001001

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STATE STANDARDS

AREAS OF REINFORCEMENT REBARS

001006	DECIMAL OF AN INCH AND A FOOT
420001-06	PAVEMENT JOINTS /
515001-02	NAME PLATE FOR BRIDGES
630001-0 5	STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE 1 GUARDRAIL TERMINALS (SPECIAL)
631032-01	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER REPLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
667101	PERMANENT SURVEY MARKERS
701006-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
701201-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
701301-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
701311-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
701321-08	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
701326-0 2	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
702001-0 5	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE
720011	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
780001-01	TYPICAL PAVEMENT MARKINGS
886001	DETECTOR LOOP INSTALLATIONS
886006	TYPICAL LAYOUT FOR DETECTION LOOPS

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

WHITESIDE COUNTY
GARDEN PLAIN TOWNSHIP, SECTION 19 & 20

CONTRACT NO. 64B29

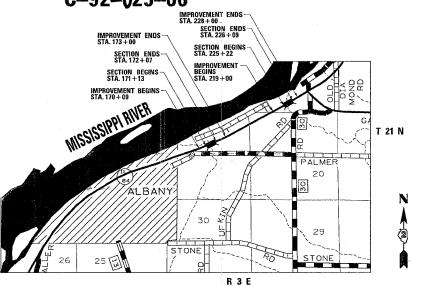
STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

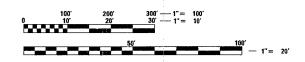
FAP ROUTE 308 (IL 84)
SECTION 109BR-3 & 109BR-4
PROJECT NHF-0308(028)
WHITESIDE COUNTY
C-92-025-06



THIS PROJECT INCLUDES THE REMOVAL AND REPLACEMENT
OF SUPERSTRUCTURES ON BRIDGES CARRYING IL 84 OVER:
-CEDAR CREEK LOCATED 1.5 MILES NORTH OF ALBANY (SN # 098-0022)
-SPRING CREEK LOCATED 0.5 MILES NORTH OF ALBANY (SN # 098-0023)
WITH GUARDRAIL UP DATES

GROSS LENGTH OF SECTIONS = 181 FEET = 0.034 MILES

NET LENGTH OF SECTIONS = 181 FEET = 0.034 MILES



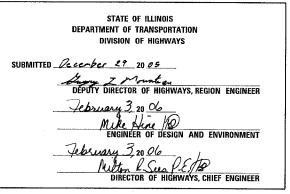
CONTRACT NO. 6

RTE. SECTION COUNTY TOTAL SH.

308 1098R-3 & WHITESIDE 47

D-92-092-05





PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

GENERAL NOTES

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 308 (IL 84)	109BR-3 & 109BR-4	Whiteside	47	2
FED ROAD DIST. NO.	LLINOIS	PROJECT		

The final top 100 mm (four inches) of soil in any right-of-way area disturbed by the Contractor must be capable of supporting vegetation. The soil must be from the A horizon (zero to 2' deep) of soil profiles of local soils.

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 4 or 6 (modified) shall be used, except in front of properties where the grass will be mowed, then use Seeding, Class 1 (modified). Class 6 (modified) shall be used on front slopes and ditch bottoms. Class 4 shall be used behind Type A gutter, on all backslopes and areas behind the backslope, and beyond the toe of front slope on fill sections without ditches. This work will be included in the contract unit price per Cubic Meter (Cubic Yard) for FURNISHED EXCAVATION.

Fertilizer shall be applied to all disturbed areas and incorporated into the seedbed prior to seeding or placement of sod at the rate specified in Sections 250 and 252 of the Standard Specifications. This work shall be included in the cost of FURNISHED EXCAVATION.

Mulch Method II shall be applied over all seeded areas. This shall be included in the cost of the FURNISHED EXCAVATION.

The following Mixture Requirements are applicable for this project:

Mixture Uses(s):	Mainline Surface Course
PG:	PG 64-22
RAP%: (Max)	10%
Design Air Voids	4.2 @ N50
Mixture Composition (Gradation Mixture)	IL 9.5 or 12.5
Friction Aggregate	С
20 Year ESAL	4.3

Install a "TO ACTUATE SIGNAL" sign for the traffic signal detector loops. The detail of this sign is included in the plans. This work will be included in the cost of TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

These structures will retain the same numbers 098-0022 & 098-0023.

The Contractor shall supply the Resident Engineer with the manufacturer's installation requirements for the type of Steel Plate Beam Guardrail Terminal Type 1 Special (Flared).

Bituminous Prime Coat shall be placed in accordance with Section 406 of the Standard Specifications. The cost of the Bituminous Prime Coat shall be included in the contract unit price per TON for BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX C, N50.

A quantity of Furnished Excavation has been included to repair washed out areas of existing slopes and to build up the shoulders throughout the job to conform with the typical sections and shoulder widening for terminals as shown in the plans. This work will be included in the contract unit price per Cubic Yard for FURNISHED EXCAVATION.

One 16d galvanized nail shall be used to toe nail the wood block out to the wood post on all Traffic Farrier Terminal Type I Specials.

Delineators shall be installed as shown in Standard 635001, except that the post shall be rotated 180° and only metal-backed delineators shall be permitted.

Delineators shall be salvaged and placed at the ends of approach guardrail terminal sections. The Contractor shall take care to not damage delineators and store in a safe manner for re-use. Damaged delineators shall be replaced at the contractor's expense.

Pavement marking shall be done according to Standard 780001, except as follows:

- 1. All words, such as ONLY, shall be 2.4 m (8 feet) high.
- 2. All non-freeway arrows shall be the large size.
- The distance between yellow no-passing lines shall be 200 mm (8"), not 180 mm (7") as shown in the detail of Typical Lane and Edge Lines.

Permanent survey markers, Type II shall be cast-in-place as shown on Highway Standard 667101. A marker shall be placed mid point between the two structures and the other marker shall be placed at or just east of Cedar Creek in such a location that will take into account satellite and future construction. Location shall be determined by the Engineer.

The Contractor shall submit to the Engineer a description of location, elevation, and coordinates for each permanent survey marker. The Engineer shall submit this information to the Survey Crew.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

Mediacom Alliant Energy Norlight Telecommunications Commonwealth Edison Citizen's Telephone

Following are the known utilities located within the project limits or immediately adjacent to the project construction limits which are not members of JULIE and should be notified individually by the contractor:

IDOT 819 Depot Ave. Dixon, IL 61021 Ph. 815/284-2271

Due to environmental concerns, the following shall be strictly adhered to:

- 1. All work shall be performed from the existing decks and no work shall take place below the existing structure on the ground.
- No fill shall be placed in or around Cedar Creek or Spring Creek.

Embankment quantities for the construction of Traffic Barrier Terminals and placement of Steel Plate Beam Guardrail as shown on the plans are included in quantities for FURNISHED EXCAVATION.

CADD data will be available to Contractors and Consultants working on this project. This information will be provided upon request as MicroStation CADD files and Geopak coordinate geometry files <u>ONLY</u>. If data is required in other formats it will be your responsibility to make these conversions. If any discrepancy or inconsistency arises between the electronic data and the information on the hard copy, the information on the hard copy should be used. Contact the District's Project Engineer to request these files.

Program #5 (Arch. Size) Enlarge 200% Enlarge 107%

SUMMARY OF QUANTITIES

 			WILK	4C I	NU. 64	BZ:
F.A.P. RTE.	SECTION	(COUNT	Y	TOTAL SHEETS	SH N
308		1	WHITE	SIDE	47	
STA.		то	STA.			
FED. ROA	D DIST. NO.	ILLINOIS	FED.	AID	PROJECT	-

CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY	X080-2A 80 % FED 20 % STATE	SFTY-3N 80 % FED 20 % STATE	1000			
									+
20400800	FURNSHED EXCAVATION	CU YD	42	42		Y			
440000007	BITUMINOUS CONCRETE SURFACE REMOVAL 2"	SQ YD	227	227					
48101200	AGGREGATE SHOULDERS, TYPE B	TON	264	264					
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	2	2			X		
50102400	CONCRETE REMOVAL	CU YD	2.2	2.2					
			har						-
50300225	CONCRETE STRUCTURES	CU YD	Ø . 9	Ø.9					
50300255	CONCRETE SUPERSTRUCTURES	CU YD	2.4	2.4					
50300260	BRIDGE DECK GROOVING	SQ YD	427	427					
50300300	PROTECTIVE COAT	SG YD	449	449				7	
50301245	FORMED CONCRETE REPAIR (DEPTH LESS THAN OR EQUAL TO 5 *)	SQ FT	207	207		7			
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21' DEPTH)	SQ. FT.	4036	4Ø36					
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	694	694					
50800205	REINFOREMENT BARS, EPOXY COATED	POUND	61ØØ	6100					
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	313	313			\downarrow		
51500100	NAME PLATES	EACH	2	2					
58700200	BRIDGE SEAT SEALER	SQ FT	195	195					
59000100	EPGXY CRACK SEALING	FOOT	116	116					
63000005	STEEL PLATE BEAM GUARDRAIL, TYPE B	FOOT	1000	1000					
63100087	TRAFFIC BARRIER TERMINAL , TYPE 6A	EACH	8	8					
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	6	6		in Burlook			
63200310	GUARDRAIL REMOVAL	FOOT	1150	1150		1000	X		
633Ø121Ø	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	300	300					
66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	2	2					
6700,0400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4	-				
67100100	MOBILIZATION	L SUM	1	1		<u></u>			

* SPECIALTY ITEMS

REVISIO	NS
NAME	DATE
	
	-

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT.
DATE DRAWN BY
CHECKED BY

SUMMARY OF QUANTITIE

SUMMARY OF QUANTITIES

TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

		5		480% FEDE	RAL->			
CODE NUM.	PAY ITEM	UNIT	TOTAL		SFTY-3N			
70100500	TRAFFIC CONTROL AND PROTECTION STD. 701326	L SUM	1	1		1		
70100105	TRACTIO COUTOOL AND PROTECTION OTO 75000							/
70100405	TRAFFIC CONTROL AND PROTECTION STD 701321	EACH	2	2				
7Ø1ØØ45Ø	TRAFFIC CONTROL AND PROTECTION STD. 701201	L SUM	1	1	-	 		-/-
,							_	1
70103815	TRAFFIC CONTROL SURVEILANCE	CAL DA	4	4				
70100500	TEMPODADY DDIDGE TRAFFIC GIONALO	FACIL						1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	2.			- ,	
70300220	TEMPORARY PAVEMENT MARKING LINE 4*	FOOT	3350	3350			- /4	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SG FT	62	62			_//_	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1052	1052		ا منعه	\forall	
70400100		F001	1002	2001			\ 	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1052	1Ø52			} 	45
							Δ	-
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	3515	3515		The parent section is		
	PANEMENT	-		ļ				
78100100	RAISED REFLECTIVE MARKER	EACH	4	4			-	
78200410	GUARDRAIL MARKERS, TYPE A	EACH	17	17	<u> </u>		+	
70200110	South Data Land Land Land Land Land Land Land Lan	2.70.7				7	+	
78201000	TEMINAL MARKER - DIRECT APPLIED	EACH	6	6				
						/-	+	-
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	4			+	
XMZMMIZE	 BRIDGE APPROACH SHOULDER REMOVAL	SQ YD	: 47	47			$ +$ \rightarrow	-
ADDDD100	THE STATE OF STREET OF THE STATE OF THE STAT	00 10				/	+	\ /
XØ32Ø887	POLYMER CONCRETE	CU FT	1Ø	10				17
							1	\underline{V}
XØ322932	SILICONE JOINT SEALER, 1 1/2*	FOOT	81	81			+	
XØ323894	GUARDRAIL POST	EACH	1	1			+	
ABBEBB 71	SOUTH DOT	Eneri		-			++	
XØ7124ØØ	TEMPORARY PAVEMENT	SQ YD	637	637	1		1/1	
X4Ø66414	BITUMINOUS CONCRETE SURFACE COARSE, SUPERPAVE, MIX "C", N50	TON	3Ø	30			—Å—⁴	
X5Ø3Ø3Ø5	CONCRETE WEARING SURFACE, 5°	SQ. YD	449	449			4.	1
√7676760	CONCRETE WERNING SURFACE, S	30.10	747	443	 		/ \	-
X633Ø1Ø3	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2	2		/		
	SPECIAL (TANGENT)					1		
								·
XXØØ47Ø3	PRECAST CONCRETE BEAM UNIT	EACH	4	4				1
ZØØØ19ØØ	ASBESTOS BEARING PAD REMOVAL	EACH	32	32	-	مستر	+-	
20001 100	I SOLOTO DETINITO CHO HETOTIE	LITCIT	74	32				
ZØØØ26ØØ	BAR SPLICERS	EACH	6Ø	60				
ZØØ3Ø25Ø	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4		. 4			
ZØØ3Ø35Ø	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4		4		+	<u> ا</u>
7.00.00.00	FROM HOT HITENOMIONS, NECOCHITE MONTREDIRECTIVES, TEST LEVEL 3	CHUT	*		1		_	
* SPECIALTY	ITEMS		1	1	1			

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIE

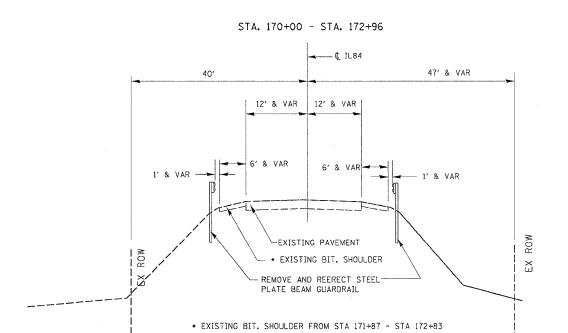
CONTRACT NO. 64B29

 F.A.P. RTE.	SECTION		cou	NT.	۲	TOT	AL :TS	SHEET NO.
308	*		MHI.	TES	IDE	4	7	5
STA.		T	O ST.	Α.				
FED. ROAD	DIST. NO.	ILLINO	IS FE	o.	AID	PROJ	ECT	

* 109BR-3. & 109BR-4

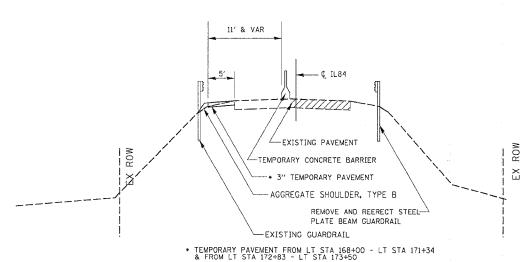
TYPICAL SECTIONS

(SN # 098-0023



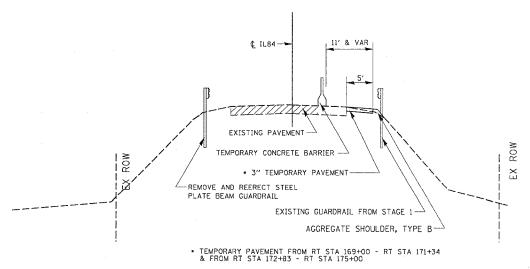
STAGE 1

STA. 168+00 - STA. 174+47



STAGE 2

STA. 168+67 - STA. 175+00



ILLINOIS DEPARTMENT OF TRANSPORTATION SCALE: VERT. HORIZ. DRAWN BY CHECKED BY

TYPICAL SECTIONS

(SN # 098-0023)

≃ WORK AREA

CONTRACT NO. 64B29

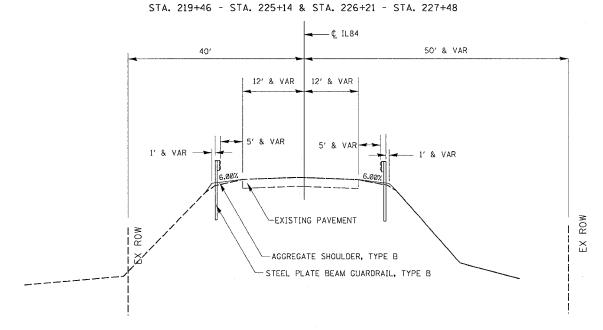
F.A.P. RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
308	*	WHITESIDE	47	5
STA.		TO STA.		
····				

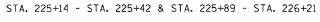
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

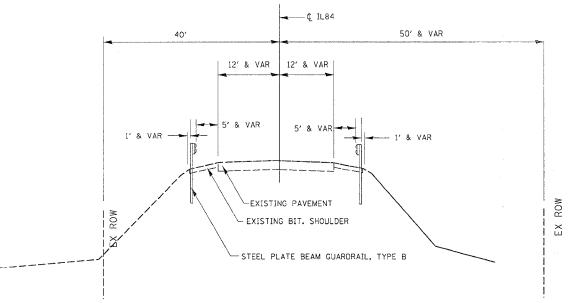
* 1098R-3 & 109BR-4

TYPICAL SECTIONS

(SN # 098-0022

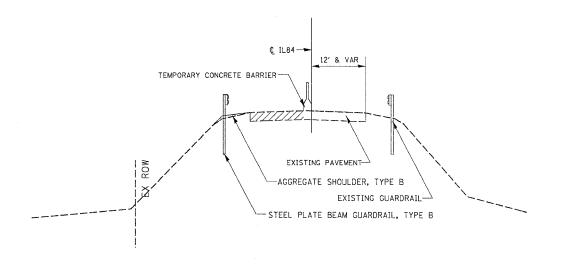






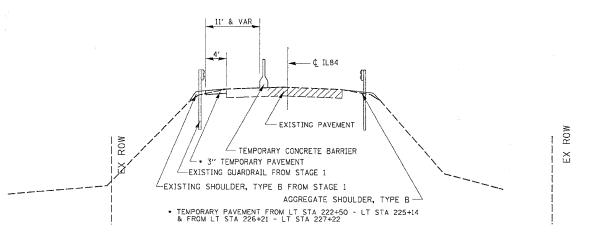
STAGE 1

STA. 222+90 - STA. 228+40



STAGE 2

STA. 219+46 - STA. 228+40



ILLINOIS DEPARTMENT OF TRANSPORTATION CHECKED BY

(SN # 098-0022)

TYPICAL SECTIONS

CONTRACT NO. 64B29

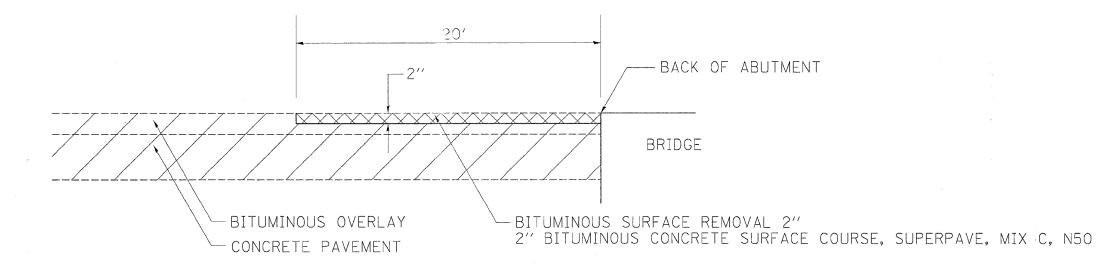
F.A.P. RTE.	SECTION	ı	COUNT	Y	TOTAL	SHEET NO.
308	•		WHITES	IDE	47	7
STA.			TO STA.			
FED. RO	AD DIST. NO.	ILLIN	OIS FED.	AID	PROJECT	

• 109BR-3 & 109BR-4

BITUMINOUS SURFACE REMOVAL - 2"

(SN # 098-0023) (SN # 098-0022)

BITUMINOUS SURFACE REMOVAL - 2"



REVISIO		THE TWO IS	DEDADTMENT	ΛE	TRANSPORTATION
NAME	DATE	ILLINOIS	DEI ARTIMENT	OI-	THANSFORTALION
·····					
	_	SCALE: VERT.			DRAWN BY
		DATE HURIZ.			CHECKED BY

SCHEDULE OF QUANTITIES

| CONTRACT NO. 64B29 | F.A.P. | SECTION | COUNTY | TOTAL | SHEET | NO. 308 | WHITESIDE | 47 | 8 | STA. | TO STA. | FED. ROAD DIST. NO. | ILLINOIS | FED. AID | PROJECT | 109ER-3 & 109BR-4

```
FURNISHED EXCAVATION CU YO LOCATION
20400800
                                                                                                                                                                                                                                      63301210
                                                                                                                                                                                                                                                                                  REMOVE AND RE-ERECT STEEL BEAM GUARGRAIL, TYPE A
                                                                                                              173+ Ø
                                                                    17Ø+ Ø-
219+ 4Ø-
                                                                                                                                                                                                                                                                                                         LOCATION

170+ 12.52-

170+ 12.36-

172+ 21.14-

172+ 21.26-
                                                                                                                                                                                                                                                                                     E00T
87.5
87.5
                                                                                                                                                                                                                                                                                                                                                      171+ Ø 32LT
17Ø+99,-6RT
172+83.54LT
172+83.56RT
                                                                     TOTAL
                                            BITUMINOUS CONCRETE SURFACE REMOVAL 2*
440000007
                                                                    LOCATION
                                                                              171+ 13-
171+ 87-
225+ 22-
225+ 89-
                                                                                                                171+ 33
172+ 7
225+ 42
226+ 2Ø
                                                 55
56
58
58
227
                                                                                                                                                                                                                                     70300220
                                                                                                                                                                                                                                                                                   TEMPORARY PAVEMENT MARKING LINE 45
                                                                                                                                                                                                                                                                                      EMPUN
5001
500
500
500
500
450
450
450
3350
                                                                                                                                                                                                                                                                                                          LOCATION
                                                                                                                                                                                                                                                                                                                                                                     ØL STAGE 2
ØL STAGE 2
ØR STAGE 1
ØR STAGE 1
ØL STAGE 2
ØL STAGE 2
                                                                    TOTAL
                                                                                                                                                                                                                                                                                                                                                        174+
                                                                                                                                                                                                                                                                                                                    169+
169+
169+
223+
223+
223+
48101200
                                             AGGREGATE SHOULDERS, TYPE B
                                                                                                                                                                                                                                                                                                                                                       174+
                                                                     SHOUL DERS. TYPE E
LOCATION
170+ 0-
172+ 83-
172+ 82-
170+ 0-
222+ 46-
219+ 46-
226+ 21-
226+ 14-
TOTAL
                                                                                                                                                                                                                                                                                                                                                      228+
228+
228+
                                                                                                                                                                                                                                                                                                                                    50-
50-
50-
                                                  ION
54
10
                                                                                                                171+ 33 LT
172+ 97 RT
172+ 97 LT
171+ 33 RT
225+ 14 LT
225+ 13 RT
227+ 48 LT
227+ 23 RT
                                                                                                                                                                                                                                                                                                          TOTAL
                                                  10
52
34
50
28
26
264

        WORK ZONE
        PAVEMENT MARKING REMOVAL

        SO. FT.
        LOCATION

        18.5
        169+
        0-
        174+

        1.7
        169+
        0-
        169+

        2.2
        173+
        41-
        174+

        18.5
        169+
        0-
        174+

        1.7
        169+
        0-
        169+

        0.8
        173+
        78-
        174+

        16.7
        223+
        50-
        228+

        0.6
        223+
        50-
        223+

        1.3
        227+
        66-
        228+

        102
        100-
        100-
        100-

                                                                                                                                                                                                                                      70301000
                                                                                                                                                                                                                                                                                                                                                      174+
169+
174+
174+
169+
174+
228+
223+
                                                                     TOTAL
63000000
                                            STEEL PLATE BEAM GUARDRAIL, TYPE B
                                                                   LOCATION
222+58.28-
219+58.23-
226+23.36-
226+23.21-
                                                E001
250
550
112.5
87.5
                                                                                                              225+ 8.28 LT
225+ 8.23 RT
227+35.66 LT
227+10.71 RT
                                                                                                                                                                                                                                                                                   TEMPORARY CONCRETE BARRIER
                                                                                                                                                                                                                                      70400100
                                                                                                                                                                                                                                                                                      E001
542
510
1052
                                                                                                                                                                                                                                                                                                          LOCATION
168+ 87- 174+ 27LT
223+ 10- 228+ 20LT
63100087
                                             TRAFFIC BARRIER TERMINAL, TYPE 6A
                                                                    LOCATION
171+ 0.02-
                                                                                                                  171+ 33.92 LT
172+ 21.14 LT
172+ 21.26 RT
                                                                                                                                                                                                                                                                                                          TOTAL
                                                                                171+87.24-
171+87.36-
                                                                                 170+99.86-
                                                                                                                   171+33.76 RT
                                                                              225+ 8.28-
225+ 8.23-
226+23.36-
                                                                                                                225+ 42.18 LT
225+ 42.13 RT
226+ 57.26 LT
                                                                                                                                                                                                                                     70400200
                                                                                                                                                                                                                                                                                  RELOCATE TEMPOPARY CONCRETE BARRIER
                                                                                                                                                                                                                                                                                                            168+ 87- 174+ 27RT
223+ 10- 220+
                                                                                                                                                                                                                                                                                      E001
542
510
1052
                                                                                226+ 23.21-
                                                                                                                226+ 57.11 RT
                                                                                                                                                                                                                                                                                                          TOTAL
 63100167
                                             TRAFFIC BARRIER TERMINAL TYPE 1. SPECIAL (TANGENT)
                                                                    LOCATION
170+ 0.02-
172+83.64-
                                                                                                                                                                                                                                       78001110
                                                                                                                                                                                                                                                                                  PAINT PAVEMENT MARKING LINE 4'
                                                                                                                17Ø+ 12.52 LT
172+ 96.14 LT
222+ 58.28 LT
219+ 58.23 RT
                                                                                                                                                                                                                                                                                      F00T
1136
1988
142
249
3515
                                                                                                                                                                                                                                                                                                          LOCATION
170+
                                                                                                                                                                                                                                                                                                                    ATION

170+ 5 - 172+ 89 WHITE EDGLINES - 2 COATS
222+ 42 - 227+ 39 WHITE EDGLINES - 2 COATS
170+ 5 - 172+ 89 SKIP DASH YELLOW - 2 COATS
222+ 42 - 227+ 39 SKIP DASH YELLOW - 2 COATS
                                                                              222+45.78-
219+45.73-
227+35.86-
227+ 10.71-
                                                                                                                227+ 48.36 LT
227+ 23.21 RT
                                                                                                                                                                                                                                                                                                          TOTAL
                                                                                                                                                                                                                                                                                  RAISED REFLECTIVE MARKER
                                                                                                                                                                                                                                      78100100
                                                                                                                                                                                                                                                                                                         LOCATION
171+ 13 - 172+ 7
225+ 22 - 226+ 2Ø
TOTAL
63200310
                                                                    222+
225+
219+
225+
                                                E001
292
142
                                                                                                43-
98-
43-
91-
                                                                                                                225+ 35 LT
227+ 40 LT
225+ 35 RT
227+ 15 RT
                                                                    TOTAL
```

= Thu Dec 29 10:36:55 2005 = c:\projects\p209205\d09205 E = 50.0000 '/ IN. = qoff II

78200410	GUARDRAL MARKERS, TYPE A EACH LOCATION 4 222+ 92- 225+ 10 LT 10 219+ 92- 225+ 10 RT 2 226+ 20- 226+ 89 LT 1 226+ 20- 226+ 64 RT 17 TOTAL
78201000	TERMINA MARKER - DIRECT APPLIED
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL EACH LOCATION 2 171+ 13 - 172+ 7 2 225+ 22 - 226+ 20 4 TOTAL
xØ323894	GUARDRAL POST EACH LOCATION 1 172+89 RT 1 TOTAL
XØ7124ØØ	TEMPORARY PAVEMENT SQ. YD LOCATION 130 169+ 0 - 171+33.77 RT 121 172+83.43 - 175+ 0 RT 186 168+ 0 - 171+33.9 LT 38 172+82.37 - 172+ 50 LT 118 222+ 50 - 225+13.53 LT 44 226+21.12 - 227+21.84 LT 637 TOTAL
X4Ø66414	BITUMINUS CONCRETE SURFACE COARSE, SUPERPAVE, MIX C, N50 TON LOCATION 7.5 171+ 13 - 171+ 33 7.5 171+ 87 - 172+ 7 7.5 225+ 22 - 225+ 42 Z.5 225+ 89 - 226+ 10 30 TOTAL
X633Ø1Ø3	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1, SPECALLITANGEND
ZØØ3Ø25Ø	IMPACT ATENUATORS, TEMPORARY (NON -RE-DIRECTIVE), TEST LEVEL 3
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON -RE-DIFECTIVE), TEST LEVEL 3

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		DATE			CHECKED BY

SCHEDULE OF QUANTITIES

F.A.P. SECTION COUNTY WHITESIDE STA. TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

• 109BR-3 & 109BR-4

EXISTING HORIZONTAL AND VERTICAL CONTROL

BENCH MARKS							
POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
401	1866989.528	2284688.539	588.42	IL84	134+91.2922	52.9929' RT	FIRE HYDRANT, BOLT
402	1870277.463	2291586.88	584.888	IL84	211+68.1105	139.0691' LT	FOUNDATION, CHISELED SQUARE
403	1870820.378	2292911.204	585.421	IL84	225+90.4857	20.4289' RT	TOP OF ABUTMENT, CHISELED SQUARE
454	1868692.534	2289040.99	579.549	IL84	181+73.9031	29.0917' RT	HEADWALL, CHISELED SQUARE
455	1868265.383	2288150.396	586.753	IL84	171+87.5845	23.7399' LT	HEADWALL, CHISELED SQUARE
456	1867702.936	2286884.115	584.403	IL84	157+99.8608	48.9914' RT	PERM. SURVEY MARKER, DISK
490	1866309.12	2282185.938	585.023	IL84	OUT OF CHAIN		PERM. SURVEY MARKER, DISK

	SURVEY WORK POINTS								
POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION		
100	1868809.854	2289159.259	585.48	IL84	183+33.9738	17.0485' LT	GPS CONTROL POINT, PK NAIL		
101	1869240.795	2289942.231	585.639	IL84	192+27.7023	19.2072' LT	GPS CONTROL POINT, PK NAIL		
102	1867413.772	2285725.564	586.228	IL84	146+08.5153	31.9552' LT	TOPO SURVEY POINT, PK NAIL		
103	1867900.176	2287392.762	586.263	IL84	163+44.5101	17.6464' RT	TOPO SURVEY POINT, NAIL		
104	1868434.209	2288548.373	584.954	IL84	176+17.7505	19.215' RT	TOPO SURVEY POINT, NAIL		
105	1868150.154	2288023.079	586.895	IL84	170+20.7783	16.4252' RT	TRAVERSE STATION, PK NAIL		
106	1870818.241	2292829	587.493	IL84	225+17.3477	17.1597' LT	TRAVERSE STATION, PK NAIL		

				HORIZONTAL	CONTROL	POINTS	
POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
1	1867031.06	2284729.353	586.631	IL84	135+42.8962	26.0169' RT	GPS CONTROL POINT, PIN
2	1870198.618	2291688.122	585.698	IL84	212+19.0727	21.3009' LT	GPS CONTROL POINT, PIN
3	1871055.726	2293352.204	587.775	IL84	230+90.3278	25.6823' RT	GPS CONTROL POINT, PIN
10	1871565.41	2294230.064	589.239	IL84	241+05.0969	0.0000	POT, PK NAIL
16	1869754.287	2290919.832	586.32	IL84	203+31.7956	0.3478' LT	POT, PK NAIL
18	1868261.689	2288150.864	586.997	IL84	171+86,2217	20.2747' LT	BRIDGE DECK, CORNER
19	1868236.623	2288104.896	586.958	IL84	171+33.8637	20.3536' LT	BRIDGE DECK, CORNER
20	1868200.989	2288124.346	587.231	IL84	171+33.8193	20.243′ RT	BRIDGE DECK, CORNER
21	1868226.005	2288170.309	587.04	IL84	171+86.1489	20.3634' RT	BRIDGE DECK, CORNER
22	1868045.773	2287761.335	586.711	IL84	167+40.1815	0.0000′	POC, PK NAIL
23	1867788.368	2286989.213	586.904	IL84	159+26.1305	0.0000′	POT, PK NAIL
24	1866836,412	2284042.113	587.92	IL84	128+29.0967	0.0000′	POT, PK NAIL
65723018	1867008.78	2284456.006	583.609	IL84	132+75.9342	36.8022' LT	CPS CONTROL POINT, DISK
65723019	1867663.709	2286460.756	584.199	IL84	153+84.9400	43.8114' LT	GPS CONTROL POINT, DISK

Chain IL84 contains: 24 CUR 200 10

Beginning chain IL84 description

Point 24 N 1,866,836.4120 E 2,284,042.1130 Sta 128+29.0967

Course from 24 to PC 200 72° 05′ 55.6500" Dist 3,706,2501'

Curve 200

P.I. Station 167+95.4916 N 1,868,055.5893 E 2,287,816.4865

Delta = 10° 47′ 18.2719′′ (LT) Degree = 2° 04′ 46.8731″

Degree = 2° 04′ 46.8731″

Tangent = 260.1448′

Length = 518.7516′

Radius = 2,755.0194′

External = 12.2549′

Long Chord = 517.9856′

Mid. Ord. = 12.2007′

P.C. Station 165+35.3468 N 1,867,975.6269 E 2,287,568.9358

P.T. Station 170+54.0983 N 1,868,180.4756 E 2,288,044.6942 C.C. N 1,870,597.2700 E 2,286,722.1071

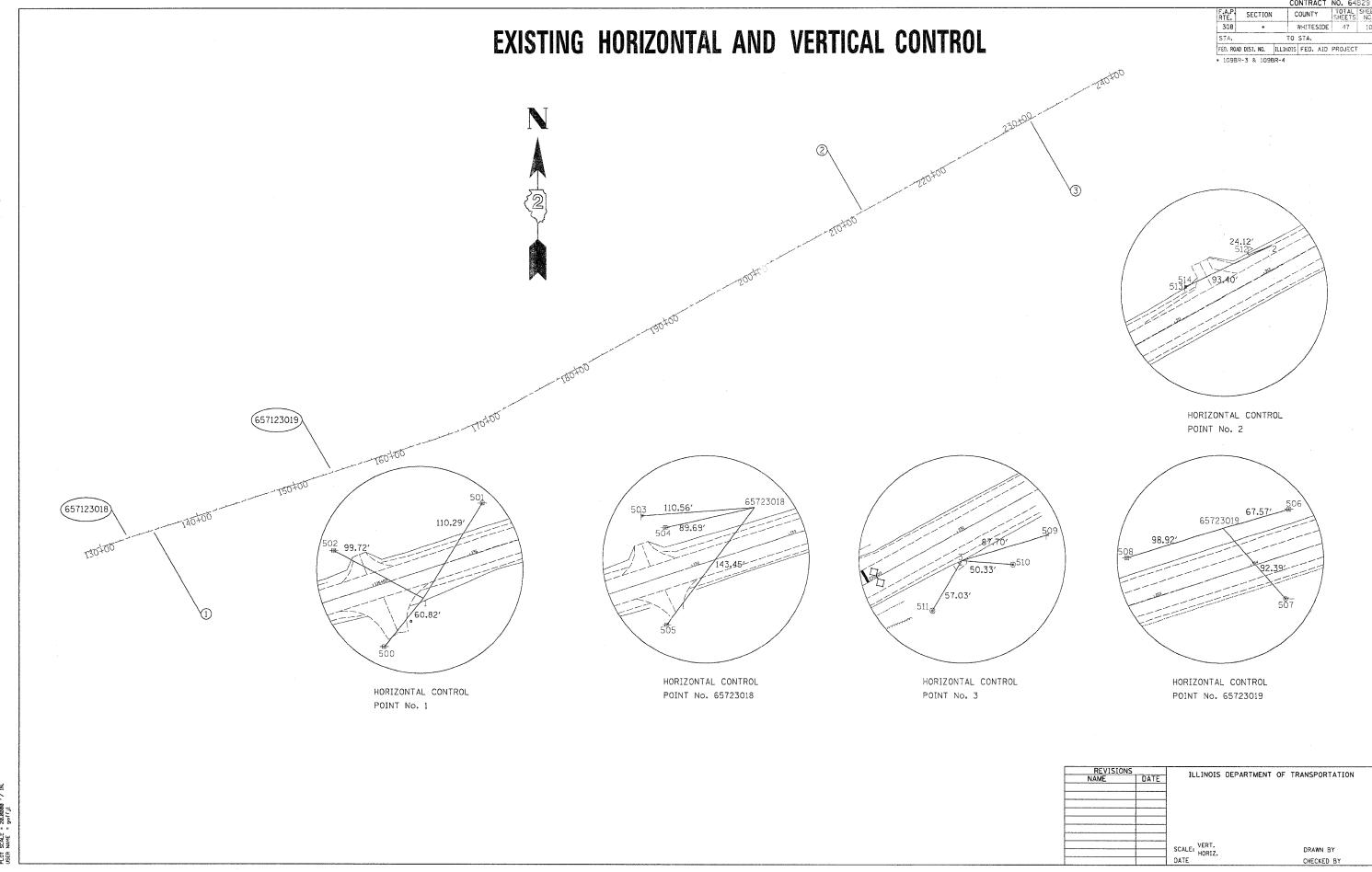
Course from PT 200 to 10 61° 18′ 37.3781″ Dist 7,050.9986′

Point 10 N 1,871,565.4100 E 2,294,230.0640 Sta 241+05.0969

Ending chain IL84 description

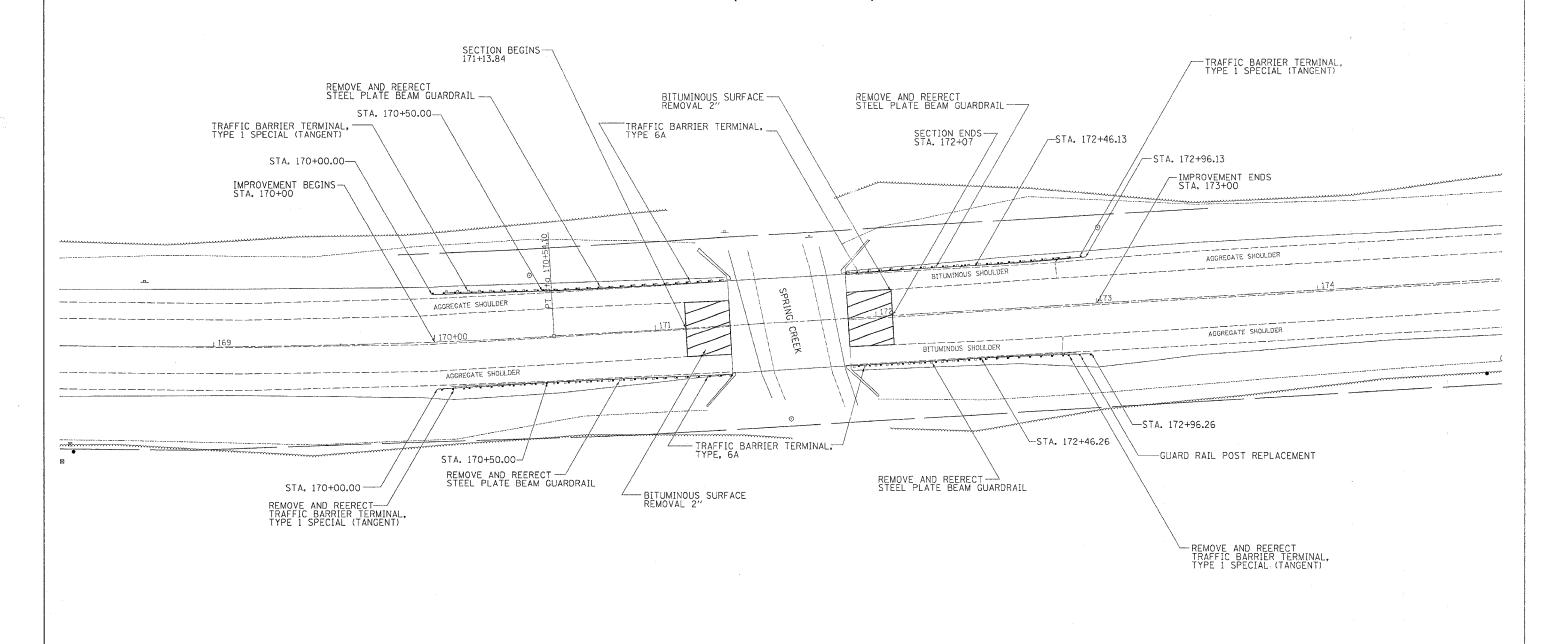
	REFERENCE TIES								
POINT	CHAIN	STATION	OFFSET	DESCRIPTION					
500	IL84	134+91.9214	59.1914' RT	POWER POLE WITH LIGHT, SHINER					
501	IL84	136+26.9652	45.3745' LT	POWER POLE WITH TRANSFORMER, SHINER					
502	IL84	134+73.5073	45.5998' LT	POWER POLE, SHINER					
503	IL84	131+68.5108	62.9663' LT	SIGN, SHINER					
504	IL84	131+86.5905	44.7165' LT	POWER POLE, SHINER					
505	IL84	131+58.8273	46.0457' RT	POWER POLE WITH LIGHT, SHINER					
506	IL84	154+52.4835	41.8354' LT	POWER POLE, SHINER					
507	IL84	154+22.3753	40.7039' RT	GUY POLE, SHINER					
508	IL84	152+86.0322	45.3162' LT	POWER POLE WITH TRANSFORMER, SHINER					
509	IL84	231+76.0596	44.1572' RT	WARNING SIGN, NAIL					
510	IL84	231+32.5247	53.1211' RT	16" TREE DECIDUOUS, NAIL					
511	IL84	230+41.3381	54.8875' RT	10" TREE DECIDUOUS, NAIL					
512	IL84	211+95.1153	24.1418' LT	MAILBOX, NAIL					
513	IL84	211+25.8104	26.1467' LT	WARNING SIGN					
514	IL84	211+25.8215	26.5522' LT	WARNING SIGN, SHINER					

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PLAN SHEET (SN # 098-0023)





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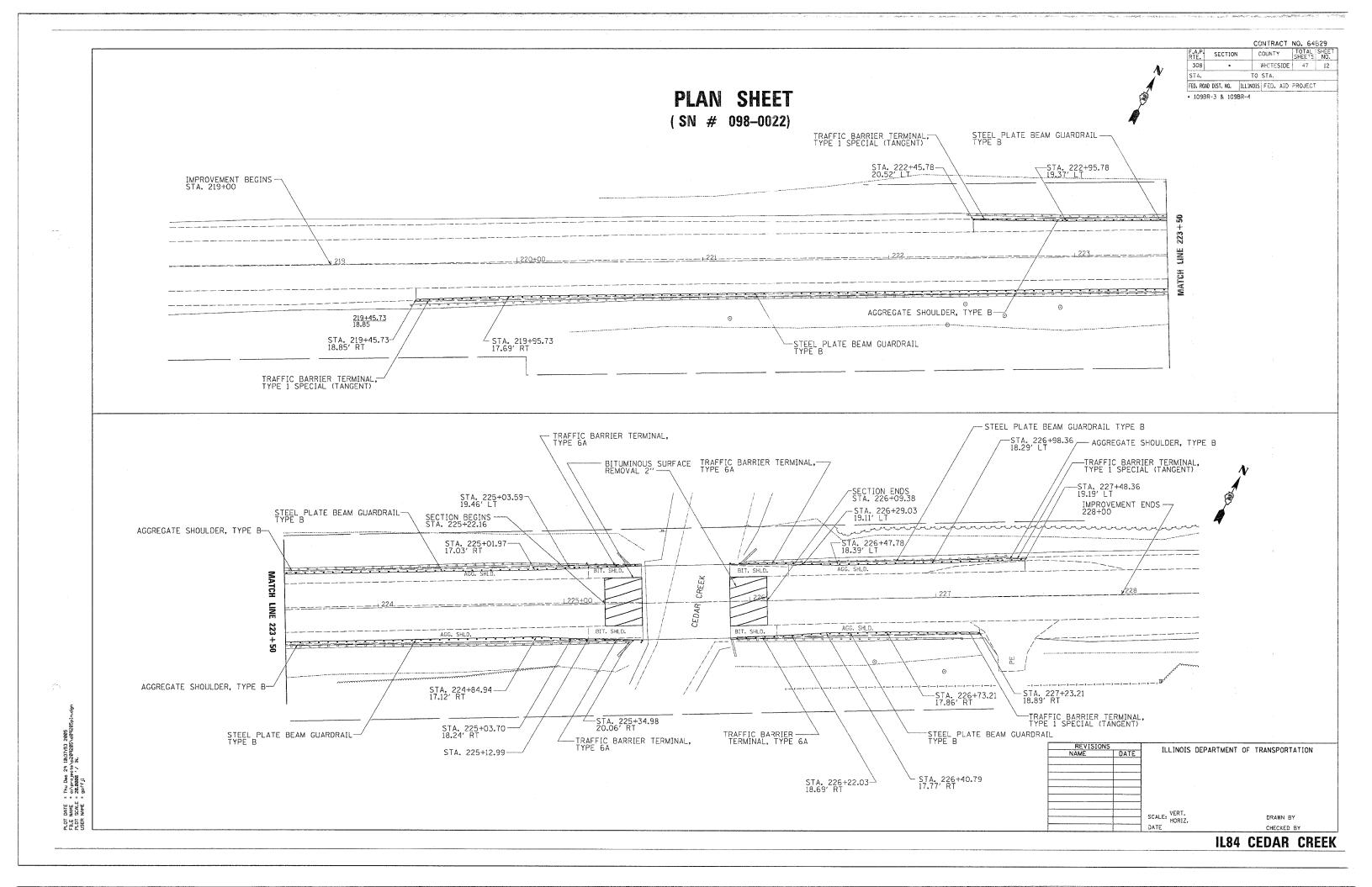
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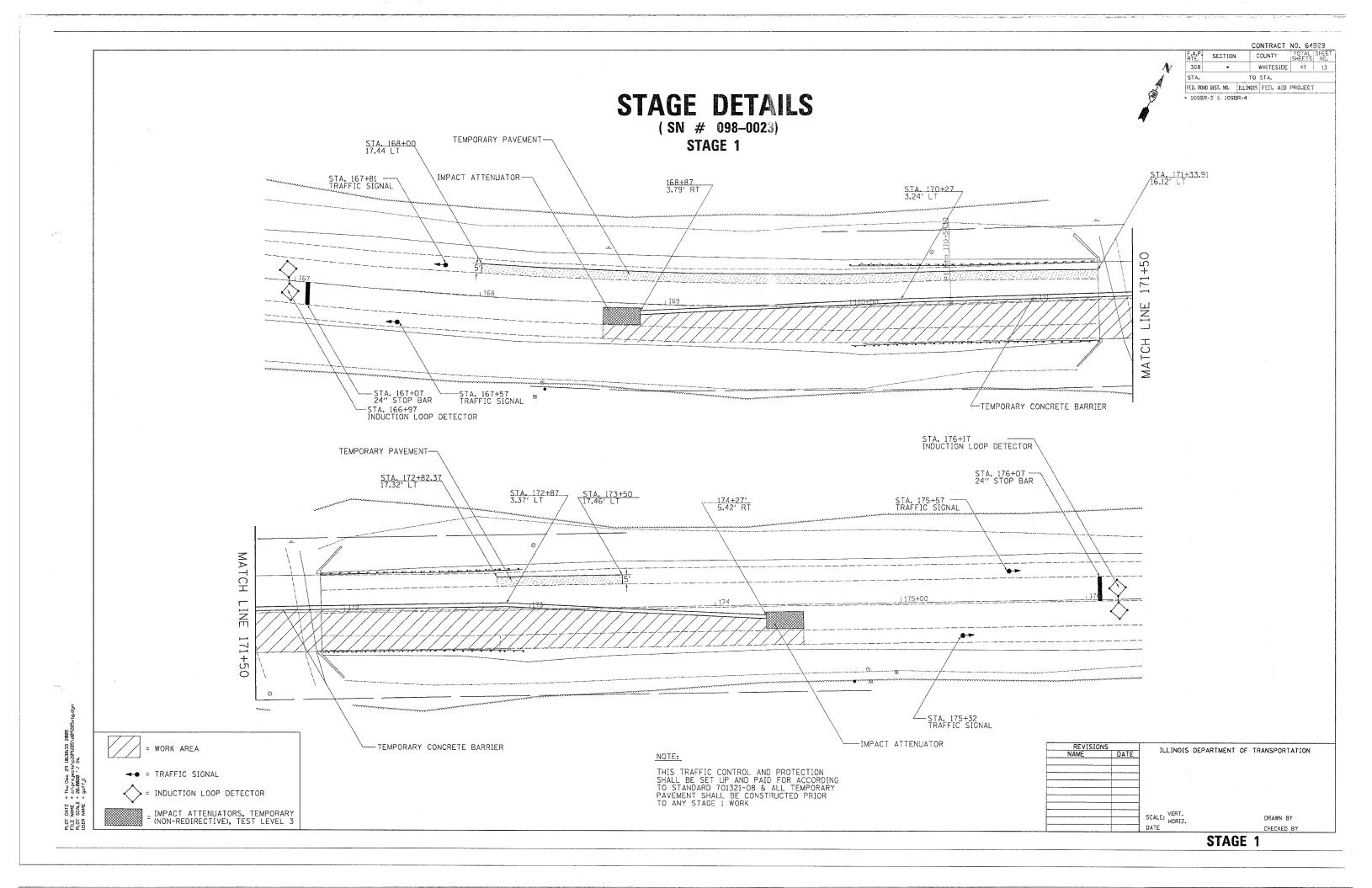
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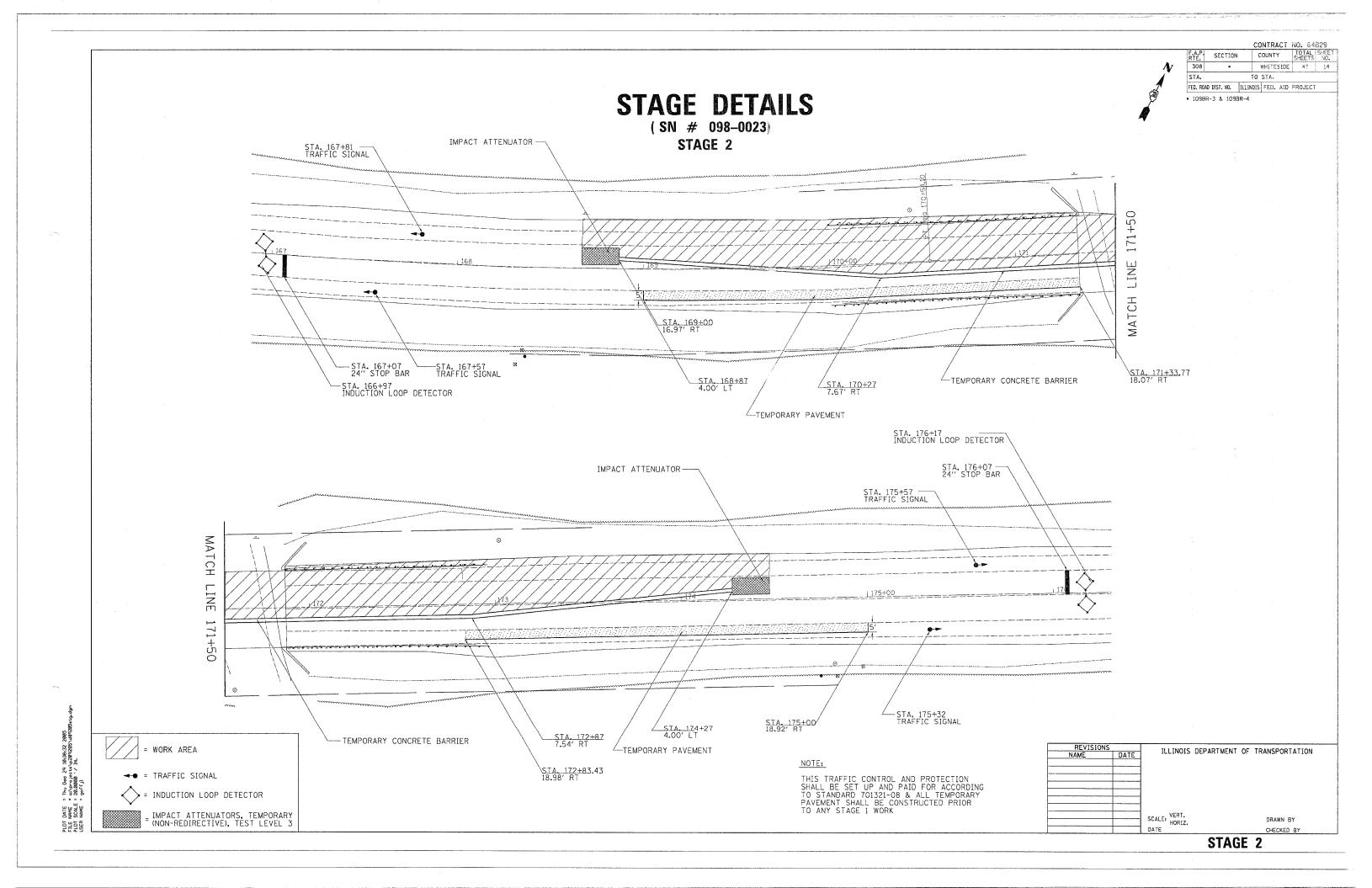
TRANSPORTATION

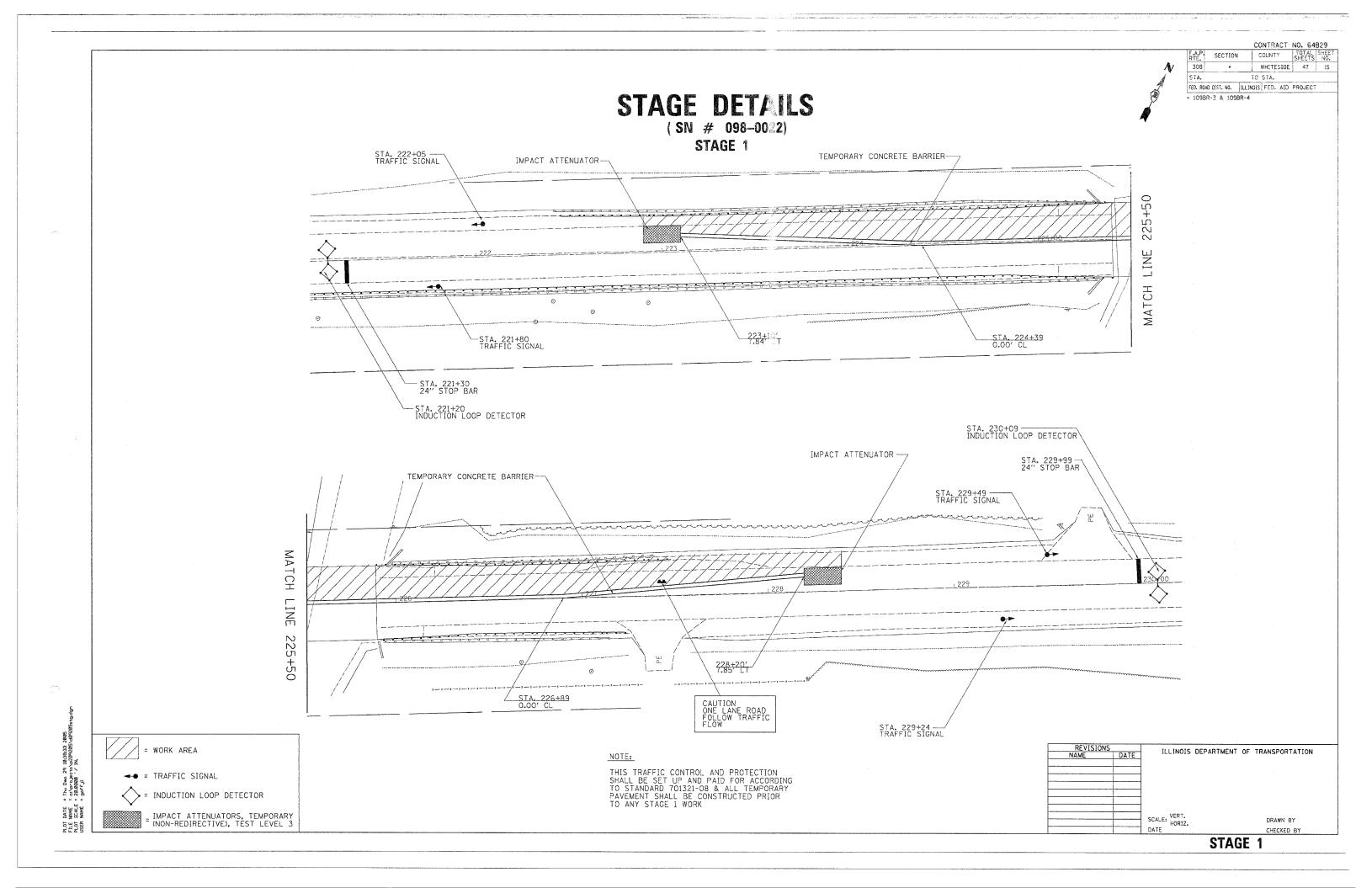
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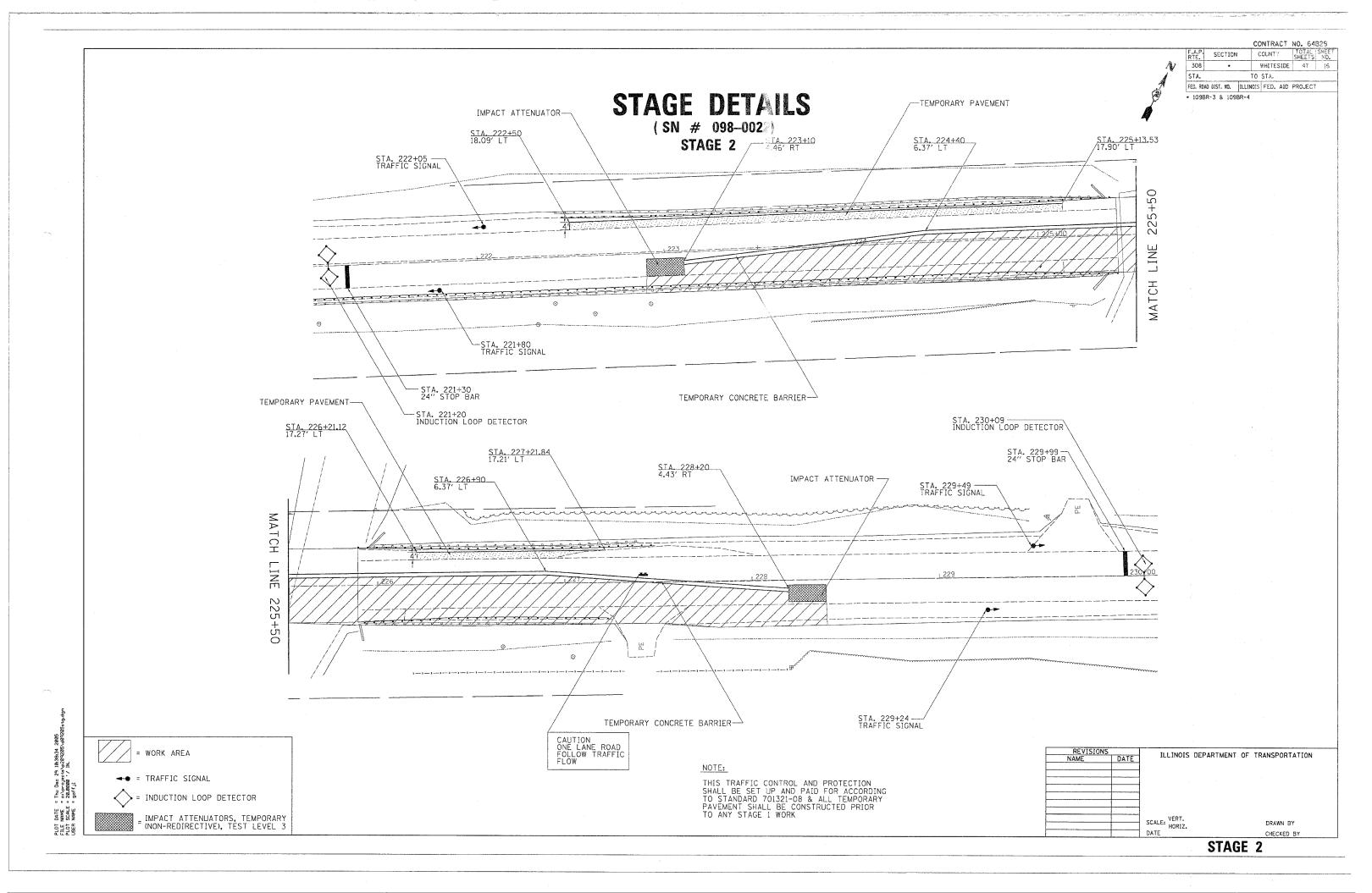
IL84 SPRING CREEK

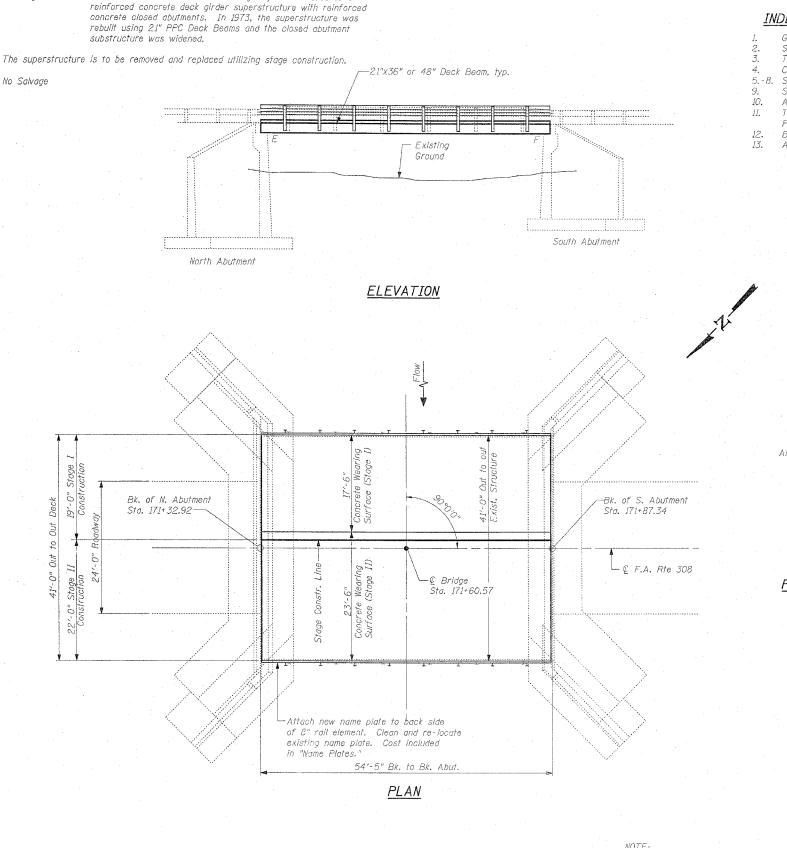












Existing Structure: S.B.I. Rte. 80 Sec. 109 BR was originally built in 1931 as a

See Roadway plans for profile grade information.

INDEX OF SHEETS

General Plan

Silicone Joint Sealer

Bar Splicer Assembly Details

STATION 171+60.57 REBUILT F.A. RTE 308 SEC. 109 BR-4 LOADING HS20 STR. NO. 098-0023

LOADING HS20-44 Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

 $f_c' = 3,500 \text{ psi}$

 $f_c' = 5,000 \text{ psi (concrete wearing surface)}$

PRECAST PRESTRESSED UNITS

f'c = 5,000 psi

f'ci = 4.000 psi

 $f's = 270,000 \text{ psi } (\frac{1}{2}" \text{ ϕ low lax strands})$ $fsi = 201,960 \text{ psi } (\frac{1}{2}" \text{ ϕ low lax strands})$

Stage Construction

Type SM Steel Bridge Rail Side Mounted

Concrete Wearing Surface

5.-8. Superstructure Details

Abutment Repairs

Temporary Concrete Barrier

For Stage Construction

Anchor Bolt Details

STATE OF ILLINOIS

NAME PLATE

DESIGN STRESSES

FIELD UNITS

 $f_V = 60,000 \text{ psi (reinforcement)}$

Proposed

FOTAL SHEETS *WET NO. 1 F.A. 308 109BR-4 WHITESIDE 47 17 FED, ROAD DIST, NO. 7 ILLINOIS FED. AID

Contract #64B29

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

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

All Construction joints shall be bonded.

No in-stream work will be allowed on this project.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or point shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

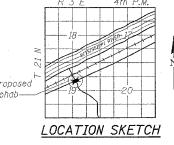
The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Repair of the abutments and pier caps shall be completed prior to placement of the

"All structural steel shall conform to AASHTO classification M-270 Gr 36, unless

Existing name plate shall be cleaned and relocated adjacent to new name plate. Cost included with "Name Plates."

All structural steel shall be painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with Furnishing and Erecting Structural Steel.



GENERAL PLAN

F.A. 308 (IL 84) OVER SPRING CREEK SEC. 109 BR-4 WHITESIDE COUNTY STATION 171+60.57 STRUCTURE NO. 098-0023

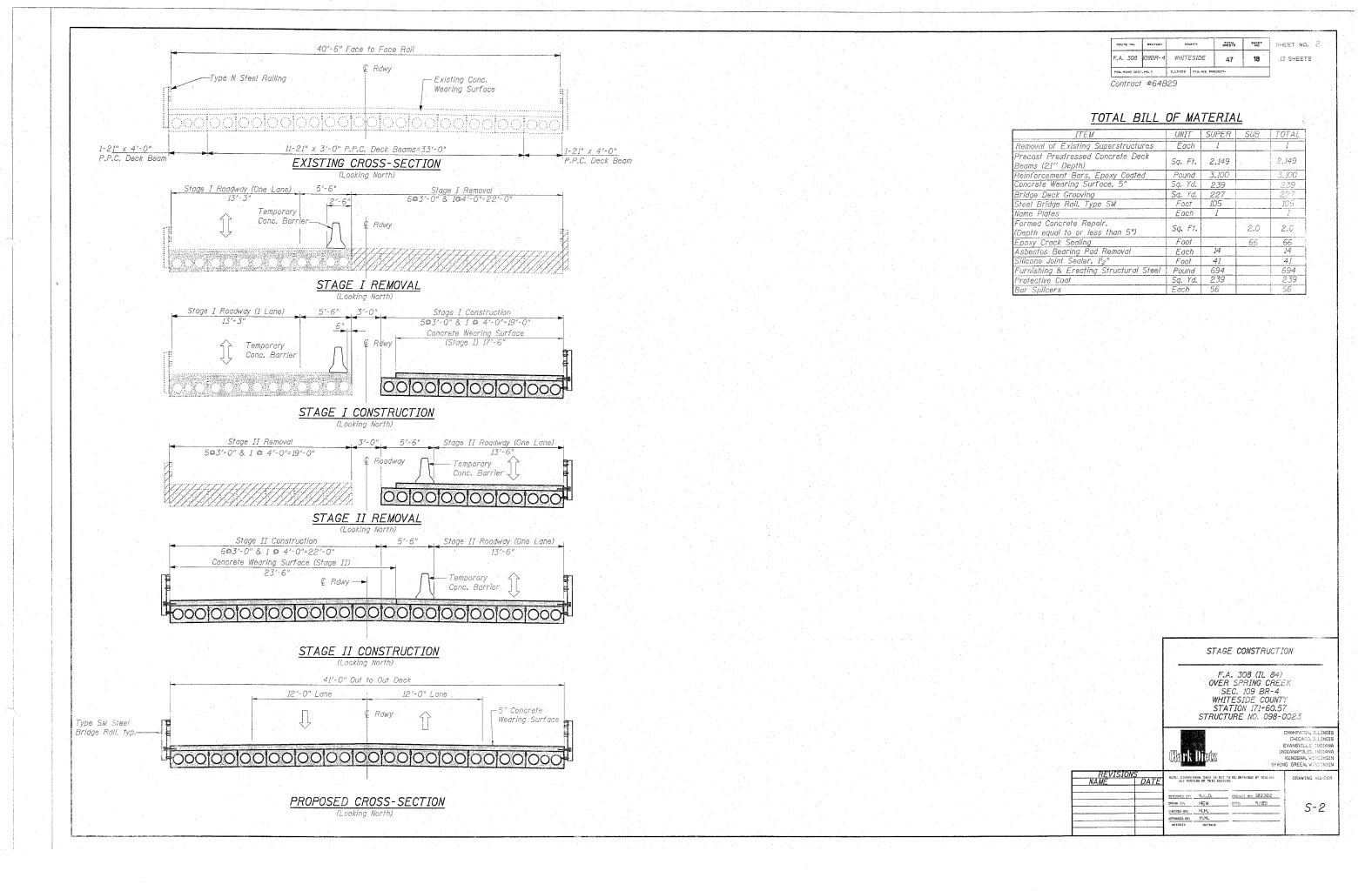


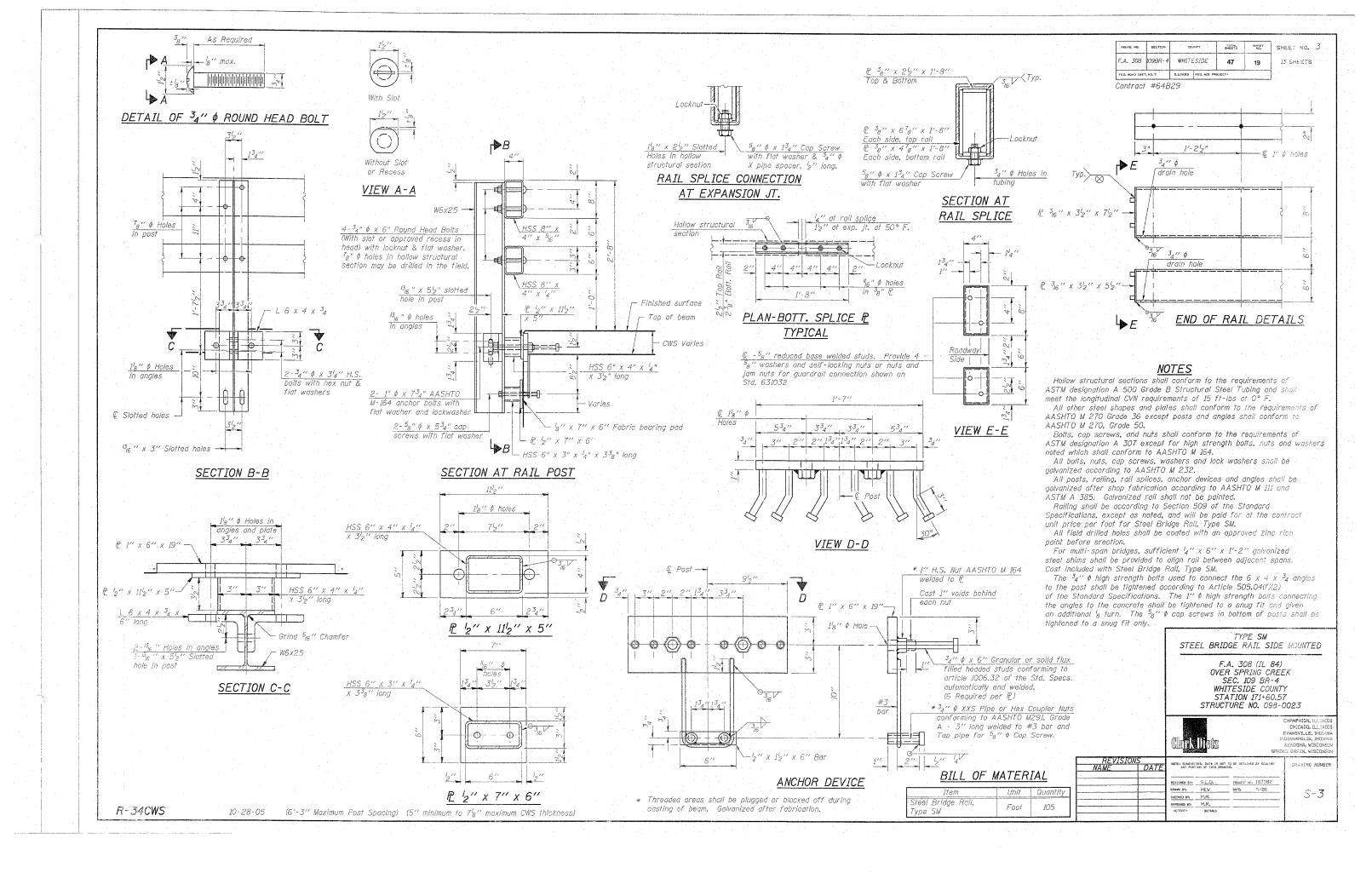
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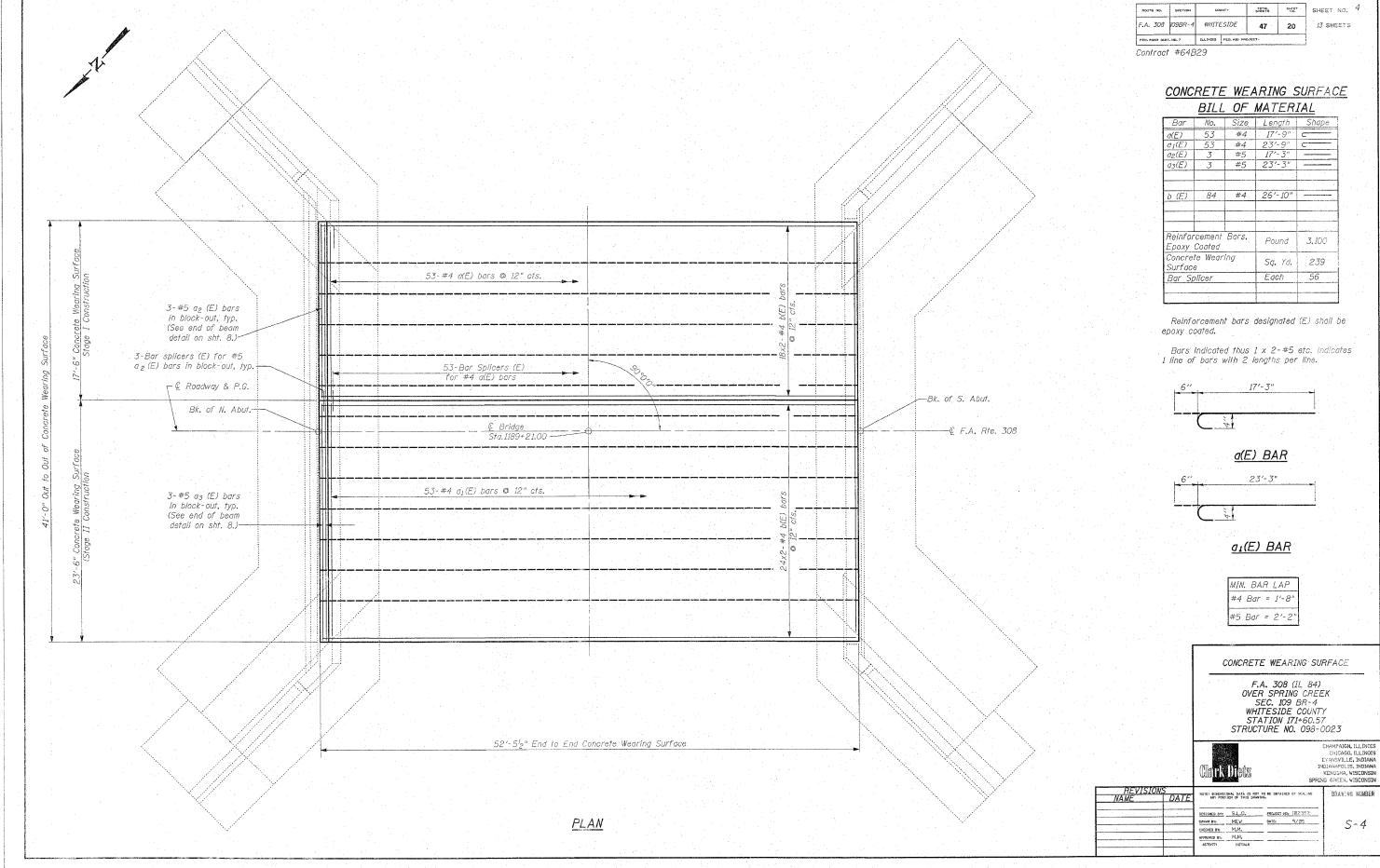
NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING AMY PORTION OF THIS DRAWING. DRAWING NUMBER RESIGNED BY: S.L.D. PROJECT NO: 102302 DRAWN BY: MEW DATE: 9/85 5-1 CHECKED BY: M.M. APPROVED BY: M.M.

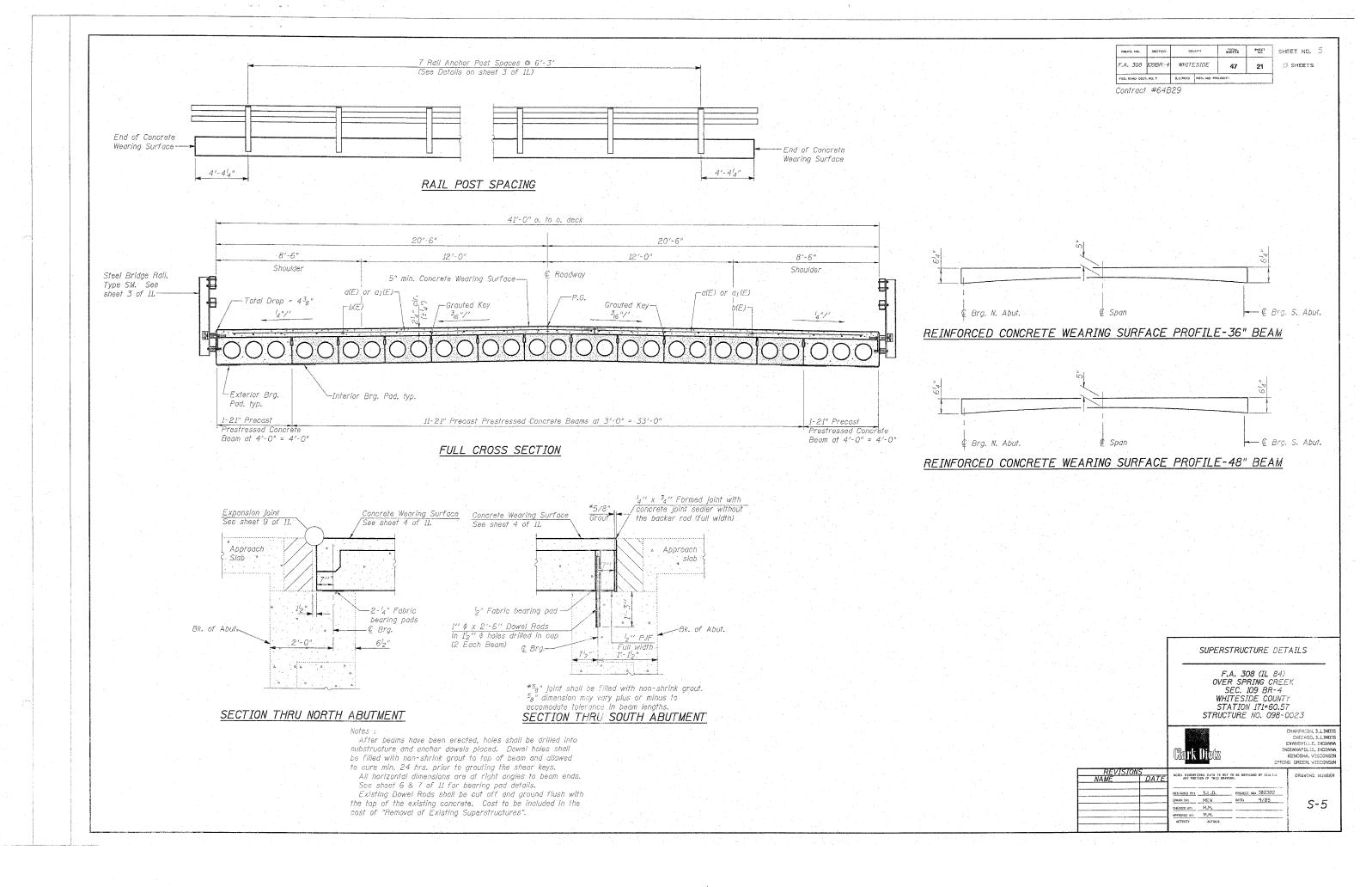
Clark Dietz, Inc.

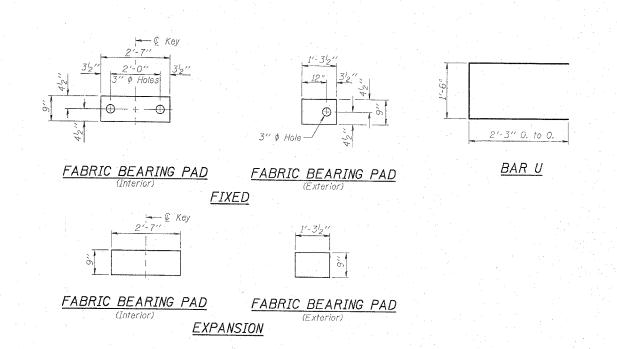
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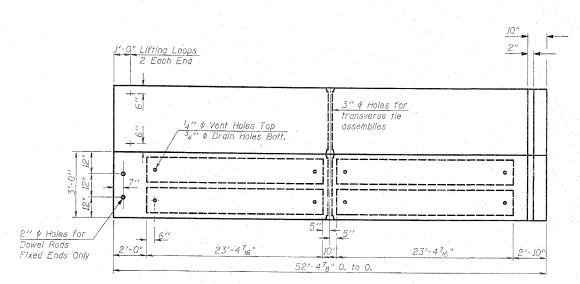




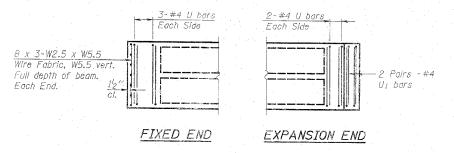




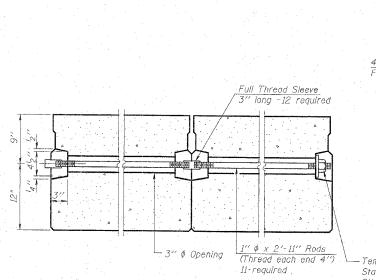




PLAN



PLAN



TYPICAL TRANSVERSE TIE ASSEMBLY

Omit key on exterior face of outside beams. 104'' 104 4-#5 B bars Full length of beam 2-#5 B1 bars, 10'-6" Each End 8 x 3-W2.5 x W5.5 Wire Fabric W2.5 longitudinal Full length of beam except at U bars cl. Standard Grid Pattern -Temporary for - ¾″ Chamfer Stage Construction, TYPICAL SECTION Otherwise use

ROUTE NO. SECTION

F.A. 308 109BR-4

Contract #64B29

Thread Sleeve

 $^{1}_{2}$ " ϕ Strands, Each Strand Stressed to 30,900 Lbs. 6-Strands 1^{3}_{4} " up, 8-Strands 3^{1}_{4} " up, 2-Strands 9" up.

Place strands symmetrically about © of beam.

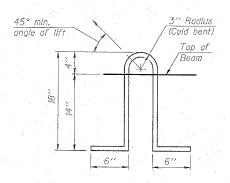
TOTAL SHEET SHEET NO. 6

22

113 SHEETS

47

WHITESIDE



LIFTING LOOP DETAIL

<u>NOTES</u>

Prestressing steel shall be uncoaled high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $^12''$ and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be $2 - ^12''$ ϕ -270 ksi strands, as shown. 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 barring saids shims of the dimensions of the Exterior Bearing Pad shall be provided for each

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.

SUPERSTRUCTURE DETAILS

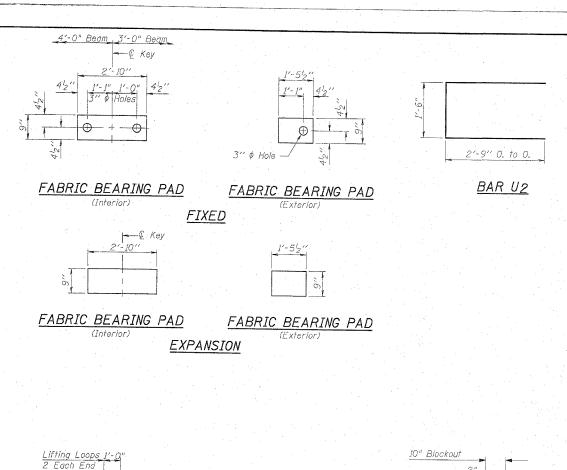
F.A. 308 (IL 84) OVER SPRING CREEK SEC. 109 BR-4 WHITESIDE COUNTY STATION 171+60.57 STRUCTURE NO. 098-0023

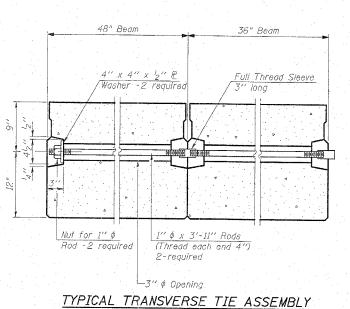


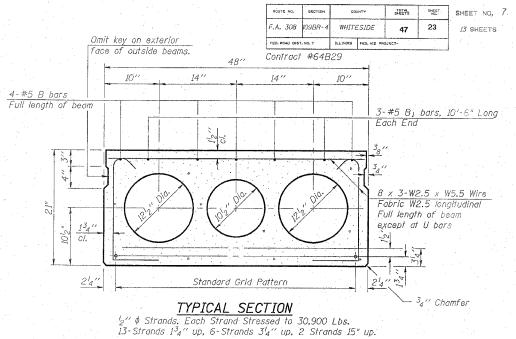
CHAMPAIGN, ILLINOIS CHICAGO, ILLINOIS EVANSVILLE, INDIANA INDIANAPOLIS, INDIANA KENOSHA, WISCONSIN SPRING GREEN, WISCONSIN

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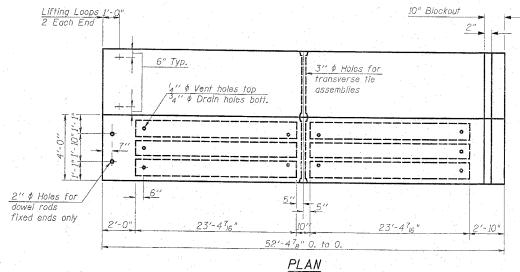
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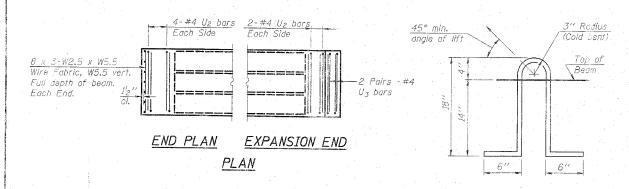






Place strands symmetrically about @ of beam.





LIFTING LOOP DETAIL

<u>NOTES</u>

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Lifting loops shall be 2-½" \$\phi\$-270 ksl strands, as shown.

The 1" \$\phi\$ rads in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

Non prestressing steel shall conform to AASHTO M-31 or M-322 Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two by fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each

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.

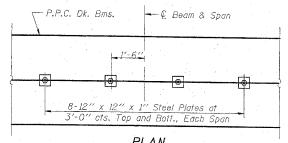
SUPERSTRUCTURE DETAILS

F.A. 308 (IL 84) OVER SPRING CREEK SEC. 109 BR-4
WHITESIDE COUNTY
STATION 171+60.57
STRUCTURE NO. 098-0023

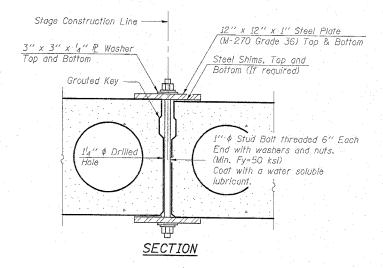


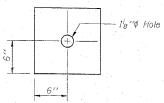
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INDIANAPOLIS, INDIANA
KENOSHA, WISCONSIN
SPRING GREEN, WISCONSIN

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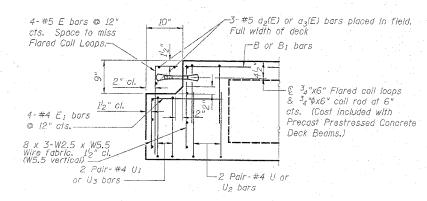


CLAMPING PLATE

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

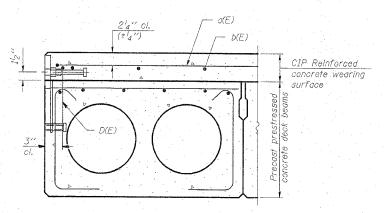
See Special Provisions for Stage Construction of Precast Prestressed Concrete Deck Beams.
Cost included with "Precast Prestressed Concrete Deck Beams".

See Stage Construction Details for traffic lanes.

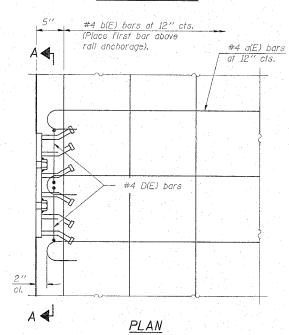


END OF BEAM (EXPANSION END)

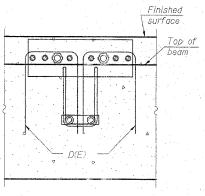
(Dimensions are at Rt. L's)



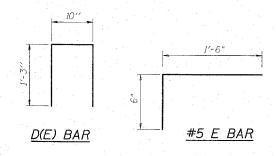
CROSS SECTION



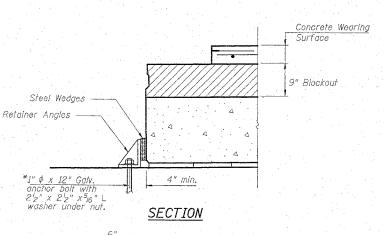
The rail anchorage shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rall anchorage inserts and/or additional inserts cast into the beam. Drilling into the beam will not be

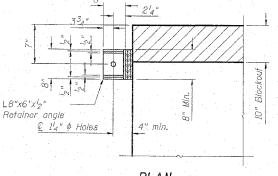


SECTION A-A









PLAN

SIDE RETAINER AT EXPANSION JOINT

* Anchor bolts shall be approved threaded rods and be placed in drilled holes and grouted in place. Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams.

Note: After block-outs are poured and cured the retainer angles shall be removed. Anchor bolts may be left in place.

ROUTE NO.	SECTION	co	MTY .	TOTAL SHEETS	SHEET NO.	SHEET NO.	8
F.A. 308	109BR-4	WHITE	SIDE	47	24	123 SHEET:	S,
FED. ROAD DIST	, NO, 7	ILLINGIS	FED. AID PR	DJECT-	*****		

Contract #64B29

BILL OF MATERIAL

Item		Unit	Quantity	
	Precast Prestressed Concrete Deck Beams (21" Depth)			
50				
		′-3"		
	#4 B	<u>4R U</u> 1		
ō				

2'-9"

#4 BAR U3

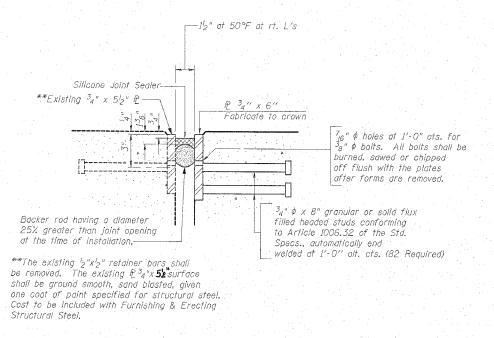
SUPERSTRUCTURE DETAILS

F.A. 308 (IL 84) OVER SPRING CREEK SEC. 109 BR-4 WHITESIDE COUNTY STATION 171+60.57 STRUCTURE NO. 098-0023



CHAMPAIGN, ILLINOIS CHICAGO, ILLINOIS EVANSVILLE, INDIANA INDIANAPOLIS, INDIANA KENOSHA, WISCONSIN SPRING GREEN, WISCONSIN

REVISIONS NAME DATE	NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.	DRAWING NUMBER
	DESTUNED BY: S.L.D. PROJECT NO: 102302	
	DRAMN BY: MEW DATE: 9/85	5-8
	CHÉCKEO BY: M.M. APPROVED BY: M.M.	
	ACTIVITY INITIALS	



SECTION THRU EXPANSION JOINT @ N. ABT.

ROUTE NO. GECTION COUNTY SHEETS SHEET NO. 9

F.A. 308 VOSBR-4 WHITESIDE 47 25

FEO. RODG DISS IND. 7 ILLINOIS FEEL ALD PROJECT-

Contract #64B29

GENERAL NOTES

Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be $\vec{\beta}_B$. Seal space with silicone sealant suitable for structural steel.

After fabrication all surfaces of the steel plates shall be given one coat of paint specified for Structural Steel.

BILL OF MATERIAL

	· Unit	Total
Silicone Joint Sealer, 1½"	foot	41

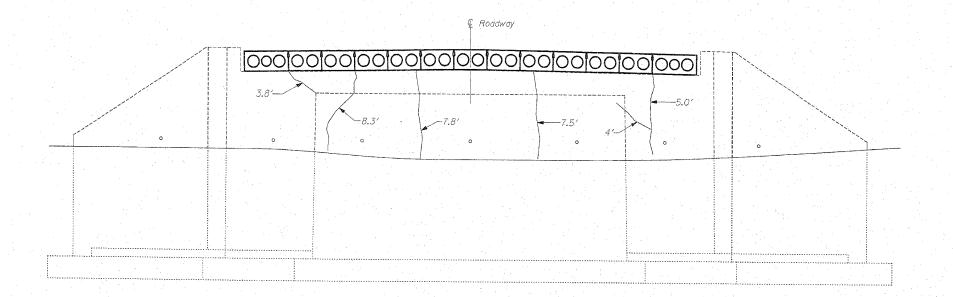
SILICONE JOINT SEALER

F.A. 308 (IL 84)
OVER SPRING CREEK
SEC. 109 BR-4
WHITESIDE COUNTY
STATION 171+60.57
STRUCTURE NO. 098-0023

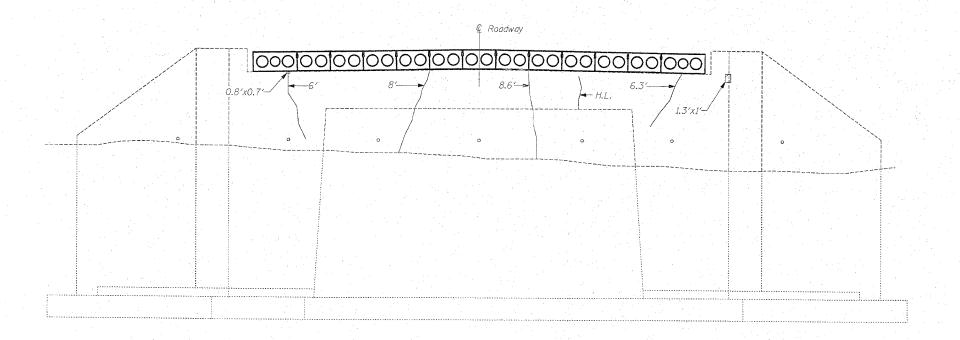


CHAMPAIGN, ILLINOIS
CHICAGO, ILLINOIS
EVANSVILLE, INDIANA
INDIANAPOLLS, INDIANA
KENOSHA, WISCONSIN
SPRING GREEN, WISCONSIN

REVISIONS NAME	DATE	NOTE: DIMENSIONAL DATA IS NOT TO ANY PORTION OF THIS DRAWING		DRAWING NUMB
		DESIGNED BY: S.L.D.	PROJECT NO: 102302	
		DRAWN BY: MEW	DATE: 9/25	5-0
		CHECKED BY: M.M.		3-3
		ACTIVITY DETIALS		



ELEVATION-SOUTH ABUTMENT



ELEVATION-NORTH ABUTMENT

ROLLYE NO. GECTION		COUNTY	TOTAL SHEET SHEETS NO.		SHEET NO.	10
F.A. 308	109BR - 4	WHITESIDE	47	26	13 SHEETS	

Contract #64B29

LEGEND

Formed Concrete Repair
Depth equal to or less than 5"

Epoxy Crack Sealing

Hairline Crack - Not to be sealed

Note: Crack widths are $\frac{1}{8}$ " $\pm \frac{1}{16}$ " unless otherwise noted.

BILL OF MATERIAL - ABUTMENTS

ITEM	UNIT	QUANTITY
Epoxy Crack Sealing	Foot	66
Formed Concrete Repair (Depthequal to or less than 5")	Sq Ft	2

ABUTMENT REPAIRS

F.A. 308 (IL 84)

OVER SPRING CREEK

SEC. 109 BR-4

WHITESIDE COUNTY

STATION 171+60.57

STRUCTURE NO. 098-0023



CHAMPAIGN, ILLINOIS
CHICAGO, ILLINOIS
EYANSVILLE, INDIANA
INDIANAPOLIS, INDIANA
KENOSHA, WISCONSIN
PRING GREEN, WISCONSIN

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REVISIONS NAME	S DATE	NOTE: DIMENSI AMY PORT	CHAL DATA IS NOT CON OF THIS DRAW!	TO BE OBTAINED BY SCA NG.	L ING	DRAWING NUMBER
		GESTGNED BY:	S.L.D.	PROJECT NO: 1923	32	
		CHECKED BY:	MEW M.M.	BATE: 9/85	= $ $	S-10
		APPROVED BY:	M.M. INITIALS	-		

PROMETRIAL SECTION COUNTY SHEETS SHEET NO. 11

F.A. 308 09BR-4 WHITESIDE 47 27 13 SHEETS

FED. NONO DIST. NO. 7 BLUDGIS FED. AID PROJECT-

Contract #64B29

Temporary Concrete Barrier

See Standard 704001

Stage Construction Line

NJ shape 2'-0'' A

Estage Removal Line

2'-0'' NJ shape
1'-10\frac{1}{2}'' F shape

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

See Detail I or Detail II.

Styrofoam Pads (NJ Shape only) See Standard 704001

Temporary Concrete Barrier

Stage Removal Line

2'-0'' NJ shape
1'-10\frac{1}{2}'' F shape

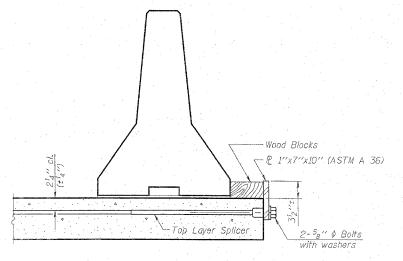
1'-10\frac{1}{2}'' F shape

1'-10\frac{1}{2}'' V Shape
1'-10\frac{1}{2}'' V Shape
1'-10\frac{1}{2}'' V Shape
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1'-10\frac{1}{2}'' V Shape
1'-10\frac{1}{2}'' V Shape
1'-10\frac{1}{2}

NEW SLAB

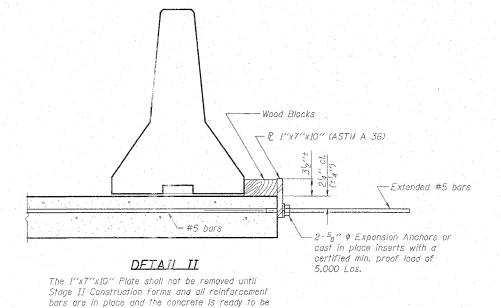
EXISTING SLAB

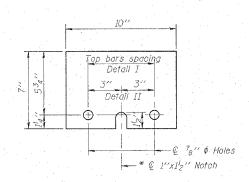
SECTIONS THRU SLAB



DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.





NOTES

Cost of anchorage is included with Temporary Concrete Barrier.

Connect one (1) 1"x7"x10" steel ₽ to the

top layer of couplers with $2^{-5}8''$ ϕ bolts screwed to coupler at approximate $\mathfrak C$ of

Connect one (f) 1"x7"x10" steel I<u>P</u> to the concrete slab with 2-⁵8" \(\psi \) Expansion Anchors or cast in place inserts spaced between the

top layer of reinforcement at approximate © of

Detail I - With Bar Splicer or Couplers:

each barrier panel.
Detail II - With Extended Reinforcement Bars:

each barrier panel.

P 1"x7"x10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

F.A. 308 (IL 84)
OVER SPRING CREEK
SEC. 109 BR-4
WHITESIDE COUNTY
STATION 171+60.57
STRUCTURE NO. 098-0023



CHAMPAIGN, ILLINOIS
CHICAGO, ILLINOIS
EVANSVILLE, INDIANA
INDIANAPOLIS, INDIANA
KENOSHA, WISCONSIN
SPRING GREEN, WISCONSIN

REVISIONS DATE	NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING MAY PORTION OF THIS DRAWING.	DRAWING NUMBER
	DESIGNED BY: S.L.D. PROJECT NO: 102302 GRANN BY: MFW DATE: 9/05	
	CHECKED BY M.M.	S-11
	ACTIVITY INITIALS	

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

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:

(Tension in κίρω) Minimum *Pull-out Strength = 1.25 x fs_{allow} x A_t

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

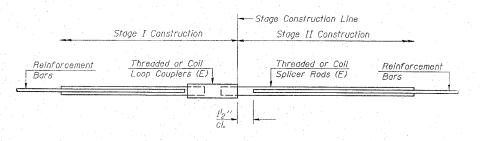
fsallow = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

A_t = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

	BAR SPLIC	CER ASSEMBLI	ES			
		Strengt	Strength Requirements			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length		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."



STANDARD

Bar Size	No. Assemblies Required	Location
4	53	Concrete Wearing Surface
5	3	Concrete Wearing Surface

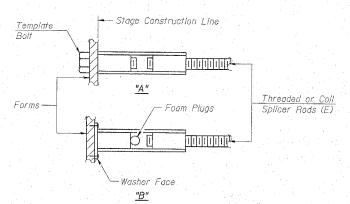
BAR SPLICER ASSEMBLY DETAILS

F.A. 308 (IL 84) OVER SPRING CREEK SEC. 109 BR-4 WHITESIDE COUNTY STATION 171+60.57 STRUCTURE NO. 098-0023



CHAMPAIGN, ILLINOIS CHICAGO, ILLINOIS EVANSVILLE, INDIANA INDIANAPOLIS, INDIANA KENOSHA, WISCONSIN SPRING GREEN, WISCONSIN

REVISIONS NAME	NOTE: DIMENSI ANY PORT	OHAL DATA IS NOT ION OF THIS DRAW!	TO BE GBTAINE	ED BY SCALING	DRAWING NUMBER	
		DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY: ACTIVITY	S.L.D. MEW M.M. M.M. Districts	PROJECT NO DATE:	n: 102302 9/05	S-12



BAR SPLICER ASSEMBLY ALTERNATIVES

WELDED SECTIONS

— The diameter of this part is

equal or larger than the

diameter of bar spliced.

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

ROLLED THREAD DOWEL BAR

** ONE PIECE

- Wire Connector

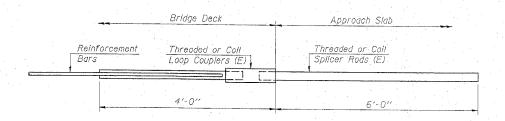
The diameter of this part

of the bar spliced.

is the same as the diameter

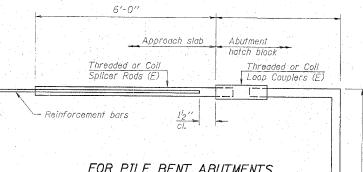
INSTALLATION AND SETTING METHODS

"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.



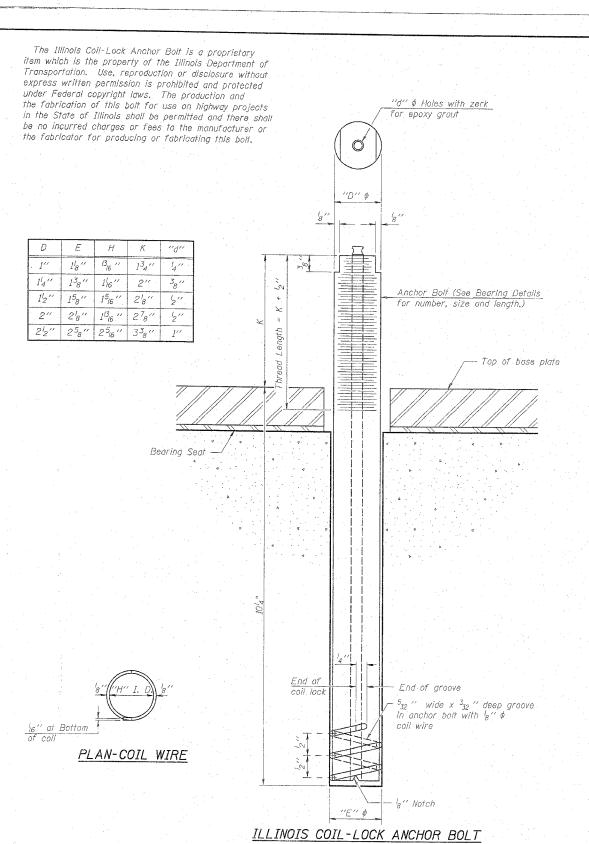
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

	Bar	Splice	r foi	- 45	, bar	-	
Min.	Capacity	= 23.0	. klp	s	tensi	on	
Min.	Pull-out	Strengt	h =	9.2	kips	-	tension
No.	Required	= .					



FOR PILE BENT ABUTMENTS

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



ROUTE NO.	SECTION	COUNTY		SHEETS	SHERT NO.	SHEET	NO.
F.A. 308	109BR - 4			47	29	<i>I</i> 3 SH	EETS
FED. ROAD DIST, NO. 7		ILLINOIS	FEG. AID PR	DJECT-		1	

NO. 13

Contract #64B29

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed. The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

- 1. A threaded rod stud with nut and washer of the type specified.
- A sealed glass capsule or a sealed glass adhesive curtridge containing premeasured amounts of the adhesive chemical.

Location	Туре
N. Abut	A 307
-	

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

ANCHOR BOLT DETAILS

F.A. 308 (IL 84) OVER SPRING CREEK SEC. 109 BR-4 WHITESIDE COUNTY STATION 171+60.57 STRUCTURE NO. 098-0023



CHAMPAIGN, ILL INDIS CHAMPAIGN, ILLINDIS
CHICAGO, ILLINDIS
EVANSVILLE, INDIANA
INDIANAPOLIS, INDIANA
KENOSHA, WISCONSIN
SPRING GREEN, WISCONSIN

REVISIONS ME L DATE	NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.	DRAWING NUMBER
	DESIGNED BY: S.L.D. PROJECT NO: 102302	
	CHECKED BY: M, M, a APPROVED BY: M, M, ACTIVITY DISTINCTS	S-13

Originally built in 1931 as S.B.I. Rt. 80, Sec. 109B at Sta. 1135+12.5. Rehabilitated and widened in 1971. The structure consists of 1 span

to bk. abutments dimension measures 48'-0"; the o.-o. width

throughout construction using temporary traffic signals.

Existing Structure:

Salvage existing substructure.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO. TUTAL SPECTS FAP RT.308 109 BR-3 Whiteside 47 30

Sheet 1 of 12

DESIGN SPECIFICATIONS (New Construction)

LOADING HS20-44 (New Construction) 50 p.s.f. allowance for future wearing surface.

DESIGN STRESSES

f'c = 3.500 psi

 $f_V = 60,000 \text{ psi (Reinforcement Bars)}$ fc = 5,000 psi (conc. wearing surface)

PRECAST PRESTRESSED UNITS

f'c = 5.000 psi

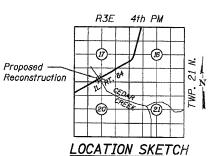
f'ci = 4.000 psi

f's = 270,000 psi (1/2"\$ low lax. strands)

fsi = 201,960 psi (1/2"\$ low lax. strands)

EXISTING BEAM REMOVAL AND PROPOSED BEAM ERECTION SEQUENCE

- 1. Five adjacent existing bridge beams and two approach channel beams shall be removed.
- 2. Four new bridge beams and two approach beams shall be installed and doweled into position.
- 3. Construct Concrete Wearing Surface and move traffic to new beams
- 4. Remaining five existing bridge beams and two approach channel beams shall be removed.
- 5. Remaining six new bridge beams and two approach beams shall be installed and doweled into position.



To the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges",

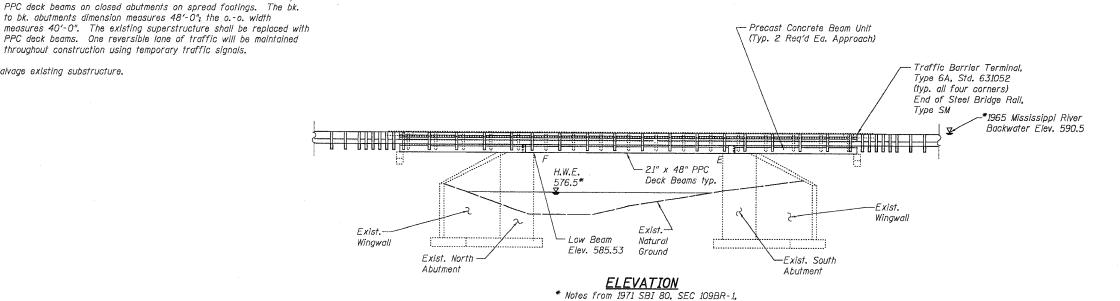
Talux J. Vice IL Licensed Structural Engineer

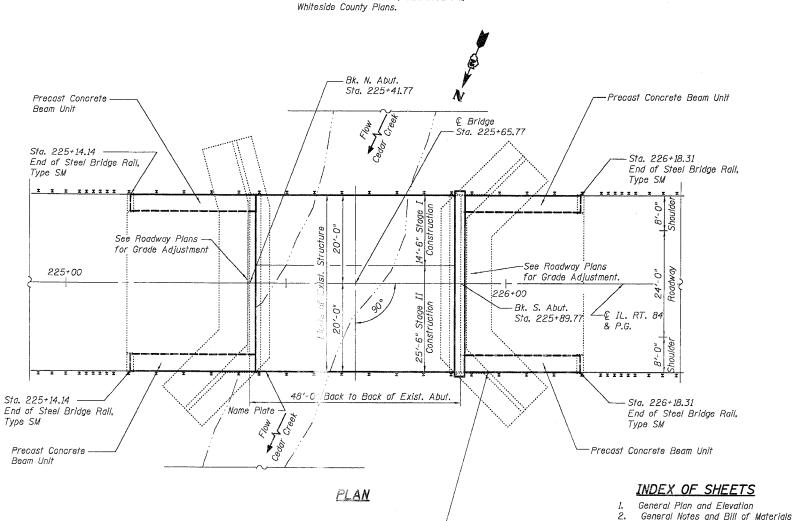
12-68-05 Date

11-30-66 License Expires



GENERAL PLAN AND ELEVATION IL. RT. 84 OVER CEDAR CREEK F.A.P. ROUTE 308 - SECTION 109 BR-3 WHITESIDE COUNTY STA. 225+65.77 SN 098-0022





Remove existing concrete channel

This work shall be paid for under

the Item Bridge Approach Shoulder

beam (Typ. each approach).

Removal

Superstructure

Superstructure Details

Superstructure Details

Superstructure Details

Bar Splicer Assembly Details

Steel Bridge Rail, Type SM at PPC Concrete Deck Beams

12. Temporary Concrete Barrier for Stage Construction

Steel Bridge Rall, Type SM at Precast Concrete Beam Unit

Deck Joint Details

Substructure

LETTERING FOR NAME PLATE

STATION 225+65.77

REBUILT 200 BY

STATE OF ILLINOIS

F.A.P. RT. 308 SEC. 109 BR-3

LOADING HS20

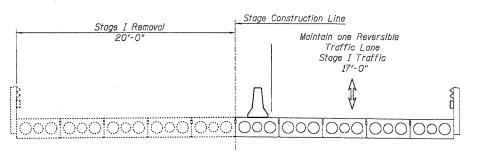
STR. NO. 098-0022

See Std. 515001

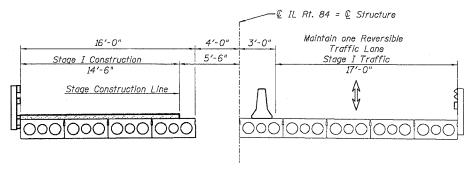
Attach to backside of 8" rail element. Remove, clean, and relocate existing name plate adjacent to new name plate. Cost included in Name Plates.

DESIGNED MGH CHECKED RGD DRAWN MDJ CHECKED

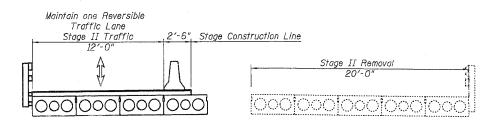
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



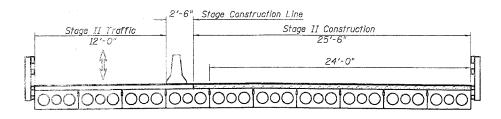
STAGE I REMOVAL BRIDGE DECK LOOKING SOUTH



STAGE I CONSTRUCTION BRIDGE DECK LOOKING SOUTH

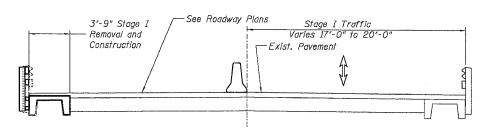


STAGE II REMOVAL BRIDGE DECK <u>LOOKING SOUTH</u>

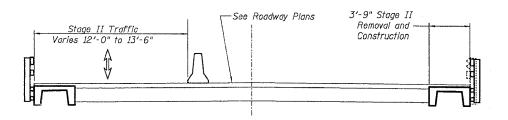


STAGE II CONSTRUCTION BRIDGE DECK LOOKING SOUTH

DESIGNED	MGH
CHECKED	RGD
DRAWN	LOM
CHECKED	NRF



STAGE I REMOVAL AND CONSTRUCTION APPROACH LOOKING SOUTH



STAGE II REMOVAL AND CONSTRUCTION APPROACH LOOKING SOUTH

TOTAL BILL OF MATERIALS

CODE AO.	DESCRIPTION	UNIT	SUPER	SUB	TOTAL
50101500	Removal of Existing Superstructures	EACH	1	-	1
501024 0 0	Concrete Removal	CU YD	-	2.2	2.2
Z0002600	Bar Splicers	Each	4		4
5030025	Concrete Structures	ĆU YD	-	0.9	0.9
503002.5	Concrete Superstructure	CU YD	2.4	-	2.4
50300250	Bridge Deck Grooving	SQ YD	210	-	200
50300300	Protective Coat	SQ YD	210	-	210
503012 -5	Formed Concrete Repair (Depth Less than or Equal to 5")	SQ FT	- 1	205	205
50400405	Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,887		1,887
<i>50800205</i>	Reinforcement Bars, Epoxy Coated	POUND	3,000	-	3,000
50901005	Steel Bridge Rail, Type SM	FOOT	208	-	208
51500160	Name Plates	EACH	1	-	1
58700200	Bridge Seat Sealer	SQ FT	-	195	195
59000100	Epoxy Crack Sealing	FOOT	-	50	50
X0300136	Bridge Approach Shoulder Removal	SQ YD	47	-	47
X0320887	Polymer Concrete	CU FT	10	-	10
X0322932	Silicone Joint Sealer, 1 1/2"	FOOT	40	-	40
X5030305	Concrete Wearing Surface, 5"	SQ YD	210	-	210
XX004703	Precast Concrete Beam Unit	EACH	4	**	4
Z0001900	Asbestos Bearing Pad Removal	EACH	18	-	18

TOTAL PREST COUNTY FAP RT.308 109 BR-3 Whiteside 47

Contract # 64829 GENERAL NOTES

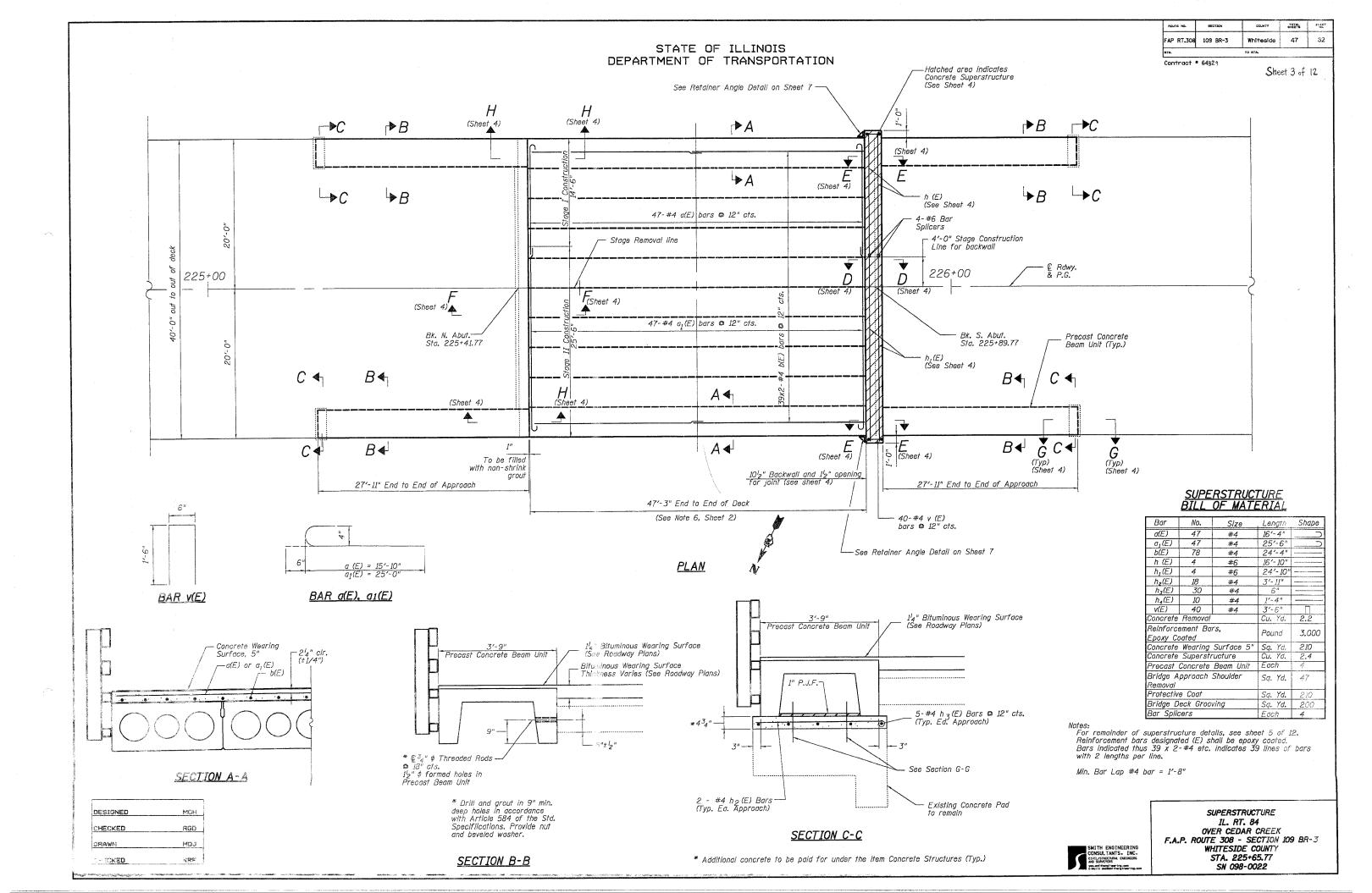
Sheet 2 of 12

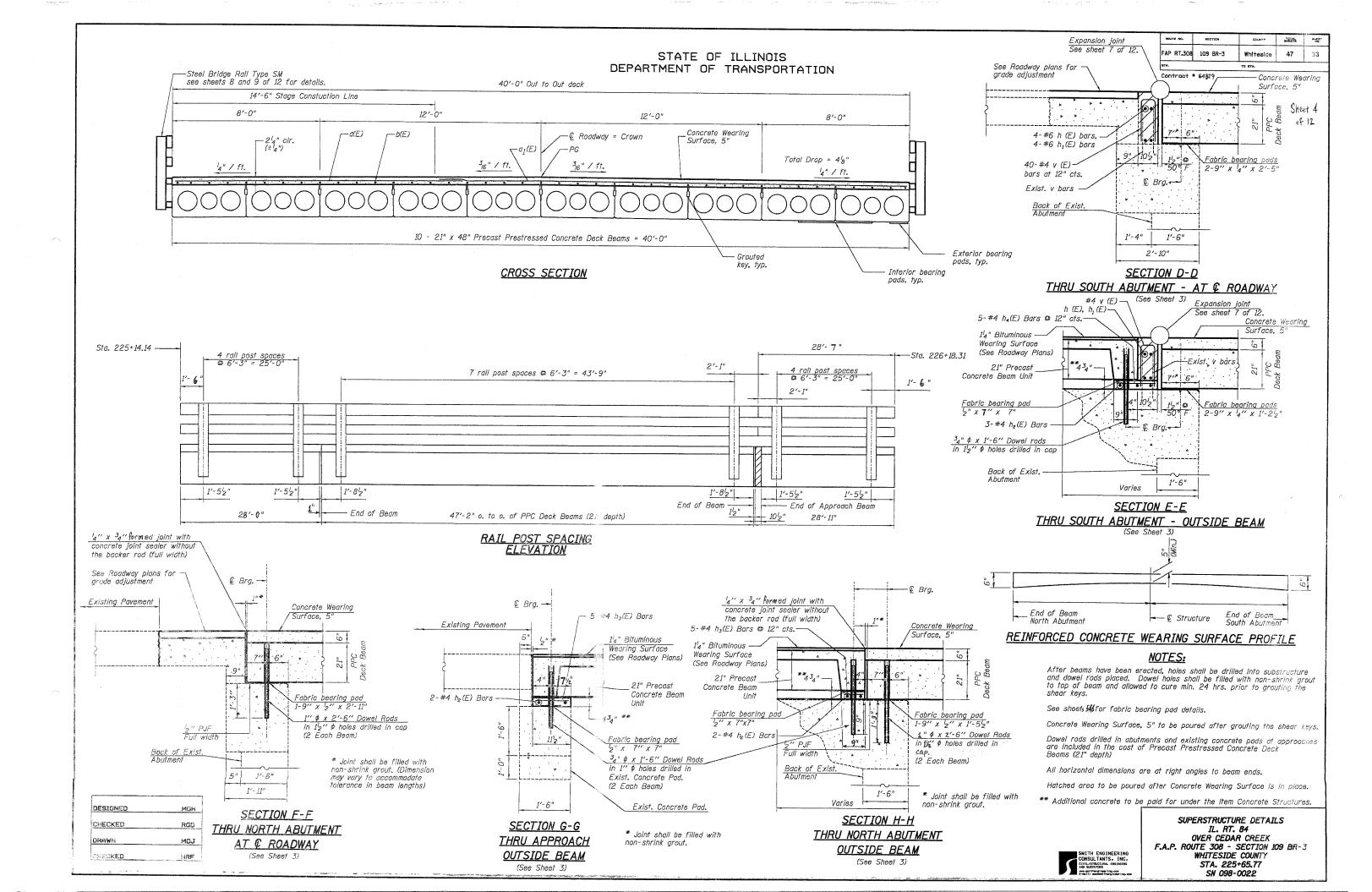
- 1. The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included in the cost
- 2. The minuimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam
- 3. The Contractor is advised that the existing PPC Deck Beams are In a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.
- 4. Repair of the substructure shall be completed prior to placement of the new deck beams.
- 5. Reinforcement bars shall conform to the requirements of AASHTO M31, or M322 Grade 60.
- 6. 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.
- 7. Bridge Seat Sealer shall be applied to the seat area of the abutments.
- 8. All construction joints shall be bonded.
- 9. No in-stream work will be allowed on this project
- 10. Reinforcement Bars designated "(E)" shall be epoxy coated.
- 11. Reinforcement Bar Splices shall be in accordance with the following table unless shown otherwise on the drawing.

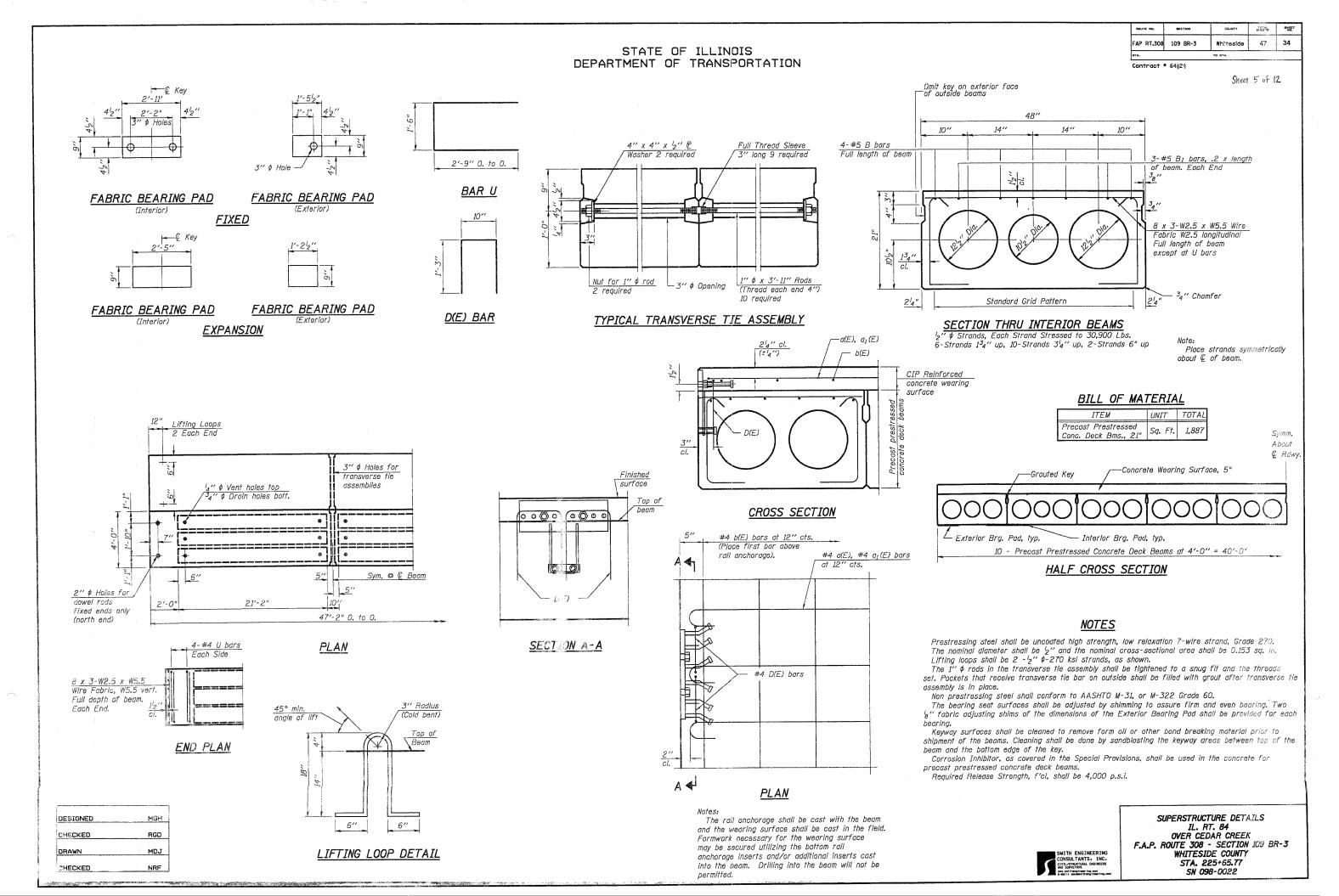
Size .	Basic Lap	Top Bars La
#4	1'-8"	2'-5"
#5	2'-2"	3′-0"
#6	2'-7"	3'-7"

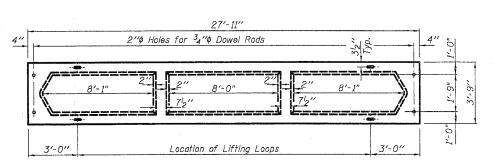
- 12. The existing bearing pads contain asbestos. The contractor shall take appropriate precautions to deal with the presence of asbestos in the bearing pads and shall be responsible for disposal in an appropriate facility. See Special Provisions
- 13. Removal of the approach channel beams shall be included under the Contract Unit Price for Bridge Approach Shoulder Removal.
- 14. Removal of existing back walls shall be included under the contract unit price for Concrete Removal.

GENERAL NOTES AND BILL OF MATERIALS IL. RT. 84 OVER CEDAR CREEK F.A.P. ROUTE 308 - SECTION 109 BR-3 WHITESIDE COUNTY STA. 225+65.77 SN 098-0022

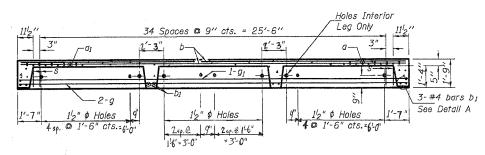




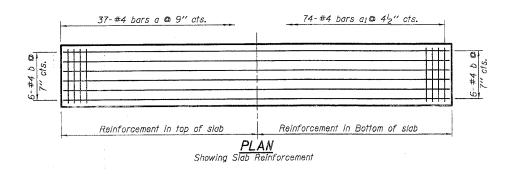




TYPICAL PLAN OF BEAM



LONGITUDINAL SECTION



Note: Refer to sheets 4 of 12 and 9 of 12 for railing details

DESIGNED MGH
CHECKED RGD
DRAWN MCJ
CHECKED NRF

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAIL A

prior to erection, the beam shall be by the resident Engineer at the jobsite.

2-1₂"\$\psi Strands/Loop, 2 Ea. End, Ea. Beam. Loop shall be burned

requirements of AASHTO M 203.

off after beams have been erected. Strands shall conform to the

The surface of the member shall not deviate more

than 1/1200 of the full length of the member from a straight line connecting the two end points on the member's surface. In addition to State inspection and

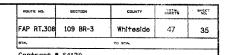
The units shall remain on the bottom supporting forms until the concrete has attained a compressive strength of not less than 3,500 pounds per square inch.

Precast Concrete Beam Units shall meet the requirements of Section 504 of the Standard Specifications and shall be paid for at the contract unit price each for Precast Concrete Beam

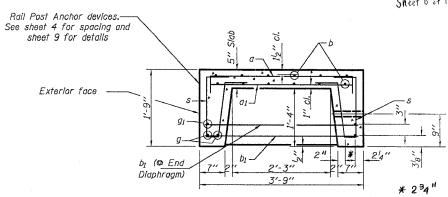
© Exterior Corners 4-12" Fabric Pads Req'd. per Beam BEARING PADS

Weld ends of g bars to b bars with

full bead weld



Sheet 6 of 12



TYPICAL SECTION THRU BEAM

BILL OF MATERIAL-SUPERSTRUCTURE

* BILL OF REINFORCEMENT BARS FOR ONE BEAM

		ONE	UNIT	
BAR	SIZE	NO.	LENGTH	SHAPE
а	#4	37	4'-0"	
<i>a</i> 1	#4	74	3'-3"	
Ь	#4	12	27'-6"	
bı	#4	10	3'-6"	***************************************
g	#11	4	30'-8"	
g_1	#8	2	29'-4"	<u> </u>
S	#3	74	3'-10''	[Jr

^{*} For information of suppliers of Precast Slab Units only.

27'-6" | 1'-7" g

BARS g and g₁

5" 2"

<u>BAR s</u>

BAR a

LIFTING LOOP

Approved alternate may be substituted for the above.

_Top of Beam

Note:

Tack welding of stirrups to bottom longitudinal reinforcement bars will not be permitted except as otherwise authorized in writing by the Engineer.

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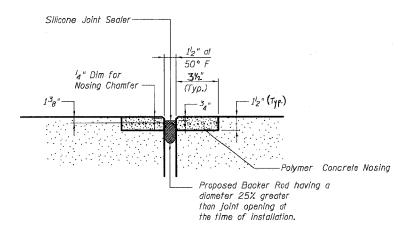
SUPERSTRUCTURE DETAILS
IL. RT. B4
OVER CEDAR CREEK
F.A.P. ROUTE 308 - SECTION 109 BR-3
WHITESIDE COUNTY
STA. 225+65.77
SN 098-0022

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

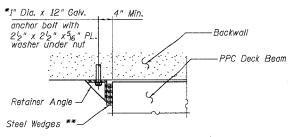
TOTAL SHEETS 47 36 FAP RT.308 109 BR-3 Whiteside

Contract * 64829

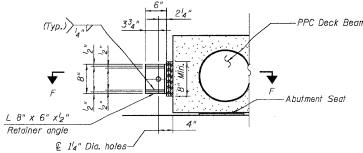
Sheet 7 of 12



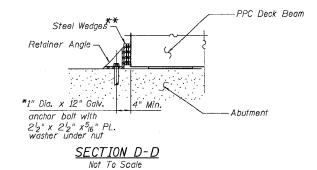
SILICONE JOINT SEALER DETAIL

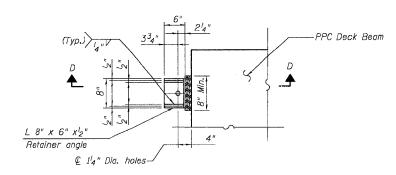


SECTION F-F Not To Scale



ELEVATION RETAINER ANGLE AT EXPANSION JOINT





PLAN RETAINER ANGLE AT STAGE CONSTRUCTION JOINT

Not To Scale

* Anchor bolts may be cast into the masonry or approved threaded rod may be placed in drilled holes and grouted in place. Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams. Anchor bolt for retainer angle at construction joint shall be removed, flush with seat in Construction Stage 2.

** Wedges shall be removed after wearing surface

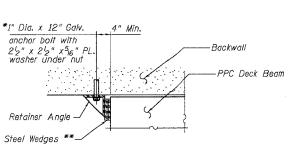
BILL OF MATERIAL

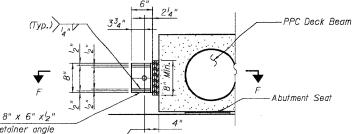
Item	Unit	Total
Polymer Concrete	Cu. Ft.	10
Silicone Joint Sealer, 1/2"	Foot	40

cone Joint Sealer, 1½" Foot 40	vmer Concrete	Cu. Ft.	10
	cone Joint Sealer, 1½"	Foot	40

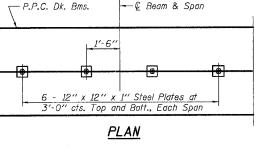


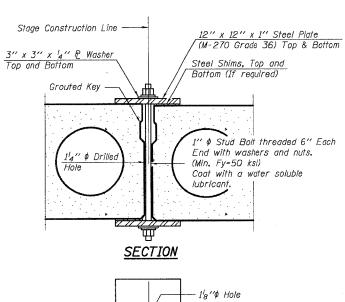
DECK JOINT DETAILS IL. RT. 84 OVER CEDAR CREEK F.A.P. ROUTE 308 - SECTION 109 BR-3 WHITESIDE COUNTY STA. 225+65.77 SN 098-0022

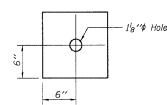




Not To Scale







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.

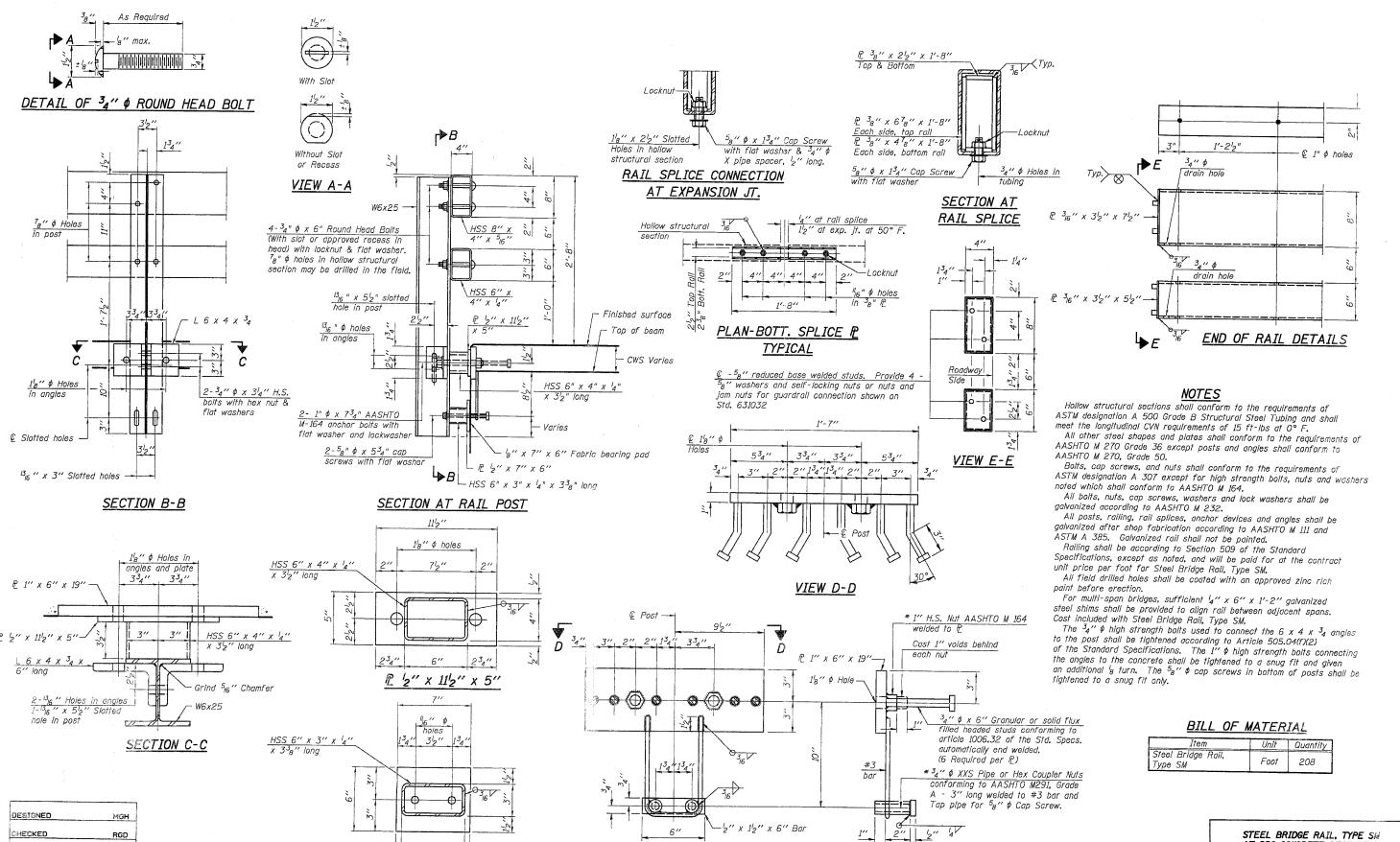
DESIGNED	MGH
CHECKED	RGD
DRAWN	MDJ
CHECKED	NRF

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

QUTE NO.	SECTION	EDUNTY	TOTAL SHEETS	SHEET NO.
P RT.308	109 BR-3	Whiteside	47	37
		TO STA.		

Contract * 64829

Sheet 8 of 12



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during

casting of beam. Galvanized after fabrication.

DRAWN

CHECKED R-340**WS** MDJ

NRF

10-25-05

P 2" x 7" x 6"

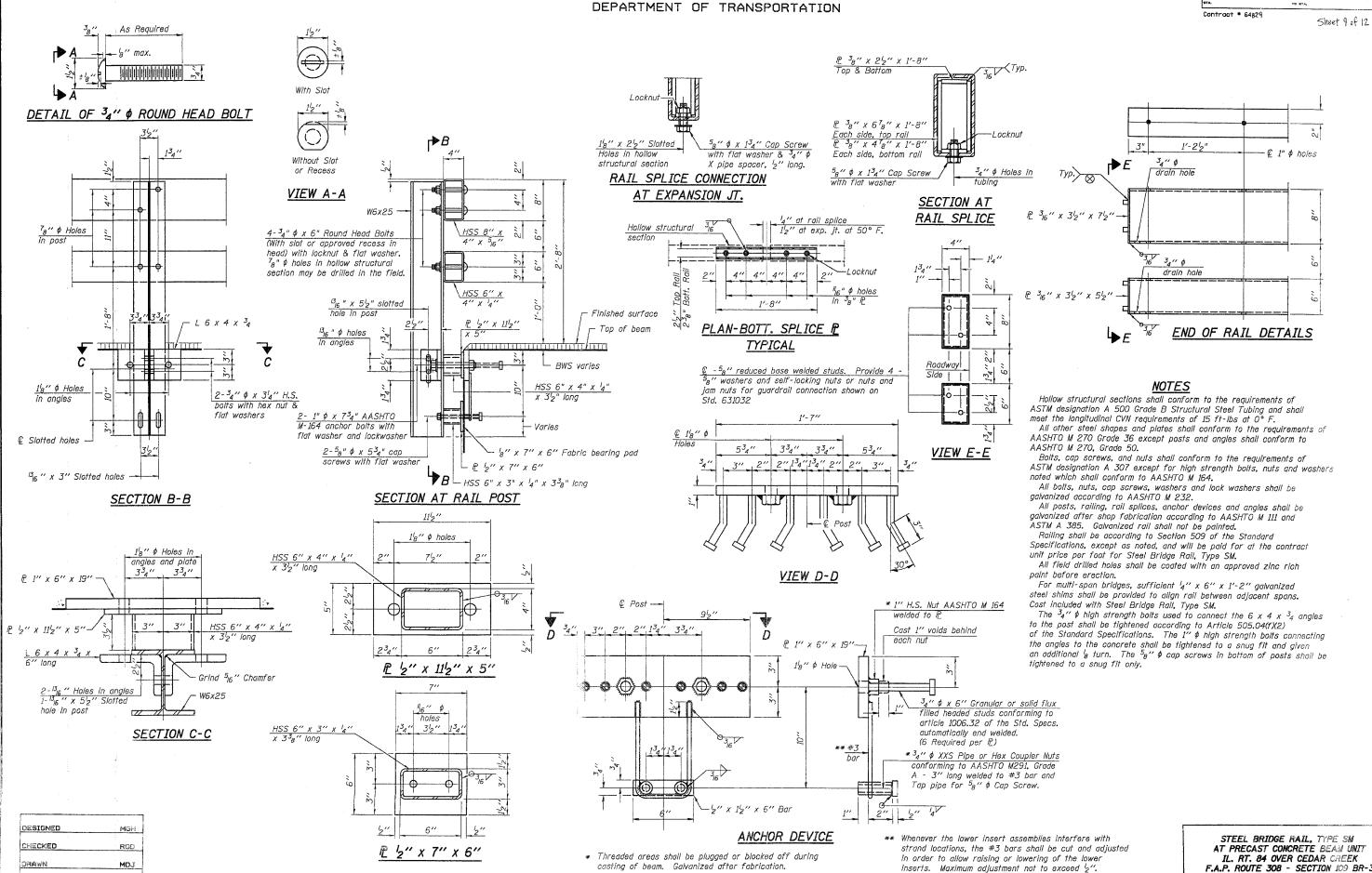
(81-3" NewYman Post Specing) (5" minimum to 7½" maximum CWS thickness)

STEEL BRIDGE RAIL, TYPE SM AT PPC CONCRETE DECK BEAMS IL. RT. 84 OVER CEDAR CREEK F.A.P. ROUTE 308 - SECTION 109 BR 3 WHITESIDE COUNTY STA. 225+65.77 SN 098-0022

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STATE OF ILLINOIS

BECTION COUNTY TOTAL SP-SET AP RT.308 109 BR-3 Whiteside 47



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10-28-05 (6'3" Maximum Post Species (14" minimum to 3%" maximum BWS thickness)

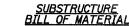
IL. RT. 84 OVER CEDAR CREEK F.A.P. ROUTE 308 - SECTION 109 BR-3 WHITESIDE COUNTY STA. 225+65.77 SN 098-0022

SMITH ENGINEERING CONSULTANTS. INC.

TOTAL SHEETS FAP RT.308 109 BR-3 Whiteside 47

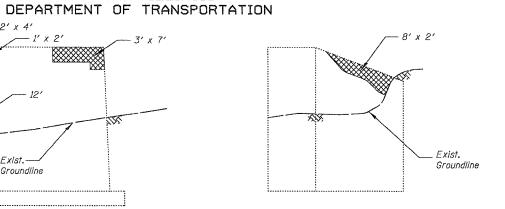
Contract * 64829

Sheet 10 of 12



Item	Unit	Quantity
Formed Concrete Repair (Depth Less than or Equal to 5 in)	Sq. Ft.	205
Epoxy Crack Sealing	Foot	50

When removing concrete backwall, preserve and protect existing vertical bars. This work shall be included in Concrete Removal. Work this sheet with Sheet 4.



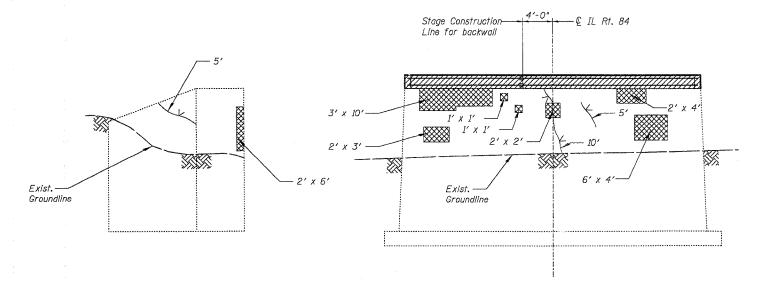
NORTH ABUTMENT ELEVATION

Exist.-

Groundline

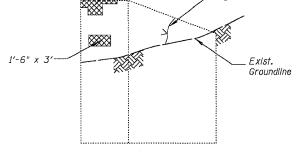
STATE OF ILLINOIS





2' x 1

2' x 1'



LEGEND

NOTES:



Formed Concrete Repair (Depth Less than or Equal to 5 In)



Epoxy Crack Sealing

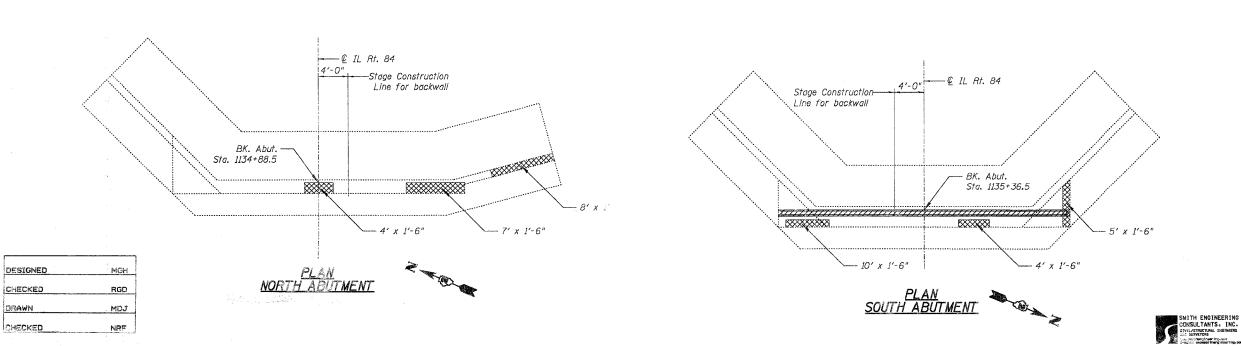


Concrete Removal and Concrete Superstructure (See sheet 3 for quantities and sheets 3 & 4 for proposed backwall details)

SOUTHEAST WINGWALL ELEVATION

SOUTH ABUTMENT ELEVATION

SOUTHWEST WINGWALL ELEVATION



SUBSTRUCTURE IL. RT. 84 OVER CEDAR CREEK F.A.P. ROUTE 308 - SECTION 109 BR-3 WHITESIDE COUNTY STA. 225+65.77 SN 098-0022

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

Threaded or Coll

Splicer Rods (E)

TOTAL. 47 40 FAP RT.308 109 BR-3 Whiteside

Contract * 64B29

Sheet 11 of 12

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 fied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

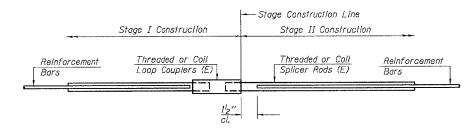
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- Minimum Capacity 1.25 x fy x A_t
 (Tension in kips) = 1.25 x fy x A_t
 Minimum *Puli-out Strength = 1.25 x fs_{allow} x A_t (Tension in kips)

Where fy = Yield strength of lapped reinforcement bars in ksi. fs_{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 SPLICER ASSEMBLIES								
Bar Size to be Spliced		Strength Requirements							
	Splicer Rod or Dowel Bar Length	Min. Capacity klps - 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	<i>13.3</i>						
#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						

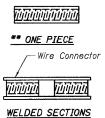
Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



STANDARD

Bar Size	No. Assemblies Required		Loca	ation
#6	4	South	Abutment	Backwall

—The diameter of this part is equal or larger than the diameter of bar spliced. ROLLED THREAD DOWEL BAR



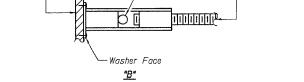
The diameter of this part

of the bar spliced.

is the same as the diameter

BAR SPLICER ASSEMBLY ALTERNATIVES

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



- Stage Construction Line

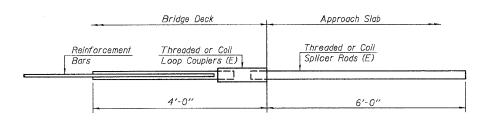
<u>"A"</u>

Template

Forms-

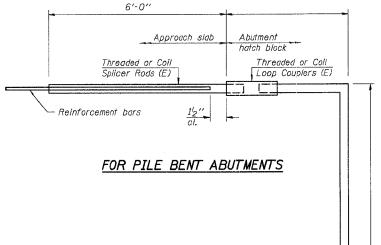
INSTALLATION AND SETTING METHODS

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



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

	Bar	Spl	icer	foi	- #	5	bar			
Min.	Capacity	- 2	3.0	kip	s -	1	ensi	on		
Min.	Pull-out	Stre	ngth	=	9.2	2 .	kips	-	ter	sion
No.	Reauired	=		•						



	Bat	Sp	licer	foi	#5	5 bar		
Min.	Capacity	= 2	23.0	kip	s -	tensi	on	
Min.	Pull-out	Str	engtt.	=	9.2	kips	-	tension
No.	Required	=						

DESIGNED	MGH
CHECKED	RGD
DRAWN	MDJ
CHECKED	NRF

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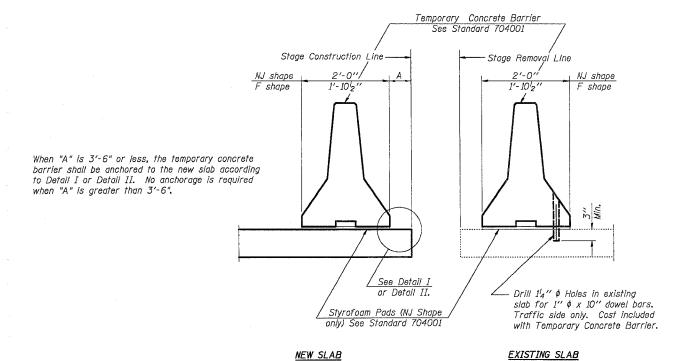
BAR SPLICER ASSEMBLY DETAILS IL. RT. 84 OVER CEDAR CREEK F.A.P. ROUTE 308 - SECTION 109 BR-3 WHITESIDE COUNTY STA. 225+65.77 SN 098-0022

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATE AND THE	SHEET NO.	
FAP RT.308	109 BR-3	Whiteside	47	41	
STA.	***************************************				

Contract * 64929

Sheet 12 of 12



<u>NOTES</u>

Detail I - With Bar Splicer or Couplers:

Connect one (I) I"x7"x10" steel £ to the top layer of couplers with 2-5g" \$\phi\$ bolts screwed to coupler at approximate \$\mathbb{C}\$ of each barrier panel.

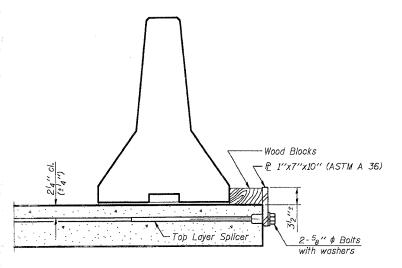
Detail II - With Extended Reinforcement Bars:

Connect one (I) I'x7"x10" steel ₱ to the concrete slab with 2-5g" \$\phi\$ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \$\mathbb{Q}\$ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

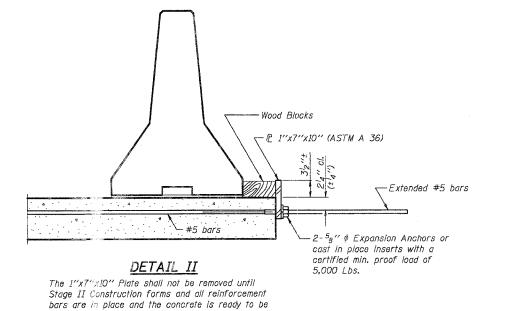
SECTIONS THRU SLAB

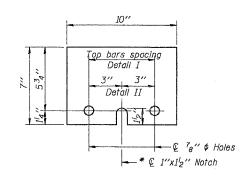
placed.



DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.





P 1"x7"x10"

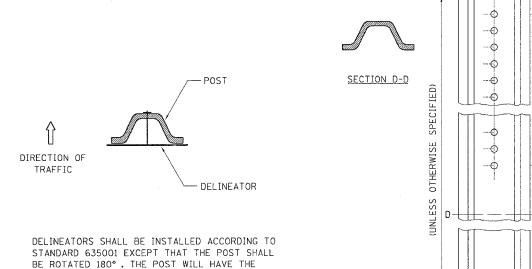
* Required only with Detail II

DESIGNED	ИВН
CHECKED	RGD
DRAWN	MDJ
 	. N#2

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TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
IL. RT. 84
OVER CEDAR CREEK
F.A.P. ROUTE 308 - SECTION 109 BR-3
WHITESIDE COUNTY
STA. 225+65.77
SN 098-0022

DELINEATOR AND POST ORIENTATION



ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

WIDE SIDE FACING TRAFFIC AND THE DELINEATOR

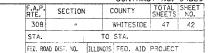
ATTACHECD AS SHOWN ABOVE.

DELINEATOR AND POST ORIENTATION

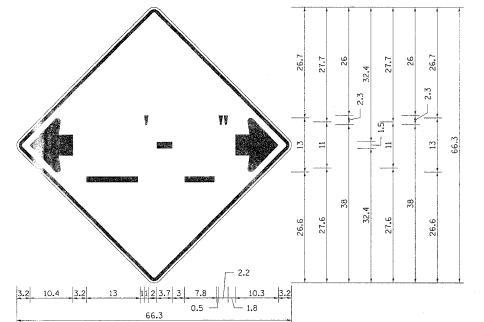
37.4

REVISED 1-31-00

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



*:109BR-3 & 109BR-4



NOTES
W12-2 - Horizontal Clearance Sign
48.0" across sides, 1.9" Radius,
0.8" Border, 0.5" Indent, Block on
Orange; Standard Arrow Custom
10.4" X 8.1" 180° Block 11 Inch
D Series Lettering; Standard Arrow

Custom 10.4" X 8.1" 0°

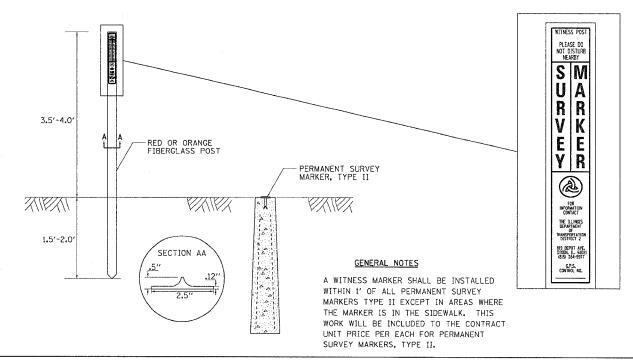
All work to furnish and install these signs shall be included in the cost of the Traffic Control Standards and shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

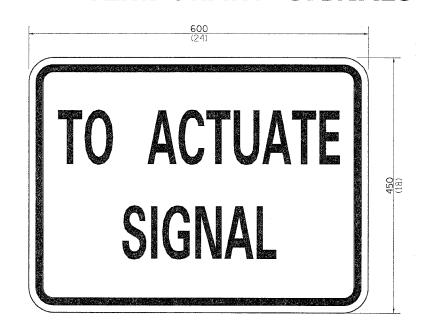
INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES) 39.4

REVISED 6-29-05

WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II



STOP LINE SIGN FOR TEMPORARY SIGNALS



SIZE: 600(24) x 450(18)

100(4) CAPITAL LETTERS - BLACK

13(1/2) BORDER - BLACK

WHITE REFLECTIVE - TYPE B ENGINEERING GRADE SHEETING

GENERAL NOTE:

THIS SIGN SHALL BE INSTALLED AT THE STOP LINE AS DIRECTED BY ENGINEER.

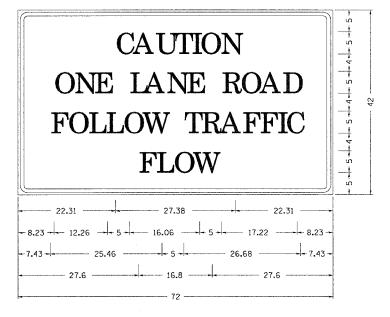
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II 38.4

STOP LINE SIGN FOR TEMPORARY SIGNALS

99.4

ENTRANCE SIGN FOR USE WITH TEMPORARY SIGNALS



Type AA Fluorescent Orange Sheeting; 2.25" Radius, 0.88" Border, 0.50" Indent, Black on Orange; [CAUTION] D; [ONE LANE ROAD] D; [FOLLOW TRAFFIC] D; [FLOW] D

Table Of Widths And Spaces

	C		A		U		T		I		0	1	N		
22.31	3.36	0.62	4.18	0.94	3.36	0.94	3.04	0.94	1 0.78	3 1.17	3.52	1.17	3.36	22.3	1
	0		N		E										
8.23	3.51	1.17	3.36	1.18	3.04										
		L		A		N		E							
	5.00	3.05	0.31	4.18	0.94	3.36	1.17	3.05							
		R		0		A		D							
	5,00	3.36	0.93	3.52	0.94	4.18	0.93	3.36	8.23						
	F		0		L		L		0		W				
7.43	3.04	0.94	3.52	1.17	3.04	0.94	3.05	0.94	3.51	0.94	4.37				
		Т		R		A		F		F		I		С	
	5.00	3.05	0.94	3.36	0.94	4.18	0.93	3.05	0.94	3.04	0.94	0.78	1.18	3.35	7.43
	F		L		0	1	W								
27.60	3.0	5 0.9	4 3.0	4 0,9	4 3.52	0.9	3 4.38	27.6	50						

GENERAL NOTES

THIS SIGN SHALL BE INSTALLED AT ENTRANCES LOCATED BETWEEN THE TEMPORARY SIGNALS AS DIRECTED BY THE ENGINEER.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

THE COST TO FURNISH, INSTALL AND REMOVE THIS SIGN AT THE REQUIRED LOCATIONS SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

ENTRANCE SIGN FOR USE WITH TEMPORARY SIGNALS

F.A.P. RTE.	SECTION		OUNTY	′	TOTAL SHEETS	SHEET NO.
308	•		WHITE	SIDE	47	43
STA.		TO	STA.		***************************************	
FED. RO	AD DIST. NO.	ILLINOIS	FED.	AID	PROJECT	

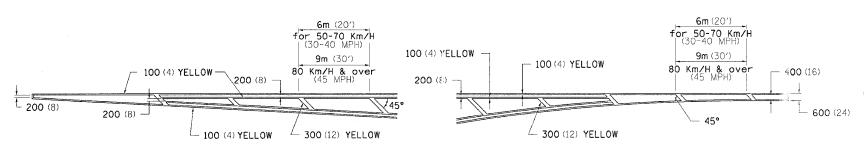
* 109BR-3 & 109BR-4

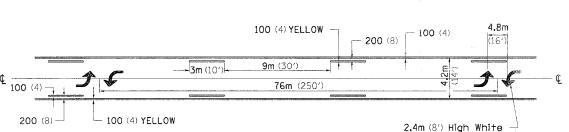
TYPICAL PAVEMENT MARKINGS

F.A.P. SECTION 308 COUNTY TOTAL SHEET SHEETS NO. WHITESIDE 47 44 FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT

• 1098R-3 & 109BR-4

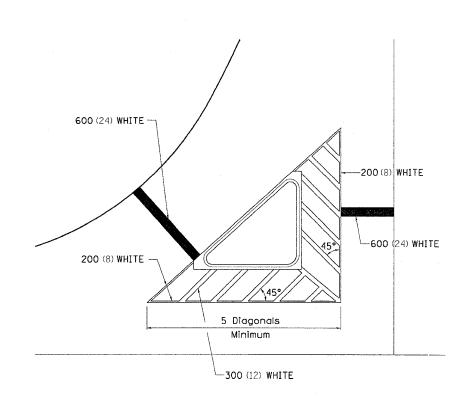
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



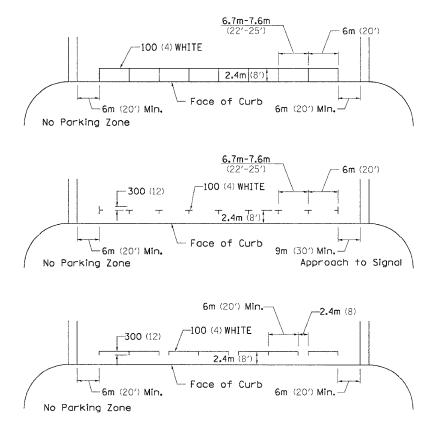


MEDIAN PAVEMENT MARKING

TYPICAL ISLAND OFFSET SHOULDER WIDTH

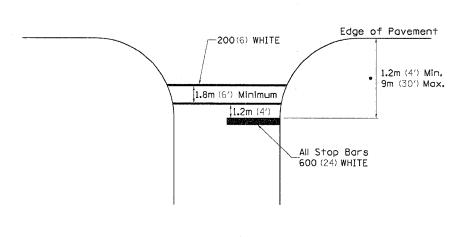


TYPICAL PARKING SPACING



.. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

STANDARD CROSSWALK MARKING See Schedules for Locations



• Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

