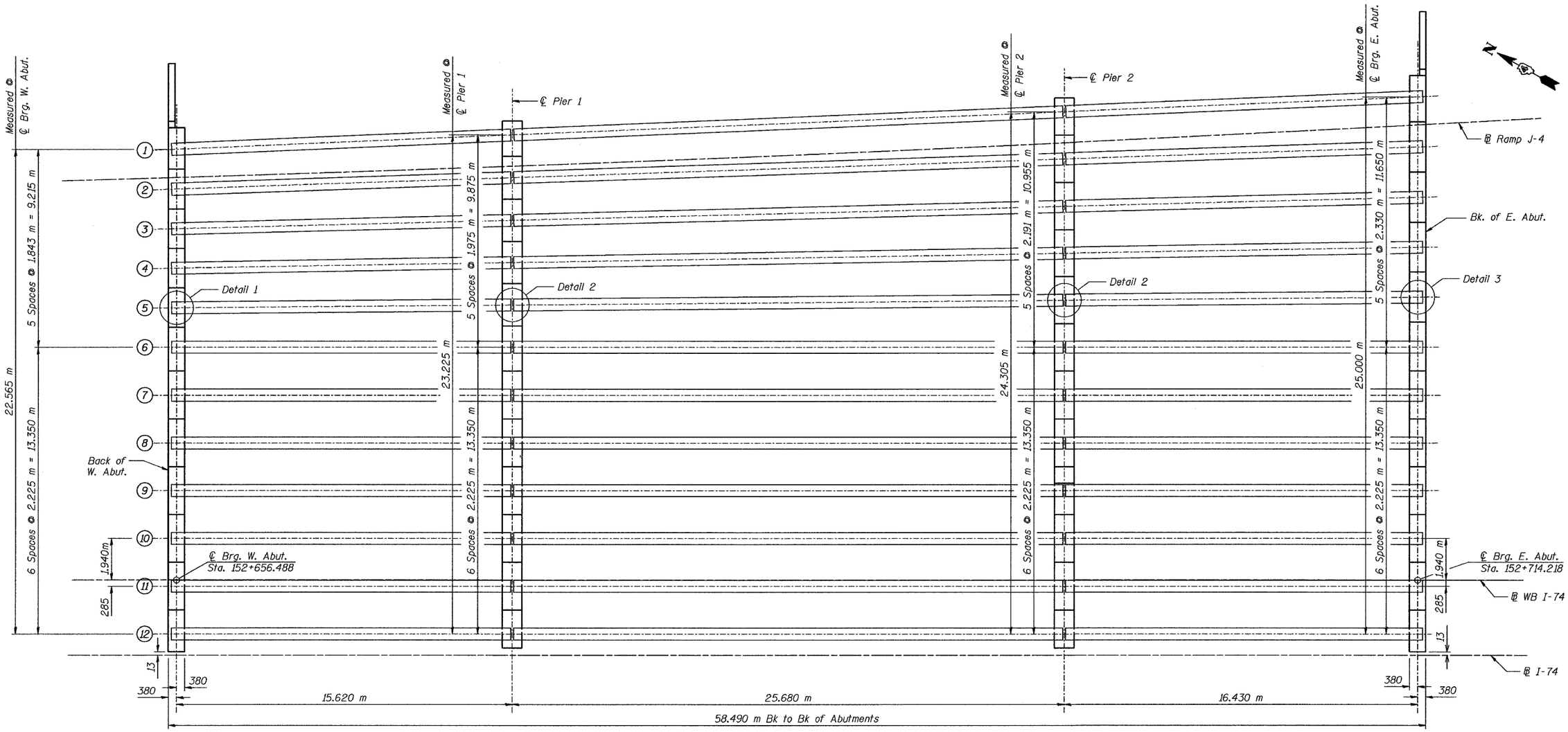
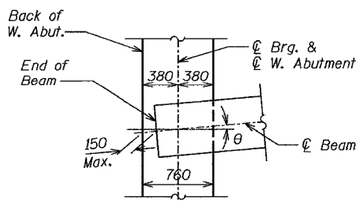
68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	401
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

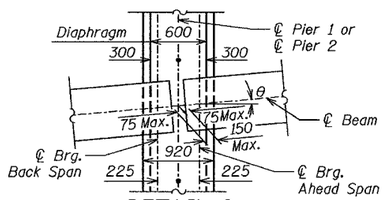
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



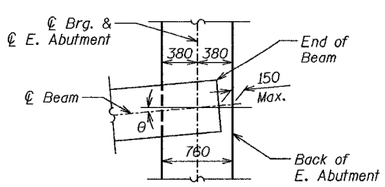
FRAMING PLAN



DETAIL 1



DETAIL 2



DETAIL 3

Beam	θ
1	2°24'55"
2	1°55'57"
3	1°26'59"
4	0°58'00"
5	0°29'00"
6-12	0°00'00"

Note: See Sheets #14 & 15 of 33 for Beam Details.
All Stations and elevations are in meters.
All dimensions are in millimeters (mm) except as noted.

URS CORPORATION
ST. LOUIS, MO

FRAMING PLAN

Date
Revisions

Designed JLK
Drawn KDK
Checked RME
Approved DLC

INTERSTATE 74 AND RAMPS J-4 OVER
ALTORFER LANE AND TP&W R.R.
F.A.I. RTE. 74 SECTION (90-11VB)BR
TAZEWELL COUNTY
STATION 152+685.353
STRUCTURE NO. 090-0159 (WB)

Sheet No. 13 of 33

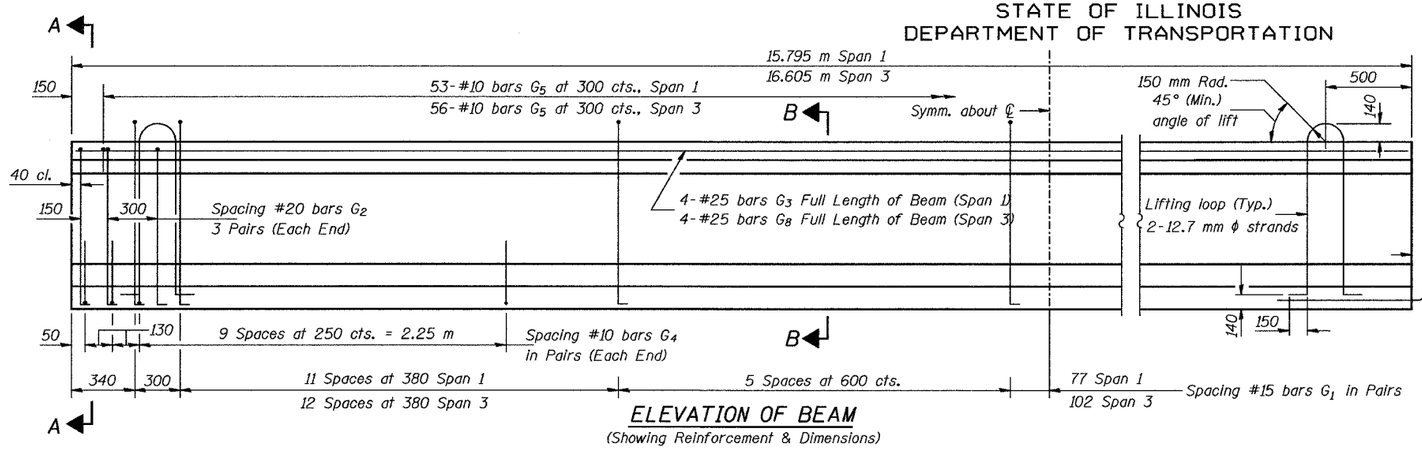
Date: 7-21-04

URS Job No.
2100001243.02

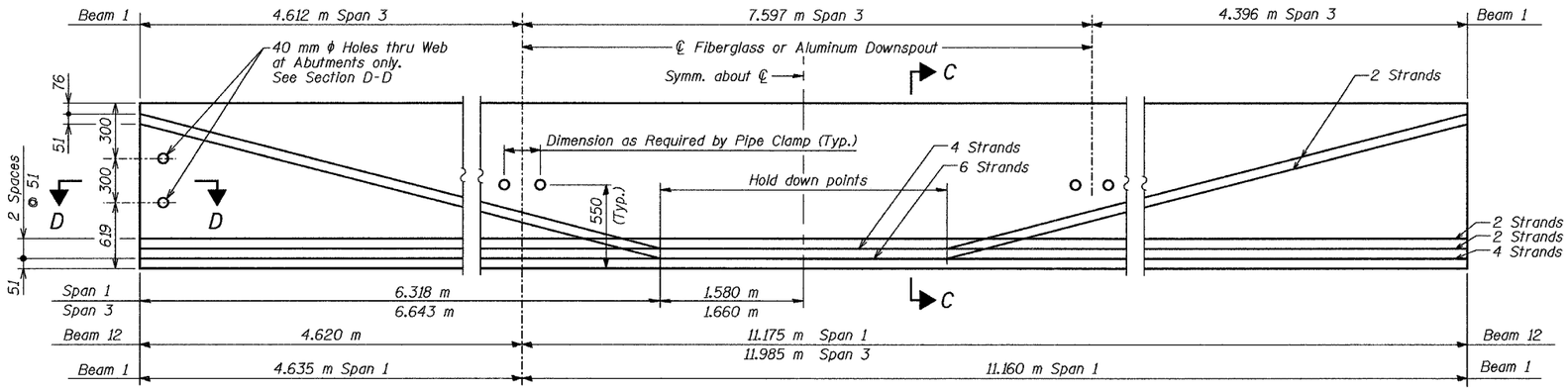
68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-1IVB)BY	TAZEWELL	1366	402
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

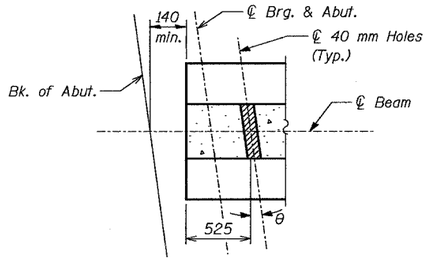
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

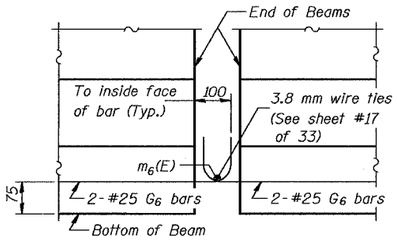


ELEVATION OF BEAM
(Showing Prestressing Steel)

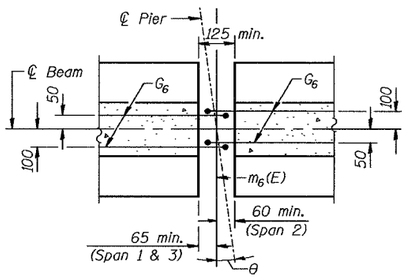


SECTION D-D

Beam	θ
1	2°24'55"
2	1°55'57"
3	1°26'59"
4	0°58'00"
5	0°29'00"
6-12	0°00'00"

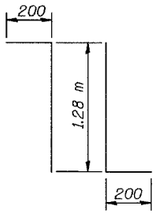


ELEVATION

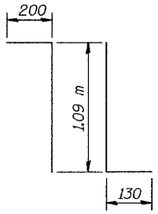


DETAIL "A"

PLAN



BAR G1



BAR G2

NOTES

All inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precst Concrete I-Beams shall be included in the contract unit price per meter of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 1219 mm."

Inserts for 20 mm ϕ Stud Bolts are to be single coil, flared loop type for drainage scupper attachment to exterior I-Beams. See Sheets 9, 11 and 12 of 33 for scupper locations and attachment details.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand (Fu-1860 MPa).

The nominal diameter shall be 12.7 mm and the nominal cross-section area shall be 98.71 mm^2.

Non-prestressing steel shall conform to AASHTO designation M-31M or M-322M Grade 400.

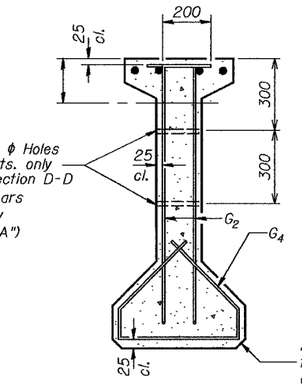
Lifting loops shall be 2-12.7 mm ϕ strands (Fu=1860 MPa), as shown.

Required release strength, f'ci. shall be 35 MPa.

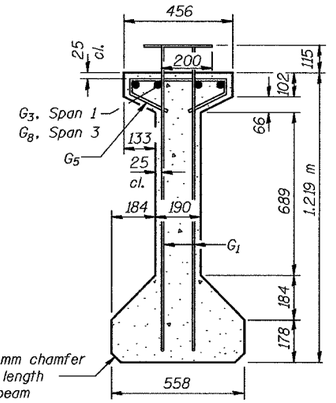
Reinforcement bars designated (E) shall be epoxy coated.

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

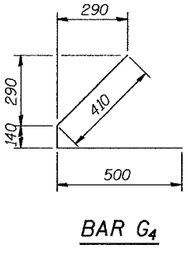
See Sheet No. 13 of 33 for Framing Plan.



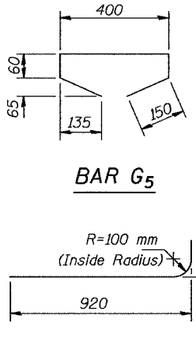
SECTION A-A



SECTION B-B

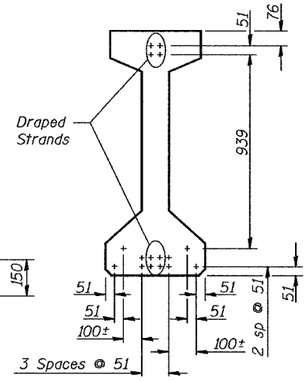


BAR G4



BAR G5

BAR G6



SECTION C-C

* BAR LIST SPAN 1

Bar	No.	Size	Length (m)	Shape
G_1	72	#15	1.68	⅂L
G_2	12	#20	1.42	⅂L
G_3	4	#25	15.70	—
G_4	48	#10	1.05	⊂
G_5	53	#10	0.82	⊃
G_6	2	#25	1.07	⌒

* For one beam only.

* BAR LIST SPAN 3

Bar	No.	Size	Length (m)	Shape
G_1	76	#15	1.68	⅂L
G_2	12	#20	1.42	⅂L
G_4	48	#10	1.05	⊂
G_5	56	#10	0.82	⊃
G_6	2	#25	1.07	⌒
G_8	4	#25	16.51	—

* For one beam only.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 1219 mm	m	695.5

BEAM DETAILS - SPANS 1 AND 3

Date			
Revisions	Designed	JML	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-1IVB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)
	Drawn	KDK	
	Checked	RME	
	Approved	DLC	

Sheet No. 14 of 33

URS CORPORATION
ST. LOUIS, MO

Date: 7-21-04

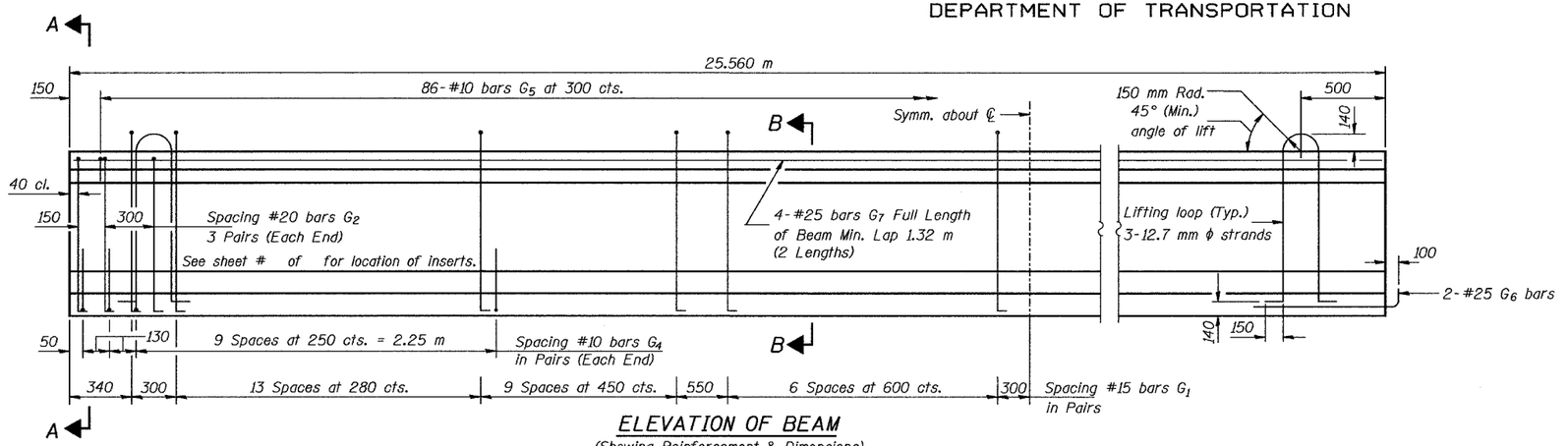
URS Job No. 2100001243.02

PI-4-1219 (M) 7-1-94

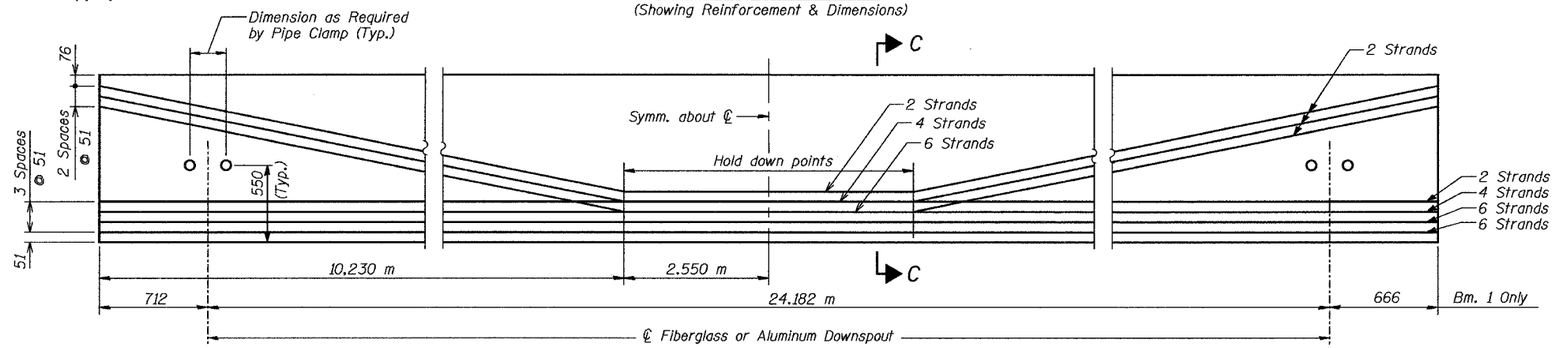
69201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	403
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

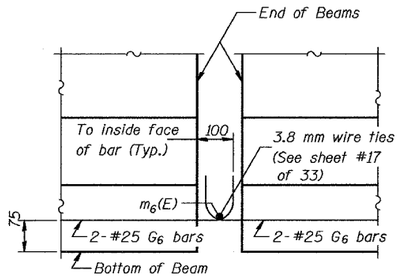


ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

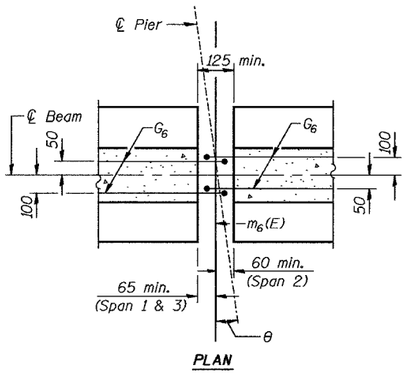


ELEVATION OF BEAM
(Showing Prestressing Steel)

Beam	θ
1	2°24'55"
2	1°55'57"
3	1°26'59"
4	0°58'00"
5	0°29'00"
6-12	0°00'00"

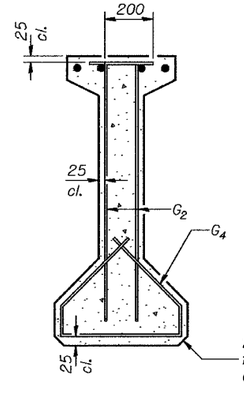


ELEVATION

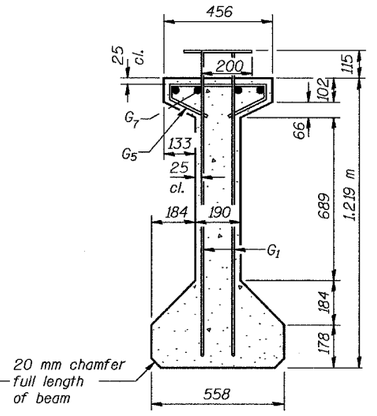


PLAN

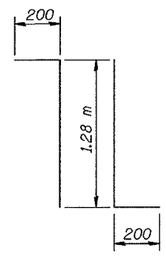
DETAIL "A"



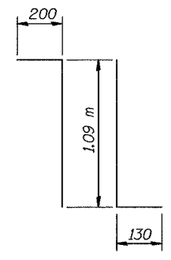
SECTION A-A



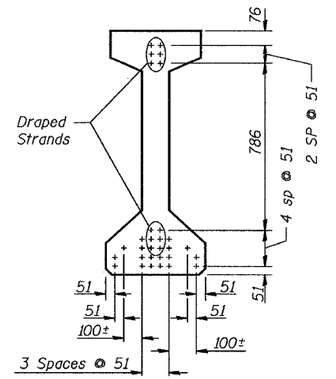
SECTION B-B



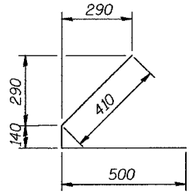
BAR G1



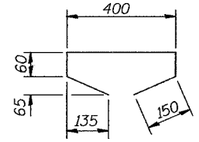
BAR G2



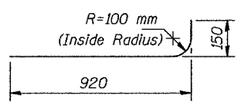
SECTION C-C



BAR G4



BAR G5



BAR G6

* BAR LIST

Bar	No.	Size	Length (m)	Shape
G1	124	#15	1.68	7L
G2	12	#20	1.42	7L
G4	48	#10	1.05	C
G5	86	#10	0.82	C
G6	4	#25	1.07	U
G7	8	#25	13.24	—

* For one beam only.

NOTES

All inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precst Concrete I-Beams shall be included in the contract unit price per meter of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 1219 mm."

Inserts for 20 mm ϕ Stud Bolts are to be single coil, flared loop type for drainage scupper attachment to exterior I-Beams. See Sheets 9, 11 and 12 of 33 for scupper locations and attachment details.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand (Fu-1860 MPa).

The nominal diameter shall be 12.7 mm and the nominal cross-section area shall be 98.71 mm^2.

Non-prestressing steel shall conform to AASHTO designation M-31M or M-322M Grade 400.

Lifting loops shall be 3-12.7 mm ϕ strands (Fu=1860 MPa), as shown.

Required release strength, f'ci. shall be 35 MPa.

Reinforcement bars designated (E) shall be epoxy coated.

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

See Sheet No. 13 of 33 for Framing Plan.

See Sheet No. 14 of 33 for Bill of Material.

URS CORPORATION
ST. LOUIS, MO

Date		
Revisions	Designed	JML
	Drawn	KDK
	Checked	RME
	Approved	DLC

BEAM DETAILS - SPAN 2

INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R.
F.A.I. RTE. 74 SECTION (90-11VB)BR
TAZEWELL COUNTY
STATION 152+685.353
STRUCTURE NO. 090-0159 (WB)

Date: 7-21-04

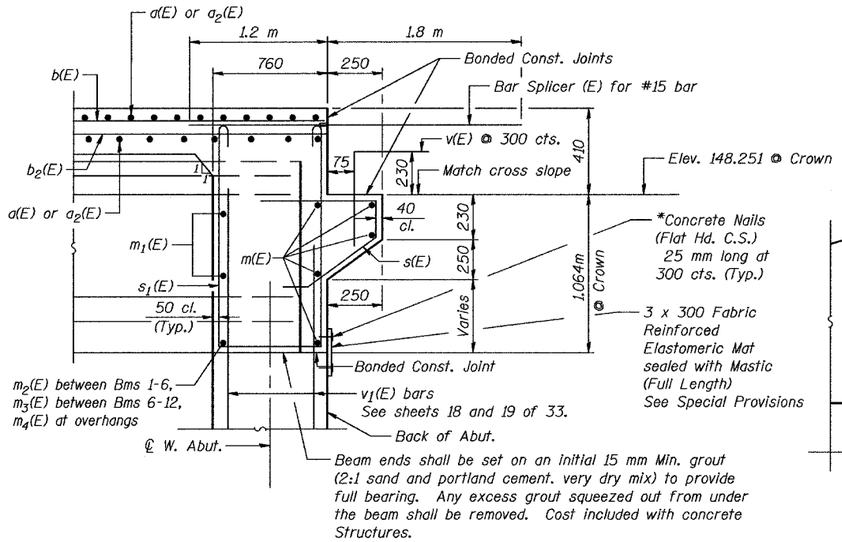
Sheet No. 15 of 33

URS Job No. 2100001243.02

PI-4-1219 (M) 7-1-94

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-IIVB)BY	TAZEWELL	1366	404
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

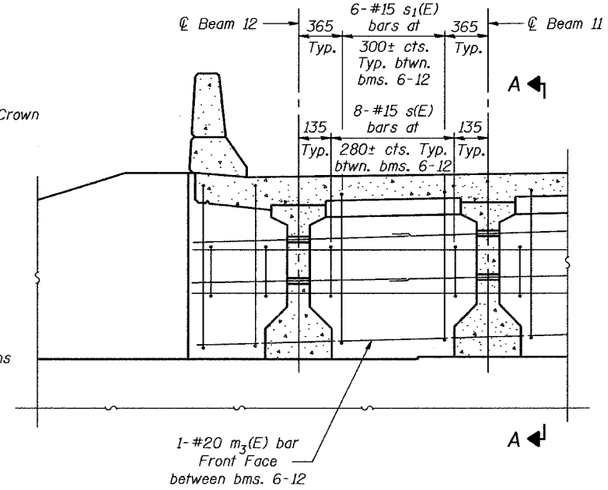


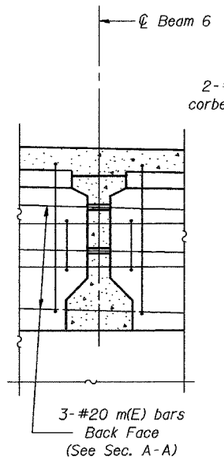
SECTION A-A

Dimensions at right angles to abutment.
**Cost included with Concrete Structures.*

SECTION B-B

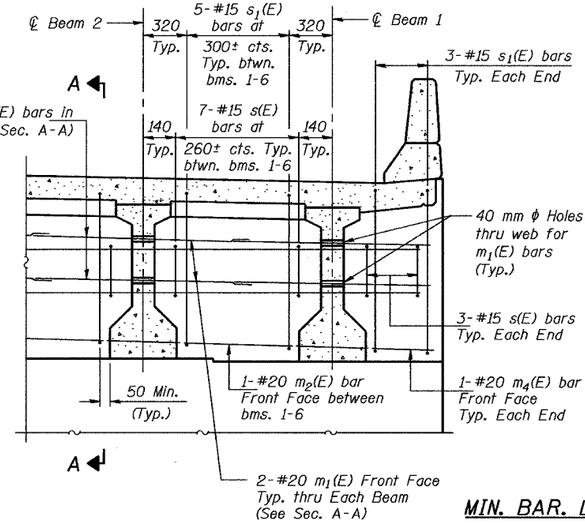
See Section A-A for dimensions and details not shown.





DIAPHRAGM AT WEST ABUTMENT

(Looking West)



MIN. BAR. LAP

#20 bar = 850

DIAPHRAGM AT EAST ABUTMENT

(Looking East)

INTERIOR BEAM MOMENT TABLE						
		0.4 Span 1	Pier 1	0.5 Span 2	Pier 2	0.6 Span 3
Strand Pattern						
I	(10^6 mm⁴)	59986		59986		59986
I′	(10^6 mm⁴)	173718		173718		173718
S_b	(10^3 mm³)	111998		111998		111998
S_b′	(10^3 mm³)	187206		187206		187206
S_t	(10^3 mm³)	87750		87750		87750
S_t′	(10^3 mm³)	596466		596466		596466
D℄	(kN/m)	19.59		19.59		19.59
M D℄	(kN·m)	498		1609		661
s D℄	(kN/m)	6.29		6.29		6.29
Ms D℄	(kN·m)	66	297	218	305	87
M L℄	(kN·m)	502	536	662	542	534
M (Imp)	(kN·m)	150	150	199	152	160

INTERIOR BEAM REACTION TABLE							
		West Abutment	Pier 1 Span 1	Pier 1 Span 2	Pier 2 Span 2	Pier 2 Span 3	East Abutment
R D℄	(kN)	153	153	252	252	161	161
Rs D℄	(kN)	30	68	81	81	70	33
R L℄	(kN)	197	213	224	224	214	198
Imp.	(kN)	55	60	54	54	60	56
R (Total)	(kN)	423	466	577	578	476	435

I and I′ are the moment of inertia and composite moment of inertia of the beam section.
S_b and S_b′ are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.
S_t and S_t′ are the non-composite and composite section modulus for the top fiber of the prestressed beam.

NOTES:

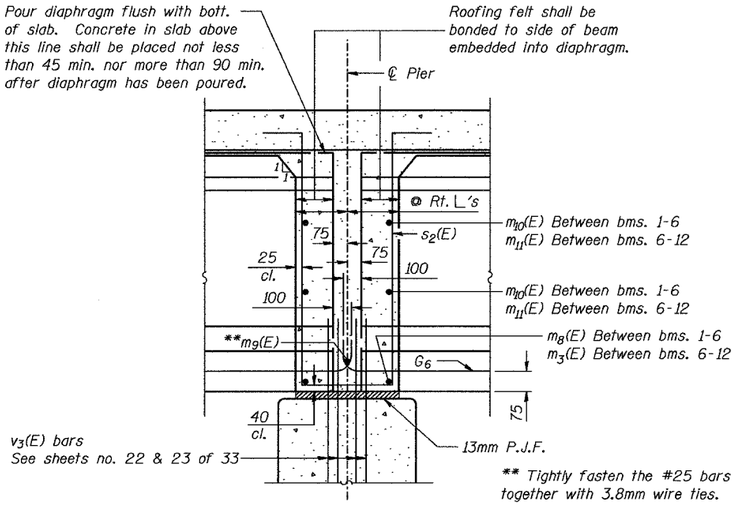
Reinforcement bars in diaphragm are billed with superstructure on sheet no. 11 of 33.
Concrete in diaphragm is included with Concrete Superstructure on sheet no. 11 of 33.
For details of bars s(E) and s_1(E) see sheet no. 11 of 33.
The s(E), s_1(E) and s_2(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
Cost of 4.4 kg/m roofing felt is included with Concrete Superstructure.
All dimensions are in millimeters (mm) except as noted.
For details of deck reinforcing bars, see sheets no. 9 and 10 of 33.

ABUTMENT DIAPHRAGM DETAILS

Date	Designed JML	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)	Sheet No. 16 of 33
Revisions	Drawn JEH		
	Checked RME		
	Approved DLC		
URS CORPORATION ST. LOUIS, MO	Date: 7-21-04		URS Job No. 2100001243.02

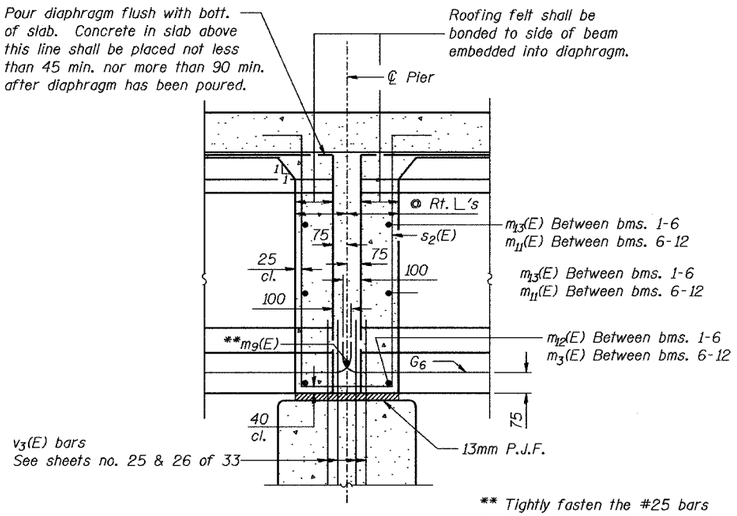
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	405
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



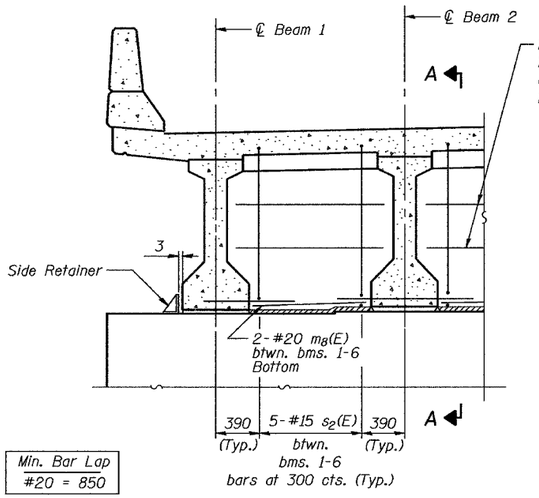
SECTION A-A

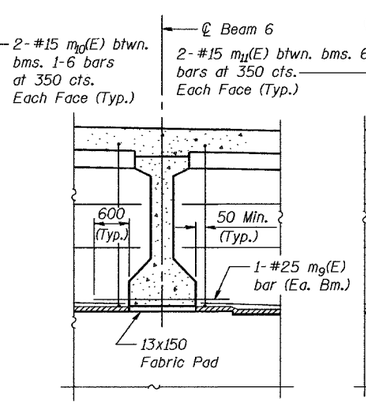
Dimensions along ℄ of beam, except as shown.

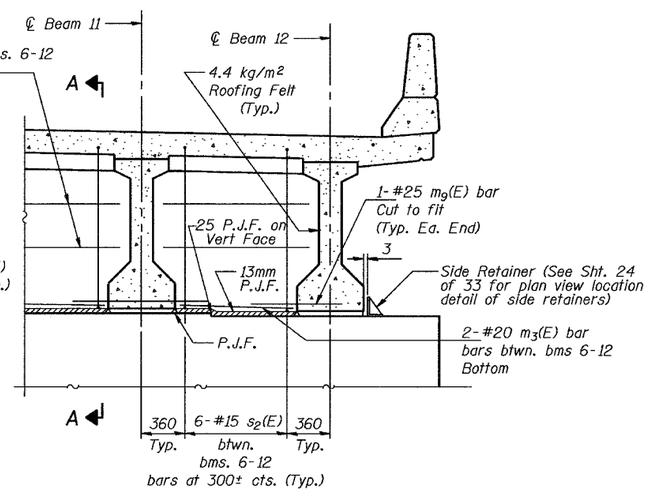


SECTION B-B

Dimensions along ℄ of beam, except as shown.

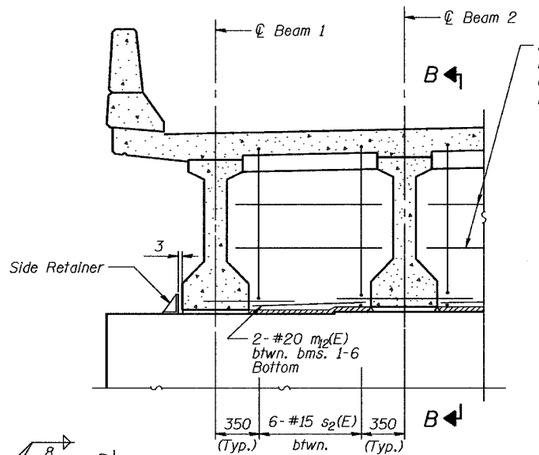


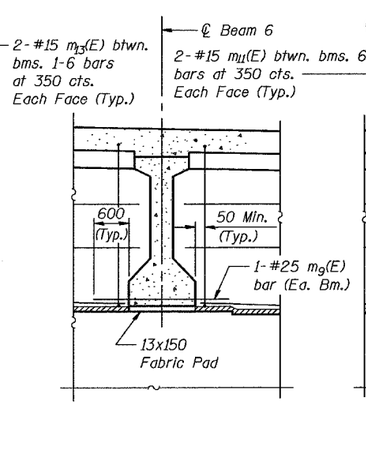


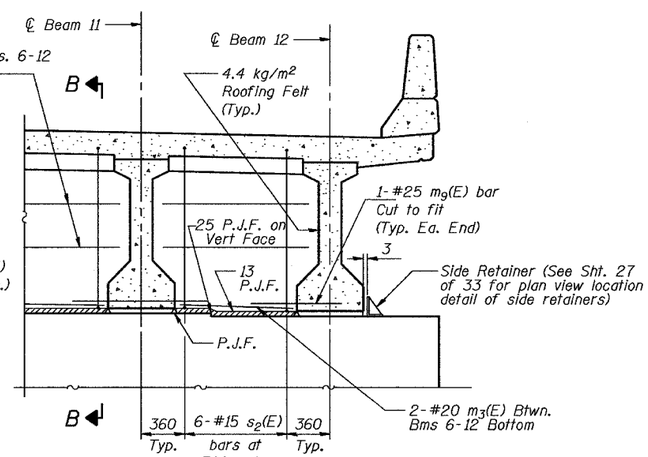


Min. Bar Lap
#20 = 850

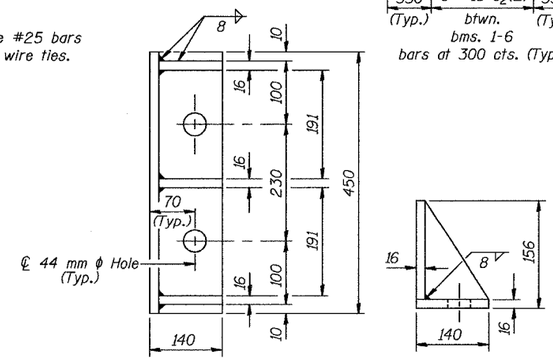
DIAPHRAGM AT PIER 1







DIAPHRAGM AT PIER 2



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

NOTES:

Reinforcement bars in diaphragm are billed with superstructure on sheet no. 11 of 33.

Concrete in diaphragm is included with Concrete Superstructure on sheet no. 11 of 33.

For details of bars s_2(E) see sheet no. 11 of 33.

The s_1(E) and s_2(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

Cost of 4.4 kg/m roofing felt is included with Concrete Superstructure.

Cost of Side Retainers is included with Concrete Structures.

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

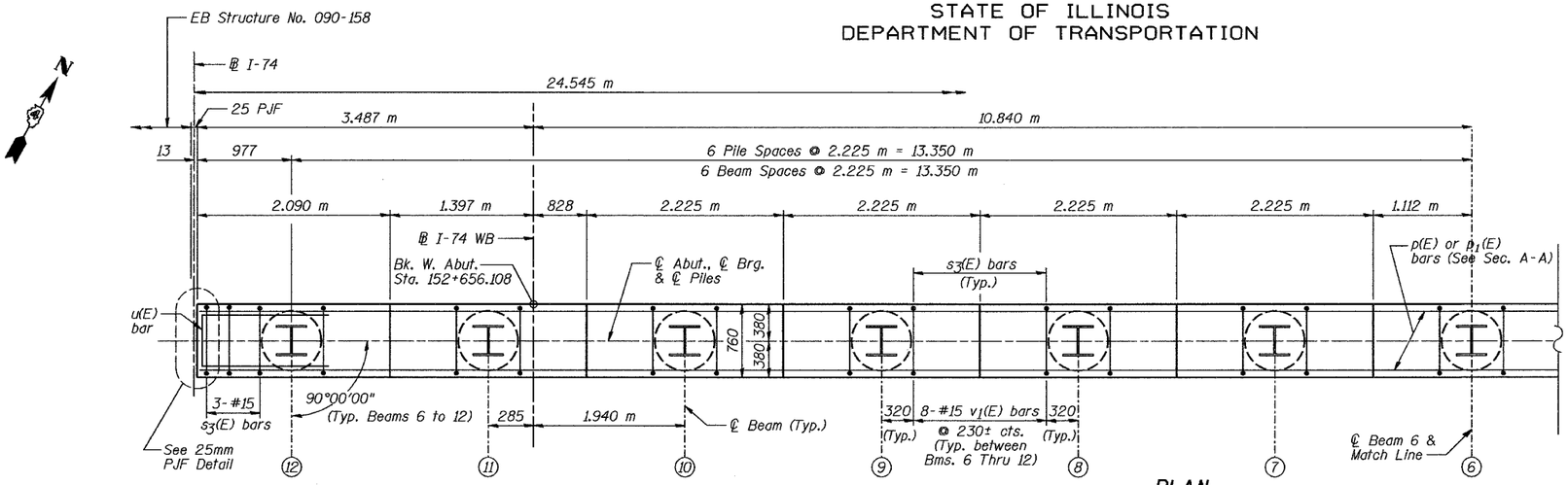
PIER DIAPHRAGM DETAILS

Date	Designed JML	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)	Sheet No. 17 of 33
Revisions	Drawn KDK		
	Checked RME		
	Approved DLC		
URS CORPORATION ST. LOUIS, MO	Date: 7-21-04		URS Job No. 2100001243.02

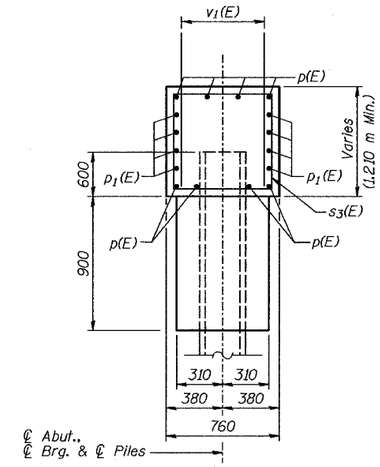
66201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	406
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

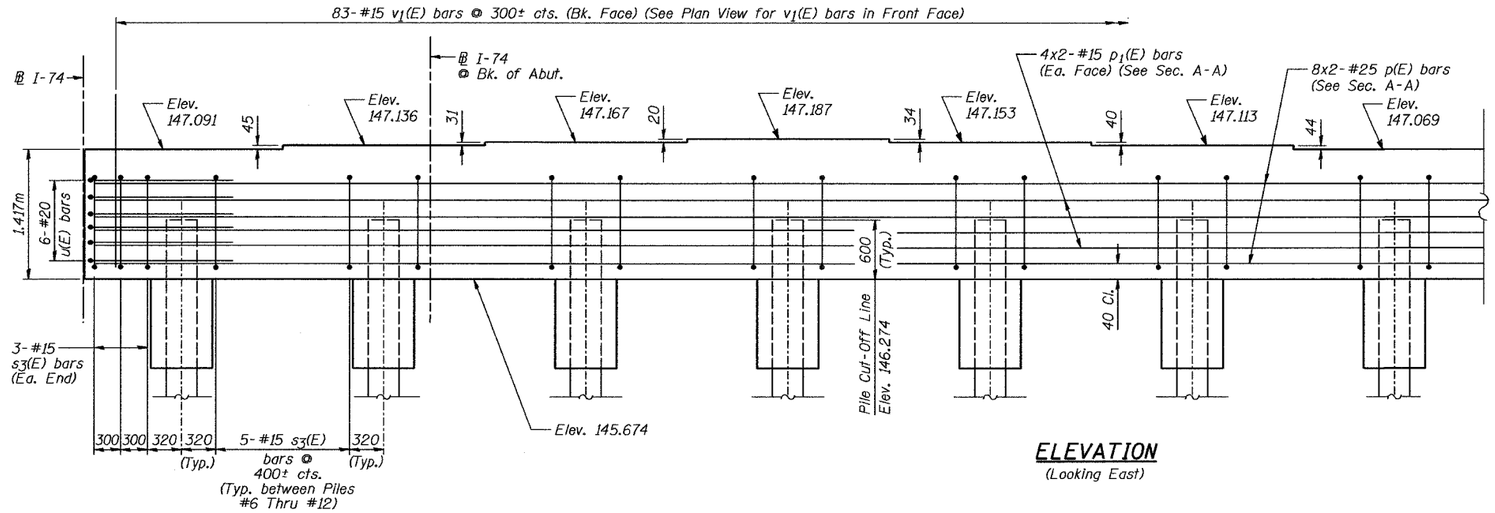
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



SECTION A-A



ELEVATION
(Looking East)

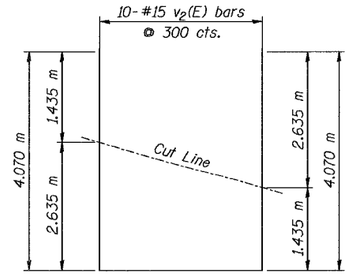
PILE DATA

Type - HP310x125
Capacity - Driven to refusal
Est. Length - 25.5m
No. Req'd. - 11
Test Piles - 1 (Permanent location)
Driven to refusal
Allow 650 KN/Pile for Negative Skin Friction

Note:
See Sheet #19 of 33 for notes, Bill of Material, location of Section A-A, 25mm PJF Detail, and Pile Data.

Min. Bar Lap

#15 - 890
#20 - 1.110 m



FIELD CUTTING DIAGRAM

Order bars full length. Cut to fit as shown and use remainder of bars in other face.

URS CORPORATION ST. LOUIS, MO

WEST ABUTMENT

Date		
Revisions	Designed	JLK
	Drawn	KDK
	Checked	RME
	Approved	DLC

INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R.
F.A.I. RTE. 74 SECTION (90-11VB)BR
TAZEWELL COUNTY
STATION 152+685.353
STRUCTURE NO. 090-0159 (WB)

Sheet No. 18 of 33

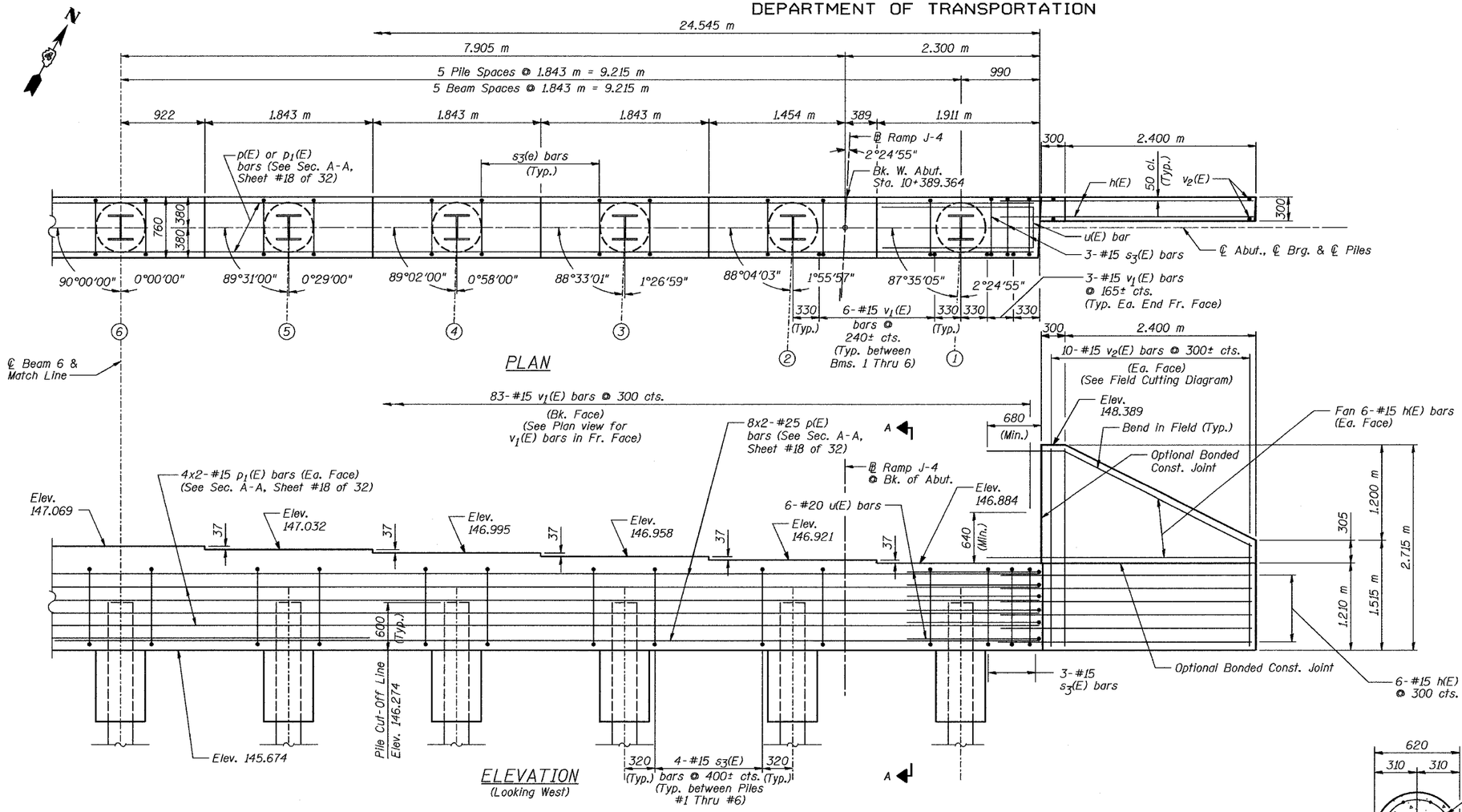
Date: 7-21-04

URS Job No. 2100001243.02

68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	407
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



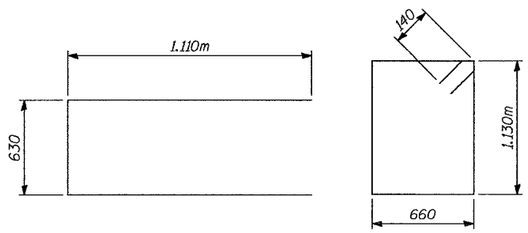
ELEVATION
(Looking West)

BILL OF MATERIAL
WEST ABUTMENT

Bar	No.	Size	Length	Shape
h(E)	24	#15	3.38	——
p(E)	16	#25	13.16	——
p1(E)	16	#15	12.55	——
s3(E)	56	#15	3.86	□
u(E)	12	#20	2.85	▭
v1(E)	167	#15	2.18	——
v2(E)	10	#15	4.07	——

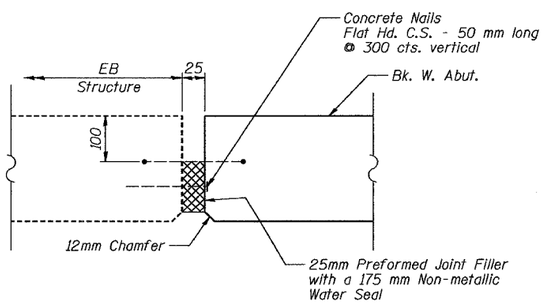
Structure Excavation	m³	112
Concrete Structures	m³	26.9
Reinforcement Bars, Epoxy Coated	kg	2330
Furn. Steel Piles HP 310 x 125	meter	280.5
Test Pile HP 310 x 125	Ea.	1
Driving Steel Piles	meter	280.2

Min. Bar. Lap	
#15	640
#20	790
#25	1320

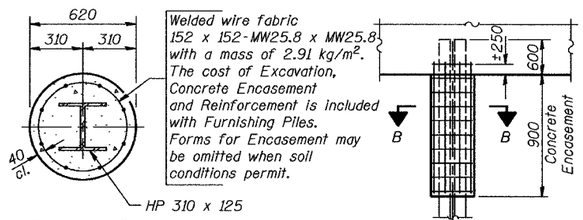


BAR u(E)

BAR s3(E)



25mm PREFORMED JOINT FILLER DETAIL
(at Back of Abutment)



SECTION B-B
PILE ENCASEMENT DETAIL

Notes: Work this Sheet with #18 of 33.
See Sheet #4 of 33 for existing pile locations.
Pour steps monolithically with cap.
Bars indicated thus 4 x 3 - #20 etc. indicates 4 lines of bars with 3 lengths per line.
Reinforcement bars designated (E) shall be Epoxy Coated.
All dimensions are in millimeters (mm) except as noted.
All stations and elevations are in meters (m).
All edges shall have standard 20mm chamfers, except as noted.
See Sheet #18 of 33 for Section A-A.

URS
URS CORPORATION
ST. LOUIS, MO

WEST ABUTMENT

Date	Designed JLK
Revisions	Drawn KDK
	Checked RME
	Approved DLC
Date: 7-21-04	

INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R.
F.A.I. RTE. 74 SECTION (90-11VB)BR
TAZEWELL COUNTY
STATION 152+685.353
STRUCTURE NO. 090-0159 (WB)

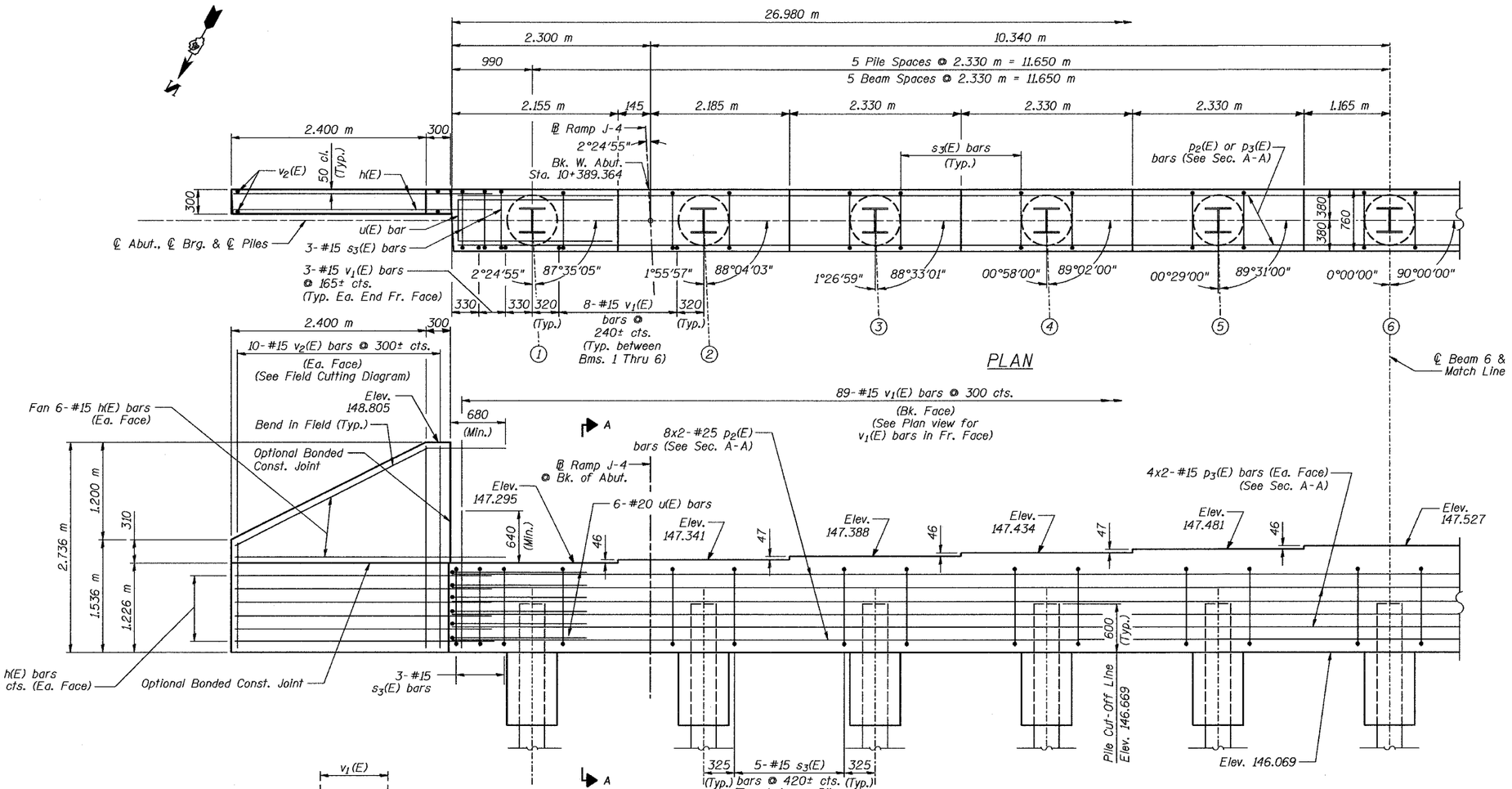
Sheet No. 19 of 33

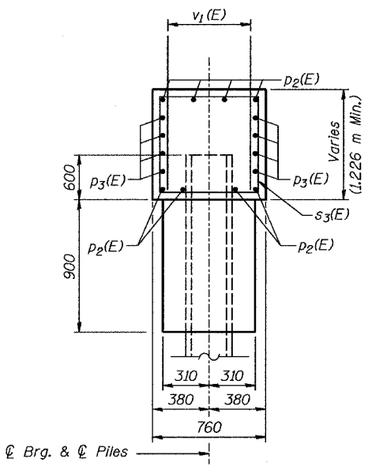
URS Job No. 2100001243.02

68201

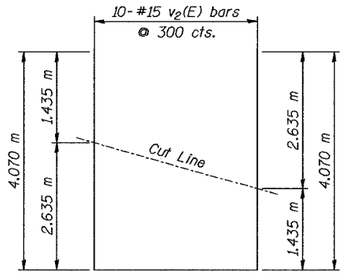
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	408
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION





SECTION A-A



FIELD CUTTING DIAGRAM

Order bars full length. Cut to fit as shown and use remainder of bars in other face.

Note:
See Sheet #21 of 33 for notes, Bill of Material, and Pile Data.

EAST ABUTMENT

Date	Designed	JLK
Revisions	Drawn	KDK
	Checked	RME
	Approved	DLC

INTERSTATE 74 AND RAMPS J-4 OVER
ALTORFER LANE AND TP&W R.R.
F.A.I. RTE. 74 SECTION (90-11VB)BR
TAZEWELL COUNTY
STATION 152+685.353
STRUCTURE NO. 090-0159 (WB)

Sheet No. 20 of 33

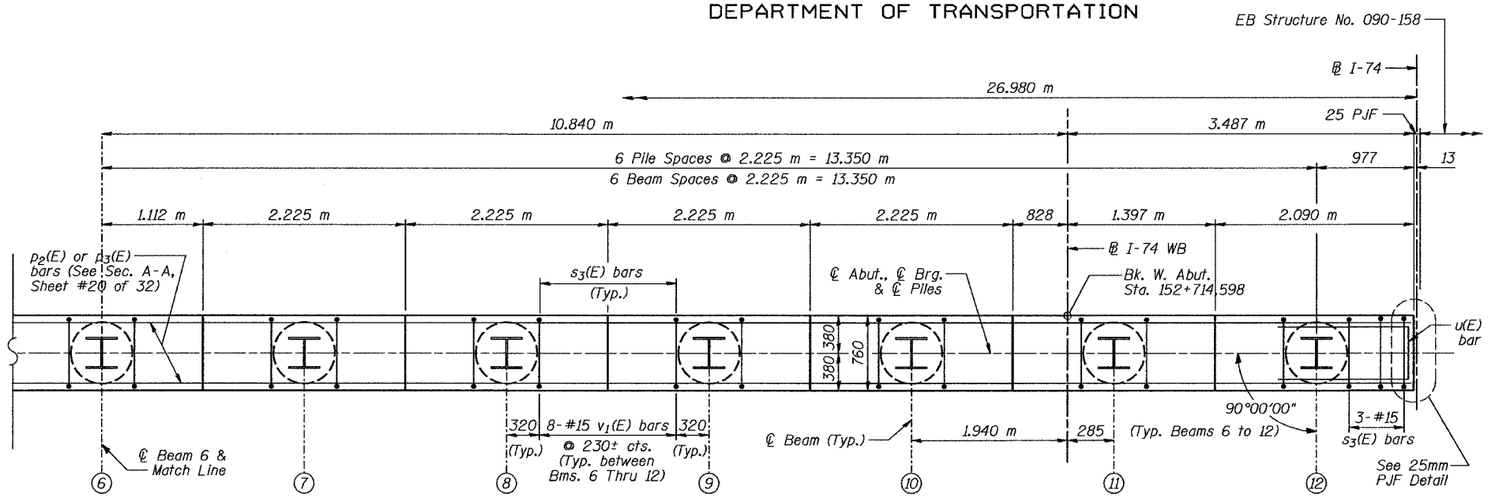
URS CORPORATION
ST. LOUIS, MO

Date: 7-21-04

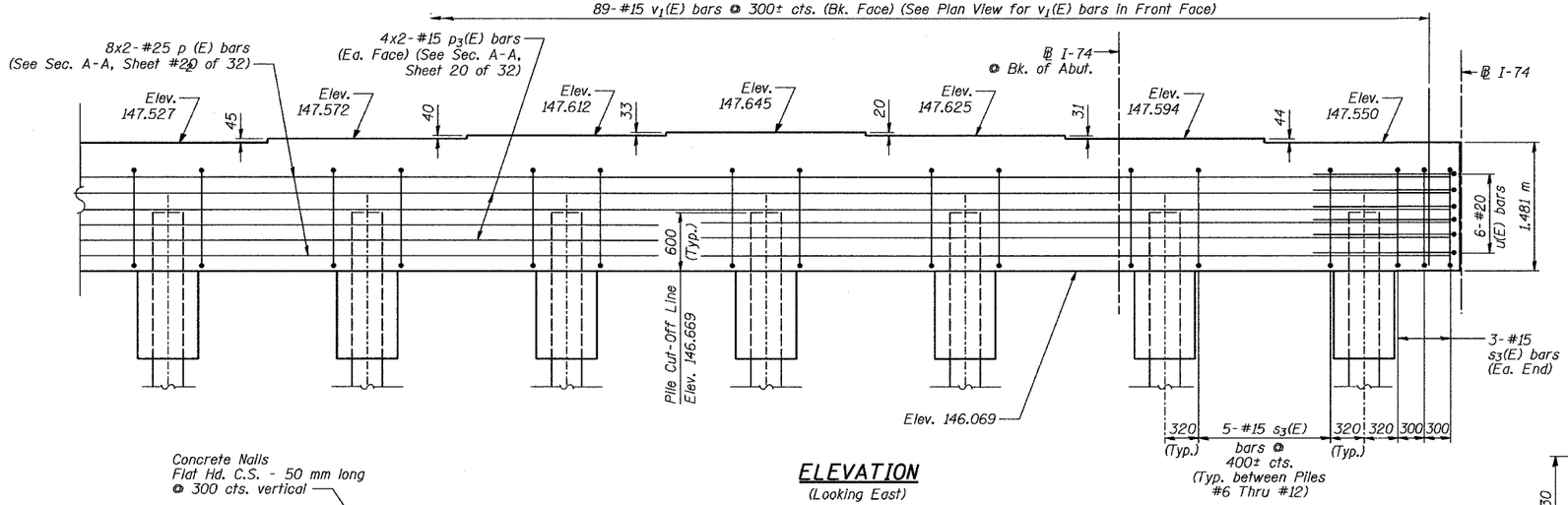
URS Job No. 2100001243.02

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	409
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

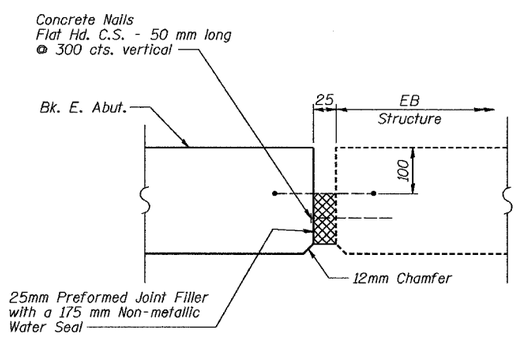
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



ELEVATION
(Looking East)



25mm PREFORMED JOINT FILLER DETAIL
(at Back of Abutment)

PILE DATA

Type - HP310x125
Capacity - Driven to refusal
Est. Length - 26.9m
No. Req'd. - 12
Allow 650 KN/Pile for Negative Skin Friction

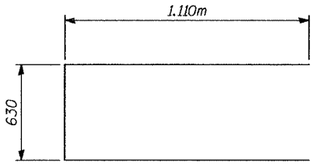
Notes: Work this Sheet with #20 of 33.
See Sheet #19 of 33 for pile encasement details.
See Sheet #4 of 33 for existing pile locations.
Pour steps monolithically with cap.
Bars indicated thus 4 x 3 - #20 etc. indicates 4 lines of bars with 3 lengths per line.
Reinforcement bars designated (E) shall be Epoxy Coated.
All dimensions are in millimeters (mm) except as noted.
All stations and elevations are in meters (m).
All edges shall have standard 20mm chamfers, except as noted.

BILL OF MATERIAL
EAST ABUTMENT

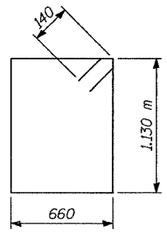
Bar	No.	Size	Length	Shape
h(E)	24	#15	3.38	——
p_2(E)	16	#25	14.36	——
p_3(E)	16	#15	13.88	——
s_3(E)	61	#15	3.86	⌐
u(E)	12	#20	2.85	▭
v_1(E)	183	#15	2.18	——
v_2(E)	10	#15	4.07	——
Structure Excavation			m^3	80
Concrete Structures			m^3	30.4
Reinforcement Bars, Epoxy Coated			kg	2520
Furn. Steel Piles HP 310 x 125			meter	322.8
Driving Steel Piles			meter	322.8

Min. Bar. Lap

#15	640
#20	790
#25	1320



BAR u(E)



BAR s_3(E)

URS CORPORATION
ST. LOUIS, MO

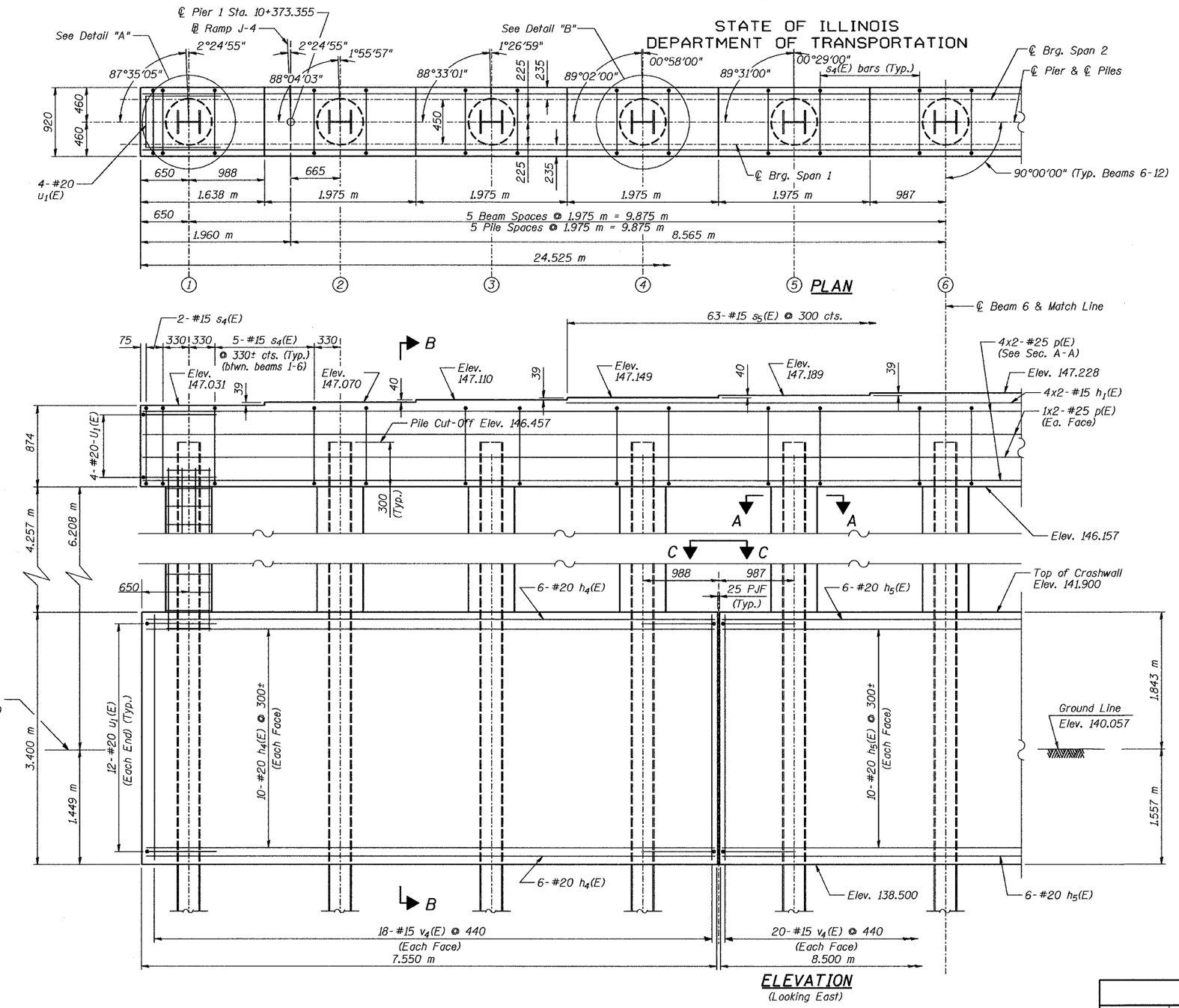
EAST ABUTMENT

Date	Designed JLK	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)	Sheet No. 21 of 33
Revisions	Drawn KDK		
	Checked RME		
	Approved DLC		
Date: 7-21-04			URS Job No. 2100001243.02

88201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	410
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTE: See Sheet #23 of 33 for Section A-A and Section B-B.
See Sheet #24 of 33 for Detail A, Detail B, View C-C, and Bill of Material.
All edges shall have standard 20mm chamfers, except as noted.
Bars indicated thus 12x4-#15 etc. indicates 12 lines of Bars with 4 lengths per line.

MIN. BAR LAP

#15 - 640
#25 - 1850

PILE DATA

Type - HP360x174
Capacity - Driven to Refusal
Est. Length - 27.2m
No. Req'd. - 11
Test Piles - 1 (Permanent Location) Driven to Refusal
Allow 650 KN/Pile for Negative Skin Friction

URS CORPORATION ST. LOUIS, MO

PIER 1

Date			
Revisions	Designed	JML	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)
	Drawn	KDK	
	Checked	RME	
	Approved	DLC	

Date: 7-21-04

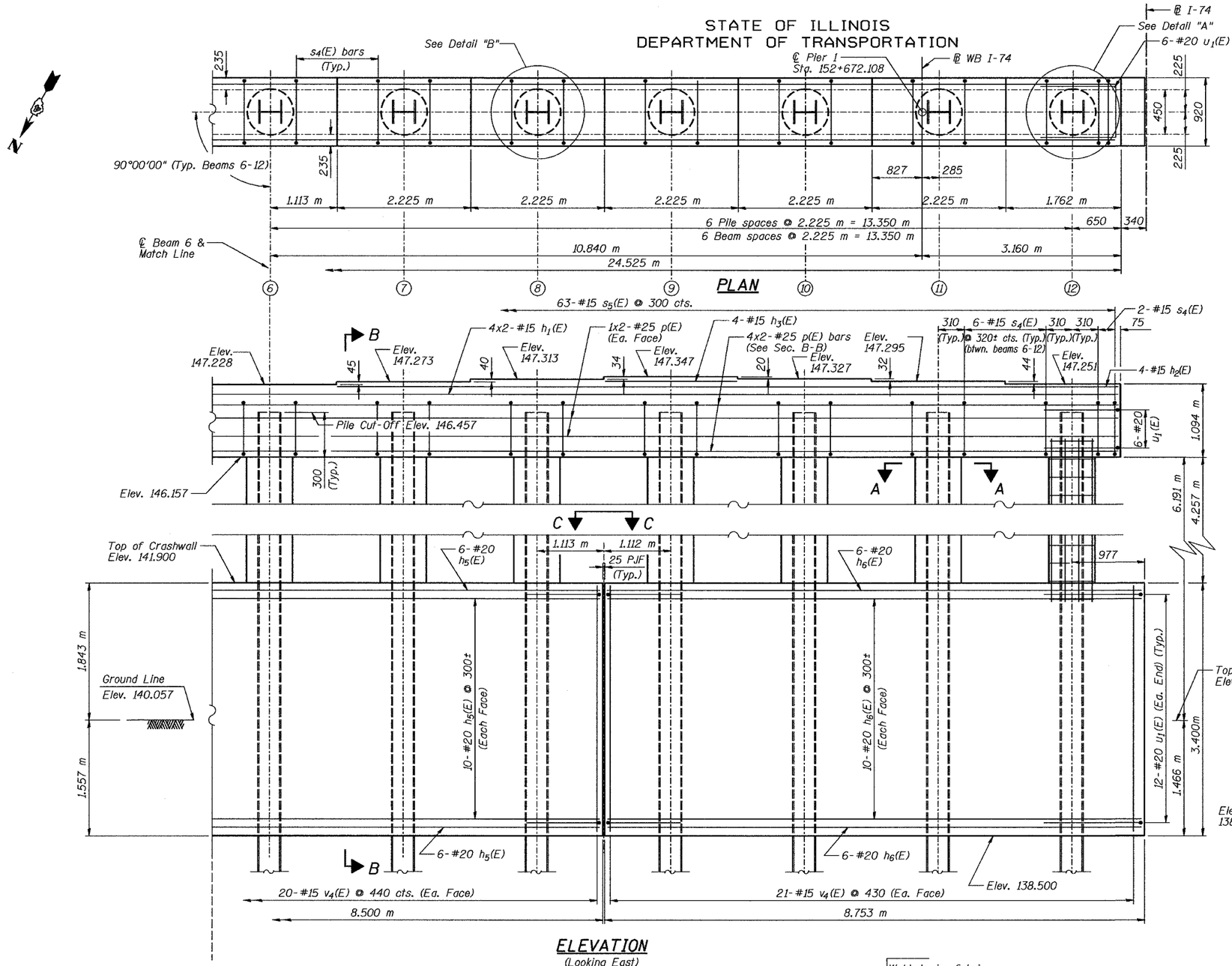
Sheet No. 22 of 33

URS Job No. 2100001243.02

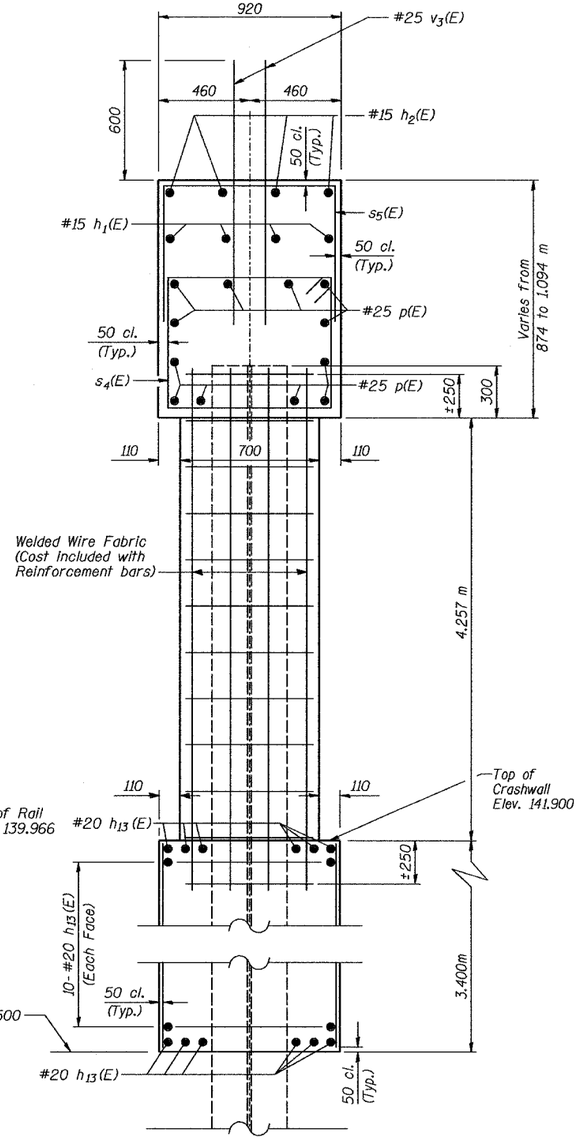
68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	411
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

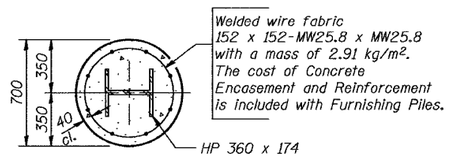


ELEVATION
(Looking East)



SECTION B-B

NOTE: See Sheet #24 of 33 for Detail A, Detail B, View C-C, and Bill of Material.
All edges shall have standard 20mm chamfers, except as noted.
Bars indicated thus 12x4-#15 etc. indicates 12 lines of Bars with 4 lengths per line.
See Sheet #24 of 33 for Drainage System details.



SECTION A-A
PILE ENCASEMENT DETAIL

URS CORPORATION
ST. LOUIS, MO

PIER 1

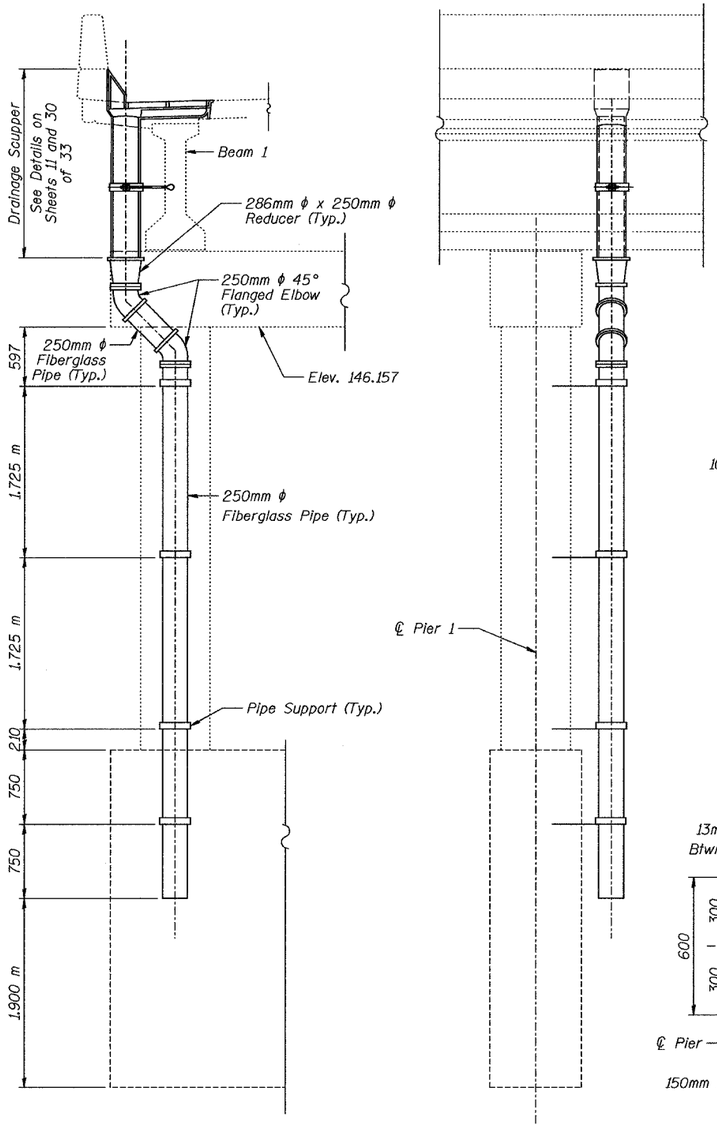
Date			
Revisions	Designed	JML	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)
	Drawn	KDK	
	Checked	RME	
	Approved	DLC	

Date: 7-21-04

Sheet No. 23 of 33

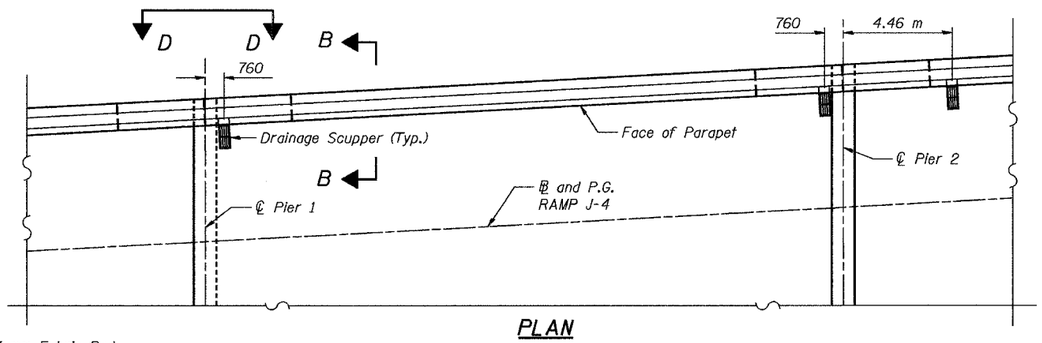
URS Job No. 2.100001243.02

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

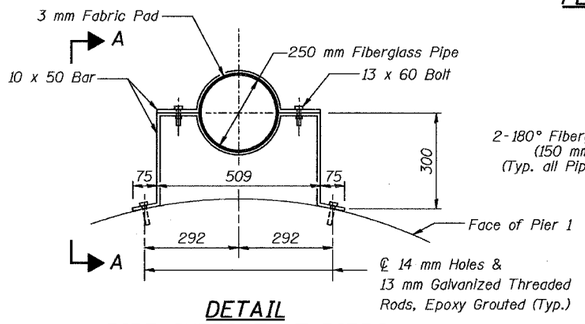


SECTION B-B

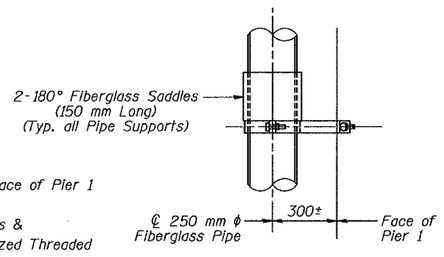
VIEW D-D



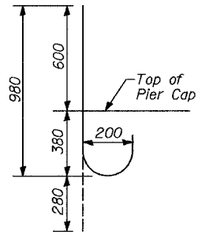
PLAN



DETAIL
PIPE SUPPORT AT PIERS



VIEW A-A

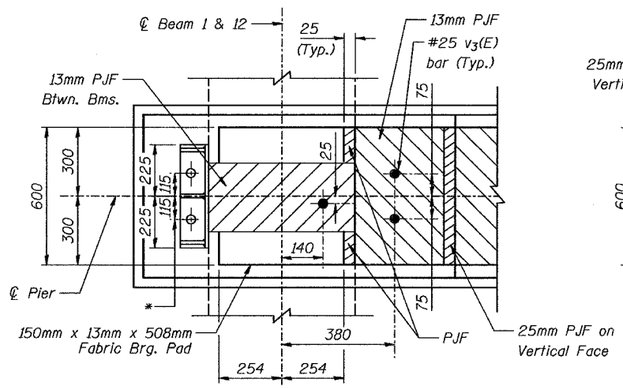


v_3(E) DOWEL BAR

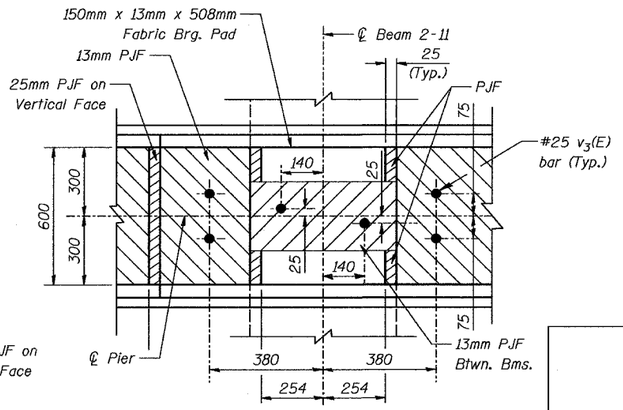
BILL OF MATERIAL
PIER 1

Bar	No.	Size	Length	Shape
h_1(E)	8	#15	9.87	——
h_2(E)	4	#15	12.81	——
h_3(E)	4	#15	2.15	——
h_4(E)	32	#20	7.47	——
h_5(E)	32	#20	8.42	——
h_6(E)	32	#20	8.67	——
p(E)	24	#25	13.16	——
s_4(E)	65	#15	3.47	⌐
s_5(E)	63	#15	1.75	⌐
u_1(E)	82	#20	3.39	⊐
v_3(E)	66	#25	1.26	⊃
v_4(E)	118	#15	3.30	——
Structure Excavation			m^3	67
Concrete Structures			m^3	101.6
Reinforcement Bars, Epoxy Coated			kg	5430
Furn. Steel Piles HP 360 x 174			meter	299.2
Driving Steel Piles			meter	299.2
Test Pile HP 360 x 174			Ea.	1

Reinforcement bars designated (E) shall be epoxy coated.



DETAIL "A"
Typ. at Exterior Bms.



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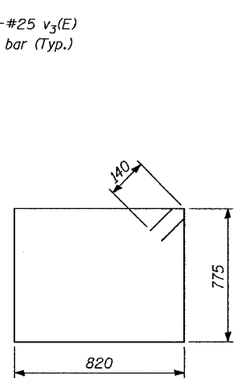
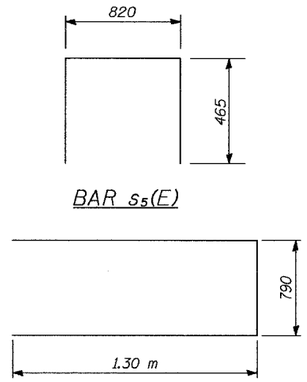
Typ. at Interior Bms.



BAR s_4(E)

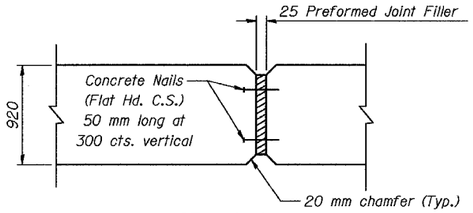


BAR s_5(E)

BAR u_1(E)

* ℄ M36 x 450 mm Anchor Bolts with 75 x75 x 8 mm ℄ washer under nut. Holes in cap to be drilled after beams are in place. Cost is included in Concrete Structures.

PIER 1
(Looking West)



VIEW C-C

DETAILS OF PIER CAP SHOWING BEARINGS, PREFORMED JOINT FILLER AND DOWEL BARS

Notes:
Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 200 MPa minimum.
The surface of the Fiberglass pipe shall be free of bond inhibiting agents.
Bolts, nuts, rods, and washers for "Drainage System" shall conform to the requirements of ASTM A307.
The pay item "Drainage System" shall include providing and installing fiberglass pipe, tees, reducers, elbows, cleanouts, inserts, anchors, hangers, clamps, saddles and all other items necessary to complete the underdeck drainage system (See Special Provisions).
For Drainage Scupper Details See Sheet 11 & 30 of 33.
Locate anchors to miss reinforcement.
All dimensions are in millimeters (mm) except as noted.

URS CORPORATION
ST. LOUIS, MO

PIER 1 DETAILS

Date		
Revisions	Designed	JML
	Drawn	KDK
	Checked	RME
	Approved	DLC

INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R.
F.A.I. RTE. 74 SECTION (90-11VB)BR
TAZEWELL COUNTY
STATION 152+685.353
STRUCTURE NO. 090-0159 (WB)

Sheet No. 24 of 33

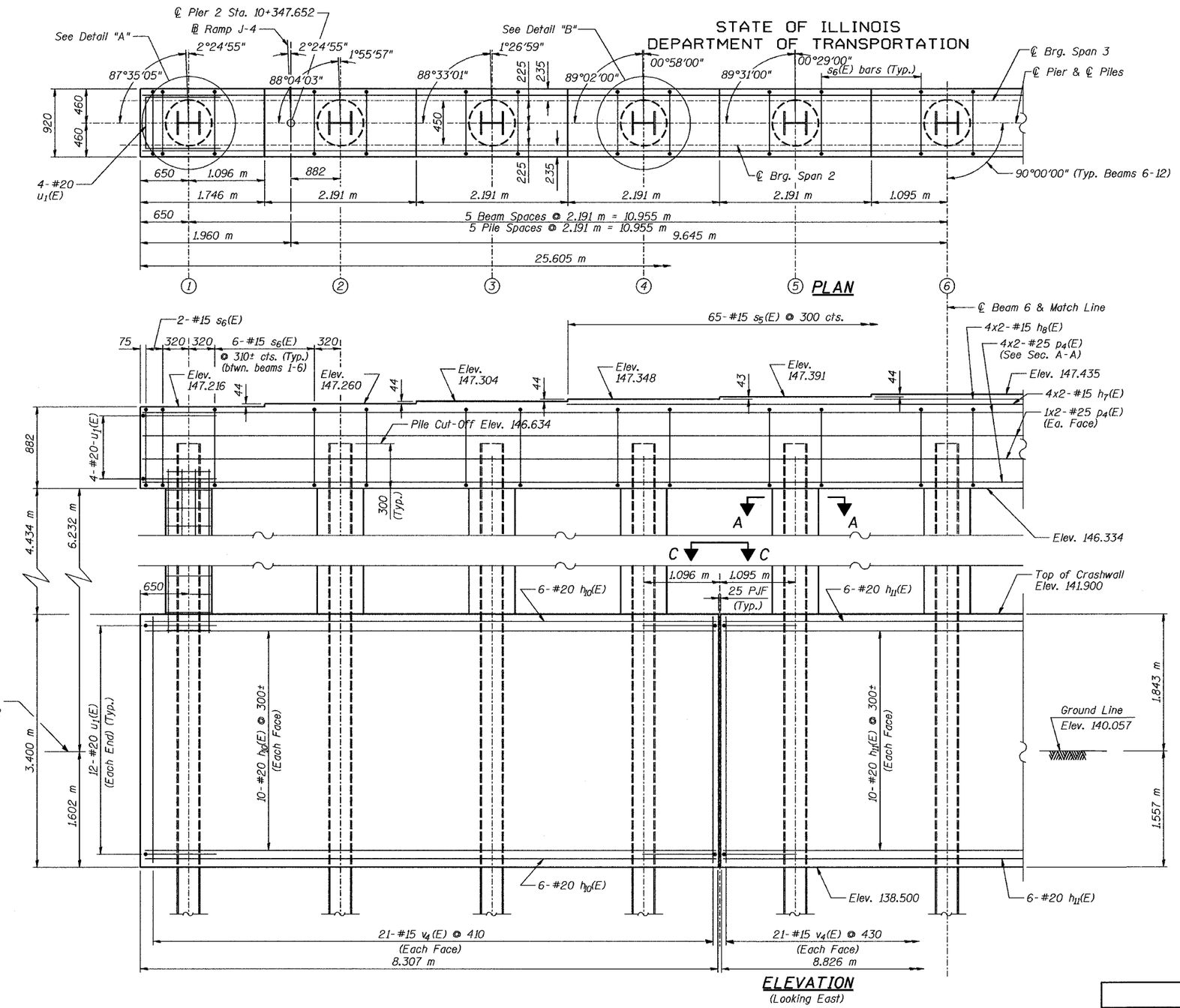
Date: 7-21-04

URS Job No. 2100001243.02

68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	413
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PILE DATA

Type - HP360x174
Capacity - Driven to Refusal
Est. Length - 27.3m
No. Req'd. - 12
Allow 650 KN/Pile for Negative Skin Friction

NOTE: See Sheet #26 of 33 for Section A-A and Section B-B.
See Sheet #27 of 33 for Detail A, Detail B, View C-C, and Bill of Material.
All edges shall have standard 20mm chamfers, except as noted.
Bars indicated thus 12x4-#15 etc. indicates 12 lines of Bars with 4 lengths per line.

MIN. BAR LAP

#15 - 640
#25 - 1850

URS CORPORATION ST. LOUIS, MO

PIER 2

Date		
Revisions	Designed	JML
	Drawn	KDK
	Checked	RME
	Approved	DLC

INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R.
F.A.I. RTE. 74 SECTION (90-11VB)BR
TAZEWELL COUNTY
STATION 152+685.353
STRUCTURE NO. 090-0159 (WB)

Sheet No. 25 of 33

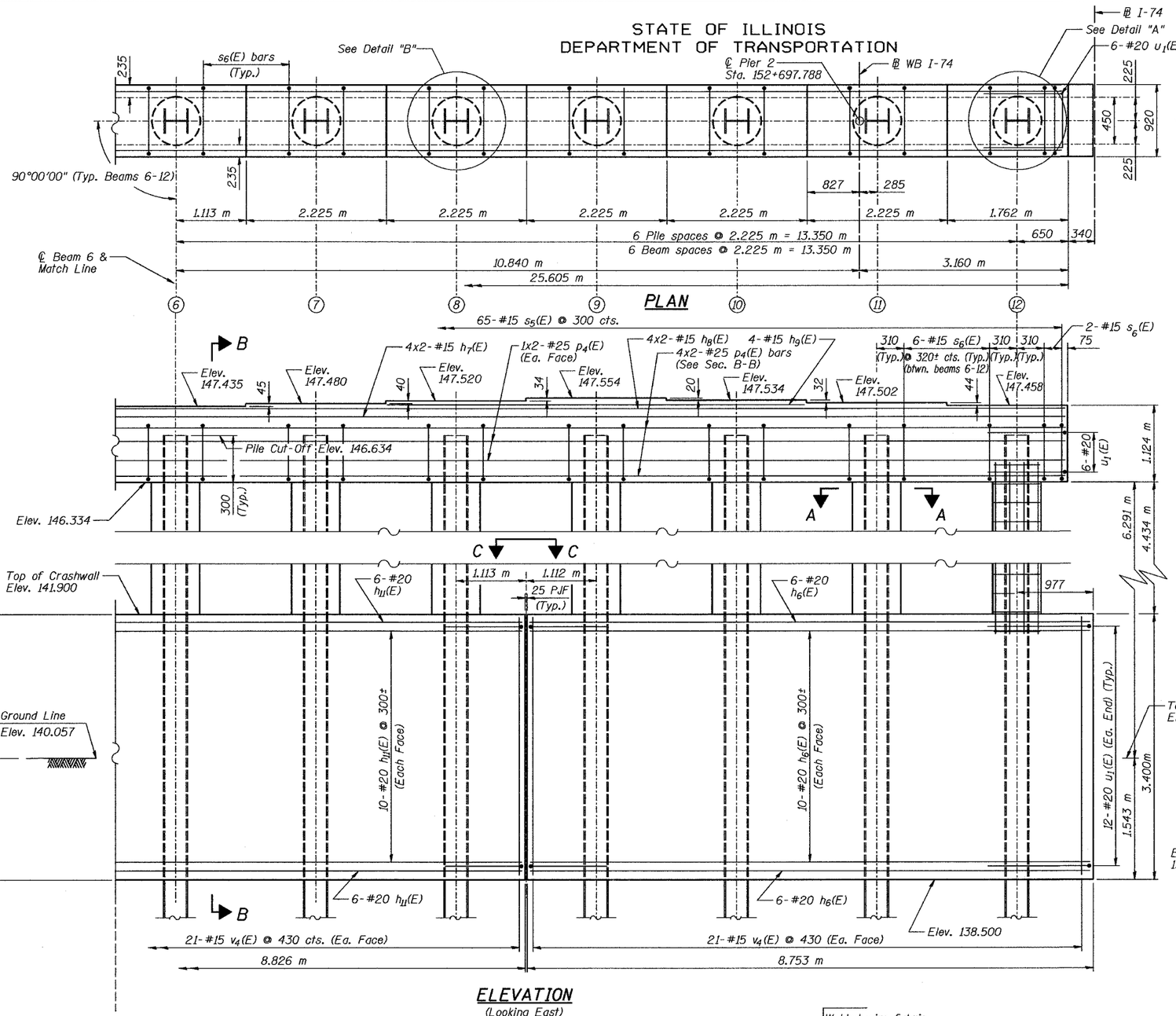
Date: 7-21-04

URS Job No. 2100001243.02

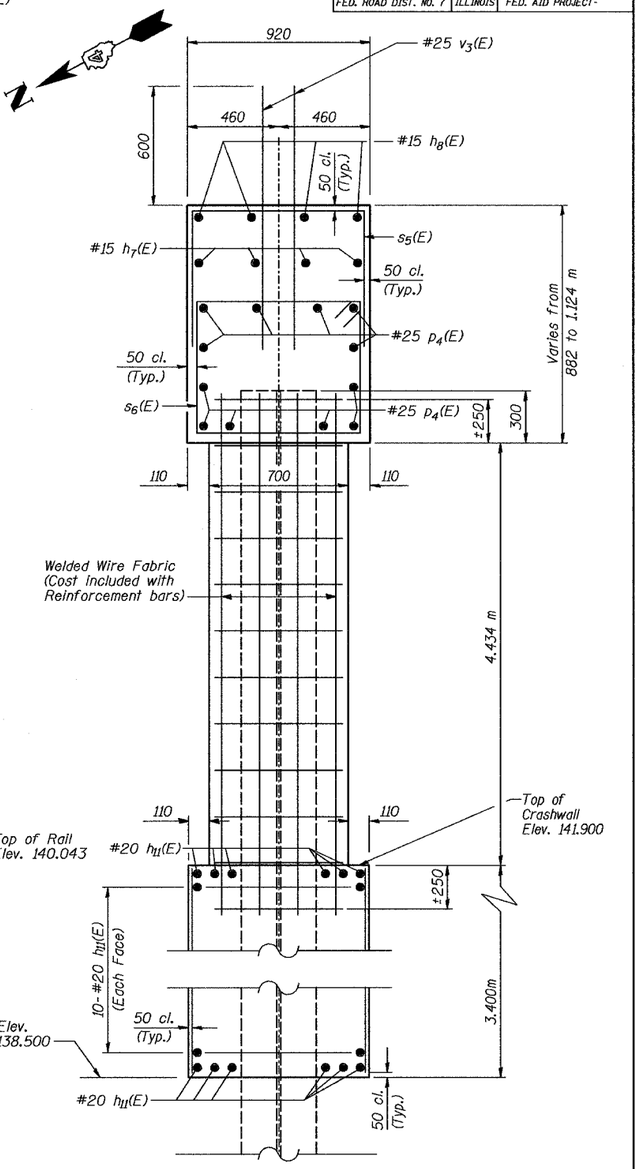
68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-1IVB)BR	TAZEWELL	1366	414
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

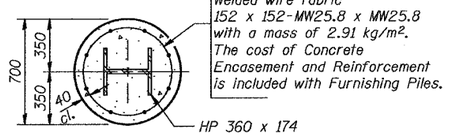
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
(Looking East)



SECTION B-B



SECTION A-A
PILE ENCASEMENT DETAIL

NOTE: See Sheet #25 of 33 for Detail A, Detail B, View C-C, and Bill of Material.
All edges shall have standard 20mm chamfers, except as noted.
Bars indicated thus 12x4-#15 etc. indicates 12 lines of Bars with 4 lengths per line.
See Sheet #27 of 33 for Drainage System details.

URS CORPORATION
ST. LOUIS, MO

PIER 2

Date		
Revisions		
	Designed	JML
	Drawn	KDK
	Checked	RME
	Approved	DLC

INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R.
F.A.I. RTE. 74 SECTION (90-1IVB)BR
TAZEWELL COUNTY
STATION 152+685.353
STRUCTURE NO. 090-0159 (WB)

Date: 7-21-04

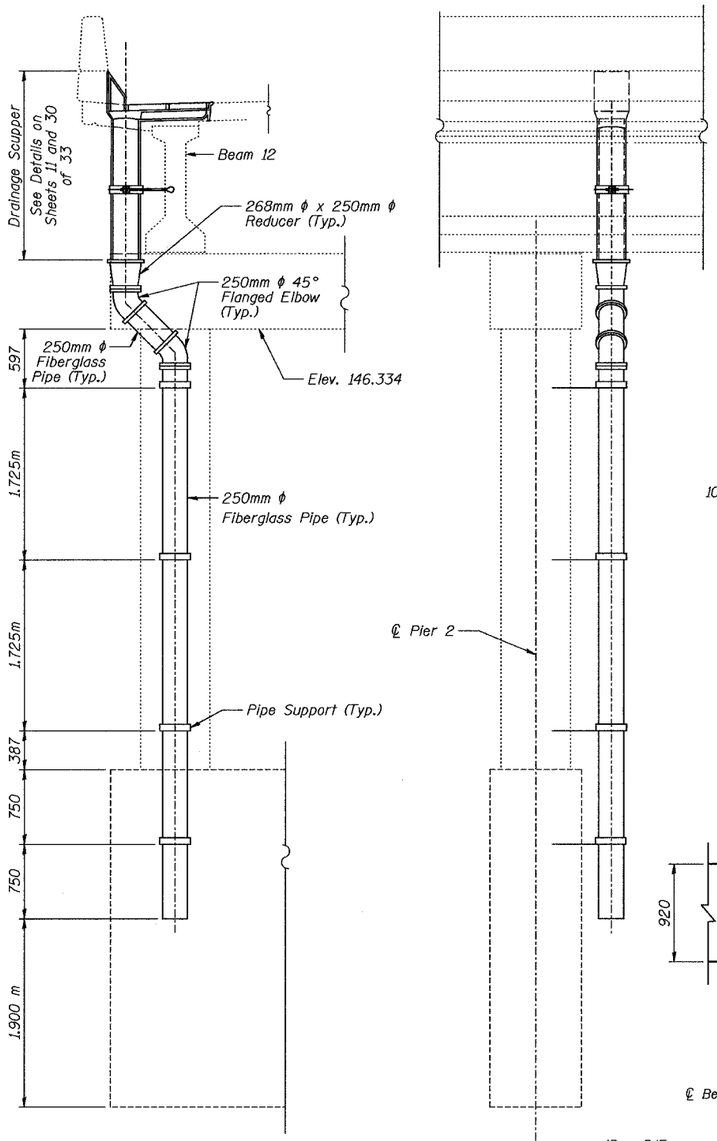
Sheet No. 26 of 33

URS Job No. 2.100001243.02

68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	415
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

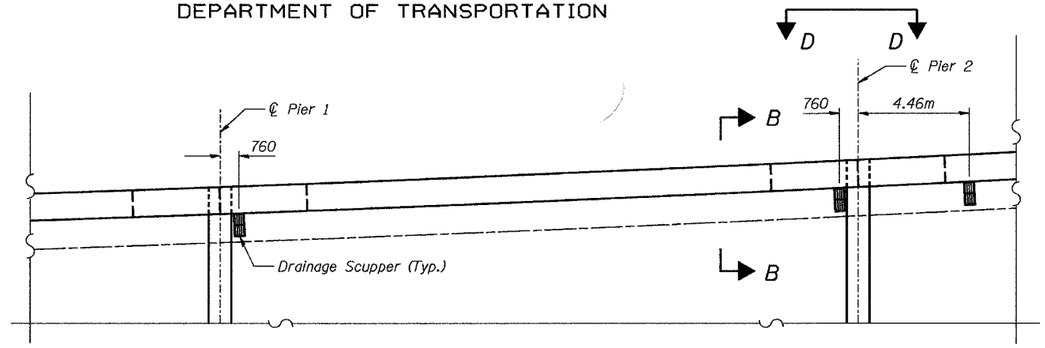
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



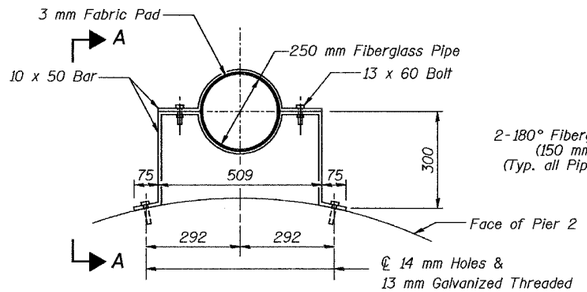
SECTION B-B

VIEW D-D

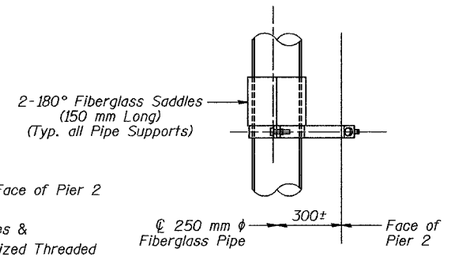
PIER 2
(Looking East)



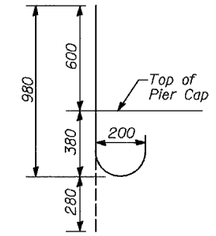
PLAN



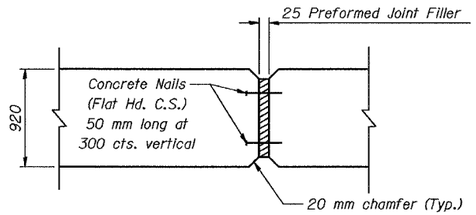
DETAIL
PIPE SUPPORT AT PIERS



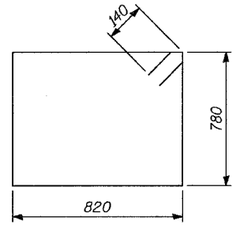
VIEW A-A



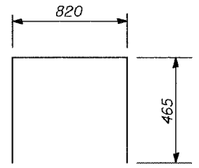
V3(E) DOWEL BAR



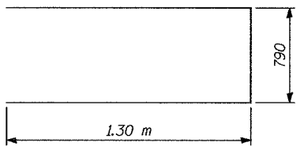
VIEW C-C



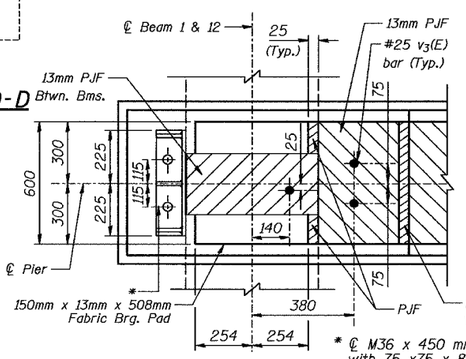
BAR s_6(E)



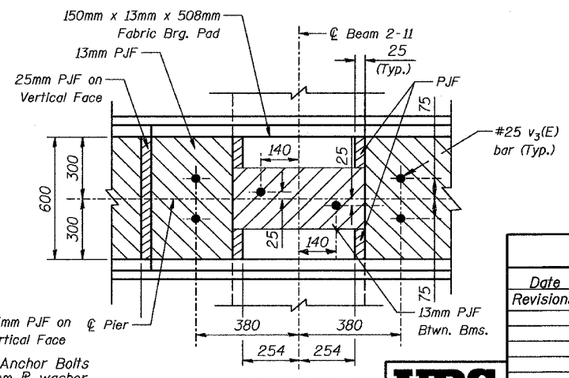
BAR s_5(E)



BAR u_1(E)



DETAIL "A"
Typ. at Exterior Bms.



DETAIL "B"
Typ. at Interior Bms.

* ℄ M36 x 450 mm Anchor Bolts with 75 x75 x 8 mm ℄ washer under nut. Holes in cap to be drilled after beams are in place. Cost is included in Concrete Structures.

BILL OF MATERIAL
PIER 2

Bar	No.	Size	Length	Shape
h_6(E)	32	#20	8.67	——
h_7(E)	8	#15	10.02	——
h_8(E)	8	#15	7.83	——
h_9(E)	4	#15	6.60	——
h_{10}(E)	32	#20	8.23	——
h_{11}(E)	32	#20	8.75	——
p_4(E)	24	#25	13.69	——
s_5(E)	65	#15	1.75	⊓
s_6(E)	70	#15	3.48	⊓
u_1(E)	82	#20	3.39	⊐
v_3(E)	66	#25	1.26	⊐
v_4(E)	126	#15	3.30	——
Structure Excavation			m^3	119
Concrete Structures			m^3	106.6
Reinforcement Bars, Epoxy Coated			kg	5720
Furn. Steel Piles HP 360 x 174			m	327.6
Driving Steel Piles			meter	327.6

Reinforcement bars designated (E) shall be epoxy coated.

Notes:
Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 200 MPa minimum.
The surface of the Fiberglass pipe shall be free of bond inhibiting agents.
Bolts, nuts, rods, and washers for "Drainage System" shall conform to the requirements of ASTM A307.
The pay item "Drainage System" shall include providing and installing fiberglass pipe, tees, reducers, elbows, cleanouts, inserts, anchors, hangers, clamps, saddles and all other items necessary to complete the underdeck drainage system (See Special Provisions).
For Drainage Scupper Details See Sheet 11 & 30 of 33.
Locate anchors to miss reinforcement.
All dimensions are in millimeters (mm) except as noted.

PIER 2 DETAILS

Date		
Revisions	Designed JML	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)
	Drawn KDK	
	Checked RME	
	Approved DLC	

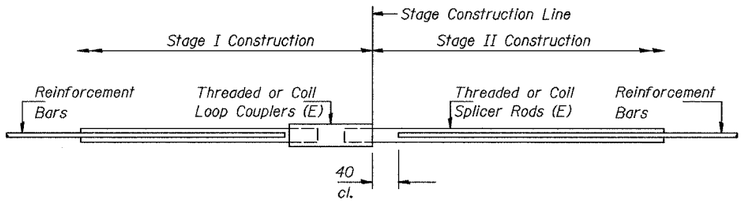
URS CORPORATION ST. LOUIS, MO

Date: 7-21-04

Sheet No. 27 of 33

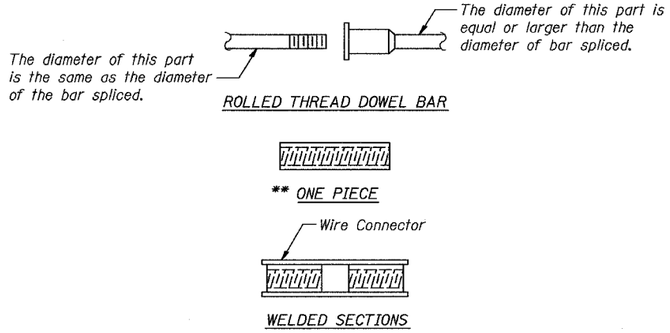
URS Job No. 2100001243.02

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



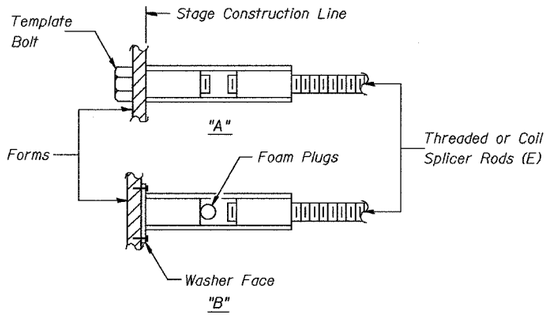
BAR SPLICER ASSEMBLY DETAIL

Bar Size	No. Assemblies Required	Location
#15	82	West Abutment Backwall
#15	90	East Abutment Backwall



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, 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 400 MPa 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 (Tension in kN) $= 1.25 \times 10^{-3} \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kN) $= 1.25 \times 10^{-3} \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in MPa.

fs_{allow} = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)

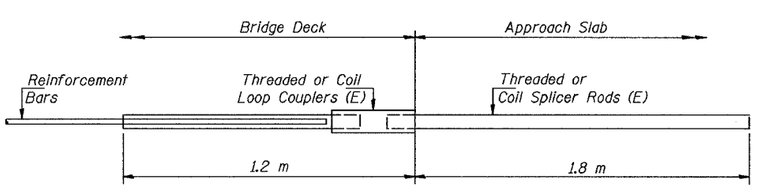
A_t = Tensile stress area of lapped reinforcement bars (mm^2).

* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	790 mm	150	60
#25	1.04 m	250	100
#30	1.37 m	350	140

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."

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



INTEGRAL ABUTMENT BAR SPLICER ASSEMBLY DETAIL FOR #15 BAR

Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required = 172

BAR SPLICER ASSEMBLY DETAILS

Date			
Revisions	Designed JLK	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)	Sheet No. 28 of 33
	Drawn JEH		
	Checked RME		
	Approved DLC		
	Date: 7-21-04		URS Job No. 2100001243.02

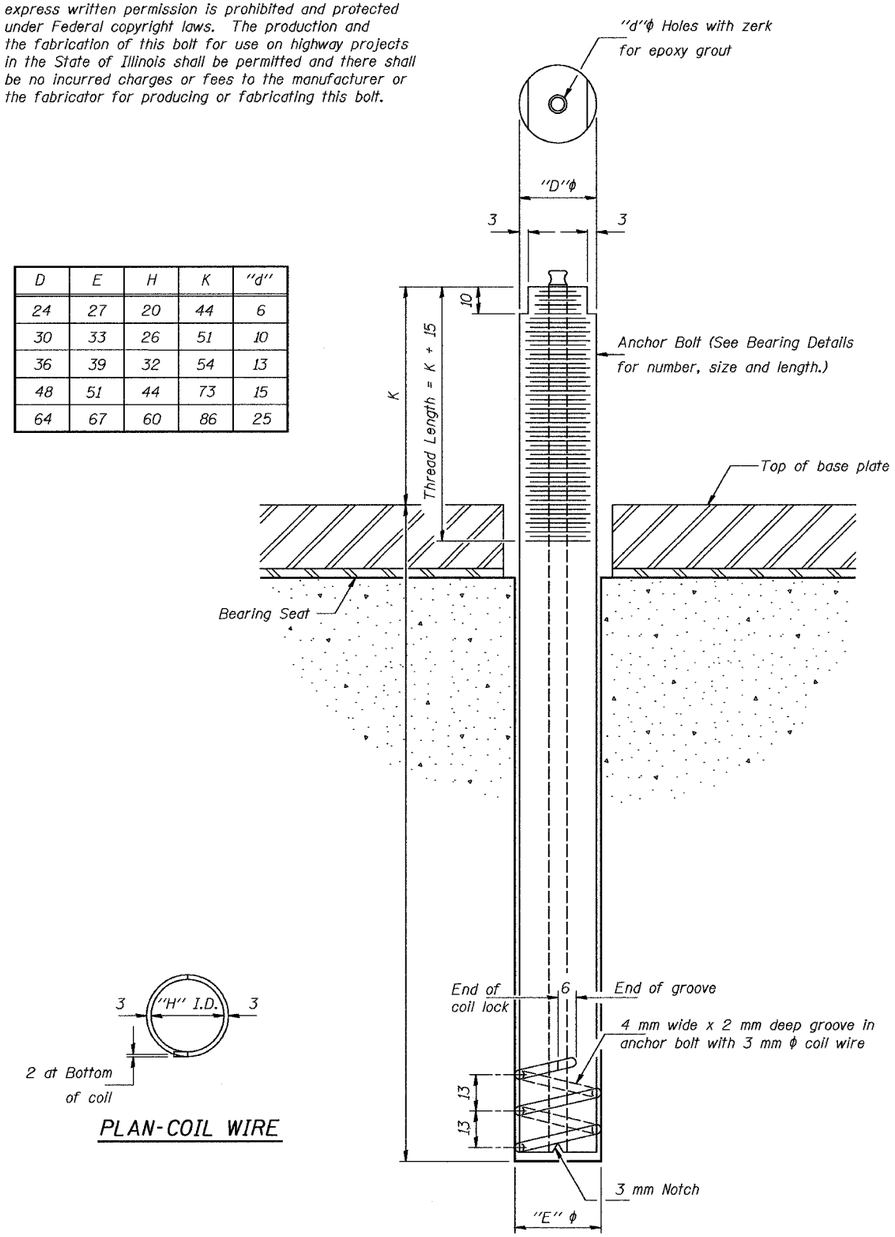
URS CORPORATION
ST. LOUIS, MO

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	417
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

68201

D	E	H	K	"d"
24	27	20	44	6
30	33	26	51	10
36	39	32	54	13
48	51	44	73	15
64	67	60	86	25



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

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

ASTM F 1554 (Fy = 724 MPa), ASTM A 449 and AASHTO M 314 (Fy = 724 MPa) 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 "Concrete Structures".

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

URS CORPORATION
ST. LOUIS, MO

Date	Designed	JLK
Revisions	Drawn	RTT
	Checked	RME
	Approved	DLC

ANCHOR BOLT DETAILS

INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R.
F.A.I. RTE. 74 SECTION (90-11VB)BR
TAZEWELL COUNTY
STATION 152+685.353
STRUCTURE NO. 090-0159 (WB)

Sheet No. 29 of 33

Date: 7-21-04

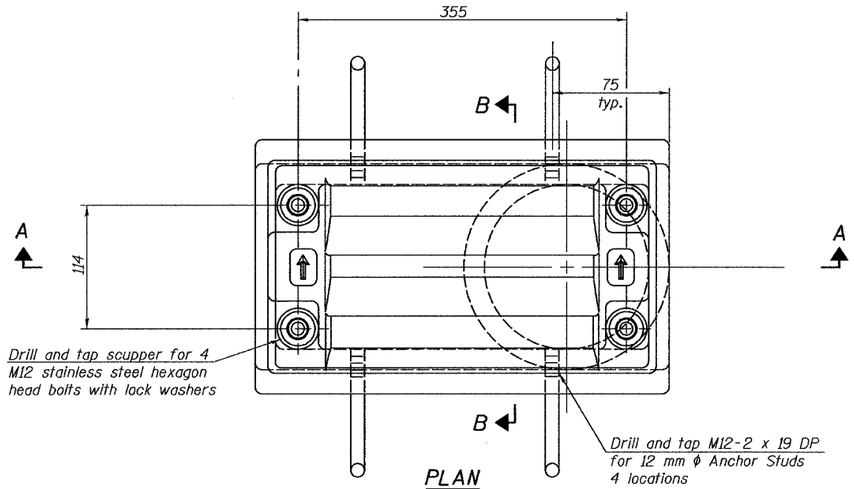
URS Job No. 2100001243.02

ABB-1 (M) 4-30-99

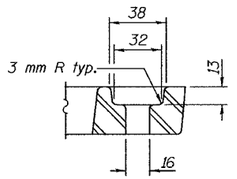
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-IIVB)BY	TAZEWELL	1366	418
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

68201

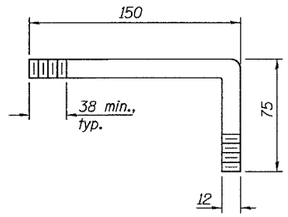
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



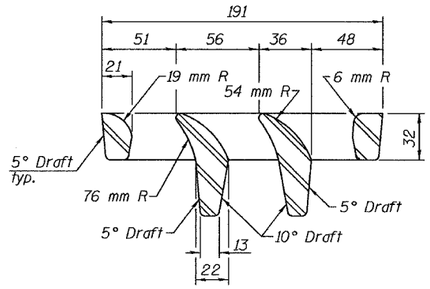
PLAN



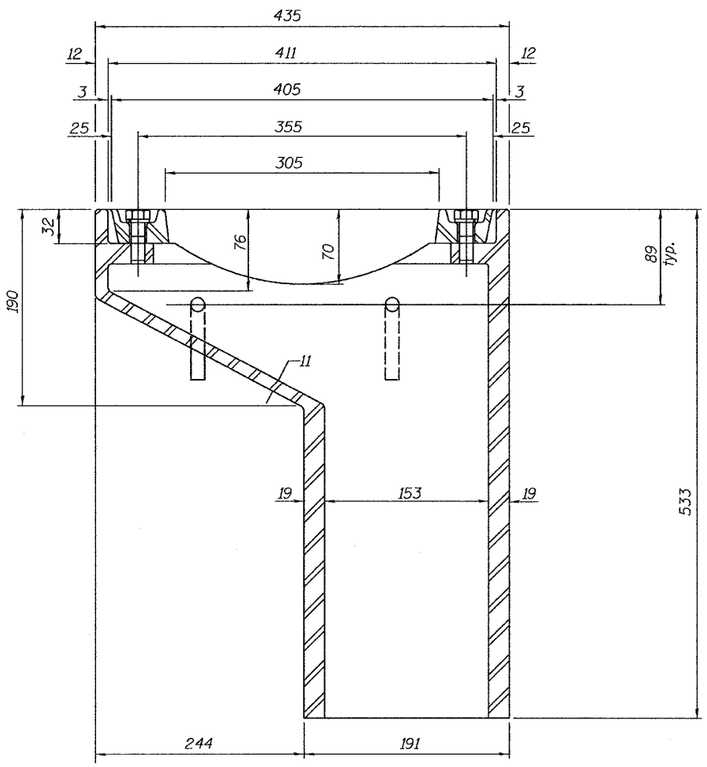
BOLT HOLE DETAIL



ANCHOR STUD DETAIL

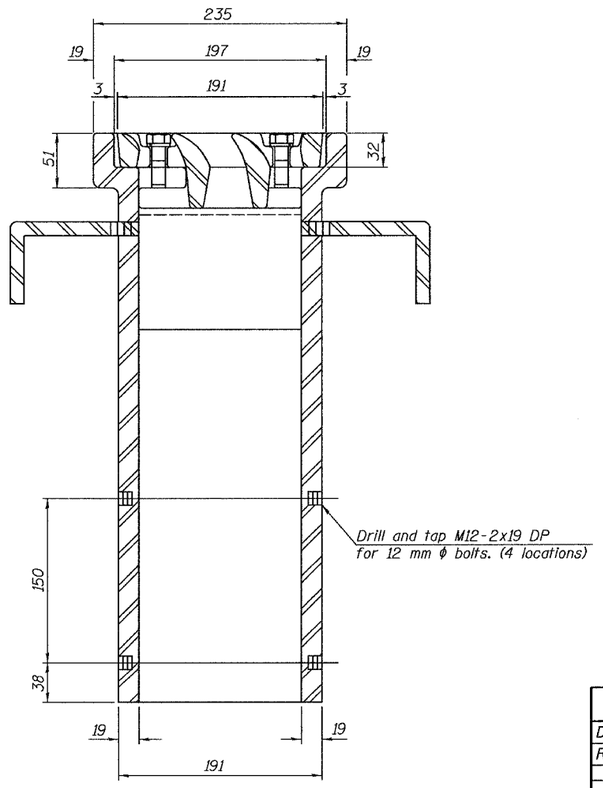


VANE GRATE DETAIL



SECTION A-A

See sheet of for scupper location relative to parapet.



SECTION B-B

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232M.

The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

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

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	7

DRAINAGE SCUPPER, DS-11

DRAINAGE SCUPPER DETAILS

Date			
Revisions	Designed JLK	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)	Sheet No. 30 of 33
	Drawn JEH		
	Checked RME		
	Approved DLC		
Date: 7-21-04			URS Job No. 2100001243.02

URS CORPORATION
ST. LOUIS, MO

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	419
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D4 — BORING NO. SB-222

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BRIDGE NO. 090-0159 (STRUCTURE) WBI-74BL 152+637.2 (STATION) 10.9mL (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 11-18-94 COMPLETED 11-18-94 SURFACE ELEVATION 147.92

DRILLED BY D. ROESEL — LOGGED BY K. OLSON

CLASSIFICATION (Elev / Depth)	N Bp0.15m	Qu KPa	W %	γd Kgpm³
SHOULDER MATERIALS: 152mm AC, 152mm GRAVELLY SAND, A-1-b	AU	-	10	-
147.62	5 6 8	335	10	-
FILL: BR, DK BR & GR SILTY CLAY LOAM, A-6	3 6 5	270	10	-
	3 3 5	190	13	-
145.48	2 4 12	190	11	-
FILL: BR, GR & BR GR CLAY LOAM, A-6	5 6 7	440	12	-
	5 6 6	535	11	-
	5 7 7	440	14	-
	4 7 8	400	10	-
141.67	5 5 8	355	14	-
FILL: BR, LT BR & GR CLAY LOAM, A-4				

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	11-18	14.9	-
RW	11-18	-	0h
BORING FILLED			1d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.15m HSA-1.5m RW-27.1m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

CLASSIFICATION (Elev / Depth)	N Bp0.15m	Qu KPa	W %	γd Kgpm³
FILL: BR, LT BR & GR CLAY LOAM, A-4	4 6 9	730	13	-
140.45				
FILL: DK BR, BR & GR SILTY CLAY LOAM, A-6	3 7 9	565	12	-
	4 7 8	585	11	-
	4 5 7	335	12	-
SAND, A-2-4 SEAM	5 5 8	400	12	-
137.10	9 9 10	-	14	-
FILL: BR GRAVELLY LOAM, A-4	4 5 5	460	18	-
136.34	1 2 2	170	23	-
FILL: DK BR, BR & GR SILTY CLAY, A-6				
135.58				
BR, GR & DK BR SILTY CLAY, A-7-6				
134.82				
BR SAND, A-2-4				

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D4 — BORING NO. SB-222 (CONT)

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BRIDGE NO. 090-0159 (STRUCTURE) WBI-74BL 152+637.2 (STATION) 10.9mL (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 11-18-94 COMPLETED 11-18-94 SURFACE ELEVATION 147.92

DRILLED BY D. ROESEL — LOGGED BY K. OLSON

CLASSIFICATION (Elev / Depth)	N Bp0.15m	Qu KPa	W %	γd Kgpm³
BR SAND, A-2-4	4 5 5	-	22	-
133.60	5 4 3	-	22	-
SAND, A-3 SEAM	3 2 2	190	23	-
BR & DK BR SILTY LOAM, A-6	1 1 2	170	21	-
131.77	3 3 2	-	23	-
BR GR TO GR SILTY LOAM, A-6	4 7 7	145	21	-
131.01	4 2 2	95	24	-
SAND, A-3 SEAM	1 2 2	115	23	-
GR SILT, A-4 W/ FIBERS	3 3 4	170	27	-
	2	-	-	-

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	11-18	14.9	-
RW	11-18	-	0h
BORING FILLED			1d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.15m HSA-1.5m RW-27.1m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

CLASSIFICATION (Elev / Depth)	N Bp0.15m	Qu KPa	W %	γd Kgpm³
GR SILT, A-4 W/ FIBERS	4 10	145	32	-
127.20				
BR & BR GR SANDY GRAVEL, A-1-b	8 11 14	-	10	-
	11 16 19	-	14	-
125.67				
DK GR, GR & BR SILTY LOAM, A-4	6 8 11	-	29	-
	7 9 11	-	26	-
124.15				
GR & BR SANDY LOAM, A-2-4	10 12 14	-	18	-
	9 12 13	-	21	-
122.62				
DK GR SILTY LOAM, A-4	2 2 4	-	28	-
	5	-	-	-

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D4 — BORING NO. SB-222 (CONT)

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BRIDGE NO. 090-0159 (STRUCTURE) WBI-74BL 152+637.2 (STATION) 10.9mL (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 11-18-94 COMPLETED 11-18-94 SURFACE ELEVATION 147.92

DRILLED BY D. ROESEL — LOGGED BY K. OLSON

CLASSIFICATION (Elev / Depth)	N Bp0.15m	Qu KPa	W %	γd Kgpm³
DK GR SILTY LOAM, A-4	33 100/ 0.08m	-	26	-
121.44		-	16	-
GR & DK GR LAMINATED SILTY SHALE				
120.83 END OF BORING	100/ 0.10m	-	16	-

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	11-18	14.9	-
RW	11-18	-	0h
BORING FILLED			1d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.15m HSA-1.5m RW-27.1m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

CLASSIFICATION (Elev / Depth)	N Bp0.15m	Qu KPa	W %	γd Kgpm³

BORING LOGS

Date	Designed JLK	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)	Sheet No. 31 of 33
Revisions	Drawn KDK		
	Checked RME		
	Approved DLC		
Date: 7-21-04			URS Job No. 2100001243.02

URS CORPORATION ST. LOUIS, MO

68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	420
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-04 BORING NO. SB-223

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BRIDGE NO. 090-0159 (STRUCTURE) WB1-74BL 152+698.4 (STATION) 29.2mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 11-1-04 COMPLETED 11-1-04 SURFACE ELEVATION 140.09

DRILLED BY J. WHEELER LOGGED BY K. OLSON

GROUNDWATER DATA	DATE	DEPTH	HOUR
DO	11-1	2.6	-
RW	11-1	-	0h
WC	11-2	2.2	1d

DRILLING METHOD: RIG TYPE CME-55; AUGER TYPE-DEPTH 0.15m HSA-3.0m RW-21.8m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	W %	γd Kgpm³
139.84 / 0	PAVEMENT MATERIALS: 51mm AC 190mm GRAVELLY SAND, A-1-b	AU	-	7	-
		15 8 8	845	10	-
		5 5 7	575	12	-
	FILL: DK BR, BR & GR SILTY CLAY LOAM, A-6	3 4 4	365	14	-
		5 7 8	285	12	-
136.89 / 3	FILL: DK BR, BR & GR SILTY CLAY, A-6	4 5 6	180	18	-
136.12 / 4		4 5 8	-	17	-
	BR SAND, A-2-4	5 7 9	-	24	-
		4 5 6	-	26	-
133.08 / 7		7 8 11	-	23	-

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	W %	γd Kgpm³
	BR & DK BR SILTY LOAM, A-6	3 2 2	170	25	-
132.31 / 8		2 2 3	-	23	-
	BR GR TO GR SILTY LOAM, A-4	2 2 5	-	27	-
		2 3 4	-	25	-
130.03 / 10	SAND, A-3 SEAM	5 8 11	115	16	-
	GR SILT, A-4 W/ FIBERS	3 3 5	145	21	-
		7 3 3	95	25	-
126.98 / 12	BR & BR GR SANDY GRAVEL, A-1-b	5 7 6	155	28	-

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-04 BORING NO. SB-223 (CONT)

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BRIDGE NO. 090-0159 (STRUCTURE) WB1-74BL 152+698.4 (STATION) 29.2mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 11-1-04 COMPLETED 11-1-04 SURFACE ELEVATION 140.09

DRILLED BY J. WHEELER LOGGED BY K. OLSON

GROUNDWATER DATA	DATE	DEPTH	HOUR
DO	11-1	2.6	-
RW	11-1	-	0h
WC	11-2	2.2	1d

DRILLING METHOD: RIG TYPE CME-55; AUGER TYPE-DEPTH 0.15m HSA-3.0m RW-21.8m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	W %	γd Kgpm³
		8 11 13	-	17	-
	BR & BR GR SANDY GRAVEL, A-1-b	8 8 8	-	11	-
125.46 / 15		2 3 3	-	27	-
		5 8 8	-	26	-
	DK GR, GR & BR SILTY LOAM, A-4	5 3 6	-	23	-
		8 6 5	-	29	-
122.41 / 18	GR & BR SANDY LOAM, A-2-4	10 15 17	-	21	-
121.65 / 19		11 15 17	-	23	-
	DK GR SILTY LOAM, A-4	12 8 12	-	28	-
120.12 / 20	GR & DK GR LAMINATED CLAY SHALE	165	-	14	-

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	W %	γd Kgpm³
	GR & DK GR LAMINATED SILTY SHALE	150/ 0.05m	-	15	-
118.26 / 22	END OF BORING	73 100/ 0.03m	-	18	-

BORING LOGS

Date	Designed JLK	INTERSTATE 74 AND RAMPS J-4 OVER ALTORFER LANE AND TP&W R.R. F.A.I. RTE. 74 SECTION (90-11VB)BR TAZEWELL COUNTY STATION 152+685.353 STRUCTURE NO. 090-0159 (WB)	Sheet No. 32 of 33
Revisions	Drawn KDK		
	Checked RME		
	Approved DLC		
Date: 7-21-04			URS Job No. 2100001243.02

URS CORPORATION ST. LOUIS, MO

68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-11VB)BY	TAZEWELL	1366	421
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D4 — BORING NO. SB-224

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BRIDGE NO. 090-0159 (STRUCTURE) WBI-74EL 152+710.5 (STATION) 29.7mL (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 11-15-94 COMPLETED 11-16-94 SURFACE ELEVATION 141.42

DRILLED BY D. ROESEL — LOGGED BY K. OLSON

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	11-15	4.7	-
RW	11-16	-	0h
BORING FILLED			1d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.15m HSA-1.5m RW-22.5m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	q_u KPa	W %	γ_d Kgpm³
	TOPSOIL FILL: DK BR SILTY LOAM, A-4	AU	-	18	-
141.11		4 6 6	305	13	-
1	FILL: BR & BR GR CLAY LOAM, A-6				
		5 6 6	335	15	-
139.74	FILL: BR SANDY LOAM, A-4	4 5 6	-	12	-
139.43 2			265	15	-
	FILL: DK BR, BR & GR SILTY CLAY LOAM, A-6	3 3 6	365	13	-
4		3 5 7	525	13	-
		3 7 8	285	14	-
136.69		3 5 6	-	26	-
6	BR SAND, A-2-4	3 3 4	-	29	-
		5 5 5	-	22	-
134.40 7					

Elev / Depth	CLASSIFICATION	N Bp0.15m	q_u KPa	W %	γ_d Kgpm³
	BR GRAVELLY SAND, A-1-b	3 4 4	-	12	-
133.64 8	BR & DK BR SILTY LOAM, A-6	2 2 2	190	21	-
132.68	SAND, A-2-4 SEAM	1 2 2	-	26	-
9	BR GR TO GR SILTY LOAM, A-4	1 2 2	-	24	-
10		2 2 3	-	28	-
130.59 11	SAND, A-3 SEAM	1 1 4	155	33	-
	GR SILT, A-4 W/ FIBERS	2 3 2	95	23	-
12		4 3 2	75	26	-
128.31 13	BR & BR GR SANDY GRAVEL, A-1-b				

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D4 — BORING NO. SB-224 (CONT)

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BRIDGE NO. 090-0159 (STRUCTURE) WBI-74EL 152+710.5 (STATION) 29.7mL (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 11-15-94 COMPLETED 11-16-94 SURFACE ELEVATION 141.42

DRILLED BY D. ROESEL — LOGGED BY K. OLSON

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	11-15	4.7	-
RW	11-16	-	0h
BORING FILLED			1d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.15m HSA-1.5m RW-22.5m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	q_u KPa	W %	γ_d Kgpm³
	SILT, A-4 SEAM	4 5 9	-	14	-
	BR & BR GR SANDY GRAVEL, A-1-b				
14		6 7 8	-	9	-
126.78	BR GR TO GR GRAVELLY LOAM, A-4	4 5 6	-	13	-
15					
126.02	DK GR, GR & BR SILTY LOAM, A-4	2 3 4	-	27	-
16					
125.26		7 9 6	-	23	-
	GR & BR SANDY LOAM, A-2-4				
17		13 20 18	-	10	-
123.74					
18		5 4 2	-	26	-
	DK GR SILTY LOAM, A-4	2 2 3	-	31	-
19	SAND, A-3 SEAM				
		7 5 4	-	22	-
20					

Elev / Depth	CLASSIFICATION	N Bp0.15m	q_u KPa	W %	γ_d Kgpm³
	SAND, A-3 SEAM	7 6	-	24	-
	DK GR SILTY LOAM, A-4				
120.69 21		100/0.15m	-	14	-
	GR & DK GR LAMINATED SILTY SHALE	45 100/0.05m	-	11	-
22					
118.95	END OF BORING	100/0.05m	-	11	-
23					
24					
25					
26					

BORING LOGS

Date / Revisions		
	Designed	JLK
	Drawn	KDK
	Checked	RME
	Approved	DLC

INTERSTATE 74 AND RAMPS J-4 OVER
ALTORFER LANE AND TP&W R.R.
F.A.I. RTE. 74 SECTION (90-11VB)BR
TAZEWELL COUNTY
STATION 152+685.353
STRUCTURE NO. 090-0159 (WB)

Sheet No. 33 of 33

URS CORPORATION
ST. LOUIS, MO

Date: 7-21-04

URS Job No. 2100001243.02

68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-74	*	TAZEWELL	1366	422
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

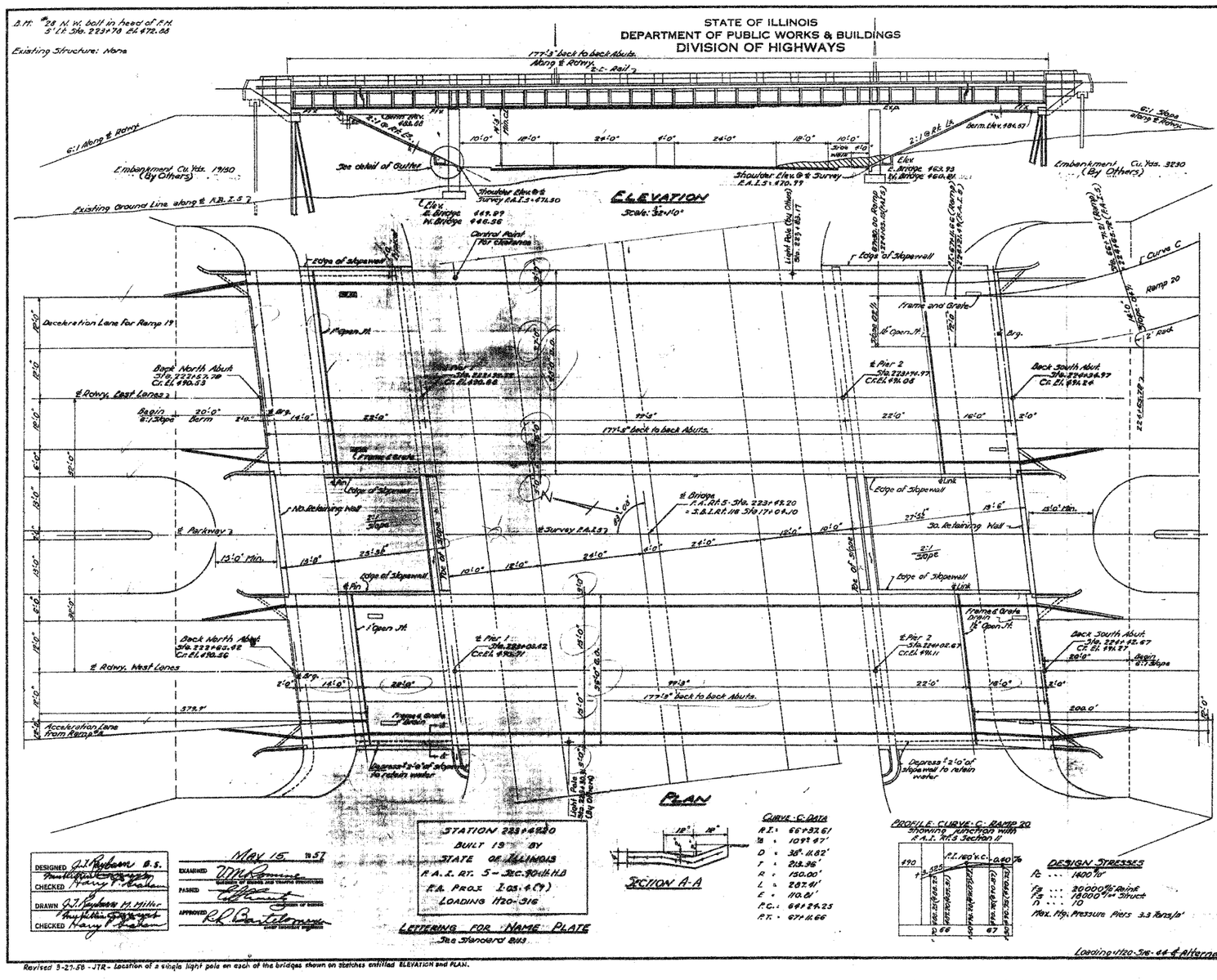
SHEET NO. 1
1 SHEETS

*(90-11)R-2;90(13.14.14-1)R-1

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

B.M. "28 N.W. bolt in head of F.H. 5' Lt. Sta. 223+70 El. 472.08

Existing Structure: None



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. R.A.I. 5	26-11HS	Tazewell	30	5
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 1
74 SHEETS

General Notes

Class-X Concrete shall be used throuout except as noted.

The concrete floor slab shall be poured in one continuous operation between construction joints shown.

The concrete floor slab shall be finished in accordance with Art. 512.8 (a) of the Standard Specifications.

Grate 8" with Open Holes 7" unless noted.

Pilot connections riveted except as noted.

High tensile steel bolts may be used where impossible to drive Pilot rivets. See Special Provisions.

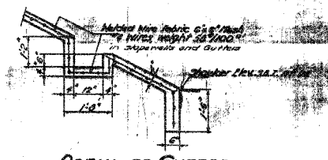
All rollers, rockers, bearing plates, hard plates and anchor bolts shall be fabricated and set in accordance with Art. 512.14 of the Standard Specifications.

Anchor bolts shall be set before fitting diaphragms or superstructure steel.

Unless otherwise noted, Structural Steel and Cast Steel shall be given one shop coat of red lead paint and two field coats of aluminum paint.

All paint shall be furnished and applied by the Contractor.

The Contractor shall drive test piles, permanent locations, one in each of the 2 abutments, as directed by the engineer before ordering remainder of piles.

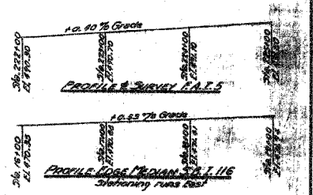


Detail of Gutter

Note: Gutter included for payment as slopewall

Total Bill of Material

ITEM	UNIT	SUPER.	SUB.	TOTAL
Class-X Concrete	Cu.Yds.	378.7	1425.3	1804.0
Metal Handrail (Furnishing)	Lin. Ft.		62	62
Reinforcement Bars	Lbs.	36450	127400	163850
Structural Steel Etcching	Lbs.			
Metal Handrail (Erecting)	Lin. Ft.	762	62	824
Name Plates	Each	2		2
Cast Iron Frames	Each	4		4
Steel Piles (40 a.e. 62)	Lin. Ft.		846	846
Test Piles (40 a.e. 62)	Each		6	6
Class-A Exc. for Structures	Cu.Yds.		760	760
Slope Wall	Sq. Yds.		747	747
Rock Exc. for Struck	Cu.Yds.		40	40



General Plan & Elevation

Project I-05-4(9)
FAI Rt. 5 - Section 90-11HB
Over
S.B.I. Rt. 116
Tazewell County
Station 223+49.20

DESIGNED J.T. Rayburn B.S.
CHECKED Harry P. Dalton
DRAWN J.T. Rayburn H. Miller
CHECKED Harry P. Dalton

MAY 15, 19 57

EXAMINED
PASSED
APPROVED R.L. Bartelsmeyer

STATION 223+49.20
BUILT IN BY
STATE OF ILLINOIS
F.A.I. RT. 5 - SEC. 90-11HB
F.A. PROJ. I-05-4(9)
LOADING H20-S16

LETTERING FOR NAME PLATE
See Standard 813

SECTION A-A

CURVE C DATA
P.I. = 66+92.61
Δ = 109°07'
D = 38°11.82'
T = 213.96'
R = 150.00'
L = 287.41'
E = 110.61'
P.C. = 64+24.23
P.T. = 67+11.66

PROFILE CURVE C RAMP 20
Showing Section Plan
F.A.I. Rt. 5 Section 11

DESIGN STRESSES
fc ... 1400 lbs
fs ... 20000 lbs/in² Rebar
fs ... 15000 lbs/in² Struck
n ... 10
Max. Pdg. Pressure Piers 3.3 Tons/s.f.

Loading H20-S16-44 & Alternate Loading

Revised 3-27-58 - JTR - Location of a single light pole on each of the bridges shown on sheetches entitled ELEVATION and PLAN.

FOR INFORMATION ONLY

URS
URS CORPORATION
DECATUR, ILLINOIS

TAZEWELL COUNTY
EXISTING STRUCTURE PLAN AT
PROPOSED STRUCTURE NO. 090-0160

88201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	423
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
25 SHEETS

* (90-11HB)BR

Bench Mark: Chiseled "□" S.E. corner Camp St., bridge parapet concrete wall state point TH8905, Elev. 149.398

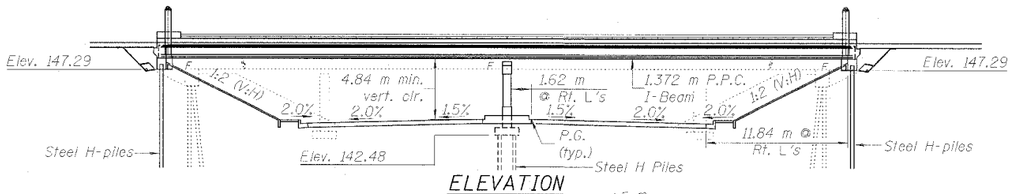
Existing Structure: 090-0006(WB) 3 span WF beams and steel plate girders supported on pile bent abutments and multiple column hammerhead piers. The length is 54.03 m bk. to bk. of abutments and the width is variable from 14.63 m to 14.73 m out to out.

Staging Note: Two lanes of traffic in each direction will be maintained on the Stage I EB structure S.N. 090-0161 while Stage II WB S.N. 090-0160 is constructed.

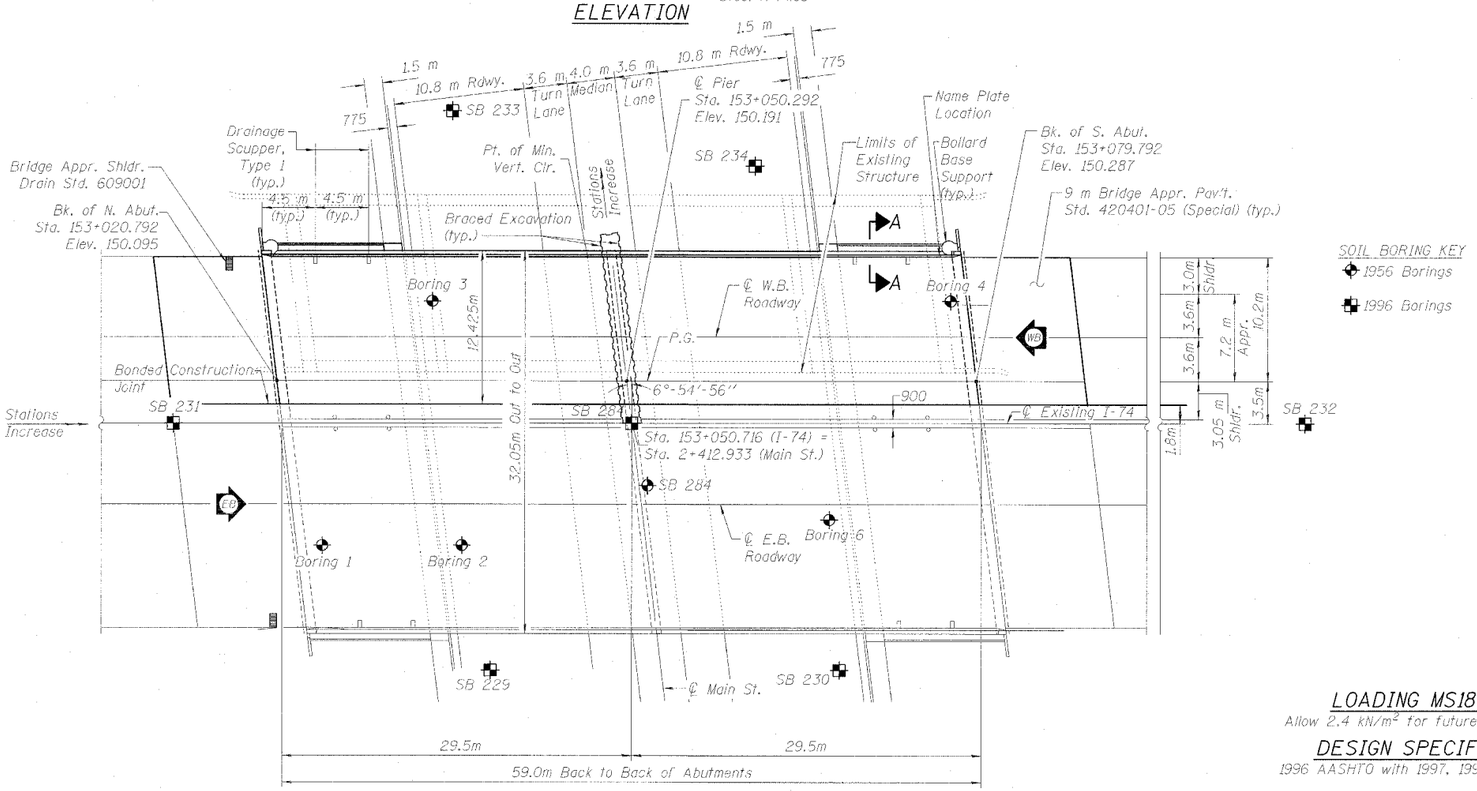
No salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes: All dimensions are in millimeters except as noted.
For limits of protective shield See Sheet 3 of 25

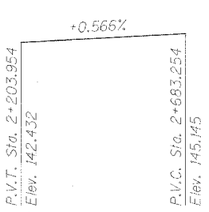


ELEVATION

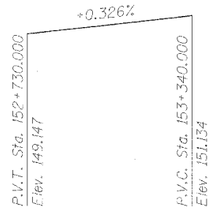


PLAN

SOIL BORING KEY
- 1956 Borings
- 1996 Borings



PROFILE GRADE
(Main Street)



PROFILE GRADE
(EB & WB I-74)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Structures	cu m	-	105.9	105.9
Concrete Superstructure	cu m	198.3	-	198.3
Removal of Existing Structures No. 1	Each	-	1	1
Reinforcement Bars, Epoxy Coated	kg	25,110	10,710	35,820
Bar Splicers	Each	80	-	80
Name Plates	Each	1	-	1
Slopewall 100 mm	sq m	-	309	309
Protective Shield	sq m	-	531	531
Braced Excavation	cu m	-	63	63
Drainage Scuppers, Type 1	Each	4	-	4
Protective Coat	sq m	774	-	774
Bridge Deck Grooving	sq m	684	-	684
Porous Granular Embankment	cu m	-	152	152
Structure Excavation	cu m	-	232	232
Furnishing Steel Piles HP310x94	m	-	292	292
Driving Steel Piles	m	-	292	292
Furn. & Erect. Precast Prestressed Concrete I Beams, 1372 mm	m	352	-	352
Aluminum Railing, Type H (Special)	m	56	-	56
Install Bollard and Luminaires	Each	2	-	2
Permanent Survey Markers, Type 1	Each	-	1	1

DESIGNED	KEF
CHECKED	KEF
DRAWN	DEM
CHECKED	KEF

STATION 153+050.716
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. (90-11HB)BR
LOADING MS18 & ALT.
STR. NO. 090-0160

NAME PLATE
See Std. 515001

LOADING MS18 & ALT.
Allow 2.4 kN/m² for future wearing surface.

DESIGN SPECIFICATIONS
1996 AASHTO with 1997, 1998, & 1999 Interims

DESIGN STRESSES
FIELD UNITS
f'_c = 24 MPa
f_y = 400 MPa (reinforcement)

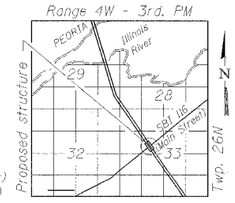
PRECAST PRESTRESSED UNITS
f'_c = 42 MPa
f'_{ci} = 35 MPa
f_s = 1860 MPa (12.7 mm ϕ low relaxed strands)
f_{si} = 1395 MPa (12.7 mm ϕ low relaxed strands)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.043g
Site Coefficient (S) = 1.2

STATE OF ILLINOIS
DAVID L. MAURER
3921
PEORIA, IL.
LICENSED STRUCTURAL ENGINEER

David L. Maurer, PE, SE
S.E. No. 3921
EXP. DATE 11/2006

12/14/04
DATE



LOCATION SKETCH

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

GENERAL PLAN AND ELEVATION
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	424
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
25 SHEETS

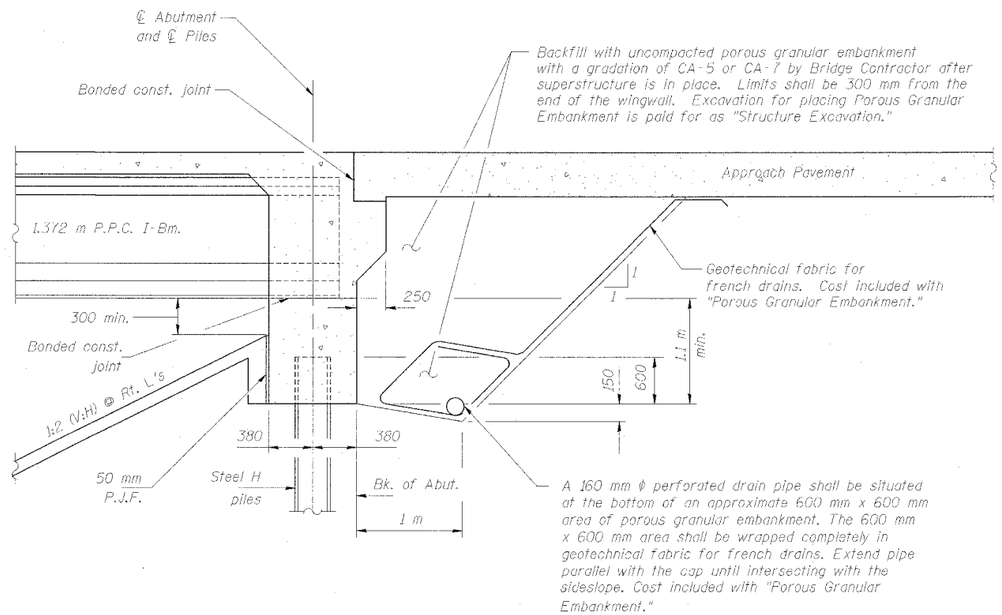
* (90-11HB)BR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

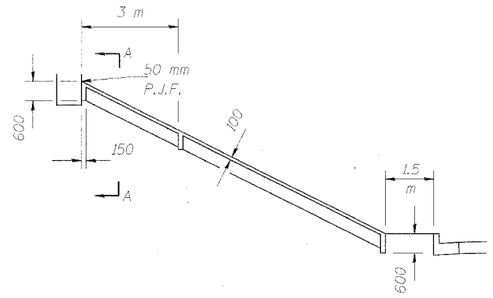
GENERAL NOTES:

1. Reinforcement bars shall conform to the requirements of AASHTO M 31M or M 322M Grade 400.
2. Slope wall shall be reinforced with welded wire fabric, 152 x 152 - MW25.8 x MW25.8 with a mass of 2.91 kg/m^2.
3. All dimensions are in millimeters (mm) except as noted.
4. The existing structure steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.
5. All construction joints shall be bonded.
6. Contractor shall contact IDOT regarding test pile results for Contract #9 (S.N. 090-0161) prior to ordering piles.

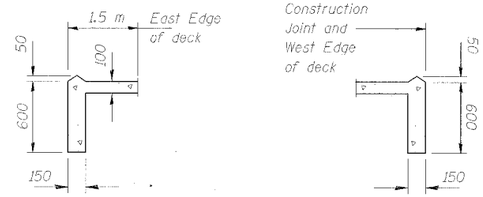
INDEX OF SHEETS



SECTION THRU INTEGRAL ABUTMENT



SECTION THRU SLOPEWALL



SECTION A-A

DESIGNED	KEF
CHECKED	KEF
DRAWN	DEM
CHECKED	KEF

GENERAL NOTES AND DETAILS
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

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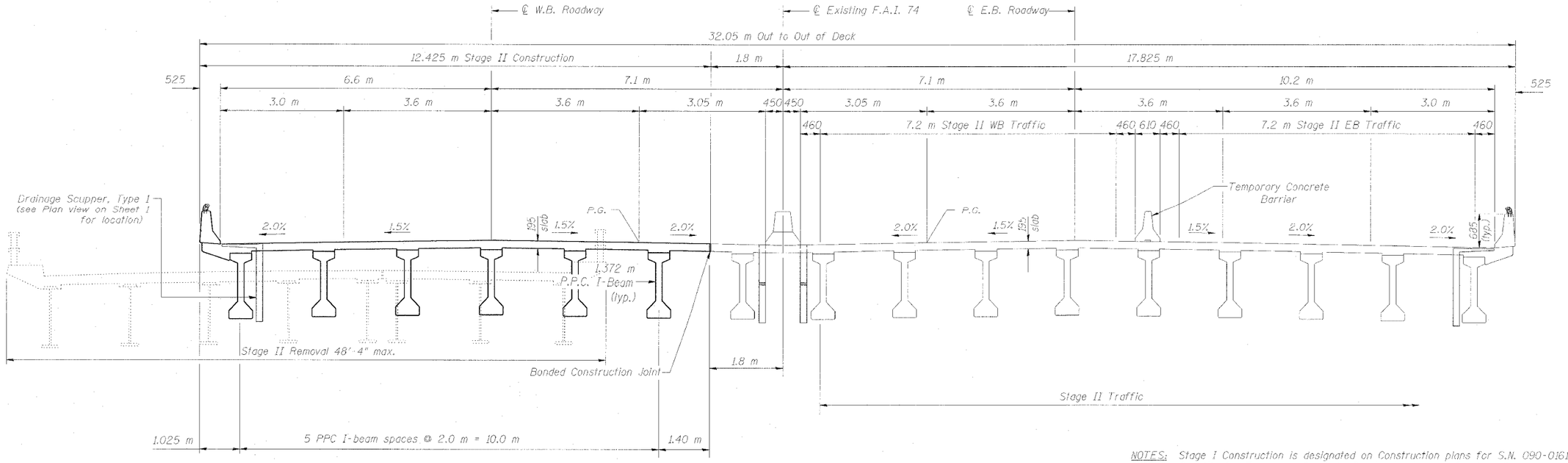
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.N.I. F.A. I-74	*	TAZEWELL	1366	425
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

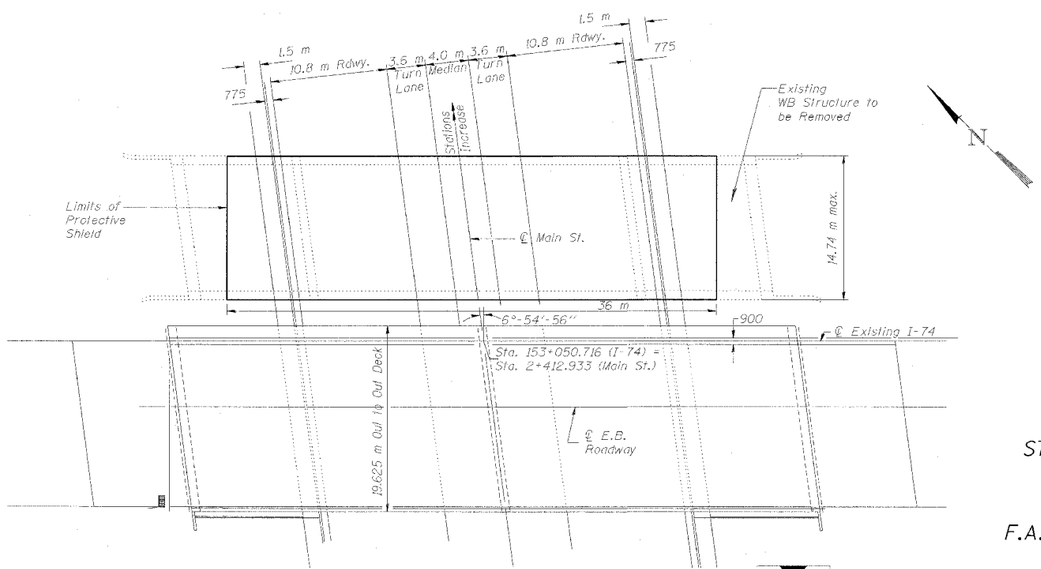
SHEET NO. 3
25 SHEETS

* (90-11HB)BR



NOTES: Stage I Construction is designated on Construction plans for S.N. 090-0161. Quantity for Temporary Concrete Barrier is given on Roadway Plans.

CROSS SECTION
(Looking South - Upstation)



PROTECTIVE SHIELD PLAN

DESIGNED	KEF
CHECKED	KEF
DRAWN	DEM
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

STAGE CONSTRUCTION SEQUENCE
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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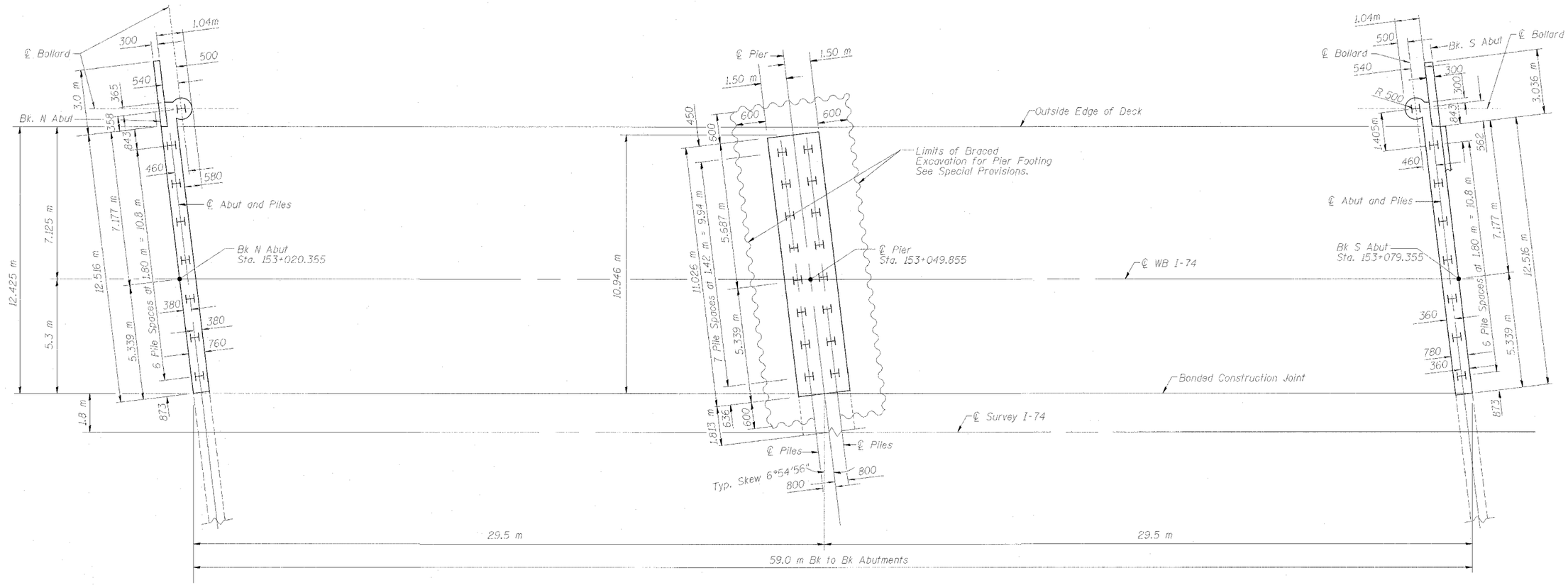
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 1-74	*	TAZEWELL	1366 426	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
25 SHEETS

* (90-11HB)BR



N

SUBSTRUCTURE LAYOUT

DESIGNED	KEF
CHECKED	MJS
DRAWN	DEM
CHECKED	KEF

SUBSTRUCTURE LAYOUT
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

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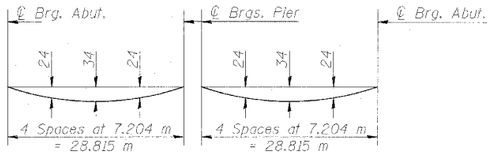
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	427
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
25 SHEETS

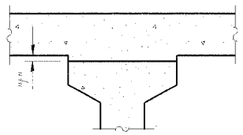
* (90-11HB)BR



DEAD LOAD DEFLECTION DIAGRAM

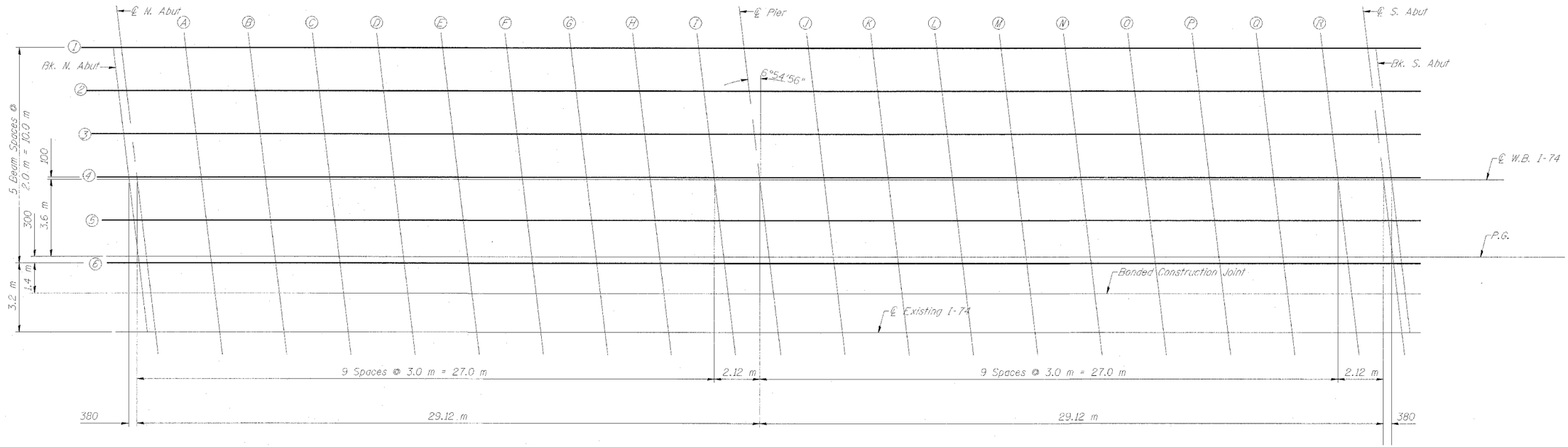
(Includes weight of concrete, excluding beams).

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 precast prestressed beams have 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 Deflections" minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS



PLAN

DESIGNED	KEF
CHECKED	MJS
DRAWN	DEM
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

TOP OF SLAB ELEVATIONS
WB INTERSTATE 74 OVER
MAIN STREET (IL RTE. 116)
F.A.I. ROUTE 74-SEC. (90-11 HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	428
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
25 SHEETS

* (90-11HB)BR

BEAM 1

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N. Abut	153019.615	-9.7	150.041	150.041
CL N. Abut	153019.995	-9.7	150.042	150.042
A	153022.995	-9.7	150.052	150.064
B	153025.995	-9.7	150.062	150.085
C	153028.995	-9.7	150.072	150.103
D	153031.995	-9.7	150.082	150.118
E	153034.995	-9.7	150.091	150.128
F	153037.995	-9.7	150.101	150.135
G	153040.995	-9.7	150.111	150.139
H	153043.995	-9.7	150.121	150.140
I	153046.995	-9.7	150.130	150.138
CL Pier 1	153049.115	-9.7	150.137	150.137
J	153052.115	-9.7	150.147	150.159
K	153055.115	-9.7	150.157	150.179
L	153058.115	-9.7	150.167	150.197
M	153061.115	-9.7	150.176	150.211
N	153064.115	-9.7	150.186	150.223
O	153067.115	-9.7	150.196	150.231
P	153070.115	-9.7	150.206	150.235
Q	153073.115	-9.7	150.216	150.236
R	153076.115	-9.7	150.225	150.234
CL S. Abut	153078.235	-9.7	150.232	150.232
Bk S. Abut	153078.615	-9.7	150.233	150.233

BEAM 2

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N. Abut	153019.858	-7.7	150.082	150.082
CL N. Abut	153020.238	-7.7	150.083	150.083
A	153023.238	-7.7	150.093	150.104
B	153026.238	-7.7	150.103	150.124
C	153029.238	-7.7	150.113	150.141
D	153032.238	-7.7	150.122	150.155
E	153035.238	-7.7	150.132	150.166
F	153038.238	-7.7	150.142	150.173
G	153041.238	-7.7	150.152	150.178
H	153044.238	-7.7	150.161	150.179
I	153047.238	-7.7	150.171	150.179
CL Pier 1	153049.358	-7.7	150.178	150.178
J	153052.358	-7.7	150.188	150.199
K	153055.358	-7.7	150.198	150.218
L	153058.358	-7.7	150.207	150.235
M	153061.358	-7.7	150.217	150.249
N	153064.358	-7.7	150.227	150.261
O	153067.358	-7.7	150.237	150.269
P	153070.358	-7.7	150.247	150.273
Q	153073.358	-7.7	150.256	150.274
R	153076.358	-7.7	150.266	150.274
CL S. Abut	153078.478	-7.7	150.273	150.273
Bk S. Abut	153078.858	-7.7	150.274	150.274

BEAM 3

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N. Abut	153020.101	-5.7	150.115	150.115
CL N. Abut	153020.481	-5.7	150.116	150.116
A	153023.481	-5.7	150.126	150.137
B	153026.481	-5.7	150.136	150.157
C	153029.481	-5.7	150.146	150.174
D	153032.481	-5.7	150.156	150.189
E	153035.481	-5.7	150.165	150.199
F	153038.481	-5.7	150.175	150.206
G	153041.481	-5.7	150.185	150.211
H	153044.481	-5.7	150.195	150.213
I	153047.481	-5.7	150.204	150.212
CL Pier 1	153049.601	-5.7	150.211	150.211
J	153052.601	-5.7	150.221	150.232
K	153055.601	-5.7	150.231	150.251
L	153058.601	-5.7	150.241	150.269
M	153061.601	-5.7	150.251	150.283
N	153064.601	-5.7	150.260	150.294
O	153067.601	-5.7	150.270	150.302
P	153070.601	-5.7	150.280	150.306
Q	153073.601	-5.7	150.290	150.308
R	153076.601	-5.7	150.299	150.307
CL S. Abut	153078.721	-5.7	150.306	150.306
Bk S. Abut	153079.101	-5.7	150.308	150.308

BEAM 4

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N. Abut	153020.343	-3.7	150.146	150.146
CL N. Abut	153020.723	-3.7	150.147	150.147
A	153023.723	-3.7	150.157	150.168
B	153026.723	-3.7	150.167	150.188
C	153029.723	-3.7	150.177	150.205
D	153032.723	-3.7	150.186	150.219
E	153035.723	-3.7	150.196	150.230
F	153038.723	-3.7	150.206	150.237
G	153041.723	-3.7	150.216	150.242
H	153044.723	-3.7	150.225	150.243
I	153047.723	-3.7	150.235	150.243
CL Pier 1	153049.843	-3.7	150.242	150.242
J	153052.843	-3.7	150.252	150.263
K	153055.843	-3.7	150.262	150.282
L	153058.843	-3.7	150.272	150.300
M	153061.843	-3.7	150.281	150.313
N	153064.843	-3.7	150.291	150.325
O	153067.843	-3.7	150.301	150.333
P	153070.843	-3.7	150.311	150.337
Q	153073.843	-3.7	150.320	150.338
R	153076.843	-3.7	150.330	150.338
CL S. Abut	153078.963	-3.7	150.337	150.337
Bk S. Abut	153079.343	-3.7	150.338	150.338

DESIGNED	KEF
CHECKED	MJS
DRAWN	DEM
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

TOP OF SLAB ELEVATIONS
WB INTERSTATE 74 OVER
MAIN STREET (IL RTE. 116)
F.A.I. ROUTE 74-SEC. (90-11 HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	429
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 7
25 SHEETS

* (90-11HB)BR

℄ W.B. I-74

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N. Abut	153020.355	-3.6	150.148	150.148
CL N. Abut	153020.735	-3.6	150.149	150.149
A	153023.735	-3.6	150.159	150.170
B	153026.735	-3.6	150.168	150.189
C	153029.735	-3.6	150.178	150.206
D	153032.735	-3.6	150.188	150.221
E	153035.735	-3.6	150.198	150.232
F	153038.735	-3.6	150.207	150.238
G	153041.735	-3.6	150.217	150.243
H	153044.735	-3.6	150.227	150.245
I	153047.735	-3.6	150.237	150.245
CL Pier 1	153049.855	-3.6	150.244	150.244
J	153052.855	-3.6	150.254	150.265
K	153055.855	-3.6	150.263	150.283
L	153058.855	-3.6	150.273	150.301
M	153061.855	-3.6	150.283	150.315
N	153064.855	-3.6	150.293	150.327
O	153067.855	-3.6	150.302	150.334
P	153070.855	-3.6	150.312	150.338
Q	153073.855	-3.6	150.322	150.340
R	153076.855	-3.6	150.332	150.340
CL S. Abut	153078.975	-3.6	150.339	150.339
Bk S. Abut	153079.355	-3.6	150.340	150.340

BEAM 5

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N. Abut	153020.586	-1.7	150.120	150.120
CL N. Abut	153020.966	-1.7	150.121	150.121
A	153023.966	-1.7	150.131	150.142
B	153026.966	-1.7	150.141	150.162
C	153029.966	-1.7	150.150	150.178
D	153032.966	-1.7	150.160	150.193
E	153035.966	-1.7	150.170	150.204
F	153038.966	-1.7	150.180	150.211
G	153041.966	-1.7	150.190	150.216
H	153044.966	-1.7	150.199	150.217
I	153047.966	-1.7	150.209	150.217
CL Pier 1	153050.086	-1.7	150.216	150.216
J	153053.086	-1.7	150.226	150.237
K	153056.086	-1.7	150.236	150.256
L	153059.086	-1.7	150.245	150.273
M	153062.086	-1.7	150.255	150.287
N	153065.086	-1.7	150.265	150.299
O	153068.086	-1.7	150.275	150.307
P	153071.086	-1.7	150.284	150.310
Q	153074.086	-1.7	150.294	150.312
R	153077.086	-1.7	150.304	150.312
CL S. Abut	153079.206	-1.7	150.311	150.311
Bk S. Abut	153079.586	-1.7	150.312	150.312

PROFILE GRADE LINE

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N. Abut	153020.792	0	150.095	150.095
CL N. Abut	153021.172	0	150.096	150.096
A	153024.172	0	150.106	150.117
B	153027.172	0	150.116	150.137
C	153030.172	0	150.126	150.154
D	153033.172	0	150.135	150.168
E	153036.172	0	150.145	150.179
F	153039.172	0	150.155	150.186
G	153042.172	0	150.165	150.191
H	153045.172	0	150.174	150.192
I	153048.172	0	150.184	150.192
CL Pier 1	153050.292	0	150.191	150.191
J	153053.292	0	150.201	150.212
K	153056.292	0	150.211	150.231
L	153059.292	0	150.220	150.248
M	153062.292	0	150.230	150.262
N	153065.292	0	150.240	150.274
O	153068.292	0	150.250	150.282
P	153071.292	0	150.260	150.286
Q	153074.292	0	150.269	150.287
R	153077.292	0	150.279	150.287
CL S. Abut	153079.412	0	150.286	150.286
Bk S. Abut	153079.792	0	150.287	150.287

BEAM 6

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N. Abut	153020.828	0.3	150.089	150.089
CL N. Abut	153021.208	0.3	150.090	150.090
A	153024.208	0.3	150.100	150.111
B	153027.208	0.3	150.110	150.131
C	153030.208	0.3	150.120	150.148
D	153033.208	0.3	150.129	150.162
E	153036.208	0.3	150.139	150.173
F	153039.208	0.3	150.149	150.180
G	153042.208	0.3	150.159	150.185
H	153045.208	0.3	150.169	150.187
I	153048.208	0.3	150.178	150.186
CL Pier 1	153050.328	0.3	150.185	150.185
J	153053.328	0.3	150.195	150.206
K	153056.328	0.3	150.205	150.225
L	153059.328	0.3	150.215	150.243
M	153062.328	0.3	150.224	150.256
N	153065.328	0.3	150.234	150.268
O	153068.328	0.3	150.244	150.276
P	153071.328	0.3	150.254	150.280
Q	153074.328	0.3	150.264	150.282
R	153077.328	0.3	150.273	150.281
CL S. Abut	153079.448	0.3	150.280	150.280
Bk S. Abut	153079.828	0.3	150.281	150.281

BONDED CONSTRUCTION JOINT

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N. Abut	153020.998	1.7	150.062	150.062
CL N. Abut	153021.378	1.7	150.063	150.063
A	153024.378	1.7	150.073	150.084
B	153027.378	1.7	150.082	150.103
C	153030.378	1.7	150.092	150.120
D	153033.378	1.7	150.102	150.135
E	153036.378	1.7	150.112	150.146
F	153039.378	1.7	150.122	150.153
G	153042.378	1.7	150.131	150.157
H	153045.378	1.7	150.141	150.159
I	153048.378	1.7	150.151	150.159
CL Pier 1	153050.498	1.7	150.158	150.158
J	153053.498	1.7	150.168	150.179
K	153056.498	1.7	150.177	150.197
L	153059.498	1.7	150.187	150.215
M	153062.498	1.7	150.197	150.229
N	153065.498	1.7	150.207	150.241
O	153068.498	1.7	150.217	150.249
P	153071.498	1.7	150.226	150.252
Q	153074.498	1.7	150.236	150.254
R	153077.498	1.7	150.246	150.254
CL S. Abut	153079.618	1.7	150.253	150.253
Bk S. Abut	153079.998	1.7	150.254	150.254

DESIGNED	KEF
CHECKED	MJS
DRAWN	DEM
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

TOP OF SLAB ELEVATIONS
WB INTERSTATE 74 OVER
MAIN STREET (IL RTE. 116)
F.A.I. ROUTE 74-SEC. (90-11 HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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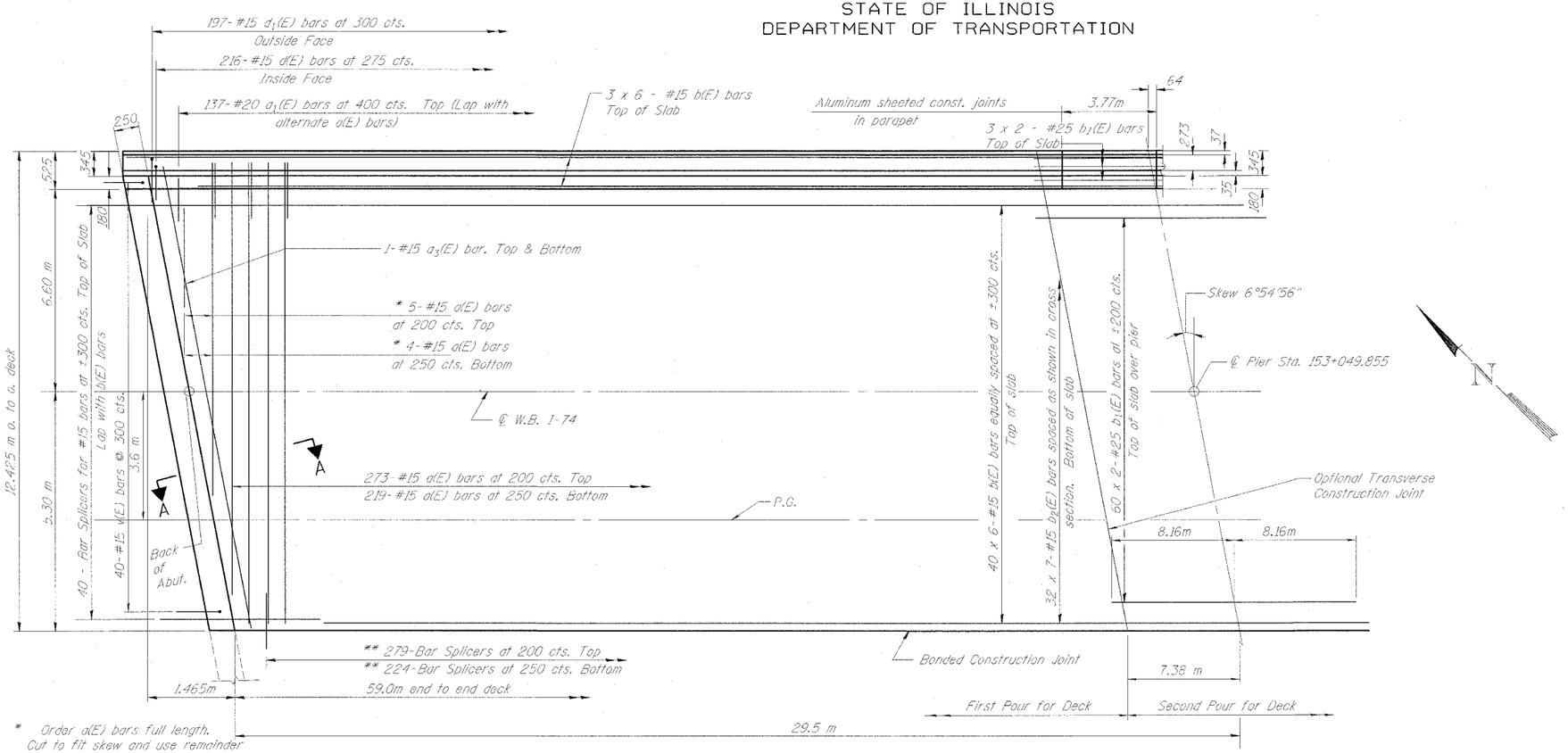
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	430
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

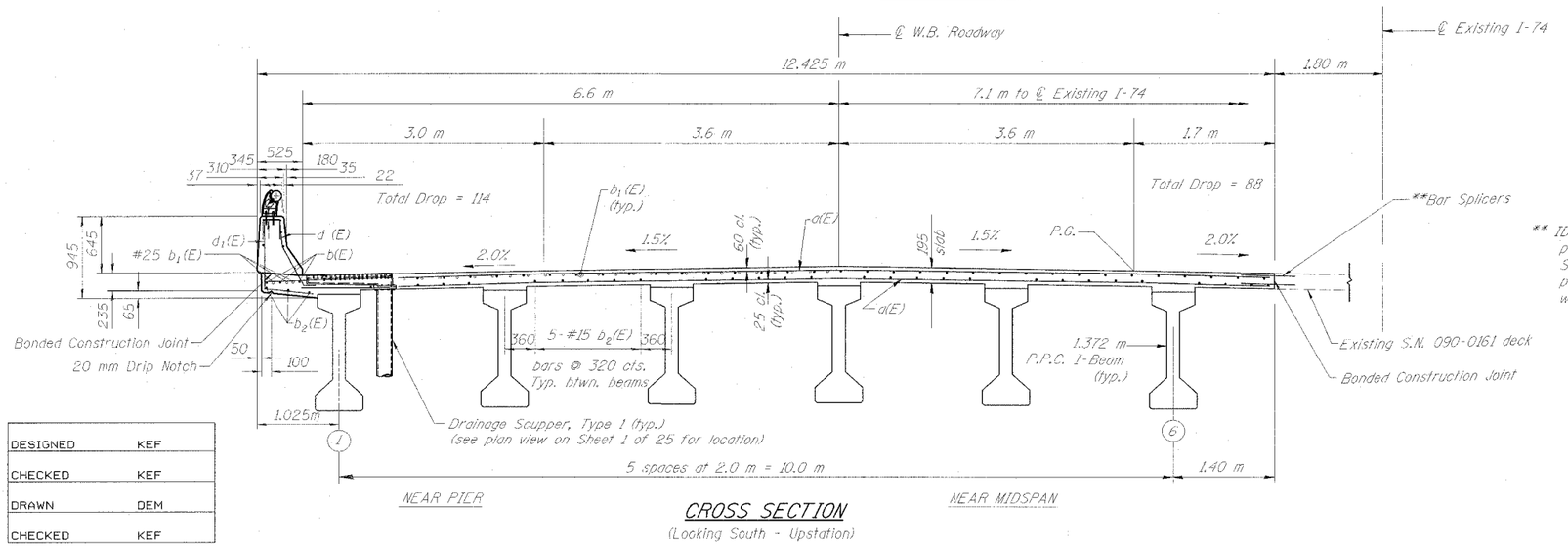
SHEET NO. 8
25 SHEETS

* (90-11HB)BR



* Order d(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

PARTIAL PLAN



CROSS SECTION
(Looking South - Upstation)

** IDOT shall supply (from Stage I Construction) the unused portions of the bar splicers to the Contractor with the correct Structure Number and size on them. These formerly unused portions shall be installed by Contractor. Cost is included with "Reinforcement Bars, Epoxy Coated."

Notes:
- See sheet #9 of 25 for superstructure details and Bill of Material.
- See sheet #13 of 25 for sections of Abutments and Piers.
- Reinforcement bars designated (E) shall be epoxy coated.
- Bars indicated thus 20 x 3- #15 etc. indicates 20 lines of bars with 3 lengths per line.
- All dimensions are in millimeters (mm) except as noted.
- For Section A-A See Sheet 13 of 25.

DESIGNED	KEF
CHECKED	KEF
DRAWN	DEM
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

SUPERSTRUCTURE
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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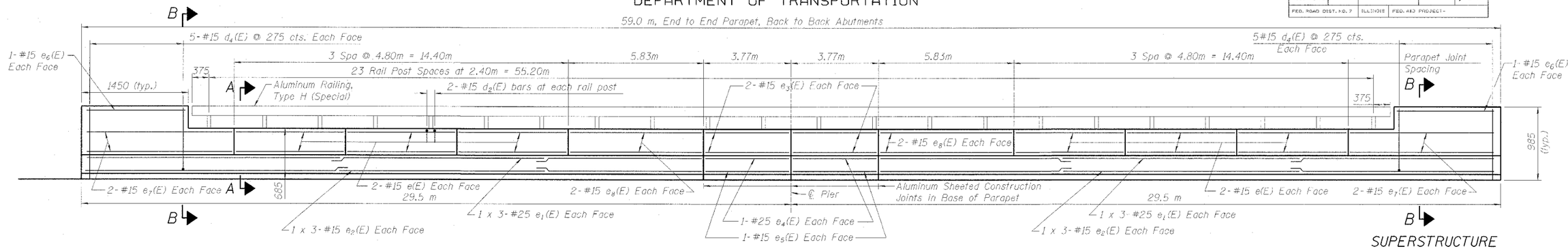
* (90-11HB)BR

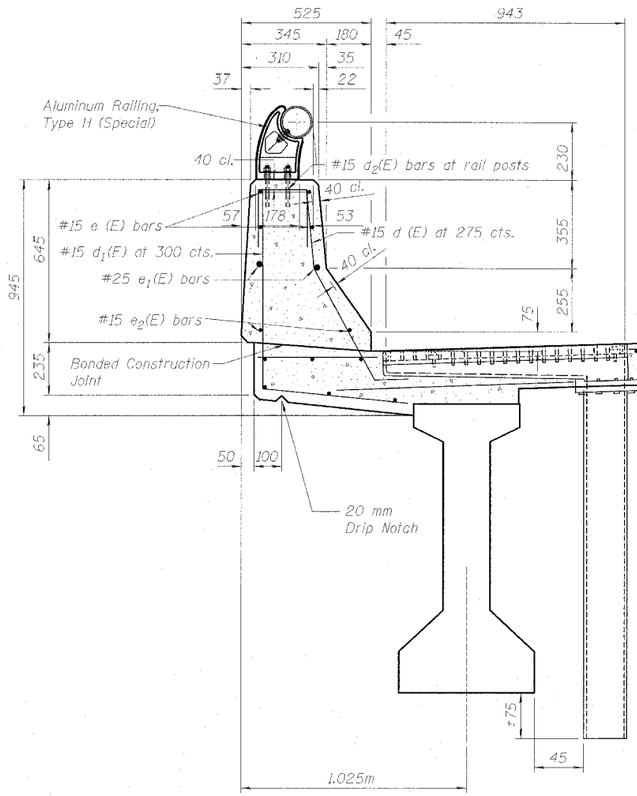
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. I-74	*	TAZEWELL	1366	431
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
25 SHEETS

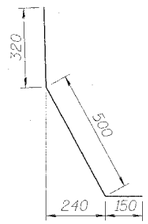
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



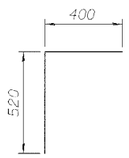
INSIDE ELEVATION OF PARAPET



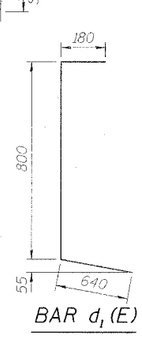
SECTION A-A THRU PARAPET



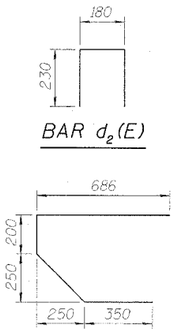
BAR d(E)



BAR v(E)

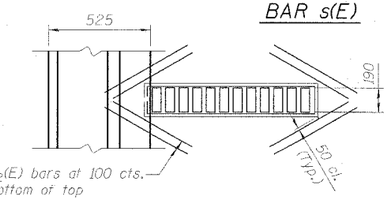


BAR d_1(E)



BAR d_2(E)

BAR s(E)

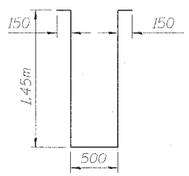


2-#15 a_2(E) bars at 100 cts. tied to bottom of top reinforcement mat. (Typ. at each scupper location)

Note: Cut longitudinal reinforcement to clear drainage scuppers.

PLAN OF ADDITIONAL REINFORCEMENT IN DECK AT DRAINAGE SCUPPER LOCATIONS

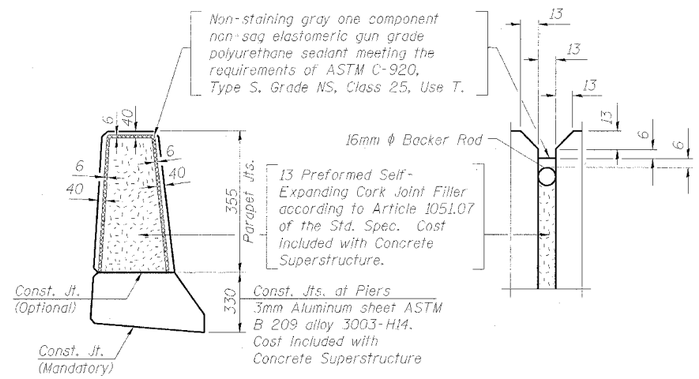
BAR d_4(E)



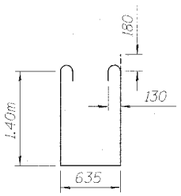
BAR s_2(E)

MIN. BAR LAP

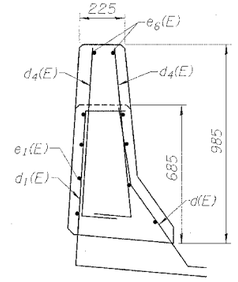
#15 = 490
#25 = 1.01 m



PARAPET JOINT DETAILS



BAR s_1(E)



SECTION B-B

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
All dimensions are in millimeters (mm) except as noted.

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
a(E)	501	#15	12.27	
a_1(E)	137	#20	1.20	
a_2(E)	32	#15	0.60	
a_3(E)	4	#15	12.36	
b(E)	258	#15	10.22	
b_1(E)	126	#25	8.67	
b_2(E)	224	#15	8.83	
d(E)	216	#15	0.97	
d_1(E)	197	#15	1.62	
d_2(E)	48	#15	0.64	
d_4(E)	20	#15	1.05	
e(E)	24	#15	4.65	
e_1(E)	12	#25	9.21	
e_2(E)	12	#15	8.87	
e_3(E)	8	#15	3.62	
e_4(E)	4	#25	3.62	
e_5(E)	4	#15	3.62	
e_6(E)	4	#15	1.30	
e_7(E)	8	#15	5.30	
e_8(E)	8	#15	5.68	
m(E)	10	#20	12.30	
m_1(E)	20	#20	1.40	
m_2(E)	24	#20	3.13	
m_3(E)	2	#20	1.29	
m_4(E)	2	#20	0.67	
m_5(E)	20	#15	1.76	
m_6(E)	6	#25	1.76	
s(E)	74	#15	1.59	
s_1(E)	64	#15	3.80	
s_2(E)	25	#15	3.70	
v(E)	80	#15	0.92	
Reinforcement Bars Epoxy Coated			kg	25,110
Concrete Superstructure			cu m	198.3
Bar Splicers			Each	80

DESIGNED	KEF
CHECKED	KEF
DRAWN	CAD
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

SUPERSTRUCTURE DETAILS
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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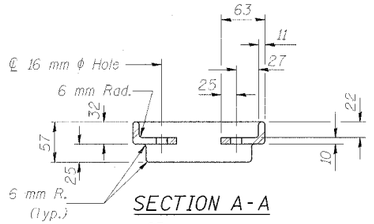
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

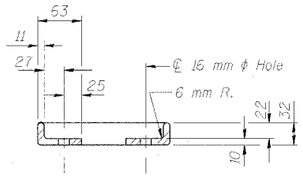
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	432
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
25 SHEETS

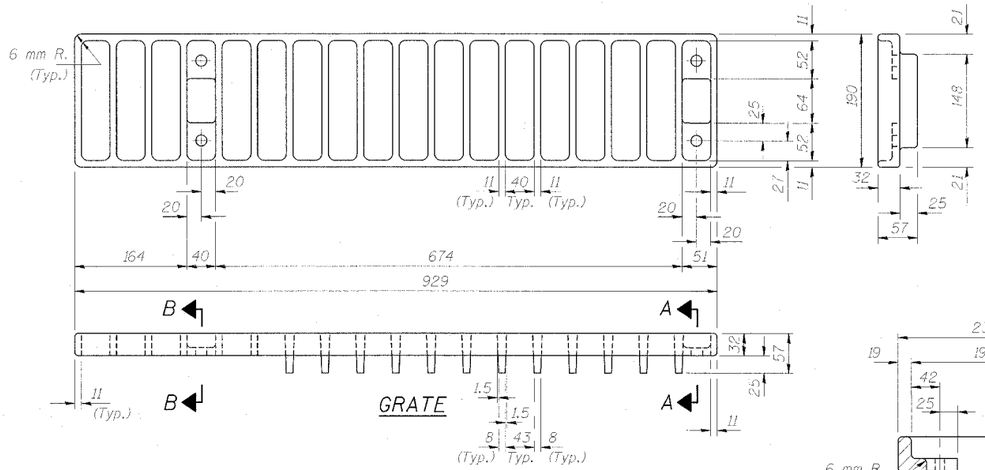
* (90-11HB)BR

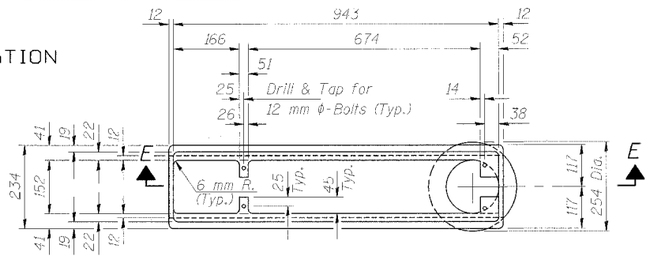


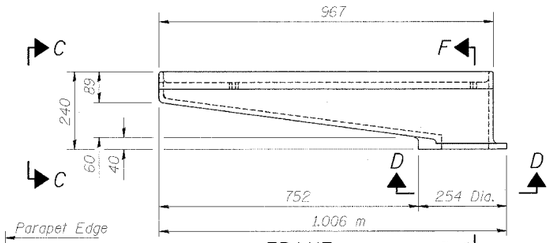
SECTION A-A



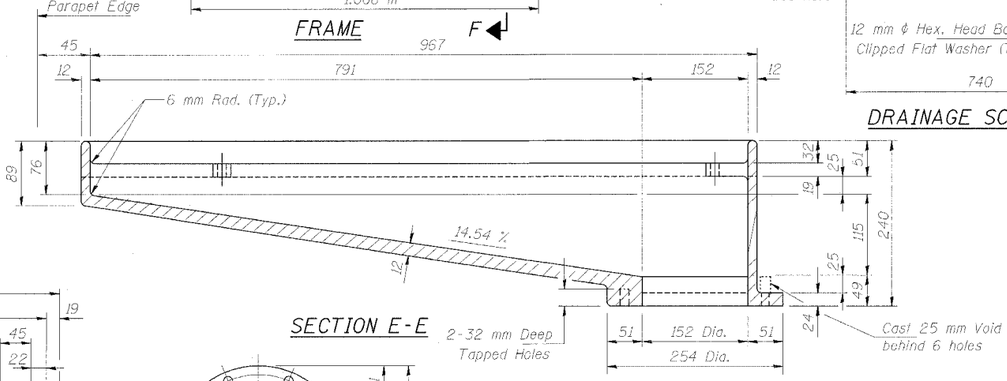
SECTION B-B



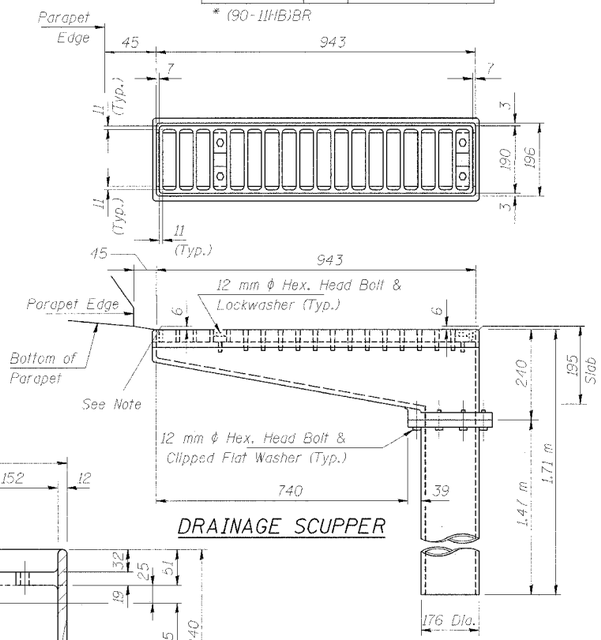




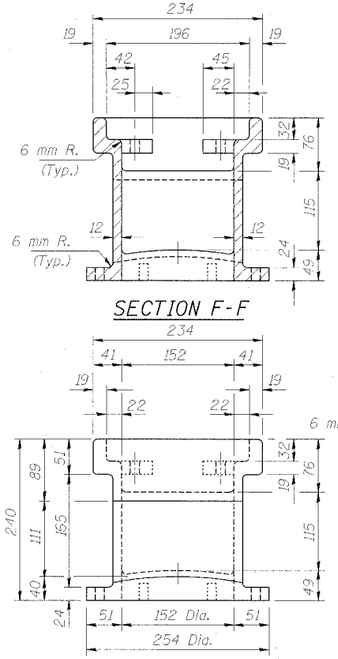
FRAME



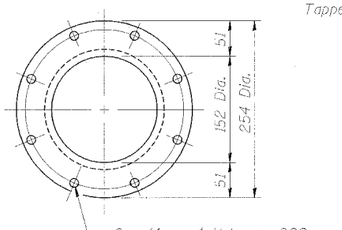
SECTION E-E



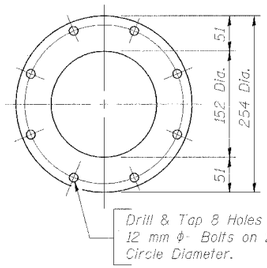
DRAINAGE SCUPPER



SECTION F-F

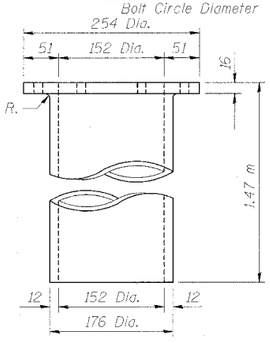


8 - 14 mm ϕ Holes on 222 mm
Bolt Circle Diameter



VIEW D-D

VIEW C-C



DOWNSPOUT

Notes:
All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 30.
Bolts and washers shall conform to the requirements of ASTM A 307.
All bolts and washers shall be galvanized according to AASHTO M 232.
As an alternate bolts and washers may be stainless steel.
Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPER, TYPE I."
The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.
All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, Type I	Each	4

DESIGNED	KEF
CHECKED	KEF
DRAWN	CAD
CHECKED	KEF

DRAINAGE SCUPPER, TYPE 1 DETAILS
W.B. INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

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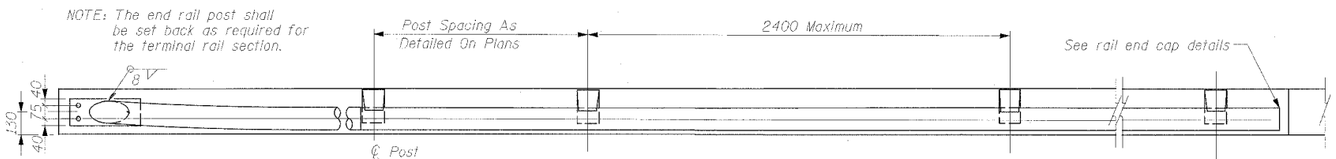
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. R. I. F. A. 1-74	*	TAZEWELL	1366	433
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

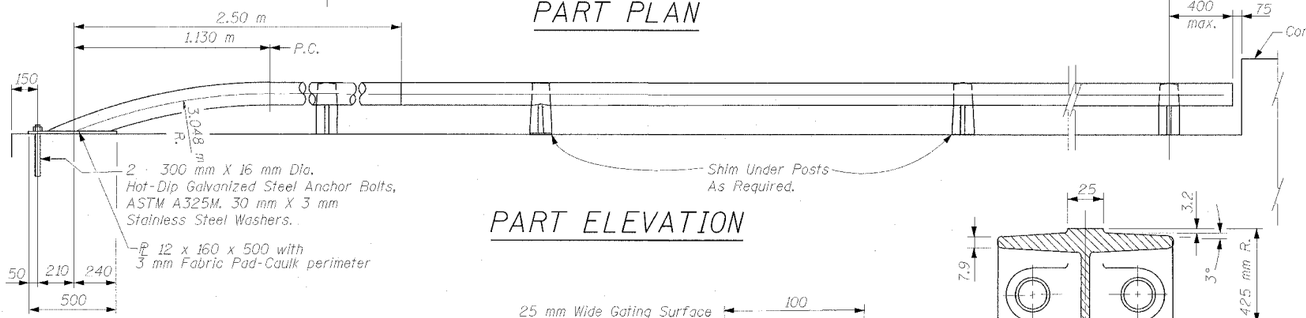
SHEET NO. 11
25 SHEETS

* (90-11HB)BR

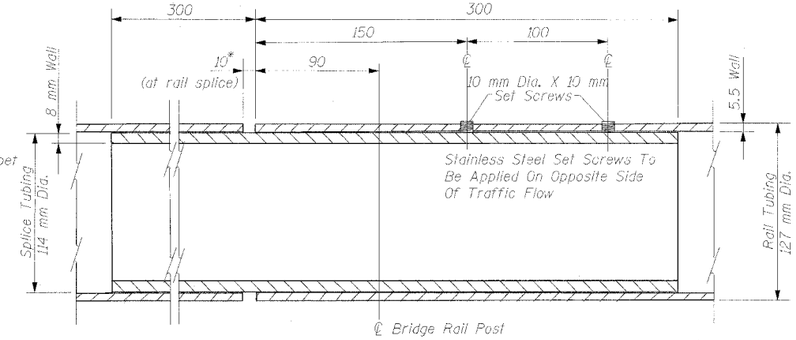
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PART PLAN

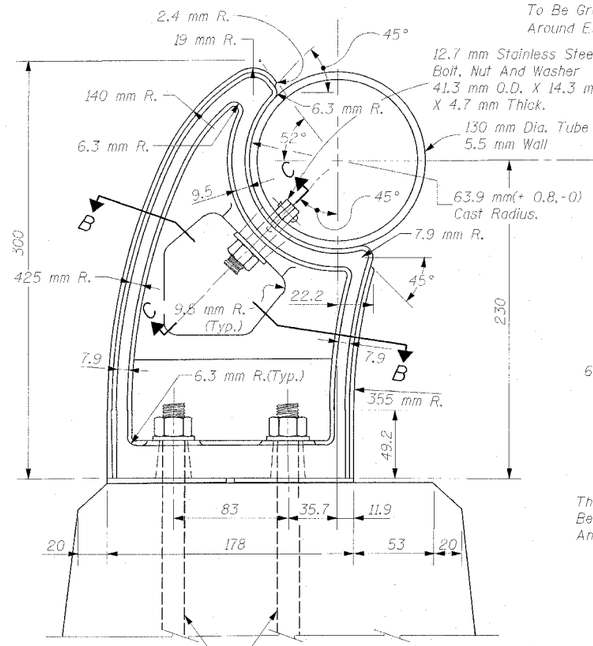


PART ELEVATION

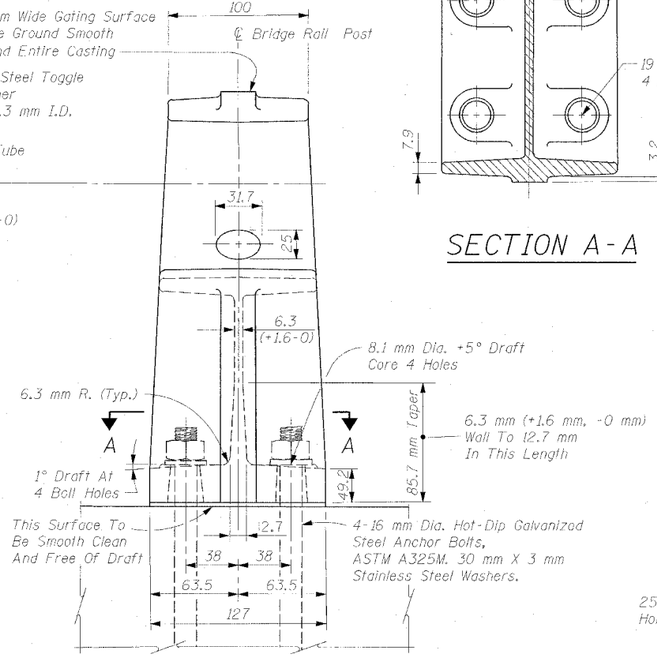


*At bridge expansion joints, match opening of joint in deck.

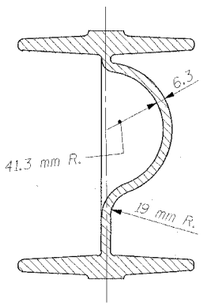
INSIDE SPLICE DETAIL



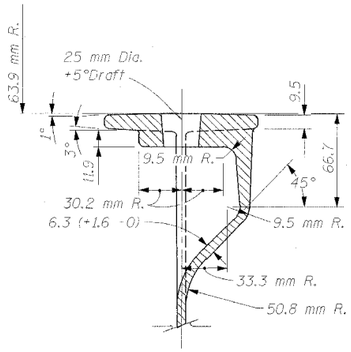
RAILING DETAILS



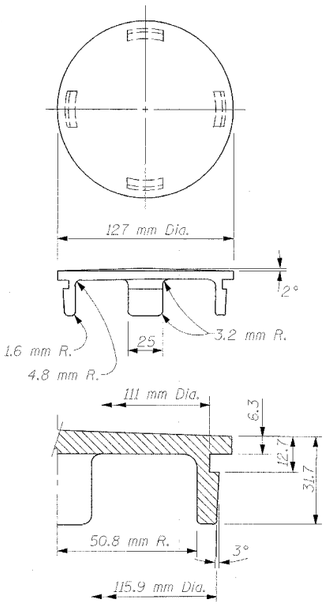
SECTION A-A

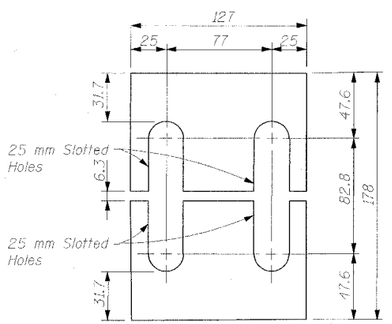


SECTION B-B



SECTION C-C





SHIM DETAIL

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type H (Special)	m	56

NOTES:

1. Railing to conform to vertical and horizontal alignment.
2. Joint to be placed 7500 mm center to center, max.
3. Slip joint to be placed in panels to match expansion joints in deck.
4. Design weight: 9.3 kg. per meter.
5. Unless otherwise specified all draft to be 3°.
6. All unmarked Radius to be 3 mm R.
7. After fabrication, exposed surfaces of aluminum shall be given an anodic oxide coating, dyed black, conforming to the requirements of ASTM designation: B 580, Type B, Architectural Class I.

DESIGNED	KEF
CHECKED	KEF
DRAWN	CAD
CHECKED	KEF

RAIL END CAP DETAILS
ALUMINUM RAILING
TYPE H (SPECIAL)

ALUMINUM RAILING,
TYPE H (SPECIAL) DETAILS
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

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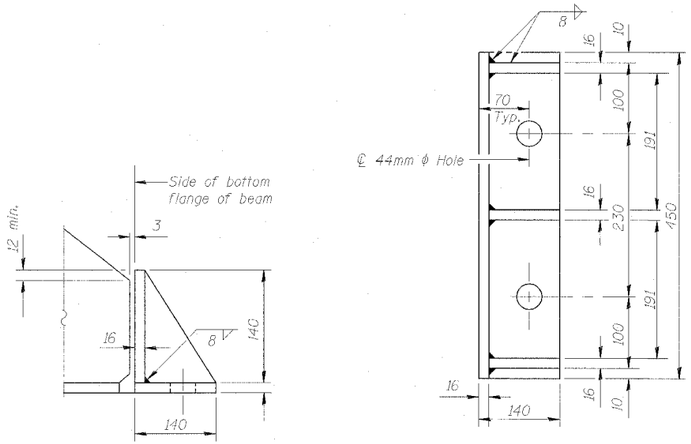
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. I-74	*	TAZEWELL	1366	434
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

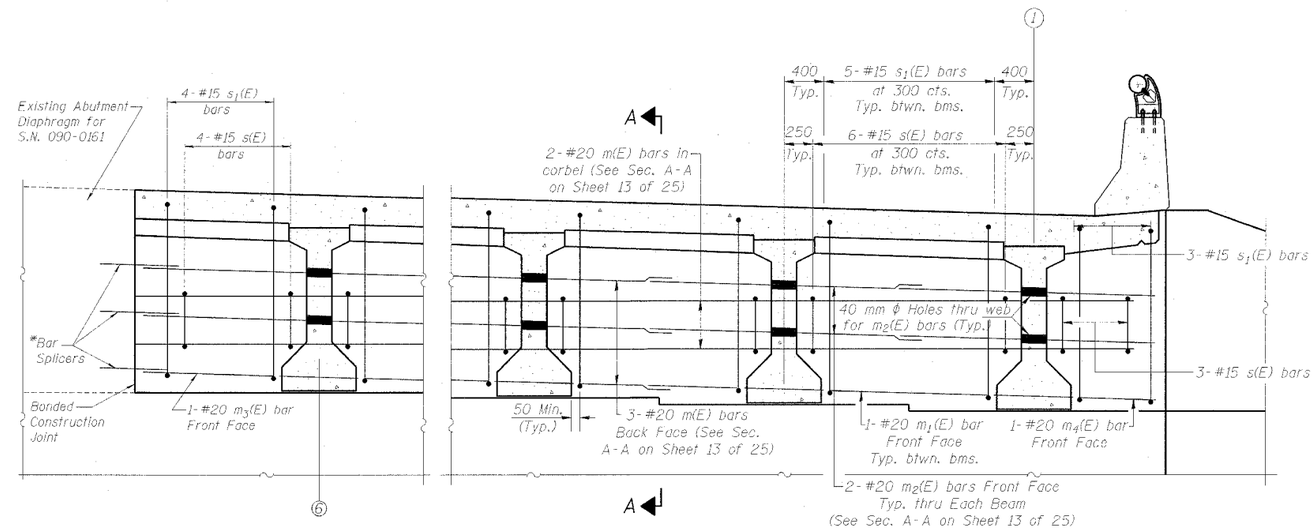
SHEET NO. 12
25 SHEETS

* (90-11HB)BR



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



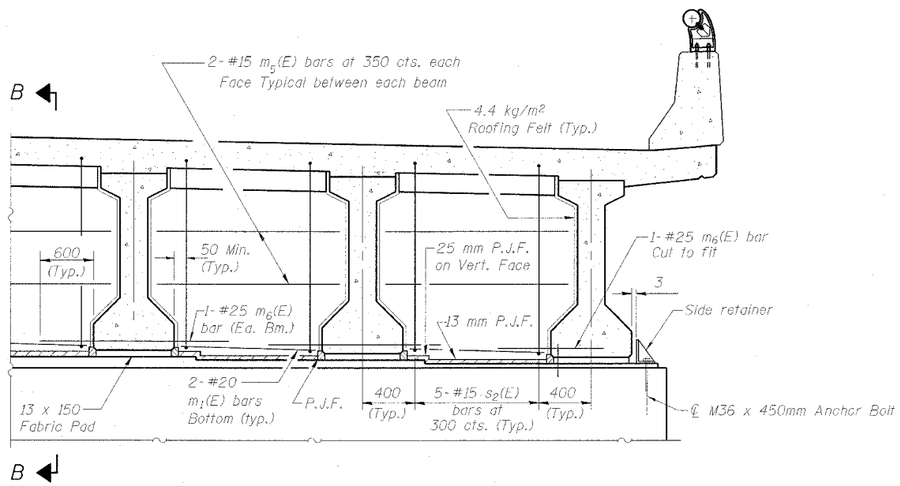
DIAPHRAGM ELEVATION AT ABUTMENT

MIN. BAR. LAP

#20 bar = 1.11m

* IDOT shall supply (from Stage I Construction) the unused portion of the bar splicers to the Contractor with the correct Structure No. and size on them. These formerly unused portions shall be installed by Contractor. Cost is included with "Reinforcement Bars, Epoxy Coated."

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet 9 of 25.
- Concrete in diaphragm is included with Concrete Superstructure on sheet 9 of 25.
- For details of bars s(E) & s_1(E) see sheet 9 of 25.
- The s(E) and s_1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
- For anchor bolt details see sheet 20 of 25.
- All dimensions are in millimeters (mm) except as noted.
- For Sections A-A and B-B see sheet 13 of 25.
- The side retainer shall be galvanized after shop fabrication according to AASHTO M111 and ASTM A 385. Cost of side retainer and anchor bolts shall be included with "Concrete Structures."
- Bars indicated thus 20x3-#15 etc. indicates 20 lines of bars with 3 lengths per line.



DIAPHRAGM AT PIER

(Fixed)

Note: Section B-B is shown on Sheet 13 of 25.

DESIGNED	KEF
CHECKED	KEF
DRAWN	DEM
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

DIAPHRAGM DETAILS
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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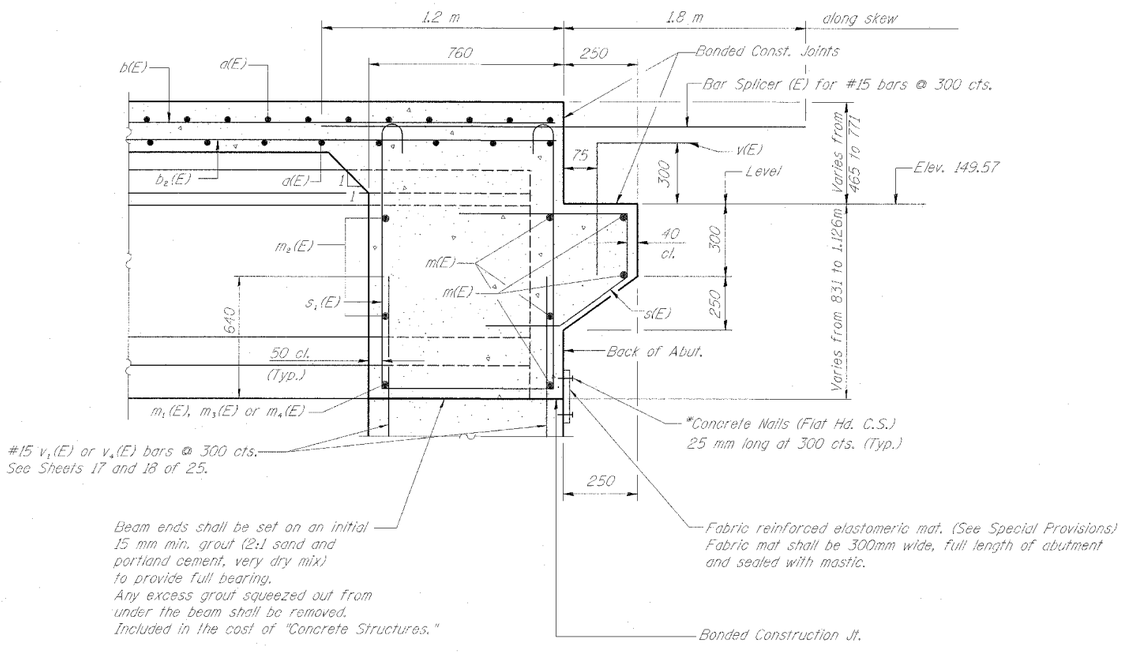
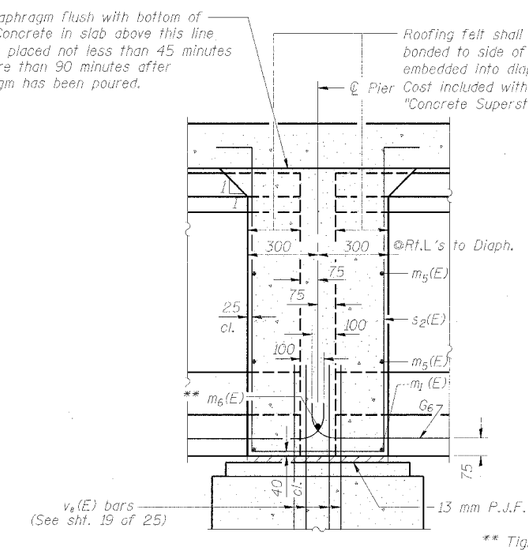
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 1-74	*	TAZEWELL	1366	435
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
25 SHEETS

* (90-11HB)BR





** Tightly fasten the #25 bars together with 3.8 mm wire ties.

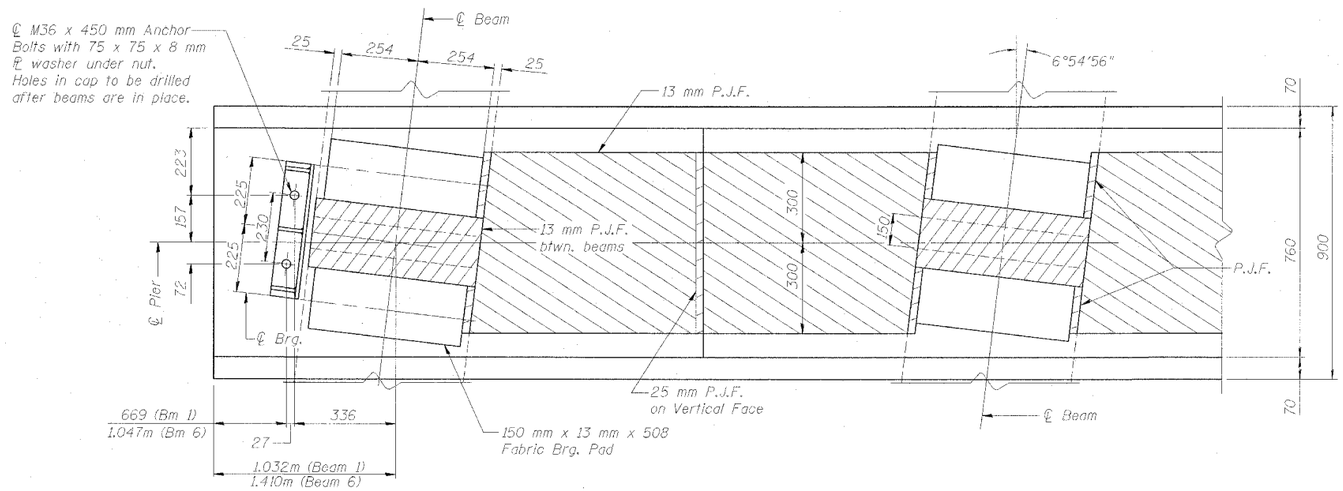
Note: Horizontal dimensions for Sec. B-B are along ℄ of beam unless otherwise noted.

SECTION B-B
AT PIER
(Fixed)

Notes: Reinforcement bars in diaphragm are billed with superstructure on sheet 9 of 25.
Concrete in diaphragm is included with Concrete Superstructure on sheet 19 of 25.
For details of bars s(E), s_1(E) & s_2(E) see sheet 9 of 25.
The s(E) and s_1(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.
For anchor bolt details see sheet 20 of 25.
All dimensions are in millimeters (mm) except as noted.
For side retainer details see sheet 12 of 25.

SECTION A-A

Dimensions at right angles to abutment, except as shown.
* Cost included with "Concrete Structures"



PLAN AT PIER
(Showing Bearing Pad, PJF, and Anchor Bolt layout details)

DESIGNED	KEF
CHECKED	MJS
DRAWN	DEM
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

DIAPHRAGM DETAILS
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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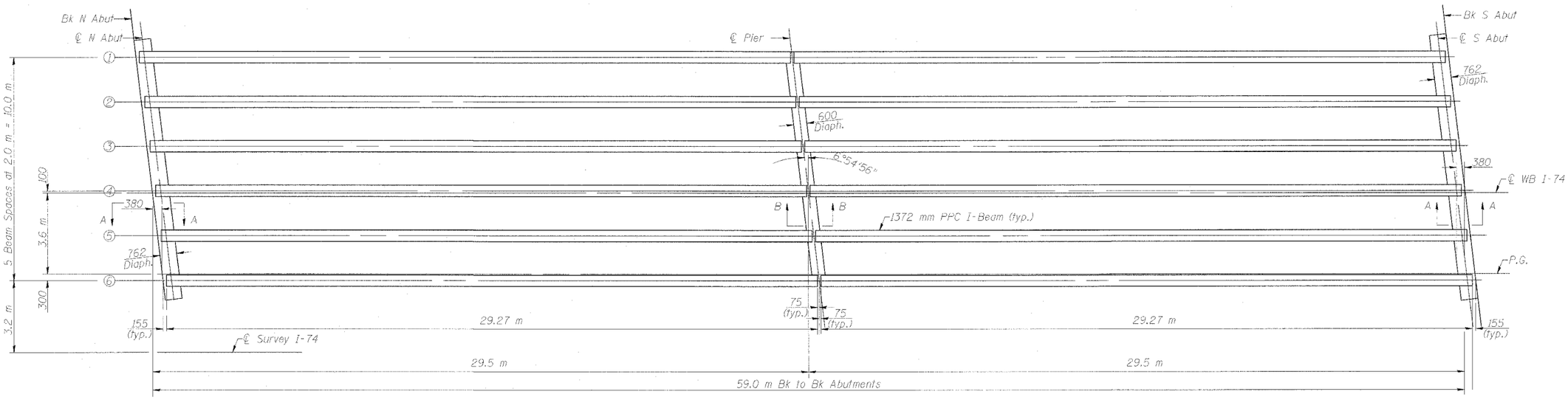
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	436
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
25 SHEETS

* (90-11HB)BR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

Note: For Sections A-A see sheet 13 of 25
For Section B-B see sheet 13 of 25

INTERIOR BEAM MOMENT TABLE			
		0.4 Sp. #1 0.6 Sp. #2	Pier 1
I	(10^6 mm^4)	88955	
I'	(10^6 mm^4)	207054	
S_b	(10^3 mm^3)	140263	
S_b'	(10^3 mm^3)	207624	
S_t	(10^3 mm^3)	120633	
S_t'	(10^3 mm^3)	553030	
$\mathcal{D}$	(kN/m)	18.56	
$M\mathcal{D}$	(kN·m)	1966	
$s\mathcal{D}$	(kN/m)	6.42	6.42
$Ms\mathcal{D}$	(kN·m)	383	680
$M\mathcal{L}$	(kN·m)	950	863
M (Imp)	(kN·m)	216	196

INTERIOR BEAM REACTION TABLE				
		Abut.	Pier 1 Span 1	Pier 1 Span 2
$R\mathcal{D}$	(kN)	270	270	270
$Rs\mathcal{D}$	(kN)	70	117	117
$R\mathcal{L}$	(kN)	169	137	137
Imp.	(kN)	38	31	31
R (Total)	(kN)	547	555	555

I and I' are the moment of inertia and composite moment of inertia of the beam section.

S_b and S_b' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.

S_t and S_t' are the non-composite and composite section modulus for the top fiber of the prestressed beam.

$M\mathcal{D}$ is the moment due to dead loads on the non-composite prestressed beam. It is conservatively calculated at 0.5 of the span.

$Ms\mathcal{D}$ is the moment due to dead loads on the composite section.

$M\mathcal{L}$ is the moment due to live load on the composite section.

M (Imp) is the moment due to live load impact on the composite section.

DESIGNED	KEF
CHECKED	MJS
DRAWN	DEM
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

FRAMING PLAN
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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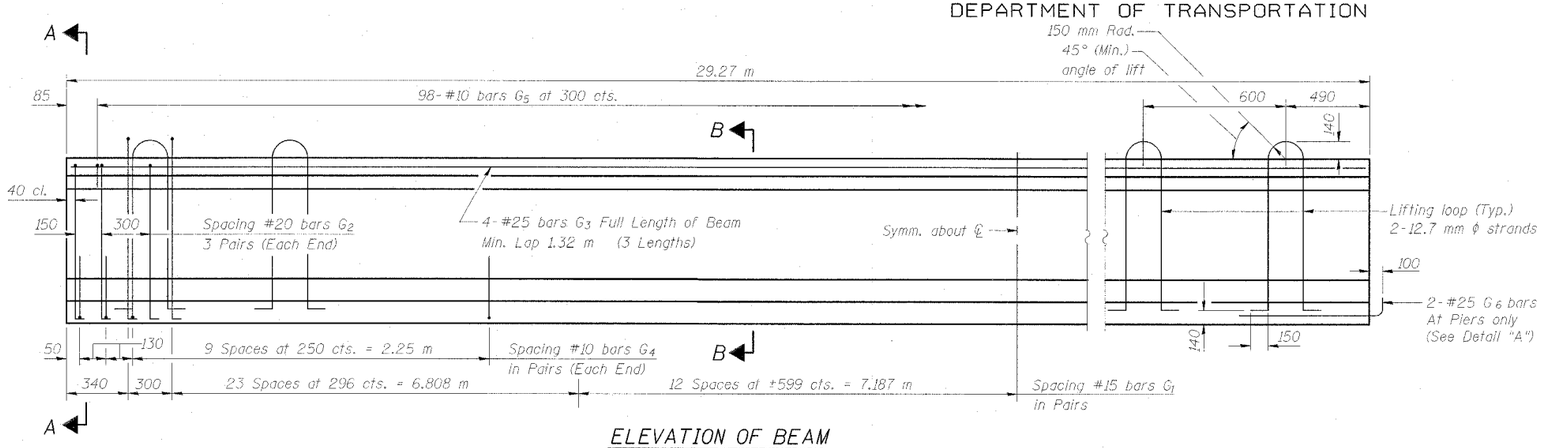
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 1-74	*	TAZEWELL	1366	437
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
25 SHEETS

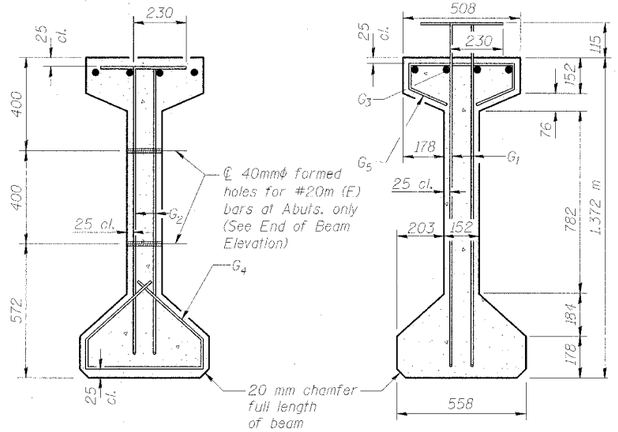
* (90-11HB)BR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



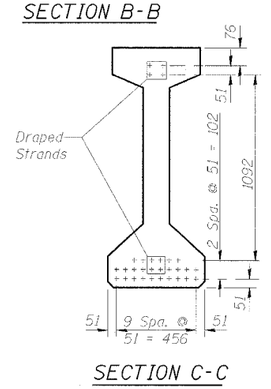
ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

ELEVATION OF BEAM
(Showing Prestressing Steel)

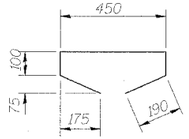


SECTION A-A

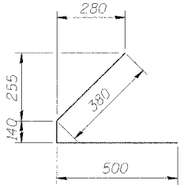
SECTION B-B



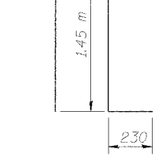
SECTION C-C



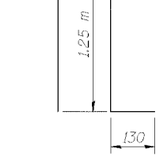
BAR G_5



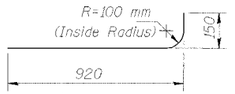
BAR G_4



BAR G_1



BAR G_2

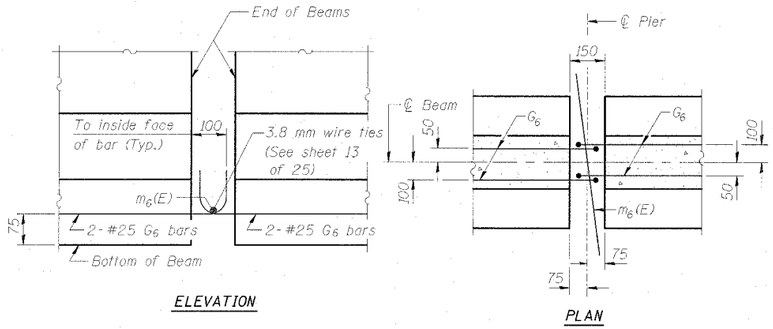


BAR G_6

* BAR LIST

Bar	No.	Size	Length (m)	Shape
G_1	74	#15	1.91	7L
G_2	12	#20	1.61	7L
G_3	12	#25	10.59	—
G_4	48	#10	1.02	6
G_5	98	#10	1.03	5
G_6	2	#25	1.07	5

* For one beam only.



DETAIL "A"

DESIGNED	KEF
CHECKED	KEF
DRAWN	DEM
CHECKED	KEF

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per meter of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 1372 mm."

Inserts for 20 mm threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand (Fu=1860 MPa).

The nominal diameter shall be 12.7 mm and the nominal cross-sectional area shall be 98.71 mm^2.

Non-prestressing steel shall conform to AASHTO designation M-31M or M-322M, Grade 400.

Lifting loops shall be 2-12.7 mm ϕ strands (Fu=1860 MPa), as shown.

Required release strength, f'ci, shall be 35 MPa.

Reinforcement bars designated (E) shall be epoxy coated.

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

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 1372 mm	m	352

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

BEAM DETAILS
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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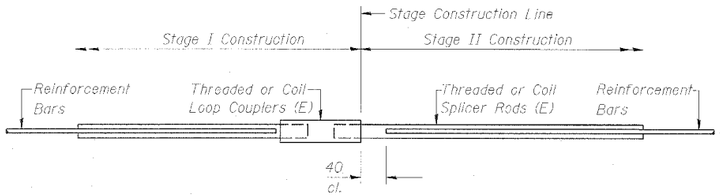
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 1-74	*	TAZEWELL	1366	438
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
25 SHEETS

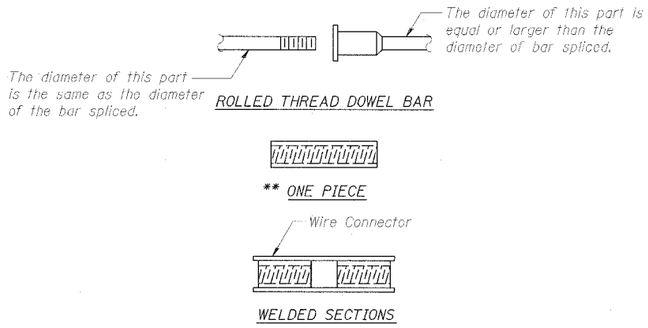
* (90-11HB)BR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



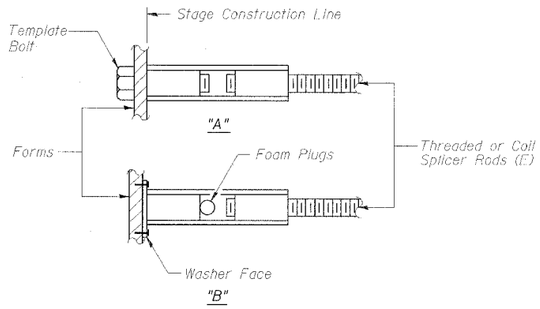
BAR SPLICER ASSEMBLY DETAIL

Bar Size	No. Assemblies Required	Location
-	-	-
-	-	-



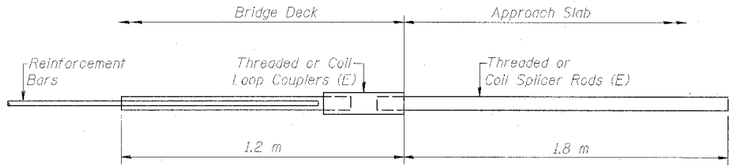
BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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



INTEGRAL ABUTMENT BAR SPLICER ASSEMBLY DETAIL FOR #15 BAR

Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required = 80

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 400 MPa 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 (Tension in kN) = $1.25 \times 10^{-3} \times f_y \times A_t$

② Minimum *Pull-out Strength (Tension in kN) = $1.25 \times 10^{-3} \times fs_{allow} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in MPa.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)
A_t = Tensile stress area of lapped reinforcement bars (mm^2).
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	790 mm	150	60
#25	1.32 m	250	100
#30	1.85 m	350	140
#35	2.64 m	500	200

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."

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

Note:
The unused half of the bar splicers shall be bundled together and clearly labeled with structure number, size, and location within the structure (for example: SN 090-0160 #15 bar splicers for deck). They shall be supplied by IDOT and installed by Contractor. Cost is included with Reinforcement Bars, Epoxy Coated.

DESIGNED	KEF
CHECKED	MJS
DRAWN	DEM
CHECKED	KEF

BAR SPLICER ASSEMBLY DETAILS
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

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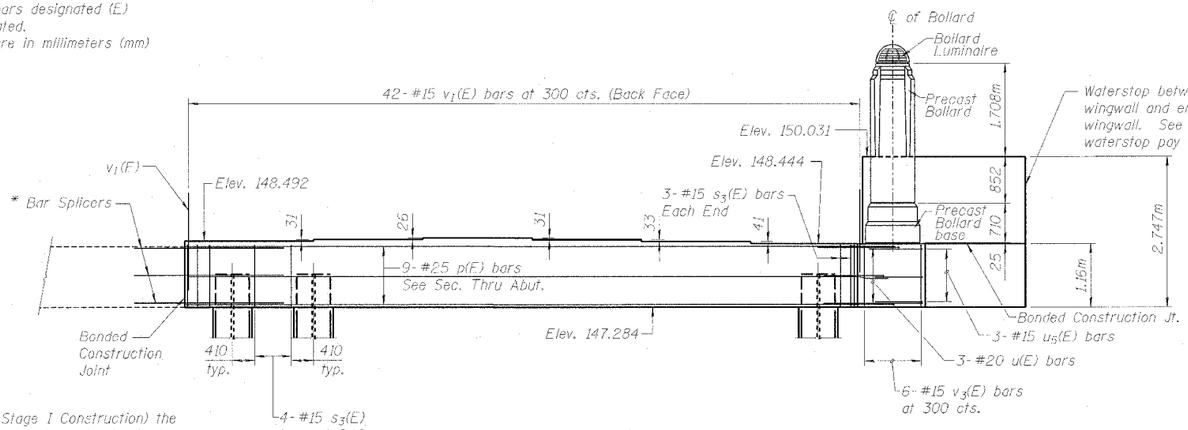
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	439
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17
25 SHEETS

* (90-11HB)BR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

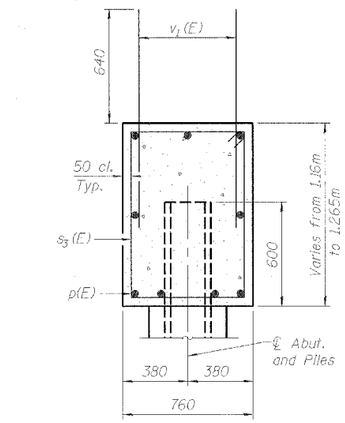
Notes: Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.



* IDOT shall supply (from Stage I Construction) the unused portions of the bar splicers to the Contractor with the correct Structure Number and size on them. These formerly unused portions shall be installed by Contractor. Cost is included with "Reinforcement Bars, Epoxy Coated."

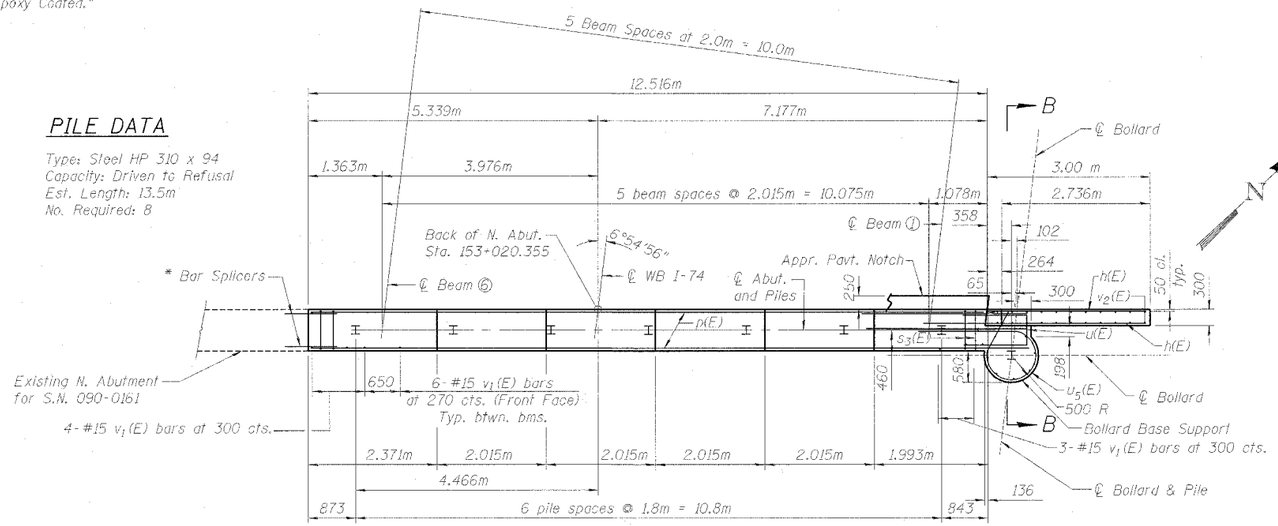
BEAM SEAT ELEVATIONS

Beam No.	Elev.
1	148.444
2	148.485
3	148.518
4	148.549
5	148.523
6	148.492



SEC. THRU ABUT.

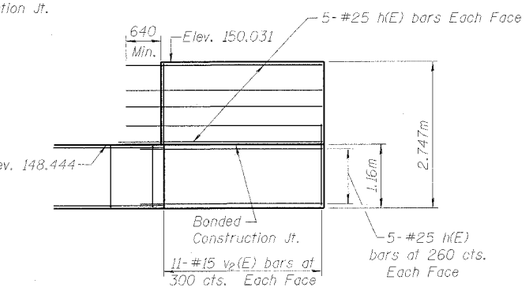
ELEVATION
(Looking North)



PILE DATA

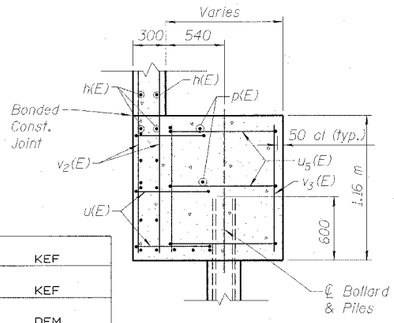
Type: Steel HP 310 x 94
Capacity: Driven to Refusal
Est. Length: 13.5m
No. Required: 8

WINGWALL REINF. DETAIL
(Looking North)

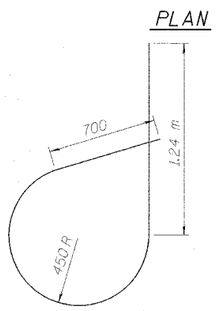


BILL OF MATERIAL

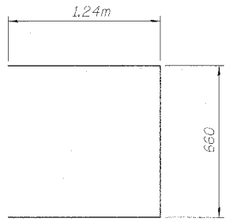
Bar	No.	Size	Length	Shape
h(E)	20	#25	3.64	
p(E)	9	#25	13.05	
s_3(E)	30	#15	3.72	
u(E)	3	#20	3.14	
u_5(E)	3	#15	3.67	
v_1(E)	79	#15	1.28	
v_2(E)	22	#15	2.63	
v_3(E)	6	#15	1.06	
Concrete Structures		m^3	15.0	
Reinforcement Bars Epoxy Coated		kg	1220	
Structure Excavation		m^3	104	
Furnishing Steel Piles HP310 x 94		m	108	
Driving Steel Piles		m	108	



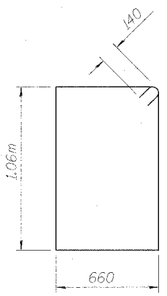
SECTION B-B



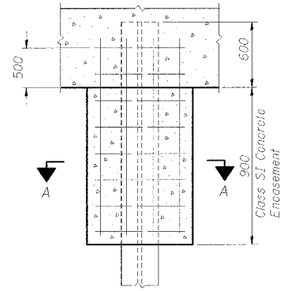
BAR u_5(E)



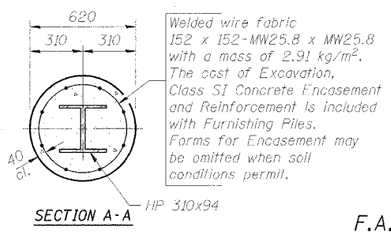
BAR u(E)



BAR s_3(E)



PILE ENCASEMENT DETAIL



SECTION A-A

Welded wire fabric 152 x 152-MW25.8 x MW25.8 with a mass of 2.91 kg/m^2. The cost of Excavation, Class SI Concrete Encasement and Reinforcement is included with Furnishing Piles. Forms for Encasement may be omitted when soil conditions permit.

DESIGNED	KEF
CHECKED	KEF
DRAWN	DEM
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

NORTH ABUTMENT
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 1-74	*	TAZEWELL	1366	440
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 18
25 SHEETS

* (90-11HB)BR

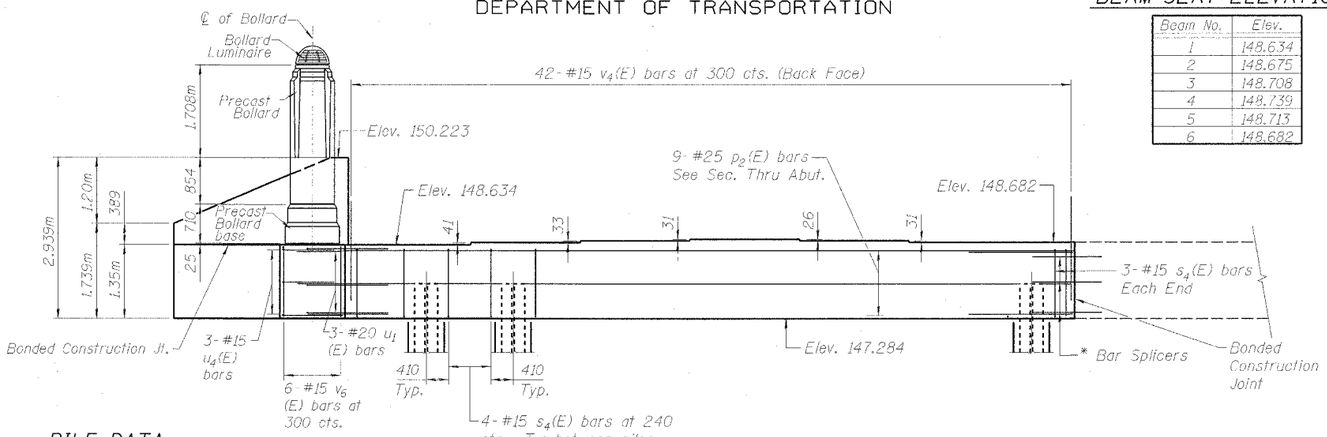
Notes: Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.

* IDOT shall supply (from Stage 1 Construction) the unused portions of the bar splicers to the Contractor with the correct Structure Number and size on them. These formerly unused portions shall be installed by Contractor. Cost is included with "Reinforcement Bars, Epoxy Coated."

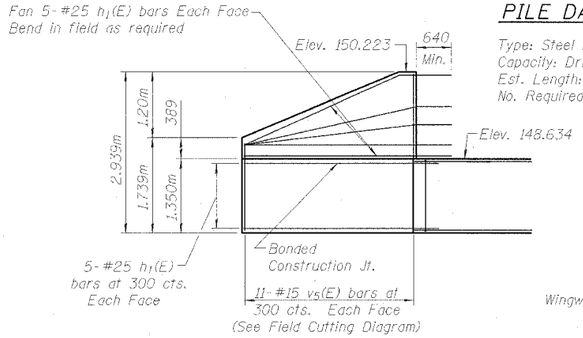
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM SEAT ELEVATIONS

Beam No.	Elev.
1	148.634
2	148.675
3	148.708
4	148.739
5	148.713
6	148.682



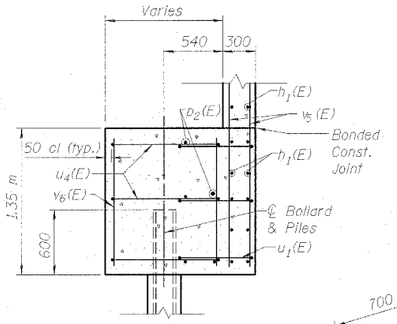
ELEVATION
(Looking South)



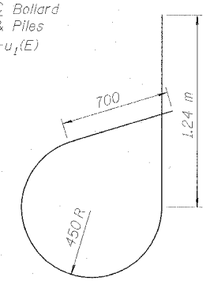
PILE DATA

Type: Steel HP 310 x 94
Capacity: Driven to Refusal
Est. Length: 9m
No. Required: 8

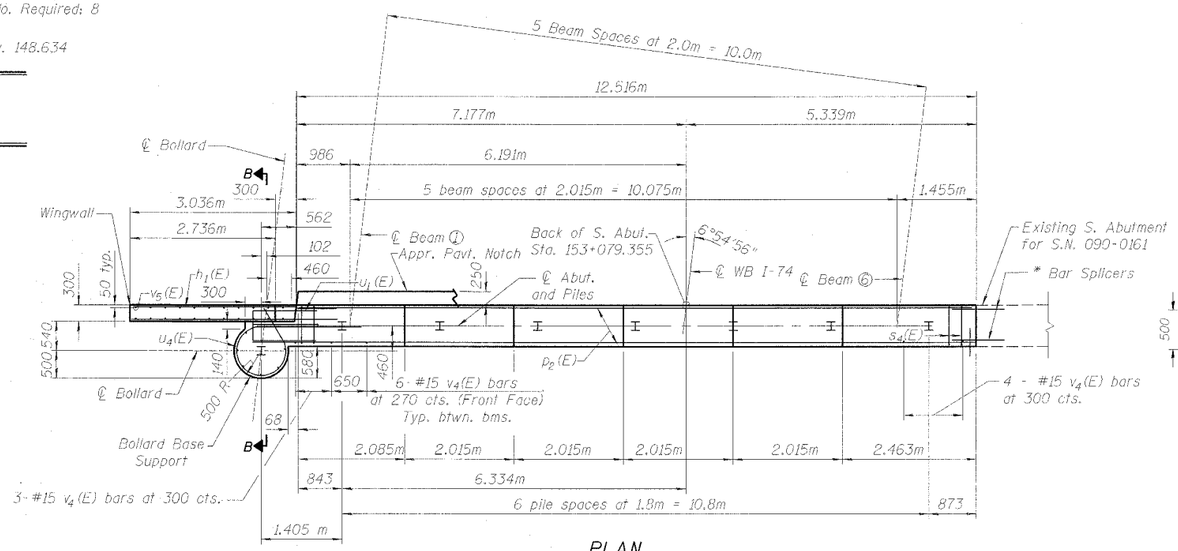
WINGWALL REINF. DETAIL
(Looking South)



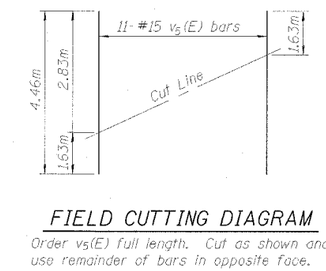
SECTION B-B



BAR u_4(E)

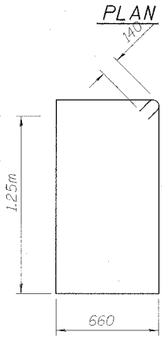


PLAN

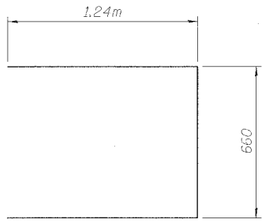


FIELD CUTTING DIAGRAM

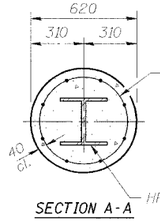
Order v_5(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s_4(E)

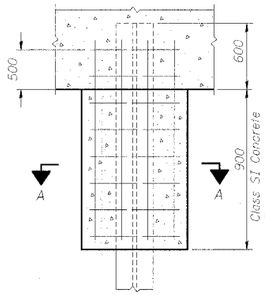


BAR u_1(E)

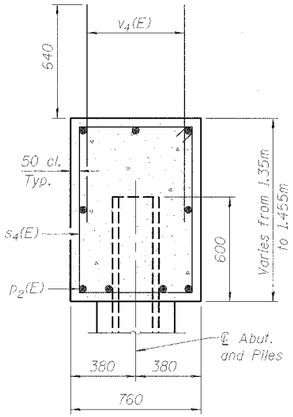


SECTION A-A

Welded wire fabric 152 x 152-MW25.8 x MW25.8 with a mass of 2.91 kg/m². The cost of Excavation, Class SI Concrete Encasement and Reinforcement is included with Furnishing Piles. Forms for Encasement may be omitted when soil conditions permit.



PILE ENCASEMENT DETAIL



SEC. THRU ABUT.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_1(E)	20	#25	3.93	
p_2(E)	9	#25	13.00	
s_4(E)	30	#15	4.10	
u_1(E)	3	#20	3.14	
u_4(E)	3	#15	3.67	
v_4(E)	79	#15	1.28	
v_5(E)	11	#15	4.46	
v_6(E)	6	#15	1.25	
Concrete Structures		cu m	16.8	
Reinforcement Bars Epoxy Coated		kg	1250	
Structure Excavation		cu m	128	
Furnishing Steel Piles HP 310X94		m	72	
Driving Steel Piles		m	72	

DESIGNED	KEF
CHECKED	KEF
DRAWN	DEM
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

SOUTH ABUTMENT
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	441
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

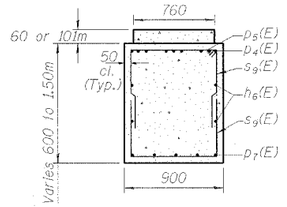
SHEET NO. 19
25 SHEETS

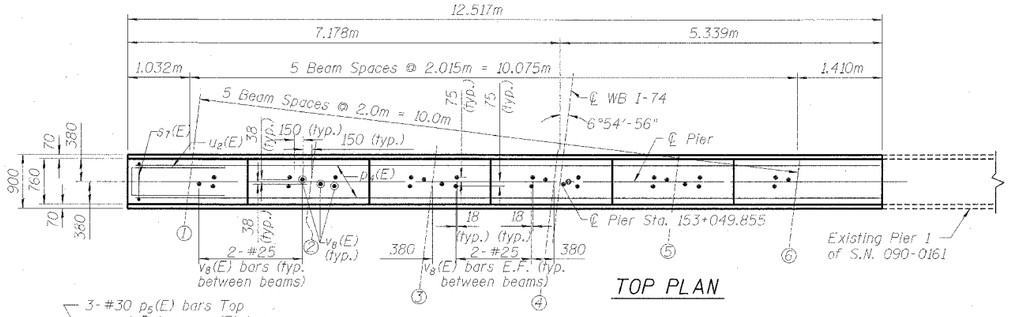
* (90-11HB)BR

Notes: Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All dimensions are in millimeters (mm), except as noted.
For anchor bolt layout see sheet 13 of 25.

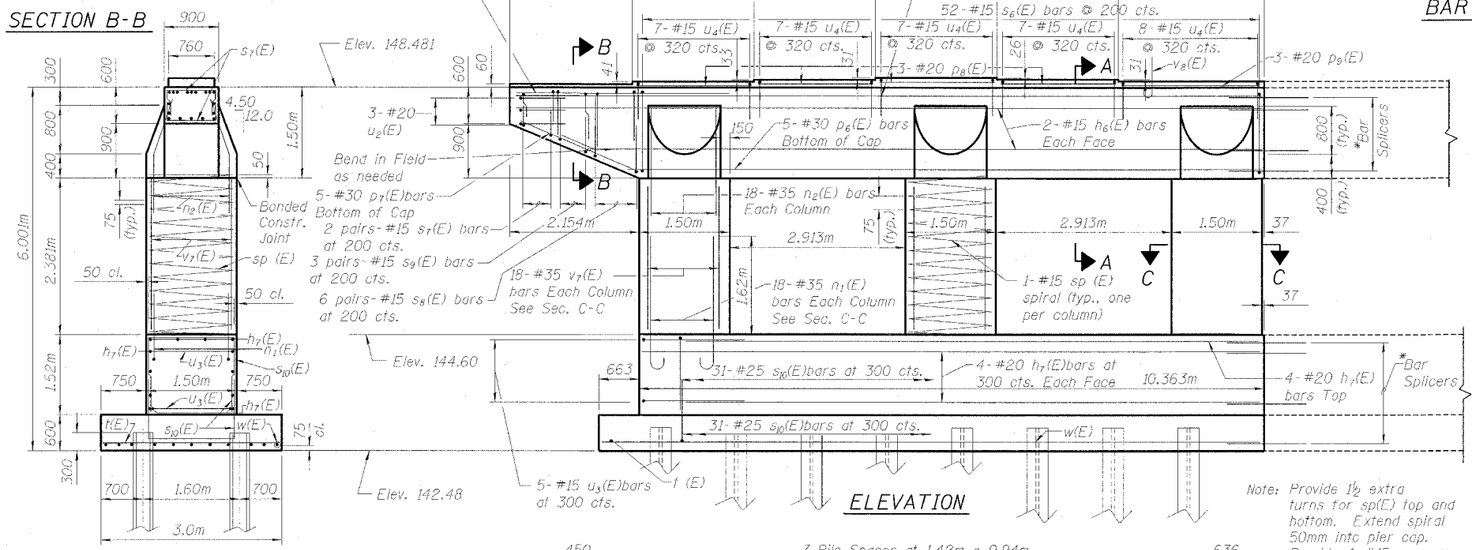
* IDOT shall supply (from Stage I Construction) the unused portions of the bar splicers to the Contractor with the correct Structure Number and size on them. These formerly unused portions shall be installed by Contractor. Cost is included with "Reinforcement Bars, Epoxy Coated."

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

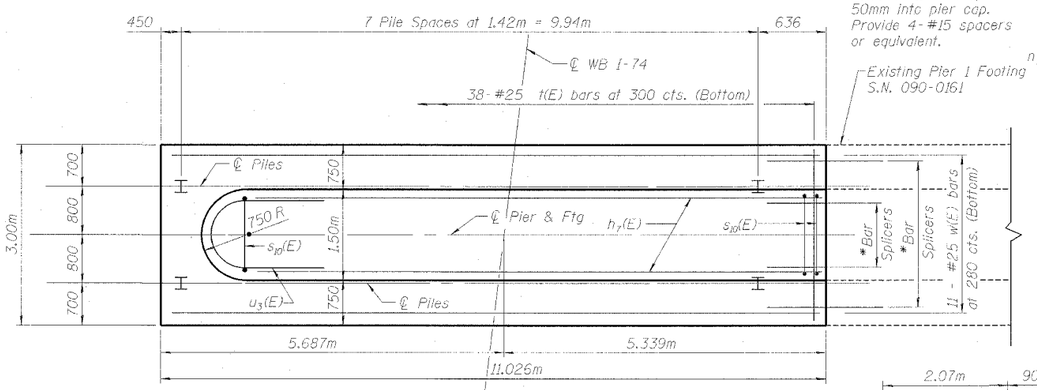




TOP PLAN



ELEVATION

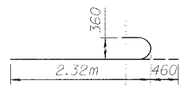


FOOTING PLAN

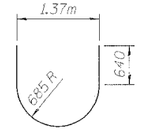
Note: Provide 1½ extra turns for sp(E) top and bottom. Extend spiral 50mm into pier cap. Provide 4-#15 spacers or equivalent.

BEAM SEAT ELEVATIONS

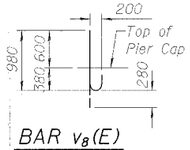
Beam No.	Elev.
1	148.541
2	148.582
3	148.615
4	148.646
5	148.620
6	148.589



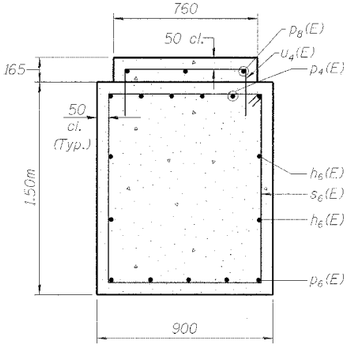
BAR $n_1(E)$



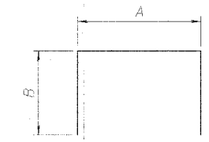
BAR $u_3(E)$



BAR $v_8(E)$



SECTION A-A



BARS $S_7(E)$, $S_8(E)$, $S_9(E)$ $S_{10}(E)$, $U_2(E)$, $U_4(E)$

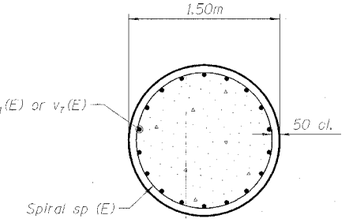
A & B DIMENSIONS

Bar	A	B
$S_7(E)$	800	500
$S_8(E)$	800	940
$S_9(E)$	800	675
$S_{10}(E)$	1.40m	1.40m
$u_2(E)$	770	1.22m
$u_4(E)$	660	660

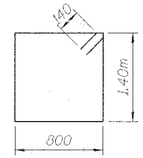
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
$h_6(E)$	4	#15	12.41	
$h_7(E)$	12	#20	8.86	
$n_1(E)$	54	#35	2.78	
$n_2(E)$	54	#35	3.03	
$p_4(E)$	6	#35	12.41	
$p_5(E)$	3	#30	4.60	
$p_6(E)$	5	#30	10.26	
$p_7(E)$	5	#30	2.23	
$p_8(E)$	12	#20	1.91	
$p_9(E)$	3	#20	2.31	
$s_6(E)$	52	#15	4.68	
$s_7(E)$	4	#15	1.80	
$s_8(E)$	12	#15	2.68	
$s_9(E)$	6	#15	2.15	
$s_{10}(E)$	62	#25	4.20	
sp (E)	3	#15	2.43	
t (E)	38	#25	2.85	
$u_2(E)$	3	#20	3.21	
$u_3(E)$	5	#15	3.43	
$u_4(E)$	36	#15	1.98	
$v_7(E)$	54	#35	2.28	
$v_8(E)$	30	#25	1.26	
w (E)	11	#25	10.87	
Furnishing Steel Piles HP 310 x 94		m	112	
Driving Steel Piles		m	112	
Braced Excavation		cu m	63	
Concrete Structures		cu m	74.1	
Reinforcement Bars, Epoxy Coated		kg	8240	

Reinforcement bars designated (E) shall be epoxy coated.



SECTION C-C



BAR $s_6(E)$

PILE DATA

Type - Steel HP 310 x 94
Capacity - Driven to Refusal
Est. Length - 7.0m
No. Reqd. - 16

DESIGNED	KEF
CHECKED	LVT
DRAWN	CAD
CHECKED	KEF

MIN. BAR LAP

#15	490
#20	610
#25	1.01m
#30	1.98m
#35	2.82m

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

PIER 1
W.B. INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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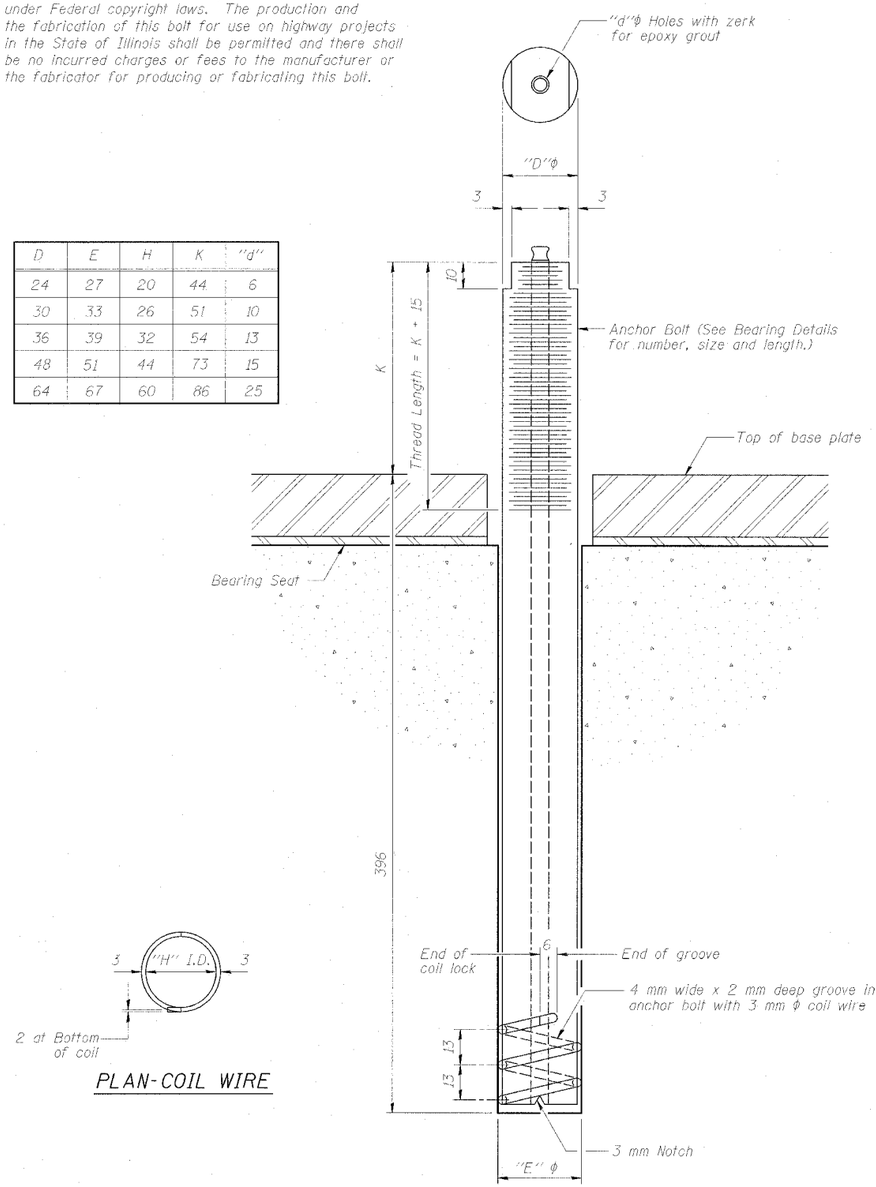
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	442
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 20 25 SHEETS

* (90-11HB)BR

D	E	H	K	"d"
24	27	20	44	6
30	33	26	51	10
36	39	32	54	13
48	51	44	73	15
64	67	60	86	25



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

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
Pier	A 307

ASTM F 1554 (Fy = 724 MPa), ASTM A 449 and AASHTO M 314 (Fy = 724 MPa) 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 "Concrete Structures."

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

DESIGNED
CHECKED
DRAWN
CHECKED

ABB-1 (M) 4-30-99

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

ANCHOR BOLT DETAILS FOR BEARINGS
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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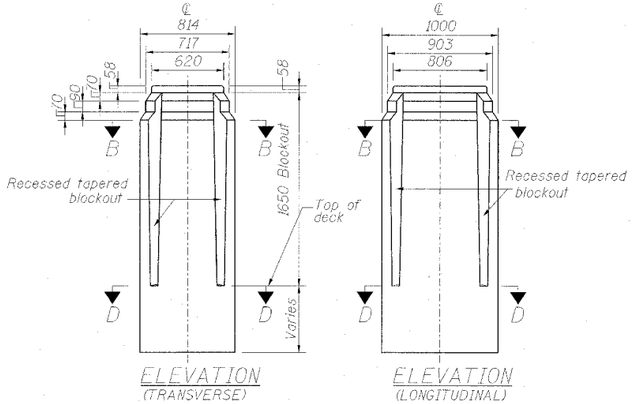
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

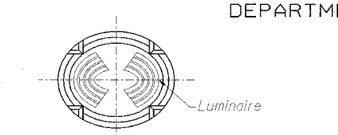
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	443
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 21
25 SHEETS

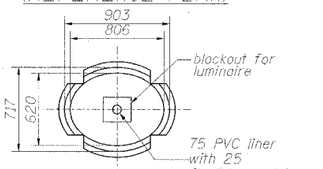
* (90-11HB)BR



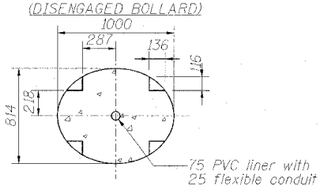
DISENGAGED BOLLARD



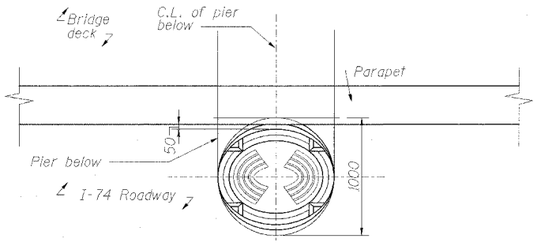
(REFERENCE PLAN)



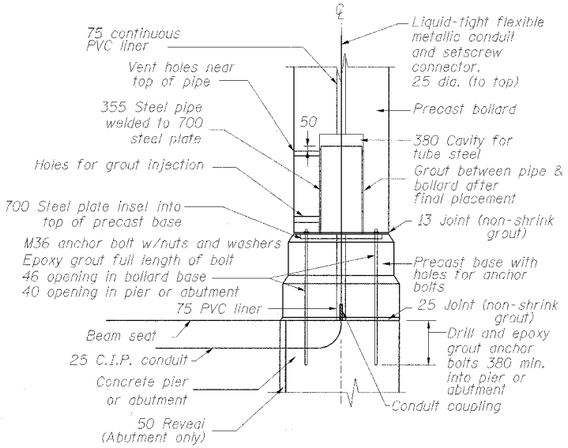
SECTION A-A
(ENGAGED BOLLARD)
(DISENGAGED BOLLARD)



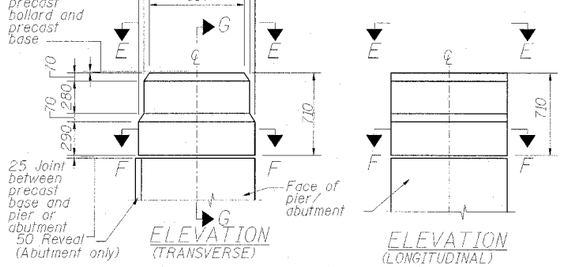
SECTION B-B
(ENGAGED BOLLARD)
(DISENGAGED BOLLARD)



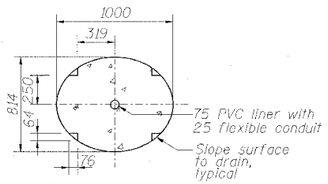
PLAN AT DISENGAGED BOLLARD



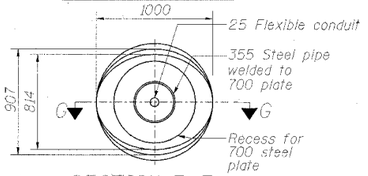
BASE CONNECTION DETAIL



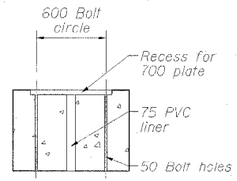
BOLLARD BASE



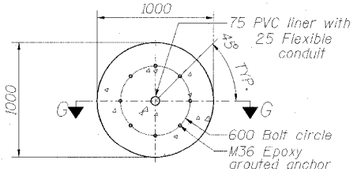
SECTION D-D
(DISENGAGED BOLLARD)



SECTION E-E
(BOLLARD BASE)

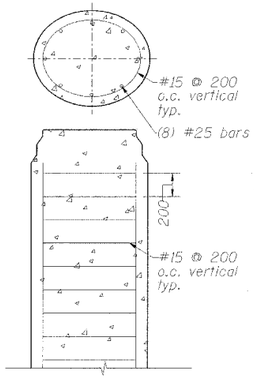


SECTION G-G
(BOLLARD BASE)



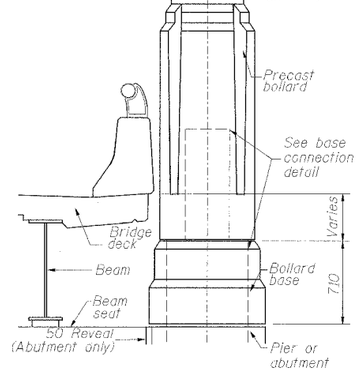
SECTION F-F
(BOLLARD BASE)

BOLLARD SECTIONS



TYP. REINF.
(MIN. REINFORCEMENT SHOWN
FINAL DESIGN BY FABRICATOR)

(SIMILAR REINFORCEMENT
IN BOLLARD BASE)



DISENGAGED BOLLARD

REFERENCE ELEVATIONS

DESIGNED	KEF
CHECKED	KEF
DRAWN	CAD
CHECKED	KEF

NOTES:

1. BOLLARDS, BOLLARD BASES, BOLLARD LUMINAIRES, AND CONNECTION COMPONENTS (UNLESS OTHERWISE NOTED) ARE SUPPLIED BY OTHERS. FABRICATION DETAILS AND DIMENSIONS ARE PRESENTED FOR INFORMATION ONLY. INSTALLATION IS INCLUDED IN THIS CONTRACT.
2. SOME BOLLARD BASE CONNECTION DETAILS NOT SHOWN. FINAL CONNECTION DESIGN AND DETAILING BY BOLLARD FABRICATOR.
3. NON-SHRINK GROUT, EPOXY GROUT, FLEXIBLE CONDUIT AND CONNECTOR, AND SILICONE JOINT SEALER TO BE SUPPLIED AND INSTALLED BY INSTALLATION CONTRACTOR.

PRECAST CONCRETE BOLLARD DETAILS
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

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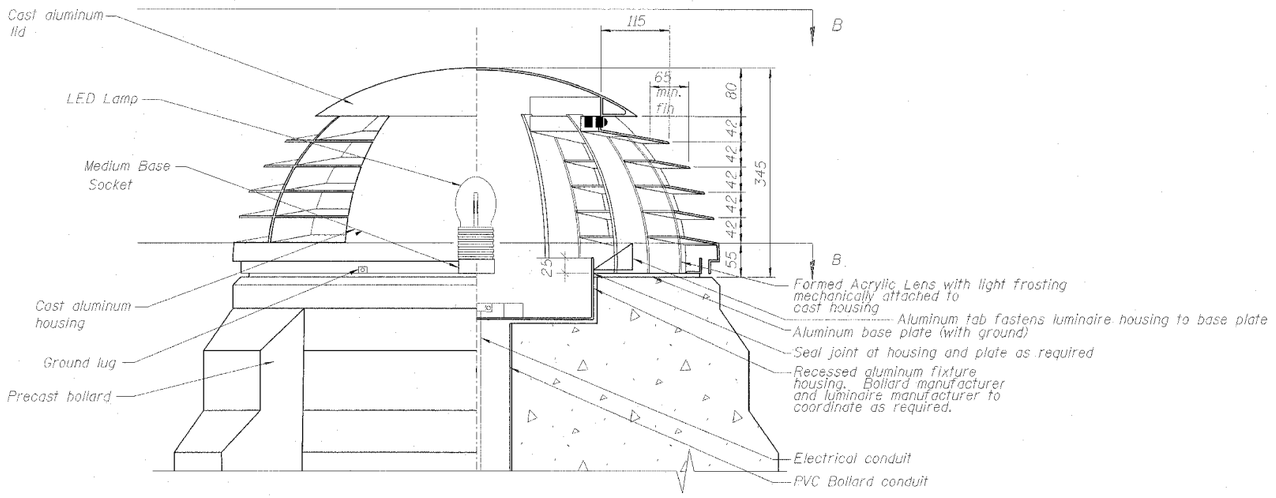
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	444
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

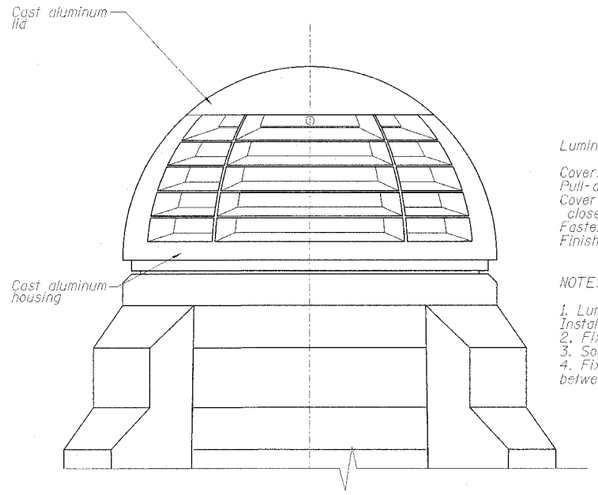
SHEET NO. 22
25 SHEETS

* (90-11HB)BR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LONGITUDINAL ELEVATION/SECTION A-A



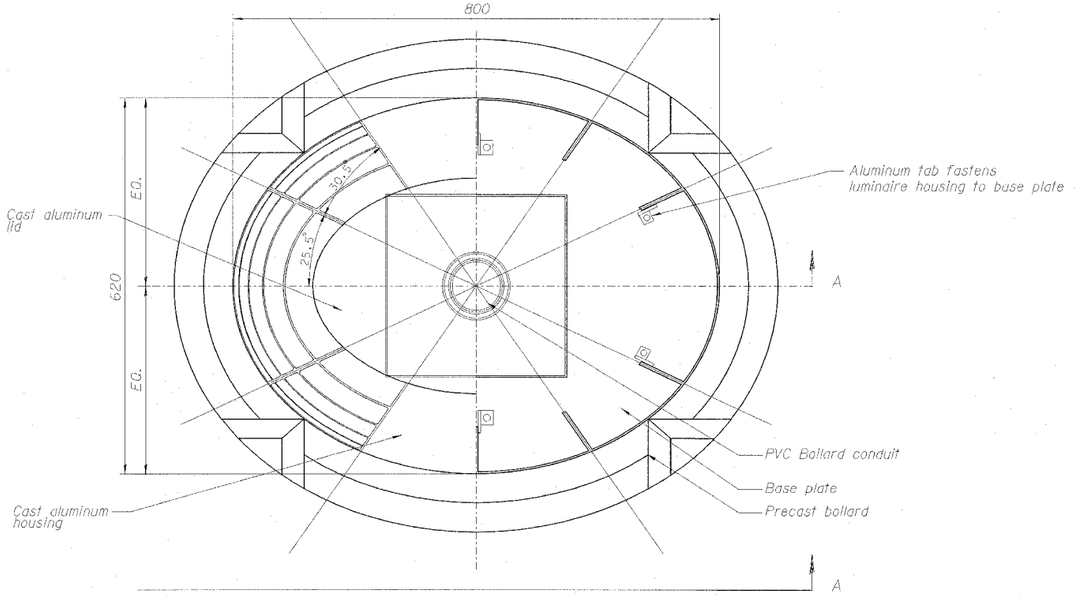
TRANSVERSE ELEVATION

Luminiare Specifications

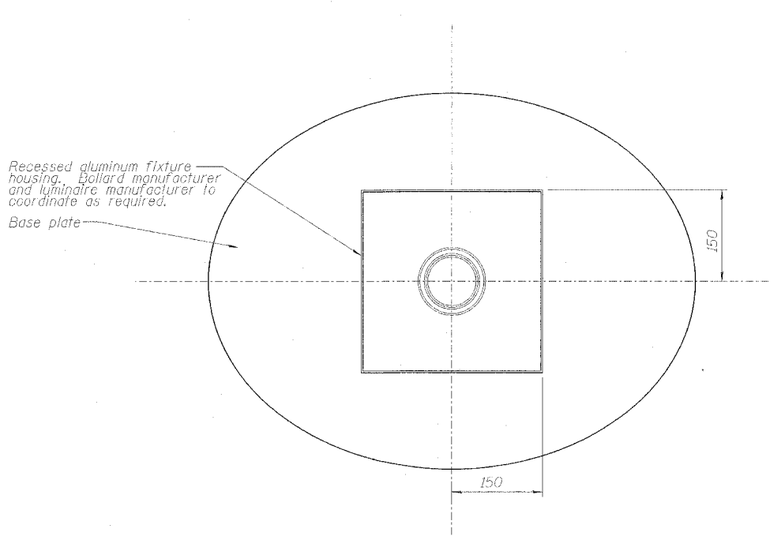
Cover: 3 thick all aluminum construction
Pull-down catches and strikes: Stainless steel
Cover Gasket: 3 thick (die cut) high density closed-cell EPDM with P.S.A. backing
Fasteners: Stainless steel, cast-in-place Heli-Coil
Finish: Factory applied - silver metallic

NOTES:

1. Luminaire supplied by others. Installation in this contract.
2. Fixture to Bear "U.L." Label" suitable for wet locations"
3. Socket to be supplied with disconnect plugs.
4. Fixture supplied with vinyl coated stainless steel safety cable between cast aluminum lid and baseplate.



PLAN/SECTION B-B



PLAN

DESIGNED	KEF
CHECKED	KEF
DRAWN	CAD
CHECKED	KEF

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

BOLLARD LUMINAIRE DETAILS
WB INTERSTATE 74 OVER
MAIN STREET (IL. RTE. 116)
F.A.I. ROUTE 74 - SEC. (90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO. 090-0160

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	*	TAZEWELL	1366	445
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 23
25 SHEETS

* (90-11HB)BR

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D4
BORING NO. SB-229
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR
LOCATION BRIDGE NO. 090-0155 (STRUCTURE) EBI-74BL 153+041.2 (STATION) 13.3mR (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)
DRILLING CONTRACTOR D & G DRILLING, INC.
DATE OF DRILLING: STARTED 12-28-94 COMPLETED 12-28-94 SURFACE ELEVATION 143.04
DRILLED BY D. ROESEL LOGGED BY M. DOOLEY

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	12-28	4.7	-
-	12-28	DRY	0
-	1-3	5.4	6d

DRILLING METHOD
RIG TYPE MOBILE B-57
AUGER TYPE-DEPTH 0.10m FA-10.3m
CASING TYPE-DEPTH -
SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	W %	γd Kgpm³
143.04 / 0	PAVEMENT MATERIALS: 38mm AC, 165mm PCC	AU	-	1	-
142.80 / 1	FILL: DK BR & BR SILTY CLAY LOAM, A-6	5 5 6	510	12	-
		3 4 5	200	15	-
140.60 / 2	DK BR TO BR SILTY LOAM, A-6	3 4 5	145	15	-
		3 5 5	230	20	-
139.08 / 3	BR TO DK BR CLAY LOAM, A-4	3 4 5	285	20	-
		2 2 2	55	18	-
138.32 / 4	BR SILTY LOAM, A-4	2 2 2	65	24	-
137.56 / 5	BR & GR SILTY CLAY LOAM, A-7-6 W/ SHELLS	3 4 4	165	27	-
136.79 / 6	BR & GRN GR SILTY CLAY, A-7-6	3 4 8	250	23	-
136.03 / 7	LT GRN GR MASSIVE CLAY SHALE	17 34 82	-	9	-
		100	-	11	-
		100	-	9	-
		100/0.10m	-	9	-
132.74 / 10	END OF BORING	100/0.08m	-	11	-

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D4
BORING NO. SB-230
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR
LOCATION BRIDGE NO. 090-0155 (STRUCTURE) EBI-74BL 153+065.3 (STATION) 12.8mR (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)
DRILLING CONTRACTOR D & G DRILLING, INC.
DATE OF DRILLING: STARTED 11-1-94 COMPLETED 11-1-94 SURFACE ELEVATION 143.32
DRILLED BY D. ROESEL LOGGED BY J. DUDLICEK

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	11-1	DRY	-
RW	11-1	-	0
WC	11-3	2.2	2d

DRILLING METHOD
RIG TYPE MOBILE B-57
AUGER TYPE-DEPTH 0.10m FA-2.4m RH-7.5m
CASING TYPE-DEPTH -
SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	W %	γd Kgpm³
143.32 / 0	SIDEWALK MATERIALS: 76mm AC	AU	-	-	-
143.23 / 1	TRENCH BACKFILL: BR GRAVELLY SAND, A-1-b	2 3 2	-	10	-
		2 1 1	-	8	-
		1 1 1	-	9	-
140.88 / 3	FILL: BR & GR SILTY CLAY, A-7-6 W/ SHALE FRAGMENTS	3 3 5	335	26	-
140.12 / 4	DK GR & GRN GR MASSIVE CLAY SHALE	4 7 12	-	26	-
		8 19 21	-	20	-
138.59 / 5	LT GRN GR MASSIVE CLAY SHALE	28 43 51	-	15	-
		25 54 100/0.08m	-	12	-
		50 100	-	13	-
	LT GRN GR MASSIVE CLAY SHALE	65 100	-	12	-
135.85 / 10	END OF BORING				

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-7 (and subgroups)	Engineering classifications of soil samples in accordance with AASHTO M 145 standard specification.
N,Bp0.15m	Number of blows required to drive a standard soil sampling device 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil sample in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil sample in percent determined in accordance with AASHTO T 265 standard specification.
γd, kgpm³	Dry density of soil sample in kilograms per cubic meter.

GROUNDWATER DATA

DD	During Drilling
BAR	Before Auger Removal
AAR	After Auger Removal
DC	Dry Collapse
WC	Wet Collapse
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger
AU	Auger
SS	Split Spoon

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

SOIL BORINGS
WB INTERSTATE 74
OVER MAIN STREET
(IL RTE. 116) F.A.I.
ROUTE 74 - SEC.
(90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO.
090-0160

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 1-74	*	TAZEWELL	1366	446
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 24
25 SHEETS

* (90-11HB)BR

CLAUDE H. HURLEY COMPANY — BORING LOG

PROJECT NO. 3-380-D4 — BORING NO. SB-231
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR
LOCATION BRIDGE NO. 090-0007 (STRUCTURE) EBI-74BL 153+019.7 (STATION) 3.6mL (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)
DRILLING CONTRACTOR WANG ENGINEERING, INC.
DATE OF DRILLING: STARTED 11-15-94 COMPLETED 11-15-94 SURFACE ELEVATION 149.42
DRILLED BY J. WHEELER — LOGGED BY M. DOOLEY

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	11-15	14.6	-
BAR	11-15	-	0
DC	11-17	0.9	2d

DRILLING METHOD: RIG TYPE CME-55; AUGER TYPE-DEPTH 0.10m FA-1.5m, RM-17.3m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
149.12 / 0	TOPSOIL FILL: DK BR SILTY LOAM, A-4	AU	-	20	-
		3 5 5	155	17	-
	FILL: DK BR, DK GR & BR SILTY CLAY LOAM, A-6 CINDERS	6 6 8	190	17	-
2		4 5 5	200	23	-
146.99 / 3	FILL: BR LOAM, A-4	5 8 8	-	25	-
146.23 / 4		5 6 5	145	12	-
	FILL: BR CLAY LOAM TO SILTY CLAY LOAM, A-4	2 1 1	210	17	-
5		1 2 3	165	19	-
		2 3 3	155	15	-
143.18 / 7	FILL: DK BR SILTY LOAM, A-4	2 2 4	-	17	-
140.13 / 9	FILL: DK BR SILTY LOAM, A-4	2 2 2	-	18	-
		1 2 2	-	16	-
		5 3 3	-	17	-
138.61 / 10	DK BR SILTY LOAM, A-4	5 5 6	240	22	-
		2 3 4	170	21	-
137.85 / 12	DK BR TO BR LOAM, A-4	5 7 7	200	21	-
	DK BR TO BR SILTY LOAM, A-4	2 2 3	20	29	-
13		0 2 3	65	25	-

CLAUDE H. HURLEY COMPANY — BORING LOG

PROJECT NO. 3-380-D4 — BORING NO. SB-231 (Cont.)
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR
LOCATION BRIDGE NO. 090-0007 (STRUCTURE) EBI-74BL 153+019.7 (STATION) 3.6mL (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)
DRILLING CONTRACTOR WANG ENGINEERING, INC.
DATE OF DRILLING: STARTED 11-15-94 COMPLETED 11-15-94 SURFACE ELEVATION 149.42
DRILLED BY J. WHEELER — LOGGED BY M. DOOLEY

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	11-15	14.6	-
BAR	11-15	-	0
DC	11-17	0.9	2d

DRILLING METHOD: RIG TYPE CME-55; AUGER TYPE-DEPTH 0.10m FA-1.5m, RM-17.3m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
	DK BR TO BR SILTY LOAM, A-4	3 5 5	115	23	-
135.56 / 14	BR LOAM, A-4	5 8 8	-	26	-
134.80 / 15	DK BR TO BR CLAY LOAM, A-4	3 3 2	65	25	-
134.04 / 16	BR SANDY LOAM, A-2-4	8 16 14	-	14	-
133.27 / 17	LT GRN GR MASSIVE CLAY SHALE	10 38 100/0.10m	-	16	-
		50 100/0.08m	-	16	-
132.12 / 18	END OF BORING				
19					
20					
21					
22					
23					
24					
25					
26					

CLAUDE H. HURLEY COMPANY — BORING LOG

PROJECT NO. 3-380-D4 — BORING NO. SB-232
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR
LOCATION BRIDGE NO. 090-0007 (STRUCTURE) EBI-74BL 153+095.8 (STATION) 3.6mL (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)
DRILLING CONTRACTOR D & G DRILLING, INC.
DATE OF DRILLING: STARTED 11-15-94 COMPLETED 11-15-94 SURFACE ELEVATION 149.08
DRILLED BY D. ROESEL — LOGGED BY K. OLSON

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	11-15	6.2	-
BAR	11-15	-	0
DC	11-17	1.5	2d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.15m HSA-1.5m, RM-11.2m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
148.78 / 0	TOPSOIL FILL: DK BR SILTY LOAM, A-4	AU	-	10	-
		2 1 1	-	20	-
	FILL: BR CLAY LOAM, A-4	2 3 3	-	19	-
2		1 2 4	-	19	-
146.64 / 3	BLK TO DK BR SILTY LOAM, A-7-5	2 2 8	-	18	-
145.88 / 4	DK BR SILTY LOAM, A-4	4 5 6	190	16	-
145.12 / 5	DK BR TO BR LOAM, A-4	2 2 4	115	22	-
144.36 / 6	DK BR TO BR SILTY LOAM, A-4	1 2 3	85	24	-
		1 2 2	115	21	-
142.83 / 7	DK BR TO BR CLAY LOAM, A-4	0 0 1	75	19	-
142.53	DK GR CLAY LOAM, A-4 W/ FREQ ORGANIC FIBERS	-	-	22	-
142.07 / 8					
9	BR SANDY LOAM, A-2-4	5 6 14	-	16	-
141.31 / 10	BR SANDY GRAVEL, A-1-a	20 15 19	-	9	-
140.55 / 11	DK GR & GRN GR MASSIVE CLAY SHALE	18 20 26	-	24	-
		23 39 67	-	16	-
139.17 / 12	LT GRN GR MASSIVE CLAY SHALE	45 100/0.08m	-	13	-
137.86 / 13	END OF BORING	104 100/0.08m	-	20	-

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-7 (and subgroups)	Engineering classifications of soil samples in accordance with AASHTO M 145 standard specification.
N,Bp0.15m	Number of blows required to drive a standard soil sampling device 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil sample in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil sample in percent determined in accordance with AASHTO T 265 standard specification.
γd, kgpm³	Dry density of soil sample in kilograms per cubic meter.

GROUNDWATER DATA

DD	During Drilling
BAR	Before Auger Removal
AAR	After Auger Removal
DC	Dry Collapse
WC	Wet Collapse
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger
AU	Auger
SS	Split Spoon

MAURER ▲ STUTZ, INC. ENGINEERS SURVEYORS

SOIL BORINGS
WB INTERSTATE 74
OVER MAIN STREET
(IL RTE. 116) F.A.I.
ROUTE 74 - SEC.
(90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO.
090-0160

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLAUDE H. HURLEY COMPANY
BORING LOG

PROJECT NO. 3-380-D4
BORING NO. SB-233
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR
LOCATION BRIDGE NO. 090-0156 (STRUCTURE) RAMP K-2BL 10+616.1 (STATION) 3.3mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)
DRILLING CONTRACTOR D & G DRILLING, INC.
DATE OF DRILLING: STARTED 12-28-94 COMPLETED 12-28-94 SURFACE ELEVATION 143.27
DRILLED BY D. ROESEL LOGGED BY N. DOOLEY

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	12-28	DRY	-
-	12-28	DRY	0
WC	1-3	1.5	6d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.10m FA-8.8m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	W %	γd Kgpm³
143.03	0	PAVEMENT MATERIALS: 38mm AC, 165mm PCC	AU	-	3	-
		FILL: DK BR & BR SILTY CLAY LOAM, A-6	5 8 5	395	11	-
	1		2 3 3	180	16	-
141.59		BLK TO DK BR SILTY LOAM, A-7-5	3 4 5	-	21	-
	2					
140.83		DK BR TO BR LOAM, A-4	3 5 7	180	20	-
	3					
140.07		DK BR TO BR SILTY LOAM, A-4	4 5 8	270	22	-
139.31	4	BR, GR & GRN GR SILTY CLAY, A-7-6	4 5 8	270	26	-
			5 6 9	280	24	-
137.78	6	DK GR & GRN GR MASSIVE CLAY SHALE	11 17 32	-	16	-
137.02		LT GRN GR MASSIVE CLAY SHALE	17 33 67	-	11	-
	7					
134.49	8	LT GRN GR MASSIVE CLAY SHALE	35 100	-	10	-
			100/0.13m	-	10	-
	9	END OF BORING	100/0.10m	-	12	-
	10					
	11					
	12					
	13					

CLAUDE H. HURLEY COMPANY
BORING LOG

PROJECT NO. 3-380-D4
BORING NO. SB-234
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR
LOCATION BRIDGE NO. 090-0156 (STRUCTURE) RAMP K-2BL 10+592.8 (STATION) 7.2mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)
DRILLING CONTRACTOR D & G DRILLING, INC.
DATE OF DRILLING: STARTED 11-1-94 COMPLETED 11-1-94 SURFACE ELEVATION 143.56
DRILLED BY D. ROESEL LOGGED BY J. DUDLICEK

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	11-1	DRY	-
RW	11-1	-	0
WC	11-3	1.2	2d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.10m FA-1.5m, RW-7.5m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	W %	γd Kgpm³
143.47	0	SIDEWALK MATERIALS: 76mm AC	AU	-	-	-
		FILL: BR, DK BR & GRN GR SILTY CLAY LOAM, A-6	2 2 2	-	35	-
142.65	1		2 4 5	270	29	-
		FILL: BR, GRN GR & GR SILTY CLAY, A-7-6	3 4 5	335	22	-
141.40	2	DK GR LAMINATED CLAY SHALE	4	-	15	-
141.12		DK GR & GRN GR MASSIVE CLAY SHALE	10 12 17	-	19	-
139.60	3		6 10 14	-	18	-
	4	LT GRN GR MASSIVE CLAY SHALE	17 34 78	-	13	-
	5		34 75 100/0.10m	-	15	-
	6		38 100	-	14	-
	7		39 100/0.13m	-	15	-
136.09	8	LT GRN GR MASSIVE CLAY SHALE	40 100	-	14	-
	9	END OF BORING				
	10					
	11					
	12					
	13					

CLAUDE H. HURLEY COMPANY
BORING LOG

PROJECT NO. 3-380-D4
BORING NO. SB-284
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR
LOCATION BRIDGE NO. 090-0007 (STRUCTURE) EBI-74BL 153+052.7 (STATION) 3.5mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY
DATE OF DRILLING: STARTED 3-11-96 COMPLETED 3-11-96 SURFACE ELEVATION 143.59
DRILLED BY S. SCOTT LOGGED BY N. DEMAULT/R. HOEKSTRA

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	3-11	3.1	-
WC	3-11	2.1	0
-	3-12	2.3	1d

DRILLING METHOD: RIG TYPE CME-850; AUGER TYPE-DEPTH 0.08m HSA-4.9m, NXDB-9.6m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS-DB

Elev	Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	W %	γd Kgpm³
143.59	0	PAVEMENT MATERIALS: 51mm AC, 254mm PCC				
143.29		FILL: BR SILTY CLAY LOAM, A-4	AU	-	13	-
142.98		DK BR SILTY LOAM, A-4	6 7 6	490	14	-
	1					
142.37		DK BR, BR & GR SILTY LOAM, A-4	4 6 8	165	22	-
141.76	2	DK GR SILT, A-4 W/ FREQ ORGANIC FIBERS	2 1 2	30	30	-
	3		2 1 2	50	27	-
140.45		GR & BR LOAM, A-4	2 1 2	-	21	-
140.08	4	BR SANDY LOAM, A-2-4	2 2 2	-	15	-
139.32		LT GRN GR MASSIVE CLAY SHALE	13 26 62	-	12	-
	5		NX	REC = 93% RQD = 93%		
	6					
	7		NX	REC = 100% RQD = 92%		
133.99	8	LT GRN GR MASSIVE CLAY SHALE	NX	REC = 100% RQD = 100%		
	9	END OF BORING				
	10					
	11					
	12					
	13					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-7 (and subgroups)	Engineering classifications of soil samples in accordance with AASHTO M 145 standard specification.
N,Bp0.15m	Number of blows required to drive a standard soil sampling device 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil sample in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil sample in percent determined in accordance with AASHTO T 265 standard specification.
γd, Kgpm³	Dry density of soil sample in kilograms per cubic meter.

GROUNDWATER DATA

DD	During Drilling
BAR	Before Auger Removal
AAR	After Auger Removal
DC	Dry Collapse
WC	Wet Collapse
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger
AU	Auger
SS	Spilt Spoon

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

SOIL BORINGS
WB INTERSTATE 74
OVER MAIN STREET
(IL RTE. 116) F.A.I.
ROUTE 74 - SEC.
(90-11HB)BR
TAZEWELL COUNTY
STATION 153+050.716
STRUCTURE NO.
090-0160

...\090-0160\st1126-fc0900160.dgn 12/14/2004 3:33:56 PM

88201

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-74	*	TAZEWELL	1366	448
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

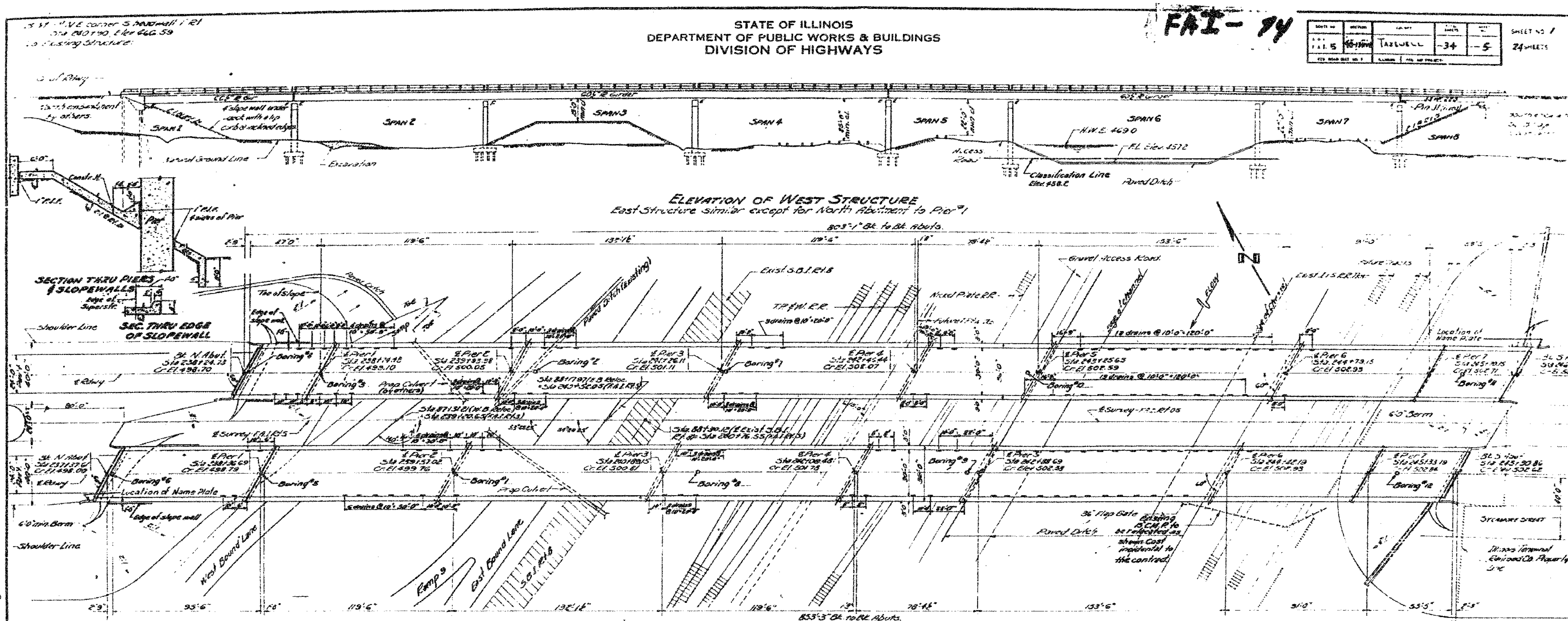
SHEET NO. 1
1 SHEETS

*(90-1I)R-2;90(13,14,14-1)R-1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

FAI-74



GENERAL NOTES

Class X Concrete shall be used throughout.

The concrete floor slab shall be finished in accordance with Article 51.18(a) of the Standard Specifications.

The concrete floor slab shall be poured continuously within limits of construction joints shown.

The Contractor shall drive Test Piles in permanent locations at the Abutments and designated Piers as shown on the plans, and as directed by the Engineer before ordering remainder of piles.

Slopewall shall be reinforced with welded wire fabric, 6"x6" mesh, #4 wires, weighing 58# per 100 sq. ft.

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

Railings shall be adjusted to true alignment after curbs are poured.

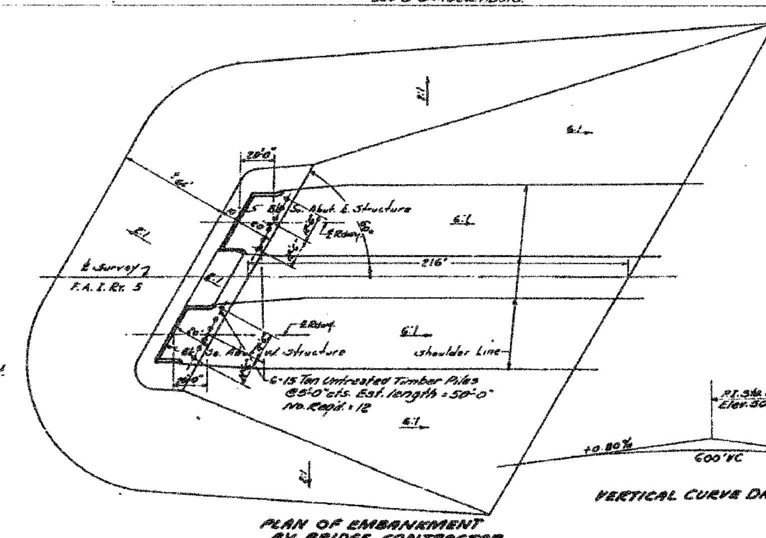
Provide 1-⅛ & 1-⅛ shim for each post.

Contractor shall apply two field coats of aluminum paint to Structural Steel. See Articles 51.1 to 51.5 inclusive of the Standard Specifications.

All paint shall be furnished and applied by the Contractor.

At the south abut. the Contr. shall drive the piles including the test piles and the approach piles through holes drilled through the embankment to the natural ground level at proper locations. After the piles have been driven, the void spaces outside of the piles shall be filled with compacted sand.

The cost of complying with these requirements shall be incidental to the contract.



TOTAL BILL OF MATERIAL

ITEM	Unit	SUPERST.	SUBSTR.	TOTAL
Class X Concrete	Cu. Yds	1667.7	1622.1	3289.8
Reinforcement Bars	Lbs.	309,880	133,850	443,730
Metal Handrail	Lin. Ft.	3367		3367
Name Plates	Each	2		2
Steel Piles (12BP53)	Lin. Ft.		476	476
Test Piles (12BP53)	Each		2	2
R.C. Piles (14")	Lin. Ft.		6,072	6,072
Test Piles (R.C. 14")	Each		6	6
Class "A" Excavation for Structures	Cu. Yds.		1,193	1,193
Class "B" Excavation for Structures	Cu. Yds		380	380
Slope Wall	Sq. Yds.		474	474
Erecting Structural Steel	Lbs.	2,947,400		2,947,400
Earth Excavation	Cu. Yds			54,276
Untreated Piles	Lin. Ft.		600	600

DESIGNED O. J. McCoy
CHECKED
DRAWN E. Rush

March 26 1959
EXAMINED
PASSED
APPROVED

STATION 240+76.55
BUILT 195 BY
STATE OF ILLINOIS
F.A.I. Rt. 5 Sec. 90-13HVB
F.A. Project I-05-4(12)
Loading H20-S16

LETTERING FOR NAME PLATE
See 3/16 2/13

STRESS
f_s = 18000#/□"
Loading H-20-S16-44

PROJECT I-05-4(12)
GENERAL PLAN & ELEVATION
CAMP ST. GRADE SEPARATION
F.A.I. RT. 5 SEC. 90-13HVB
TAZEWELL COUNTY

Rev. 6-24-58 Length of Appr. Piles changed to 50'

FOR INFORMATION ONLY

URS
URS CORPORATION
DECATUR, ILLINOIS

TAZEWELL COUNTY
EXISTING STRUCTURE PLAN AT
PROPOSED STRUCTURE NO. 090-0009

68201

B.M. $\frac{1}{2}$" Iron Rod set off shoulder on South side of Camp St. Rte. 8 East ± 25 m East of F.A.I. Rte. 74 S.N. 090-0009. Elev. 146.286
State point TH 8905, Elev. 149.398 m.

Existing Structure: S.N. 090-0009 is eight-span bridge built as F.A.I. Route 5 (now F.A.I. Route 74), Section 90-13 HVB, in 1960. The superstructure consists of R.C. concrete deck, 10.97 m wide by 244.78 m (S.N. 090-0009, WB) long, supported by 840 WF beams (end spans) and 1.52 m riveted plate girders. The deck and stem of Pier 4 are to be removed and replaced. Exist. piles are to be reused.

Staging Note: Westbound traffic will be diverted on to the newly constructed Eastbound structure during construction of Westbound structure.

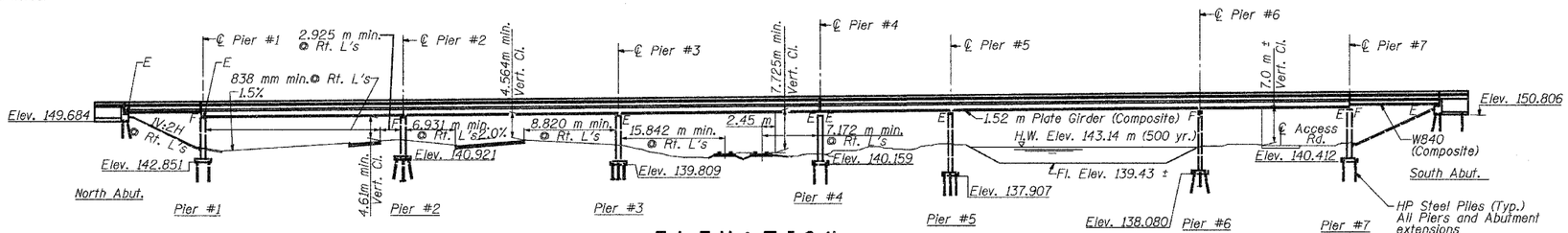
Note: All dimensions are in millimeters (mm) except as noted.

Salvage: Existing Beams and Existing Substructures.
Stem of Pier 4 to be reconstructed.

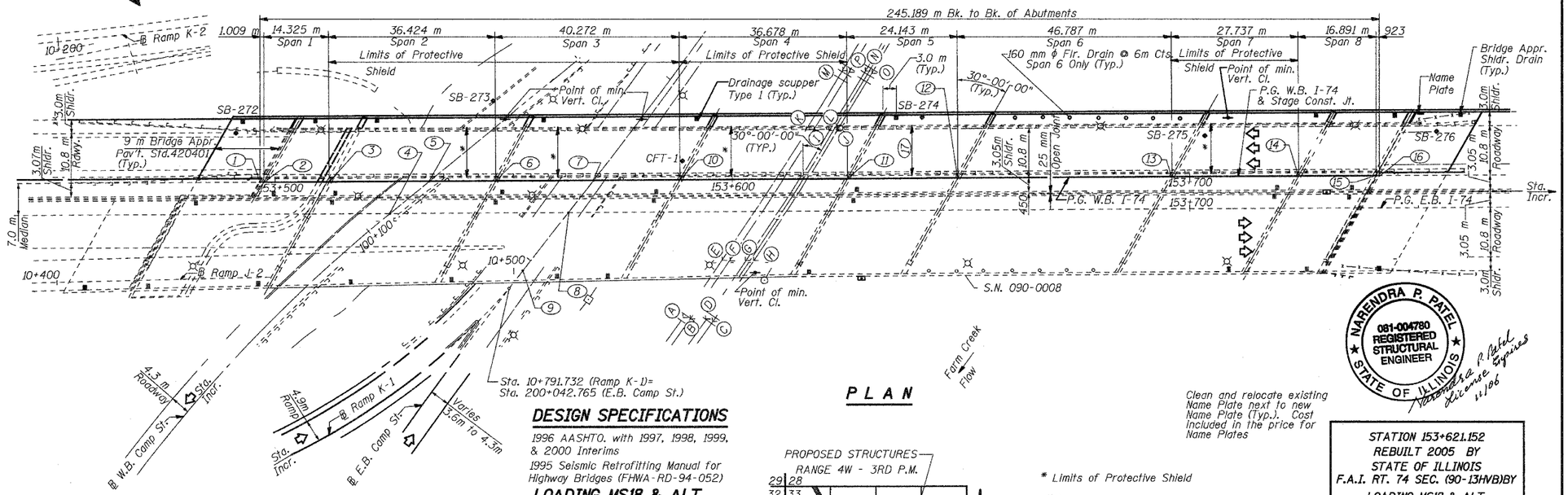
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	449
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
68 SHEETS



ELEVATION



Sta. 10+791.732 (Ramp K-1)=
Sta. 200+042.765 (E.B. Camp St.)

PLAN

DESIGN SPECIFICATIONS

1996 AASHTO. with 1997, 1998, 1999, & 2000 Interims
1995 Seismic Retrofitting Manual for Highway Bridges (FHWA-RD-94-052)

LOADING MS18 & ALT.

Allow 2.4 kN/m² for future wearing surface.

DESIGN STRESSES

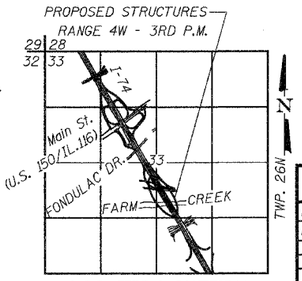
FIELD UNITS
f'c = 24 MPa
fy = 400 MPa (Reinf.)
fs = 140 MPa (Struct.)

EXISTING
fc = 10 MPa
fs = 140 MPa (Reinf.)
fs = 125 MPa (Struct.)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.043g
Site Coefficient (S) = 1.0

PROPOSED STRUCTURES
RANGE 4W - 3RD P.M.



LOCATION SKETCH

Clean and relocate existing Name Plate next to new Name Plate (Typ.). Cost included in the price for Name Plates

* Limits of Protective Shield

Notes:
1. See sht. 2 for legend (1) through (17).
2. See sht. 2 for slopewall details.
3 See sht. 2 for curve data.

STATION 153+621.152
REBUILT 2005 BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. (90-13HVB)BY
LOADING MS18 & ALT.
STR. NO. 090-0009

NAME PLATE

See Std. 515001

SURVEYED TOP OF RAIL ELEVATIONS

Location	Elevation	Location	Elevation	Location	Elevation	Location	Elevation
(A)	142.83	(E)	142.90	(I)	143.17	(M)	143.09
(B)	142.87	(F)	142.91	(J)	143.18	(N)	143.22
(C)	143.08	(G)	143.10	(K)	143.03	(O)	143.23
(D)	143.07	(H)	143.12	(L)	143.05	(P)	143.10

NARENDRA P. PATEL
081-004780
REGISTERED STRUCTURAL ENGINEER
STATE OF ILLINOIS
Narendra P. Patel, License Expires 11/96

GENERAL PLAN AND ELEVATION

Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 1 of 68
Revisions	Drawn EV		
	Checked NPP		
	Approved		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

68201

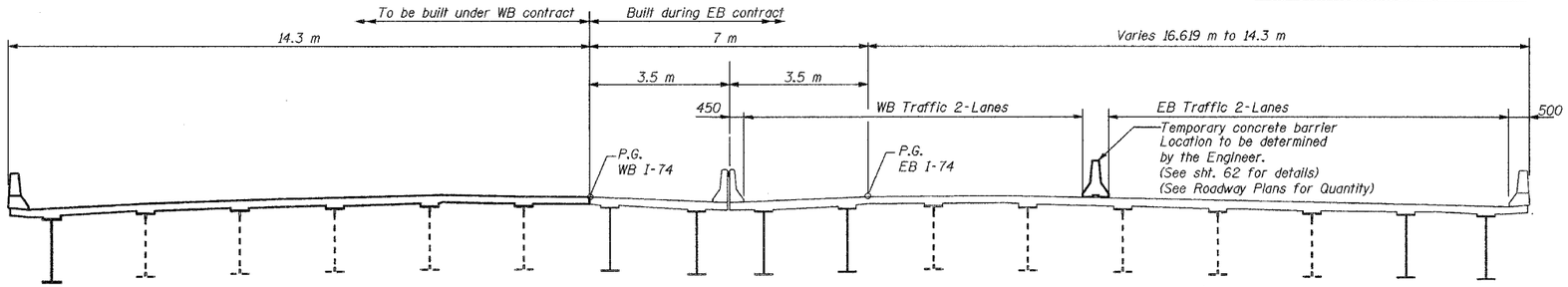
FOR LEGEND SEE PLAN VIEW ON SHT. 1

Legend	Location Station Elevation	Legend	Location Station Elevation
(1)	Bk. of N.Abut. Stal 153+496.485 Elev. 152.103	(10)	℄ Pier #3 Sta. 153+588.515 Elev. 152.838
(2)	℄ Brg. N. Abut. Sta. 153+497.494 Elev. 152.110	(11)	℄ Pier #4 Sta. 153+625.193 Elev. 153.131
(3)	℄ Pier #1 Sta. 153+511.819 Elev. 152.224	(12)	℄ Pier #5 Sta. 153+649.336 Elev. 153.299
(4)	Sta. 153+525.091 (E.B. I-74)= Sta. 100+106.136 (W.B. Camp St.)	(13)	℄ Pier #6 Sta. 153+696.123 Elev. 153.419
(5)	Sta. 153+533.740 (W.B. I-74)= Sta. 100+117.264 (W.B. Camp St.)	(14)	℄ Pier #7 Sta. 153+723.860 Elev. 153.363
(6)	℄ Pier #2 Sta. 153+548.243 Elev. 152.516	(15)	℄ Brg. S.Abut. Sta. 153+740.751 Elev. 153.283
(7)	Sta. 153+569.683 (W.B. I-74)= Sta. 200+072.296 (E.B. Camp St.)	(16)	Bk. of S.Abut. Sta. 153+741.674 Elev. 153.278
(8)	Sta. 153+564.119 (E.B. I-74)= Sta. 200+063.355 (E.B. Camp St.)	(17)	Exist. WB. Structure
(9)	Sta. 10+501.988 (Ramp J-2)= Sta. 200+047.266 (E.B. Camp St.)		

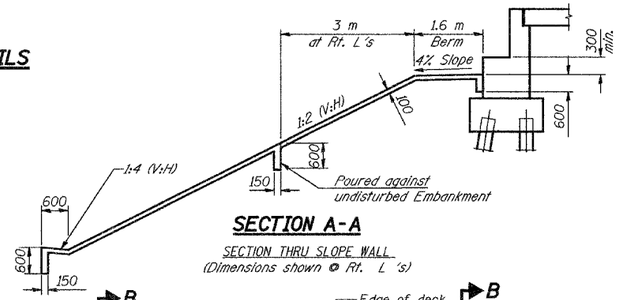
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	450
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

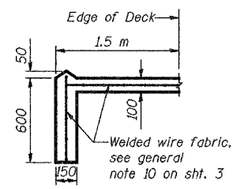
SHEET NO. 2
68 SHEETS



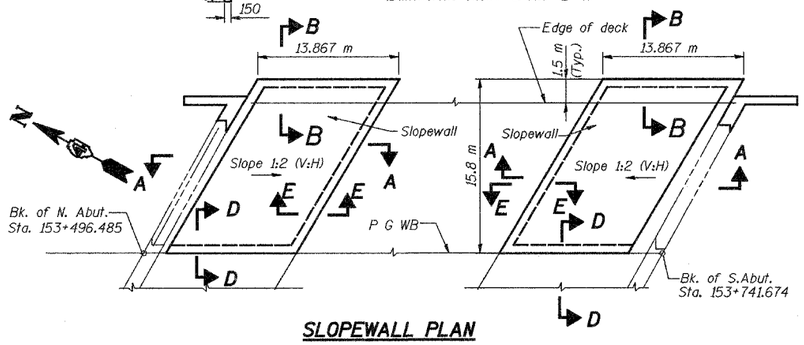
TRAFFIC STAGING DETAILS
(LOOKING SOUTH)



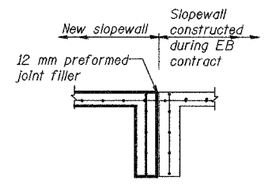
SECTION A-A
SECTION THRU SLOPE WALL
(Dimensions shown @ Rt. L 's)



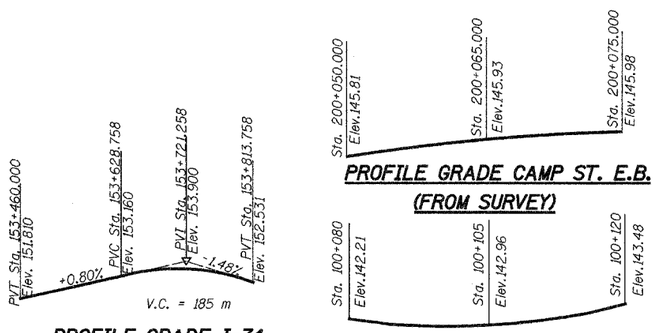
SECTION B-B



SLOPEWALL PLAN



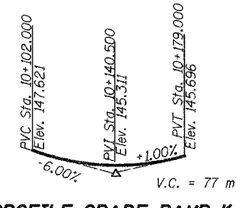
SECTION D-D
Details not shown are
similar to Section B-B



PROFILE GRADE I-74

PROFILE GRADE CAMP ST. E.B.
(FROM SURVEY)

PROFILE GRADE CAMP ST. W.B.
(FROM SURVEY)

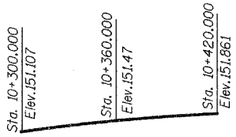


PROFILE GRADE RAMP K-1

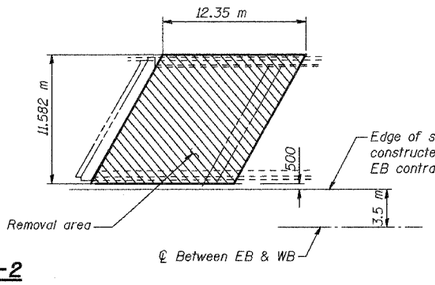
CURVE DATA

WB CAMP ST. (Existing)		EB CAMP ST. (Existing)		EB CAMP ST.(Cont.)		RAMP K-1	
△ =	25°39'38.17"	△ =	3°08'56.00"	△ =	3°08'56.00"	△ =	62°22'16.90"
R =	325.000 m	R =	1109.214 m	R =	1109.214 m	R =	155.000 m
T =	74.019 m	T =	30.488 m	T =	30.488 m	T =	93.818 m
L =	145.555 m	L =	60.961 m	L =	60.961 m	L =	168.731 m
E =	8.322 m	E =	0.419 m	E =	0.419 m	E =	29.182 m
PC =	99+958.149	PC =	200+000.000	PRC =	200+060.961	PC =	10+621.912
PI =	100+032.168	PI =	200+030.488	PI =	200+091.449	PI =	10+715.730
PT =	100+103.704	PRC =	200+060.961	PCC =	200+121.921	PT =	10+790.643
SE =	1.5 %	SE =	2.0 %	SE =	2.0 %	SE =	7.0%

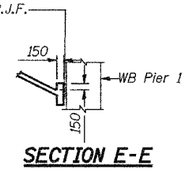
Transition In : 10+573 to 10+643
Transition out : N.A.



PROFILE GRADE RAMP J-2



EXISTING SLOPEWALL REMOVAL PLAN
(There is no exist. Slopewall at South Abutment)



SECTION E-E

CURVE DATA, SLOPEWALL AND STAGING DETAILS

Date			Sheet No.
Revisions	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	2 of 68
	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	451
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
68 SHEETS

GENERAL NOTES

1. Fasteners shall be high strength bolts . Bolts M22, open holes 24 mm ϕ, unless otherwise noted.
2. Calculated mass of Structural Steel = 166,780 kg (M 270M, GR 250)
3. Roadway expansion guards shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.
4. The roadway expansion plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.
5. Field welding of construction accessories will not be permitted to the beams or girders.
6. Anchor bolts shall be set before bolting diaphragms or cross frames over supports.
7. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams, the tension flanges, webs and all splice plate material except fill plates.
8. Reinforcement bars shall conform to the requirements of AASHTO M 31M or M 322M Grade 400.
9. 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.
10. Slopewall shall be reinforced with welded wire fabric, 152 x 152 - MW25.8 x MW25.8, with a mass of 2.91 kg/m^2.
11. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two 3 mm adjusting shims shall be provided for each bearing and placed as detailed.
12. The Contractor shall drive 1 HP360 X 108 test pile in permanent location at WB Pier 1 and 1 HP310X79 test pile each in a permanent location at North Abutment and South Abutment WB as directed by the Engineer before ordering the remainder of piles.
13. Bridge Seat Sealer shall be applied to the seat area of the North and South Abutments WB, Piers 1, 4 and 7 WB.
14. When the deck pour is stopped for the day at one or more of the Transverse Bonded Construction Joints in the deck Pouring Sequence as shown, the next pour shall not be made until both of the following requirements are met:
    1. At least 72 hours shall have elapsed from the end of the previous pour.
    2. The concrete strength shall have attained a minimum modulus of rupture of 4.5 MPa or a minimum compressive strength of 24 MPa.
15. All dimensions are in millimeters (mm) except as noted.
16. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
17. Cleaning and painting of the existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures". All existing beams, girders, bearings and other structural steel within 1.5 m (measured along the beams and girders) of either side of deck joints shall be cleaned per Near White Blast Cleaning - SSPC-SP10. The exterior surfaces and bottom flanges of the fascia beams and girders shall be cleaned per Power Tool Cleaning - Commercial Grade. All remaining existing structural steel shall be cleaned per Power Tool Cleaning - Modified SSPC-SP3.

    The designated areas cleaned per Near White Blast Cleaning - SSPC-SP10 and per Power Tool Cleaned - commercial Grade shall be painted according to the requirements of Paint System 1 - OZ/E/U. The designated areas cleaned per Power Tool Cleaning - Modified SSPC-SP3 shall be painted according to the requirements of Paint System 2 - PS/EM/U. The color of the final finish coat for all interior steel surfaces shall be old IDOT Gray, Munsell No. 10Y 7/1. The color of the final finish coat for the exterior and bottom flanges of the fascia beams and girders shall also be old IDOT gray, Munsell No. 10Y 7/1.

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18. Prior to pouring the new concrete for the deck, all loose rust, loose mill scale and all other loose potentially detrimental foreign material shall be removed from the surfaces of the portions of flanges of beams or girders in contact with concrete. The removal shall be accomplished with appropriate power hand tools. Cost shall be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.
19. The Inorganic zinc rich primer / Epoxy/ Urethane Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all steel surfaces shall be old IDOT gray, No. 10Y 7/1.
20. All existing construction accessories welded to the top flange over piers 2, 3, 5 and 6 between the quarter points of the existing girders shall be removed. The remaining welds shall be ground smooth and inspected for cracks using magnetic particle testing. Any cracks that cannot be removed by grinding approximately 6 mm deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of this work will be paid for according to Article 109.04.
21. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06 of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
22. All soil data collected and processed for the Soil Report made in conjunction with the design of this improvement is on file at the District Office where it is available for the inspection of Contractors or prospective bidders.
23. All elevations shown on the plans are established from U.S.G.S. mean sea level datum.
24. Commitments are not to be altered without written approval of all parties to which the commitment was made.
25. The Contractor shall submit to the Engineer a satisfactory progress schedule and critical path schedule which show the proposed sequence of work at the time of the pre-construction conference.
26. All construction joints shall be bonded.

INDEX OF DRAWINGS

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER STRUCT	SUB STRUCT.	TOTAL
REMOVAL OF EXISTING CONCRETE DECK	L SUM	1	-	1
CONCRETE REMOVAL	CU M	-	122.2	122.2
STRUCTURE EXCAVATION	CU M	-	568	568
NEOPRENE EXPANSION JOINT 50MM	METER	80	-	80
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12	-	12
ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	24	-	24
FLOATING BEARINGS, GUIDED EXPANSION, 1500 KN	EACH	12	-	12
JACK AND REMOVE EXISTING BEARINGS	EACH	30	-	30
CONCRETE STRUCTURES	CU M	-	510	510
CONCRETE SUPERSTRUCTURE	CU M	861.5	-	861.5
BRIDGE DECK GROOVING	SQ M	3,799	-	3,799
PROTECTIVE COAT	SQ M	4,787	-	4,787
FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	.30	-	0.30
STRUCTURAL STEEL REMOVAL	KG	1,540	-	1,540
REMOVAL OF EXISTING BEARINGS	EACH	10	-	10
STUD SHEAR CONNECTORS	EACH	12,334	-	12,334
REINFORCEMENT BARS, EPOXY COATED	KG	130,410	28,190	158,600
FURNISHING STEEL PILES HP360X108	METER	-	524.6	524.6
FURNISHING STEEL PILES HP310X79	METER	-	132	132
DRIVING STEEL PILES	METER	-	656.6	656.6
TEST PILE STEEL HP360X108	EACH	-	1	1
TEST PILE STEEL HP310X79	EACH	-	2	2
SLOPE WALL REMOVAL	SQ M	-	306	306
SLOPE WALL 150MM	SQ M	-	107.4	107.4
SLOPE WALL 100MM	SQ M	-	482	482
BRIDGE SEAT SEALER	SQ M	-	73.1	73.1
EPOXY CRACK SEALING	METER	-	34.2	34.2
FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 125MM)	SQ M	-	3.7	3.7
PROTECTIVE SHIELD	SQ M	1,550	-	1,550
JACKING AND SHORING EXISTING GIRDERS	L SUM	1	-	1
BAR SPLICERS	EACH	-	98	98
CLEANING AND PAINTING STEEL BRIDGE	L SUM	1	-	1
DRAINAGE SYSTEM	L SUM	1	-	0.14
FLOOR DRAINS	EACH	7	-	7
DRAINAGE SCUPPERS, TYPE 1	EACH	7	-	7
NAME PLATES	EACH	1	-	1
FABRIC REINFORCED ELASTOMERIC TROUGH	METER	19.4	-	19.4
BRACED EXCAVATION	CU M	-	278	278
CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1	-	1
PERMANENT SURVEY MARKERS, TYPE I	EACH	-	1	1

GENERAL NOTES, INDEX AND QUANTITIES

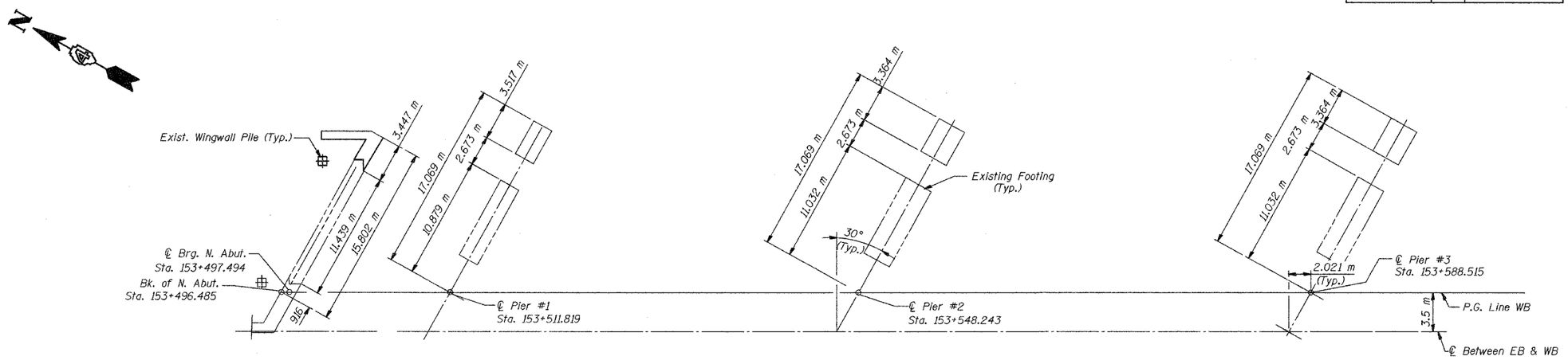
Date / Revisions			
	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 3 of 68
	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

I:/PROJECTS/17049.071/Pre_Final_Plans/174_eb/PreFinal_Issue/gnotesindx.dgn

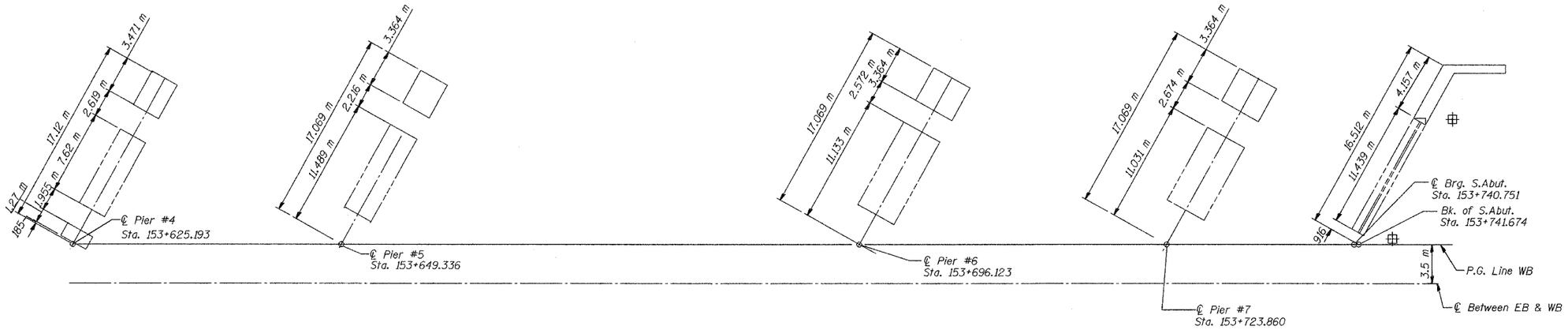
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	452
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
68 SHEETS



PLAN SPANS 1, 2, 3, & 4



PLAN SPANS 5, 6, 7, & 8

FOOTING LAYOUT

Date			
Revisions	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 4 of 68
	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

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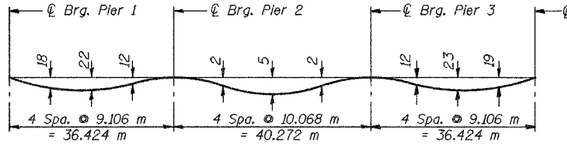
68201

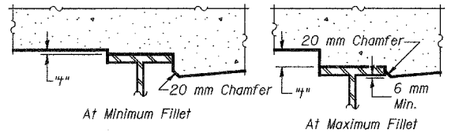
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	453
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
68 SHEETS

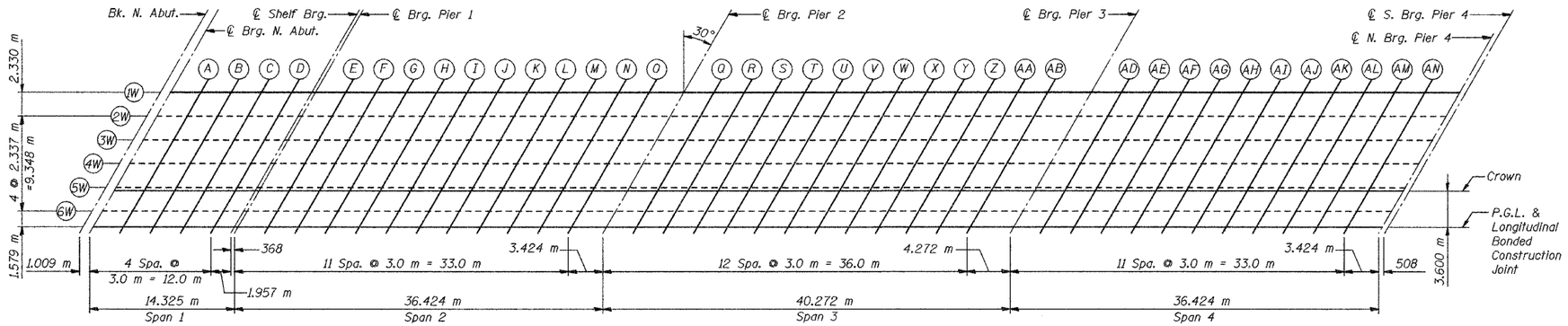


SPANS 2, 3 & 4

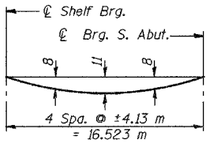


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet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

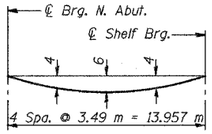
FILLET HEIGHTS



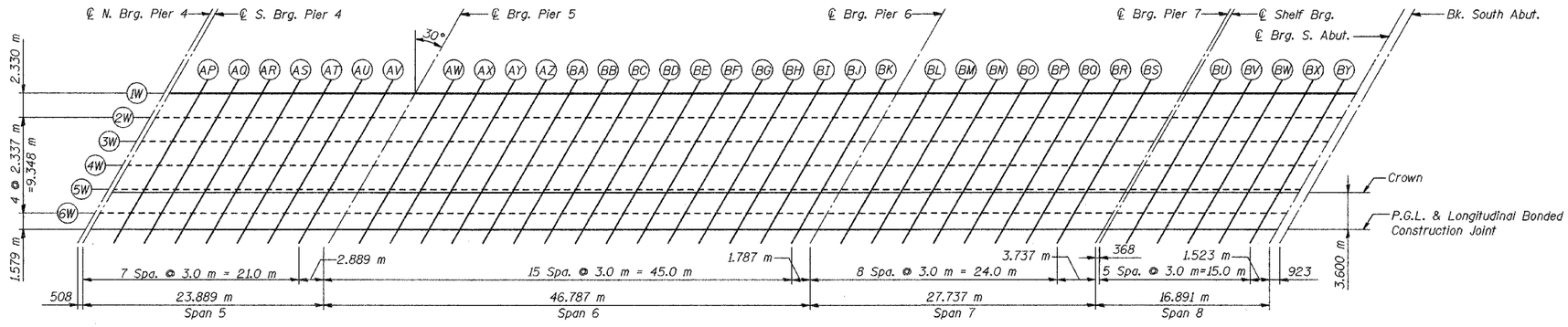
PLAN-SPANS 1, 2, 3 & 4



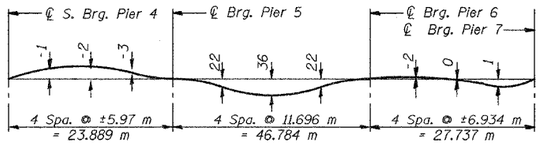
SPAN 8



SPAN 1



PLAN-SPANS 5, 6, 7 & 8



SPANS 5, 6 & 7

DEAD LOAD DEFLECTION DIAGRAMS

(Includes weight of concrete only)

Notes:

1. 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 on sheets 6 thru 9.
2. All dimensions are in millimeters (mm) except as noted.

Notes:

1. The Shelf bearings are located on the cantilevered extension of girders beyond bearings at Pier 1 and Pier 7.

PLAN-TOP OF SLAB ELEVATIONS

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 5 of 68
Revisions	Drawn AEU		
	Checked NPP		
	Approved NPP		

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	454
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
68 SHEETS

GIRDER 1W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	153504.139	-13.257	152.042	152.042
CL BRG. N. ABUT	153505.148	-13.257	152.050	152.050
A	153508.148	-13.257	152.074	152.078
B	153511.148	-13.257	152.098	152.103
C	153514.148	-13.257	152.122	152.127
D	153517.148	-13.257	152.146	152.148
CL SHELF BRG.	153519.105	-13.257	152.162	152.162
CL BRG. PIER 1	153519.473	-13.257	152.165	152.165
E	153522.473	-13.257	152.189	152.195
F	153525.473	-13.257	152.213	152.225
G	153528.473	-13.257	152.237	152.254
H	153531.473	-13.257	152.261	152.282
I	153534.473	-13.257	152.285	152.308
J	153537.473	-13.257	152.309	152.331
K	153540.473	-13.257	152.333	152.353
L	153543.473	-13.257	152.357	152.373
M	153546.473	-13.257	152.381	152.392
N	153549.473	-13.257	152.405	152.411
O	153552.473	-13.257	152.429	152.431
CL BRG. PIER 2	153555.897	-13.257	152.456	152.456
Q	153558.897	-13.257	152.480	152.479
R	153561.897	-13.257	152.504	152.504
S	153564.897	-13.257	152.528	152.529
T	153567.897	-13.257	152.552	152.554
U	153570.897	-13.257	152.576	152.580
V	153573.897	-13.257	152.600	152.605
W	153576.897	-13.257	152.624	152.629
X	153579.897	-13.257	152.648	152.652
Y	153582.897	-13.257	152.672	152.675
Z	153585.897	-13.257	152.696	152.698
AA	153588.897	-13.257	152.720	152.720
AB	153591.897	-13.257	152.744	152.743
CL BRG. PIER 3	153596.169	-13.257	152.778	152.778
AD	153599.169	-13.257	152.802	152.805
AE	153602.169	-13.257	152.826	152.833
AF	153605.169	-13.257	152.850	152.862
AG	153608.169	-13.257	152.874	152.890
AH	153611.169	-13.257	152.898	152.918
AI	153614.169	-13.257	152.922	152.944
AJ	153617.169	-13.257	152.946	152.969
AK	153620.169	-13.257	152.970	152.992
AL	153623.169	-13.257	152.994	153.013
AM	153626.169	-13.257	153.018	153.032
AN	153629.169	-13.257	153.042	153.050
CL N. BRG. PIER 4	153632.593	-13.257	153.069	153.069

GIRDER 1W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL S. BRG. PIER 4	153633.101	-13.257	153.073	153.073
AP	153636.101	-13.257	153.094	153.094
AQ	153639.101	-13.257	153.115	153.115
AR	153642.101	-13.257	153.135	153.133
AS	153645.101	-13.257	153.153	153.151
AT	153648.101	-13.257	153.171	153.168
AU	153651.101	-13.257	153.187	153.184
AV	153654.101	-13.257	153.202	153.200
CL BRG. PIER 5	153656.990	-13.257	153.216	153.216
AW	153659.990	-13.257	153.229	153.232
AX	153662.990	-13.257	153.241	153.250
AY	153665.990	-13.257	153.251	153.267
AZ	153668.990	-13.257	153.261	153.284
BA	153671.990	-13.257	153.270	153.298
BB	153674.990	-13.257	153.277	153.310
BC	153677.990	-13.257	153.283	153.319
BD	153680.990	-13.257	153.289	153.325
BE	153683.990	-13.257	153.293	153.327
BF	153686.990	-13.257	153.296	153.327
BG	153689.990	-13.257	153.298	153.324
BH	153692.990	-13.257	153.299	153.318
BI	153695.990	-13.257	153.298	153.311
BJ	153698.990	-13.257	153.297	153.303
BK	153701.990	-13.257	153.294	153.296
CL BRG. PIER 6	153703.777	-13.257	153.292	153.292
BL	153706.777	-13.257	153.288	153.286
BM	153709.777	-13.257	153.283	153.280
BN	153712.777	-13.257	153.276	153.274
BO	153715.777	-13.257	153.269	153.268
BP	153718.777	-13.257	153.260	153.260
BQ	153721.777	-13.257	153.250	153.251
BR	153724.777	-13.257	153.239	153.240
BS	153727.777	-13.257	153.227	153.228
CL BRG. PIER 7	153731.514	-13.257	153.210	153.210
CL SHELF BRG.	153731.882	-13.257	153.209	153.209
BU	153734.882	-13.257	153.194	153.200
BV	153737.882	-13.257	153.178	153.188
BW	153740.882	-13.257	153.161	153.172
BX	153743.882	-13.257	153.143	153.151
BY	153746.882	-13.257	153.124	153.127
CL BRG. S. ABUT	153748.405	-13.257	153.114	153.114
BK. S. ABUT.	153749.328	-13.257	153.108	153.108

GIRDER 2W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	153502.794	-10.927	152.078	152.078
CL BRG. N. ABUT	153503.803	-10.927	152.086	152.086
A	153506.803	-10.927	152.110	152.113
B	153509.803	-10.927	152.134	152.139
C	153512.803	-10.927	152.158	152.163
D	153515.803	-10.927	152.182	152.184
CL SHELF BRG.	153517.760	-10.927	152.198	152.198
CL BRG. PIER 1	153518.128	-10.927	152.201	152.201
E	153521.128	-10.927	152.225	152.231
F	153524.128	-10.927	152.249	152.261
G	153527.128	-10.927	152.273	152.290
H	153530.128	-10.927	152.297	152.318
I	153533.128	-10.927	152.321	152.343
J	153536.128	-10.927	152.345	152.367
K	153539.128	-10.927	152.369	152.389
L	153542.128	-10.927	152.393	152.409
M	153545.128	-10.927	152.417	152.428
N	153548.128	-10.927	152.441	152.447
O	153551.128	-10.927	152.465	152.467
CL BRG. PIER 2	153554.552	-10.927	152.492	152.492
Q	153557.552	-10.927	152.516	152.515
R	153560.552	-10.927	152.540	152.539
S	153563.552	-10.927	152.564	152.565
T	153566.552	-10.927	152.588	152.590
U	153569.552	-10.927	152.612	152.616
V	153572.552	-10.927	152.636	152.640
W	153575.552	-10.927	152.660	152.665
X	153578.552	-10.927	152.684	152.688
Y	153581.552	-10.927	152.708	152.711
Z	153584.552	-10.927	152.732	152.733
AA	153587.552	-10.927	152.756	152.756
AB	153590.552	-10.927	152.780	152.779
CL BRG. PIER 3	153594.824	-10.927	152.814	152.814
AD	153597.824	-10.927	152.838	152.841
AE	153600.824	-10.927	152.862	152.869
AF	153603.824	-10.927	152.886	152.898
AG	153606.824	-10.927	152.910	152.926
AH	153609.824	-10.927	152.934	152.954
AI	153612.824	-10.927	152.958	152.980
AJ	153615.824	-10.927	152.982	153.005
AK	153618.824	-10.927	153.006	153.028
AL	153621.824	-10.927	153.030	153.049
AM	153624.824	-10.927	153.054	153.068
AN	153627.824	-10.927	153.078	153.086
CL N. BRG. PIER 4	153631.248	-10.927	153.105	153.105

GIRDER 2W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL S. BRG. PIER 4	153631.756	-10.927	153.109	153.109
AP	153634.756	-10.927	153.131	153.131
AQ	153637.756	-10.927	153.153	153.152
AR	153640.756	-10.927	153.173	153.171
AS	153643.756	-10.927	153.192	153.189
AT	153646.756	-10.927	153.210	153.207
AU	153649.756	-10.927	153.226	153.224
AV	153652.756	-10.927	153.242	153.240
CL BRG. PIER 5	153655.645	-10.927	153.256	153.256
AW	153658.645	-10.927	153.270	153.273
AX	153661.645	-10.927	153.282	153.291
AY	153664.645	-10.927	153.293	153.309
AZ	153667.645	-10.927	153.303	153.326
BA	153670.645	-10.927	153.313	153.341
BB	153673.645	-10.927	153.320	153.353
BC	153676.645	-10.927	153.327	153.363
BD	153679.645	-10.927	153.333	153.369
BE	153682.645	-10.927	153.338	153.372
BF	153685.645	-10.927	153.341	153.372
BG	153688.645	-10.927	153.344	153.369
BH	153691.645	-10.927	153.345	153.364
BI	153694.645	-10.927	153.345	153.358
BJ	153697.645	-10.927	153.344	153.351
BK	153700.645	-10.927	153.342	153.344
CL BRG. PIER 6	153702.432	-10.927	153.340	153.340
BL	153705.432	-10.927	153.337	153.335
BM	153708.432	-10.927	153.332	153.329
BN	153711.432	-10.927	153.326	153.324
BO	153714.432	-10.927	153.319	153.318
BP	153717.432	-10.927	153.310	153.311
BQ	153720.432	-10.927	153.301	153.302
BR	153723.432	-10.927	153.291	153.292
BS	153726.432	-10.927	153.279	153.280
CL BRG. PIER 7	153730.169	-10.927	153.263	153.263
CL SHELF BRG	153730.537	-10.927	153.261	153.261
BU	153733.537	-10.927	153.247	153.253
BV	153736.537	-10.927	153.232	153.242
BW	153739.537	-10.927	153.216	153.226
BX	153742.537	-10.927	153.198	153.206
BY	153745.537	-10.927	153.179	153.182
CL BRG. S. A	153747.060	-10.927	153.170	153.170
BK. S. ABUT.	153747.983	-10.927	153.163	153.163

Notes:

Lines P, AC, AO & BT Not Used

The shelf bearings are located on the cantilevered extension of girders beyond bearings at Pier 1 and Pier 7.

All elevations & offsets are in meters.

TOP OF SLAB ELEVATIONS

Date / Revisions		
	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn AEU	
	Checked NPP	
	Approved NPP	

Sheet No. 6 of 68

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL.

BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	455
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
68 SHEETS

GIRDER 3W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	153501.444	-8.590	152.114	152.114
CL BRG. N. ABUT	153502.453	-8.590	152.122	152.122
A	153505.453	-8.590	152.146	152.149
B	153508.453	-8.590	152.170	152.175
C	153511.453	-8.590	152.194	152.199
D	153514.453	-8.590	152.218	152.220
CL SHELF BRG.	153516.410	-8.590	152.233	152.233
CL BRG. PIER 1	153516.778	-8.590	152.236	152.236
E	153519.778	-8.590	152.260	152.267
F	153522.778	-8.590	152.284	152.297
G	153525.778	-8.590	152.308	152.326
H	153528.778	-8.590	152.332	152.354
I	153531.778	-8.590	152.356	152.379
J	153534.778	-8.590	152.380	152.403
K	153537.778	-8.590	152.404	152.424
L	153540.778	-8.590	152.428	152.445
M	153543.778	-8.590	152.452	152.464
N	153546.778	-8.590	152.476	152.483
O	153549.778	-8.590	152.500	152.502
CL BRG. PIER 2	153553.202	-8.590	152.528	152.528
Q	153556.202	-8.590	152.552	152.551
R	153559.202	-8.590	152.576	152.575
S	153562.202	-8.590	152.600	152.601
T	153565.202	-8.590	152.624	152.626
U	153568.202	-8.590	152.648	152.651
V	153571.202	-8.590	152.672	152.676
W	153574.202	-8.590	152.696	152.700
X	153577.202	-8.590	152.720	152.724
Y	153580.202	-8.590	152.744	152.747
Z	153583.202	-8.590	152.768	152.769
AA	153586.202	-8.590	152.792	152.792
AB	153589.202	-8.590	152.816	152.815
CL BRG. PIER 3	153593.474	-8.590	152.850	152.850
AD	153596.474	-8.590	152.874	152.877
AE	153599.474	-8.590	152.898	152.905
AF	153602.474	-8.590	152.922	152.933
AG	153605.474	-8.590	152.946	152.962
AH	153608.474	-8.590	152.970	152.990
AI	153611.474	-8.590	152.994	153.016
AJ	153614.474	-8.590	153.018	153.041
AK	153617.474	-8.590	153.042	153.064
AL	153620.474	-8.590	153.066	153.085
AM	153623.474	-8.590	153.090	153.104
AN	153626.474	-8.590	153.114	153.122
CL N. BRG. PIER 4	153629.898	-8.590	153.141	153.141

GIRDER 3W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL S. BRG. PIER 4	153630.406	-8.590	153.145	153.145
AP	153633.406	-8.590	153.168	153.168
AQ	153636.406	-8.590	153.190	153.189
AR	153639.406	-8.590	153.210	153.209
AS	153642.406	-8.590	153.230	153.228
AT	153645.406	-8.590	153.248	153.246
AU	153648.406	-8.590	153.266	153.263
AV	153651.406	-8.590	153.282	153.280
CL BRG. PIER 5	153654.295	-8.590	153.296	153.296
AW	153657.295	-8.590	153.310	153.314
AX	153660.295	-8.590	153.323	153.333
AY	153663.295	-8.590	153.335	153.351
AZ	153666.295	-8.590	153.346	153.368
BA	153669.295	-8.590	153.355	153.384
BB	153672.295	-8.590	153.364	153.397
BC	153675.295	-8.590	153.371	153.406
BD	153678.295	-8.590	153.377	153.413
BE	153681.295	-8.590	153.382	153.417
BF	153684.295	-8.590	153.386	153.417
BG	153687.295	-8.590	153.389	153.415
BH	153690.295	-8.590	153.391	153.411
BI	153693.295	-8.590	153.392	153.405
BJ	153696.295	-8.590	153.391	153.398
BK	153699.295	-8.590	153.390	153.392
CL BRG. PIER 6	153701.082	-8.590	153.388	153.388
BL	153704.082	-8.590	153.385	153.383
BM	153707.082	-8.590	153.381	153.378
BN	153710.082	-8.590	153.375	153.374
BO	153713.082	-8.590	153.369	153.368
BP	153716.082	-8.590	153.361	153.361
BQ	153719.082	-8.590	153.352	153.353
BR	153722.082	-8.590	153.342	153.343
BS	153725.082	-8.590	153.331	153.332
CL BRG. PIER 7	153728.819	-8.590	153.316	153.316
CL SHELF BRG.	153729.187	-8.590	153.314	153.314
BU	153732.187	-8.590	153.300	153.306
BV	153735.187	-8.590	153.286	153.296
BW	153738.187	-8.590	153.270	153.281
BX	153741.187	-8.590	153.253	153.261
BY	153744.187	-8.590	153.235	153.238
CL BRG. S. ABUT.	153745.710	-8.590	153.225	153.225
BK. S. ABUT.	153746.633	-8.590	153.219	153.219

GIRDER 4W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	153500.095	-6.253	152.145	152.145
CL BRG. N. ABUT	153501.104	-6.253	152.153	152.153
A	153504.104	-6.253	152.177	152.180
B	153507.104	-6.253	152.201	152.206
C	153510.104	-6.253	152.225	152.230
D	153513.104	-6.253	152.249	152.251
CL SHELF BRG.	153515.061	-6.253	152.265	152.265
CL BRG. PIER 1	153515.429	-6.253	152.268	152.268
E	153518.429	-6.253	152.292	152.298
F	153521.429	-6.253	152.316	152.328
G	153524.429	-6.253	152.340	152.357
H	153527.429	-6.253	152.364	152.385
I	153530.429	-6.253	152.388	152.410
J	153533.429	-6.253	152.412	152.434
K	153536.429	-6.253	152.436	152.456
L	153539.429	-6.253	152.460	152.476
M	153542.429	-6.253	152.484	152.495
N	153545.429	-6.253	152.508	152.514
O	153548.429	-6.253	152.532	152.534
CL BRG. PIER 2	153551.853	-6.253	152.559	152.559
Q	153554.853	-6.253	152.583	152.582
R	153557.853	-6.253	152.607	152.607
S	153560.853	-6.253	152.631	152.632
T	153563.853	-6.253	152.655	152.657
U	153566.853	-6.253	152.679	152.683
V	153569.853	-6.253	152.703	152.707
W	153572.853	-6.253	152.727	152.732
X	153575.853	-6.253	152.751	152.755
Y	153578.853	-6.253	152.775	152.778
Z	153581.853	-6.253	152.799	152.800
AA	153584.853	-6.253	152.823	152.823
AB	153587.853	-6.253	152.847	152.846
CL BRG. PIER 3	153592.125	-6.253	152.881	152.881
AD	153595.125	-6.253	152.905	152.908
AE	153598.125	-6.253	152.929	152.936
AF	153601.125	-6.253	152.953	152.965
AG	153604.125	-6.253	152.977	152.993
AH	153607.125	-6.253	153.001	153.021
AI	153610.125	-6.253	153.025	153.047
AJ	153613.125	-6.253	153.049	153.072
AK	153616.125	-6.253	153.073	153.095
AL	153619.125	-6.253	153.097	153.116
AM	153622.125	-6.253	153.121	153.135
AN	153625.125	-6.253	153.145	153.153
CL N. BRG. PIER 4	153628.549	-6.253	153.173	153.173

GIRDER 4W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL S. BRG. PIER 4	153629.057	-6.253	153.177	153.177
AP	153632.057	-6.253	153.200	153.200
AQ	153635.057	-6.253	153.222	153.222
AR	153638.057	-6.253	153.243	153.242
AS	153641.057	-6.253	153.263	153.261
AT	153644.057	-6.253	153.282	153.279
AU	153647.057	-6.253	153.300	153.297
AV	153650.057	-6.253	153.317	153.315
CL BRG. PIER 5	153652.946	-6.253	153.332	153.332
AW	153655.946	-6.253	153.346	153.350
AX	153658.946	-6.253	153.360	153.369
AY	153661.946	-6.253	153.372	153.388
AZ	153664.946	-6.253	153.383	153.406
BA	153667.946	-6.253	153.393	153.422
BB	153670.946	-6.253	153.402	153.435
BC	153673.946	-6.253	153.410	153.445
BD	153676.946	-6.253	153.417	153.453
BE	153679.946	-6.253	153.422	153.457
BF	153682.946	-6.253	153.427	153.458
BG	153685.946	-6.253	153.430	153.456
BH	153688.946	-6.253	153.432	153.452
BI	153691.946	-6.253	153.434	153.446
BJ	153694.946	-6.253	153.434	153.440
BK	153697.946	-6.253	153.433	153.434
CL BRG. PIER 6	153699.733	-6.253	153.432	153.432
BL	153702.733	-6.253	153.429	153.427
BM	153705.733	-6.253	153.425	153.423
BN	153708.733	-6.253	153.420	153.418
BO	153711.733	-6.253	153.414	153.413
BP	153714.733	-6.253	153.407	153.407
BQ	153717.733	-6.253	153.398	153.399
BR	153720.733	-6.253	153.389	153.390
BS	153723.733	-6.253	153.378	153.379
CL BRG. PIER 7	153727.470	-6.253	153.363	153.363
CL SHELF BRG.	153727.838	-6.253	153.362	153.362
BU	153730.838	-6.253	153.349	153.354
BV	153733.838	-6.253	153.334	153.344
BW	153736.838	-6.253	153.319	153.330
BX	153739.838	-6.253	153.303	153.311
BY	153742.838	-6.253	153.285	153.288
CL BRG. S. ABUT	153744.361	-6.253	153.276	153.276
BK. S. ABUT.	153745.284	-6.253	153.270	153.270

Notes:

Lines P, AC, AO & BT Not Used

The shelf bearings are located on the cantilevered extension of girders beyond bearings at Pier 1 and Pier 7.

All elevations & offsets are in meters.

TOP OF SLAB ELEVATIONS

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 7 of 68
Revisions	Drawn AEU		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	456
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8
68 SHEETS

GIRDER 5W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	153498.746	-3.916	152.169	152.169
CL BRG. N. ABUT	153499.755	-3.916	152.177	152.177
A	153502.755	-3.916	152.201	152.205
B	153505.755	-3.916	152.225	152.231
C	153508.755	-3.916	152.249	152.254
D	153511.755	-3.916	152.273	152.276
CL SHELF BRG.	153513.712	-3.916	152.289	152.289
CL BRG. PIER 1	153514.080	-3.916	152.292	152.292
E	153517.080	-3.916	152.316	152.322
F	153520.080	-3.916	152.340	152.352
G	153523.080	-3.916	152.364	152.382
H	153526.080	-3.916	152.388	152.409
I	153529.080	-3.916	152.412	152.435
J	153532.080	-3.916	152.436	152.458
K	153535.080	-3.916	152.460	152.480
L	153538.080	-3.916	152.484	152.500
M	153541.080	-3.916	152.508	152.519
N	153544.080	-3.916	152.532	152.538
O	153547.080	-3.916	152.556	152.558
CL BRG. PIER 2	153550.504	-3.916	152.583	152.583
Q	153553.504	-3.916	152.607	152.606
R	153556.504	-3.916	152.631	152.631
S	153559.504	-3.916	152.655	152.656
T	153562.504	-3.916	152.679	152.682
U	153565.504	-3.916	152.703	152.707
V	153568.504	-3.916	152.727	152.732
W	153571.504	-3.916	152.751	152.756
X	153574.504	-3.916	152.775	152.779
Y	153577.504	-3.916	152.799	152.802
Z	153580.504	-3.916	152.823	152.825
AA	153583.504	-3.916	152.847	152.847
AB	153586.504	-3.916	152.871	152.870
CL BRG. PIER 3	153590.776	-3.916	152.905	152.905
AD	153593.776	-3.916	152.929	152.932
AE	153596.776	-3.916	152.953	152.960
AF	153599.776	-3.916	152.977	152.989
AG	153602.776	-3.916	153.001	153.017
AH	153605.776	-3.916	153.025	153.045
AI	153608.776	-3.916	153.049	153.072
AJ	153611.776	-3.916	153.073	153.096
AK	153614.776	-3.916	153.097	153.119
AL	153617.776	-3.916	153.121	153.140
AM	153620.776	-3.916	153.145	153.160
AN	153623.776	-3.916	153.169	153.177
CL N. BRG. PIER 4	153627.200	-3.916	153.197	153.197

GIRDER 5W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL S. BRG. PIER 4	153627.708	-3.916	153.201	153.201
AP	153630.708	-3.916	153.225	153.225
AQ	153633.708	-3.916	153.247	153.247
AR	153636.708	-3.916	153.269	153.268
AS	153639.708	-3.916	153.289	153.287
AT	153642.708	-3.916	153.309	153.306
AU	153645.708	-3.916	153.327	153.324
AV	153648.708	-3.916	153.344	153.343
CL BRG. PIER 5	153651.597	-3.916	153.360	153.360
AW	153654.597	-3.916	153.375	153.379
AX	153657.597	-3.916	153.389	153.398
AY	153660.597	-3.916	153.402	153.418
AZ	153663.597	-3.916	153.413	153.436
BA	153666.597	-3.916	153.424	153.452
BB	153669.597	-3.916	153.433	153.466
BC	153672.597	-3.916	153.442	153.477
BD	153675.597	-3.916	153.449	153.485
BE	153678.597	-3.916	153.455	153.489
BF	153681.597	-3.916	153.460	153.491
BG	153684.597	-3.916	153.464	153.490
BH	153687.597	-3.916	153.467	153.486
BI	153690.597	-3.916	153.468	153.481
BJ	153693.597	-3.916	153.469	153.475
BK	153696.597	-3.916	153.468	153.470
CL BRG. PIER 6	153698.384	-3.916	153.468	153.468
BL	153701.384	-3.916	153.465	153.463
BM	153704.384	-3.916	153.462	153.459
BN	153707.384	-3.916	153.457	153.456
BO	153710.384	-3.916	153.452	153.451
BP	153713.384	-3.916	153.445	153.445
BQ	153716.384	-3.916	153.437	153.438
BR	153719.384	-3.916	153.428	153.429
BS	153722.384	-3.916	153.418	153.419
CL BRG. PIER 7	153726.121	-3.916	153.404	153.404
CL SHELF BRG.	153726.489	-3.916	153.403	153.403
BU	153729.489	-3.916	153.390	153.396
BV	153732.489	-3.916	153.376	153.386
BW	153735.489	-3.916	153.361	153.372
BX	153738.489	-3.916	153.345	153.353
BY	153741.489	-3.916	153.328	153.331
CL BRG. S. ABUT	153743.012	-3.916	153.319	153.319
BK. S. ABUT.	153743.935	-3.916	153.313	153.313

CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	153498.563	-3.600	152.172	152.172
CL BRG. N. ABUT	153499.572	-3.600	152.181	152.181
A	153502.572	-3.600	152.205	152.208
B	153505.572	-3.600	152.229	152.234
C	153508.572	-3.600	152.253	152.257
D	153511.572	-3.600	152.277	152.279
CL SHELF BRG.	153513.529	-3.600	152.292	152.292
CL BRG. PIER 1	153513.897	-3.600	152.295	152.295
E	153516.897	-3.600	152.319	152.326
F	153519.897	-3.600	152.343	152.356
G	153522.897	-3.600	152.367	152.385
H	153525.897	-3.600	152.391	152.412
I	153528.897	-3.600	152.415	152.438
J	153531.897	-3.600	152.439	152.462
K	153534.897	-3.600	152.463	152.483
L	153537.897	-3.600	152.487	152.503
M	153540.897	-3.600	152.511	152.522
N	153543.897	-3.600	152.535	152.541
O	153546.897	-3.600	152.559	152.561
CL BRG. PIER 2	153550.321	-3.600	152.587	152.587
Q	153553.321	-3.600	152.611	152.610
R	153556.321	-3.600	152.635	152.634
S	153559.321	-3.600	152.659	152.659
T	153562.321	-3.600	152.683	152.685
U	153565.321	-3.600	152.707	152.710
V	153568.321	-3.600	152.731	152.735
W	153571.321	-3.600	152.755	152.759
X	153574.321	-3.600	152.779	152.783
Y	153577.321	-3.600	152.803	152.805
Z	153580.321	-3.600	152.827	152.828
AA	153583.321	-3.600	152.851	152.851
AB	153586.321	-3.600	152.875	152.874
CL BRG. PIER 3	153590.593	-3.600	152.909	152.909
AD	153593.593	-3.600	152.933	152.935
AE	153596.593	-3.600	152.957	152.963
AF	153599.593	-3.600	152.981	152.992
AG	153602.593	-3.600	153.005	153.021
AH	153605.593	-3.600	153.029	153.048
AI	153608.593	-3.600	153.053	153.075
AJ	153611.593	-3.600	153.077	153.100
AK	153614.593	-3.600	153.101	153.122
AL	153617.593	-3.600	153.125	153.144
AM	153620.593	-3.600	153.149	153.163
AN	153623.593	-3.600	153.173	153.181
CL N. BRG. PIER 4	153627.017	-3.600	153.200	153.200

CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL S. BRG. PIER 4	153627.525	-3.600	153.204	153.204
AP	153630.525	-3.600	153.228	153.228
AQ	153633.525	-3.600	153.251	153.250
AR	153636.525	-3.600	153.272	153.271
AS	153639.525	-3.600	153.293	153.291
AT	153642.525	-3.600	153.312	153.310
AU	153645.525	-3.600	153.331	153.328
AV	153648.525	-3.600	153.348	153.346
CL BRG. PIER 5	153651.414	-3.600	153.364	153.364
AW	153654.414	-3.600	153.379	153.382
AX	153657.414	-3.600	153.393	153.402
AY	153660.414	-3.600	153.405	153.422
AZ	153663.414	-3.600	153.417	153.440
BA	153666.414	-3.600	153.428	153.456
BB	153669.414	-3.600	153.437	153.470
BC	153672.414	-3.600	153.446	153.481
BD	153675.414	-3.600	153.453	153.489
BE	153678.414	-3.600	153.459	153.494
BF	153681.414	-3.600	153.464	153.495
BG	153684.414	-3.600	153.468	153.494
BH	153687.414	-3.600	153.471	153.491
BI	153690.414	-3.600	153.473	153.486
BJ	153693.414	-3.600	153.474	153.480
BK	153696.414	-3.600	153.473	153.475
CL BRG. PIER 6	153698.201	-3.600	153.472	153.472
BL	153701.201	-3.600	153.470	153.468
BM	153704.201	-3.600	153.467	153.464
BN	153707.201	-3.600	153.462	153.461
BO	153710.201	-3.600	153.457	153.456
BP	153713.201	-3.600	153.450	153.450
BQ	153716.201	-3.600	153.442	153.443
BR	153719.201	-3.600	153.433	153.434
BS	153722.201	-3.600	153.423	153.424
CL BRG. PIER 7	153725.938	-3.600	153.409	153.409
CL SHELF BRG.	153726.306	-3.600	153.408	153.408
BU	153729.306	-3.600	153.395	153.401
BV	153732.306	-3.600	153.382	153.392
BW	153735.306	-3.600	153.367	153.378
BX	153738.306	-3.600	153.351	153.359
BY	153741.306	-3.600	153.334	153.337
CL BRG. S. ABUT	153742.829	-3.600	153.325	153.325
BK. S. ABUT.	153743.752	-3.600	153.319	153.319

Notes:

Lines P, AC, AO & BT Not Used

The shelf bearings are located on the cantilevered extension of girders beyond bearings at Pier 1 and Pier 7.

All elevations & offsets are in meters.

TOP OF SLAB ELEVATIONS

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 8 of 68
Revisions	Drawn AEU		
	Checked NPP		
	Approved NPP		

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	457
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
68 SHEETS

GIRDER 6W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	153497.397	-1.579	152.133	152.133
CL BRG. N. ABUT	153498.406	-1.579	152.141	152.141
A	153501.406	-1.579	152.165	152.168
B	153504.406	-1.579	152.189	152.194
C	153507.406	-1.579	152.213	152.218
D	153510.406	-1.579	152.237	152.239
CL SHELF BRG.	153512.363	-1.579	152.253	152.253
CL BRG. PIER 1	153512.731	-1.579	152.255	152.255
E	153515.731	-1.579	152.279	152.286
F	153518.731	-1.579	152.303	152.316
G	153521.731	-1.579	152.327	152.345
H	153524.731	-1.579	152.351	152.373
I	153527.731	-1.579	152.375	152.398
J	153530.731	-1.579	152.399	152.422
K	153533.731	-1.579	152.423	152.444
L	153536.731	-1.579	152.447	152.464
M	153539.731	-1.579	152.471	152.483
N	153542.731	-1.579	152.495	152.502
O	153545.731	-1.579	152.519	152.522
CL BRG. PIER 2	153549.155	-1.579	152.547	152.547
Q	153552.155	-1.579	152.571	152.570
R	153555.155	-1.579	152.595	152.594
S	153558.155	-1.579	152.619	152.620
T	153561.155	-1.579	152.643	152.645
U	153564.155	-1.579	152.667	152.671
V	153567.155	-1.579	152.691	152.695
W	153570.155	-1.579	152.715	152.720
X	153573.155	-1.579	152.739	152.743
Y	153576.155	-1.579	152.763	152.766
Z	153579.155	-1.579	152.787	152.788
AA	153582.155	-1.579	152.811	152.811
AB	153585.155	-1.579	152.835	152.834
CL BRG. PIER 3	153589.427	-1.579	152.869	152.869
AD	153592.427	-1.579	152.893	152.896
AE	153595.427	-1.579	152.917	152.924
AF	153598.427	-1.579	152.941	152.953
AG	153601.427	-1.579	152.965	152.981
AH	153604.427	-1.579	152.989	153.009
AI	153607.427	-1.579	153.013	153.035
AJ	153610.427	-1.579	153.037	153.060
AK	153613.427	-1.579	153.061	153.083
AL	153616.427	-1.579	153.085	153.104
AM	153619.427	-1.579	153.109	153.123
AN	153622.427	-1.579	153.133	153.141
CL N. BRG. PIER 4	153625.851	-1.579	153.160	153.160

GIRDER 6W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL S. BRG. PIER 4	153626.359	-1.579	153.164	153.164
AP	153629.359	-1.579	153.188	153.189
AQ	153632.359	-1.579	153.212	153.211
AR	153635.359	-1.579	153.234	153.232
AS	153638.359	-1.579	153.255	153.253
AT	153641.359	-1.579	153.275	153.272
AU	153644.359	-1.579	153.293	153.291
AV	153647.359	-1.579	153.311	153.309
CL BRG. PIER 5	153650.248	-1.579	153.327	153.327
AW	153653.248	-1.579	153.343	153.346
AX	153656.248	-1.579	153.357	153.366
AY	153659.248	-1.579	153.370	153.386
AZ	153662.248	-1.579	153.382	153.405
BA	153665.248	-1.579	153.394	153.422
BB	153668.248	-1.579	153.404	153.436
BC	153671.248	-1.579	153.412	153.448
BD	153674.248	-1.579	153.420	153.456
BE	153677.248	-1.579	153.427	153.461
BF	153680.248	-1.579	153.432	153.463
BG	153683.248	-1.579	153.437	153.462
BH	153686.248	-1.579	153.440	153.459
BI	153689.248	-1.579	153.442	153.455
BJ	153692.248	-1.579	153.443	153.450
BK	153695.248	-1.579	153.443	153.445
CL BRG. PIER 6	153697.035	-1.579	153.443	153.443
BL	153700.035	-1.579	153.441	153.439
BM	153703.035	-1.579	153.438	153.436
BN	153706.035	-1.579	153.434	153.432
BO	153709.035	-1.579	153.429	153.428
BP	153712.035	-1.579	153.423	153.423
BQ	153715.035	-1.579	153.415	153.416
BR	153718.035	-1.579	153.407	153.408
BS	153721.035	-1.579	153.397	153.398
CL BRG. PIER 7	153724.772	-1.579	153.384	153.384
CL SHELF BRG.	153725.140	-1.579	153.382	153.382
BU	153728.140	-1.579	153.370	153.376
BV	153731.140	-1.579	153.357	153.367
BW	153734.140	-1.579	153.342	153.353
BX	153737.140	-1.579	153.327	153.335
BY	153740.140	-1.579	153.310	153.313
CL BRG. S. ABUT	153741.663	-1.579	153.301	153.301
BK. S. ABUT.	153742.586	-1.579	153.296	153.296

P.G.L. & LONGITUDINAL BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	153496.485	0.000	152.102	152.102
CL BRG. N. ABUT	153497.494	0.000	152.110	152.110
A	153500.494	0.000	152.134	152.137
B	153503.494	0.000	152.158	152.163
C	153506.494	0.000	152.182	152.187
D	153509.494	0.000	152.206	152.208
CL SHELF BRG.	153511.451	0.000	152.222	152.222
CL BRG. PIER 1	153511.819	0.000	152.224	152.224
E	153514.819	0.000	152.248	152.255
F	153517.819	0.000	152.272	152.285
G	153520.819	0.000	152.296	152.314
H	153523.819	0.000	152.320	152.342
I	153526.819	0.000	152.344	152.367
J	153529.819	0.000	152.368	152.391
K	153532.819	0.000	152.392	152.413
L	153535.819	0.000	152.416	152.433
M	153538.819	0.000	152.440	152.452
N	153541.819	0.000	152.464	152.471
O	153544.819	0.000	152.488	152.491
CL BRG. PIER 2	153548.243	0.000	152.516	152.516
Q	153551.243	0.000	152.540	152.539
R	153554.243	0.000	152.564	152.563
S	153557.243	0.000	152.588	152.589
T	153560.243	0.000	152.612	152.614
U	153563.243	0.000	152.636	152.640
V	153566.243	0.000	152.660	152.664
W	153569.243	0.000	152.684	152.689
X	153572.243	0.000	152.708	152.712
Y	153575.243	0.000	152.732	152.735
Z	153578.243	0.000	152.756	152.757
AA	153581.243	0.000	152.780	152.780
AB	153584.243	0.000	152.804	152.803
CL BRG. PIER 3	153588.515	0.000	152.838	152.838
AD	153591.515	0.000	152.862	152.865
AE	153594.515	0.000	152.886	152.893
AF	153597.515	0.000	152.910	152.922
AG	153600.515	0.000	152.934	152.950
AH	153603.515	0.000	152.958	152.978
AI	153606.515	0.000	152.982	153.004
AJ	153609.515	0.000	153.006	153.029
AK	153612.515	0.000	153.030	153.052
AL	153615.515	0.000	153.054	153.073
AM	153618.515	0.000	153.078	153.092
AN	153621.515	0.000	153.102	153.110
CL N. BRG. PIER 4	153624.939	0.000	153.129	153.129

P.G.L. & LONGITUDINAL BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL S. BRG. PIER 4	153625.447	0.000	153.134	153.134
AP	153628.447	0.000	153.158	153.158
AQ	153631.447	0.000	153.181	153.181
AR	153634.447	0.000	153.204	153.202
AS	153637.447	0.000	153.225	153.223
AT	153640.447	0.000	153.245	153.242
AU	153643.447	0.000	153.264	153.262
AV	153646.447	0.000	153.282	153.280
CL BRG. PIER 5	153649.336	0.000	153.299	153.299
AW	153652.336	0.000	153.314	153.318
AX	153655.336	0.000	153.329	153.338
AY	153658.336	0.000	153.343	153.359
AZ	153661.336	0.000	153.355	153.378
BA	153664.336	0.000	153.367	153.395
BB	153667.336	0.000	153.377	153.410
BC	153670.336	0.000	153.386	153.421
BD	153673.336	0.000	153.394	153.430
BE	153676.336	0.000	153.401	153.436
BF	153679.336	0.000	153.407	153.438
BG	153682.336	0.000	153.412	153.438
BH	153685.336	0.000	153.415	153.435
BI	153688.336	0.000	153.418	153.431
BJ	153691.336	0.000	153.419	153.426
BK	153694.336	0.000	153.420	153.421
CL BRG. PIER 6	153696.123	0.000	153.419	153.419
BL	153699.123	0.000	153.418	153.416
BM	153702.123	0.000	153.415	153.413
BN	153705.123	0.000	153.412	153.410
BO	153708.123	0.000	153.407	153.406
BP	153711.123	0.000	153.401	153.401
BQ	153714.123	0.000	153.394	153.395
BR	153717.123	0.000	153.386	153.387
BS	153720.123	0.000	153.377	153.377
CL BRG. PIER 7	153723.860	0.000	153.363	153.363
CL SHELF BRG.	153724.228	0.000	153.362	153.362
BU	153727.228	0.000	153.350	153.356
BV	153730.228	0.000	153.337	153.347
BW	153733.228	0.000	153.323	153.334
BX	153736.228	0.000	153.308	153.316
BY	153739.228	0.000	153.292	153.295
CL BRG. S. ABUT	153740.751	0.000	153.283	153.283
BK. S. ABUT.	153741.674	0.000	153.278	153.278

Notes:

Lines P, AC, AO & BT Not Used

The shelf bearings are located on the cantilevered extension of girders beyond bearings at Pier 1 and Pier 7.

All elevations & offsets are in meters.

TOP OF SLAB ELEVATIONS

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 9 of 68
Revisions	Drawn AEU		
	Checked NPP		
	Approved NPP		

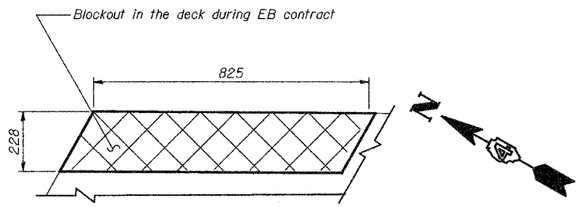
Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	458
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
68 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DETAIL 1

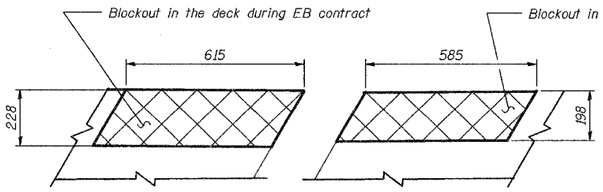
SPAN 1

(1) 49- #15 d15(E) bars @ 300 cts. see cross-section for details

LEGENDS

Deck blockout area provided during EB contract.

Hatched area, see note 8.



DETAIL 2

* Order a(E) and a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

Notes:

1. Work this sheet with sheet No's 11 through 20.
2. Reinforcement bars designated (E) shall be Epoxy Coated.
3. For Neoprene Expansion Joint Details see sheet No. 21.
4. Cut longitudinal reinforcement bars to clear drainage scupper.
5. Bars indicated thus "67x4 - #15 etc." indicates 67 lines of bars with 4 lengths per line.
6. Min. bar lap for a #15 bar shall be 510 mm.
7. For bill of materials and reinforcement details see sht. 18.
8. Hatched area to be poured after superstructure forms have been removed. Quantity of Concrete included with Concrete Superstructure.
9. See sht. 17 for Sections A-A and B-B.
10. See sht. 17 for reinforcement details around scupper.
11. The remaining portions of the bar splicers provided for the WB deck under EB contract shall be obtained from the Engineer by the Contractor and shall be incorporated in the WB deck reinforcement.
12. The Contractor shall pour the deck at skew.

DECK REINFORCEMENT SPAN 1

Date / Revisions			
	Designed	EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn	EV	
	Checked	NPP	
	Approved	NPP	

Sheet No. 10 of 68

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL.

BRW Job No. 17049-071

S-1-L(>15°) (M) 4-30-99

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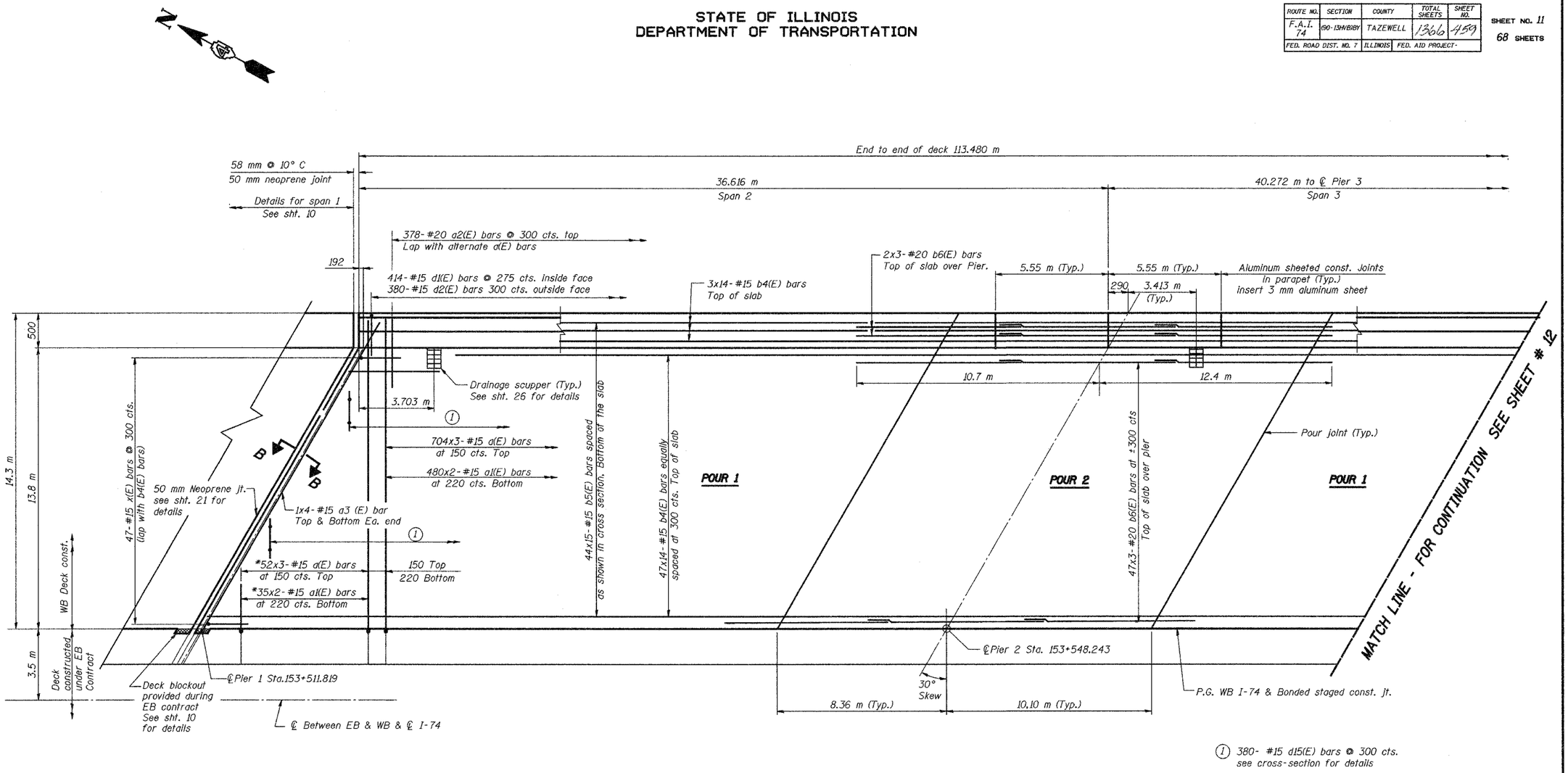
68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13H/B)BY	TAZEWELL	1366	1159
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
68 SHEETS



(1) 380-#15 d15(E) bars @ 300 cts.
see cross-section for details

SPANS 2 AND 3

Notes:

1. Work this sheet with sheet No's 10 & 12 through 20.
2. Reinforcement bars designated (E) shall be Epoxy Coated.
3. For Neoprene Expansion Joint Details see sheet No. 21.
4. Cut longitudinal reinforcement bars to clear drainage scuppers.
5. Bars indicated thus "60x4 - #15 etc." indicates 60 lines of bars with 4 lengths per line.
6. Min. bar lap for a #15 bar shall be 510 mm and for # 20 bar shall be 790 mm.
7. For bill of materials and reinforcement details see sht. 18.
8. See sht. 17 for Section B-B.
9. The remaining portions of the bar splicers provided for the WB deck under EB contract shall be obtained from the Engineer by the Contractor and shall be incorporated in the WB deck reinforcement.
10. The Contractor shall pour the deck at skew.

* Order a(E) and a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

S-1-L(>15°) (M) 4-30-99

DECK REINFORCEMENT SPANS 2 & 3

Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 11 of 68
Revisions	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

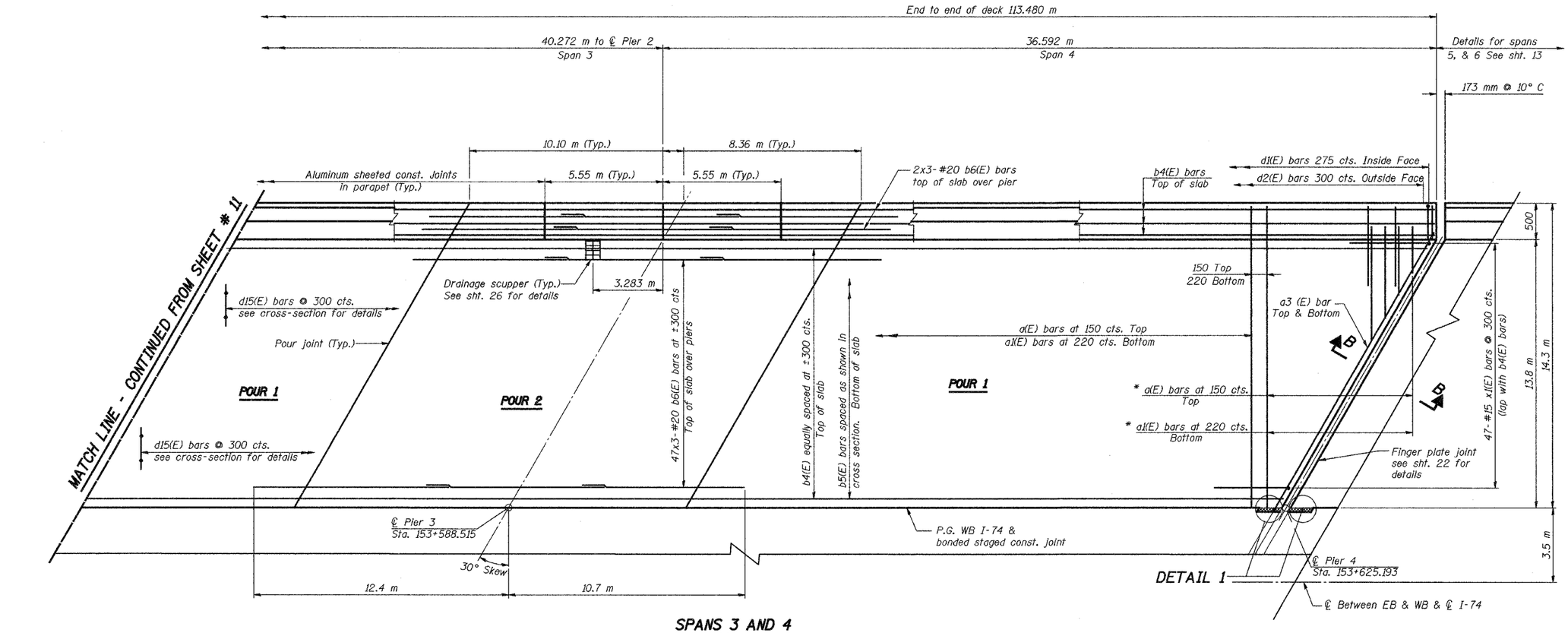
I:/PROJECTS/17049.071/Pre_Final_Plans/174_ab/Prefinal_Issue/deckspan2-3.dgn

68201

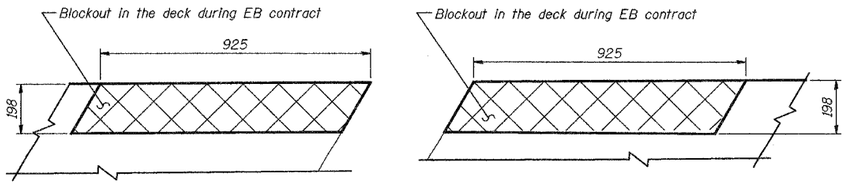
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	460
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 12
68 SHEETS



SPANS 3 AND 4



DETAIL 1

LEGEND

Deck blockout area provide during EB contract.

Notes:

1. Work this sheet with sheets 10, 11 and 13 through 20.
2. Reinforcement bars designated (E) shall be Epoxy Coated.
3. For Neoprene Expansion Joint Details see sheet No. 21.
4. Cut longitudinal reinforcement bars to clear drainage scupper.
5. Bars indicated thus "60x4 - #15 etc." indicates 60 lines of bars with 4 lengths per line.
6. Min. bar lap for a #15 bar shall be 510 mm and for #20 bar shall be 790 mm.
7. For bill of materials and reinforcement details see sht. 18.
8. For reinforcement details not shown on this sht. see sht. 11.
9. See sht. 22 for Section B-B.
10. The remaining portions of the bar splicers provided for the WB deck under EB contract shall be obtained from the Engineer by the Contractor and shall be incorporated in the WB deck reinforcement.
11. The Contractor shall pour the deck at skew.

* Order a(E) and a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end see sht. 11.

DECK REINFORCEMENT SPANS 3 & 4

Date			
Revisions	Designed	EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn	EV	
	Checked	NPP	
	Approved	NPP	

Sheet No. 12 of 68

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

S-1-L(>15°) (M) 4-30-99

17049.071/pre_final_plans/IT4_eb/deckspan3-4

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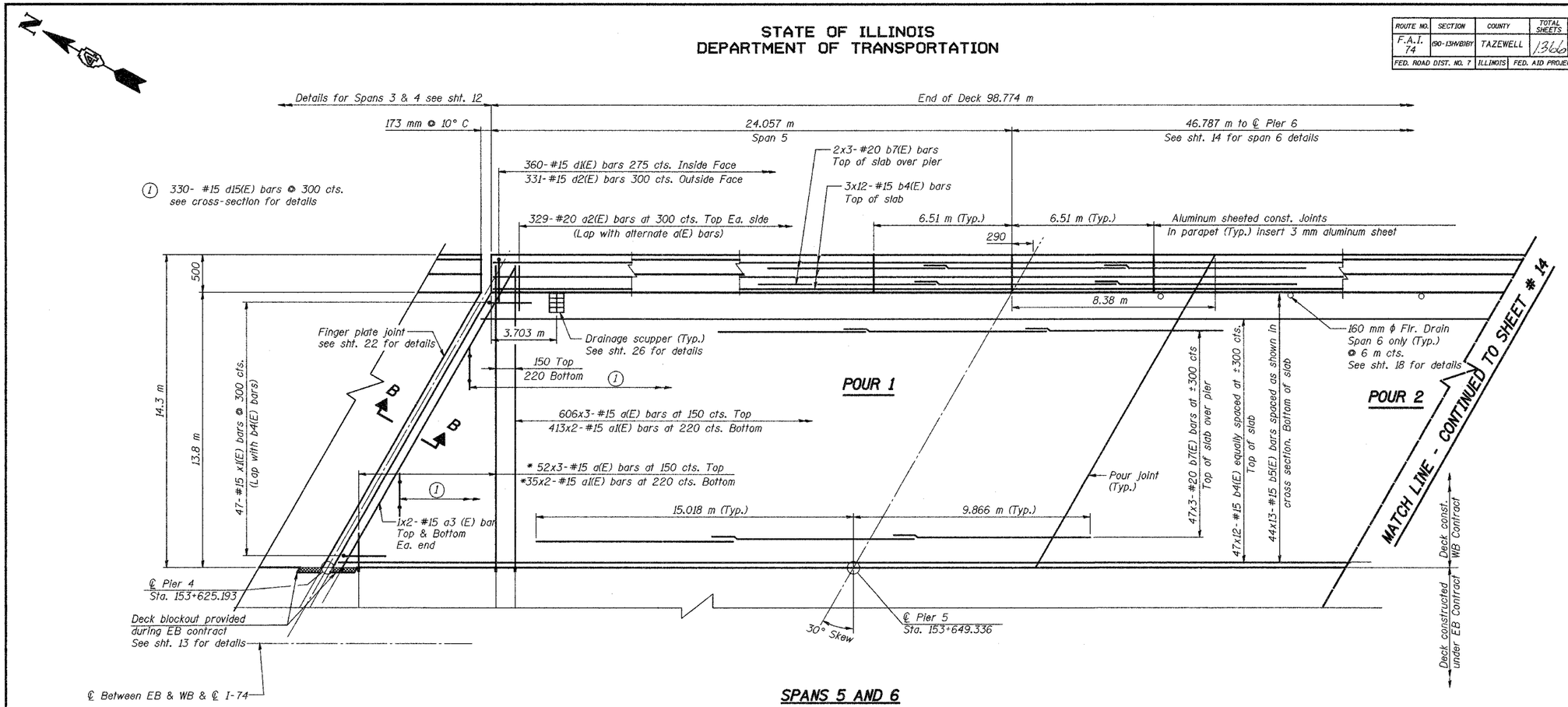
68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	461
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
68 SHEETS



SPANS 5 AND 6

* Order a(E) and a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end see sht. 19.

Notes:
1. Work this sheet with sheets 10 through 12 & shts. 14 through 20.
2. Reinforcement bars designated (E) shall be Epoxy Coated.
3. For finger plate expansion joint details see sheets 22 through 25.
4. Cut longitudinal reinforcement bars to clear drainage scupper.
5. Bars indicated thus "60x4 - #15 etc." indicates 60 lines of bars with 4 lengths per line.
6. Min. bar lap for a #15 bar shall be 510 mm and for a #20 bar shall be 790 mm.
7. For bill of materials and reinforcement details see sht. 18.
8. See sht. 22 for Section B-B.
9. The remaining portions of the bar splicers provided for the WB deck under EB contract shall be obtained from the Engineer by the Contractor and shall be incorporated in the WB deck reinforcement.
10. The Contractor shall pour the deck at skew.

S-1-L(>15°) (M) 4-30-99

DECK REINFORCEMENT SPANS 5 & 6

Date / Revisions		
	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn EV	
	Checked NPP	
	Approved NPP	

Sheet No. 13 of 68

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000, Rolling Meadows, IL.

BRW Job No. 17049-071

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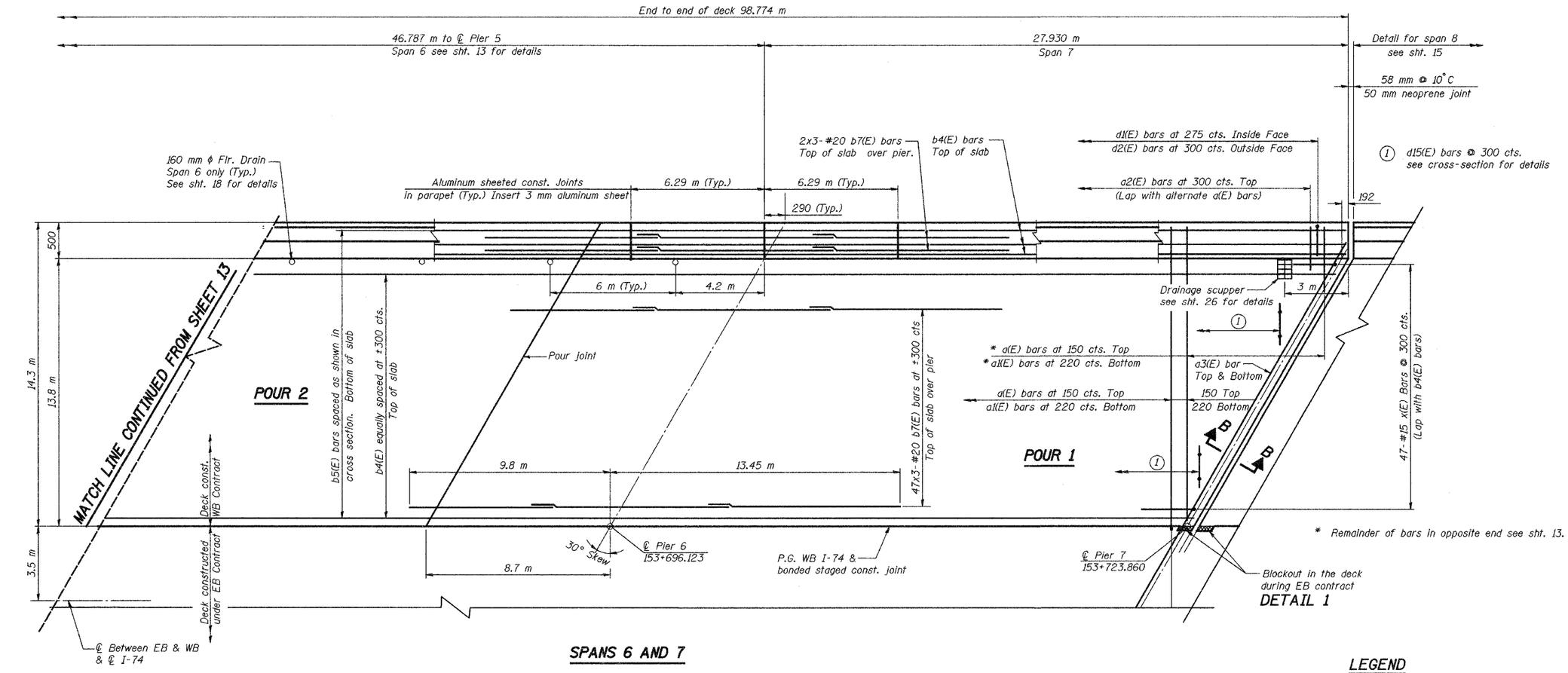
68201

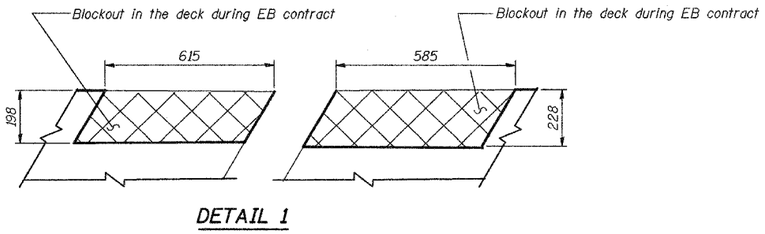
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	462
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
68 SHEETS



SPANS 6 AND 7



DETAIL 1

LEGEND

Deck blockout area provide during EB contract.

Notes

1. Work this sheet with sheets 10 through 13, and 15 through 20.
2. Reinforcement bars designated (E) shall be Epoxy Coated.
3. For Neoprene Expansion Joint Details see sheet No. 21.
4. Cut longitudinal reinforcement bars to clear drainage scupper.
5. Bars indicated thus "60x4 - #15 etc." indicates 60 lines of bars with 4 lengths per line.
6. Min. bar lap for a #15 bar shall be 510 mm and for #20 bar shall be 790 mm.
7. For bill of materials and reinforcement details see sht. 18.
8. For reinforcement details not shown on this sht. see sht. 13.
9. See sht. 17 for section B-B.
10. The remaining portions of the bar splicers provided for the WB deck under EB contract shall be obtained from the Engineer by the Contractor and shall be incorporated in the WB deck reinforcement.
10. The Contractor shall pour the deck at skew.

S-1-L(>15°) (M) 4-30-99

DECK REINFORCEMENT SPANS 6 & 7

Date		
Revisions	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn EV	
	Checked NPP	
	Approved NPP	

Sheet No. 14 of 68

Prepared By: BRW, Inc. A Division of URS
1701 Golf Rd., Suite 1000
Rolling Meadows, IL.
BRW Job No. 17049-071

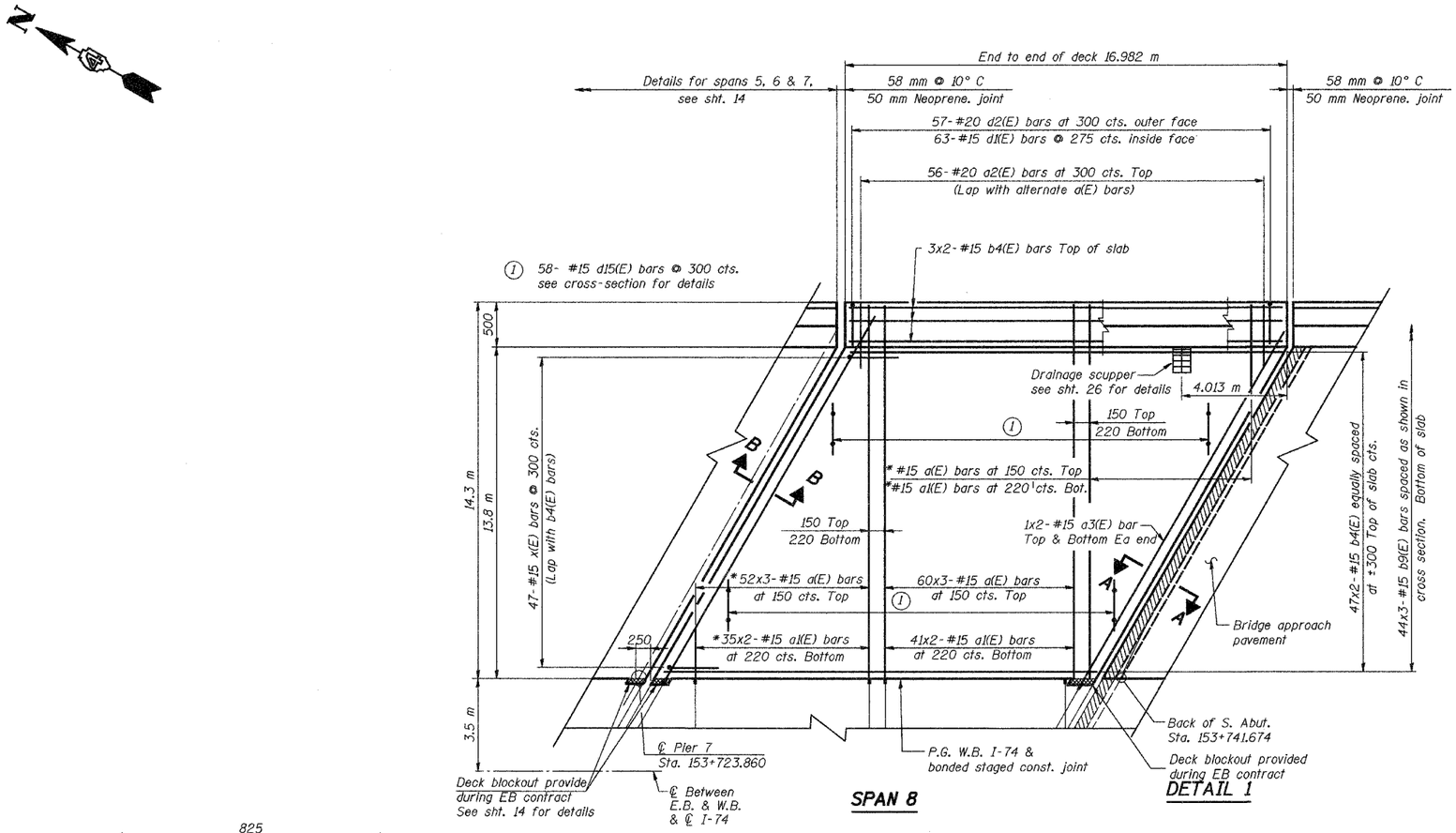
17049.071/Pre_Final_Plans/174_eb/Prefinal_Issue/deckspan6-7.dgn

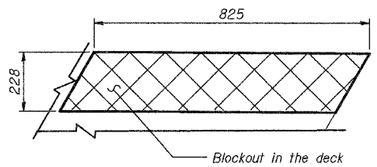
68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	463
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
68 SHEETS





DETAIL 1

* Order a(E) and a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

Notes:

1. Work this sheet with sheet No's 10 through 14 & 16 through. 20.
2. Reinforcement bars designated (E) shall be Epoxy Coated.
3. For Neoprene Expansion Joint Details see sheet No. 21.
4. Cut longitudinal reinforcement bars to clear drainage scupper.
5. Bars indicated thus "60x4 - #15 etc." indicates 60 lines of bars with 4 lengths per line.
6. Min. bar lap for a #15 bar shall be 510 mm.
7. For bill of materials and reinforcement details see sht. 18.
8. Hatched area to be poured after superstructure forms have been removed. Quantity of Concrete included with Concrete Superstructure.
9. See sht. 17 for sections A-A and B-B.
10. The remaining portions of the bar splicers provided for the WB deck under EB contract shall be obtained from the Engineer by the Contractor and shall be incorporated in the WB deck reinforcement.
11. The Contractor shall pour the deck at skew.

LEGENDS

Deck blockout area provided during EB contract.

Hatched area, see note 8.

DECK REINFORCEMENT SPAN 8

Date			
Revisions	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 15 of 68
	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

S-1-L(>15°) (M) 4-30-99

68201

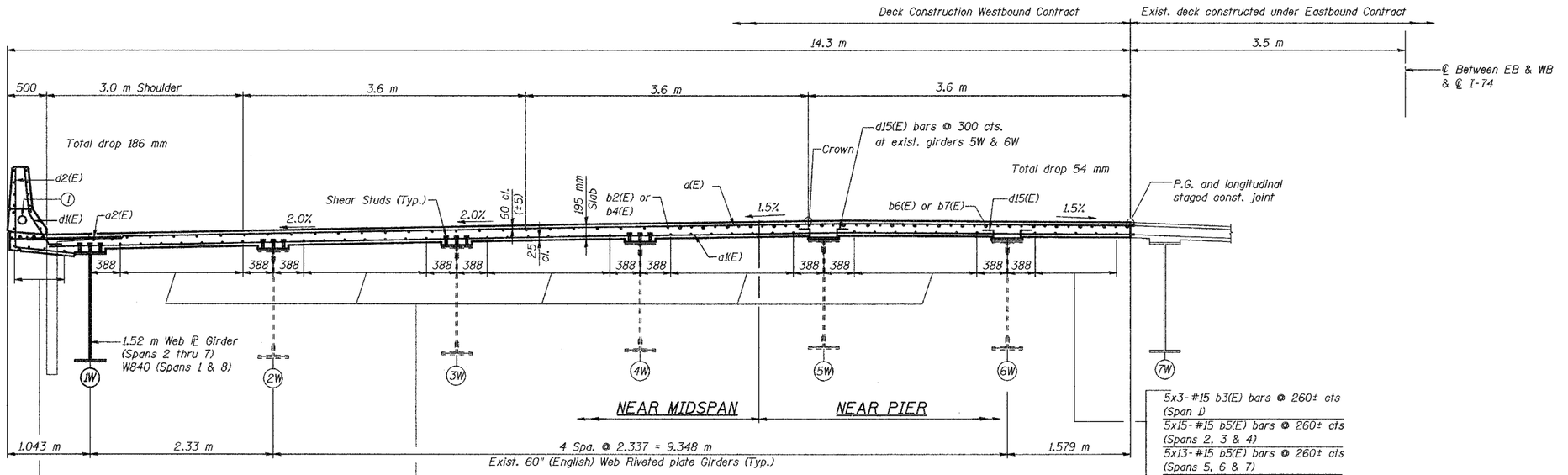
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	464
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
68 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

① Conduits shall only be placed in the curb portion of the parapet. No conduits shall be placed above the optional construction joint.

See lighting drawings for the size and number of electrical conduits required.



4x3-#15 b3(E) bars @ 260± cts
Girders (Span 1)
4x15-#15 b5(E) bars @ 260± cts
(Spans 2, 3 & 4)
4x13-#15 b5(E) bars @ 260± cts
(Spans 5, 6 & 7)
4x3-#15 b9(E) bars @ 260± cts
Typ. between Exist. Girders (Span 8)

7x3-#15 b3(E) bars @ 260± cts
Typ. (Span 1)
7x15-#15 b5(E) bars @ 260± cts
Typ. (Spans 2, 3 & 4)
7x13-#15 b5(E) bars @ 260± cts
Typ. (Spans 5, 6 & 7)
7x3-#15 b9(E) bars @ 260± cts
Typ. between Exist. Girders (Span 8)

5x3-#15 b3(E) bars @ 260± cts
(Span 1)
5x15-#15 b5(E) bars @ 260± cts
(Spans 2, 3 & 4)
5x13-#15 b5(E) bars @ 260± cts
(Spans 5, 6 & 7)
5x3-#15 b9(E) bars @ 260± cts
Typ. between Exist. Girders (Span 8)

CROSS SECTION - SPANS 1 THRU 8
(Looking South)

NOTES:
1. Work this sheet with sheets 10 through 15 and 17 through 20.
2. Reinforcement bars designated (E) shall be Epoxy Coated.
3. Cut longitudinal reinforcement bars to clear drainage scuppers.
4. Bars indicated thus "60x4 - #15 etc." indicates 60 lines of bars with 4 lengths per line.
5. Min. bar lap for a #15 bar shall be 510 mm and for #20 bar shall be 790 mm.
6. For bill of materials and reinforcement details see sht. 18.

CROSS SECTION THRU BRIDGE DECK

Date / Revisions		
	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn EV	
	Checked NPP	
	Approved NPP	

Sheet No. 16 of 68

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL.

BRW Job No. 17049-071

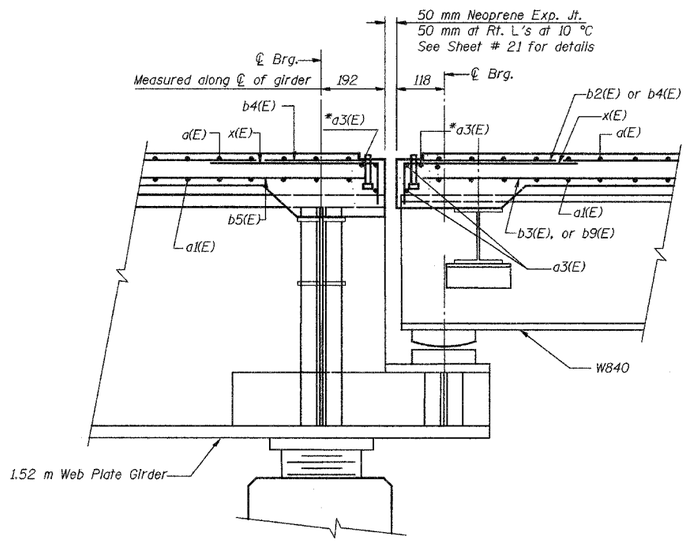
I:/PROJECTS/17049.071/Pre_Final_Plans/I74_eb/Prefinal_Issue/deckcrosec.dgn

68201

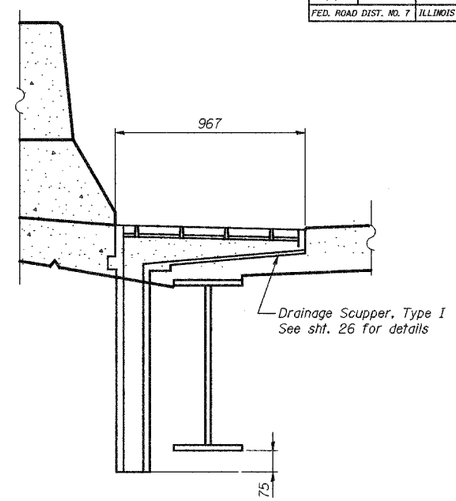
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	465
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

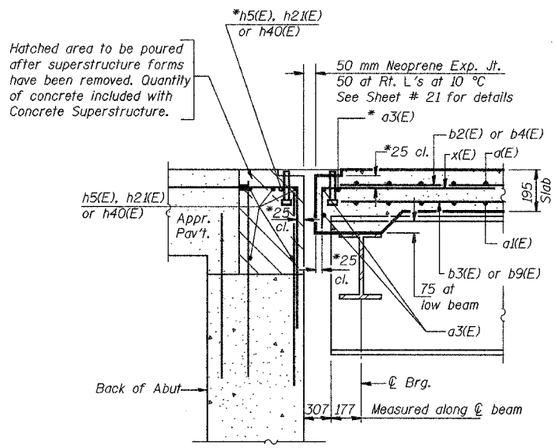
SHEET NO. 17
68 SHEETS



SECTION B-B

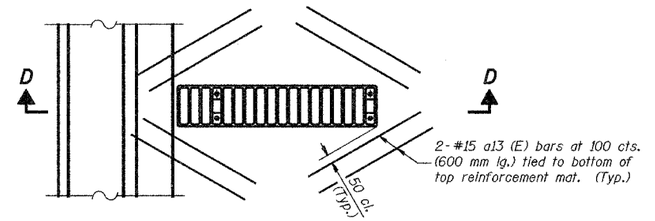


SECTION D-D



SECTION A-A

* Place a3(E), h5(E), h21(E) or h40(E) bars in back of anchor bolt as shown if required to maintain 25 mm cl. (+0-3 mm)
Anchor bolts should be tied to a3(E), h5(E), h21(E) or h40(E) bars.



PLAN

Notes:
See shts. 10 and 15 for Section A-A
See shts. 10, 11, 14, and 15 for Section B-B.

DECK DETAILS

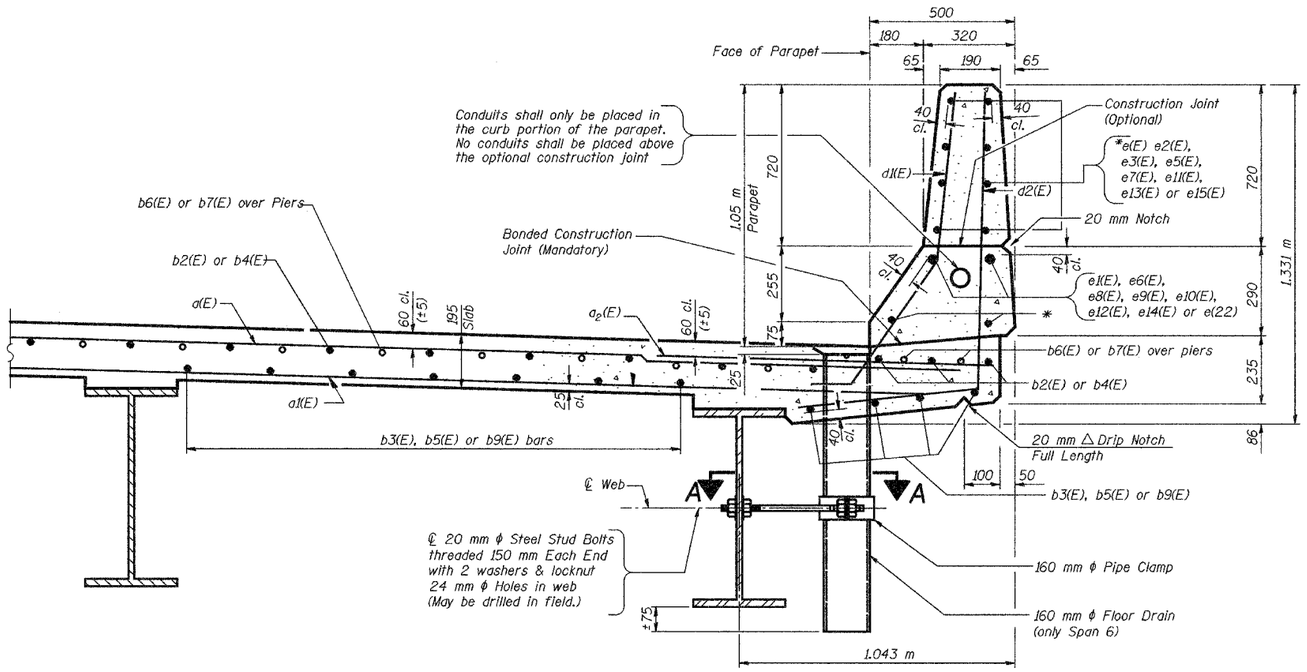
Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 17 of 68
Revisions	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

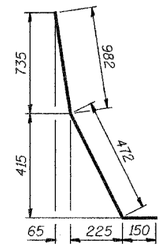
68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	#66
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

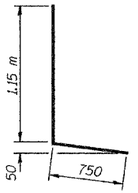
SHEET NO. 18
68 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

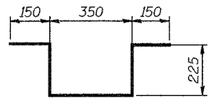




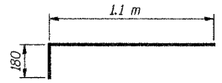
BAR d1(E)



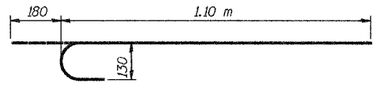
BAR d2(E)



BAR d15(E)



BAR x(E)



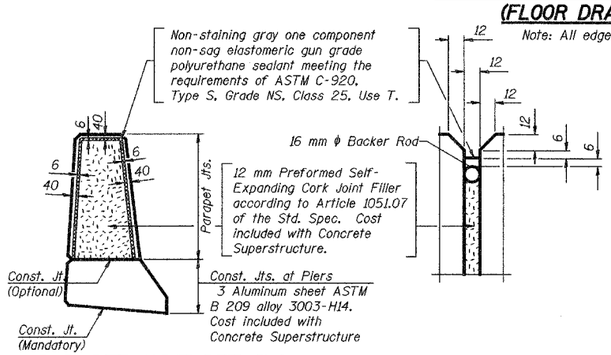
BAR x1(E)

SUPERSTRUCTURE BILL OF MATERIAL

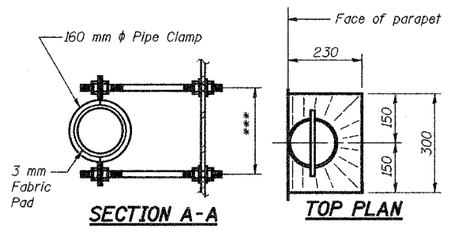
Bar	No.	Size	Length (m)	Shape
a(E)	4869	#15	5.00	
a1(E)	2212	#15	7.25	
a2(E)	811	#20	1.2	
a3(E)	64	#15	6.1	
a13(E)	56	#15	0.6	
b2(E)	100	#15	7.60	
b3(E)	132	#15	5.20	
b4(E)	1400	#15	8.74	
b5(E)	1232	#15	8.20	
b6(E)	294	#20	8.3	
b7(E)	294	#20	8.82	
b9(E)	132	#15	6.10	
d1(E)	891	#15	1.36	
d2(E)	818	#15	1.9	
d15(E)	1634	#15	1.1	
e(E)	12	#15	7.70	
e1(E)	16	#25	8.10	
e2(E)	10	#15	6.4	
e3(E)	6	#15	7.6	
e5(E)	16	#15	8.3	
e6(E)	16	#25	8.6	
e7(E)	36	#15	5.47	
e8(E)	8	#25	5.47	
e9(E)	6	#25	6.5	
e10(E)	4	#25	6.43	
e11(E)	18	#15	6.21	
e12(E)	4	#25	6.21	
e13(E)	10	#15	7.2	
e14(E)	16	#25	7.0	
e15(E)	4	#15	8.7	
e22(E)	6	#25	6.3	
e23(E)	24	#15	1.28	
e24(E)	96	#15	1.28	
e25(E)	48	#15	4.78	
e26(E)	24	#15	5.12	
e27(E)	24	#15	4.81	
e28(E)	56	#15	5.61	
e29(E)	32	#15	5.44	
x(E)	235	#15	4.8	
x1(E)	94	#15	5.31	
Reinforcement Bars, Epoxy Coated		kg	130,410	
Concrete Superstructure		m^3	861.5	
Bridge Deck Grooving		m^2	3,799	
Protective Coat		m^2	4,787	
Floor Drains		Each	7	

FLOOR DRAIN AND FASCIA PARAPET DETAILS
(FLOOR DRAINS ONLY IN SPAN 6)

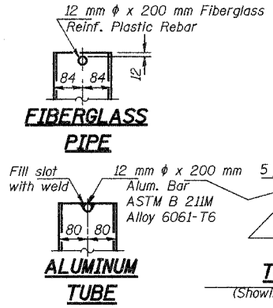
Note: All edges shall have 20 mm chamfer.



PARAPET JOINT DETAILS



*** Dimension as required by Pipe Clamp.



Notes:

1. 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-SP1 prior to painting.
2. Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 200 MPa minimum.
3. All dimensions are in millimeters (mm) except as noted.
4. Reinforcement bars designated (E) shall be epoxy coated.

S-1-D (M) 4-30-99

I:/PROJECTS/17049.071/Pre_Final_Plans/174_ab/Prefinal_Issue/parpdrain.dgn

DECK DETAILS

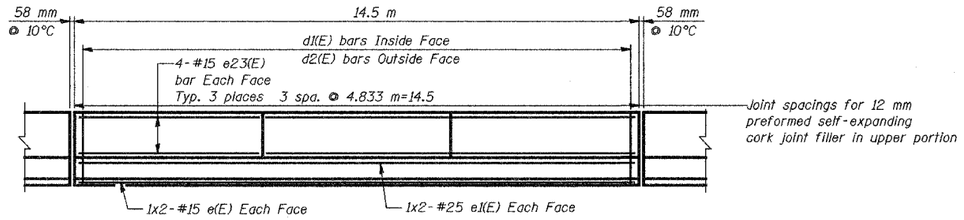
Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 18 of 68
Revisions	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

68201

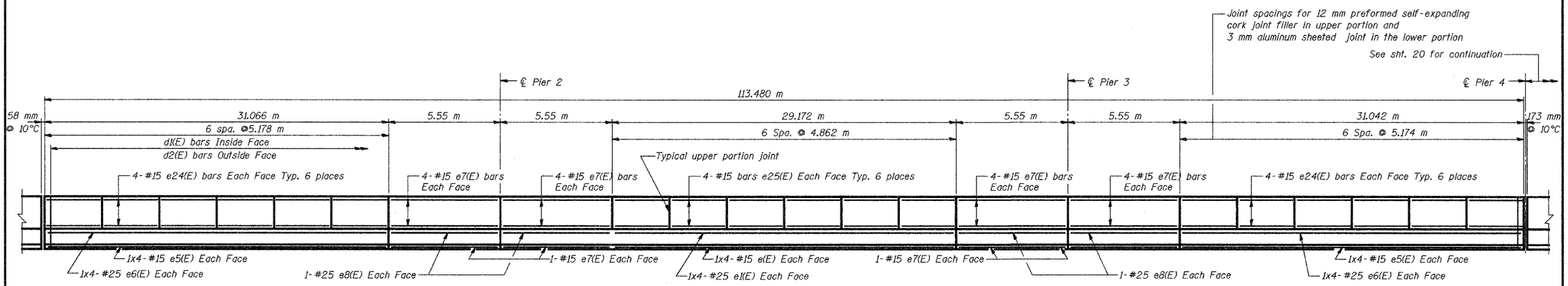
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	461
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 19
68 SHEETS



SPAN 1 PARAPET



SPANS 2, 3 & 4 PARAPET

Notes:

1. Work this sheet with sheet No's 10 through 18 & 20.
2. Reinforcement bars designated (E) shall be Epoxy Coated.
3. For Neoprene Expansion Joint Details see sheet No. 21.
4. Bars indicated thus "60x4 - #15 etc." indicates 60 lines of bars with 4 lengths per line.
5. Min. bar lap for a #15 bar shall be 510 mm. and for #25 bar shall be 1.01 m.
6. For bill of materials and reinforcement details see sht. 18.
7. For finger plate joint details see shts. 22 through 25.

PARAPET REINFORCEMENT DETAILS

Date / Revisions		
	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn EV	
	Checked NPP	
	Approved NPP	

Sheet No. 19 of 68

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000, Rolling Meadows, IL.

BRW Job No. 17049-071

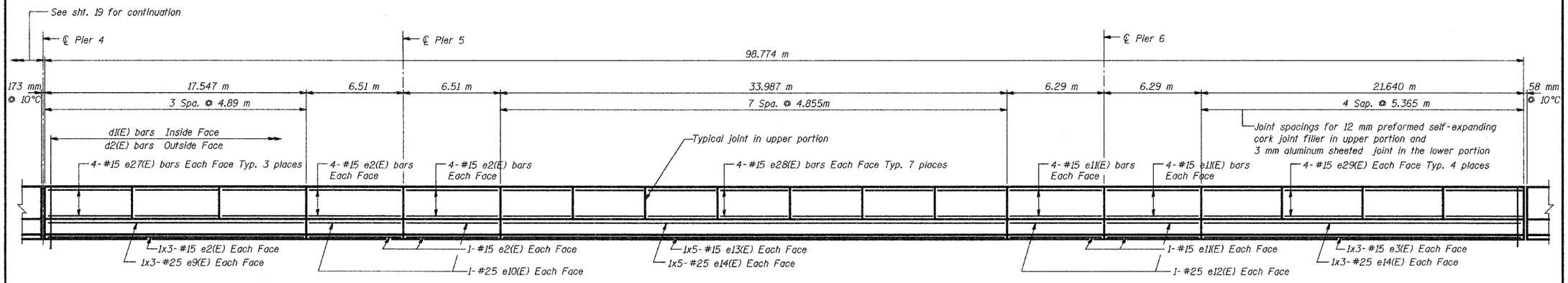
I:/PROJECTS/17049.071/Pre_Final_Plans/174_eb/Prefinal_Issue/parapet-ew.dgn

68201

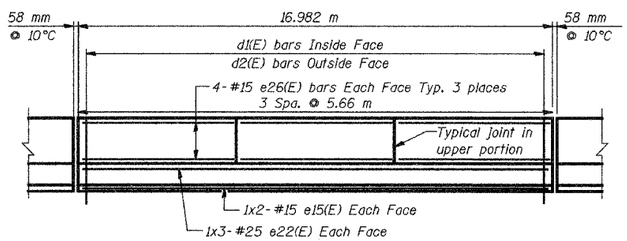
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	468
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 20
68 SHEETS



SPANS 5, 6 & 7 PARAPET



SPAN 8 PARAPET

Notes:

1. Work this sheet with sheet No's 10 through 19.
2. Reinforcement bars designated (E) shall be Epoxy Coated.
3. For Neoprene Expansion Joint Details see sheet No. 21.
4. Bars indicated thus "60x4-#15" etc. indicates 60 lines of bars with 4 lengths per line.
5. Min. bar lap for a #15 bar shall be 510 mm. and for #25 bar shall be 1.01 m.
6. For bill of materials and reinforcement details see sht. 18.
7. For finger plate joint details see shts. 22 through 25.

PARAPET REINFORCEMENT DETAILS

Date / Revisions			
	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 20 of 68
	Drawn EV		
	Checked NPP		
	Approved NPP		

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

I:/PROJECTS/17049.071/Pre_Final_Plans/IT4_eb/Prefinal_Issue/parapet-ew1.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13H/B)BY	TAZEWELL	1366	469
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 21
68 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Joint Size	"C" at 10°C	"D" at 10°C
50	50	40 Min.
65	65	45 Min.
100	75	65 Min.

INSTALLATION NOTES

(1) Install continuous seal in roadway, parapet, curb, and sidewalk.

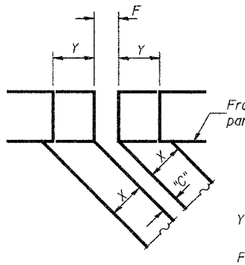
(2) Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 300 centers.

SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

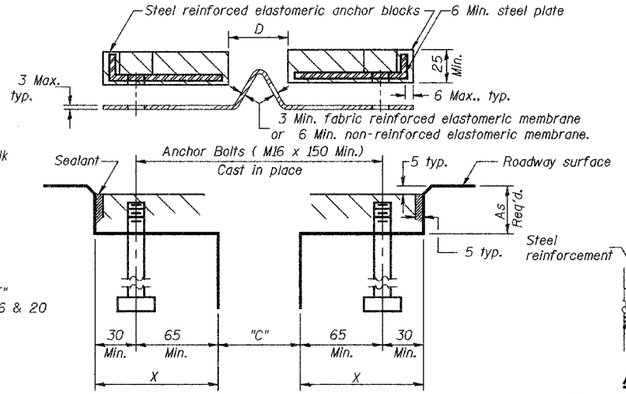
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±300 cts.



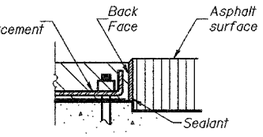
$Y = X - \left(\frac{F-C}{2}\right)$

For dimension "F" see sheets 15, 16 & 20

FORMING BLOCKOUT SKETCH



CROSS SECTION



ANCHOR BLOCK WITH ASPHALT SURFACE

GENERAL NOTES

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

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

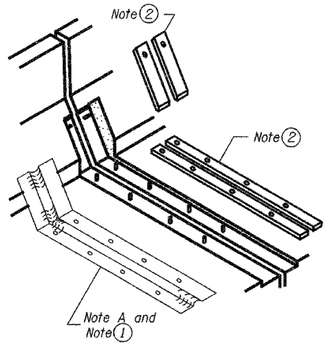
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 10° C.

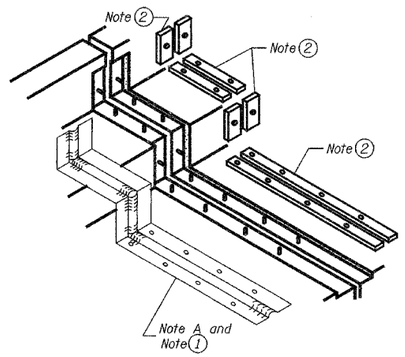
The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

BILL OF MATERIAL

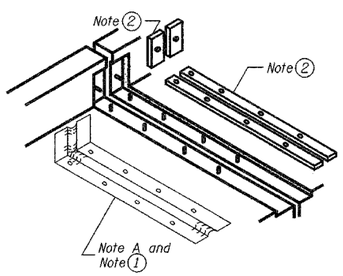
ITEM	UNIT	TOTAL
Neoprene Expansion Joint 50 mm	Meter	80



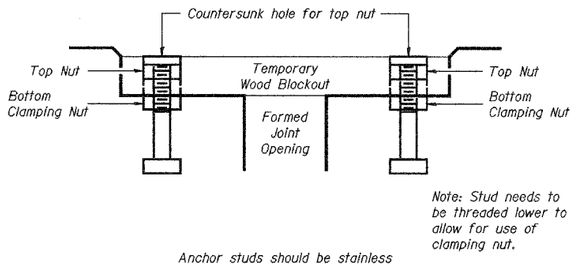
AT PARAPET



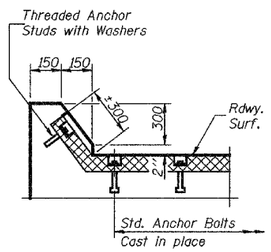
AT SIDEWALK OR MEDIAN



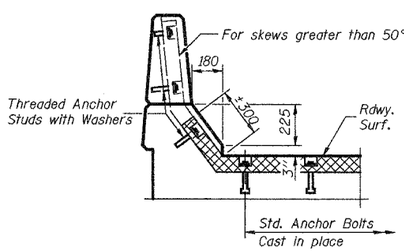
AT WALL



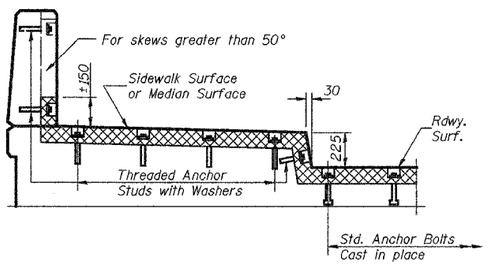
RECOMMENDED BLOCKOUT DETAIL



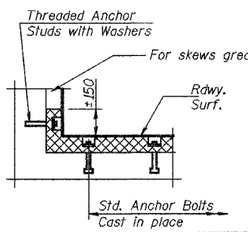
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN



AT WALL

TYPICAL END TREATMENTS

CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS

NEOPRENE EXPANSION JOINTS

Date	Designed NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 21 of 68
Revisions	Drawn SOI		
	Checked JPB		
	Approved NPP		

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

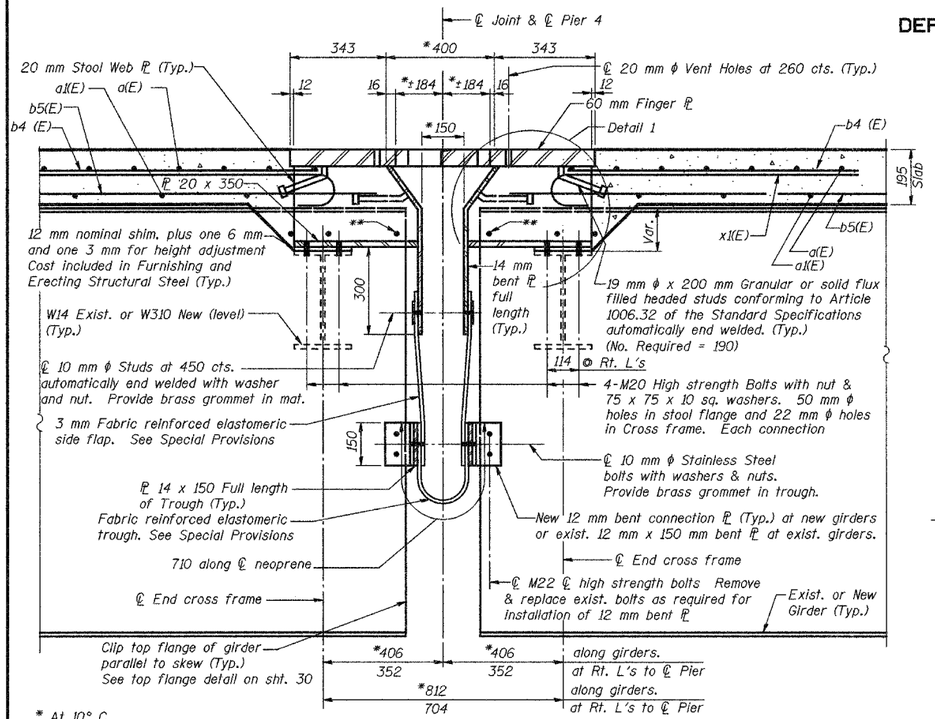
EJ-CS 10-31-02

68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	470
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 22
68 SHEETS



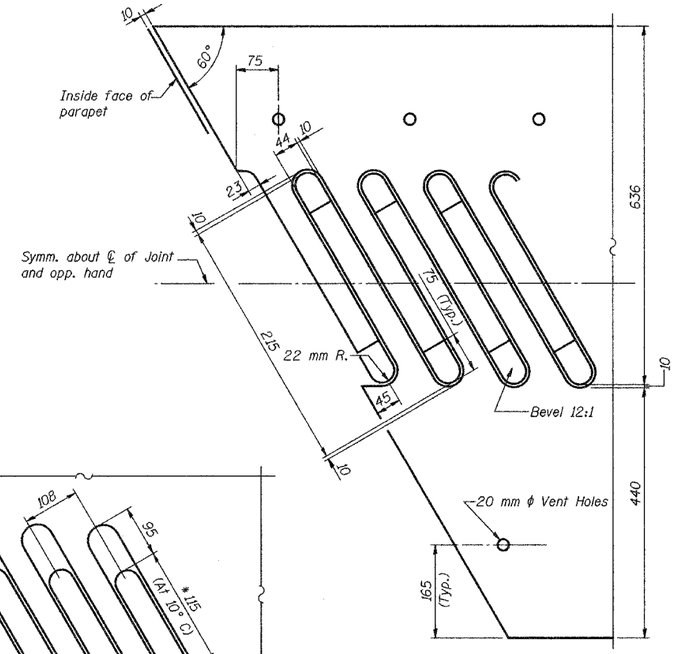
* At 10° C

** Cut bars in field to fit between stools.

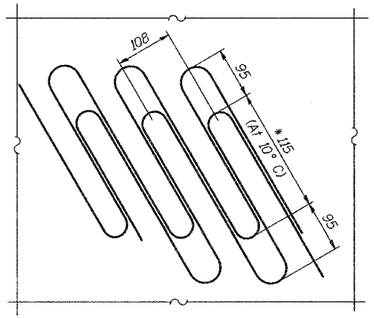
SECTION B-B
(Looking North)

Tapered shims shall be added under the stools as required by the Engineer to make a smooth finger plate joint

According to the exist. plans the end of girders and bearing stiffeners are vertical and the diaphragms are level. The Contractor shall verify in the field prior to ordering materials.

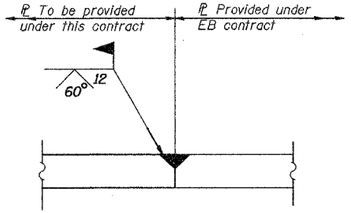


FINGER PLATE CUTTING DIAGRAM
(ℙ 60 x 1086 x 15.924 m along skew one required)

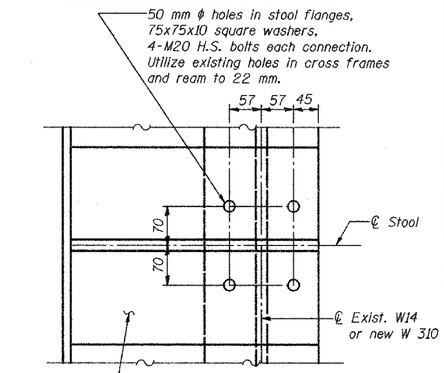


FINGER PLATE SETTING DIAGRAM

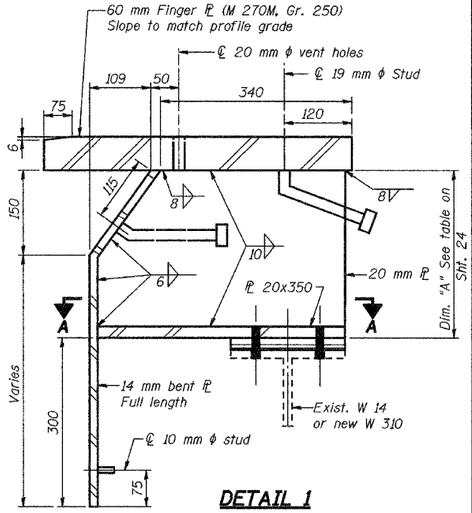
*Add 1 mm per each 10 m of expansion for every 8° C above the normal temp. of 10° C. Subtract 1 mm per each 10 m of expansion for every 8° C below the normal of 10° C. (Expansion Length = 147.372 m)



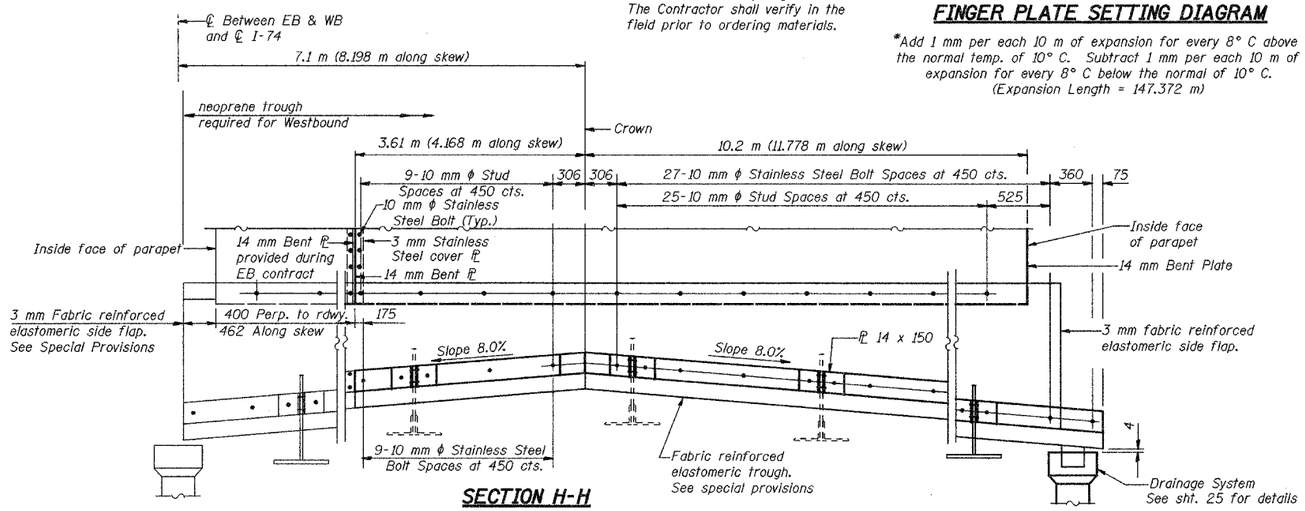
FINGER PLATE SPLICE DETAIL



SECTION A-A



DETAIL 1
(At Diaphragm)



SECTION H-H

Notes:
1. See shts. 12, 13 and 23 for Section B-B.
2. See sht. 25 for Detail 1 at Girders.
3. See sht. 24 for stool spacings.
4. See sht. 23 for location of Section H-H.

FINGER PLATE EXPANSION JOINT DETAILS

Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 22 of 68
Revisions	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

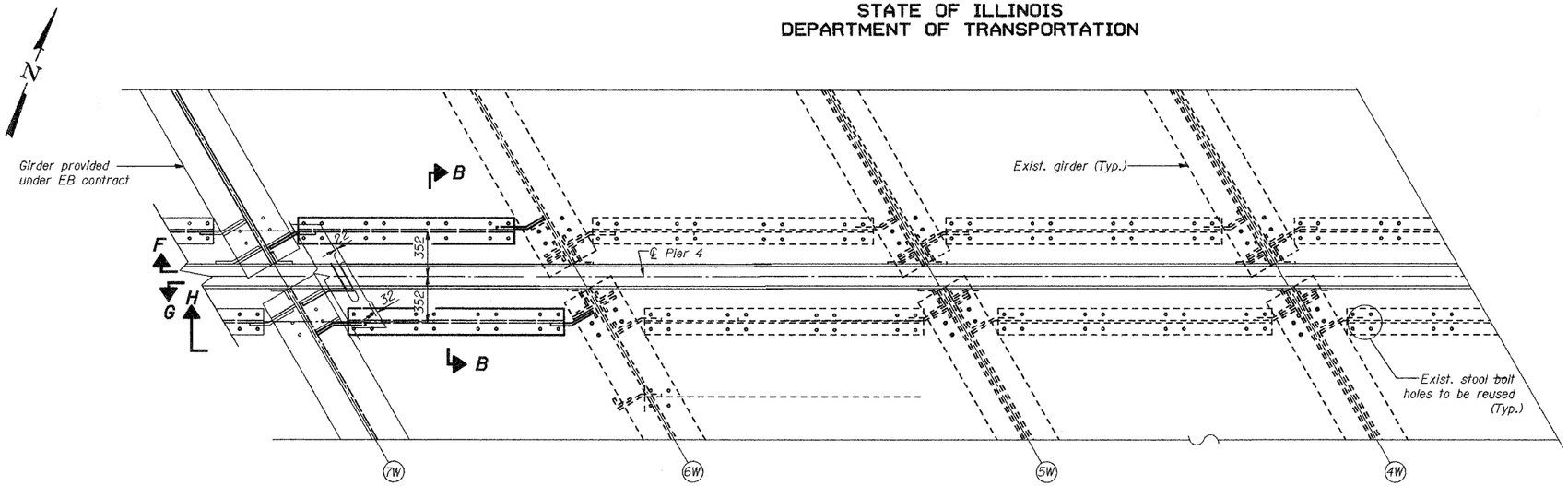
I:/PROJECTS/17049.071/Pre_Final_Plans/IT4_eb/PreFinal_Issue/fngrplatedet.dgn

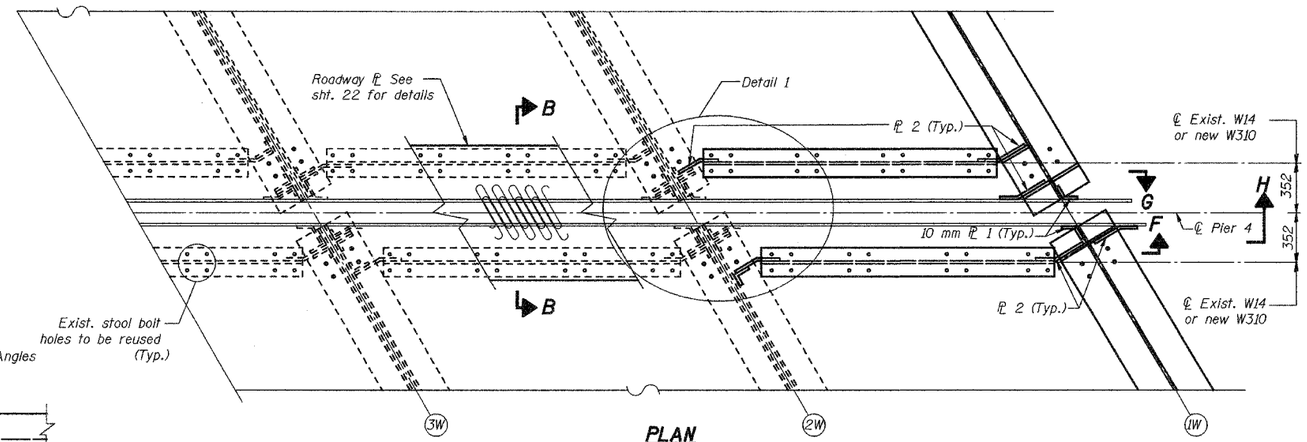
68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	471
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 23
68 SHEETS

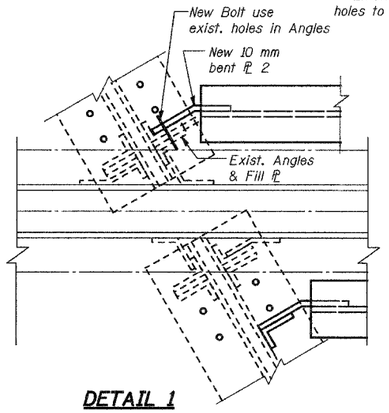
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



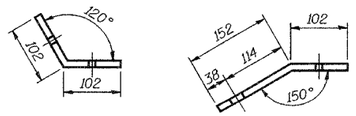


PLAN

Notes:
See sht. 24 for sections F-F & G-G.
See sht. 22 for sections B-B & H-H.



DETAIL 1



℄ 1 ℄ 2

BENT CONNECTION PLATE DETAILS

FINGERPLATE PLAN AND DIAPHRAGMS

Date / Revisions		
	Designed	EV
	Drawn	EV
	Checked	NPP
	Approved	NPP

WESTBOUND F.A.I. ROUTE 74 OVER
CAMP STREET, FARM CREEK, AND TP&W RR
F.A.I. RTE. 74 SECTION (90-13HVB)BY
TAZEWELL COUNTY
STATION 153+625.193
STRUCTURE NO. 090-0009

Sheet No. 23 of 68

Prepared By: BRW, Inc.
A Division of URS
1701 Golf Rd., Suite 1000
Rolling Meadows, IL.

BRW Job No. 17049-071

68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13W)BIBY	TAZEWELL	1366	472
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 24
68 SHEETS

TABLE FOR STOOL HEIGHT AT DIAPHRAGMS

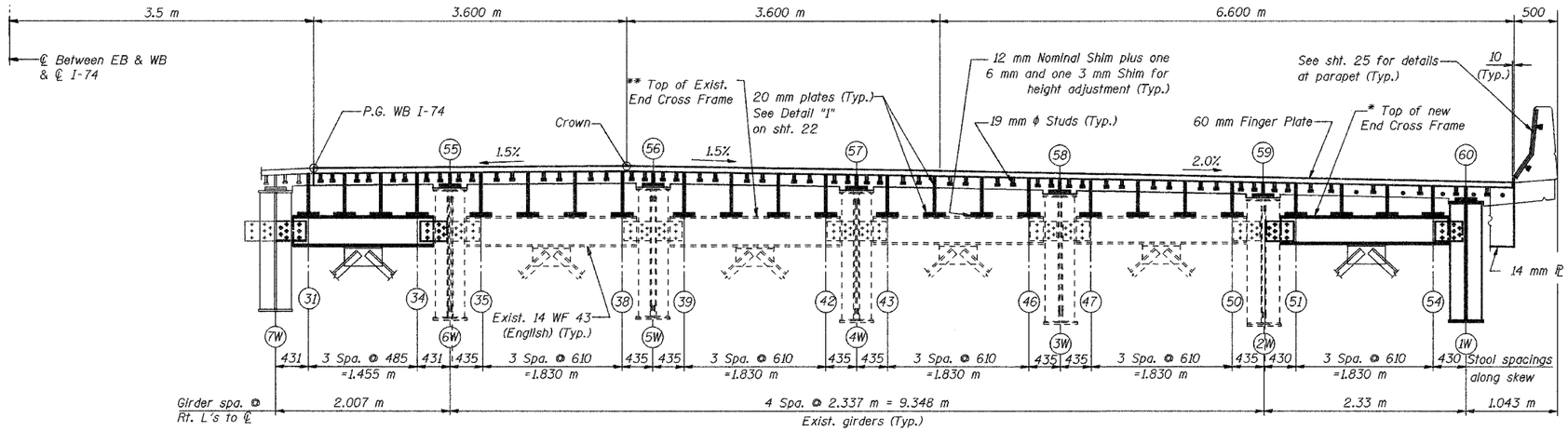
Stool #	Dim. A
1	313
2	321
3	329
4	337
5	352
6	363
7	373
8	383
9	377
10	372
11	366
12	361
13	353
14	347
15	339
16	331
17	320
18	311
19	303
20	295
21	283
22	275
23	267
24	257
31	310
32	318
33	327
34	335
35	402
36	412
37	422
38	433
39	427
40	421
41	416
42	410
43	402
44	397
45	389
46	381
47	369
48	361
49	353
50	345
51	281
52	273
53	265
54	259

See Detail 1 on Sht. 22 for Dim. A

TABLE FOR STOOL HEIGHT AT GIRDERS

25	355
26	347
27	316
28	265
29	268
30	176
55	329
56	318
57	267
58	241
59	231
60	175

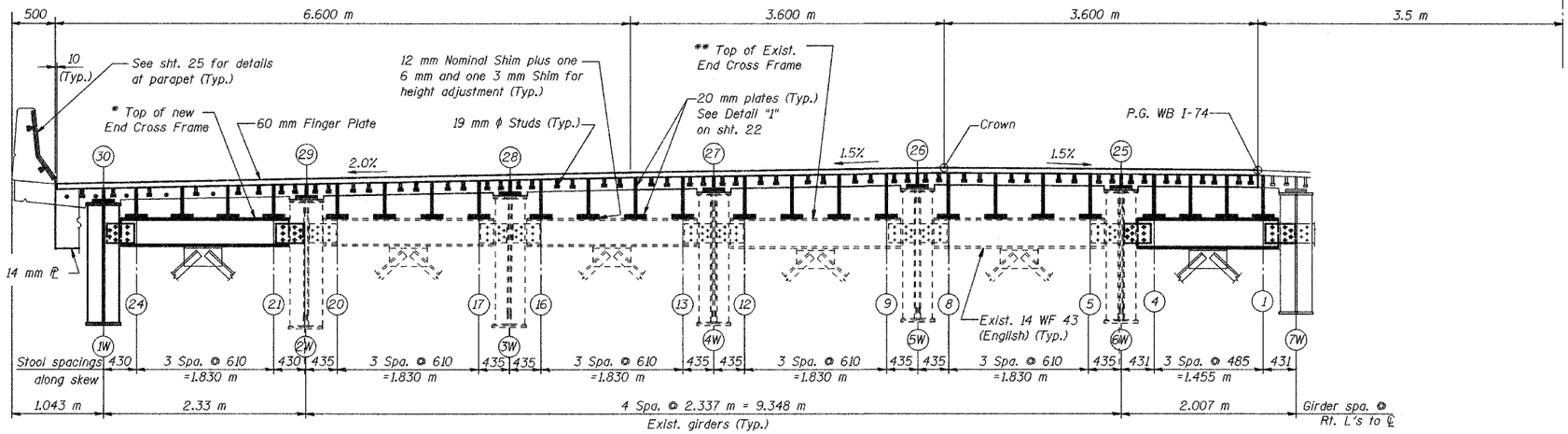
See Detail 1 on Sht. 25 for Dim. A



** Top of Existing cross frame beam
Elevation 152.684 WB North Bearings
Elevation 152.667 WB South Bearings

* Top of New cross frame beam
Elevation 152.736 WB North Bearings
Elevation 152.740 WB South Bearings

CROSS SECTION F-F (NORTH BRGS.)



CROSS SECTION G-G (SOUTH BRGS.)

Notes:

The cost of new steel and all hardware for the finger plate joints shall be included in the price of Furnishing and Erecting Structural steel.

The exist. finger plate joint assembly including roadway plate, stools and connecting hardware shall be removed. The cost of this work shall be included in the price for Removal of Existing Concrete Deck.

The exist. end diaphragm beams 14 WF 43 (English) shall remain. The existing holes in the diaphragm top flange shall be reused as a template for field drilling holes in the new stools to connect the new stools.

See Sheet 23 for location of Sections F-F and G-G.

For new stools on the existing girders use the holes in the new stools as a template to field drill holes in the existing girder flange.

The Contractor shall field verify the stool heights before ordering material for fabrication.

FINGER PLATE JOINT CROSS SECTION

Date		
Revisions	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn EV	
	Checked NPP	
	Approved NPP	

Sheet No. 24 of 68

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL.

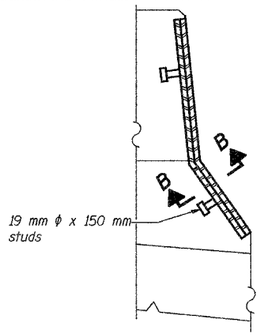
BRW Job No. 17049-071

68201

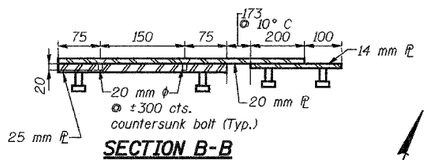
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	473
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 25
68 SHEETS

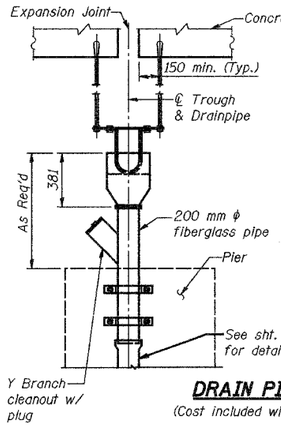
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

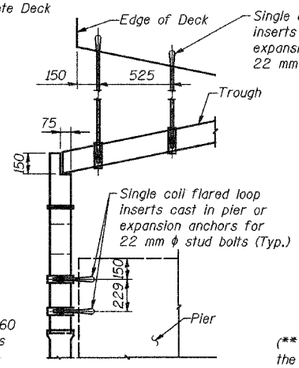


JOINT DETAIL AT PARAPET

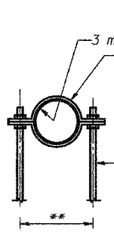


SECTION B-B

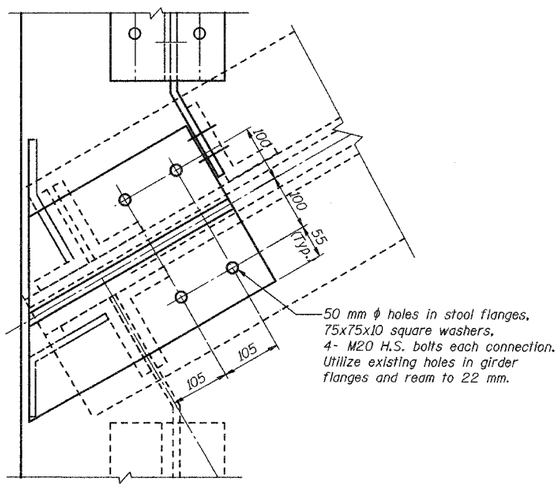




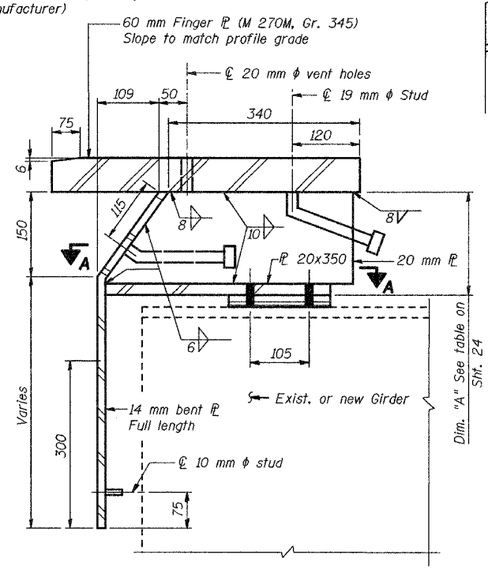
DRAIN PIPE DETAILS
(Cost included with "Drainage System")



(** Dimension as required by the manufacturer)



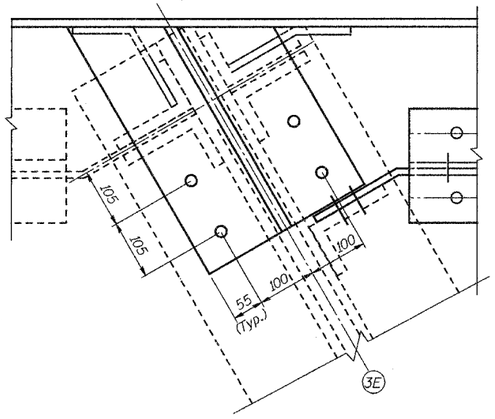
SECTION A-A



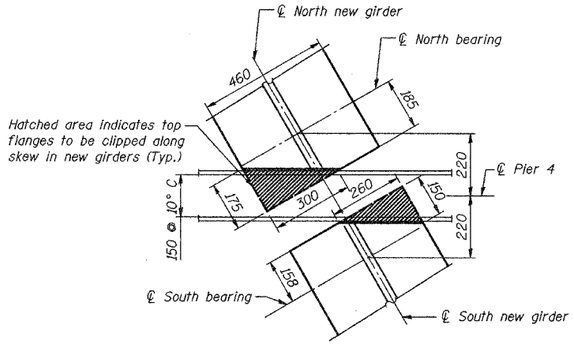
DETAIL 1
(At Girders)

*All the holes (12 mm ϕ) shall be drilled in the field.

TYPICAL SUPPORT DETAIL FOR THE FINGERPLATE JOINT STOOL



DETAIL 2



TOP FLANGE DETAIL
(At new girder)

Note:
See sht. 22 for location of Detail 1.

FINGERPLATE JOINT DETAILS

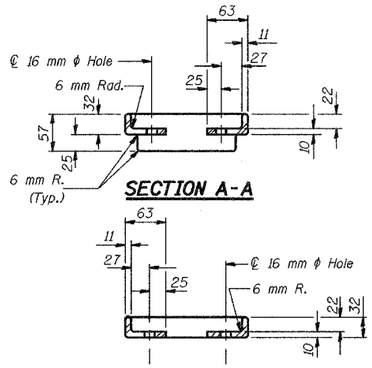
Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 25 of 68
Revisions	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

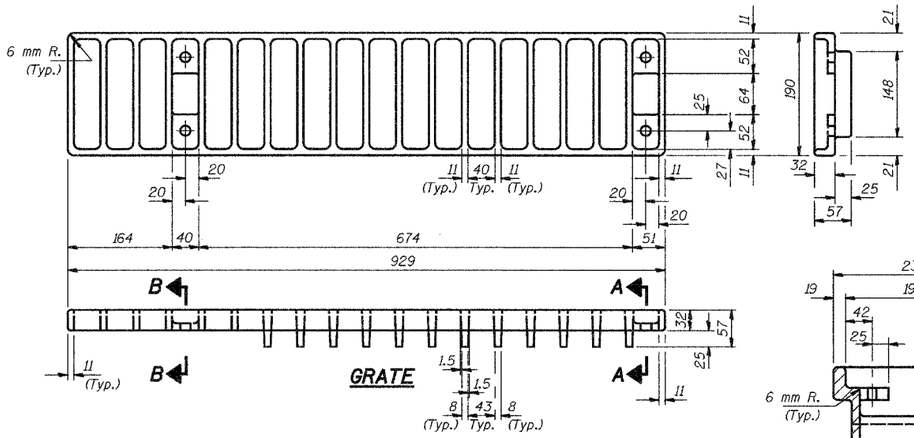
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	474
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 26
68 SHEETS

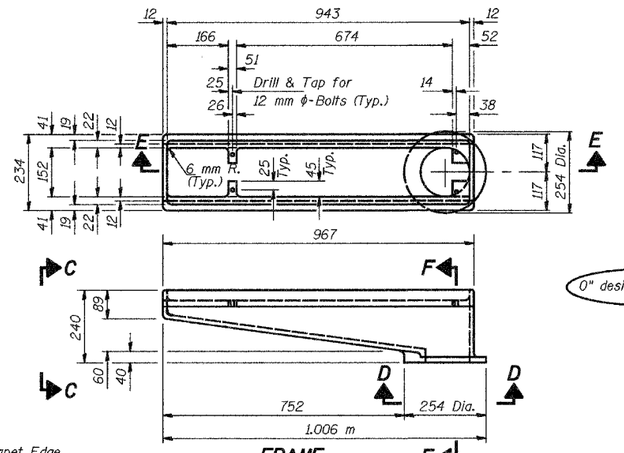


SECTION A-A

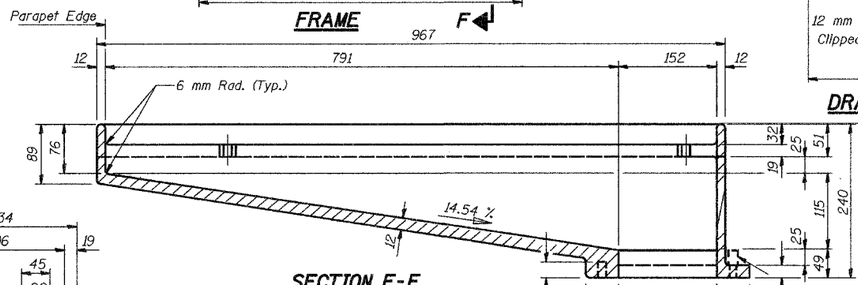
SECTION B-B

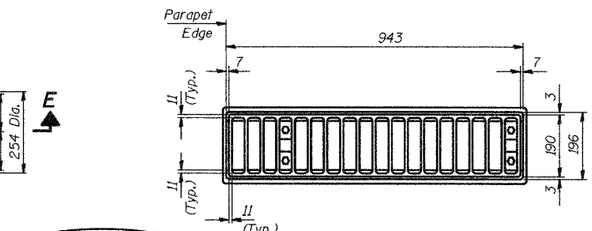


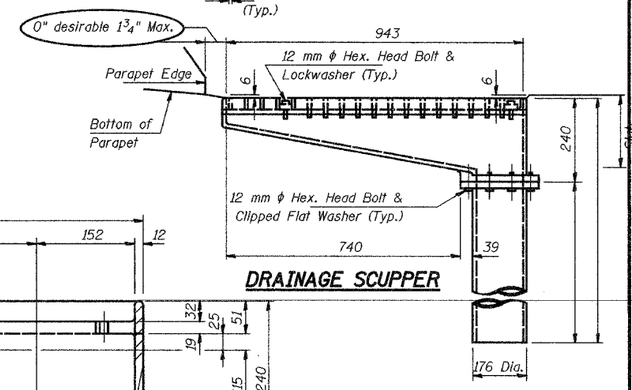
GRATE



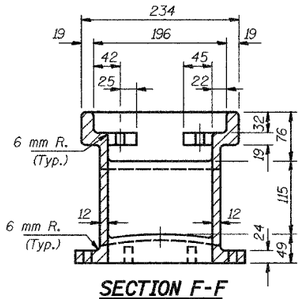
FRAME



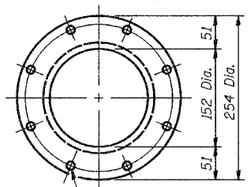




DRAINAGE SCUPPER

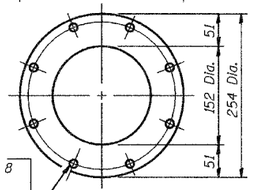


SECTION F-F



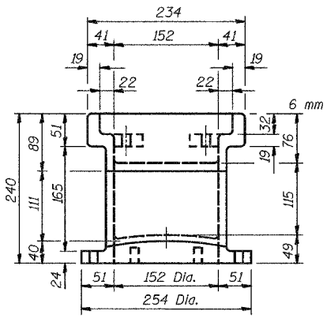
8 - 14 mm ϕ Holes on 222 mm
Bolt Circle Diameter

SECTION E-E

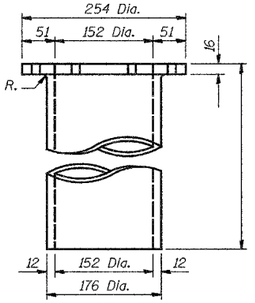


Drill & Tap 8
Holes for
12 mm ϕ- Bolts
on 222 mm Bolt
Circle Diameter.

VIEW D-D



VIEW C-C



DOWNSPOUT

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 30.
Bolts and washers shall conform to the requirements of ASTM A 307.
All bolts and washers shall be galvanized according to AASHTO M 232.
As an alternate bolts and washers may be stainless steel.
Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPER, TYPE I."
The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.
All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, Type I	Each	7

DRAINAGE SCUPPER, TYPE I

Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 26 of 68
Revisions	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

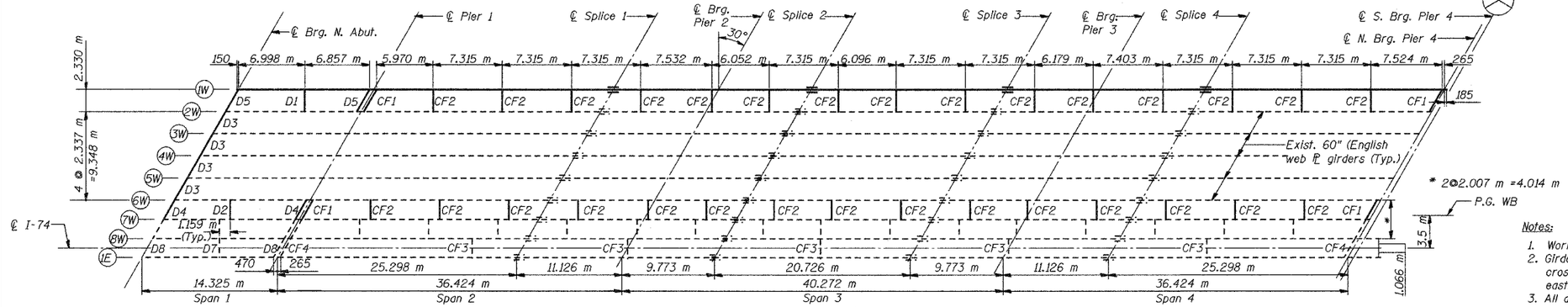
I:/PROJECTS/17049.071/Pre_Final_Plans/174_eb/Prefinal_Issue/drainscup.dgn

68201

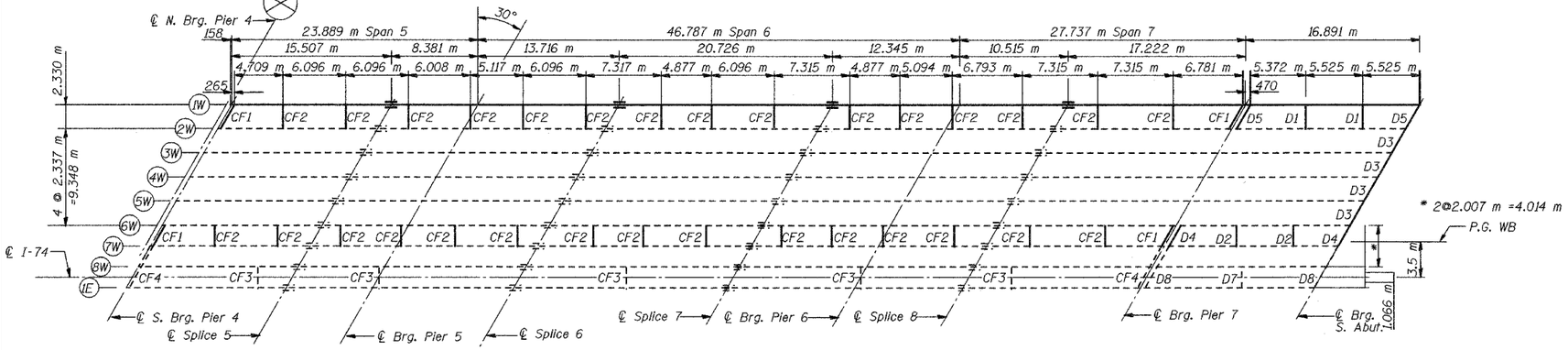
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	1475
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 27
68 SHEETS



PLAN-SPANS 1, 2, 3 & 4



PLAN-SPANS 5, 6, 7 & 8

Notes:

1. Work this sheet with sheets 28 through 33.
2. Girders 1E, 7W and 8W and associated cross frames and diaphragms erected during eastrbound contract.
3. All dimensions in millimeter (mm), except as noted.
4. See shts. 28 and 29 for girder details.
5. See shts. 30 and 31 for cross frame and diaphragm details.
6. Temporary diaphragms D7 and D8 and cross frames CF3 and CF4 are to be removed after all the steel is erected and prior to pouring concrete for the deck slab.
7. See shts. 34 through 40 for bearing details.
8. Cross frame spacing dimensions are at the ℄ of 10 mm connection plates.
9. Plan dimensions and details relative to the existing structure have been taken from existing plans. It shall be the Contractor's responsibility to verify such dimension in the field prior to fabrication of any material.
10. The cost of removing existing diaphragms shall be included in Structural Steel Removal. The cost of furnishing and erecting new diaphragms shall be included in Furnishing and Erecting Structural Steel.

LEGEND

- Existing Splice Location
- New Splice Location

STEEL FRAMING PLAN

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 27 of 68
Revisions	Drawn AEU		
	Checked NPP		
	Approved NPP		

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

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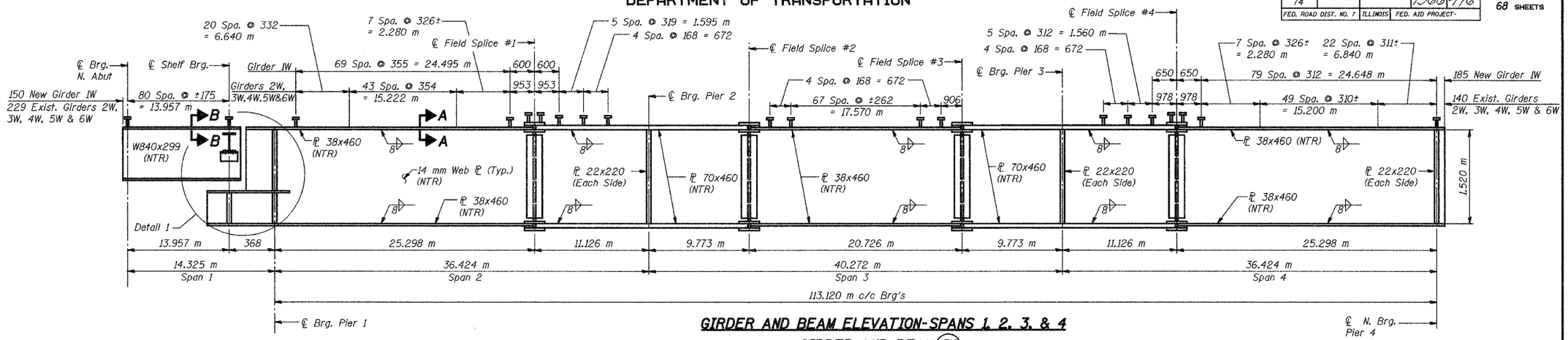
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

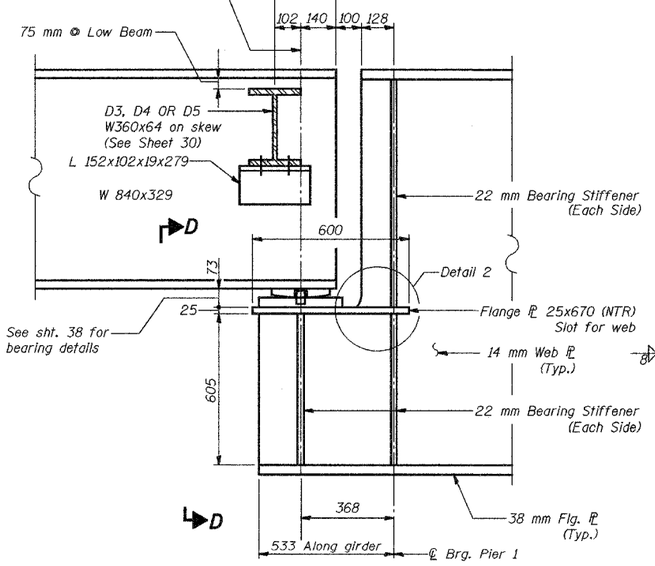
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	476
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 28
68 SHEETS

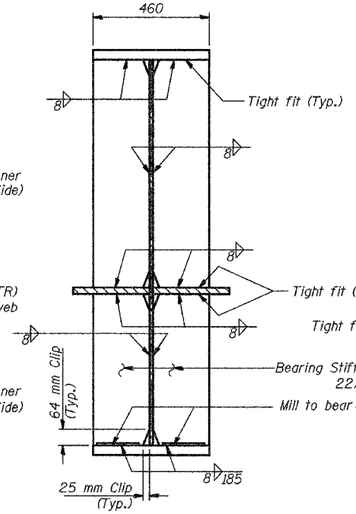


GIRDER AND BEAM ELEVATION-SPANS 1, 2, 3, & 4
GIRDER AND BEAM (1W)

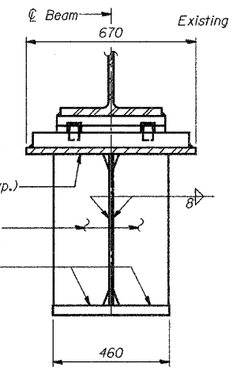
"NTR" denotes plates to which notch toughness requirements are applicable.
All plates of the girders, including bearing stiffeners, shall be AASHTO M 270M, Grade 250.
Cross frame connection plates are not shown.
See sht. 27 & 31 for locations and details.
See sht. 33 for shear connector detail on splice plate.



DETAIL 1

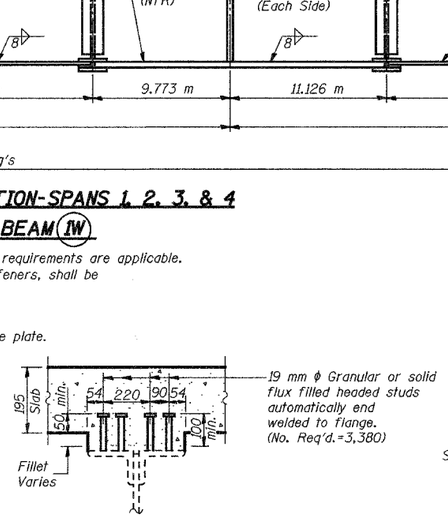


SECTION C-C



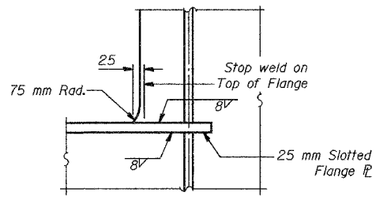
SECTION D-D

Notes:
1. Work this sht. with sht. 27.
2. See sht. 33 for bearing stiffener details.
3. See sht. 33 for splice details.

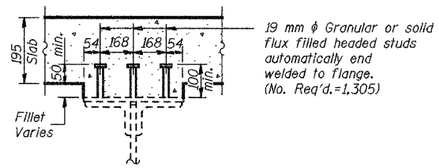


SECTION A-A

Existing Girders (2W), (3W), (4W), (5W) & (6W) without coverplates

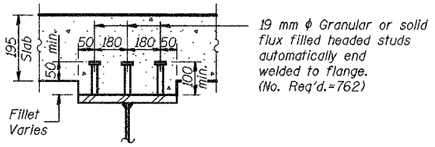


DETAIL 2



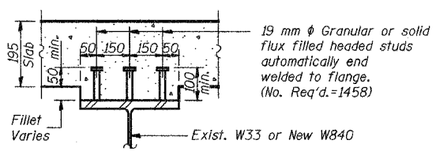
SECTION A-A

Existing Girders (2W), (3W), (4W), (5W) & (6W) with coverplates
Space Connectors to miss existing rivets & end of coverplate



SECTION A-A

Includes Connectors for top flange splice plate
See Detail on sht. 33



SECTION B-B

All Beams

STEEL DETAILS-SPANS 1, 2, 3 & 4

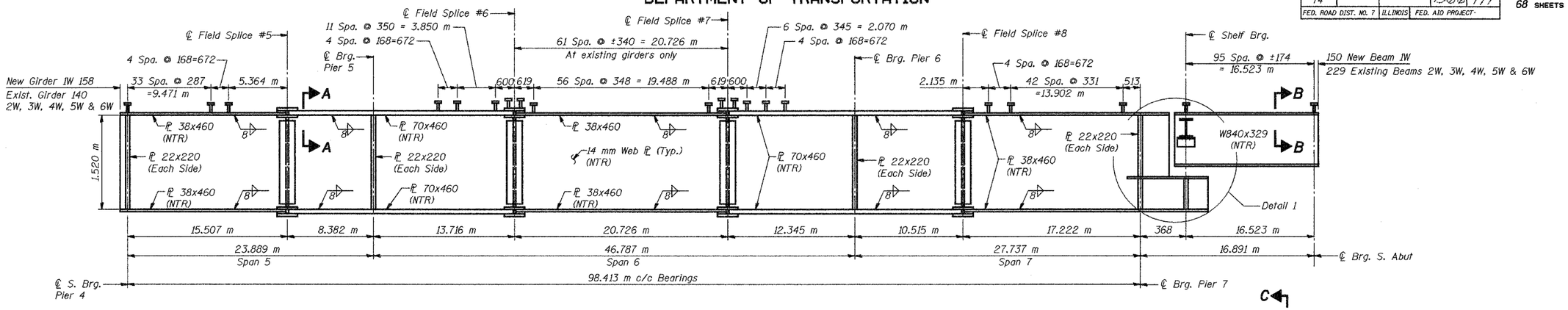
Date			
Revisions	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 28 of 68
	Drawn AEU		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	477
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 29
68 SHEETS



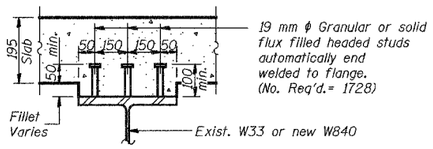
GIRDER ELEVATION-SPANS 5, 6, 7 & 8

GIRDER (1W)

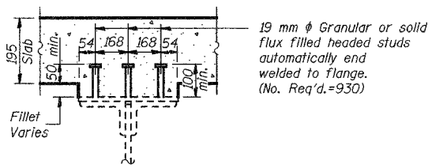
Cross frame connection plates are not shown. See shts. 27 and 31 for locations and details.

"NTR" denotes plates to which notch toughness requirements are applicable.

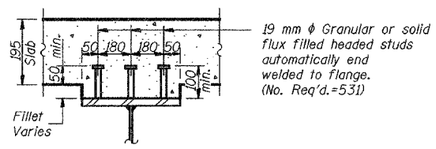
All plates of the girders, including bearing stiffeners, shall be AASHTO M 270M Grade 250.



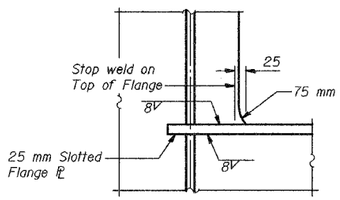
SECTION B-B
All Beams



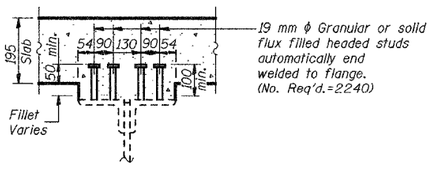
SECTION A-A
Existing Girders (2W), (3W), (4W), (5W) & (6W) with coverplates
Space Connectors to miss existing rivets & end of coverplate



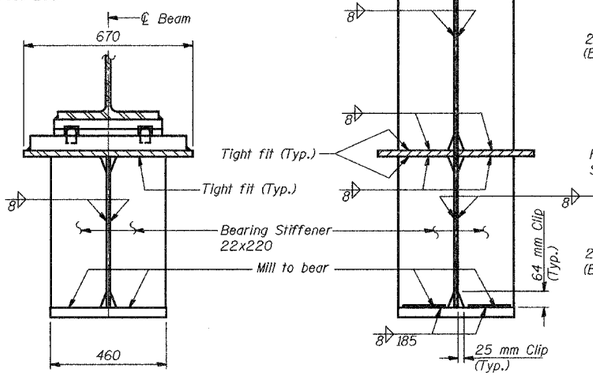
SECTION A-A
New Girder (1W)
Includes Connectors for top flange splice plate
See Detail on sht. 32



DETAIL 2

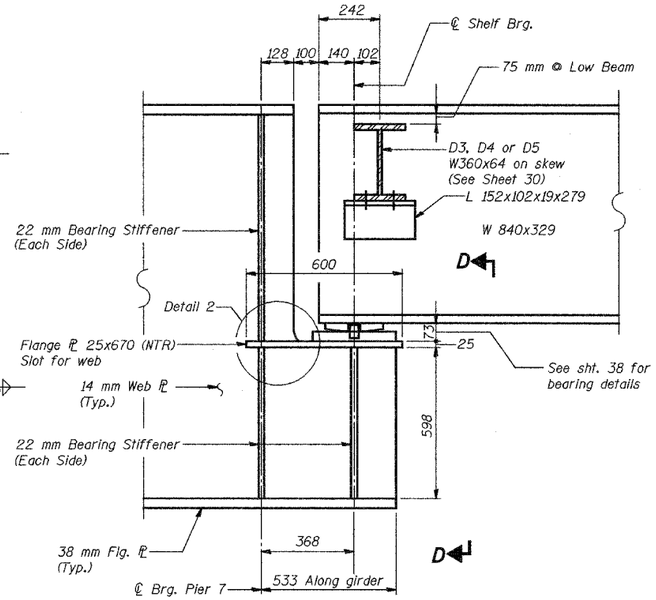


SECTION A-A
Existing Girders (2W), (3W), (4W), (5W) & (6W) without coverplates



SECTION D-D

SECTION C-C



DETAIL 1

Notes:
1. Work this sht. with sht. 26.
2. See sht. 32 for bearing stiffener details.
3. See sht. 32 for splice details.

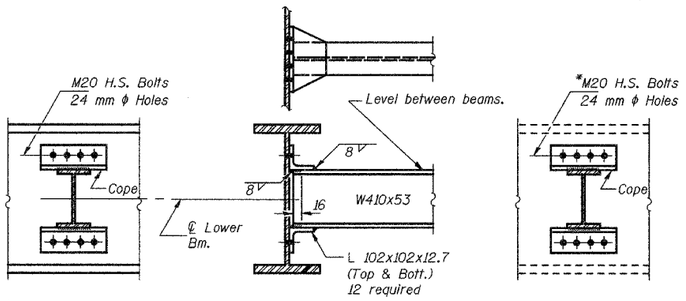
STEEL DETAILS-SPANS 5, 6, 7 & 8

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 29 of 68
Revisions	Drawn SOI		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	478
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

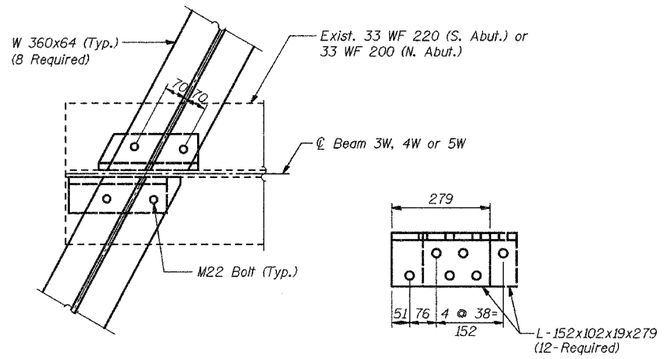
SHEET NO. 30
68 SHEETS

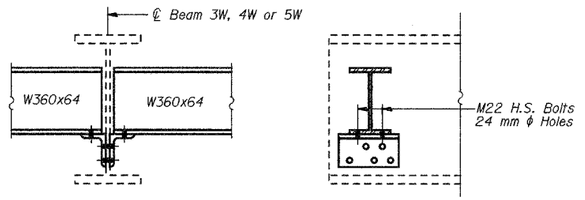


DIAPHRAGMS D1 AND D2

3-D1 Required
3-D2 Required

*Use holes in vertical leg of L 102x102 as a template to field drill holes in web of existing beams 2W, 6W & 7W. Cost included in Furnishing & Erecting Structural Steel.

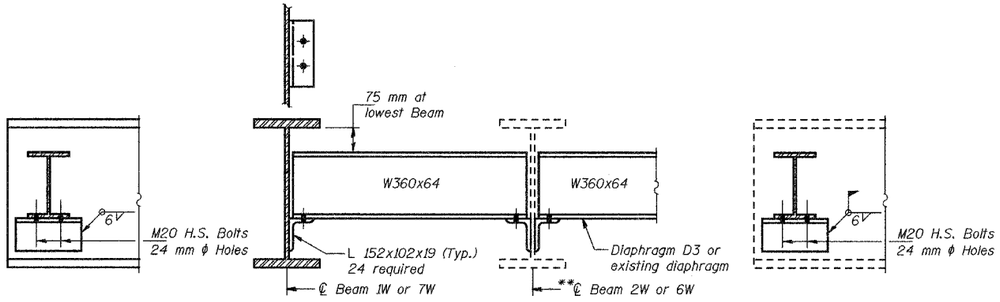




DIAPHRAGM D3

4 Required at N. Abutment
4 Required at S. Abutment

Use existing holes in 33 WF 220 or 33 WF 200 web as a template to field drill 24 mm ϕ holes in vertical leg of angle.
Use holes in W 360x64 flange as a template to field drill 24 mm ϕ holes in horizontal leg of angle.
Remove and replace exist. rivets with M22 bolts.
Existing holes shall be reamed in the field to 24 mm ϕ.
Cost included with Structural Steel Removal.
(Estimated No. 60).



DIAPHRAGM D4 & D5

4-D4 Required
4-D5 Required
**Remove existing rivets in existing web and field weld angle to existing web of beam

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Removal	kg	1,540

Notes
1. Work this sheet with sheet 27.
2. All dimensions are in millimeters (mm) except as noted.
3. Two hardened washers shall be required over all oversized holes for diaphragms and crossframes.

DIAPHRAGM DETAILS

Date			
Revisions	Designed	AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn	AEU	
	Checked	NPP	
	Approved	NPP	

Sheet No. 30 of 68

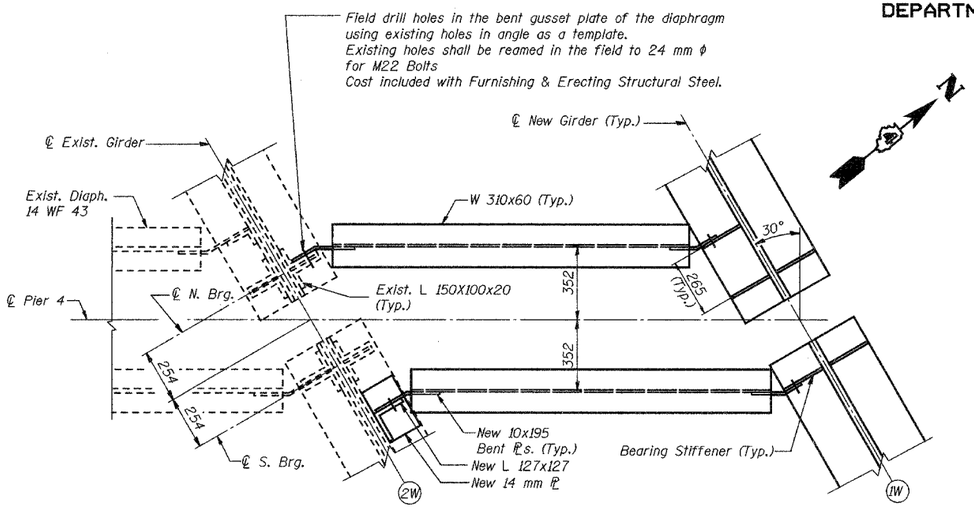
Prepared By: BRW, Inc.
A Division of URS
1701 Golf Rd., Suite 1000
Rolling Meadows, IL.
BRW Job No. 17049-071

68201

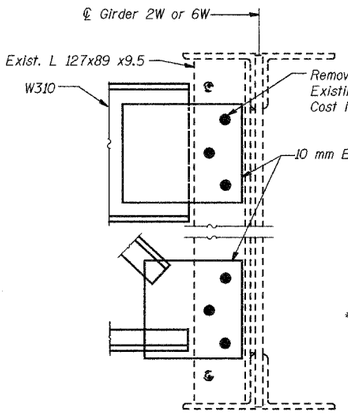
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	479
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 31
68 SHEETS

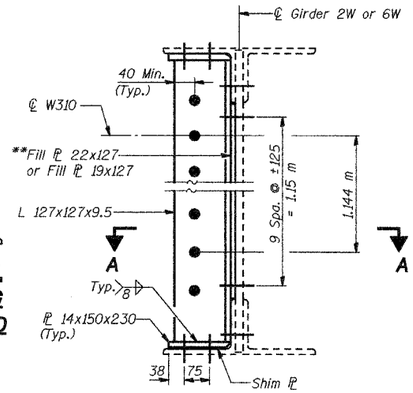


TYPICAL END CROSS FRAME PLAN



Remove and replace exist. rivets with M22 bolts.
Existing holes shall be reamed in the field to 24mm ϕ.
Cost included with Furnishing & Erecting Structural Steel.

CONNECTION DETAIL AT EXIST. BEARING STIFFENER FOR END CROSS FRAME CF1

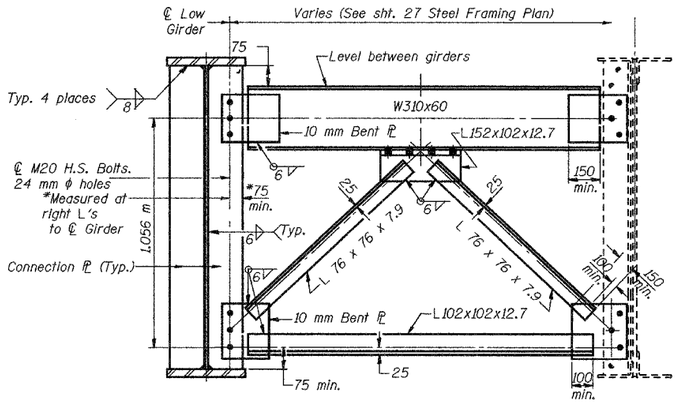


CONNECTION DETAIL AT EXIST. GIRDER FOR END CROSS FRAME CF1

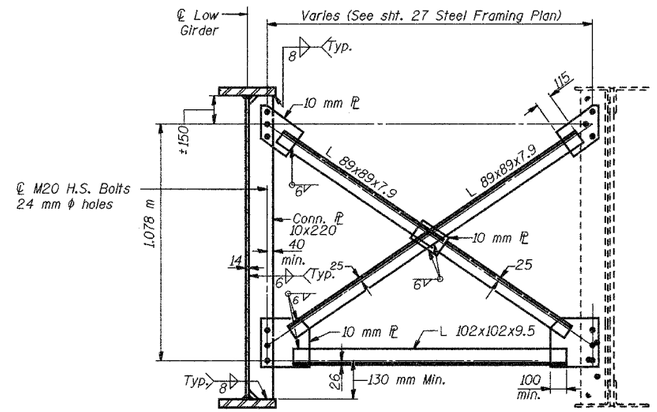
Remove and replace exist. rivets with M22 bolts.
Existing holes shall be reamed in the field to 24mm ϕ.
Cost included with Furnishing & Erecting Structural Steel.

****FILL ℙ SCHEDULE**

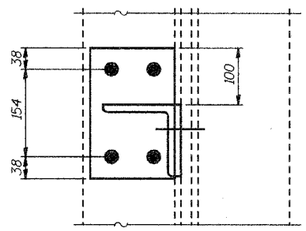
Location	Girder	Fill ℙ (mm)
Pier 1	2W	22
Pier 4 (N)	6W	22
Pier 4 (S)	2W	19
Pier 7	6W	19



TYPICAL END CROSS FRAME CF1
(All dimensions are along skew, unless otherwise noted)
See sht. 33 for bearing stiffener details
8 Required

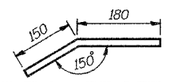


TYPICAL INTERIOR CROSS FRAME CF2
(All dimensions are measured at right L's to ℄ Girder)
60 Required



SECTION A-A

Notes:
1. Work this sheet with sheets 27 through 29.
2. Two hardened washers shall be required over all oversized holes for diaphragms and crossframes.
3. Field drill holes in the stiffeners at girder 7W using holes in the gusset plates as a template.



TYPICAL BENT PLATE DETAIL

CROSS FRAME DETAILS

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 31 of 68
Revisions	Drawn SOI		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

68201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	480
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 32
68 SHEETS

INTERIOR GIRDER MOMENT TABLE I-74 WESTBOUND

		0.5 Sp. 1	0.4 Sp.2or4	Pier 2 or 3	0.5 Sp. 3	*0.3 Sp. 5	Pier 5	0.5 Sp. 6	Pier 6	*0.4 Sp. 7	0.5 Sp. 8
Is	(10^6 mm^4)	4786	25316	44825	25316	25316	44825	25316	44825	25316	5327
Ic (n)	(10^6 mm^4)	9922	43486	—	43486	—	—	43486	—	—	10718
Ic (3n)	(10^6 mm^4)	7416	33836	—	33836	—	—	33836	—	—	8023
Ss	(10^3 mm^3)	11182	31724	54006	31724	31724	54006	31724	54006	31724	12360
Sc (n)	(10^3 mm^3)	14338	37104	—	37104	—	—	37104	—	—	15693
Sc (3n)	(10^3 mm^3)	13149	34739	—	34739	—	—	34739	—	—	14378
M_{DL}	(kN/m)	13.94	15.5	24.69	15.5	22.2	24.69	15.5	24.69	22.2	14.27
M_{DL}	(kN·m)	340	1468	3701	618	202	3850	1575	4043	571	487
f_{sDL} (non-comp)	(MPa)	30	47	69	20	7	71	50	75	18	39
s_{DL}	(kN/m)	6.7	6.7	—	6.7	—	—	6.7	—	—	6.7
M_{SDL}	(kN·m)	163	642	—	318	—	—	726	—	—	229
f_{sDL} (comp)	(MPa)	12	19	—	9	—	—	21	—	—	16
M_{LL}	(kN·m)	513	1432	1479	1274	797	1468	1435	1530	970	656
M (Imp)	(kN·m)	150	293	295	248	196	264	258	274	225	183
$f_s[M_S+M(Imp)]$	(kN·m)	46	47	33	41	32	32	46	33	38	54
fs (Total)	(MPa)	88	113	102	70	39	103	117	108	56	109
VR	(kN)	230	283	—	303	291	—	299	—	285	239

INTERIOR GIRDER REACTION TABLE-WESTBOUND

		N. Abut. Shelf Span 1	Pier 1	Pier 2	Pier 3	Pier 4 North	Pier 4 South	Pier 5	Pier 6	Pier 7	Shelf Span 8 S. Abut.
R_{DL}	(kN)	144	473	1002	1005	308	108	988	1024	360	173
R_{LL}	(kN)	177	236	376	376	201	190	363	371	219	184
Imp.	(kN)	52	41	50	50	41	47	50	50	41	51
R (Total)	(kN)	373	750	1428	1431	550	345	1401	1445	620	408

*These sections were not considered as composite because the ultimate strength provisions of AASHTO Article 10.38.5.1.2 for the design of the shear studs was not met. Only the fatigue provisions of AASHTO Article 10.38.5.1.1 have been satisfied.

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

M_{DL} - Moment due to loads on non-composite section.

M_{SDL} - Moment due to loads on composite section.

M_{LL} - Moment due to live load on non-composite or composite section.

M (Imp)- Moment due to live load impact on non-composite or composite section.

MISCELLANEOUS STEEL DETAILS

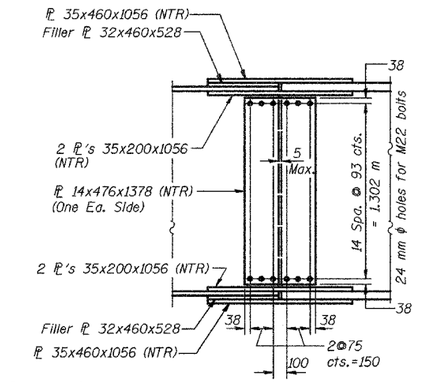
Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 32 of 68
Revisions	Drawn AEU		
	Checked NPP		
	Approved NPP		

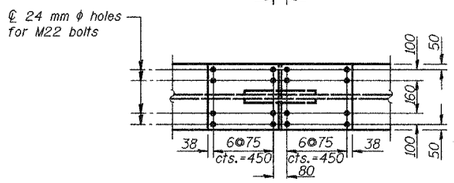
Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	481
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 33
68 SHEETS

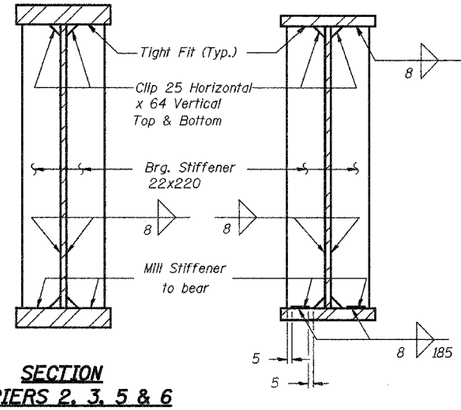




TYPICAL FIELD SPLICE DETAILS

(8-Required)

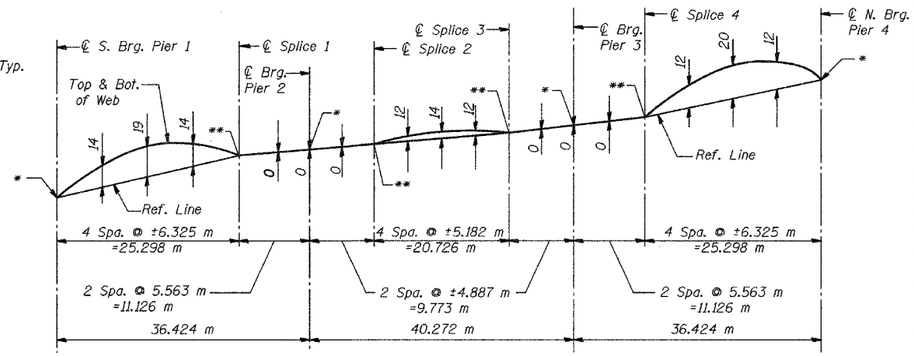
All plates, except filler plates, to meet notch toughness requirements.



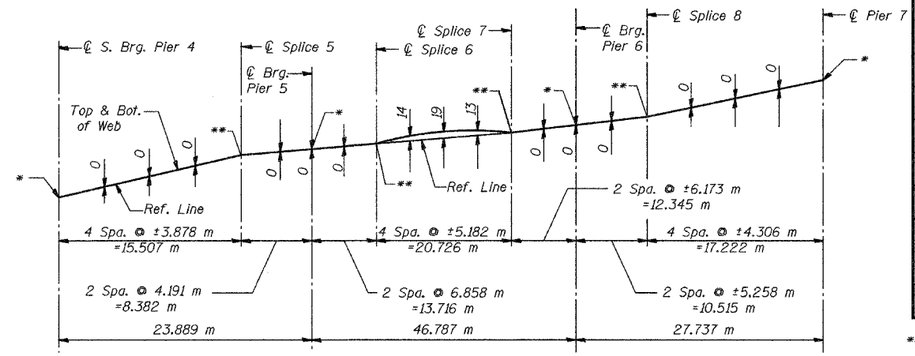
SECTION AT PIERS 2, 3, 5 & 6

SECTION AT PIERS 1, 4, & 7

BEARING STIFFENER DETAILS



CAMBER DIAGRAM SPANS 2, 3 & 4



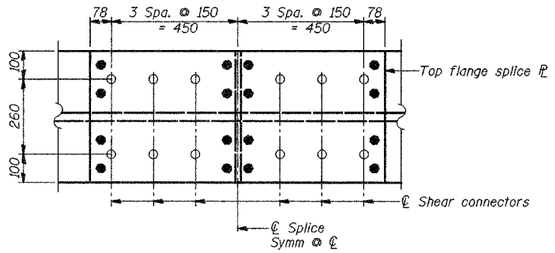
CAMBER DIAGRAM SPANS 5, 6 & 7

* Final top of web elevations to be used in computing the bearing's seat elevations.

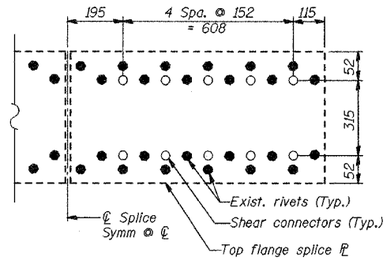
** Theoretical elevations before Dead Load deflection.

TOP OF WEB ELEVATIONS (For Fabrication Only)	
Location	Girder 1W
*N. Abut.	151.836
*℄ Shelf	151.948
Pier 1	151.907
Pier 2	152.131
Pier 3	152.453
Pier 4 (N)	152.811
Pier 4 (S)	152.815
Pier 5	152.891
Pier 6	152.967
Pier 7	152.952
*℄ Shelf	152.995
*S. Abut.	152.900
Splice 1	152.052
Splice 2	152.201
Splice 3	152.367
Splice 4	152.551
Splice 5	152.841
Splice 6	152.971
Splice 7	153.000
Splice 8	152.941

*Top of Beam Elevations



(NEW GIRDER-1W)



(EXIST. GIRDERS-2W, 3W, 4W, 5W & 6W)

PLAN - TOP FLANGE SPLICE ℄ DETAILS FOR SHEAR CONNECTORS

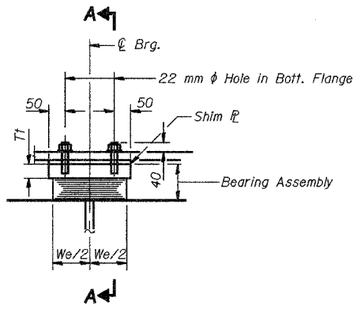
MISCELLANEOUS STEEL DETAILS

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 33 of 68
Revisions	Drawn AEU		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

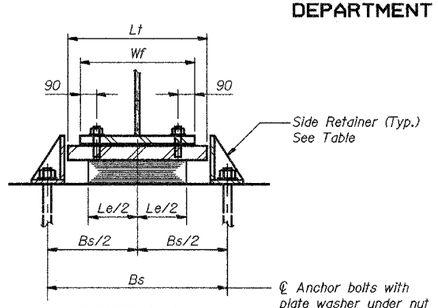
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	432
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 34
68 SHEETS



ELEVATION AT PIER



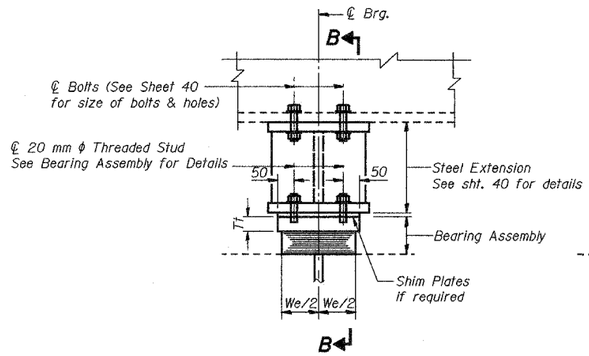
SECTION A-A

TYPE I BEARING DIMENSION SCHEDULE

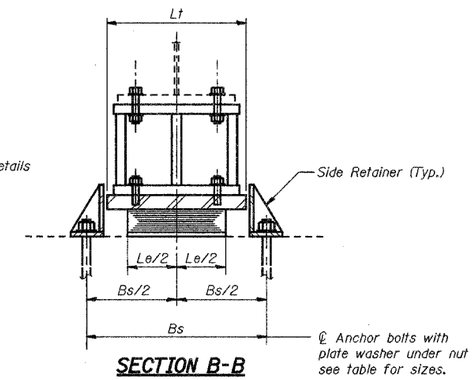
Location	Girder	Bearing								Top Plate			Bs	Th	Wf
		We	Le	Tp	Np	Ts	Ns	Te	f	Wt	Lt	Tt			
Pier 7	IW-6W	280	406	13	5	3	4	77	86	304	460	55	586	132	460
Pier 1	IW-6W	306	458	14	6	5	5	109	86	330	510	70	656	179	460

TYPE I ELASTOMERIC EXP. BRG. AT PIERS 1 & 7 (AT NEW GIRDER)

1 Required at Pier 1
1 Required at Pier 7



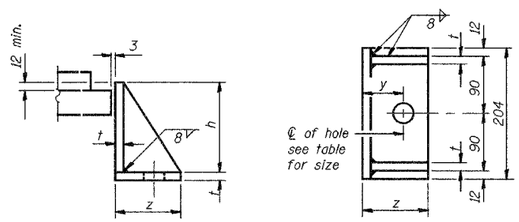
ELEVATION AT PIER



SECTION B-B

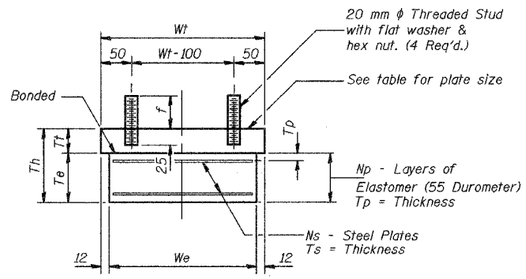
TYPE I ELASTOMERIC EXP. BRG. AT PIERS 1 & 7 (AT EXISTING GIRDERS)

5 Required at Pier 1
5 Required at Pier 7



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Structural Steel.



TYPE I BEARING ASSEMBLY

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

SIDE RETAINER SCHEDULE

Location	Girder	Anchor Bolt Dia. x Length	Plate Washer	Hole Size ϕ (mm)	Side Retainer			
					y	z	t	h
Pier 7	IW-6W	M30x380 (A307)	65x65x8	38	60	120	14	130
Pier 1	IW-6W	M36x450 (A307)	75x75x8	44	70	140	16	175

Notes:
1. The cost of furnishing and erecting elastomeric bearing assemblies, including threaded studs, is included in the cost of Elastomeric Bearing Assembly Type I. The cost of furnishing and erecting side retainers, anchor bolts and shim plates of elastomeric bearings is included in the cost of Furnishing and Erecting Structural Steel.
2. Adjusting shims shall be placed as required during erection. The cost of furnishing and erecting adjusting shims is included in the cost of Furnishing and Erecting Structural Steel. See General Note 11, Sheet 3.
3. All dimensions are in millimeters (mm) except as noted.
4. The cost of removal of the existing bearings is included in the cost of Jack and Remove Existing bearings. See sheet 39 for jacking details.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12

TYPE I ELASTOMERIC BEARING DETAILS

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 34 of 68
Revisions	Drawn AEU		
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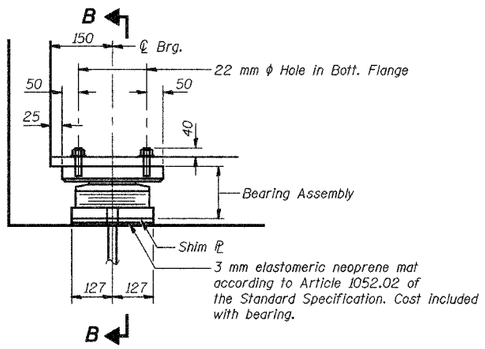
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

68201

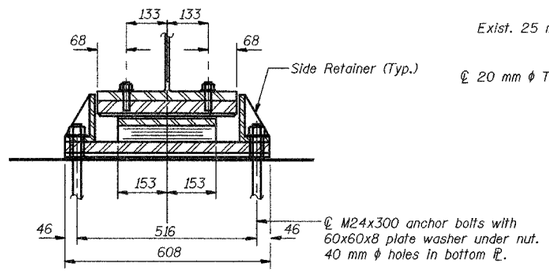
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	483
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

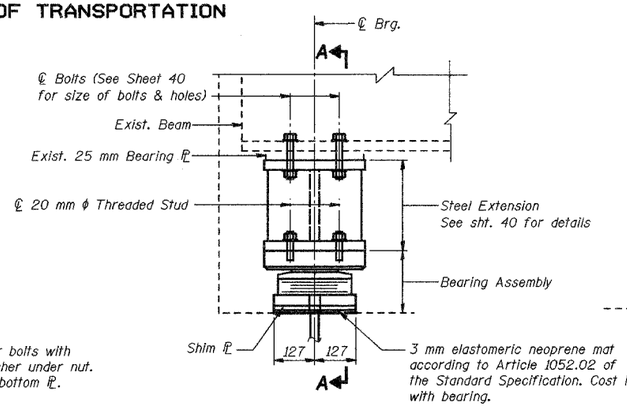
SHEET NO. 35
68 SHEETS



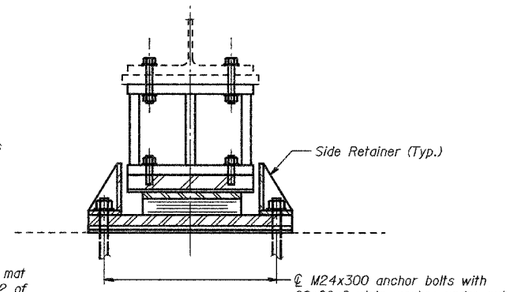
ELEVATION AT ABUTMENTS



SECTION B-B



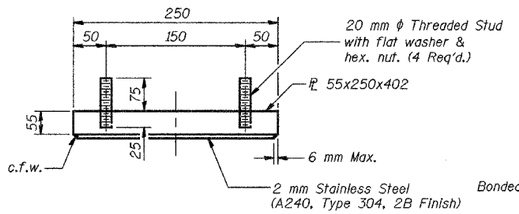
ELEVATION AT ABUT.



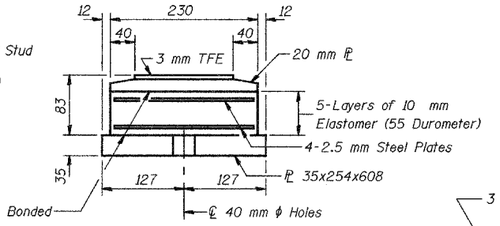
SECTION A-A

TYPE II ELASTOMERIC EXP. BRG. AT ABUTMENTS (AT NEW BEAM)

1 Required at North Abutment
1 Required at South Abutment

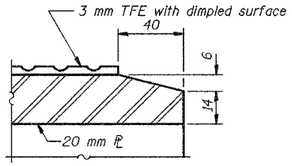


TOP BEARING ASSEMBLY

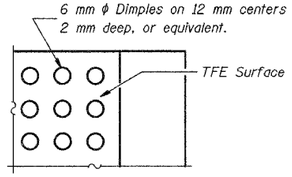


BOTTOM BEARING ASSEMBLY

TYPE II BEARING ASSEMBLY



SECTION THRU TFE



PLAN-TFE SURFACE

TYPE II ELASTOMERIC EXP. BRG. AT ABUTMENTS (AT EXISTING BEAMS)

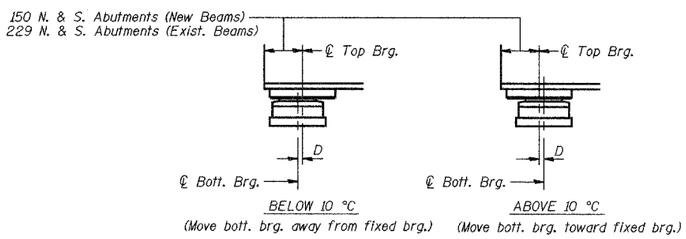
5 Required at North Abutment
5 Required at South Abutment
(Details not shown are similar to at new beam)

Notes:

1. The cost of furnishing and erecting elastomeric bearing assemblies, including threaded studs, is included in the cost of Elastomeric Bearing Assembly Type II. The cost of furnishing and erecting side retainers, anchor bolts and shim plates of elastomeric bearings is included in the cost of Furnishing and Erecting Structural Steel.
2. Adjusting shims shall be placed as required during erection. The cost of furnishing and erecting adjusting shims is included in the cost of Furnishing and Erecting Structural Steel. See General Note 11, Sheet 3.
3. All dimensions are in millimeters (mm) except as noted.
4. The cost of removal of the existing bearings is included in the cost of Jack and Remove Existing Bearings. See sheet 39 for details.

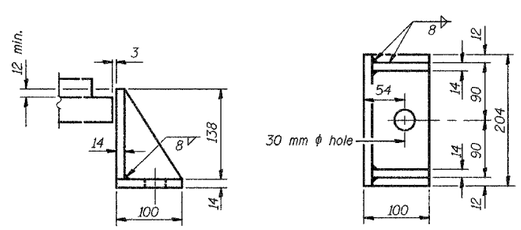
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12



SETTING ANCHOR BOLTS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Structural Steel.

TYPE II ELASTOMERIC BEARING DETAILS

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 35 of 68
Revisions	Drawn SOI		
	Checked NPP		
	Approved NPP		

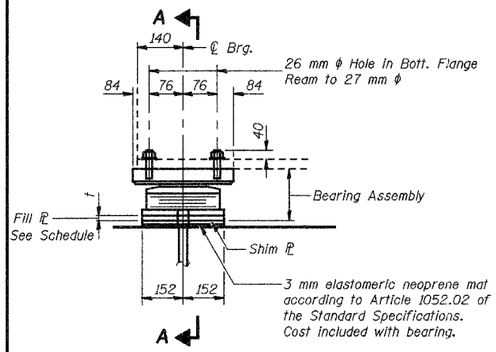
Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

66201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

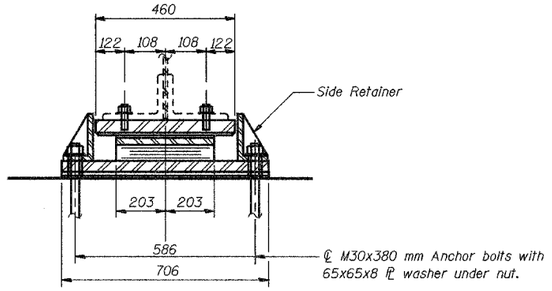
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	184
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 36
68 SHEETS

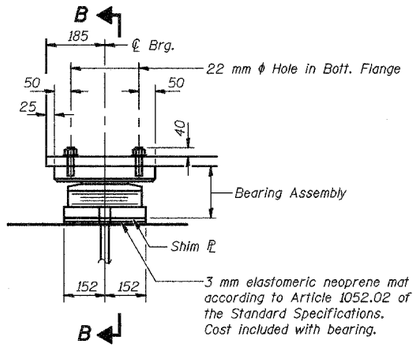


ELEVATION AT PIER 4 (NORTH) AT EXISTING GIRDERS

5 Required

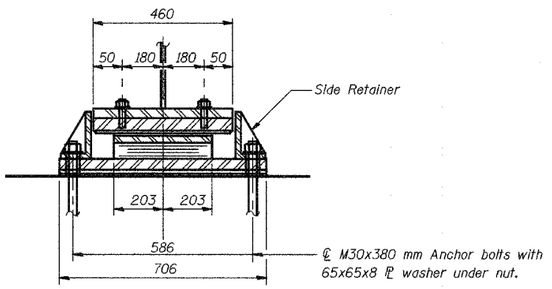


SECTION A-A



ELEVATION AT PIER 4 (NORTH) AT NEW GIRDER

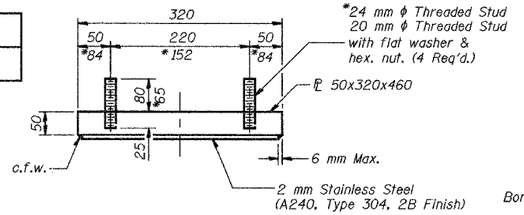
1 Required



SECTION B-B

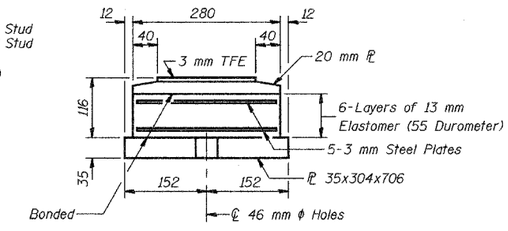
FILL ℙ SCHEDULE

Girder	2W	3W	4W	5W	6W
t	19	51	43	18	22



TOP BEARING ASSEMBLY

*Indicates dimensions for existing girders

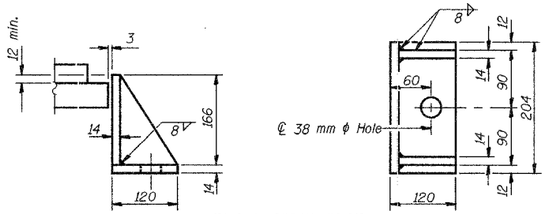


BOTTOM BEARING ASSEMBLY

TYPE II ELASTOMERIC EXP. BRG.

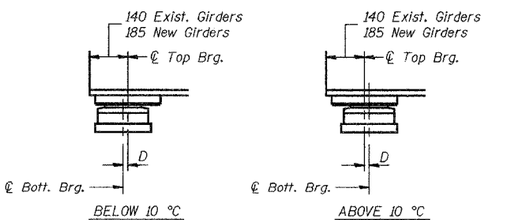
Notes:

1. The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
2. Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
3. See sheet 41 for Anchor Bolt installation.
4. All dimensions are in millimeters (mm) except as noted.
5. The removal of existing bearings at Pier 4 is included in the cost of Removal of Existing Bearings.



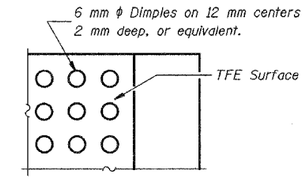
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Structural Steel.

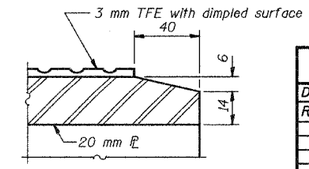


SETTING ANCHOR BOLTS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.



PLAN-TFE SURFACE



SECTION THRU TFE

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	6
Removal of Existing Bearings	Each	5

BEARING DETAILS PIER 4 (NORTH)

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 36 of 68
Revisions	Drawn AEU		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

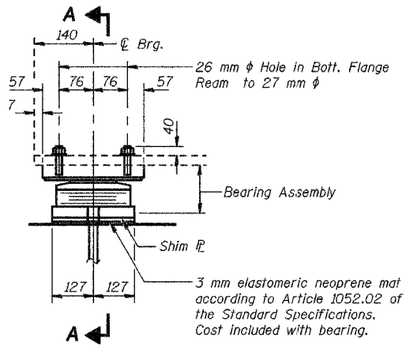
I-2-E2 (M) 4-30-99

68201

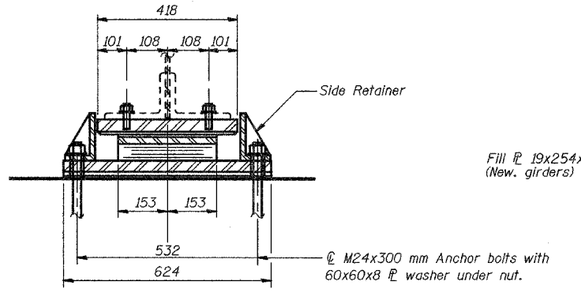
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	485
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

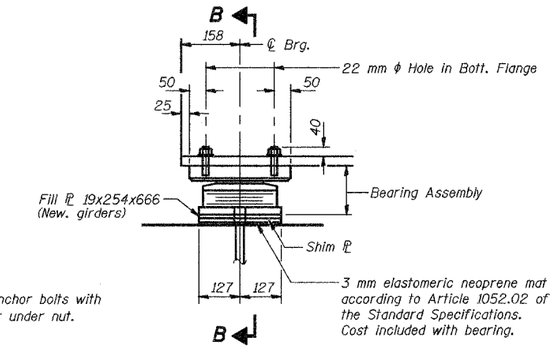
SHEET NO. 37
68 SHEETS



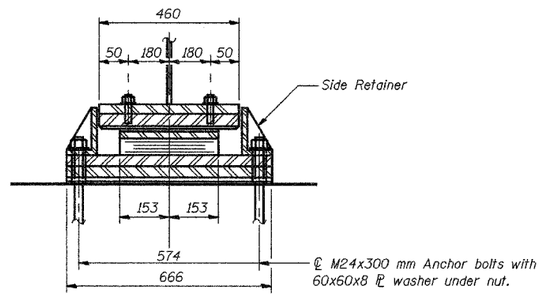
ELEVATION AT PIER 4 (SOUTH) AT EXISTING GIRDERS
5 Required



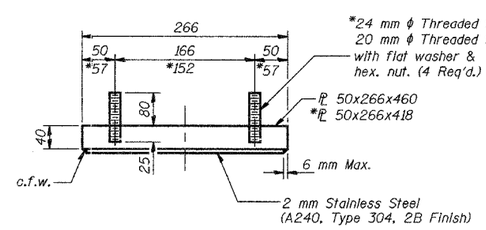
SECTION A-A



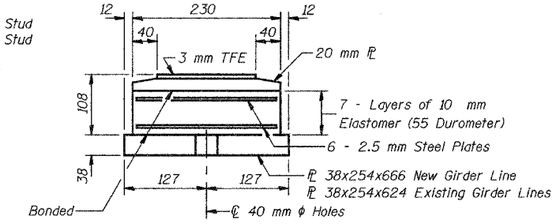
ELEVATION AT PIER 4 (SOUTH) AT NEW GIRDER
1 Required



SECTION B-B



TOP BEARING ASSEMBLY
*Indicates dimensions for existing girders

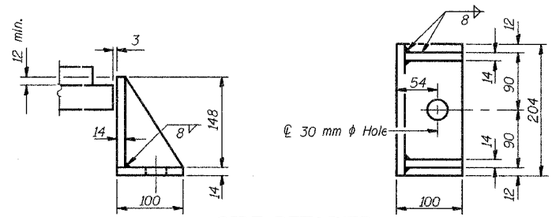


BOTTOM BEARING ASSEMBLY

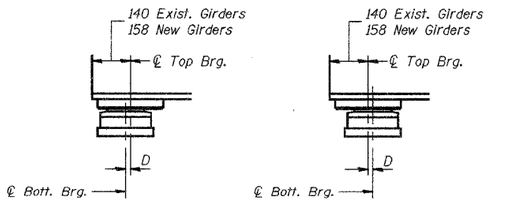
TYPE II ELASTOMERIC EXP. BRG.

Notes:

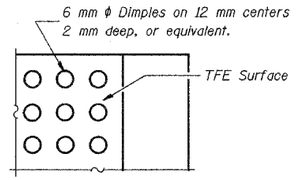
1. The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
2. Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
3. See sheet 41 for Anchor Bolt Installation.
4. All dimensions are in millimeters (mm) except as noted.
5. The removal of existing bearings at Pier 4 is included in the cost of Removal of Existing Bearings.



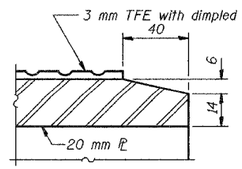
SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Structural Steel.



SETTING ANCHOR BOLTS AT EXP. BRG.
D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.



PLAN-TFE SURFACE



SECTION THRU TFE

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	6
Removal of Existing Bearings	Each	5

BEARING DETAILS PIER 4 (SOUTH)

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 37 of 68
Revisions	Drawn AEU		
	Checked NPP		
	Approved NPP		

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

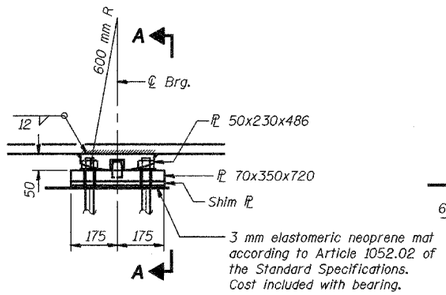
I-2-E2 (M) 4-30-99

68201

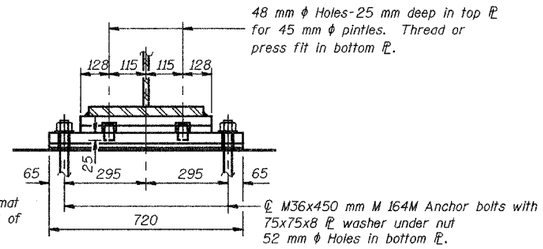
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	486
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 38
68 SHEETS



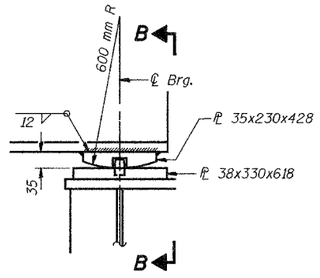
ELEVATION AT PIER



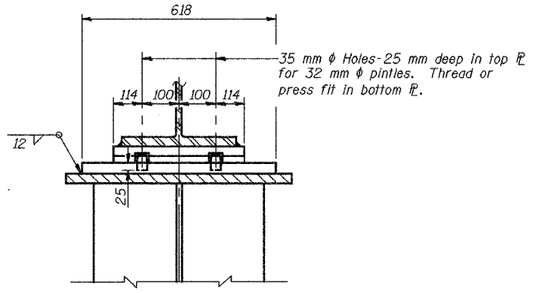
SECTION A-A

FIXED BEARING AT PIERS 2 AND 6

1 Required at Pier 2
1 Required at Pier 6



ELEVATION AT PIER

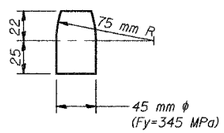


SECTION B-B

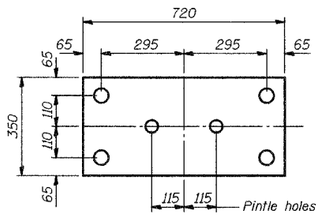
(See sheets 27 & 28 for shelf details)

FIXED SHELF BEARING AT PIERS 1 & 7

1 Required at Pier 1
1 Required at Pier 7

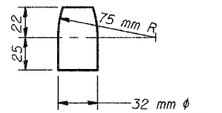


PINTLE



BOTTOM BEARING PLATE DETAIL

(At Piers 2 & 6)



PINTLE

Notes:
1. Anchor bolts at fixed bearings may be built into masonry.
2. See sht. 41 for Anchor Bolt installation.
3. All dimensions are in millimeters (mm) except as noted.
4. The existing fixed bearings shall be cleaned and painted. The cost for cleaning and painting shall be included in Cleaning and Painting Steel Bridge.

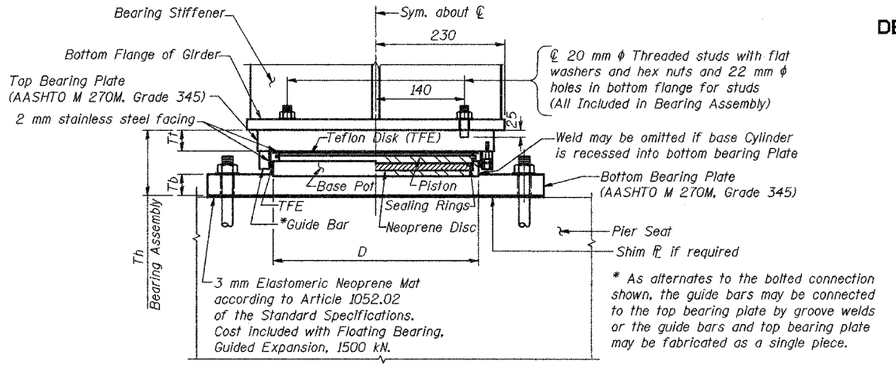
FIXED BEARING DETAILS

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 38 of 68
Revisions	Drawn AEU		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	487
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 39
68 SHEETS

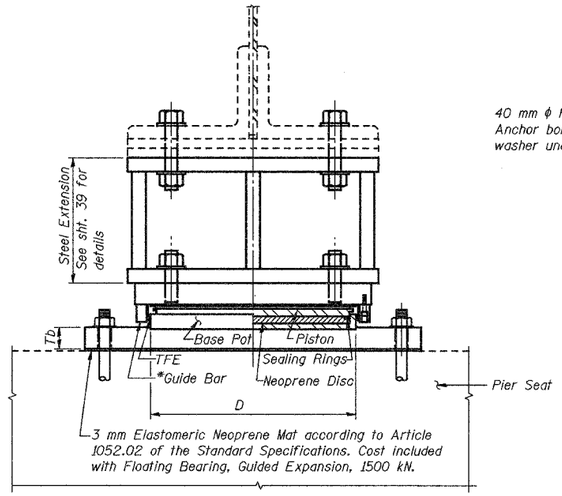


* As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.

HALF SECTION THRU GUIDED EXPANSION BEARING (AT GIRDER IW, PIERS 3 & 5)

1 Required at Pier 3
1 Required at Pier 5

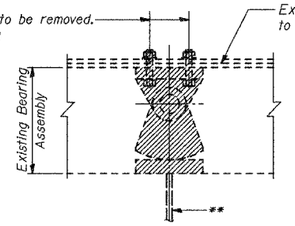
R Total - Total axial DL+LL w/o impact .... 1381 kN
Expansion Length..... 46.787 m
L - Transverse Length of piston..... 340 mm
D - Outside pot diameter..... 340 mm
Tt - Thickness of top plate..... 70 mm
Tb - Thickness of bottom plate..... 50 mm
Th - Total height of bearing assembly..... 237 mm



HALF SECTION THRU GUIDED EXPANSION BEARING AND STEEL EXTENSION (AT EXISTING GIRDERS, PIERS 3 & 5)

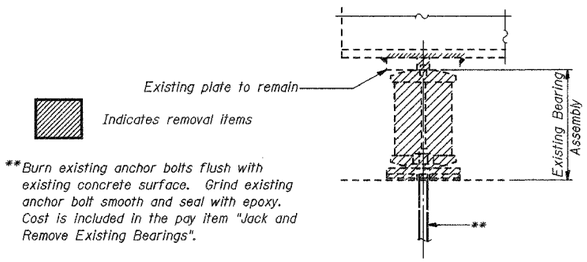
(Other information not given same as shown for New Girders)
5 Required at Pier 3
5 Required at Pier 5

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



PIERS 3 & 5 EXIST. BEARING REMOVAL DETAIL

5 Required at Pier 3
5 Required at Pier 5



**Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy. Cost is included in the pay item "Jack and Remove Existing Bearings".

N. & S. ABUTMENT EXIST. BEARING REMOVAL DETAIL

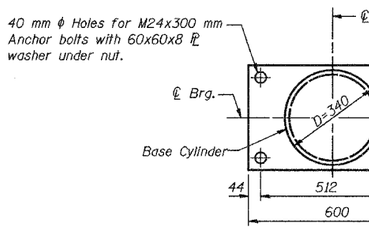
5 Required at North Abutment
5 Required at South Abutment

DEAD LOAD REACTIONS (STEEL ONLY)

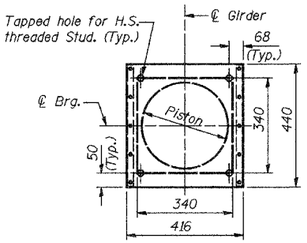
Location	Reaction (kN)	Min. Jack Capacity (kN)
N. Abut. & S. Abut.	73	146
Pier 1	106	212
Pier 2 & Pier 3	230	460
Pier 4 (N)	69	138
Pier 4 (S)	24	48
Pier 5	227	454
Pier 6	235	470
Pier 7	80	160

JACK AND REMOVE EXISTING BEARING PROCEDURE

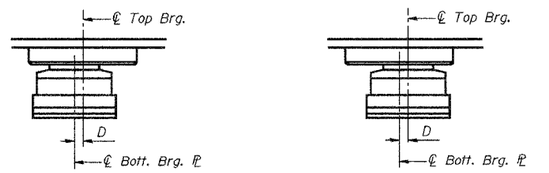
1. The Contractor shall submit for approval by the Engineer, plans for jacking prior to commencing any work at the bearings.
2. Jacking and removing bearings shall be done after removal of existing deck is complete.
3. The maximum differential lift between beams or girders at any one substructure unit shall be limited to 7 mm. If simultaneous jacking of all beams or girders at a substructure unit is utilized, then the maximum total lift shall be limited to 19 mm.
4. The new bearings shall be in place and the jacks lowered before the new concrete deck is poured.



BOTTOM BEARING PLATE & BASE CYLINDER PLAN

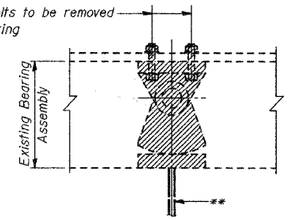


TOP BEARING PLATE & PISTON PLAN



ANCHOR BOLT SETTING DETAILS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8° C temp change from the normal temp. of 10° C.



PIER 1 & PIER 7 EXISTING BEARING REMOVAL DETAIL

5 Required at Pier 1
5 Required at Pier 7

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Guided Expansion, 1500 kN.	Each	12
Jack and Remove Existing Bearings	Each	30

Notes:
1. See Sht. 41 for Anchor Bolt installation.

FLOATING BEARING DETAILS

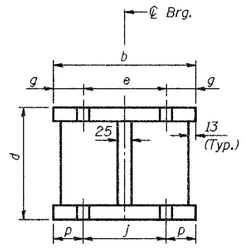
Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 39 of 68
Revisions	Drawn SOI		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

66201

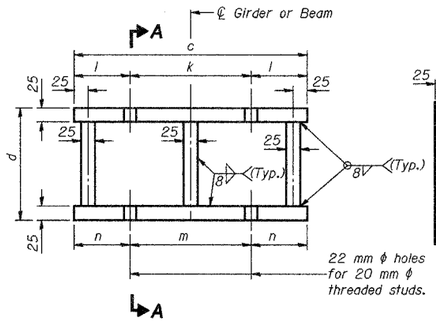
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	488
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

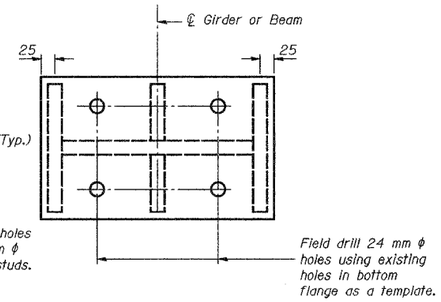
SHEET NO. 40
68 SHEETS



SECTION A-A



ELEVATION STEEL EXTENSION



PLAN STEEL EXTENSION

STEEL EXTENSION DIMENSION SCHEDULE

Location	Girder or beam	b	c	d	e	g	j	k	l	m	n	p	Remarks
N. Abut. & S. Abut.	2W-6W	250	402	165	140	55	150	202	100	266	68	50	Field drill 24 mm ϕ holes in existing bottom flange and 25 mm plate for M22 bolts.
Pier 1	2W-6W	330	416	269	152	89	230	216	100	280	68	50	Use existing 26 mm ϕ holes in existing bottom flange of the Girder to connect steel extensions. Use M22 bolts.
Pier 7	2W-6W	304	416	316	152	76	204	216	100	280	68	50	Use existing 26 mm ϕ holes in existing bottom flange of the Girder to connect steel extensions. Use M22 bolts.
Piers 3 & 5	2W-6W	440	416	246	178	131	340	216	100	280	68	50	Use existing 26 mm ϕ holes in existing bottom flange of the Girder to connect steel extensions. Use M22 bolts.

Note:
Prior to ordering any material the Contractor shall verify in field all bearing heights and shim thickness dimensions.

STEEL EXTENSION DETAILS

Date / Revisions			
	Designed NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 40 of 68
	Drawn SOI		
	Checked JPB		
	Approved NPP		

Prepared By: BRW, Inc.
A Division of URS
1701 Golf Rd., Suite 1000
Rolling Meadows, IL.

BRW Job No. 17049-071

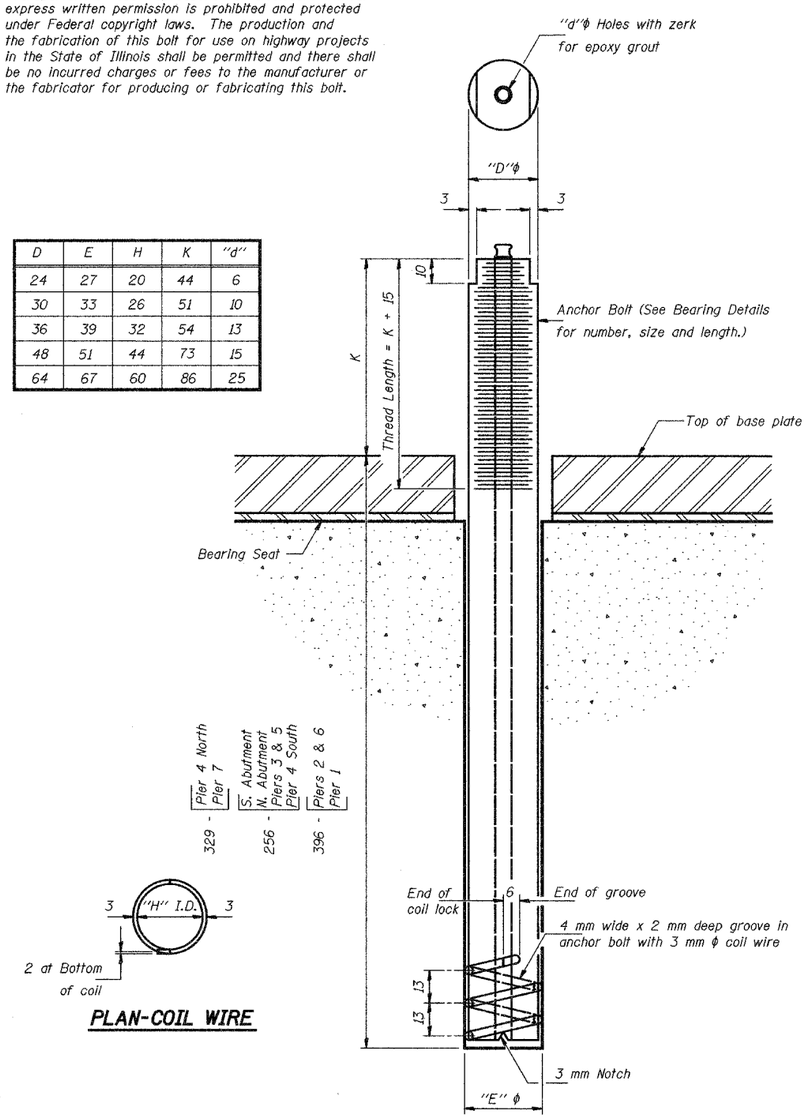
68291

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	489
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 41
68 SHEETS

D	E	H	K	"d"
24	27	20	44	6
30	33	26	51	10
36	39	32	54	13
48	51	44	73	15
64	67	60	86	25



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

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
S. Abutment	A 307
N. Abutment	A 307
Pier 1	A 307
Piers 2 & 6	M 164
Piers 3 & 5	A 307
Pier 4 South	A 307
Pier 4 North	A 307
Pier 7	A 307

ASTM F 1554 (Fy = 724 MPa), ASTM A 449 and AASHTO M 314 (Fy = 724 MPa) 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".

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

ABB-1 (M) 4-30-99

ANCHOR BOLT DETAILS

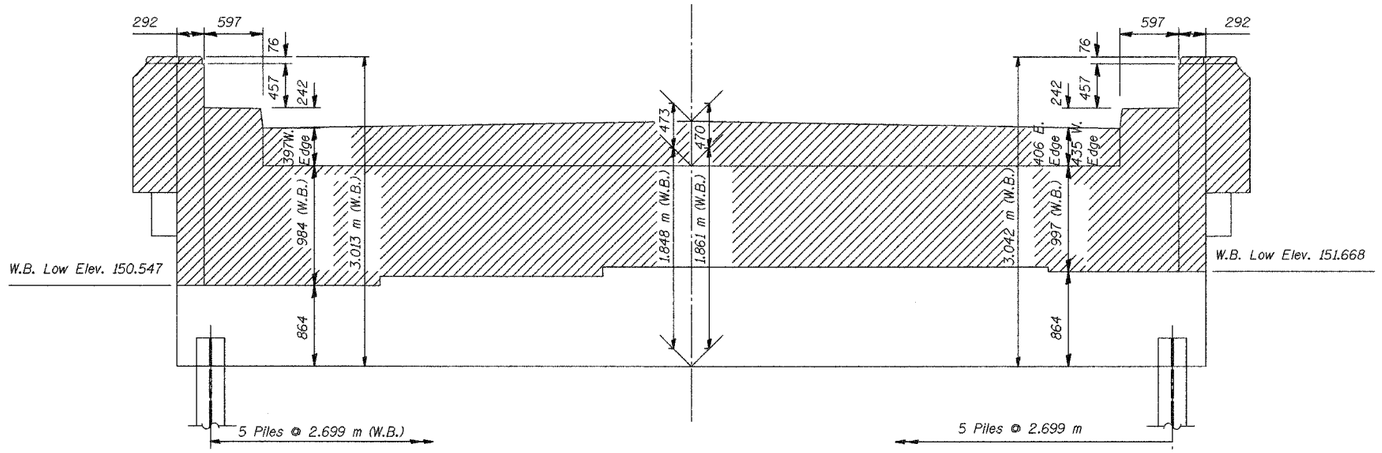
Date / Revisions			Sheet No.
	Designed NPP Drawn SOI Checked AEU Approved NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	41 of 68
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

98201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	1490
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 42
68 SHEETS

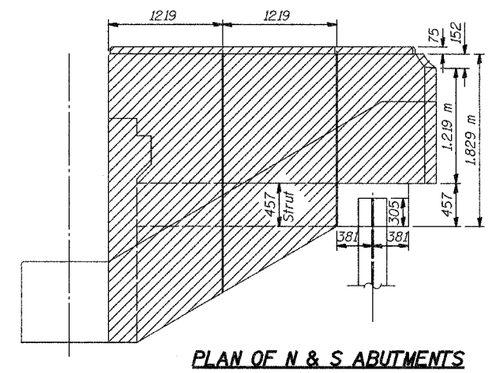


HALF ELEV. OF N. ABUTMENTS

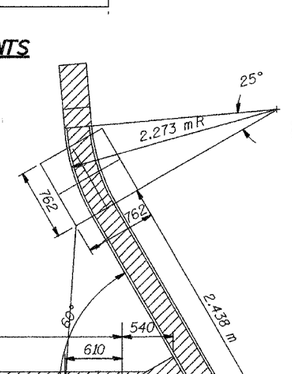
At Right Angles to the ℄ Rdwy.
Looking North

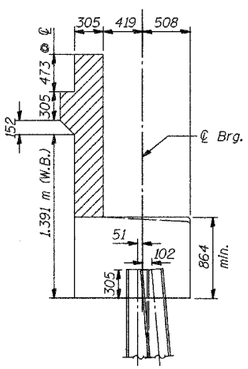
HALF ELEV. OF S. ABUTMENTS

At Right Angles to the ℄ Rdwy.
Looking South

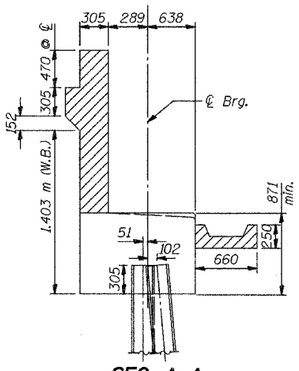


PLAN OF N & S ABUTMENTS





SEC. A-A N. ABUTMENT



SEC. A-A S. ABUTMENT

PLAN OF N & S ABUTMENTS

BILL OF MATERIAL

Item		Unit	Total
Concrete Removal	N. Abut.	CU YD	21.7
Concrete Removal	S. Abut.	CU YD	26.4

Legend:

Concrete Removal

NOTES:

1. Dimensions and Elevations given are based on original design plans and are to be field verified by the Contractor.
2. Hatched areas indicate "Concrete Removal".

PARTIAL ABUTMENT REMOVAL DETAILS

Date / Revisions		
	Designed EV Drawn EV Checked NPP Approved NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009

Sheet No. 42 of 68

Prepared By: BRW, Inc.
A Division of URS
1701 Golf Rd., Suite 1000
Rolling Meadows, IL.

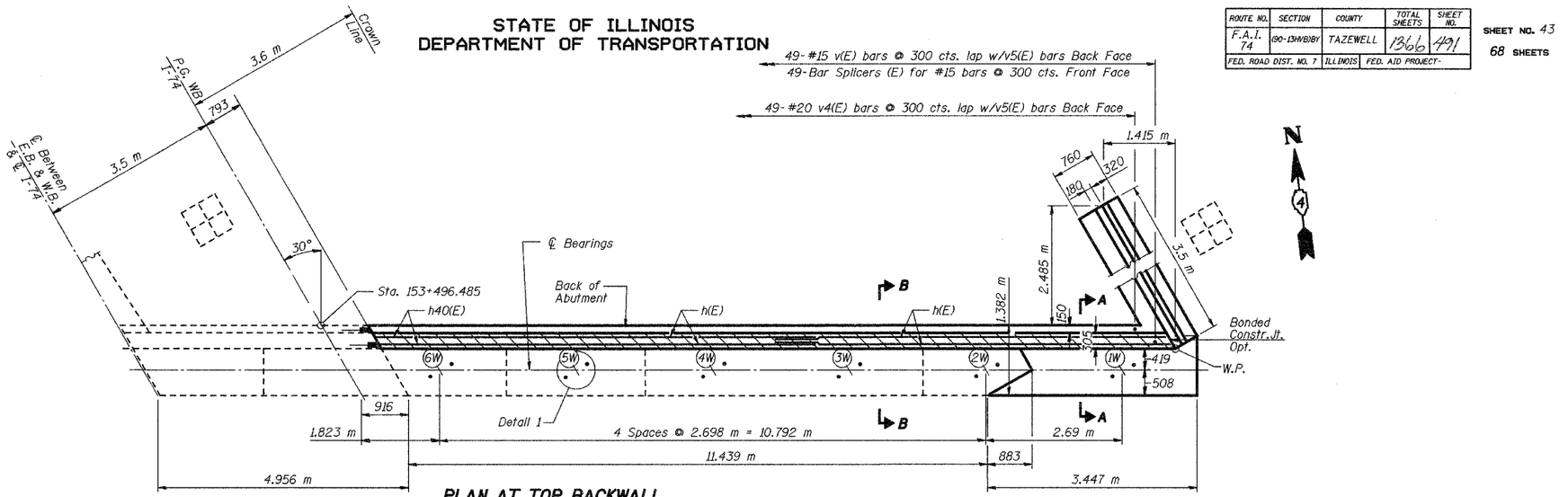
BRW Job No. 17049-071

69201

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	491
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 43
68 SHEETS



PILE DATA

Type: Steel HP310x79 Piles
Capacity: Driven to Refusal
Est. Length: 11 m
No. Required: 5 (4+1 Test Pile)

NOTES:

1. Work this Sheet with Sheets 44 and 45.
2. See Sheet 44 for Notes.
3. See Sheet 42 for abutment removal details.
4. All dimensions are in millimeters (mm) except as noted.
5. Reinforcement bars designated (E) shall be epoxy coated.

NORTH ABUTMENT EXTENSION PLANS

Date			
Revisions	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 43 of 68
	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

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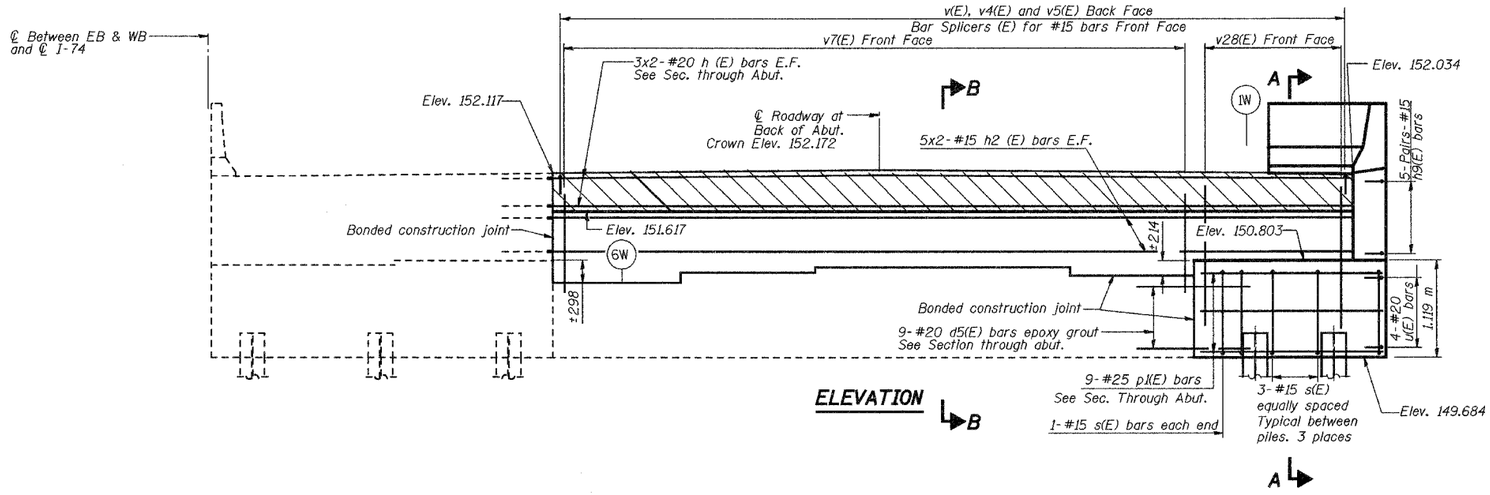
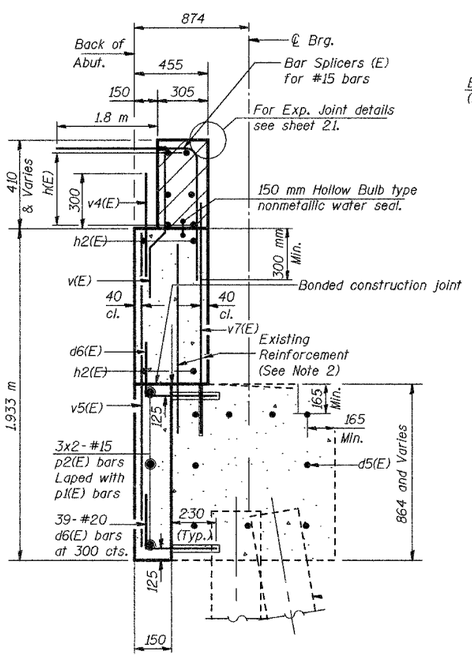
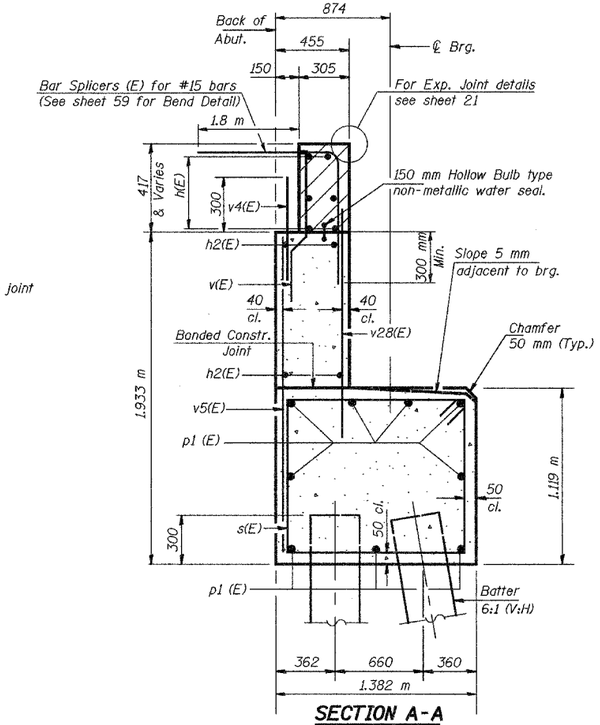
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	492
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 44
68 SHEETS







Notes:

1. Remove Existing backwall down to top of Existing beam seat. Remove wingwalls, clean and provide Bonded Construction Joint at the back of the Abutment Cap. See Sht. 43 for details.
2. Existing reinforcement shall be cleaned, straightened and incorporated into the new construction.
3. Hatched area to be poured after superstructure falsework has been removed. Quantity of Concrete included with Concrete Superstructure.
4. Space reinforcement in cap to miss anchor bolts.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Epoxy grout bars d5(E), d6(E) & v7(E) in 230 mm minimum deep drilled holes in accordance with IDOT Standard Specification Section 584.
7. Lap length for #15 bar is 890 mm, #20 bars is 1.11 m, and #25 is 1.85 m.
8. See Sheet 45 for Bill of Materials and Bar Bend Details.
9. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
10. Quantity of concrete in end posts included with Concrete Superstructure on sheet-18.
11. All dimensions are in millimeters (mm) except as noted.
12. Work this Sheet with Sheets 43 and 45.
13. Bonded Construction joint at interface between existing abutment and new extension shall be in accordance with Article 503.09(a)(2) of the Standard Specifications.
14. The remaining portions of the bar splicers provided for the WB backwall under EB contract shall be obtained from the Engineer by the Contractor and shall be incorporated in the WB abutment backwall reinforcement.

NORTH ABUTMENT EXTENSION ELEVATION

Date			
Revisions	Designed MR	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 44 of 68
	Drawn MR		
	Checked NPP		
	Approved NPP		

Prepared By: BRW, Inc. A Division of URS — 1701 Golf Rd., Suite 1000 Rolling Meadows, IL. — BRW Job No. 17049-071

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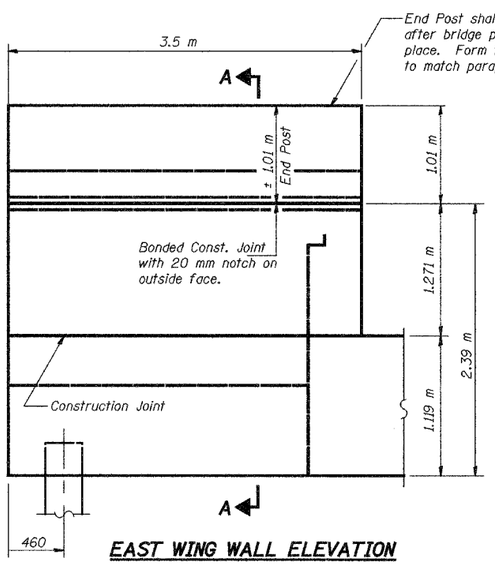
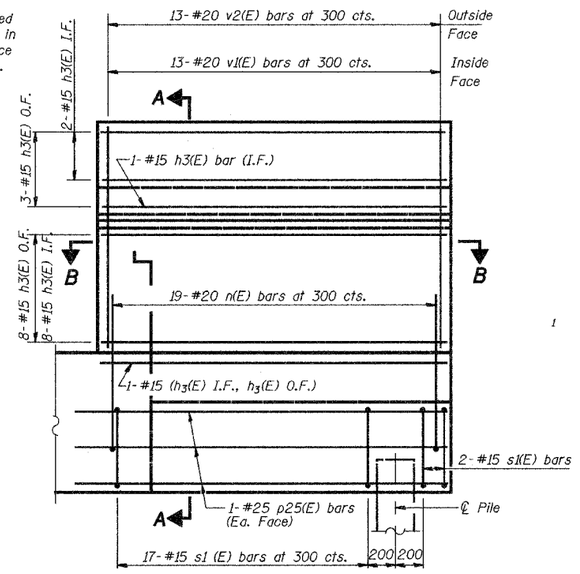
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	493
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

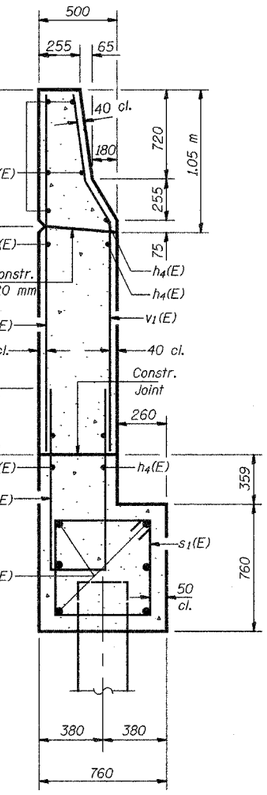
SHEET NO. 45
68 SHEETS



EAST WING WALL ELEVATION
Showing Dimensions



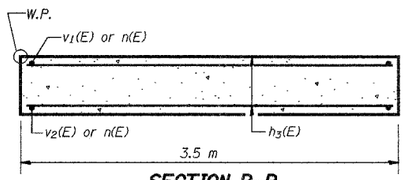
EAST WING WALL ELEVATION
Showing Reinforcement



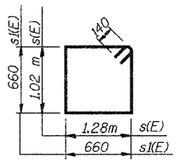
SECTION A-A

ABUTMENT BILL OF MATERIAL

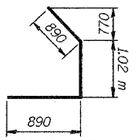
Bar	No.	Size	Length (m)	Shape
d5(E)	9	#20	1.0	
d6(E)	84	#20	1.03	
h(E)	12	#20	7.8	
h2(E)	20	#15	7.7	
h3(E)	24	#15	3.4	
h9(E)	10	#15	1.78	
n(E)	13	#20	3.88	
p1(E)	9	#25	3.33	
p2(E)	6	#15	6.9	
p25(E)	6	#25	4.2	
s(E)	11	#15	4.88	
s1(E)	19	#15	2.92	
u(E)	4	#20	2.8	
v(E)	49	#15	1.33	
v1(E)	13	#20	2.26	
v2(E)	13	#20	2.23	
v4(E)	49	#20	1.1	
v5(E)	49	#15	1.82	
v7(E)	42	#20	1.6	
v28(E)	10	#20	1.8	
Structure Excavation			m^3	36
Concrete Structures			m^3	18
Reinforcement Bars, Epoxy Coated			kg	2,150
Furnishing Steel Piles HP310x79			m	44
Driving Steel Piles			m	44
Test Pile Steel HP310x79			Each	1
Bridge Seat Sealer			m^2	14.1
Bar Splicers			Each	49



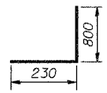
SECTION B-B



BARS s(E) & s1(E)

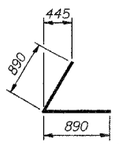


BAR u(E)

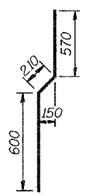


BAR d6(E)

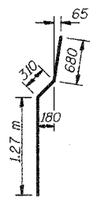
BAR n(E)



BAR h9(E)



BAR v(E)



BAR v1(E)

NOTES:

1. Work this Sheet with Sheets 43 and 44.
2. See Sheet 44 for Notes.
3. All dimensions are in millimeters (mm) except as noted.
4. Reinforcement bars designated (E) shall be epoxy coated.

NORTH ABUTMENT EXTENSION DETAILS

Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 45 of 68
Revisions	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

A-1-D (M)
4-30-99

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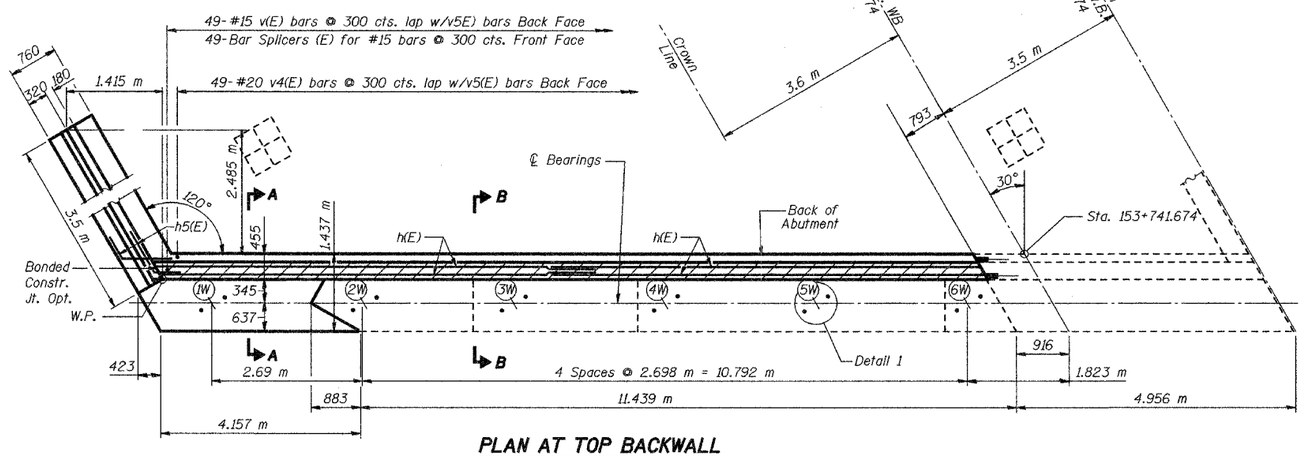
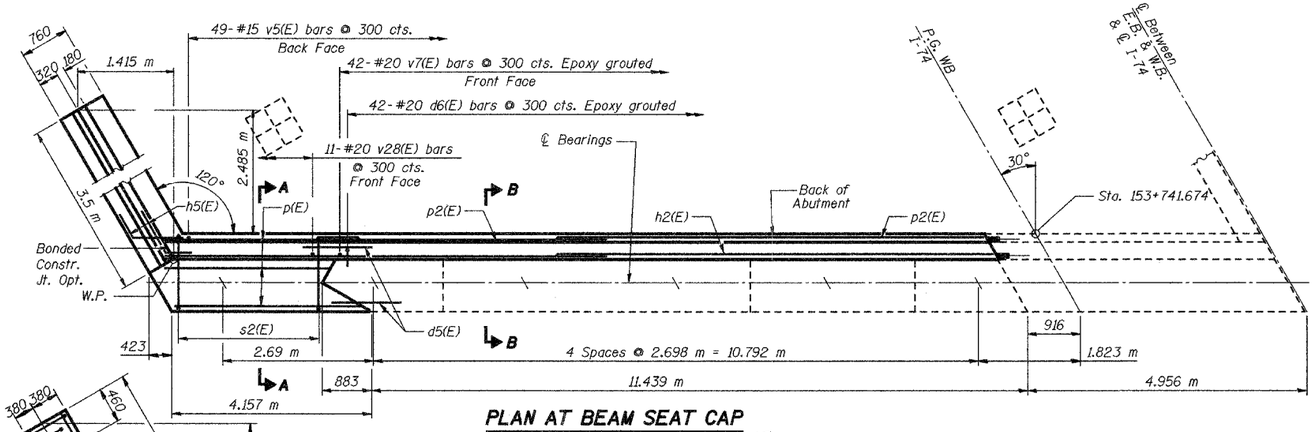
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1966	4844
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 46
68 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

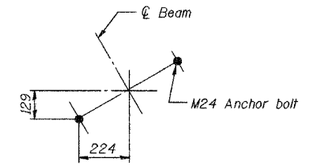


PLAN AT TOP BACKWALL



PLAN AT BEAM SEAT CAP

PLAN AT PILE CAP



DETAIL 1

PILE DATA

Type: Steel HP310x79 Piles
Capacity: Driven to Refusal
Est. Length: 22 m
No. Required: 5 (4+1 Test Pile)
Test pile driven to 95 metric ton

NOTES:

1. Work this Sheet with Sheets 47 and 48.
2. See Sheet 47 for Notes.
3. See Sheet 42 for abutment removal details.
4. All dimensions are in millimeters (mm) except as noted.
5. Reinforcement bars designated (E) shall be epoxy coated.

SOUTH ABUTMENT EXTENSION PLANS

Date / Revisions		
	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn EV	
	Checked NPP	
	Approved NPP	

Sheet No. 46 of 68

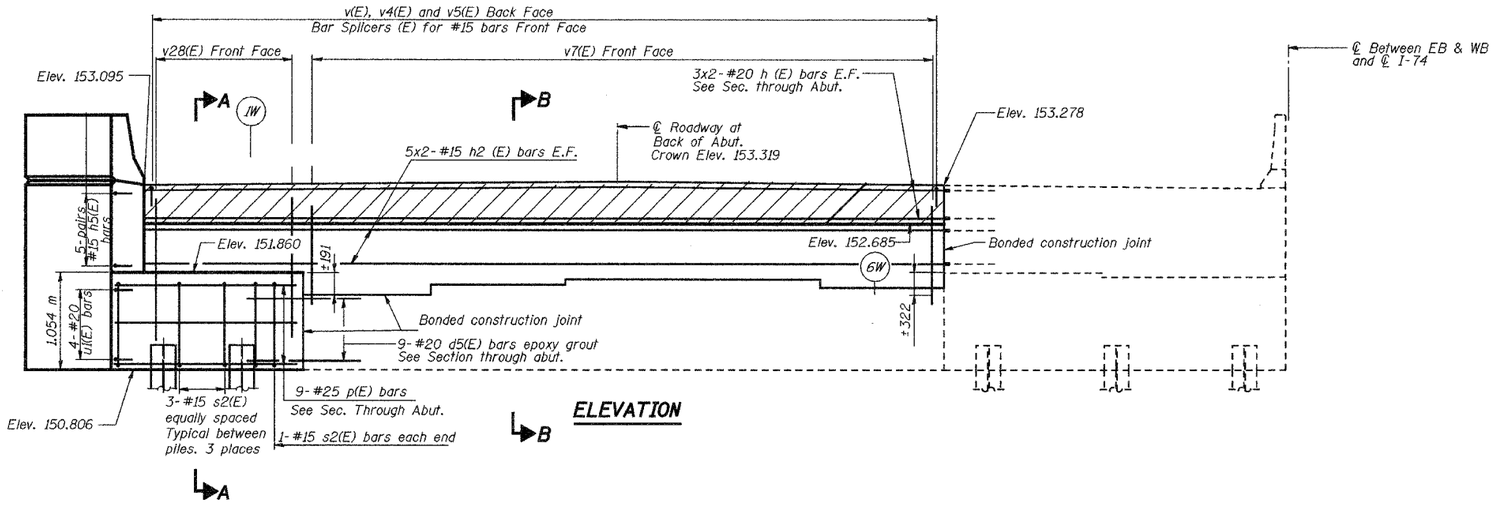
Prepared By: BRW, Inc. A Division of URS
1701 Golf Rd., Suite 1000
Rolling Meadows, IL.
BRW Job No. 17049-071

68201

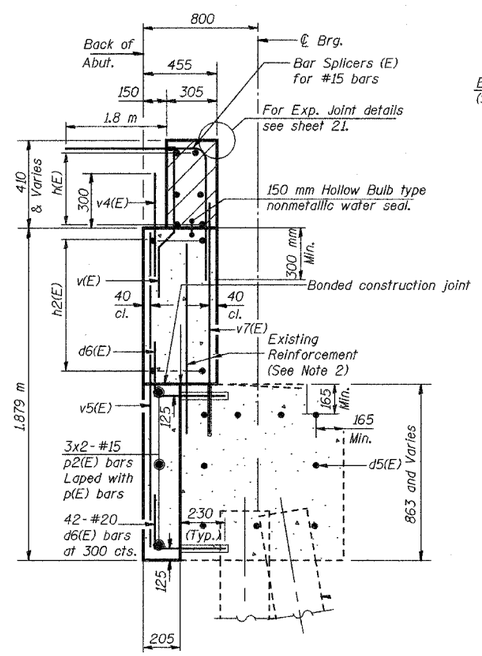
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	1495
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 47
68 SHEETS

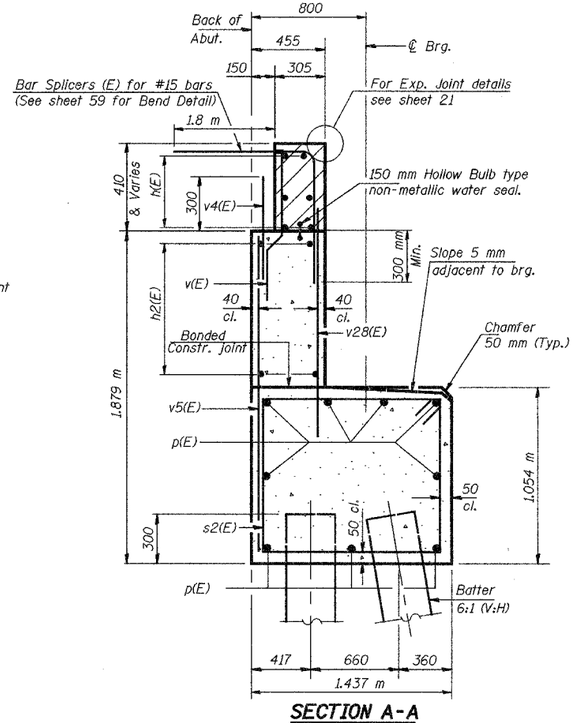
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



SECTION B-B
SEC. THRU ABUT.



SECTION A-A
SEC. THRU ABUT.

Notes:

1. Remove Existing backwall down to top of Existing beam seat. Remove wingwalls, clean and provide Bonded Construction Joint at the back of the Abutment Cap. See Sht. 46 for details.
2. Existing reinforcement shall be cleaned, straightened and incorporated into the new construction.
3. Hatched area to be poured after superstructure falsework has been removed. Quantity of Concrete included with Concrete Superstructure.
4. Space reinforcement in cap to miss anchor bolts.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Epoxy grout bars d5(E), d6(E) & v7(E) in 230 mm minimum deep drilled holes in accordance with IDOT Standard Specification Section 584.
7. Lap length for #15 bar is 890 mm, #20 bars is 1.11 m, and #25 is 1.85 m.
8. See Sheet 48 for Bill of Materials and Bar Bend Details.
9. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
10. Quantity of concrete in end posts included with Concrete Superstructure on sheet-18.
11. All dimensions are in millimeters (mm) except as noted.
12. Work this Sheet with Sheets 46 and 48.
13. Bonded Construction joint at interface between existing abutment and new extension shall be in accordance with Article 503.09(a)(2) of the Standard Specifications.
14. The remaining portions of the bar splicers provided for the WB backwall under EB contract shall be obtained from the Engineer by the Contractor and shall be incorporated in the WB abutment backwall reinforcement.

SOUTH ABUTMENT EXTENSION ELEVATION

Date	Designed MR	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 47 of 68
Revisions	Drawn MR		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

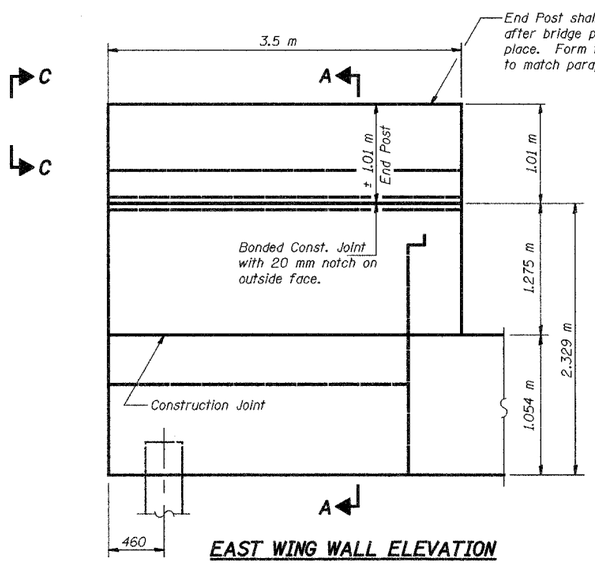
I:/projects*49071/pre_final_plans/I74_WB/st0944nabut2-5A0900009.dgn

68201

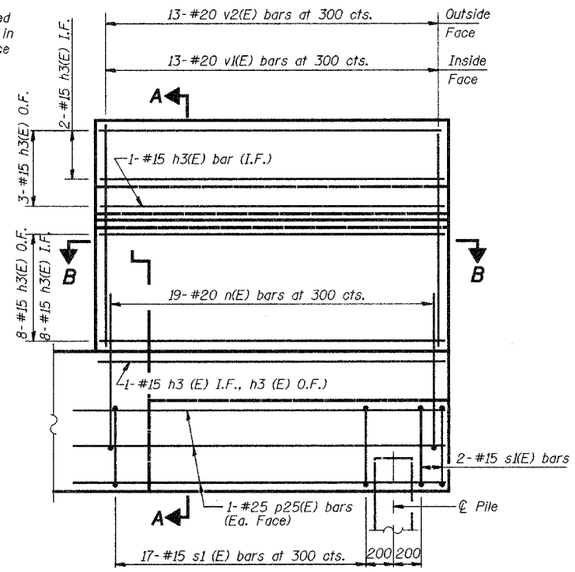
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	1796
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 48
68 SHEETS

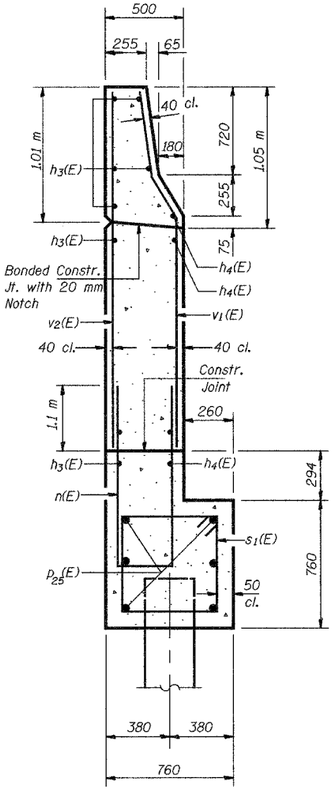
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



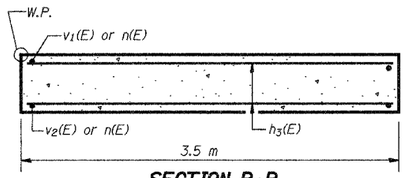
EAST WING WALL ELEVATION
Showing Dimensions



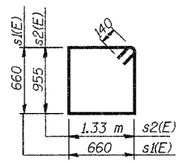
EAST WING WALL ELEVATION
Showing Reinforcement



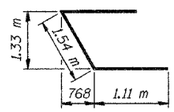
SECTION A-A



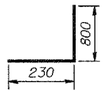
SECTION B-B



BARS s1(E) & s2(E)



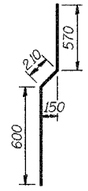
BAR u1(E)



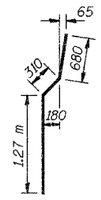
BAR d6(E)

BAR n(E)

BAR h5(E)



BAR v(E)



BAR v1(E)

ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
d5(E)	9	#20	1.0	
d6(E)	84	#20	1.03	
h(E)	12	#20	7.8	
h2(E)	20	#15	7.7	
h3(E)	24	#15	3.4	
h5(E)	10	#15	1.78	
n(E)	19	#20	3.88	
p(E)	9	#25	3.85	
p2(E)	6	#15	6.9	
p25(E)	6	#25	4.2	
s1(E)	19	#15	2.92	
s2(E)	11	#15	4.85	
u1(E)	4	#20	3.76	
v(E)	49	#15	1.33	
v1(E)	13	#20	2.26	
v2(E)	13	#20	2.23	
v4(E)	49	#20	1.1	
v5(E)	49	#15	1.82	
v7(E)	42	#20	1.6	
v28(E)	11	#20	1.8	

Structure Excavation	m^3	36
Concrete Structures	m^3	20
Reinforcement Bars, Epoxy Coated	kg	2,240
Furnishing Steel Piles HP310x79	m	88
Driving Steel Piles	m	88
Test Pile Steel HP310x79	Each	1
Bridge Seat Sealer	m^2	15.3
Bar Splicers	Each	49

NOTES:

1. Work this Sheet with Sheets 46 and 47.
2. See Sheet 47 for Notes.
3. All dimensions are in millimeters (mm) except as noted.
4. Reinforcement bars designated (E) shall be epoxy coated.

SOUTH ABUTMENT EXTENSION DETAILS

Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 48 of 68
Revisions	Drawn EV		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

A-1-D (M)
4-30-99

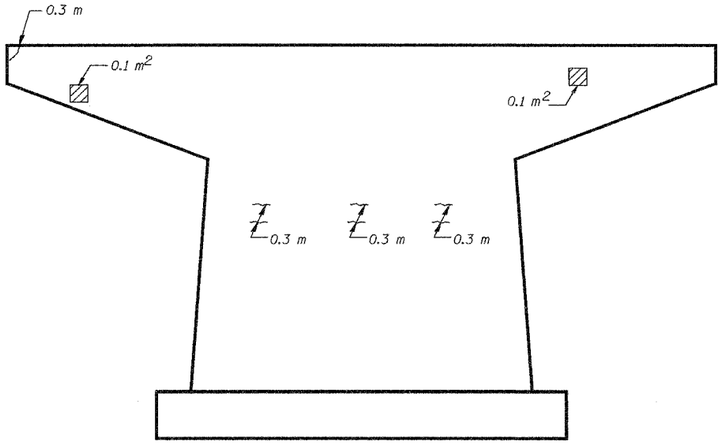
I:/PROJECTS/17049.071/PRE FINAL PLANS/I74 WB/st0945nabut3-5a0900009.dgn

68201

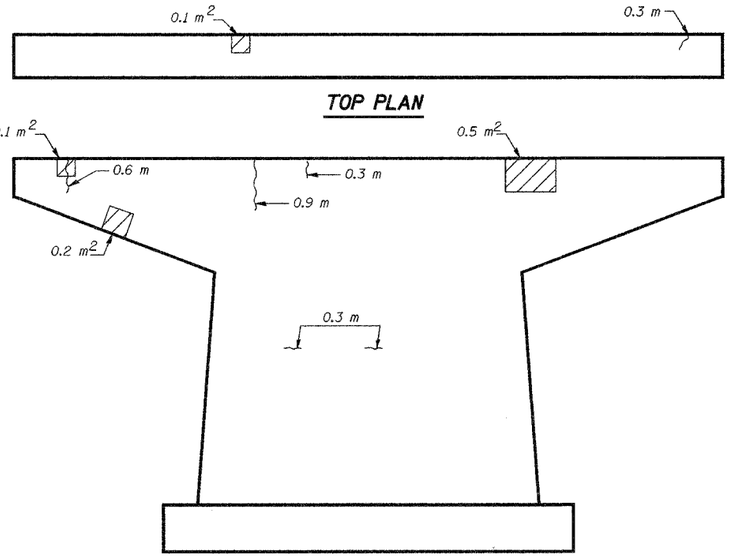
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	497
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 49
68 SHEETS



ELEVATION
(Pier 1, Looking South)



ELEVATION
(Pier 1, Looking North)

LEGEND:

Formed Concrete Repair
Depth equal to or less than 125 mm

1.0 m — Epoxy Crack Sealing

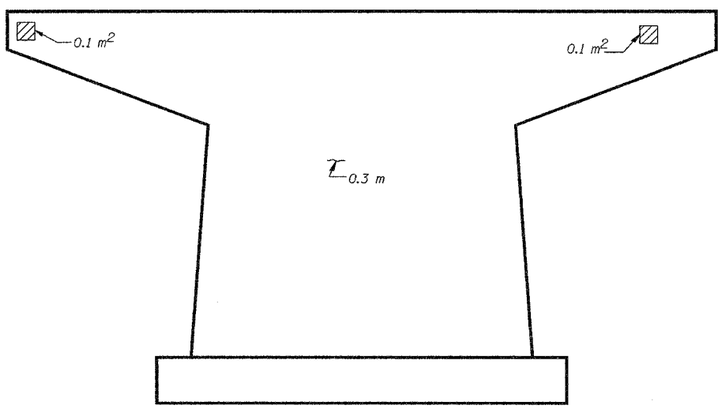
* The Contractor shall verify soundness of existing concrete at the locations shown for repair.

BILL OF MATERIAL - PIER 1 & PIER 2

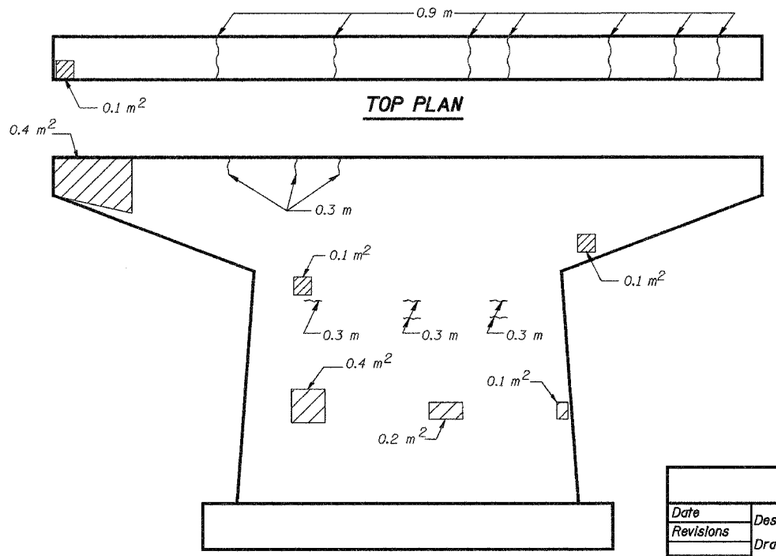
ITEM	UNIT	TOTAL
Formed Concrete Repair (Depth equal to or less than 125 mm)	SQ. M.	** 3.1
Epoxy Crack Sealing	M	** 15.9

** The estimated quantities include an increase of 15% to reflect any future damage areas.

Note:
All crack lengths and repair areas are approximates.



ELEVATION
(Pier 2, Looking South)



ELEVATION
(Pier 2, Looking North)

PIERS 1 AND 2 REPAIRS

Date / Revisions		
	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn EV	
	Checked NPP	
	Approved NPP	

Sheet No. 49 of 68

Prepared By: BRW, Inc.
A Division of URS
1701 Golf Rd., Suite 1000
Rolling Meadows, IL.

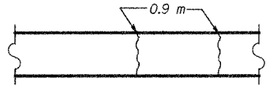
BRW Job No. 17049-071

69201

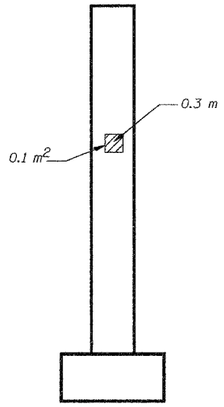
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	498
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 50
68 SHEETS

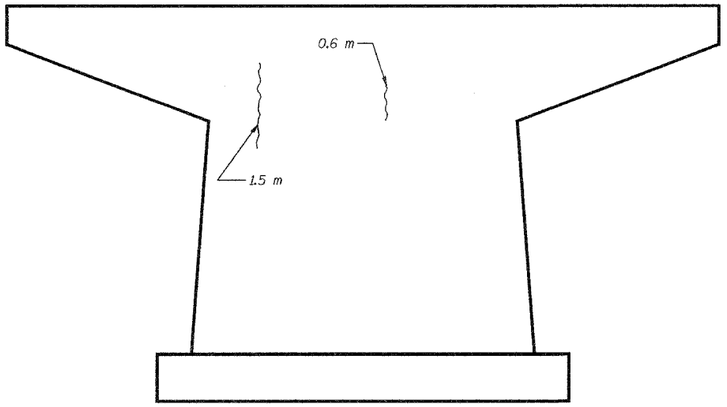
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



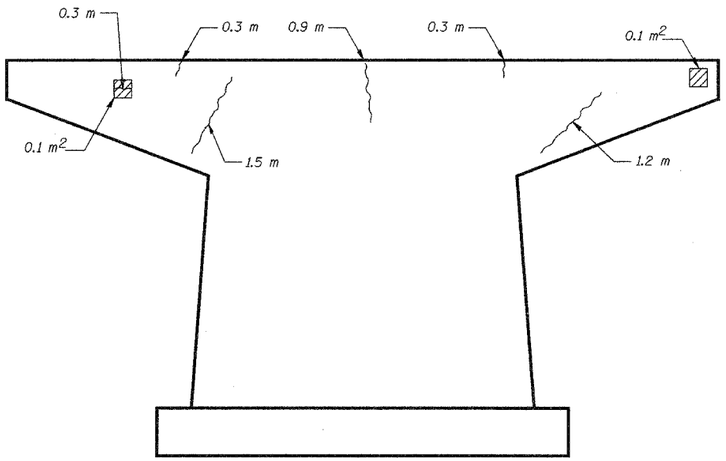
TOP PLAN



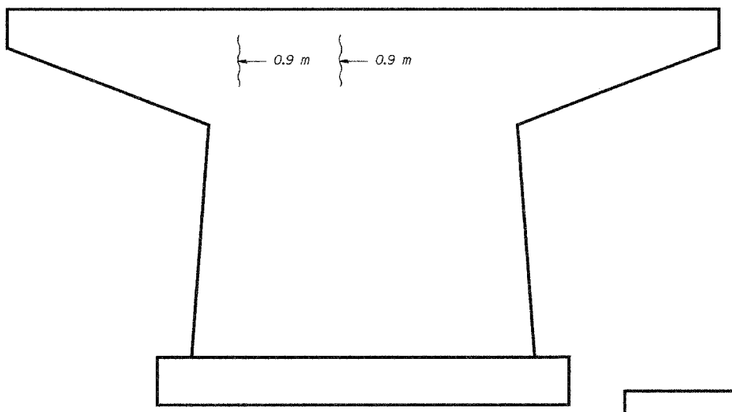
ELEVATION
(Pier 3, West End)



ELEVATION
(Pier 3, Looking North)



ELEVATION
(Pier 5, Looking South)



ELEVATION
(Pier 5, Looking North)

LEGEND:

Formed Concrete Repair
Depth equal to or less than 125 mm

1.0 m — Epoxy Crack Sealing

* The Contractor shall verify soundness of existing concrete at the locations shown for repair.

BILL OF MATERIAL - PIER 3 & PIER 5

ITEM	UNIT	TOTAL
Formed Concrete Repair (Depth equal to or less than 125 mm)	SQ. M.	** 0.4
Epoxy Crack Sealing	M	** 12.1

** The estimated quantities include an increase of 15% to reflect any future damage areas.

Note:
All crack lengths and repair areas are approximates.

PIERS 3 AND 5 REPAIRS

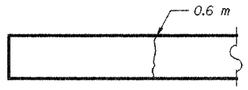
Date / Revisions	Designed EV Drawn EV Checked NPP Approved NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 50 of 68
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

86201

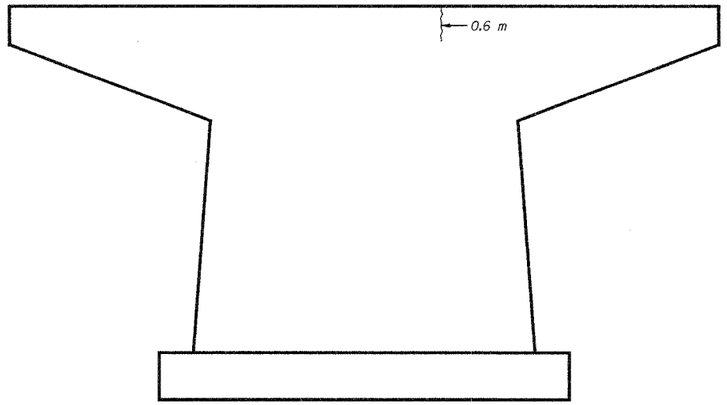
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	1366	499
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 51
68 SHEETS

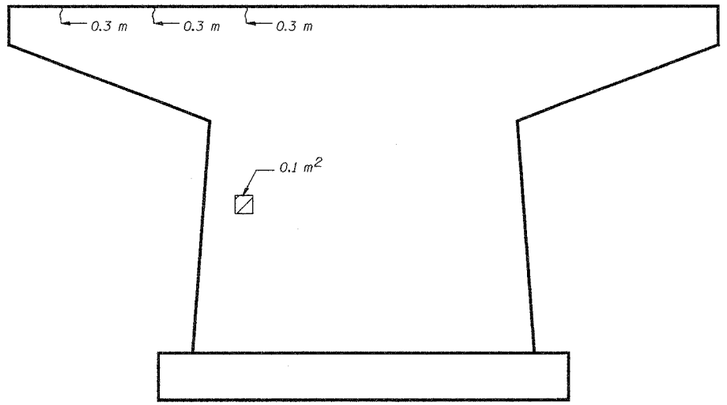
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



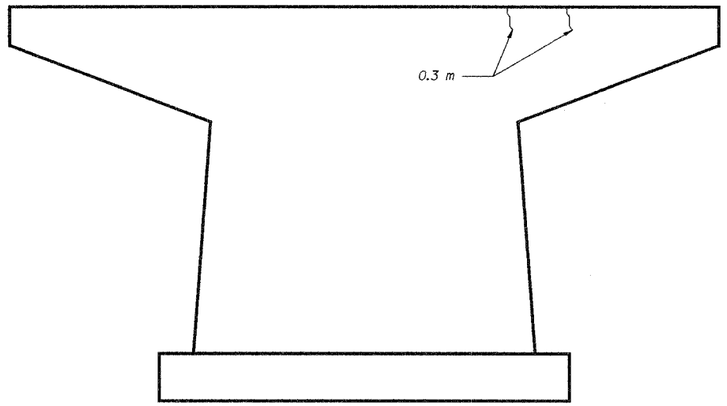
TOP PLAN



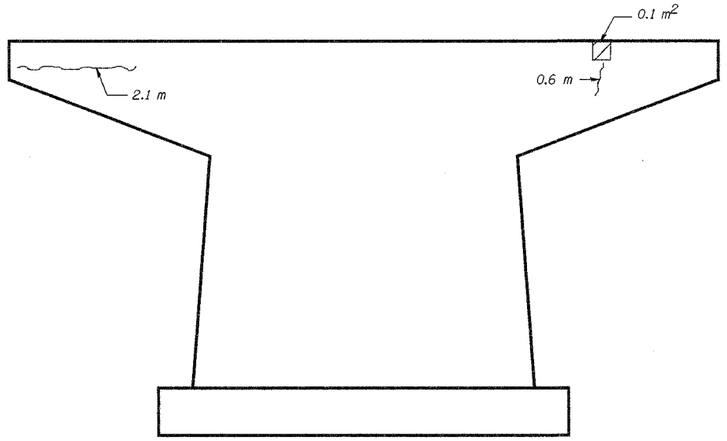
ELEVATION
(Pier 6, Looking South)



ELEVATION
(Pier 6, Looking North)



ELEVATION
(Pier 7, Looking South)



ELEVATION
(Pier 7, Looking North)

LEGEND:

Formed Concrete Repair
Depth equal to or less than 125 mm

1.0 m — Epoxy Crack Sealing

* The Contractor shall verify soundness of existing concrete at the locations shown for repair.

BILL OF MATERIAL - PIER 6 & PIER 7

ITEM	UNIT	TOTAL
Formed Concrete Repair (Depth equal to or less than 125 mm)	SQ. M.	** 0.2
Epoxy Crack Sealing	M	** 6.2

** The estimated quantities include an increase of 15% to reflect any future damage areas.

Note:
All crack lengths and repair areas are approximates.

PIERS 6 AND 7 REPAIRS

Date
Revisions

Designed EV
Drawn EV
Checked NPP
Approved NPP

WESTBOUND F.A.I. ROUTE 74 OVER
CAMP STREET, FARM CREEK, AND TP&W RR
F.A.I. RTE. 74 SECTION (90-13HVB)BY
TAZEWELL COUNTY
STATION 153+625.193
STRUCTURE NO. 090-0009

Sheet No. 51 of 68

Prepared By: BRW, Inc.
A Division of URS
1701 Golf Rd., Suite 1000
Rolling Meadows, IL.

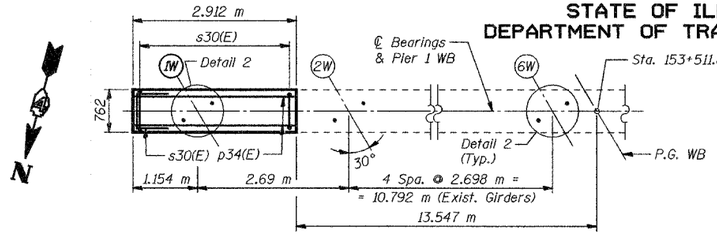
BRW Job No. 17049-071

68201

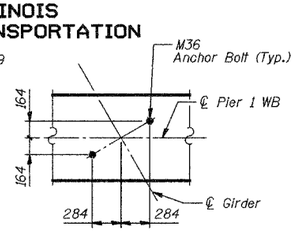
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-13HVB)BY	TAZEWELL	136	500
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

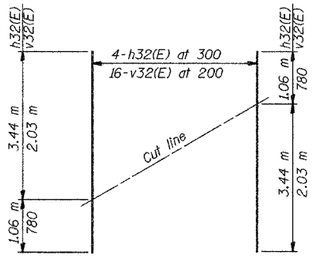
SHEET NO. 52
68 SHEETS



TOP PLAN

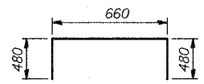


DETAIL 2

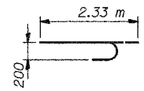


FIELD CUTTING DIAGRAM

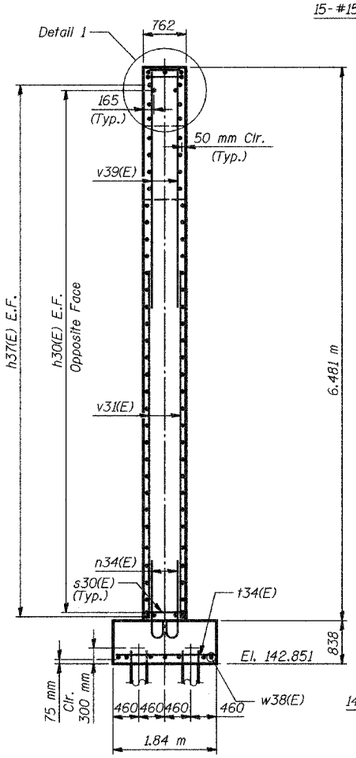
* Order h32(E) and v32(E) bars full length. Cut to fit and use the remainder of bars in opposite face.



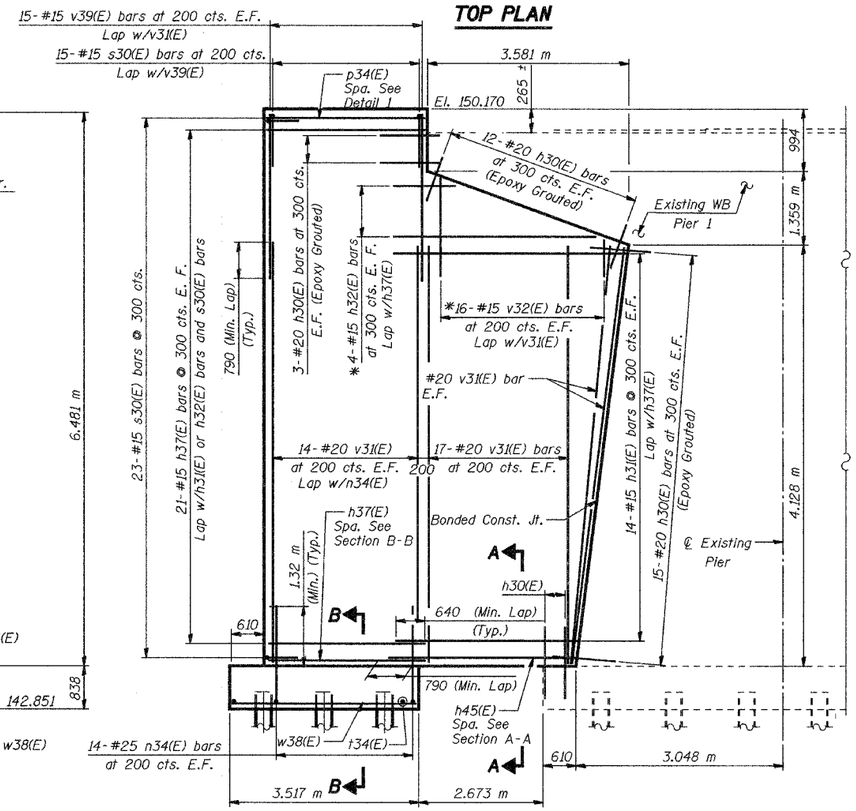
BAR s30(E)



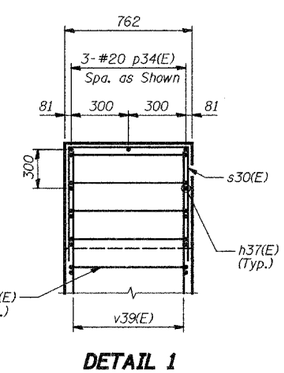
BAR n34(E)



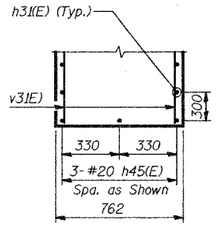
END VIEW



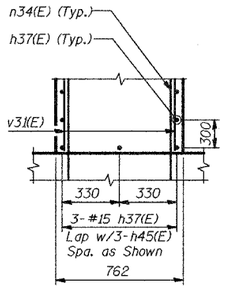
ELEVATION (LOOKING SOUTH)



DETAIL 1



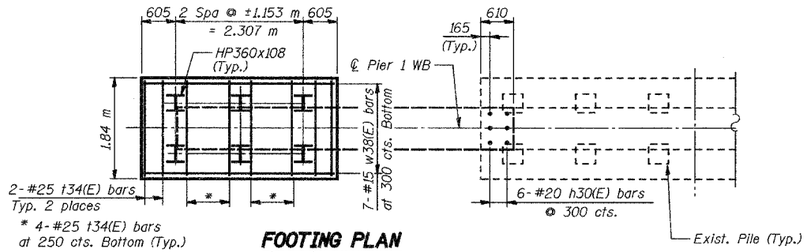
SECTION A-A



SECTION B-B

PILE DATA

Type	Steel HP 360x108
Capacity	Driven to refusal
Est. Length	8 m
No. Required	6 (5 + 1 Test Pile)
Test pile driven to 131 metric ton	



FOOTING PLAN

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h30(E)	66	#20	1.00	—
h31(E)	28	#15	4.3	—
h32(E)	4	#15	4.5	—
h37(E)	45	#15	2.81	—
h45(E)	3	#20	4.1	—
n34(E)	28	#25	2.33	⊃
p34(E)	3	#20	2.81	—
s30(E)	38	#15	1.62	⊓
t34(E)	14	#25	1.74	—
v31(E)	66	#20	4.03	—
v32(E)	16	#15	2.81	—
v39(E)	30	#15	3.2	—
w38(E)	7	#15	3.4	—
Structure Excavation			m^3	22
Concrete Structures			m^3	28
Reinforcement Bars, Epoxy Coated			kg	1,960
Furnishing Steel Piles HP360x108			m	40
Driving Steel Piles			m	40
Test Pile Steel HP360x108			Each	1
Bridge Seat Sealer			m^2	11.9

NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete clear cover shall be 50 mm minimum unless noted otherwise.
3. Space Reinforcement in Cap to miss Anchor Bolts.
4. Epoxy Grout Bar h30(E) in minimum 230 mm deep drilled holes.
5. The material and installation shall be in accordance with IDOT Standard Specification Section 584.
6. Bonded Construction Joint at interface between existing concrete and proposed concrete shall be in accordance with Standard Specifications Article 503.09(a)(2).
7. For Anchor Bolt Details, see Sheet 41.
8. All edges shall have standard 20 mm chamfers except as noted.
9. Min. Lap for Bar #15=640 mm, #20=790 mm, #25=1.32 m.
10. Space h30(E) bar to miss existing reinforcement in Pier.
11. All dimensions are in millimeters (mm) except as noted.
12. Clean exist. WB Pier beam seats and apply Bridge Seat Sealer to new and the exist. beam seats.

PIER 1 EXTENSION DETAILS

Date / Revisions		
	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
	Drawn EV	
	Checked NPP	
	Approved NPP	

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