

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

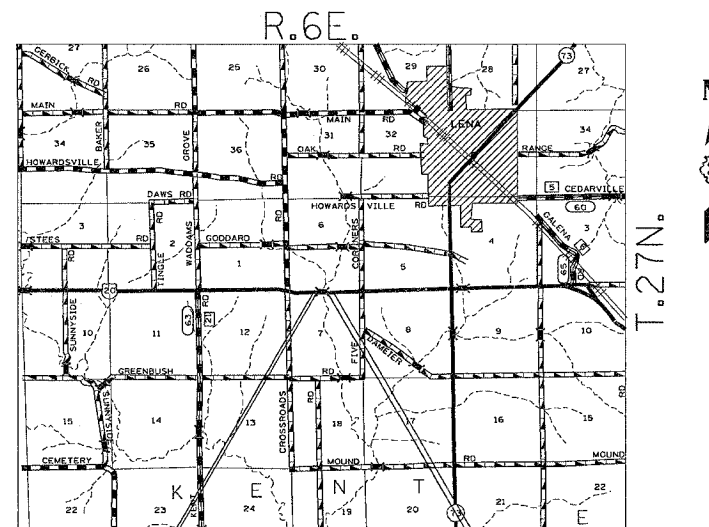
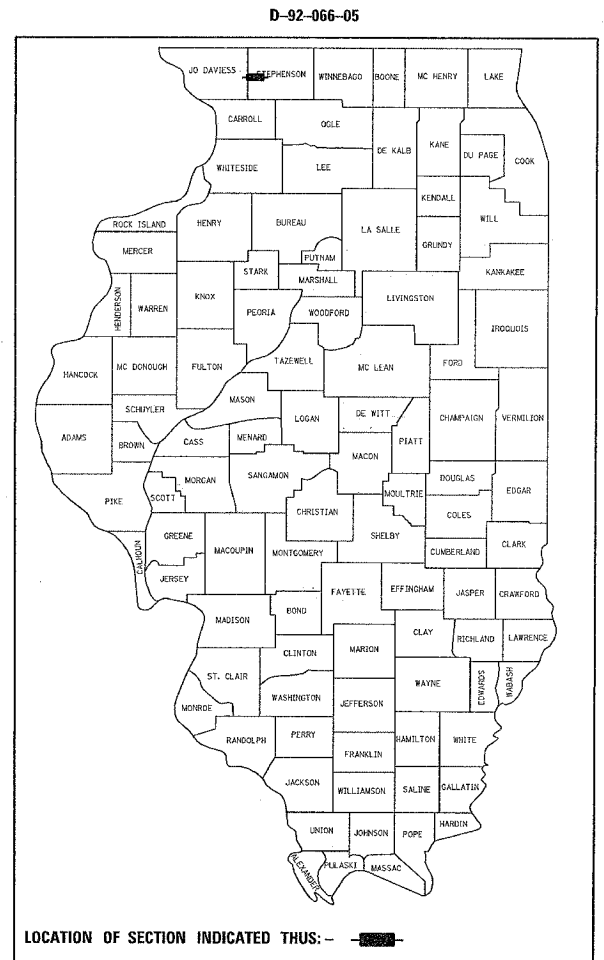
**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 301 (US 20)
SECTION 22BR-1
PROJECT BHF-0301(033)
STEPHENSON COUNTY
C-92-131-05

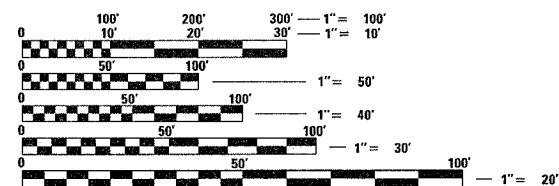
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR STATE STANDARDS, SEE SHEET NO. 2

PROJECT ENGINEER: BOB WAGNER

SQUAD LEADER: SAMEER ABDULLAH
(815) 284-5935



IMPROVEMENT BEGINS STA. 7+73
SECTION BEGINS STA. 10+36
IMPROVEMENT ENDS STA. 14+12
SECTION ENDS STA. 10+68



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

KENT TOWNSHIP,
SECTION 6,7

NET LENGTH OF PROJECT = 32 FEET = 0.006 MILES
GROSS LENGTH OF PROJECT = 32 FEET = 0.006 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED: June 23, 2005
 Gregory R. Mountain
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

July 1, 2005
 Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT

July 1, 2005
 Victor Mader
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

CONTRACT NO. 64B04

FAP ROUTE 301 (US 20) SECTION 22BR-1 STEPHENSON COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	30	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

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STATE STANDARDS

000001 -	04	Standard Symbols, Abbreviations and Patterns
001001		Areas of Reinforcement Bars
001006		Decimal of an Inch and of a Foot
280001 -	02	Temporary Erosion Control Systems
515001 -	02	Name Plate for Bridges
542401		Metal End Section for Pipe Culverts
630001 -	05	Steel Plate Beam Guardrail
630201 -	03	PCC/Bituminous Stabilization at Steel Plate Beam Guardrail
630301 -	03	Shoulder Widening for Type 1 (Special) Guardrail Terminals
631032 -	01	Traffic Barrier Terminal, Type 6A
635001		Delineators
635006 -	02	Reflector and Terminal Marker Placement
635011 -	01	Reflector Marker and Mounting Details
667101		Permanent Survey Markers
701006 -	02	Typical Application of Traffic Control Standard
701011 -	01	Typical Application of Traffic Control Standard
701201 -	02	Typical Application of Traffic Control Standard
701301 -	02	Typical Application of Traffic Control Standard
702001 -	05	Traffic Control Devices
704001 -	02	Temporary Concrete Barrier
720011		Metal Posts for Signs, Markers and Delineators
729001		Applications of Types A and B Metal Posts (For Signs & Markers)
780001 -	01	Typical Pavement Markings
781001 -	02	Typical Applications Raised Reflective Pavement Markers

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

F.A. P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	30	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	X080-2A 80% FED/ 20% STATE	SFTY-3N 80% FED/ 20% STATE
20400800	FURNISHED EXCAVATION	CU YD	338	338	
25000750	MOWING	ACRE	0.2	0.2	
25100630	EROSION CONTROL BLANKET	SQ YD	911	911	
28000400	PERIMETER EROSION BARRIER	FOOT	559	559	
28000500	INLET AND PIPE PROTECTION	EACH	1	1	
35101400	AGGREGATE BASE COURSE, TYPE B	TON	18	18	
20200100	EARTH EXCAVATION	CU YD	89	89	
40800040	INCIDENTAL BITUMINOUS SURFACING	TON	5	5	
44000007	BITUMINOUS SURFACE REMOVAL 2"	SQ YD	114	114	
44200108	PAVEMENT PATCHING, TYPE II, 9 INCH	SQ YD	210	210	
44200112	PAVEMENT PATCHING, TYPE III, 9 INCH	SQ YD	209	209	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	98	98	
48201400	BITUMINOUS SHOULDERS SUPERPAVE 6"	SQ YD	791	791	
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1	
50300260	BRIDGE DECK GROOVING	SQ YD	114	114	
50301200	CONCRETE WEARING SURFACE	SQ YD	115	115	
50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	45	45	
50301250	FORMED CONCRETE REPAIR (DEPTH GREATER THAN 5 INCHES)	SQ FT	12	12	
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1084	1084	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1400	1400	
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	146	146	
51500100	NAME PLATES	EACH	1	1	
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	56	56	
54213450	END SECTION 15"	EACH	2	2	

* SPECIALITY ITEMS

⓪NON-PARTICIPATING

SUMMARY OF QUANTITIES

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	30	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	X080-2A 80% FED/ 20% STATE	SFTY-3N 80% FED/ 20% STATE
* 63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	325	325	
* 63000005	STEEL PLATE BEAM GUARDRAIL, TYPE B	FOOT	100	100	
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4	
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	2	2	
63100169	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	EACH	2	2	
63200310	GUARDRAIL REMOVAL	FOOT	348	348	
63500105	DELINEATORS	EACH	4	4	
66700350	PERMENANT SURVEY MARKERS, TYPE II	EACH	2	2	
67000400	ENGINEERS FIELD OFFICE, TYPE A	CAL MO	3	3	
67100100	MOBILIZATION	L SUM	1	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	560	560	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	329	329	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	1	1	
* 78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	1	1	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	16	16	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
X4066414	BITUMINOUS ^{CONCRETE} SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	794	794	
X7013015	TRAFFIC CONTROL FOR ROAD CLOSURE	L SUM	1	1	
X4066426	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70	TON	14	14	
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4		4
* SPECIALITY ITEMS					

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GENERAL NOTES

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 301 (US 20)	22BR-1	Stephenson	32	5
FED ROAD DIST. NO.	ILLINOIS	PROJECT		
Contract #64B04				

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.

It is estimated that 258 cubic meters (338 cubic yards) of earth will be hauled to the job from outside the project limits. A shrinkage factor of 25% has been used.

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 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.

Previously pugmilled stockpiles of "Type A" older than 1 month will not be approved for use until a moisture check is run to verify moisture content. Material shipped to projects without being tested will not be accepted.

The existing bituminous surface on private and commercial entrances shall be bladed off or milled and disposed of outside the project limits. The cost of the blading, milling, rolling, and disposal is included in the contract unit price for INCIDENTAL BITUMINOUS SURFACING.

The following Mixture Requirements are applicable for this project:

Mixture Uses(s):	Main Line Surface Course	Detour Resurfacing & Top Shoulder	Bottom Shoulder
PG:	PG 64-22	PG 58-22	PG 58-22
RAP%: (Max)	10%	30%	30%
Design Air Voids	4.2 @ N70	3 @ N50	2 @ N50
Mixture Composition (Gradation Mixture)	IL 9.5 or 12.5	IL 9.5 or 12.5	BAM
Friction Aggregate	D	C	N/A
20 Year ESAL	6.0	N/A	N/A

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 BITUMINOUS SURFACE COURSE, SUPERPAVE, MIX "C", N50.

This structure will retain the same number 089-0002.

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)

At bridge expansion joints, if temporary expansion joint bulkheads are attached to adjacent deck slabs or abutments for support, the Contractor shall cut the attachments as soon as the concrete has set to prevent joint damage due to horizontal contraction or expansion.

The proposed pipes for entrances and side roads shall be placed in line with the existing or proposed ditch line.

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 (Tangent) or Steel Plate Beam Guardrail Terminal Type I 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. All words, such as ONLY, shall be 2.4 m (8 feet) high.
2. All non-freeway arrows shall be the large size.
3. 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.

GENERAL NOTES

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 301 (US 20)	22BR-1	Stephenson	32	6
FED ROAD DIST. NO.	ILLINOIS	PROJECT		
Contract #64B04				

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:

Mediacom
Verizon

Commonwealth Edison Co.
NICOR Gas Co.

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), once right-of-way is clear to award the project, 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 ONLY. 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.

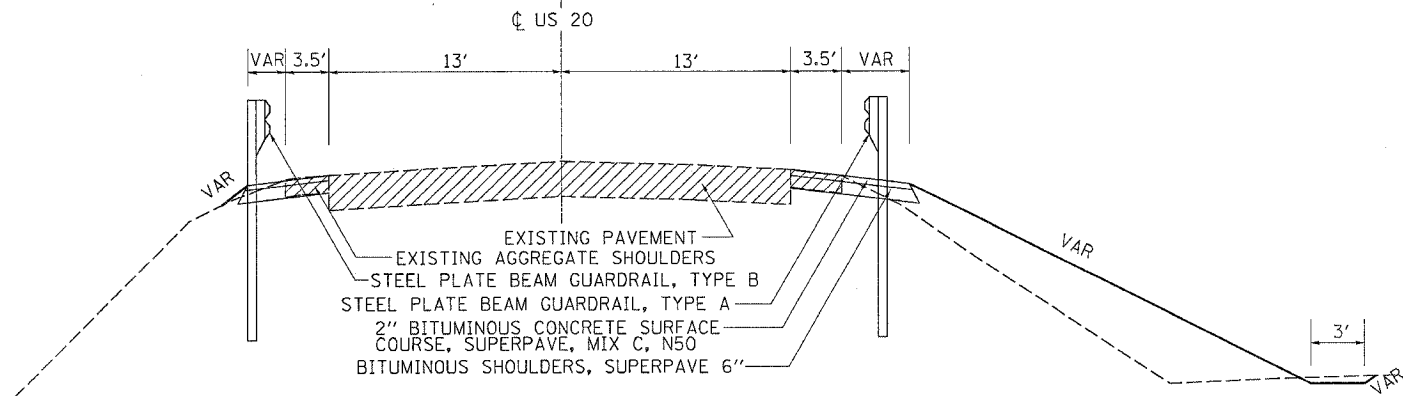
A quantity for Bituminous Surface Course, Superpave, Mix "C", N50, Aggregate Shoulders, Type B, and Pavement Patching has been included in the plans in the case that roadway repairs are needed for "Good Neighbor Policy" and shall be used as directed by the engineer.

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

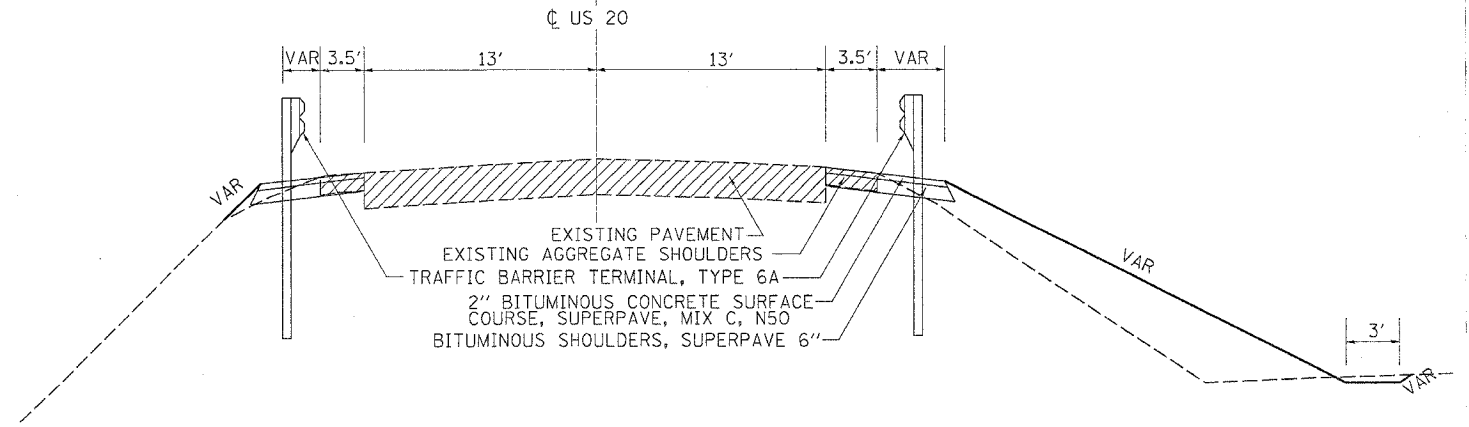
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	30	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TYPICAL SECTIONS

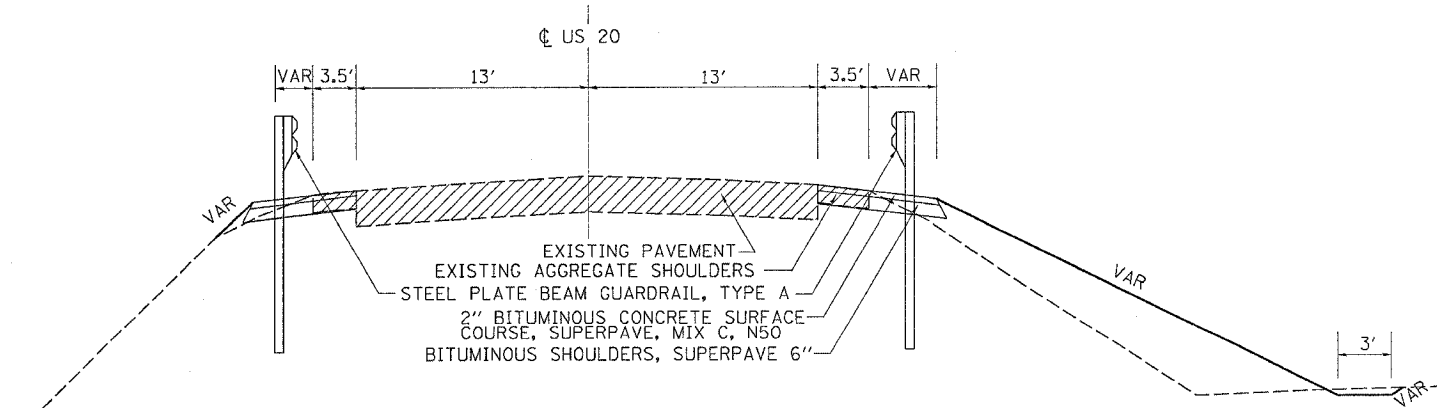
US 20
STA 8+19 TO STA 9+83



US 20
STA 9+83 TO STA 10+16
STA 10+87 TO STA 11+20

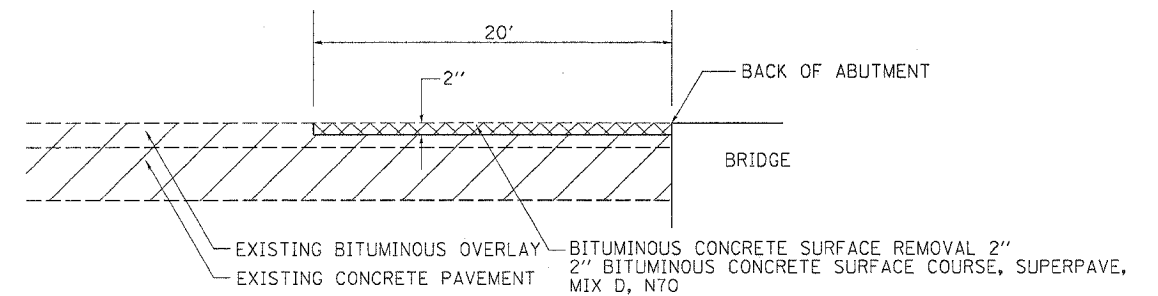


US 20
STA 11+20 TO STA 14+12



BITUMINOUS SURFACE REMOVAL - BUTT JOINT

STA 9+96 TO STA 10+16
STA 10+87 TO STA 11+07



• BITUMINOUS SURFACE COURSES CALCULATED AT 112 LB/SY/IN

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

20200100 EARTH EXCAVATION

CU YD	LOCATION			
49.00	US 20	8+19	-	10+16
40.00	LT&RT	10+87	-	14+12
89	TOTAL			

20400800 FURNISHED EXCAVATION

CU YD	LOCATION			
60.20	US 20	8+19	-	10+05
277.80	LT&RT	10+87	-	14+00
338.00	TOTAL			

25100630 EROSION CONTROL BLANKET

SQ YD	LOCATION			
360	US 20	8+00	-	10+16.54
551	LT&RT	10+86.58	-	14+00
911	TOTAL			

28000400 PERIMETER EROSION BARRIER

FOOT	LOCATION			
134	US 20	8+82	-	10+16
83	LT	9+33	-	10+16
196	RT	10+87	-	12+83
146	LT	10+87	-	12+33
559	TOTAL			

28000500 INLET AND PIPE PROTECTION

EACH	LOCATION			
1	US 20	7+72		
1	LT			
1	TOTAL			

35101400 AGGREGATE BASE COURSE, TYPE B

TON	LOCATION			
18	US 20	8+05		
18	LT			
18	TOTAL			

40800040 INCIDENTAL BITUMINOUS SURFACING

TON	LOCATION			
5.00	US 20	8+05		
5	LT			
5	TOTAL			

44000007 BITUMINOUS SURFACE REMOVAL 2"

SQ YD	LOCATION			
57	US 20	9+96	-	10+16
57	LT&RT	10+87	-	11+07
114	TOTAL			

44200108 PAVEMENT PATCHING, TYPE II, 9 INCH

SQ YD	LOCATION			
210.00	GOOD NEIGHBOR POLICY			
210.00	TO BE DETERMINED BY ENGINEER			
210.00	TOTAL			

44200112 PAVEMENT PATCHING, TYPE III, 9 INCH

SQ YD	LOCATION			
209.00	GOOD NEIGHBOR POLICY			
209.00	TO BE DETERMINED BY ENGINEER			
209.00	TOTAL			

48101200 AGGREGATE SHOULDERS, TYPE B

TONS	LOCATION			
98.00	GOOD NEIGHBOR POLICY			
98.00	TO BE DETERMINED BY ENGINEER			
98.00	TOTAL			

48200400 BITUMINOUS SHOULDERS SUPERPAVE 6"

SQ YD	LOCATION			
100	US 20	8+19	-	10+16
161	LT	8+63	-	10+16
306	RT	10+87	-	14+12
224	LT	10+87	-	13+18
791	TOTAL			

54200220 PIPE CULVERTS, CLASS D, TYPE 1, 15"

FOOT	LOCATION			
56.00	US 20	7+73	-	8+28
56	LT&RT			
56	TOTAL			

54213450 END SECTION 15"

EACH	LOCATION			
1.00	US 20	7+73		
1.00	LT	8+28		
2	TOTAL			

63000000 STEEL PLATE BEAM GUARDRAIL, TYPE A

FOOT	LOCATION			
50	US 20	9+33	-	9+83
162.5	RT	11+20	-	12+82.5
112.5	LT	11+20	-	12+32.5
325	TOTAL			

63000005 STEEL PLATE BEAM GUARDRAIL, TYPE B

FOOT	LOCATION			
100	US 20	8+82	-	9+82
100	LT			
100	TOTAL			

63100087 TRAFFIC BARRIER TERMINAL, TYPE 6A

EACH	LOCATION			
1	US 20	9+83	-	10+16
1	LT	9+83	-	10+16
1	RT	10+87	-	11+20
1	LT	10+87	-	11+20
4	TOTAL			

63100167 TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)

EACH	LOCATION			
1	US 20	8+19	-	8+83
1	RT	12+83	-	14+12
2	TOTAL			

63100169 TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)

EACH	LOCATION			
1	US 20	8+63	-	9+33
1	LT	12+33	-	13+18
2	TOTAL			

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301	22BR-1	STEPHENSON	32	9
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

63200310 GUARDRAIL REMOVAL

EQOI	LOCATION			
87	US 20			
87	LT	9+30	-	10+16
87	RT	9+30	-	10+16
87	LT	10+87	-	11+74
87	RT	10+87	-	11+74
<u>348</u>	TOTAL			

63500105 DELINEATORS

EACH	LOCATION			
	US 20			
1	LT	8+33		
1	RT	8+83		
1	LT	12+83		
1	RT	13+33		
<u>4</u>	TOTAL			

70400100 TEMPORARY CONCRETE BARRIER

EQOI	LOCATION			
	US 20			
240	RT	9+13	-	11+53
320	LT	9+48	-	12+68
<u>560</u>	TOTAL			

78001110 PAINT PAVEMENT MARKING - LINE 4" (TWO COATS)

EQOI	LOCATION			
	US 20			
37	STA.	10+15	-	10+88 (YELLOW SKIP DASH)
292	LT&RT	10+15	-	10+88 (WHITE EDGE LINE)
<u>329</u>	TOTAL			

78100100 RAISED REFLECTIVE PAVEMENT MARKER

EACH	LOCATION			
	US 20			
1	STA.			
<u>1</u>	TOTAL			

78300200 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

EACH	LOCATION			
	US 20			
1	STA.			
<u>1</u>	TOTAL			

78200410 GUARDRAIL MARKERS, TYPE A

EACH	LOCATION			
	US 20			
4	LT	8+82	-	9+82
4	RT	9+33	-	9+83
4	LT	11+20	-	12+82.5
4	RT	11+20	-	12+32.5
<u>16</u>	TOTAL			

78201000 TERMINAL MARKER - DIRECT APPLIED

EACH	LOCATION			
	US 20			
1	LT	8+33		
1	RT	8+83		
1	LT	12+83		
1	RT	13+33		
<u>4</u>	TOTAL			

X4066414 BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX "C" N50

TON	LOCATION			
	US 20			
12	LT	8+19	-	10+16
18	RT	8+63	-	10+16
34	LT	10+87	-	14+12
25	RT	10+87	-	13+18
<u>705</u>	TOTAL			
794	TOTAL			

GOOD NEIGHBOR POLICY
TO BE DETERMINED BY ENGINEER

XX005322 BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX D, N70

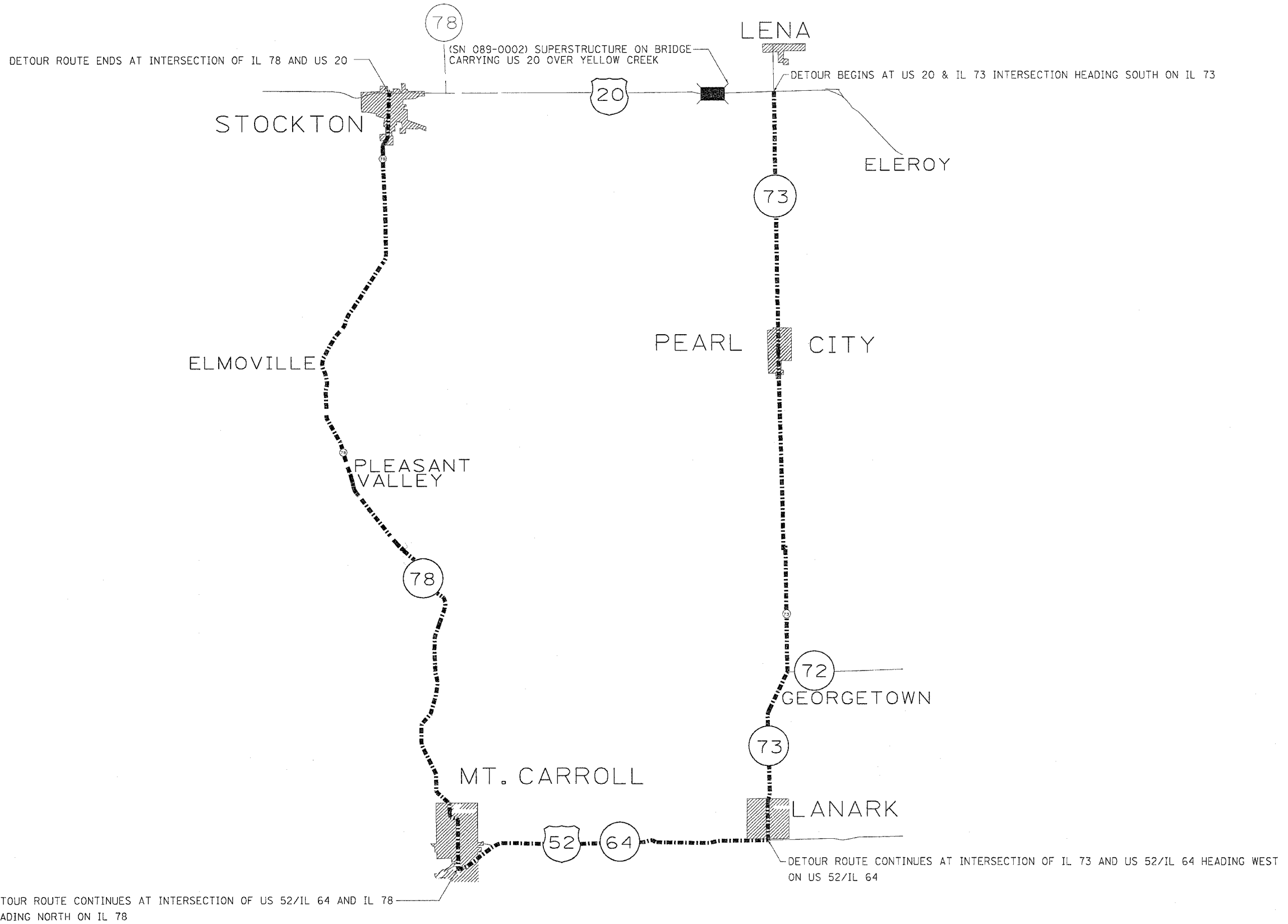
TON	LOCATION			
	US 20			
7	LT&RT	9+96	-	10+16
7	LT&RT	10+87	-	11+07
<u>14</u>	TOTAL			

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

EACH	LOCATION			
	US 20			
1	RT	9+13		
1	LT	9+48		
1	RT	11+53		
1	LT	12+68		
<u>4</u>	TOTAL			

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	10
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

DETOUR ROUTE DETAIL

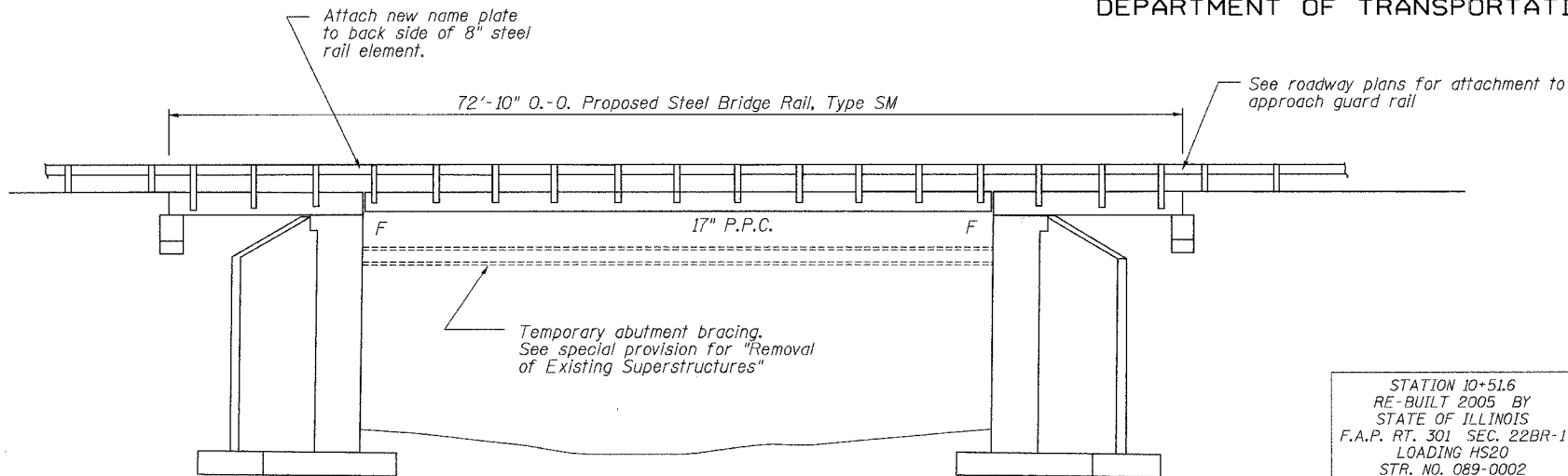


PLOT DATE * Wed Jul 26 10:52:58 2006
 FILE NAME * c:\p\m\22BR-1\22BR-1.dgn
 PLOT SCALE * 60/2000' / IN.
 USER NAME * mgghj

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301	*	Stephenson	x	1
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	SHEETS
				5

* Section 22 BR-1 Contract #64B04

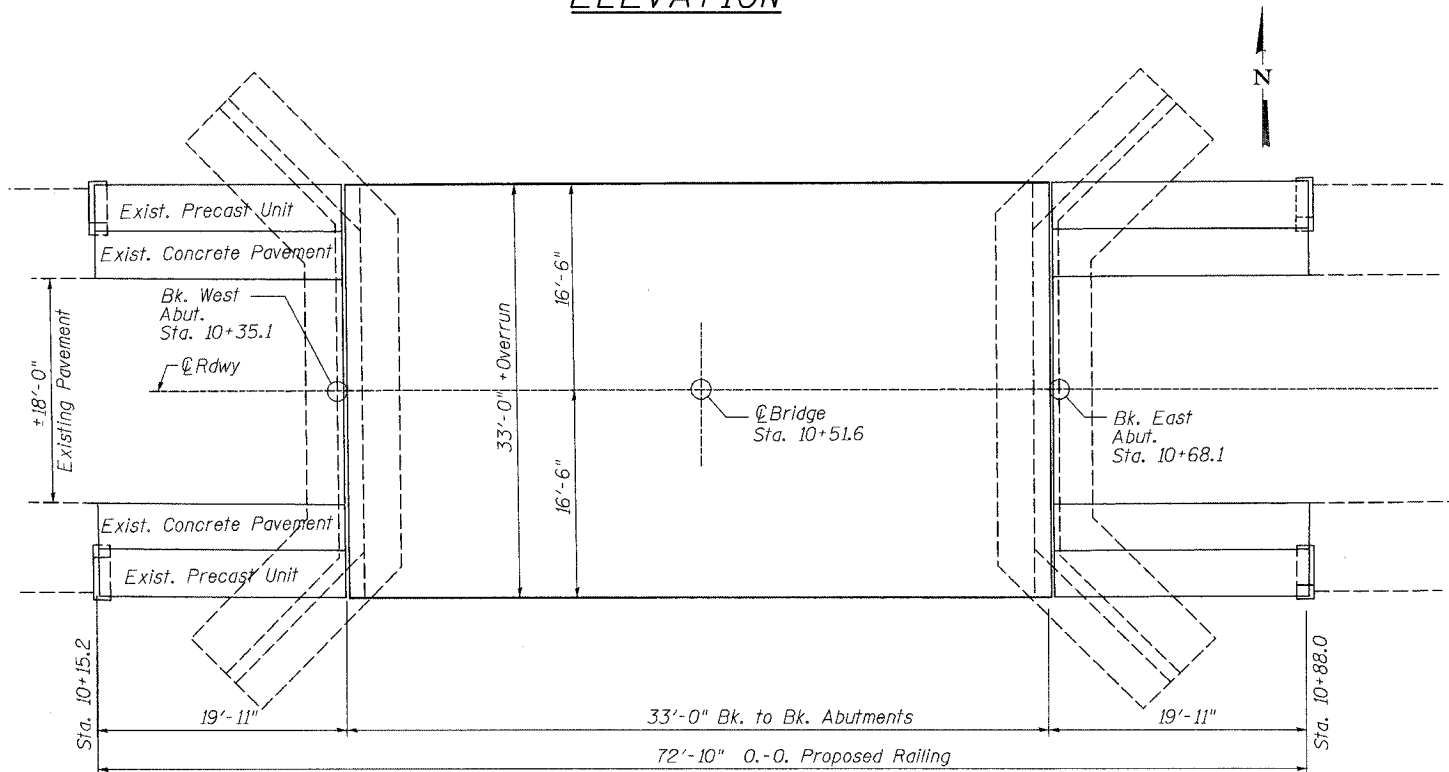


ELEVATION

STATION 10+51.6
RE-BUILT 2005 BY
STATE OF ILLINOIS
F.A.P. RT. 301 SEC. 22BR-1
LOADING HS20
STR. NO. 089-0002

LETTERING FOR NAME PLATE

SEE STD. 515001



PLAN

WENDLER ENGINEERING SERVICES, INC.
Illinois Professional Design
Firm No. 184-000848
Bridge plan sheets
1 thru 5 Only

SCOTT A. BROWN
081-005981
STATE OF ILLINOIS

Scott A. Brown
DATE

SCOTT A. BROWN
DIXON, ILLINOIS
ILLINOIS LICENSED STRUCTURAL
ENGINEER NO. 081-005981
EXPIRES 11-30-2006

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 (17").

The exposed strands at each deck beam end shall be given two coats of zinc dust spray or paint according to the manufacturer's specifications and meeting the requirements of ASTM A780. Cost included with PPC Deck Beams (17").

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 of the superstructure.

The contractor is advised that due to the lack of vertical reinforcement in the back of the abutment walls a temporary bracing system must be provided prior to the removal of the existing PPC deck beams in order to ensure stability of the abutments. The details must be submitted to the Engineer for his approval. Cost to be included with Removal of Existing Superstructures. (See Special Provisions)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Superstructures	Each	1
Bridge Deck Grooving	Sq Yd	114
Concrete Wearing Surface	Sq Yd	115
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1084
Reinforcement Bars, Epoxy Coated	Pound	1400
Steel Bridge Rail, Type SM	Foot	146
Formed Concrete Repair (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	45
Formed Concrete Repair (Depth Greater Than 5 Inches)	Sq. Ft.	12
Name Plates	Each	1

LOADING HS20-44 (New Construction)

NO ALLOWANCE FOR FUTURE WEARING SURFACE

DESIGN SPECIFICATIONS (New Construction)

2002 AASHTO

DESIGN STRESSES

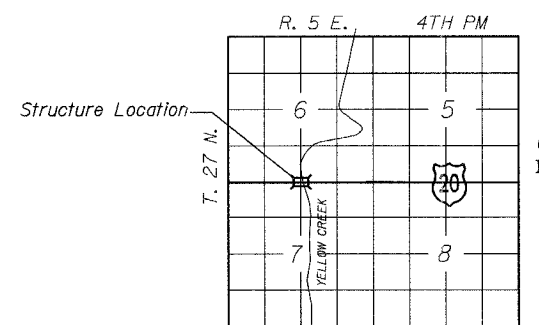
FIELD UNITS

$f'_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i. (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ 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	DB, BS
CHECKED	SB



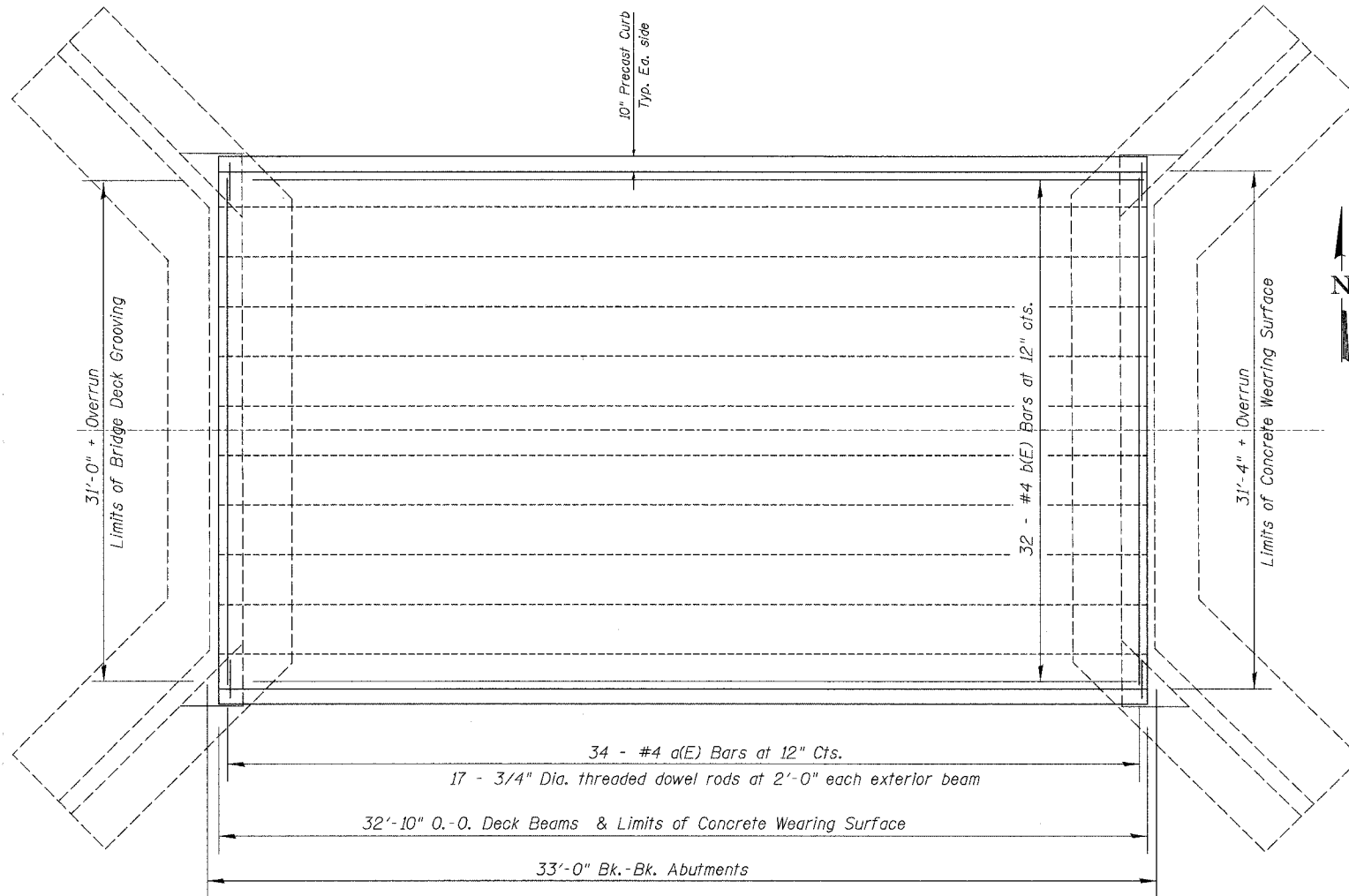
LOCATION SKETCH

GENERAL PLAN AND ELEVATION
F.A.P. 301 (U.S. 20)
OVER YELLOW CREEK
SECTION 22BR-1
STEPHENS ON COUNTY
STR. NO. 089-0002

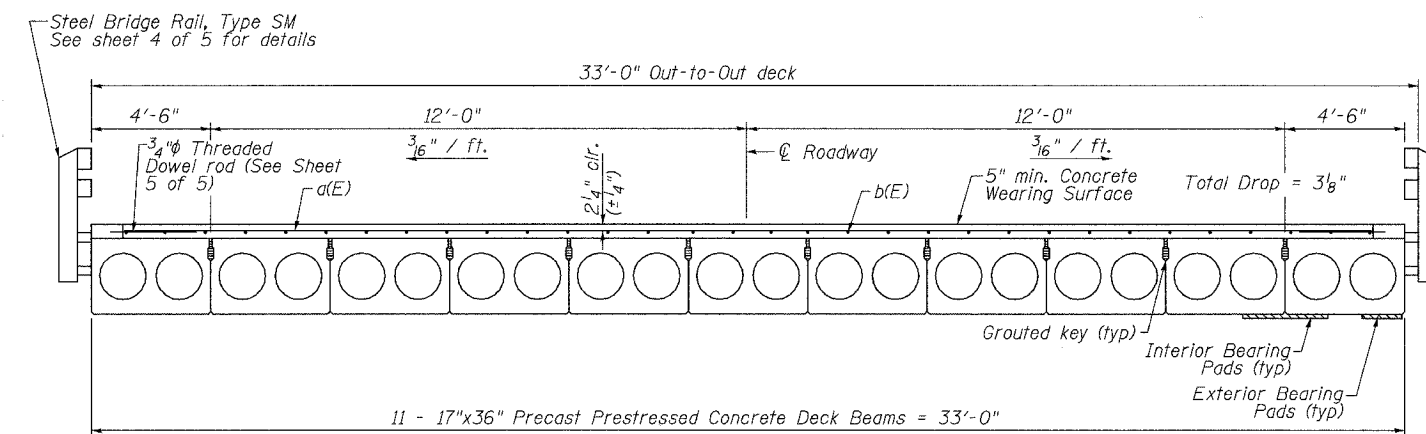
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
F.A.P. 301	*	Stephenson	x	#12	5 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

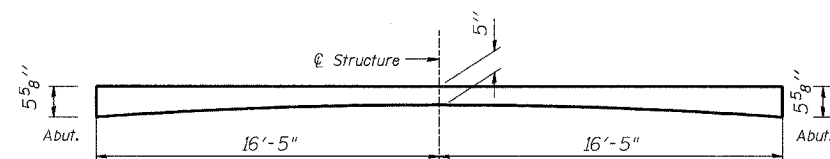
* Section 22 BR-1 Contract #64B04



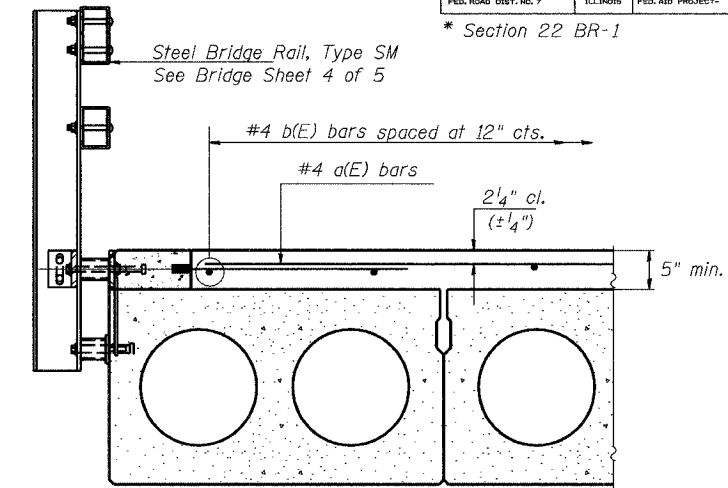
DECK PLAN



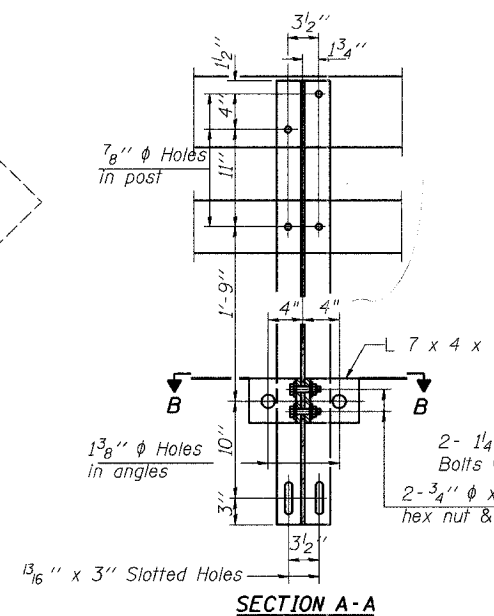
CROSS SECTION



SECTION THRU WEARING SURFACE



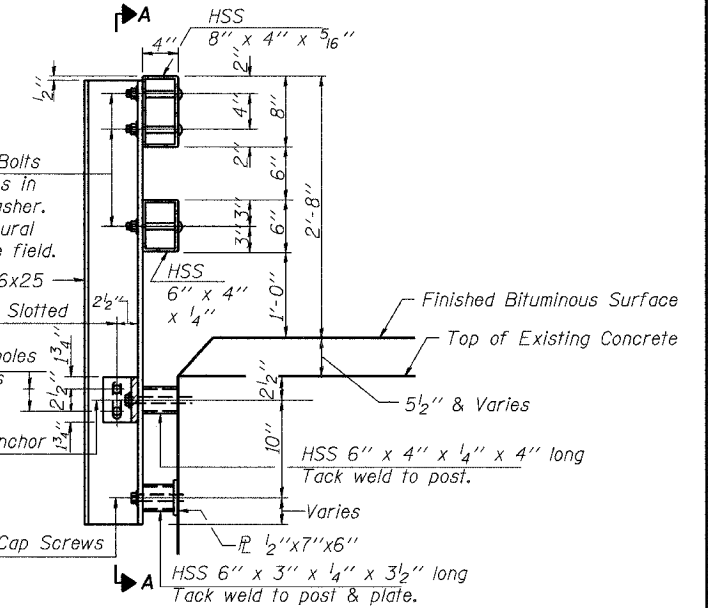
SECTION THRU
DECK EDGE - MAIN SPAN



SECTION A-A

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

W6x25
1 3/16" x 5 1/2" Slotted Hole in post
1 3/16" phi holes in angles
2 - 1 1/4" phi x 7 3/4" AASHTO M 164 Anchor Bolts with flat washer & lockwasher.
2 - 3/4" phi x 3 1/4" H.S. Bolts with hex nut & flat washers



SECTION THRU
EDGE - APPROACH SPAN

See Bridge Sheet 5 of 5 for Existing Anchor Details

BILL OF MATERIAL - SUPERSTRUCTURE

Bar	Size	Length	Shape
a(E)	#4	31'-0"	---
b(E)	#4	32'-6"	---
ITEM	UNIT	TOTAL	
Removal of Existing Superstructures	Each	1	
Bridge Deck Grooving	Sq Yd	114	
Concrete Wearing Surface	Sq Yd	115	

Reinforcement bars designated (E) shall be epoxy coated.

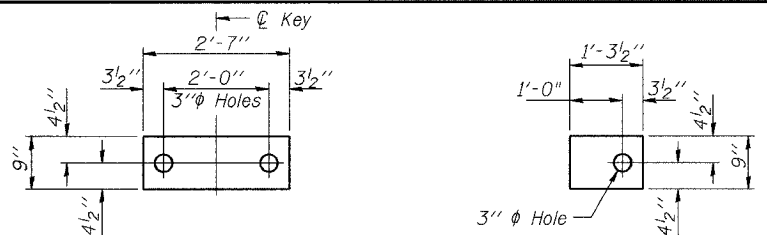
DECK OVERLAY DETAILS
F.A.P. 301 (U.S. 20)
OVER YELLOW CREEK
SECTION 22BR-1
STEPHENSON COUNTY
STR. NO. 089-0002

DESIGNED	SB
CHECKED	RB
DRAWN	DB, BS
CHECKED	SB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
F.A.P. 301	*	Stephenson	X	5 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

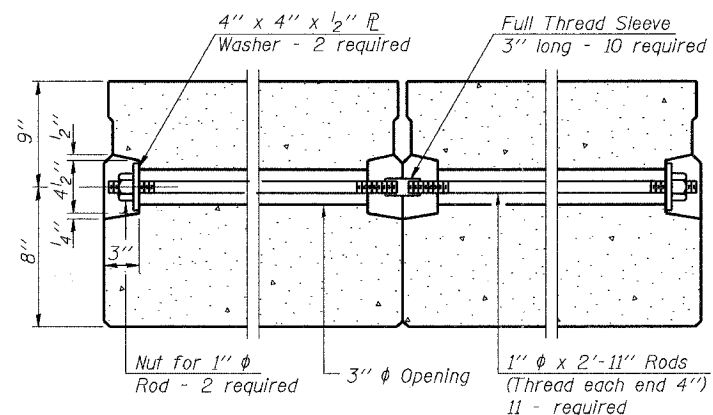
* Section 22 BR-1 Contract #64B04



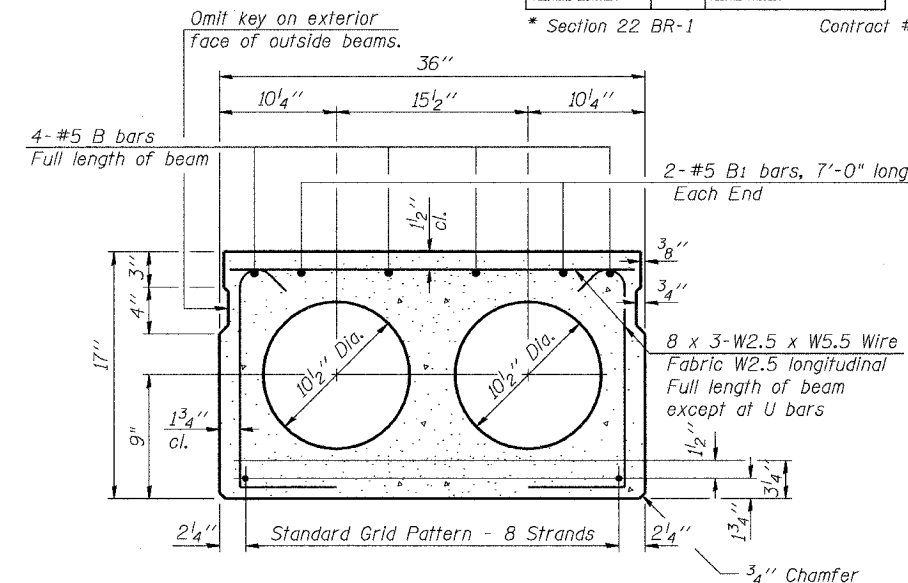
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

FIXED

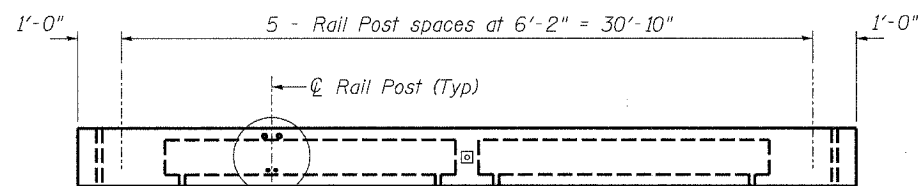


TYPICAL TRANSVERSE TIE ASSEMBLY

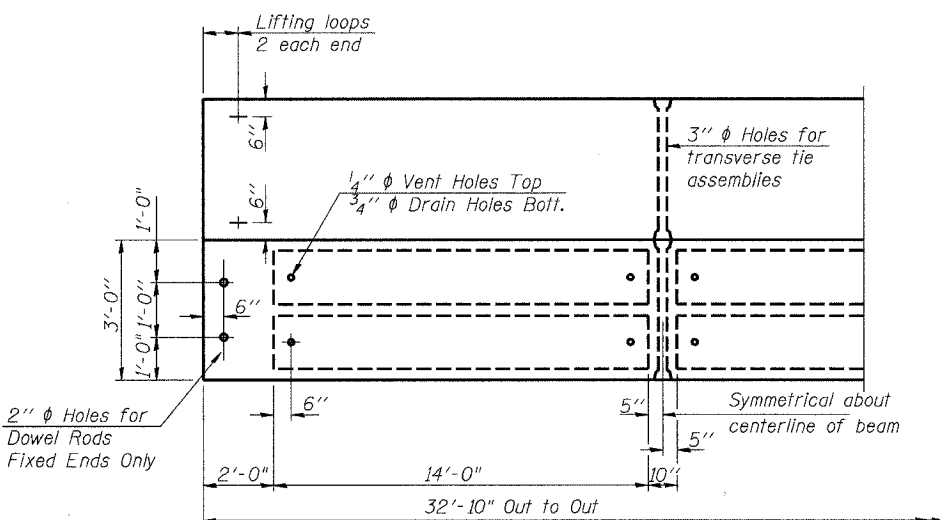


TYPICAL SECTION

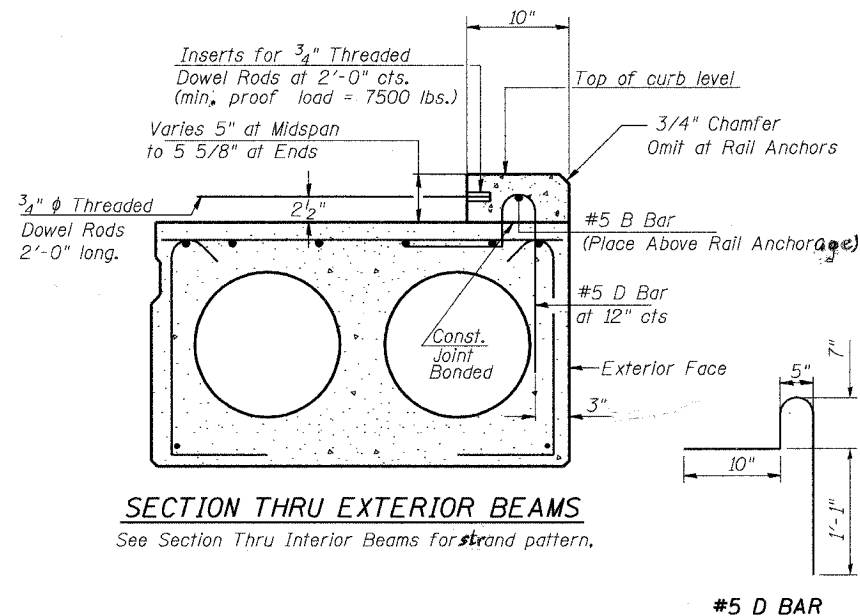
9-1/2" ϕ Strands, Each Strand Stressed to 30,900 Lbs. Note:
5-Strands 1 3/4" up, 4-Strands 3/4" up
Place strands symmetrically about ϕ of beam.



OUTSIDE BEAM ELEVATION

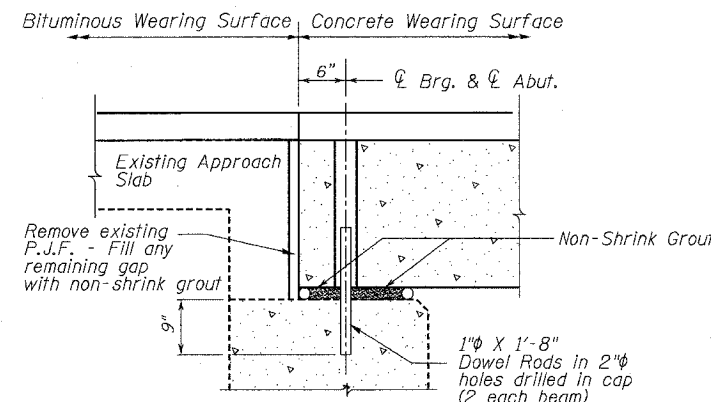


PLAN



SECTION THRU EXTERIOR BEAMS

See Section Thru Interior Beams for strand pattern.



SECTION THRU ABUTMENTS

BILL OF MATERIAL

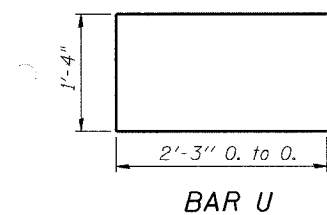
Bar	No./Bm	Size	Length	Shape
B	4	#5	32'-6"	—
B	1	#5	32'-6"	—
B ₁	4	#5	7'-0"	—
D	33	#5	3'-4"	—
U	12	#4	5'-10"	—
Precast Prestressed Conc. Deck Bms.			Sq. Ft.	1084

* At exterior beams only

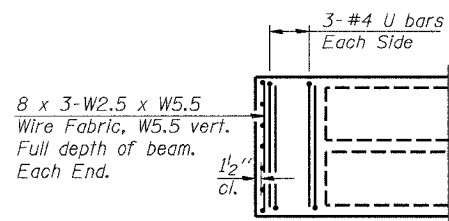
NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2 - 1/2" Dia.-270 ksi strands, as shown. The 1" Dia. rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Non prestressing steel shall conform to AASHTO M-31, or M-322 Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4000 p.s.i. Bridge rail inserts shall be cast into the precast beams and curbs. Curbs shall be cast by the precast prestressed concrete fabricator after the strands have been released and prior to shipping the beams. The concrete used in the curb shall meet the requirements specified for the beams. The curbs including all concrete and reinforcement will not be paid for separately but included with Precast Prestressed Concrete Deck Beams. The curb inserts and threaded dowel rods may be either epoxy coated or galvanized and the cost shall be considered included with Precast Prestressed Concrete Deck Beams. The exposed strands at each deck beam end shall be given two coats of zinc dust spray or paint according to the manufacturer's specifications and meeting the requirements of ASTM A 780. Cost Included with Precast Prestressed Concrete Deck Beams.

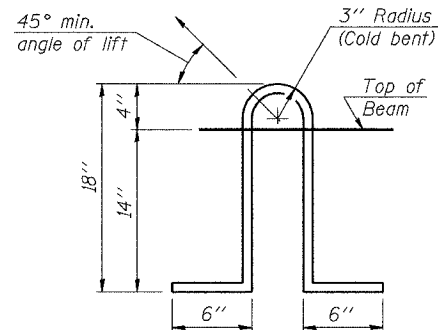
SUPERSTRUCTURE DETAILS
F.A.P. 301 (U.S. 20)
OVER YELLOW CREEK
SECTION 22BR-1
STEPHENSON COUNTY
S.N. 089-0002



BAR U



END PLAN



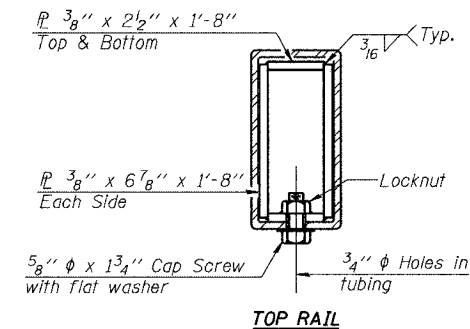
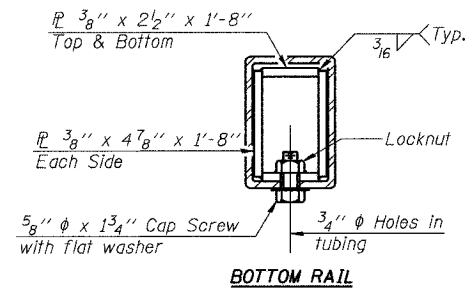
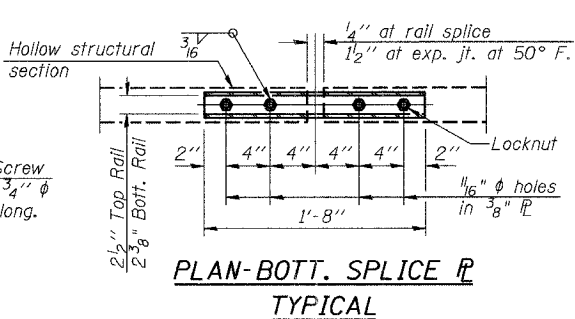
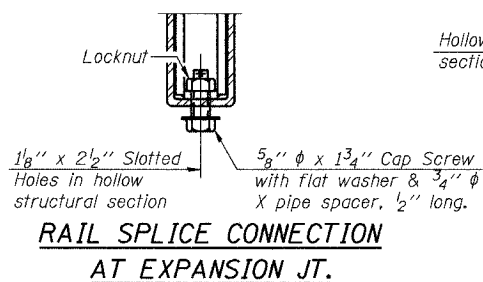
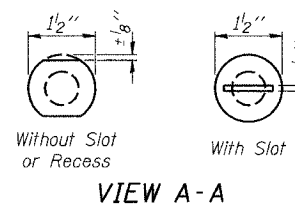
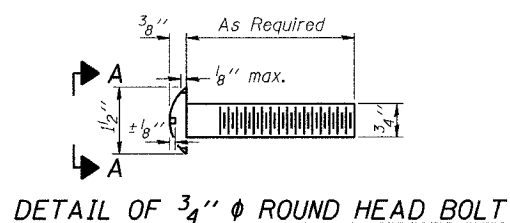
LIFTING LOOP DETAIL

DESIGNED	SB
CHECKED	RB
DRAWN	DB, BS
CHECKED	SB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301	*	Stephenson	x	5
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

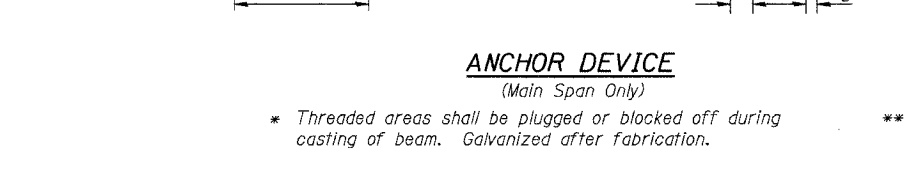
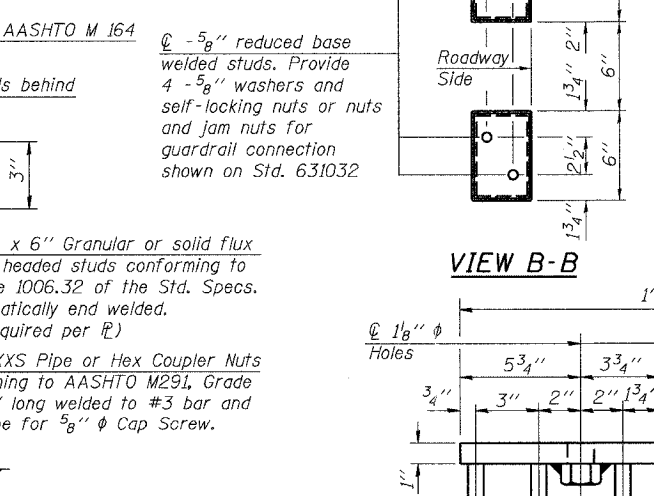
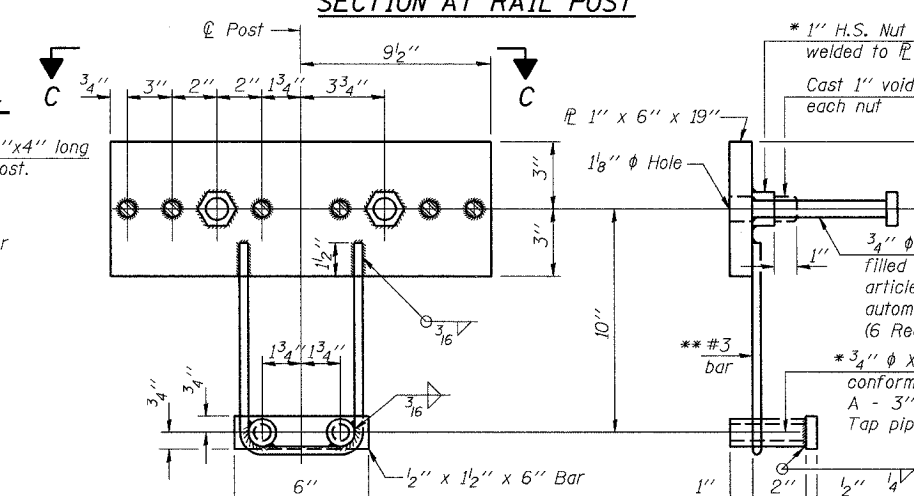
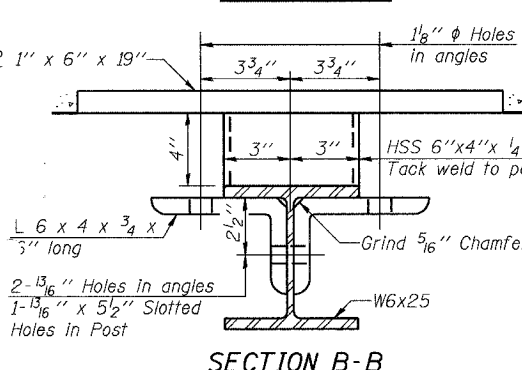
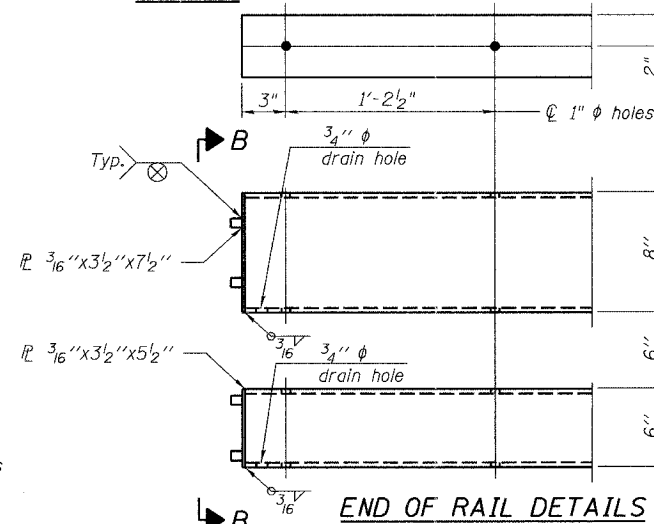
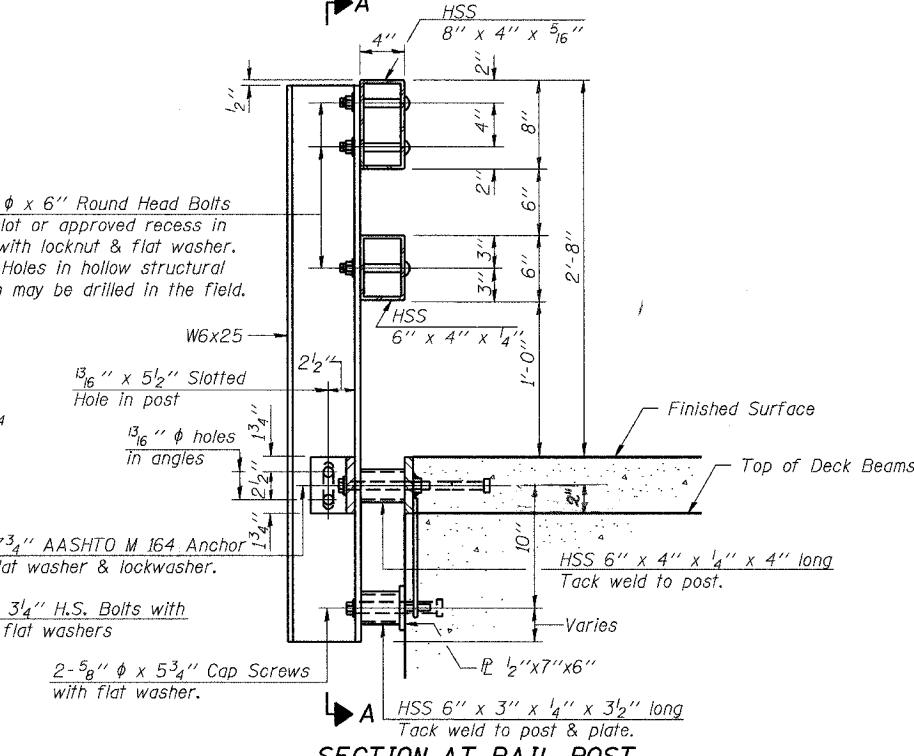
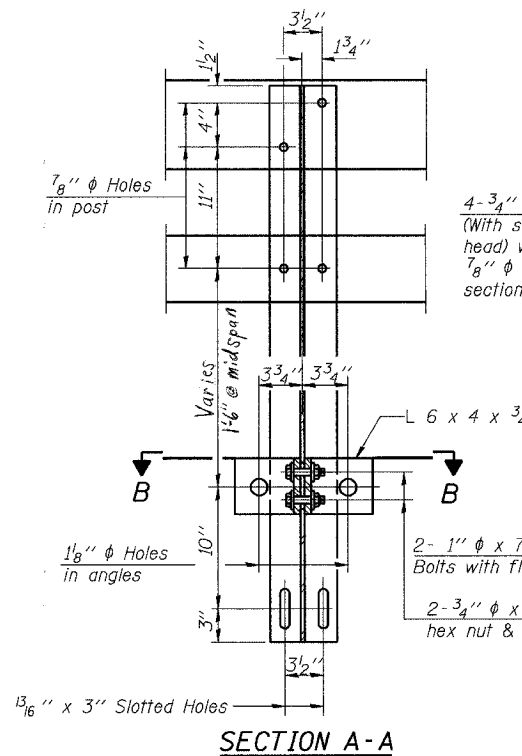
* Section 22 BR-1 Contract #64B04



SECTIONS AT RAIL SPLICE

NOTES

See bridge sheet 3 of 5 for railing connection to the existing approach slabs.
Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.
All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.
Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.
All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.
The 1/2 inch x 7 inch x 6 inch plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/8 inch fabric bearing pads between the plates and concrete.
The 3/4 inch high strength bolts used to connect the 7 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1 inch diameter high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8 inch diameter cap screws in bottom of posts shall be tightened to a snug fit only.



BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	146

TYPE SM
STEEL BRIDGE RAIL SIDE MOUNTED

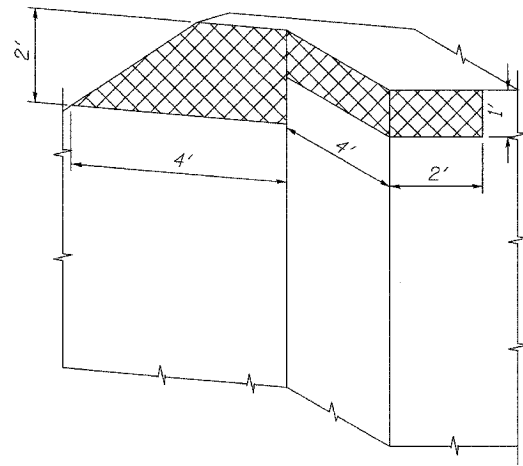
F.A.P. 301 (U.S. 20)
OVER YELLOW CREEK
SECTION 22BR-1
STEPHENSON COUNTY
STR. NO. 089-0002

* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2 inch.

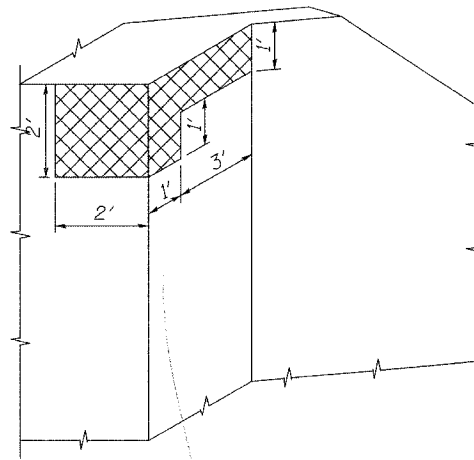
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
F.A.P. 301	*	Stephenson	x	15	5 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

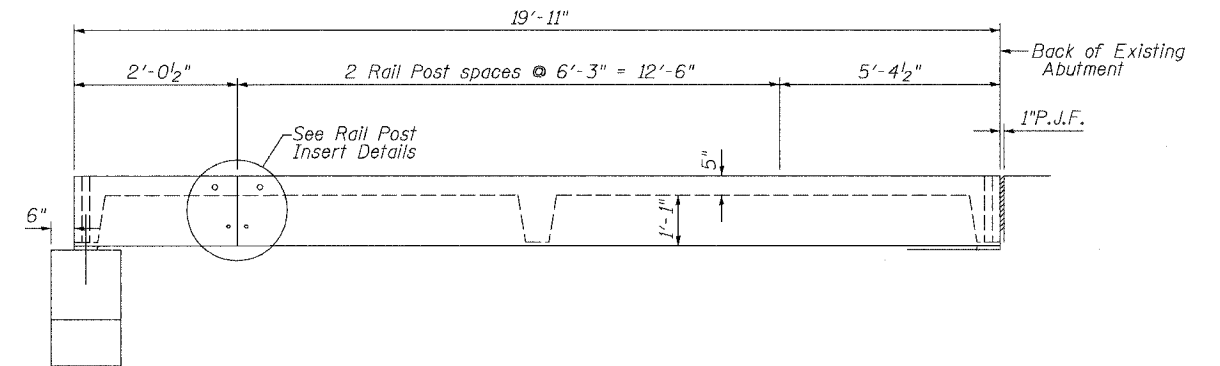
* Section 22 BR-1 Contract #64B04



N.E. ABUTMENT CORNER ELEV.

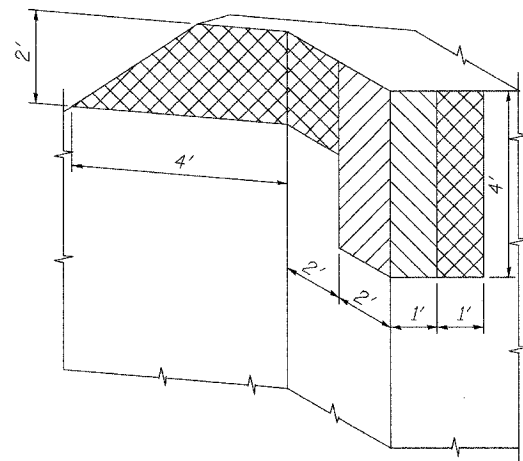


S.E. ABUTMENT CORNER ELEV.

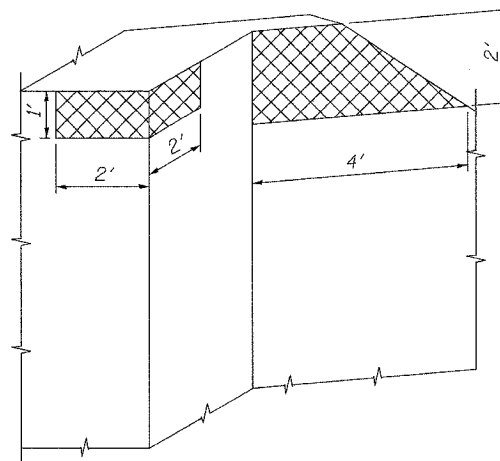


EXISTING APPROACH SLAB SIDE ELEVATION

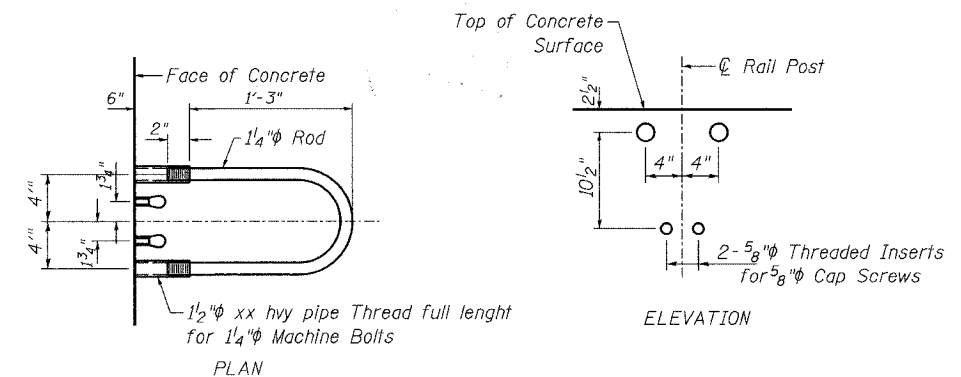
(For Information Only)



S.W. ABUTMENT CORNER ELEV.



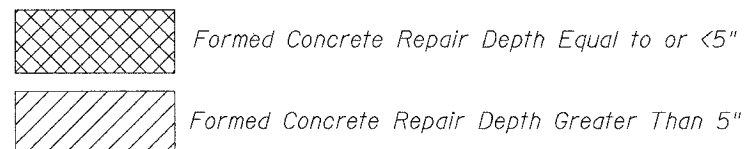
N.W. ABUTMENT CORNER ELEV.



EXISTING APPROACH SLAB
RAIL POST INSERT DETAILS

(For Information Only)

DESIGNED	SB, DP
CHECKED	SB
DRAWN	BH, BS
CHECKED	SB



BILL OF MATERIAL

ITEM	UNIT	TOTAL
Formed Concrete Repair (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	45
Formed Concrete Repair (Depth Greater Than 5 Inches)	Sq. Ft.	12

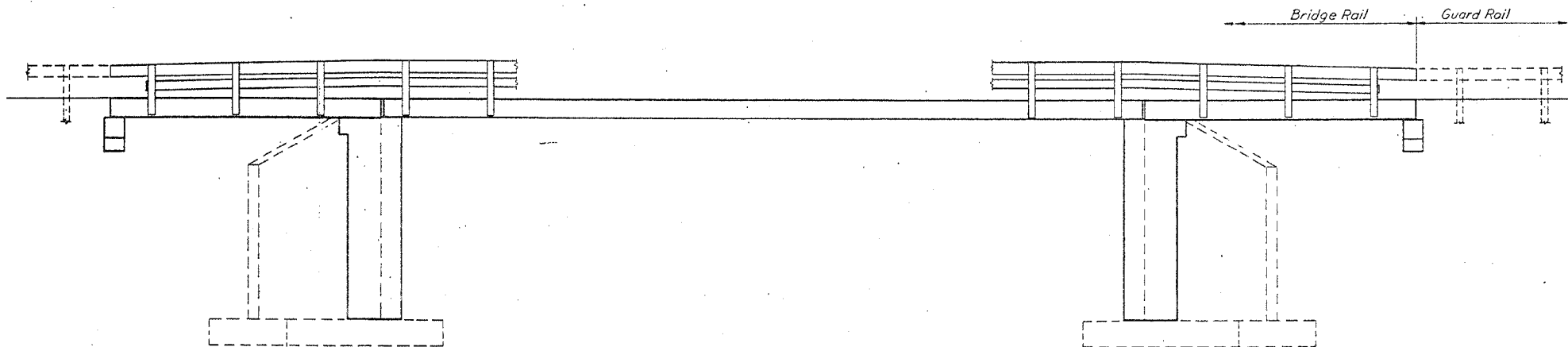
CONCRETE REPAIR DETAILS
F.A.P. 301 (U.S. 20)
OVER YELLOW CREEK
SECTION 22BR-1
STEPHENSON COUNTY
STR. NO. 089-0002

Built as S.B.I. Rt. 5, Section 22 B, Sta. 391+45, Year
 Existing Structure: R.C. Thru Girder on Closed Abutments.
 Superstructure 33'-0" long, 23'-2" wide.

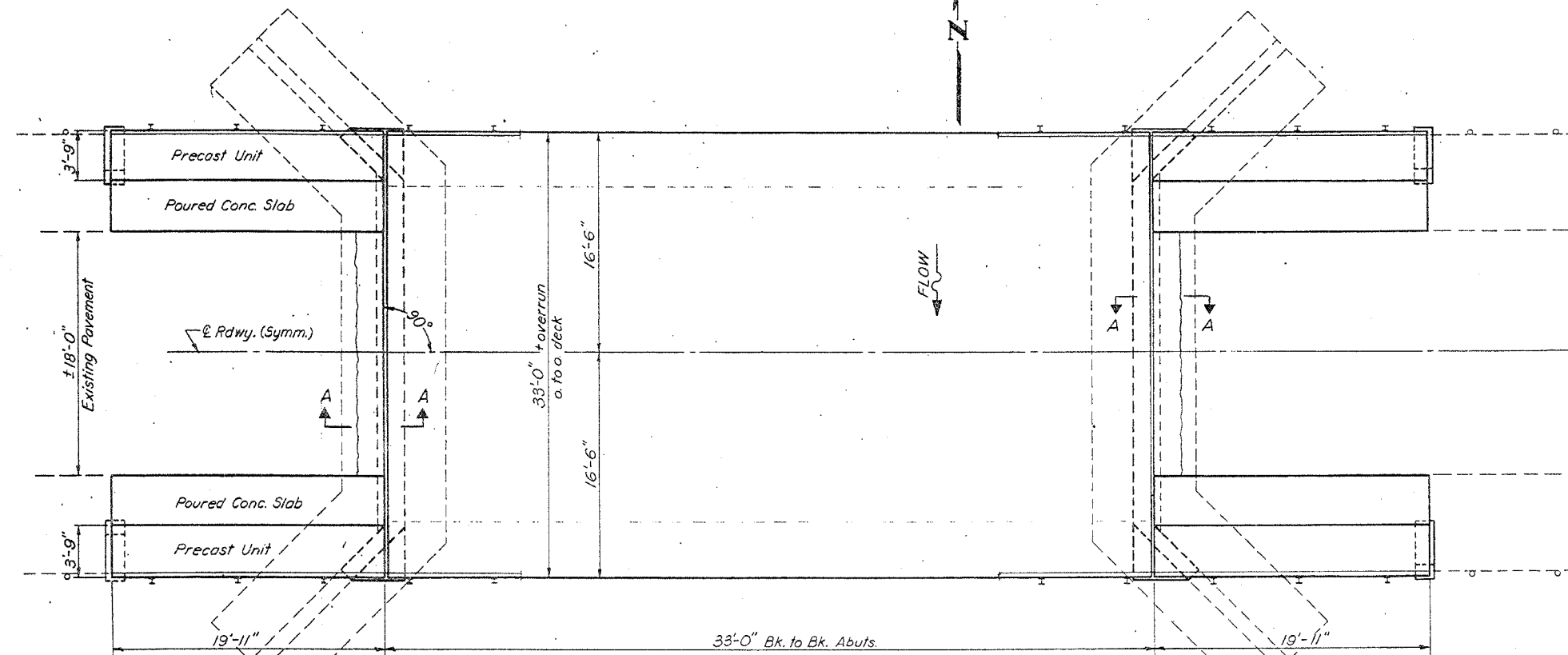
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS

CONTRACT NO. 64B04				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	223R-1	STEPHENSON	32	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

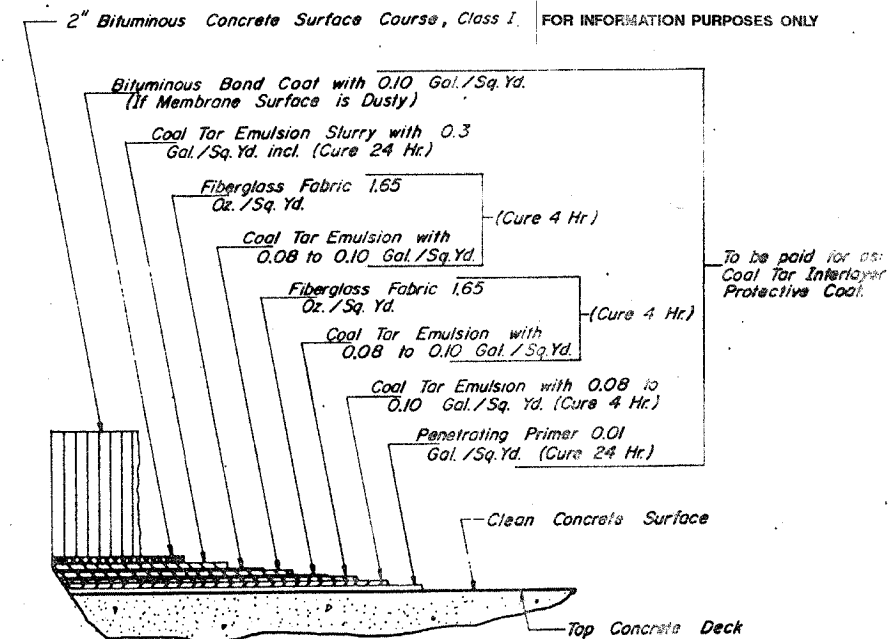
SHEET NO. 1
5 SHEETS



ELEVATION



PLAN



DETAIL OF DECK SURFACING

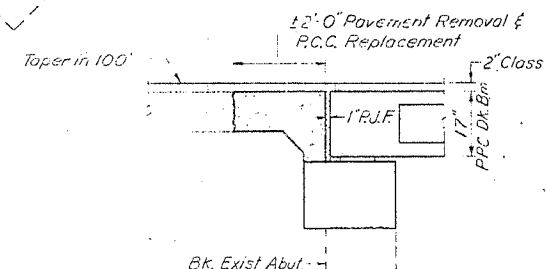
GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
 It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.
 An alternate strand pattern using Extra High Strength Prestressing strand (270 ksi.) is permitted.
 Expansion bolts shall consist of self drilling expansion shields and 3/4" hooked bolts. Hooked bolts shall extend a minimum of 12" into new concrete.
 Any excavation shall be incidental to Bridge Contract.
 Shoulder transition to wingwall shall be shaped with broken concrete. Cost Incidental.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Portland Cement Concrete Pavement (10")	Sq. Yds.	33		33
Pavement Fabric	Sq. Yds.	33		33
Concrete Removal	Cu. Yds.		5	5
Expansion Bolts (3/4")	Each	52	100	152
Class X Concrete	Cu. Yds.		25.6	25.6
Precast Concrete Bridge Slab	Sq. Ft.	299		299
Precast Prestressed Concrete Deck Beams (17)	Sq. Ft.	1083		1083
Steel Railings, Type W	Lin. Ft.	138		138
Reinforcement Bars	Lbs.		970	970
Pavement Removal & P.C.C. Replacement Typ. 2(10)	Sq. Yds.			8
Removal of Existing Superstructures	Each	1		1
* Cool Tar Interlayer Protective Coat	Sq. Yds.	121		121

* Applied Bk. to Bk. Abuts.



SECTION A-A

DESIGNED	James Pence
CHECKED	Jack Armstrong
DRAWN	J.L. Armstrong
CHECKED	JP

EXAMINED
 AUGUST 8 1963
 PASSED
 APPROVED
 RICHARD H. HOFFMAN
 CHIEF HIGHWAY ENGINEER

DESIGN STRESSES

FIELD UNITS	PRECAST PRESTR. UNITS
f _c = 1400 psi. (super)	f _c = 5000 psi.
f _c = 1000 psi. (sub)	f _c = 4000 psi.
f _s = 20,000 psi. (reinf.)	f _s = 248,000 psi.
v _c = 75 psi. (footing)	f _{si} = 173,600 psi.
n = 10	

LOADING HS 20-44

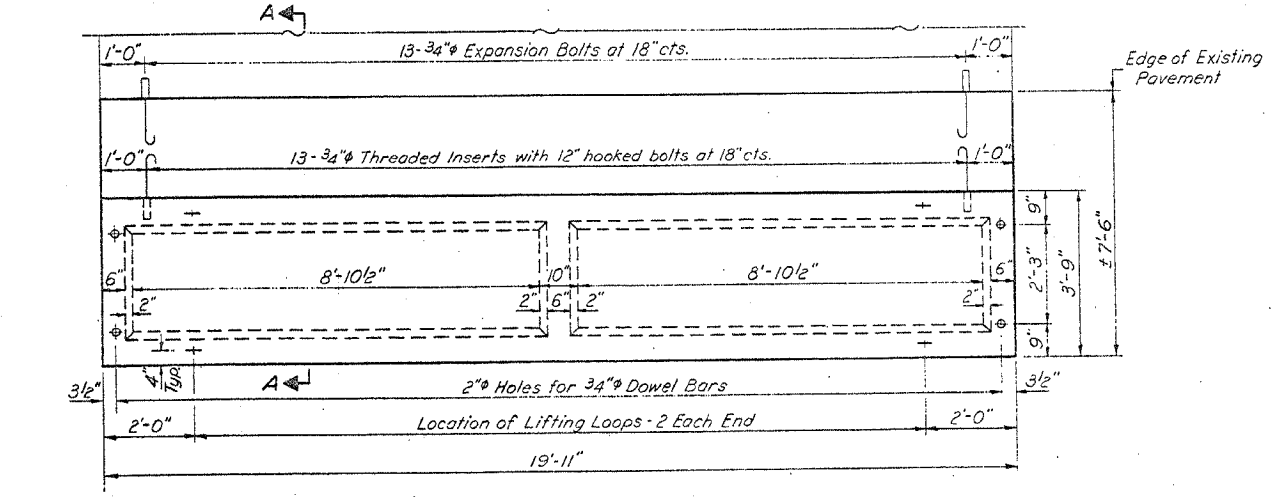
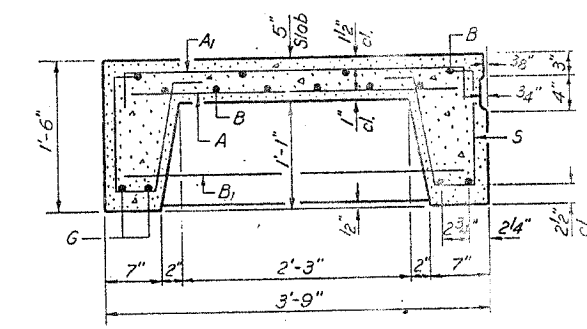
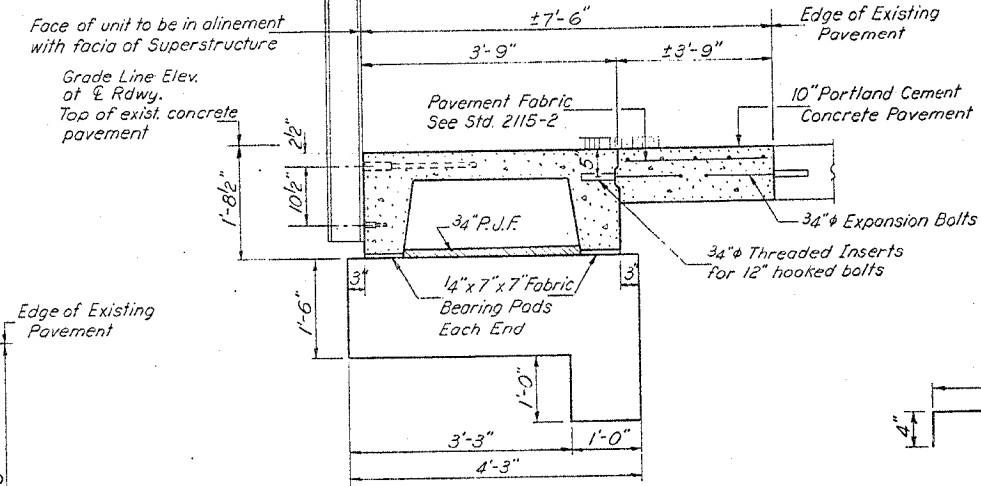
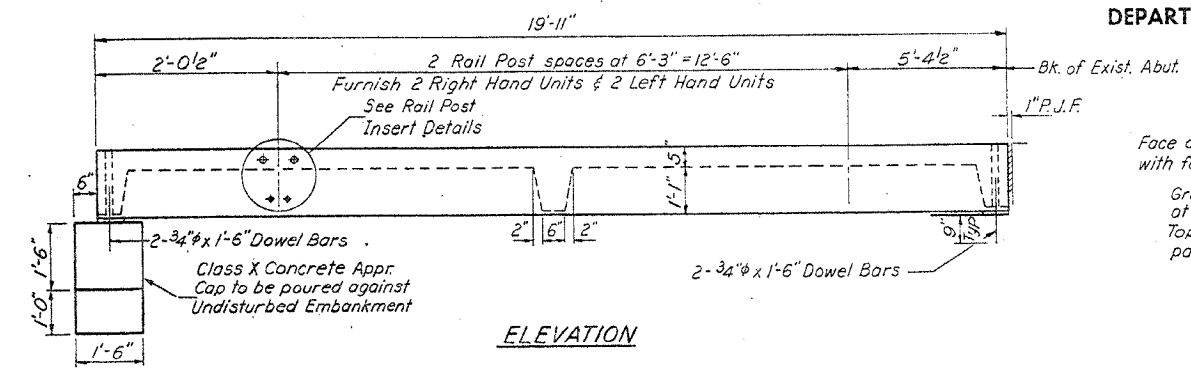
GENERAL PLAN & ELEVATION
 YELLOW CREEK
 S.B.I. RT. 5 (U.S. 20) SEC. 22 BR
 STEPHENSON COUNTY
 STA. 391+45

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

SHEET NO. 2
5 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

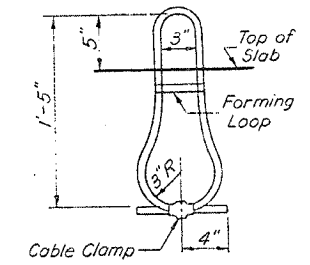
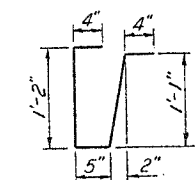
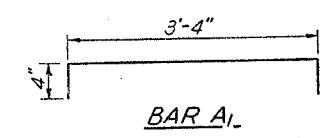
FOR INFORMATION PURPOSES ONLY



BAR LIST - ONE UNIT

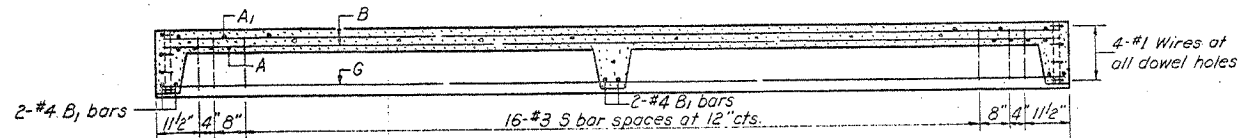
Reinforcement to be cast into slab

Bar	No	Size	Length	Shape
A	52	#4	3'-3"	—
A1	27	#4	4'-0"	—
B	10	#4	19'-6"	—
B1	6	#4	3'-6"	—
G	4	#10	19'-6"	—
S	42	#3	3'-4"	[]

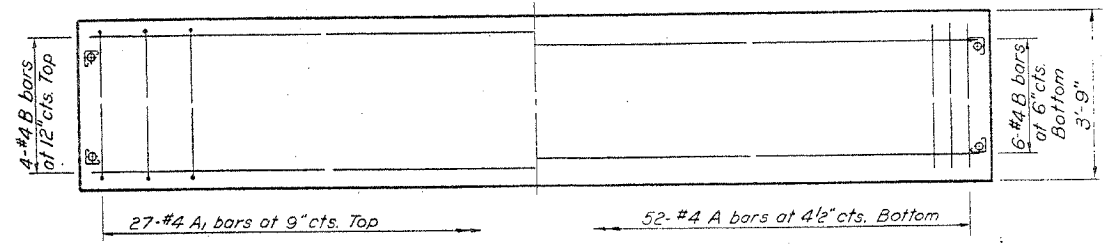


GENERAL NOTES

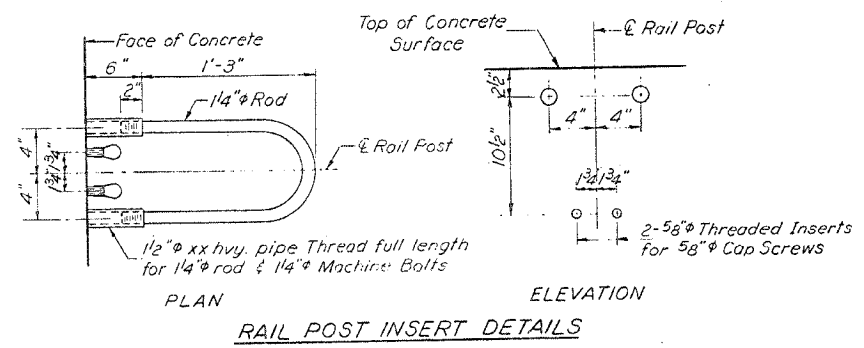
Unless otherwise approved by the Engineer, lifting loops shall be 1/2", 6x19 class wire rope with fiber core and shall have a minimum ultimate strength of 18,700 lbs. Loops shall be burned off after slab has been erected. Holes shall be drilled and anchor dowels grouted in place. Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor dowels and 3/4" hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab".



LONGITUDINAL SECTION



REINFORCEMENT PLAN



RAIL POST INSERT DETAILS

STRESSES
f_c = 4,500 psi
f_c = 1,800 psi
f_s = 20,000 psi
n = 8
LOADING HS-20

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	299
Portland Cement Concrete Pavement (10)	Sq. Yds.	33
Pavement Fabric	Sq. Yds.	33
Expansion Bolts 3/4"	Each	52
Class X Concrete	Cu. Yds.	1.5

APPROACH DETAILS
S.B.I. RT. 5 SEC. 22 BR
STEPHENSON COUNTY
STA. 391+45

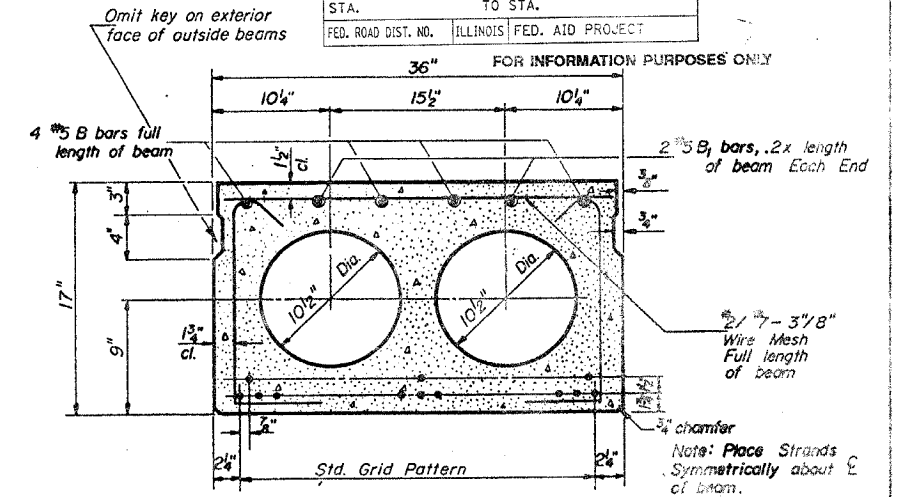
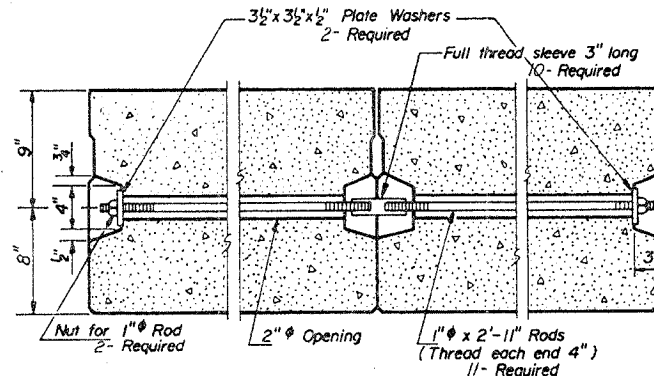
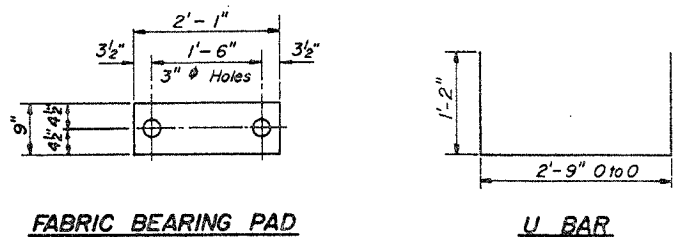
DESIGNED James Pence	EXAMINED [Signature] AUG. 8 1969
CHECKED Jack Armstrong	PASSED [Signature]
DRAWN J.L. Armstrong	APPROVED [Signature] CHIEF HIGHWAY ENGINEER
CHECKED JP	

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

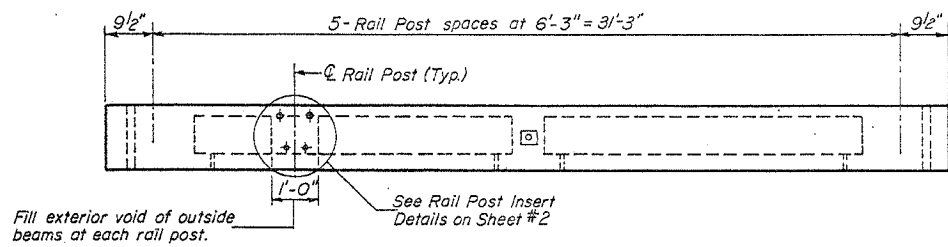
CONTRACT NO. 64B04

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	18
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

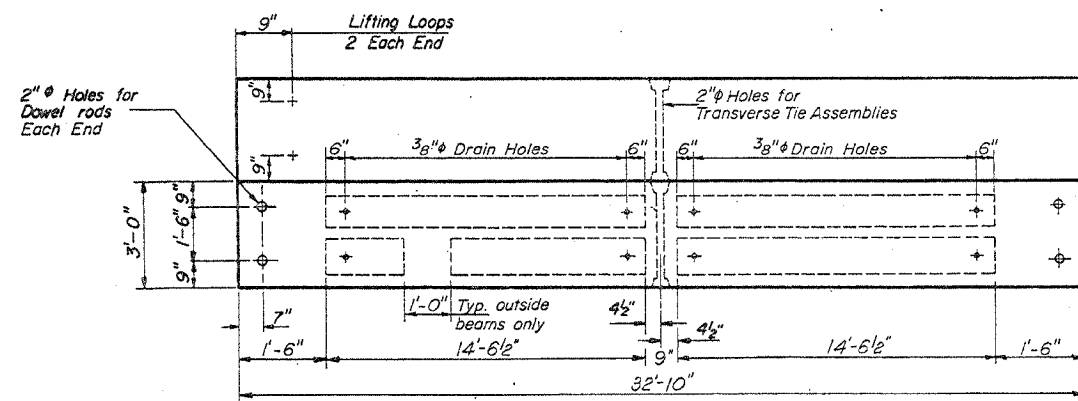
SHEET NO. 2
5 SHEETS



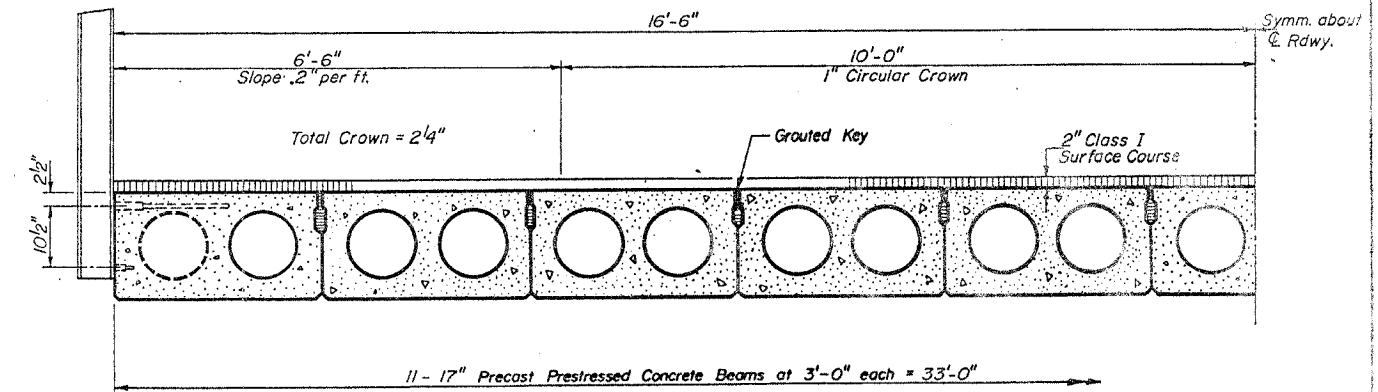
FOR INFORMATION PURPOSES ONLY
7/16" Strands Each Strand Stressed to 18,900 lbs.
9-Strands 1 1/4" up 3-Strands 3/4" up



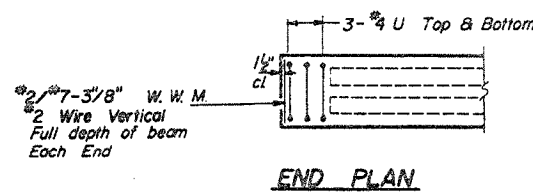
ELEVATION



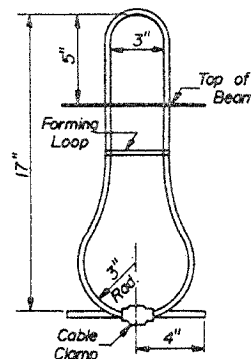
PARTIAL PLAN



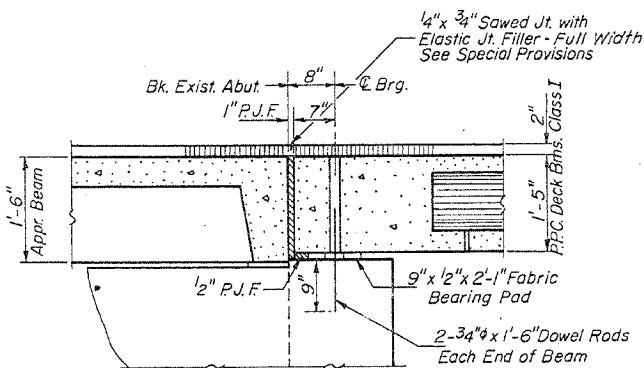
HALF CROSS SECTION



END PLAN



LIFTING LOOP DETAIL



SECTION THRU ABUT.
AT OUTSIDE BEAM

GENERAL NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand. The nominal diameter shall be 7/8" and the nominal cross-sectional area shall be 0.109 sq. in. Lifting loops shall be 1/2" diameter, 6x19 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 18,700 lbs. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside beam shall be filled with grout after transverse tie assembly is in place. Longitudinal shear keys shall be packed with a very dry mix of 2-1 sand and P.C. mortar. After beams have been erected, holes for the dowel anchors shall be drilled into the sub-structure and the anchor dowels shall be grouted in place. Steel for dowel rods, transverse tie rods, and armor angles shall be S.A.E. 1020, structural steel A.S.T.M. Designation: A36, or intermediate grade A.S.T.M. Designation: A15. After fabrication the transverse tie assemblies (tie rods, nuts, washers and sleeves) shall be hot-dipped galvanized in accordance with A.S.T.M. Designation: A153. Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beams."

BILL OF MATERIAL

Item	Unit	Quantity
Precast Prestressed Concrete Deck Beams	Sq. Ft.	1088
Removal of Existing Superstructure	Each	1

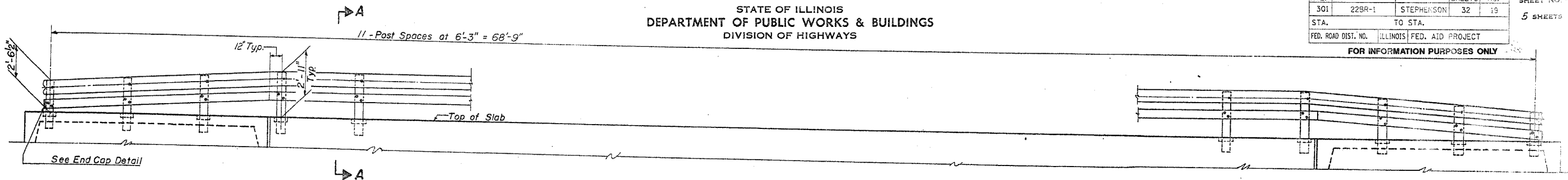
SUPERSTRUCTURE
S.B.I. R.T. SEC. 22 BR
STEPHENSON COUNTY
STA. 391+45

DESIGNED	James Pence	EXAMINED	Aug. 8 1968
CHECKED	Jack Armstrong	PASSED	Richard H. Holloman
DRAWN	J. L. Armstrong	APPROVED	Richard H. Holloman
CHECKED	JP		

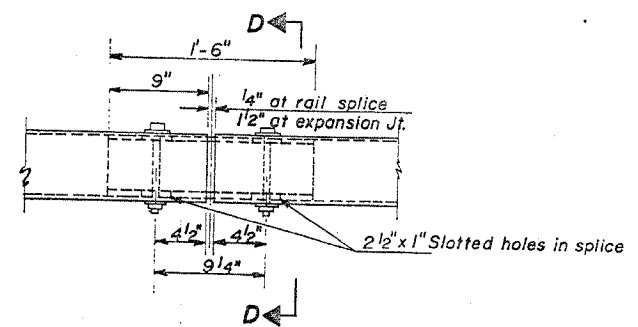
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

CONTRACT NO. 64804				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	19
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FOR INFORMATION PURPOSES ONLY



ELEVATION
Showing inside face of railing



RAIL SPLICE

NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A 501 "Hot Formed Welded and Seamless Carbon Steel Structural Tubing". All other steel shapes and plates shall conform to the requirements of ASTM designation A 441 or A 36.

Bolting materials, bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A 307.

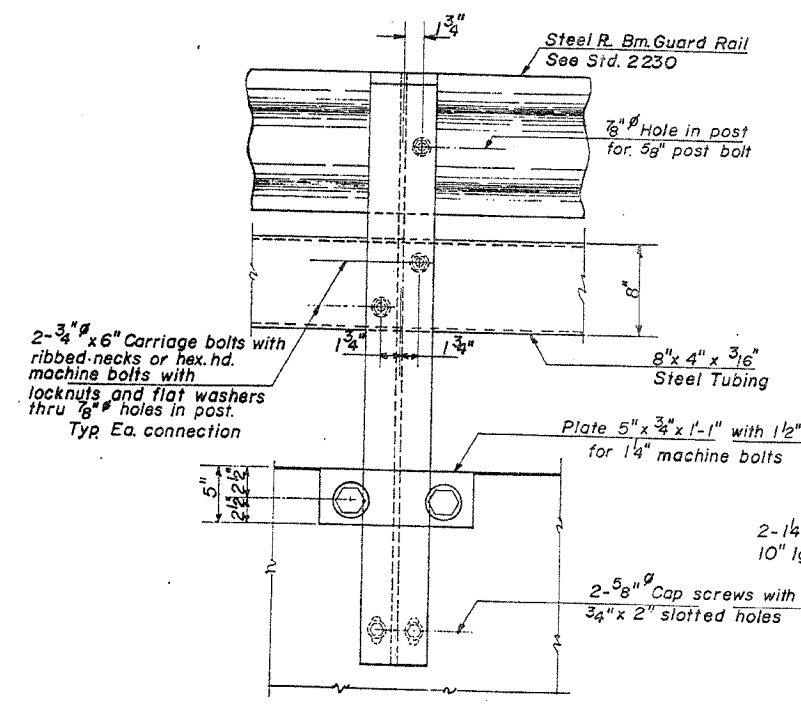
All bolts, nuts, cap screws, washers, and lock washers shall be galvanized in accordance with ASTM designation A-153.

All posts, railing, and rail splices shall be galv. after shop fabrication in accordance with ASTM designation A-123 and A-385.

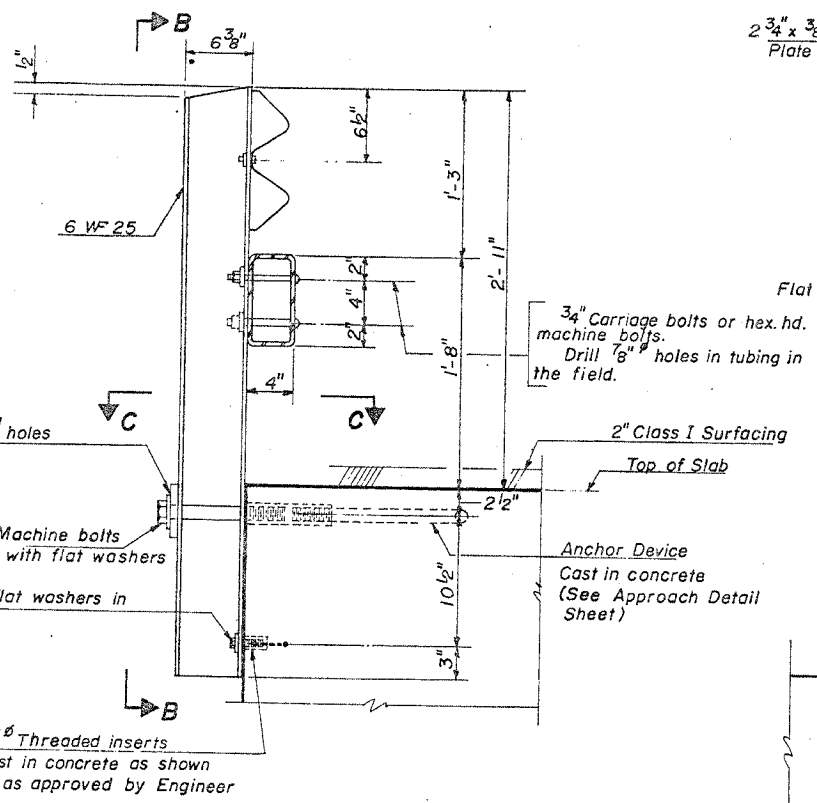
Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE W.

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

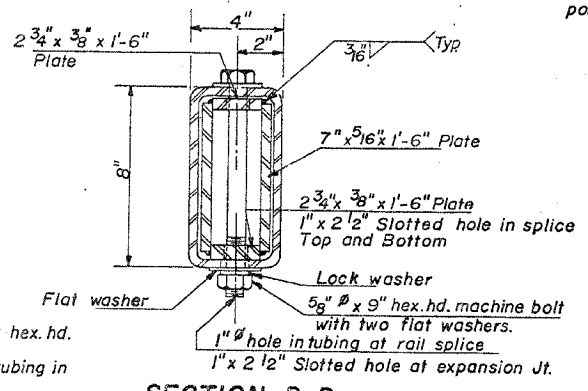
The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/2" fabric bearing pad between the post and concrete.



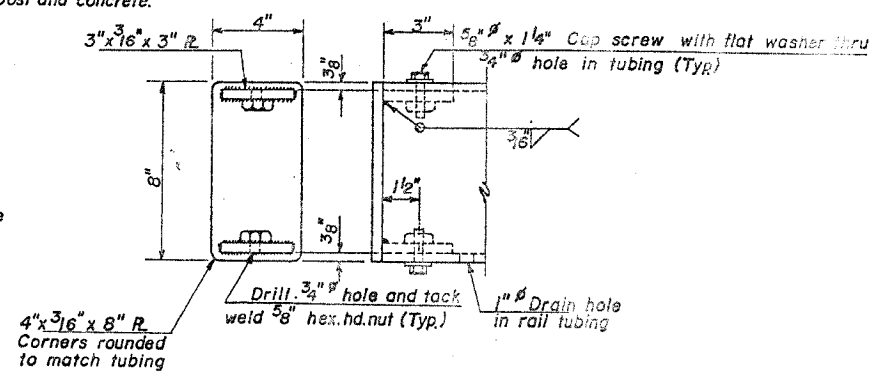
VIEW B-B



SECTION A-A

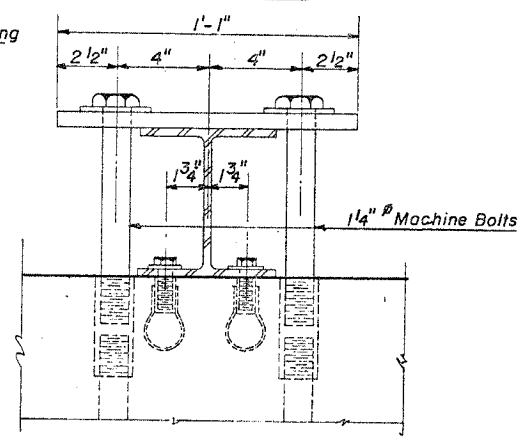


SECTION D-D



END CAP DETAIL

4 - Required



SECTION C-C

BILL OF MATERIAL

Item	Unit	Quantity
STEEL RAILING, TYPE W	Lin. Ft.	138

**TYPE W
STEEL RAILING**

S.B.I. RT. 5 SEC. 22 BR
STEPHENSON COUNTY
STA. 391 + 45

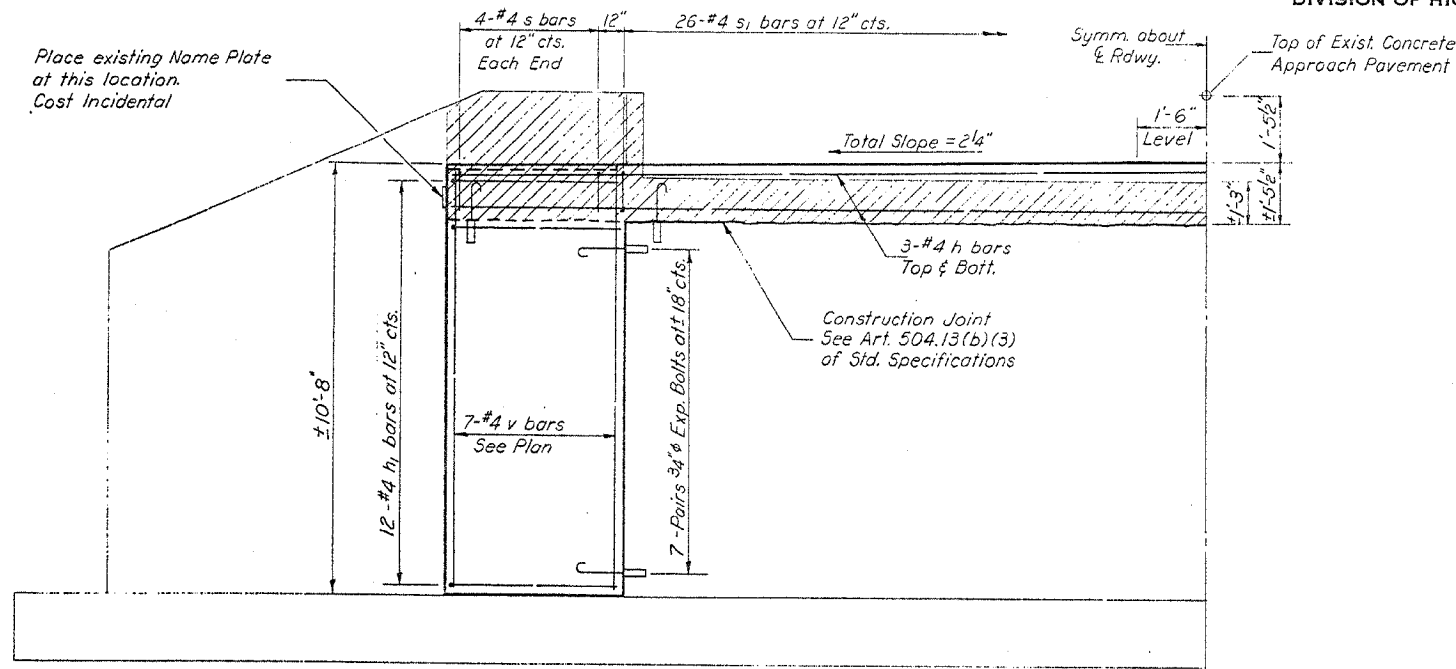
DESIGNED	James Pence	EXAMINED	Aug. 8 1969
CHECKED	Jack Armstrong	PASSED	W. P. Baumann
DRAWN	A. Barraza	APPROVED	Richard H. Goltzman
CHECKED	JP		

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

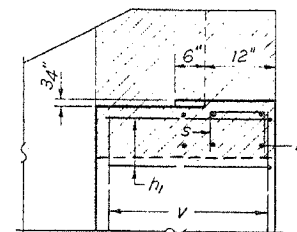
CONTRACT NO. E4B04				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	20
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SHEET NO. 5
5 SHEETS

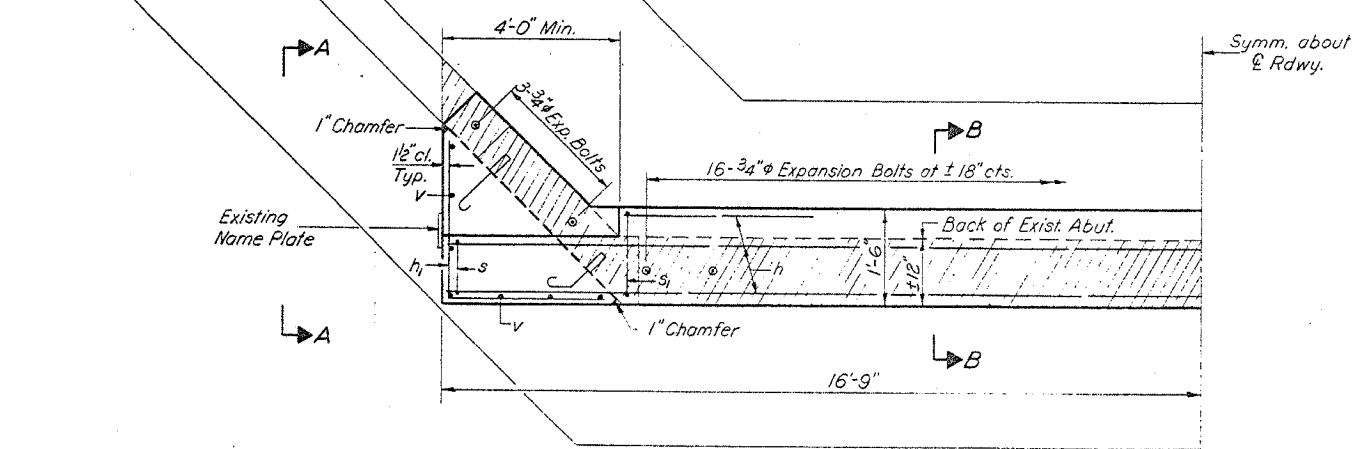
FOR INFORMATION PURPOSES ONLY



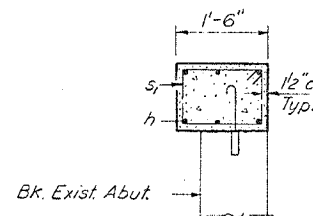
ELEVATION



VIEW A-A



PLAN



SECTION B-B

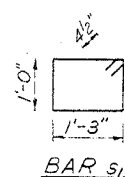
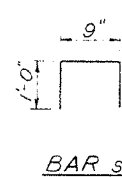
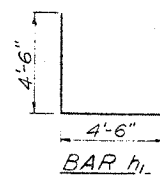
NOTES:
Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.
Expansion bolts shall be anchored in sound concrete.
All edges shall have standard 3/4 inch chamfers except as noted.

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	12	#4	33'-3"	—
h ₁	48	#4	9'-0"	L
s	16	#4	2'-9"	□
s ₁	52	#4	5'-3"	□
v	28	#4	10'-6"	—
Class X Concrete			Cu. Yds.	24.0
Reinforcement Bars			Lbs.	970
Expansion Bolts 3/4"			Each	100
Concrete Removal			Cu. Yds.	5

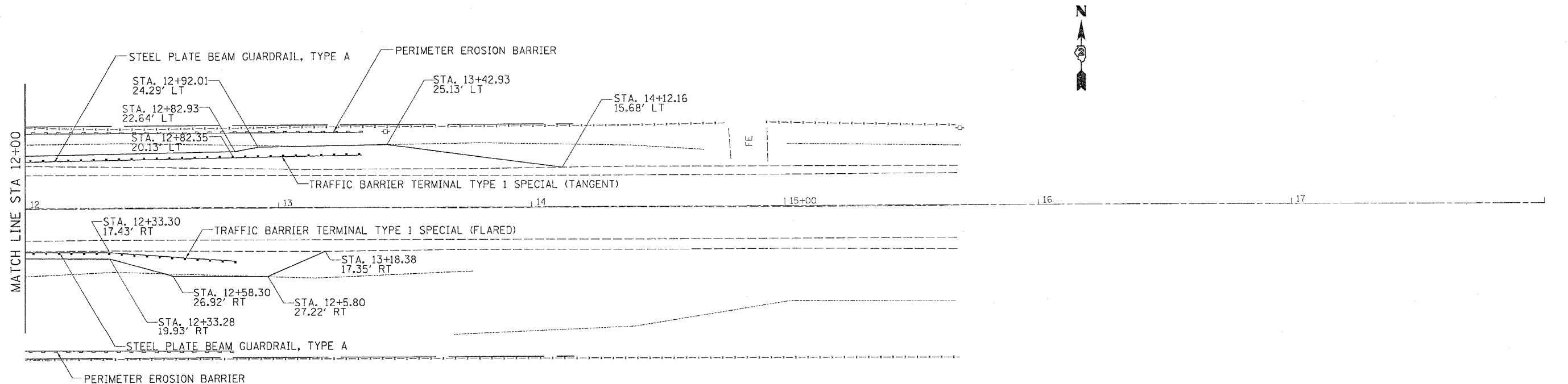
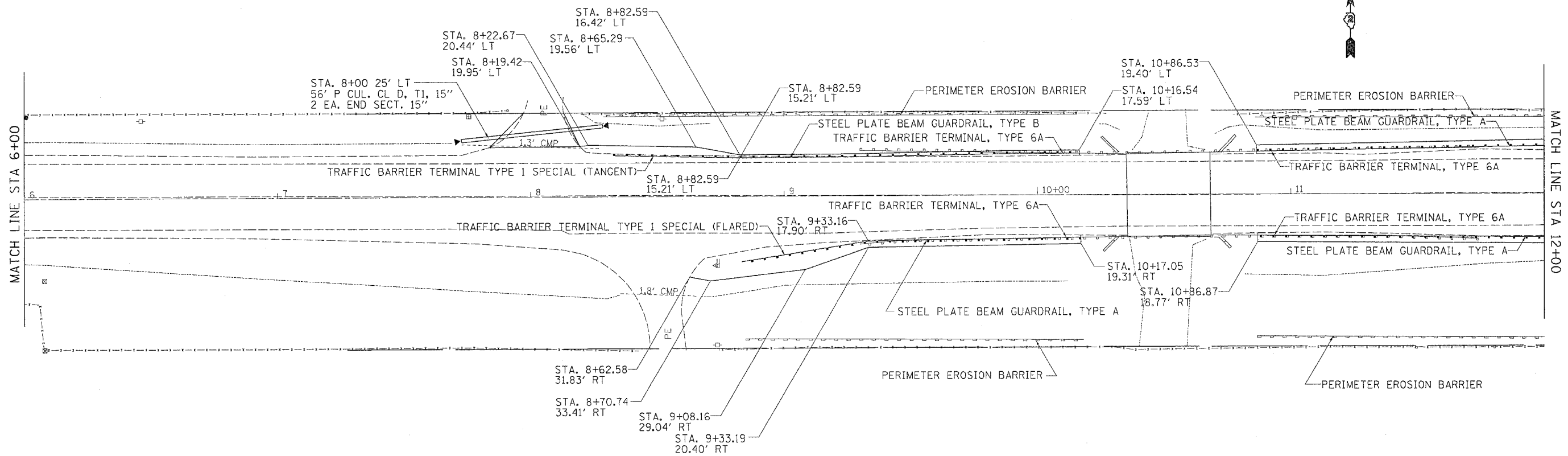
DESIGNED James Pence
CHECKED Jack Armstrong
DRAWN J.L. Armstrong
CHECKED JP

EXAMINED [Signature]
PASSED [Signature]
APPROVED Richard H. Goltzman
CHIEF HIGHWAY ENGINEER



ABUTMENTS
S.B.I. RT. 5 SEC. 22 BR
STEPHENSON COUNTY
STA. 391 + 45

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	21
STA. TO STA.		ILLINOIS FED. AID PROJECT		



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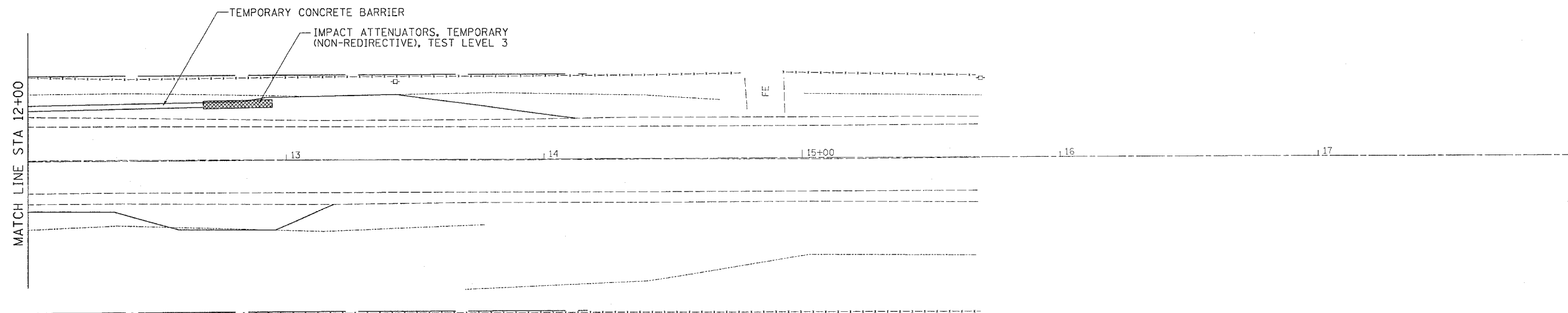
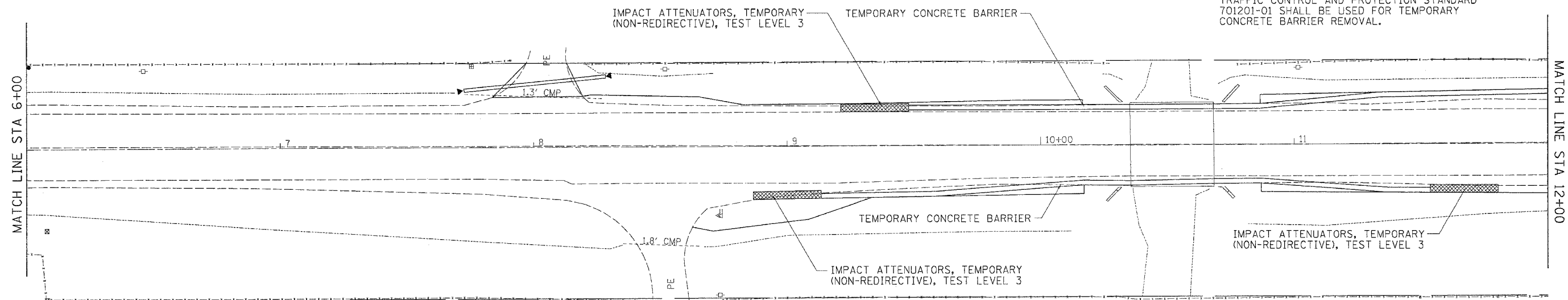
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	22
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TEMPORARY CONCRETE BARRIER DETAIL

NOTE

TEMPORARY CONCRETE BARRIER SHALL ONLY BE USED IF BRIDGE RAIL IS UNAVAILABLE WHEN ROADWAY IS OPENED TO TRAFFIC.

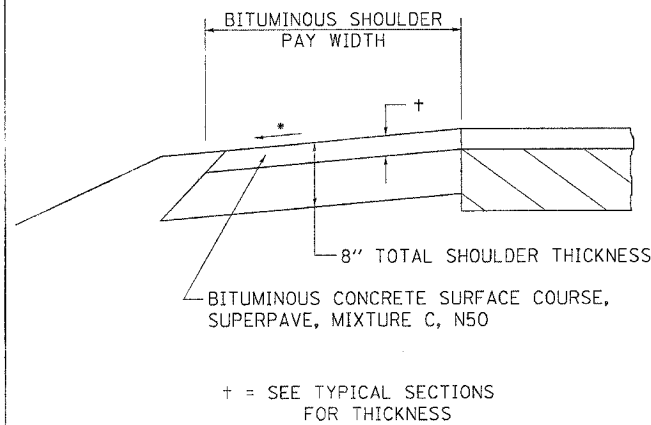
TRAFFIC CONTROL AND PROTECTION STANDARD 701201-01 SHALL BE USED FOR TEMPORARY CONCRETE BARRIER REMOVAL.



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F.A. R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	23
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

BITUMINOUS SHOULDER



GENERAL NOTES

THE BITUMINOUS SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, AND SQUARE YARD FOR BITUMINOUS SHOULDERS SUPERPAVE OF THE THICKNESS SPECIFIED.

USE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, WHEN RESURFACING EXISTING BITUMINOUS SHOULDERS. THE THICKNESS IS SHOWN ON THE TYPICAL SECTIONS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50.

REMOVAL OF MATERIAL FOR PLACEMENT OF THE BITUMINOUS SHOULDER TO BE PAID FOR IN UNITS FOR EXCAVATING AND GRADING EXISTING SHOULDERS OR IN CUBIC YARDS FOR EARTH EXCAVATION OR EARTH EXCAVATION WIDENING.

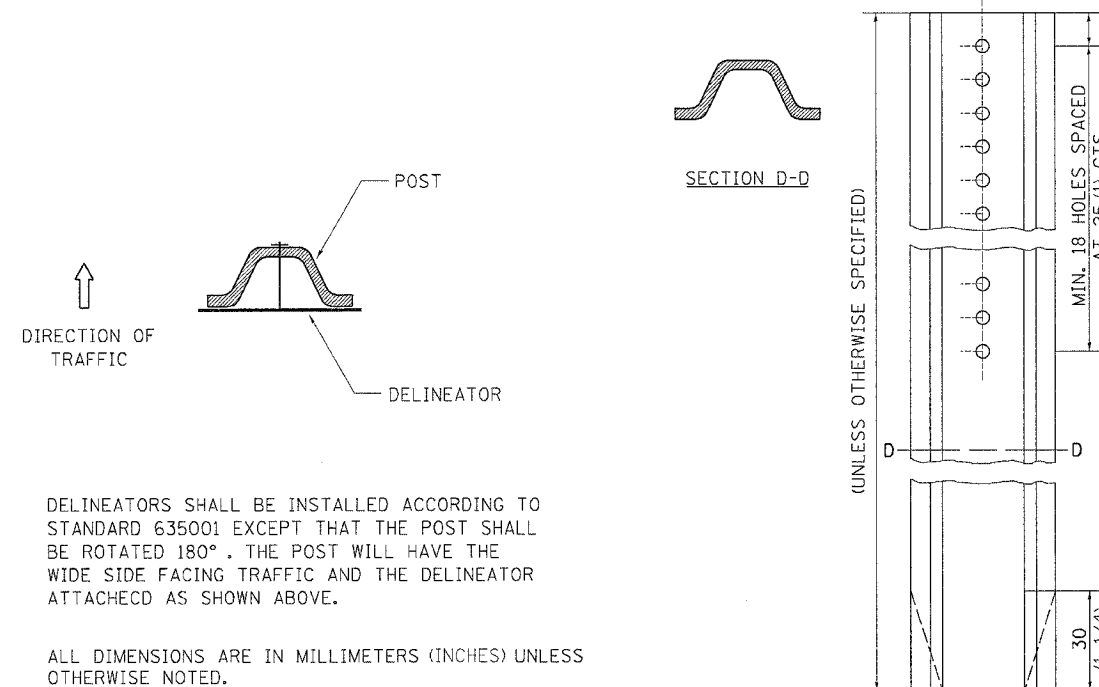
* 4% WHEN MAINLINE IS ON TANGENT. FOR CROSS SLOPE ON SUPERELEVATION SECTION, SEE HIGHWAY STANDARD 482001 OR 482006.

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

BITUMINOUS SHOULDER 23.4a

REVISED 5-30-03

DELINEATOR AND POST ORIENTATION



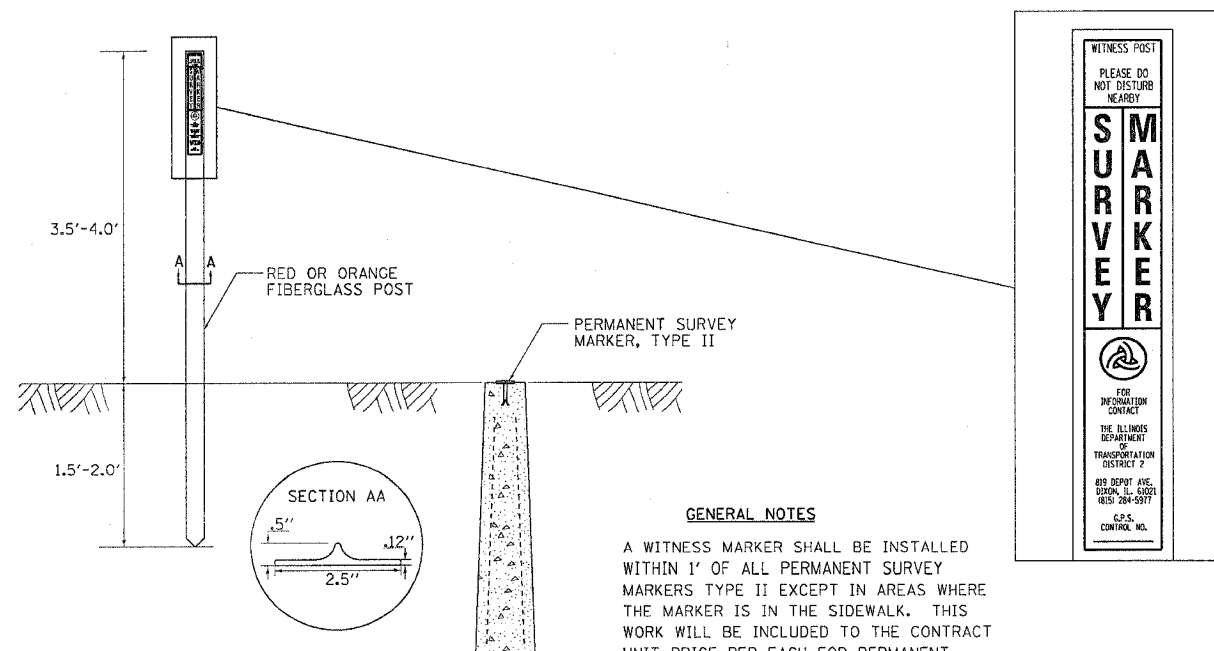
DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°. THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE DELINEATOR ATTACHED AS SHOWN ABOVE.

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

DELINEATOR AND POST ORIENTATION 37.4

REVISED 1-31-00

WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II



GENERAL NOTES

A WITNESS MARKER SHALL BE INSTALLED WITHIN 1' OF ALL PERMANENT SURVEY MARKERS TYPE II EXCEPT IN AREAS WHERE THE MARKER IS IN THE SIDEWALK. THIS WORK WILL BE INCLUDED TO THE CONTRACT UNIT PRICE PER EACH FOR PERMANENT SURVEY MARKERS, TYPE II.

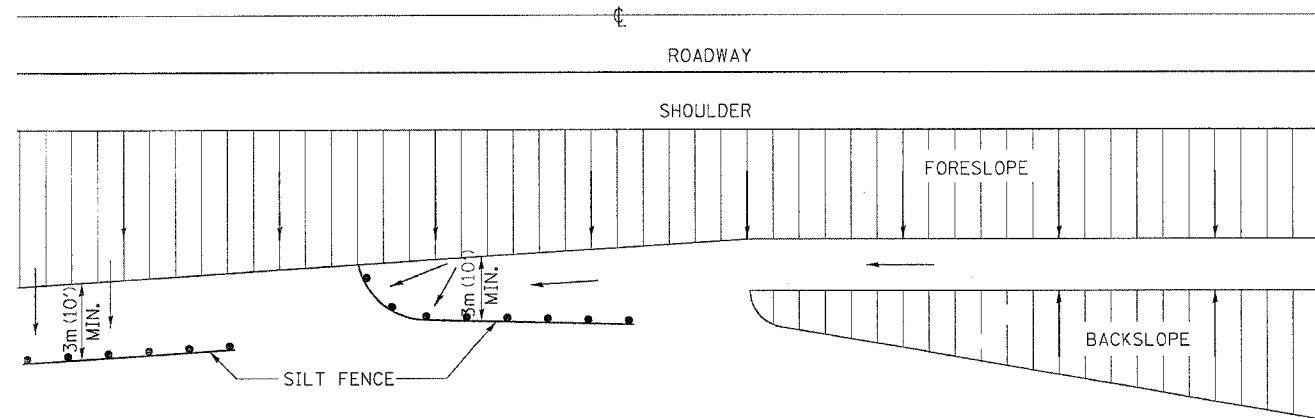
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WITNESS MARKER FOR PERMANENT SURVEY MARKERS TYPE II 38.4

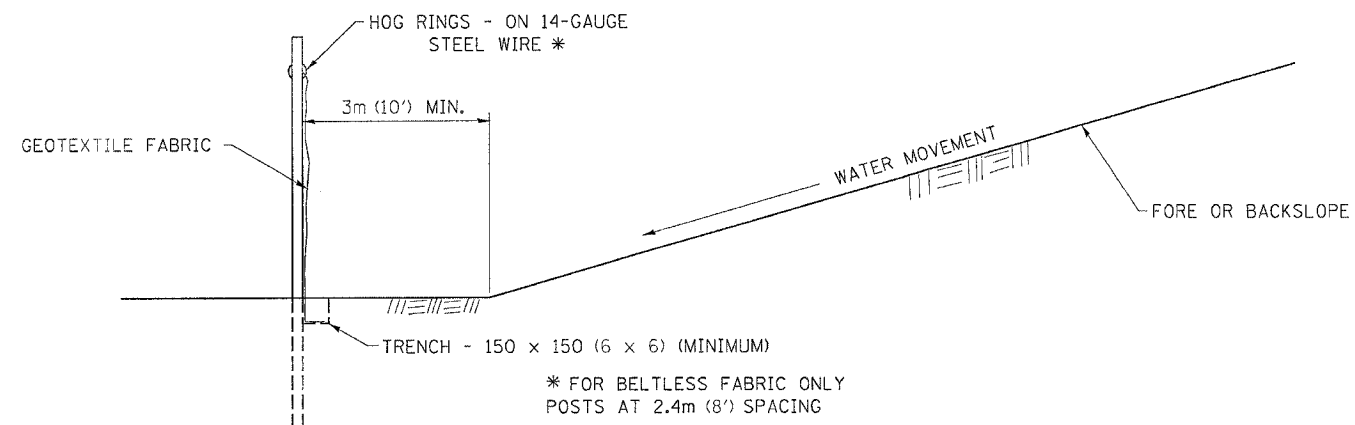
REVISED 1-31-00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	24
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EROSION CONTROL DETAILS FOR SILT FENCE



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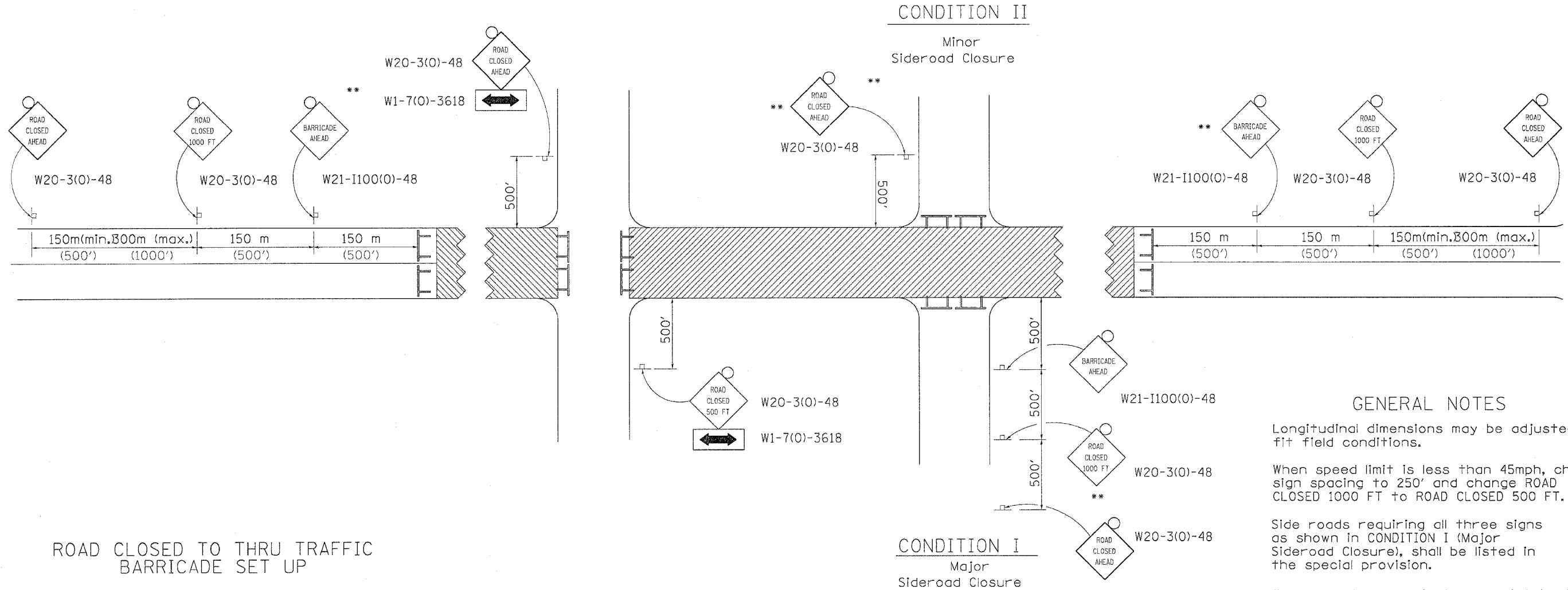
DETAILS OF SILT FENCE

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

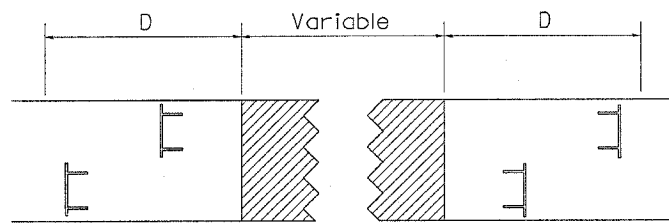
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	25
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

TRAFFIC CONTROL FOR ROAD CLOSURE



ROAD CLOSED TO THRU TRAFFIC BARRICADE SET UP



Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To All Thru Traffic" detail on Highway Standard 702001. If the distance "D" exceeds 600 m (2000') an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.

SYMBOLS

- Work area
- Type III Barricade with Flashers
- Sign with flashing light

GENERAL NOTES

Longitudinal dimensions may be adjusted to fit field conditions.

When speed limit is less than 45mph, change sign spacing to 250' and change ROAD CLOSED 1000 FT. to ROAD CLOSED 500 FT.

Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.

** Where local access is to be maintained, barricades are to be set up as shown in Road Closed to thru traffic.

Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed To All Traffic" detail on Highway Standard 702001.

All dimensions are in millimeters (inches) unless otherwise shown.

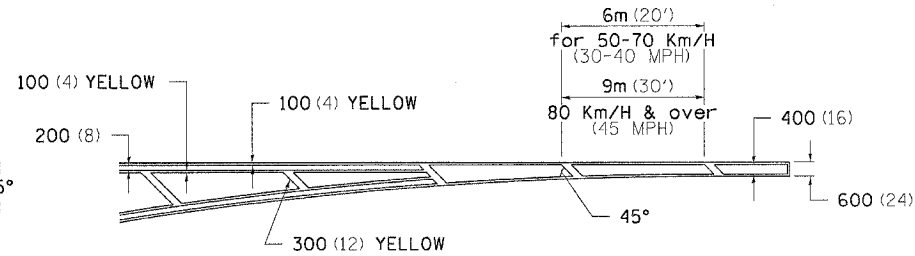
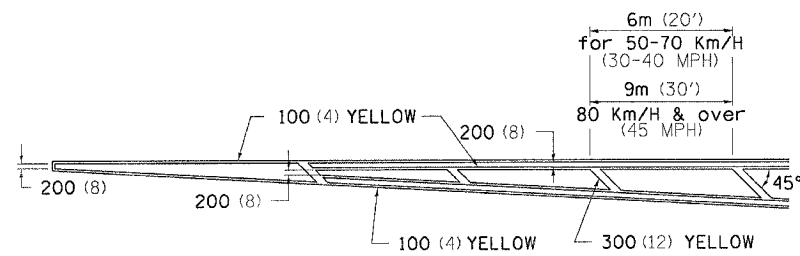
TYPICAL APPLICATION FOR ROAD CLOSURE

PLOT DATE * Wed Jul 06 10:53:02 2005
 FILE NAME * c:\p\proj\22br-1\22br125.dgn
 PLOT SCALE * 1/8" = 1'-0"
 REFERENCE * BREF#

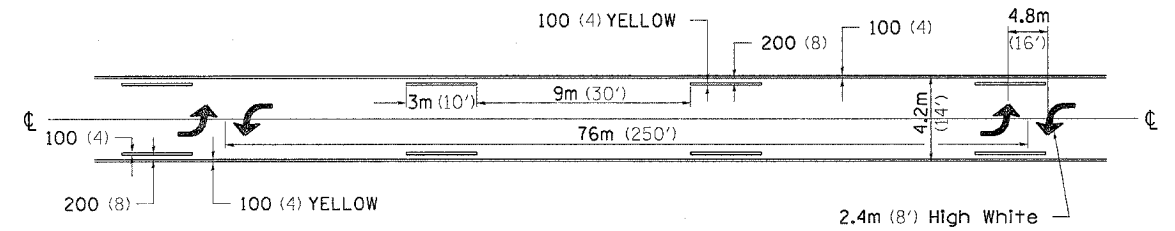
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	26
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TYPICAL PAVEMENT MARKINGS

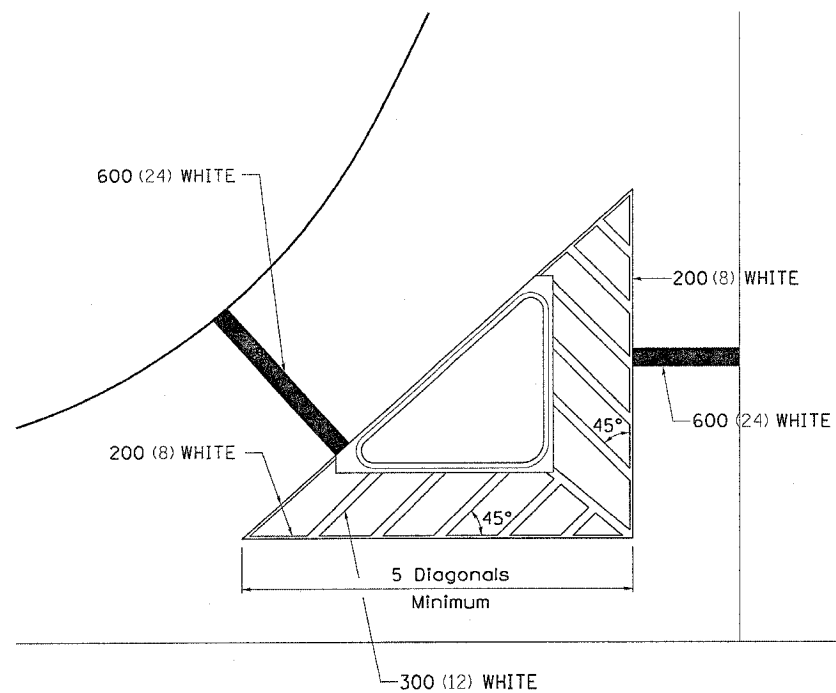
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



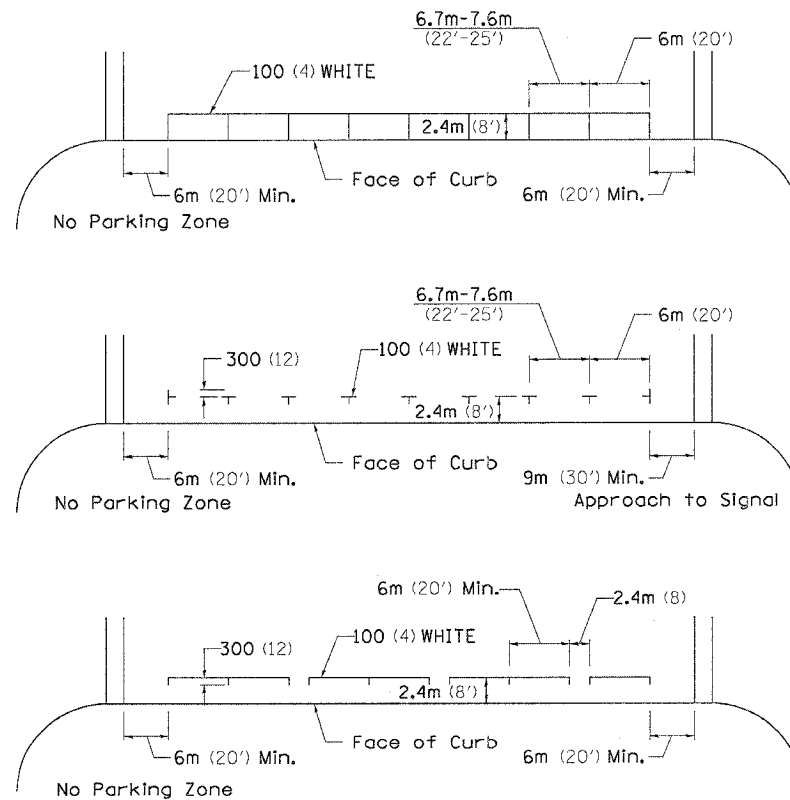
MEDIAN PAVEMENT MARKING



TYPICAL ISLAND OFFSET SHOULDER WIDTH



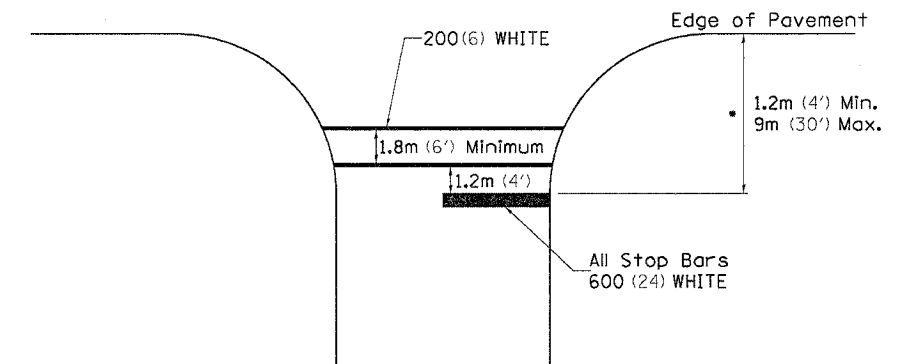
TYPICAL PARKING SPACING



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

STANDARD CROSSWALK MARKING

See Schedules for Locations



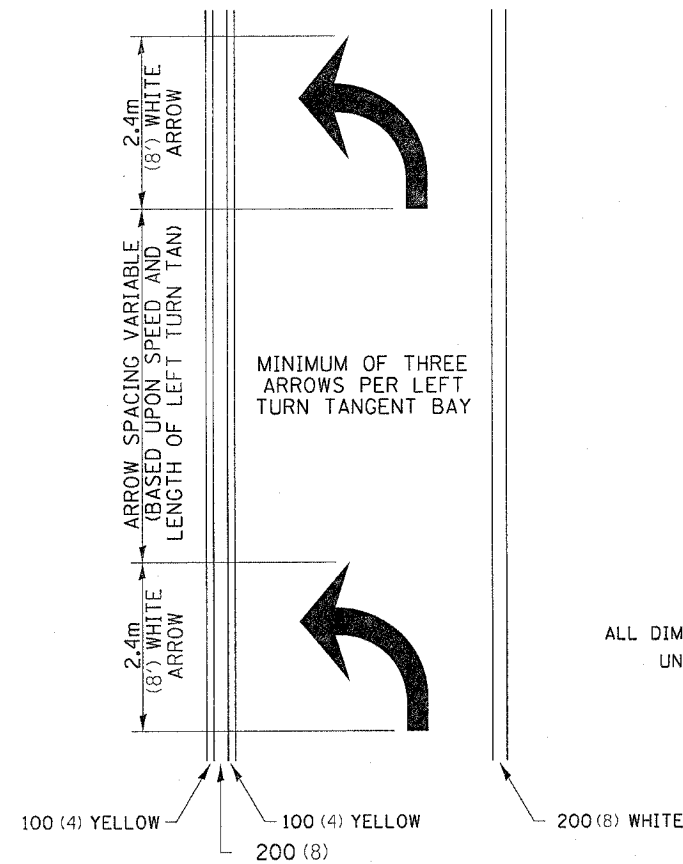
• Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

PLOT DATE: Wed Jul 06 10:53:03 2005
 FILE NAME: c:\projects\228665\228665.dwg
 PLOT SCALE: 1/8" = 1'-0"
 REFERENCE: 228665

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	27
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TYPICAL PAVEMENT MARKINGS

ARROW LAYOUT

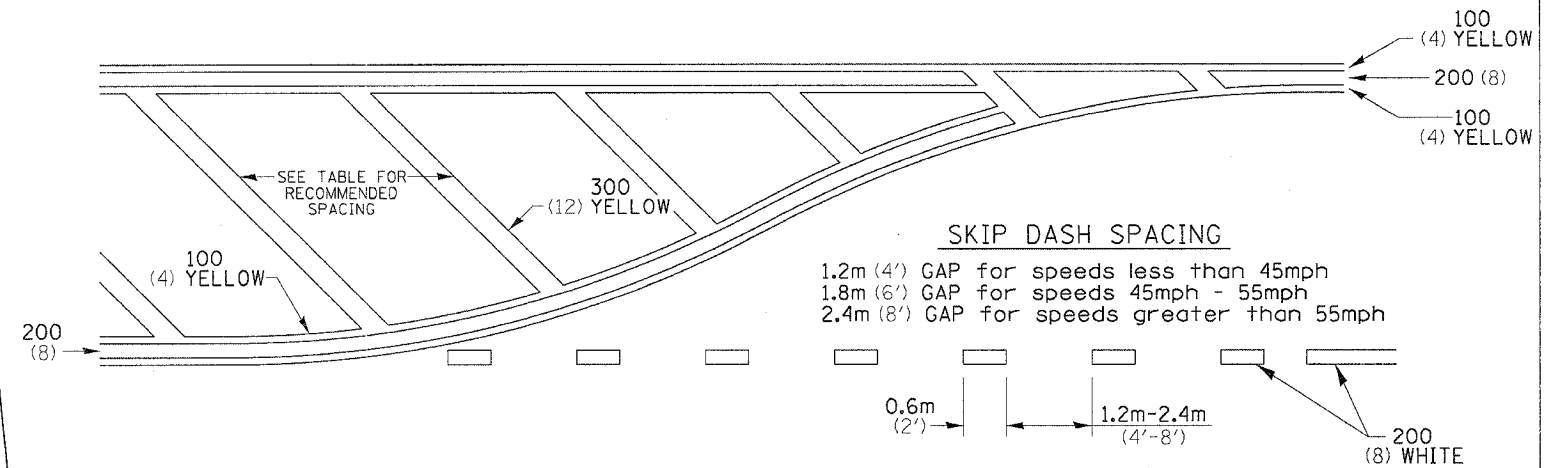


- ▲ ONE-WAY AMBER MARKER
- △ ONE-WAY CRYSTAL MARKER
- ◆ TWO-WAY AMBER MARKER

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

12.2m
6 at (40') O.C.
APPROACH SIDE ONLY

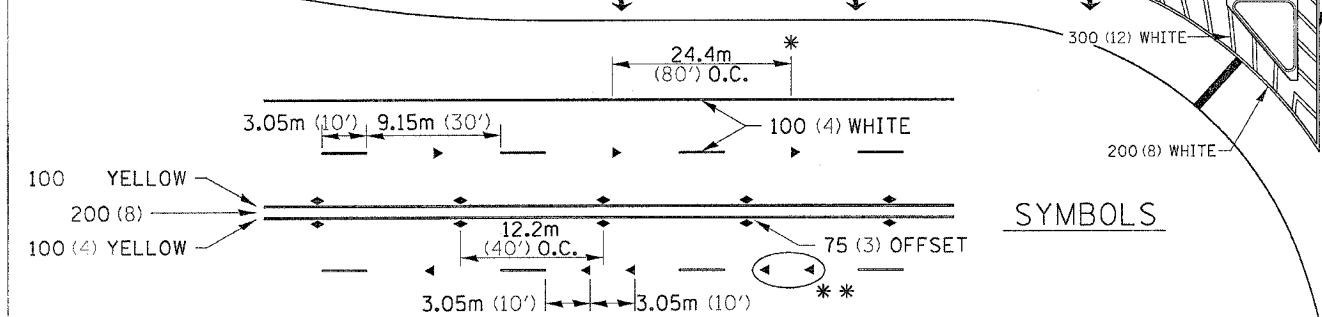
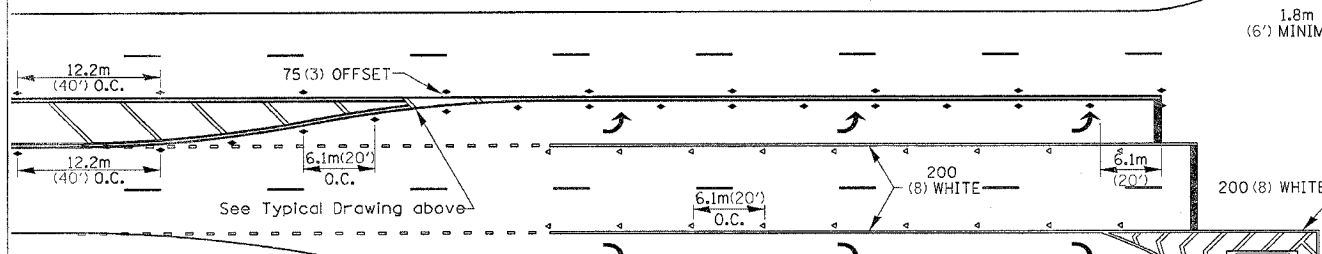
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



RECOMMENDED SPACING BETWEEN DIAGONALS (IN FEET)

Speed Limit Range	Continuous Median Area	Intersection Channelization	Objects (Islands)
less than 50Km/H (30MPH)	15.3m (50')	4.53m (15')	3.05m (10')
50-60Km/H (30-40MPH)	22.9m (75')	6.1m (20')	4.53m (15')
70Km/H (45MPH) & over	22.9m (75')	9.05m (30')	6.1m (20')

NOTE: if the spacing recommended in the Table does not permit at least five diagonal lines in the area being marked, the spacing from the next lowest speed range should be used. The recommended spacing is measured parallel to the pavement center line.



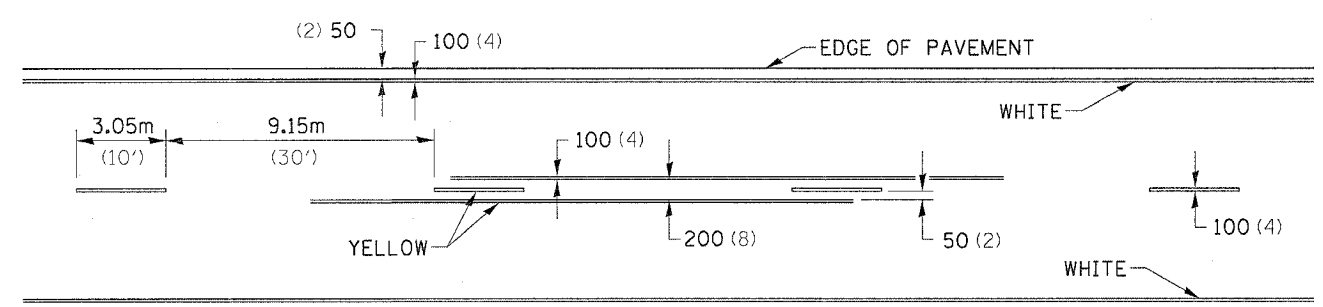
- * REDUCE TO 12.2m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 15Km/H (10MPH) LOWER THAN POSTED SPEEDS.
- ** USE DOUBLE MARKERS WHEN ADT ≥ 25,000

MULTI-LANE / UNDIVIDED

SYMBOLS

See Typical Drawing above
12.2m
6 at (40') O.C.
APPROACH SIDE ONLY

TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION - NO PASSING ZONES



PLOT DATE: Wed Jul 06 10:53:03 2005
 PLOT SCALE: 1/8" = 1'-0"
 REFERENCE: * REF*

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	28
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FINAL SURVEY NO. _____

SURVEYED BY _____

DATE _____

NOTE BOOK NO. _____

AREAS CHECKED _____

ORIGINAL SURVEY NO. _____

SURVEYED BY _____

DATE _____

NOTE BOOK NO. _____

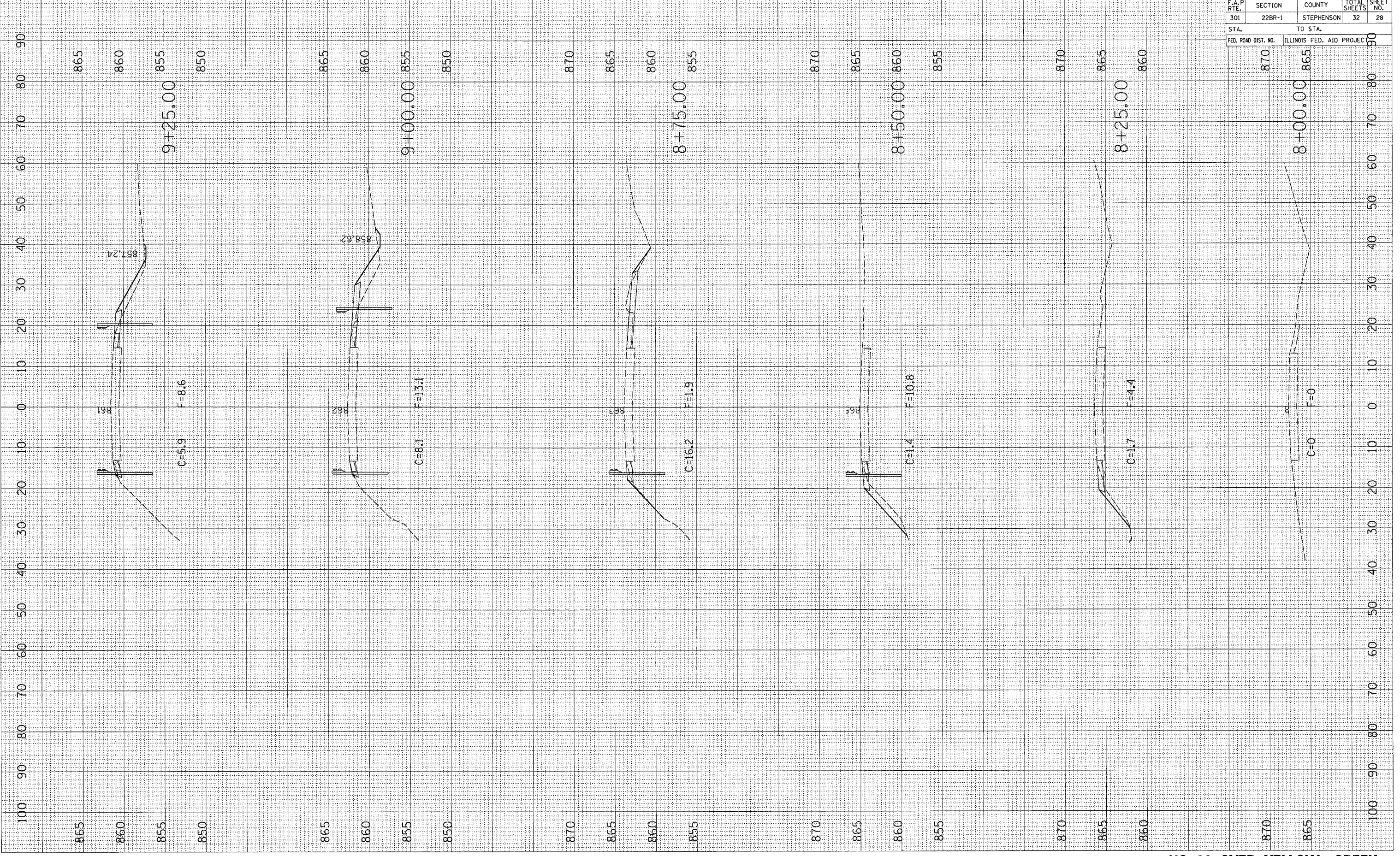
AREAS CHECKED _____

PLOT DATE = Wed Jul 08 11:54:44 2009

FILE NAME = c:\pvc\mca\2065075\0865075.dwg

PLOT SCALE = 10.0000 / IN.

USER NAME = mgj11j

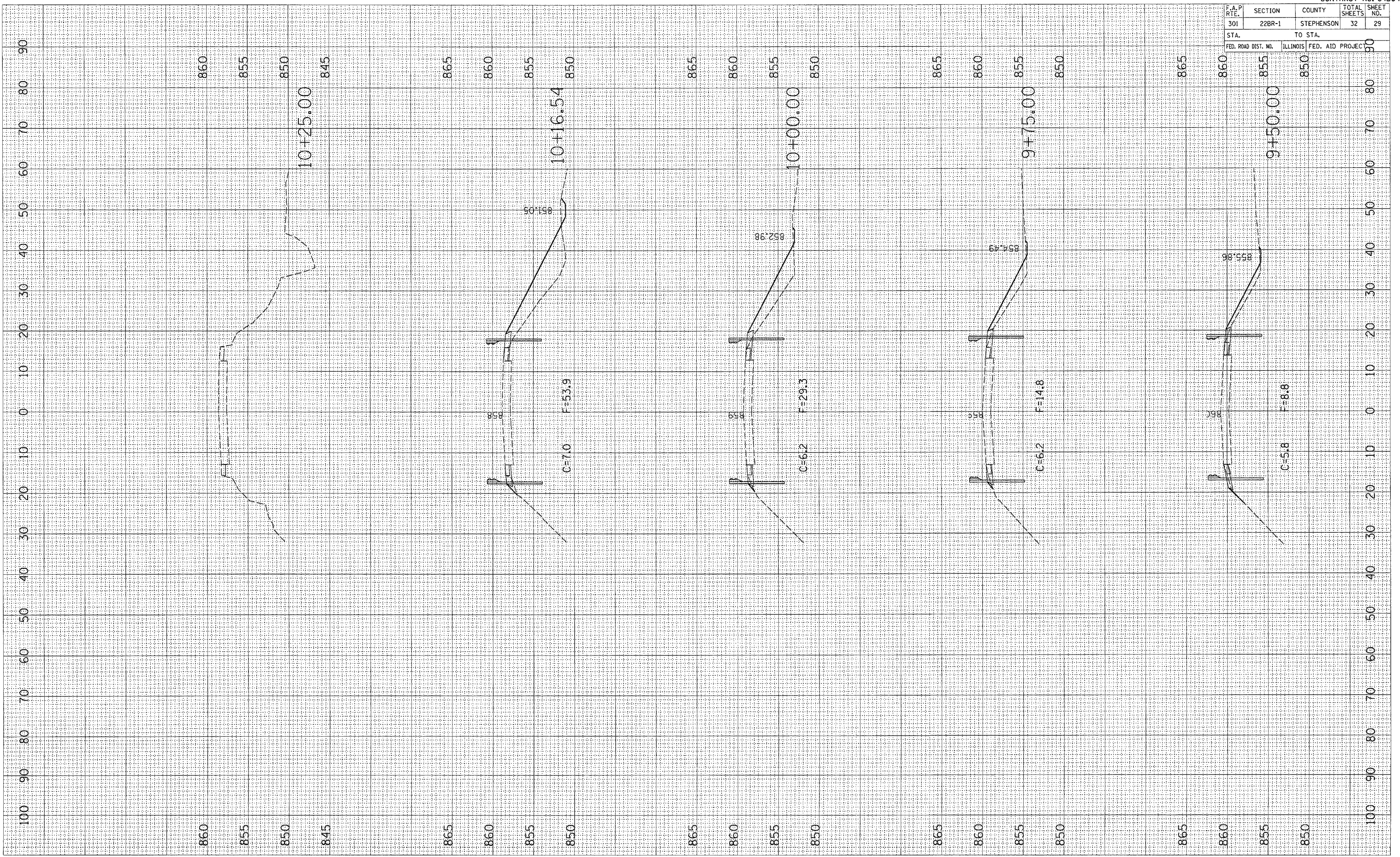


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	29
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJEC	

FINAL SURVEY	DATE
NO. _____	BY _____
NO. _____	DATE _____
NO. _____	DATE _____

ORIGINAL SURVEY	DATE
NO. _____	BY _____
NO. _____	DATE _____
NO. _____	DATE _____

PLOT DATE = Wed Jul 06 11:34:44 2005
 PLOT SCALE = 1/4" = 100' / IN.
 USER NAME = mag11j

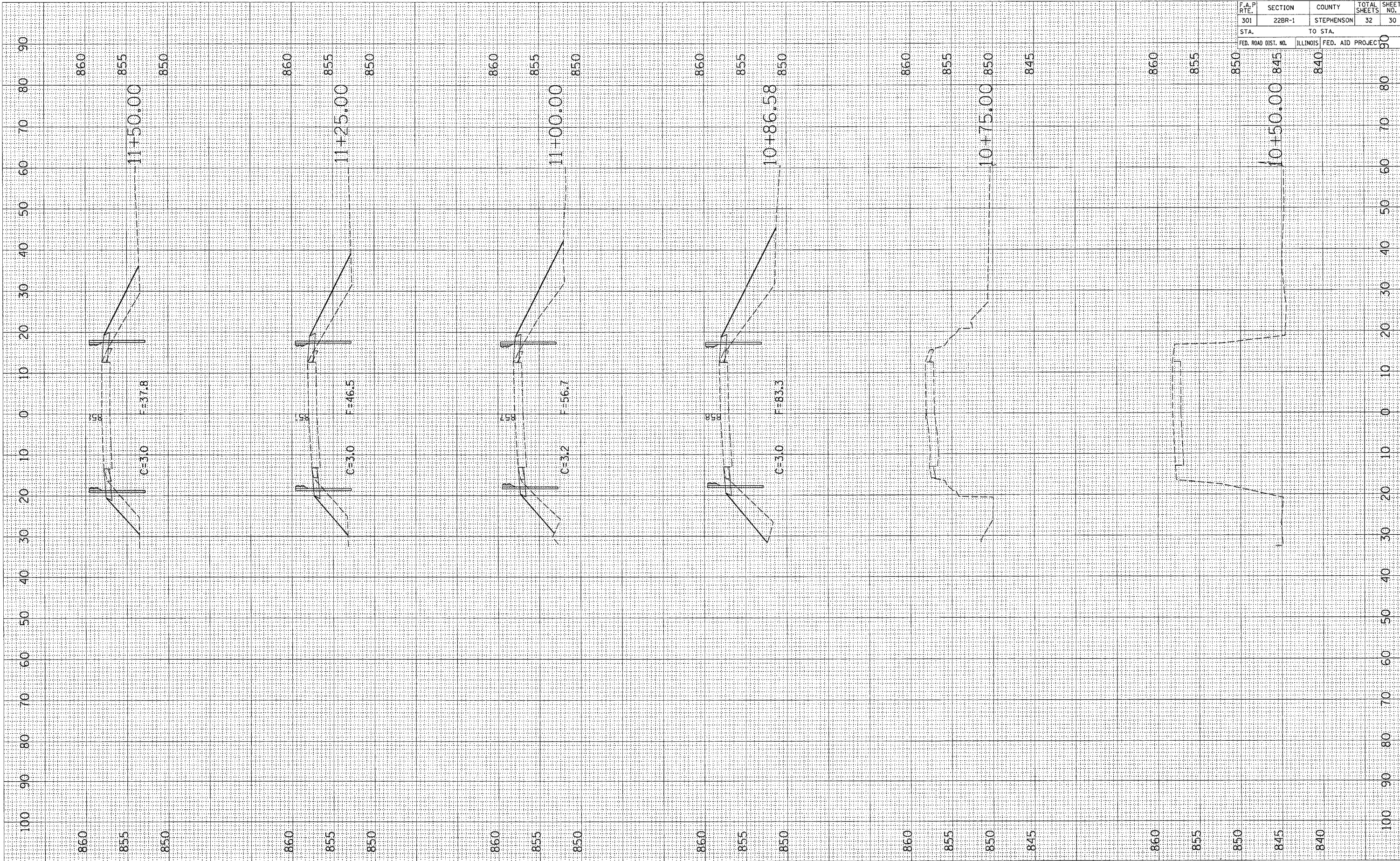


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	30
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

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

ORIGINAL SURVEY
 SUP TO P.L.O.
 TEMPORARY NOTE BOOK AREAS CHECKED
 NO. _____ BY _____ DATE _____

PLOT DATE = Wed Jul 06 11:54:45 2005
 PLOT SCALE = 1"=40.00'
 USER NAME = megallj

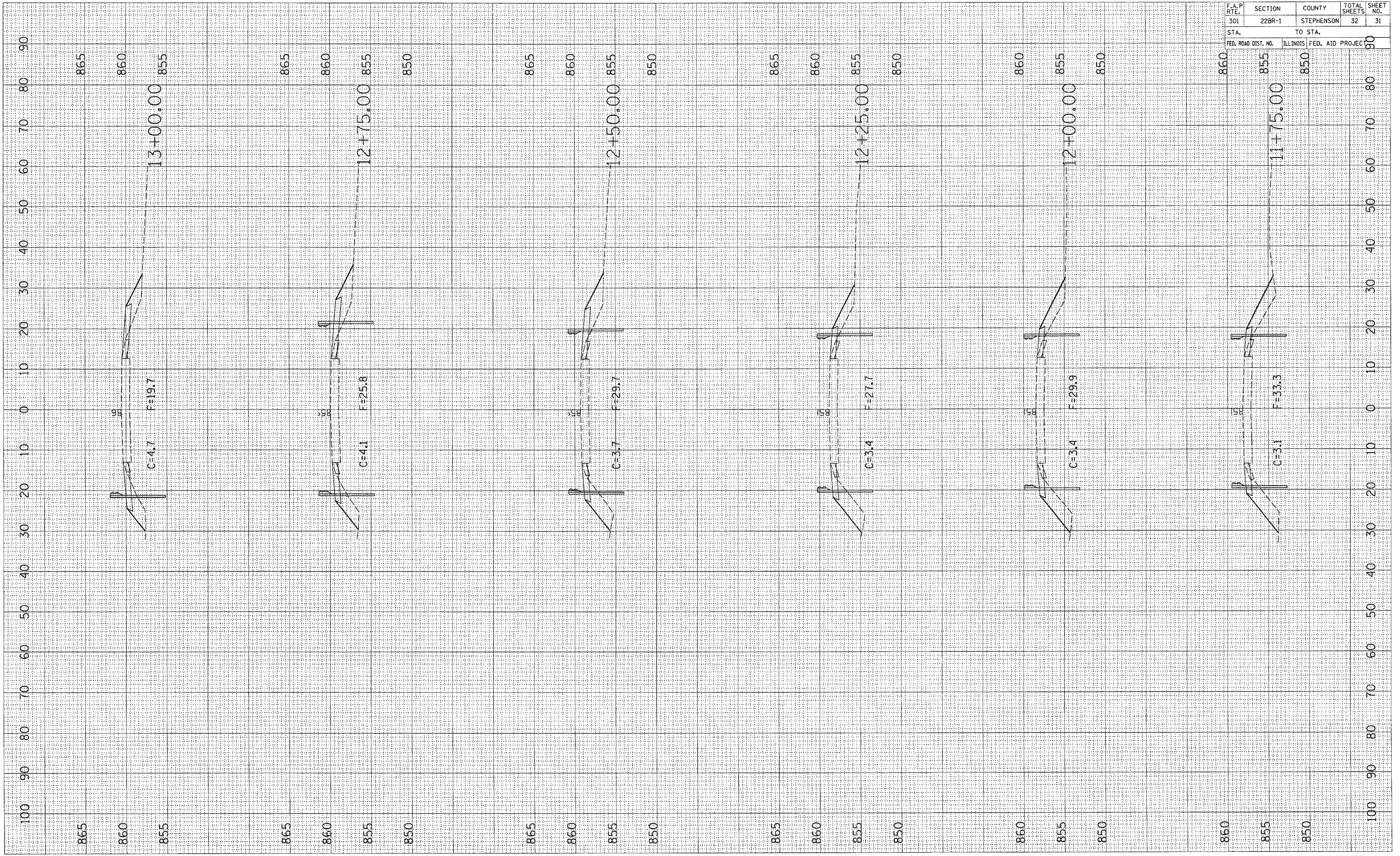


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	31
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLotted	
	DATE	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
TEMP. AT		
AREAS CHECKED		

PLOT DATE = Wed Jul 06 11:54:46 2005
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 USER NAME = mgjllj



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
301	22BR-1	STEPHENSON	32	32
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS CHECKED		

PLOT DATE = Wed Jul 06 11:14:46 2005
 PLOT SCALE = 1/8" = 20'
 USER NAME = mgj11j

