

04-25-14 LETTING ITEM 076

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 327 (US 50)
SECTION 14-14B-1
BRIDGE PREVENTATIVE MAINTENANCE
CLINTON COUNTY

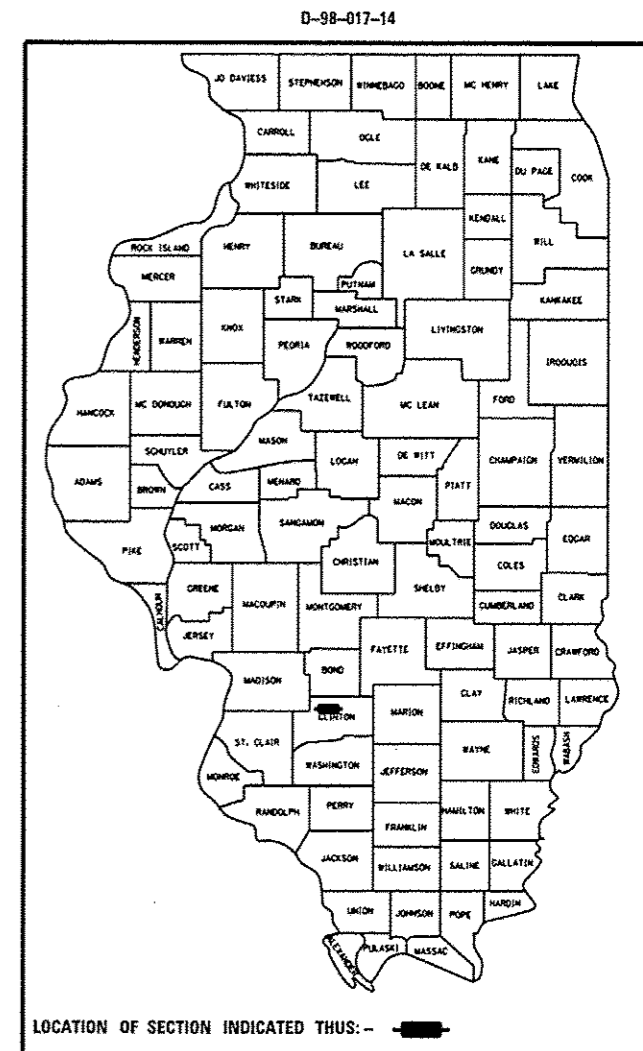
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-1	CLINTON	27	1
		ILLINOIS	CONTRACT NO. 76G91	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

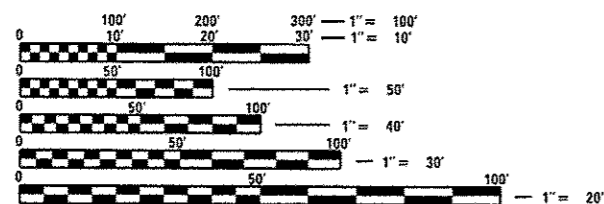
TRAFFIC DATA

2013 ADT = 6000 (ACTUAL)
2014 ADT = 6100 (ESTIMATED)
2034 ADT = 7400 (ESTIMATED)
SU = 5.0% MU = 9.2%

C-98-017-14

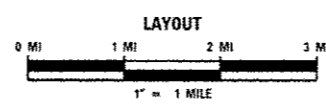
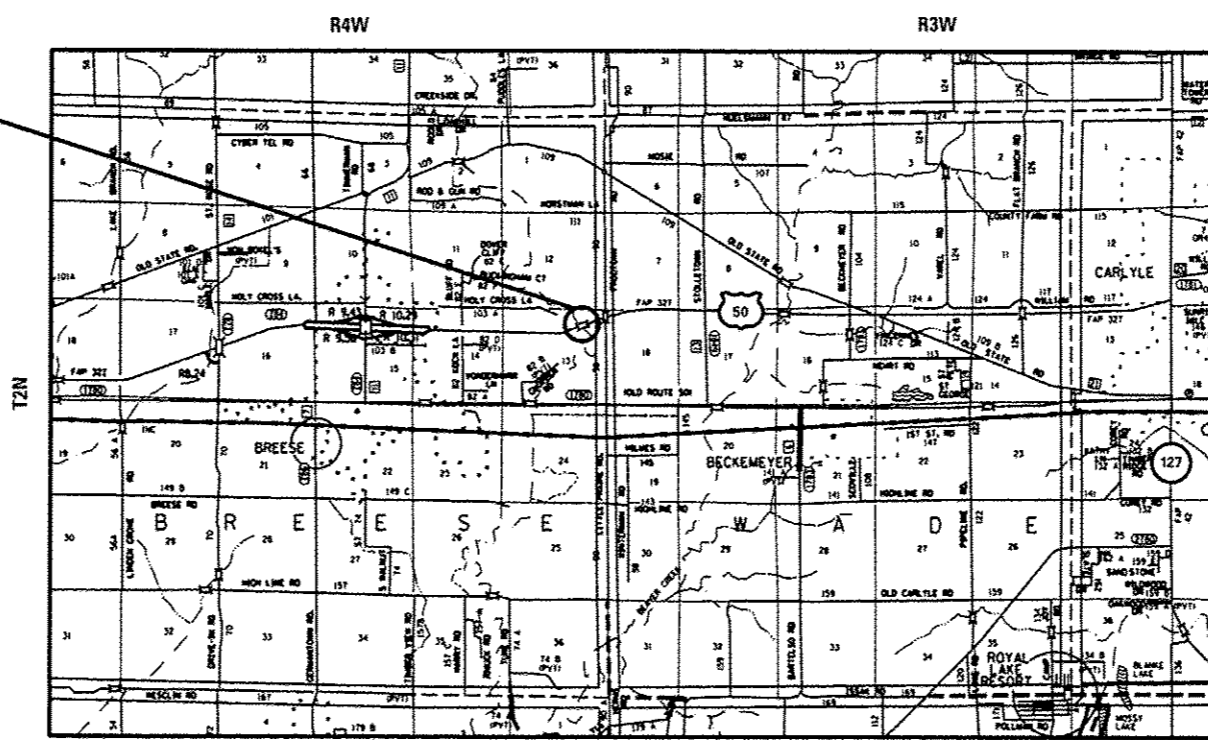


**BRIDGE REPAIR
OVER SHOAL CREEK
STA 3206 + 00
SN 014-0058
BEGIN STA 3200 + 08.79
END STA 3212 + 02.58**



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: PATTI LEBEAU (618) 346-3179
PROJECT MANAGER: REBECCA THARP (618) 346-3323

DESIGN DESIGNATION
N/A

GROSS LENGTH = 1185 FT. = 0.224 MILE
NET LENGTH = 1185 FT. = 0.224 MILE

LATITUDE 38.62139 LONGITUDE -89.48609

CONTRACT NO. 76G91

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *February 7 20 14*
John D. Paranzelli, PE, Jr.
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

March 21 20 14
John D. Paranzelli, PE, Jr.
acting ENGINEER OF DESIGN AND ENVIRONMENT

March 21 20 14
Omer Osman, PE, Jr.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

GENERAL NOTES

INDEX OF SHEETS

1	COVER SHEET
2	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, & COMMITMENTS
3	SUMMARY OF QUANTITIES
4	TYPICAL SECTIONS
5	SCHEDULE OF QUANTITIES
6-27	STRUCTURAL SHEETS

1. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
 - AT&T ILLINOIS-COMMUNICATIONS
 - CARLYLE NORTH WATER COMPANY
 - CHARTER COMMUNICATIONS, INC.
 - KINDER MORGAN
 MEMBERS OF J.U.L.I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY *. NON- J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.
2. THE CONTRACTOR AND THE ENGINEER SHALL BE AWARE THAT NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE STATIONING, TOPOGRAPHY, AND QUANTITIES SHOWN IN THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS. ALL SHALL BE ASSUMED TO BE APPROXIMATE. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
3. ANY RAISED REFLECTIVE PAVEMENT MARKERS DISTURBED OR REMOVED DURING THE DECK SLAB REPAIR SHALL BE REPLACED ACCORDING TO ARTICLE 781 AND PAID FOR IN ACCORDANCE WITH ARTICLE 109.04.
4. A QUANTITY OF 2950 FEET OF TEMPORARY PAVEMENT MARKING - LINE 6" WHITE HAS BEEN INCLUDED IN THE PLANS FOR PAINTING THE BOTTOM 6" OF THE TEMPORARY CONCRETE BARRIER.
5. THE PROPOSED PAVEMENT MARKING SHALL MATCH THE LOCATIONS OF THE EXISTING PAVEMENT MARKING, AS DIRECTED BY THE ENGINEER.
6. ALL TURF AREAS DISTURBED BY THE CONTRACTOR SHALL BE SEEDED WITH THE APPROPRIATE EROSION CONTROL, AS DIRECTED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
7. EXISTING PAVEMENT MARKING SHALL BE TEMPORARILY COVERED PRIOR TO APPLICATION OF THE DECK SURFACE TREATMENT, TO PREVENT THE MATERIAL FROM BEING APPLIED TO THE MARKINGS AND TO PROTECT THE REFLECTIVE PROPERTIES OF THE MARKINGS. THE TEMPORARY COVERING MATERIAL USED SHALL BE SUCH THAT IT WILL NOT AFFECT THE MARKINGS REFLECTIVITY WHEN REMOVED AFTER APPLICATION OF THE DECK SURFACE TREATMENT AND PRIOR TO OPENING TO TRAFFIC. COST IS INCLUDED WITH THE BRIDGE DECK CONCRETE SEALER SURFACE TREATMENT SPECIFIED.
8. THE RESIDENT ENGINEER SHALL VERIFY THE EXISTENCE OF HIGHWAY LIGHTING AND/OR I.T.S. UTILITIES WITHIN THE PROJECT LIMITS. IF HIGHWAY LIGHTING AND/OR I.T.S. EXISTS WITHIN THE PROJECT LIMITS, AND IF THESE ITEMS REQUIRE LOCATING, THE CONTRACTOR SHALL BE DIRECTED TO DO SO ACCORDING TO SECTION 803 OF THE STANDARD SPECIFICATIONS.

STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-13	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701901-03	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
780001-04	TYPICAL PAVEMENT MARKINGS

COMMITMENTS

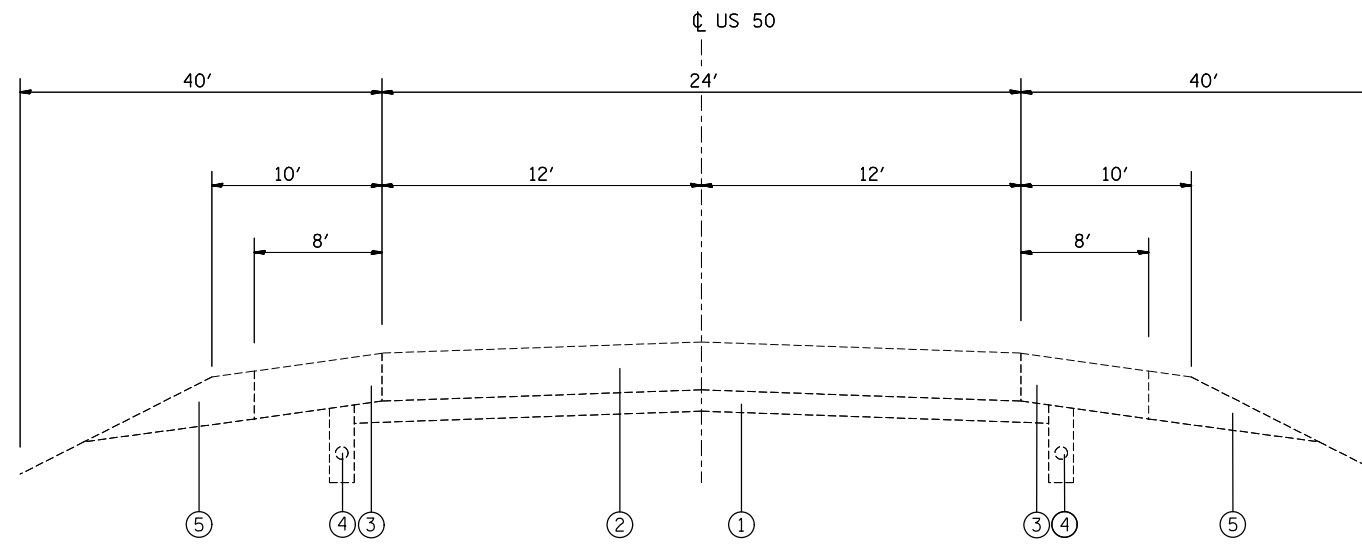
NONE

FILE NAME =	USER NAME = dntel-man-jn	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, & COMMITMENTS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
en\p\work\p\idat\dntel-man-jn\0378447	0075691-148-1	DRAWN -	REVISED -			327	14-148-1	CLINTON	27	2	
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 76691					
	PLOT DATE = 2/7/2014	DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET NO.	OF	SHEETS	STA. TO STA.	

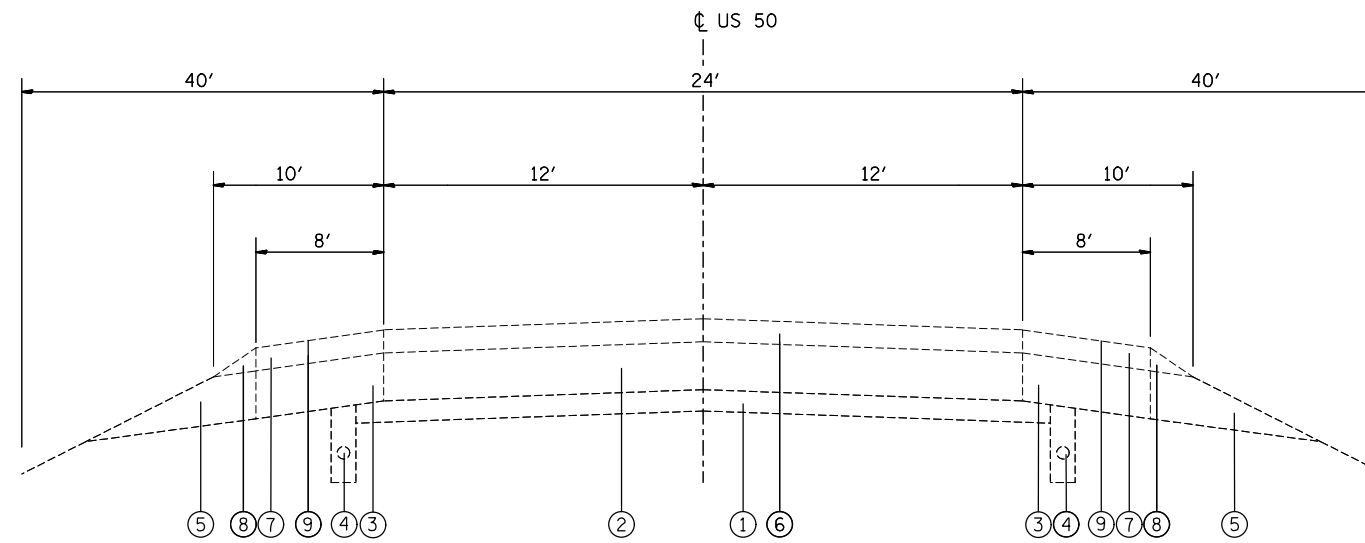
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				100% STATE
				BRIDGE 0014 014-0058
50102400	CONCRETE REMOVAL	CU YD	87.9	87.9
50300255	CONCRETE SUPERSTRUCTURE	CU YD	87.4	87.4
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	13700	13700
50800515	BAR SPLICERS	EACH	88	88
52000110	PREFORMED JOINT STRIP SEAL	FOOT	228	228
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2860	2860
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	2950	2950
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	954	954
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1475	1475

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				100% STATE
				BRIDGE 0014 014-0058
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1475	1475
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2860	2860
78300100	PAVEMENT MARKING REMOVAL	SO FT	954	954
X5030530	FLOOR DRAIN EXTENSION	EACH	121	121
Z0015802	PLUG EXISTING DECK DRAINS	EACH	223	223
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SO YD	25	25
Z0016200	DECK SLAB REPAIR (PARTIAL)	SO YD	125	125

* SPECIALTY ITEM



EXISTING TYPICAL SECTION
STA. 3179+15.25 TO STA. 3200+08.79



EXISTING TYPICAL SECTION
STA. 3214+42.17 TO STA. 3230+56.57

LEGEND

- | | |
|--|-------------------------------------|
| ① EXISTING STABILIZED SUB-BASE 4" | ⑥ EXISTING HMA OVERLAY, 3 3/4" |
| ② EXISTING PORTLAND CEMENT PAVEMENT 8" | ⑦ EXISTING HMA SHOULDER, 3 3/4" |
| ③ EXISTING BITUMINOUS SHOULDERS 8" | ⑧ EXISTING AGGREGATE SHOULDER WEDGE |
| ④ EXISTING PIPE DRAINS, 4" | ⑨ EXISTING SHOULDER RUMBLE STRIP |
| ⑤ EXISTING AGGREGATE SHOULDERS, TYPE B | |

FILE NAME =	USER NAME = dntelmenjn	DESIGNED -	REVISED -
et:\pw\work\p\dot\dntelmenjn\1\0370447	0876691-shr-plan.dgn	DRAWN -	REVISED -
#MODELNAME#	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 2/7/2014	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	4
CONTRACT NO. 76G91			ILLINOIS FED. AID PROJECT	

STAGING SCHEDULE

LOCATION	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	TEMPORARY RUMBLE STRIP	TEMPORARY BRIDGE TRAFFIC SIGNALS
	FOOT	FOOT	EACH	EACH	EACH	EACH
SN 014-0058						
STAGE I	1475		2			
STAGE II		1475		2		
STAGE I & II					6	1
TOTAL	1475	1475	2	2	6	1

NOTE: TEMPORARY BRIDGE TRAFFIC SIGNAL QUANTITY IS FOR THE SYSTEM OF SIGNALS, PAID FOR AS EACH SYSTEM.

PAVEMENT MARKING SCHEDULE

LOCATION	PAINT			TEMPORARY PVMT			PAVEMENT MARKING	WORK ZONE PAVEMENT MARKING
	MARKING - LINE 4"			MARKING - LINE 4"				
	CENTERLINE	EDGE LINE		CENTERLINE	EDGE LINE		REMOVAL	REMOVAL
	SKIP-DASH	WHITE		SKIP-DASH	WHITE		REMOVAL	REMOVAL
	YELLOW	LEFT	RIGHT	YELLOW	LEFT	RIGHT	SQ FT	SQ FT
S.N. 014-0058	80	1390	1390	80	1390	1390	954	954
TOTAL =	2860			2860			954	954

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.

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

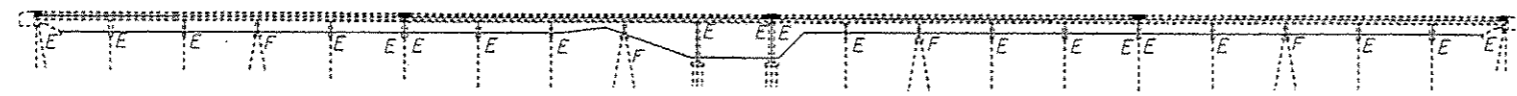
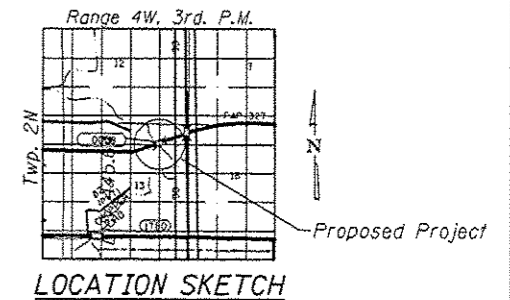
The deck surface shall have its final finish surface tined according to Article 420.09(e)1 of the Standard Specifications. Cost included with "Concrete Superstructure".

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

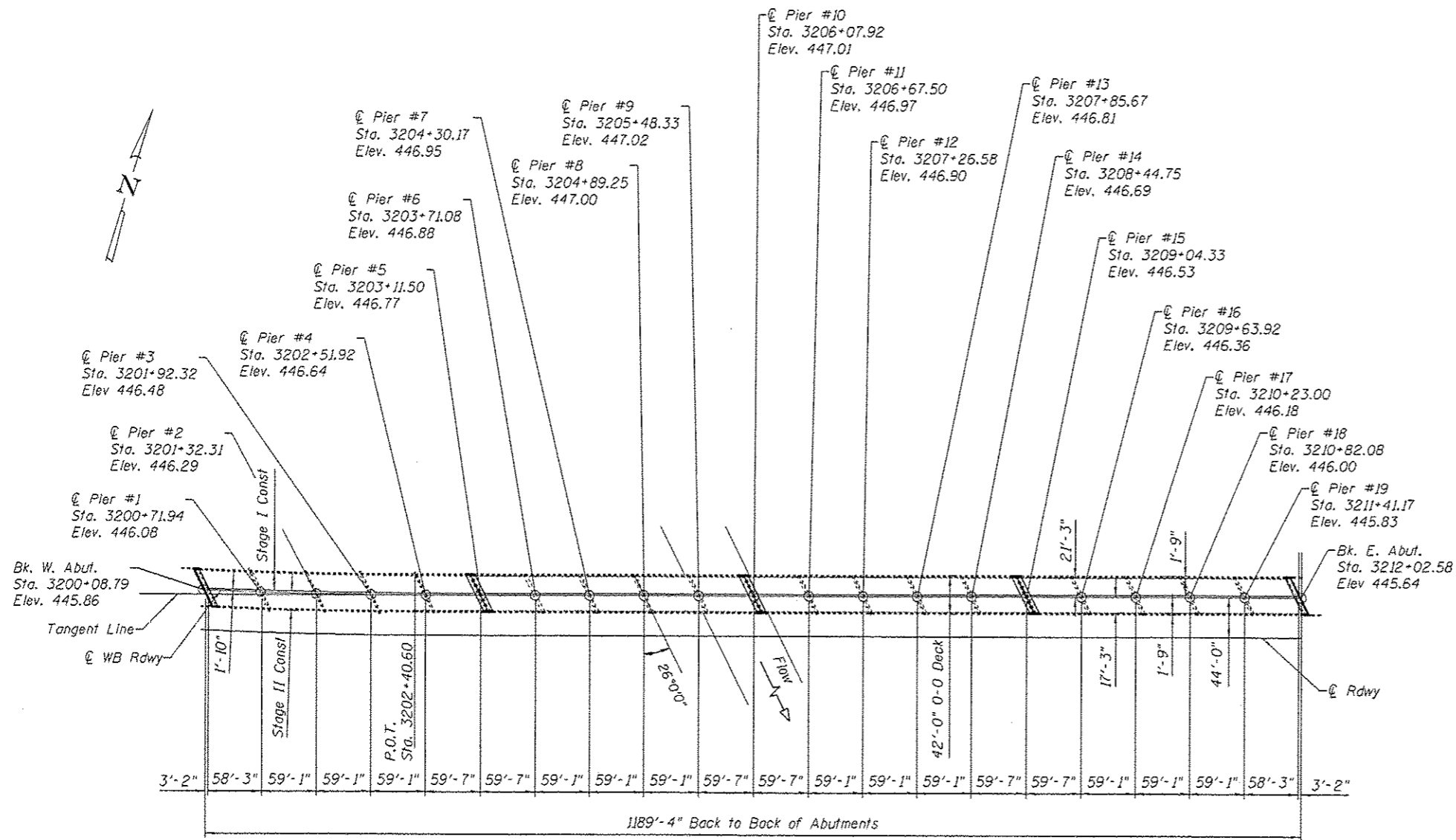
The Contractor shall use extreme care during concrete removal so as not to damage the PPC I-Beams. Any damage to the PPCI-Beams shall be repaired at the Contractor's expense.

INDEX OF SHEETS

1. General Plan & Elevation
2. Deck Cross Section (Spans 1-5)
3. Deck Cross Section (Spans 6-20)
4. Joint Removal (W. Abut.)
5. Joint Removal (Piers 5 & 10)
6. Joint Removal (Pier 15 & E. Abut.)
7. Joint Replacement (W. Abut.)
8. Joint Replacement (Pier 5)
9. Joint Replacement (Pier 10)
10. Joint Replacement (Pier 15)
11. Joint Replacement (E. Abut.)
12. Joint Details
13. Rail Anchorage Details
14. Drain Extension & Plugging Locations (Spans 1-10)
15. Drain Extension & Plugging Locations (Spans 11-20)
16. Drain Details
17. Strip Seal Details
18. Temporary Concrete Barrier
19. Bar Splicers
20. For Information Only (F.I.O.)-Existing General Plan & Elevation
21. F.I.O.-Existing Footing Plan
22. F.I.O.-Existing Framing Plan (Spans 1-5)



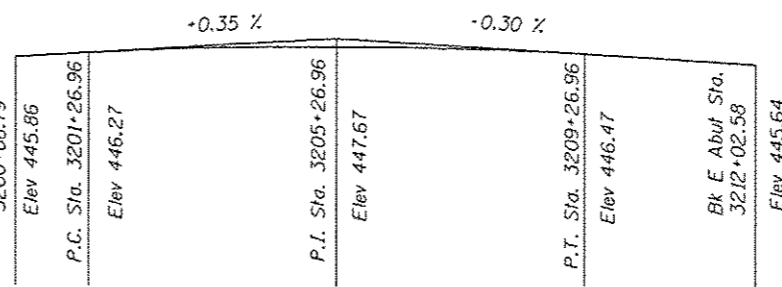
ELEVATION



PLAN

Replace deck ends at abutments, piers 5, 10 & 15 and install Preformed Joint Strip Seal.
 Perform partial and full depth patching
 Floor Drain Extensions & Plug Existing Drains

See sheet 20 of 22 for curve data.



PROFILE GRADE

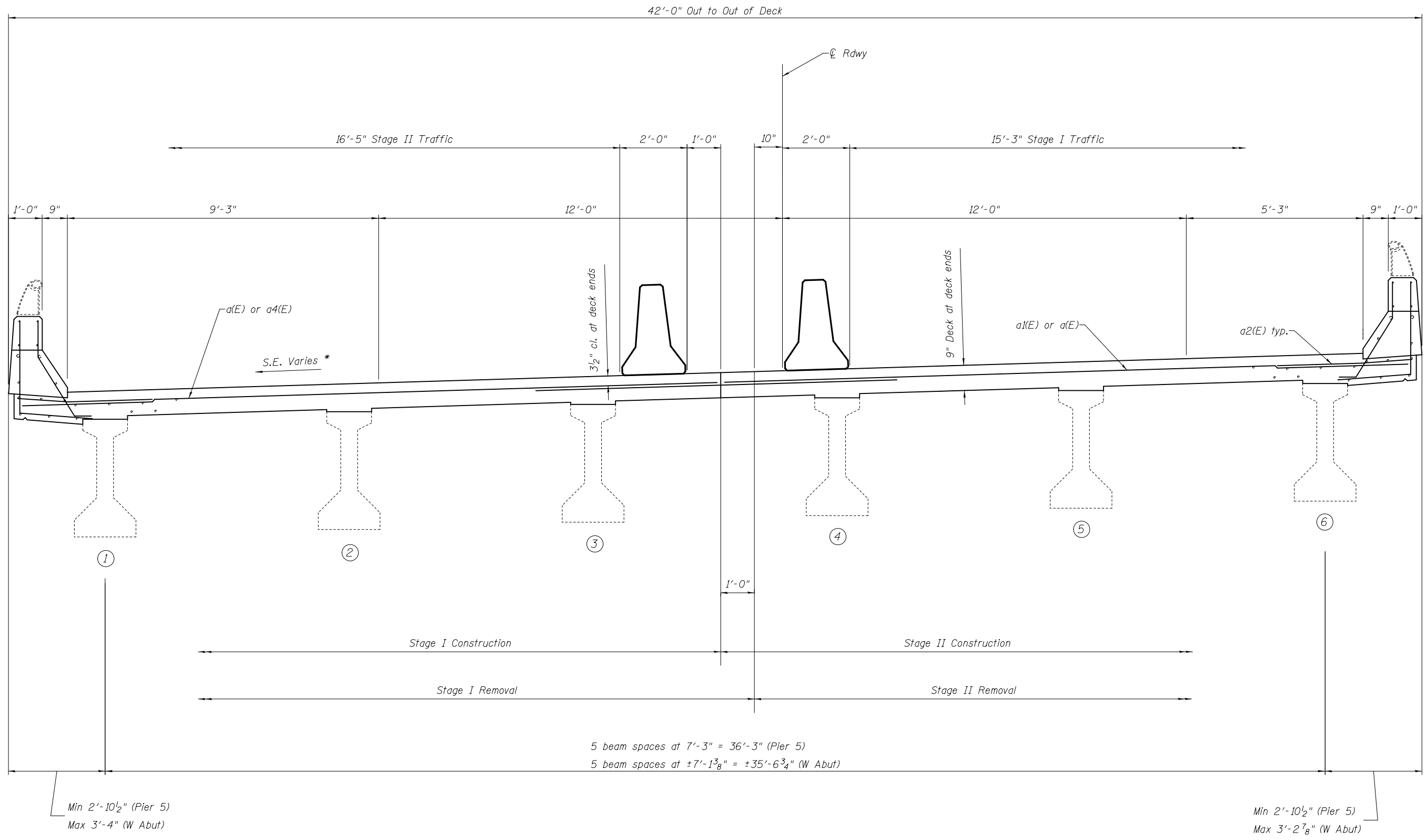


Expires 11/30/14

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	87.9
Concrete Superstructure	Cu. Yd.	87.4
Floor Drain Extension	Each	121
Plug Existing Deck Drains	Each	223
Reinforcement Bars, Epoxy Coated	Pound	13700
Bar Splicers	Each	88
Preformed Joint Strip Seal	Foot	228
Deck Slab Repair (Partial)	Sq. Yd.	125
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	25

DESIGNED - A.Y.V.	EXAMINED - <i>Timothy A. [Signature]</i>	DATE - 3/13/14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION SN 014-0058 [New US 50 WB (N. Bridge) over Shoal Ck.]	F.A.P. RTE. 327	SECTION 14-148-1	COUNTY CLINTON	TOTAL SHEETS 27	SHEET NO. 6
CHECKED - ATU	PASSED - <i>[Signature]</i>	REVISED			SHEET NO. 1 OF 22 SHEETS				
DRAWN - A.Y.V.	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	ILLINOIS FED. AID PROJECT CONTRACT NO. 76G91						

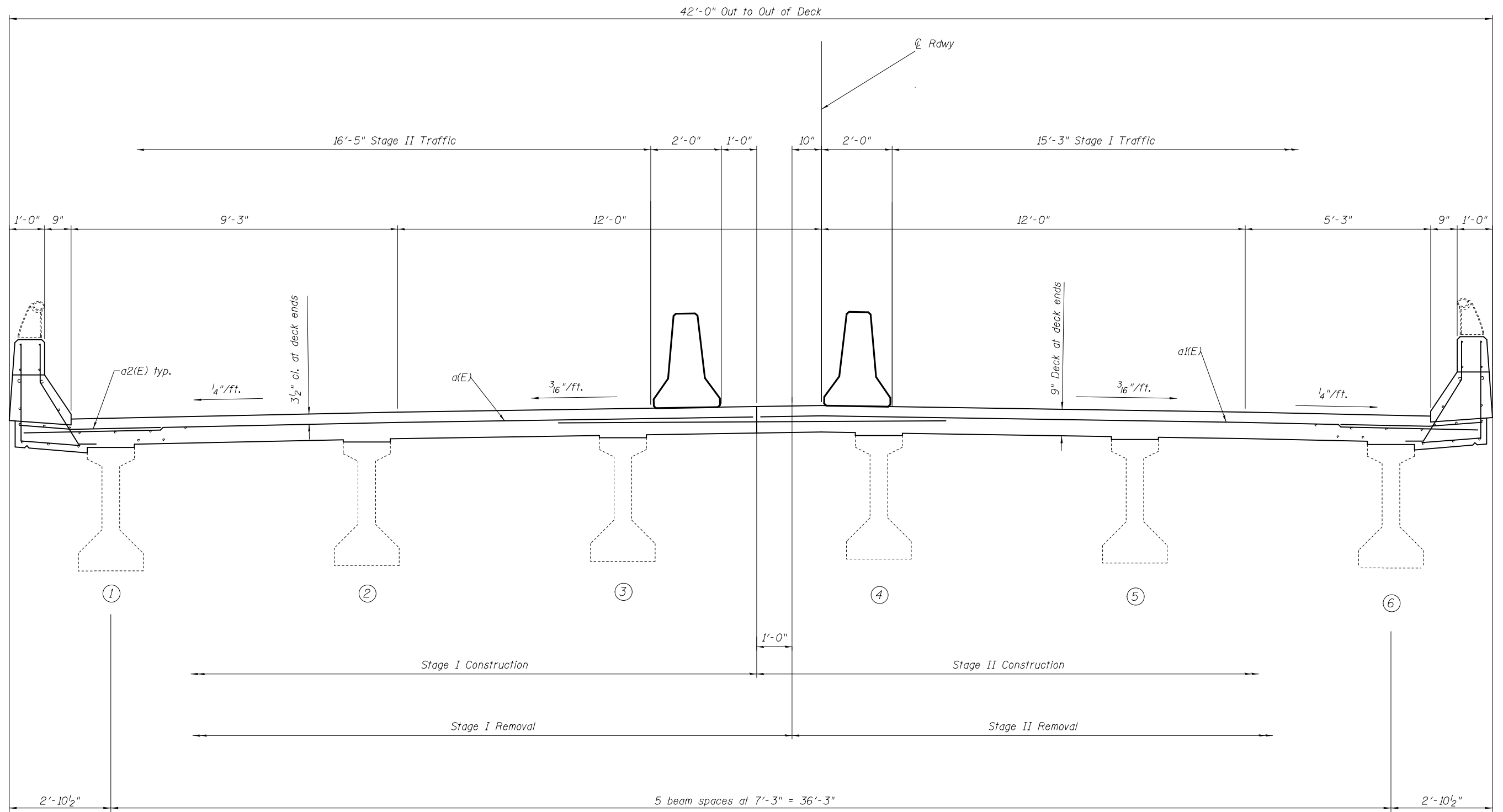


DECK CROSS SECTION

* S.E. = 0.030 ft/ft
 Full Super Elevation @ Sta. 3201+73.93
 Normal Crown @ Sta. 3203+73.93

Looking East
 @ Joint Locations

DESIGNED - A.Y.V.	EXAMINED _____	DATE - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK CROSS SECTION (SPANS 1-5) SN 014-0058	F.A.P. RTE. 327	SECTION 14-14B-I	COUNTY CLINTON	TOTAL SHEETS 27	SHEET NO. 7	
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	REVISOR _____			CONTRACT NO. 76G91					
DRAWN - A.Y.V.	PASSED _____	REVISOR _____			SHEET NO. 2 OF 22 SHEETS					
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR _____			ILLINOIS FED. AID PROJECT					



DECK CROSS SECTION

Note:
 S.E. = 0.030 ft/ft
 Full Super Elevation @ Sta. 3201+73.93
 Normal Crown @ Sta. 3203+73.93

Looking East
 @ Joint Locations

DESIGNED - A.Y.V.	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - A.Y.V.	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

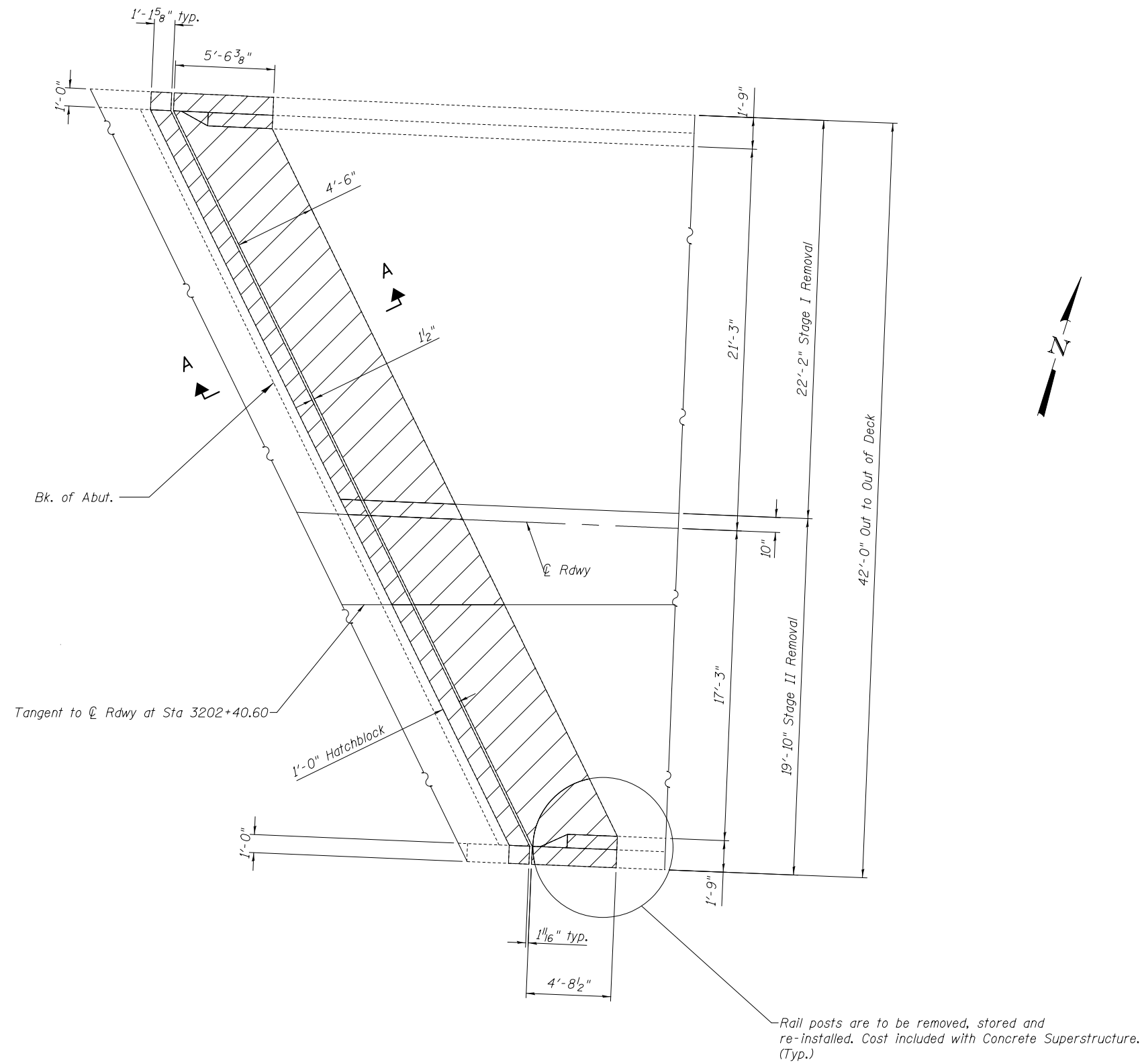
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DECK CROSS SECTION (SPANS 6-20)
 SN 014-0058**

SHEET NO. 3 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	8
CONTRACT NO. 76G91				

ILLINOIS FED. AID PROJECT



Note:
See sheet 12 of 22 for Section A-A.

CONCRETE REMOVAL

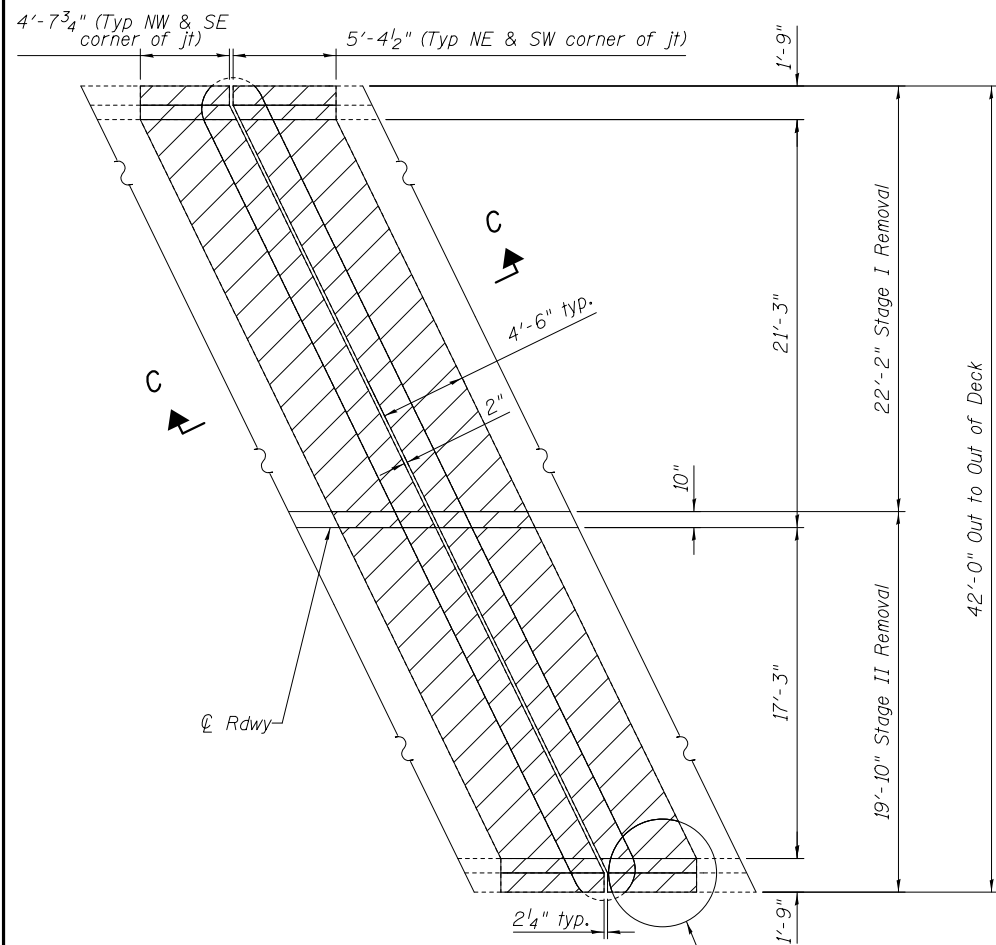
DESIGNED - A.Y.V.	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	REVISÉ _____
DRAWN - A.Y.V.	PASSED _____	REVISÉ _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**JOINT REMOVAL (W. ABUT.)
SN 014-0058**

SHEET NO. 4 OF 22 SHEETS

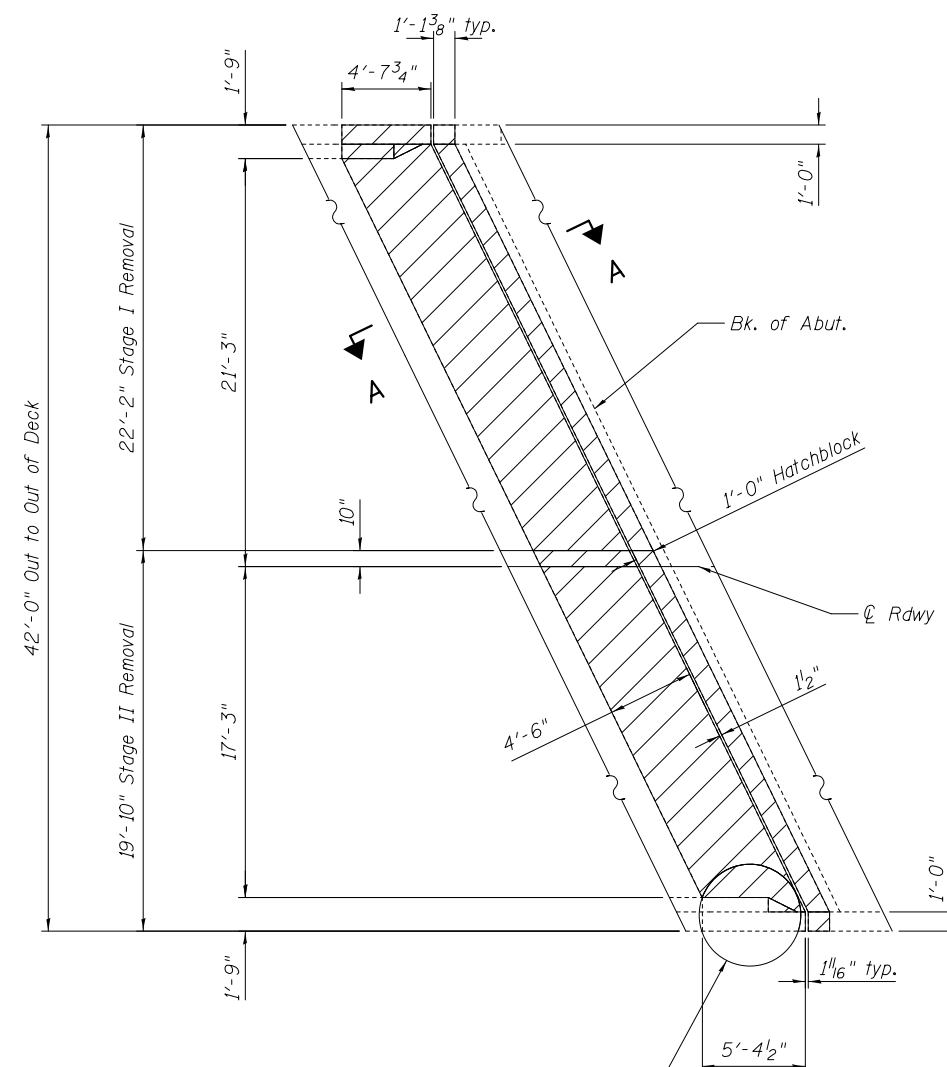
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	9
CONTRACT NO. 76G91				
ILLINOIS FED. AID PROJECT				



Rail posts east of joint are to be removed, stored and re-installed. Cost included with Concrete Superstructure. (Typ.)

CONCRETE REMOVAL

PIER #15



Rail posts are to be removed, stored and re-installed. Cost included with Concrete Superstructure. (Typ.)

CONCRETE REMOVAL

E. ABUT.

Note:

See sheet 12 of 22 for Section A-A & C-C.

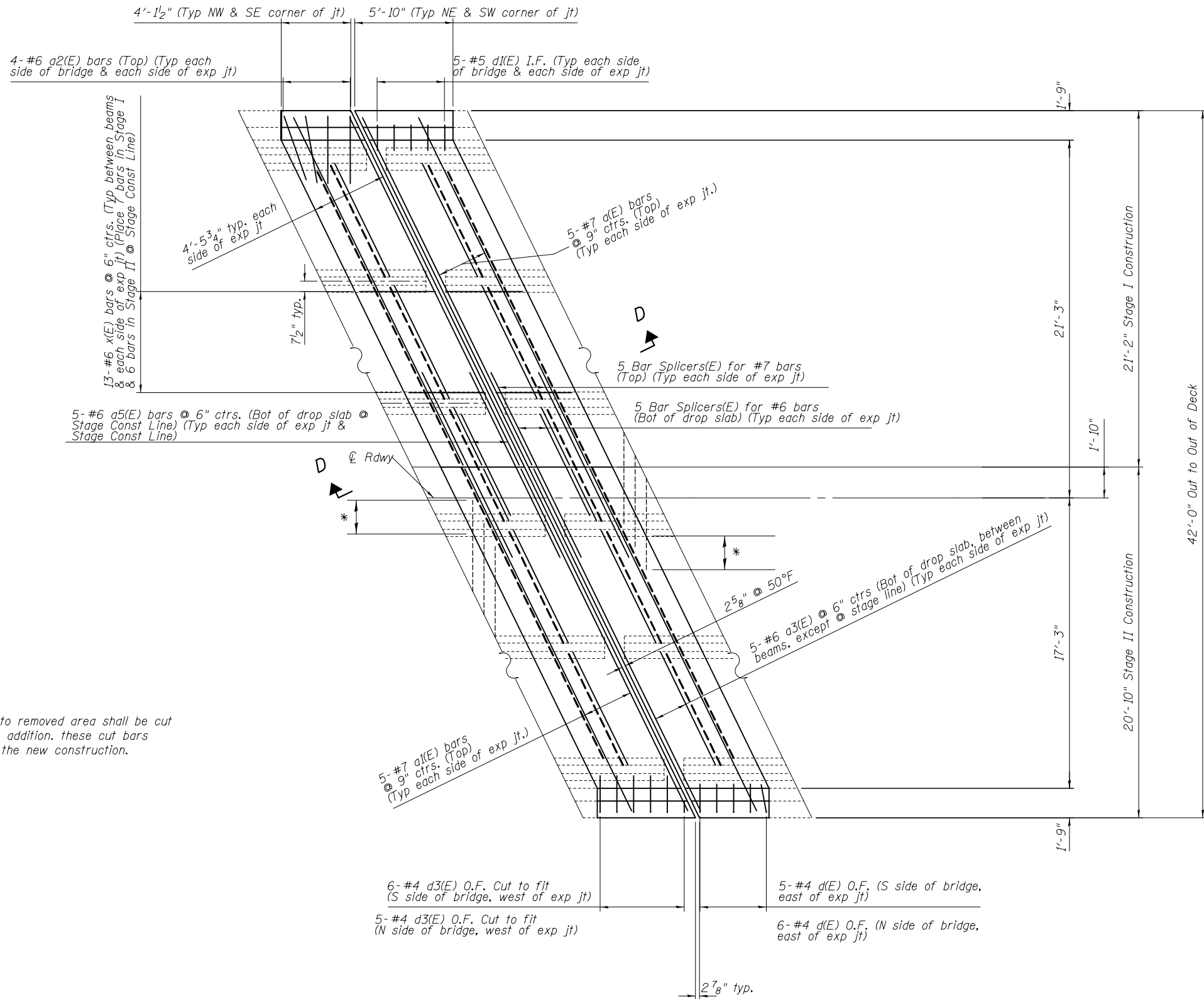
DESIGNED - A.Y.V.	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - A.Y.V.	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**JOINT REMOVAL (Pier 15 & E. ABUT.)
SN 014-0058**

SHEET NO. 6 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	11
CONTRACT NO. 76G91				
ILLINOIS FED. AID PROJECT				



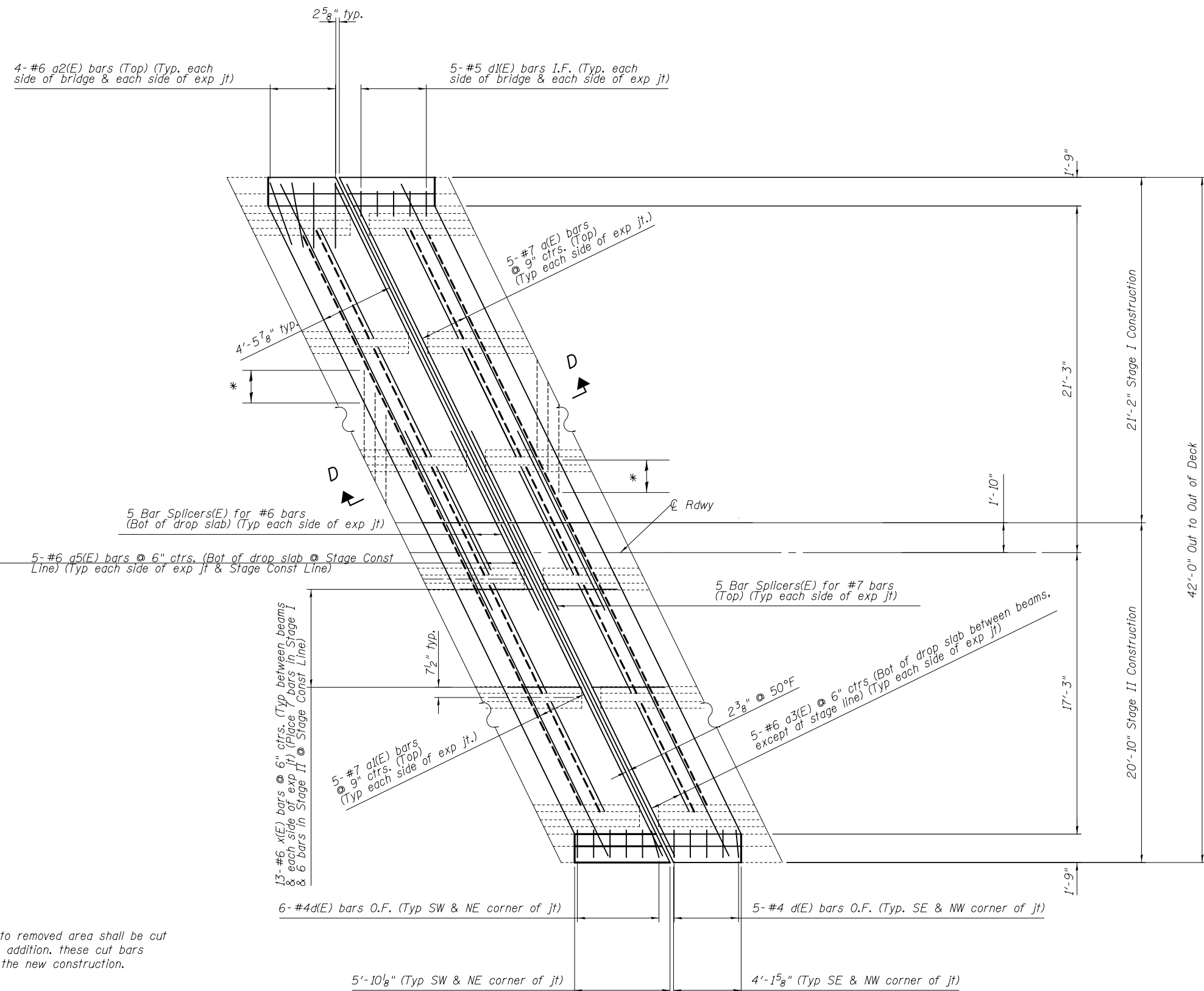
Note:

* 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.

See sheet 12 of 22 for Section D-D.

CONCRETE REPLACEMENT

DESIGNED - A.Y.V.	EXAMINED _____	DATE - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REPLACEMENT (PIER #5) SN 014-0058	F.A.P. RTE. 327	SECTION 14-14B-I	COUNTY CLINTON	TOTAL SHEETS 27	SHEET NO. 13	
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	REVISOR _____			CONTRACT NO. 76G91					
DRAWN - A.Y.V.	PASSED _____	REVISOR _____			SHEET NO. 8 OF 22 SHEETS					
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR _____			ILLINOIS FED. AID PROJECT					



Note:

* 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.

See sheet 12 of 22 for Section D-D.

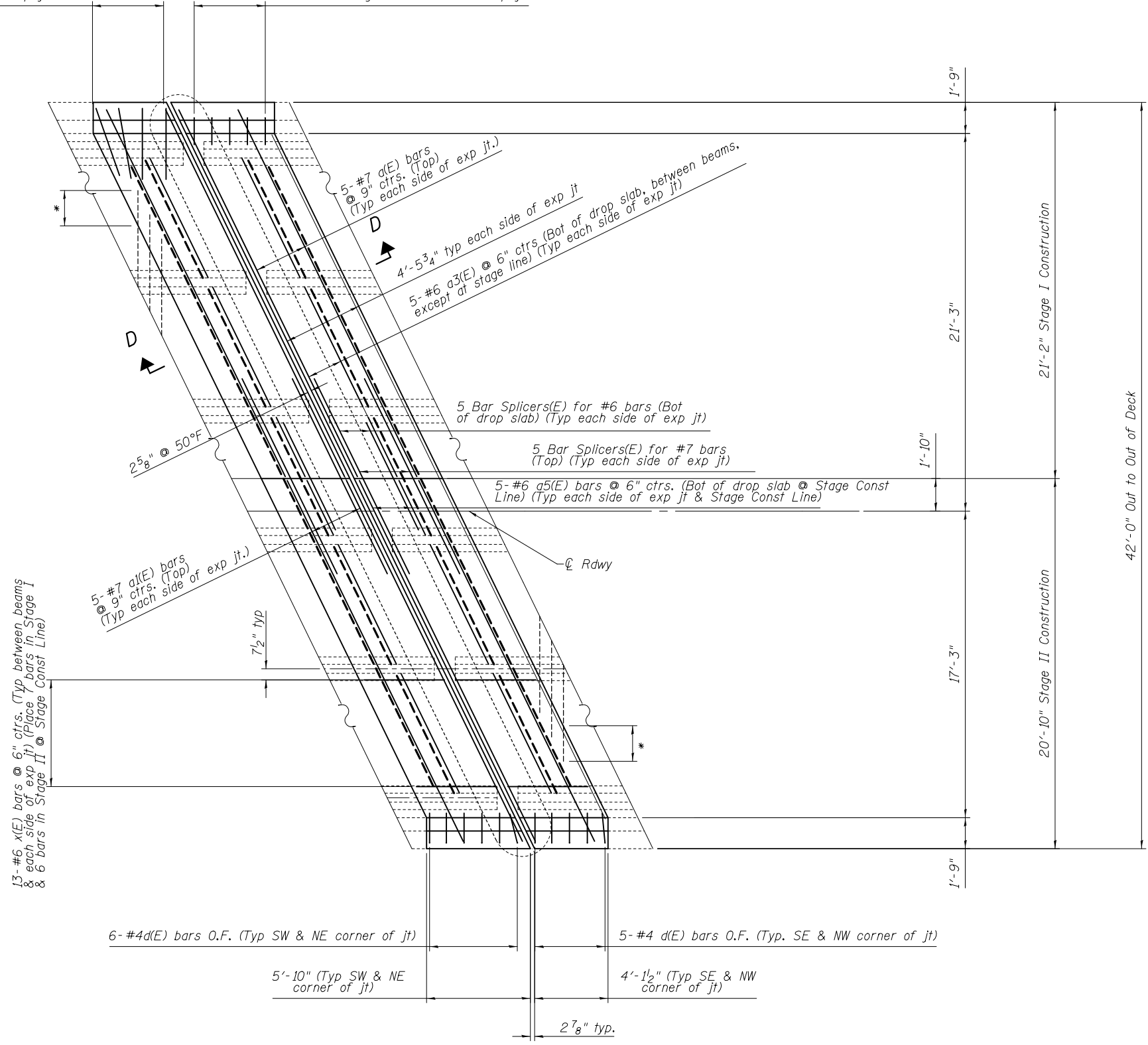
CONCRETE REPLACEMENT

DESIGNED - A.Y.V.	EXAMINED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REPLACEMENT (PIER #10) SN 014-0058	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED -	ENGINEER OF STRUCTURAL SERVICES				327	14-14B-I	CLINTON	27	14
DRAWN - A.Y.V.	PASSED	REVISED	SHEET NO. 9 OF 22 SHEETS		CONTRACT NO. 76G91				
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	ILLINOIS FED. AID PROJECT						



4- #6 a2(E) bars (Top) (Typ. each side of bridge & each side of exp jt)

5- #5 d1(E) bars I.F. (Typ. each side of bridge & each side of exp jt)



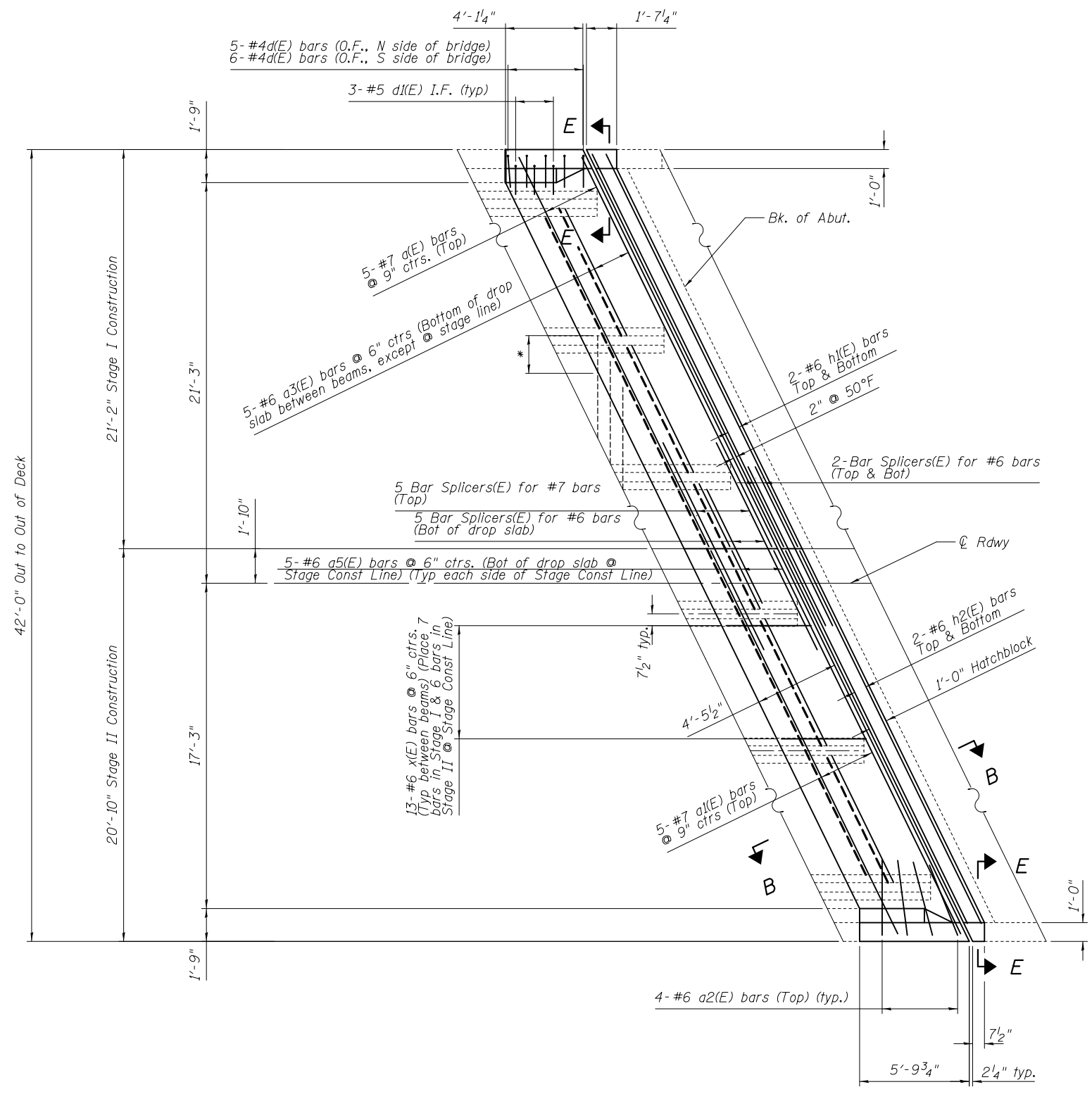
Note:

* 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.

See sheet 12 of 22 for Section D-D.

CONCRETE REPLACEMENT

DESIGNED - A.Y.V.	EXAMINED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REPLACEMENT (PIER 15) SN 014-0058	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED -	ENGINEER OF STRUCTURAL SERVICES				327	14-14B-I	CLINTON	27	15
DRAWN - A.Y.V.	PASSED	REVISOR	CONTRACT NO. 76G91						
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR	SHEET NO. 10 OF 22 SHEETS						
ILLINOIS FED. AID PROJECT									



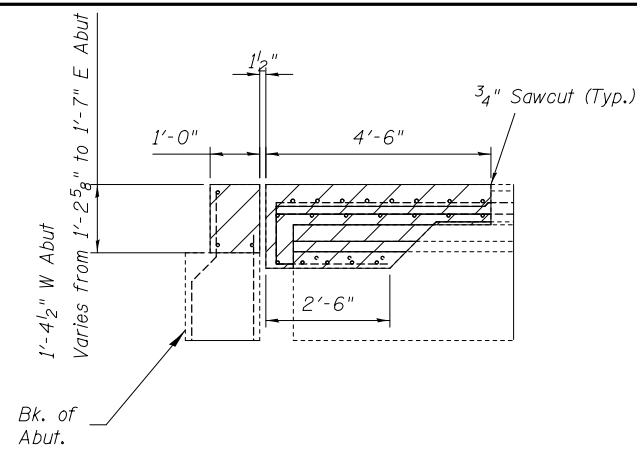
CONCRETE REPLACEMENT

Note:

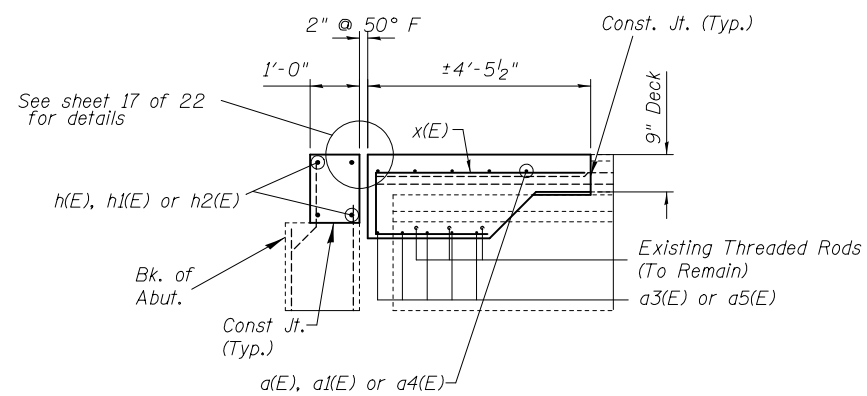
* Existing transverse bars extending from deck into removed area shall be cut allowing 2'-0" to extend into the removed area. In addition, these cut bars shall be cleaned, straighten, and incorporated into the new construction.

See sheet 12 of 22 for Section B-B & E-E.

DESIGNED - A.Y.V.	EXAMINED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REPLACEMENT (E. ABUT.) SN 014-0058	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	REVIS			327	14-14B-I	CLINTON	27	16
DRAWN - A.Y.V.	PASSED	REVIS	SHEET NO. 11 OF 22 SHEETS		CONTRACT NO. 76G91				
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVIS	ILLINOIS FED. AID PROJECT						



SECTION A-A

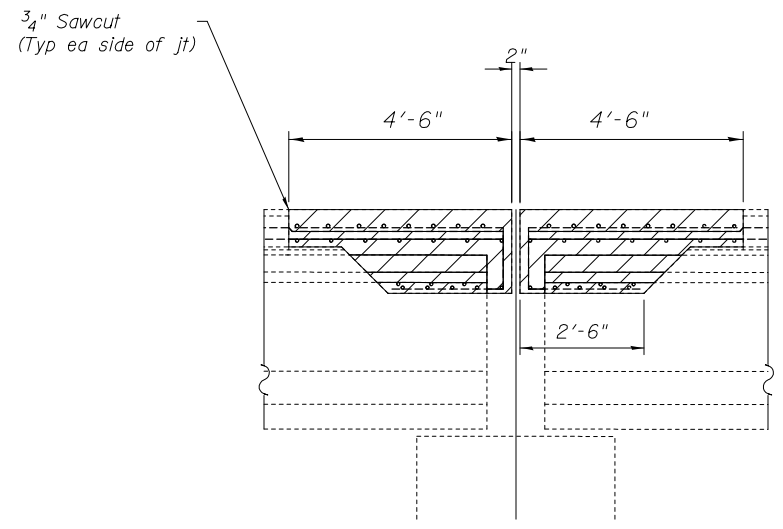


SECTION B-B

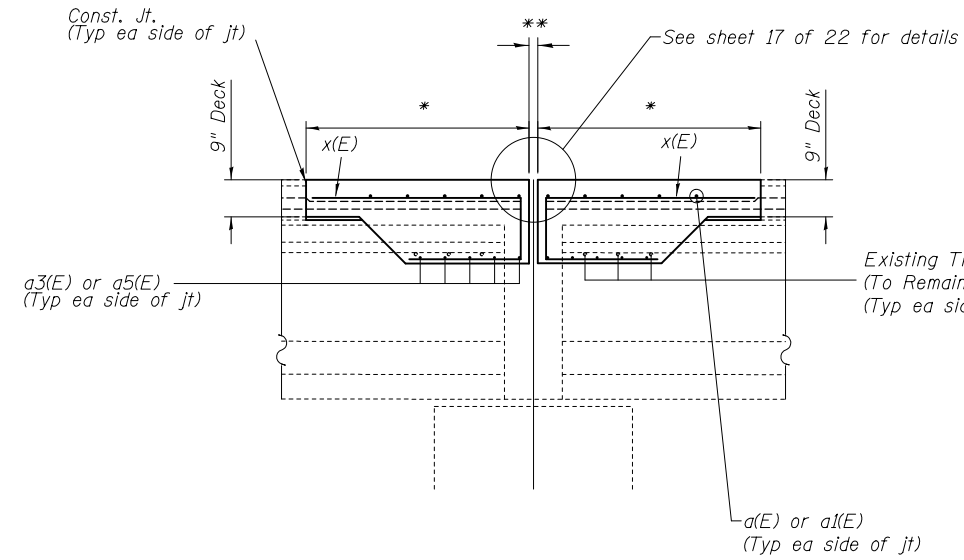
Bar x(E) to be placed parallel to ϕ of Beam

ABUTMENTS

All dimensions are at right angle to jt.



SECTION C-C



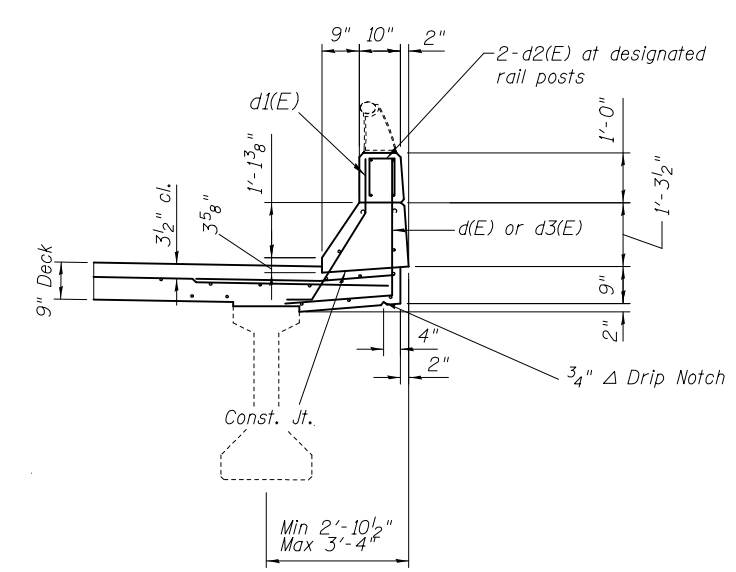
SECTION D-D

Bar x(E) to be placed parallel to ϕ of Beam

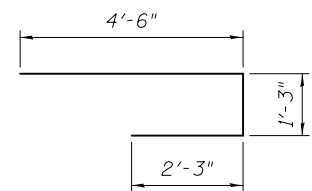
PIER 5, 10 & 15

All dimensions are at right angle to jt.

- * Pier 5 & 15 = $\pm 4'-5\frac{3}{4}"$
- ** Pier 5 & 15 = $2\frac{5}{8}" \text{ @ } 50^\circ F$
- Pier 10 = $\pm 4'-5\frac{7}{8}"$
- Pier 10 = $2\frac{3}{8}" \text{ @ } 50^\circ F$



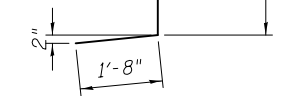
PARAPET SECTION



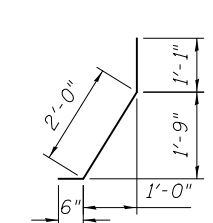
BAR x(E)



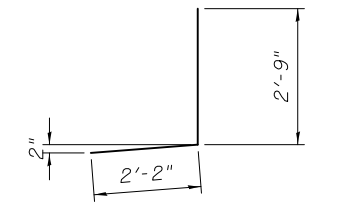
BAR d2(E)



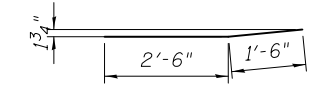
BAR d(E)



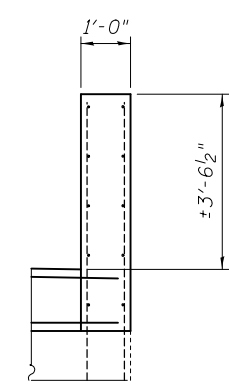
BAR d1(E)



BAR d3(E)



BAR a2(E)



SECTION E-E

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	40	#7	23'-0"	—
a1(E)	35	#7	22'-7"	—
a2(E)	64	#6	4'-0"	—
a3(E)	160	#6	7'-6"	—
a4(E)	5	#7	23'-6"	—
a5(E)	80	#6	3'-5"	—
d(E)	66	#4	4'-5"	└
d1(E)	73	#5	3'-7"	└
d2(E)	24	#4	2'-1"	└
d3(E)	22	#4	4'-11"	└
h(E)	4	#6	22'-11"	—
h1E	8	#6	23'-2"	—
h2(E)	4	#6	22'-0"	—
x(E)	520	#6	8'-0"	└
Concrete Removal			Cu. Yd.	87.9
Concrete Superstructure			Cu. Yd.	87.4
Reinforcement Bars, Epoxy Coated			Lbs.	13700

Reinforcement bars designated (E) shall be epoxy coated.

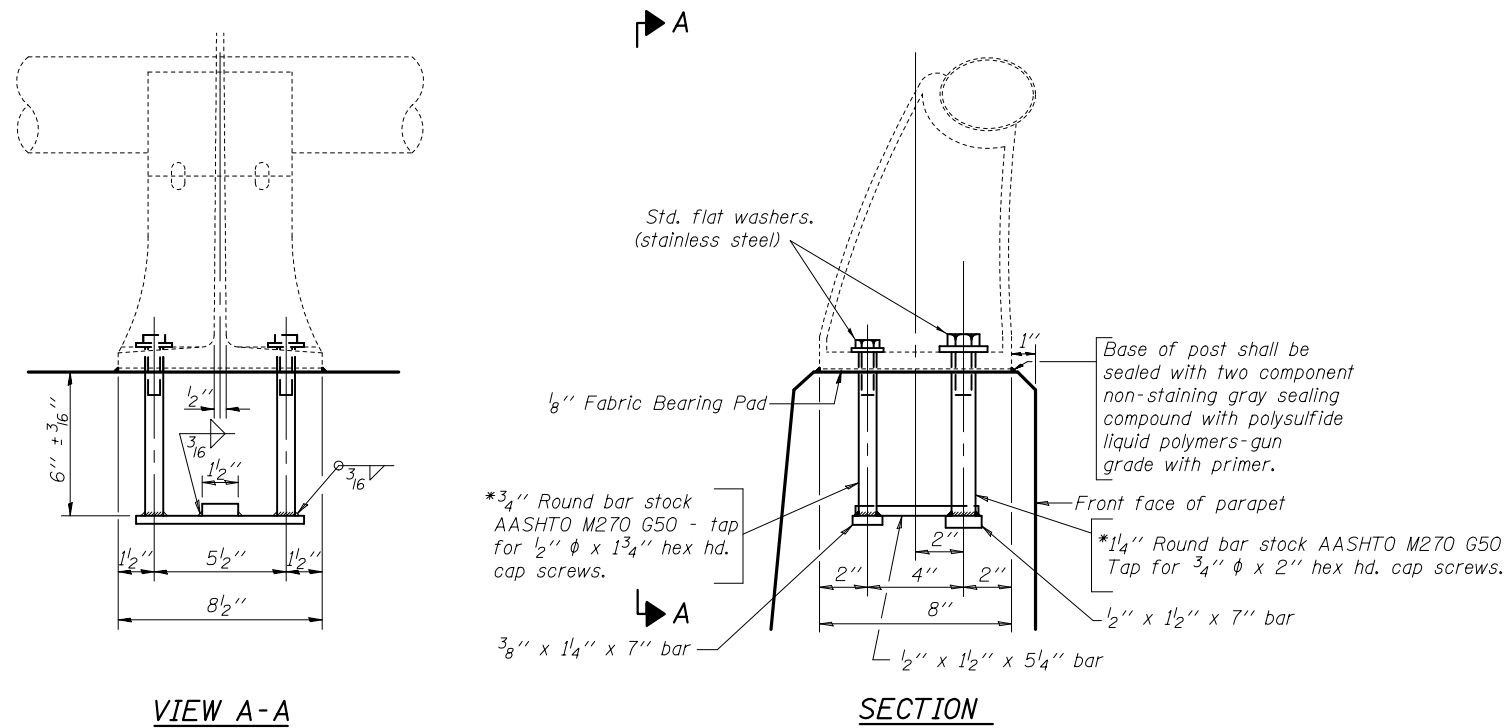
DESIGNED - A.Y.V.	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - A.Y.V.	PASSED	REVISOR
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**JOINT DETAILS
SN 014-0058**

SHEET NO. 12 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	17
CONTRACT NO. 76G91				
ILLINOIS FED. AID PROJECT				



RAIL POST DETAILS

* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws 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.

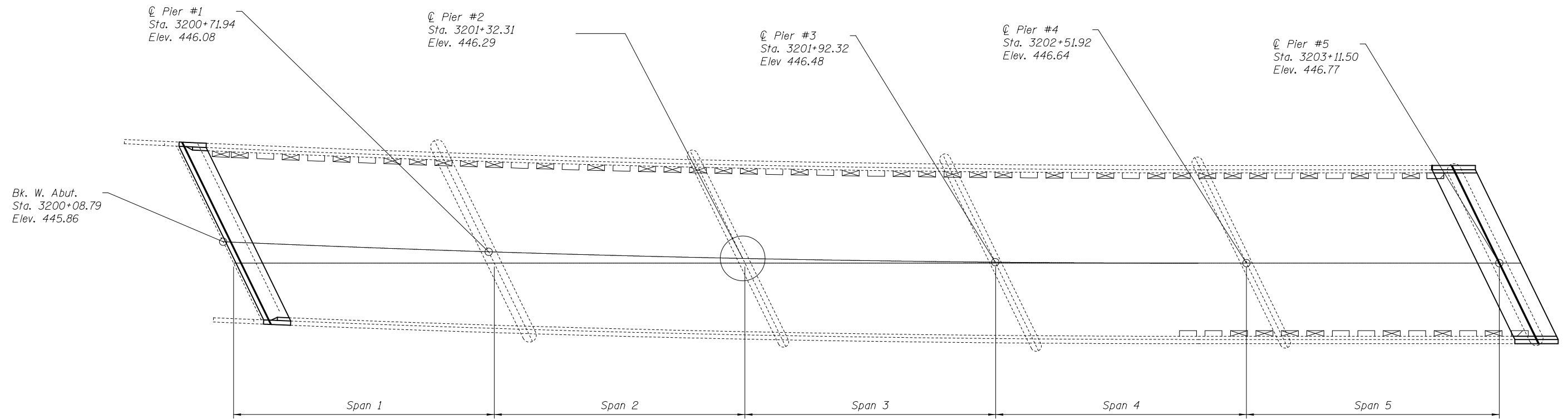
DESIGNED - A.Y.V.	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - A.Y.V.	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

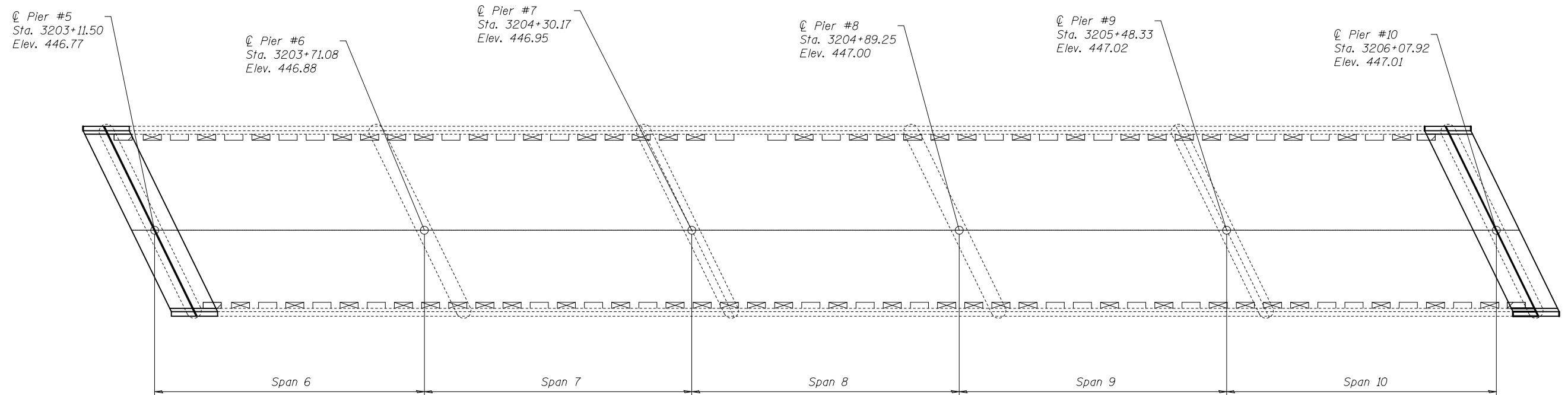
**RAIL ANCHORAGE DETAILS
SN 014-0058**

SHEET NO. 13 OF 22 SHEETS

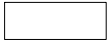

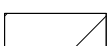
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	18
			CONTRACT NO. 76G91	
ILLINOIS FED. AID PROJECT				



SPANS 1-5



SPANS 6-10

- Floor Drain Extension  (54 Req'd)
- Plug Existing Drains  (100 Req'd)
- Existing Floor Drains to be removed (Cost included with Concrete Removal)  (6 Req'd)

DESIGNED - A.Y.V.	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - A.Y.V.	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

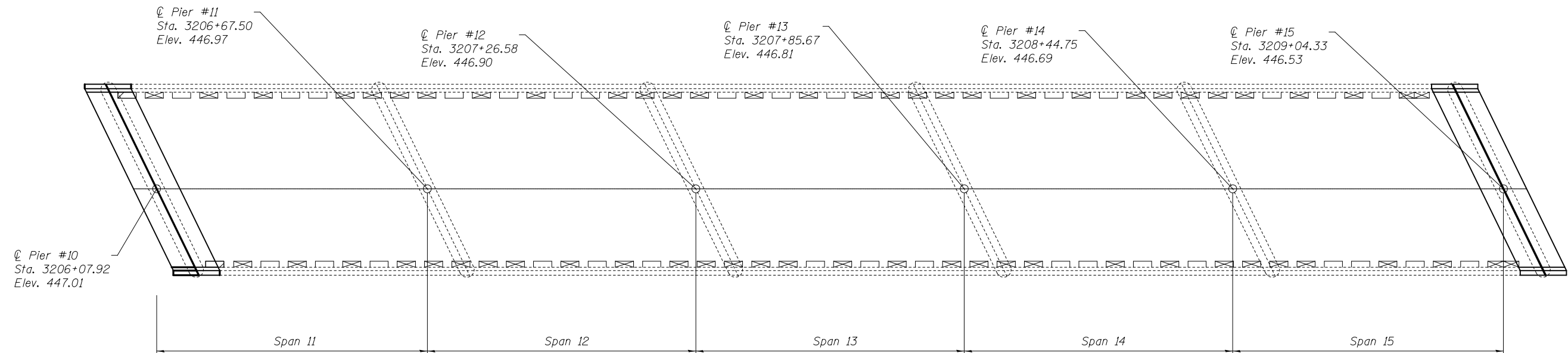
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAIN EXTENSIONS & PLUGGING LOCATIONS (SPANS 1-10)
SN 014-0058**

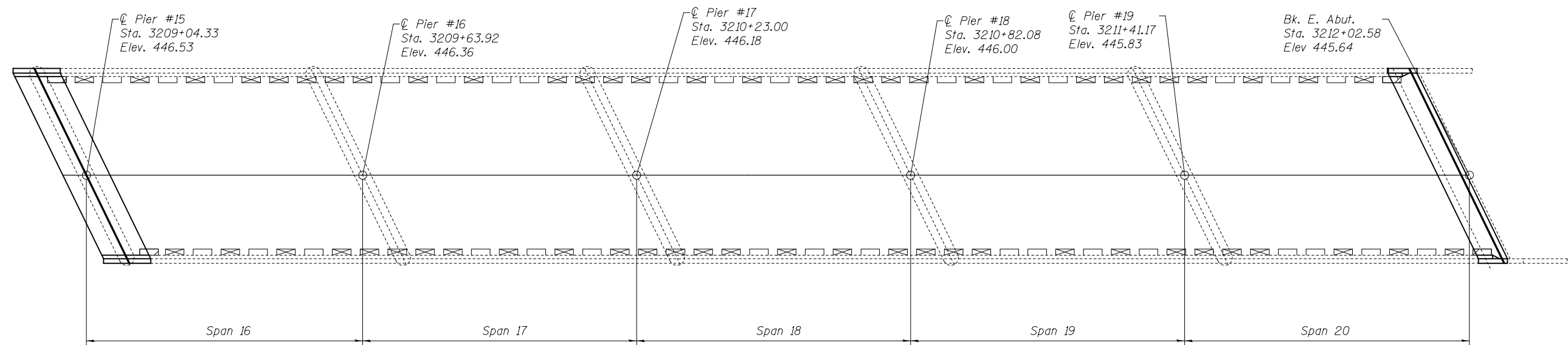
SHEET NO. 14 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	19
CONTRACT NO. 76G91				

ILLINOIS FED. AID PROJECT



SPANS 11-15



SPANS 16-20

- Floor Drain Extension (67 Req'd)
- Plug Existing Drains (123 Req'd)
- Existing Floor Drains to be removed
(Cost included with Concrete Removal) (6 Req'd)

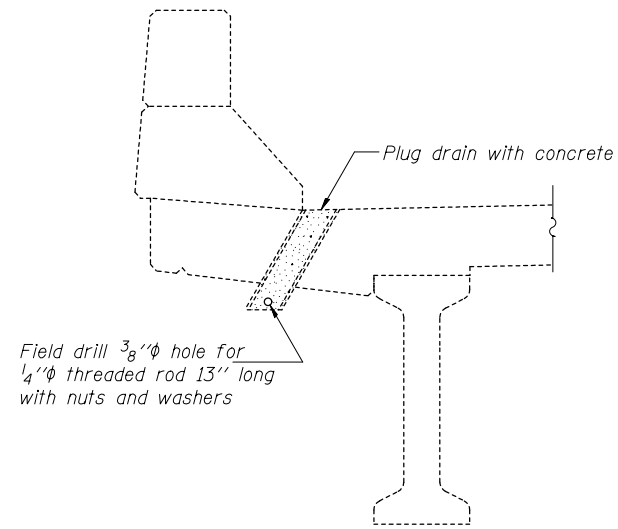
DESIGNED - A.Y.V.	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - A.Y.V.	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAIN EXTENSIONS & PLUGGING LOCATIONS (SPANS 11-20)
SN 014-0058**

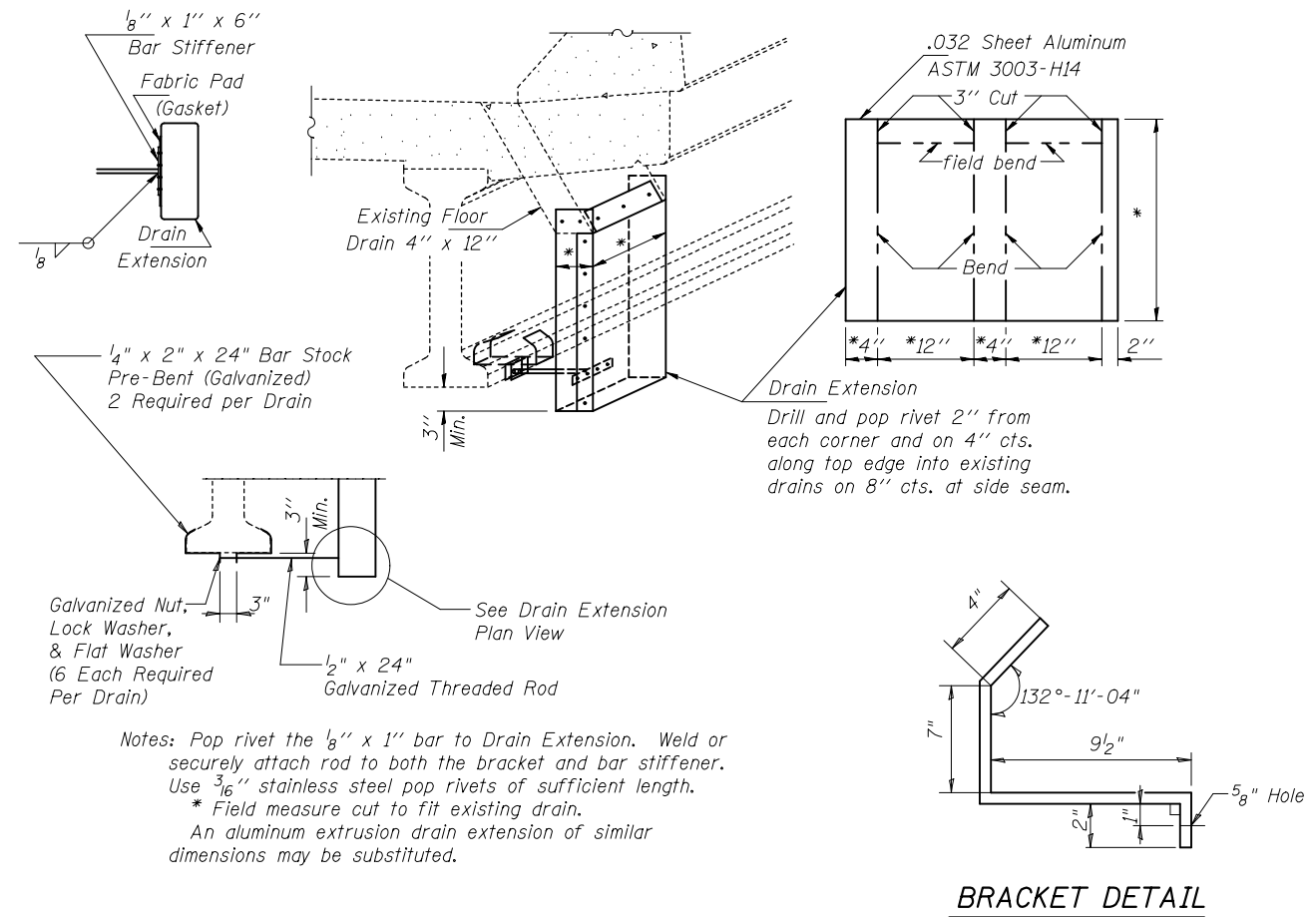
SHEET NO. 15 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	20
CONTRACT NO. 76G91				
ILLINOIS FED. AID PROJECT				



PLUG DRAIN DETAIL

See sheet 14 & 15 of 22 for locations



FLOOR DRAIN EXTENSION DETAIL

See sheet 14 & 15 of 22 for locations

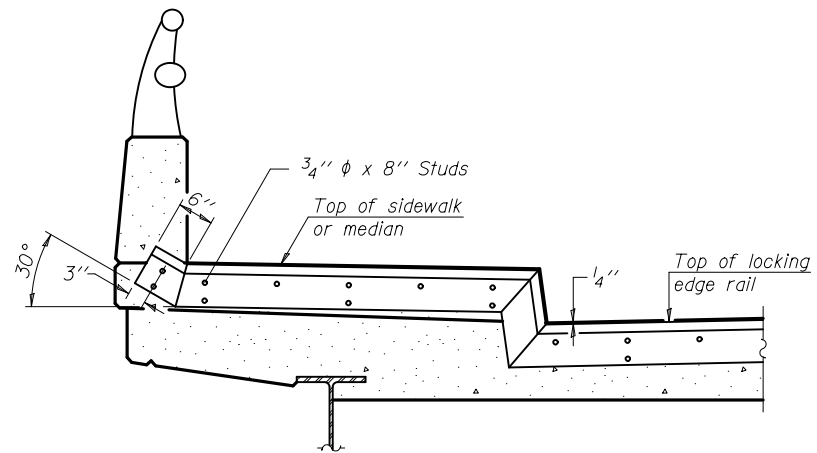
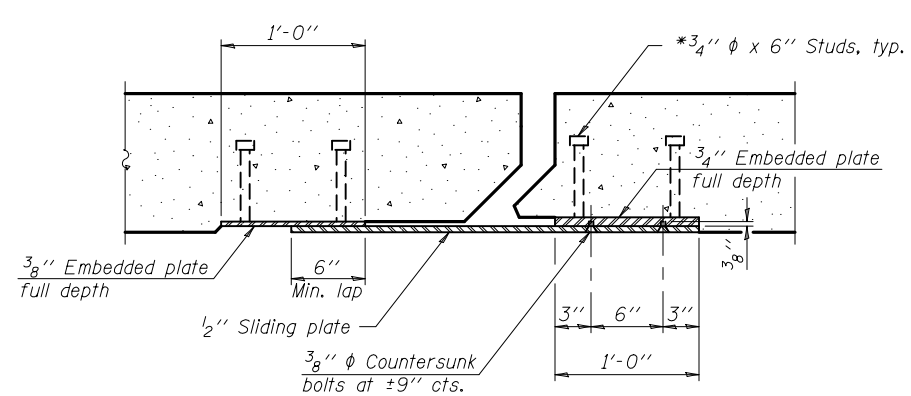
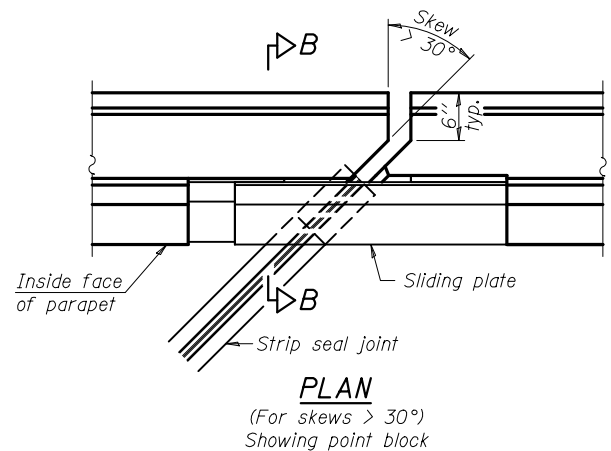
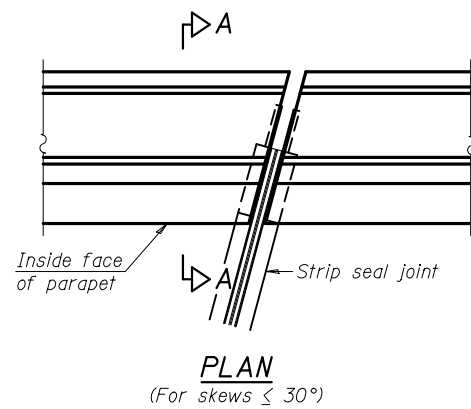
DESIGNED - A.Y.V.	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - A.Y.V.	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAIN DETAILS
SN 014-0058**

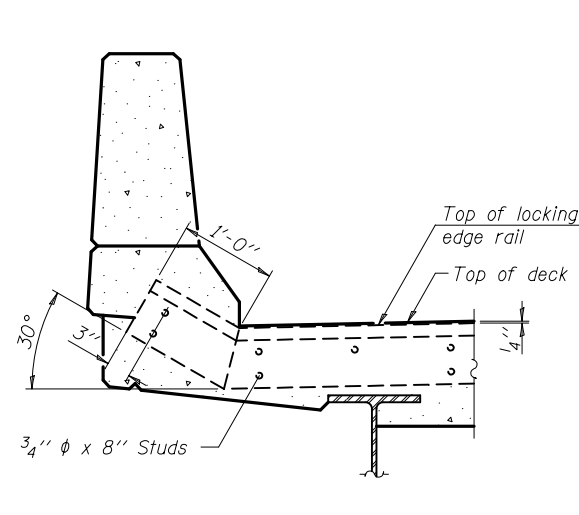
SHEET NO. 16 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	21
CONTRACT NO. 76G91				
ILLINOIS FED. AID PROJECT				

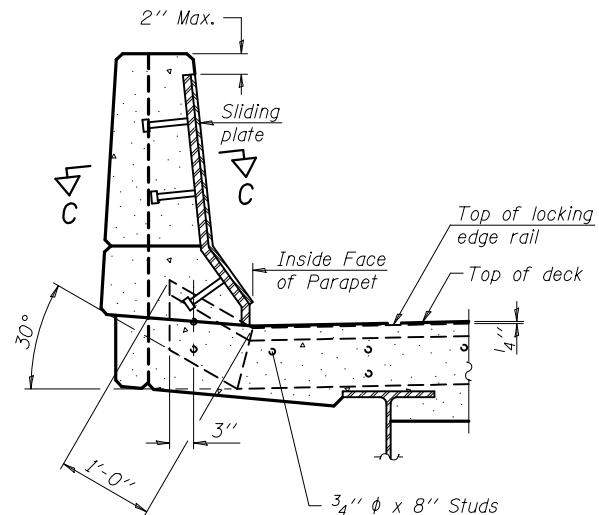


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

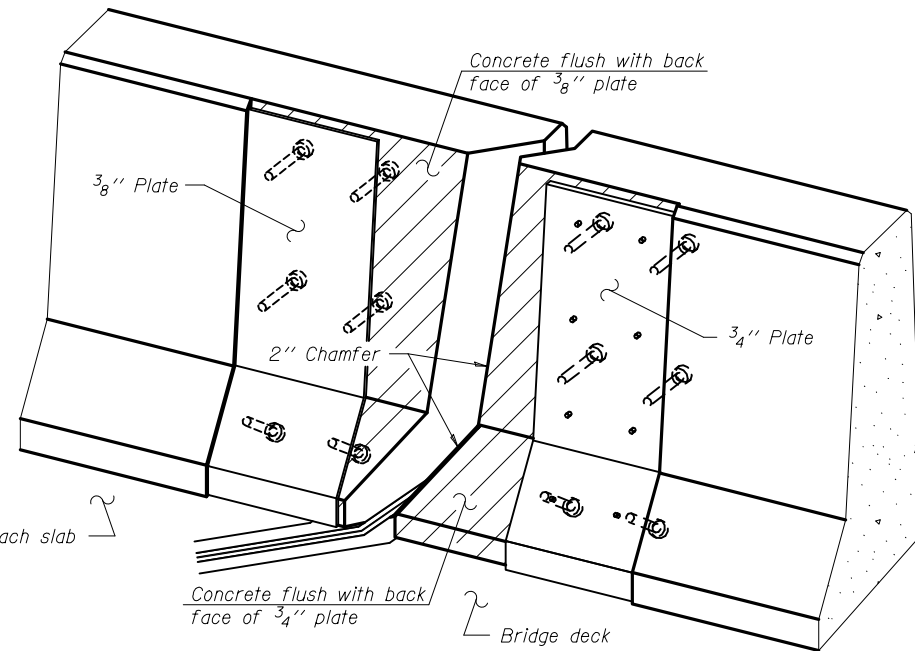
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



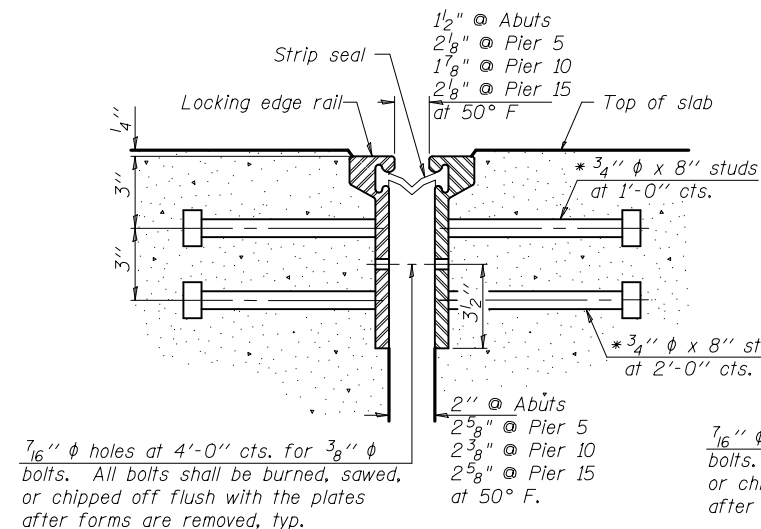
SECTION A-A



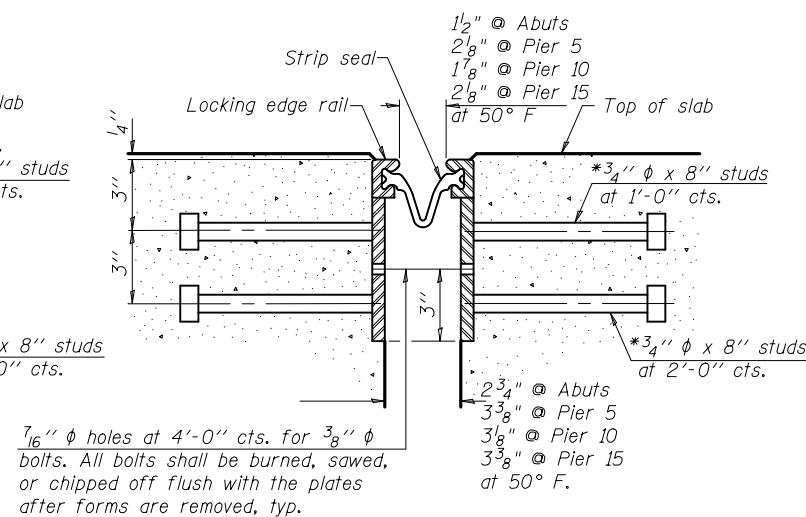
SECTION B-B



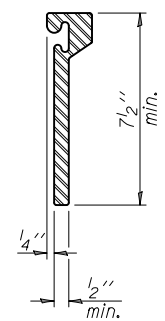
TRIMETRIC VIEW (Showing back plates only)



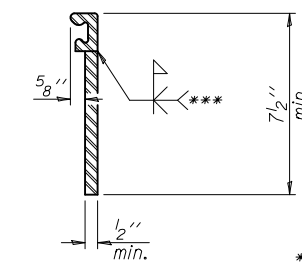
SECTION THRU ROLLED RAIL JOINT



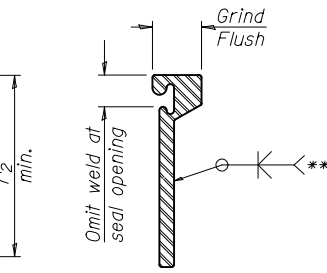
SECTION THRU WELDED RAIL JOINT



ROLLED EXTRUDED RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.
Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	228

EJ-SSJ

1-27-12

DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

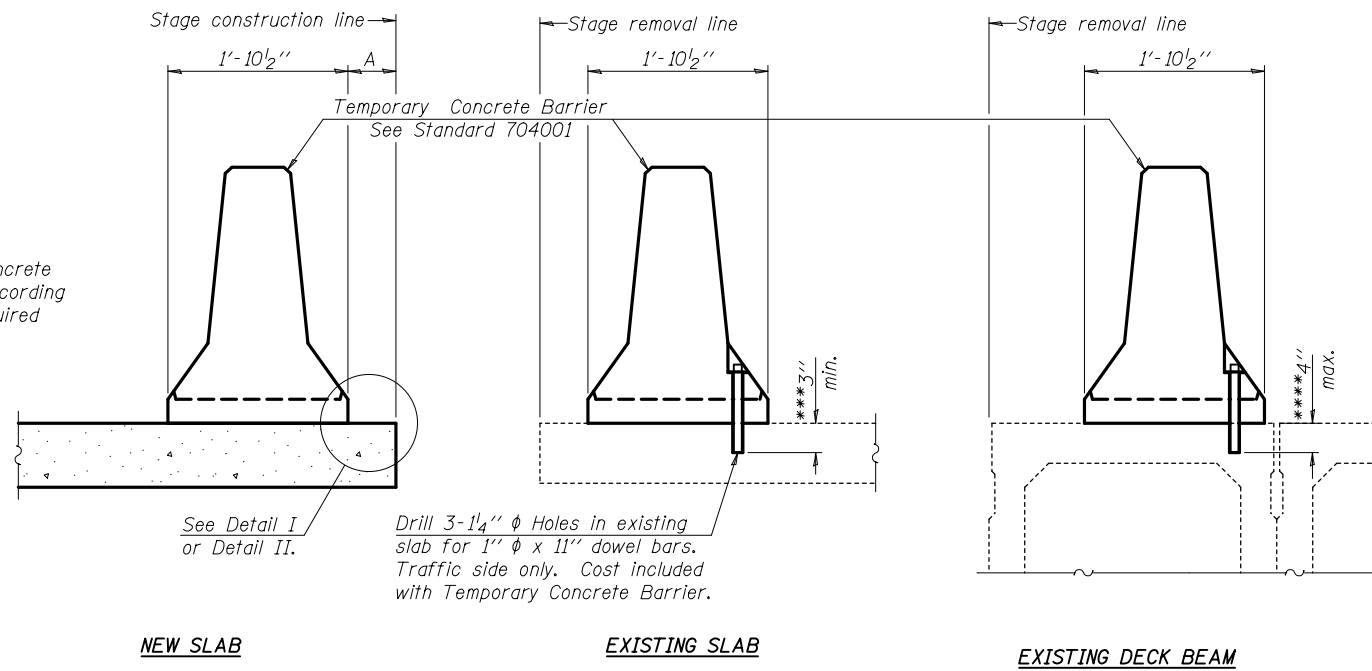
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 014-0058**

SHEET NO. 17 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	22
CONTRACT NO. 76G91				
ILLINOIS FED. AID PROJECT				

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



SECTIONS THRU SLAB OR DECK BEAM

NOTES

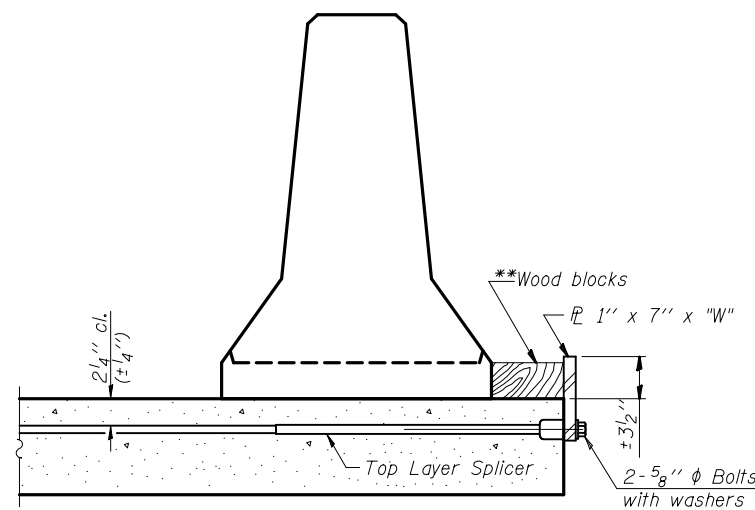
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel PL to the concrete slab or concrete wearing surface with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

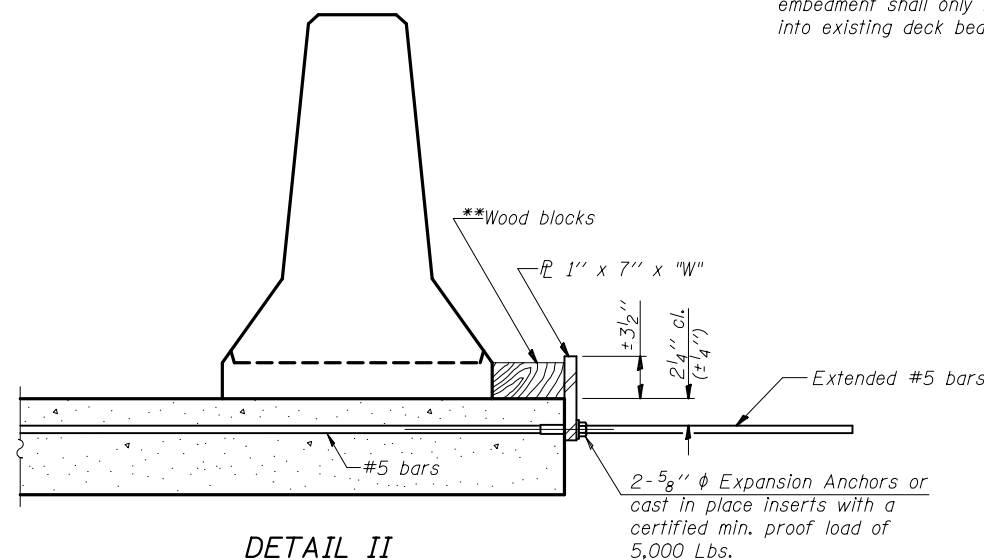
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

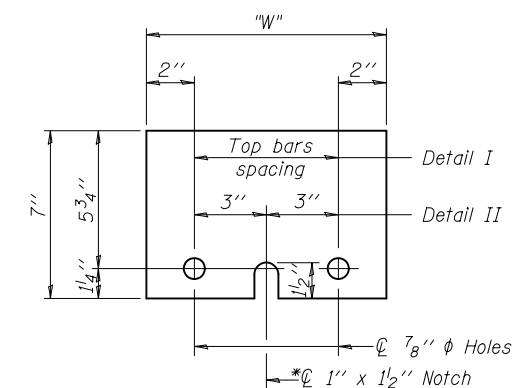
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1" x 7" x "W"

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

R-27

7-1-10

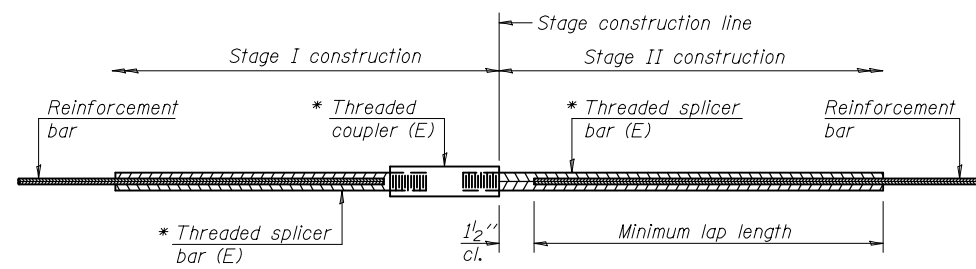
DESIGNED - A.Y.V.	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - A.Y.V.	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 014-0058**

SHEET NO. 18 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	23
			CONTRACT NO. 76G91	
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

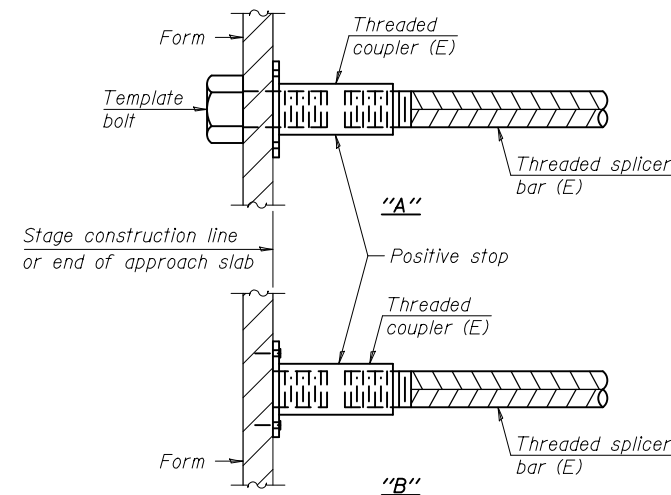
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

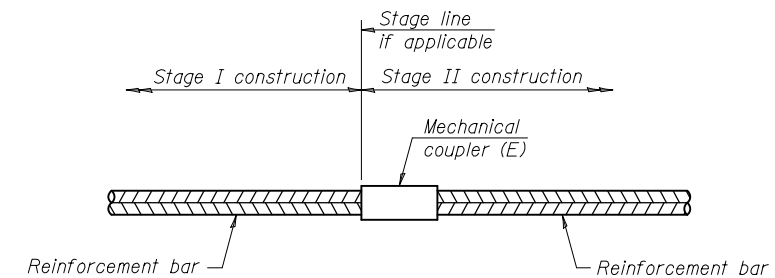
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Abuts (Hatchblock)	#6	8	6
Abuts (End of Deck, except bot of drop slab)	#7	10	6
Abuts (Bot of drop slab)	#6	10	3
Piers (Except bot of drop slab)	#7	30	6
Piers (Bot of drop slab)	#6	30	3



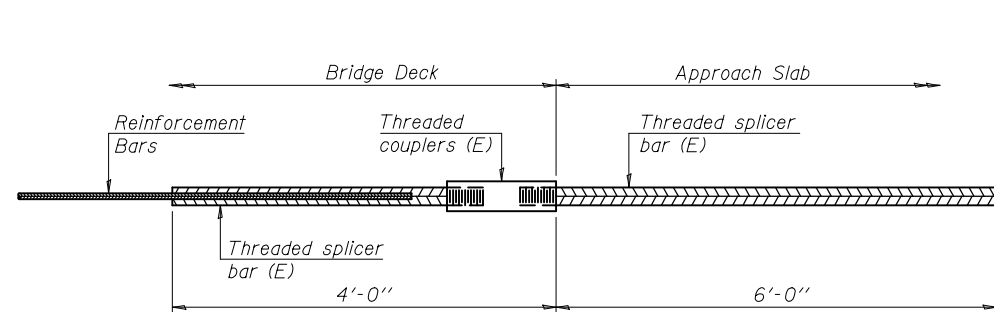
INSTALLATION AND SETTING METHODS

"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.



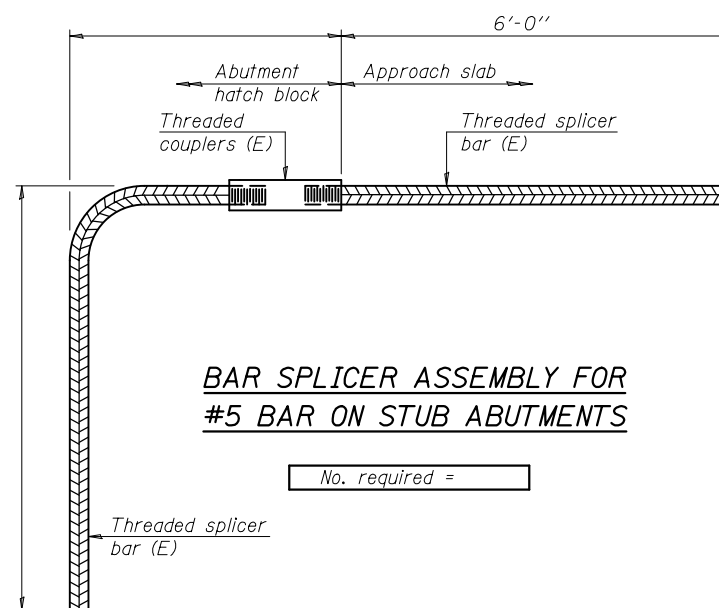
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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.

BSD-1

1-27-12

DESIGNED - A.Y.V.	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - A.Y.V.	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 014-0058

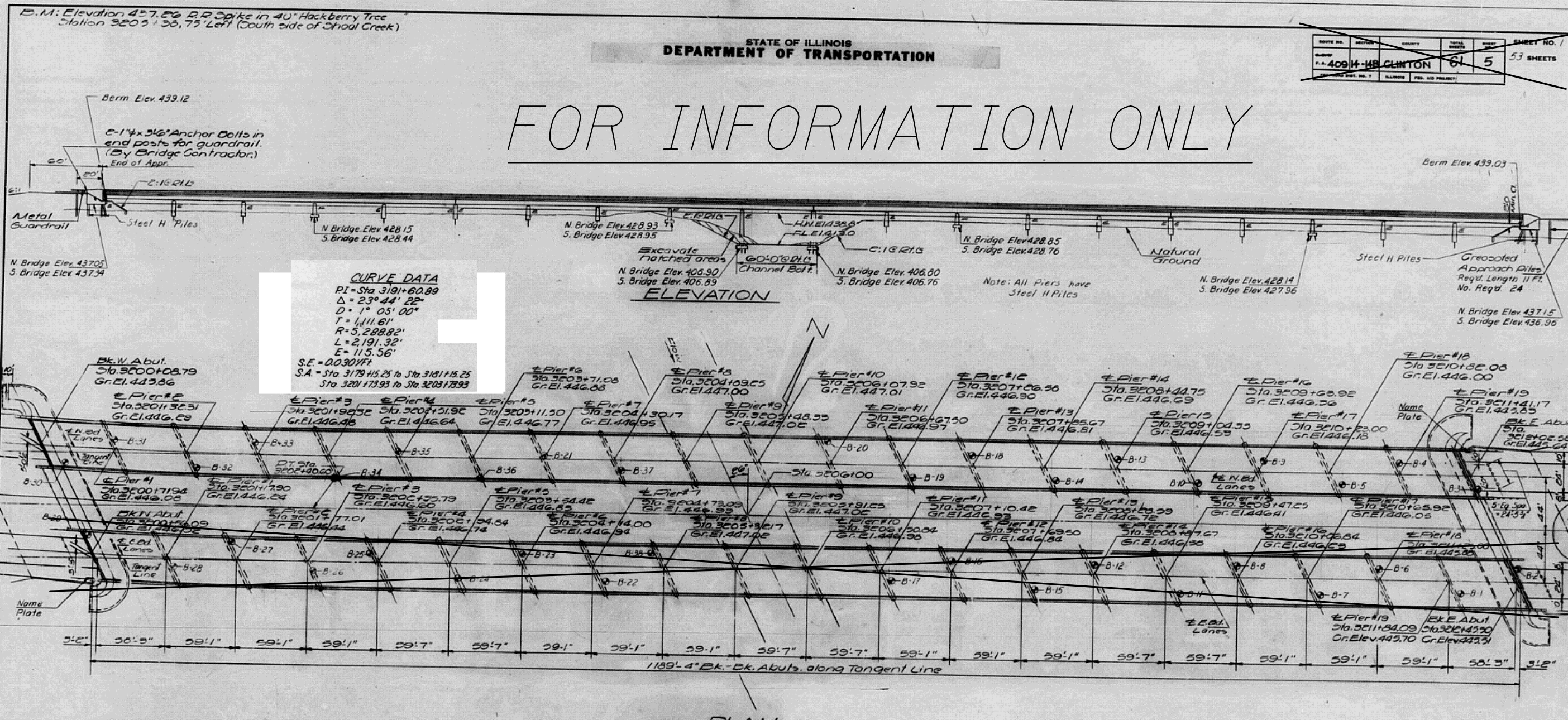
SHEET NO. 19 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	24
CONTRACT NO. 76G91				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
409-14-148	CLINTON	6	5	53 SHEETS

FOR INFORMATION ONLY



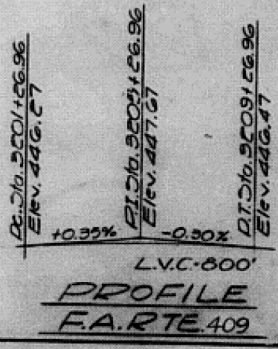
CURVE DATA
 PI = Sta 3191+60.89
 $\Delta = 23^\circ 44' 22''$
 $D = 1^\circ 05' 00''$
 $T = 1111.61'$
 $R = 5,288.82'$
 $L = 2,191.32'$
 $E = 115.56'$
 $S.E. = 0.0301\%$
 $S.A. = \text{Sta } 3179+15.25 \text{ to Sta } 3181+15.25$
 $\text{Sta } 3201+73.93 \text{ to Sta } 3203+73.93$

PLAN

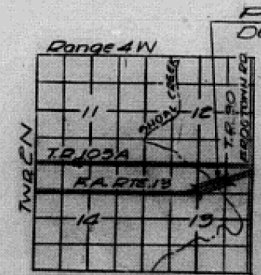
WATERWAY INFORMATION
 Drainage Area — 776 Sq.Miles
 Character — Level, Wooded, Cultivated
 Required Opening — 50 Yr Flood — 6940 Cfd.
 Present Opening — None
 Proposed Opening — 6940 Cfd.
 $Q = 39,900 \text{ c.f.s.}$
 Created Head = 0.62 Ft.

DESIGNED: Suresh T. Desai
 CHECKED: Jerry Boston
 DRAWN: R.P.S. J05
 CHECKED: GB

EXAMINED: [Signature] 12/10/13
 PASSED: [Signature]
 APPROVED: Richard H. Hollerman



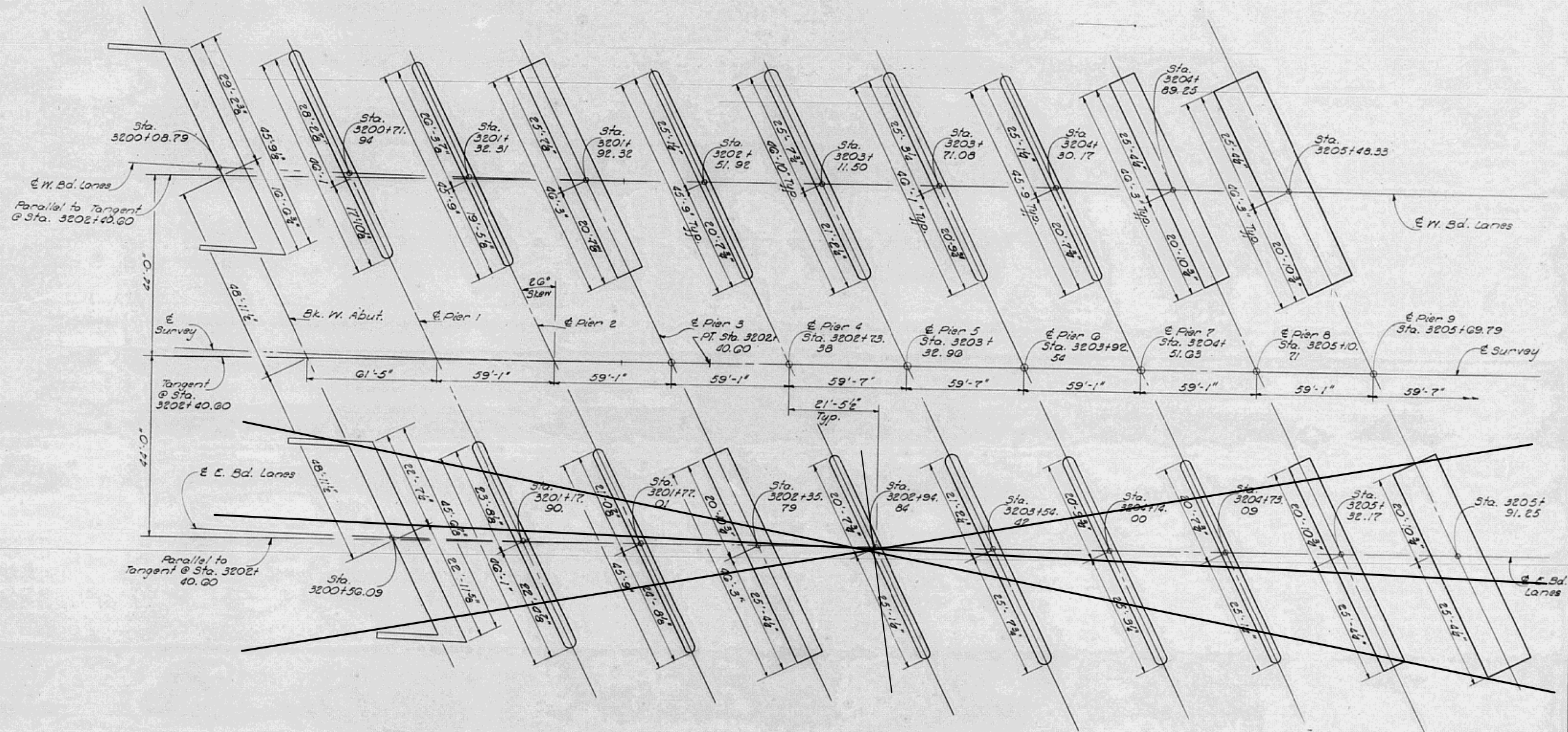
DESIGN STRESSES
FIELD STRESSES
 $f_c = 1500 \text{ psi} - \text{Deck Slab}$
 $f_c = 1400 \text{ psi} - \text{Curb, Parapet, Sub.}$
 $f_s = 60,000 \text{ psi} - \text{Reinf.}$
 $f_s = 60,000 \text{ psi} - \text{Struct.}$
 $f_t = 75 \text{ psi} - \text{Flg.}$
 $n = 10$
PRECAST PRESTRESSED UNITS
 $f_c = 5000 \text{ psi}$
 $f_t = 4000 \text{ psi}$
 $f_s = 248,000 \text{ psi} - \text{Strands}$
 $f_s = 173,600 \text{ psi} - \text{Strands}$
 Allow 25% 'a' for future W.S.
LOADING H-20-44



GENERAL PLAN & ELEVATION
 PROJECT EBF 409-1(13)
 OVER SHOAL CREEK
 F.A. ROUTE 409
 SECTION 14-148
 CLINTON COUNTY
 STATION 3206+00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 409 14-14B	CLINTON	61	7	53 SHEETS
DATE	DESIGNED BY	DESIGNED	PER. OR PROJECT	



Note:
All dimensions shown are at
bottom of bent or footing.

FOR INFORMATION ONLY

DESIGNED	Suresh T Desai
CHECKED	Greg Boster
DRAWN	J. SCHNELLER
CHECKED	G.P.

EXAMINED
PASSED
APPROVED

[Signatures]

1973

FOOTING PLAN
F.A. RT. 409 SEC. 14-14B
CLINTON COUNTY
STA. 3200+00

DESIGNED - A.Y.V.	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - A.Y.V.	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

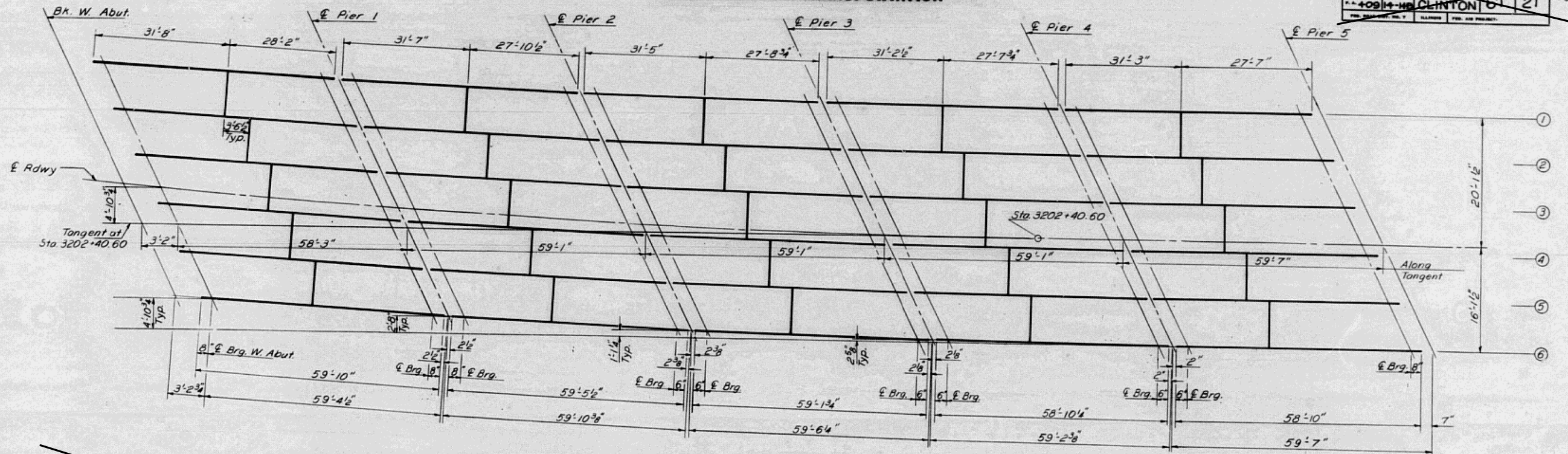
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY - EXISTING FOOTING PLAN
STRUCTURE NO. 014-0058

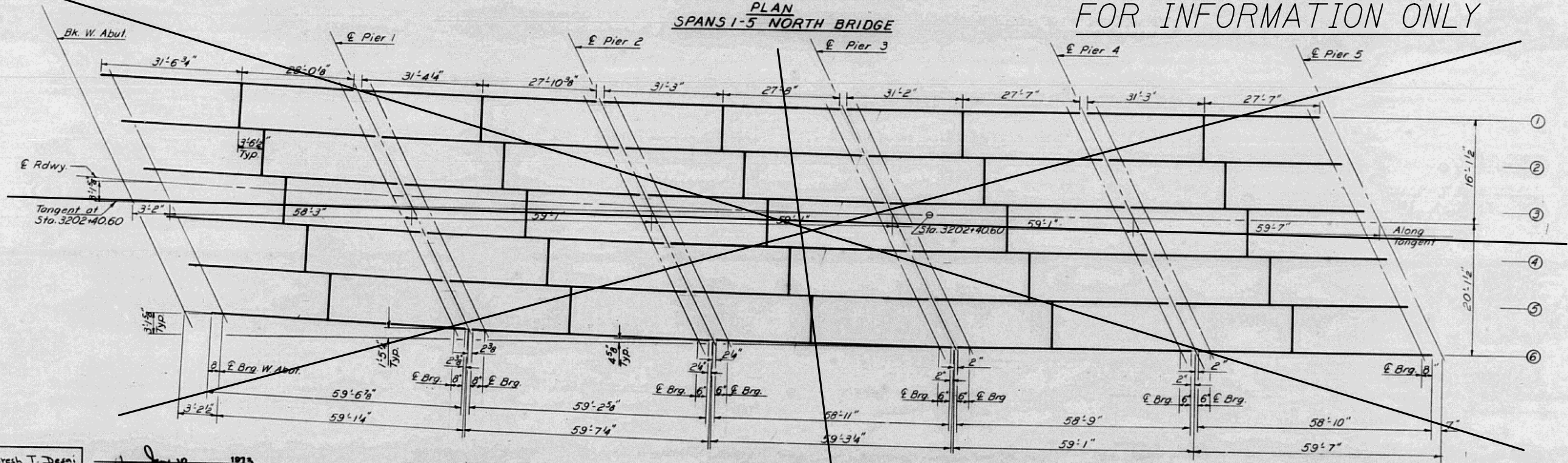
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14B-I	CLINTON	27	26
CONTRACT NO. 76G91				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
409	14-14B	CLINTON	61	21
53 SHEETS				



FOR INFORMATION ONLY



DESIGNED Suresh T. Desai
 CHECKED Gary Baska
 DRAWN R.P. Summer
 CHECKED G.B.

EXAMINED [Signature]
 PASSED [Signature]
 APPROVED [Signature]

BEAM SPACES

Location	Span-1	Span-2	Span-3	Span-4	Span-5
N. Structure	7'-1 3/8"	7'-1 1/8"	7'-2 3/8"	7'-2 1/8"	7'-3"
S. Structure	7'-1 3/8"	7'-2 1/4"	7'-2 3/4"	7'-3"	7'-3"

Notes:
 All Longitudinal dimensions are along
 & Beams except otherwise indicated.
 For Sec. at Piers & Abut. See Sheet #18119

**FRAMING PLAN
 NORTH & SOUTH BRIDGES
 SPANS 1-5
 FA. RT.409 SEC. 14-14B
 CLINTON COUNTY
 STATION 3206+00**