# (815)**ABDULLAH** SAMEER SQUAD SENIOR

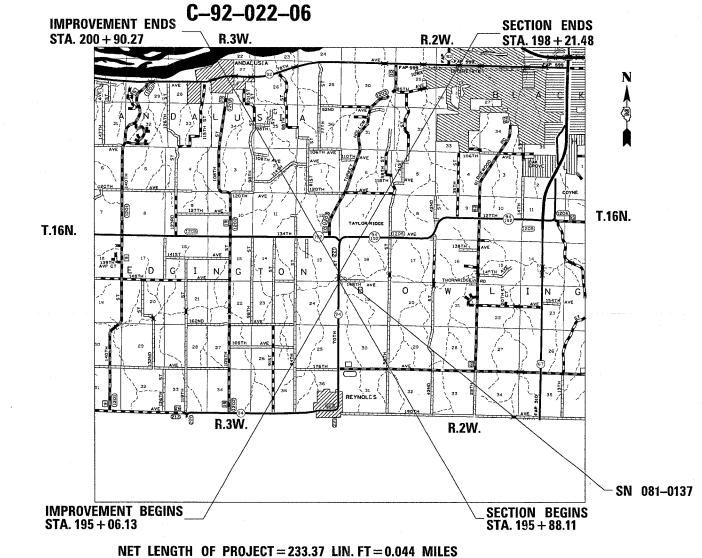
STATE OF ILLINOIS

**DEPARTMENT OF TRANSPORTATION** 

**DIVISION OF HIGHWAYS** 

## **PROPOSED HIGHWAY PLANS**

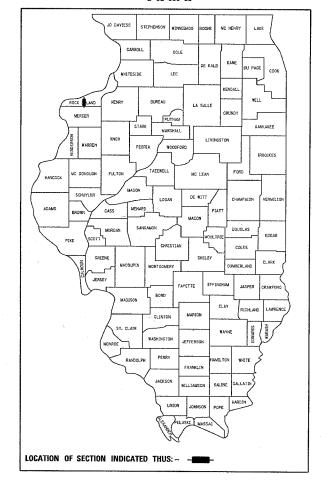
**FAS ROUTE 221 (IL94)** SECTION (19B-1) M
PROJECT BHS - 221(105)
ROCK ISLAND COUNTY

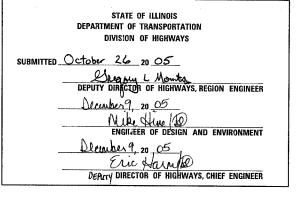


GROSS LENGTH OF PROJECT = 233.37 LIN. FT = 0.044 MILES

D-92-068-05

(19B-1) M ROCK ISLAND 29

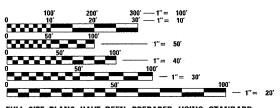




PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

**EDGINGTON TOWNSHIP SECTION 13 & 24 BOWLING TOWNSHIP SECTION 18 &19** 

FOR INDEX OF SHEETS, SEE SHEET NO. 2 FOR STATE STANDARDS, SEE SHEET NO. 2



ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123

CONTRACT NO. 64B06

**FAS ROUTE 221 (IL 94)** 

SECTION (19B-1) M

**ROCK ISLAND COUNTY** 

F.A.S. RTE.	SECTION	COUNTY	TOTAL	SHEET NO.				
221	(19B-1) M	ROCK ISLAND	29	2				
STA.	STA. TO STA.							
FFD. ROAF	DIST. NO. ILL	INOIS FED. AID	PROJECT					

#### INDEX OF SHETS

COVER SHEET

INDEX OF SHEETS

STATE STANDARDS

3 -SUMMARY OF QUANTITIES 4-5 GENERAL NOTES

TYPICAL SECTIONS

7 -HORIZONTAL AND VERTICAL CONTROL

8- 9 SCHEDLLE OF QUANTITIES

10 -GENERAL PLAN AND ELEVATION FOR BRIDGE

11 -STAGEING PLAN FOR BRIDŒ

12 -DECK PLAN FOR BRIDŒ

SUPERSTRUCTURE 13 -

SUPERSTRUCTURE DETAILS 14-

15 -TYPE SM STEEL BRIDŒ RAIL SIDE MOUNTED

BAR SPLICER ASSEMBLY DETAILS 16 -

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION 17 -

18 -PLAN SHEET

19-21 STAGING DETALS

22 -DELINEATOR AND POST (37.4)

WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE 2 (38.4) 22-

22 -INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES) (39.4)

STOP LINE SIGN FOR TEMPORARY SIGNALS (99.4) 22 -

23-STEEL PLATE BEAM GUARDRAIL, TYPE A (SPECIAL) (52.2)

24 - 25 TYPICAL PAVEMENT MARKINGS (41.1)

26-29 IL 94 CROSS SECTIONS

#### STATE STANDARDS

001001	Areas of Reinforcement Bars
001006	Decimal of an Inch and of a Foot
28000 <b>1</b> - 02	Temporary Erosion Control Systems
406201	Mailbox Turnat
51500 <b>1</b> - 02	Name Plate for Bridges
	Steel Plate Beam Guardrail
63030 <b>I</b> - 03	Shoulder Widering for Type 1 (Special) Guardrail Terminals
	Traffic Barrier Terminal, Type 2
	Traffic Barrier Terminal, Type 6A
635001	Delineators
6350 <b>%</b> - 02	Reflector and Terminal Marker Placement
63501 <b>1</b> - 01	Reflector Marker and Mounting Details
667101	Permanent Survey Markers
70100 <b>6</b> - 02	Typical Application of Traffic Control Standard
70120 <b>1</b> - 02	Typical Application of Traffic Control Standard
70130 <b>1</b> - 02	Typical Application of Traffic Control Stancard
701311 - 02	Typical Application of Traffic Control Standard
70132 <b>1</b> - 08	Typical Application of Traffic Control Stancard
70132 <b>6</b> - 02	Typical Application of Traffic Control Stancard
70200 <b>1</b> - 05	Traffic Control Deviœs
70400 <b>!</b> - 02	Temporary Concrete Barrier
720011	Metal Post for Signs, Markers and Delineators
78000 <b>i</b> - 01	Typical Pavement Markings
886001	Detector Loop Instalations
886@6	Typical Layout for Detection Loops

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

## SUMMARY OF QUANTITIES

			CO	NTRACT	NO.	64	B06
	F.A.S. RTE.	SECTION	C	OUNTY		TAL	SHEET NO.
L	221	(198-1)	M RO	CK ISLAN	ID :	29	3
	STA.		TO	STA.			
- 11	FED. ROAD	DIST. NO.	ILLINOIS	FED. AID	PRO	JECT	

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	X080-2A 80% FED/ 20%STATE	SFTY - 3 80% FED. 20%STAT
20200100	EARTH EXCAVATION	CU YD	84	84	
20400800	FURNISHED EXCAVATION	CU YD	227	227	
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	63	63	
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	158	158	
40600990	TEMPORARY RAMP	SQ YD	28	28	
44001205	BITUMINOUS CONCRETE SURFACE REMOVAL COMPLETE	SQ YD	215	215	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	197	197	
50102400	CONCRETE REMOVAL	CU YD	1.3	1.3	
50300225	CONCRETE STRUCTURES	CU YD	1,7	1,7	
50300260	BRIDGE DECK GROOVING	SQ YD	236	236	
50300300	PROTECTIVE COAT	SQ YD	258	258	
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	410	410	<u> </u>
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3300	3300	
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	137	137	
51500100	NAME PLATES	EACH	1	1	
63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	287.5	287.5	
63000130	STEEL PLATE BEAM GUARDRAIL, TYPE A (SPECIAL)	FOOT	25	25	
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4	
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	570	570	
63500105	DELINEATORS	EACH	4	4	
66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	2	2	
67000400	ENGINEERS FIELD OFFICE, TYPE A	CAL MO	4	4	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	4	4	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	11	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2892	2892	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	964	964	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	450	450	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	360	360	
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2284	2284	
78200410	GUARDRAIL MARKERS, TYPE A	EACH	16	16	
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	-

CODE	ITFM	UNIT	TOTAL	X080-2A 80% FED/	SFTY - 31
NUMBER	TIEM	UNII	QUANTITY	20%STATE	20%STATE
78300500	PAINT PAVEMENT MARKING REMOVAL	SQ FT	381	381	
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	410	410	
X0320887	POLYMER CONCRETE	CUFT	2.4	2,4	
X0322932	SILICONE JOINT SEALER, 1.5"	FOOT	33	33	
X0712400	TEMPORARY PAVEMENT	SQ YD	278	278	
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	54	54	
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	251	251	
Z0002600	BAR SPLICERS	EACH	71	71	
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON - REDIRECTIVE), TEST LEVEL 3	EACH	4		4
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON - REDIRECTIVE), TEST LEVEL 3	EACH	2		2
	* SPECIALTY ITEMS		l		J

\* SPECIALTY ITEMS

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SUMMARY OF QUANTITIES** 

### **GENERAL NOTES**

ROUTE NO.	SEC.	COUNTY	TOTAL	SHEET NO.
FAS 221 (IL 94)	(19B-1)M	Rock Island	29	4
ED ROAD DIST. NO.	ILLINOIS	PROJECT	1	

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 6 (modified) shall be used. Class 6 (modified) shall be used on front slopes and ditch bottoms. This work will be included in the contract unit price per Cubic Meter (Cubic Yard) for EARTH 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 EARTH EXCAVATION.

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

The following Mixture Requirements are applicable for this project:

Mixture Uses(s):	Mainline Surface Course	Top Shoulder	Bottom Shoulder
PG:	PG 64-22	PG 58-22	PG 58-22
RAP%: (Max)	15%	30%	30%
Design Air Voids	4.2% @ N50	3 @ N50	2 @ N50
Mixture Composition (Gradation Mixture)	IL 9.5	IL 9.5 or 12.5	BAM
Friction Aggregate	С	С	N/A
20 Year ESAL	0.6	N/A	N/A

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.

Bituminous and Aggregate prime coat shall be placed in accordance with Section 406 of the Standard Specifications. The cost of the prime coats shall be included in the contract unit price per metric ton (ton) for SURFACE COURSE of the type specified.

This structure will retain the same number SN 081-0137.

The contractor shall submit four copies of the required shop drawings for review and approval to the Bureau of Bridges and Structures, 2300 South Dirksen Parkway, Springfield, IL 62764. After approval of initial submittal, the contractor shall submit one set of shop drawings to Eric Harm, Engineer of Materials, 126 East Ash Street, Springfield, IL 62706, and eight (8) sets of shop drawings to be distributed to:

District 2 District Engineer (1)
Fabricator (1)
Contractor (2)
Resident Engineer (2)
District 2 Bureau of Materials (2)

It is anticipated that several mailboxes will require relocation to the approach side of the entrances. When this is done, the contractor shall be required to mount the mailbox on a 100 mm x 100 m (4" x 4") wood post 1 m (40 inches) above the shoulder surface and extending to a minimum of 0.6 m (24 inches) into the embankment. This work shall be included in the contract unit price for the EARTH EXCAVATION. There are an estimated 2 mailboxes to be relocated.

The excavated materials from earth excavation widening, grading and shaping ditches, and excavating and grading shoulders shall be used to build up the shoulder throughout the job to conform with the typical sections and shoulder widening for terminals as shown on the plans.

A quantity of 227 Cubic Meter (Cubic Yards) of Furnish Excavation has been included to further build up the shoulders, if the Engineer determines that the excavated materials from the job are insufficient to bring the shoulders to the proper slope.

Embankment quantities for the construction of the Traffic Barrier Terminals as shown in the plans are included in quantities for Furnished Excavation.

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).

One 16d galvanized nail shall be used to toe nail the wood block out to the wood post on all Traffic Barrier 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 placed at the ends of approach guardrail terminal sections, and at each headwall or end section of AR Culverts. This work will be paid for at the contract unit price each for DELINEATORS.

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

1. 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 set at intervals of 1.6 Km (1 mile) or as directed by the Engineer. Bridge or culvert projects shall have one survey marker placed near the structure. Estimated: 2 Each.

Permanent Survey Markers, Type II shall be cast-in-place as shown on Highway Standard 667101.

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:

SBC/Ameritech Telephone Co.

MidAmerican Energy Co.

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:

Ms. Grace Ochsner Reynolds Telephone Co. 221 W. Main Street/PO Box 27 Reynolds, IL 61279-0027 Ph. 309/372-4490

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

### **GENERAL NOTES**

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 221 (IL 94)	(19B-1)M	Rock Island	29	5
FED ROAD DIST. NO	. ILLINOIS	PROJECT		

The applicable portions of Article 105.07 of the Standard Specification shall apply except for the following: The Contractor shall be responsible to locate the vertical depths of the underground utilities which may interfere with construction operations. This work will not be measured or paid for separately, but shall be considered as included in the unit bid price for the item of construction involved.

Per SB 699 (90 day utility relocation law), a notice will be sent to the utility companies instructing them to have their facilities relocated within 90 days. Estimated date relocation complete = Letting Date + 135 days.

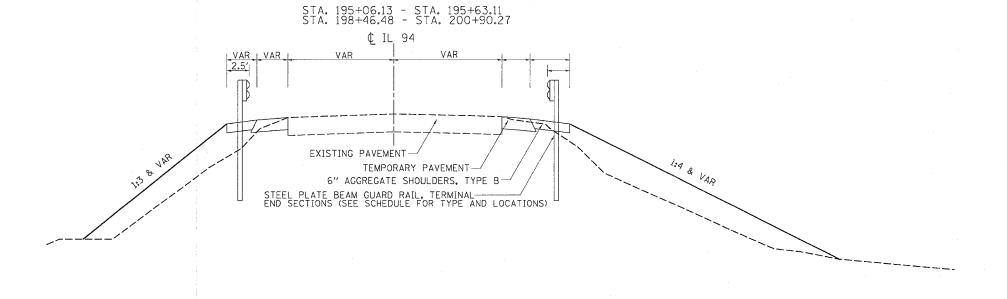
CADD data will be available to Contractors and Consultants working on this project. This information will be provided upon request as MicroStation CADD files and Geopak coordinate geometry files <u>ONLY</u>. If data is required in other formats it will be your responsibility to make these conversions. 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.

#### **COMMITMENTS**

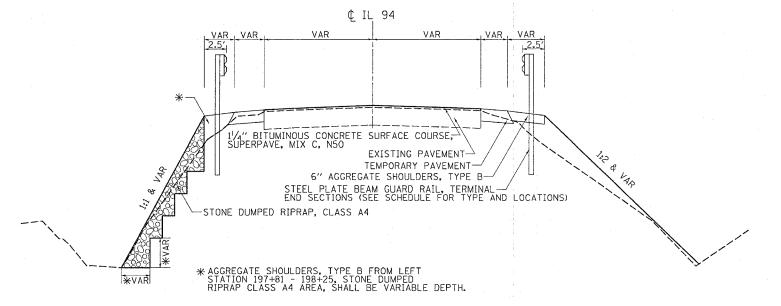
- 1. All work on this structure over Mill Creek, 1 mile south of IL 192, shall be performed from the existing deck and no work shall take place below the existing structure on the ground.
- 2. No fill shall be placed in or around Mill Creek.

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

## **TYPICAL SECTIONS**

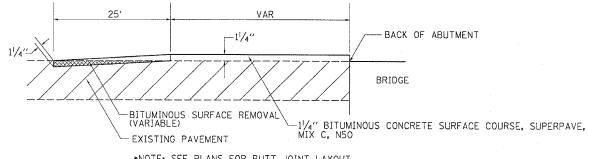


#### STA. 195+88.11 - STA. 197+13.11 STA. 197+81.48 - STA. 198+21.48



\* BENCH EXISTING SLOPE PRIOR TO RIPRAP INSTALLATION

#### BITUMINOUS SURFACE REMOVAL - BUTT JOINT STA. 195+63.11 - STA. 195+88.11 STA. 198+21.48 - STA. 198+46.48



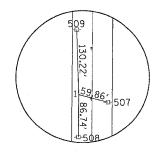
\*NOTE: SEE PLANS FOR BUTT JOINT LAYOUT

		CO	A 1 1.	VAC I	NO. 04	000
F.A.S. RTE.	SECTION	C	OUN	TY	TOTAL SHEETS	SHEET NO.
221	19BR-1	RO	CK	ISLAND	29	7
STA.		TO :	STA			
FFD DOA	O DICT NO	TI L THOTC	CCC	110	חחס יבסד	

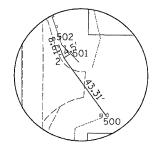
	,		···	HORIZONTA	L CONTROL	POINTS	
POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
1	1713370.895	2158961.414	749.52	IL94	84+45.71	26.6056' LT	GPS CONTROL POINT, PIN
2	1714228.185	2159019.56	708.822	IL94	93+03.40	25.3172' RT	GPS CONTROL POINT, PIN
3	1714636.273	2158981.15	706.074	IL94	97+11.20	16.0534' LT	GPS CONTROL POINT, PIN
957175	1698711.819	2158506.5	808,294	IL94	OUT OF CHAIN		DISTRICT NETWORK MONUMENT, PERM. SURVEY MARKER
957275	1698673.547	2156197.98	807.264	IL94	OUT OF CHAIN		DISTRICT NETWORK MONUMENT, PERM. SURVEY MARKER

	BENCH MARKS							
POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION	
402	1714340.406	2159012.698	707.287	IL94	94+15.57	17.641' RT	HEADWALL, PLUG	

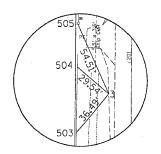
	REFERENCE TIES								
POINT	CHAIN	STATION	OFFSET	DESCRIPTION					
500	IL94	92+68.54	51.0239' RT	POWER POLE, SHINER					
501	IL94	93+05.64	28.845' RT	GUARDPOST, SHINER					
502	IL94	93+11.38	22.0952' RT	MAILBOX, POLE					
503	IL94	96+82.73	38.8885' LT	FENCE POST, SHINER					
504	IL94	97+30.36	38.5291' LT	FENCE POST, SHINER					
505	IL94	97+60.86	38.5244' LT	POWER POLE, SHINER					
507	IL94	84+31.07	31.4392' RT	POWER POLE, SHINER					
508	IL94	83+58.97	26.5711' LT	POWER POLE, SHINER					
509	IL94	85+75.83	31.5211' LT	POWER POLE, SHINER					



HORIZONTAL CONTROL POINT No. 1



HORIZONTAL CONTROL POINT No. 2



HORIZONTAL CONTROL POINT No. 3

REVISIO	NS	THINDIC	DEDADTMENT	OF TRANSPORTATION
NAME	DATE	ILLINOIS	DEFARIMENT	OF TRANSPORTATION
***************************************				
		VERT.		
		SCALE: HORIZ.		DRAWN BY
		DATE		CHECKED BY

PLOT DATE = Wad Oct 26 11:06:19 2005 FILE NAME = crkrcjects/p206605/UB6802 PLOT SCALE = 1000.0000 '/ IN. USER NAME = meglil

DRAWN BY

SCALE: VERT.

## SCHEDULE OF QUANTITIES

CONTRACT NO. 64B06 TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

#### X0712400 TEMPORARY PAVEMENT

SU YU	LUCALIUN			
	IL 94			
52	LT	195+59	-	197+13
136	RT	195+65	-	197+13
46	LT	197+81	-	199+30
44	RT	197+81	-	199+30
278	TOTAL			

#### X4066414 BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX C. N50

ION	LOCATION			
38 16 <b>54</b>	IL <b>94</b> LT&RT LT&RT <b>TOTAL</b>	195+63 197+82	-	197+13 198+46

#### Z0030250 IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

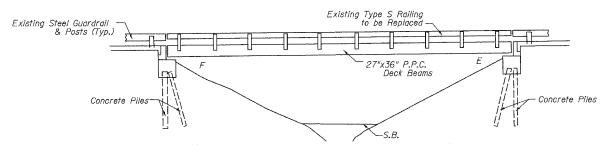
EACH	LOCATION		
	IL 94		
1	RT	195+22	STAGE 2
1	LT	196+12	STAGE 2
1	LT	197+02	STAGE 2
1	RT	199+72	STAGE 2
. 4	TOTAL		

#### Z0030350 IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3

LAGI	LOCALION		
	IL 94		
1	LT	195+22	STAGE 3
1	LT	199+72	STAGE 3
2	TOTAL		

REVISIONS	THE THORS	DEDARTMENT OF	TRANSPORTATION
NAME DA	E	DEFAITIWENT OF	TRANSFORTATION
	-		
	SCALE: VERT.		DRAWN BY
	DATE		CHECKED BY

#### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



STATION 197+47.30 MILL CREEK BUILT 1979 RE-BUILT 2006 F.A.S. RT. 221 SEC. (19B-1)M F.A. PROJ. RS-221(102)

ELEVATION

LOADING HS20-44 STR. NO. 081-0137 LETTERING FOR NAME PLATE 222222 SEE STD. 515001 Stage Construction -Line Bk. S. Abut -Sta. 611+52.75 Bk. N. Abut. Sta., 610+81.25 €F.A.S. Rte. 221 @ Roadway 71'-6" Bk. to Bk. Abutments

#### PLAN

#### LOADING HS20-44 (New Construction) No Allowance for Future Wearing Surface

#### DESIGN SPECIFICATIONS (New Construction) 2002 AASHTO

#### DESIGN STRESSES

FIELD UNITS

PRECAST PRESTRESSED UNITS

f'c = 3,500 p.s.i.

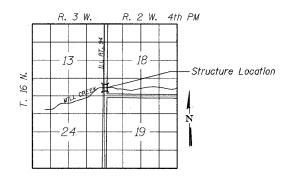
fy = 60,000 p.s.i. (Reinforcement) f'c = 5,000 p.s.i. (Concrete Wearing Surface)

f'c = 5,000 p.s.i. f'ci = 4,000 p.s.i.

f's = 270,000 p.s.i. (1/2" Low Lax Strands)

f'si = 201,960 p.s.i. (1/2" Low Lax Strands)

DESIGNED SB CHECKED RB DRAWN BH, BS CHECKED SB



LOCATION SKETCH

### WENDLER ENGINEERING SERVICES, INC. Illinois Professional Design Firm No. 184-000848 Bridge plan sheets 1 thru 8 Only



DIXON, ILLINOIS HUNOIS LICENSED STRUCTURAL

EXPIRES 11-30-2006

SHEET NO. SHEET NO. \_1\_ Rock Island 8\_ SHEETS

\* Section (19BR-1)M

Contract #64B06

#### 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 work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing structure construction plans and subsequent repair plans are available from the IDOT District office by written request. The contractor shall be responsible for obtaining and reviewing the plans prior to construction.

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

A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the fascia deck beam on the side exposed to view, and the adjacent side underneath for a distance extending 9 in. Cost included with PPC Deck Beams (27").

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

All construction joints shall be bonded.

No instream work will be allowed on this project.

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

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with

Any damage done to the bridge during beam removal and joint reconstruction shall be repaired by the Contractor. Cost to be included in the cost of "Removal of Existing P.P.C. Deck Beams".

Protective Coat quantity is included for the top and side surfaces of the concrete wearing surface.

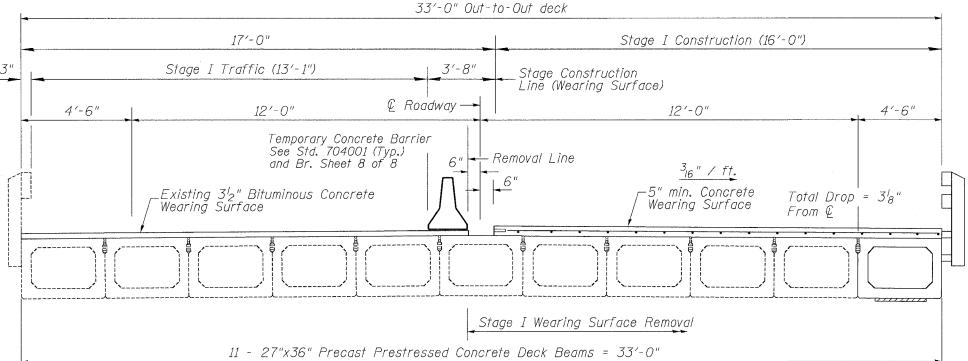
#### TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Precast Prestressed Concrete Deck Beams	Sq Ft	410
Bridge Deck Grooving	Sq Yd	236
Concrete Wearing Surface, 5"	Sg Yd	251
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq Ft	410
Reinforcement Bars, Epoxy Coated	Pound	3300
Concrete Structures	Cu Yd	1.7
Concrete Removal	Cu Yd	1.3
Bar Splicers	Each	71
Steel Bridge Rail, Type SM	Foot	137
Bituminous Concrete Surface Removal Complete	Sq Yd	215
Protective Coat	Sq Yd	258
Silicone Joint Sealer, 1 1/2"	Foot	33
Polymer Concrete	Cu Ft	2.4
Name Plates	Each	1

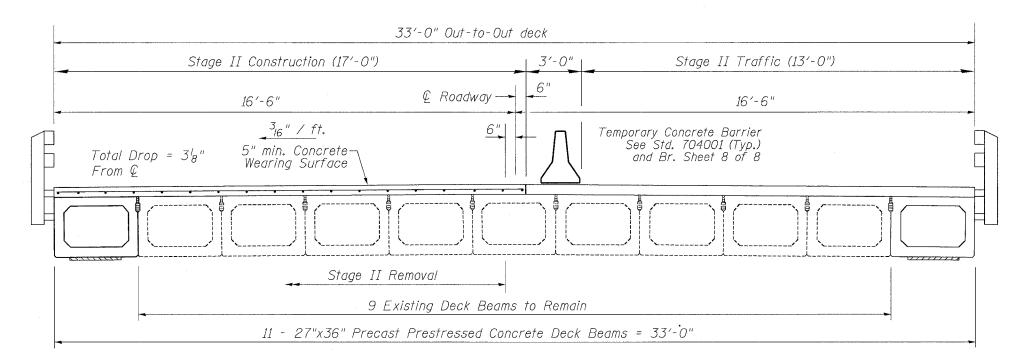
GENERAL PLAN AND ELEVATION F.A.S. 221 (IL RTE 94) OVER MILL CREEK SECTION (19B-1)M ROCK ISLAND COUNTY STR. NO. 081-0137

#### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION





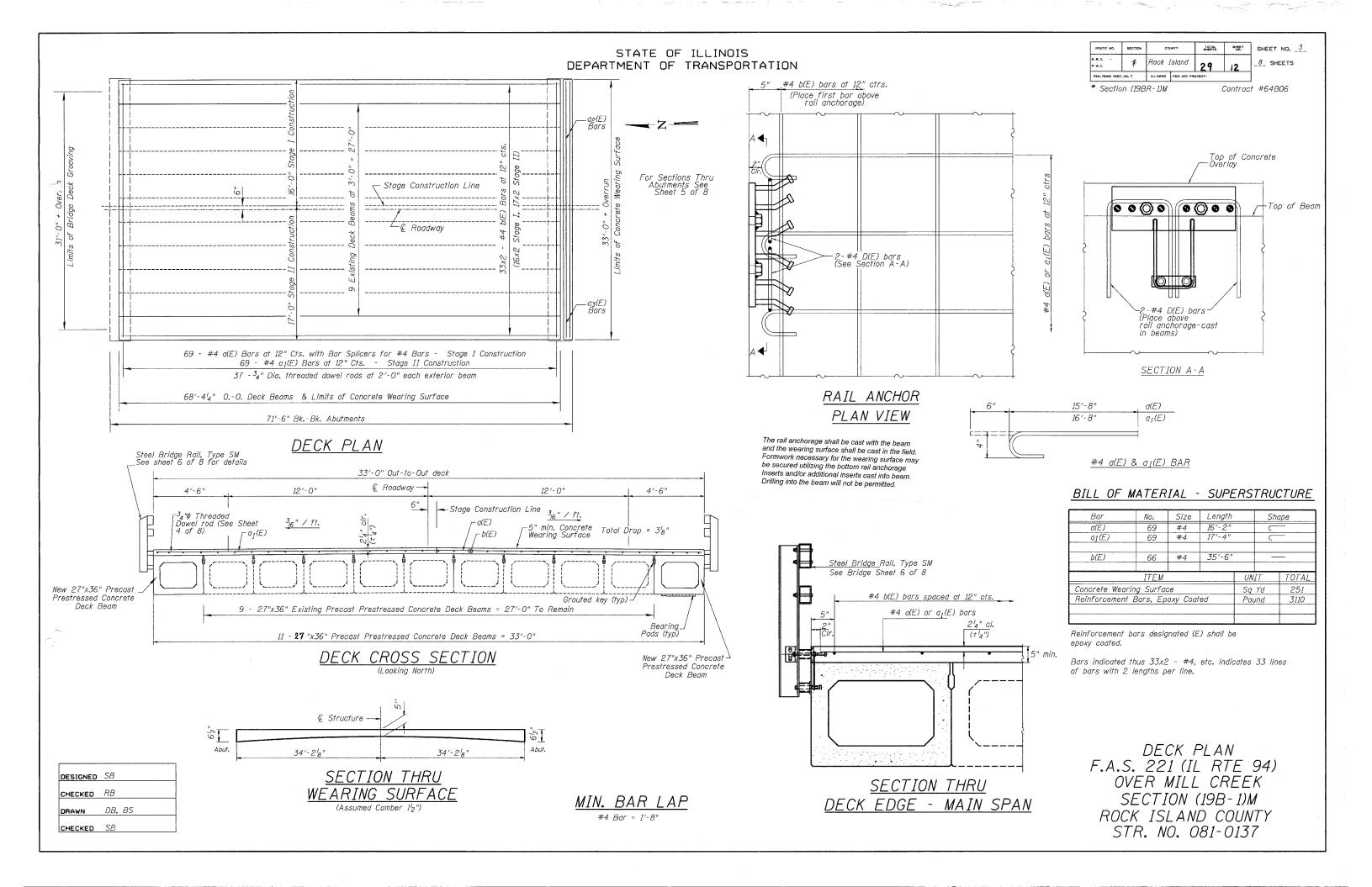
#### DECK CROSS SECTION - STAGE I (Looking North)

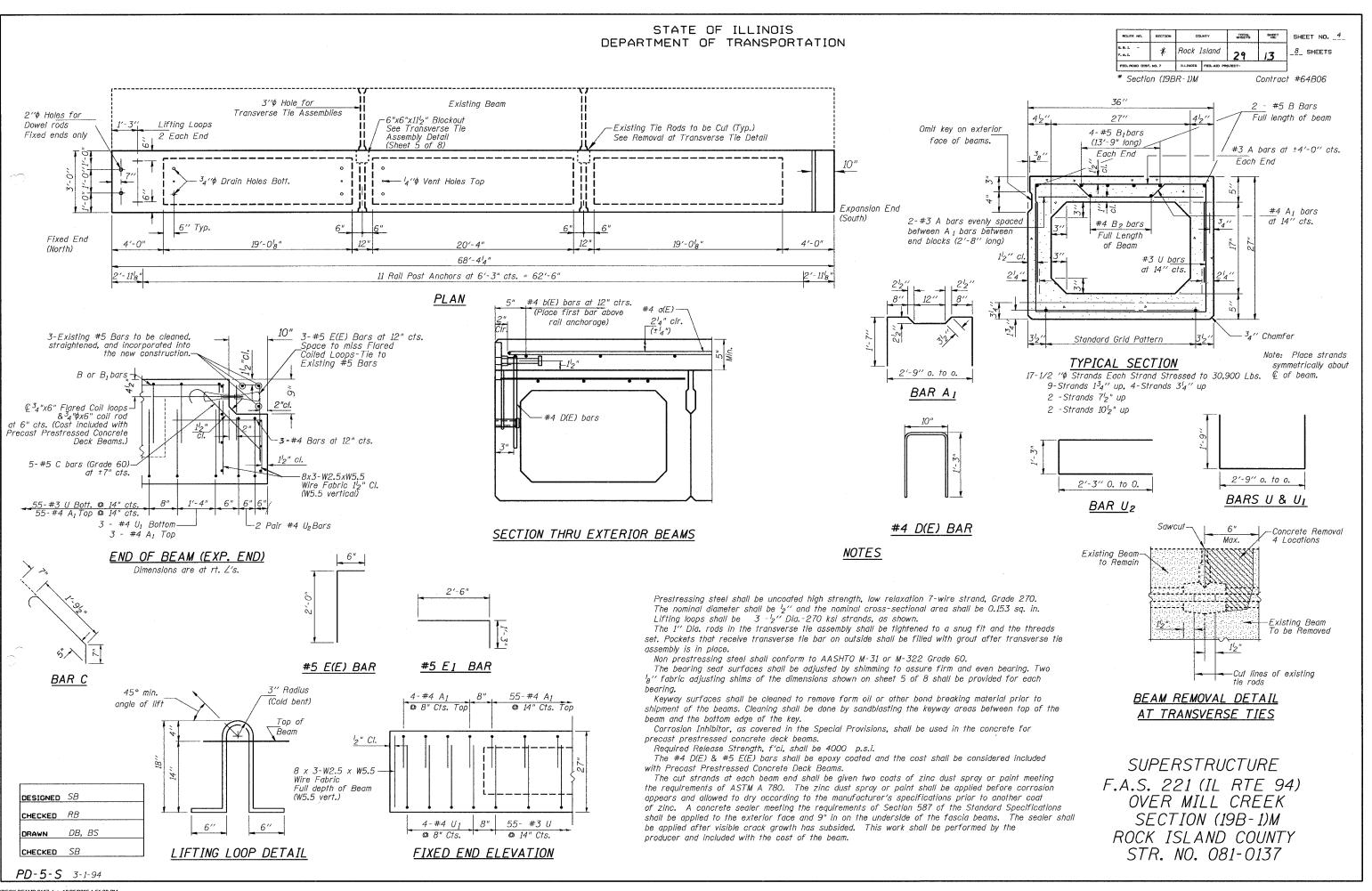


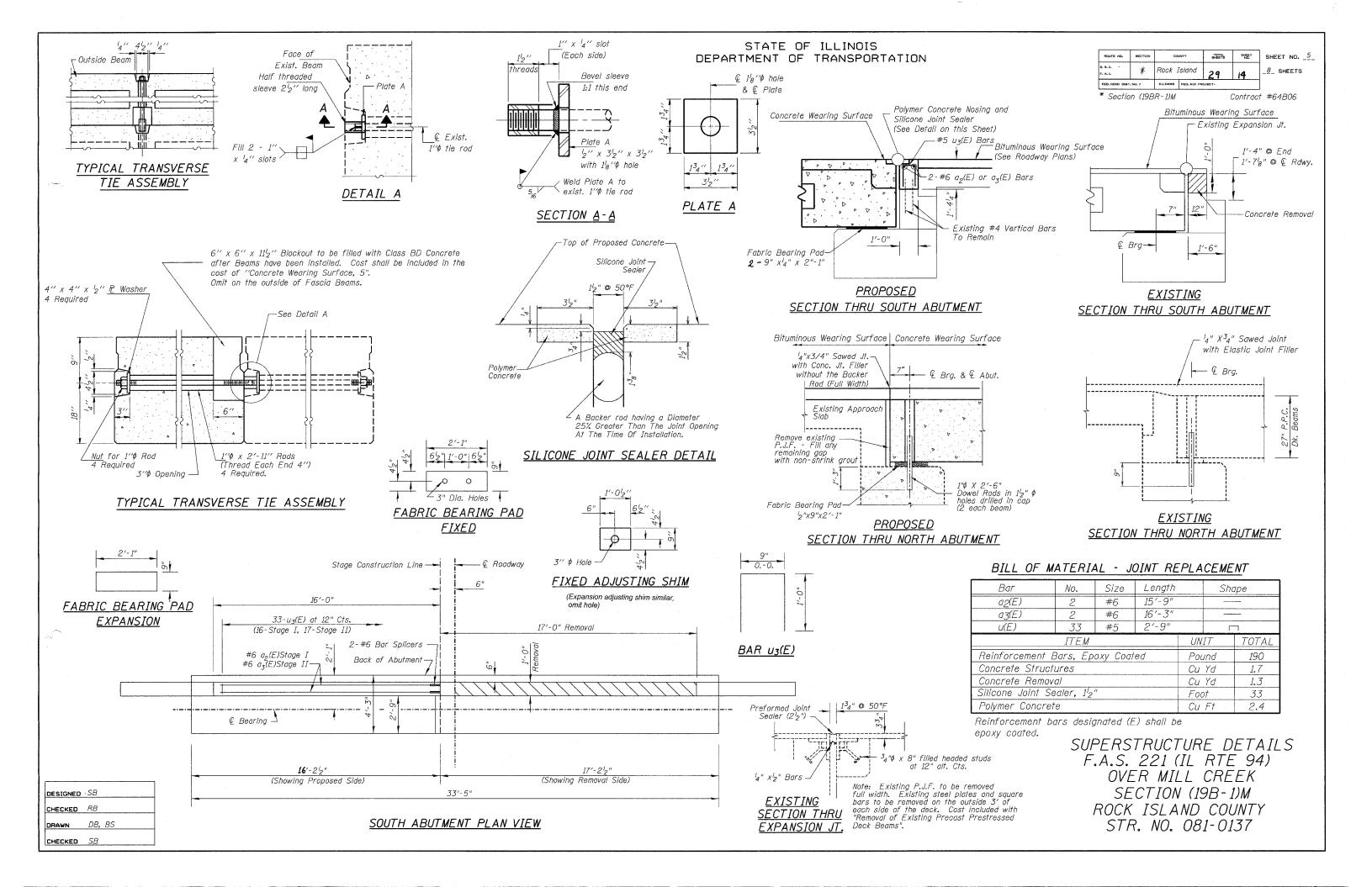
DECK CROSS SECTION - STAGE II

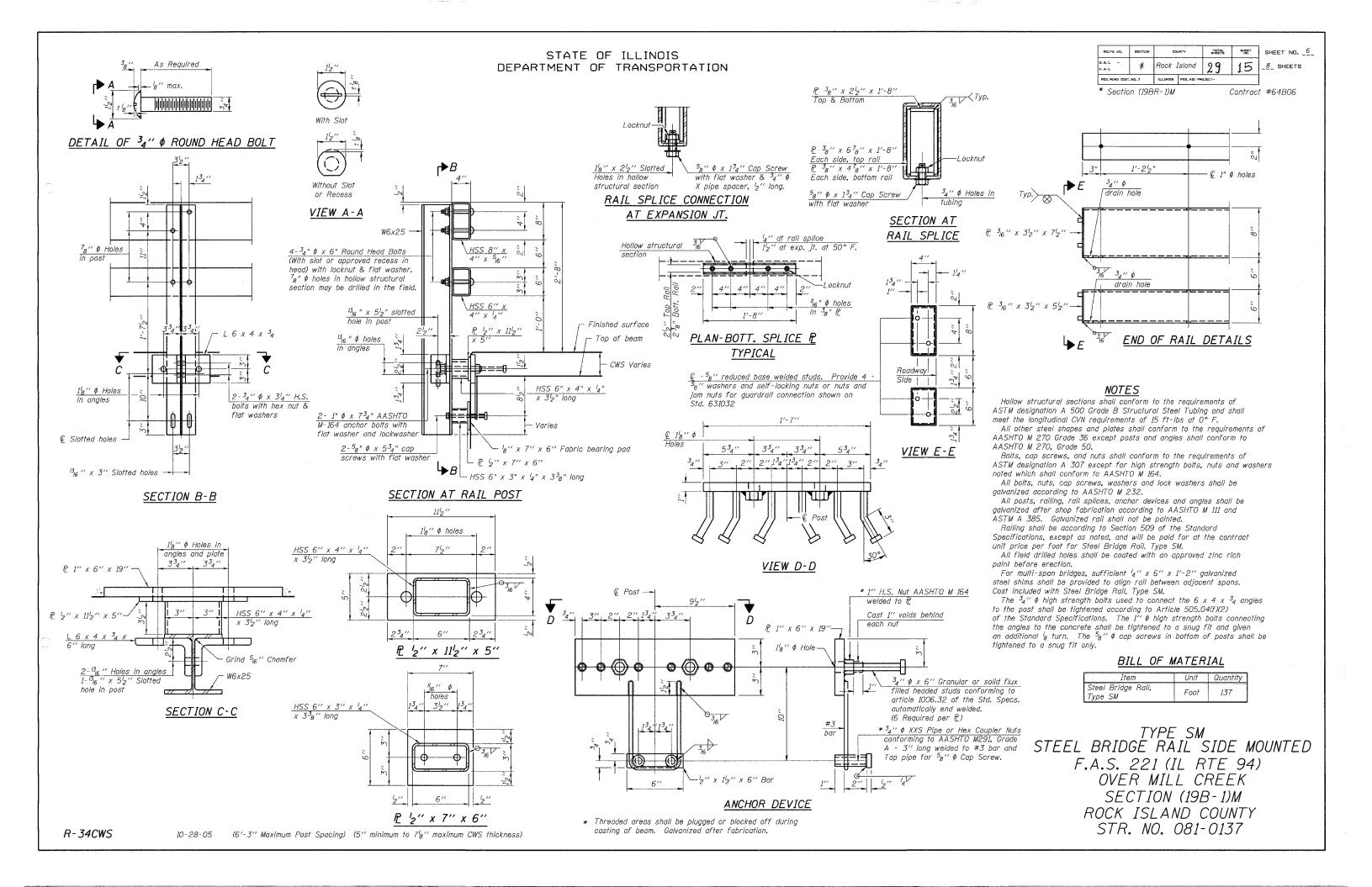
DESIGNED SB CHECKED RB DRAWN BH, BS CHECKED SB

STAGING PLAN F.A.S. 221 (IL RTE 94) OVER MILL CREEK SECTION (19B-1)M ROCK ISLAND COUNTY STR. NO. 081-0137

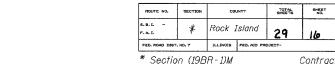








#### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



#### **NOTES**

Contract #64B06

SHEET NO. 7

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

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

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

Minimum Capacity (Tension in kips) = 1.25 x fy x A<sub>t</sub>

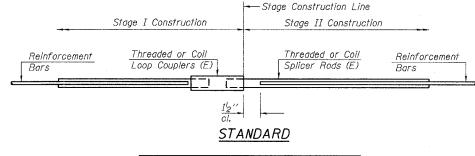
Minimum \*Pull-out Strength = 1.25 x  $fs_{allow}$  x  $A_t$ 

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

fs<sub>allow</sub>= Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)  $A_t$  = Tensile stress area of lapped reinforcement bars. \* = 28 day concrete

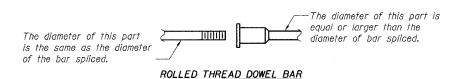
	BAR SPLIC	ER ASSEMBLI	ES
		Strengt	h Requirements
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8''	14.7	5,9
#5	2'-0''	23.0	9.2
#6	2'-7''	33.1	13.3
#7	3′-5″	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5′-9′′	75.0	30.0
#10	7′-3′′	95.0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

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



Bar Size	No. Assemblies Required	Location
#4	69	Deck
#6	2	S. Abut. Backwall

BAR SPLICER ASSEMBLY DETAILS F.A.S. 221 (IL RTE 94) OVER MILL CREEK SECTION (19B-1)M ROCK ISLAND COUNTY STR. NO. 081-0137

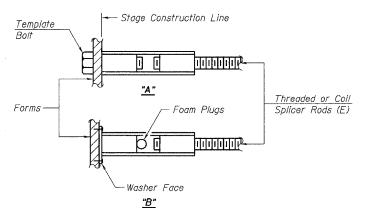


\*\* ONE PIECE

WELDED SECTIONS

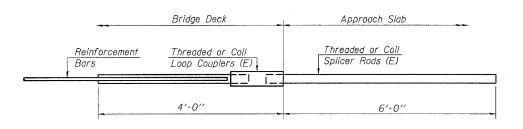
#### BAR SPLICER ASSEMBLY ALTERNATIVES

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



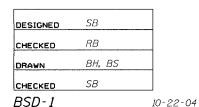
#### INSTALLATION AND SETTING METHODS

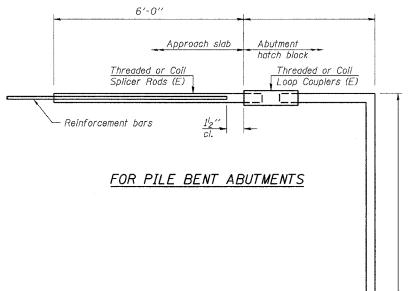
"A": Set bar splicer assembly by means of a template bolt. "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms. (E): Indicates epoxy coating.



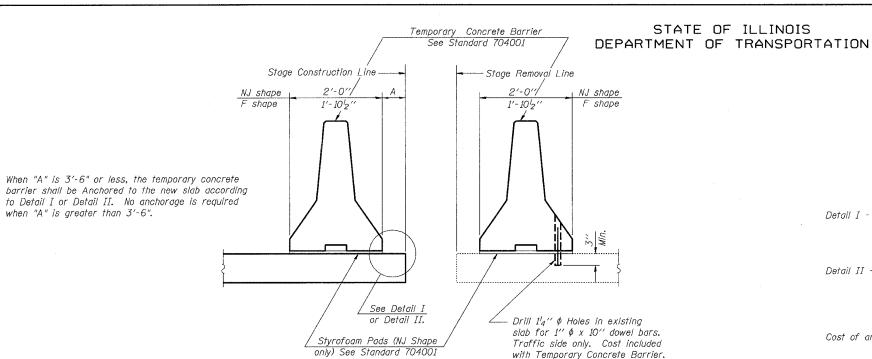
#### FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

	Bar	Splic	er	for	#5	bar		
Min.	Capacity	= 23	3.0 I	kip.	s -	tensi	on	
Min.	Pull-out	Stren	gth	=	9,2	kips	-	tension
No.	Required	=						





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



#### NOTES

Detail I - With Bar Splicer or Couplers: Connect one (1) 1"x7"x10" steel P to the top layer of couplers with 2-58" \$\phi\$ bolts screwed to coupler at approximate & of each barrier panel.

Detail II - With Extended Reinforcement Bars: Connect one (1) 1''x7''x10'' steel  $I^{\rm C}$  to the concrete slab with  $2^{-5}8''$   $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate © of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

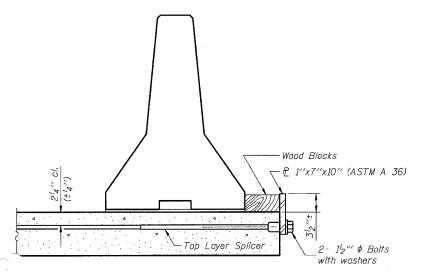
T<u>op bars spacin</u>g Detail I 3'' 3'' Detail II — € .7<sub>8</sub>" ¢ Holes \* @ 1"x12" Notch

#### ₽ 1"x7"x10"

\* Required only with Detail II

#### SECTIONS THRU SLAB

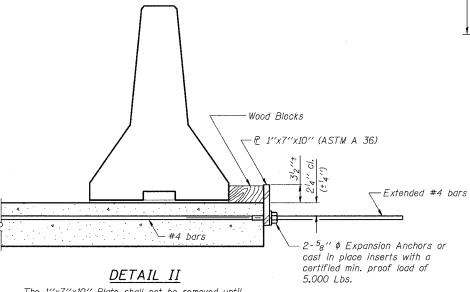
NEW SLAB



#### DETAIL I

when "A" is greater than 3'-6".

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



## The 1"x7"x10" Plate shall not be removed until

EXISTING SLAB

Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

DESIGNED CHECKED DRAWN CHECKED

R-27 10-31-02 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION F.A.S. 221 (IL RTE 94) OVER MILL CREEK SECTION (19B-1)M ROCK ISLAND COUNTY STR. NO. 081-0137

ROUTE NO.

TOTAL SHEETS

Rock Island

PED. ROAD DIST. NO. 7 ILLINGIS FED. AID PROJECT

\* Section (19BR-1)M

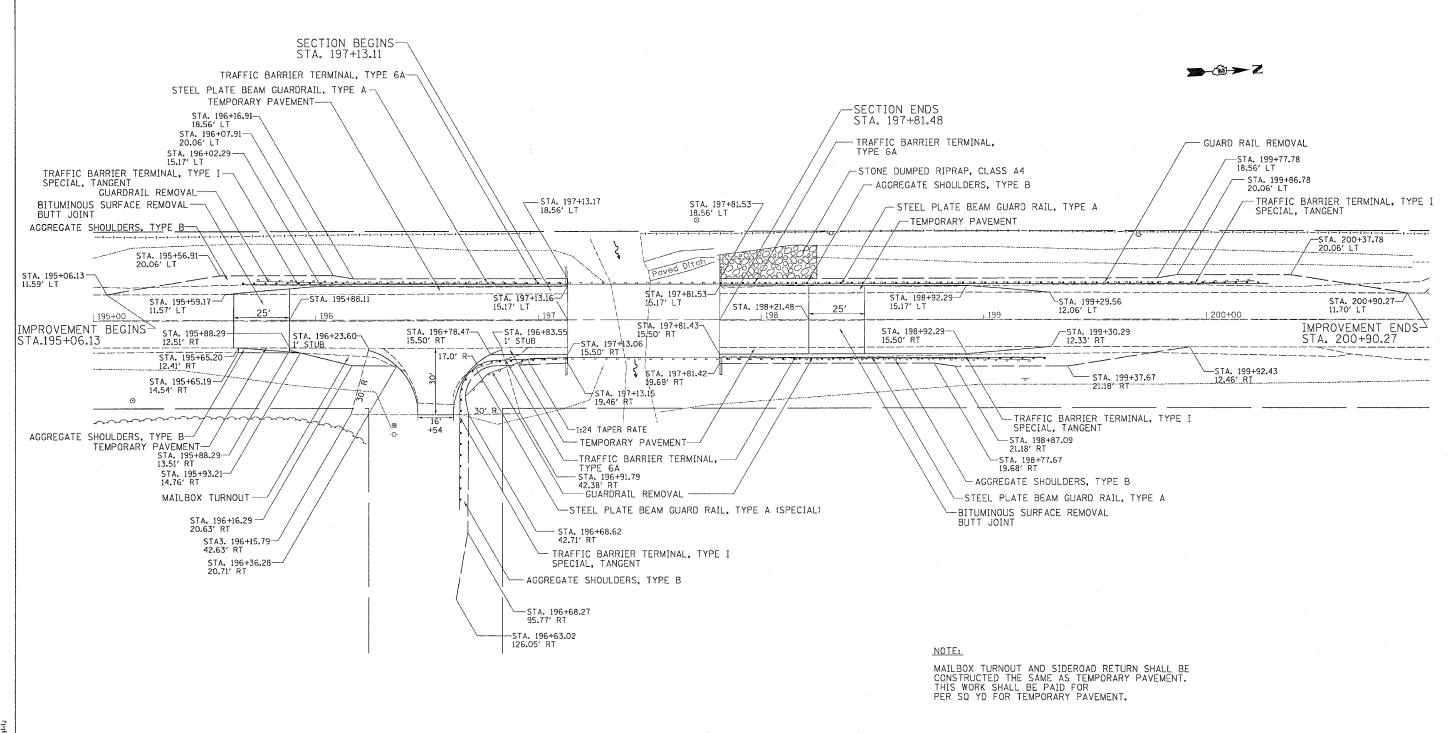
SHEET NO.

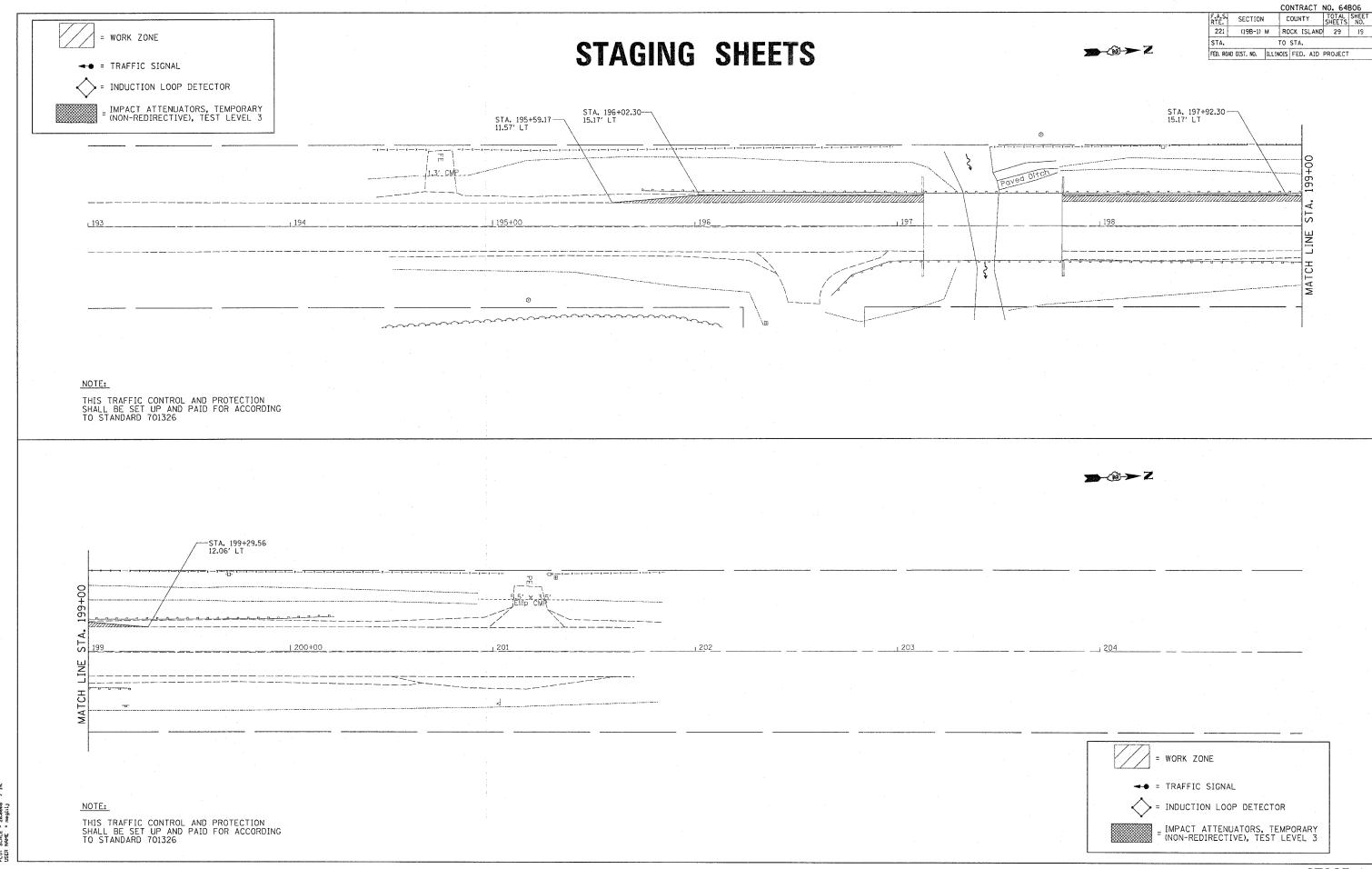
Contract #64B06

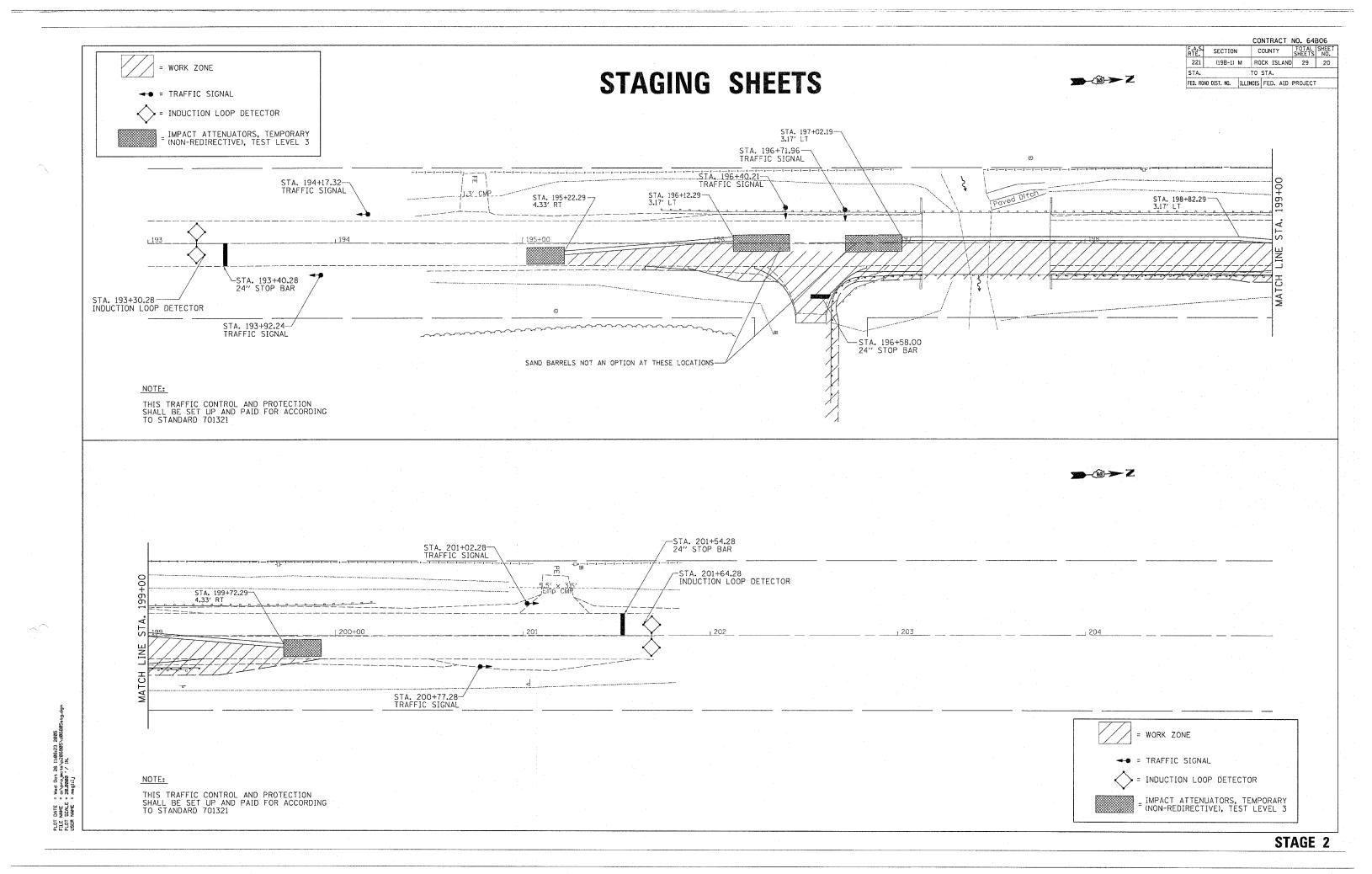
SHEET NO. \_8\_

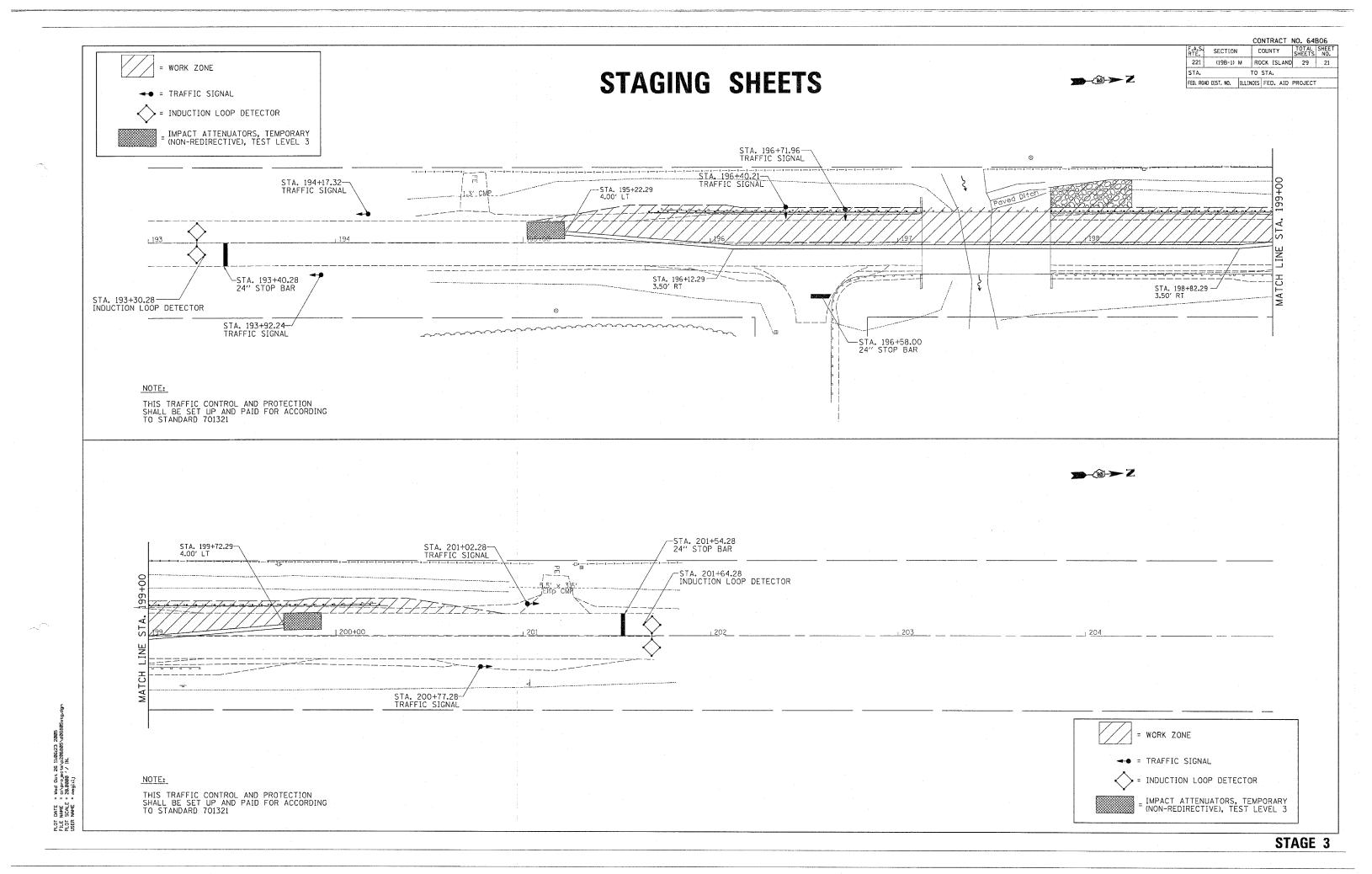
 $\underline{8}$  SHEETS

**PLAN SHEETS** 

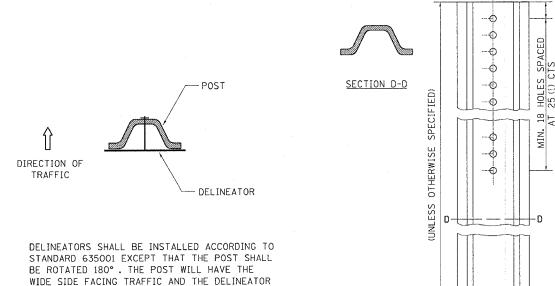








# DELINEATOR AND POST ORIENTATION



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

ATTACHECD AS SHOWN ABOVE.

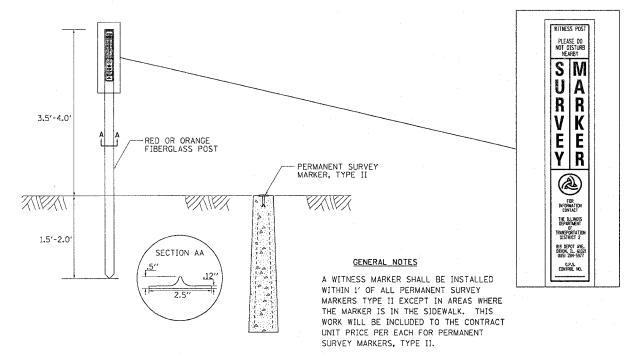
**DELINEATOR AND POST ORIENTATION** 

REVISED 1-31-00

37.4

## WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II

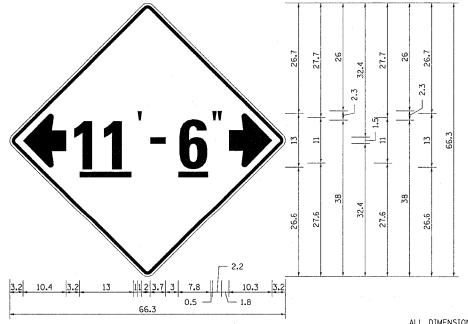




WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II 38

REVISED 1-31-00

# INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



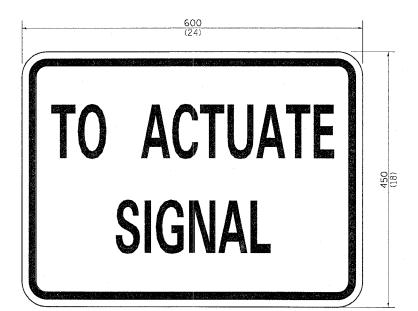
#### NOTES

W12-2 - Horizontal Clearance Sign 48.0" across sides, 1.9" Radius, 0.8" Border, 0.5" Indent, Black on Orange; Standard Arrow Custom 10.4" X 8.1" 180° Black 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

# 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.

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES) 39.4

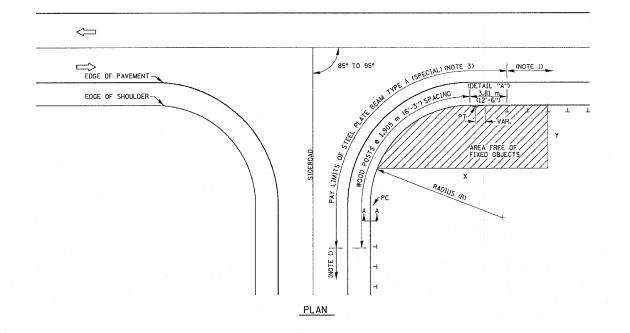
STOP LINE SIGN FOR TEMPORARY SIGNALS

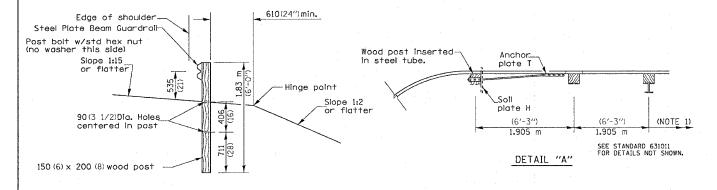
99.4

REVISED 6-29-05

TVICED B 7.00

## STEEL PLATE BEAM GUARD RAIL, TYPE A (SPECIAL)





SECTION A-A

NOTES:

STEEL PLATE BEAM GUARDRAIL TYPE A, TYPE B, OR TRAFFIC BARRIER TERMINAL AS SPECIFIED.

GENERAL NOTES

- 2. FOR THE 2.59 m (8'-6") RADIUS, THE RAIL IS NOT BOLTED TO THE POST LOCATED AT THE MIDPOINT OF THE CURVE.
- 4. BLOCK OUTS SHALL NOT BE USED WITHIN LIMITS OF THIS PAY ITEM.

ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

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

R	NO. OF WOOD POSTS	х	Y
2.59 (8'-6'')	5 (NOTE 2)	7.6 m (251)	<b>4.6</b> (15')
5.18 (17'-0'')	6	9.1 m (30')	<b>4.6</b> (15′)
7.77 (25'~6'')	8	12.2 m (40°)	<b>6.1</b> (20′)
10.67 (35'-0")	11	15.2 m (50′)	6.1 (20')

INSTALLATION CHARACTERISTICS

COUNTY TOTAL SHEET NO. 221 (198-1) M ROCK ISLAND 29 23 STA. TO STA. FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

SECTION

CONTRACT NO. 64B06

STEEL PLATE BEAM GUARD RAIL, TYPE A (SPECIAL)

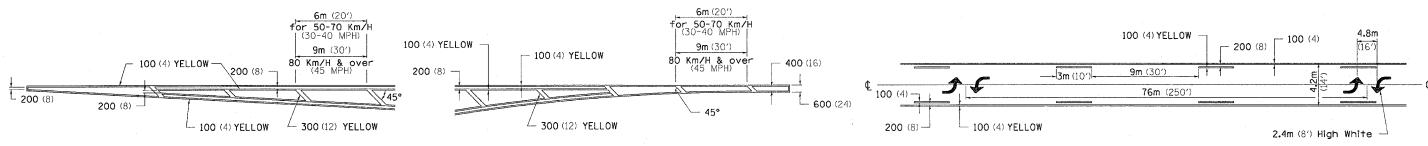
52.2

## TYPICAL PAVEMENT MARKINGS

COUNTY TOTAL SHEET NO. SECTION 221 (19B-1) M (19B-1) M 29 24 TO STA. FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

#### TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN

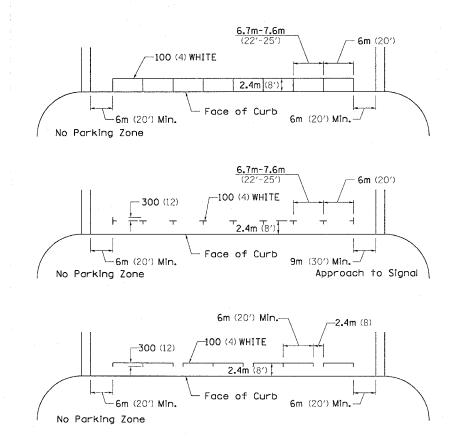
## MEDIAN PAVEMENT MARKING



#### TYPICAL ISLAND OFFSET SHOULDER WIDTH

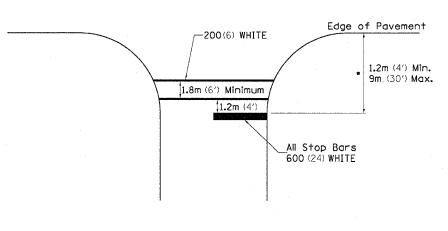
## 600 (24) WHITE -200 (8) WHITE -600 (24) WHITE 200 (8) WHITE \45% 5 Diagonals -300 (12) WHITE

#### 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.

