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PLAN PREPARATION ENGINEER  
TOM HOLTZ/RAJENDRA SHAH (708) 705-4437

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

PLAN  
PROFILE HORIZ.  
PROFILE VERT.  
CROSS SECTIONS  
H. 1" = 50'  
V. 1" = 10'  
H. 1" = 50'  
V. 1" = 10'

F.A.I. ROUTE 55 (STEVENSON EXPRESSWAY) N.B. & S.B.  
SECTION (28, 29 & 121)WRS-1

PROJECT: STPI-55-6 (194)264

WIDENING, RESURFACING, BRIDGE JACKING, LIGHTING, SURVEILLANCE &  
WILL COUNTY WEIGH-IN-MOTION SCALES

C-91-053-90

FAI-55 OVER IL. RTE. 53  
STRUCTURE NO. 099-0260 (STA. 477+54.96)  
JACKING EXIST. SUPER STRUCTURE

FAI-55 OVER JOLIET RD.  
STRUCTURE NO. 099-0028 (STA. 684+83.12)  
JACKING EXIST. SUPER STRUCTURE

DESIGN DESIGNATION  
ADT 52,900 (2005) TRUNK 47.83 (B-20)

POSTED SPEED LIMIT = 55 MPH

PROJECT BEGINS  
STATION 339+00

STATION EQUATIONS  
STA. 466+76.62 BACK=  
STA. 466+72.95 AHEAD  
STA. 487+58.11 BACK=  
STA. 504+00.00 AHEAD  
STA. 676+72.33 BACK=  
STA. 676+09.00 AHEAD

PROJECT ENDS  
STATION 700+00

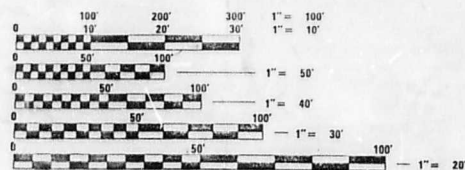
F.A.I-55 (STEVENSON EXPRESSWAY)  
GROSS LENGTH = 24,525.11 LIN. FT. OR 4.645 MILES  
NET LENGTH = 24,525.11 LIN. FT. OR 4.645 MILES

FOR UTILITY INFORMATION, CALL  
J.U.L.I.E. 1-800-892-0123

\* WILL & COOK

FAI RTE	SECTION	CON. FTY	TOTAL SHEETS	SHEET NO.
55	*	*	230	1

D-91-053-90  
\* (28, 29 & 121)WRS-1



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.

CONTRACT NO. 80649

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED Dec 13 1995  
EXAMINED Jan 13 1996  
PASSED January 27 1995  
APPROVED January 27 1995

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

WILL & COOK COUNTIES SECTION (28, 29 & 121)WRS-1 A.I. ROUTE 55  
Sheets 1 Thru 50

TAMERAN

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211	MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS
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PLAN NOTES

10' TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB & GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS & GUTTERS AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

THE REMOVAL OF GUARDRAIL TERMINAL SECTIONS SHALL BE INCLUDED IN THE UNIT PRICE PER LINEAL FOOT FOR STEEL PLATE BEAM GUARD RAIL REMOVAL.

BARRICADES: THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SAND BAGS ON EACH TYPE I OR TYPE II BARRICADE USED. (ONE (1) WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL).

WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.

ON STATE STANDARDS 2429 AND 2430 AGGREGATE SUBGRADE 12" SHALL BE USED IN LIEU OF LIME MODIFIED SOIL OR SUB-BASE GRANULAR MATERIAL, TYPE C SPECIFIED. THE ADDITIONAL THICKNESS OF AGGREGATE SUBGRADE UNDER THE SHOULDER SHALL BE INCLUDED IN THE COST PER SQ YD OF "AGGREGATE SUBGRADE 12".

ALL STORM SEWER CONNECTIONS WITH PIPES 27" DIAMETER AND SMALLER SHALL BE MADE WITH PRECAST "TEE" OR "WYE" PIPES. FOR PROPOSED STORM SEWER PIPES LARGER THAN 27" DIAMETER OPENINGS OF THE SPECIFIED DIAMETER, SHALL BE MADE IN THE PIPE AT THE TIME IT IS MANUFACTURED. PRECAST "TEE" AND "WYE" PIPE CONNECTIONS FOR PROPOSED STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST FOR STORM SEWERS.

TRAFFIC CONDITIONS, ACCIDENTS AND OTHER UNFORSEEN EMERGENCY CONDITIONS MAY REQUIRE THE ENGINEER TO RESTRICT, MODIFY OR REMOVE LANE CLOSURES OR CHANNELIZATION SHOWN IN THE PLANS. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER WITHOUT DELAY. THE CONTRACTOR SHALL RESPOND WITHIN THIRTY (30) MINUTES FROM THE TIME OF NOTIFICATION BY THE ENGINEER TO ANY REQUEST MADE BY THE ENGINEER FOR CORRECTION.

ALL PAVEMENT RELIEF JOINTS SHALL BE REMOVED AND RECONSTRUCTED, SEE STANDARD 2426 (METHOD II). THE REMOVAL, THE SAW CUT (FULL DEPTH) AND ALL OTHER NECESSARY WORK SHALL BE CONSIDERED INCIDENTAL TO CLASS B PATCH - EXPANSION JOINT.

NEW THERMOPLASTIC PAVEMENT MARKINGS ARE TO BE REMOVED PRIOR TO SURFACING OPERATIONS. GRINDING OF PAVEMENT MARKINGS TO BE REMOVED WILL BE PERMITTED WHERE THE PAVEMENT IS TO BE RESURFACED.

Chain Link Fence 4'

1) Install chain link fence 4' at location of existing fence to be removed, unless otherwise directed by Engineer.

2) Contractor and Engineer will agree upon a reasonable amount of existing fence removal after which the proposed chain link fence 4' must be installed at this same location, prior to removal of additional fence. The purpose being to reasonably maintain the access control fence line.

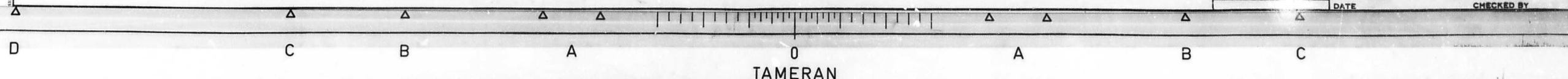
3) Removal of accumulations of rubbish of whatever nature, removal of logs, shrubs, bushes, saplings, weeds and stumps less than 6 inches shall be done prior to installing the new chain link fence 4'. This work will be incidental to chain link fence 4'.

F. A. SITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	#	WILL.	230	2
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT.	

# (28, 29 & 121) WRS-1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION	
INDEX OF SHEETS, STATE STANDARDS & PLAN NOTES	
SCALE: VERT. HORIZ. DATE	DRAWN BY CHECKED BY





SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	WILL	230	74
STA.	TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	

\*(28 & 121)RS-1 SHEET S-1 OF S-16

### BILL OF MATERIALS

ITEM	UNIT	QUANTITY
CONCRETE SUPERSTRUCTURE	CU.YDS	135.7
REINFORCEMENT BARS (EPOXY COATED)	LBS	30,690
NEOPRENE EXPANSION JOINT (2")	FOOT	505
CONCRETE REMOVAL	CU.YDS	119
JACKING EXISTING SUPERSTRUCTURE	L.SUM	1.0
PROTECTIVE SHIELD	SQ YD	2753
BAR SPLICERS	EACH	72
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	20
FURNISHING AND ERECTING STRUCTURAL STEEL	LBS	25,630
REMOVE EXISTING BEARINGS	EACH	20

### CONSTRUCTION SEQUENCE

1. TRAFFIC STAGING
2. REMOVE CONCRETE, CUT REINFORCEMENT AND JACK AND CRIB BRIDGE DECK.
3. ADJUST BEARINGS AND INSTALL NEW BEARINGS AND STEEL EXTENSIONS.
4. RECONSTRUCT TRANSVERSE EXPANSION JOINTS.
5. RECONSTRUCT LONGITUDINAL BRIDGE DECK OPENING.

### GENERAL NOTES

1. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO MINOR CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS.  
SUCH VARIATION SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT BID PRICE FOR THE WORK.
2. JACKING AND CRIBBING SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING BRIDGE RAISING OPERATIONS. TRAFFIC SHALL BE REMOVED FROM THE PORTION OF THE STRUCTURE TO BE JACKED PRIOR TO COMMENCING JACKING OPERATIONS. TRAFFIC SHALL BE KEPT OFF THE STRUCTURE DURING THE ENTIRE OPERATION.  
DIFFERENTIAL JACKING HEIGHT SHALL NOT EXCEED 1/8" TRANSVERSELY BETWEEN ADJACENT BEAMS OR 1/4" LONGITUDINALLY BETWEEN ADJACENT SUPPORTS.
3. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-50 GRADE 60.
4. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL SHALL BE REPLACED WITH AN APPROVED BAR SPLICE OR ANCHORAGE SYSTEM.
5. ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M-270, GR. 36 UNLESS OTHERWISE SPECIFIED.
6. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
7. THE CONTRACTOR SHALL BE REQUIRED TO MARK, ON THE TOP OF THE CONCRETE DECK, THE LOCATION OF THE TOP FLANGE OF THE STEEL BEAMS PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM IS NOT PERMITTED.

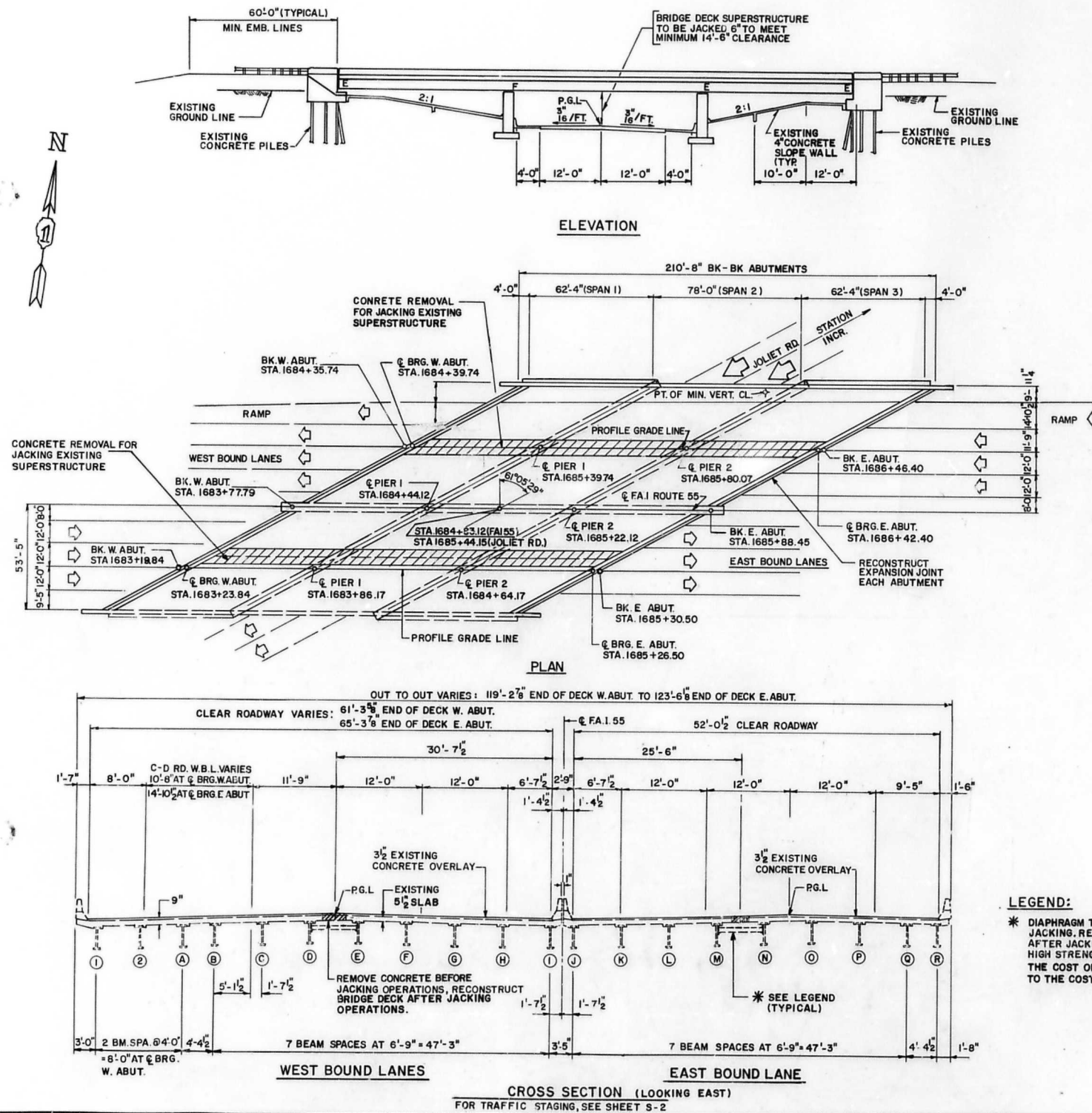
### LEGEND:

- \* DIAPHRAGM TO BE REMOVED DURING BRIDGE JACKING. REFASTEN EXISTING DIAPHRAGMS AFTER JACKING IS COMPLETED WITH NEW 3/4" DIA. HIGH STRENGTH BOLTS (AASHTO M-164). THE COST OF HIGH STRENGTH BOLTS IS INCIDENTAL TO THE COST OF JACKING EXISTING SUPERSTRUCTURE.

### REVISIONS

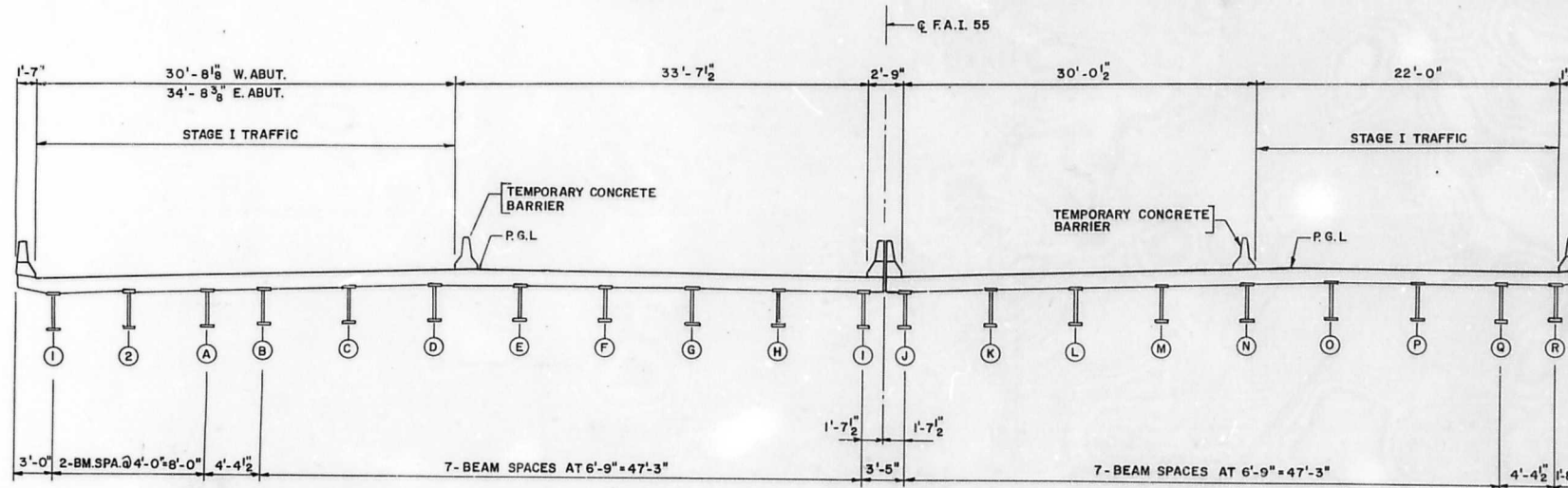
NAME	DATE
MVT	11-29-94

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
I-355 TO NAPERVILLE ROAD  
GENERAL PLAN AND ELEVATION  
S.N. 099-0028  
SCALE: VERT. 1"=10'  
HORIZ. 1"=40'  
DRAWN BY: MVT  
CHECKED BY: JAF

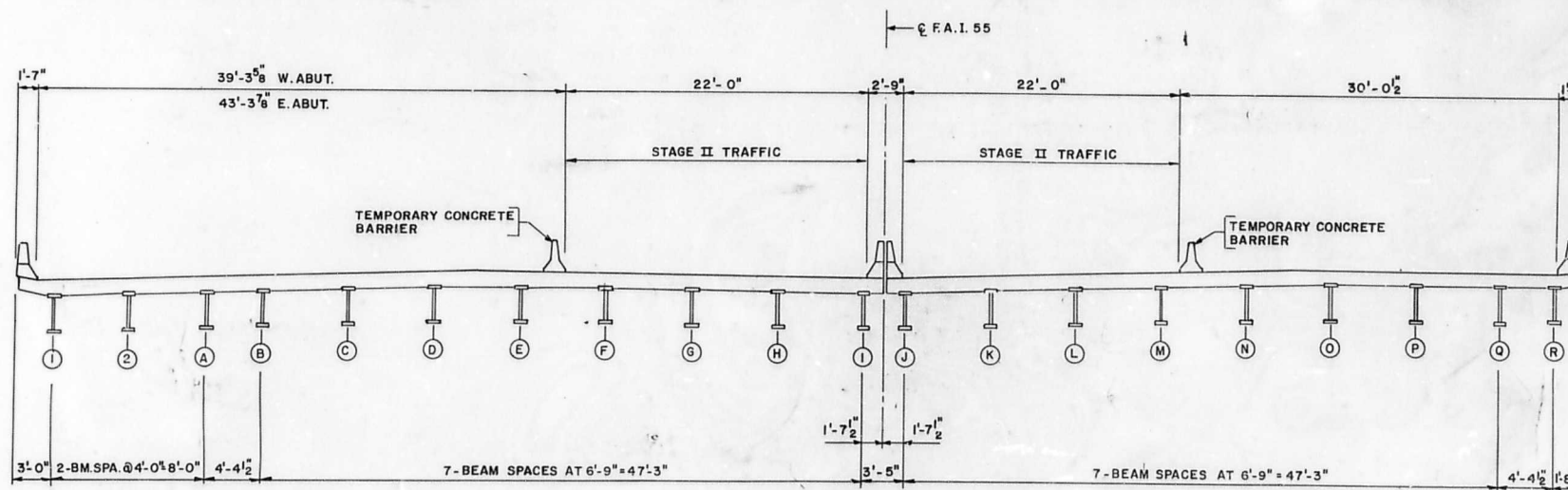


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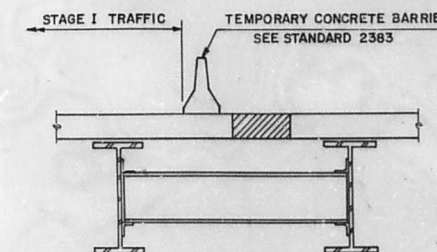
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	WILL	230	75
STA.	TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	
*128 & 121 RS-RS-1 SHEET S-2 OF S-16			



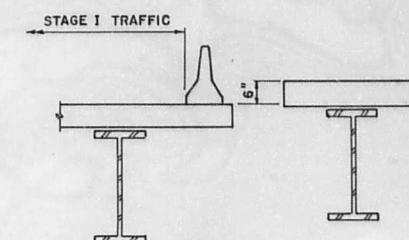
STAGE I CONSTRUCTION



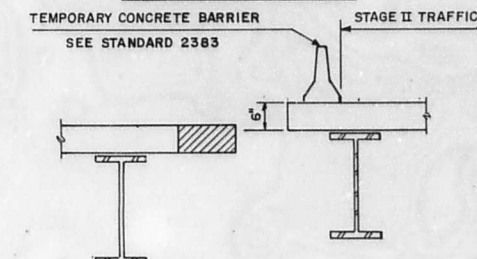
STAGE II CONSTRUCTION



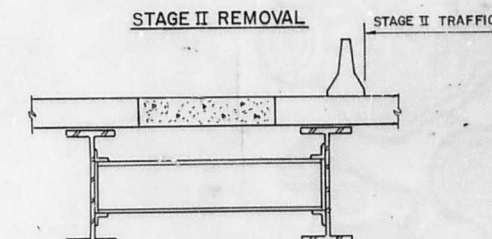
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION

STAGE CONSTRUCTION DETAILS

REVISIONS	
NAME	DATE

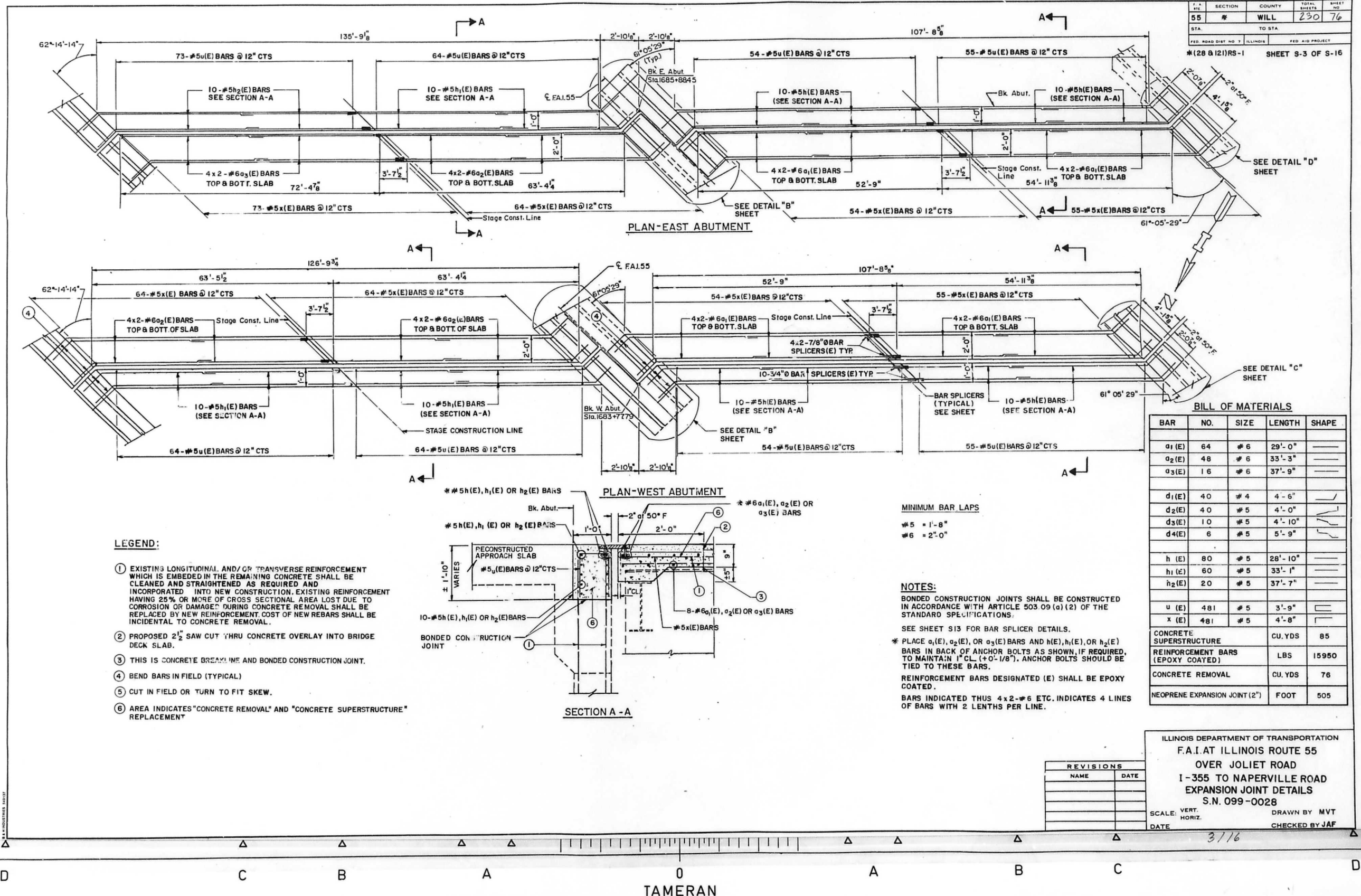
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 INTERSTATE ROUTE 55  
 OVER JOLIET ROAD  
 I-355 TO NAPERVILLE ROAD  
 STAGE CONSTRUCTION  
 SCALE: VERT. S.N.099-0028 DRAWN BY MVT  
 DATE 2/16 CHECKED BY JAF

D C B A 0 A B C D  
 TAMERAN



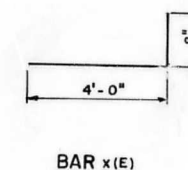
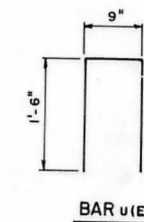
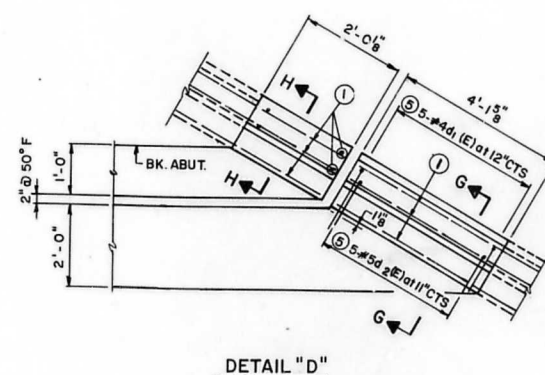
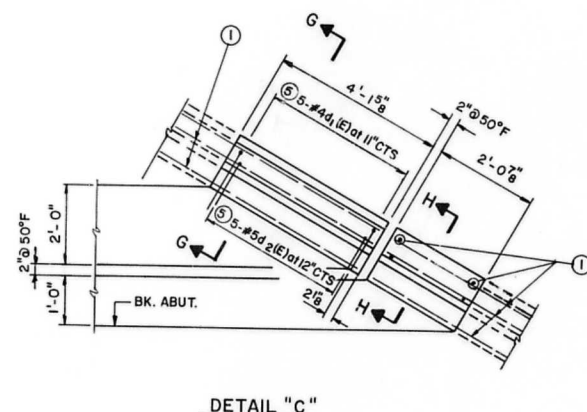
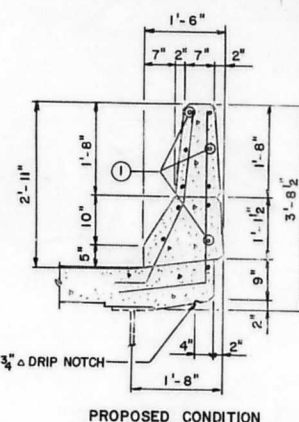
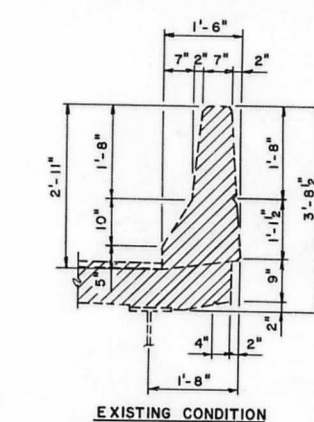
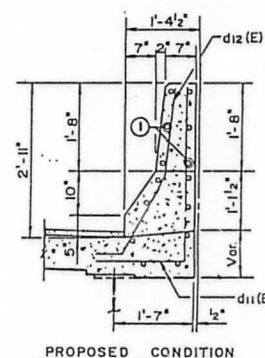
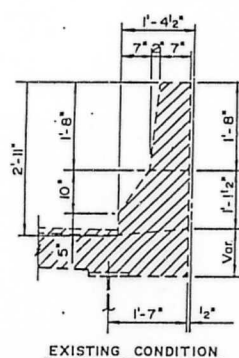
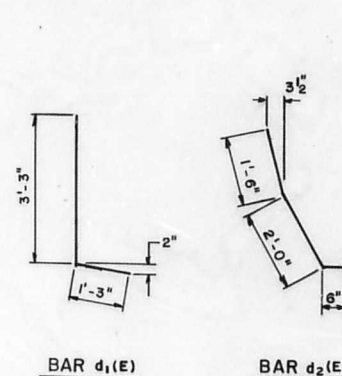
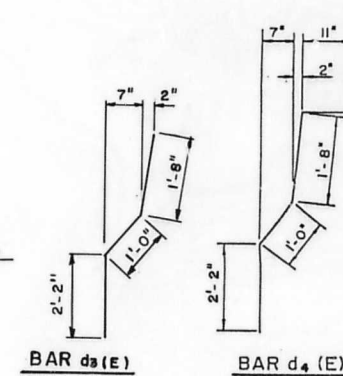
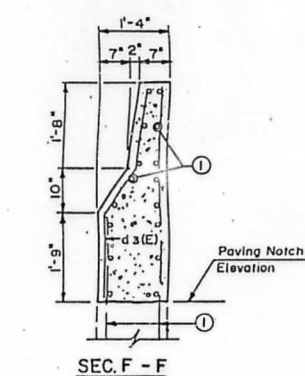
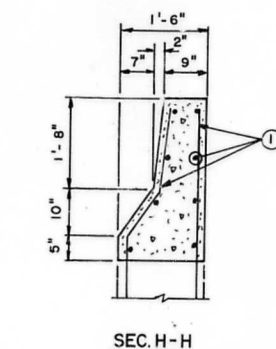
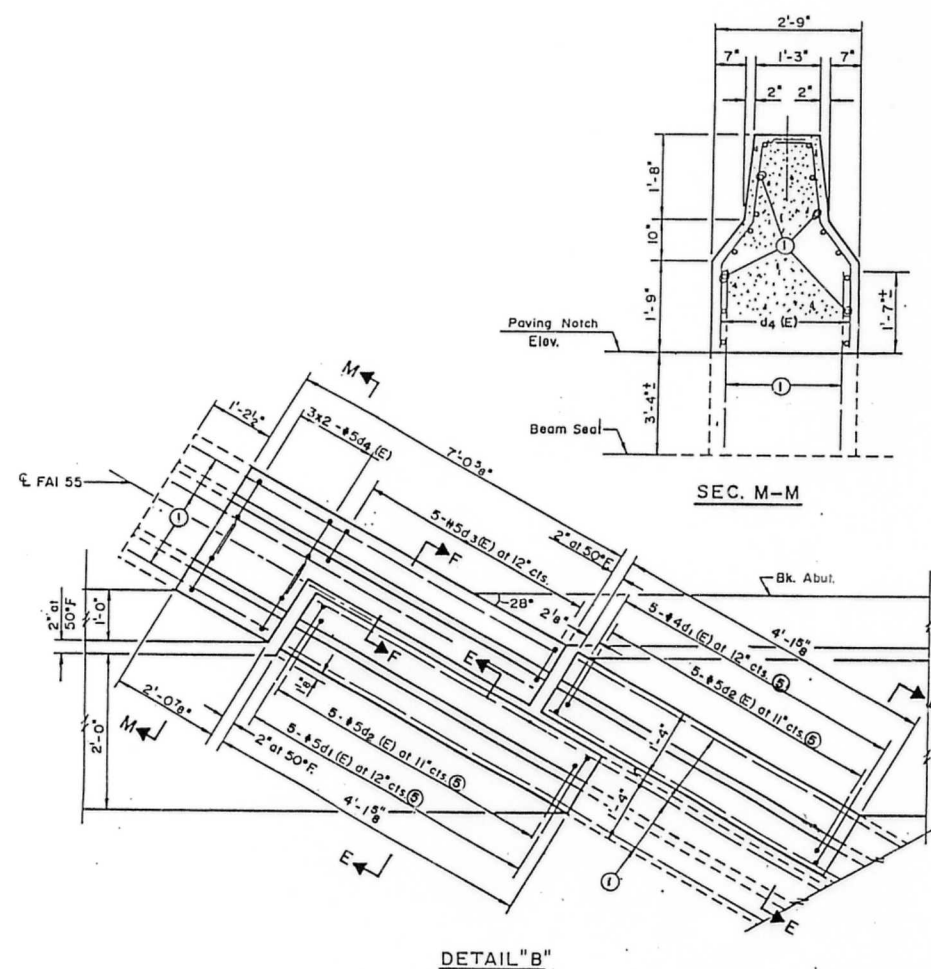
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	WILL	230	76
STA.	TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	

\*(28 & 121)RS-1 SHEET S-3 OF S-16



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	WILL	230	77
STA.	TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	

\* (28 & 12) RS-1 SHEET S-4 OF S-16



SEC. G-G

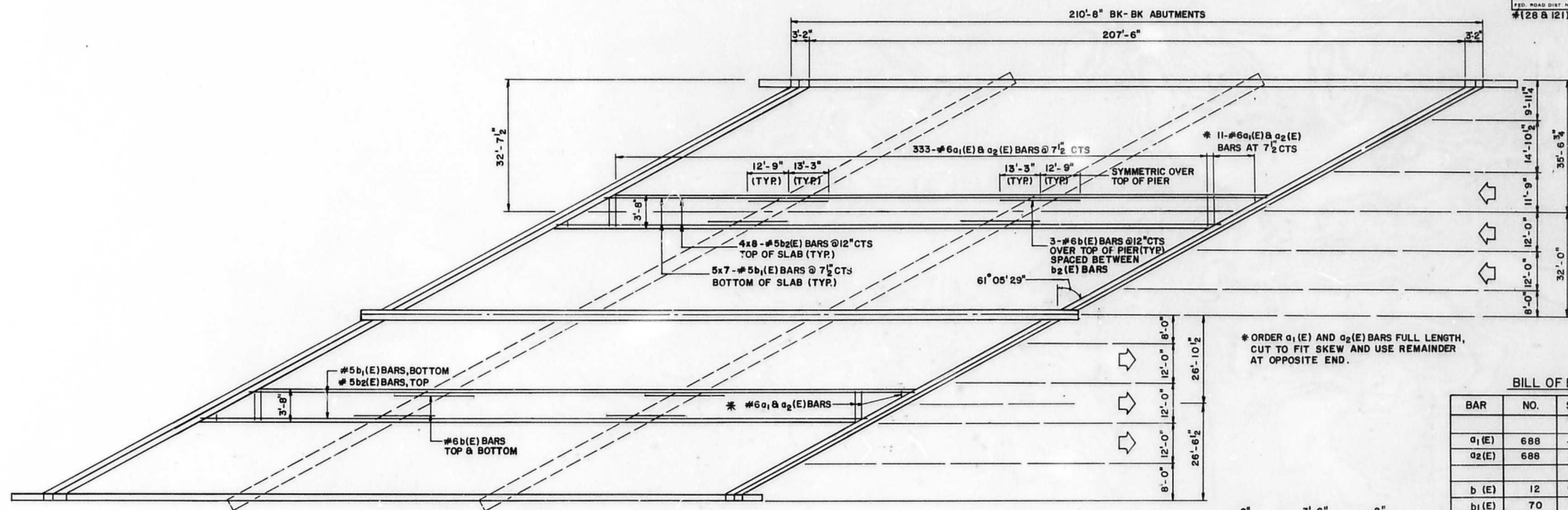
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 INTERSTATE ROUTE 55  
 OVER JOLIET ROAD  
 I-355 TO NAPERVILLE ROAD  
 EXPANSION JOINT DETAILS  
 S.N. 099-0028  
 SCALE: VERT. 1"=4'-0"  
 HORIZ. 1"=4'-0"  
 DRAWN BY MVT  
 CHECKED BY JAF



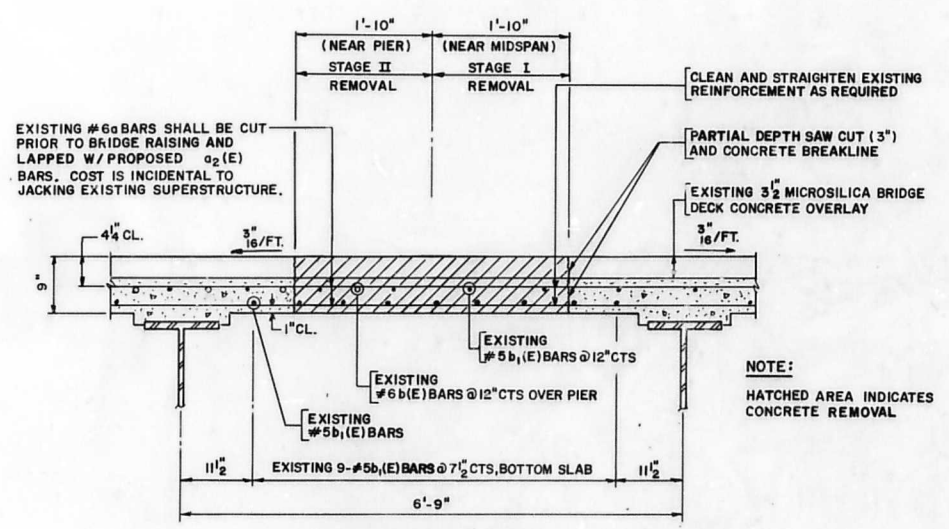
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	WILL	230	78
STA	TO STA		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	
#(28 & 121)RS-1			

SHEET S-5 OF S-16

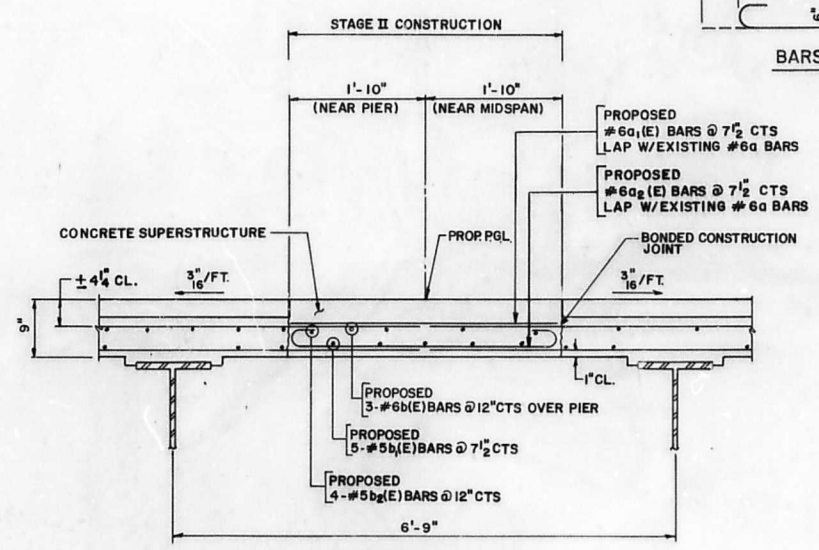


**BILL OF MATERIALS**

BAR	NO.	SIZE	LENGTH	SHAPE
a1(E)	688	#6	3'-7"	—
a2(E)	688	#6	4'-10"	—
b(E)	12	#6	26'-0"	—
b1(E)	70	#5	31'-5"	—
b2(E)	64	#5	27'-1"	—
CONCRETE REMOVAL			CU.YDS	43
CONCRETE SUPERSTRUCTURE			CU.YDS	43
REINFORCEMENT BARS (EPOXY COATED)			LBS	13,268



**NOTE:**  
HATCHED AREA INDICATES CONCRETE REMOVAL



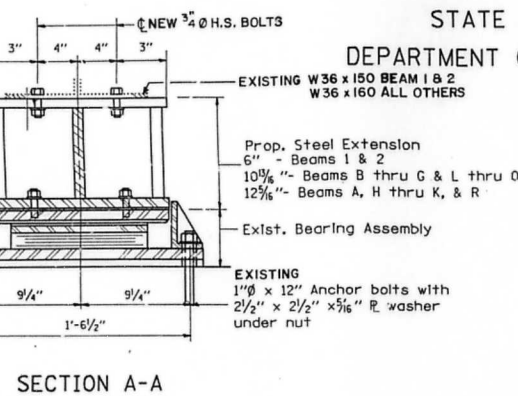
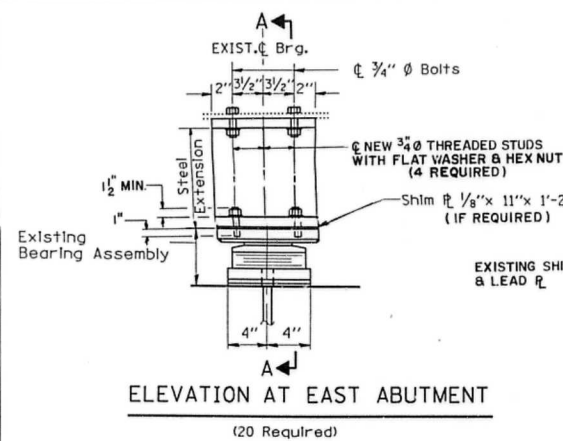
**NOTES:**  
HEAVY CONSTRUCTION MACHINERY AND TRAFFIC MUST BE KEPT OFF THE BRIDGE DECK SLAB OVERHANG BETWEEN BEAMS D8E AND BEAMS M8N DURING CONCRETE REMOVAL AND RECONSTRUCTION OF THE BRIDGE DECK.  
THE MINIMUM LAP FOR #5 BARS IS 1'-8" CTS.  
BONDED CONSTRUCTION JOINT SHALL BE CONSTRUCTED IN ACCORDANCE WITH ARTICLE 503.09 (a) (2).  
EXISTING REINFORCEMENT BARS EXTENDING INTO CONCRETE REMOVAL AREAS SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO NEW CONSTRUCTION, COST INCIDENTAL TO "CONCRETE REMOVAL".  
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.  
BARS INDICATED THUS 4x8-#5b2(E) INDICATES 4 LINES OF BARS WITH 8 LENGTHS PER LINE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
I-355 TO NAPERVILLE ROAD  
BRIDGE DECK SAW CUT JOINT CLOSURE  
S.N. 099-0028  
SCALE: VERT. HORIZ.  
DATE: 5/16  
DRAWN BY: MVT  
CHECKED BY: JAF

F. A. L. FILE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	WILL	230	79
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* 28 & 121 RS-1				

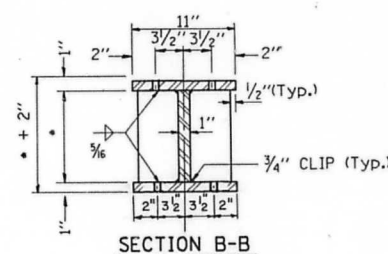
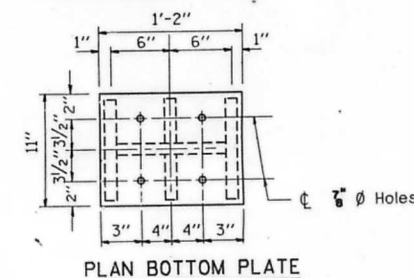
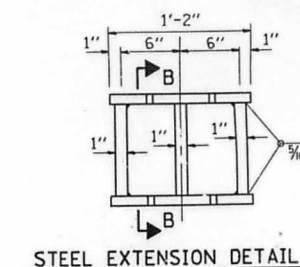
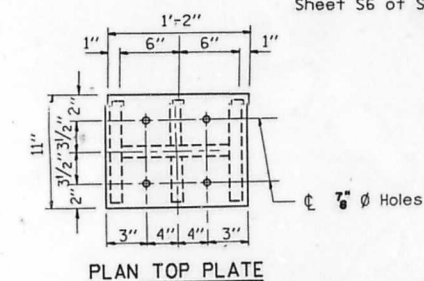
Sheet S6 of S-16



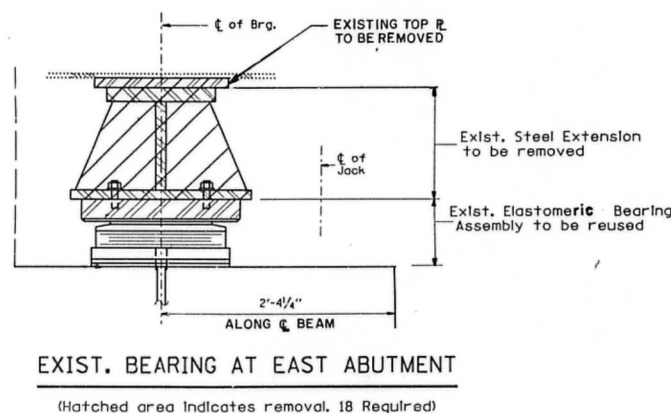
# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

## GIRDER REACTIONS

R DL (K)	28.4
R LL+Imp. (K)	51.5
R (Total) (K)	79.9



- \* 4" BEAMS 1 AND 2
- \* 8 1/8" BEAMS B thru G AND L thru O
- \* 10 5/8" BEAMS A, H, I, J, K, AND R



**NOTES:**  
Before installing the new steel extensions, remove the existing plate from the bottom flange of the existing beam, using the air-arc method and grind smooth all weld material remaining on the bottom flange. The cost is incidental to jacking existing superstructure.  
Diaphragm removal and replacement may be required to facilitate drilling holes for bearing attachment. The cost is incidental to furnishing and erecting structural steel.

New steel extensions and connection bolts are included in furnishing and erecting structural steel.

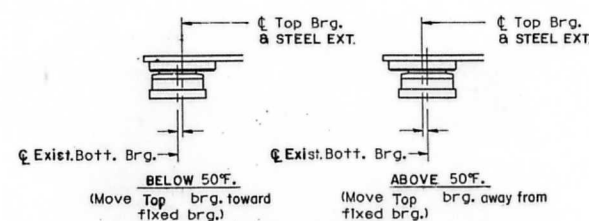
13 1/8" Ø holes for 3/4" Ø bolts in bottom flange to be drilled in the field. Cost incidental to furnishing and erecting structural steel.

Two 1/8" additional adjusting shims of the dimensions of the steel extension shall be provided for each bearing (beam) which are not shown on the plans and shall be used as required. Shim plates are not to be placed under bearing assembly.

Proposed bearing to be aligned above existing C of bearing. Proposed plates shall be AASHTO M-270, Gr-36.

For jacking information and the details of existing bearings see sheet S10 - S12.

Contractor shall submit jacking details for approval by the bridge office.



**SETTING STEEL EXTENSION AT EXP. BRG.**  
De 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

## BILL OF MATERIAL

Item	Unit	Total
Furn. and Erect Structural Steel	Lbs	4550
Jacking Existing Superstructure	L.S.	1.0

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
EAST ABUTMENT  
ELASTOMERIC BEARING DETAILS  
S.N. 099-0028  
SCALE: VERT. NONE  
HORIZ. DATE 04/28/94  
DRAWN BY JAF  
CHECKED BY MVT



\*28 & 121 RS-1

Sheet S7 of S-16

Item	Unit	Total
Furnished and erecting structural steel	Lbs.	1120

Before installing the new bearing plates, remove the bottom plate of the existing bearing assembly from the bottom of the balister using the air-arc method and grind smooth all weld material remaining on the balister. Burn existing anchor bolts flush with existing concrete surface. Grind smooth and seal with epoxy. The cost is incidental to Jacking Existing Superstructure.

Proposed bearing plates, Shim Plates, lead Plates and anchor bolts are included in Furnishing and Erecting Structural Steel.  
Two  $\frac{1}{8}$ " additional adjusting shims of the dimensions of the steel extension shall be provided for each bearing (beam) which are shown on the plans and shall be used as required.

Proposed bearing plates to be aligned above existing C  
of bearing. Proposed plates shall be AASHTO, M-270, Gr-36.  
For Jacking Information and the details of existing bearings  
see sheet S10 - S12

Contractor shall submit jacking details for approval by the bridge office.

Drilling of proposed anchor bolts is incidental to the cost of Furnishing and Erecting Structural Steel.

Replace broken or rusted out pintles subject to the approval of the Engineer. The cost is incidental to Furnishing and Erecting Structural Steel

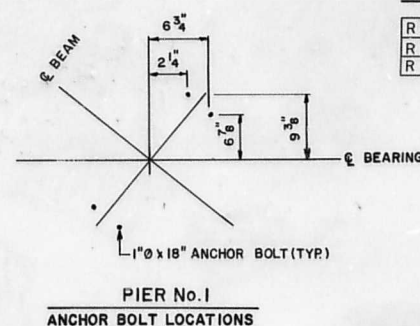
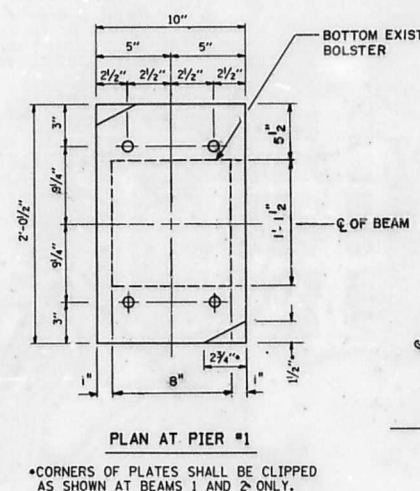
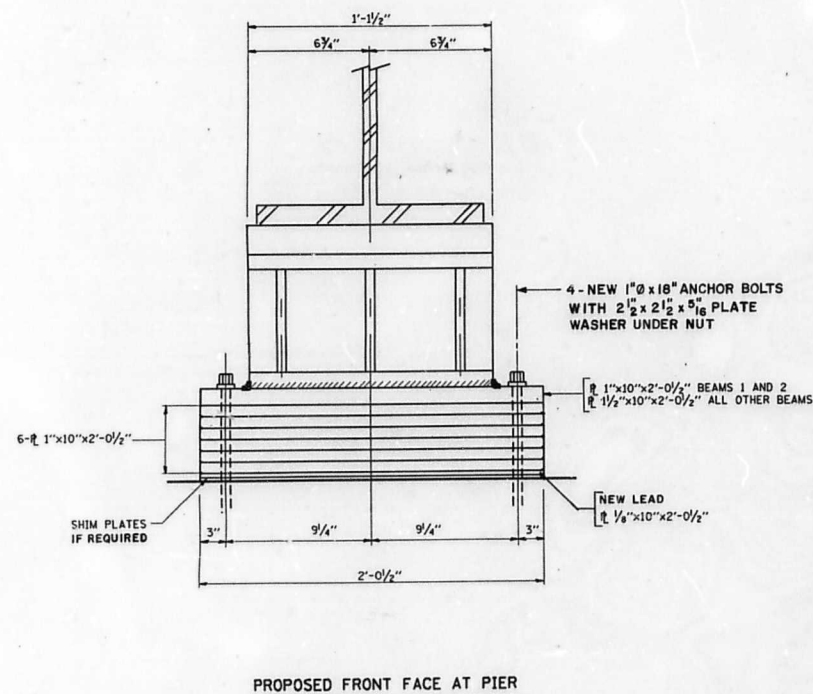
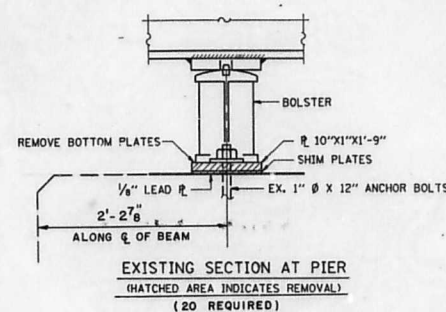
Existing fixed bearings to be reused shall be cleaned and painted. See special provisions.

R DL (K)	98.4
R LL+Imp. (K)	66.1
R (Total) (K)	164.5

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
PIER #1  
FIXED BEARING DETAILS  
S.N. 099-0028

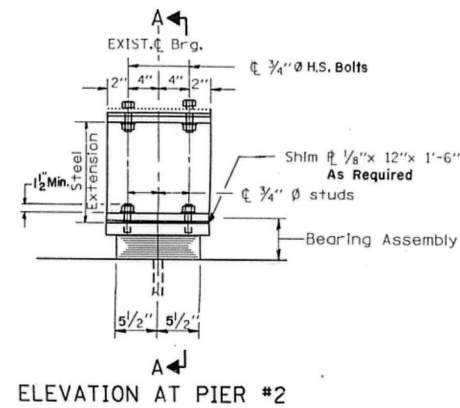
SCALE: 50'=1"      DRAWN BY CADD  
DATE 04/28/94      CHECKED BY JAF



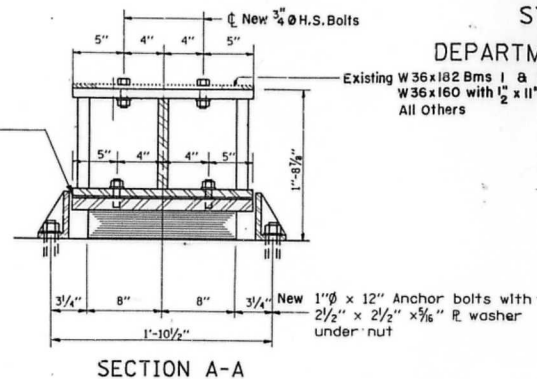
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

P. A. #	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	WILL	230	81
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* 28 & 121 RS-1				

Sheet 58 of S-16



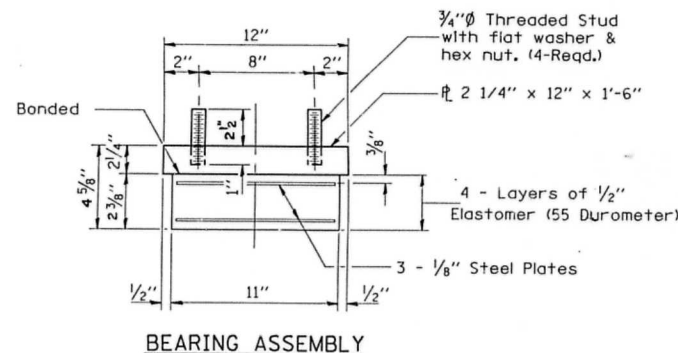
ELEVATION AT PIER #2



SECTION A-A

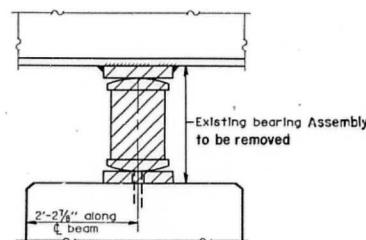
TYPE I ELASTOMERIC EXP. BRG.

(20 Required)



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



EXISTING BEARING REMOVAL

DETAIL AT PIER #2

(Hatched area indicates removal, 20 Required)

NOTES:

Before installing the new bearing, remove the existing top plate of the existing bearing assembly from the bottom flange of existing beam using the air-arc method and grind smooth all weld material remaining on the bottom flange. Burn existing anchor bolts flush with existing concrete surface. Grind smooth and seal with epoxy. The cost is included in "Remove Existing Bearing".

Diaphragm removal and replacement may be required to facilitate drilling holes in bottom flange for bearing attachment. The cost is incidental to furnishing and erecting structural steel.

New steel extensions, side retainers, connection bolts, shim plates and anchor bolts are included in furnishing and erecting structural steel.

1 1/2" Ø holes for 3/4" Ø bolts in bottom flange to be drilled in the field. Cost incidental to furnishing and erecting structural steel.

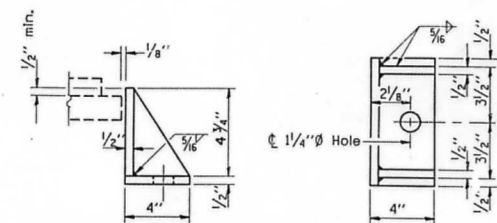
Two 1/8" additional adjusting shims of the dimensions of the steel extension shall be provided for each bearing (beam) which are not shown on the plans and shall be used as required. Shims shall not be placed under bearing assembly. Proposed bearing to be aligned above existing center of bearing. Proposed plates shall be AASHTO, M-270, Gr-36.

For jacking information and the details of existing bearings see sheet S10 - S12

Contractor shall submit jacking details for approval by the bridge office.

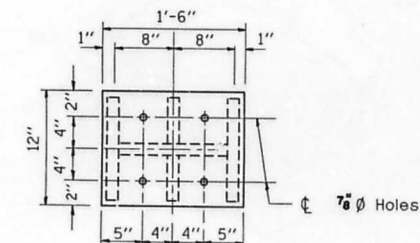
Drilling of proposed anchor bolts is incidental to the cost of furnishing and erecting structural steel.

For Anchor Bolts Installation details See Sheet S16 of S16

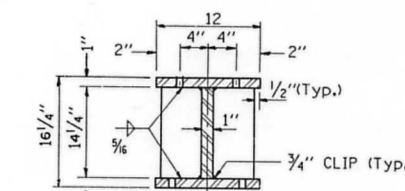


SIDE RETAINER

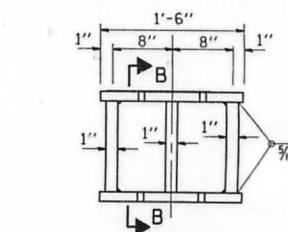
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with structural steel. (40 Required)



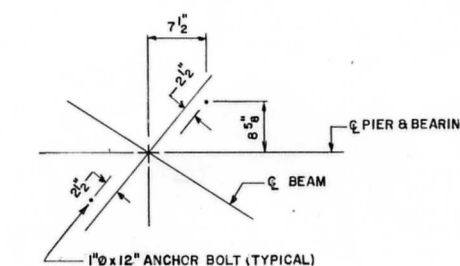
PLAN TOP PLATE



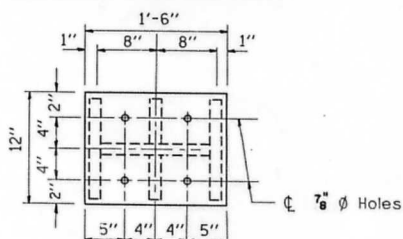
SECTION B-B



STEEL EXTENSION DETAIL



PIER #2  
LOCATION OF ANCHOR BOLTS



PLAN BOTTOM PLATE

GIRDER REACTIONS

R DL (K)	98.4
R LL+Imp. (K)	66.1
R (Total) (K)	164.5

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	20
Furn. and Erect Structural Steel	Lbs	6360

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
PIER #2  
ELASTOMERIC BEARING DETAILS  
S.N. 099-0028

SCALE: VERT. NONE HORIZ. DATE 04/28/94 DRAWN BY JAF CHECKED BY MVT

8/16

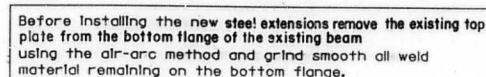
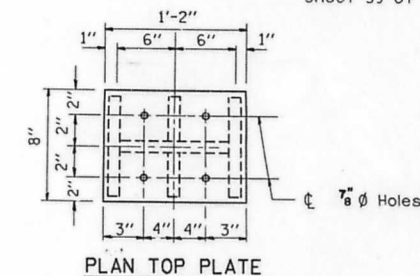
7/11/94 JAF 58 09561139 1394  
7/11/94 JAF 58 09561139 1394  
7/11/94 JAF 58 09561139 1394



Sheet S9 of S-16



R DL (K)	28.4
R LL+Imp. (K)	51.5
R (Total) (K)	79.9



The cost is incidental to Jacking Existing Superstructure. Diaphragm removal and replacement may be required to facilitate drilling holes in bottom flange for bearing attachment. The cost is incidental to Furnishing and Erecting Structural Steel.

New steel extensions, side retainers, connection bolts, and anchor bolts are included in furnishing and erecting Structural Steel.

13<sup>16</sup> Ø holes for 3/4" Ø bolts in bottom flange to be drilled in the field. Cost incidental to furnishing and erecting Structural Steel.

Two 1/8" additional adjusting shims of the dimensions of the steel extension shall be provided for each bearing (beam) which are not shown on the plans and shall be used as required. Shim Plates are not to be placed under bearing assembly

Proposed extensions to be aligned above existing top of bearing.  
Proposed plates shall be AASHTO M-270, Gr-36.

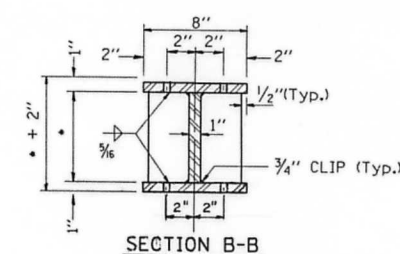
For Jacking Information and the details of existing bearings  
see sheet S10 - S12.

Contractor shall submit jacking details for approval by the bridge office.

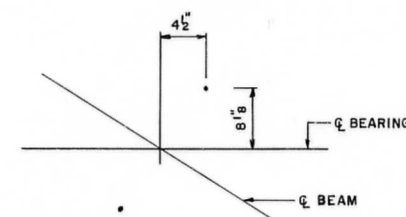
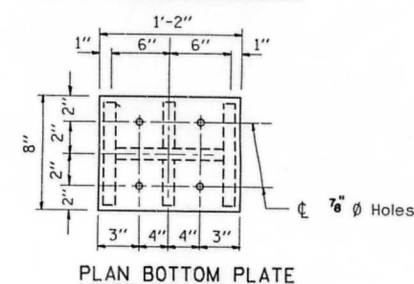
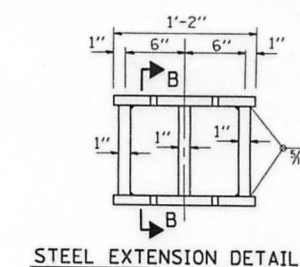
Drilling of proposed anchor bolts is incidental to the cost of Furnishing and Erecting Structural Steel.

\*\*\* Proposed side retainers shall be placed at both sides of beams 2, A thru H, and K thru O. One side retainer shall be placed on the outside face of beams I, J, and R. Existing side retainers are to remain.

FOR ANCHOR BOLT INSTALLATION DETAILS, SEE SHEET S16 OF S16



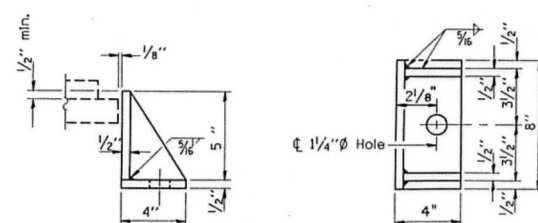
- \* 4" BEAMS 1 AND 2
- \* 10 $\frac{7}{8}$ " BEAMS B thru G AND L thru O
- \* 14 $\frac{3}{8}$ " BEAMS A,H,I,J,K, AND R



ANCHOR BOLT  
LOCATION SKETCH

BILL OF MATERIAL

Item	Unit	Total
Furn. and Erect Structural Steel	Lbs	352



SIDE RETAINER

Equivalent rolled angle with stiffeners  
will be allowed in lieu of welded plates.  
Weight Included with Structural Steel.  
**(36 REQUIRED)**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
WEST ABUTMENT  
ELASTOMERIC BEARING DETAILS  
S.N. 099-0028

SCALE: VERT. NONE  
HORIZ.  
DATE 04/28/94

DRAWN BY JAF  
CHECKED BY MVT

9/14

Thu Apr 28 10:07:21 1994  
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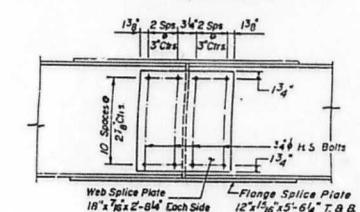
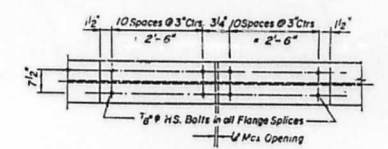
TAMERAN

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	WILL	230	83
STA.	TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	
* (23 & 121)RS-1			

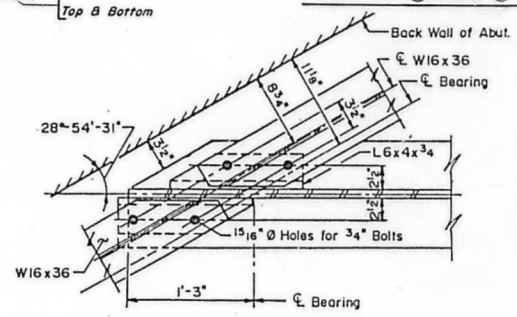
SHEET S-10 OF S-16

INTERIOR BEAM MOMENT TABLE				
	0.4 Span/1st	Pier 1 or 2	0.5 Span 2	
I (in <sup>4</sup> )	9760	13,424	9760	
S (in <sup>3</sup> )	542	726	542	
E (in <sup>2</sup> /ft)	1,249	1,295	1,249	
M <sub>u</sub> (ft-k)	322	-651.3	299.3	
I <sub>u</sub> (in <sup>4</sup> )	7.13	10.77	6.63	
M <sub>u</sub> + Imp (ft-k)	524.7	-478.8	519.6	
I <sub>u</sub> + Imp (in <sup>4</sup> )	11.62	7.91	11.50	
I <sub>u</sub> Total (in <sup>4</sup> )	18.75	18.68	18.13	
I/R (in <sup>4</sup> /ft)	50.7		51.5	

I and S are the Moment of Inertia and Section Modulus of the Steel Section Respectively.  
 V<sub>R</sub> is The Maximum Live Load Plus Impact Shear Range in the Span (Symmetrical About 0.5 Span 2).  
 E includes Weight of Beam, Slab, Curb, Parapet 13" J-11 and 25 psf Future Wearing Surface



DETAIL OF SPLICE FOR BEAMS (A) THRU (R)

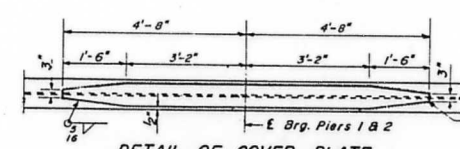


CONN. FOR END DIAPHRAGM FOR BEAMS 1 AND 2

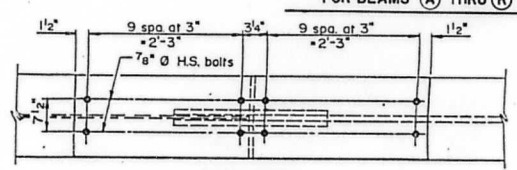
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 INTERSTATE ROUTE 55  
 OVER JOLIET ROAD  
 I-355 TO NAPERVILLE ROAD  
 STRUCTURAL STEEL DETAILS  
 S.N.099-0028  
 SCALE: VERT. 1"=10'-0" HORIZ. 1"=40'-0"  
 DATE: 10/16  
 DRAWN BY: MVT  
 CHECKED BY: JAF

FOR JACKING INFORMATION ONLY

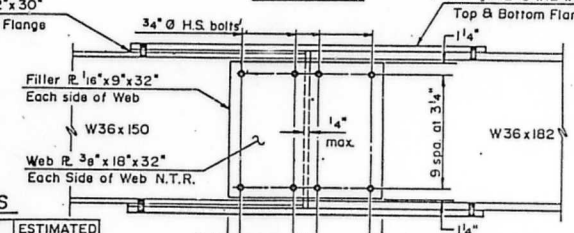
INTERIOR BEAM REACTION TABLE		
Reaction	Abutments	Piers
R <sub>u</sub> (k)	28.4	98.4
R <sub>u</sub> + Imp. (k)	51.5	66.1
R Total (k)	79.9	164.5



DETAIL OF COVER PLATE FOR BEAMS (A) THRU (R)



TOP VIEW FIELD SPLICE DETAILS (FOR BEAMS 1 AND 2)



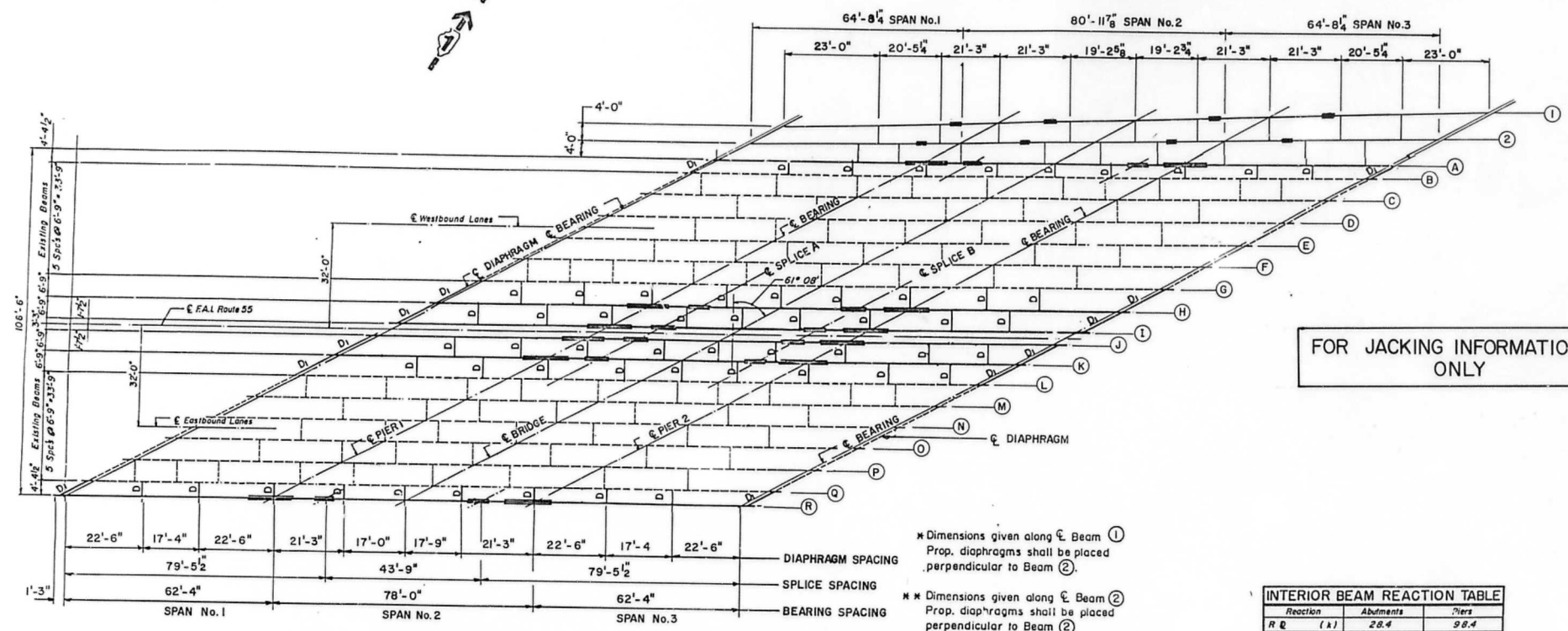
ELEVATION FIELD SPLICE DETAILS (FOR BEAMS 1 AND 2)

- \* Dimensions given along E Beam 1  
 Prop. diaphragms shall be placed perpendicular to Beam 2.
- \* Dimensions given along E Beam 2  
 Prop. diaphragms shall be placed perpendicular to Beam 1.
- \*\*\* Estimated quantity for Structural Steel includes the weight of all proposed beams, diaphragms, splices, bolts, fixed bearings and bolsters. Metal component parts of Elastomeric Bearings are not included in the quantity for Structural Steel.
- \*\*\*\* Adjusting shim R's (2-3/4", 2-1/2", 2-1/4") shall be provided for each Brg. Max. Jacking Load +60 kip

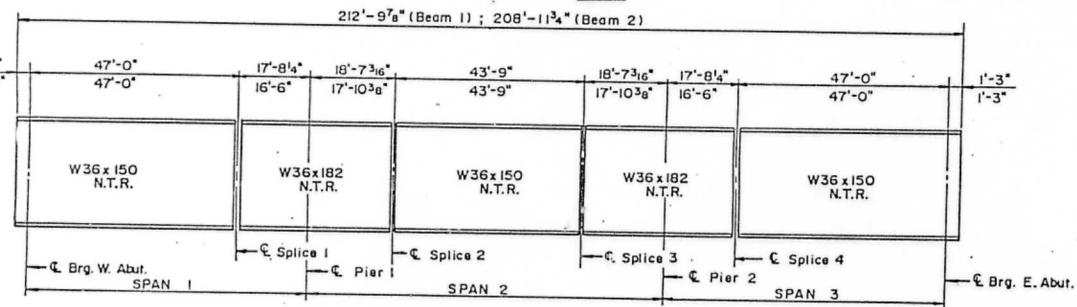
NOTE  
 All New Beams W 36x160  
 All Exist. Beams W 36x160

BILL OF MATERIALS

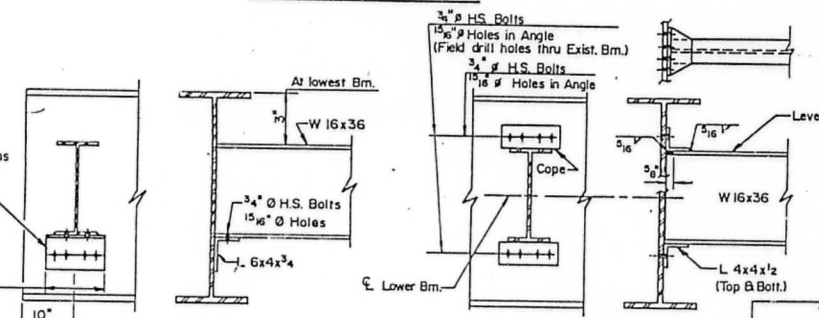
ITEM	UNIT	ESTIMATED QUANTITIES
Structural Steel	Lbs.	84,390
Elastomeric Bearings, Type A	Ea.	20
Elastomeric Bearings, Type B	Ea.	20
Bridge Expansion Brg. Removal	Ea.	36



PLAN



BEAM ELEVATION



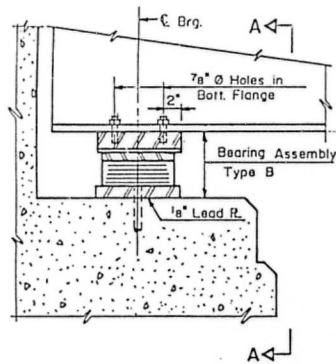
DIAPHRAGM D1

DIAPHRAGM D

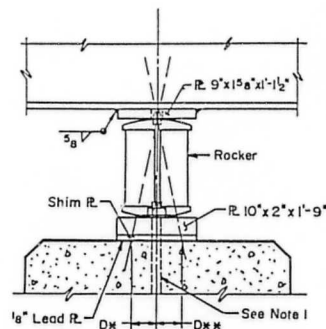
Shop weld end diaphragms at New Beams only

Field drill 15/16" Ø holes thru Existing Angle & Beam for 3/4" Ø H.S. Bolts using prop. L 6"x4"x3/4" as template

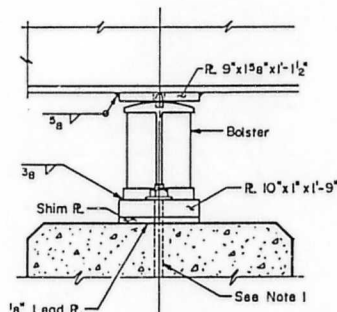




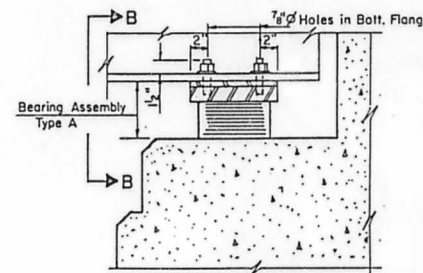
SEC. AT EAST ABUT.  
(Beams 1 & 2)



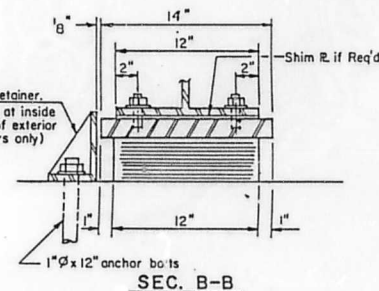
SECTION AT PIER 2



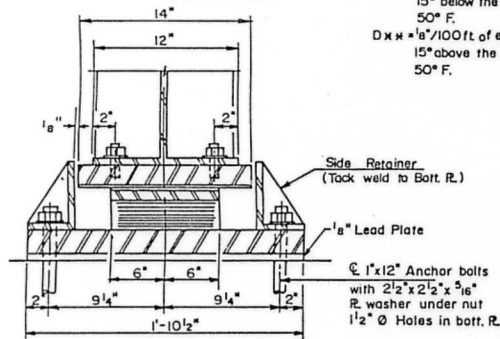
SECTION AT PIER 1



SEC. AT WEST ABUT.  
(Beams 1 & 2)

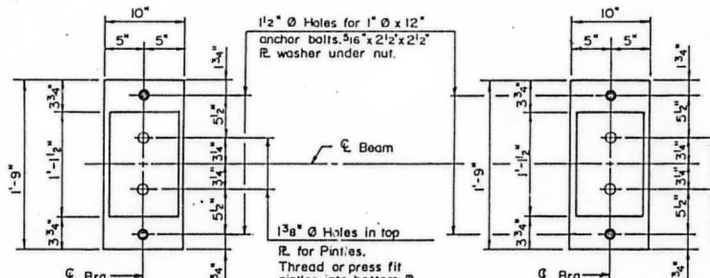


SEC. B-B

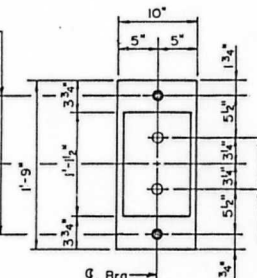


SECTION A-A

Δ = 1/8" / 100 ft. of exp. for every 15° below the normal temp. 50° F.  
Δ = 1/8" / 100 ft. of exp. for every 15° above the normal temp. 50° F.

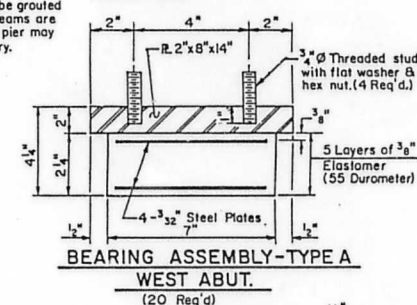


PLAN  
Pier 2



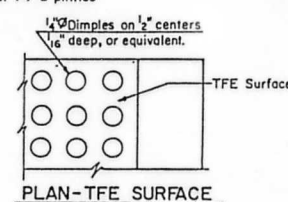
PLAN  
Pier 1

Note: 1/8" x 12" Anchor Bolts to be grouted into drilled holes after beams are in place, or bolts of fixed pier may be built into the masonry.

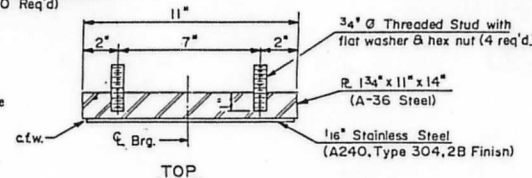


BEARING ASSEMBLY-TYPE A  
WEST ABUT.  
(20 Req'd)

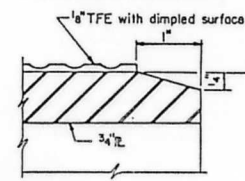
For Bolster Details at Existing Bearings, See Sheet S-1C-2-3



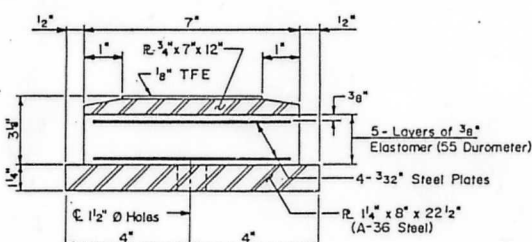
PLAN-TFE SURFACE



TOP



SECTION THRU TFE



BOTTOM

BEARING ASSEMBLY-TYPE B  
EAST ABUT.  
(20 Req'd)

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
1-355 TO NAPERVILLE ROAD  
EXISTING BEARINGS  
S.N. 099-0028  
SCALE: VERT. 1" = 4'-0"  
HORIZ. 1" = 10'-0"  
DATE 11/16  
DRAWN BY MVT  
CHECKED BY JAF

REVISIONS	
NAME	DATE

TAMERAN

[illegible]

Technical drawing of a bearing assembly, showing two views: a side elevation (left) and a cross-section (right).

**Side Elevation (Left):**

- Top flange:  $2\frac{1}{2}"$ ,  $3\frac{1}{2}"$ ,  $3\frac{1}{2}"$ ,  $2\frac{1}{2}"$
- Top R:  $1" \times 7" \times 15"$
- Web R:  $1" \times 14" \times C$
- Bottom R:  $1" \times 12" \times 14"$
- Bearing Assembly Type B
- Shim R as req'd
- $\frac{1}{8}"$  Lead Plate

**Cross-Section (Right):**

- Top flange:  $2\frac{1}{2}"$ ,  $2\frac{1}{2}"$ ,  $3"$ ,  $1"$
- Top R:  $1" \times 7" \times 15"$
- Clip:  $1" \times 1"$  Typical
- 9" Stiffener R B
- Plate B
- Plate C
- PLATES B & C
- $1" \times 12"$  Anchor bolts with

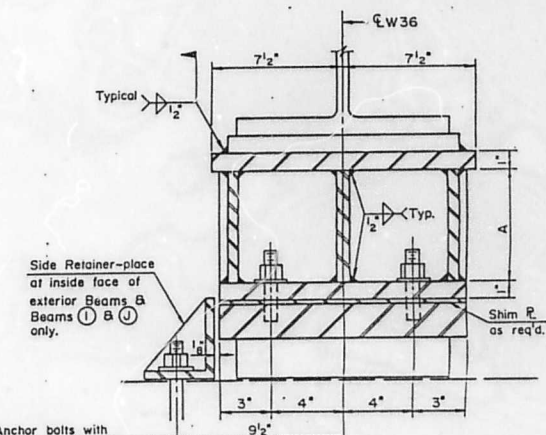
**Dimensions and Notes:**

- Existing R welded to bottom flange of W36 to remain.
- Typical
- 5"
- 4"
- 4"
- 3"
- 9 $\frac{1}{4}"$
- 9 $\frac{1}{4}"$

$C = 2\frac{3}{16}$  Bms.  $\textcircled{A} \textcircled{B} \textcircled{C} \textcircled{D} \textcircled{E} \textcircled{F} \textcircled{G} \textcircled{H} \textcircled{I} \textcircled{J} \textcircled{K} \textcircled{L} \textcircled{M} \textcircled{N} \textcircled{O} \textcircled{P} \textcircled{Q} \textcircled{R} \textcircled{S} \textcircled{T} \textcircled{U} \textcircled{V} \textcircled{W} \textcircled{X} \textcircled{Y} \textcircled{Z}$   
 $C = 4\frac{3}{16}$  Bms.  $\textcircled{A} \textcircled{B} \textcircled{C} \textcircled{D} \textcircled{E}$

Typ.  $\frac{1}{2}$ "  
 Bottom Pl.  $1" \times 12" \times 14"$   
 Plate B (Typ.)  
 See Detail  
 Bo  
 $\textcircled{E} 7\frac{1}{8}" \text{ } \phi$  Holes in bottom Pl.  
 $\textcircled{E}$  Exist. W36

BOLSTER-WEST ABUT.  
(Existing Beams Only-18 Req'd)



$\frac{6 \text{ 1"x12" Anchor bolts } \times}{2 \frac{1}{2} \text{ "x} 2 \frac{1}{2} \text{ "x} \frac{1}{16} \text{ " Washer}}$   
 A = 4  $\frac{7}{8}$ " Bms. (B C D E F G L M N O P Q)  
 A = 6  $\frac{3}{8}$ " Bms. (A H I U K R)

SEC. D - D  
(West Abut.)

FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
I-355 TO NAPERVILLE ROAD  
EXISTING BEARING DETAILS  
S.N.099-0028

SCALE: VERT. HORIZ. DRAWN BY MVT  
DATE CHECKED BY JAF

12/10

TAMERAN

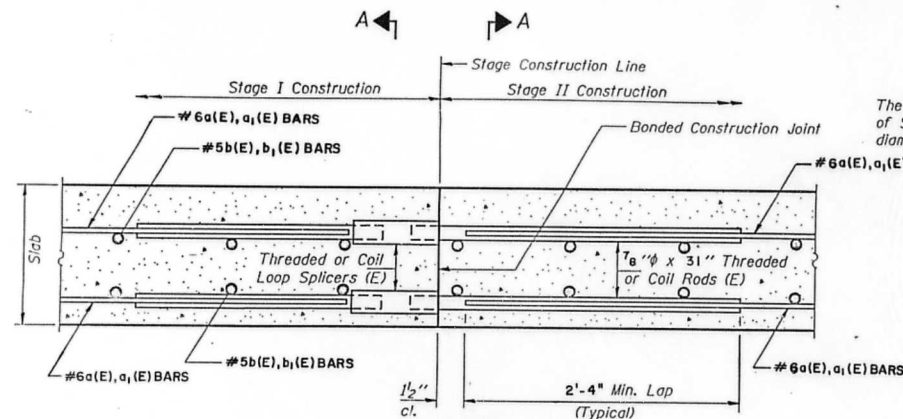


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

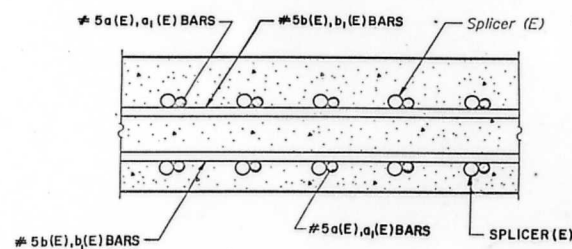
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
55	*	WILL	130	96
FED. ROAD DIST. NO. 7				
ILLINOIS				
FED. AID PROJECT				

\*(28 & 121) RS - 1

SHEET S-13 OF S-16



SECTION THRU SLAB



SECTION A-A  
SPLICER DETAILS  
(No. Req'd. 32)

The diameter of this part of splicer is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR

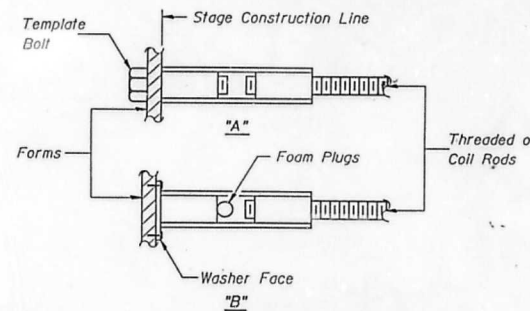
ONE PIECE

Wire Connector

WELDED SECTIONS

SPLICER ALTERNATIVES

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

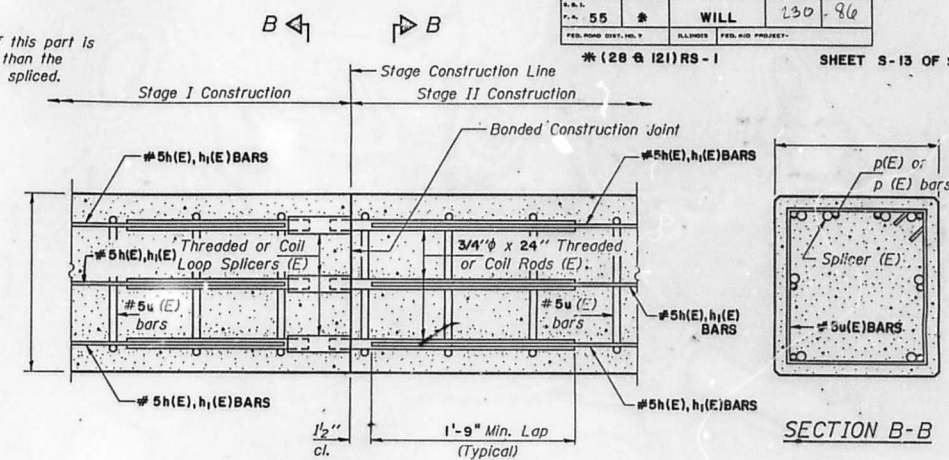


INSTALLATION AND SETTING METHODS

"A": Set splicer by means of a template bolt.

"B": Set splicer by nailing to wood forms or cementing to steel forms.

(E): Indicates epoxy coating.



SECTION THRU ABUTMENTS AND PIERS

SPLICER DETAILS  
(No. Req'd. 40)

BAR SPLICER TABLE

BAR SIZE	No. REQUIRED
#5 - 3/4"	40
#6 - 7/8"	32

NOTES

Bar splicers shall be in accordance with Section 508 of the Standard Specifications, except as noted, and will be paid for at the contract unit price each for "BAR SPLICERS."

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods.  
Splicer (coupler) assembly shall be epoxy coated in accordance with the requirements for reinforcement bars.

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

- Minimum Capacity (Tension in kips) =  $1.25 \times f_y \times A_t$
- Minimum Pull-out Strength (Tension in kips) =  $1.25 \times f_{allow} \times A_t$

Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.

$f_{allow}$  = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

$A_t$  = Tensile stress area of lapped reinforcement bars.

\* = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

#5 bar lap with 3/4" Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension Minimum Pull-out Strength = 9.2 kips-tension
#6 bar lap with 7/8" Splicer (Coupler) x 2'-7" Splicer Rods	Minimum Capacity = 33.1 kips-tension Minimum Pull-out Strength = 13.3 kips-tension
#7 bar lap with 1" Splicer (Coupler) x 3'-5" Splicer Rods	Minimum Capacity = 45.1 kips-tension Minimum Pull-out Strength = 18.0 kips-tension
#8 bar lap with 1 1/4" Splicer (Coupler) x 4'-6" Splicer Rods	Minimum Capacity = 58.9 kips-tension Minimum Pull-out Strength = 23.6 kips-tension

IN SLABS OR SUBSTRUCTURE

DESIGNED	19
CHECKED	
DRAWN	
CHECKED	

BSD-1 2-26-93

EXAMINED	ENGINEER OF BRIDGE DESIGN
PASSED	ENGINEER OF BRIDGES AND STRUCTURES

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
1-355 TO NAPERVILLE ROAD  
BAR SPLICER (COUPLER) DETAILS  
AT STAGE CONSTRUCTION  
S.N. 099-0028  
SCALE: VERT. HORIZ.  
DATE  
DRAWN BY  
CHECKED BY JAF

TAMERAN

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

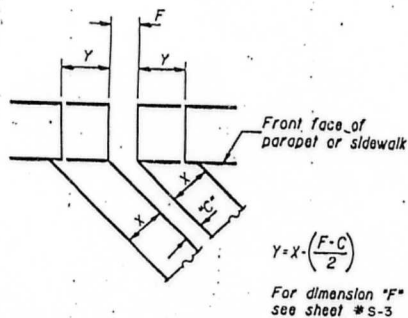
### INSTALLATION NOTES

1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

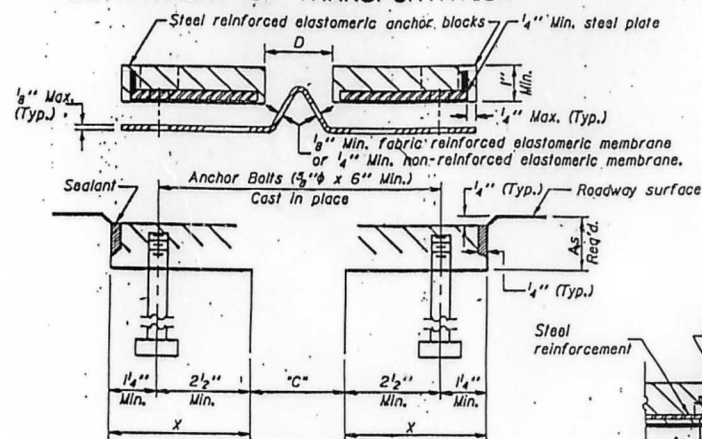
### SKUE LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at 12" cts.



FORMING BLOCKOUT SKETCH

### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



CROSS SECTION

### ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

ROUTE NO.	SECTION	DATE	BY	CHK
55	P	WILL	230	87
JOB NO. DIST. NO. 1		SHEET S-14 OF S-16		

### GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

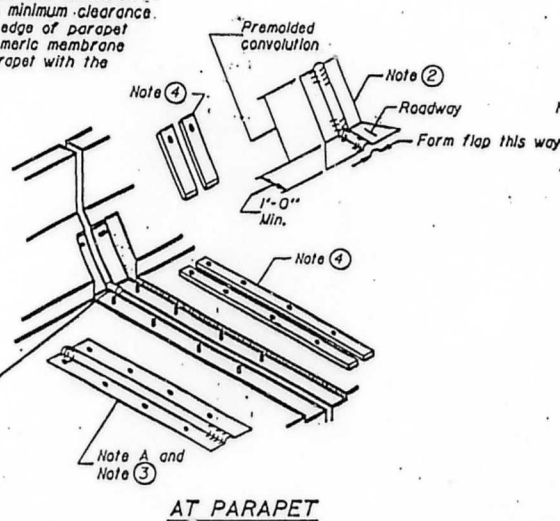
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

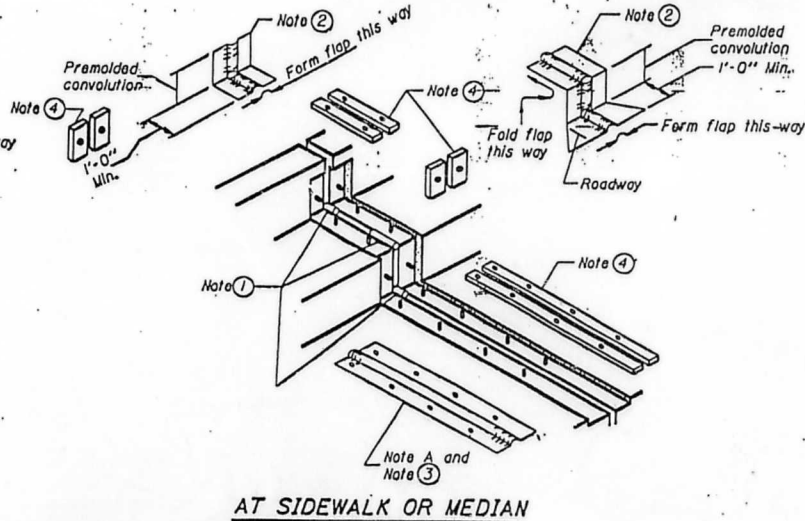
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

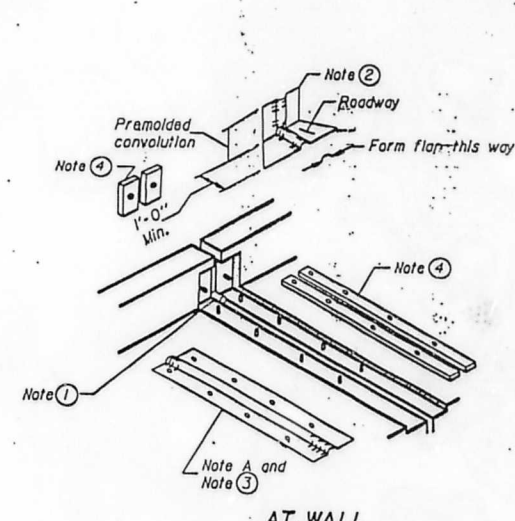
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



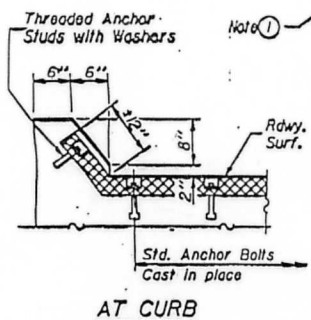
AT PARAPET



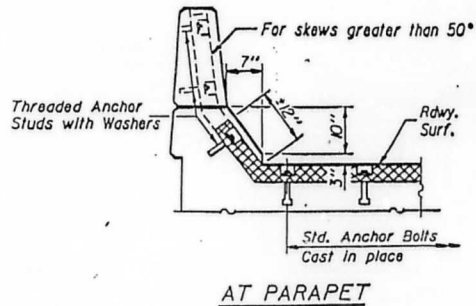
AT SIDEWALK OR MEDIAN



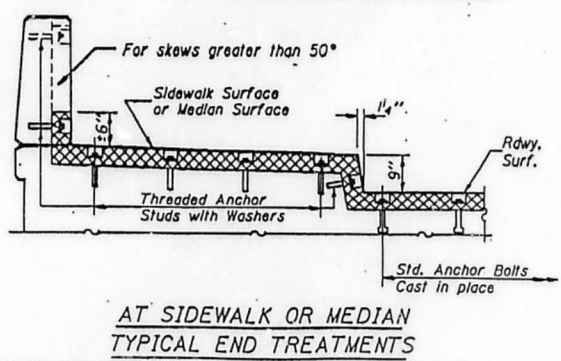
AT WALL



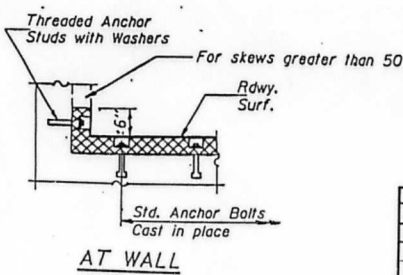
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN  
TYPICAL END TREATMENTS



AT WALL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
1-355 TO NAPERVILLE ROAD  
NEOPRENE EXPANSION JOINTS FOR 2"  
S.N. 099-0028  
SCALE: VERT. HORIZ.  
DATE: 14/16  
DRAWN BY: JAF  
CHECKED BY: JAF

TAMERAN

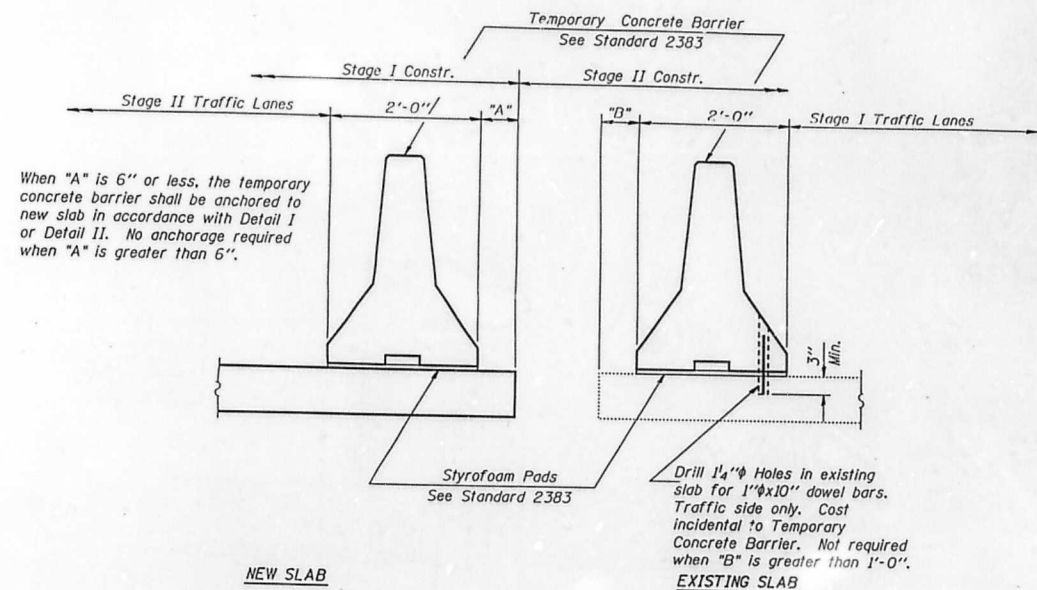


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	2217	2217
55	+	WILL	230	28A
FED. ROAD DIST. NO. 7				
SHEET S-15 OF S-16				

\* (28 & 121) RS - 1

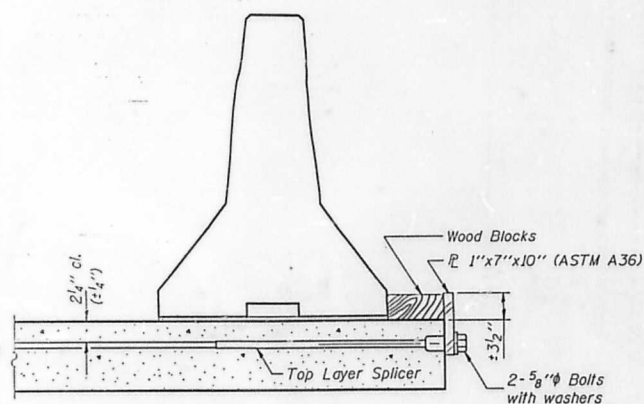
SHEET S-15 OF S-16



SECTIONS THRU SLAB

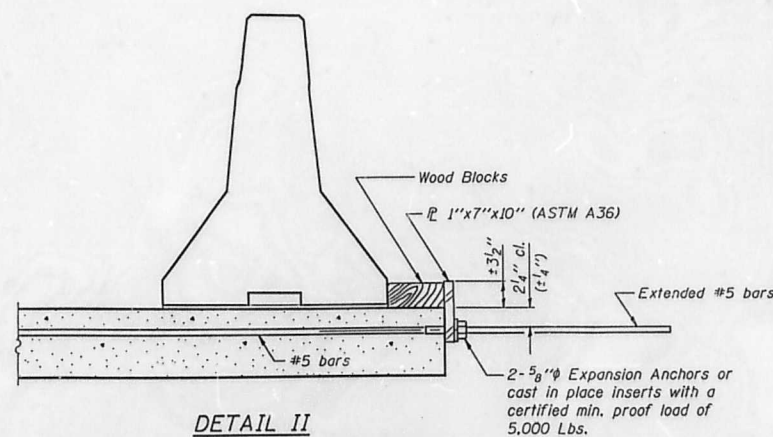
NOTES

- Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1"x7"x10" steel plate to the top layer of couplers with 2-5/8" bolts screwed to coupler at approximate center of each 10'-0" barrier panel.
- Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1"x7"x10" steel plate to the concrete slab with 2-5/8" Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate center of each 10'-0" barrier panel.  
Cost of anchorage is incidental to Temporary Concrete Barrier.



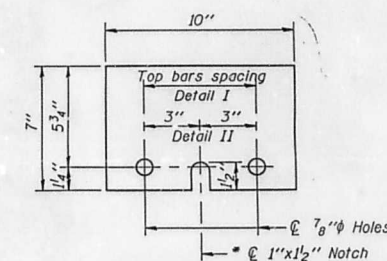
DETAIL I

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



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



1"x7"x10"

\* Required only with Detail II

DESIGNED	14
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	ENGINEER OF BRIDGES AND STRUCTURES

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
1-355 TO NAPERVILLE ROAD  
TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION  
S.N. 099-0028  
SCALE: VERT. 1"=10'  
DATE:      DRAWN BY: JAF  
CHECKED BY: JAF

R-27 7-1-91

D

C

B

A

TAMERAN

A

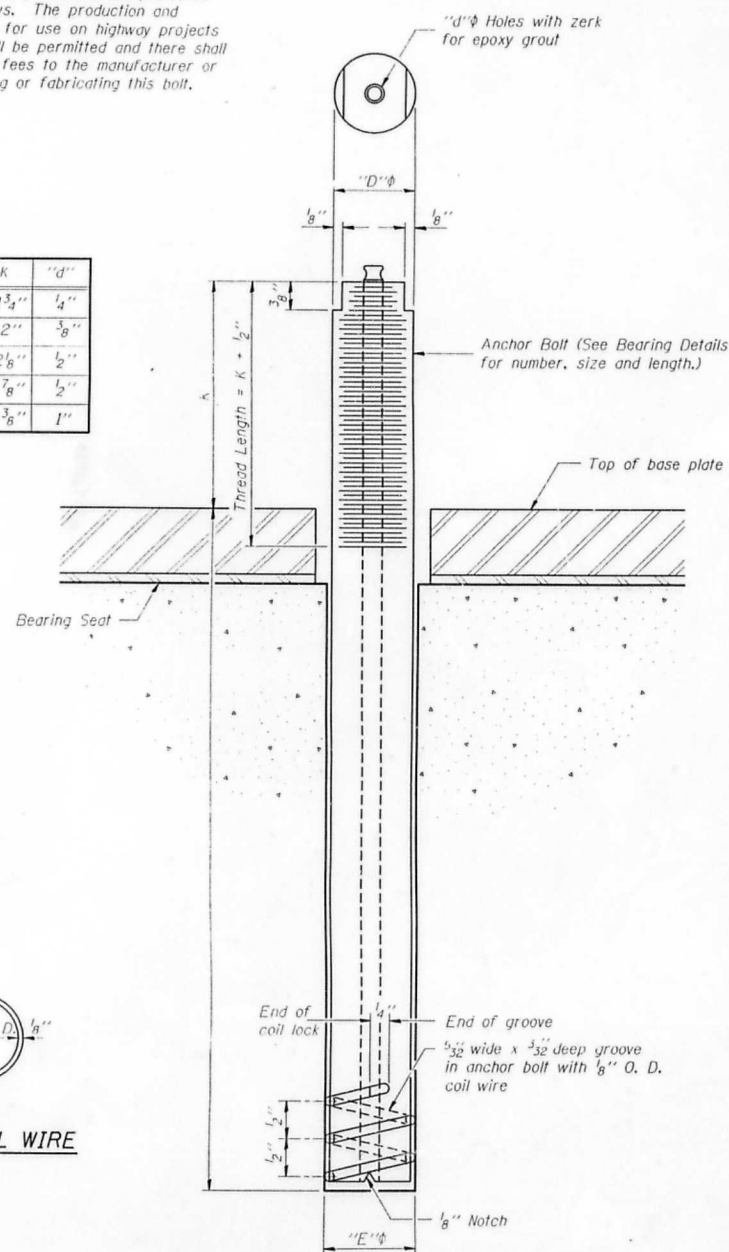
B

C

D

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/2"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/4"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

## STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

### MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.  
The coil wire shall be made of any suitable soft steel wire.  
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.  
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type 1, Grade 1 and of a Class suitable for the temperature at installation.

### INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

### ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.  
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:  
1. A threaded rod stud with nut and washer conforming to ASTM A307.  
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
55	*	WILL	230	88B	SHEETS

# (28 & 121) RS-1

SHEET S-16 OF S-16

### GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.  
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.  
The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	ENGINEER OF BRIDGES AND STRUCTURES

ABB-1 7-1-91

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INTERSTATE ROUTE 55  
OVER JOLIET ROAD  
I-355 TO NAPERVILLE ROAD  
ANCHOR BOLT DETAILS FOR BEARINGS  
S.N.099-0028  
SCALE: VERT. 1"=1'-0"  
HORIZ. 1"=1'-0"  
DRAWN BY  
CHECKED BY JAF

16/16