

76J77

MADISON



04-28-2017 LETTING ITEM 1661

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789	1-VB-R-1	MADISON	31	1
		ILLINOIS	CONTRACT NO. 76J77	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

100%
11-25-2017

TRAFFIC DATA
2015 ADT = 13800
2037 ADT = 17200
SU = 3.6% MU = 1.4%

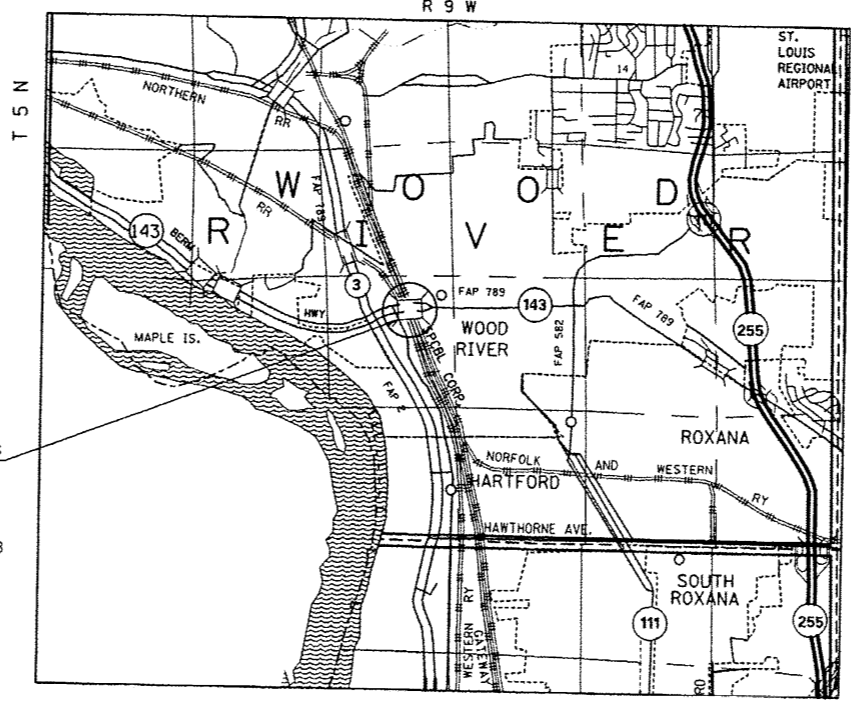
PROPOSED HIGHWAY PLANS

FAP ROUTE 789 (IL 143)
SECTION 1-VB-R-1

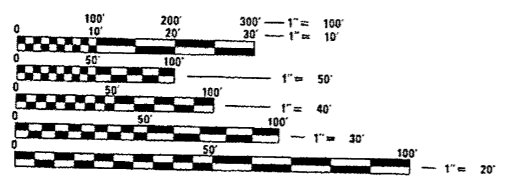
BRIDGE DECK WATERPROOFING &
JOINT REPAIR
MADISON COUNTY



C-98-055-16
R 9 W



PROJECT LOCATION
IL 143 OVER N&W, ICG
& CONRAIL RAILROAD
SN 060-0212
STA. 15+90.00
LATITUDE: 38.859879
LONGITUDE: -90.102248

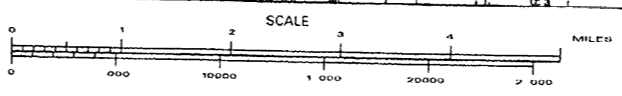


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: TIM PADGETT (618) 346-3325
PROJECT MANAGER: JOHNSON DUROSIER (618) 346-3454

CONTRACT NO. 76J77



GROSS LENGTH = 656 FT. = 0.124 MILE
NET LENGTH = 656 FT. = 0.124 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Feb 6 2017
Jeffrey Z. Ka... REGIONAL ENGINEER
Mar 24 2017
Mawson M. Addis PE... ENGINEER OF DESIGN AND ENVIRONMENT
Mar 24 2017
... DIRECTOR OF PROGRAM DEVELOPMENT

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Traffic Control: Stage Construction

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Joint opening shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

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

Bridge deck concrete sealer shall be placed on top/inside faces of parapets (full length) and wingwalls. In addition, place sealer on median (full length), on top of new concrete at joints and on sidewalk & curb adjacent to wingwall.

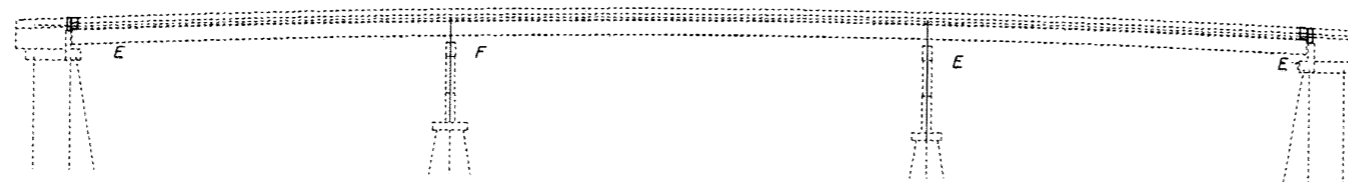
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All structural steel shall conform to AASHTO Classification M270 Grade 36, unless otherwise noted.

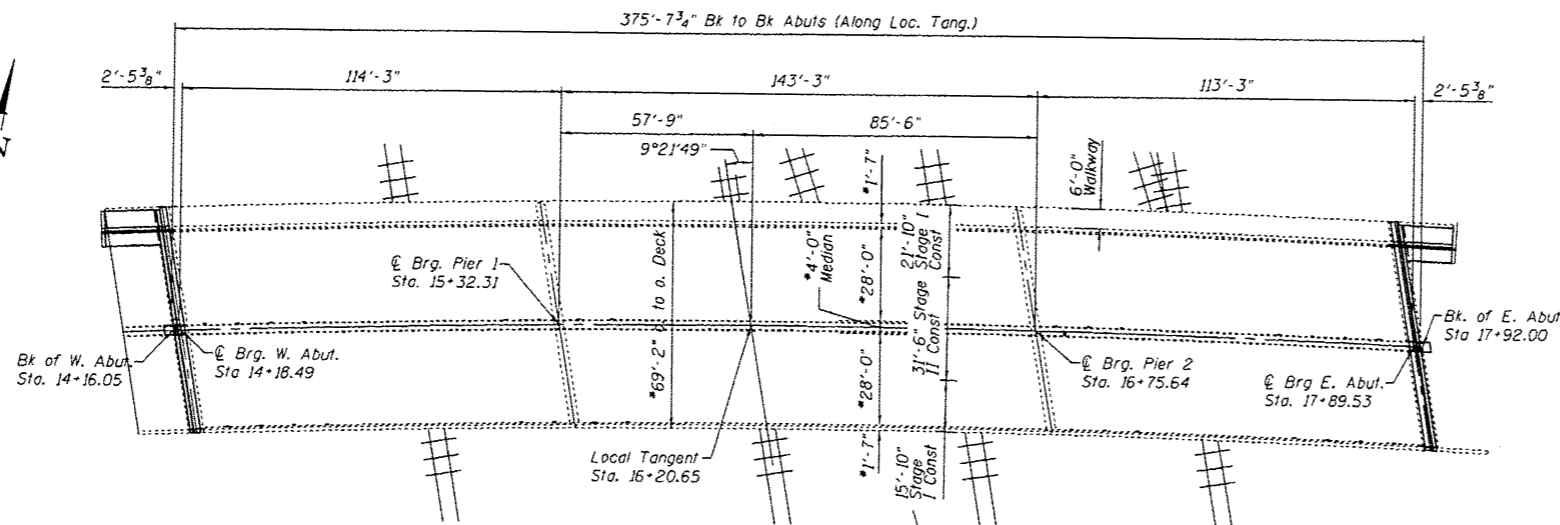
Fasteners shall be high strength bolts. Bolt 3/4"φ, open holes 1/8"φ, unless otherwise noted.

All structural steel, bolts, nuts, and washers shall be galvanized according to AASHTO M111 or M232 as applicable. Cost included with Furnishing and Erecting Structural Steel.

The concrete deck surface at joints shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.



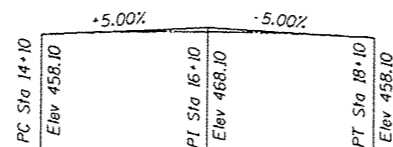
ELEVATION



PLAN

CURVE DATA

P.I. Sta. 16+10.83
 $\Delta = 18^{\circ} 53' 44''$ Rt.
 $D = 1^{\circ} 15'$
 $R = 4583.66'$
 $T = 762.75'$
 $L = 1511.64'$
 $E = 63.03'$
 $S.E. = 0.015611'$



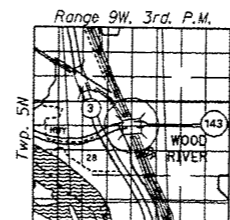
EXISTING PROFILE GRADE

INDEX OF SHEETS

1. General Plan & Elevation
2. Deck Cross Section & Waterproofing Staging
3. Joint Removal
4. Joint Replacement (W. Abut.)
5. Joint Replacement (E. Abut.)
6. Joint Details
7. Approach Details
8. Median Cross Section
9. Approach Parapet
10. Structural Steel
11. Structural Steel Details (W. Abut.)
12. Structural Steel Details (E. Abut.)
13. Beam End Repair (W. Abut. - Bm B)
14. Strip Seal Details
15. Temporary Concrete Barrier
16. Bar Splicers
17. Fence Anchorage Details
18. For Information Only (F.I.O.) - Existing Fence

SCOPE OF WORK

- Replace deck ends & hatchblocks
- Install Preformed Joint Strip Seals
- HMA overlay with WMS on deck
- Deck Slab Repair (Partial)
- Sidewalk Removal & Replacement
- Replace diaphragms & cross frames at abutments with new galvanized diaphragms & crossframes.
- Replace the approach sidewalk, adjacent curb & gutter, bridge approach shoulder & guardrail with bridge approach pavement with parapet to the limits shown on the plans
- Beam end repair (Galvanized)



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Polymerized HMA Surface Course, Mix "D" N70	Ton	197
Sidewalk Removal	Sq. Ft.	247
Concrete Removal	Cu. Yd.	23.8
Concrete Superstructure	Cu. Yd.	39.1
Reinforcement Bars, Epoxy Coated	Pound	8680
Furnishing & Erecting Structural Steel	Pound	7840
Bar Splicers	Each	48
Preformed Joint Strip Seal	Foot	138
Waterproofing Membrane System	Sq. Yd.	2386
Bridge Deck Concrete Sealer	Sq. Ft.	8253
Structural Steel Removal	Pound	7730
**Deck Slab Repair (Partial)	Sq. Yd.	20

**The quantity of deck slab repair is estimated. The engineer in the field shall determine the actual quantity and locations.



David Carl Puzey 3/20/17
 Expires 11/30/18

DESIGNED -	AYV
CHECKED -	ATH
DRAWN -	AYV
CHECKED -	ATH

DATE - APRIL 28, 2017

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 DEPARTMENT OF TRANSPORTATION

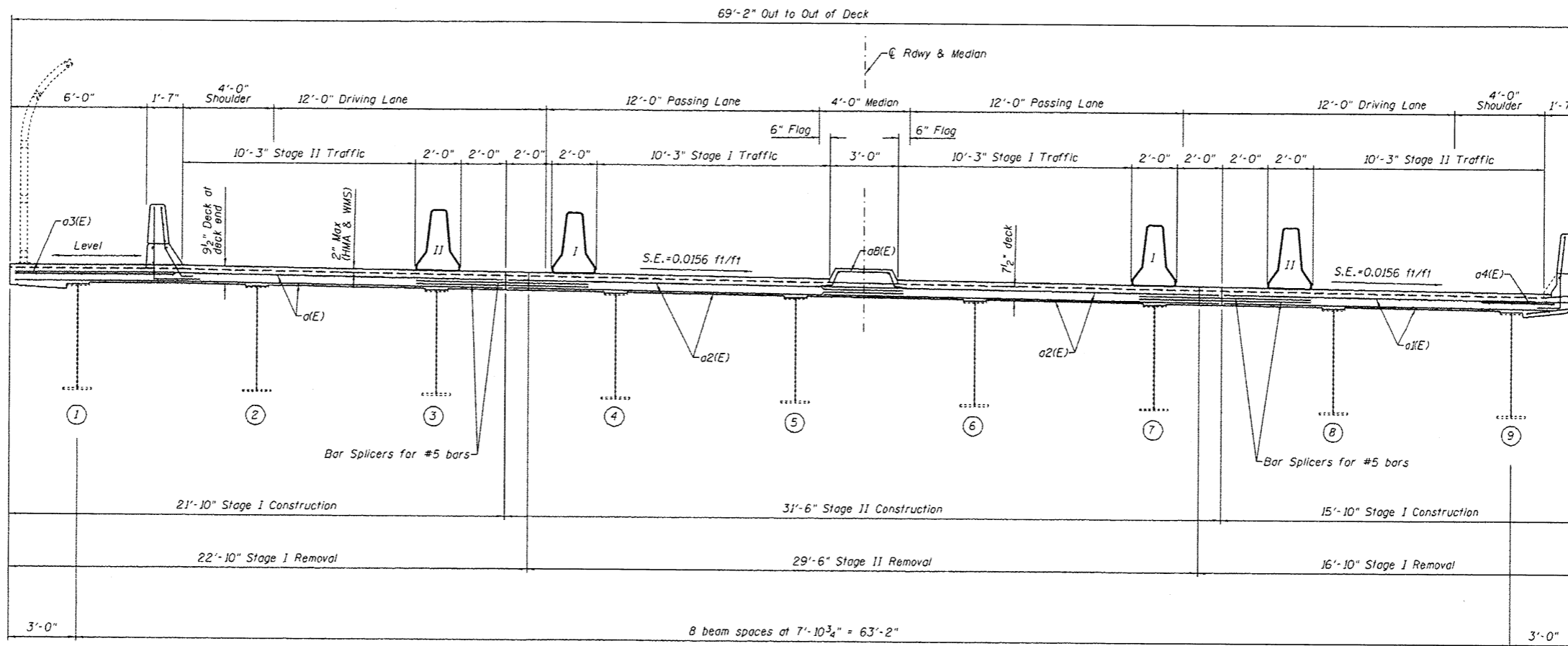
GENERAL PLAN & ELEVATION (IL 143 over RR - Phoebe Goldberg Bridge)
 SN 060-0212

SHEET NO. 1 OF 18 SHEETS

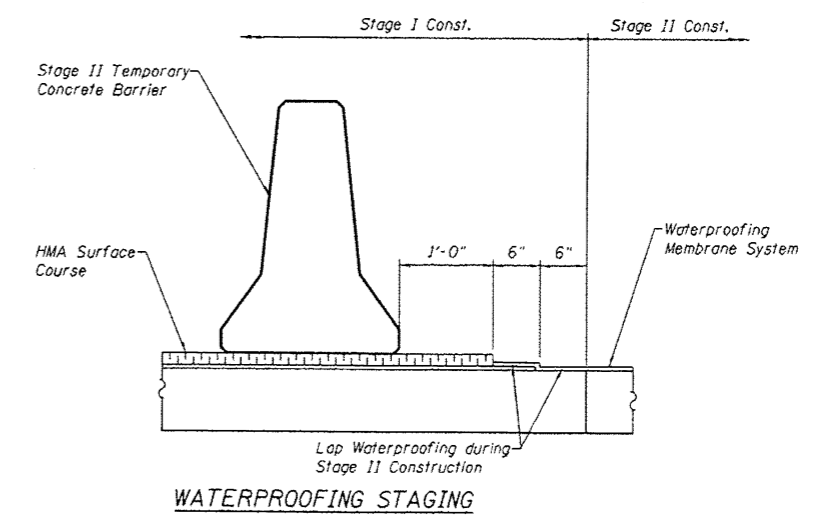
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789	1-VB-R-1	MADISON	31	14

CONTRACT NO. 76J77

ILLINOIS PER. AID PROJECT



DECK CROSS SECTION
 Looking East @ Joint Location
 All horizontal dimensions in Deck Cross Section are radial.



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DESIGNED - AYW
CHECKED - ATH
DRAWN - AYW
CHECKED - ATH

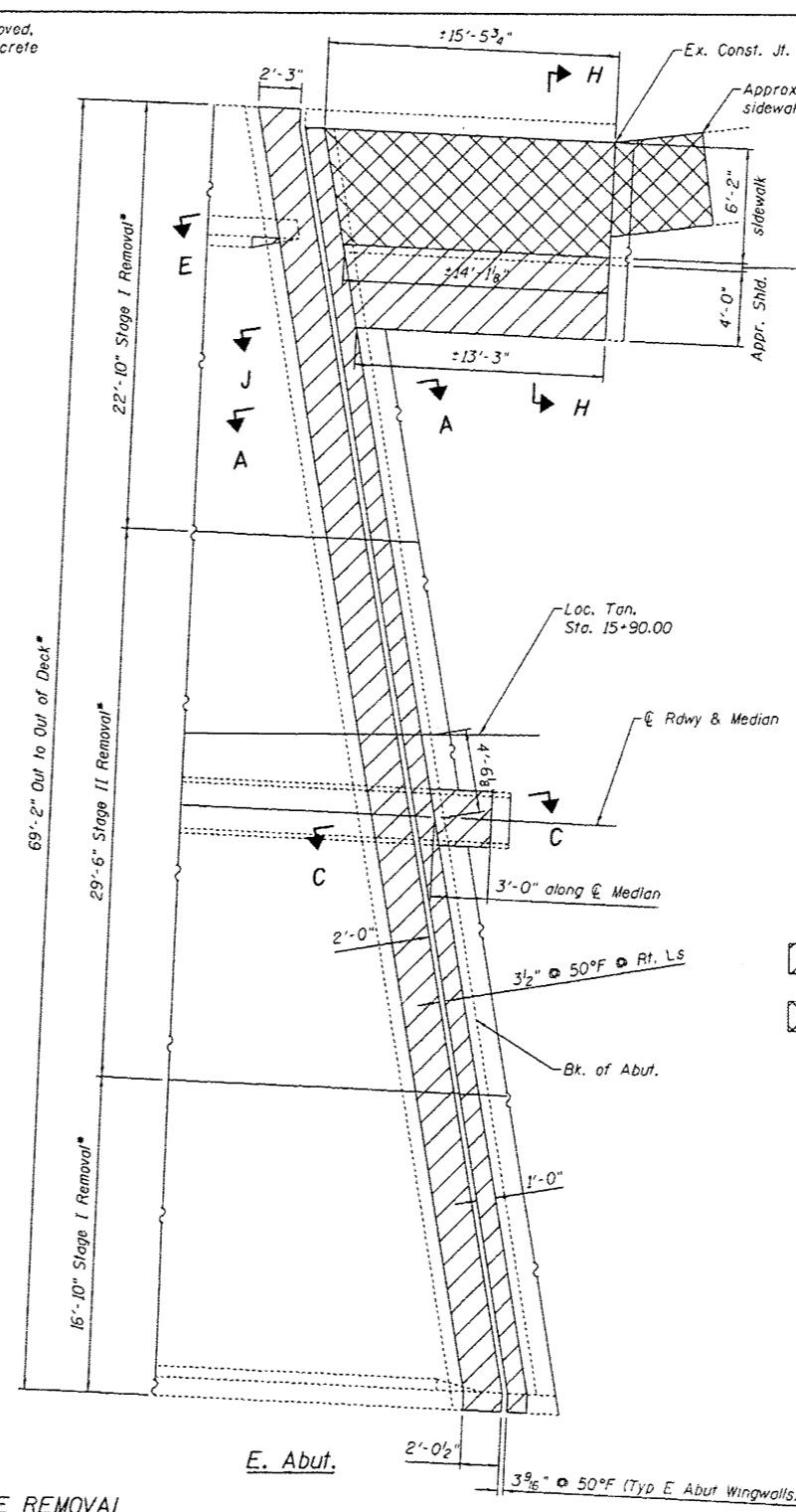
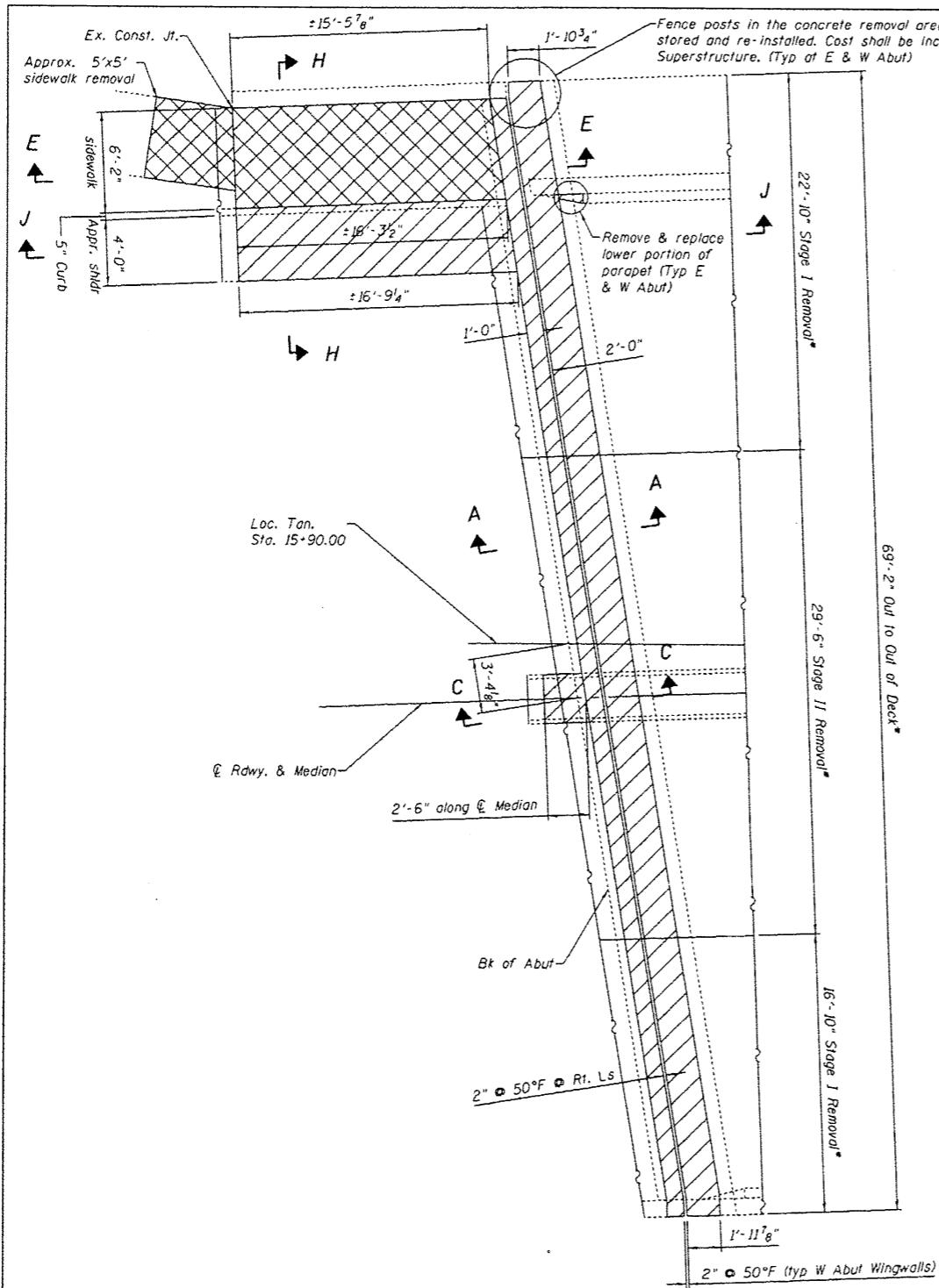
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DECK CROSS SECTION & WATERPROOFING STAGING
SN 060-0212

F.A.P. RTE. 789	SECTION I-VB-R-1	COUNTY MADISON	TOTAL SHEETS 31	SHEET NO. 15
SHEET NO. 2 OF 18 SHEETS			CONTRACT NO. 76J77	

ILLINOIS FED. AID PROJECT



Concrete Removal (Will include removal of the Bridge Approach Shoulder Pavement and the curb and gutter to the limits shown.)
 Sidewalk Removal

Notes:
 See sheet 6 of 18 for Sections A-A & C-C
 See sheet 7 of 18 for Sections E-E & J-J
 See Sheet 9 of 18 for Section H-H

CONCRETE REMOVAL
* Measured Radially

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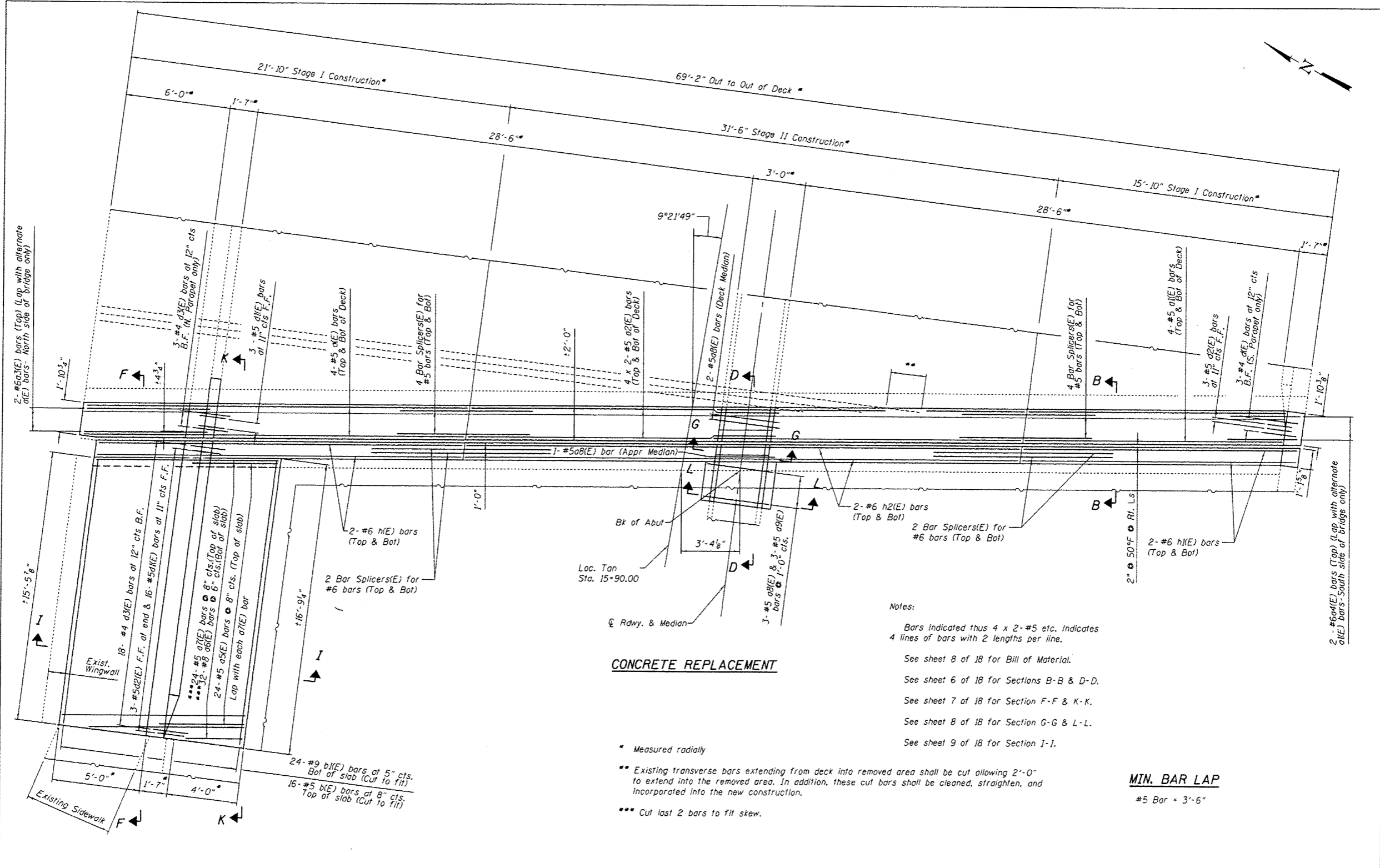
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DRAWN -	AYV
CHECKED -	ATH

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REMOVAL
SN 060-0212
SHEET NO. 3 OF 18 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789	1-V8-R-1	MADISON	31	16
CONTRACT NO. 76J77			ILLINOIS FED. AID PROJECT	



CONCRETE REPLACEMENT

Notes:
 Bars indicated thus 4 x 2-#5 etc. indicates 4 lines of bars with 2 lengths per line.
 See sheet 8 of 18 for Bill of Material.
 See sheet 6 of 18 for Sections B-B & D-D.
 See sheet 7 of 18 for Section F-F & K-K.
 See sheet 8 of 18 for Section G-G & L-L.
 See sheet 9 of 18 for Section I-I.

- * Measured radially
- ** Existing transverse bars extending from deck into removed area shall be cut allowing 2'-0" to extend into the removed area. In addition, these cut bars shall be cleaned, straighten, and incorporated into the new construction.
- *** Cut last 2 bars to fit skew.

MIN. BAR LAP
 #5 Bar = 3'-6"

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DRAWN -	AYV
CHECKED -	ATH

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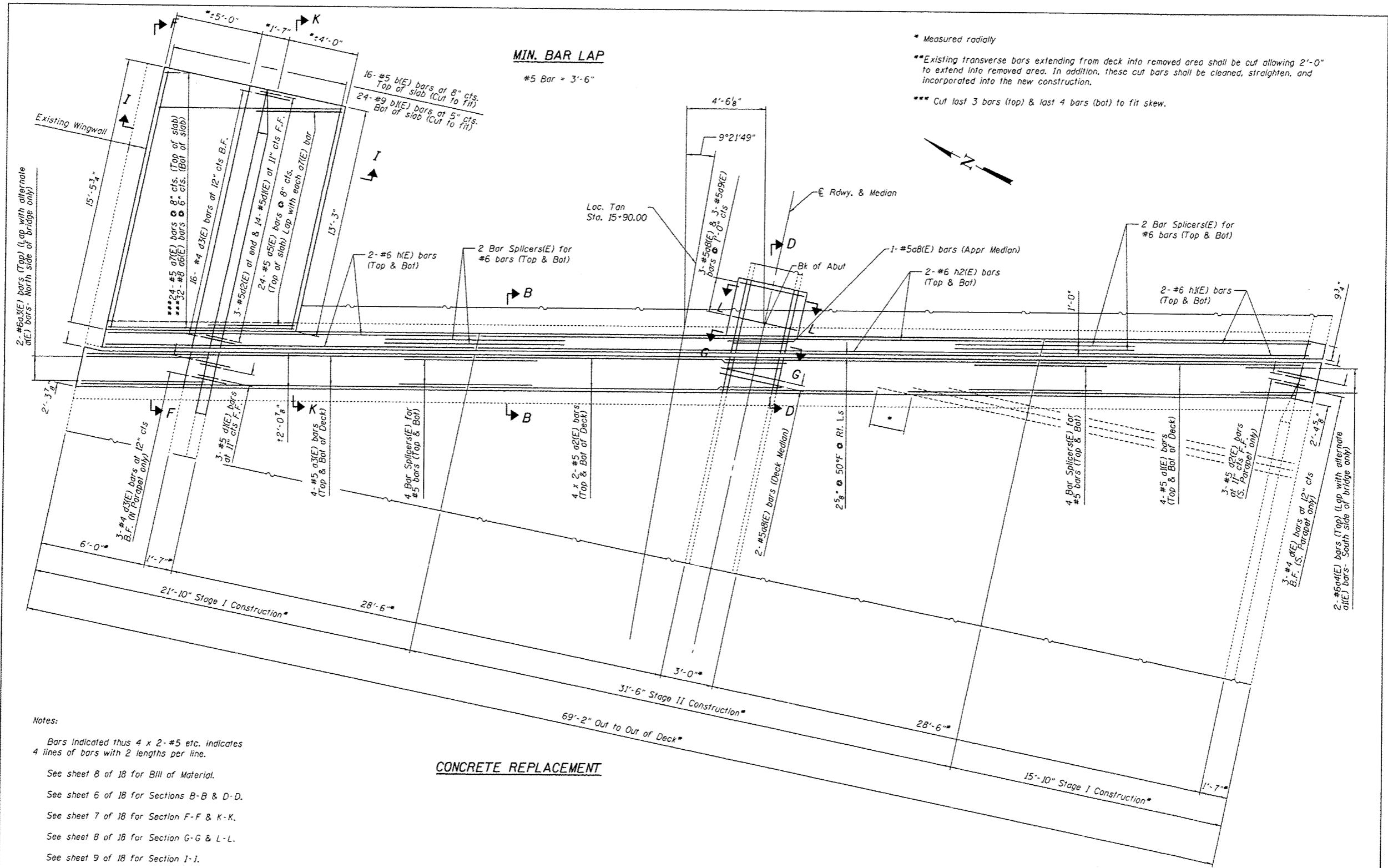
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 DEPARTMENT OF TRANSPORTATION**

**JOINT REPLACEMENT (W. ABUT.)
 SN 060-0212**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789	1-VB-R-1	MADISON	31	17

SHEET NO. 4 OF 18 SHEETS

ILLINOIS FED. AID PROJECT CONTRACT NO. T6J77



MIN. BAR LAP

#5 Bar = 3'-6"

* Measured radially

** Existing transverse bars extending from deck into removed area shall be cut allowing 2'-0" to extend into removed area. In addition, these cut bars shall be cleaned, straighten, and incorporated into the new construction.

*** Cut last 3 bars (top) & last 4 bars (bot) to fit skew.

Notes:

Bars Indicated thus 4 x 2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

See sheet 8 of 18 for Bill of Material.

See sheet 6 of 18 for Sections B-B & D-D.

See sheet 7 of 18 for Section F-F & K-K.

See sheet 8 of 18 for Section G-G & L-L.

See sheet 9 of 18 for Section 1-1.

CONCRETE REPLACEMENT

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DESIGNED	-	AYV
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DRAWN	-	AYV
CHECKED	-	ATH

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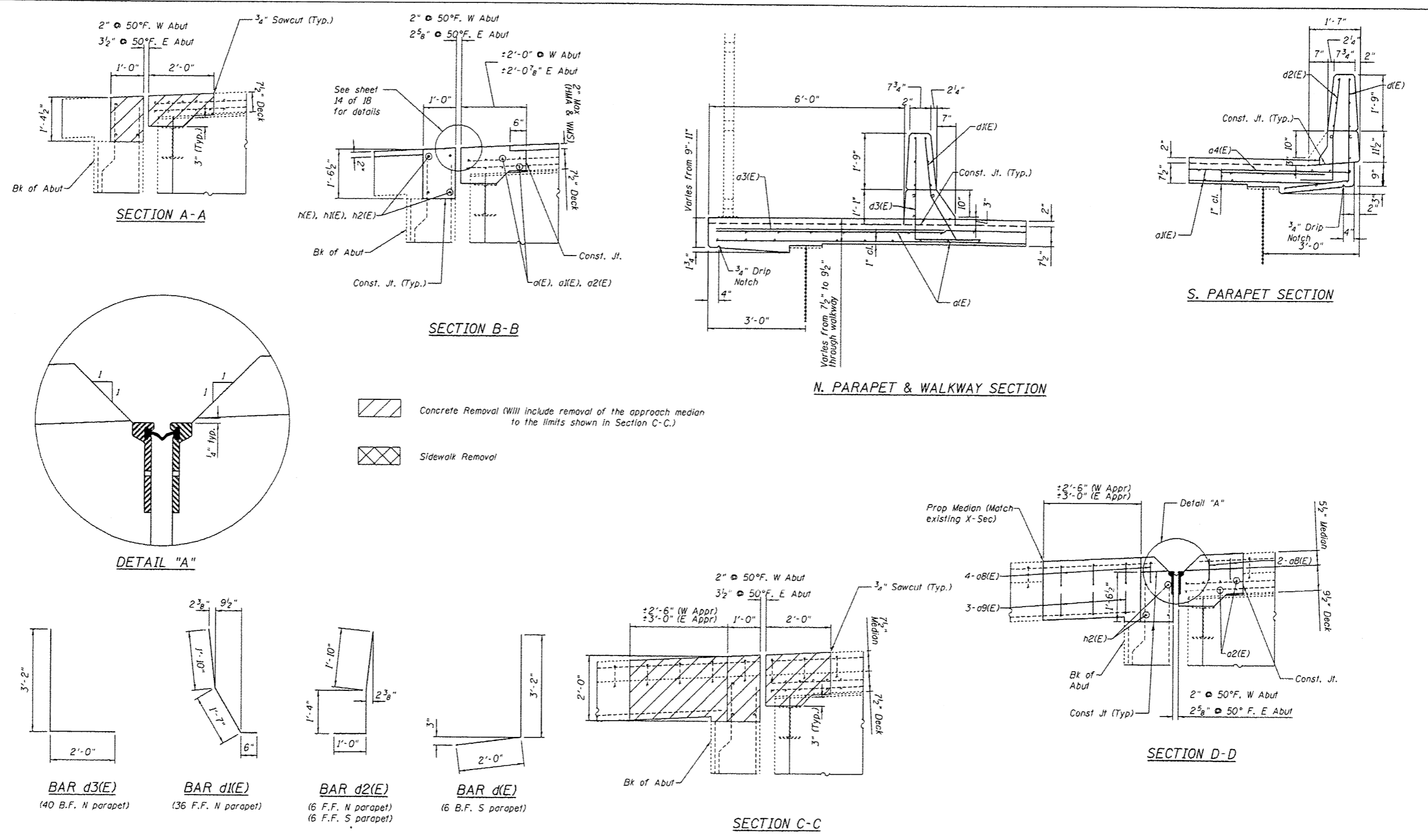
**JOINT REPLACEMENT (E. ABUT.)
SN 060-0212**

SHEET NO. 5 OF 18 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789	1-VB-R-1	MADISON	31	18

CONTRACT NO. 76J77

ILLINOIS FED. AID PROJECT



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DRAWN - AYW	REVISED
CHECKED - ATH	

DATE - APRIL 28, 2017	REVISED
	REVISED

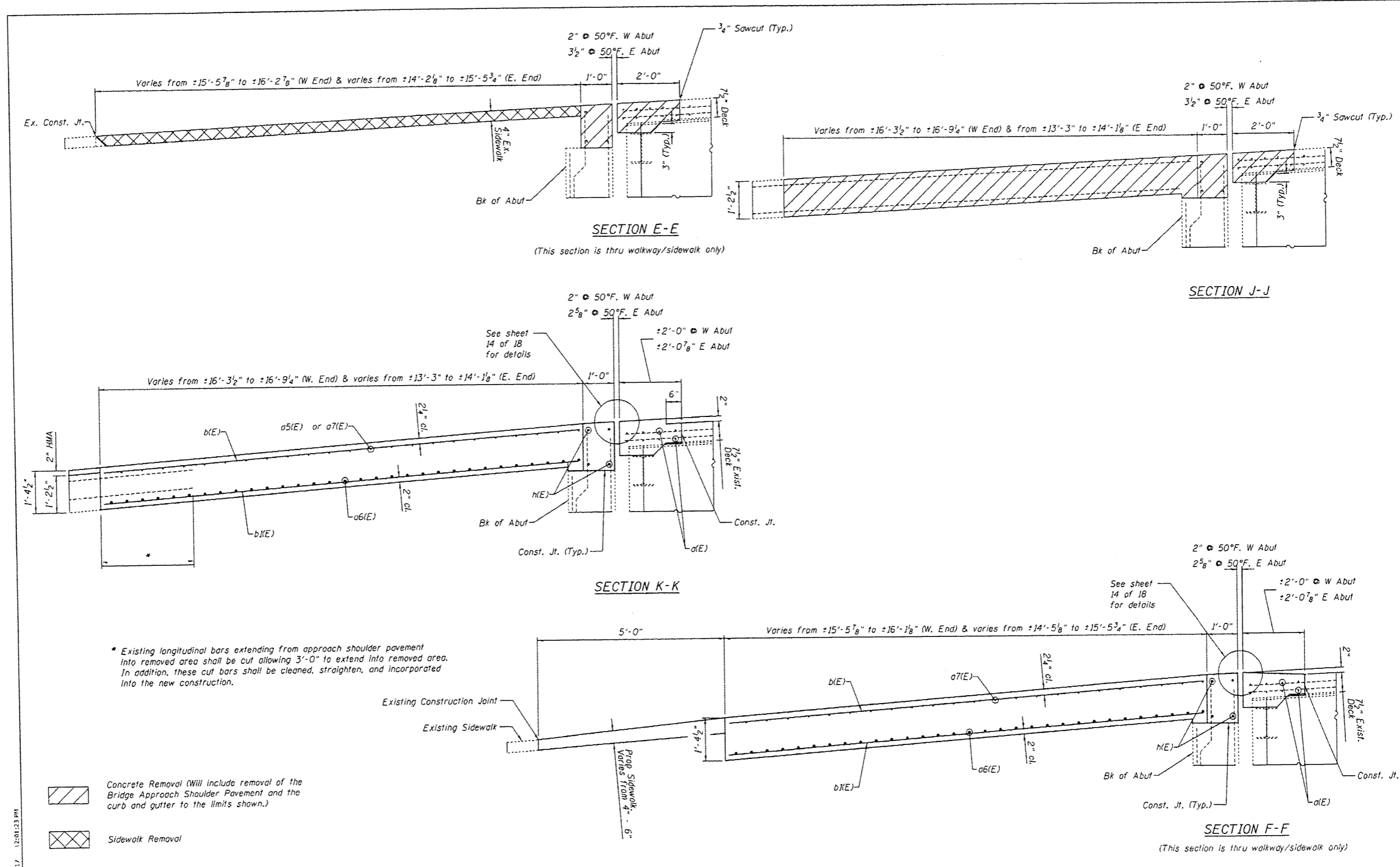
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**JOINT DETAILS
 SN 060-0212**

SHEET NO. 6 OF 18 SHEETS

F.A.P. RTE. 789	SECTION 1-VB-R-1	COUNTY MADISON	TOTAL SHEETS 31	SHEET NO. 19
				CONTRACT NO. T6J77

ILLINOIS FED. AID PROJECT



* Existing longitudinal bars extending from approach shoulder pavement into removed area shall be cut allowing 3'-0" to extend into removed area. In addition, these cut bars shall be cleaned, straighten, and incorporated into the new construction.

- Concrete Removal (Will include removal of the Bridge Approach Shoulder Pavement and the curb and gutter to the limits shown.)
- Sidewalk Removal

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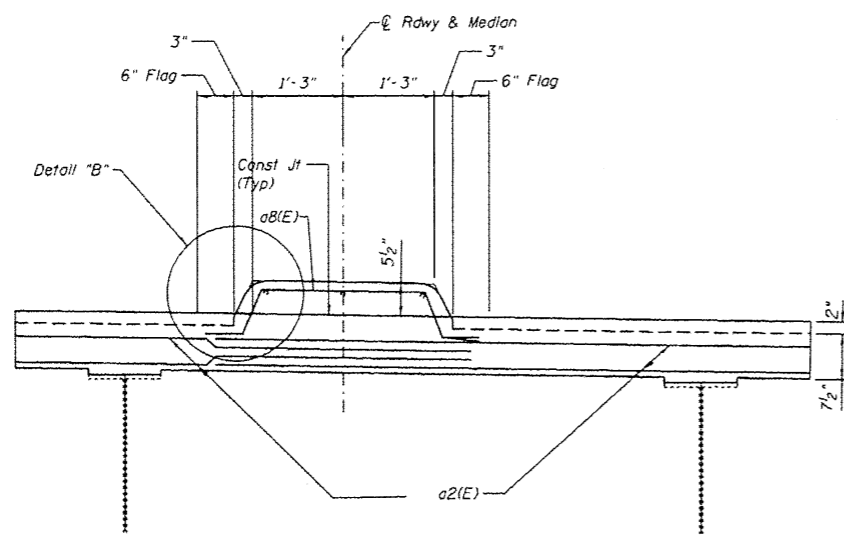
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CHECKED - ATH	REVISED
DRAWN - AYY	REVISED
CHECKED - ATH	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**APPROACH DETAILS
SN 060-0212**

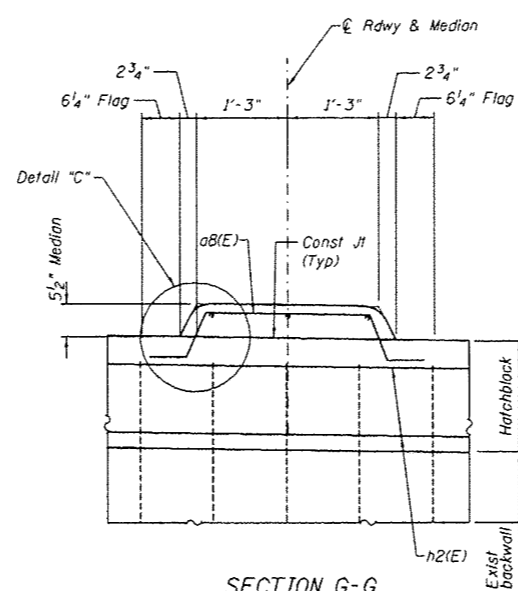
SHEET NO. 7 OF 18 SHEETS

F.A.P. SITE	SECTION	COUNTY	TOTAL SHEET NO.
789	1-VB-R-1	MADISON	31 20
			CONTRACT NO. 76J77
ILLINOIS FED. AID PROJECT			

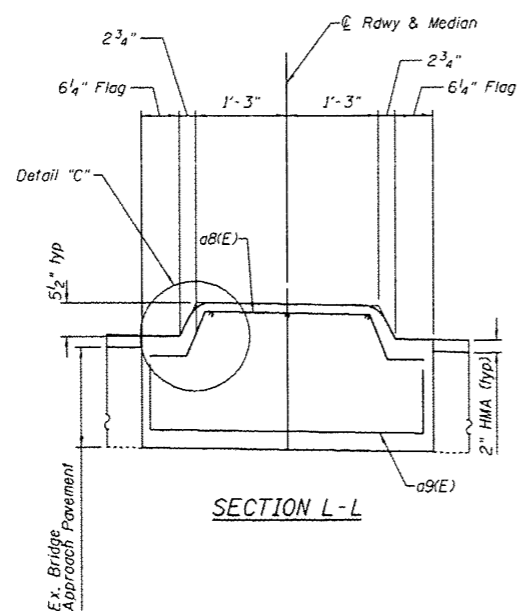


SECTION BRIDGE MEDIAN

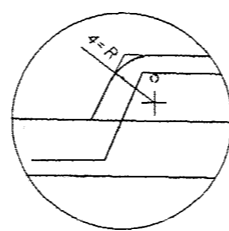
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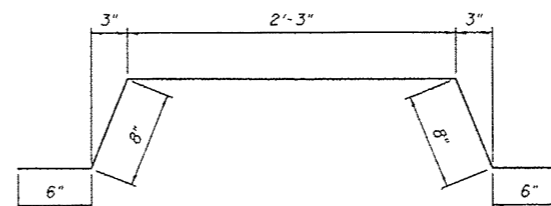
SECTION G-G



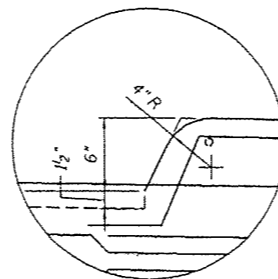
SECTION L-L



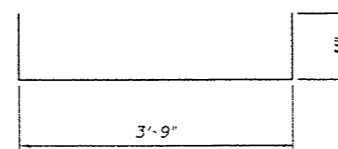
DETAIL "C"



BAR a8(E)



DETAIL "B"



BAR a9(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	16	#5	21'-7"	—
a1(E)	16	#5	14'-9"	—
a2(E)	32	#5	17'-9"	—
a3(E)	4	#6	7'-0"	—
a4(E)	4	#6	4'-0"	—
a5(E)	48	#5	5'-3"	—
a6(E)	64	#8	10'-5"	—
a7(E)	48	#5	10'-5"	—
a8(E)	12	#5	4'-7"	—
a9(E)	6	#5	5'-7"	—
b(E)	32	#5	16'-5"	—
b1(E)	48	#9	16'-5"	—
d1(E)	6	#4	5'-2"	J
d1(E)	36	#5	3'-11"	L
d2(E)	12	#5	4'-2"	J
d3(E)	40	#4	5'-2"	L
e(E)	6	#4	16'-9"	—
e1(E)	2	#8	16'-9"	—
e2(E)	2	#5	16'-9"	—
e3(E)	6	#4	14'-9"	—
e4(E)	2	#8	14'-9"	—
e5(E)	2	#5	14'-9"	—
n(E)	8	#5	20'-8"	—
h1(E)	8	#6	15'-7"	—
h2(E)	8	#6	31'-6"	—
Concrete Removal			Cu. Yd.	23.8
Concrete Structures			Cu. Yd.	39.1
Reinforcement Bars, Epoxy Coated			Lbs.	8680

Reinforcement bars designated (E) shall be epoxy coated.

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DESIGNED - AYW
CHECKED - ATH
DRAWN - AYW
CHECKED - ATH

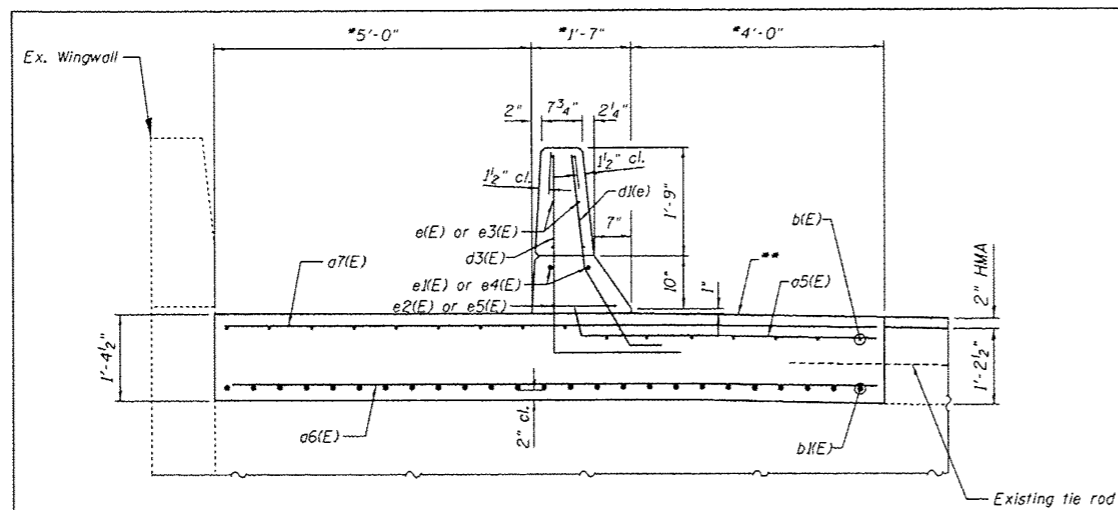
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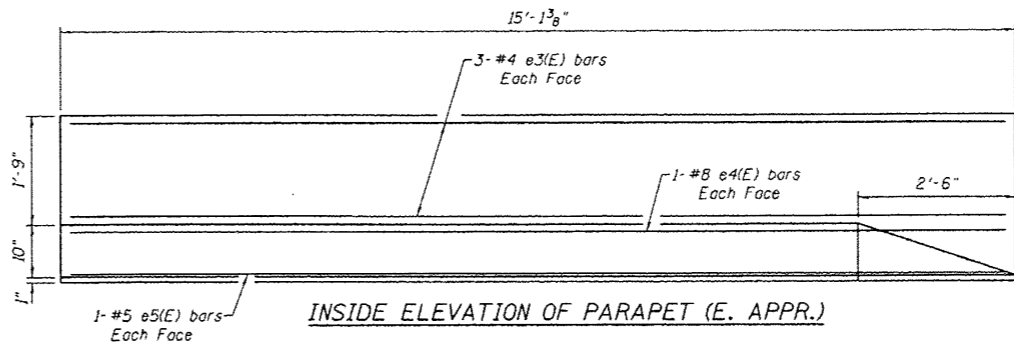
MEDIAN CROSS SECTION
SN 060-0212

SHEET NO. 8 OF 18 SHEETS

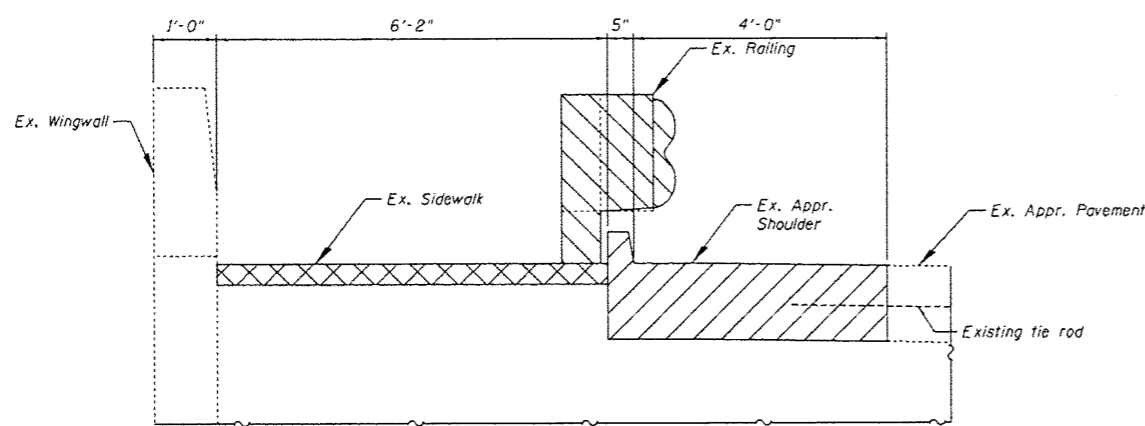
F.A.P. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789	1-VB-R-1	MADISON	31	21
			CONTRACT NO. 76J77	
ILLINOIS FED. AID PROJECT				



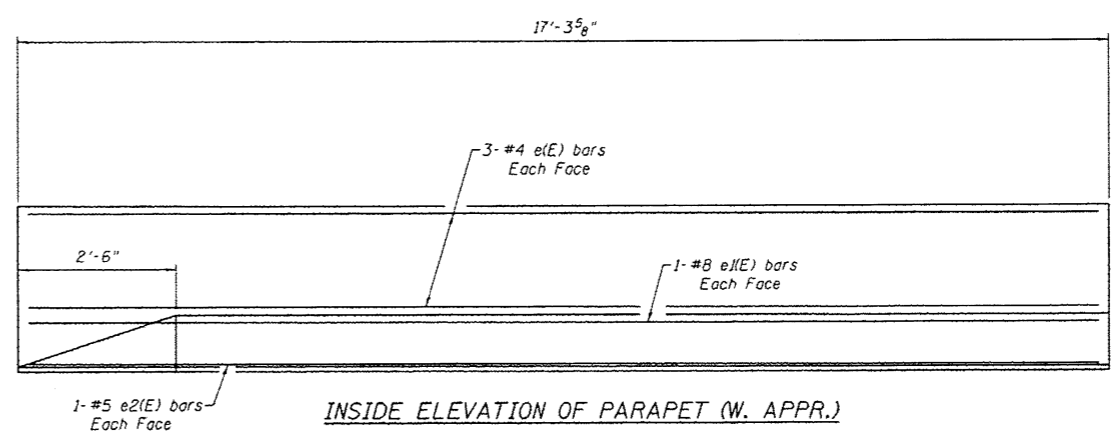
SECTION I-I



INSIDE ELEVATION OF PARAPET (E. APPR.)

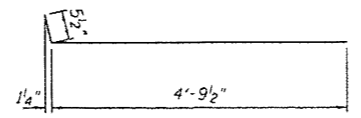


SECTION H-H



INSIDE ELEVATION OF PARAPET (W. APPR.)

*Measured radially
 ** Contractor has option of pouring 4'-0" x 2" blackout and extending HMA to face of parapet.



BAR a5(E)

- Concrete Removal (Will include removal of the Bridge Approach Pavement and curb to the limits shown.)
- Sidewalk Removal
- Guardrail Removal

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DESIGNED - AYV
CHECKED - ATH
DRAWN - AYV
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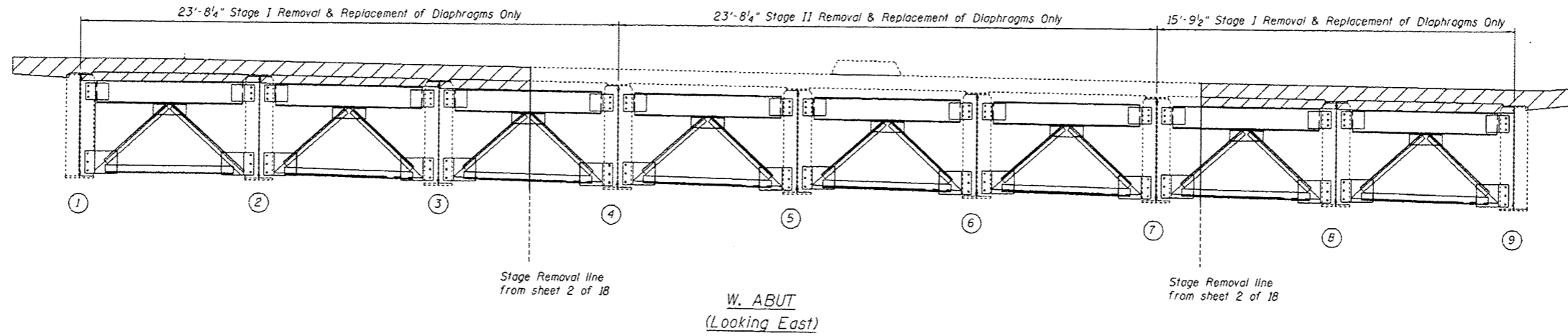
DATE - APRIL 28, 2017
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

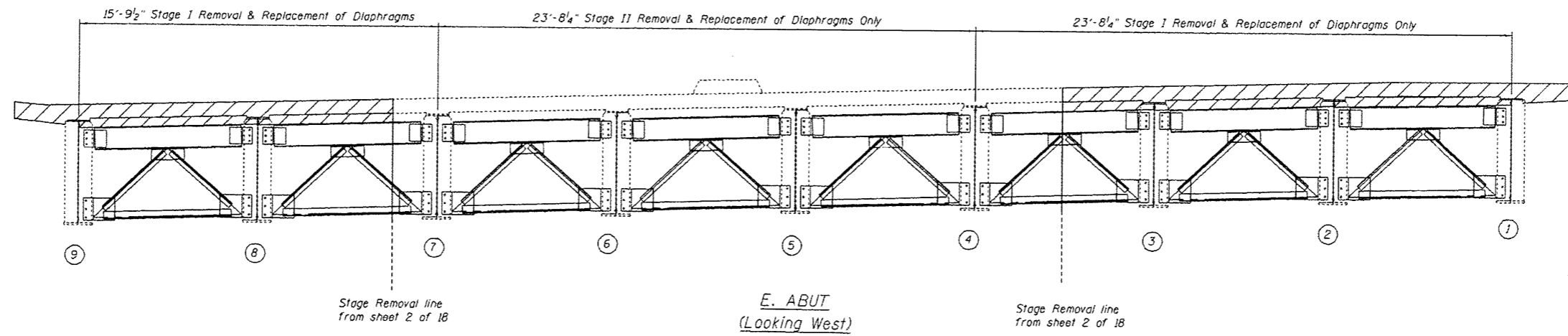
APPROACH PARAPET
 SN 060-0212

SHEET NO. 9 OF 18 SHEETS

F.A.P. RTE. 189	SECTION 1-VB-R-1	COUNTY MADISON	TOTAL SHEETS 31	SHEET NO. 22
CONTRACT NO. 76J77			ILLINOIS FED. AID PROJECT	



W. ABUT
(Looking East)



E. ABUT
(Looking West)

Note: Galvanize new diaphragms, angles & plates

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Removal	Pound	7730
F & E Structural Steel	Pound	7840

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CHECKED -	ATH
DRAWN -	AYV
CHECKED -	ATH

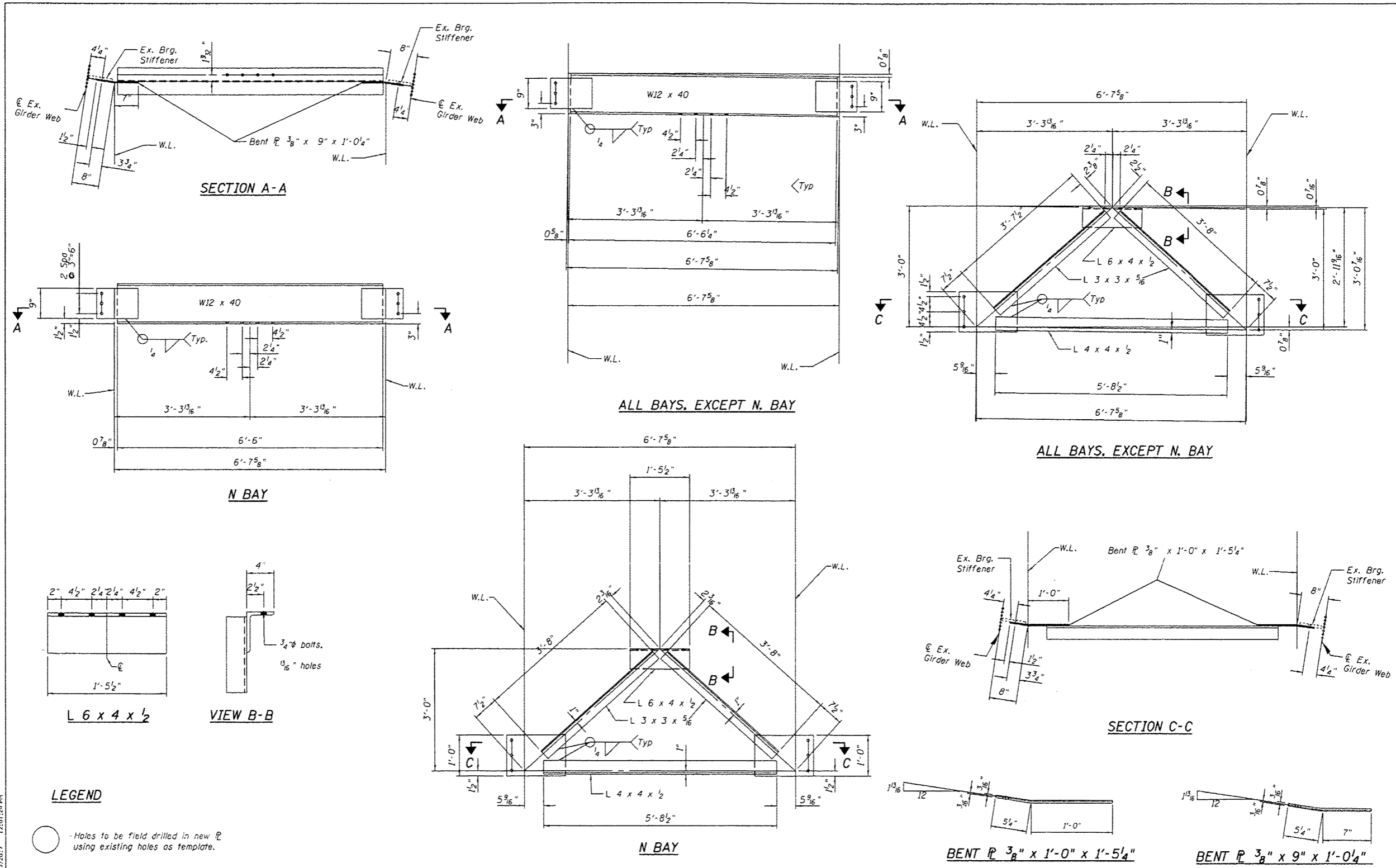
DATE -	APRIL 28, 2017
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL
SN 060-0212**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789	1-VB-R-1	MADISON	31	23
CONTRACT NO. T6J77			ILLINOIS FED. AID PROJECT	

SHEET NO. 10 OF 18 SHEETS



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DATE -	APRIL 28, 2017
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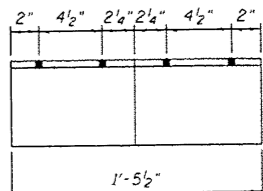
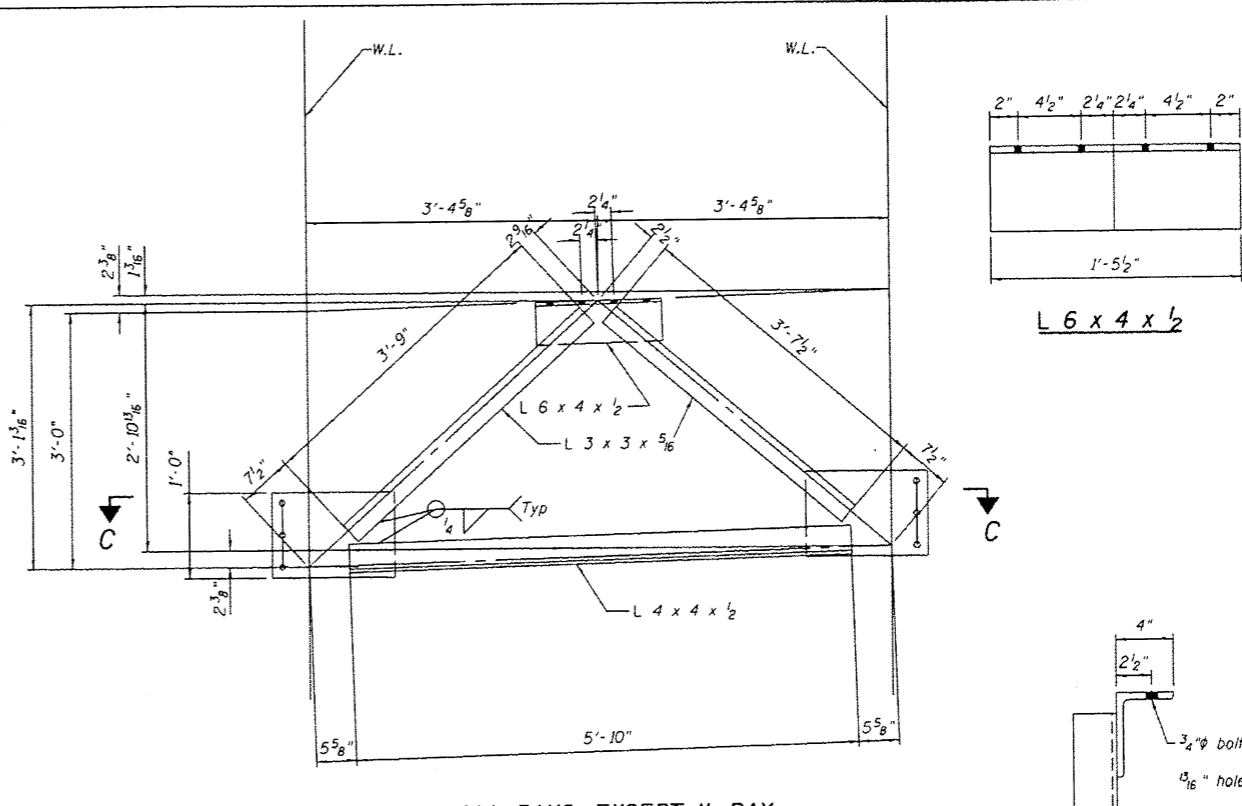
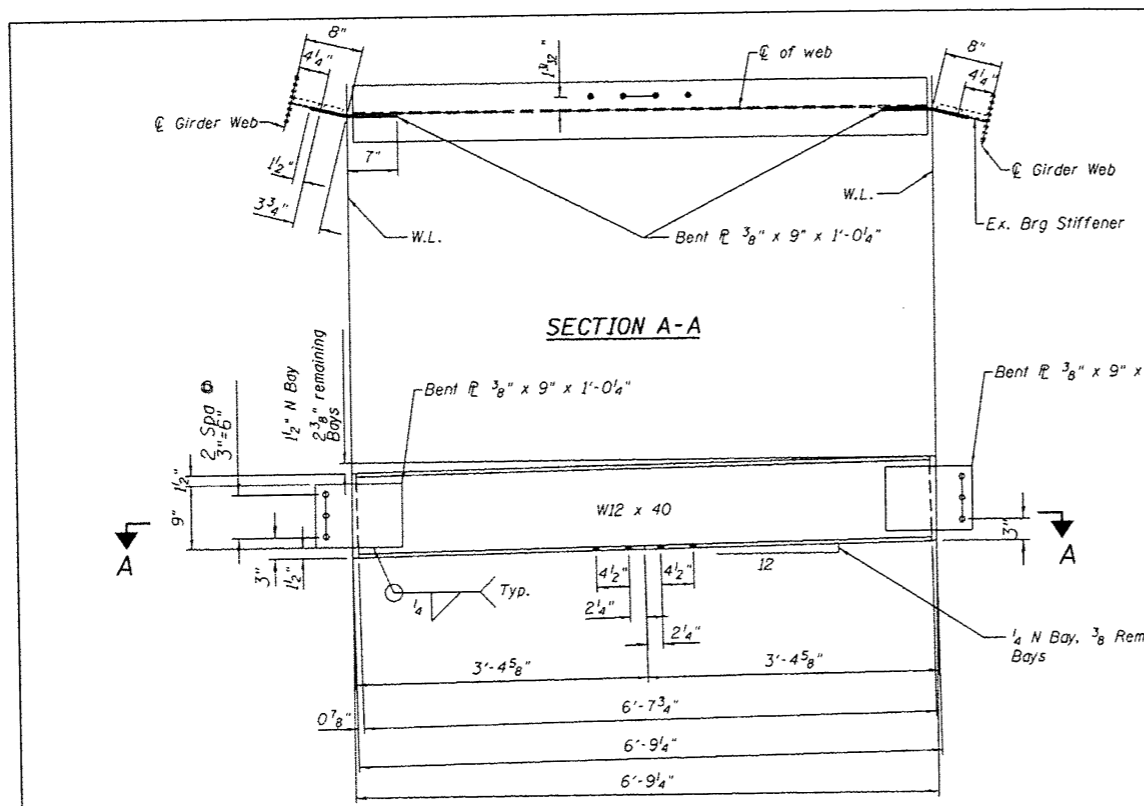
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS (W. ABUT-LOOKING E.)
SN 060-0212

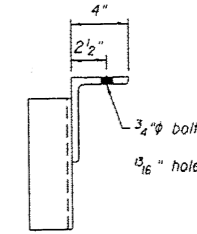
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T89	J-VB-R-1	MADISON	31	24
CONTRACT NO. T6J77				

BENT PLATE 3/8" x 1'-0" x 1'-5 1/4"

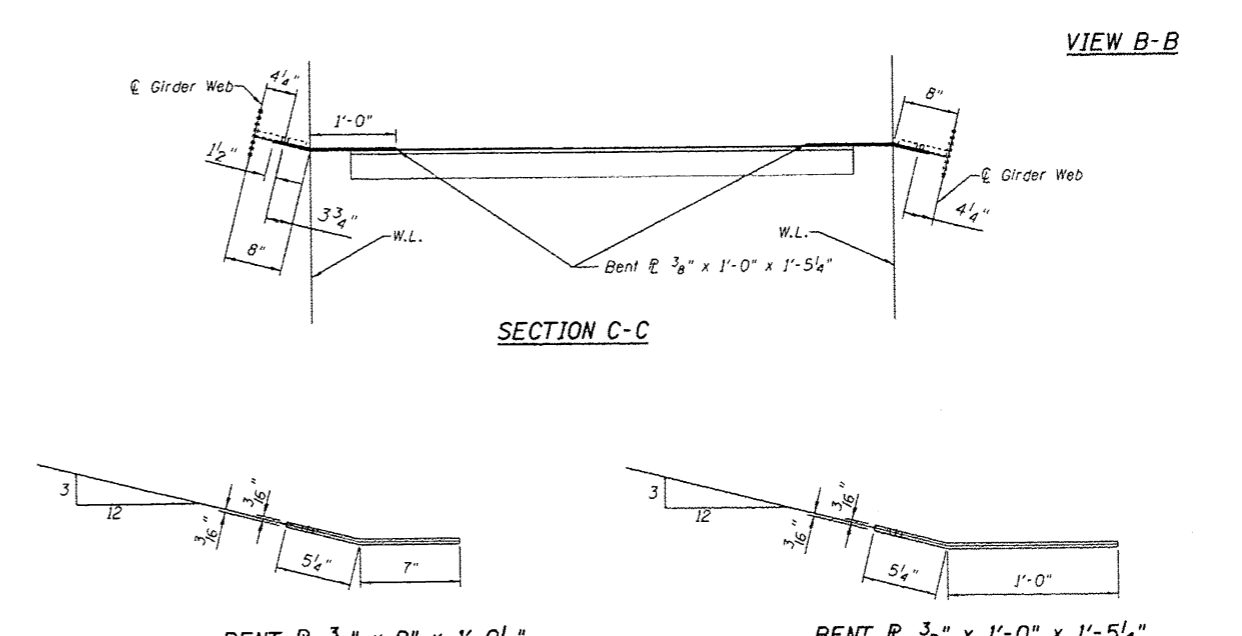
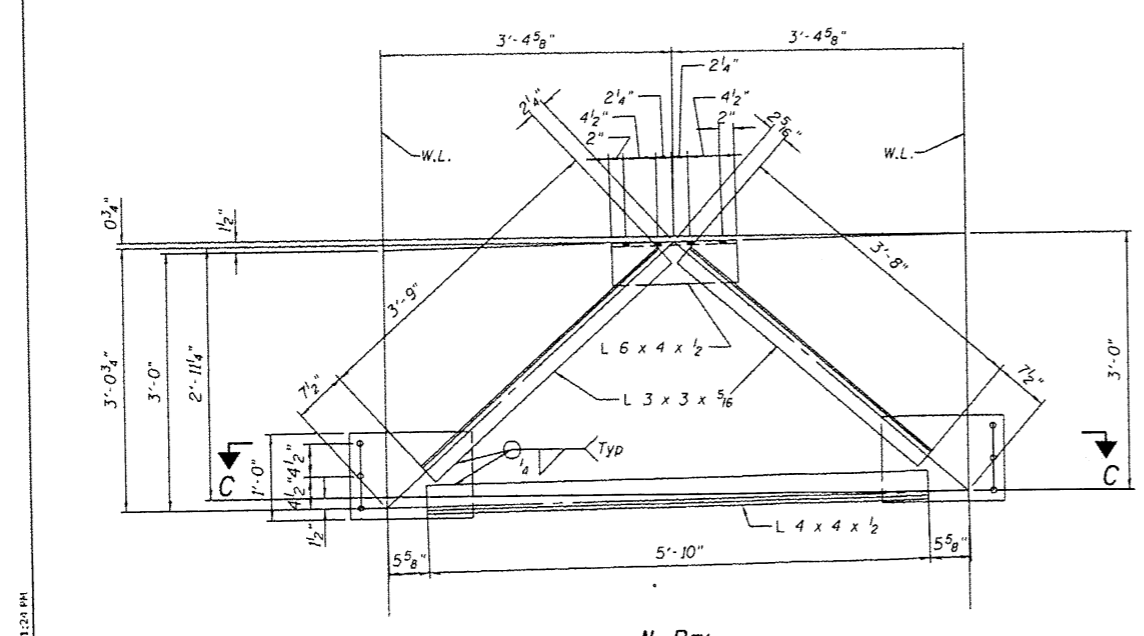
BENT PLATE 3/8" x 9" x 1'-0 1/4"



L 6 x 4 x 1/2



VIEW B-B



BENT P 3/8\" x 9\" x 1'-0 1/4\"

BENT P 3/8\" x 1'-0\" x 1'-5 1/4\"

○ - Holes to be field drilled in new P using existing holes as template.

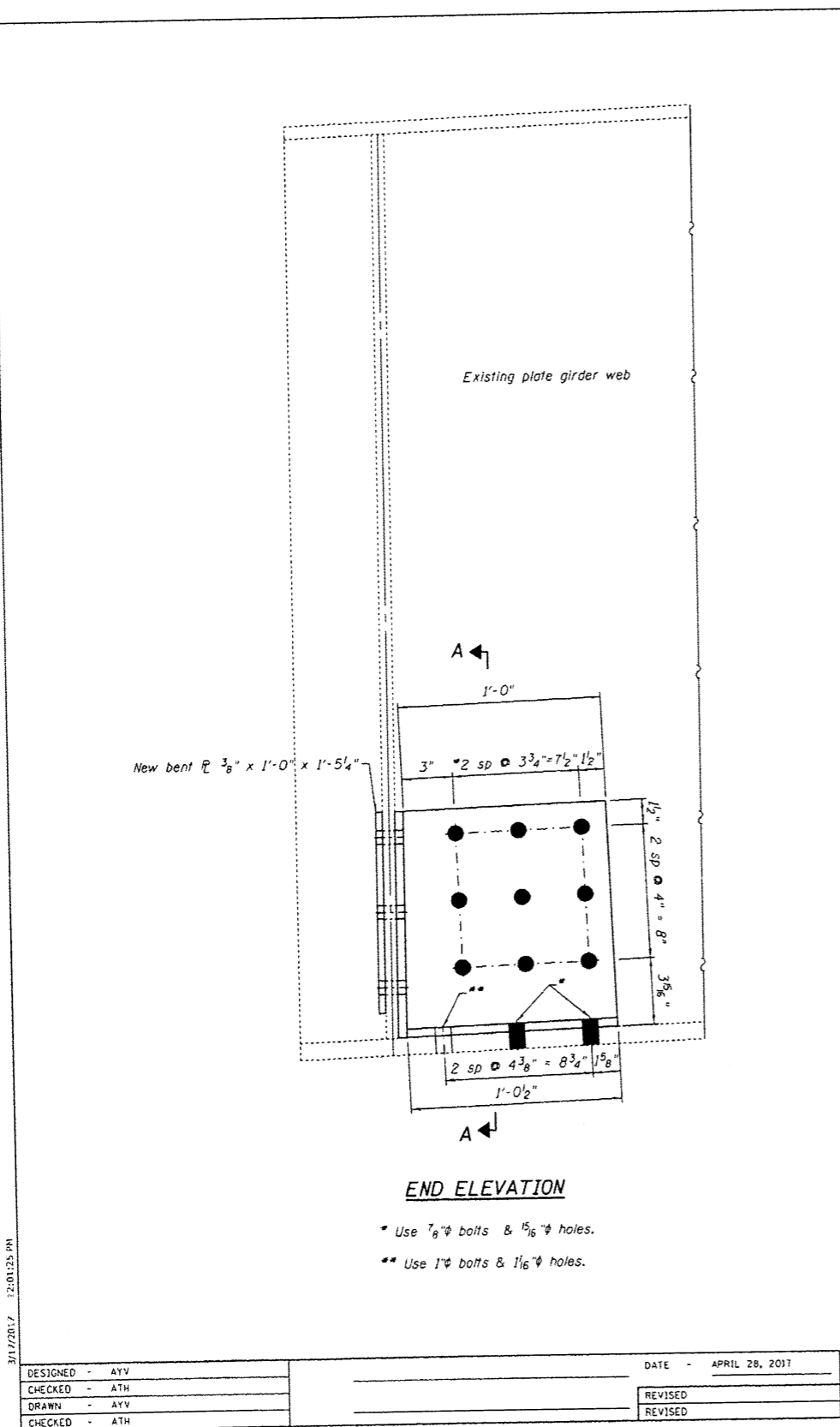
DESIGNED - AYW	DATE - APRIL 28, 2017
CHECKED - ATH	
DRAWN - AYW	REVISED
CHECKED - ATH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS (E. ABUT-LOOKING W.)
SN 060-0212
SHEET NO. 12 OF 18 SHEETS

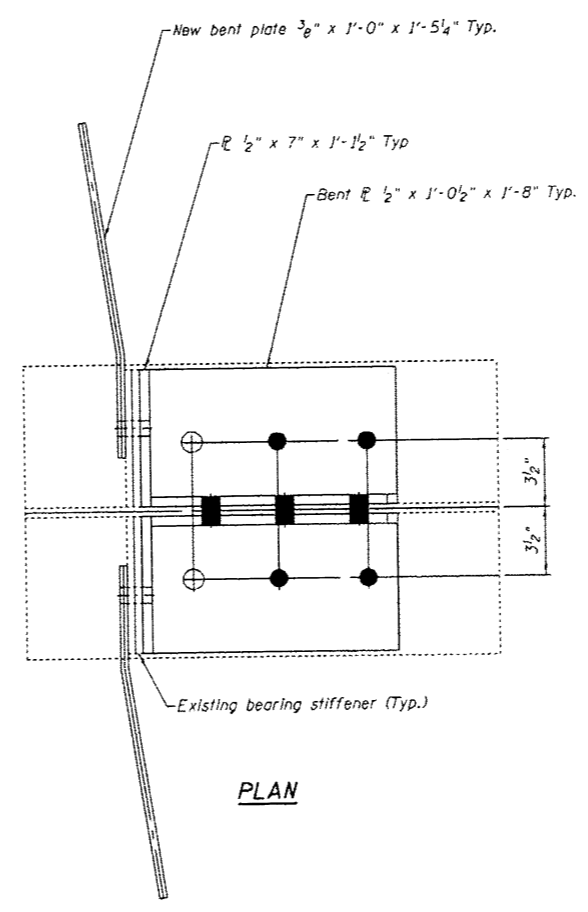
F.A.P. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T89	J-VB-R-1	MADISON	31	25
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76J77	

3/17/2017 12:01:23 PM



END ELEVATION

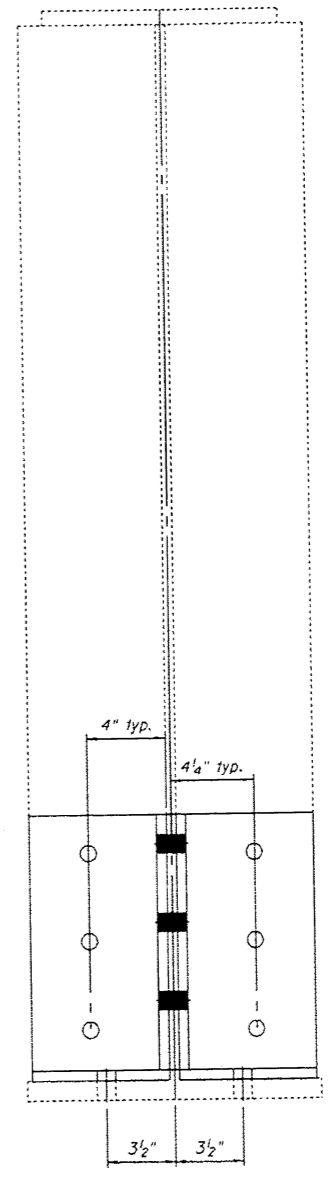
- * Use 7/8" φ bolts & 15/16" φ holes.
- ** Use 1" φ bolts & 1 1/16" φ holes.



PLAN

LEGEND

- - Holes to be field drilled in existing \bar{r} using new \bar{r} as template.
- - Holes to be field drilled in new \bar{r} using existing holes as template.



SECTION A-A

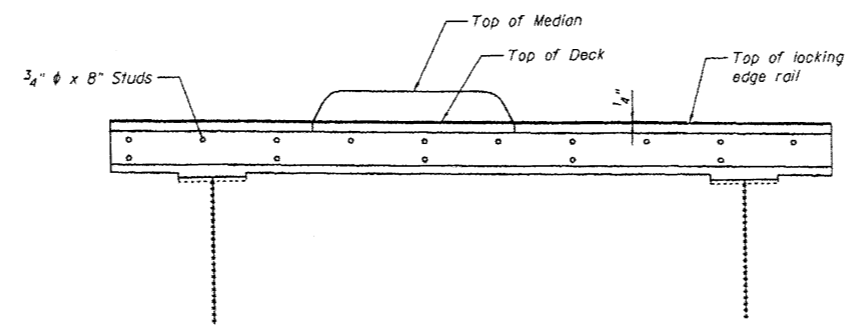
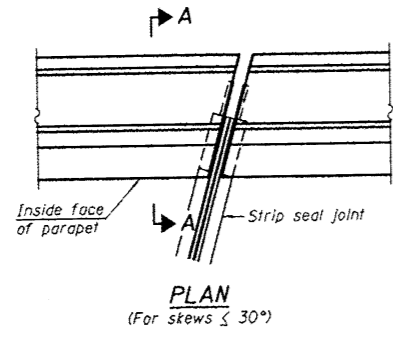
DESIGNED - AYY	DATE - APRIL 28, 2017
CHECKED - ATH	REVISED
DRAWN - AYY	REVISED
CHECKED - ATH	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

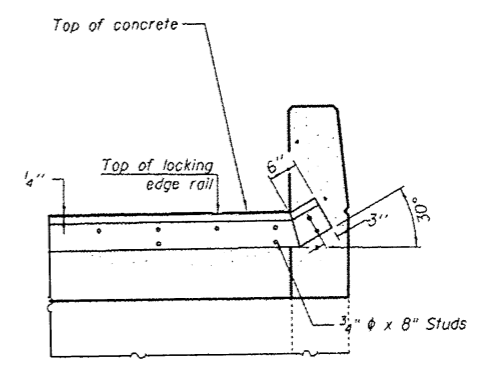
**BEAM END REPAIR (W. ABUT - BM 8)
SN 060-0212**

SHEET NO. 13 OF 18 SHEETS

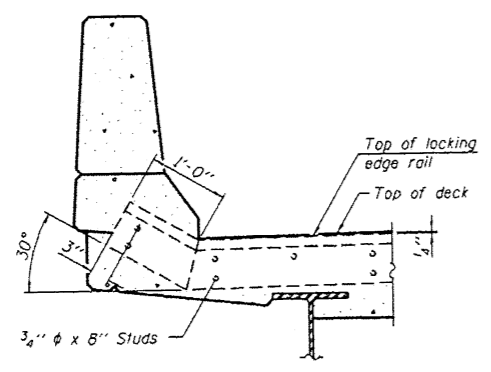
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789	1-VB-R-1	MADISON	31	26
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76J77	



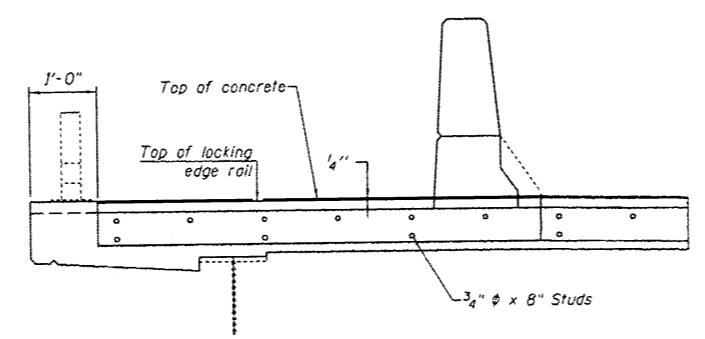
TYPICAL TREATMENT AT MEDIAN



TYPICAL END TREATMENT AT SOUTH SIDE

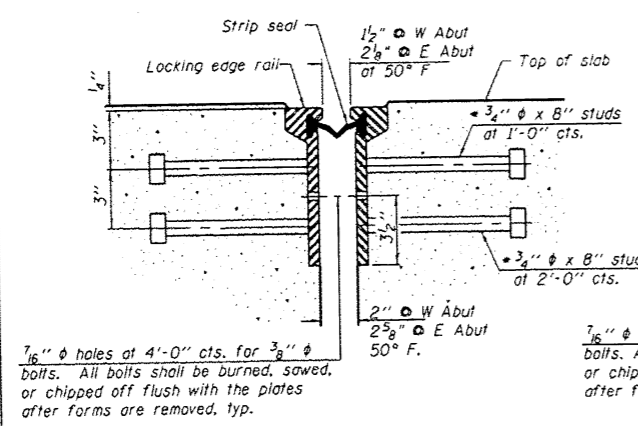


SECTION A-A

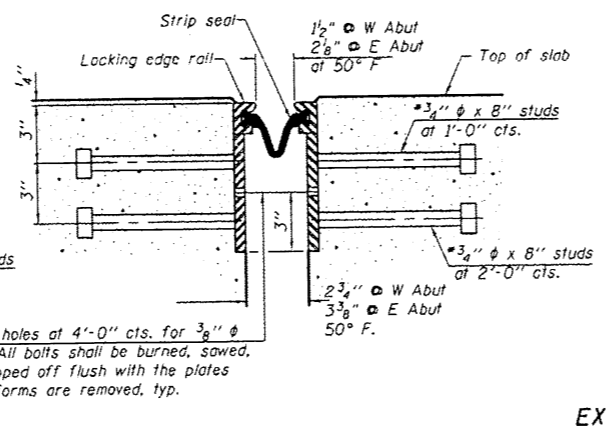


TYPICAL END TREATMENT AT N. PARAPET & WALKWAY SECTION

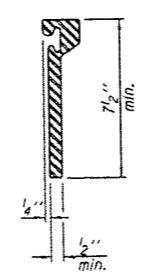
Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
 The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.
 The manufacturer's recommended installation methods shall be followed.
 The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
 All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.
 Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



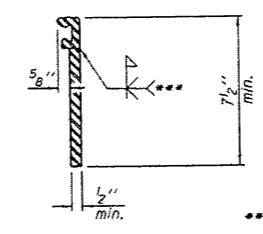
SECTION THRU ROLLED RAIL JOINT



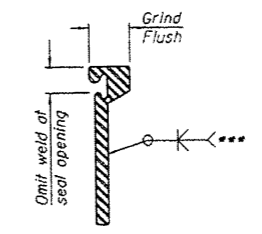
SECTION THRU WELDED RAIL JOINT



ROLLED EXTRUDED RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

*** Back gouge not required if complete joint penetration is verified by mock-up.
 The inside of the locking edge rail groove shall be free of weld residue.
 Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	136

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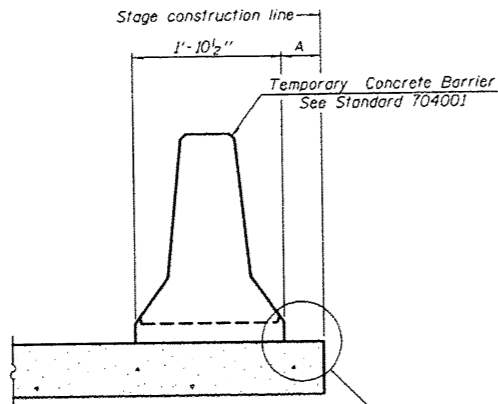
DESIGNED - AYY	DATE - APRIL 28, 2017
CHECKED - ATH	
DRAWN - AYY	REVISED
CHECKED - ATH	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL
SN 060-0212**

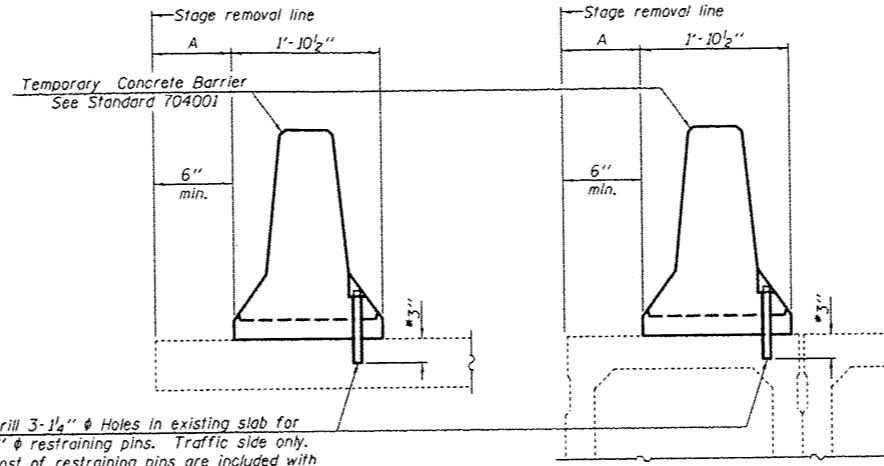
SHEET NO. 14 OF 38 SHEETS

F.A.P. RTE. 789	SECTION 1-VB-R-1	COUNTY MADISON	TOTAL SHEETS 31	SHEET NO. 27
			CONTRACT NO. T6J77	
ILLINOIS FED. AID PROJECT				



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1". See Detail I, II or III

NEW SLAB OR NEW DECK BEAM

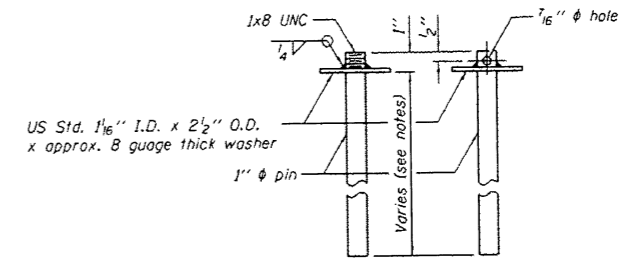


Drill 3-1/4" ϕ Holes in existing slab for 1" ϕ restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

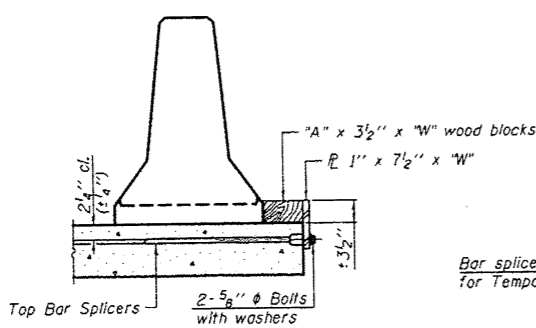
EXISTING SLAB

EXISTING DECK BEAM

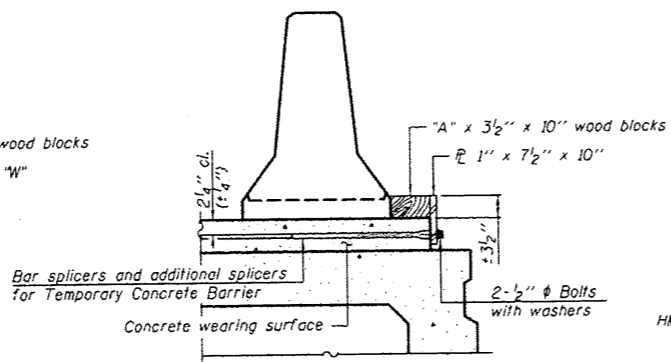
SECTIONS THRU SLAB OR DECK BEAM



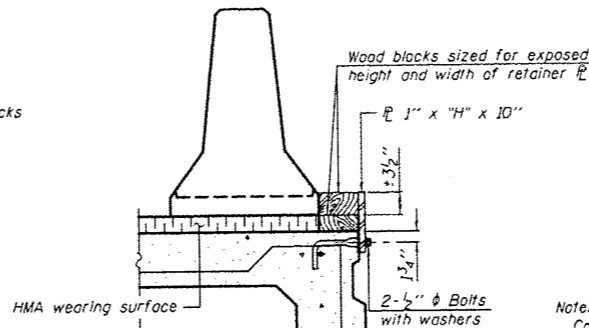
RESTRAINING PIN



DETAIL I

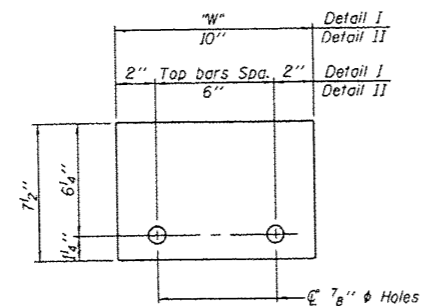


DETAIL II

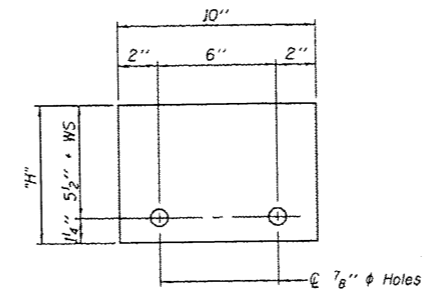


DETAIL III

BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 7 1/2" x "W"
(Detail I and II)



STEEL RETAINER 1" x "H" x 10"
(Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate ϕ of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate.
 For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

- Detail I - Installation for a new bridge deck or bridge slab.
- Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
- Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

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R-27 07-22-16

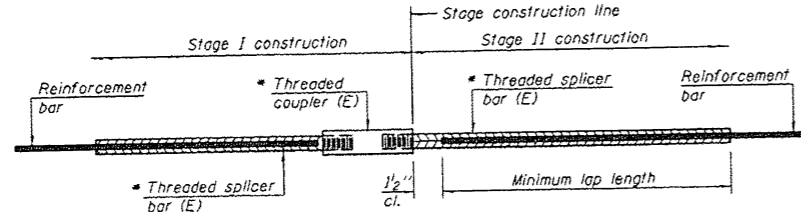
DESIGNED - AYW	DATE - APRIL 26, 2017
CHECKED - ATH	REVISOR
DRAWN - AYW	REVISOR
CHECKED - ATH	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
SN 060-0212

SHEET NO. 15 OF 18 SHEETS

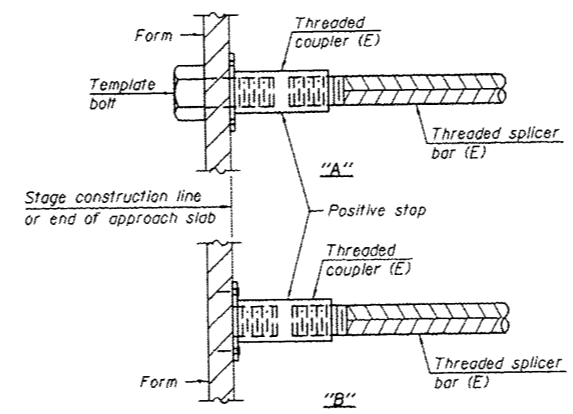
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
189	1-V8-R-1	MADISON	31	28
				CONTRACT NO. T6J77
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

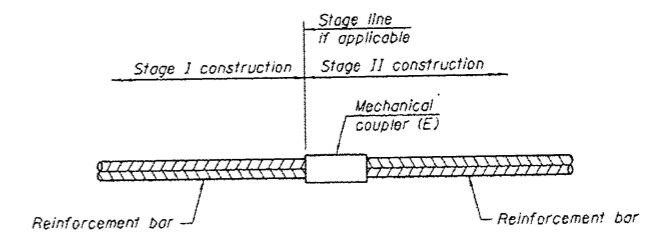
Threaded splicer bar length = min. lap length + 1/2" + thread length
 * Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
W. Abut. Hatch	#6	8	4'-0"
W. Abut. Deck	#5	16	3'-6"
E. Abut. Deck	#5	16	3'-6"
E. Abut. Hatch	#6	8	4'-0"



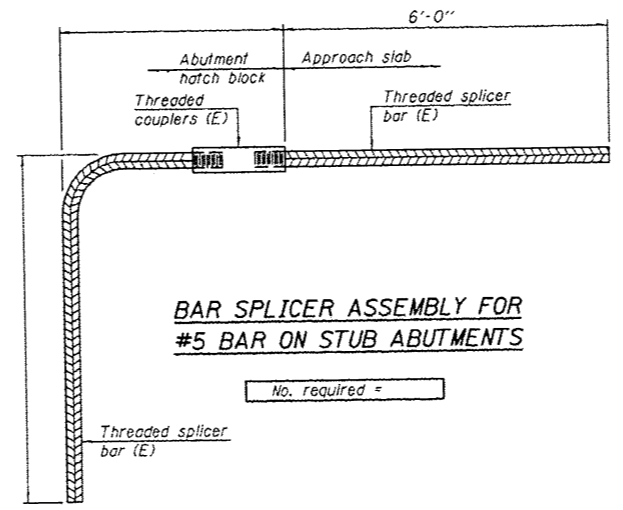
INSTALLATION AND SETTING METHODS

"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.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

NOTES
 Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

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BSD-1 6-B-15

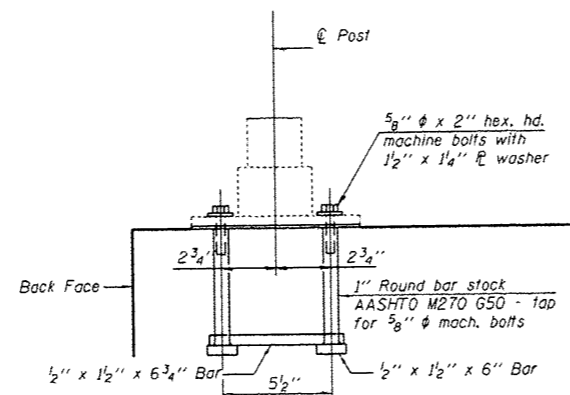
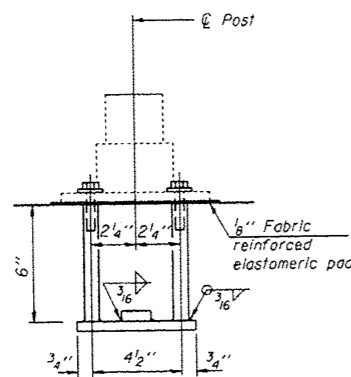
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CHECKED - ATH	REVISED
DRAWN - AYV	REVISED
CHECKED - ATH	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 SN 060-0212

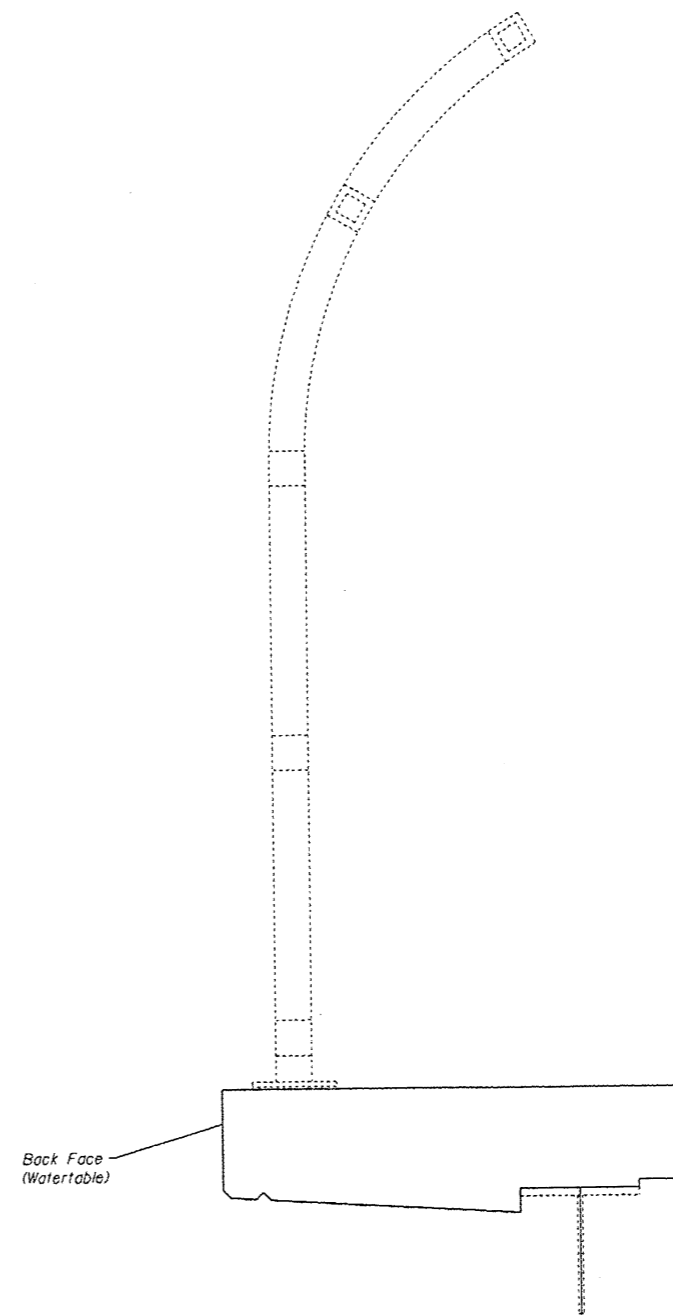
SHEET NO. 16 OF 18 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789	J-VB-R-1	MADISON	31	29
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76J77	



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications. Cost of providing anchorages is included with Concrete Superstructure.



SECTION THRU DECK

3/17/2017 12:01:27 PM

DESIGNED -	AYV
CHECKED -	ATH
DRAWN -	AYV
CHECKED -	ATH

DATE -	APRIL 28, 2017
REVISED	
REVISED	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FENCE ANCHORAGE DETAILS
SN 060-0212**

SHEET NO. 17 OF 18 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789	1-VB-R-1	MADISON	31	30
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76J77	

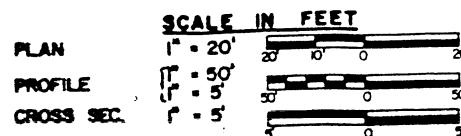
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
789	1 VB	MADISON	74	1

P-98-015-78

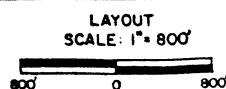
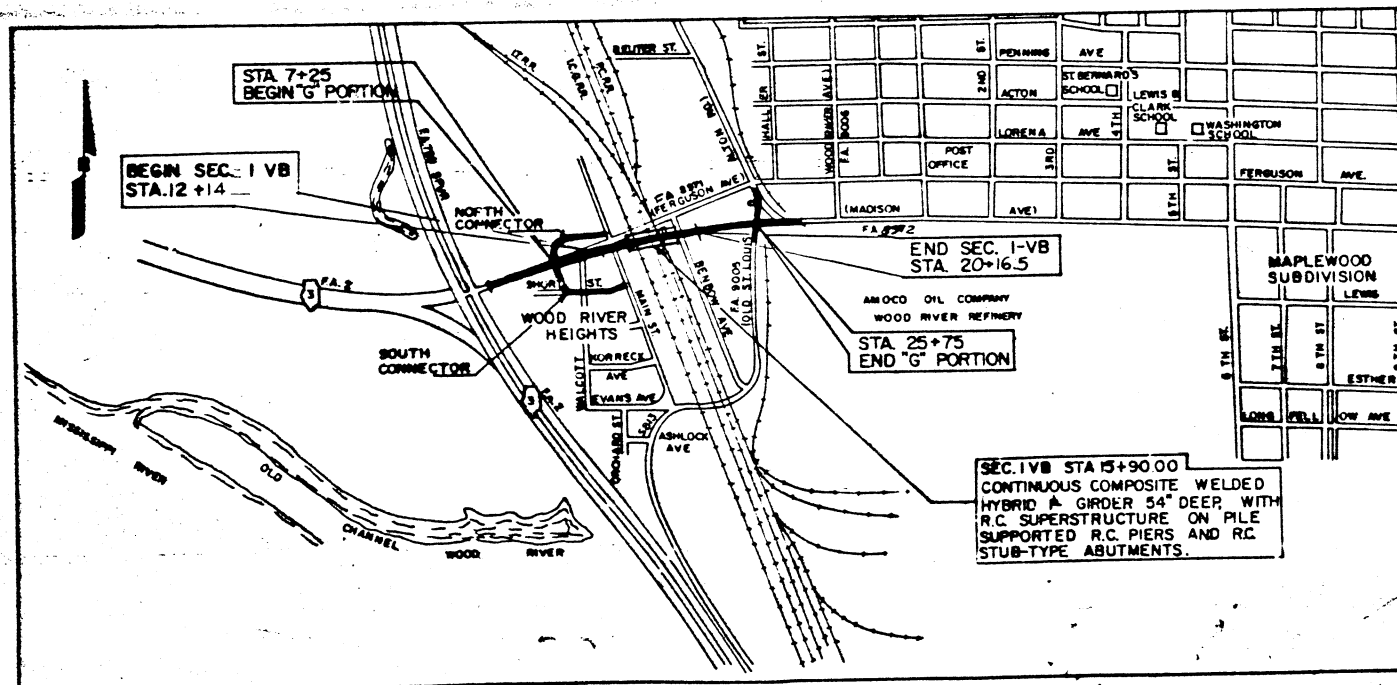
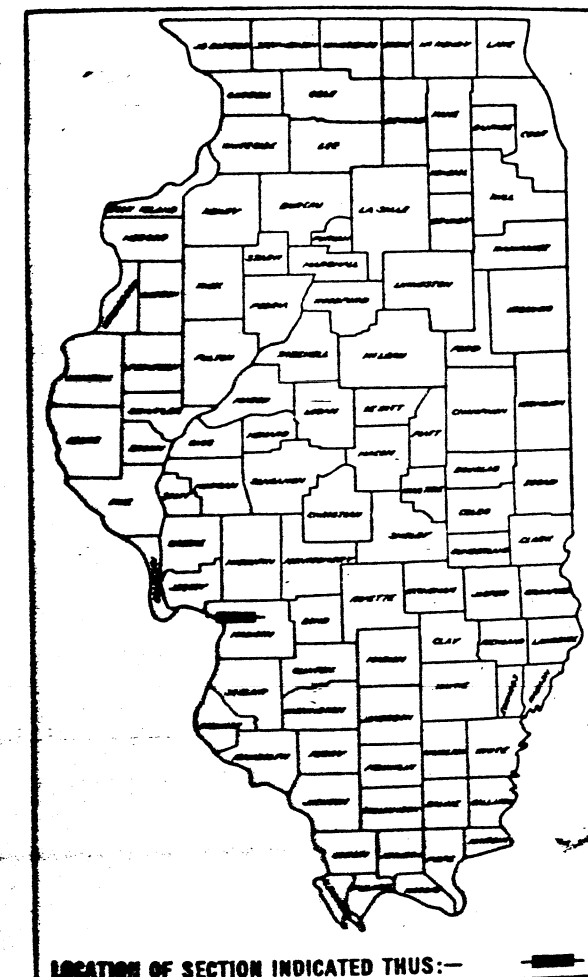
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SEE SHEET NO. 5 FOR
INDEX OF SHEETS
SEE SHEET NO. 4 FOR
SUMMARY OF QUANTITIES



F.A. ROUTE 789 SECTION 1 VB

MADISON COUNTY
C-98-148-79



NET LENGTH OF SECTION = 802.50 LIN. FT. = 0.152 MILES
NET LENGTH OF "G" PORTION = 1,850.00 LIN. FT. = 0.35 MILES
NET LENGTH OF PROJECT = 802.50 LIN. FT. = 0.152 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

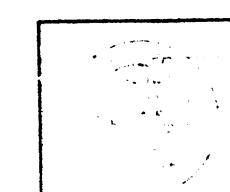
SUBMITTED: May 9 1980

DRAWN: June 3 1980

DESIGNED: June 3 1980

APPROVED: June 3 1980

THOMAS L. BRYANT
DIRECTOR OF TRANSPORTATION



HURST-ROSCH ENGINEERS INC.
CONSULTING ENGINEERS
HILLSBORO, ILLINOIS

DATE: 1/4/80

PE 19508

8-128

CONTRACT NO. 34523

060-0212

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

DESIGN DESIGNATION
(2000)-AREA SERVICE - 526 (PCC 20)

1M Top of highest Bolt (Painted Red) on South face of S.E. Leg of Steel Transmission Tower 334'± Lt. Sta. 14+92.2 Elev. 430.37

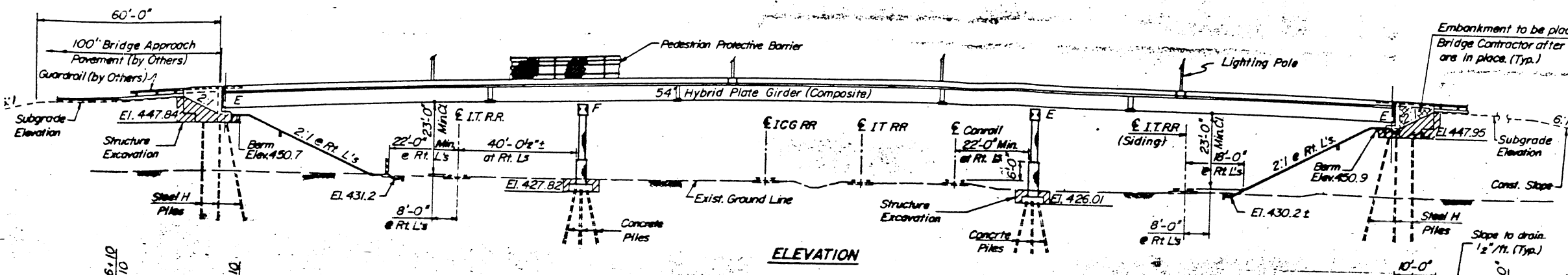
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 789	1-VB	MADISON	92	50
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 1
20 SHEETS

GENERAL NOTES

A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for Class X Concrete for parapets. See Proposal for Boring Data.
Calculated weight of Structural Steel = 310,220 lbs. (M-223) Grade 50, 21,290 lbs. (M-192) = 459,240 lbs. (M-183)
Fasteners shall be high strength bolts. Bolts 3/4" Ø, open holes 1 1/8" Ø, unless otherwise noted.
The basic lead silico chromate paint system shall be used for shop & field painting of Structural Steel.
Field welding of construction accessories will not be permitted to the bottom flange of girders nor to the top flange for the distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
Anchor bolts shall be set before bolting cross frames over supports. Protective Coat shall be applied in accordance with Article 503.12 of the Standard Specifications.
The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs, and all splice plate material of the steel girders.
Reinforcement bars shall conform to AASHTO M-31 or M-53, Grade 60. Slope wall shall be reinforced with welded wire fabric 6" x 6" W40 x W40, weighing 58# per 100 sq. ft.
The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

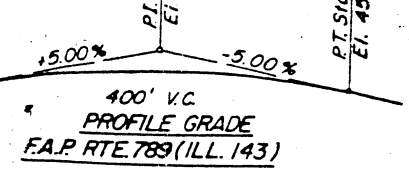


ELEVATION

TOP OF RAIL ELEVATIONS

STATION	I.T.R.R. (W. Track)		I.C.G. R.R.		I.T.R.R. (Center Trk)	
	W. Rail	E. Rail	W. Rail	E. Rail	W. Rail	E. Rail
8+00	431.64	431.65	433.28	433.32	433.43	433.44
9+00	431.74	431.75	433.23	433.27	432.97	432.99
10+00	432.07	432.08	433.03	433.04	432.89	432.86
11+00	432.41	432.43	432.78	432.77	432.82	432.77
12+00	432.41	432.49	432.52	432.49	432.48	432.49

STATION	CCN RAIL		I.T.R.R. (Turnout)		I.T.R.R. (Siding)	
	W. Rail	E. Rail	W. Rail	E. Rail	W. Rail	E. Rail
8+00	433.42	433.44	-	-	431.67	431.63
9+00	433.39	433.30	-	-	431.79	431.82
10+00	433.39	433.38	432.64	432.20	432.19	432.29
11+00	433.45	433.44	432.90	432.93	433.03	432.99
12+00	433.47	433.50	432.57	432.50	-	-

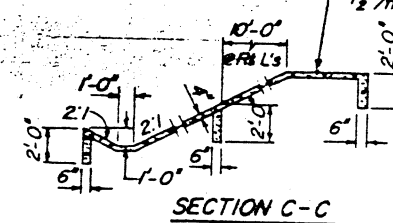


DESIGN STRESSES

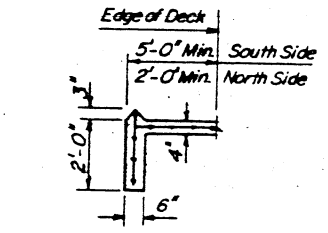
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fc = 1400 p.s.i. (Substr.)
fy = 60,000 p.s.i. (Reinf. Deck)
n = 9, vc = 56 p.s.i.
fs = 27,000 p.s.i. (M-223) Grade 50
fs = 20,000 p.s.i. (M-183)
fs = 24,000 p.s.i. (Reinf. Steel Substr. & Parapets)
Allowable Deflection 1/1200 Comp.
Allow 25 #/a F.W.S.
Loading HS-20-44
DESIGN SPEC.: 1977 AASHTO and 1978-1979 Interims as Applicable
Service Load Design

CURVE DATA

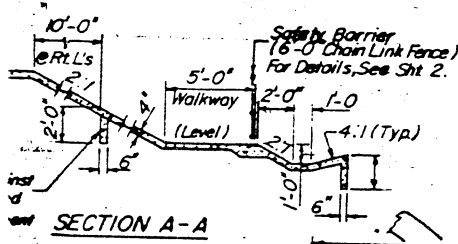
P.I. Sta. 16+10.83
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D = 1°-15'
R = 4583.66'
T = 762.75'
L = 1511.64'
E = 63.03'
SE = 0.0156 1/2



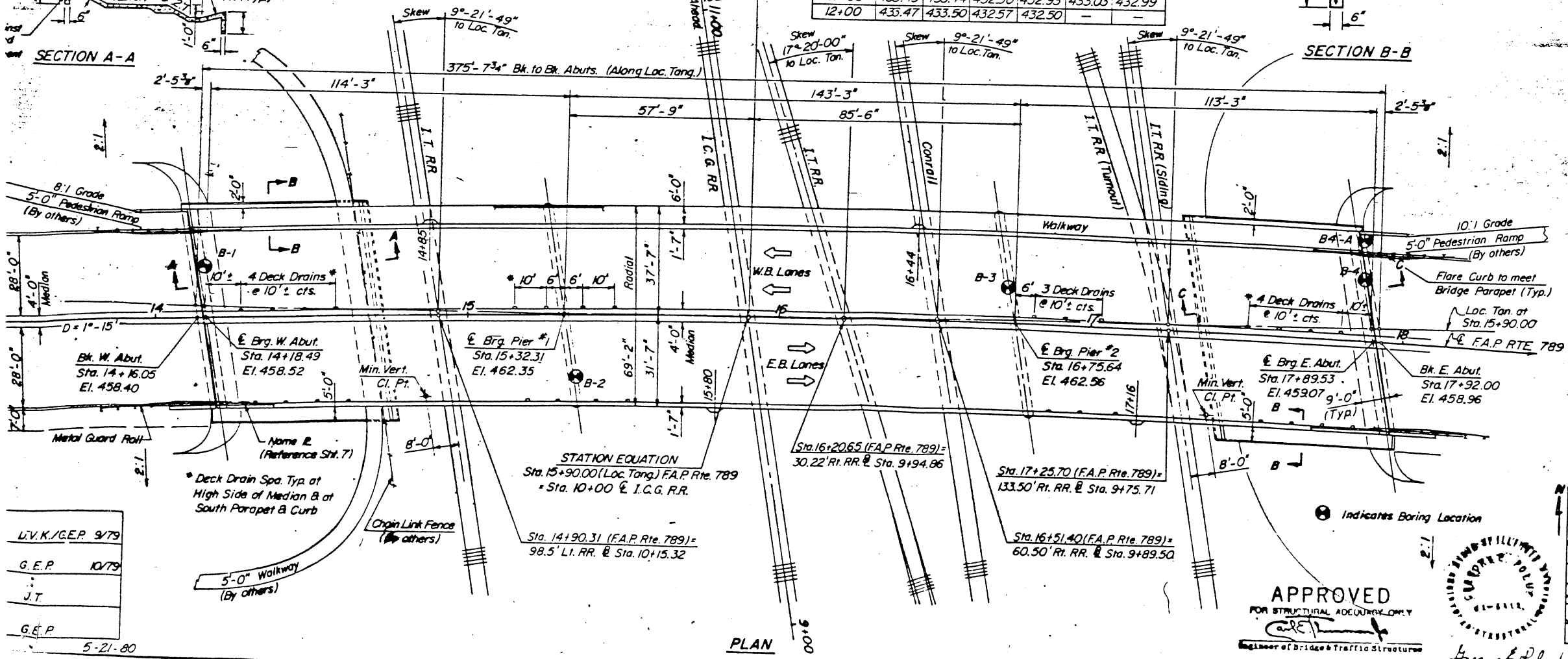
SECTION C-C



SECTION B-B



SECTION A-A

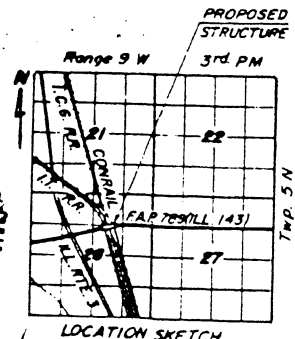


PLAN

TOTAL BILL OF MATERIAL

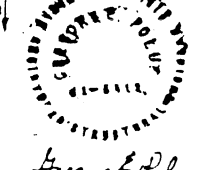
ITEM	UNIT	SUPER.	SUB.	TOTAL
Structure Excavation	Cu. Yds.		809	809
Class X Concrete	Cu. Yds.	727.5	475.9	1203.4
Structural Steel	L.S.	1		1
Reinforcement Bars	Lbs.	82,730	72,710	155,440
Reinforcement Bars (Epoxy Coated)	Lbs.	129,370		129,370
Concrete Piles	Lin. Ft.		3231	3231
Test Piles (Concrete)	Each		1	1
Steel Piles (HP 14 x 117)	Lin. Ft.		2478	2478
Test Piles (Steel HP 14 x 117)	Each		1	1
Floordrains	Each	30		30
Stud Shear Connectors	Each	5724		5724
Neoprene Expansion Joint (2")	Lin. Ft.	69		69
Neoprene Expansion Joint (4")	Lin. Ft.	70		70
Protective Barrier**	Lin. Ft.	371		371
Name Plate	Each	1		1
Protective Coat	Sq. Yds.	2815		2815
Sloped Wall (4")	Sq. Yds.		1153	1153

** See Special Provisions.

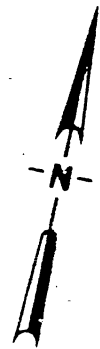
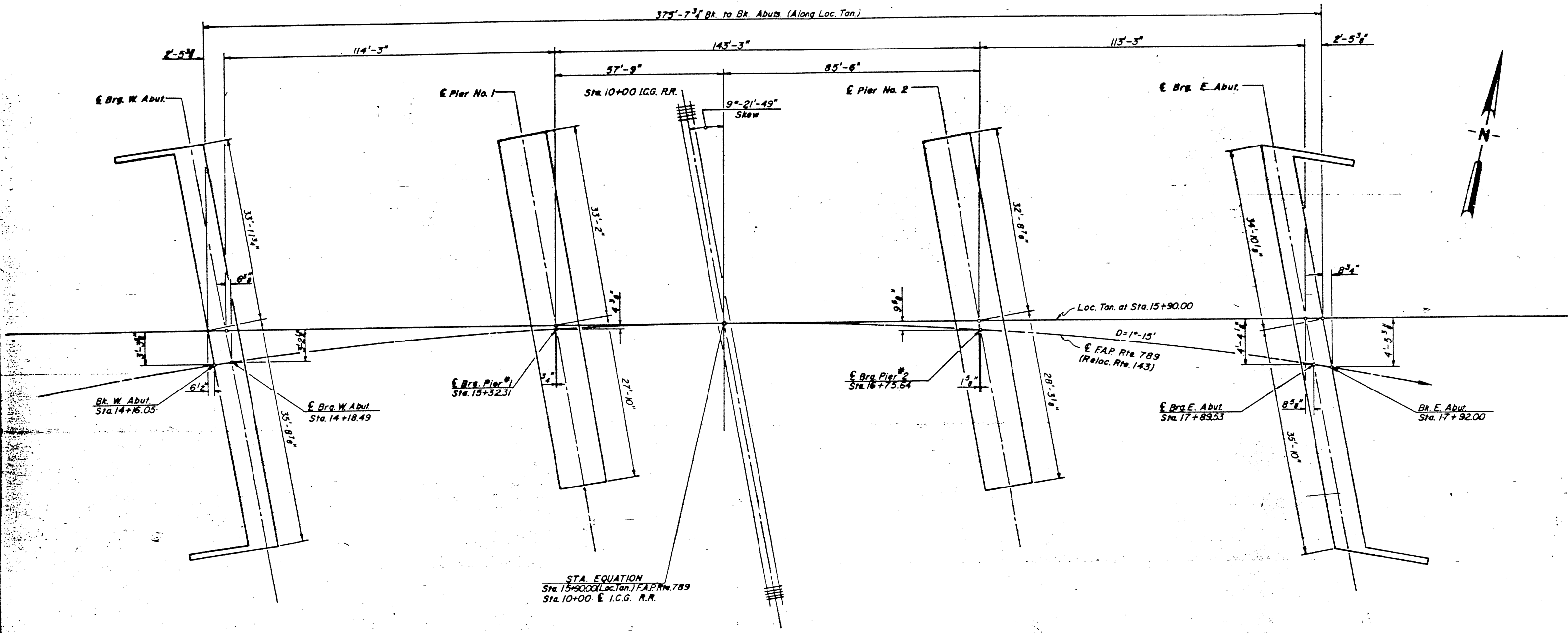


GENERAL PLAN & ELEVATION
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G. R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+90.00 (F.A.P. RTE. 789)

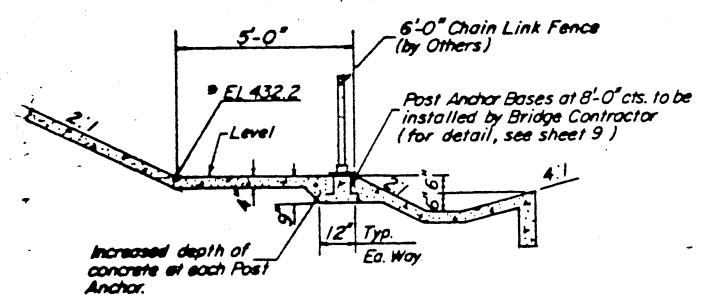
APPROVED
FOR STRUCTURAL ACCURACY ONLY
[Signature]
Engineer of Bridge & Traffic Structures



L.V.K./GEP 9/79
G.E.P. 10/79
J.T.
G.E.P.
5-21-80



Note: Substructure Elements are parallel to local tangent at sta. 15+90.00



* Sidewalk Elev. to be 0.4' above natural ground line.

STATION 15+90
BUILT 198_ BY
STATE OF ILLINOIS
F.A. RT. 789 SEC. 1-VB

LOADING HS20
STR. NO. _____

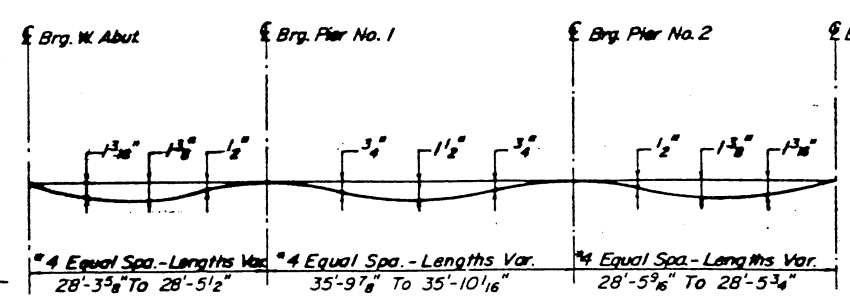
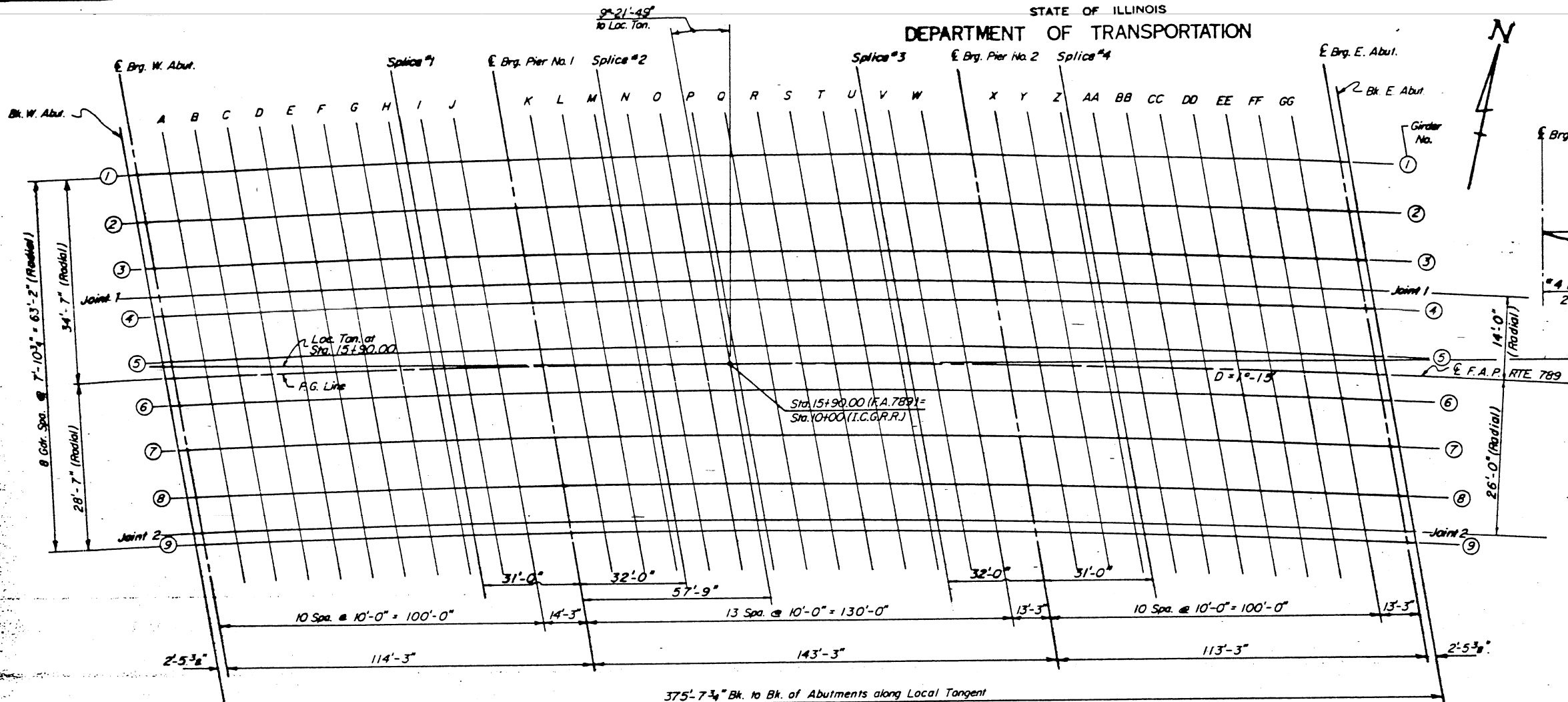
NAME PLATE
See Std. 2113
(For location see sheet 7)
(Structure No. to be supplied by District)

FOOTING LAYOUT
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G. R.R.
CONRAIL & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+90.00 (F.A.P. RTE. 789)

DESIGNED	G.E.P.
CHECKED	D.V.K.
DRAWN	R.W.M.
CHECKED	E.F.V.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-10	1-VB	MADISON	92	52
PUB. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

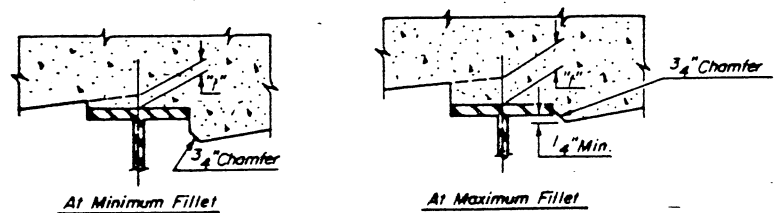


DEAD LOAD DEFLECTION DIAGRAM (INCL. WEIGHT OF CURB)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

* Reference Sheet #15 For Girder Lengths

Note: Profile Grade Elevations (P.G.) given in table below apply at Top Of Slab, not at Top of Median.

PLAN



FILLET HEIGHTS

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BACK WEST ABUT.	GDR-1	1411.725	34.583	458.654	458.654
	GDR-2	1412.708	26.687	458.651	458.651
	GDR-3	1413.694	18.792	458.576	458.576
	JOINT1	1414.294	14.000	458.531	458.531
	GDR-4	1414.683	10.896	458.501	458.501
	GDR-5	1415.676	3.000	458.427	458.427
	P.G.	1416.055	0.000	458.398	458.398
	GDR-6	1416.673	-4.896	458.352	458.352
	GDR-7	1417.673	-12.792	458.277	458.277
C BRG. WEST ABUT.	GDR-1	1414.141	34.583	458.773	458.773
	GDR-2	1415.128	26.687	458.769	458.769
	GDR-3	1416.118	18.792	458.694	458.694
	JOINT1	1416.721	14.000	458.649	458.649
	GDR-4	1417.112	10.896	458.619	458.619
	GDR-5	1418.109	3.000	458.544	458.544
	P.G.	1418.489	0.000	458.515	458.515
	GDR-6	1419.110	-4.896	458.469	458.469
	GDR-7	1420.114	-12.792	458.393	458.393
A	GDR-1	1424.012	34.583	459.244	459.244
	GDR-2	1425.016	26.687	459.239	459.239
	GDR-3	1426.024	18.792	459.162	459.203
	JOINT1	1426.637	14.000	459.116	459.156
	GDR-4	1427.035	10.896	459.085	459.126
	GDR-5	1428.030	3.000	459.009	459.049
	P.G.	1428.436	0.000	458.979	459.020
	GDR-6	1429.068	-4.896	458.932	458.972
	GDR-7	1430.089	-12.792	458.854	458.895
D	GDR-1	1453.643	34.583	460.512	460.512
	GDR-2	1454.699	26.687	460.502	460.502
	GDR-3	1455.758	18.792	460.419	460.536
	JOINT1	1456.403	14.000	460.369	460.486
	GDR-4	1456.821	10.896	460.337	460.453
	GDR-5	1457.888	3.000	460.255	460.371
	P.G.	1458.294	0.000	460.223	460.339
	GDR-6	1458.958	-4.896	460.172	460.288
	GDR-7	1460.032	-12.792	460.089	460.205

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
B	GDR-1	1433.886	34.583	459.691	459.766
	GDR-2	1434.908	26.687	459.684	459.759
	GDR-3	1435.932	18.792	459.606	459.681
	JOINT1	1436.556	14.000	459.558	459.633
	GDR-4	1436.961	10.896	459.527	459.602
	GDR-5	1437.993	3.000	459.448	459.524
	P.G.	1438.386	0.000	459.419	459.494
	GDR-6	1439.028	-4.896	459.370	459.445
	GDR-7	1440.067	-12.792	459.291	459.366
C	GDR-1	1443.763	34.583	460.114	460.219
	GDR-2	1444.802	26.687	460.105	460.208
	GDR-3	1445.844	18.792	460.025	460.126
	JOINT1	1446.478	14.000	459.976	460.077
	GDR-4	1446.889	10.896	459.944	460.046
	GDR-5	1447.939	3.000	459.864	459.965
	P.G.	1448.338	0.000	459.833	459.935
	GDR-6	1448.992	-4.896	459.783	459.885
	GDR-7	1450.048	-12.792	459.702	459.804
D	GDR-1	1453.643	34.583	460.512	460.628
	GDR-2	1454.699	26.687	460.502	460.618
	GDR-3	1455.758	18.792	460.419	460.536
	JOINT1	1456.403	14.000	460.369	460.486
	GDR-4	1456.821	10.896	460.337	460.453
	GDR-5	1457.888	3.000	460.255	460.371
	P.G.	1458.294	0.000	460.223	460.339
	GDR-6	1458.958	-4.896	460.172	460.288
	GDR-7	1460.032	-12.792	460.089	460.205

TOP OF SLAB ELEVATION
F.A.P. RTE. 789(ILL. 14)
OVER I.T.R.R., I.C.G.R.
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+90.00(F.A.P. R)

DESIGNED	EFV
CHECKED	DVK
DRAWN	R.W.M.
CHECKED	EFV/G.E.P.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-789	I-VB	MADISON	92	53
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO.
20 SHEETS

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
E	GDR-1	1463.525	34.583	460.886	461.004
	GDR-2	1464.598	26.688	460.874	460.991
	GDR-3	1465.675	18.792	460.789	460.907
	JOINT1	1466.330	14.000	460.738	460.856
	GDR-4	1466.755	10.896	460.705	460.823
	GDR-5	1467.839	3.000	460.621	460.738
	P.G.	1468.252	0.000	460.588	460.706
	GDR-6	1468.927	-4.896	460.536	460.654
	GDR-7	1470.019	-12.792	460.451	460.569
F	GDR-1	1473.411	34.583	461.236	461.344
	GDR-2	1474.501	26.688	461.221	461.329
	GDR-3	1475.595	18.792	461.135	461.243
	JOINT1	1476.261	14.000	461.083	461.191
	GDR-4	1476.693	10.896	461.049	461.157
	GDR-5	1477.794	3.000	460.962	461.070
	P.G.	1478.214	0.000	460.929	461.037
	GDR-6	1478.900	-4.896	460.875	460.983
	GDR-7	1480.009	-12.792	460.788	460.896
G	GDR-1	1483.299	34.583	461.561	461.650
	GDR-2	1484.406	26.688	461.545	461.633
	GDR-3	1485.518	18.792	461.456	461.545
	JOINT1	1486.194	14.000	461.402	461.491
	GDR-4	1486.633	10.896	461.368	461.456
	GDR-5	1487.752	3.000	461.279	461.367
	P.G.	1488.178	0.000	461.245	461.333
	GDR-6	1488.875	-4.896	461.190	461.278
	GDR-7	1490.002	-12.792	461.101	461.189
H	GDR-1	1493.190	34.583	461.862	461.925
	GDR-2	1494.315	26.688	461.843	461.906
	GDR-3	1495.444	18.792	461.753	461.815
	JOINT1	1496.131	14.000	461.698	461.760
	GDR-4	1496.576	10.896	461.662	461.725
	GDR-5	1497.713	3.000	461.571	461.633
	P.G.	1498.146	0.000	461.536	461.599
	GDR-6	1498.853	-4.896	461.479	461.542
	GDR-7	1499.998	-12.792	461.388	461.451
I	GDR-1	1503.085	34.583	462.139	462.175
	GDR-2	1504.227	26.688	462.118	462.154
	GDR-3	1505.373	18.792	462.025	462.061
	JOINT1	1506.070	14.000	461.968	462.004
	GDR-4	1506.523	10.896	461.932	461.967
	GDR-5	1507.677	3.000	461.838	461.874
	P.G.	1508.116	0.000	461.802	461.838
	GDR-6	1508.835	-4.896	461.744	461.780
	GDR-7	1509.997	-12.792	461.650	461.686
J	GDR-1	1512.982	34.583	462.391	462.405
	GDR-2	1514.142	26.688	462.368	462.381
	GDR-3	1515.305	18.792	462.272	462.286
	JOINT1	1516.013	14.000	462.214	462.228
	GDR-4	1516.472	10.896	462.177	462.190
	GDR-5	1517.644	3.000	462.081	462.094
	P.G.	1518.090	0.000	462.044	462.058
	GDR-6	1518.819	-4.896	461.984	461.998
	GDR-7	1519.999	-12.792	461.888	461.902
K	GDR-1	1521.183	34.583	462.688	462.702
	GDR-2	1522.371	26.688	462.665	462.679
	GDR-3	1523.564	18.792	462.569	462.583
	JOINT1	1524.764	14.000	462.473	462.487
	GDR-4	1525.974	10.896	462.377	462.391
	GDR-5	1527.194	3.000	462.281	462.295
	P.G.	1527.622	0.000	462.244	462.258
	GDR-6	1528.857	-4.896	462.148	462.162
	GDR-7	1530.107	-12.792	462.052	462.066
L	GDR-1	1533.364	34.583	462.902	462.909
	GDR-2	1534.628	26.688	462.879	462.879
	GDR-3	1535.904	18.792	462.770	462.777
	JOINT1	1537.194	14.000	462.668	462.675
	GDR-4	1538.498	10.896	462.566	462.573
	GDR-5	1539.816	3.000	462.464	462.471
	P.G.	1540.146	0.000	462.427	462.434
	GDR-6	1541.489	-4.896	462.325	462.332
	GDR-7	1542.846	-12.792	462.227	462.234
M	GDR-1	1546.207	34.583	463.070	463.095
	GDR-2	1547.532	26.688	463.038	463.062
	GDR-3	1548.872	18.792	462.933	462.958
	JOINT1	1550.226	14.000	462.870	462.894
	GDR-4	1551.594	10.896	462.820	462.843
	GDR-5	1552.976	3.000	462.723	462.748
	P.G.	1553.275	0.000	462.683	462.708
	GDR-6	1554.588	-4.896	462.581	462.642
	GDR-7	1555.916	-12.792	462.482	462.543
N	GDR-1	1559.257	34.583	463.214	463.264
	GDR-2	1560.614	26.688	463.179	463.228
	GDR-3	1561.984	18.792	463.072	463.121
	JOINT1	1563.366	14.000	462.967	463.056
	GDR-4	1564.760	10.896	462.864	463.013
	GDR-5	1566.166	3.000	462.764	462.906
	P.G.	1566.431	0.000	462.718	462.864
	GDR-6	1567.752	-4.896	462.618	462.797
	GDR-7	1569.088	-12.792	462.520	462.689
O	GDR-1	1572.431	34.583	463.334	463.410
	GDR-2	1573.814	26.688	463.296	463.372
	GDR-3	1575.204	18.792	463.186	463.262
	JOINT1	1576.600	14.000	463.118	463.195
	GDR-4	1578.002	10.896	463.075	463.152
	GDR-5	1579.410	3.000	462.964	463.041
	P.G.	1579.724	0.000	462.922	463.008
	GDR-6	1581.044	-4.896	462.853	462.929
	GDR-7	1582.378	-12.792	462.744	462.818
P	GDR-1	1585.723	34.583	463.929	463.999
	GDR-2	1587.116	26.688	463.888	463.948
	GDR-3	1588.516	18.792	463.770	463.838
	JOINT1	1589.924	14.000	463.652	463.728
	GDR-4	1591.338	10.896	463.536	463.612
	GDR-5	1592.758	3.000	463.420	463.496
	P.G.	1593.184	0.000	463.384	463.460
	GDR-6	1594.616	-4.896	463.268	463.344
	GDR-7	1596.052	-12.792	463.152	463.228
Q	GDR-1	1599.493	34.583	463.545	463.670
	GDR-2	1600.944	26.688	463.498	463.623
	GDR-3	1602.395	18.792	463.378	463.503
	JOINT1	1603.856	14.000	463.259	463.383
	GDR-4	1605.322	10.896	463.140	463.263
	GDR-5	1606.794	3.000	463.022	463.143
	P.G.	1607.270	0.000	462.982	463.107
	GDR-6	1608.752	-4.896	462.866	462.991
	GDR-7	1610.240	-12.792	462.750	462.875
R	GDR-1	1613.731	34.583	463.877	463.953
	GDR-2	1615.232	26.688	463.828	463.894
	GDR-3	1616.733	18.792	463.708	463.774
	JOINT1	1618.244	14.000	463.588	463.649
	GDR-4	1619.755	10.896	463.468	463.523
	GDR-5	1621.276	3.000	463.348	463.397
	P.G.	1621.752	0.000	463.308	463.361
	GDR-6	1623.233	-4.896	463.192	463.245
	GDR-7	1624.716	-12.792	463.076	463.129
S	GDR-1	1628.207	34.583	463.566	463.688
	GDR-2	1629.718	26.688	463.516	463.637
	GDR-3	1631.229	18.792	463.393	463.514
	JOINT1	1632.740	14.000	463.270	463.391
	GDR-4	1634.251	10.896	463.146	463.268
	GDR-5	1635.762	3.000	463.022	463.143
	P.G.	1636.238	0.000	462.982	463.107
	GDR-6	1637.714	-4.896	462.866	462.991
	GDR-7	1639.201	-12.792	462.750	462.875
T	GDR-1	1642.692	34.583	463.929	463.999
	GDR-2	1644.183	26.688	463.888	463.948
	GDR-3	1645.674	18.792	463.770	463.838
	JOINT1	1647.165	14.000	463.652	463.728
	GDR-4	1648.656	10.896	463.536	463.612
	GDR-5	1650.147	3.000	463.420	463.496
	P.G.	1650.623	0.000	463.384	463.460
	GDR-6	1652.109	-4.896	463.268	463.344
	GDR-7	1653.596	-12.792	463.152	463.228
U	GDR-1	1657.087	34.583	463.566	463.688
	GDR-2	1658.578	26.688	463.516	463.637
	GDR-3	1660.069	18.792	463.393	463.514
	JOINT1	1661.560	14.000	463.270	463.391
	GDR-4	1663.051	10.896	463.146	463.268
	GDR-5	1664.542	3.000	463.022	463.143
	P.G.	1665.018	0.000	462.982	463.107
	GDR-6	1666.504	-4.896	462.866	462.991
	GDR-7	1667.991	-12.792	462.750	462.875
V	GDR-1	1671.972	34.583	463.929	463.999
	GDR-2	1673.463	26.688	463.888	463.948
	GDR-3	1674.954	18.792	463.770	463.838
	JOINT1	1676.445	14.000	463.652	463.728
	GDR-4	1677.936	10.896	463.536	463.612
	GDR-5	1679.427	3.000	463.420	463.496
	P.G.	1679.903	0.000	463.384	463.460
	GDR-6	1681.389	-4.896	463.268	463.344
	GDR-7	1682.880	-12.792	463.152	463.228
W	GDR-1	1686.861	34.583	463.566	463.688
	GDR-2	1688.352	26.688	463.516	463.637
	GDR-3	1689.843	18.792	463.393	463.514
	JOINT1	1691.334	14.000	463.270	463.391
	GDR-4	1692.825	10.896	463.146	463.268
	GDR-5	1694.316	3.000	463.022	463.143
	P.G.	1694.792	0.000	462.982	463.107
	GDR-6	1696.278	-4.896	462.866	462.991
	GDR-7	1697.769	-12.792	462.750	462.875
X	GDR-1	1701.750	34.583	463.929	463.999
	GDR-2	1703.241	26.688	463.888	463.948
	GDR-3	1704.732	18.792	463.770	463.838
	JOINT1	1706.223	14.000	463.652	463.728
	GDR-4	1707.714	10.896	463.536	463.612
	GDR-5	1709.205	3.000	463.420	463.496
	P.G.	1709.681	0.000	463.384	463.460
	GDR-6	1711.167	-4.896	463.268	463.344
	GDR-7	1712.658	-12.792	463.152	463.228
Y	GDR-1	1716.639	34.583	463.566	463.688
	GDR-2	1718.130	26.688	463.516	463.637
	GDR-3	1719.621	18.792	463.393	463.514
	JOINT1	1721.112	14.000	463.270	463.391
	GDR-4	1722.603	10.896	463.146	463.268
	GDR-5	1724.094	3.000	463.022	463.143
	P.G.	1724.570	0.000	462.982	463.107
	GDR-6	1726.056	-4.896	462.866	462.991
	GDR-7	1727.547	-12.792	462.750	462.875
Z	GDR-1	1731.528	34.583	463.929	463.999
	GDR-2	1733.019	26.688	463.888	463.948
	GDR-3	1734.510	18.792	463.770	463.838
	JOINT1	1736.001	14.000	463.652	463.728
	GDR-4	1737.492	10.896	463.536	463.612
	GDR-5	1738.983	3.000	463.420	463.496

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 789	I-VB	MADISON	92	54
ILLINOIS		FED. AID PROJECT		

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
SPICE #4	GDR-1	1700.197	34.583	462.551	462.605
	GDR-2	1701.686	26.687	462.466	462.520
	GDR-3	1703.180	18.792	462.308	462.362
	JOINT1	1704.090	14.000	462.212	462.266
	GDR-4	1704.680	10.896	462.149	462.204
	GDR-5	1706.185	3.000	461.990	462.044
	P.G.	1706.758	0.000	461.930	461.984
	GDR-6	1707.695	-4.896	461.831	461.885
	GDR-7	1709.210	-12.792	461.670	461.724
AA	GDR-1	1709.169	34.583	462.359	462.417
	GDR-2	1710.674	26.688	462.249	462.328
	GDR-3	1712.185	18.792	462.088	462.167
	JOINT1	1713.104	14.000	461.990	462.068
	GDR-4	1713.700	10.896	461.926	462.005
	GDR-5	1715.221	3.000	461.763	461.842
	P.G.	1715.800	0.000	461.701	461.780
	GDR-6	1716.747	-4.896	461.599	461.678
	GDR-7	1718.279	-12.792	461.435	461.514
BB	GDR-1	1719.142	34.583	462.079	462.181
	GDR-2	1720.665	26.688	461.985	462.087
	GDR-3	1722.193	18.792	461.820	461.922
	JOINT1	1723.123	14.000	461.719	461.821
	GDR-4	1723.727	10.896	461.653	461.755
	GDR-5	1725.266	3.000	461.486	461.588
	P.G.	1725.852	0.000	461.422	461.524
	GDR-6	1726.810	-4.896	461.318	461.420
	GDR-7	1728.360	-12.792	461.149	461.251
CC	GDR-1	1729.120	34.583	461.794	461.910
	GDR-2	1730.660	26.688	461.696	461.812
	GDR-3	1732.206	18.792	461.526	461.642
	JOINT1	1733.147	14.000	461.423	461.539
	GDR-4	1733.758	10.896	461.355	461.471
	GDR-5	1735.315	3.000	461.184	461.300
	P.G.	1735.908	0.000	461.118	461.234
	GDR-6	1736.877	-4.896	461.011	461.127
	GDR-7	1738.445	-12.792	460.838	460.954
DD	GDR-1	1739.102	34.583	461.485	461.603
	GDR-2	1740.660	26.687	461.382	461.501
	GDR-3	1742.224	18.792	461.208	461.326
	JOINT1	1743.175	14.000	461.101	461.220
	GDR-4	1743.793	10.896	461.032	461.151
	GDR-5	1745.368	3.000	460.856	460.975
	P.G.	1745.968	0.000	460.789	460.907
	GDR-6	1746.948	-4.896	460.679	460.798
	GDR-7	1748.534	-12.792	460.501	460.620
EE	GDR-1	1749.088	34.583	461.150	461.258
	GDR-2	1750.664	26.688	461.043	461.151
	GDR-3	1752.246	18.792	460.864	460.972
	JOINT1	1753.208	14.000	460.755	460.863
	GDR-4	1753.833	10.896	460.684	460.792
	GDR-5	1755.425	3.000	460.503	460.611
	P.G.	1756.032	0.000	460.434	460.542
	GDR-6	1757.024	-4.896	460.322	460.430
	GDR-7	1758.628	-12.792	460.139	460.247

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
FF	GDR-1	1759.078	34.583	460.790	460.875
	GDR-2	1760.672	26.687	460.679	460.764
	GDR-3	1762.272	18.792	460.495	460.580
	JOINT1	1763.245	14.000	460.383	460.468
	GDR-4	1763.877	10.896	460.310	460.395
	GDR-5	1765.488	3.000	460.125	460.210
	P.G.	1766.101	0.000	460.056	460.139
	GDR-6	1767.104	-4.896	459.938	460.024
	GDR-7	1768.726	-12.792	459.751	459.836
GG	GDR-1	1769.073	34.583	460.405	460.456
	GDR-2	1770.685	26.688	460.289	460.340
	GDR-3	1772.302	18.792	460.100	460.152
	JOINT1	1773.287	14.000	459.986	460.037
	GDR-4	1773.925	10.896	459.911	459.962
	GDR-5	1775.554	3.000	459.721	459.772
	P.G.	1776.175	0.000	459.648	459.700
	GDR-6	1777.189	-4.896	459.530	459.581
	GDR-7	1778.829	-12.792	459.338	459.389
E. BRG. EAST ABUT.	GDR-1	1782.323	34.583	459.856	459.856
	GDR-2	1783.959	26.687	459.734	459.734
	GDR-3	1785.600	18.792	459.539	459.539
	JOINT1	1786.599	14.000	459.420	459.420
	GDR-4	1787.247	10.896	459.343	459.343
	GDR-5	1788.900	3.000	459.144	459.144
	P.G.	1789.529	0.000	459.071	459.071
	GDR-6	1790.558	-4.896	458.948	458.948
	GDR-7	1792.222	-12.792	458.750	458.750
BACK EAST ABUT.	GDR-1	1784.772	34.583	459.750	459.750
	GDR-2	1786.412	26.688	459.626	459.626
	GDR-3	1788.057	18.792	459.430	459.430
	JOINT1	1789.059	14.000	459.311	459.311
	GDR-4	1789.709	10.896	459.233	459.233
	GDR-5	1791.366	3.000	459.035	459.035
	P.G.	1791.997	0.000	458.960	458.960
	GDR-6	1793.029	-4.896	458.836	458.836
	GDR-7	1794.698	-12.792	458.636	458.636

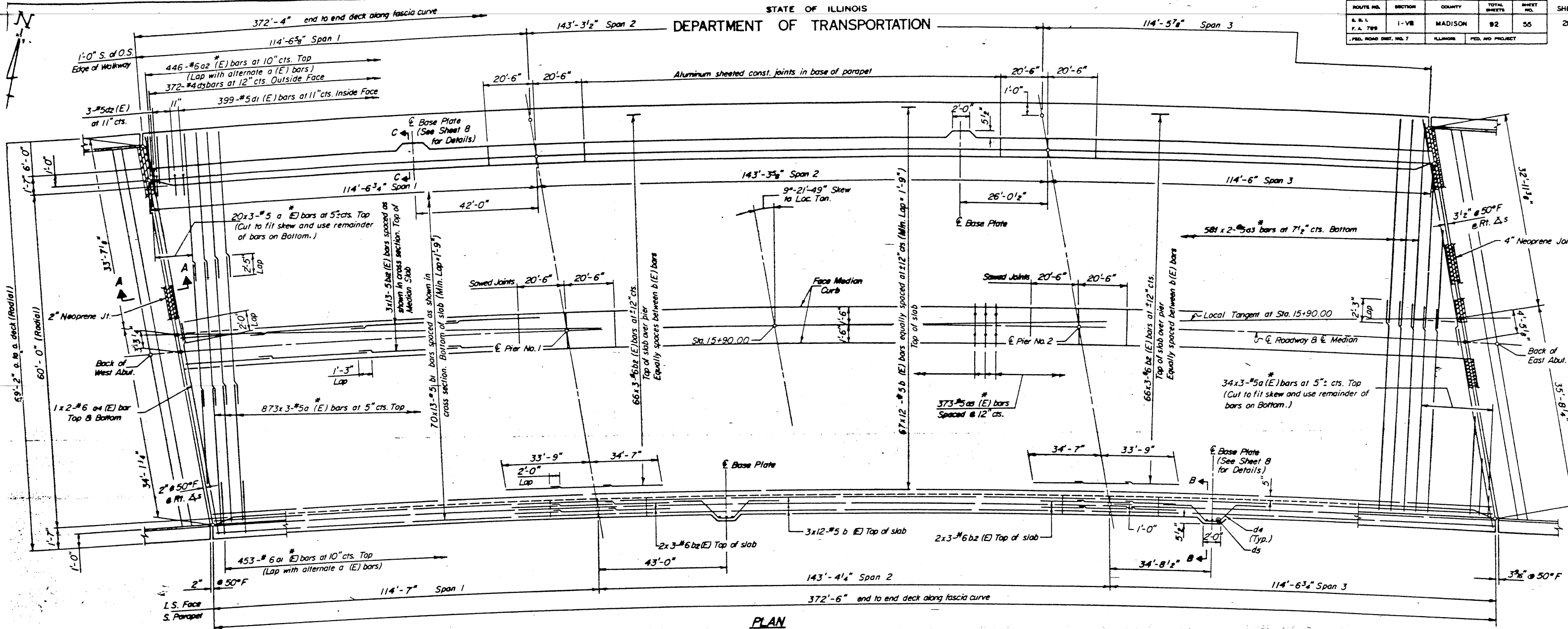
DESIGNED E.F.V.
CHECKED D.V.K.
DRAWN H.E.S.
CHECKED E.F.V./G.E.P.

TOP OF SLAB ELEVATION
F.A.P. RTE. 789(ILL.)
OVER I.T.R.R., I.C.G.
CONRAIL, & I.T.F.
MADISON COUNTY
SECTION I-VB
STA. 15+90.00(F.A.P.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P.A. 789	1-VB	MADISON	82	55
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

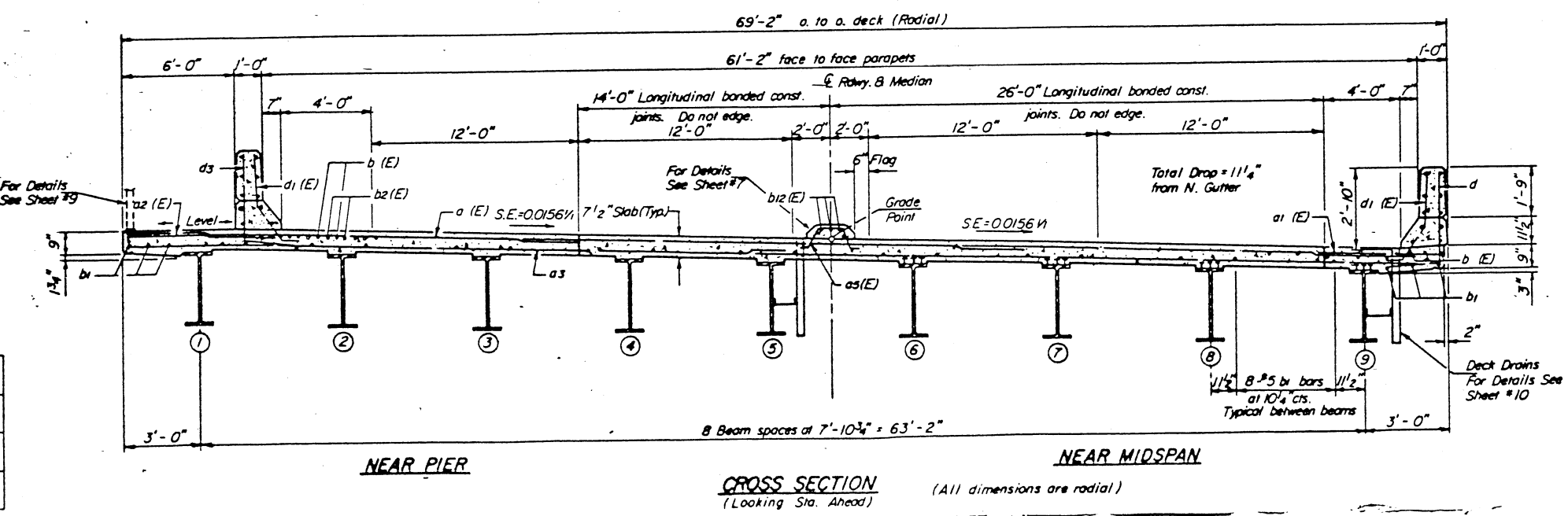
SHEET NO.
20 SHEET



PLAN

* Bars a1(E), a2(E), a3(E), a5(E) to be placed radially.

DESIGNED	D.V.K.
CHECKED	E.F.V.
DRAWN	M.W.R.
CHECKED	G.E.P.



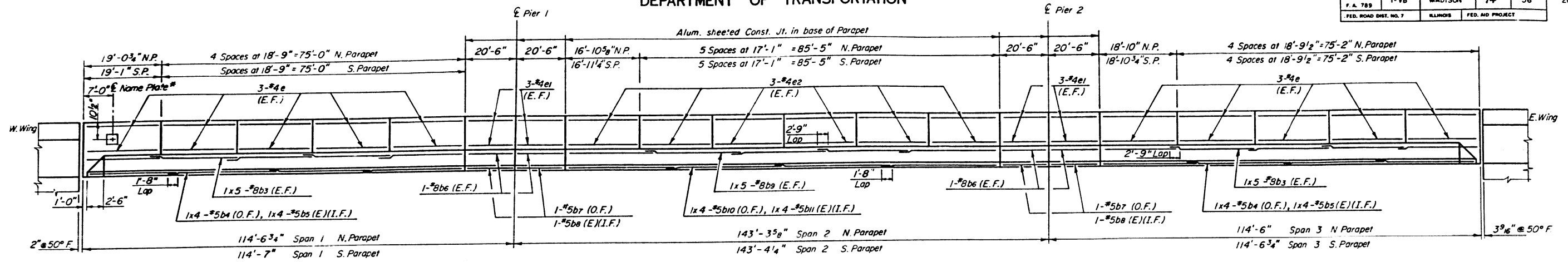
CROSS SECTION
(Looking Sta. Ahead)
(All dimensions are radial)

NOTES:
See sheet #7 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 66 x 3-#6 etc. indicates 66 lines of bars with 3 lengths per line.

SUPERSTRUCTURE
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+90.00 (F.A.P. RTE. 789)

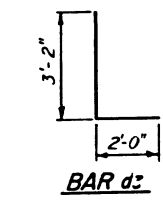
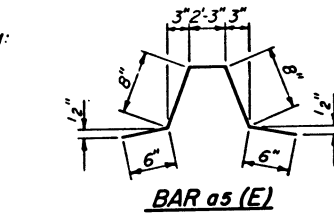
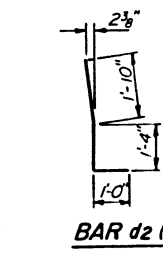
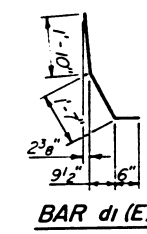
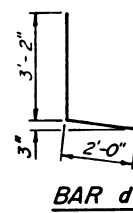
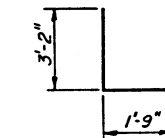
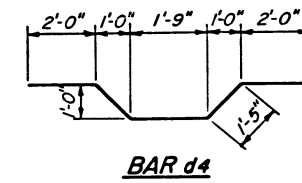
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 789	1-VB	MADISON	74	56
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



* Name Plate to be located at West End of Structure on South Parapet.

INSIDE ELEVATION OF PARAPET
(Looking North)

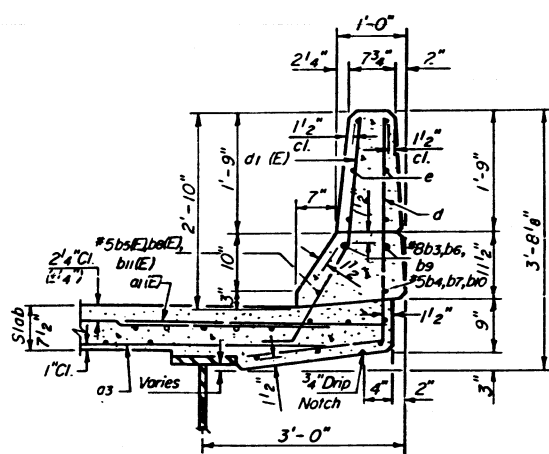


SUPERSTRUCTURE
BILL OF MATERIAL

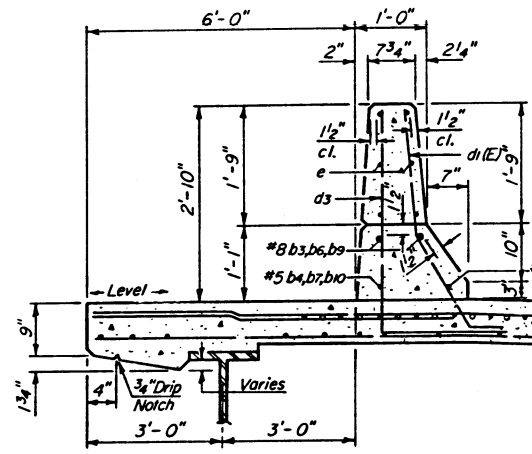
Bar	No.	Size	Length	Shape
a (E)	2781	#5	24'-6"	
a1 (E)	453	#6	4'-0"	
a2 (E)	446	#6	7'-0"	
c3	1162	#5	35'-6"	
a4 (E)	8	#6	35'-6"	
a5 (E)	373	#5	4'-7"	
b (E)	840	#5	32'-7"	
b1	910	#5	30'-3"	
b2 (E)	408	#6	24'-2"	
b3	40	#8	20'-11"	
b4	16	#5	24'-8"	
b5 (E)	16	#5	24'-8"	
b6	16	#8	20'-3"	
b7	8	#5	20'-3"	
b8 (E)	8	#5	20'-3"	
b9	20	#8	22'-7"	
b10	8	#5	26'-9"	
b11 (E)	8	#5	26'-9"	
b12 (E)	39	#5	29'-9"	
d	372	#4	5'-2"	
d1 (E)	798	#5	3'-11"	
d2 (E)	12	#5	4'-2"	
d3	372	#4	5'-2"	
d4	22	#6	8'-7"	
d5	12	#6	4'-11"	
e	120	#4	18'-6"	
e1	48	#4	20'-3"	
e2	72	#4	16'-9"	
Reinforcement Bars	Lbs.		82,730	
Reinf. Bars (Epoxy Ctd.)	Lbs.		129,370	
Class X Concrete	Cu. Yds.		727.5	
Neoprene Expansion Jt. (1/4")	Lin. Ft.		70	
Neoprene Expansion Jt. (1/2")	Lin. Ft.		69	

Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.

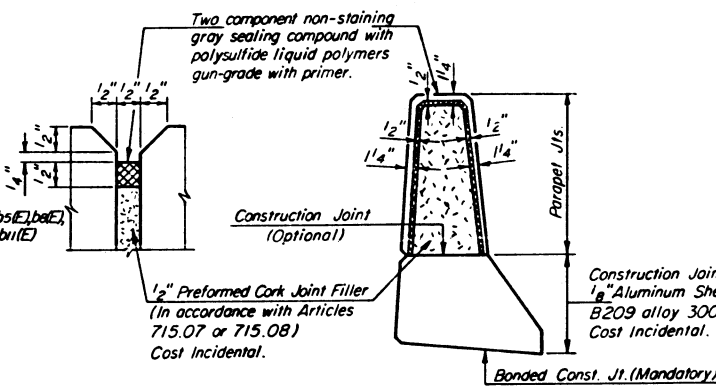
SUPERSTRUCTURE DETAILS
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+90.00 (F.A.P. RTE. 789)



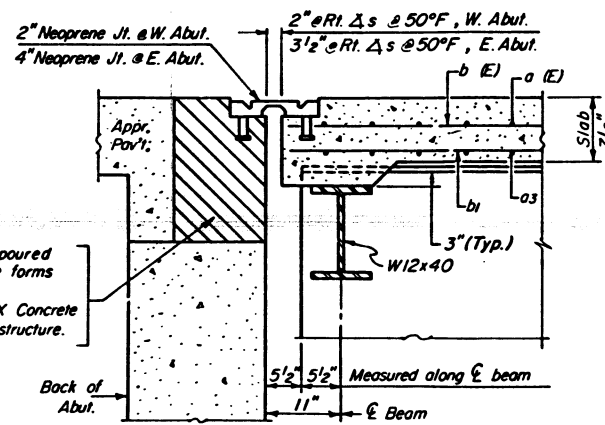
SECTION THRU PARAPET
(SOUTH)



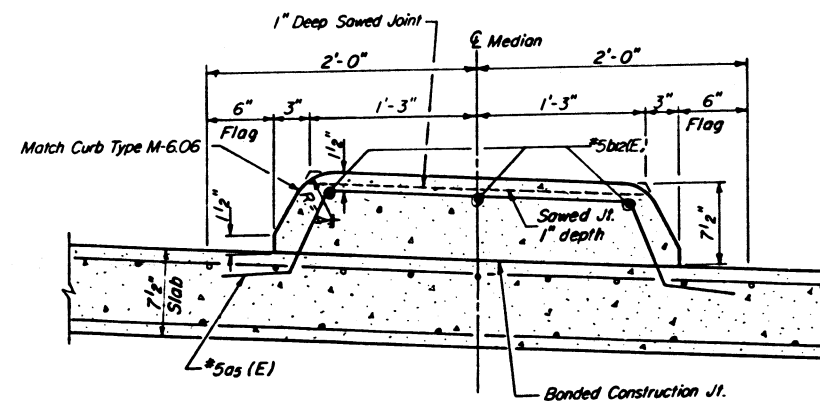
SECTION THRU PARAPET
(NORTH)



PARAPET JOINT DETAILS



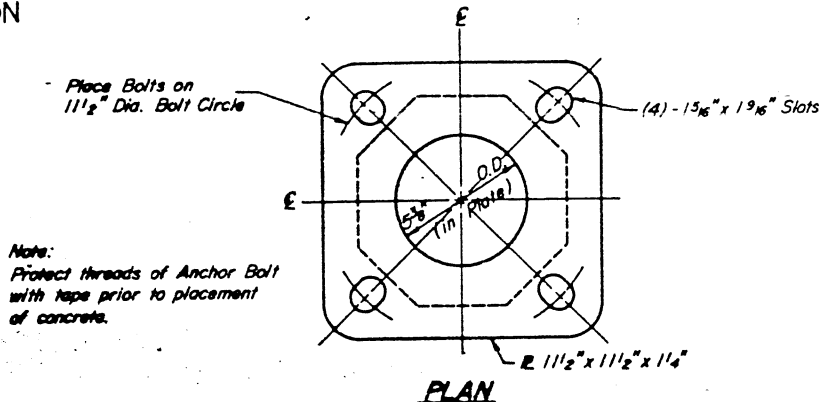
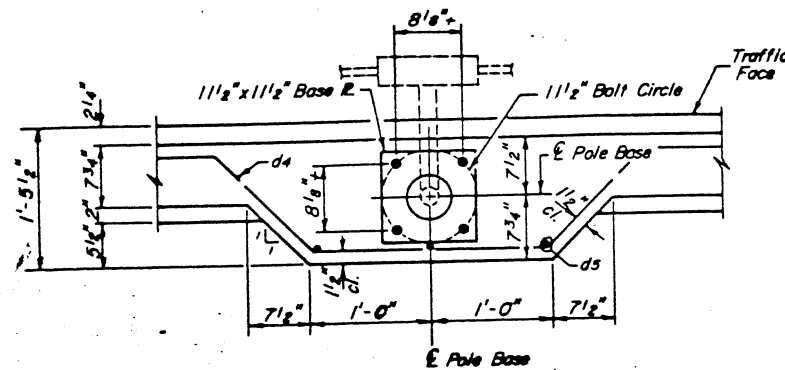
SECTION A-A



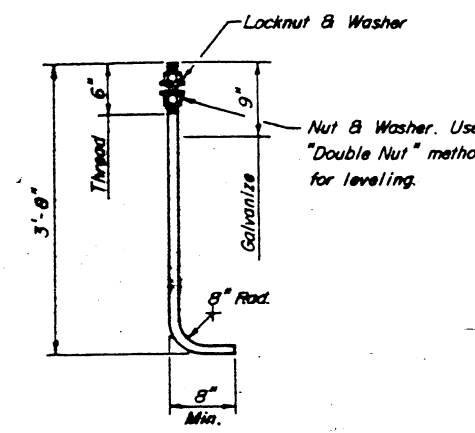
MEDIAN DETAIL

DESIGNED	D.V.K.
CHECKED	E.F.V.
DRAWN	M.W.R.
CHECKED	G.E.P.

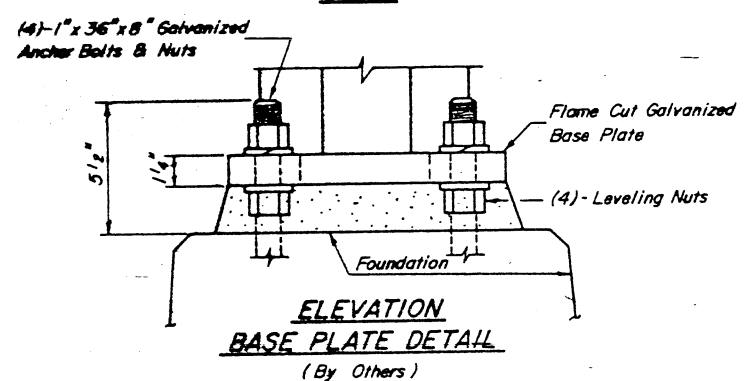
Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with superstructure.



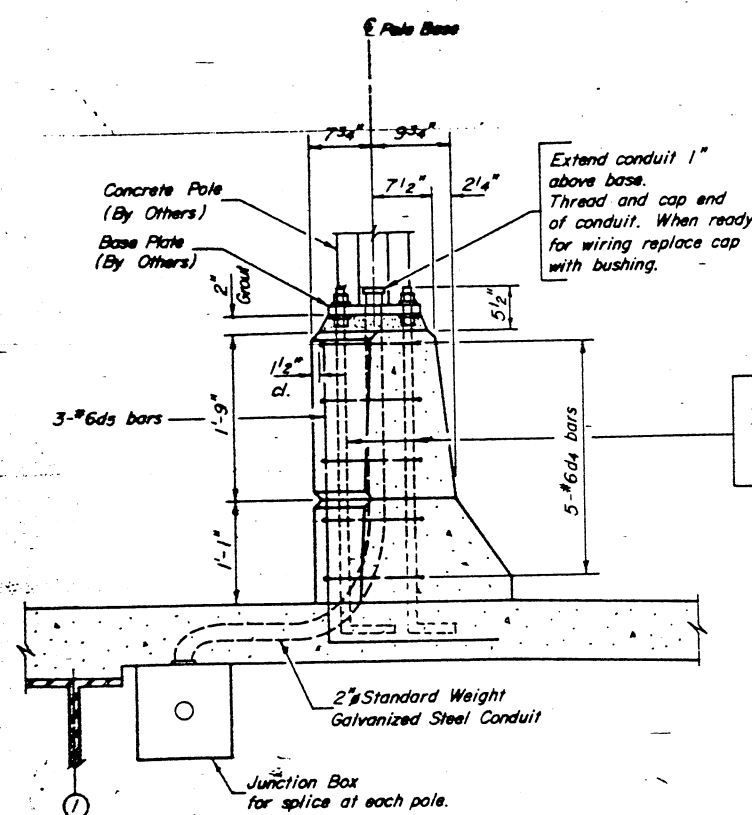
Note:
Protect threads of Anchor Bolt with tape prior to placement of concrete.



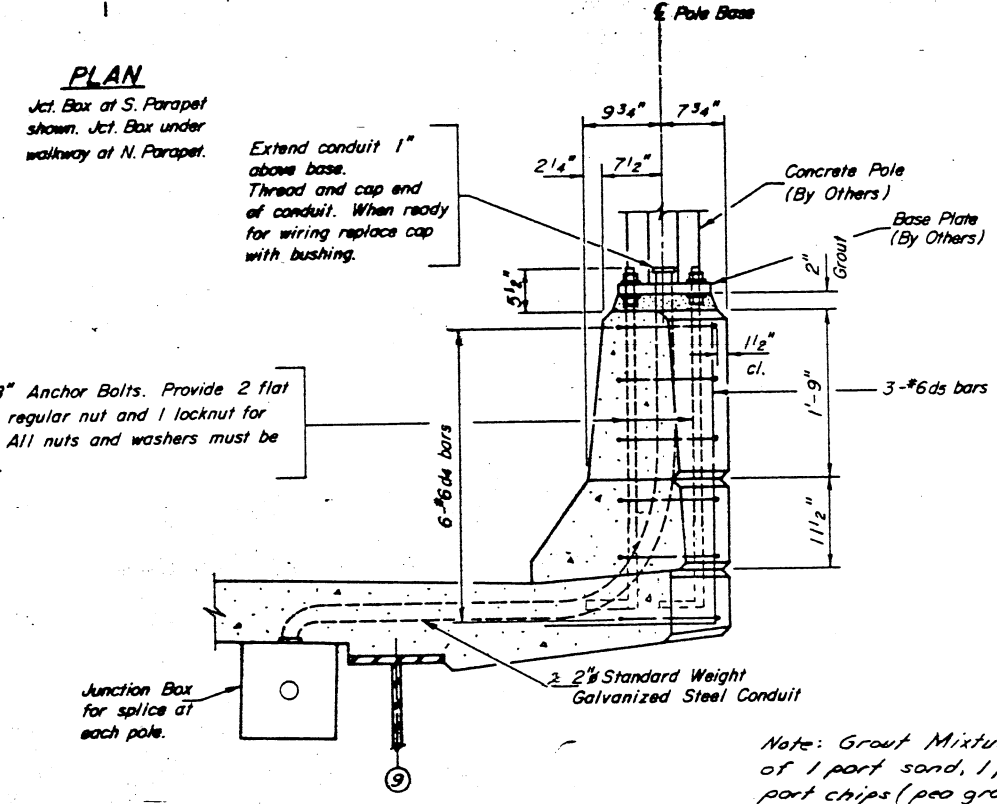
1" ANCHOR BOLT
(16 Required)



ELEVATION BASE PLATE DETAIL
(By Others)

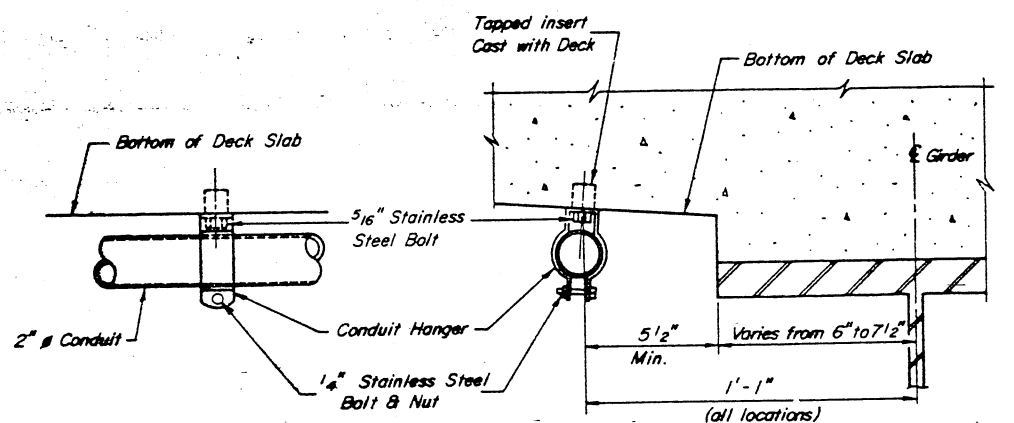


ELEVATION LIGHT POLE FOUNDATION DETAIL
(NORTH PARAPET)



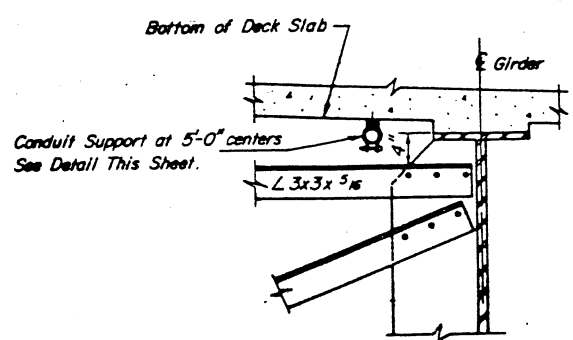
ELEVATION LIGHT POLE FOUNDATION DETAIL
(SOUTH PARAPET)

Note: Grout Mixture shall consist of 1 part sand, 1 part cement & 1 part chips (pea gravel). The grout shall contain water for a 1" slump.

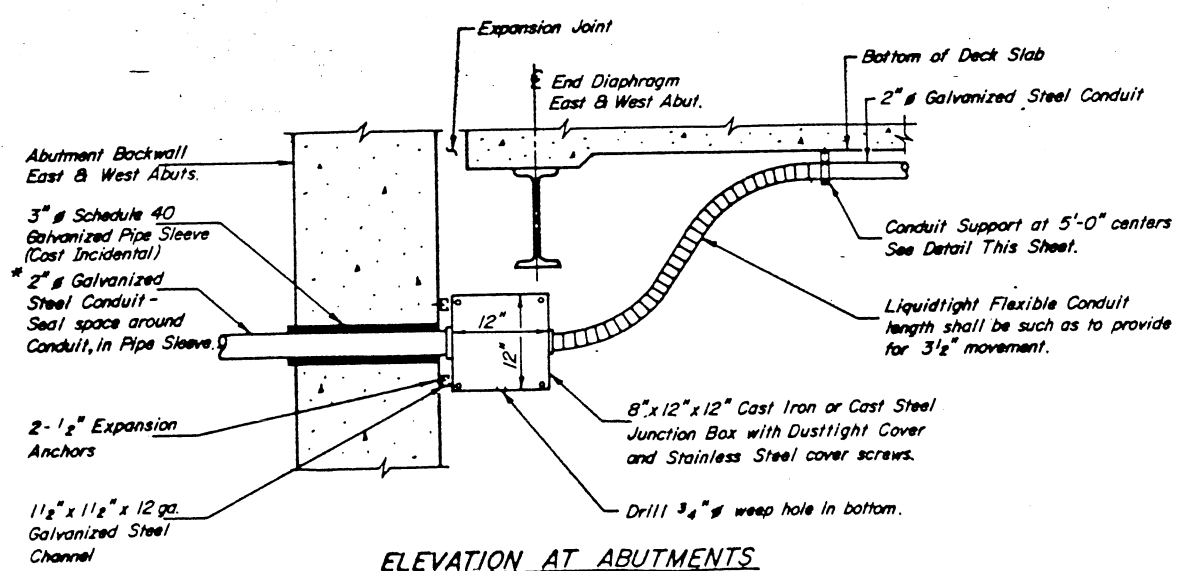


CONDUIT SUPPORT DETAIL
(At 5'-0" Centers)

Max. light pole height should not exceed 26 feet.



ELEVATION AT INTERIOR DIAPHRAGM



ELEVATION AT ABUTMENTS

* Stub and cap conduit at shoulder 1'-0" from end of each Wingwall, 24" below grade at all 4 corners.

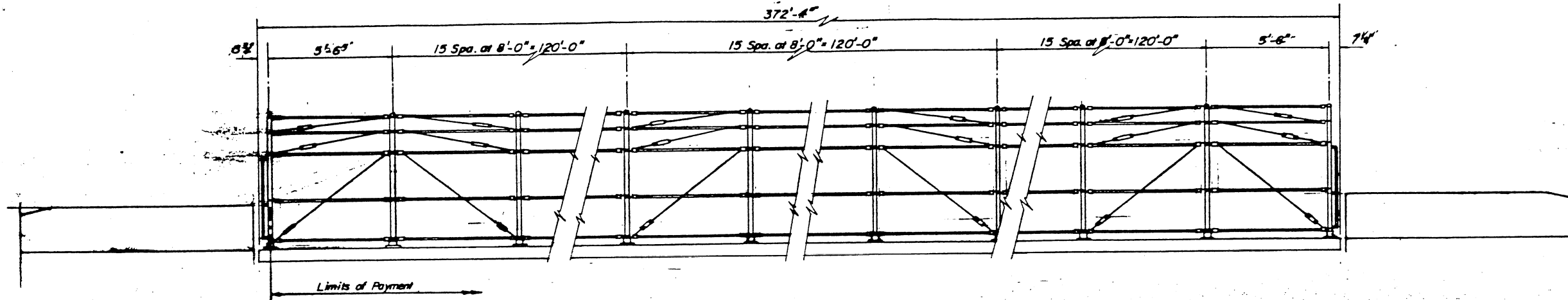
- NOTES:**
1. Grout between pole base and top of parapet to be done after work is completed by Illinois Power Company.
 2. Conduit shall be A.N.S.I. C80.1 or C80.3.
 3. Conduit Supports shall be Everdur alloy with Stainless Steel hardware.
 4. Conduit minimum 36" bending radius.
 5. Base Plates and Anchor Bolts shall be AASHTO M-183 (A-36).
 6. Cost of Anchor Bolts and Conduit is Incidental.

SUPERSTRUCTURE LIGHTING DETAILS
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+90.00 (F.A.P. RTE. 789)

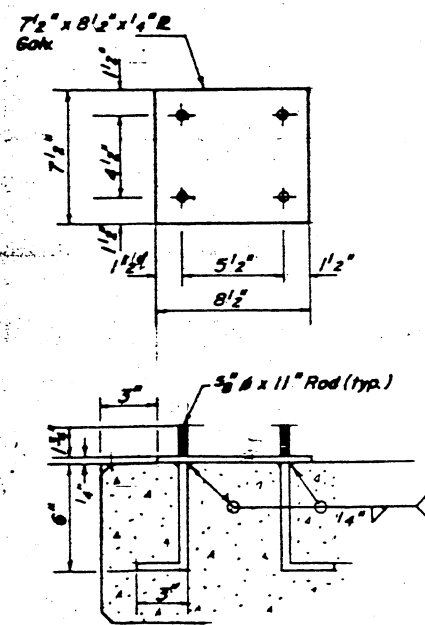
DESIGNED	E.F.V.
CHECKED	G.E.P.
DRAWN	M.W.R.
CHECKED	G.E.P.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

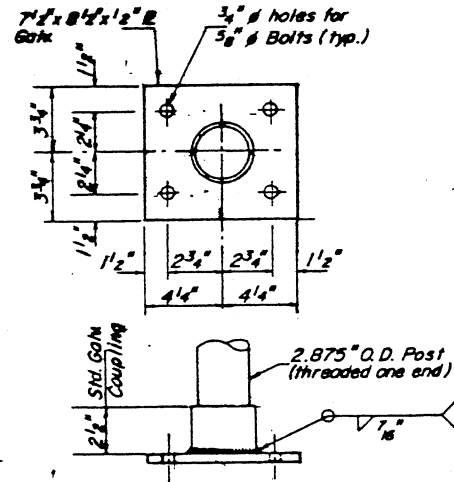
DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-1	1-VB	MADISON	82	57
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



ELEVATION

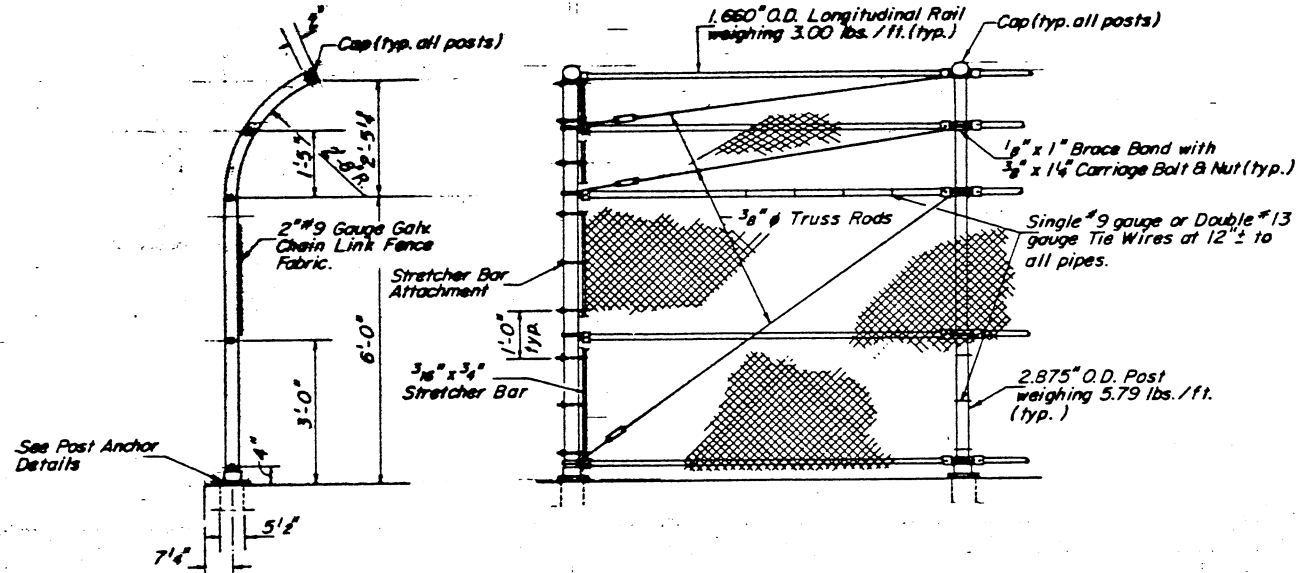


POST ANCHOR BASE

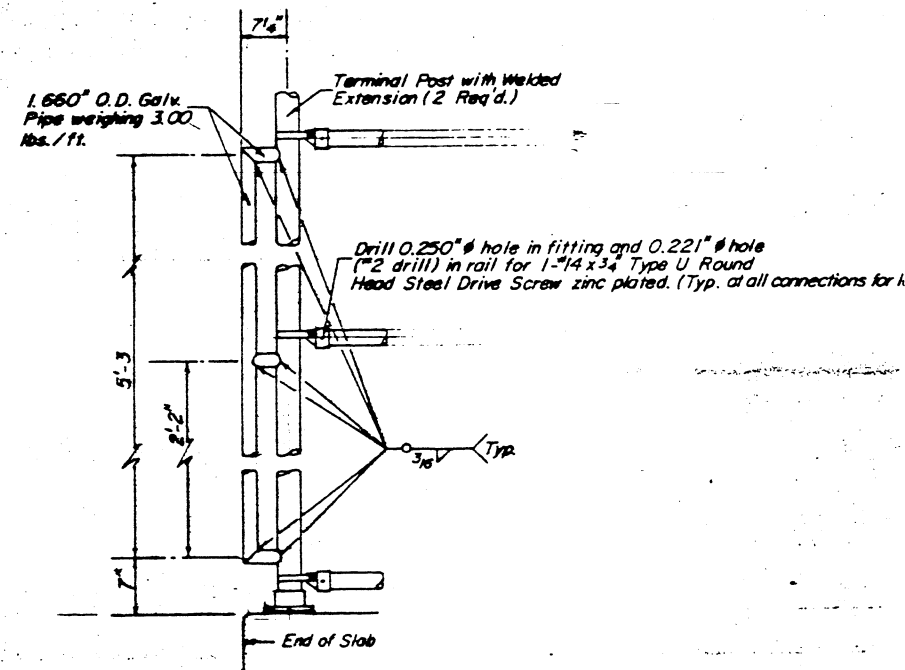


POST ANCHOR

DETAILS OF POST ANCHORS

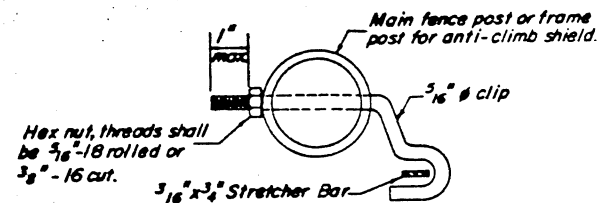


FENCE DETAILS

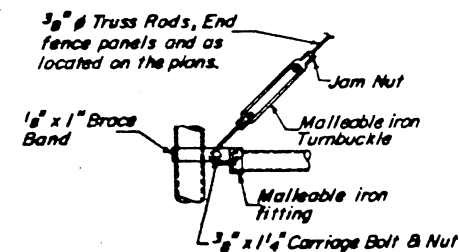


SAFETY EXTENSION DETAIL

Notes: Furnish and install all Chain Link Fencing in accordance with current Standard Specifications For Road and Bridges, Sections 710.33 and 629, unless indicated otherwise on this drawing.
All posts, longitudinal rails, truss rods and turnbuckles, connecting hardware, and fencing fabric shall be galvanized.



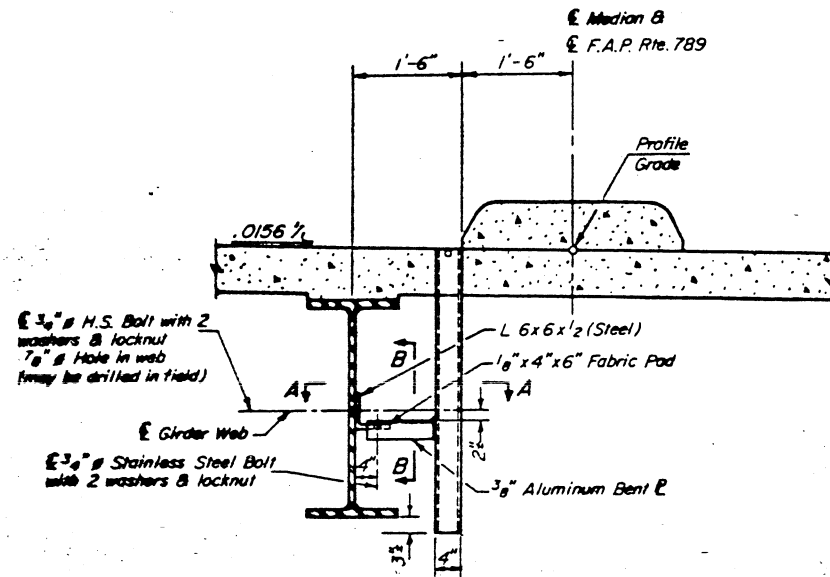
STRETCHER BAR ATTACHMENT



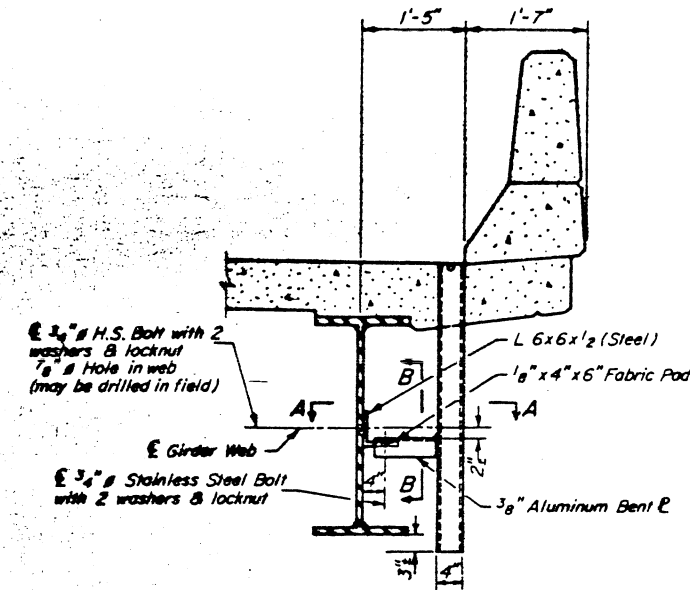
TRUSS ROD ATTACHMENT

DESIGNED	E.F.V.
CHECKED	G.E.P.
DRAWN	H.E.S.
CHECKED	E.F.V.

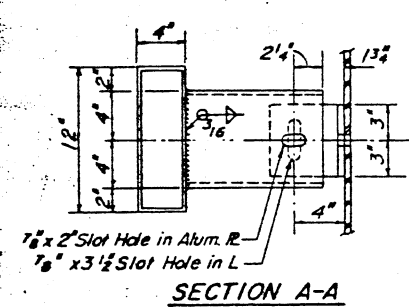
PROTECTIVE BARRIER
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+90.00 (F.A.P. RTE.)



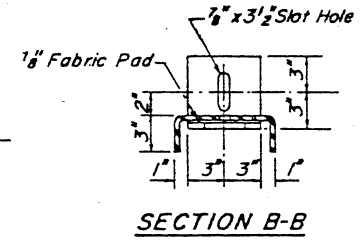
SECTION AT MEDIAN CURB



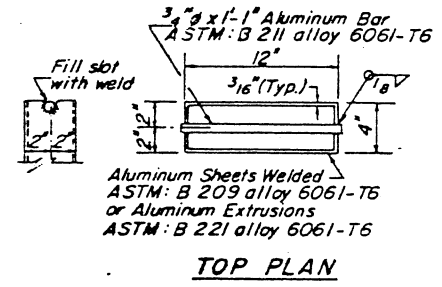
SECTION AT PARAPET



SECTION A-A



SECTION B-B



TOP PLAN

Note:
The exterior surfaces of the aluminum drains shall be cleaned and given a washcoat pre-treatment in accordance with the Steel Struct. Painting Council's Spec. SSPC-SPI & SSPC-PT3 followed by the Basic Lead Silica Chromate painting specified for Structural Steel.

Deck Drains *	Each	30
---------------	------	----

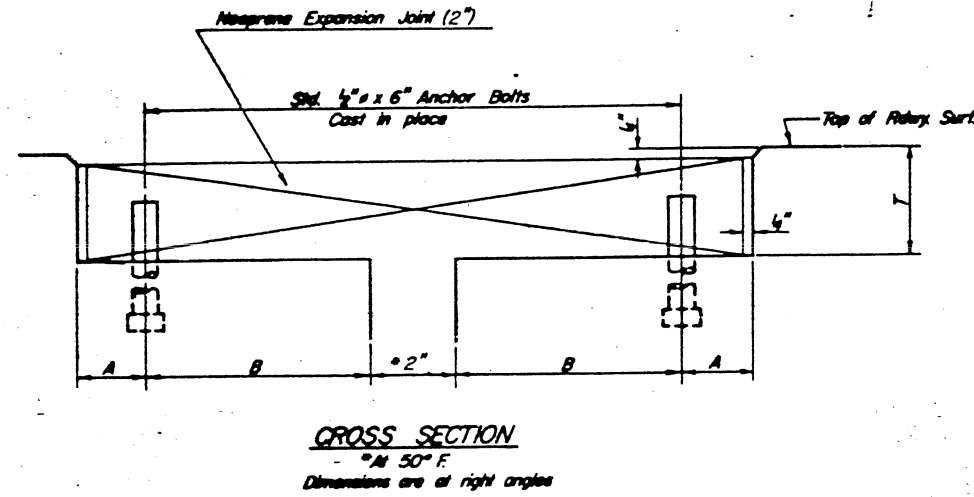
*See General Plan for arrangement. Deck drains must clear Cross Frames.

DESIGNED	G.F.P.
CHECKED	D.V.K.
DRAWN	M.W.R.
CHECKED	E.F.V.

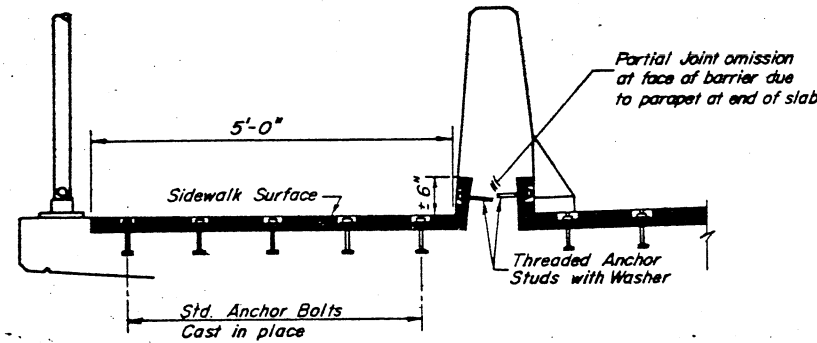
DECK DRAINS
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+90.00 (F.A.P. RTE. 789)

ALTERNATE NEOPRENE EXPANSION JOINTS (2")
(See Special Provisions)

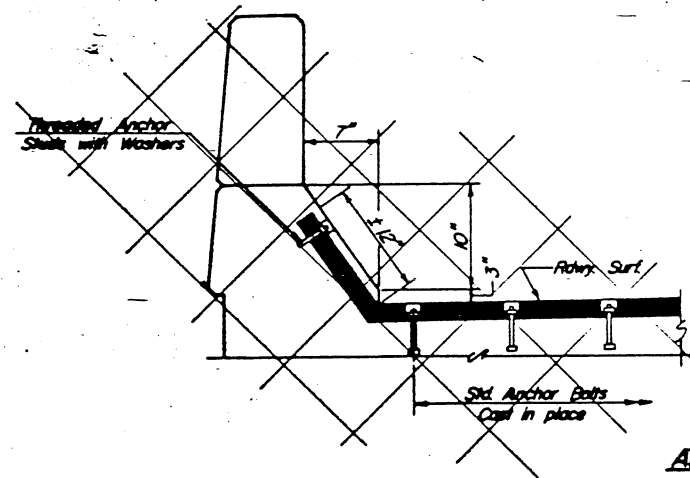
Model	Supplier	Blockout Dimensions
TRANSFLEX, MODEL 200A	General Tire Company	T=1 ³ / ₈ " A=1 ¹ / ₂ " B=3 ³ / ₈ "
WABOFLEX, MODEL SR 2	Watson Bowman Associates, Inc.	T=1 ³ / ₈ " A=1 ¹ / ₄ " B=3 ³ / ₈ "
FEL-SPAN, MODEL T-30 Set joint seal 1 ¹ / ₂ " at 50° F	Fel-Pro Building Products Inc.	T=1 ³ / ₈ " A=2 ¹ / ₄ " B=2 ¹ / ₂ "
WABO ELASTODAM, TYPE 300 Set joint seal 1 ¹ / ₂ " at 50° F	Watson Bowman Associates, Inc.	T=1 ³ / ₈ " A=2 ¹ / ₄ " B=2 ¹ / ₂ "
WABO ALL-STRIP, TYPE III S300 Set joint seal 1 ¹ / ₂ " at 50° F Permitted for 0° skew only	Watson Bowman Associates, Inc.	T=1 ³ / ₈ " A=1 ⁵ / ₈ " B=2 ¹ / ₂ "
LOW PROFILE ONFLEX-25 Set joint seal 1 ¹ / ₂ " at 50° F Roadway bolt channel shall be filled with approved grout. Permitted for up to 50° skew	Structural Accessories, Inc.	T=1 ³ / ₈ " A=1 ⁵ / ₈ " B=2 ¹ / ₂ "



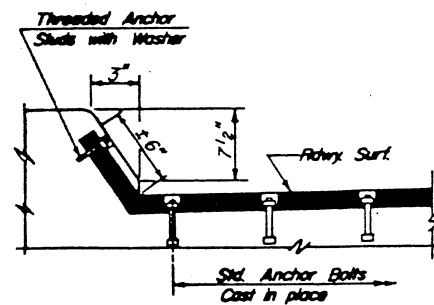
NOTE:
Joint openings shall be adjusted in accordance with Article 903.07(c) of the Std. Spec's. when the deck is poured at an ambient temperature other than 50° F.



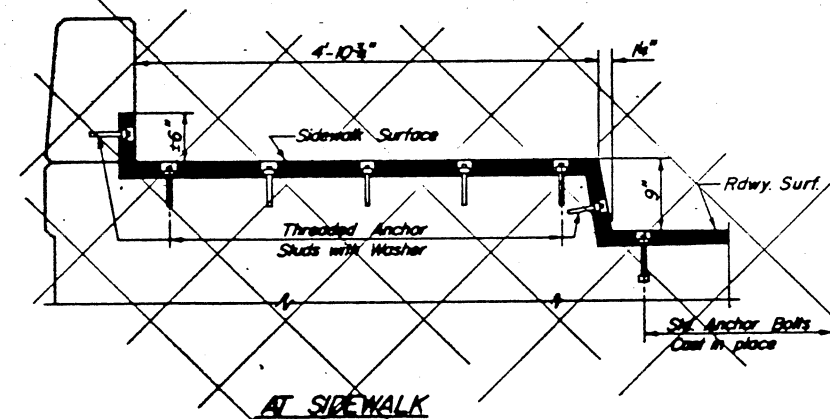
AT SIDEWALK



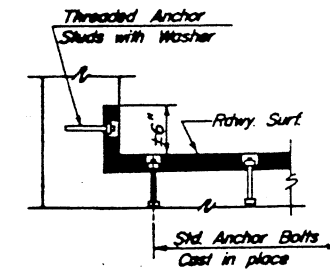
AT CURBS



AT MEDIAN "CURB"



AT SIDEWALK



AT ABUTMENT

TYPICAL END TREATMENTS

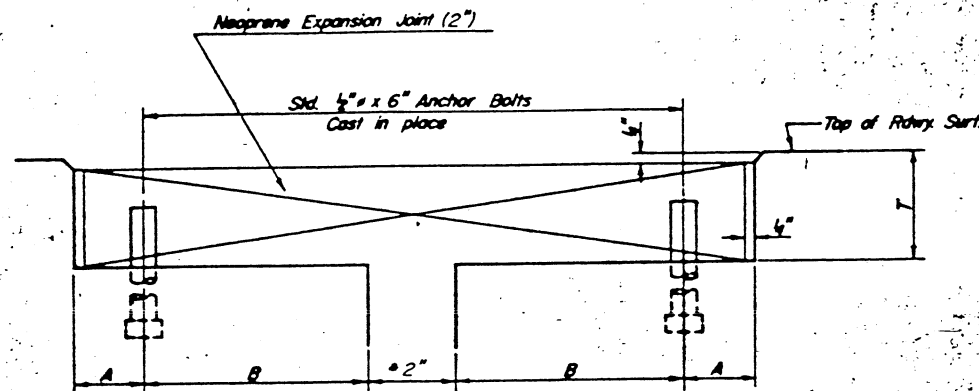
DESIGNED	GEP
CHECKED	DVK
DRAWN	MF
CHECKED	EFV

NEOPRENE EXPANSION JOINTS (2")
FOR EXPANSION LENGTH OF DECK = 0101601

SUPERSTRUCTURE DETAILS
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+89.75 (F.A.P. RTE. 789)

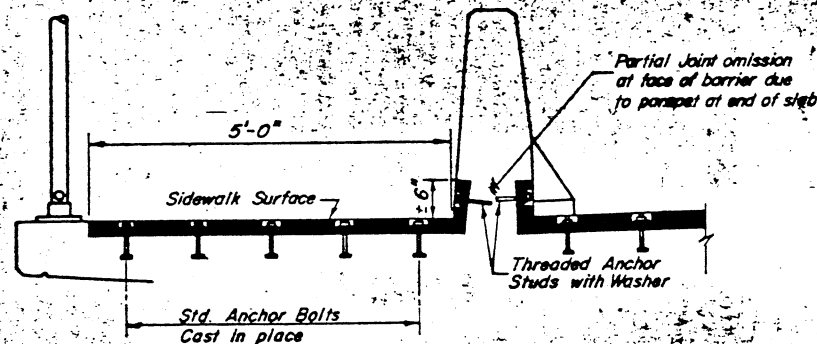
ALTERNATE NEOPRENE EXPANSION JOINTS (2")

(See Special Provisions)

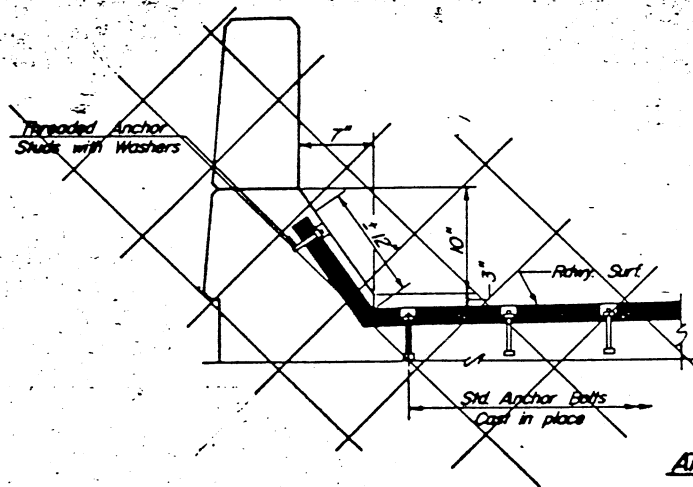


CROSS SECTION
At 50° F
Dimensions are at right angles

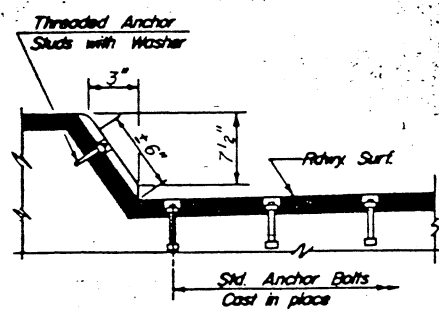
NOTE:
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Std. Spec's. when the deck is poured at an ambient temperature other than 50° F.



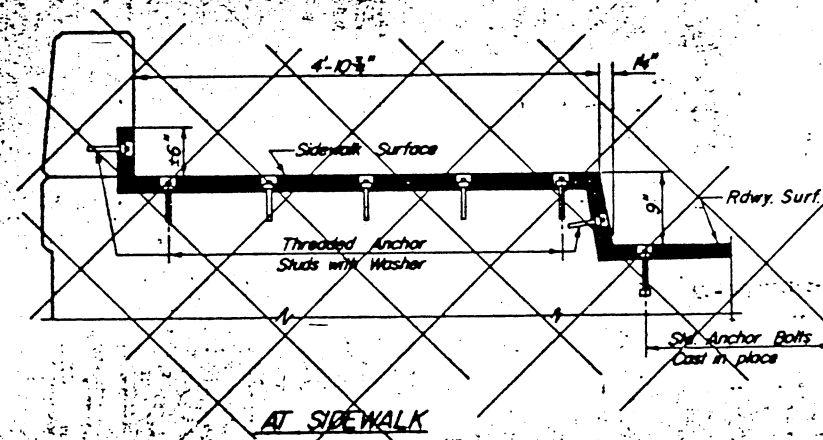
AT SIDEWALK



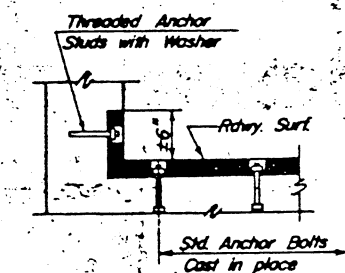
AT CURBS



AT MEDIAN "CURB"



AT SIDEWALK



AT ABUTMENT

TYPICAL END TREATMENTS

Model	Supplier	Blockout Dimensions
TRANSFLEX, MODEL 200A	General Tire Company	T=1 1/2", A=1 1/2", B=3 1/2"
WABOFLEX, MODEL SR 2	Watson Bowman Associates, Inc.	T=1 1/2", A=1 1/2", B=3 1/2"
FEL-SPAN, MODEL T-30 Set joint seal 1 1/2" at 50° F	Fel-Pro Building Products Inc.	T=1 1/2", A=2 1/4", B=2 1/4"
WABO ELASTODAM, TYPE 300 Set joint seal 1 1/2" at 50° F	Watson Bowman Associates, Inc.	T=1 1/2", A=2 1/4", B=2 1/4"
WABO ALLU-STRIP, TYPE III S300 Set joint seal 1 1/2" at 50° F Permitted for 0° skew only	Watson Bowman Associates, Inc.	T=1 1/2", A=1 1/2", B=2 1/4"
LOW PROFILE ONFLEX-25 Set joint seal 1 1/2" at 50° F Roadway bolt channel shall be filled with approved grout. Permitted for up to 50° skew	Structural Accessories, Inc.	T=1 1/2", A=1 1/2", B=2 1/4"

DESIGNED	GEP
CHECKED	DVK
DRAWN	MP
CHECKED	EFV

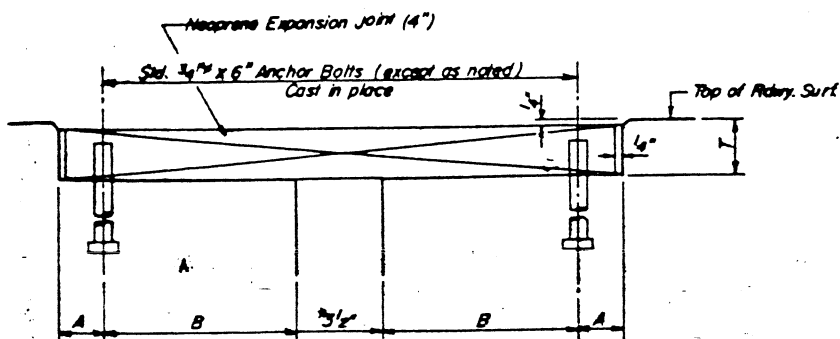
AS REVISED

NEOPRENE EXPANSION JOINT
FOR EXPANSION LENGTH OF DECK = 0.10 (1)

SUPERSTRUCTURE DETAIL
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+89.75 (F.A.P. RTE. 789)

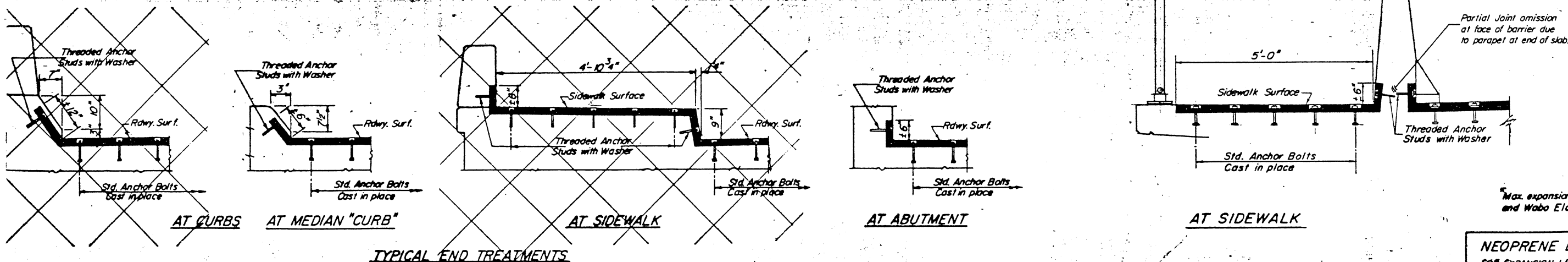
ALTERNATE NEOPRENE EXPANSION JOINTS (4")
(See Special Provisions)

Model	Supplier	Blockout Dimensions
TRANSFLEX, MODEL 400A	General Tire Company	$T = 2\frac{3}{8}"$, $A = 1\frac{13}{16}"$, $B = 8\frac{1}{16}"$
WABOFLEX, MODEL SR 4	Watson Bowman Associates, Inc.	$T = 2\frac{3}{8}"$, $A = 1\frac{13}{16}"$, $B = 8\frac{1}{16}"$
FEL-SPAN, MODEL T-40 Set joint seal 2" at 50°F. Use 1/2" x 6" Anchor Bolts Max. expansion length = 300'	Fel-Pro Building Products Inc.	$T = 2\frac{3}{8}"$, $A = 2\frac{1}{4}"$, $B = 2\frac{3}{8}"$
WABO ELASTODAM, TYPE 400 Set joint seal 2" at 50°F. Use 1/2" x 6" Anchor Bolts Max. expansion length = 300'	Watson Bowman Associates, Inc.	$T = 2\frac{3}{8}"$, $A = 2\frac{1}{4}"$, $B = 2\frac{3}{8}"$



CROSS SECTION
At 50°F.
Dimensions are at right angles.

NOTE:
Joint openings shall be adjusted in accordance with Article 503.07 (c) of the Std. Spec's. when the deck is poured at an ambient temperature other than 50°F.



TYPICAL END TREATMENTS

Max. expansion length for the Fel-Span, Model T-40 and Wabo Elastodam, Type 400 = 300 ft.

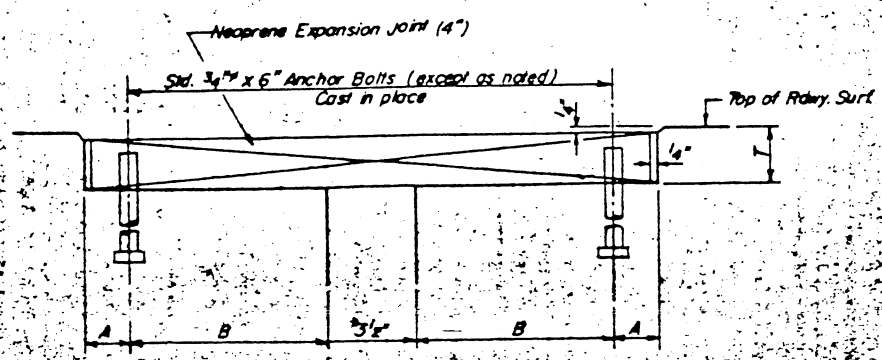
NEOPRENE EXPANSION JOINTS (4")
FOR EXPANSION LENGTH OF DECK = 200 ft. to 320 ft.

SUPERSTRUCTURE DETAILS
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+89.75 (F.A.P. RTE. 789)

G.E.P.
D.V.K.
M.W.R.
D.V.K.

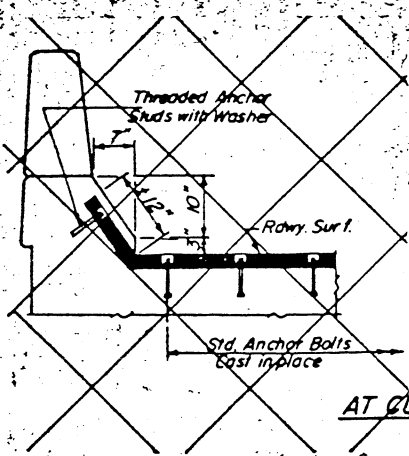
ALTERNATE NEOPRENE EXPANSION JOINTS (4")
(See Special Provisions)

Model	Supplier	Blockout Dimensions
TRANSFLEX, MODEL 400A	General Tire Company	T = 2 3/8", A = 1 1/8", B = 8 1/8"
WABOFLEX, MODEL SR 4	Watson Bowman Associates, Inc.	T = 2 3/8", A = 1 1/8", B = 8 1/8"
FEL-SPAN, MODEL T-40 Set joint seal 2" at 50°F Use 1/2" x 6" Anchor Bolts Max. expansion length = 300'	Fel-Pro Building Products Inc.	T = 2 3/8", A = 2 1/4", B = 2 3/4"
WABO ELASTODAM, TYPE 400 Set joint seal 2" at 50°F Use 1/2" x 6" Anchor Bolts Max. expansion length = 300'	Watson Bowman Associates, Inc.	T = 2 3/8", A = 2 1/4", B = 2 3/4"

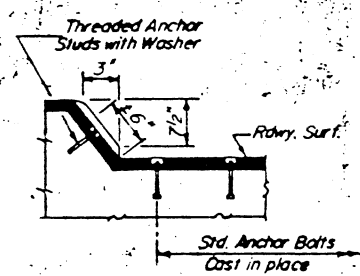


CROSS SECTION
At 50°F
Dimensions are at right angles.

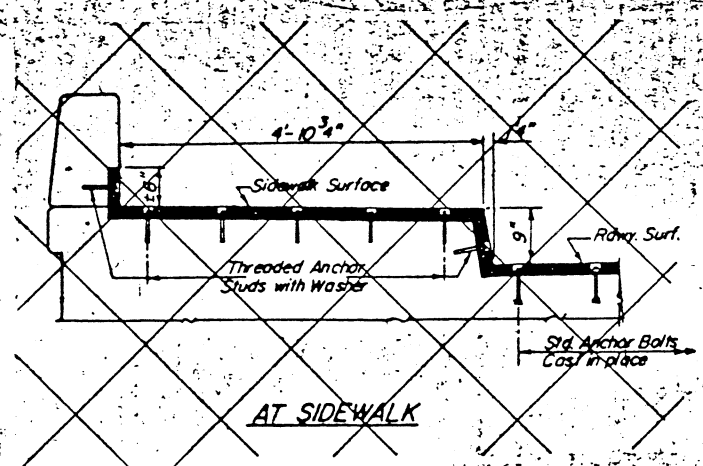
NOTE:
Joint openings shall be adjusted in accordance with Article 503.07 (c) of the Std. Spec's. when the deck is poured at an ambient temperature other than 50°F.



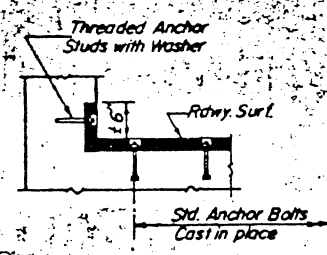
AT CURBS



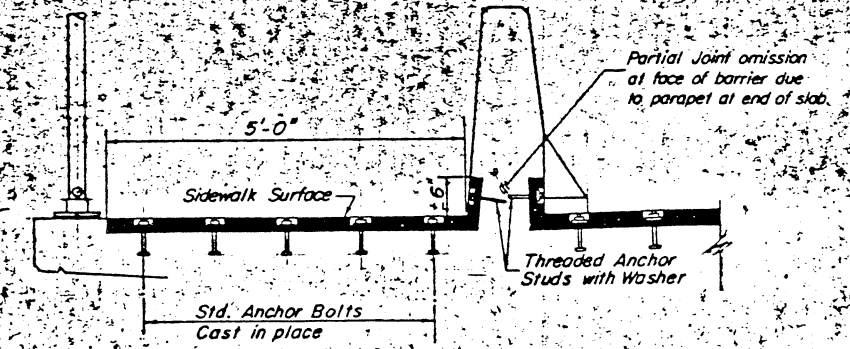
AT MEDIAN "CURB"



AT SIDEWALK



AT ABUTMENT



AT SIDEWALK

Max. expansion length for the Fel-Span, Model T-40 and Wabo Elastodam, Type-400 = 300'

DESIGNED	G.E.P.
CHECKED	D.V.K.
DRAWN	M.W.R.
CHECKED	D.V.K.

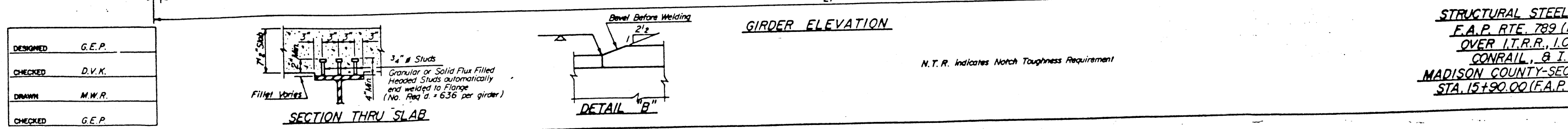
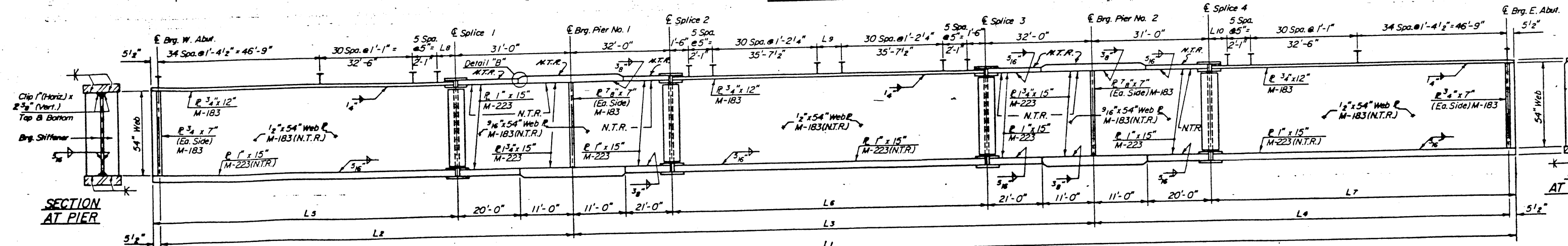
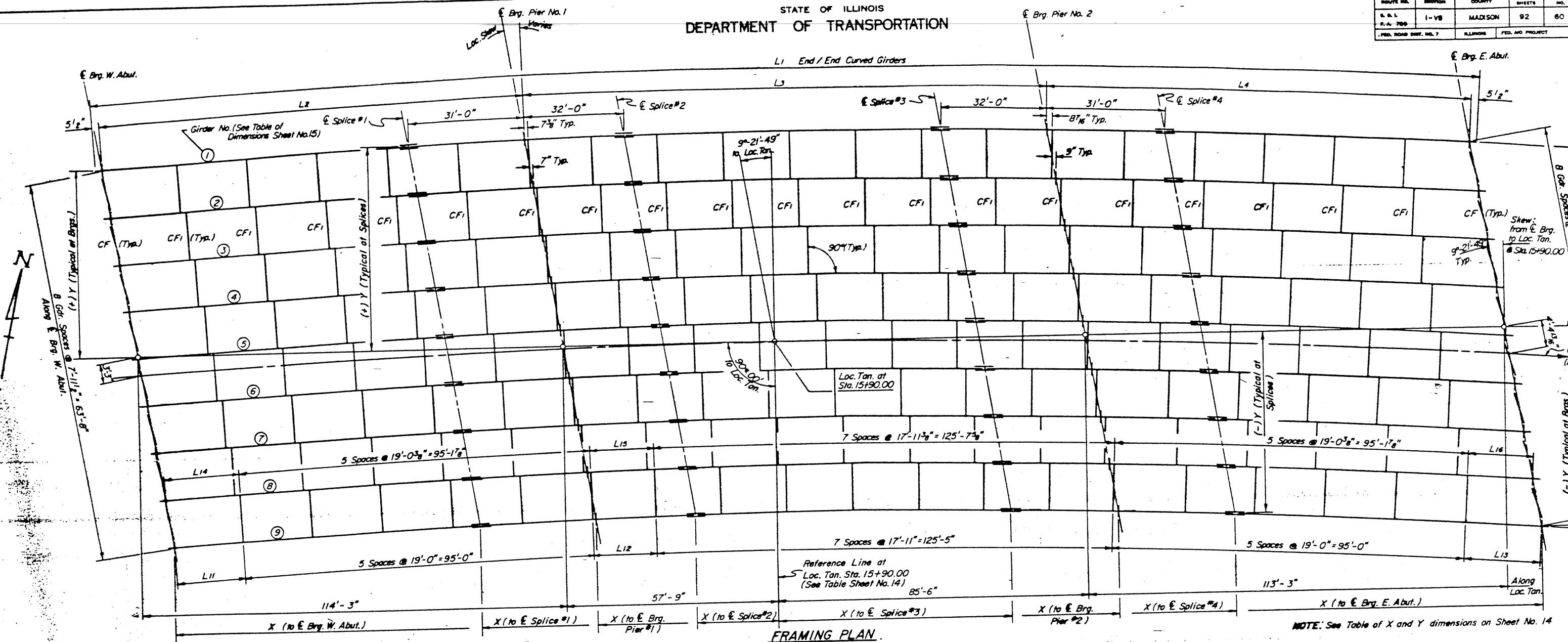
AS REVISED

NEOPRENE EXPANSION JOINTS
FOR EXPANSION LENGTH OF DECK = 200 ft. to 300 ft.

SUPERSTRUCTURE DETAILS
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+89.75 (F.A.P. RTE. 789)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-18	1-18	MADISON	92	60
F.A.P. 789		ILLINOIS		FED. AID PROJECT



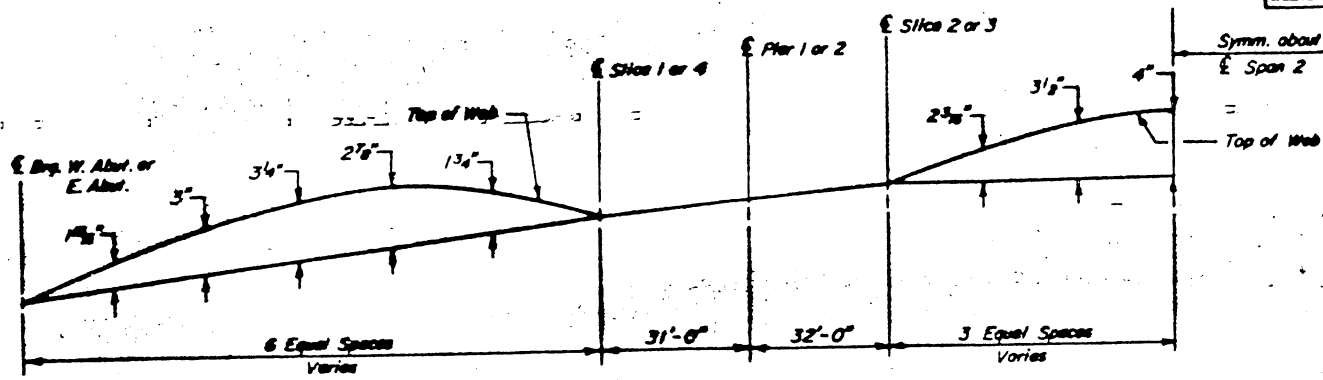
DESIGNED	G.E.P.
CHECKED	D.V.K.
DRAWN	M.W.R.
CHECKED	G.E.P.

STRUCTURAL STEEL DET.
F.A.P. RTE. 789 (ILL. 1-18)
OVER I.T.R.R., I.C.G.R.R.
CONRAIL, & I.T.R.R.
MADISON COUNTY-SECTION
STA. 15+90.00 (F.A.P. RTE.)

TABLE OF X AND Y OFFSETS

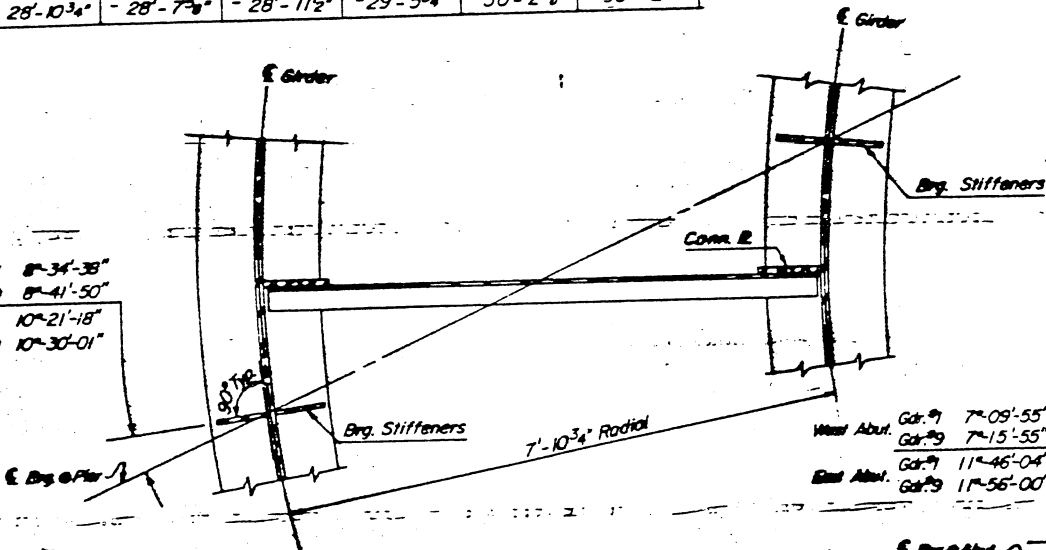
E. Brg. W. Abut.	Splice #1	E. Brg. Pier #1	Splice #2	Splice #3	E. Brg. Pier #2	Splice #4	E. Brg. E. Abut.
177'-13"	94'-4 1/2"	63'-4 3/4"	31'-4 3/8"	47'-11"	79'-10 7/8"	110'-10 7/8"	193'-8 3/8"
31'-2 1/4"	33'-7 3/4"	34'-1 3/4"	34'-5 3/4"	34'-4"	33'-10 3/4"	33'-3"	30'-6 1/4"
175'-10 1/2"	93'-0 7/8"	62'-1 1/2"	30'-7"	49'-2 3/4"	81'-2 5/8"	112'-2 1/2"	195'-0 3/8"
25'-4"	25'-9"	26'-3 1/4"	26'-7 1/8"	26'-5 1/8"	25'-11 5/8"	25'-3 3/8"	22'-6 3/4"
174'-6 3/4"	91'-9 3/4"	60'-9 3/4"	28'-9 3/4"	50'-6 3/4"	82'-6 1/4"	113'-6 1/4"	196'-4 1/8"
15'-5 3/4"	17'-10 1/2"	18'-4 3/4"	18'-8 3/4"	18'-6 3/4"	18'-0 3/4"	17'-4 3/4"	14'-7 1/4"
173'-3 1/2"	90'-5 3/4"	59'-5 3/4"	27'-5 3/4"	51'-10"	83'-10"	114'-9 7/8"	197'-7 1/8"
7'-7 1/2"	10'-0"	10'-6 1/4"	10'-9 3/4"	10'-7 1/4"	10'-1 5/8"	9'-5 1/2"	6'-7 3/4"
171'-11 1/2"	89'-2 1/4"	58'-2 1/4"	26'-2 1/4"	53'-1 3/4"	85'-1 3/4"	116'-1 1/2"	198'-11 1/4"
-0'-2 3/4"	2'-1 3/4"	2'-7 3/4"	2'-11 1/4"	2'-8 1/4"	2'-2 1/4"	1'-6 3/4"	-1'-3 3/4"
170'-8"	87'-10 1/4"	56'-10 1/4"	24'-10 1/4"	54'-5 1/4"	86'-5 1/4"	117'-5 1/4"	200'-3 1/4"
-8'-0 7/8"	-5'-8 7/8"	-5'-5"	-4'-11 1/2"	-5'-2 5/8"	-5'-8 1/2"	-6'-4 7/8"	-9'-3 3/4"
169'-4 1/2"	86'-7"	55'-7"	23'-7"	55'-9"	87'-9"	118'-8 3/4"	201'-7 1/4"
-15'-11 1/4"	-13'-7 3/4"	-13'-1 1/2"	-12'-10 1/4"	-13'-1 3/4"	-13'-7 3/4"	-14'-4"	-17'-2 7/8"
168'-1"	85'-3 3/4"	54'-3 3/4"	22'-3 1/2"	57'-0 3/4"	89'-0 3/4"	120'-0 1/2"	202'-10 7/8"
-23'-9 3/4"	-21'-5 3/4"	-21'-0 1/4"	-20'-8 1/8"	-21'-0 1/2"	-21'-6 5/8"	-22'-3 1/4"	-25'-2 3/8"
166'-9 3/4"	83'-11 3/4"	52'-11 3/4"	20'-11 3/4"	58'-4 3/8"	90'-4 3/8"	121'-4 1/4"	204'-2 3/8"
-31'-7 3/4"	-29'-4 1/4"	-28'-10 3/4"	-28'-7 3/8"	-28'-11 1/2"	-29'-5 3/4"	-30'-2 3/8"	-33'-2"

Eng. Plan, Sheet No. 13

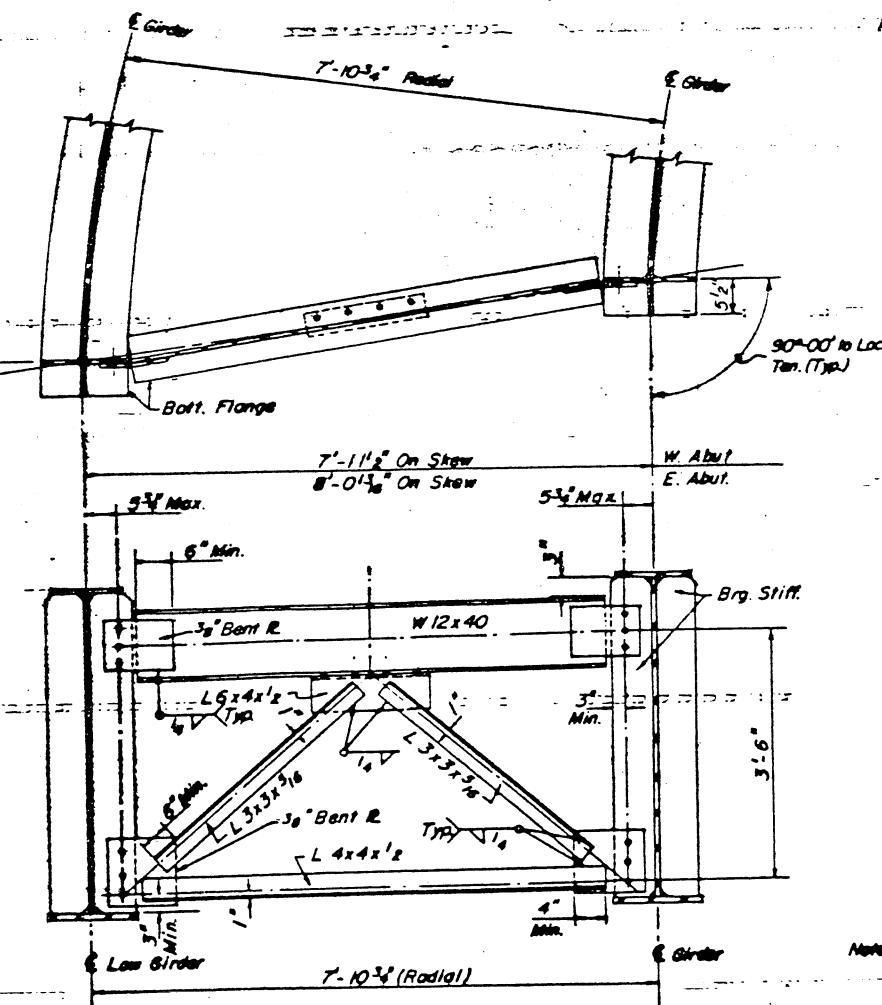


CAMBER DIAGRAM

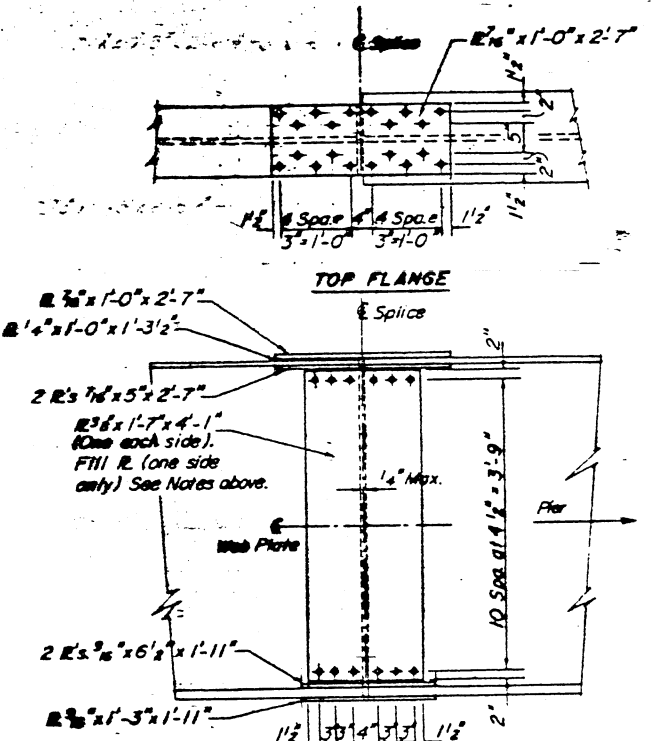
NOTES:
All Splice Plate Bolts to be 7/8" A-325.
N.T.R. all splice plate material.
All Flange Splice R's to be M-223.
Web Splice R's to be M-183.
Open holes 1/4" dia.
Web Splice F.H. Plate (one side) to be 1/2" x 9" x 4'-1".



CROSS FRAME "CF 1"
(136 Req'd. - Use 3/4" H.S. Bolts)



TYPICAL END CROSS FRAME "CF"
(16 Req'd. - Use 3/4" H.S. Bolts)



SPLICE PLATE DETAILS
(136 Req'd.)

STRUCTURAL STEEL DETAILS
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION I-VB
STA. 15+90.00 (F.A.P. RTE. 789)

Note: Use M-183 Structural Steel for Cross Frames

Girder No.	1	2	3	4	5	6	7	8	9
Location									
Brig. W. Abut.	458.02	458.02	457.94	457.87	457.79	457.72	457.64	457.57	457.49
Splice #1	461.20	461.18	461.09	461.00	460.91	460.81	460.72	460.63	460.54
Brig. Pier 1	461.83	461.81	461.71	461.61	461.51	461.41	461.31	461.21	461.10
Splice #2	462.49	462.45	462.34	462.24	462.13	462.02	461.91	461.80	461.69
Splice #3	462.72	462.66	462.53	462.39	462.26	462.12	461.99	461.85	461.72
Brig. Pier 2	462.25	462.18	462.03	461.89	461.74	461.59	461.44	461.30	461.15
Splice #4	461.80	461.71	461.55	461.40	461.24	461.08	460.92	460.76	460.59
Brig. E. Abut.	459.11	458.98	458.79	458.59	458.40	458.20	458.00	457.80	457.60

* For Fabrication Only

	Abuts.	Piers
R ₁ (k)	50.9	181.7
R ₂ (k)	46.6	87.3
R ₃ (k)	9.8	17.3
R total primary (k)	107.3	286.3
R secondary (k)	0.8	3.6
R total (k)	108.1	289.9

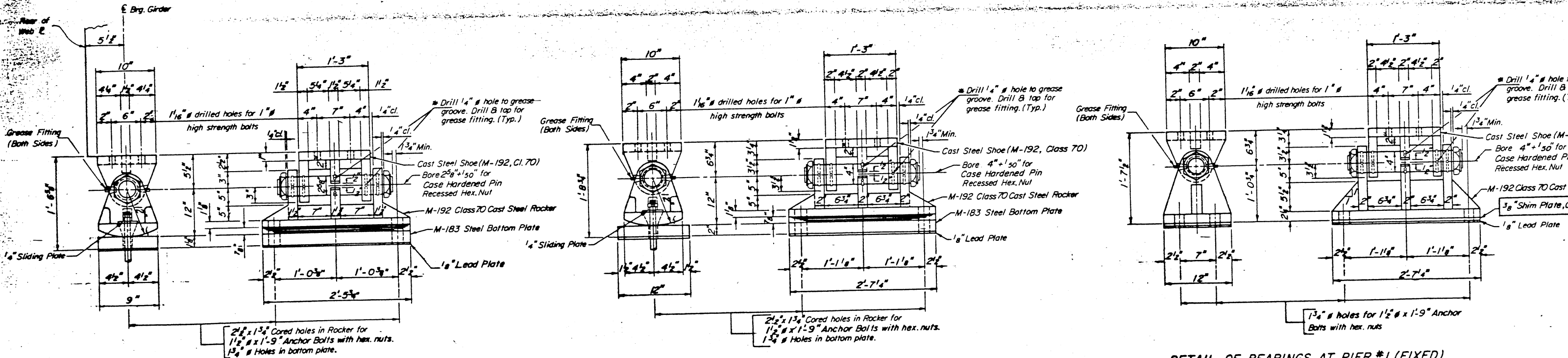
** Interior Girder

	0.4 Sp. 1 or 3	Pier 1 or 2	0.5 Sp. 2
I _s (in ⁴)	24,110	48,188	24,110
I _c (in ⁴)	60,114	—	60,114
S _s (in ³)	974	1676	974
S _c (in ³)	1347	—	1347
Q (k/1)	0.954	1.353	0.954
M _R (k)	803.1	2245.9	703.2
f _{s non-comp} (ksi)	9.89	16.08	8.66
S _R (k/1)	0.277	—	0.277
M _{s R} (k)	271.8	—	298.8
M ₁ (k)	1102.9	1065.0	1167.8
M ₂ (k)	230.9	210.8	217.5
M _{total comp} (k)	1605.6	1275.8	1684.1
f _{s comp} (ksi)	14.30	9.13	15.00
f _{s total} (ksi)	24.19	25.21	23.66
f _{s lateral} (ksi)	1.33	1.03	1.17
f _{s total} (ksi)	25.52	26.24	24.83
VR (kip)	61.3	—	55.6

** Interior Girder † Includes effects of primary and secondary forces.

I_s and S_s are the moment of inertia and section modulus of the steel section. I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s. VR is the maximum $\frac{1}{4}$ + Impact shear range in span.

GIRDER	1	2	3	4	5	6	7	8	9
Radius	4618.24	4610.35	4602.45	4594.56	4586.66	4578.76	4570.87	4562.97	4555.08
L ₁	371'-10 ¹ / ₂ "	371'-10 ³ / ₄ "	371'-11"	371'-11 ¹ / ₈ "	371'-11 ³ / ₁₆ "	371'-11 ⁵ / ₁₆ "	371'-11 ⁷ / ₁₆ "	372'-0 ¹ / ₁₆ "	372'-0 ³ / ₁₆ "
L ₂	113'-9 ⁵ / ₈ "	113'-9 ¹ / ₁₆ "	113'-9 ³ / ₁₆ "	113'-9 ⁵ / ₁₆ "	113'-9 ⁷ / ₁₆ "	113'-9 ⁹ / ₁₆ "	113'-9 ¹¹ / ₁₆ "	113'-9 ¹³ / ₁₆ "	113'-10"
L ₃	143'-3 ³ / ₁₆ "	143'-3 ¹ / ₁₆ "	143'-3 ¹ / ₈ "	143'-3 ³ / ₁₆ "	143'-3 ⁵ / ₁₆ "	143'-4"	143'-4 ¹ / ₁₆ "	143'-4 ³ / ₁₆ "	143'-4 ⁵ / ₁₆ "
L ₄	113'-10 ⁵ / ₁₆ "	113'-10 ³ / ₁₆ "	113'-10 ¹ / ₂ "	113'-10 ⁹ / ₁₆ "	113'-10 ¹¹ / ₁₆ "	113'-10 ¹³ / ₁₆ "	113'-10 ¹⁵ / ₁₆ "	113'-10 ¹⁷ / ₁₆ "	113'-11 ¹ / ₁₆ "
L ₅	83'-3 ¹ / ₈ "	83'-3 ³ / ₁₆ "	83'-3 ⁵ / ₁₆ "	83'-3 ⁷ / ₁₆ "	83'-3 ⁹ / ₁₆ "	83'-3 ¹¹ / ₁₆ "	83'-3 ¹³ / ₁₆ "	83'-3 ¹⁵ / ₁₆ "	83'-3 ¹⁷ / ₁₆ "
L ₆	79'-3 ³ / ₁₆ "	79'-3 ¹ / ₁₆ "	79'-3 ¹ / ₈ "	79'-3 ³ / ₁₆ "	79'-3 ⁵ / ₁₆ "	79'-4"	79'-4 ¹ / ₁₆ "	79'-4 ³ / ₁₆ "	79'-4 ⁵ / ₁₆ "
L ₇	83'-3 ⁵ / ₁₆ "	83'-3 ⁷ / ₁₆ "	83'-4"	83'-4 ¹ / ₁₆ "	83'-4 ³ / ₁₆ "	83'-4 ⁵ / ₁₆ "	83'-4 ⁷ / ₁₆ "	83'-4 ⁹ / ₁₆ "	83'-4 ¹¹ / ₁₆ "
L ₈	1'-5 ⁵ / ₈ "	1'-5 ¹ / ₁₆ "	1'-5 ³ / ₁₆ "	1'-5 ⁵ / ₁₆ "	1'-5 ⁷ / ₁₆ "	1'-5 ⁹ / ₁₆ "	1'-5 ¹¹ / ₁₆ "	1'-5 ¹³ / ₁₆ "	1'-6"
L ₉	10 ⁵ / ₁₆ "	10 ¹ / ₁₆ "	10 ³ / ₁₆ "	10 ⁵ / ₁₆ "	10 ⁷ / ₁₆ "	11"	11 ¹ / ₁₆ "	11 ³ / ₁₆ "	11 ⁵ / ₁₆ "
L ₁₀	1'-6 ⁵ / ₁₆ "	1'-6 ³ / ₁₆ "	1'-6 ¹ / ₂ "	1'-6 ⁹ / ₁₆ "	1'-6 ¹¹ / ₁₆ "	1'-6 ¹³ / ₁₆ "	1'-6 ¹⁵ / ₁₆ "	1'-6 ¹⁷ / ₁₆ "	1'-7 ¹ / ₁₆ "
L ₁₁	—	18'-2 ¹ / ₁₆ "	18'-2 ³ / ₁₆ "	18'-2 ⁵ / ₁₆ "	18'-2 ⁷ / ₁₆ "	18'-2 ⁹ / ₁₆ "	18'-2 ¹¹ / ₁₆ "	18'-2 ¹³ / ₁₆ "	18'-3"
L ₁₂	—	17'-8 ¹ / ₁₆ "	17'-8 ³ / ₁₆ "	17'-8 ⁵ / ₁₆ "	17'-8 ⁷ / ₁₆ "	17'-9"	17'-9 ¹ / ₁₆ "	17'-9 ³ / ₁₆ "	17'-9 ⁵ / ₁₆ "
L ₁₃	—	19'-7 ³ / ₁₆ "	19'-7 ¹ / ₂ "	19'-7 ⁹ / ₁₆ "	19'-7 ¹¹ / ₁₆ "	19'-7 ¹³ / ₁₆ "	19'-7 ¹⁵ / ₁₆ "	19'-7 ¹⁷ / ₁₆ "	19'-8 ¹ / ₁₆ "
L ₁₄	19'-3 ¹ / ₈ "	19'-3 ³ / ₁₆ "	19'-3 ⁵ / ₁₆ "	19'-3 ⁷ / ₁₆ "	19'-3 ⁹ / ₁₆ "	19'-3 ¹¹ / ₁₆ "	19'-3 ¹³ / ₁₆ "	19'-3 ¹⁵ / ₁₆ "	—
L ₁₅	17'-9"	17'-9 ¹ / ₁₆ "	17'-9 ³ / ₁₆ "	17'-9 ⁵ / ₁₆ "	17'-9 ⁷ / ₁₆ "	17'-9 ⁹ / ₁₆ "	17'-9 ¹¹ / ₁₆ "	17'-9 ¹³ / ₁₆ "	—
L ₁₆	18'-0"	18'-0 ¹ / ₁₆ "	18'-0 ³ / ₁₆ "	18'-0 ⁵ / ₁₆ "	18'-0 ⁷ / ₁₆ "	18'-0 ⁹ / ₁₆ "	18'-0 ¹¹ / ₁₆ "	18'-0 ¹³ / ₁₆ "	—



DETAIL OF BEARINGS AT ABUTS (EXP.)

DETAIL OF BEARINGS AT PIER #2 (EXP.)

DETAIL OF BEARINGS AT PIER #1 (FIXED)

DESIGNED	E.F.V.
CHECKED	G.E.P.
DRAWN	M.R.
CHECKED	G.E.P.

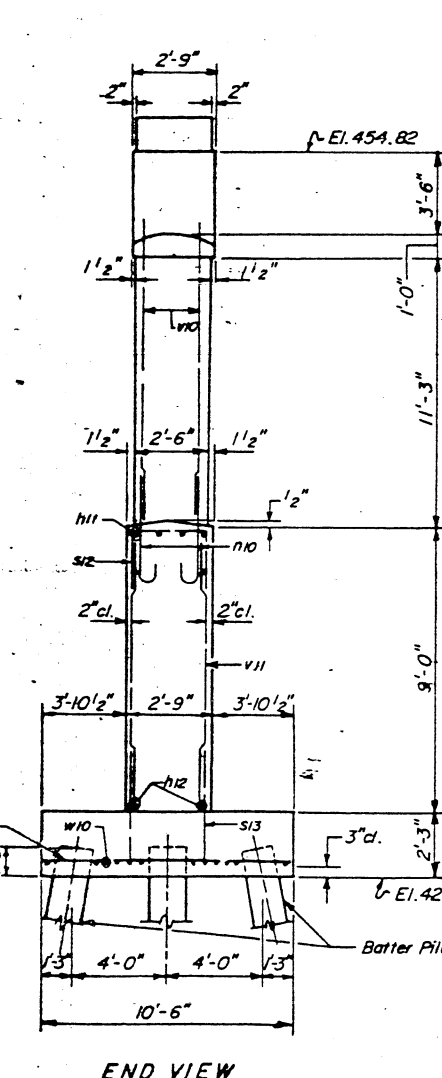
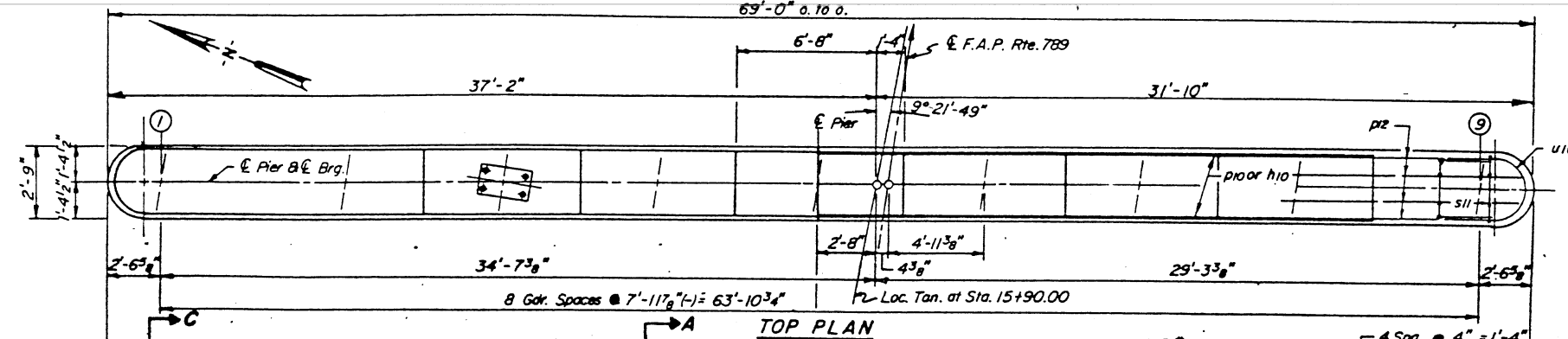
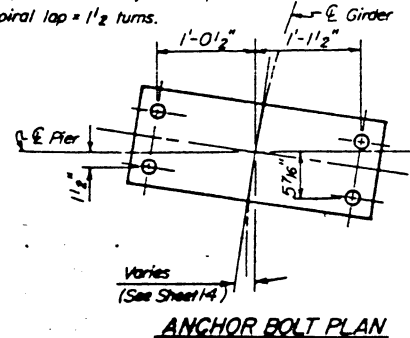
Note: M-183 Structural steel weldments of equal sections may be substituted for the castings. Fillet or partial penetration weld shall be used for weldments. Minimum weld size shall be $\frac{1}{4}$ thickness of plate being welded, except maximum size of weld need not exceed $\frac{3}{4}$ ".

GREASE GROOVE ON SADDLE
Note: Grease bearing assembly with molybdenum grease before installation.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\pm \frac{1}{16}$ " (inch). Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

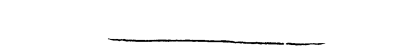
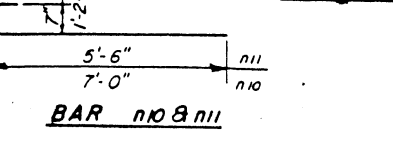
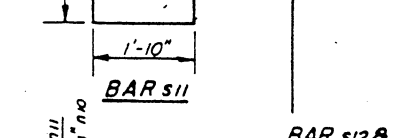
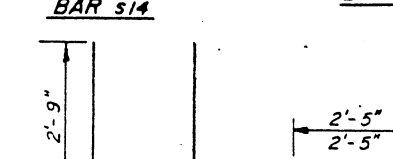
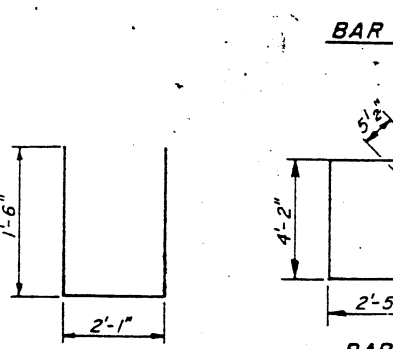
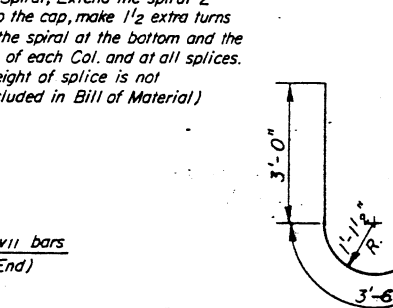
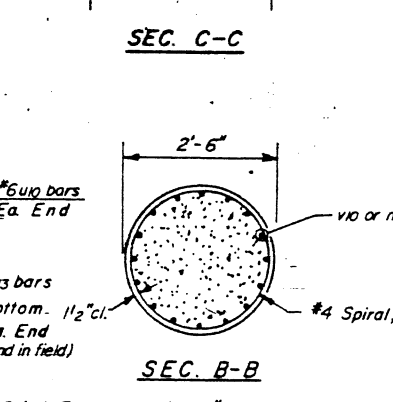
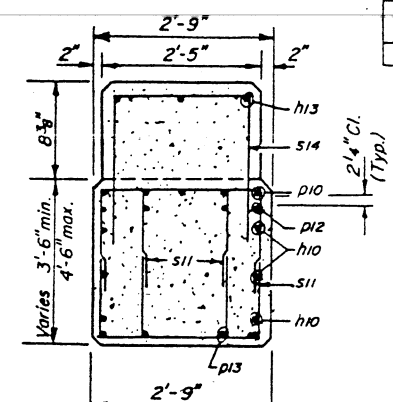
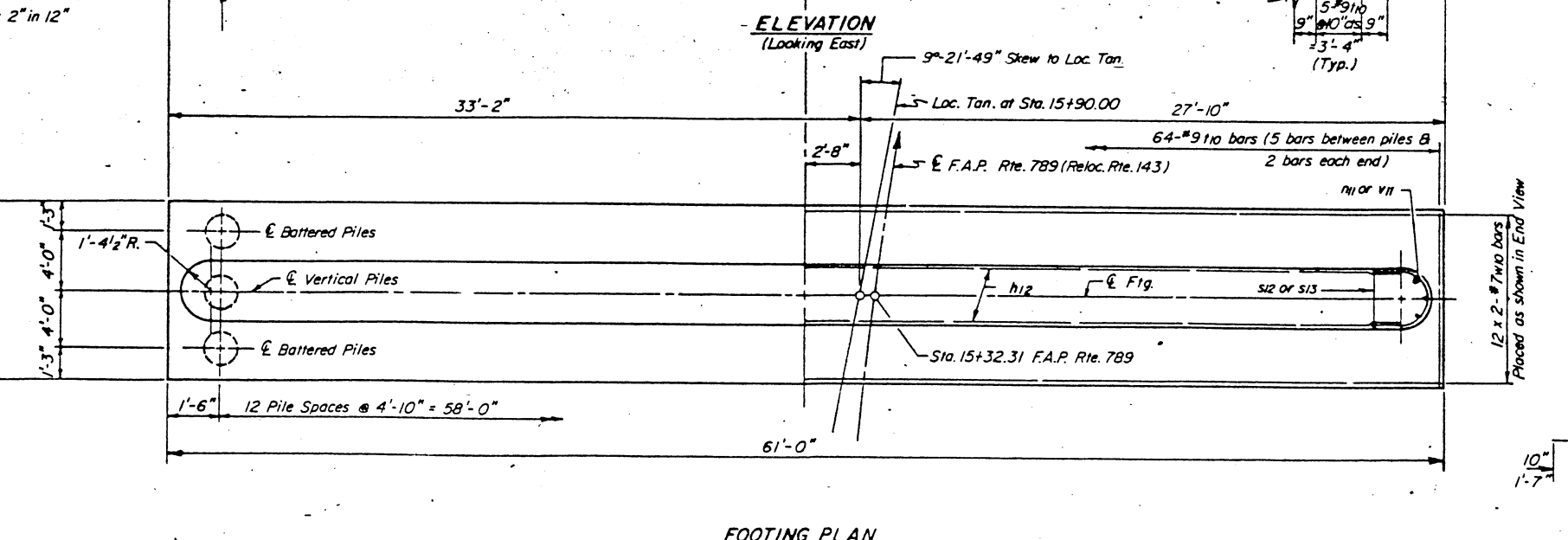
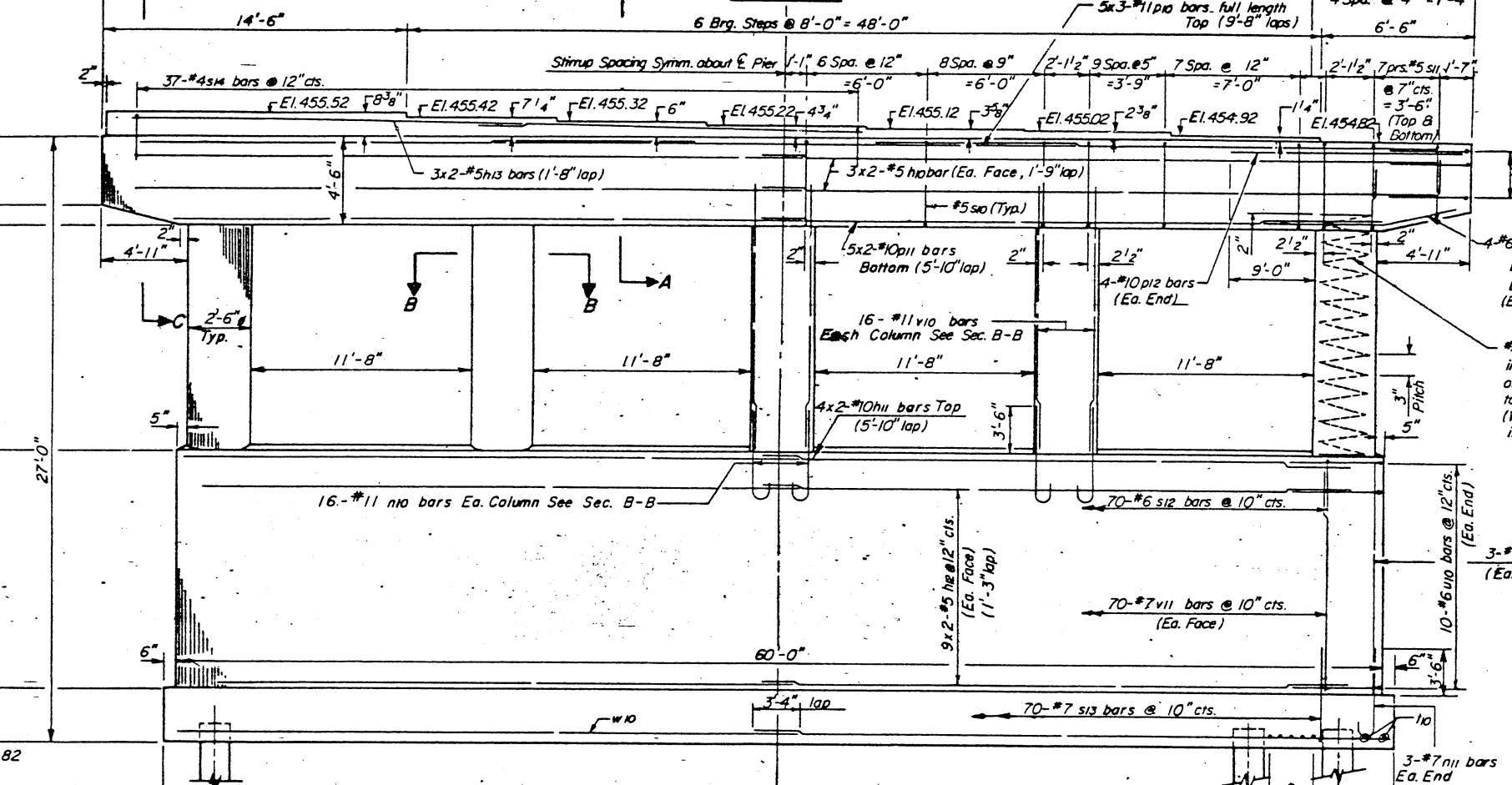
BEARING DETAILS
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+90.00 (F.A.P. RTE. 7)

NOTES:
1. Reinforcement in cap to miss anchor bolts.
2. All edges shall have standard 3/4" chamfer except as noted.
3. All steps monolithically with cap.
4. Spiral lap = 1 1/2 turns.



PILE DATA
Type: Conc.
Capacity: 41 Tons
Est. Length: 45'
No. Req'd: 38 + 1 Permanent Test Pile

DESIGNED	D.V.K.
CHECKED	G.E.P.
DRAWN	R.W.M.
CHECKED	D.V.K.



**PIER 1
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h10	12	#5	34'-0"	
h11	8	#10	31'-9"	
h12	36	#5	29'-3"	
h13	6	#5	19'-6"	
n10	80	#11	8'-7"	
n11	6	#7	6'-4"	
p10	15	#11	28'-6"	
p11	10	#10	32'-9"	
p12	8	#10	15'-6"	
p13	8	#6	8'-6"	
s10	72	#5	14'-1"	
s11	56	#5	7'-4"	
s12	70	#6	8'-5"	
s13	70	#7	13'-5"	
s14	37	#4	5'-1"	
sp10	5	#4	11'-5"	
v10	64	#9	10'-3"	
v11	146	#7	8'-9"	
w10	24	#7	32'-0"	
u10	28	#6	9'-6"	
v10	80	#11	14'-3"	
v11	146	#7	8'-9"	
w10	24	#7	32'-0"	

Bar	No.	Size	Length	Shape
h10	12	#5	34'-0"	
h11	8	#10	31'-9"	
h12	36	#5	29'-3"	
h13	6	#5	19'-6"	
n10	80	#11	8'-7"	
n11	6	#7	6'-4"	
p10	15	#11	28'-6"	
p11	10	#10	32'-9"	
p12	8	#10	15'-6"	
p13	8	#6	8'-6"	
s10	72	#5	14'-1"	
s11	56	#5	7'-4"	
s12	70	#6	8'-5"	
s13	70	#7	13'-5"	
s14	37	#4	5'-1"	
sp10	5	#4	11'-5"	
v10	64	#9	10'-3"	
v11	146	#7	8'-9"	
w10	24	#7	32'-0"	
u10	28	#6	9'-6"	
v10	80	#11	14'-3"	
v11	146	#7	8'-9"	
w10	24	#7	32'-0"	

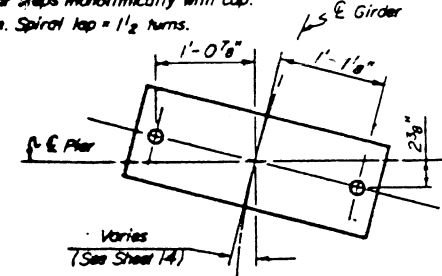
*Vertical height; weight of spiral includes 2.4 lbs. per ft. of spacer.

**PIER 1
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION 1-VB
STA. 15+90.00 (F.A.P. RTE. 789)**

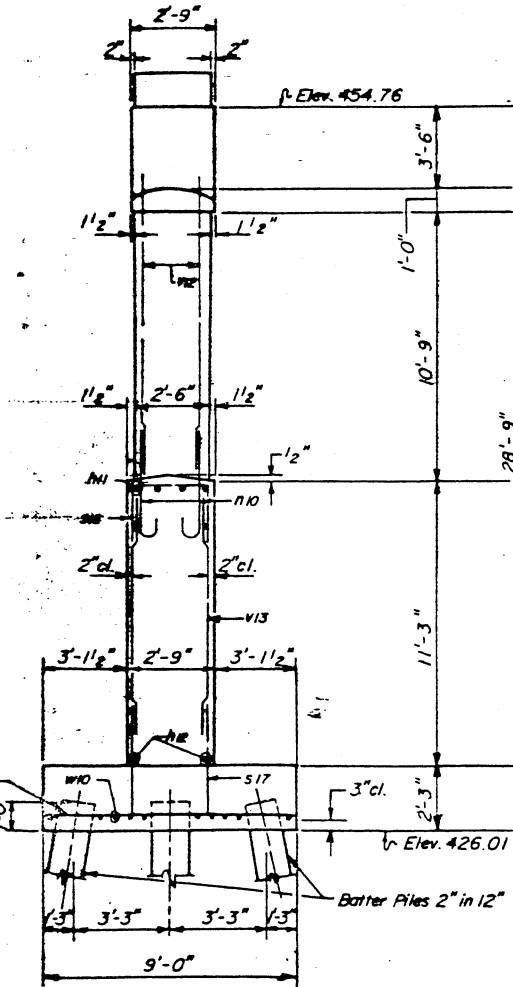
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 19
F.A. 789	I-VB	MADISON	92	96	20 SHEETS
FED. ROAD DIST. NO.	ILL. PROJ. NO.	FED. AID PROJECT			

NOTES:
1. Reinforcement in cap to miss anchor bolts.
2. Edges shall have standard 3/4" chamfer except as noted.
3. Wraps monolithically with cap.
4. Spiral lap = 1 1/2 turns.



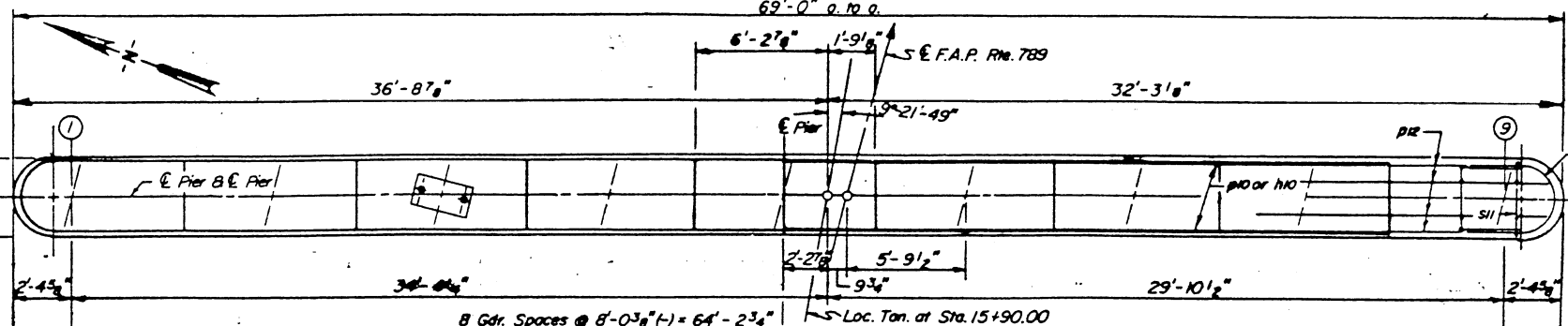
ANCHOR BOLT DETAIL



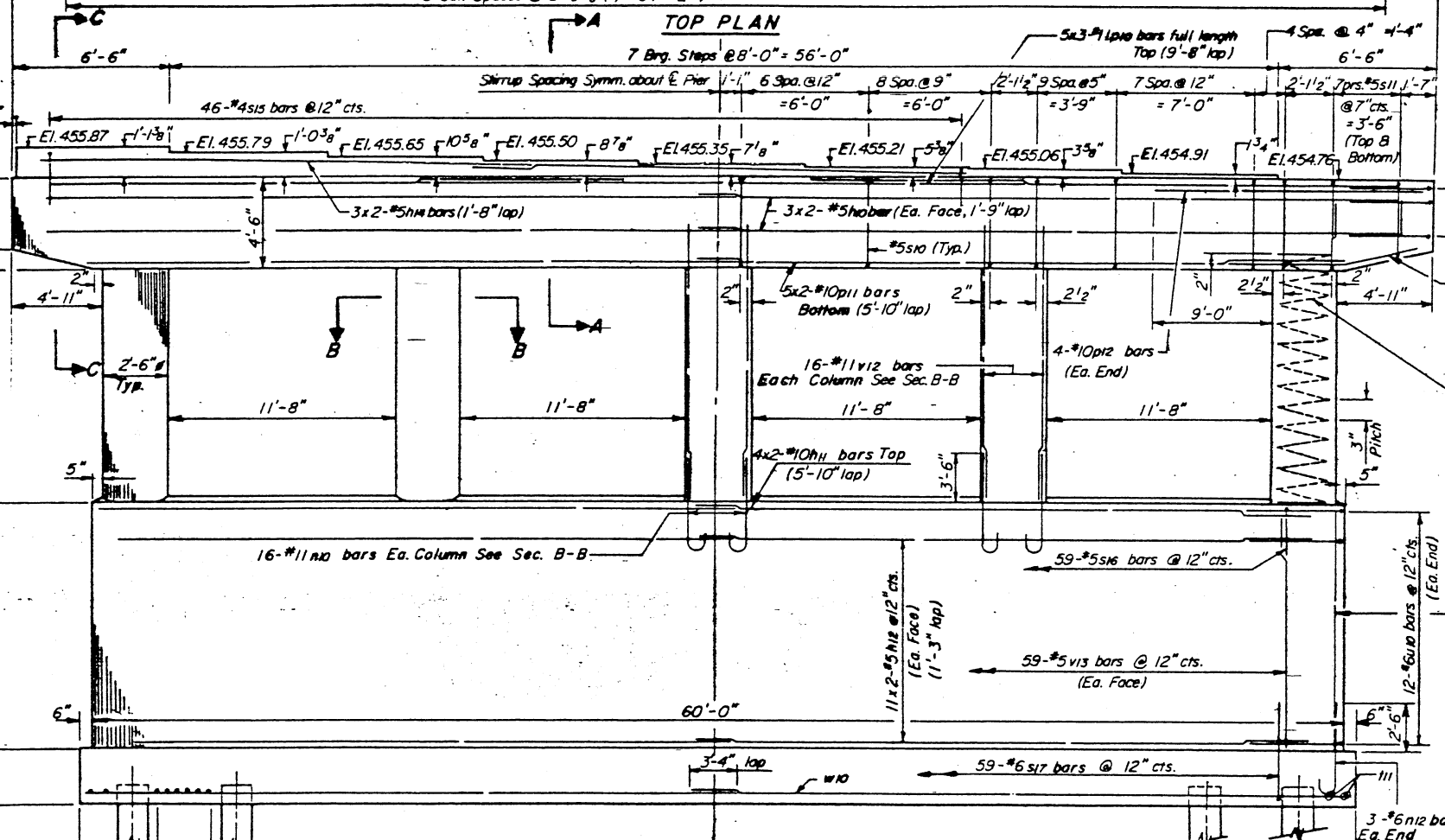
END VIEW

PILE DATA
Type: Concrete
Capacity: 41 Tons
Est. Length: 39'
No. Req'd: 39

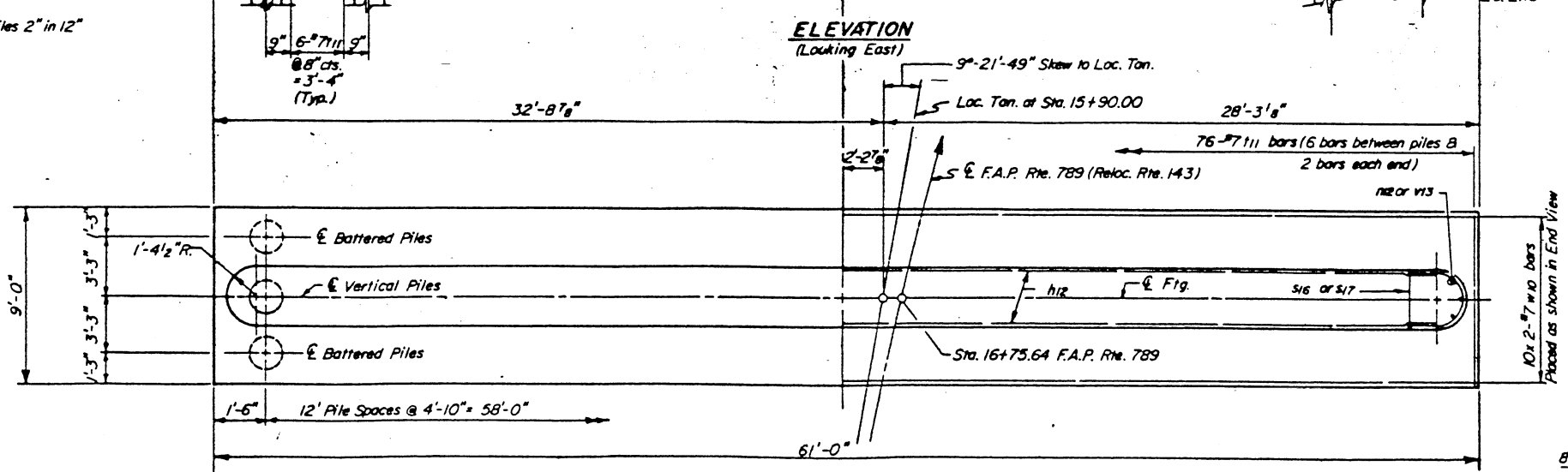
DESIGNED	G.E.P.
CHECKED	D.V.K.
DRAWN	R.W.M.
CHECKED	D.V.K.



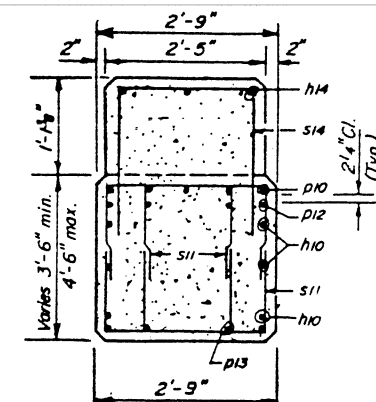
TOP PLAN



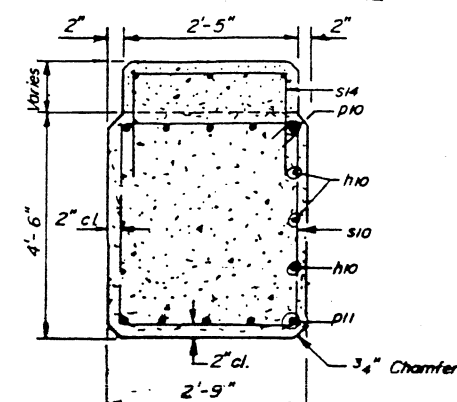
ELEVATION (Looking East)



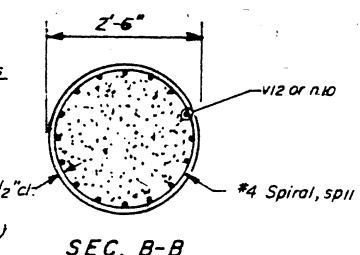
FOOTING PLAN



SEC. C-C

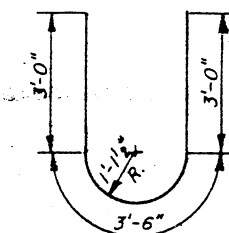


SEC. A-A

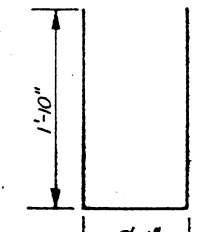


SEC. B-B

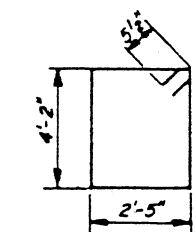
#4 Spiral, Extend the spiral 2" into the cap, make 1/2 extra turns of the spiral at the bottom and the top of each Col. and at all splices. (Weight of splice is not included in Bill of Material)



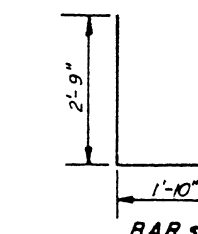
BAR n10



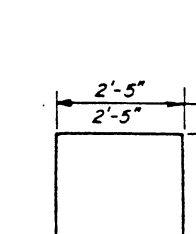
BAR s15



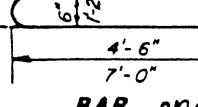
BAR s10



BAR s11



BAR s16 or s17



BAR n10 or n12

**PIER 2
BILL OF MATERIAL**

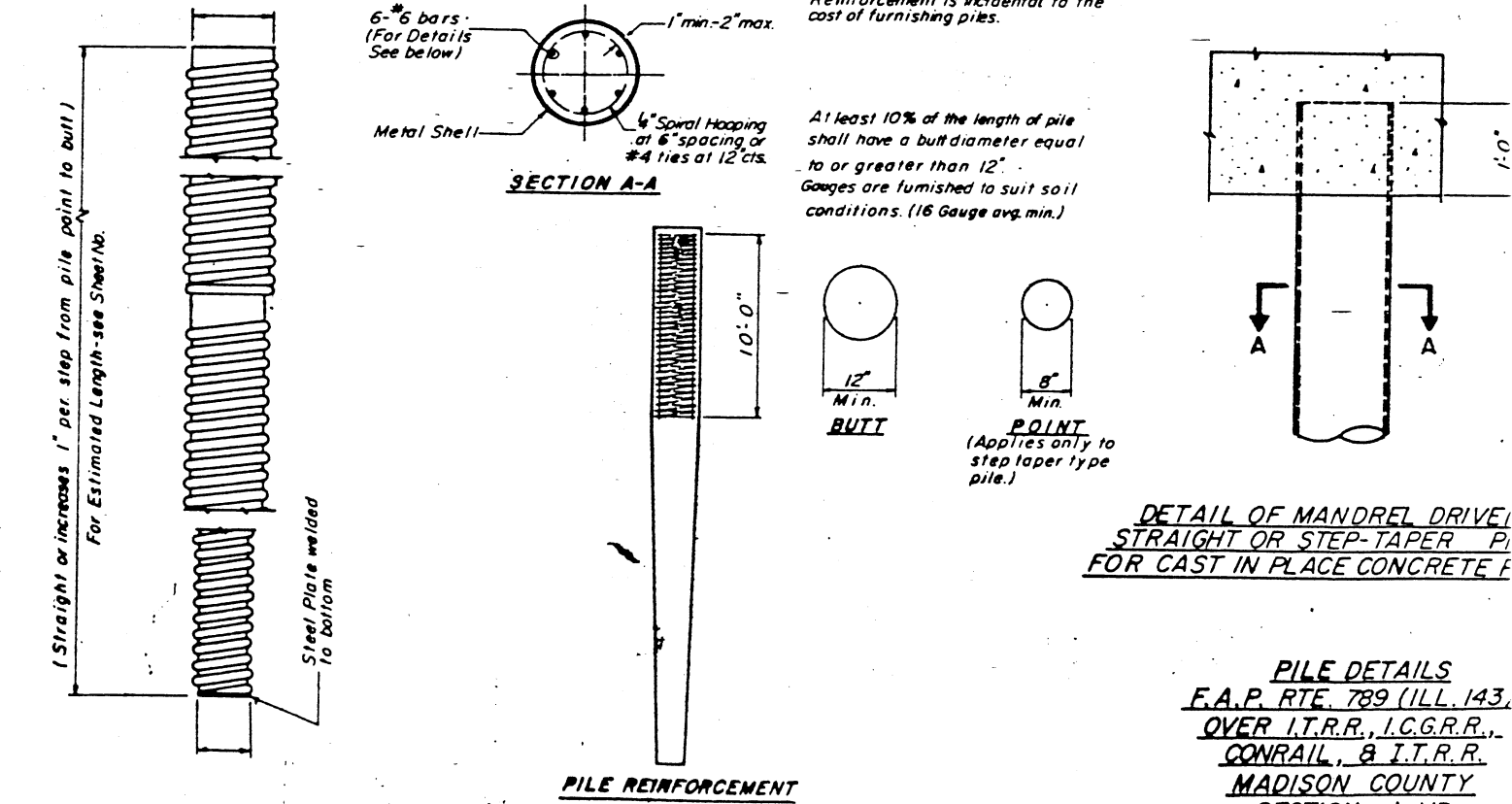
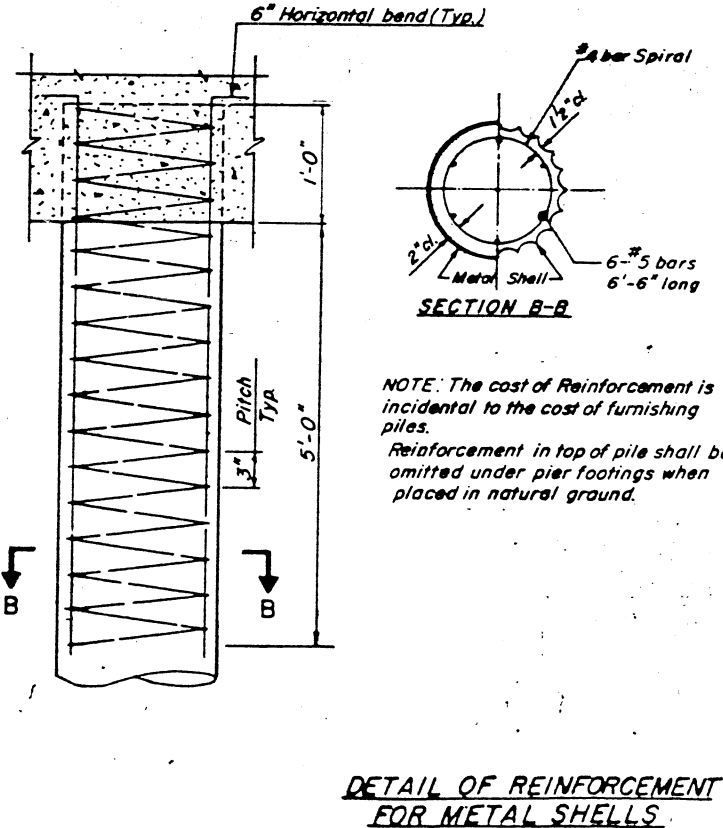
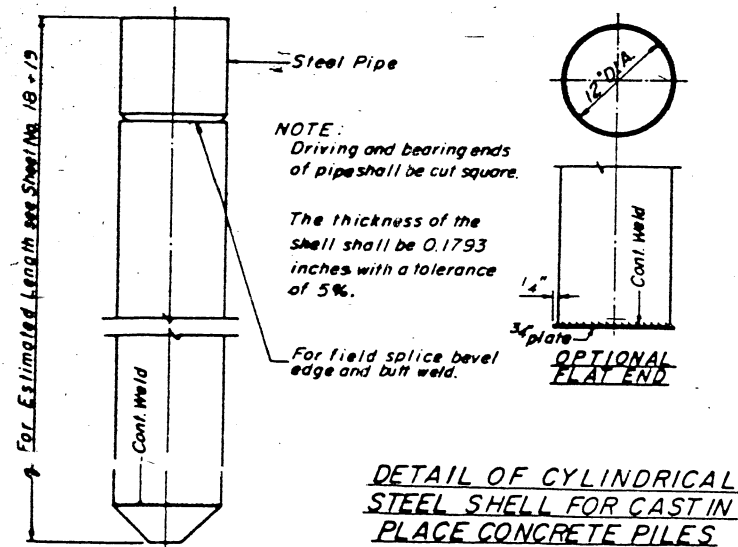
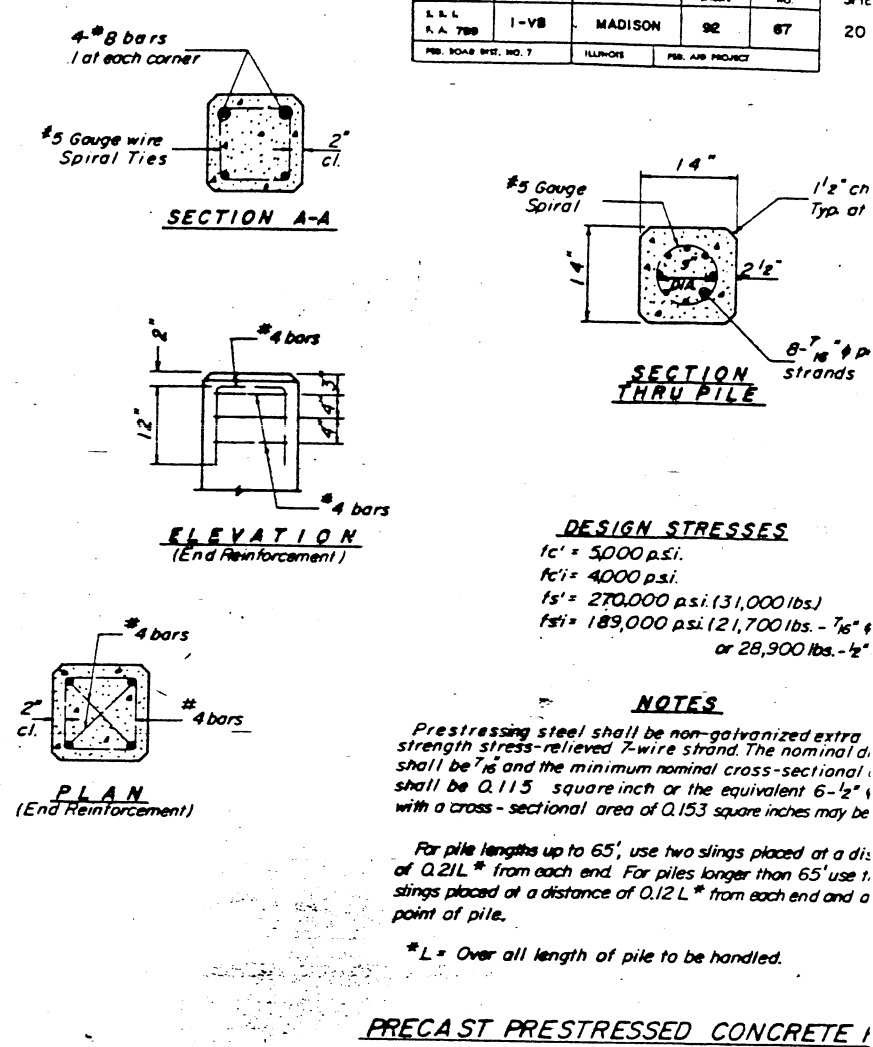
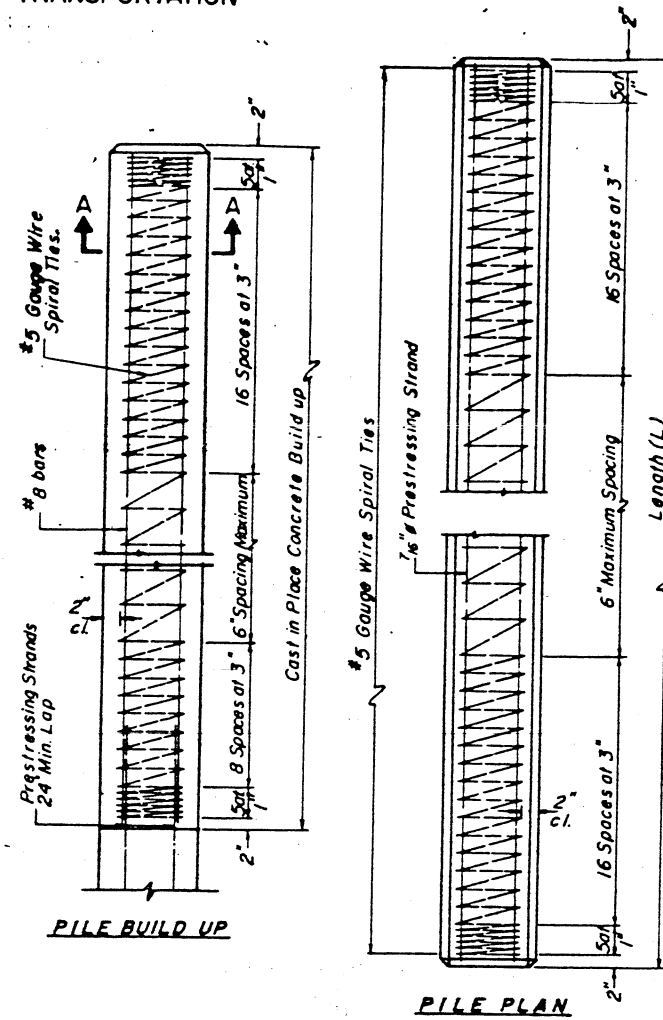
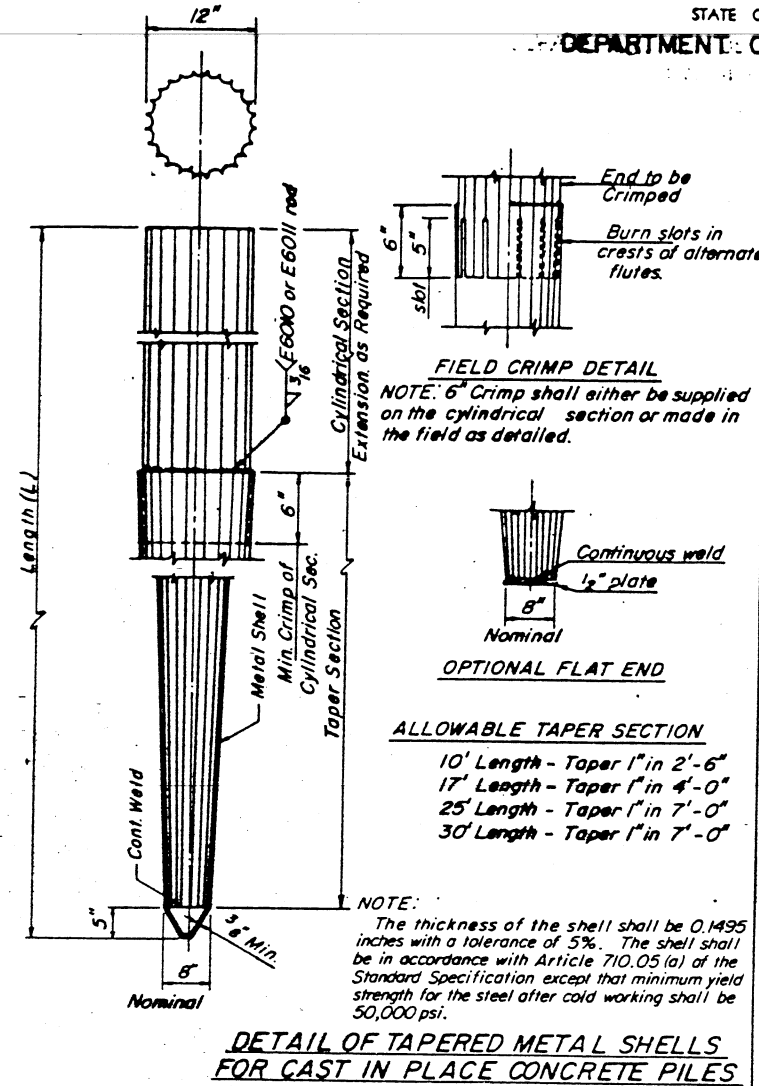
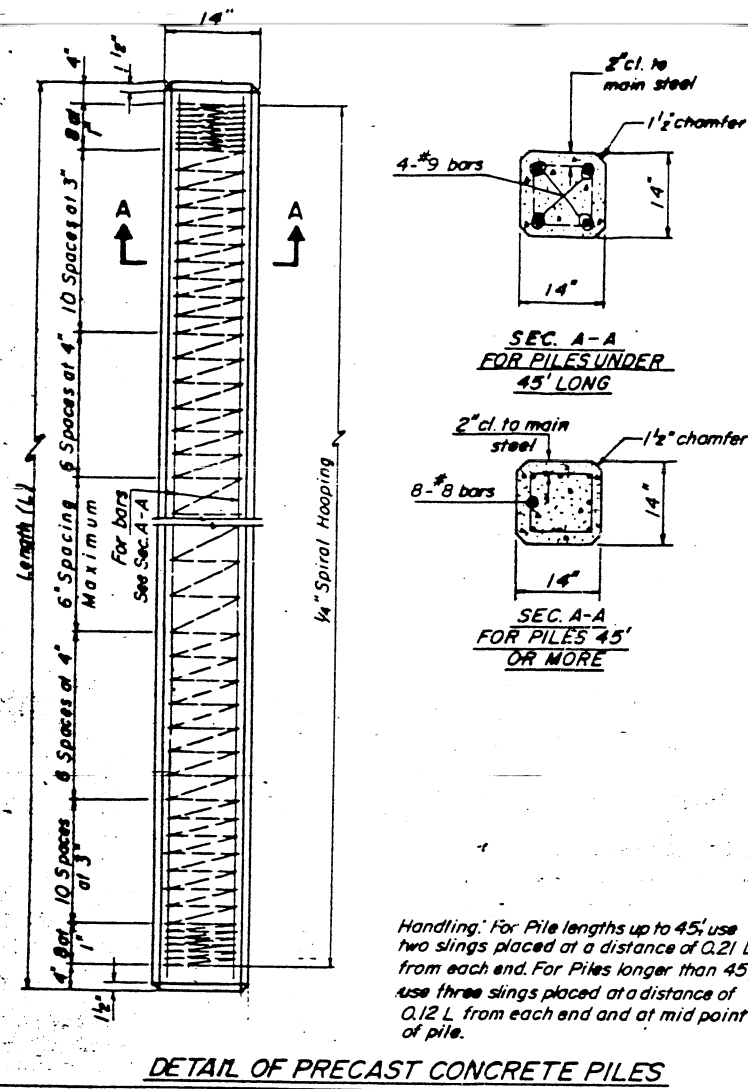
Bar	No.	Size	Length	Shape
n10	12	#5	34'-0"	U
n11	8	#10	31'-9"	U
n12	44	#5	29'-3"	U
n14	6	#5	23'-6"	U
n10	80	#11	8'-7"	U
n12	6	#6	5'-2"	U
p10	15	#11	28'-6"	U
p11	10	#10	32'-9"	U
p12	8	#10	15'-6"	U
p13	8	#6	8'-6"	U
s10	72	#5	14'-1"	U
s11	56	#5	7'-4"	U
s15	46	#4	5'-9"	U
s16	59	#5	6'-5"	U
s17	59	#6	11'-5"	U
sp11	5	#4	10'-11"	W
h11	76	#7	8'-9"	U
u10	32	#6	9'-6"	U
vi2	80	#11	13'-9"	U
vi3	124	#5	11'-0"	U
w10	20	#7	32'-0"	U

Class X Concrete Cu. Yds. 155.8
Reinforcement Bars Lbs. 25,720
Concrete Piles Lin. Ft. 1521

*Vertical height; weight of spiral includes 2.4 lbs. per ft. of spacer.

**PIER 2
F.A.P. RTE. 789 (ILL. 143)
OVER I.T.R.R., I.C.G.R.R.,
CONRAIL, & I.T.R.R.
MADISON COUNTY
SECTION I-VB
STA. 15+90.00 (F.A.P. RTE. 789)**

WORK NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET
L.L.L.	1-VB	MADISON	92	67	20
F.A. 789					
ILL. STATE	ILL. STATE	ILL. STATE	ILL. STATE	ILL. STATE	ILL. STATE



DESIGNED	
CHECKED	
DRAWN	
CHECKED	