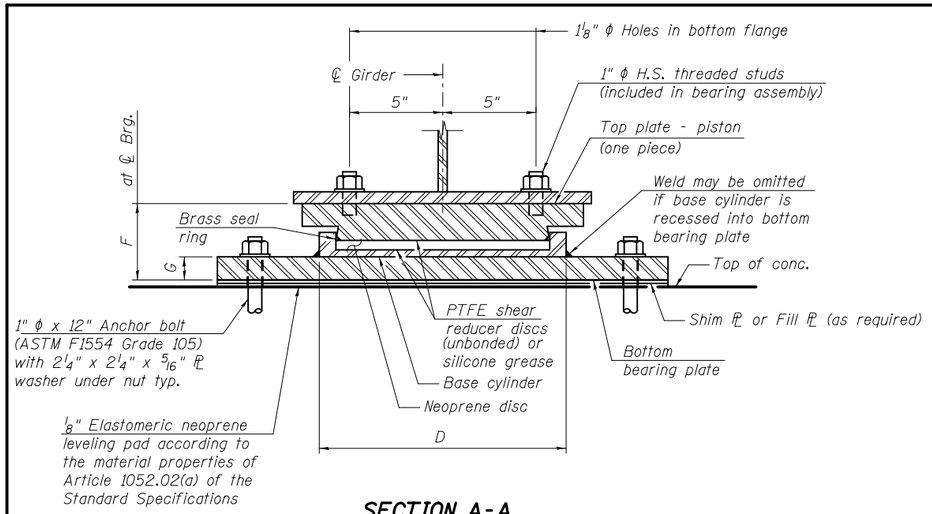
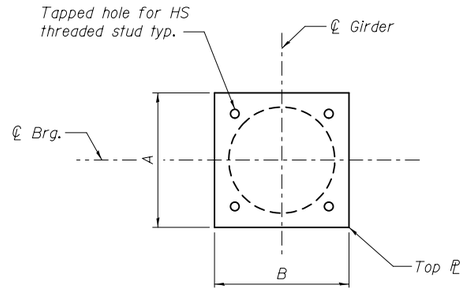


SECTION A-A

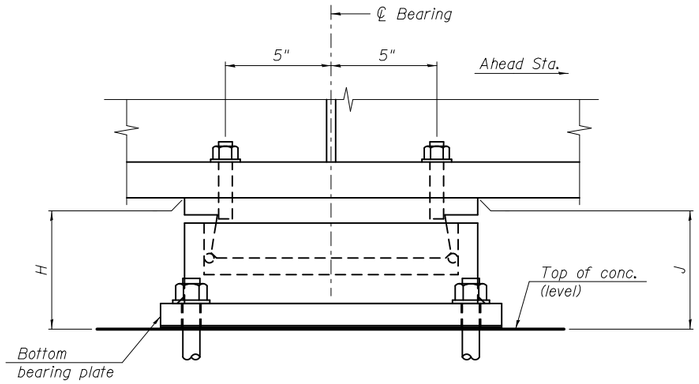


TOP ℙ - PISTON PLAN

Pier 1 and Pier 3

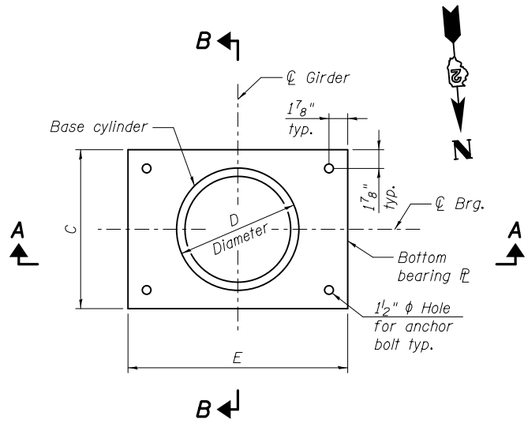
HLMR BEARING ASSEMBLY TABLE

Location	A	B	C	D	E	F	G	H	J
Pier 1	1'-4"	1'-4"	1'-5"	1'-4"	2'-2"	8 7/8"	1 3/8"	8 9/16"	9 3/16"
Pier 3	1'-2 1/4"	1'-2 1/4"	1'-4"	1'-2 1/4"	2'-0"	8"	1 5/16"	7 3/4"	8 1/4"



SECTION B-B

(Looking East)



BOTTOM BEARING ℙ AND BASE CYLINDER PLAN

Pier 1 and Pier 3

BEARING DESIGN DATA

Location	Vert. Design Load* (kips)	Hu, Horiz. Design Load* (kips)	θu, Required Rotation Range** (radians)
Pier 1	440	88	0.01
Pier 3	340	68	0.01

* Design Loads are the governing service loads with no dynamic load allowance.
** Rotation allowances for fabrication tolerances (0.005 radians), installation uncertainties (0.005 radians) are excluded.

FILL PLATE TABLE

(Pier 1 only)

Girder No.	Total Thickness
9	0
10	1/4"
11	1/2"
12	0
13	1/4"
14	1/2"
15	0
16	1/4"

Notes:

All steel for bearings shall conform to the requirements of AASHTO M270 Grade 50, unless otherwise noted.

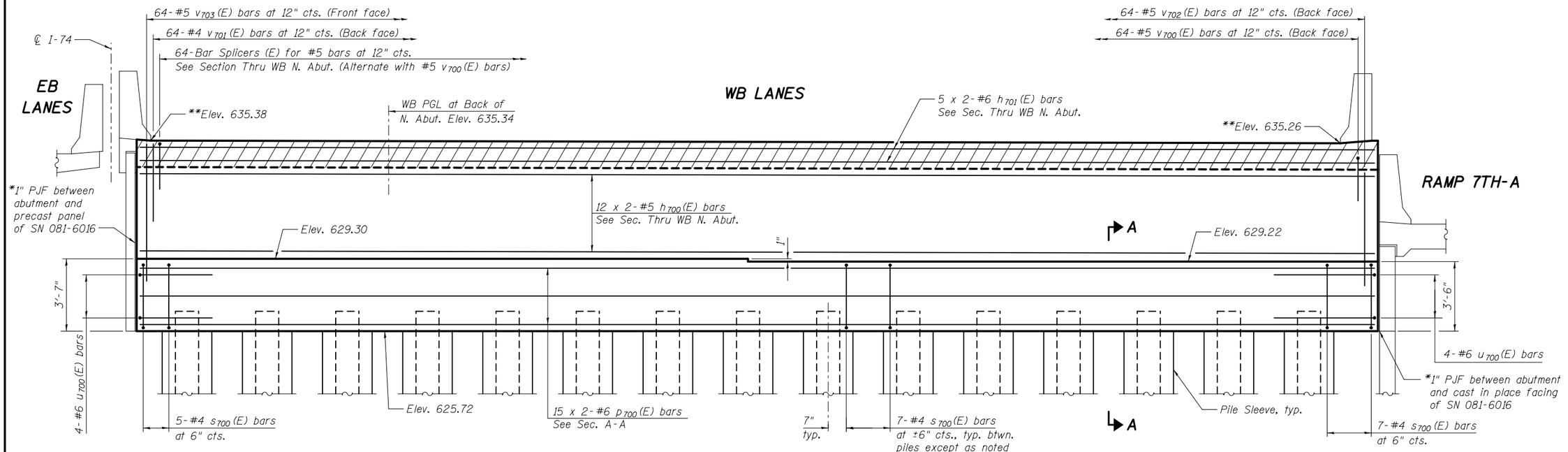
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554. Anchor bolts may be either cast in place or installed in holes drilled after the supported member is in place. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Total bearing height is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The Contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier concrete. Total bearing height is taken at the ℄ of bearing for bevelled top plates.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates.

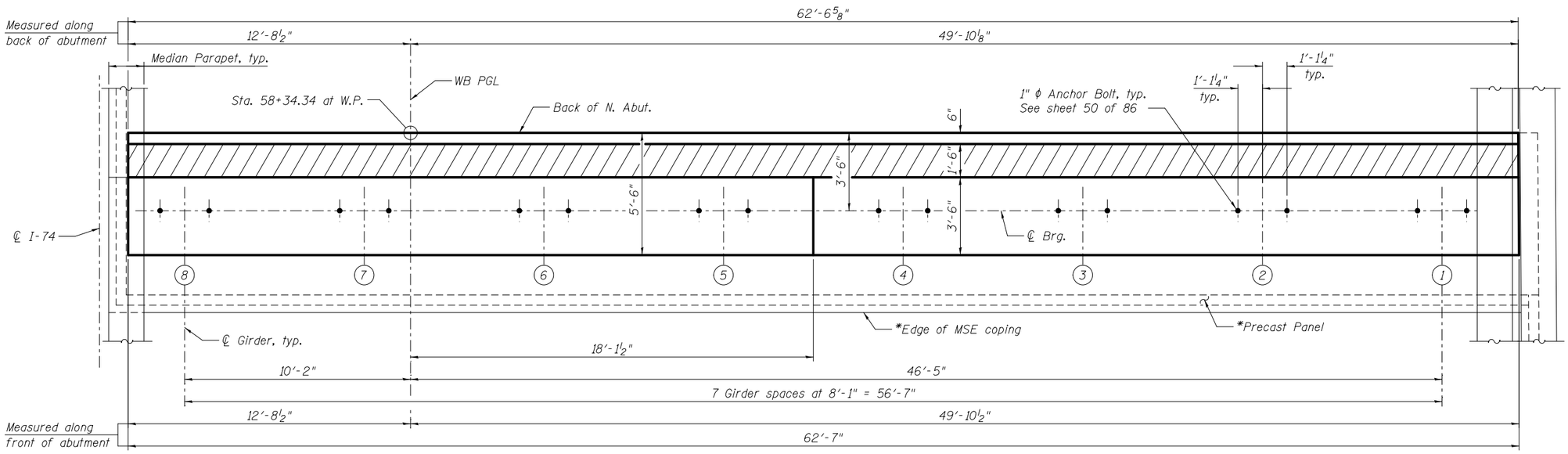
BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotational Bearings, Fixed, 350k	Each	8
High Load Multi-Rotational Bearings, Fixed, 450k	Each	8
Anchor Bolts, 1"	Each	64



** Elevation given at 6" from back of abutment (end of approach slab).

ELEVATION
(Looking North)



TOP PLAN VIEW

* See SN 081-6016 for retaining wall details.

MINIMUM BAR LAP
(Abutment)

#5 Bar = 3'-8"
#6 Bar = 4'-5"

N

Notes:
Pour step monolithically with cap.
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructures on sheet 34 of 86.
For details of bar splicers, see sheet 77 of 86.
PJF shall be included in the cost of Concrete Structures.
For Pile Cap Plan, Abutment Pile Data, Section thru Westbound North Abutment and Section A-A, see sheet 54 of 86.
Bars indicated thus 5 x 2- #6 etc. indicates 5 lines of bars with 2 lengths per line.
For Bill of Material, see sheet 63 of 86.

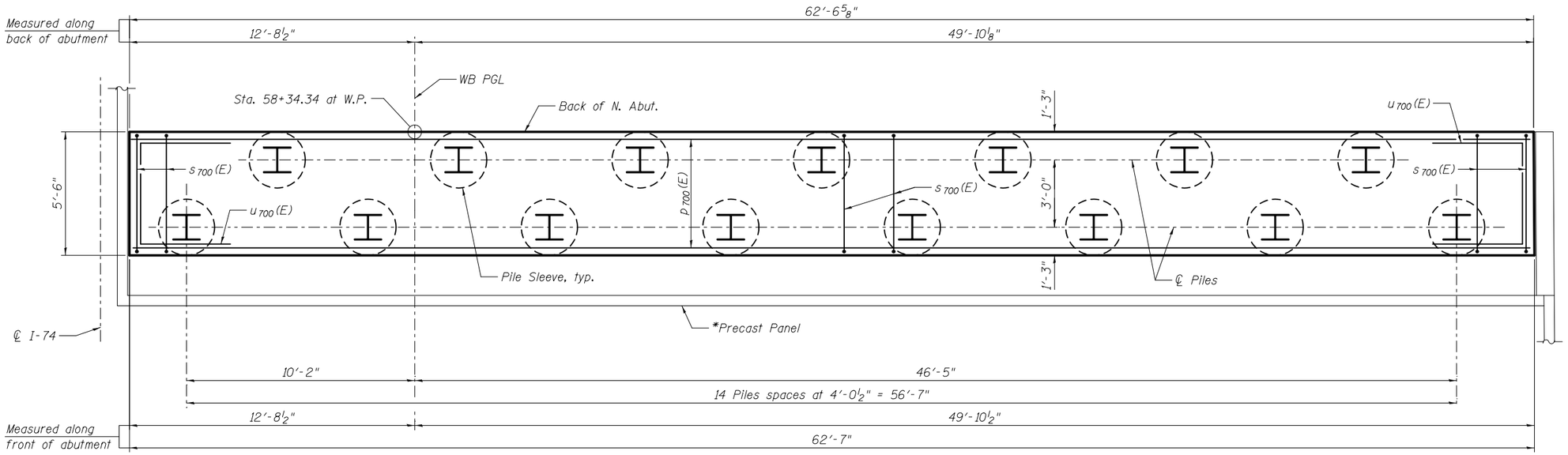
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

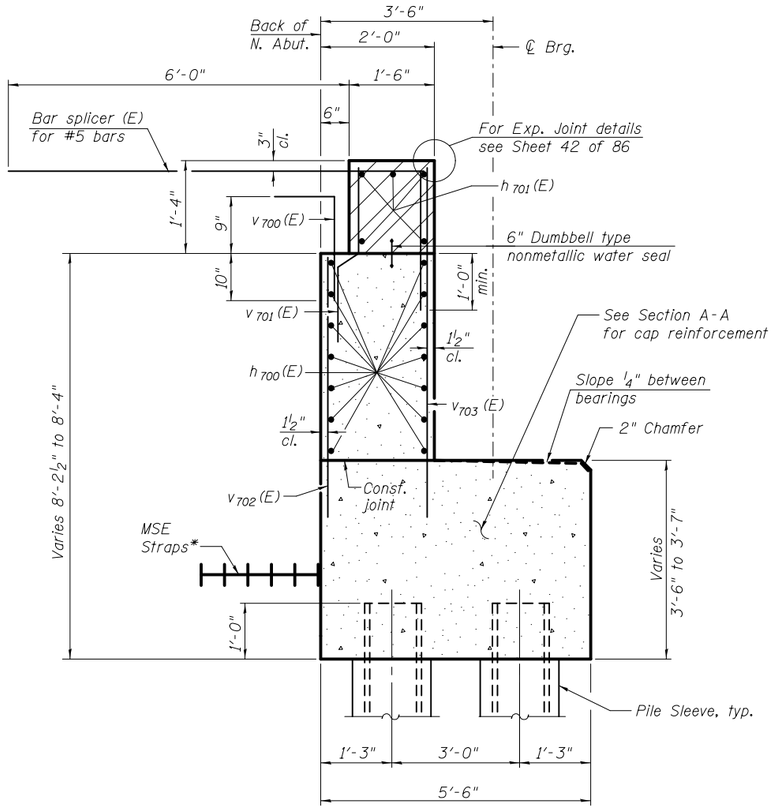
NORTH ABUTMENT ELEVATION AND PLAN – WESTBOUND
I–74 OVER 19TH ST. – STRUCTURE NO. 081–0179 WB & 081–0180 EB
SHEET NO. 53 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1002
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



* See SN 081-6016 for retaining wall details.

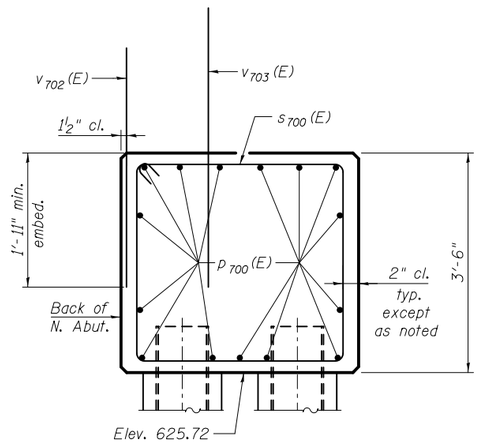
PILE CAP PLAN



SECTION THRU WB NORTH ABUTMENT

ABUTMENT PILE DATA

Type: HP12x63
Nominal Required Bearing: 598 Kips
Factored Resistance Available: 351 Kips
Est. Length: 72 foot
Soil Setup Pile Length: N/A - Rock
No. Production Piles: 14
No. Test Piles: 1 (West End)



SECTION A-A

Notes:
Space reinforcement in cap to miss anchor bolts.
See sheet 63 of 86 for bar details and Bill of Material.
For details of piles and pile sleeves, see sheet 76 of 86.
For location of Section A-A, see sheet 53 of 86.
Pile sleeves shall be sized to provide at least 1 1/2″ inches of clearance around the pile and shall extend from bottom of abutment to bottom of reinforced soil mass.
The area between the pile and the pile sleeve shall be backfilled with dry, loose sand. The cost shall be included in Driving Piles.
To minimize risk of unforseen conflicts with existing buried structures, it is recommended that piles be driven before MSE walls are constructed. Piles may be driven before or after the construction of MSE wall SN 081-6016. Contractor shall coordinate with MSE wall operations.

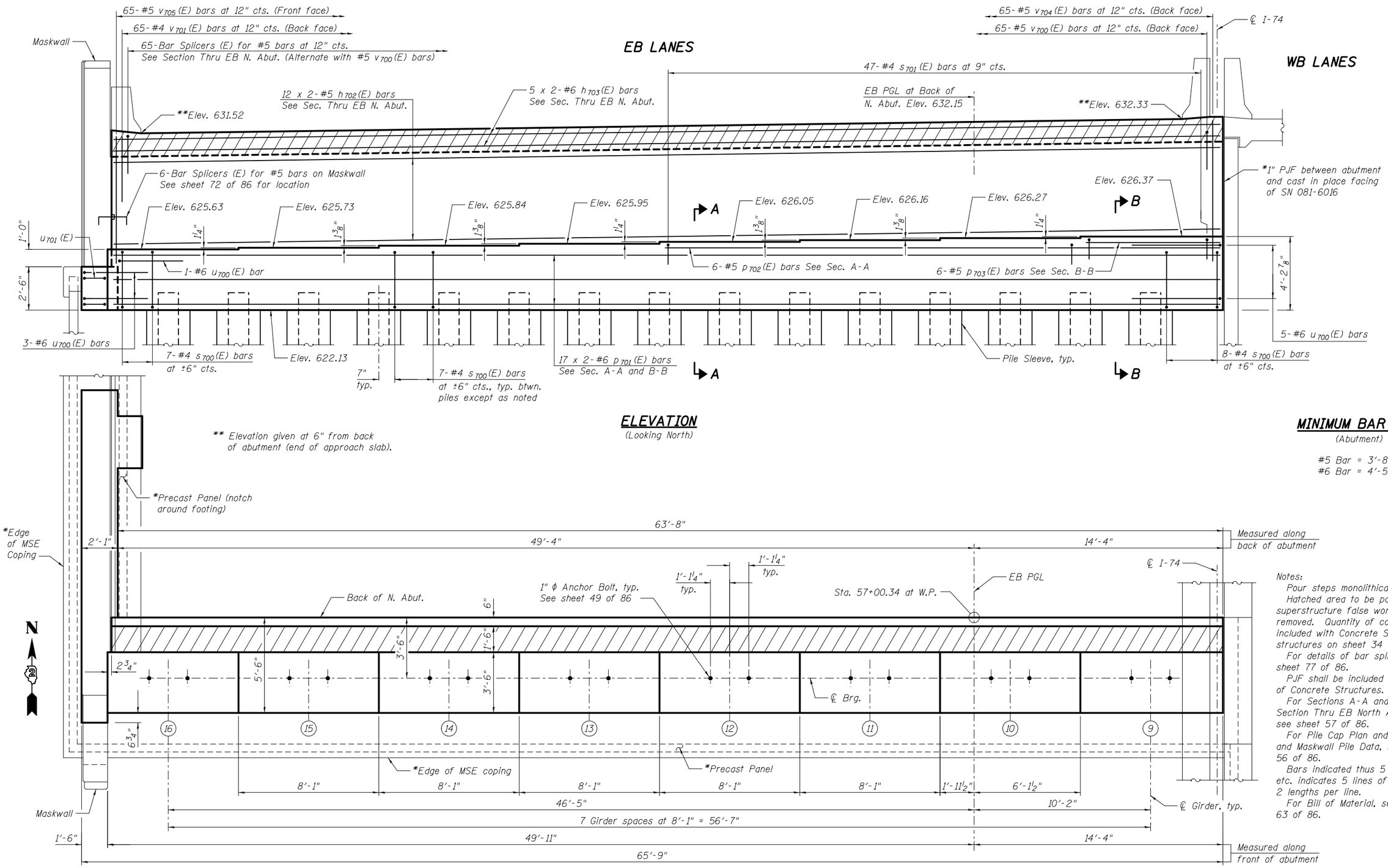
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT DETAILS – WESTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 54 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1003
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



ELEVATION
(Looking North)

** Elevation given at 6" from back of abutment (end of approach slab).

MINIMUM BAR LAP
(Abutment)

#5 Bar = 3'-8"
#6 Bar = 4'-5"

Notes:
Pour steps monolithically with cap.
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructures on sheet 34 of 86.
For details of bar splicers, see sheet 77 of 86.
PJF shall be included in the cost of Concrete Structures.
For Sections A-A and B-B, and Section Thru EB North Abutment, see sheet 57 of 86.
For Pile Cap Plan and Abutment and Maskwall Pile Data, see sheet 56 of 86.
Bars indicated thus 5 x 2-#6 etc. indicates 5 lines of bars with 2 lengths per line.
For Bill of Material, see sheet 63 of 86.

* See SN 081-6016 for retaining wall details.

TOP PLAN VIEW

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT ELEVATION AND PLAN – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 55 OF 86 SHEETS

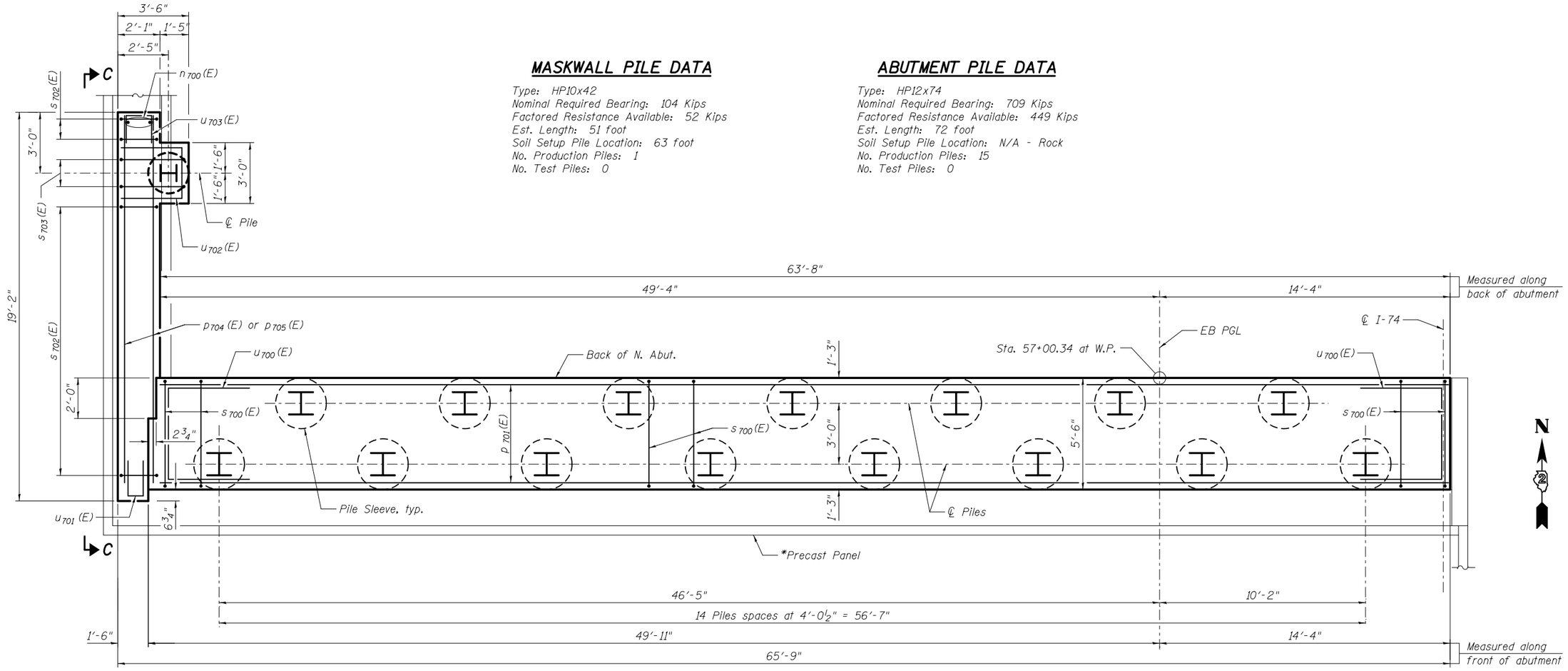
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1004
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

MASKWALL PILE DATA

Type: HP10x42
Nominal Required Bearing: 104 Kips
Factored Resistance Available: 52 Kips
Est. Length: 51 foot
Soil Setup Pile Location: 63 foot
No. Production Piles: 1
No. Test Piles: 0

ABUTMENT PILE DATA

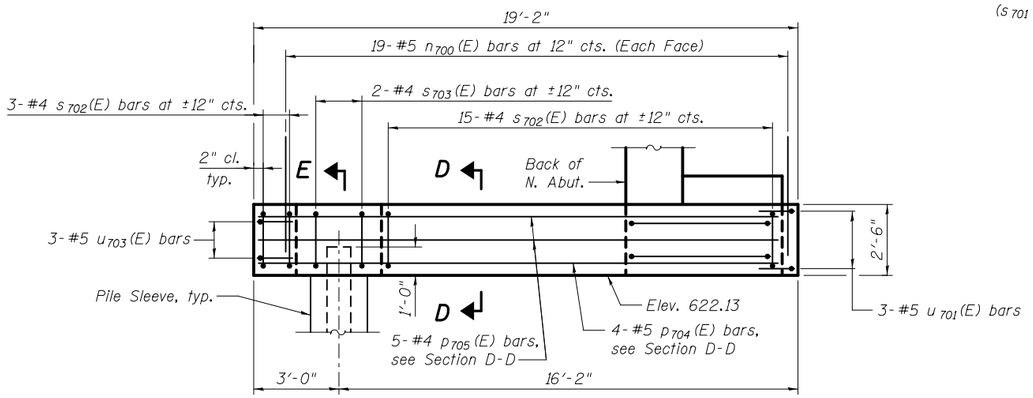
Type: HP12x74
Nominal Required Bearing: 709 Kips
Factored Resistance Available: 449 Kips
Est. Length: 72 foot
Soil Setup Pile Location: N/A - Rock
No. Production Piles: 15
No. Test Piles: 0



* See SN 081-6016 for retaining wall details.

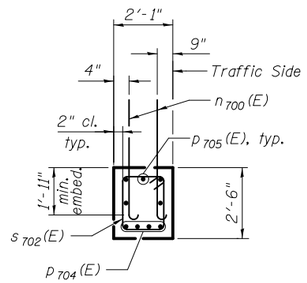
PILE CAP PLAN

(s_{701} (E) not shown for clarity)

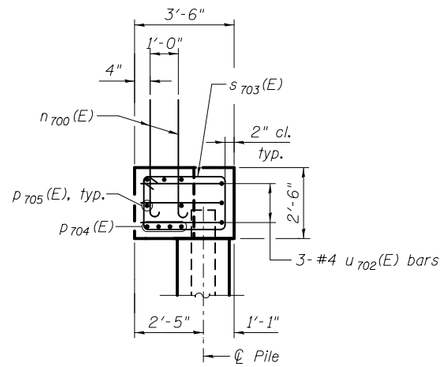


VIEW C-C

(Precast Panel not shown for clarity)



SECTION D-D



SECTION E-E

Notes:

See sheet 63 of 86 for bar details and Bill of Material.

For details of piles and pile sleeves, see sheet 76 of 86.

Pile sleeves shall be sized to provide at least 1 1/2" inches of clearance around the pile and shall extend from bottom of abutment to bottom of reinforced soil mass.

The area between the pile and the pile sleeve shall be backfilled with dry, loose sand. The cost shall be included in Driving Piles.

To minimize risk of unforseen conflicts with existing buried structures, it is recommended that piles be driven before MSE walls are constructed. Piles may be driven before or after the construction of MSE wall 081-6016. Contractor shall coordinate with MSE wall operations.

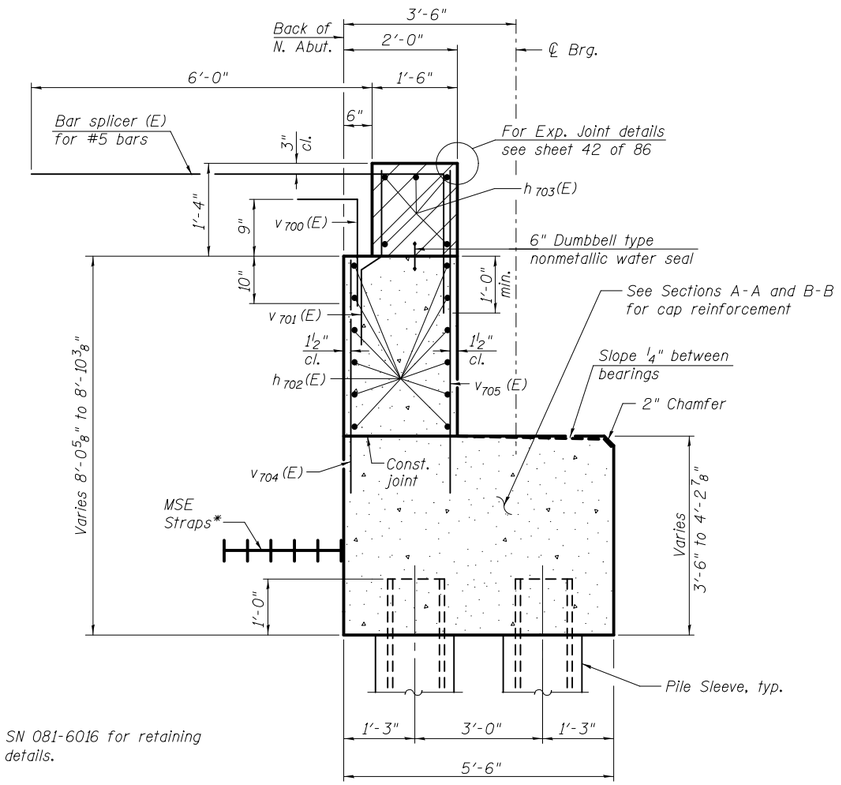
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

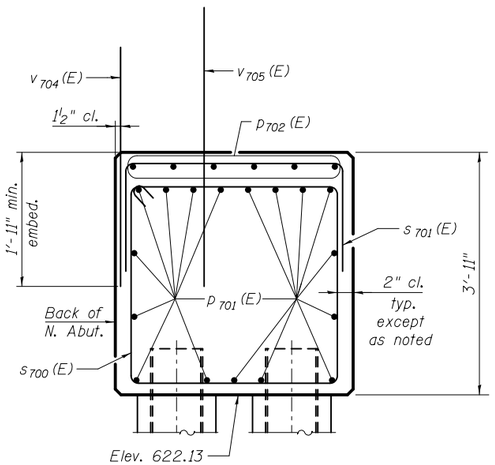
NORTH ABUTMENT DETAILS 1 – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 56 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1005
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

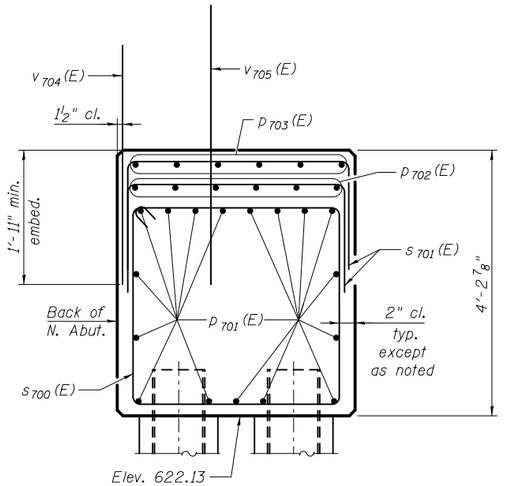


*See SN 081-6016 for retaining wall details.

SECTION THRU EB NORTH ABUTMENT



SECTION A-A



SECTION B-B

Notes:
Space reinforcement in cap to miss anchor bolts.
See sheet 63 of 86 for bar details and Bill of Material.
For locations of Sections A-A and B-B, see sheet 55 of 86.

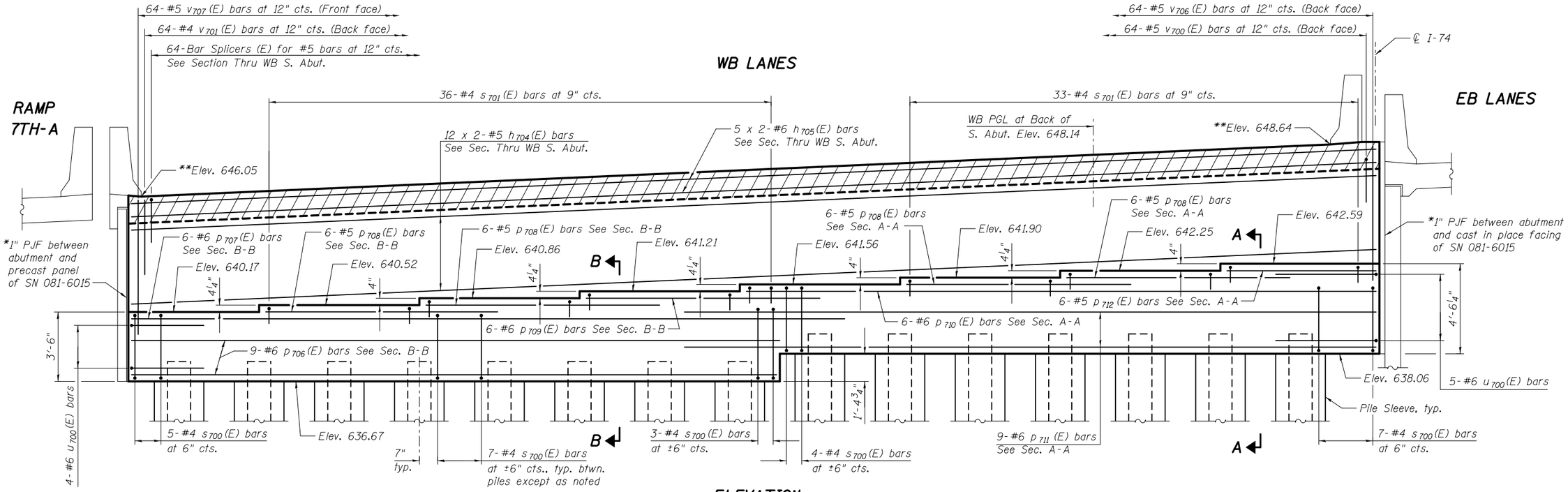
MODJESKI and MASTERS
Experience great bridges.

USER NAME =		DESIGNED - JTH	REVISED
		CHECKED - APL/YSS	REVISED
PLOT SCALE =		DRAWN - PRC	REVISED
PLOT DATE =	03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

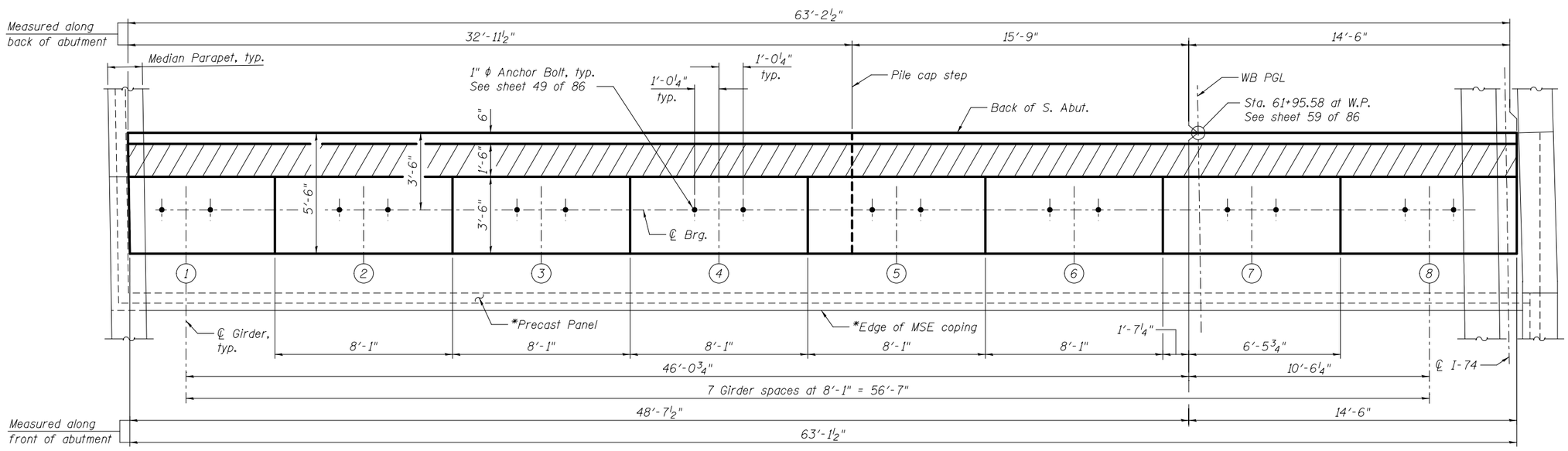
NORTH ABUTMENT DETAILS 2 – EASTBOUND
I–74 OVER 19TH ST. – STRUCTURE NO. 081–0179 WB & 081–0180 EB
SHEET NO. 57 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1006
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



** Elevation given at 6" from back of abutment (end of approach slab).

ELEVATION
(Looking South)



TOP PLAN VIEW

* See SN 081-6015 for retaining wall details.

MINIMUM BAR LAP
(Abutment)

#5 Bar = 3'-8"
#6 Bar = 4'-5"

N

Notes:
Pour steps monolithically with cap.
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructures on sheet 34 of 86.
For details of bar splicers, see sheet 77 of 86.
PJF shall be included in the cost of Concrete Structures.
For Pile Cap Plan, Abutment Pile Data, Sections A-A and B-B, and Section Thru WB South Abutment, see sheet 59 of 86.
Bars indicated thus 5 x 2-#6 etc. indicates 5 lines of bars with 2 lengths per line.
For Bill of Material, see sheet 63 of 86.

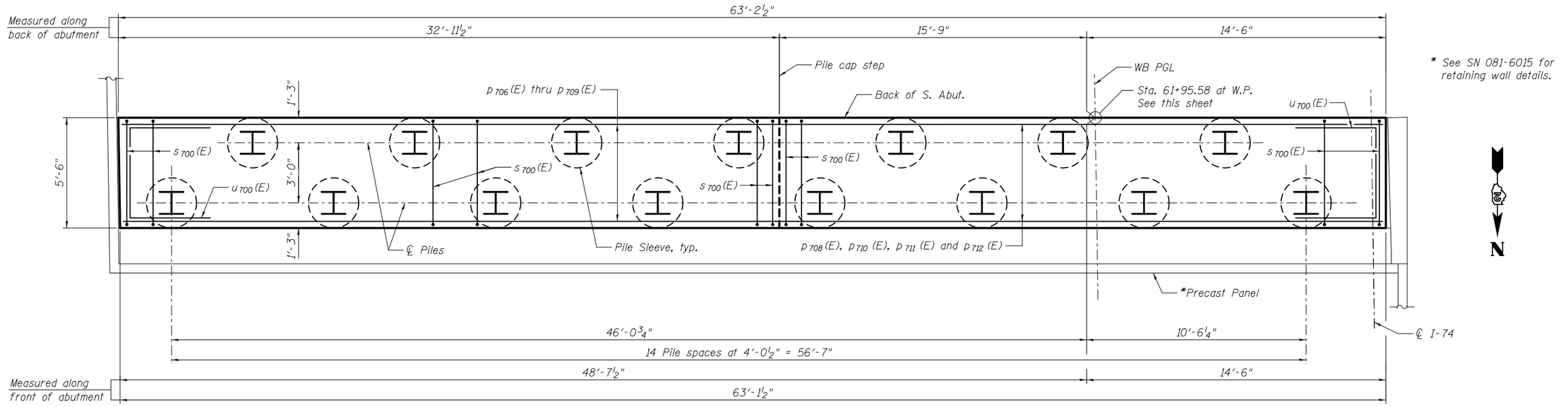
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT ELEVATION AND PLAN – WESTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 58 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1007
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

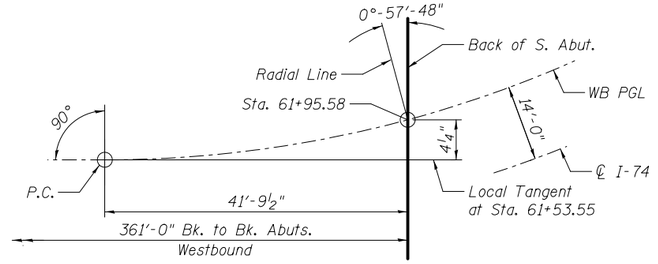


PILE CAP PLAN

(s 701 (E) not shown for clarity)

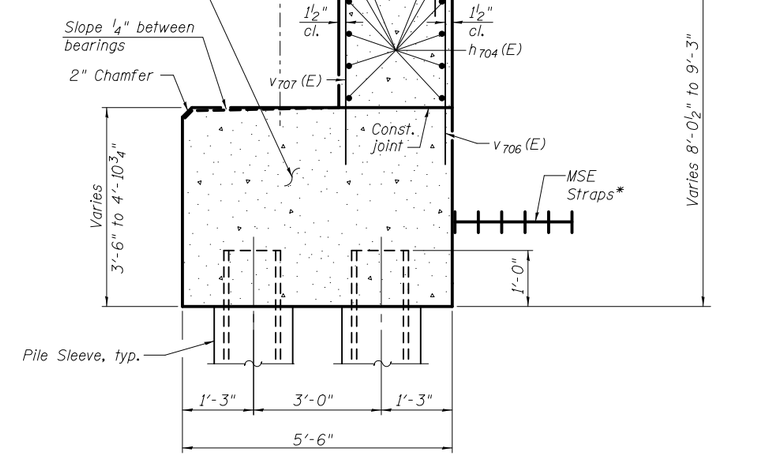
ABUTMENT PILE DATA

Type: HP12x63
Nominal Required Bearing: 598 Kips
Factored Resistance Available: 334 Kips
Est. Length: 69 foot
Soil Setup Pile Length: N/A- Rock
No. Production Piles: 14
No. Test Piles: 1 (East End)

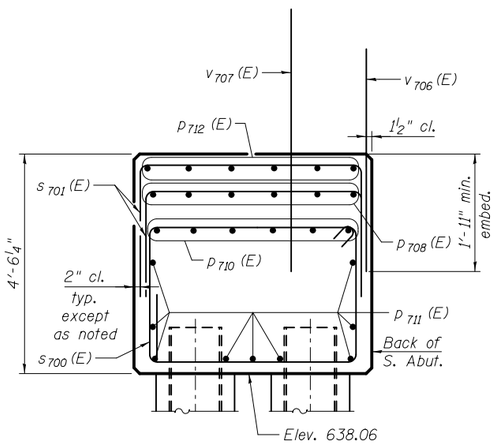


WORK POINT SKETCH

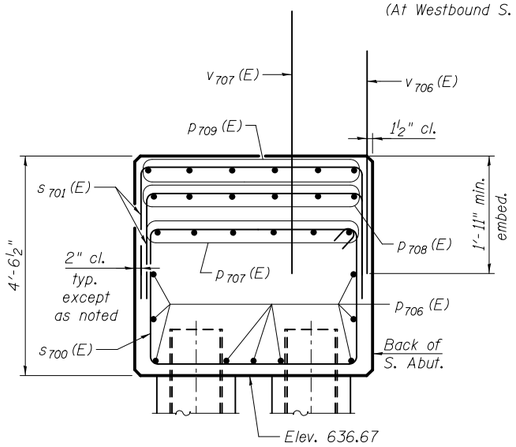
(At Westbound S. Abut.)



SECTION THRU WB SOUTH ABUTMENT



SECTION A-A



SECTION B-B

Notes:

Space reinforcement in cap to miss anchor bolts.

See sheet 63 of 86 for bar details and Bill of Material.

For details of piles and pile sleeves, see sheet 76 of 86.

Pile sleeves shall be sized to provide at least 1½" inches of clearance around the pile and shall extend from bottom of abutment to bottom of reinforced soil mass.

The area between the pile and the sleeve shall be backfilled with dry, loose sand. The cost shall be included in Driving Piles.

To minimize risk of unforseen conflicts with existing buried structures, it is recommended that piles be driven before MSE walls are constructed. Piles may be driven before or after the construction of MSE wall SN 081-6015. Contractor shall coordinate with MSE wall operations.

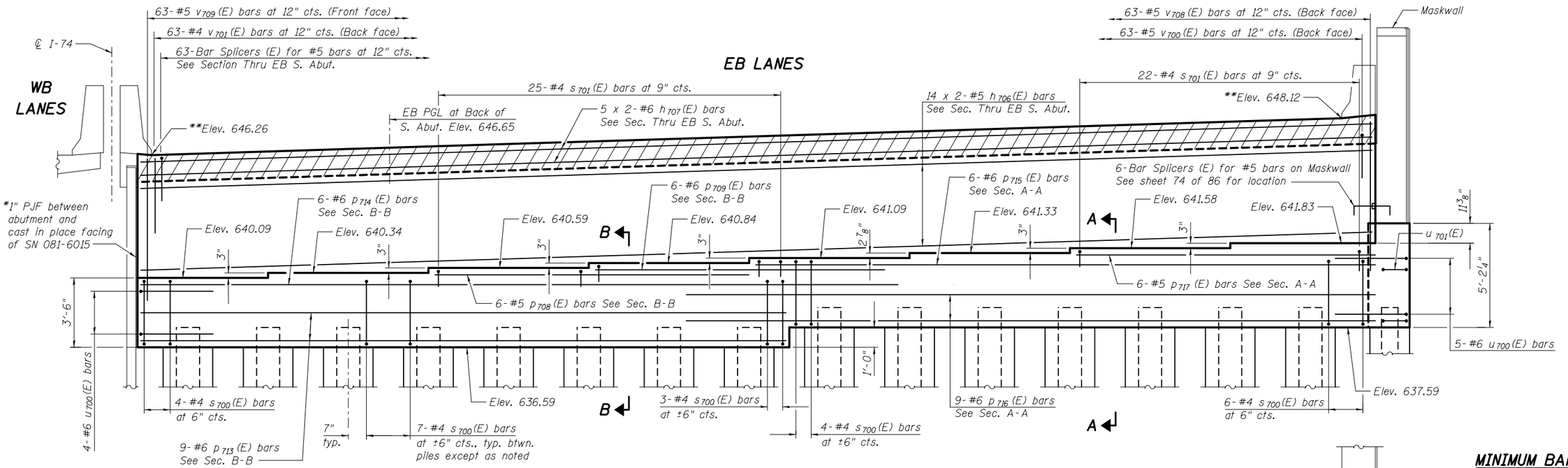
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

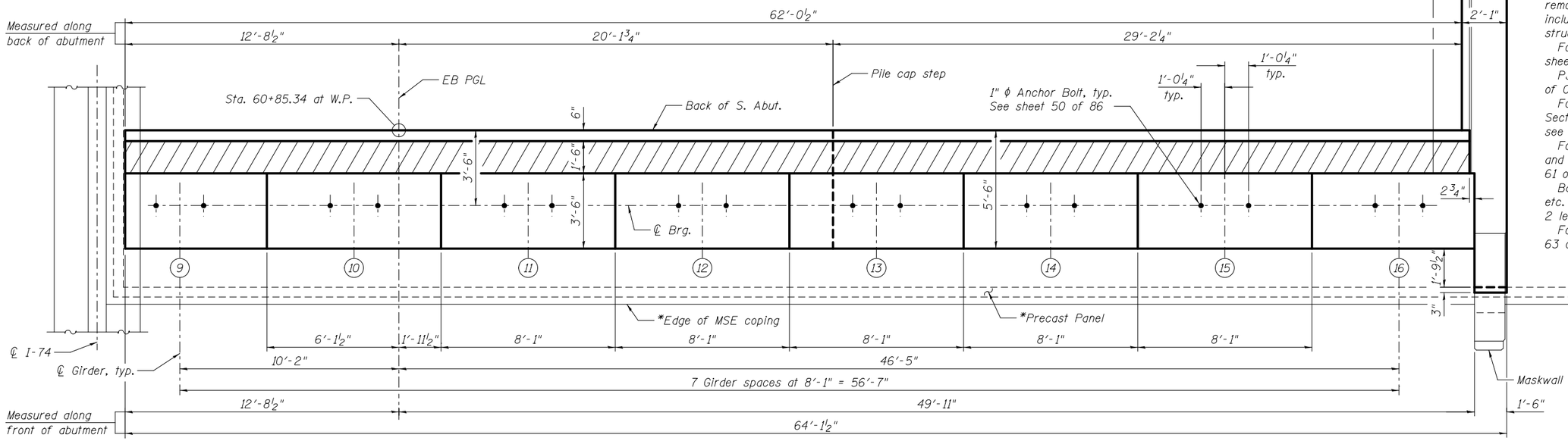
SOUTH ABUTMENT DETAILS – WESTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 59 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1008
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



ELEVATION
(Looking South)

** Elevation given at 6" from back of abutment (end of approach slab).



TOP PLAN VIEW

* See SN 081-6015 for retaining wall details.

MINIMUM BAR LAP
(Abutment)

#5 Bar = 3'-8"
#6 Bar = 4'-5"

Notes:
Pour steps monolithically with cap.
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructures on sheet 34 of 86.
For details of bar splicers, see sheet 77 of 86.
PJF shall be included in the cost of Concrete Structures.
For Sections A-A and B-B and Section Thru EB South Abutment, see sheet 62 of 86.
For Pile Cap Plan and Abutment and Maskwall Pile Data, see sheet 61 of 86.
Bars indicated thus 5 x 2-#6 etc. indicates 5 lines of bars with 2 lengths per line.
For Bill of Material, see sheet 63 of 86.

MODJESKI and MASTERS
Experience greet bridges.

USER NAME =	DESIGNED - JTH	REVISED	
	CHECKED - APL/YSS	REVISED	
PLOT SCALE =	DRAWN - PRC	REVISED	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT ELEVATION AND PLAN – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 60 OF 86 SHEETS

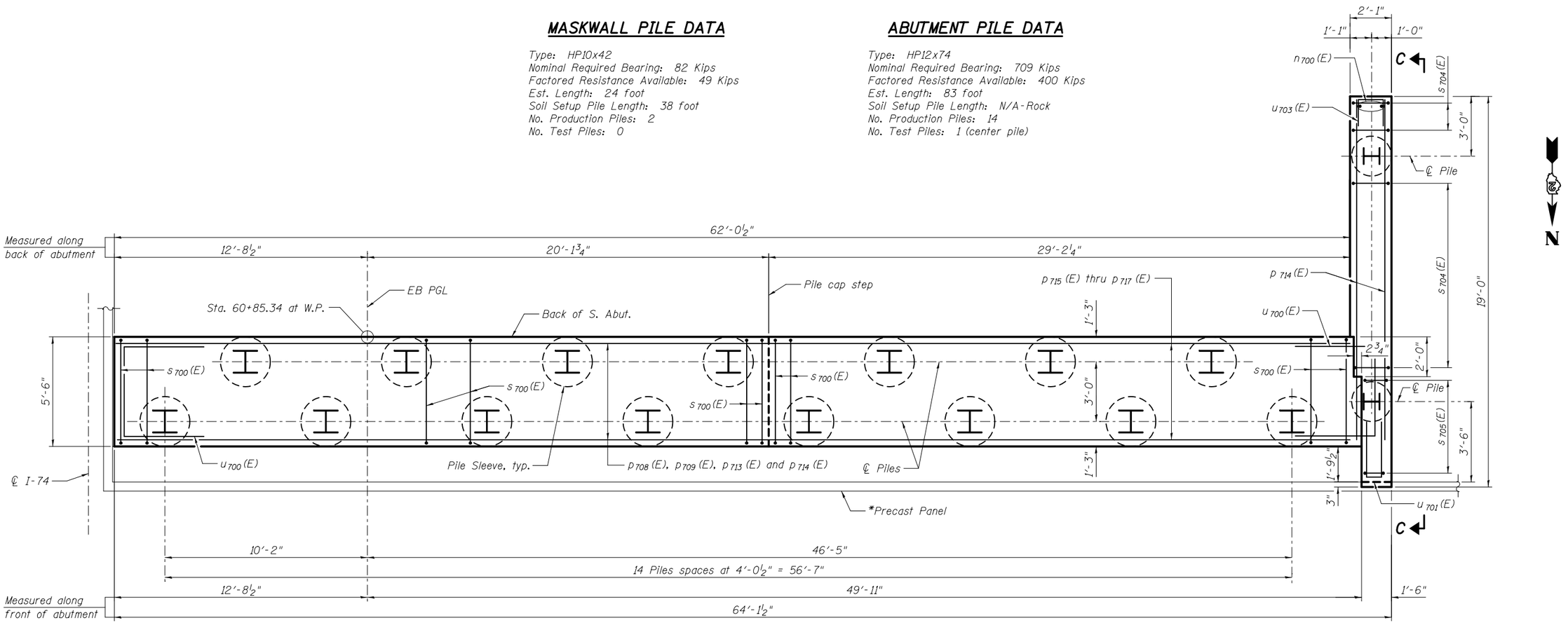
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1009
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

MASKWALL PILE DATA

Type: HP10x42
Nominal Required Bearing: 82 Kips
Factored Resistance Available: 49 Kips
Est. Length: 24 foot
Soil Setup Pile Length: 38 foot
No. Production Piles: 2
No. Test Piles: 0

ABUTMENT PILE DATA

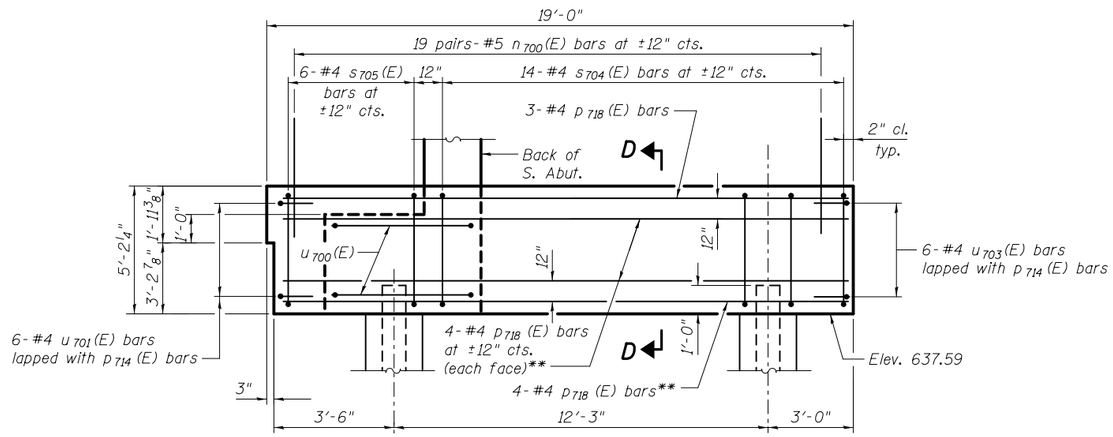
Type: HP12x74
Nominal Required Bearing: 709 Kips
Factored Resistance Available: 400 Kips
Est. Length: 83 foot
Soil Setup Pile Length: N/A-Rock
No. Production Piles: 14
No. Test Piles: 1 (center pile)



PILE CAP PLAN

(s 701 (E) not shown for clarity)

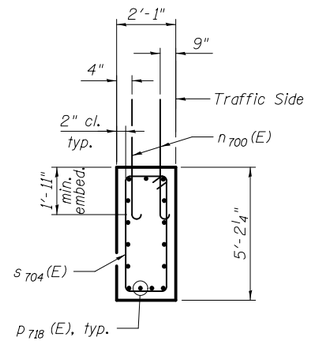
* See SN 081-6015 for retaining wall details.



VIEW C-C

(Precast Panel not shown for clarity)

** Trim to fit



SECTION D-D

Notes:
See sheet 63 of 86 for bar details and Bill of Material.
For details of piles and pile sleeves, see sheet 76 of 86.
Pile sleeves shall be sized to provide at least 1½" inches of clearance around the pile and shall extend from bottom of abutment to bottom of reinforced soil mass.
The area between the pile and the sleeve shall be backfilled with dry, loose sand. The cost shall be included in Driving Piles.
To minimize risk of unforseen conflicts with existing buried structures, it is recommended that piles be driven before MSE walls are constructed. Piles may be driven before or after the construction of MSE wall SN 081-6015. Contractor shall coordinate with MSE wall operations.

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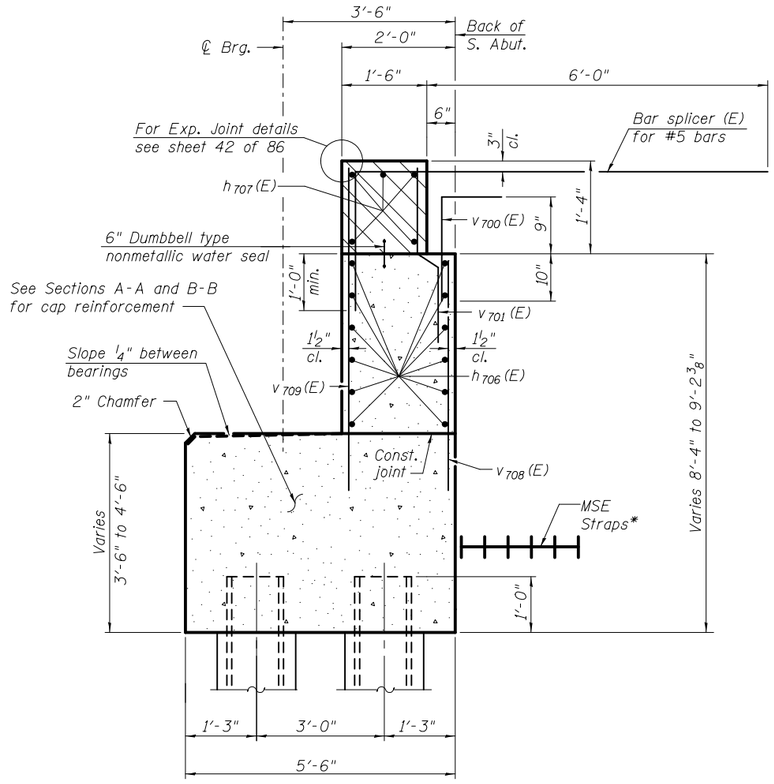
USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

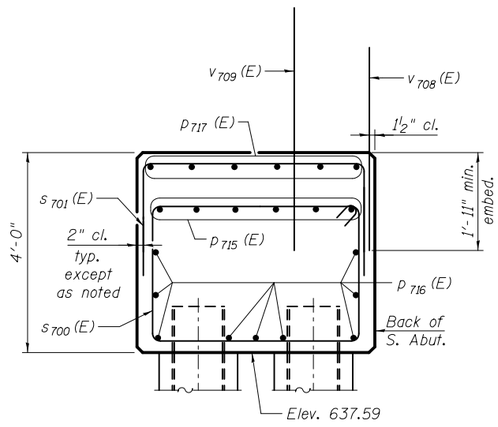
SOUTH ABUTMENT DETAILS 1 – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 61 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1010
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

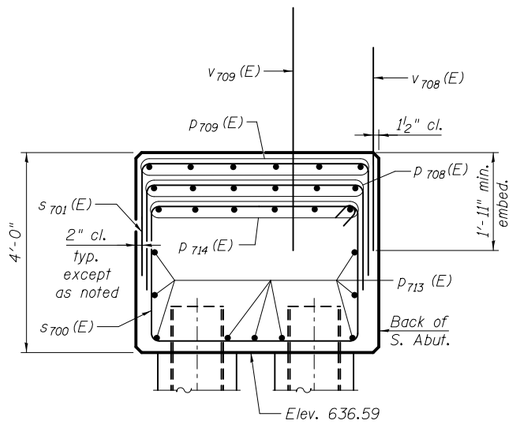


SECTION THRU EB SOUTH ABUTMENT

*See SN 081-6015 for retaining wall details.



SECTION A-A



SECTION B-B

Notes:
Space reinforcement in cap to miss anchor bolts.
See sheet 63 of 86 for bar details and Bill of Material.
For details of piles, see sheet 76 of 86.
Pile sleeves shall be sized to provide at least 1½ inches of clearance around the pile and shall extend from bottom of abutment to bottom of reinforced soil mass.
For location of Sections A-A and B-B, see sheet 60 of 86.

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USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT DETAILS 2 – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 62 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1011
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

NORTH ABUTMENT (WB) BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h 700 (E)	24	#5	33'-0"	
h 701 (E)	10	#6	33'-4"	
D 700 (E)	30	#6	33'-4"	
S 700 (E)	110	#4	17'-5"	
U 700 (E)	8	#6	13'-10"	
V 700 (E)	64	#5	3'-6"	
V 701 (E)	64	#4	3'-0"	
V 702 (E)	64	#5	6'-6"	
V 703 (E)	64	#5	7'-10"	

Concrete Structures	Cu. Yd.	67.2
Reinforcement Bars, Epoxy Coated	Pound	5,600
Furnishing Steel Piles HP12X63	Foot	1,008
Driving Piles	Foot	1,008
Test Pile Steel HP12x63	Each	1
Concrete Sealer	Sq. Ft.	578
Granular Backfill	Cu. Yd.	105

NORTH ABUTMENT (EB) BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h 702 (E)	24	#5	33'-9"	
h 703 (E)	10	#6	34'-1"	
D 701 (E)	34	#6	34'-3"	
D 702 (E)	6	#5	27'-11"	
D 703 (E)	6	#5	7'-11"	
D 704 (E)	4	#5	18'-10"	
D 705 (E)	5	#4	18'-10"	
S 700 (E)	113	#4	17'-5"	
S 701 (E)	47	#4	9'-10"	
S 702 (E)	18	#4	8'-7"	
S 703 (E)	2	#4	11'-5"	
U 700 (E)	9	#6	13'-10"	
U 701 (E)	3	#5	8'-1"	
U 702 (E)	3	#4	9'-0"	
U 703 (E)	3	#5	9'-1"	
V 700 (E)	65	#5	3'-6"	
V 701 (E)	65	#4	3'-0"	
V 704 (E)	65	#5	6'-5"	
V 705 (E)	65	#5	7'-9"	
n 700 (E)	38	#5	4'-7"	

Concrete Structures	Cu. Yd.	76.4
Reinforcement Bars, Epoxy Coated	Pound	6,990
Furnishing Steel Piles HP10X42	Foot	51
Furnishing Steel Piles HP12X74	Foot	1,080
Driving Piles	Foot	1,131
Concrete Sealer	Sq. Ft.	586
Granular Backfill	Cu. Yd.	104

SOUTH ABUTMENT (WB) BILL OF MATERIAL

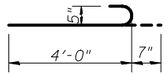
Bar	No.	Size	Length	Shape
h 704 (E)	24	#5	33'-4"	
h 705 (E)	10	#6	33'-8"	
D 706 (E)	9	#6	32'-8"	
D 707 (E)	6	#6	37'-3"	
D 708 (E)	24	#5	11'-9"	
D 709 (E)	6	#6	12'-6"	
D 710 (E)	6	#6	32'-0"	
D 711 (E)	9	#6	34'-8"	
D 712 (E)	6	#5	7'-9"	
S 700 (E)	110	#4	17'-5"	
S 701 (E)	69	#4	9'-10"	
U 700 (E)	9	#6	13'-10"	
V 700 (E)	64	#5	3'-6"	
V 701 (E)	64	#4	3'-0"	
V 706 (E)	64	#5	6'-6"	
V 707 (E)	64	#5	7'-10"	

Concrete Structures	Cu. Yd.	74.3
Reinforcement Bars, Epoxy Coated	Pound	6,570
Furnishing Steel Piles HP12X63	Foot	966
Driving Piles	Foot	966
Test Pile Steel HP12x63	Each	1
Concrete Sealer	Sq. Ft.	586
Granular Backfill	Cu. Yd.	104

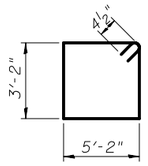
SOUTH ABUTMENT (EB) BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h 706 (E)	28	#5	32'-11"	
h 707 (E)	10	#6	33'-3"	
D 708 (E)	6	#5	11'-9"	
D 709 (E)	6	#6	12'-6"	
D 713 (E)	9	#6	32'-7"	
D 714 (E)	6	#6	37'-2"	
D 715 (E)	6	#6	31'-6"	
D 716 (E)	9	#6	34'-1"	
D 717 (E)	6	#5	15'-4"	
D 718 (E)	15	#4	18'-8"	
S 700 (E)	108	#4	17'-5"	
S 701 (E)	47	#4	9'-10"	
S 704 (E)	14	#4	13'-11"	
S 705 (E)	6	#4	12'-9"	
U 700 (E)	9	#6	13'-10"	
U 701 (E)	6	#4	8'-1"	
U 703 (E)	6	#4	9'-1"	
V 700 (E)	63	#5	3'-6"	
V 701 (E)	63	#4	3'-0"	
V 708 (E)	63	#5	6'-11"	
V 709 (E)	63	#5	8'-3"	
n 700 (E)	38	#5	4'-7"	

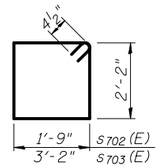
Concrete Structures	Cu. Yd.	79.5
Reinforcement Bars, Epoxy Coated	Pound	6,990
Furnishing Steel Piles HP10X42	Foot	48
Furnishing Steel Piles HP12X74	Foot	1,162
Driving Piles	Foot	1,210
Test Pile Steel HP12x74	Each	1
Concrete Sealer	Sq. Ft.	603
Granular Backfill	Cu. Yd.	110



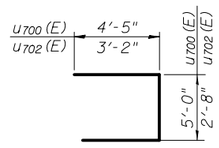
BAR n 700 (E)



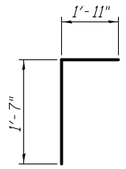
BAR S 700 (E)



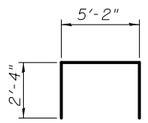
BARS S 702 (E) and S 703 (E)



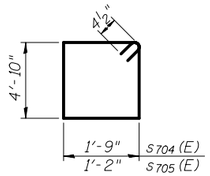
BARS U 700 (E) and U 702 (E)



BAR V 700 (E)



BAR S 701 (E)



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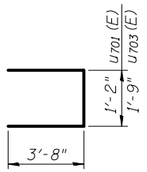
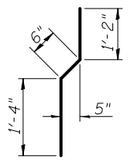


BARS U 701 (E) and U 703 (E)



BAR V 701 (E)

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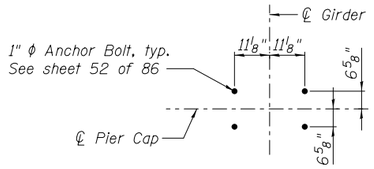
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

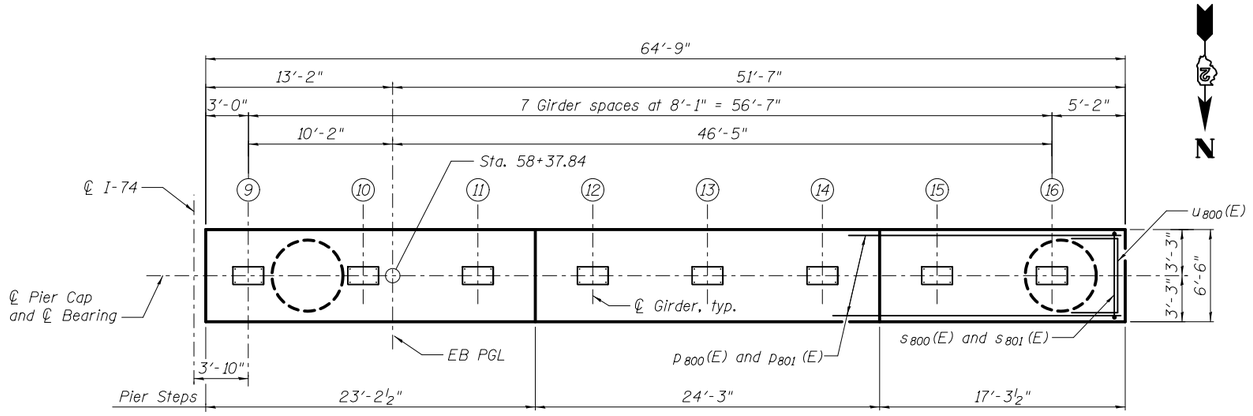
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT REINFORCEMENT AND BILL OF MATERIAL
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 63 OF 86 SHEETS

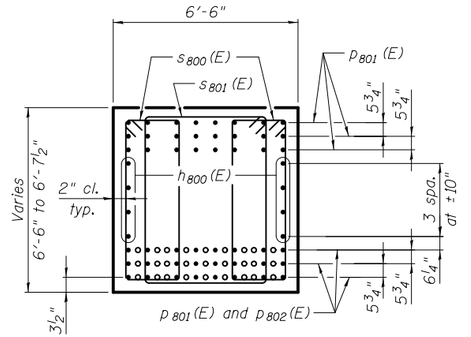
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1012
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



ANCHOR BOLT LAYOUT



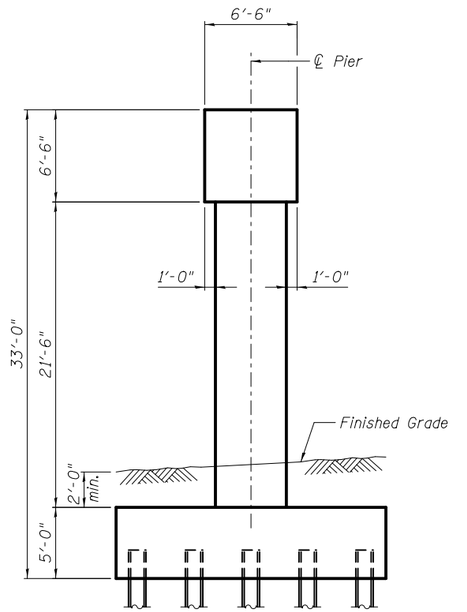
PLAN OF PIER CAP



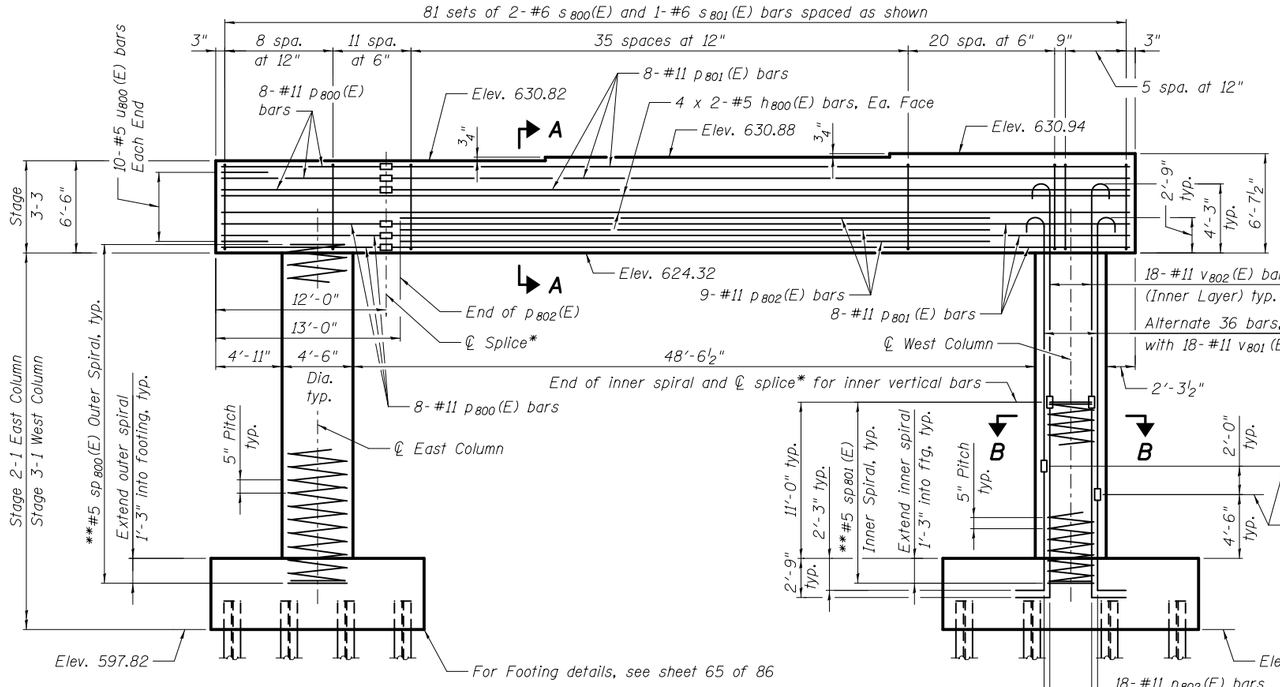
SECTION A-A

∘ p_{802}(E) bars

Note:
Locate p_{802}(E) bars in cap as shown in Section A-A to alleviate congestion within sections over column.



END VIEW

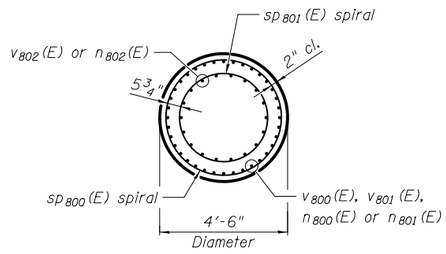


PIER 1 ELEVATION

(Looking South)

* Mechanical Splicer

** Provide 1 1/2 extra turns, top and bottom. Extend outer spiral 2" into pier cap. Provide min. 4-#4 spacers or equivalent.



SECTION B-B

MINIMUM BAR LAP

#5 Bar = 3'-8"

PILE DATA

Type: HP14x102
Nominal Required Bearing: 975 Kips
Factored Resistance Available: 634 Kips
Est. Length: 47' (Min. Tip Elev. 559.8)
Soil Setup Pile Length: N/A-Rock
No. Production Piles: 32
No. Test Piles: 0

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Bars indicated thus 4 x 2-#5 etc. indicates 4 lines of bars with 2 lengths per line.
For Bill of Material, see sheet 65 of 86.
For details of piles, see sheet 76 of 86.
For mechanical splicer details, see sheet 77 of 86.
See Heat of Hydration Control for Concrete Structures special provision for pier concrete pour requirements.

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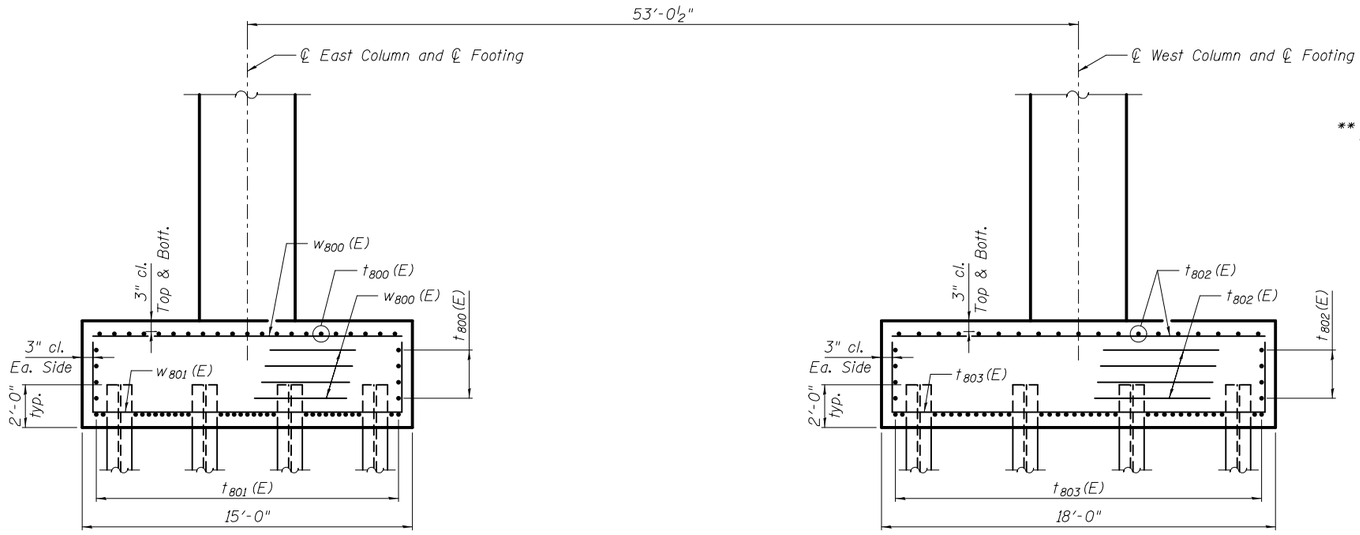
USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JTH	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

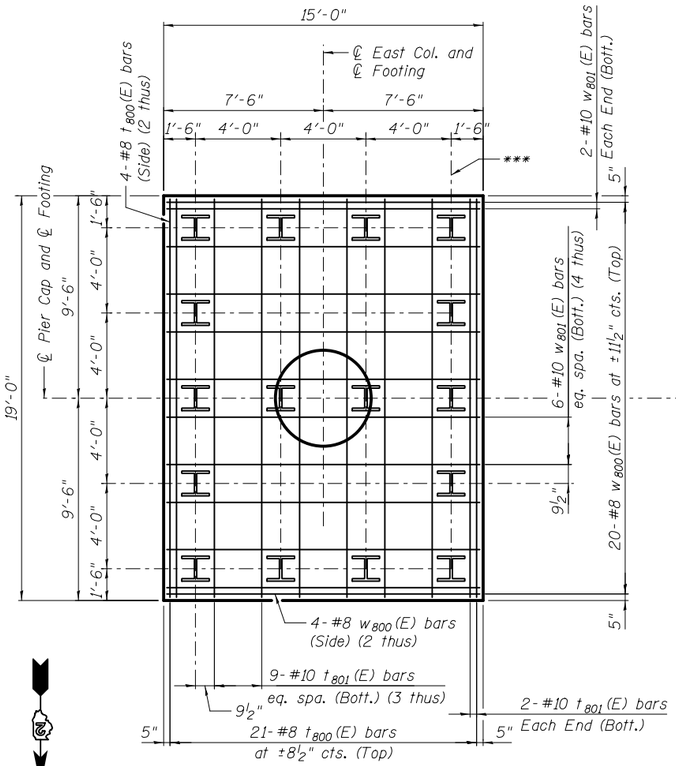
PIER 1 – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 64 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1013
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

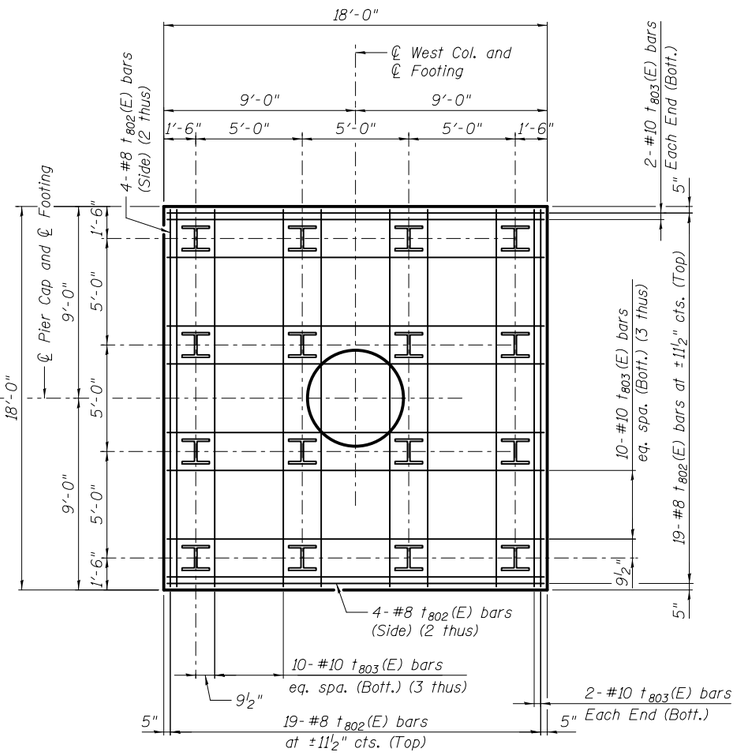


FOOTING DETAIL

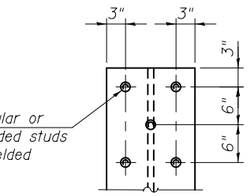
(Looking South)



*** Existing southbound structure (SN 081-0099) may create a conflict with pile driving equipment for this row of piles. To alleviate the potential conflict, the Contractor may batter this row of piles up to a batter of 1:12 (H:V) as approved by the Engineer.



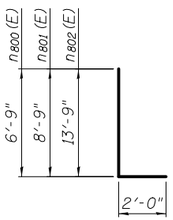
FOOTING PLAN



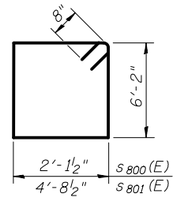
** 5-¾" ϕ x 4" Granular or solid flux filled headed studs automatically end welded

PILE ANCHORAGE

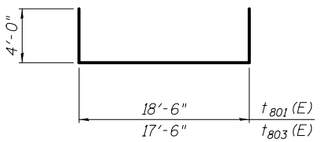
** Typical each flange, each pier pile. Cost included with Furnishing Piles.



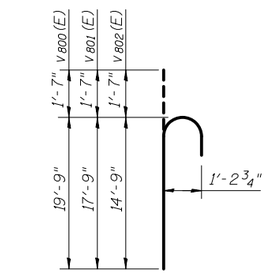
BARS $n_{800}(E)$, $n_{801}(E)$ AND $n_{802}(E)$



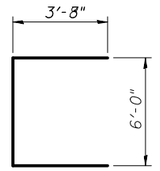
BARS $s_{800}(E)$ AND $s_{801}(E)$



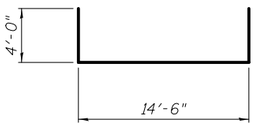
BARS $t_{801}(E)$ AND $t_{803}(E)$



BARS $v_{800}(E)$, $v_{801}(E)$ AND $v_{802}(E)$



BAR $u_{800}(E)$



BAR $w_{801}(E)$

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	$h_{800}(E)$	16	#5	34'-1"	
	$n_{800}(E)$	36	#11	8'-9"	
	$n_{801}(E)$	36	#11	10'-9"	
	$n_{802}(E)$	36	#11	15'-9"	
	$p_{800}(E)$	48	#11	11'-10"	
	$p_{801}(E)$	48	#11	52'-7"	
	$p_{802}(E)$	27	#11	42'-0"	
	$s_{800}(E)$	162	#6	17'-11"	
	$s_{801}(E)$	81	#6	23'-1"	
*	$sp_{800}(E)$	2	#5	22'-11"	
*	$sp_{801}(E)$	2	#5	12'-3"	
	$u_{800}(E)$	20	#5	13'-4"	
	$v_{800}(E)$	36	#11	21'-4"	
	$v_{801}(E)$	36	#11	19'-4"	
	$v_{802}(E)$	36	#11	16'-4"	
	$t_{800}(E)$	29	#8	18'-6"	
	$t_{801}(E)$	31	#10	26'-6"	
	$t_{802}(E)$	54	#8	17'-6"	
	$t_{803}(E)$	68	#10	25'-6"	
	$w_{800}(E)$	28	#8	14'-6"	
	$w_{801}(E)$	28	#10	22'-6"	
	Structure Excavation		Cu. Yd.	999	
	Concrete Structures		Cu. Yd.	240.5	
	Reinforcement Bars, Epoxy Coated		Pound	69,100	
	Furnishing Steel Piles HP14x102		Foot	1,504	
	Driving Piles		Foot	1,504	
	Concrete Sealer		Sq. Ft.	2,297	

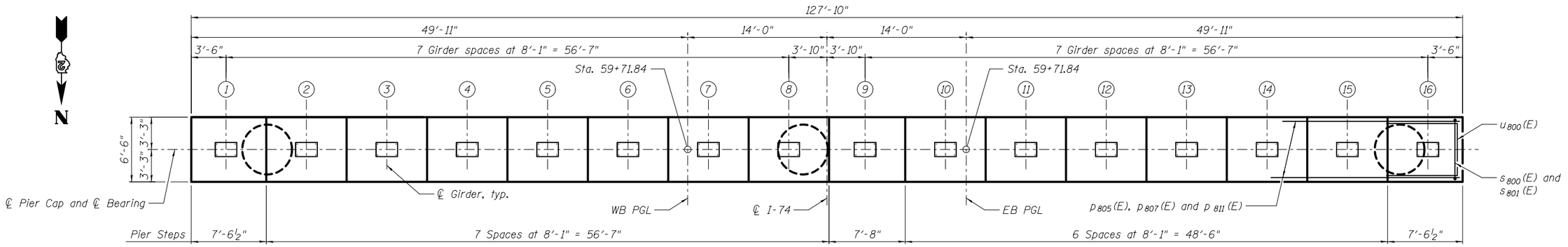
* Length is height of spiral.

MODJESKI and MASTERS Experience greet bridges.	USER NAME =	DESIGNED - YSS	REVISED
		CHECKED - JTH	REVISED
	PLOT SCALE =	DRAWN - PRC	REVISED
	PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

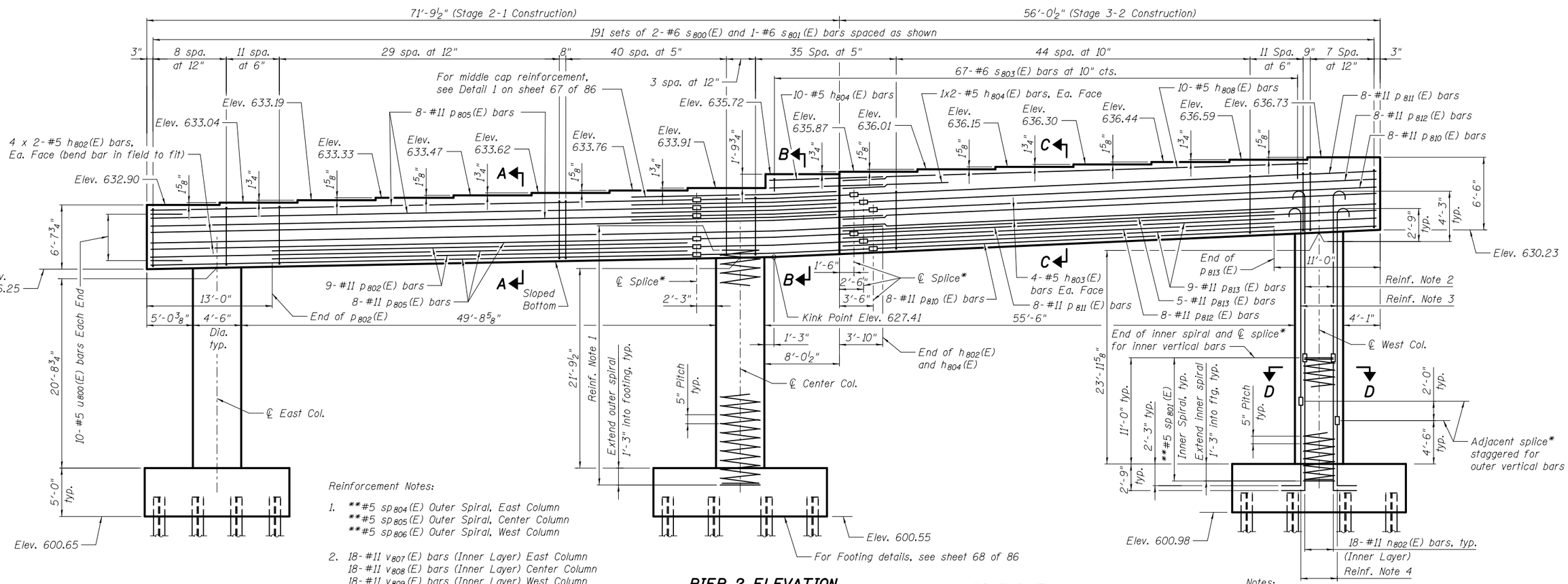
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 DETAILS – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 65 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1014
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



PLAN OF PIER CAP



Reinforcement Notes:

1. **#5 sp804(E) Outer Spiral, East Column
   **#5 sp805(E) Outer Spiral, Center Column
   **#5 sp806(E) Outer Spiral, West Column
2. 18-#11 v807(E) bars (Inner Layer) East Column
   18-#11 v808(E) bars (Inner Layer) Center Column
   18-#11 v809(E) bars (Inner Layer) West Column
3. Alternate 36 bars 18-#11 v810(E) with 18-#11 v811(E) (Outer Layer) East Column
   Alternate 36 bars 18-#11 v812(E) with 18-#11 v813(E) (Outer Layer) Center Column
   Alternate 36 bars 18-#11 v814(E) with 18-#11 v815(E) (Outer Layer) West Column
4. Alternate 36 bars 18-#11 n800(E) with 18-#11 n801(E) (Outer Layer) Each Column

MINIMUM BAR LAP

#5 Bar = 3'-8"

PIER 2 ELEVATION

(Looking South)

* Mechanical Splicer

** Provide 1½ extra turns, top and bottom. Extend outer spiral 2" into pier cap. Provide min. 4-#4 spacers or equivalent.

PILE DATA

Type: HP14x102
Nominal Required Bearing: 975 Kips
Factored Resistance Available: 634 Kips
Est. Length: 51' (Min. Tip Elev. 557.7) East Footing
48' (Min. Tip Elev. 562.6) Center Footing
52' (Min. Tip Elev. 557.0) West Footing
Soil Setup Pile Length: N/A Rock
No. Production Piles: 51
No. Test Piles: 1 (at Center Footing)

Notes:

Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Bars indicated thus 4 x 2-#5 etc. indicates 4 lines of bars with 2 lengths per line.
For anchor bolt layout, see sheet 67 of 86.
For Section A-A, B-B and C-C and Bill of Material, see sheet 67 of 86.
For details of piles, see sheet 76 of 86.
For mechanical splicer details, see sheet 77 of 86.
See Heat of Hydration Control for Concrete Structures special provision for pier concrete pour requirements.

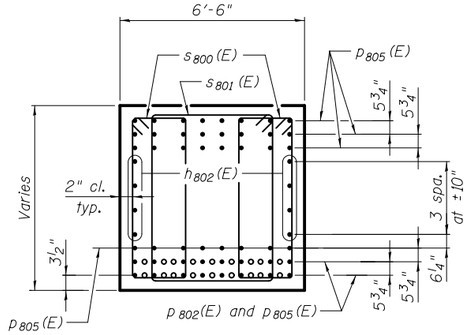
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JTH	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

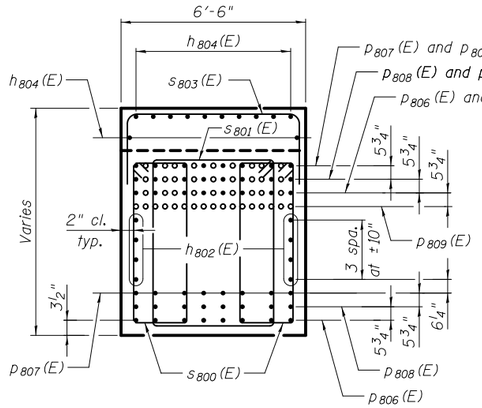
PIER 2 – WESTBOUND AND EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 66 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1015
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



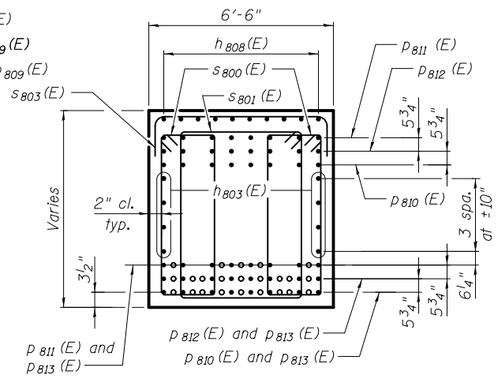
SECTION A-A

- $p_{802}(E)$ bars



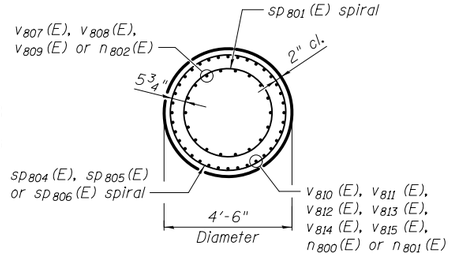
SECTION B-B

- $p_{809}(E)$ bars



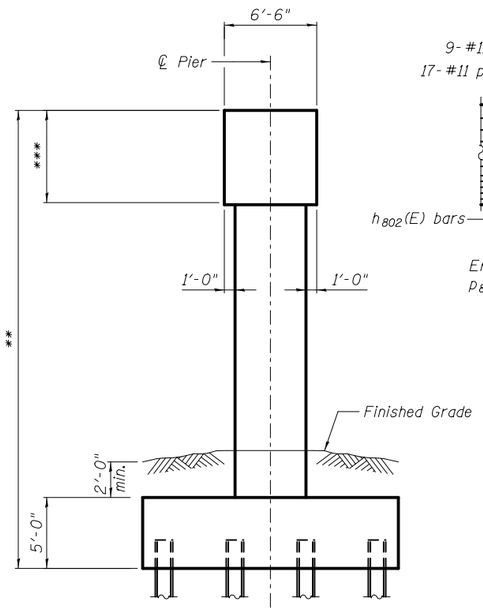
SECTION C-C

- $p_{813}(E)$ bars



SECTION D-D

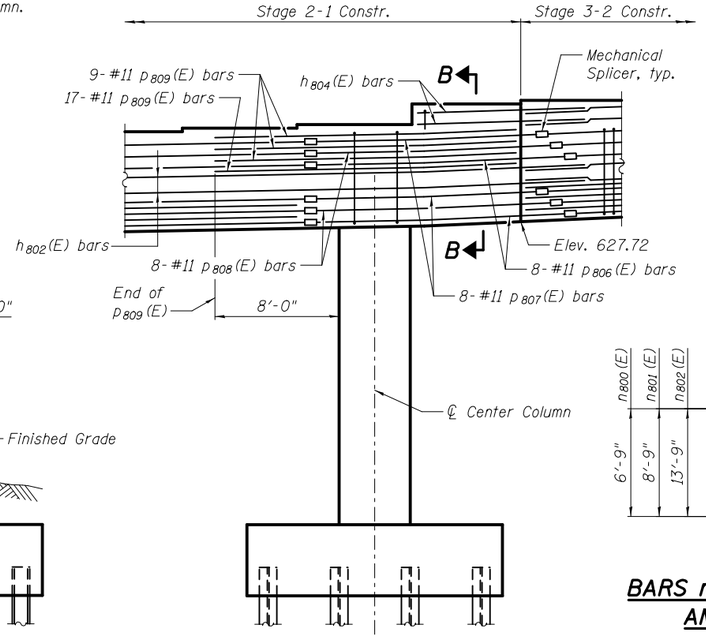
Note:
Locate $p_{802}(E)$, $p_{809}(E)$ and $p_{813}(E)$ bars in cap as shown in Section A-A, B-B and C-C to alleviate congestion within sections over column.



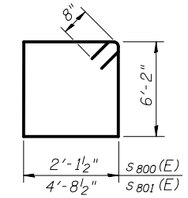
END VIEW

** 32'-3" East Column
35'-9" West Column

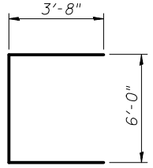
*** 6'-7 3/4" East Column
6'-6" West Column



DETAIL 1

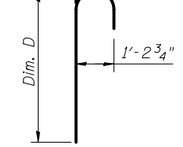


BARS $s_{800}(E)$ AND $s_{801}(E)$



BAR $u_{800}(E)$

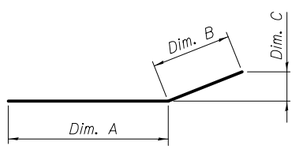
BAR $s_{803}(E)$



BARS $v_{807}(E)$ THRU $v_{815}(E)$

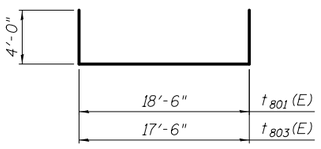
Bar	Dim. D
$v_{807}(E)$	14'-0"
$v_{808}(E)$	15'-1"
$v_{809}(E)$	17'-3"
$v_{810}(E)$	19'-0"
$v_{811}(E)$	17'-0"
$v_{812}(E)$	20'-1"
$v_{813}(E)$	18'-1"
$v_{814}(E)$	22'-3"
$v_{815}(E)$	20'-3"

BARS $n_{800}(E)$, $n_{801}(E)$ AND $n_{802}(E)$

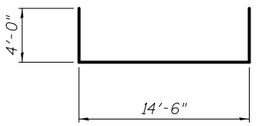


BARS $p_{806}(E)$ THRU $p_{809}(E)$

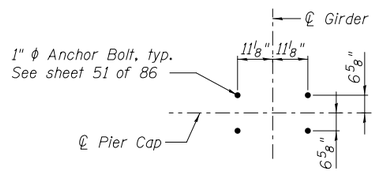
Bar	Dim. A	Dim. B	Dim. C
$p_{806}(E)$	8'-0"	10'-4"	3 3/8"
$p_{807}(E)$	8'-0"	8'-4"	2 3/4"
$p_{808}(E)$	8'-0"	9'-4"	3"
$p_{809}(E)$	13'-9"	6'-9"	2 1/4"



BARS $t_{801}(E)$ AND $t_{803}(E)$



BAR $w_{801}(E)$



ANCHOR BOLT LAYOUT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{802}(E)$	16	#5	39'-7"	
$h_{803}(E)$	8	#5	55'-9"	
$h_{804}(E)$	14	#5	11'-4"	
$h_{808}(E)$	10	#5	48'-6"	
$n_{800}(E)$	54	#11	8'-9"	
$n_{801}(E)$	54	#11	10'-9"	
$n_{802}(E)$	54	#11	15'-9"	
$p_{802}(E)$	18	#11	42'-0"	
$p_{805}(E)$	48	#11	56'-10"	
$p_{806}(E)$	16	#11	18'-4"	
$p_{807}(E)$	16	#11	16'-4"	
$p_{808}(E)$	16	#11	17'-4"	
$p_{809}(E)$	44	#11	20'-6"	
$p_{810}(E)$	16	#11	52'-5"	
$p_{811}(E)$	16	#11	54'-5"	
$p_{812}(E)$	16	#11	53'-5"	
$p_{813}(E)$	23	#11	45'-0"	
$s_{800}(E)$	382	#6	17'-11"	
$s_{801}(E)$	191	#6	23'-1"	
$s_{803}(E)$	67	#6	14'-4"	
* $sp_{801}(E)$	3	#5	12'-3"	
* $sp_{804}(E)$	1	#5	22'-2"	
* $sp_{805}(E)$	1	#5	23'-3"	
* $sp_{806}(E)$	1	#5	25'-6"	
$u_{800}(E)$	20	#5	13'-4"	
$v_{807}(E)$	18	#11	15'-7"	
$v_{808}(E)$	18	#11	16'-8"	
$v_{809}(E)$	18	#11	18'-10"	
$v_{810}(E)$	18	#11	20'-7"	
$v_{811}(E)$	18	#11	18'-7"	
$v_{812}(E)$	18	#11	21'-8"	
$v_{813}(E)$	18	#11	19'-8"	
$v_{814}(E)$	18	#11	23'-10"	
$v_{815}(E)$	18	#11	21'-10"	
$t_{800}(E)$	37	#8	18'-6"	
$t_{801}(E)$	31	#10	26'-6"	
$t_{802}(E)$	108	#8	17'-6"	
$t_{803}(E)$	136	#10	25'-6"	
$w_{800}(E)$	28	#8	14'-6"	
$w_{801}(E)$	28	#10	22'-6"	

Structure Excavation	Cu. Yd.	1,005
Concrete Structures	Cu. Yd.	427.4
Reinforcement Bars, Epoxy Coated	Pound	126,880
Furnishing Steel Piles HP14x102	Foot	2,572
Driving Piles	Foot	2,572
Test Piles Steel HP14x102	Each	1
Concrete Sealer	Sq. Ft.	4,366

* Length is height of spiral.

Note:
For location of Section A-A, C-C and D-D, see sheet 66 of 86.

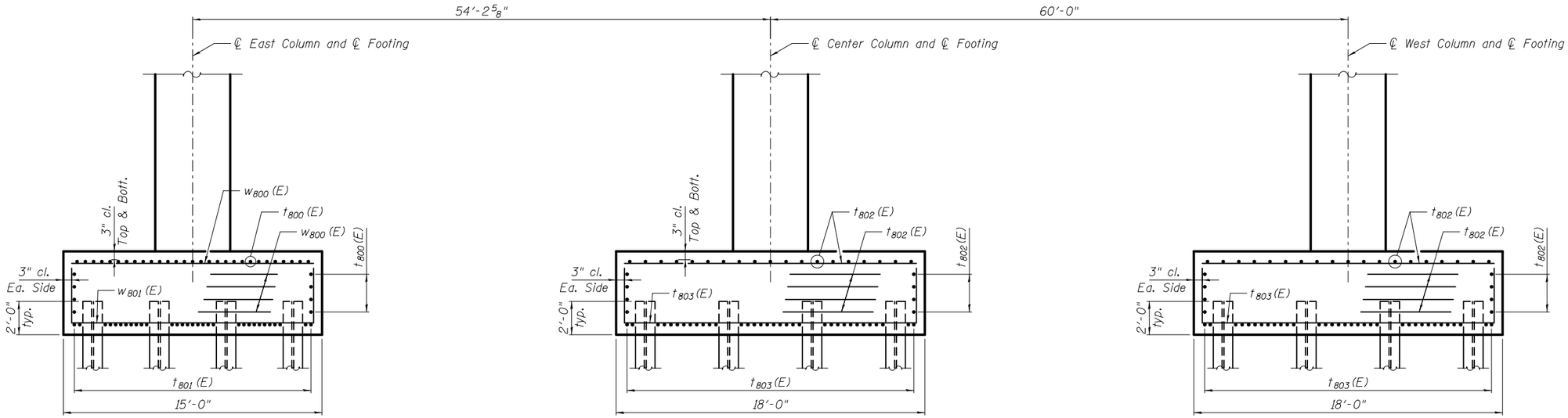
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - JTH	REVISED	
PLOT SCALE =	DRAWN - PRC	REVISED	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

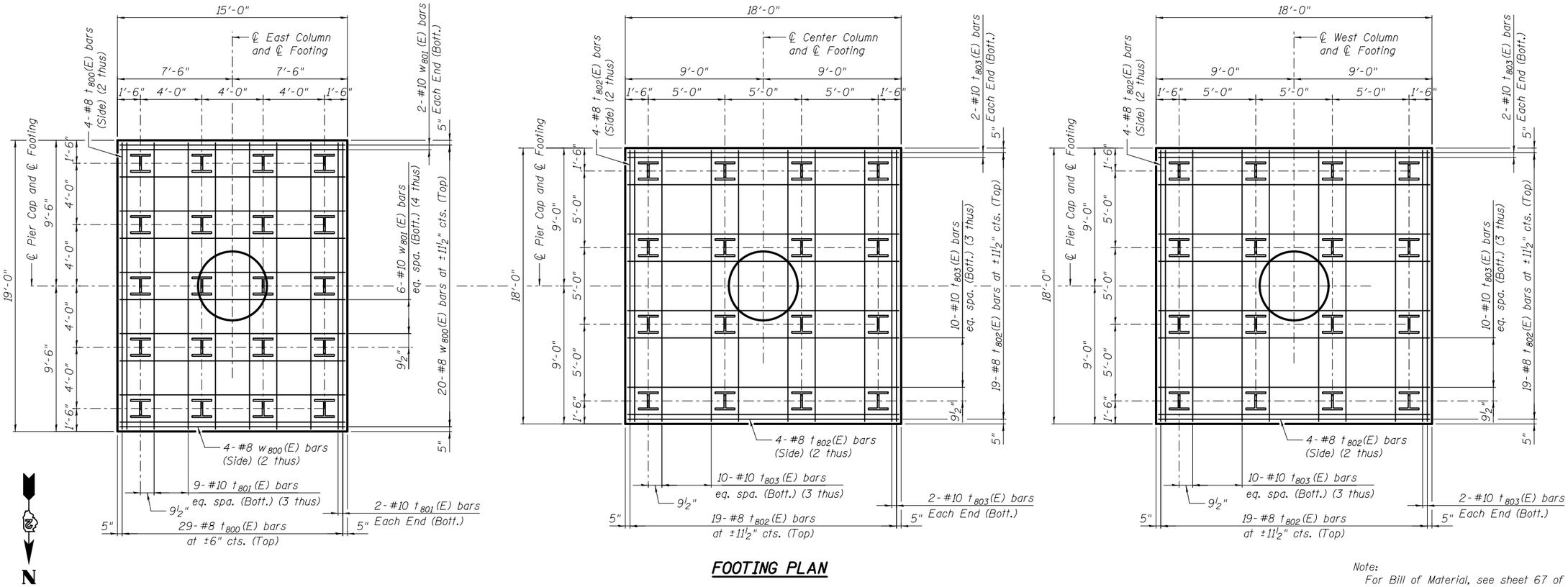
PIER 2 DETAILS – WESTBOUND AND EASTBOUND – 1
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 67 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1016
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



FOOTING DETAIL

(Looking South)



FOOTING PLAN

Note:
For Bill of Material, see sheet 67 of 86.
For pile anchorage details, see sheet 65 of 86.

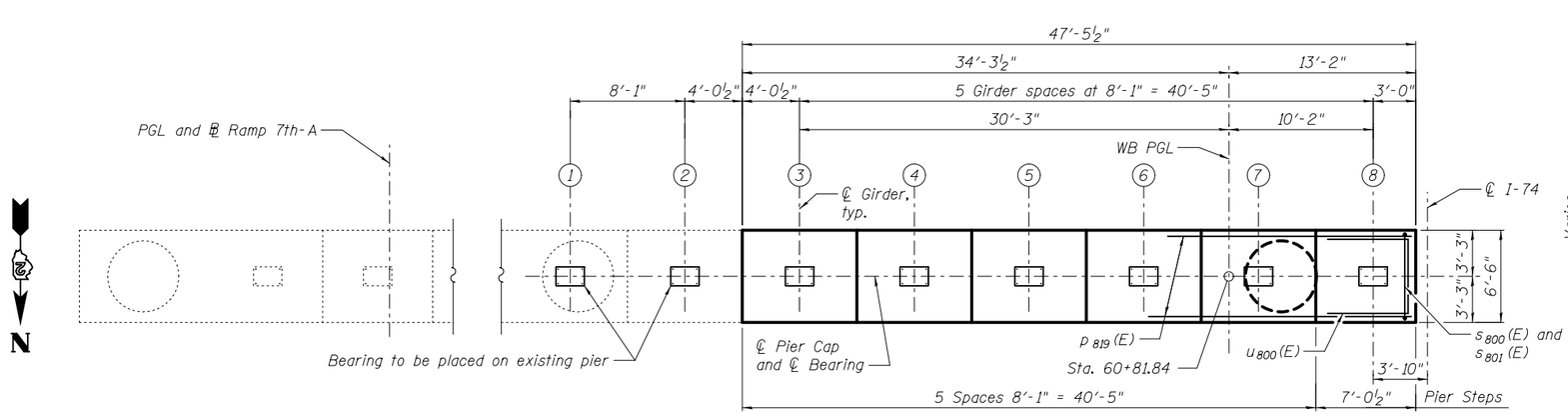
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JTH	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

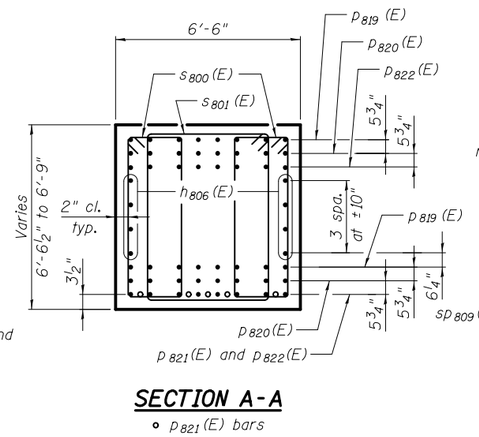
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 DETAILS – WESTBOUND AND EASTBOUND – 2
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 68 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1017
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

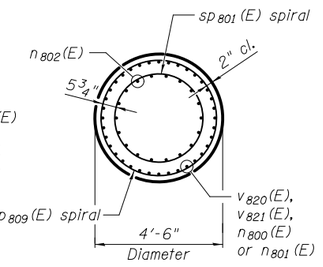


PLAN OF PIER CAP



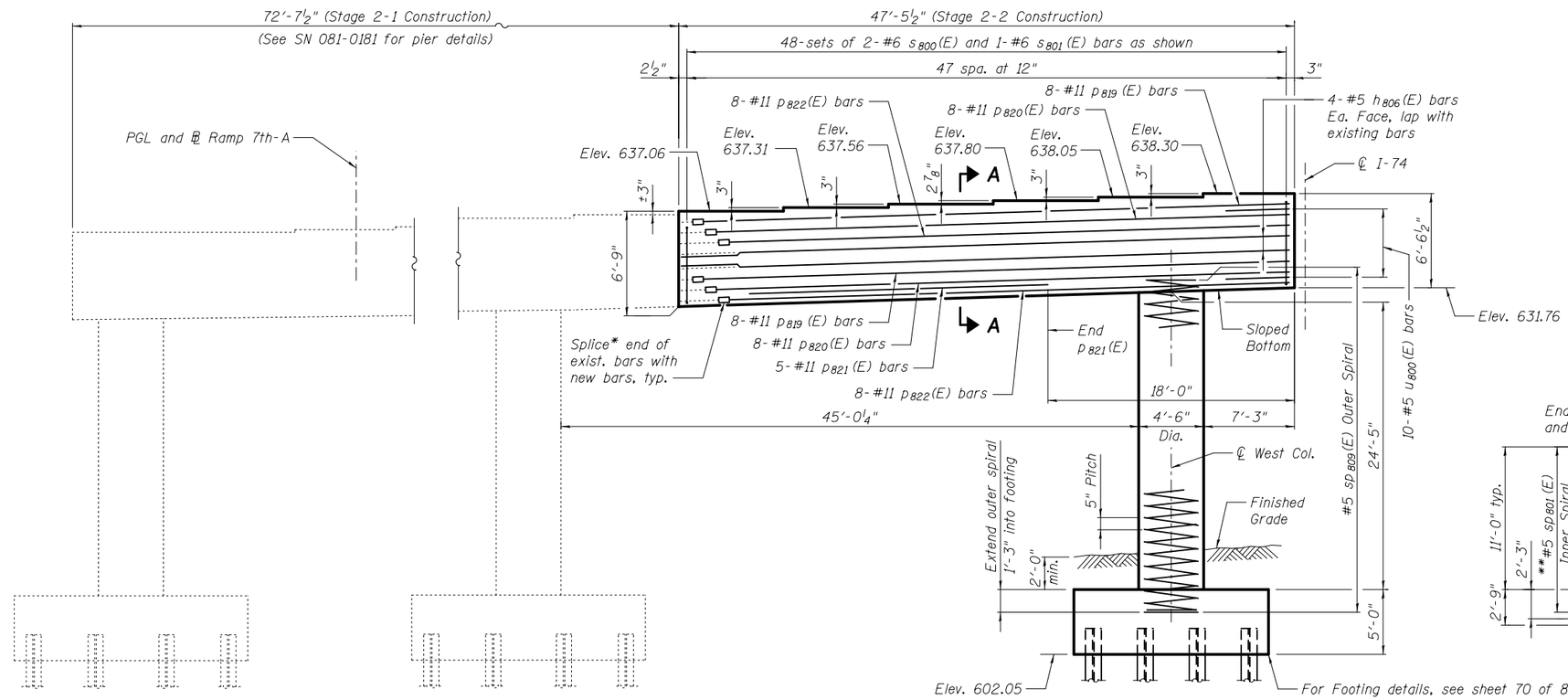
SECTION A-A

∘ p 821 (E) bars



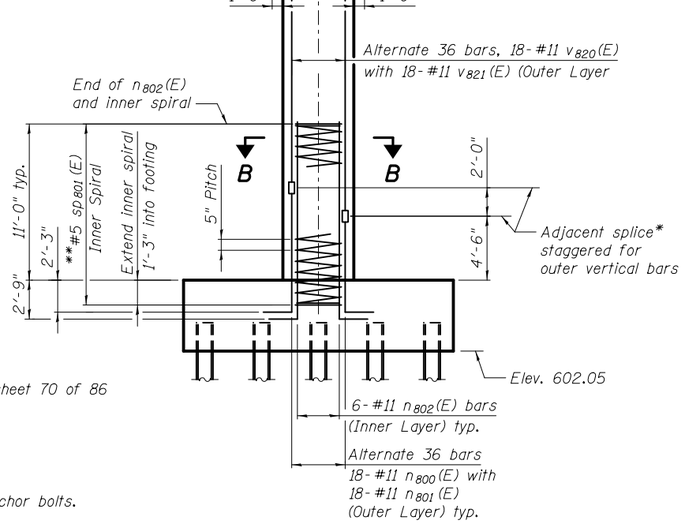
SECTION B-B

Note:
Locate p 821 (E) bars in cap as shown in Section A-A to alleviate congestion within sections over column.

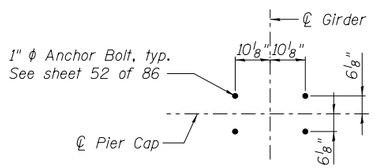


PIER 3 ELEVATION

(Looking South)



END VIEW



ANCHOR BOLT LAYOUT

PILE DATA

Type: HP14x102
Nominal Required Bearing: 975 Kips
Factored Resistance Available: 682 Kips
Est. Length: 36' (Min. Tip Elev. 571.1)
Soil Setup Pile Length: N/A-Rock
No. Production Piles: 16
No. Test Piles: 0

* Mechanical Splicer

** Provide 1½ extra turns, top and bottom. Extend outer spiral 2" into pier cap. Provide min. 4-#4 spacers or equivalent.

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For Bill of Material, see sheet 70 of 86.
For details of piles, see sheet 76 of 86.
For mechanical splicer details, see sheet 77 of 86.
See Heat of Hydration Control for Concrete Structures special provision for pier concrete pour requirements.

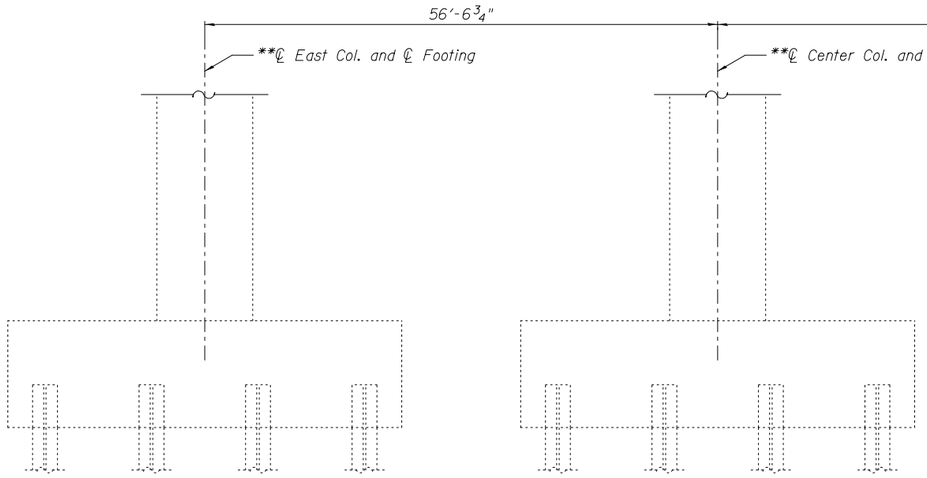
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JTH	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

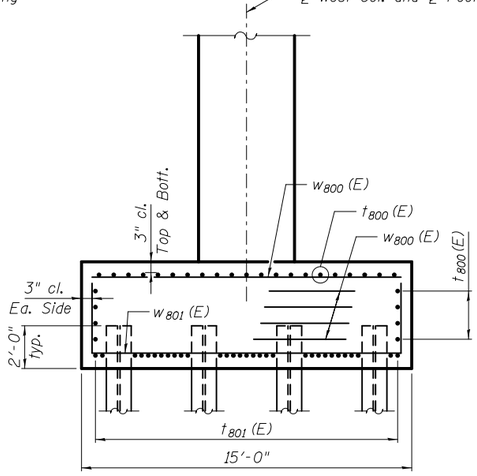
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 – WESTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 69 OF 86 SHEETS

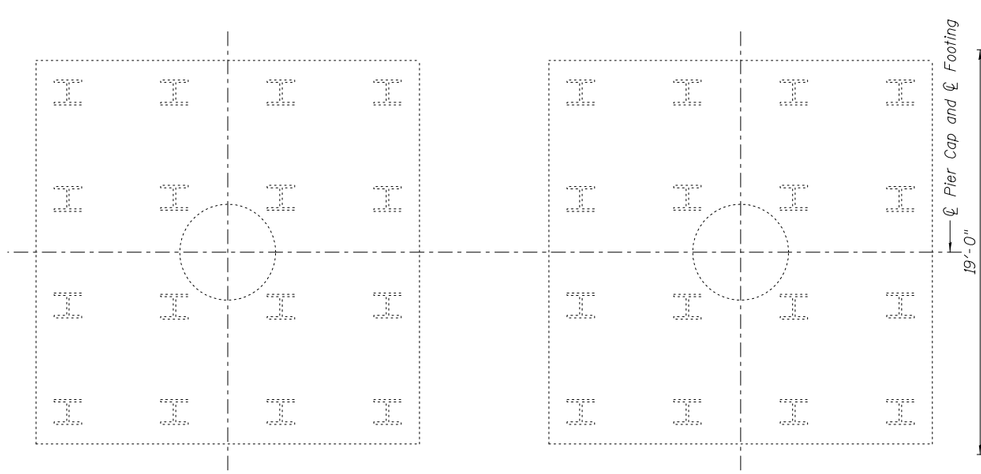
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1018
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

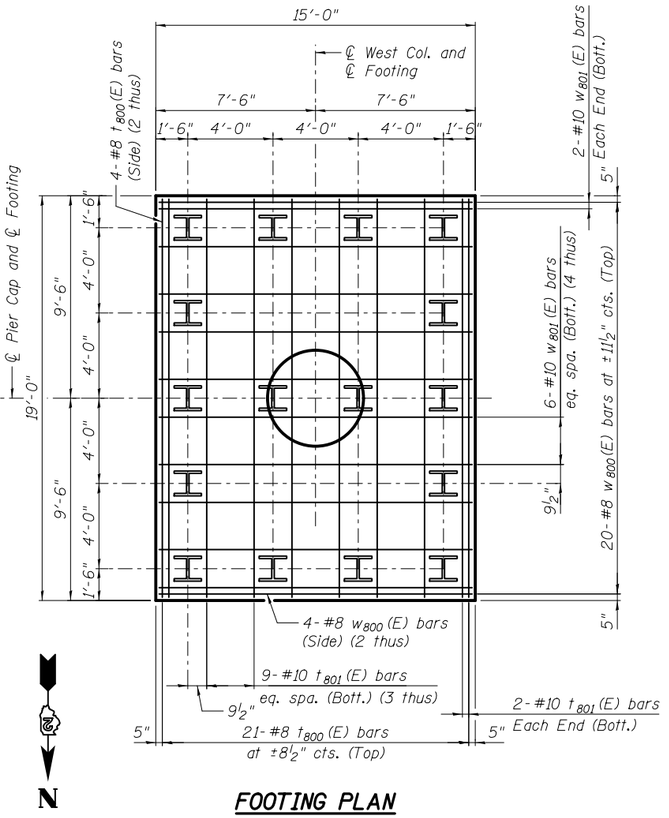


** Stage 2-1 Construction
(See SN 081-0181 for pier details)

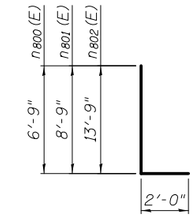


FOOTING DETAIL
(Looking South)

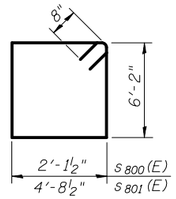




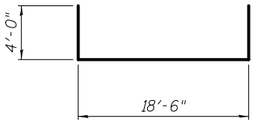
FOOTING PLAN



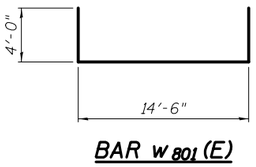
BARS n_{800}(E), n_{801}(E) AND n_{802}(E)



BARS s_{800}(E) AND s_{801}(E)



BAR t_{801}(E)

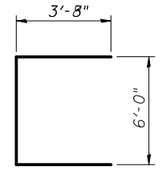


BAR w_{801}(E)

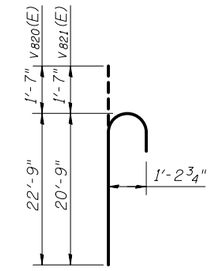
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{806}(E)	8	#5	47′-2"	
n_{800}(E)	18	#11	8′-9"	
n_{801}(E)	18	#11	10′-9"	
n_{802}(E)	6	#11	15′-9"	
p_{819}(E)	16	#11	45′-10"	
p_{820}(E)	16	#11	44′-10"	
p_{821}(E)	5	#11	24′-0"	
p_{822}(E)	16	#11	43′-10"	
s_{800}(E)	96	#6	17′-11"	
s_{801}(E)	48	#6	23′-1"	
* sp_{801}(E)	1	#5	12′-3"	
* sp_{809}(E)	1	#5	25′-11"	
u_{800}(E)	10	#5	13′-4"	
v_{820}(E)	18	#11	24′-4"	
v_{821}(E)	18	#11	22′-4"	
t_{800}(E)	29	#8	18′-6"	
t_{801}(E)	31	#10	26′-6"	
w_{800}(E)	28	#8	14′-6"	
w_{801}(E)	28	#10	22′-6"	
Structure Excavation		Cu. Yd.	198	
Concrete Structures		Cu. Yd.	143.0	
Reinforcement Bars, Epoxy Coated		Pound	33,660	
Furnishing Steel Piles HP14x102		Foot	576	
Driving Piles		Foot	576	
Concrete Sealer		Sq. Ft.	1,601	

* Length is height of spiral.



BAR u_{800}(E)



BARS v_{820}(E) AND v_{821}(E)

Note:
For pile anchorage details, see sheet 65 of 86.

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - JTH	REVISED	
PLOT SCALE =	DRAWN - PRC	REVISED	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED	

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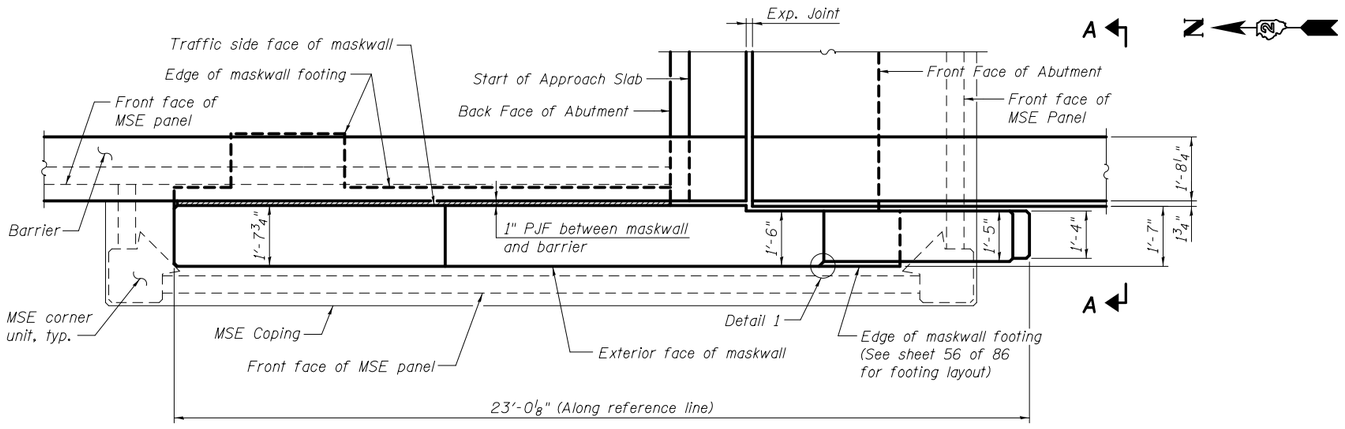
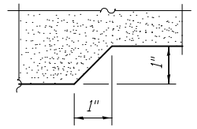
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 DETAILS – WESTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 70 OF 86 SHEETS

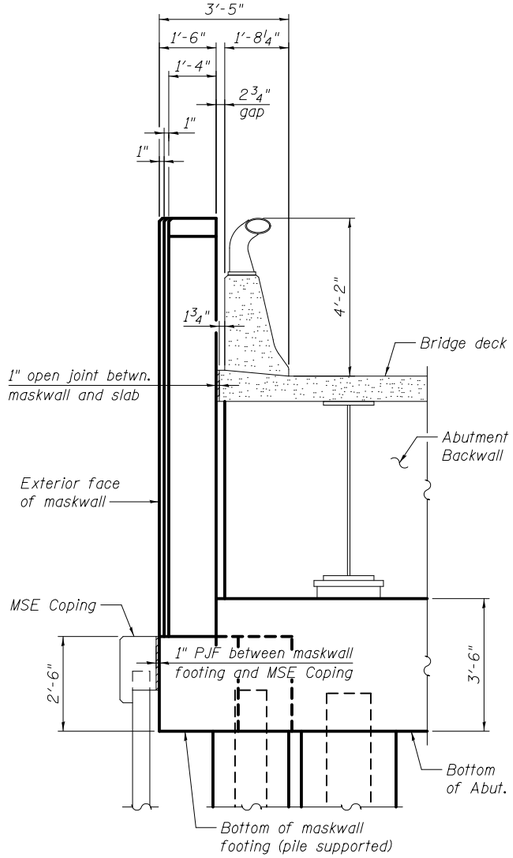
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1019
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



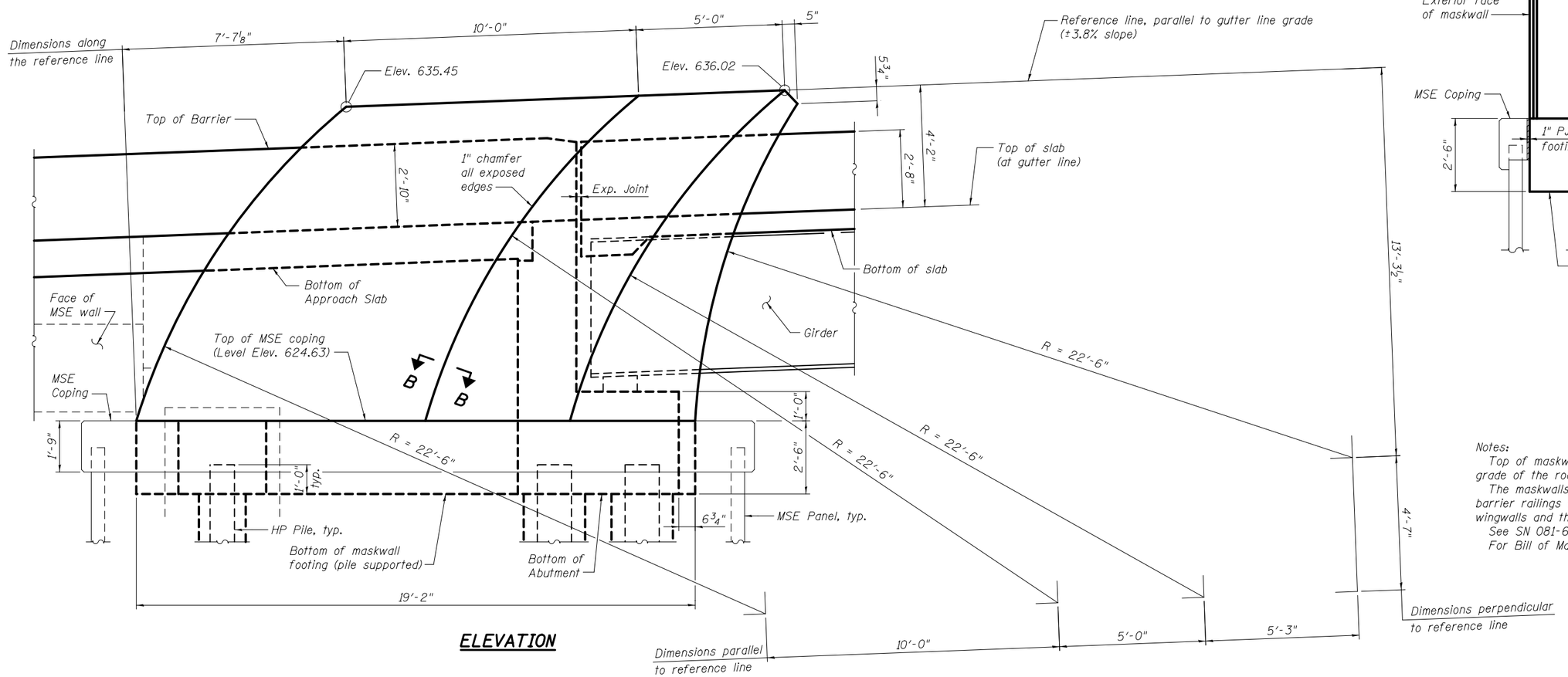
MASKWALL PLAN



SECTION B-B - DETAIL 1



VIEW A-A



ELEVATION

Notes:
Top of maskwall shall be parallel to the longitudinal grade of the roadway and any adjacent barrier.
The maskwalls are to be poured after the adjacent barrier railings are poured on the bridge slab, the wingwalls and the approach slab.
See SN 081-6016 for MSE wall details.
For Bill of Material, see sheet 75 of 86.

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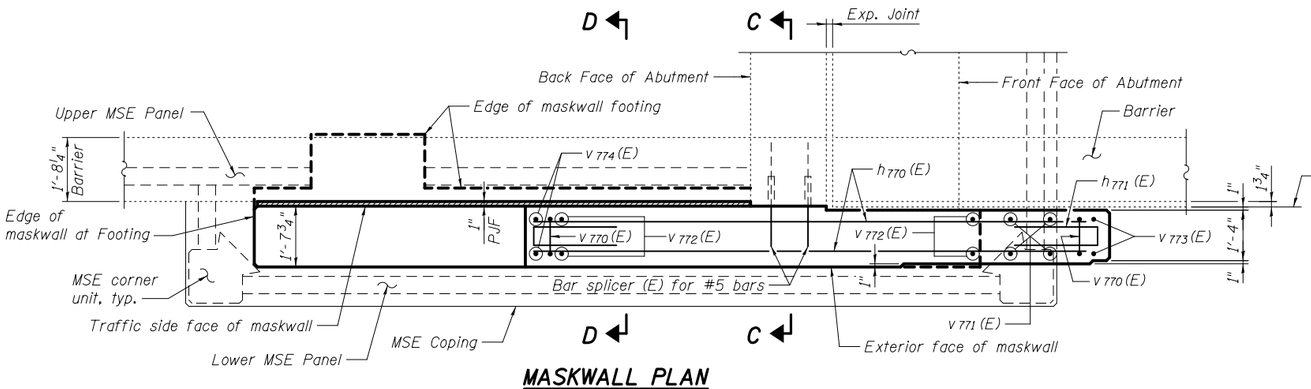
USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

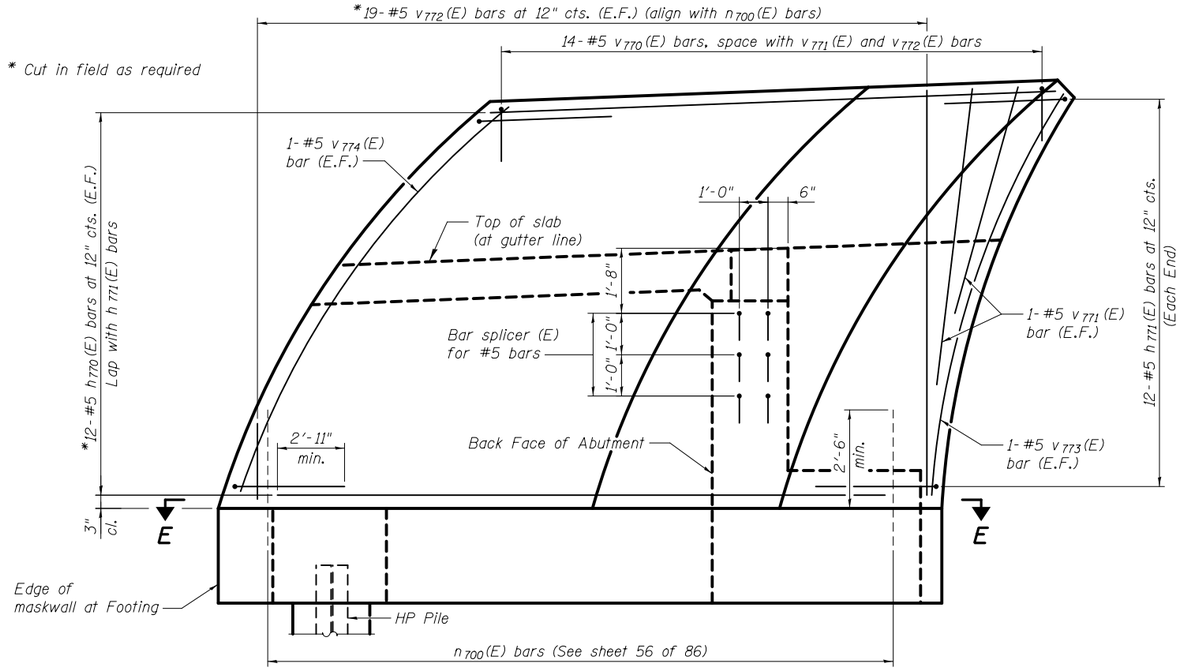
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH MASKWALL PLAN AND ELEVATION – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 71 OF 86 SHEETS

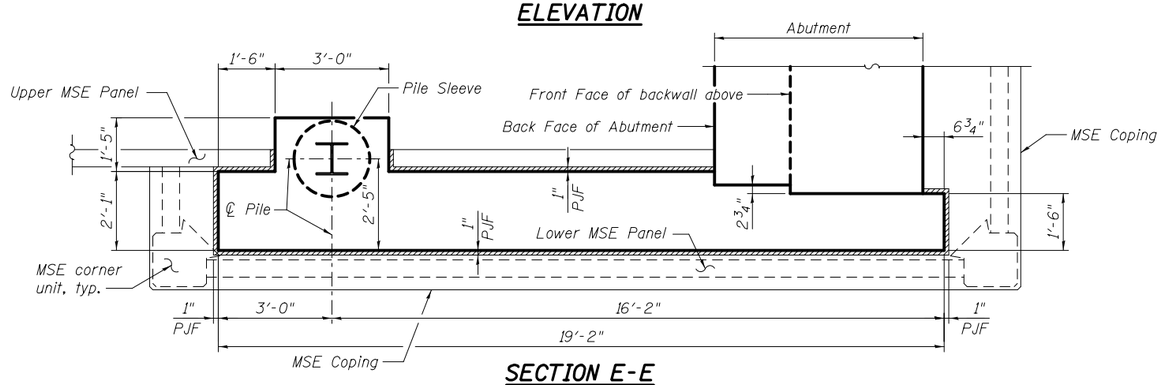
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1020
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



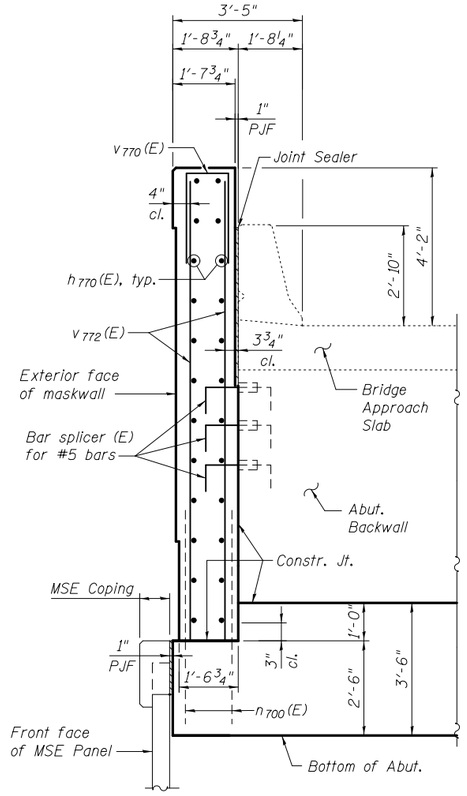
MASKWALL PLAN



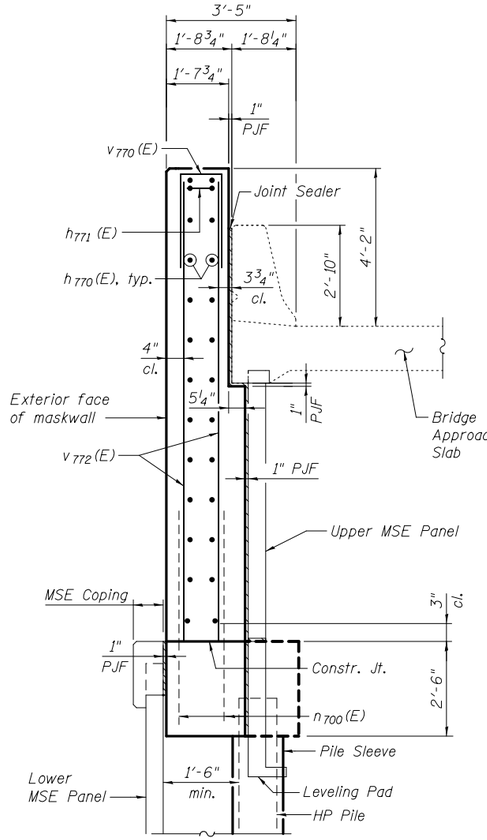
ELEVATION



SECTION E-E
(Footing Partial Plan)



SECTION C-C



SECTION D-D

Notes:

See SN 081-6016 for MSE wall details.

Two inch clear concrete cover unless noted otherwise.

The joint sealer shall be light gray nonsag latex caulking sealer marketed for outdoor use. Cost of the joint sealer shall be included with Concrete Structures.

See sheets 56 and 63 of 86 for maskwall footing bar detailing.

When exterior face of barrier is exposed, use rubbed finish same as maskwall.

For details of bar splicers, see sheet 77 of 86.

For Bill of Material, see sheet 75 of 86.

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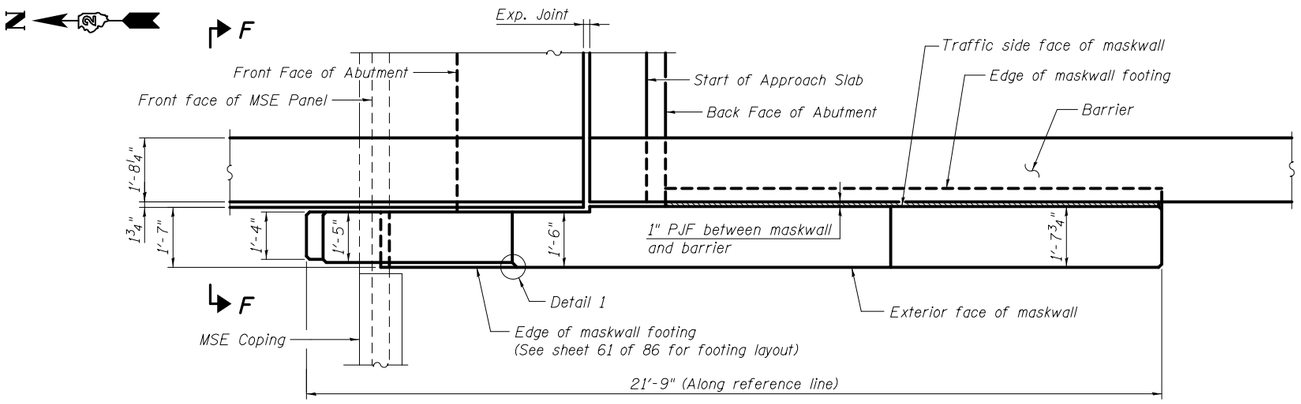
USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL/YSS	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

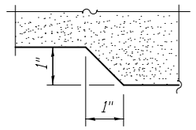
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH MASKWALL DETAILS – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 72 OF 86 SHEETS

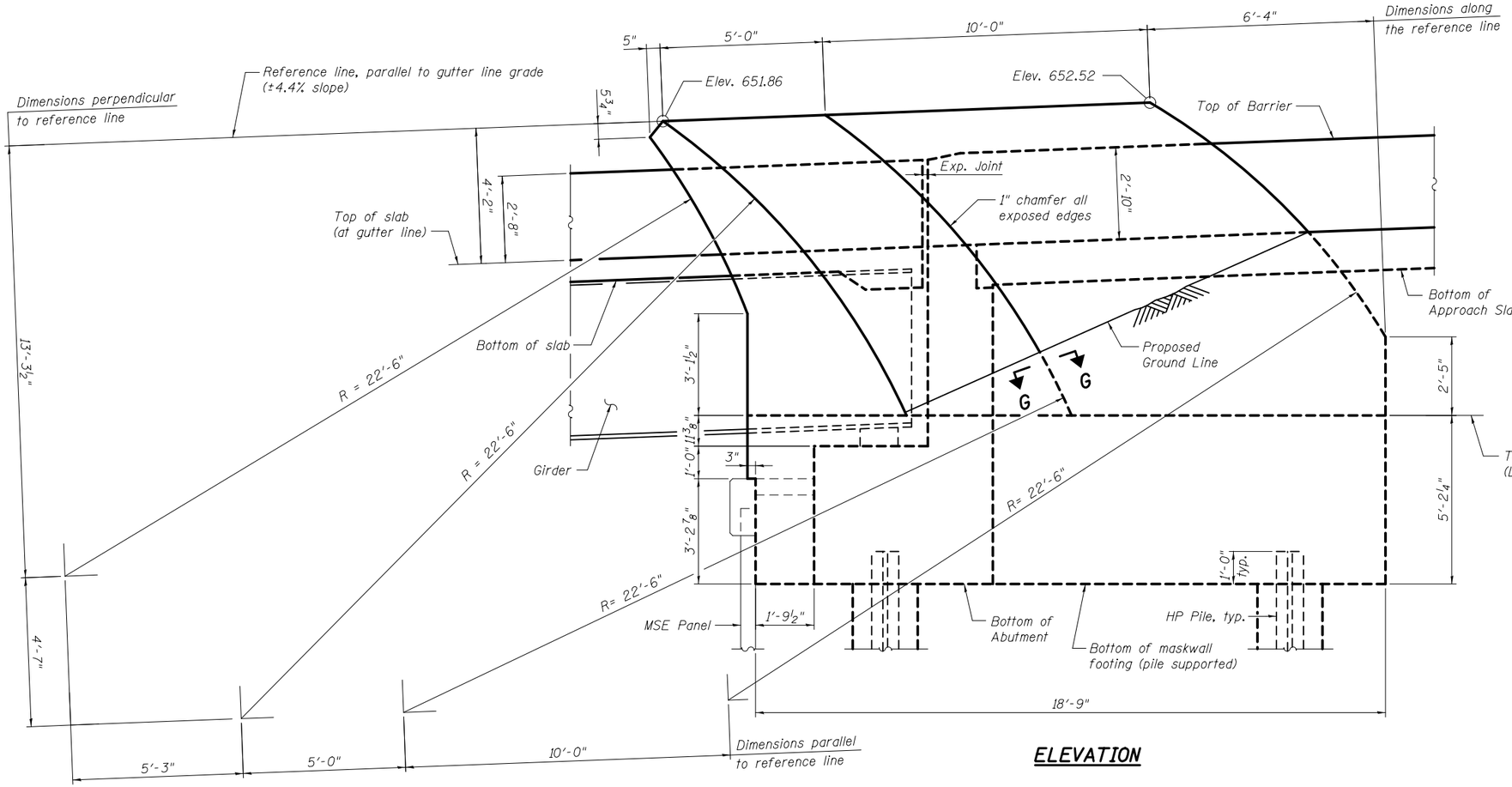
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1021
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



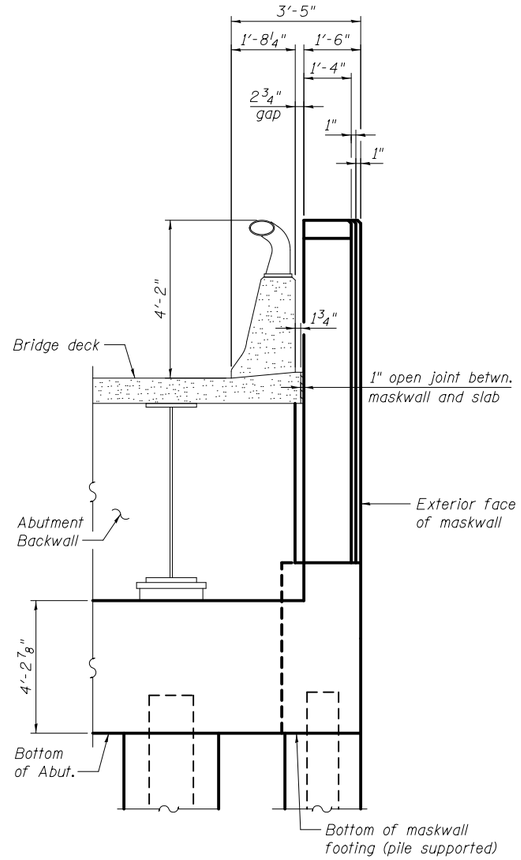
MASKWALL PLAN



SECTION G-G - DETAIL 1



ELEVATION



VIEW F-F

Notes:

Top of maskwall shall be parallel to the longitudinal grade of the roadway and any adjacent barrier.

The maskwalls are to be poured after the adjacent barrier railings are poured on the bridge slab, the wingwalls and the approach slab.

See SN 081-6015 for MSE wall details.

For Bill of Material, see sheet 75 of 86.

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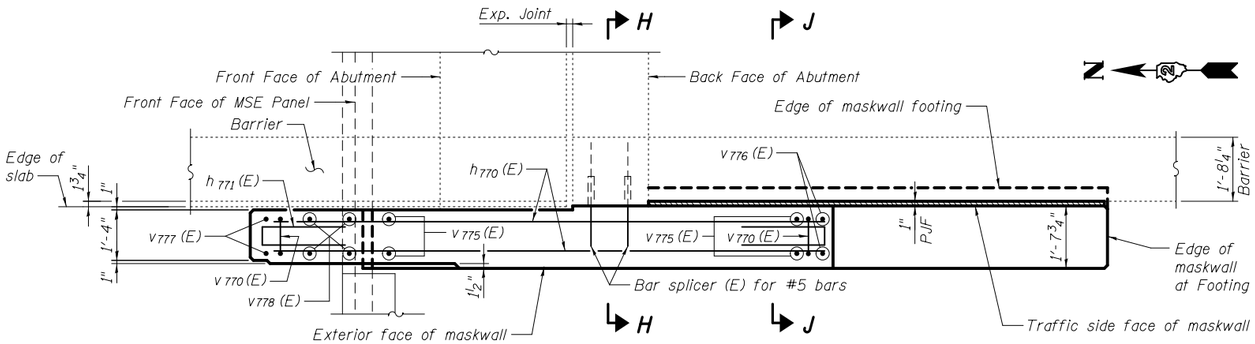
USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

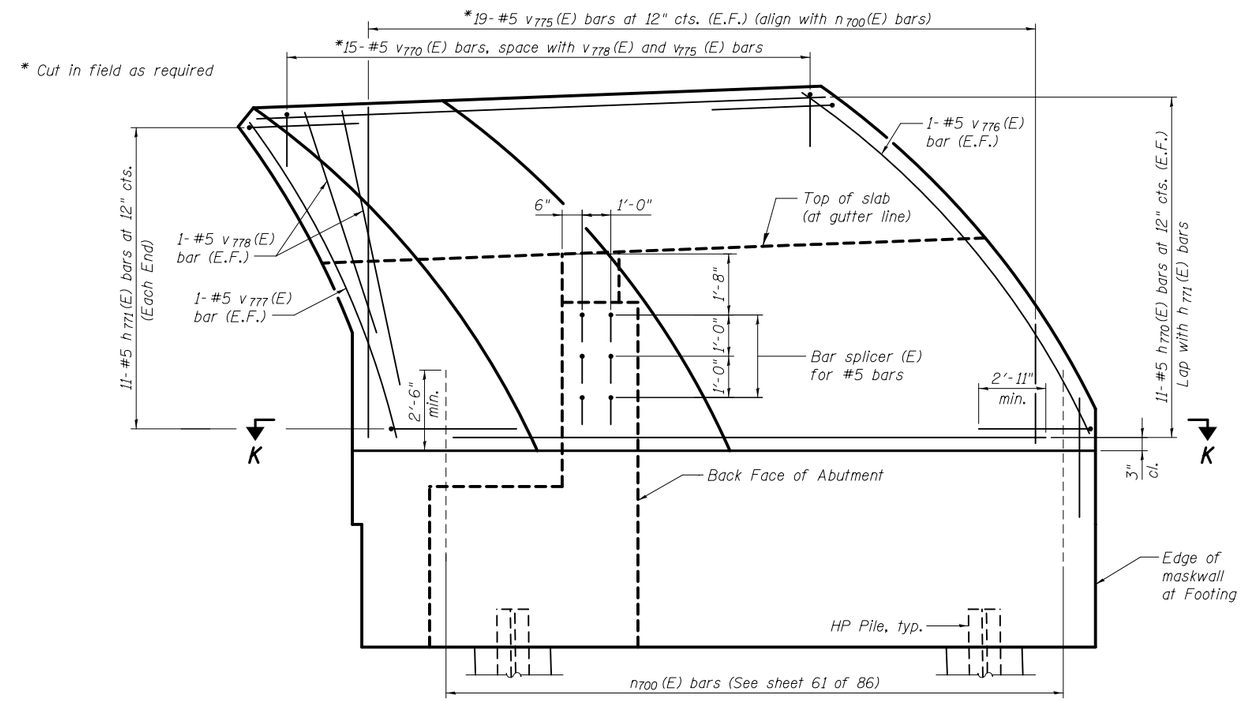
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH MASKWALL PLAN AND ELEVATION – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 73 OF 86 SHEETS

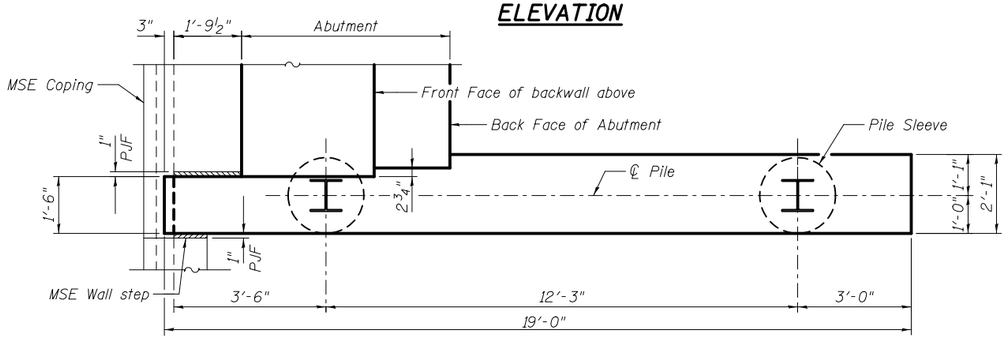
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1022
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



MASKWALL PLAN

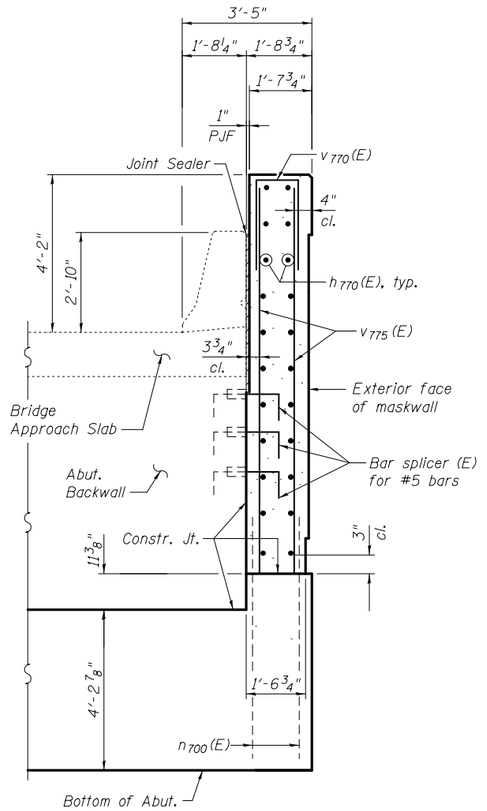


ELEVATION

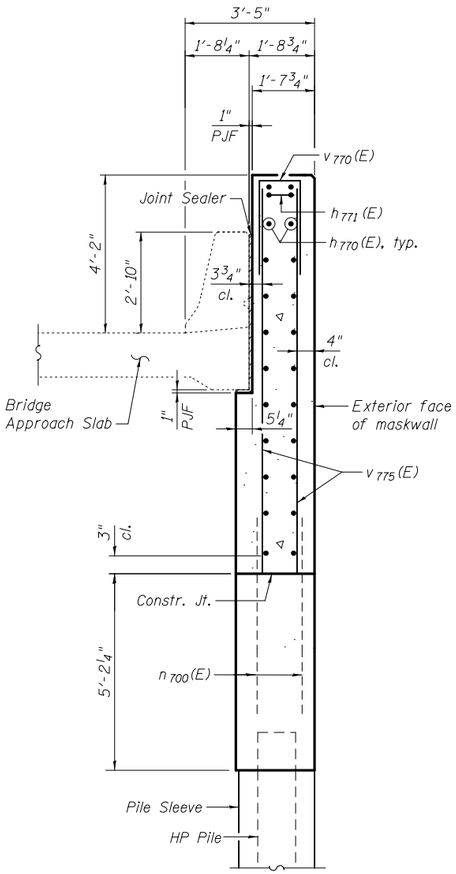


SECTION K-K

(Footing Partial Plan)



SECTION H-H



SECTION J-J

Notes:

See SN 081-6015 for MSE wall details.

Two inch clear concrete cover unless noted otherwise.

The joint sealer shall be light gray nonsag latex caulking sealer marketed for outdoor use. Cost of the joint sealer shall be included with Concrete Structures.

See sheets 61 and 63 of 86 for maskwall footing bar detailing.

When exterior face of barrier is exposed, use rubbed finish same as maskwall.

For details of bar splicers, see sheet 77 of 86.

For Bill of Material, see sheet 75 of 86.

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USER NAME =	DESIGNED - JTH	REVISED
	CHECKED - APL	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH MASKWALL DETAILS – EASTBOUND
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 74 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1023
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

MASKWALL FINISHING NOTES

If form ties are used in forming the maskwall, arrange ties to be regularly spaced and in a consistent geometric grid pattern. Do not locate ties at edges of concrete rusticications.

Following form removal, a rubbed surface finish in accordance with Article 503.15 (b) of the Standard Specifications shall be required but with the following additional requirements:

1. Demonstrate hole and void patching operations in accordance with Article 503.15 (b) of the Standard Specifications on a four foot section of vertical maskwall located in an inconspicuous area. Begin patching demonstration by using a mortar mix comprised of 1 part white cement, 2 parts standard portland cement, 6 parts mortar sand, and water. The quantity of water used shall produce a mortar consistency as dry as possible to use effectively.

2. When patching test areas have set, saturate with water and rub with a fine carborundum stone until surfaces are smooth in texture. Remove loose powder and other contaminants by rubbing with burlap and rinsing with water. After surfaces have dried, patch color and texture of surfaces will be reviewed by the Engineer. Patches should match or be slightly lighter than surrounding concrete. If results are unsatisfactory, adjust patching mortar mix proportions and perform another demonstration until results are deemed satisfactory by the Engineer.

3. Use the patching mortar mix proportions that are approved by the Engineer as a result of the satisfactory demonstration. Do not use patching mortar that is more than 1 hour old.

4. Finished maskwall concrete shall be smooth and show no wood grain or other texture from the face of the forms used. All costs for repair or covering wood grain or other textures on these surfaces shall be the responsibility of the Contractor.

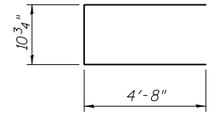
5. Do not apply curing compounds, sealers, or other coatings to the finished maskwalls.

BILL OF MATERIAL
NORTH ABUTMENT (EB) MASKWALL

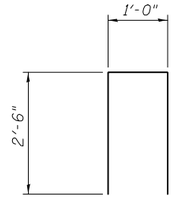
Bar	No.	Size	Length	Shape
h 770(E)	24	#5	18'-7"	—
h 771 (E)	24	#5	10'-3"	⊏
v 770(E)	14	#5	6'-0"	⊏
v 771 (E)	4	#5	6'-3"	—
v 772(E)	38	#5	11'-0"	—
v 773(E)	2	#5	11'-6"	⌒
v 774(E)	2	#5	13'-0"	⌒
Concrete Structures			Cu. Yd.	12.4
Reinforcement Bars, Epoxy Coated			Pound	1,330

BILL OF MATERIAL
SOUTH ABUTMENT (EB) MASKWALL

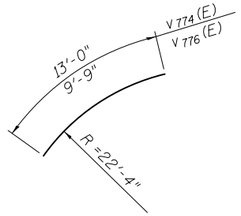
Bar	No.	Size	Length	Shape
h 770(E)	24	#5	18'-7"	—
h 771 (E)	22	#5	10'-3"	⊏
v 770(E)	15	#5	6'-0"	⊏
v 775(E)	38	#5	9'-4"	—
v 776(E)	2	#5	9'-9"	⌒
v 777(E)	2	#5	6'-3"	⌒
v 778(E)	4	#5	3'-8"	—
Concrete Structures			Cu. Yd.	10.6
Reinforcement Bars, Epoxy Coated			Pound	1,180



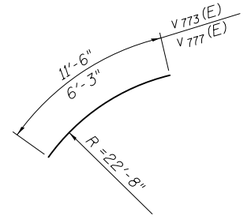
BAR h 771 (E)



BAR v 770 (E)



BARS v 774 (E) AND v 776 (E)



BARS v 773 (E) AND v 777 (E)

NOTE:

Contractor shall exercise all due care to assure that the maskwall surface finish is intact and the overall appearance is aesthetically pleasing at completion of the project. If the maskwalls are constructed before the deck, approach slab or parapets, additional effort may be required in forming and placing the deck, approach slab and/or parapet concrete, and precautions shall be taken to protect the maskwalls during these operations. If the maskwalls are constructed after deck, approach slab or parapets, temporary earth retention may be required. In either case, any costs for protecting the maskwalls, working around them or temporary earth retention and final grading shall be included in the cost of Concrete Structures.

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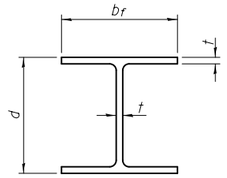
USER NAME =		DESIGNED - JTH	REVISED
		CHECKED - APL/YSS	REVISED
PLOT SCALE =		DRAWN - PRC	REVISED
PLOT DATE =	03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

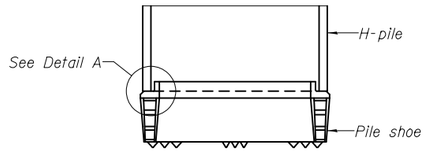
MASKWALL NOTES AND BILL OF MATERIAL
I-74 OVER 19TH ST. - STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 75 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1024
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

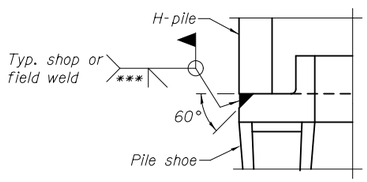


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

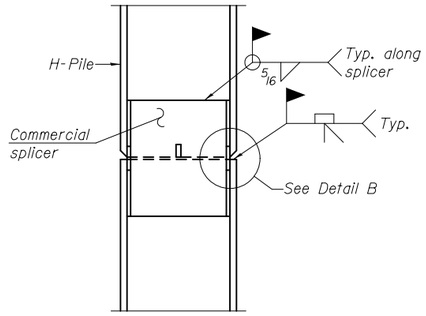


ELEVATION

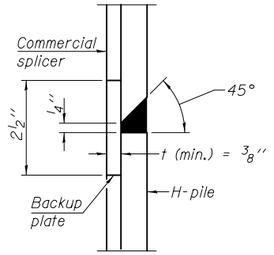


DETAIL A

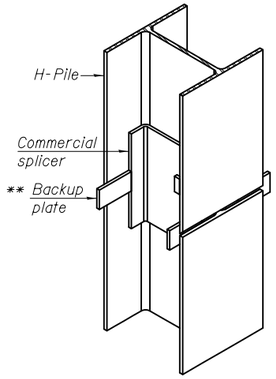
H-PILE SHOE ATTACHMENT



ELEVATION

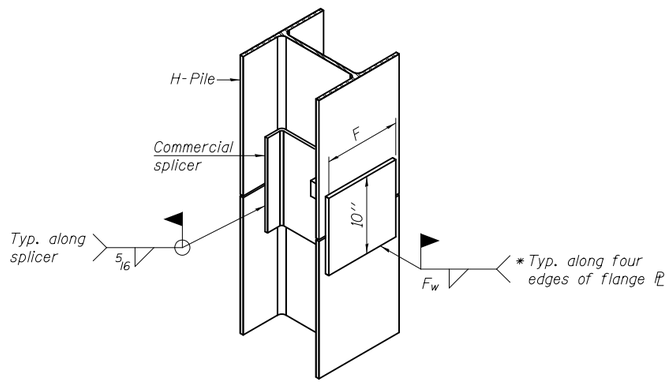


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



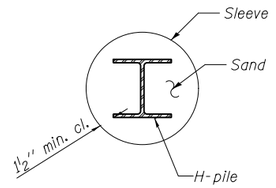
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



PILE SLEEVE SECTION

Notes:

Piles are recommended to be driven before the MSE wall is constructed. See sheets 54, 56, 59 and 61 of 86.

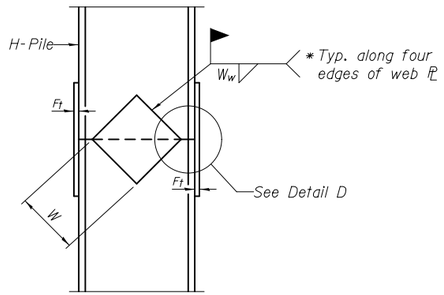
Set pile sleeves prior to construction of the MSE walls.

Sleeves should extend from the bottom of the abutment to the bottom of the reinforced soil mass.

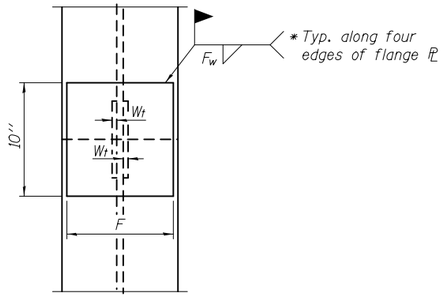
After the piles and pile sleeves are in place, the pile sleeves shall be filled with dry loose sand according to Section 512.09(c) of the Standard Specifications.

Cost of pile sleeves, setting pile sleeves, dry loose sand, and placing dry loose sand is included in the cost of Driving Piles.

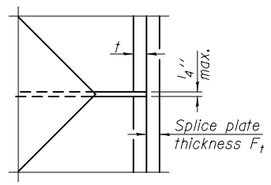
See SN 081-6015 and SN 081-6016 for ground improvement requirements and MSE details.



ELEVATION



END VIEW



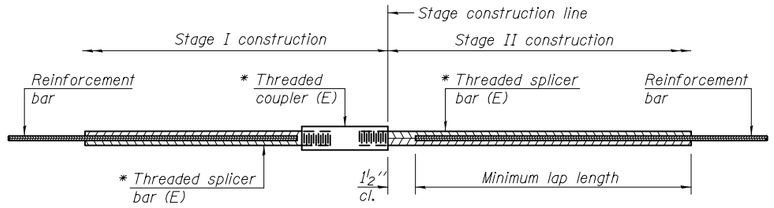
DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

Note:

The steel H-piles shall be according to AASHTO M270 Grade 50.



STANDARD BAR SPLICER ASSEMBLY

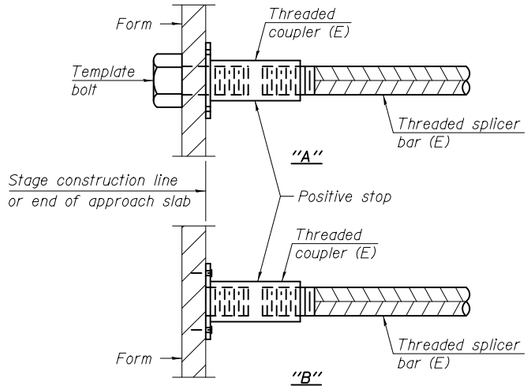
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

Threaded splicer bar length = min. lap length + 1½" + thread length

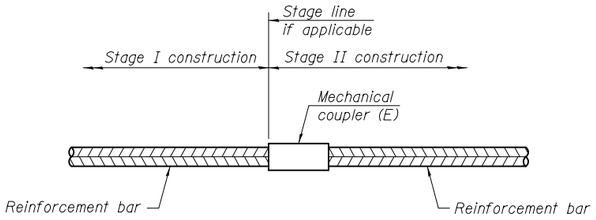
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



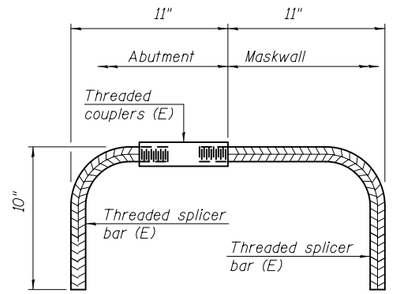
INSTALLATION AND SETTING METHODS

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



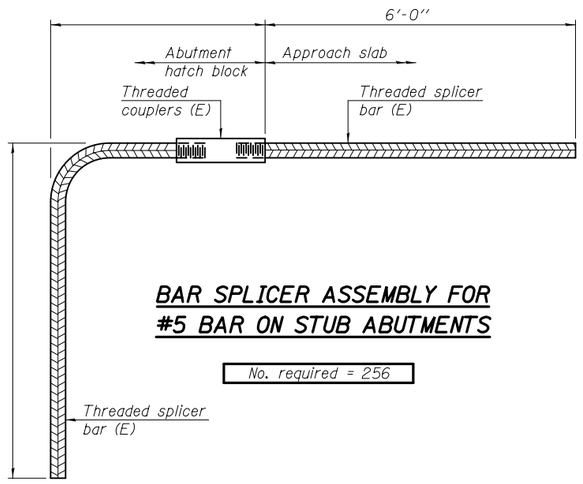
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Pier 1	11	156
Pier 2	11	258
Pier 3	11	84



BAR SPLICER ASSEMBLY FOR #5 BAR ON MASKWALL

No. required = 12



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 256

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

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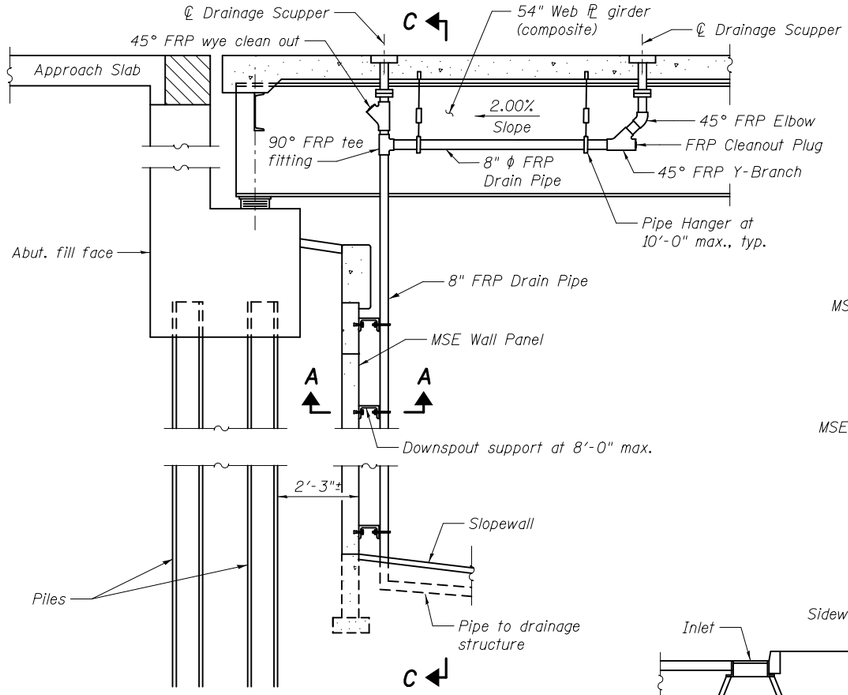
USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JTH	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

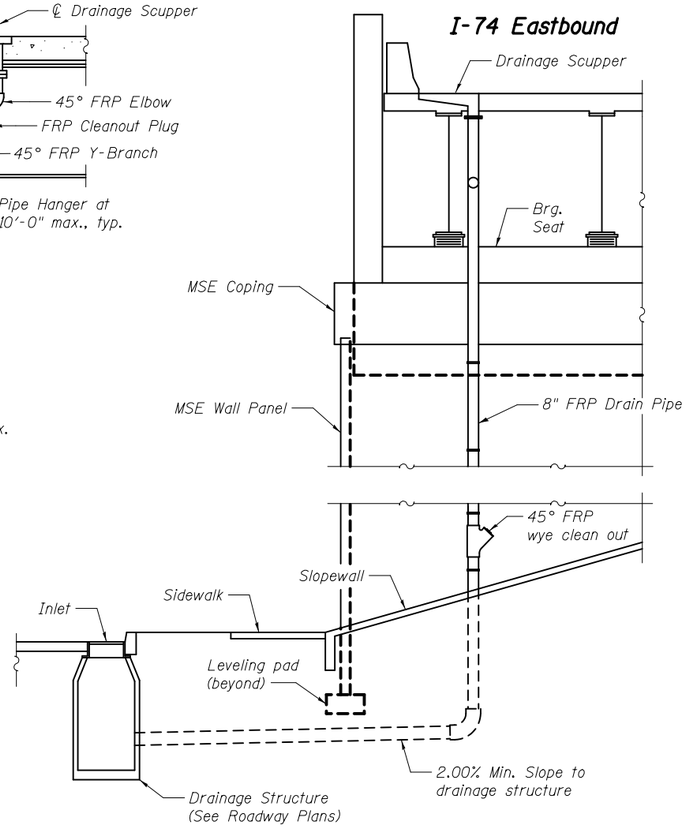
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
I-74 OVER 19TH ST. - STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 77 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1026
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



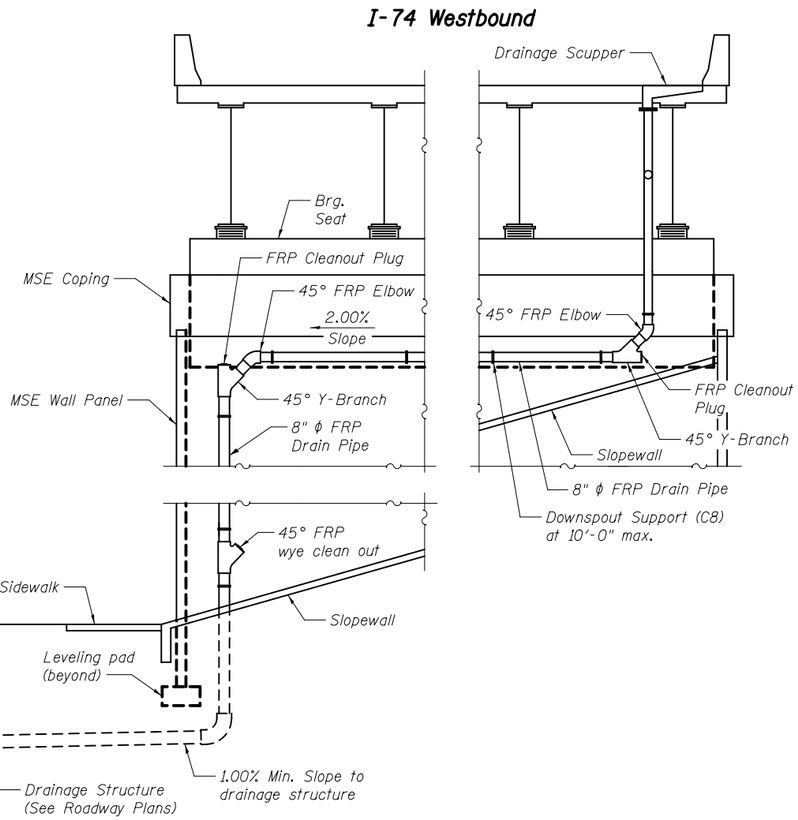
DRAINAGE AT EASTBOUND NORTH ABUTMENT (Shown)
DRAINAGE AT WESTBOUND NORTH ABUTMENT (Similar)

(See retaining wall SN 081-6016 plans for MSE wall details)



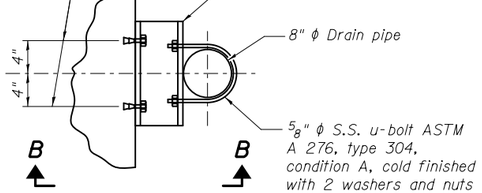
SECTION C-C (Eastbound)

(Looking North)

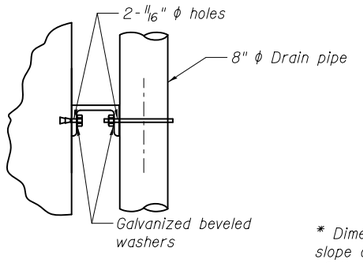


SECTION C-C (Westbound)

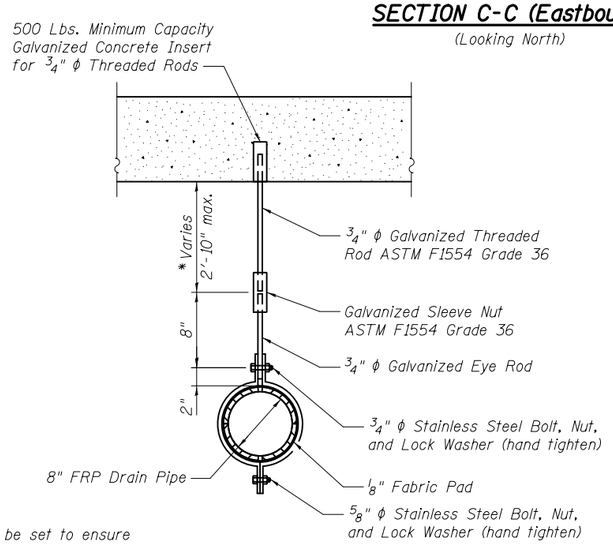
(Looking North)



SECTION A-A

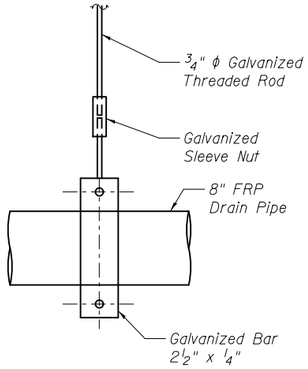


VIEW B-B



* Dimension shall be set to ensure slope of 2.00% and that no element of the drainage system, except the downspout, passes below the bottom of the girders.

PIPE HANGER DETAIL



ELEVATION

BILL OF MATERIAL

Drainage System	Lump Sum	0.5

Notes:

For location of drainage scupper stations, see table on sheet 1 of 86.

For details of drainage scuppers, see sheet 43 of 86.

The cost of furnishing, fabricating and installing of the bridge drainage system including pipes, fittings, cleanouts, connections to proposed drainage structures, and all mounting hardware neccessary to install and place the system into service shall be included in the lump sum price bid for Drainage System.

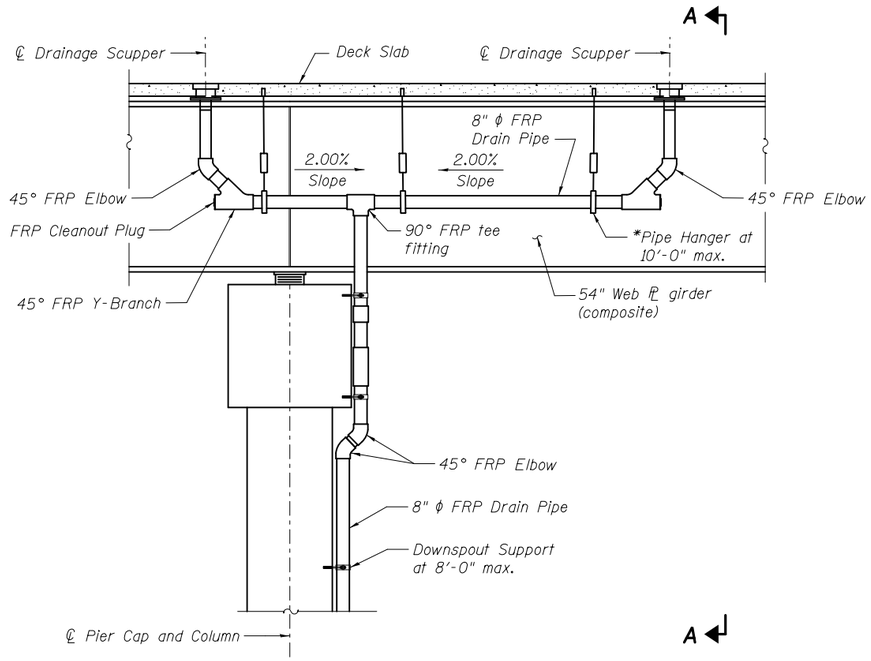
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED
	CHECKED - JTH	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLOSED DRAINAGE AT NORTH ABUTMENTS
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 78 OF 86 SHEETS

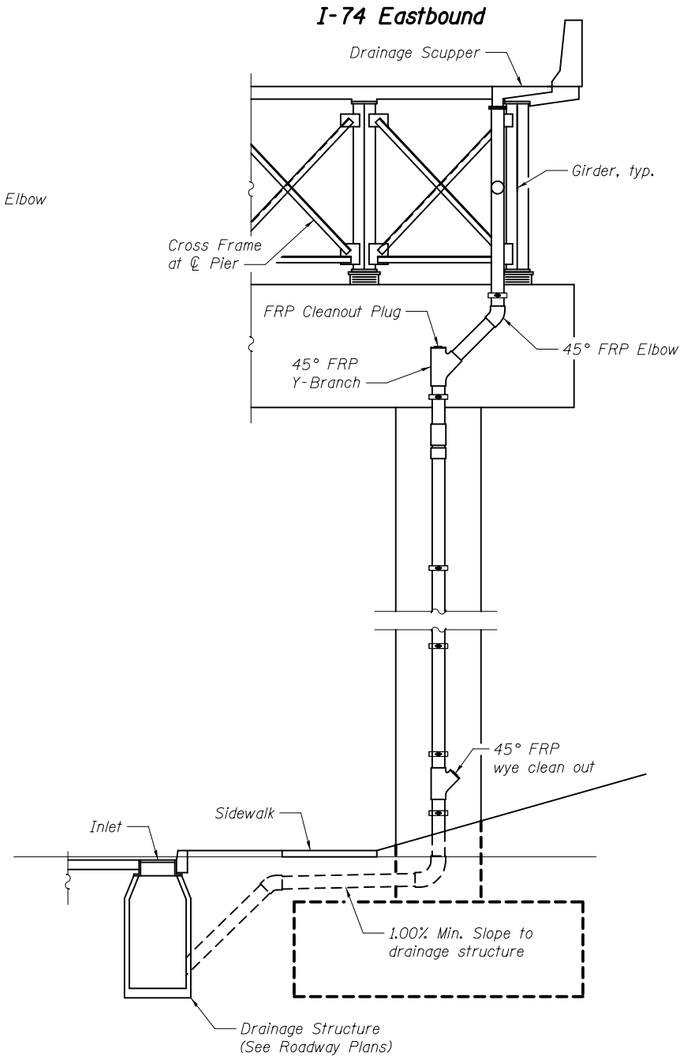
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1027
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



DRAINAGE AT EASTBOUND PIER 1

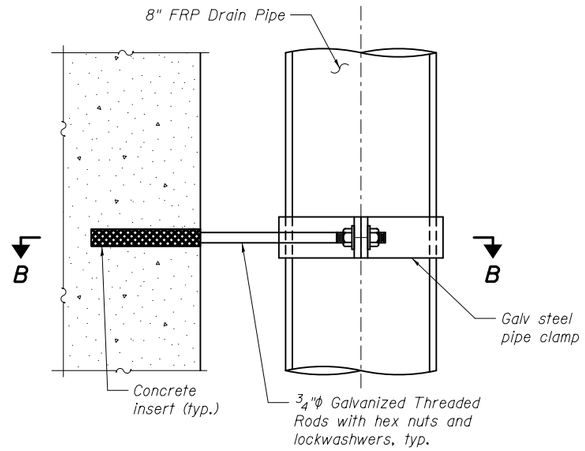
(East Column)

* For pipe hanger details, see sheet 78 of 86

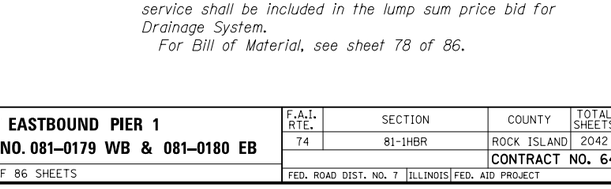


SECTION A-A

(Looking North)



DOWNSPOUT SUPPORT AT PIER



SECTION B-B

Notes:

For location of drainage scupper stations, see table on sheet 1 of 86.

For details of drainage scuppers, see sheet 43 of 86.

The cost of furnishing, fabricating and installing of the bridge drainage system including pipes, fittings, cleanouts, connections to proposed drainage structures, and all mounting hardware neccessary to install and place the system into service shall be included in the lump sum price bid for Drainage System.

For Bill of Material, see sheet 78 of 86.

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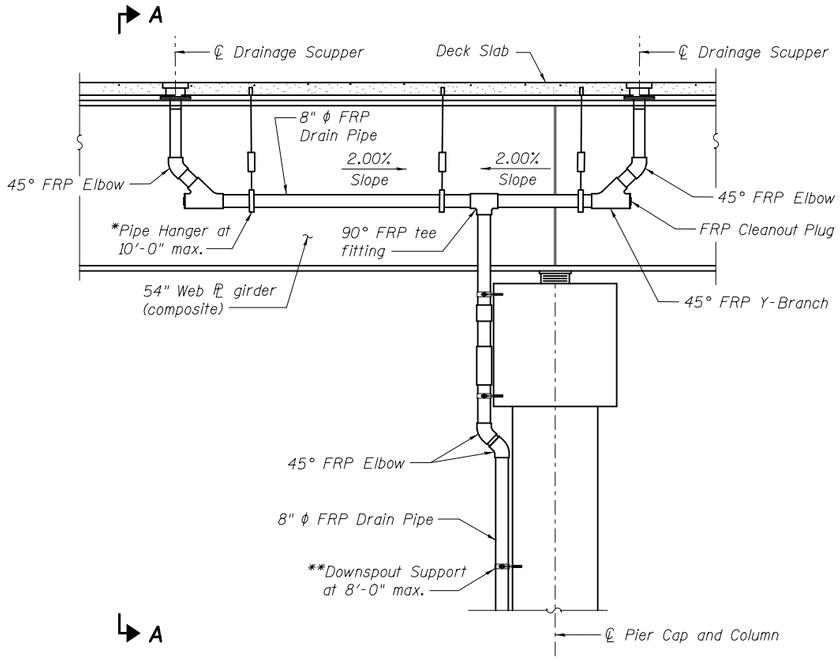
USER NAME =	DESIGNED - JMH	REVISED
	CHECKED - JTH	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLOSED DRAINAGE AT EASTBOUND PIER 1
I-74 OVER 19TH ST. – STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 79 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1028
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



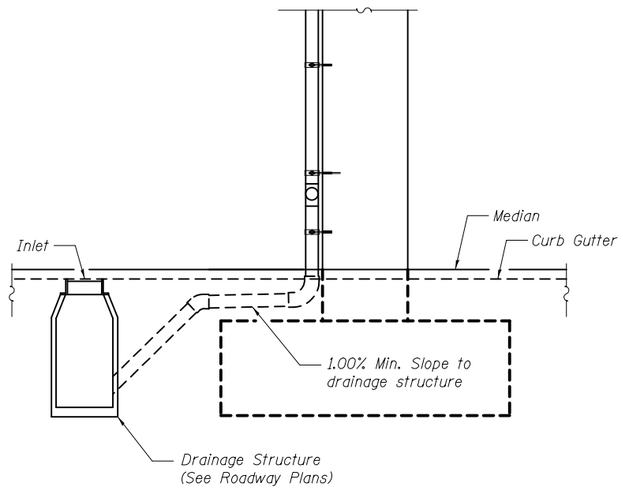
DRAINAGE AT WESTBOUND PIER 2

(Shown, East Column, Looking East)

DRAINAGE AT EASTBOUND PIER 2

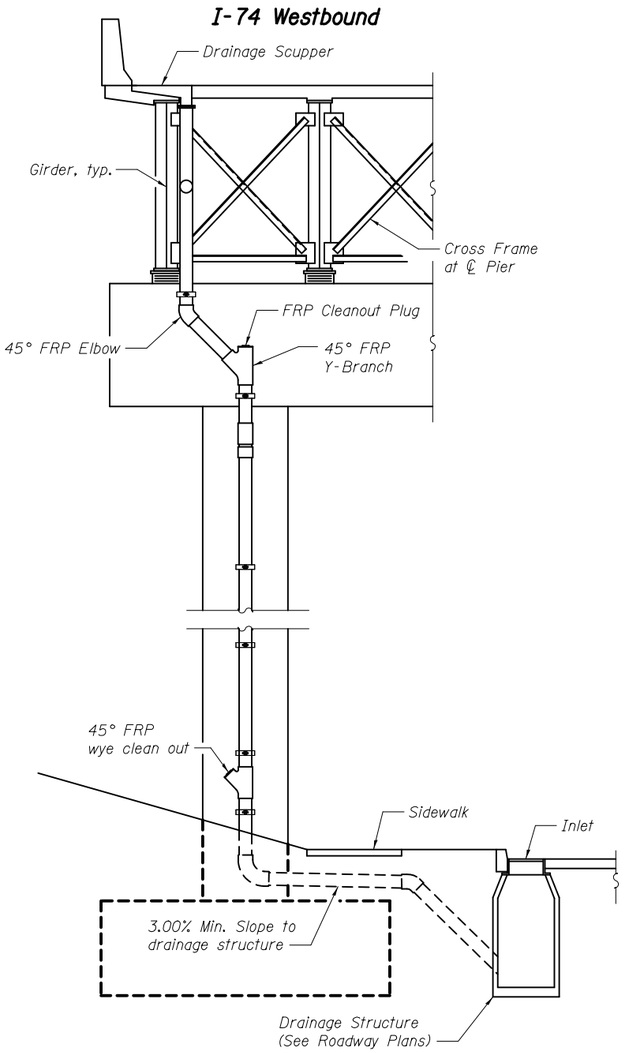
(Similar, Center Column, Looking East)

* For pipe hanger details, see sheet 78 of 86
** For downspout support, see sheet 79 of 86



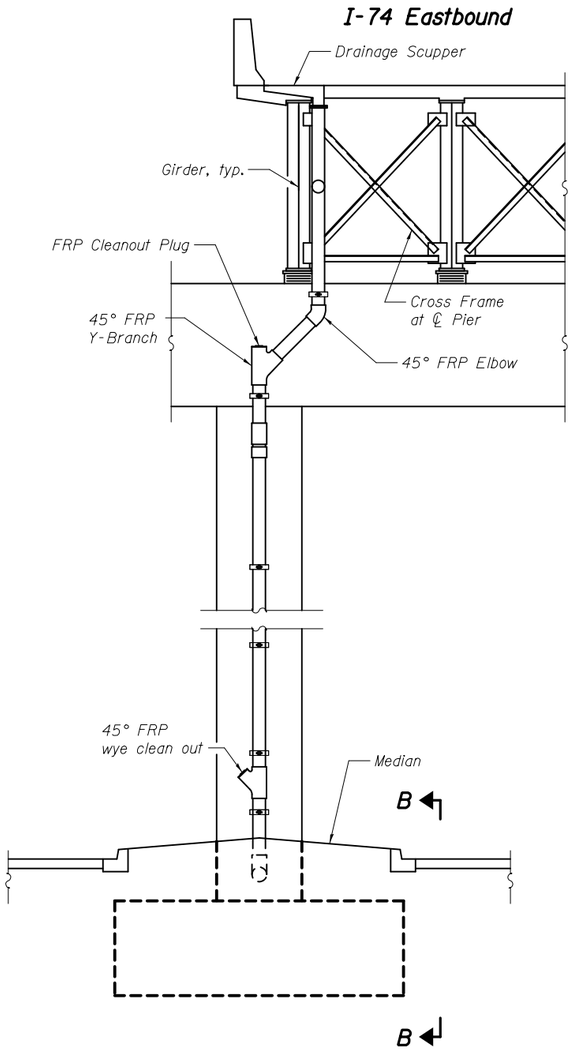
SECTION B-B EASTBOUND PIER 2

(Center Column, Looking East)



SECTION A-A WESTBOUND PIER 2

(Looking South)



SECTION A-A EASTBOUND PIER 2

(Looking South)

Notes:

For location of drainage scupper stations, see table on sheet 1 of 86.

For details of drainage scuppers, see sheet 43 of 86.

The cost of furnishing, fabricating and installing of the bridge drainage system including pipes, fittings, cleanouts, connections to proposed drainage structures, and all mounting hardware neccessary to install and place the system into service shall be included in the lump sum price bid for Drainage System.

For Bill of Material, see sheet 78 of 86.

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USER NAME =	DESIGNED - JMH	REVISED
	CHECKED - JTH	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLOSED DRAINAGE AT PIER 2
I-74 OVER 19TH ST. - STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 80 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1029
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
JCI

SOIL BORING LOG

Date 9/14/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561990.925, E=2459643.925), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. 19BR-104
Station 58 + 65
Offset 70' Rt.
Ground Surface Elev. 605.80 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CONCRETE - 3" to 4" thick 605.40			
SILT - reddish brown, little to some clay, crumbly, medium plastic, medium stiff to stiff, moist.	2		
	4	0.7	17.2
	5	B	
602.30			
SILT - dark brown to gray with rust color, little to some clay, crumbly, medium plastic, stiff, moist.	4		
	5	1.7	22.2
-5	4	S	
599.80			
SILT - dark brown, and clay to silty CLAY, medium plastic, soft, moist.	2		
	1	0.7	19.6
	1	B	
597.30			
CLAY TILL - brown, sandy, little to some fine to coarse sand, trace gravel, crumbly, medium stiff, slightly moist (FILL?)	1		
	2	0.9	19.2
-10	3	B	
594.80			
SILT - brown to dark gray, little to some clay, slightly to medium plastic, medium stiff, moist.	WOH		
	2	0.5	17.4
	4	B	
592.30			
SILT - brown, some fine to coarse sand, and fine gravel, trace clay, moist.	7		
	8		2.2
-15	8		
[Note: attempted to take Shelby tube at 13.5'; hit gravel; followed up with SPT] 589.80	6		
CLAY TILL - greenish gray to bluish gray, silty, trace to little medium to coarse sand, trace fine gravel, medium plastic, stiff to very stiff, moist (GLACIAL TILL). **-[Dry unit weight = 114.5 pcf]**	5		14.8
	2		
		1.3	
-20		P	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY TILL - greenish gray to bluish gray, silty, trace to little medium to coarse sand, trace fine gravel, medium plastic, stiff to very stiff, moist (GLACIAL TILL). *(continued)*			
	3		
	5	2.1	13.5
	8	B	
	3		
	6	3.5	
-25	8	B	
	4		
	7	3.1	14.2
	8	B	
- bluish gray sandy clay till.	5		
	9	2.8	16.0
-30	12	S	
- bluish gray sandy clay till.	7		
	9	4.0	14.2
-35	12	B	
	14		
	22	4.2	13.6
568.30 -40	33	S	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Date 9/14/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561990.925, E=2459643.925), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. 19BR-104
Station 58 + 65
Offset 70' Rt.
Ground Surface Elev. 605.80 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY SHALE - black to dark gray, no laminations above 48.5 ft, thin laminations and partial rock-like shale chips below 48.5 ft depth, hard (for clay), slightly moist to dry. *(continued)*			
	24		
	54	>4.5	10.6
-45	50/3"	P	
- black flaky shale, thinly laminated (start of rock-like shale properties).	48		
	50/1"		8.4
-50			
	60/1"		
-55			
[Groundwater level not observed in soils or shale during drilling]			
547.22	48		
End of Boring	50/1"		6.0
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
JCI

SOIL BORING LOG

Date 9/14/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561828.313, E=2459724.286), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. 19BR-105
Station 60 + 26
Offset 14' Lt.
Ground Surface Elev. 609.30 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 580.3 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CONCRETE - 3" thick concrete plus base course. 608.80			
SILT - light brown and dark brown, some clay, trace to little gravel, medium plastic, stiff, moist (FILL?).	2		
	5	1.5	12.8
	5	P	
	6		
	10	0.8	12.6
604.80 -5	7	S	
SILT - light brown and gray mottled, little clay, crumbly, slightly to medium plastic, medium stiff, slightly moist to dry.	3		
	2	0.6	27.4
	2	B	
600.80			
SILT - dark brown, little to some clay, crumbly, slight to medium plastic, medium stiff, moist.	2		
	2	0.6	18.2
-10	3	S	
598.30			
SILT - dark brown, trace to little clay, little fine sand, slight binder, slightly plastic, soft to medium stiff, moist.	2		
	2	0.4	16.2
	2	S	
595.30	3		
SAND - brown, fine to coarse, clayey, and gravel, loose, moist.	7		4.3
-15	12		
	5		
	2		5.5
	2		
590.80			
	1		
	3	1.4	14.4
-20	3	B	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY TILL - greenish gray, sandy to silty, trace medium to coarse sand, trace fine gravel, slightly to medium plastic, hard, moist (GLACIAL TILL). *(continued)* **-[Dry unit weight = 118 pcf]**			
		1.9	14.3
	B		
	4		
	5	3.1	13.8
-25	7	B	
	6		
	10	3.3	12.9
	10	B	
▼ - contains thin layers of wet/saturated fine sand.	4		
	7	3.3	15.4
-30	7	B	
	21		
	50/1"		23.9
- greenish gray to bluish gray with limestone fragments, hard. 574.00 -35			
Borehole continued with rock coring.			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED	
	CHECKED - JTH	REVISED	
PLOT SCALE =	DRAWN - CMM	REVISED	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS - 1
I-74 OVER 19TH ST. - STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 81 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1030
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
JCI

ROCK CORE LOG

Date 9/14/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561828.313, E=2459724.286), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO.
Station

CORING BARREL TYPE & SIZE NQ Wireline

Core Diameter 1.8 in
Top of Rock Elev. 574.80 ft
Begin Core Elev. 574.00 ft

BORING NO. 19BR-105
Station 60 + 26
Offset 14' Lt.
Ground Surface Elev. 609.30 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
LIMESTONE - gray, fine grained, hard, dense, very thin to thin bedded, closely to very closely fractured with possible shale and/or clay seams which were not recovered between 35.3' and 40.7', occasional iron-stains at fractures, slightly weathered, poor quality rock but hard where recovered.	574.00	Run 1	46	8	2.8	
[Note: driller repeatedly lifted the core barrel while drilling to keep it from jamming. Observation of core pieces suggest numerous near-vertical fractures were encountered, causing core pieces to get stuck in the core catcher and possibly grinding up subsequent rock encountered while drilling.]	-40	Run 2	81	0		
		Run 3	43	0	1.7	488.6
- 11" thick layer of very soft green-gray, sandy, gravelly clay at 45.8' to 46.7'.	-45	Run 4	77	35	4.4	
- 13" layer of medium gray "birdseye" texture limestone with vertical fractures at 47.5' to 48.6'.	-50					
	558.50					
End of Boring	-55					

Color pictures of the cores Yes
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
JCI

SOIL BORING LOG

Date 9/10/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561873.84, E=2459651.753), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. 19BR-107
Station 59 + 82
Offset 60' Rt.
Ground Surface Elev. 609.10 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CONCRETE SIDEWALK - concrete (4-1/2" thick) + base course.	608.60			
		3		
CLAY - brown to yellowish brown, some silt, trace gravel, medium plastic, stiff, slightly moist.		4	1.4	13.5
		3	B	
	605.60			
SILT - dark brown, little to some clay, trace gravel, crumbly, slight to medium plastic, stiff, moist.		4		
	-5	5	1.5	15.9
		5	B	
		2		
		4	1.3	15.6
		6	B	
- little clay.				
	-10		1.8	24.3
			P	
	598.10			
CLAY TILL - dark brown (to 12.5 ft) o brown, to gray and tan, trace medium to coarse sand, trace fine gravel, stiff, moist (GLACIAL TILL). - sandy till at 11.0'-12.5'.		2		
		2	0.5	14.4
		3	P	
		3		
		4	2.0	14.1
	-15	5	B	
			3.3	14.4
			B	
-[Dry unit weight = 119.8 pcf]	590.60			
		4		
		6	2.3	14.1
	-20	8	B	

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY TILL - greenish brown to gray, trace medium to coarse sand, trace fine gravel, hard, moist to dry (GLACIAL TILL). *(continued)*				
		5		
		9	2.6	13.8
		11	B	
		5		
		8	2.8	14.5
	-25	10	B	
		6		
		7	2.7	13.1
		9	B	
		5		
		5	3.2	13.9
	-30	9	B	
		4		
		5	3.0	12.7
	-35	9	P	
	570.60			
CLAY SHALE - greenish gray to brown, clayey, hard, slightly to moderately weathered, slightly		6		
		17	>4.5	14.9
	-40	28	P	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
JCI

SOIL BORING LOG

Date 9/10/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561873.84, E=2459651.753), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. 19BR-107
Station 59 + 82
Offset 60' Rt.
Ground Surface Elev. 609.10 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
moist to dry. CLAY SHALE - greenish gray to brown, clayey, hard, slightly to moderately weathered, slightly moist to dry. *(continued)*				
	565.60			
CLAY SHALE - black to dark gray, feint to no laminations, hard, slightly moist to dry.		16		
		29	>4.5	13.5
	-45	57	P	
		19		
		58	>4.5	10.9
		55/3"	P	
		20		
		50/5"	>4.5	10.3
	-50		P	
- [Note: driller added water to hole to be able to turn augers below 50' depth]				
		33		
- soft, laminated, clayey, sticky; falls apart and readily crumbles when moist; becomes sticky clay when wet.		50/2"	>4.5	12.8
	-55		P	
- light and dark gray shale cuttings.	550.50	50/5"		7.9
End of Boring	-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED	
	CHECKED - JTH	REVISED	
PLOT SCALE =	DRAWN - CMM	REVISED	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS – 2
I–74 OVER 19TH ST. – STRUCTURE NO. 081–0179 WB & 081–0180 EB
SHEET NO. 82 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1031
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
JCI

SOIL BORING LOG

Date 9/11/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561728.148, E=2459730.629), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. 19BR-108
Station 61+26
Offset 22' Lt.
Ground Surface Elev. 611.60 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
611.00				CONCRETE SIDEWALK - 4.5" thick concrete plus base course.
	4			CLAY - olive brown and gray, some to and silt, trace to little medium to coarse sand, trace fine gravel, very stiff, moist (GLACIAL TILL - FILL?).
	2	1.6	13.8	
	4	B		
	2			
-5	5	3.0	18.2	
	7	B		
605.60				
	4			SILT - dark brown, little to some clay, trace gravel, trace organics, slightly to medium plastic, medium stiff to stiff, moist
	5	0.8	18.4	
	5	B		
	2			
-10	2	0.9	24.2	
	3	B		
600.60				
	WOH			CLAY - brown, little silt, trace sand, with gravel, to SILT and clay, with gravel or cobble, slightly to medium plastic, medium stiff, moist.
	2	0.7	24.1	
	3	B		
	3			
-15	5		13.9	- cobble at 14.5'-15.0'.
	12			
595.60				
		2.5	14.2	CLAY TILL - greenish brown to gray, trace to little medium to coarse sand, trace fine gravel, hard, moist to dry (GLACIAL TILL). **-[Dry unit weight = 116.7 pcf]**
		B		
	5			
-20	5	3.4	13.9	
	8	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				CLAY TILL - greenish brown to gray, trace to little medium to coarse sand, trace fine gravel, hard, moist to dry (GLACIAL TILL). *(continued)*
	5			
	7	3.1	14.4	
	9	B		
		2.8		
-25		P		
	4			
	6	2.9	14.8	
	8	B		
	30			- greenish gray and red silty clay till, crumbly, moist.
	50/3"	2.5	17.3	
581.80		P		
-30				CLAY - red, silty, shaly, crumbly, dry to slightly moist (TILL or CLAY SHALE?).
578.10				
	18			CLAY SHALE - greenish gray, clayey, hard, laminated, slightly to moderately weathered, slightly moist to dry.
	31	3.5	14.8	
-35	60	P		
				- [Groundwater not observed in soils and shale during drilling operations]
573.90				
				Borehole continued with rock coring.
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
JCI

ROCK CORE LOG

Date 9/11/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561728.148, E=2459730.629), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO.
Station

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 573.90 ft
Begin Core Elev. 573.90 ft

BORING NO. 19BR-108
Station 61+26
Offset 22' Lt.
Ground Surface Elev. 611.60 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)	Description
573.90	Run 1	77	0	3.4		LIMESTONE - gray, fine grained, dense, hard, very thin to thin bedded, horizontal to subhorizontal slightly rough fractures with some high angle (60° to 90°) fractures, slightly weathered with faint iron stains on some fractures, occasional stylolites.
-40						
	Run 2	93	23	4	503.4	
-45						
	Run 3	100	45	3.5		
563.70						End of Boring
-50						
-55						

Color pictures of the cores Yes
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 3/28/08

ROUTE I-74 DESCRIPTION I-74 SB Near 7th Avenue LOGGED BY B. Karnik

SECTION I-74 Bridge over Mississippi River LOCATION (N=562235.7741, E=2459668.0033), SEC. 32, TWP. 18N, RNG. 1W

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. ILR0701
Station 56+20
Offset 50' Rt.
Ground Surface Elev. 629.30 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 581.3 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
628.70				7" Thick ACC followed by gravel subbase to 1.0'
	2			Silty Sandy Clay with Gravel, greenish brown, moist, low plasticity, stiff, with subangular to subrounded gravel embedded throughout, fill/subbase
	2			
	10			
625.30				
	4			Sandy Clay Trace Gravel, dark gray, frozen, stiff, with subangular to subrounded fine to coarse gravel embedded throughout, fill
-5	5			
	4			
	5			
	3			
	5	3.0		
	6	to		
	6	4.0		
621.30		P		
	2			Silty Clay with Gravel, gray, moist, soft to medium stiff, high plasticity, trace gravel, possible fill
	2	2.0	15.5	
	3	P		
-10	3			
		1.5		
		P		
615.80				
	3			Sandy Lean Clay Trace Gravel, gray, moist, stiff, medium plasticity, fill or disturbed till
	2	2.0	16.0	
-15	3	P		
610.80				
	3			Same As Above, turning grayish brown at bottom 3", piece of wood embedded, possible fill
	4			
-20	7			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Same As Above, turning grayish brown at bottom 3", piece of wood embedded, possible fill *(continued)*
605.80				
	5			Sandy Lean Clay Trave Gravel, brown, moist, stiff, low plasticity, possible weathered till
	6	3.0		
-25	6	P		
600.80				
	6			Same as Above, gray, then brown, split in almost vertical with reddish brown surface, weathered till
	7	2.5	15.0	
	8	to		
-30		3.5		
		P		
595.80				
	4			Sandy Lean Clay Trace Gravel, gray, moist, stiff, low plasticity, unweathered till
	6	2.5		
	6	to		
-35		3.0		
		P		
	5			
	6	2.5		
-40	9	P		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED
	CHECKED - JTH	REVISED
PLOT SCALE =	DRAWN - CMM	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS - 3
I-74 OVER 19TH ST. - STRUCTURE NO. 081-0179 WB & 081-0180 EB
SHEET NO. 83 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1032
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 3/28/08

ROUTE I-74 DESCRIPTION I-74 SB Near 7th Avenue LOGGED BY B. Karnik
SECTION I-74 Bridge over Mississippi River LOCATION (N=562235.7741, E=2459668.0033), SEC. 32, TWP. 18N, RNG. 1W
COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____
BORING NO. ILR0701
Station 56 + 20
Offset 50' Rt.
Ground Surface Elev. 629.30 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter 581.3 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Sandy Lean Clay Trace Gravel, gray, moist, stiff, low plasticity, unweathered till *(continued)*				
	-45			
	580.80			
Top 3" is same as above		12		
Bottom 12" is Poorly Graded Sand, gray, wet, medium dense, fine to medium sand seam		16		
	579.30 -50	12		
followed by 3" of gray sandy lean clay, trace gravel, till				
End of Boring				
	-55			
	-60			

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	-65			
	-70			
	-75			
	-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

HANSON

SOIL BORING LOG

Date 6/22/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB
SECTION 81-1-2 LOCATION SE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.
COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6015
Station _____
BORING NO. RW 06-1
Station 61+02
Offset 7' Lt.
Ground Surface Elev. 611.3 ft

Surface Water Elev. _____
Stream Bed Elev. _____
Groundwater Elev.:
First Encounter 593.8 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CONCRETE 610.80				
FILL - Light gray, slightly moist, SILT			2.50P	14
	2			14
608.30				17
FILL - Very dark brown, moist, clayey SILT with trace gravel			1.80P	13
	4			
605.30				
FILL - Gray, moist, medium dense, silty, medium-grained SAND with trace gravel, wood, brick and rock fragments	6	5 6 11	2.00P	15
	8			
		11 23 50/4"		12
	10			
600.30				20
Dark brown, moist, stiff, sandy SILT with trace gravel			1.65S	17
	12			
	14	11 4 4		16
596.30				
Dark brown, moist, sandy, clayey SILT with trace gravel				
595.30				
Dark brown, wet, dense, silty SAND with trace gravel	16		0.50P	12
593.30 ▼				
Gray and brown, moist, medium stiff, silty CLAY with sand and trace gravel	18	3 3 5	0.54B	18
	20			

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray and brown, moist, medium stiff, silty CLAY with sand and trace gravel *(continued from previous page)*				
588.80	22			
Gray and brown, moist, very stiff, silty CLAY with sand and gravel		8 10 11	2.61B	14
	24			
586.30				
End of Boring				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 2/19/11

ROUTE FAI 74 DESCRIPTION 081-0099, 0100 P92-032-01 I-74 over 19th Street, north of 12th Avenue LOGGED BY M. Jacoby
SECTION 81-1HB LOCATION Moline Twp. - 32SE, SEC. , TWP. 18N, RNG. 1W
COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 081-0099, 0100
Station _____
BORING NO. B-2
Station 61 + 31
Offset 6' Lt.
Ground Surface Elev. 610.26 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After 24 Hrs. 590.8 ft ▽

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
STIFF gray SILTY CLAY LOAM			1.8 P	14
608.26				
VERY STIFF gray/brown SILTY CLAY LOAM		5 7 9	2.7 S	15
606.76				
STIFF brown SILTY CLAY LOAM	-5	2 4 14	1.2 B	15
604.26				
VERY STIFF dark brown SILTY CLAY LOAM		4 5 5	2.3 P	21
601.76				
STIFF dark brown SILTY CLAY LOAM	-10	0 3 3	1.0 B	16
599.26				
STIFF brown SANDY LOAM with GRAVEL		4 6 7	1.5 P	
596.26				
No recovery, rock blocking sampler	-15	12 15 7		
594.26				
No recovery		2 4 7		
591.26				
▽	-20	4		

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
VERY STIFF gray CLAY LOAM TILL *(continued)*		7 8	3.0 B	13
589.26				
VERY STIFF gray CLAY LOAM TILL		3 6 10	2.7 B	13
586.76				
VERY STIFF gray CLAY LOAM TILL	-25	2 6 9	2.7 B	13
584.26				
VERY STIFF gray CLAY LOAM TILL		2 6 10	2.2 B	14
581.76				
VERY STIFF gray CLAY LOAM TILL	-30	4 12 25	2.3 S	17
579.26				
STIFF gray CLAY TILL with DOLOMITE lenses		15 15 6	1.3 P	27
576.76				
STIFF gray CLAY TILL	575.26 -35	100/6"		52
Borehole continued with rock coring.				
	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED	
	CHECKED - JTH	REVISED	
PLOT SCALE =	DRAWN - CMM	REVISED	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS – 4
I–74 OVER 19TH ST. – STRUCTURE NO. 081–0179 WB & 081–0180 EB
SHEET NO. 84 OF 86 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1033
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

ROCK CORE LOG

Date 2/19/11

ROUTE FAI 74 DESCRIPTION 081-0099, 0100 P92-032-01 I-74 over 19th Street, north of 12th Avenue LOGGED BY M. Jacoby

SECTION 81-1HB LOCATION Moline Twp. - 32SE, SEC. , TWP. 18N, RNG. 1W

COUNTY Rock Island CORING METHOD

STRUCT. NO. 081-0099, 0100 CORING BARREL TYPE & SIZE
Station
Core Diameter 2 in

BORING NO. B-2 Top of Rock Elev. 575.26 ft
Station 49+75 Begin Core Elev. 575.26 ft
Offset 0.00ft off BL - 19th St.
Ground Surface Elev. 610.26 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Dolomite: gray-buff, aphanitic, dense, pitted and mostly fractured with voids evident. t.s.f.: 572.9 to 572.5	575.26	1	85	15	2.2	228
Dolomite: as above, pitted, fractured with macro-voiding apparent throughout.	570.26 -40	2	30	0	2	
End of Boring	565.26 -45					
	-50					
	-55					

Color pictures of the cores _____
Cores will be stored for examination until _____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 3/22/11

ROUTE FAI 74 DESCRIPTION 081-0099, 0100 P92-032-01 I-74 over 19th Street, north of 12th Avenue LOGGED BY W. Garza

SECTION 81-1HB LOCATION Moline Twp. - 32SE, SEC. , TWP. 18N, RNG. 1W

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. 081-0099, 0100
Station

BORING NO. B-5
Station 56+11
Offset 89' Rt.
Ground Surface Elev. 613.1 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 568.1 ft ▼
Upon Completion Wash ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM light brown SILTY CLAY LOAM			0.5 P	13
	610.60			
MEDIUM light brown SILTY CLAY LOAM		2 4 4	0.5 P	15
	609.10 -5			
STIFF gray/brown SILTY CLAY LOAM		2 3 4	1.2 B	17
	606.60			
MEDIUM gray SILTY CLAY LOAM		2 2 3	0.6 P	20
	604.10 -10			
HARD tan CLAY LOAM		7 6 7	5.4 B	12
	601.60			
STIFF gray SILTY LOAM		2 4 5	1.1 S	15
	599.10 -15			
STIFF brown SILTY CLAY LOAM		3 5 7	2.0 B	20
	596.60			
MEDIUM gray SILTY CLAY LOAM		3 3 5	0.8 P	21
	593.60 -20			

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
VERY STIFF tan CLAY LOAM TILL		3 6 7	2.7 B	16
	591.60			
VERY STIFF tan CLAY LOAM TILL		5 6 9	2.5 B	15
	589.10 -25			
VERY STIFF tan/gray CLAY LOAM TILL		3 5 9	2.7 B	15
	586.60			
VERY STIFF gray CLAY LOAM TILL		4 6 9	2.5 B	15
	584.10 -30			
VERY STIFF gray CLAY LOAM TILL		4 6 9	2.5 B	15
	581.60			
VERY STIFF gray CLAY LOAM TILL		4 6 10	2.1 B	15
	579.10 -35			
VERY STIFF gray CLAY LOAM TILL		4 5 9	2.5 B	16
	576.60			
HARD gray CLAY LOAM TILL		5 11 15	5.4 B	18
	574.10 -40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 3/22/11

ROUTE FAI 74 DESCRIPTION 081-0099, 0100 P92-032-01 I-74 over 19th Street, north of 12th Avenue LOGGED BY W. Garza

SECTION 81-1HB LOCATION Moline Twp. - 32SE, SEC. , TWP. 18N, RNG. 1W

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. 081-0099, 0100
Station

BORING NO. B-5
Station 56+11
Offset 89' Rt.
Ground Surface Elev. 613.1 ft

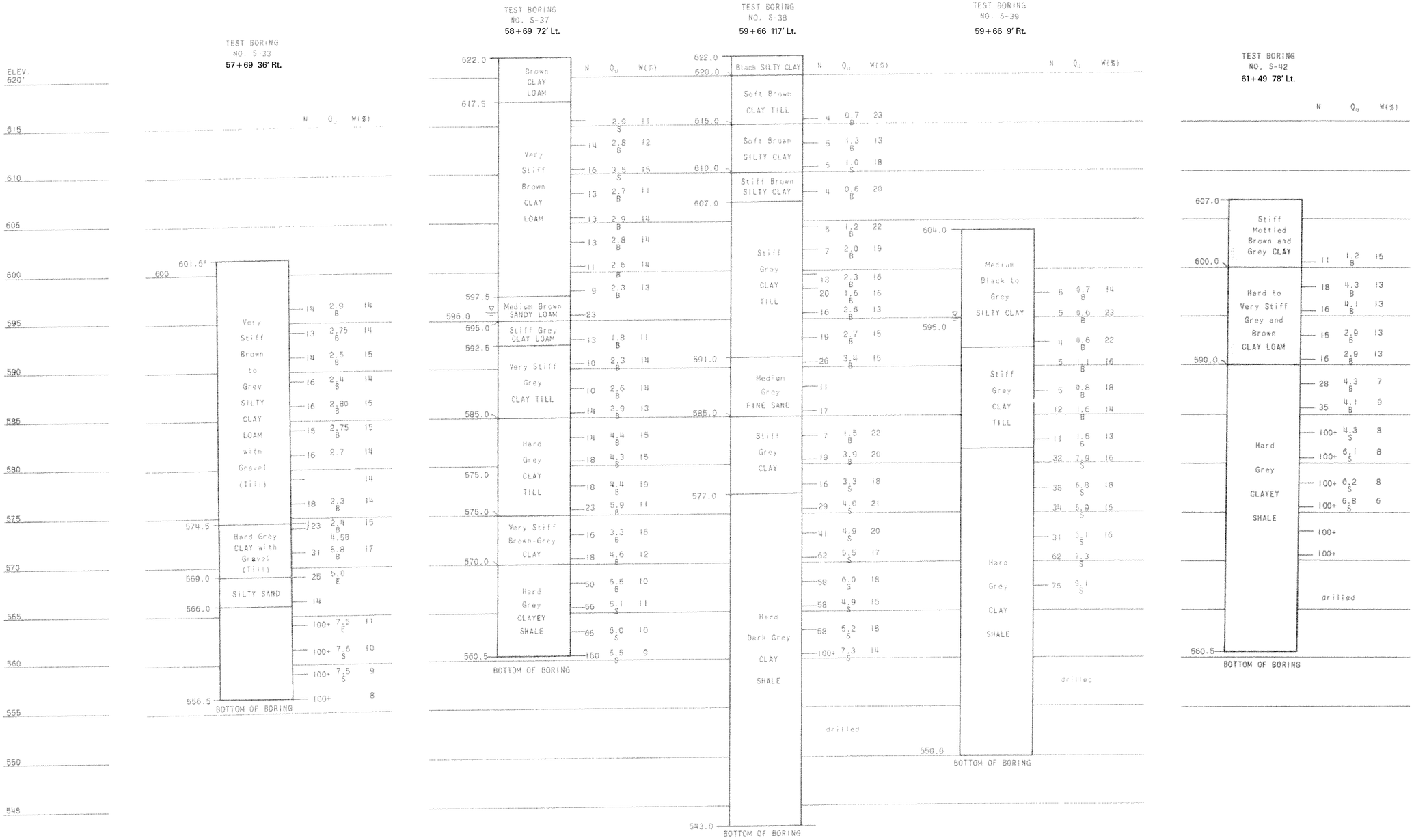
Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 568.1 ft ▼
Upon Completion Wash ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
HARD gray CLAY LOAM TILL		6 9 14	5.7 B	18
	571.60			
VERY STIFF gray CLAY LOAM TILL with SILTY SAND lens		4 8 13	3.1 B	18
	569.10 ▼-45			
MEDIUM gray clean medium coarse SAND		0 5 7		
	566.10			
MEDIUM gray clean medium coarse SAND with CLAY lens		3 5 11	4.0 P	12
	563.60 -50			
VERY DENSE gray weathered SHALE with COAL lens		40 100/8"		
	561.60			
	560.60			
Wash		100/1"		
VERY DENSE olive-green SANDSTONE with DOLOMITE fragments				
Auger Refusal @ 52.5'				
End of Boring	-55			
	-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



Note:
Boring logs shown on this sheet have been compiled from the existing plans.

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - JMH	REVISED	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**BORING LOGS - 6**	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - JTH	REVISED		**I-74 OVER 19TH ST. - STRUCTURE NO. 081-0179 WB & 081-0180 EB**	74	81-1HBR	ROCK ISLAND	2042	1035
	PLOT SCALE =	DRAWN - CMM	REVISED		SHEET NO. 86 OF 86 SHEETS					CONTRACT NO. 64E26
	PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED			FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Benchmark No. 586:
Cut "X" on Northerly Bolt of Existing Ramp 7th-A Pier Foundation
Elevation NAVD 88 = 614.214

Existing Structures:
The existing structure was built in 1973 as F.A.I. Route 74, S.N. 081-0116 (Ramp S-7). The existing structure consists of 6 spans of reinforced concrete deck on multiple steel plate girders. The total length of existing structure is ±455' back to back of abutments. The deck width is 26'-0". The structure is to be removed and replaced during the Stage 2 Construction.

No salvage.

EXISTING UTILITY LEGEND

- Underground Sanitary Sewer
- Underground Storm Sewer
- Underground Telephone
- Underground Fiber Optic
- Underground Water

Note: Utilities in conflict are to be relocated or removed by others. (See Utility Plans)

DRAINAGE SCUPPER STATIONS

630+65.25
630+75.25

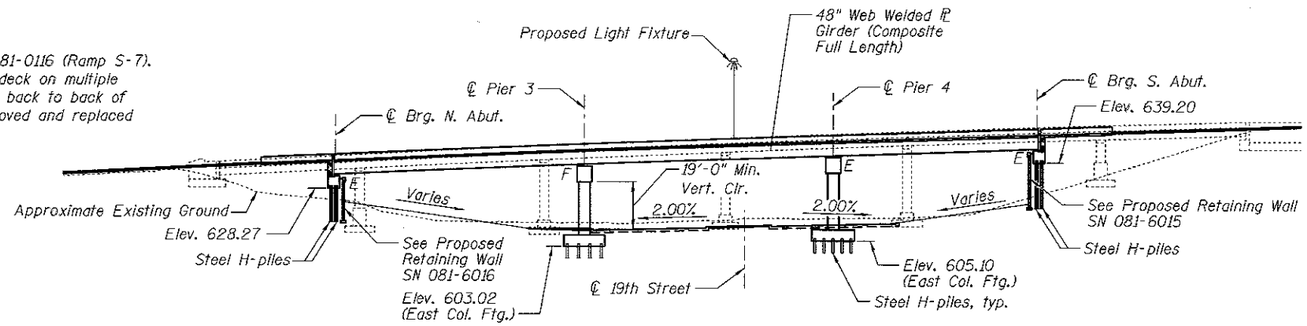
Note: Scupper located at east gutterline.

PR CURVE 7RA IL-1

PI STA = 623+55.18
Δ = 20° 08' 26" (RT)
D = 2° 51' 53"
R = 2,000.00'
T = 355.18'
L = 703.04'
E = 31.29'
e = 5.4%
T.R. = N/A
S.E. RUN = 63' (I), 156' (O)
PC STA = 620+00.00
PT STA = 627+03.04

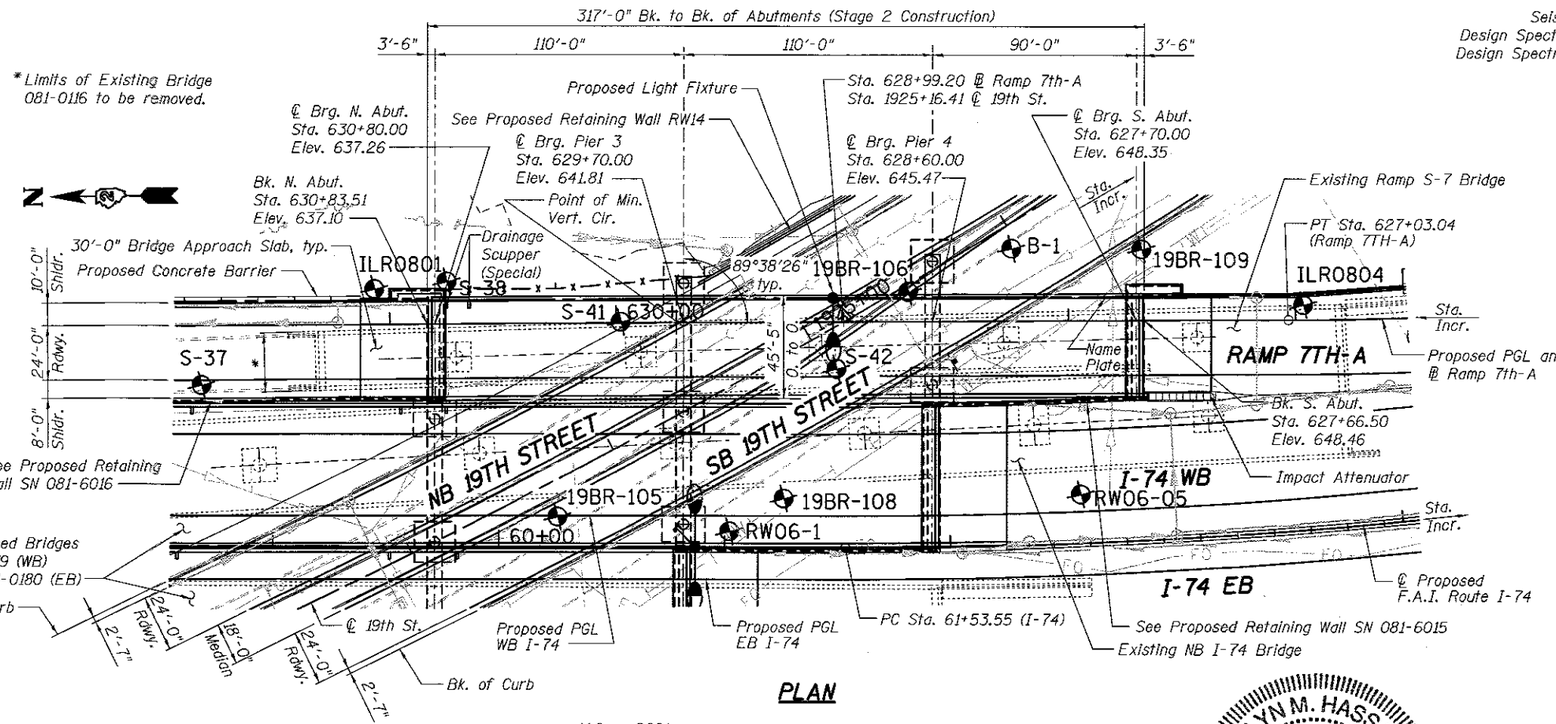
PR CURVE 19TH_3

PI STA = 1923+30.58
Δ = 12° 08' 13" (LT)
D = 1° 38' 13"
R = 3,500.00'
T = 372.09'
L = 741.40'
E = 19.72'
e = N.C. (2.0%)
T.R. = N/A
S.E. RUN = N/A
PC STA = 1919+58.49
PT STA = 1926+99.89



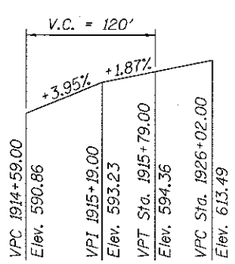
ELEVATION

(Looking East along ℄ Ramp 7th-A)



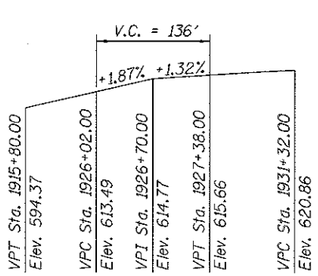
PROFILE GRADE

(Along SB PGL 19th Street)



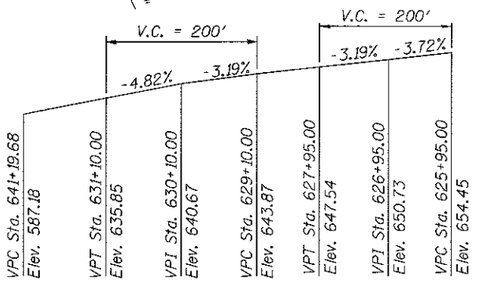
PROFILE GRADE

(Along NB PGL 19th Street)

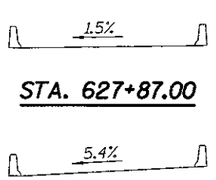


PROFILE GRADE

(Along PGL Ramp 7TH-A)



PLAN



SUPERELEVATION TRANSITION
RAMP 7TH-A
(Looking South)

DESIGN SPECIFICATIONS

2012 AASHTO LRFD
Bridge Design Specifications,
6th Edition

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi (Superstructure and Abutments)
f'_c = 6,000 psi (Piers)
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (M270 Grade 50)
f_y = 36,000 psi (M270 Grade 36)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

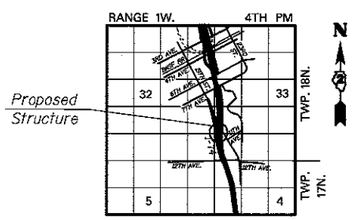
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.061g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.095g
Soil Site Class = C

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

LEGEND

- Soil Borings

Notes:
Stations and elevations are given at the ℄ of Ramp 7th-A.
For Piers 1 and 2, see proposed bridges SN 081-0179 (WB) and SN 081-0180 (EB).
See Electrical Plans for lighting and conduit details.
See Roadway Plans for grading and impact attenuator details.



JERILYN M. HASSARD
081-006521
LICENSED STRUCTURAL ENGINEER OF
ILLINOIS
03-23-17

JERILYN M. HASSARD
EDWARDSVILLE, ILLINOIS
ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 081-006521
EXPIRES 11/30/2018

GENERAL PLAN AND ELEVATION
RAMP 7TH-A OVER 19TH STREET
F.A.I. ROUTE 74 SEC. 81-1HBR
ROCK ISLAND COUNTY
STA. 628+99.20
STRUCTURE NO. 081-0181

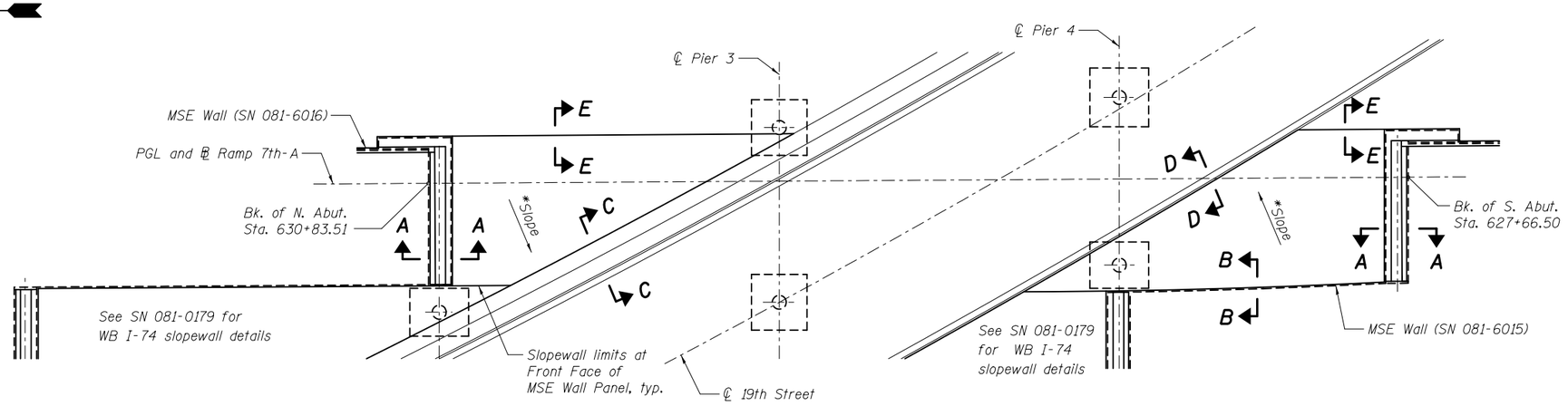
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

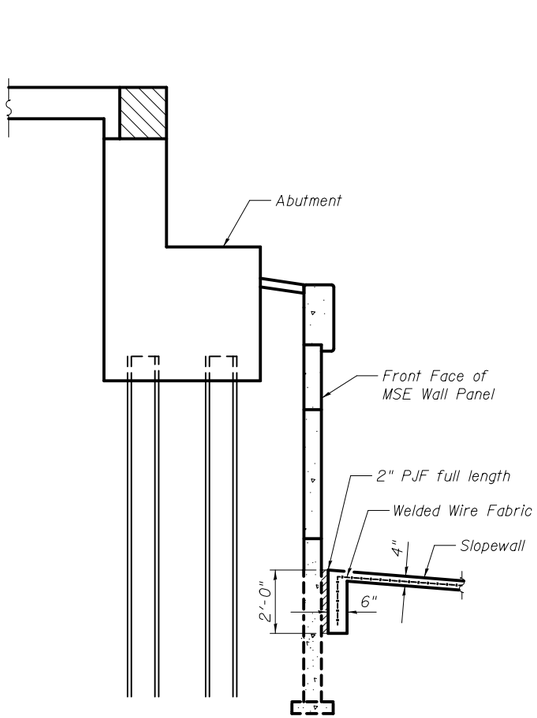
GENERAL PLAN AND ELEVATION
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 1 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1036
		CONTRACT NO. 64E26		
ILLINOIS	FED. AID PROJECT			

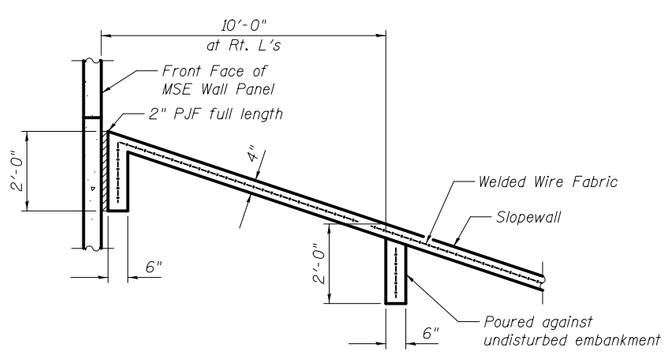


SLOPEWALL PLAN

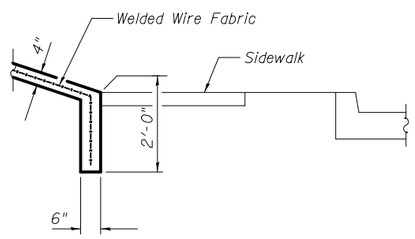
* 1V:3H (max.) at Rt. L's to 19th Street.
See Roadway Plans for grading details.



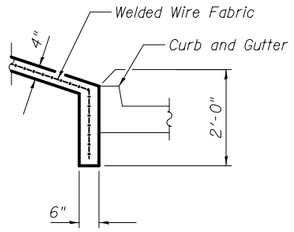
SECTION A-A



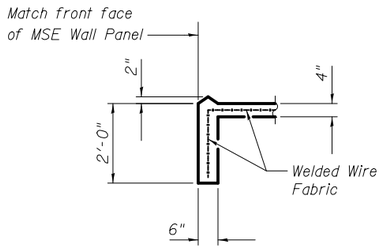
SECTION B-B



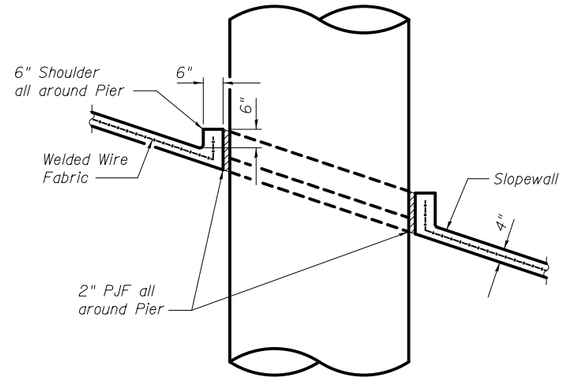
SECTION C-C



SECTION D-D



SECTION E-E



SLOPEWALL AT PIER COLUMN

Notes:
See sheet 1 of 54 for relative plan dimensions.
See SN 081-6015 and SN 081-6016 for MSE wall configuration and details.
Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0, weighing 58 lbs. per 100 sq. ft. Cost of the mesh is included in the cost of slopewall.

BILL OF MATERIAL

Item	Unit	Total
Slope Wall 4 Inch	Sq. Yd.	798

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION DETAILS
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 2 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1037
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

INDEX OF SHEETS

STATION 628+99.20
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RTE. 74 SEC. 81-1HBR
LOADING HL-93
STRUCTURE NO. 081-0181

NAME PLATE
See Std. 515001

GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$" ϕ, open holes $\frac{15}{16}$" ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel =
   M 270 Grade 36: 19,617 lbs
   M 270 Grade 50: 391,077 lbs
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. If the Contractor elects to use cantilever forming brackets on the exterior beams, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) 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.
6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
7. Concrete Sealer shall be applied to all exposed surfaces of abutments and piers.
8. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
9. The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception of the exterior surfaces and the bottom of the bottom flange of fascia beams, masked off connection surfaces, and field installed fasteners, all of which shall be touched up and finish coated in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The exterior and bottom flange of the fascia beams and fascia bearings shall be finish coated with a fluoropolymer paint. The color of the final finish coat for the exterior and bottom flange of the fascia beams and bearings shall be Federal Standard 595C Color 26099 (gray-blue). See Special Provision for "Cleaning and Painting Structural Steel".
10. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments. The proposed embankment configuration includes the Reinforced Soil Mass required for the adjacent MSE walls.
11. See SN 081-6015 and SN 081-6016 plans for MSE details and pay items.
12. See SN 081-0179 and SN 081-0180 plans for temporary sheet piling and temporary soil retention system details and pay items.
13. The abutment piles are located within the reinforced soil mass of SN 081-6015 and SN 081-6016. Pile sleeves shall be installed within the reinforced soil mass. Cost of pile sleeves is included with Driving Piles. Installation of pile sleeves shall be coordinated with the wall system supplier.
14. Slipforming of the exterior parapet aligned next to the I-74 WB Structure (SN 081-0179) is not allowed. Slipforming of the Aesthetic Traffic Barrier is allowed.
15. A protective shield system shall be erected and maintained to protect pedestrian and vehicular traffic. The system shall protect the following bridge length and width of the existing structures.

STRUCTURE	LENGTH	WIDTH
081-0116 (Ramp S-7)	450'-7"	26'-0"

16. Light poles and luminaires mounted on the existing structures shall be removed. None are to be salvaged. Cost included with Removal of Existing Structures No. 2.

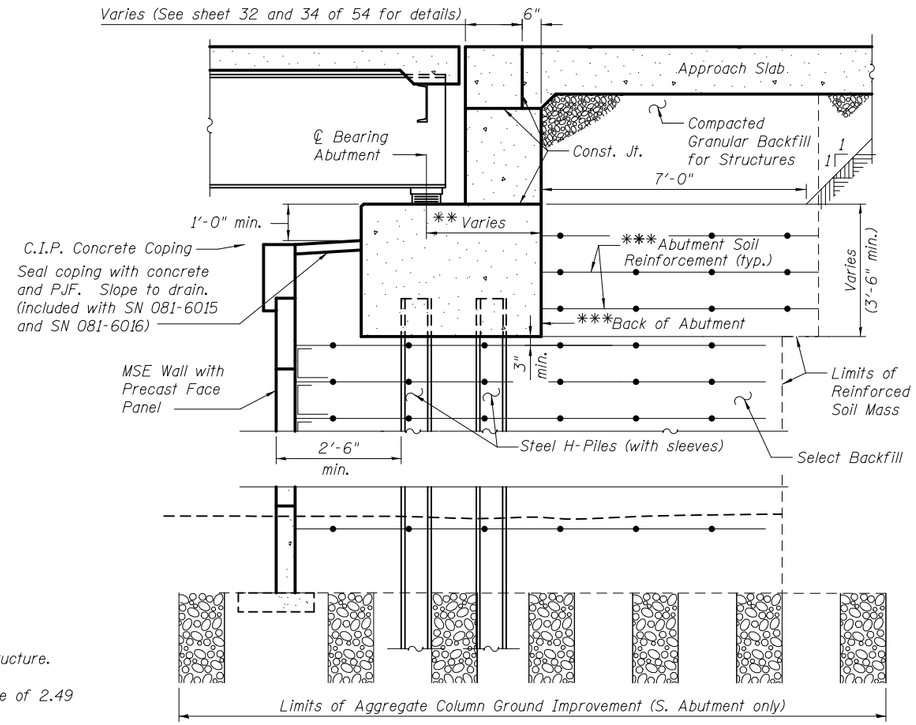
* See additional structures within this contract for remainder of L. Sum quantity.

** Removal of Existing Structures includes the removal of slopewalls and sidewalks beneath the structure.

*** The M.S.E. wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 2.49 kips/ft. and 2.65 kips/ft. of abutment for the south and north abutments, respectively. Cost shall be included with "Mechanically Stabilized Earth Retaining Wall". (See General Note 13)

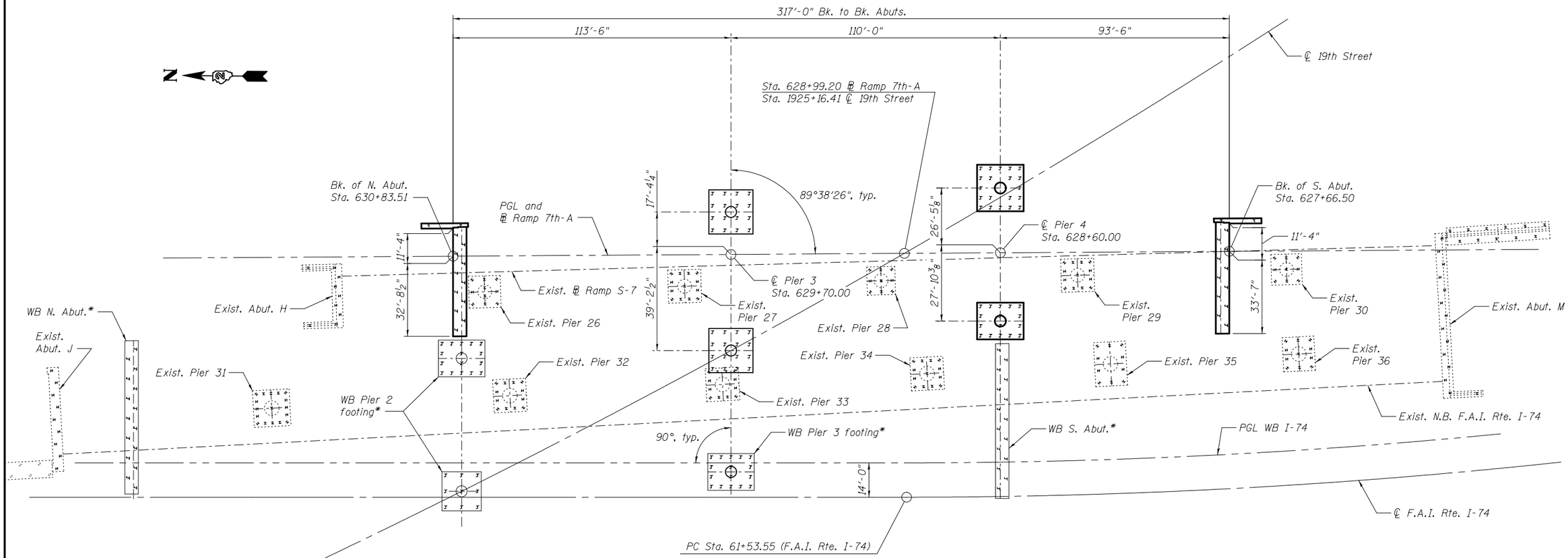
TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
**	Removal of Existing Structures No. 2	Each			1
	Protective Shield	Sq. Yd.	1,302		1,302
	Structure Excavation	Cu. Yd.		1,227	1,227
	Concrete Structures	Cu. Yd.		669.8	669.8
	Concrete Superstructure	Cu. Yd.	616.9		616.9
	Bridge Deck Grooving	Sq. Yd.	1,737		1,737
	Protective Coat	Sq. Yd.	2,093		2,093
*	Furnishing and Erecting Structural Steel	L. Sum	0.15		0.15
	Stud Shear Connectors	Each	5,148		5,148
	Reinforcement Bars, Epoxy Coated	Pound	161,490	144,370	305,860
	Bar Splicers	Each		103	103
	Mechanical Splicers	Each		240	240
	Slope Wall 4 Inch	Sq. Yd.		798	798
	Furnishing Steel Piles HP 10x42	Foot		166	166
	Furnishing Steel Piles HP 12X63	Foot		1,518	1,518
	Furnishing Steel Piles HP 14X102	Foot		2,184	2,184
	Driving Piles	Foot		3,868	3,868
	Name Plates	Each	1		1
	Preformed Joint Strip Seal	Foot	88		88
	Elastomeric Bearing Assembly, Type I	Each	6		6
	Elastomeric Bearing Assembly, Type II	Each	6		6
	Anchor Bolts, 1"	Each		72	72
	Concrete Sealer	Sq. Ft.		5,624	5,624
	High Load Multi-Rotational Bearings, Guided Expansion, 350K	Each	6		6
	High Load Multi-Rotational Bearings, Fixed - 350K	Each	6		6
	Granular Backfill for Structures	Cu. Yd.		127	127
	Steel Railing (Special)	Foot	313		313
	Drainage Scuppers (Special)	Each	2		2
*	Drainage System	L. Sum		0.5	0.5



TYPICAL SECTION THRU ABUTMENT

S. Abutment Shown. N. Abutment Similar



FOUNDATION LAYOUT

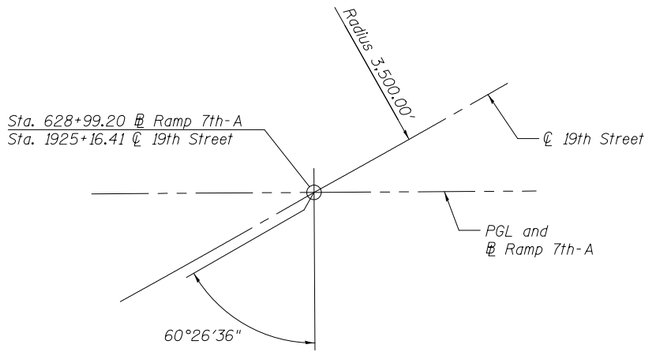
* See SN 081-0179 for foundation details

EXISTING FOUNDATION TABLE

LOCATION	DESCRIPTION
Exist. Ramp S-7 - Abut. H	Pile Cap 26'-0"x4'-2"x3'-6" with 9-Piles (10BP42)
Exist. N.B. I-74 - Abut. J	Pile Cap 42'-6"x4'-2"x3'-6" with 28-Piles (10BP42 & Timber)
Exist. Ramp S-7 - Pier 26	Footing 13'-0"x13'-0"x2'-9" with 10-Piles (10BP42)
Exist. Ramp S-7 - Pier 27	Footing 13'-6"x13'-6"x3'-0" with 13-Piles (10BP42)
Exist. Ramp S-7 - Pier 28	Footing 11'-6"x11'-6"x2'-9" with 9-Piles (10BP42)
Exist. Ramp S-7 - Pier 29	Footing 13'-6"x13'-6"x3'-0" with 13-Piles (10BP42)
Exist. Ramp S-7 - Pier 30	Footing 12'-6"x12'-6"x3'-0" with 9-Piles (10BP42)
Exist. N.B. I-74 - Pier 31	Footing 15'-0"x15'-0"x3'-3" with 21-Piles (10BP42)
Exist. N.B. I-74 - Pier 32	Footing 13'-6"x13'-6"x3'-0" with 16-Piles (10BP42)
Exist. N.B. I-74 - Pier 33	Footing 13'-6"x13'-6"x3'-0" with 16-Piles (10BP42)
Exist. N.B. I-74 - Pier 34	Footing 13'-6"x13'-6"x3'-0" with 13-Piles (10BP42)
Exist. N.B. I-74 - Pier 35	Footing 18'-0"x13'-0"x3'-0" with 12-Piles (10BP42)
Exist. N.B. I-74 - Pier 36	Footing 14'-0"x13'-0"x3'-0" with 11-Piles (10BP42)
Exist. Ramp S-7 - Abut. M and N.B. I-74 - Abut. M	Pile Cap 67'-4 3/4"x4'-9"x3'-6" with 25-Piles (10BP42)

For additional existing foundations not shown, see Foundation Layout sheet for SN 081-0179 and SN 081-0180.

TIE STATION



Notes:

Plan dimensions and details relative to existing structures are from existing plans and subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction.

For Ramp 7th-A north and south abutment pile cap and pile layout, see sheets 33 and 35 of 54.

For Ramp 7th-A pier 3 and 4 footing and pile layout, see sheets 39 and 41 of 54.

See staging plan sheets for SN 081-0179 and SN 081-0180 for foundation staging details.

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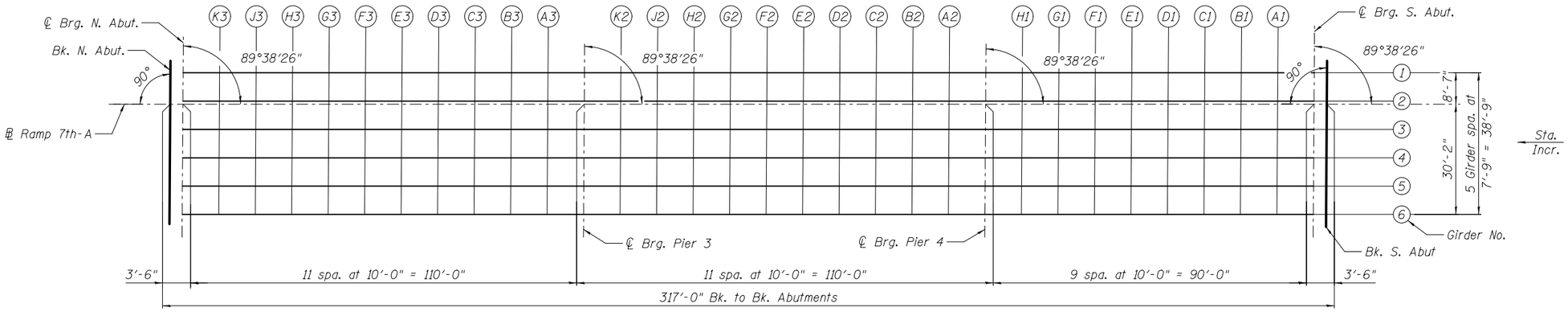
USER NAME =	DESIGNED - JMH	REVISED -
	CHECKED - JTH	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JTH	REVISED -

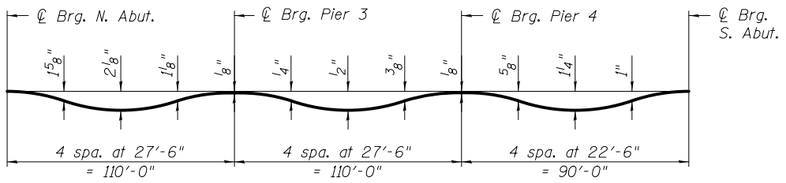
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOUNDATION LAYOUT
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 4 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1039
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



PLAN



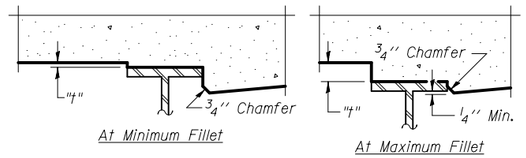
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Notes:

Dead load deflection will occur at the piers due to the pier column spacing.

The dead load deflections are not to be used in the field if the engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection".



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 6 thru 8 of 54, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - JTH	REVISED -
		CHECKED - YSS	REVISED -
	PLOT SCALE =	DRAWN - AEC	REVISED -
	PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS – 1
RAMP 7TH–A OVER 19TH STREET – STRUCTURE NO. 081–0181
SHEET NO. 5 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1040
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	627+66.56	8.58	648.29	648.29
CL Brg. S. Abut.	627+70.00	8.58	648.18	648.18
A1	627+80.00	8.58	647.88	647.93
B1	627+90.00	8.58	647.57	647.67
C1	628+00.00	8.58	647.25	647.39
D1	628+10.00	8.58	646.93	647.09
E1	628+20.00	8.58	646.61	646.77
F1	628+30.00	8.58	646.29	646.45
G1	628+40.00	8.58	645.98	646.12
H1	628+50.00	8.58	645.66	645.79
CL Brg. Pier 4	628+60.00	8.58	645.34	645.47
A2	628+70.00	8.58	645.02	645.14
B2	628+80.00	8.58	644.70	644.83
C2	628+90.00	8.58	644.38	644.52
D2	629+00.00	8.58	644.06	644.21
E2	629+10.00	8.58	643.74	643.89
F2	629+20.00	8.58	643.42	643.56
G2	629+30.00	8.58	643.09	643.22
H2	629+40.00	8.58	642.75	642.87
J2	629+50.00	8.58	642.40	642.50
K2	629+60.00	8.58	642.04	642.14
CL Brg. Pier 3	629+70.00	8.58	641.68	641.78
A3	629+80.00	8.58	641.31	641.43
B3	629+90.00	8.58	640.93	641.07
C3	630+00.00	8.58	640.54	640.71
D3	630+10.00	8.58	640.14	640.35
E3	630+20.00	8.58	639.74	639.96
F3	630+30.00	8.58	639.33	639.55
G3	630+40.00	8.58	638.91	639.11
H3	630+50.00	8.58	638.48	638.65
J3	630+60.00	8.58	638.04	638.17
K3	630+70.00	8.58	637.59	637.66
CL Brg. N. Abut.	630+80.00	8.58	637.14	637.14
Bk. N. Abut.	630+83.56	8.58	636.98	636.98

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	627+66.51	0.83	648.44	648.44
CL Brg. S. Abut.	627+70.00	0.83	648.33	648.33
A1	627+80.00	0.83	648.01	648.06
B1	627+90.00	0.83	647.69	647.79
C1	628+00.00	0.83	647.37	647.51
D1	628+10.00	0.83	647.05	647.21
E1	628+20.00	0.83	646.73	646.90
F1	628+30.00	0.83	646.41	646.58
G1	628+40.00	0.83	646.09	646.25
H1	628+50.00	0.83	645.77	645.92
CL Brg. Pier 4	628+60.00	0.83	645.45	645.61
A2	628+70.00	0.83	645.13	645.29
B2	628+80.00	0.83	644.81	644.98
C2	628+90.00	0.83	644.50	644.67
D2	629+00.00	0.83	644.18	644.36
E2	629+10.00	0.83	643.86	644.05
F2	629+20.00	0.83	643.53	643.73
G2	629+30.00	0.83	643.20	643.39
H2	629+40.00	0.83	642.86	643.04
J2	629+50.00	0.83	642.52	642.68
K2	629+60.00	0.83	642.16	642.32
CL Brg. Pier 3	629+70.00	0.83	641.80	641.96
A3	629+80.00	0.83	641.42	641.60
B3	629+90.00	0.83	641.04	641.24
C3	630+00.00	0.83	640.66	640.88
D3	630+10.00	0.83	640.26	640.50
E3	630+20.00	0.83	639.86	640.11
F3	630+30.00	0.83	639.44	639.69
G3	630+40.00	0.83	639.02	639.25
H3	630+50.00	0.83	638.59	638.78
J3	630+60.00	0.83	638.16	638.29
K3	630+70.00	0.83	637.71	637.78
CL Brg. N. Abut.	630+80.00	0.83	637.26	637.26
Bk. N. Abut.	630+83.51	0.83	637.10	637.10

BASE LINE AND PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	627+66.50	0.00	648.46	648.46
CL Brg. S. Abut.	627+70.00	0.00	648.35	648.35
A1	627+80.00	0.00	648.02	648.08
B1	627+90.00	0.00	647.70	647.80
C1	628+00.00	0.00	647.38	647.52
D1	628+10.00	0.00	647.06	647.22
E1	628+20.00	0.00	646.74	646.91
F1	628+30.00	0.00	646.42	646.59
G1	628+40.00	0.00	646.10	646.26
H1	628+50.00	0.00	645.78	645.94
CL Brg. Pier 4	628+60.00	0.00	645.47	645.62
A2	628+70.00	0.00	645.15	645.30
B2	628+80.00	0.00	644.83	644.99
C2	628+90.00	0.00	644.51	644.69
D2	629+00.00	0.00	644.19	644.38
E2	629+10.00	0.00	643.87	644.06
F2	629+20.00	0.00	643.55	643.74
G2	629+30.00	0.00	643.22	643.40
H2	629+40.00	0.00	642.88	643.05
J2	629+50.00	0.00	642.53	642.69
K2	629+60.00	0.00	642.17	642.33
CL Brg. Pier 3	629+70.00	0.00	641.81	641.98
A3	629+80.00	0.00	641.44	641.62
B3	629+90.00	0.00	641.06	641.25
C3	630+00.00	0.00	640.67	640.89
D3	630+10.00	0.00	640.27	640.51
E3	630+20.00	0.00	639.87	640.12
F3	630+30.00	0.00	639.46	639.70
G3	630+40.00	0.00	639.03	639.26
H3	630+50.00	0.00	638.61	638.80
J3	630+60.00	0.00	638.17	638.31
K3	630+70.00	0.00	637.72	637.80
CL Brg. N. Abut.	630+80.00	0.00	637.27	637.27
Bk. N. Abut.	630+83.51	0.00	637.10	637.10

Notes:

Dead load deflection will occur at the piers due to the pier column spacing.

The "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown are based on an anticipated construction sequence as described herein. SN 081-0179 Westbound I-74 steel superstructure only is constructed prior to the Ramp 7th-A concrete superstructure. Deviation from this sequence will require adjustment to the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown.

MODJESKI and MASTERS
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USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - AEC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS – 2
RAMP 7TH–A OVER 19TH STREET – STRUCTURE NO. 081–0181
SHEET NO. 6 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1041
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	627+66.46	-6.92	648.60	648.60
CL Brg. S. Abut.	627+70.00	-6.92	648.48	648.48
A1	627+80.00	-6.92	648.14	648.19
B1	627+90.00	-6.92	647.80	647.91
C1	628+00.00	-6.92	647.48	647.62
D1	628+10.00	-6.92	647.17	647.33
E1	628+20.00	-6.92	646.85	647.01
F1	628+30.00	-6.92	646.53	646.69
G1	628+40.00	-6.92	646.21	646.36
H1	628+50.00	-6.92	645.89	646.04
CL Brg. Pier 4	628+60.00	-6.92	645.57	645.72
A2	628+70.00	-6.92	645.25	645.40
B2	628+80.00	-6.92	644.93	645.10
C2	628+90.00	-6.92	644.61	644.79
D2	629+00.00	-6.92	644.29	644.49
E2	629+10.00	-6.92	643.97	644.18
F2	629+20.00	-6.92	643.65	643.86
G2	629+30.00	-6.92	643.32	643.52
H2	629+40.00	-6.92	642.98	643.17
J2	629+50.00	-6.92	642.63	642.82
K2	629+60.00	-6.92	642.28	642.46
CL Brg. Pier 3	629+70.00	-6.92	641.91	642.11
A3	629+80.00	-6.92	641.54	641.75
B3	629+90.00	-6.92	641.16	641.38
C3	630+00.00	-6.92	640.77	641.01
D3	630+10.00	-6.92	640.38	640.64
E3	630+20.00	-6.92	639.97	640.24
F3	630+30.00	-6.92	639.56	639.82
G3	630+40.00	-6.92	639.14	639.38
H3	630+50.00	-6.92	638.71	638.91
J3	630+60.00	-6.92	638.27	638.42
K3	630+70.00	-6.92	637.83	637.90
CL Brg. N. Abut.	630+80.00	-6.92	637.37	637.37
Bk. N. Abut.	630+83.47	-6.92	637.21	637.21

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	627+66.41	-14.67	648.76	648.76
CL Brg. S. Abut.	627+70.00	-14.67	648.63	648.63
A1	627+80.00	-14.67	648.27	648.32
B1	627+90.00	-14.67	647.92	648.01
C1	628+00.00	-14.67	647.60	647.73
D1	628+10.00	-14.67	647.28	647.43
E1	628+20.00	-14.67	646.96	647.11
F1	628+30.00	-14.67	646.64	646.79
G1	628+40.00	-14.67	646.32	646.45
H1	628+50.00	-14.67	646.00	646.12
CL Brg. Pier 4	628+60.00	-14.67	645.69	645.80
A2	628+70.00	-14.67	645.37	645.49
B2	628+80.00	-14.67	645.05	645.18
C2	628+90.00	-14.67	644.73	644.88
D2	629+00.00	-14.67	644.41	644.58
E2	629+10.00	-14.67	644.09	644.27
F2	629+20.00	-14.67	643.77	643.95
G2	629+30.00	-14.67	643.44	643.62
H2	629+40.00	-14.67	643.10	643.28
J2	629+50.00	-14.67	642.75	642.92
K2	629+60.00	-14.67	642.39	642.57
CL Brg. Pier 3	629+70.00	-14.67	642.03	642.22
A3	629+80.00	-14.67	641.66	641.86
B3	629+90.00	-14.67	641.28	641.49
C3	630+00.00	-14.67	640.89	641.13
D3	630+10.00	-14.67	640.49	640.75
E3	630+20.00	-14.67	640.09	640.35
F3	630+30.00	-14.67	639.68	639.93
G3	630+40.00	-14.67	639.25	639.49
H3	630+50.00	-14.67	638.83	639.02
J3	630+60.00	-14.67	638.39	638.53
K3	630+70.00	-14.67	637.94	638.02
CL Brg. N. Abut.	630+80.00	-14.67	637.49	637.49
Bk. N. Abut.	630+83.42	-14.67	637.33	637.33

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	627+66.36	-22.42	648.92	648.92
CL Brg. S. Abut.	627+70.00	-22.42	648.78	648.78
A1	627+80.00	-22.42	648.40	648.44
B1	627+90.00	-22.42	648.04	648.12
C1	628+00.00	-22.42	647.72	647.83
D1	628+10.00	-22.42	647.40	647.52
E1	628+20.00	-22.42	647.08	647.20
F1	628+30.00	-22.42	646.76	646.87
G1	628+40.00	-22.42	646.44	646.53
H1	628+50.00	-22.42	646.12	646.19
CL Brg. Pier 4	628+60.00	-22.42	645.80	645.86
A2	628+70.00	-22.42	645.48	645.55
B2	628+80.00	-22.42	645.16	645.25
C2	628+90.00	-22.42	644.84	644.95
D2	629+00.00	-22.42	644.53	644.65
E2	629+10.00	-22.42	644.21	644.34
F2	629+20.00	-22.42	643.88	644.02
G2	629+30.00	-22.42	643.55	643.69
H2	629+40.00	-22.42	643.21	643.35
J2	629+50.00	-22.42	642.87	643.00
K2	629+60.00	-22.42	642.51	642.65
CL Brg. Pier 3	629+70.00	-22.42	642.15	642.30
A3	629+80.00	-22.42	641.77	641.94
B3	629+90.00	-22.42	641.39	641.58
C3	630+00.00	-22.42	641.01	641.21
D3	630+10.00	-22.42	640.61	640.84
E3	630+20.00	-22.42	640.20	640.45
F3	630+30.00	-22.42	639.79	640.03
G3	630+40.00	-22.42	639.37	639.59
H3	630+50.00	-22.42	638.94	639.13
J3	630+60.00	-22.42	638.50	638.64
K3	630+70.00	-22.42	638.06	638.13
CL Brg. N. Abut.	630+80.00	-22.42	637.61	637.61
Bk. N. Abut.	630+83.37	-22.42	637.45	637.45

Notes:

Dead load deflection will occur at the piers due to the pier column spacing.

The "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown are based on an anticipated construction sequence as described herein. SN 081-0179 Westbound I-74 steel superstructure only is constructed prior to the Ramp 7th-A concrete superstructure. Deviation from this sequence will require adjustment to the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown.

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USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - AEC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS – 3
RAMP 7TH–A OVER 19TH STREET – STRUCTURE NO. 081–0181
SHEET NO. 7 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1042
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	627+66.31	-30.17	649.07	649.07
CL Brg. S. Abut.	627+70.00	-30.17	648.93	648.93
A1	627+80.00	-30.17	648.53	648.57
B1	627+90.00	-30.17	648.15	648.22
C1	628+00.00	-30.17	647.83	647.92
D1	628+10.00	-30.17	647.51	647.61
E1	628+20.00	-30.17	647.19	647.28
F1	628+30.00	-30.17	646.88	646.94
G1	628+40.00	-30.17	646.56	646.60
H1	628+50.00	-30.17	646.24	646.25
CL Brg. Pier 4	628+60.00	-30.17	645.92	645.92
A2	628+70.00	-30.17	645.60	645.61
B2	628+80.00	-30.17	645.28	645.31
C2	628+90.00	-30.17	644.96	645.01
D2	629+00.00	-30.17	644.64	644.71
E2	629+10.00	-30.17	644.32	644.40
F2	629+20.00	-30.17	644.00	644.08
G2	629+30.00	-30.17	643.67	643.75
H2	629+40.00	-30.17	643.33	643.40
J2	629+50.00	-30.17	642.98	643.05
K2	629+60.00	-30.17	642.63	642.70
CL Brg. Pier 3	629+70.00	-30.17	642.26	642.35
A3	629+80.00	-30.17	641.89	642.00
B3	629+90.00	-30.17	641.51	641.64
C3	630+00.00	-30.17	641.12	641.29
D3	630+10.00	-30.17	640.73	640.92
E3	630+20.00	-30.17	640.32	640.53
F3	630+30.00	-30.17	639.91	640.12
G3	630+40.00	-30.17	639.49	639.69
H3	630+50.00	-30.17	639.06	639.23
J3	630+60.00	-30.17	638.62	638.75
K3	630+70.00	-30.17	638.18	638.24
CL Brg. N. Abut.	630+80.00	-30.17	637.72	637.72
Bk. N. Abut.	630+83.32	-30.17	637.57	637.57

Notes:

Dead load deflection will occur at the piers due to the pier column spacing.

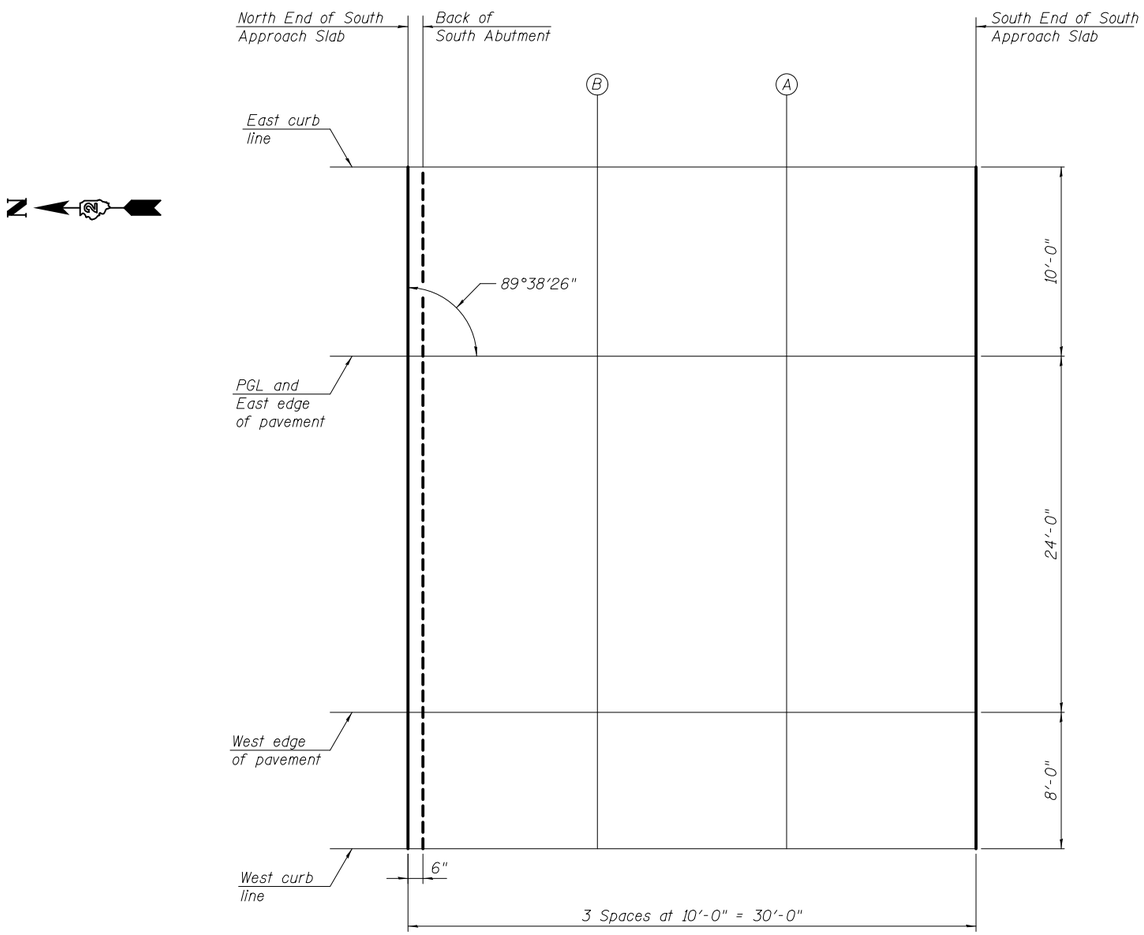
The "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown are based on an anticipated construction sequence as described herein. SN 081-0179 Westbound I-74 steel superstructure only is constructed prior to the Ramp 7th-A concrete superstructure. Deviation from this sequence will require adjustment to the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown.

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Slab	627+36.94	10.00	649.16
A	627+46.94	10.00	648.85
B	627+56.94	10.00	648.55
N. End Appr. Slab at S. Abut.	627+66.94	10.00	648.25

PGL AND EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Slab	627+37.00	0.00	649.43
A	627+47.00	0.00	649.10
B	627+57.00	0.00	648.77
N. End Appr. Slab at S. Abut.	627+67.00	0.00	648.44



PLAN

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Slab	627+37.15	-24.00	650.09
A	627+47.15	-24.00	649.70
B	627+57.15	-24.00	649.31
N. End Appr. Slab at S. Abut.	627+67.15	-24.00	648.92

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Slab	627+37.20	-32.00	650.31
A	627+47.20	-32.00	649.89
B	627+57.20	-32.00	649.48
N. End Appr. Slab at S. Abut.	627+67.20	-32.00	649.08

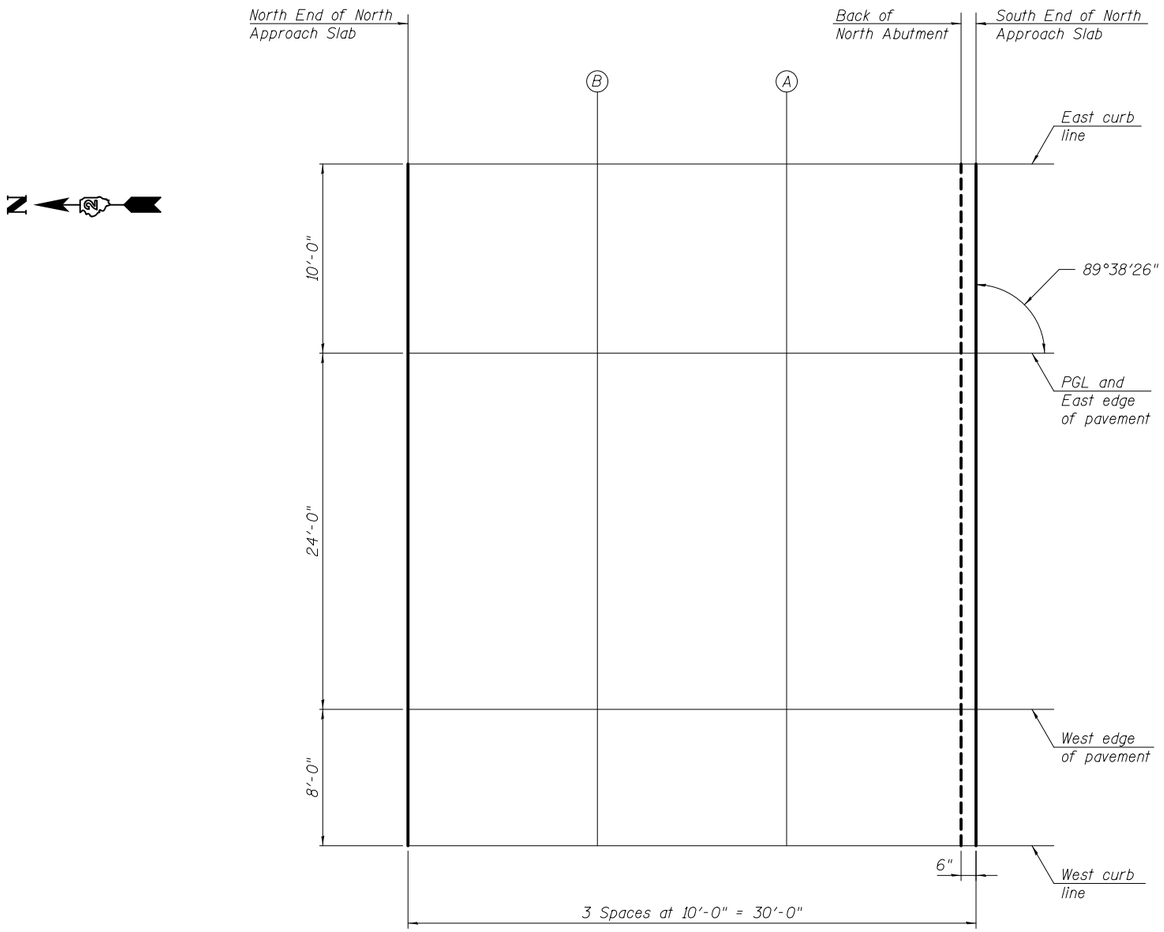
Note: West curb line falls within the limits of the Attenuator Pad. See Sheets 19 and 20 of 54.

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End Appr. Slab at N. Abut.	630+82.95	10.00	636.98
A	630+92.95	10.00	636.52
B	631+02.95	10.00	636.05
N. End North Appr. Slab	631+12.95	10.00	635.56

PGL AND EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End Appr. Slab at N. Abut.	630+83.01	0.00	637.13
A	630+93.01	0.00	636.67
B	631+03.01	0.00	636.19
N. End North Appr. Slab	631+13.01	0.00	635.70



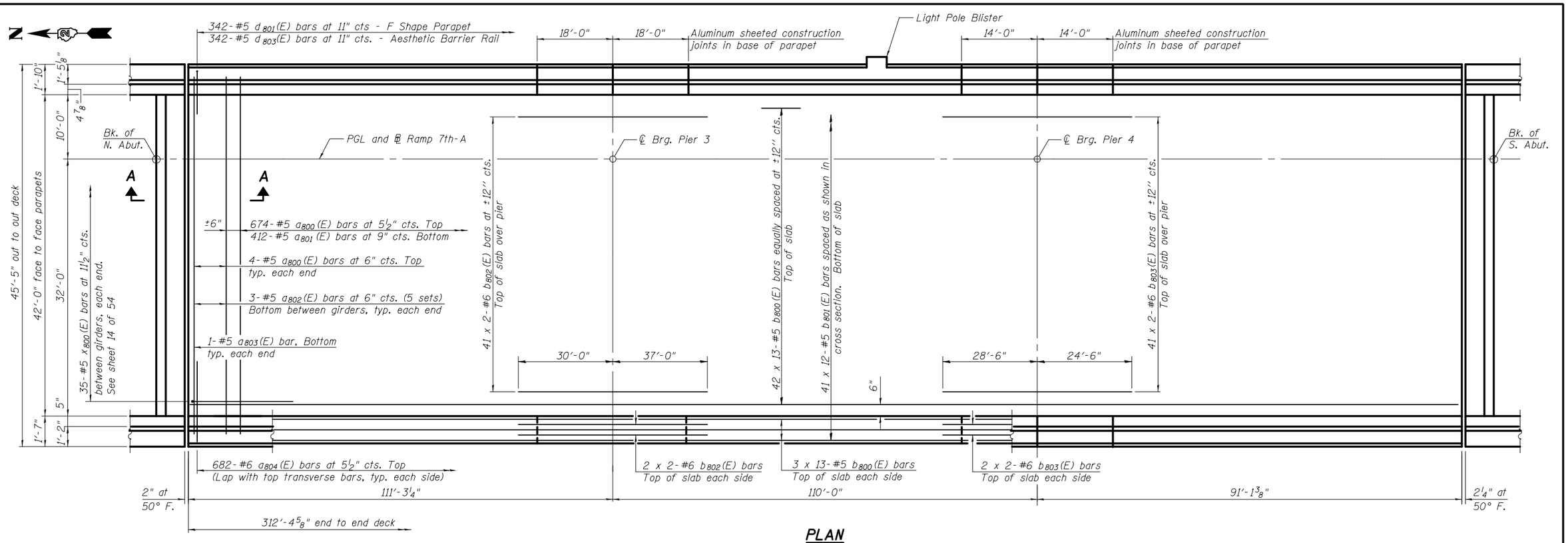
PLAN

WEST EDGE OF PAVEMENT

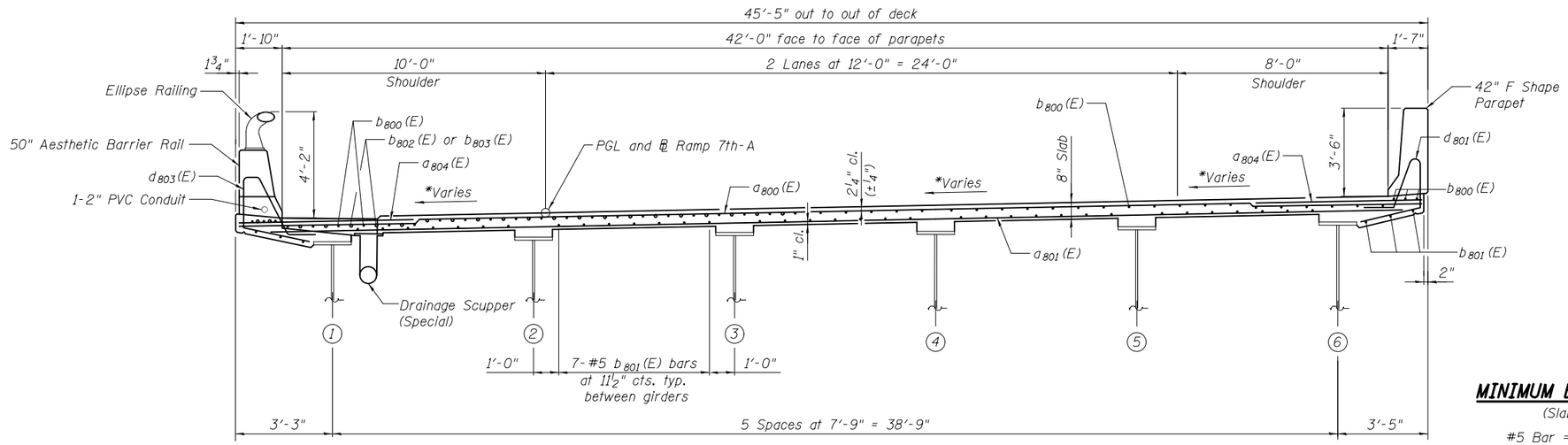
Location	Station	Offset	Theoretical Grade Elevations
S. End Appr. Slab at N. Abut.	630+83.16	-24.00	637.48
A	630+93.16	-24.00	637.02
B	631+03.16	-24.00	636.55
N. End North Appr. Slab	631+13.16	-24.00	636.06

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End Appr. Slab at N. Abut.	630+83.22	-32.00	637.60
A	630+93.22	-32.00	637.14
B	631+03.22	-32.00	636.66
N. End North Appr. Slab	631+13.22	-32.00	636.17



PLAN

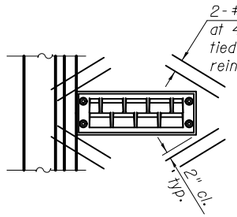


NEAR PIER NEAR MIDSPAN

CROSS SECTION

(Looking South)

*See Sheet 1 of 54 for superelevation transition



PART PLAN AT SCUPPER

(2 Location Required)

Note: Cut longitudinal reinforcement to clear drainage scuppers.

MINIMUM BAR LAP

(Slab)

#5 Bar = 3'-3"
#6 Bar = 3'-10"

Notes:

Dimensions are based on a Rolled Rail Strip Seal Joint. If the contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustment to satisfy the details on sheet 22 of 54.

See sheet 14 of 54 for Section A-A, light pole blister details and Bill of Material.

Bars indicated thus 42 x 13-#5 etc. indicates 42 lines of bars with 13 lengths per lines.

See sheets 12 and 13 of 54 for parapet and barrier reinforcement.

See sheet 1 of 54 for drainage scupper locations.

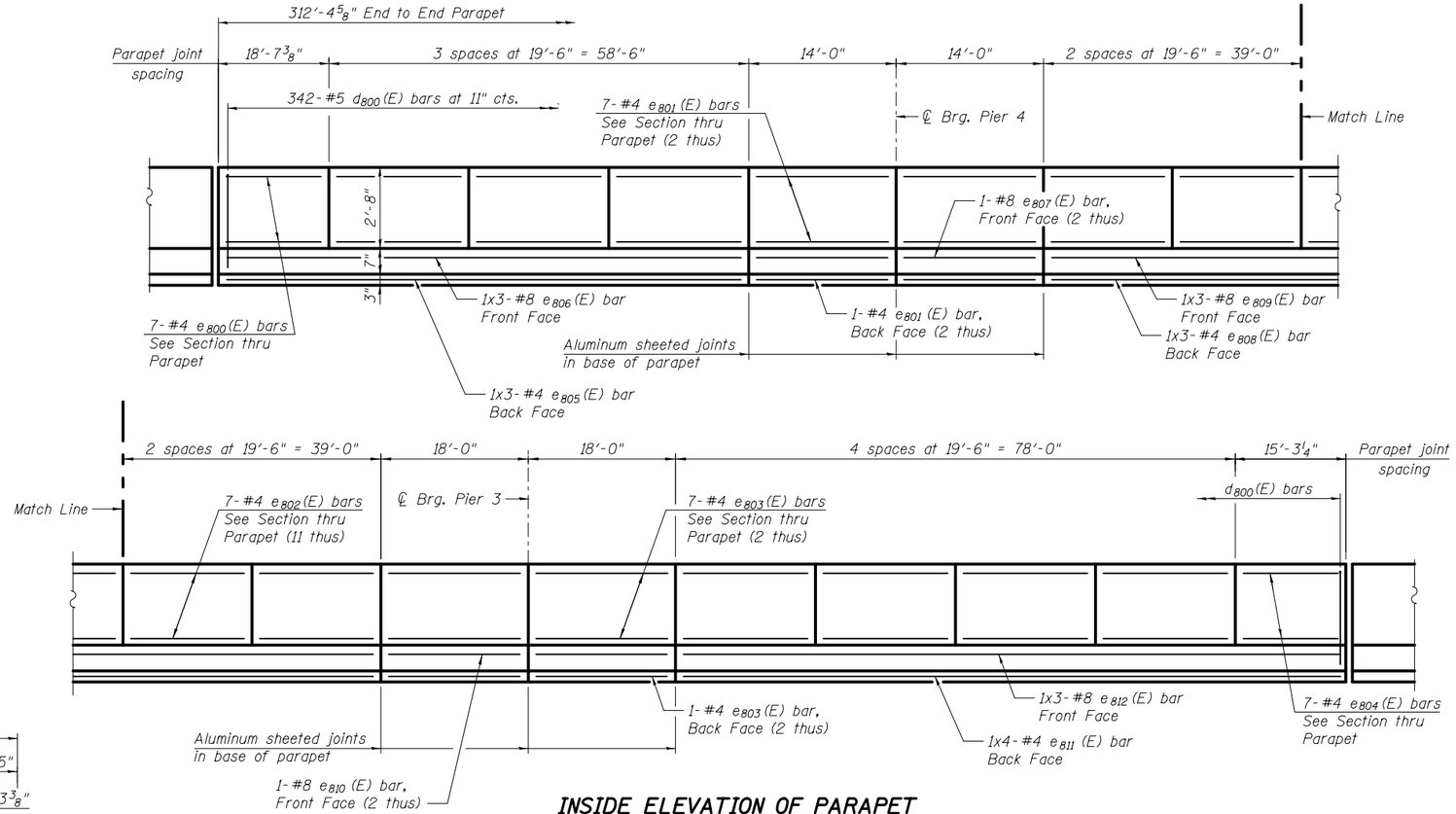
MODJESKI and MASTERS Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -
	CHECKED - KJP	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 11 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1046
		CONTRACT NO. 64E26		
ILLINOIS FED. AID PROJECT				

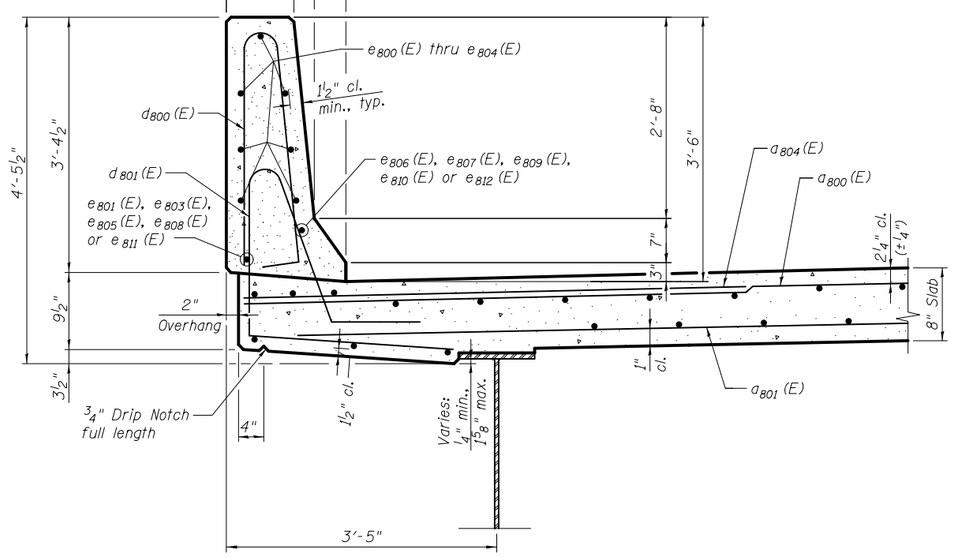


INSIDE ELEVATION OF PARAPET

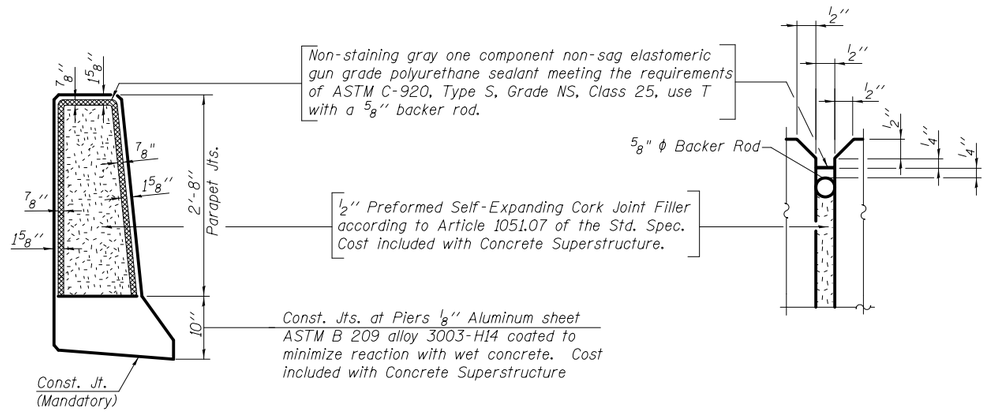
(Looking West)

MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



SECTION THRU PARAPET



PARAPET JOINT DETAILS

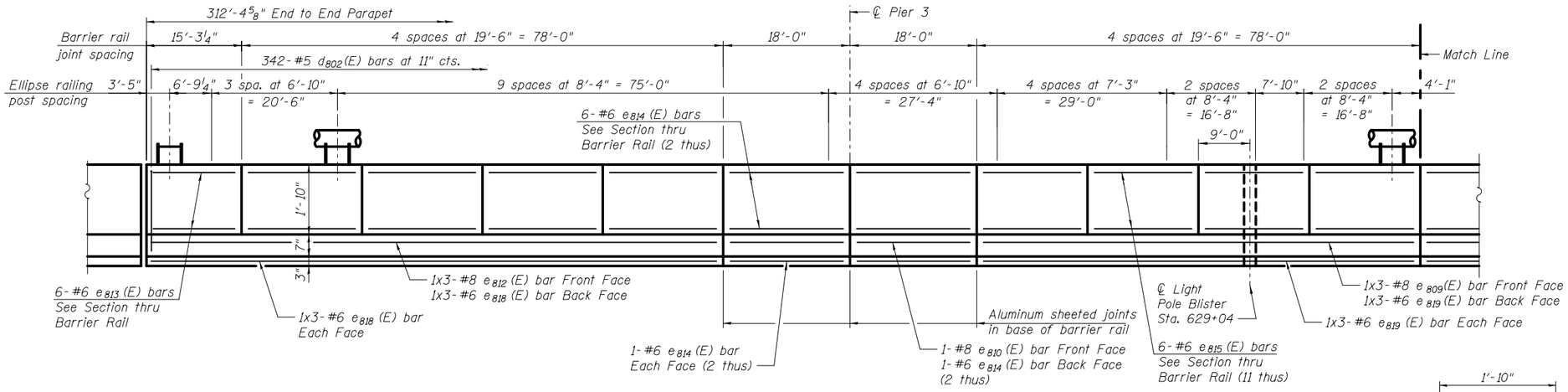
Notes:
All dimensions shown are along toe of parapet.
Bars indicated thus 1x3-#8 etc. indicates 1 line of bars with 3 lengths per line.
Apply Protective Coat according to Article 503.19.

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED -
		CHECKED - KJP	REVISED -
	PLOT SCALE =	DRAWN - PRC	REVISED -
	PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS – 1
RAMP 7TH–A OVER 19TH STREET – STRUCTURE NO. 081–0181
SHEET NO. 12 OF 54 SHEETS

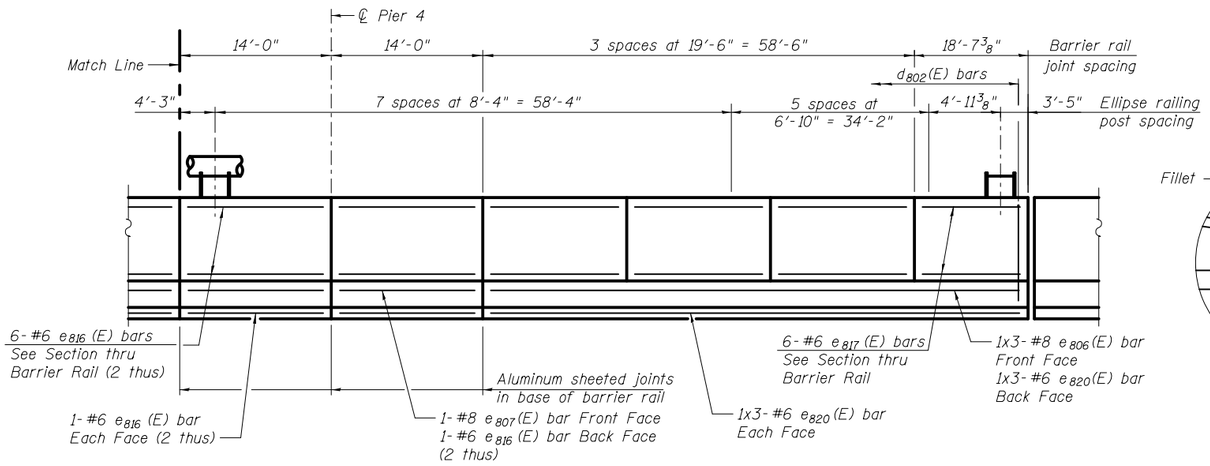
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1047
		CONTRACT NO. 64E26		
ILLINOIS	FED. AID PROJECT			



MINIMUM BAR LAP

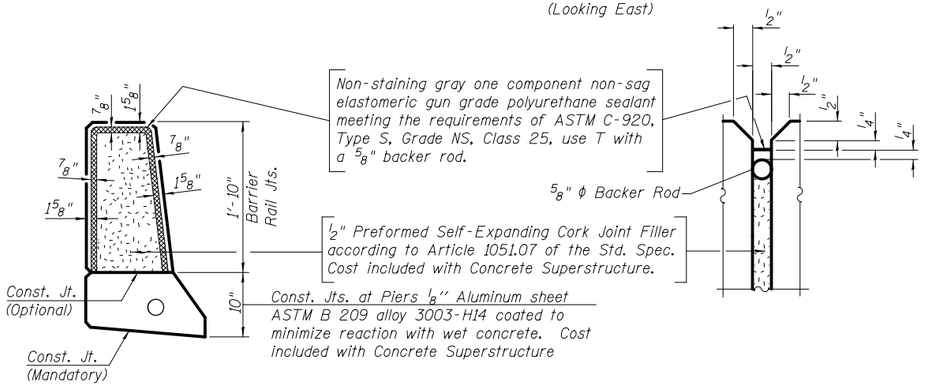
(Barrier Rail)
#6 bar = 3'-0"
#8 bar = 5'-2"

Notes:
All dimensions shown are along toe of Aesthetic Traffic Barrier Rail.
Bars indicated thus 1x3-#8 etc. indicates 1 line of bars with 3 lengths per line.



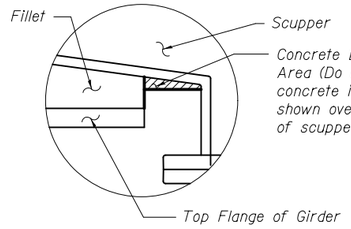
INSIDE ELEVATION OF AESTHETIC TRAFFIC BARRIER RAIL

(Looking East)

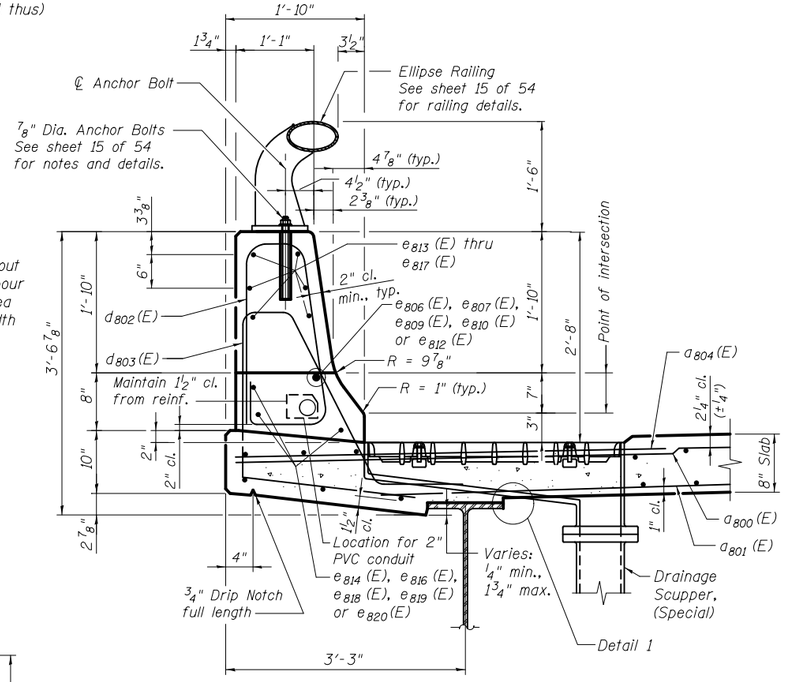


AESTHETIC TRAFFIC BARRIER RAIL JOINT DETAILS

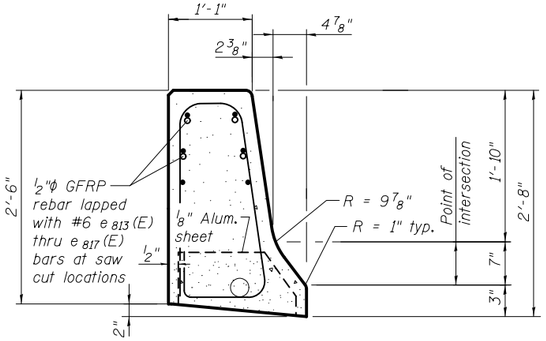
(For conventional concrete placement)



DETAIL 1



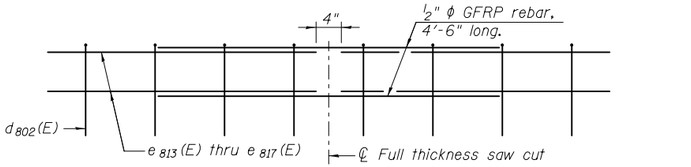
SECTION THRU BARRIER RAIL



*SLIPFORMED AESTHETIC BARRIER RAIL JOINT DETAILS

(Ellipse railing not shown for clarity)

1. All dimensions shall remain the same as shown on superstructure details.
2. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.



*GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

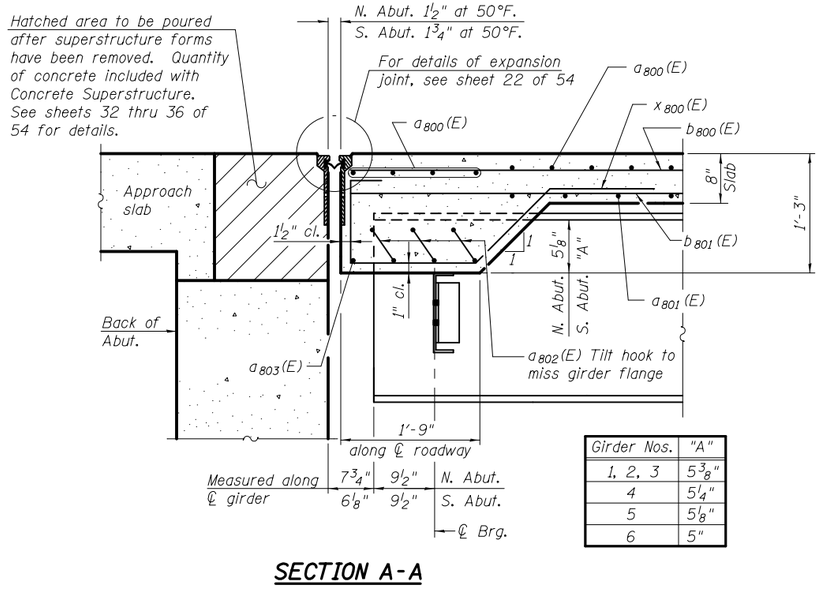
* To be used only if slipforming option is selected.

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED -
		CHECKED - KJP	REVISED -
	PLOT SCALE =	DRAWN - PRC	REVISED -
	PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

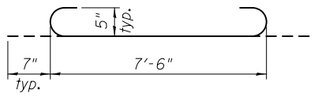
SUPERSTRUCTURE DETAILS - 2
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 13 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1048
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

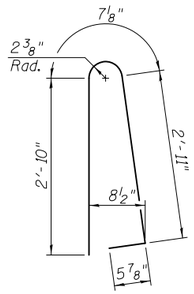


Girder Nos.	"A"
1, 2, 3	5⅜"
4	5¼"
5	5⅛"
6	5"

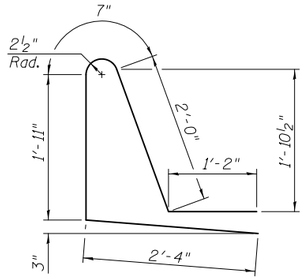
SECTION A-A



BAR a802(E)



BAR d800(E)



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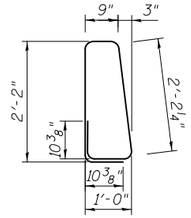

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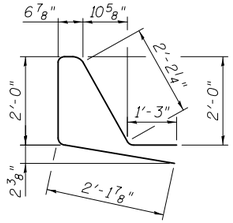

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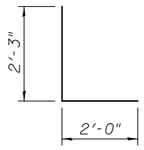

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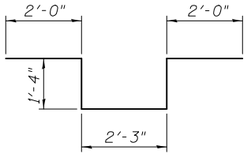
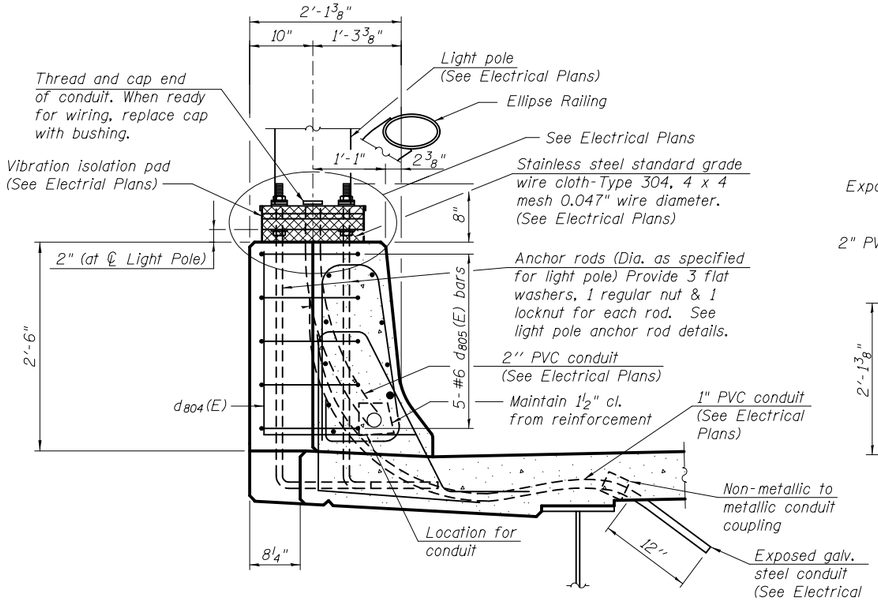


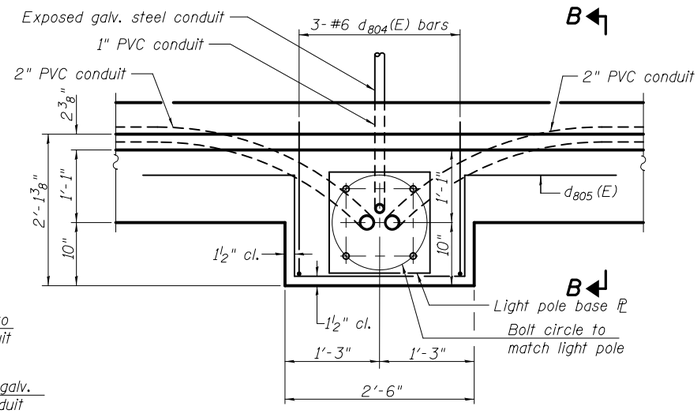
BAR d805(E)



SECTION B-B

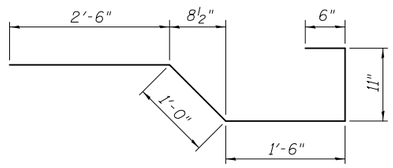
(1 location)

Slab reinforement not shown for clarity.

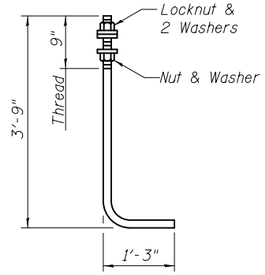


LIGHT POLE BLISTER PLAN

(1 Location Required)
Cost of anchor rods is included with Concrete Superstructures.



BAR x800(E)



LIGHT POLE ANCHOR ROD

Diameter as specified for light poles. (ASTM F 1554 Grade 105). Full length hot dipped galvanized. (4 Required per Light Pole)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a800(E)	682	#5	44'-10"	
a801(E)	412	#5	44'-7"	
a802(E)	30	#5	8'-8"	
a803(E)	2	#5	38'-5"	
a804(E)	1364	#6	6'-6"	
a805(E)	16	#5	2'-0"	
b800(E)	624	#5	27'-1"	
b801(E)	492	#5	29'-1"	
b802(E)	90	#6	35'-5"	
b803(E)	90	#6	28'-5"	
d800(E)	342	#5	6'-10"	
d801(E)	342	#5	8'-0"	
d802(E)	342	#5	7'-10"	
d803(E)	342	#5	8'-2"	
d804(E)	3	#6	4'-3"	
d805(E)	5	#6	8'-11"	
e800(E)	7	#4	18'-3"	
e801(E)	16	#4	13'-8"	
e802(E)	77	#4	19'-2"	
e803(E)	16	#4	17'-8"	
e804(E)	7	#4	14'-11"	
e805(E)	3	#4	27'-1"	
e806(E)	6	#8	29'-3"	
e807(E)	4	#8	13'-8"	
e808(E)	3	#4	27'-4"	
e809(E)	6	#8	29'-4"	
e810(E)	4	#8	17'-8"	
e811(E)	4	#4	24'-10"	
e812(E)	6	#8	34'-7"	
e813(E)	6	#6	14'-11"	
e814(E)	18	#6	17'-8"	
e815(E)	66	#6	19'-2"	
e816(E)	18	#6	13'-8"	
e817(E)	6	#6	18'-3"	
e818(E)	9	#6	33'-1"	
e819(E)	9	#6	28'-0"	
e820(E)	9	#6	27'-9"	
x800(E)	70	#5	6'-5"	
Concrete Superstructure			Cu. Yd.	476.9
Bridge Deck Grooving			Sq. Yd.	1.458
Protective Coat			Sq. Yd.	1.751
Reinforcement Bars, Epoxy Coated			Pound	125,210

Notes:
See sheet 11 of 54 for location of Section A-A.
See sheet 13 of 54 for Light Pole Blister location.
Apply Protective Coat according to Article 503.19 and to the top surface of the light pole blister.

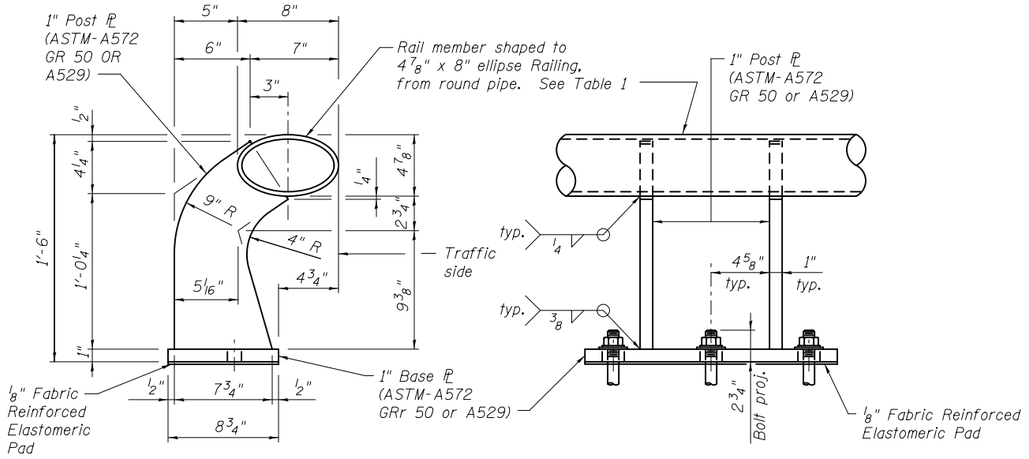
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -	
	CHECKED - KJP	REVISED -	
PLOT SCALE =	DRAWN - PRC	REVISED -	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -	

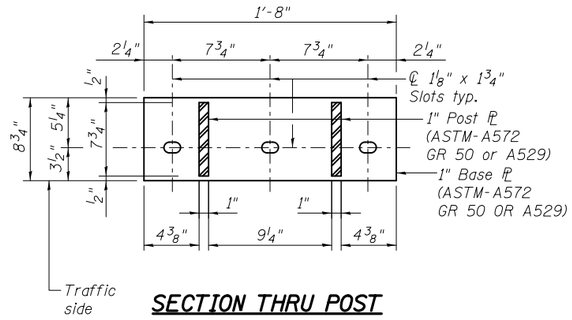
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS - 3
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 14 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1049
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

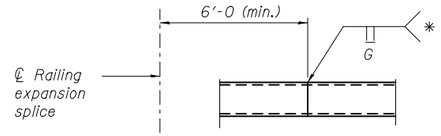


SIDE VIEW **ELEVATION**



SECTION THRU POST

ELLIPTICAL TUBE WITH RAIL POST AND ANCHORAGE DETAILS



RAILING SHOP SPLICE DETAIL

* Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove, double vee groove, or single groove. Grind smooth.

Notes:

See Sheet 13 of 54 for post spacing.

Steel Railing (Special) shall be fabricated and installed in accordance with Article 509 of the Standard Specifications, unless otherwise noted.

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

The Steel Railing (Special) is to be bid on a per linear foot basis measured from end to end of steel railing.

Payment for Steel Railing (Special) shall include full compensation for furnishing all material, and all the equipment and labor required to erect the rail in accordance with these plans and the Standard Specifications.

Anchor bolts shall be 7/8" ϕ, ASTM A-193 GR. B7, fully threaded with heavy hex nuts and one hardened washer and one 2 1/4" O.D. washer each. Embed threaded rods 10 1/2" min. into concrete parapet. Material for these items shall be in accordance with the adhesive manufacturer's requirements to be capable of obtaining an ultimate load per threaded rod of 36 kips in tension, considering spacing and edge distance. See Standard Specification 509.06 for further details on setting anchor bolts. Cost of anchor bolts included with Steel Railing (Special).

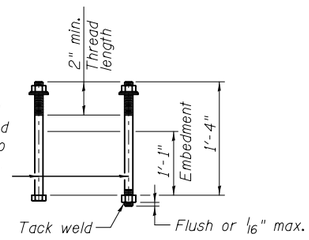
Optional cast-in-place anchor bolts to comply with ASTM F-1554 Grade 105. Hex nuts to comply with AASHTO M291, washers to comply with AASHTO M-293. Galvanizing in accordance with AASHTO M-232.

Provide one 1/8" and two 1/16" galvanized steel shims for 25% of rail posts, to be used as required. Shims shall be similar to base plates in size and holes. Cost included with Steel Railing (Special).

TABLE 1

APPROVED RAILING MATERIAL		
4 7/8" x 8" Ellipse Railing	Sleeve Member (at railing splice)	
Material	Material	Thickness
6" Dia. Std. Pipe ASTM-A53 E OR S GRADE B	ASTM-A53-B	0.353"
	A36 or A500 GR. B	0.339"
	API-5LX52	0.224"
6" Dia. 0.280" Wall thickness ASTM-A501	ASTM-A53-B	0.353"
	A36 or A500 GR. B	0.339"
	API-5LX52	0.224"
6 5/8" O.D. x 0.188" Tube API-5LX52	ASTM-A53-B	0.339"
	A36 or A500 GR. B	0.325"
	API-5LX52	0.216"

7/8" ϕ Anchor bolts with one 2 1/4" o.d. washer. One additional heavy hex nut must be furnished for each threaded rod. Refer to notes for additional information.



CAST-IN-PLACE ANCHOR BOLT OPTIONS

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Steel Railing (Special)	Foot	313

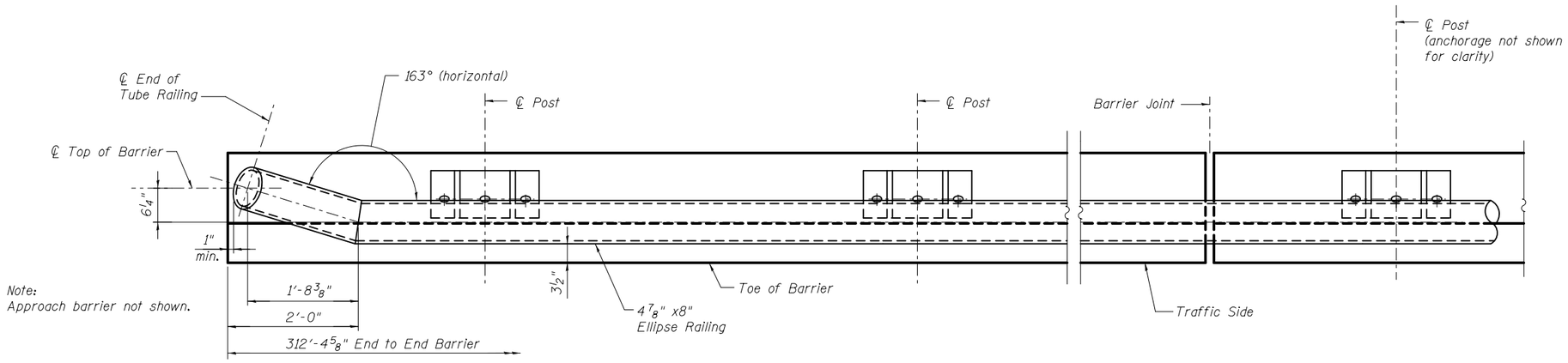
MODJESKI and MASTERS Experience great bridges.

USER NAME =	DESIGNED - KJP	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

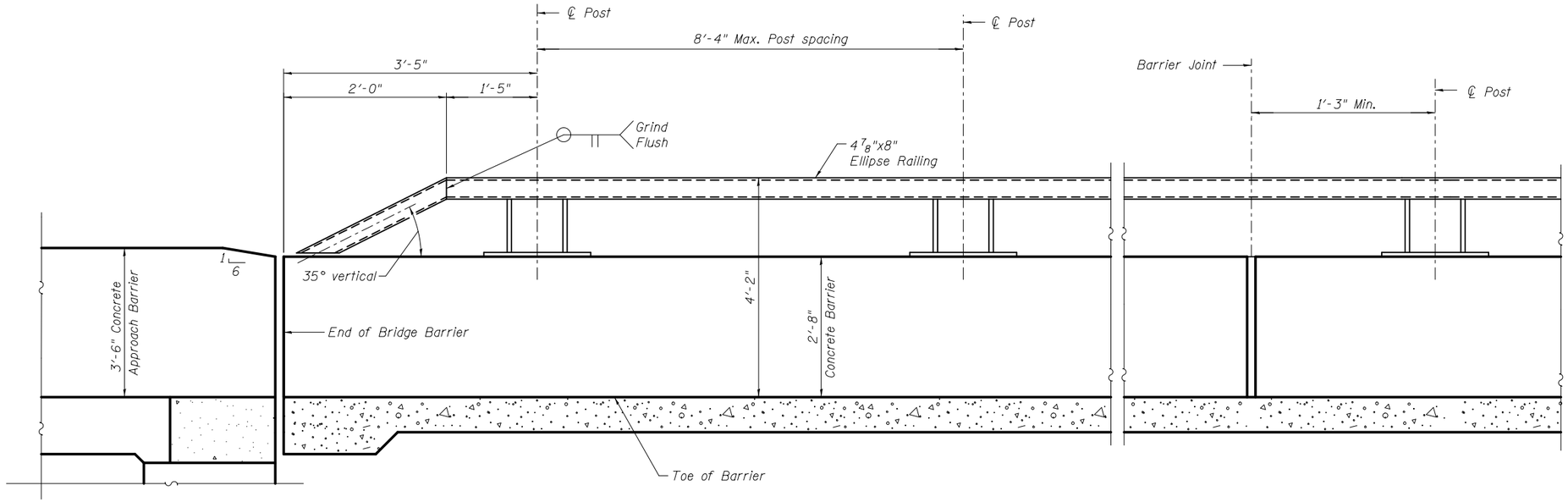
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AESTHETIC TRAFFIC BARRIER RAIL DETAIL – 1
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 15 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1050
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			



PART PLAN



PART ELEVATION

AESTHETIC TRAFFIC BARRIER RAIL

Inside Face, Looking East

Notes:

Edge of base plate shall not be less than 6" from any cold joint or barrier discontinuity including the back of the abutment.

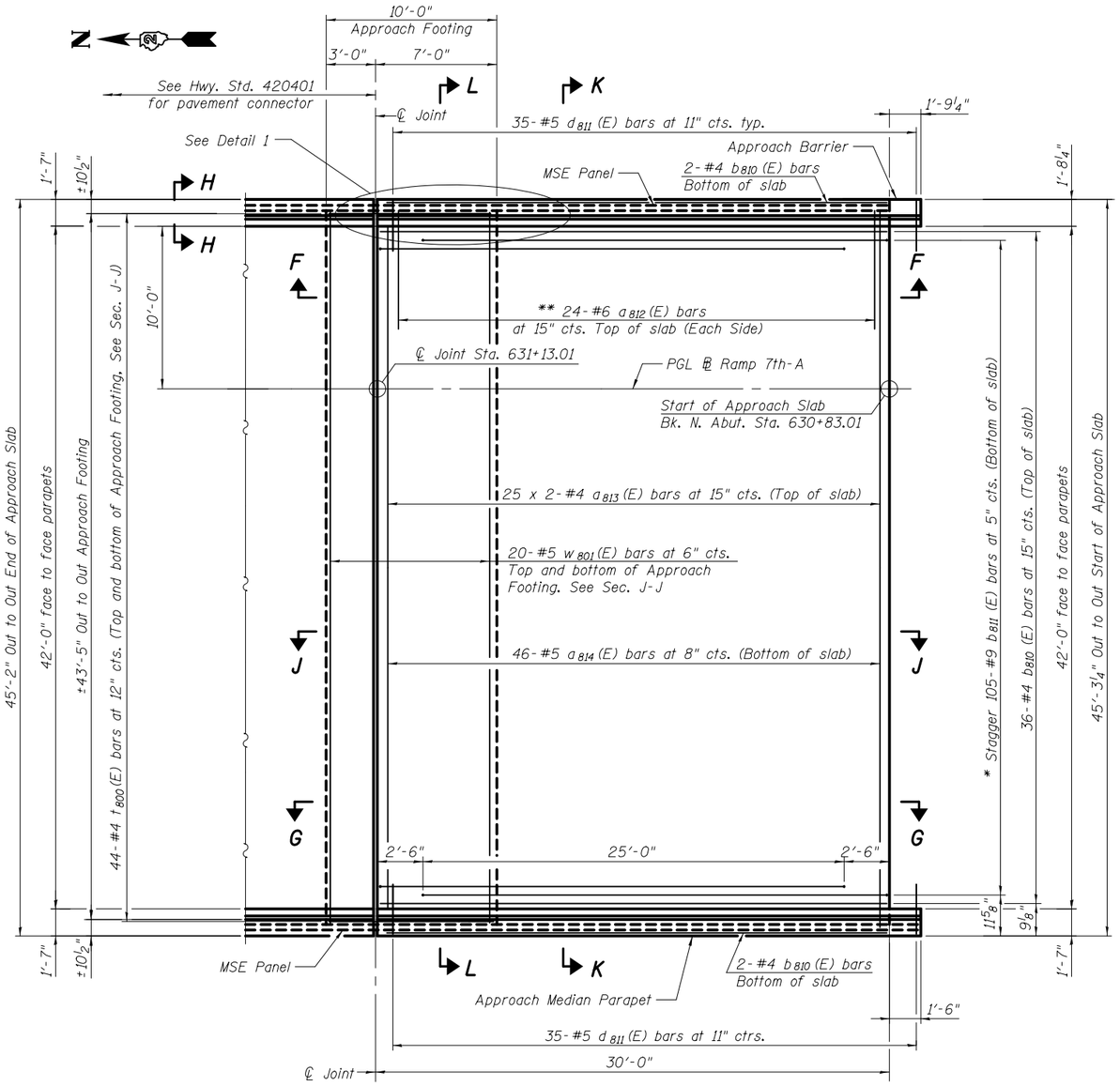
See Sheet 13 of 54 for post spacing and barrier details.

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - KJP	REVISED -
		CHECKED - YSS	REVISED -
	PLOT SCALE =	DRAWN - PRC	REVISED -
	PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

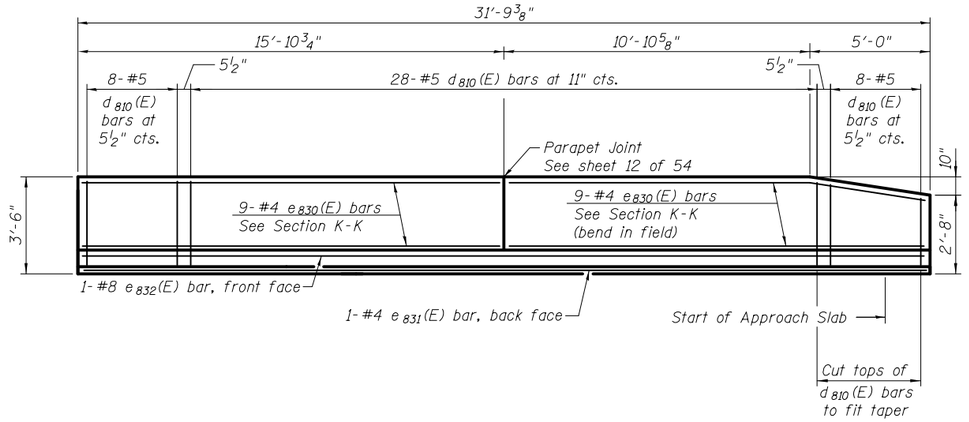
AESTHETIC TRAFFIC BARRIER RAIL DETAIL – 2
RAMP 7TH–A OVER 19TH STREET – STRUCTURE NO. 081–0181
SHEET NO. 16 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1051
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

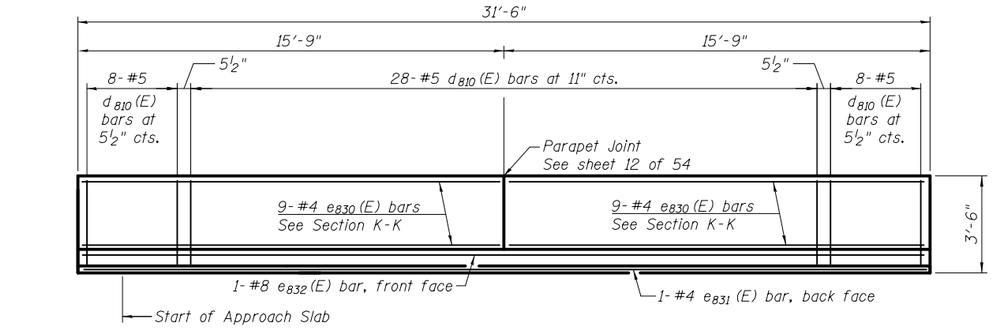


* Tilt #9 b_{811} (E) bars as required to maintain clearance.
** Space between a_{813} (E) bars, typ. ea. parapet.

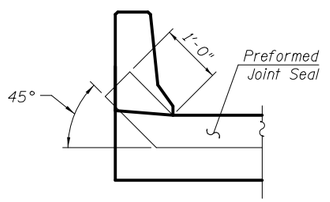
PLAN



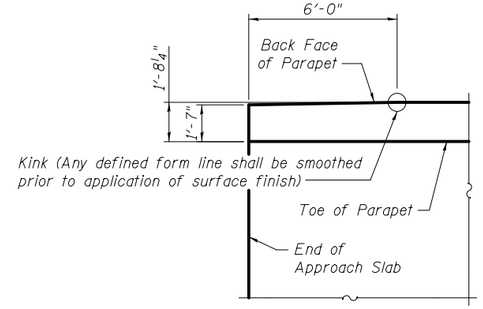
VIEW F-F (INSIDE ELEVATION OF APPROACH BARRIER)



VIEW G-G (INSIDE ELEVATION OF APPROACH MEDIAN PARAPET)



VIEW H-H



DETAIL 1

MINIMUM BAR LAP

(Approach Slab)

#4 Bar = 2'-7"
#5 Bar = 3'-3"

Notes:
See sheet 18 of 54 for Sections J-J, K-K and L-L.
All a(E) bar spacings measured along ℄ Rdwy.
See sheet 21 of 54 for reinforcement details and Bill of Material.
See SN 081-6016 for MSE wall details.

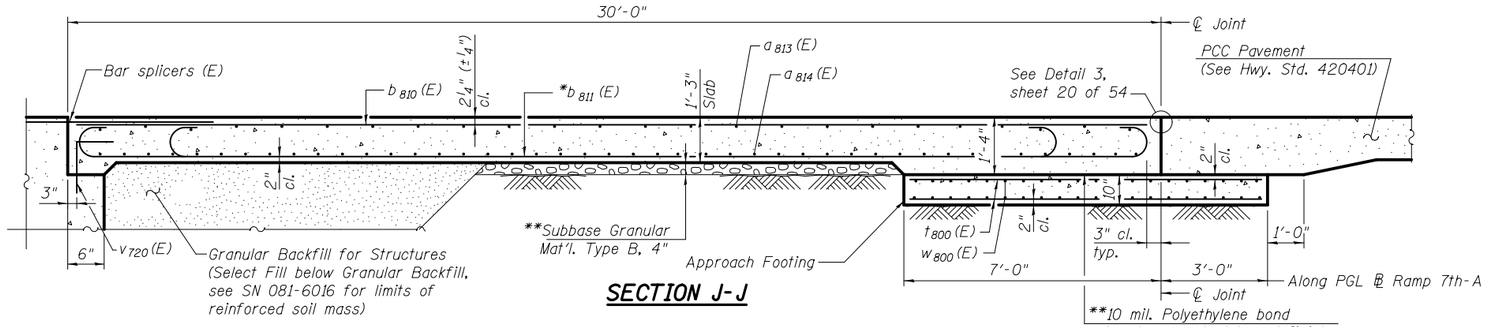
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

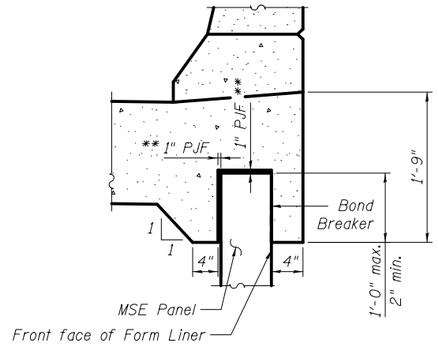
BRIDGE APPROACH SLAB – NORTH
RAMP 7TH–A OVER 19TH STREET – STRUCTURE NO. 081–0181
SHEET NO. 17 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1052
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

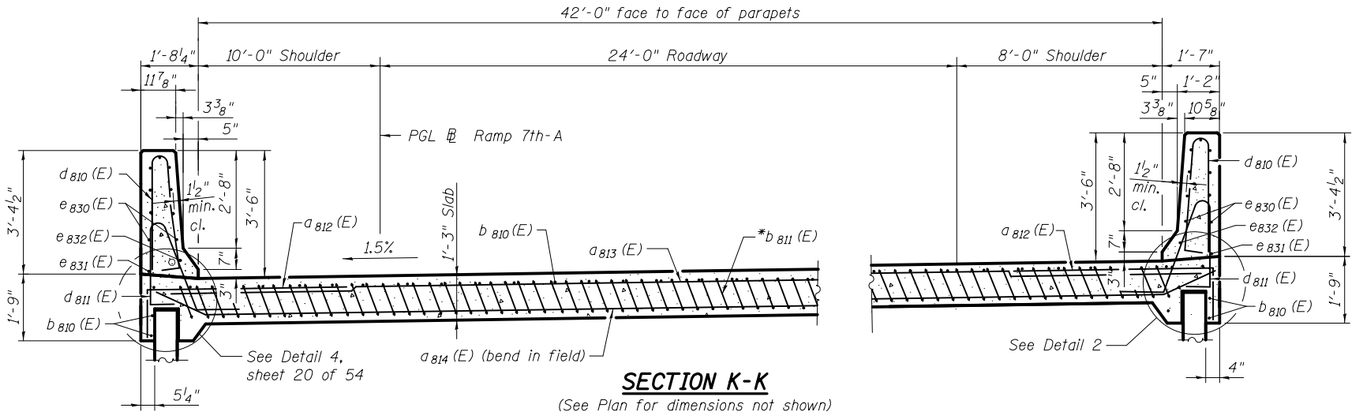


SECTION J-J

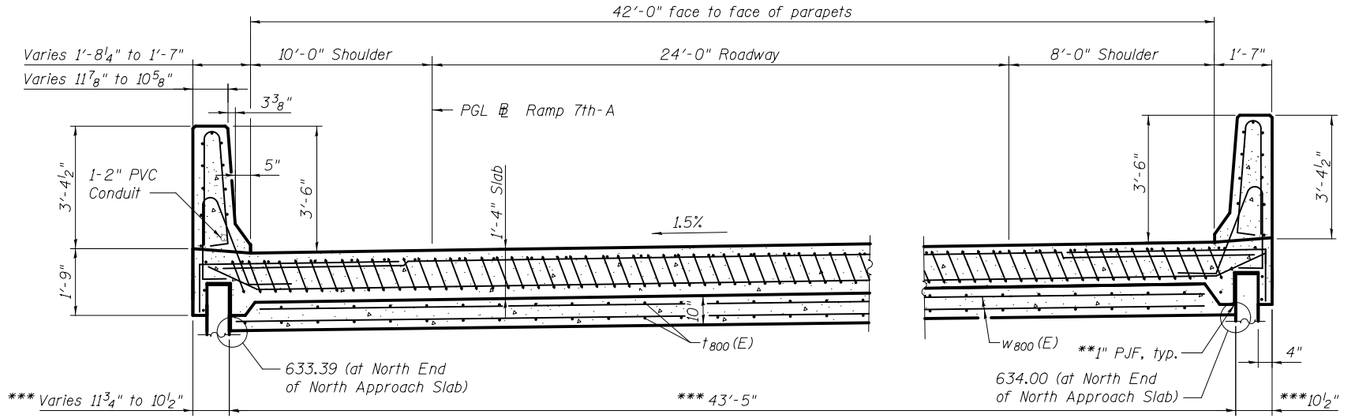
* Tilt #9 b 811 (E) bars as required to maintain clearance.
** Cost included with Concrete Superstructure.



DETAIL 2



SECTION K-K
(See Plan for dimensions not shown)



SECTION L-L
(See Plan for dimensions not shown)

*** Dimensions are based on an assumed thickness of the MSE panels. See SN 081-6016.

Notes:
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v 720 (E) bar details, see sheet 32 thru 36 of 54.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 48 of 54.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 3 of 54.
Transverse dimensions shown are measured perpendicular to ℄.
See SN 081-6016 for MSE wall details.

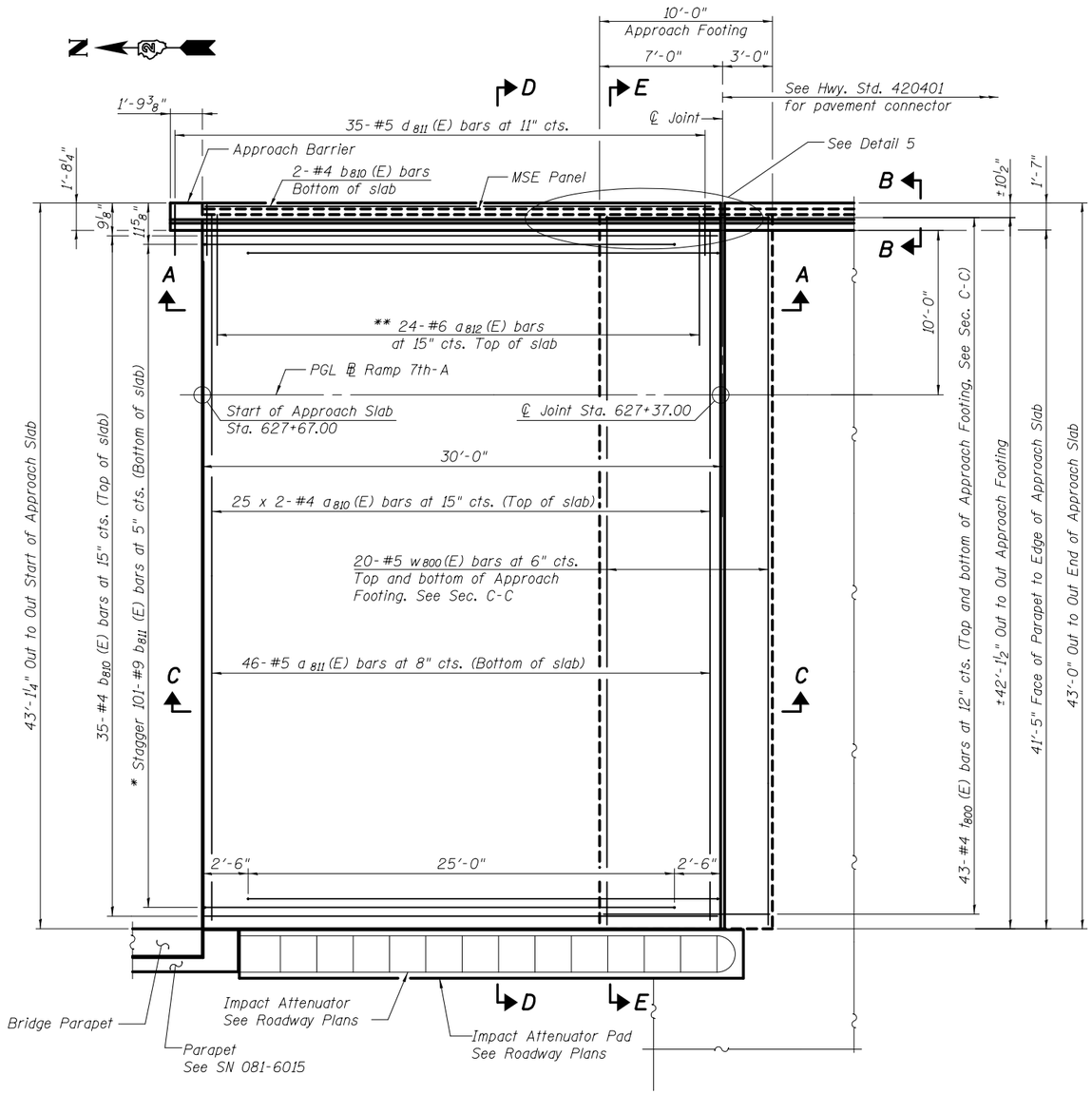
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

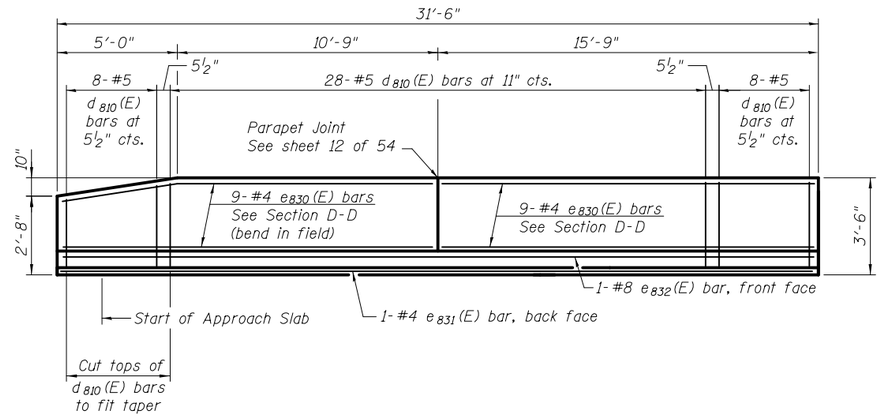
BRIDGE APPROACH SLAB DETAILS - NORTH
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 18 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1053
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

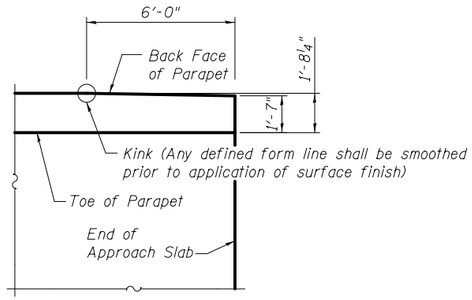


* Tilt #9 b_{811} (E) bars as required to maintain clearance.
** Space between a_{810} (E) bars.

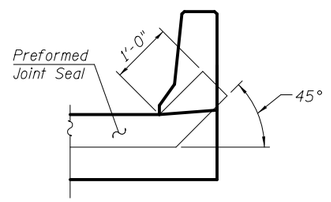
PLAN



VIEW A-A (INSIDE ELEVATION OF APPROACH BARRIER)



DETAIL 5



VIEW B-B

MINIMUM BAR LAP

(Approach Slab)

#4 Bar = 2'-7"
#5 Bar = 3'-3"

Notes:
See sheet 20 of 54 for Sections C-C, D-D, and E-E.
All a(E) bar spacings measured along ℄ Rdwy.
See sheet 21 of 54 for reinforcement details and Bill of Material.
See SN 081-6015 for MSE wall details.

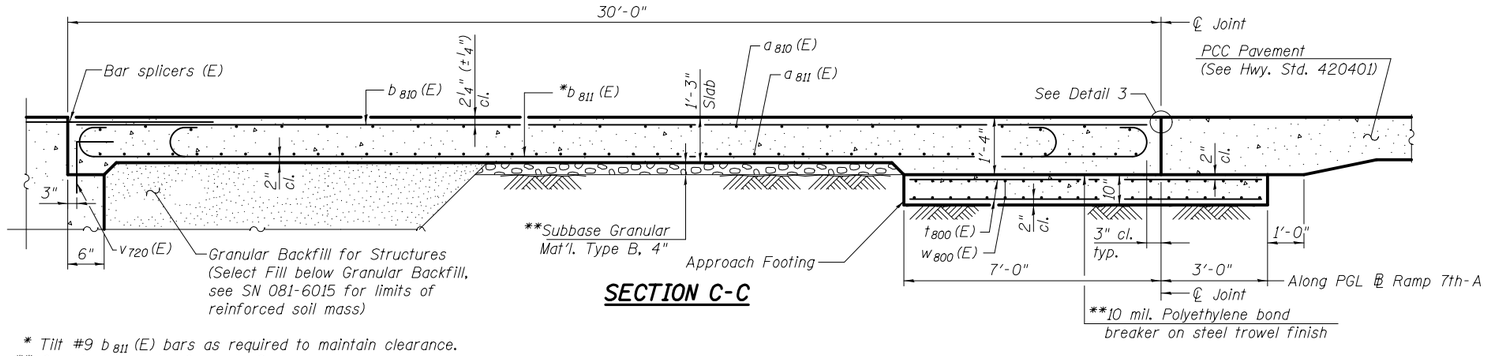
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

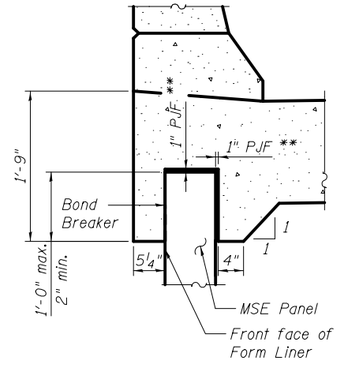
BRIDGE APPROACH SLAB – SOUTH
RAMP 7TH–A OVER 19TH STREET – STRUCTURE NO. 081–0181
SHEET NO. 19 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1054
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

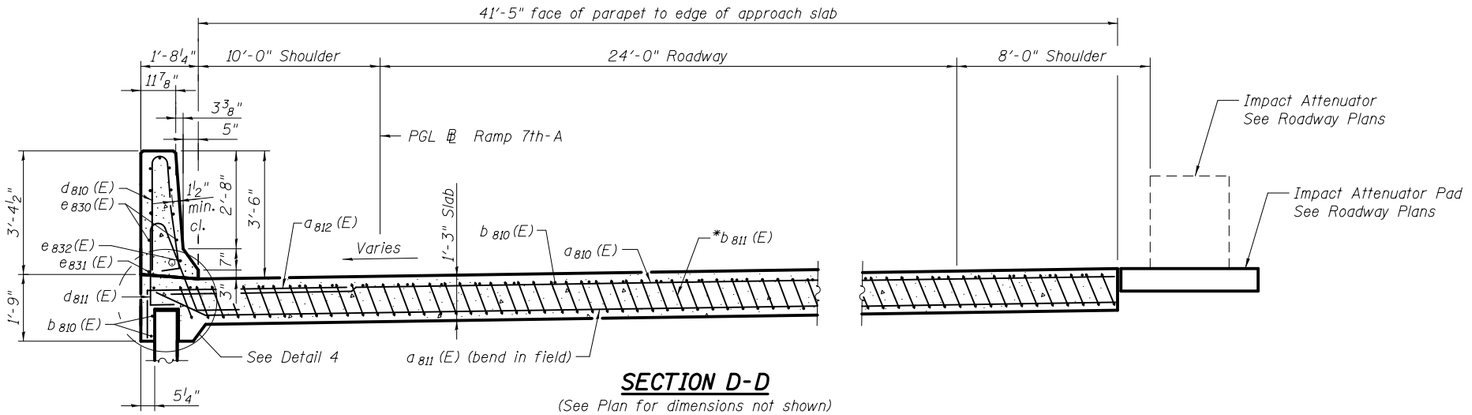


SECTION C-C

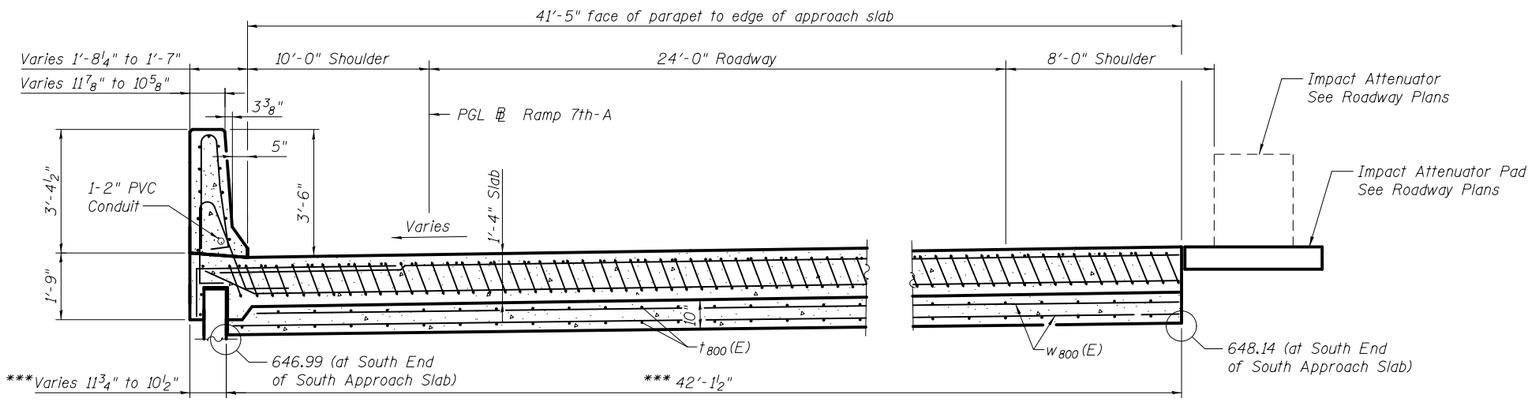
* Tilt #9 b 811 (E) bars as required to maintain clearance.
** Cost included with Concrete Superstructure.



DETAIL 4

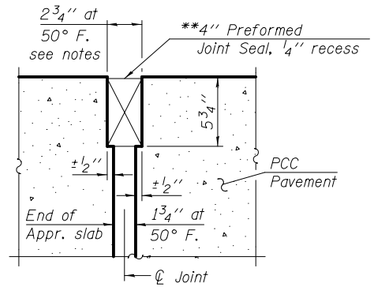


SECTION D-D
(See Plan for dimensions not shown)

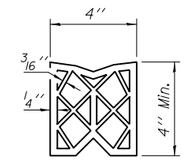


SECTION E-E
(See Plan for dimensions not shown)

*** Dimensions are based on an assumed thickness of the MSE Panel. See SN 081-6015.



RIGID PAVEMENT



PREFORMED
JOINT SEAL

DETAIL 3

** Cost included with Concrete Superstructure.

Notes:
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v 720 (E) bar details, see sheet 32 thru 36 of 54.
The appoach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 48 of 54.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 3 of 54.
Transverse dimensions shown are measured perpendicular to ℄.
See SN 081-6015 for MSE wall details.
The joint opening shall be determined per Article 520.04. The minimum dimension shall be 1½" for installation purposes.

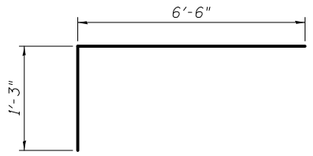
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

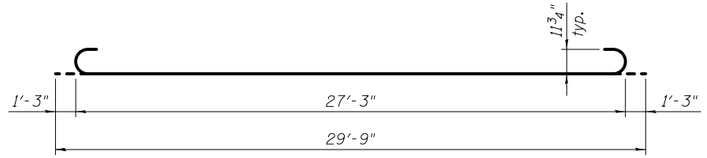
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS - SOUTH
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 20 OF 54 SHEETS

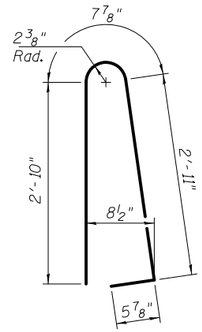
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1055
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			



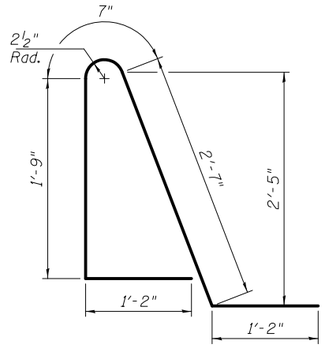
BAR a_{812} (E)



BAR b_{811} (E)



BARS d_{810} (E)



BAR d_{811} (E)

SOUTH APPROACH SLAB BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{810} (E)	50	#4	22'-10"	
a_{811} (E)	46	#5	42'-8"	
a_{812} (E)	24	#6	7'-9"	
b_{810} (E)	37	#4	29'-8"	
b_{811} (E)	101	#9	29'-9"	
d_{810} (E)	44	#5	6'-11"	
d_{811} (E)	35	#5	7'-3"	
e_{830} (E)	18	#4	15'-5"	
e_{831} (E)	1	#4	31'-2"	
e_{832} (E)	1	#8	31'-2"	
f_{800} (E)	86	#4	9'-8"	
w_{800} (E)	40	#5	41'-9"	
Concrete Structures		Cu. Yd.	13.1	
Concrete Superstructure		Cu. Yd.	65.9	
Bridge Deck Grooving		Sq. Yd.	139	
Protective Coat		Sq. Yd.	162	
Reinforcement Bars, Epoxy Coated		Pound	17,210	

NORTH APPROACH SLAB BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{812} (E)	48	#6	7'-9"	
a_{813} (E)	50	#4	23'-11"	
a_{814} (E)	46	#5	44'-10"	
b_{810} (E)	40	#4	29'-8"	
b_{811} (E)	105	#9	29'-9"	
d_{810} (E)	88	#5	6'-11"	
d_{811} (E)	70	#5	7'-3"	
e_{830} (E)	36	#4	15'-5"	
e_{831} (E)	2	#4	31'-2"	
e_{832} (E)	2	#8	31'-2"	
f_{800} (E)	90	#4	9'-8"	
w_{801} (E)	40	#5	44'-0"	
Concrete Structures		Cu. Yd.	13.7	
Concrete Superstructure		Cu. Yd.	74.1	
Bridge Deck Grooving		Sq. Yd.	140	
Protective Coat		Sq. Yd.	180	
Reinforcement Bars, Epoxy Coated		Pound	19,070	

MODJESKI and MASTERS
Experience great bridges.

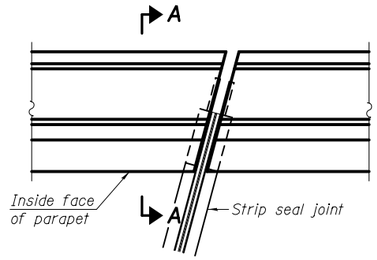
USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

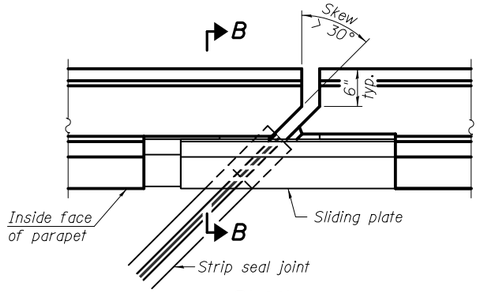
BRIDGE APPROACH SLAB – MISCELLANEOUS DETAILS
RAMP 7TH–A OVER 19TH STREET – STRUCTURE NO. 081–0181

SHEET NO. 21 OF 54 SHEETS

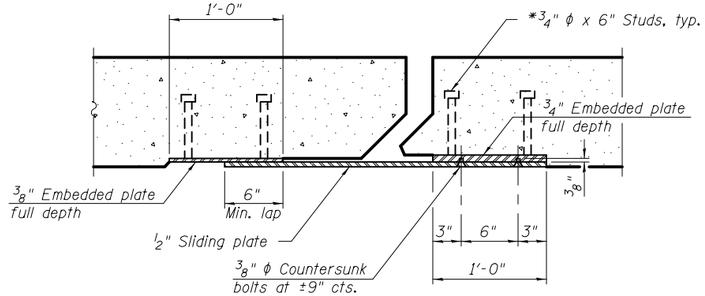
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1056
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



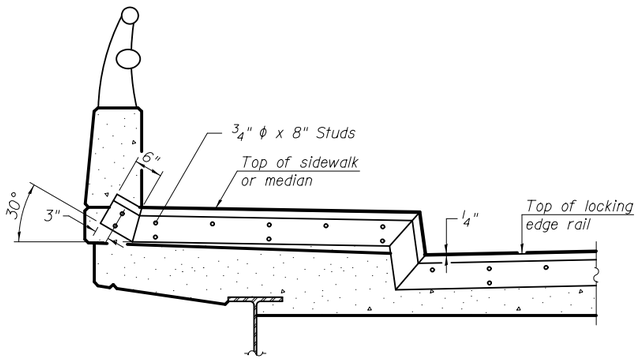
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

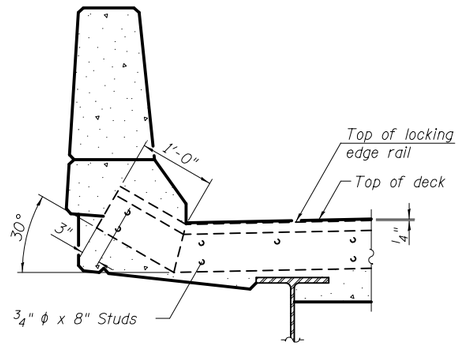


SECTION C-C

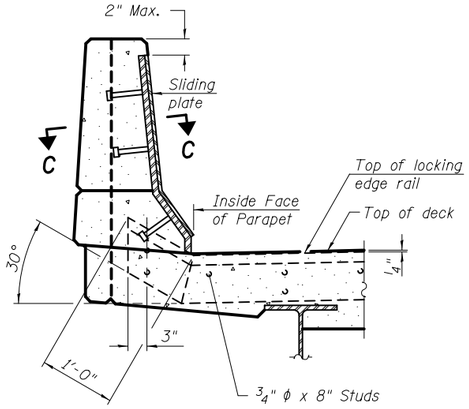


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

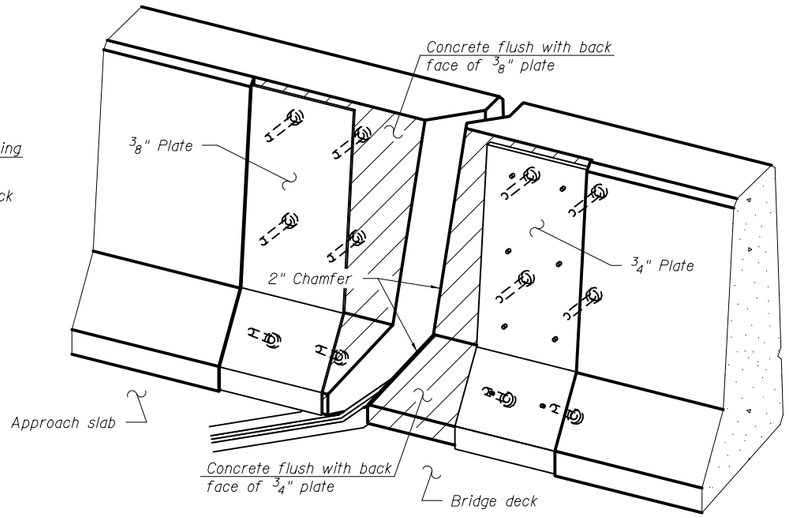
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



SECTION A-A



SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

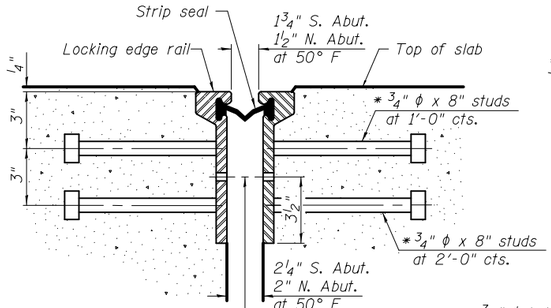
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

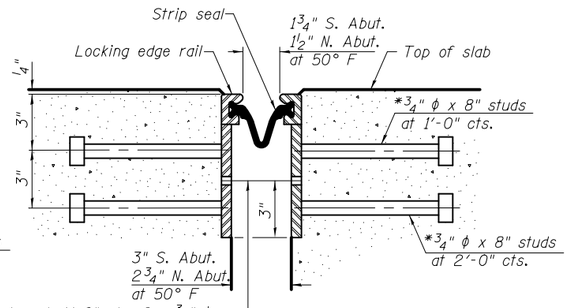
Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

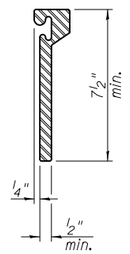
SECTION THRU ROLLED RAIL JOINT



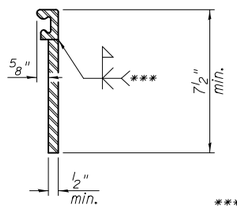
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

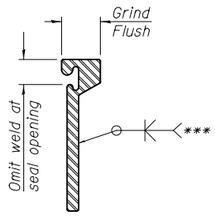
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	88

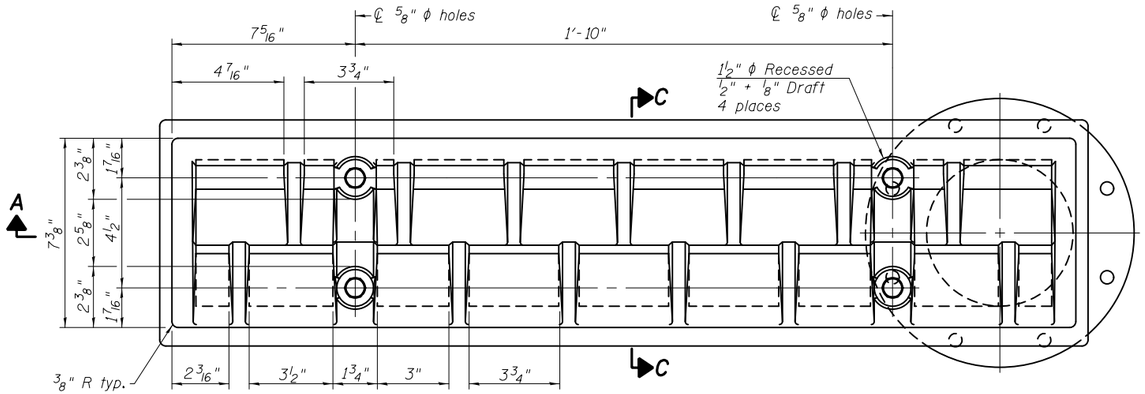
EJ-SSJ 1-27-12

USER NAME =	DESIGNED - KJP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CHECKED - JTH	REVISED -	
PLOT SCALE =	DRAWN - PRC	REVISED -	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -	

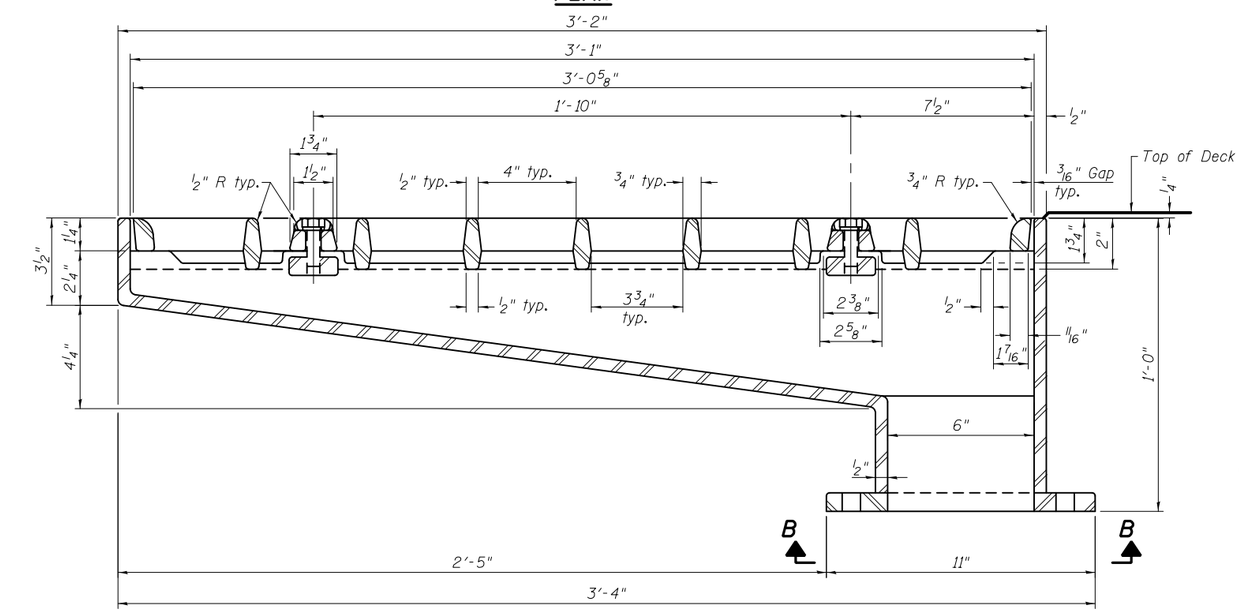
MODJESKI and MASTERS Experience great bridges.

PREFORMED JOINT STRIP SEAL
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 22 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1057
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

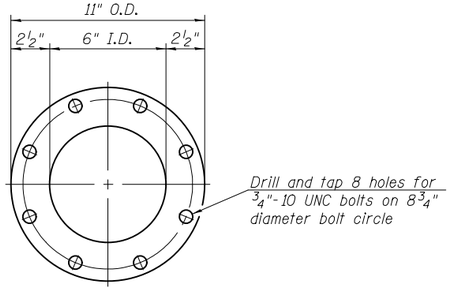


PLAN

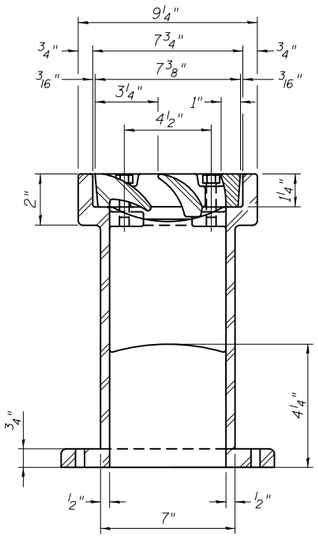


SECTION A-A

See sheet 11 of 54 for scupper location relative to parapet.



VIEW B-B



SECTION C-C

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 232.

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.

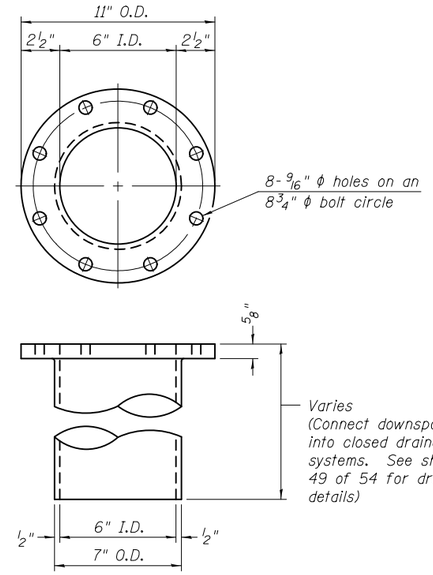
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

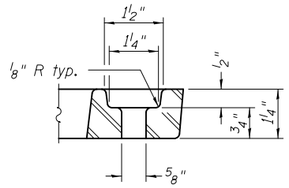
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

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 (Special).

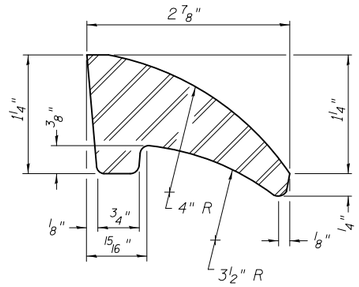
Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



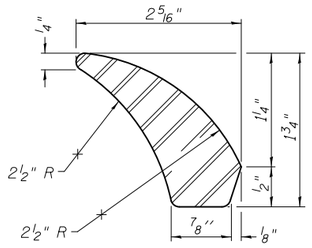
DOWNSPOUT



BOLT HOLE DETAIL



FIRST VANE DETAIL



SECOND VANE DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper (Special)	Each	2

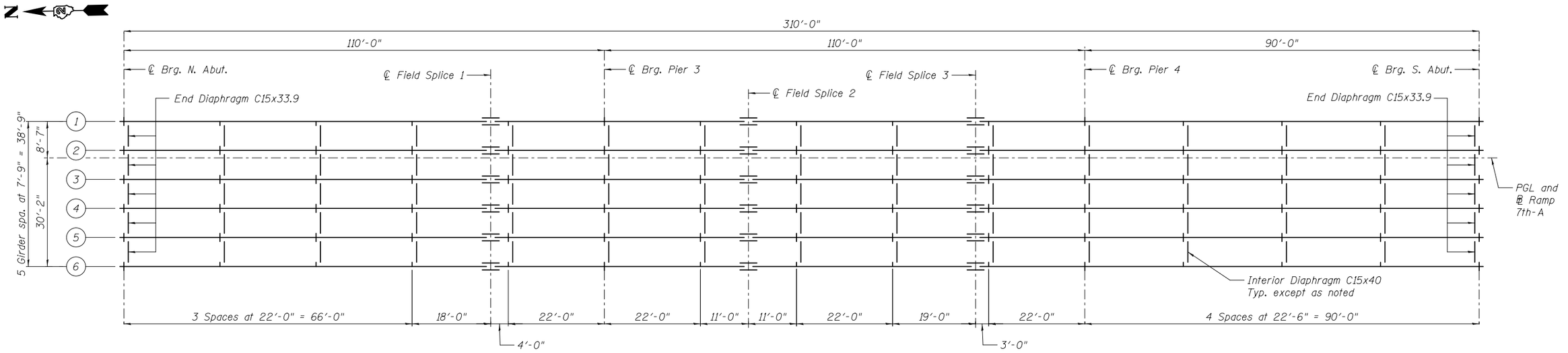
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - KJP	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

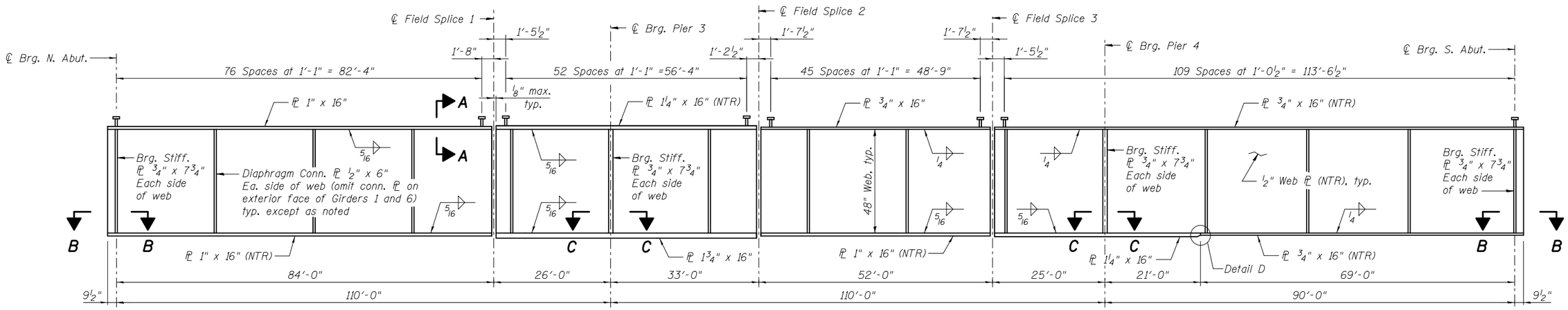
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER – SPECIAL
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 23 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1058
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

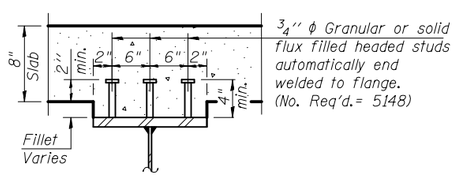


FRAMING PLAN

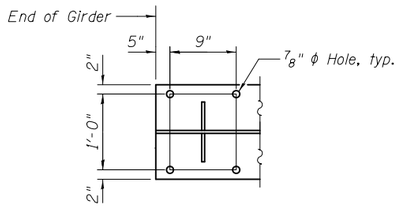


GIRDER ELEVATION

Interior girders shown, exterior girders similar.
(Looking East, 6 required)

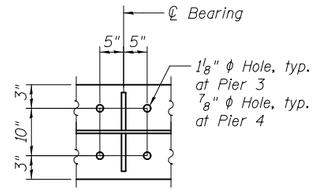


SECTION A-A



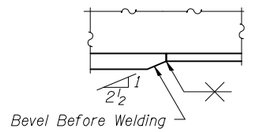
SECTION B-B

Section at North Abutment shown,
Section at South Abutment opposite hand



SECTION C-C

Section at Pier 3 and Pier 4



DETAIL D

Notes:

Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

All flange plates, web plates, bearing stiffeners, and diaphragm connection plates shall be AASHTO M270 Grade 50.

See sheets 25 and 26 of 54 for steel details.

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USER NAME =	DESIGNED - KJP	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - KJP	REVISED -

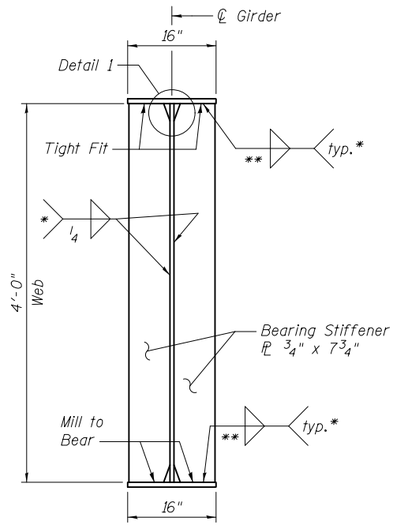
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL FRAMING PLAN
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 24 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1059
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

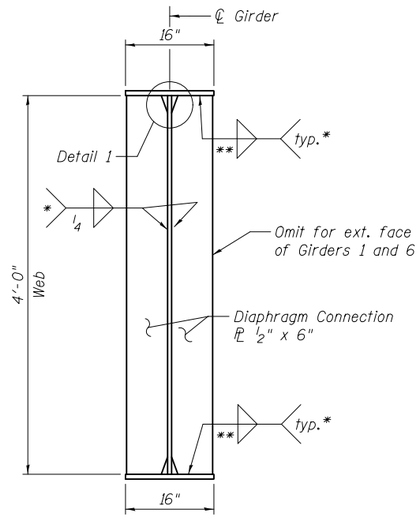
* Terminate weld $\frac{1}{4}$" from edges of stiffener and connection PL.

** $\frac{1}{4}$" weld for flange plate thickness $\frac{3}{4}$"
$\frac{5}{16}$" weld for flange plate thickness greater than $\frac{3}{4}$"



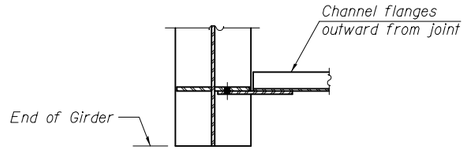
BEARING STIFFENER AT ABUTMENT AND PIER

Use with End Diaphragm and Interior Diaphragm at Pier only

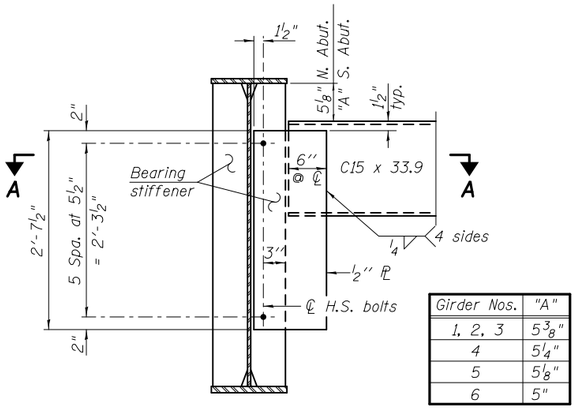


CONNECTION PLATE DETAIL

Use with Interior Diaphragm except at Pier

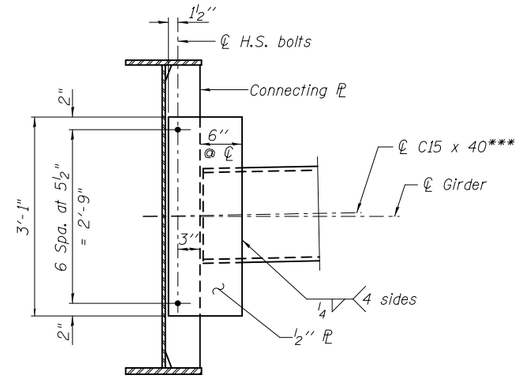


SECTION A-A



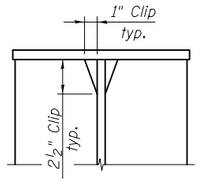
Girder Nos.	"A"
1, 2, 3	$5\frac{3}{8}$"
4	$5\frac{1}{4}$"
5	$5\frac{1}{8}$"
6	5"

END DIAPHRAGM



INTERIOR DIAPHRAGM

*** Alternate channels C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on C15x40 sections. The alternate, if utilized, shall be provided at no extra cost to the department.



DETAIL 1

(Typical top & bottom flanges)

TOP OF WEB ELEVATIONS

(For fabrication only)

Girder No.	℄ Brg. N. Abut.	℄ Field Splice 1	℄ Brg. Pier 3	℄ Field Splice 2	℄ Field Splice 3	℄ Brg. Pier 4	℄ Brg. S. Abut.
1	636.32	639.81	640.84	641.97	643.70	644.54	647.38
2	636.43	639.93	640.95	642.08	643.81	644.65	647.53
3	636.55	640.04	641.07	642.20	643.93	644.77	647.68
4	636.66	640.16	641.18	642.31	644.04	644.88	647.81
5	636.78	640.27	641.30	642.42	644.16	645.00	647.95
6	636.89	640.38	641.41	642.54	644.27	645.11	648.09

Notes:
All diaphragm members may be AASHTO M270 Grade 36.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.
Bolts for diaphragm connections shall be $\frac{3}{4}$" ϕ, holes $\frac{15}{16}$" ϕ. Two hardened washers required for each set of oversized holes.

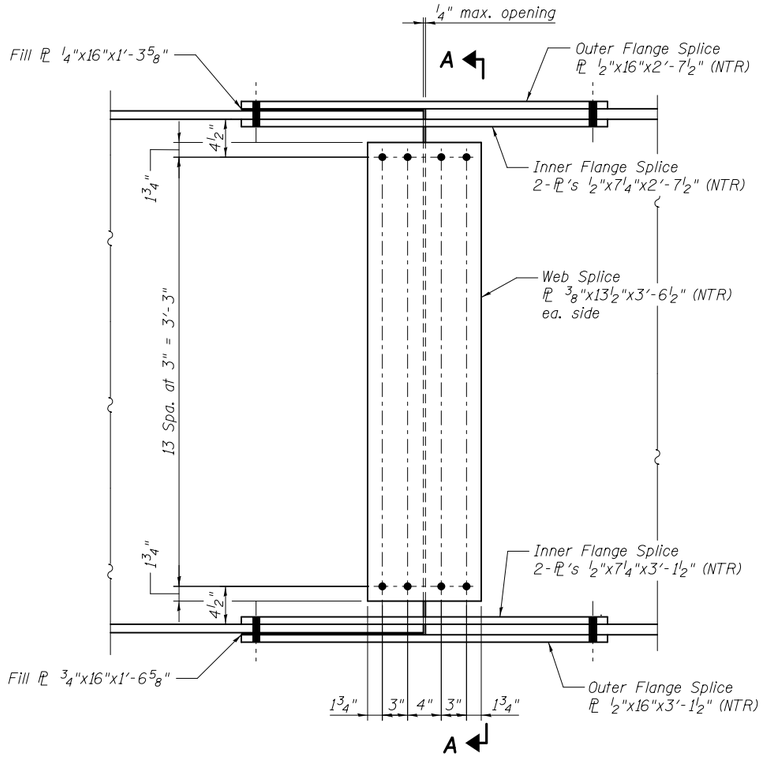
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - KJP	REVISED -
	CHECKED - YSS/JTH	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - KJP	REVISED -

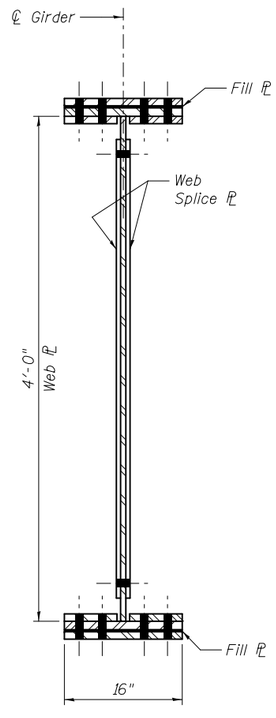
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL DETAILS – 1
RAMP 7TH–A OVER 19TH STREET – STRUCTURE NO. 081–0181
SHEET NO. 25 OF 54 SHEETS

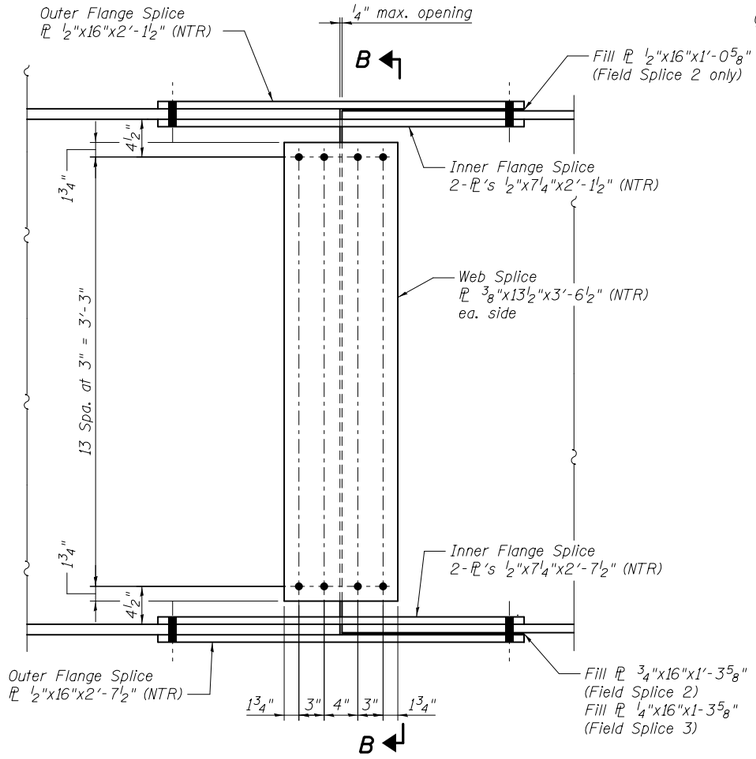
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1060
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



FIELD SPLICE 1 - ELEVATION

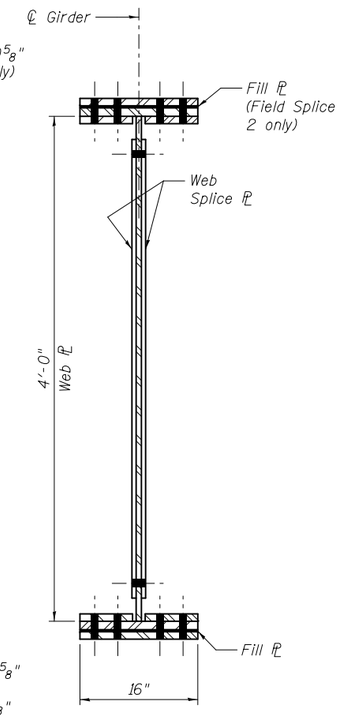


SECTION A-A

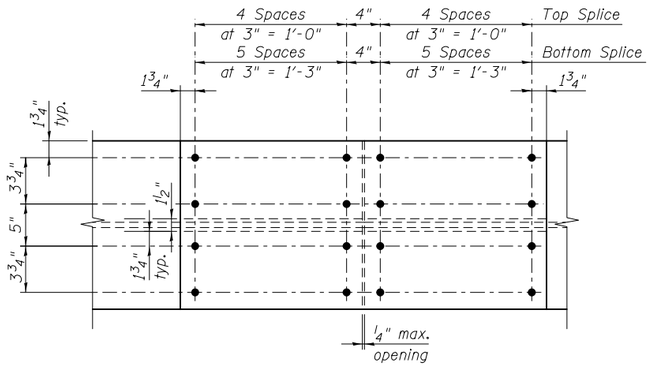


FIELD SPLICE 2 AND 3 - ELEVATION

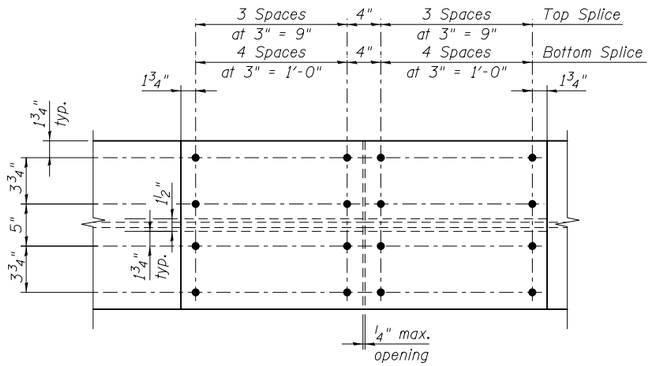
(Field Splice 2 shown, Field Splice 3 opposite hand)



SECTION B-B



FLANGE SPLICE



FLANGE SPLICE

Notes:

All Splice Plates shall be AASHTO M270 Grade 50 steel.

Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - KJP	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - KJP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL DETAILS - 2
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 26 OF 54 SHEETS

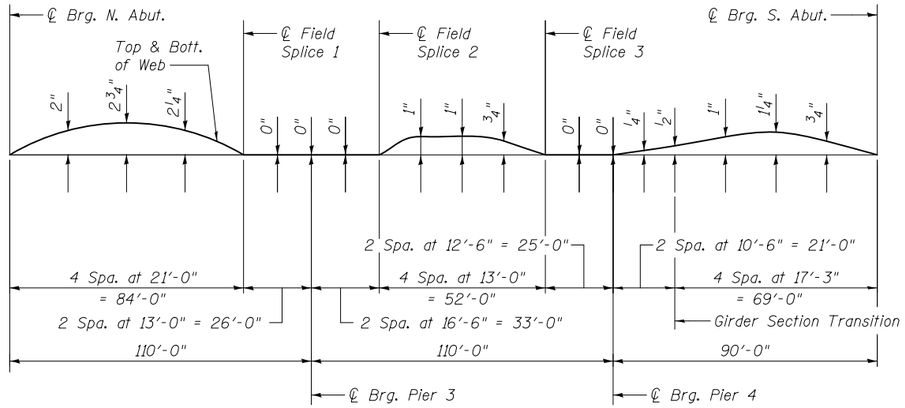
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1061
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

EXTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 1	Pier 3	0.5 Sp. 2	Pier 4	0.6 Sp. 3
I_s	(in^4)	23,819	33,493	21,153	23,154	18,868
$I_c(n)$	(in^4)	50,341	-	49,571	-	42,721
$I_c(3n)$	(in^4)	37,942	-	36,588	-	32,088
$I_c(cr)$	(in^4)	-	40,416	-	29,997	-
S_s	(in^3)	953	1193	916	818	762
$S_c(n)$	(in^3)	1220	-	1214	-	1019
$S_c(3n)$	(in^3)	1126	-	1116	-	935
$S_c(cr)$	(in^3)	-	1612	-	1223	-
DC1	(k/')	1.057	1.115	1.039	1.053	1.025
M_{DC1}	('k)	945.7	1511.4	365.9	982.1	612.5
DC2	(k/')	0.186	0.186	0.186	0.186	0.186
M_{DC2}	('k)	166.2	259.7	62.3	178.3	109.5
DW	(k/')	0.350	0.350	0.350	0.350	0.350
M_{DW}	('k)	312.7	488.7	117.3	335.6	206.0
M_{L+IM}	('k)	1760.7	1954.6	1416.5	1607.8	1381.3
M_u (Strength I)	('k)	4940.2	6367.5	3190.1	4767.6	3628.8
$\phi_f M_n$	('k)	6103.8	6867.8	6206.3	5161.0	5131.3
f_s DC1	(ksi)	11.91	15.20	4.79	14.41	9.65
f_s DC2	(ksi)	1.77	1.93	0.67	1.75	1.41
f_s DW	(ksi)	3.33	3.64	1.26	3.29	2.64
f_s (L+IM)	(ksi)	17.32	14.55	14.00	15.78	16.27
f_s (Service II)	(ksi)	39.53	39.69	24.93	39.96	34.84
$0.95R_hF_{yf}$	(ksi)	47.50	47.50	47.50	47.50	47.50
f_s (Total)(Strength I)	(ksi)	-	-	-	-	-
$\phi_f F_n$	(ksi)	-	-	-	-	-
V_f	(k)	31.7	34.6	27.6	36.1	30.9

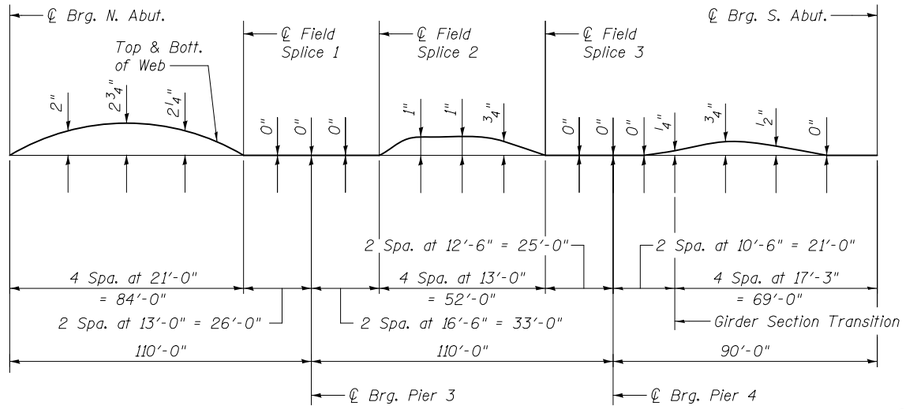
INTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 1	Pier 3	0.5 Sp. 2	Pier 4	0.6 Sp. 3
I_s	(in^4)	23,819	33,493	21,153	23,154	18,868
$I_c(n)$	(in^4)	51,053	-	50,302	-	43,308
$I_c(3n)$	(in^4)	38,552	-	37,239	-	32,631
$I_c(cr)$	(in^4)	-	40,578	-	30,373	-
S_s	(in^3)	953	1193	916	818	762
$S_c(n)$	(in^3)	1225	-	1218	-	1023
$S_c(3n)$	(in^3)	1131	-	1122	-	940
$S_c(cr)$	(in^3)	-	1626	-	1249	-
DC1	(k/')	1.046	1.104	1.028	1.042	1.014
M_{DC1}	('k)	936.5	1495.6	363.7	971.5	606.5
DC2	(k/')	0.186	0.186	0.186	0.186	0.186
M_{DC2}	('k)	166.2	259.7	62.3	178.4	109.4
DW	(k/')	0.350	0.350	0.350	0.350	0.350
M_{DW}	('k)	312.7	488.7	117.2	335.7	205.9
M_{L+IM}	('k)	1472.3	1696.4	1182.7	1395.3	1196.0
M_u (Strength I)	('k)	4424.0	5895.9	2778.0	4382.7	3296.7
$\phi_f M_n$	('k)	6126.5	6895.0	6253.3	5222.0	5151.7
f_s DC1	(ksi)	11.79	15.04	4.76	14.25	9.55
f_s DC2	(ksi)	1.76	1.92	0.67	1.71	1.40
f_s DW	(ksi)	3.32	3.61	1.25	3.23	2.63
f_s (L+IM)	(ksi)	14.42	12.52	11.65	13.41	14.03
f_s (Service II)	(ksi)	35.62	36.84	21.83	36.62	31.81
$0.95R_hF_{yf}$	(ksi)	47.50	47.50	47.50	47.50	47.50
f_s (Total)(Strength I)	(ksi)	-	-	-	-	-
$\phi_f F_n$	(ksi)	-	-	-	-	-
V_f	(k)	29.9	32.7	26.1	34.1	29.2

EXTERIOR GIRDER REACTION TABLE					
		N. Abut.	Pier 3	Pier 4	S. Abut.
R_{DC1}	(k)	44.73	137.30	110.54	35.46
R_{DC2}	(k)	7.87	23.56	19.84	6.39
R_{DW}	(k)	14.81	44.33	37.34	12.02
R_{L+IM}	(k)	82.21	155.75	145.29	77.78
R_{Total}	(k)	149.6	360.9	313.0	131.7

INTERIOR GIRDER REACTION TABLE					
		N. Abut.	Pier 3	Pier 4	S. Abut.
R_{DC1}	(k)	44.28	135.88	109.35	35.09
R_{DC2}	(k)	7.87	23.56	19.84	6.39
R_{DW}	(k)	14.81	44.33	37.34	12.02
R_{L+IM}	(k)	92.41	175.10	163.33	87.43
R_{Total}	(k)	159.4	378.9	329.9	140.9



CAMBER DIAGRAM (GIRDERS 1 THRU 3)



CAMBER DIAGRAM (GIRDERS 4 THRU 6)

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_{yf}$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_s(L+IM)$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V_f: Maximum factored shear range in span computed according to Article 6.10.10.

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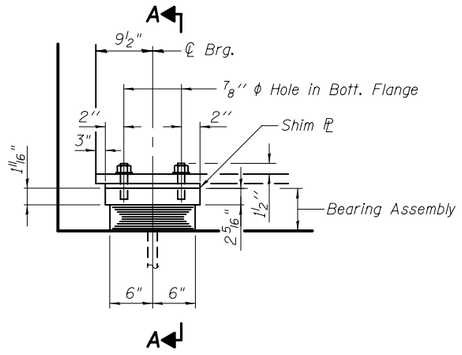
USER NAME =	DESIGNED - KJP	REVISED -	
	CHECKED - YSS/JTH	REVISED -	
PLOT SCALE =	DRAWN - AEC	REVISED -	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

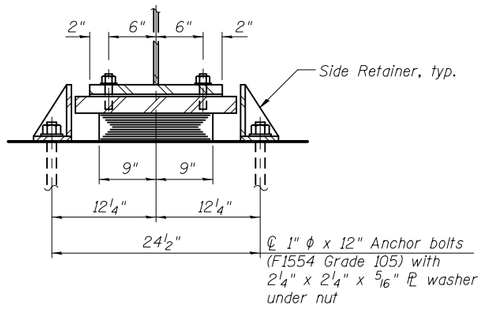
DESIGN DATA TABLE AND NOTES
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 27 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1062
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			



ELEVATION AT NORTH ABUT.

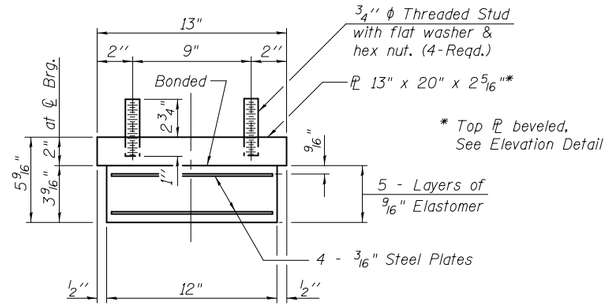
(Looking East)



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

North Abutment



BEARING ASSEMBLY

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

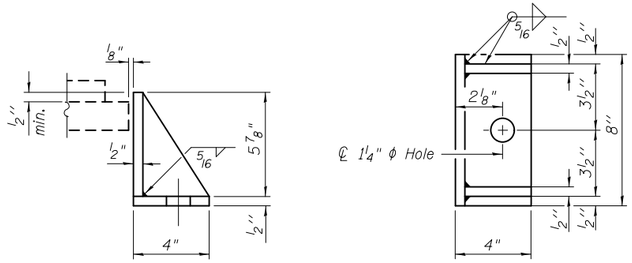
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Two 1/8" in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Note:

Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	6
Anchor Bolts, 1"	Each	12

I-2E-1

1-27-12

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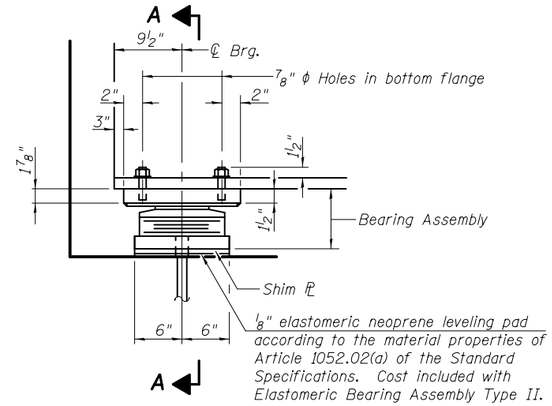
USER NAME =	DESIGNED - KJP	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

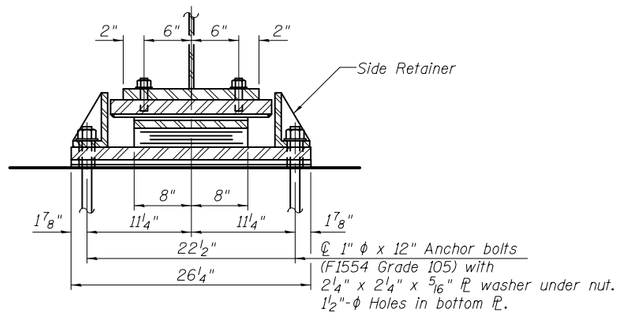
TYPE I BEARING DETAILS
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 28 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1063
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			



ELEVATION AT SOUTH ABUT.

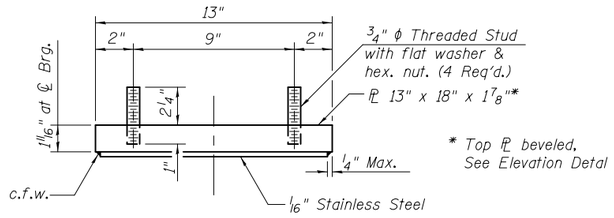
(Looking West)



SECTION A-C

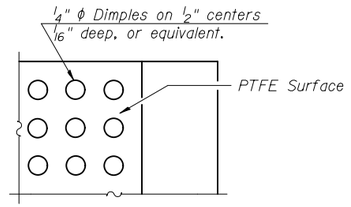
TYPE II ELASTOMERIC EXP. BRG.

South Abutment

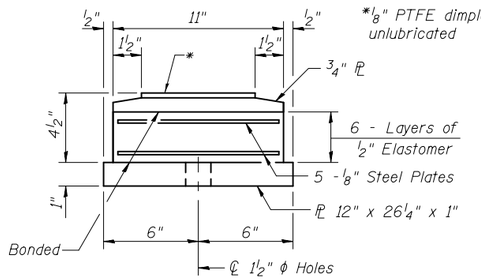


* Top PL beveled. See Elevation Detal

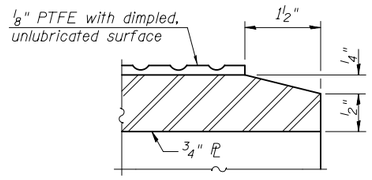
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE

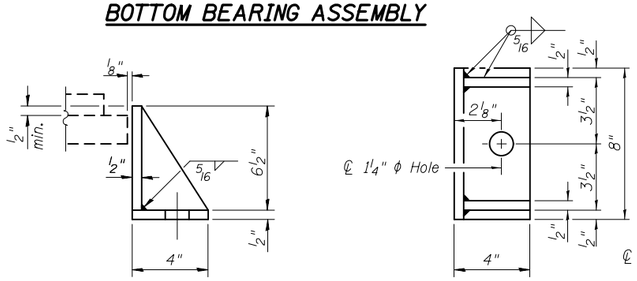


*1/8" PTFE dimpled, unlubricated



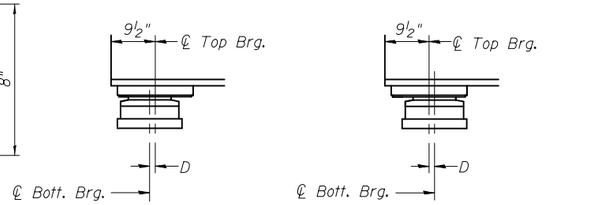
SECTION THRU PTFE

BOTTOM BEARING ASSEMBLY



SIDE RETAINER

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



BELOW 50°F.
(Move bott. brg. away from fixed brg.)

ABOVE 50°F.
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

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

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8" PTFE 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.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Two 1/8" in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	6
Anchor Bolts, 1"	Each	12

I-2E-2

1-27-12

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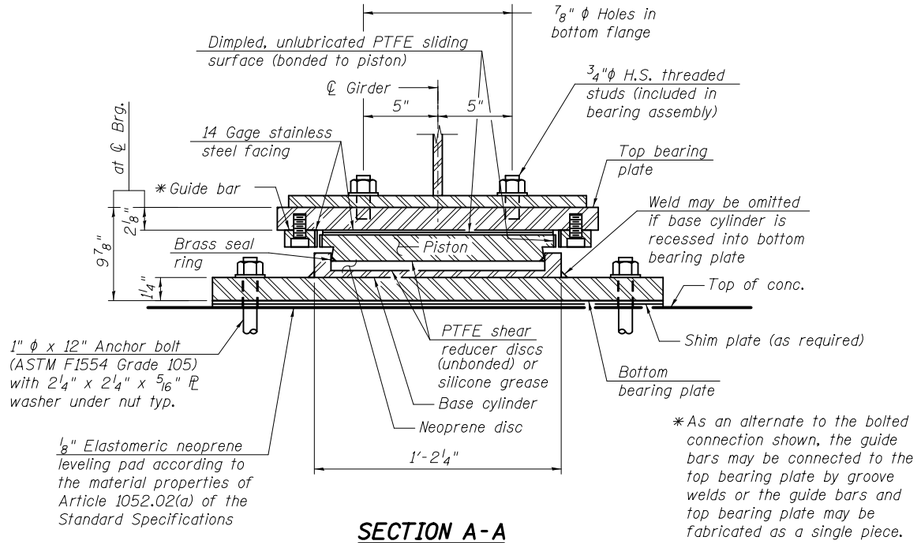
USER NAME =	DESIGNED - KJP	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

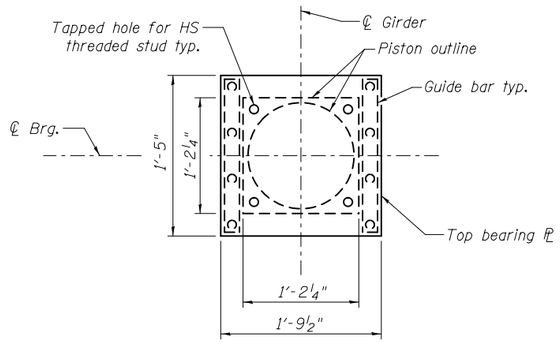
TYPE II BEARING DETAILS
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 29 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1064
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



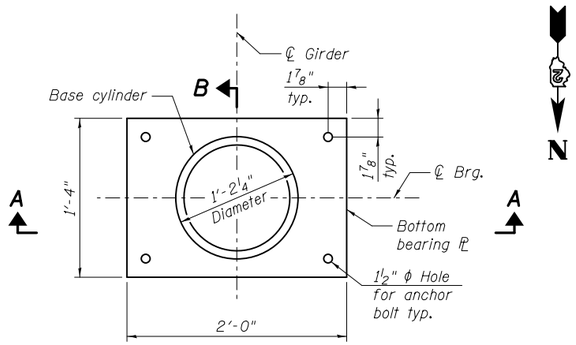
SECTION A-A

*As an alternate 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.



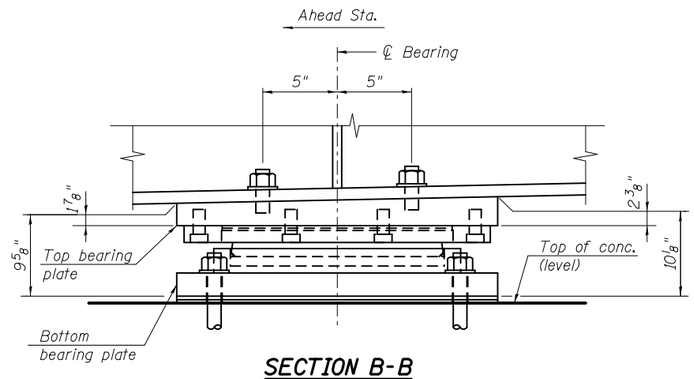
TOP BEARING ℄ AND PISTON PLAN

Pier 4



BOTTOM BEARING ℄ AND BASE CYLINDER PLAN

Pier 4



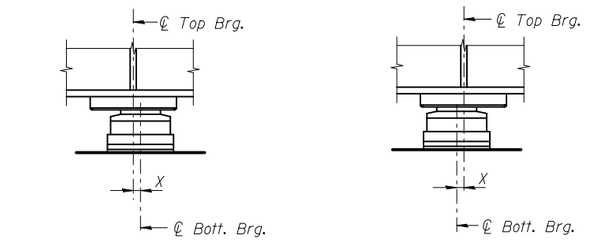
SECTION B-B

(Looking East)

BEARING DESIGN DATA

Location	Vert. Design Load** (kips)	Hu, Horiz. Design Load** (kips)	θu, Required Rotation Range*** (radians)	Max. Theor. Thermal Mvmt**** from 50 °F
Pier 4	305	61	0.01	3/4"

** Design Loads are the governing service loads with no dynamic load allowance.
*** Rotation allowances for fabrication tolerances (0.005 radians), installation uncertainties (0.005 radians) are excluded.
**** Total required movement is based on one way expansion (or contraction) of the superstructure along the centerline of girder when bearings are set at 50°F. Bearing movement tolerances are excluded.



BELOW 50°F
(Move bottom brg. away from fixed brg.)

ABOVE 50°F
(Move bottom brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT HLMR EXP. BRG.

(Looking East)

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

Notes:

All steel for bearings shall conform to the requirements of AASHTO M270 Grade 50, unless otherwise noted.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554. Anchor bolts may be either cast in place or installed in holes drilled after the supported member is in place. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Total bearing height is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The Contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier concrete. Total bearing height is taken at the ℄ of bearing for bevelled top plates.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates.

BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion, 350k	Each	6
Anchor Bolts, 1"	Each	24

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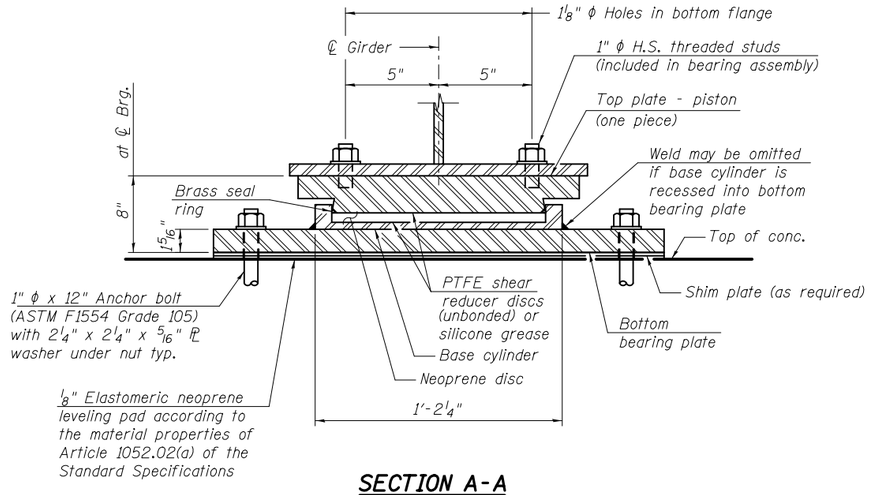
USER NAME =	DESIGNED - KJP	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

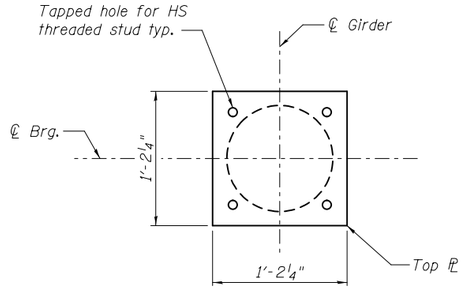
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HLMR GUIDED EXPANSION BEARING DETAILS
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 30 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1065
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

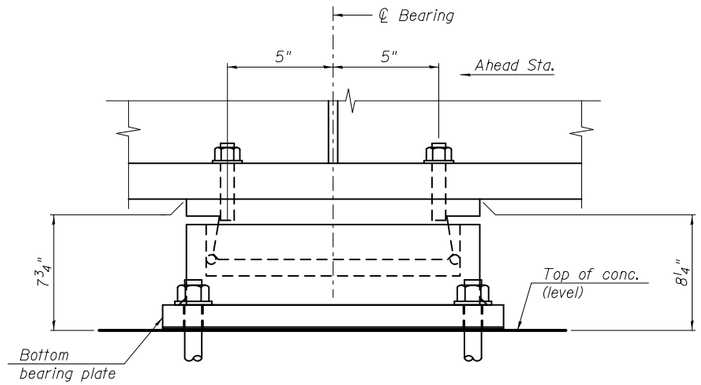


SECTION A-A



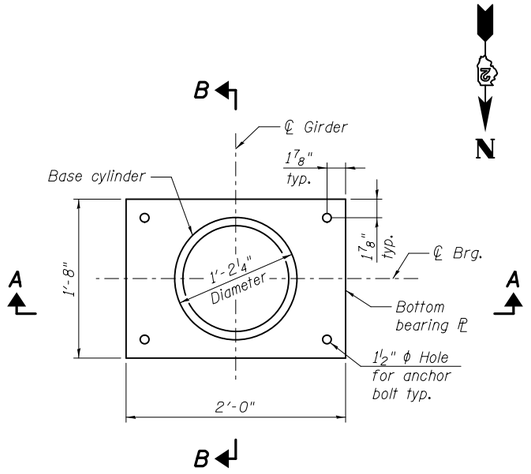
TOP ℘ - PISTON PLAN

Pier 3



SECTION B-B

(Looking East)



BOTTOM BEARING ℘ AND BASE CYLINDER PLAN

Pier 3

BEARING DESIGN DATA

Location	Vert. Design Load* (kips)	Hu, Horiz. Design Load* (kips)	θu, Required Rotation Range** (radians)
Pier 3	350	70	0.01

* Design Loads are the governing service loads with no dynamic load allowance.
** Rotation allowances for fabrication tolerances (0.005 radians), installation uncertainties (0.005 radians) are excluded.

Notes:

All steel for bearings shall conform to the requirements of AASHTO M270 Grade 50, unless otherwise noted.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554. Anchor bolts may be either cast in place or installed in holes drilled after the supported member is in place. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Total bearing height is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The Contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier concrete. Total bearing height is taken at the ℄ of bearing for bevelled top plates.

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates.

BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotational Bearings, Fixed, 350k	Each	6
Anchor Bolts, 1"	Each	24

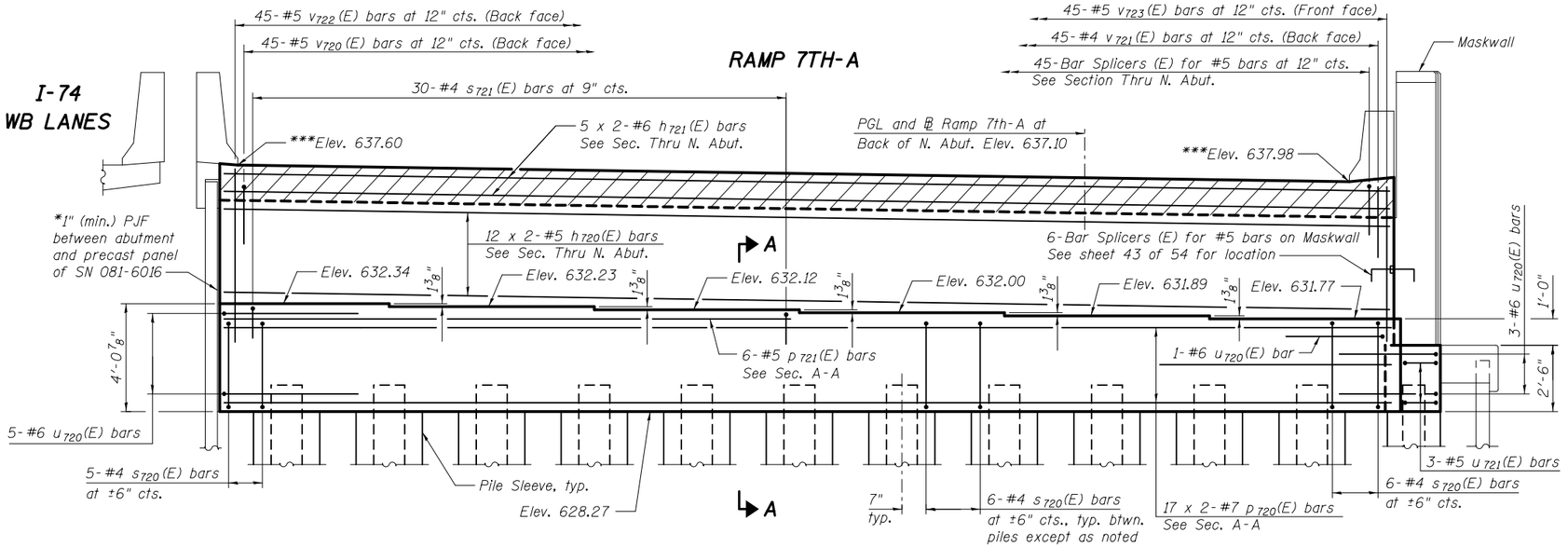
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - KJP	REVISED -
	CHECKED - YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

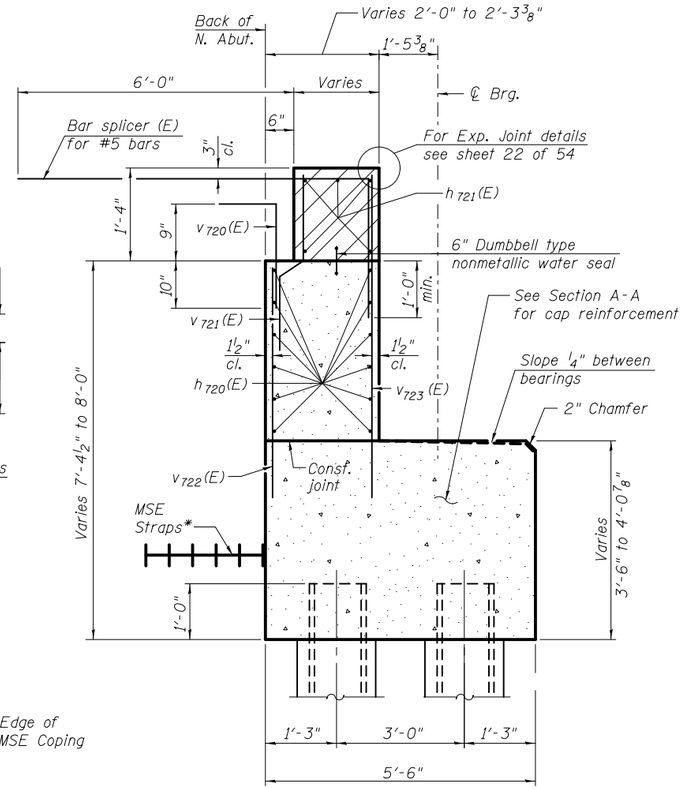
HLMR FIXED BEARING DETAILS
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 31 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1066
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

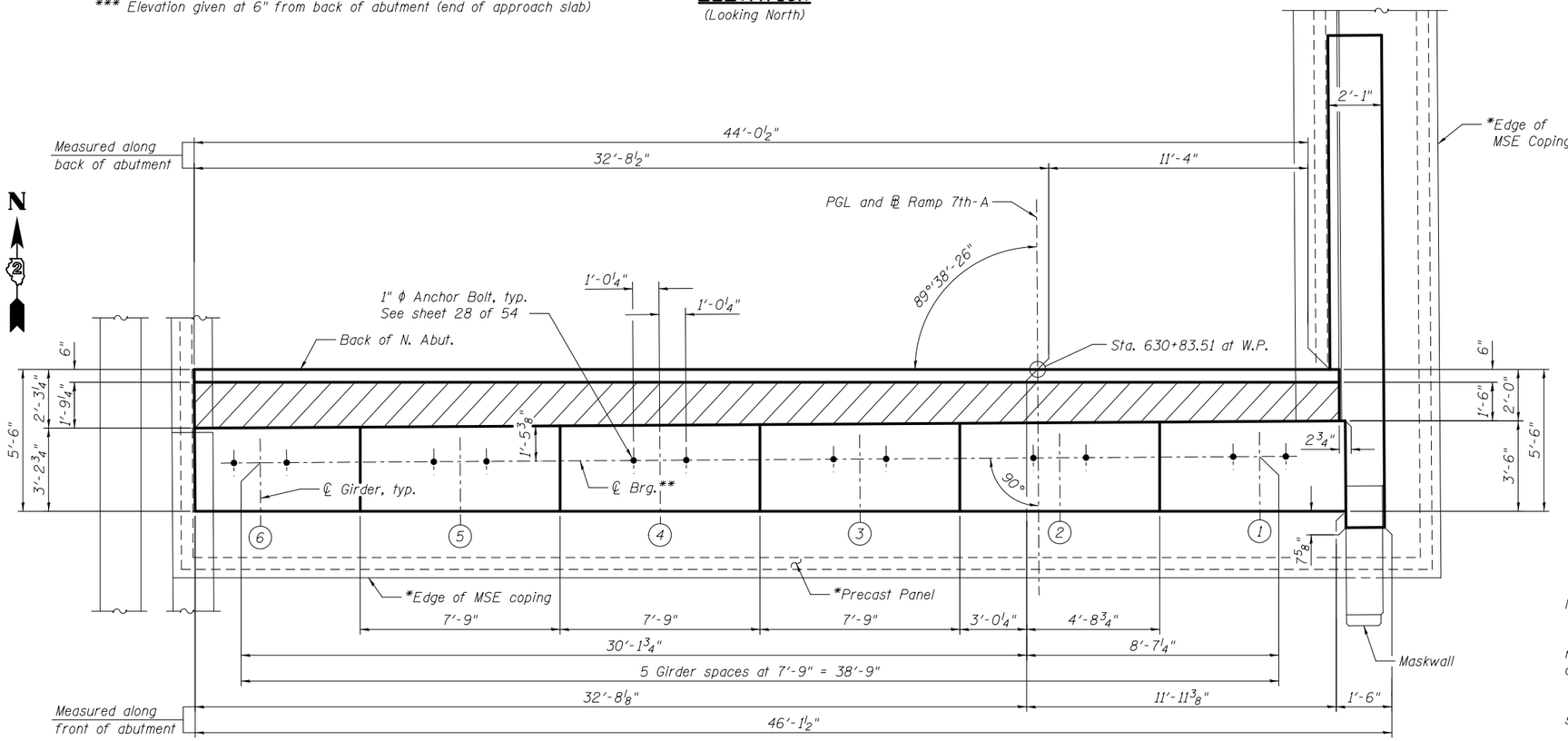


*** Elevation given at 6" from back of abutment (end of approach slab)

ELEVATION
(Looking North)



SECTION THRU NORTH ABUTMENT



TOP PLAN VIEW

MINIMUM BAR LAP
(Abutment)

#5 Bar = 3'-8"
#6 Bar = 4'-5"
#7 Bar = 5'-10"

* See SN 081-6016 for retaining wall details.

** Parallel to front face of backwall

Notes:
Pour steps monolithically with cap.
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructures on sheet 14 of 54.
For details of bar splicers, see sheet 48 of 54.
For Section A-A, Pile Cap Plan, and Abutment and Mask Wall Pile Data, see sheet 33 of 54.
Bars indicated thus 5 x 2-#6 etc. indicates 5 lines of bars with 2 lengths per line.
For Bill of Material, see sheet 36 of 54.

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - APL/YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT ELEVATION AND PLAN
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 32 OF 54 SHEETS

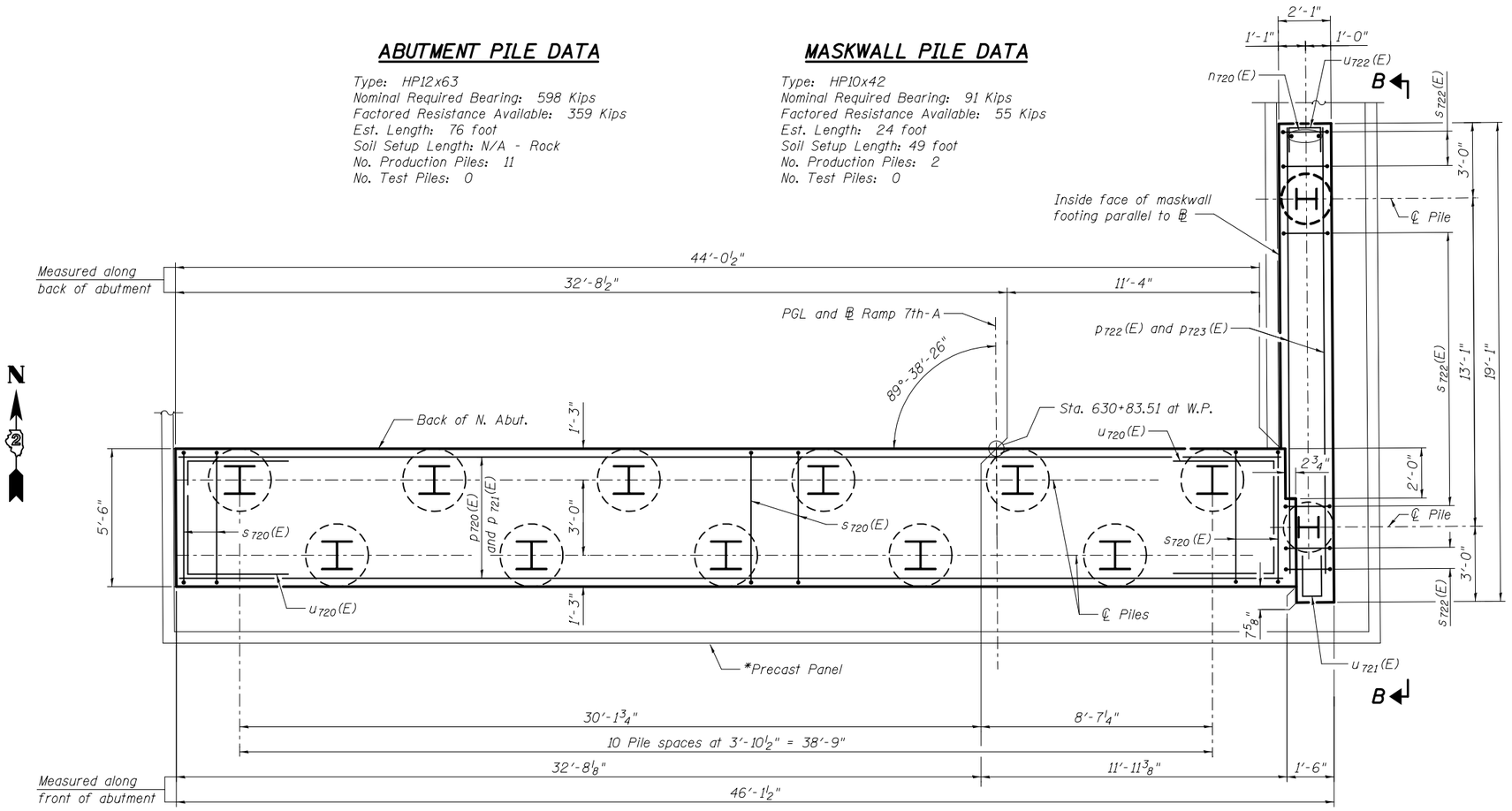
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1067
		CONTRACT NO. 64E26		
ILLINOIS	FED. AID PROJECT			

ABUTMENT PILE DATA

Type: HP12x63
Nominal Required Bearing: 598 Kips
Factored Resistance Available: 359 Kips
Est. Length: 76 foot
Soil Setup Length: N/A - Rock
No. Production Piles: 11
No. Test Piles: 0

MASKWALL PILE DATA

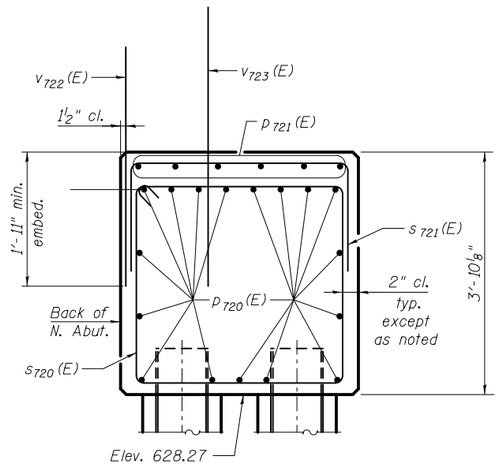
Type: HP10x42
Nominal Required Bearing: 91 Kips
Factored Resistance Available: 55 Kips
Est. Length: 24 foot
Soil Setup Length: 49 foot
No. Production Piles: 2
No. Test Piles: 0



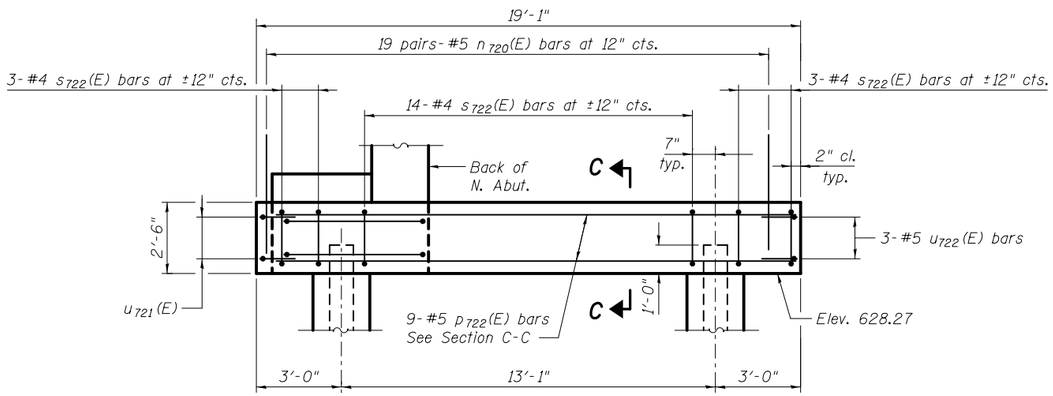
* See SN 081-6016 for retaining wall details.

PILE CAP PLAN

($s_{721}(E)$ not shown for clarity)

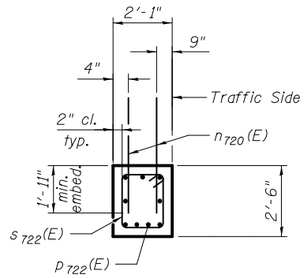


SECTION A-A



VIEW B-B

(Precast Panel not shown for clarity)



SECTION C-C

Notes:
Space reinforcement in cap to miss anchor bolts.
See sheet 36 of 54 for bar details and Bill of Material.
For location of Section A-A, see sheet 32 of 54.
For details of piles and pile sleeves, see sheet 47 of 54.
Pile sleeves shall be sized to provide at least 1 1/2" inches of clearance around the pile and shall extend from bottom of abutment to bottom of reinforced soil mass.
The area between the pile and the sleeve shall be backfilled with dry, loose sand. The cost shall be included in Driving Piles.
To minimize risk of unforseen conflicts with existing buried structures, it is recommended that piles be driven before MSE walls are constructed. Piles may be driven before or after the construction of MSE wall 081-6016. Contractor shall coordinate with MSE wall operations.

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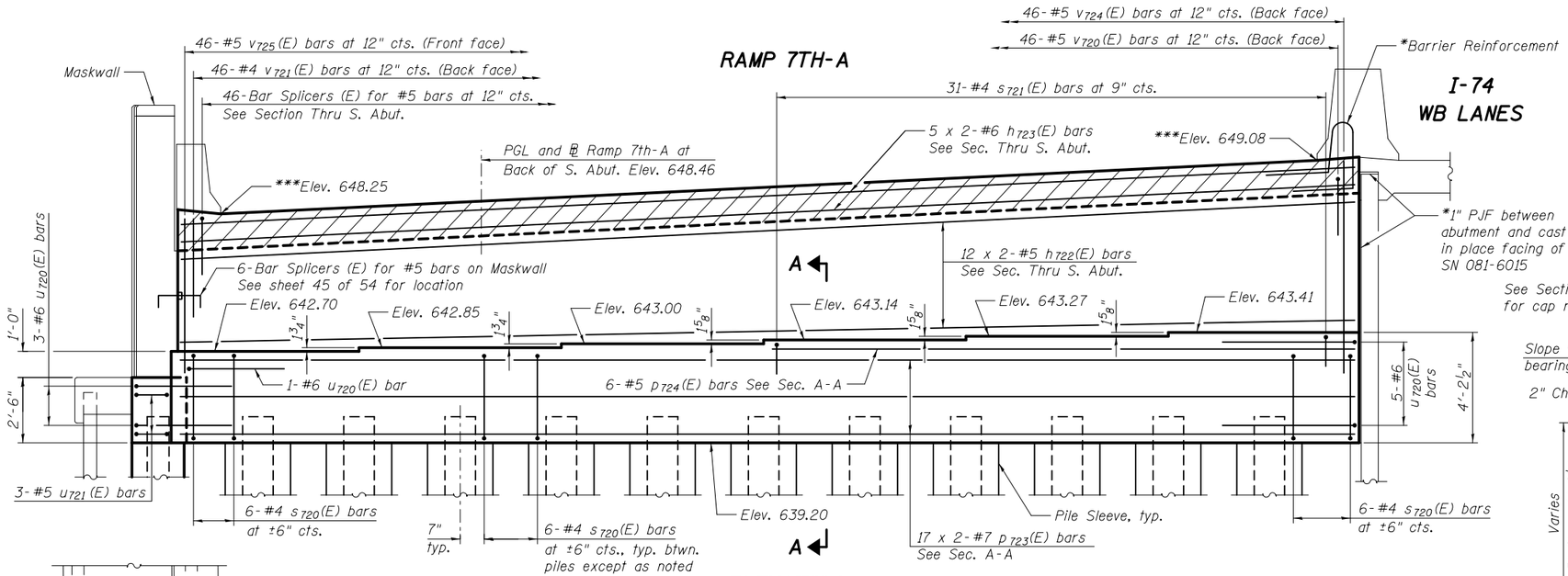
USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - APL/YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

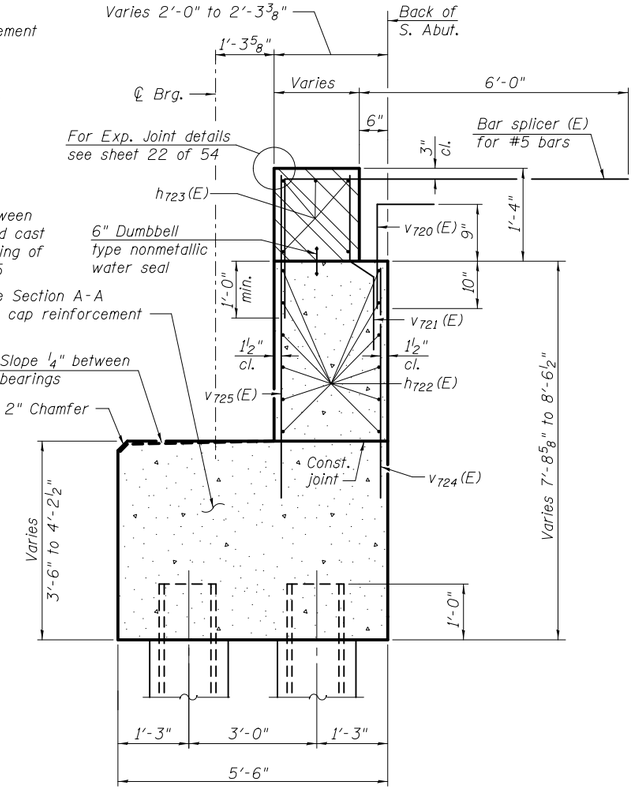
NORTH ABUTMENT DETAILS
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 33 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1068
		CONTRACT NO. 64E26		
ILLINOIS	FED. AID PROJECT			

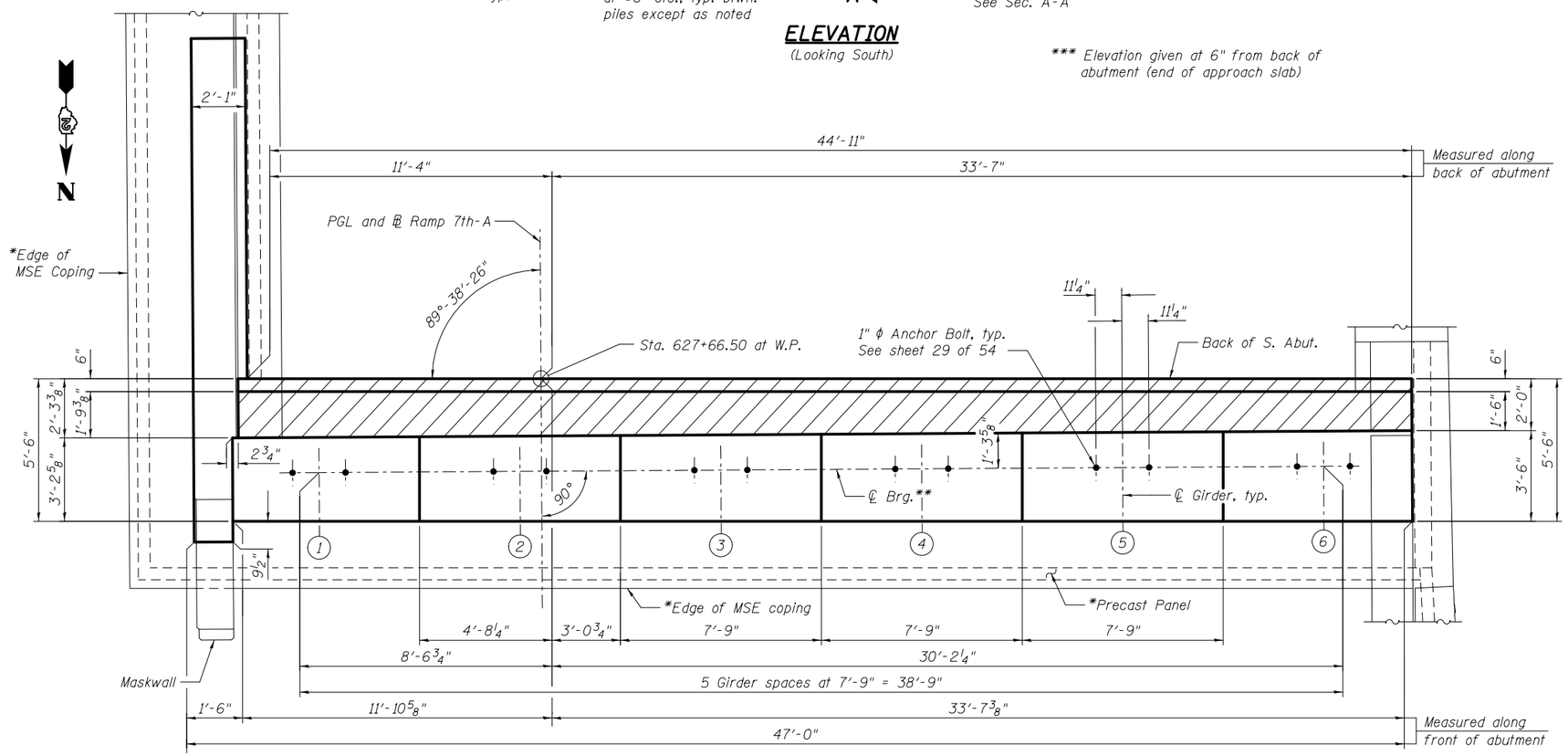


ELEVATION
(Looking South)

*** Elevation given at 6" from back of abutment (end of approach slab)



SECTION THRU SOUTH ABUTMENT



TOP PLAN VIEW

* See SN 081-6015 for retaining wall details.
** Parallel to front face of backwall

MINIMUM BAR LAP
(Abutment)

#5 Bar = 3'-8"
#6 Bar = 4'-5"
#7 Bar = 5'-10"

Notes:
Pour steps monolithically with cap.
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructures on sheet 14 of 54.
For details of bar splicers, see sheet 48 of 54.
For Section A-A, Pile Cap Plan and Abutment Pile Data, see sheet 35 of 54.
Bars indicated thus 5 x 2-#6 etc. indicates 5 lines of bars with 2 lengths per line.

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USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - APL/YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT ELEVATION AND PLAN
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 34 OF 54 SHEETS

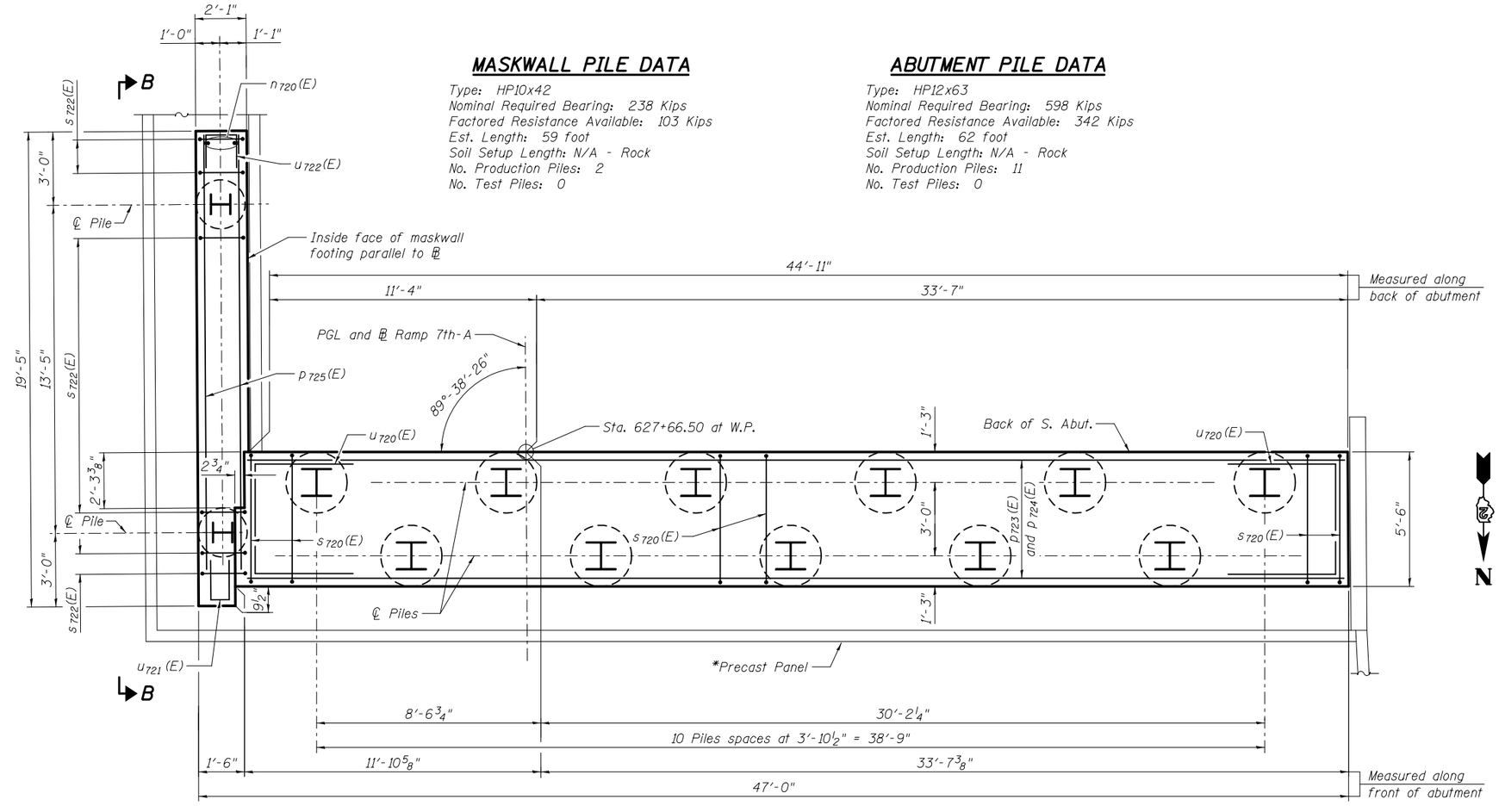
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1069
		CONTRACT NO. 64E26		
ILLINOIS FED. AID PROJECT				

MASKWALL PILE DATA

Type: HP10x42
Nominal Required Bearing: 238 Kips
Factored Resistance Available: 103 Kips
Est. Length: 59 foot
Soil Setup Length: N/A - Rock
No. Production Piles: 2
No. Test Piles: 0

ABUTMENT PILE DATA

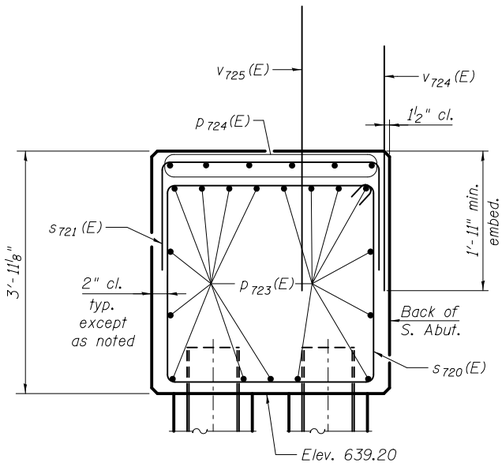
Type: HP12x63
Nominal Required Bearing: 598 Kips
Factored Resistance Available: 342 Kips
Est. Length: 62 foot
Soil Setup Length: N/A - Rock
No. Production Piles: 11
No. Test Piles: 0



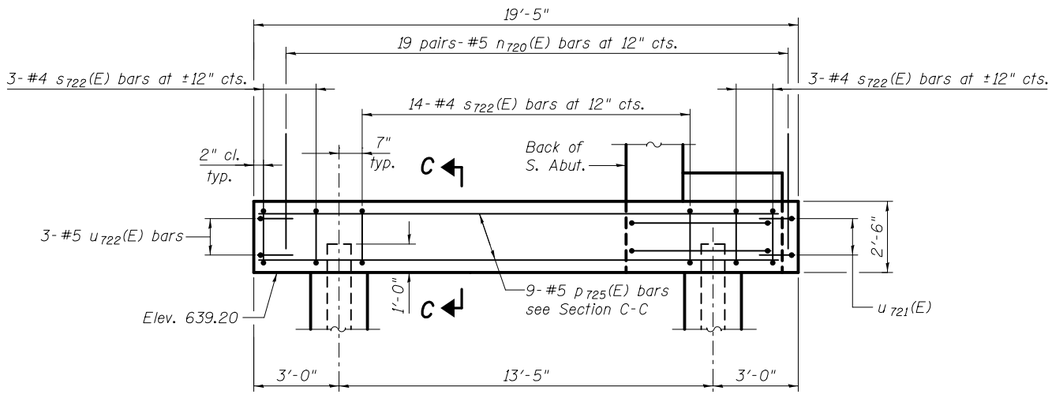
* See SN 081-6015 for retaining wall details.

PILE CAP PLAN

(s721(E) not shown for clarity)

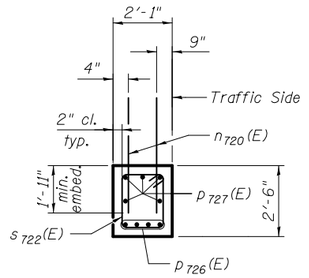


SECTION A-A



VIEW B-B

(Precast Panel not shown for clarity)



SECTION C-C

Notes:
Space reinforcement in cap to miss anchor bolts.
See sheet 36 of 54 for bar details and Bill of Material.
For location of Section A-A, see sheet 34 of 54.
For details of piles and pile sleeves, see sheet 47 of 54.
Pile sleeves shall be sized to provide at least 1½" inches of clearance around the pile and shall extend from bottom of abutment to bottom of reinforced soil mass.
The area between the pile and the sleeve shall be backfilled with dry, loose sand. The cost shall be included in Driving Piles.
To minimize risk of unforseen conflicts with existing buried structures, it is recommended that piles be driven before MSE walls are constructed. Piles may be driven before or after the construction of MSE wall 081-6016. Contractor shall coordinate with MSE wall operations.

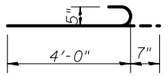
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - APL/YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

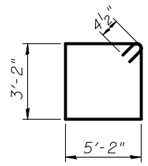
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT DETAILS
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 35 OF 54 SHEETS

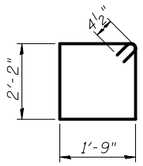
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1070
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



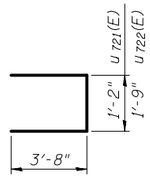
BAR $n_{720}(E)$



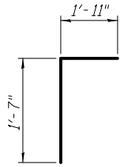
BAR $s_{720}(E)$



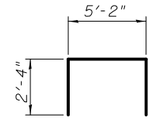
BAR $s_{722}(E)$



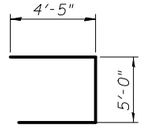
BARS $u_{721}(E)$ AND $u_{722}(E)$



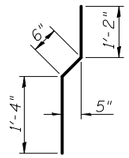
BAR $v_{720}(E)$



BAR $s_{721}(E)$



BAR $u_{720}(E)$



BAR $v_{721}(E)$

NORTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{720}(E)$	24	#5	23'-11"	
$h_{721}(E)$	10	#6	24'-3"	
$p_{720}(E)$	34	#7	25'-1"	
$p_{721}(E)$	6	#5	21'-7"	
$p_{722}(E)$	9	#5	18'-9"	
$s_{720}(E)$	71	#4	17'-5"	
$s_{721}(E)$	30	#4	9'-10"	
$s_{722}(E)$	20	#4	8'-7"	
$u_{720}(E)$	9	#6	13'-10"	
$u_{721}(E)$	3	#5	8'-6"	
$u_{722}(E)$	3	#5	9'-1"	
$v_{720}(E)$	45	#5	3'-6"	
$v_{721}(E)$	45	#4	3'-0"	
$v_{722}(E)$	45	#5	5'-8"	
$v_{723}(E)$	45	#5	7'-0"	
$n_{720}(E)$	38	#5	4'-7"	
Concrete Structures			Cu. Yd.	51.6
Reinforcement Bars, Epoxy Coated			Pound	5,430
Furnishing Steel Piles HP10X42			Foot	48
Furnishing Steel Piles HP12X63			Foot	836
Driving Piles			Foot	884
Concrete Sealer			Sq. Ft.	377

SOUTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{722}(E)$	24	#5	24'-4"	
$h_{723}(E)$	10	#6	24'-9"	
$p_{723}(E)$	34	#7	25'-6"	
$p_{724}(E)$	6	#5	22'-6"	
$p_{725}(E)$	9	#5	19'-1"	
$s_{720}(E)$	72	#4	17'-5"	
$s_{721}(E)$	31	#4	9'-10"	
$s_{722}(E)$	20	#4	8'-7"	
$u_{720}(E)$	9	#6	13'-10"	
$u_{721}(E)$	3	#5	8'-6"	
$u_{722}(E)$	3	#5	9'-1"	
$v_{720}(E)$	46	#5	3'-6"	
$v_{721}(E)$	46	#4	3'-0"	
$v_{724}(E)$	46	#5	6'-1"	
$v_{725}(E)$	46	#5	7'-5"	
$n_{720}(E)$	38	#5	4'-7"	
Concrete Structures			Cu. Yd.	54.8
Reinforcement Bars, Epoxy Coated			Pound	5,570
Furnishing Steel Piles HP10X42			Foot	118
Furnishing Steel Piles HP12X63			Foot	682
Driving Piles			Foot	800
Concrete Sealer			Sq. Ft.	400

MODJESKI and MASTERS
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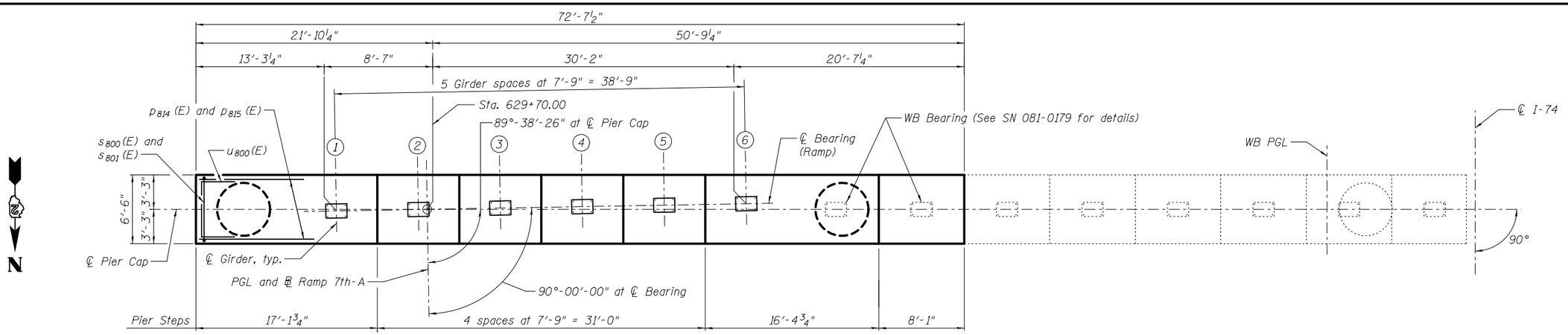
USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - APL/YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

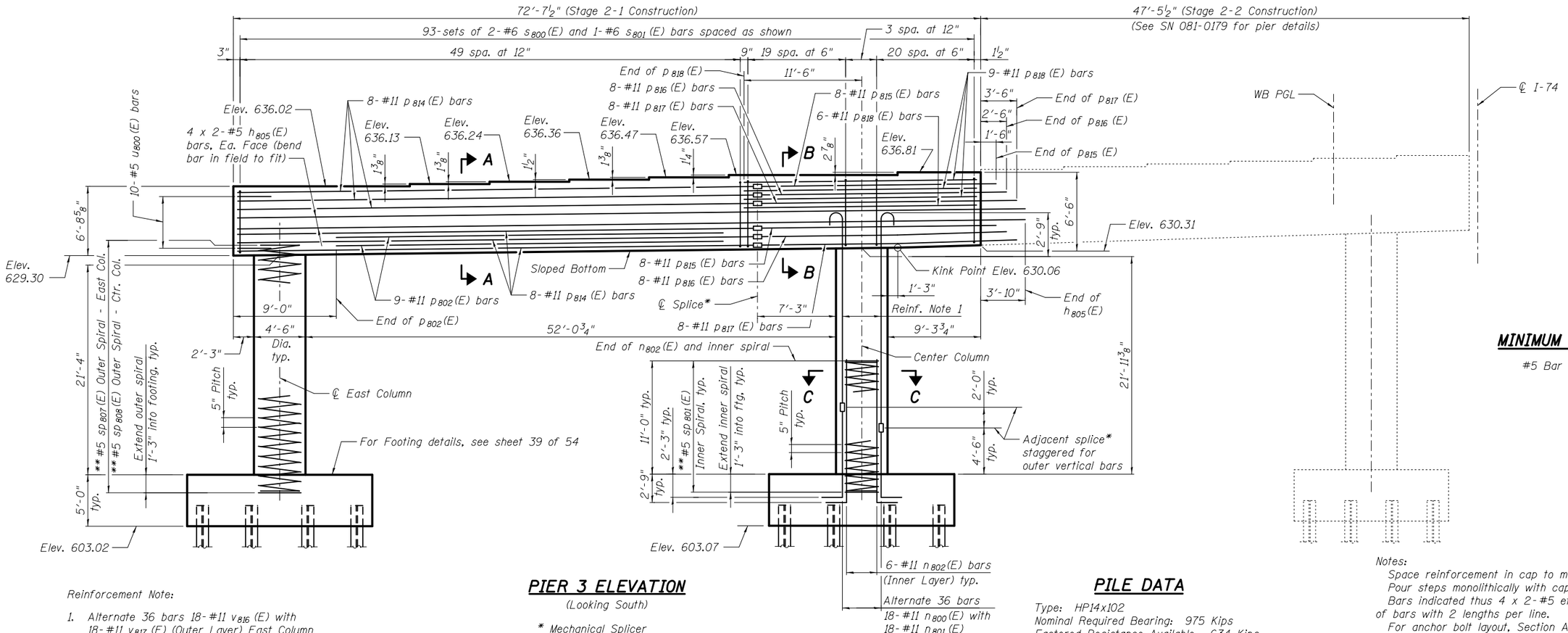
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT REINFORCEMENT AND BILL OF MATERIAL
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 36 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1071
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



PLAN OF PIER CAP



Reinforcement Note:

1. Alternate 36 bars 18-#11 v_{816} (E) with 18-#11 v_{817} (E) (Outer Layer) East Column
   Alternate 36 bars 18-#11 v_{818} (E) with 18-#11 v_{819} (E) (Outer Layer) Center Column

PIER 3 ELEVATION

(Looking South)

* Mechanical Splicer

** Provide 1½ extra turns, top and bottom. Extend outer spiral 2" into pier cap. Provide min. 4-#4 spacers or equivalent.

PILE DATA

Type: HP14x102
Nominal Required Bearing: 975 Kips
Factored Resistance Available: 634 Kips
Est. Length: 35' (Min. Tip Elev. 576.0) East Footing
34' (Min. Tip Elev. 578.1) Center Footing
Soil Setup Pile Length: N/A-Rock
No. Production Piles: 32
No. Test Piles: 0

MINIMUM BAR LAP

#5 Bar = 3'-8"

Notes:
Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
Bars indicated thus 4 x 2-#5 etc. indicates 4 lines of bars with 2 lengths per line.
For anchor bolt layout, Section A-A, B-B and C-C, see sheet 38 of 54.
For Bill of Material, see sheet 39 of 54.
For details of piles, see sheet 47 of 54.
For mechanical splicer details, see sheet 48 of 54.
See Heat of Hydration Control for Concrete Structures special provision for concrete pour requirements.

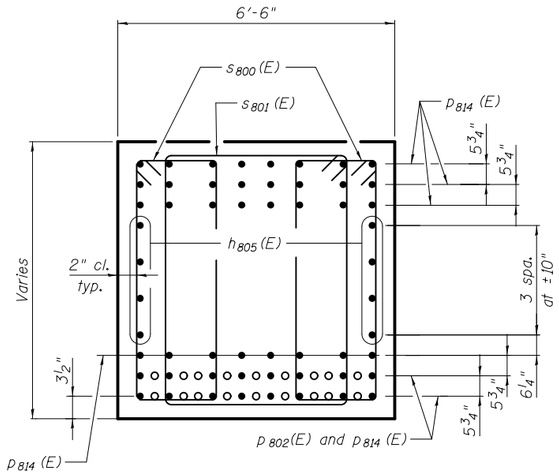
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -
	CHECKED - JTH	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 37 OF 54 SHEETS

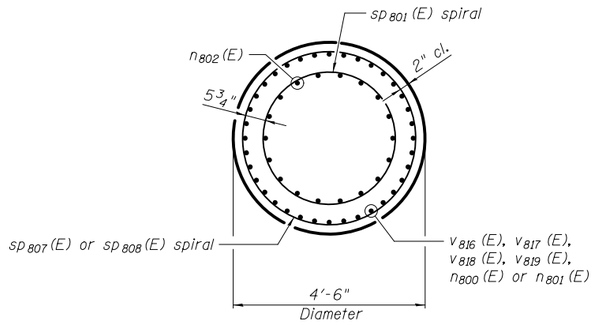
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1072
		CONTRACT NO. 64E26		
		ILLINOIS FED. AID PROJECT		



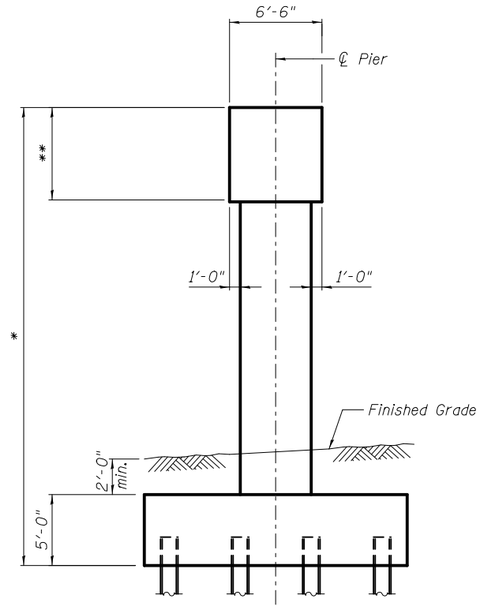
SECTION A-A

○ p_{802}(E) bars

Note:
Locate p_{802}(E) and p_{818} (E) bars in cap as shown in Section A-A and B-B to alleviate congestion within sections over column.



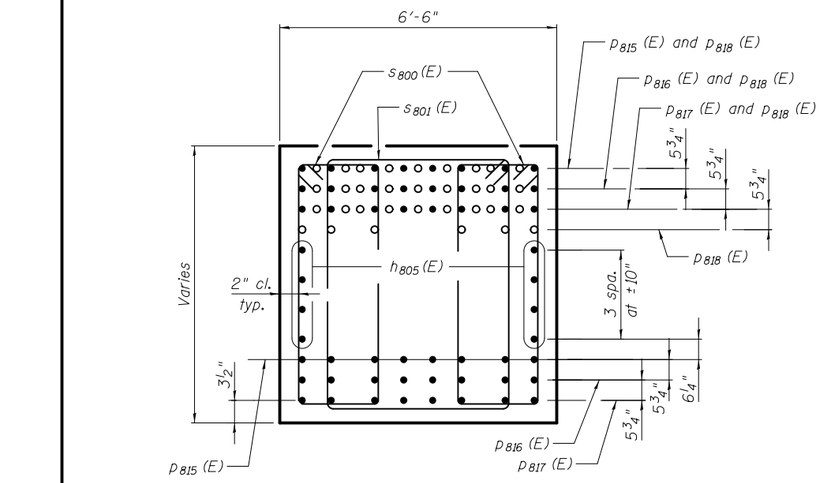
SECTION C-C



END VIEW

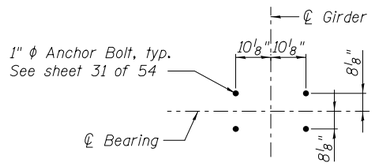
* 33'-0" East Column
33'-9" Center Column

** $6'-8\frac{5}{8}$" East Column
6'-6" Center Column



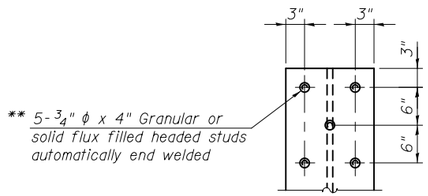
SECTION B-B

○ p_{818} (E) bars



ANCHOR BOLT LAYOUT

(Ramp 7th-A only)



PILE ANCHORAGE

** Typical each flange, each pier pile.
Cost included with Furnishing Piles.

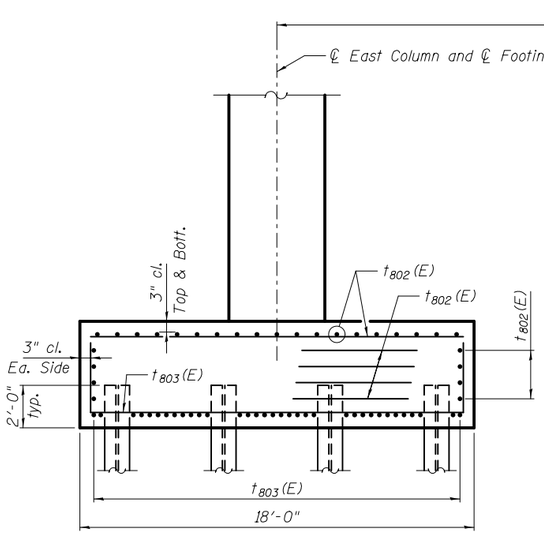
Note:
For location of Section A-A, B-B and C-C, see sheet 37 of 54.

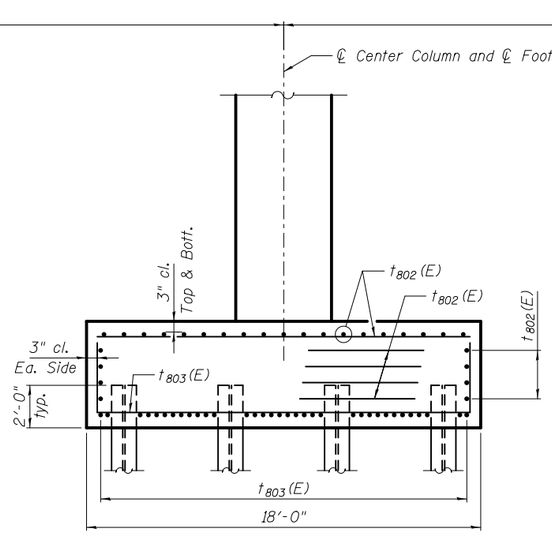
MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED -
		CHECKED - JTH	REVISED -
	PLOT SCALE =	DRAWN - PRC	REVISED -
	PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

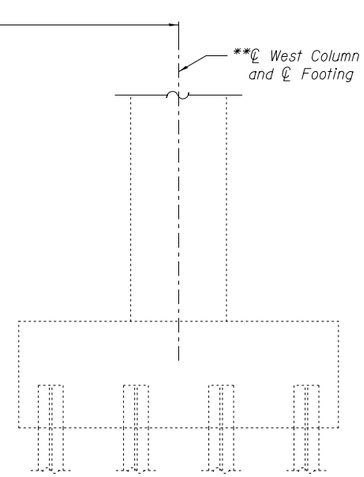
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 DETAILS - 1
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 38 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1073
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



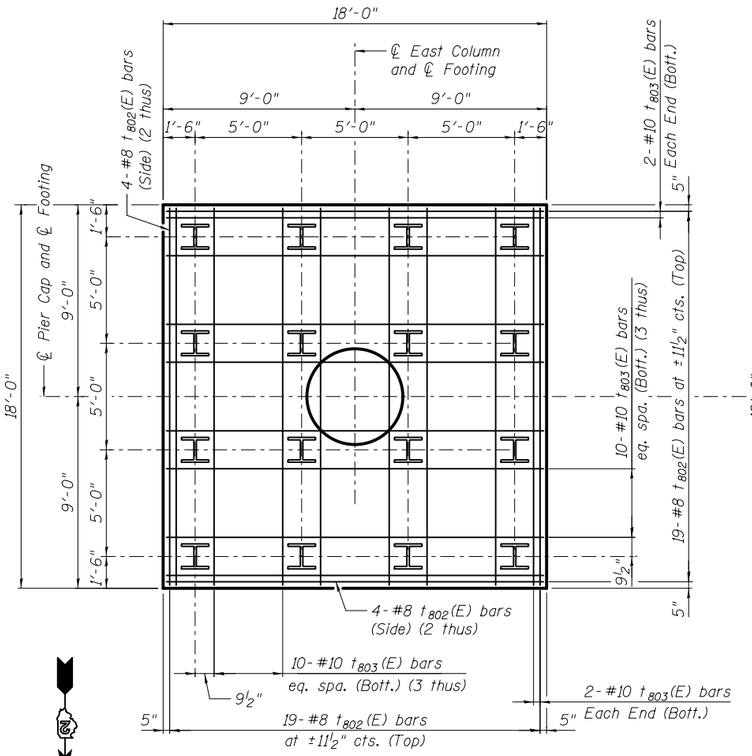


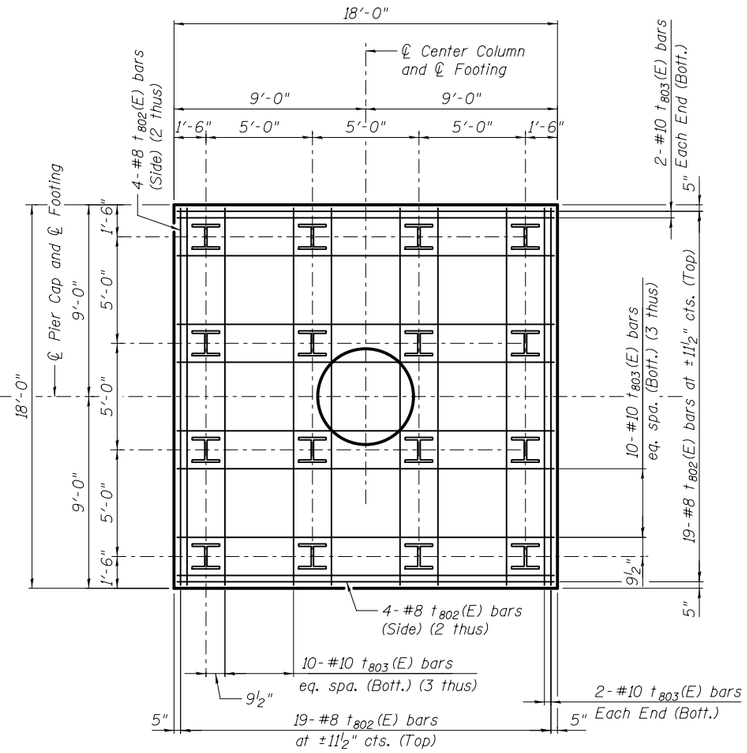


** Stage 2-2 Construction
(See SN 081-0179 for pier details)

FOOTING DETAIL

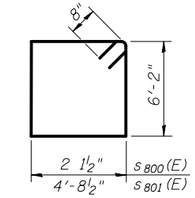
(Looking South)



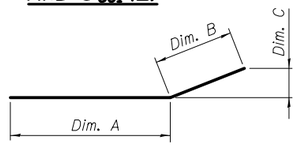


FOOTING PLAN

Note:
For pile anchorage details, see sheet 38 of 54.

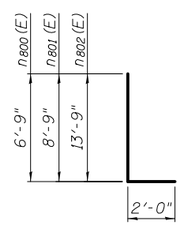


BARS s_{800}(E) AND s_{801}(E)

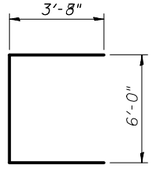


BARS p_{815} (E) THRU p_{818} (E)

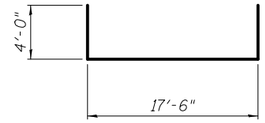
Bar	Dim. A	Dim. B	Dim. C
p_{815} (E)	13'-0"	9'-7"	2⅛"
p_{816} (E)	13'-0"	10'-7"	2⅜"
p_{817} (E)	13'-0"	11'-7"	2⅝"
p_{818} (E)	15'-0"	8'-0"	1⅞"



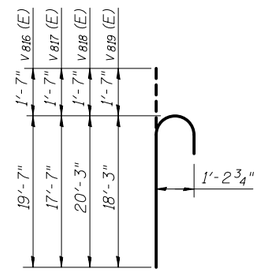
BARS n_{800}(E), n_{801}(E) AND n_{802}(E)



BAR u_{800}(E)



BAR t_{803}(E)



BARS v_{816}(E) THRU v_{819}(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{805}(E)	16	#5	39'-11"	
n_{800}(E)	36	#11	8'-9"	
n_{801}(E)	36	#11	10'-9"	
n_{802}(E)	12	#11	15'-9"	
p_{802}(E)	18	#11	42'-0"	
p_{814} (E)	48	#11	51'-5"	
p_{815} (E)	16	#11	22'-7"	
p_{816} (E)	16	#11	23'-7"	
p_{817} (E)	16	#11	24'-7"	
p_{818} (E)	33	#11	23'-0"	
s_{800}(E)	186	#6	17'-11"	
s_{801}(E)	93	#6	23'-1"	
* sp_{801} (E)	2	#5	12'-3"	
* sp_{807} (E)	1	#5	22'-9"	
* sp_{808} (E)	1	#5	23'-5"	
u_{800}(E)	10	#5	13'-4"	
v_{816} (E)	18	#11	21'-2"	
v_{817} (E)	18	#11	19'-2"	
v_{818} (E)	18	#11	21'-10"	
v_{819} (E)	18	#11	19'-10"	
t_{802}(E)	108	#8	17'-6"	
t_{803}(E)	136	#10	25'-6"	
Structure Excavation		Cu. Yd.	561	
Concrete Structures		Cu. Yd.	261.2	
Reinforcement Bars, Epoxy Coated		Pound	71,010	
Furnishing Steel Piles HP14x102		Foot	1,104	
Driving Piles		Foot	1,104	
Concrete Sealer		Sq. Ft.	2,477	

* Length is height of spiral.

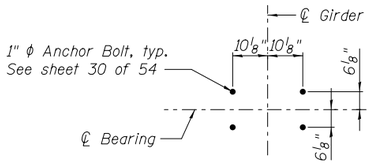
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -
	CHECKED - JTH	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

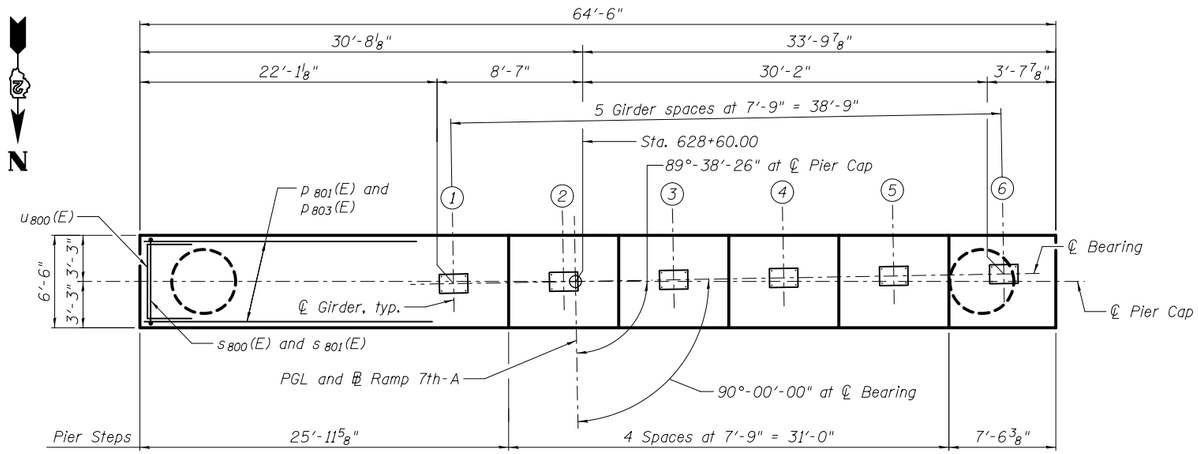
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 DETAILS - 2
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 39 OF 54 SHEETS

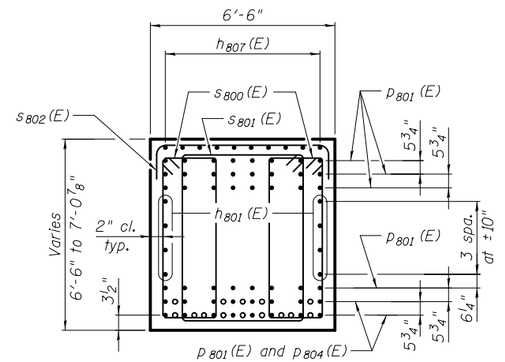
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1074
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			



ANCHOR BOLT LAYOUT



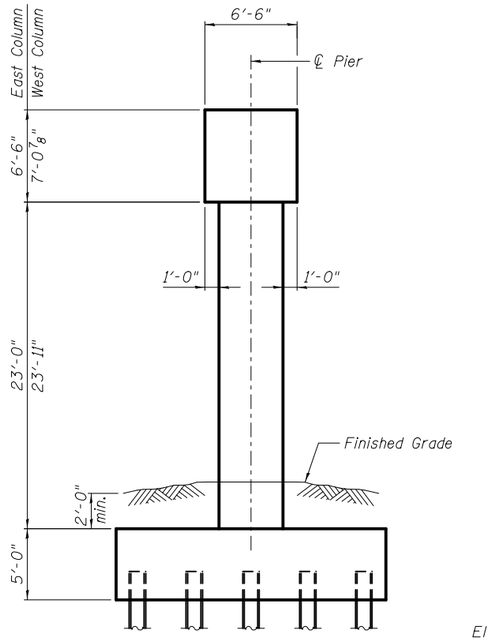
PLAN OF PIER CAP



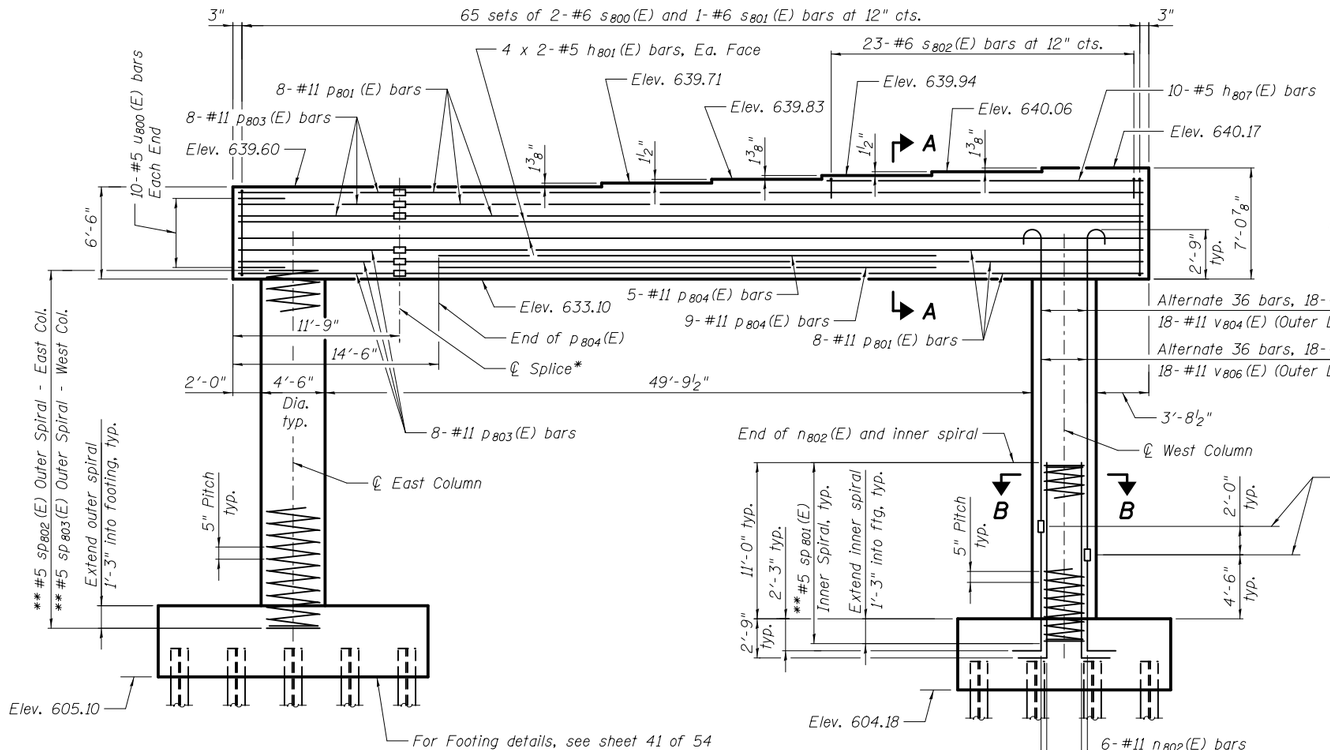
SECTION A-A

○ p_{804}(E) bars

Note:
Locate p_{804}(E) bars in cap as shown in Section A-A to alleviate congestion within sections over column.



END VIEW

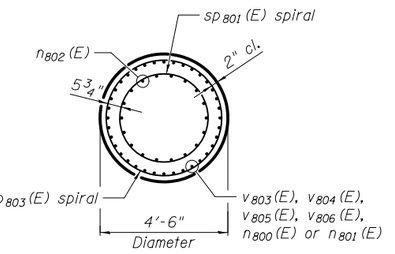


PIER 4 ELEVATION

(Looking South)

* Mechanical Splicer

** Provide 1½ extra turns, top and bottom. Extend outer spiral 2" into pier cap. Provide min. 4-#4 spacers or equivalent.



SECTION B-B

MINIMUM BAR LAP

#5 Bar = 3'-8"

PILE DATA

Type: HP14x102
Nominal Required Bearing: 975 Kips
Factored Resistance Available: 682 Kips East Footing
634 Kips West Footing
Est. Length: 26' (Min. Tip Elev. 584.1) East Footing
35' (Min. Tip Elev. 578.2) West Footing
Soil Setup Pile Length: N/A-Rocks
No. Production Piles: 36
No. Test Piles: 0

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Bars indicated thus 4 x 2-#5 etc. indicates 4 lines of bars with 2 lengths per line.
For Bill of Material, see sheet 41 of 54.
For details of piles, see sheet 47 of 54.
For mechanical splicer details, see sheet 48 of 54.
See Heat of Hydration Control for Concrete Structures special provision for concrete pour requirements.

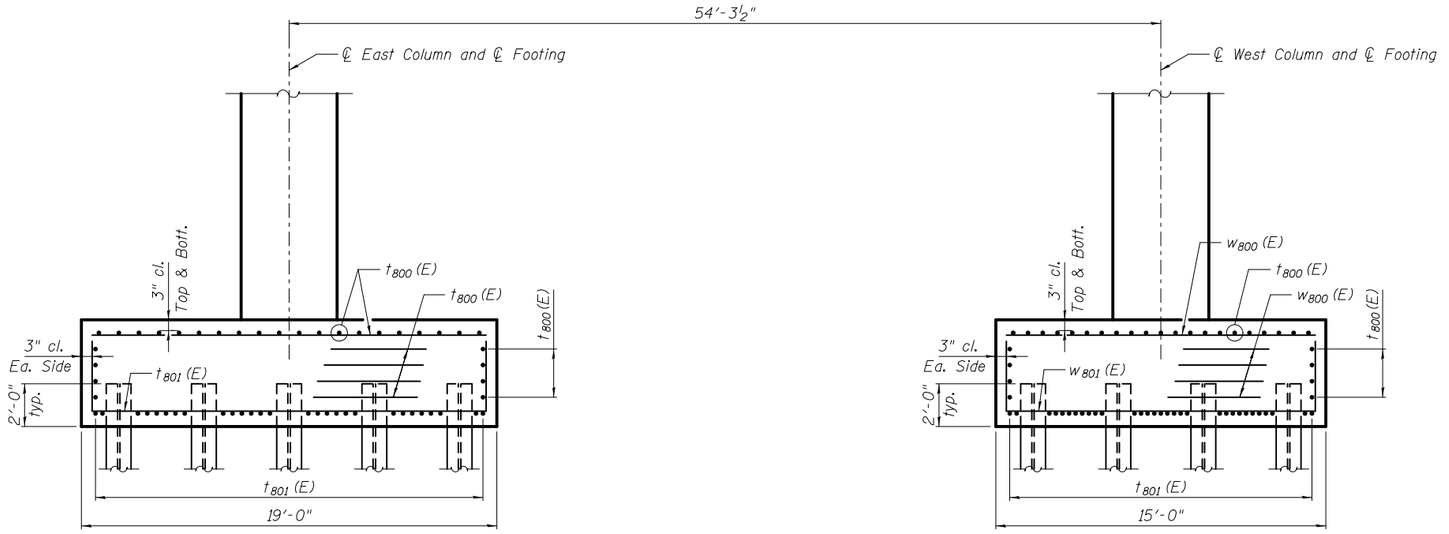
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -
	CHECKED - JTH	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

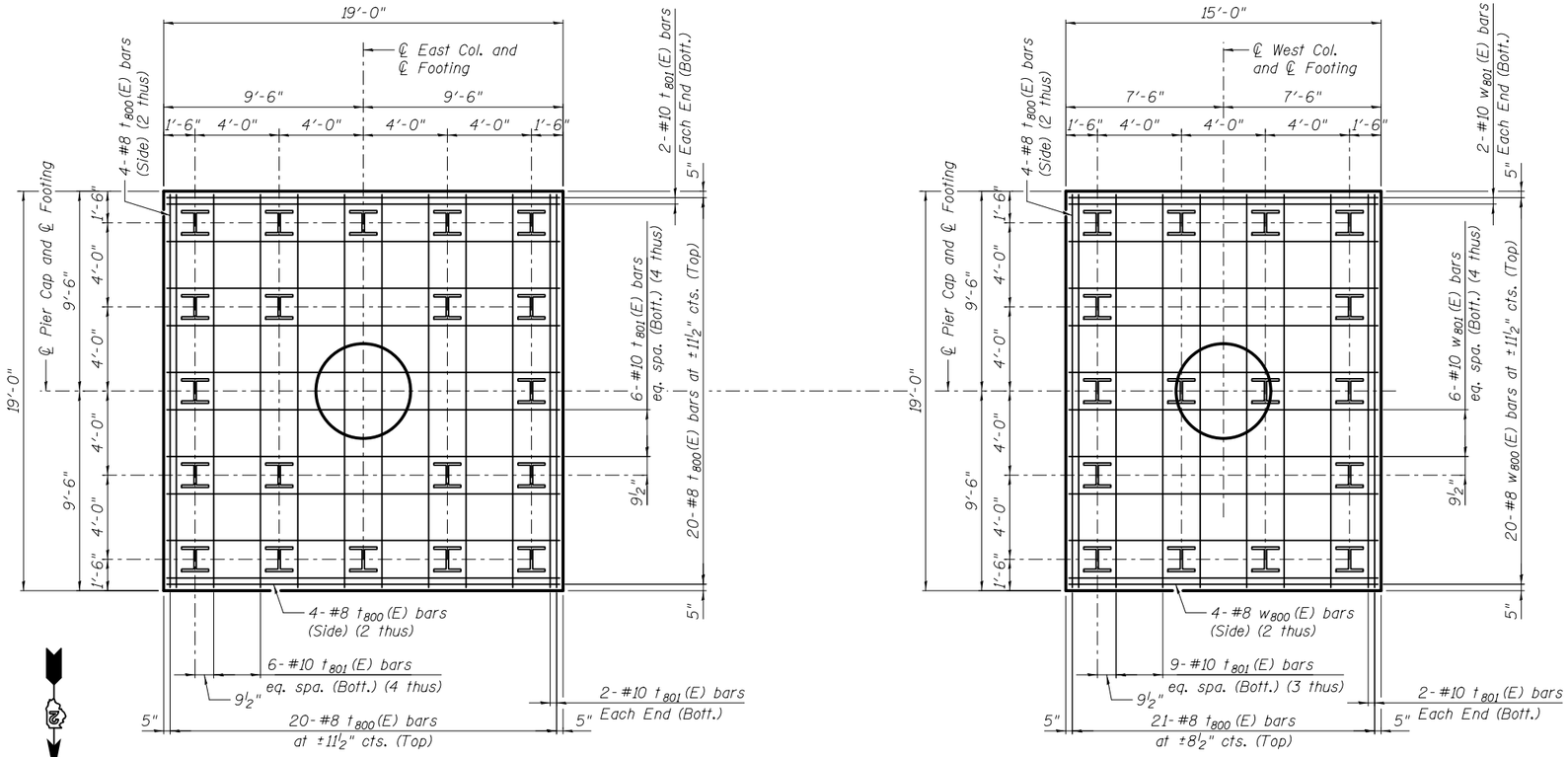
PIER 4
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 40 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1075
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

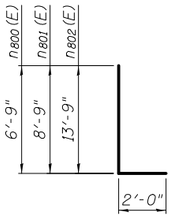


FOOTING DETAIL

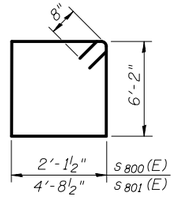
(Looking South)



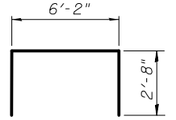
FOOTING PLAN



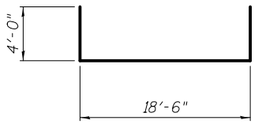
BARS n_{800}(E), n_{801}(E) AND n_{802}(E)



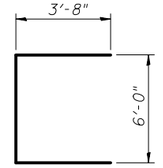
BARS s_{800}(E) AND s_{801}(E)



BAR s_{802}(E)



BAR t_{801}(E)

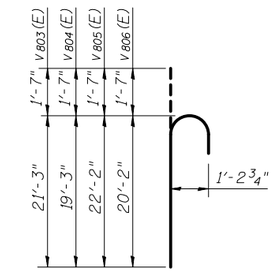


BAR u_{800}(E)

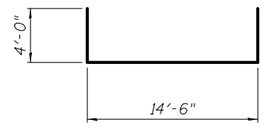
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{801}(E)	16	#5	33'-11"	
h_{807}(E)	10	#5	22'-8"	
n_{800}(E)	36	#11	8'-9"	
n_{801}(E)	36	#11	10'-9"	
n_{802}(E)	12	#11	15'-9"	
p_{801}(E)	48	#11	52'-7"	
p_{803}(E)	48	#11	11'-7"	
p_{804}(E)	14	#11	37'-0"	
s_{800}(E)	130	#6	17'-11"	
s_{801}(E)	65	#6	23'-1"	
s_{802}(E)	23	#6	11'-6"	
* sp_{801}(E)	2	#5	12'-3"	
* sp_{802}(E)	1	#5	24'-5"	
* sp_{803}(E)	1	#5	25'-4"	
u_{800}(E)	20	#5	13'-4"	
v_{803}(E)	18	#11	22'-10"	
v_{804}(E)	18	#11	20'-10"	
v_{805}(E)	18	#11	23'-9"	
v_{806}(E)	18	#11	21'-9"	
t_{800}(E)	85	#8	18'-6"	
t_{801}(E)	87	#10	26'-6"	
w_{800}(E)	28	#8	14'-6"	
w_{801}(E)	28	#10	22'-6"	
Structure Excavation			Cu. Yd.	666
Concrete Structures			Cu. Yd.	251.5
Reinforcement Bars, Epoxy Coated			Pound	59,890
Furnishing Steel Piles HP14x102			Foot	1,080
Driving Piles			Foot	1,080
Concrete Sealer			Sq. Ft.	2,370

* Length is height of spiral.



BARS v_{803}(E) THRU v_{806}(E)



BAR w_{801}(E)

Note:
For pile anchorage details, see sheet 38 of 54.

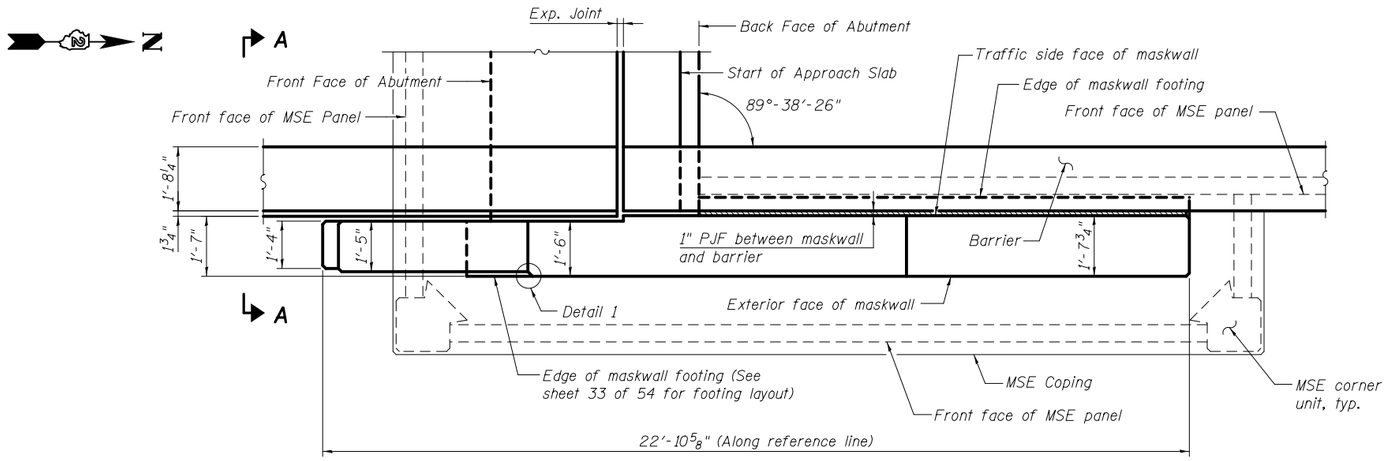
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -
	CHECKED - JTH	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

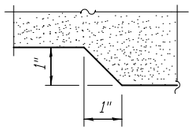
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 4 DETAILS
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 41 OF 54 SHEETS

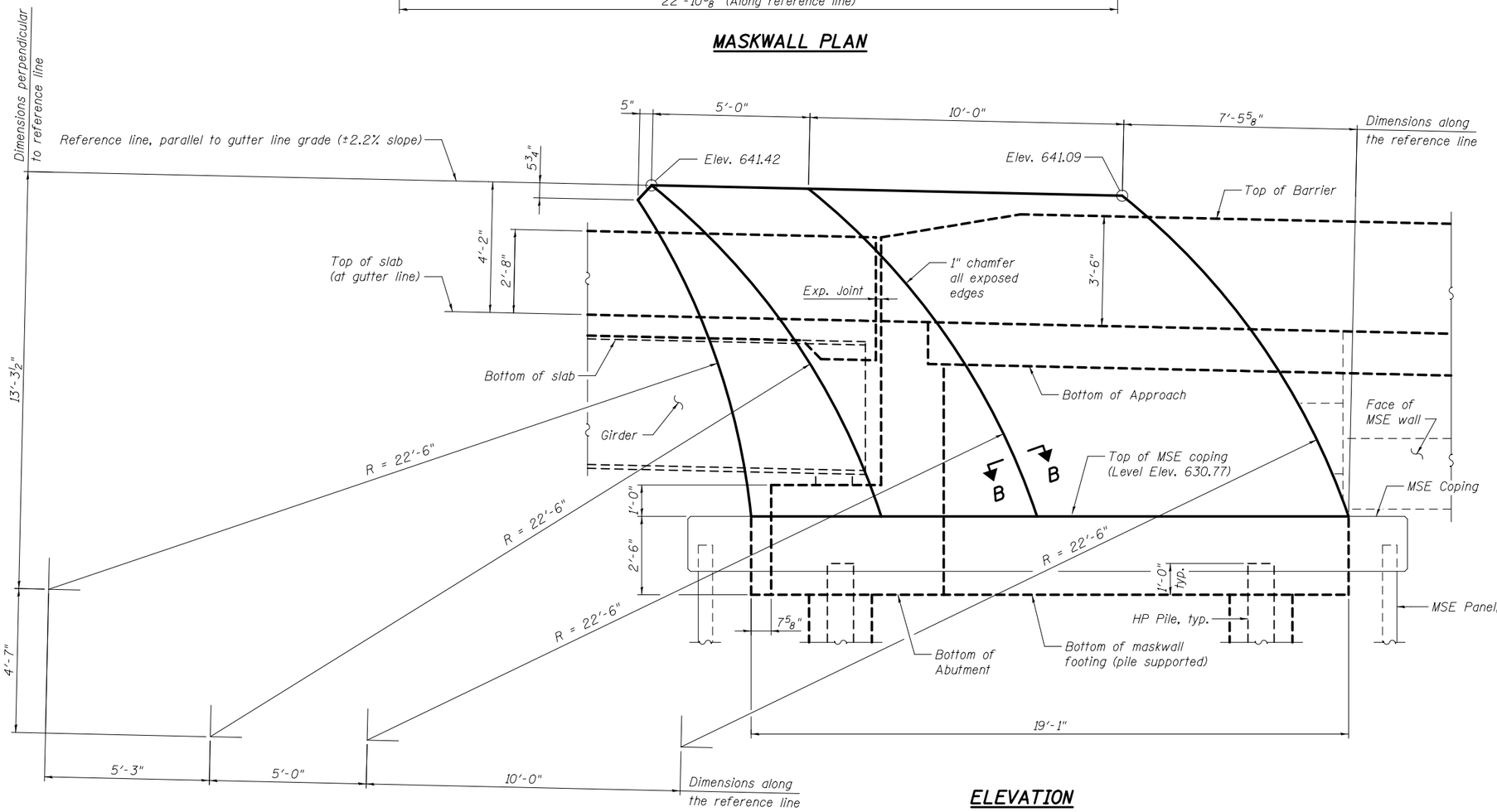
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1076
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			



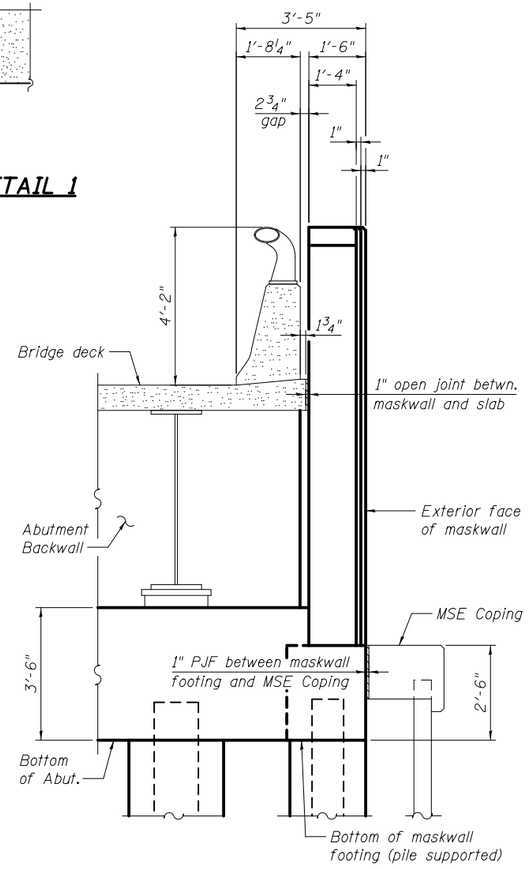
MASKWALL PLAN



SECTION B-B - DETAIL 1



ELEVATION



VIEW A-A

Notes:

Top of maskwall shall be parallel to the longitudinal grade of the roadway and any adjacent barrier.

The maskwalls are to be poured after the adjacent barrier railings are poured on the bridge slab, the wingwalls and the approach slab.

See SN 081-6016 for MSE wall details.

For Bill of Material, see sheet 46 of 54.

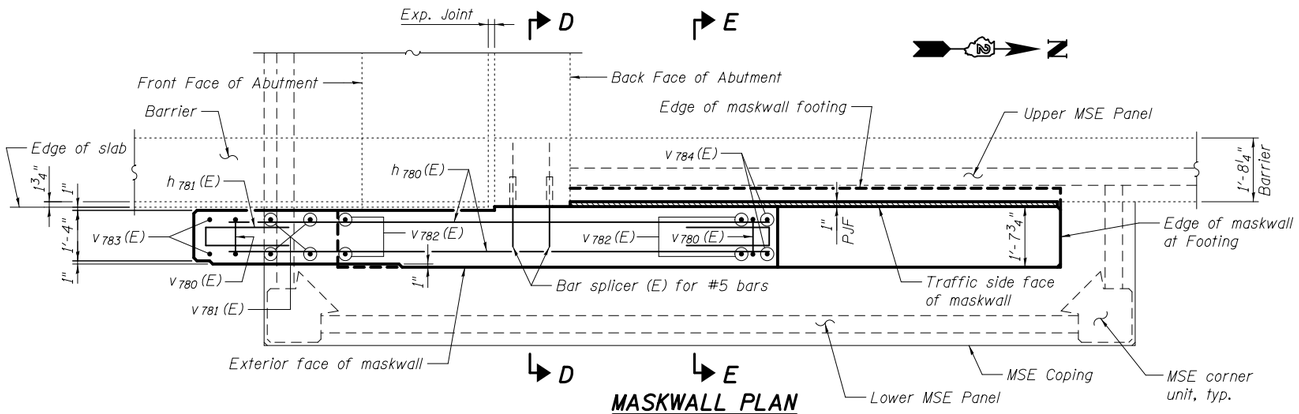
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - APL/YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

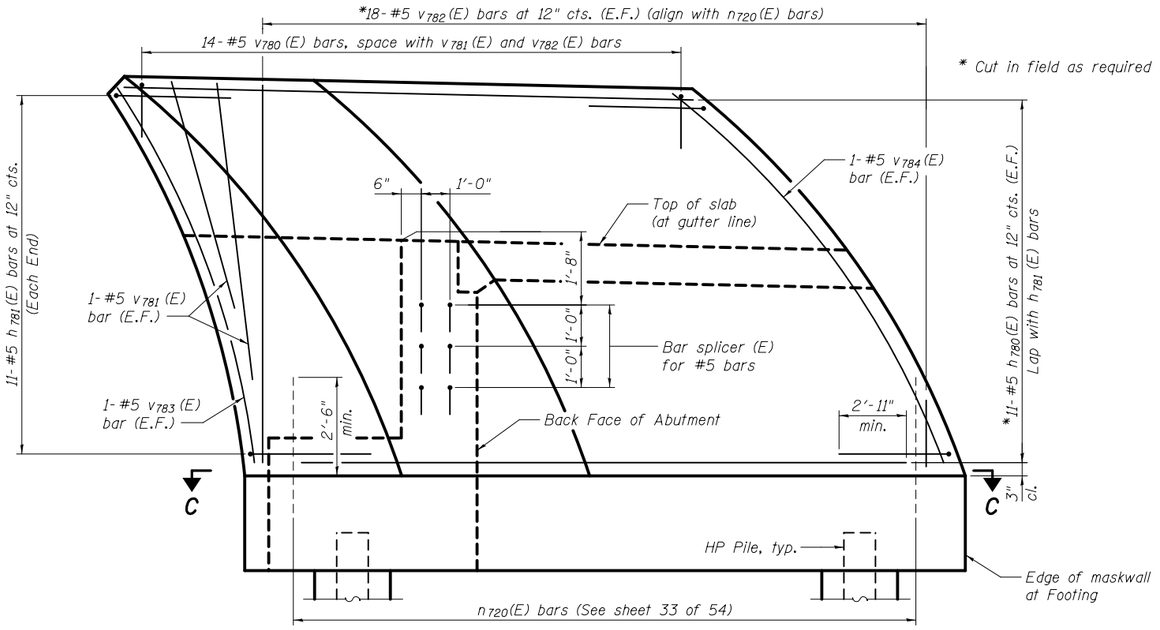
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH MASKWALL PLAN AND ELEVATION
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 42 OF 54 SHEETS

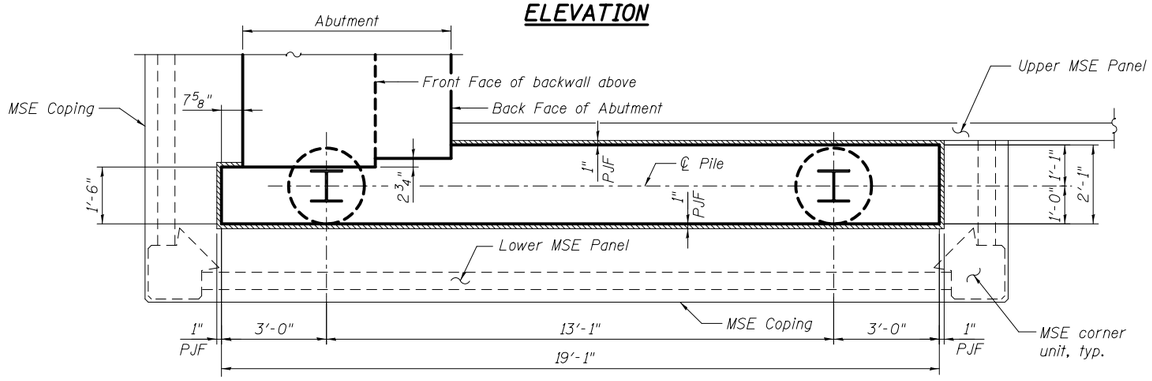
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1077
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



MASKWALL PLAN

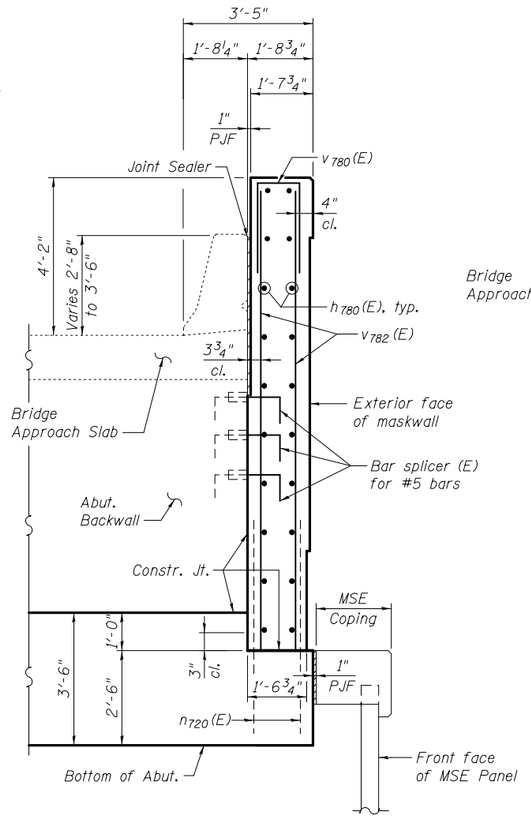


ELEVATION

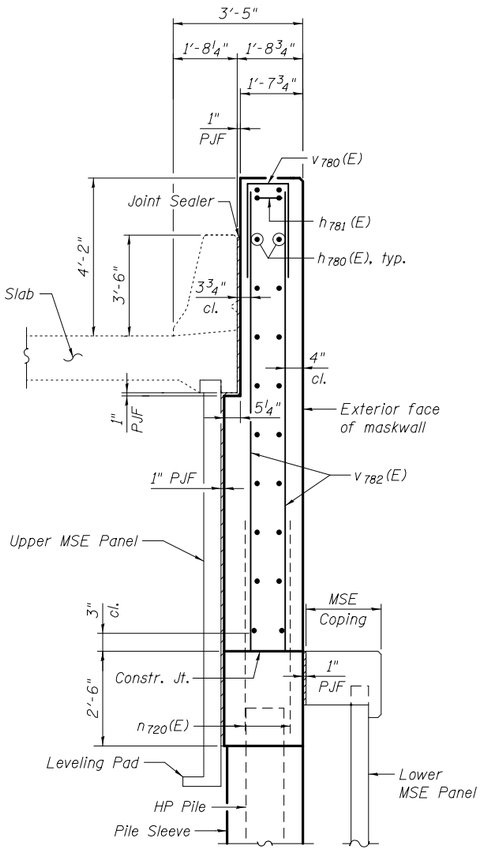


SECTION C-C

(Footing Partial Plan)



SECTION D-D



SECTION E-E

Notes:

See SN 081-6016 for MSE wall details.

Two inch clear concrete cover unless noted otherwise.

The joint sealer shall be light gray nonsag latex caulking sealer marketed for outdoor use. Cost of the joint sealer shall be included with Concrete Structures.

See sheets 32, 33 and 36 of 54 for maskwall footing bar detailing.

When exterior face of barrier is exposed, use rubbed finish same as maskwall.

For details of bar splicers, see sheet 48 of 54.

For Bill of Material, see sheet 46 of 54.

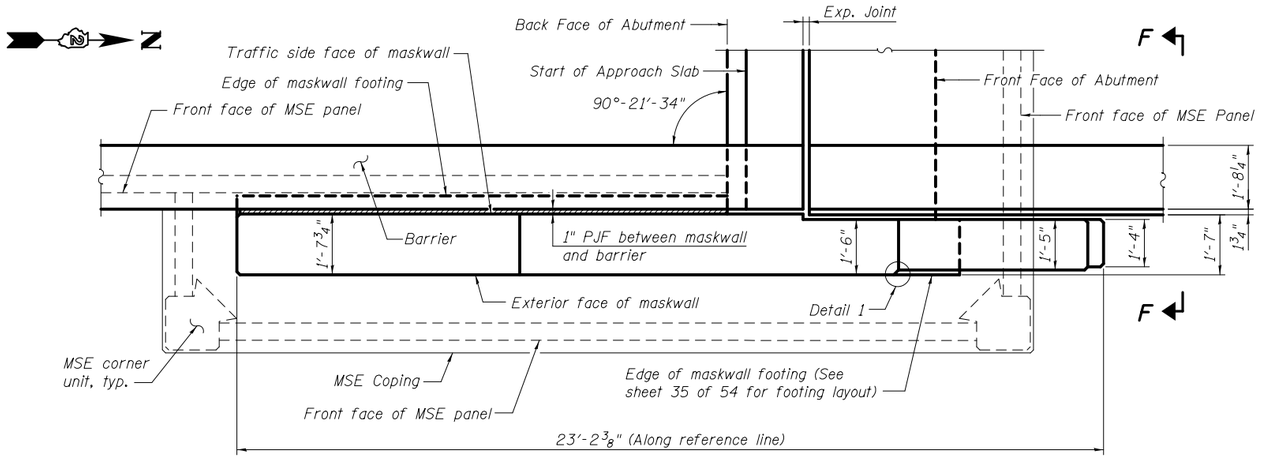
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JTH	REVISED -
	CHECKED - APL/YSS	REVISED -
PLOT SCALE =	DRAWN - PRC	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

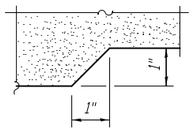
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH MASKWALL DETAILS
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 43 OF 54 SHEETS

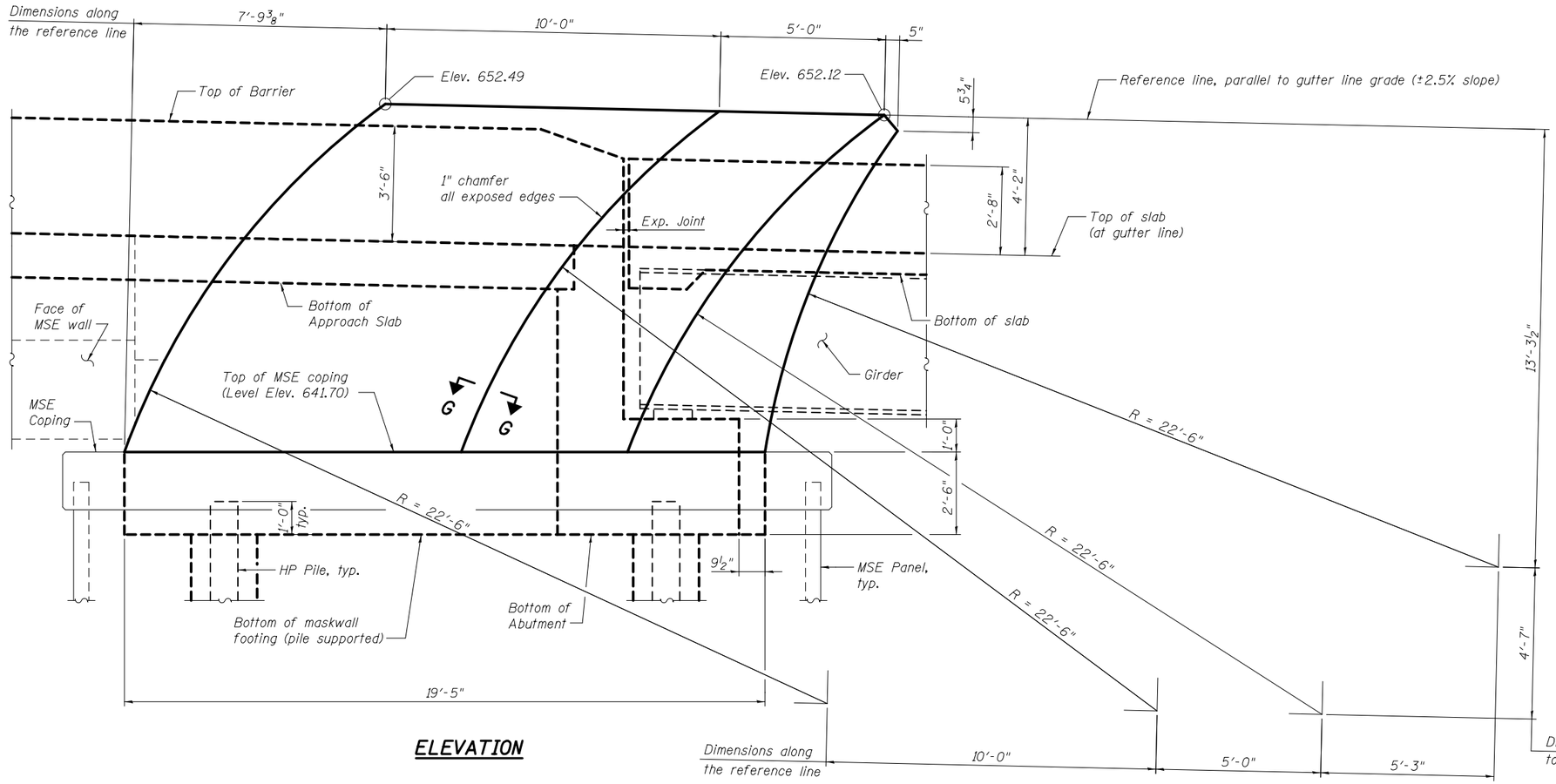
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1078
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			



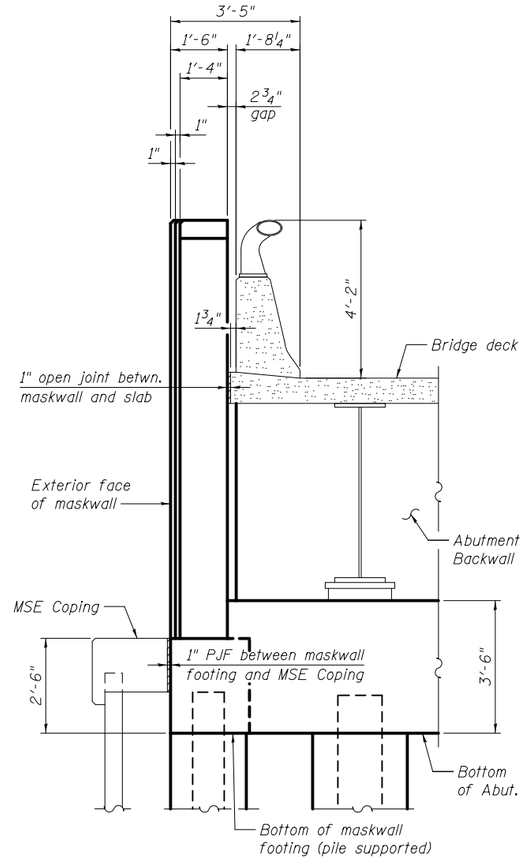
MASKWALL PLAN



SECTION G-G - DETAIL 1



ELEVATION



VIEW F-F

Notes:

Top of maskwall shall be parallel to the longitudinal grade of the roadway and any adjacent barrier.

The maskwalls are to be poured after the adjacent barrier railings are poured on the bridge slab, the wingwalls and the approach slab.

See SN 081-6015 for MSE wall details.

For Bill of Material, see sheet 46 of 54.

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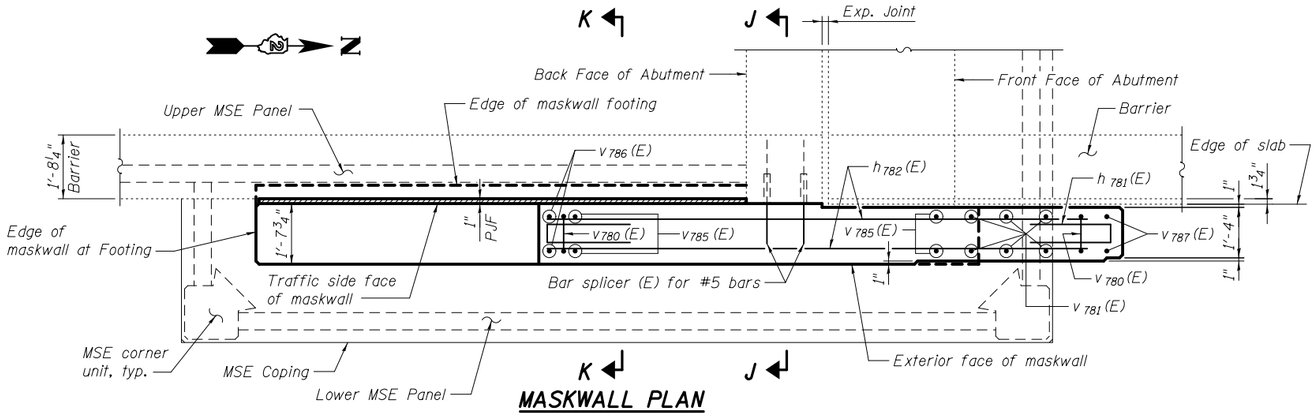
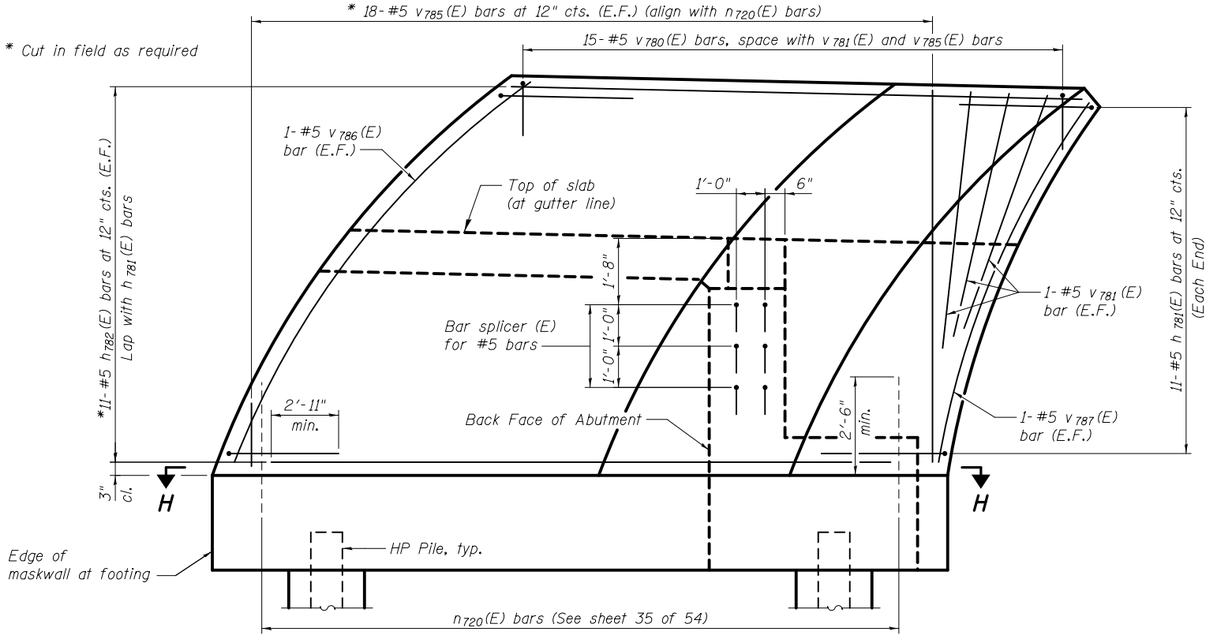
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH MASKWALL PLAN AND ELEVATION
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 44 OF 54 SHEETS

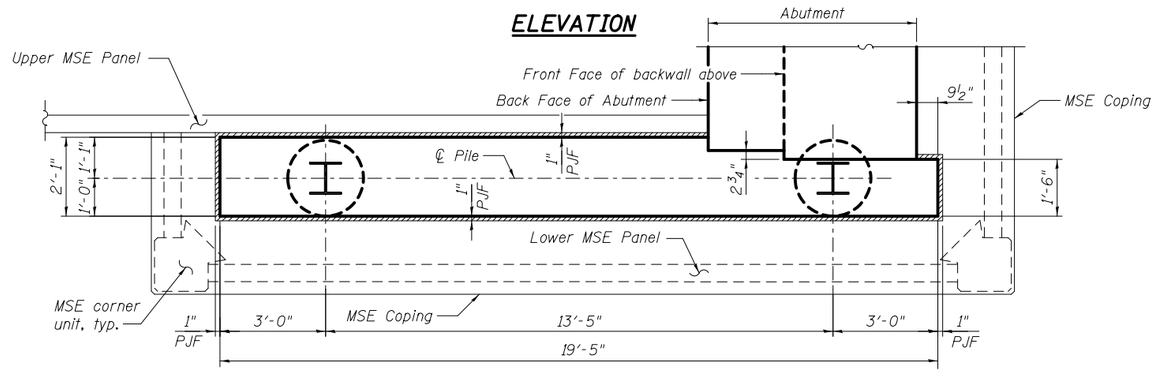
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1079
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



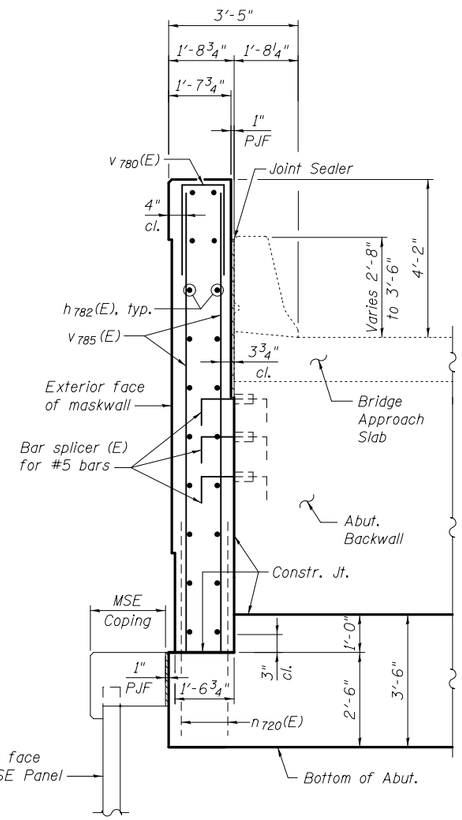
MASKWALL PLAN



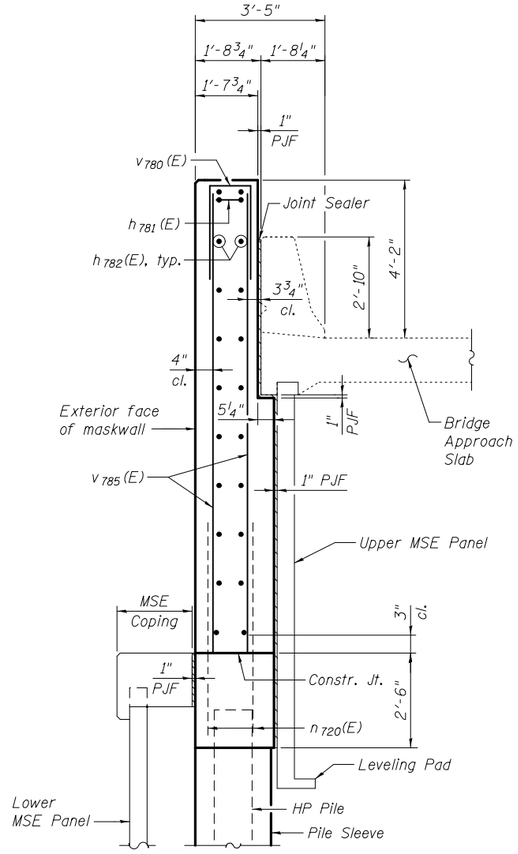
ELEVATION



SECTION H-H
(Footing Partial Plan)



SECTION J-J



SECTION K-K

Notes:

See SN 081-6015 for MSE wall details.

Two inch clear concrete cover unless noted otherwise.

The joint sealer shall be light gray nonsag latex caulking sealer marketed for outdoor use. Cost of the joint sealer shall be included with Concrete Structures.

See sheets 34 thru 36 of 54 for maskwall footing bar detailing.

When exterior face of barrier is exposed, use rubbed finish same as maskwall.

For details of bar splicers, see sheet 48 of 54.

For Bill of Material, see sheet 46 of 54.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH MASKWALL DETAILS
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 45 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1080
		CONTRACT NO. 64E26		
	ILLINOIS FED. AID PROJECT			

MASKWALL FINISHING NOTES

If form ties are used in forming the maskwall, arrange ties to be regularly spaced and in a consistent geometric grid pattern. Do not locate ties at edges of concrete rustications.

Following form removal, a rubbed surface finish in accordance with Article 503.15 (b) of the Standard Specifications shall be required but with the following additional requirements:

1. Demonstrate hole and void patching operations in accordance with Article 503.15 (b) of the Standard Specifications on a four foot section of vertical maskwall located in an inconspicuous area. Begin patching demonstration by using a mortar mix comprised of 1 part white cement, 2 parts standard portland cement, 6 parts mortar sand, and water. The quantity of water used shall produce a mortar consistency as dry as possible to use effectively.

2. When patching test areas have set, saturate with water and rub with a fine carborundum stone until surfaces are smooth in texture. Remove loose powder and other contaminants by rubbing with burlap and rinsing with water. After surfaces have dried, patch color and texture of surfaces will be reviewed by the Engineer. Patches should match or be slightly lighter than surrounding concrete. If results are unsatisfactory, adjust patching mortar mix proportions and perform another demonstration until results are deemed satisfactory by the Engineer.

3. Use the patching mortar mix proportions that are approved by the Engineer as a result of the satisfactory demonstration. Do not use patching mortar that is more than 1 hour old.

4. Finished maskwall concrete shall be smooth and show no wood grain or other texture from the face of the forms used. All costs for repair or covering wood grain or other textures on these surfaces shall be the responsibility of the Contractor.

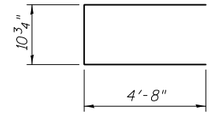
5. Do not apply curing compounds, sealers, or other coatings to the finished maskwalls.

BILL OF MATERIAL
NORTH ABUTMENT MASKWALL

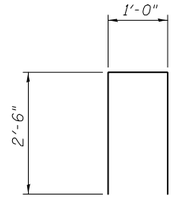
Bar	No.	Size	Length	Shape
h_{780}(E)	22	#5	18'-7"	—
h_{781}(E)	22	#5	10'-3"	⊏
v_{780}(E)	14	#5	6'-0"	⊏
v_{781}(E)	4	#5	6'-3"	—
v_{782}(E)	36	#5	10'-4"	—
v_{783}(E)	2	#5	10'-7"	⌒
v_{784}(E)	2	#5	12'-3"	⌒
Concrete Structures			Cu. Yd.	11.7
Reinforcement Bars, Epoxy Coated			Pound	1,220

BILL OF MATERIAL
SOUTH ABUTMENT MASKWALL

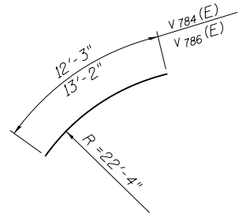
Bar	No.	Size	Length	Shape
h_{781}(E)	22	#5	10'-3"	⊏
h_{782}(E)	22	#5	18'-11"	—
v_{780}(E)	15	#5	6'-0"	⊏
v_{781}(E)	6	#5	6'-3"	—
v_{785}(E)	36	#5	10'-7"	—
v_{786}(E)	2	#5	13'-2"	⌒
v_{787}(E)	2	#5	10'-6"	⌒
Concrete Structures			Cu. Yd.	12.2
Reinforcement Bars, Epoxy Coated			Pound	1,250



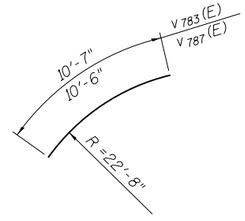
BAR h_{781} (E)



BAR v_{780} (E)



BARS v_{784} (E) AND v_{786} (E)



BARS v_{783} (E) AND v_{787} (E)

NOTE:

Contractor shall exercise all due care to assure that the maskwall surface finish is intact and the overall appearance is aesthetically pleasing at completion of the project. If the maskwalls are constructed before the deck, approach slab or parapets, additional effort may be required in forming and placing the deck, approach slab and/or parapet concrete, and precautions shall be taken to protect the maskwalls during these operations. If the maskwalls are constructed after deck, approach slab or parapets, temporary earth retention may be required. In either case, any costs for protecting the maskwalls, working around them or temporary earth retention and final grading shall be included in the cost of Concrete Structures.

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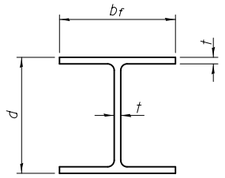
DEPARTMENT OF TRANSPORTATION

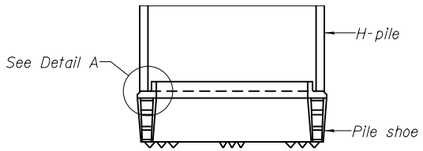
MASKWALL NOTES AND BILL OF MATERIAL
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 46 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1081
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

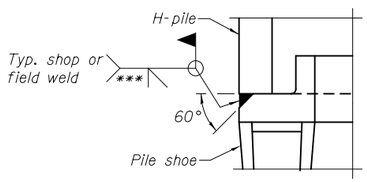


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	$14\frac{1}{4}''$	$14\frac{7}{8}''$	$\frac{13}{16}''$	30″
x102	14″	$14\frac{3}{4}''$	$\frac{11}{16}''$	30″
x89	$13\frac{7}{8}''$	$14\frac{3}{4}''$	$\frac{5}{8}''$	30″
x73	$13\frac{5}{8}''$	$14\frac{5}{8}''$	$\frac{1}{2}''$	30″
HP 12x84	$12\frac{1}{4}''$	$12\frac{1}{4}''$	$\frac{11}{16}''$	24″
x74	$12\frac{1}{8}''$	$12\frac{1}{4}''$	$\frac{5}{8}''$	24″
x63	12″	$12\frac{1}{8}''$	$\frac{1}{2}''$	24″
x53	$11\frac{3}{4}''$	12″	$\frac{7}{16}''$	24″
HP 10x57	10″	$10\frac{1}{4}''$	$\frac{9}{16}''$	24″
x42	$9\frac{3}{4}''$	$10\frac{1}{8}''$	$\frac{7}{16}''$	24″
HP 8x36	8″	$8\frac{1}{8}''$	$\frac{7}{16}''$	18″

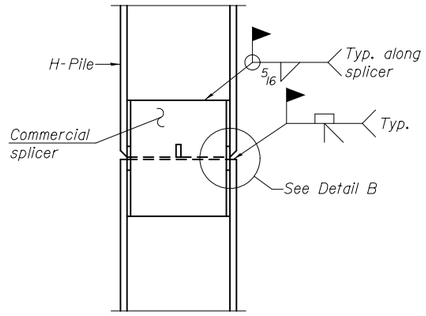


ELEVATION

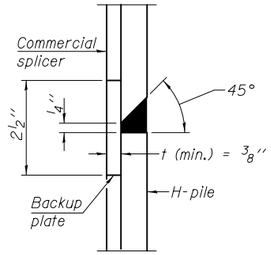


DETAIL A

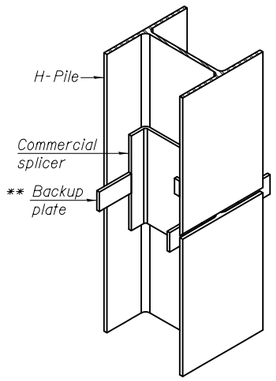
H-PILE SHOE ATTACHMENT



ELEVATION

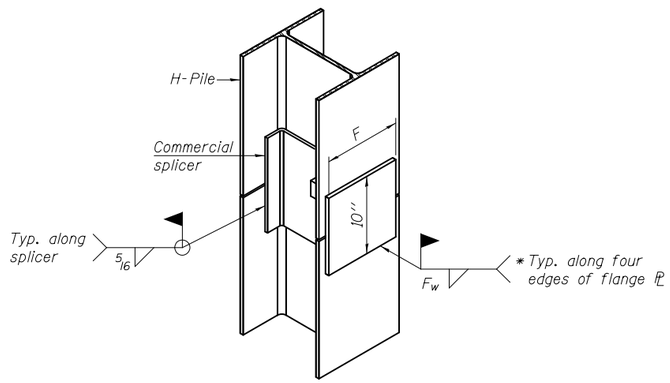


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



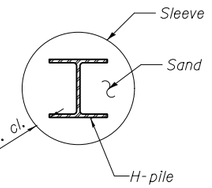
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds ¼″ from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer ($\frac{5}{16}''$ min.).



PILE SLEEVE SECTION

Notes:

Piles are recommended to be driven before the MSE wall is constructed. See sheets 33 and 35 of 54.

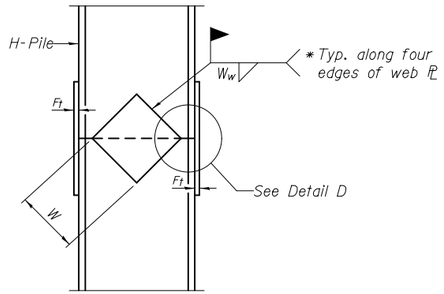
Set pile sleeves prior to construction of the MSE walls.

Sleeves should extend from the bottom of the abutment to the bottom of the reinforced soil mass.

After the piles and pile sleeves are in place, the pile sleeves shall be filled with dry loose sand according to Section 512.09(c) of the Standard Specifications.

Cost of pile sleeves, setting pile sleeves, dry loose sand, and placing dry loose sand is included in the cost of Driving Piles.

See SN 081-6015 and SN 081-6016 for ground improvement requirements and MSE details.



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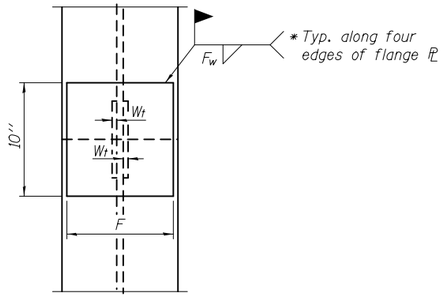
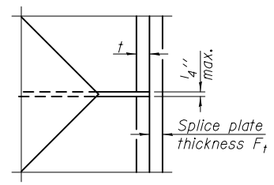


END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	$12\frac{1}{2}''$	1″	$\frac{7}{8}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x102	$12\frac{1}{2}''$	$\frac{7}{8}''$	$\frac{3}{4}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x89	$12\frac{1}{2}''$	$\frac{3}{4}''$	$\frac{11}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x73	$12\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{9}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
HP 12x84	10″	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x74	10″	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x63	10″	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x53	10″	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 10x57	8″	$\frac{3}{4}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x42	8″	$\frac{5}{8}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 8x36	7″	$\frac{5}{8}''$	$\frac{7}{16}''$	$4\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$

WELDED PLATE FIELD SPLICE

Note:

The steel H-piles shall be according to AASHTO M270 Grade 50.

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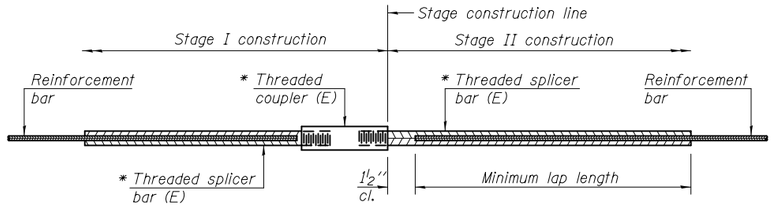
STEEL H-PILE DETAILS
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 47 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1082
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



STANDARD BAR SPLICER ASSEMBLY

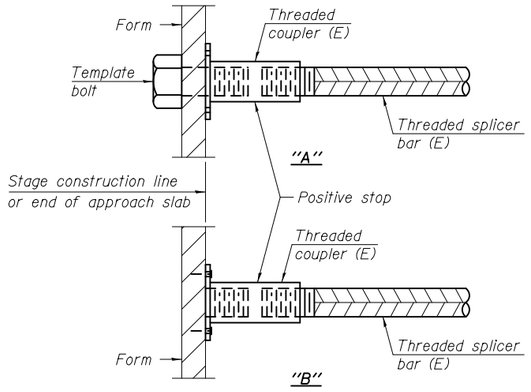
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

Threaded splicer bar length = min. lap length + 1½" + thread length

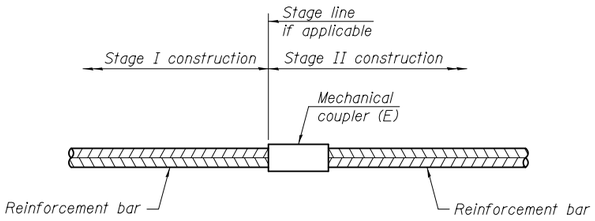
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



INSTALLATION AND SETTING METHODS

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

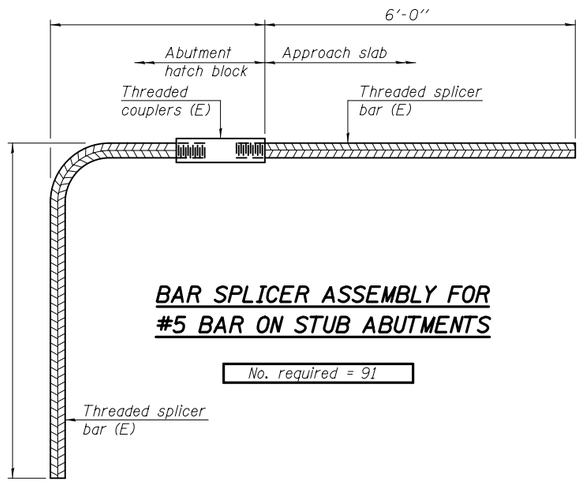


STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Pier 3	11	120
Pier 4	11	120

BAR SPLICER ASSEMBLY FOR #5 BAR ON MASKWALL

No. required = 12



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 91

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

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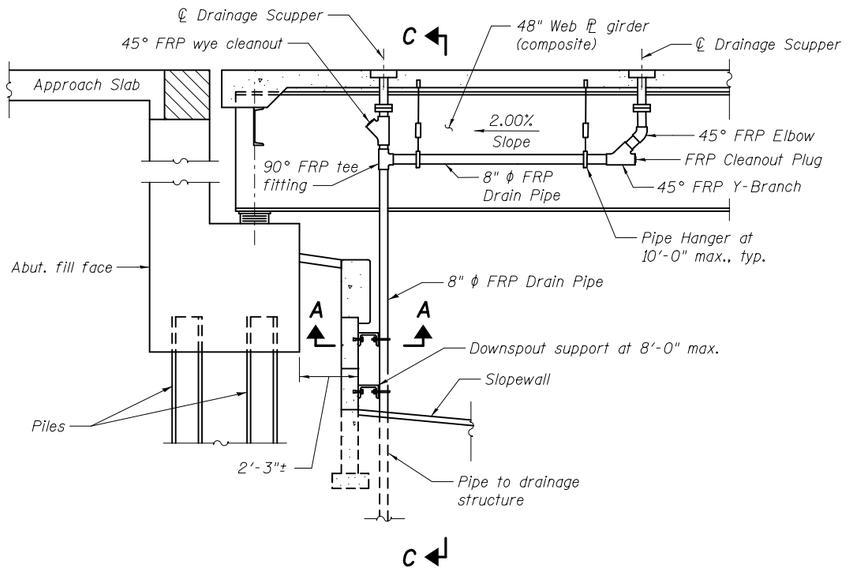
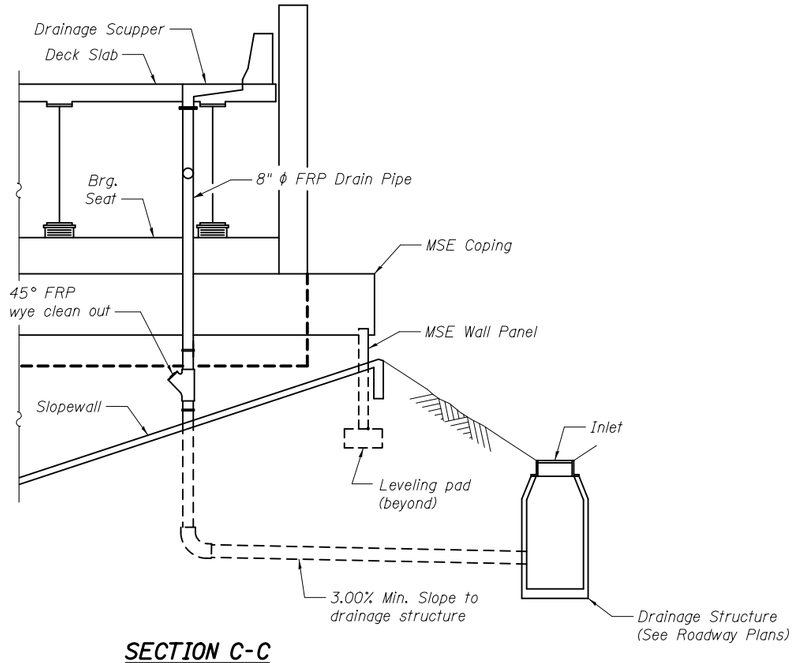
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 48 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1083
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		



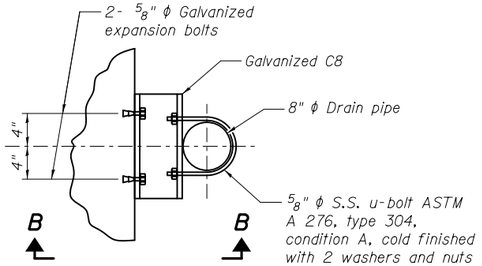
DRAINAGE AT NORTH ABUTMENT

(See retaining wall SN 081-6016 plans for MSE wall details)

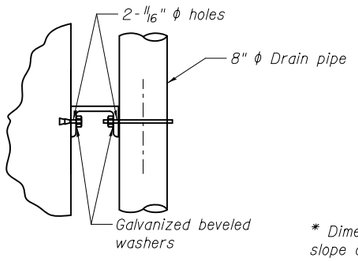


SECTION C-C

(Looking North)

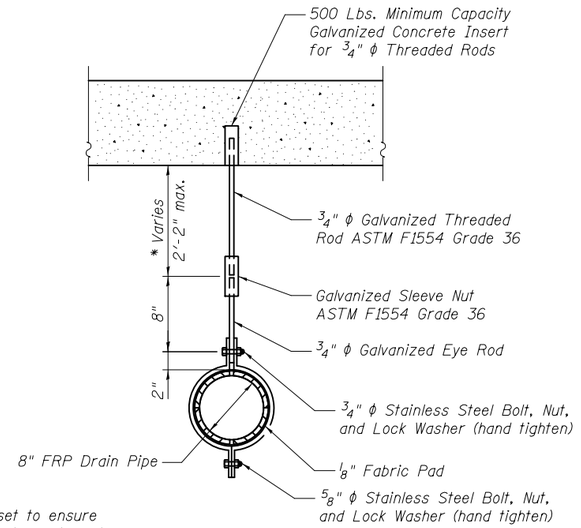


SECTION A-A

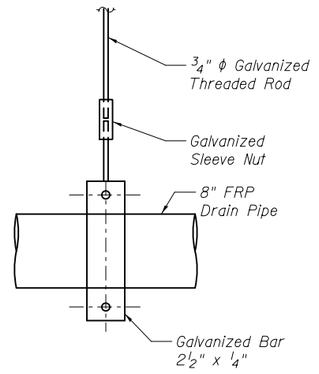


VIEW B-B

* Dimension shall be set to ensure slope of 2.00% and that no element of the drainage system, except the downspout, passes below the bottom of the girders.



PIPE HANGER DETAIL



ELEVATION

BILL OF MATERIAL

Drainage System	Lump Sum	0.5

Notes:

For location of drainage scupper stations, see table on sheet 1 of 54.

For details of drainage scuppers, see sheet 23 of 54.

The cost of furnishing, fabricating and installing of the bridge drainage system including pipes, fittings, cleanouts, connections to proposed drainage structures, and all mounting hardware neccessary to install and place the system into service shall be included in the lump sum price bid for Drainage System.

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED -	
	CHECKED - JTH	REVISED -	
PLOT SCALE =	DRAWN - PRC	REVISED -	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLOSED DRAINAGE AT NORTH ABUTMENT
RAMP 7TH-A OVER 19TH STREET – STRUCTURE NO. 081-0181
SHEET NO. 49 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1084
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 10/5/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=561907.847, E=2459825.874), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. ILR0801
Station 631+07
Offset 16' Rt.
Ground Surface Elev. 623.02 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Grass Matter followed by silty clay with sands and topsoil
622.02				
	4			**Silty Clay With Sand(CL-ML)** dark brown with brown, dry to moist, non plastic, little to few coarse to fine sands, strong cementation, occasional reddish brick fragments, possible fill
	4			
	5			
620.02	5			
	3			
	3			**Lean Clay With Sand(CL)** medium brown, dry to moist, low plasticity, medium stiff, little to few coarse to fine sands, dark brown silty pocket at top of sample, possible fill
-5	3			
617.02	1			
	3	3.75-4.0		**Sandy Lean Clay(CL)** olive gray with medium brown and gray, dry to moist, medium stiff, few coarse to fine sands, trace fine subangular to subrounded gravels, dark gray with occasional root matter at bottom of sample
	5	P		
	6			
615.02	3			
	4	1.3		
	5			
-10	6			**Sandy Lean Clay With Gravel (CL)** medium brown with gray, dry, strongly cemented, stiff, crumbly, few coarse to fine sands, little to trace of medium to fine gravels, occasional medium to fine sand seams scattered throughout, dark gray with heavy matter at top 2" of sample, possible old topsoil followed by native soil Rimac: Pu = 68 lbs
	2			
	3	4.3		
	5	P		
	7			
	3			
	4	4.5		
-15	5	P		
	6			same as above, medium brown, dry to moist, stiff, strongly cemented, glacial till
				same as above, medium brown to brown, stiff, strongly cemented, dry, glacial till
605.02				
	3			
	5	4.0-4.5		uniform gray, dry to moist, stiff, little to few coarse to fine sands, scattered sand pockets, possible unweathered glacial till
	7	P		
-20	10			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Sandy Lean Clay(CL) medium brown with orange brown, dry, non plastic, stiff, few coarse to fine sands, frequent sand seams, approximately 1/8"-1/4" thick at center and bottom of sample, sand seams of medium to fine sands, oxidized, possible weathered till with scattered sand seams *(continued)* medium brown with gray, mottled with orange brown, dry, stiff, few coarse to fine sands, very oxidized, small pockets of dark gray to black coal like deposits in middle of sample, possible weathered glacial till Rimac: Pu = 100 lbs
	3			
	5	1.9		
	7	B		
-25	10			
				olive gray with light brown, dry to moist, slightly oxidized at top, stiff, possible unweathered glacial till
	3			
	5	3.8		
	6	P		
-30	9			
				Lean Clay With Sand(CL) uniform gray, dry to moist, stiff, little to few coarse to fine sands, scattered sand pockets, possible unweathered glacial till Rimac: Pu = 70 lbs
590.02	3			
	5	1.3		
	7			
-35	9			
				uniform gray, dry to moist, stiff, little to few coarse to fine sands, scattered sand pockets, possible unweathered glacial till
	2			
583.52	4			
583.02 -40	8 12			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Date 10/5/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=561907.847, E=2459825.874), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. ILR0801
Station 631+07
Offset 16' Rt.
Ground Surface Elev. 623.02 ft

Surface Water Elev. ft
Stream Bed Elev. ft

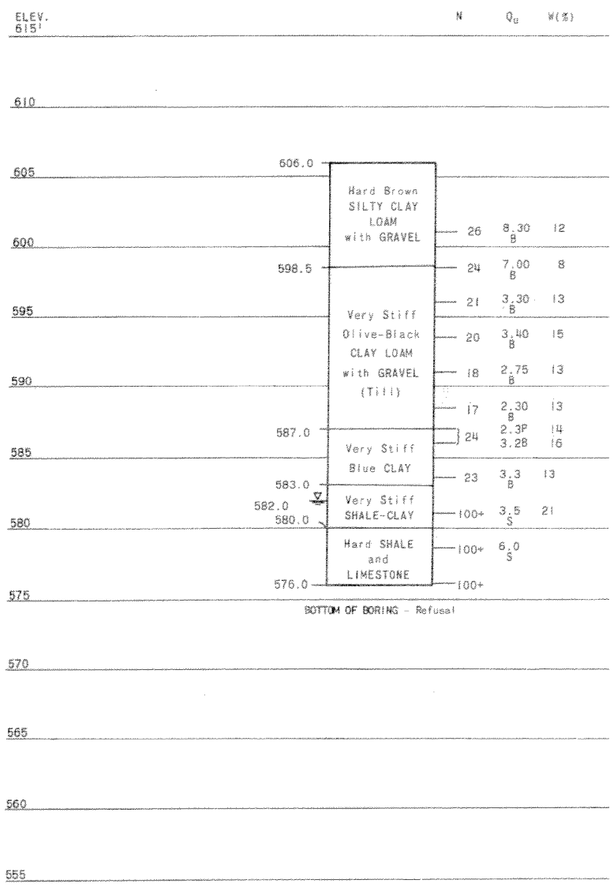
Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Clayey Sand With Silt(SC) gray, moist to wet, medium dense, clay with medium to fine sands, possible residual soil
				End of Boring
-45				
-50				
-55				
-60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

TEST BORING
NO. S-41
Sta. 630+02 7' Rt.



For the Boring Logs S-38 and S-42, see Boring Logs - 6 sheet in the I-74 over 19th St. - Structure No. 081-0179 WB and 081-0180 EB plan set.

Illinois Department of Transportation
Division of Highways
JCI

SOIL BORING LOG

Page 1 of 2

Date 9/13/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561671.671, E=2459820.632), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. 19BR-106
Station 628 + 71
Offset 13' Rt.
Ground Surface Elev. 612.90 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
612.40 CONCRETE - 4" thick plus base course.			
CLAY - yellowish brown, little to some silt, medium plastic, medium stiff, moist.	1		
	2 3	1.2 B	15.4
609.40 SILT - brown, tan, orange, and dark brown, mottled, some clay, to CLAY, some silt, medium plastic, medium stiff, moist.	WOH		
-5	1 3	1.0 S	12.9
	WOH		
	2 3	1.1 B	18.6
	WOH		
-10	WOH 3	0.8 B	18.1
		0.9 B	16.4
- [Dry unit weight = 116.3 pcf]			
- gray and tan silt, little to some clay at 13'. 599.40 CLAY TILL - brown to gray and greenish gray, silty to sandy, trace to some fine to coarse sand, trace fine gravel, hard, dry to slightly moist (GLACIAL TILL).	5		
-15	6 7	3.0 B	14.8
	3		
	6 8	2.7 B	15.6
	6		
-20	11 18	4.5 S	11.2

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY TILL - brown to gray and greenish gray, silty to sandy, trace to some fine to coarse sand, trace fine gravel, hard, dry to slightly moist (GLACIAL TILL). *(continued)*	9		
	25 19	6.2 B	10.9
	7		
-25	9 14		13.1
[Groundwater not noted in soils during drilling operations.]	5		
585.90	50/2"		
Borehole continued with rock coring.			
-30			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
JCI

ROCK CORE LOG

Page 2 of 2

Date 9/13/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561671.671, E=2459820.632), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO.
Station

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 586.20 ft
Begin Core Elev. 585.90 ft

BORING NO. 19BR-106
Station 628 + 71
Offset 13' Rt.
Ground Surface Elev. 612.90 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
585.90 LIMESTONE - gray, fine grained, hard, dense, thin bedded, horizontal to subhorizontal bedding fractures with several near-vertical to high angle fractures, slightly rough, frequently brown-stained fracture surfaces, slightly to very slightly weathered.	Run 1	91	46	3.2	309.9
-30					
- slightly to moderately weathered at 27.0'-27.8'; very slightly weathered below 27.8'.	Run 2	100	63	3.2	
- high angle (60° to 90°) fractures at 27.5'-27.7', 33.8', 35.4', 35.8'-36.0', 36.7', and 37.3'. Mid angle (30° to 60°) at 29.2', 34.0', and 34.5'.					
-35					
575.60 End of Boring	Run 3	100	75	4	
-40					
-45					

Color pictures of the cores Yes
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 2/16/11

ROUTE FAI 74 DESCRIPTION 081-0099, 0100 P92-032-01 I-74 over 19th Street, north of 12th Avenue LOGGED BY J. Wenzel

SECTION 81-1HB LOCATION Moline Twp. - 32SE, SEC. , TWP. 18N, RNG. 1W

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 081-0099, 0100
Station

BORING NO. B-1
Station 628 + 25
Offset 32' Rt.
Ground Surface Elev. 614.60 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
BROWN stiff SILTY CLAY LOAM			
		1.3 P	10
612.60 Broken Concrete	5		
	15		
611.10 VERY STIFF black SILTY CLAY LOAM	51		
-5	4		
	4	3.0 P	14
	6		
608.10 STIFF tan CLAY LOAM TILL	2		
	3	2.0 P	11
	4		
606.10 MEDIUM tan CLAY LOAM TILL with SAND lens	-10 2		
	4	0.8 P	17
	4		
603.60 STIFF brown CLAY LOAM	1		
	3	2.0 B	15
601.10 VERY STIFF gray CLAY LOAM TILL	8		
-15	2		
	6	2.3 B	11
598.60 VERY STIFF gray CLAY LOAM TILL	10		
	3		
	7	3.3 B	13
596.10 HARD gray CLAY LOAM TILL	10		
-20	7		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
HARD gray CLAY LOAM TILL *(continued)*	11	10.3 B	10
593.60	21		
HARD gray CLAY LOAM TILL with SANDSTONE at bottom	6		
	14	6.6 B	8
591.10	52		
HARD gray CLAY LOAM TILL	-25 5		
	14	10.3 B	7
	8		
588.10 VERY DENSE weathered SANDSTONE	4		
	43		
	57		
585.60 Borehole continued with rock coring.			
-30			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED -
	CHECKED - JTH	REVISED -
PLOT SCALE =	DRAWN - CMM	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS - 2
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 51 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1086
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

ROCK CORE LOG

Date 2/16/11

ROUTE FAI 74 DESCRIPTION 081-0099, 0100 P92-032-01 I-74 over 19th Street, north of 12th Avenue LOGGED BY J. Wenzel

SECTION 81-1HB LOCATION Moline Twp - 32SE, SEC. , TWP. 18N, RNG. 1W

COUNTY Rock Island CORING METHOD

STRUCT. NO. 081-0099, 0100 CORING BARREL TYPE & SIZE
Station

BORING NO. B-1 Core Diameter 2 in
Station 628 + 25 Top of Rock Elev. 588.10 ft
Offset 32' Rt. Begin Core Elev. 585.60 ft
Ground Surface Elev. 614.60 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Dolomite: gray-buff, aphanitic, dense, top-half mostly fractured, with clay film and minor pitting. t.s.f.: 582.5 to 581.6	585.60	1	60	22	4.4	795
Dolomite: as above, though mostly solid and thickly bedded. t.s.f.: 578.1 to 577.2	575.60	2	100	70	4.2	900
End of Boring						

Color pictures of the cores
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
JCI

SOIL BORING LOG

Date 9/12/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561568.395, E=2459838.396), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station

BORING NO. 19BR-109
Station 627 + 68
Offset 32' Rt.
Ground Surface Elev. 614.30 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 595.8 ft ▼
Upon Completion ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL - (roots) 1" to 2" thick.	614.10			
SILT - brown, tan and orange mottled, little clay, slightly to medium plastic, stiff to crumbly, moist.		2		
		4	2.3	12.8
		5	S	
	610.80			
CLAY - greenish gray and brown, little silt, waxy, medium plastic, stiff, moist.		3		
	-5	5	1.9	20.4
		6	B	
	608.30			
CLAY - brown and tan, some to and silt, trace sand, medium plastic, medium stiff, moist.		2		
		2	0.8	16.0
		2	B	
	605.80			
SILT - dark brown to brown, little to some clay, trace fine sand, slightly to medium plastic, medium stiff to stiff, moist.		2		
	-10	3	0.8	16.7
		4	S	
		1		
	602.30			
CLAY - gray and brown mottled, some silt, medium plastic, stiff, moist.		3	1.0	16.6
		3	B	
	600.80			
CLAY - brown and red brown, sandy, grading from clayey silt with fine to coarse sand, trace gravel to very soft wet sandy clay.		3		
		3	0.7	14.2
	-15	7	B	
		WOH		
		2	0.5	18.4
		2	B	
	595.80 ▼			
GRAVEL - brown to reddish brown, clayey, angular, saturated.		2		
		4		13.9
	-20	4		

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
GRAVEL - brown to reddish brown, clayey, angular, saturated. *(continued)*	593.30			
CLAY - greenish gray, little to some silt, medium to highly plastic, stiff to very stiff, moist.		2		
		4	3.2	9.7
		7	B	
-[Dry unit weight = 120.7 pcf]				
			2.9	14.9
	-25		B	
- trace sand at bottom of shelby tube.				
	587.80	7		
CLAY SHALE - bluish to greenish gray, clayey, hard, no laminations, slightly weathered, slightly moist to dry.		48		15.4
		50/4"		
		48		
	-30	55/3"	>4.5 P	10.7
	583.80			
Borehole continued with rock coring.				
	-35			
	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
JCI

ROCK CORE LOG

Date 9/12/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561568.395, E=2459838.396), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO.
Station

BORING NO. 19BR-109
Station 627 + 68
Offset 32' Rt.
Ground Surface Elev. 614.30 ft

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 583.80 ft
Begin Core Elev. 583.80 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
CLAY SHALE - bluish to greenish gray, clayey, hard, no laminations, slightly weathered.	583.80	Run 1	86	60	3.3	690.7
- intermixed sandy shale and limestone at 30.5'-32.2'.	582.10					
LIMESTONE - gray with yellowish brown and iron-staining along fractures in the upper 6 ft, fine grained, occasional stylolites, dense, hard, sound, thin bedded, primarily uneven horizontal to subhorizontal fractures with occasional high angle fractures, slightly weathered to fresh. - iron stained fractures at 32.8', 36.0', 36.2', 36.5', 36.8', 38.2'.	-35					
- vertical fracture at 35.4'-35.6'; 80° to 60° curvilinear fracture at 36.6'-36.8'; 60° jagged brown-stained fracture at 36.4'.		Run 2	91	74	2.8	
- fresh rock below 38.2'.	-40					
- [Note: RQD shown for Run 1 is based on length of recovered rock, not on length of run. RQD= 40% for entire length of run (including material washed away from augers and ground up during the drilling operations).]	572.00					
End of Boring	-45					
	-50					

Color pictures of the cores Yes
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED -	
	CHECKED - JTH	REVISED -	
PLOT SCALE =	DRAWN - CMM	REVISED -	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS - 3
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 52 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1087
		CONTRACT NO. 64E26		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Page 1 of 1

Date 10/9/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY Wise, Kaustav/SCO

SECTION I-74 Bridge over Mississippi River LOCATION (N=561497.653, E=2459812.286), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station
BORING NO. ILR0804
Station 626+96
Offset 7' Rt.
Ground Surface Elev. 641.39 ft

Surface Water Elev. ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Clay (CL) gray, moist, very stiff to hard, trace sand and fine angular gravel			
	1		
	2	4.1	
	5	S	
	2		
-5	7	2.5	
	9	P	
635.39			
Clay (CL) gray to greenish gray, moist, trace fine to coarse grained sand, stiff to hard	1		
	2		
	2		
-10			
RIMAC: Pu = 31lbs (Bulging)	2		
	2	1.9	
	4	B	
-15			
RIMAC: Pu = 68lbs (bulging)	2		
	4	4.1	
	6	B	
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Clay (CL) gray to greenish gray, moist, trace fine to coarse grained sand, stiff to hard *(continued)*			
	3		
	4	3.0	
	9	P	
-25			
	3		
	6	4.5	
	8	P	
-30			
shale in tip	4		
	10	4.5	
	26	P	
606.39 -35			
End of Boring			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/22/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1-2 LOCATION SE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6015
Station
BORING NO. RW 06-1
Station 61+02
Offset 7' Lt. off CL I–74
Ground Surface Elev. 611.3 ft

Surface Water Elev.
Stream Bed Elev.
Groundwater Elev.:
First Encounter 593.8 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CONCRETE 610.80			
FILL - Light gray, slightly moist, SILT		2.50P	14
			14
2			17
608.30			
FILL - Very dark brown, moist, clayey SILT with trace gravel			
		1.80P	13
4			
6 605.30	5	2.00P	15
FILL - Gray, moist, medium dense, silty, medium-grained SAND with trace gravel, wood, brick and rock fragments	6		
	11		
8			
	11		12
	23		
10	50/4"		
600.30			
Dark brown, moist, stiff, sandy SILT with trace gravel			20
		1.65S	17
12			
	11		16
14	4		
	4		
596.30			
Dark brown, moist, sandy, clayey SILT with trace gravel			
595.30 16			
Dark brown, wet, dense, silty SAND with trace gravel		0.50P	12
▼ 593.30			
18			
Gray and brown, moist, medium stiff, silty CLAY with sand and trace gravel	3	0.54B	18
	3		
	5		
20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray and brown, moist, medium stiff, silty CLAY with sand and trace gravel *(continued from previous page)*			
568.80 22			
Gray and brown, moist, very stiff, silty CLAY with sand and gravel			
24	8	2.61B	14
	10		
	11		
566.30			
End of Boring			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

HANSON

SOIL BORING LOG

Page 1 of 2

Date 6/25/14

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY RPD

SECTION 81-1-2 LOCATION SW¼ of SEC. 33, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Continuous Flight Auger HAMMER TYPE Auto

STRUCT. NO. 081-6015
Station
BORING NO. RW 06-05
Station 62+58
Offset 22' Rt. off CL I–74
Ground Surface Elev. 644.6 ft

Surface Water Elev.
Stream Bed Elev.
Groundwater Elev.:
First Encounter NE ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
3.0" TOPSOIL. 644.35			
FILL - Brown lean CLAY, trace silt, trace sand, with organics.			
	3	3.50P	15
2	7		
	7		
4	1	1.75B	23
	2		
	5		
6			
	5	3.50P	17
	8		
	10		
8 636.10			
FILL - Brown and gray silty lean CLAY, trace sand, trace gravel, with wood debris and brick fragments.	3	3.10B	16
	5		
10	6		
12		1.60S	18
		1.55S	19
14	3	3.30S	16
	6		
	9		
16			
	4	4.46S	16
	7		
	9		
18			
	5	4.50P	16
20	7		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL - Brown and gray silty lean CLAY, trace sand, trace gravel, with wood debris and brick fragments. *(continued from previous page)*	9		
22			
24	5	2.52S	16
	8		
	12		
26			
28			
	7	3.30S	18
	9		
	11		
30			
32			
	7	4.50P	16
34	8		
	13		
36			
607.60			
FILL - Gray clayey SILT, little sand, trace gravel, with red brick fragments.			
38			
	3	2.50P	22
	6		
	9		
40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED -
	CHECKED - JTH	REVISED -
PLOT SCALE =	DRAWN - CMM	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS - 4
RAMP 7TH-A OVER 19TH STREET - STRUCTURE NO. 081-0181
SHEET NO. 53 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1088
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

HANSON SOIL BORING LOG

Page 2 of 2

Date 6/25/14

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY RPD

SECTION 81-1-2 LOCATION SW¼ of SEC. 33, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Continuous Flight Auger HAMMER TYPE Auto

STRUCT. NO. 081-6015
Station
BORING NO. RW 06-05
Station 62+58
Offset 22' Rt. off CL I–74
Ground Surface Elev. 644.6 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter NE ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL - Gray clayey SILT, little sand, trace gravel, with red brick fragments. *(continued from previous page)*			
42			
	5		10
44	7		
	9		
46			
597.60			
Gray moist, very stiff, silty lean CLAY, with trace sand and trace gravel.			
48			
	5	3.30S	15
	7		
50	10		
52			
	6	6.01B	12
54	11		
	15		
56			
58			
	7	3.69B	15
	11		
584.60 60	15		

End of Boring

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation SOIL BORING LOG

Division of Highways JCI

Page 1 of 2

Date 9/11/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561728.148, E=2459730.629), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station
BORING NO. 19BR-108
Station 61+26
Offset 22' Lt. off CL I–74
Ground Surface Elev. 611.60 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CONCRETE SIDEWALK - 4.5" thck concrete plus base course. 611.00			
CLAY - olive brown and gray, some to and silt, trace to little medium to coarse sand, trace fine gravel, very stiff, moist (GLACIAL TILL - FILL?).	4		
	2	1.6	13.8
	4	B	
	2		
	5	3.0	18.2
-5	7	B	
605.60			
SILT - dark brown, little to some clay, trace gravel, trace organics, slightly to medium plastic, medium stiff to stiff, moist	4		
	5	0.8	18.4
	5	B	
	2		
	2	0.9	24.2
-10	3	B	
600.60			
CLAY - brown, little silt, trace send, with gravel, to SILT and clay, with gravel or cobble, slightly to medium plastic, medium stiff, moist.	WOH		
	2	0.7	24.1
	3	B	
- cobble at 14.5'-15.0'.	3		
	5		13.9
-15	12		
595.60			
CLAY TILL - greenish brown to gray, trace to little medium to coarse sand, trace fine gravel, hard, moist to dry (GLACIAL TILL). **-[Dry unit weight = 116.7 pcf]**		2.5	14.2
		B	
	5		
	5	3.4	13.9
-20	8	B	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY TILL - greenish brown to gray, trace to little medium to coarse sand, trace fine gravel, hard, moist to dry (GLACIAL TILL). *(continued)*			
	5		
	7	3.1	14.4
	9	B	
		2.8	
-25		P	
	4		
	6	2.9	14.8
	8	B	
- greenish gray and red silty clay till, crumbly, moist.	30		
581.80	50/3"	2.5	17.3
-30 CLAY - red, silty, shaly, crumbly, dry to slightly moist (TILL or CLAY SHALE?).		P	
578.10			
CLAY SHALE - greenish gray, clayey, hard, laminated, slightly to moderately weathered, slightly moist to dry.	18		
	31	3.5	14.8
-35	60	P	
- [Groundwater not observed in soils and shale during drilling operations]			
573.90			
Borehole continued with rock coring.			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation ROCK CORE LOG

Division of Highways JCI

Page 2 of 2

Date 9/11/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION LOCATION (N=561728.148, E=2459730.629), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO.
Station
BORING NO. 19BR-108
Station 61+26
Offset 22' Lt. off CL I–74
Ground Surface Elev. 611.60 ft

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 573.90 ft
Begin Core Elev. 573.90 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
LIMESTONE - gray, fine grained, dense, hard, very thin to thin bedded, horizontal to subhorizontal slightly rough fractures with some high angle (60° to 90°) fractures, slightly weathered with faint iron stains on some fractures, occasional stylolites. 573.90					
-40	Run 1	77	0	3.4	
	Run 2	93	23	4	503.4
-45					
	Run 3	100	45	3.5	
563.70					
End of Boring					
-50					
-55					

Color pictures of the cores Yes
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Note:
For additional boring logs, see SN 081-0179 and SN 081-0180.

MODJESKI and MASTERS Experience great bridges.

USER NAME =	DESIGNED - JMH	REVISED -
	CHECKED - JTH	REVISED -
PLOT SCALE =	DRAWN - CMM	REVISED -
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS – 5
RAMP 7TH–A OVER 19TH STREET – STRUCTURE NO. 081–0181
SHEET NO. 54 OF 54 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR	ROCK ISLAND	2042	1089
		CONTRACT NO. 64E26		
	ILLINOIS	FED. AID PROJECT		

Benchmark No. 542:

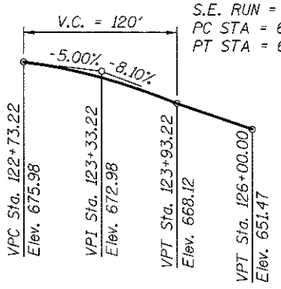
Chiseled "X" on West side of traffic signal foundation in concrete island, I-74 Sta. 72+53.00.
Elevation NAVD 88 = 627.220

Existing Structures: The existing structures, 081-0101 (EB) and 081-0102 (WB), were built in 1975 as a part of FAI-74. The existing dual structures are single-span, composite plate girders supporting a reinforced concrete deck. The out to out dimension of the WB bridge is a constant 42'-0" while the EB bridge varies from 55'-9" to 57'-3". The closed abutments are supported by a combination of timber and concrete piles. The existing structures are 103'-5" back to back of abutments. Both structures will be removed (as required) and replaced. Traffic to be maintained utilizing stage construction.

No salvage.

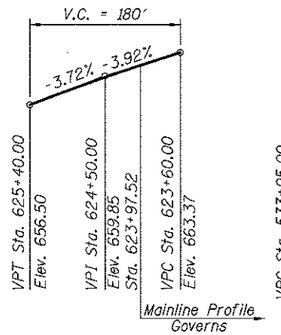
PR Curve 7RA_IL-1
PI STA = 623+55.18
Δ = 20° 08' 26" (RT)
D = 2° 51' 53"
R = 2,000.00'
T = 355.18'
L = 703.04'
E = 31.29'
e = 5.4%
T.R. = N/A
S.E. RUN = 63'(I), 156'(O)
PC STA = 620+00.00
PT STA = 627+03.04

PR Curve R7TH-B-3
PI STA = 540+43.21
Δ = 4° 34' 58" (LT)
D = 2° 14' 02"
R = 2,564.81'
T = 102.63'
L = 205.15'
E = 2.05'
e = 4.9%
T.R. = N/A
S.E. RUN = 57'
PC STA = 539+40.58
PT STA = 541+45.73

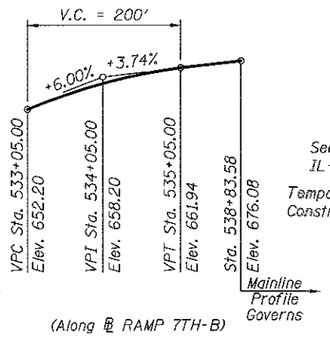


(Along ℄ 12TH Avenue)

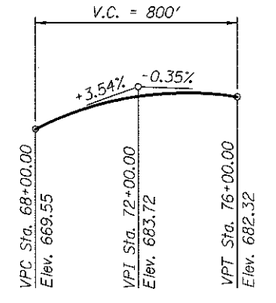
PR Curve ML100CL3
PI STA = 66+05.62
Δ = 20° 30' 00" (LT)
D = 2° 17' 31"
R = 2,500.00'
T = 452.07'
L = 894.48'
E = 40.55'
e = 4.9%
T.R. = N/A
S.E. RUN = 422.89'(I), 410.49'(O)
PC STA = 61+53.55
PT STA = 70+48.03



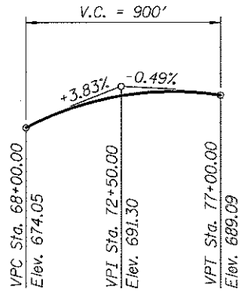
(Along ℄ RAMP 7TH-A)



(Along ℄ RAMP 7TH-B)

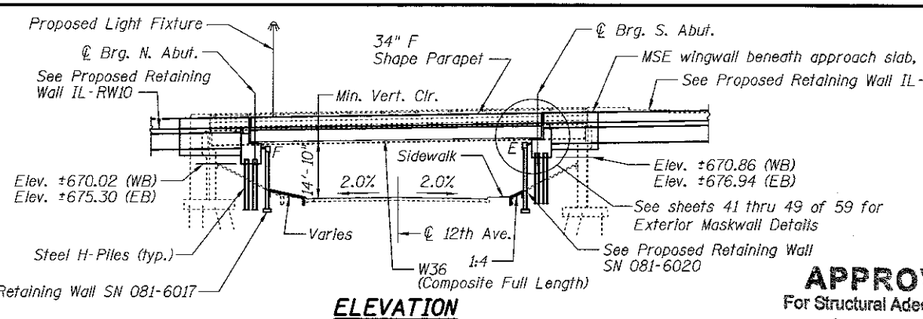


(Along WB PGL - F.A.I. Route 74)



(Along EB PGL - F.A.I. Route 74)

PROFILE GRADES



ELEVATION

(Looking East Along ℄ I-74)

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications
6th Edition

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.061g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.095g
Soil Site Class = C

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

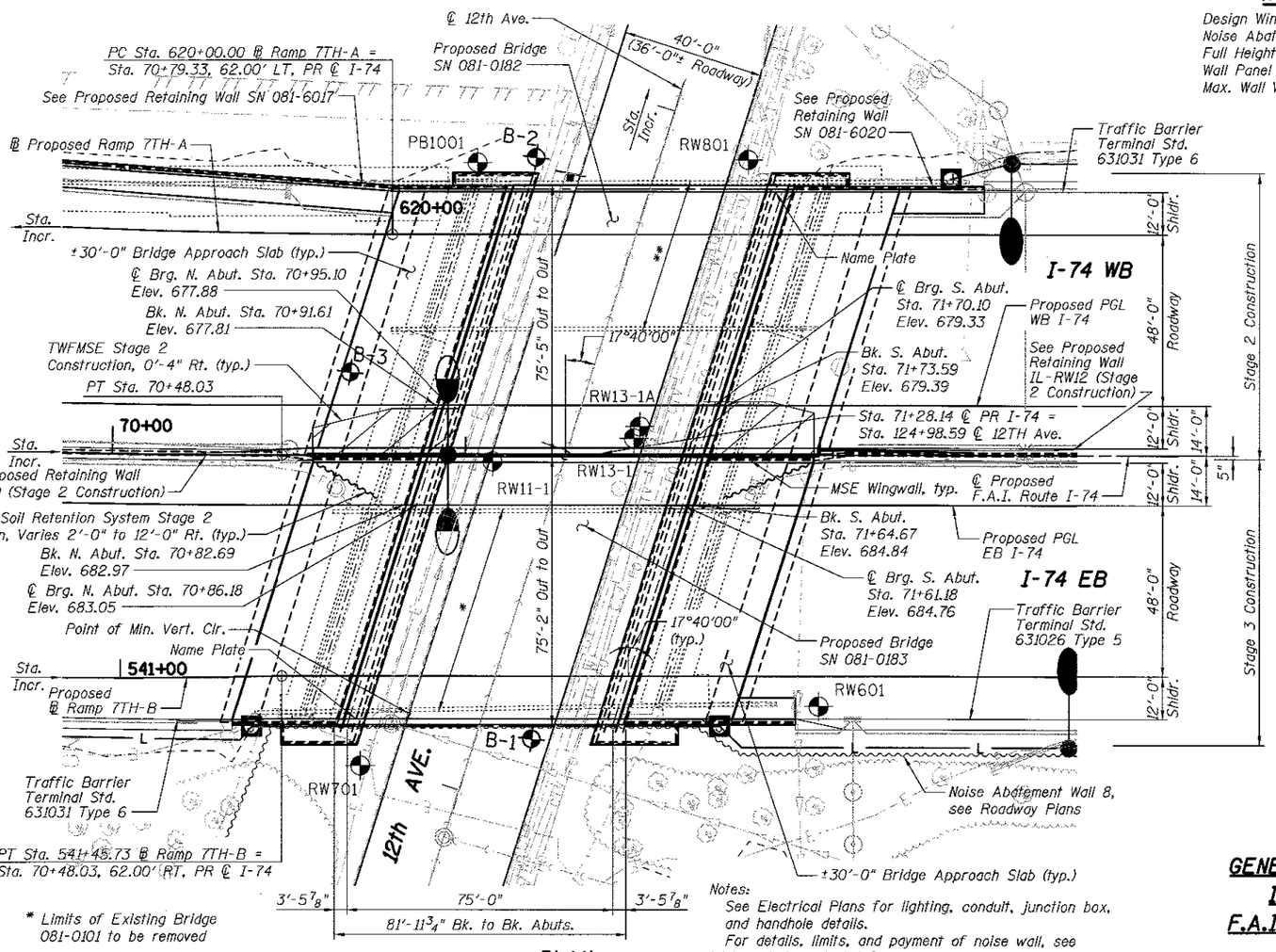
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

NOISE WALL DATA

Design Wind Pressure = 35 psf
Noise Abatement Wall-Structure Mounted
Full Height Panels
Wall Panel Height = 10'-10"
Max. Wall Weight = 325 plf (includes weight of framing)



* Limits of Existing Bridge 081-0101 to be removed

** Limits of Existing Bridge 081-0102 to be removed

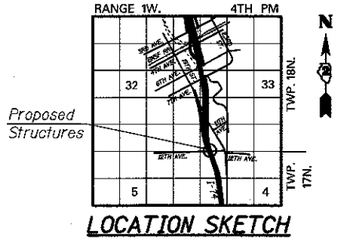
PLAN

Soil Borings

Notes:
See Electrical Plans for lighting, conduit, junction box, and handhole details.
For details, limits, and payment of noise wall, see "Noise Abatement Wall 8" plans.
For superelevation transitions, see sheet 3 of 59.
Existing utilities shown will be relocated to avoid any conflicts during construction except as noted (see Utility Plans).
For details of Temporary Wire Faced MSE Walls (TWFMSE) and MSE Wingwalls, see SN 081-6017 and SN 081-6020.

JERILYN M. HASSARD
081-006521
LICENSED STRUCTURAL ENGINEER OF ILLINOIS
03-23-17

JERILYN M. HASSARD
EDWARDSVILLE, ILLINOIS
ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 081-006521
EXPIRES 11/30/2018



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
I-74 OVER 12TH AVENUE
F.A.I. ROUTE 74 SEC. 81-1HBR-1
ROCK ISLAND COUNTY
STATION 71+28.14
STRUCTURE NO. 081-0182 WESTBOUND
STRUCTURE NO. 081-0183 EASTBOUND

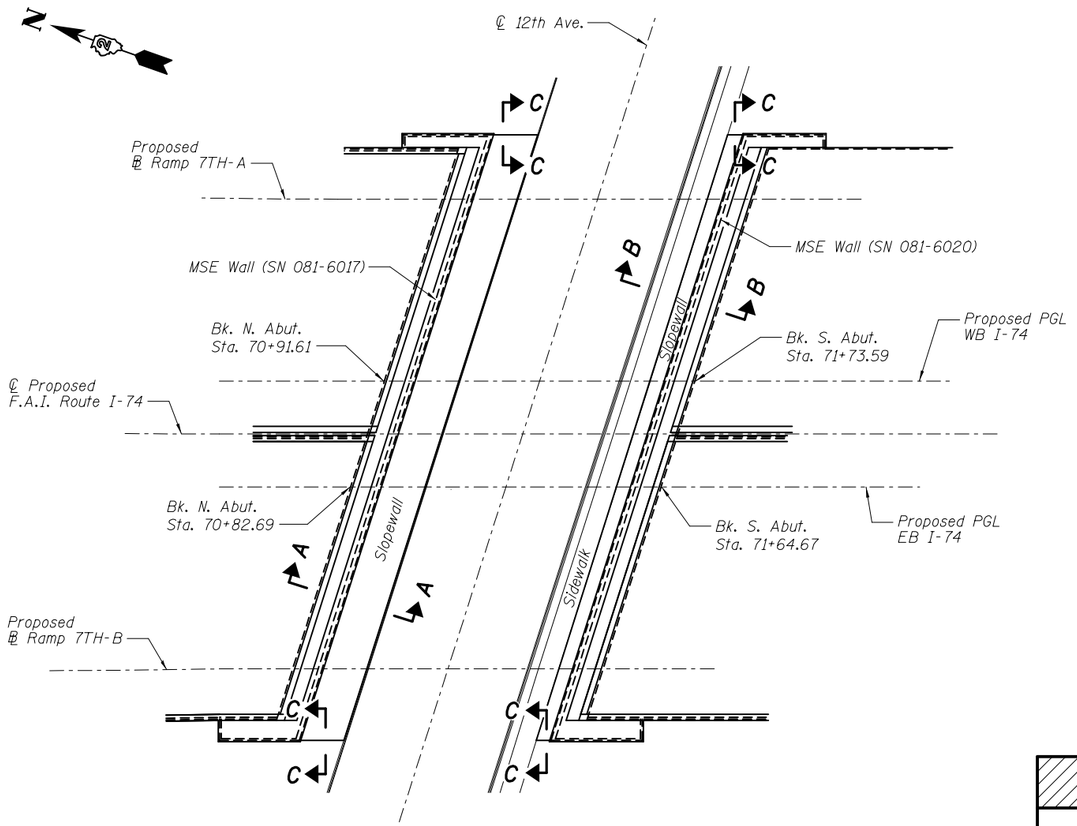
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - PRC	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

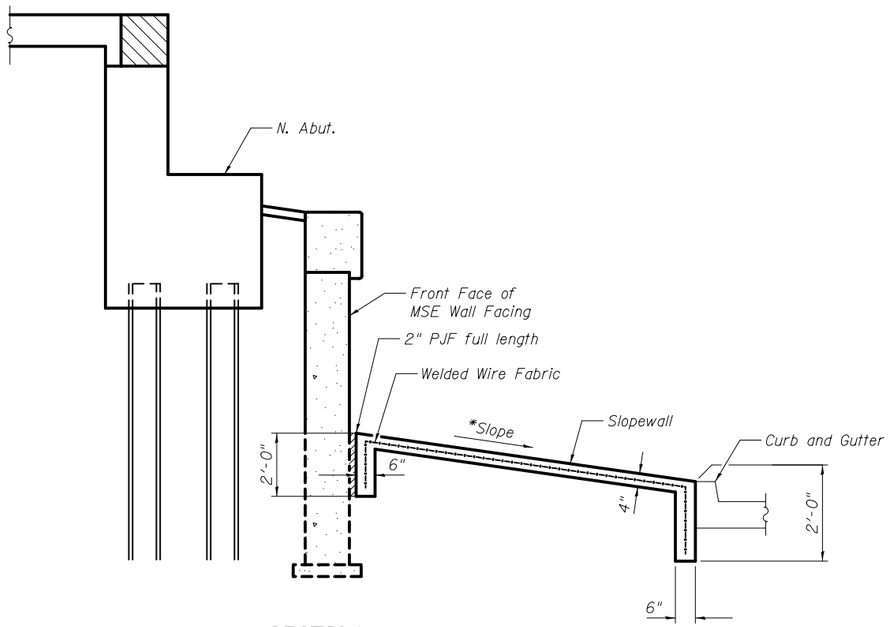
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
I-74 OVER 12TH AVE. – STRUCTURE NO. 081-0182 WB & 081-0183 EB
SHEET NO. 1 OF 59 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR-1	ROCK ISLAND	2042	1090
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

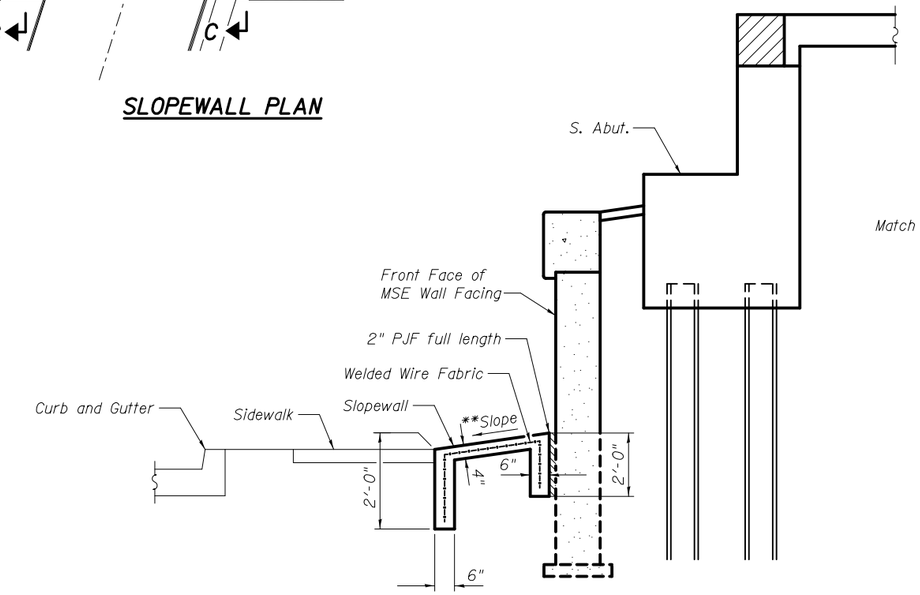


SLOPEWALL PLAN



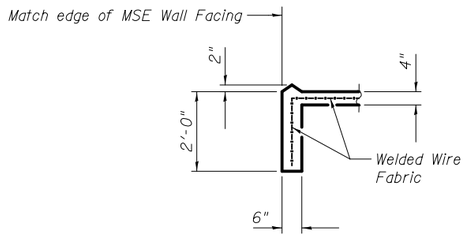
SECTION A-A

* Varies 1V:4.6H to 1V:15H at Rt. L's to 12th Avenue.
See Roadway Plans for grading details.



SECTION B-B

** 1V:4H at Rt. L's to 12th Avenue.
See Roadway Plans for grading details.



SECTION C-C

Notes:

Slopewall shall be placed during Stage 3 Construction after completion of the MSE Wall Facing.

See sheet 1 of 59 for relative plan dimensions.

See SN 081-6017 and SN 081-6020 for MSE wall configuration and details.

Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0, weighing 58 lbs. per 100 sq. ft. Cost of the mesh is included in the cost of slopewall.

BILL OF MATERIAL

Item	Unit	Total
Slope Wall 4 Inch	Sq. Yd.	284

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - PRC	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION DETAILS
I-74 OVER 12TH AVE. – STRUCTURE NO. 081-0182 WB & 081-0183 EB
SHEET NO. 2 OF 59 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR-1	ROCK ISLAND	2042	1091
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

INDEX OF SHEETS

GENERAL NOTES

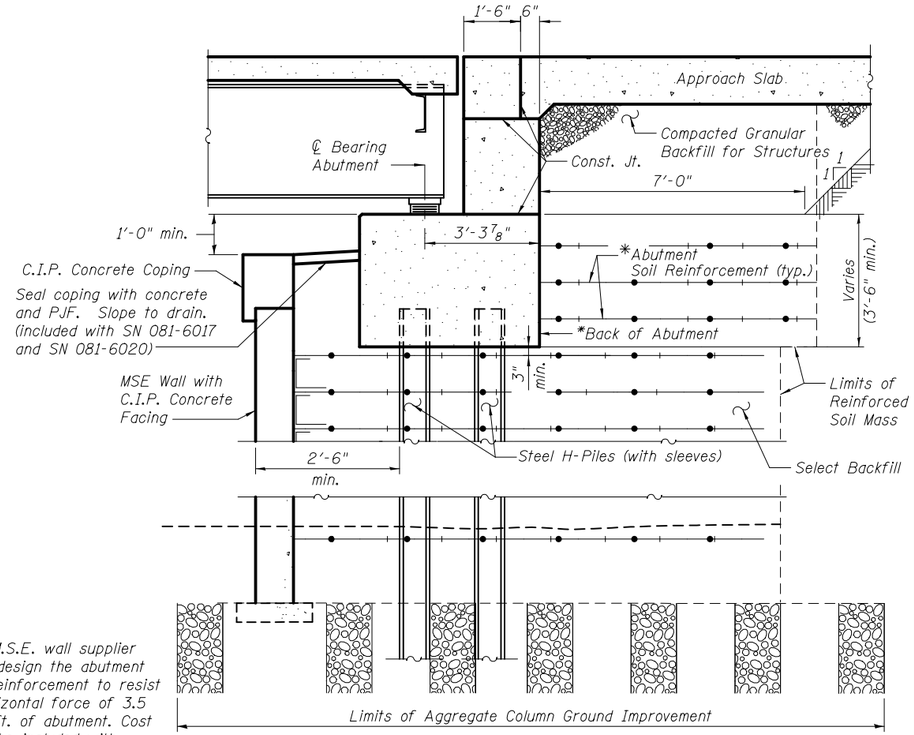
1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $^{7}/_{8}$" ϕ, holes $^{15}/_{16}$" ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel =
   M 270 Grade 36: 31,630 lbs
   M 270 Grade 50: 252,850 lbs
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. Concrete Sealer shall be applied to all exposed surfaces of backwalls, bridge seats, and front faces of pile caps at abutments.
6. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
7. The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception of the exterior surfaces and the bottom of the bottom flange of fascia beams, masked off connection surfaces, and field installed fasteners, all of which shall be touched up and finish coated in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The exterior and bottom flange of the fascia beams and fascia bearings shall be finish coated with a fluoropolymer paint. The color of the final finish coat for the exterior and bottom flange of the fascia beams and bearings shall be Federal Standard 595C Color 26099 (gray-blue). See Special Provision for "Cleaning and Painting Structural Steel".
8. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments. The proposed embankment configuration includes the Reinforced Soil Mass required for the adjacent MSE walls.
9. Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before removal to ensure the remaining portion will not be prematurely damaged.
10. See SN 081-6017 and SN 081-6020 plans for MSE details and pay items.
11. The abutment piles are located within the reinforced soil mass of SN 081-6017 and SN 081-6020. Pile sleeves shall be installed within the reinforced soil mass. Cost of pile sleeves is included with Driving Piles. Installation of pile sleeves shall be coordinated with the wall system supplier.
12. Slipforming of the median parapets is not allowed. Slipforming of the exterior parapet and Aesthetic Traffic Barrier is allowed.
13. A protective shield system shall be erected and maintained to protect pedestrian and vehicular traffic. The system shall protect the following bridge length and width of the existing structures.

STRUCTURE	LENGTH	WIDTH
081-0101 (EB)	98'-0"	55'-9$^{1}/_{4}$" to 57'-3$^{1}/_{2}$"
081-0102 (WB)	98'-0"	42'-0"

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
**	Removal of Existing Structures No. 3	Each			2
	Protective Shield	Sq. Yd.	1,074		1,074
	Concrete Structures	Cu. Yd.		461.4	461.4
	Concrete Superstructure	Cu. Yd.	832.8		832.8
	Bridge Deck Grooving	Sq. Yd.	2,207		2,207
	Protective Coat	Sq. Yd.	2,449		2,449
***	Furnishing and Erecting Structural Steel	L. Sum	0.10		0.10
	Stud Shear Connectors	Each	8,208		8,208
	Reinforcement Bars, Epoxy Coated	Pound	217,250	38,680	255,930
	Bar Splicers	Each		354	354
	Slope Wall 4 inch	Sq. Yd.		284	284
	Furnishing Steel Piles HP 10x42	Foot		322	322
	Furnishing Steel Piles HP 14x73	Foot		5,480	5,480
	Driving Piles	Foot		5,802	5,802
	Test Pile Steel HP 14x73	Each		4	4
	Name Plates	Each	2		2
	Preformed Joint Strip Seal	Foot	312.0		312.0
	Elastomeric Bearing Assembly, Type 1	Each	18		18
	Anchor Bolts, 1$^{1}/_{4}$"	Each	72		72
	Concrete Sealer	Sq. Ft.		3,674	3,674
	Granular Backfill for Structures	Cu. Yd.		283	283
	Steel Railing (Special)	Foot	78		78
	Temporary Soil Retention System	Sq. Ft.		963	963

** Removal of Existing Structures includes the removal of the extended wingwalls/retaining walls.
*** See additional structures within this Contract for remainder of L. Sum quantity.



* The M.S.E. wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 3.5 kips/ft. of abutment. Cost shall be included with "Mechanically Stabilized Earth Retaining Wall". (See General Note 10)

TYPICAL SECTION THRU ABUTMENT

S. Abutment Shown. N. Abutment Similar
(Horiz. dim. @ Rt. L's)

STATION 71+28.14
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RTE. 74 SEC. 81-1HBR-1
LOADING HL-93
STRUCTURE NO. 081-0182

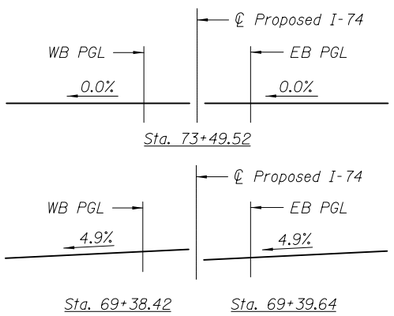
WESTBOUND NAME PLATE

See Std. 515001

STATION 71+28.14
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RTE. 74 SEC. 81-1HBR-1
LOADING HL-93
STRUCTURE NO. 081-0183

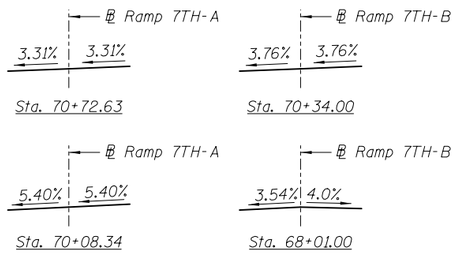
EASTBOUND NAME PLATE

See Std. 515001



SUPERELEVATION TRANSITIONS
I-74 MAINLINE

(Looking Upstation)



SUPERELEVATION TRANSITIONS
RAMPS 7TH-A AND 7TH-B

(Looking Upstation)

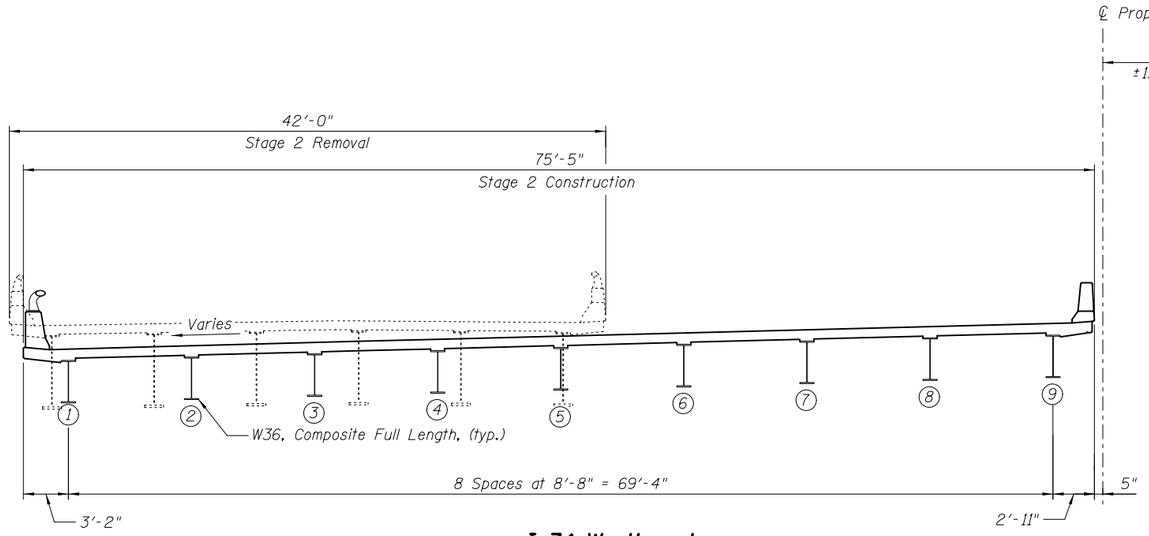
Note: Superelevation is constant face to face of parapet.

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - KJP	REVISED
		CHECKED - YSS	REVISED
	PLOT SCALE =	DRAWN - ATH	REVISED
	PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

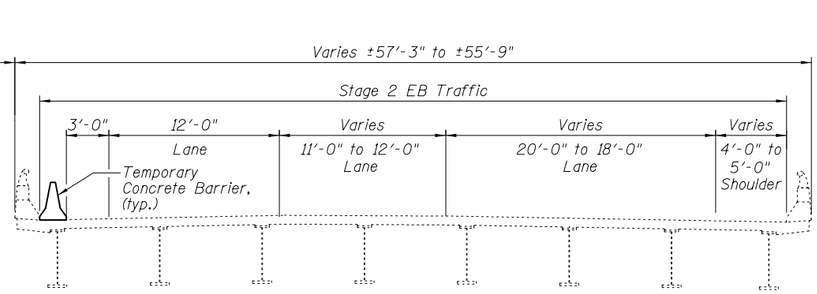
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL STRUCTURE DATA
I-74 OVER 12TH AVE. – STRUCTURE NO. 081-0182 WB & 081-0183 EB
SHEET NO. 3 OF 59 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR-1	ROCK ISLAND	2042	1092
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



I-74 Westbound

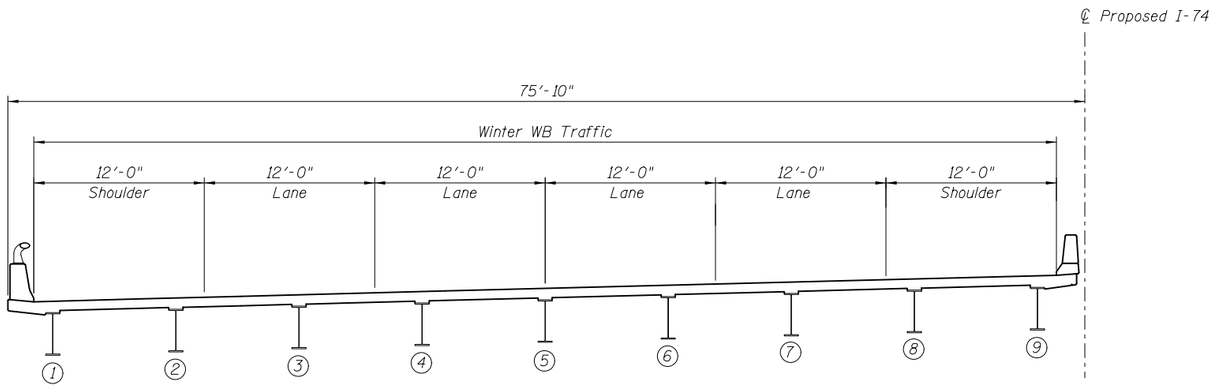


I-74 Eastbound

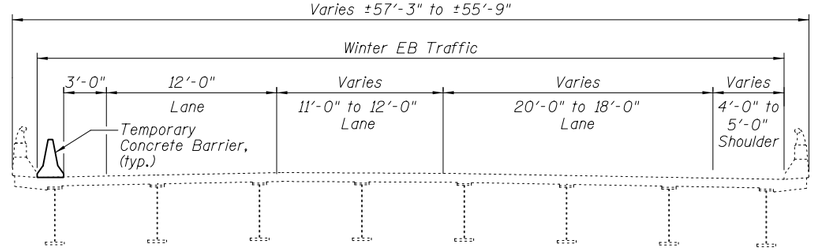
Note: See Traffic Control Plans for Westbound Detour during Stage 2.

CROSS SECTION - STAGE 2

(Looking South)



I-74 Westbound



I-74 Eastbound

CROSS SECTION - WINTER

(Looking South)

Notes:
For details of Temporary Concrete Barrier, see sheet 7 of 59.
For quantity of Temporary Concrete Barrier, see roadway plans.
Dotted area indicates Removal of Existing Structures.

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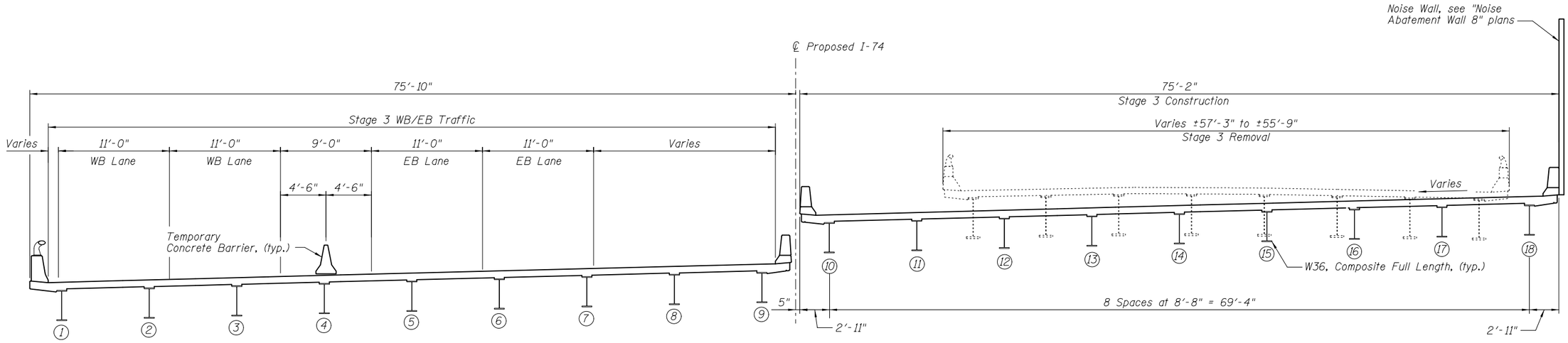
USER NAME =	DESIGNED - PRC	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS - 1
I-74 OVER 12TH AVE. - STRUCTURE NO. 081-0182 WB & 081-0183 EB
SHEET NO. 4 OF 59 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR-1	ROCK ISLAND	2042	1093
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



I-74 Westbound **I-74 Eastbound**

CROSS SECTION - STAGE 3

(Looking South)

Notes:

For details of Temporary Concrete Barrier, see sheet 7 of 59.
For quantity of Temporary Concrete Barrier, see roadway plans.
Dotted area indicates Removal of Existing Structures.

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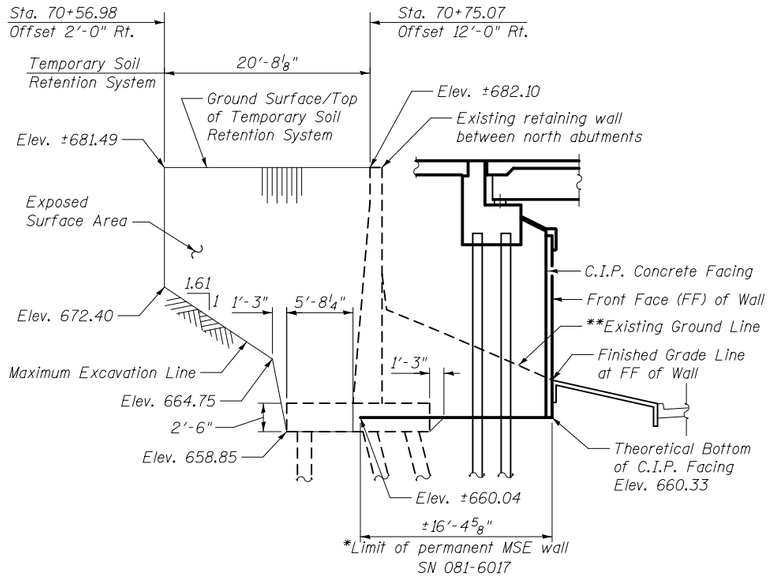
USER NAME =	DESIGNED - PRC	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED

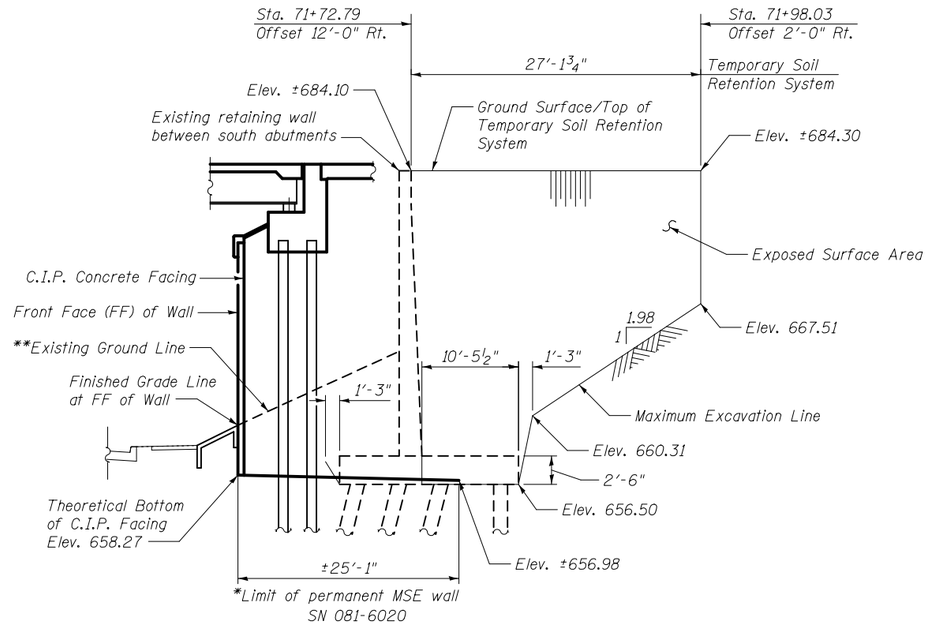
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS - 2
I-74 OVER 12TH AVE. - STRUCTURE NO. 081-0182 WB & 081-0183 EB
SHEET NO. 5 OF 59 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR-1	ROCK ISLAND	2042	1094
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



(At North Abutment)



(At South Abutment)

TEMPORARY SOIL RETENTION SYSTEM

(Looking East)

* Soil reinforcement and aggregate column ground improvement not shown for clarity.

** Soil in front of the existing abutment and retaining wall to be sloped during stage 2 construction.

Notes:

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

Limits of temporary soil retention system shown are based on theoretical limit of permanent MSE walls. Adjustments may be required if actual field conditions vary from the configurations shown.

See SN 081-6017 and SN 081-6020 plan sheets for MSE wall and ground improvement details.

BILL OF MATERIAL

Item	Unit	Quantity
Temporary Soil Retention System	Sq. Ft.	963

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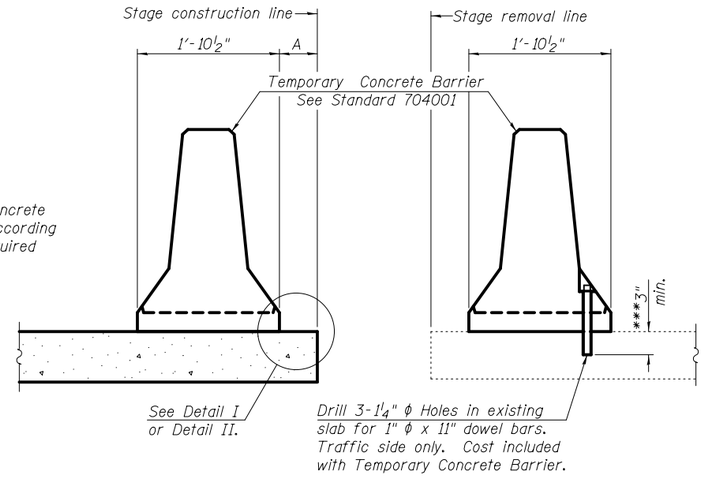
USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - ATH	REVISED
PLOT DATE = 03/23/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY SOIL RETENTION DETAILS
I-74 OVER 12TH AVE. - STRUCTURE NO. 081-0182 WB & 081-0183 EB
SHEET NO. 6 OF 59 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR-1	ROCK ISLAND	2042	1095
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

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



SECTIONS THRU SLAB

NOTES

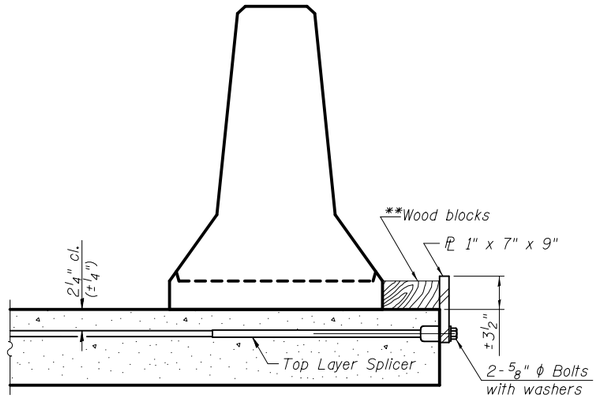
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x 9" steel PL to the top layer of couplers with 2-$\frac{5}{8}$" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x 9" steel PL to the concrete slab or concrete wearing surface with 2-$\frac{5}{8}$" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

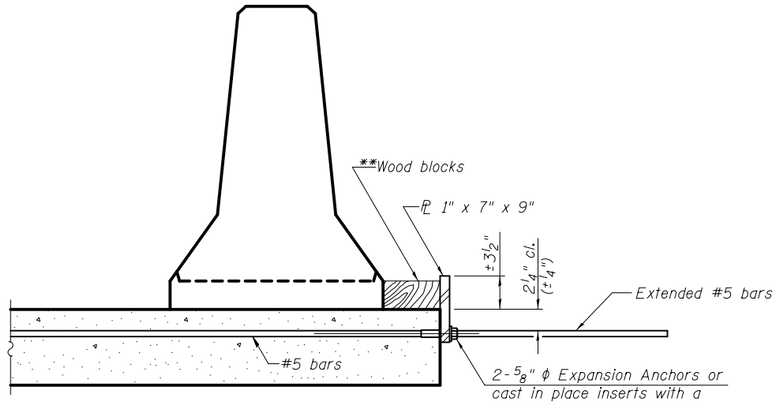
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x 9" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

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

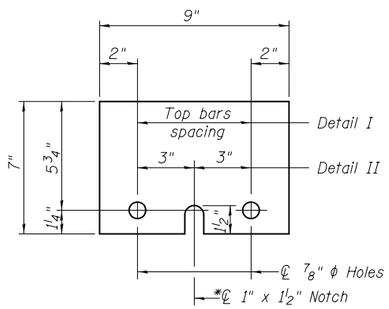


DETAIL I



DETAIL II

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



STEEL RETAINER PL 1" x 7" x 9"

* Required only with Detail II

Note:
See Staging Plans for Temporary Concrete Barrier quantity and payment.

R-27

7-1-10

USER NAME =	DESIGNED - KJP	REVISED	
	CHECKED - JBN	REVISED	
PLOT SCALE =	DRAWN - ATH	REVISED	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED	

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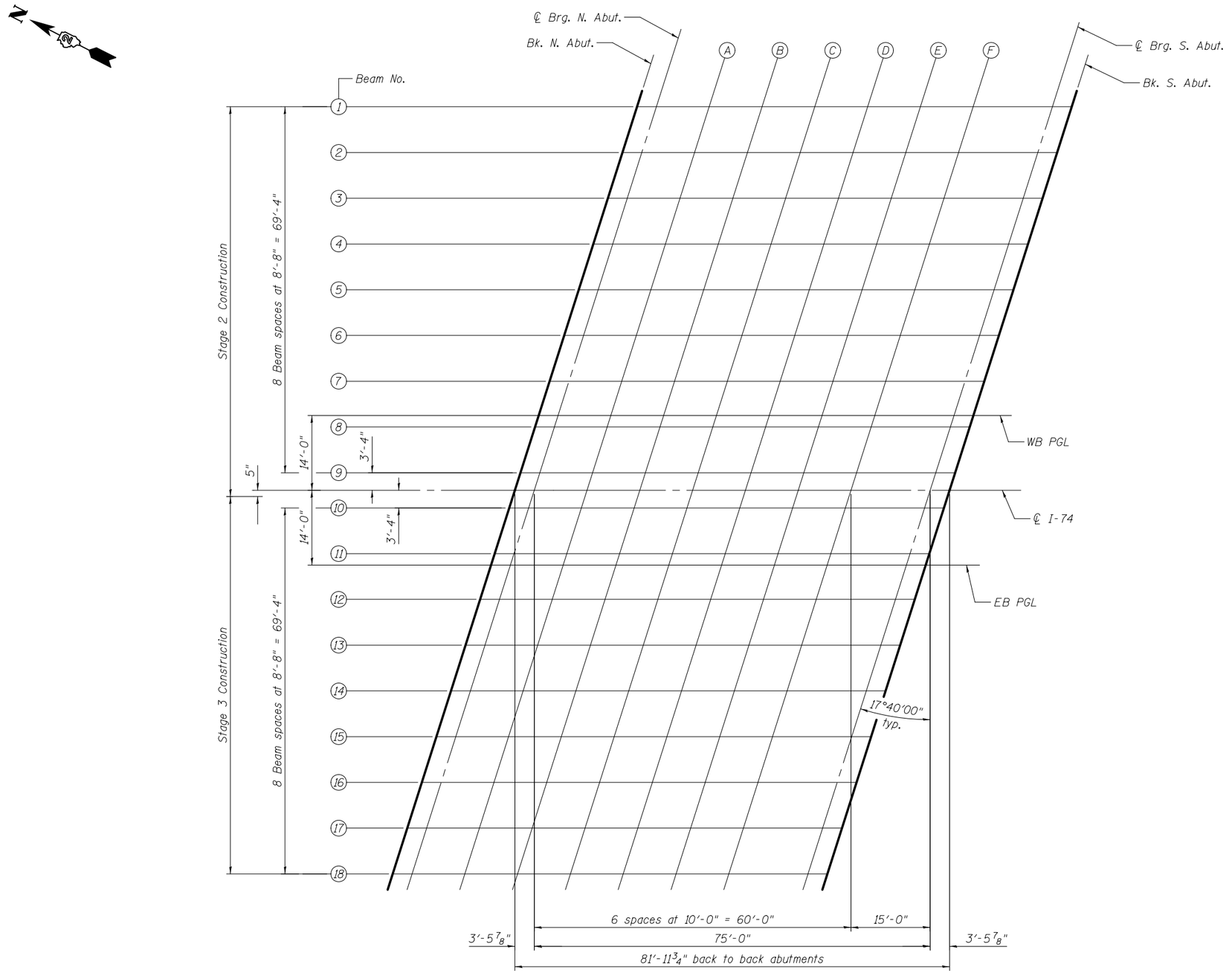
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
I-74 OVER 12TH AVE. – STRUCTURE NO. 081-0182 WB & 081-0183 EB
SHEET NO. 7 OF 59 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR-1	ROCK ISLAND	2042	1096
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



PLAN

USER NAME =	DESIGNED - KJP	REVISED	
	CHECKED - YSS	REVISED	
PLOT SCALE =	DRAWN - ATH	REVISED	
PLOT DATE = 03/23/2017	CHECKED - JMH	REVISED	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS – 1
I–74 OVER 12TH AVE. – STRUCTURE NO. 081–0182 WB & 081–0183 EB
SHEET NO. 8 OF 59 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HBR-1	ROCK ISLAND	2042	1097
		CONTRACT NO. 64E26		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	71+10.29	-72.67	676.52	676.52
℄ Brg. N. Abut.	71+13.78	-72.67	676.62	676.62
A	71+23.78	-72.67	676.88	676.95
B	71+33.78	-72.67	677.15	677.28
C	71+43.78	-72.67	677.41	677.57
D	71+53.78	-72.67	677.66	677.83
E	71+63.78	-72.67	677.91	678.06
F	71+73.78	-72.67	678.16	678.26
℄ Brg. S. Abut.	71+88.78	-72.67	678.52	678.52
Bk. S. Abut.	71+92.27	-72.67	678.60	678.60

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	71+07.53	-64.00	676.70	676.70
℄ Brg. N. Abut.	71+11.02	-64.00	676.79	676.79
A	71+21.02	-64.00	677.05	677.12
B	71+31.02	-64.00	677.30	677.43
C	71+41.02	-64.00	677.55	677.72
D	71+51.02	-64.00	677.80	677.98
E	71+61.02	-64.00	678.04	678.20
F	71+71.02	-64.00	678.28	678.39
℄ Brg. S. Abut.	71+86.02	-64.00	678.62	678.62
Bk. S. Abut.	71+89.51	-64.00	678.70	678.70

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	71+04.77	-55.33	676.88	676.88
℄ Brg. N. Abut.	71+08.26	-55.33	676.97	676.97
A	71+18.26	-55.33	677.22	677.29
B	71+28.26	-55.33	677.46	677.59
C	71+38.26	-55.33	677.71	677.88
D	71+48.26	-55.33	677.94	678.12
E	71+58.26	-55.33	678.17	678.33
F	71+68.26	-55.33	678.40	678.51
℄ Brg. S. Abut.	71+83.26	-55.33	678.73	678.73
Bk. S. Abut.	71+86.75	-55.33	678.81	678.81

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	71+02.01	-46.67	677.06	677.06
℄ Brg. N. Abut.	71+05.50	-46.67	677.15	677.15
A	71+15.50	-46.67	677.39	677.46
B	71+25.50	-46.67	677.63	677.75
C	71+35.50	-46.67	677.86	678.01
D	71+45.50	-46.67	678.09	678.25
E	71+55.50	-46.67	678.31	678.45
F	71+65.50	-46.67	678.53	678.63
℄ Brg. S. Abut.	71+80.50	-46.67	678.84	678.84
Bk. S. Abut.	71+83.99	-46.67	678.92	678.92

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+99.25	-38.00	677.25	677.25
℄ Brg. N. Abut.	71+02.74	-38.00	677.34	677.34
A	71+12.74	-38.00	677.57	677.64
B	71+22.74	-38.00	677.80	677.92
C	71+32.74	-38.00	678.02	678.17
D	71+42.74	-38.00	678.24	678.40
E	71+52.74	-38.00	678.45	678.59
F	71+62.74	-38.00	678.66	678.76
℄ Brg. S. Abut.	71+77.74	-38.00	678.96	678.96
Bk. S. Abut.	71+81.23	-38.00	679.03	679.03

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+96.49	-29.33	677.45	677.45
℄ Brg. N. Abut.	70+99.98	-29.33	677.53	677.53
A	71+09.98	-29.33	677.75	677.82
B	71+19.98	-29.33	677.97	678.09
C	71+29.98	-29.33	678.19	678.34
D	71+39.98	-29.33	678.40	678.56
E	71+49.98	-29.33	678.60	678.74
F	71+59.98	-29.33	678.80	678.90
℄ Brg. S. Abut.	71+74.98	-29.33	679.09	679.09
Bk. S. Abut.	71+78.47	-29.33	679.16	679.16

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+93.73	-20.67	677.65	677.65
℄ Brg. N. Abut.	70+97.22	-20.67	677.73	677.73
A	71+07.22	-20.67	677.94	678.01
B	71+17.22	-20.67	678.15	678.28
C	71+27.22	-20.67	678.36	678.53
D	71+37.22	-20.67	678.56	678.74
E	71+47.22	-20.67	678.75	678.90
F	71+57.22	-20.67	678.94	679.04
℄ Brg. S. Abut.	71+72.22	-20.67	679.22	679.22
Bk. S. Abut.	71+75.71	-20.67	679.28	679.28

WESTBOUND PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+91.61	-14.00	677.81	677.81
℄ Brg. N. Abut.	70+95.10	-14.00	677.88	677.88
A	71+05.10	-14.00	678.09	678.17
B	71+15.10	-14.00	678.29	678.43
C	71+25.10	-14.00	678.49	678.66
D	71+35.10	-14.00	678.69	678.87
E	71+45.10	-14.00	678.87	679.03
F	71+55.10	-14.00	679.06	679.16
℄ Brg. S. Abut.	71+70.10	-14.00	679.33	679.33
Bk. S. Abut.	71+73.59	-14.00	679.39	679.39

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+90.97	-12.00	677.86	677.86
℄ Brg. N. Abut.	70+94.46	-12.00	677.93	677.93
A	71+04.46	-12.00	678.14	678.21
B	71+14.46	-12.00	678.34	678.47
C	71+24.46	-12.00	678.53	678.70
D	71+34.46	-12.00	678.73	678.91
E	71+44.46	-12.00	678.91	679.06
F	71+54.46	-12.00	679.09	679.19
℄ Brg. S. Abut.	71+69.46	-12.00	679.36	679.36
Bk. S. Abut.	71+72.95	-12.00	679.42	679.42

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+88.21	-3.33	678.07	678.07
℄ Brg. N. Abut.	70+91.70	-3.33	678.14	678.14
A	71+01.70	-3.33	678.33	678.40
B	71+11.70	-3.33	678.53	678.65
C	71+21.70	-3.33	678.72	678.87
D	71+31.70	-3.33	678.90	679.06
E	71+41.70	-3.33	679.08	679.22
F	71+51.70	-3.33	679.25	679.34
℄ Brg. S. Abut.	71+66.70	-3.33	679.50	679.50
Bk. S. Abut.	71+70.19	-3.33	679.56	679.56

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+86.09	3.33	682.72	682.72
℄ Brg. N. Abut.	70+89.58	3.33	682.81	682.81
A	70+99.58	3.33	683.06	683.13
B	71+09.58	3.33	683.31	683.43
C	71+19.58	3.33	683.56	683.71
D	71+29.58	3.33	683.80	683.96
E	71+39.58	3.33	684.03	684.17
F	71+49.58	3.33	684.26	684.35
℄ Brg. S. Abut.	71+64.58	3.33	684.60	684.60
Bk. S. Abut.	71+68.07	3.33	684.68	684.68

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+83.33	12.00	682.92	682.92
℄ Brg. N. Abut.	70+86.82	12.00	683.01	683.01
A	70+96.82	12.00	683.25	683.32
B	71+06.82	12.00	683.49	683.62
C	71+16.82	12.00	683.73	683.90
D	71+26.82	12.00	683.96	684.14
E	71+36.82	12.00	684.19	684.34
F	71+46.82	12.00	684.41	684.51
℄ Brg. S. Abut.	71+61.82	12.00	684.73	684.73
Bk. S. Abut.	71+65.31	12.00	684.81	684.81

EASTBOUND PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+82.69	14.00	682.97	682.97
℄ Brg. N. Abut.	70+86.18	14.00	683.05	683.05
A	70+96.18	14.00	683.30	683.37
B	71+06.18	14.00	683.54	683.67
C	71+16.18	14.00	683.77	683.94
D	71+26.18	14.00	684.00	684.17
E	71+36.18	14.00	684.22	684.38
F	71+46.18	14.00	684.44	684.55
℄ Brg. S. Abut.	71+61.18	14.00	684.76	684.76
Bk. S. Abut.	71+64.67	14.00	684.84	684.84

BEAM 12

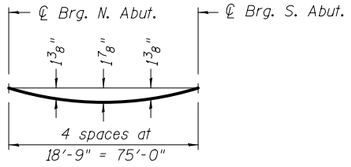
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+80.57	20.67	683.13	683.13
℄ Brg. N. Abut.	70+84.06	20.67	683.21	683.21
A	70+94.06	20.67	683.45	683.52
B	71+04.06	20.67	683.68	683.81
C	71+14.06	20.67	683.91	684.08
D	71+24.06	20.67	684.13	684.31
E	71+34.06	20.67	684.35	684.50
F	71+44.06	20.67	684.56	684.66
℄ Brg. S. Abut.	71+59.06	20.67	684.87	684.87
Bk. S. Abut.	71+62.55	20.67	684.94	684.94

BEAM 13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+77.81	29.33	683.34	683.34
℄ Brg. N. Abut.	70.81.30	29.33	683.43	683.43
A	70+91.30	29.33	683.65	683.72
B	71+01.30	29.33	683.88	684.00
C	71+11.30	29.33	684.09	684.24
D	71+21.30	29.33	684.31	684.47
E	71+31.30	29.33	684.51	684.65
F	71+41.30	29.33	684.72	684.82
℄ Brg. S. Abut.	71+56.30	29.33	685.01	685.01
Bk. S. Abut.	71+59.79	29.33	685.08	685.08

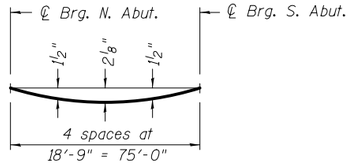
BEAM 14

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+75.05	38.00	683.56	683.56
℄ Brg. N. Abut.	70+78.54	38.00	683.64	683.64
A	70+88.54	38.00	683.86	683.93
B	70+98.54	38.00	684.07	684.19
C	71+08.54	38.00	684.28	684.43
D	71+18.54	38.00	684.49	684.65
E	71+28.54	38.00	684.69	684.83
F	71+38.54	38.00	684.88	684.98
℄ Brg. S. Abut.	71+53.54	38.00	685.16	685.16
Bk. S. Abut.	71+57.03	38.00	685.23	685.23



DEAD LOAD DEFLECTION DIAGRAM (BEAMS 1, 4-6, 9-10, 13-15)

(Includes weight of concrete only.)



DEAD LOAD DEFLECTION DIAGRAM (BEAMS 2-3, 7-8, 11-12, 16-18)

(Includes weight of concrete only.)

BEAM 15

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+72.29	46.67	683.79	683.79
℄ Brg. N. Abut.	70+75.78	46.67	683.86	683.86
A	70+85.78	46.67	684.07	684.14
B	70+95.78	46.67	684.28	684.40
C	71+05.78	46.67	684.48	684.63
D	71+15.78	46.67	684.67	684.83
E	71+25.78	46.67	684.86	685.00
F	71+35.78	46.67	685.05	685.15
℄ Brg. S. Abut.	71+50.78	46.67	685.32	685.32
Bk. S. Abut.	71+54.27	46.67	685.38	685.38

BEAM 16

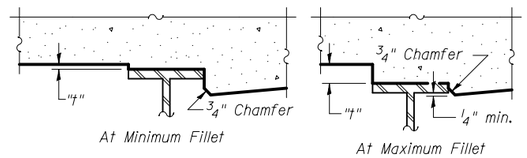
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+69.53	55.33	684.02	684.02
℄ Brg. N. Abut.	70+73.02	55.33	684.09	684.09
A	70+83.02	55.33	684.29	684.37
B	70+93.02	55.33	684.49	684.63
C	71+03.02	55.33	684.68	684.86
D	71+13.02	55.33	684.86	685.05
E	71+23.02	55.33	685.05	685.21
F	71+33.02	55.33	685.22	685.33
℄ Brg. S. Abut.	71+48.02	55.33	685.48	685.48
Bk. S. Abut.	71+51.51	55.33	685.54	685.54

BEAM 17

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+66.77	64.00	684.26	684.26
℄ Brg. N. Abut.	70+70.26	64.00	684.32	684.32
A	70+80.26	64.00	684.52	684.60
B	70+90.26	64.00	684.70	684.84
C	71+00.26	64.00	684.88	685.06
D	71+10.26	64.00	685.06	685.25
E	71+20.26	64.00	685.23	685.39
F	71+30.26	64.00	685.40	685.51
℄ Brg. S. Abut.	71+45.26	64.00	685.64	685.64
Bk. S. Abut.	71+48.75	64.00	685.70	685.70

BEAM 18

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	70+64.01	72.67	684.50	684.50
℄ Brg. N. Abut.	70+67.50	72.67	684.56	684.56
A	70+77.50	72.67	684.74	684.81
B	70+87.50	72.67	684.92	685.05
C	70+97.50	72.67	685.09	685.25
D	71+07.50	72.67	685.26	685.43
E	71+17.50	72.67	685.43	685.58
F	71+27.50	72.67	685.58	685.68
℄ Brg. S. Abut.	71+42.50	72.67	685.81	685.81
Bk. S. Abut.	71+45.99	72.67	685.86	685.86



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 9 thru 11 of 59, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

Notes:

The dead load deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted For Dead Load Deflection" as shown in tables.

Dead load deflections for Beams 16, 17 and 18 are based on noise wall weight of 325 plf. If actual noise wall weight varies from 325 plf the deflection ordinates shall be recalculated and submitted to the Engineer.