6-16-06 Letting, Item 017

Randolph

I&R

#17

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-1-1	RANDOLPH	5	1

76A16

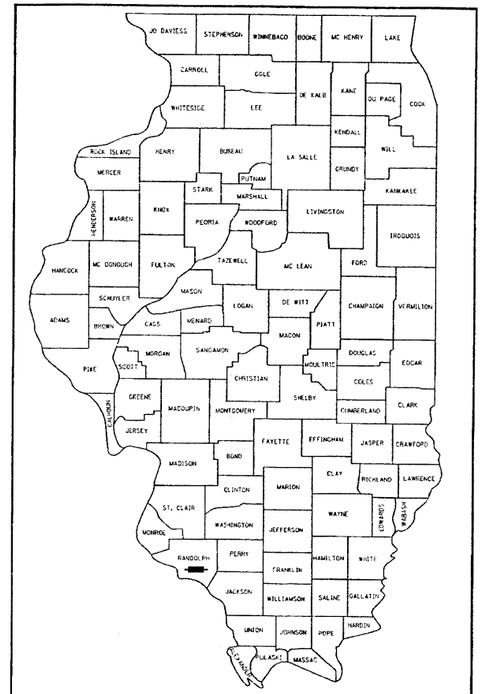
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP ROUTE 329 (IL 154)
SECTION 125-1B-I-1
HOAN DETAIL RETROFIT
RANDOLPH COUNTY

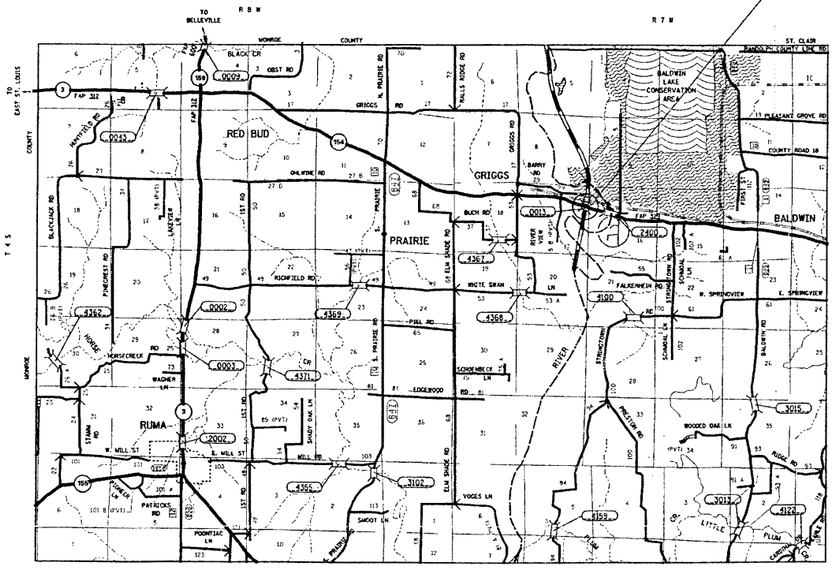
C-98-044-06

D-98-056-06



LOCATION OF SECTION INDICATED THUS: –

PROJECT LOCATION
IL 154 OVER KASKASKIA RIVER
SN: 079-0013
STA 321+96.23



LAYOUT
0 MI 1 MI 2 MI 3 MI
1" = 1 MILE

LATITUDE: 38.18919 LONGITUDE: 89.89031

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

100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

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

TRAFFIC DATA
ADT: 4300 (2006)
ADT: 4350 (2007)
SU: 4.1%
MU: 7.6%

CONTRACT NO. 76A16

079-0013

RANDOLPH COUNTY SECTION 125-1B-I-1 FAP ROUTE 329 (IL 154)

INDEX OF SHEETS

100%
11-29-2006

HIGHWAY STANDARDS

701006-02
701201-02
702001-06

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	100% STATE SFTY-2A
CODE NO	ITEM	UNIT		
50501130	STRUCTURAL STEEL REPAIR	POUND	3290	3290
67100100	MOBILIZATION	L SUM	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
X0322556	STIFFENER INTERSECTION MODIFICATION	EACH	200	200

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 22 20 06
DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER

May 12, 20 06
ENGINEER OF DESIGN AND ENVIRONMENT

May 12, 20 06
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179
SQUAD CONTACT: ART MUEHLFELD (618) 346-3209

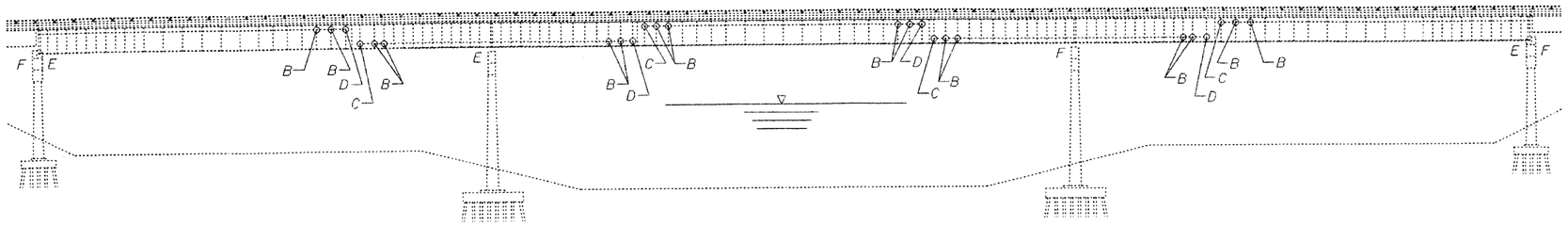
079-0013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

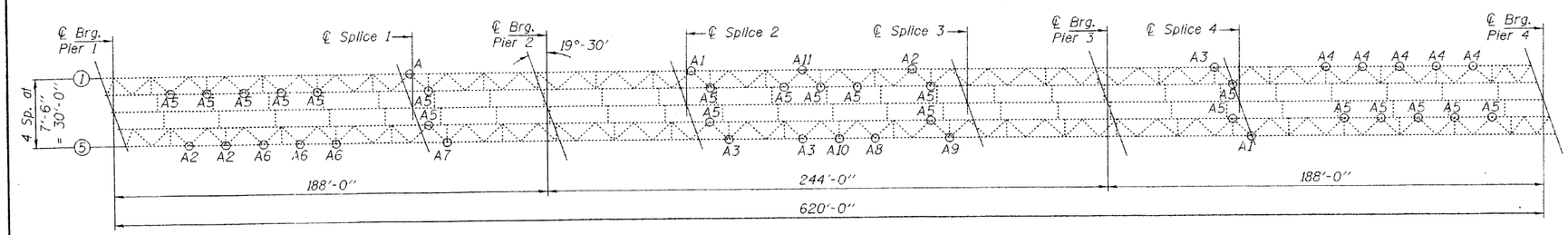
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 154		RANDOLPH	5	2
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
4 SHEETS

Contract Number: 76A16



ELEVATION



PLAN

(A) Thru (A11) Repair details A thru A11. See sheet 2 of 3.
(B) (C) (D) Stiffener modification detail. See sheet 3 of 3.

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$"ϕ, open holes $\frac{15}{16}$"ϕ, unless otherwise noted.

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 the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

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

All new structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Structural Steel Repair.

Surfaces of existing steel exposed down to bare metal as a result of the stiffener modification work shall be spot cleaned and painted with an aluminum epoxy mastic according to Article 506.05. The cost of this work shall be included with Stiffener Intersection Modification.

Cost of removal and/or re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of Structural Steel Repair. Cost of temporarily supporting the lateral bracing is included with Structural Steel Repair.

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

The Contractor shall grind all cracked welds parallel to the direction of the existing weld and not perpendicular to the weld.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stiffener Intersection Modification	Each	200
Structural Steel Repair	Pound	3290

DESIGNED	
CHECKED	Adrian T. Hollowell
DRAWN	baliva
CHECKED	SJB ATH

April 27, 2006
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

EXPIRES 11-30-2006

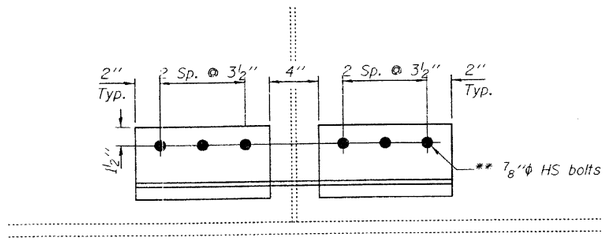
PLAN & ELEVATION
FAP RT. 329 (IL 154)
OVER THE KASKASKIA RIVER
RANDOLPH COUNTY
SN 079-0013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

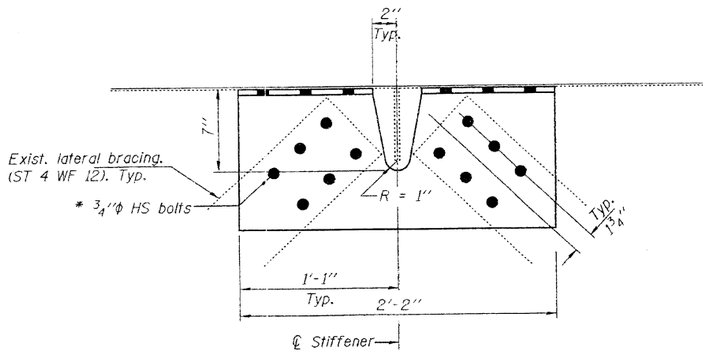
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 154		RANDOLPH	5	3
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
4 SHEETS

Contract Number: 76A16



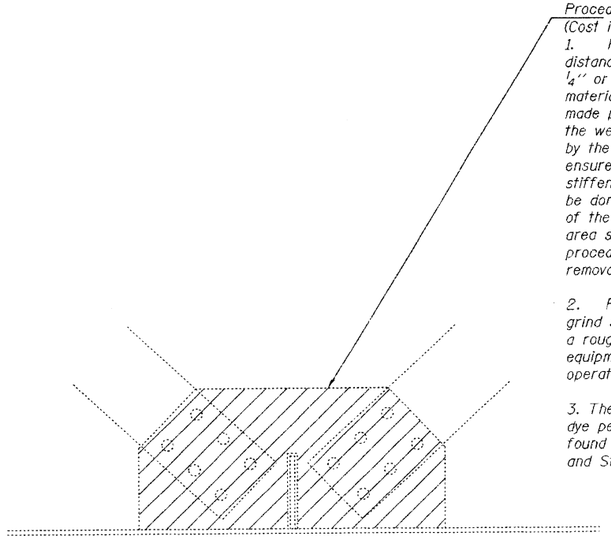
ELEVATION



PLAN

REPAIRS A THRU A9
℘ ⅜" x 11" x 2'-2"

* Use holes in existing lateral bracing as a template for drilling holes on new plate.
** Use holes in new ½" x 6" ℘ as a template for drilling holes in existing web.



REPAIR A THRU A9
EXISTING CONNECTION PLATE REMOVAL
(See table for no. req'd.)

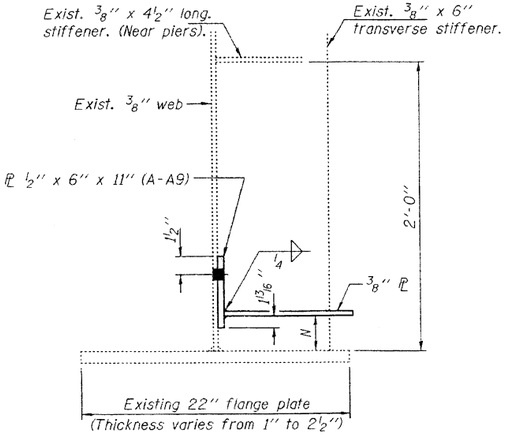
Notes:
Work at adjacent connection locations shall not be performed concurrently.
At each location, the 2 lateral bracing members shall be removed and stored to allow removal of the connection plate and shall be re-installed after erection of the new brackets. Cost shall be included with Structural Steel Repair.

Procedure for Lateral Bracing Retrofit Detail:
(Cost included with Structural Steel Repair)
1. Remove existing ⅜" connecting plate. The minimum distance from cut to face of web shall be the larger of ¼" or web to plate weld size, with removal of remaining material by grinding as described below. The cut shall be made parallel to the web without angling the cut towards the web. Equipment and method of cutting shall be approved by the Engineer. Any method of removal to be used shall ensure that no damage is done to the existing web, vertical stiffener or welds connecting these elements. Cutting shall be done in a manner such that the paint on the opposite face of the web is not damaged. If damage occurs, the damaged area shall be repainted at the contractor's expense and procedures shall be modified to prevent damage at subsequent removal locations.

2. Remove material between cut and web by grinding and grind smooth at web surface. Web plate surfaces shall have a roughness average (Ra) of 250μ in. or less. Grinding equipment shall be approved by the Engineer. The grinding operation should not gouge the girder web plate.

3. The web surface at the modification shall be inspected using dye penetrant or magnetic particle (MT) methods. Any cracks found shall be identified and reported to the Bureau of Bridges and Structures for further disposition.

REPAIR	N	NO. REQ'D.
A	4 11/16"	1
A1	4 5/8"	2
A2	4 13/16"	3
A3	4 9/16"	3
A4	5"	5
A5	3"	21
A6	4 3/4"	3
A7	4 1/2"	1
A8	4 7/16"	1
A9	4 3/8"	1



SECTION THRU GIRDER
(A-A9)

REPAIR DETAILS
FAP RT. 329 (IL 154)
OVER THE KASKASKIA RIVER
RANDOLPH COUNTY
SN 079-0013

DESIGNED	SJB
CHECKED	ATH
DRAWN	baliva
CHECKED	SJB ATH

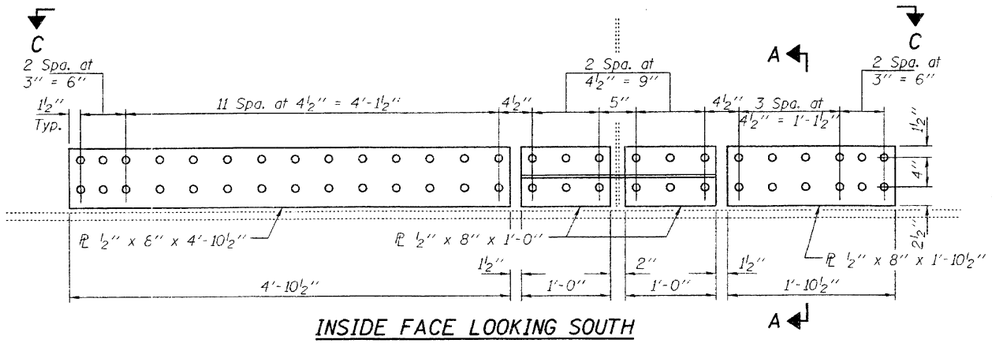
APRIL 27, 2006
EXAMINED John A. Morris ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

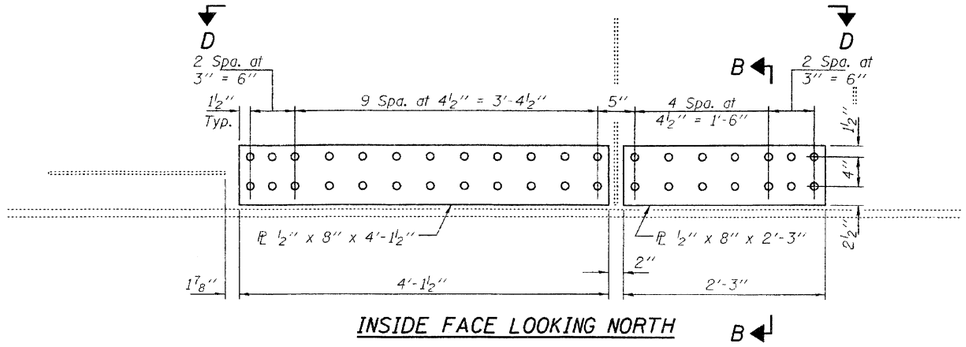
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 154		RANDOLPH	5	4
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3
4 SHEETS

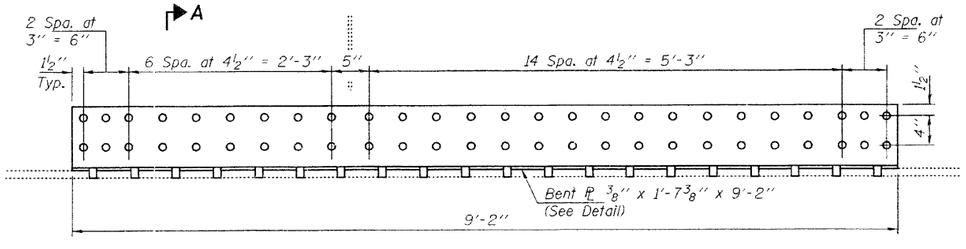
Contract Number: 76A16



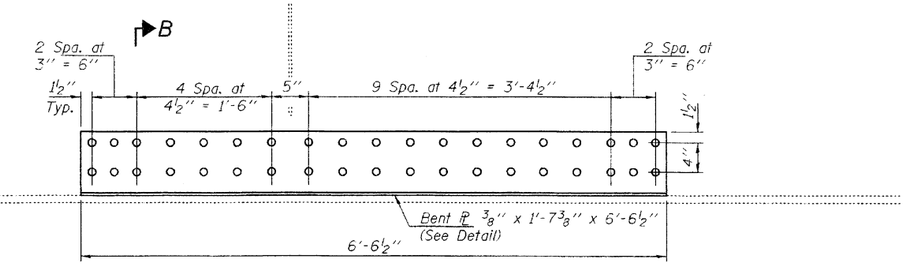
INSIDE FACE LOOKING SOUTH



INSIDE FACE LOOKING NORTH



OUTSIDE FACE LOOKING NORTH



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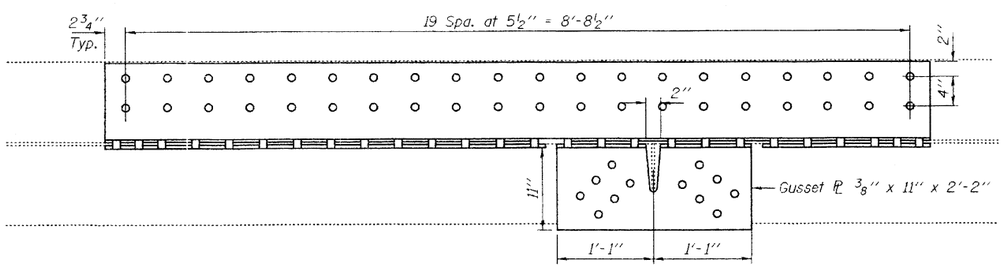
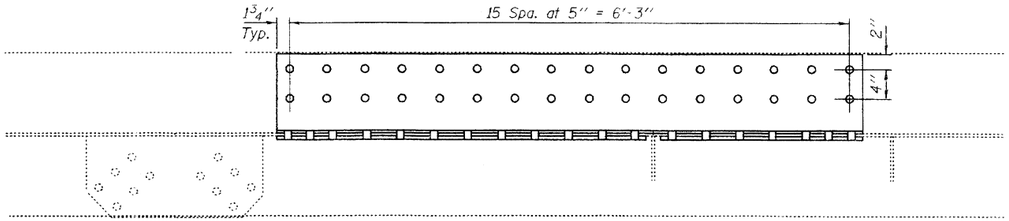


VIEW C-C

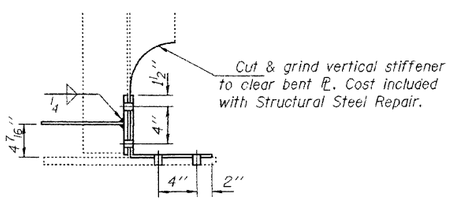
REPAIR A10
(1 Required)



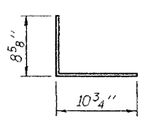
VIEW D-D

REPAIR A11
(1 Required)

Notes:
The Engineer shall field verify the location of repair detail A10 & A11 and ensure that the plate lengths are sufficient to cover the deteriorated areas.
Use holes in bent PL as a template for field drilling holes in existing web and flange.

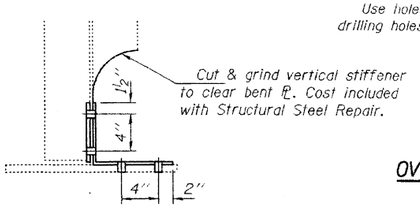


SECTION A-A



BENT PLATE

Grind heel as required to clear existing web to flange weld.



SECTION B-B

DESIGNED	SJB
CHECKED	ATH
DRAWN	baliva
CHECKED	SJB ATH

APRIL 27, 2006
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

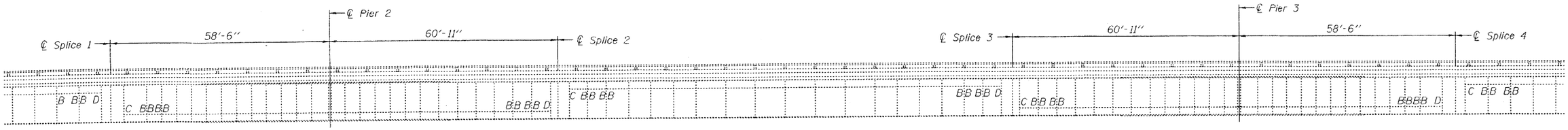
REPAIR DETAILS
FAP RT. 329 (IL 154)
OVER THE KASKASKIA RIVER
RANDOLPH COUNTY
SN 079-0013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

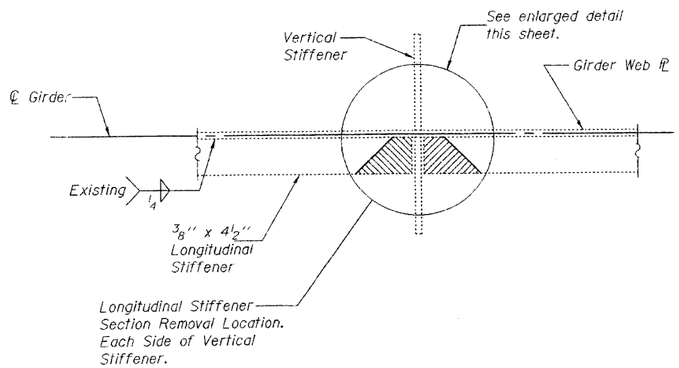
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 154		RANDOLPH	5	5
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
4 SHEETS

Contract Number: 76A16



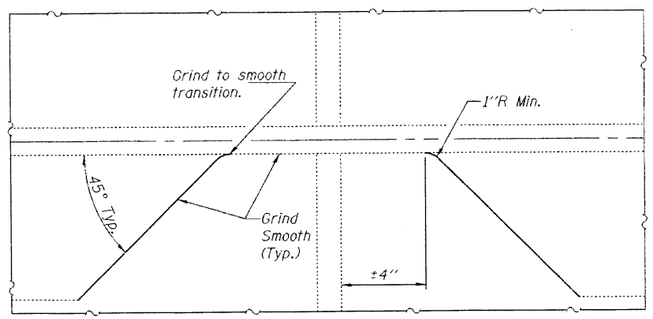
PARTIAL GIRDER ELEVATION



REPAIR DETAIL B, C & D

Hatched area indicates section removal.
(Showing 2 Locations)

Note:
Repair B to be performed to both sides of the stiffener.
Repair C to be performed to the right side of the stiffener only.
Repair D to be performed to the left side of the stiffener only.



Note:
Cost of grinding and testing shall be included with Stiffener Intersection Modification.

Procedure for Stiffener Intersection Modification:

1. Cut existing longitudinal stiffener 4" from face of vertical stiffener and along web as shown, with a 1"R (Min) at Web. The minimum distance from cut to face of web shall be the larger of 1/4" or web to plate weld size, with removal of remaining material by grinding as described below. The cut shall be made parallel to the web without angling the cut towards the web. Equipment and method of cutting shall be approved by the Engineer. Any method of removal to be used shall ensure that no damage is done to the existing web, vertical stiffener or welds connecting these elements. Cutting shall be done in a manner such that the paint on the opposite face of the web is not damaged. If damage occurs, the damaged area shall be repainted at the contractor's expense and procedures shall be modified to prevent damage at subsequent removal locations.

2. Remove material between cut and web by grinding and grind smooth at web surface and cut end of stiffener. Web plate surfaces and cut end of stiffener shall have a roughness average (Ra) of 250μ.in. or less. Grinding equipment shall be approved by the Engineer. The grinding operation should not gouge the girder web plate.

3. The web surface at the modification shall be inspected using dye penetrant or magnetic particle (MT) methods. Any cracks found shall be identified and reported to the Bureau of Bridges and Structures for further disposition.

4. The exposed steel surfaces shall be cleaned and painted using an aluminum epoxy mastic primer according to Article 506.05.

Each 4" stiffener removal area is to be considered as one retrofit. Accepted above referenced work will be paid for at the contract unit price each for Stiffener Intersection Modification, which price shall include all materials, equipment, labor, cleaning, testing and painting.

DESIGNED	SJB
CHECKED	ATH
DRAWN	baliva
CHECKED	SJB ATH

APRIL 27, 2006
EXAMINED John A. Morris
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

SIMD/REPS 04-26-2004

REPAIR DETAILS
FAP RT. 329 (IL 154)
OVER THE KASKASKIA RIVER
RANDOLPH COUNTY
SN 079-0013

#76277 #141 4-28-00 FAP 329 Randolph Co. SEC 125-1B-I I&R copy #141

141

99.9%

6-3-2091

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-I	RANDOLPH	35	1
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FAP ROUTE 329 (IL.154)
SECTION 125-1B-I
RANDOLPH COUNTY

C-98-107-99

STRUCTURE REPAIRS AND PCC PAVEMENT PATCHING

D-98-119-99

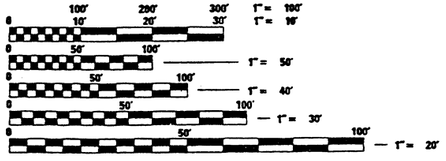
LOCATION OF SECTION INDICATED THUS:- ▬

INDEX OF SHEETS

STANDARDS

630001-02	701321-03
631031-02	701326-01
635006	701336-03
635011	702001-01
701201-01	704001
701306	780001-01
701311-02	781001-02

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

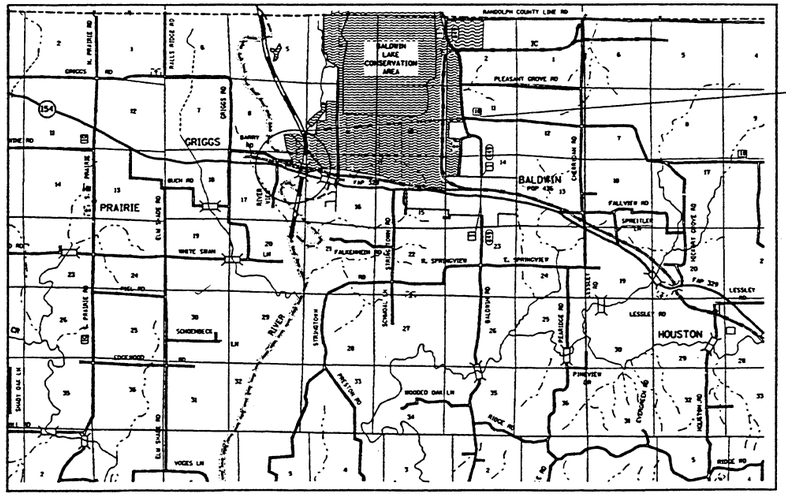


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

CONTRACT NO. 76277

079-0013



SN 079-0013
PROPOSED BRIDGE DECK OVERLAY
WITH REPAIRS AND PCC PAVEMENT PATCHING
BEGIN AT STA. 296+04
END AT STA. 339+09

LAYOUT
0 MI 1 MI 2 MI 3 MI
1" = 1 MILE

FAP ROUTE 329 (IL 154)
ADT = 4100 (1999)
ADT = 5200 (2020)
SU = 5.3%
MU = 5.5%

GROSS LENGTH = 4305 FT. = 0.82 MILES
NET LENGTH = 4305 FT. = 0.82 MILES

JAMES L. EASTERLY
62-3374
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Feb 7 20 00
James Easterly (mcl)
DISTRICT ENGINEER

PASSED March 24 20 00
Michael Klein
ENGINEER OF DESIGN AND ENVIRONMENT

APPROVED March 24 20 00
James C. Sigler
DIRECTOR, DIVISION OF HIGHWAYS

8-239

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: PATTI LeBEAU (618) 346-3179
SQUAD CONTACT: TIFFANY BRASE (618) 346-3329

RANDOLPH COUNTY SECTION 125-1B-I FAP ROUTE 329

PLOT DATE: Fri Feb 4 09:18:01 2000

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 329	*	RANDOLPH	35	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
20 SHEETS

* 125-1B-1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark:
" X" cut on S.W. corner of Bridge curb. overflow Bridge. 12' rt. of Sta. 1011+80. Channel Transit Line U.S.A.C.E. Elev. 396.12

Existing Structure:
S.N. 079-0013 Built as SBI Rte. 170. Section 125B-1 in 1970. The existing structure consists of 2 approach spans at 20'-5" over vaulted abutments and with a 5 span steel structure. The end spans (spans 1 & 5) are single spans of 115'-5½" and the center 3 spans are continuous. Spans 2 & 4 are 189'-1½" and the center span is 244'-0". The out-to-out deck width is 36'-0", the bridge roadway width is 32'-6", and the length back to back of approaches is 893'-4". The existing structure is skewed 19°30' right ahead. Stage Construction will be utilized with the North side to be constructed as Stage I. Temporary traffic signals will be used to provide one lane, one way traffic.

SCOPE OF WORK

1. Retrofit bridge parapets to eliminate metal rail.
2. Install water collection system under finger plate joint at Pier 1.
3. Remove and replace preformed joints between the main and approach spans at the abutments.
4. Remove and replace the deck ends at Pier 4 to re-establish the joint opening.
5. Remove existing expansion bearings and replace with new pot bearings at the expansion side of Piers 1 & 4, and at Pier 2, replace with new elastomeric bearings at the Abutments.
6. Repair ends of girders at Pier 1, Span 2.
7. Repair Piers 1 & 4 with Formed Concrete Repair.
8. Extend or eliminate deck drains.
9. Seal joints and cracks in slopewalls and place controlled low strength material in voids under slopewalls.
10. Remove and replace the bolts attaching access doors at vaulted abutments.
11. Perform partial depth and full depth repairs to deck, scarify deck to a depth of ¼" and place 2¼" microsilica concrete overlay.
12. Place new bituminous surface on approaches for vertical transitions.

DESIGN SPECIFICATIONS

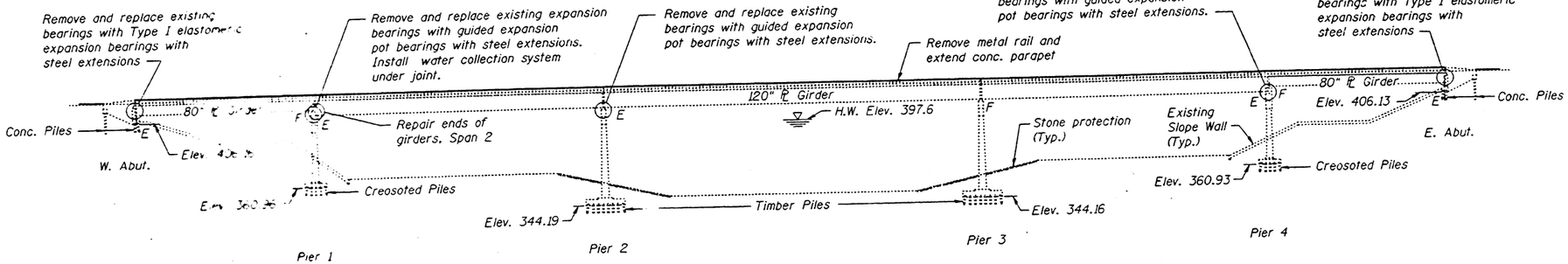
1996 AASHTO and applicable Interims thru 1998.

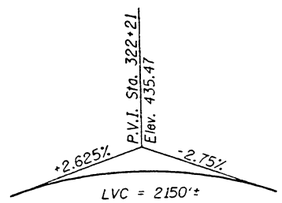
LOADING HS20-44

No allowance for future wearing surface included

DESIGN STRESSES

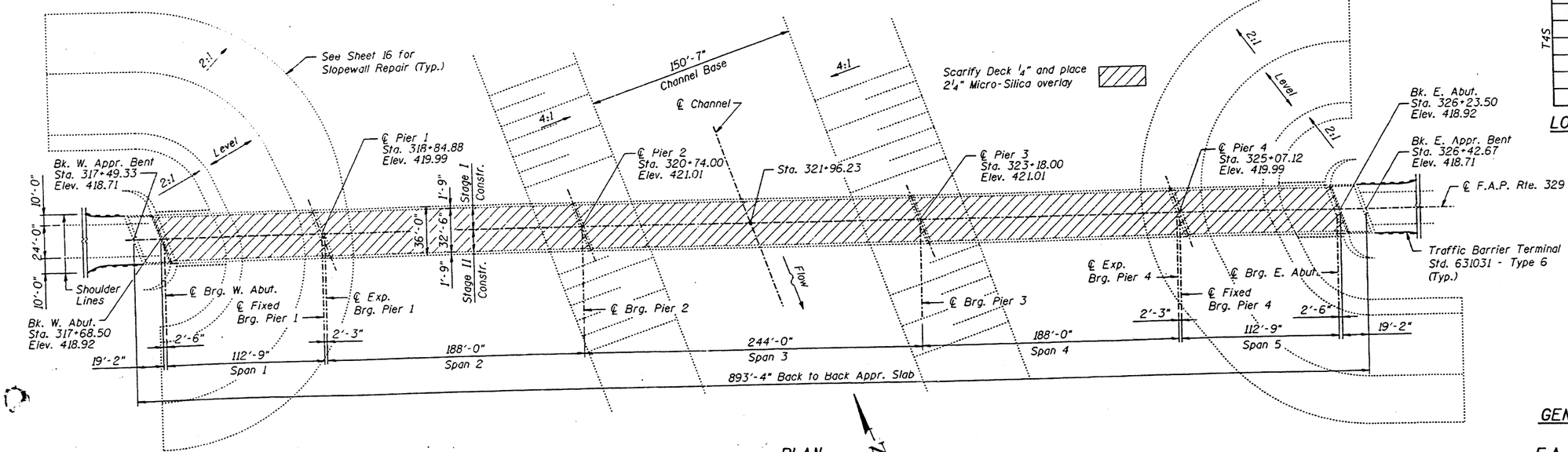
f'_c = 3,500 psi
f_s = 20,000 psi (Exist.)
f_s = 20,000 psi (New)



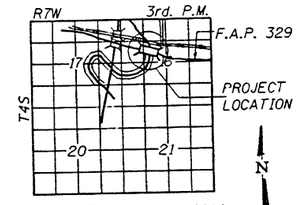


PROFILE GRADE
FAP ROUTE 329 (IL 154)

ELEVATION



PLAN



LOCATION SKETCH

Date: 3-3-00
Expires 11/30/2000
Sheets Covered By This Seal:
1, 2, 8, 10-14, 16 & 19 of 20

GENERAL PLAN & ELEVATION

F.A.P. RT. 329 SEC. (125-1B-I)
RANDOLPH COUNTY
S.N. 079-0013

PARSONS BRINCKERHOFF

Route No.	Section	County	Total Sheets	Sheet No.
FAP 329	*	RANDOLPH	35	17

SHEET NO. 2
20 SHEETS

* 125-1B-I

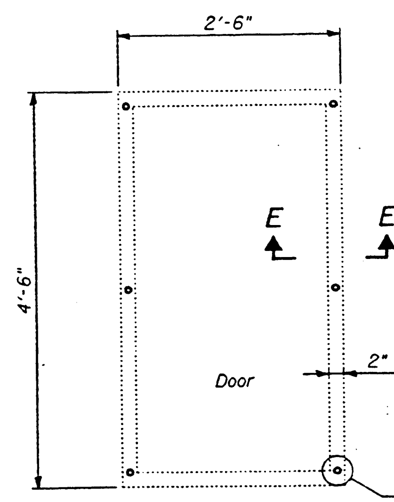
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

1. Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$" ϕ, open holes $\frac{15}{16}$" ϕ, unless otherwise noted.
2. Calculated weight of new structural steel = 20.920 lbs.
3. All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
4. Cost of removal of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of "Furnishing and Erecting Structural Steel".
5. 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 the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
6. The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.
7. Existing structural steel shall only be cleaned as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures".
8. Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
9. Prior to pouring the new concrete for the deck, all loose rust, loose mill scale and all other loose, detrimental foreign material shall be removed from the portions of flanges of girders in contact with concrete. The removal shall be accomplished according to the requirements of the SSPC Surface Preparation Specifications SP-3 for power tool cleaning or SP-2 for hand tool cleaning. Cost shall be included in the cost of "Concrete Superstructure".
10. 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".
11. 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.
12. All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".

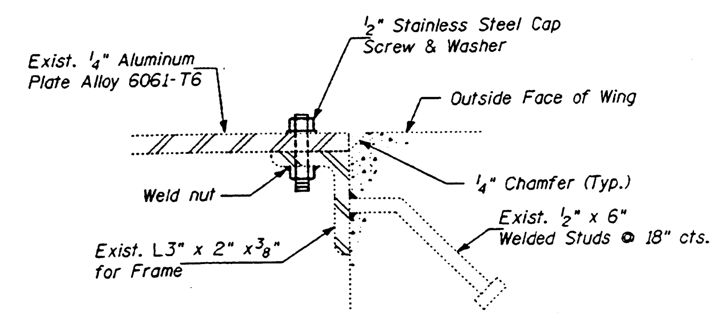
TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Elastomeric Bearing Assembly, Type I	Each	10	-	10
Floating Bearing, Guided Expansion 200 K	Each	10	-	10
Floating Bearing, Guided Expansion 750 K	Each	5	-	5
Furnishing and Erecting Structural Steel	Pound	20.920	-	20.920
Jack and Remove Existing Bearings	Each	25	-	25
Floor Drain Extension	Each	122	-	122
Plug Existing Deck Drains	Each	156	-	156
Controlled Low-Strength Material	Cu Yd	-	171	171
Sealing Cracks	Foot	-	7.350	7.350
FABRIC REINFORCED ELASTOMERIC TROUGH	Foot	40	-	40
Deck Slab Repair (Partial Depth)	Sq Yd	147	-	147
Deck Slab Repair (Full Depth, - Type II)	Sq Yd	21	-	21
Concrete Bridge Deck Scarification - $\frac{1}{4}$"	Sq Yd	3.241	-	3.241
Bridge Deck Microsilica Concrete Overlay $2\frac{1}{4}$"	Sq Yd	3.241	-	3.241
Waterway Obstruction Warning Luminaire	Each	6	-	6
Junction Box, Stainless Steel, Attached to Structure, 6" x 6" x 4"	Each	6	-	6
Bridge Rail Removal	Foot	1.710	-	1.710
Retrofit Concrete Parapet	Foot	1.710	-	1.710
Silicone Joint Sealer	Foot	115	-	115
Bridge Deck Grooving	Sq Yd	3.040	-	3.040
Concrete Removal	Cu Yd	5.3	-	5.3
Concrete Superstructure	Cu Yd	5.3	-	5.3
Polymer Concrete	Cu Ft	11.5	-	11.5
Formed Concrete Repair (Depth EQUAL TO OR LESS THAN 5")	Sq Ft	-	646.7	646.7
Formed Concrete Repair (DEPTH GREATER THAN 5")	Sq Ft	-	13.0	13.0
Sheet Waterproofing Membrane System	Sq Yd	154	-	154
Bituminous Concrete Surface Course Mix D, Class I, Type 2	Ton	11	-	11
Bar Splicers	Each	20	-	20
Reinforcement Bars, Epoxy Coated	Pound	1470	-	1,470



DOOR ELEVATION

West abutment looking North, East abutment opp. hand



SECTION E-E

VAULTED ABUTMENT ACCESS DOOR REPAIR DETAILS

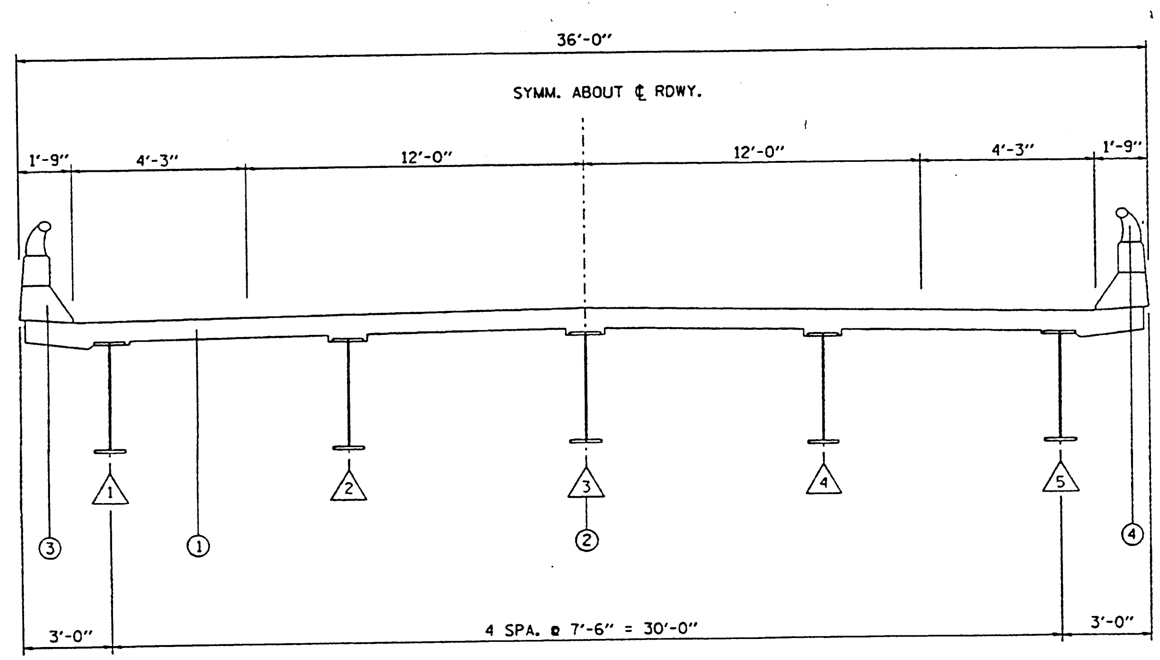
Cost of repairs to access doors is included in "Furnishing and Erecting Structural Steel".

ABUTMENT ACCESS DOOR REPAIRS,
GENERAL NOTES & BILL OF MATERIAL

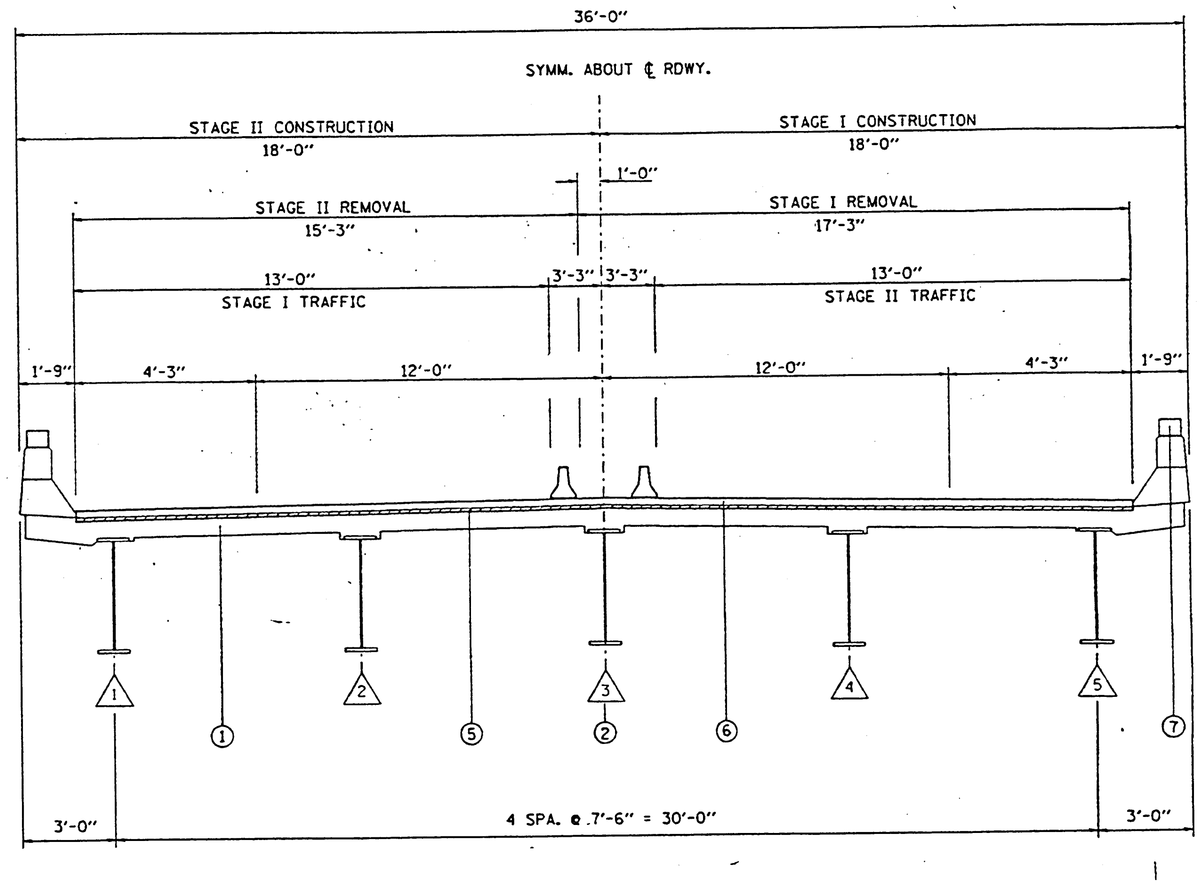
F.A.P. RT. 329 SEC. (125-1B-I)
RANDOLPH COUNTY
S.N. 079-0013

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-I	RANDOLPH	35	18
STA.		TO STA.		
EXISTING CONDITIONS:				

SHEET *3 OF 20.



EXISTING CROSS SECTION
LOOKING EAST



PROPOSED CROSS SECTION
LOOKING EAST

GENERAL NOTES

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.

PRIOR TO POUR THE NEW CONCRETE DECK, ALL LOOSE RUST, LOOSE MILL SCALE AND ALL LOOSE, DETRIMENTAL FOREIGN MATERIAL SHALL BE REMOVED FROM THE PORTIONS OF FLANGES OF BEAMS IN CONTACT WITH CONCRETE. THE REMOVAL SHALL BE ACCOMPLISHED ACCORDING TO THE REQUIREMENTS OF THE SSPC SURFACE PREPARATION SPECIFICATIONS SP-3 FOR POWER TOOL CLEANING OR SP-2 FOR HAND TOOL CLEANING. COST SHALL BE INCLUDED IN THE COST OF "CONCRETE SUPERSTRUCTURE".

LEGEND

(1) EXISTING REINFORCED CONCRETE DECK - 7½"
(2) EXISTING ℞ GIRDER - 80" OR 120" WEB
(3) EXISTING CONCRETE PARAPET
(4) EXISTING ALUMINUM RAILING (TO BE REMOVED)
(5) PROPOSED CONCRETE BRIDGE DECK SCARIFICATION - ¼"
(6) PROPOSED MICROSILICA CONCRETE OVERLAY - 2¼"
(7) PROPOSED RETROFIT CONCRETE PARAPET

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BRIDGE CROSS SECTION

FAP 329 (IL. 154)
SECTION 125-1B-I
RANDOLPH COUNTY
SN 079-0013

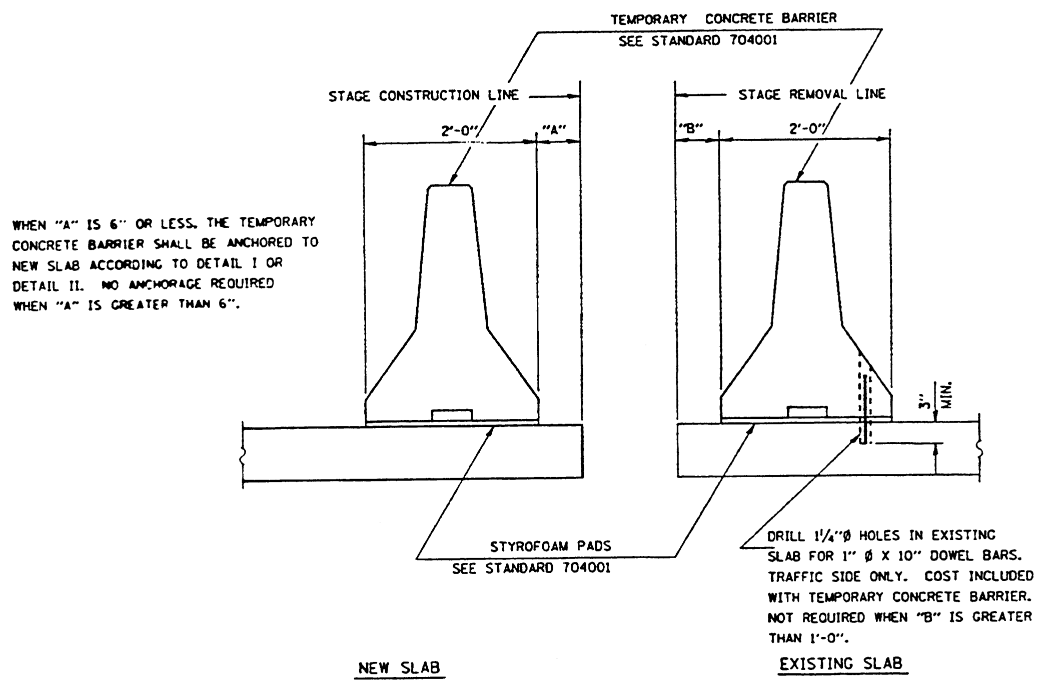
DRAWN BY:

PLAN | NOTE BOOK NO. | SURVEYED | PLOTTED | ALIGNMENT CHECKED | R.L. OF R.W. CHECKED | CADD FILE NAME | BY | DATE

12/03/08

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-I	RANDOLPH	35	19
STA.		TO STA.		
EXISTING CONDITIONS:				

SHEET #4 OF 20.



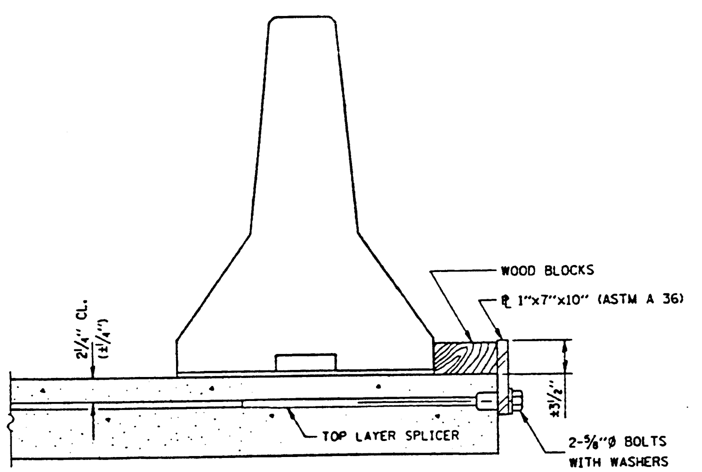
SECTIONS THRU SLAB

NOTES

DETAIL I - WITH BAR SPLICER OR COUPLERS:
CONNECT ONE (1) 1"X7"X10" STEEL ℘ TO THE TOP LAYER OF COUPLERS WITH 2-⅝"Ø BOLTS SCREWED TO COUPLER AT APPROXIMATE ℄ OF EACH 10'-0" BARRIER PANEL.

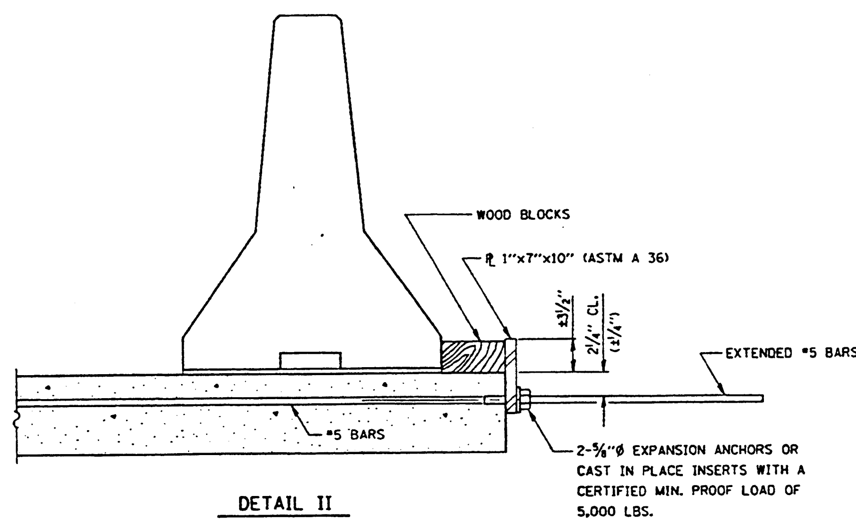
DETAIL II - WITH EXTENDED REINFORCEMENT BARS:
CONNECT ONE (1) 1"X7"X10" STEEL ℘ TO THE CONCRETE SLAB WITH 2-⅝"Ø EXPANSION ANCHORS OR CAST IN PLACE INSERTS SPACED BETWEEN THE TOP LAYER OF REINFORCEMENT AT APPROXIMATE ℄ OF EACH 10'-0" BARRIER PANEL.

COST OF ANCHORAGE IS INCLUDED WITH TEMPORARY CONCRETE BARRIER.



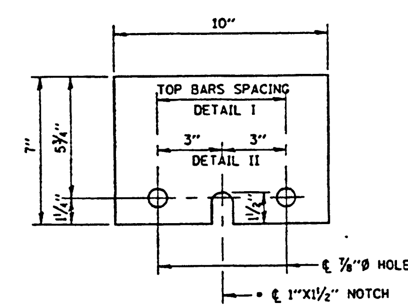
DETAIL I

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.



℘ 1"x7"x10"

* REQUIRED ONLY WITH DETAIL II

REVISIONS	
NAME	DATE

DRAWN BY:

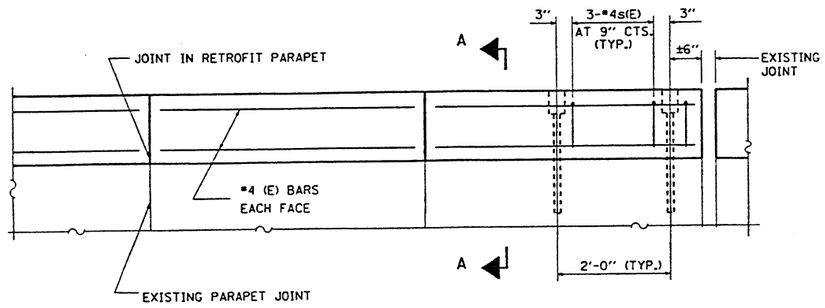
ILLINOIS DEPARTMENT OF TRANSPORTATION

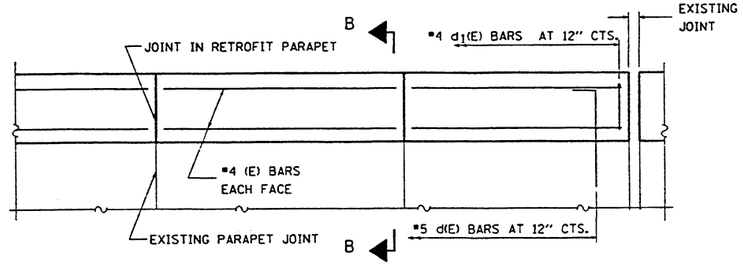
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

FAP 329 (IL. 154)
SECTION 125-1B-I
RANDOLPH COUNTY
SN 079-0013

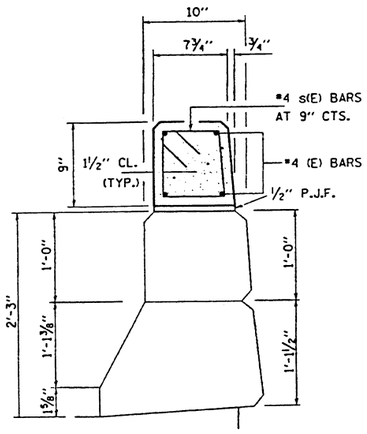
FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-1	RANDOLPH	35	20
STA.	TO STA.			
EXISTING CONDITIONS:				

SHEET #5 OF 20.

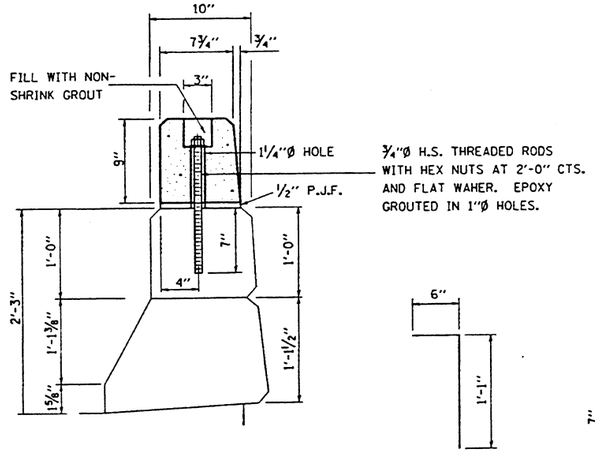




INSIDE ELEVATION OF PARAPET
(PRECAST ALTERNATE)

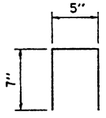


PRECAST ALTERNATE
(SHOWING REINFORCEMENT)



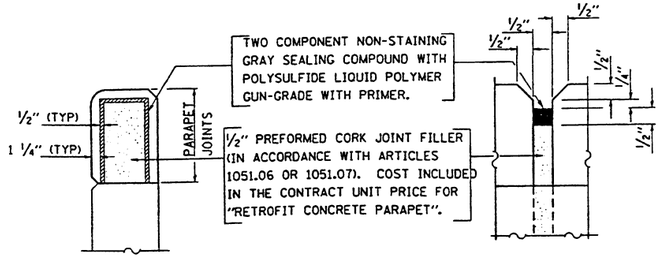
PRECAST ALTERNATE
(SHOWING ATTACHMENT)

BAR d(E)

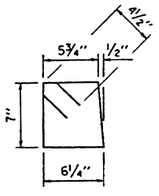


BAR d1(E)

SECTION A-A

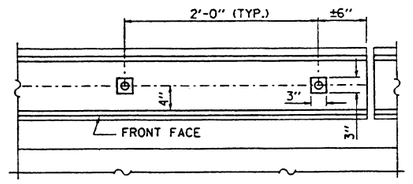


JOINT DETAIL

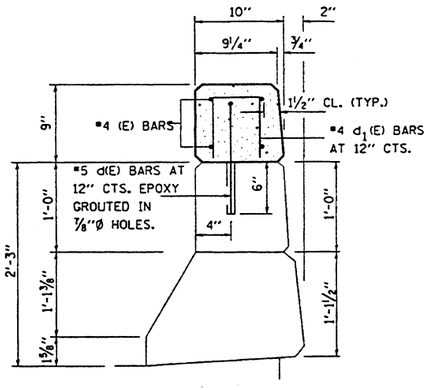


BAR S(E)

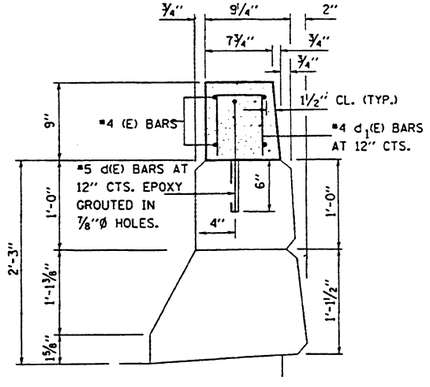
INSIDE ELEVATION OF PARAPET
(CAST-IN-PLACE ALTERNATE)



TOP VIEW
(SHOWING SPACING OF ¾"Ø H.S. THREADED RODS)



CAST-IN-PLACE ALTERNATE



CAST-IN-PLACE ALTERNATE
(SHOWING SLIP-FORMED ALTERNATE)

SECTION B-B

GENERAL NOTES

CLASS SI CONCRETE SHALL BE USED THROUGHOUT FOR CAST-IN-PLACE OPTION.

CLASS PC CONCRETE SHALL BE USED THROUGHOUT FOR PRECAST OPTION.

ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".

CLASS SI OR PC CONCRETE; REINFORCEMENT BARS, EPOXY COATED; THREADED ANCHOR RODS; ½" PJF AND ALL OTHER ACCESSORIES NEEDED FOR INSTALLATION AND ERECTION SHALL BE INCLUDED IN THE COST OF "RETROFIT CONCRETE PARAPET".

THE CONCTRACTOR SHALL USE 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 SHALL BE SEALED GLASS CAPSULE OR A SEALED GLASS ADHESIVE CARTRIDGE CONTAINING PREMEASURED AMOUNT OF ADHESIVE CHEMICAL. THE THREADED ROD STUD WITH NUT & WASHERS SHALL CONFORM TO ASTM A307.

THE EXISTING ¾"Ø AND 1"Ø WELDED STUDS SHALL BE BURNED, SAWED OR CHIPPED OFF FLUSH WITH THE TOP OF THE EXISTING PARAPET.

HOLES FOR THE DOWEL RODS SHALL MISS EXISTING PARAPET JOINTS.

THE PRECAST SECTIONS MAY BE CAST IN UNITS OF 3', 5', 7'..... ETC. LENGTH AS DESIRED. WHERE THEY OVERLAP THE JOINTS IN THE PARAPET, THE PRECAST UNITS SHALL BE SAW CUT TO LINE UP WITH THE JOINTS IN THE PARAPET. THE SAWCUT FACES OF THE UNITS SHALL BE GIVEN A COAT OF BOILED LINSEED OIL MIXTURE (PROTECTIVE COAT). THE COST OF THE PROTECTIVE COAT SHALL BE INCLUDED IN THE COST FOR "RETROFIT CONCRETE PARAPET".

THE CONCRETE PARAPET RETROFIT WILL BE MEASURED FOR PAYMENT IN FOOT (FT) ALONG THE TOP OF PARAPET END TO END. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (FT) OF "RETROFIT CONCRETE PARAPET".

• EPOXY GROUT d(E) BARS IN 6" (MIN.) DRILLED HOLES ACCORDING TO SECTION 584 OF THE STANDARD SPECIFICATIONS.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
RETROFIT CONCRETE PARAPET	FOOT	1693

REVISIONS	
NAME	DATE

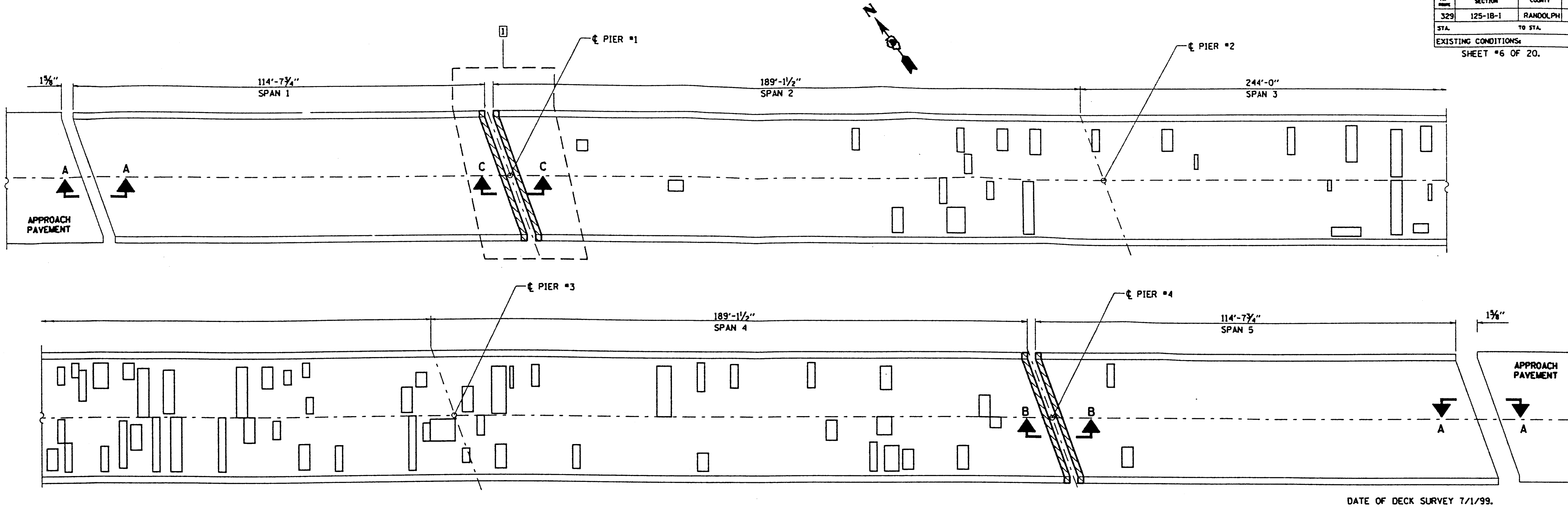
ILLINOIS DEPARTMENT OF TRANSPORTATION

RETROFIT CONCRETE PARAPET DETAIL

FAP 329 (IL. 154)
SECTION 125-1B-I
RANDOLPH COUNTY
SN 079-0013

DRAWN BY:

PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
FILE NAME
BY
DATE



DATE OF DECK SURVEY 7/1/99.

CONCRETE REMOVAL

DECK PATCHING

PARTIAL DEPTH PATCHING

STATION FROM	STATION TO	OFFSET FROM CENTERLINE* FROM	OFFSET FROM CENTERLINE* TO	AREA SQ. FT.
319+03	319+06	7.0 LT	10.0 LT	9.0
319+28	319+32	1.0 RT	4.0 RT	12.0
319+78	319+80	8.0 LT	14.0 LT	12.0
319+89	319+92	8.0 RT	15.0 RT	21.0
320+02	320+04	0.0	7.0 RT	14.0
320+04	320+09	8.0 RT	15.0 RT	35.0
320+07	320+09	7.0 LT	14.0 LT	14.0
320+09	320+11	1.0 LT	6.5 LT	11.0
320+15	320+17	1.0 RT	6.0 RT	10.0
320+25	320+28	0.5 RT	15.5 RT	45.0
320+44	320+46	8.0 LT	14.0 LT	12.0
320+63	320+66	8.0 LT	14.0 LT	18.0
320+72	320+73	3.0 LT	7.0 LT	4.0
320+98	321+00	7.0 LT	14.5 LT	15.0
321+09	321+10	0.0	3.0 RT	3.0
321+10	321+18	13.0 RT	15.5 RT	20.0
321+14	321+17	0.5 LT	15.0 LT	43.5
321+26	321+29	1.0 LT	14.0 LT	39.0
321+26	321+29	0.0	15.0 RT	45.0
321+32	321+36	12.0 RT	14.5 RT	10.0
321+34	321+37	8.0 LT	15.0 LT	21.0
321+36	321+37	1.0 RT	5.5 RT	4.5

PARTIAL DEPTH PATCHING

STATION FROM	STATION TO	OFFSET FROM CENTERLINE* FROM	OFFSET FROM CENTERLINE* TO	AREA SQ. FT.
321+42	321+45	8.5 RT	14.5 RT	18.0
321+45	321+47	9.0 LT	14.0 LT	10.0
321+45	321+47	0.5 RT	7.0 RT	13.0
321+49	321+51	11.0 LT	15.0 LT	8.0
321+62	321+64	1.0 RT	14.0 RT	26.0
321+63	321+66	10.5 LT	15.0 LT	13.5
321+65	321+68	2.0 RT	9.0 RT	21.0
321+67	321+70	0.0	13.5 LT	40.5
321+71	321+73	0.0	15.0 RT	30.0
321+74	321+77	1.0 LT	13.0 LT	36.0
321+76	321+79	0.0	15.0 RT	45.0
321+89	321+91	0.0	15.0 RT	30.0
321+94	321+97	0.0	14.0 LT	42.0
321+96	321+99	0.0	7.0 RT	21.0
322+01	322+04	8.0 LT	14.0 LT	18.0
322+04	322+06	1.0 RT	6.0 RT	10.0
322+07	322+09	9.0 LT	13.0 LT	8.0
322+11	322+14	7.5 RT	14.5 RT	21.0
322+12	322+14	11.0 LT	15.0 LT	8.0
322+13	322+15	1.0 LT	5.5 LT	9.0
322+21	322+23	8.0 RT	15.0 RT	14.0
322+39	322+42	1.0 LT	8.0 LT	21.0

PARTIAL DEPTH PATCHING

STATION FROM	STATION TO	OFFSET FROM CENTERLINE* FROM	OFFSET FROM CENTERLINE* TO	AREA SQ. FT.
322+41	322+43	0.0	15.0 RT	30.0
322+43	322+46	8.0 LT	12.0 LT	12.0
322+45	322+47	2.0 RT	7.0 RT	10.0
322+51	322+54	1.0 RT	7.0 RT	18.0
322+56	322+58	9.0 RT	13.0 RT	8.0
322+56	322+59	1.0 LT	8.0 LT	21.0
322+60	322+62	0.0	5.5 RT	11.0
322+64	322+68	0.5 LT	13.5 LT	52.0
322+65	322+68	8.0 RT	14.5 RT	19.5
322+69	322+70	7.5 LT	13.5 LT	6.0
322+75	322+77	8.0 LT	14.0 LT	12.0
322+86	322+88	8.0 RT	14.5 RT	13.0
323+09	323+13	0.0	14.0 LT	56.0
323+20	323+22	7.0 LT	15.0 LT	16.0
323+20	323+23	10.0 RT	15.0 RT	15.0
323+29	323+31	8.0 LT	14.5 LT	13.0
323+50	323+52	8.0 LT	15.0 LT	14.0
323+55	323+58	1.0 RT	6.5 RT	16.5
323+70	323+73	7.5 LT	14.0 LT	19.5
323+71	323+75	8.0 RT	15.0 RT	28.0
323+97	324+00	0.0	6.0 LT	18.0
324+00	324+03	0.0	3.0 RT	9.0
324+32	324+34	8.5 LT	15.0 LT	13.0
324+36	324+39	8.0 RT	13.5 RT	16.5

FULL DEPTH PATCHING

STATION FROM	STATION TO	OFFSET FROM CENTERLINE* FROM	OFFSET FROM CENTERLINE* TO	AREA SQ. FT.
320+18	320+21	8.0 LT	14.0 LT	18.0
320+27	320+30	7.0 LT	14.0 LT	21.0
321+47	321+49	7.0 RT	15.0 RT	16.0
321+51	321+53	4.5 LT	13.0 LT	17.0
321+55	321+59	8.0 LT	15.0 LT	28.0
321+57	321+59	8.0 RT	15.0 RT	14.0
323+67	323+69	7.0 RT	15.0 RT	16.0
323+69	323+73	0.0	5.0 RT	20.0
323+76	323+79	9.0 RT	14.5 RT	16.5
323+91	323+94	8.0 RT	14.5 RT	19.5

FOR SECTION A-A SEE SHEET #9 OF 19.

FOR SECTION B-B SEE SHEET #7 OF 19.

AREAS OF DECK REPAIRS SHOWN ARE ESTIMATED. THE ENGINEER SHALL SHOW ACTUAL LOCATIONS ON AS-BUILT PLANS.

* OFFSET IS MEASURED FROM ℄ STRUCTURE.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DECK REPAIR PLANS

FAP 329 (IL 154)
SECTION 125-1B-1
RANDOLPH COUNTY
SN 079-0013

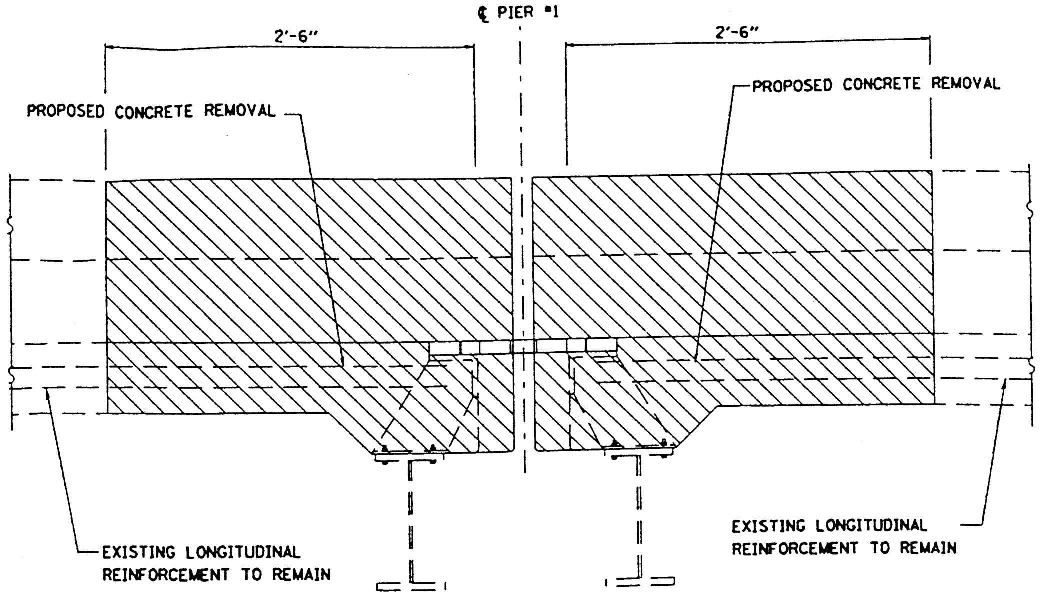
DRAWN BY:

PLOT DATE: Thu Jun 29 12:24:22 2000

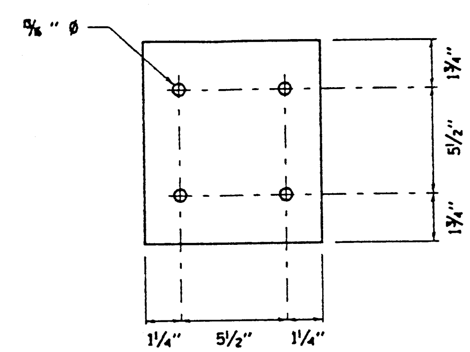
1 REV. 06/19/00 TTBB

F.A.P. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-1	RANDOLPH	35	21A
STA.		TO STA.		
EXISTING CONDITIONS:				

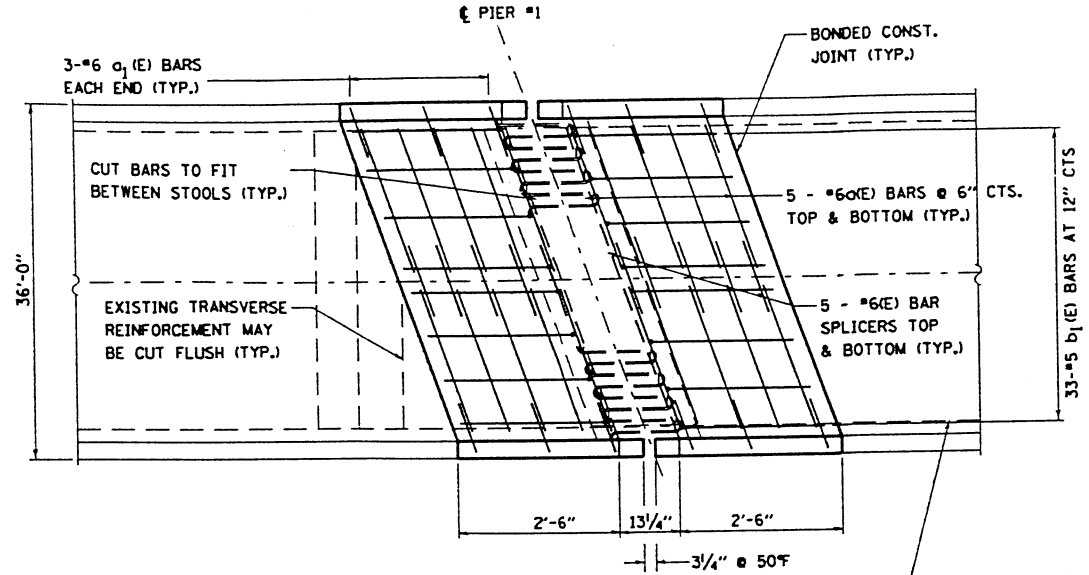
SHEET #6A OF 20.



SECTION C-C
EXISTING
DIMENSIONS MEASURED PARALLEL TO GIRDERS

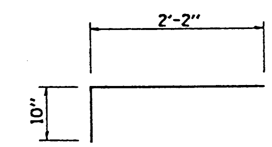


DETAIL 'A'



PLAN - DECK END

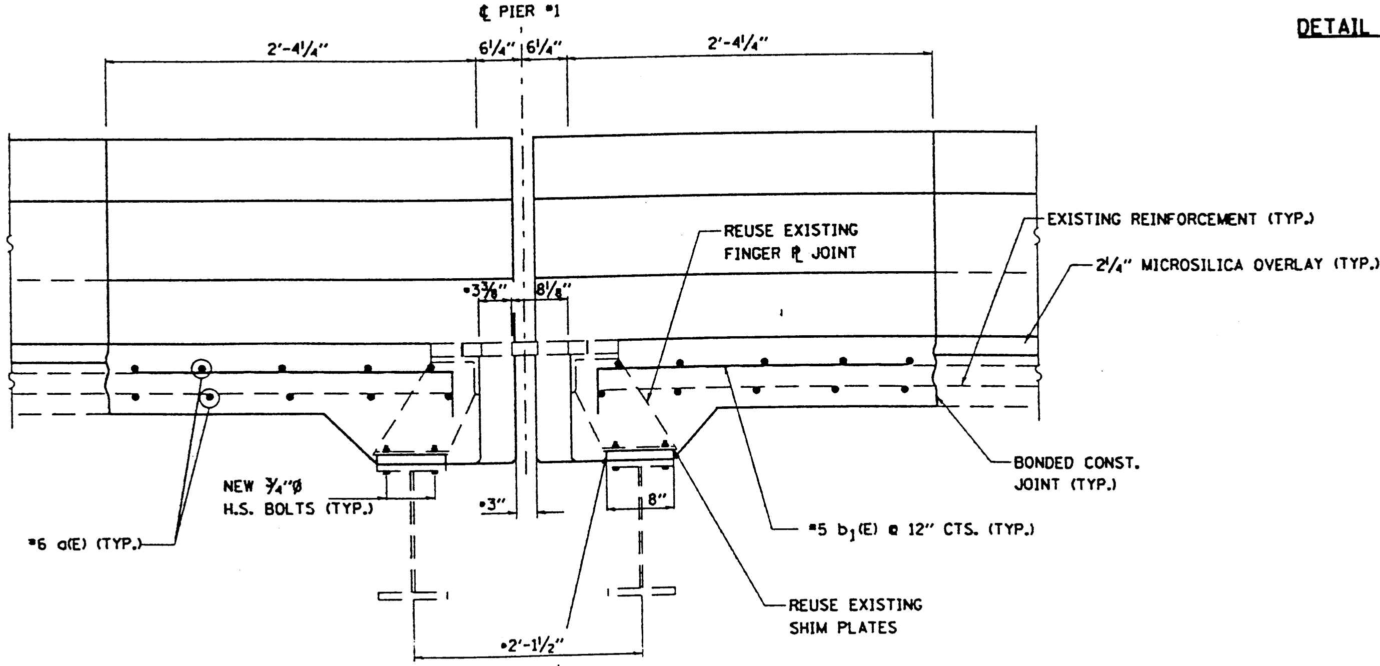
EXISTING LONGITUDINAL REINFORCEMENT



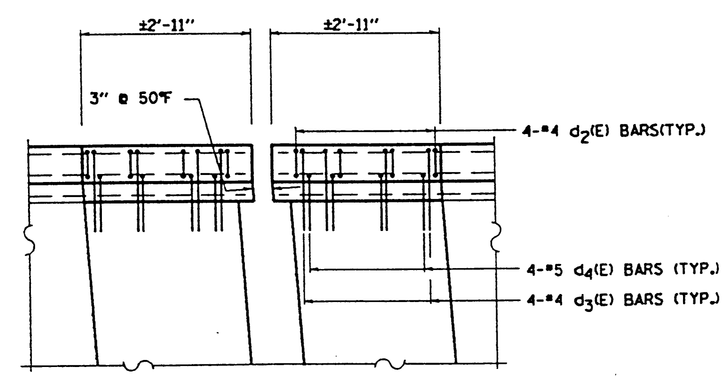
BAR b1(E)

BILL OF MATERIAL••

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	40	#6	18'-6"	——
a1(E)	12	#6	4'-0"	——
b1(E)	66	#5	3'-0"	┌──
d2(E)	16	#4	2'-1"	⊓
d3(E)	16	#4	4'-7"	└
d4(E)	16	#5	3'-5"	└
CONCRETE REMOVAL			CU.YD.	5.4
REINFORCEMENT BARS, EPOXY COATED			POUND	1520
CONCRETE SUPERSTRUCTURE			CU.YD	5.4
BAR SPLICERS			EACH	20
FURNISHING AND ERECTING STRUCTURAL STEEL			POUND	1420



SECTION C-C
PROPOSED
DIMENSIONS MEASURED PERPENDICULAR TO JOINT



PLAN OF CURB END (TYP.)

• @ 50°F

••FOR WORK TO BE DONE AT PIER #1 ONLY.

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.

FOR REINFORCEMENT BAR DETAILS, SECTION THRU PROPOSED PARAPET, AND PLAN OF CURB END SEE SHEET #7 OF 20.

THE EXACT DIMENSIONS OF THE 2" STEEL SHIMS SHALL BE FIELD VERIFIED PRIOR TO BEING ORDERED.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

FAP 329 (IL. 154)
SECTION 125-1B-1
RANDOLPH COUNTY
SN 079-0013

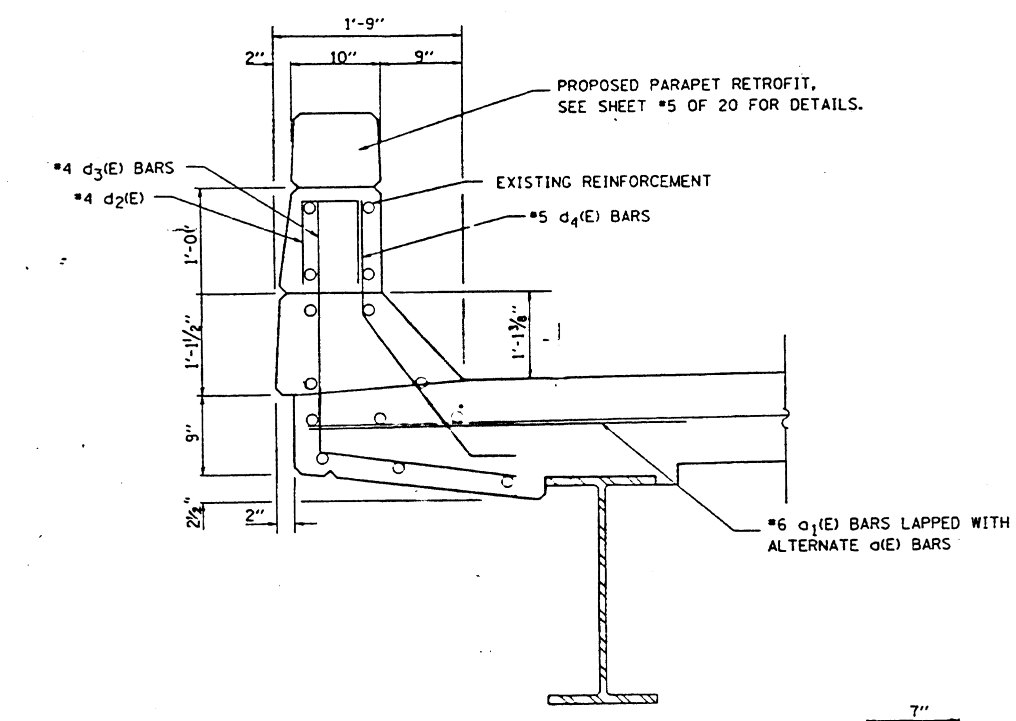
DRAWN BY:

PLOT DATE: Thu Jun 29 12:22:58 2000

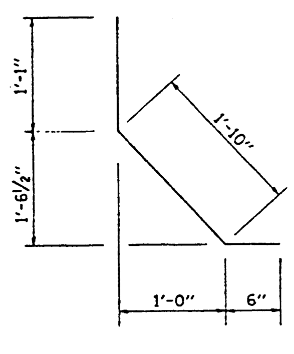
1 ADDED SHEET 06/19/00 TTBB

F.A.P. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-I	RANDOLPH	35	22
STA.		TO STA.		

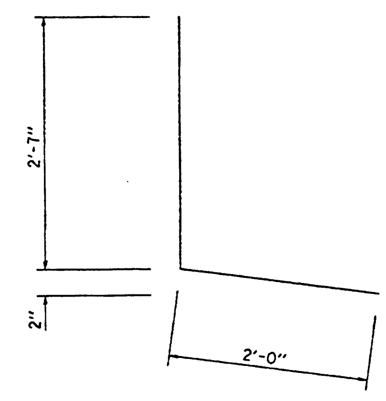
EXISTING CONDITIONS:
SHEET #7 OF 20.



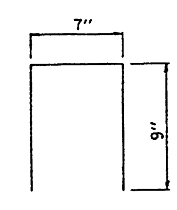
SECTION THRU PROPOSED PARAPET



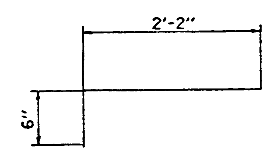
BAR d4(E)



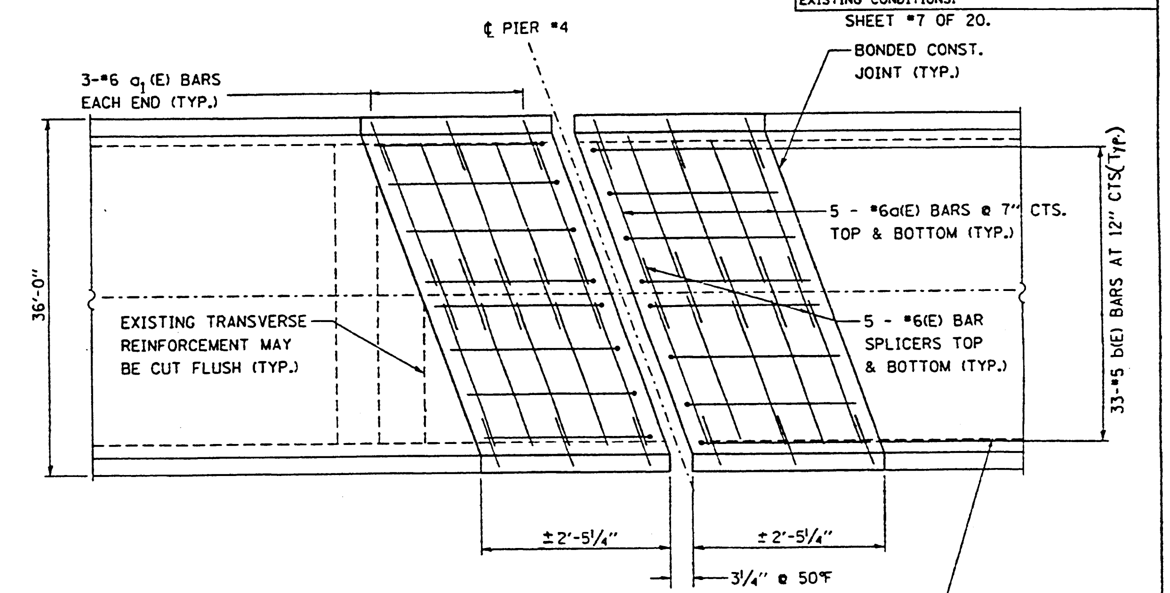
BAR d3(E)



BAR d2(E)

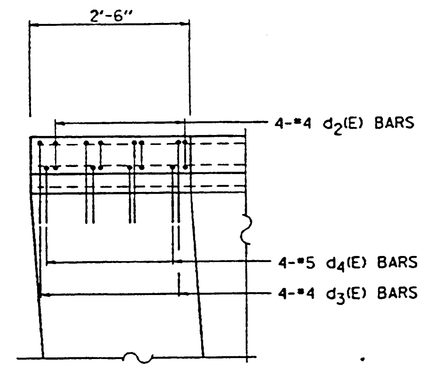


BAR b(E)



PLAN - DECK END

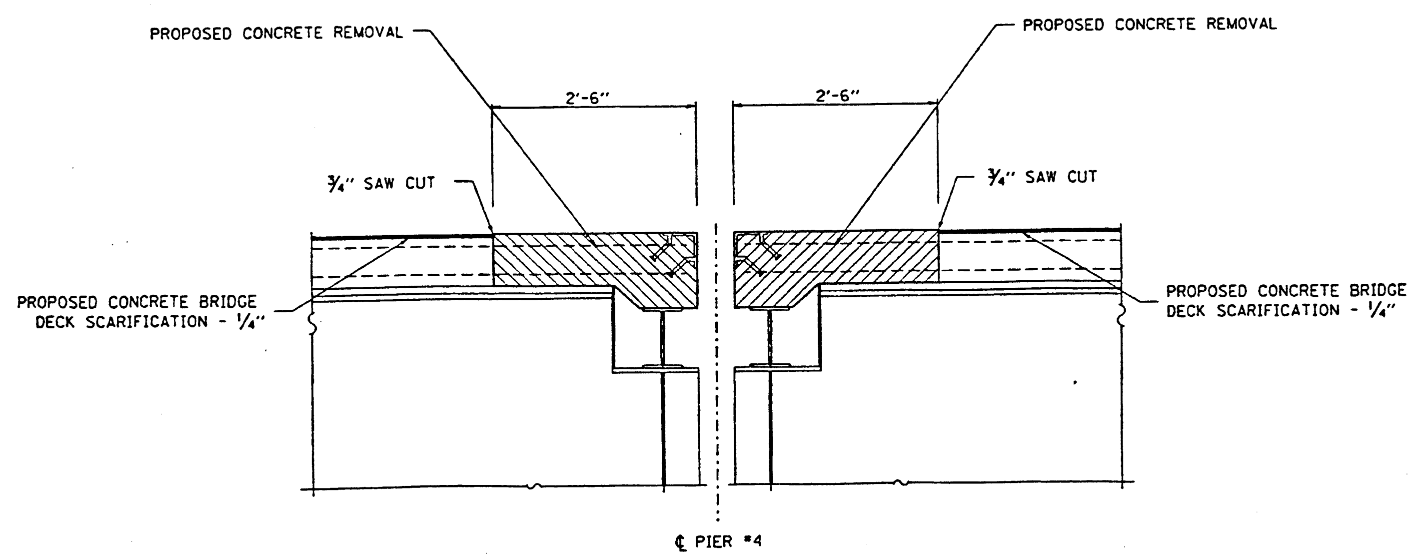
EXISTING LONGITUDINAL REINFORCEMENT



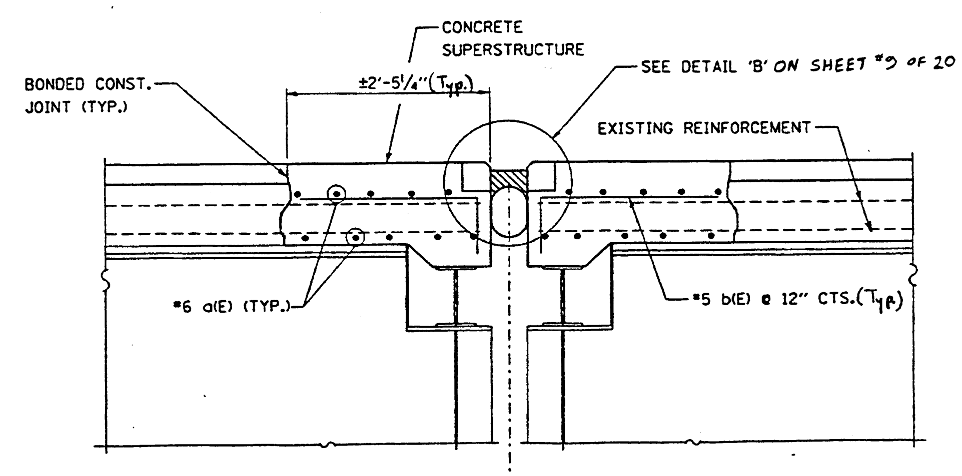
PLAN OF CURB END (TYP.)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	40	#6	18'-6"	——
a1(E)	8	#6	4'-0"	——
b(E)	66	#5	2'-8"	┌——
d2(E)	16	#4	2'-1"	⊓
d3(E)	16	#4	4'-7"	L
d4(E)	16	#5	3'-5"	L
CONCRETE REMOVAL			CU.YD.	5.3
CONCRETE BRIDGE DECK SCARIFICATION - ¼"			SQ.YD.	3241
BRIDGE DECK MICROSILICA CONCRETE OVERLAY - 2¼"			SQ.YD.	3241
REINFORCEMENT BARS, EPOXY COATED			POUND	1470
CONCRETE SUPERSTRUCTURE			CU.YD	5.3
BRIDGE DECK GROOVING			SQ.YD.	3040
DECK SLAB REPAIR (PARTIAL)			SQ.YD.	147
DECK SLAB REPAIR (FULL DEPTH) - TYPE II			SQ.YD.	21
BAR SPLICERS			EACH	20
POLYMER CONCRETE			CU.FT.	11.5
BIT. CONC. SURF. CSE. MIX D, CL I, TY 2			TON	11
SHEET WATERPROOFING MEMBRANE SYSTEM			SQ.YD.	154



SECTION B-B
EXISTING
DIMENSIONS MEASURED PARALLEL TO GIRDERS



SECTION B-B
PROPOSED
DIMENSIONS MEASURED PARALLEL TO GIRDERS

FOR DETAIL 'B' SEE SHEET #9 OF 20.

FOR LOCATION OF SECTION B-B SEE SHEET #6 OF 20.

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.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

FAP 329 (IL. 154)
SECTION 125-1B-I
RANDOLPH COUNTY
SN 079-0013

DRAWN BY:

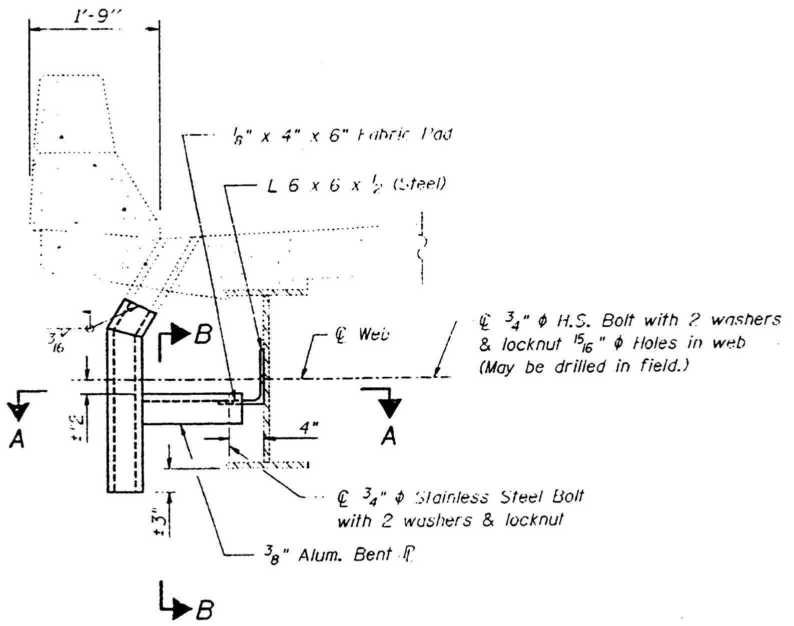
PLAN	
SURVEYED	
PLOTTED	
ALIGNMENT CHECKED	
R.E. OF W. CHECKED	
E400 FILE NAME	
NOTE BOOK NO.	
BY	DATE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 329	*	RANDOLPH	35	23

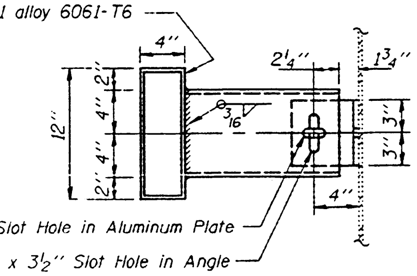
SHEET NO. 8 · 20 SHEETS

* 125-1B-I

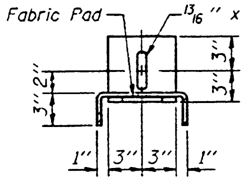
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



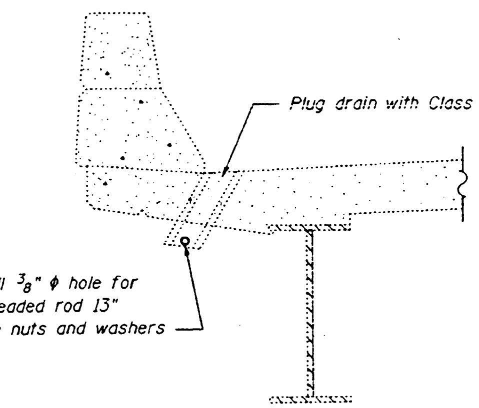
SECTION AT DRAIN EXTENSION



SECTION A-A



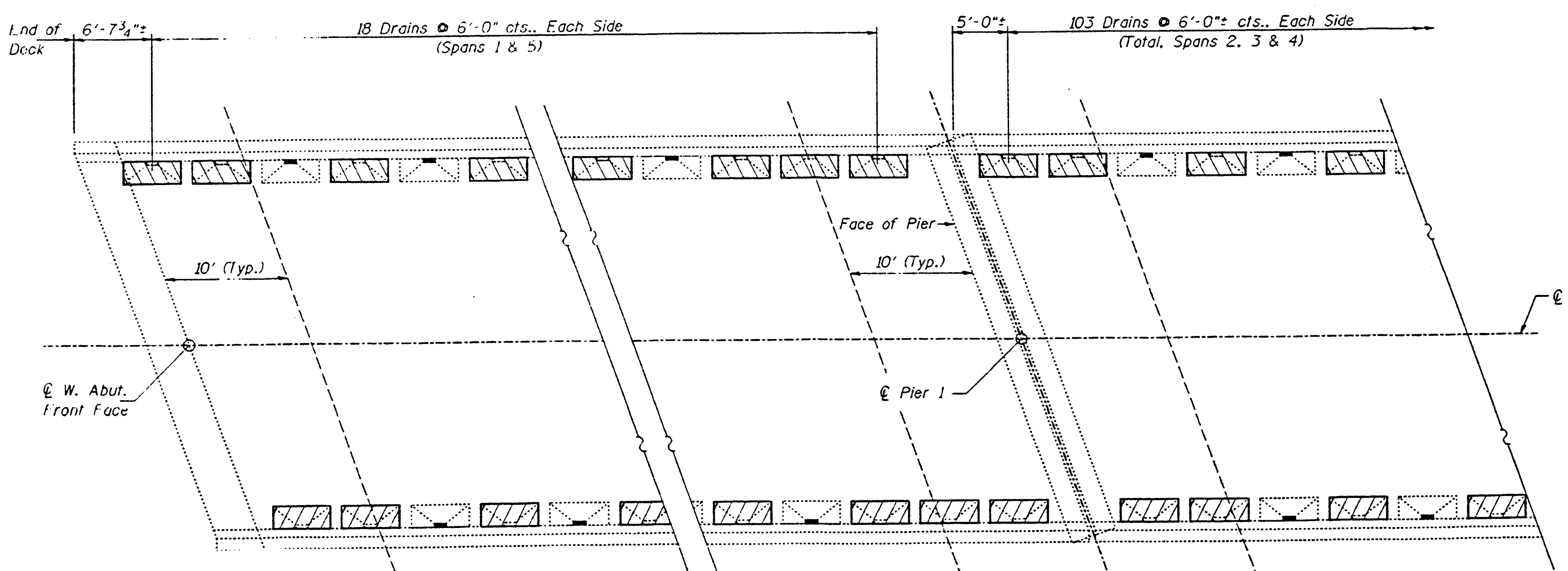
SECTION B-B



SECTION AT DRAIN ELIMINATION

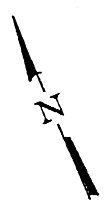
Note:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1prior to painting.

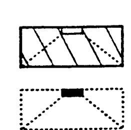
DRAIN EXTENSION DETAILS



Note:
Eliminate all drains within 10 feet of substructure elements. Extend or eliminate alternate drains in other locations.

PARTIAL PLAN





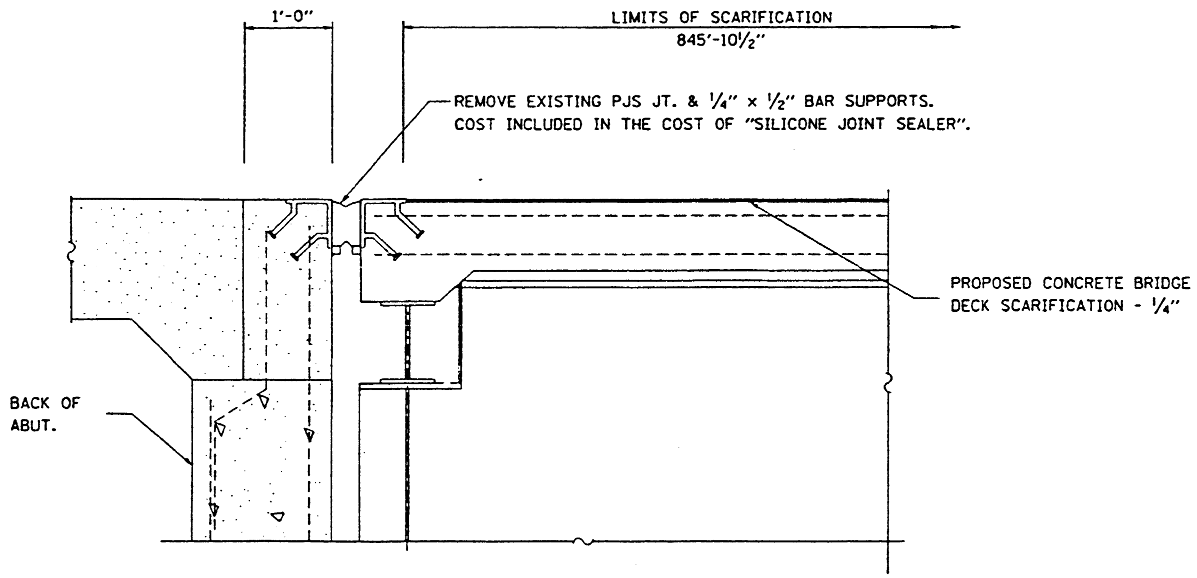
BILL OF MATERIAL

Item	Unit	Total
Floor Drain Extensions	Each	122
Plug Existing Deck Drains	Each	156

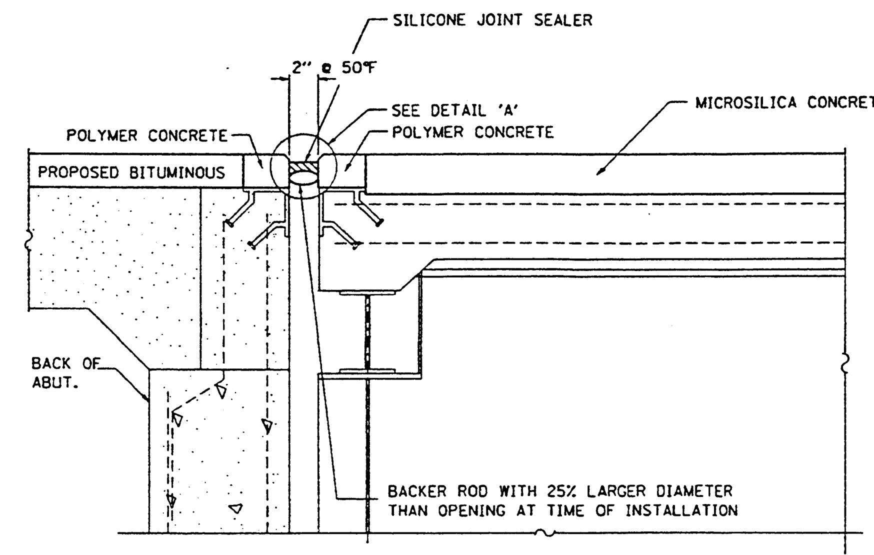
DRAIN EXTENSION AND ELIMINATION DETAILS
F.A.P. RT. 329 SEC. (125-1B-I)
RANDOLPH COUNTY
S.N. 079-0013

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-I	RANDOLPH	35	24
STA.		TO STA.		
EXISTING CONDITIONS:				

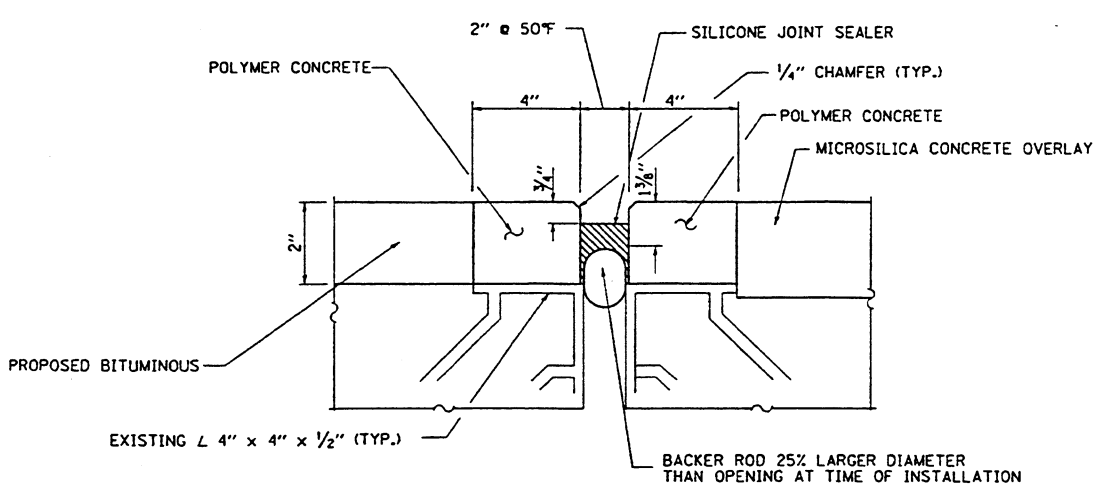
SHEET #9 OF 20.



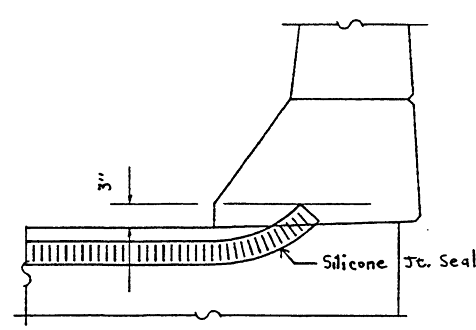
SECTION A-A
EXISTING



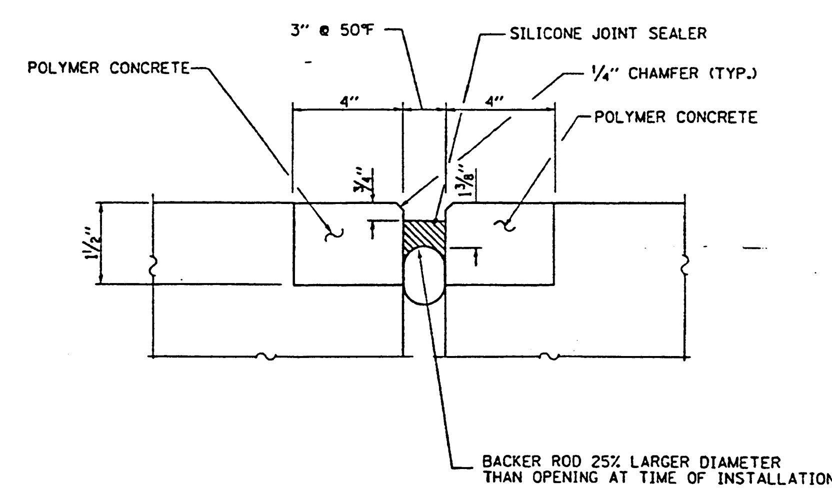
SECTION A-A
PROPOSED



DETAIL 'A'
DIMENSIONS MEASURED AT RT. ∠ TO JOINT



TYPICAL END OF SEAL TREATMENT
AT EXPANSION JOINT



DETAIL 'B'
DIMENSIONS MEASURED AT RT. ∠ TO JOINT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT DETAILS

FAP 329 (IL. 154)
SECTION 125-1B-I
RANDOLPH COUNTY
SN 079-0013

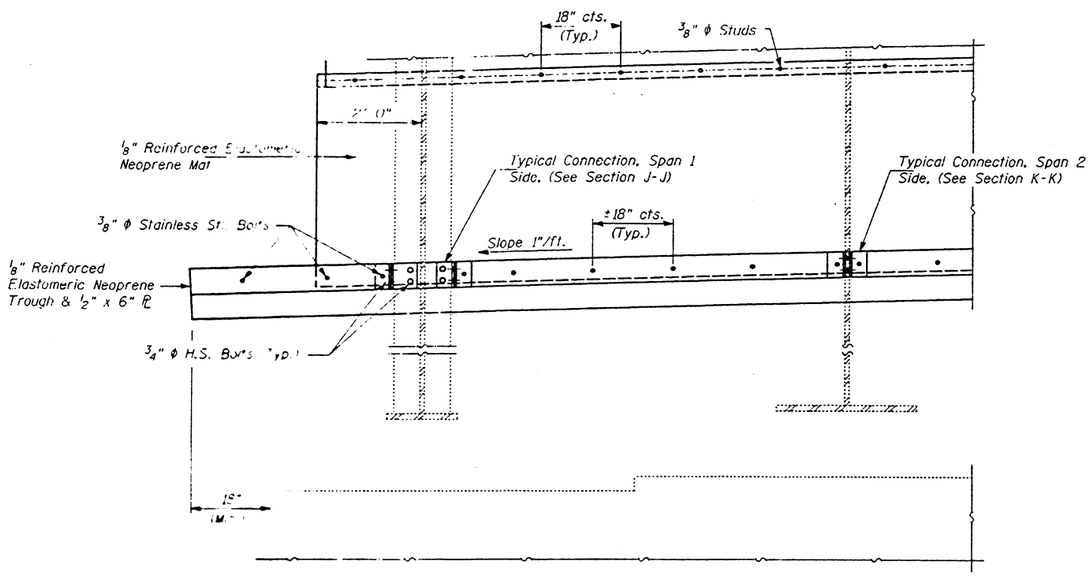
DRAWN BY:

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

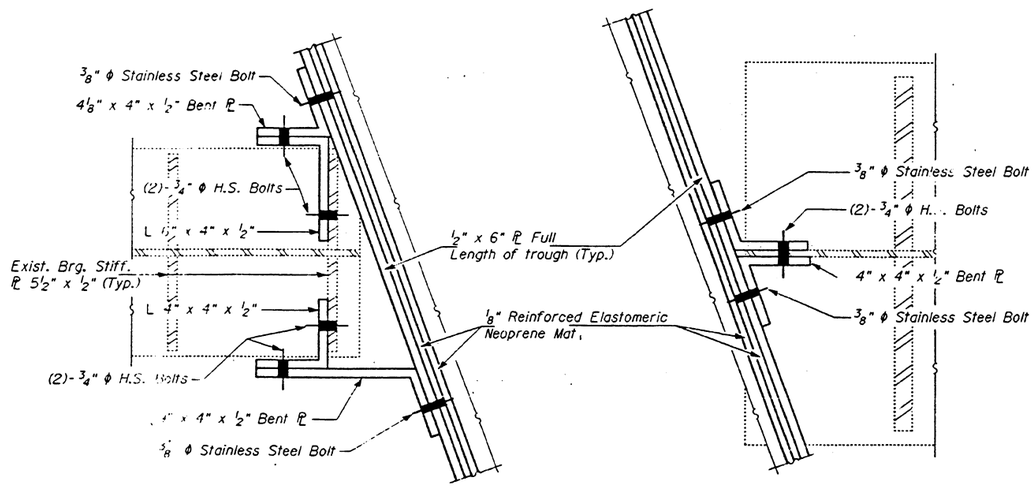
HWY'S NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 329	*	RANDOLPH	35	25
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT*	

SHEET NO. 10
20 SHEETS

* 125-1B-1

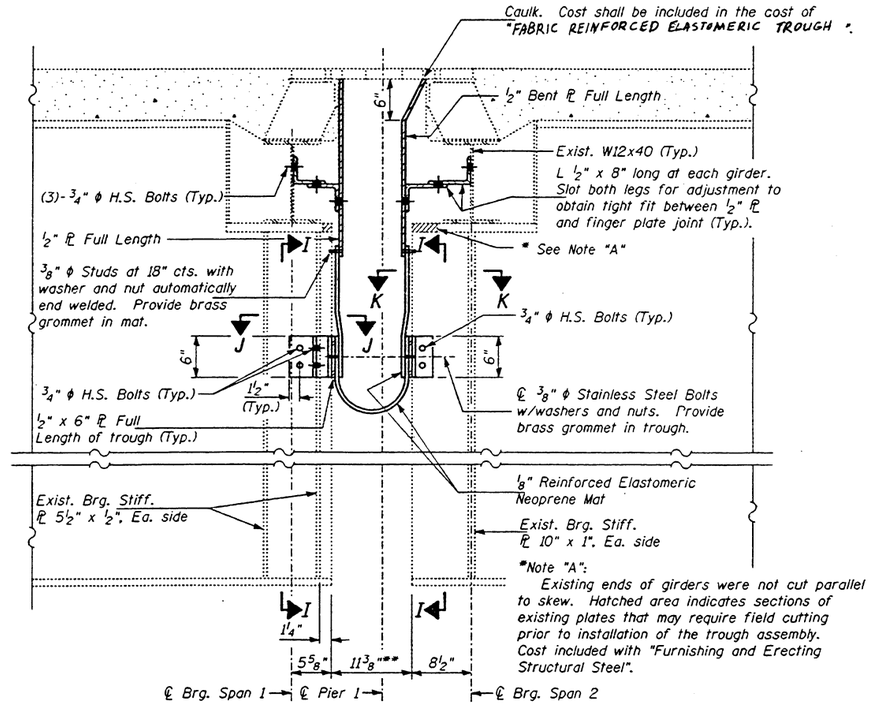


SECTION I-I



SECTION J-J

SECTION K-K



*Note "A":
Existing ends of girders were not cut parallel to skew. Hatched area indicates sections of existing plates that may require field cutting prior to installation of the trough assembly. Cost included with "Furnishing and Erecting Structural Steel".

** at 50° F

ELEVATION AT NEW DRAIN TROUGH

Dimensions are at rt. Ls to Joint

BILL OF MATERIAL

Item	Unit	Total
FABRIC REINFORCED ELASTOMERIC TROUGH	Foot	40
Furnishing and Erecting Structural Steel	Pound	5,530

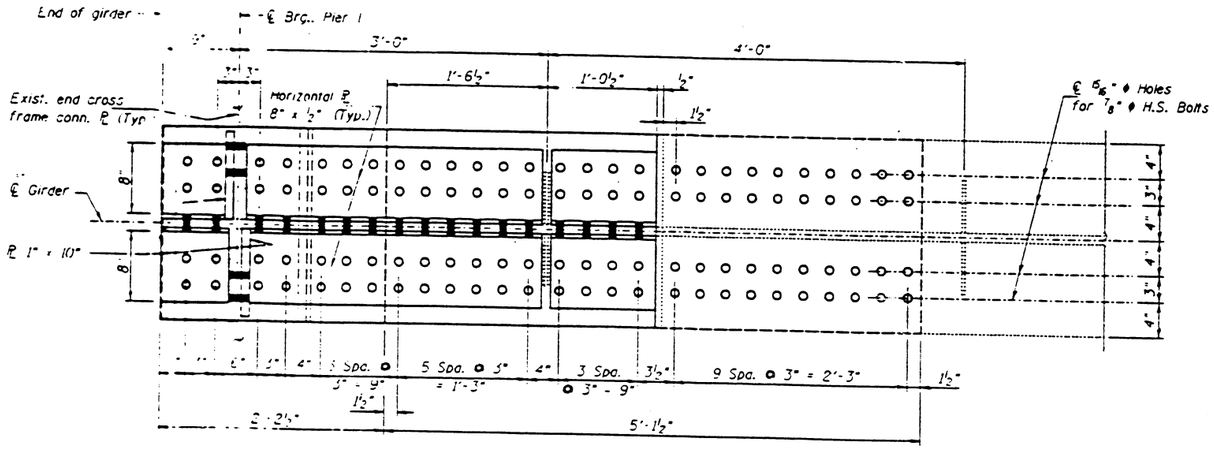
TROUGH DETAILS AT PIER 1
F.A.P. RT. 329 SEC. 125-1B-I
RANDOLPH COUNTY
S.N. 079-0013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

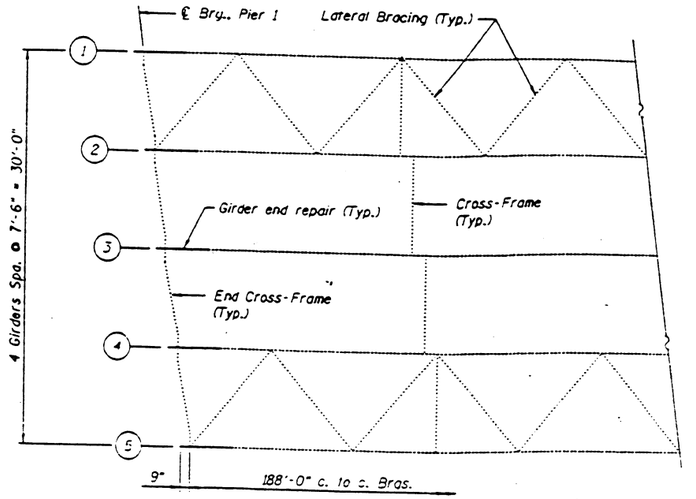
F.A.P. 329	*	RANDOLPH	35	26

SHEET NO. 11
20 SHEETS

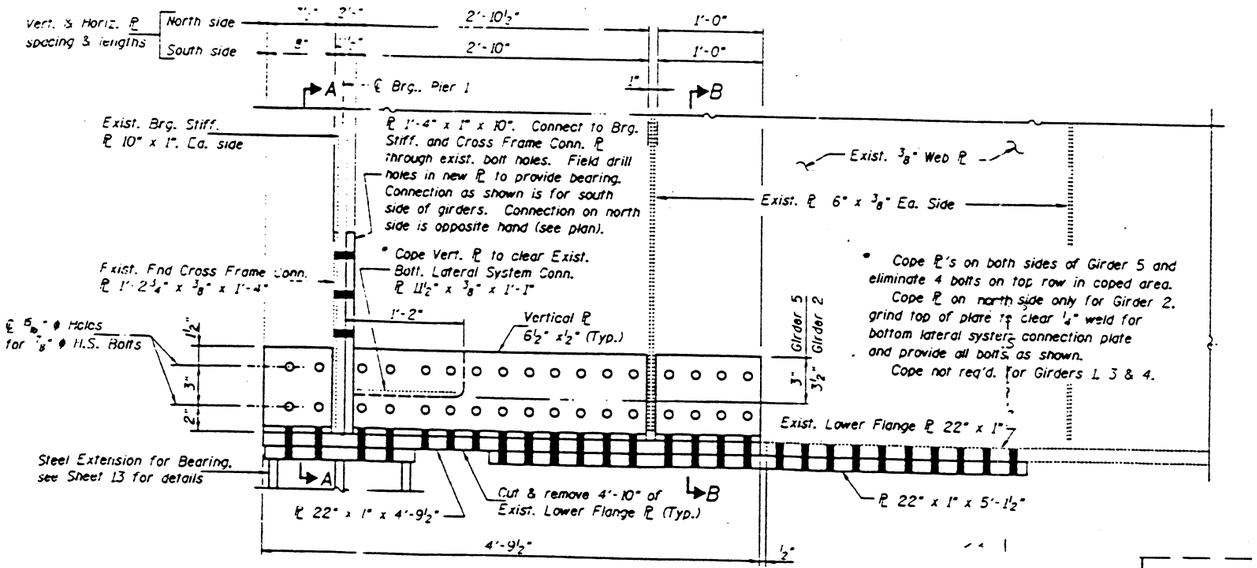
* 125-1B-1



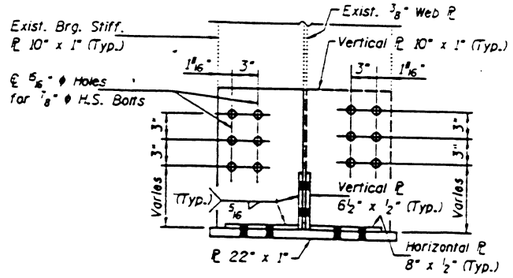
PLAN - LOWER FLANGE



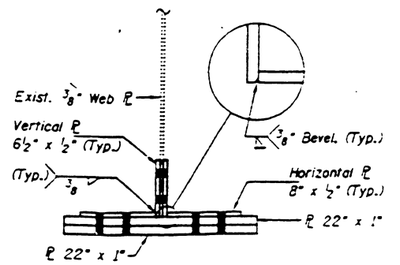
PARTIAL FRAMING PLAN - SPAN 2



PARTIAL ELEVATION - SOUTH SIDE
(North side - opposite hand)



SECTION A-A
Steel Extension not shown



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	6,150

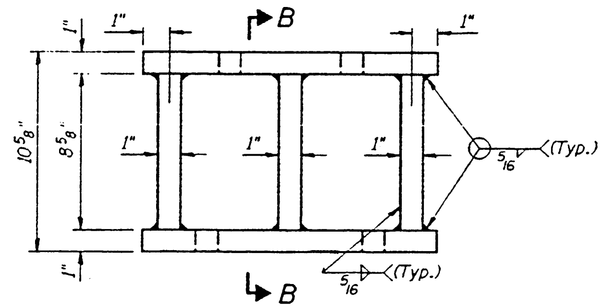
After removing the 4'-10" section of the existing flange, the remaining weld material to the web area shall be ground flush prior to attaching the new 6½" and 8½" plates to the web.

GIRDER REPAIR DETAILS
F.A.P. RT. 329 SEC. (125-1B-I)
RANDOLPH COUNTY
S.N. 079-0013

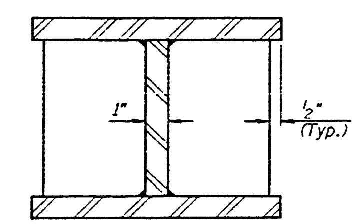
1 Revised 1-28-00 B.R.T.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

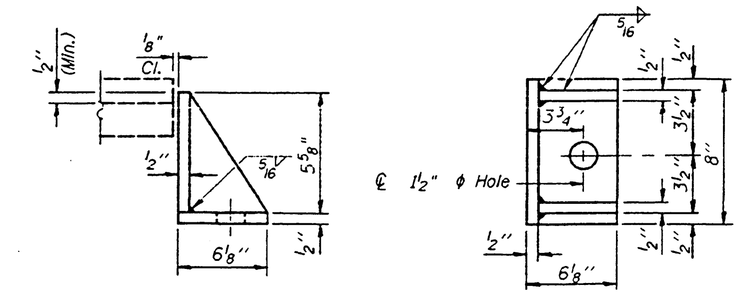
Note:
Cross frame removal and replacement may be required to facilitate drilling of holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".



ELEVATION STEEL EXTENSION

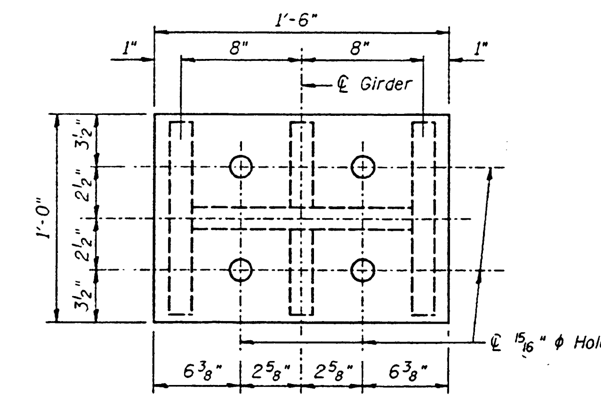


SECTION B-B

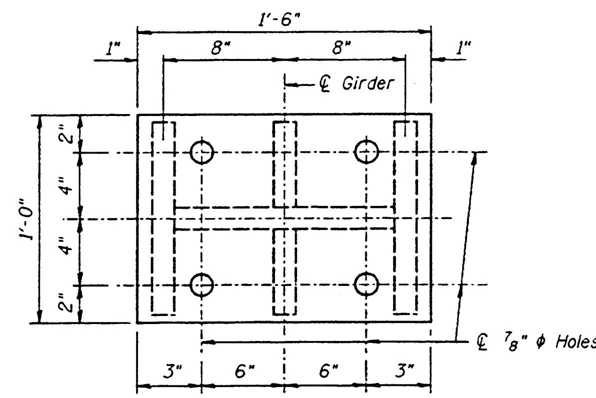


SIDE RETAINER

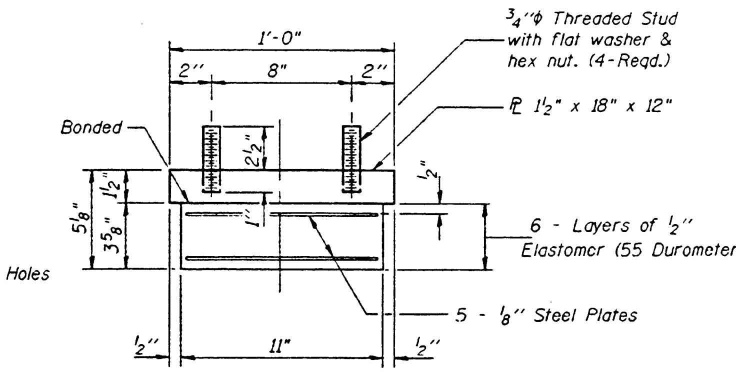
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
Weight included with "Furnishing and Erecting Structural Steel".



PLAN TOP PLATE

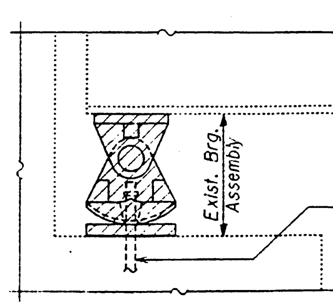


PLAN BOTTOM PLATE



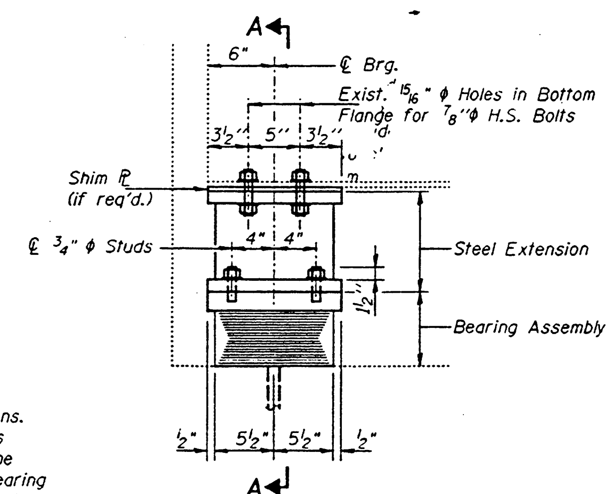
BEARING ASSEMBLY

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

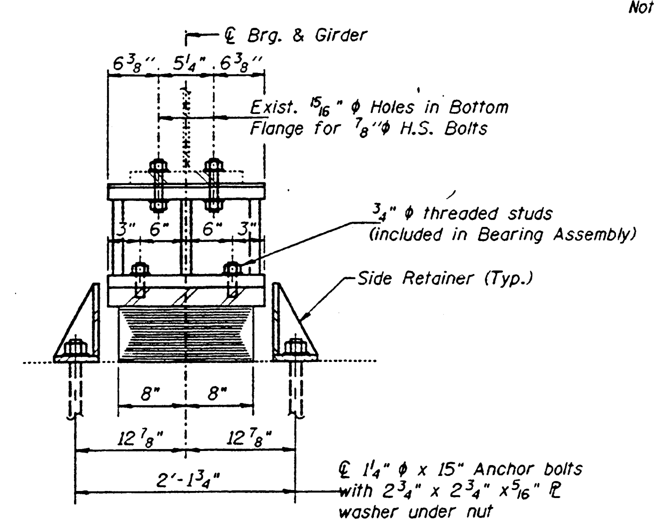


Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost shall be included in the cost of "Jack and Remove Existing Bearings".

EXISTING BEARING REMOVAL DETAIL



ELEVATION AT ABUT.



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

GIRDER REACTIONS

Location	R_{DL}	R_{LL}	R_{Imp}	R_{Total}
E. Abut.	73.3^k	44.9^k	9.5^k	127.7^k
W. Abut.	[illegible]	44.9^k	9.5^k	127.7^k

Min. total capacity of jacks = 128 tons per girder

Notes:
Traffic will be stopped during jacking operations. Cribbing shall be designed to carry Live Load plus Impact. Contractor shall submit the design for the cribbing as well as procedures for jacking and bearing removal to the Engineer for approval prior to starting any work on the fabrication, erection or construction of the cribbing. See Special Provisions.
The cost of the cribbing is included in "Jack and Remove Existing Bearings". See Special Provisions.
Where footings for cribbings are on slope walls, Contractor to provide for leveling.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	10
Furnishing and Erecting Structural Steel	Pound	3,070
Jack and Remove Existing Bearings	Each	10

Note:
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
New steel extensions, side retainers, anchor bolts, shim plates and connection bolts are included in "Furnishing and Erecting Structural Steel".
See sheet 19 for Anchor Bolt installation.

BEARING DETAILS - E. & W. ABUTMENTS

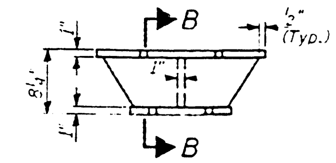
F.A.P. RT. 329 SEC. (125-1B-I)
RANDOLPH COUNTY
S.N. 079-0013

Route No.	Section	County	Total Sheets	Sheet No.
F.A.P. 329	*	RANDOLPH	35	28

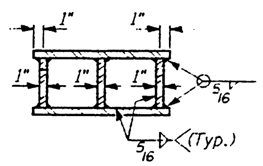
SHEET NO. 13
20 SHEETS

* 125-1B-1

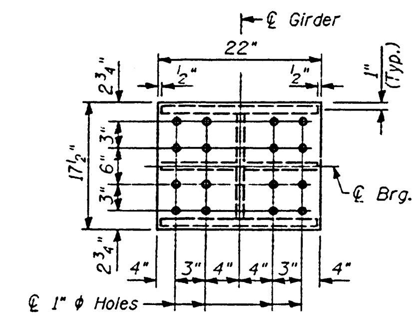
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



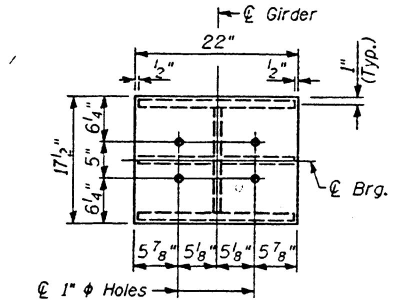
ELEVATION STEEL EXTENSION



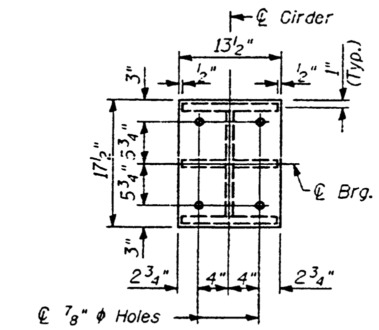
SECTION B-B



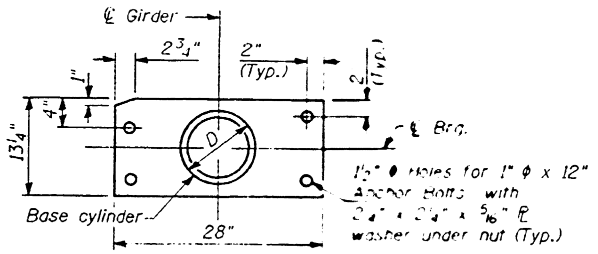
TOP PLAN - STEEL EXTENSION - PIER 1



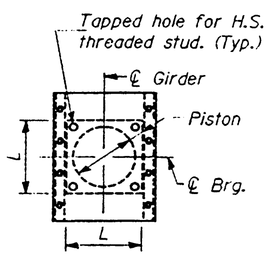
TOP PLAN - STEEL EXTENSION - PIER 4



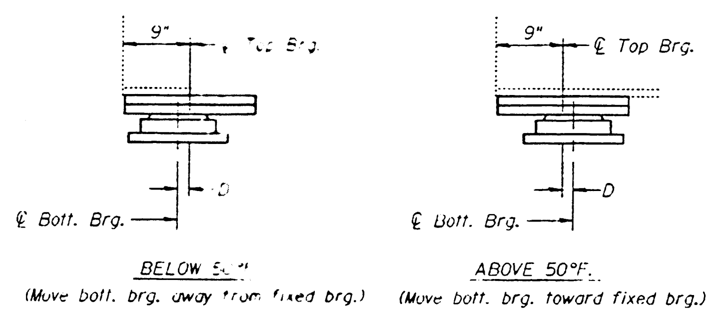
BOTTOM PLAN - STEEL EXTENSION



BOTTOM BEARING ℙ AND BASE CYLINDER PLAN



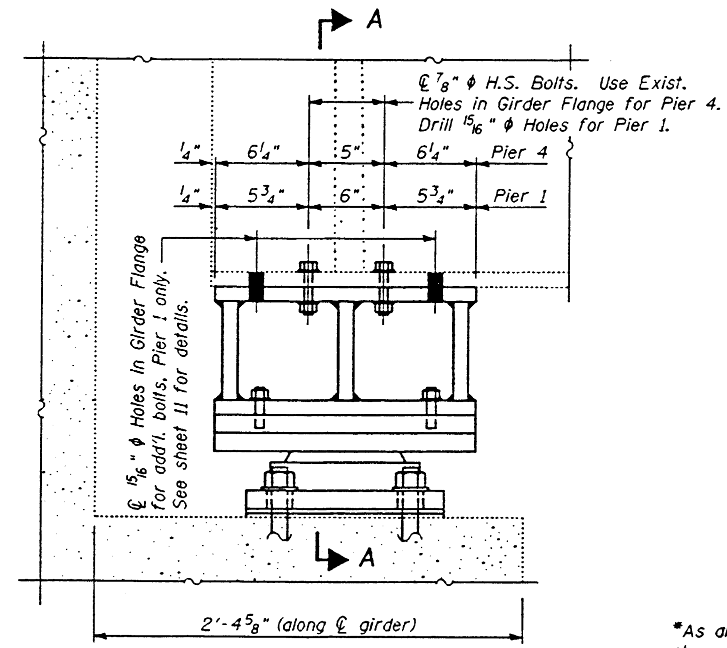
TOP ℙ - PISTON PLAN



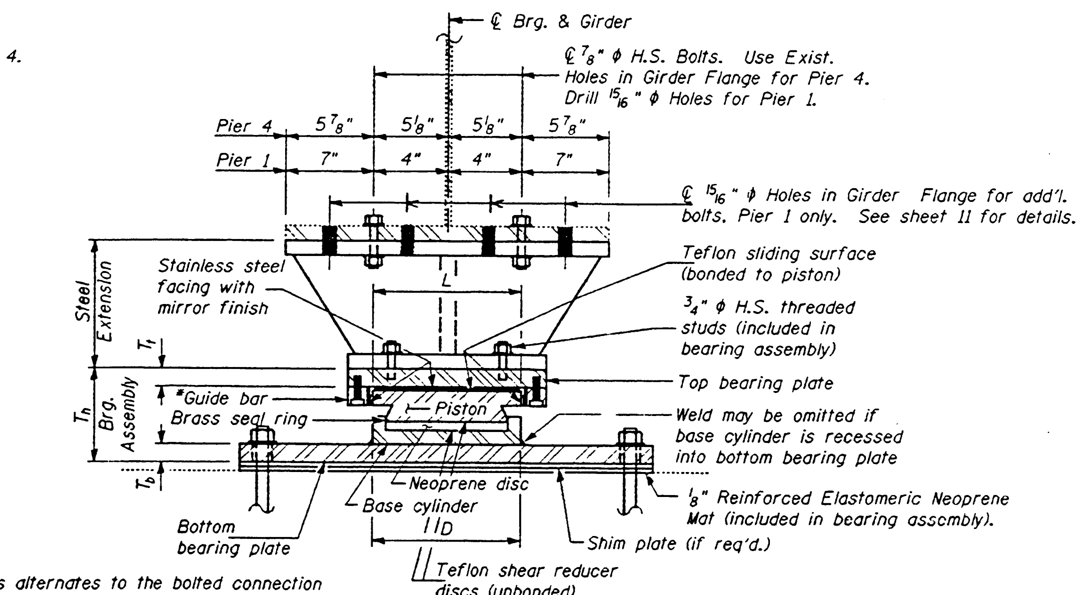
SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

Note: Steel extension omitted for clarity.

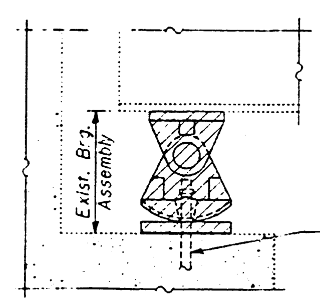


ELEVATION AT PIER



*As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.

SECTION A-A



Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost shall be included in the cost of "Jack and Remove Existing Bearings".

EXISTING BEARING REMOVAL DETAIL

R_{TOTAL} - Total axial DL + LL without impact ...... 171.3 K
Lateral Load ...... 23.3 K
Expansion Length
Pier 1 ...... 432'-0"
Pier 4 ...... 188'-0"
L - Transverse length of piston ...... 10"
D - Outside pot diameter...... 10"
T_t - Thickness of top plate ...... 1 1/2"
T_b - Thickness of bottom plate ...... 1 1/2"
T_h - Total height of bearing assembly ...... 7"

GUIDED EXPANSION POT BEARING

At Piers 1 & 4 (5 each, 10 total)

BILL OF MATERIAL
PIERS 1 & 4

Item	Unit	Total
Floating Bearing, Guided Expansion 200 K	Each	10
Furnishing and Erecting Structural Steel	Pound	3,170
Jack and Remove Existing Bearings	Each	10

GIRDER REACTIONS

Location	R_{DL}	R_{LL}	R_{Imp}	R_{Total}
Pier 1	116.5k	54.8k	8.8k	180.1k
Pier 4	[illegible]	54.8k	8.8k	180.1k

Min. total capacity of jacks = 180 tons per girder

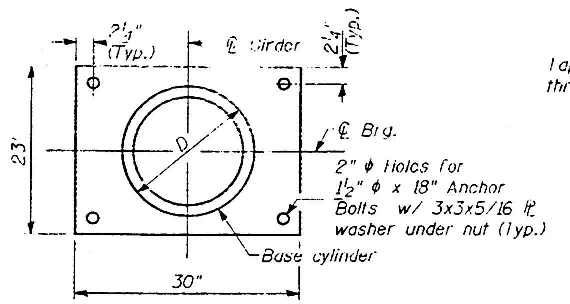
Notes:
Traffic will be stopped during jacking operations. Cribbing shall be designed to carry Live Load plus Impact. Contractor shall submit the design for the cribbing as well as procedures for jacking and bearing removal to the Engineer for approval prior to starting any work on the fabrication, erection or construction of the cribbing. See Special Provisions.
The cost of the cribbing is included in "Jack and Remove Existing Bearings". See Special Provisions.
Where footings for cribbings are on slope walls. Contractor to provide for leveling.

Notes:
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
New steel extensions, anchor bolts, shim plates and connection bolts are included in "Furnishing and Erecting Structural Steel".
See sheet 19 for Anchor Bolt installation.

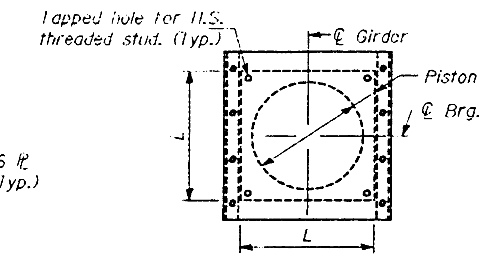
Cross frame removal and replacement may be required to facilitate drilling of holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".
Place 1/4" shim plate under bearing at girder #5 only.

BEARING DETAILS - PIERS 1 & 4
SPANS 2 & 4
F.A.P. RT. 329 SEC. (125-1B-I)
RANDOLPH COUNTY
S.N. 079-0013

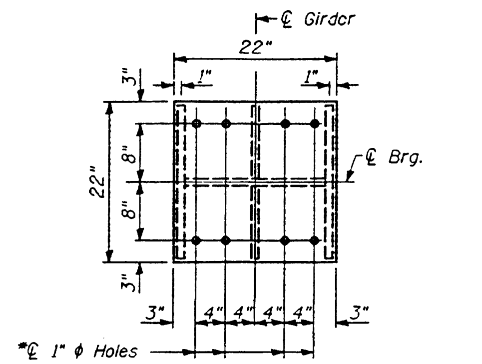
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BOTTOM BEARING ℙ AND BASE CYLINDER PLAN

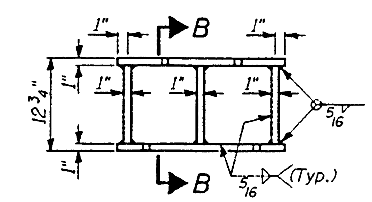


TOP BEARING ℙ - PISTON PLAN

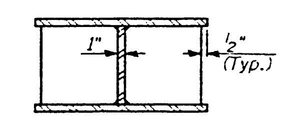


*Hole locations shown are for bottom plate of steel extension. See "Elevation at Pier 2" and "Section A-A" for hole locations for top plate of steel extension.

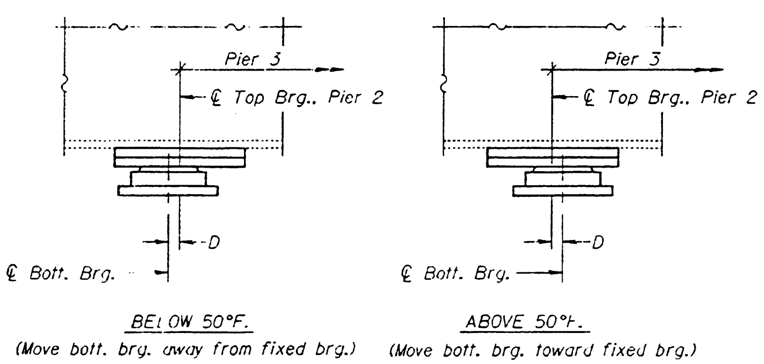
PLAN STEEL EXTENSION



ELEVATION STEEL EXTENSION



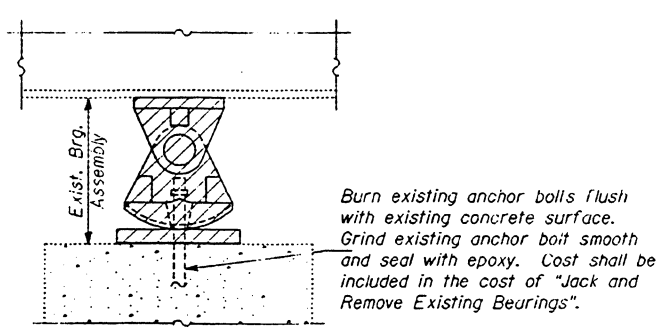
SECTION B-B



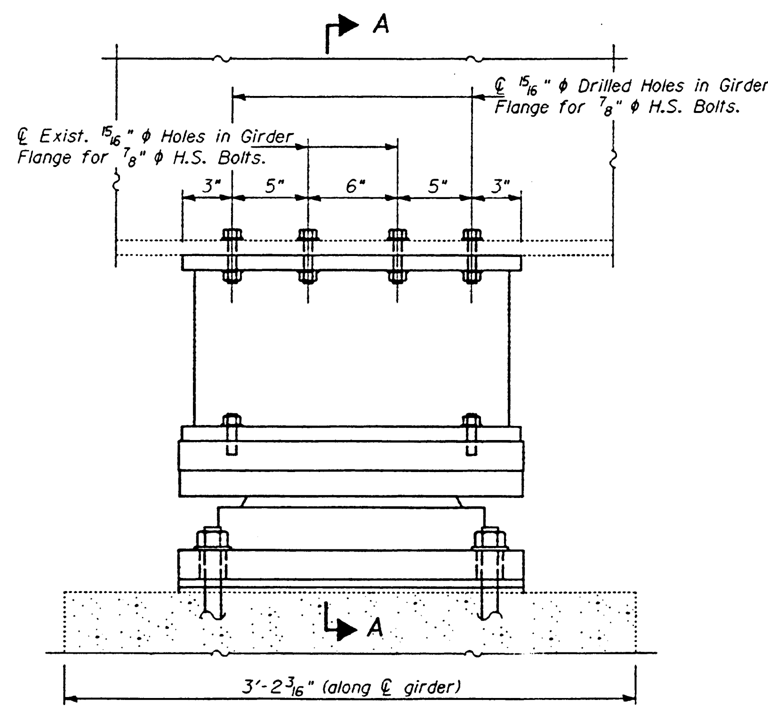
SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

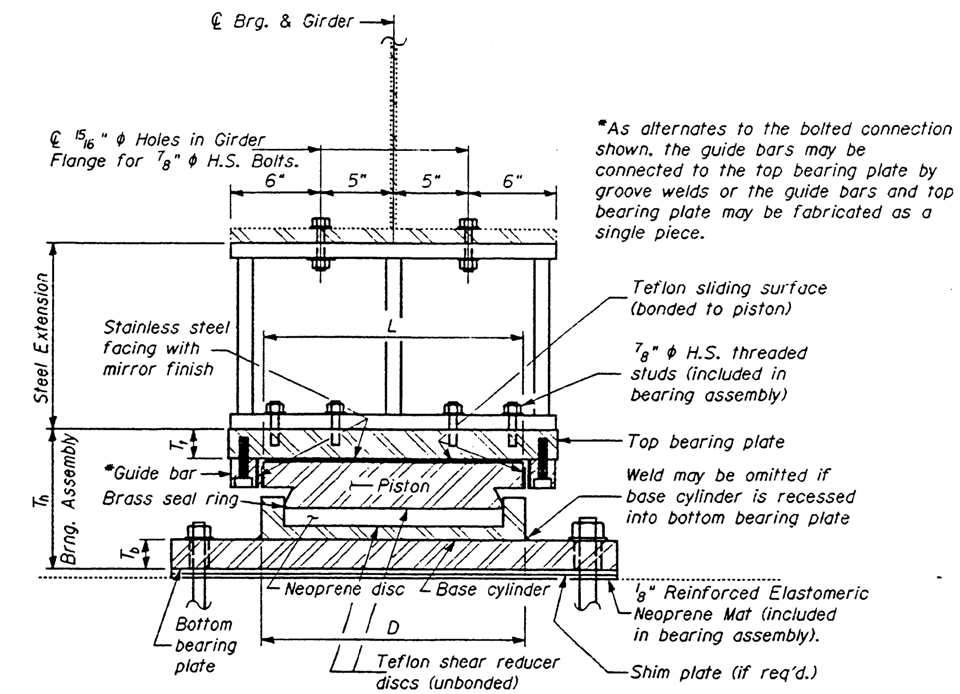
Note: Steel extension omitted for clarity.



EXISTING BEARING REMOVAL DETAIL



ELEVATION AT PIER 2



SECTION A-A

*As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.

R_{TOTAL} - Total axial DL + LL without impact ...... 570.2 K
Lateral Load ...... 87.5 K
Expansion Length ...... 244'-0"
L - Transverse length of piston ...... 17¾"
D - Outside pot diameter ...... 17¾"
T_t - Thickness of top plate ...... 1 15/16"
T_b - Thickness of bottom plate ...... 2"
T_h - Total height of bearing assembly ...... 9¼"

GUIDED EXPANSION POT BEARING

At Pier 2 (5 total)

BILL OF MATERIAL

Item	Unit	Total
Floating Bearing, Guided Expansion 750 K	Each	5
Furnishing and Erecting Structural Steel	Pound	2,990
Jack and Remove Existing Bearings	Each	5

GIRDER REACTIONS

Location	R_D	R_L	R_{Imp}	R_{Total}
Pier 2	437.6^k	132.6^k	19.5^k	589.7^k

Min. total capacity of jacks = 590 tons per girder

Notes:
Traffic will be stopped during jacking operations. Cribbing shall be designed to carry Live Load plus Impact. Contractor shall submit the design for the cribbing as well as procedures for jacking and bearing removal to the Engineer for approval prior to starting any work on the fabrication, erection or construction of the cribbing. See Special Provisions.
The cost of the cribbing is included in "Jack and Remove Existing Bearings". See Special Provisions.
Where footings for cribbings are on slope walls, Contractor to provide for leveling.

Notes:
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
New steel extensions, anchor bolts, shim plates and connection bolts are included in "Furnishing and Erecting Structural Steel".
See sheet 19 for Anchor Bolt installation.

Cross frame removal and replacement may be required to facilitate drilling of holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".
Place ¼" shim plate under bearing at girder #5 only.

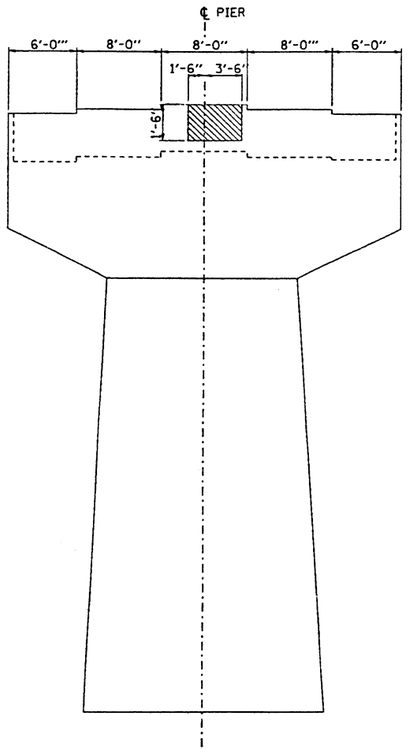
BEARING DETAILS - PIER 2

F.A.P. RT. 329 SEC. (125-1B-I)
RANDOLPH COUNTY
S.N. 079-0013

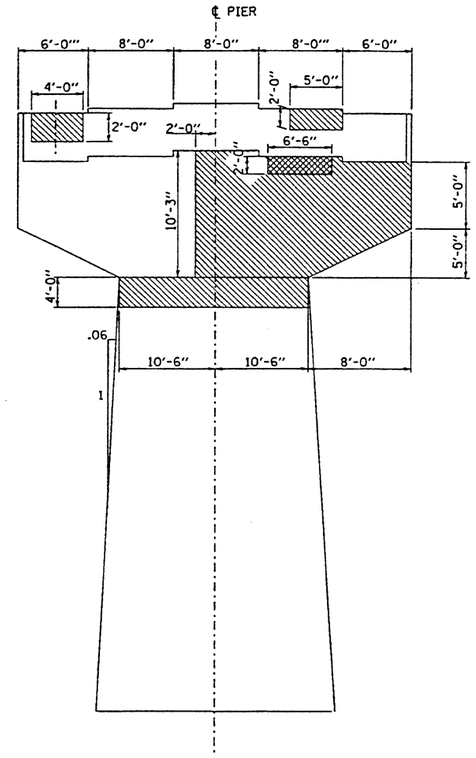
FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
329	125-1B-I	RANDOLPH	35	30
STA.		TO STA.		
EXISTING CONDITIONS:				

SHEET #15 OF 20.

PLAN	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	ALIGNMENT CHECKED		
	REL. OF RAY. CHECKED		
	CADD FILE NAME		



PIER * 1
LOOKING EAST



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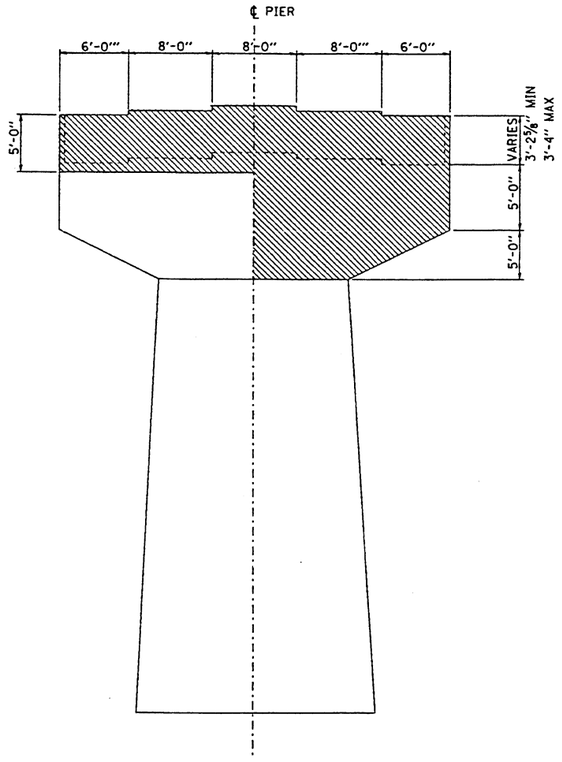
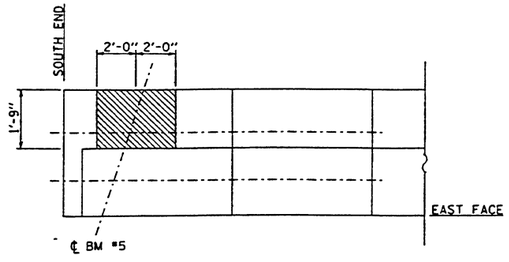
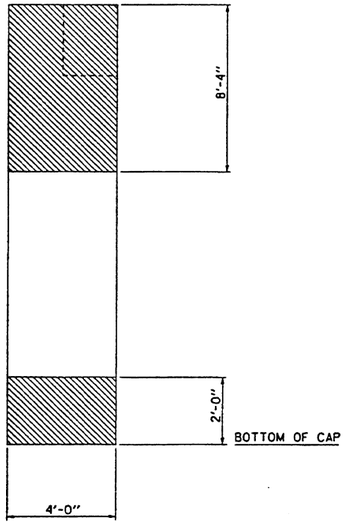
LOOKING WEST



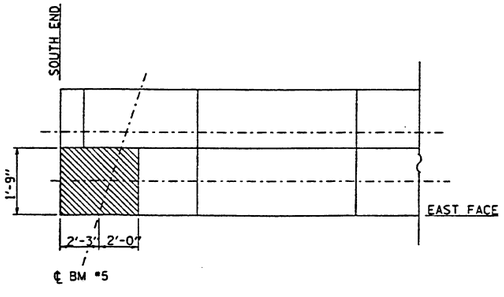
PIER * 4
LOOKING WEST



PIER *1
LOOKING DOWN ON SEAT



PIER *1 - SOUTH END
LOOKING NORTH



PIER *4
LOOKING DOWN ON SEAT

LEGEND

FORMED CONCRETE REPAIR
(DEPTH EQUAL TO OR LESS THAN 5")

FORMED CONCRETE REPAIR
(DEPTH GREATER THAN 5")

BILL OF MATERIALS

ITEM	UNIT	TOTAL
FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ.FT.	646.7
FORMED CONCRETE REPAIR (DEPTH GREATER THAN 5")	SQ.FT.	13.0

REVISIONS	
NAME	DATE

DRAWN BY:

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE
REPAIR DETAILS

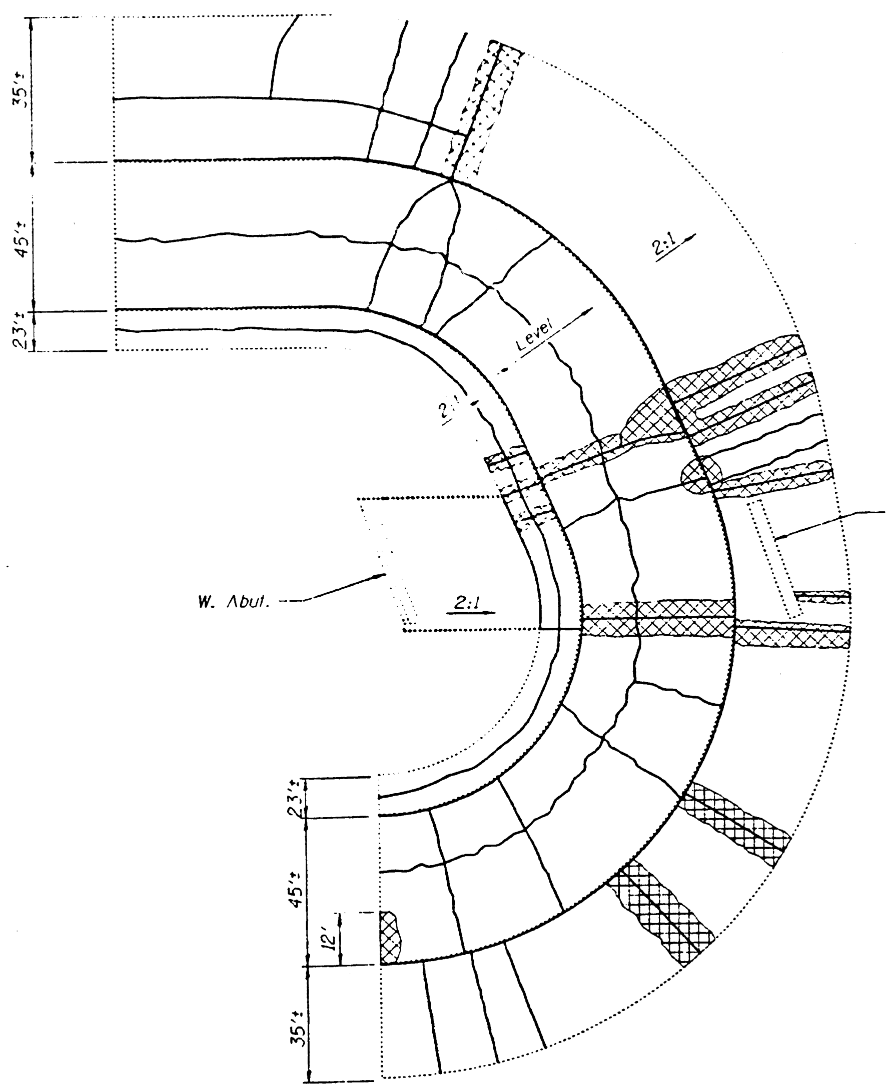
FAP 329 (IL. 154)
SECTION 125-1B-I
RANDOLPH COUNTY
SN 079-0013

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 329	*	RANDOLPH	35	31
FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT-		

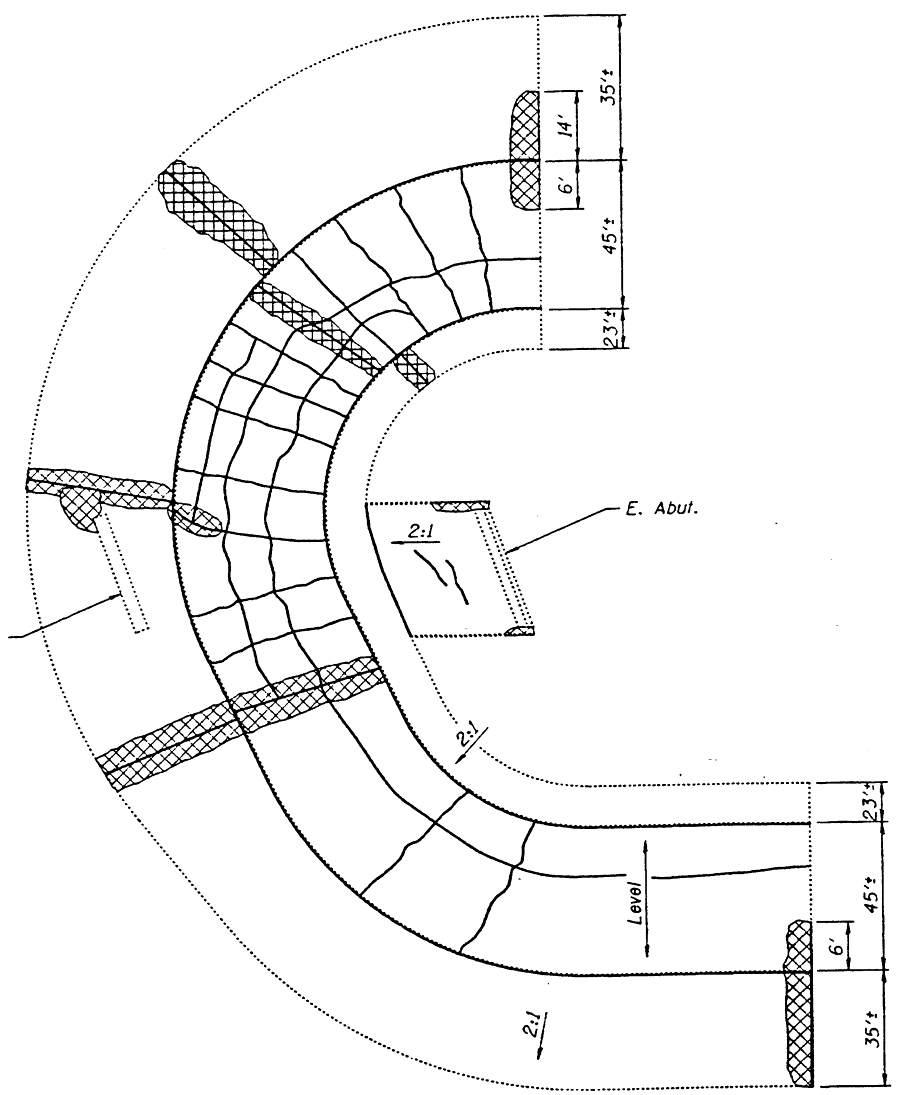
SHEET NO. 16
20 SHEETS

* 125-1B-I

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN-WEST SLOPE WALL



PLAN-EAST SLOPE WALL

LEGEND

or — Cracks and Joints to be sealed

Void areas under slopewall to be filled with "Controlled Low-Strength Material"

Notes:
Not all cracks and joints shown for clarity.
Locations shown for "Sealing Cracks" and "Controlled Low-Strength Material" are intended to be representative in type and location only. Do not scale drawings.
Quantities for "Sealing Cracks" and "Controlled Low-Strength Material" are estimated. Actual quantities will be determined by the Engineer in the field.
Seal separation between East side of Pier 1 and Slopewall.

BILL OF MATERIAL

Item	Unit	Total
Controlled Low-Strength Material	Cu. Yd.	171
Sealing Cracks	Foot	7,350

SLOPE WALL REPAIRS DETAILS
F.A.P. RT. 329 SEC. (125-1B-I)
RANDOLPH COUNTY
S.N. 079-0013

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-1	RANDOLPH	35	32
STA.	TO STA.			
EXISTING CONDITIONS:				

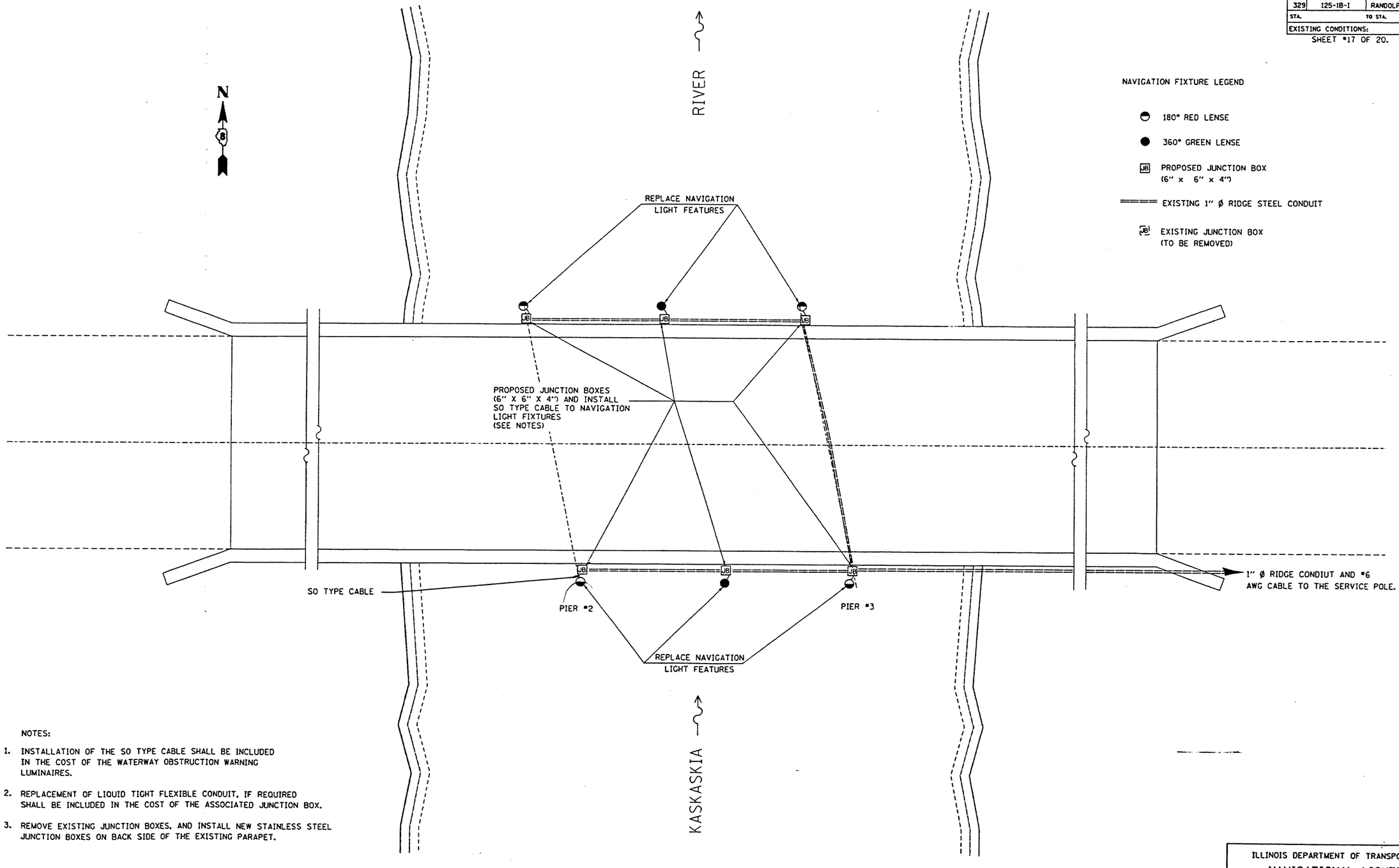
SHEET #17 OF 20.

PLAN

DATE	BY

SCANNED
PLOTTED
ALIGNMENT CHECKED
ALL FILES CHECKED
CADD FILE NAME

NOTE BOOK
NO.



NOTES:

1. INSTALLATION OF THE SO TYPE CABLE SHALL BE INCLUDED IN THE COST OF THE WATERWAY OBSTRUCTION WARNING LUMINAIRES.
2. REPLACEMENT OF LIQUID TIGHT FLEXIBLE CONDUIT, IF REQUIRED SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED JUNCTION BOX.
3. REMOVE EXISTING JUNCTION BOXES, AND INSTALL NEW STAINLESS STEEL JUNCTION BOXES ON BACK SIDE OF THE EXISTING PARAPET.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

NAVIGATIONAL LIGHTING DETAILS

FAP 329 (IL. 154)
SECTION 125-1B-I
RANDOLPH COUNTY
SN 079-0013

DRAWN BY:

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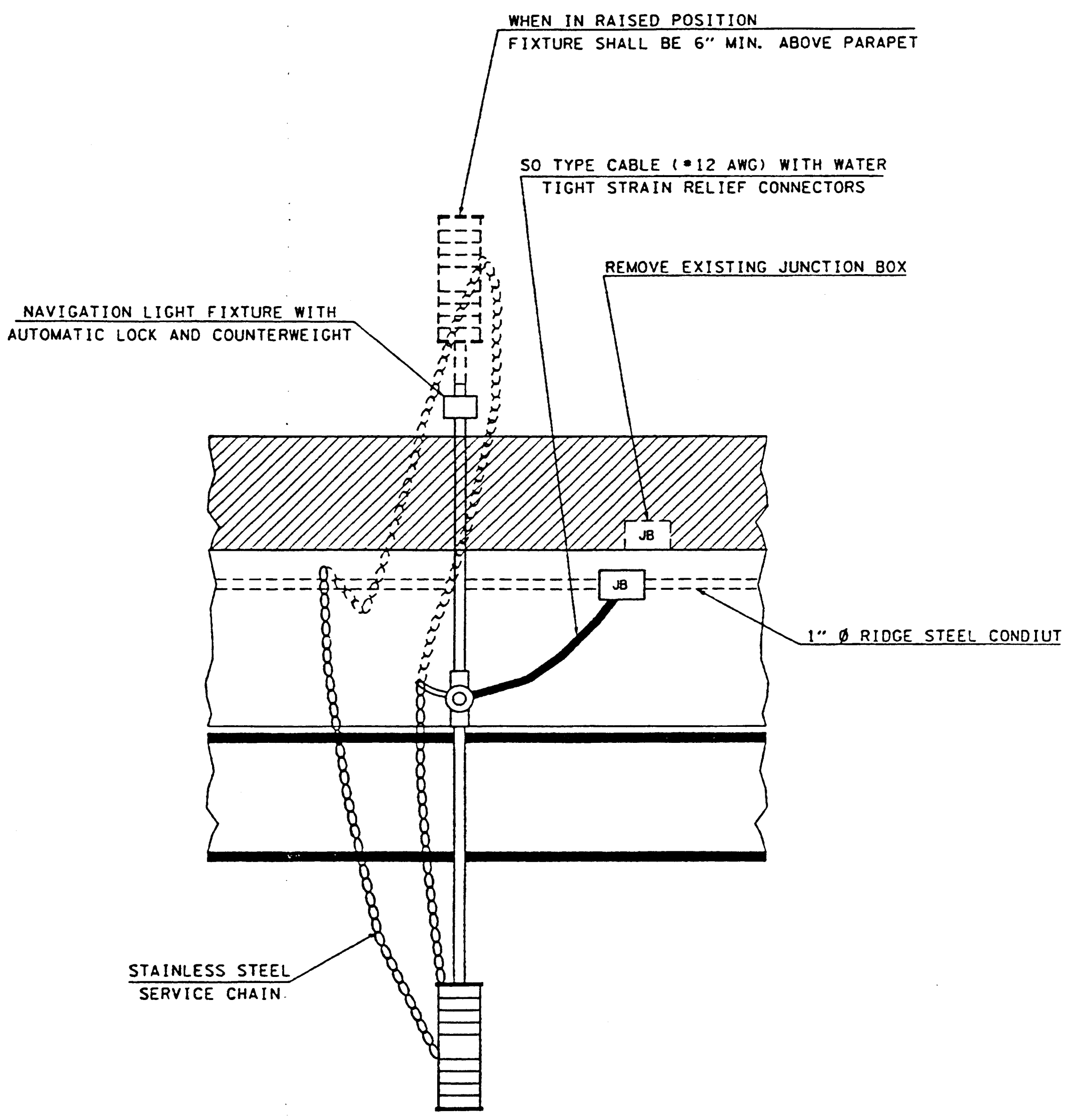
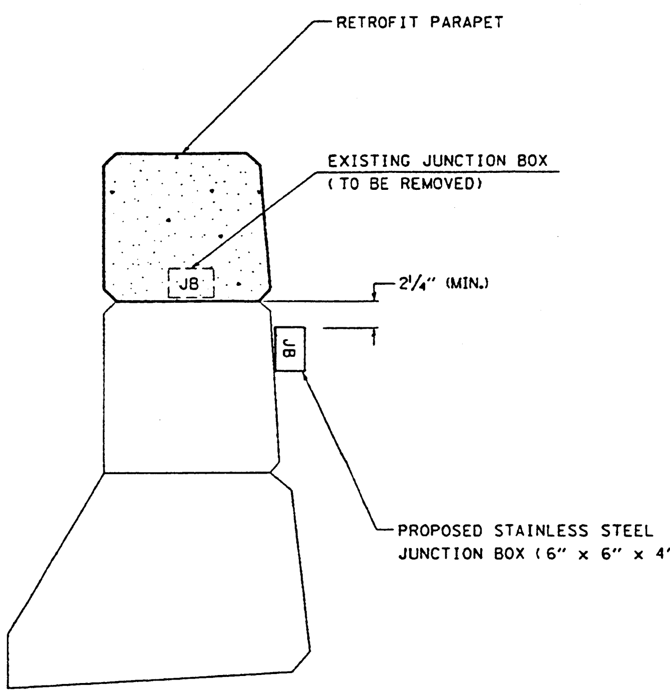
FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-I	RANDOLPH	35	33
STA.		TO STA.		
EXISTING CONDITIONS:				

SHEET *18 OF 20.





REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

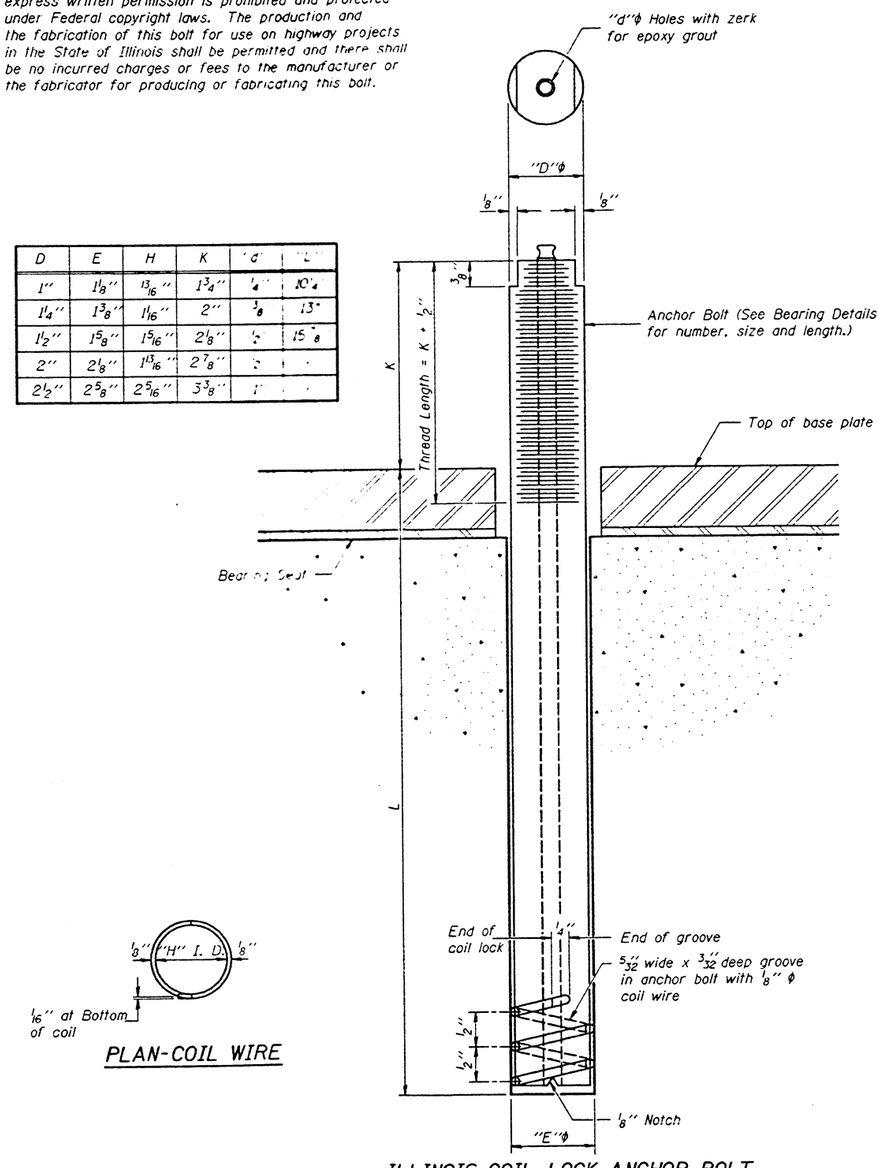
NAVIGATIONAL LIGHTING DETAILS

FAP 329 (IL. 154)
SECTION 125-1B-I
RANDOLPH COUNTY
SN 079-0013

DRAWN BY:

PLAN		BY	DATE
NOTE BOOK NO.	SURVEYED		
	PLOTTED		
	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		
	CADD FILE NAME		

D	E	H	K	"d"	"L"
1"	1 1/8"	13/16"	1 3/4"	1/4"	10"
1 1/4"	1 3/8"	1 1/16"	2"	1/8	13"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2	15"
2"	2 1/8"	1 13/16"	2 7/8"	1/2	"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"	"



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 329	*	RANDOLPH	35	34
FED. ROAD DIST. NO. 8		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 19
20 SHEETS

* 125-1B-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 comforming 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
Abutments	A307
Piers 1 & 4	A307
Pier 2	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.

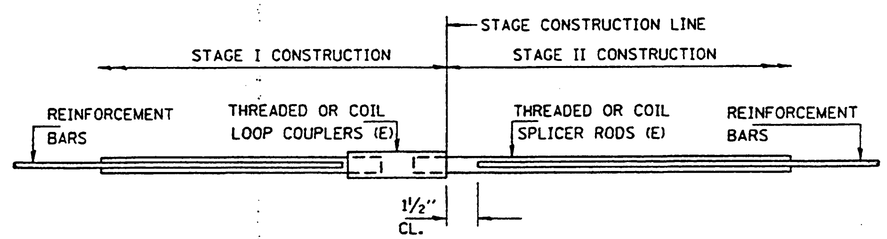
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

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
F.A.P. RT. 329 SEC. (125-1B-I)
RANDOLPH COUNTY
S.N. 079-0013

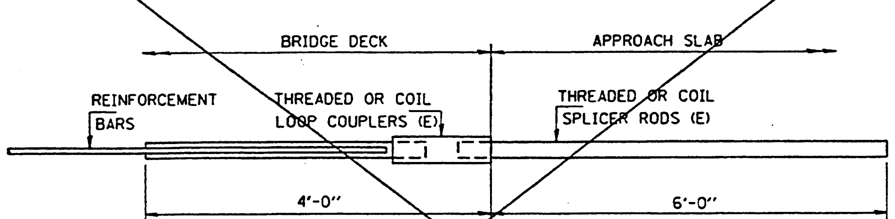
F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
329	125-1B-I	RANDOLPH	35	35
STA.		TO STA.		
EXISTING CONDITIONS:				

SHEET #20 OF 20.



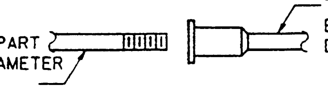
SPLICER DETAIL

BAR SIZE	NO. ASSEMBLIES REQUIRED	LOCATION
#6	20	DECK (PIER #4)



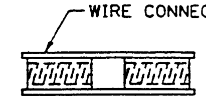
INTEGRAL ABUTMENT BAR SPLICER ASSEMBLY DETAIL FOR #15 BAR

MIN. CAPACITY = 23.0 KIPS - TENSION	
MIN. PULL-OUT STRENGTH = 9.2 KIPS - TENSION	
NO. REQUIRED =	



ROLLED THREAD DOWEL BAR

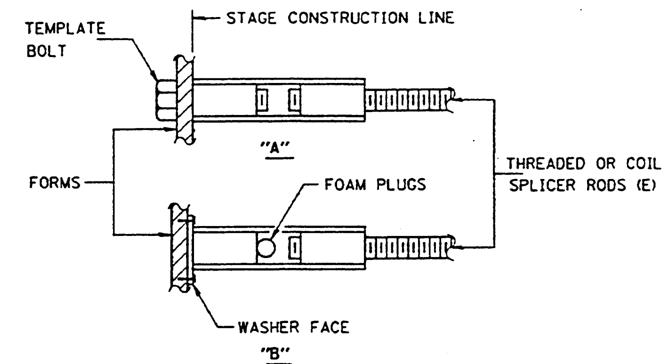
** ONE PIECE



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.

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 = $1.25 \times FY \times A_T$ (TENSION IN KIPS)

② MINIMUM *PULL-OUT STRENGTH = $1.25 \times FS_{ALLOW} \times A_T$ (TENSION IN KIPS)

WHERE FY = YIELD STRENGTH OF LAPPED REINFORCEMENT BARS IN KSI.
FS_{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			
		STRENGTH REQUIREMENTS	
BAR SIZE TO BE SPLICED	SPLICER ROD OR DOWEL BAR LENGTH	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."

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BAR SPLICER DETAIL

FAP 329 (IL. 154)
SECTION 125-1B-I
RANDOLPH COUNTY
SN 079-0013

DRAWN BY:

079-0013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

INDEX

LEON D. WINN
82-22282
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Leon D. Winn
ILLINOIS REGISTERED PROFESSIONAL ENGINEER NO. 82-22282

LEON D. WINN
81-2792
REGISTERED STRUCTURAL ENGINEER OF ILLINOIS

Leon D. Winn
ILLINOIS REGISTERED STRUCTURAL ENGINEER NO. 81-2792

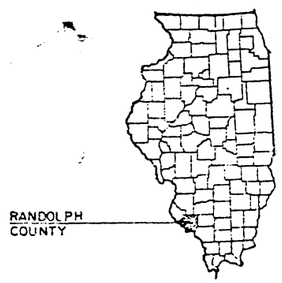
SUBMITTED BY Leon D. Winn DATE Dec 17, 1981
CHIEF, BUREAU OF PROJECT IMPLEMENTATION

APPROVED BY _____ DATE Dec 18, 1981
DIRECTOR

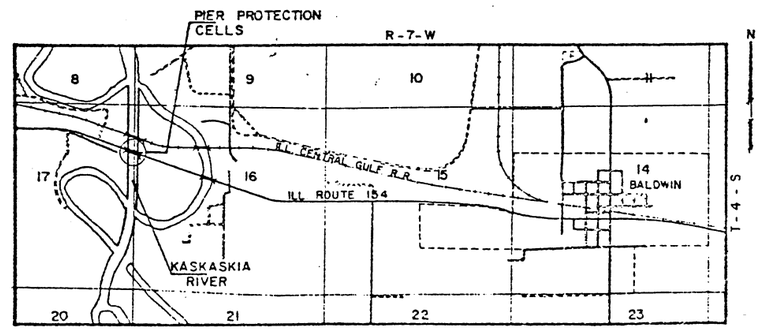
KASKASKIA RIVER
BRIDGE PIER PROTECTION
RANDOLPH COUNTY

FR-312

1981



REGIONAL MAP



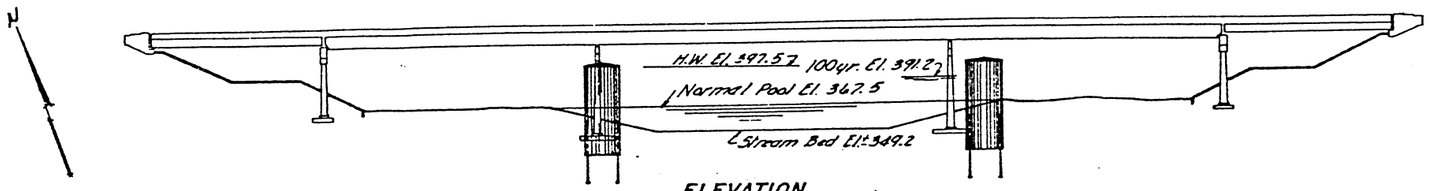
LOCATION PLAN

SCALE

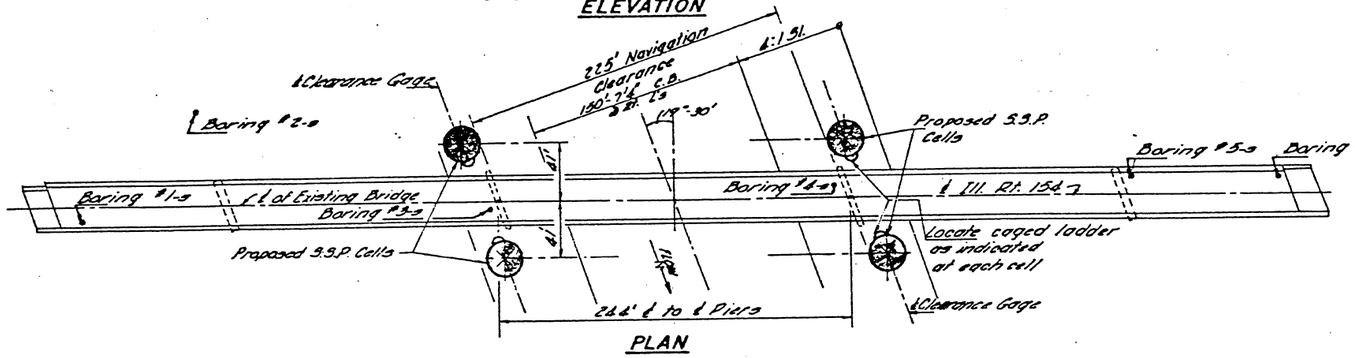
KASKASKIA RIVER
BRIDGE PIER PROTECTION
RANDOLPH COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF WATER RESOURCES



ELEVATION



PLAN

GENERAL NOTES

All elevations refer to mean sea level 1929 adj.

The Contractors construction procedures shall conform to EPA #430/9-73-007 entitled, Processes, Procedures and Methods to control Pollution Resulting from all Construction Activities dated October, 1973.

The Contractor shall furnish, erect and when directed by the Engineer, shall completely remove two (2) construction signs. The exact location of the signs shall be established by the Engineer in the field.

If and when cobbles or boulders are encountered, care shall be taken to prevent driving of sheet piling out of interlock.

The depth of the seal coat has been computed based on the theoretical elevation of the bottom of the cell as shown on the plans and a water surface elevation of 376.2. If the water surface elevation rises above elevation 376.2 during construction, the protective cell shall be flooded.

Cost of furnishing and installing the steps at top of cells shall be incidental to the contract.

All exterior metal work of the cells shall be coated with coal tar epoxy protective coating. Koppers Bitumastic No. 300M or approved equal. The coal tar epoxy protective coating shall be used for coating the steel sheet piling, steel ladder, steps and cage. See Specifications.

Before construction is begun, the Contractor shall submit to the Engineer for approval, detailed plans showing his proposed method of bracing the inside of the cell during construction.

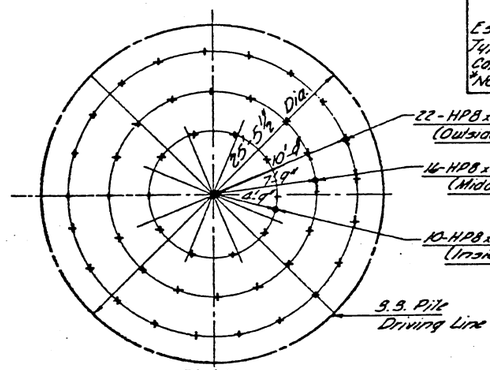
The Contractor shall drive one (1) Steel HP8x36 test pile in a permanent location at each protection cell as directed by the Engineer before ordering the remainder of piles.

Spoil from excavated area shall be disposed of at an area away from the river in a manner conforming to all existing State, Federal and Local regulations. The spoil area shall be furnished by the Contractor at his expense and approved by the Engineer.

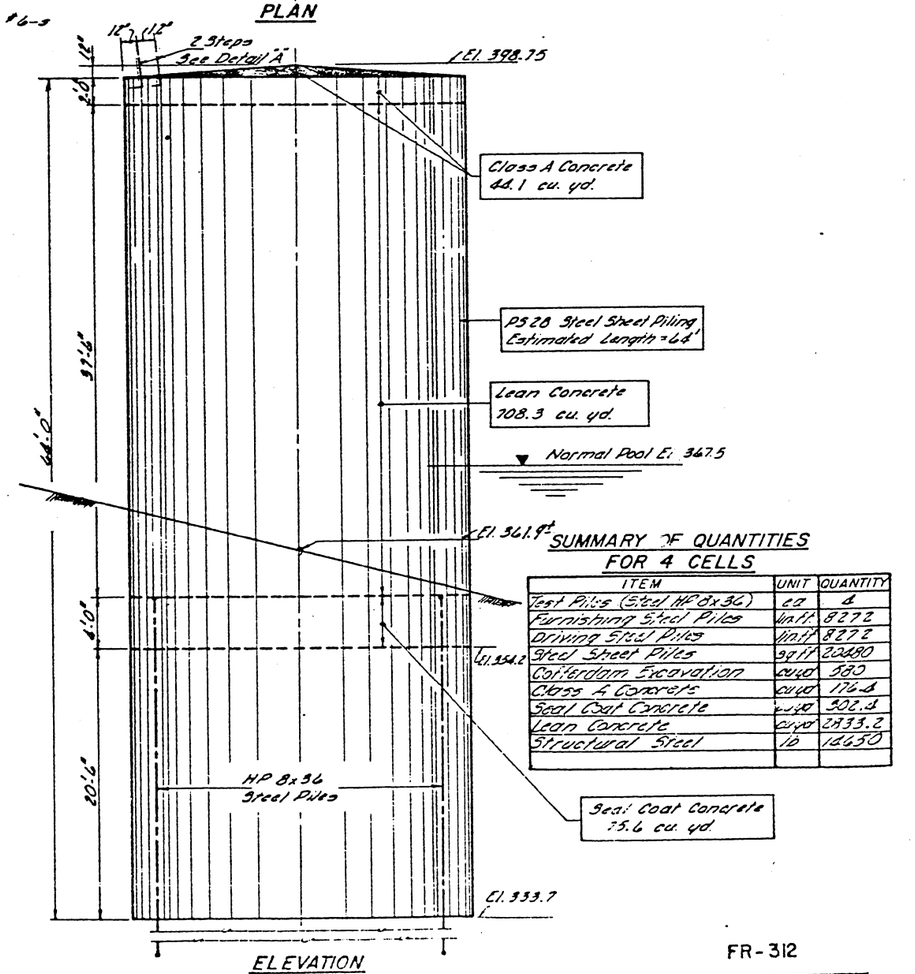
PILE DATA

Estimated Length	44 ft.
Type	HP8x36
Capacity	44 ton
*No. Required	68

*Note: Includes one (1) Test Pile.



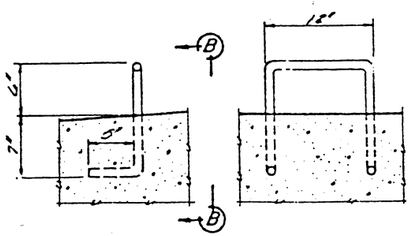
PLAN



ELEVATION

SUMMARY OF QUANTITIES FOR 4 CELLS

ITEM	UNIT	QUANTITY
Test Piles (Steel HP8x36)	ea	4
Furnishing Steel Piles	lin ft	8272
Driving Steel Piles	lin ft	8272
Steel Sheet Piles	sq ft	22680
Cofferdam Excavation	cu yd	590
Class A Concrete	cu yd	176.4
Seal Coat Concrete	cu yd	302.4
Lean Concrete	cu yd	2833.2
Structural Steel	lb	18650



DETAIL "A" SEC. B-B

FR-312

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CHECKED BY
ORIGINAL SURVEY
FINAL SURVEY
DATE
PAGE
BOOK
BOOK

ISSUE	REVISION	DATE

SCALE: AS SHOWN

KASKASKIA RIVER BRIDGE PIER PROTECTION

PLAN AND DETAILS - S.S.P. CELLS - ROUTE 154 BRIDGE - BALDWIN

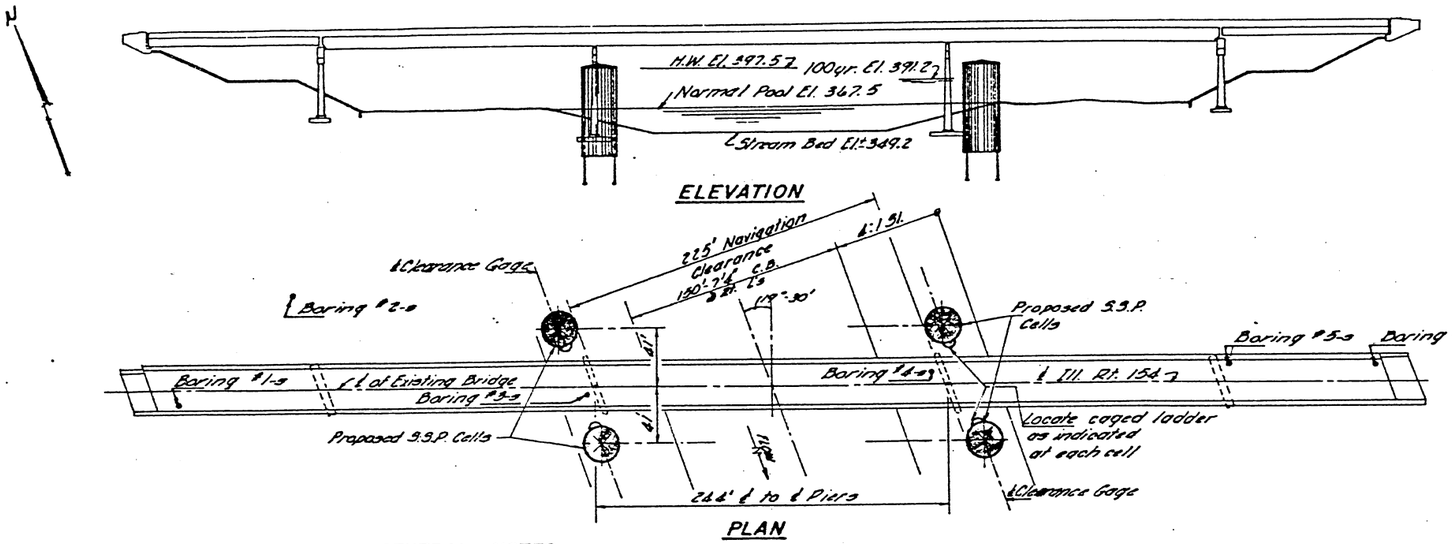
FILE NO.
CLASSIFICATIO NO.

SHEET NO. 2 OF 6

KASKASKIA RIVER
BRIDGE PIER PROTECTION
RANDOLPH COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF WATER RESOURCES



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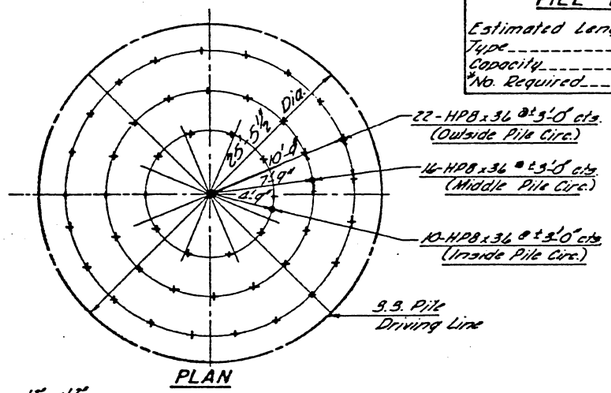
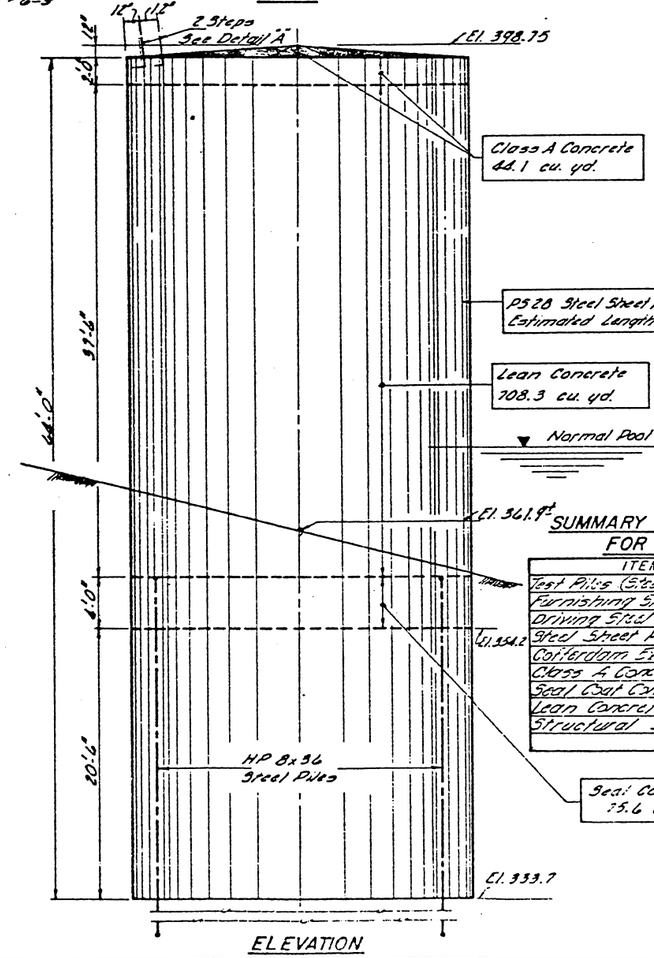
PILE DATA

Estimated Length	44 ft.
Type	HP8x36
Capacity	44 ton
*No. Required	48

*Note: Includes one (1) Test Pile.





SUMMARY OF QUANTITIES FOR 4 CELLS

ITEM	UNIT	QUANTITY
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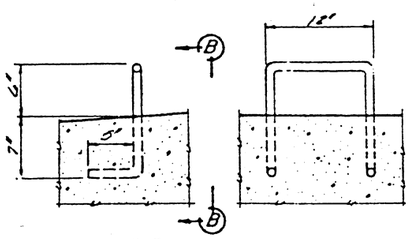
Furnishing Steel Piles	lin ft	8272
Driving Steel Piles	lin ft	8272
Steel Sheet Piles	sq ft	22480
Cofferdam Excavation	cu yd	380
Class A Concrete	cu yd	176.4
Seal Coat Concrete	cu yd	302.3
Lean Concrete	cu yd	2833.2
Structural Steel	lb	12650



FR-312

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CHECKED BY
ORIGINAL SURVEY
FINAL SURVEY
DATE
BOOK
BOOK
BOOK

ISSUE

SCALE: AS SHOWN

KASKASKIA RIVER BRIDGE PIER PROTECTION

PLAN AND DETAILS - S.S.P. CELLS - ROUTE 154 BRIDGE - BALDWIN

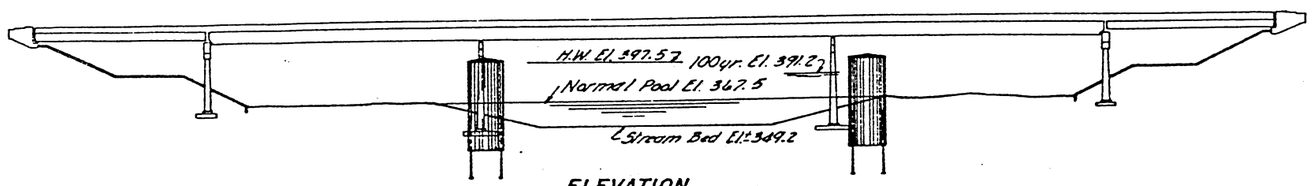
FILE NO.
CLASSIFICATIO NO.

SHEET NO. 2 OF 6

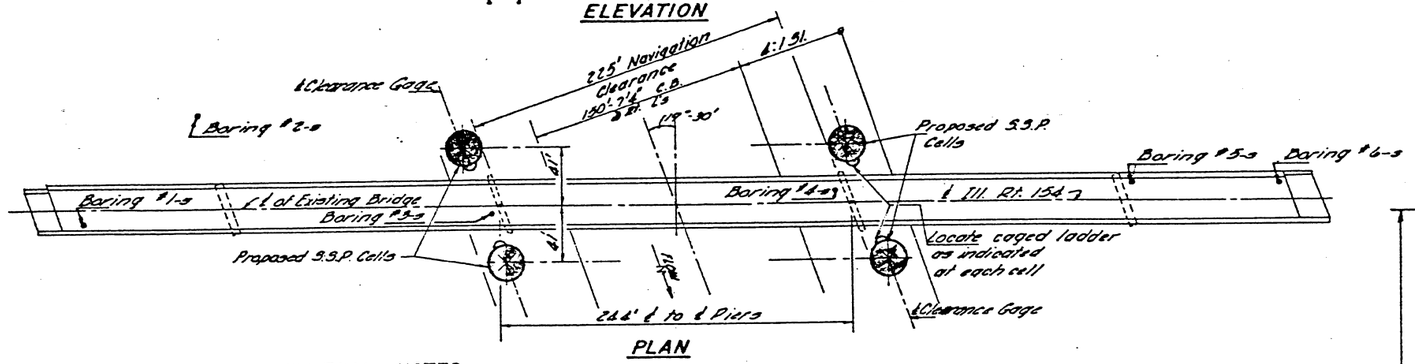
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

KASKASKIA RIVER
BRIDGE PIER PROTECTION
RANDOLPH COUNTY

DIVISION OF WATER RESOURCES



ELEVATION



PLAN

GENERAL NOTES

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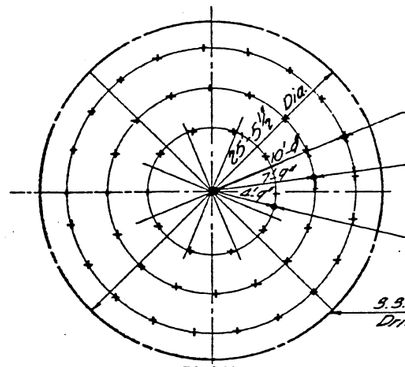
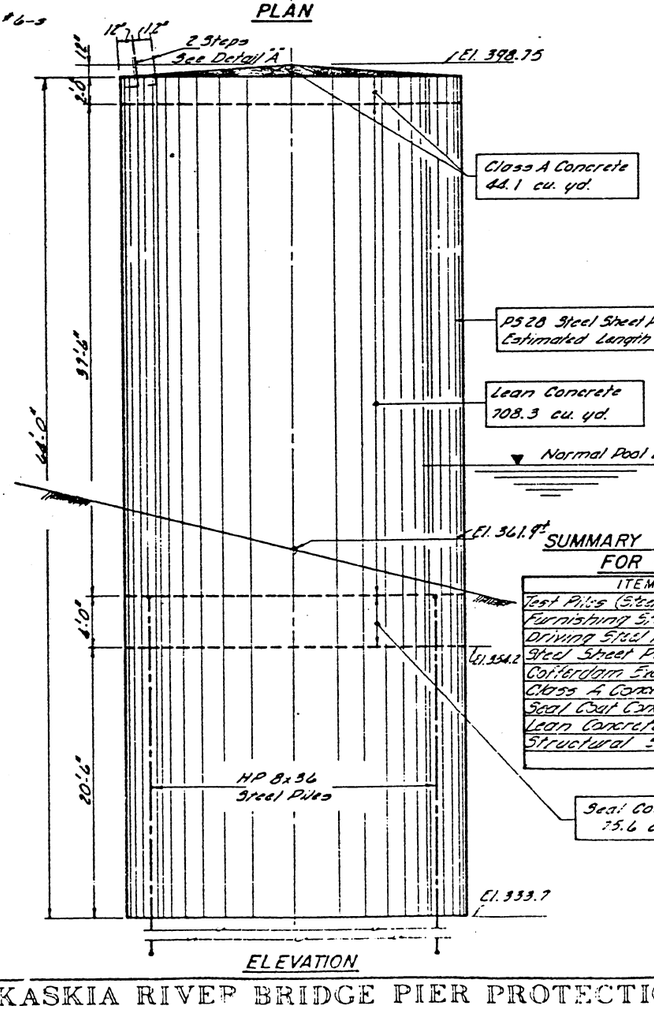
PILE DATA

Estimated Length	44 ft.
Type	HP8x36
Capacity	44 ton
*No. Required	68

*Note: Includes one (1) Test Pile.



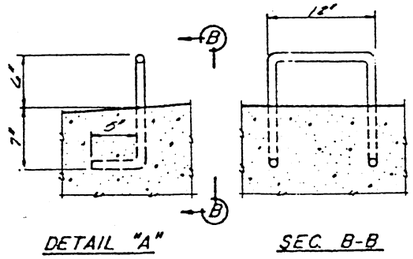
PLAN



ELEVATION

SUMMARY OF QUANTITIES FOR 4 CELLS

ITEM	UNIT	QUANTITY
Test Piles (Steel HP 8x36)	ea	4
Furnishing Steel Piles	lin ft	8272
Driving Steel Piles	lin ft	8272
Steel Sheet Piles	sq ft	20480
Cofferdam Excavation	cu yd	580
Class A Concrete	cu yd	176.4
Seal Coat Concrete	cu yd	302.3
Lean Concrete	cu yd	2833.2
Structural Steel	lb	16650



DETAIL "A" SEC. B-B

FR-312

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CHECKED BY
ORIGINAL SURVEY
FINAL SURVEY
DATE
DATE
BOOK
BOOK

ISSUE	DATE

SCALE: AS SHOWN

KASKASKIA RIVER BRIDGE PIER PROTECTION

PLAN AND DETAILS - S.S.P. CELLS - ROUTE 154 BRIDGE - BALDWIN

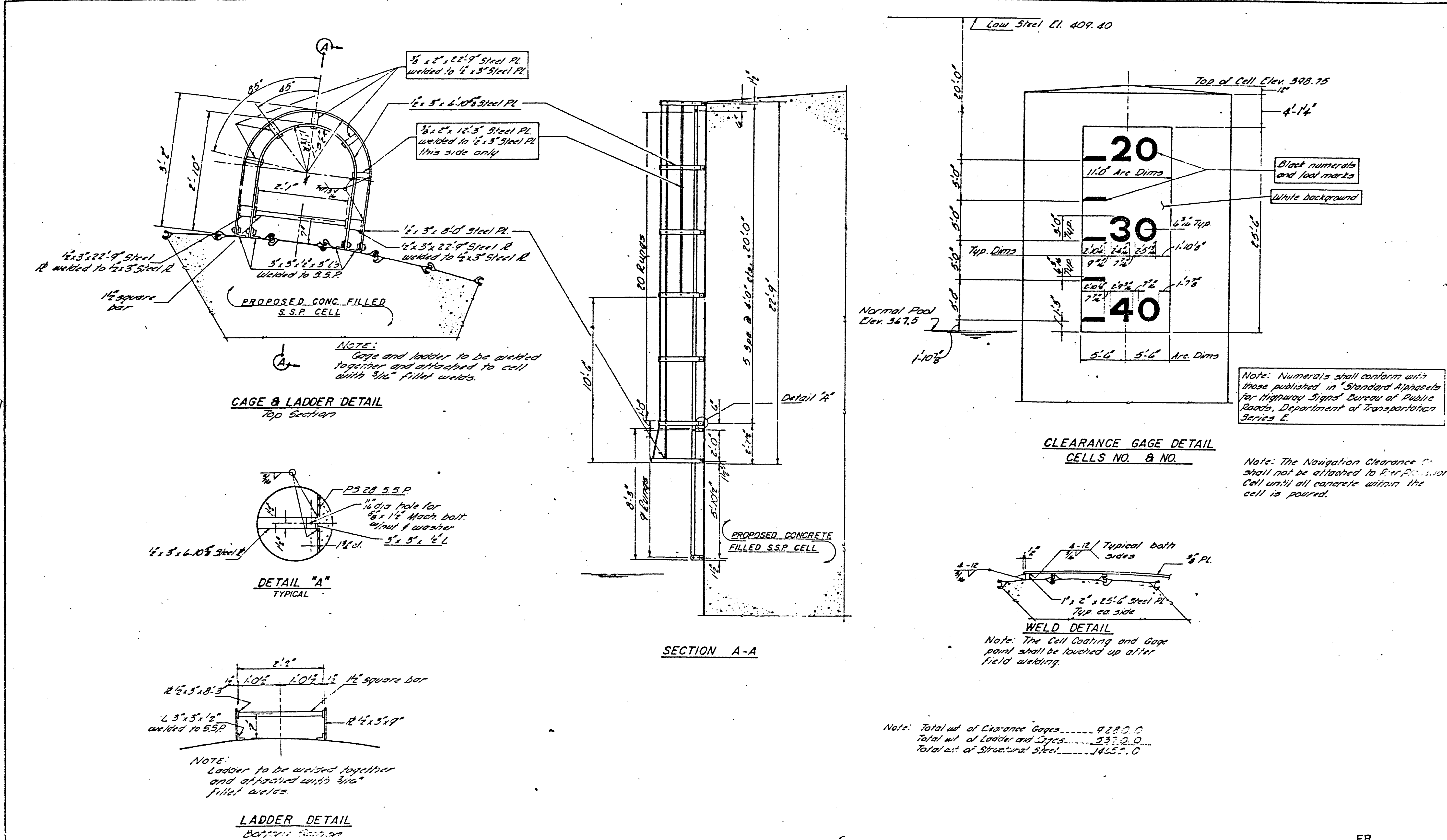
FILE NO.
CLASSIFICATION NO.

SHEET NO. 2 OF 6

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

KASKASKIA RIVER
BRIDGE PIER PROTECTION
RANDOLPH COUNTY

DIVISION OF WATER RESOURCES



FR

KASKASKIA RIVER BRIDGE PIER PROTECTION

LADDER CAGE AND CLEARANCE GAGE DETAILS - RT. 154 BRIDGE - BALDWIN

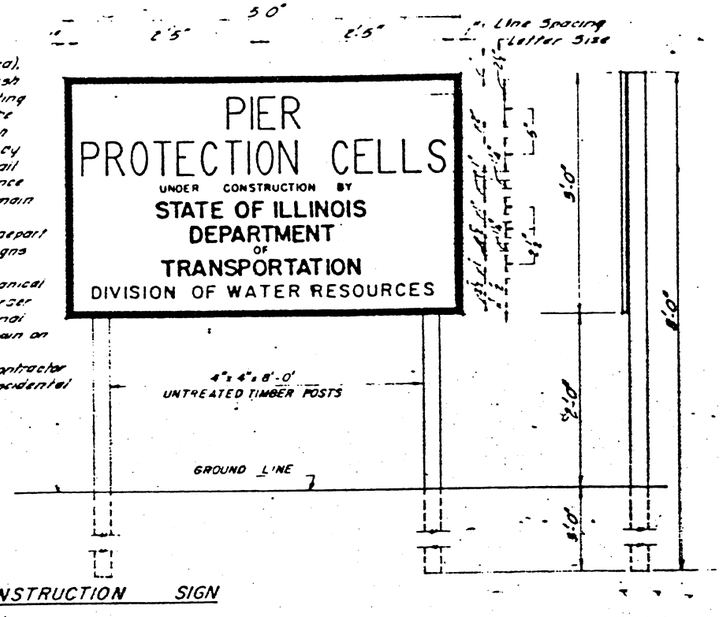
SCALE AS SHOWN

GENERAL NOTES

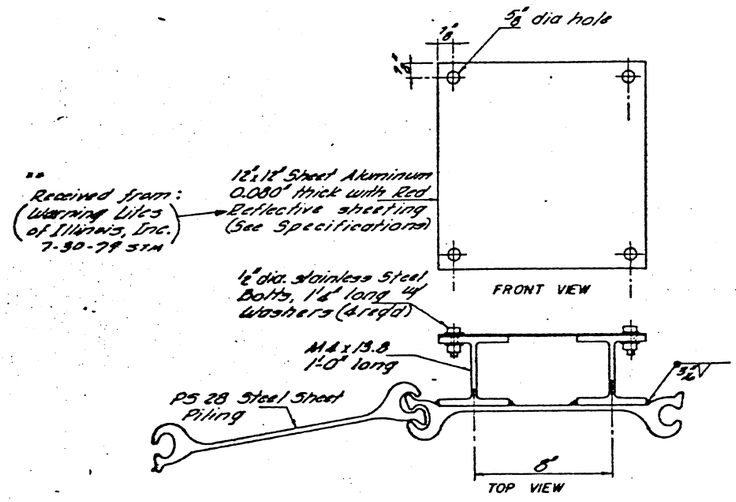
Signs shall be made of (1" lumber rigidly cleated), or of metal (18 ga). The Contractor shall furnish all material and labor for constructing and erecting the signs. The signs shall be placed prior to the starting of actual construction operations at each end of the construction section, or as directed by the Engineer. Before any sign is erected, it shall be approved by the Engineer as to its appearance and quality of construction. The signs shall remain in place and shall be maintained in satisfactory condition until the project is accepted by the department. The Contractor shall then remove the signs and the material will become his property.

The letters on the signs shall be black mechanical style on a white background and appropriate border line. The signs shall be painted by a professional painter and the size of the letters shall be as shown on these Plans.

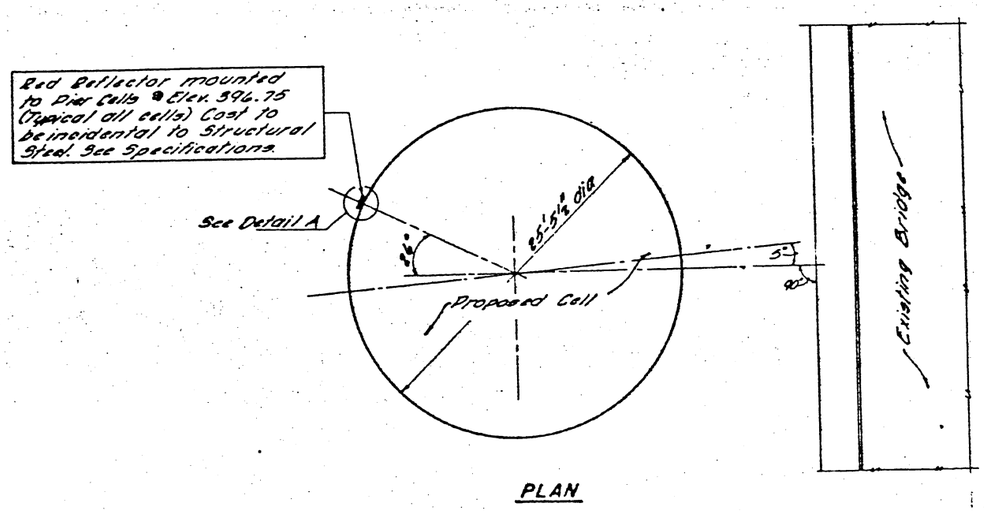
No extra compensation will be allowed the Contractor for these signs and the cost shall be considered incidental to the Contract.



CONSTRUCTION SIGN



DETAIL "A"



PLAN

FR-312

SCALE AS SHOWN

KASKASKIA RIVER BRIDGE PIER PROTECTION
RED REFLECTOR AND CONSTRUCTION SIGN RT 154 BRIDGE BALDWIN

FILE NO.
CLASSIFICATION NO.
SHEET NO. 4 OF 6 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

KASKASKIA RIVER
BRIDGE PIER PROTECTION
RANDOLPH COUNTY

DIVISION OF WATER RESOURCES

Boring #33 Pier 2
Boring Located 5' Rt. of ℄

	Elevation	Blows per ft	Qu
Ground Surface	367.0		
Stiff Moist Dark Brown Clay	364.0		
Soft Moist Brown Clay Loam	361.5	4	0.4
Soft Moist Brown Sandy Clay	359.0	7	0.6
Soft Very Moist Brown Silty Clay Loam	356.5	2	0.3
Very Loose to Loose Wet Brown Fine Sand with Clay Seams	349.0		
Medium Wet Brown Fine Sand with Clay Seams	346.5		
Medium Wet Gray Coarse Sand.	341.5		
Medium Wet Gray Coarse Sand w/Some Gravel and Clay Seams	334.0		
Soft Very Moist Gray Sandy Clay Loam	331.5		
Medium Wet Gray Coarse Sand w/Some Gravel and Clay Seams	321.5		
Dense Wet Gray Coarse Sand w/Some Gravel	316.5		
Medium Wet Gray Coarse Sand w/ Some Gravel	310.5		

Bottom of Hole = 56.5'

Boring #4-3 Pier 3
Boring Located 8' Lt. of ℄

	Elevation	Blows per ft	Qu
Ground Surface	366.5		
Stiff Moist Dark Brown Clay A-7-6 (18-14)	363.5		
Stiff Moist Dark Brn. Silty Clay to Clay A-7-6 (12-13)	361.0	4	1.08
Stiff Moist Dark Brown Clay Loam A-4 (8)	358.5	4	0.38
Very Loose, Very Moist Brown Fine Grained Sand w/Sandy Clay Loam Seams	353.5	2 3	
Loose Wet Brown Fine Grained Sand with Sandy Clay Loam Seams	346.0	6 7 8	
Medium Wet Brown Coarse Grained Sand with Some Gravel	338.5	27 17	
Medium Wet Grey Coarse Grained Sand with Gravel and Clay Seams	326.0	20 18 14 16 12	
Loose Wet Grey Coarse Sand w/Loose Grav.	323.5	8	
Medium Wet Grey Coarse Sand with Some Gravel	311.0	23 18 14 28 32 22	
Very Dense Wet Grey C'g Sand w/some Gravel		75	

Bottom of Hole = 56.5'

During drilling it appeared that free water was encountered at 8.0'
Washing procedure used below 11.5'

See Sheet #2 for Location of Borings

Note: Blows per ft = Blows per foot of penetration of sampling spoon. Hammer weight = 350 lbs Drop = 12". Qu = Unconfined compressive strength in tons per square foot.

DESIGNED BY ____ DATE ____
CHECKED BY ____ DATE ____
ORIGINAL SURVEY ____ BOOK ____
FINAL SURVEY ____ BOOK ____

REVISIONS

ITEM	REVISION - EFFECT	REVISED BY	DATE

FR-312

SCALE: AS SHOWN

KASKASKIA RIVER BRIDGE PIER PROTECTION

BORINGS - ROUTE 154 BRIDGE - BALDWIN

FILE NO.
CLASSIFICATION NO.

SHEET NO. 5 OF 6 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

KASKASKIA RIVER
BRIDGE PIER PROTECTION
RANDOLPH COUNTY

DIVISION OF WATER RESOURCES

Boring #1
Elevation 365.9' — 0.0'

Water		4.0'
Rip Rap		5.0'
Concrete		5.7'
Wet Brown Silty Fine Sand Some Rock		11.0'
Wet Brown Fine Sand	w.s.	13.0'
Wet Brown Medium Compact Fine to Coarse Sand w/Small Gravel	11 17	23.0'
Red Clay Seam		25.5'
Wet Grey Med. Compact Fine Sand Trace Coarse Sand & Small Gravel Some Silt & Clay Seams	28 21 26	37.0'
Wet Grey Med. Compact Fine Sand Some Coarse Sand & Small Gravel Some Silt & Clay Seams	27 32 28 26	55.0'

ws - Wash Sample Obtained
Used 59.5' BX Casing

Boring #2
Elevation 365.9' — 0.0'

Water		4.0'
Rip Rap		5.5'
Concrete		6.0'
Rip Rap with Wet Sand & Silts.		8.0'
Wet Loose Brown Fine Sand	ws	14.0'
Wet Brown Med. Compact Fine Sand Some Med. to Coarse Trace Small Gravel	18 13	22.0'
Reddish Brown to Grey Very Stiff Silty Clay Deposits		23.0'
Wet Grey Fine Sand Some Coarse Sand, Small Gravel & Silt Seams	19	30.0'

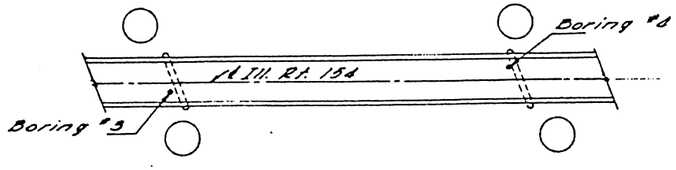
Boring Advanced by Auger
ws - Wash Sample Obtained

Boring #3
Elevation 365.6' — 0.0'

Water		3.0'
Wet Grey Silt & Rip Rap (Concrete)		4.0'
Wet Brown Fine Sand, Brown Grey Silt Seams		12.0'
Wet Brown Medium Compact Fine Sand	15	16.0'
Wet Brown Medium Compact Fine to Coarse Sand Some Small Gravel	28	21.0'
Wet Brown Compact Fine Sand Some Medium - Coarse Sand, Trace Gravel Some Silt & Clay Seams	32	28.0'
Wet Grey Compact Fine Sand Trace Med. to Coarse Sand & Small Gravel	26 32 30	41.5'
Grey Very Compact Fine to Coarse Sand w/Small Gravel	49 53	50.0'

Used 48.5' BX Casing

Note:
Borings shown are for informational purposes only. Furnished by Raymond International Inc. Aug. 19, 1975



Boring Location

DESIGNED BY — DATE
CHECKED BY — DATE
ORIGINAL SURVEY — BOOK
FIELD SURVEY — BOOK

REVISIONS			
ISSUE	REVISION LETTER	REVISED BY	DATE

SCALE: AS SHOWN

KASKASKIA RIVER BRIDGE PIER PROTECTION

BORINGS - ROUTE 154 BRIDGE - BALDWIN

FR-312

FILE NO.
CLASSIFICATION NO.

SHEET NO. 6 OF 6 SHEETS

BOND ISSUE ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
170	125-1 125B-1	RANDOLPH	75	1
B.F.P. REG. NO. 4	ILLINOIS	PROJECT		

P-99-171-63

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
STATE BOND ISSUE HIGHWAY

SCALES

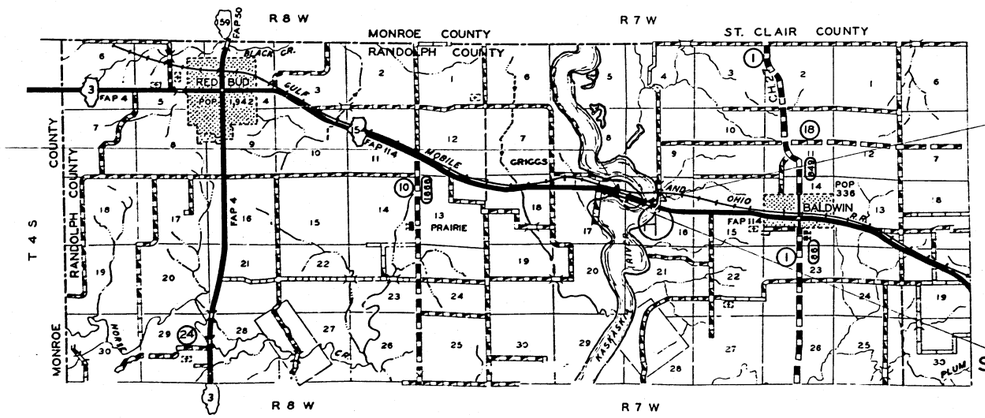
PLAN	1 INCH	100 FT.
PROFILE, HOR.	1 INCH	100 FT.
PROFILE, VERT.	1 INCH	10 FT.
CROSS-SECTIONS	1 INCH	10 FT.

S.B.I. ROUTE 170 SECTION [125-1 / 125B-1]

RANDOLPH COUNTY

C-99-406-68

INDEX OF SHEETS SHEET NO. 3
SUMMARY OF QUANTITIES SHEET NO. 4



PROPOSED CONSTRUCTION
SEC. 125-1 ENDS STA. 339+08.7

BRIDGE SEC. 125B-1
INCLUDES A 5-SPAN PLATE GIRDER STRUCTURE OVER THE KASKASKIA RIVER, ON R.C. PIERS AND ABUTMENTS
TOTAL LENGTH BK.-BK. APPR. BENTS = 893'-4"

PROPOSED CONSTRUCTION
SEC. 125-1 BEGINS STA. 296+03.6

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

SUBMITTED May 29 19 68 — DISTRICT ENGINEER
EXAMINED Aug 68 — ENGINEER OF BOND ISSUE AND CONTRACTS
PASSED Aug 1 68 — ENGINEER OF DESIGN
APPROVED Aug 1 68 — CHIEF ENGINEER
APPROVED Aug 1 68 — DIRECTOR

LAYOUT

APPPOXIMATE SCALE: 1 INCH = 1 MILE

NET LENGTH SECTION 125-1 = 3411.76 LIN. FT. = 0.646 MILES
NET LENGTH SECTION 125B-1 = 893.34 LIN. FT. = 0.169 MILES
NET LENGTH ENTIRE PROJECT = 4305.10 LIN. FT. = 0.815 MILES

CONTRACT NO. 25755

RANDOLPH COUNTY SECTION 125-1 125B-1 S. B. I. ROUTE 170

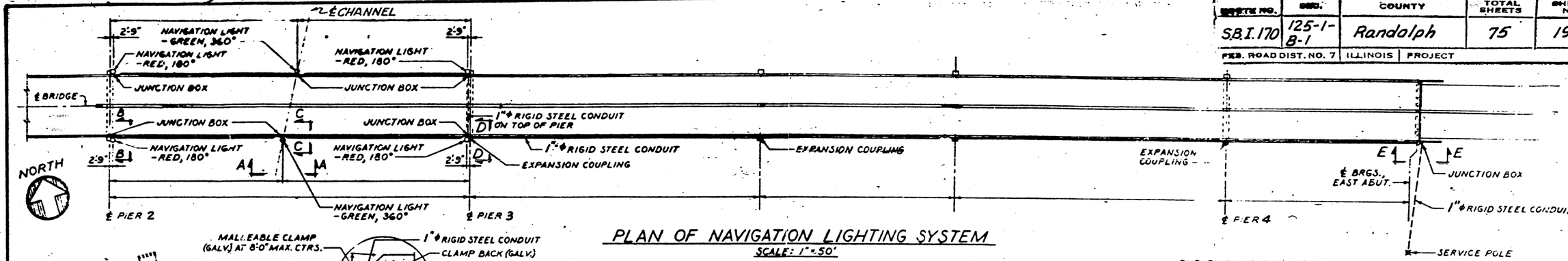
REEL 9-65

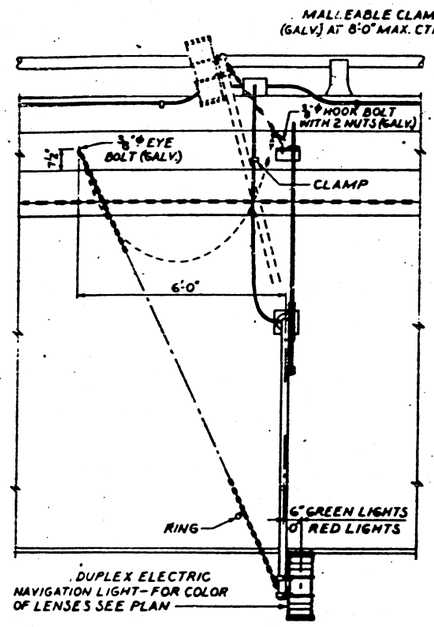
079-0013

SECTION NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170	125-1-B-1	Randolph	75	19A
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

PLAN OF NAVIGATION LIGHTING SYSTEM

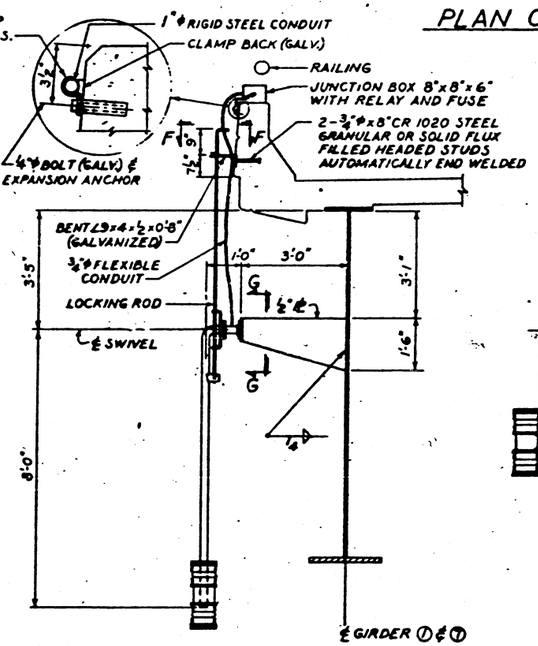
SCALE: 1" = 50'





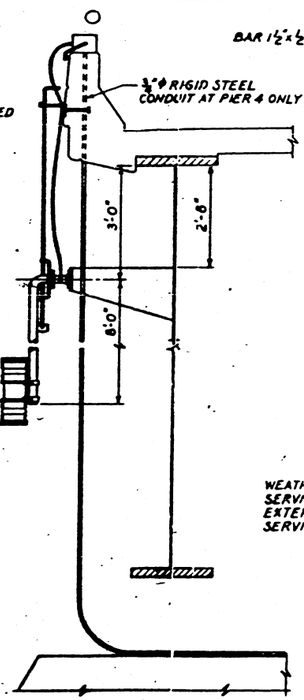
ELEVATION A-A

SCALE: ½" = 1'-0"



SECTION C-C

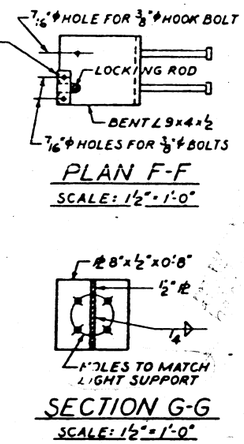
SCALE: ½" = 1'-0"



SECTION D-D

SECTION B-B SIMILAR

SCALE: ½" = 1'-0"

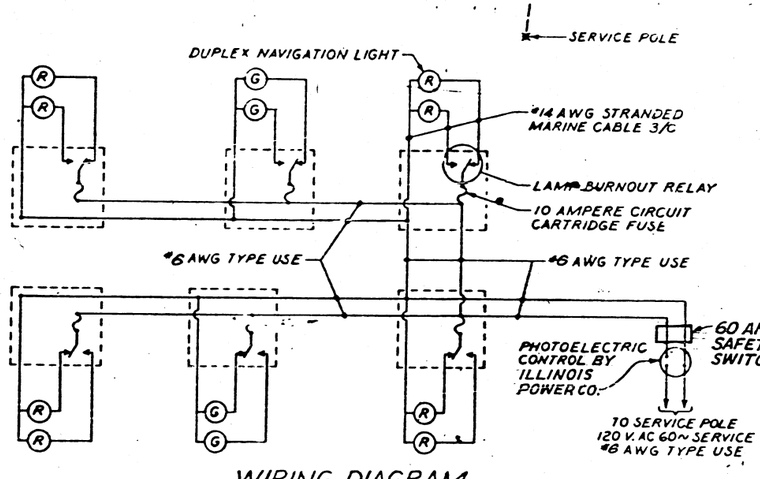


PLAN F-F

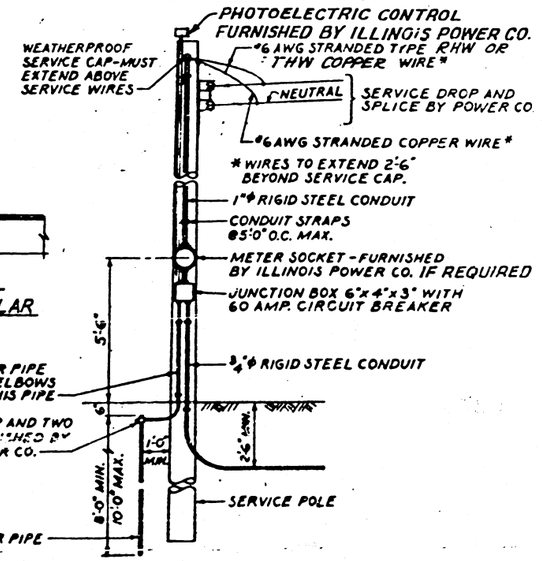
SCALE: 1½" = 1'-0"

SECTION G-G

SCALE: 1½" = 1'-0"

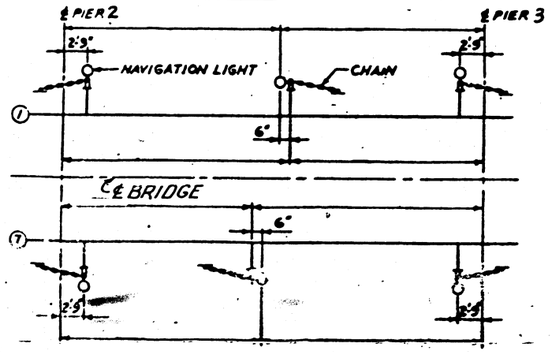


WIRING DIAGRAM



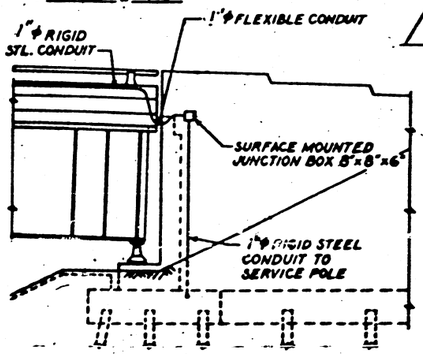
SERVICE POLE

SCALE: ½" = 1'-0"



SCHEMATIC PLAN OF LIGHT SUPPORTS

NO SCALE



ELEVATION E-E

SCALE: ¾" = 1'-0"

NOTES

ALL CABLE FROM THE NAVIGATION LIGHTS TO THE NEAREST JUNCTION BOX SHALL BE NEOPRENE COVERED MARINE CABLE.

ALL JUNCTION BOXES SHALL BE 8" X 8" X 6" CAST IRON, EXCEPT AS NOTED, DRILLED AND TAPPED FOR CONDUIT AS REQUIRED.

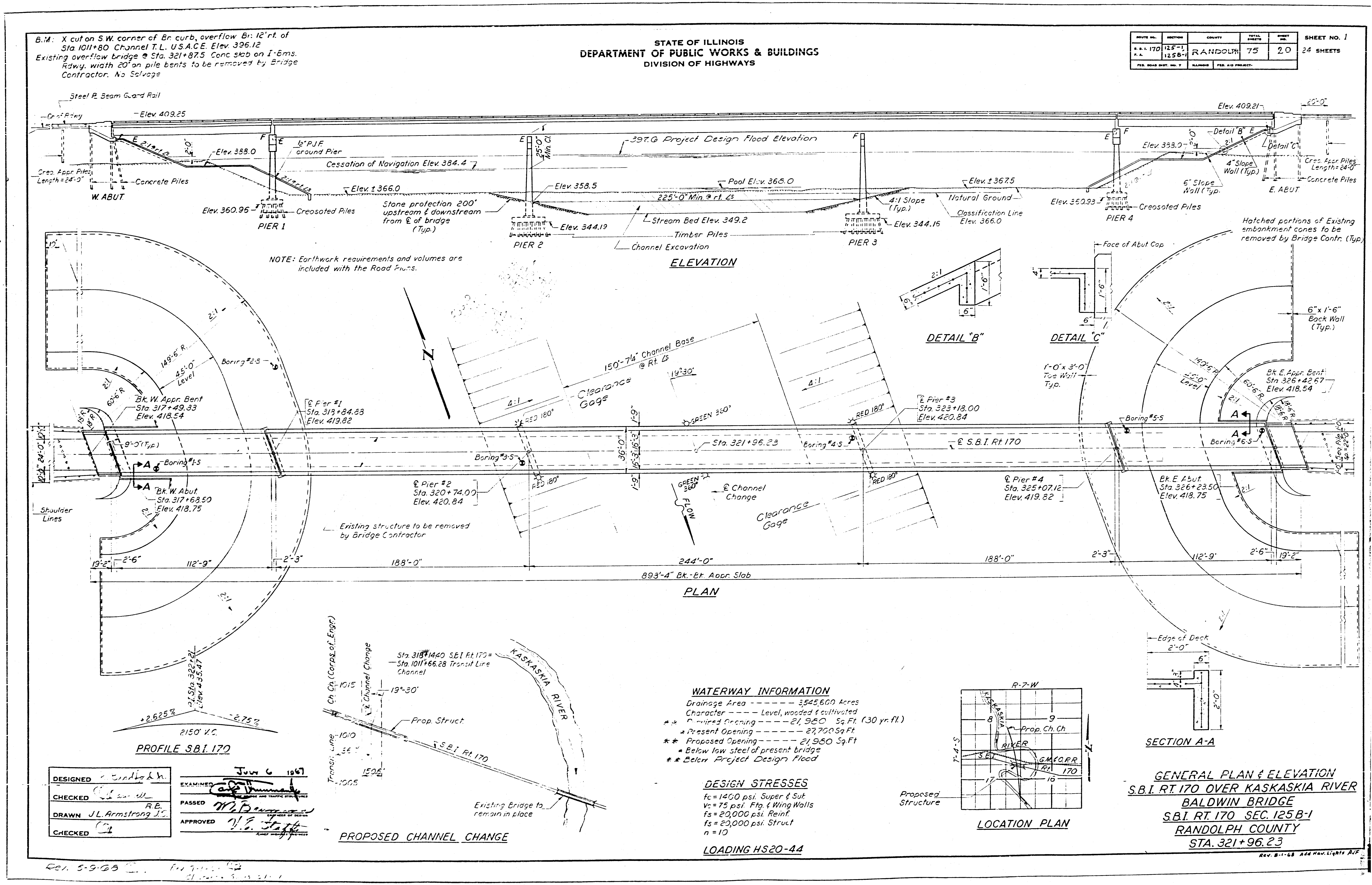
ANGLES AND PLATES USED IN NAVIGATION LIGHT ASSEMBLY SHALL BE A. S. T. M. A36 STEEL.

LOCKING ROD AND CHAIN SHALL BE FURNISHED WITH NAVIGATION LIGHT.

FURNISHING AND INSTALLING OF ALL EQUIPMENT AND MATERIAL ON THIS SHEET, COMPLETE IN PLACE, IS INCLUDED IN THE ITEM "NAVIGATION LIGHTING SYSTEM," EXCEPT AS OTHERWISE NOTED.

FOR OTHER REQUIREMENTS, SEE SPECIAL PROVISIONS.

ALL INSPECTION CHAINS SHALL BE STAINLESS STEEL AND OF SUFFICIENT STRENGTH TO RAISE THE NAVIGATION LIGHT TO THE LEVEL OF THE BRIDGE PARAPET.



STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
S.B.I. 170 | 125-1, 125B-1 | RANDOLPH | 75 | 20
SHEET NO. 1
24 SHEETS
B.M.: X cut on S.W. corner of Br. curb, overflow Br. 12' rt. of Sta. 1011+80 Channel T.L. U.S.A.C.E. Elev. 396.12
Existing overflow bridge @ Sta. 321+87.5 Conc. slab on I-Bms. Rdwy. width 20' on pile bents to be removed by Bridge Contractor. No Salvage
Steel R. Beam Guard Rail
Elev. 409.25
Elev. 409.21
397.6 Project Design Flood Elevation
Cessation of Navigation Elev. 384.4
12" PJF around Pier
25'-0" Min. Cl.
Elev. 388.0
Elev. 383.0
Detail "B"
Detail "C"
4" Slope Wall (Typ.)
6" Slope Wall (Typ.)
Creo. Appr. Piles Length = 24'-0"
Concrete Piles
W. ABUT
E. ABUT
Elev. ± 366.0
Elev. 358.5
Pool Elev. 368.0
Elev. ± 367.5
225'-0" Min. @ rt. ∠s
Natural Ground
Classification Line Elev. 366.0
4:1 Slope (Typ.)
Elev. 360.95
Elev. 360.93
Creosoted Piles
PIER 1
PIER 2
PIER 3
PIER 4
Stone protection 200' upstream & downstream from ℄ of bridge (Typ.)
Elev. 344.19
Elev. 344.16
Stream Bed Elev. 349.2
Timber Piles
Channel Excavation
ELEVATION
NOTE: Earthwork requirements and volumes are included with the Road Plans.
Hatched portions of Existing embankment cones to be removed by Bridge Contr. (Typ.)
Face of Abut Cap
DETAIL "B"
DETAIL "C"
6" x 1'-6" Back Wall (Typ.)
1'-0" x 3'-0" Toe Wall Typ.
150'-7¼" Channel Base @ Rt. ∠s
19°30'
Clearance Gage
Boring #2-S
149'-6" R.
45'-0" Level
60'-6" R.
Bk. W. Appr. Bent Sta. 317+49.33 Elev. 418.54
℄ Pier #1 Sta. 313+84.83 Elev. 419.82
℄ Pier #3 Sta. 323+18.00 Elev. 420.84
Bk. E. Appr. Bent Sta. 326+42.67 Elev. 418.54
RED 180°
GREEN 360°
Sta. 321+96.23
Boring #3-S
Boring #4-S
Boring #5-S
Boring #6-S
Boring #1-S
℄ S.B.I. Rt. 170
9'-0" (Typ.)
36'-0"
Bk. W. Abut. Sta. 317+68.50 Elev. 418.75
℄ Pier #2 Sta. 320+74.00 Elev. 420.84
℄ Channel Change
FLOW
℄ Pier #4 Sta. 325+07.12 Elev. 419.82
Bk. E. Abut. Sta. 326+23.50 Elev. 418.75
Shoulder Lines
Existing structure to be removed by Bridge Contractor
19'-2" 2'-6" 112'-9" 2'-3" 188'-0" 244'-0" 188'-0" 2'-3" 112'-9" 2'-6" 19'-2"
893'-4" Bk.-Bk. Appr. Slab
PLAN
Edge of Deck
2'-0"
SECTION A-A
P.I. Sta. 322+21 Elev. 435.47
+2.625%
-2.75%
2150' V.C.
PROFILE S.B.I. 170
Sta. 318+1440 S.B.I. Rt. 170 = Sta. 1011+66.28 Transit Line Channel
Ch. Ch. (Corps of Engr.)
℄ Channel Change
19°-30'
Prop. Struct.
S.B.I. Rt. 170
Transit Line
KASKASKIA RIVER
Existing Bridge to remain in place
PROPOSED CHANNEL CHANGE
WATERWAY INFORMATION
Drainage Area — 3,545,600 Acres
Character — Level, wooded & cultivated
** Required Opening — 21,980 Sq. Ft. (30 yr. fl.)
* Present Opening — 27,700 Sq. Ft.
** Proposed Opening — 21,980 Sq. Ft.
* Below low steel of present bridge
** Below Project Design Flood
DESIGN STRESSES
fc = 1400 psi. Super & Sub.
Vc = 75 psi. Ftg. & Wing Walls
fs = 20,000 psi. Reinf.
fs = 20,000 psi. Struct.
n = 10
LOADING HS20-44
R-7-W
T-4-S
KASKASKIA RIVER
Prop. Ch. Ch.
S.B.I. Rt. 170
G.M.&O.R.R.
Proposed Structure
LOCATION PLAN
DESIGNED
CHECKED
DRAWN J.L. Armstrong
CHECKED
EXAMINED
PASSED
APPROVED
June 6 1967
GENERAL PLAN & ELEVATION
S.B.I. RT. 170 OVER KASKASKIA RIVER
BALDWIN BRIDGE
S.B.I. RT. 170 SEC. 125 B-1
RANDOLPH COUNTY
STA. 321+96.23
Rev. 5-9-68
Rev. 8-1-68 Add Nav. Lights

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170 F.A.	125-1 125B-1	RANDOLPH	75	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
24 SHEETS

$\theta_B = \frac{1990(12)}{1727} + \frac{1669(12)}{1992} = 13.8 + 10.1 = 23.9 ksi > 20.0 ksi$

$\theta_T = \frac{1990(12)}{1431} + \frac{1669.4(12)}{5093} = 16.7 + 3.9 = 20.6 ksi > 20.0 ksi$

L.L. CAPACITY OF GIRDER (STRESS) $= 20.0 - 13.8 - \left(\frac{234.7}{1669.4} \times 10.1\right) = 4.8 ksi$

L.L. CAPACITY OF GIRDER (MOMENT) $= \frac{4.8 \times 1992}{12} = 813^K$

OPERATING L.L. CAPACITY OF GIRDER (MOMENT) $= \frac{11.8 \times 1992}{12} = 1958^K$

INVENTORY RATING $= \frac{813}{(1185.7 + 249.0)} \times 20 = 11.3$

OPERATING RATING $= \frac{1958}{1434.7} \times 20 = 26.2$

STRESS TABLES

SPANS 1 & 5

TABLE OF MOMENTS AND SHEARS - INTERIOR GIRDERS			
	STEEL SECTION MAX. MOMENT		
D.L.	1990.0 Ft-Kips		
	COMPOSITE SECTION MAX. MOMENT		
S.D.L.	234.7 Ft-Kips		
L.L.	1185.7		
Imp.	249.0		
Total	3659.4 Ft-Kips		
	SHEAR		
	Supp't.	1/4 point	1/2 point
S.D.L.	8.5^K	4.2^K	0^K
L.L.	44.9	32.7	20.5
Imp.	9.5	6.9	4.3
Total	52.9^K	43.8^K	24.5^K

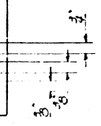
PROPERTIES	
Steel Section	
Is	64,552 in.^4
Sts	1431 in.^3
Sbs	1727 in.^3
Composite Section (1669.4)	
Ic	128,493 in.^4
Stc	5093 in.^3
Sbc	1992 in.^3

SPANS 2, 3 & 4 (CONTINUOUS)

TABLE OF MOMENTS AND REACTIONS INTERIOR GIRDERS					
	MOMENTS			REACTIONS	
	4 Sp 2	Pier 2	5 Sp. 3	Pier 1	Pier 2
D.L.	3283.7	5734.6	3196.8	104.2	331.5
L.L.	2017.0	3330.4	2065.8	54.3	132.6
Imp.	322.7	483.6	278.9	9.8	19.5
Total	5623.4	12554.6	5541.5	167.8	543.6

PROPERTIES	
Steel Section	
Is	215,062 in.^4
Sts	3526 in.^3
Sbs	3526 in.^4

BRIDGE RA-2 STATION 321+96.23
STATE OF ILLINOIS
S.B.I. RT. 170 SEC. 125B-1
U.S. ARMY
CORPS OF ENGINEERS
ST. LOUIS DISTRICT
BUILT 196 HS 20



NAME PLATE LETTERING
See Standard 2113-1
(Except as shown)

DESIGNED	R. Bindbeutel
CHECKED	
DRAWN	J.L. Armstrong R.B.
CHECKED	

JULY 6 1967
EXAMINED
PASSED
APPROVED

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and wing walls must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

Permanent forms will not be permitted in forming the concrete floor.

Slope Wall shall be reinforced with welded wire fabric 6"x 6" mesh, weighing 58# per 100 Sq. Ft.

Layout of slope walls may be varied to suit ground conditions in the field as directed by the Engineer.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Specifications Designation A-36.

Rivets 7/8"ø, open holes 15/16"ø, unless otherwise noted.

Anchor bolts shall be set before riveting cross frames over supports.

Structural steel weldments of equal sections and strength may be substituted for castings at the option of the Contractor, except details and welds shall be subject to approval of the Engineer prior to fabrication. No additional compensation will be allowed the Contractor for this substitution.

Stud shear connectors on the girder flanges of Spans 1 & 5 shall be placed in the field after the steel has been erected and the deck forms are in place. Flange shear connectors are included in the quantity of Structural Steel. Number Required = 4120. Estimated Weight = 3340 Lbs.

Roadway expansion devices shall be assembled in the shop in proper position with the ends in place and shall be left assembled for shop inspection.

Plates shall be flame cut as provided in Article 54.5 (1) of the Standard Specifications.

The exposed surfaces of the expansion devices shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of Structural Steel. Estimated Weight = 9,940 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of the Standard Specifications.

The Contractor shall drive two timber test piles, (one in the vicinity of Pier 1 and one in a permanent location at Pier 3) and one concrete test pile in a permanent location at the West Abutment. The test piles shall be driven as directed by the Engineer before ordering the remaining piles.

Concrete piles at abutments shall be driven in holes precored through the embankment in accordance with Article 60.9 (c) of the Standard Specifications.

Excavation for portions of the structure in the embankments shall not be classified.

Class A Excavation for Structures includes excavation for slope wall.

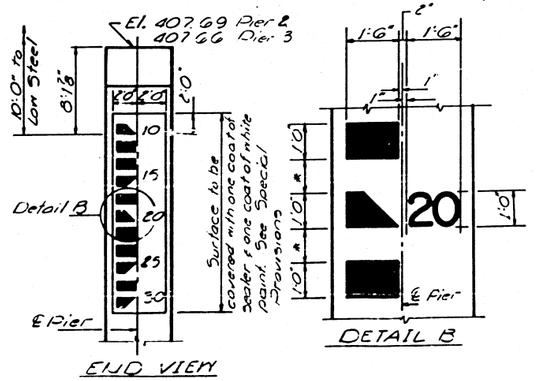
FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF 1/4 OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

For 'Bridge Seat Sealant' see Special Provisions.

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Removal of Existing Structures	Each			1
Class X Concrete	Cu. Yds.	912.0	1286.0	2198.0
Structural Steel	Lbs.	1,722,440		1,722,440
Aluminum Handrail	Lin. Ft.	1704		1704
Reinforcement Bars	Lbs	249,830	156,940	406,770
Untreated Piles (Up to 30)	Lin. Ft.		5174	5174
Creosoted Piles (20.1 to 38')	Lin. Ft.		4358	4358
Test Piles (Timber)	Each		2	2
Concrete Piles	Lin. Ft.		3193	3193
Test Piles (Concrete)	Each		1	1
Name Plates	Each			1
Slope Wall (4")	Sq. Yds.		400	400
Slope Wall (6")	Sq. Yds.		2410	3410
** Bridge Seat Sealant	Lump Sum			1
* Protective Coat	Sq. Yds.	4030		4030
Class A Excavation for Structures	Cu. Yds.		750	750
Class B Excavation for Structures	Cu. Yds.		1610	1610
† Preformed Joint Sealer	Lin. Ft.	77		77
2"ϕ Telephone Conduit	Lin. Ft.	902		902

* Includes use on inside vertical faces, tops and exposed ends of the approach wings.
** Use at Piers 1 & 4 only.
† Use at Abutments only.



CLEARANCE GAGE
To be located at upstream end of Pier 2 and down stream end Pier 3 See Sheet 1.

* Spacing and markings shall be adjusted to allow for curve in Pier face.

GENERAL NOTES & TOTAL BILL
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

ROUTE NO.	SECTION	COUNTY	P. N. NO.	SHEET NO.
S.B.I. 170 F.A.	125-1 125B-1	RANDOLPH	75	21A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 21A
24 SHEETS

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

MOMENT & STRESS TABLE
(@ .5 ℓ & .5 Ps)

	Moment	Stress in Bott. flange
ℓ on Steel Section	+159' K	+ 1.10 ksi.
SIℓ on Comp. Section	+190' K	+ 1.08 ksi.
ℓ + SIℓ on Comp. Section	+1752' K	+10.27 ksi.
ℓ + I on Comp. Section	1195 + 251 = 1446' K	+ 7.81 ksi.
Total		20.2 ksi.

(For Interior Girders only)

STRESS TABLES

SPANS 1 & 5

TABLE OF ~~MOMENTS AND~~ SHEARS - INTERIOR GIRDERS

	STEEL SECTION MAX. MOMENT
D.L.	1560.5 Ft.-Kips
	COMPOSITE SECTION MAX. MOMENT
S.D.L.	337.7 Ft-Kips
L.L.	1180.7
Imp.	245.0
Total	3559.4 Ft-Kips

	SHEAR		
	Supp't	¼ point	½ point
D.L. & S.D.L.	40.2K	35.1K	31.1K
L.L.	44.9	32.7	20.5
Imp.	9.5	6.9	4.3
Total	94.6K	75.3K	55.9K

PROPERTIES	
Steel Section	
Is	64,552 in.⁴
Sts	1431 in.³
Sbs	1727 in.³
Composite Section	
Ic	188,495 in.⁴
Stc	5093 in.³
Sbc	1992 in.³

Comp. Section (n=6)		Comp. Section (n=30)	
Ic	140,747 in.⁴	Ic	103,747 in.⁴
Stc	7311 in.³	Stc	3264 in.³
Sbc	2225 in.³	Sbc	2046 in.³
& Scc	5261 in.³	Sco	2640 in.³

& Sectional Modulus at top of Concrete slab.

SPANS 2, 3 & 4 (CONTINUOUS)

TABLE OF MOMENTS AND REACTIONS INTERIOR GIRDERS

	MOMENTS			REACTIONS	
	.4 Sp 2	Pier 2	.5 Sp 3	Pier 1	Pier 2
D.L.	3253.7	5734.6	3156.8	104.2	391.5
L.L.	2017.0	3334.4	2065.8	54.8	132.6
Imp.	322.7	423.6	278.9	8.8	13.5
Total	5623.4	12554.6	5541.5	167.8	543.6

PROPERTIES	
Steel Section	
Is	215,062 in.⁴
Sts	3526 in.³
Ses	3526 in.³

BRIDGE ~~=~~ STATION 321+96.23
STATE OF ILLINOIS
SBI RT. 170 SEC. 125B-1
U.S. ARMY
CORPS OF ENGINEERS
ST. LOUIS DISTRICT
BRIDGE 196 HS 20

NAME PLATE LETTERING
See Standard 2113-1
(Except as shown)

DESIGNED	[illegible]
CHECKED	[illegible]
DRAWN	J.L. Armstrong
CHECKED	

EXAMINED July 6 1967
PASSED [illegible]
APPROVED [illegible]

Rev. 5-3-71 W.H.

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and wing walls must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

Permanent forms will not be permitted in forming the concrete floor.

Slope Wall shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 58# per 100 Sq. Ft.

Layout of slope walls may be varied to suit ground conditions in the field as directed by the Engineer.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Specifications Designation A-36.

Rivets 7/8"ϕ, open holes 15/16"ϕ, unless otherwise noted.

Anchor bolts shall be set before riveting cross frames over supports.

Structural steel weldments of equal sections and strength may be substituted for castings at the option of the Contractor, except details and welds shall be subject to approval of the Engineer prior to fabrication. No additional compensation will be allowed the Contractor for this substitution.

Stud shear connectors on the girder flanges of Spans 1 & 5 shall be placed in the field after the steel has been erected and the deck forms are in place. Flange shear connectors are included in the quantity of Structural Steel. Number Required = 4120. Estimated Weight = 3340 Lbs.

Roadway expansion devices shall be assembled in the shop in proper position with the ends in place and shall be left assembled for shop inspection.

Plates shall be flame cut as provided in Article 54.5 (1) of the Standard Specifications.

The exposed surfaces of the expansion devices shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of Structural Steel. Estimated Weight = 9,940 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of the Standard Specifications.

The Contractor shall drive two timber test piles, (one in the vicinity of Pier 1 and one in a permanent location of Pier 3.) and one concrete test pile in a permanent location at the West Abutment. The test piles shall be driven as directed by the Engineer before ordering the remaining piles.

Concrete piles at abutments shall be driven in holes precored through the embankment in accordance with Article 60.9 (c) of the Standard Specifications.

Excavation for portions of the structure in the embankments shall not be classified.

Class A Excavation for Structures includes excavation for slope wall.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ¼ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS, WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

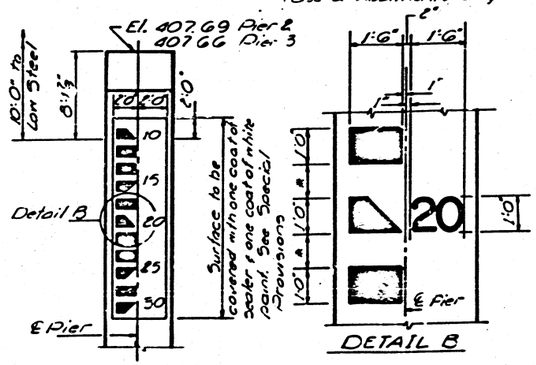
For 'Bridge Seat Sealant' see Special Provisions.

Temporary supports shall be erected at the mid-span of spans 1 & 5 before pouring concrete slab. The supports shall remain in place for 21 days after the final pour.

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Removal of Existing Structures	Each			1
Class X Concrete	Cu. Yds.	912.0	1286.0	2198.0
Structural Steel	Lbs.	1,722,440		1,722,440
Aluminum Handrail	Lin. Ft.	1704		1704
Reinforcement Bars	Lbs.	249,830	156,940	406,770
Untreated Piles (Up to 30)	Lin. Ft.		5174	5174
Creosoted Piles (20.1 to 38')	Lin. Ft.		4358	4358
Test Piles (Timber)	Each		2	2
Concrete Piles	Lin. Ft.		3193	3193
Test Piles (Concrete)	Each		1	1
Name Plates	Each			1
Slope Wall (4")	Sq. Yds.		400	400
Slope Wall (6")	Sq. Yds.		9410	9410
** Bridge Seat Sealant	Lump Sum			1
* Protective Coat	Sq. Yds.	4030		4030
Class A Excavation for Structures	Cu. Yds.		750	750
Class B Excavation for Structures	Cu. Yds.		1610	1610
† Preformed Joint Sealer	Lin. Ft.	77		77
2" ϕ Telephone Conduit	Lin. Ft.	902		902

* Includes use on inside vertical faces, tops and exposed ends of the approach wings.
** Use at Piers 1 & 4 only.
† Use at Abutments only.



CLEARANCE GAGE
To be located at upstream end of Pier 2 and downstream end Pier 3 See Sheet 1.

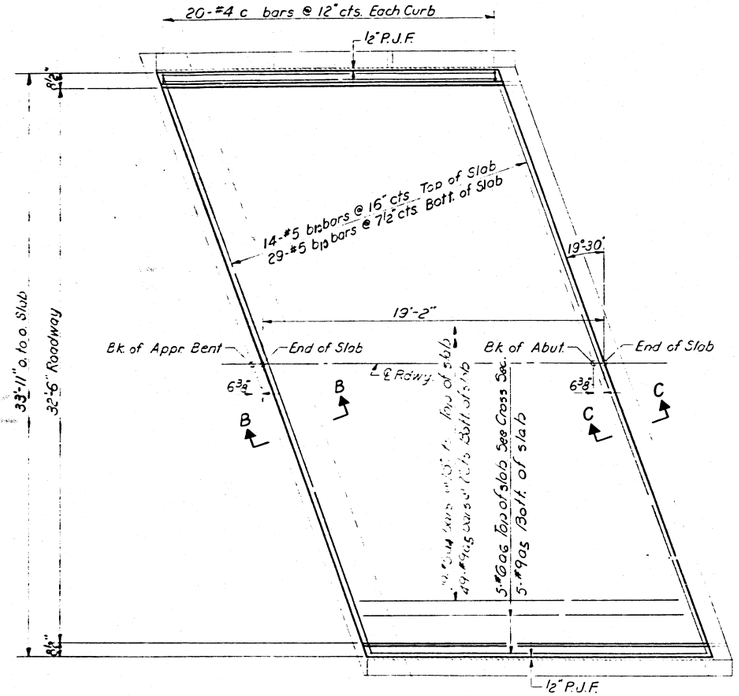
* Spacing and markings shall be adjusted to allow for curve in Pier face.

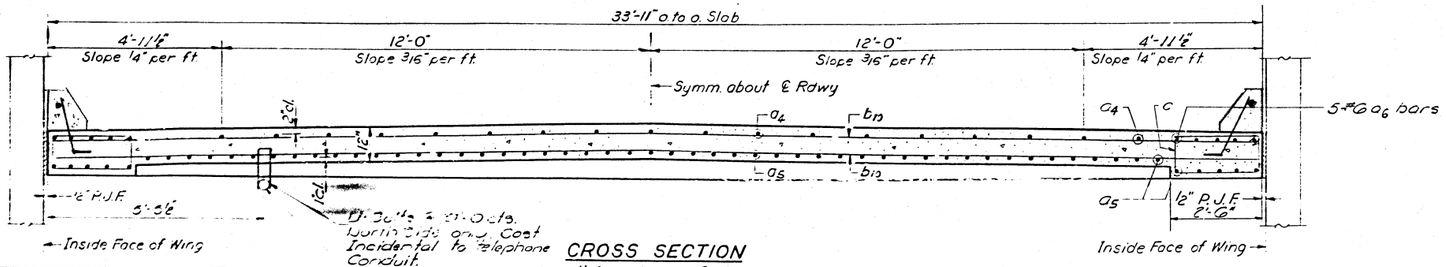
As Revised 5-3-71
GENERAL NOTES & TOTAL BILL
SBI RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

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

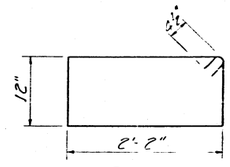
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170 F.A.	125-1, 125B-1	RANDOLPH	75	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 3
24 SHEETS

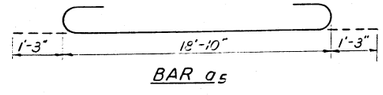




CROSS SECTION
W. Appr. Looking East
E. Appr. Looking West



BAR c



BAR a5

2 APPROACH SLABS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a4	38	#5	18'-11"	—
a5	118	#9	21'-4"	C
a6	20	#6	18'-11"	—
b10	86	#5	35'-9"	—
c	80	#4	7'-1"	⊓
Reinforcement Bars			Lbs.	13,610
Class X Concrete			Cu. Yds.	52.7

V13 bars are billed on abutment sheets.

DESIGNED	R. Bradley Jr.	
CHECKED		
DRAWN	J.L. Armstrong	E.B.
CHECKED		

EXAMINED July 6 1967
PASSED
APPROVED

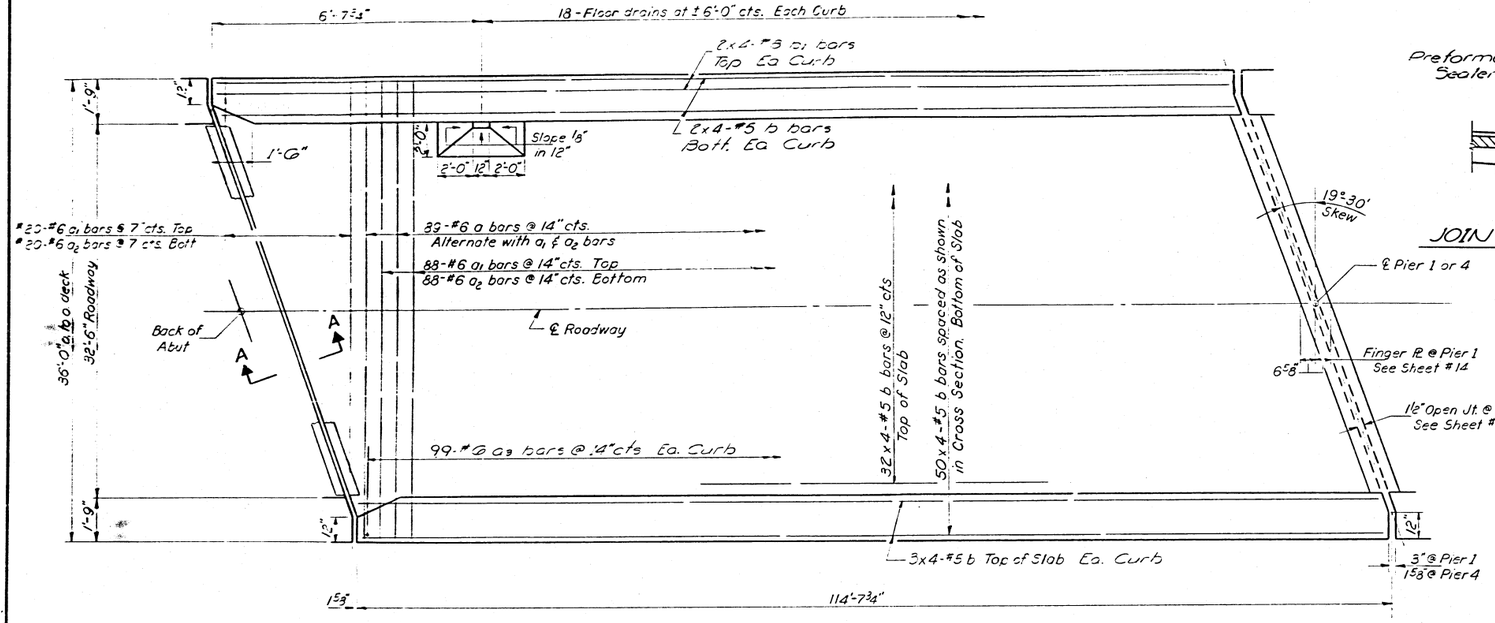
APPROACH SLAB
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

Note: Bars indicated thus 34x4-#5 etc. indicates 34 lines of bars with 4 lengths per line.
Min. bar laps = 20 dia.

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170 F.A.	125-1, 125B-1	RANDOLPH	75	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

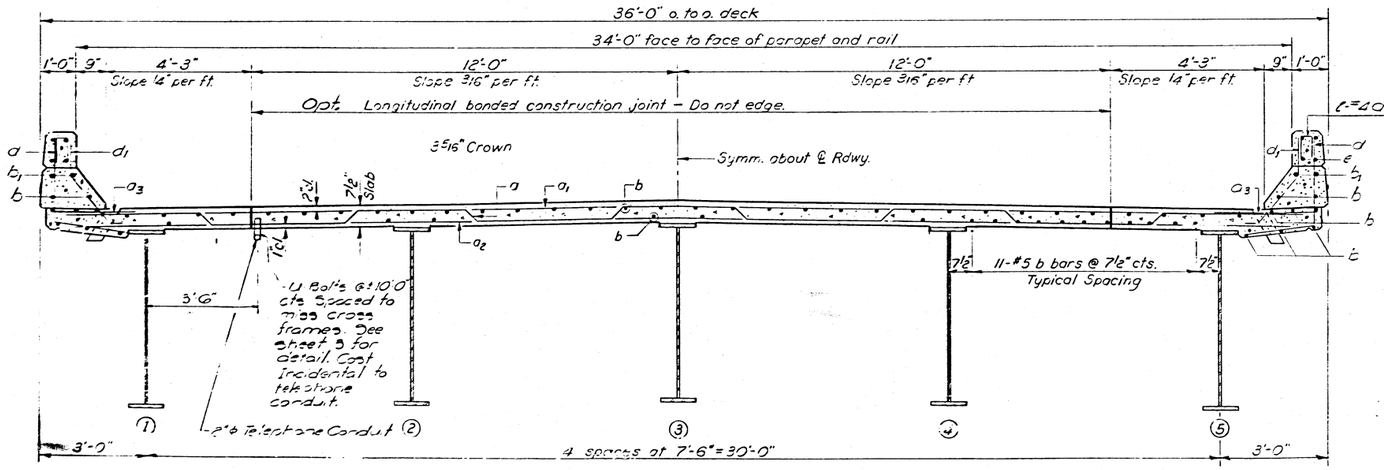
SHEET NO. 4
24 SHEETS



PLAN ~ SPAN 1

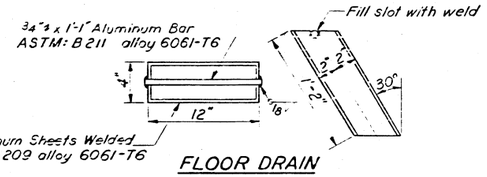
Note: Span 5 is similar by rotation thru 180° except as shown.

*Order a1 & a2 bars full length. Cut to fit skew and use remainder of bars in opposite end.

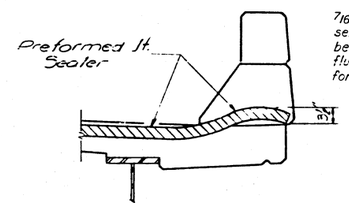


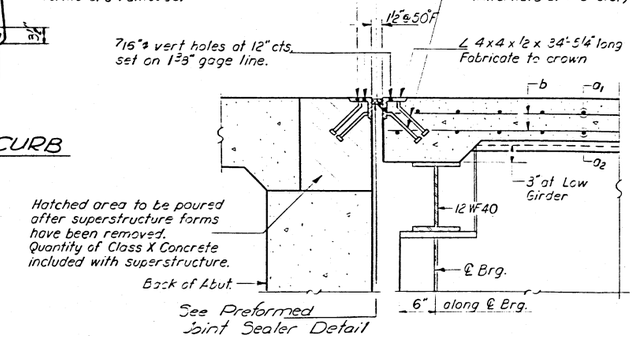
CROSS SECTION
LOOKING EAST

DESIGNED	R. Bradfield	July 6 1967
CHECKED		EXAMINED
DRAWN	J.L. Armstrong R.B	PASSED
CHECKED		APPROVED



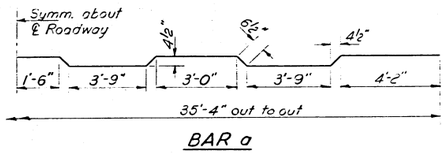
FLOOR DRAIN



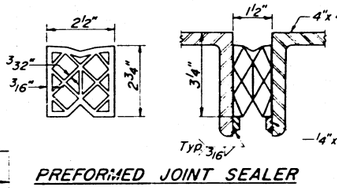


SECTION A-A

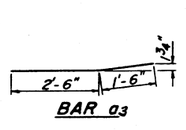
Note: See sheet #14 for Sections at Piers 1 & 4.



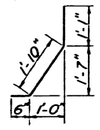
BAR a



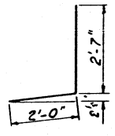
PREFORMED JOINT SEALER



BAR a3



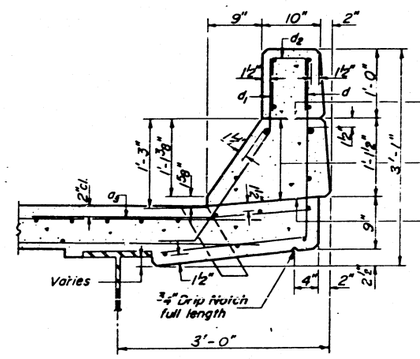
BAR d1



BAR d

For placement of d, d1 & d2 see Sheet 8

BAR d2



CURB SECTION
Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete

SPANS 1 & 5
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	178	#6	36'-8"	
a1	216	#6	35'-4"	
a2	216	#6	34'-0"	
a3	198	#6	4'-0"	
b	736	#5	29'-6"	
b1	32	#5	30'-0"	
d	460	#4	2'-7"	
d1	460	#5	3'-5"	
d2	120	#4	2'-1"	
Reinforcement Bars			Lbs.	61,310
** Structural Steel			Lbs.	331,610
Class X Concrete			Cu. Yds.	220.6

** Weight of bearing assemblies with lead plates, anchor bolts & expansion devices are included as structural steel. Est. Wt = 13,440 Lbs.

The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet #8

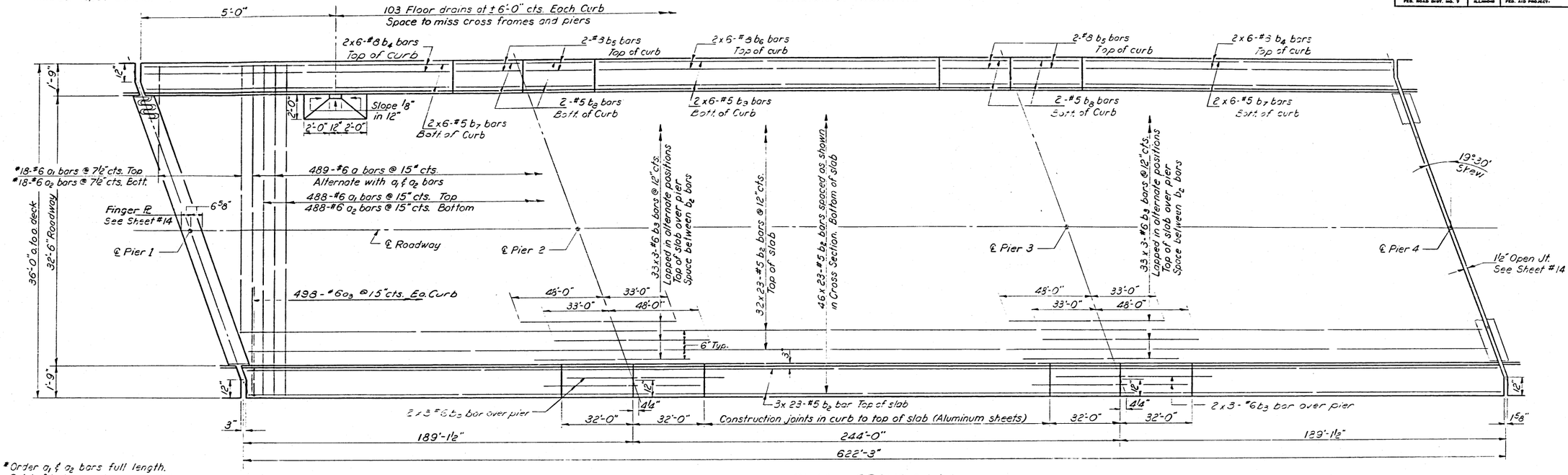
SUPERSTRUCTURE ~ SPANS 1 & 5
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321 + 96.23

Note: Bars indicated thus 34 x 4 - #5 etc. indicate 34 lines of bars with 4 lengths per line.
Min. bar laps = 20 dia.

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

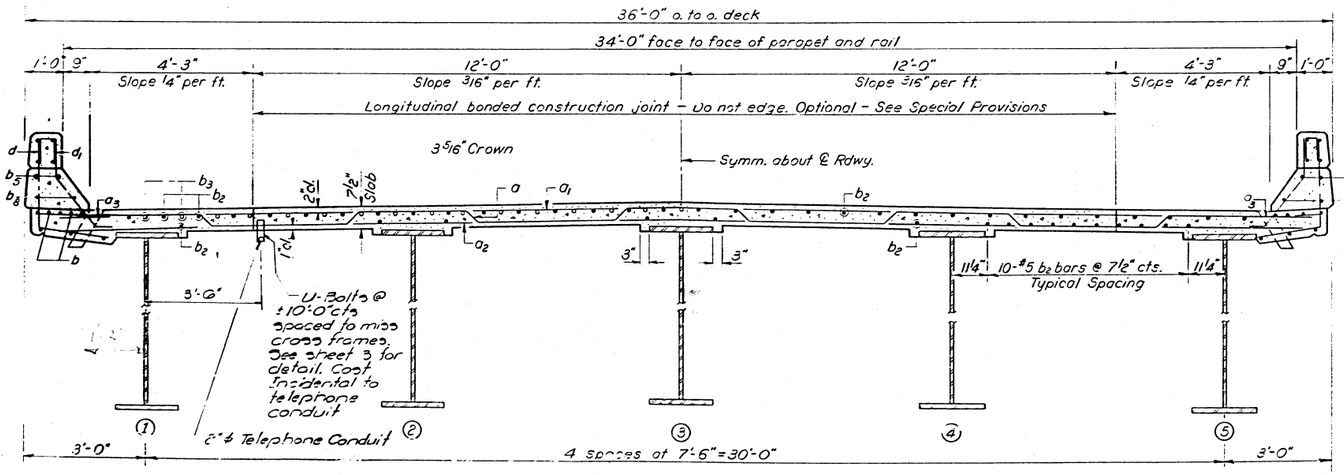
ROUTE NO.	MAP NUM	COUNTY	TOT. SHEETS	SHEET NO.
S.B.I. 170 F.A.	125-1, 125B-1	RANDOLPH	75	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 5
24 SHEETS



PLAN ~ SPANS 2,3 & 4

*Order a1 & a2 bars full length. Cut to fit skew and use remainder of bars in opposite end.

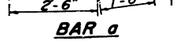


NEAR PIERS — NEAR MIDSPAN

CROSS SECTION
LOOKING EAST

DESIGNED	R. Bradbury
CHECKED	
DRAWN	J.L. Armstrong R.B.
CHECKED	

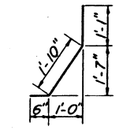
JULY 6 1967
EXAMINED — ENGINEER OF ROAD AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER



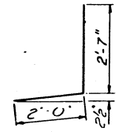
BAR a

Note: For detail of aluminum drain See Sheet #4

See sheet #14 for Sections at Piers 1 & 4.

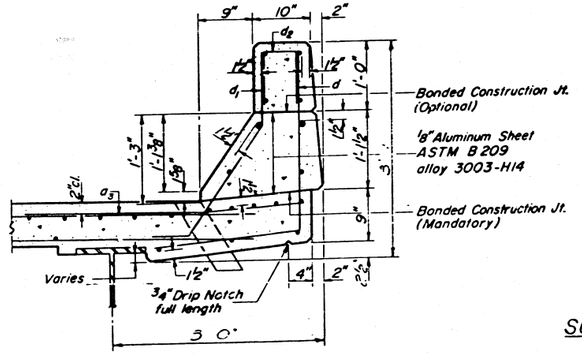


BAR d1



BAR d

BAR d2



CURB SECTION
Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete

SPANS 2,3 & 4
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	489	#6	36'-8"	
a1	506	#6	35'-4"	
a2	506	#6	34'-0"	
a3	996	#6	4'-0"	
b2	1332	#5	28'-1"	
b3	222	#6	28'-0"	
b4	48	#8	27'-5"	
b5	16	#8	31'-9"	
b6	24	#8	31'-6"	
b7	48	#5	27'-6"	
b8	16	#5	31'-9"	
b3	24	#5	31'-0"	
d	1246	#4	4'-7"	
d1	1246	#5	3'-5"	
d2	308	#4	2'-1"	
Reinforcement Bars			Lbs.	163,333
** Structural Steel			Lbs.	1,390,830
Class X Concrete			Cu Yds.	533.7

** Weight of bearing assemblies with lead plates, anchor bolts & expansion devices are included as structural steel. Est. Wt = 25,480 Lbs.

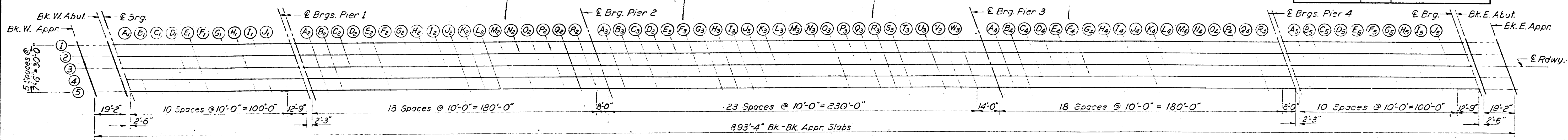
The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet #8.

SUPERSTRUCTURE ~ SPANS 2,3 & 4
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321 + 96.23

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 170	125-1, 125B-1	RANDOLPH	75	25

SHEET NO. 6
24 SHEETS



PLAN ~ ELEVATION LOCATIONS

Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Appr.	1	31744.018	15.000	418.229	418.229
	2	31746.674	7.500	418.392	418.392
	3	31749.330	.000	418.539	418.539
	4	31751.986	-7.500	418.451	418.451
	5	31754.642	-15.000	418.348	418.348
Bk. W. Abut.	1	31763.185	15.000	418.441	418.441
	2	31765.841	7.500	418.602	418.602
	3	31768.497	.000	418.748	418.748
	4	31771.153	-7.500	418.659	418.659
	5	31773.809	-15.000	418.555	418.555
℄ Brg.	1	31765.685	15.000	418.468	418.468
	2	31768.341	7.500	418.629	418.629
	3	31770.997	.000	418.775	418.775
	4	31773.653	-7.500	418.686	418.686
	5	31776.309	-15.000	418.581	418.581
A_1	1	31775.685	15.000	418.574	418.621
	2	31778.341	7.500	418.735	418.781
	3	31780.997	.000	418.880	418.926
	4	31783.653	-7.500	418.790	418.836
	5	31786.309	-15.000	418.685	418.731
B_1	1	31785.685	15.000	418.678	418.771
	2	31788.341	7.500	418.838	418.930
	3	31790.997	.000	418.982	419.075
	4	31793.653	-7.500	418.892	418.984
	5	31796.309	-15.000	418.786	418.878
C_1	1	31795.685	15.000	418.780	418.913
	2	31798.341	7.500	418.939	419.072
	3	31800.997	.000	419.082	419.216
	4	31803.653	-7.500	418.991	419.125
	5	31806.309	-15.000	418.884	419.018
D_1	1	31805.685	15.000	418.878	419.030
	2	31808.341	7.500	419.037	419.189
	3	31810.997	.000	419.180	419.332
	4	31813.653	-7.500	419.088	419.240
	5	31816.309	-15.000	418.981	419.133
E_1	1	31815.685	15.000	418.975	419.145
	2	31818.341	7.500	419.133	419.303
	3	31820.997	.000	419.275	419.445
	4	31823.653	-7.500	419.182	419.353
	5	31826.309	-15.000	419.074	419.245
F_1	1	31825.685	15.000	419.069	419.244
	2	31828.341	7.500	419.226	419.401
	3	31830.997	.000	419.367	419.543
	4	31833.653	-7.500	419.274	419.450
	5	31836.309	-15.000	419.166	419.341
G_1	1	31835.685	15.000	419.160	419.317
	2	31838.341	7.500	419.316	419.474
	3	31840.997	.000	419.457	419.614
	4	31843.653	-7.500	419.364	419.521
	5	31846.309	-15.000	419.254	419.411
H_1	1	31845.685	15.000	419.249	419.387
	2	31848.341	7.500	419.405	419.543
	3	31850.997	.000	419.545	419.683
	4	31853.653	-7.500	419.450	419.589
	5	31856.309	-15.000	419.340	419.479

Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
I_1	1	31855.685	15.000	419.335	419.440
	2	31858.341	7.500	419.490	419.595
	3	31860.997	.000	419.630	419.735
	4	31863.653	-7.500	419.535	419.640
	5	31866.309	-15.000	419.424	419.529
J_1	1	31865.685	15.000	419.419	419.478
	2	31868.341	7.500	419.573	419.632
	3	31870.997	.000	419.712	419.771
	4	31873.653	-7.500	419.617	419.676
	5	31876.309	-15.000	419.505	419.564
℄ Brg. Pier 1	1	31878.435	15.000	419.522	419.522
	2	31881.091	7.500	419.676	419.676
	3	31883.747	.000	419.814	419.814
	4	31886.403	-7.500	419.717	419.717
	5	31889.059	-15.000	419.605	419.605
℄ Brg. Pier 1	1	31880.685	15.000	419.540	419.540
	2	31883.341	7.500	419.694	419.694
	3	31885.997	.000	419.831	419.831
	4	31888.653	-7.500	419.735	419.735
	5	31891.309	-15.000	419.622	419.622
A_2	1	31890.685	15.000	419.618	419.636
	2	31893.341	7.500	419.770	419.789
	3	31895.997	.000	419.908	419.926
	4	31898.653	-7.500	419.810	419.829
	5	31901.309	-15.000	419.697	419.716
B_2	1	31900.685	15.000	419.693	419.730
	2	31903.341	7.500	419.845	419.882
	3	31905.997	.000	419.981	420.019
	4	31908.653	-7.500	419.883	419.921
	5	31911.309	-15.000	419.770	419.807
C_2	1	31910.685	15.000	419.765	419.821
	2	31913.341	7.500	419.917	419.973
	3	31915.997	.000	420.053	420.108
	4	31918.653	-7.500	419.954	420.010
	5	31921.309	-15.000	419.840	419.895
D_2	1	31920.685	15.000	419.835	419.910
	2	31923.341	7.500	419.985	420.061
	3	31925.997	.000	420.121	420.196
	4	31928.653	-7.500	420.022	420.096
	5	31931.309	-15.000	419.907	419.981
E_2	1	31930.685	15.000	419.903	419.991
	2	31933.341	7.500	420.053	420.141
	3	31935.997	.000	420.188	420.276
	4	31938.653	-7.500	420.088	420.176
	5	31941.309	-15.000	419.972	420.060
F_2	1	31940.685	15.000	419.958	420.058
	2	31943.341	7.500	420.118	420.208
	3	31945.997	.000	420.251	420.342
	4	31948.653	-7.500	420.151	420.241
	5	31951.309	-15.000	420.034	420.125
G_2	1	31950.685	15.000	420.031	420.123
	2	31953.341	7.500	420.179	420.272
	3	31955.997	[illegible]	[illegible]	420.405
	4	31958.653	-7.500	420.211	420.304
	5	31961.309	-15.000	420.094	420.18[illegible]
H_2	1	31950.685	15.000	420.091	420.1[illegible]
	2	31963.341	7.500	420.239	420.[illegible]
	3	31965.997	.000	420.371	420.4[illegible]
	4	31968.653	-7.500	420.269	420.364
	5	31971.309	-15.000	420.152	420.246
I_2	1	31970.685	15.000	420.148	420.245
	2	31973.341	7.500	420.296	420.392
	3	31975.997	.000	420.428	420.524
	4	31978.653	-7.500	420.325	420.421
	5	31981.309	-15.000	420.207	420.303

Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
J_2	1	31980.685	15.000	420.203	420.297
	2	31983.341	7.500	420.350	420.444
	3	31985.997	.000	420.481	420.575
	4	31988.653	-7.500	420.378	420.472
	5	31991.309	-15.000	420.259	420.353
K_2	1	31990.685	15.000	420.256	420.344
	2	31993.341	7.500	420.402	420.490
	3	31995.997	.000	420.533	420.620
	4	31998.653	-7.500	420.429	420.516
	5	32001.309	-15.000	420.309	420.397
L_2	1	32000.685	15.000	420.306	420.388
	2	32003.341	7.500	420.452	420.533
	3	32005.997	.000	420.581	420.663
	4	32008.653	-7.500	420.477	420.559
	5	32011.309	-15.000	420.356	420.438
M_2	1	32010.685	15.000	420.354	420.429
	2	32013.341	7.500	420.498	420.574
	3	32015.997	.000	420.628	420.704
	4	32018.653	-7.500	420.522	420.598
	5	32021.309	-15.000	420.401	420.477
N_2	1	32020.685	15.000	420.399	420.469
	2	32023.341	7.500	420.543	420.613
	3	32025.997	.000	420.671	420.741
	4	32028.653	-7.500	420.565	420.635
	5	32031.309	-15.000	420.444	420.514
O_2	1	32030.685	15.000	420.441	420.497
	2	32033.341	7.500	420.585	420.641
	3	32035.997	.000	420.713	420.769
	4	32038.653	-7.500	420.606	420.662
	5	32041.309	-15.000	420.484	420.540
P_2	1	32040.685	15.000	420.481	420.523
	2	32043.341	7.500	420.624	420.666
	3	32045.997	.000	420.751	420.793
	4	32048.653	-7.500	420.644	420.686
	5	32051.309	-15.000	420.521	420.563
Q_2	1	32050.685	15.000	420.519	420.546
	2	32053.341	7.500	420.661	420.688
	3	32055.997	.000	420.788	420.814
	4	32058.653	-7.500	420.680	420.706
	5	32061.309	-15.000	420.556	420.583
R_2	1	32060.685	15.000	420.554	420.566
	2	32063.341	7.500	420.696	420.707
	3	32065.997	.000	420.821	420.833
	4	32068.653	-7.500	420.713	420.725
	5	32071.309	-15.000	420.588	420.600
℄ Brg. Pier 2	1	32068.685	15.000	420.580	420.580
	2	32071.341	7.500	420.721	420.721
	3	32073.997	.000	420.847	420.847
	4	32076.653	-7.500	420.737	420.738
	5	32079.309	-15.000	420.613	420.613
A_3	1	32078.685	15.000	420.611	[illegible]
	2	32081.341	7.500	420.751	420.762
	3	32083.997	.000	420.876	420.887
	4	32086.653	-7.500	420.766	420.777
	5	32089.309	-15.000	420.641	420.651
B_3	1	32088.685	15.000	420.639	420.661
	2	32091.341	7.500	420.779	420.800
	3	32093.997	.000	420.903	420.924
	4	32096.653	-7.500	420.792	420.814
	5	32099.309	-15.000	420.666	420.688
C_3	1	32098.685	15.000	420.664	420.697
	2	32101.341	7.500	420.804	420.836
	3	32103.997	.000	420.927	420.959
	4	32106.653	-7.500	420.816	420.848
	5	32109.309	-15.000	420.689	420.721

Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
D_3	1	32108.685	15.000	420.688	420.731
	2	32111.341	7.500	420.826	420.869
	3	32113.997	.000	420.949	420.992
	4	32116.653	-7.500	420.837	420.880
	5	32119.309	-15.000	420.709	420.753
E_3	1	32118.685	15.000	420.708	420.762
	2	32121.341	7.500	420.846	420.900
	3	32123.997	.000	420.968	421.022
	4	32126.653	-7.500	420.855	420.910
	5	32129.309	-15.0[illegible]	420.727	420.781
F_3	1	32128.685	15.000	420.726	420.791
	2	32131.341	7.500	420.863	420.928
	3	32133.997	.000	420.985	421.050
	4	32136.653	-7.500	420.872	420.937
	5	32139.309	-15.000	420.743	420.808
G_3	1	32138.685	15.000	420.742	420.817
	2	32141.341	7.500	420.878	420.954
	3	32143.997	.000	420.999	421.074
	4	32146.653	-7.500	420.885	420.961
	5	32149.309	-15.000	420.756	420.831
H_3	1	32148.685	15.000	420.755	420.841
	2	32151.341	7.500	420.891	420.976
	3	32153.997	.000	421.011	421.096
	4	32156.653	-7.500	420.896	420.982
	5	32159.309	-15.000	420.766	420.852
I_3	1	32158.685	15.000	420.765	420.862
	2	32161.341	7.500	420.901	420.997
	3	32163.997	.000	421.020	421.116
	4	32166.653	-7.500	420.905	421.001
	5	32169.309	-15.000	420.774	420.870
J_3	1	32168.685	15.000	420.774	420.880
	2	32171.341	7.500	420.908	421.014
	3	32173.997	.000	421.027	421.133
	4	32176.653	-7.500	420.911	421.017
	5	32179.309	-15.000	420.779	420.886
K_3	1	32178.685	15.000	420.779	420.896
	2	32181.341	7.500	420.913	421.030
	3	32183.997	.000	421.031	421.148
	4	32186.653	-7.500	420.915	421.031
	5	32189.309	-15.000	420.782	420.899
L_3	1	32188.685	15.000	420.782	420.909
	2	32191.341	7.500	420.915	421.042
	3	32193.997	.000	421.033	421.160
	4	32196.653	-7.500	420.916	421.043
	5	32199.309	-15.000	420.783	420.910
M_3	1	32198.685	15.000	420.783	420.904
	2	32201.341	7.500	420.915	421.036
	3	32203.997	.000	421.032	421.153
	4	32206.653	-7.500	420.914	421.035
	5	32209.309	-15.000	420.781	420.902

DESIGNED	R. Bradford
CHECKED	[illegible]
DRAWN	J.L. Armstrong
CHECKED	[illegible]

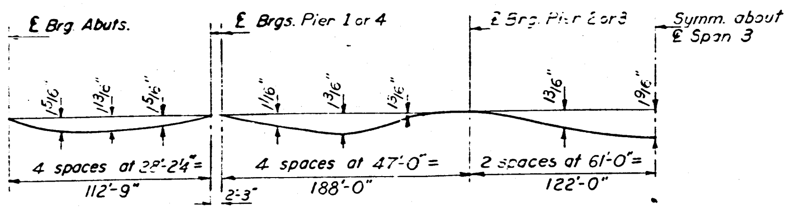
JULY 6 1967
EXAMINED [signature]
PASSED W.E. Baumann
APPROVED N.E. Staff

TOP OF SLAB ELEVATIONS
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 170	125-1, 125B-1	RANDOLPH	75	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7
24 SHEETS

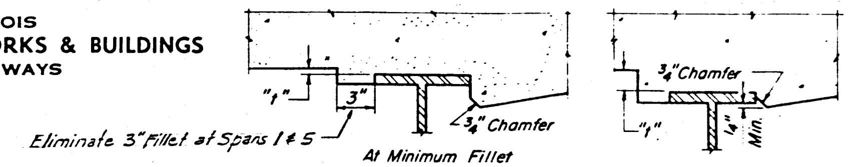
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



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

FILLET HEIGHTS

Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
N3	1	32208.685	15.000	420.781	420.892
	2	32211.341	7.500	420.913	421.023
	3	32213.997	.000	421.029	421.139
	4	32216.653	7.500	420.910	421.021
	5	32219.309	15.000	420.776	420.887
O3	1	32218.685	15.000	420.776	420.877
	2	32221.341	7.500	420.908	421.008
	3	32223.997	.000	421.023	421.123
	4	32226.653	7.500	420.904	421.004
	5	32229.309	15.000	420.769	420.869
P3	1	32228.685	15.000	420.770	420.860
	2	32231.341	7.500	420.900	420.990
	3	32233.997	.000	421.015	421.105
	4	32236.653	7.500	420.895	420.985
	5	32239.309	15.000	420.759	420.850
Q3	1	32238.685	15.000	420.760	420.840
	2	32241.341	7.500	420.890	420.970
	3	32243.997	.000	421.004	421.084
	4	32246.653	7.500	420.884	420.963
	5	32249.309	15.000	420.747	420.827
R3	1	32248.685	15.000	420.748	420.818
	2	32251.341	7.500	420.877	420.947
	3	32253.997	.000	420.991	421.060
	4	32256.653	7.500	420.870	420.939
	5	32259.309	15.000	420.733	420.802
S3	1	32258.685	15.000	420.734	420.792
	2	32261.341	7.500	420.862	420.921
	3	32263.997	.000	420.975	421.034
	4	32266.653	7.500	420.853	420.912
	5	32269.309	15.000	420.716	420.774
T3	1	32268.685	15.000	420.717	420.765
	2	32271.341	7.500	420.845	420.893
	3	32273.997	.000	420.957	421.005
	4	32276.653	7.500	420.834	420.882
	5	32279.309	15.000	420.696	420.744
U3	1	32278.685	15.000	420.697	420.734
	2	32281.341	7.500	420.825	420.862
	3	32283.997	.000	420.936	420.973
	4	32286.653	7.500	420.813	420.850
	5	32289.309	15.000	420.674	420.711
V3	1	32288.685	15.000	420.676	420.702
	2	32291.341	7.500	420.802	420.828
	3	32293.997	.000	420.913	420.939
	4	32296.653	7.500	420.789	420.815
	5	32299.309	15.000	420.650	420.676
W3	1	32298.685	15.000	420.651	420.666
	2	32301.341	7.500	420.777	420.792
	3	32303.997	.000	420.887	420.902
	4	32306.653	7.500	420.763	420.778
	5	32309.309	15.000	420.622	420.638

Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Brg. Pier 3	1	32312.688	15.000	420.613	420.613
	2	32315.344	7.500	420.738	420.738
	3	32318.000	.000	420.847	420.847
	4	32320.656	7.500	420.721	420.721
	5	32323.312	15.000	420.580	420.580
A4	1	32322.688	15.000	420.582	420.597
	2	32325.344	7.500	420.707	420.721
	3	32328.000	.000	420.815	420.830
	4	32330.656	7.500	420.689	420.704
	5	32333.312	15.000	420.547	420.562
B4	1	32332.688	15.000	420.549	420.579
	2	32335.344	7.500	420.673	420.703
	3	32338.000	.000	420.781	420.810
	4	32340.656	7.500	420.654	420.684
	5	32343.312	15.000	420.512	420.541
C4	1	32342.688	15.000	420.514	420.558
	2	32345.344	7.500	420.637	420.681
	3	32348.000	.000	420.744	420.788
	4	32350.656	7.500	420.617	420.661
	5	32353.312	15.000	420.474	420.518
D4	1	32352.688	15.000	420.476	420.535
	2	32355.344	7.500	420.598	420.657
	3	32358.000	.000	420.705	420.764
	4	32360.656	7.500	420.577	420.636
	5	32363.312	15.000	420.433	420.492
E4	1	32362.688	15.000	420.436	420.507
	2	32365.344	7.500	420.557	420.628
	3	32368.000	.000	420.663	420.734
	4	32370.656	7.500	420.534	420.606
	5	32373.312	15.000	420.390	420.461
F4	1	32372.688	15.000	420.393	420.470
	2	32375.344	7.500	420.514	420.591
	3	32378.000	.000	420.619	420.696
	4	32380.656	7.500	420.490	420.567
	5	32383.312	15.000	420.344	420.422
G4	1	32382.688	15.000	420.347	420.430
	2	32385.344	7.500	420.468	420.551
	3	32388.000	.000	420.572	420.655
	4	32390.656	7.500	420.442	420.525
	5	32393.312	15.000	420.296	420.379
H4	1	32392.688	15.000	420.299	420.388
	2	32395.344	7.500	420.419	420.508
	3	32398.000	.000	420.523	420.612
	4	32400.656	7.500	420.392	420.481
	5	32403.312	15.000	420.246	420.335
I4	1	32402.688	15.000	420.249	420.344
	2	32405.344	7.500	420.368	420.463
	3	32408.000	.000	420.471	420.566
	4	32410.656	7.500	420.340	420.435
	5	32413.312	15.000	420.193	420.288
J4	1	32412.688	15.000	420.196	420.292
	2	32415.344	7.500	420.314	420.410
	3	32418.000	.000	420.417	420.513
	4	32420.656	7.500	420.285	420.381
	5	32423.312	15.000	420.137	420.233
K4	1	32422.688	15.000	420.141	420.235
	2	32425.344	7.500	420.258	420.352
	3	32428.000	.000	420.360	420.454
	4	32430.656	7.500	420.227	420.321
	5	32433.312	15.000	[illegible]	420.173
L4	1	32432.688	15.000	420.033	420.175
	2	32435.344	7.500	420.200	420.292
	3	32438.000	.000	420.301	420.393
	4	32440.656	7.500	420.168	420.259
	5	32443.312	15.000	420.019	420.110
M4	1	32442.688	15.000	420.022	420.112
	2	32445.344	7.500	[illegible]	420.228
	3	32448.000	.000	420.239	420.329
	4	32450.656	7.500	420.105	420.195
	5	32453.312	15.000	419.955	420.045

Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
N4	1	32452.688	15.000	419.959	420.047
	2	32455.344	7.500	420.075	420.163
	3	32458.000	.000	420.175	420.263
	4	32460.656	7.500	420.040	420.128
	5	32463.312	15.000	419.890	419.978
O4	1	32462.688	15.000	419.894	419.965
	2	32465.344	7.500	420.009	420.080
	3	32468.000	.000	420.108	420.179
	4	32470.656	7.500	419.973	420.044
	5	32473.312	15.000	419.822	419.893
P4	1	32472.688	15.000	419.826	419.878
	2	32475.344	7.500	419.940	419.993
	3	32478.000	.000	420.039	420.091
	4	32480.656	7.500	419.903	419.955
	5	32483.312	15.000	419.751	419.803
Q4	1	32482.688	15.000	419.756	419.789
	2	32485.344	7.500	419.869	419.903
	3	32488.000	.000	419.967	420.001
	4	32490.656	7.500	419.831	419.864
	5	32493.312	15.000	419.678	419.712
R4	1	32492.688	15.000	419.683	419.698
	2	32495.344	7.500	419.795	419.811
	3	32498.000	.000	419.893	419.908
	4	32500.656	7.500	419.756	419.771
	5	32503.312	15.000	419.603	419.618
℄ Brg. Pier 4	1	32500.688	15.000	419.623	419.623
	2	32503.344	7.500	419.735	419.735
	3	32506.000	.000	419.832	419.832
	4	32508.656	7.500	419.694	419.694
	5	32511.312	15.000	419.540	419.540
℄ Brg. Pier 4	1	32502.938	15.000	419.605	419.605
	2	32505.594	7.500	419.718	419.718
	3	32508.250	.000	419.814	419.814
	4	32510.906	7.500	419.676	419.676
	5	32513.562	15.000	419.523	419.523
A5	1	32512.938	15.000	419.527	419.574
	2	32515.594	7.500	419.639	419.685
	3	32518.250	.000	419.735	419.781
	4	32520.906	7.500	419.596	419.642
	5	32523.562	15.000	419.442	419.488
B5	1	32522.938	15.000	419.447	419.539
	2	32525.594	7.500	419.558	419.650
	3	32528.250	.000	419.653	419.745
	4	32530.906	7.500	419.514	419.606
	5	32533.562	15.000	419.359	419.451
C5	1	32532.938	15.000	419.364	419.498
	2	32535.594	7.500	419.474	419.608
	3	32538.250	.000	419.569	419.702
	4	32540.906	7.500	419.429	419.562
	5	32543.562	15.000	419.273	419.407
D5	1	32542.938	15.000	419.279	419.431
	2	32545.594	7.500	419.388	419.540
	3	32548.250	.000	419.482	419.634
	4	32550.906	7.500	419.341	419.493
	5	32553.562	15.000	419.185	419.337
E5	1	32552.938	15.000	419.191	419.361
	2	32555.594	7.500	419.300	419.470
	3	32558.250	.000	419.393	419.563
	4	32560.906	7.500	419.251	419.422
	5	32563.562	15.000	419.094	419.265
F5	1	32562.938	15.000	419.100	419.276
	2	32565.594	7.500	419.208	419.384
	3	32568.250	.000	419.301	419.477
	4	32570.906	7.500	419.159	419.335
	5	32573.562	15.000	419.001	419.177

Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
G5	1	32572.938	15.000	419.007	419.164
	2	32575.594	7.500	419.115	419.272
	3	32578.250	.000	419.207	419.364
	4	32580.906	7.500	419.064	419.221
	5	32583.562	15.000	418.906	419.063
H5	1	32582.938	15.000	418.912	419.050
	2	32585.594	7.500	419.019	419.157
	3	32588.250	.000	419.110	419.249
	4	32590.906	7.500	418.966	419.105
	5	32593.562	15.000	418.807	418.946
I5	1	32592.938	15.000	418.814	418.919
	2	32595.594	7.500	418.920	419.025
	3	32598.250	.000	419.011	419.116
	4	32600.906	7.500	418.867	418.972
	5	32603.562	15.000	418.707	418.812
J5	1	32602.938	15.000	418.713	418.772
	2	32605.594	7.500	418.819	418.878
	3	32608.250	.000	418.909	418.958
	4	32610.906	7.500	418.764	418.823
	5	32613.562	15.000	418.604	418.663
℄ Brg.	1	32615.688	15.000	418.581	418.582
	2	32618.344	7.500	418.686	418.686
	3	32621.000	.000	418.775	418.775
	4	32623.656	7.500	418.630	418.630
	5	32626.312	15.000	418.469	418.469
Bk. E. Abut.	1	32618.188	15.000	418.555	418.555
	2	32620.844	7.500	418.660	418.660
	3	32623.500	.000	418.749	418.749
	4	32626.156	7.500	418.603	418.603
	5	32628.812	15.000	418.442	418.442
Bk. E. Appr.	1	32637.355	15.000	418.348	418.348
	2	32640.011	7.500	418.452	418.452
	3	32642.667	.000	418.539	418.539
	4	32645.323	7.500	418.392	418.392
	5	32647.979	15.000	418.230	418.230

DESIGNED	R. Brashear
CHECKED	[illegible]
DRAWN	J.L. Armstrong
CHECKED	[illegible]

E-S 8-1-65

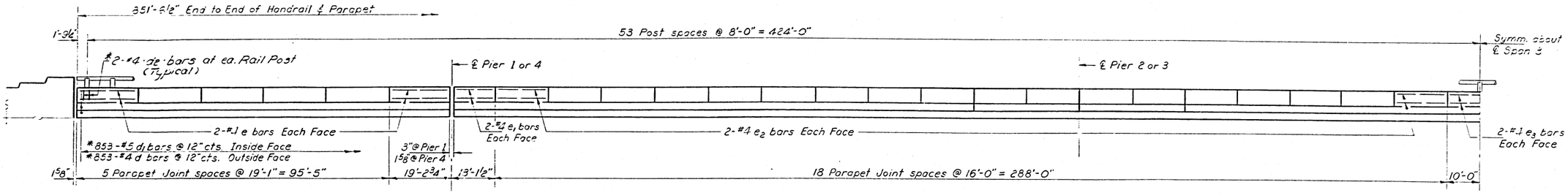
July 6 1967
EXAMINED [signature] ENGINEER OF TRAFFIC STRUCTURES
PASSED W.E. Baumann ENGINEER OF DESIGN
APPROVED V.E. Staff CHIEF HIGHWAY ENGINEER

TOP OF SLAB ELEVATIONS
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321 + 96.23

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

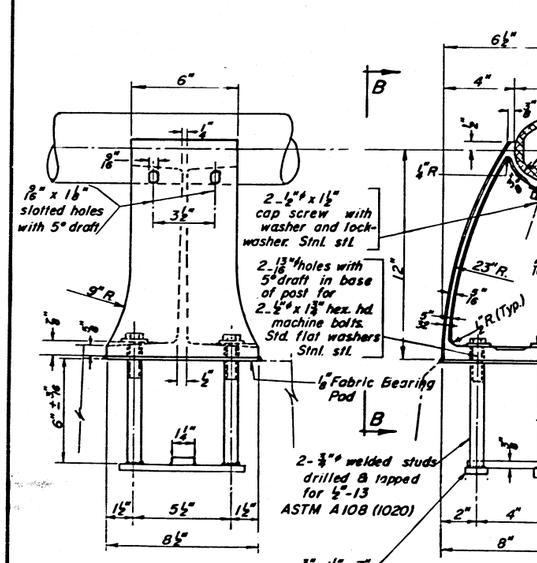
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 170	125-1, 125B-1	RANDOLPH	75	27
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT-		

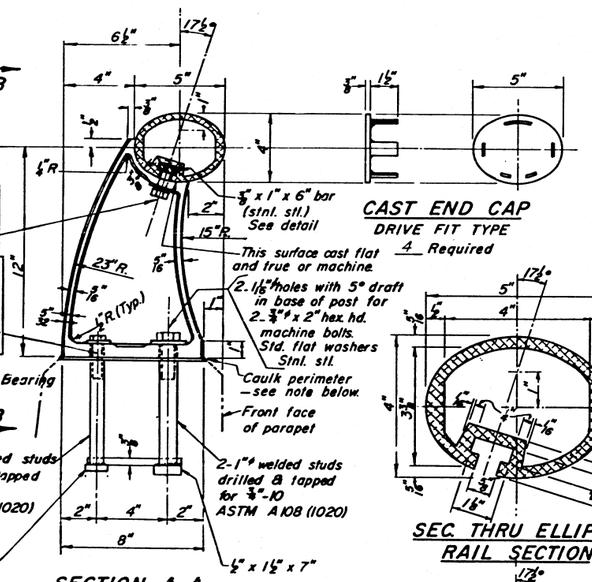
SHEET NO. 8
24 SHEETS



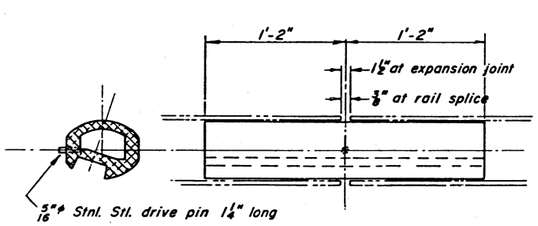
HALF ELEVATION ~ HANDRAIL & PARAPET

*d1, d & g2 bars are billed with Superstr. Bill of Materials Sheets #4 & 5.

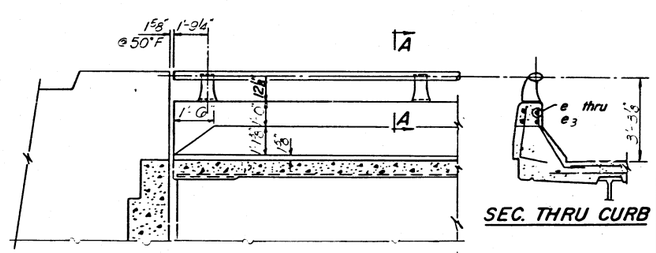




RAIL POST DETAILS

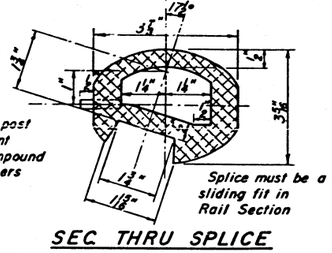


RAIL SPLICE



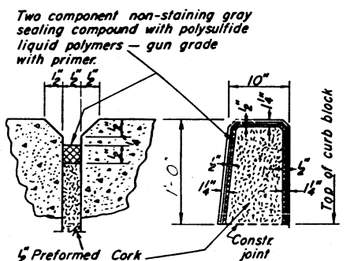
SEC. THRU CURB

SEC. THRU ELLIPTICAL RAIL SECTION



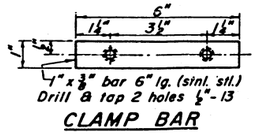
Splice must be a sliding fit in Rail Section

SEC. THRU SPLICE



Cost incidental.

PARAPET JOINT DETAIL



CLAMP BAR

DESIGNED	R. Bradfield Jr.
CHECKED	
DRAWN	J.L. Armstrong Wm. M. Best R.B.
CHECKED	

EXAMINED — JULY 6 1967
PASSED — N.E. Bauman, BUREAU OF TRAFFIC
APPROVED — N.E. Stahl, ROAD INSPECTION ENGINEER

Note:
Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers —gun grade with primer.

NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-221 alloy 6061-T6 and shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail.

See Special Provisions for following Material Specifications:
Cast Aluminum Alloy Bridge Post—Alloy 4344-T4.
Stainless Steel Bars, Cap Screws, Washers and Lockwashers.
Fabric Bearing Pad.

METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing members thru all posts and gaps.

BASIS of PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.

Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.

Provide 1-⅛" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade —high spots shall be ground, and low spots shimmed.

INSIDE VIEW AT ABUTMENT

PARAPETS & RAILS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e	96	#4	18'-10"	
e1	16	#4	12'-10"	
e2	288	#4	15'-9"	
e3	8	#4	19'-9"	
Class X Concrete			Cu. Yds.	58.0
Reinforcement Bars			Lbs	4480
Aluminum Handrail			Lin. Ft	1704

ALUMINUM HANDRAIL

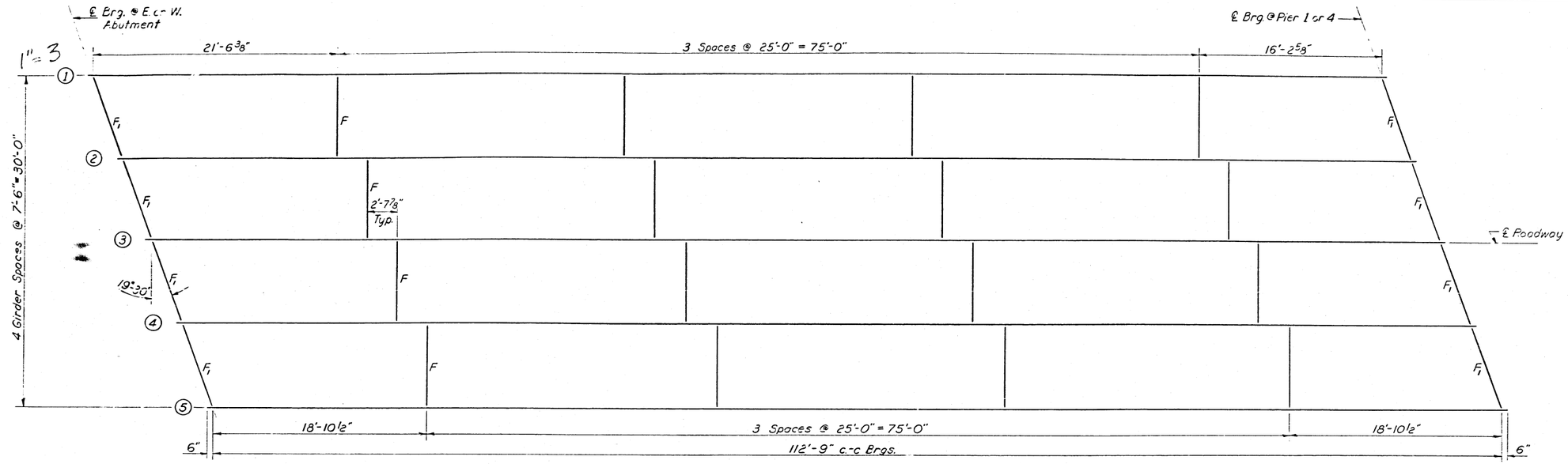
HANDRAIL DETAILS
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

R-17 11-18-66

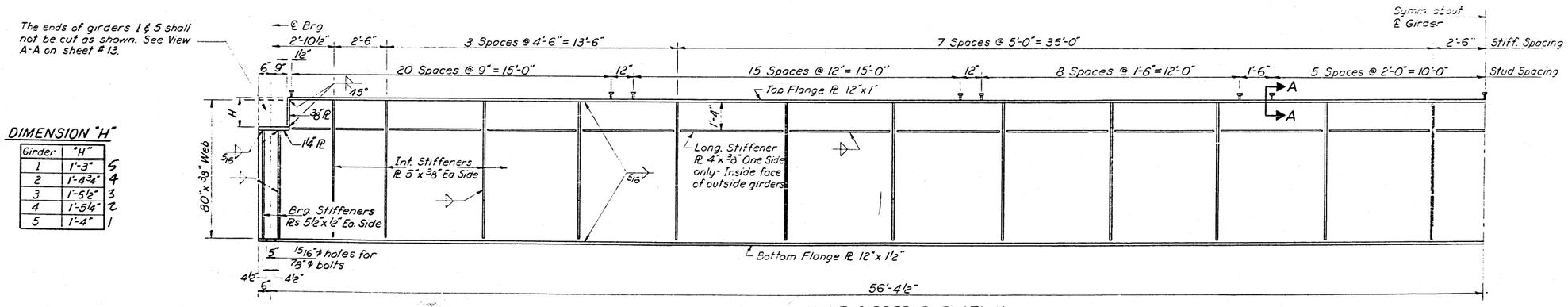
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170 F.A.	125-1 125B-1	RANDOLPH	75	28
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
24 SHEETS



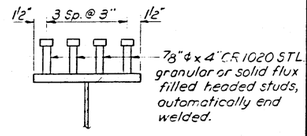
FRAMING PLAN



HALF GIRDER ELEVATION

DIMENSION "H"

Girder	"H"	
1	1'-3"	5
2	1'-4 3/4"	4
3	1'-5 1/2"	3
4	1'-5 1/4"	2
5	1'-4"	1



SECTION A-A
(412 Studs per Girder)

NOTES:
All fillet welds 1/4" unless otherwise shown.
Intermediate stiffeners shall be undercut 5/8" at bottom flange and fit tight top flange.
Bearing stiffeners shall be fit tight at top flange and milled to bear bottom flange.
Clip all stiffeners 1/2" to clear web to flange weld.
For end frame and cross frame details see sheet #13.

DESIGNED	R. Bradshaw
CHECKED	
DRAWN	J.L. Armstrong R.B.
CHECKED	

EXAMINED — July 6 1967
PASSED — W.E. Brumann, ENGINEER OF DESIGN
APPROVED — V.E. Stark, CHIEF HIGHWAY ENGINEER

TOP OF WEB ELEVATIONS

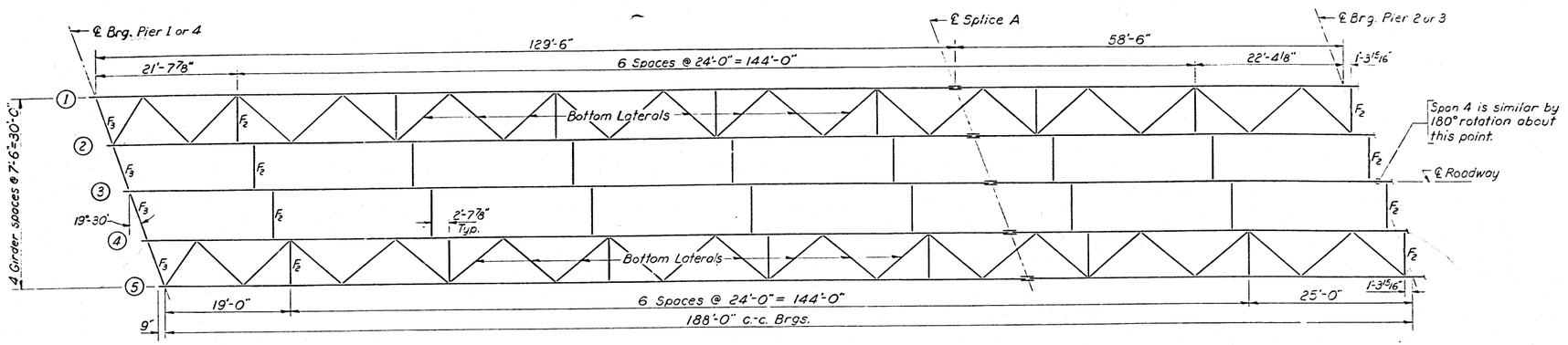
Girder	W. Abut.	Pier 1	Pier 4	E. Abut.	
1	417.76	418.81	418.87	417.85	5
2	417.91	418.95	418.97	417.95	4
3	418.05	419.10	419.06	418.04	3
4	417.95	419.00	418.91	417.83	2
5	417.84	418.89	418.75	417.73	1

STRUCTURAL STEEL ~ SPANS 1 & 5
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

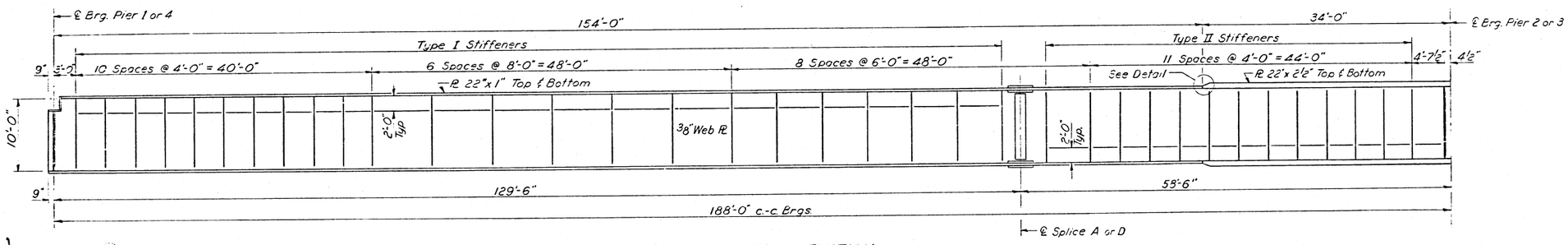
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A.	125B-1	RANDOLPH	75	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 10
24 SHEETS



FRAMING PLAN ~ SPANS 2 & 4

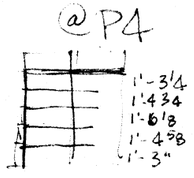


GIRDER ELEVATION

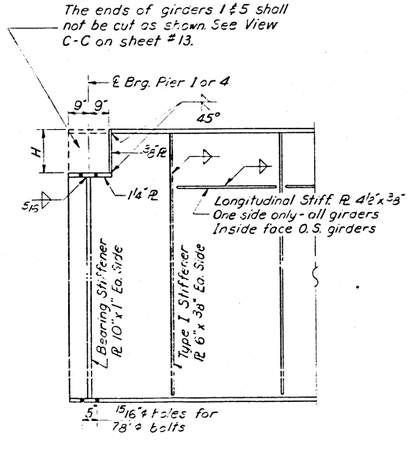
@ P1 @ P4

DIMENSION H

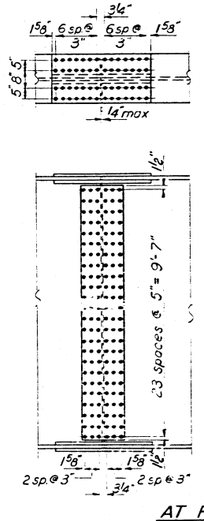
Girder	"H"
1	1'-3"
2	1'-4⅝"
3	1'-6⅛"
4	1'-4⅜"
5	1'-3¼"



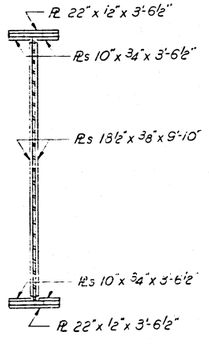
NOTES:
All fillet welds ¼" unless otherwise shown.
Type I & II stiffeners shall be undercut 45°.
Bearing stiffeners shall be fit tight top flange and milled to bear bottom flange.
Type I stiffeners shall be fit tight top flange.
Type II stiffeners shall be fit tight bottom flange.
Clip all stiffeners ½" to clear web to flange weld
For end frame and cross frame details see sheet #13.
See sheet #11 for bottom lateral details



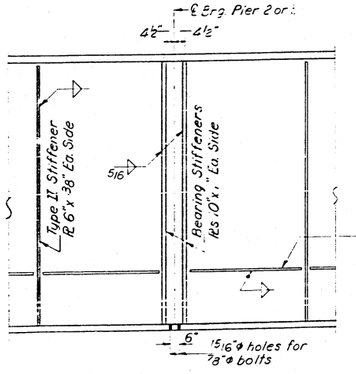
AT PIERS 1 OR 4



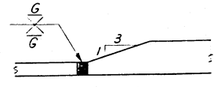
AT FIELD SPLICE



GIRDER DETAILS



AT PIERS 2 OR 3



FLANGE THICKNESS TRANSITION DETAIL

DESIGNED	R. Brookfield
CHECKED	
DRAWN	J. L. Armstrong R.B.
CHECKED	

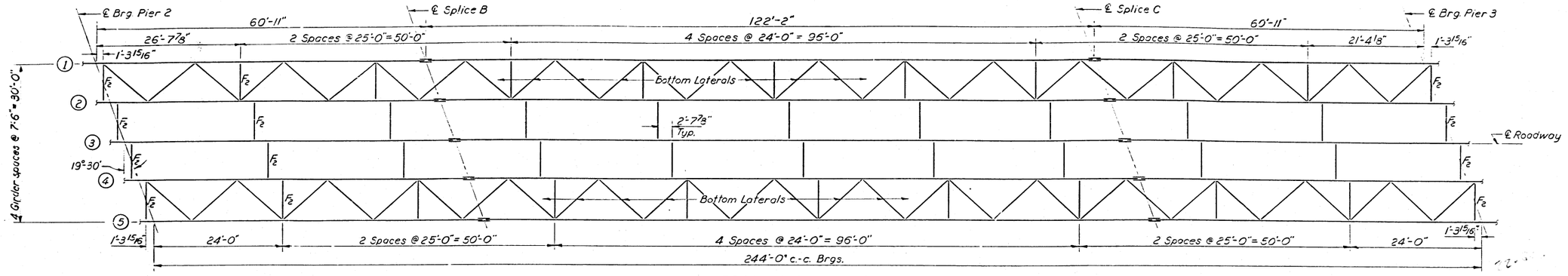
JULY 6 1967
EXAMINED
PASSED
APPROVED

STRUCTURAL STEEL ~ SPANS 2 & 4
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

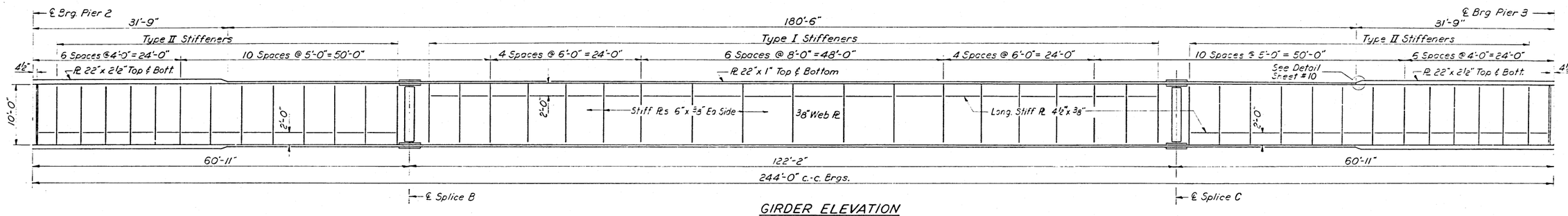
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170 F.A.	125-1, 125B-1	RANDOLPH	75	30
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
24 SHEETS



FRAMING PLAN ~ SPAN 3

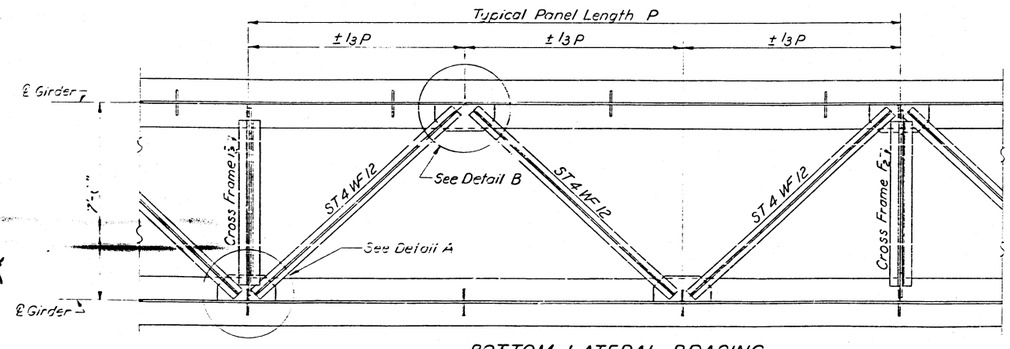


GIRDER ELEVATION

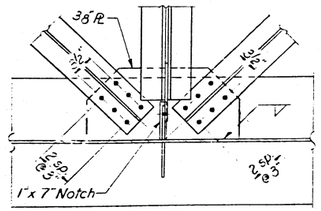
TOP OF WEB ELEVATIONS

Girder	Pier 1	Splice A	Pier 2	Splice B	Splice C	Pier 3	Splice D	Pier 4
1	415.52	419.56	419.74	419.93	419.91	419.71	419.53	418.79
2	418.96	419.70	419.88	420.07	420.05	419.85	419.67	418.93
3	419.08	419.82	420.00	420.19	420.17	419.97	419.79	419.05
4	418.97	419.71	419.89	420.08	420.06	419.86	419.68	418.94
5	418.34	419.58	419.76	419.95	419.93	419.73	419.55	418.81

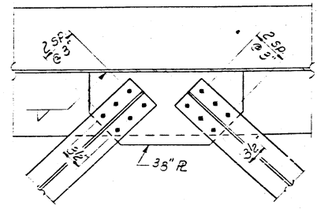
NOTE
Work this sheet with sheet # 10.
For cross frame details see sheet # 13.



BOTTOM LATERAL BRACING



DETAIL A



DETAIL B

DESIGNED	R. Bradbury Jr.
CHECKED	A. Worrell
DRAWN	J.L. Armstrong R.B.
CHECKED	

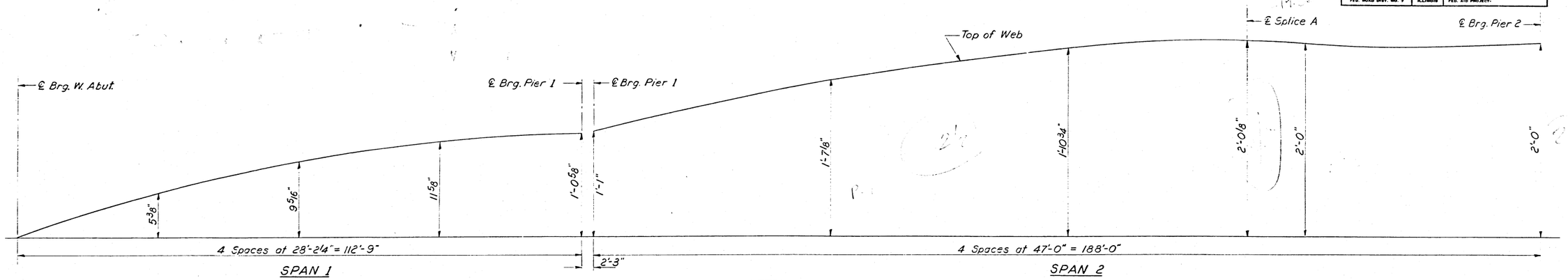
EXAMINED July 6 1967
PASSED
APPROVED

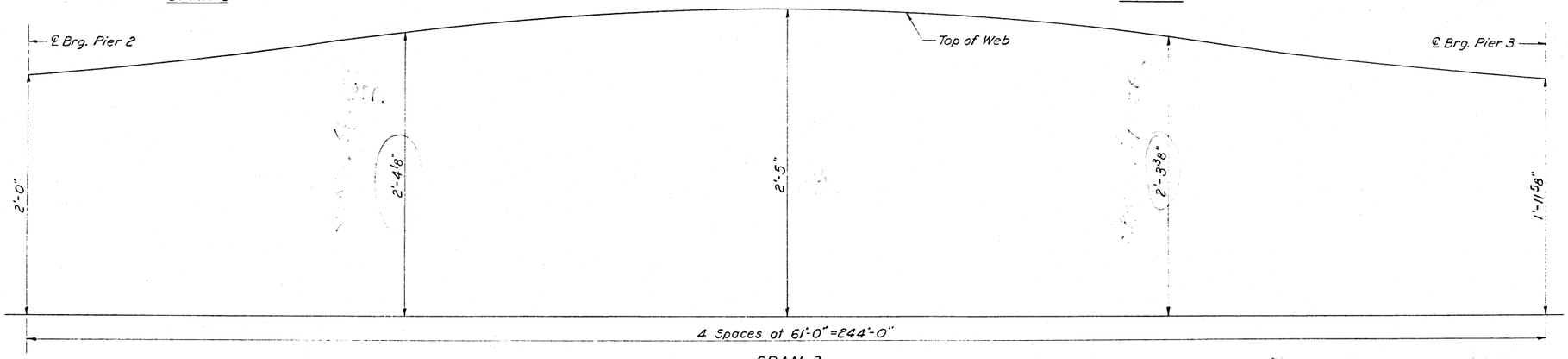
STRUCTURAL STEEL ~ SPAN 3
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

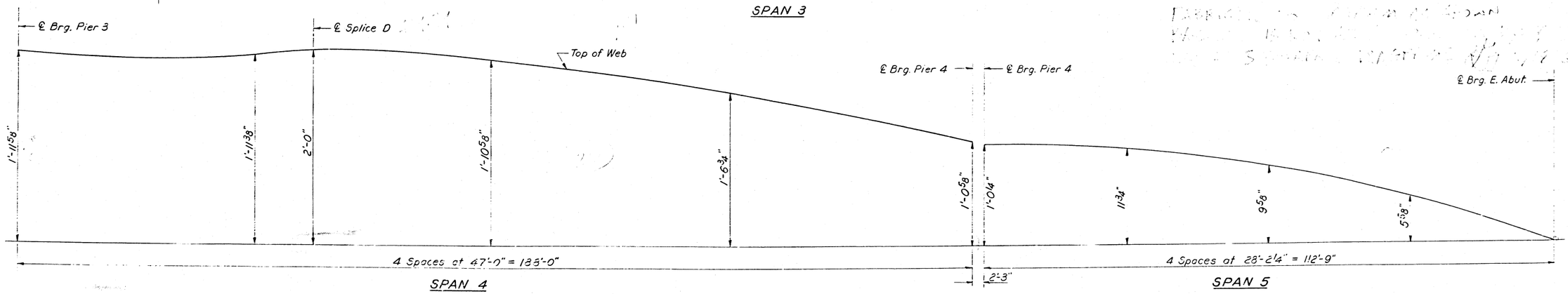
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 170 / F. A.	125-1, 125B-1	RANDOLPH	75	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 12
24 SHEETS







DESIGNED	R. Bradford	JULY 6 1967
CHECKED		EXAMINED
DRAWN	J.L. Armstrong R.B.	PASSED
CHECKED		APPROVED

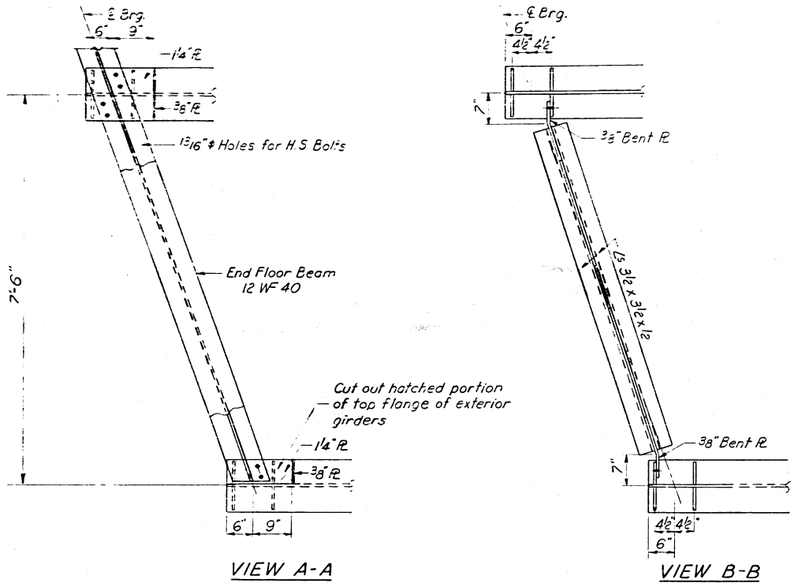
NOTE: All ordinates measured from horizontal base line.

CAMBER DIAGRAM
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

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

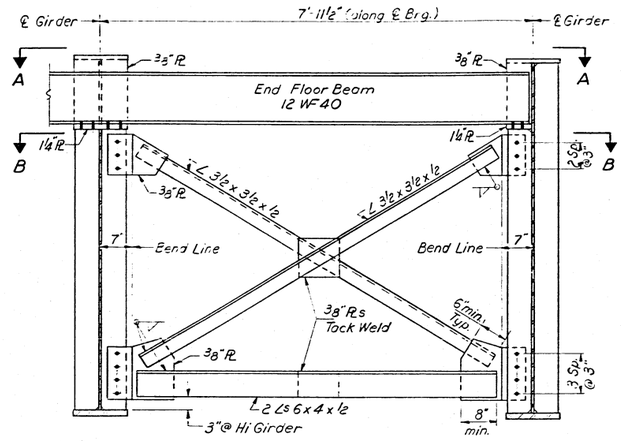
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170 F.A.	125B-1	RANDOLPH	75	32
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
24 SHEETS

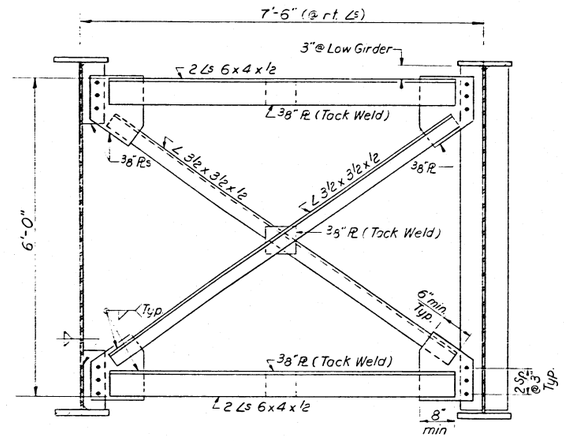


VIEW A-A

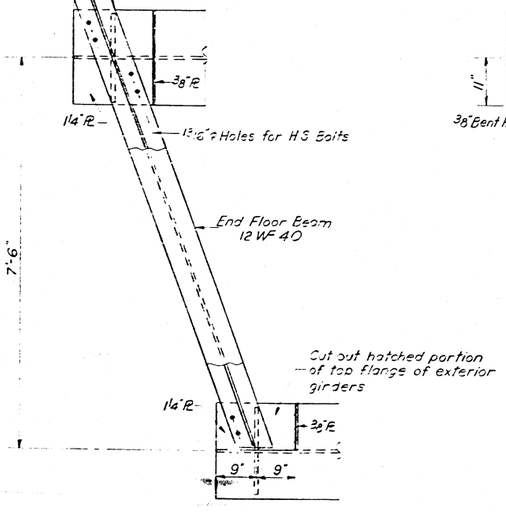
VIEW B-B



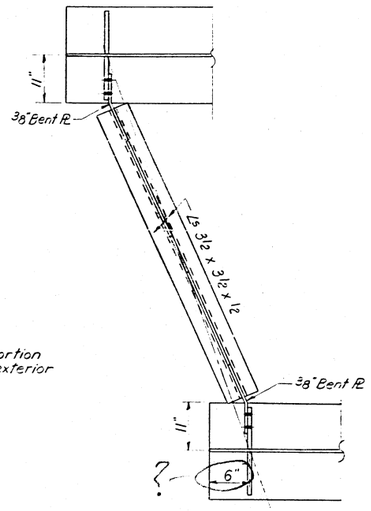
END CROSS FRAME F_1
16 Required



TYPICAL CROSS FRAME F
32 Required



VIEW C-C

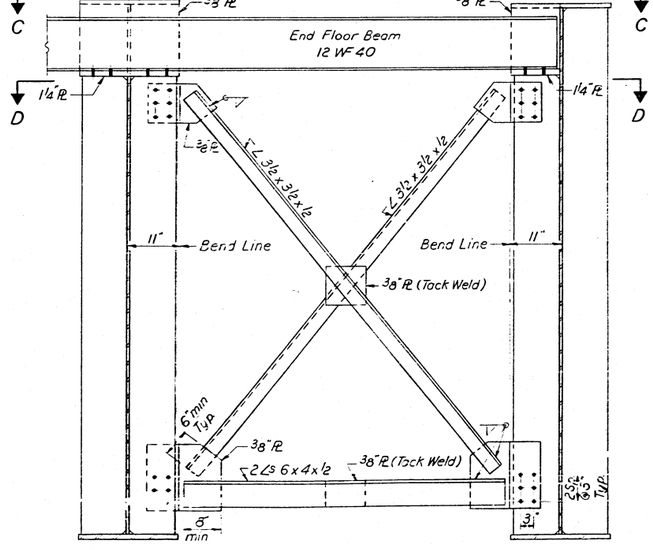


VIEW C-C
D-D

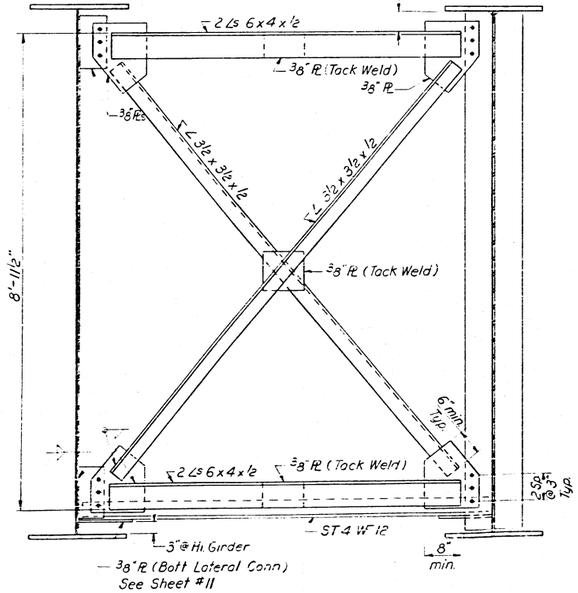
DESIGNED	R. Rundbaken
CHECKED	
DRAWN	J.L. Armstrong R.B.
CHECKED	

JULY 6 1967

EXAMINED — BRIDGE AND TRAFFIC STRUCTURES
PASSED — M.E. Bauman, ENGINEER OF BRIDGES
APPROVED — V.E. Staff, CHIEF ENGINEER



END CROSS FRAME F_3
8 Required



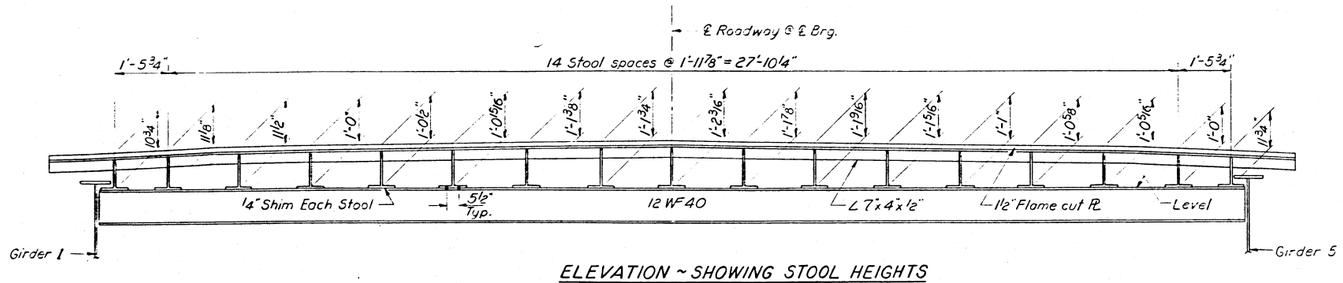
TYPICAL CROSS FRAME F_2
100 Required
Note: 3⅜" Clip PL required each side at Pier 2 & 3

FRAMING DETAILS
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

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

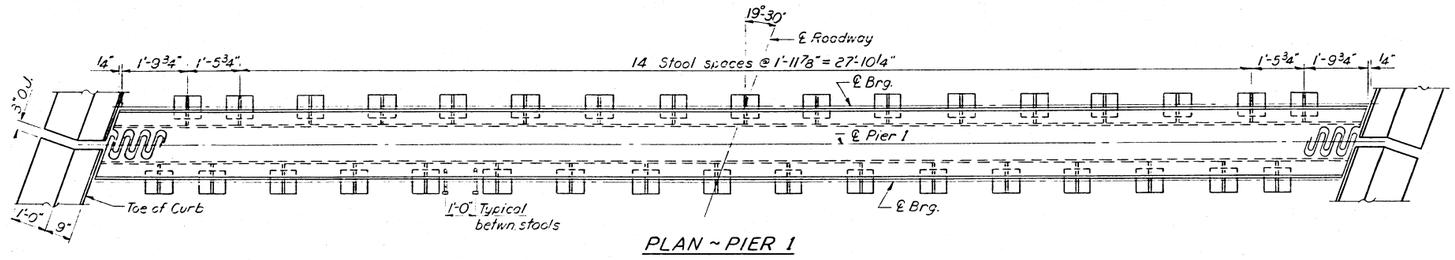
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 170 F.A.	125-1, 125B-1	RANDOLPH	75	33
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
24 SHEETS



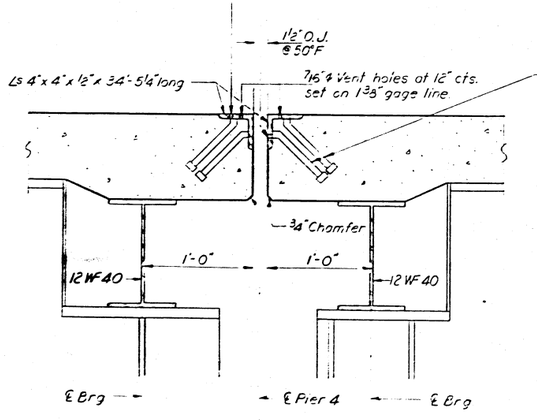
ELEVATION ~ SHOWING STOOL HEIGHTS
(Cut 2 Stools from 24 WF 76)

NOTE: Stool dimensions include ¼" shim



PLAN ~ PIER 1

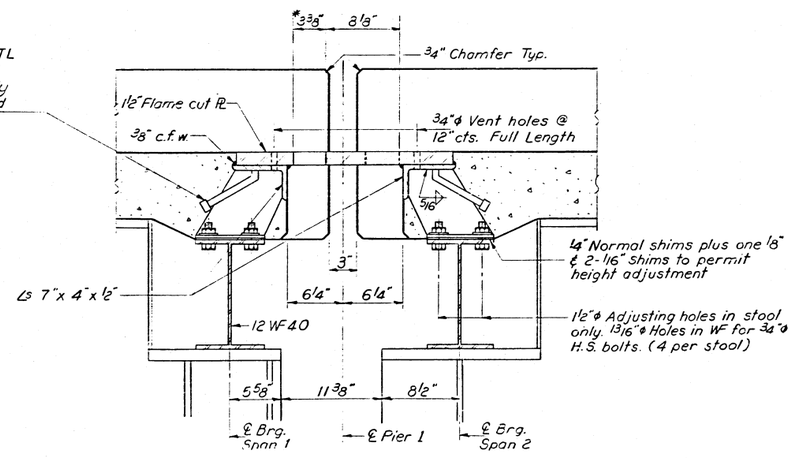
7/16"ϕ Holes at 12" cts. for ⅜"ϕ bolts set on 2½" gage line. All bolts shall be burned, sawed or clipped off flush with back of angles after forms have been removed.



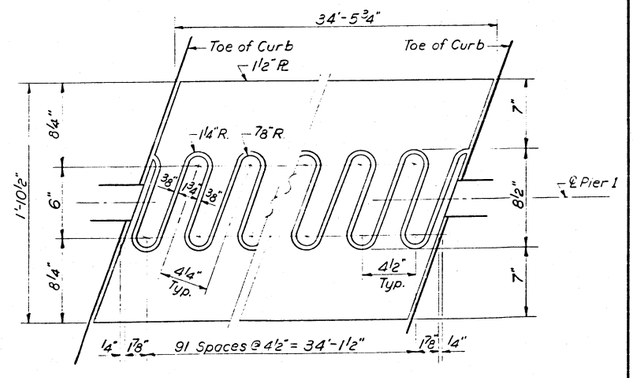
SECTION AT PIER 4
Dimension at rt. ℄ to Jt.

¾"ϕ x 8" CR 1020 STL granular or solid flux filled headed studs automatically end welded. Two studs placed symmetrically between each pair of stools at Pier 1. At Pier 4 place studs at 1'-0" alternate cts.

* at 50°F



SECTION AT PIER 1
Dimensions at rt. ℄s to Jt.



DETAIL OF FLAME CUT PLATE
Plate shall be match-marked

DESIGNED	R Bradshaw
CHECKED	
DRAWN	J.L. Armstrong R.B.
CHECKED	

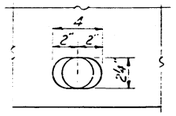
EXAMINED July 6 1967
PASSED
APPROVED

EXPANSION DEVICES
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

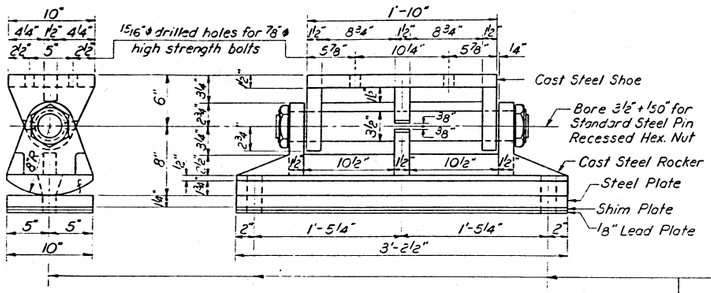
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170 F.A.	125S-1, 125B-1	RANDOLPH	75	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

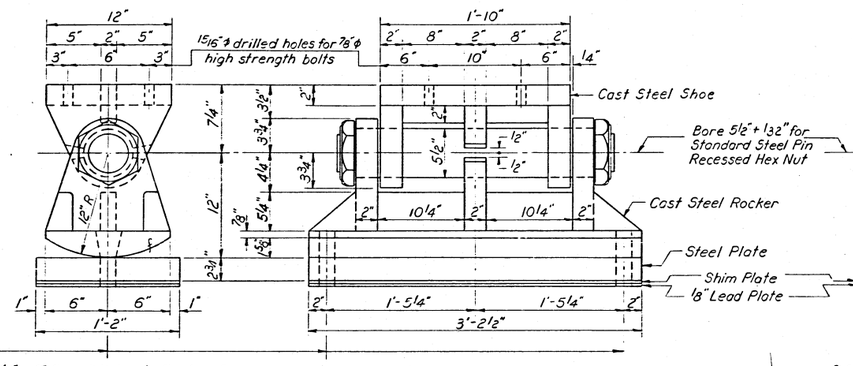
SHEET NO. 15
24 SHEETS



PLAN OF CORED HOLES

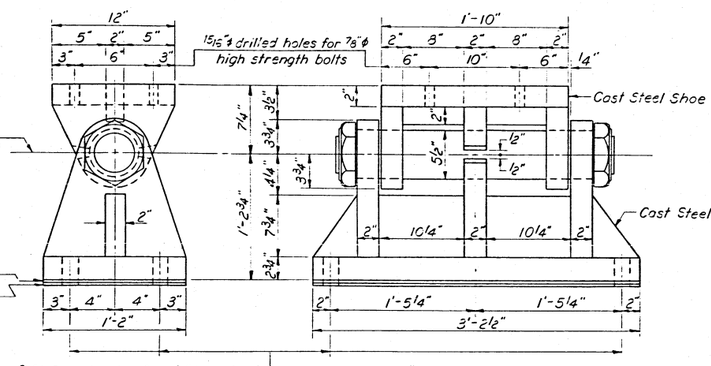


BEARING DETAIL AT PIER 1 & 4
SPANS 2 & 4
See Detail "A"



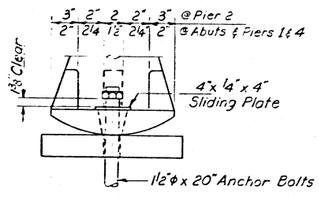
2¼"x 4" Cored holes in Rocker for 1½"ϕ Anchor Bolts with hex. nuts.
1¾"ϕ Holes in bottom plate.

BEARING DETAIL AT PIER 2

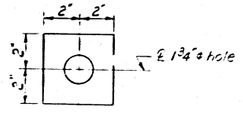


1¾"ϕ Cored holes for 1½"ϕ Anchor Bolts with hex. nuts.

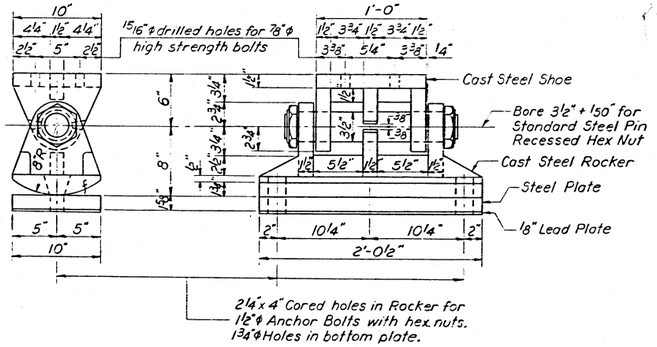
BEARING DETAIL AT PIER 3



ROCKER END VIEW

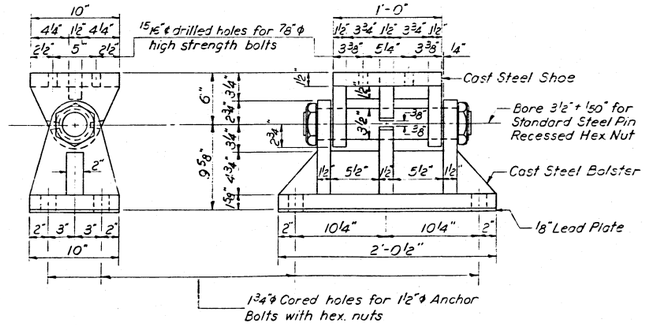


¼" SLIDING ℝ FOR ROCKER



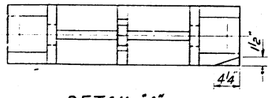
2¼"x 4" Cored holes in Rocker for 1½"ϕ Anchor Bolts with hex. nuts.
1¾"ϕ Holes in bottom plate.

BEARING DETAIL AT ABUTMENTS



1¾"ϕ Cored holes for 1½"ϕ Anchor Bolts with hex. nuts

BEARING DETAIL AT PIERS 1 & 4
SPANS 1 & 5



DETAIL "A"
Clip one corner of rocker casting and lower plates as shown. (Span 2 & 4 rocker bearings of Piers 1 & 4 only.)

NOTE:
Place ¼" shim plates under Girder #5 bearings in Spans 2, 3 & 4.

NOTE: Structural Steel weldments of equal sections and strength may be substituted for castings at the option of the Contractor, except details and welds shall be subject to approval of the Engineer prior to fabrication. No additional compensation will be allowed the Contractor for this substitution.

DESIGNED	R. Bradshaw	JULY 6 1967
CHECKED	C. F. Schmidt	EXAMINED Carl E. Hummert, ENGINEER OF BRIDGES & TRAFFIC STRUCTURES
DRAWN	J. L. Armstrong & a.	PASSED H. E. Baumann, ENGINEER OF DESIGN
CHECKED	J.	APPROVED V. E. Gatt, CHIEF ENGINEER & DIRECTOR

BEARING DETAILS
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

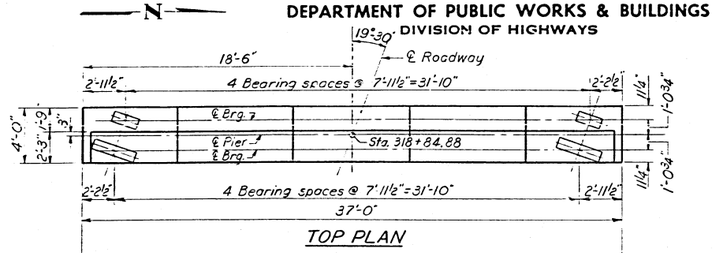
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170 F.A.	125-1 125B-1	RANDOLPH	75	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
24 SHEETS

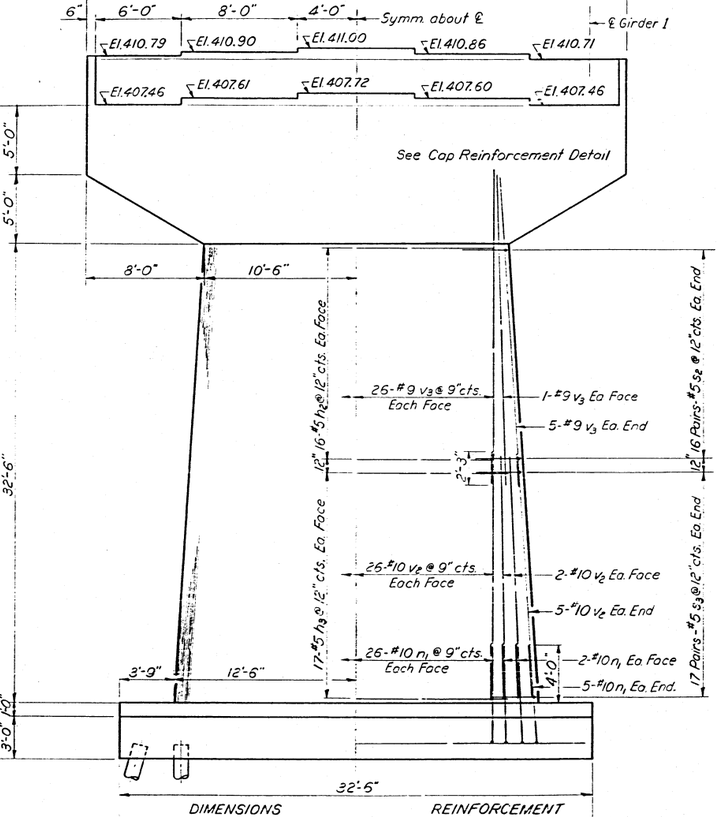
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PILE DATA

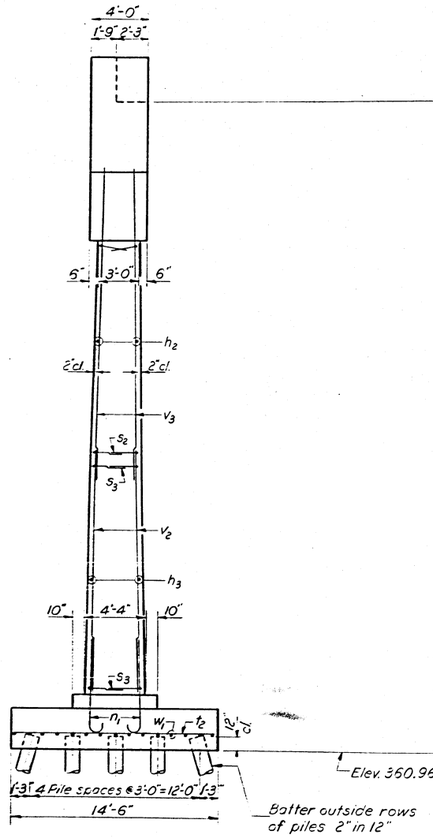
Type - Creosoted
Capacity - 24 Tons
Est. Length - 36'-0"
No. Reqd. - 55
Test Files - 1



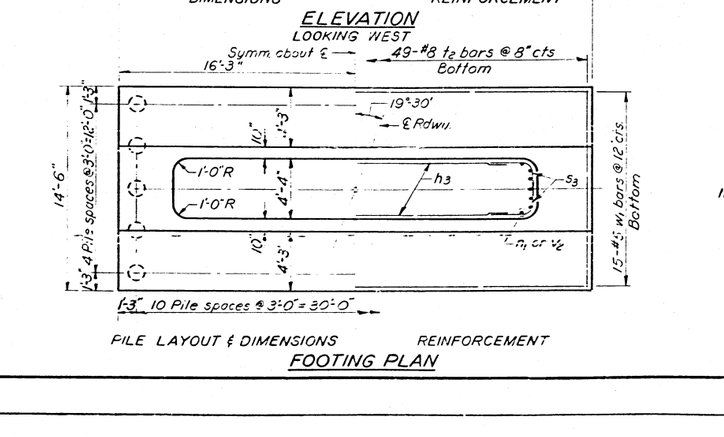
TOP PLAN



ELEVATION
LOOKING WEST

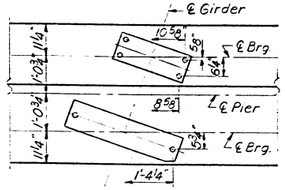


END VIEW

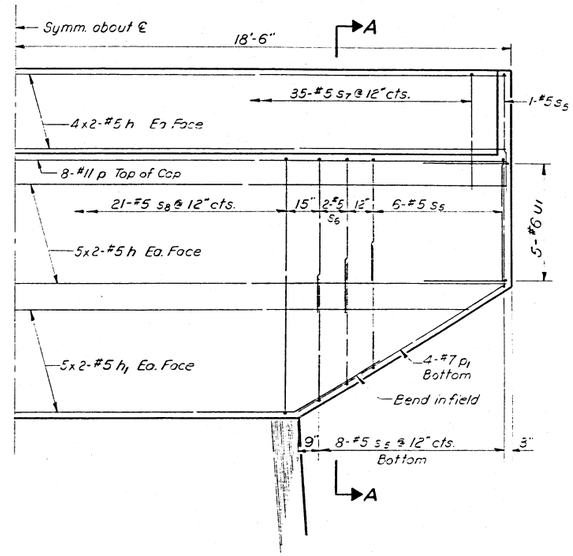


PILE LAYOUT & DIMENSIONS
REINFORCEMENT

FOOTING PLAN



ANCHOR BOLT LAYOUT



CAP REINFORCEMENT

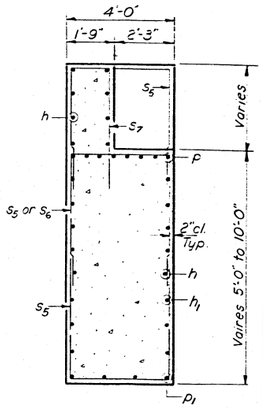
BARS s_2 & s_3

BARS s_5 s_6 & s_7

BAR s_8

BAR u_1

BAR n_1



SECTION A-A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	36	#5	19'-3"	—
h_1	20	#5	17'-6"	—
h_2	32	#5	13'-0"	—
h_3	34	#5	21'-0"	—
n_1	70	#10	8'-3"	⊃
p	8	#11	35'-9"	—
p_1	8	#7	9'-3"	—
s_2	64	#5	5'-0"	⌋
s_3	68	#5	5'-4"	⌋
s_5	30	#5	13'-0"	⊓
s_6	4	#5	15'-4"	⊓
s_7	35	#5	10'-9"	⊓
s_8	21	#5	27'-5"	□
t_2	49	#8	14'-3"	—
u_1	10	#6	12'-0"	⌋
v_2	70	#10	17'-0"	—
v_3	66	#9	22'-9"	—
w_1	15	#5	32'-3"	—
Class X Concrete			Cu.Yds	216.7
Reinforcement Bars			Lbs.	21,620
Creosoted Piles (20 to 36)			Lin. Ft.	1980
Test Piles (Timber)			Each	1

DESIGNED	R. Gradowski Jr.
CHECKED	
DRAWN	J.L. Armstrong
CHECKED	

EXAMINED — JULY 6 1967
PASSED
APPROVED — V.E. Staff, CHIEF ENGINEER

Note:
Space reinforcement in cap to miss anchor bolts.
Minimum bar laps = 20 diameters unless otherwise noted.
All exposed edges shall have standard ¾" chamfers except as noted.
Pour steps monolithically with cap

PIER # 1
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

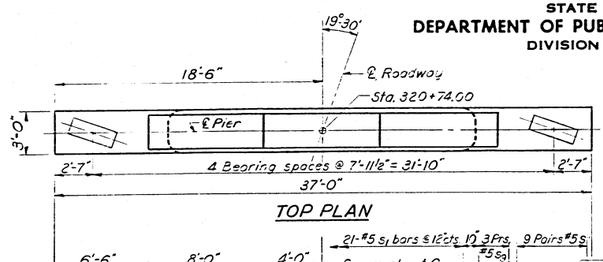
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
A.B.I. 170 F.A.	125-1, 125B-1	RANDOLPH	75	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

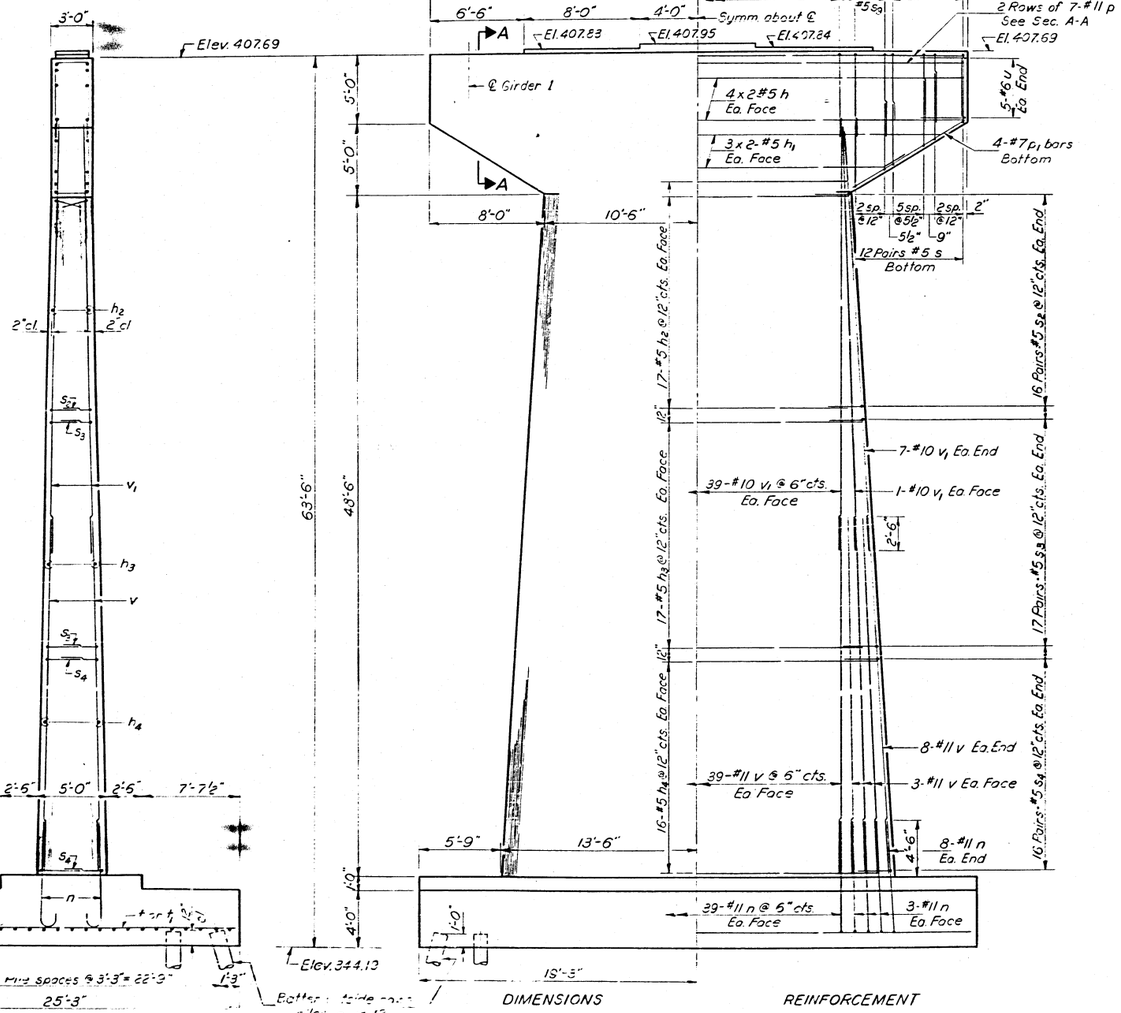
SHEET NO. 17
24 SHEETS

PILE DATA

Type - Untreated
Capacity - 24 Tons
Est Length - 24'-0"
No. Req'd. - 104



TOP PLAN



END VIEW

DIMENSIONS

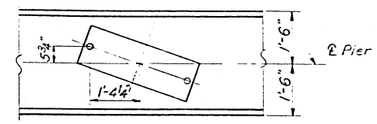
REINFORCEMENT

ELEVATION
LOOKING EAST

DESIGNED	R. Rudolph
CHECKED	
DRAWN	J.L. Armstrong 2.B.
CHECKED	

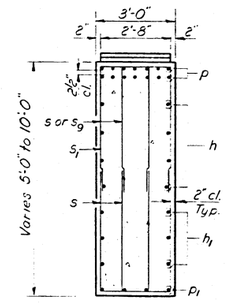
EXAMINED July 6 1967
PASSED
APPROVED

Note:
See Detail of Clearance Gage Sheet 2.

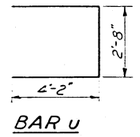


ANCHOR BOLT LAYOUT

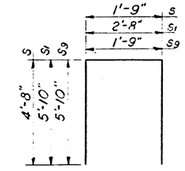
Note:
Space reinforcement in cap to miss anchor bolts.
Minimum bar laps = 20 diameters unless otherwise noted.
All exposed edges shall have standard ¾" chamfers except as noted.
Pour steps monolithicolly with cap.



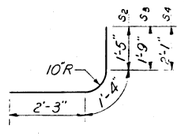
SECTION A-A



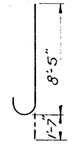
BAR u



BARS s, s1 & s9



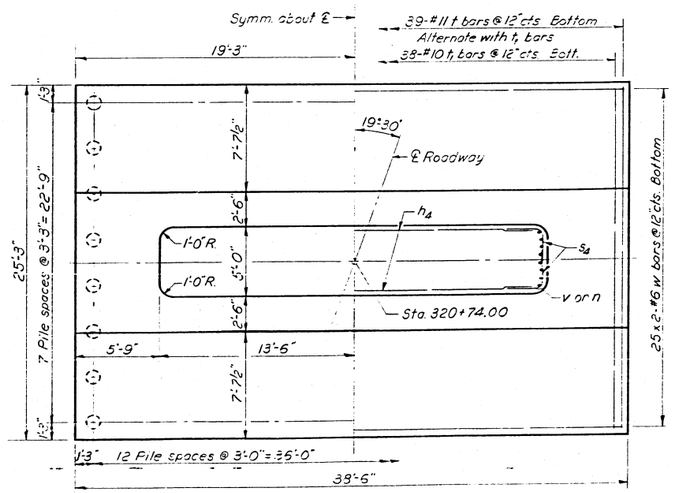
BARS s_2, s_3 & s_4



BAR n

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	16	#5	19'-3"	—
h_1	12	#5	17'-6"	—
h_2	34	#5	19'-0	—
h_3	34	#5	21'-0	—
l_4	32	#5	23'-0	—
n	106	#11	10'-0"	U
p	14	#11	36'-9"	—
p_1	8	#7	9'-3"	—
s	84	#5	11'-1"	ELL
s_1	21	#5	14'-4"	ELL
s_2	64	#5	5'-0"	ELL
s_3	68	#5	5'-4"	ELL
s_4	64	#5	5'-8"	ELL
s_9	12	#5	13'-5"	ELL
t	39	#11	25'-0"	—
t_1	38	#10	25'-0"	—
u	10	#6	11'-0"	U
v	106	#11	25'-6"	—
v_1	96	#10	30'-6	—
w	50	#6	19'-9"	—
Class X Concrete			Cu Yds	365.1
Reinforcement Bars			Lbs	51,660
Untreated Piles (Up to 30')			Lin Ft	2496



PILE LAYOUT & DIMENSIONS

REINFORCEMENT

FOOTING PLAN

PIER #2
SBI RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

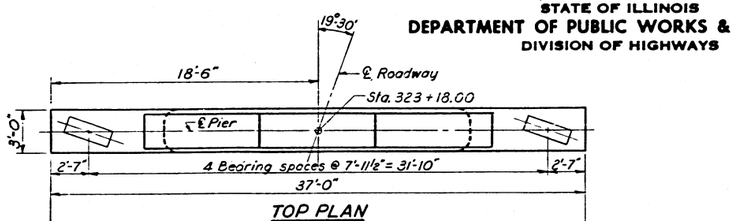
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	DIRECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 170	12S-L, 12S B-1	RANDOLPH	75	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

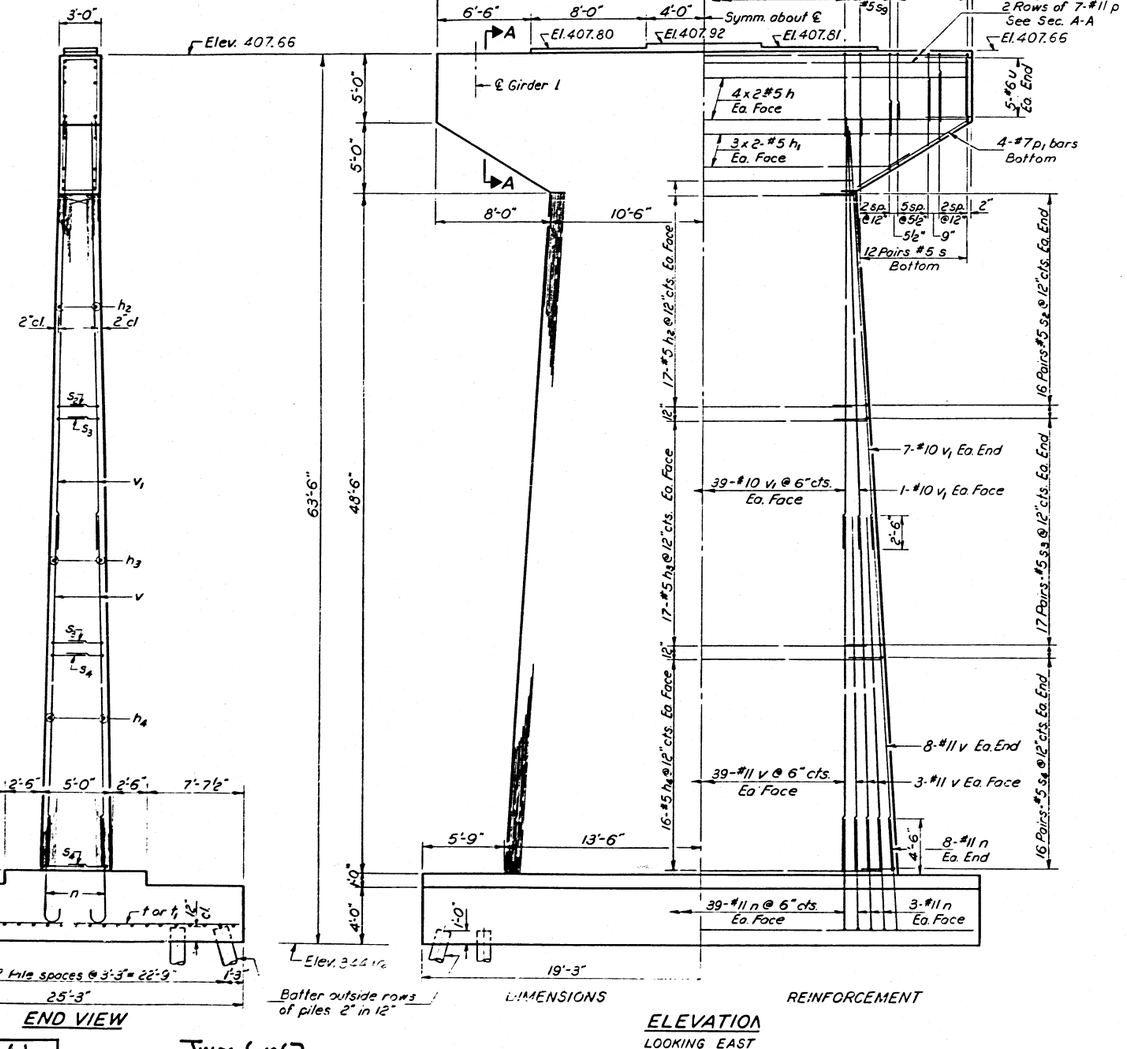
SHEET NO. 18
24 SHEETS

PILE DATA

Type - Untreated
Capacity - 24 Tons
Est. Length - 26'-0"
No. Req'd. - 103
Test Piles - 1



TOP PLAN



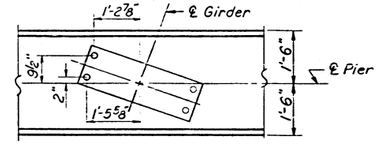
END VIEW

Batter outside rows of piles 2" in 12"

DIMENSIONS

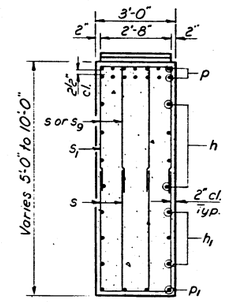
REINFORCEMENT

ELEVATION
LOOKING EAST

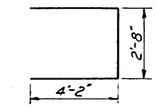


ANCHOR BOLT LAYOUT

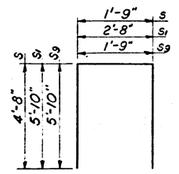
Note:
Space reinforcement in cap to miss anchor bolts.
Minimum bar laps = 20 diameters unless otherwise noted.
All exposed edges shall have standard ¾" chamfers except as noted.
Pour steps monolithically with cap.



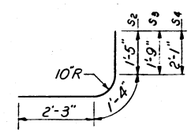
SECTION A-A



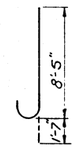
BAR u



BARS s, s1 & s9



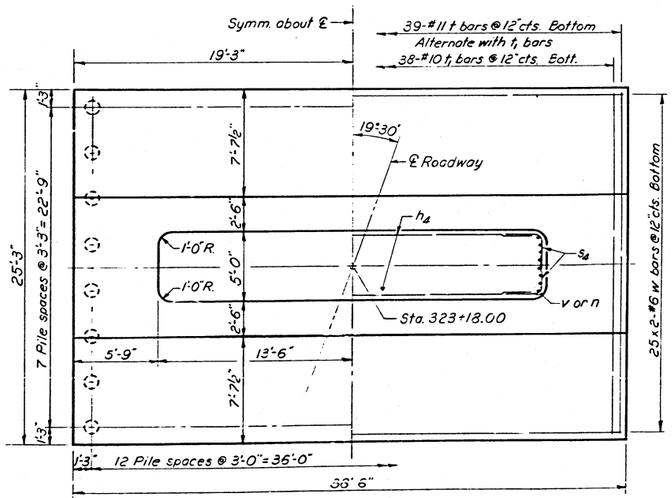
BARS s2, s3 & s4



BAR n

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	16	#5	19'-3"	—
h1	12	#5	17'-6"	—
h2	34	#5	19'-0	—
h3	34	#5	21'-0	—
h4	32	#5	23'-0	—
n	106	#11	10'-0"	⊃
p	14	#11	36'-9"	—
p1	8	#7	9'-3"	—
s	84	#5	11'-1"	⊓
s1	21	#5	14'-4"	⊓
s2	64	#5	5'-0"	⌋
s3	68	#5	5'-4"	⌋
s4	64	#5	5'-8"	⌋
s9	12	#5	13'-5"	⊓
t	39	#11	25'-0"	—
t1	38	#10	25'-0"	—
u	10	#6	11'-0"	⊐
v	106	#11	25'-6"	—
v1	96	#10	30'-6"	—
w	50	#6	19'-9"	—
Class X Concrete			Cu. Yds.	365.1
Reinforcement Bars			Lbs.	51,660
Untreated Piles (Up to 30)			Lin. Ft.	2678
Test Piles (Timber)			Each	1



PILE LAYOUT & DIMENSIONS

REINFORCEMENT

FOOTING PLAN

DESIGNED	
CHECKED	
DRAWN	J.L. Armstrong
CHECKED	

EXAMINED — JULY 6 1960
PASSED — H.E. Bowman
APPROVED — V.E. Stoff

Note
See Detail of Clearance Gage Sheet 2.

PIER #3
SBI RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

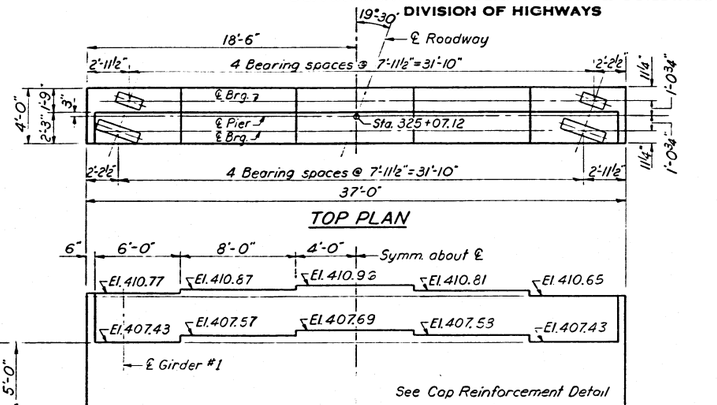
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170	125-1, #258-1	RANDOLPH	75	38
F.A.				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 19
24 SHEETS

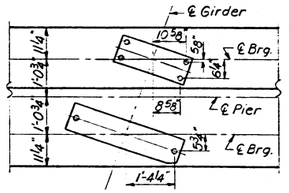
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PILE DATA

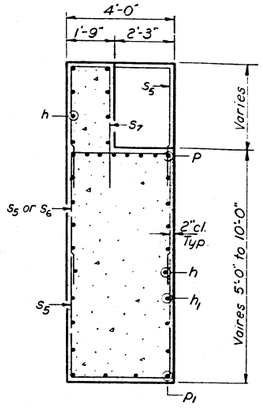
Type - Creosoted
Capacity - 24 Tons
Est. Length - 38'-0"
No. Req'd. - 55



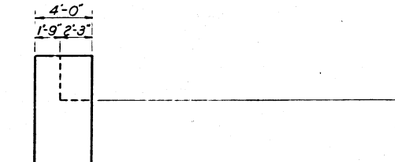
TOP PLAN



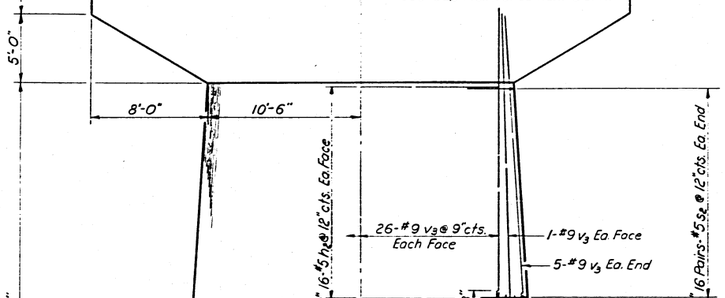
ANCHOR BOLT LAYOUT



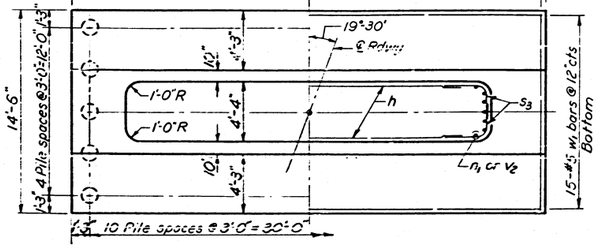
SECTION A-A



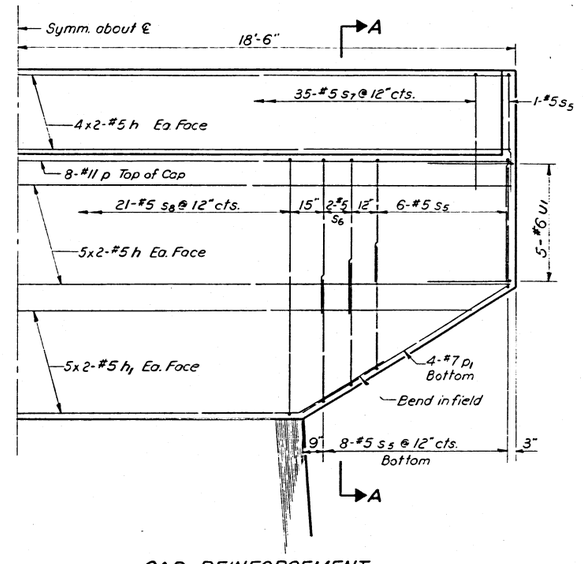
END VIEW



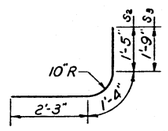
ELEVATION
LOOKING EAST



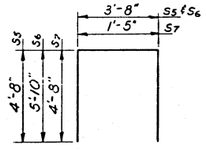
PILE LAYOUT & DIMENSIONS REINFORCEMENT
FOOTING PLAN



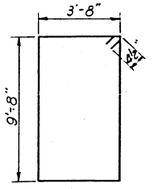
CAP REINFORCEMENT



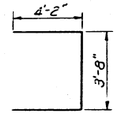
BARS S_2 & S_3



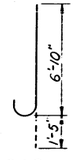
BARS S_5, S_6 & S_7



BAR S_8



BAR U_1



BAR n_1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	36	#5	19'-3"	——
h_1	20	#5	17'-6"	——
h_2	32	#5	19'-0"	——
h_3	34	#5	21'-0"	——
n_1	70	#10	8'-3"	⊃
p	8	#11	36'-9"	——
p_1	8	#7	9'-3"	——
S_2	64	#5	5'-0"	⌋
S_3	68	#5	5'-4"	⌋
S_5	30	#5	13'-0"	⊓
S_6	4	#5	15'-4"	⊓
S_7	35	#5	10'-9"	⊓
S_8	21	#5	27'-5"	□
t_2	49	#8	14'-3"	——
U_1	10	#6	12'-0"	⊐
V_2	70	#10	17'-0"	——
V_3	66	#9	22'-9"	——
W_1	15	#5	32'-3"	——
Class X Concrete			Cu. Yds.	216.7
Reinforcement Bars			Lbs.	21,620
Creosoted Piles (20.1 to 38.)			Lin. Ft.	2090

DESIGNED	P. Randolph
CHECKED	
DRAWN	J.L. Armstrong R.B.
CHECKED	

July 6 1967
EXAMINED Carl Hummendy
PASSED W.E. Bauman
APPROVED V.E. Stapp

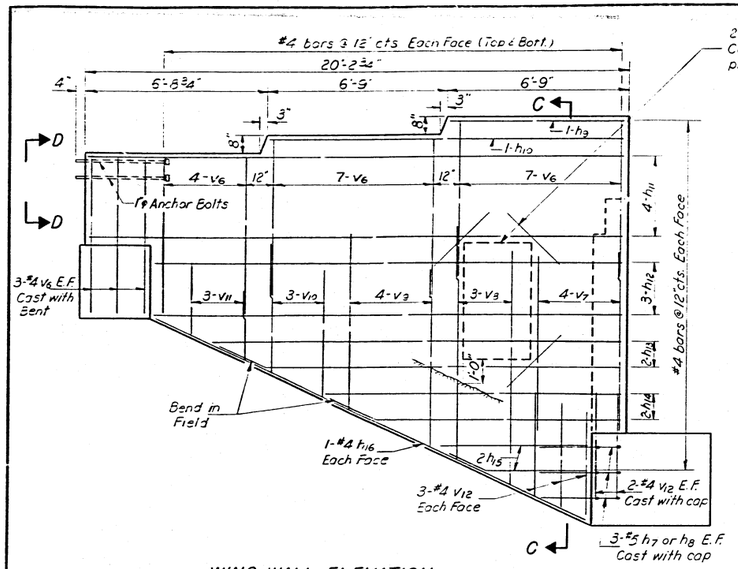
Note:
Space reinforcement in cap to miss anchor bolts.
Minimum bar laps = 20 diameters unless otherwise noted.
All exposed edges shall have standard ¾" chamfers except as noted.
Pour steps monolithically with cap

PIER #4
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

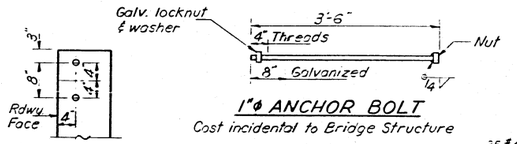
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 170	125-1, 125B-1	RANDOLPH	75	39
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 20
24 SHEETS

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



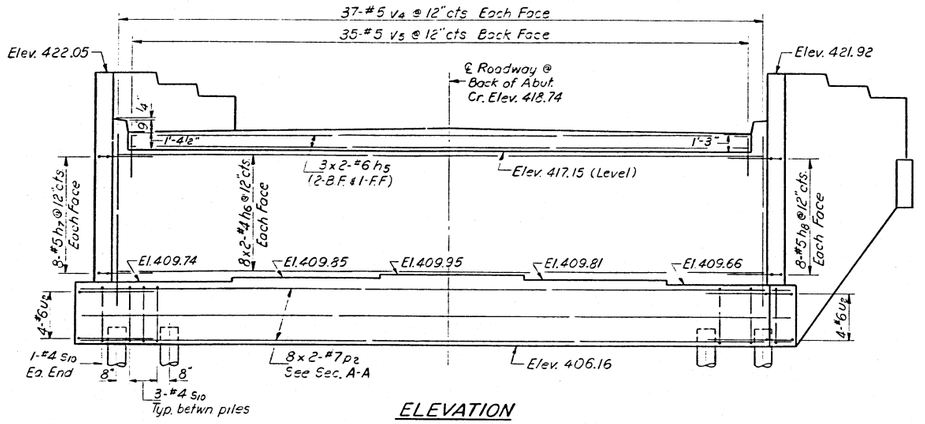
WING WALL ELEVATION



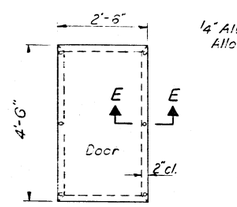
1" ø ANCHOR BOLT
Cost incidental to Bridge Structure

VIEW D-D

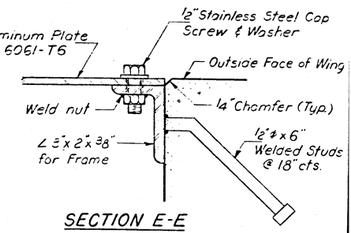
2'-5" x 4'-6" Door in South Wing
Cut bars to clear door and place excess of corners Eq. Face



ELEVATION
LOOKING WEST

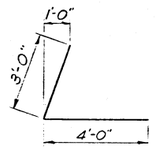


DOOR ELEVATION
(Cost of door & frame incidental)

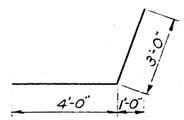


SECTION E-E

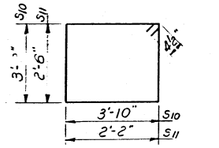
NOTE:
See sheet #3 for telephone conduit detail.



BAR h7

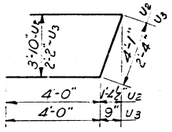


BAR h8



BARS S10 & S11

BAR V5

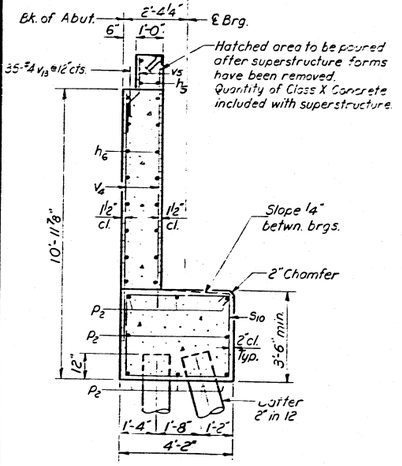


BARS U2 & U3

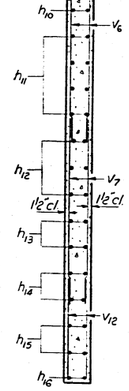
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_5	6	#6	17'-9"	—
h_6	32	#4	18'-6"	—
h_7	22	#5	7'-0"	L
h_8	22	#5	7'-0"	⌋
h_9	4	#4	6'-6"	—
h_{10}	4	#4	13'-3"	—
h_{11}	16	#4	20'-0"	—
h_{12}	12	#4	17'-6"	—
h_{13}	8	#4	15'-3"	—
h_{14}	8	#4	11'-0"	—
h_{15}	8	#4	5'-6"	—
h_{16}	4	#4	18'-0"	—
P_2	28	#7	19'-9"	—
S_{10}	38	#4	14'-9"	□
S_{11}	36	#4	10'-1"	□
U_2	8	#6	12'-1	⌋
U_3	8	#6	10'-4"	⌋
V_4	74	#5	10'-0"	—
V_5	35	#5	3'-6"	⌉
V_6	84	#4	6'-0"	—
V_7	16	#4	7'-0"	—
V_8	12	#4	9'-0"	—
V_9	16	#4	6'-9"	—
V_{10}	12	#4	5'-0"	—
V_{11}	12	#4	2'-9"	—
V_{12}	20	#4	4'-0"	—
V_{13}	70	#4	2'-0"	—

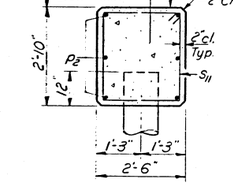
Class X Concrete	Cu. Yds.	61.0
Reinforcement Bars	Lbs.	5190
Concrete Piles	Lin. Ft.	1608
Test Piles (Concrete)	Each	1



SECTION A-A

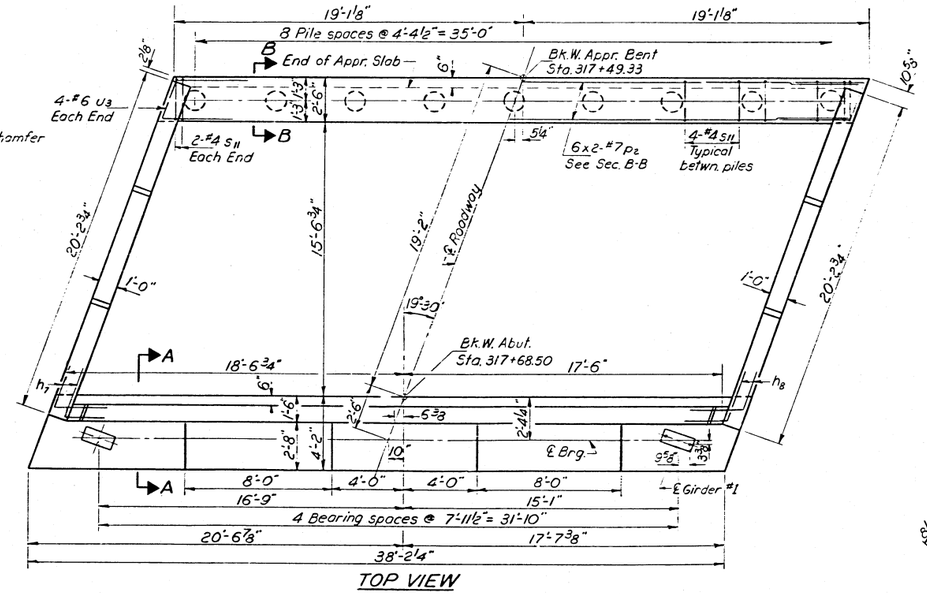


SECTION C-C



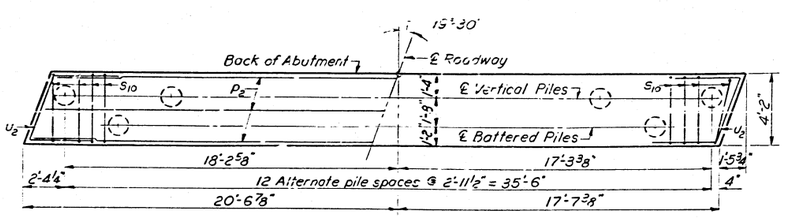
SECTION B-B

APPR. ABUT. PILE DATA
Type - Concrete
Capacity - 55 Tons
Est. Length - 80'-0"
No. Req'd - 9



TOP VIEW

MAIN ABUT. PILE DATA
Type - Concrete
Capacity - 55 Ton
Est. Length - 74'-0"
No. Req'd - 12
Test Piles - 1



PLAN ~ PILE CAP

DESIGNED R. Brandenfels
CHECKED
DRAWN J.L. Armstrong 2.8.
CHECKED

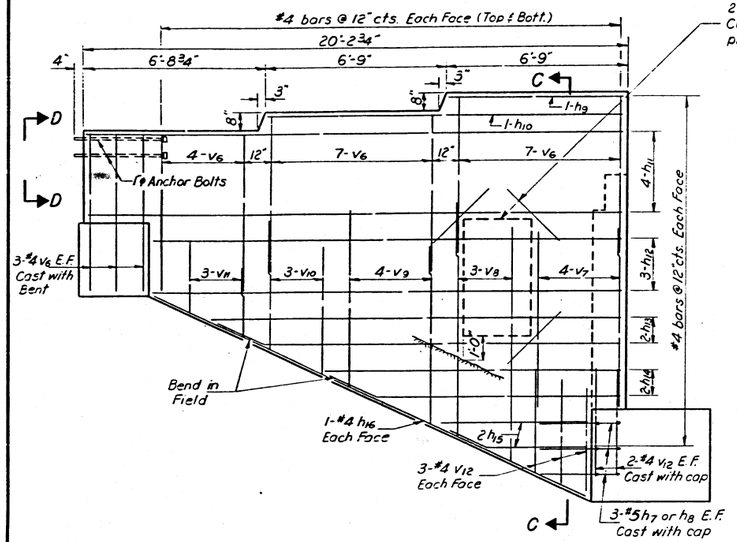
EXAMINED July 6 1967
PASSED
APPROVED

WEST ABUTMENT
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

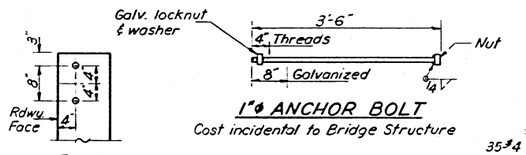
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. 170	125-1,	RANDOLPH	75	40
F. A.	125B-1			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 21
24 SHEETS

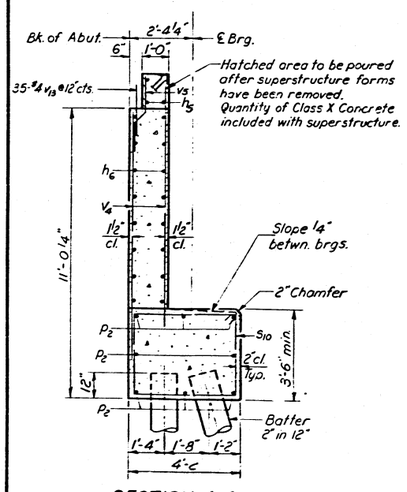


WING WALL ELEVATION

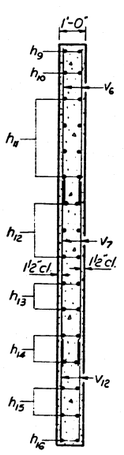


1" ø ANCHOR BOLT
Cost incidental to Bridge Structure

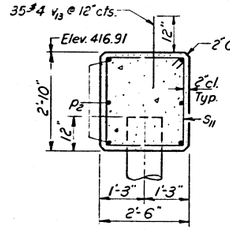
VIEW D-D



SECTION A-A



SECTION C-C



SECTION B-B

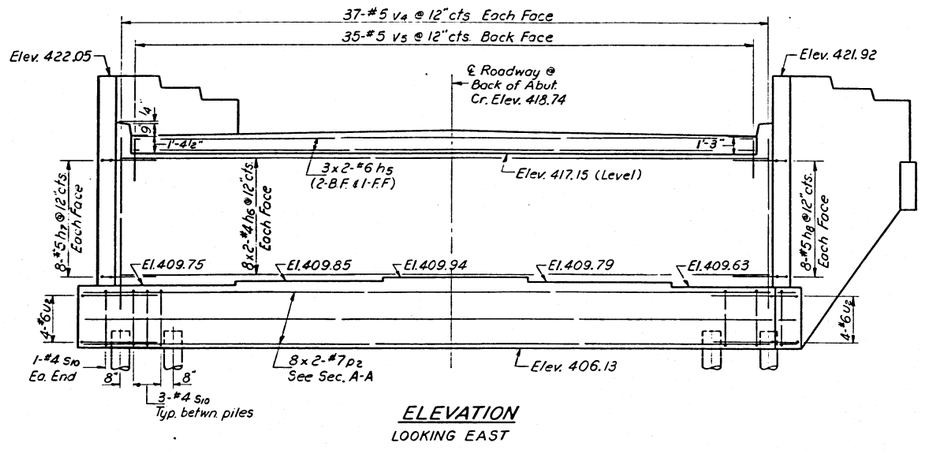
DESIGNED	R. Bland & H.
CHECKED	
DRAWN	J.L. Armstrong
CHECKED	

EXAMINED JULY 6 1967
PASSED W.E. Bauman
APPROVED V.E. Stutz

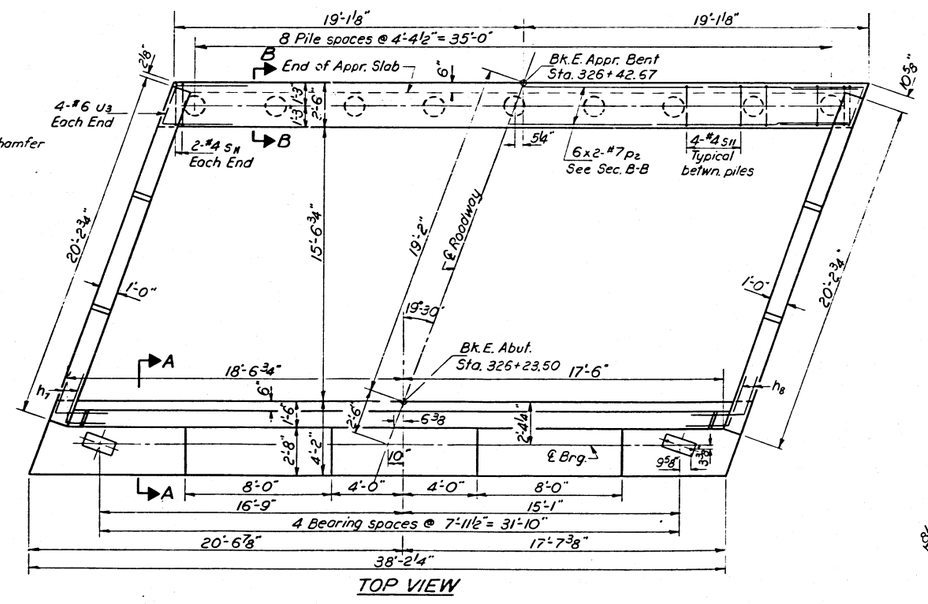
MAIN ABUT. PILE DATA
Type - Concrete
Capacity - 55 Ton
Est. Length - 70'-0"
No. Req'd - 13

APPR. ABUT PILE DATA
Type - Concrete
Capacity - 55 Ton
Est. Length - 75'-0"
No. Req'd - 9

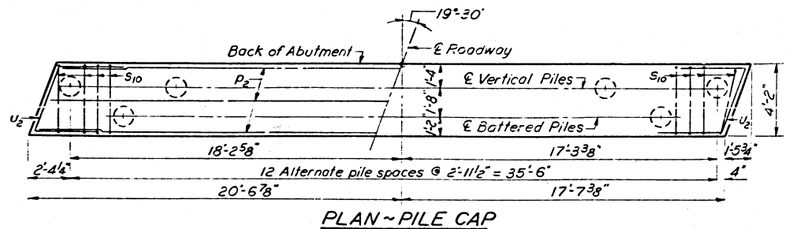
2'-6" x 4'-6" Door in North Wing
Cut bars to clear door and place excess at corners Ea Face



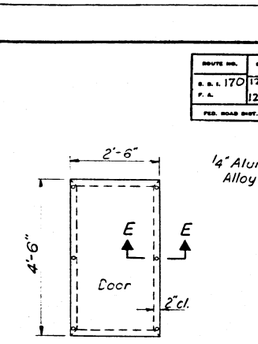
ELEVATION
LOOKING EAST



TOP VIEW



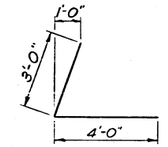
PLAN - PILE CAP



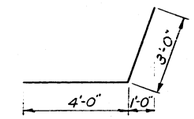
SECTION E-E

DOOR ELEVATION
(Cost of door & frame incidental)

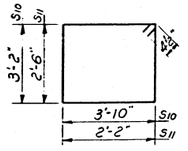
Note:
See Sheet #3 for telephone conduit detail.



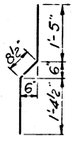
BAR h7



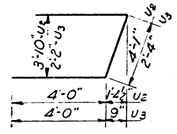
BAR h8



BARS S10 & S11



BAR V5



BARS U2 & U3

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_5	6	#6	17'-9"	—
h_6	32	#4	18'-6"	—
h_7	22	#5	7'-0"	L
h_8	22	#5	7'-0"	⌋
h_9	4	#4	6'-6"	—
h_{10}	4	#4	13'-3"	—
h_{11}	16	#4	20'-0"	—
h_{12}	12	#4	17'-6"	—
h_{13}	8	#4	15'-3"	—
h_{14}	8	#4	11'-0"	—
h_{15}	8	#4	5'-6"	—
h_{16}	4	#4	18'-0"	—
P_2	28	#7	19'-9"	—
S_{10}	38	#4	14'-9"	□
S_{11}	36	#4	10'-1"	□
U_2	8	#6	12'-1	⌐
U_3	8	#6	10'-4"	⌐
V_4	74	#5	10'-0"	—
V_5	35	#5	3'-6"	⌇
V_6	84	#4	6'-0"	—
V_7	16	#4	7'-0"	—
V_8	12	#4	9'-0"	—
V_9	16	#4	6'-9"	—
V_{10}	12	#4	5'-0"	—
V_{11}	12	#4	2'-9"	—
V_{12}	20	#4	4'-0"	—
V_{13}	70	#4	2'-0"	—
Class X Concrete			Cu Yds.	61.4
Reinforcement Bars			Lbs.	5190
Concrete Piles			Lin Ft	1585

EAST ABUTMENT
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 170 / F.A.	125-1, 125B-1	RANDOLPH	75	41
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 22
24 SHEETS

Boring No. 1 S — Station 317+80 — Offset 13 FEET RIGHT
Surface Water El. NONE
Groundwater El. at Completion 375.0
After 24 Hours 375.0

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 395.0	0		
MEDIUM MOIST BROWN SILTY CLAY TO CLAY A7-6(14-15)			
	5	-	25
389.5	-5		
MEDIUM MOIST BROWN SILTY CLAY A-6(9-10)	3	0.48	24
387.0			
STIFF MOIST BROWN AND GREY CLAY A-6(11) TO A7-6(13)	5	1.3B	24
	-10		
	5	1.0B	26
382.0			
MEDIUM MOIST GREY MOTTLED BROWN CLAY A7-6(1[illegible]	5	0.7B	30
	-15		
	5	0.8B	30
377.0			
(SEE NEXT COLUMN)	7	1.8B	28
	-20		
	6	1.2B	28

Elevation	N	Qu t/s.f.	w (%)
	7	1.0B	31
STIFF TO VERY STIFF MOIST BROWN AND GREY CLAY A7-6(15-20+)	-25		
	7	1.6B	27
	10	2.3B	25
	-30		
	10	1.5B	24
362.0			
MEDIUM VERY MOIST GREY SAND LOAM A2-4(0)	5	0.2B	22
359.5	-35		
LOOSE WET GREY TO BROWN FINE GRAINED SAND WITH SOME CLAY SEAMS	6	-	20
	2	-	25
354.5	-40		
(SEE NEXT SHEET)	10	-	-
	12	-	-
	-45		

Boring No. 2-S — Station 318+80 — Offset 57 FEET LEFT
Surface Water El. NONE
Groundwater El. at Completion 364.0
After — Hours *

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 369.0	0		
STIFF MOIST DARK BROWN CLAY A-7-6(15-20)			
366.0			
STIFF MOIST DARK BROWN CLAY A-7-6(14-15)	14	1.6B	24
	-5		
361.0	6	1.1B	28
SOFT VERY MOIST DARK BROWN CLAY LOAM A-4(8)	5	0.3B	26
358.5	-10		
LOOSE VERY MOIST BROWN SAND LOAM A-2-4(0)	4	-	23
356.0			
LOOSE TO MEDIUM VERY MOIST BROWN FINE GRAINED SAND	5	-	-
	-15		
	8	-	-
	13	-	-
348.5	-20		
MEDIUM TO LOOSE MOIST DARK BROWN COARSE GRAINED SAND WITH CLAY SEAMS	10	-	-

Elevation	N	Qu t/s.f.	w (%)
SEE PREVIOUS COLUMN			
	7	-	-
	-25		
341.0	13	-	-
MEDIUM VERY MOIST BROWN TO GREY COARSE GRAINED SAND WITH CLAY AND GRAVEL SEAMS	18	-	-
	-30		
	25	-	-
	10	-	-
	-35		
	19	-	-
	21	-	-
328.5	-40		
DENSE TO MEDIUM VERY MOIST GREY COARSE GRAINED SAND WITH CLAY AND GRAVEL SEAMS	32	-	-
	23	-	-
	-45		

Boring No. 3 S — Station 320+69 — Offset 5 FEET RIGHT
Surface Water El. NONE
Groundwater El. at Completion *
After — Hours —

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 367.0	0		
STIFF MOIST DARK BROWN CLAY A-7-6(15)			
364.0			
SOFT MOIST BROWN CLAY LOAM A-4(8)	4	0.4B	24
	-5		
361.5	7	0.4S	25
SOFT MOIST BROWN SANDY CLAY LOAM A-4(4)			
359.0			
SOFT VERY MOIST BROWN SILTY CLAY LOAM A-6(8-9)	2	0.3B	26
	-10		
356.5	1	-	-
VERY LOOSE TO LOOSE WET BROWN FINE SAND WITH CLAY SEAMS			
	-15		
	6	-	-
349.0			
MEDIUM WET BROWN FINE SAND WITH CLAY SEAMS	15	-	-
346.5	-20		
	13	-	-

Elevation	N	Qu t/s.f.	w (%)
MEDIUM WET GREY COARSE SAND			
	18	-	-
	-25		
341.5	21	-	-
MEDIUM WET GREY COARSE SAND WITH SOME GRAVEL AND CLAY SEAMS			
	12	-	-
	-30		
	10	-	-
334.0			
SOFT VERY MOIST GREY SANDY CLAY LOAM A-4(8)	6	0.3B	-
331.5	-35		
MEDIUM WET GREY COARSE SAND WITH SOME GRAVEL AND CLAY SEAMS	14	-	-
	23	-	-
	-40		
	25	-	-
	30	-	-
	-45		

Boring No. 1-S — Station 317+80 — Offset 13 FEET RIGHT
Surface Water El. NONE
Groundwater El. at Completion —
After — Hours —

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 395.0	0		
354.5			
	10	-	-
	-45		
MEDIUM TO VERY DENSE WET BROWN AND GREY FINE GRAINED SAND	12	-	-
	17	-	-
	15	-	-
	-50		
	15	-	-
	24	-	-
	-55		
	58	-	-
	46	-	-
	-60		
333.5	25	-	-
BOTTOM OF HOLE = 61.5 FEET			

DURING DRILLING IT APPEARED THAT FREE WATER WAS ENCOUNTERED AT 35.5 FEET

WASHING PROCEDURE USED BELOW 41.5 FEET

EXISTING EMBANKMENT FROM 0.0 TO 30.0 FEET

Boring No. 2 S — Station 318+80 — Offset 57 FEET LEFT
Surface Water El. NONE
Groundwater El. at Completion 364.0
After — Hours *

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 328.5	0		
DENSE TO MEDIUM VERY MOIST GREY COARSE GRAINED SAND WITH CLAY AND GRAVEL SEAMS			
	32	-	-
	-25		
	23	-	-
	-30		
	32	-	-
	40	-	-
	-35		
	35	-	-
315.0	-40		
	26	-	-
BOTTOM OF HOLE = 54.0 FEET	-45		
*WASHING PROCEDURE USED BELOW 14.0 FEET DURING DRILLING OPERATIONS			

Boring No. 3 S — Station 320+69 — Offset 5 FEET RIGHT
Surface Water El. NONE
Groundwater El. at Completion *
After — Hours —

Elevation	N	Qu t/s.f.	w (%)
Ground Surface -4.0			
MEDIUM WET GREY COARSE SAND WITH SOME GRAVEL AND CLAY SEAMS	25	-	-
	-65		
	30	-	-
321.5	-45		
DENSE WET GREY COARSE SAND WITH SOME GRAVEL AND CLAY SEAMS	34	-	-
	-70		
319.0			
DENSE WET GREY COARSE SAND WITH SOME GRAVEL	36	-	-
316.5	-50		
MEDIUM WET GREY COARSE SAND WITH SOME GRAVEL	20	-	-
	-75		
	22	-	-
	-55		
310.5	40	-	-
BOTTOM OF HOLE = 56.5 FEET	-80		
DURING DRILLING IT APPEARED THAT FREE WATER WAS ENCOUNTERED AT 8.0 FEET			
*WASHING PROCEDURE USED BELOW 14.0 FEET	-60		

DESIGNED	K Sinclair
CHECKED	
DRAWN	J.L. Armstrong
CHECKED	

JULY 6 1967
EXAMINED Carl Trummer
PASSED W.E. Bauman
APPROVED V.E. Staff

N-Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30"

Qu-Unconfined Compressive Strength-t/sf

w-Water Content-percentage of oven dry weight-%

Type failure:
B-Bulge Failure
S-Shear Failure
E-Estimated Value
P-Penetrometer

BORINGS
S.B.I. RT. 170 SEC. 125B-1
RANDOLPH COUNTY
STA. 321+96.23

P-99-171-63

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
170	125-1, 125B-1	RANDOLPH	75	42
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 23
24 SHEETS

Boring No. 4-S — Station 323+10 — Offset 8 FEET LEFT

Surface Water El. NONE; Groundwater El. at Completion *; After 72 Hours -40

Elevation	Description	N	Qu t/s.f.	w (%)
366.5 (0)	Ground Surface			
	STIFF MOIST DARK BROWN CLAY A-7-6(13-14)			
363.5	STIFF MOIST DARK BROWN SILTY CLAY TO CLAY A-7-6(12-13)	6	1.0B	21
361.0	STIFF VERY MOIST DARK BROWN CLAY LOAM A-4(8)	4	0.3B	24
358.5	VERY LOOSE, VERY MOIST BROWN FINE GRAINED SAND WITH SANDY CLAY LOAM SEAMS	2	-	-
		3	-	-
353.5	LOOSE WET BROWN FINE GRAINED SAND WITH SANDY CLAY LOAM SEAMS	6	-	-
		7	-	-
		6	-	-
346.0	SEE NEXT COLUMN	15	-	-
	MEDIUM WET BROWN COARSE GRAINED SAND WITH SOME GRAVEL	27	-	-
		17	-	-
338.5	MEDIUM WET GREY COARSE GRAINED SAND WITH GRAVEL AND CLAY SEAMS	20	-	-
		12	-	-
		19	-	-
		16	-	-
		12	-	-
326.0	LOOSE WET GREY COARSE SAND WITH SOME GRAVEL	8	-	-
323.5	SEE NEXT SHEET	22	-	-

Boring No. 4-S — Station 323+10 — Offset 8 FEET LEFT

Surface Water El. NONE; Groundwater El. at Completion *; After 72 Hours -40

Elevation	Description	N	Qu t/s.f.	w (%)
326.0 (-40)	~~Ground Surface~~			
	LOOSE WET GREY COARSE SAND WITH SOME GRAVEL	8	-	-
323.5	MEDIUM WET GREY COARSE GRAINED SAND WITH SOME GRAVEL	22	-	-
		18	-	-
		24	-	-
		25	-	-
		22	-	-
311.0	VERY DENSE WET GREY COARSE SAND WITH SOME GRAVEL	75		

BOTTOM OF HOLE = 56.5 FEET

DURING DRILLING IT APPEARED THAT FREE WATER WAS ENCOUNTERED AT 6.0 FEET

* WASHING PROCEDURE USED BELOW 11.5 FEET

Boring No. 5 S — Station 325+12 — Offset 15 FEET LEFT

Surface Water El. NONE; Groundwater El. at Completion *; After 24 Hours -35

Elevation	Description	N	Qu t/s.f.	w (%)
367.0 (0)	Ground Surface			
	STIFF TO MEDIUM MOIST DARK BROWN SILTY CLAY TO CLAY A-7-6(12-13)	5	0.9B	25
361.5	SOFT MOIST DARK BROWN CLAY LOAM A-4(8)	8	0.3B	19
359.0	LOOSE VERY MOIST BROWN FINE GRAINED SAND WITH SANDY CLAY LOAM SEAMS	4	-	21
356.5	LOOSE VERY MOIST TO WET BROWN FINE GRAINED SAND	7	-	38
		9	-	-
		9	-	-
349.0	MEDIUM WET GREY FINE TO COARSE GRAINED SAND WITH CLAY SEAMS	15	-	-
346.5	SEE NEXT COLUMN	18	-	-
	MEDIUM WET GREY COARSE GRAINED SAND	11	-	-
		16	-	-
		14	-	-
336.5	MEDIUM VERY MOIST GREY CLAY LOAM A-6(12)	4	0.5B	-
334.0	MEDIUM WET GREY COARSE GRAINED SAND WITH CLAY SEAMS	10	-	-
		20	-	-
		19	-	-
		15	-	-
		22	-	-

Boring No. 5 S — Station 325+12 — Offset 15 FEET LEFT

Surface Water El. NONE; Groundwater El. at Completion *; After 24 Hours -3.5

Elevation	Description	N	Qu t/s.f.	w (%)
327.0 (0)	~~Ground Surface~~			
	MEDIUM WET GREY COARSE GRAINED SAND WITH CLAY SEAMS	15	-	-
		22	-	-
		13	-	-
319.0	MEDIUM WET GREY COARSE GRAINED SAND WITH SOME GRAVEL AND CLAY SEAMS	21	-	-
316.5	MEDIUM TO DENSE WET GREY COARSE GRAINED SAND WITH SOME GRAVEL	30	-	-
		43	-	-
320.5		25	-	-

BOTTOM OF HOLE = 56.5 FEET

DURING DRILLING IT APPEARED THAT FREE WATER WAS ENCOUNTERED AT 5.? FEET

* WASHING PROCEDURE USED BELOW 14.? FEET

Boring No. 6 S — Station 326+10 — Offset 12 FEET LEFT

Surface Water El. NONE; Groundwater El. at Completion *; After — Hours *

Elevation	Description	N	Qu t/s.f.	w (%)
394.7 (0)	Ground Surface			
	MEDIUM MOIST BROWN SILTY CLAY A-4(8)			
391.7	MEDIUM MOIST BROWN SILTY CLAY A-6(11-12)	7	-	20
389.2	MEDIUM MOIST DARK BROWN TO GREY CLAY A-7-6(13-14)	6	0.8B	26
386.7	MEDIUM MOIST DARK GREY CLAY LOAM A-4(7-8)	7	0.8B	21
384.2	STIFF MOIST DARK GREY CLAY A7-6(13-15)	10	1.4B	20
		10	1.4B	20
379.2	MEDIUM DAMP DARK GREY SAND LOAM A-4(3) WITH SOME CLAY SEAMS	13	1.0B	12
376.7	VERY STIFF DAMP DARK GREY CLAY LOAM A-4(7-8)	16	2.6B	16
374.2	MEDIUM DAMP DARK GREY SAND LOAM A2-4(0)	7	0.8S	12
371.7	(SEE PRECEDING COLUMN)			
	MEDIUM MOIST DARK GREY CLAY LOAM A-4(8)	7	0.7B	21
369.2	STIFF TO VERY STIFF MOIST DARK GREY CLAY A7-6(15+)	10	1.8B	21
		11	2.0B	29
		9	1.3B	25
361.7	SOFT VERY MOIST DARK GREY SILTY CLAY LOAM TO CLAY LOAM A-4(8)	5	0.4B	25
359.2	MEDIUM TO LOOSE WET BROWN FINE GRAINED SAND	10	-	21
		9	-	-
		10	-	-
		14	-	-

Boring No. 6 S — Station 326+10 — Offset 12 FEET LEFT

Surface Water El. NONE; Groundwater El. at Completion *; After — Hours *

Elevation	Description	N	Qu t/s.f.	w (%)
354.7 (-40)	~~Ground Surface~~			
	(SEE PRECEDING SHEET)	10	-	-
		14	-	-
		19	-	-
		21	-	-
		10	-	-
341.7	LOOSE TO MEDIUM WET GREY COARSE GRAINED SAND WITH SOME CLAY SEAMS	6	-	-
		18	-	-
		22	-	-
		10	-	-
331.7	(SEE PRECEDING COLUMN)			
	MEDIUM WET GREY COARSE GRAINED SAND AND GRAVEL	15	-	-
		13	-	-
		20	-	-
		19	-	-
320.7		23	-	-

BOTTOM OF HOLE = 74.0 FEET

DURING DRILLING IT APPEARED THAT FREE WATER WAS ENCOUNTERED AT 35.5 FEET

WASHING PROCEDURE USED BELOW 39.0 FEET

EXISTING EMBANKMENT FROM 0.0 TO 30.0 FEET

*HOLE CLOSED IN AT 21.5 FEET

DESIGNED R. Bardolph H.
CHECKED D. Cabanell
DRAWN J.L. Armstrong
CHECKED [signature]

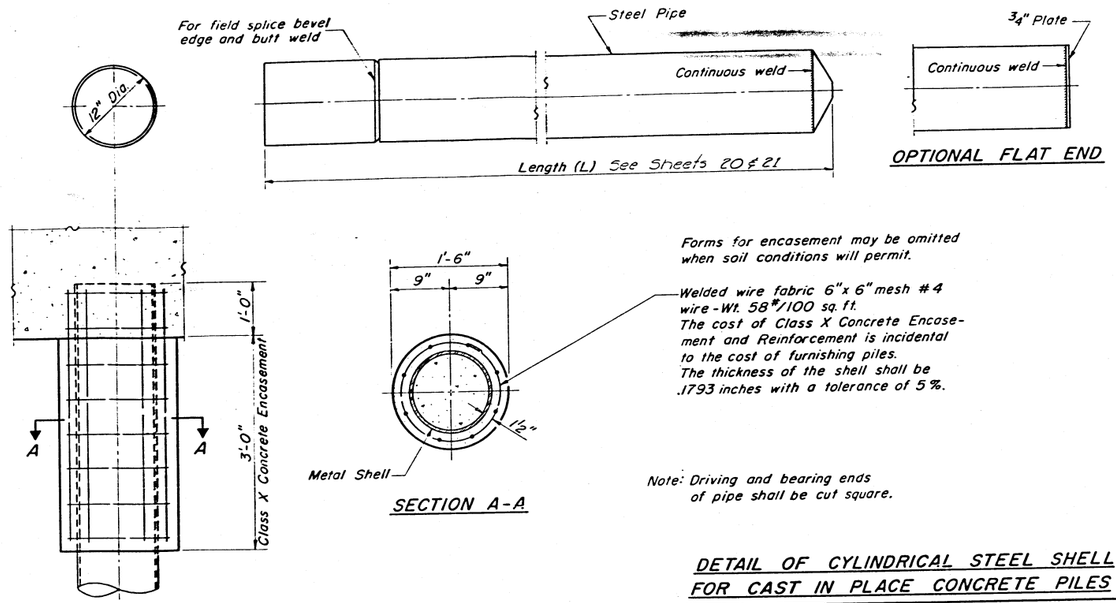
EXAMINED July 6 1967 Carl Trummer (Engineer of Traffic Structures)
PASSED W.E. Baumann (Engineer of Design)
APPROVED V.E. Staff (Chief Highway Engineer)

BORINGS
S.B.I. RT. 170 SEC. 125 B-1
RANDOLPH COUNTY
STA. 321 + 96.23

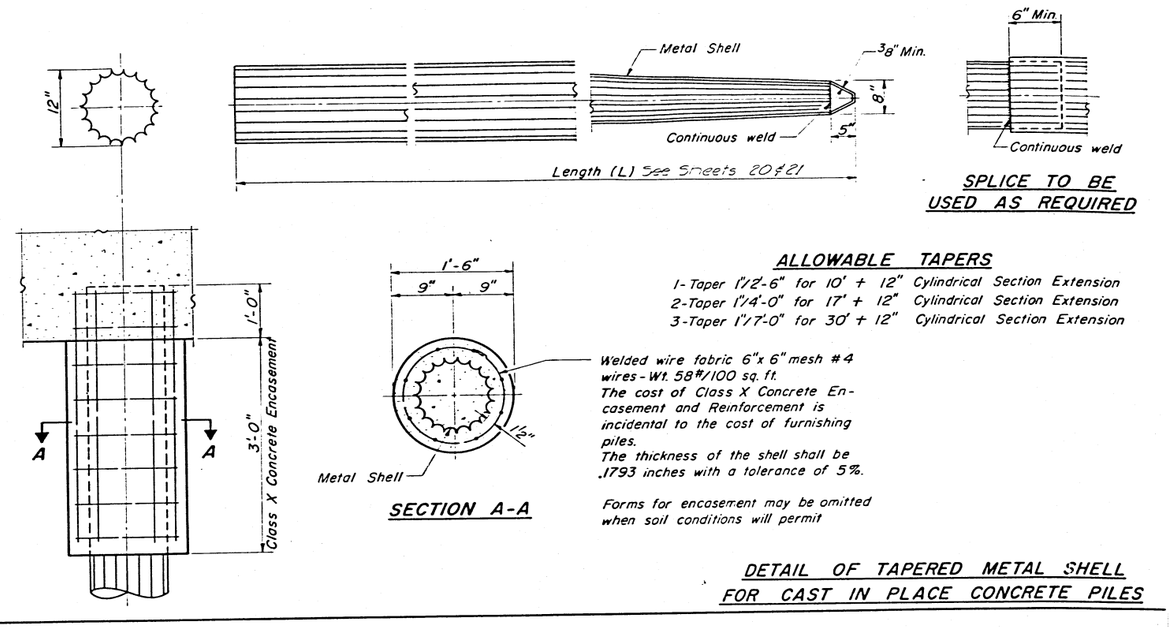
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 170 F.A.	125-1, 125B-1	RANDOLPH	75	43
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

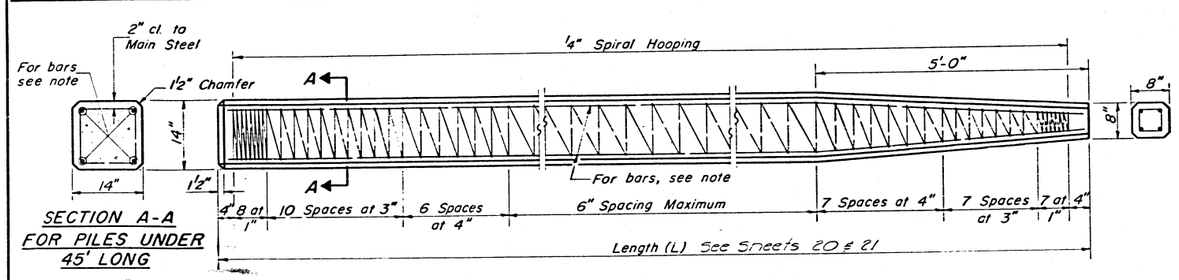
SHEET NO. 24 OF SHEETS



DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES



Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 14" Piles under 45' long use 4-#9 bars full length.

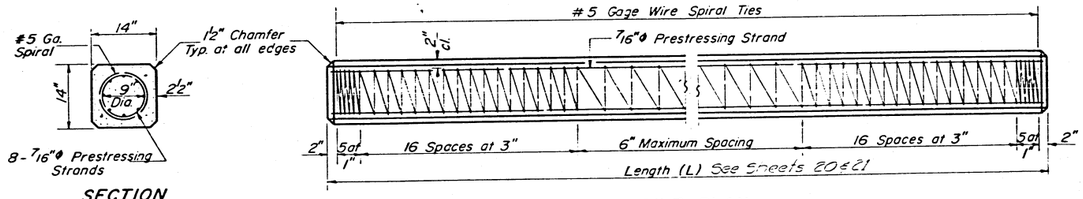
Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12 L from each end and at mid-point of pile.

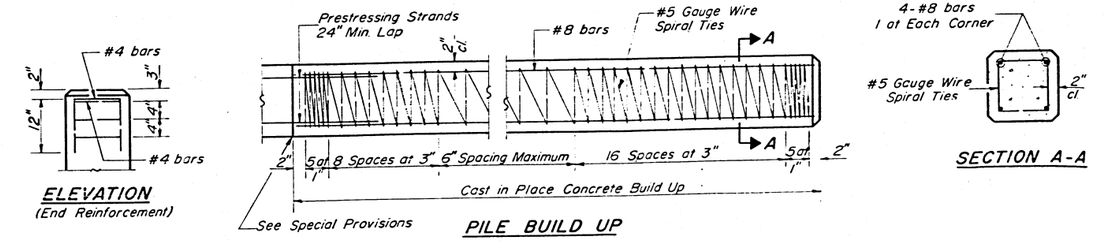
DESIGNED	K.E.B.
CHECKED	T.H.G.
DRAWN	J. SCHNELLER
CHECKED	

EXAMINED — CHIEF BRIDGE AND TRAFFIC STRUCTURE
PASSED — H.E. Baumann, ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER
19

X-2 11-21-67

DETAIL OF PRECAST CONCRETE PILES





DESIGN STRESSES
fc' = 5,000 psi.
fci' = 4,000 psi.
fs' = 268,000 psi. (31,000 lbs.)
fsi' = 188,000 psi. (21,700 lbs.)

Note: Prestressing steel shall be non-galvanized extra high strength stress-relieved 7 wire strand. The nominal diameter shall be 7/16" and the minimum nominal cross-sectional area shall be 0.1155 square inch.

Handling: For pile lengths up to 65', use two slings placed at a distance of 0.21L from each end. For piles longer than 65', use three slings placed at a distance of 0.12 L from each end and at midpoint of pile.

PILE DETAILS
S.B.I. RT 170 SEC. 125 B-1
RANDOLPH COUNTY
STA. 321+95.23

DETAIL OF PRECAST PRESTRESSED CONCRETE PILES