3-7-08 Letting Item 056

MERCER

CONTRACT NO. 68766

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102B)I	MERCER	11	1

+1
12

100%
5-15-2008

INDEX OF SHEETS:

1. COVER SHEET
2. GENERAL NOTES
3. SUMMARY OF QUANTITIES
4. TYPICAL SECTIONS
5. SCHEDULE OF QUANTITIES
6–7. PLAT SHEETS
8. GENERAL LAYOUT
9. TRAFFIC CONTROL
10–11. GENERAL PLAN & ELEVATION BEAM DETAILS

STANDARDS:

701001–01 701901

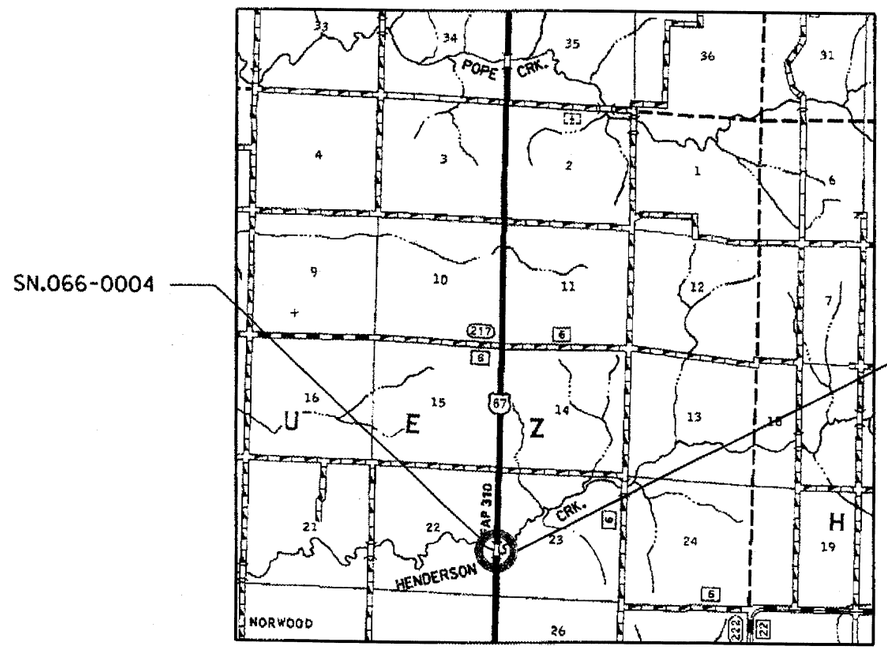
701006–02

701201–02

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

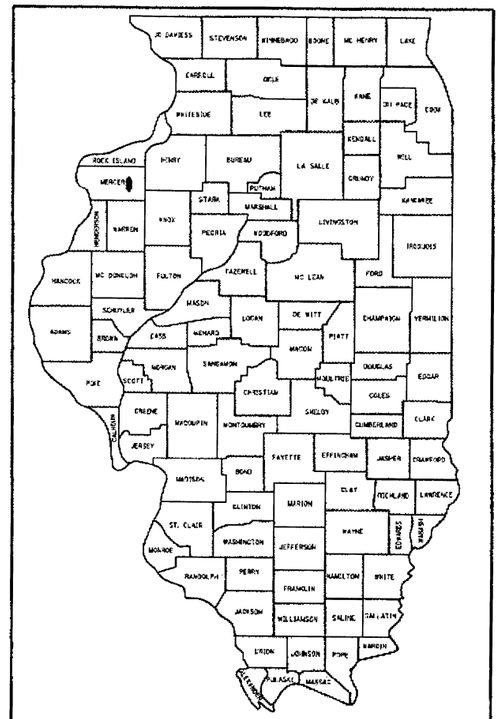
PROPOSED HIGHWAY PLANS

FAP 310 (US 67)
SECTION (102B)I
MERCER COUNTY
C–94–003–08



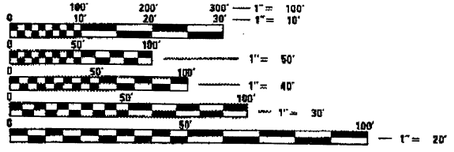
LOCATION MAP

D–94–003–08



LOCATION OF SECTION INDICATED THUS: –■–

PROJECT CONSISTS OF BEAM BRACING OF FIVE PPC BEAMS ON STRUCTURE (SN.066-0004) CARRYING US67 OVER HENDERSON CREEK, 6.7 MILES SOUTH OF VIOLA.



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec 16 20 07

DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 1, 2008
Erin E. Harm
Interim ENGINEER OF DESIGN AND ENVIRONMENT

February 1, 2008
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 68766 CAT. NO. 033615–00D 066-0004

CONTRACT NO. 68766

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(10281)	MERCER	11	8
STA. 1077+00				
FED. ROAD DIST. NO. 4	ILLINOIS FED. AID PROJECT			

Description: T13N R2W 4th PM

Benchmark Chisled Square:
N.W. WINGWALL - ELEV. 100.00

T13N; R2W; SEC; 4th PM

Emma Olson

SECTION 23

Existing R.O.W.

R.O.W.= 40'

40' R.O.W.

40' R.O.W.

FLOW

103'-4" O. to O. of deck

Dry Area

Dry Area

Construction Limits

R.O.W.= 50'

12"CMP

Gutter

Outlet

Revetment Mat

US Route 67

1075:00

1076:00

1077:00

1078:00

1079:00

12"CMP

Outlet

Gutter

Revetment Mat

R.O.W.= 40'

R.O.W.= 50'

PLAN

SECTION 22

Beam Bracing

Irvin A. Stephenson

NOTES
When it is necessary for the Contractor to place and store materials and equipment on State owned R.O.W. the appearance and condition of the affected sod area shall be left as it was found and according to the discretion of the Engineer. All necessary work and Seeding Minor Areas shall be included in cost of Erosion Control Blanket.
See section 107 of the Standard Specifications for requirements concerning Contractor access and protection & preservation of the natural area and waterway at and around the project.

SN.066-0004 US. 67
over N. HENDERSON CRK.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL LAYOUT

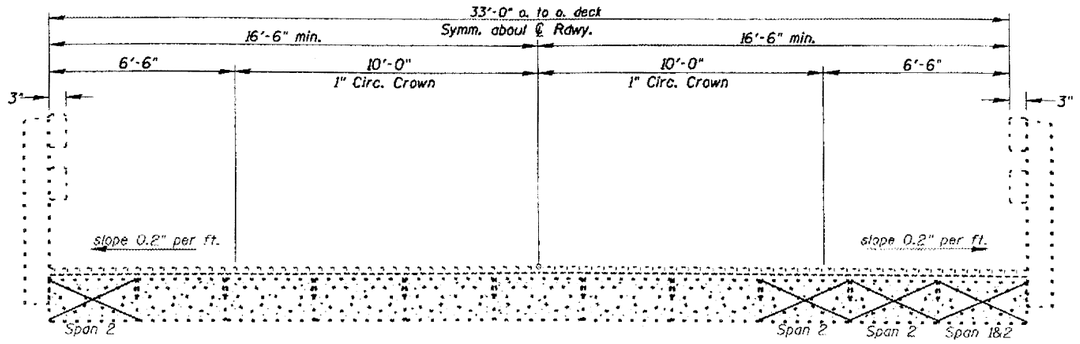
SCALE: VERT.
HORIZ.
DATE 08-01-2007

DRAWN BY CEJ
CHECKED BY

#DATE#09:45:07
#FILENAME#C:\DOCUMENTS\STAR\MS\SDAMS24\Bridge\Contracts\Emergency\PCBeamRepairs\68766 SN066-0004\SN066-0004 US67over Henderson Crk.dgn
18.0882 c / in.
#RES#

CONTRACT NO. 68766

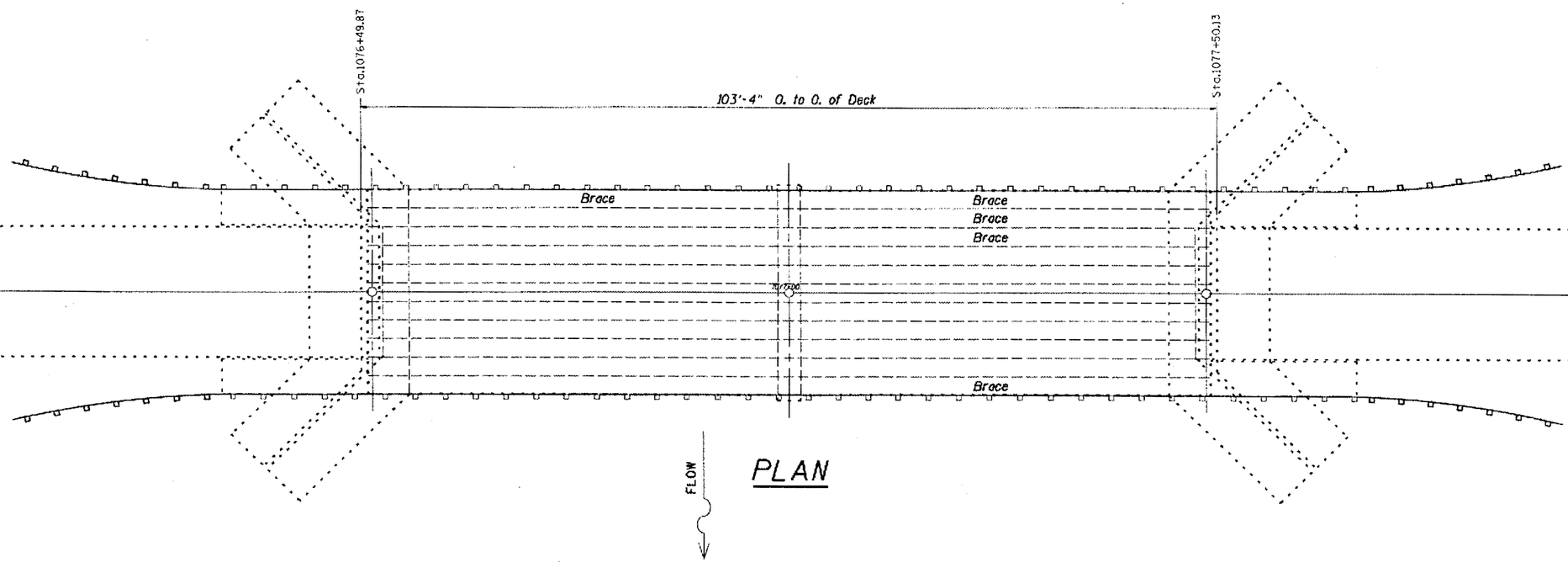
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(102B)1	MERCER	11	9
STA. 1077+00				
FED. ROAD DIST. NO. 4	ILLINOIS FED. AID PROJECT			



Beam to be Braced

BRIDGE CROSS SECTION

(Looking North)



PLAN

SN.066-0004 US. 67
over HENDERSON CRK.

NOTES
Refer to Highway Standard 701201 in conjunction with this sheet for exact placement of traffic management devices and other clarifications as construction is proposed with temporary use of this standard for materials delivery and unloading.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

SCALE: VERT.
HORIZ.
DATE 08-01-2007

DRAWN BY CEJ
CHECKED BY

#DATE#08-01-07
#FILE#S:\DESIGN\ENGINEERING\PROJECTS\SDMO14\Bridge Contracts\Engineering\PCBeamRepairs\68766 SN066-0004\SN066-0004 US67over Henderson Crk.dgn
#SCALE#
#REF#

*Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures.

*** Transverse tie ℄'s (3 per span). Place additional shims at midpoints between tie ℄'s. Securely weld shims to top flange of support beam. Minimum shim size is 6" x flange width. Spacing may be adjusted to miss adjacent transverse tie ℄'s.

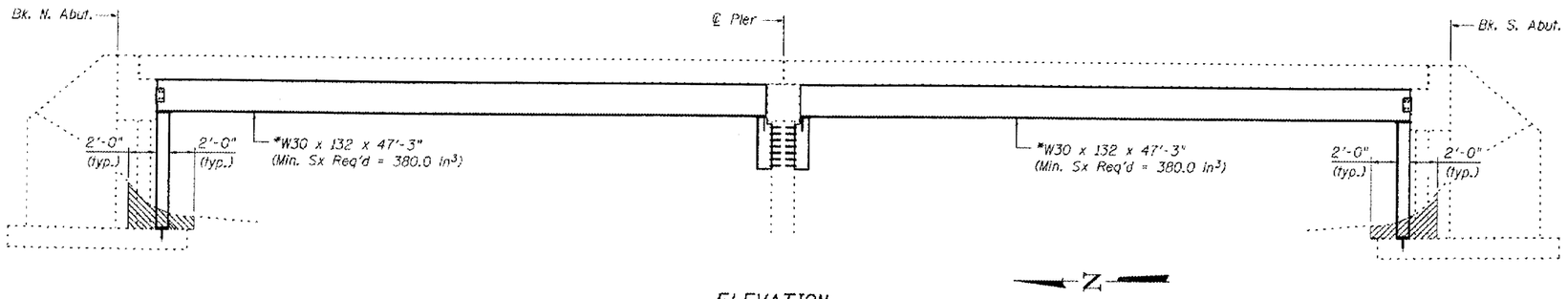
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 310	-	Mercer	11	10
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT -		

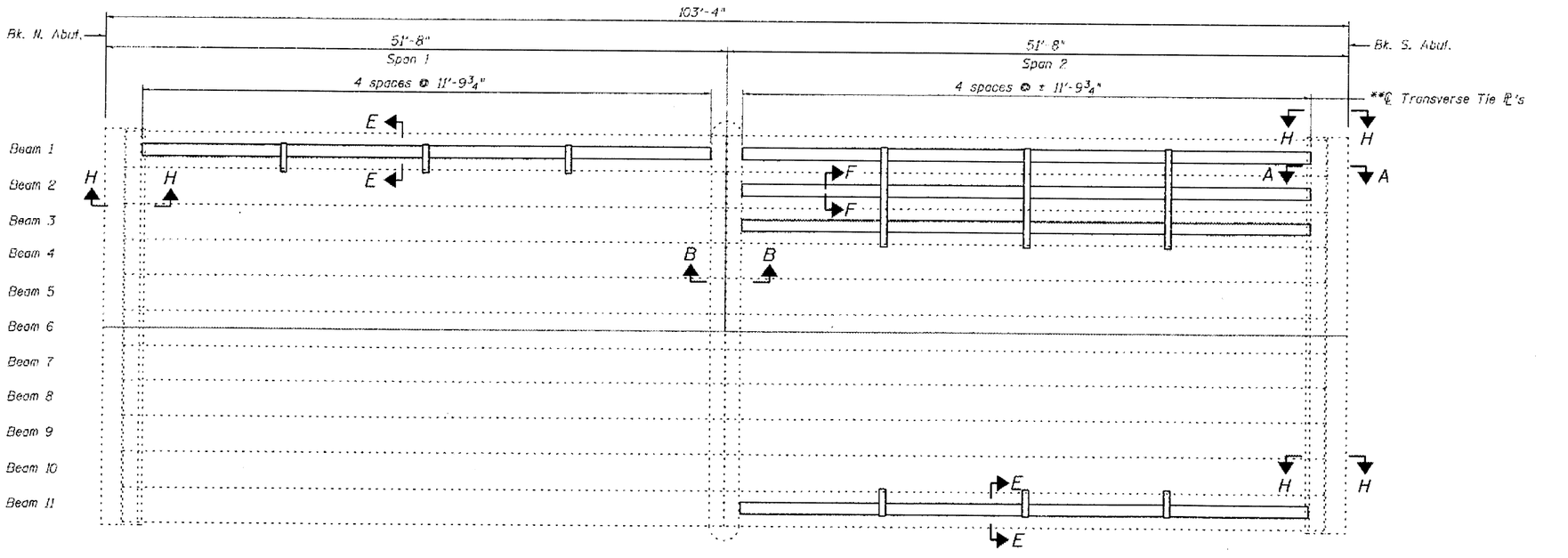
SHEET NO. 1
3 SHEETS

Contract # 68766

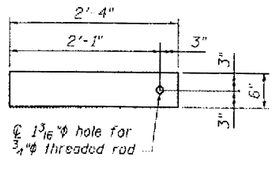
Limits of Structure Excavation



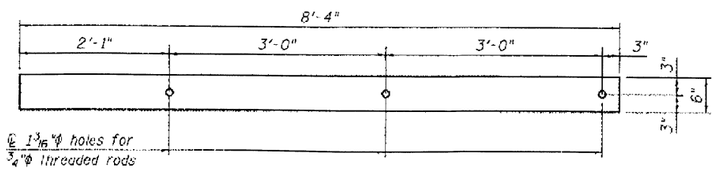
ELEVATION



PLAN



TRANSVERSE TIE ℄ "A"
½" x 2'-4" x 6" (3 Req'd.)



TRANSVERSE TIE ℄ "B"
½" x 8'-4" x 6" (3 Req'd.)

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 35, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

See Section 584 of the Standard Specifications for Epoxy Grouting of Threaded Rods: Min. embedment 9".

The cost of epoxy grouting threaded rods shall be included with Furnishing and Erecting Structural Steel.

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors responsibility to account for the condition of the beams when developing construction procedures.

If the contractor's procedure for placement of beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams.

Any dewatering required for the installation of the support columns shall be included in the unit cost for Structure Excavation.

Contractor has the option of using used steel. See Special Provision.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	37,100
Structure Excavation	Cu. Yd.	5

STATE OF ILLINOIS
SCOTT D. SANFORD
081-005468
LICENSED SPRINGFIELD
STRUCTURAL ENGINEER
1-3-08
Expires 11/30/08

DESIGNED	CMV
CHECKED	SDS
DRAWN	DLH
CHECKED	CMV

WHKS & CO.
ENGINEERS PLANNERS LAND SURVEYORS
MASON CITY, IOWA DUBUQUE, IOWA AMES, IOWA
E. DUBUQUE, ILLINOIS SPRINGFIELD, ILLINOIS ROCHESTER, MINNESOTA

GENERAL PLAN AND ELEVATION
REPAIR DETAILS
US 67 OVER HENDERSON CREEK
MERCER COUNTY
S.N. 066-0004

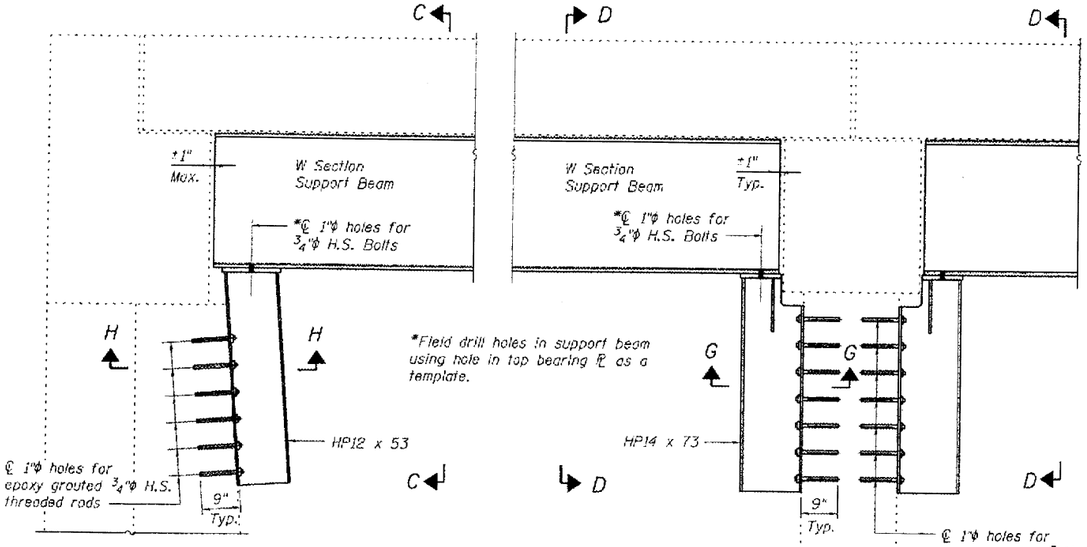
Filename: L:\Jobs\IDOT BBS\6727 BBS Various Various\6727.09\CADD_Struct\S.N. 066-0004\S.N. 066-0004_rev1.dgn
Date: 1/3/2008
Operator: cvollmer

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 310	-	Mercer	11	11
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

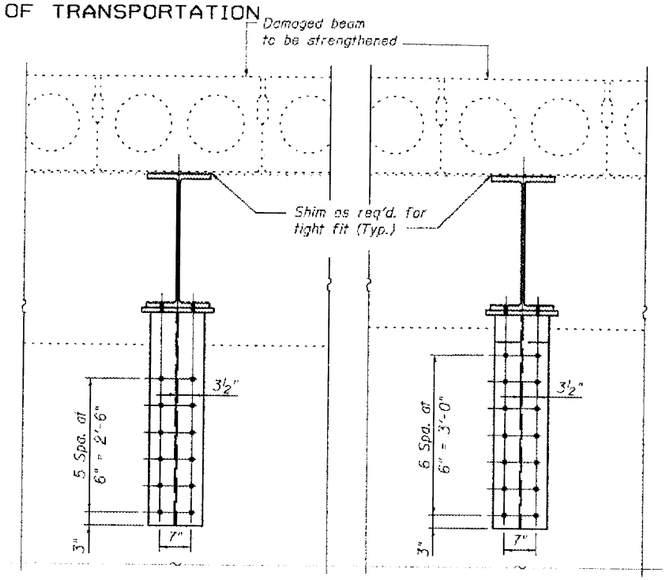
SHEET NO. 2
3 SHEETS

Contract # 68766



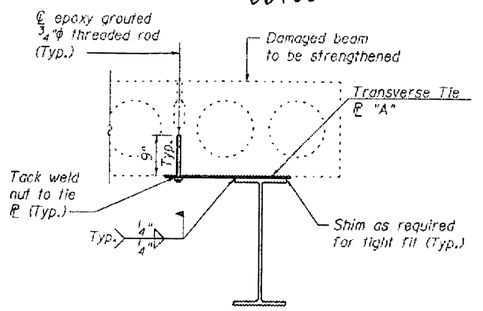
SECTION A-A
(at South Abut. Beams 2 & 3)

SECTION B-B
(at Pier)

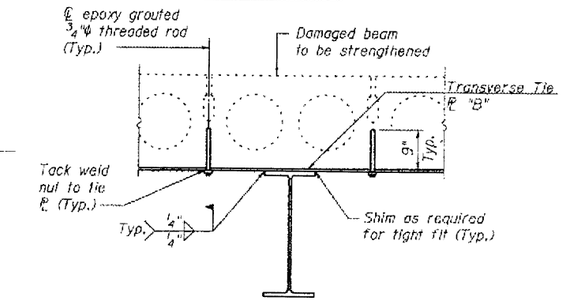


SECTION C-C
(at South Abut. Beams 2 & 3)

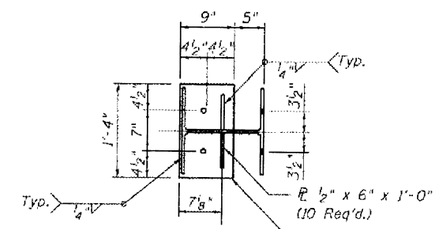
SECTION D-D
(at Pier)



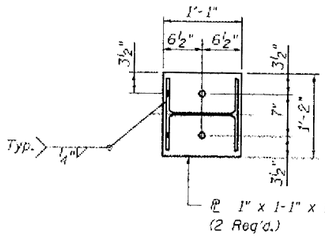
SECTION E-E



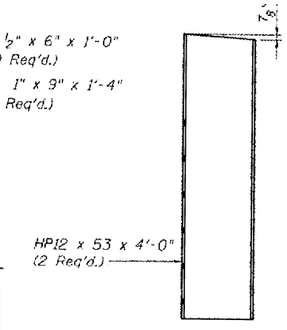
SECTION F-F



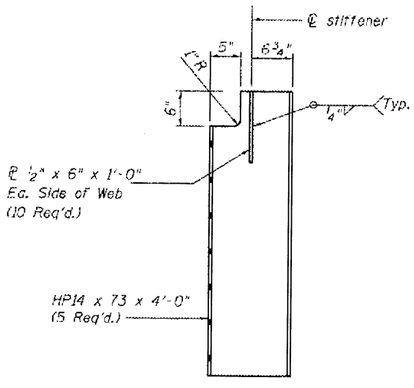
SECTION G-G (5 Req'd.)



SECTION H-H



TYPICAL HP SECTION
(at South Abutment)



TYPICAL HP SECTION
(at Pier)

DESIGNED	CMV
CHECKED	SDS
DRAWN	DLH
CHECKED	CMV

WHKS & CO.
CONSULTING ENGINEERS ■ PLANNERS ■ LAND SURVEYORS
MASON CITY, IOWA DUBUQUE, IOWA AMES, IOWA
E. DUBUQUE, ILLINOIS SPRINGFIELD, ILLINOIS ROCHESTER, MINNESOTA

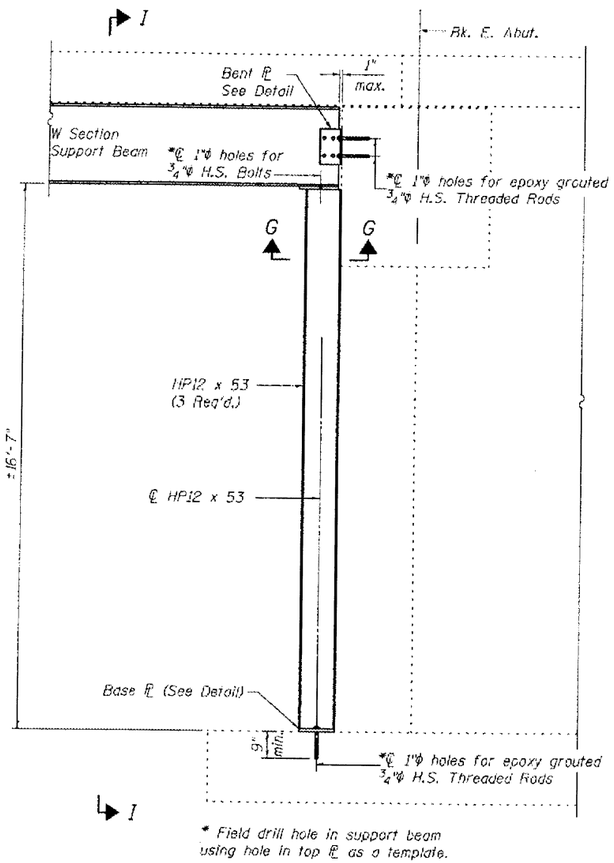
REPAIR DETAILS
US 67 OVER HENDERSON CREEK
MERCER COUNTY
S.N. 066-0004

Filename: L:\Jobs\IDOT BBS\6727 BBS Various Various\6727.09\CADD_Struct\S.N. 066-0004\S.N. 066-0004_rev1.dgn
Date: 1/3/2008
Operator: cvollmer

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

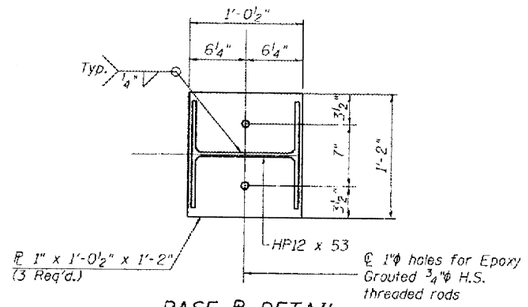
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 310	-	Mercer	11	11A
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
3 SHEETS
Contract # 68766

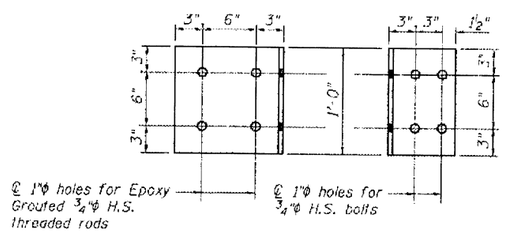


* Field drill hole in support beam using hole in top ℄ as a template.

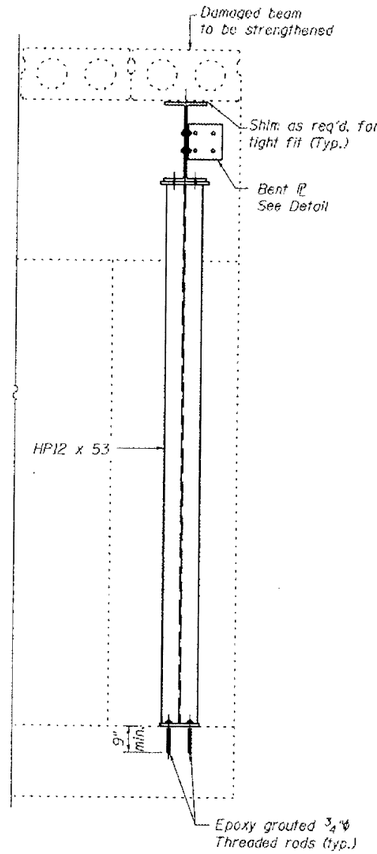
SECTION H-H
(Fascia Beams Only, Both Abutments)



BASE ℄ DETAIL



BENT ℄ ½" x 1'-0" x 1'-7½"
(3 Req'd.)



SECTION I-I

DESIGNED	CMV
CHECKED	SDS
DRAWN	DLH
CHECKED	CMV

WHKS & CO.
ENGINEERS PLANNERS LAND SURVEYORS
MASON CITY, IOWA DUBUQUE, IOWA AMES, IOWA
E. DUBUQUE, ILLINOIS SPRINGFIELD, ILLINOIS ROCHESTER, MINNESOTA

REPAIR DETAILS
US 67 OVER HENDERSON CREEK
MERCER COUNTY
S.N. 066-0004

Filename: L:\Jobs\IDOT BBS\6727 BBS Various Variouss\6727.09\CADD_Struct\S.N. 066-0004\S.N. 066-0004_rev1.dgn Operator: cvollmer Date: 1/3/2008

#88517 #5 11-7-97 FAP 310 Mercer Co. Sec. 101RS-3, 102RS-4, 102XRS-1 Etc. IDR Copy

#5

PROJECT ENGINEER: ERIC THERKILDSEN (309)671-3453

CONSULTANT LIAISON: TERRY RASMUSSEN (309)671-3466

5

FOR INDEX OF SHEETS, SEE PAGE #2

99.9%

7-28-1999

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FAP ROUTE 310 (US 67)
SECTION 101RS-3, 102RS-4, 102XRS-1, (102B)BR, (102B,C)I
PROJECT DPR-ACSTPF-0066(001)
MERCER COUNTY

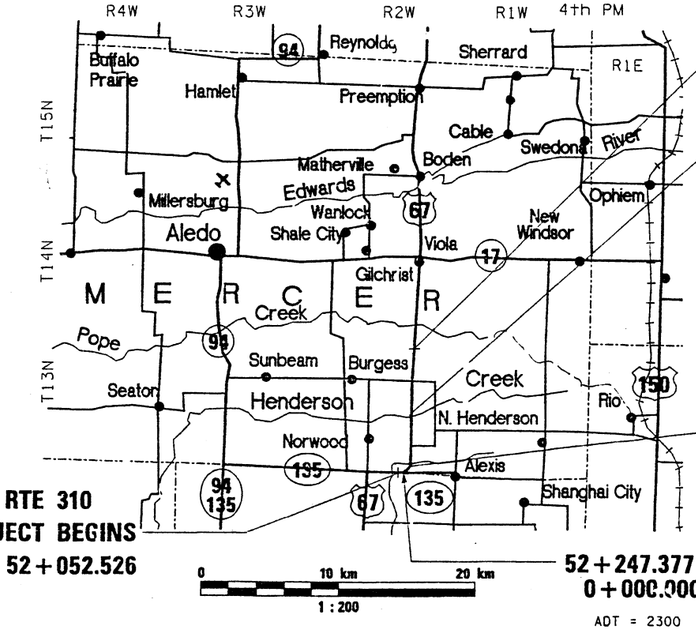
C-94-387-99

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	*	MERCER	256	1
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* 101RS-3,102RS-4,102XRS-1,(102B)BR,(102B,C)I

D-94-112-93

LOCATION OF SECTION INDICATED THUS: -



FAP RTE 310
PROJECT BEGINS
STA 52+052.526

52+247.377 BK =
0+000.000 AH

FAP RTE 310
PROJECT ENDS
STA 7+170.000

SECTION (102B,C) I INCLUDES:
EXISTING BITUMINOUS SURFACE TO BE REMOVED AND REPLACED WITH A CONCRETE WEARING SURFACE ON AN EXISTING TWO SPAN (2 @ 15.2 m) PRECAST PRESTRESSED CONCRETE JECK BEAM STRUCTURE ALONG WITH REPAIRS TO EXISTING DECK AND SUBSTRUCTURE.
BRIDGE STATION 4+059.413
EX STRUCTURE NO. 066-0004

SECTION (102B)BR INCLUDES:
A SINGLE SPAN STRUCTURE CARRYING US ROUTE 67 OVER TOMS CREEK AT STATION 0+658.820 CONSISTING OF PPC BULB TEE AND REINFORCED CONCRETE DECK ON H PILE SUPPORTED INTEGRAL ABUTMENTS.
BRIDGE STATION 0+642.812 TO 0+674.733
PR STRUCTURE NO. 066-0016

N.P.D.E.S. PERMIT REQUIRED
LATITUDE = 41°06' 15"
LONGITUDE =90°35' 30"

ADT = 2300
MU = 15%

QA/QC BITUMINOUS & CONCRETE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 8-20 19 97
D E Rawlings
DISTRICT ENGINEER
_____ 19 ____
ENGINEER OF PROJECT DEVELOPMENT AND IMPLEMENTATION
October 3 19 97
Bill Hinkley
ENGINEER OF DESIGN AND ENVIRONMENT
October 3, 19 97
James C. Shilton
DIRECTOR DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS
4-211

DESIGN DESIGNATION
360 (17) MAJOR 1.79 (COMP-20)

METRIC RATIOS

1 m 0 2 m
1 : 50

0 5 m 10 m
1 : 100

10 m 0 20 m
1 : 250

5 m 0 20 m
1 : 500

0 50 m 100 m
1 : 1000

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.

FOR JOINT UTILITY INFORMATION CALL TOLL FREE
1-800-892-0123

CATALOG NO. 030038-04
CONTRACT NO. 88517
066-0004

SURVEY BOOK NOS.
2763A-2763Z
2763AA-276300

GROSS AND NET LENGTH OF PROJECT: 7.359 km

DARRELD E. SUNMARK
62-20992
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Signed Darreld E Sunmark
DARRELD E. SUNMARK, P.E.
EXPIRES: Nov 30, 1997
Date Aug 13, 1997

MERCER AND WARREN COUNTY SECTION 101RS-3, 102RS-4, 102XRS-1, (102B)BR, (102B,C)I FAP ROUTE 310

BELING CONSULTANTS

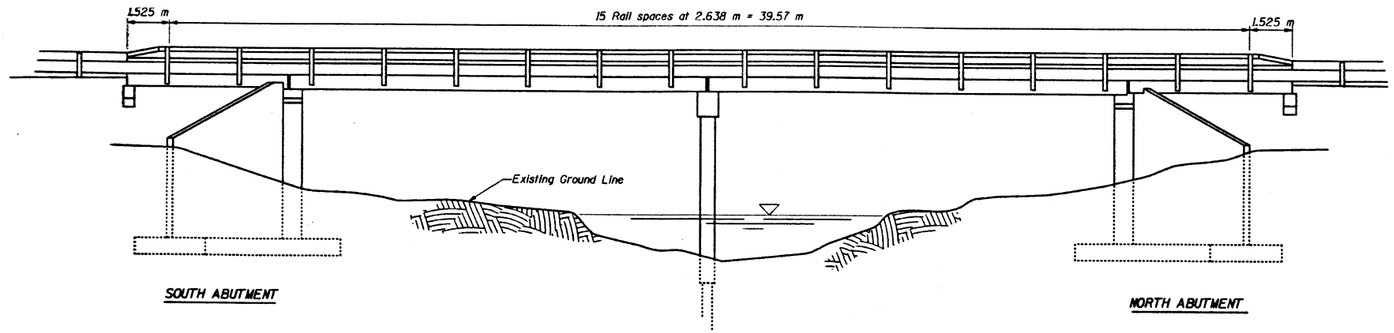
EXISTING STRUCTURE: No. 066-0004

A two (2@15.2 m) Precast Prestressed Concrete Deck Beam bridge on closed concrete abutments and pile bent pier with solid stem.

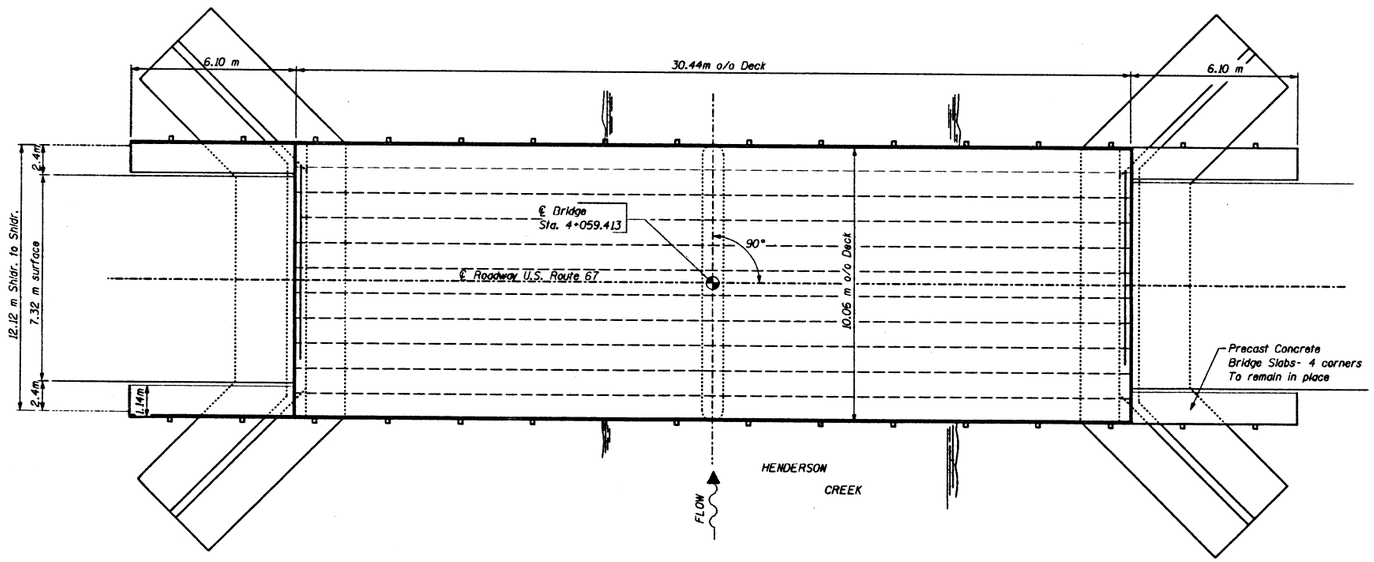
Existing bituminous wearing surface to be removed and replaced with a concrete wearing surface along with repairs to existing deck beams and substructure.

BENCHMARK:

Sta. 4+07.670. 5.486 m Lt. Chiseled square in top of Northwest wingwall of Henderson Creek Bridge = 202.430



ELEVATION
Scale 1:100



PLAN VIEW

BELING CONSULTANTS
Professional Engineering Since 1936
Indiana, S. Columbus, Oh., Davenport, Ia., Chicago, S. Joliet, IL, Peoria, IL Beloit, Wi.

Rev.	Date	Remarks

Designed:	R.E.R.
Drawn:	T.M.C.
Checked:	W.C.T.
Date:	7-31-97

WILLIAM C. THOMPSON JR. 81-3965 REGISTERED STRUCTURAL ENGINEER OF ILLINOIS
8/13/97
Expires: 11/30/98

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U. S. Rt. U.S. 67 F. A. 310	(102B,C)I	MERCER	266	114
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 1
7 SHEETS

GENERAL NOTES:

This structure will retain the same structure number 066-0004.

Reinforcement bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M Grade 400.

All structural steel (deck plates and attached bars) shall be AASHTO M270 Grade 250.

Deck joint plates and attached bars shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type I.

The minimum thickness of the concrete overlay shall be 127mm and varies as required to adjust for existing profile grade and beam camber.

All keyway repair shall be done after sandblasting of deck. Exact locations for keyway repairs will be determined by the Engineer after the bituminous concrete removal. Refer to Special Provisions for description of keyway repair.

Plan dimensions and details relative to exisiting 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.

All dimensions are in millimeters (mm) unless noted otherwise.

BILL OF MATERIAL

	ITEM	UNIT	QUANT.
	Bituminous Concrete Surface Removal Complete	m^2	306
	Preformed Joint Seal 45 mm	m	10
	Concrete Wearing Surface	m^2	306
	Furnishing and Erecting Structural Steel	Kg	1080
	Reinforcement Bars, Epoxy Coated	Kg	3580
	Removing and Re-erecting Existing Railing	m	85
	Polymer Modified Portland Cement Mortar	m^2	1.10
	Epoxy Crack Sealing	m	20.4
*	Concrete Deck Beam Repair	m^2	14.5
*	Keyway Repair	m	150
*	Bearing Pad Ajustment	Each	22
*	Dowel Repair	Each	20

* Estimated Quantity

INDEX OF BRIDGE SHEETS

1 GENERAL PLAN & ELEVATION
2 DECK REPAIRS
3 RAILING REPAIRS
4 CONCRETE DECK BEAM REPAIR
5 ABUTMENT & PIER REPAIRS
6 STAGE CONSTRUCTION
7 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

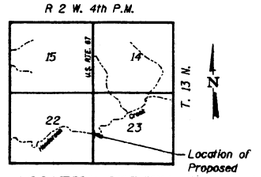
DESIGN STRESSES
(Existing Plans 9/12/69)

PRECAST PRESTRESSED UNITS
f_c = 5,000 psi
f'_c = 4,000 psi
f_s = 248,000 psi (Strands)
f'_s = 173,600 psi (Strands)

FIELD UNITS
f_c = 1000 psi (Original Abut.)
f_c = 1400 psi (Exist.)
f_s = 20,000 psi
v_c = 75 psi
n = 10

LOADING HS20-44

R 2 W. 4th P.M.



LOCATION SKETCH

GENERAL PLAN
U.S. RTE. 67 OVER
HENDERSON CREEK
F.A. RTE. 310 SECTION (102B,C)I
MERCER COUNTY
STATION 4+059.413
STRUCTURE NO. 066-0004

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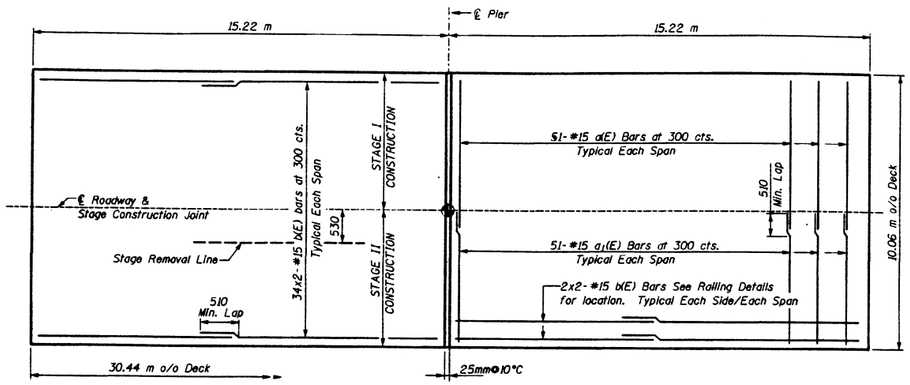
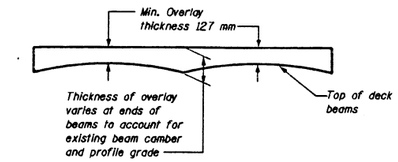
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U. S. Rte. 67 F. A. 310	(102B,C)I	MERCER	266	115
FED. ROAD DIST. NO. 7	ILL. DIVISION	FED. AID PROJECT -		

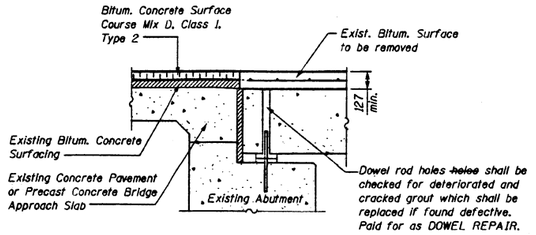
SHEET NO. 2
7 SHEETS



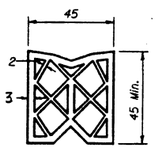
PLAN - CONCRETE WEARING SURFACE



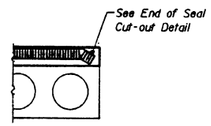
SECTION THRU CONCRETE OVERLAY



PROPOSED SECTION THRU ABUTMENT

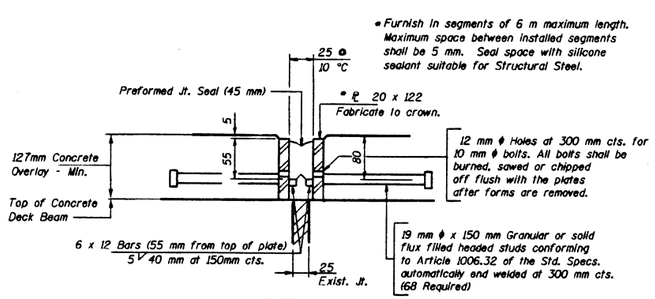


DETAIL "A"



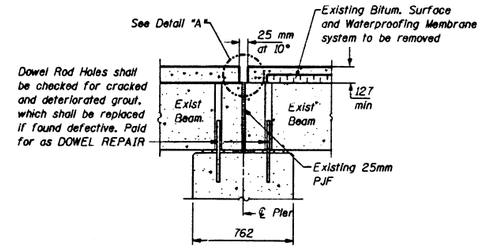
TYPICAL END OF SEAL TREATMENT

SEAL CUT-OUT

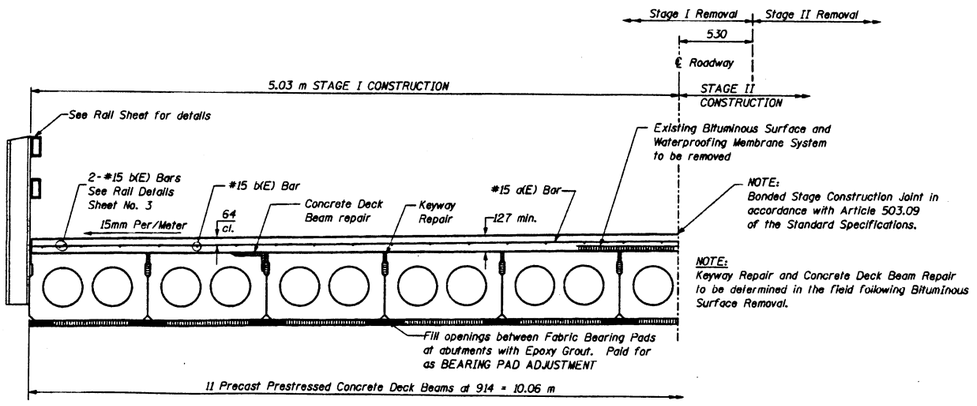


DETAIL A

NOTE:
Steel plates and studs paid for as Structural Steel.



SEC. THRU PIER



HALF SECTION
LOOKING NORTH

BILL OF MATERIAL-DECK

Bar	No.	Size	Length (m)	Shape
a(E)	102	#15	5.65	——
a_1(E)	102	#15	4.98	——
b(E)	152	#15	7.88	——
Concrete Wearing Surface			m^2	306
Reinforcement Bars-Epoxy Coated			kg	3580
Bituminous Concrete Surface Removal Complete			m^2	306
Bearing Pad Adjustment			Ea.	22
Dowel Repair			Ea.	20
Keyway Repair			m	150
Preformed Joint Seal-45 mm			m	10
Furnishing and Erecting Structural Steel			kg	1080

DECK REPAIRS
U.S. RTE. 67 OVER
HENDERSON CREEK
F.A. RTE. 310 SECTION (102B,C)I
MERCER COUNTY
STATION 4+059.413
STRUCTURE NO. 066-0004

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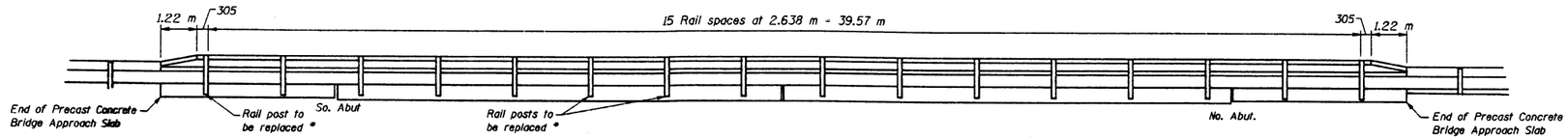
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. 310	(102B,C)1	MERCER	266	116
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

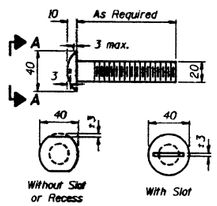
SHEET NO. 3
7 SHEETS



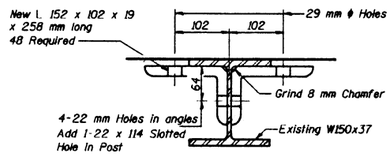
* East Rail Only

ELEVATION RAIL POST SPACING

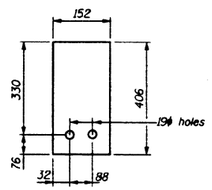
(Looking West)



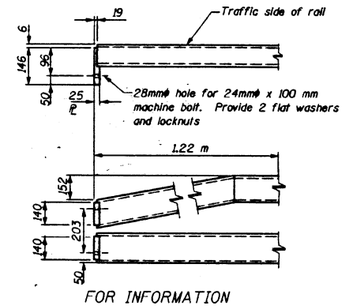
VIEW A-A
ROUND HEAD BOLT



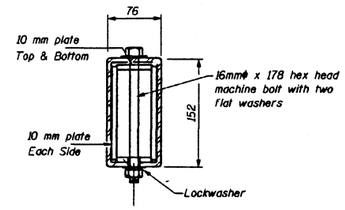
SECTION B-B



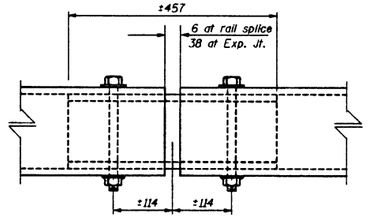
SHIM DETAIL



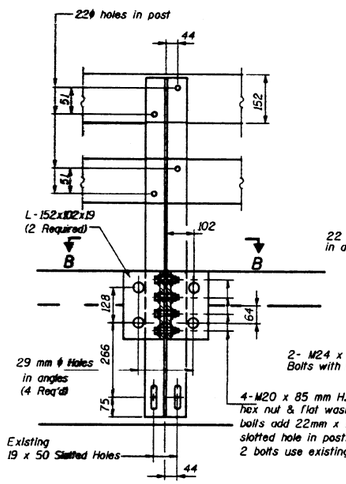
FOR INFORMATION
END OF RAIL DETAIL



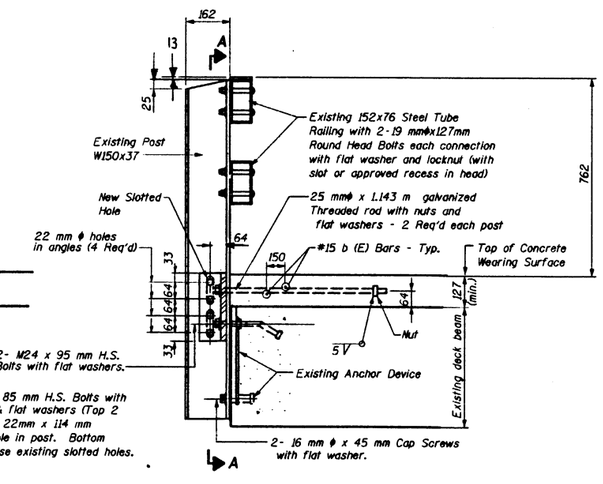
SECTION D-D



FOR INFORMATION
EXISTING RAIL SPLICE



SECTION A-A



SECTION AT RAIL POST

GENERAL NOTES:

The contractor shall remove the existing 150 mm x 75 mm Galvanized steel tubing, W150x37 galvanized posts, stockpile and re-erect the steel tubing on existing or new galvanized steel posts as shown on the plans or determined in the field.

All steel shapes and plates shall conform to the requirements of AASHTO M-270M Grade 250 except posts and angles shall conform to AASHTO M-270M Grade 345.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts. Nuts and washers noted which shall conform to AASHTO M-164M.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All new angles and new posts shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. (Galvanized rail shall not be painted).

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per meter for REMOVING AND RE-ERECTING EXISTING RAILING.

All field drilled holes shall be coated with and approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive a 2 coats of asphalt paint conforming to Section 1060.07 Type II or place 3 mm fabric bearing pad between the post and concrete.

The M20 high strength bolts used to conect the 152x102x19 angles to the post shall be tightened in accordance with Article 505.04(f)(3) of the Standard Specification. The M24 high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional ⅛ turn. The 16mmϕ cap screws in the bottom of posts shall be tightened to a snug fit only.

Contractor shall provide sufficient shims to realign existing railing. The railing shall be re-erected at its original location. Cost of shims to be included in REMOVING AND RE-ERECTING EXISTING RAILING.

REMOVING AND RE-ERECTING EXISTING RAILING includes all removal and re-erecting of existing steel tubing and posts, furnishing and erecting new posts as required, all bolts, nuts, washers, shim plates, and angles.

Contractor to provide all new bolts, cap screws and nuts, and washers for the re-erecting of the existing railing. Existing steel posts and angles shall be replaced with new steel posts and angles as shown. Rail elements and posts that are damaged during removal or storage or that are otherwise unsatisfactory for re-erection shall be replaced. Those damaged during removal or storage shall be replaced by the Contractor at his/her own expense.

All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

Item	Unit	Quantity
Removing and Re-erecting Existing Railing	m	85

RAILING REPAIRS

U.S. RTE. 67 OVER
HENDERSON CREEK
F.A. RTE. 310 SECTION (102B,C)1
MERCER COUNTY
STATION 4+059.413
STRUCTURE NO. 066-0004

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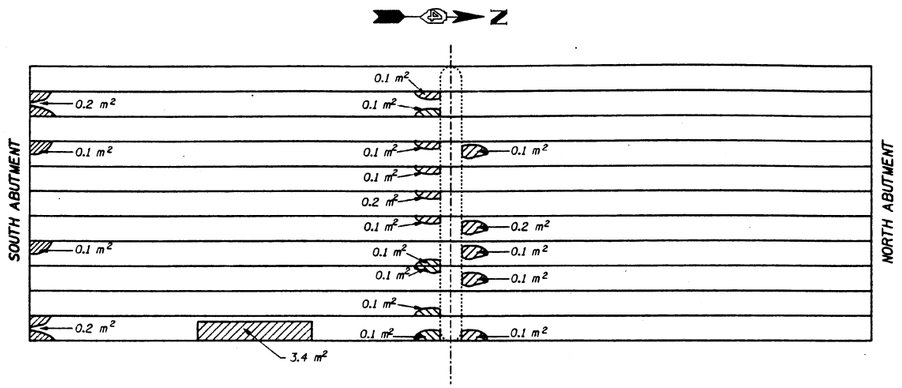
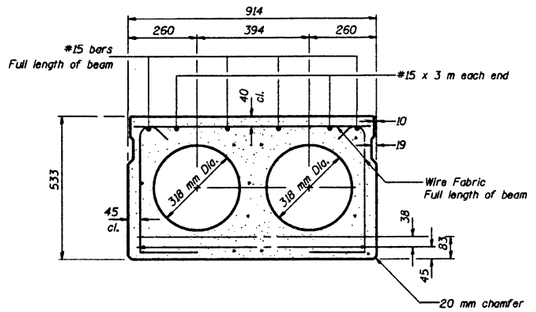
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. U.S. 67 F.A. 310	(102B,C)I	MERCER	266	117
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

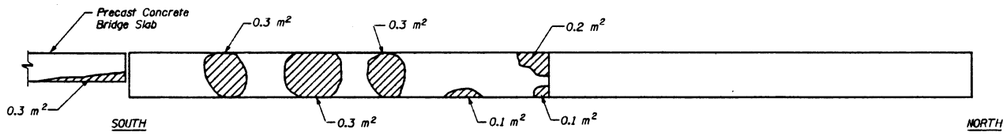
SHEET NO. 4
7 SHEETS



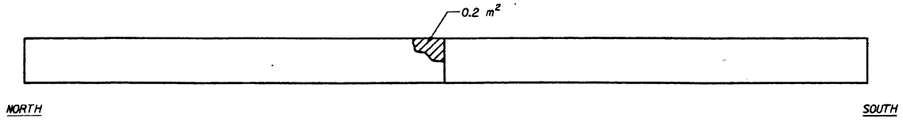
UNDER DECK PLAN



TYPICAL SECTION - DECK BEAMS
FOR INFORMATION



EAST ELEVATION - DECK BEAMS



WEST ELEVATION - DECK BEAMS

BILL OF MATERIAL

Item	Unit	Quantity
Concrete Deck Beam Repair	m^2	14.5

Estimate 7.0 square meters of Concrete Deck Beam Repair on the top of the deck beams

CONCRETE DECK BEAM REPAIR
U.S. RTE. 67 OVER
HENDERSON CREEK
F.A. RTE. 310 SECTION (102B,C)I
MERCER COUNTY
STATION 4+059.413
STRUCTURE NO. 066-0004

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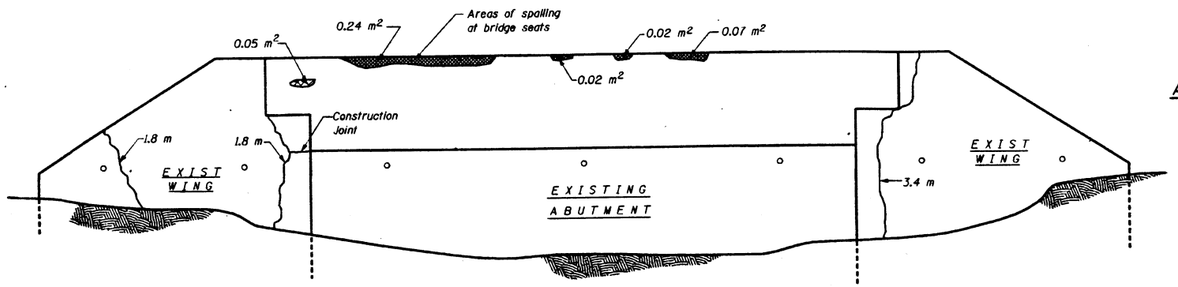
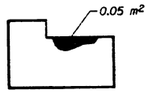
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S.R. U.S. 67 F.A. 310	(102B,C)I	MERCER	266	118
FED. ROAD DIST. NO. 7	S.P. NUMBER	FED. AID PROJECT		

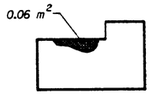
SHEET NO. 5
7 SHEETS



SOUTH ABUTMENT
LOOKING SOUTH



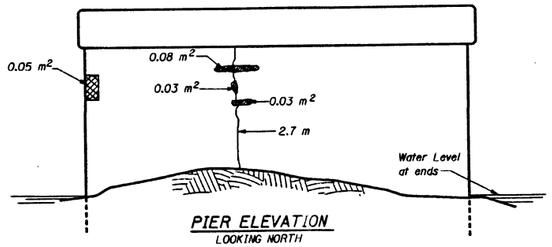
ABUTMENT CAP
S.E. CORNER



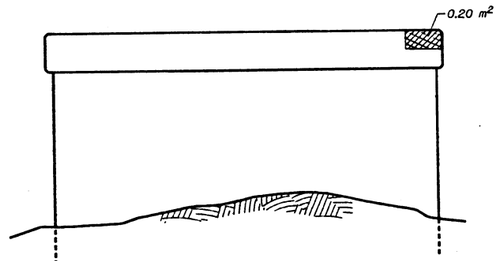
ABUTMENT CAP
S.W. CORNER

TABLE OF REPAIR

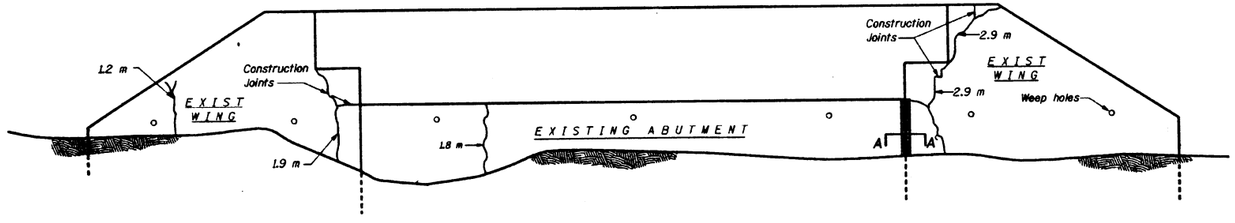
Location	Epoxy Crack Sealing	Polymer Modified Portland Cement Mortar
So. Abut.	7.0 m	0.51 m²
No. Abut.	10.7 m	0.20 m²
Pier	2.7 m	0.39 m²
Totals	20.4 m	1.10 m²



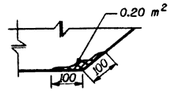
PIER ELEVATION
LOOKING NORTH



PIER ELEVATION
LOOKING SOUTH



NORTH ABUTMENT
LOOKING NORTH



SECTION A-A

BILL OF MATERIAL

Item	Unit	Quantity
Epoxy Crack Sealing	Meter	20.4
Polymer Modified Portland Cement Mortar	m²	1.10

LEGEND

Polymer Modified Portland Cement Mortar

Epoxy Crack Sealing

ABUTMENT AND PIER REPAIRS
U.S. RTE. 67 OVER
HENDERSON CREEK
F.A. RTE. 310 SECTION (102B,C)I
MERCER COUNTY
STATION 4+059.413
STRUCTURE NO. 066-0004

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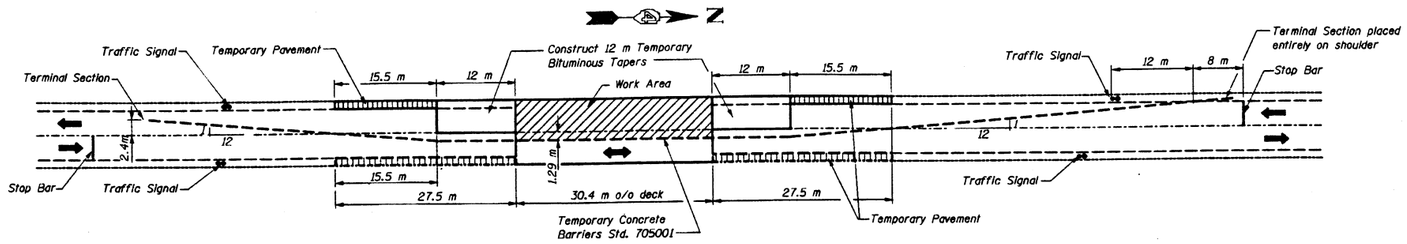
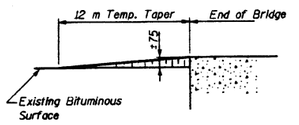
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 67 F.A. 310	102B.C1	MERCER	266	119
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
7 SHEETS

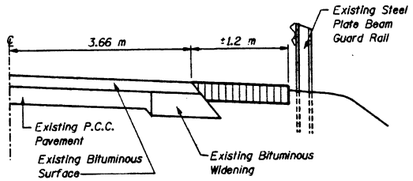


STAGE I CONSTRUCTION

1. Construct Bituminous Base Course Widening on East side using Standard 701326.
2. Install Standard 701321 at location shown. Place barriers in Stage I alignment. Use Standard 701301 for traffic control.
3. Move traffic to Stage I Traffic Lanes.
4. Complete Stage I repairs.
5. Place Temporary Bituminous Tapers each end and Temporary Pavement as shown



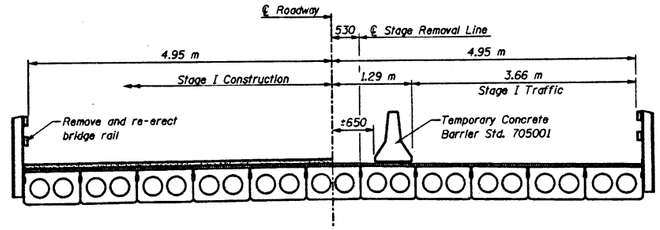
TEMPORARY BITUMINOUS TAPER



BITUMINOUS CONCRETE BASE COURSE WIDENING

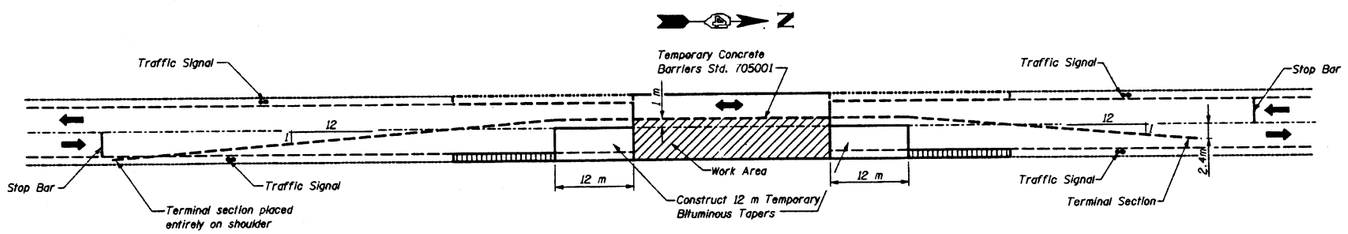
GENERAL NOTES:

Contractor to install a "TO ACTUATE SIGNAL" sign for the traffic signal loops. This work will be included in the cost of TRAFFIC CONTROL AND PROTECTION STANDARD 701321.



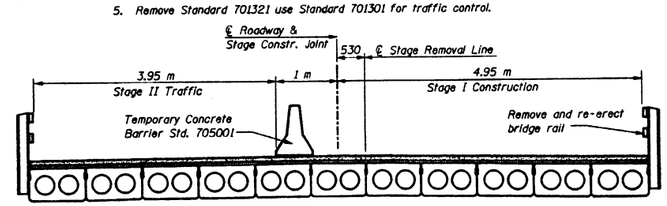
SECTION THRU STRUCTURE
LOOKING NORTH

STAGE I



STAGE II CONSTRUCTION

1. Relocate barriers to Standard 701321, Stage II. Use Standard 701301 for traffic control.
2. Move traffic to Stage II traffic lanes
3. Complete Stage II repairs.
4. Place Temporary Bituminous Tapers each end.
5. Remove Standard 701321 use Standard 701301 for traffic control.



SECTION THRU STRUCTURE
LOOKING NORTH

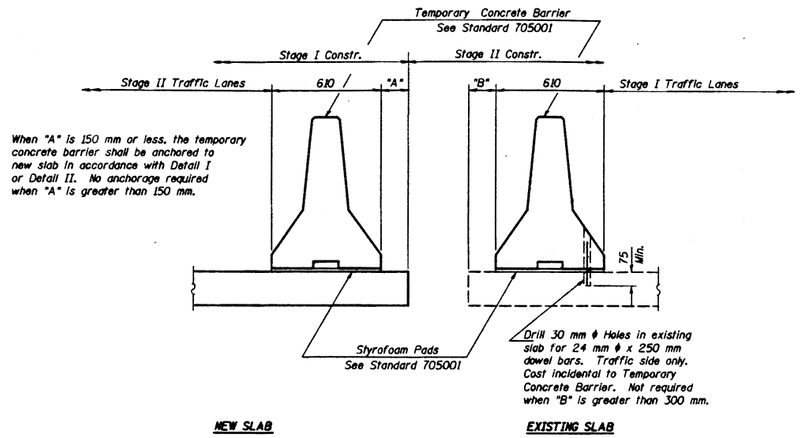
STAGE II

STAGE CONSTRUCTION

U.S. RTE. 67 OVER
HENDERSON CREEK
F.A. RTE. 310 SECTION (102B,C)I
MERCER COUNTY
STATION 4+059.413
STRUCTURE NO. 066-0004

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. R. L. U.S. 67 F. A. 310	(102B,C)I	MERCER	266	120
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
7 SHEETS



NOTES

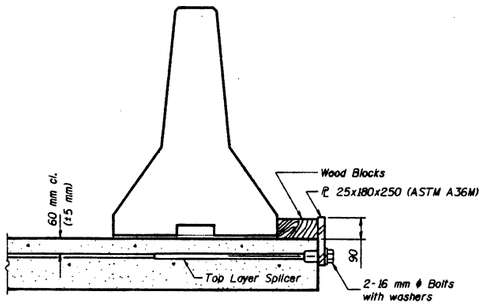
Detail I - With Bar Splicer or Couplers:
Connect one (1) 25x180x250 steel ℄ to the top layer of couplers with 2-16 mm ϕ bolts screwed to coupler at approximate ℄ of each 3 m barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 25x180x250 steel ℄ to the concrete slab with 2-16 mm ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each 3 m barrier panel.

Cost of anchorage is incidental to Temporary Concrete Barrier.

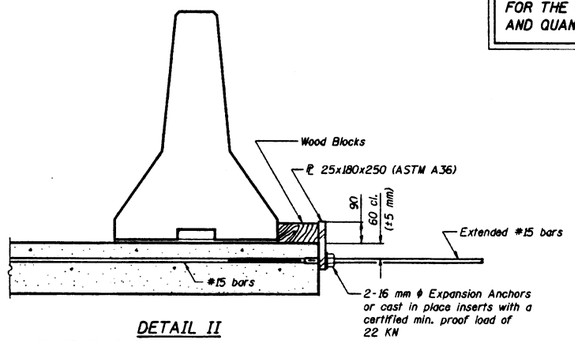
All dimensions are in millimeters (mm) except as noted.

SECTIONS THRU SLAB



DETAIL I

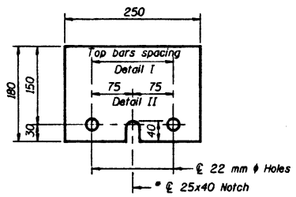
The 25x180x250 Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 25x180x250 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.

FOR THE CONCRETE BARRIER PAY ITEM AND QUANTITY, SEE ROADWAY PLANS



℄ 25x180x250

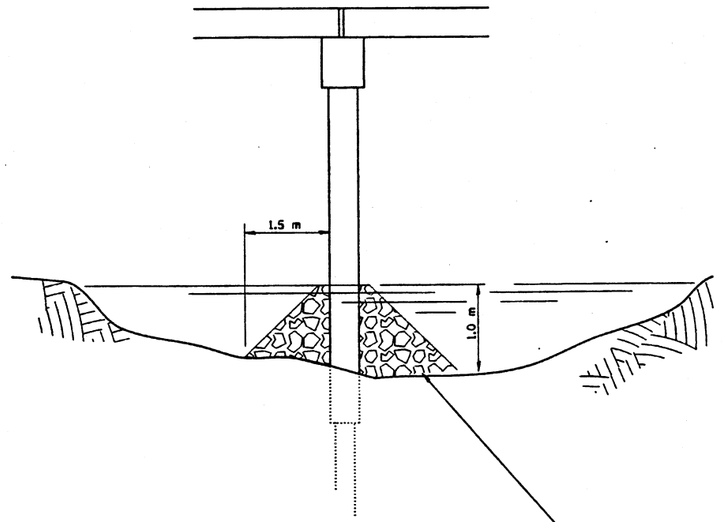
* Required only with Detail II

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

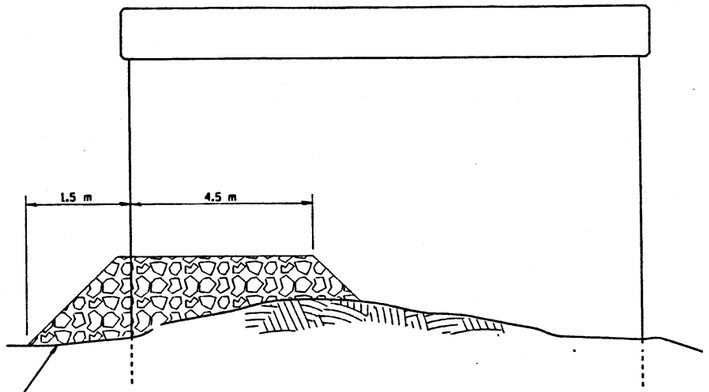
U.S. RTE. 67 OVER
HENDERSON CREEK
F.A. RTE. 310 SECTION (102B,C)I
MERCER COUNTY
STATION 4+059.413
STRUCTURE NO. 066-0004

C:\rt067\hender\barrier.dgn Aug. 05, 1997 10:33:37

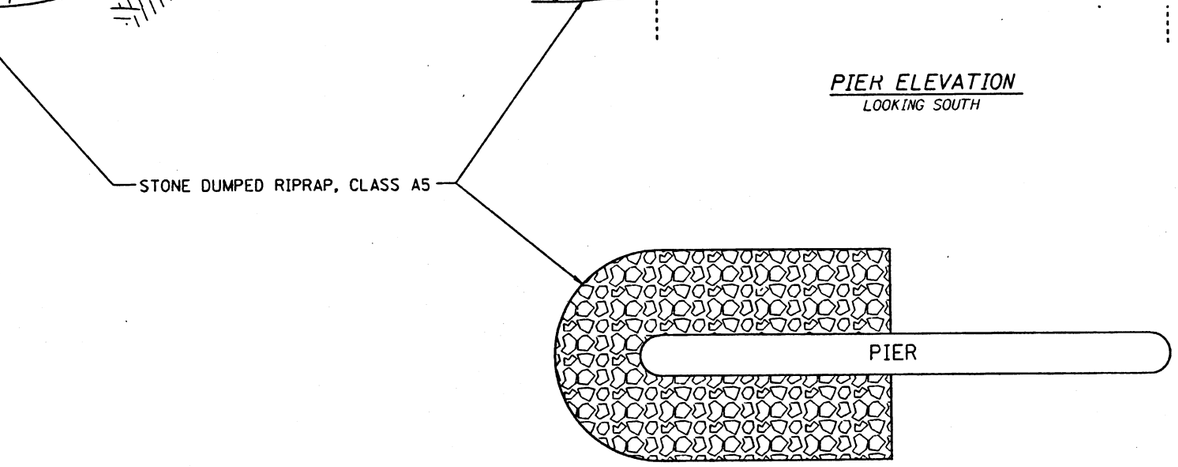
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 67 & U.S. 30	102B,C)I	MERCER	266	120A
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT -	



ELEVATION
LOOKING WEST



PIER ELEVATION
LOOKING SOUTH



PLAN VIEW

ITEM	QUANTITY
STONE DUMPED RIPRAP, CLASS A5	15 M TON

SCOUR PROTECTION
HENDERSON CREEK
F.A. RTE. 310 SECTION (102B,C)I
MERCER COUNTY
STATION 4+059.413
STRUCTURE NO. 066-0004

SET 1 OF 2 SETS

BOND ISSUE ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO
85	102 BR 103 BR	MERCER	31	1
FED ROAD DIV NO 4	ILLINOIS	PROJECT		

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

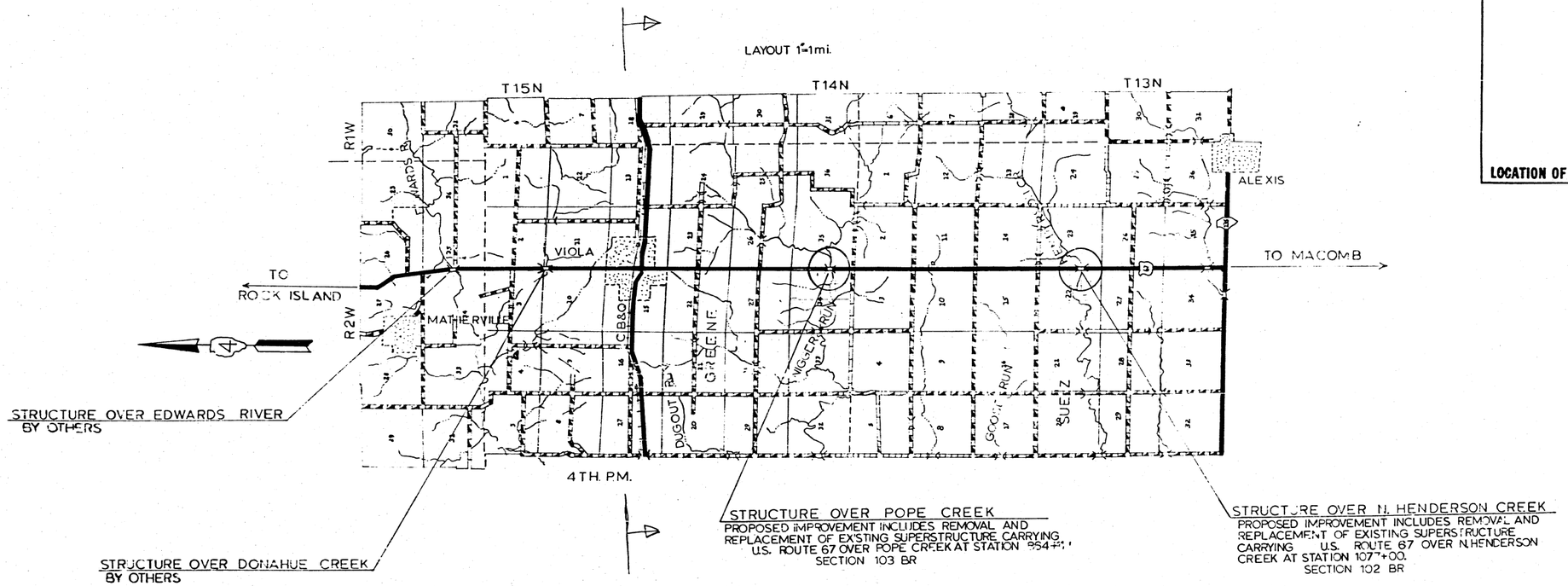
SCALES			
	PLAN	1 INCH	100 FT.
	PROFILE, HOR.	1 INCH	100 FT.
	PROFILE, VERT.	1 INCH	10 FT.
	CROSS-SECTIONS	1 INCH	5 FT.

SBI ROUTE 85
SECTIONS 102 BR & 103 BR
MERCER COUNTY

P-84-105-69

LOCATION OF SECTION INDICATED THUS:—

INDEX: SEE SHEET NO. 2



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

SUBMITTED 9-12-, 1967
W. H. Harland
DISTRICT ENGINEER

EXAMINED 9/66, 1968
A. M. Womack
ENGINEER OF ROAD CLAIMS AND CONTRACTS

PASSED 9/26, 1968
[illegible]
ENGINEER OF DESIGN

APPROVED 9/66, 1968
[illegible]
CHIEF HIGHWAY ENGINEER

APPROVED 9/26, 1968
Wm. M. Kelly
DIRECTOR

LENGTH OF IMPROVEMENT

SECTION 102 BR	440.00 ft = 0.083 mi.
SECTION 103 BR	440.00 ft. = 0.083 mi.

Reel 4-91
Sec 102 BR
STA: 1077+00

066-0004

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	102 BR	103 BR
	CONSTRUCTION TYPE CODE		X080	X080	X050
202001	EARTH EXCAVATION	CU YD	13,027	8,875	4,152
202067	GRADING EXISTING SHOULDERS	UNIT	8.0	4.0	4.0
204001	BORROW EXCAVATION	CU YD	15,623	10,642	4,981
301001	AGGREGATE BASE COURSE TYPE A	TON	1,114	557	557
405003	BITUMINOUS MIXTURE COMPLETE	TON	446	223	223
406005	LEVELING BINDER (MACHINE METHOD)	TON	20	20	-
406007	BITUMINOUS CONCRETE BINDER COURSE	TON	148	74	74
406008	BITUMINOUS CONCRETE SURFACE COURSE, CLASS I	TON	138	69	69
408005	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	68	34	34
408013	PAVEMENT FABRIC	SQ YD	68	34	34
501015	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	2	1	1
501022	CONCRETE REMOVAL	CU YD	30.0	15.0	15.0
501026	EXPANSION BOLTS 3/4 INCH	EACH	104	52	52
504003	CLASS X CONCRETE	CU YD	148.6	74.3	74.3
505001	PRECAST CONCRETE BRIDGE SLAB	SQ FT	598	299	299
505005	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	6,584	3,292	3,292
508008	STEEL RAILING, TYPE N	LIN FT	560	280	280
512001	REINFORCEMENT BARS	POUND	16,380	8,190	8,190
513009	FURNISHING METAL PILE SHELLS 12"	LIN FT	960	480	480
513025	DRIVING AND FILLING SHELLS	LIN FT	960	480	480
513031	TEST PILE METAL SHELLS	EACH	2	1	1
620026	PAVEMENT REMOVAL AND P.C.C. REPLACEMENT, TYPE II,10 INCH	SQ YD	16	8	8
628001	STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL	LIN FT	800	400	400
633003	STEEL PLATE BEAM GUARD RAIL REMOVAL	LIN FT	300	150	150
X03909	SALVAGED AGGREGATE	UNIT	12	6	6
636007	STOCK-PILING SALVAGED AGGREGATE	CU YD	282	141	141
638004	TEMPORARY BRIDGE COMPLETE (STA.1077+00)(NO.3)	EACH	1	1	1
X63801	TEMPORARY BRIDGE COMPLETE (STA.864+00)NO.4)	EACH	1		1
XZ1068	TEMPORARY PAVEMENT MARKING INTERMITTENT	STATION	22	11	11
XZ1086	BASE COURSE WIDENING, TYPE I	UNIT	4.8	1.6	3.2
XZ1101	TRAFFIC CONTROL AND PROTECTION, STANDARD 2310	L SUM	2	1	1
Z10178	COAL-TAR INTERLAYER PROTECTIVE COAT	SQ YD	730	365	365

INDEX

SHEET NO.		TITLE	
1		COVER SHEET	
2		INDEX, SUMMARY OF QUANTITIES, QUANTITIES NOT OTHERWISE SHOWN	
		SECTION 102 BRIDGE PLANS	
3		PLAN AND PROFILE SHEET	SHEET NO.
4		GENERAL PLAN AND ELEVATION	1
5		PIER BENT	2
6		NORTH AND SOUTH ABUTMENTS	3
7		SUPERSTRUCTURE DETAILS	4
8		APPROACH DETAILS	5
9		TYPE N STEEL RAILING	6
10-12		X-SECTIONS DETOUR ROAD	
		SECTION 103 BRIDGE PLANS	
13		PLAN AND PROFILE SHEET	SHEET NO.
14		GENERAL PLAN AND ELEVATION	1
15		PIER BENT	2
16		NORTH AND SOUTH ABUTMENTS	3
17		SUPERSTRUCTURE DETAILS	4
18		APPROACH DETAILS	5
19		TYPE N STEEL RAILING	6
20-21		X-SECTIONS DETOUR ROAD	
22		PAVEMENT STRUCTURE AND TYPICAL SECTIONS SECTION 102 BR &103 BR	
		STANDARDS	
23	1686-3	SYMBOLS AND ABBREVIATIONS	
24	2115-3	PAVEMENT FABRIC, TYPE A AND TYPE B	
25		**DELETED**	
26	2230-3	STEEL PLATE BEAM GUARDRAIL	
27	2231-3	TYPICAL APPLICATIONS OF STEEL PLATE BEAM GUARDRAIL	
28	2298-I	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE	
29	2299-I	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE	
30	2300	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE	
31	2310-I	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE	

Above Standards are included after Set No. 2

QUANTITIES NOT OTHERWISE SHOWN

	BRIDGE OVERLAY		APPROACH OVERLAY		SUB TOTAL		TOTAL
	102 BR	103 BR	102 BR	103 BR	102 BR	103 BR	
LEVELING BINDER (MACHINE METHOD)	——	——	20	——	20	——	20
BITUMINOUS CONCRETE BINDER COURSE	21	21	53	53	74	74	148
BITUMINOUS CONCRETE SURFACE COURSE, CLASS I	21	21	48	48	69	69	138

GRADING EXISTING SHOULDERS

			UNITS
SEC 102 BR			
NORTH END	LT&RT		2.0
SOUTH END	LT&RT		2.0
			4.0
SEC 103 BR			
NORTH END	LT&RT		2.0
SOUTH END	LT&RT		2.0
			4.0
		TOTAL	8.0 UNITS

STEEL PLATE BEAM GUARD RAIL

		LIN.FT.
SEC 102 BR		
100 EACH CORNER		400'
SEC 103 BR		
100 EACH CORNER		400'
	TOTAL	800' LIN.FT.

TEMPORARY PAVEMENT MARKING INTERMITTENT

SECTION 102 BR	45 STATIONS
SECTION 103 BR	45 STATIONS
	90 STATIONS MAINLINE
SECTION 102 BR	6.5 STATIONS
SECTION 103 BR	6.5 STATIONS
	13.0 STATIONS DETOUR
TOTAL	22.0 STATIONS

AGGREGATE SHOULDERS, TYPE B

		UNITS
SEC 102 BR		
NORTH END	LT&RT	3.0
SOUTH END	LT&RT	3.0
		6.0
SEC 103 BR		
NORTH END	LT&RT	3.0
SOUTH END	LT&RT	3.0
		6.0
	TOTAL	12.0 UNITS

(USE SALVAGED AGGREGATE)

SEC 103 BR
BASE COURSE WIDENING, TYPE I

NORTH END	LT&RT	1.6 UNITS *
SOUTH END	LT&RT	1.6 UNITS *
	TOTAL	3.2 UNITS *

SEC 102 BR
BASE COURSE WIDENING, TYPE I

NORTH END	LT&RT	1.6 UNITS *
	TOTAL	1.6 UNITS *

* 100 LIN FT (ONE SIDE) = 1 UNIT

DETOUR QUANTITIES

	102BR	103BR
AGGREGATE BASE COURSE TYPE A 1222 SQ YDS X 8" THICK X 2.05/36 = 557 TONS	557 TONS	557 TONS
BITUMINOUS MIXTURE COMPLETE (PRIME COST 0.3 GALLON PER SQ YD TO BE USED) 1222 SQ YDS X 2" X 112/2000 = 137 TONS	137 TONS	137 TONS
40% OF AGGREGATE BASE COURSE TYPE A TO BE SALVAGED = 223 TONS	223 TONS	223 TONS
SALVAGED AGGREGATE (TO BE USED AS AGGREGATE SHOULDER TYPE B) LENGTH 600' 54 TONS TO BE USED FOR BOTH SIDES 6 UNITS	6 UNITS	6 UNITS
STOCK-PILING SALVAGED AGGREGATE (223 TONS - 54 TONS) X 2000/2400 = 141 CU. YDS.	141 CU YDS	141 CU YDS

SUBMITTED Sept. 9, 1969
E. L. Sanders
Dist. Design Engr.

EXAMINED Aug. 28, 1969
A.E. Burnham
Dist. Const. Engr.

EXAMINED August 15, 1969
Harry S. Boutin
Dist. Maint. Engr.

EXAMINED 9/10/69
V.T. Bann
Dist. Traffic Engr.

Entire Section inspected and approved as to policy

DATE 9-12-69 W.H. Garland
District Engineer

Rev. Stds. & Delete Std 2308 3-26-70
Revise Temp. Br. Compl

STRUCTURE OVER N. HENDERSON CREEK
SEC. 102 BR

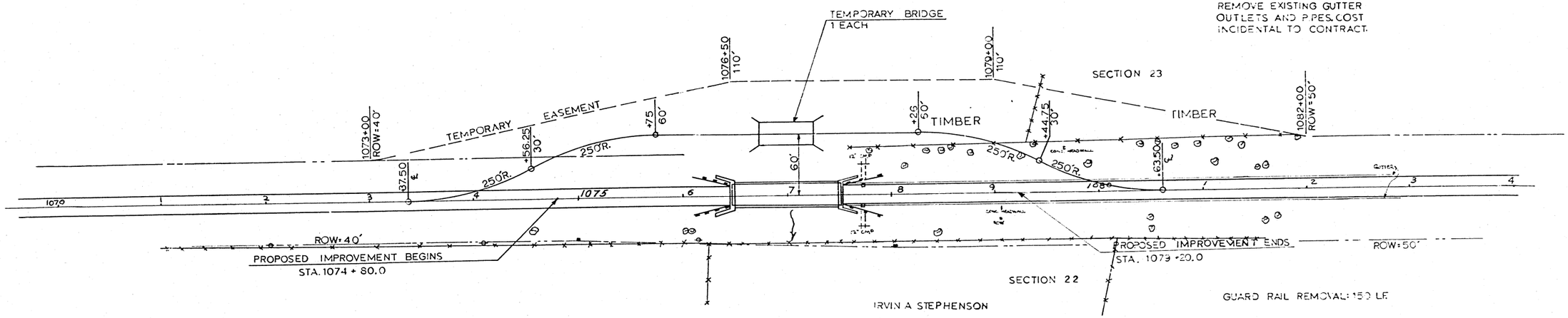
T13N R2W 4th PM

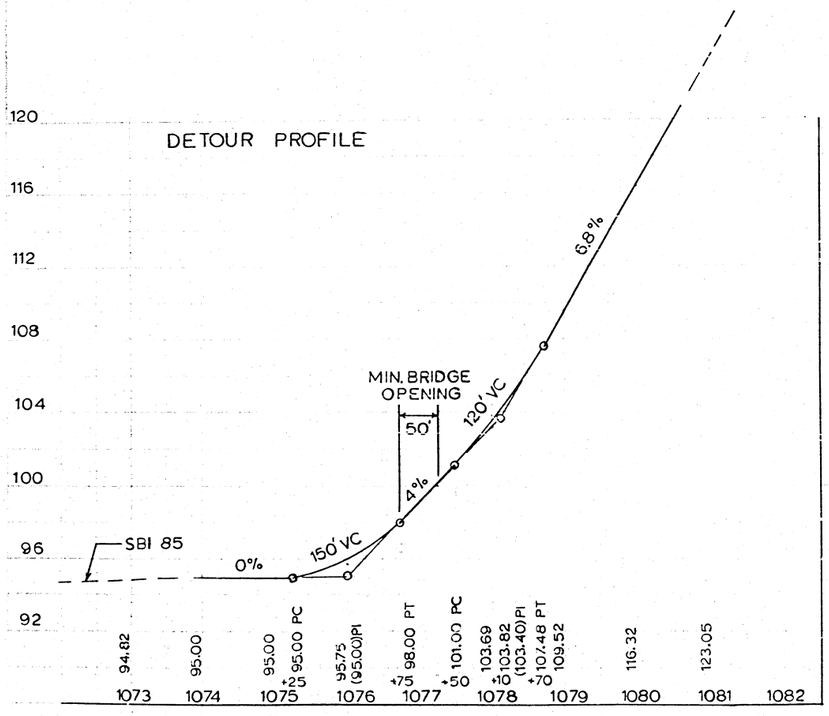
EMMA OLSON

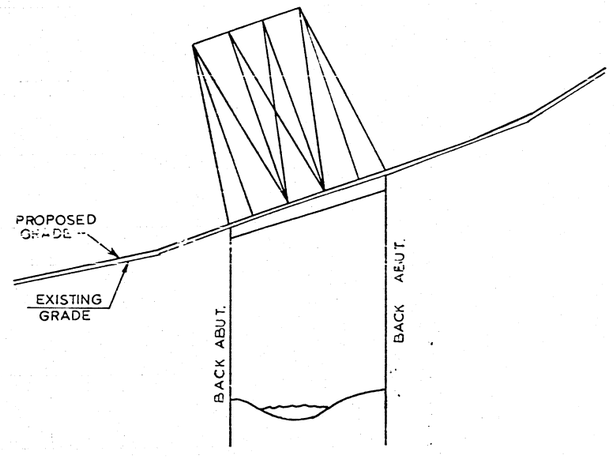
4

SB185	*	MERCER	31	3

*SECTION 102 BR







96.2 96.53	97.2 97.48	98.4 98.67	100.01 100.30	101.8 102.04	103.5 103.78	105.2 105.46	107.5 107.76	110.3 110.56
1075	+50	1076	+48.9	1077	+51.1	1078	+50	1079

110
105
100
95

SUMMARY OF EARTHWORK		
	DETOUR CONST.	DETOUR REMOVAL
EARTH EXCAVTION	44	8831
EARTH EMBANKMENT	8331	—
BORROW EXCAVATION	13,842	—
WASTE	—	8778

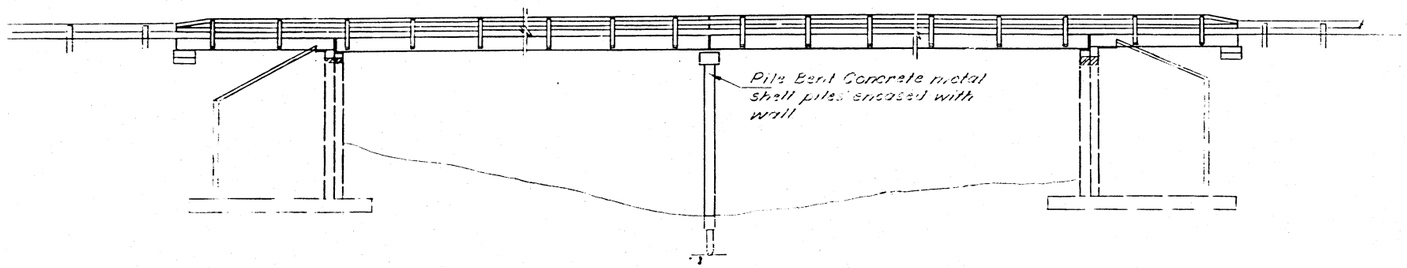
Built as Section 102 C, SBI Rt 85 1931

Existing Structure:
Closed Reinforced Conc Abutments to remain in place and 100'span steel truss (18'0" Roadway) Superstructure to be removed

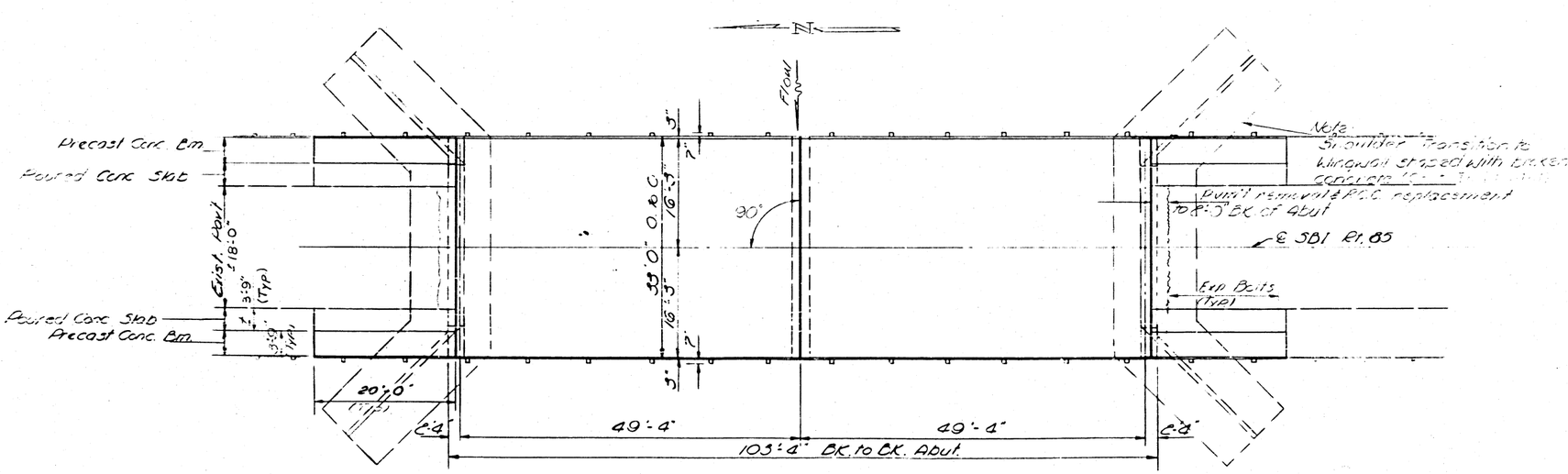
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 85	102BR, 103BR	MERCER	31	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 1
SHEETS



ELEVATION



PLAN

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

An alternate strand pattern using Extra High Strength Prestressing strand (270 K.S.I.) is permitted.

The Contractor shall drive one Metal Shell Test pile in a permanent location at the pier bent as directed by the Engineer before ordering the remainder of piles.

Reference Grade line is the profile grade line along ℄ S.B.I. Rt 85. (Top of PCC Pavement)

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Portland Cement Conc. Pvt. (10")	Sq. Yds	34		34
Pavement Fabric	Sq. Yds	34		34
Removal of Existing Superstructure	Ea.			1
Concrete Removal	Cu. Yds		15.0	15.0
Expansion Bolts (3/4"ø)	Ea.	52		52
Class X Concrete	Cu. Yds		74.3	74.3
Precast Concrete Bridge Slab	Sq. Ft.	299		299
Steel Railing, Type 1	Lin. Ft.	295		295
Reinforcement Bars	Lbs.		9130	9130
Pvm't Remv'l & PCC Replm't Type B (10")	Sq. Yds			8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	329		329
Metal Shell Piles (13ø)	Lin. Ft.			45
Test Piles (Metal Shell 13ø)	Ea.			1
Coal Tar Impervious Protective Coat	Sq. Yds			

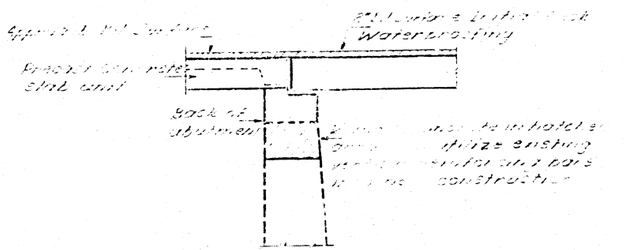
PRECAST PRESTRESSED UNITS

f'c = 5,000 psi
f'ci = 4,000 psi
f's = 248,000 psi (Strands)
f'si = 173,000 psi (Strands)

FIELD UNITS

f'c = 1000 psi
f'ci = 1200 psi
f's = 20000 psi
fc = 75 psi
n = 10

LOADING



SECTION THRU NEW ABUTMENT CAP

DESIGNED	
CHECKED	A. A. Humandi
DRAWN	J. Kessler
CHECKED	A. A. Humandi

Nov 3 1933
EXAMINED A. E. Furman
DIVISION OF BRIDGES AND TRAFFIC ENGINEERING
PASSED
DIVISION OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

GENERAL PLAN & ELEVATION
S.B.I. RT. 85 OVER NO. HENDERSON CR
S.B.I. RT. 85 SEC. 102 BR
MERCER COUNTY
STATION 1077+00.

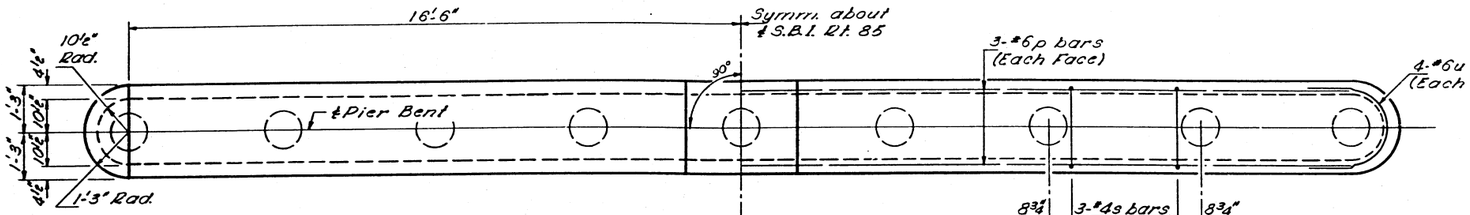
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1085	102 BR 103 BR	MERCER	31	5
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
6 SHEETS

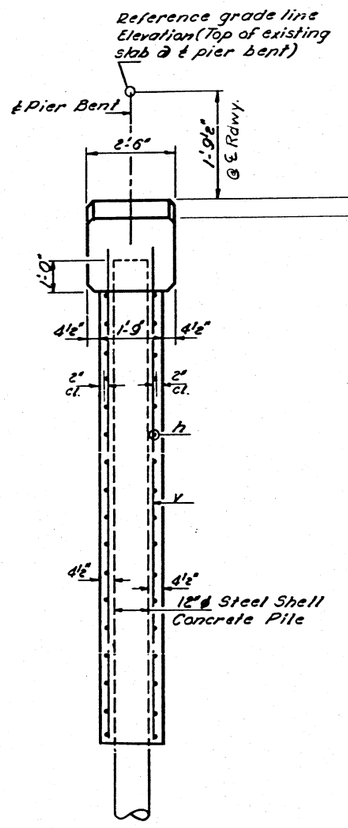
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PILE DATA

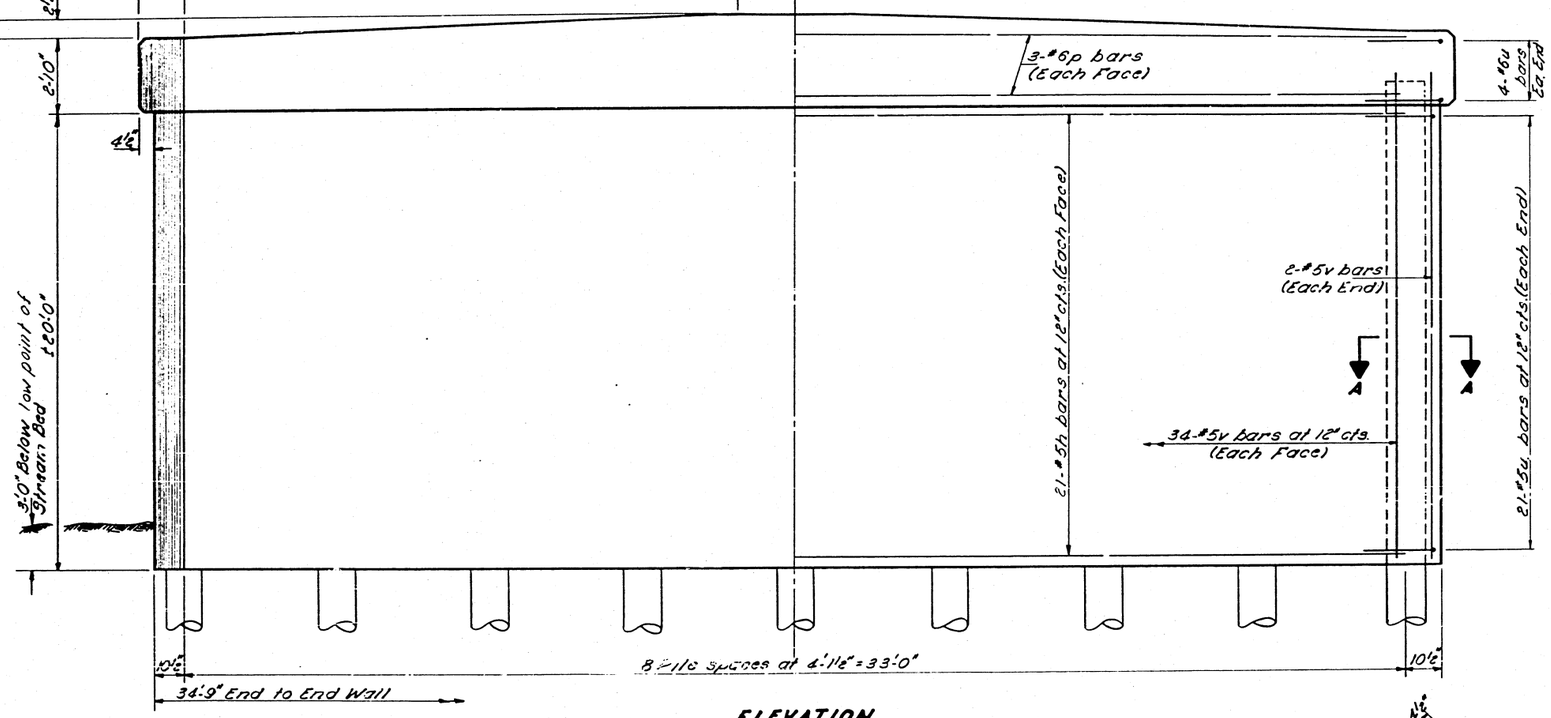
Type: 12"ø Steel Shell cast in place Concrete Pile
Capacity: 38 Tons
Est. Lgth.: 60'
No. Req'd.: 8 plus 1 test pile in a permanent location.



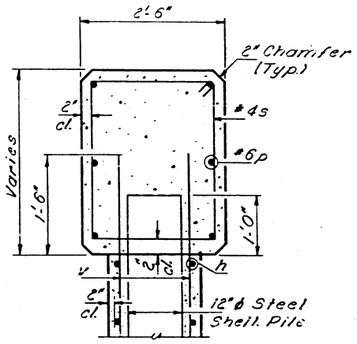
PLAN



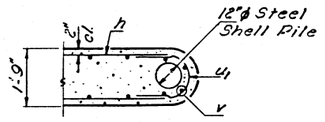
END VIEW



ELEVATION



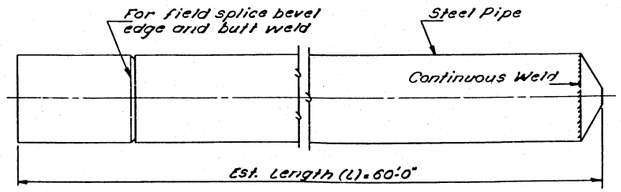
TYP. SECTION THRU CAP



SECTION A-A

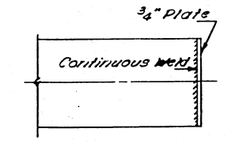
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	42	#5	33'-0"	—
p	6	#6	33'-0"	—
s	24	#4	10'-1"	⊏
u	8	#6	6'-9"	⊐
u1	42	#5	4'-9"	⊐
v	72	#5	21'-9"	—
Class X Concrete			Cu. Yds.	48.5
Reinforcement Bars			Lbs.	3790
Metal Shell Piles (12"ø)			Lin. Ft.	480
Test Piles Met. Shell (12"ø)			Each	1

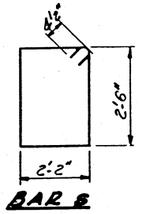


Note: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be .1793 inches with a tolerance of 5%.

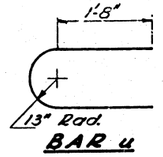
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



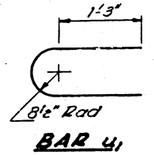
OPTIONAL FLAT END



BAR s



BAR u



BAR u1

DESIGNED	Jesse McCormick
CHECKED	R.A. Hunnicutt
DRAWN	J. Kessler
CHECKED	R.A. Hunnicutt

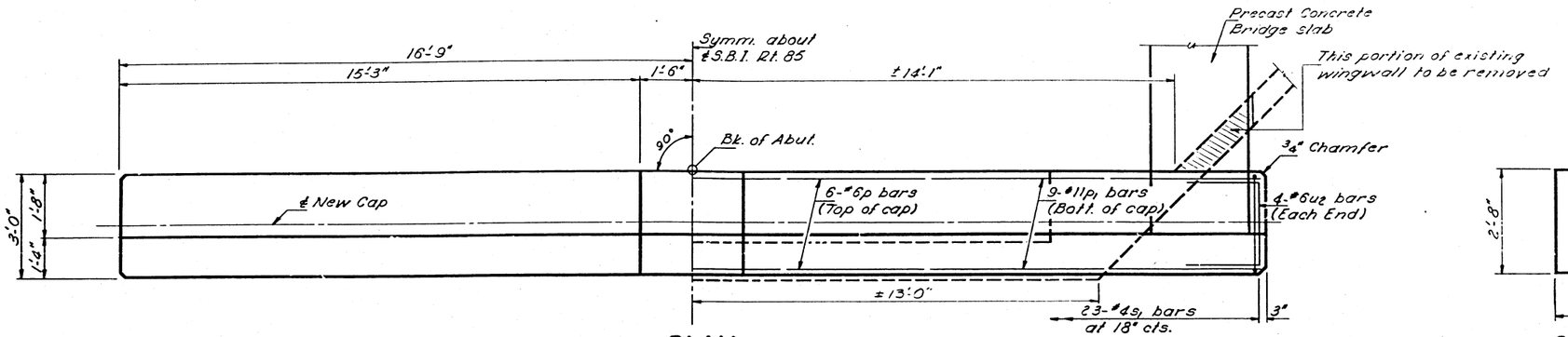
July 3 1969
EXAMINED Earl E. Timmerman Jr
DIRECTOR OF HIGHWAYS
PASSED
ENGINEER OF BRIDGES
APPROVED
CHIEF HIGHWAY ENGINEER

PIER BENT
S.B.I. RT. 85 SEC. 102 BR
MERCER COUNTY
STATION 1077+00

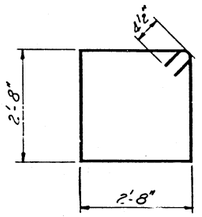
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 85	102BR 103BR	MERCER	31	6
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 3
6 SHEETS

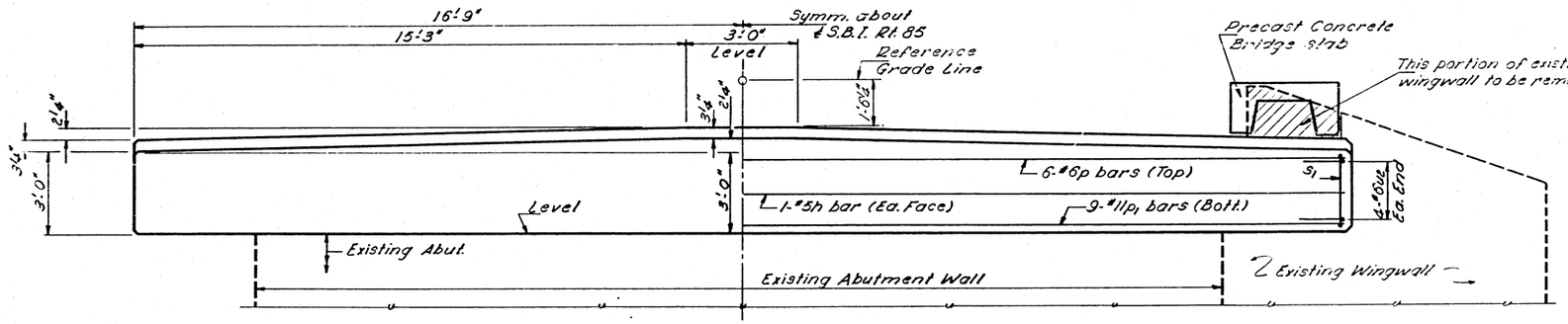
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



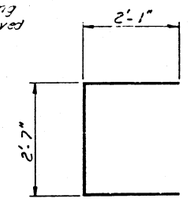
PLAN
New Abutment Cap



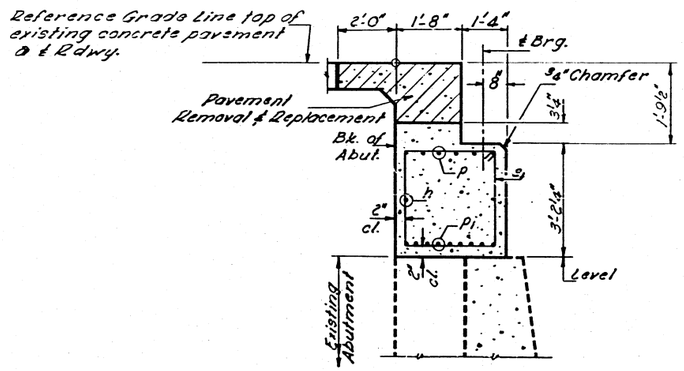
BAR s_1



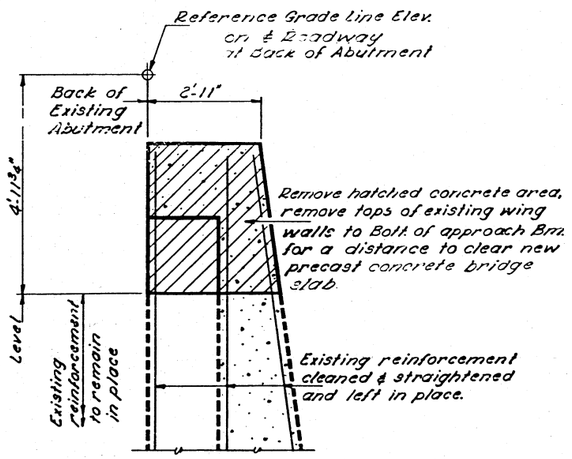
ELEVATION
New Abutment Cap



BAR u_2



SECTION THRU NEW TOP OF ABUTMENT @ ℄ RDWY



SECTION THRU EXISTING TOP OF ABUT. @ ℄ RDWY

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	4	#5	33'-0"	——
p	12	#6	33'-0"	——
p1	18	#11	33'-0"	——
s_1	46	#4	11'-5"	□
u_2	16	#6	6'-9"	⊏
Class X Concrete			Cu. Yds.	24.2
Reinforcement Bars			Lbs.	4400
Concrete Removal			Cu. Yds	15.0

DESIGNED	Hans McCormick
CHECKED	A.N. Hummel
DRAWN	J. Kessler
CHECKED	A.N. Hummel

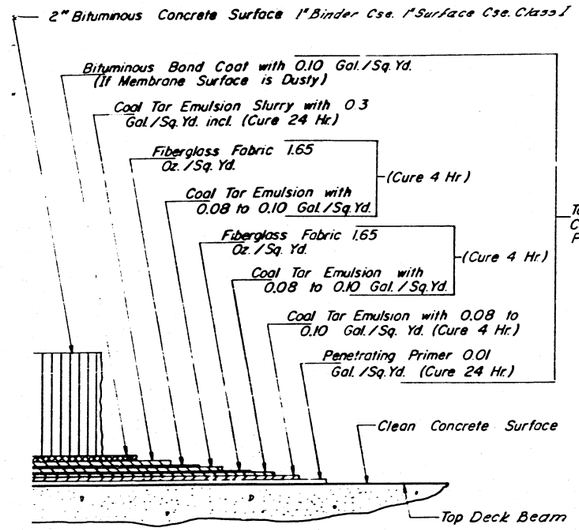
EXAMINED July 3 1969 Earl E. Thurman Jr.
PASSED
APPROVED

ABUTMENTS
S.B.I. RT. 85 SEC. 102 BR
MERCER COUNTY
STATION 1077+00

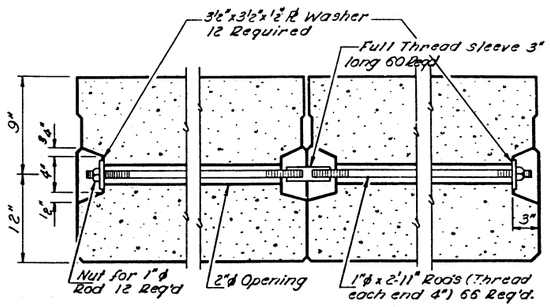
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 85	102BR 103BR	MERCER	31	7
F.A.S. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

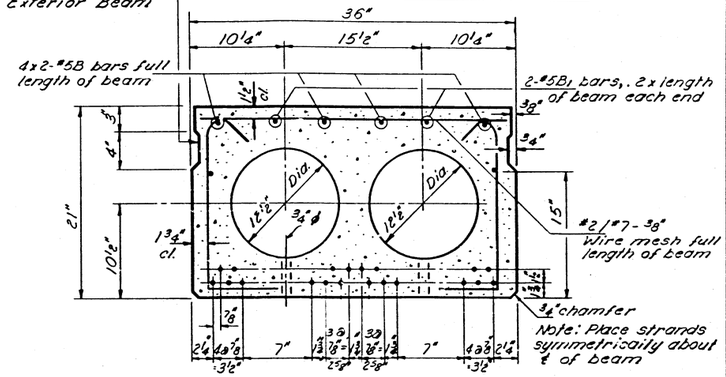
SHEET NO. 4
6 SHEETS



DETAIL OF DECK SURFACING

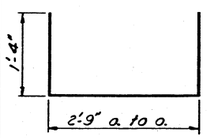


TYPICAL TRANSVERSE TIE ASSEMBLY

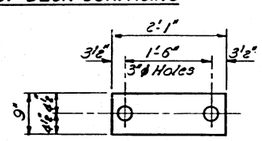


TYPICAL SECTION

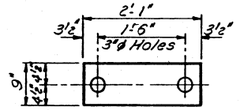
7/16"ø Strands each strand stressed to 18,900 Lbs.
12 strands 1 3/4" up 8 strands 3 1/2" up 2 strands 15" up



U BAR

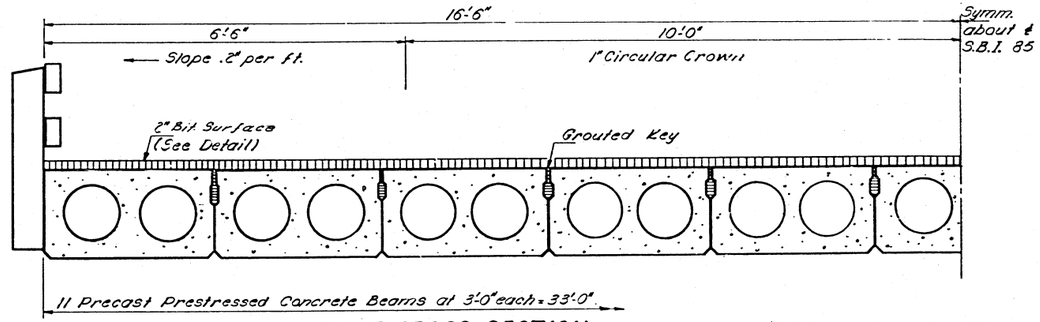


FABRIC BRG. PAD
(At Abutment)



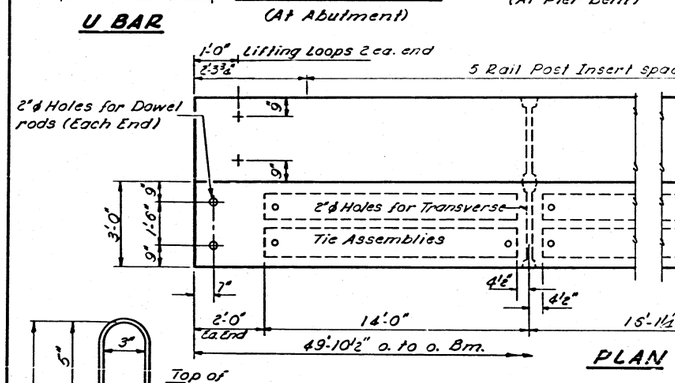
GRAPHITED ASBESTOS BEARING PAD
(At Pier Bent)

Note:
For Handrail Details see sheet #6.
For Rail Post Insert Det. see sheet #5.
(Exterior Units only)

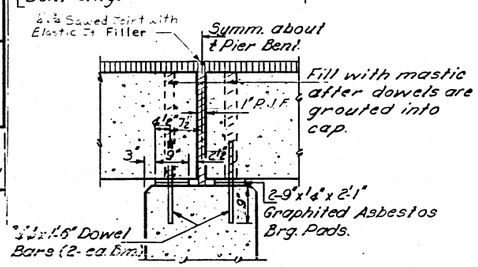


11 Precast Prestressed Concrete Beams at 3'-0" each = 33'-0"

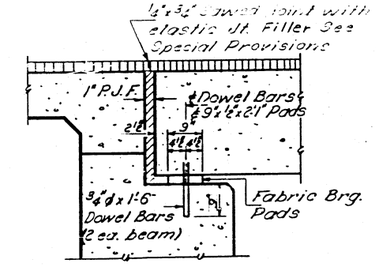
HALF CROSS SECTION



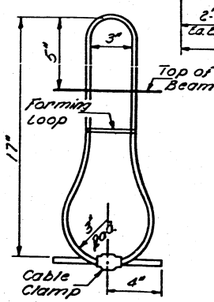
PLAN



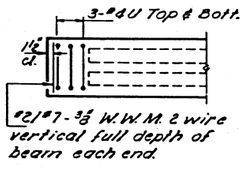
SECTION THRU PIER BENT



SEC. THRU ABUTMENT



LIFTING LOOP DET.



END PLAN

DESIGNED	Jesse McCormick
CHECKED	R.A. Hummel
DRAWN	J. Kessler
CHECKED	R.A. Hummel

EXAMINED July 3 1969
PASSED
APPROVED
CHIEF HIGHWAY ENGINEER

GENERAL NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7 wire strand. The nominal diameter shall be 7/16" and the nominal cross sectional area shall be 0.109 sq. in.

Lifting loops shall be 5/8" dia., 6x19 class wire rope with fibre core and shall have a minimum ultimate tensile strength of 29,000 Lbs.

The 1"ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside beam shall be filled with grout after transverse tie assembly is in place.

Longitudinal shear keys shall be packed with a very dry mix of 2:1 sand & P.C. Mortar.

After beams have been erected, holes for the dowel anchors shall be drilled into the substructure and the anchor dowels shall be grouted in place at abutment, at pier grout dowels into cap and fill holes in beams with mastic.

Steel for dowel rods, transverse tie rods, shall be S.A.E. 1020.

Structural steel A.S.T.M. Designation: A36, or intermediate grade A.S.T.M. A15.

After fabrication the transverse tie assemblies (tie rods, nuts, washers & sleeves) shall be hot-dipped galvanized in accordance with A.S.T.M. Designation: A153.

Cost of reinforcement and accessories cast into the beam, of bearing pads, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beams.

BILL OF MATERIAL*

Bar	No.	Size	Length	Shape
B	8	#5	25'-6"	——
B1	4	#5	10'-0"	——
U	12	#4	5'-5"	⊔
Precast Prestressed Concrete Deck Beams			S.F. 3292	

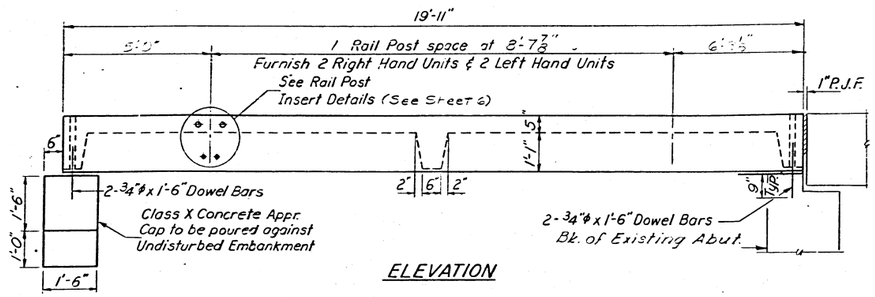
*For one beam only

SUPERSTRUCTURE DETAILS
S.B.I. RT 85 SEC 102 BR
MERCER COUNTY
STATION 1077+00.

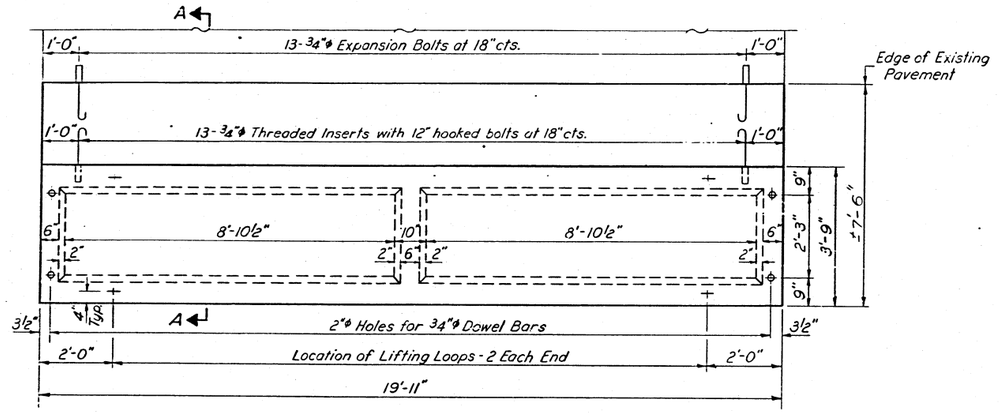
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. Rte. 85	102BR 103BR	MERCER	31	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

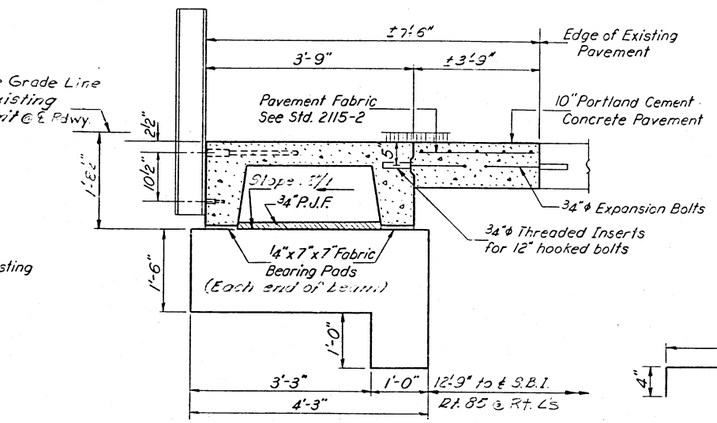
SHEET NO. 5
6 SHEETS



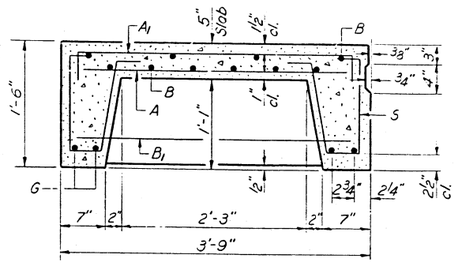
ELEVATION



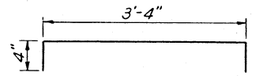
PARTIAL PLAN OF APPR.



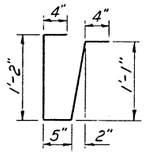
SECTION A-A



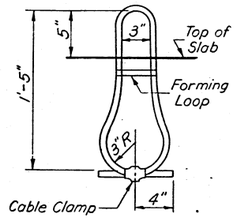
SECTION THRU PRECAST UNIT



BAR A1



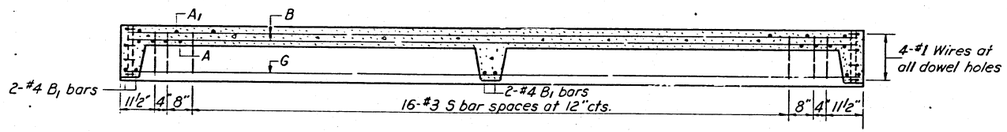
BAR S



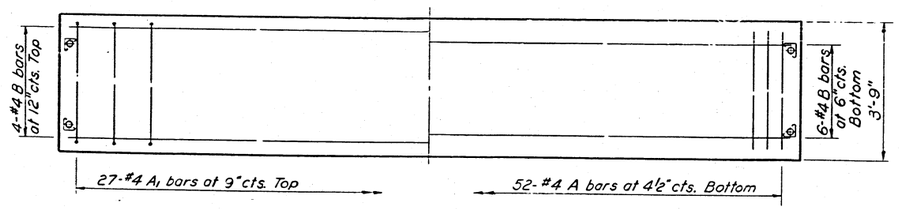
LIFTING LOOP DETAIL

BAR LIST - ONE UNIT
Reinforcement to be cast into slab

Bar	No	Size	Length	Shape
A	52	#4	3'-3"	—
A1	27	#4	4'-0"	⌐¬
B	10	#4	19'-6"	—
B1	6	#4	3'-6"	—
G	4	#10	19'-6"	—
S	42	#3	3'-4"	⊔



LONGITUDINAL SECTION



REINFORCEMENT PLAN

GENERAL NOTES

Unless otherwise approved by the Engineer, lifting loops shall be ½"ϕ, 6x19 class wire rope with fiber core and shall have a minimum ultimate strength of 18,700 lbs. Loops shall be burned off after slab has been erected.

Holes shall be drilled and anchor dowels grouted in place.

Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor dowels and ¾"ϕ hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab."

The precast concrete bridge slab shall be erected and aligned with the exterior face of the exterior deck beam after deck beams are in final position.

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	299
Portland Cement Concrete Pavement (10")	Sq. Yds.	34
Pavement Fabric	Sq. Yds.	34
Expansion Bolts ¾"ϕ	Each	52
Class X Concrete	Cu. Yds.	1.6

Expansion bolts shall consist of self-setting expansion shields with 4½" hooked bolts. Hooked bolts shall extend a min. of 9" into new concrete.

STRESSES
f'c = 4,500 psi.
fc = 1,800 psi.
fs = 20,000 psi.
n = 8

LOADING HS-20

DESIGNED	Lee McCord
CHECKED	A. A. Humadi
DRAWN	J. L. Armstrong
CHECKED	A. A. Humadi

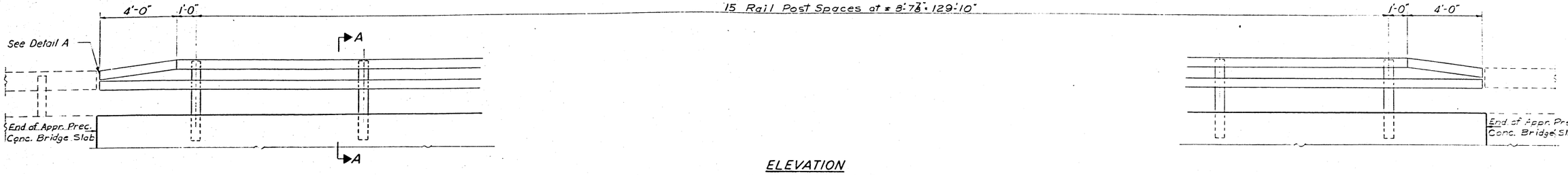
EXAMINED July 3 1969
Orel E. Thurman Jr
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

APPROACH DETAILS
S.B.I. RT. 85 SEC. 102BR
MERCER COUNTY
STATION 1077+00

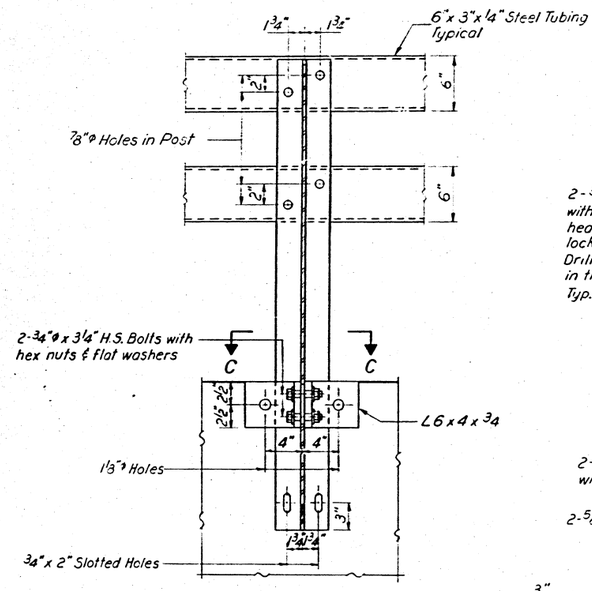
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 85	102BR 103BR	MERCER	31.	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

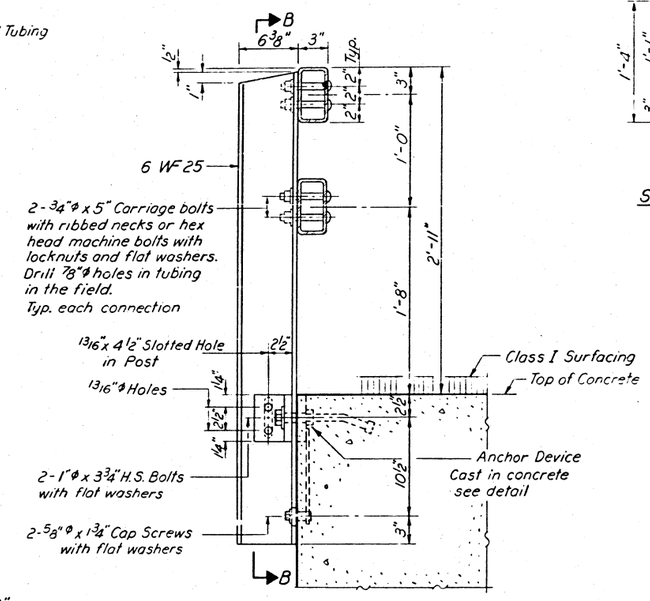
SHEET NO. 6
6 SHEETS



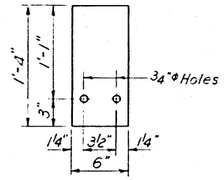
ELEVATION
Showing inside face of railing



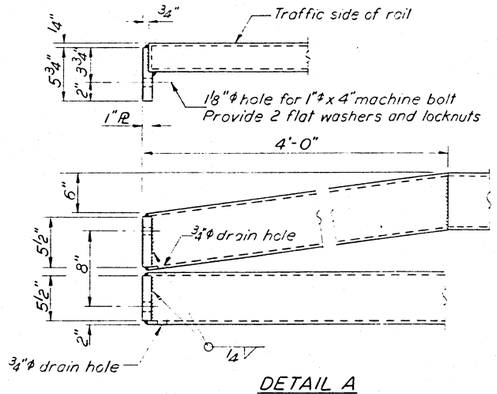
SECTION B-B



SECTION A-A



SHIM DETAIL



DETAIL A

NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-501 "Hot Formed Welded and Seamless Carbon Steel Structural Tubing."

All other steel shapes and plates shall conform to the requirements of ASTM designation A-36 except posts shall conform to ASTM A-441.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to ASTM designation A-325.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with ASTM designation A-153.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with ASTM designation A-123 and A-385. Galvanized rail shall not be painted.

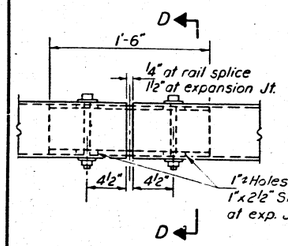
Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE N

All field drilled holes shall be coated with an approved zinc rich paint before erection.

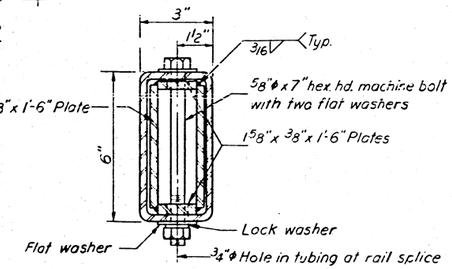
The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/8" fabric bearing pad between the post and concrete.

The 3/4"ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 710.11 of the Standard Specifications. The 1"ϕ high strength bolts connecting the angles to the concrete beam shall be tightened to a snug fit and given an additional 1/8 turn.

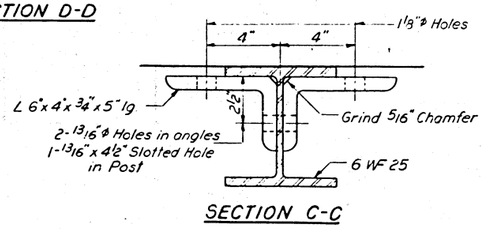
For multi-span bridges, sufficient 1/4"x 6"x 1'-4" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing.



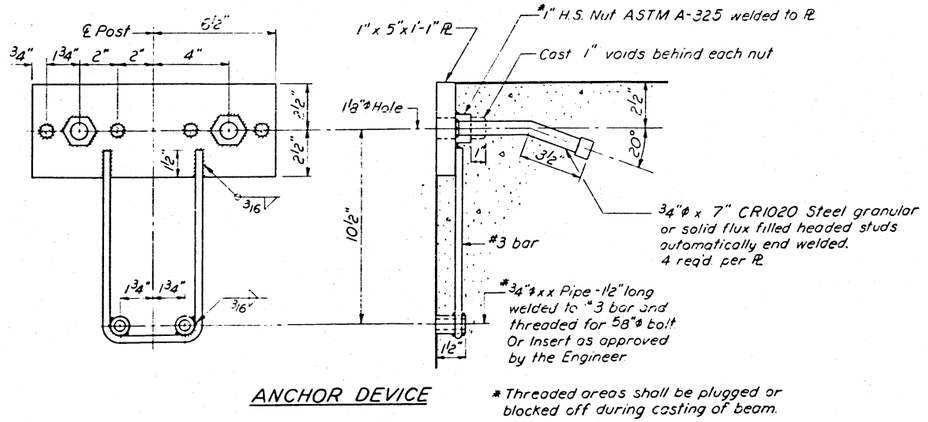
RAIL SPLICE



SECTION D-D



SECTION C-C



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.

BILL OF MATERIAL

Item	Unit	Quantity
STEEL RAILING, TYPE N	Lin. Ft.	230

DESIGNED	Jas. McConnell
CHECKED	A A H
DRAWN	J.L. Armstrong
CHECKED	A A H.

19
EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

(9'-0" Max Post Spacing)

TYPE N STEEL RAILING

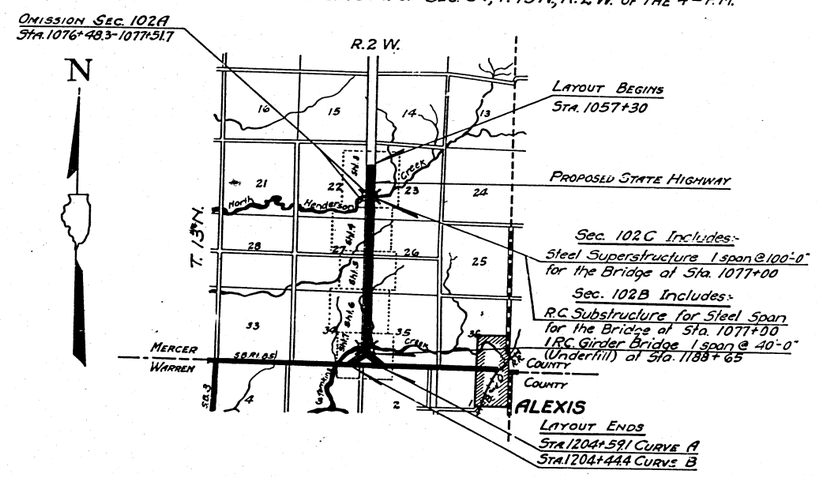
S.B.I. RT. 85 SEC. 102BR
MERCER COUNTY
STATION 1077+00

INDEX OF SHEETS

Sheet No 1	Title Page	
" 2	Standard Cross Sections No. 1232, 1359	
" 3	Plan and Profile Sta. 1057+30 — 1085+00	
" 4	" " " 1085+00 — 1115+00	
" 5	" " " 1115+00 — 1145+00	
" 6	" " " 1145+00 — 1175+00	
" 7	" " " 1175+00 < 1204+591 A / 1204+444 B	
" 8-46	Inc. Cross Sections	
" 47	Sta. Culv. Des. No. 828-1, 828-2	
" 47	Sp. " " Sta. 1088+13, 1112+23	
" 48	" " " 11120+27, 1135+50, 1160+33, 1168+10	
" 49	" " " 1173+26, 1185+40, 1201+00A, 1201+00B	
" 50	" " " 1203+16	
" 50	Detail of Proposed Detour	
" 51	Sp. Bridge Des. Sta. 1077+00	Sh. 1 of 2
" 52	" " " 1077+00	" 2 - 2
" 53	" " " 1188+65	" 1 - 3
" 54	" " " 1188+65	" 2 - 3
" 55	" " " 1188+65	" 3 - 3
" 56	Standard 1162, 1177	

PROJ. 144, SEC'S. 102A, B AND C, MERCER CO.

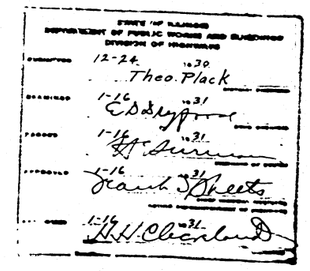
FROM A POINT NEAR THE NE. COR. OF THE SE. 1/4 OF THE NE 1/4 OF SEC. 22, T. 13 N., R. 2 W. OF THE 4TH P.M., TO A POINT NEAR THE SE. COR. OF SEC. 34, T. 13 N, R. 2 W. OF THE 4TH P.M.



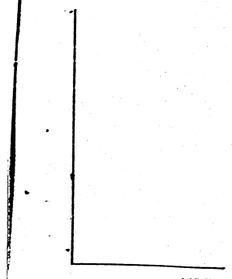
LAYOUT

APPROXIMATE SCALE 1 INCH = 1 MILE

NET LENGTH OF SEC'S. 102A, B & C = 15573.5 FT. = 2.949 5 MI.



Reel 4-27
Sec 102B
STA: 1077+00



102A,B&C 144

066-0004

BOND ISSUE ROUTE NO	SEC.	COUNTY	TOTAL SHEETS	SHEET NO
85	B-102C	Mercer	56	51
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		144

3

T.J. Smyth
F.R.E.

Jan 29 31
G. H. Burch
H. Dunman
Frank Sheets

Name Plate 1

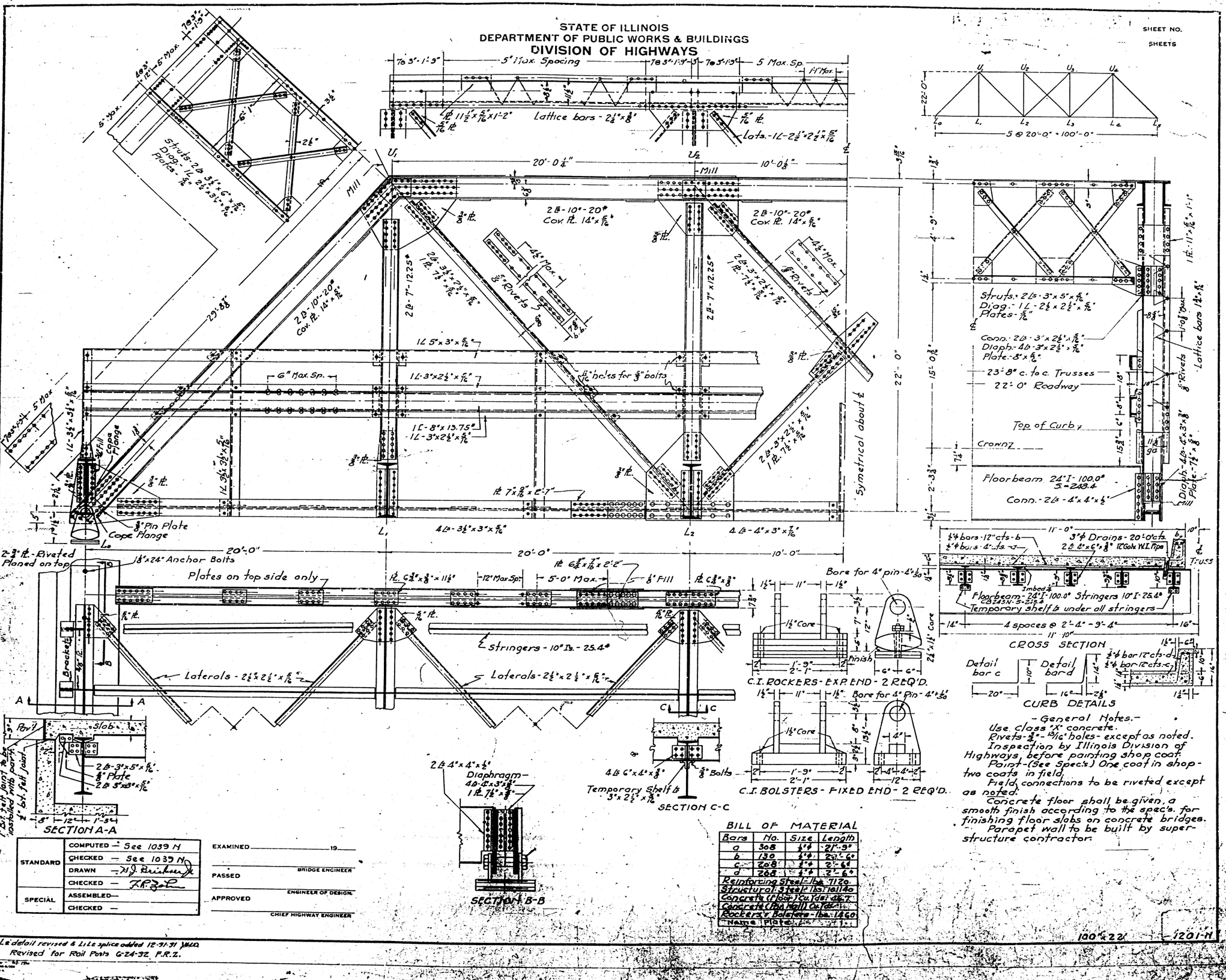
S.6

NORTH HENDERSON CREEK
S.B.I. ROUTE 85 SECTION 102-C
MERCER COUNTY
STA. 1077+00

1201-11

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

SHEET NO.
SHEETS



- General Notes. -

Use class "X" concrete.
Rivets-⅞"-13/16" holes-except as noted.
Inspection by Illinois Division of Highways, before painting shop coat.
Paint-(See Specs.) One coat in shop-two coats in field.
Field connections to be riveted except as noted.
Concrete floor shall be given a smooth finish according to the spec's. for finishing floor slabs on concrete bridges.
Parapet wall to be built by superstructure contractor.

BILL OF MATERIAL

Bars	No.	Size	Length
a	308	¾ϕ	27'-9"
b	130	¾ϕ	23'-6"
c	208	¾ϕ	2'-6"
d	208	¾ϕ	2'-6"
Reinforcing Steel-lbs.			7120
Structural Steel-lbs.			11140
Concrete (floor) Cu. Yds.			45.7
Concrete (Rail & Curb) Cu. Yds.			
Rockers & Bolsters-lbs.			1460
Name Plate			

STANDARD	COMPUTED — See 1039 N	
	CHECKED — See 1039 N	
	DRAWN — N.J. Brisbois	
	CHECKED — F.R.P.	
SPECIAL	ASSEMBLED —	
	CHECKED —	

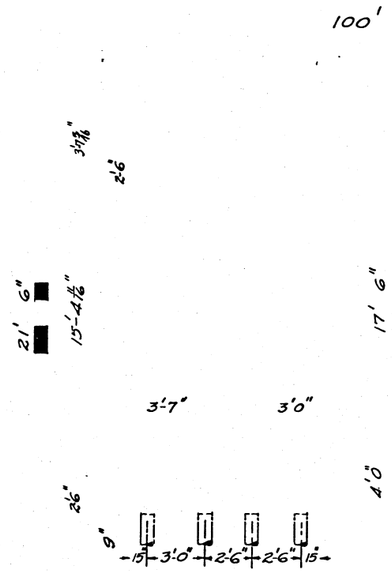
EXAMINED _____ 19__
PASSED _____ BRIDGE ENGINEER
APPROVED _____ ENGINEER OF DESIGN
_____ CHIEF HIGHWAY ENGINEER

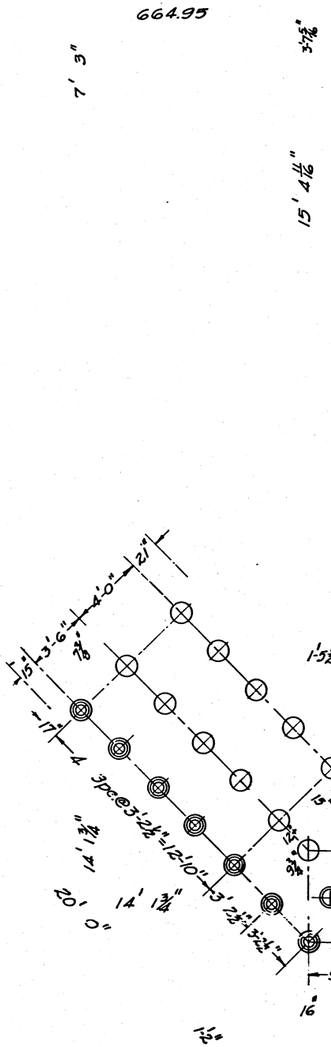
Le detail revised & L1L2 splice added 12-31-31 N.J.B.
Revised for Rail Posts 6-24-32 F.R.P.

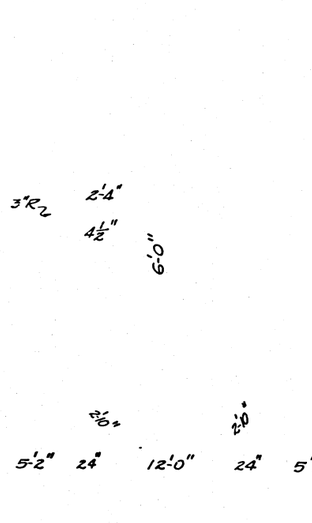
100-22 — 1201-N

BOND ISSUE ROUTE NO	SEC.	COUNTY	TOTAL SHEETS	SHEET NO
85	B-102B	Mercer	56	52
FED ROAD DIST. NO. 7	ILLINOIS FED AID PROJECT		144	

B.M. #94 S.& W. Horiz in F.P.
in X Fence Rt. Sta. 1075+68
Elev. 654.86





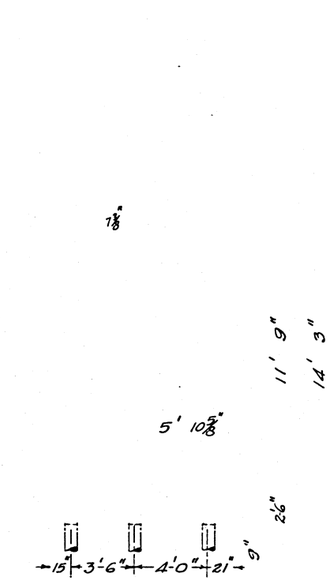


Untreated Piles - 8" Tip - 12" Butt - 20' Long

Capacity	No. Req'd.	Total Est. Length
10 Ton	22	440 Lin. Ft.
12 Ton	9	180 Lin. Ft.
15 Ton	38	760 Lin. Ft.

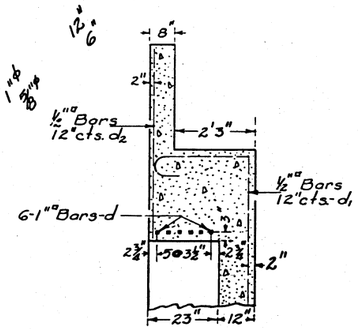
Jan 29 31
D. F. Burch

H.H. Davis
F.R.E.



NORTH ABUTMENT

	62		
10			15'-3"
	28		11'-3"
	6		14'-6"
	6		13'-0"
	6		11'-6"
	6		10'-0"
	10		8'6"
	16		26'-0"
	26		20'-0"
	4		15'-0"
	2		10'-6"
d_1	21	½"ᵃ	9'-6"
	6		28'-0"
	61		
	59	⅝"ϕ	10'-3"
	84	⅝"ϕ	
	30	1"ϕ	10'-3"
	36	1"ϕ	
d_2	28	½"ᵃ	5'-0"
	4		29'-0"
	8	½"ᵃ	21'-0"
			8220
			123.7

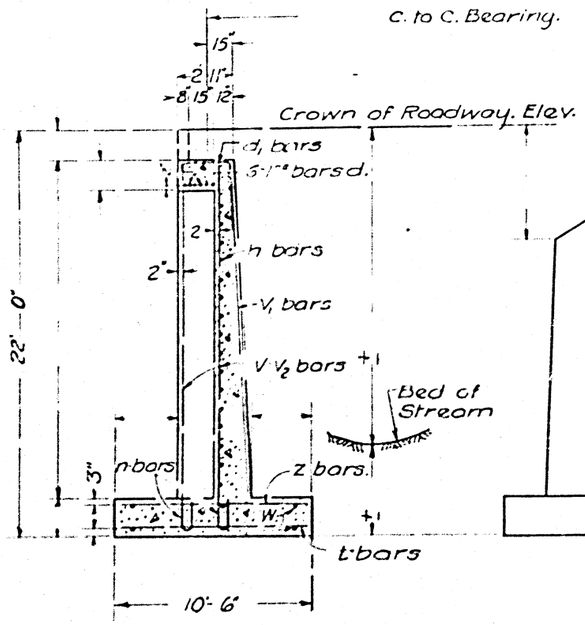


SECTION-TOP OF MAIN WALL

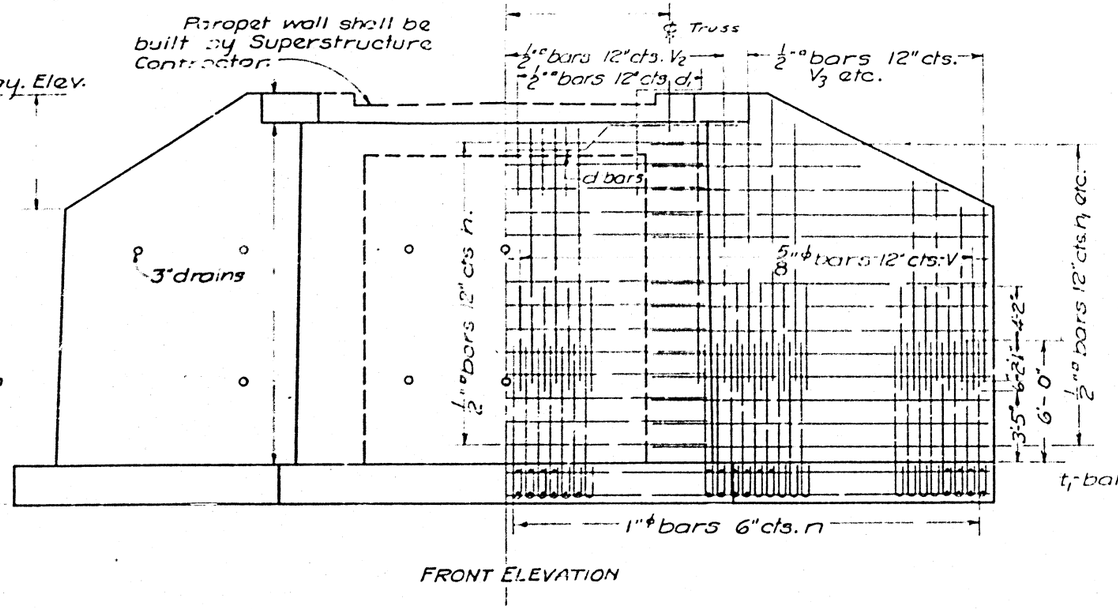
NORTH ABUTMENT
NORTH HENDERSON CREEK
S.B.I. ROUTE 85 SEC. 102B
MERCER COUNTY
STATION 1077+00

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

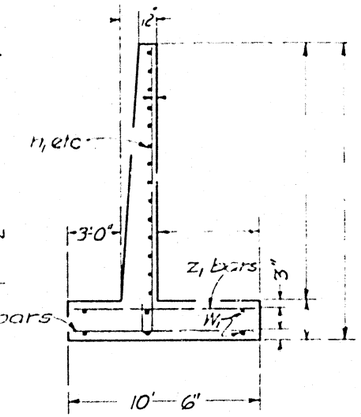
SHEET NO.
SHEETS



SECTION OF ABUTMENT.

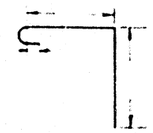


FRONT ELEVATION

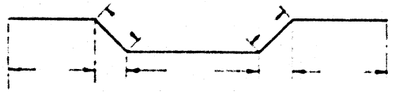


END OF WING.

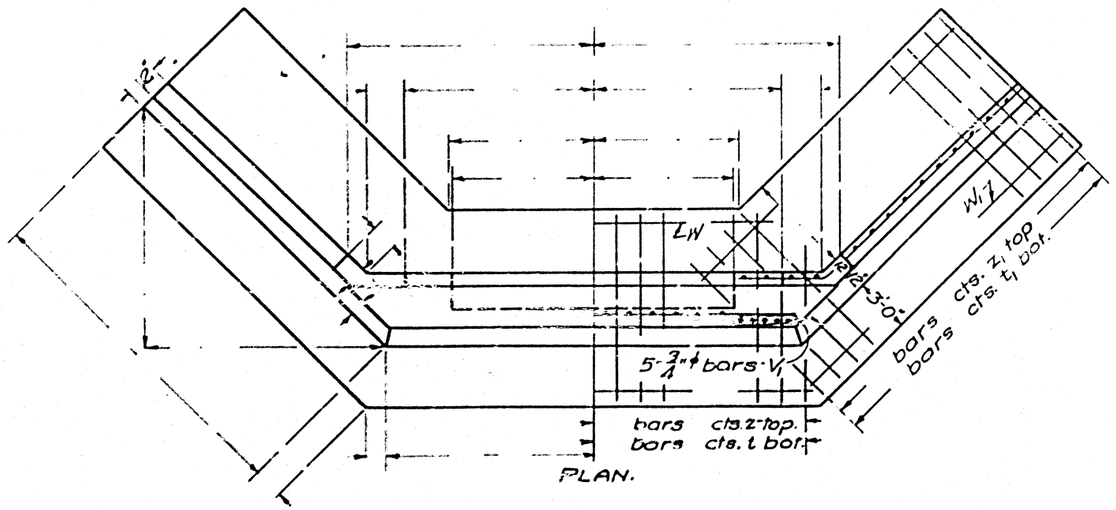
Class X concrete shall be used throughout.
All reinforcing steel shall be wired securely in place before concrete is poured.



DETAIL-d, BARS



DETAIL-d BARS



PLAN.

BILL OF MATERIAL.

Bars	No	Size	Length
V		⅝"ø	6'-9"
V,	20	¾"ø	
V2		½"	
V3		"	
V4		"	
V5		"	
V6		"	
V7		"	
h		½"	
h,		"	
h2		"	
h3		"	
d		1"ø	
n		1"ø	10'-3"
t			
t,			10'-3"
z			
z,			10'-3"
W		½"ø	
W,		"	
Reinforcing Steel-Lbs.			
Concrete-Cu Yds.			

STANDARD	COMPUTED —	F.R.S.
	CHECKED —	R.I.R.
	DRAWN —	F.R.S.
	CHECKED —	R.I.R.
SPECIAL	ASSEMBLED —	
	CHECKED —	

EXAMINED ..... 19 .....
BRIDGE ENGINEER
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

1361

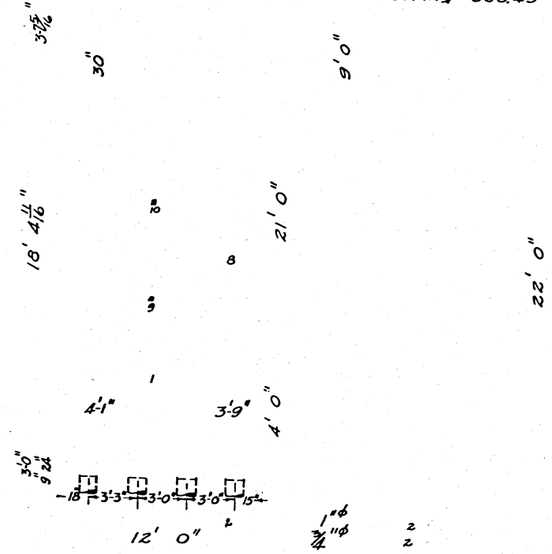
BOND ISSUE ROUTE NO	SEC.	COUNTY	TOTAL SHEETS	SHEET NO
85	B-102 B	Mercer	56	52A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		144

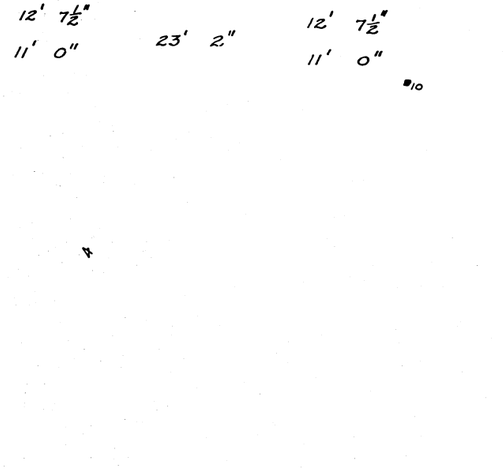
B.M. - #94 - S. & W. - Horiz. in F.P. in X Fence - Rt. of Sta. 1075+68
Elev. 654.86

Existing 60' steel bridge with 2 14' approaches to be removed by contractor for 102 B

100'

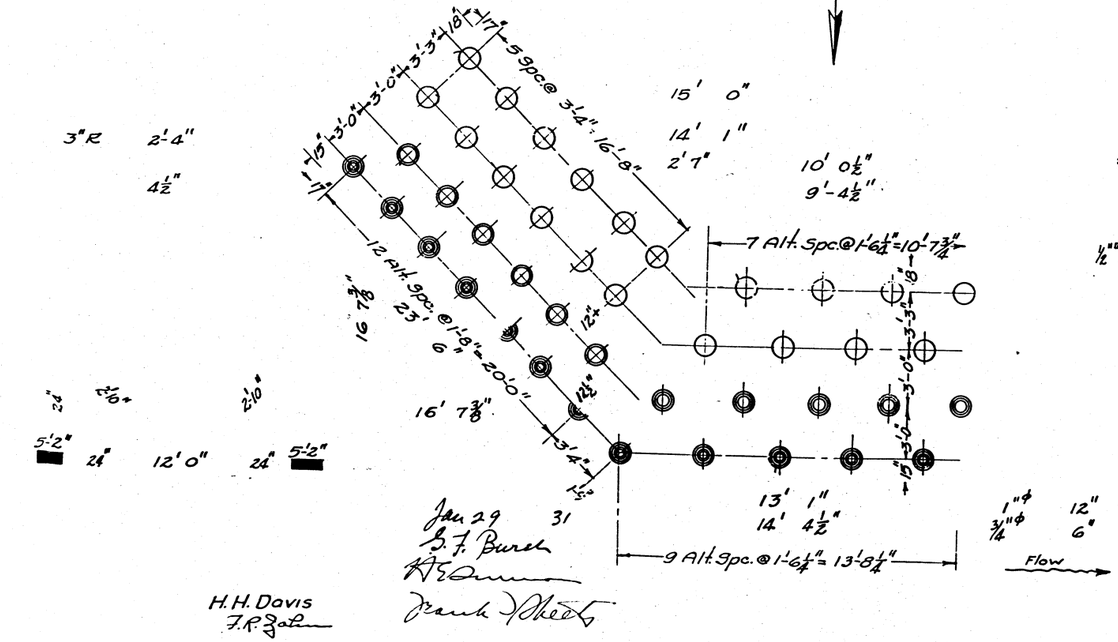
Elev. at center of Bearing = 668.45

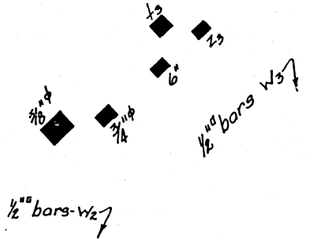




SOUTH ABUTMENT

8	10		18'-3"
#9	68		
#10	28		14'-9"
#11	4		18'-0"
#12	10		16'-0"
#13	8		14'-0"
#14	8		12'-0"
V15	10	3/4"ϕ	10'-0"
4	19		26'-0"
#5	30		23'-6"
#6	4		15'-0"
#7	4		11'-0"
d1	21	1/2"□	9'-6"
d2	28	1/2"□	5'-0"
:	136		
	6	1"□	28'-0"
2	58	3/4"ϕ	11'-9"
#3	102	5/8"■	
2	30	1"ϕ	11'-9"
#3	82	3/4"⌐	
2	4		29'-0"
#3	8		25'-0"
			14,360
			179.4





Untreated Piles - 8" Tip - 12" Butt

Capacity	No. Req'd	Total Est. Length
17 Ton	24	480 Lin. Ft.
15 Ton	9	180 Lin. Ft.
12 Ton	12	240 Lin. Ft.
10 Ton	39	780 Lin. Ft.

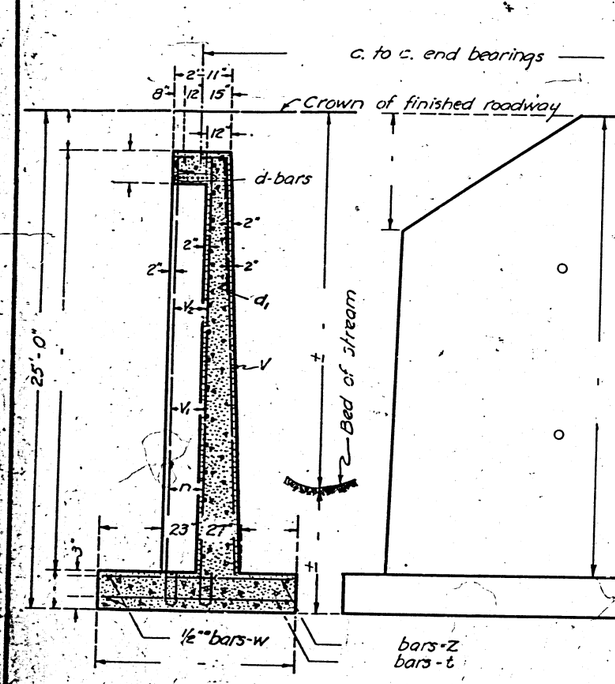
Piles Est. 20' Leng.

SOUTH ABUTMENT
NORTH HENDERSON CREEK
S.B.I. ROUTE 85 SEC. 102 B
MERCER COUNTY
STATION 1077+00

1279

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

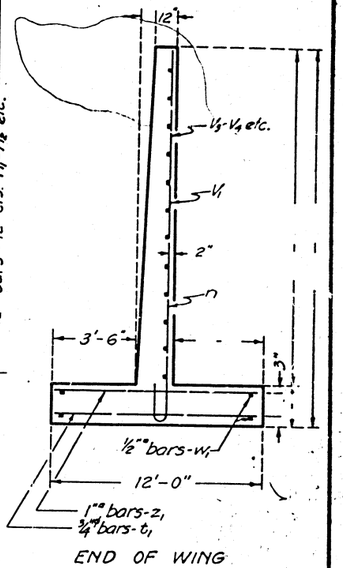
SHEET NO.
SHEETS



SECTION OF ABUTMENT

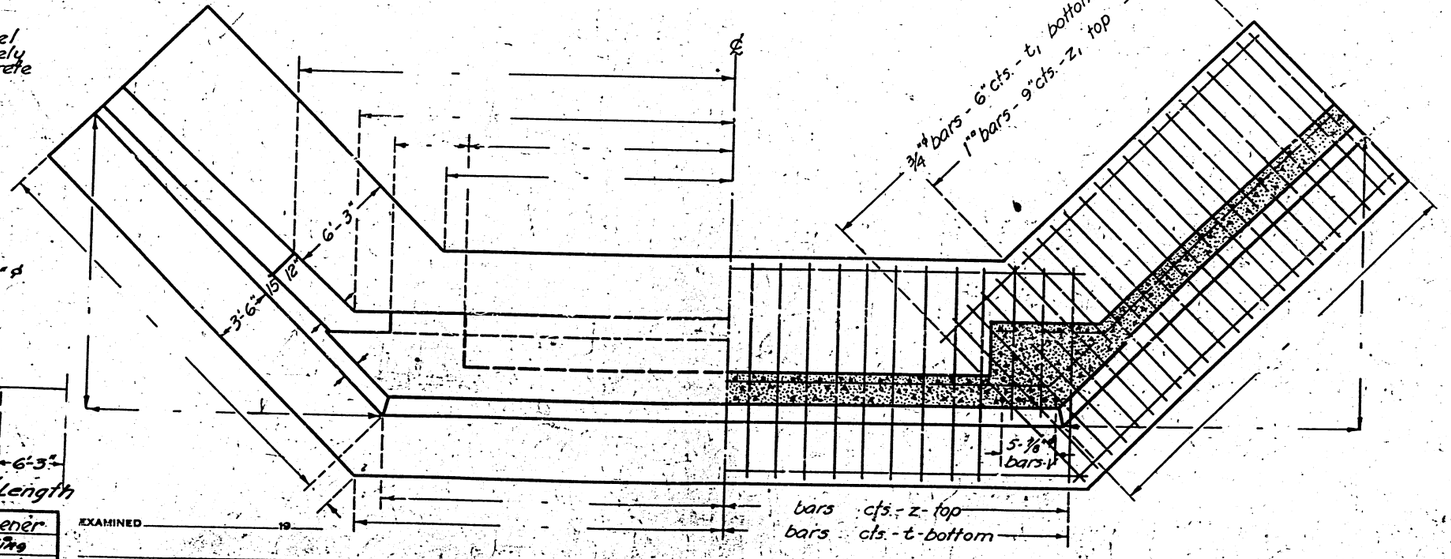
SHOWING OUTLINES

ELEVATION



END OF WING

SHOWING REINFORCEMENT

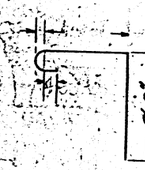


SHOWING OUTLINES SHOWING REINFORCEMENT

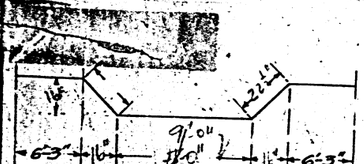
PLAN

Class X concrete shall be used thruout.

All reinforcing steel shall be wired securely in place before concrete is poured.



Detail "d" bars ½"ø



Detail "d" bars ¾"ø Length

BILL OF MATERIAL

Bar	No	Size	Length
V	20	⅞"ø	
V1		¾"ø	6'-9"
V2		¾"ø	
V3		¾"ø	
V4		¾"ø	
V5		¾"ø	
V6		¾"ø	
h		½"ø	
h1		½"ø	
h2		½"ø	
h3		½"ø	
n		1"ø	10'-9"
d			
t			
t1		¾"ø	11'-9"
z			
z1		1"ø	11'-9"
w		½"ø	
w1		½"ø	
Reinforcing Steel-Lbs.			
Class X concrete-cu yds.			

STANDARD	COMPUTED	P. Michener
	CHECKED	H. L. King
	DRAWN	P.M.
	CHECKED	H.L.K.
SPECIAL	ASSEMBLED	
	CHECKED	

Revised 1-15-31

EXAMINED _____ 19
PASSED _____ BRIDGE ENGINEER
APPROVED _____ ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

1279