

64H76

9-21-12

#24

Various

#24

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

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

(VARIOUS ROUTES)

FAI ROUTE 39 AND FAP ROUTE 301 (US 20) (VARIOUS LOCATIONS)

SECTION D2 SAFETY 2012-1

PROJECT HSIP: ACHSIP-0005(906)

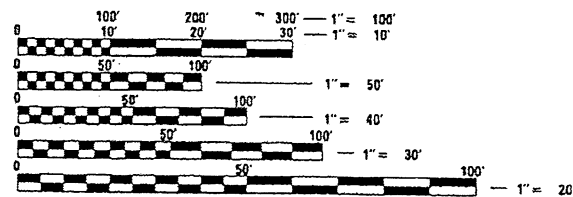
TYPE OF IMPROVEMENT

(LEE, OGLE, STEPHENSON AND WINNEBAGO COUNTIES) VARIOUS COUNTIES

C-92-125-12

100%
11-27-2013

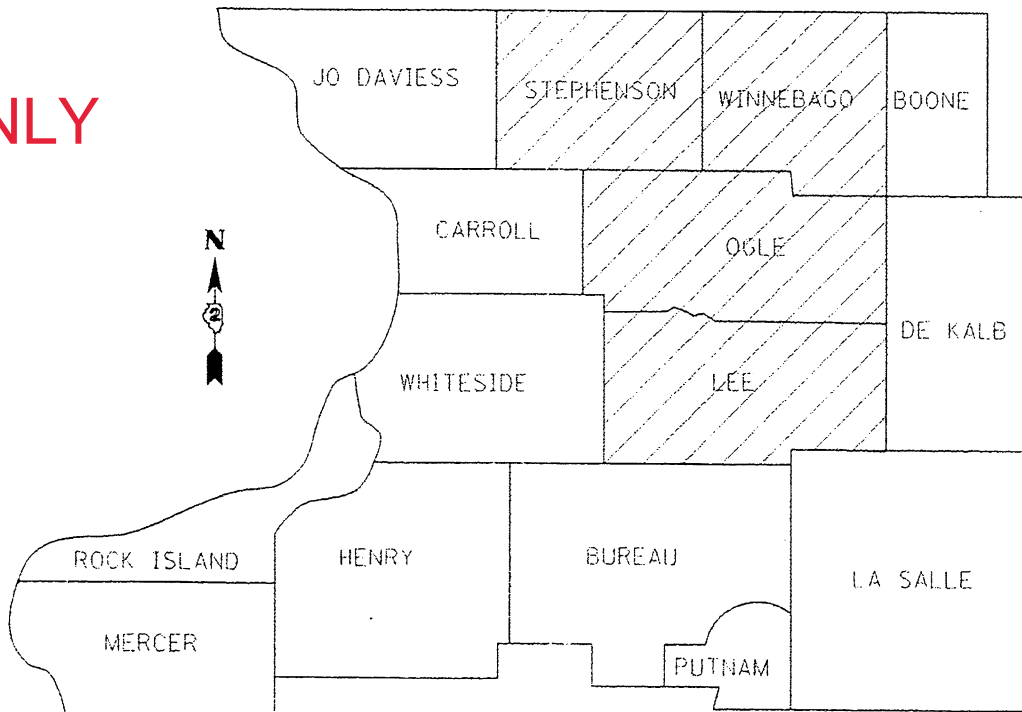
FOR INFORMATION ONLY



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

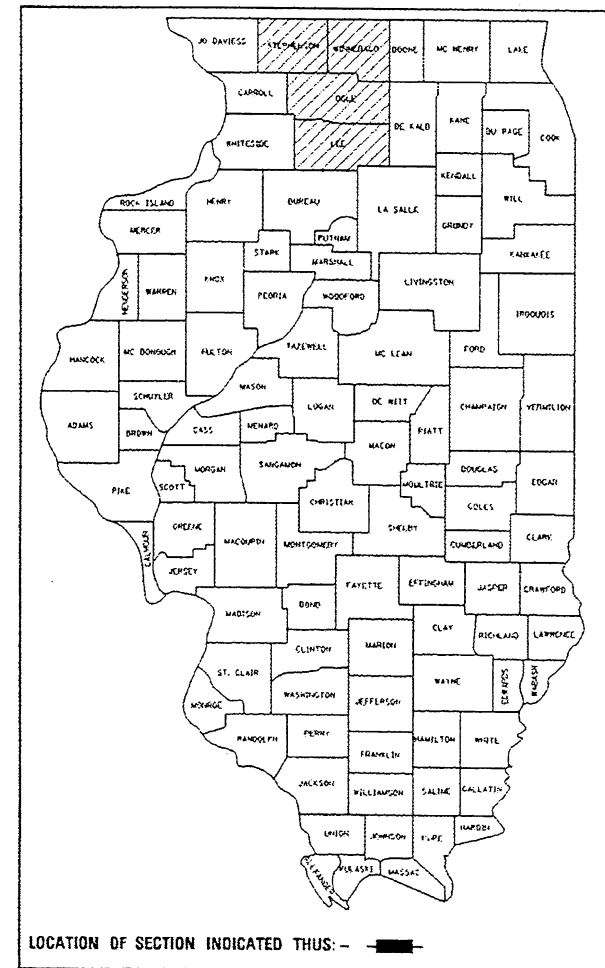
PROJECT ENGINEER: MASOOD AHMAD
SENIOR SQUAD LEADER: SAM ABDULLAH (815) 284-5935
SQUAD LEADER: DAVID DOSS (815) 284-5916
CONTRACT NO. 64H76 071-0055



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D2 SAFETY 2012-1	**	175	1

ILLINOIS CONTRACT NO. 64H76
* FAI 39, FAP 301 (US 20)
** LEE, OGLE, WINNEBAGO AND STEPHENSON COUNTIES

D-92-051-12



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED June 14, 2012
Eric S. Thibault
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

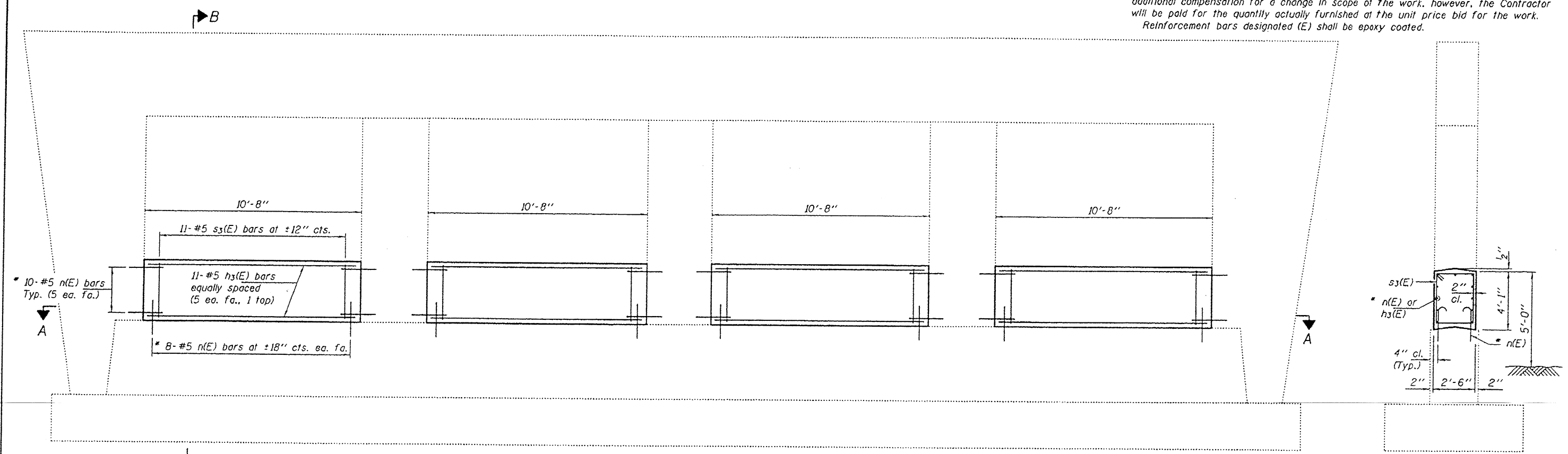
August 17, 2012
John D. Baranzelli, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

August 17, 2012
William R. Fren
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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NOTES

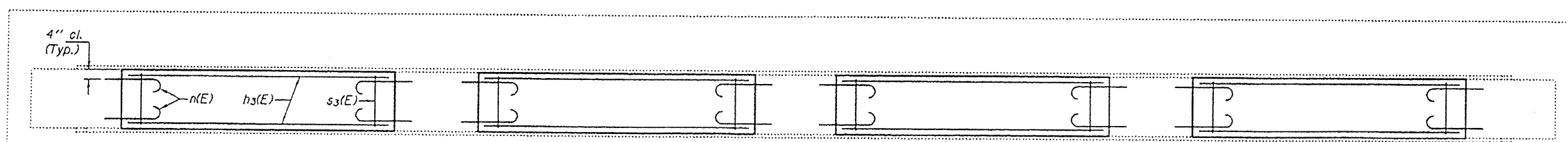
The cost of epoxy grouting threaded rods shall be included with Reinforcement Bars, Epoxy Coated.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make 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. Reinforcement bars designated (E) shall be epoxy coated.



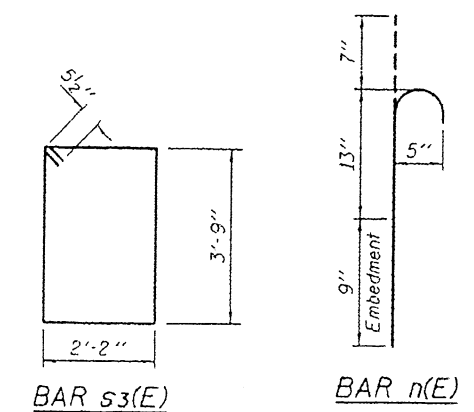
ELEVATION

SECTION B-B

* Epoxy grout n(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.



SECTION A-A



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	44	#5	10'-4"	—
n(E)	144	#5	2'-5"	⌋
s3(E)	44	#5	12'-9"	□
Concrete Structures			Cu. Yd.	16.1
Reinforcement Bars, Epoxy Coated			Pound	1420



DESIGNED DAB	EXAMINED <i>Timothy A. Allen</i>	DATE JUNE 5, 2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER CRASHWALL EXTENSION 071-0055	SHEET NO. OF SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED ARS	PASSED <i>David Carl Puzey</i>	REVISED 09/11/2012				412	D2 SAFETY 2012-1	OGLE	175	65
DRAWN boliva	ACTING ENGINEER OF BRIDGE AND STRUCTURES	REVISIONS	ILLINOIS FED. AID PROJECT							

64561 #13 4-26-02 FAI 39 WINNEBAGO + OGLE^{Sec} (141,201)RS

JJR

#13

13

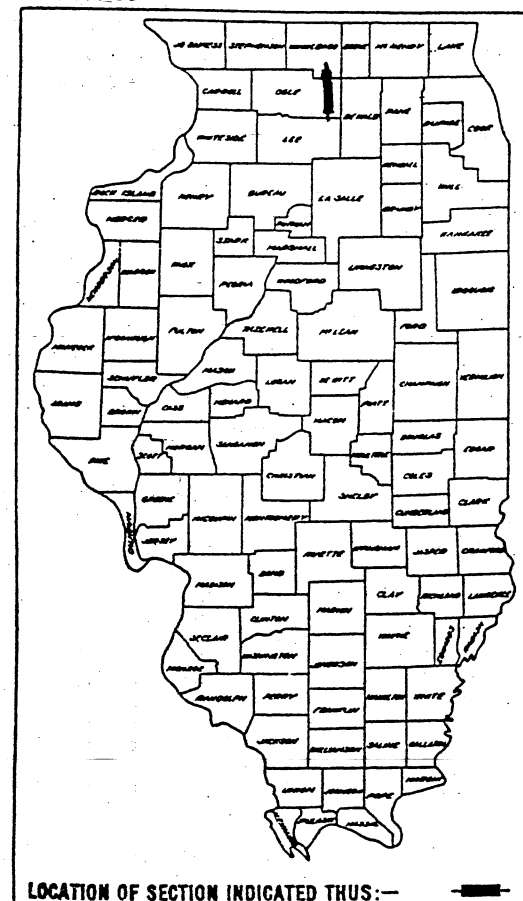
99.9%
11-9-2002

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

FAI ROUTE 39 (I-39) SECTION (141,201) RS PROJECT IM-39-1(10)119 WINNEBAGO + OGLE COUNTIES

*LEE/WINN/OGLE				
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 39	(141,201) RS	*	234	1
PROJECT				

D92-075-00



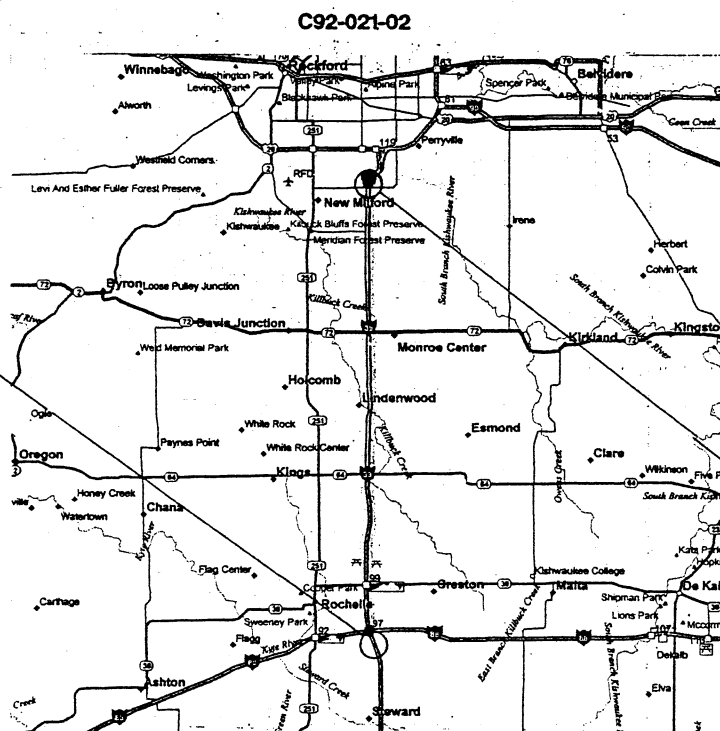
INDEX OF SHEETS

*SEE SHEET 2 FOR INDEX OF SHEETS

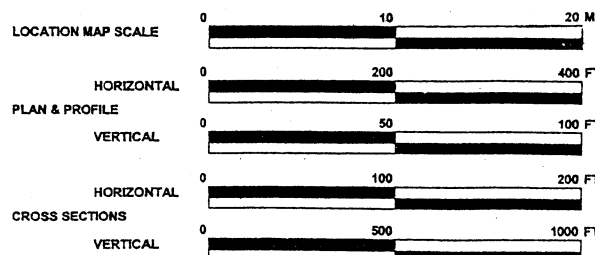
STANDARDS

*SEE SHEET 2 FOR STATE STANDARDS

PROJECT BEGINS
STA 1353+49.25



PROJECT ENDS
STA 2774+11



ALTO TOWNSHIP, SEC 4
DEMENT TOWNSHIP, SEC 4,5,8,17,20,
28,29,32,33
LYNNVILLE TOWNSHIP, SEC 4,5,8,9,16,17,20,
21,28,29,32,33
MONROE TOWNSHIP, SEC 5,8,17,20,29,32
CHERRY VALLEY TOWNSHIP, SEC 9,16,17,20
ROCKFORD TOWNSHIP, SEC 29,32

"CALL J.U.L.I.E.
BEFORE YOU DIG"
800-892-0123

071-0055

CONTRACT NO. 64561

NET LENGTH OF PROJECT = 109,408 LIN. FT = 20.702 MILES
GROSS LENGTH OF PROJECT = 109,408 LIN. FT = 20.702 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 14 FEBRUARY 2002
Roger E. Polke DISTRICT ENGINEER

EXAMINED _____ 19____

PASSED March 22, 2002
Michael R. Hines ENGINEER OF PLANS AND CONTRACTS

APPROVED March 23, 2002
James B. Costello DIVISION ENGINEER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____
DIVISION ADMINISTRATOR D-98

DISTRICT 2
DIXON, IL

2-249

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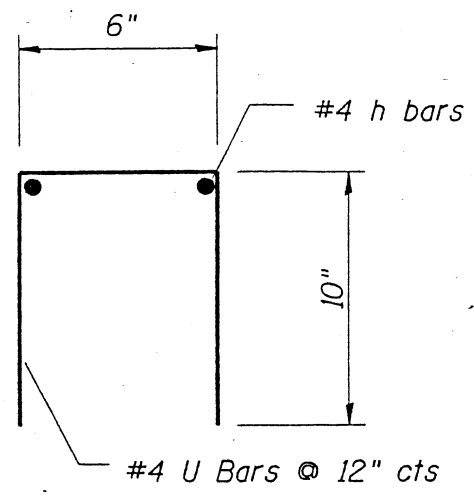
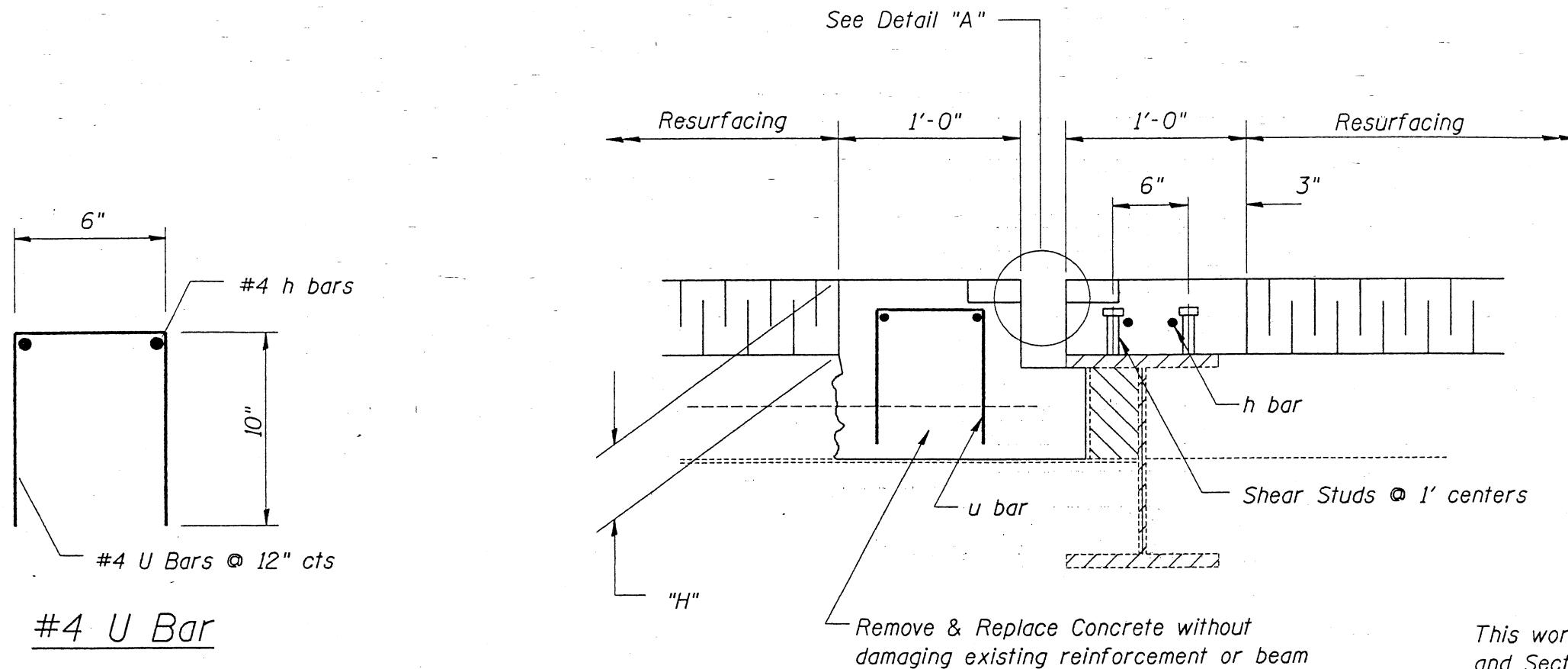
071-0055

SQUAD LEADER TRENDA PASSEAR 201-500-1111

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 39	#	**	234	69
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

* I41 & 201RS
** WINNEBAGO & OGLE



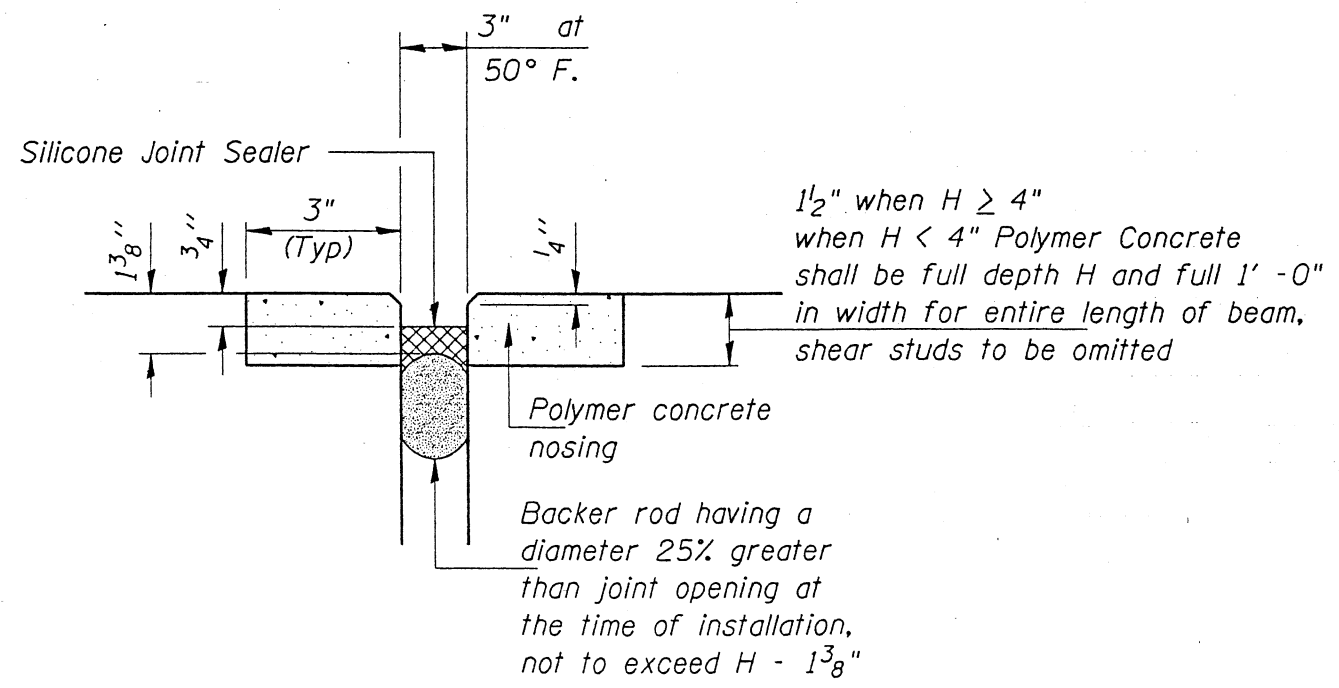
#4 U Bar

Remove & Replace Concrete without
damaging existing reinforcement or beam

This work shall be done in accordance with Standard 421103
and Sections 421 & 508 of the Standard Specifications.

The Polymer concrete work shall conform to checksheet #23
of the Recurring Special Provisions except it will not be paid
for separately.

This work shall be paid for per each of WIDE FLANGE BEAM
TERMINAL JOINT REPAIR.



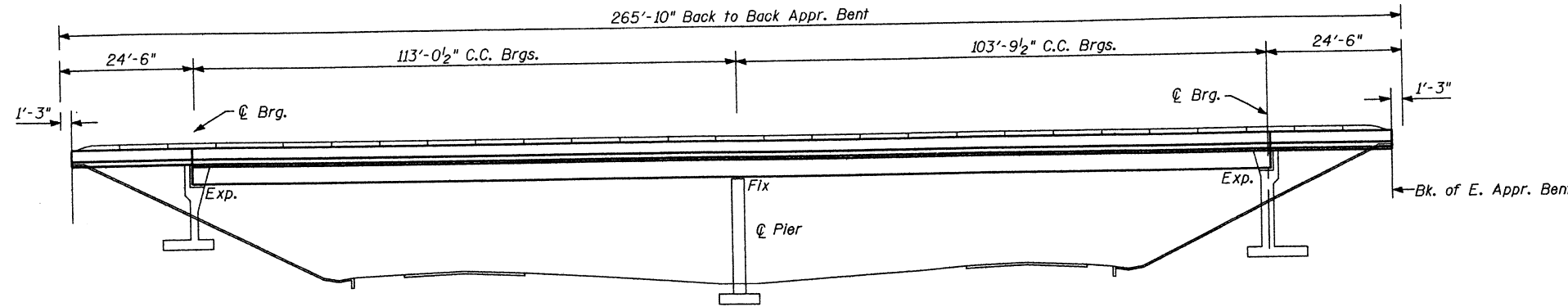
DETAIL "A"

Table of "H" Dimensions

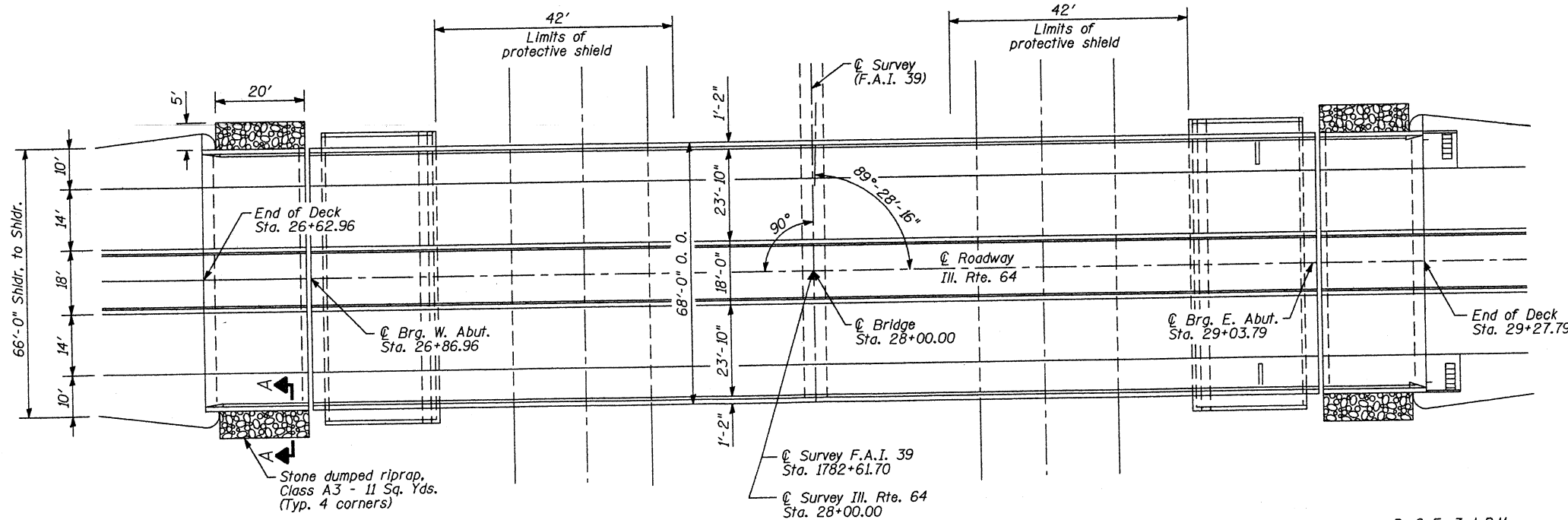
	Northbound	Southbound
I-88	5"	5"
	5"	5"
UP RAILROAD	3.68"	3.68"
KILBUCK CREEK	3"	3.68"
	1.85"	1.85"
IMRL RAILROAD	3.68"	3.68"
IL 72	5"	5"
KISHWAUKEE RIVER	1.67"	3.86"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

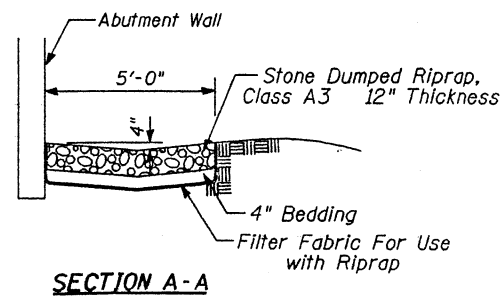
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO.
F.A.I. 39	(141, 201) RS	Winnebago & Ogle	234	185	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			13 SHEETS



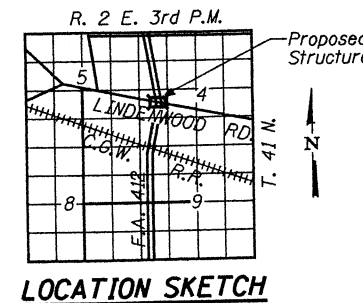
ELEVATION



PLAN



SECTION A-A



LOCATION SKETCH

GENERAL NOTES

- This structure will retain the same number 071-0055.
- All new structural steel shall conform to AASHTO Classification M-270, Gr. 36 unless otherwise noted.
- Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.
- Prior to pouring the new concrete joints, all loose rust, loose mill scale and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The existing structural steel coating contains lead. The contractor should take appropriate precautions to deal with the presence of lead on this project.
- Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included in the cost of "Concrete Removal".
- Existing longitudinal reinforcement extending into the removed area shall be cleaned, straightened and incorporated into the new construction. Existing transverse reinforcement may be cut as shown and removed.
- During construction operations, the Contractor shall provide temporary shielding from shoulder to shoulder of the roadway crossed. See Special Provisions.
- Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.
- Joint plates and attached bars shall be shop painted with the inorganic zinc rich primer. No field paint required.
- The inorganic zinc rich primer/acrylic/acrylic paint system shall be used for shop and field painting of new structural steel except where other wise noted. The color of the acrylic finish coat shall be Interstate green, Munsell No. 7.5G 4 B. See Special Provision, "Cleaning and Painting New Metal Structures."

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu Yd	14.8		14.8
Bituminous Concrete Removal (Deck)	Sq Yd	1380		1380
Concrete Superstructure	Cu Yd	16.3		16.3
Bridge Deck Microsilica Concrete Overlay 2 1/2"	Sq Yd	1380		1380
Reinforcement Bars (Epoxy Coated)	Pound	2320		2320
Concrete Bridge Deck Scarification 1/2"	Sq Yd	1380		1380
Bridge Deck Grooving	Sq Yd	1331		1331
Silicone Joint Sealer	Foot	132		132
Bridge Joint System (Expansion) 1 1/2"	Foot	134		134
Deck Slab Repair (Full Depth - Type 1)	Sq Yd	1		1
Deck Slab Repair (Full Depth - Type 2)	Sq Yd	24		24
Deck Slab Repair (Partial Depth)	Sq Yd	83		83
Protective Shield	Sq. Yd.	579		579
Bar Splicers	Each	28		28
Furnishing and Erecting Structural Steel	Pound	1904		1904
Polymer Concrete	Cu Ft	12.3		12.3
Jack and remove existing bearings	Each	5		5
Stone Dumped Riprap Class A3	Sq Yd	44		44
Filter Fabric for use with Riprap	Sq Yd	44		44

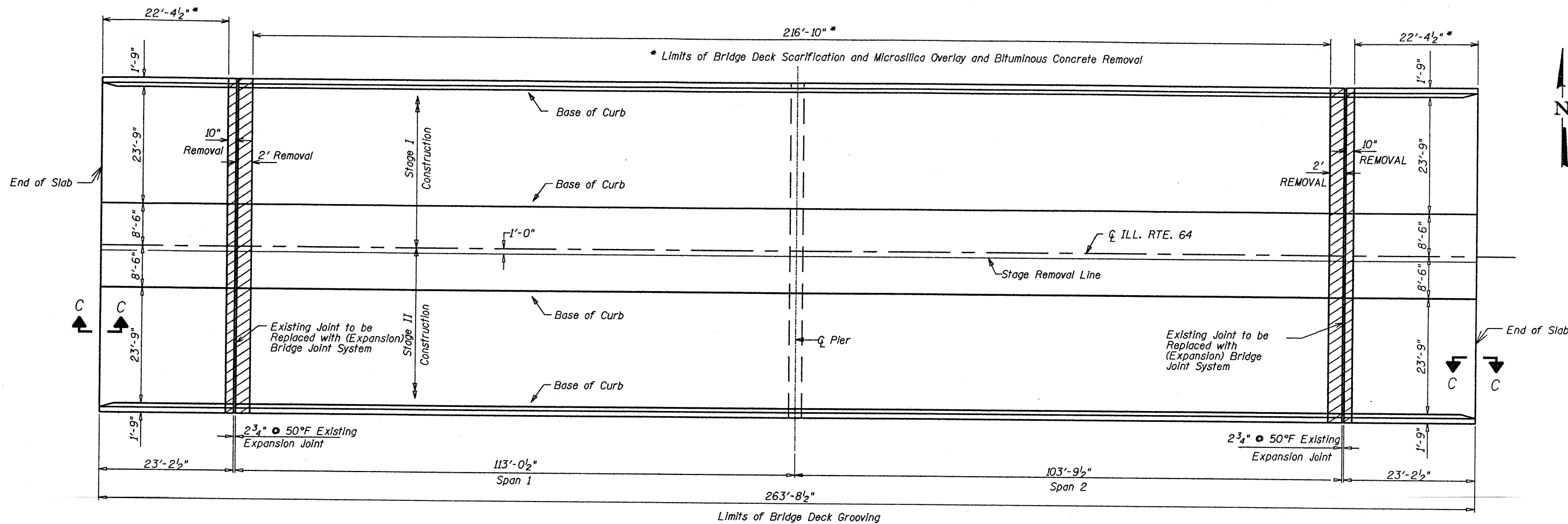
DESIGNED
CHECKED
DRAWN
CHECKED

GENERAL PLAN AND ELEVATION
ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.I. 39	(141, 201) RS	Winnebago & Ogle	234	186
FED. ROAD DIST. NO. 7		ALLIANCE	FED. AID PROJECT	

SHEET NO. 2
13 SHEETS



DECK PLAN

For Sec. C-C, See Sheet 5 of 13

BILL OF MATERIAL

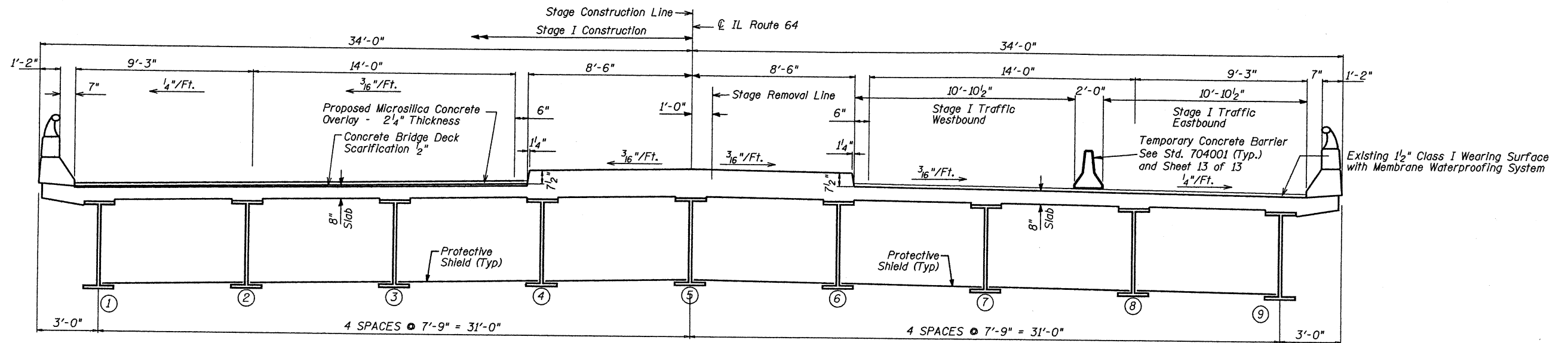
ITEM	UNIT	TOTAL
Bituminous Concrete Removal (Deck)	Sq. Yd.	1380
Concrete Bridge Deck Scarification 1/2"	Sq. Yd.	1380
Bridge Deck Microsilica Concrete Overlay 2 1/4"	Sq. Yd.	1380
Bridge Deck Grooving	Sq. Yd.	1331
Protective Shield	Sq. Yd.	579

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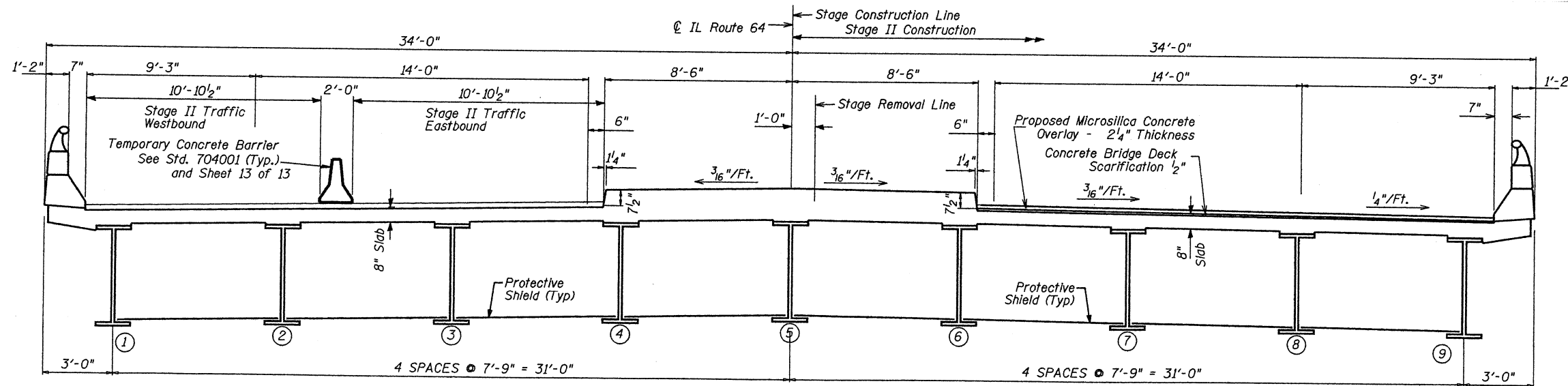
DECK PLAN
ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	LSL	POST	SHEET NO. 3
F.A.I. 39	(141, 201) RS	Winnebago & Ogle	234	187	13 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



DECK CROSS SECTION - STAGE I
(Looking East)



DECK CROSS SECTION - STAGE II
(Looking East)

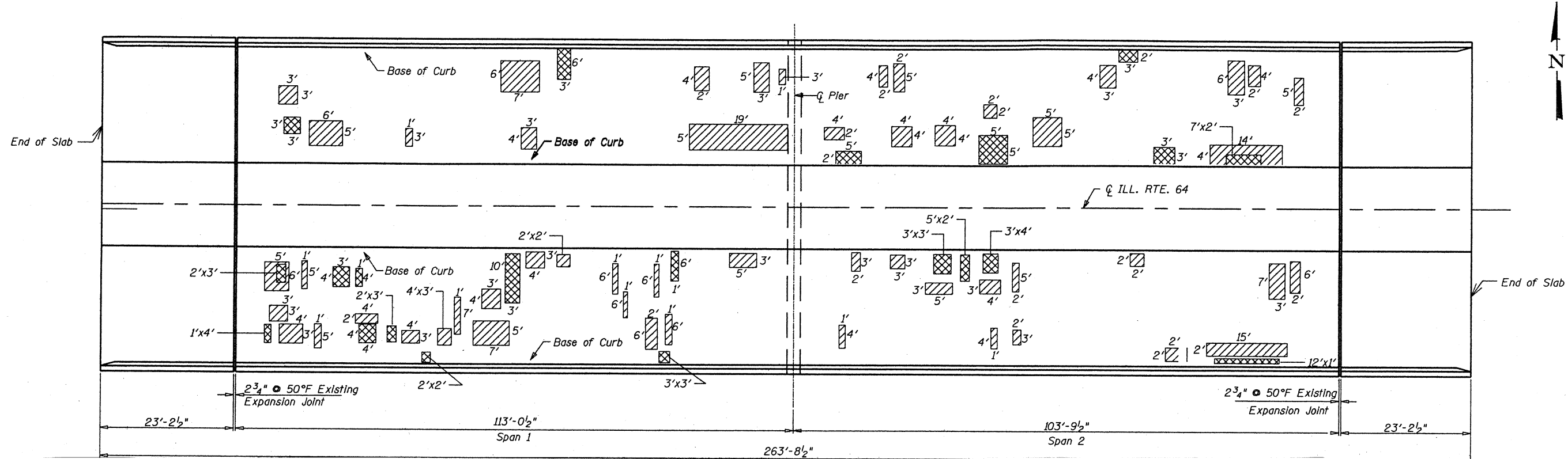
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DECK CROSS SECTIONS
ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

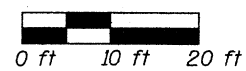
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P.A.L. 39	(141, 201) RS	Winnebago & Ogle	234	188
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
13 SHEETS



DECK PLAN



- Deck Slab Repair (Partial)
- Deck Slab Repair (Full Depth)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Deck Slab Repair (Partial)	Sq. Yd.	83.0
Deck Slab Repair (Full Depth, Type 1)	Sq. Yd.	1.0
Deck Slab Repair (Full Depth, Type 2)	Sq. Yd.	24.0

The plan quantities shown for Deck Slab Repair (Partial and Full Depth) are estimated quantities from a deck survey provided by others. The areas shown are potential areas of deck slab repair. The actual locations and quantity of Deck Slab repair shall be determined by the resident engineer in the field after removal of the existing wearing surface. Actual repair locations shall be shown on the as-built plans.

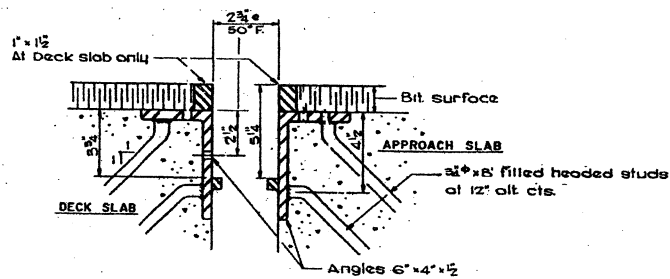
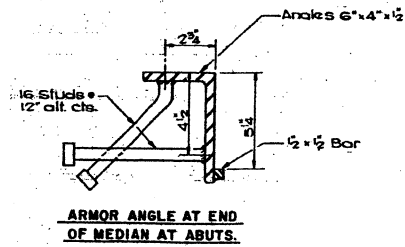
Date of Deck Survey: July 17, 2001

DECK REPAIR PLAN
ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

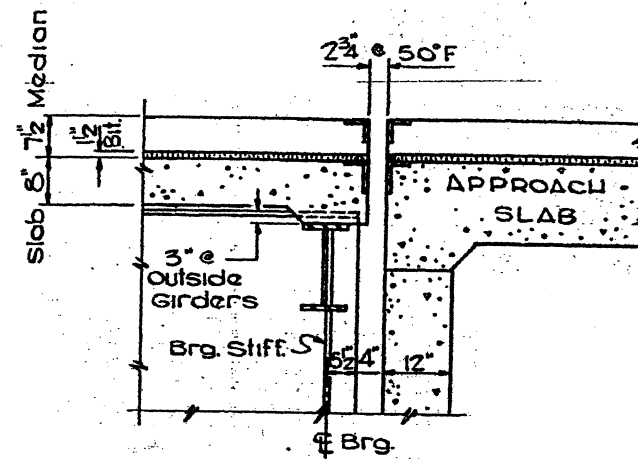
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

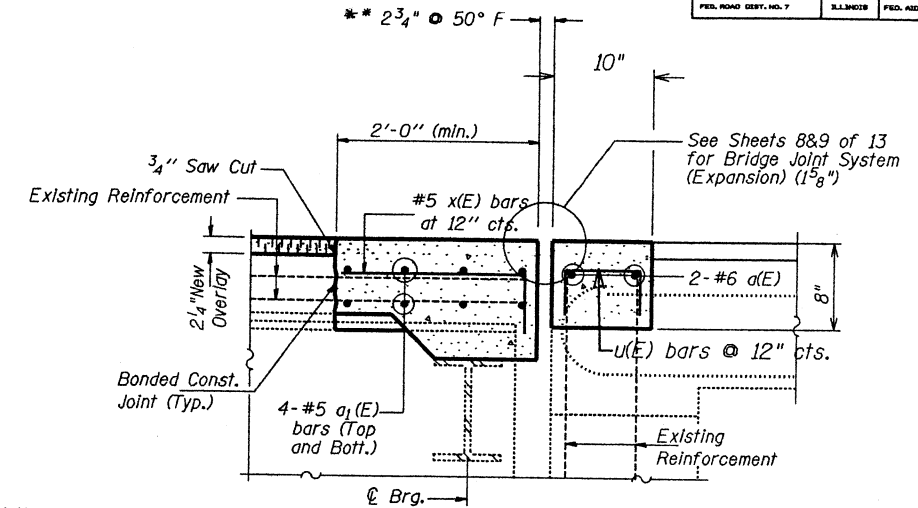
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F.A.I. 39	(141, 201) RS	Winnebago & Ogle	234	189	13 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



SECTION THRU EXISTING JOINT



SECTION THRU EXISTING ABUTMENT

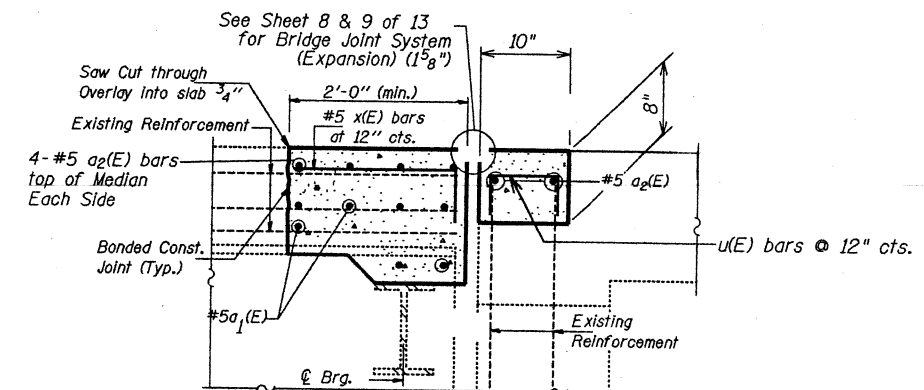


Note: Existing Reinforcement Bars shown are to be cleaned and incorporated into new construction.

SECTION A-A

(Section Thru Roadway)

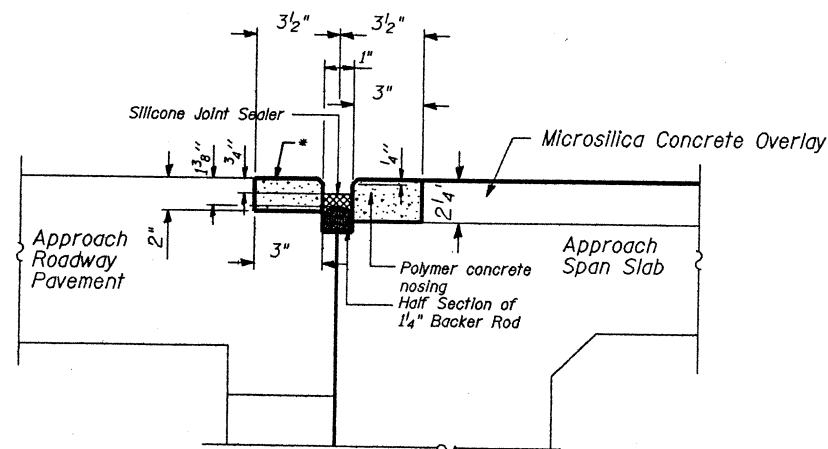
** Dimensions are base on PJS joint. If the contractor elects to use the alternate strip seal, the dimensions may require adjustment as detailed on the joint base sheet.



Note: Existing Reinforcement Bars shown are to be cleaned and incorporated into new construction.

SECTION B-B

(Section Thru Median - At Beam)



SECTION "C-C"

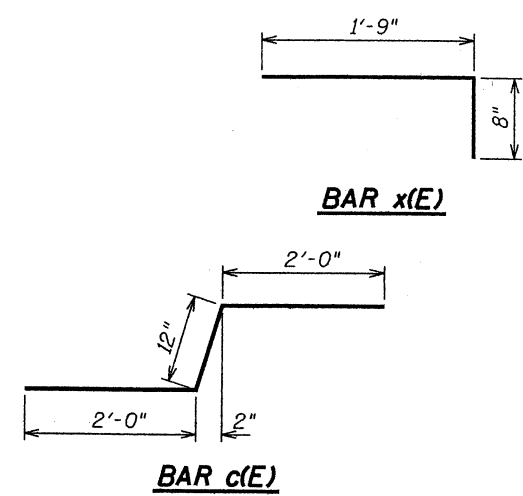
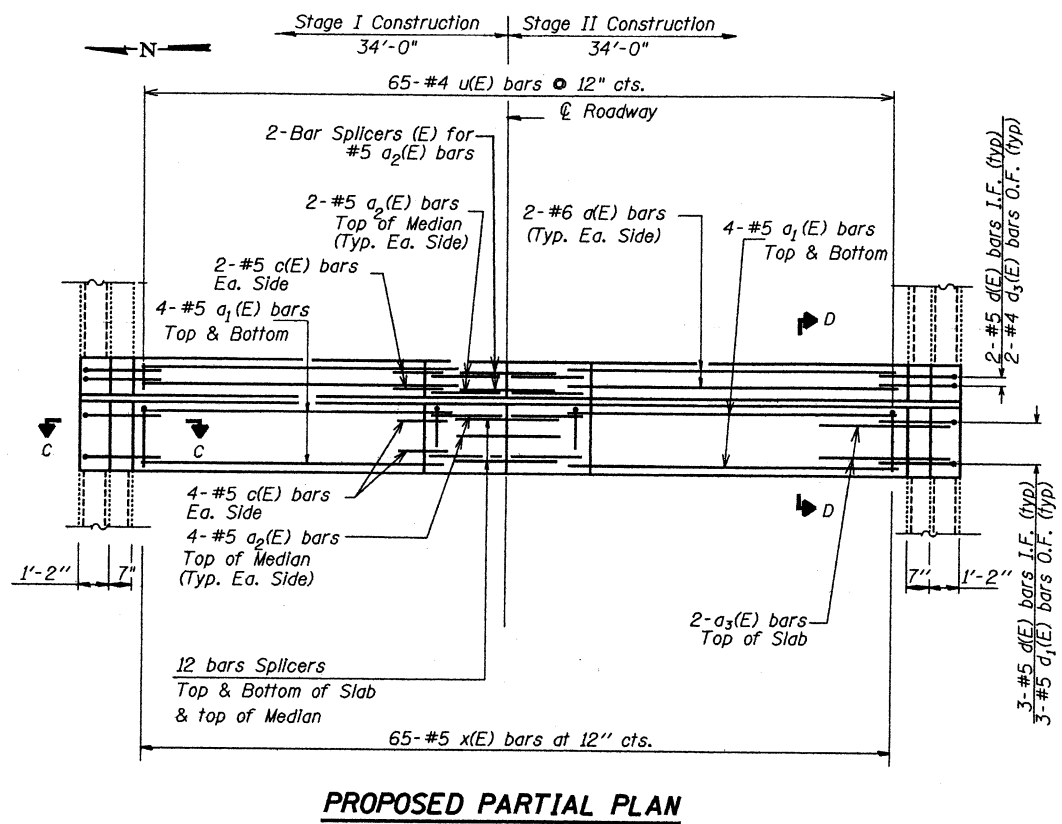
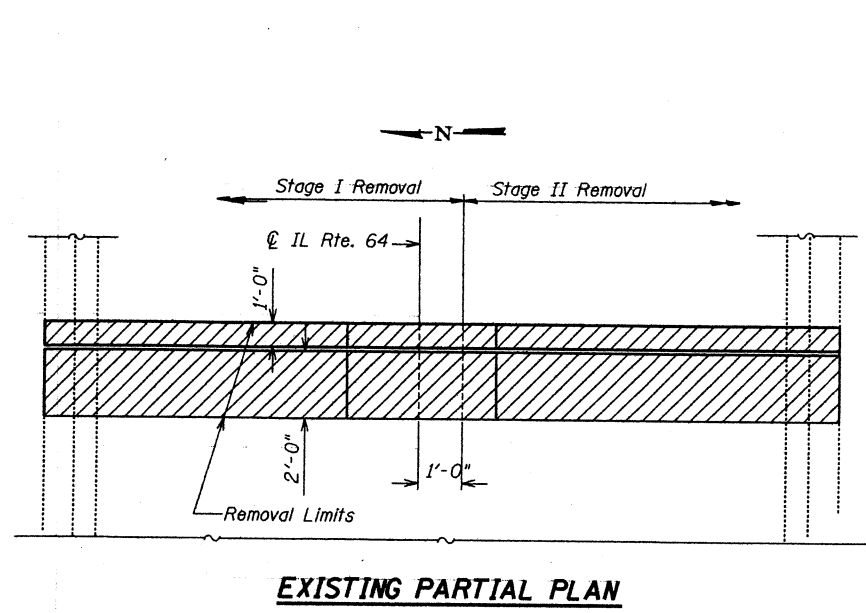
Concrete Removal for Polymer nosing Included in Concrete Removal Quantities.

DESIGNED
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JOINT REPLACEMENT DETAILS
ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO.
F.A.I. 39	(141, 201)RS	Winnebago & Ogle	234	190	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

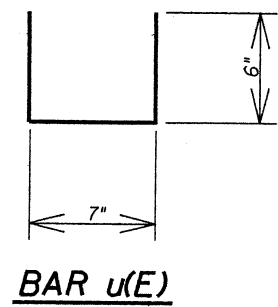
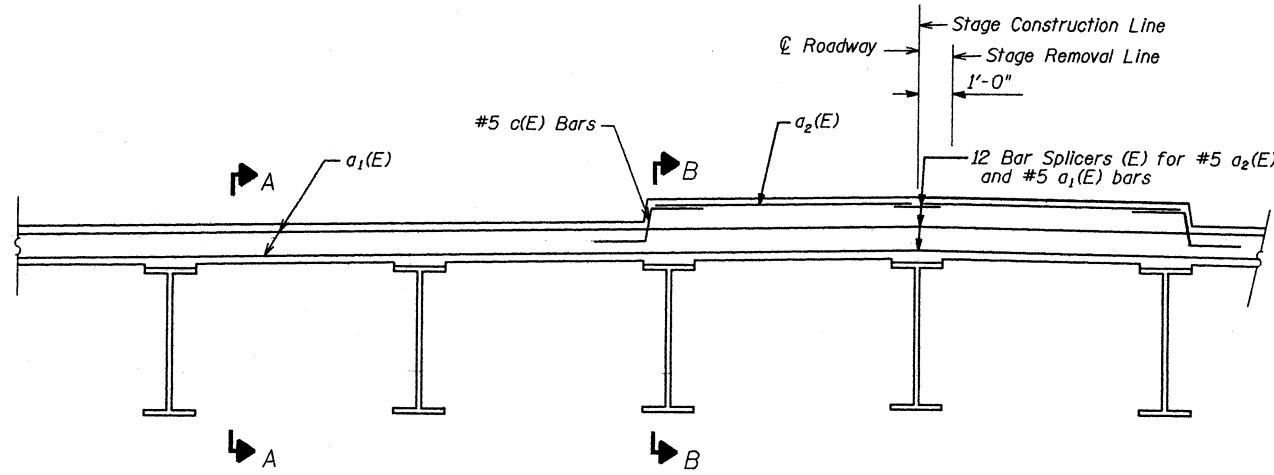


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#6	24'-0"	—
a ₁ (E)	32	#5	32'-6"	—
a ₂ (E)	16	#5	8'-2"	—
a ₃ (E)	8	#6	4'-0"	—
c(E)	24	#5	5'-0"	L
d(E)	20	#5	4'-3"	U
d ₁ (E)	12	#4	4'-6"	U
d ₂ (E)	8	#4	2'-1"	U
d ₃ (E)	8	#4	6'-0"	U
u(E)	130	#4	1'-7"	L
x(E)	130	#5	2'-5"	L

Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	2320
Concrete Superstructures	Cu. Yd.	16.3
Concrete Removal	Cu. Yd.	14.8
Silicone Joint Sealer	Foot	132
Polymer Concrete	Cu. Ft.	12.3
Bar Splicers	Each	28

Reinforcement bars designated (E) shall be epoxy coated.

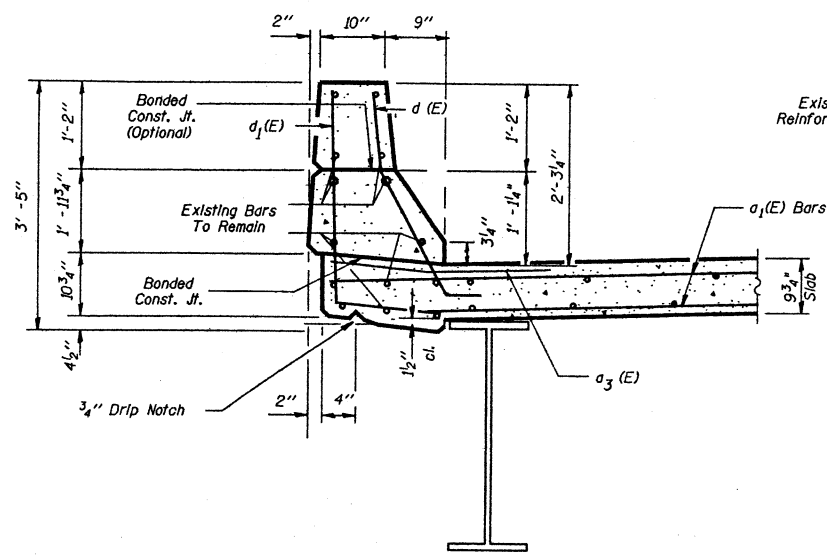


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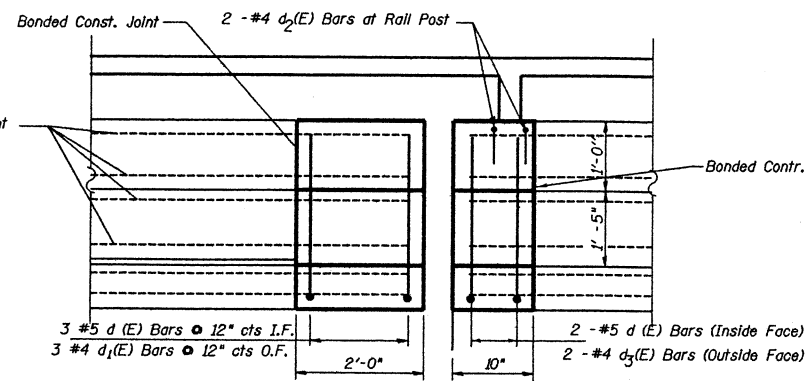
JOINT REPLACEMENT DETAILS
ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

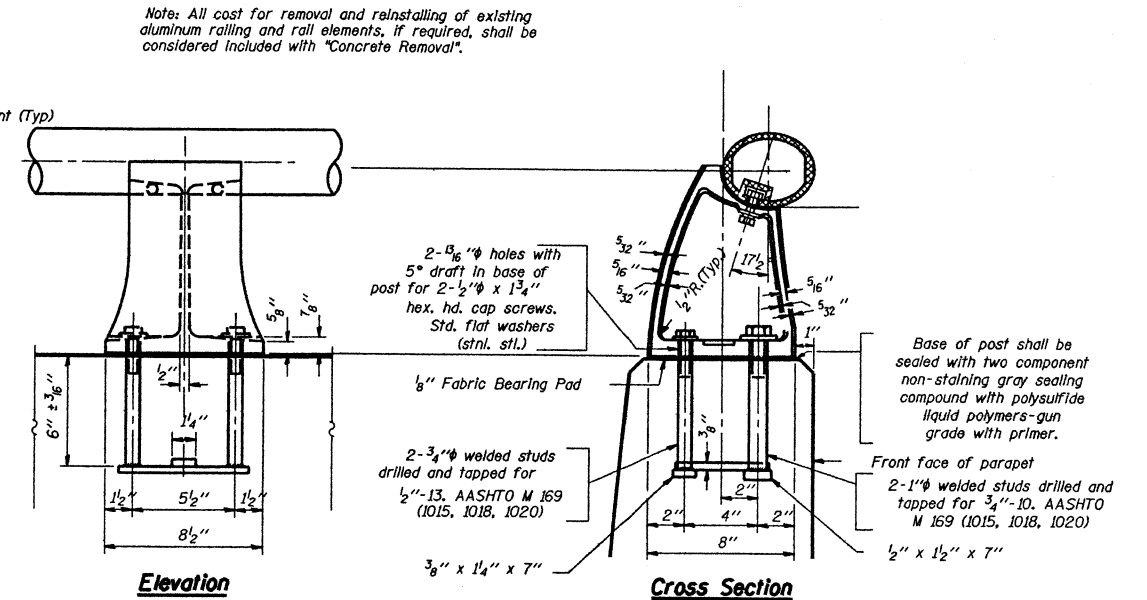
ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.
S.B.L. 39	(141, 201)RS	Winnebago & Ogle	234	191
F.A.I. 39		ILLINOIS		FED. AID PROJECT
				13 SHEETS



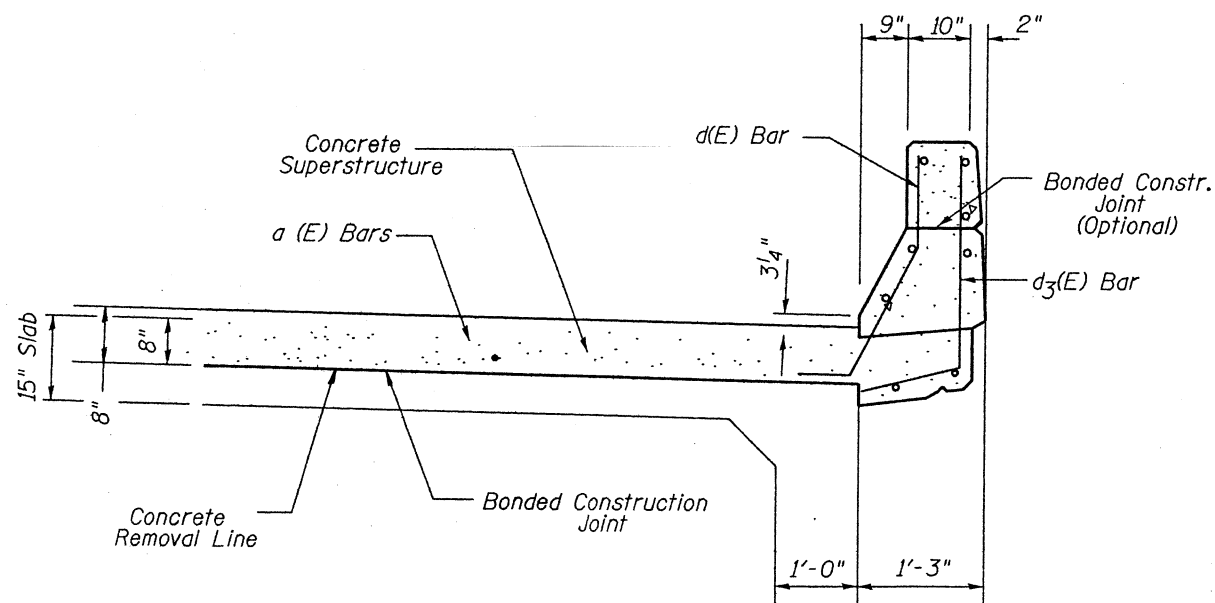
SECTION C-C
(deck span)



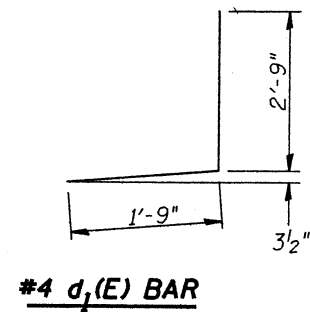
SECTION D-D



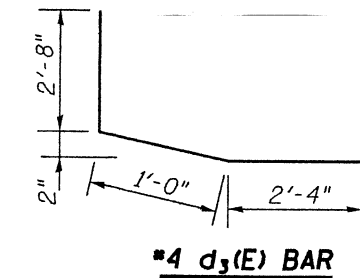
RAIL POST DETAILS



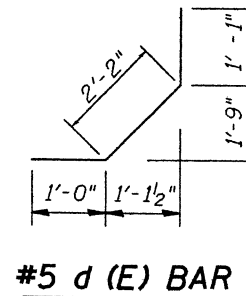
TYP SECTION THRU SLAB PARAPET
(at ends of approach span)



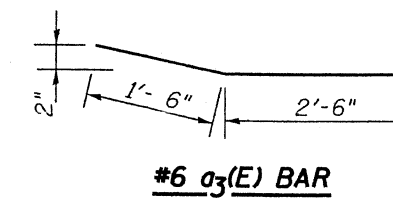
#4 d₁(E) BAR



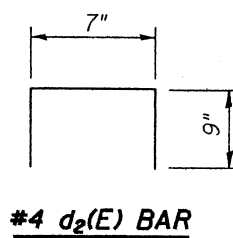
#4 d₃(E) BAR



#5 d(E) BAR



#6 a₃(E) BAR



#4 d₂(E) BAR

DESIGNED
CHECKED
DRAWN
CHECKED

PARAPET DETAILS
ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

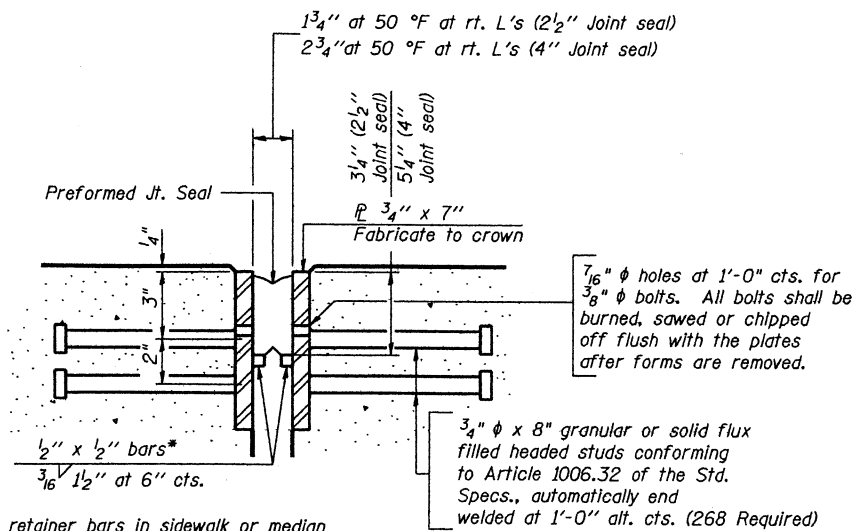
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. <u>8</u>
P.A.L. 39	(141, 201RS)	Winnebago & Ogle	234	192	13 SHEETS
FED. ROAD DIST. NO. 7	ILL. PROJ. NO.	FED. AID PROJECT NO.			

GENERAL NOTES

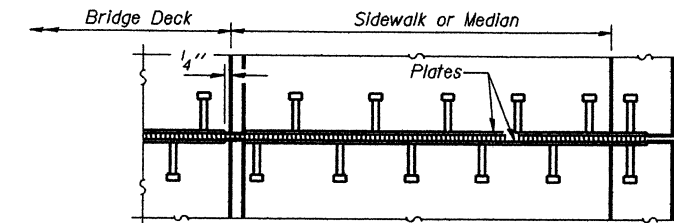
Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be $\frac{3}{16}$ ". Seal space with silicone sealant suitable for structural steel.

Bridge Joint System (Expansion)		
Design Movement	Required Preformed Joint Seal Size	Required Strip Seal rated movement
1"	2½"	1"
1½"	4"	2"

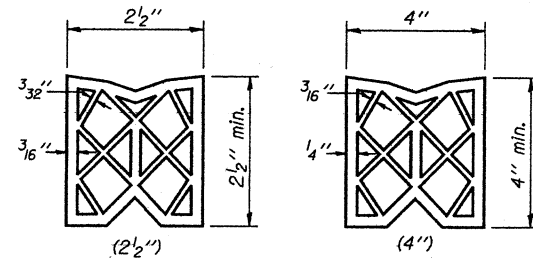


*Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

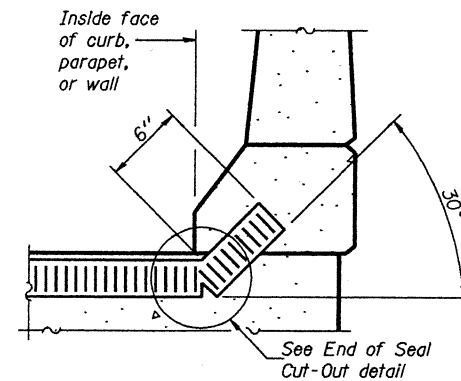
SECTION THRU EXPANSION JOINT
(2½" and 4" joint seals)



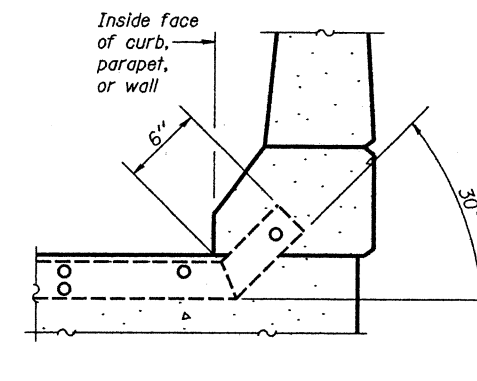
PLAN AT SIDEWALK OR MEDIAN



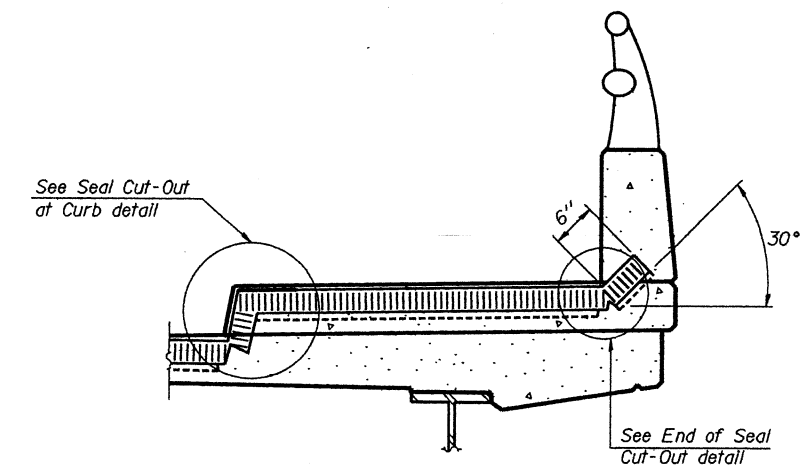
PREFORMED JOINT SEAL



AT CURB, PARAPET, OR WALL
(Showing seal)

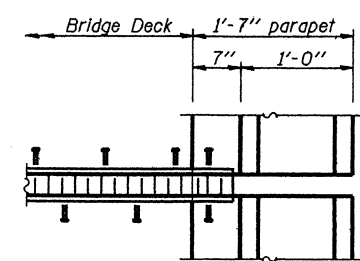


AT CURB, PARAPET, OR WALL
(Showing plate)

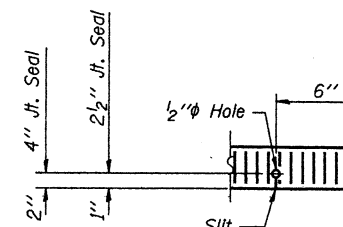


AT SIDEWALK OR MEDIAN
(Showing plate and seal)

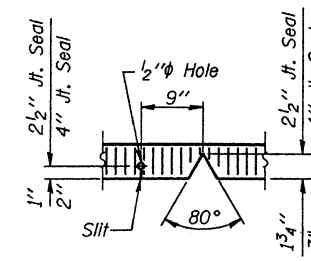
TYPICAL END TREATMENTS



PLAN AT PARAPET



END OF SEAL CUT-OUT



SEAL CUT-OUT AT CURB

BILL OF MATERIAL

Item	Unit	Total
Bridge Joint System (Expansion) 1½"	foot	134

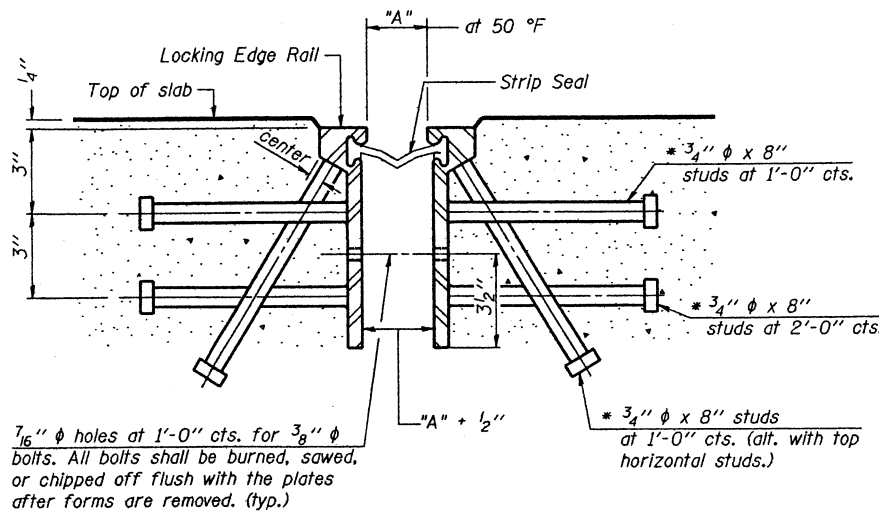
(Sheet 1 of 2)

BRIDGE JOINT SYSTEM - EXPANSION
(PREFORMED JOINT SEAL)

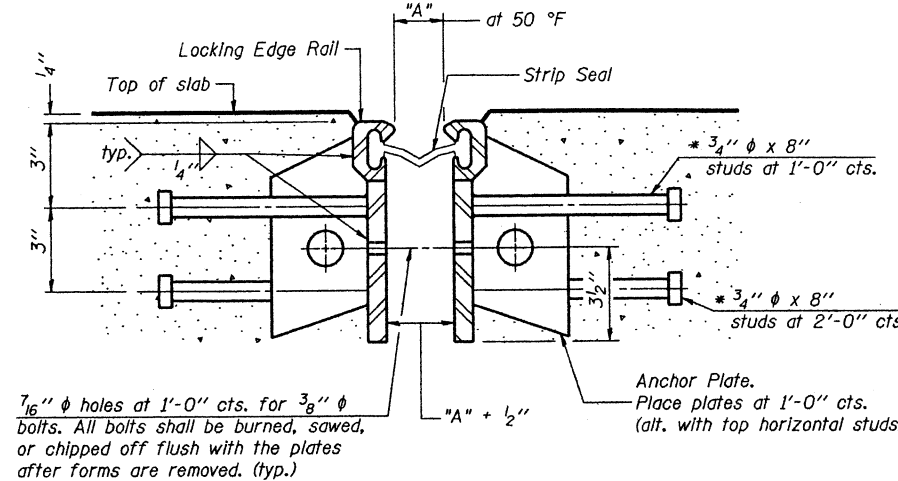
ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

DESIGNED
CHECKED
DRAWN
CHECKED

EJ-BJS



Required Strip Seal rated movement	"A"
1"	1 1/8"
2"	1 3/4"



GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

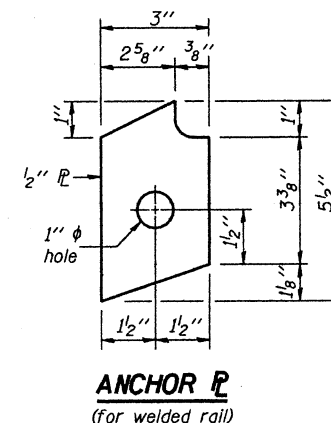
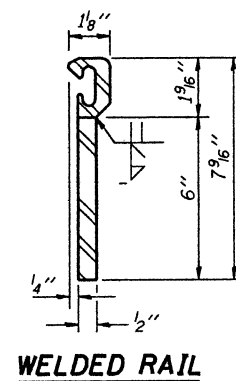
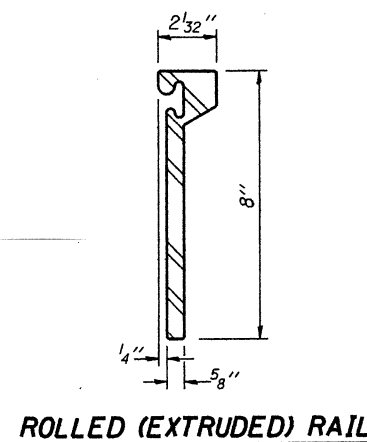
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

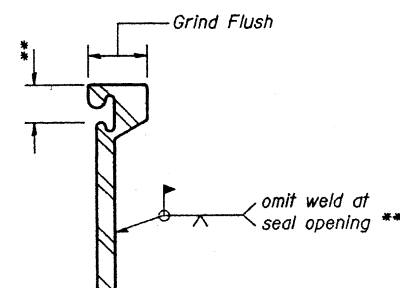
SECTION THRU ROLLED RAIL EXP. JOINT
(670 Total Studs Req'd for 2 Joints)

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

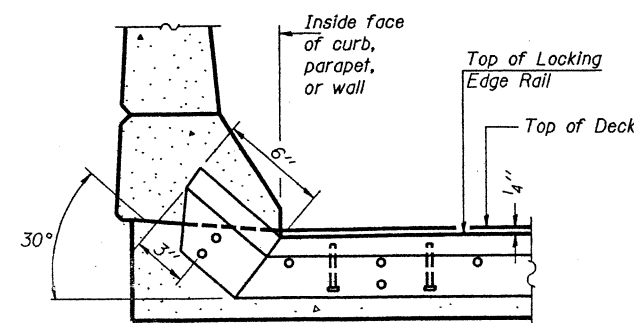
SECTION THRU WELDED RAIL EXP. JOINT
(402 total Studs Req'd for 2 Joints)
(268 Total Anchor Bolts Req'd for 2 Joints)



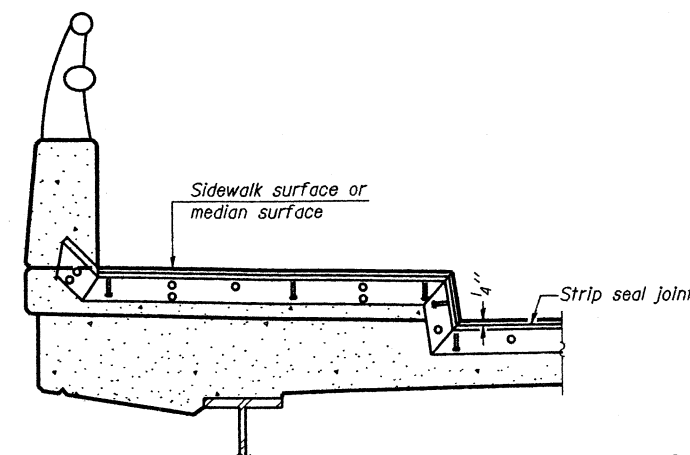
LOCKING EDGE RAILS



LOCKING EDGE RAIL SPLICE
The inside of the locking edge rail groove shall be free of weld residue.



AT CURB, PARAPET, OR WALL



AT SIDEWALK OR MEDIAN

TYPICAL END TREATMENTS

DESIGNED
CHECKED
DRAWN
CHECKED

EJ-BJS

(Sheet 2 of 2)
BRIDGE JOINT SYSTEM - EXPANSION
(ALTERNATE-STRIP SEAL)

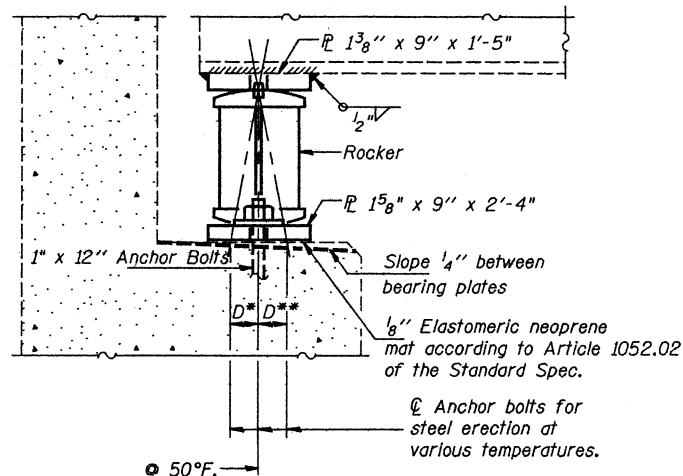
ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

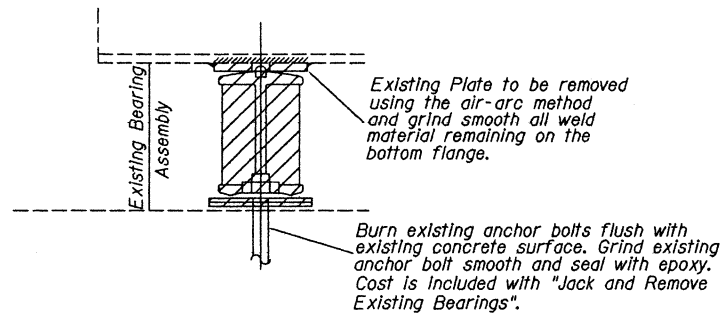
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P.A.L. 39	(141, 201)RS	Winnebago & Ogle	234	194
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 10
13 SHEETS

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

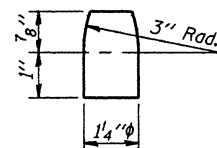


SECTION AT ABUTMENTS

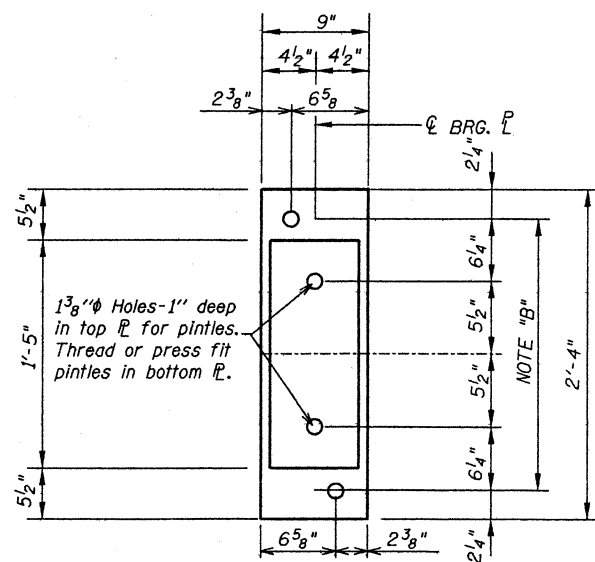


BEARING REMOVAL

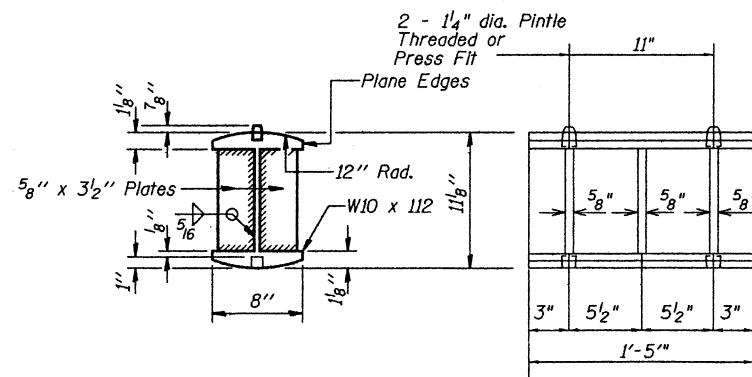
(5 Required)



DETAIL OF PINTLE



BEARING - PLAN AT ABUTMENTS



DETAIL OF ROCKER

BEARING REPLACEMENT NOTES

Bearing Removal and Replacement Schedule:

Exterior bearings at both abutments (4 total) and West Abutment bearing for beam line 6 (4th from south).

The Jacks shall be lowered before the new concrete Joint is poured at Abutments.

The Contractor shall submit plans for Jacking & Cribbing, to the Engineer for approval, prior to commencing any work at the Bearings.

Jacking and Removing Existing Bearings shall be done before new Joint is poured at the Abutments.

The Beams shall be raised a maximum of 1/8" to accommodate new Bearings.

The Top Plate shall be removed as required.

If the analysis submitted by the contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation."

Note:

-Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included with furnishing and erecting structural steel

-New bearings and anchor bolts are included with furnishing and erecting structural steel.

-Min. Jack Capacity = 75 Tons

Note "B" : 1 1/2" Dia. Holes for 1" Dia. x 12" Anchor Rods (See Sheet 11 of 13 for Anchor Bolt Details).

GIRDER REACTIONS

R Q	(k)	69.1
R L	(k)	45.7
IMP.	(k)	10.1
R (Total)	(k)	124.9

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Jack and Remove Existing Bearings	Each	5
Furnishing and Erecting Structural Steel	Pound	1904

DESIGNED
CHECKED
DRAWN
CHECKED

BEARING REPLACEMENTS
ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

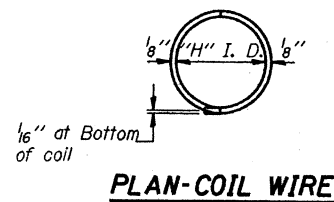
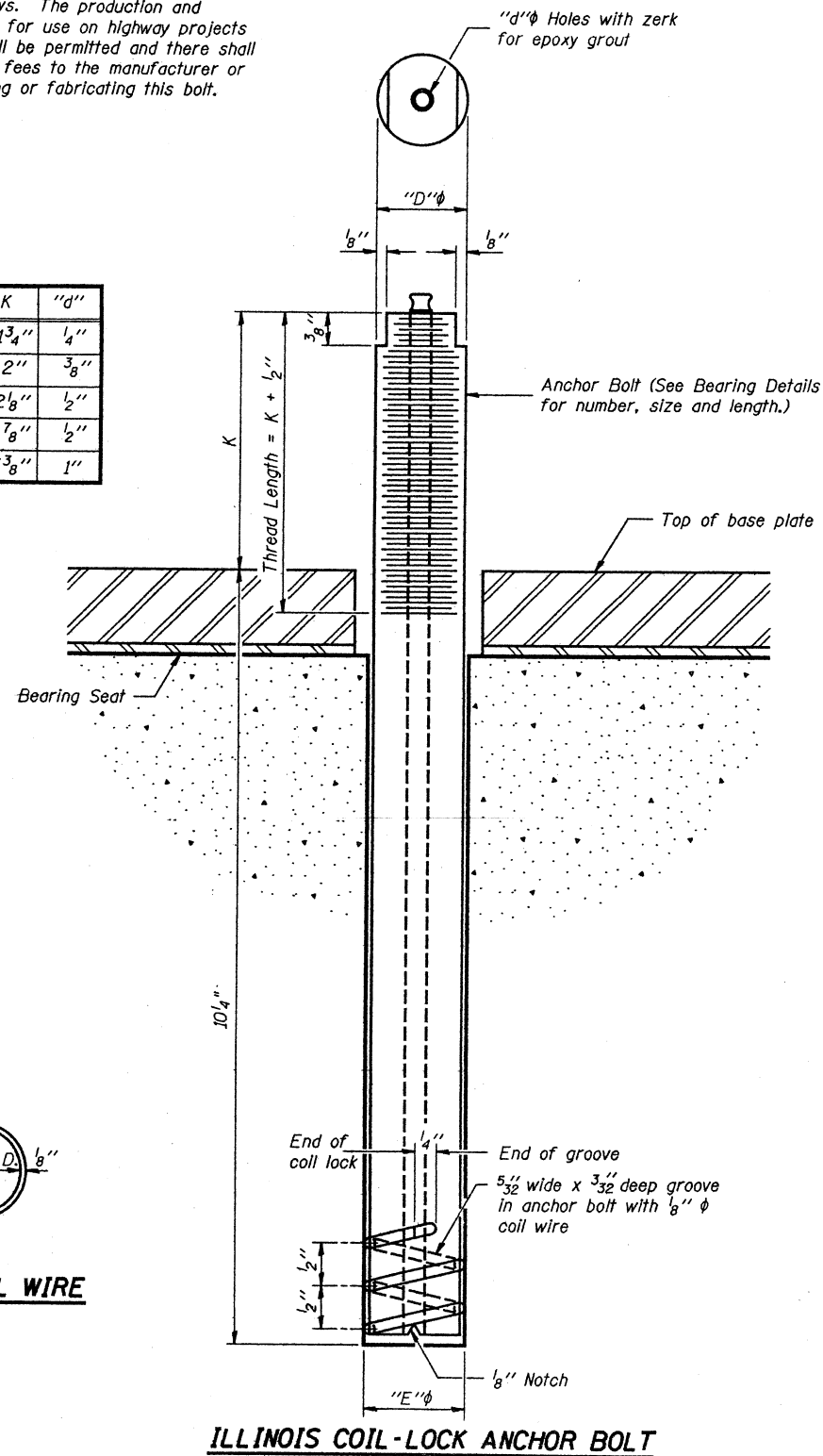
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.I. 39	(141, 201) RS	Winnebago & Ogle	234	195
FED. ROAD DIST. NO. 7	SUBDIVISION	FED. AID PROJECT-		

SHEET NO. 11
13 SHEETS

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 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



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 A 519, Grade 1026, CW 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 C 881, Type I, 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 according to 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 of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abut	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to 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".

ANCHOR BOLT DETAILS FOR BEARINGS

ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

DESIGNED
CHECKED
DRAWN
CHECKED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
39	(141, 201) RS	Winnebago & Ogle	234	12
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	13 SHEETS

NOTES

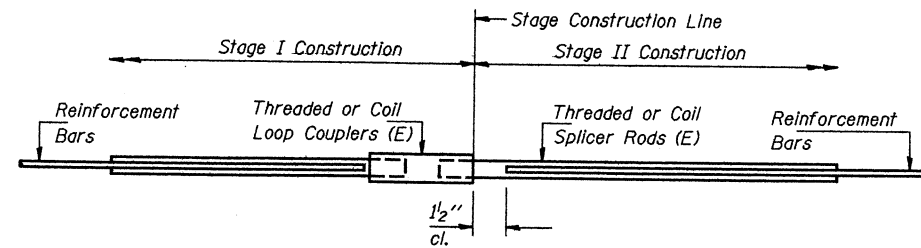
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement 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 bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{s_{allow}} \times A_t$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6

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



SPLICER DETAIL

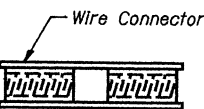
Bar Size	No. Assemblies Required	Location
#5	24	Deck Ends
#5	4	Backwall

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

ROLLED THREAD DOWEL BAR



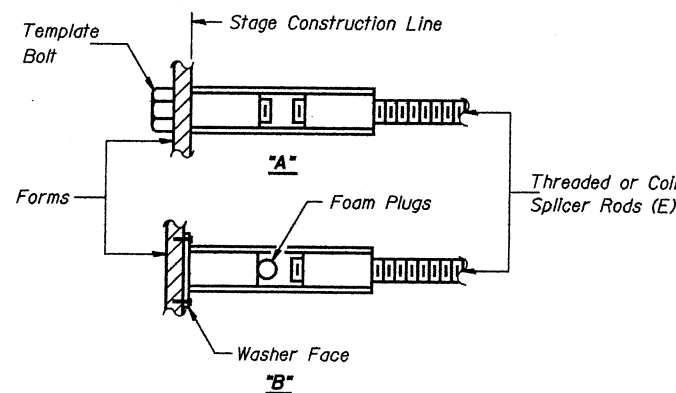
** ONE PIECE



WELDED SECTIONS

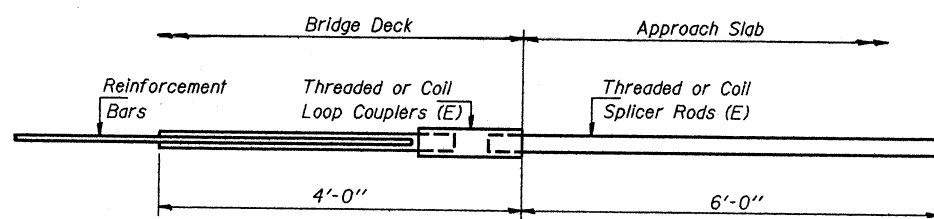
BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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



**INTEGRAL ABUTMENT
BAR SPLICER ASSEMBLY DETAIL
FOR #5 BAR**

Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =

DESIGNED
CHECKED
DRAWN
CHECKED

BSD-1 4-30-99

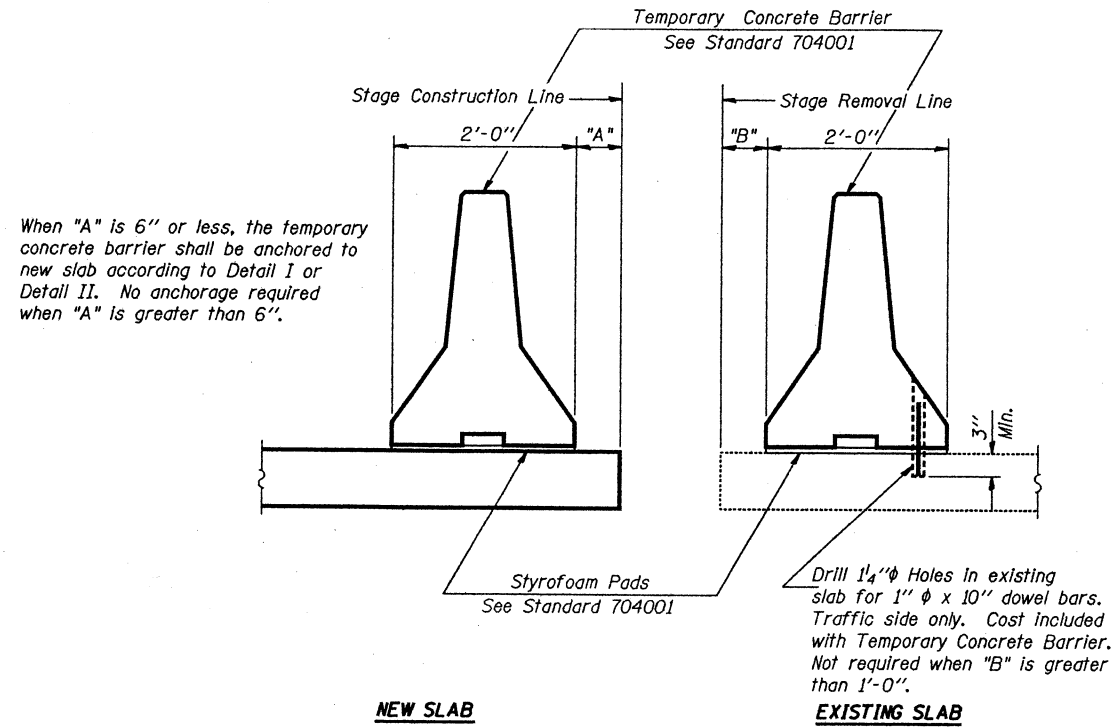
BAR SPLICER ASSEMBLY DETAILS

ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.I. 39	(141, 201) RS	Winnebago & Ogle	234	197
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

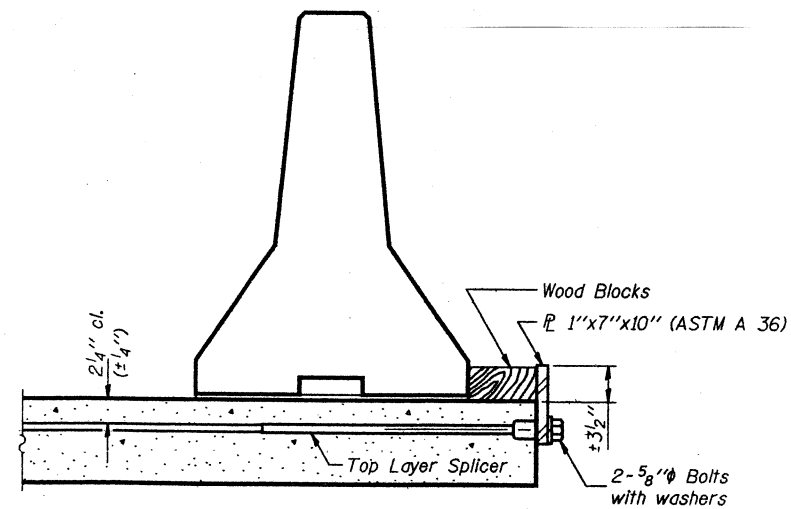
SHEET NO. 13
13 SHEETS



SECTIONS THRU SLAB

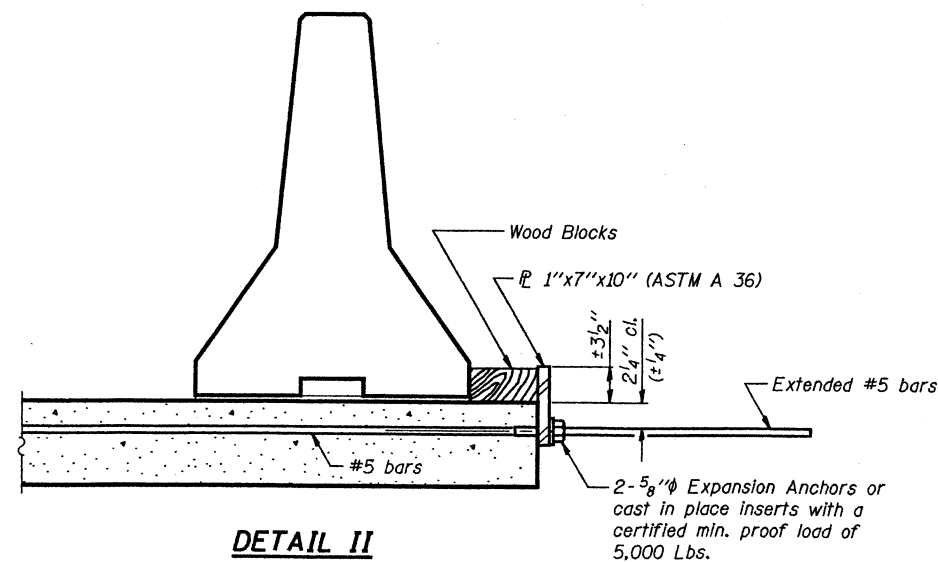
NOTES

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



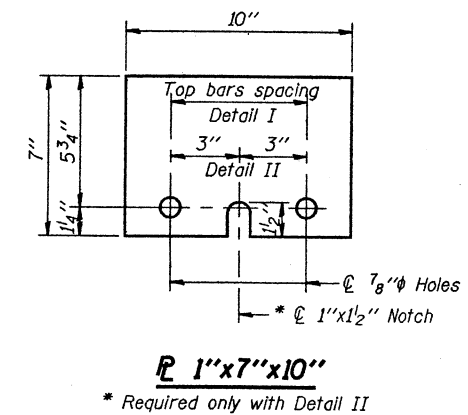
DETAIL I

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.



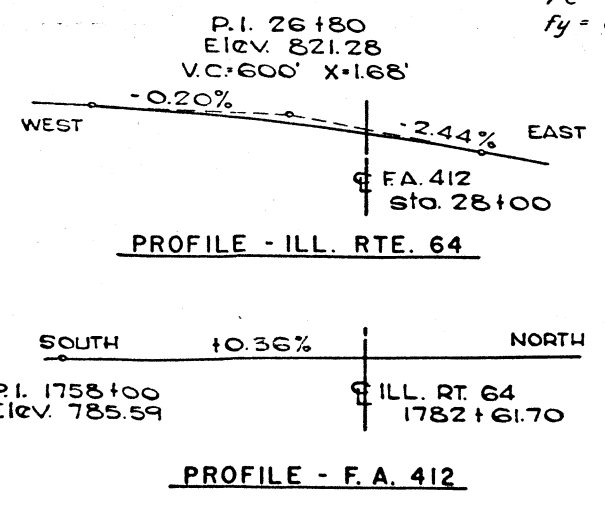
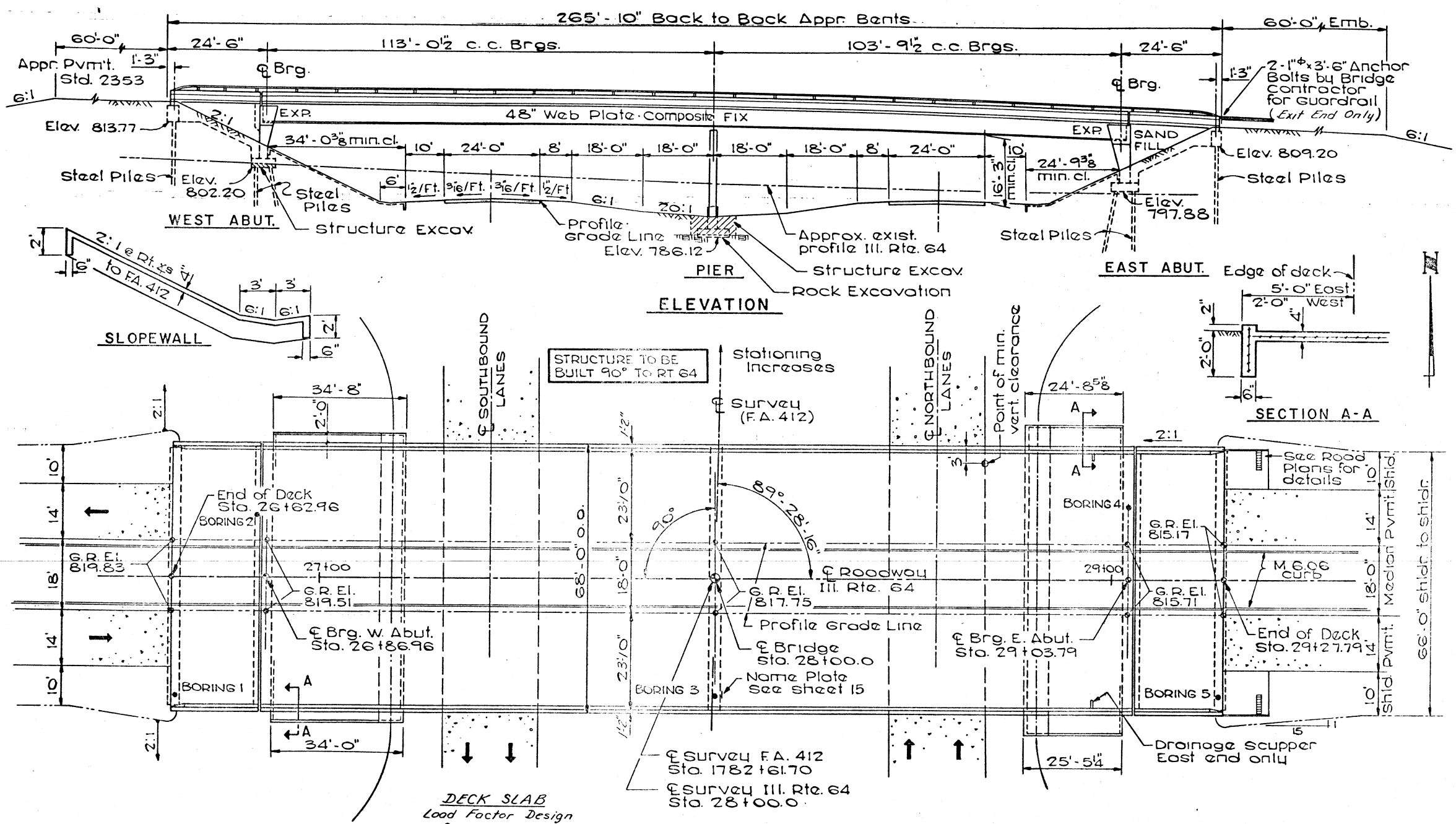
TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION

ILL. RTE 64
OVER F.A.I. RTE. 39 (I-39 & US51)
SECTION (141, 201) RS
WINNEBAGO AND OGLE COUNTIES
SN 071-0055

DESIGNED
CHECKED
DRAWN
CHECKED

R-27 4-30-99

BENCH MARK: P.K. & Washer in Power
Pole No. Side Rt. 64 197.5' + Rt. 1783 + 00
Elev. 796.05



DESIGN STRESSES

$f_c = 1400$ psi Except as follows

- $f_c = 1000$ psi Conc. in contact with earth
- $f_s = 20,000$ psi AASHTO M183 Struct. Steel
- $f_s = 20,000$ psi Reinforcement
- $v = 75$ psi allowable shear in footings
- $n = 10$

Allowable Live Load Deflection $L/1200$ (Composite)

DESIGN LOADING

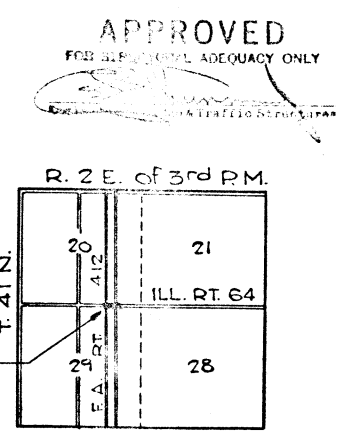
HS 20-44 Allowance for 25 p.s.f. future wearing surface

Structure designed in accordance with AASHTO specifications dated 1973.

BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUB.	SUPER.	TOTAL
Structure Excavation	Cu.Yds.	118		118
Bit. Conc. Surf. Course, Mixture D-class I	Tons		115	115
Protective Coat	Sq.Yds.		721	721
Class X Concrete	Cu.Yds.	398.0	689.9	1087.9
Structural Steel	L. Sum		32	32
Aluminum Rolling	Lin. Ft.		525	525
Steel Piles HP 8x36	Lin. Ft.	1101		1101
Test Piles - Steel HP 8x36	Eo.	2		2
Reinforcement Bars	Lbs.	49480	154080	203560
Waterproofing Membrane System	Sq.Yds.		1395	1395
Preformed Joint Sealer 4"	Lin. Ft.		137	137
Name Plates	Eo.		1	1
Slope wall 4"	Sq.Yds.	619		619
Stud shear connectors	Eo.		4266	4266
Rock Excavation for Structures	Cu.Yds.	7.1		7.1
Sand Backfill	Cu.Yds.	426		426
Drainage Scuppers	Eo.		2	2

STA. 1782+61.70
BUILT 197 BY
STATE OF ILLINOIS
FA RT. 412 SEC. 141-2HB-1
F.A. PROJ. FFD-412-5(10)
LOADING HS 20
STR. NO. _____
(STR. NO. TO BE SUPPLIED BY DIST.)
NAME PLATE
See std. 2113



GENERAL PLAN & ELEVATION
FA RTE. 412 SECTION 141-2HB-1
ILL. RTE. 64
OVER FA RTE 412
OGLE COUNTY
STATION 1782+61.70

DESIGN BY
D. E. HUFFMAN
DATE SEPT. 1975

DRAWN BY
R. RHODES
DATE OCT. 1975

CHECKED BY
B. THOMPSON
DATE OCT. 1975

APPROVED BY
Rev. 5/3/76
Rev. DEC. 75

PREPARED BY
MISSMAN, STANLEY & ASSOCIATES
CONSULTING ENGINEERS
ROCK ISLAND, ILLINOIS

Deck slab reinforcement shall conform to AASHTO M31 or M53 Grade 60.

GENERAL NOTES:

ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIA. UNLESS OTHERWISE SHOWN.

FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 7/8" DIA., OPEN H 15/16" DIA., UNLESS OTHERWISE NOTED.

* CALCULATED WEIGHT OF STRUCTURAL STEEL = 563,180 lbs.

THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SH AND FIELD PAINTING OF STRUCTURAL STEEL.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF THE GIRDERS NOR TO THE TOP FLANGE FOR DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM T PIER SUPPORT. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ON WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS COVER SUPPO

SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" x 6" ME 14 X 14 WIRE, WEIGHING 58 LBS. PER 100 SQ. FT.

THE CONTRACTOR SHALL DRIVE ONE STEEL TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.

THE CONCRETE RAIL SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE EXCEPT THE AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF HANDRAIL CONCRETE.

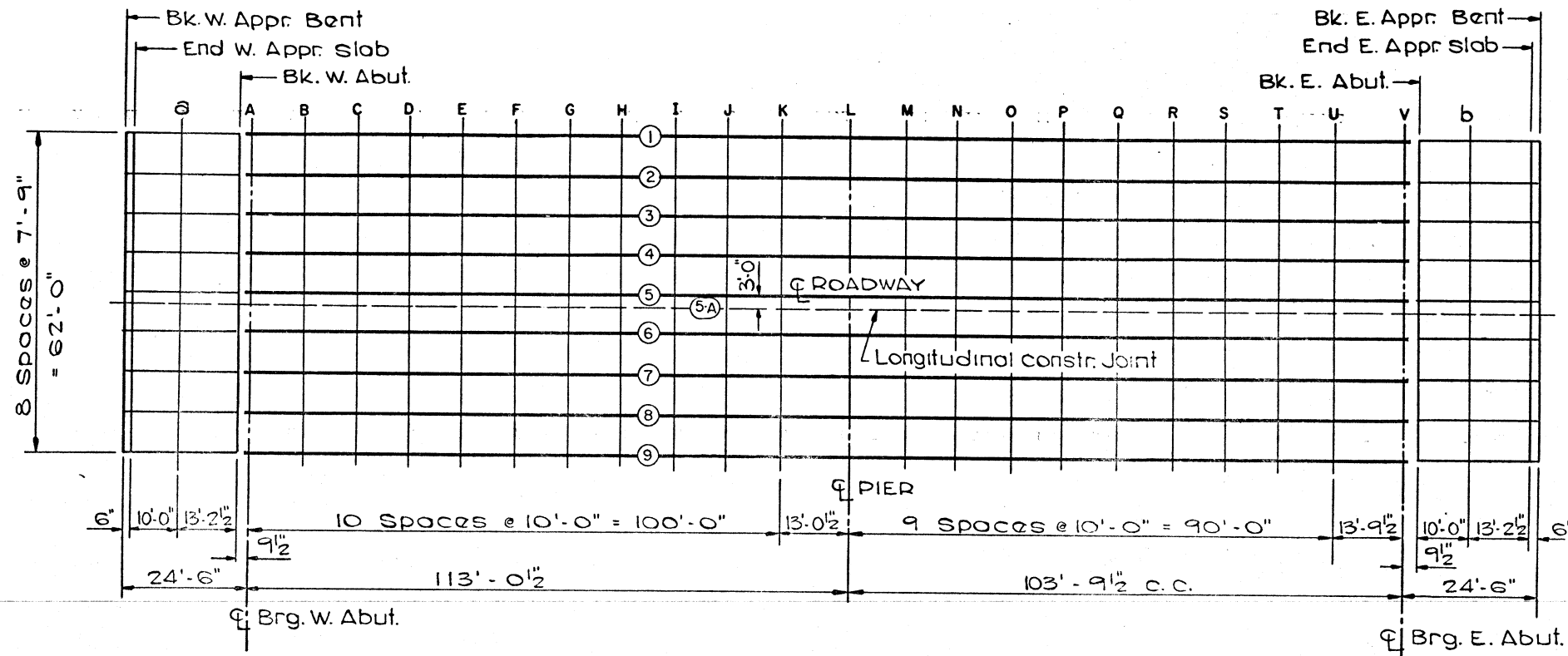
PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATER PROOFING MEMBRANE SYSTEM IS APPLIED.

BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.

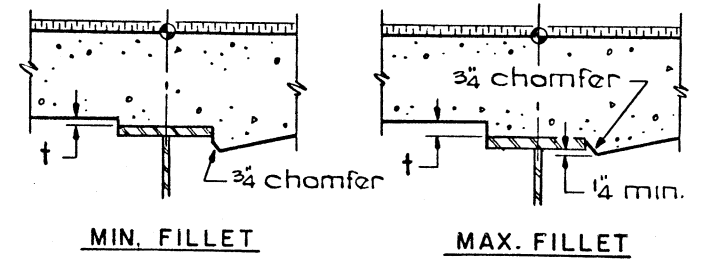
THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ARE THE FLANGES, AS DESIGNATED ON ELEVATION, WEBS AND ALL SPLICE PLATES OF THE STEEL GIRDERS.

FOR BORING DATA SEE SPECIAL PROVISIONS.

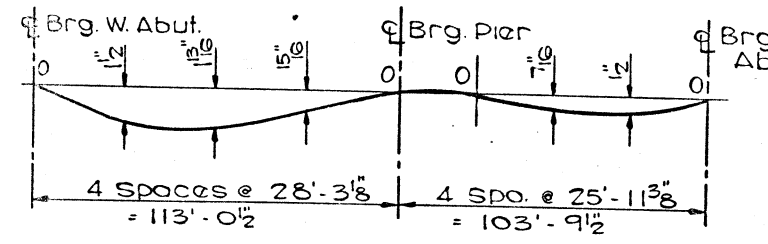
**THEORETICAL GRADE ELEVATIONS
ADJUSTED FOR DEAD LOAD DEFLECTION**



PLAN VIEW



FILLET HEIGHTS "t":
To determine t: After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at the intervals shown at left. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown in tables at left, minus slab (8") equals the fillet heights "t" above top flange of beams.



DEAD LOAD DEFLECTION DIAGRAM
Diagram includes weight of concrete. The deflections shown are not to be used in the field if the Engineer is working from the Theoretical Top of Slab Elevs. Adjusted for Dead Load Deflections.

TOP OF SLAB ELEVATIONS
FA RTE. 412 SECTION 141-2HB-1
ILL. RTE. 64 OVER FA 412
OGLE COUNTY
STATION 1782+61.70

**THEORETICAL GRADE ELEVATIONS
 ADJUSTED FOR DEAD LOAD DEFLECTION
 ELEVATIONS SHOWN ARE TO TOP OF CONCRETE SURFACE
 SPAN I**

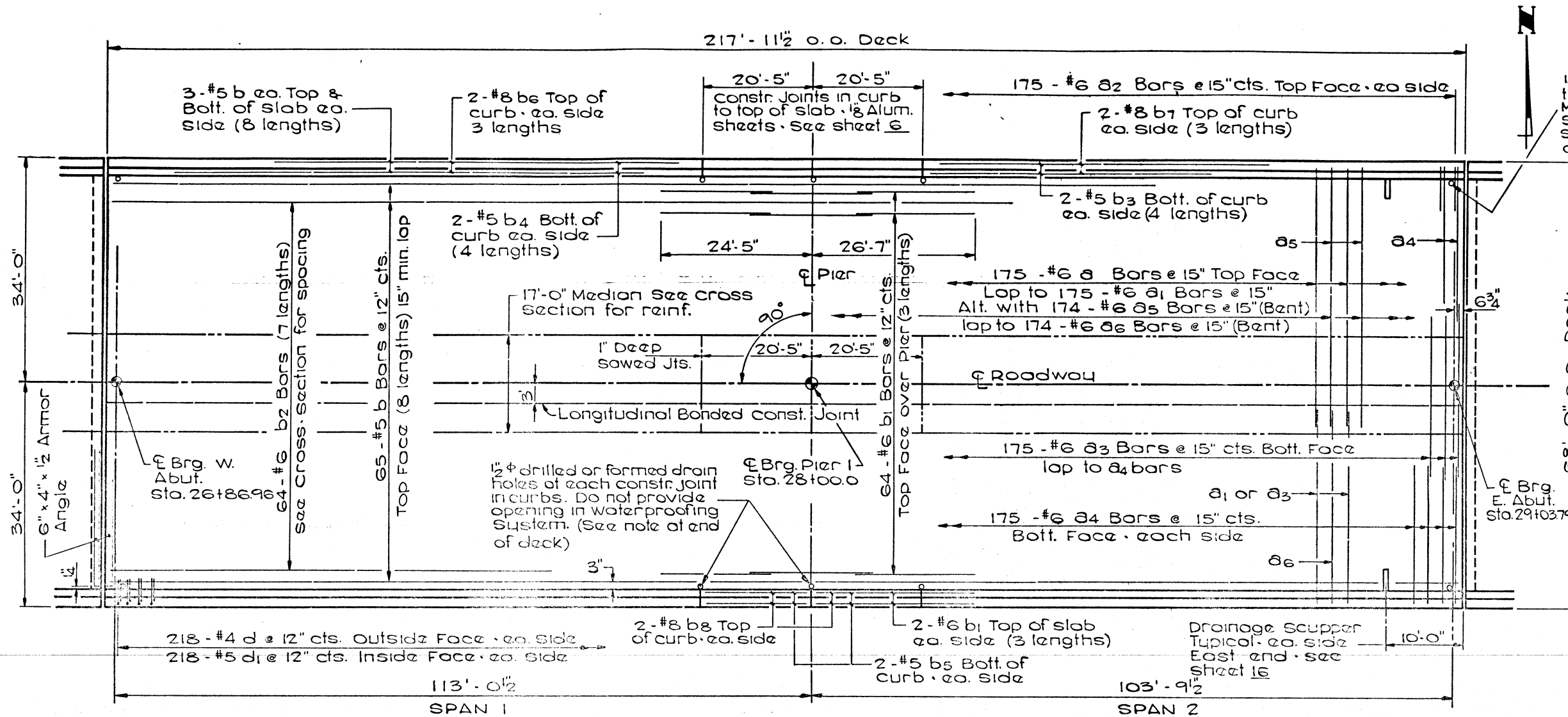
LOCATION	STATION	THEORETICAL GRADE ELEVATION	THEO. GRADE ELEV ADJ FOR DEAD LOAD DEFL	DEFLECTION	BEAM 1 OFFSET 31.0000' LENGTH 113.0417'	LOCATION	STATION	THEORETICAL GRADE ELEVATION	THEO. GRADE ELEV ADJ FOR DEAD LOAD DEFL	DEFLECTION	BEAM 5 OFFSET 0.0000' LENGTH 113.0417'	LOCATION	STATION	THEORETICAL GRADE ELEVATION	THEO. GRADE ELEV ADJ FOR DEAD LOAD DEFL	DEFLECTION	BEAM 7 OFFSET -15.5000' LENGTH 113.0417'	LOCATION	STATION	THEORETICAL GRADE ELEVATION	THEO. GRADE ELEV ADJ FOR DEAD LOAD DEFL	DEFLECTION	
BEAM 1 OFFSET 31.0000'																							
BK W APPR BENT	26+62.4583	819.3155	819.3155	0	A	26 + 86.9583	818.9968	818.9968	0.0000	A	26 + 86.9583	819.5228	819.5228	0.0000	A	26 + 86.9583	819.2806	819.2806	0.0000				
BK W APPR SLAB	26+62.9583	819.3091	819.3091	0	B	26 + 96.9583	818.8603	818.9119	.0516	B	26 + 96.9583	819.3864	819.4380	.0516	B	26 + 96.9583	819.1442	819.1958	.0516				
a	26+72.9583	819.1816	819.1816	0	C	27 + 6.9583	818.7201	818.8171	.0970	C	27 + 6.9583	819.2462	819.3432	.0970	C	27 + 6.9583	819.0040	819.1010	.0970				
BK W ABUT	26+86.1667	819.0075	819.0075	0	D	27 + 16.9583	818.5762	818.7078	.1316	D	27 + 16.9583	819.1023	819.2339	.1316	D	27 + 16.9583	818.8600	818.9916	.1316				
BEAM 2 OFFSET 23.2500'																							
BK W APPR BENT	26+62.4583	819.4769	819.4769	0	E	27 + 26.9583	818.4285	818.5809	.1524	E	27 + 26.9583	818.9546	819.1070	.1524	E	27 + 26.9583	818.7124	818.8648	.1524				
BK W APPR SLAB	26+62.9583	819.4705	819.4705	0	F	27 + 36.9583	818.2771	818.4351	.1580	F	27 + 36.9583	818.8032	818.9612	.1580	F	27 + 36.9583	818.5610	818.7190	.1580				
a	26+72.9583	819.3430	819.3430	0	G	27 + 46.9583	818.1220	818.2706	.1486	G	27 + 46.9583	818.6481	818.7967	.1486	G	27 + 46.9583	818.4059	818.5545	.1486				
BK W ABUT	26+86.1667	819.1689	819.1689	0	H	27 + 56.9583	817.9631	818.0895	.1264	H	27 + 56.9583	818.4892	818.6156	.1264	H	27 + 56.9583	818.2470	818.3734	.1264				
BEAM 3 OFFSET 15.5000'																							
BK W APPR BENT	26+62.4583	819.5993	819.5993	0	I	27 + 66.9583	817.8005	817.8952	.0947	I	27 + 66.9583	818.3266	818.4213	.0947	I	27 + 66.9583	818.0844	818.1791	.0947				
BK W APPR SLAB	26+62.9583	819.5929	819.5929	0	J	27 + 76.9583	817.6342	817.6937	.0595	J	27 + 76.9583	818.1603	818.2198	.0595	J	27 + 76.9583	817.9181	817.9776	.0595				
a	26+72.9583	819.4654	819.4654	0	K	27 + 86.9583	817.4641	817.4919	.0278	K	27 + 86.9583	817.9902	818.0180	.0278	K	27 + 86.9583	817.7480	817.7758	.0278				
BK W ABUT	26+86.1667	819.2913	819.2913	0	L	28 + 0.0000	817.2367	817.2367	0.0000	L	27 + 96.9583	817.8164	817.8213	.0049	L	27 + 96.9583	817.5742	817.5791	.0049				
BEAM 4 OFFSET 7.7500'																							
BK W APPR BENT	26+62.4583	819.7204	819.7204	0	A	26 + 86.9583	819.1582	819.1582	0.0000	A	26 + 86.9583	819.4760	819.4760	0.0000	A	26 + 86.9583	819.1582	819.1582	0.0000				
BK W APPR SLAB	26+62.9583	819.7140	819.7140	0	B	26 + 96.9583	819.0218	819.0734	.0516	B	26 + 96.9583	819.3395	819.3911	.0516	B	26 + 96.9583	819.0218	819.0734	.0516				
a	26+72.9583	819.5865	819.5865	0	C	27 + 6.9583	818.8816	818.9786	.0970	C	27 + 6.9583	819.1993	819.2963	.0970	C	27 + 6.9583	818.8816	818.9786	.0970				
BK W ABUT	26+86.1667	819.4124	819.4124	0	D	27 + 16.9583	818.7376	818.8692	.1316	D	27 + 16.9583	819.0554	819.1870	.1316	D	27 + 16.9583	818.7376	818.8692	.1316				
BEAM 5 OFFSET 0.0000'																							
BK W APPR BENT	26+62.4583	819.8415	819.8415	0	E	27 + 26.9583	818.5900	818.7424	.1524	E	27 + 26.9583	818.9077	819.0601	.1524	E	27 + 26.9583	818.5900	818.7424	.1524				
BK W APPR SLAB	26+62.9583	819.8351	819.8351	0	F	27 + 36.9583	818.4386	818.5966	.1580	F	27 + 36.9583	818.7563	818.9143	.1580	F	27 + 36.9583	818.4386	818.5966	.1580				
a	26+72.9583	819.7076	819.7076	0	G	27 + 46.9583	818.2835	818.4321	.1486	G	27 + 46.9583	818.6012	818.7498	.1486	G	27 + 46.9583	818.2835	818.4321	.1486				
BK W ABUT	26+86.1667	819.5335	819.5335	0	H	27 + 56.9583	818.1246	818.2510	.1264	H	27 + 56.9583	818.4423	818.5687	.1264	H	27 + 56.9583	818.1246	818.2510	.1264				
LONG JT OFFSET -3.0000'																							
BK W APPR BENT	26+62.4583	819.7947	819.7947	0	I	27 + 66.9583	817.9620	818.0567	.0947	I	27 + 66.9583	818.2797	818.3744	.0947	I	27 + 66.9583	817.9620	818.0567	.0947				
BK W APPR SLAB	26+62.9583	819.7883	819.7883	0	J	27 + 76.9583	817.7957	817.8552	.0595	J	27 + 76.9583	818.1134	818.1729	.0595	J	27 + 76.9583	817.7957	817.8552	.0595				
a	26+72.9583	819.6608	819.6608	0	K	27 + 86.9583	817.6256	817.6534	.0278	K	27 + 86.9583	817.9433	817.9711	.0278	K	27 + 86.9583	817.6256	817.6534	.0278				
BK W ABUT	26+86.1667	819.4867	819.4867	0	L	28 + 0.0000	817.4518	817.4567	.0049	L	27 + 96.9583	817.7695	817.7744	.0049	L	27 + 96.9583	817.4518	817.4567	.0049				
BEAM 6 OFFSET -7.7500'																							
BK W APPR BENT	26+62.4583	819.7204	819.7204	0	A	26 + 86.9583	819.2806	819.2806	0.0000	A	26 + 86.9583	819.4017	819.4017	0.0000	A	26 + 86.9583	819.2806	819.2806	0.0000				
BK W APPR SLAB	26+62.9583	819.7140	819.7140	0	B	26 + 96.9583	819.1442	819.1958	.0516	B	26 + 96.9583	819.2653	819.3169	.0516	B	26 + 96.9583	819.1442	819.1958	.0516				
a	26+72.9583	819.5865	819.5865	0	C	27 + 6.9583	819.0040	819.1010	.0970	C	27 + 6.9583	819.1251	819.2221	.0970	C	27 + 6.9583	819.0040	819.1010	.0970				
BK W ABUT	26+86.1667	819.4124	819.4124	0	D	27 + 16.9583	818.8600	818.9916	.1316	D	27 + 16.9583	819.9812	819.1128	.1316	D	27 + 16.9583	818.8600	818.9916	.1316				
BEAM 7 OFFSET -15.5000'																							
BK W APPR BENT	26+62.4583	819.5993	819.5993	0	E	27 + 26.9583	818.7124	818.8648	.1524	E	27 + 26.9583	818.8335	818.9859	.1524	E	27 + 26.9583	818.7124	818.8648	.1524				
BK W APPR SLAB	26+62.9583	819.5929	819.5929	0	F	27 + 36.9583	818.5610	818.7190	.1580	F	27 + 36.9583	818.6821	818.8401	.1580	F	27 + 36.9583	818.5610	818.7190	.1580				
a	26+72.9583	819.4654	819.4654	0	G	27 + 46.9583	818.4059	818.5545	.1486	G	27 + 46.9583	818.5270	818.6756	.1486	G	27 + 46.9583	818.4059	818.5545	.1486				
BK W ABUT	26+86.1667	819.2913	819.2913	0	H	27 + 56.9583	818.2470	818.3734	.1264	H	27 + 56.9583	818.3681	818.4945	.1264	H	27 + 56.9583	818.2470	818.3734	.1264				
BEAM 8 OFFSET -23.2500'																							
BK W APPR BENT	26+62.4583	819.4769	819.4769	0	I	27 + 66.9583	818.0844	818.1791	.0947	I	27 + 66.9583	818.2055	818.3002	.0947	I	27 + 66.9583	818.0844	818.1791	.0947				
BK W APPR SLAB	26+62.9583	819.4705	819.4705	0	J	27 + 76.9583	817.9181	817.9776	.0595	J	27 + 76.9583	818.0392	818.0987	.0595	J	27 + 76.9583	817.9181	817.9776	.0595				
a	26+72.9583	819.3430	819.3430	0	K	27 + 86.9583	817.7480	817.7758	.0278	K	27 + 86.9583	817.8691	817.8969	.0278	K	27 + 86.9583	817.7480	817.7758	.0278				
BK W ABUT	26+86.1667	819.1689	819.1689	0	L	28 + 0.0000	817.5206	817.5206	0.0000	L	27 + 96.9583	817.6953	817.7002	.0049	L	27 + 96.9583	817.5206	817.5206	0.0000				
BEAM 9 OFFSET -31.0000'																							
BK W APPR BENT	26+62.4583	819.3155	819.3155	0	A	26 + 86.9583	819.4017	819.4017	0.0000	A	26 + 86.9583	819.4017	819.4017	0.0000	A	26 + 86.9583	819.3155	819.3155	0.0000				
BK W APPR SLAB	26+62.9583	819.3091	819.3091	0	B	26 + 96.9583	819.2653	819.3169	.0516	B	26 + 96.9583	819.2653	819.3169	.0516	B	26 + 96.9583	819.3091	819.3091	0.0000				
a	26+72.9583	819.1816	819.1816	0	C	27 + 6.9583	819.1251	819.2221	.0970	C	27 + 6.9583	819.1251	819.2221	.0970	C	26 + 96.9583	819.1816	819.1816	0.0000				
BK W ABUT	26+86.1667	819.0075	819.0075	0	D	27 + 16.9583	818.9812	819.1128	.1316	D	27 + 16.9583	819.1128	819.1128	.1316	D	26 + 72.9583	819.0075	819.0075	0.0000				
BEAM 4 OFFSET 7.7500' LENGTH 113.0417'																							
A	26 + 86.9583	819.4017	819.4017	0.0000	A	26 + 86.9583	819.4017	819.4017	0.0000	A	26 + 86.9583	819.4017	819.4017	0.0000	A	26 + 86.9583	819.4017	819.4017	0.0000				
B	26 + 96.9583	819.2653	819.3169	.0516	B	26 + 96.9583	819.2653	819.3169	.0516	B	26 + 96.9583	819.2653	819.3169	.0516	B	26 + 96.9583	819.2653	819.3169	.0516				
C	27 + 6.9583	819.1251	819.2221	.0970	C	27 + 6.9583	819.1251	819.2221	.0970	C	27 + 6.9583	819.1251	819.2221	.0970	C	27 + 6.9583	819.1251	819.2221	.0970				
D	27 + 16.9583	818.9812	819.1128	.1316	D	27 + 16.9583	818.9812	819.1128	.1316	D	27 + 16.9583	818.9812	819.1128	.1316	D	27 + 16.9583	818.9812	819.1128	.1316				
E	27 + 26.9583	818.8335	818.9859	.1524	E	27 + 26.9583	818.8335	818.9859	.1524	E	27 + 26.9583	818.8335	818.9859	.1524	E	27 + 26.9583	818.8335	818.9859	.1524				
F	27 + 36.9583	818.6821	818.8401	.1580	F	27 + 36.9583	818.6821	818.8401	.1580	F	27 + 36.9583	818.6821	818.8401	.1580	F	27 + 36.9583	818.6821	818.8401	.1580				
G	27 + 46.9583	818.5270	818.6756	.1486	G	27 + 46.9583	818.5270	818.6756	.1486	G	27 + 46.9583	818.5270	818.6756	.1486	G	27 + 46.9583	818.5270	818.6756	.1486				
H	27 + 56.9583	818.3681	818.4945	.1264	H	27 + 56.9583	818.3681	818.4945	.1264	H	27 + 56.9583	818.3681	818.4945	.1264	H	27 + 56.9583	818.3681	818.4945	.1264				
I	27 + 66.9583	818.2055	818.3002	.0947	I	27 + 66.9583	818.2055	818.3002	.0947	I	27 + 66.9583	818.2055	818.3002	.0947	I	27 + 66.9583	818.2055	818.3002	.0947				
J	27 + 76.9583	818.0392	818.0987	.0595	J	27 + 76.9583	818.0392	818.0987	.0595	J	27 + 76.9583	818.0392	818.0987	.0595	J	27 + 76.9583	818.0392	818.0987	.0595				
K	27 + 86.9583	817.8691	817.8969	.0278																			

THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION ELEVATIONS SHOWN ARE TO TOP OF CONCRETE SURFACE

SPAN 2

BEAM 1 OFFSET 31.0000' LENGTH 103.7917'					BEAM 5 OFFSET 0.0000' LENGTH 103.7917'					BEAM 7 OFFSET -15.5000' LENGTH 103.7917'					LOCATION STATION THEORETICAL GRADE ELEVATION THEO. GRADE ELEV ADJ FOR DEAD LOAD DEFL DEFLECTION				
LOCATION	STATION	THEORETICAL GRADE ELEVATION	THEO. GRADE ELEV ADJ FOR DEAD LOAD DEFL	DEFLECTION	LOCATION	STATION	THEORETICAL GRADE ELEVATION	THEO. GRADE ELEV ADJ FOR DEAD LOAD DEFL	DEFLECTION	LOCATION	STATION	THEORETICAL GRADE ELEVATION	THEO. GRADE ELEV ADJ FOR DEAD LOAD DEFL	DEFLECTION	BEAM 1 OFFSET 31.0000'	STATION	THEORETICAL GRADE ELEVATION	THEO. GRADE ELEV ADJ FOR DEAD LOAD DEFL	DEFLECTION
L	28 + 0.0000	817.2367	817.2367	0.0000	L	28 + 0.0000	817.7628	817.7628	0.0000	L	28 + 0.0000	817.5206	817.5206	0.0000	BK E ABUT	29+04.5833	815.1836	815.1836	0
M	28 + 10.0000	817.0581	817.0495	-0.0086	M	28 + 10.0000	817.5841	817.5755	-0.0086	M	28 + 10.0000	817.3419	817.3333	-0.0086	b	29+14.5833	814.9659	814.9659	0
N	28 + 20.0000	816.8757	816.8694	-0.0063	N	28 + 20.0000	817.4017	817.3954	-0.0063	N	28 + 20.0000	817.1595	817.1532	-0.0063	BK E APPR SLAB	29+27.7917	814.6726	814.6726	0
O	28 + 30.0000	816.6895	816.6939	.0044	O	28 + 30.0000	817.2156	817.2200	.0044	O	28 + 30.0000	816.9734	816.9778	.0044	BK E APPR BENT	29+28.2917	814.6614	814.6614	0
P	28 + 40.0000	816.4997	816.5186	.0189	P	28 + 40.0000	817.0257	817.0446	.0189	P	28 + 40.0000	816.7835	816.8024	.0189	BEAM 2 OFFSET 23.2500'				
Q	28 + 50.0000	816.3061	816.3393	.0332	Q	28 + 50.0000	816.8321	816.8653	.0332	Q	28 + 50.0000	816.5899	816.6231	.0332	BK E ABUT	29+04.5833	815.3450	815.3450	0
R	28 + 60.0000	816.1087	816.1518	.0431	R	28 + 60.0000	816.6348	816.6779	.0431	R	28 + 60.0000	816.3926	816.4357	.0431	b	29+14.5833	815.1273	815.1273	0
S	28 + 70.0000	815.9077	815.9535	.0458	S	28 + 70.0000	816.4337	816.4795	.0458	S	28 + 70.0000	816.1915	816.2373	.0458	BK E APPR SLAB	29+27.7917	814.8340	814.8340	0
T	28 + 80.0000	815.7029	815.7431	.0402	T	28 + 80.0000	816.2289	816.2691	.0402	T	28 + 80.0000	815.9867	816.0269	.0402	BK E APPR BENT	29+28.2917	814.8228	814.8228	0
U	28 + 90.0000	815.4943	815.5212	.0269	U	28 + 90.0000	816.0204	816.0473	.0269	U	28 + 90.0000	815.7782	815.8051	.0269	BEAM 3 OFFSET 15.5000'				
V	29 + 0.0000	815.2821	815.2900	.0079	V	29 + 0.0000	815.8081	815.8160	.0079	V	29 + 0.0000	815.5659	815.5738	.0079	BK E ABUT	29+04.5833	815.4674	815.4674	0
V	29 + 3.7917	815.2006	815.2006	0.0000	V	29 + 3.7917	815.7267	815.7267	0.0000	V	29 + 3.7917	815.4845	815.4845	0.0000	b	29+14.5833	815.2497	815.2497	0
BEAM 2 OFFSET 23.2500' LENGTH 103.7917'					BEAM 5-A OFFSET -3.0000' LENGTH 103.7917'					BEAM 8 OFFSET -23.2500' LENGTH 103.7917'					BEAM 4 OFFSET 7.7500'				
L	28 + 0.0000	817.3982	817.3982	0.0000	L	28 + 0.0000	817.7159	817.7159	0.0000	L	28 + 0.0000	817.3982	817.3982	0.0000	BK E ABUT	29+04.5833	815.5885	815.5885	0
M	28 + 10.0000	817.2195	817.2109	-0.0086	M	28 + 10.0000	817.5373	817.5287	-0.0086	M	28 + 10.0000	817.2195	817.2109	-0.0086	b	29+14.5833	815.3708	815.3708	0
N	28 + 20.0000	817.0371	817.0308	-0.0063	N	28 + 20.0000	817.3549	817.3480	-0.0063	N	28 + 20.0000	817.0371	817.0308	-0.0063	BK E APPR SLAB	29+27.7917	815.0775	815.0775	0
O	28 + 30.0000	816.8510	816.8554	.0044	O	28 + 30.0000	817.1731	817.1687	.0044	O	28 + 30.0000	816.8510	816.8554	.0044	BK E APPR BENT	29+28.2917	815.0663	815.0663	0
P	28 + 40.0000	816.6611	816.6800	.0189	P	28 + 40.0000	816.9789	816.9978	.0189	P	28 + 40.0000	816.6611	816.6800	.0189	BEAM 5 OFFSET 0.0000'				
Q	28 + 50.0000	816.4675	816.5007	.0332	Q	28 + 50.0000	816.7853	816.8185	.0332	Q	28 + 50.0000	816.4675	816.5007	.0332	BK E ABUT	29+04.5833	815.7096	815.7096	0
R	28 + 60.0000	816.2702	816.3133	.0431	R	28 + 60.0000	816.5879	816.6310	.0431	R	28 + 60.0000	816.2702	816.3133	.0431	b	29+14.5833	815.4919	815.4919	0
S	28 + 70.0000	816.0691	816.1149	.0458	S	28 + 70.0000	816.3869	816.4327	.0458	S	28 + 70.0000	816.0691	816.1149	.0458	BK E APPR SLAB	29+27.7917	815.1986	815.1986	0
T	28 + 80.0000	815.8643	815.9045	.0402	T	28 + 80.0000	816.1821	816.2223	.0402	T	28 + 80.0000	815.8643	815.9045	.0402	BK E APPR BENT	29+28.2917	815.1874	815.1874	0
U	28 + 90.0000	815.6558	815.6827	.0269	U	28 + 90.0000	815.9735	816.0004	.0269	U	28 + 90.0000	815.6558	815.6827	.0269	LONG JT OFFSET -3.0000'				
V	29 + 0.0000	815.4435	815.4514	.0079	V	29 + 0.0000	815.7613	815.7692	.0079	V	29 + 0.0000	815.4435	815.4514	.0079	BK E ABUT	29+04.5833	815.6628	815.6628	0
V	29 + 3.7917	815.3621	815.3621	0.0000	V	29 + 3.7917	815.6798	815.6798	0.0000	V	29 + 3.7917	815.3621	815.3621	0.0000	b	29+14.5833	815.4451	815.4451	0
BEAM 3 OFFSET 15.5000' LENGTH 103.7917'					BEAM 6 OFFSET -7.7500' LENGTH 103.7917'					BEAM 9 OFFSET -31.0000' LENGTH 103.7917'					BEAM 6 OFFSET -7.7500'				
L	28 + 0.0000	817.5206	817.5206	0.0000	L	28 + 0.0000	817.6417	817.6417	0.0000	L	28 + 0.0000	817.2367	817.2367	0.0000	BK E ABUT	29+04.5833	815.5885	815.5885	0
M	28 + 10.0000	817.3419	817.3333	-0.0086	M	28 + 10.0000	817.4630	817.4544	-0.0086	M	28 + 10.0000	817.0581	817.0495	-0.0086	b	29+14.5833	815.3708	815.3708	0
N	28 + 20.0000	817.1595	817.1532	-0.0063	N	28 + 20.0000	817.2806	817.2743	-0.0063	N	28 + 20.0000	816.8757	816.8694	-0.0063	BK E APPR SLAB	29+27.7917	815.0775	815.0775	0
O	28 + 30.0000	816.9734	816.9778	.0044	O	28 + 30.0000	817.0945	817.0989	.0044	O	28 + 30.0000	816.6895	816.6939	.0044	BK E APPR BENT	29+28.2917	815.0663	815.0663	0
P	28 + 40.0000	816.7835	816.8024	.0189	P	28 + 40.0000	816.9046	816.9235	.0189	P	28 + 40.0000	816.4997	816.5186	.0189	BEAM 7 OFFSET -15.5000'				
Q	28 + 50.0000	816.5899	816.6231	.0332	Q	28 + 50.0000	816.7110	816.7442	.0332	Q	28 + 50.0000	816.3061	816.3393	.0332	BK E ABUT	29+04.5833	815.4674	815.4674	0
R	28 + 60.0000	816.3926	816.4357	.0431	R	28 + 60.0000	816.5137	816.5568	.0431	R	28 + 60.0000	816.1087	816.1518	.0431	b	29+14.5833	815.2497	815.2497	0
S	28 + 70.0000	816.1915	816.2373	.0458	S	28 + 70.0000	816.3126	816.3584	.0458	S	28 + 70.0000	815.9077	815.9535	.0458	BK E APPR SLAB	29+27.7917	814.9564	814.9564	0
T	28 + 80.0000	815.9867	816.0269	.0402	T	28 + 80.0000	816.1078	816.1480	.0402	T	28 + 80.0000	815.7029	815.7431	.0402	BK E APPR BENT	29+28.2917	814.9452	814.9452	0
U	28 + 90.0000	815.7782	815.8051	.0269	U	28 + 90.0000	815.8993	815.9262	.0269	U	28 + 90.0000	815.4943	815.5212	.0269	BEAM 8 OFFSET -23.2500'				
V	29 + 0.0000	815.5659	815.5738	.0079	V	29 + 0.0000	815.6870	815.6949	.0079	V	29 + 0.0000	815.2821	815.2900	.0079	BK E ABUT	29+04.5833	815.3450	815.3450	0
V	29 + 3.7917	815.4845	815.4845	0.0000	V	29 + 3.7917	815.6056	815.6056	0.0000	V	29 + 3.7917	815.2006	815.2006	0.0000	b	29+14.5833	815.1273	815.1273	0
BEAM 4 OFFSET 7.7500' LENGTH 103.7917'					BEAM 9 OFFSET -31.0000' LENGTH 103.7917'					BEAM 9 OFFSET -31.0000'									
L	28 + 0.0000	817.6417	817.6417	0.0000	L	28 + 0.0000	817.6417	817.6417	0.0000	L	28 + 0.0000	817.6417	817.6417	0.0000	BK E ABUT	29+04.5833	815.1836	815.1836	0
M	28 + 10.0000	817.4630	817.4544	-0.0086	M	28 + 10.0000	817.4630	817.4544	-0.0086	M	28 + 10.0000	817.4630	817.4544	-0.0086	b	29+14.5833	814.9659	814.9659	0
N	28 + 20.0000	817.2806	817.2743	-0.0063	N	28 + 20.0000	817.2806	817.2743	-0.0063	N	28 + 20.0000	817.2806	817.2743	-0.0063	BK E APPR SLAB	29+27.7917	814.6726	814.6726	0
O	28 + 30.0000	817.0945	817.0989	.0044	O	28 + 30.0000	817.0945	817.0989	.0044	O	28 + 30.0000	817.0945	817.0989	.0044	BK E APPR BENT	29+28.2917	814.6614	814.6614	0
P	28 + 40.0000	816.9046	816.9235	.0189	P	28 + 40.0000	816.9046	816.9235	.0189	P	28 + 40.0000	816.9046	816.9235	.0189	BEAM 9 OFFSET -31.0000'				
Q	28 + 50.0000	816.7110	816.7442	.0332	Q	28 + 50.0000	816.7110	816.7442	.0332	Q	28 + 50.0000	816.7110	816.7442	.0332	BK E ABUT	29+04.5833	815.3450	815.3450	0
R	28 + 60.0000	816.5137	816.5568	.0431	R	28 + 60.0000	816.5137	816.5568	.0431	R	28 + 60.0000	816.5137	816.5568	.0431	b	29+14.5833	815.1273	815.1273	0
S	28 + 70.0000	816.3126	816.3584	.0458	S	28 + 70.0000	816.3126	816.3584	.0458	S	28 + 70.0000	816.3126	816.3584	.0458	BK E APPR SLAB	29+27.7917	814.8340	814.8340	0
T	28 + 80.0000	816.1078	816.1480	.0402	T	28 + 80.0000	816.1078	816.1480	.0402	T	28 + 80.0000	816.1078	816.1480	.0402	BK E APPR BENT	29+28.2917	814.8228	814.8228	0
U	28 + 90.0000	815.8993	815.9262	.0269	U	28 + 90.0000	815.8993	815.9262	.0269	U	28 + 90.0000	815.8993	815.9262	.0269	BEAM 9 OFFSET -31.0000'				
V	29 + 0.0000	815.6870	815.6949	.0079	V	29 + 0.0000	815.6870	815.6949	.0079	V	29 + 0.0000	815.6870	815.6949	.0079	BK E ABUT	29+04.5833	815.1836	815.1836	0
V	29 + 3.7917	815.6056	815.6056	0.0000	V	29 + 3.7917	815.6056	815.6056	0.0000	V	29 + 3.7917	815.6056	815.6056	0.0000	b	29+14.5833	814.9659	814.9659	0

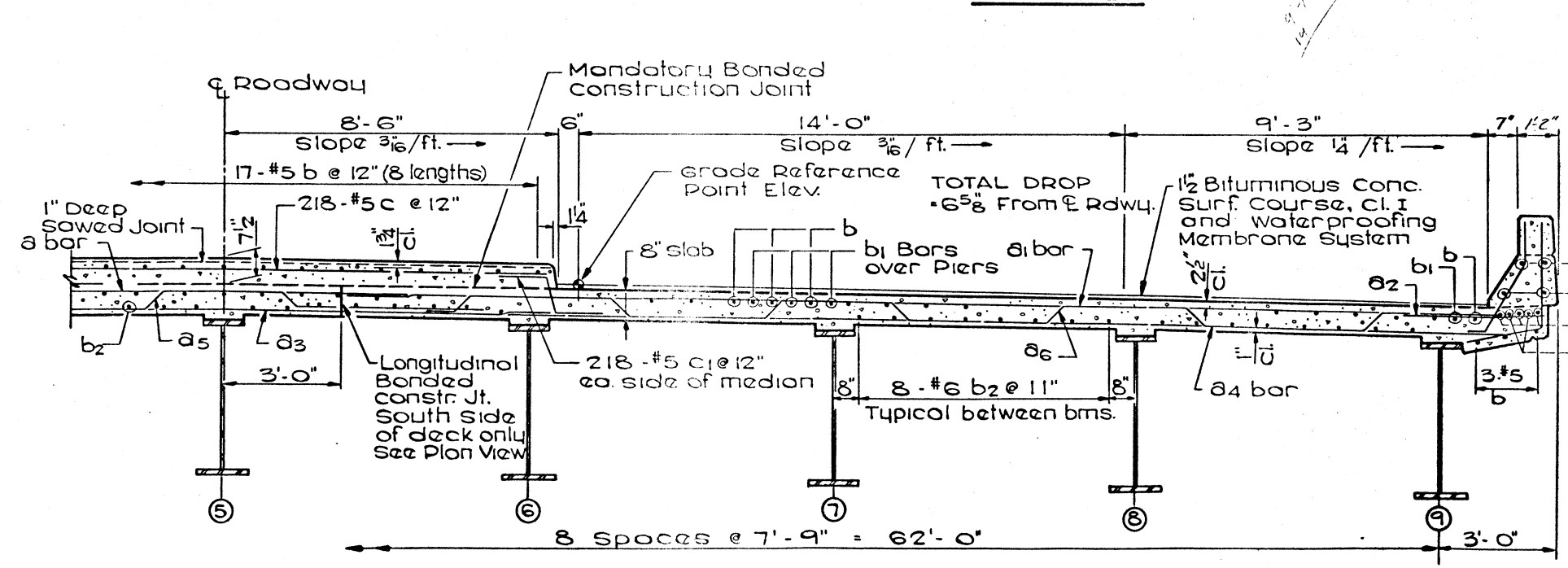
TOP OF SLAB ELEVATIONS
FA RTE. 412 SECTION 141-2HB-I
ILL. RT. 64 OVER FA 412
OGLE COUNTY
STATION 1782+61.70



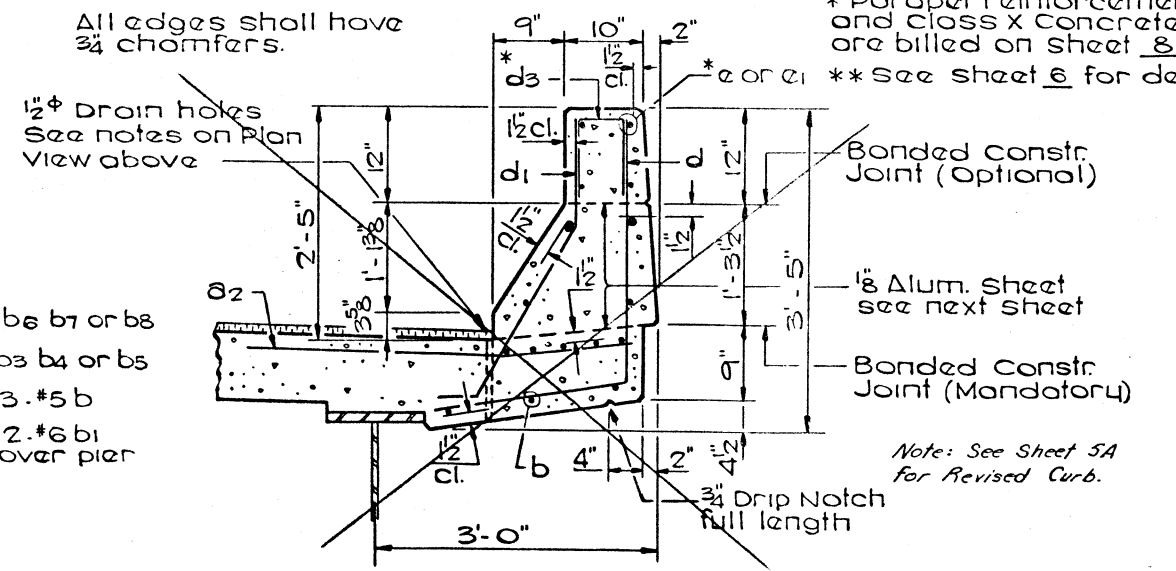
PLAN VIEW

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHA
a	175	#6	37'-6"	
a1	175	#6	29'-6"	
a2	350	#6	4'-0"	
a3	175	#6	17'-0"	
a4	350	#6	25'-6"	
a5	174	#6	40'-10"	
a6	174	#6	28'-10"	
b	752	#5	28'-6"	
b1	204	#6	18'-0"	
b2	448	#6	32'-6"	
b3	16	#5	21'-11"	
b4	16	#5	24'-3"	
b5	8	#5	20'-2"	
b6	12	#8	32'-5"	
b7	12	#8	29'-4"	
b8	8	#8	20'-2"	
c	218	#5	16'-6"	
c1	436	#5	3'-4"	
d	436	#4	4'-7"	
d1	436	#5	3'-7"	
Class X Concrete Cords				497
Reinforcement Bars Lbs.				11711

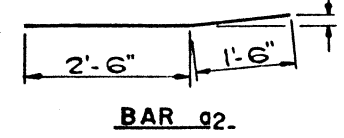


HALF CROSS SECTION
Looking East



CURB SECTION

SUPERSTRUCTURE DETAILS
F.A. RTE. 412 SECTION 141-2HB-1
ILL. RTE. 64 OVER F.A. 412
OGLE COUNTY
STATION 1782+61.70



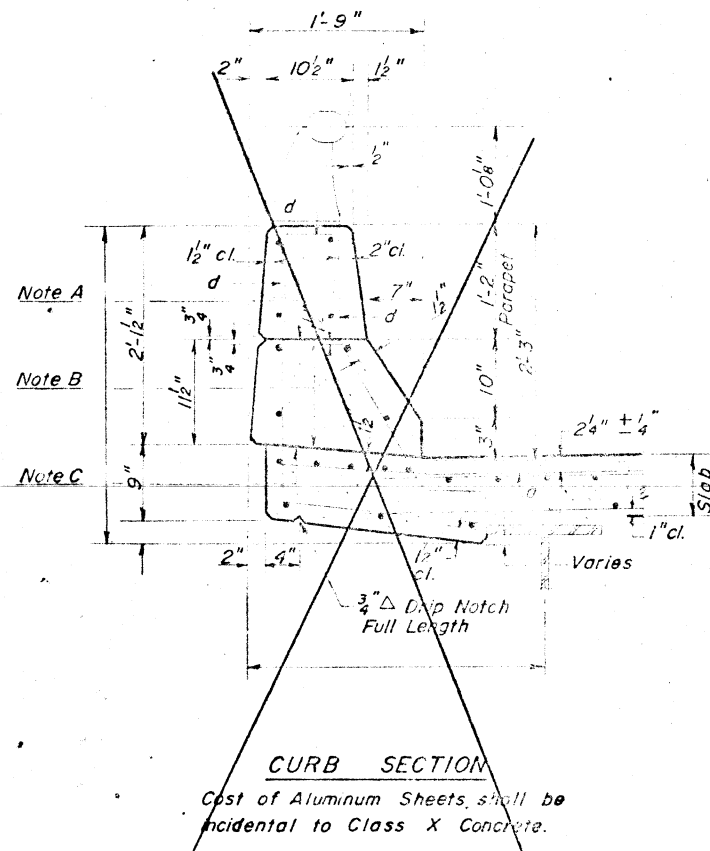
BAR a2

* Parapet reinforcement and Class X Concrete are billed on sheet 8
** See sheet 6 for details

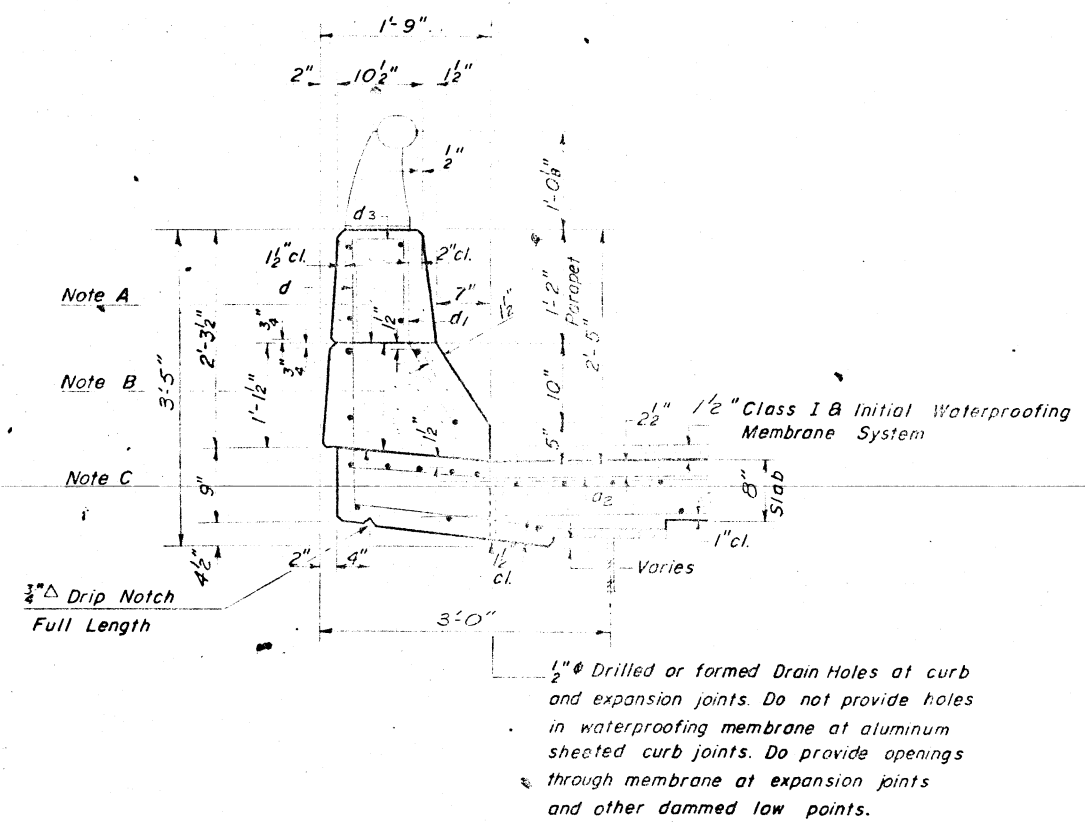
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 412	141-2HB-1	OGLE	288	128A

SHEET NO. 54
16 SHEETS



Note: All edges shall have 3/4" chamfer.



Note A - Bonded Construction Joint (Optional)

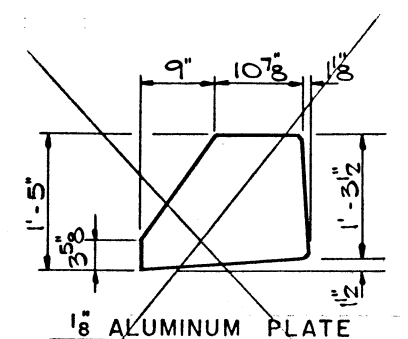
Note B - 1/8" Aluminum Sheets ASTM: B209 alloy 3003-H14

Note C - Bonded Construction Joint (Mandatory)

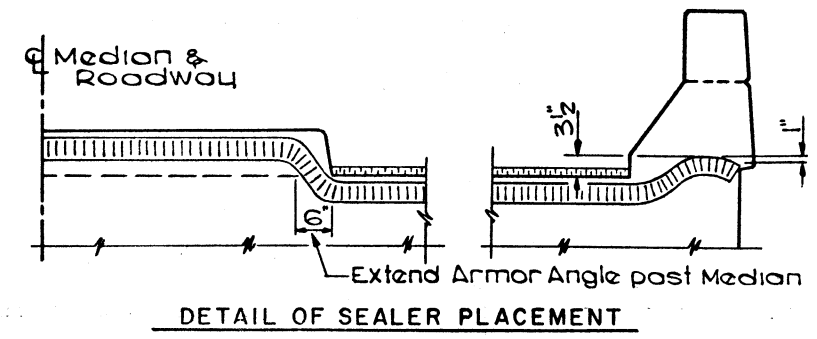
DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN: D. DERRINGER	APPROVED
CHECKED	

**SUPERSTRUCTURE
REVISED PARAPET CONFIGURATION**

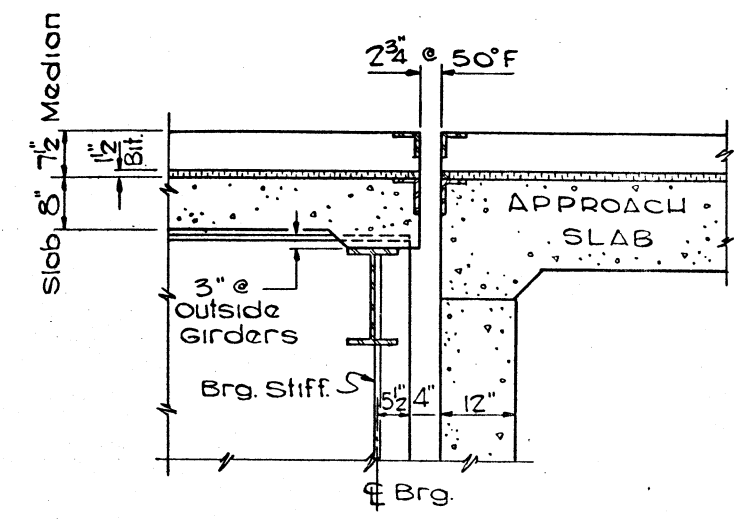
FA. RTE. 412 - SEC. 141-2HB-1
ILL. RTE. 64 OVER FA. 412
OGLE COUNTY
STA. 1782 + 64.70



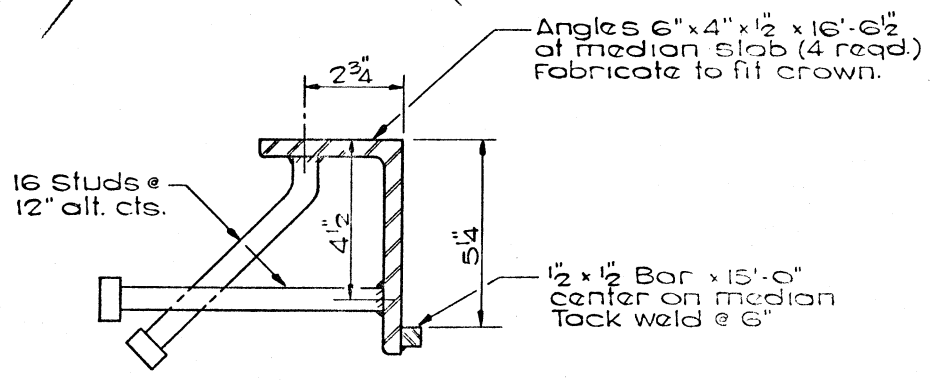
1/8" ALUMINUM PLATE
6 Required
1/8" Aluminum sheets ASTM B 209 Alloy 3003 H14. Cost shall be incidental to Class 1 concrete.



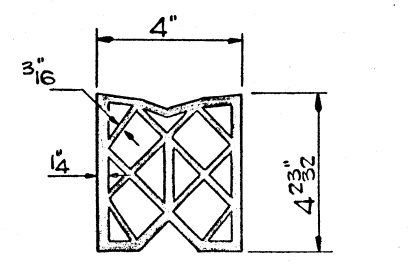
DETAIL OF SEALER PLACEMENT



SECTION AT END OF SLAB



ARMOR ANGLE AT END OF MEDIAN AT ABUTS.



PREFORMED JOINT SEALER (4")

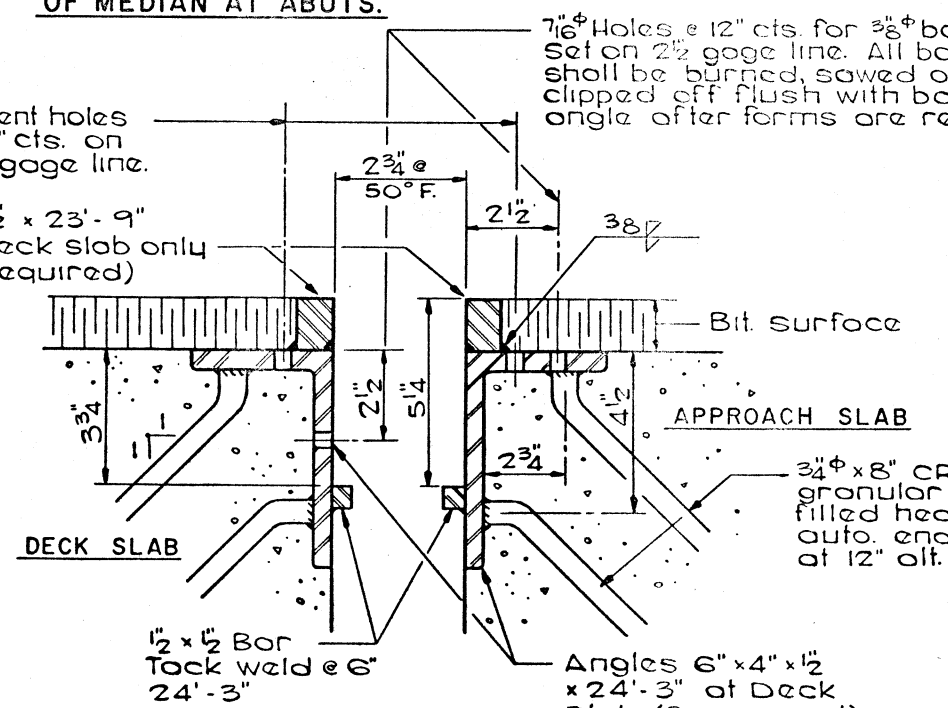
Angles 6" x 4" x 1/2" x 16'-6 1/2" of median slab (4 reqd.) Fabricate to fit crown.

1/2" x 1/2" Bar x 15'-0" Center on median Tack weld @ 6"

7/16" Holes @ 12" cts. for 3/8" bolts. Set on 2 1/2" gage line. All bolts shall be burned, sawed or clipped off flush with back of angle after forms are removed.

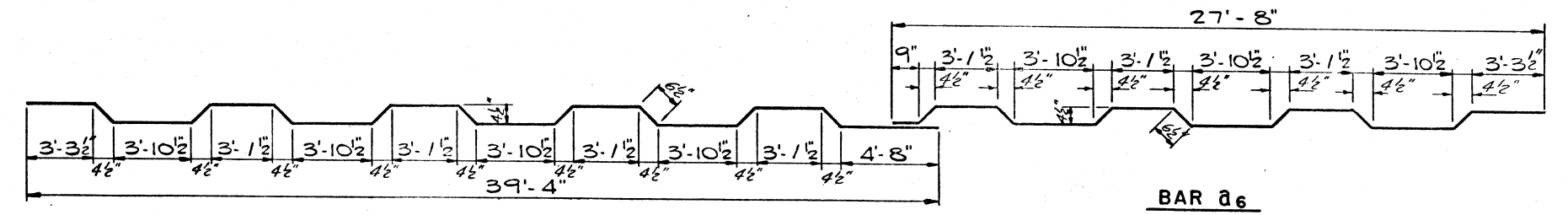
7/16" Vent holes @ 12" cts. on 1 5/8" gage line.

1" x 1 1/2" x 23'-9" At Deck slab only (8 required)



ARMOR ANGLES AT END OF SLAB & ABUTS

Angles 6" x 4" x 1/2" x 24'-3" at Deck Slab (8 required) 24 studs ea. angle Fabricate to fit crown

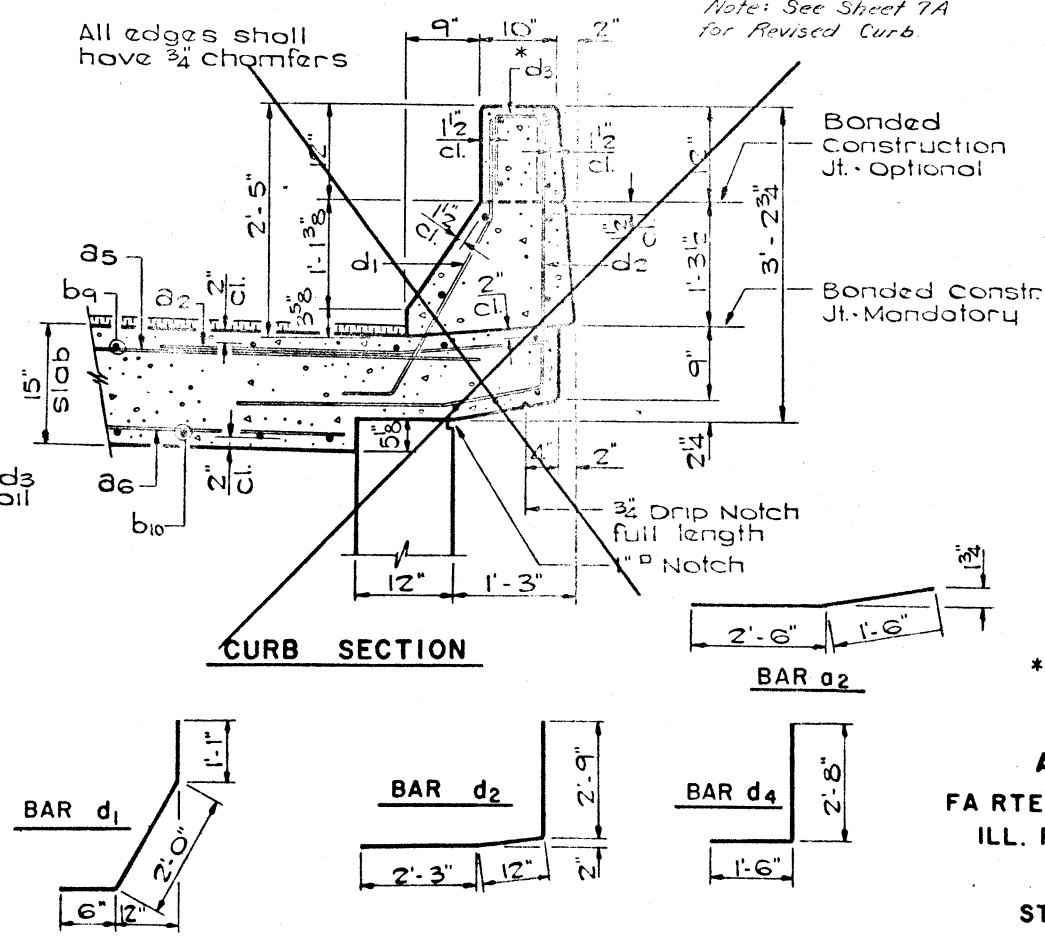
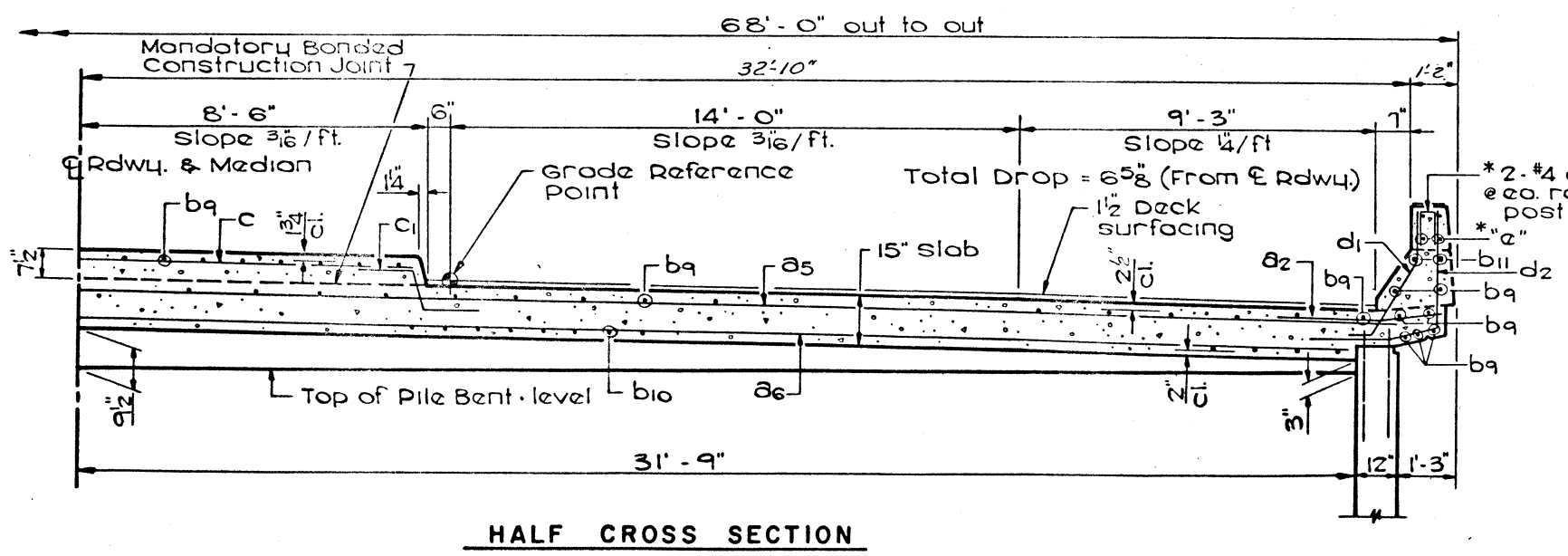
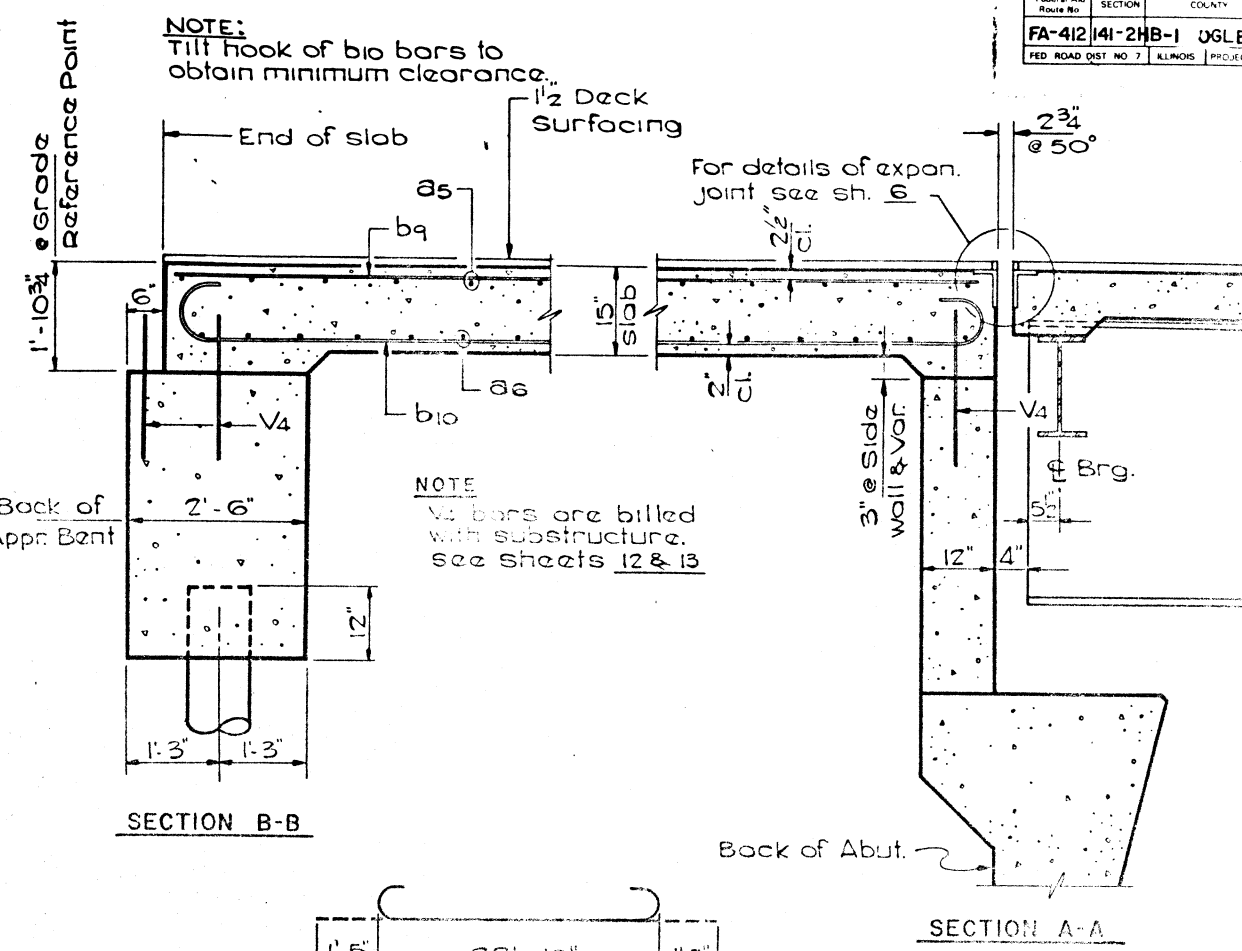
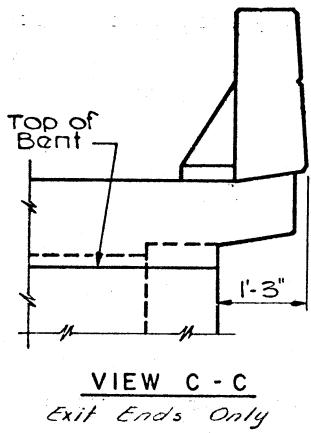
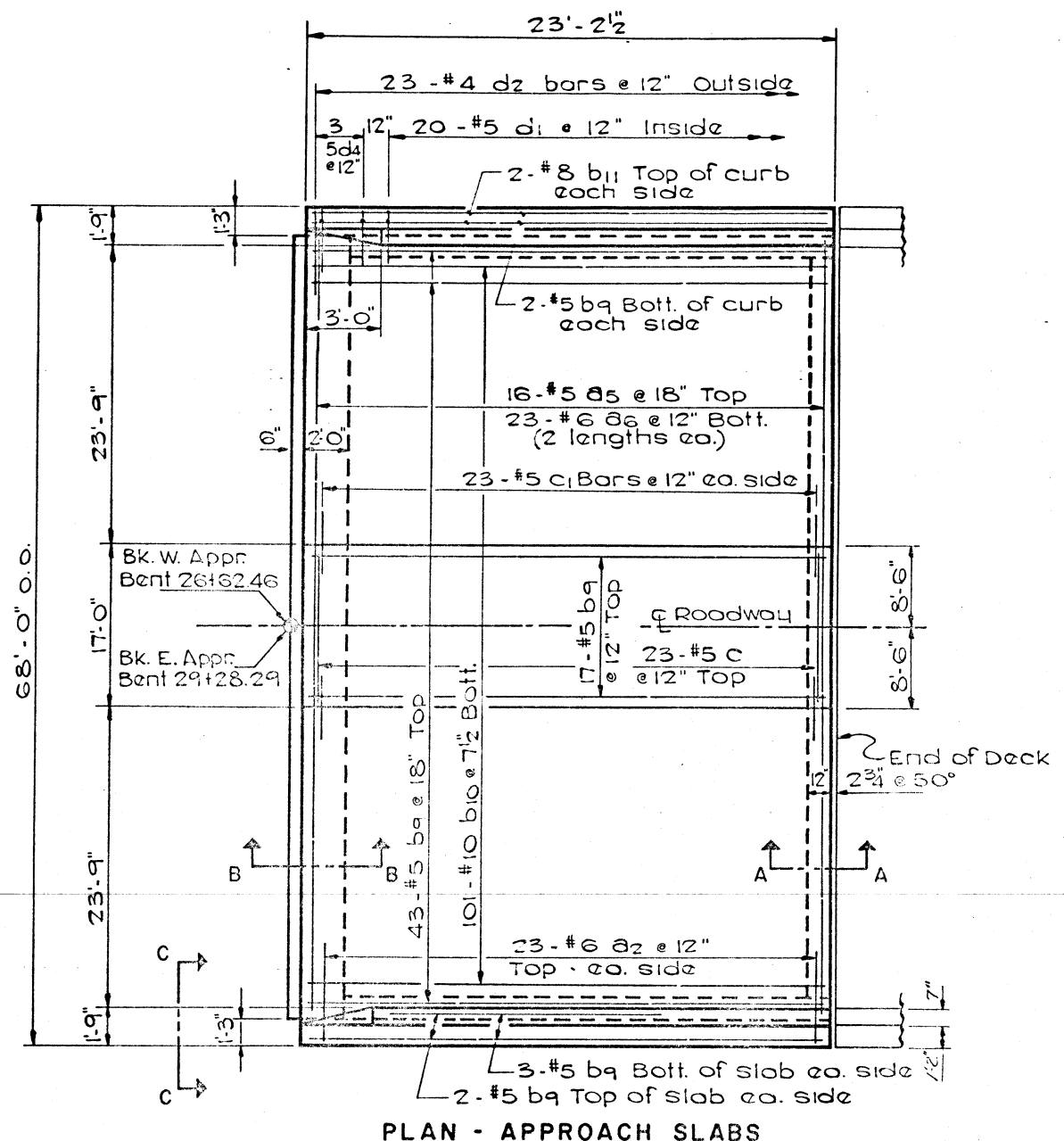


BAR a₅
North Side

BAR a₆
South Side

3/4" x 8" CR 1020 STL granular or solid flux filled headed studs auto. end welded at 12" alt. cts.

EXPANSION JOINT DETAILS
FA RTE. 412 SECTION 141-2HB-1
ILL. RTE. 64 OVER FA 412
OGLE COUNTY
STATION 1782+61.70



BILL OF MATERIAL - 2 SL

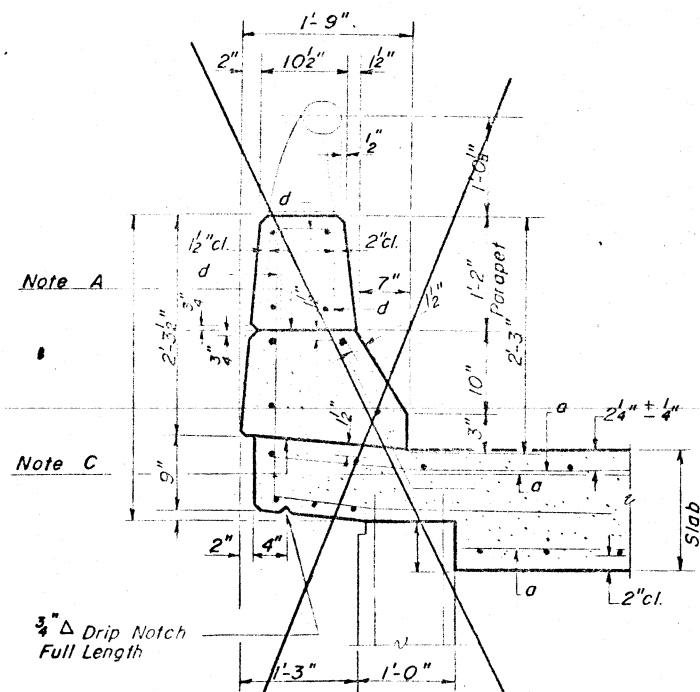
BAR NO.	SIZE	LENGTH
a2	#6	4'-0"
a5	#5	33'-7"
a6	#6	32'-6"
b9	#5	22'-10"
b10	#10	25'-8"
b11	#8	22'-10"
c	#5	16'-6"
c1	#5	3'-4"
d1	#5	3'-7"
d2	#4	6'-0"
d4	#5	4'-2"

Class X Concrete curb
 Reinforcement Bars Lbs 35

APPROACH SLAB
 FA RTE. 412 SECTION 141-2HB
 ILL. RTE. 64 OVER FA 412
 OGLE COUNTY
 STATION 1782+61.70

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

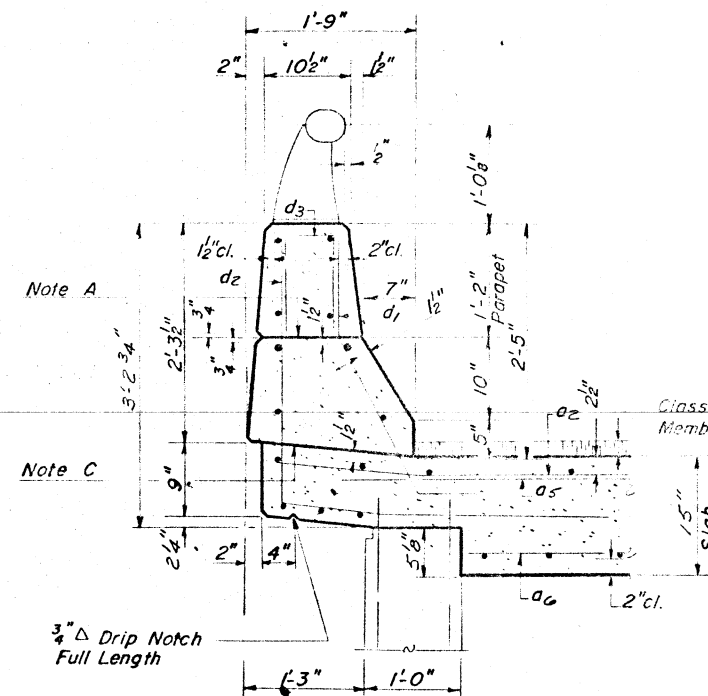
ROUTE NO.	SHEET NO.	TOTAL SHEETS	SHEET NO.	SHEET NO.	SHEET NO.
412	141-2HB-1	288	130A	16	16
PROJECT NO.		PROJECT NAME		PROJECT LOCATION	
141-2HB-1		OGLE		ILL. RTE. 64 OVER FA. 412	



CURB SECTION

Cost of Aluminum Sheets shall be incidental to Class X Concrete.

Note: All edges shall have $\frac{3}{4}$ " chamfer.



CURB SECTION

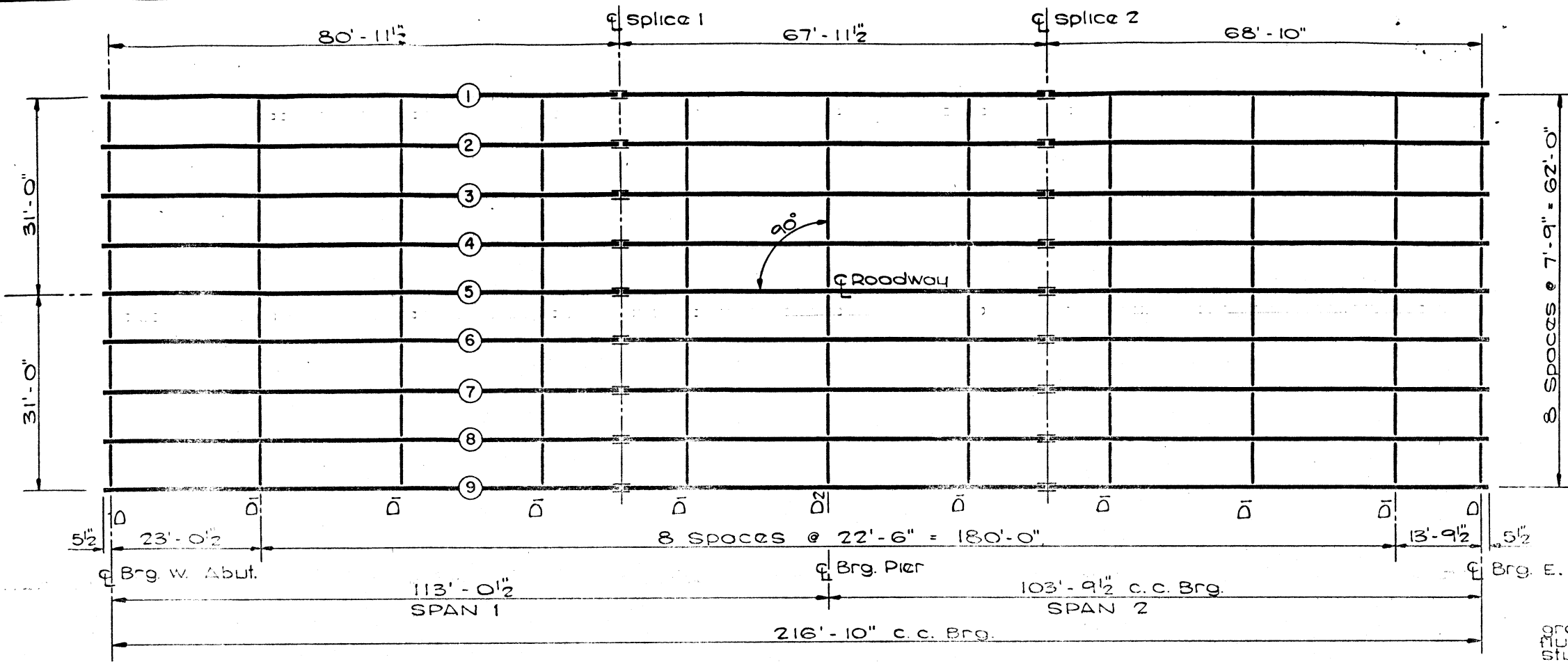
Class 1 & Initial Waterproofing Membrane System

Note A - Bonded Construction Joint (Optional)

Note C - Bonded Construction Joint (Mandatory)

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN D. DERRINGER	APPROVED
CHECKED	

APPROACH SLABS
REVISED PARAPET CONFIGURATION
FA. RTE. 412 - SEC. 141-2HB-1
ILL. RTE. 64 OVER FA. 412
OGLE COUNTY
STA. 1782 + 61.70

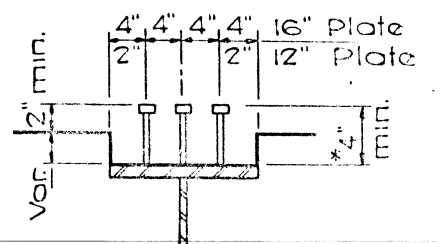


ELEVATION TOP OF WEB PLATE (FOR FABRICATORS USE ONLY)

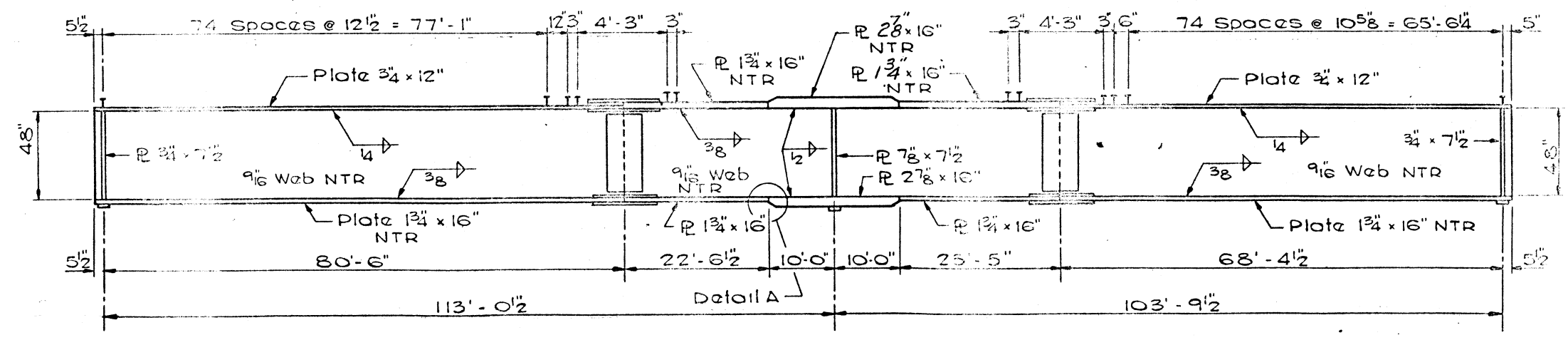
LOC.	W. ABUT.	SPLICE 1	PIER	SPLICE 2	E. ABUT.
1	818.039	816.835	816.279	815.630	814.24
2	818.200	816.996	816.440	815.791	814.40
3	818.323	817.119	816.563	815.914	814.52
4	818.444	817.240	816.684	816.035	814.64
5	818.564	817.360	816.804	816.155	814.76
6	818.444	817.240	816.684	816.035	814.64
7	818.323	817.119	816.563	815.914	814.52
8	818.200	816.996	816.440	815.791	814.40
9	818.039	816.835	816.279	815.630	814.24

* Height of studs to be determined by field measurement to provide a min. of 2" embedment above bottom face of slab.

3/4" CR 1020 STL granular or solid flux filled headed studs automatically end welded.

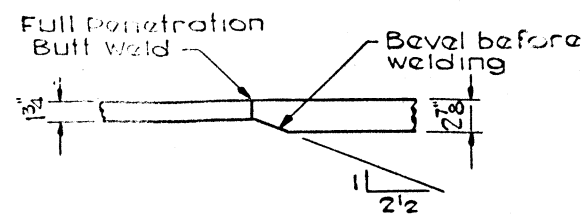
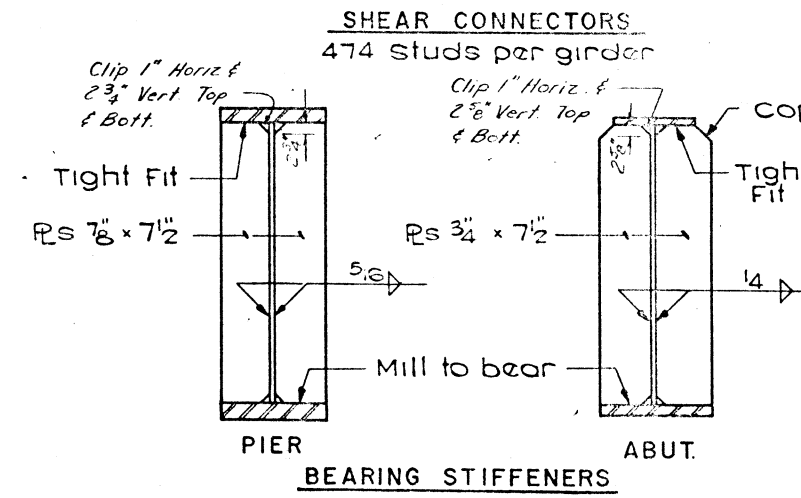


FRAMING PLAN



NTR Designates Notch Toughness Requirement.

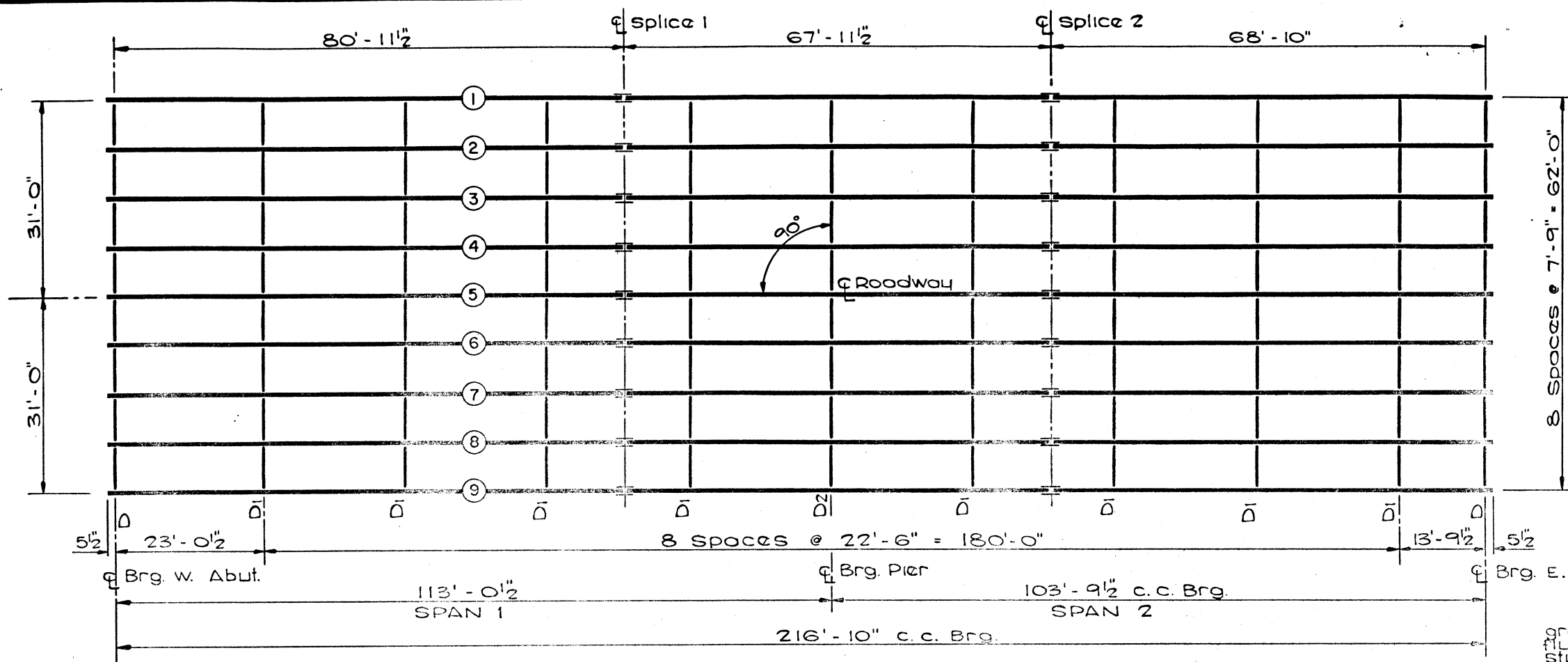
GIRDER ELEVATION



DETAIL A

AS REVISED

GIRDER DETAILS
F.A. RTE. 412 SECTION 141-2HB-1
ILL. RTE. 64 OVER F.A. 412
OGLE COUNTY
STATION 1782+61.70

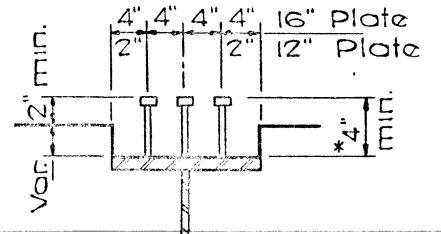


ELEVATION TOP OF WEB PLATE (FOR FABRICATORS USE ONLY)

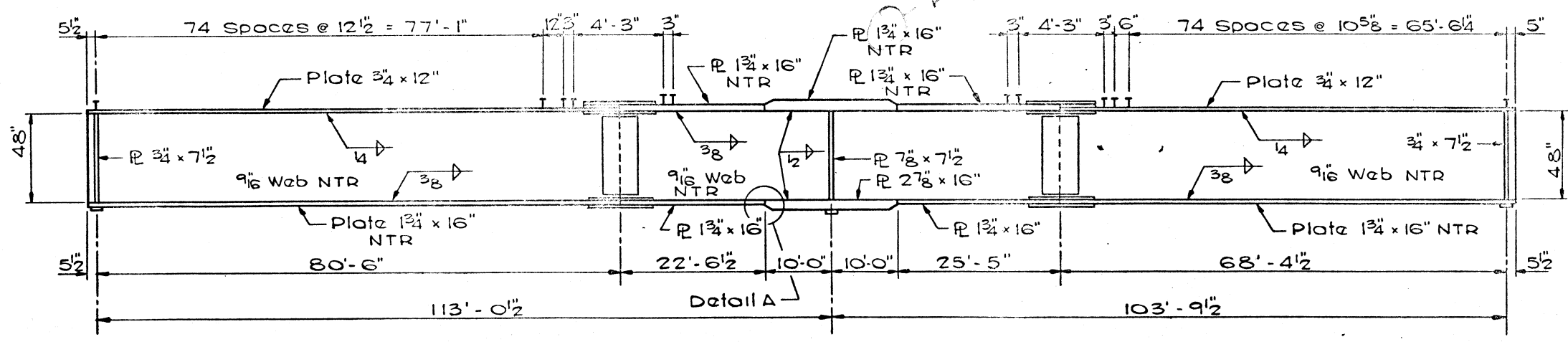
LOC.	W. ABUT.	SPLICE 1	PIER	SPLICE 2	E. ABUT.
1	818.039	816.835	816.279	815.630	814.240
2	818.200	816.996	816.440	815.791	814.400
3	818.323	817.119	816.563	815.914	814.520
4	818.444	817.240	816.684	816.035	814.640
5	818.564	817.360	816.804	816.155	814.760
6	818.444	817.240	816.684	816.035	814.640
7	818.323	817.119	816.563	815.914	814.520
8	818.200	816.996	816.440	815.791	814.400
9	818.039	816.835	816.279	815.630	814.240

* Height of studs to be determined by field measurement to provide a min. of 2" embedment above bottom face of slab.

3/4" CR 1020 STL granular or solid flux filled headed studs automatically and welded.

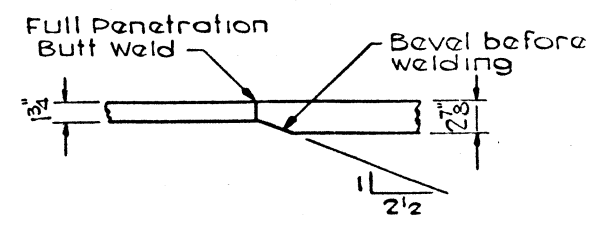


FRAMING PLAN



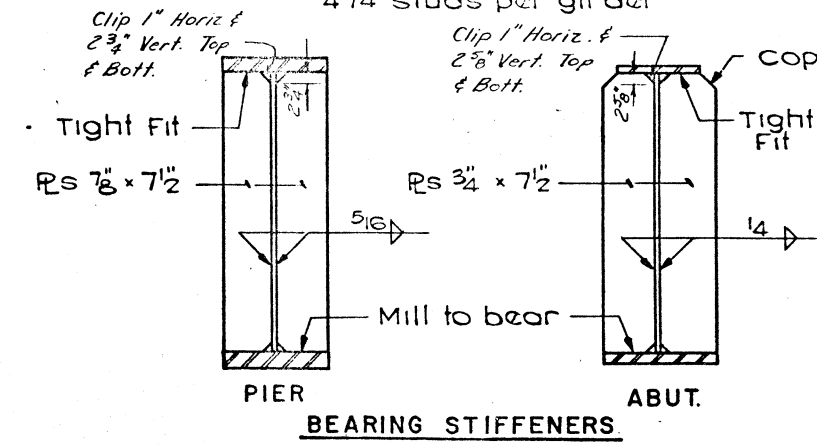
GIRDER ELEVATION

NTR Designates Notch Toughness Requirement.



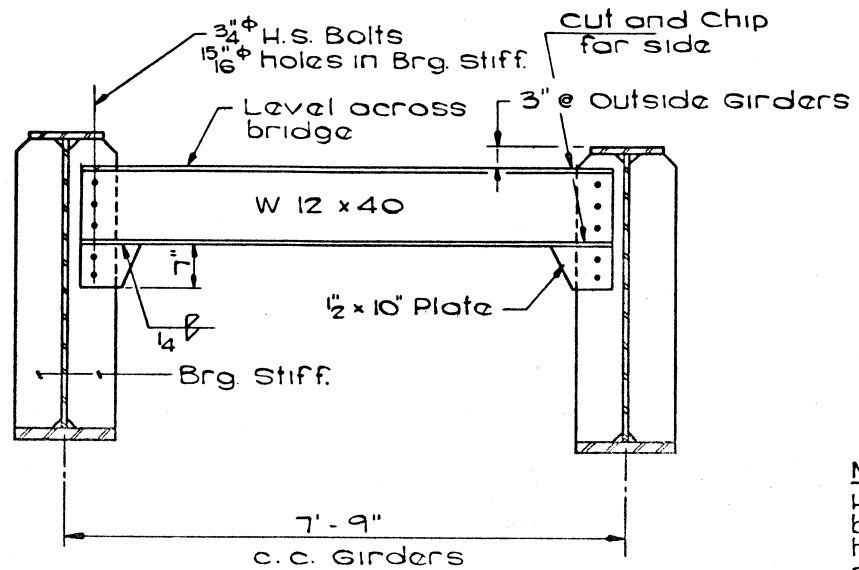
DETAIL A

SHEAR CONNECTORS
474 Studs per girder

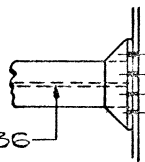


BEARING STIFFENERS

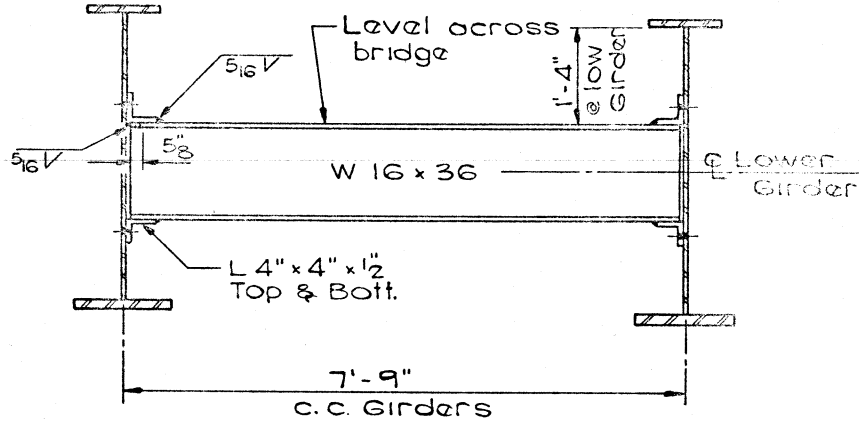
GIRDER DETAILS
F.A. RTE. 412 SECTION 141-2HB-1
ILL. RTE. 64 OVER F.A. 412
OGLE COUNTY
STATION 1782+61.70



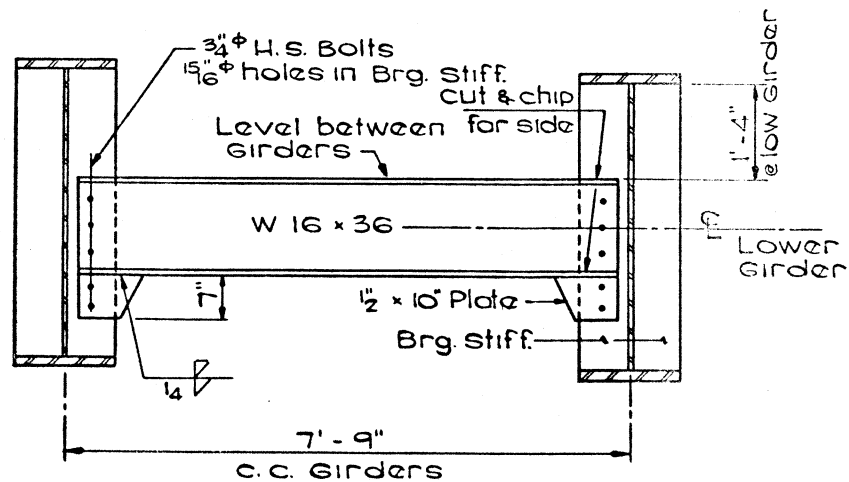
DIAPHRAGM D
16 Required



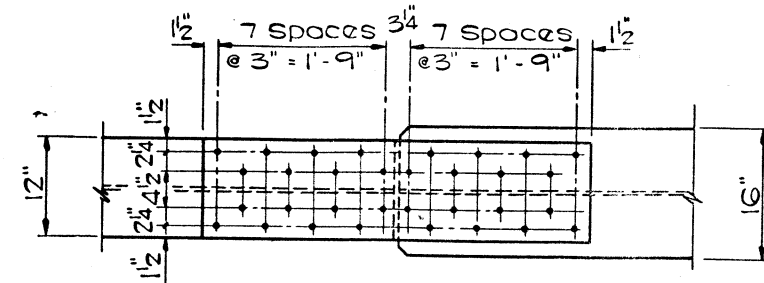
NOTE
Hardened washers shall be required over 15/16" holes in angles, w 12 x 40 and connection plates.



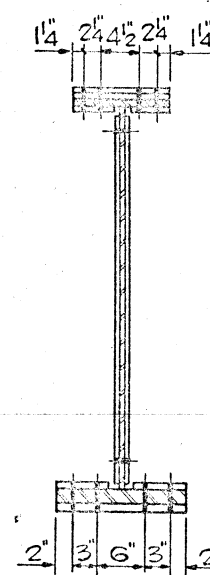
DIAPHRAGM D1
64 Required



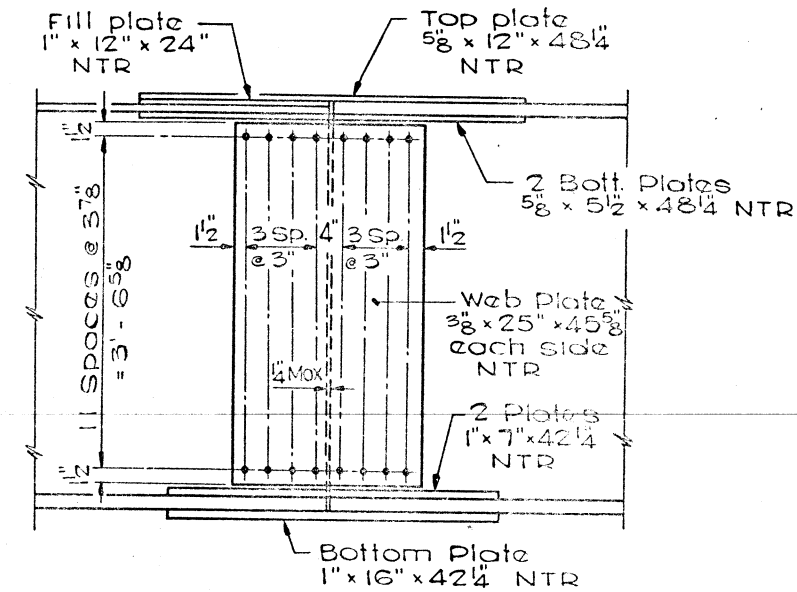
DIAPHRAGM D2
8 Required



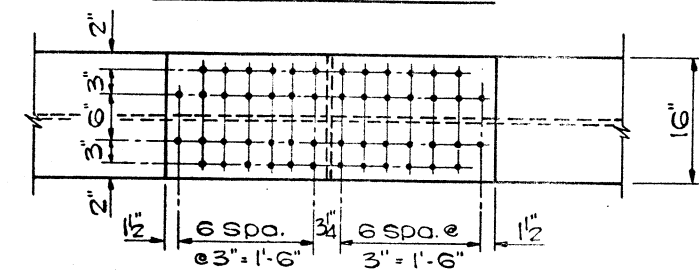
TOP FLANGE



SECTION



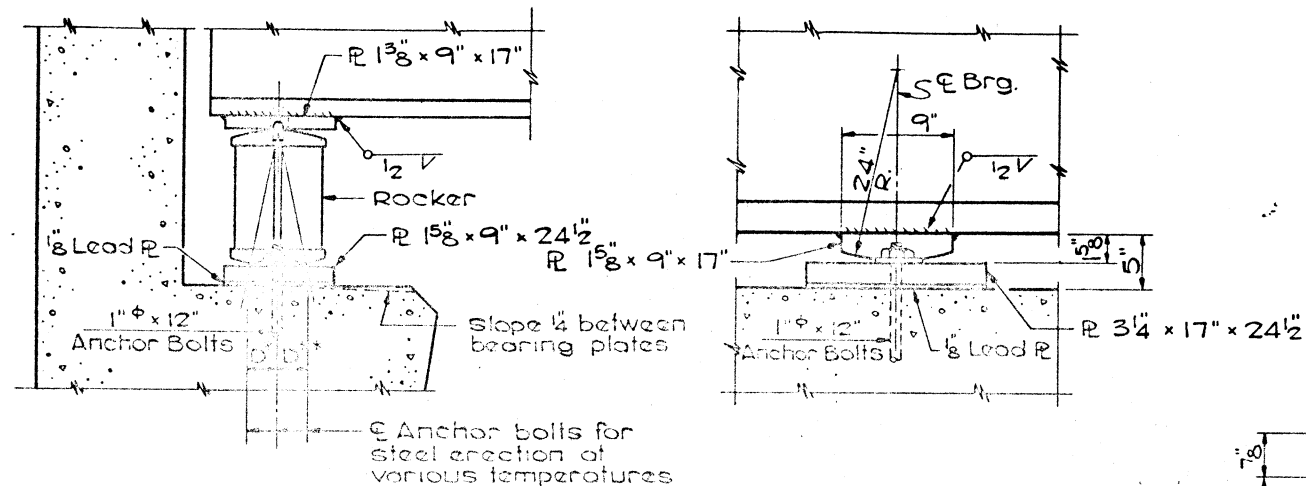
ELEVATION - SPLICE



BOTTOM FLANGE

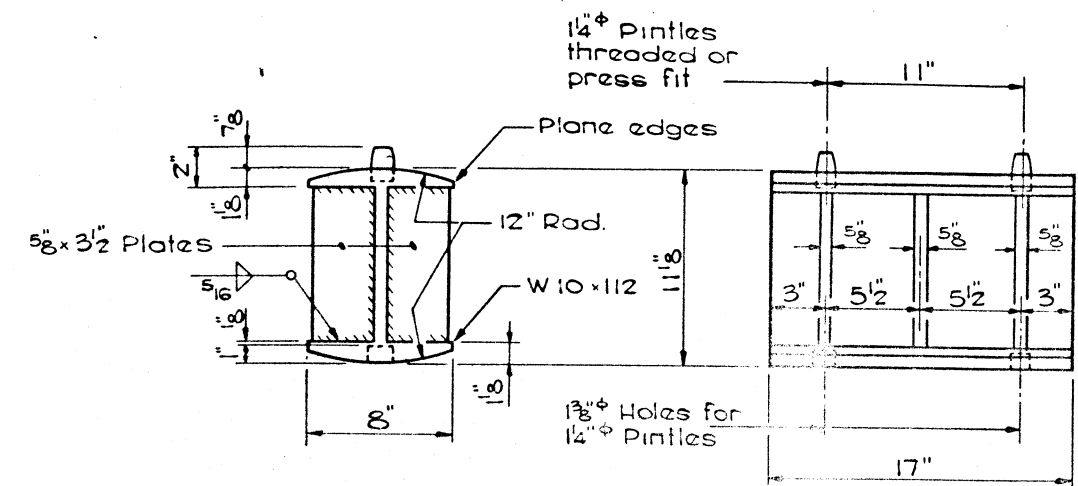
All bolts 7/8"

STRUCTURAL STEEL DETAILS
FA RTE. 412 SECTION 141-2HB-1
ILL. RTE. 64 OVER FA 412
OGLE COUNTY
STATION 1782+61.70

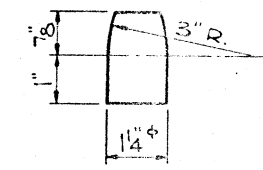


ELEVATION

ELEVATION



ROCKER



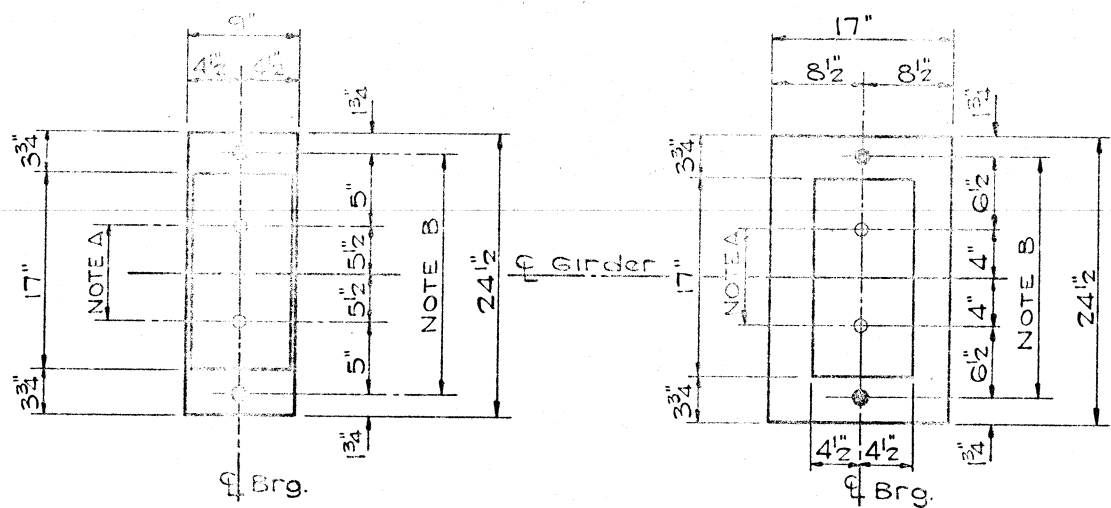
PINTLE

NOTE A

1 3/8" Holes - 1" deep in top P for 1 1/2" Pintles. Thread or press fit Pintles in bottom P.

NOTE B

1 1/2" Holes for 1" Anchor Bolts - 2 1/2 x 2 1/2 x 5/16 P washers under nut.



PLAN - ABUTMENTS

PLAN - PIER

NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

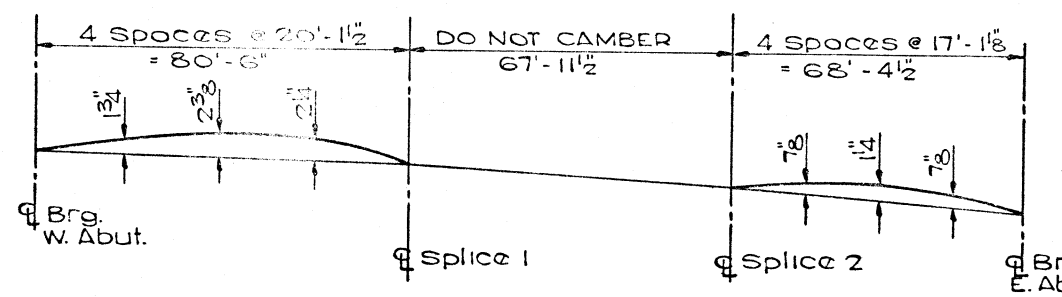
- a) D* (Side of brg. away from fixed brg.) D* = 1/8 per each 100' of expansion for every 15° fall below the normal temp. of 50° F.
- D** (Side of brg. toward fixed brg.) D** = 1/8 per each 100' of expansion for every 15° rise above the normal temp. of 50° F.

- b) After beams have been erected and dimensions D* & D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

INTERIOR GIRDER MOMENT TABLE		
	0.4 Sp. 1	Pier
Is (in ⁴)	24151	64703
Ic (in ⁴)	76744	
Ss (in ³)	1321	2407
Sc (in ³)	1956	
Q (K/I)	1.092	1.092
M Q ('K)	873.3	-2002.7
fs Q (ksi)	7.93	9.98
s Q (K/I)	.618	.618
Ms Q ('K)	620.3	-818.3
M L ('K)	1028.7	-833.9
M imp ('K)	226.3	-183.5
Total ('K)	1875.3	-1835.7
fs L + s Q (ksi)	11.50	9.15
fs Total (ksi)	19.43	19.13
VR (K)	55.7	

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
R Q (K)	69.1	234.4
R L (K)	45.7	78.3
Imp (K)	10.1	17.2
R Total (K)	124.9	329.9

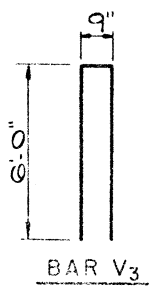
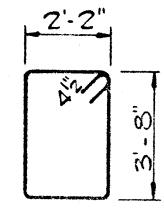
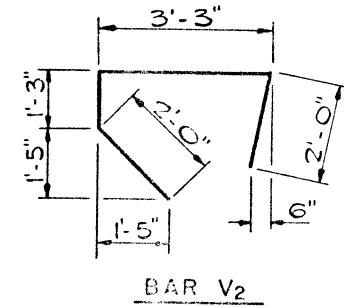
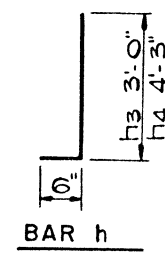
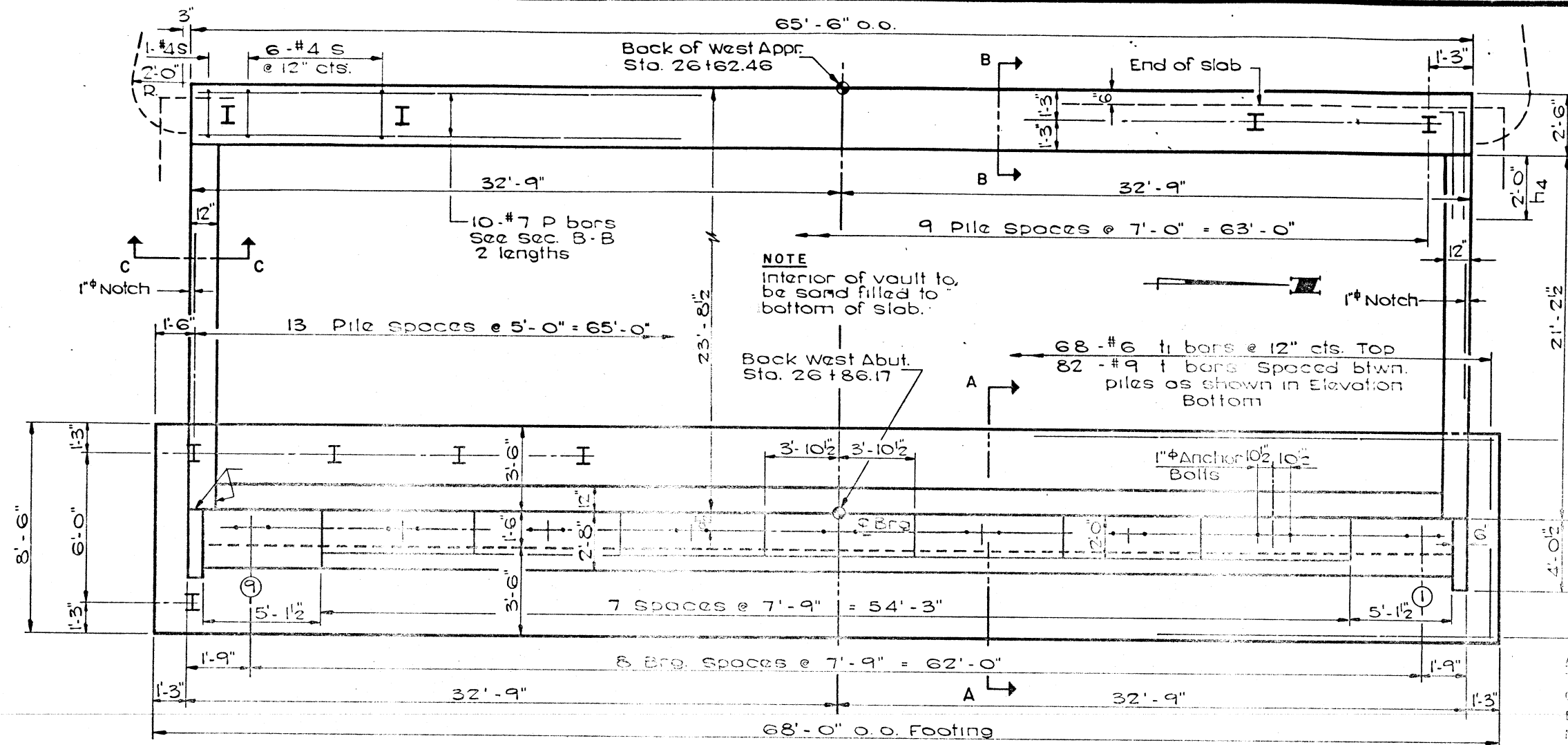
Is and Ss are the moment of inertia and section modulus of the steel section. Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs. VR is the maximum L + Impact range in span.



CAMBER DIAGRAM

Includes allowance for Total Dead Load Deflection & vertical curvature of the roadway.

BEARING DETAILS
FA RTE. 412 SECTION 141-2HB-1
ILL. RTE. 64 OVER FA 412
OGLE COUNTY
STATION 1782+61.70



ABUT. PILE DATA

TYPE	Steel HP 8x36
CAPACITY	Drive to refusal
EST. LENGTH	11 Feet
NO. REQUIRED	27 + 1 Test pile in a permanent location

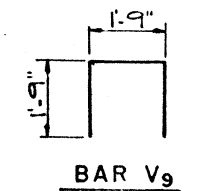
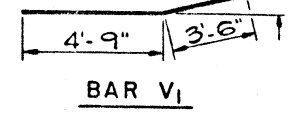
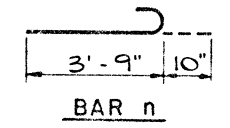
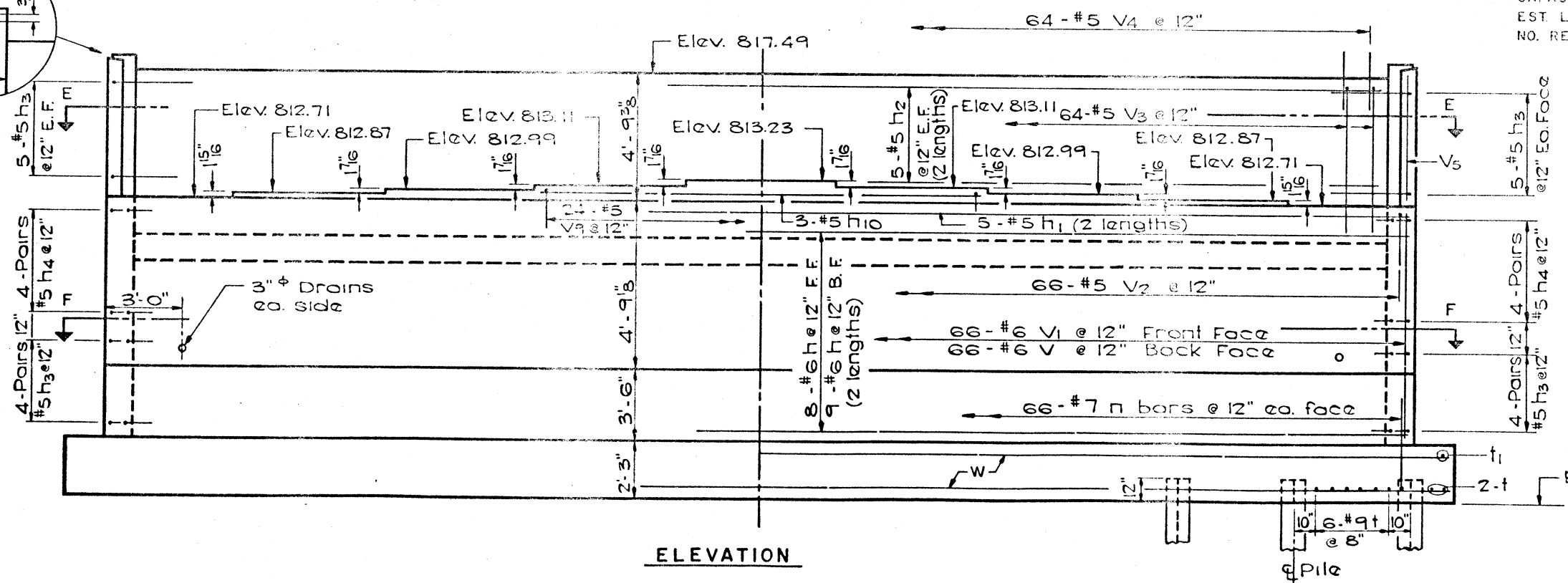
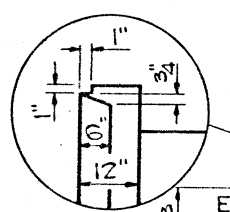
APPR. BENT PILE DATA

TYPE	Steel HP 8x36
CAPACITY	Drive to refusal
EST. LENGTH	25 Feet
NO. REQUIRED	10

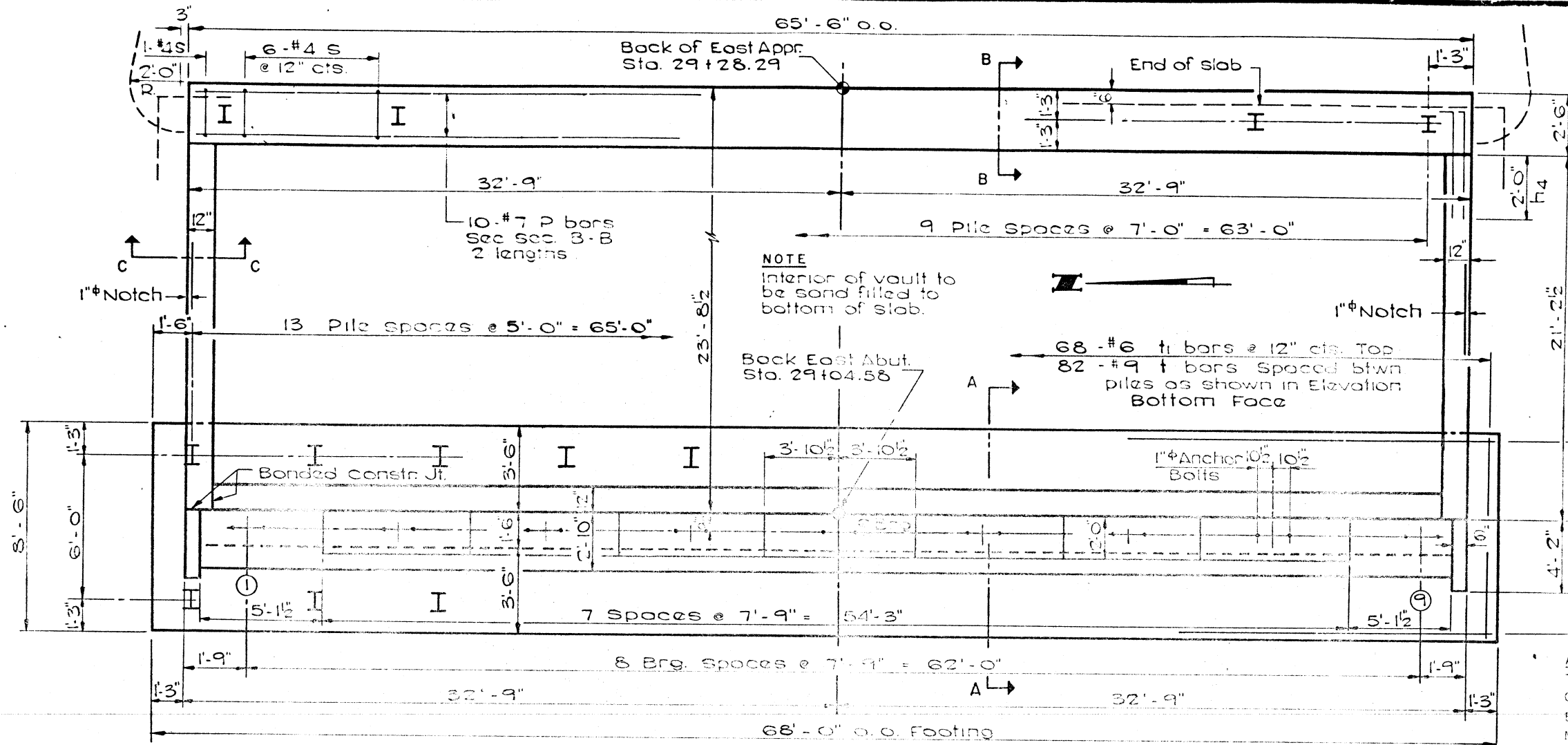
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h	34	#6	33'-3"	—
h1	10	#6	33'-0"	—
h2	20	#6	32'-0"	—
h3	36	#6	3'-6"	—
h4	36	#6	4'-9"	—
h5	10	#6	6'-0"	—
h6	20	#6	20'-9"	—
h7	10	#6	18'-0"	—
h8	16	#6	3'-3"	—
h9	4	#6	14'-0"	—
h10	3	#6	23'-0"	—
n	148	#7	4'-7"	—
p	20	#7	33'-6"	—
s	53	#6	12'-5"	—
t	82	#9	8'-3"	—
ti	68	#6	8'-3"	—
v	66	#6	8'-0"	—
v1	66	#6	8'-3"	—
v2	66	#5	8'-6"	—
v3	64	#5	12'-9"	—
v4	186	#5	2'-6"	—
v5	10	#4	6'-6"	—
v6	16	#5	13'-0"	—
v7	20	#5	15'-6"	—
v8	28	#5	4'-9"	—
v9	24	#5	5'-3"	—
w	28	#5	34'-6"	—

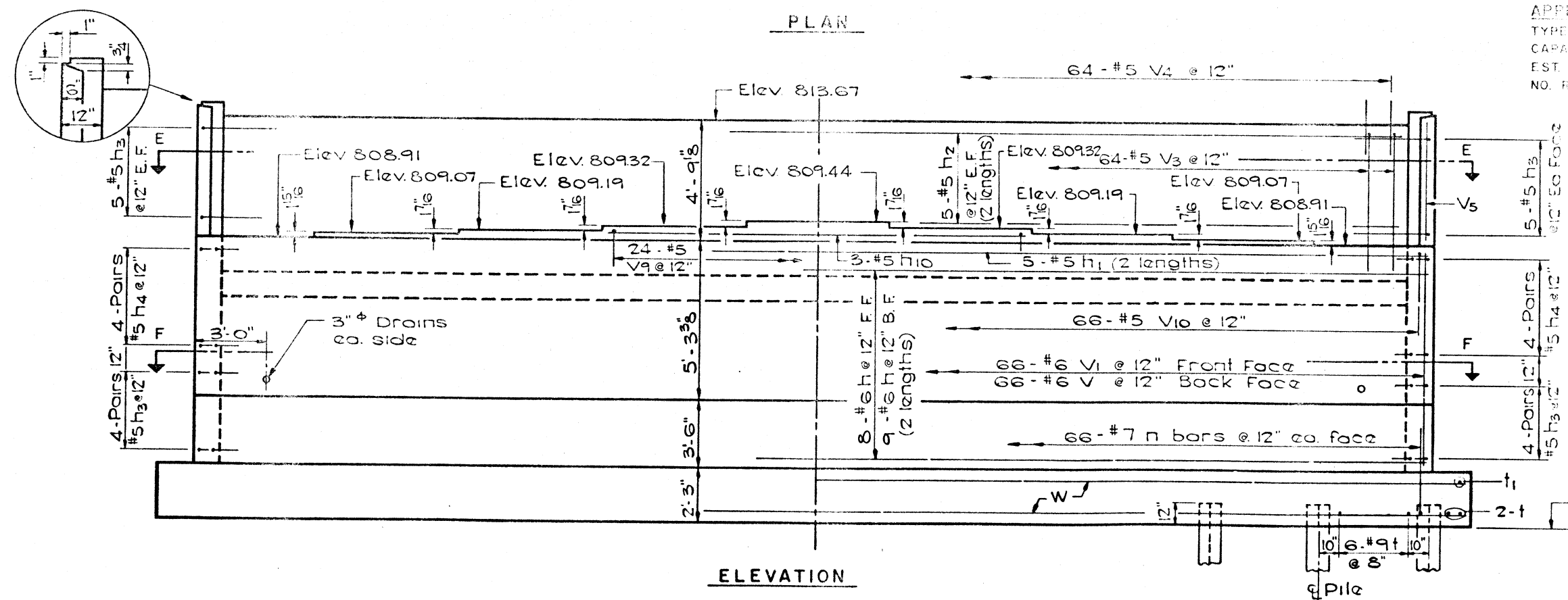
Class X Concrete Cu.Yds 139.1
 Reinforcement Bars Lbs. 15670
 Steel Piles Lin. Ft. 547
 Test Piles - Steel Ea. 1
 Structure Excav. Cu.Yds 23



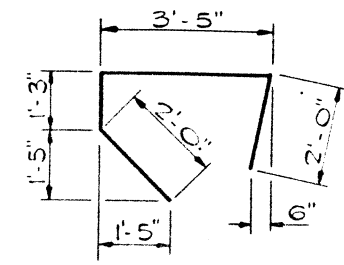
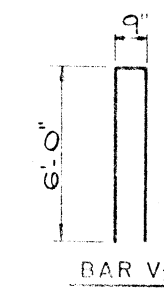
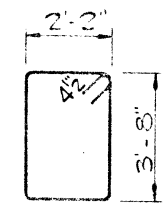
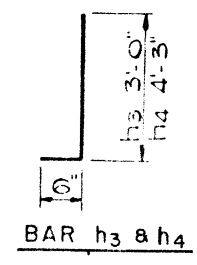
WEST ABUTMENT
 FA RTE. 412 SECTION 141-2HB-1
 ILL. RTE. 64 OVER FA 412
 OGLE COUNTY
 STATION 1782+61.70



PLAN



ELEVATION



ABUT. PILE DATA

TYPE	Steel HP 8x36
CAPACITY	Drive to refusal
EST. LENGTH	12 Feet
NO. REQUIRED	27 + 1 Test pile in permanent location

APPR. BENT PILE DATA

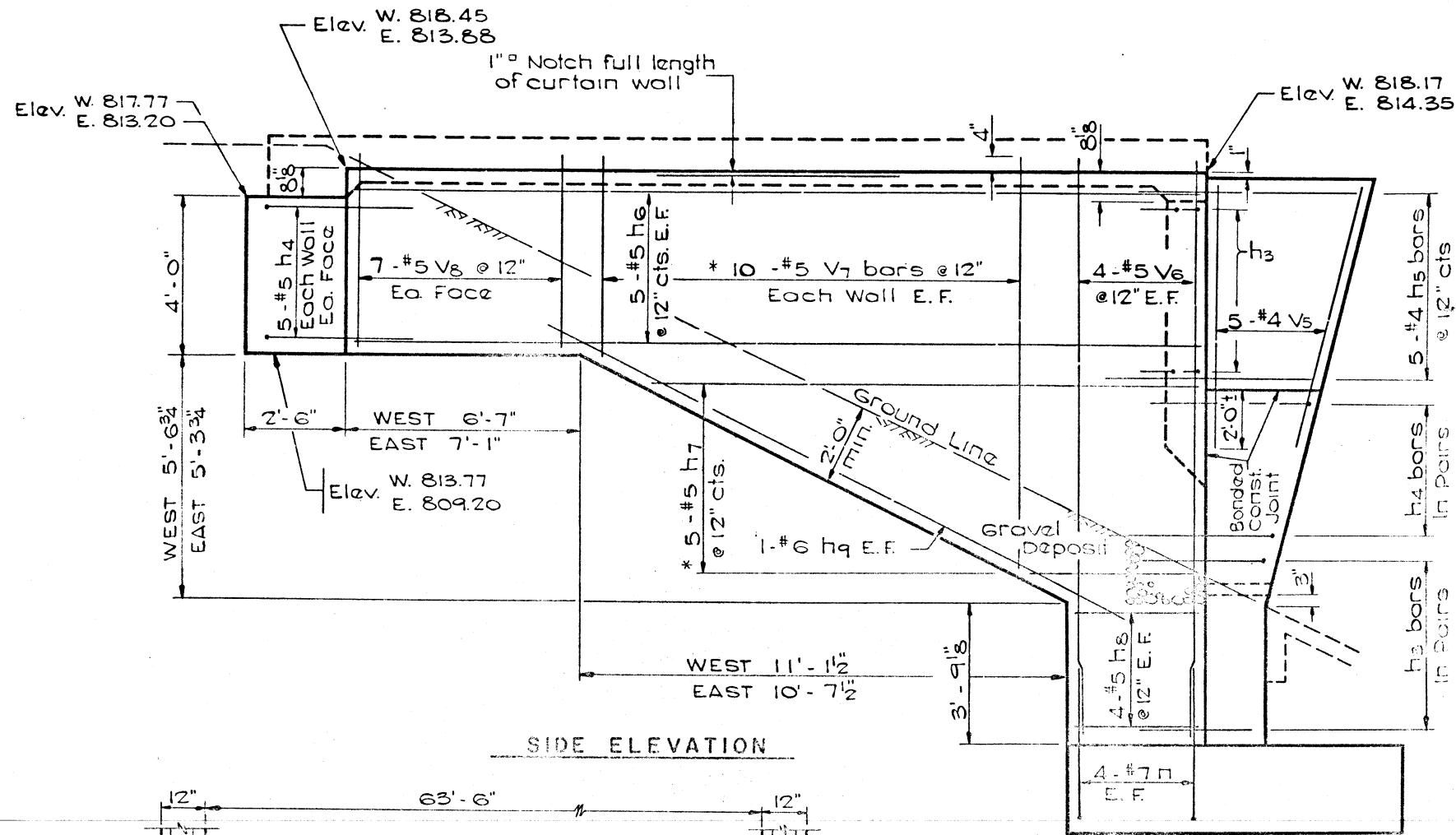
TYPE	Steel HP 8x36
CAPACITY	Drive to refusal
EST. LENGTH	23 Feet
NO. REQUIRED	10

BILL OF MATERIAL

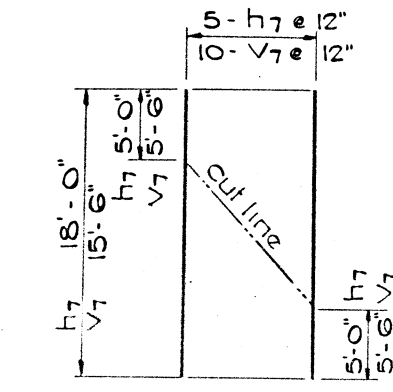
BAR	NO.	SIZE	LENGTH	SHAPE
h	34	#6	33'-3"	—
h1	10	#5	33'-0"	—
h2	20	#5	32'-0"	—
h3	36	#5	3'-6"	—
h4	36	#5	4'-9"	—
h5	10	#5	6'-0"	—
h6	20	#5	20'-9"	—
h7	10	#5	18'-0"	—
h8	16	#5	3'-3"	—
h9	4	#6	14'-0"	—
h10	3	#5	23'-0"	—
n	148	#7	4'-7"	—
p	20	#7	35'-6"	—
s	53	#4	12'-5"	□
t	82	#9	8'-3"	—
ti	68	#6	8'-3"	—
v	66	#6	8'-0"	—
v1	66	#6	8'-3"	—
v3	64	#5	12'-9"	—
v4	186	#5	2'-6"	—
v5	10	#4	6'-6"	—
v6	16	#5	13'-0"	—
v7	20	#5	15'-6"	—
v8	28	#5	4'-9"	—
v9	24	#5	5'-3"	—
v10	66	#5	8'-8"	—
w	28	#5	34'-6"	—

Class X Concrete cu Yds 143.2
 Reinforcement Bars Lbs. 15680
 Steel Piles Lin. Ft. 554
 Test Piles Steel Ea. 1

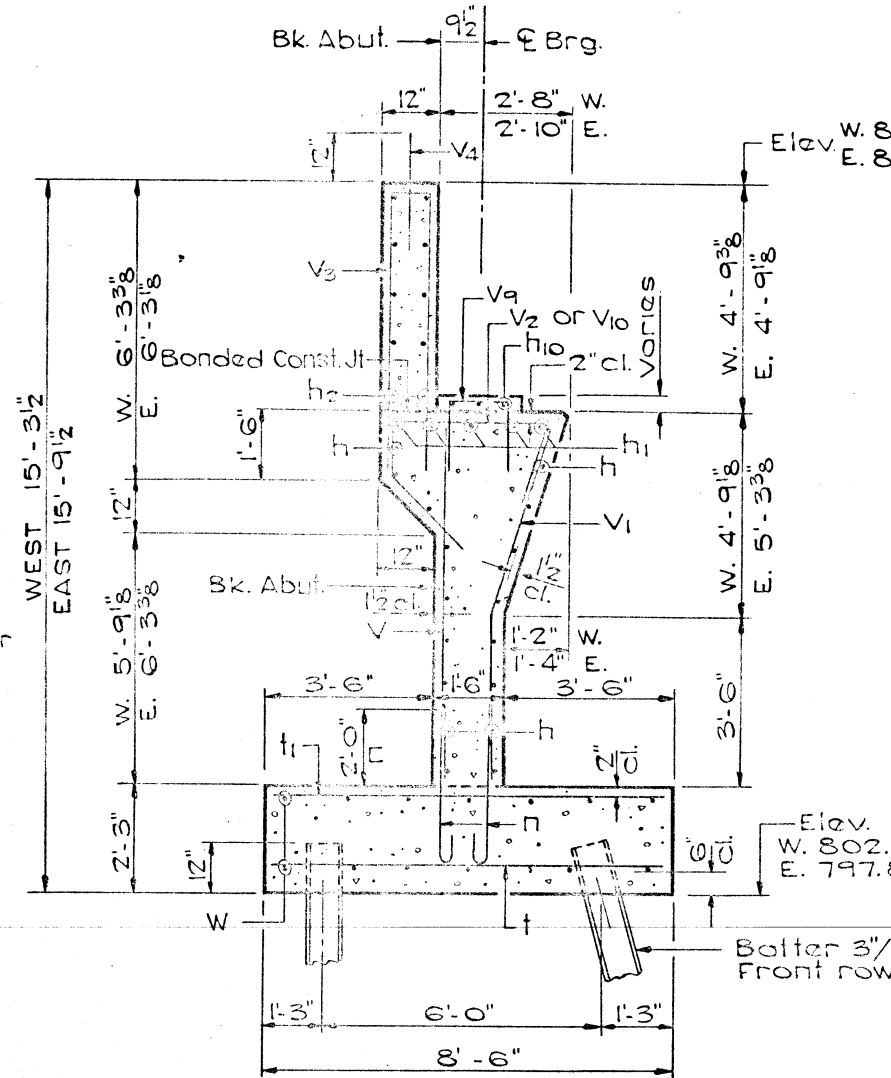
EAST ABUTMENT
 FA RTE. 412 SECTION 141-2HB-1
 ILL. RTE. 64 OVER FA 412
 OGLE COUNTY
 STATION 1782+61.70



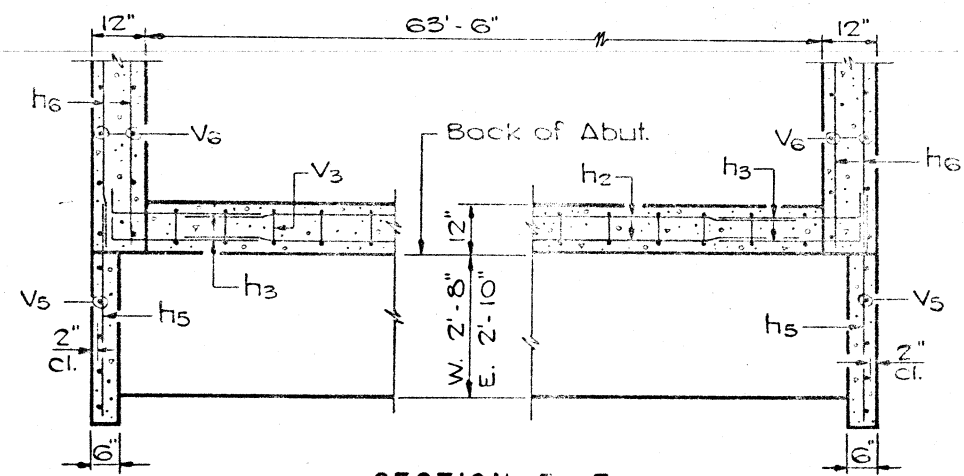
SIDE ELEVATION



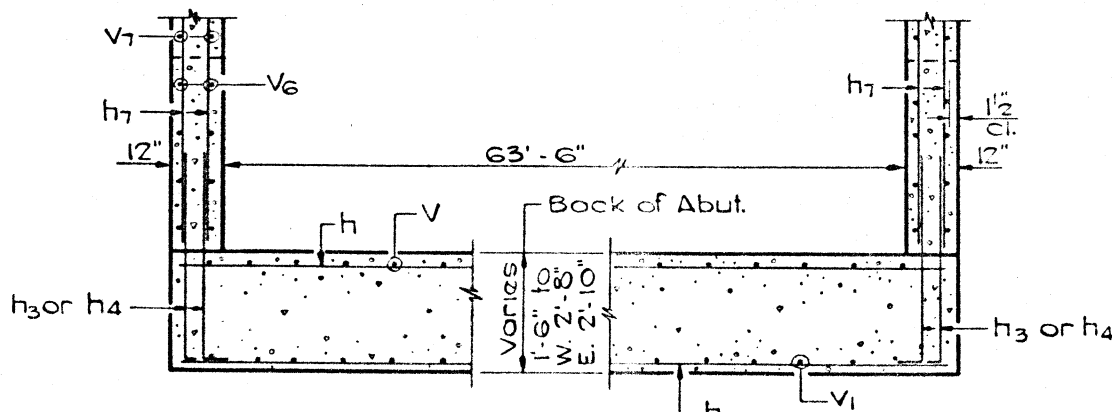
FIELD CUTTING DIAGRAM
* Order h7 & V7 bars full length. Cut to fit as shown and use remainder of bars in other face.



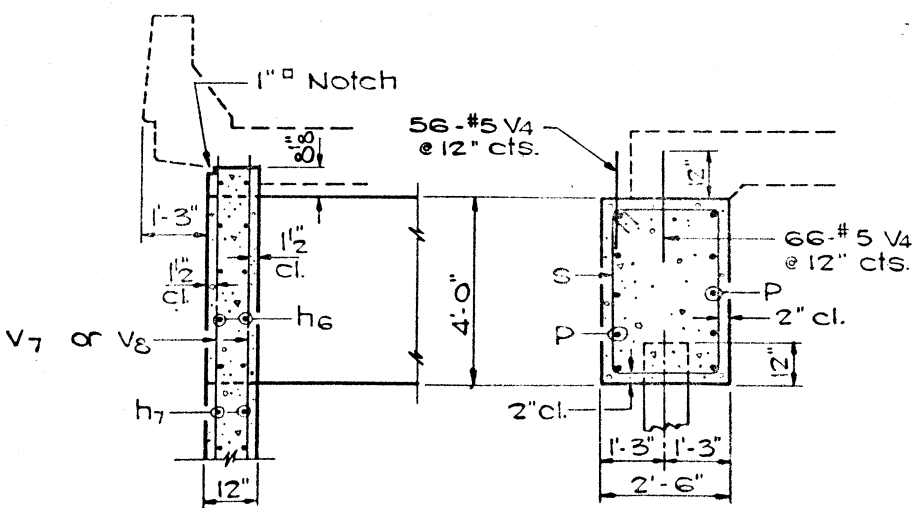
SECTION A-A



SECTION E-E



SECTION F-F

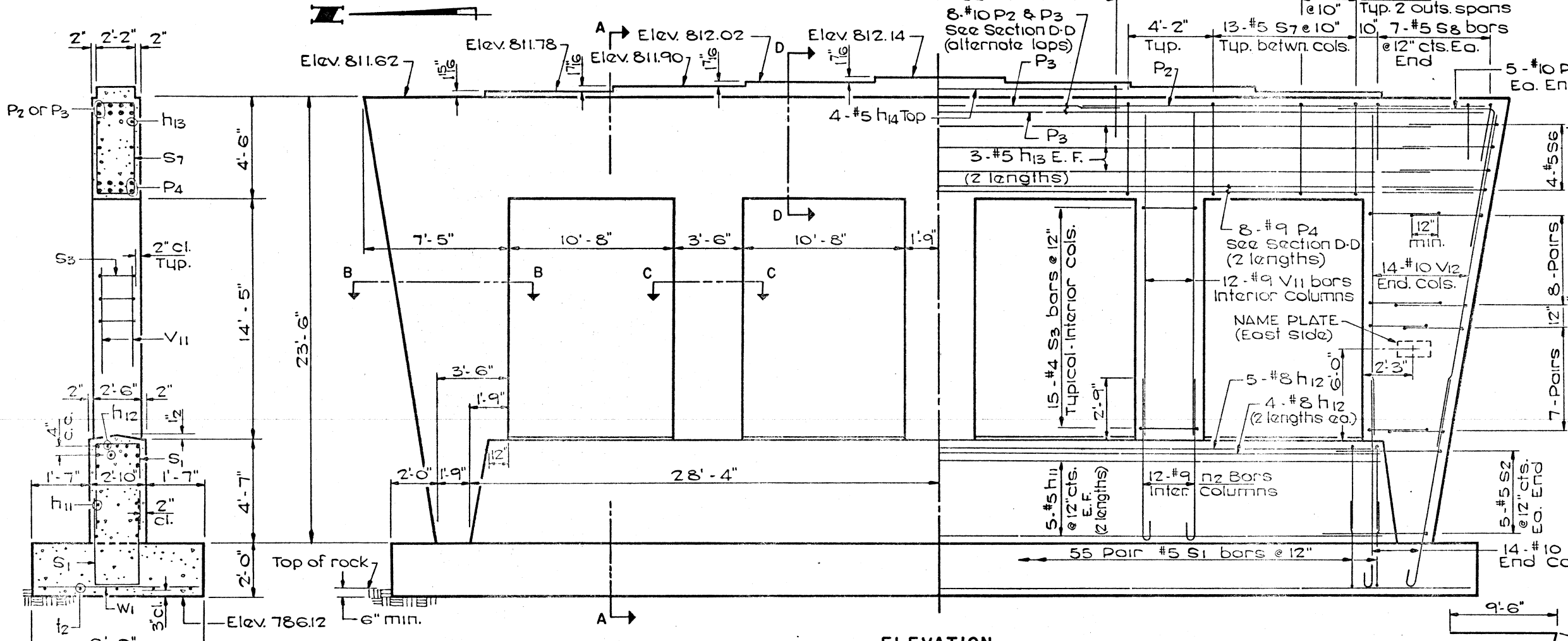
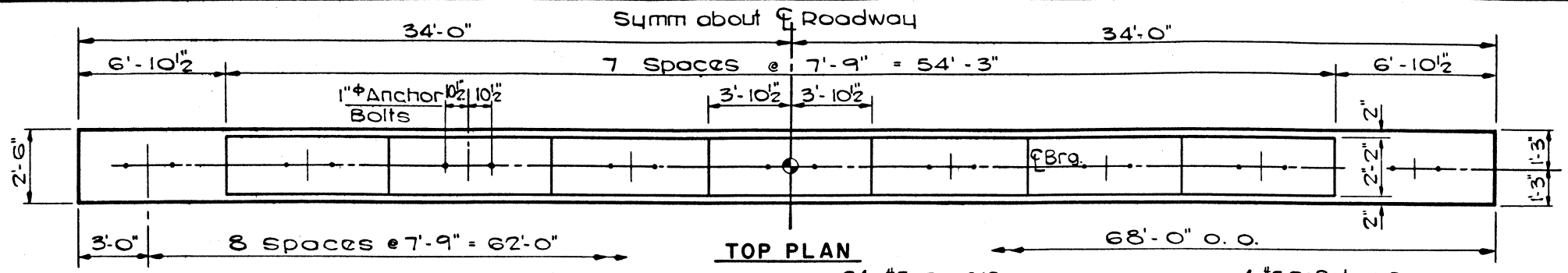


SECTION C-C

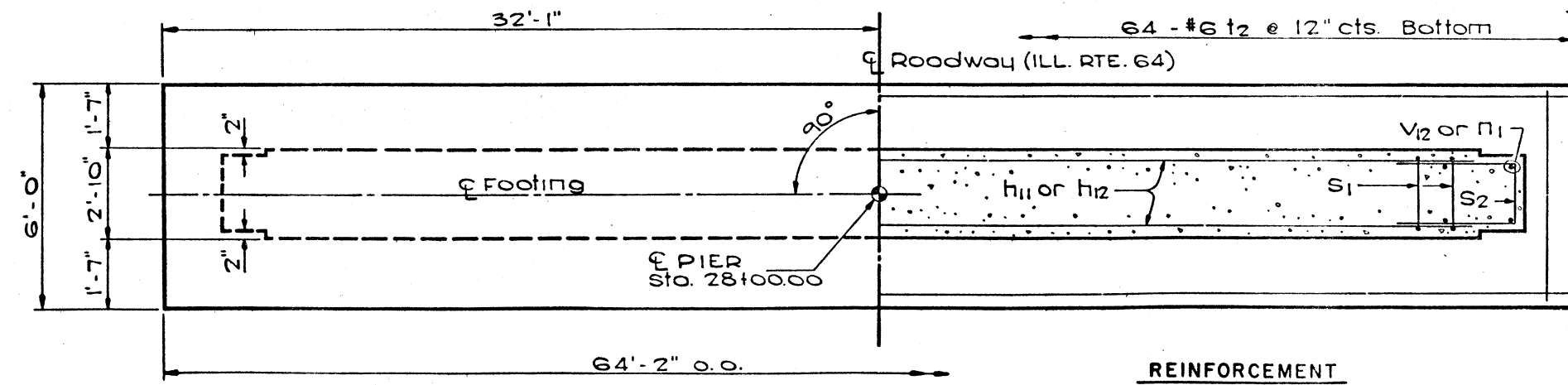
SECTION B-B

ABUTMENT DETAILS
 FA RTE. 412 SECTION 141-2HB-1
 ILL. RTE. 64 OVER FA 412
 OGLE COUNTY
 STATION 1782+61.70

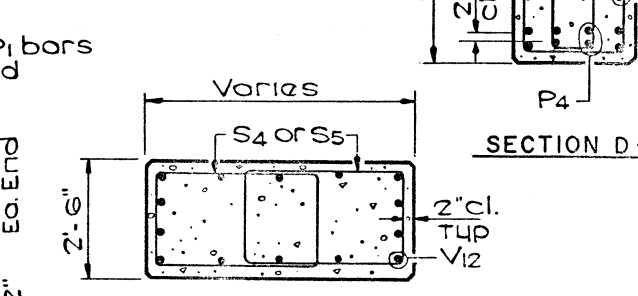
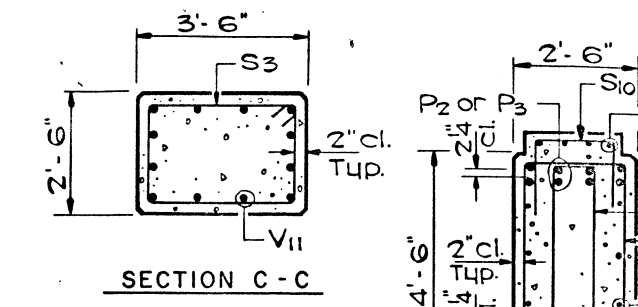
NOTES
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All edges shall have standard $\frac{3}{4}$ chamfer except as noted.



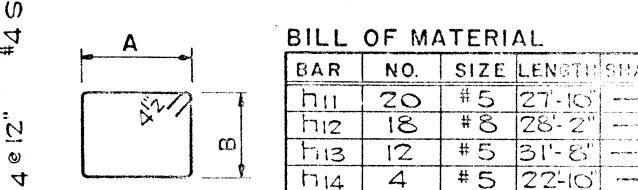
Max. Computed Soil Pressure = 9260 p.s.f.



DIMENSIONS **FOOTING PLAN**



SECTION C-C **SECTION D-D**



SECTION B-B

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h11	20	#5	27'-10"	□
h12	18	#8	28'-2"	□
h13	12	#5	31'-8"	□
h14	4	#5	22'-10"	□
P1	28	#10	10'-5"	□
P2	36	#9	8'-7"	□
P3	10	#10	17'-0"	□
P4	8	#10	28'-0"	□
P5	8	#10	42'-0"	□
P6	16	#9	31'-9"	□
S1	110	#5	10'-0"	□
S2	10	#5	11'-6"	□
S3	45	#4	11'-5"	□
S4	28	#4	11'-1"	□
S5	32	#4	12'-5"	□
S6	8	#5	11'-2"	□
S7	52	#5	13'-5"	□
S8	14	#5	10'-2"	□
S9	8	#5	10'-9"	□
S10	24	#5	4'-10"	□
t2	64	#6	5'-9"	□
V11	36	#9	18'-0"	□
V12	28	#10	18'-0"	□
W1	10	#5	32'-8"	□

DIMENSIONS

BAR	A	B
S3	2'-2"	3'-2"
S4	3'-0"	2'-2"
S5	3'-8"	2'-2"
S7	2'-2"	4'-2"
S9	10"	4'-2"

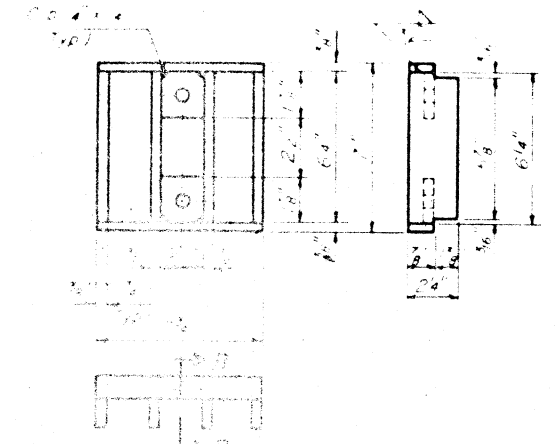
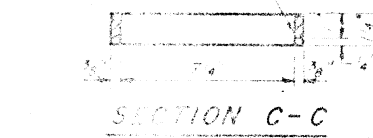
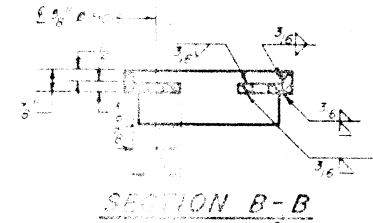
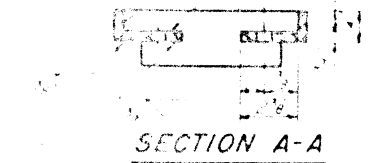
DIMENSIONS

BAR	A	B
S1	2'-6"	3'-9"
S2	2'-2"	4'-8"
S6	2'-2"	4'-6"
S8	2'-2"	4'-0"
S10	1'-10"	1'-6"

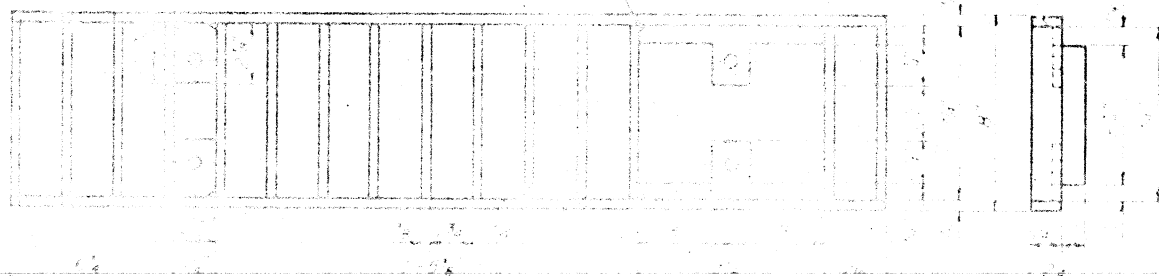
REINFORCEMENT

BAR	NO.	SIZE	LENGTH	SHAPE
P1	28	#10	10'-5"	□
P2	36	#9	8'-7"	□
P3	10	#10	17'-0"	□
P4	8	#10	28'-0"	□
P5	8	#10	42'-0"	□
P6	16	#9	31'-9"	□
S1	110	#5	10'-0"	□
S2	10	#5	11'-6"	□
S3	45	#4	11'-5"	□
S4	28	#4	11'-1"	□
S5	32	#4	12'-5"	□
S6	8	#5	11'-2"	□
S7	52	#5	13'-5"	□
S8	14	#5	10'-2"	□
S9	8	#5	10'-9"	□
S10	24	#5	4'-10"	□
t2	64	#6	5'-9"	□
V11	36	#9	18'-0"	□
V12	28	#10	18'-0"	□
W1	10	#5	32'-8"	□

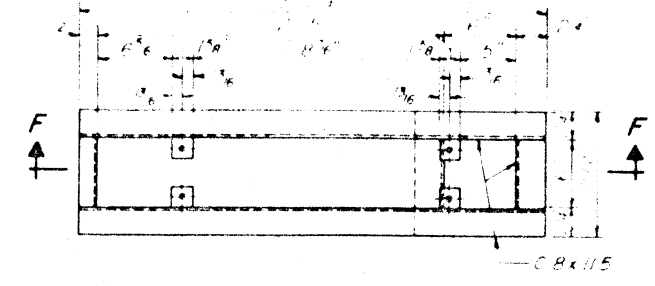
PIER DETAILS
FA RTE. 412 SECTION 141-2HB-1
ILL. RTE. 64 OVER FA 412
OGLE COUNTY
STATION 1782+61.70



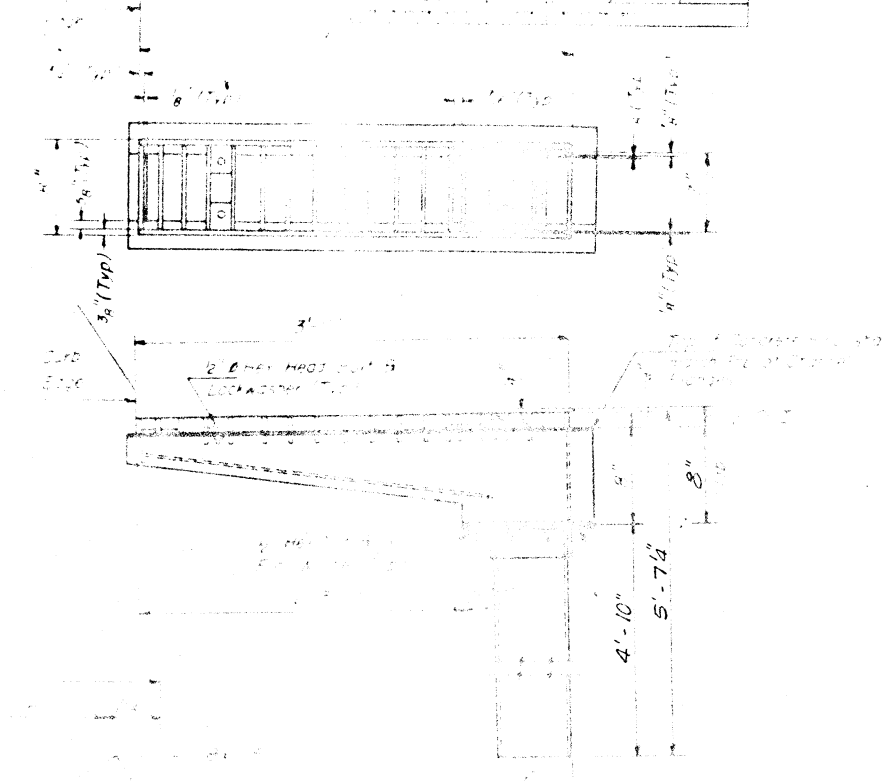
CLEANOUT GRATE



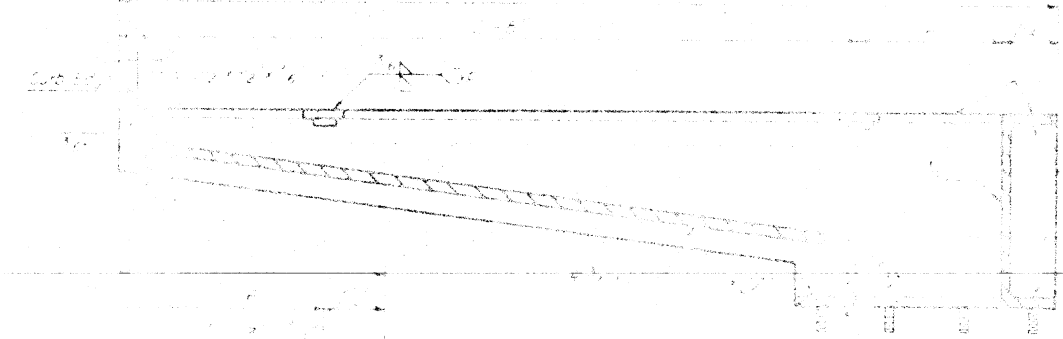
MAIN GRATE



FRAME



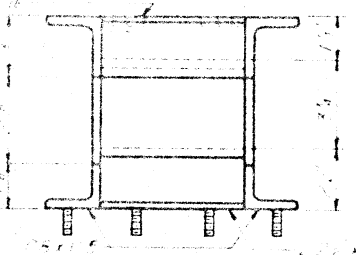
DRAINAGE SCUPPER



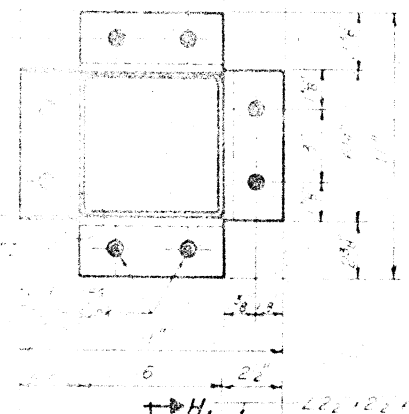
SECTION F-F



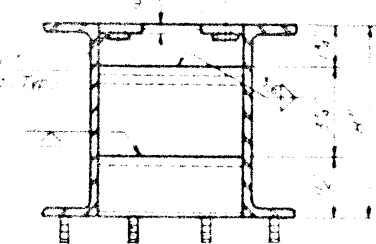
VIEW E-E



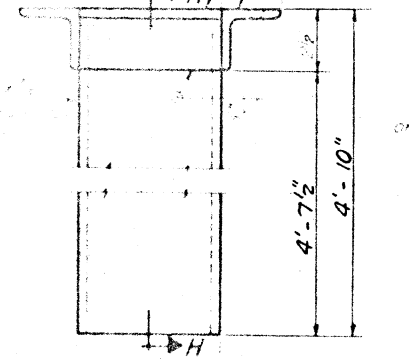
VIEW D-D



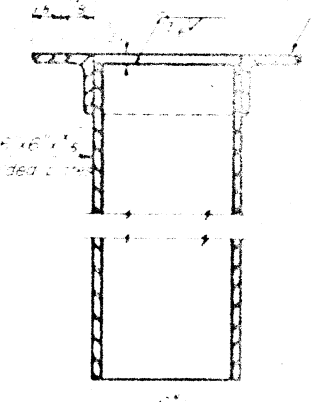
DETAIL 'I'



SECTION G-G



DOWNSPOUT



SECTION H-H

Notes:
1. Heavy structural steel used shall conform to the requirements of ASTM designations A-572 Grade 50, or A-501 Structural Steel Tube.
2. All other shapes, plates and bars shall conform to the requirements of AASHTO M 183.
3. Bolts, studs, washers and nuts shall conform to the requirements of ASTM A 307.
4. The Main Grate, Cleanout Grate, Frame and Downspout shall be galvanized after shop fabrication in accordance with AASHTO M 5 ASTM A 153.
5. All bolts, washers and nuts shall be galvanized in accordance with AASHTO M 293.
6. The Waterproofing Membrane System shall be installed just inside the curb/truck/trail/road and extend down into the frame & to the grate, & up to top of the curb/trail/road.
7. Cost of the Main Grate, Cleanout Grate, Frame, Drainage Scupper, Downspout and the complete installation of Scupper shall be paid for at the unit bid price of \$240.00 per unit.

BILL OF MATERIAL

ITEM	QTY	UNIT
Drainage Scupper	1	Each
		2

DRAINAGE SCUPPER
F.A. RTE. 412 SECTION 141-2HB-1
ILL. RTE. 64 OVER F.A. 412
OGLE COUNTY
STATION 1782+61.70

DESIGNED	EXAMINED	19
CHECKED	PASSED	
DRAWN	APPROVED	
CHECKED		