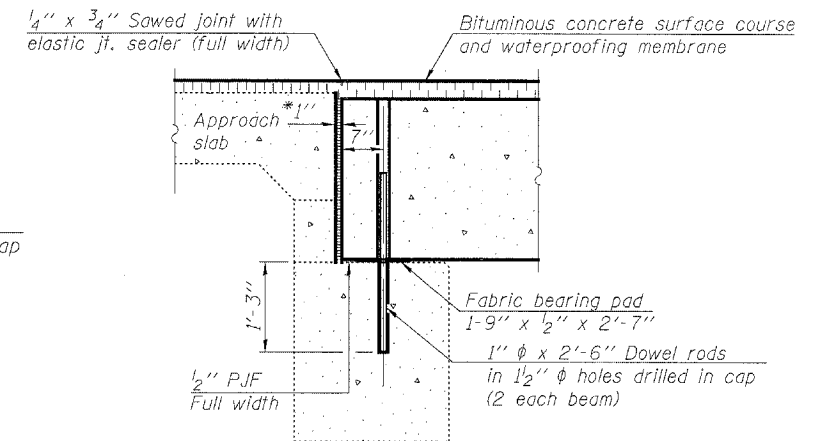


CROSS SECTION



SECTION THRU FIXED PIER

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



SECTION THRU ABUTMENT

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

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. See sheet 7 of 10 for bearing pad details.

DESIGNED	NJM
CHECKED	EML
DRAWN	NJM
CHECKED	EML

**HORNER & SHIFRIN, INC.**  
ENGINEERS ■ ARCHITECTS ■ PLANNERS

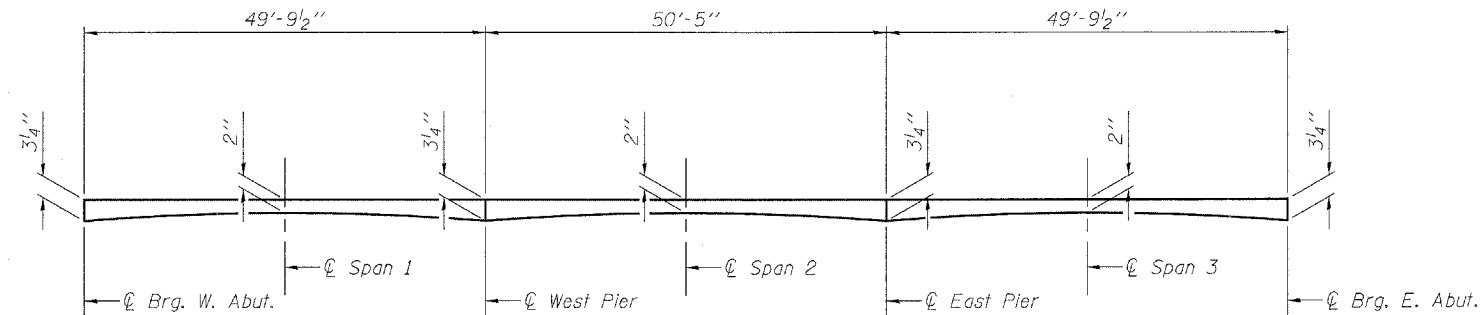
**SUPERSTRUCTURE DETAILS**  
**F.A.P. ROUTE 329 - SECTION 126BR-1**  
**RANDOLPH COUNTY**  
**STATION 718+90.00**  
**STRUCTURE NO. 079-0016**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

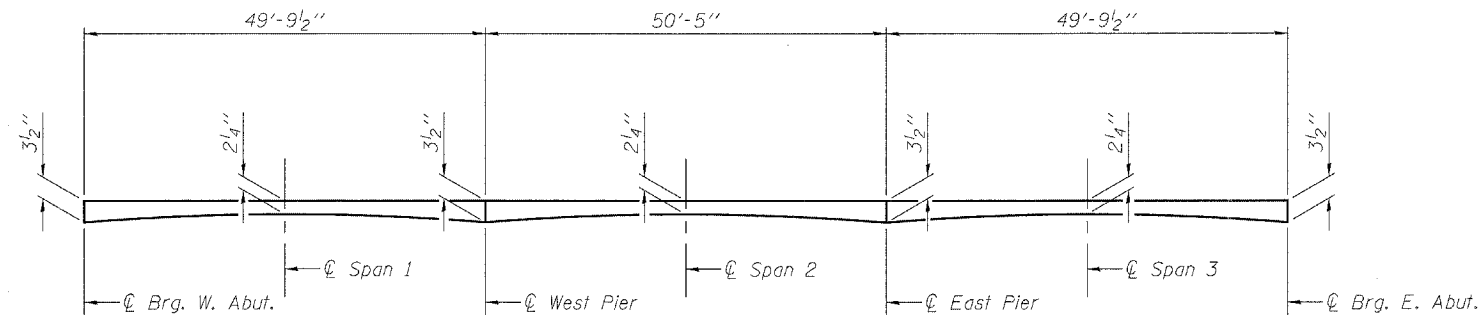
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 329	126BR-1	RANDOLPH	27	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6  
10 SHEETS

Contract #76898

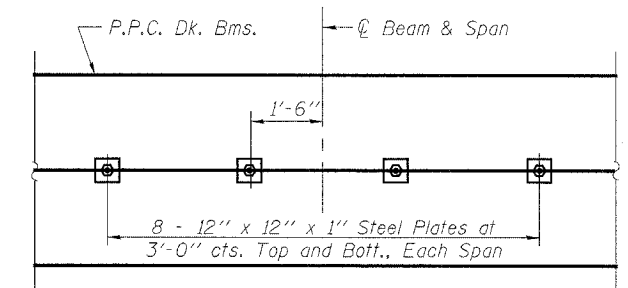


**BITUMINOUS CONCRETE SURFACE COURSE PROFILE**  
(Bituminous concrete surface course along edge of beams)

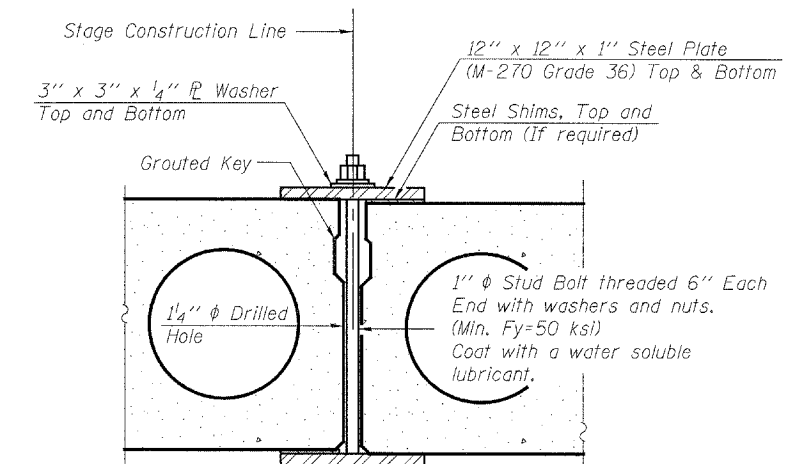


**BITUMINOUS CONCRETE SURFACE COURSE PROFILE**  
(Bituminous concrete surface course along Roadway)

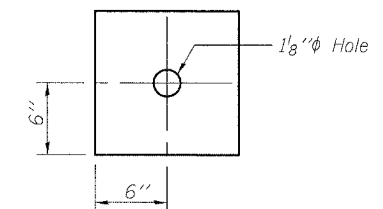
Note:  
Bituminous Concrete Surface Course Profile dimensions include 1/2" for waterproofing membrane thickness.



**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.

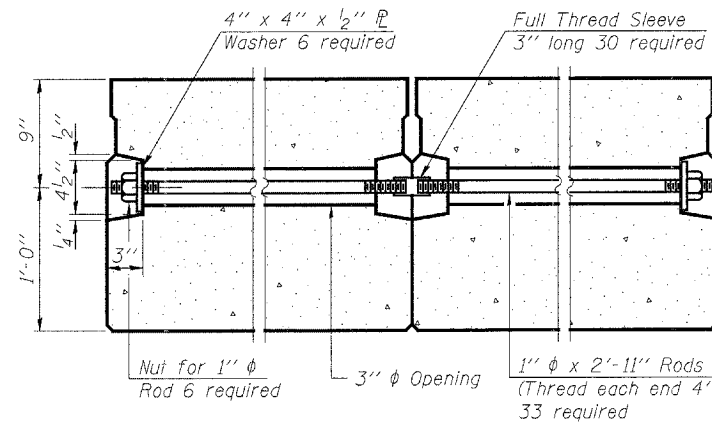
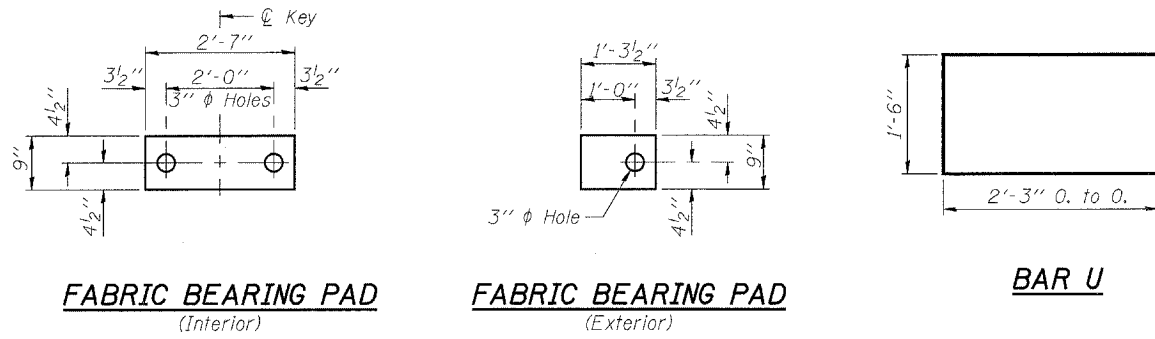
DESIGNED	NJM
CHECKED	EML
DRAWN	NJM
CHECKED	EML

**HORNER & SHIFRIN, INC.**  
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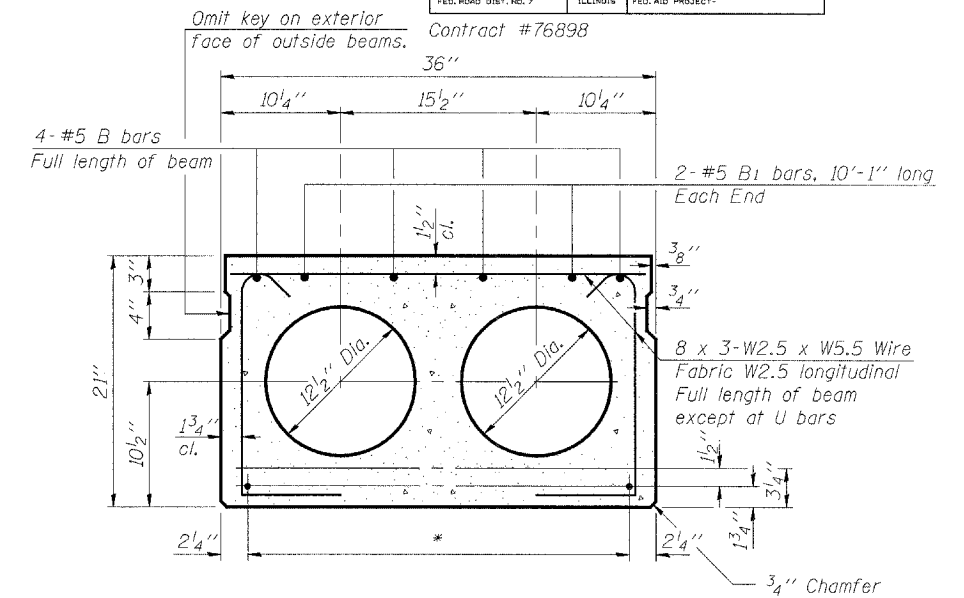
**SUPERSTRUCTURE DETAILS**  
**F.A.P. ROUTE 329 - SECTION 126BR-1**  
**RANDOLPH COUNTY**  
**STATION 718+90.00**  
**STRUCTURE NO. 079-0016**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7
F.A.P. 329	126BR-1	RANDOLPH	27	21	10 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



TYPICAL TRANSVERSE TIE ASSEMBLY



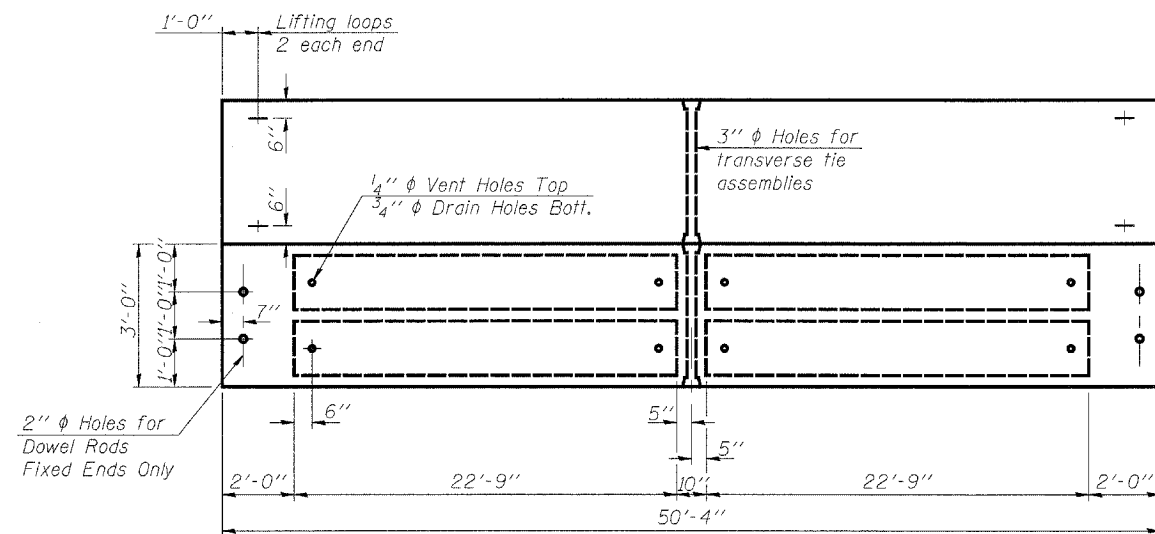
TYPICAL SECTION

1/2"  $\phi$  Strands, Each Strand Stressed to 30,900 Lbs.  
7-Strands 1 3/4" up, 6-Strands 3 1/4" up, 2-Strands 9" up

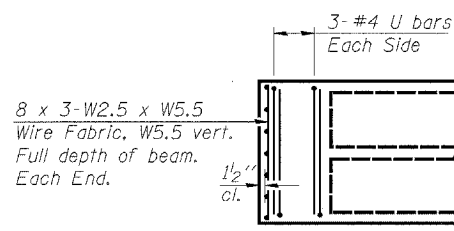
\*Transverse Strand Placement Guidelines

1. Place strands symmetrically about centerline of beam.
2. The minimum distance from center to center of strands in all directions shall be 2".
3. The minimum clearance from strand to dowel hole shall be 1/2".
4. The minimum clearance from strand to void shall be 1 1/2".

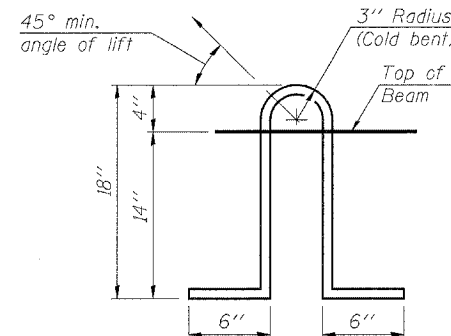
Vertical placement of strands shall not be adjusted to satisfy the above guidelines.



PLAN



END PLAN



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2-1/2"  $\phi$ -270 ksi strands, as shown. The 1"  $\phi$  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 III Construction. 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 3 of 10 for Wing Type Threaded Insert location and spacing. See sheet 4 of 10 for rail anchor device to be cast in precast beams. See sheet 5 of 10 for spacing of rail post. See sheet 6 of 10 for Shear Key Clamping Details at Stage Const. Jt.

BILL OF MATERIAL

Item	Unit	Total
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	4983

DESIGNED	NJM
CHECKED	EML
DRAWN	NJM
CHECKED	EML

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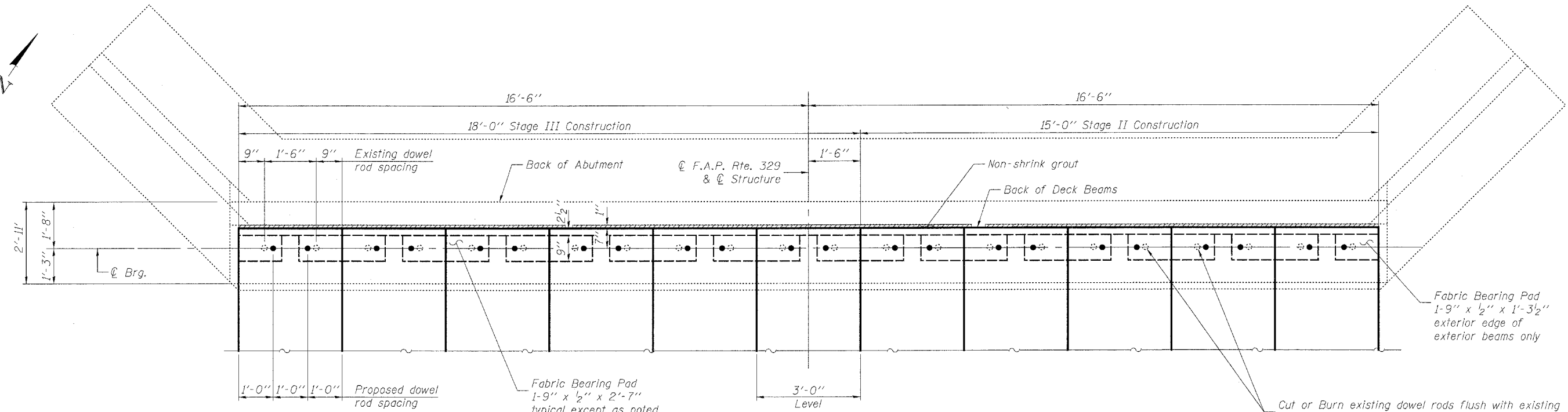
**SUPERSTRUCTURE DETAILS**  
**F.A.P. ROUTE 329 - SECTION 126BR-1**  
**RANDOLPH COUNTY**  
**STATION 718+90.00**  
**STRUCTURE NO. 079-0016**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 329126BR-1		RANDOLPH	27	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

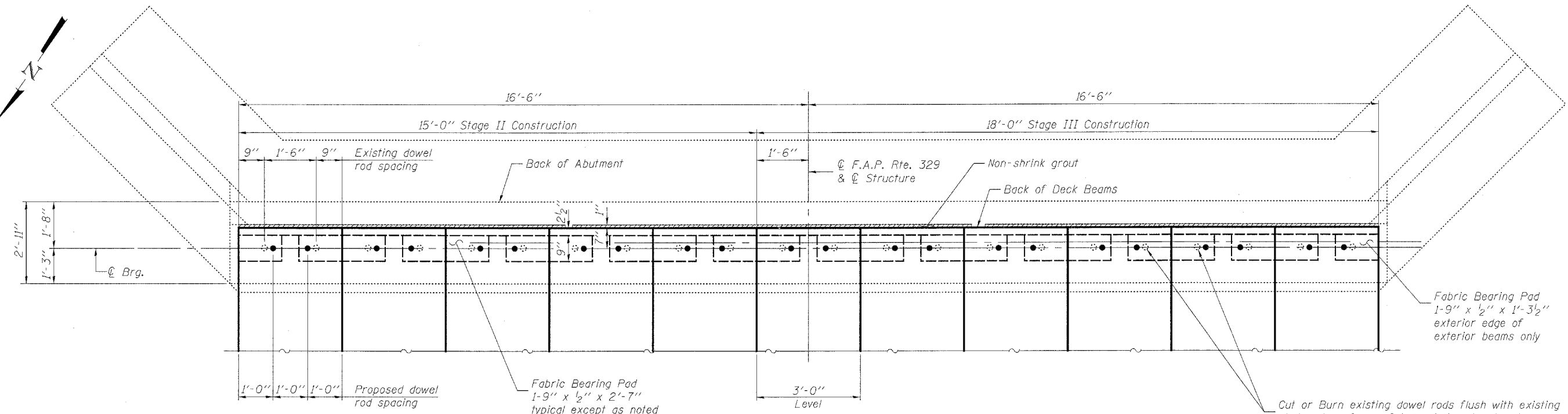
SHEET NO. 8  
10 SHEETS

Contract #76898



Cut or Burn existing dowel rods flush with existing abutment surface. Grind existing dowel rods smooth and seal with epoxy. Cost is included with Removal of Existing Superstructures.

**PLAN - WEST ABUTMENT**  
(Bituminous concrete surface course not shown)



Cut or Burn existing dowel rods flush with existing abutment surface. Grind existing dowel rods smooth and seal with epoxy. Cost is included with Removal of Existing Superstructures.

**PLAN - EAST ABUTMENT**  
(Bituminous concrete surface course not shown)

DESIGNED	NJM
CHECKED	EML
DRAWN	NJM
CHECKED	EML

**HORNER & SHIFRIN, INC.**  
ENGINEERS ■ ARCHITECTS ■ PLANNERS

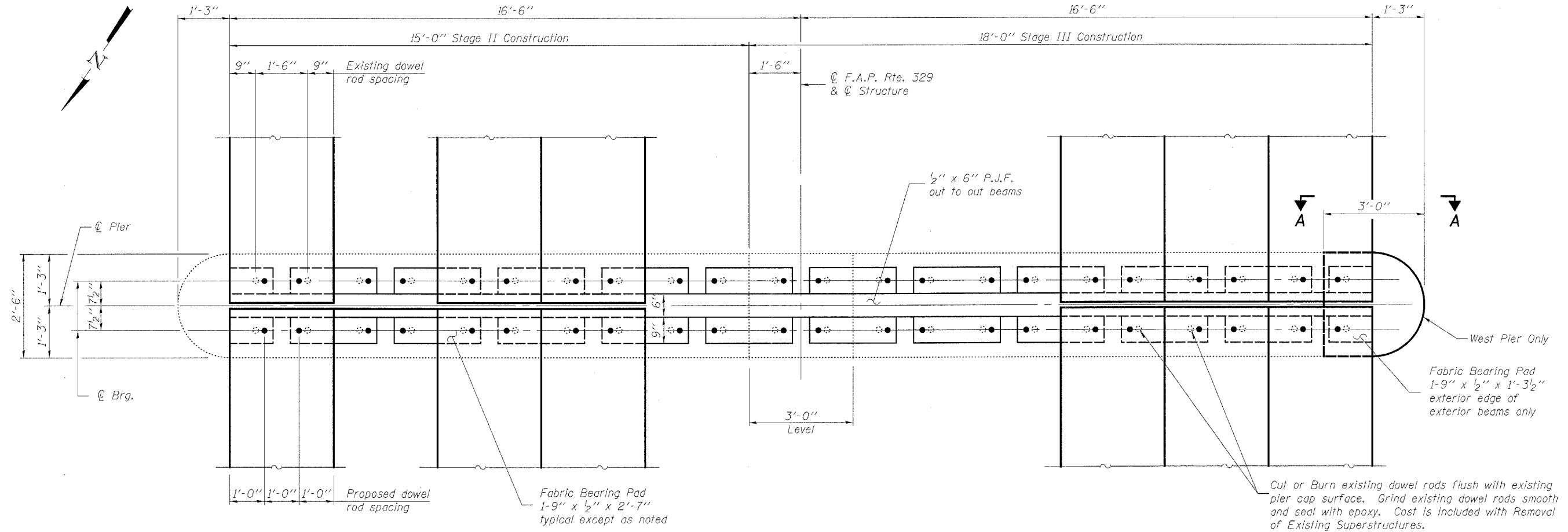
Notes:  
For Abutment repair details, see sheet 10 of 10.

**ABUTMENTS**  
**F.A.P. ROUTE 329 - SECTION 126BR-1**  
**RANDOLPH COUNTY**  
**STATION 718+90.00**  
**STRUCTURE NO. 079-0016**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

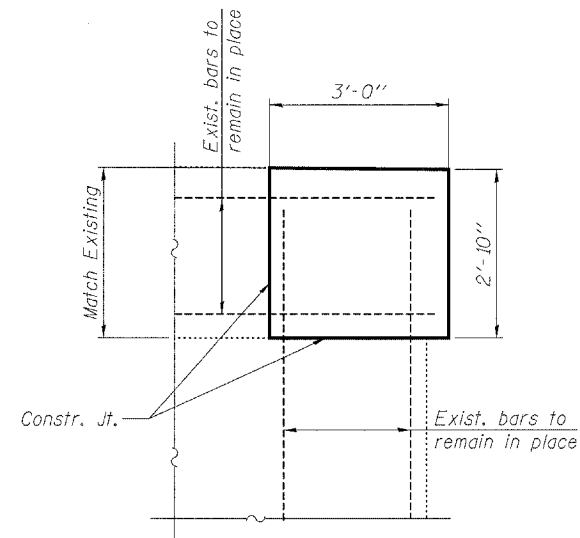
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9 10 SHEETS
F.A.P. 329	126BR-1	RANDOLPH	27	23	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #76898



**PLAN**

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



**VIEW A-A**

(Deck Beams, Bituminous concrete surface course not shown)

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu. Yd.	0.7

Notes:  
Concrete Structures shown are to be poured before placement of new deck beams.  
For Pier Repair and Concrete Removal details, see sheet 10 of 10.

DESIGNED	NJM
CHECKED	EML
DRAWN	NJM
CHECKED	EML

**HORNER & SHIFRIN, INC.**  
ENGINEERS ■ ARCHITECTS ■ PLANNERS

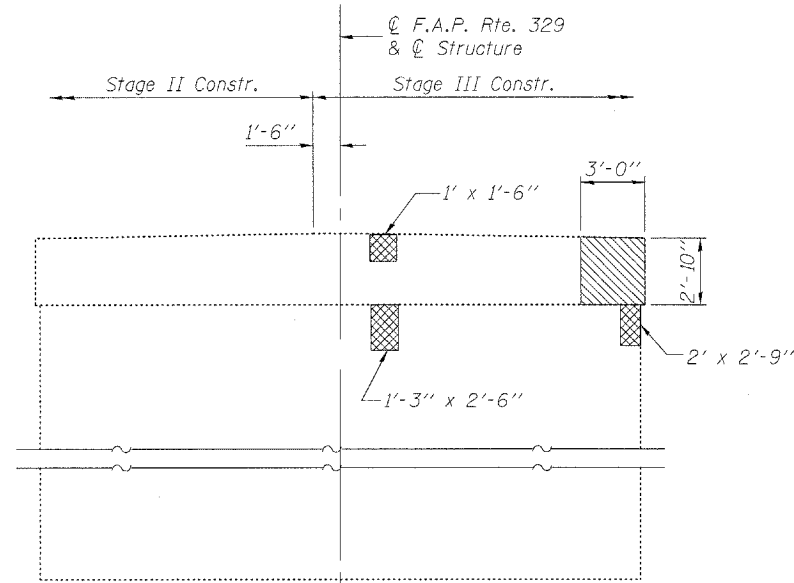
**PIERS**  
**F.A.P. ROUTE 329 - SECTION 126BR-1**  
**RANDOLPH COUNTY**  
**STATION 718+90.00**  
**STRUCTURE NO. 079-0016**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

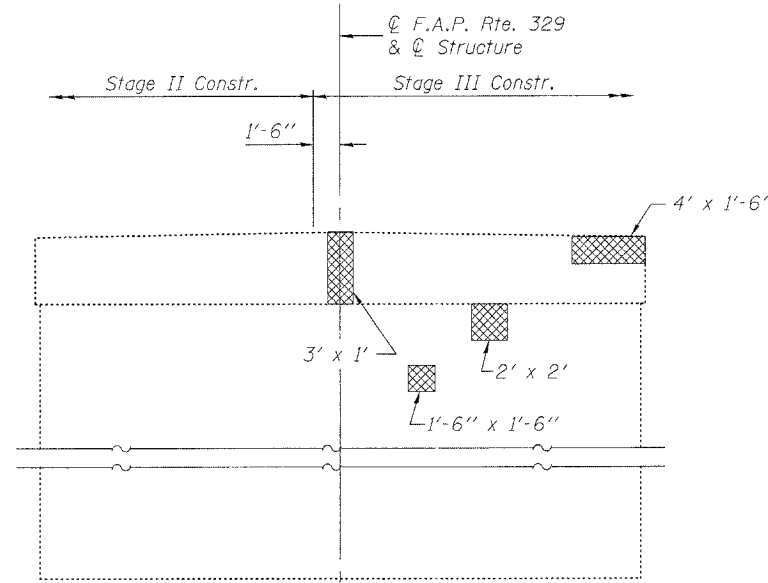
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 329	126BR-1	RANDOLPH	27	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10  
10 SHEETS

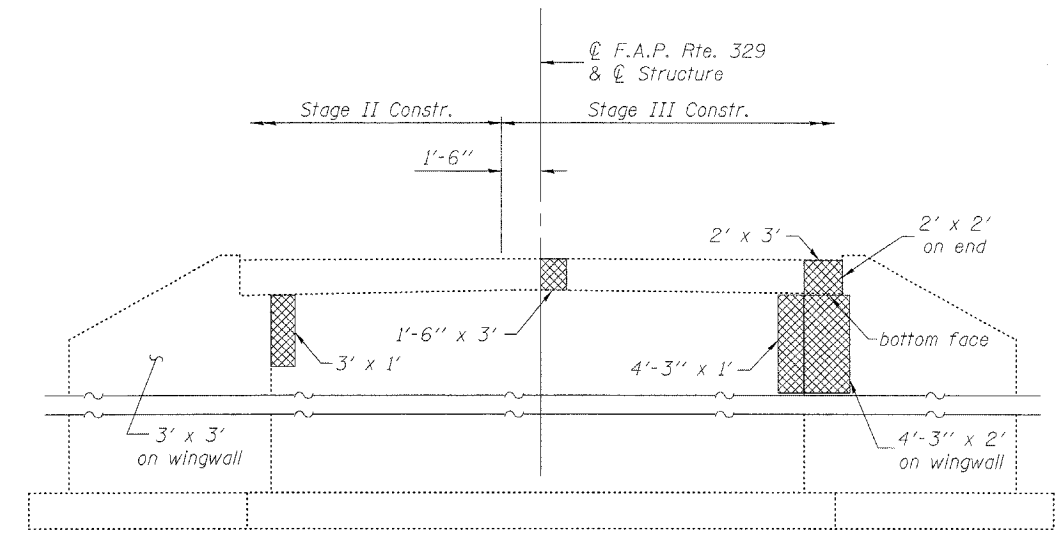
Contract #76898



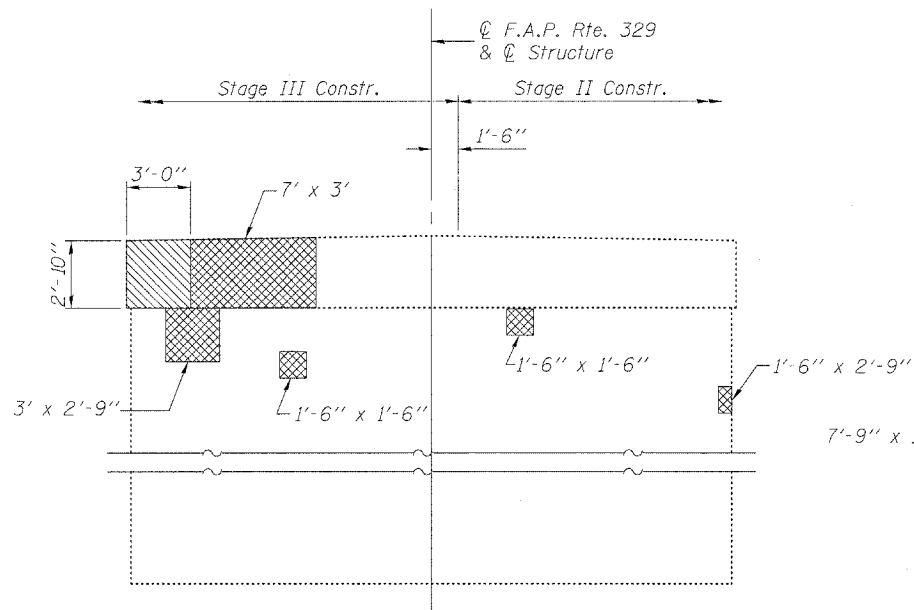
**ELEVATION-WEST PIER**  
(Looking East)



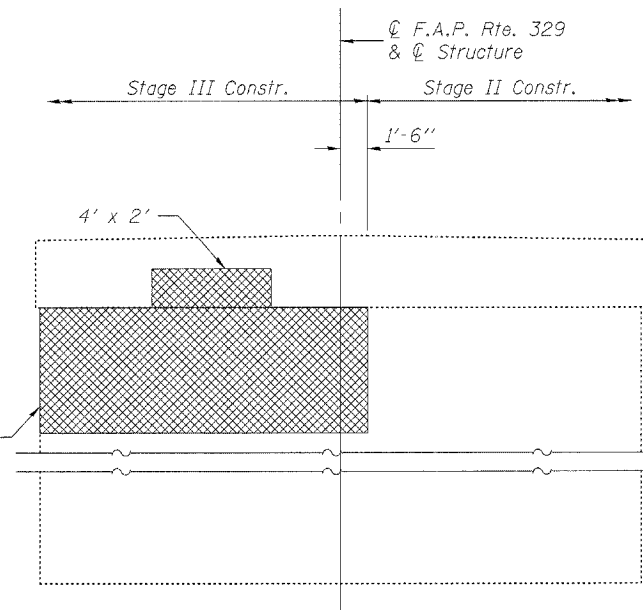
**ELEVATION-EAST PIER**  
(Looking East)



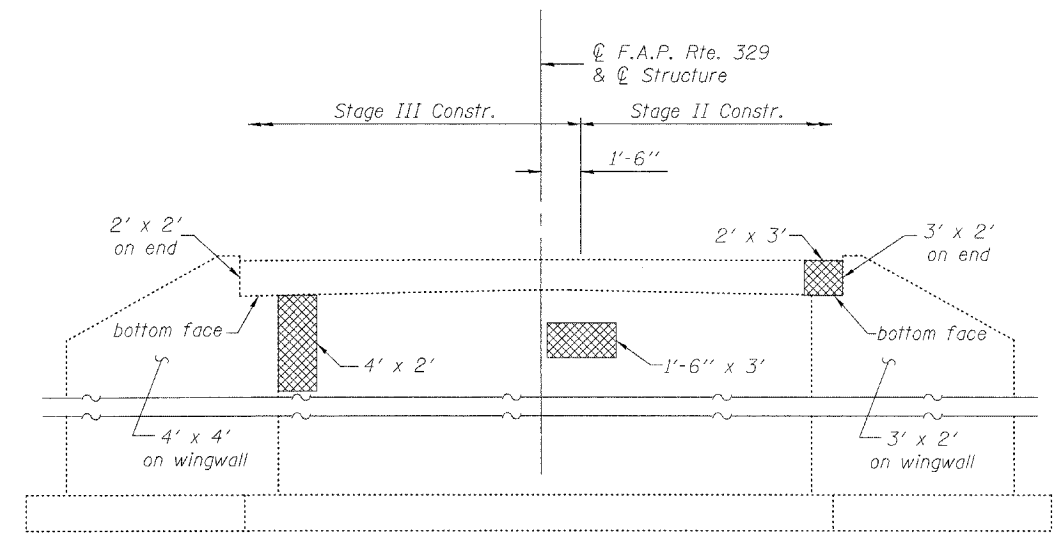
**ELEVATION-EAST ABUTMENT**  
(Looking East)



**ELEVATION-WEST PIER**  
(Looking West)



**ELEVATION-EAST PIER**  
(Looking West)



**ELEVATION-WEST ABUTMENT**  
(Looking West)

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

**LEGEND**

- Formed Concrete Repair
- Concrete Removal

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.	292.8
Concrete Removal	Cu. Yd.	0.7

DESIGNED	NJM
CHECKED	EML
DRAWN	NJM
CHECKED	EML

**HORNER & SHIFRIN, INC.**  
ENGINEERS ■ ARCHITECTS ■ PLANNERS

**SUBSTRUCTURE REPAIR DETAILS**  
**F.A.P. ROUTE 329 - SECTION 126BR-1**  
**RANDOLPH COUNTY**  
**STATION 718+90.00**  
**STRUCTURE NO. 079-0016**



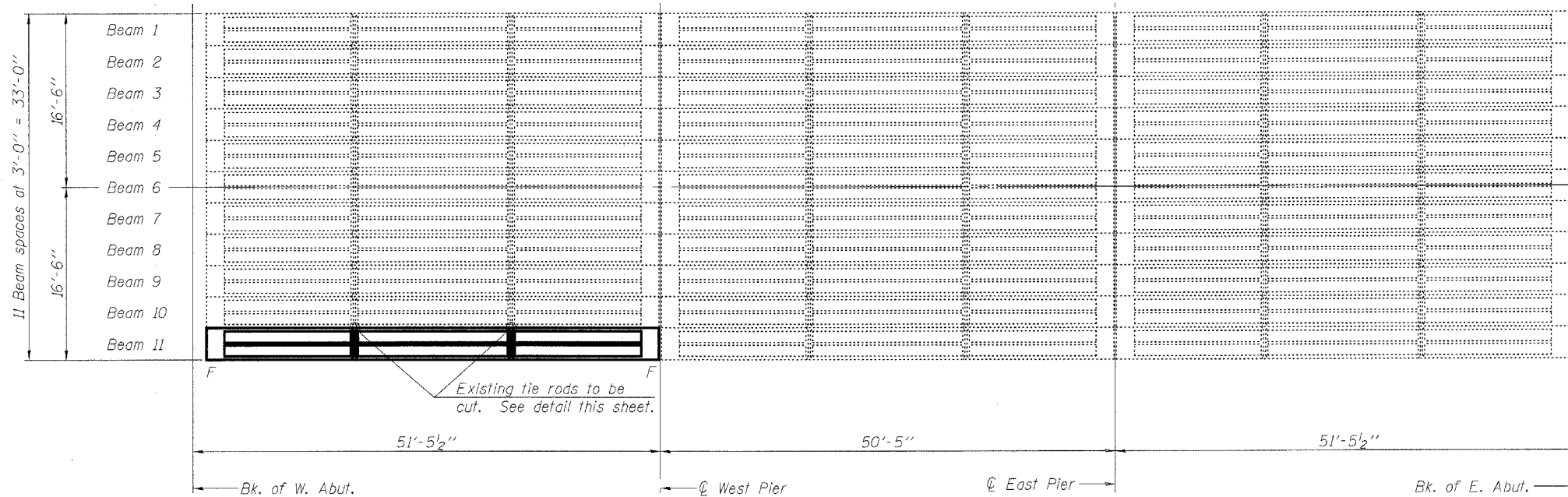
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 329	26BR-1	RANDOLPH	27	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #76898

SHEET NO. 1

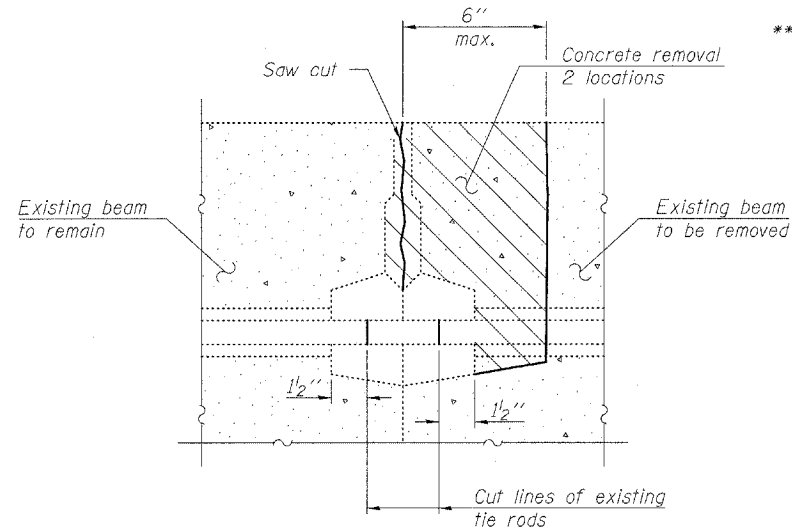
3 SHEETS



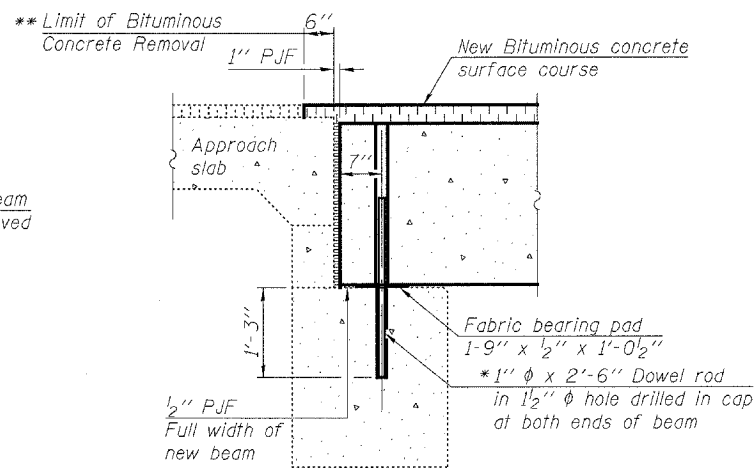
PLAN

**GENERAL NOTES**

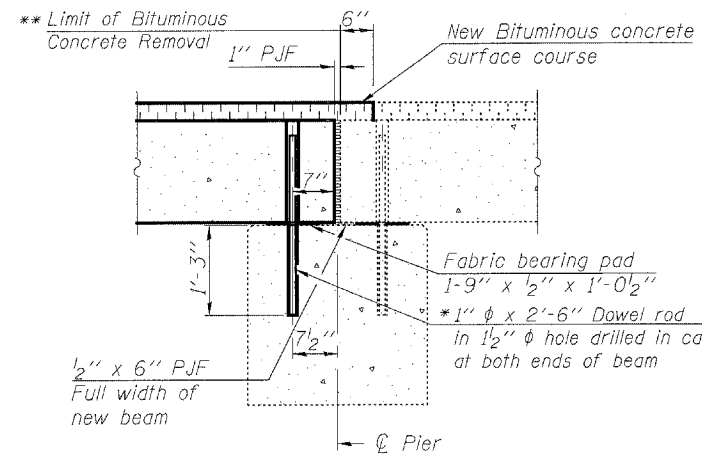
The thickness of Bituminous overlay shall match the existing thickness and shall be adjusted for the new expected beam camber.  
 Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.  
 The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. This work shall be performed by the producer and included with the cost of the beam.  
 The contractor is advised that the existing Precast Prestressed Concrete 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 beam.  
 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 P.P.C. Deck Beams".  
 The bridge shall be closed to traffic during Stage I Construction, see Roadway Plans.



BEAM REMOVAL DETAIL  
AT TRANSVERSE TIES



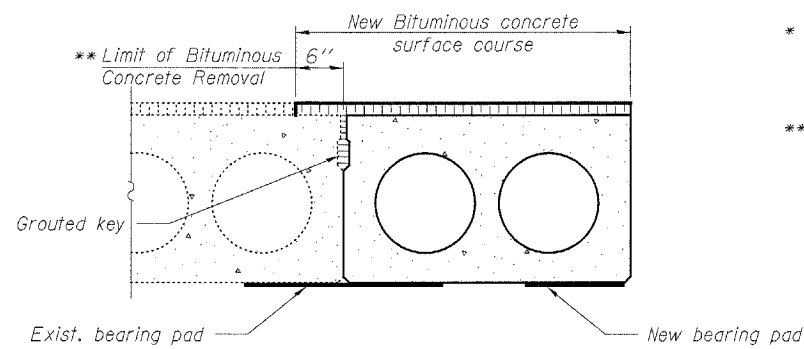
SECTION THRU WEST ABUTMENT



SECTION THRU WEST PIER

**BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Superstructure	Cu. Yd.	0.1		0.1
Precast Prestressed Concrete Deck Beams (21" Depth) Special	Sq. Ft.	151		151
Removal of Existing P.P.C. Deck Beams	Sq. Ft.	151		151
Bituminous Concrete Surface Course, Superpave, Mix "C", N70	Ton	4		4



PARTIAL CROSS SECTION

- \* Exist. dowel rods shall be cut off and ground flush with cap. New dowel rods to be grouted after beam is in place and allowed to cure (24 hrs. min.) prior to grouting the shear key.
- \*\* The cost of bituminous concrete removal shall be included with Removal of Existing PPC Deck Beams.

**DESIGN STRESSES**

PRECAST PRESTRESSED UNITS

- $f'_c = 5,000$  psi
- $f'_{ci} = 4,000$  psi
- $f'_s = 270,000$  psi ( $1/2"$  low lax. strands)
- $f_{si} = 201,960$  psi ( $1/2"$  low lax. strands)

DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

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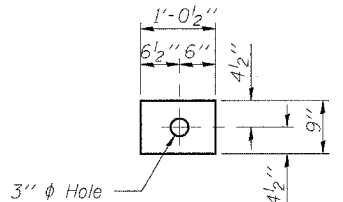


Eric Lagemann 8/10/06  
Expires 11/30/2006

**STAGE I**  
**DECK BEAM REPLACEMENT DETAILS**  
**S.B.I. ROUTE 154 OVER PLUM CREEK**  
**RANDOLPH COUNTY**  
**STRUCTURE NO. 079-0016**

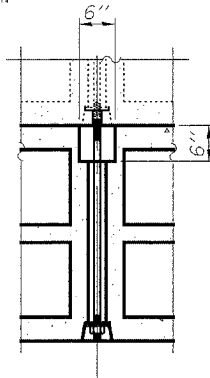
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 3 SHEETS
F.A.P. 329	26BR-1	RANDOLPH	27	26	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



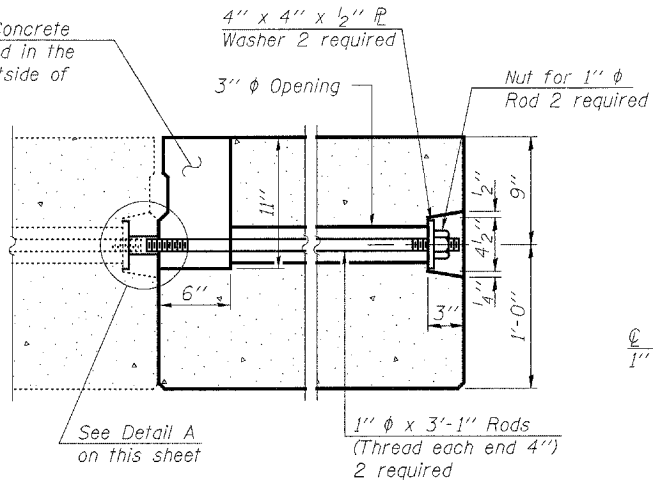
FABRIC BEARING PAD

6" x 6" x 11" Blockout to be filled with Class BD Concrete after beam has been installed. Cost shall be included in the cost of "Concrete Superstructure". Omit on the outside of fascia beam.

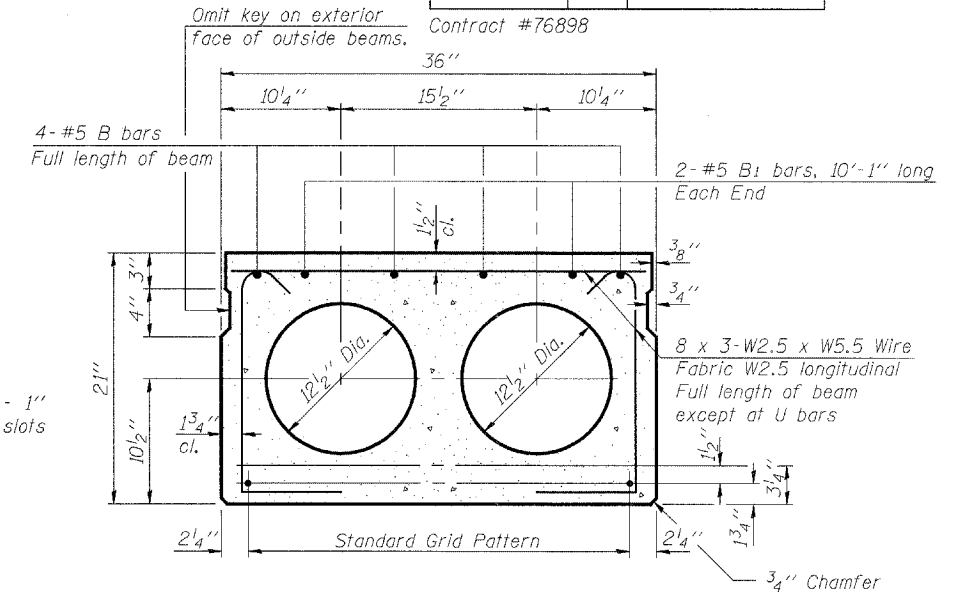


BAR U

TYPICAL TRANSVERSE TIE ASSEMBLY



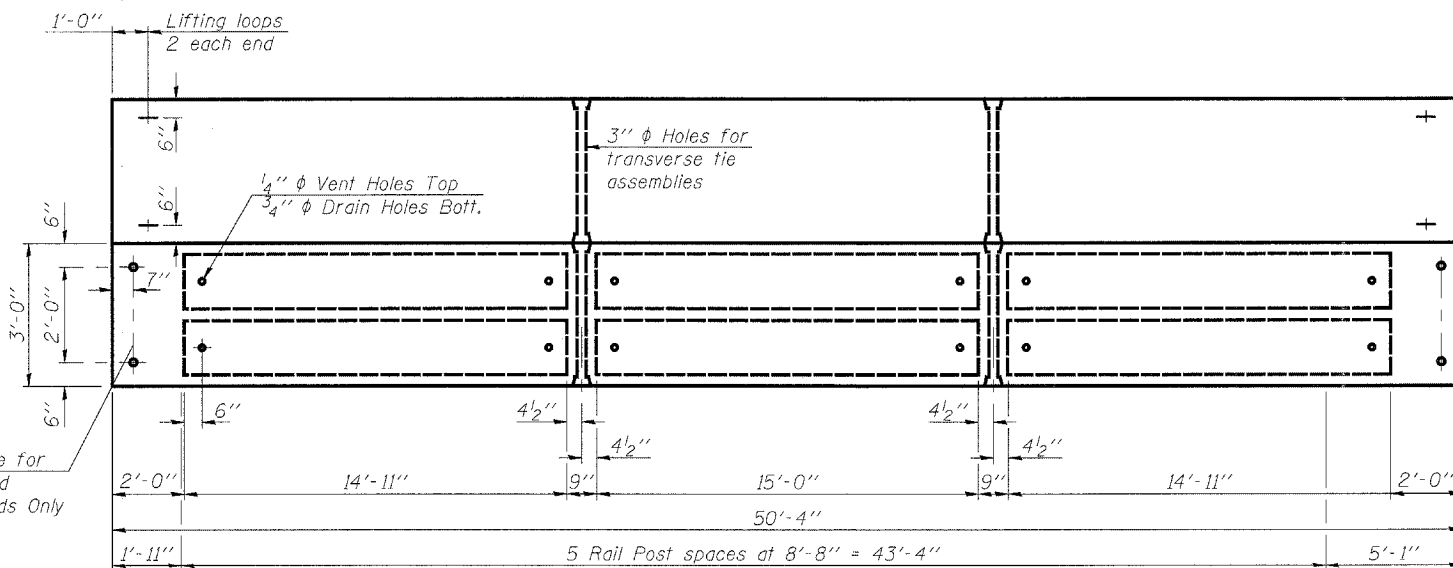
DETAIL A



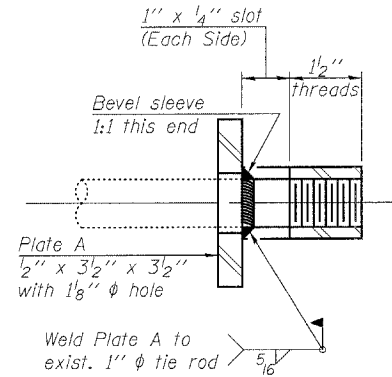
TYPICAL SECTION

1/2"  $\phi$  Strands, Each Strand Stressed to 30,900 Lbs.  
8-Strands 1 3/4" up, 4-Strands 3/4" up, 2-Strands 9" up

Note:  
Place strands symmetrically about  $\phi$  of beam.



PLAN



SECTION B-B

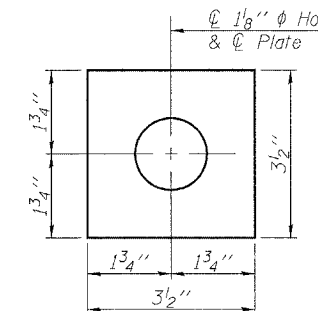
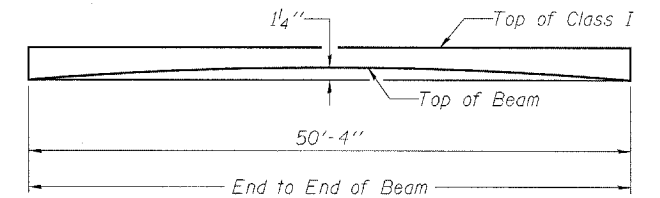
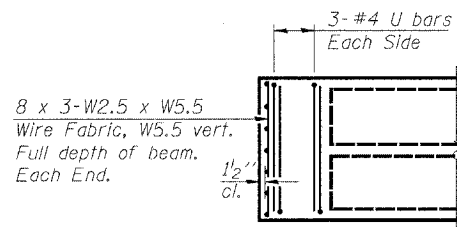


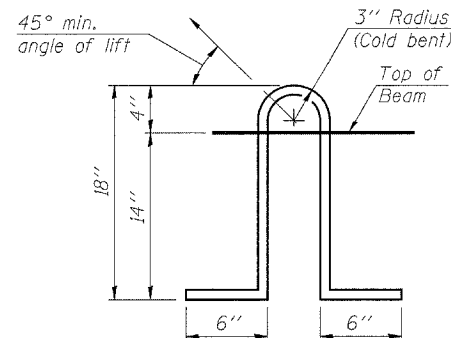
PLATE A



ANTICIPATED INITIAL CAMBER DIAGRAM



END PLAN



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2-1/2"  $\phi$  270 ksi strands, as shown. The 1"  $\phi$  rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. 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 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 3 of 3 for rail anchor device to be cast in precast beams.

BILL OF MATERIAL

Item	Unit	Total
Precast Prestressed Concrete Deck Beams (21" Depth) Special	Sq. Ft.	151

STAGE I  
DECK BEAM REPLACEMENT DETAILS  
S.B.I. ROUTE 154 OVER PLUM CREEK  
RANDOLPH COUNTY  
STRUCTURE NO. 079-0016

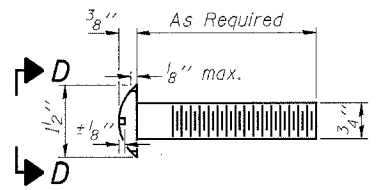
DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

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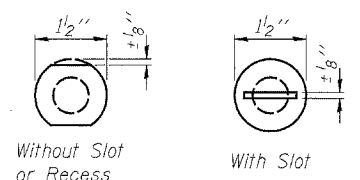
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.	SHEET NO. 3 3 SHEETS
F.A.P. 329	26BR-1	RANDOLPH	27	27	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

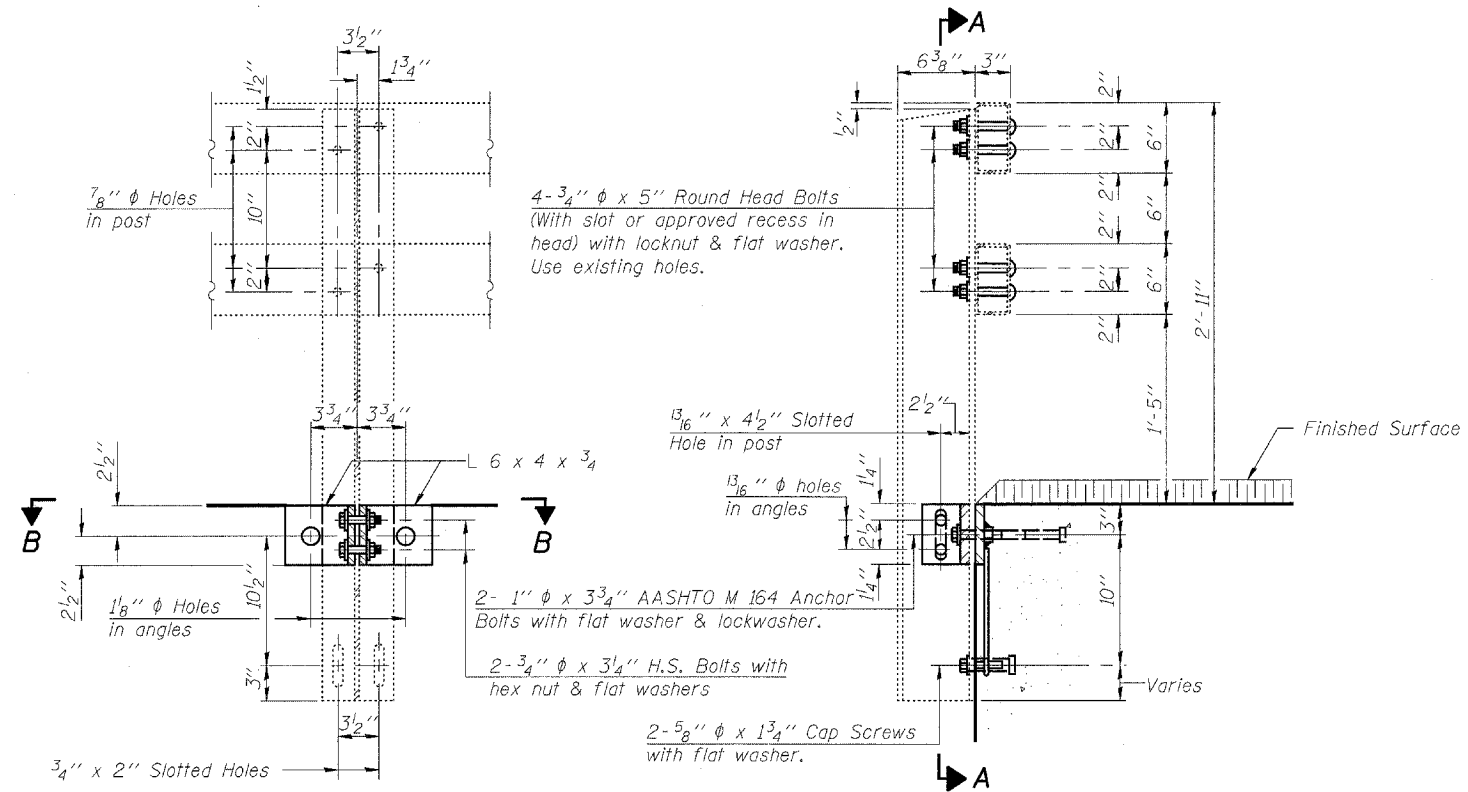
Contract #76898



DETAIL OF 3/4"  $\phi$  ROUND HEAD BOLT

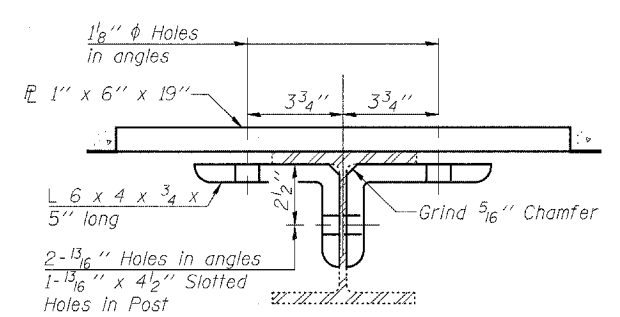


VIEW D-D

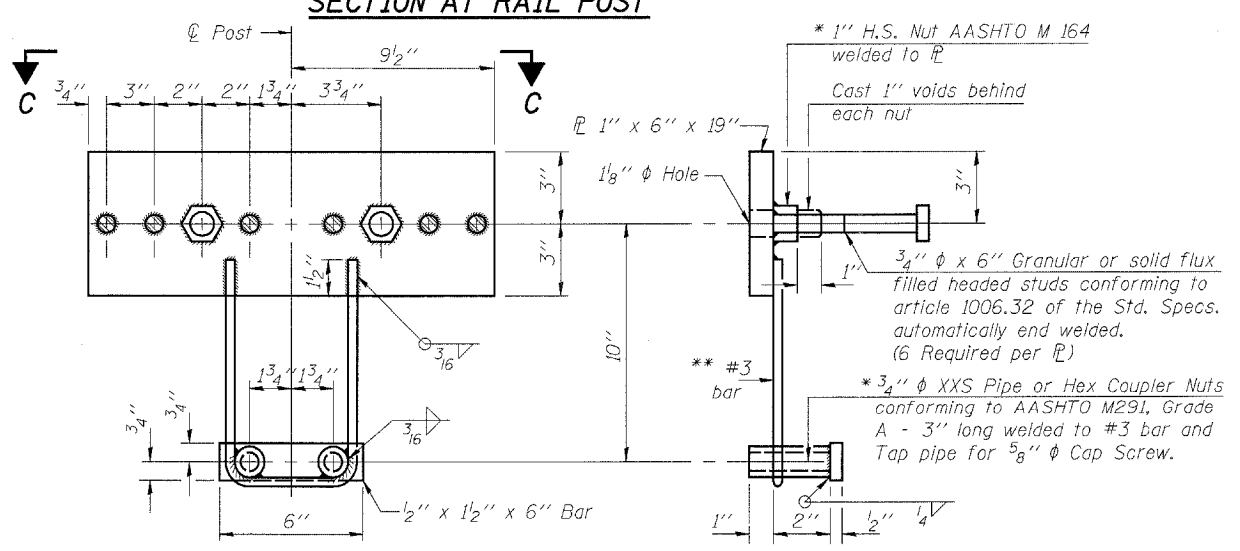


SECTION A-A

SECTION AT RAIL POST



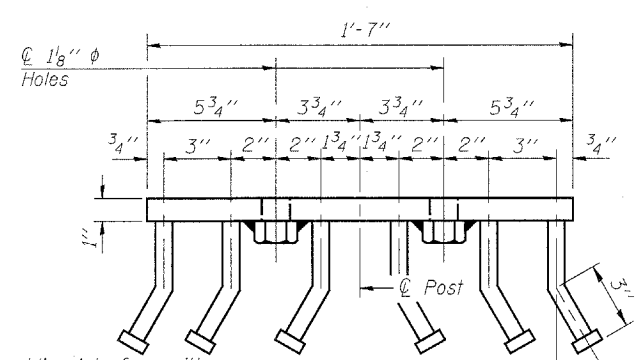
SECTION B-B



ANCHOR DEVICE

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

\*\* 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".



VIEW C-C

NOTES

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except 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 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.

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 Precast Prestressed Concrete Deck Beams (21" Depth) Special.

The 3/4"  $\phi$  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"  $\phi$  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"  $\phi$  cap screws in bottom of posts shall be tightened to a snug fit only.

Cost of reinstalling existing posts and rails, anchor devices and all accessories shall be included with Precast Prestressed Concrete Deck Beams (21" Depth) Special.

Remove and reinstall existing posts and existing rails. For rail post spacing, see sheet 2 of 3.

STAGE I  
STEEL BRIDGE RAIL  
DECK BEAM REPLACEMENT DETAILS  
S.B.I. ROUTE 154 OVER PLUM CREEK  
RANDOLPH COUNTY  
STRUCTURE NO. 079-0016

DESIGNED	EML
CHECKED	NJM
DRAWN	EML
CHECKED	NJM

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