
	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>103</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Location <u>McHenry County, IL</u>	Sheet <u>2</u> of <u>3</u> Date <u>3/12/20</u> Drilled By <u>AC</u> Logged By <u>CS</u>
		Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other	

[illegible]

Water Level —	depth, ft.	elev. ft.	S - sample	T - type (J(Jar), SS(split-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>9.0</u>	<u>806.0</u> [†]	B - Standard Penetration Test(SPT), blows/6" interval		W - water content, %
- after drilling:	<u>3.0</u>	<u>812.0</u> [†]	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

 SOIL AND MATERIAL CONSULTANTS, INC. Comments _____ _____ _____	File No. <u>24929</u> Client <u>BLA, Inc.</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Location <u>McHenry County, IL</u>	BORING LOG <u>103</u> Sheet <u>3</u> of <u>3</u> Date <u>3/12/20</u> Drilled By <u>AC</u> Logged By <u>CS</u>
	Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other	

[illegible]

End of Boring		S - sample	T - type: J(Jar), SS(split-spoon), ST(shealy tube)	R - recovery length, in.
Water Level —	depth, ft. elev. ft.	B - Standard Penetration Test(SPT), blows/6" interval	W - water content, %	
- while drilling:	<u>9.0</u> <u>806.0'</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	Uw - dry unit weight of soil, lbs/cu. ft.	
- after drilling:	<u>3.0</u> <u>812.0'</u>	Pen. - pocket penetrometer reading, tons/sq. ft.		
- hrs. after drilling:		Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	<u>104</u>
	Comments _____	Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>3</u>	
	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>3/12/20</u>		
	Location <u>McHenry County, IL</u>	Drilled By <u>AC</u>		
	Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By <u>CS</u>		

Elev., ft.	815.5'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
		Bituminous concrete - 4.0"											
		Sand & gravel - 10.0"											
		Brown clay & silt, trace sand & gravel, damp, hard - Fill						7					
								5					
								5	10	4.5+	10.6	123.0	5.1
812.5'					1	SS	15"						
		Brown silt, some sand & clay, trace gravel, damp, loose - Fill						2			13.3		
811.5'					2			2					
		Dark brown-dark-gray fine sand, some gravel & medium-coarse sand, damp, medium dense - Fill						8					
					3	SS	18"	8	16		7.6		
								6					
								14					
					4	SS	18"	14	28		9.4		
807.5'													
		Dark brown fine sand, trace medium sand, saturated, loose - Fill						3					
806.0'					5			2			27.1		
		Black organic silt, very damp, very loose			6	SS	15"	1	3		86.7		
805.0'													
		Brown-gray medium-coarse sand & gravel, some fine sand, saturated, medium dense						5					
								6					
					7	SS	12"	6	12		8.3		
802.5'													
		Brown-gray to gray fine sand, some gravel & medium-coarse sand, saturated, medium dense						6					
								7					
					15	SS	15"	7	14		13.1		
								4					
								5					
					9	SS	15"	6	11		13.0		
								4					
								5					
795.5'					20	SS	15"	7	12		17.4		

Water Level —	depth ft.	elev. ft.	S - sample	T - type (J:Jar, SS(split-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>8.0</u>	<u>807.5'</u>	B - Standard Penetration Test(SPT), blows/6" interval		W - water content, %
- after drilling:	<u>3.0</u>	<u>812.5'</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

USER NAME = knay	DESIGNED - CP	REVISED -
	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - CP	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -


**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS IV
STRUCTURE NO. 056-4023

SHEET 35 OF 42 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	101
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		




	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>104</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Location <u>McHenry County, IL</u>	Sheet <u>2</u> of <u>3</u> Date <u>3/12/20</u> Drilled By <u>AC</u>
		Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By <u>CS</u>

[illegible]

Water Level —	depth, ft.	elev. ft.	S - sample	T - type: J(Jar), SS(slit-spoon), ST(shelby tube)	R - recovery length, in
- while drilling:	<u>8.0</u>	<u>807.5</u>	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>3.0</u>	<u>812.5</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>104</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> <u>Millstream Road over Kishwaukee</u> <u>River Bridge Rehab./Replacement</u>	Sheet <u>3</u> of <u>3</u> Date <u>3/12/20</u>
	Location <u>McHenry County, IL</u>	Drilled By <u>AC</u> <u>CS</u>	
	Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By _____	

[illegible]

Water Level —	depth, ft.	elev., ft.	S - sample	T - type: (J)jar, SS(split-spoon), ST(shealy tube)	R - recovery length, in.
- while drilling:	<u>8.0</u>	<u>807.5</u>	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>3.0</u>	<u>812.5</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	<u>105</u>
	Comments _____	Client <u>BLA, Inc.</u> Sheet <u>1</u> of <u>1</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Date <u>2/24/20</u> Location <u>McHenry County, IL</u> Drilled By <u>AC</u> Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____ Logged By <u>CS</u>		

[illegible]

Water Level — depth, ft. elev., ft. S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.
 - while drilling: 9.0 806.0 B - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %
 - after drilling: 9.0 806.0 N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"
 - hrs. after drilling: Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.
 Qu - unconfined compressive strength, tons/sq. ft.

F-111b-1

USER NAME = knay	DESIGNED - CP	REVISED -
	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - CP	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS V
STRUCTURE NO. 056-4023

SHEET 36 OF 42 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	102
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		



File No. 24929 **BORING LOG** 106

Client BLA, Inc. Sheet 1 of 1

Comments _____ Project River Bridge Rehab./Replacement Date 2/24/20

Location McHenry County, IL Drilled By AC

Equipment ☒ CME 45B ☐ H.A. ☐ Other _____ Logged By CS

[illegible]

Water Level —	depth, ft.	elev. ft.
- while drilling:	<u>dry</u>	_____
- after drilling:	<u>dry</u>	_____
- hrs. after drilling:	_____	_____

S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.
B - Standard Penetration Test(SPT), blows/6" interval W - water content, %
N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"
Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.
Qu - unconfined compressive strength, tons/sq. ft.

F-111b-1

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	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - CP	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

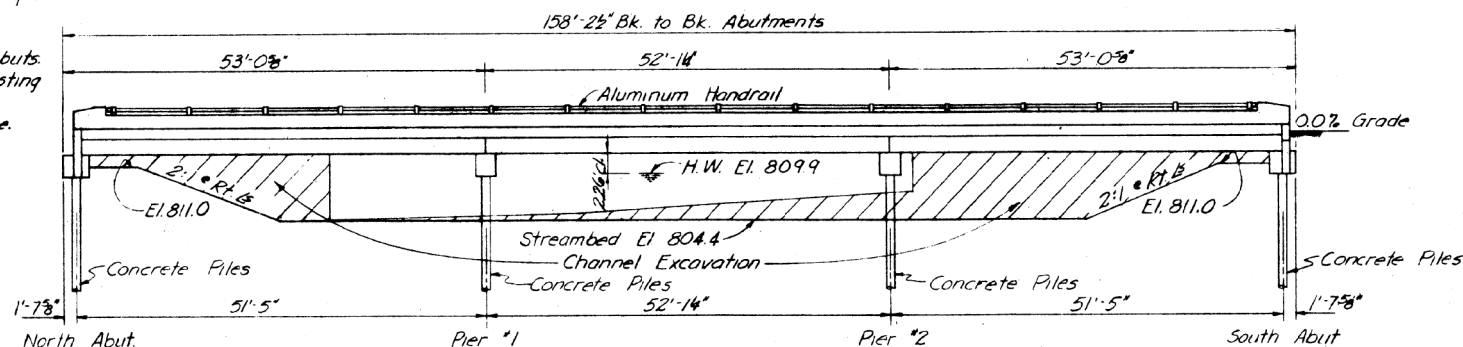
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS VI
STRUCTURE NO. 056-4023

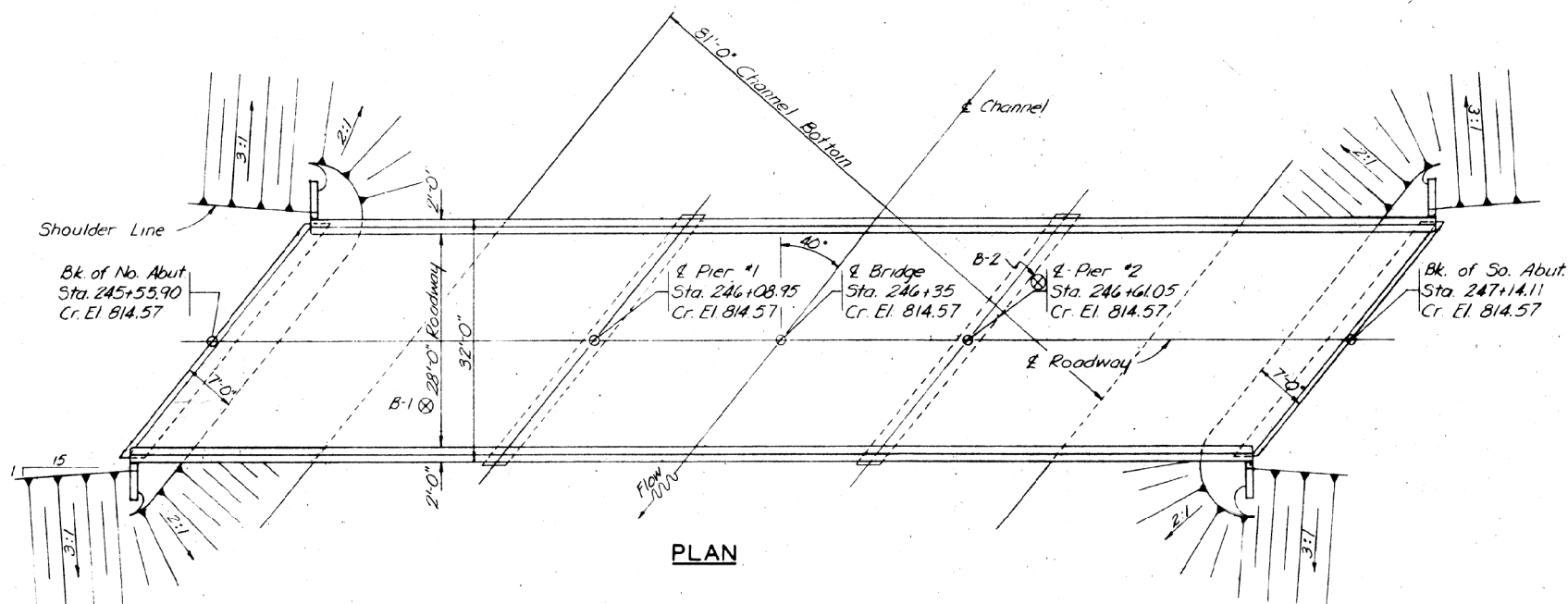
SHEET 37 OF 42 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	103
CONTRACT NO. 61J79				
	ILLINOIS	FED. AID PROJECT		

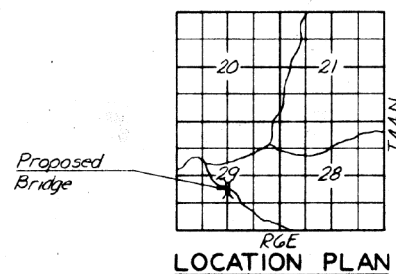
B.M. R.R. Spike in Power Pole Lt
of Sta. 242+37 Elev 808.91
Existing Structure - 1/2 Thru pony truss
1 span @ 74'-6"; 18' Rwy.
Concrete Floor.
Substructure - Closed Conc. Abutts.
Contractor shall remove existing
structure before
constructing new bridge.
No Salvage



ELEVATION



PLAN



LOCATION PLAN

TOTAL BILL OF MATERIAL

ITEM	SUPER	SUB	TOTAL
Precast Prestressed Concrete			
Bridge Deck	Sq. Ft. 4,680		4,680
Class X Concrete	Cu Yds. 42.7	50.2	92.9
Reinforcement Bars	Lbs. 3,320	4,640	7,960
Aluminum Handrail	Lin. Ft. 296		296
Name Plates	Each 1		1
Concrete Piles	Lin. Ft. 1,245	1,245	2,490
Test Piles (Concrete)	Each 2		2
Removal of Existing Structures	Each 1		1

WATERWAY INFORMATION

Drainage Area	47,400 Acres
Req'd Opening (15 yrs)	475 Sq. Ft.
Present Opening	390 Sq. Ft.
Proposed Opening	492 Sq. Ft.

DESIGN STRESSES

fc	2000 psi (Super)
fc	1400 psi (Sub)
fs	20,000 psi (Reinf.)
fs	175,000 psi (Prestressing Steel)
n	10

Loading H15-S12-44

Marion J. Rice
Illinois Structural No. 2134

GENERAL PLAN & ELEVATION
PROJECT S-1235 (101)
F.A.S. RT. 1235 SECTION 61B
MCHENRY COUNTY
STATION 246+35

COLLINS AND RICE
CONSULTING ENGINEERS

RRM MJR
KWW 12-26-63 228

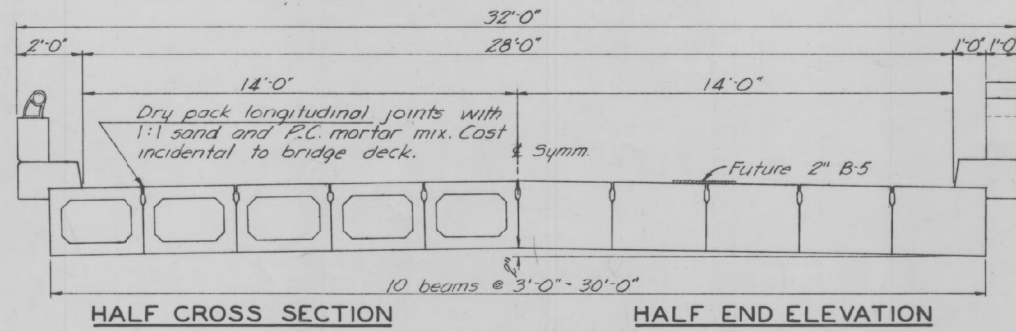
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PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS I
STRUCTURE NO. 056-4023

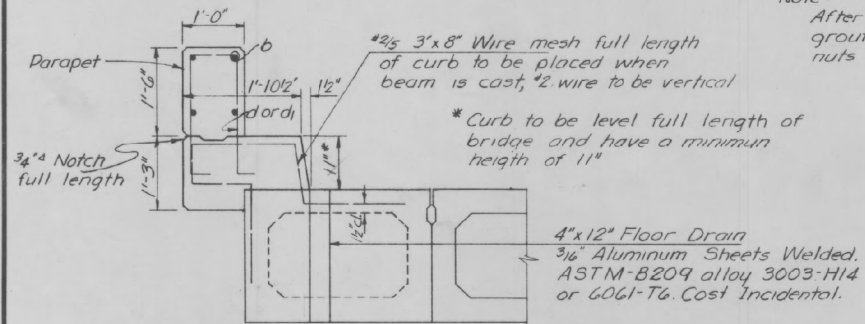
SHEET 38 OF 42 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	104
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

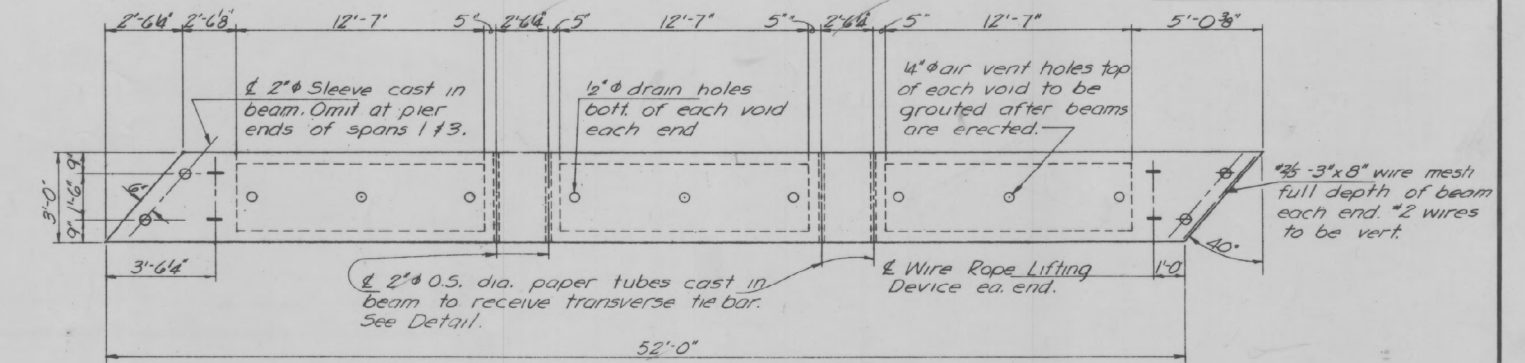


Curbs and parapet to be poured after beams are erected and grouted and will be paid for as Class X Concrete.

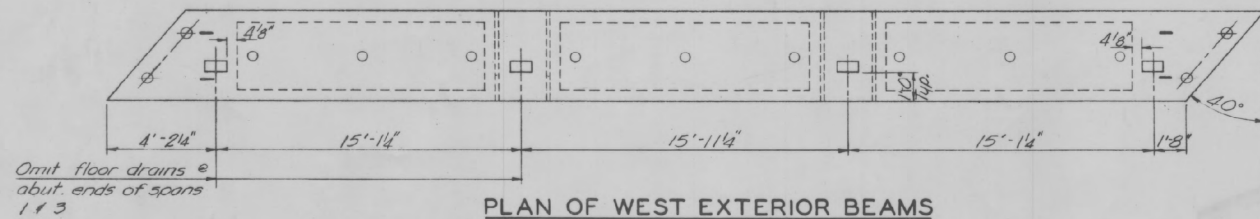
Note:
After ties are in place,
grout all recesses for
nuts in exterior beams.



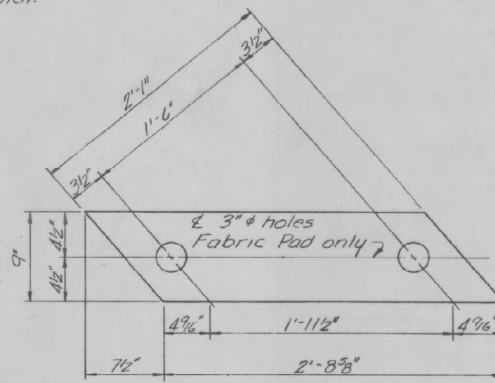
CURB & PARAPET DETAIL



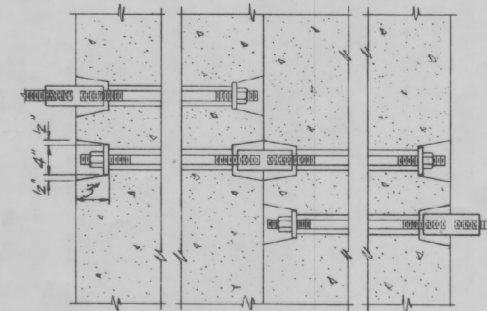
TYPICAL PLAN INTERIOR BEAMS



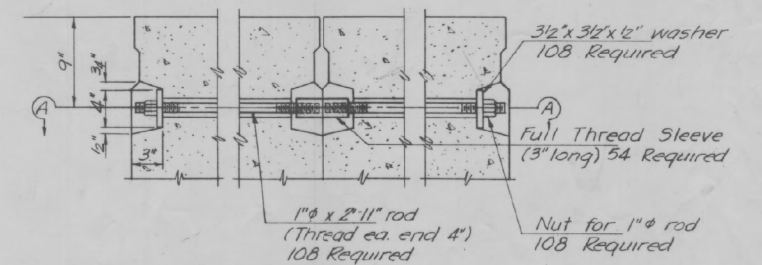
PLAN OF WEST EXTERIOR BEAMS
Rotate 180° for East Exterior Beams



PLAN OF BEARING PADS



SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY

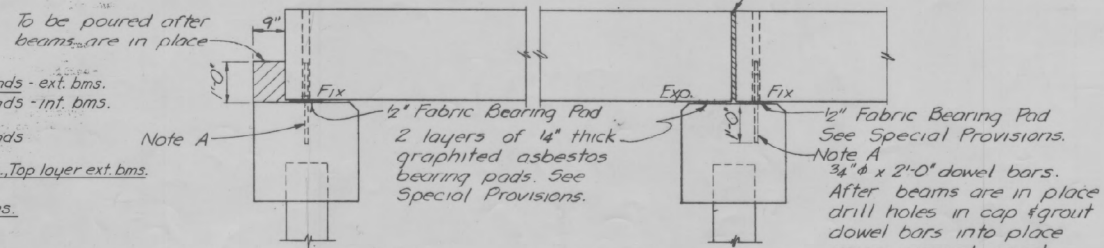
BILL OF MATERIAL SUPERSTRUCTURE

ITEM	QUANTITY
Precast Prestressed Concrete Bridge Deck	Sq. Ft. 4680
Class X Concrete (Curbs)	Cu. Yds. 24.8

See Sheet No. 5 for handrail
and parapet details.

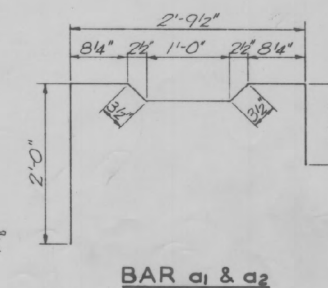
TYPICAL SECTION THRU BEAMS

Prestressing cables shall be 7 wire $\frac{7}{16}$ " strand and each strand shall be tensioned to 18,900 lbs.



SECTION AT ABUTTS.

SECTION AT PIERS



BAR a_1 & a_2

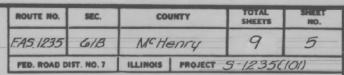
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	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EXISTING PLANS II
STRUCTURE NO. 056-4023

SHEET 39 OF 42 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	105
CONTRACT NO. 61J79				
	ILLINOIS	FED. AID PROJECT		



HANDRAIL
PROJECT S-1235 (101)
F.A.S. RT. 1235 SECTION 61B
M^CHENRY COUNTY
STATION 246+35

COLLINS AND RICE
CONSULTING ENGINEERS

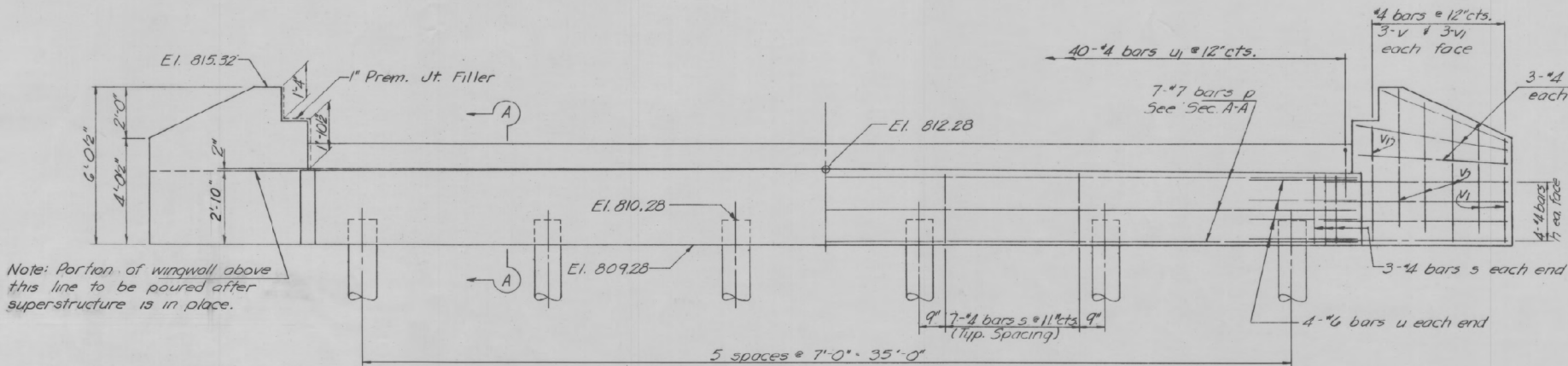
DESIGNED <i>RRM</i>	CHECKED <i>MJR</i>
DRAWN <i>KWW</i>	DATE <i>12-26-63</i> NO. <i>228</i>

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

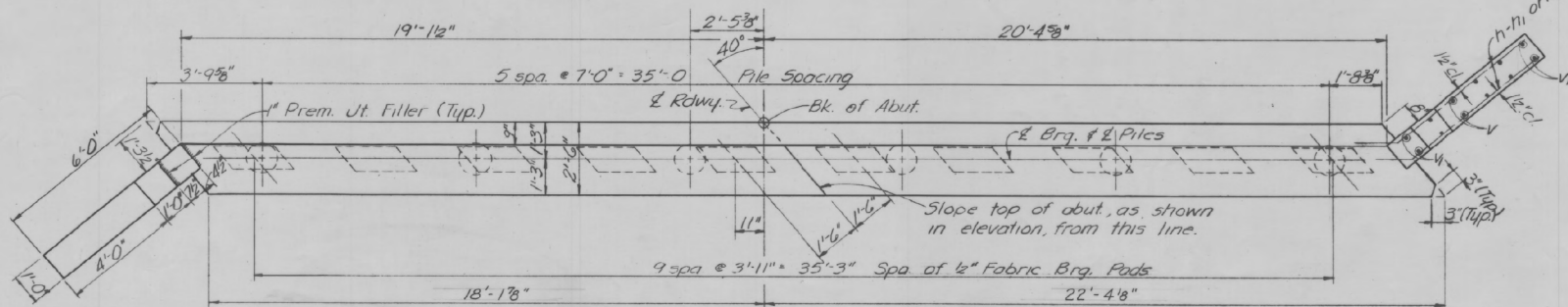
EXISTING PLANS III
STRUCTURE NO. 056-4023

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	106
CONTRACT NO. 61J79				
		ILLINOIS	FED. AID PROJECT	

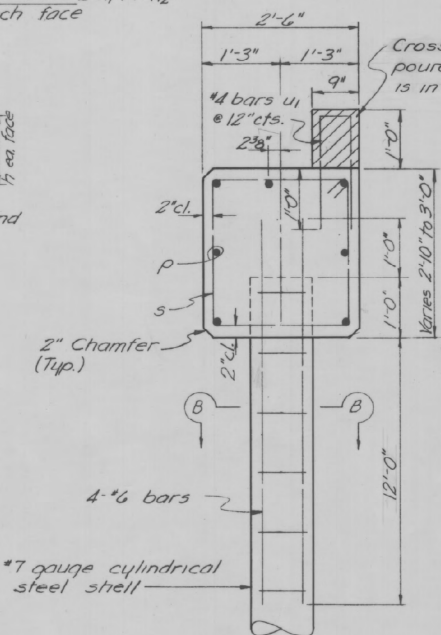
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA51235	61B	M'Henry	9	6
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT S-1235 (101)				



ELEVATION



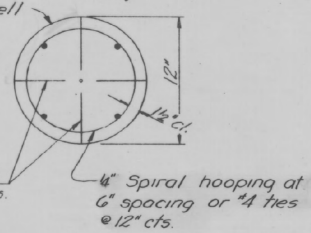
PLAN



SECTION A-A

Showing Details of Metal Shell Cast-in-Place piles.

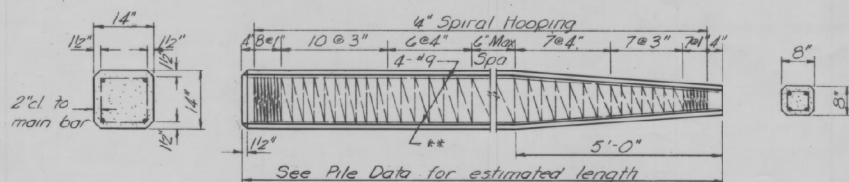
Note: Reinforcement is incidental to cost of furnishing piles.



SECTION B-B

BILL OF MATERIAL - 2 ABUTS

BAR	NO	SIZE	LENGTH	SHAPE
h	32	#4	7'-0"	—
h ₁	16	#4	5'-9"	—
h ₂	8	#4	5'-0"	—
p	28	#7	2'-0"	—
s	82	#4	10'-1"	□
u	16	#6	12'-6"	—
u ₁	80	#4	4'-1"	—
v	24	#4	5'-0"	—
v ₁	24	#4	4'-0"	—
Class X Concrete			Cu Yds	282
Reinforcement Bars			Lbs.	2,650
Concrete Piles			Lin Ft.	495
Test Piles (Concrete)			Each	1

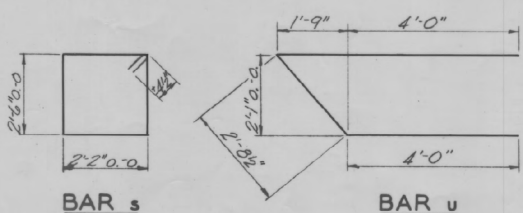


DETAIL OF PRECAST CONCRETE PILE

Note to Contractor:
For pile lengths up to 45', use two slings placed at a distance of 0.21 L* from each end. On piles longer than 45', use three slings placed at .12L from each end and at mid-point of pile.

** For piles over 45' long use 8" bars.

* L = Overall Pile Length



PILE DATA-ABUTS.

Type	Concrete Piles
No. Req'd - 2 Abuts.	12"
Min. Capacity	28 Tons
Est. Length	45 Feet
*No. includes one test pile to be driven in So. Abut.	

Note: See Special Provisions for Item "Concrete Piles."

ABUTMENTS
PROJECT S-1235 (101)
F.A.S. RT. 1235 SECTION 61B
M'HENRY COUNTY
STATION 246+35

COLLINS AND RICE
CONSULTING ENGINEERS

DESIGNED RRM	CHECKED MJR
DRAWN KWW	DATE 12-26-63

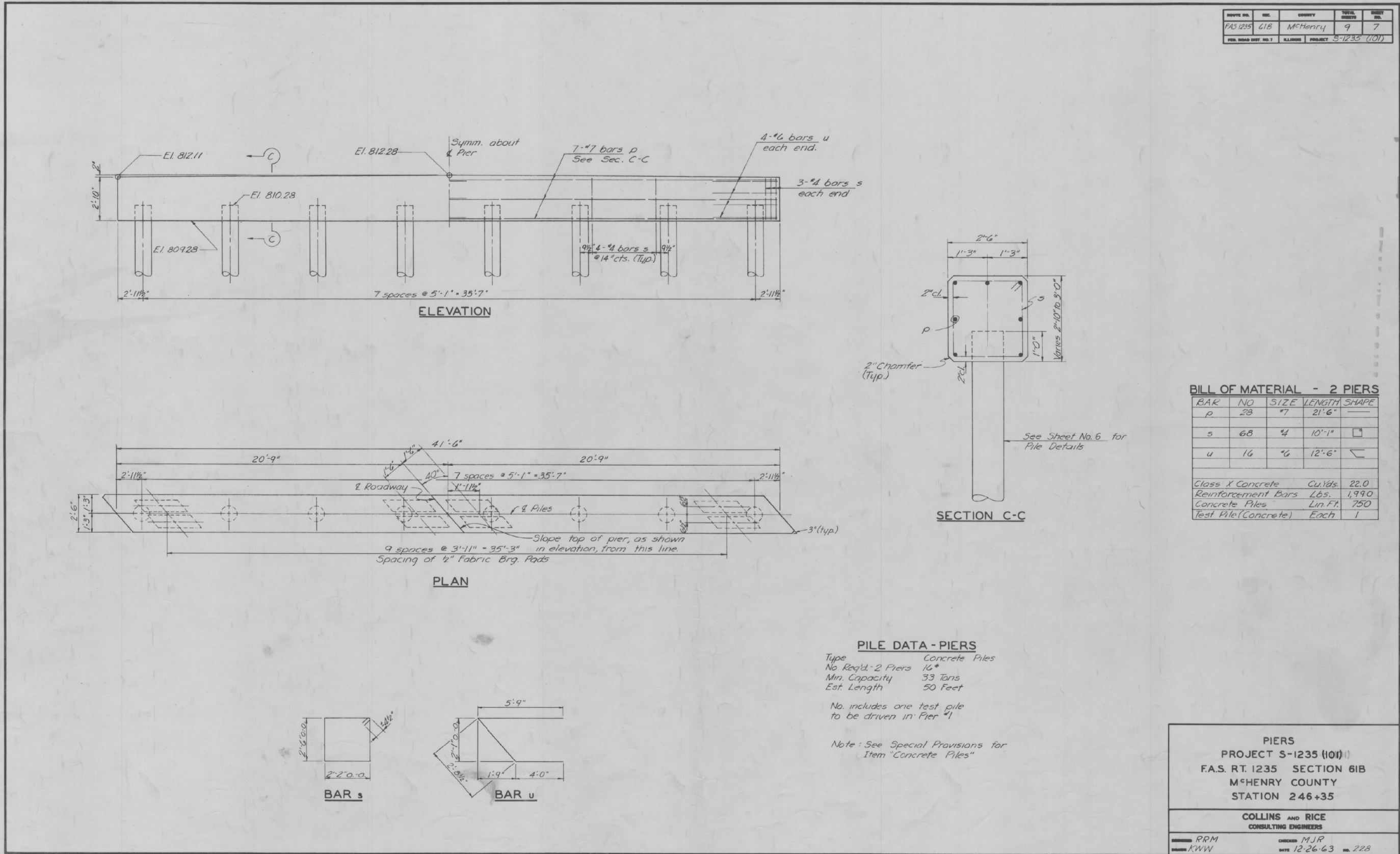
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CHECKED - PD	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS IV
STRUCTURE NO. 056-4023

SHEET 41 OF 42 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	107
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



USER NAME = knay	DESIGNED - KN	REVISED -
	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS V
STRUCTURE NO. 056-4023

SHEET 42 OF 42 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MC HENRY	219	108
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

Existing Structure: Structure No. 056-3022 was originally constructed in 1964. It consists of three-span prestressed concrete deck beams. The structure is skewed 30° right forward with an out to out width 32'-0". It is 148'-11¼" along the centerline back to back abutments. The bridge will be closed and traffic will be detoured.

detoured. ** High Voltage Lines

No Salvage.

— Existing Aerial Lines

Caltrans ST-76 Bridge Rail and Curb

Existing Aerial Lines, typ.

Traffic Barrier Terminal, Type 6

End Block (Approach)

WEST RAILING ELEVATION
(Looking East)

Design H.W.E. 811.56

1'-11 1/4" min. vert. cl. (N. Abut.)

Low Beam 813.51

End Block (Approach)

Impact Attenuator

10-Year velocity through existing structure = 3.20 ft/s

10-Year velocity through proposed structure = 2.52 ft/s

** High Voltage Lines

Elev. 810.85

±22'-0"

Metal Shell Pile

Channel Excavation, See Roadway Plans

Elev. 799.73

PPC 1L27N Beams

EWSE 809.51

Streambed Elev. ±805.0

Cofferdam Type 2 (Location 3)

Metal Shell Pile

Elev. 799.73

Cofferdam Type 2 (Location 4)

Metal Shell Pile

Channel Excavation, See Roadway Plans

Elev. 810.02

Metal Shell Pile

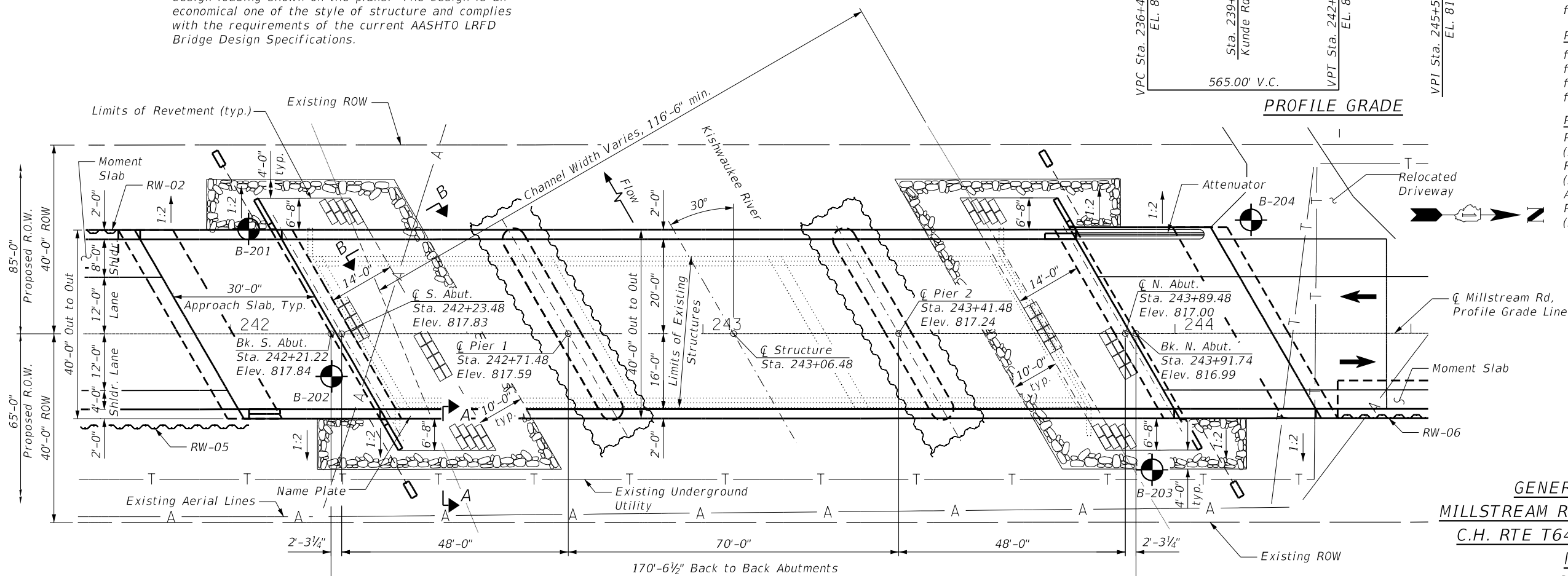
Structure Limits

PL Sta. 239+25.00

PL Sta. 244+60.00

I certify that to the best of my knowledge, information and belief, this design is structurally adequate for the design loading shown on the plans. The design is an economical one of the style of structure and complies with the requirements of the current AASHTO LRFD Bridge Design Specifications.

(Looking West)



PLAN

Drainage Area = 89.29 sq. mi.			Existing Overtopping Elev. = 815.00 at Sta. 418+37.00		Proposed Overtopping Elev. = 816.47 at Sta. 424+75.00				
Flood Event	Freq. Yr.	Discharge Ft/s	Waterway Opening-ft ²		Natural H.W.E. ft.	Head - Ft.		Headwater Elev. ft.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
	10	1970.5	512.10	818.11	811.28	0.70	0.69	811.98	811.97
Design	30	2662.31	567.90	876.25	811.56	0.95	0.96	812.51	812.51
Base	100	3411.55	625.31	932.46	811.77	1.32	1.31	813.09	813.07
Max. Calc.	500	4479.78	647.38	1002.41	812.00	1.92	1.88	813.92	813.82

10-Year velocity through existing structure = 3.20 ft/s

10-Year velocity through proposed structure = 2.52 ft/s

<i>Event/Limit</i>	<i>Design Scour Elevations (ft.)</i>				<i>Item</i>
<i>State</i>	<i>S. Abut.</i>	<i>Pier 1</i>	<i>Pier 2</i>	<i>N. Abut.</i>	<i>113</i>
<i>Q100</i>	<i>810.75</i>	<i>799.73</i>	<i>799.73</i>	<i>809.81</i>	<i>8</i>
<i>Q200</i>	<i>810.75</i>	<i>798.83</i>	<i>798.83</i>	<i>809.81</i>	
<i>Design</i>	<i>810.75</i>	<i>799.73</i>	<i>799.73</i>	<i>809.81</i>	
<i>Check</i>	<i>810.75</i>	<i>798.83</i>	<i>798.83</i>	<i>809.81</i>	

** Work for constructing bridge and wall will be performed under low overhead clearance. See General Notes Sht. 2 of 40.

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.095 g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.121 g
Soil Site Class = D

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

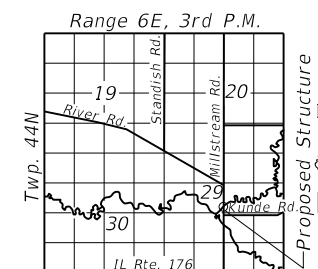
Allow 50#/sq. ft. for future wearing surface.
Vehicular Collision Force - MASH 2016 Test Level 4

FIELD UNITS

$f'_c = 3,500 \text{ psi}$
 $f'_c = 4,000 \text{ psi}$ (Superstructure)
 $f_y = 60,000 \text{ psi}$ (Reinforcement)

$f'c = 8,500 \text{ psi}$
 $f'ci = 6,500 \text{ psi}$
 $f's = 270,000 \text{ psi (0.6" } \odot \text{ low lax. strands)}$
 $f'si = 202,300 \text{ psi (0.6" } \odot \text{ low lax. strands)}$

Posts & Plates: $f_y = 36$ ksi min.
(ASTM A709/ A709M, Grade 36)
Rails: $f_y = 46$ ksi
(ASTM A500/ A500M Grade B)
Anchor Bolts: ASTM 1554, Grade 105
Parapet Shoe Plates: $f_y = 50$ ksi
(ASTM A709/ A709M, Grade 50)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
MILLSTREAM ROAD OVER KISHWAUKEE RIVER

MCHENRY COUNTY

STATION 243+06.48

STRUCTURE NO. 056-4022

USER NAME	= knay	DESIGNED	= ES	REVISED	=
		CHECKED	= PD	REVISED	=
PLOT SCALE	=	DRAWN	= ES	REVISED	=
PLOT DATE	= 8/24/2023	CHECKED	= PD	REVISED	=

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 056-4022

SHEET 1 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	109
CONTRACT NO. 61J79				
<div> <div>ILLINOIS</div> <div>FED. AID PROJECT</div> </div>				

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Protective coat shall be applied to the top of deck and the top and inside faces of curbs.
3. Seal coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.
4. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
5. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
6. Work for constructing bridge and wall will be performed under low overhead clearance. Contractor shall consider the overhead power lines in addressing all aspects of the project. Estimated elevation of lowest high voltage line is 862.90. The Contractor, ComEd, and AT&T are required to verify clearances during construction. All costs associated with work under low overhead clearance are included with associated pay items.
7. The existing structural concrete coating contains asbestos. The Contractor shall take appropriate precautions to address the presence of asbestos on this project.
8. A film forming Concrete Sealer shall be applied to the front faces of abutments and designated surfaces of pier walls and caps.
9. Contractor to submit a copy of the precast beam shop drawings to the engineer on record for load rating purposes.

TOTAL BILL OF MATERIAL

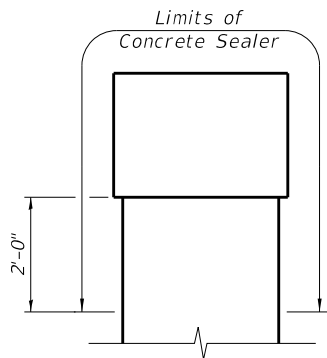
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq Yd	---	303	303
Filter Fabric	Sq Yd	---	205	205
Articulated Block Revetment Mat	Sq Yd	---	232	232
Removal Of Existing Structures No. 2	Each	1	---	1
Structure Excavation	Cu Yd	---	177	177
Cofferdam Excavation	Cu Yd	---	506	506
Cofferdam (Type 2) (Location - 3)	Each	---	1	1
Cofferdam (Type 2) (Location - 4)	Each	---	1	1
Concrete Structures	Cu Yd	--	303.3	303.3
Concrete Superstructure	Cu Yd	270.8	--	270.8
Bridge Deck Grooving	Sq Yd	862.2	--	862.2
Seal Coat Concrete	Cu Yd	---	246	246
Protective Coat	Sq Yd	1,064	--	1,064
Concrete Superstructure (Approach Slab)	Cu Yd	111.9	--	111.9
Furnishing And Erecting Precast Prestressed Concrete Beams, I127N	Foot	992	--	992
Reinforcement Bars, Epoxy Coated	Pound	122,570	24,960	147,530
Furnishing Metal Shell Piles 14" X 0.312"	Foot	---	1,664	1,664
Driving Piles	Foot	---	1,664	1,664
Test Pile Metal Shells	Each	---	4	4
Pile Shoes	Each	---	38	38
Name Plates	Each	1	---	1
Granular Backfill For Structures	Cu Yd	---	87	87
Concrete Sealer	Sq Ft	---	2,071	2,071
Geocomposite Wall Drain	Sq Yd	---	56	56
Pipe Underdrains For Structures 4"	Foot	---	92	92
Pipe Underdrains For Structures (Special) 4"	Foot	---	64	64
Asbestos Bearing Pad Removal	Each	2	---	2
Steel Railing (Special)	Foot	421	---	421

STATION 235+22.77
BUILT 20 BY
STATE OF ILLINOIS
C.H RTE T64 - SEC. 18-00482-00-BR
LOADING HL-93
STRUCTURE NO. 056-4022

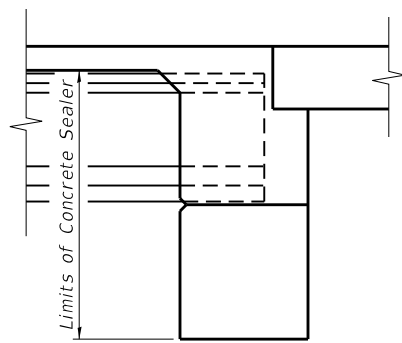
NAME PLATE
See Std. 515001

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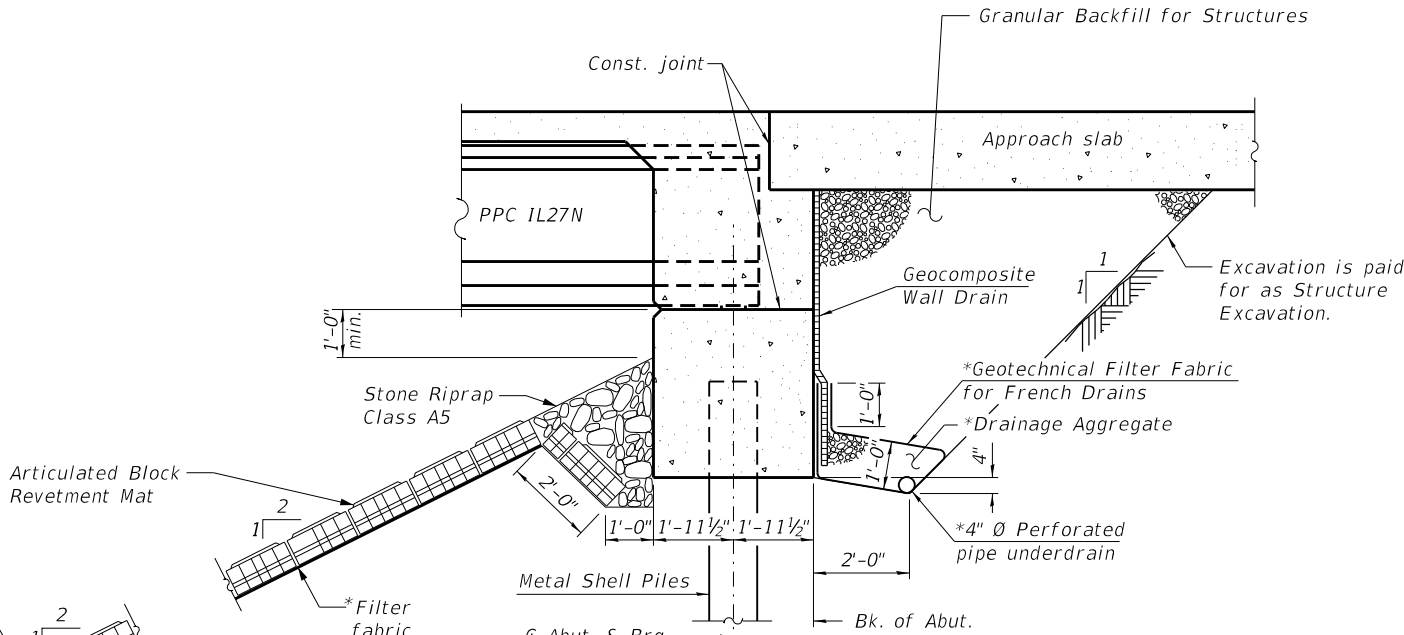


SECTION THRU PIER



SECTION THRU ABUTMENT

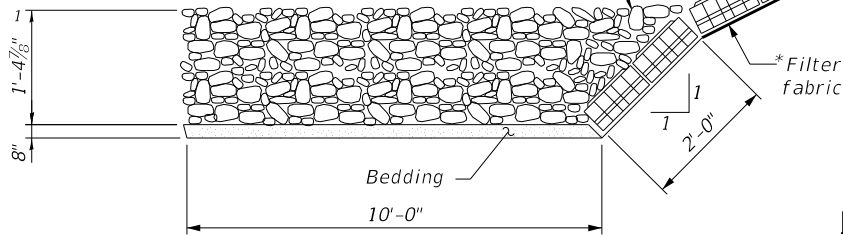
CONCRETE SEALER DETAILS



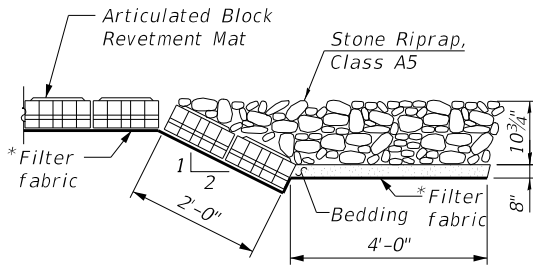
SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures 4".



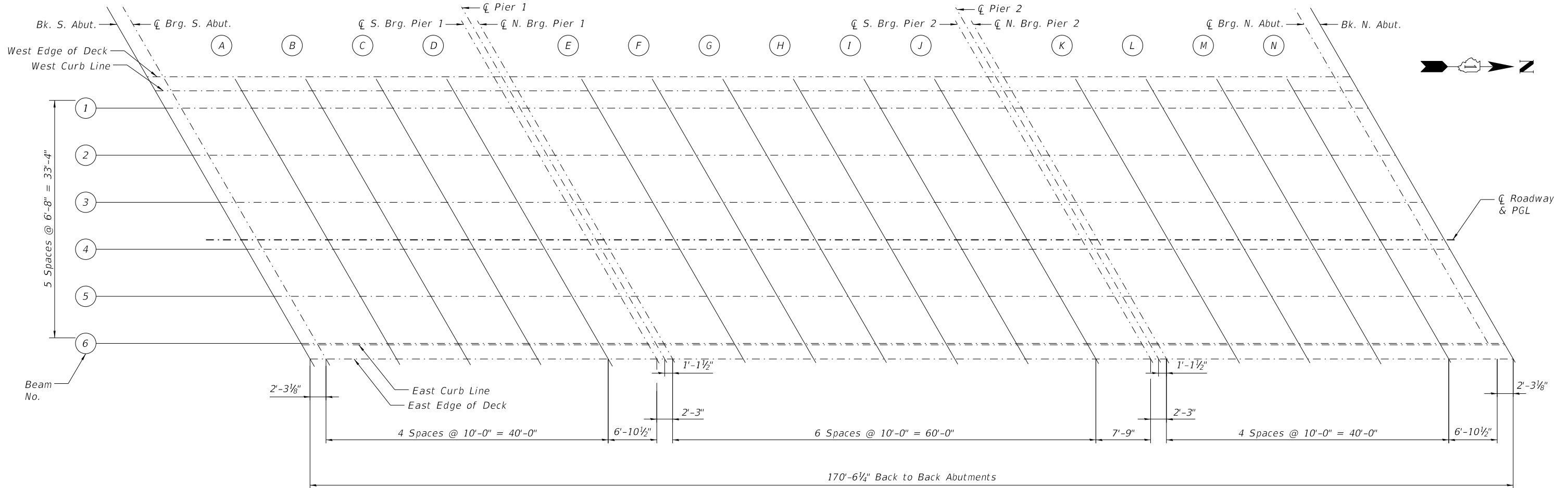
SECTION B-B



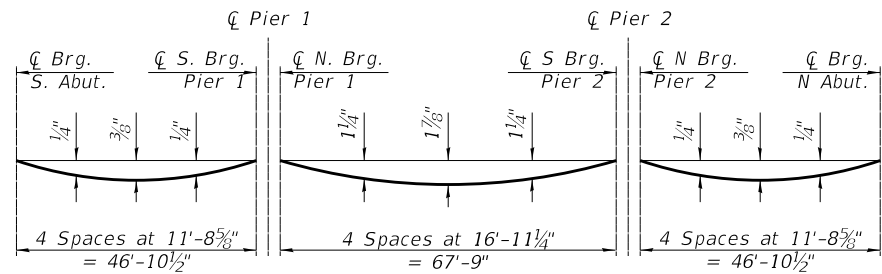
SECTION A-A

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. The outlet pipes shall be paid for as "Pipe Underdrains for Structures (Special) 4" and the headwalls shall be paid for as "Concrete Headwalls for Pipe Drains". (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

	USER NAME = esotelo	DESIGNED - ES	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL DATA STRUCTURE NO. 056-4022	C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - PD	CHECKED - PD	REVISED -			T64	18-00482-00-BR	MCHENRY	219	110
	PLOT SCALE =	DRAWN - ES	REVISED -			CONTRACT NO. 61J79				
	PLOT DATE = 9/21/2023	CHECKED - PD	REVISED -			ILLINOIS FED. AID PROJECT				



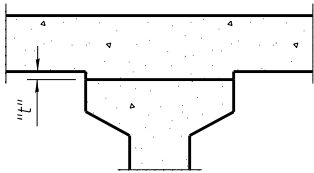
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

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



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

FILLET HEIGHTS

	USER NAME = knay	DESIGNED - ES	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF DECK ELEVATIONS LAYOUT STRUCTURE NO. 056-4022	C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - PD	REVISED -			T64	18-00482-00-BR	MCHENRY	219	111
	PLOT SCALE =	DRAWN - ES	REVISED -			CONTRACT NO. 61J79				
	PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -			ILLINOIS FED. AID PROJECT				

West Edge of Deck				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+08.52	-22.00	817.63	817.63
CL Brg. S. Abut.	242+10.78	-22.00	817.62	817.62
A	242+20.78	-22.00	817.57	817.59
B	242+30.78	-22.00	817.52	817.55
C	242+40.78	-22.00	817.47	817.50
D	242+50.78	-22.00	817.42	817.44
CL S. Brg. Pier 1	242+57.65	-22.00	817.39	817.39
CL Pier 1	242+58.78	-22.00	817.38	817.38
CL N. Brg. Pier 1	242+59.90	-22.00	817.38	817.38
E	242+69.90	-22.00	817.33	817.39
F	242+79.90	-22.00	817.28	817.40
G	242+89.90	-22.00	817.23	817.37
H	242+99.90	-22.00	817.18	817.32
I	243+09.90	-22.00	817.13	817.23
J	243+19.90	-22.00	817.08	817.13
CL S. Brg. Pier 2	243+27.65	-22.00	817.04	817.04
CL Pier 2	243+28.78	-22.00	817.03	817.03
CL N. Brg. Pier 2	243+29.90	-22.00	817.03	817.03
K	243+39.90	-22.00	816.98	817.00
L	243+49.90	-22.00	816.93	816.96
M	243+59.90	-22.00	816.88	816.91
N	243+69.90	-22.00	816.83	816.84
CL Brg. N. Abut.	243+76.78	-22.00	816.63	816.63
Bk. N. Abut.	243+79.04	-22.00	816.61	816.61

West Curb Line				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+09.67	-20.00	817.50	817.50
CL Brg. S. Abut.	242+11.93	-20.00	817.49	817.49
A	242+21.93	-20.00	817.46	817.46
B	242+31.93	-20.00	817.42	817.42
C	242+41.93	-20.00	817.37	817.37
D	242+51.93	-20.00	817.30	817.30
CL S. Brg. Pier 1	242+58.81	-20.00	817.26	817.26
CL Pier 1	242+59.93	-20.00	817.25	817.25
CL N. Brg. Pier 1	242+61.06	-20.00	817.24	817.24
E	242+71.06	-20.00	817.26	817.26
F	242+81.06	-20.00	817.26	817.26
G	242+91.06	-20.00	817.24	817.24
H	243+01.06	-20.00	817.19	817.19
I	243+11.06	-20.00	817.10	817.10
J	243+21.06	-20.00	816.99	816.99
CL S. Brg. Pier 2	243+28.81	-20.00	816.91	816.91
CL Pier 2	243+29.93	-20.00	816.90	816.90
CL N. Brg. Pier 2	243+31.06	-20.00	816.89	816.89
K	243+41.06	-20.00	816.87	816.87
L	243+51.06	-20.00	816.83	816.83
M	243+61.06	-20.00	816.78	816.78
N	243+71.06	-20.00	816.71	816.71
CL Brg. N. Abut.	243+77.93	-20.00	816.66	816.66
Bk. N. Abut.	243+80.19	-20.00	816.65	816.65

Beam 1				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+10.44	-18.67	817.52	817.52
CL Brg. S. Abut.	242+12.70	-18.67	817.51	817.51
A	242+22.70	-18.67	817.46	817.48
B	242+32.70	-18.67	817.41	817.45
C	242+42.70	-18.67	817.36	817.39
D	242+52.70	-18.67	817.31	817.33
CL S. Brg. Pier 1	242+59.58	-18.67	817.28	817.28
CL Pier 1	242+60.70	-18.67	817.27	817.27
CL N. Brg. Pier 1	242+61.83	-18.67	817.27	817.27
E	242+71.83	-18.67	817.22	817.28
F	242+81.83	-18.67	817.17	817.29
G	242+91.83	-18.67	817.12	817.26
H	243+01.83	-18.67	817.07	817.21
I	243+11.83	-18.67	817.02	817.13
J	243+21.83	-18.67	816.97	817.02
CL S. Brg. Pier 2	243+29.58	-18.67	816.93	816.93
CL Pier 2	243+30.70	-18.67	816.92	816.92
CL N. Brg. Pier 2	243+31.83	-18.67	816.92	816.92
K	243+41.83	-18.67	816.87	816.89
L	243+51.83	-18.67	816.82	816.85
M	243+61.83	-18.67	816.77	816.80
N	243+71.83	-18.67	816.72	816.73
CL Brg. N. Abut.	243+78.70	-18.67	816.68	816.68
Bk. N. Abut.	243+80.96	-18.67	816.67	816.67

Beam 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+14.29	-12.00	817.64	817.64
CL Brg. S. Abut.	242+16.55	-12.00	817.63	817.63
A	242+26.55	-12.00	817.58	817.60
B	242+36.55	-12.00	817.53	817.56
C	242+46.55	-12.00	817.48	817.51
D	242+56.55	-12.00	817.43	817.44
CL S. Brg. Pier 1	242+63.43	-12.00	817.39	817.39
CL Pier 1	242+64.55	-12.00	817.39	817.39
CL N. Brg. Pier 1	242+65.68	-12.00	817.38	817.38
E	242+75.68	-12.00	817.33	817.40
F	242+85.68	-12.00	817.28	817.40
G	242+95.68	-12.00	817.23	817.38
H	243+05.68	-12.00	817.18	817.33
I	243+15.68	-12.00	817.13	817.24
J	243+25.68	-12.00	817.08	817.13
CL S. Brg. Pier 2	243+33.43	-12.00	817.04	817.04
CL Pier 2	243+34.55	-12.00	817.04	817.04
CL N. Brg. Pier 2	243+35.68	-12.00	817.03	817.03
K	243+45.68	-12.00	816.98	817.00
L	243+55.68	-12.00	816.93	816.96
M	243+65.68	-12.00	816.88	816.91
N	243+75.68	-12.00	816.83	816.85
CL Brg. N. Abut.	243+82.55	-12.00	816.80	816.80
Bk. N. Abut.	243+84.81	-12.00	816.79	816.79

Beam 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+18.14	-5.33	817.75	817.75
CL Brg. S. Abut.	242+20.40	-5.33	817.74	817.74
A	242+30.40	-5.33	817.69	817.71
B	242+40.40	-5.33	817.64	817.67
C	242+50.40	-5.33	817.59	817.62
D	242+60.40	-5.33	817.54	817.56
CL S. Brg. Pier 1	242+67.28	-5.33	817.51	817.51
CL Pier 1	242+68.40	-5.33	817.50	817.50
CL N. Brg. Pier 1	242+69.53	-5.33	817.50	817.50
E	242+79.53	-5.33	817.45	817.51
F	242+89.53	-5.33	817.40	817.52
G	242+99.53	-5.33	817.35	817.49
H	243+09.53	-5.33	817.30	817.44
I	243+19.53	-5.33	817.25	817.35
J	243+29.53	-5.33	817.20	817.25
CL S. Brg. Pier 2	243+37.28	-5.33	817.16	817.16
CL Pier 2	243+38.40	-5.33	817.15	817.15
CL N. Brg. Pier 2	243+39.53	-5.33	817.15	817.15
K	243+49.53	-5.33	817.10	817.12
L	243+59.53	-5.33	817.05	817.08
M	243+69.53	-5.33	817.00	817.03
N	243+79.53	-5.33	816.95	816.96
CL Brg. N. Abut.	243+86.40	-5.33	816.91	816.91
Bk. N. Abut.	243+88.66	-5.33	816.90	816.90

☿ PGL & ☿ MILLSTREAM RD

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+21.22	0.00	817.84	817.84
CL Brg. S. Abut.	242+23.48	0.00	817.83	817.83
A	242+33.48	0.00	817.78	817.80
B	242+43.48	0.00	817.73	817.77
C	242+53.48	0.00	817.68	817.71
D	242+63.48	0.00	817.63	817.65
CL S. Brg. Pier 1	242+70.36	0.00	817.60	817.60
CL Pier 1	242+71.48	0.00	817.59	817.59
CL N. Brg. Pier 1	242+72.61	0.00	817.59	817.59
E	242+82.61	0.00	817.54	817.60
F	242+92.61	0.00	817.49	817.61
G	243+02.61	0.00	817.44	817.58
H	243+12.61	0.00	817.39	817.53
I	243+22.61	0.00	817.34	817.45
J	243+32.61	0.00	817.29	817.34
CL S. Brg. Pier 2	243+40.36	0.00	817.25	817.25
CL Pier 2	243+41.48	0.00	817.24	817.24
CL N. Brg. Pier 2	243+42.61	0.00	817.24	817.24
K	243+52.61	0.00	817.19	817.21
L	243+62.61	0.00	817.14	817.17
M	243+72.61	0.00	817.09	817.12
N	243+82.61	0.00	817.04	817.05
CL Brg. N. Abut.	243+89.48	0.00	817.00	817.00
Bk. N. Abut.	243+91.74	0.00	816.99	816.99

Beam 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+21.99	1.33	817.81	817.81
CL Brg. S. Abut.	242+24.25	1.33	817.80	817.80
A	242+34.25	1.33	817.75	817.77
B	242+44.25	1.33	817.70	817.74
C	242+54.25	1.33	817.65	817.68
D	242+64.25	1.33	817.60	817.62
CL S. Brg. Pier 1	242+71.12	1.33	817.57	817.57
CL Pier 1	242+72.25	1.33	817.56	817.56
CL N. Brg. Pier 1	242+73.37	1.33	817.56	817.56
E	242+83.37	1.33	817.51	817.57
F	242+93.37	1.33	817.46	817.58
G	243+03.37	1.33	817.41	817.55
H	243+13.37	1.33	817.36	817.50
I	243+23.37	1.33	817.31	817.42
J	243+33.37	1.33	817.26	817.31
CL S. Brg. Pier 2	243+41.12	1.33	817.22	817.22
CL Pier 2	243+42.25	1.33	817.21	817.21
CL N. Brg. Pier 2	243+43.37	1.33	817.21	817.21
K	243+53.37	1.33	817.16	817.18
L	243+63.37	1.33	817.11	817.14
M	243+73.37	1.33	817.06	817.09
N	243+83.37	1.33	817.01	817.02
CL Brg. N. Abut.	243+90.25	1.33	816.97	816.97
Bk. N. Abut.	243+92.51	1.33	816.96	816.96

Beam 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+25.84	8.00	817.66	817.66
CL Brg. S. Abut.	242+28.10	8.00	817.65	817.65
A	242+38.10	8.00	817.60	817.62
B	242+48.10	8.00	817.55	817.58
C	242+58.10	8.00	817.50	817.53
D	242+68.10	8.00	817.45	817.46
CL S. Brg. Pier 1	242+74.97	8.00	817.42	817.42
CL Pier 1	242+76.10	8.00	817.41	817.41
CL N. Brg. Pier 1	242+77.22	8.00	817.40	817.40
E	242+87.22	8.00	817.35	817.42
F	242+97.22	8.00	817.30	817.42
G	243+07.22	8.00	817.25	817.40
H	243+17.22	8.00	817.20	817.35
I	243+27.22	8.00	817.15	817.26
J	243+37.22	8.00	817.10	817.15
CL S. Brg. Pier 2	243+44.97	8.00	817.07	817.07
CL Pier 2	243+46.10	8.00	817.06	817.06
CL N. Brg. Pier 2	243+47.22	8.00	817.05	817.05
K	243+57.22	8.00	817.00	817.02
L	243+67.22	8.00	816.95	816.99
M	243+77.22	8.00	816.90	816.93
N	243+87.22	8.00	816.85	816.87
CL Brg. N. Abut.	243+94.10	8.00	816.82	816.82
Bk. N. Abut.	243+96.36	8.00	816.81	816.81

Beam 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+29.69	14.67	817.51	817.51
CL Brg. S. Abut.	242+31.95	14.67	817.50	817.50
A	242+41.95	14.67	817.45	817.47
B	242+51.95	14.67	817.40	817.43
C	242+61.95	14.67	817.35	817.38
D	242+71.95	14.67	817.30	817.31
CL S. Brg. Pier 1	242+78.82	14.67	817.26	817.26
CL Pier 1	242+79.95	14.67	817.26	817.26
CL N. Brg. Pier 1	242+81.07	14.67	817.25	817.25
E	242+91.07	14.67	817.20	817.27
F	243+01.07	14.67	817.15	817.27
G	243+11.07	14.67	817.10	817.25
H	243+21.07	14.67	817.05	817.20
I	243+31.07	14.67	817.00	817.11
J	243+41.07	14.67	816.95	817.00
CL S. Brg. Pier 2	243+48.82	14.67	816.91	816.91
CL Pier 2	243+49.95	14.67	816.91	816.91
CL N. Brg. Pier 2	243+51.07	14.67	816.90	816.90
K	243+61.07	14.67	816.85	816.87
L	243+71.07	14.67	816.80	816.83
M	243+81.07	14.67	816.75	816.78
N	243+91.07	14.67	816.70	816.72
CL Brg. N. Abut.	243+97.95	14.67	816.67	816.67
Bk. N. Abut.	244+00.21	14.67	816.66	816.66

East Curb Line

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+29.69	14.67	817.51	817.51
CL Brg. S. Abut.	242+31.95	14.67	817.50	817.50
A	242+41.95	14.67	817.45	817.47
B	242+51.95	14.67	817.40	817.43
C	242+61.95	14.67	817.35	817.38
D	242+71.95	14.67	817.30	817.31
CL S. Brg. Pier 1	242+78.82	14.67	817.26	817.26
CL Pier 1	242+79.95	14.67	817.26	817.26
CL N. Brg. Pier 1	242+81.07	14.67	817.25	817.25
E	242+91.07	14.67	817.20	817.27
F	243+01.07	14.67	817.15	817.27
G	243+11.07	14.67	817.10	817.25
H	243+21.07	14.67	817.05	817.20
I	243+31.07	14.67	817.00	817.11
J	243+41.07	14.67	816.95	817.00
CL S. Brg. Pier 2	243+48.82	14.67	816.91	816.91
CL Pier 2	243+49.95	14.67	816.91	816.91
CL N. Brg. Pier 2	243+51.07	14.67	816.90	816.90
K	243+61.07	14.67	816.85	816.87
L	243+71.07	14.67	816.80	816.83
M	243+81.07	14.67	816.75	816.78
N	243+91.07	14.67	816.70	816.72
CL Brg. N. Abut.	243+97.95	14.67	816.67	816.67
Bk. N. Abut.	244+00.21	14.67	816.66	816.66

East Edge of Deck

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	242+32.77	20.00	817.55	817.55
CL Brg. S. Abut.	242+35.03	20.00	817.54	817.54
A	242+45.03	20.00	817.49	817.51
B	242+55.03	20.00	817.44	817.47
C	242+65.03	20.00	817.39	817.42
D	242+75.03	20.00	817.34	817.35
CL S. Brg. Pier 1	242+81.90	20.00	817.31	817.31
CL Pier 1	242+83.03	20.00	817.30	817.30
CL N. Brg. Pier 1	242+84.15	20.00	817.29	817.29
E	242+94.15	20.00	817.24	817.31
F	243+04.15	20.00	817.19	817.31
G	243+14.15	20.00	817.14	817.29
H	243+24.15	20.00	817.09	817.24
I	243+34.15	20.00	817.04	817.15
J	243+44.15	20.00	816.99	817.04
CL S. Brg. Pier 2	243+51.90	20.00	816.96	816.96
CL Pier 2	243+53.03	20.00	816.95	816.95
CL N. Brg. Pier 2	243+54.15	20.00	816.94	816.94
K	243+64.15	20.00	816.89	816.91
L	243+74.15	20.00	816.84	816.88
M	243+84.15	20.00	816.79	816.83
N	243+94.15	20.00	816.74	816.76
CL Brg. N. Abut.	244+01.03	20.00	816.71	816.71
Bk. N. Abut.	244+03.29	20.00	816.70	816.70

West Edge of Shoulder

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Aprpr. Slab	241+80.83	-20.00	817.64
A	241+90.83	-20.00	817.60
B	242+00.83	-20.00	817.55
N. End S. Aprpr. Slab	242+10.83	-20.00	817.50

West Edge of Pavement

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Aprpr. Slab	241+85.45	-12.00	817.78
A	241+95.45	-12.00	817.74
B	242+05.45	-12.00	817.69
N. End S. Aprpr. Slab	242+15.45	-12.00	817.64

℄ Roadway & PGL

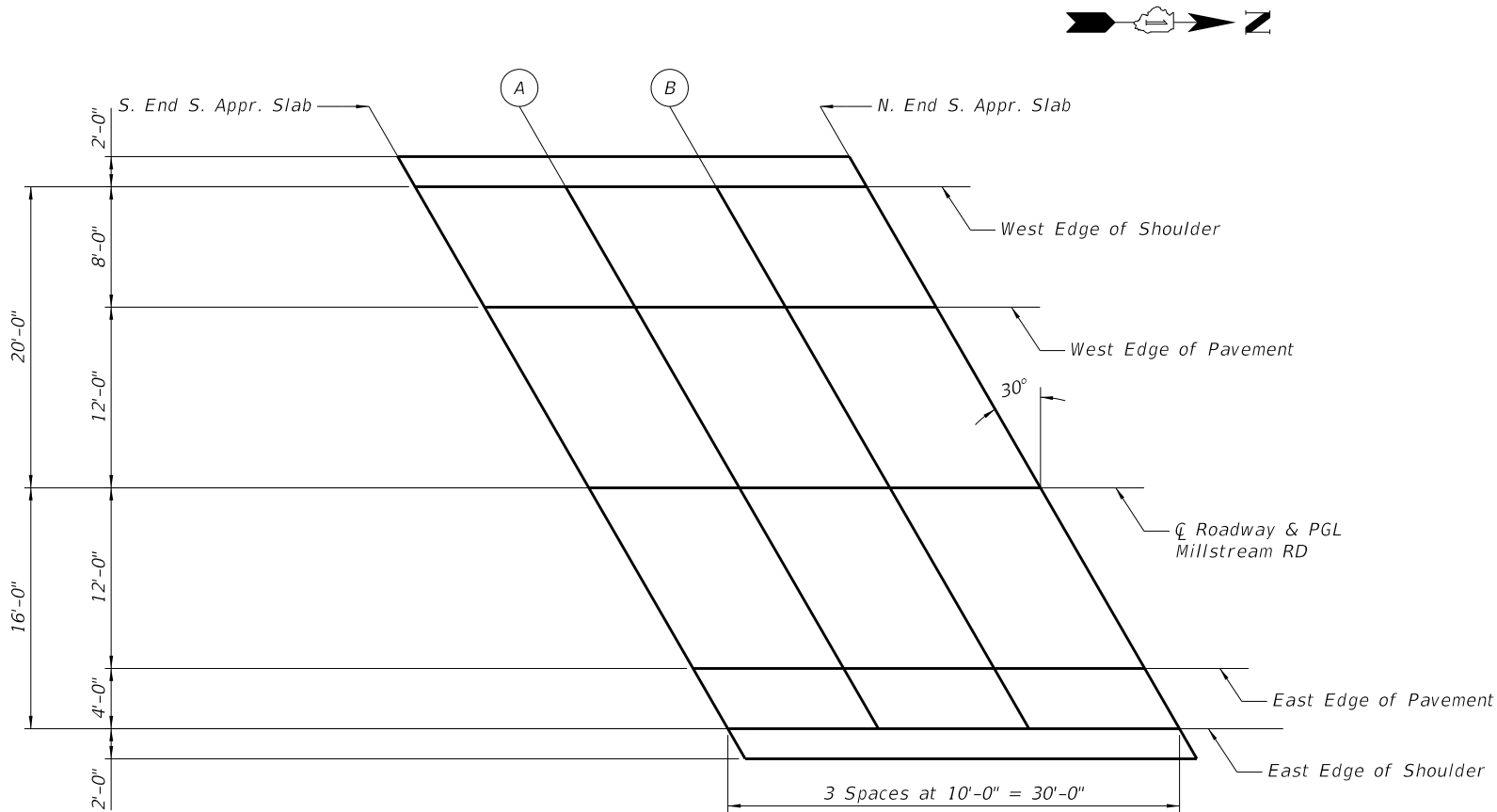
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Aprpr. Slab	241+92.37	0.00	817.99
A	242+02.37	0.00	817.94
B	242+12.37	0.00	817.89
N. End S. Aprpr. Slab	242+22.37	0.00	817.84

East Edge of Pavement

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Aprpr. Slab	241+99.30	12.00	817.72
A	242+09.30	12.00	817.67
B	242+19.30	12.00	817.62
N. End S. Aprpr. Slab	242+29.30	12.00	817.57

East Edge of Shoulder

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Aprpr. Slab	242+01.61	16.00	817.63
A	242+11.61	16.00	817.58
B	242+21.61	16.00	817.53
N. End S. Aprpr. Slab	242+31.61	16.00	817.48



SOUTH APPROACH PLAN

Note:
See sheet 15 of 40 for curb details.

West Edge of Shoulder

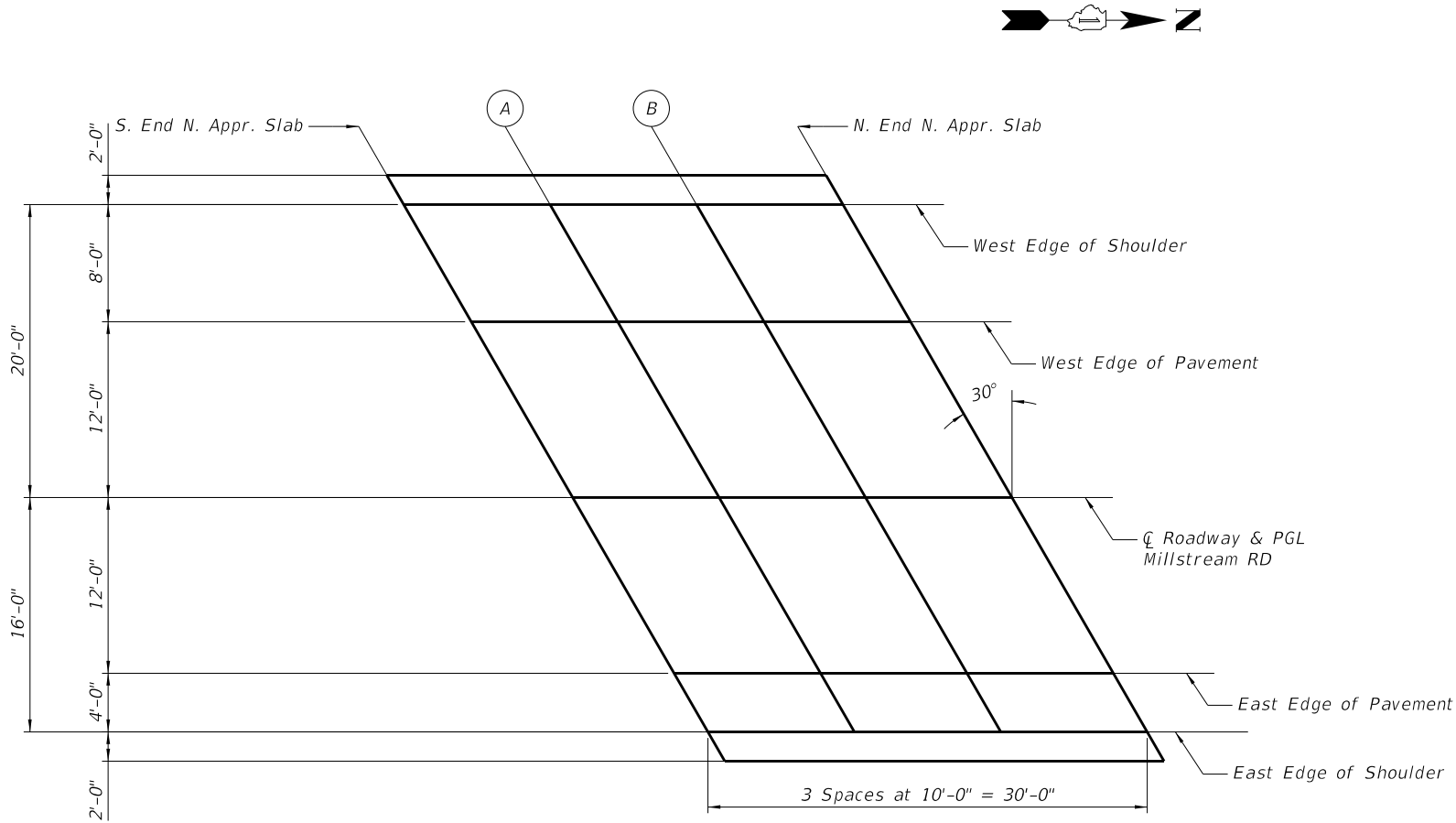
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Aprpr. Slab	243+79.04	-20.00	816.66
A	243+89.04	-20.00	816.61
B	243+99.04	-20.00	816.56
N. End N. Aprpr. Slab	244+09.04	-20.00	816.51

West Edge of Pavement

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Aprpr. Slab	243+83.66	-12.00	816.80
A	243+93.66	-12.00	816.75
B	244+03.66	-12.00	816.70
N. End N. Aprpr. Slab	244+13.66	-12.00	816.65

℄ Roadway & PGL

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Aprpr. Slab	243+90.59	0.00	817.00
A	244+00.59	0.00	816.95
B	244+10.59	0.00	816.90
N. End N. Aprpr. Slab	244+20.59	0.00	816.85



NORTH APPROACH PLAN

East Edge of Pavement

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Aprpr. Slab	243+97.51	12.00	816.73
A	244+07.51	12.00	816.68
B	244+17.51	12.00	816.63
N. End N. Aprpr. Slab	244+27.51	12.00	816.58

East Edge of Shoulder

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Aprpr. Slab	243+99.82	16.00	816.64
A	244+09.82	16.00	816.59
B	244+19.82	16.00	816.54
N. End N. Aprpr. Slab	244+29.82	16.00	816.49

Note:
See sheet 17 of 40 for curb details.

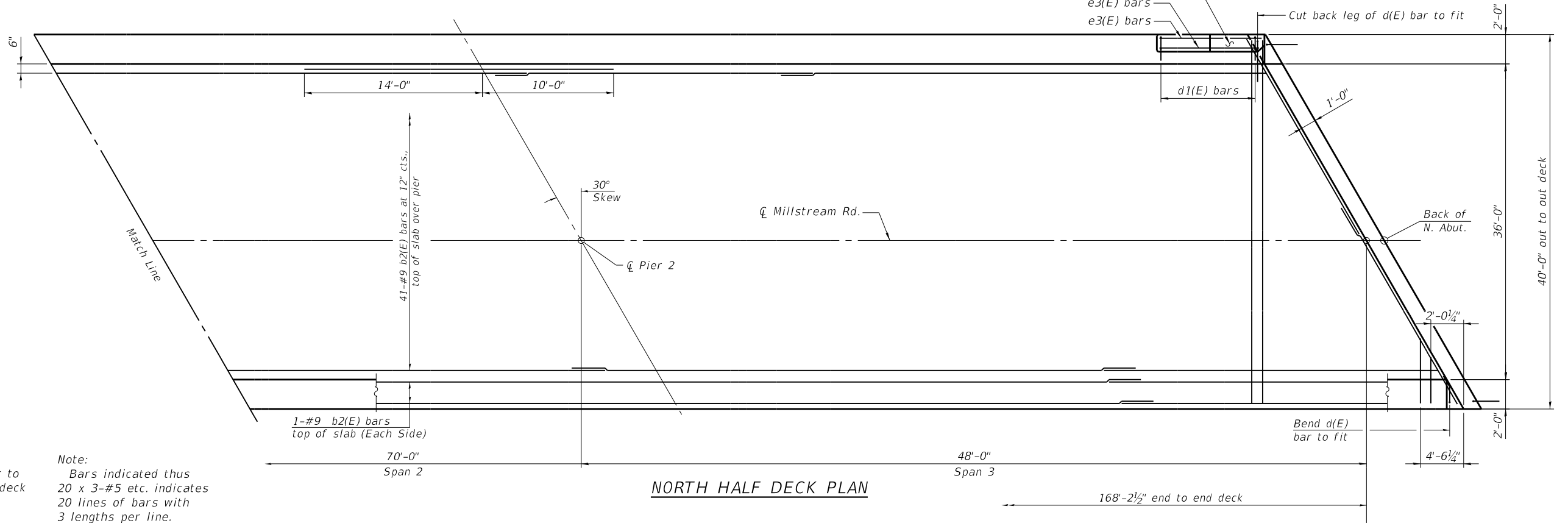
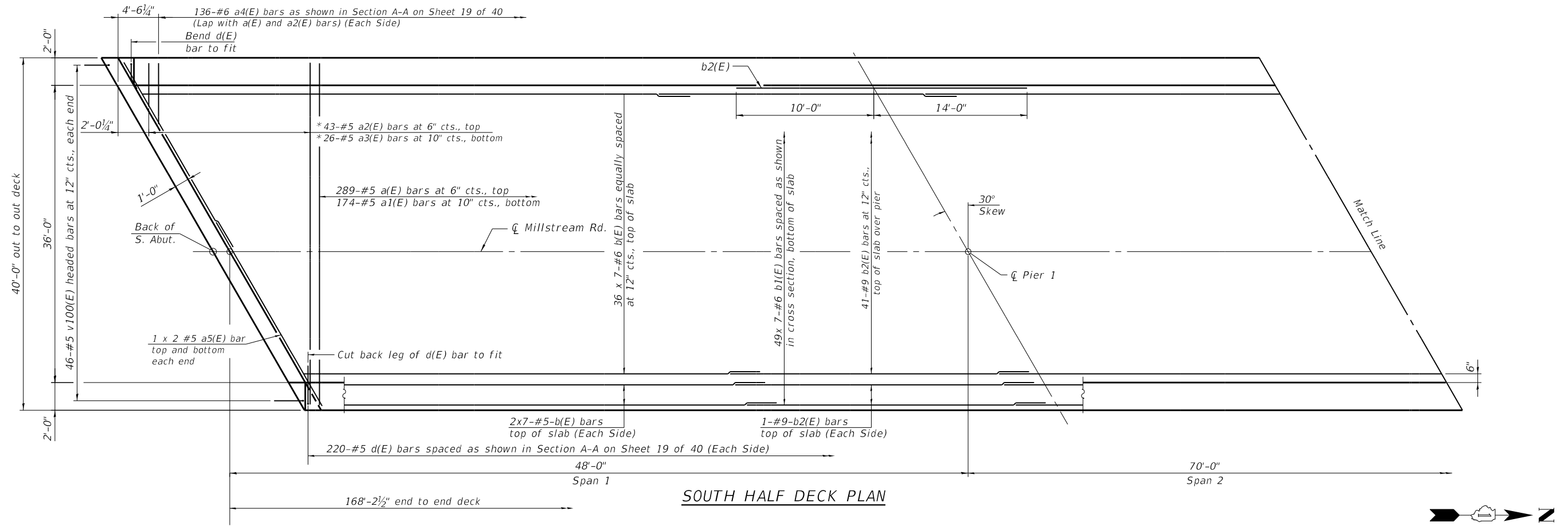
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	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 056-4022

SHEET 9 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	117
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		



MINIMUM BAR LAP
#5 bar = 3'-6"
#6 bar = 4'-10"

* See Field Cutting Diagram
on sheet 12 of 40. Cut bar to
be used on opposite end of deck

Note:
Bars indicated thus
20 x 3-#5 etc. indicates
20 lines of bars with
3 lengths per line.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN
STRUCTURE NO. 056-4022

SHEET 10 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	118
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

#5 bar = 3'-6"
#6 bar = 4'-10"



*a4(E) bars bundled at posts.
See Section A-A on Sheet 19 of 40.

**d(E) bars spaced as shown in Section
A-A on Sheet 19 of 40.

Note:
See sheet 19 of 40 for superstructure details
and Bill of Material.

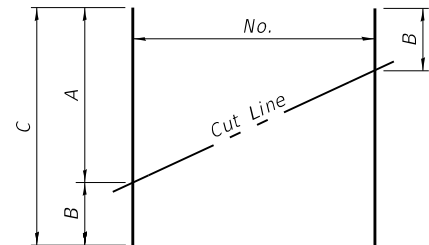
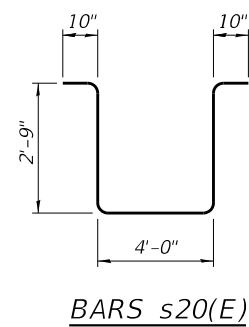
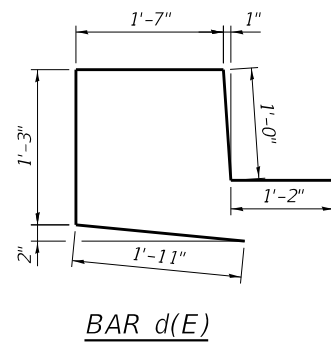
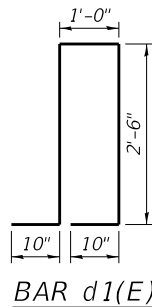
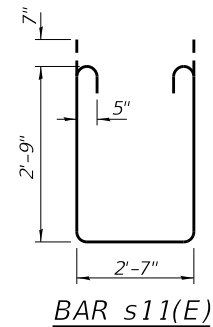
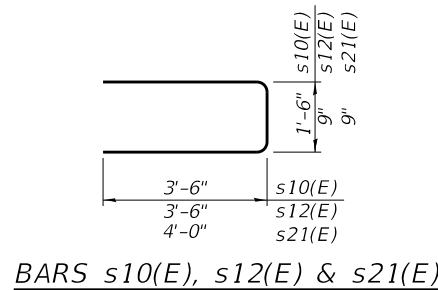
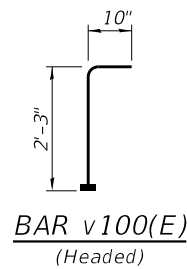
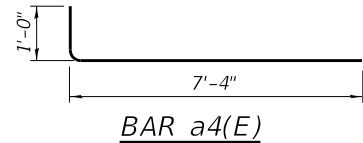
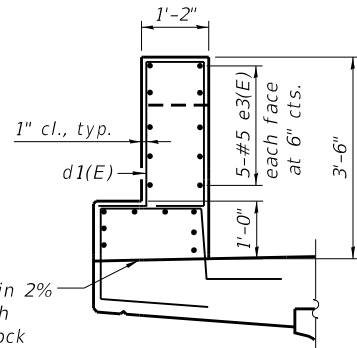
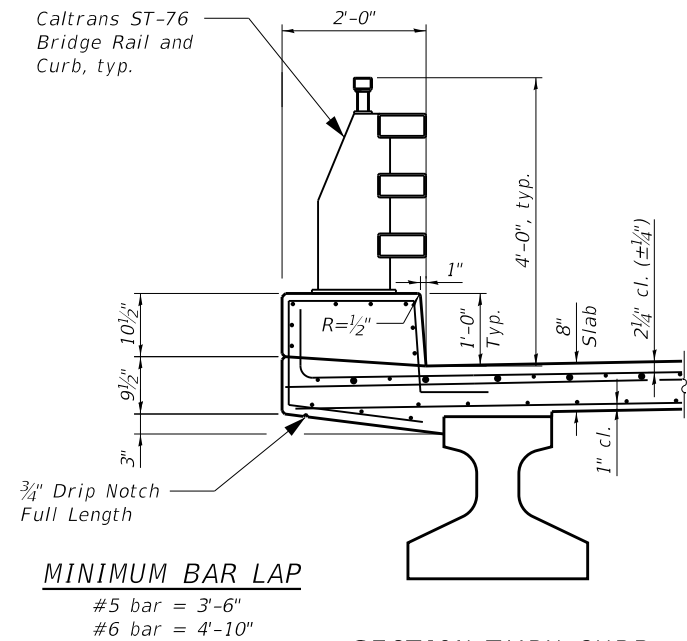
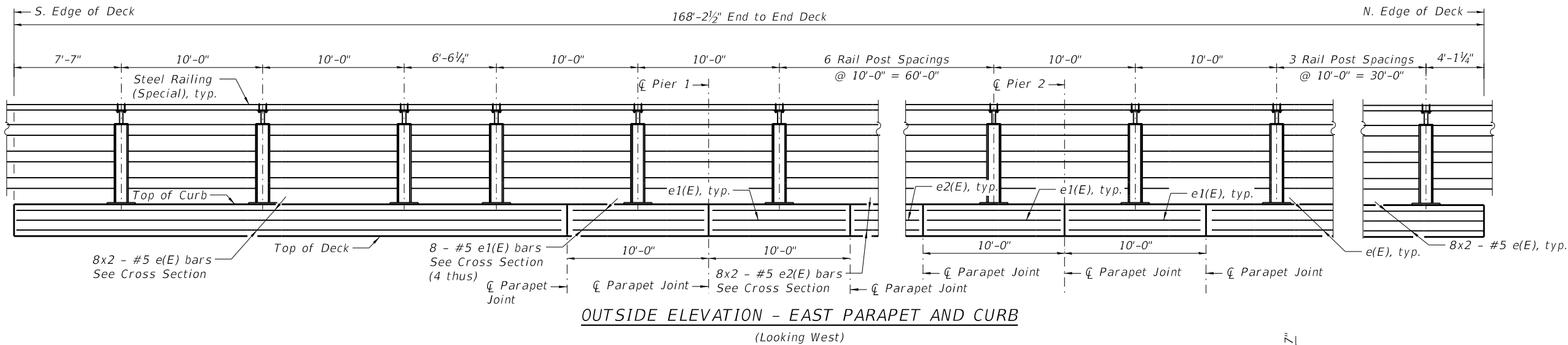
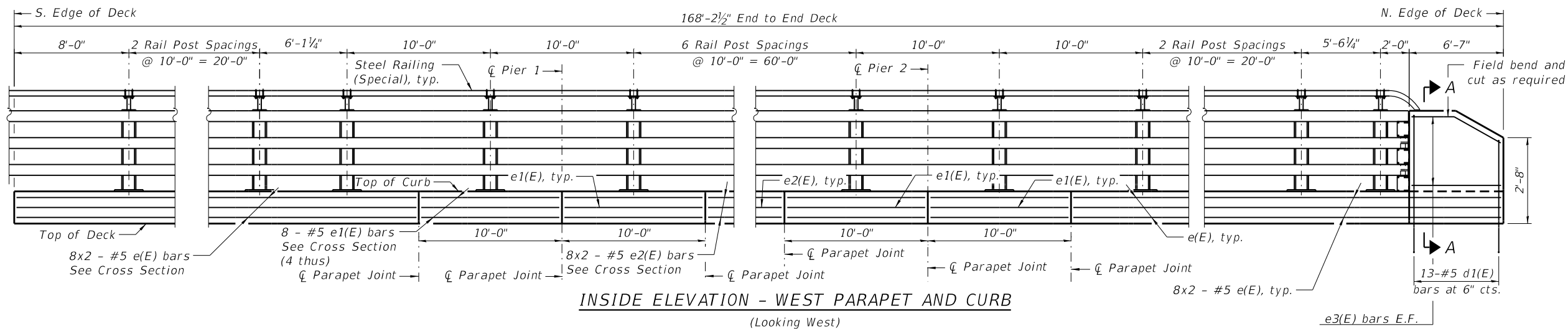
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	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE CROSS SECTION
STRUCTURE NO. 056-4022**

SHEET 11 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	119
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		

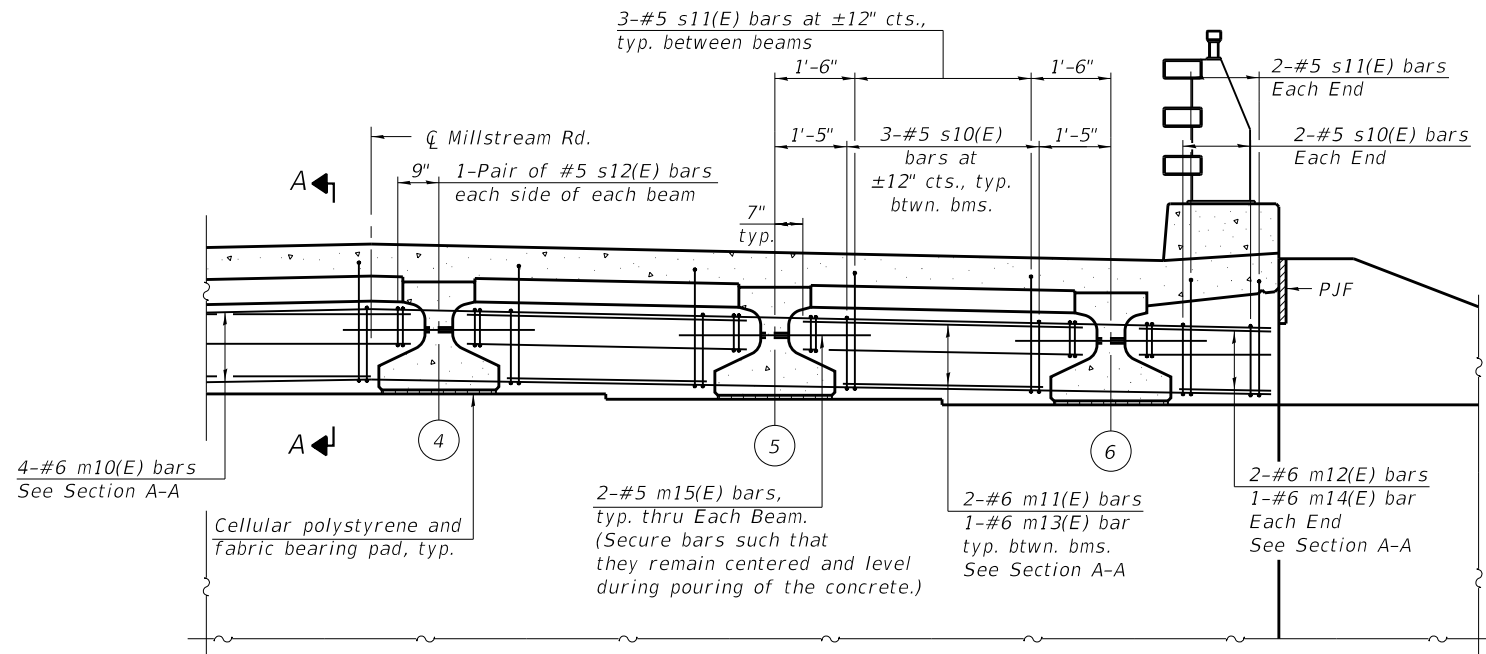


FIELD CUTTING TABLE					
Bar	No.	Size	A	B	C
a2(E)	43	#5	39'-8"	3'-0"	42'-8"
a3(E)	26	#5	39'-8"	3'-0"	42'-8"

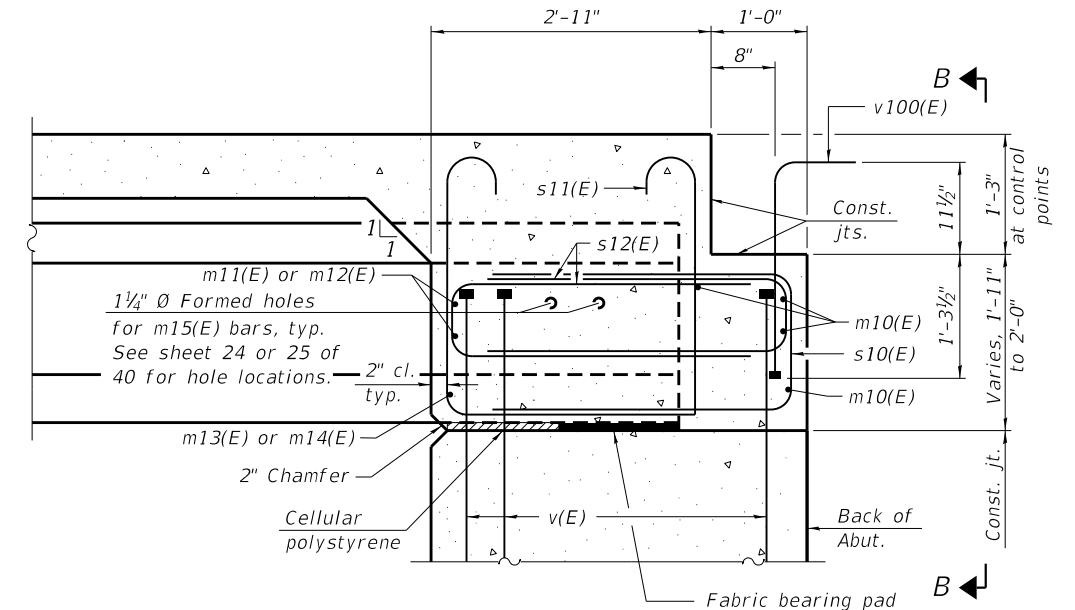
Notes:
See Sht. 19 to 22 of 40 for Railing Details.
Bill of Material includes curb quantities.

SUPERSTRUCTURE					
BILL OF MATERIAL					
Bar	No.	Size	Length	Shape	
a(E)	289	#5	39'-8"		
a1(E)	174	#5	39'-8"		
a2(E)	43	#5	42'-8"		
a3(E)	26	#5	42'-8"		
a4(E)	272	#6	8'-4"		
a5(E)	8	#5	24'-8"		
b(E)	280	#6	28'-6"		
b1(E)	343	#6	28'-6"		
b2(E)	86	#9	24'-0"		
d(E)	437	#5	6'-11"		
d1(E)	13	#5	7'-8"		
e(E)	64	#5	21'-2"		
e1(E)	64	#5	9'-8"		
e2(E)	32	#5	26'-7"		
e3(E)	10	#5	6'-3"		
m10(E)	8	#6	45'-11"		
m11(E)	20	#6	6'-4"		
m12(E)	8	#6	3'-0"		
m13(E)	10	#6	4'-5"		
m14(E)	4	#6	2'-0"		
m15(E)	24	#5	4'-0"		
m20(E)	20	#6	4'-5"		
m21(E)	40	#6	6'-4"		
m22(E)	24	#5	4'-0"		
s10(E)	68	#5	8'-6"		
s11(E)	68	#5	9'-3"		
s12(E)	48	#5	7'-9"		
s20(E)	60	#5	11'-2"		
s21(E)	40	#5	8'-9"		
v100(E)	92	#5	3'-1"		
Reinforcement Bars, Epoxy Coated			Lbs.	70,370	
Concrete Superstructure			Cu. Yds.	270.8	

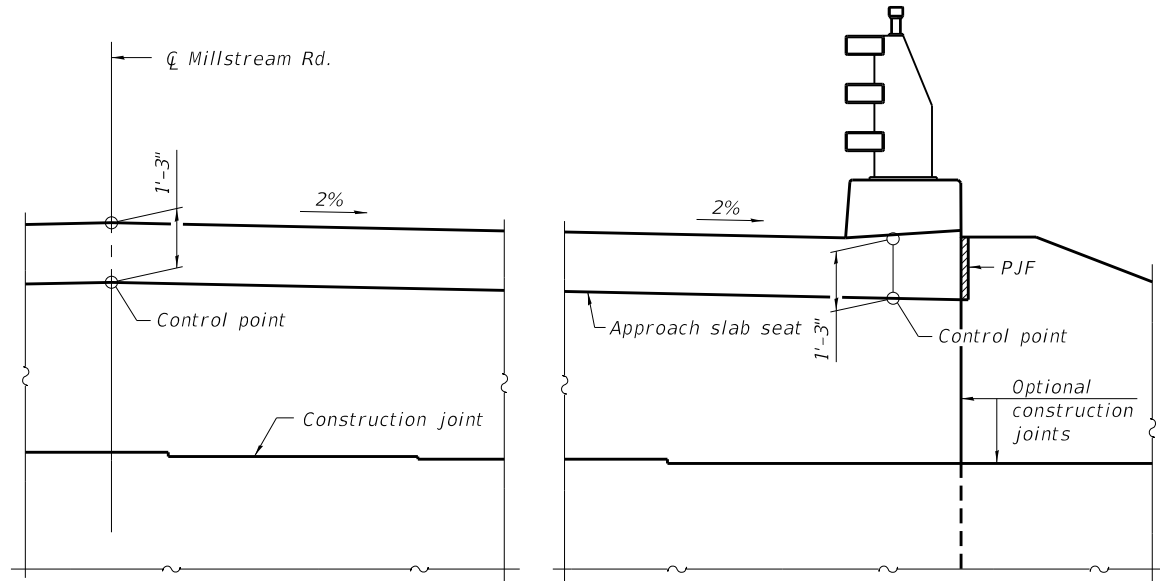
Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.



DIAPHRAGM AT ABUTMENT
(North Abutment Shown, South Abutment Similar)

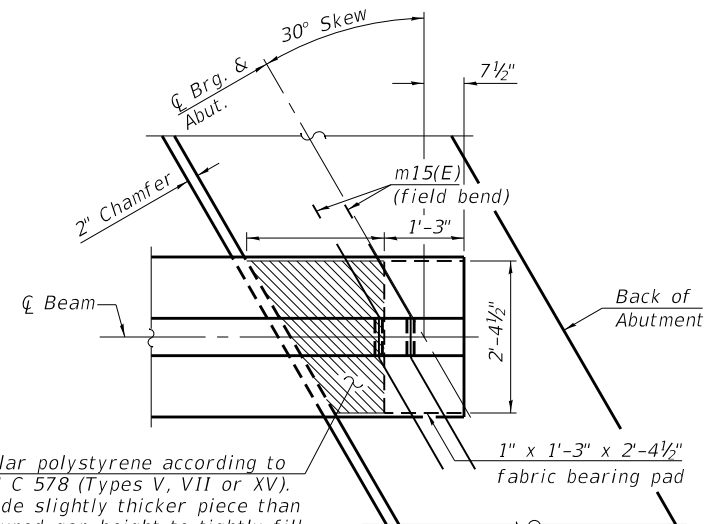


SECTION A-A
(at Rt. L's)

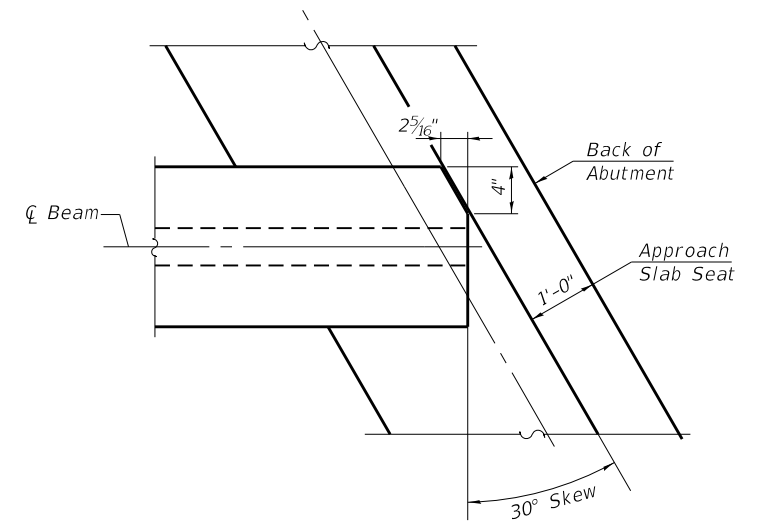


VIEW B-B

MINIMUM BAR LAP
#6 bar = 3'-7"



PLAN AT ABUTMENT
(Showing bottom flange of beam)



TOP FLANGE CLIPPING DETAIL

Notes:
See sheet 12 of 40 for superstructure details and Bill of Material.
See sheet 15 or 17 of 40 for PJF details.
The s10(E), s11(E) and s12(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
The approach slab seat shall have a constant slope determined from the control points shown.
Cost of cellular polystyrene is included with Concrete Superstructure.

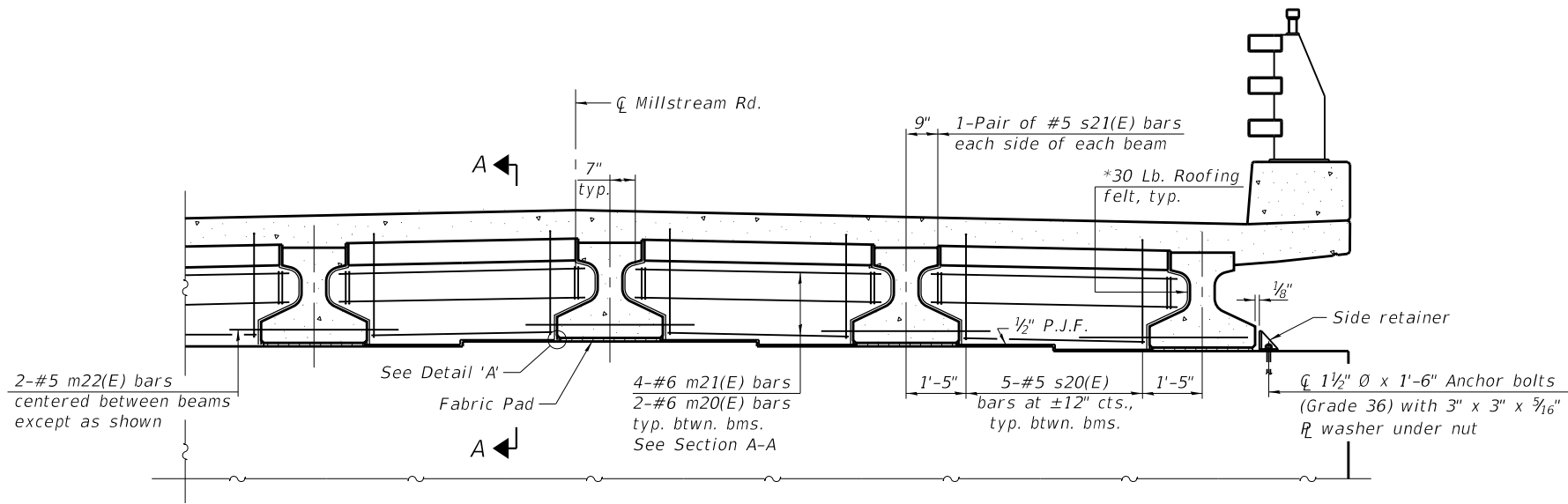
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CHECKED - PD	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 056-4022

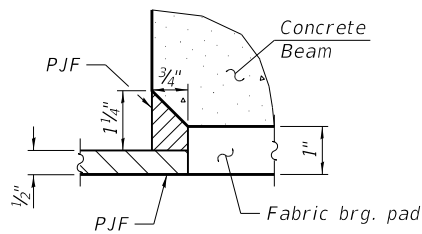
SHEET 13 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	121
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

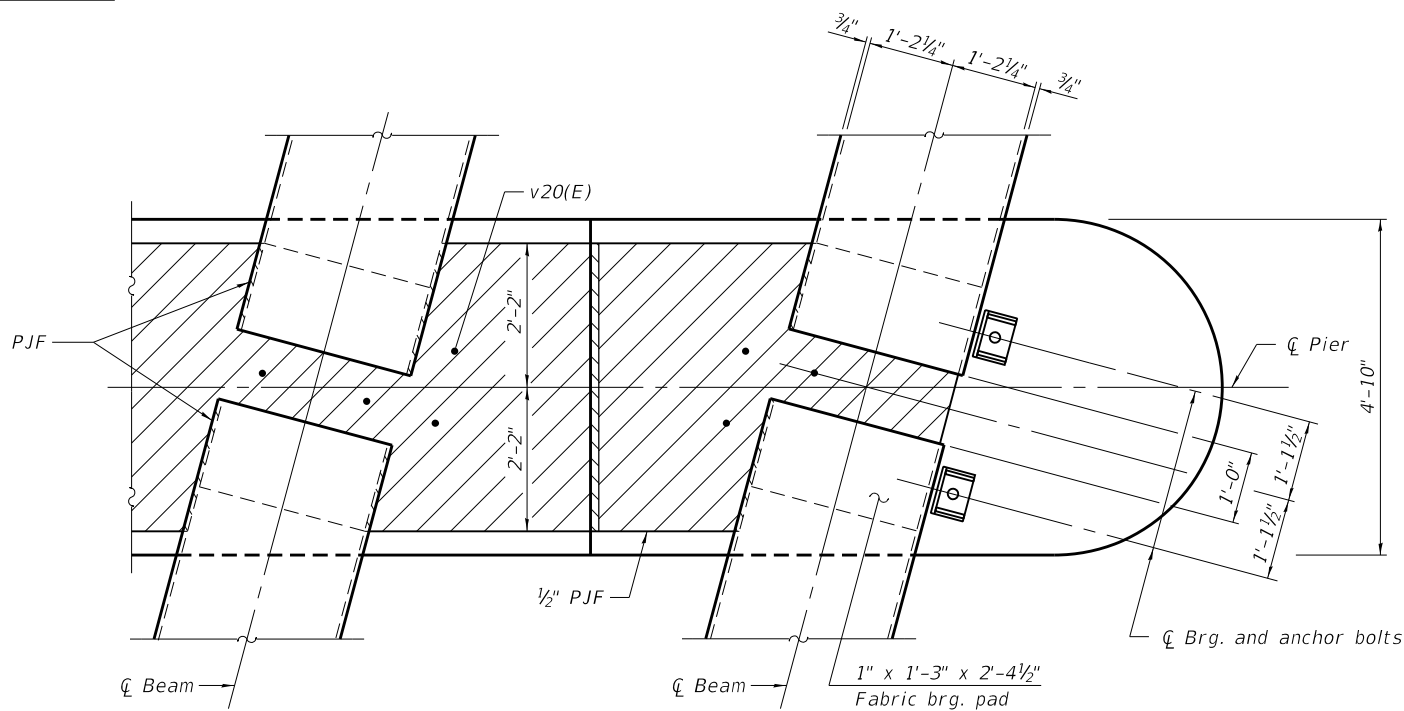


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

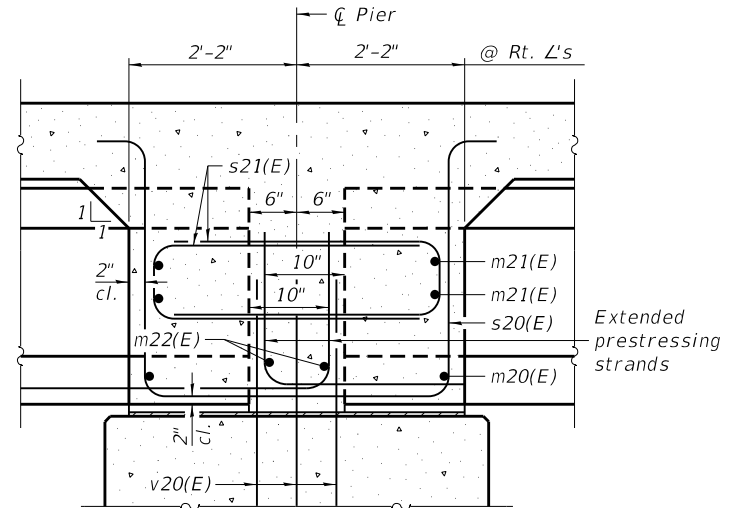


DETAIL 'A'



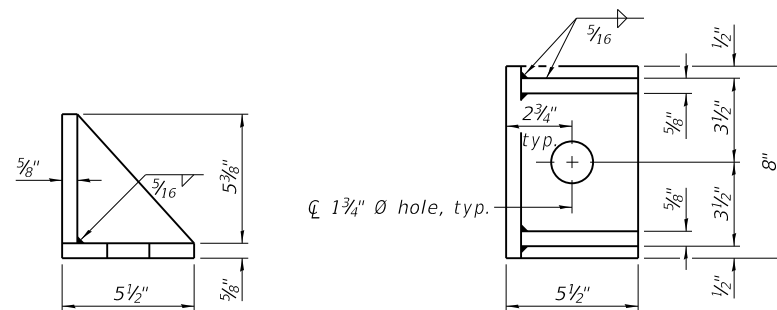
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SECTION A-A

(Dimensions along C of beam except as shown)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

Notes:

See sheet 12 of 40 for superstructure details and Bill of Material.
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.

The s20(E) and s21(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

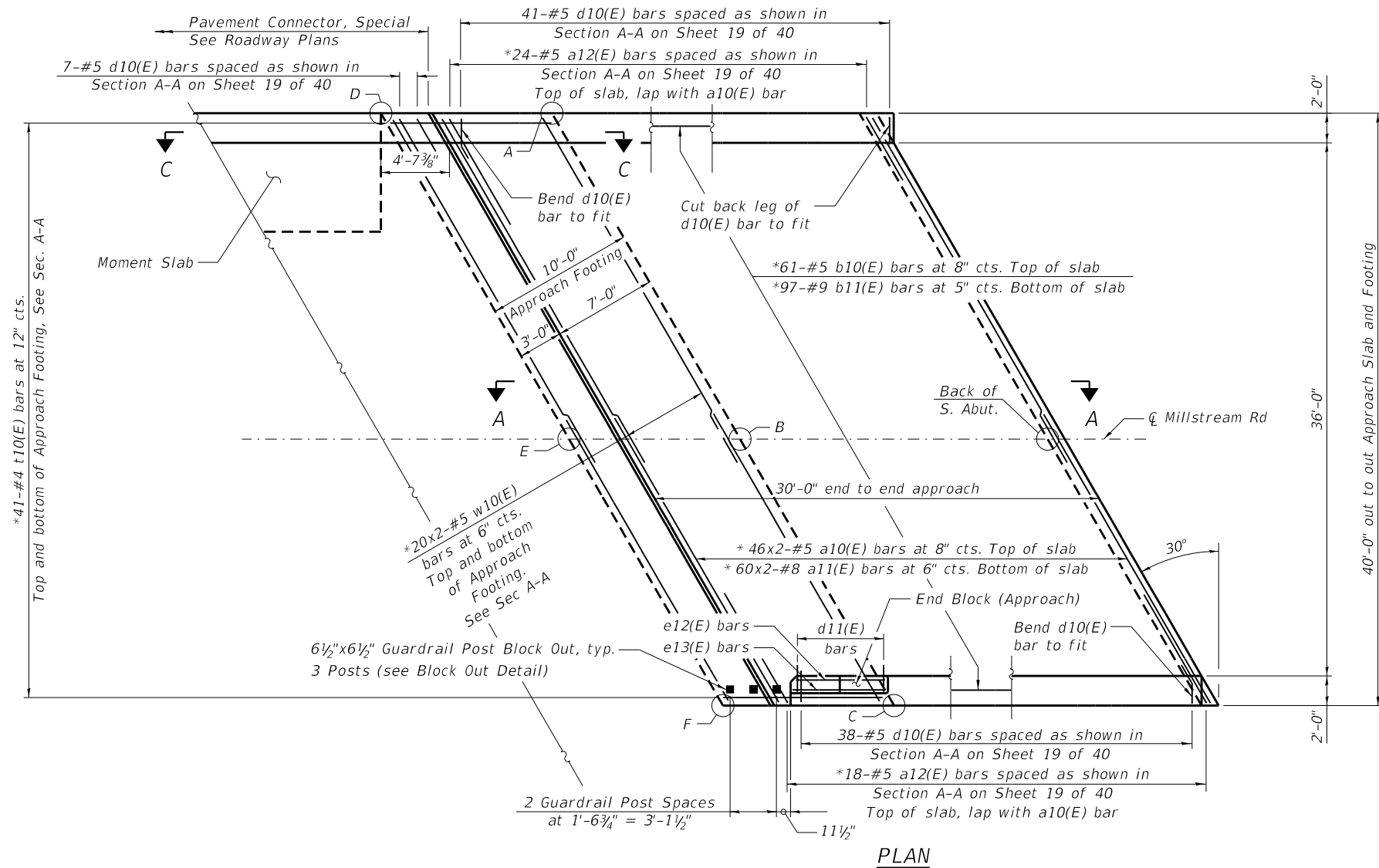
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CHECKED - PD	CHECKED - PD	REVISED -
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PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER DIAPHRAGM DETAILS
STRUCTURE NO. 056-4022

SHEET 14 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	122
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



PLAN

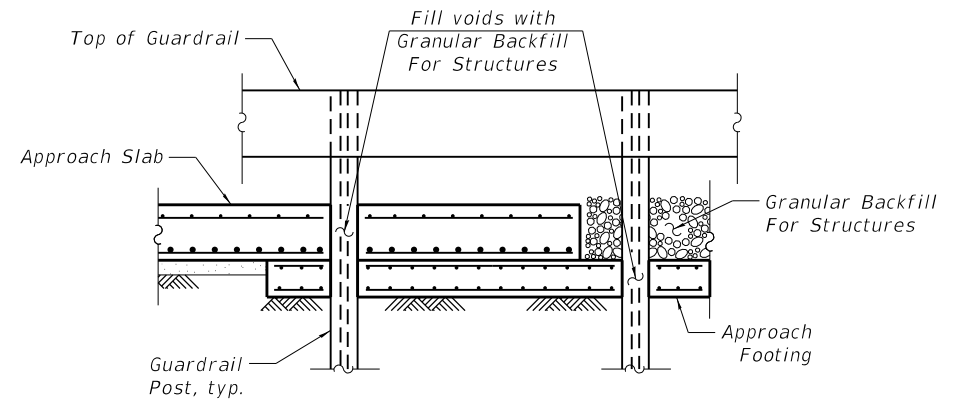


MINIMUM BAR LAP

#5 bar = 3'-0"
#8 bar = 4'-9"

TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING

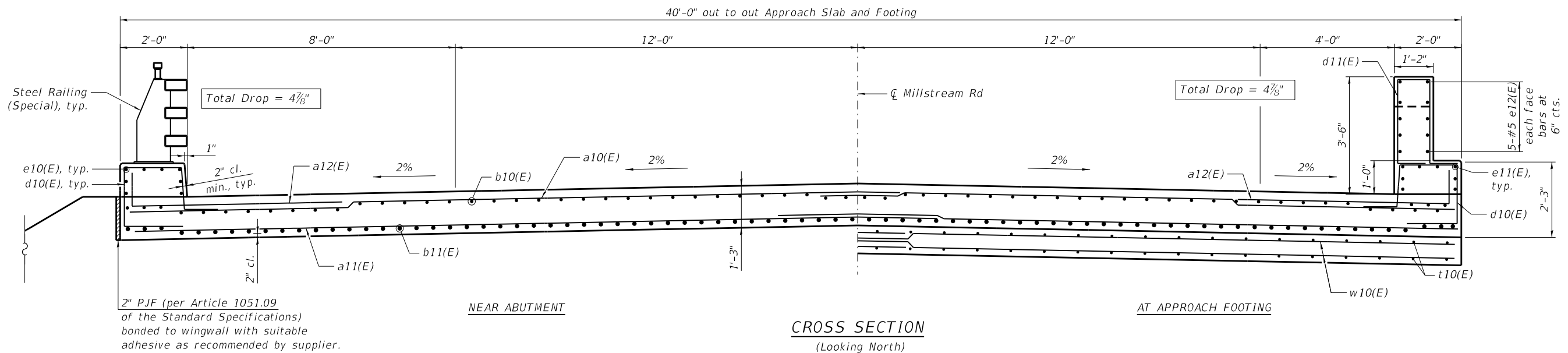
South Approach			
Point	Offset (\bar{C} Millstream Rd)	Top	Bottom
A	-22.00	816.32	815.49
B	0.00	816.70	815.86
C	18.00	816.29	815.45
D	-22.00	816.38	815.55
E	0.00	816.76	815.92
F	18.00	816.34	815.51



BLOCK OUT DETAIL

(Cost included with Concrete Structures.)

* Place reinforcement to miss Block Out.



CROSS SECTION

(Looking North)

AT APPROACH FOOTING

Notes:
Bars indicated thus 20x2-#5 etc. indicates 20 lines of bars with 2 lengths per line.
See Sheet 16 of 40 for Section A-A and Section C-C.

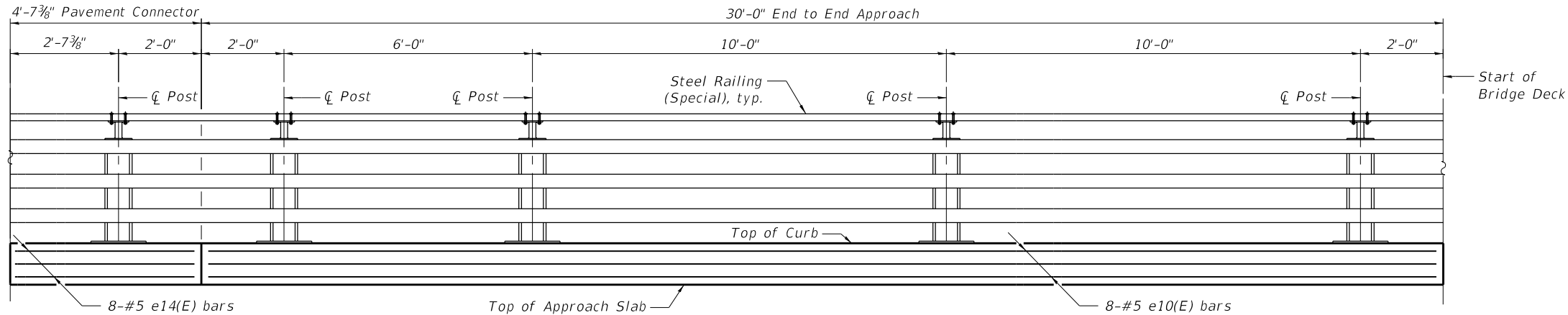
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CHECKED - PD	REVISED -	
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

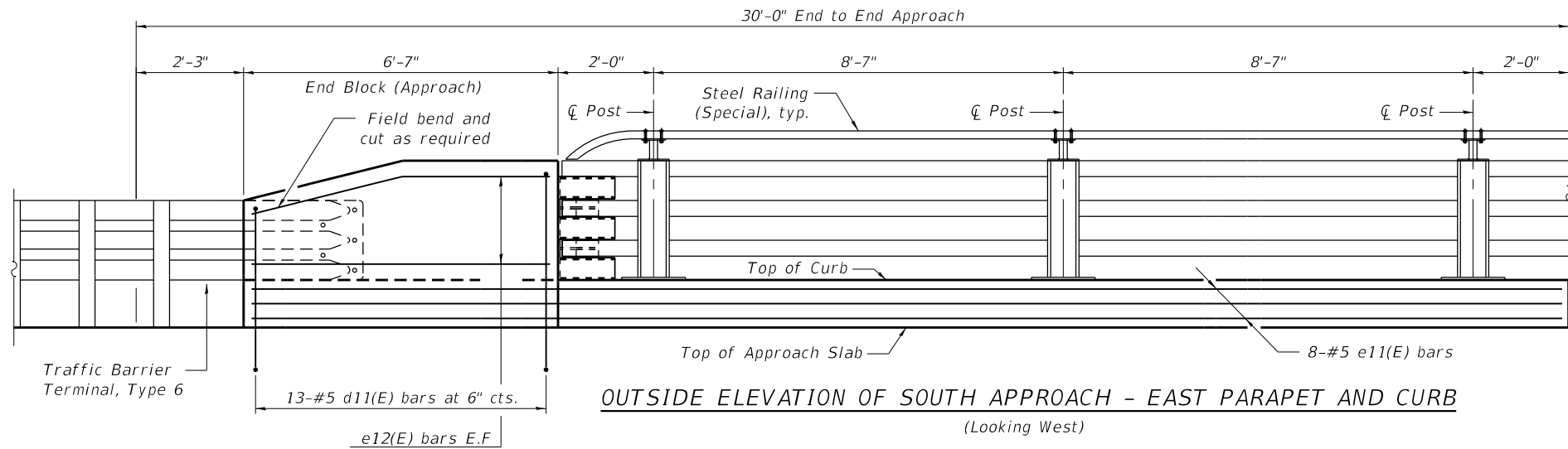
SOUTH APPROACH SLAB PLAN
STRUCTURE NO. 056-4022

SHEET 15 OF 40 SHEETS

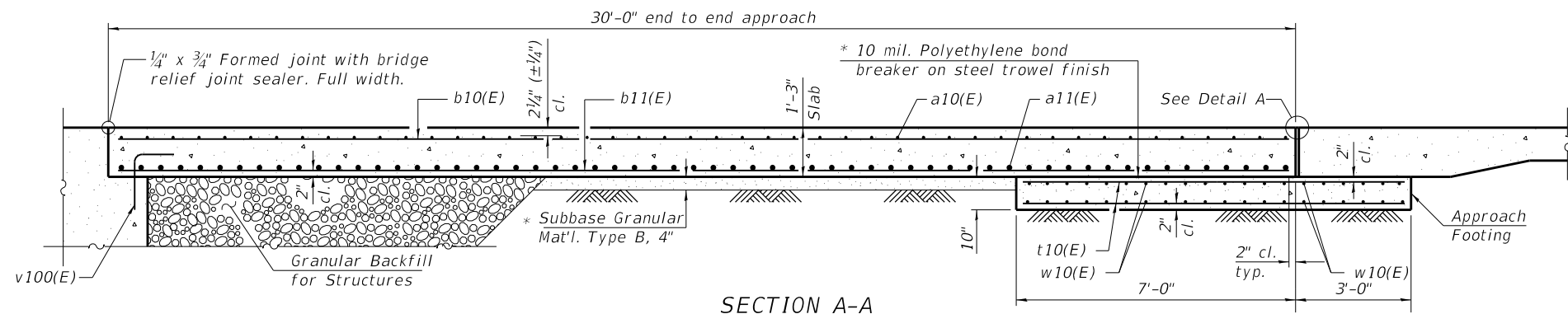
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	123
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



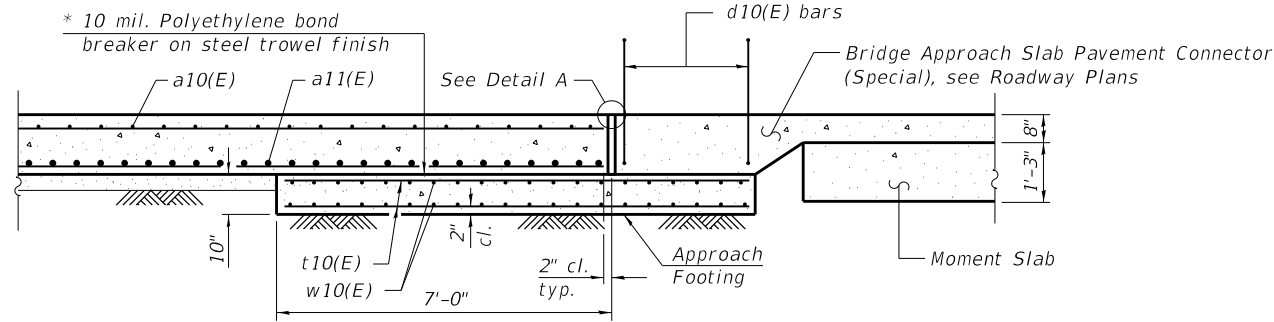
INSIDE ELEVATION OF SOUTH APPROACH - WEST PARAPET AND CURB
(Looking West)



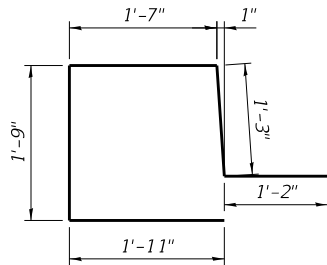
OUTSIDE ELEVATION OF SOUTH APPROACH - EAST PARAPET AND CURB
(Looking West)



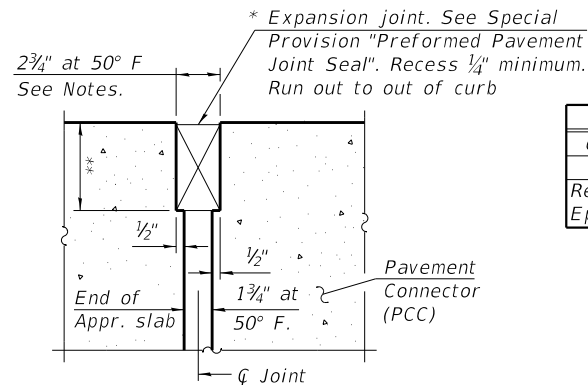
SECTION A-A



SECTION C-C AT SW CORNER

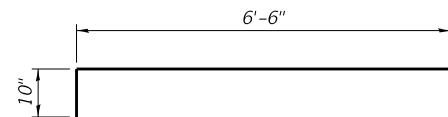


BAR d10(E)

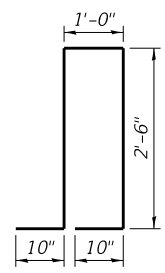


DETAIL A
(at Rt. Z's)

* Cost included with Concrete Superstructure (Approach Slab).
** Per manufacturer recommendations



BAR a12(E)



BAR d11(E)

SOUTH APPROACH
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	92	#5	24'-7"	
a11(E)	120	#8	25'-4"	
a12(E)	42	#5	7'-4"	
b10(E)	61	#5	29'-8"	
b11(E)	97	#9	29'-8"	
d10(E)	75	#5	7'-8"	
d11(E)	13	#5	7'-8"	
e10(E)	8	#5	29'-8"	
e11(E)	8	#5	27'-5"	
e12(E)	10	#5	5'-10"	
e14(E)	8	#5	4'-3"	
t10(E)	82	#4	9'-8"	
w10(E)	80	#5	24'-7"	
Concrete Superstructure		Cu. Yd.	5.6	
Concrete Superstructure (Approach Slab)		Cu. Yd.	55.6	
Concrete Structures		Cu. Yd.	14.3	
Reinforcement Bars, Epoxy Coated		Pound	26,330	

PAVEMENT CONNECTOR
AT SW CORNER
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d10(E)	7	#5	7'-8"	
Reinforcement Bars, Epoxy Coated		Pound	60	

- Notes:
1. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.
 2. Parapet concrete shall be paid for as Concrete Superstructure.
 3. Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 4. Approach footing concrete shall be paid for as Concrete Structures.
 5. The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 6. Cost of excavation for approach footing included with Concrete Structures.
 7. For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 40.
 8. See Sheets 19-22 of 40 for Railing Details.

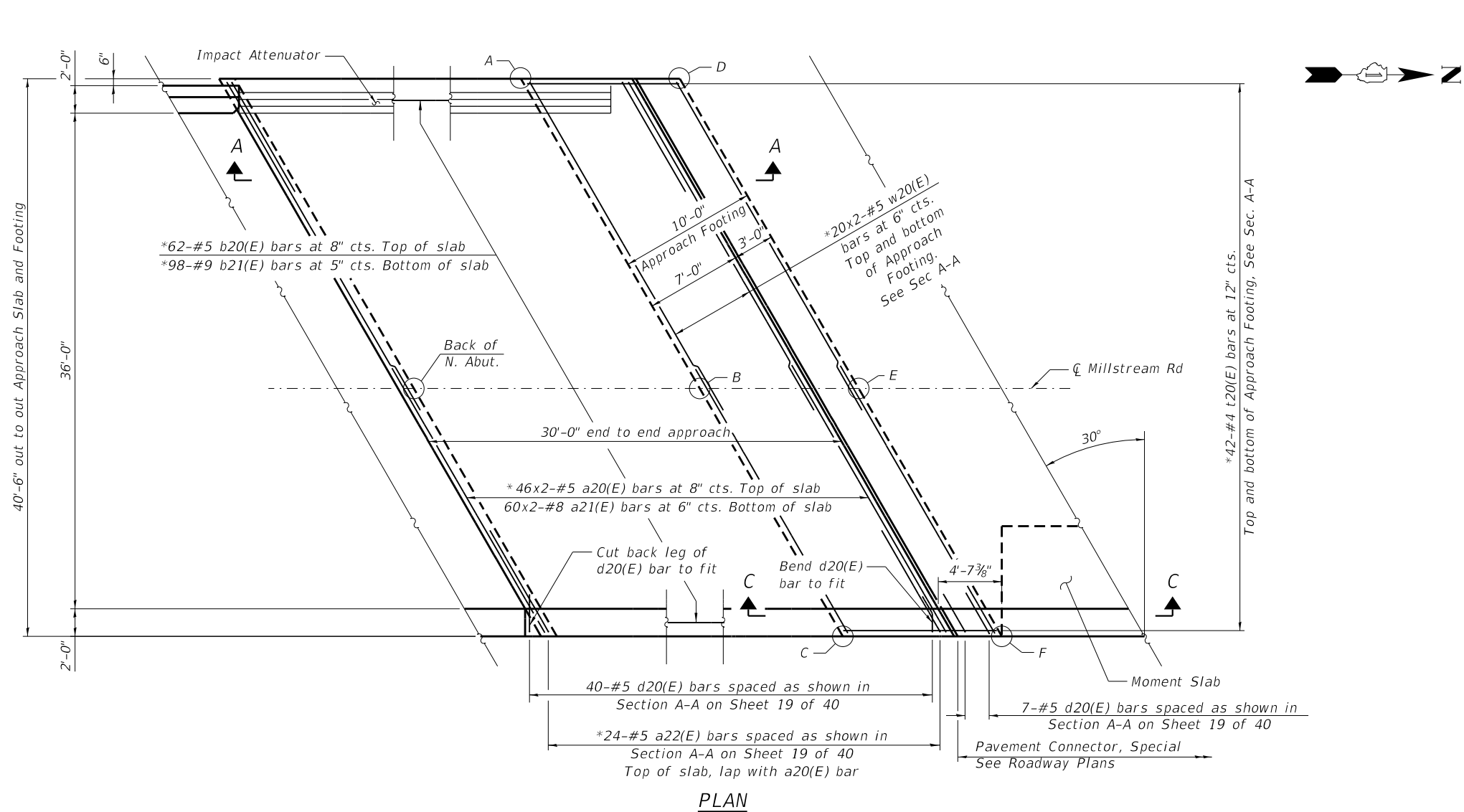
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CHECKED - PD	REVIS	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH APPROACH SLAB DETAILS
STRUCTURE NO. 056-4022

SHEET 16 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	124
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

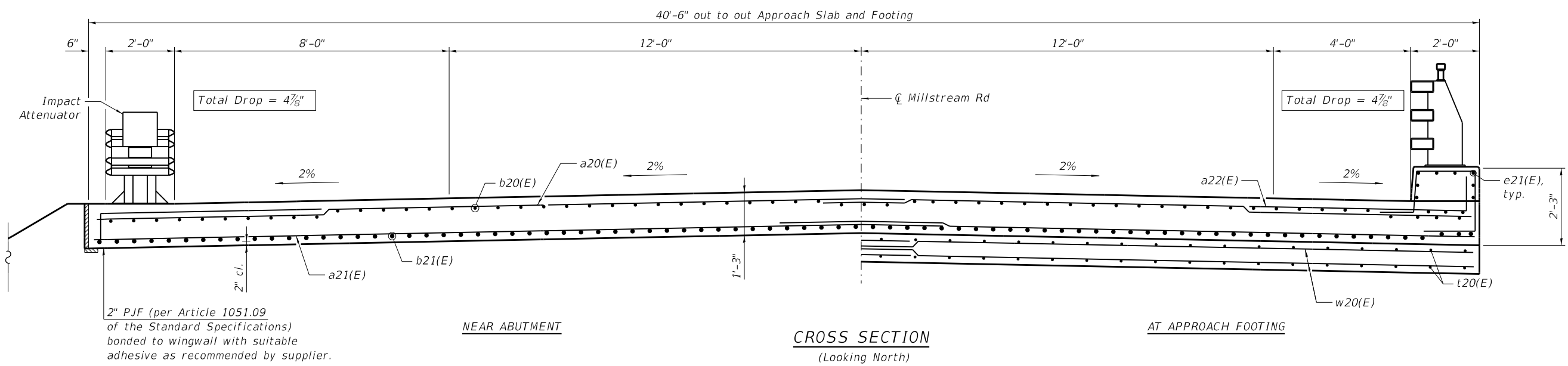


MINIMUM BAR LAP
#5 bar = 3'-0"
#8 bar = 4'-9"

* Place reinforcement to miss void for rail posts.

TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING

North Approach			
Point	Offset (ϕ Millstream Rd)	Top	Bottom
A	-22.00	815.26	814.43
B	0.00	815.64	814.80
C	18.00	815.23	814.39
D	-22.00	815.20	814.37
E	0.00	815.58	814.75
F	18.00	815.17	814.33



Notes:
Bars indicated thus 20x2-#5 etc. indicates 20 lines of bars with 2 lengths per line.
See Sheet 18 of 40 for Section A-A and Section C-C.

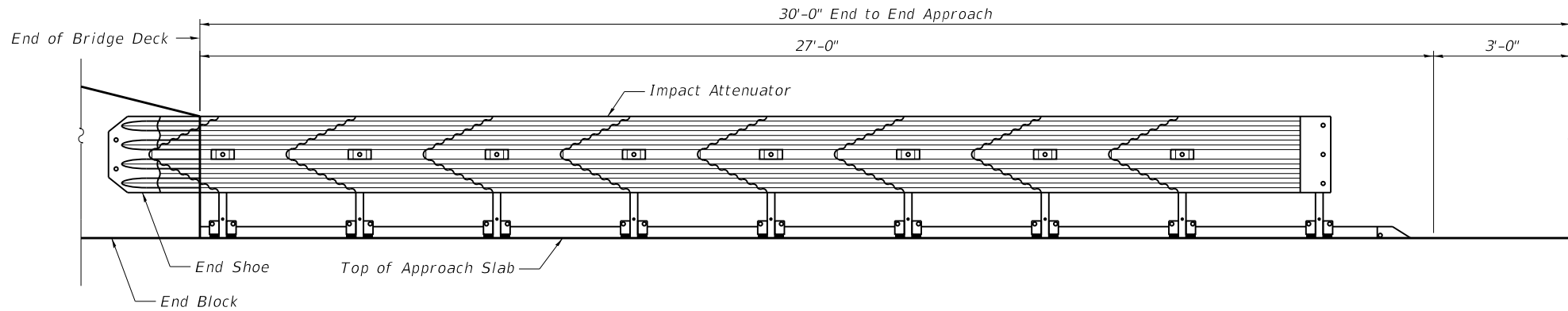
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PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

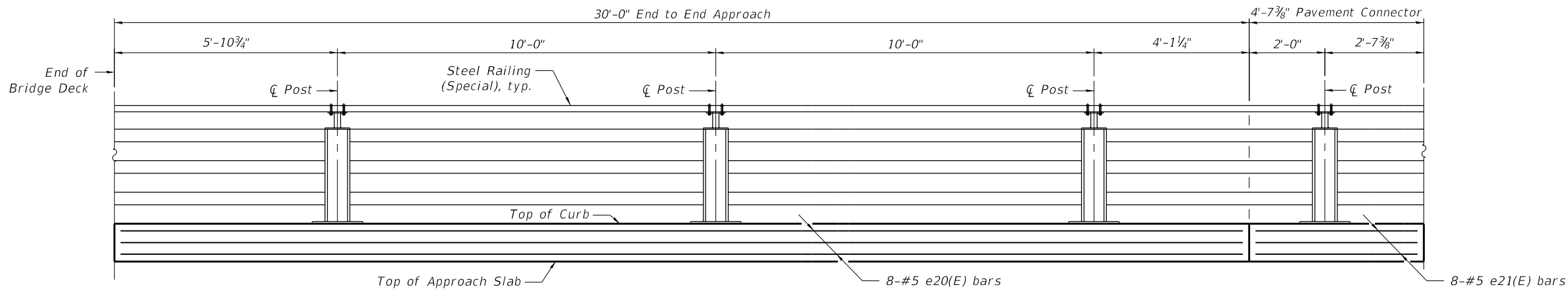
NORTH APPROACH SLAB PLAN
STRUCTURE NO. 056-4022

SHEET 17 OF 40 SHEETS

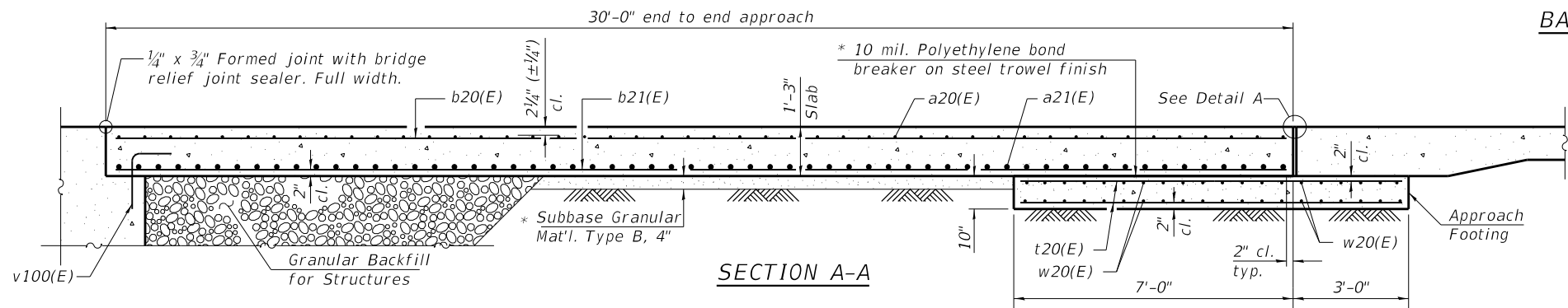
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	125
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



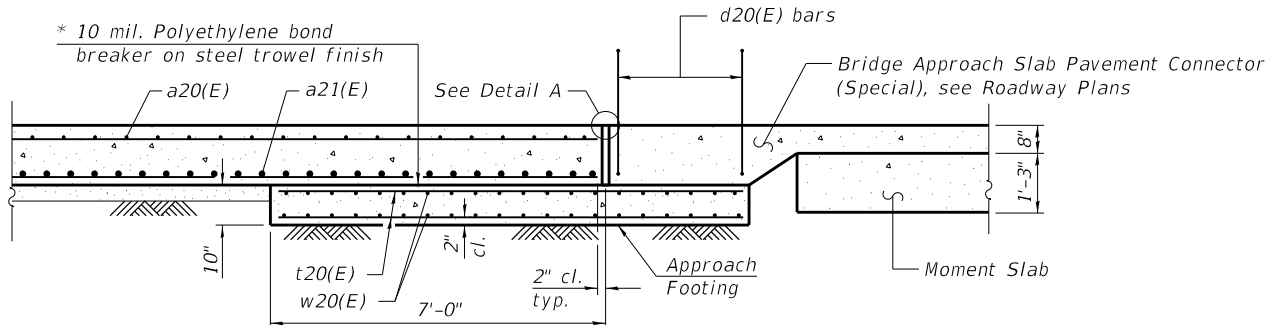
INSIDE ELEVATION OF NORTH APPROACH - WEST PARAPET AND CURB
(Looking West)



OUTSIDE ELEVATION OF NORTH APPROACH - EAST PARAPET AND CURB
(Looking West)

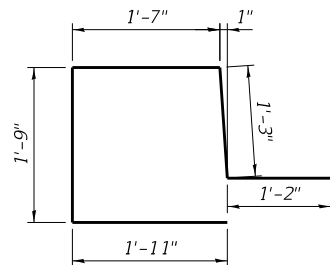


SECTION A-A

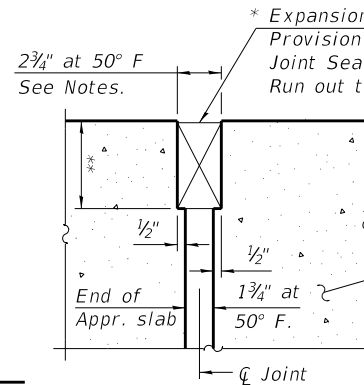


SECTION C-C AT NE CORNER

BAR a22(E)



BAR d20(E)



DETAIL A
(at Rt. L's)

* Cost included with Concrete Superstructure (Approach Slab).
** Per manufacturer recommendations

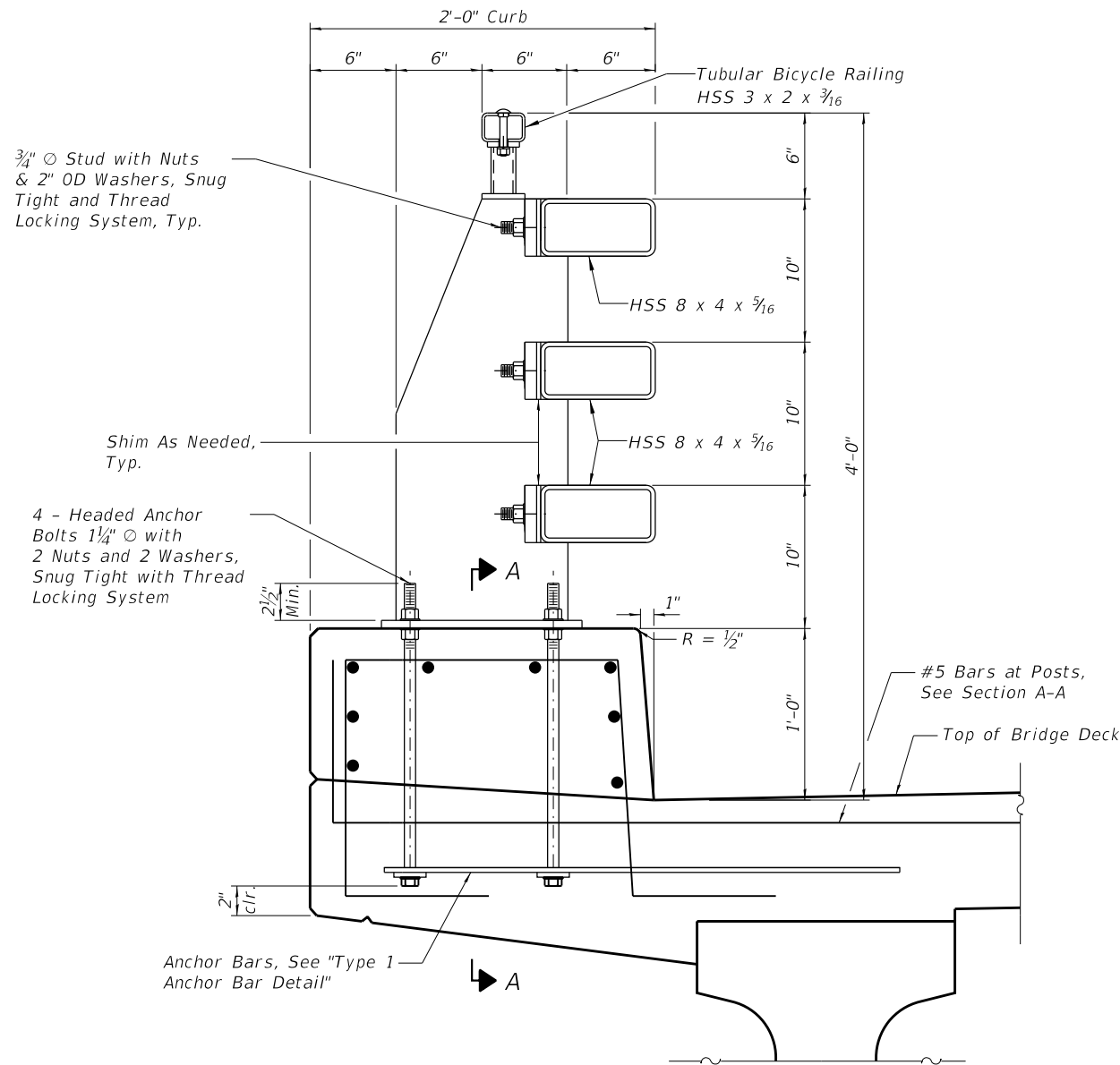
- Notes:
1. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.
 2. Parapet concrete shall be paid for as Concrete Superstructure.
 3. Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 4. Approach footing concrete shall be paid for as Concrete Structures.
 5. The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 6. Cost of excavation for approach footing included with Concrete Structures.
 7. For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 40.
 8. See Sheets 19-22 of 40 for Railing Details.

NORTH APPROACH
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a20(E)	92	#5	24'-11"	
a21(E)	120	#8	25'-8"	
a22(E)	18	#5	7'-4"	
b20(E)	62	#5	29'-8"	
b21(E)	98	#9	29'-8"	
d20(E)	38	#5	7'-8"	
e20(E)	8	#5	29'-8"	
e21(E)	8	#5	4'-3"	
t20(E)	84	#4	9'-8"	
w20(E)	80	#5	24'-9"	
Concrete Superstructure			Cu. Yd.	2.6
Concrete Superstructure (Approach Slab)			Cu. Yd.	56.3
Concrete Structures			Cu. Yd.	14.3
Reinforcement Bars, Epoxy Coated			Pound	25,750

PAVEMENT CONNECTOR
AT SW CORNER
BILL OF MATERIAL

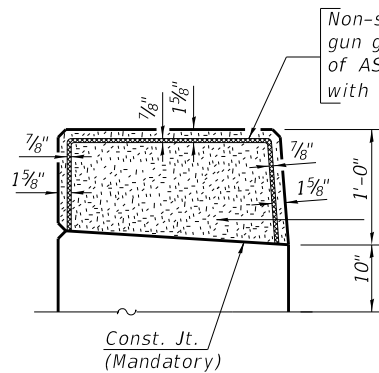
Bar	No.	Size	Length	Shape
d20(E)	7	#5	7'-8"	
Reinforcement Bars, Epoxy Coated			Pound	60



SECTION B-B - ASSEMBLY DETAIL

GENERAL NOTES

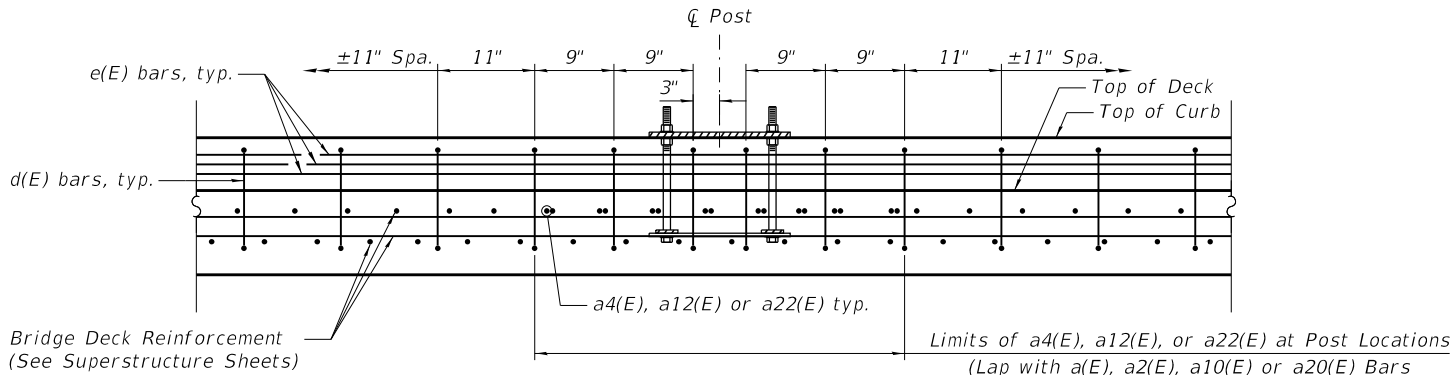
1. All railing components shall be galvanized. Type 1 anchor bar is not galvanized.
2. HS bolts with nut and washers, snug tightened, and thread locking system.
3. Use 1/2" Ø X 3 3/16" BOLTS (HSS 3 X 2 X 3/16)
Use 3/4" Ø X 5 5/16" BOLTS (HSS 8 X 4 X 5/16)
4. Each rail length must be continuous over a minimum of two posts.
5. The fabricator must check that the tubular sleeve splices conform to the dimensions indicated to assure proper clearance.
6. Not more than one splice permitted per same side of post.
7. All horizontal members are parallel to longitudinal profile grade.
8. Posts are normal to profile grade of structure.
9. Posts are vertical to the transverse cross section.
10. Anchor bolts may be tack welded to anchorage.
11. Use extra thick washers for anchor bolts, with a minimum thickness of 0.305" and a maximum thickness of 0.375".
12. All railing components shall be paid for as Steel Railing (Special).



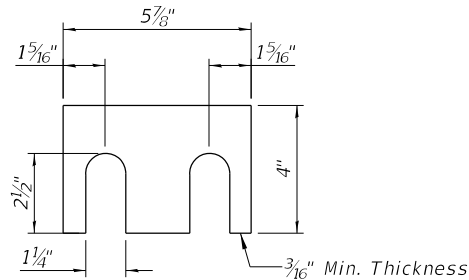
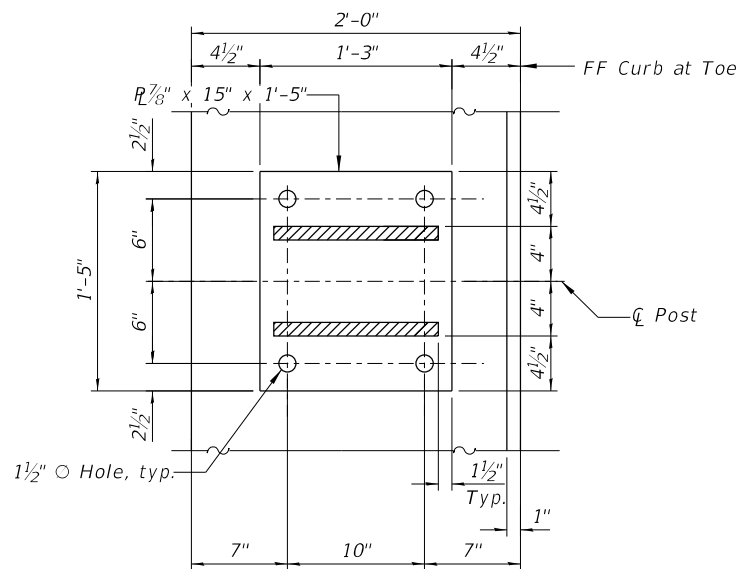
Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25. Use T with a 5/8" backer rod.

1/2" Preformed Self-Expanding Cork Joint Filler according to Article 1051.07 of the Std. Spec. Cost included with Concrete Superstructure.

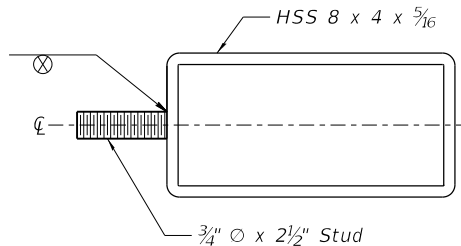
CURB JOINT DETAILS



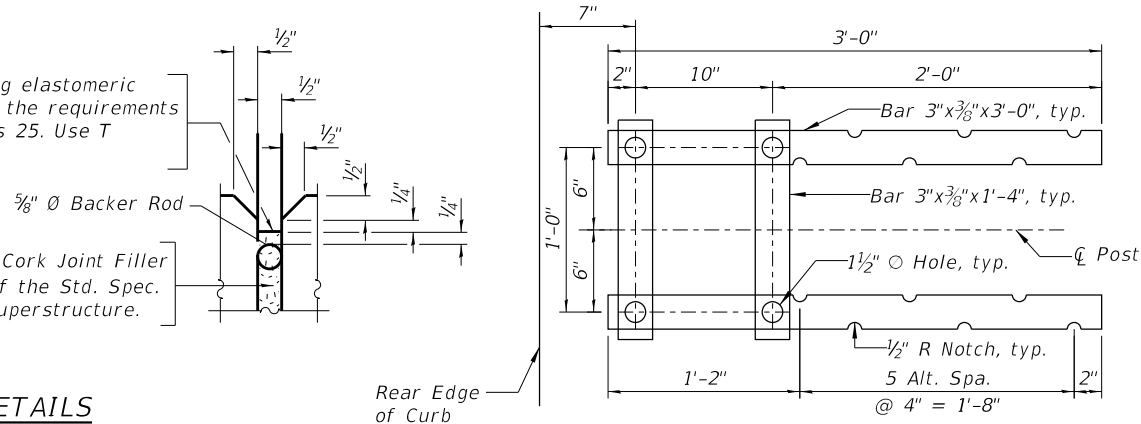
Note: Post not shown for clarity.



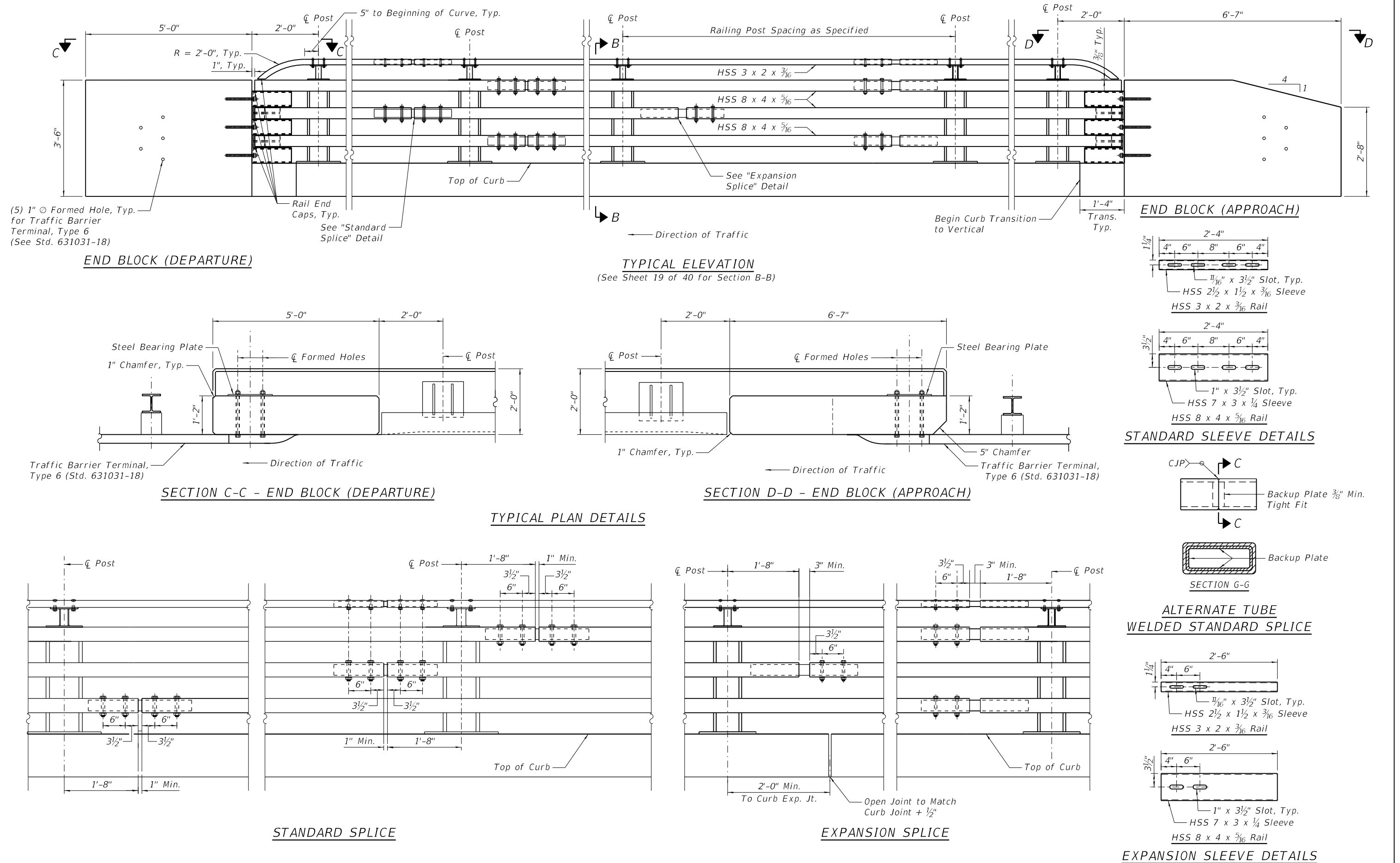
Note: Shims as needed between posts and HSS Rail Tubes



RAIL SECTION AT POST



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STEEL RAILING DETAILS I STRUCTURE NO. 056-4022			C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	SHEET 19 OF 40 SHEETS			T64	18-00482-00-BR	MCHENRY	219	127
				CONTRACT NO. 61J79				
				ILLINOIS FED. AID PROJECT				
USER NAME = knay		DESIGNED - DK	REVISED -					
CHECKED - PD		DESIGNED - PD	REVISED -					
PLOT SCALE =		DRAWN - DK	REVISED -					
PLOT DATE = 8/24/2023		CHECKED - PD	REVISED -					



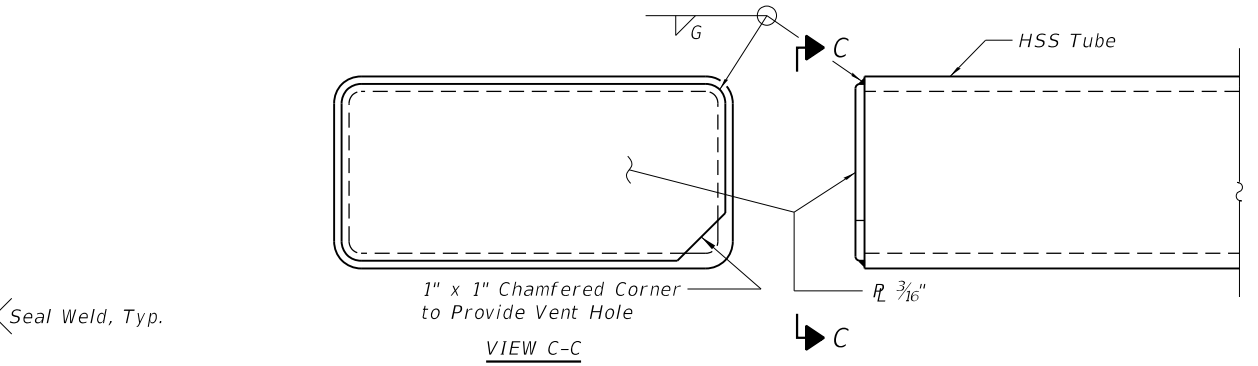
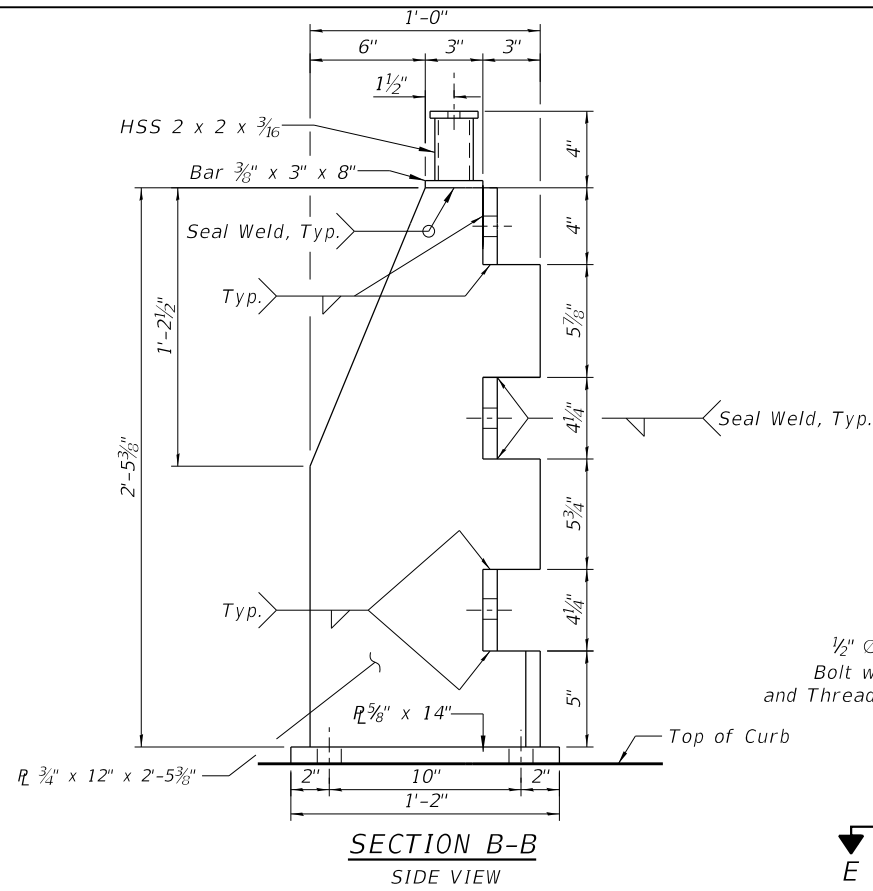
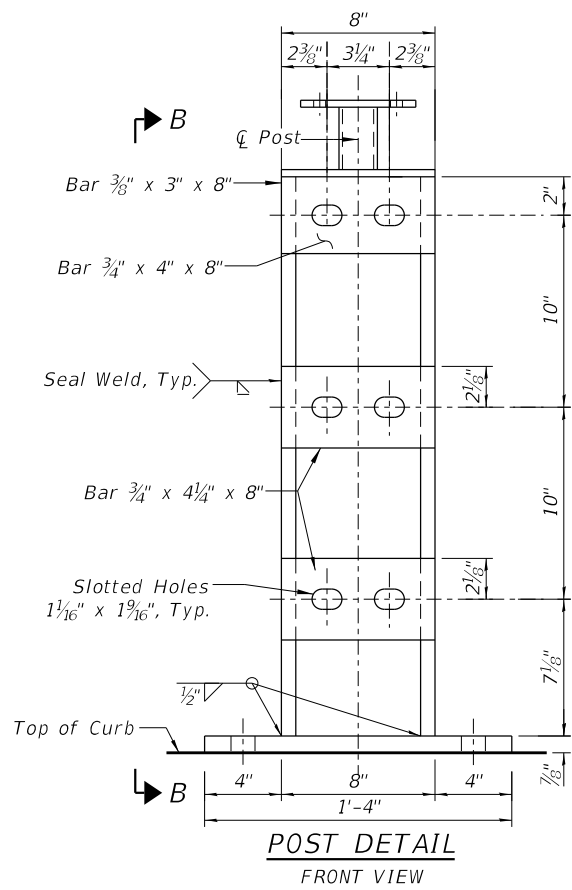
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	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL RAILING DETAILS II
STRUCTURE NO. 056-4022

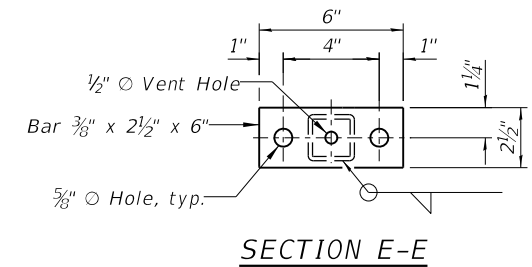
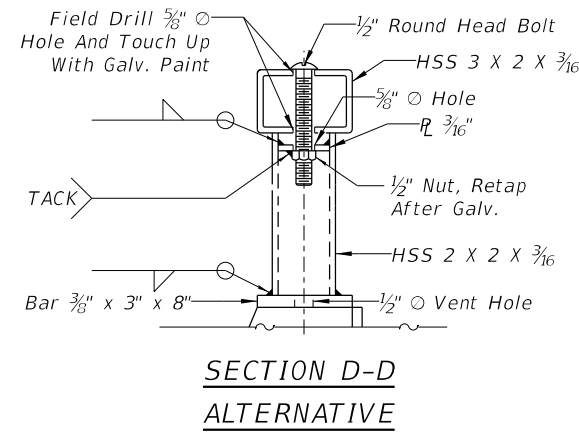
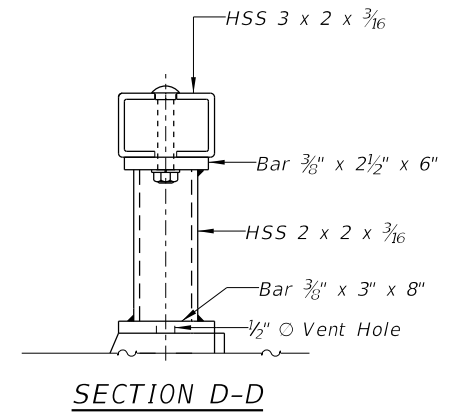
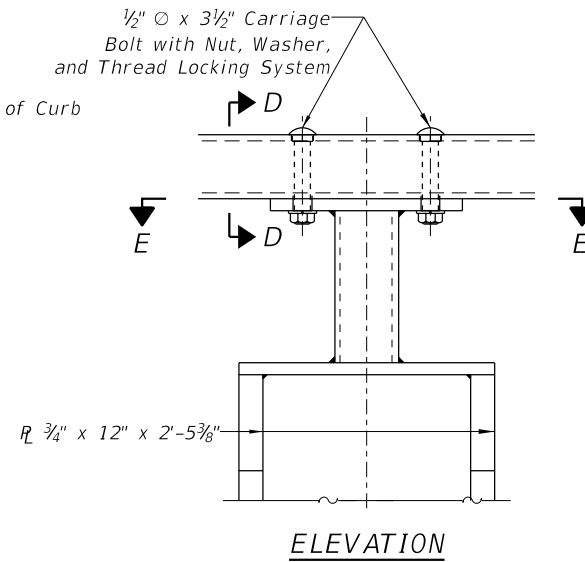
SHEET 20 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	128
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



RAIL END CAP

Note: For vehicular rail tube and bicycle railing tubes.



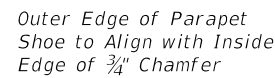
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PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

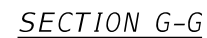
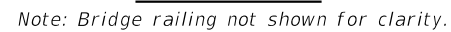
STEEL RAILING DETAILS III
STRUCTURE NO. 056-4022

SHEET 21 OF 40 SHEETS

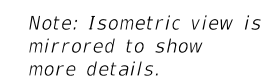
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	129
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



Note: Parapet shoe connection to approach end block is similar.



1. Anchor bolts must be $\frac{7}{8}$ " Dia. and ASTM F1554 Grade 105 fully threaded rods with heavy hex nut and one hardened washer ($1\frac{3}{4}$ " OD) each. Embed threaded rods 8" into concrete anchor block with DRILL AND BOND (CHEMICAL ADHESIVE) anchorage system.
2. DRILL AND BOND (CHEMICAL ADHESIVE) anchorages is subjected to approval of Engineer. Installation procedure must comply with manufacturer's instructions.



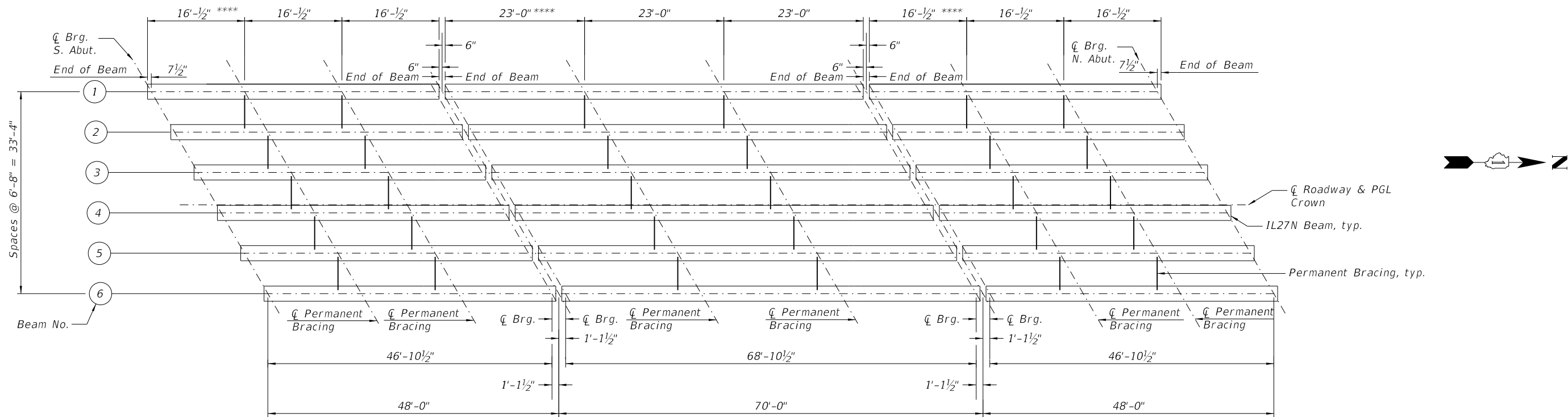
ISOMETRIC VIEW

<i>Item</i>	<i>Unit</i>	<i>Total</i>
<i>Steel Railing (Special)</i>	<i>Foot</i>	421

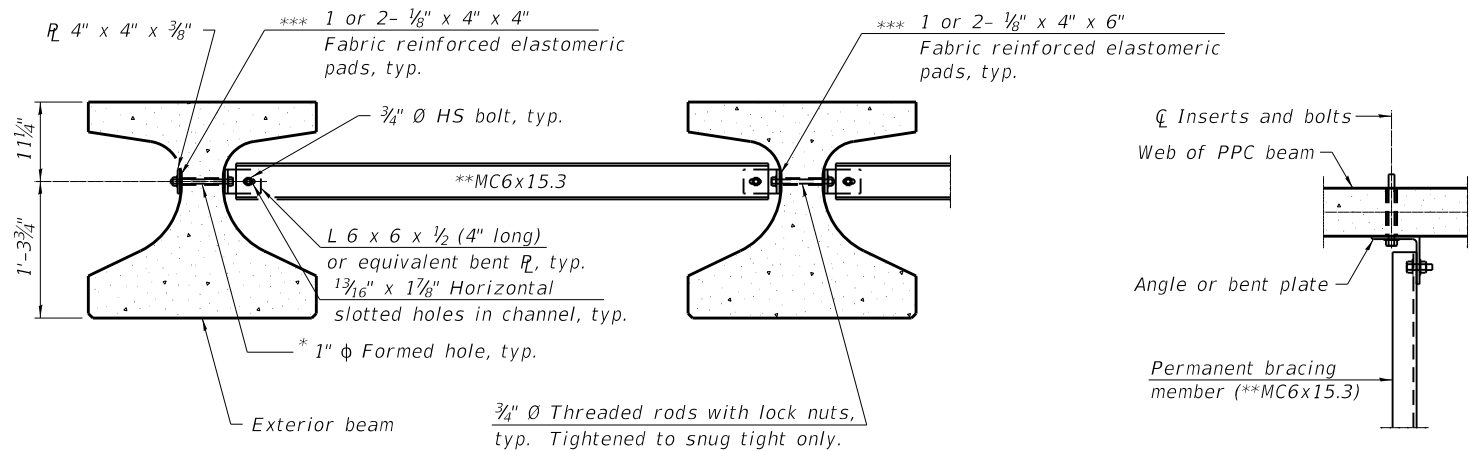
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SHEET 22 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	130
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



FRAMING PLAN



PERMANENT BRACING DETAILS

Notes:

All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
Two hardened washers are required for each set of oversized holes.
All holes shall be 1 5/16" Ø unless otherwise noted.
5/16" x 3" x 3" plate washers are required over all slotted holes.
All bolts, threaded rods, and hardware shall be galvanized according to AASHTO M232.
Threaded rods shall be ASTM F 1554 Grade 55.
Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete Beams.

- * Fabricator shall locate to miss strands within permissible tolerances.
- ** Alternate MC6x18 channels are permitted to facilitate material acquisition.
- *** Place pads as necessary to provide a flat mounting surface between the steel and concrete.
- **** Beams shall be braced at right angles to the beam. Dimensions on the first beam apply to all beams

PLAN

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I	(in ⁴)	33879	33879	33879
I'	(in ⁴)	152202	152202	152202
S _b	(in ³)	3060	3060	3060
S _b '	(in ³)	6717	6717	6717
St	(in ³)	2126	2126	2126
St'	(in ³)	10614	10614	10614
DC1	(k/')	1.181	1.181	1.181
MDC1	('k)	309.8	0	697.9
DC2	(k/')	0.139	0.139	0.139
MDC2	('k)	18	-46.4	33.6
DW	(k/')	0.33	0.33	0.33
MDW	('k)	38.9	-100.15	72.6
M _L + IM	('k)	474	-454.55	547.4

INTERIOR BEAM REACTION TABLE				
		Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
RDC1	(k)	27.1	27.1	39.2
* RDC2	(k)	2.3	4.3	4.7
* RDW	(k)	4.9	9.2	10.2
* R _L + IM	(k)	71.1	79.2	85.2
RTotal	(k)	105.4	119.8	139.3

* At continuous piers, reactions from composite loads are assumed to be equally distributed to each bearing line.

I: Non-composite moment of inertia of beam section (in.⁴).
I': Composite moment of inertia of beam section (in.⁴).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in.³).
S_b': Composite section modulus for the bottom fiber of the prestressed beam (in.³).
St: Non-composite section modulus for the top fiber of the prestressed beam (in.³).
St': Composite section modulus for the top fiber of the prestressed beam (in.³).
DC1: Un-factored non-composite dead load (kips/ft.).
MDC1: 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.).
MDC2: 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.).
MDW: 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.).

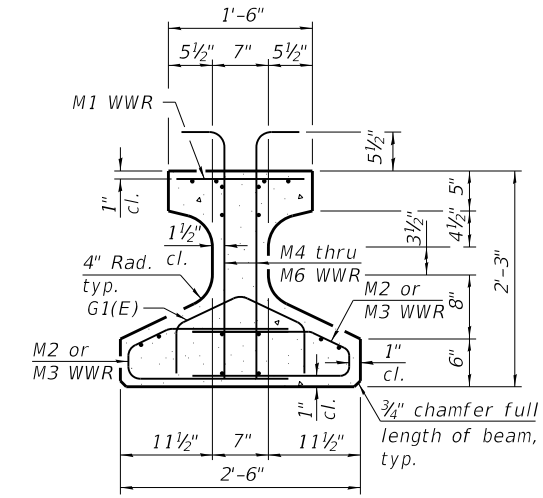
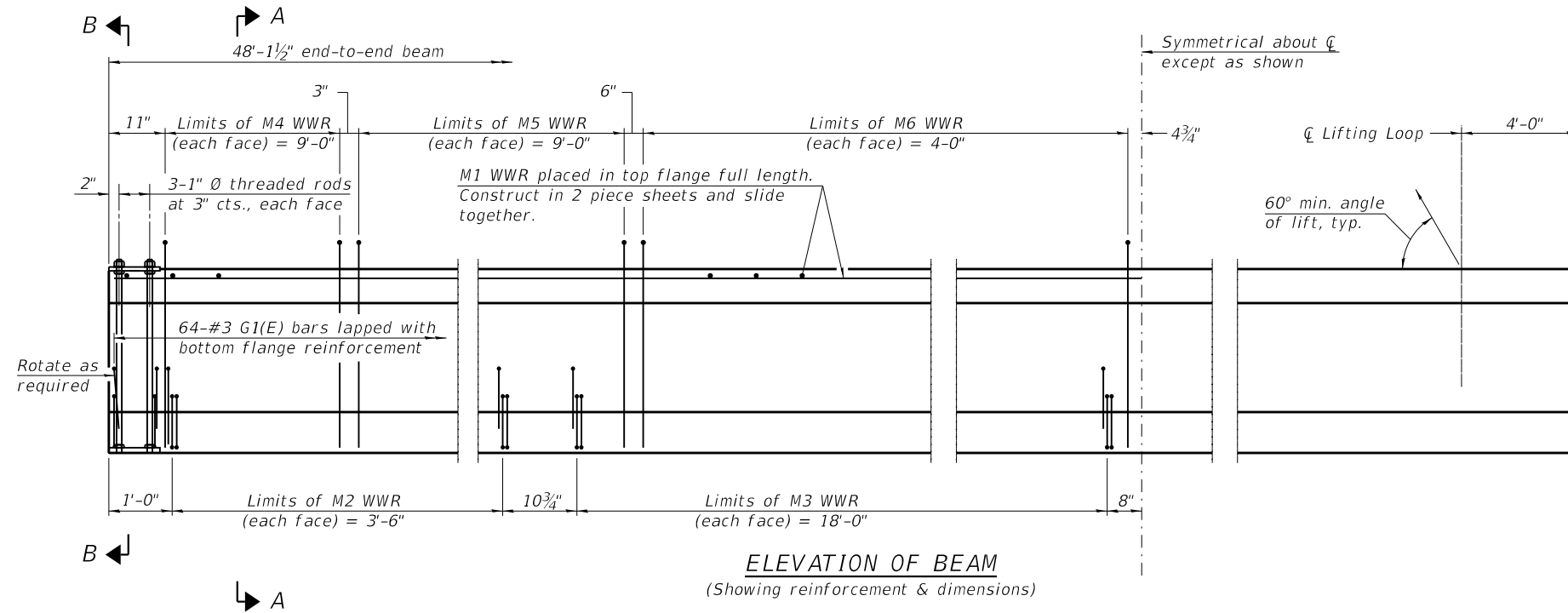
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CHECKED - PD	REVISED -	
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

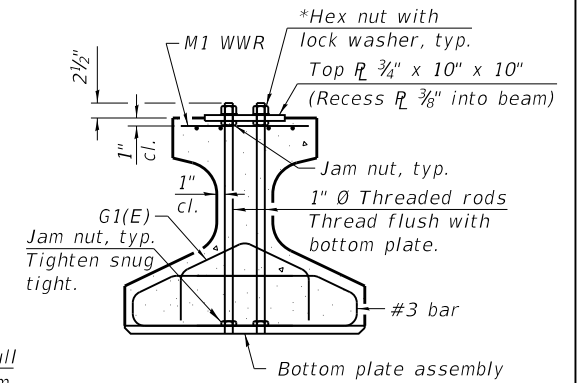
FRAMING PLAN
STRUCTURE NO. 056-4022

SHEET 23 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	131
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

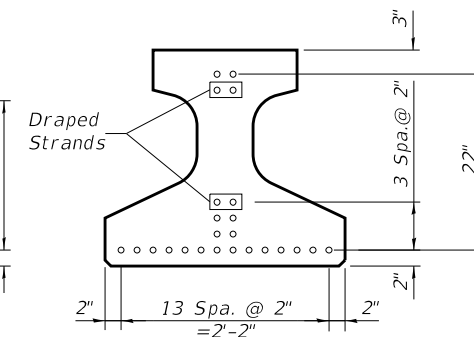
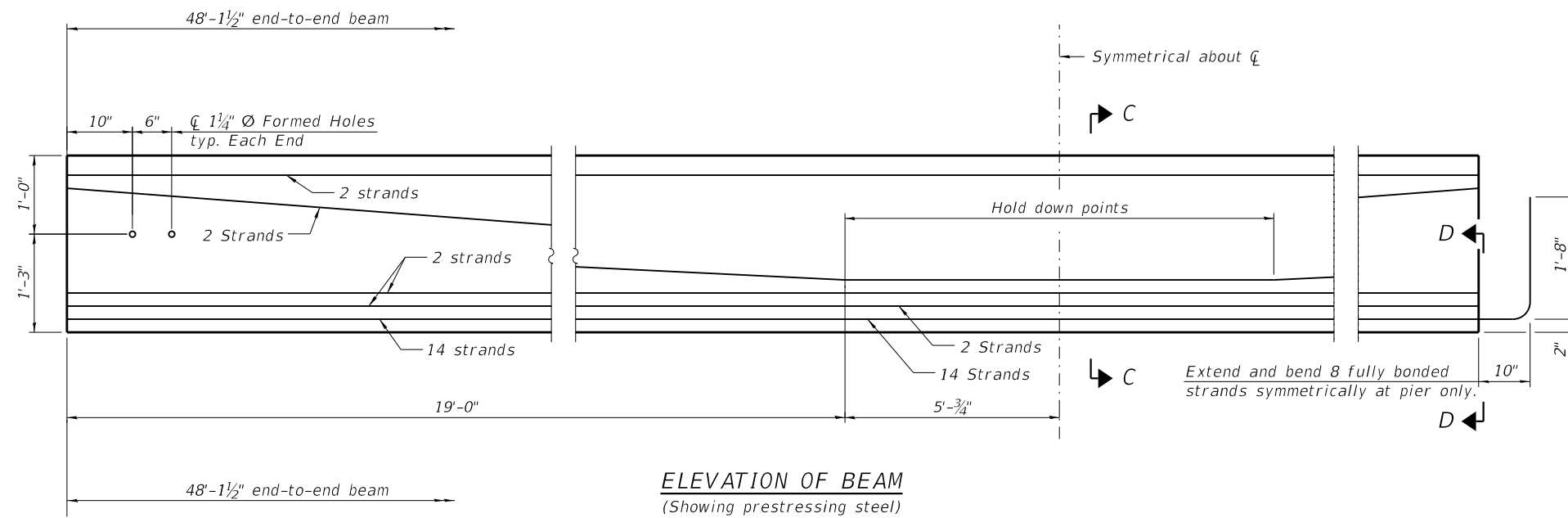


SECTION A-A



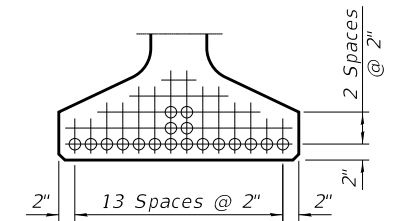
SECTION B-B

**Only tighten sufficiently to compress lock washers*



SECTION C-C

(22-0.6" Ø 270 ksi strands)



VIEW D-D

- Fully bonded strand

▲ *Partially debonded strand*

SPANS 1 & 3

IL27-1830 Beam

Strand Pattern = 20B-2T-0db-2d

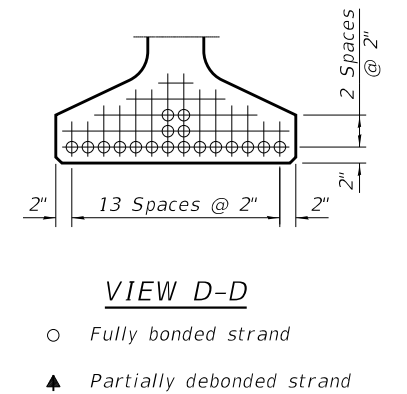
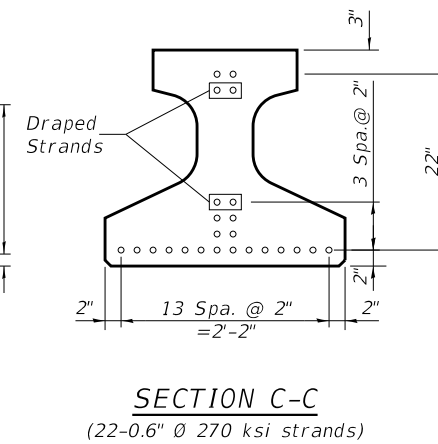
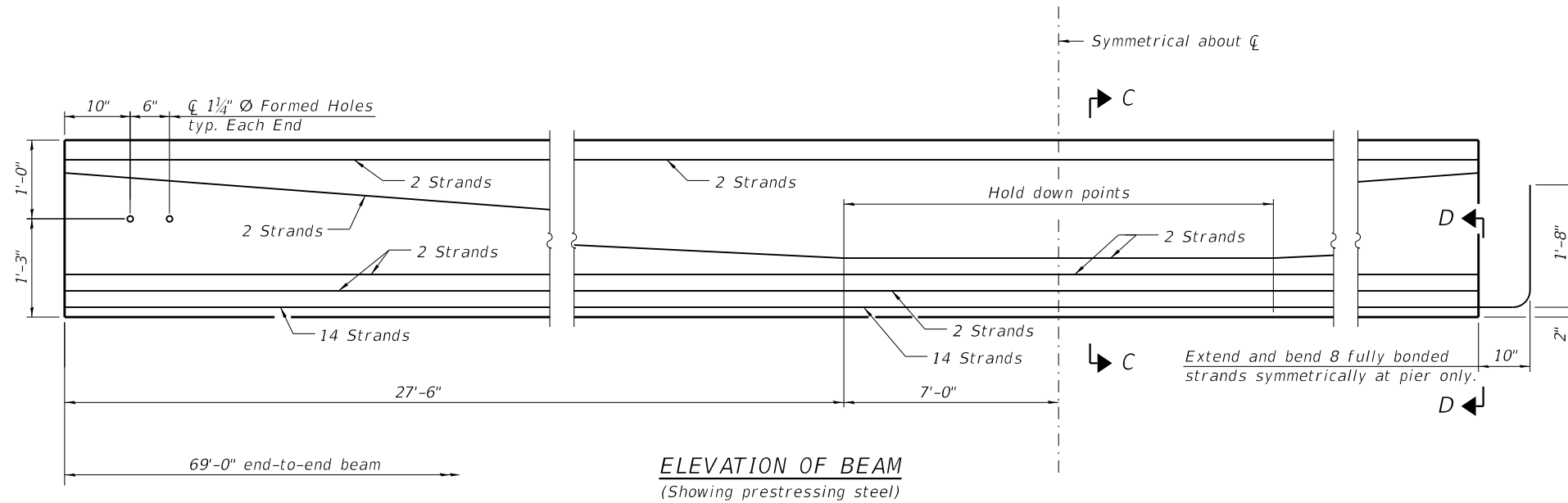
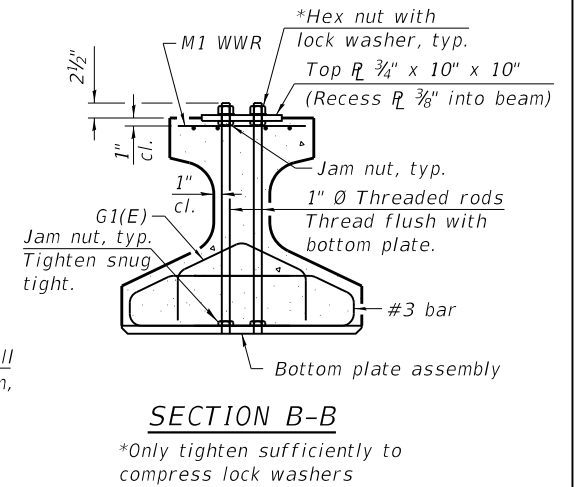
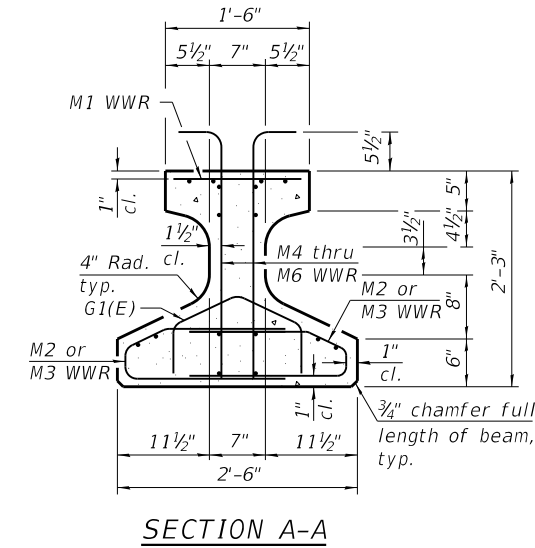
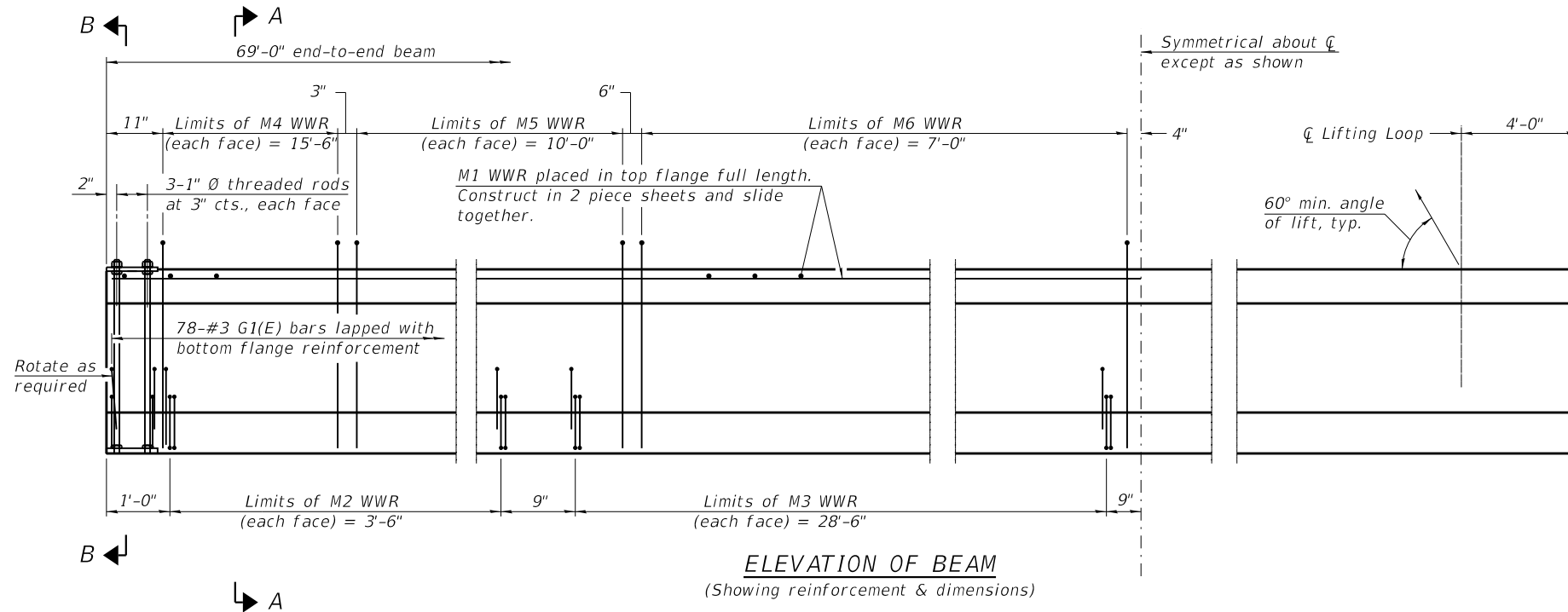
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	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

IL27N BEAM (SPANS 1 & 3)
STRUCTURE NO. 056-4022

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	132
CONTRACT NO. 61J79				
	ILLINOIS	FED. AID PROJECT		

Note:
See sheet 26 of 40 for additional
details and Bill of Material.



SPAN 2
IL27-1830 Beam
Strand Pattern = 20B-2T-0db-2d

Note:
See sheet 26 of 40 for additional details and Bill of Material.

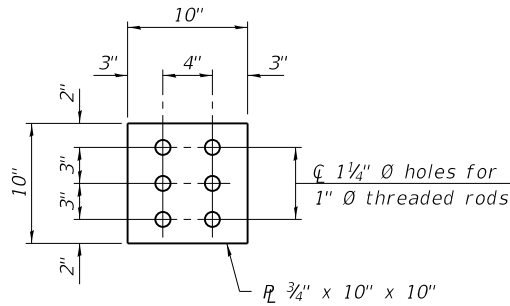
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	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

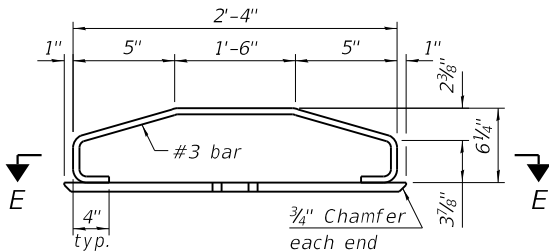
IL27N BEAM (SPAN 2)
STRUCTURE NO. 056-4022

SHEET 25 OF 40 SHEETS

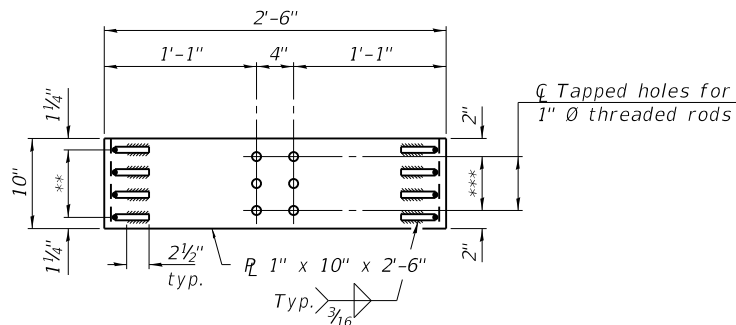
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	133
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE



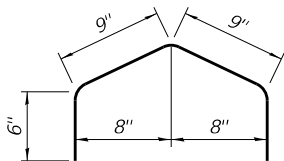
ELEVATION - BOTTOM
PLATE ASSEMBLY



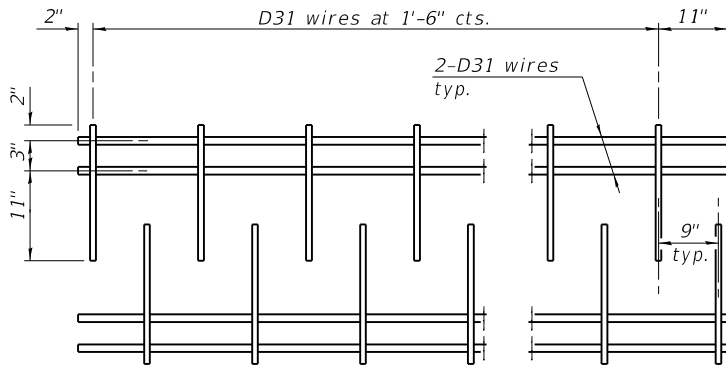
SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"

*** 2 Spaces at 3" = 6"

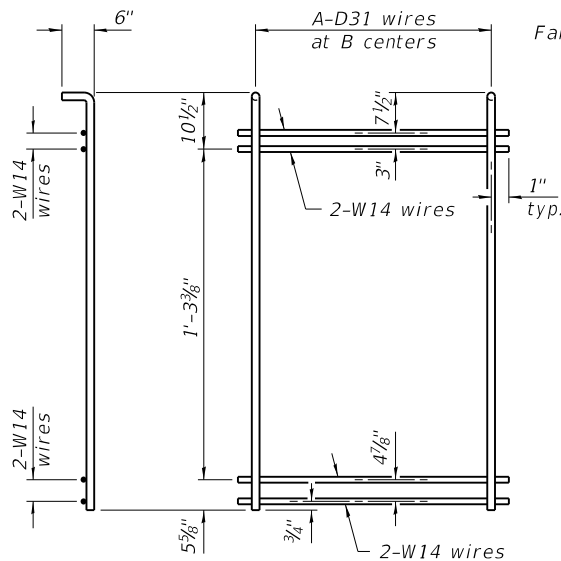


BAR G1(E)



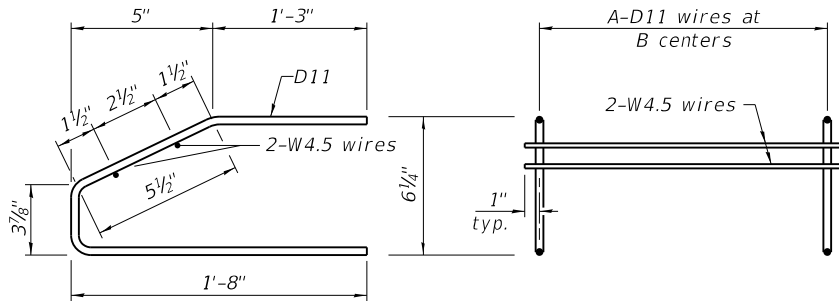
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M4 THRU M6 WWR DETAIL

(See Table of Dimensions)



M2 AND M3 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

(The WWR designs assume grade 60. If necessary, this permits the fabricator to directly substitute grade 60 rebar as detailed in the Manual for Fabrication of Precast Prestressed Concrete Products.)

SPANS 1 & 3

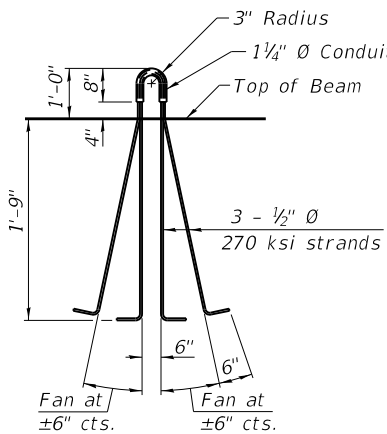
WWR	A	B
M2	15	3"
M3	13	1'-6"
M4	37	3"
M5	19	6"
M6	5	1'-0"

SPAN 2

WWR	A	B
M2	15	3"
M3	20	1'-6"
M4	63	3"
M5	21	6"
M6	8	1'-0"

NOTES

Inserts for 3/4" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 6500 psi. A minimum 2 1/2" Ø lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1 1/2" clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating or ASTM A1060, Table 3 galvanized coating.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL27N	Ft.	992

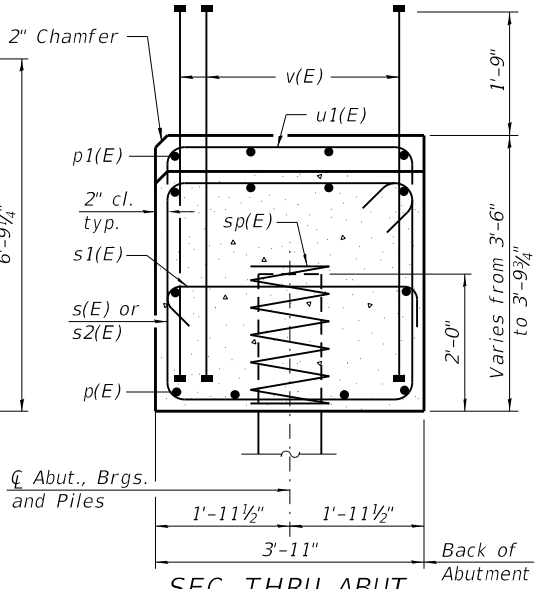
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CHECKED - PD	REDESIGNED - PD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL27N BEAM DETAILS
STRUCTURE NO. 056-4022

SHEET 26 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	134
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



Dimensions at right angles to abutment.

BILL OF MATERIAL

Dimensions at right angles to abutment.

Bar	No.	Size	Length	Shape
h(E)	24	#5	11'-0"	=====
h1(E)	6	#5	19'-11"	=====
h2(E)	4	#5	7'-5"	=====
p(E)	10	#7	45'-10"	=====
p1(E)	4	#5	7'-4"	=====
s(E)	39	#6	14'-10"	=====
s1(E)	12	#5	4'-7"	=====
s2(E)	2	#6	16'-0"	=====
s3(E)	6	#6	9'-0"	=====
sp(E)	6	#4	2'-0"	=====
sp14(E)	6	#4	10'-0"	=====
u(E)	8	#6	12'-8"	=====
u1(E)	9	#5	5'-3"	=====
v(E)	113	#8	5'-1"	=====
v1(E)	8	#5	6'-5"	=====
v2(E)	12	#5	10'-3"	=====
vpp14(E)	66	#7	10'-6"	=====
Structure Excavation			Cu. Yd.	88.3
Concrete Structures			Cu. Yd.	27.5
Reinforcement Bars, Epoxy Coated			Pound	4,490
Furnishing Metal Shell Piles 14" X 0.312"			Foot	220
Driving Piles			Foot	220
Test Pile Metal Shells			Each	1
Pile Shoes			Each	6

* Length refers to height of spiral.
 ** Cost included with Furnishing Metal Shell
 Piles 14" X 0.312".
 *** Measured from top of pile to
 bottom of pile. From Elev. 812.85
 to Elev. 768.85

Notes:
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706.
Cost included with Reinforcement Bars, Epoxy Coated.
For details of piles see sheet 30 of 40.

For details of piles see sheet 30 of 40.



USER NAME = knay	DESIGNED - KN	REVISED -
	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

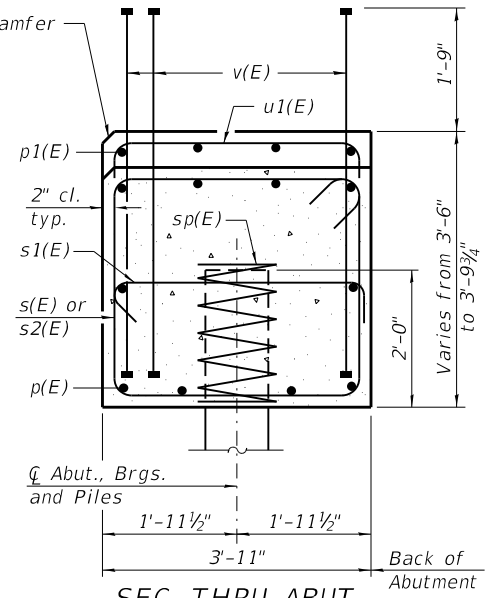
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOUTH ABUTMENT DETAILS
STRUCTURE NO. 056-4022

SHEET 27 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	135
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		

CONTRACT NO. 61J79



SEC. THRU ABUT. Abutment
Dimensions at right angles to abutment.

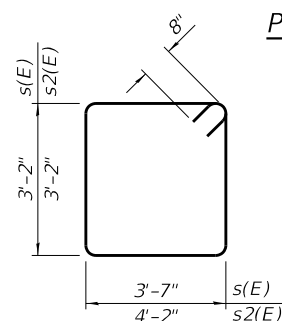


Diagram illustrating the reinforcement details for a beam section, showing dimensions and bar counts:

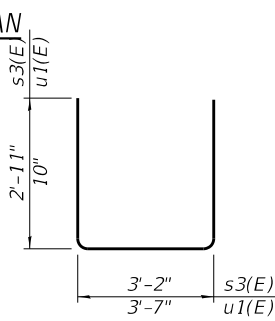
- Top section height: 19'-11"
- Top section height (above cut line): 10'-3"
- Section height below cut line: 6'-0"
- Section height below cut line (bottom): 9'-4"
- Section height below cut line (bottom): 4'-2"
- Reinforcement bars shown: 3-#5 h1(E) bars and 6-#5 v2(E) bars.
- A "Cut Line" is indicated at the bottom of the beam.

FIELD CUTTING DIAGRAM

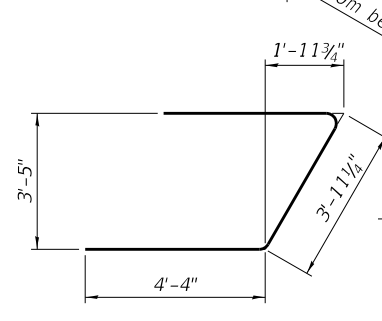
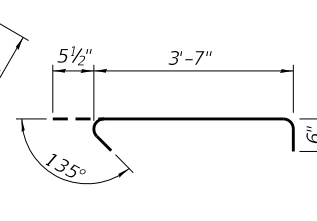
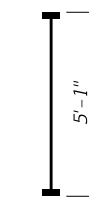
BAR $h_2(E)$ & $h_3(E)$





















BAR $s(E)$ & $s_2(E)$



BAR s3(E) and u1(E)


$$BAR \quad u(E)$$

$$BAR \ s1(E)$$

$$\frac{BAR \ v(E)}{(Headed)}$$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	24	#5	11'-8"	
h1(E)	6	#5	19'-11"	
h2(E)	2	#5	7'-5"	
h3(E)	2	#5	6'-11"	
p(E)	10	#7	45'-10"	
p1(E)	4	#5	7'-4"	
s(E)	39	#6	14'-10"	
s1(E)	12	#5	4'-7"	
s2(E)	2	#6	16'-0"	
s3(E)	6	#6	9'-0"	
sp(E)	6	#4	2'-0"	
sp14(E)	6	#4	10'-0"	
u(E)	8	#6	12'-8"	
u1(E)	9	#5	5'-3"	
v(E)	113	#8	5'-1"	
v1(E)	8	#5	6'-5"	
v2(E)	12	#5	10'-3"	
vpp14(E)	6	#7	10'-6"	
Structure Excavation			Cu. Yd.	88.3
Concrete Structures			Cu. Yd.	27.5
Reinforcement Bars, Epoxy Coated			Pound	4,490
Furnishing Metal Shell Piles 14" X 0.312"			Foot	220
Driving Piles			Foot	220
Test Pile Metal Shells			Each	1
Pile Shoes			Each	6

* Length refers to height of spiral.

*** Cost included with Furnishing Metal Shell
Piles 14" X 0.312".

*** Measured from top of pile to
bottom of pile. From Elev. 812.02
to Elev. 768.02

Notes:

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
For details of piles see sheet 30 of 40.

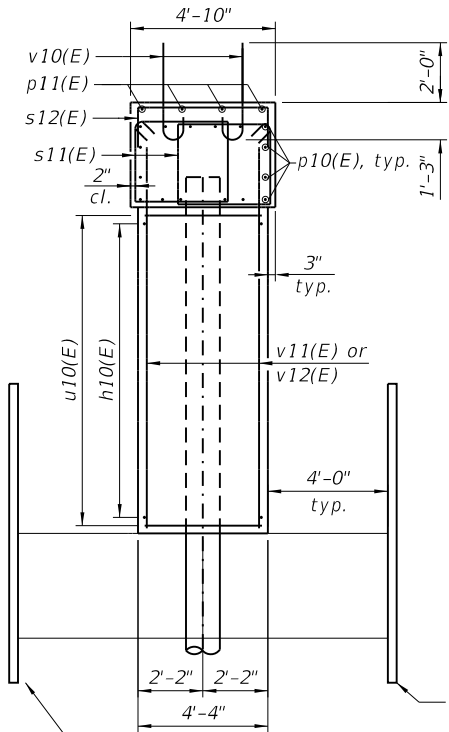
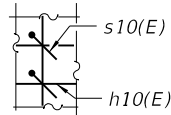
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	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

NORTH ABUTMENT DETAILS
STRUCTURE NO. 056-4022

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	136
CONTRACT NO. 61J79				
		ILLINOIS	FED. AID PROJECT	

* Orient s10(E) bars at a 45° angle at each intersection of vertical v11(E) or v12(E) bar and horizontal h10(E) bar at each side of each pile (see section A-A)



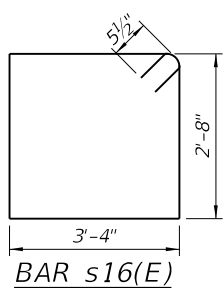
END VIEW
(Pier 1 & Pier 2)

BEARING SEAT
ELEVATIONS

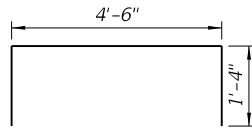
Beam	Pier 1 Elev.	Pier 2 Elev.
1	814.12	813.77
2	814.23	813.88
3	814.35	814.00
4	814.41	814.06
5	814.25	813.90
6	814.10	813.75

MINIMUM BAR LAP

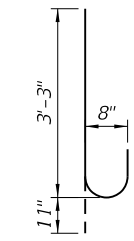
#5 Bars = 3'-7"
#6 Bars = 4'-4"



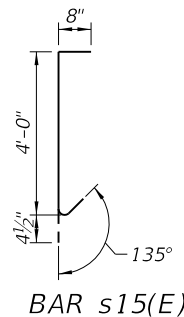
BAR s16(E)



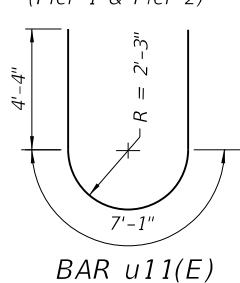
BAR s17(E)



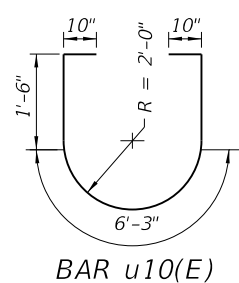
BAR v10(E)



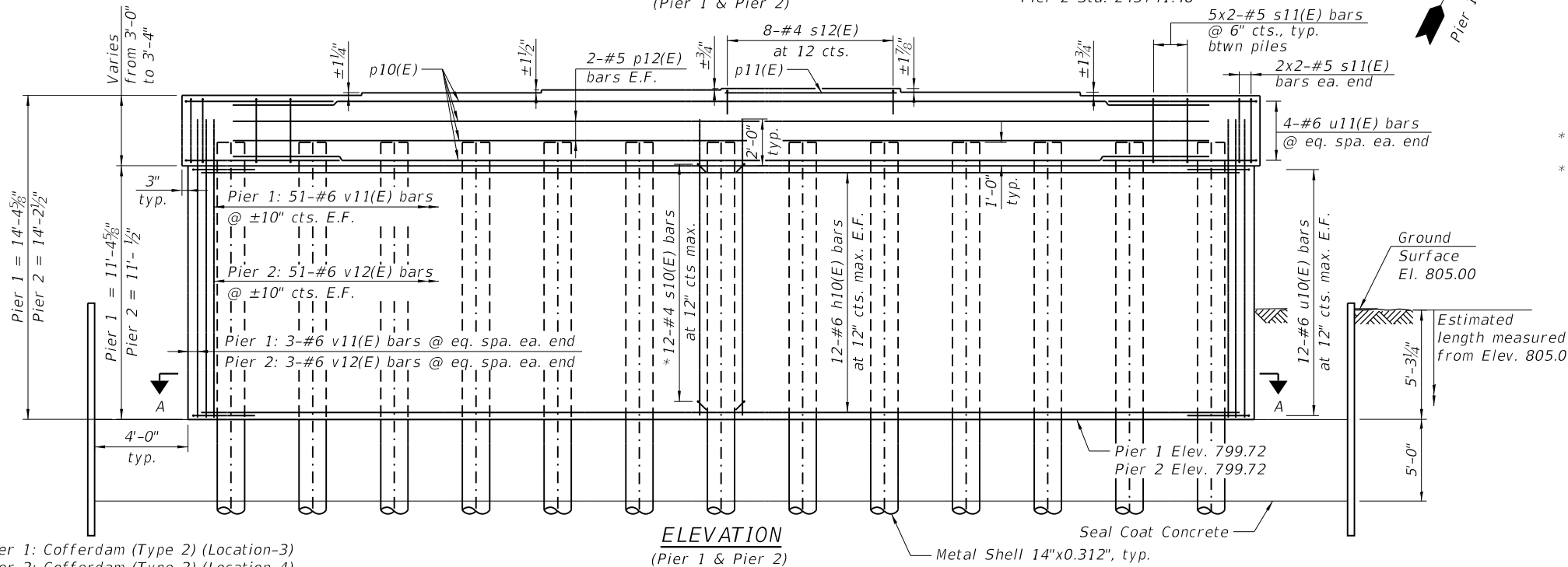
BAR s15(E)



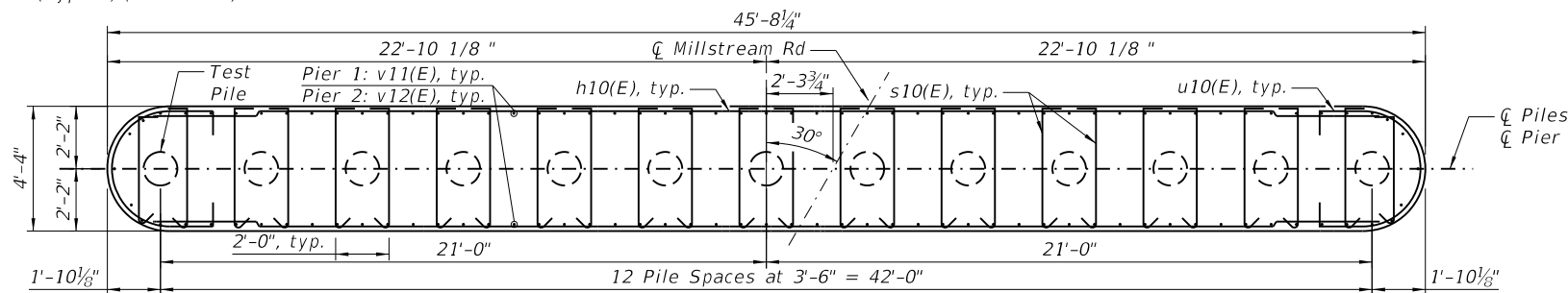
BAR u11(E)



BAR u10(E)



ELEVATION
(Pier 1 & Pier 2)



SECTION A-A
(Pier 1 & Pier 2)

PILE DATA

Pile Type and Size:

Metal Shell Pile
14" Dia. w/ 0.312" Walls
with Pile Shoes

Nominal Required Bearing:

450 kips

Factored Resistance Available:

200 kips

Estimated Length:

40 feet (Pier 1)

47 feet (Pier 2)

Number of Production Piles:

12

Number of Test Piles:

1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 & 2 DETAILS
STRUCTURE NO. 056-4022

SHEET 29 OF 40 SHEETS

PIER 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	24	#6	42'-6"	—
p10(E)	16	#5	41'-10"	—
p11(E)	4	#4	7'-5"	—
s15(E)	312	#4	5'-1"	└┐
s16(E)	128	#5	12'-11"	└┐
s17(E)	8	#4	7'-2"	└┐
u10(E)	24	#5	11'-0"	└┐
u11(E)	8	#6	15'-9"	└┐
v10(E)	30	#8	4'-2"	└┐
v11(E)	108	#6	13'-3"	—
Cofferdam Excavation				
		Cu. Yd.	243	
Cofferdam (Type 2) (Location - 3)				
		Each	1	
Concrete Structures				
		Cu. Yd.	111.0	
Seal Coat Concrete				
		Cu. Yd.	123.0	
Reinforcement Bars, Epoxy Coated				
		Pound	8,020	
* Furnishing Metal Shell Piles 14" X 0.312"				
		Foot	576	
* Driving Piles				
		Foot	576	
Test Pile Metal Shells				
		Each	1	
Pile Shoes				
		Each	12	

PIER 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	24	#6	42'-6"	—
p10(E)	16	#5	41'-10"	—
p11(E)	4	#4	7'-5"	—
s15(E)	312	#4	5'-1"	└┐
s16(E)	128	#5	12'-11"	└┐
s17(E)	8	#4	7'-2"	└┐
u10(E)	24	#5	11'-0"	└┐
u11(E)	8	#6	15'-9"	└┐
v10(E)	30	#8	4'-2"	└┐
v12(E)	108	#6	12'-10"	—
Cofferdam Excavation				
		Cu. Yd.	243	
Cofferdam (Type 2) (Location - 4)				
		Each	1	
Concrete Structures				
		Cu. Yd.	108.5	
Seal Coat Concrete				
		Cu. Yd.	123.0	
Reinforcement Bars, Epoxy Coated				
		Pound	7,960	
* Furnishing Metal Shell Piles 14" X 0.312"				
		Foot	648	
* Driving Piles				
		Foot	648	
Test Pile Metal Shells				
		Each	1	
Pile Shoes				
		Each	12	

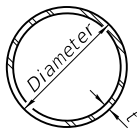
* Measured from top of pile to bottom of pile.
From Elev. 812.11 to Elev. 764.11 for Pier 1
From Elev. 811.77 to Elev. 757.77 for Pier 2

NOTES:

- Cast steps monolithically with cap.
- Space cap reinforcement to miss anchor bolts.
- For pile details see Sheet 30 of 40.

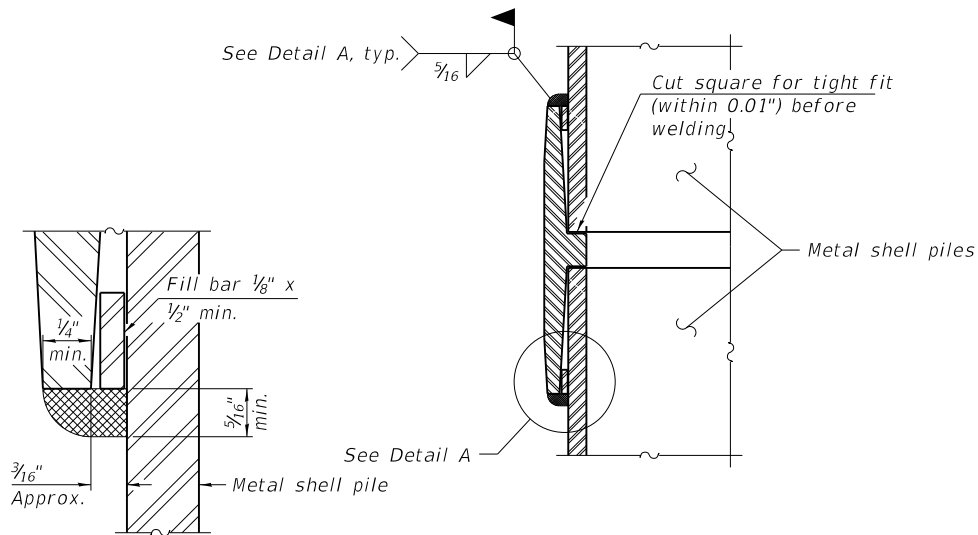
USER NAME = knay	DESIGNED - ES	REVISED -
CHECKED - PD	REVIS	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	137
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



METAL SHELL PILE TABLE

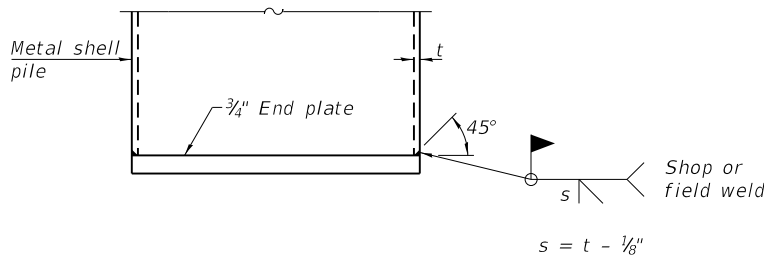
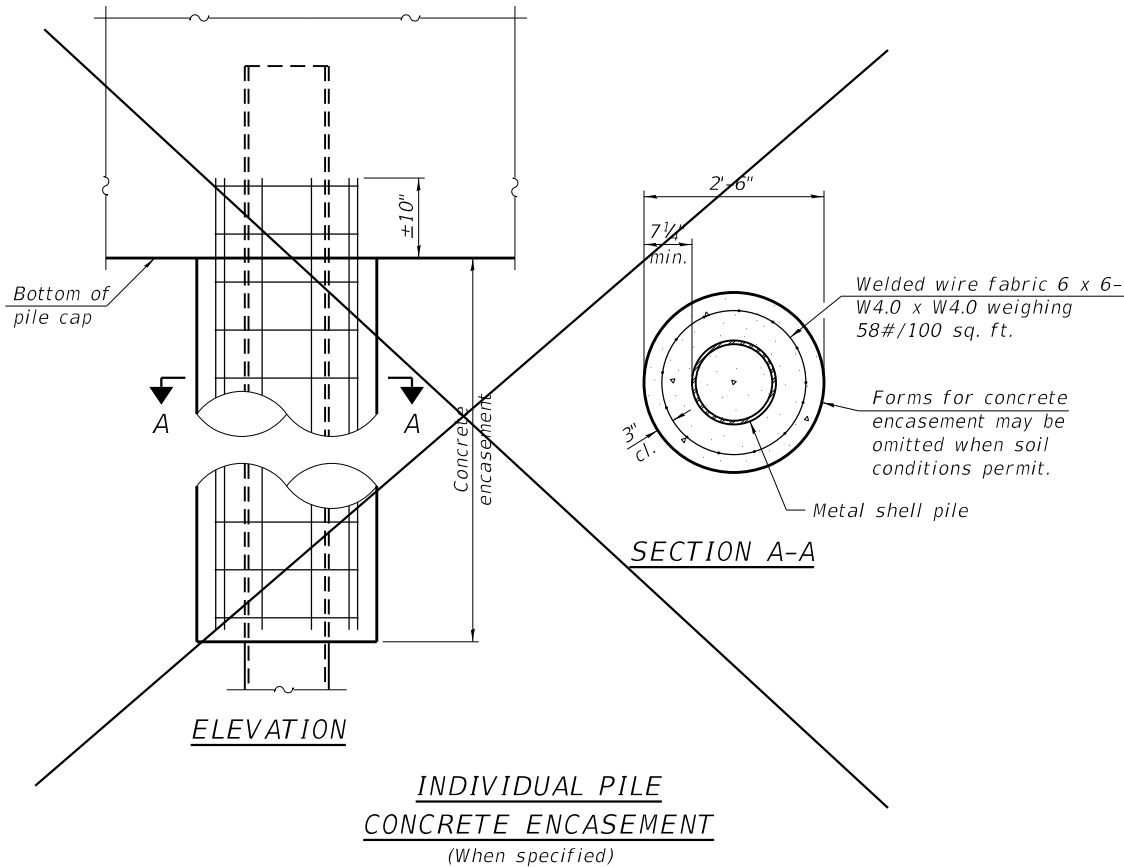
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.40	0.0267
PP14	0.250"	36.75	0.0368
PP14	0.312"	45.65	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



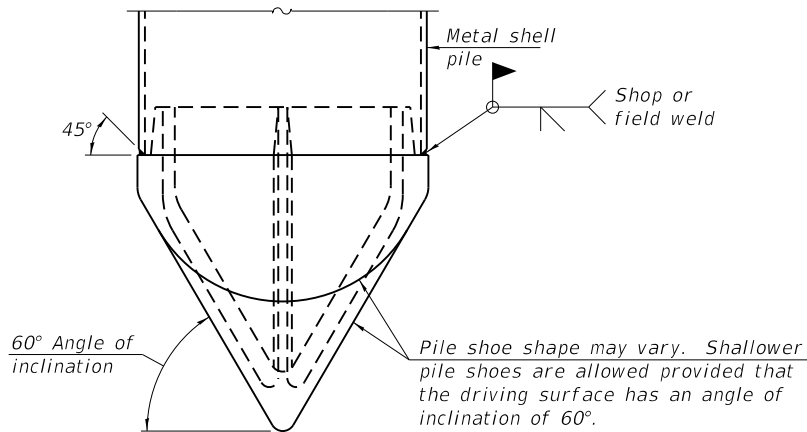
DETAIL A

WELDED COMMERCIAL SPLICE

Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

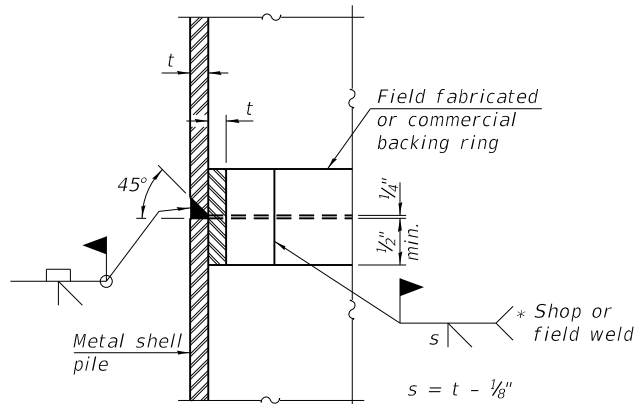


END PLATE ATTACHMENT



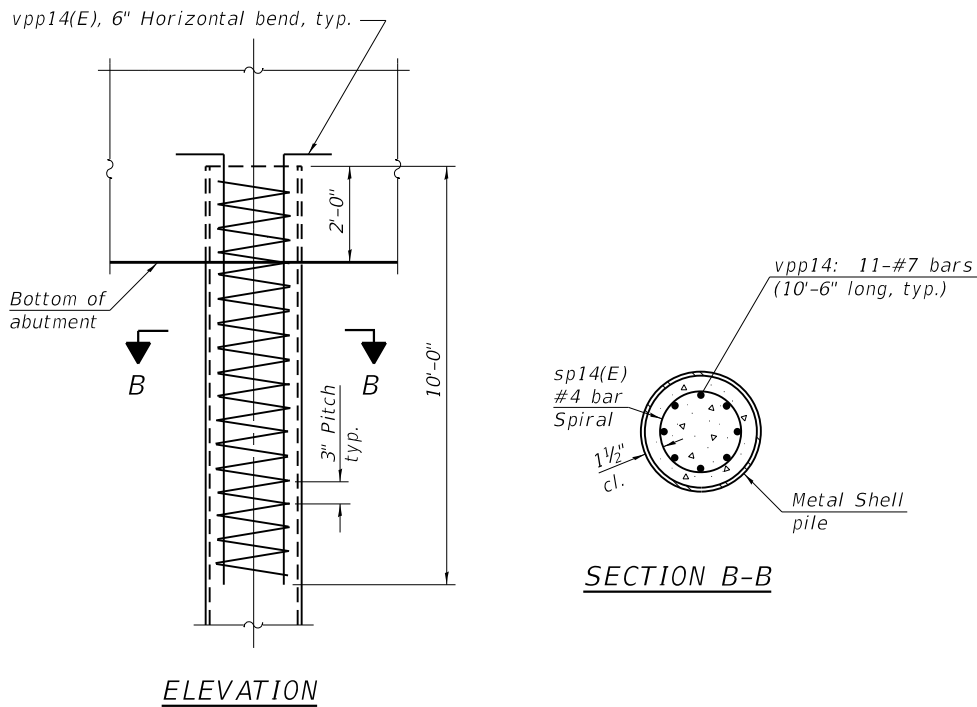
PILE SHOE ATTACHMENT

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).



COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



REINFORCEMENT AT ABUTMENTS

(Omit when concrete encasement is specified)

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

USER NAME = knay	DESIGNED - ES	REVISED -
CHECKED - PD	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - ES	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PILE DETAILS
STRUCTURE NO. 056-4022

SHEET 30 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	138
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				




	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>201</u>
	Client <u>BLA, Inc.</u> Sheet <u>1</u> of <u>3</u> <u>Millstream Road over Kishwaukee</u> Project <u>River Bridge Rehab./Replacement</u> Date <u>3/31/20</u>		
Comments _____ _____ _____		Location <u>McHenry County, IL</u> Drilled By <u>AC</u> Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____ Logged By <u>GS</u>	

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
		Bituminous concrete - 5.0"											
		Sand & gravel - 9.0"											
		Brown silt, some clay & sand, trace gravel, damp, medium dense - Fill						5					
					1	SS	15"	6	11		10.0		
								5					
811.0'								4					
		Black-dark gray fine sand, some silt, trace medium-coarse sand, damp-very damp, medium dense - Fill		5	2	SS	18"	9	14		12.4		
								5					
809.0'								4					
		Black-dark gray fine sand, some silt, trace medium-coarse sand, damp-very damp, loose - Fill			3	SS	18"	6	9		12.0		
								3					
807.0'								4					
		Black organic silt, trace fine sand, very damp, very loose						1					
					4			2			54.2		
805.5'		Dark brown-gray fine sand, saturated, loose		10	5	SS	18"	4	6		25.4		
803.5'								1					
		Dark brown gray to brown fine sand, some medium-coarse sand, trace gravel, saturated, very loose to medium dense			6	SS	10"	2	4		25.5		
								2					
								4					
								5					
799.5'				15	7	SS	12"	6	11		13.8		
		Brown fine sand, trace medium-coarse sand, saturated, loose						1					
								3					
					8	SS	15"	4	7		20.9		
796.5'													
								4					
		Brown medium-coarse sand, some gravel & fine sand, saturated, medium dense		20	9	SS	18"	7	13		13.0		
795.0'								6					

Water Level —	depth, ft.	elev. ft.	S - sample	T - type: J(Jar), SS(split-spoon), ST(shelby tube)	R - recovery length, in
- while drilling:	<u>9.0</u>	<u>806.0'</u>	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>6.0</u>	<u>809.0'</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.		
			Qu - unconfined compressive strength, tons/sq. ft.		


F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>201</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> Sheet <u>2</u> of <u>3</u> <u>Millstream Road over Kishwaukee</u> Project <u>River Bridge Rehab./Replacement</u> Date <u>3/31/20</u> <u>McHenry County, IL</u> Location _____ Drilled By <u>AC</u> _____ Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____ Logged By _____ _____	

[illegible]

Water Level — depth, ft. elev., ft. S - sample T - type: (J)ari, SS(split-spoon), ST(shelby tube) R - recovery length, in.
 - while drilling: 9.0 806.0' B - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %
 - after drilling: 6.0 809.0' N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"
 - hrs. after drilling: Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.
 Qu - unconfined compressive strength, tons/sq. ft.

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>201</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> Sheet <u>3</u> of <u>3</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Date <u>3/31/20</u> Location <u>McHenry County, IL</u> Drilled By <u>AC</u> Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____ Logged By _____	

[illegible]

Water Level —	depth, ft.	elev. ft.	S - sample	T - type: J(Jar), SS(spill-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>9.0</u>	<u>806.0</u>	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>6.0</u>	<u>809.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

USER NAME = knay	DESIGNED - CP	REVISED -
	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - CP	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS I
STRUCTURE NO. 056-4022

SHEET 31 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	139
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		




 SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>202</u>
Comments _____ _____ _____	Client <u>BLA, Inc.</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Location <u>McHenry County, IL</u>	Sheet <u>1</u> of <u>3</u> Date <u>3/20/20</u> Drilled By <u>AC</u> Logged By <u>CS</u>
Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____		

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
		Bituminous concrete - 5.5"											
		Sand & gravel - 7.5"											
		Brown silt, some clay & sand, trace gravel, damp, medium dense - Fill						6					
								7					
				1	SS		13"	6	13		9.1		
811.0'								5					
		Black fine sand, trace silt & medium-coarse sand & gravel, damp, medium dense - Fill		5	2	SS	18"	5	11		13.5		
809.5'													
		Brown-dark brown silt, some fine sand, trace coarse sand & gravel, very damp, medium dense - Fill						5					
		(Encountered large rock at 6.5')						15					
				3	SS		10"	5	20		17.8		
806.5'													
		Black silt, trace clay, fine sand & roots, damp, loose (topsoil)						2					
805.5'				4				3			51.1		
805.0'		(a) see page 3 of 3	10	5	SS		18"	3	6		30.3		
		Black organic silt, very damp, very loose											
803.5'								1			33.8		
		Brown coarse sand & gravel, trace fine-medium sand, saturated, loose						2					
802.0'				7	SS		6"	3	5		11.8		
		Brown fine sand, trace medium-coarse sand & gravel, saturated, medium dense						4					
				15	8	SS	18"	6	12		18.2		
								4					
								4					
797.0'					9	SS	10"	6	10		18.8		
		Brown fine sand, some medium-coarse sand, trace gravel, saturated, medium dense						5					
								7					
795.0'			20	10	SS		12"	10	17		12.1		

Water Level	depth, ft.	elev. ft.	S - sample	T - type: J(Jar), SS(split-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>9.5</u>	<u>805.5'</u>	E - Standard Penetration Test(SPT), blows/ 6" interval	W - water content, %	
- after drilling:	<u>5.0</u>	<u>810.0'</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.	
			Q - unconfined compressive strength, tons/sq. ft.		

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>202</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> Sheet <u>2</u> of <u>3</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Date <u>3/20/20</u> Location <u>McHenry County, IL</u> Drilled By <u>AC</u> _____ Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____ Logged By _____	

Elev. ft.	Description	Depth, ft.	O	S	T	R	B	N	Pen.	W	Uw	Qu
	Brown fine sand,some medium-coarse sand,trace gravel,saturated,medium dense											
							7 11 15	26		14.4		
							6 11 16	27		11.8		
789.5'		25	12	SS	8"							
	Brown fine-medium sand,some coarse sand & gravel,saturated, medium dense						7 12 12	24		10.3		
							9 15 18	33		17.8		
786.0'		30	14	SS	10"							
	Brown fine sand,saturated,dense											
782.5'												
	Gray fine-medium sand,some coarse sand & gravel,saturated,dense						14 15 15	30		11.4		
		35	15	SS								
							10 16 18	34		8.7		
775.0'		40	16	SS	12"							

Water Level —	depth, ft.	elev. ft.	S - sample	T - type: J(Jar), SS(split-spoon), ST(sheby tube)	R - recovery length, in.
- while drilling:	9.5	805.5 ¹	B - Standard Penetration Test(SPT), blows/ 6" interval	W - water content, %	
- after drilling:	5.0	810.0 ¹	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.	
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	<u>202</u>
	Comments _____	Client <u>BLA, Inc.</u>	Sheet <u>3</u> of <u>3</u>	
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>3/20/20</u>	
		Location <u>McHenry County, IL</u>	Drilled By <u>AC</u>	
		Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By <u>CS</u>	

[illegible]

Water Level —		depth, ft.	elev., 's	S - sample	T - type: (J, dir), SS(split-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	9.5	805.5	1	B - Standard Penetration Test (SPT), blows / f	Interval	W - water content, %
- after drilling:	5.0	810.0	1	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:				Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.	
				qc - unconfined compressive strength, tons/sq. ft.		

F-111b-1


USER NAME = knay	DESIGNED - CP	REVISED -
	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - CP	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS II
STRUCTURE NO. 056-4022

SHEET 32 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	140
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		



SOIL AND MATERIAL CONSULTANTS, INC.

File No. 24929

BORING LOG 203

Client BLA, Inc.

Sheet 1 of 4

Project Millstream Road over Kishwaukee River Bridge Rehab./Replacement

Date 3/20/20

Location McHenry County, IL

Drilled By AC

Equipment ☒CME 45B ☐H.A. ☐Other

Logged By CS

Comments

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
	814.5'	Bituminous concrete - 6.0"											
		Sand & gravel - 7.0"											
		Brown silt,some clay & sand,trace gravel,damp,loose - Fill						3					
	813.0'			1				4			11.6		
		Dark brown fine sand,some medium-coarse sand,trace gravel & silt,damp,loose - Fill		2	SS		18"		8		11.3		
								2					
		Dark brown fine sand,some medium-coarse sand,trace gravel & silt,damp,very loose - Fill						2					
	811.5'			5	3	SS	18"	1	3		15.6		
								3					
	808.5'							3					
		Brown fine-medium sand,some coarse sand & gravel,very damp-saturated,loose to medium dense - Fill			4	SS	4"	3	6		4.5		
								6					
				10	5	SS	3"	4	10		12.7		
	804.0'							1					
	803.0'	(a) see page 3 of 3		6				2			31.8		
		Brown fine-medium sand ,some coarse sand & gravel,saturated, loose to medium dense		7	SS		6"	4	6		10.2		
								6					
				15	8	SS	15"	7	14		10.0		
								7					
								6					
				9	SS		12"	7	13		13.0		
								6					
								7					
				20	10	SS	15"	7	14		8.3		

Water Level — depth,ft. elev., ft.

- while drilling: 7.0 808.0'

- after drilling: 3.0 812.0'

- hrs. after drilling: — —

S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.


B - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %

N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"

Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.

Qu - unconfined compressive strength, tons/sq. ft.

F-111b-1



SOIL AND MATERIAL CONSULTANTS, INC.

File No. 24929

BORING LOG 203

Client BLA, Inc.

Sheet 2 of 4

Project Millstream Road over Kishwaukee River Bridge Rehab./Replacement

Date 3/20/20

Location McHenry County, IL

Drilled By AC

Equipment ☒CME 45B ☐H.A. ☐Other

Logged By CS

Comments

Elev., ft.		Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
		Brown fine-medium sand,some coarse sand & gravel,saturated,medium dense						4					
								5					
				11	SS			8	13		12.8		
	791.5'							7					
		Gray fine-medium sand,some coarse sand & gravel,saturated, medium dense						7					
				25	12	SS	15"	7	14		10.4		
								4					
								5					
				13	SS		12"	6	11		10.9		
								5					
				30	14	SS		7	12		16.1		
								6					
								6					
				35	15	SS		7	13		15.3		
								7					
								9					
	775.0'			40	16	SS	10"	12	21		12.8		

Water Level — depth,ft. elev., ft.

- while drilling: 7.0 808.0'

- after drilling: 3.0 812.0'

- hrs. after drilling: — —

S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.


B - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %

N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"

Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.

Qu - unconfined compressive strength, tons/sq. ft.

F-111b-1



SOIL AND MATERIAL CONSULTANTS, INC.

File No. 24929

BORING LOG 203

Client BLA, Inc.

Sheet 3 of 4

Project Millstream Road over Kishwaukee River Bridge Rehab./Replacement

Date 3/20/20

Location McHenry County, IL

Drilled By AC

Equipment ☒CME 45B ☐H.A. ☐Other

Logged By CS

Comments

Elev., ft.		Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
		Gray fine-medium sand,some coarse sand & gravel,saturated,medium dense											
								10					
								12					
				45	17	SS		13	25		13.7		
								10					
								12					
				50	18	SS	8"	16	28		15.7		
								18					
								21					
				55	19	SS	8"	19	40		14.3		
								21					
								22					
	755.0'			60	20	SS	10"	24	46		15.1		

Water Level — depth,ft. elev., ft.

- while drilling: 7.0 808.0'

- after drilling: 3.0 812.0'

- hrs. after drilling: — —

S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.

B - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %

N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"

Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.

Qu - unconfined compressive strength, tons/sq. ft.

F-111b-1

USER NAME = knay	DESIGNED - CP	REVISED -
CHECKED - PD	REVISED -	
PLOT SCALE =	DRAWN - CP	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS III
STRUCTURE NO. 056-4022

SHEET 33 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MC HENRY	219	141
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>203</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> Sheet <u>4</u> of <u>4</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Date <u>3/20/20</u> Location <u>McHenry County, IL</u> Drilled By <u>AC</u> Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____ Logged By <u>CS</u>	

[illegible]

Water Level —	depth, ft.	elev. ft.	S - sample	T - type: J(Jar), SS(split-spoon), ST(shelby tube)	R - recovery length, in
- while drilling:	<u>7.0</u>	<u>808.0</u>	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>3.0</u>	<u>812.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		


F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>204</u>
Comments _____ _____ _____	Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>3</u>	
	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>3/23/20</u>	
	Location <u>McHenry County, IL</u>	Drilled By <u>AC</u>	
	Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By <u>CS</u>	

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
		Sand, gravel & crushed limestone - 8.0' Fill											
		Brown silt, some clay & sand, trace gravel, damp, loose - Fill						2					
								2					
					1	SS	18"	3	5		14.8		
811.5'													
		Crushed concrete & concrete rubble, damp, medium dense - Fill						11					
								7					
810.0'			5	2	SS	10"		4	11		4.0		
		Brown-dark brown fine sand, some medium-coarse sand, trace silt & gravel, damp-very damp, very loose - Fill											
								2					
								1					
				3	SS			2	3		14.3		
807.0'													
		Black silt, trace fine sand & roots, damp, loose (topsoil)											
								2					
806.0'				4							72.4		
		Dark brown-dark gray fine sand, trace medium-coarse sand & silt, saturated, loose to very loose						2					
			10	5	SS	18"		3	5		28.7		
804.0'													
		Dark brown-dark gray fine sand, trace medium-coarse sand & silt, saturated, very loose						1					
								1					
				6	SS	18"		2	3		26.3		
801.5'													
								6					
		Brown fine sand & gravel, some medium-coarse sand, saturated, medium dense						8					
			15	7	SS	15"		7	15		9.4		
799.5'													
		Brown fine-medium sand, some coarse sand & gravel, saturated, medium dense						5					
								6					
				8	SS	15"		7	13		14.9		
								5					
								6					
795.0'			20	9	SS	15"		7	13		13.9		

Water Level —	depth, ft.	elev. ft.	S - sample	T - type: J(Jar), SS(split-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>9.0</u>	<u>806.0'</u>	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>4.5</u>	<u>810.5'</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>204</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> Sheet <u>2</u> of <u>3</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Date <u>3/23/20</u> Location <u>McHenry County, IL</u> Drilled By <u>AC</u> Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____ Logged By <u>CS</u>	

Elev., ft.	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
	Brown fine-medium sand, some coarse sand & gravel, saturated, medium dense											
							4					
							5					
				10	SS	15"	8	13		14.1		
							5					
							8					
790.0'		25	11	SS	12"	11	19			12.7		
	Gray fine-medium sand, some coarse sand & gravel, saturated, medium dense											
							5					
							5					
			12	SS	12"	6	11		12.6			
786.5'												
	Gray fine sand, trace medium-coarse sand & gravel, saturated, medium dense						6					
							8					
		30	13	SS	10"	11	19		11.0			
782.5'												
	Gray fine-medium sand, some coarse sand & gravel, saturated, medium dense											
							9					
							10					
		35	14				11	21		12.6		
							10					
							11					
775.0'		40	15	SS	6"	11	22			16.0		

Water Level —	depth, ft.	elev., ft.	S - sample	T - type: J(Jar), SS(split-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>9.0</u>	<u>806.0'</u>	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>4.5</u>	<u>810.5'</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen - pocket penetrometer reading, lons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

USER NAME = knay	DESIGNED - CP	REVISED -
	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - CP	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -


**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS IV
STRUCTURE NO. 056-4022

SHEET 34 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	142
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		



	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>204</u>
		Client <u>BLA, Inc.</u>	Sheet <u>3</u> of <u>3</u>
Comments _____ _____ _____	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>3/23/20</u>	
	Location <u>McHenry County, IL</u>	Drilled By <u>AC</u>	
	Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By <u>CS</u>	

[illegible]

Water Level — depth, ft. elev. ft.
 - while drilling: 9.0 806.0
 - after drilling: 4.5 810.5
 - hrs. after drilling:

S - sample T - type (J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in
 B - Standard Penetration Test(SPT), blows/6" interval W - water content, %
 N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"
 Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.
 Qu - unconfined compressive strength, tons/sq. ft.

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>205</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> Sheet <u>1</u> of <u>1</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Date <u>2/24/20</u> Location <u>McHenry County, IL</u> Drilled By <u>AC</u> Equipment <input checked="" type="checkbox"/> CMCE 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____ Logged By <u>CS</u>	

[illegible]

Water Level — depth, ft. elev. ft.

- while drilling: dry _____

- after drilling: dry _____

- hrs. after drilling: _____

S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.

B - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %

N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"

Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.

Qu - unconfined compressive strength, tons/sq. ft.

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>206</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> Sheet <u>1</u> of <u>1</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Date <u>2/24/20</u> Location <u>McHenry County, IL</u> Drilled By <u>AC</u> Equipment <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____ Logged By <u>CS</u>	

[illegible]

Water Level —	depth, ft.	elev. ft.	S - sample	T - type: (J Jar), SS(split-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>dry</u>	_____	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>dry</u>	_____	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:		_____	Pen - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

USER NAME = knay	DESIGNED - CP	REVISED -
	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - CP	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

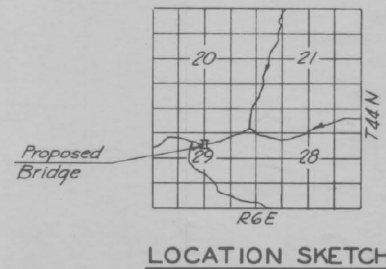
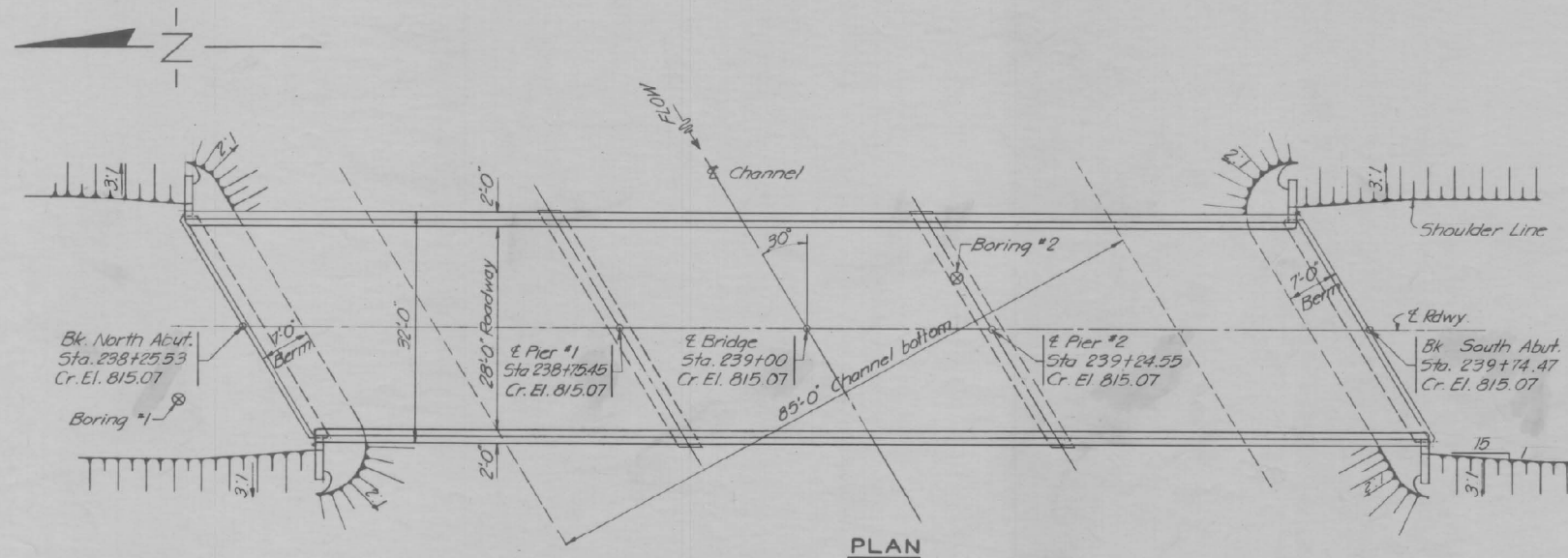
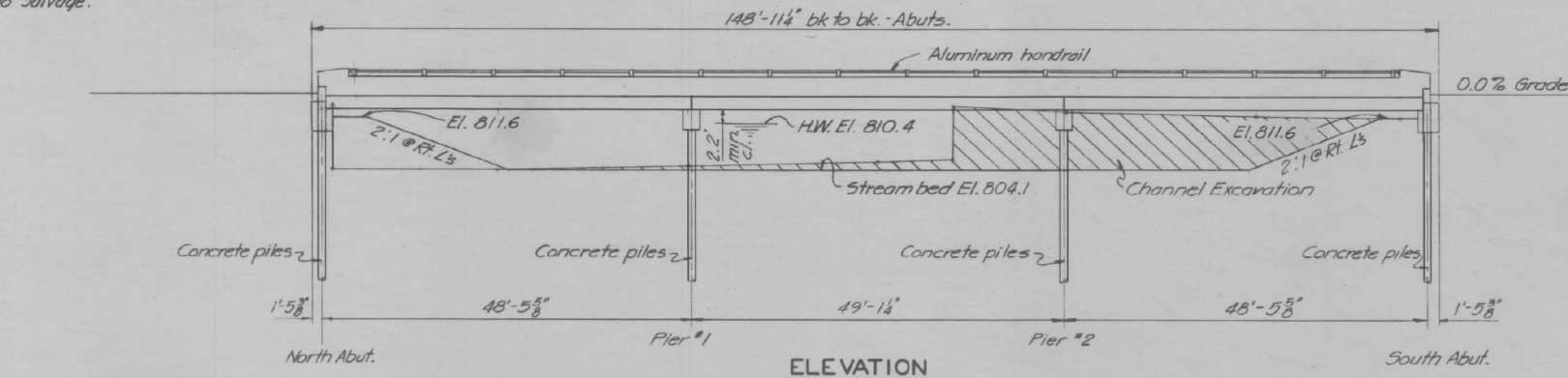
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS V
STRUCTURE NO. 056-4022

SHEET 35 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	143
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		

B.M. #1 R.R. Spike in power pole Lt.
Sta. 239+67 El. 810.64
Existing Structure: 1/2 thru pony truss,
1 span @ 84', 18' Roadway + concrete floor.
Substructure: Closed concrete Abutments.
Contractor shall remove existing structure
before constructing new bridge.
No Salvage.



TOTAL BILL OF MATERIAL

ITEM		SUPER	SUB	TOTAL
Precast Prestressed Concrete Bridge Deck	Sq. Ft.	4,410	-	4,410
Class X Concrete	Cu. Yds.	39.9	44.8	84.7
Reinforcement Bars	Lbs.	3,100	4,080	7,230
Aluminum Handrail	Lin. Ft.	278	-	278
Name Plates	Each	1	-	1
Concrete Piles	Lin. Ft.	-	1,245	1,245
Test Piles (Concrete)	Each	-	2	2
Removal of Existing Structures	Each	-	-	1

WATERWAY DATA

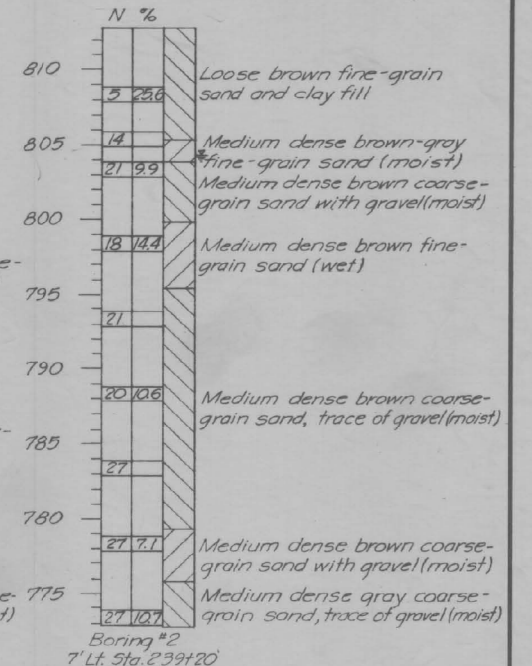
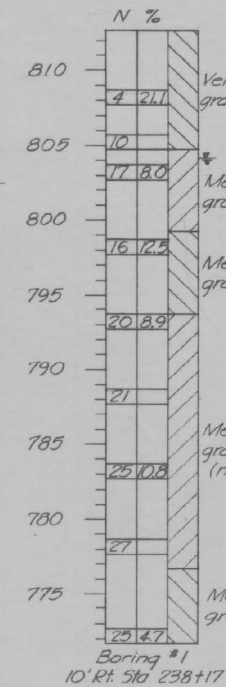
Drainage Area	53,300 Acres
Reg'd Opening (15 yr.)	600 Sq. Ft.
Present Opening	510 Sq. Ft.
Proposed Opening	598 Sq. Ft.

DESIGN STRESSES

f_c	= 2,000 psi (Super)
f_c	= 1,400 psi (Sub)
f_s	= 20,000 psi (Reinf.)
f_s	= 175,000 psi (Prestressing steel)
n	= 10

Loading H15-S12-44

Marcus J. Rice
Illinois Structural No. 2134



N = Blows per ft. of penetration to drive 1 3/8" I.D. split spoon sampler with 140# hammer falling 30 inches.
% = Moisture Content in percentage of dry weight.
= Water elevation at completion.

BORING DATA

GENERAL NOTES

Class X Concrete shall be used in the Pier Caps, Abutments, Curbs and Parapet.
Embankments shall be constructed to the elevations shown, in accordance with Sec. 16 of the Standard Specifications, before the abutment piles are driven.
The Contractor shall drive two (2) test piles in a permanent location, as directed by the Engineer, before ordering the remainder of the piles.
The aggregate for the Class X Concrete used in the parapets shall be free from chert, flint, limonite, lignite and soft sandstone.

GENERAL PLAN & ELEVATION
PROJECT S-1235 (102)
F.A.S. RT. 1235 SECTION 61B-1
MCHENRY COUNTY
STATION 239+00

COLLINS AND RICE
CONSULTING ENGINEERS

DESIGNED RRM
CHECKED REG
DATE 12-26-63 NO. 228

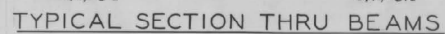
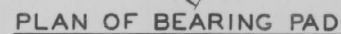
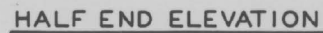
USER NAME = knay	DESIGNED - KN	REVISED -
CHECKED - PD	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

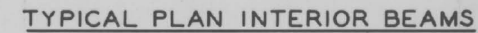
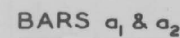
EXISTING PLANS I
STRUCTURE NO. 056-4022

SHEET 36 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	144
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



SECTION AT PIERS

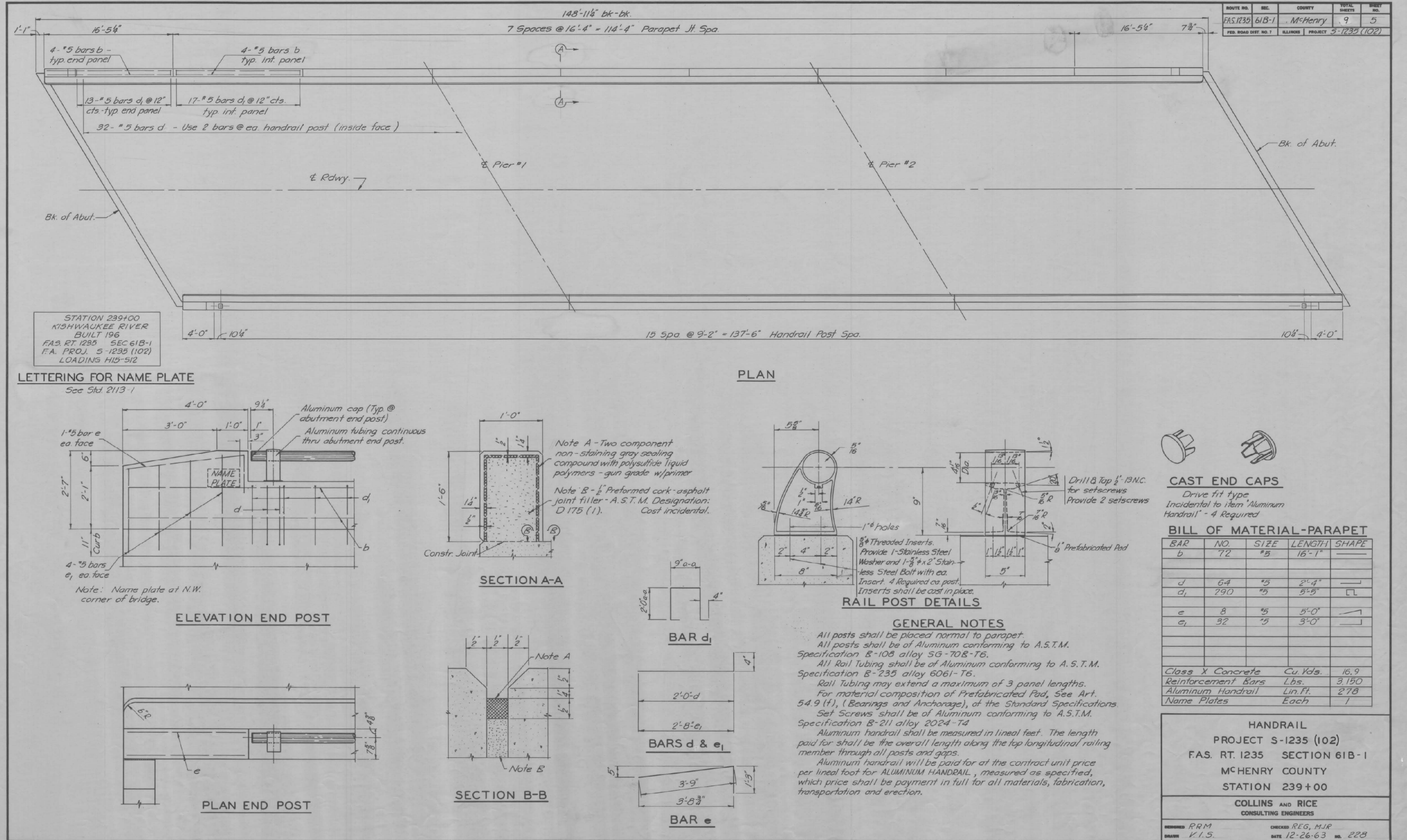


Note: After ties are in place, grout all recesses for nuts in exterior beams.



ITEM		QUANTITY
Precast Prestressed Concrete		
Bridge Deck	Sq. Ft.	4410
Class X Concrete (Curbs)	Cu. Yds.	23.0

DATE 12-26-63



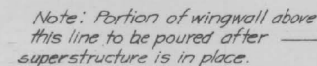
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CHECKED - PD	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS III
STRUCTURE NO. 056-4022

SHEET 38 OF 40 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MC HENRY	219	146
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

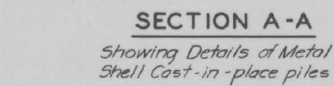


Technical drawing of a bridge deck plan view. The drawing shows a rectangular bridge deck with various dimensions and structural details. Key features include:

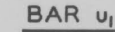
- Deck Dimensions:**
 - Overall width: $35'-10"$
 - Overall length: $17'-11"$ (left section) and $17'-0\frac{1}{2}"$ (right section)
- Structural Details:**
 - Abutment (Left):** Labeled "Bk. of Abut". It features a "30° Rdwy." (roadway) and a "3° Chamfer (Typ)". The deck width at the abutment is $17'-11"$.
 - Bridge Piers:** Labeled "4 Brg. & Files". They are spaced at $9 \text{ Spaces } @ 3'-5\frac{3}{8}" = 31'-2\frac{1}{8}"$. The spacing of $\frac{1}{2}"$ fabric bridge pads is also indicated.
 - Abutment (Right):** Features a "3° Chamfer (Typ)". The deck width at the abutment is $17'-0\frac{1}{2}"$.
- Materials and Construction:**
 - "1" Prem. Jt. Filler (Typ)" is used for the joint filler.
 - "Slope top of Abut, as shown in Elevation, from this line." is noted for the abutment slope.
- Other Dimensions:**
 - Deck width at the left abutment: $17'-11"$
 - Deck width at the right abutment: $17'-0\frac{1}{2}"$
 - Deck width at the bridge piers: $31'-2\frac{1}{8}"$
 - Deck width at the right abutment: $3'-0\frac{1}{8}"$

Note to Contractor:
For Pile lengths up to 45' use two slings placed at a distance of 0.21*L from each end. On Piles longer than 45' use three slings placed 0.12*L from each end and at the mid-point of the Pile.

*L = Overall Pile Length



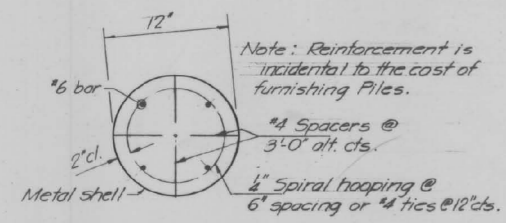
Showing Details of Metal
Shell Cast-in-place piles



PILE DATA

Type	Concrete Piles
No. Req'd. (2 Abuts.)	12*
Min. Capacity	27 Tons
Est. Length	45 Feet

* Includes 1 Test Pile to be driven in North Abutment












2'6" 0-0

2'6" 0-0

BAR s

Diagram of a rectangular plate with dimensions and a diagonal line. The plate is labeled **BAR u**. The dimensions are: width 4'-0", height 2'-10.0", and a diagonal line of 2'-5". The distance from the left edge to the diagonal line is 1'-3", and the distance from the diagonal line to the right edge is 5'-3".

BILL OF MATERIAL-2ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	32	$\frac{3}{4}$	$7'0''$	
h_1	8	$\frac{3}{4}$	$5'9''$	
h_2	16	$\frac{3}{4}$	$5'0''$	
p	14	$\frac{3}{4}$	$35'0''$	
s	72	$\frac{3}{4}$	$10'1''$	
u	16	$\frac{3}{4}$	$11'8''$	
u_1	72	$\frac{3}{4}$	$4'1''$	
v	24	$\frac{3}{4}$	$5'0''$	
v_1	24	$\frac{3}{4}$	$4'0''$	

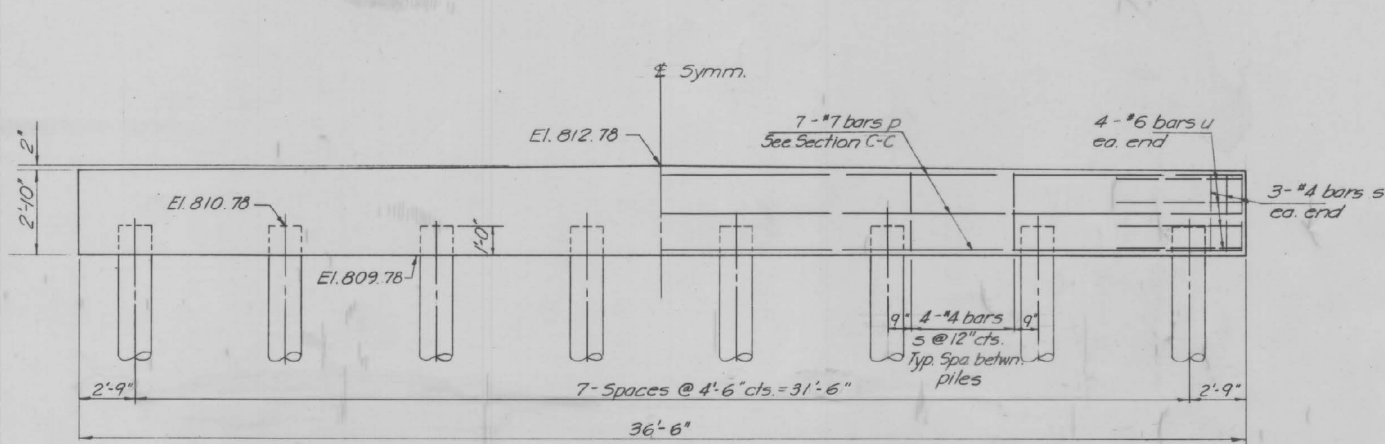
Class X Concrete	Cu Vds.	25.5
Reinforcement bars	Lbs.	2,340
Concrete Piles	Lin. Ft.	495
Test Piles (Concrete)	Each	1

ABUTMENTS
PROJECT S-1235 (102)
S. RT. 1235 SECTION 61B-1
MCHENRY COUNTY
STATION 239+00

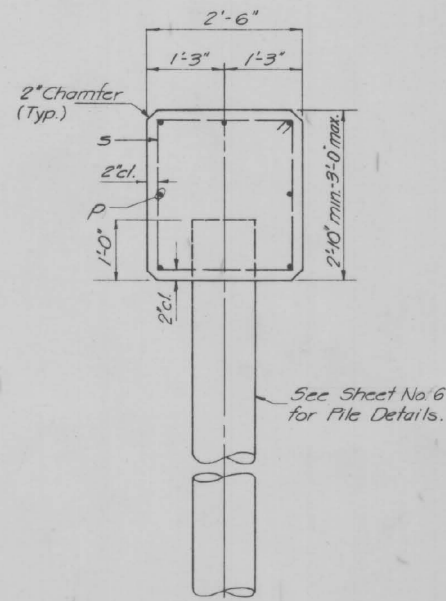
COLLINS AND RICE
CONSULTING ENGINEERS

ISSUED *RRM* CHECKED *REG*
GRADE *V.I.S.* DATE *12-26-63* NO. *228*

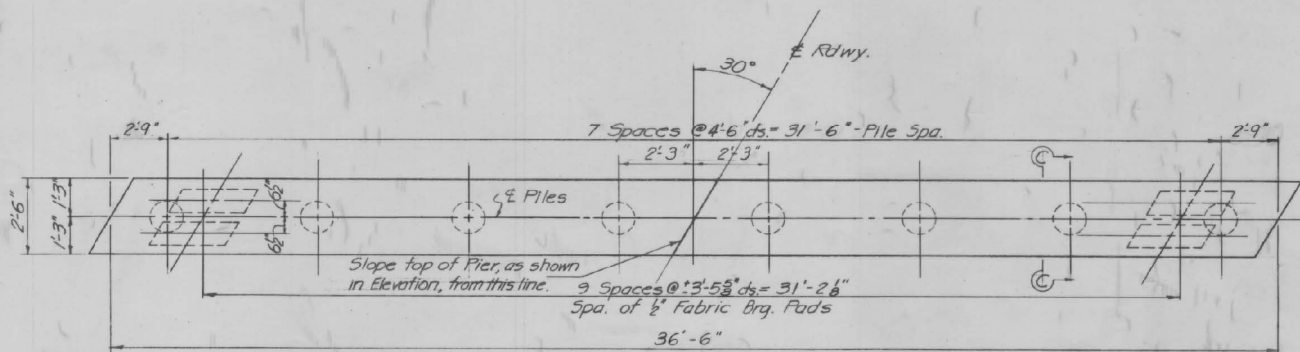
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1235	61B-1	McHenry	9	7
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT	51235	(102)



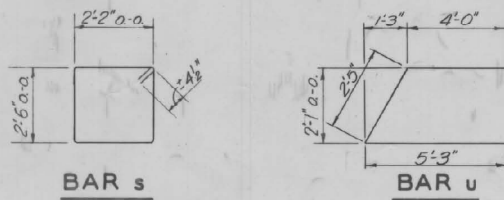
ELEVATION



SECTION C-C



PLAN



BAR s

BAR u

BILL OF MATERIAL - 2 PIERS

BAR	NO	SIZE	LENGTH	SHAPE
p	14	#7	35'-0"	—
s	68	#4	10'-1"	□
u	16	#6	11'-8"	—
Class X Concrete			Cu. Yds.	19.3
Reinforcement Bars			Lbs.	1,740
Concrete Piles			Lin. Ft.	750
Test Piles (Concrete)			Each	1

PILE DATA

Type	Concrete Piles
No. Required (2 Piers)	16*
Min. Cap	32 Tons
Est. Length	50 Feet

* No. includes one test pile to be driven in Pier # 2

PIERS	
PROJECT S-1235 (102)	
F.A.S. RT. 1235 SECTION 61B-1	
MCHENRY COUNTY	
STATION 239+00	
COLLINS AND RICE	
CONSULTING ENGINEERS	
DESIGNED RPM	CHECKED REG, MJR
DRAWN V.I.S.	DATE 12-26-63

USER NAME = knay	DESIGNED - KN	REVISED -
CHECKED - PD	REVISED -	
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

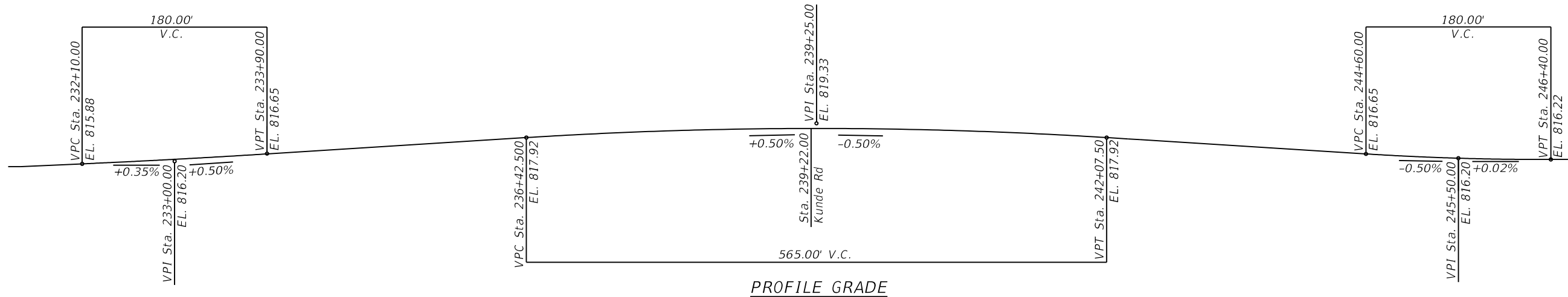
EXISTING PLANS V
STRUCTURE NO. 056-4022

SHEET 40 OF 40 SHEETS

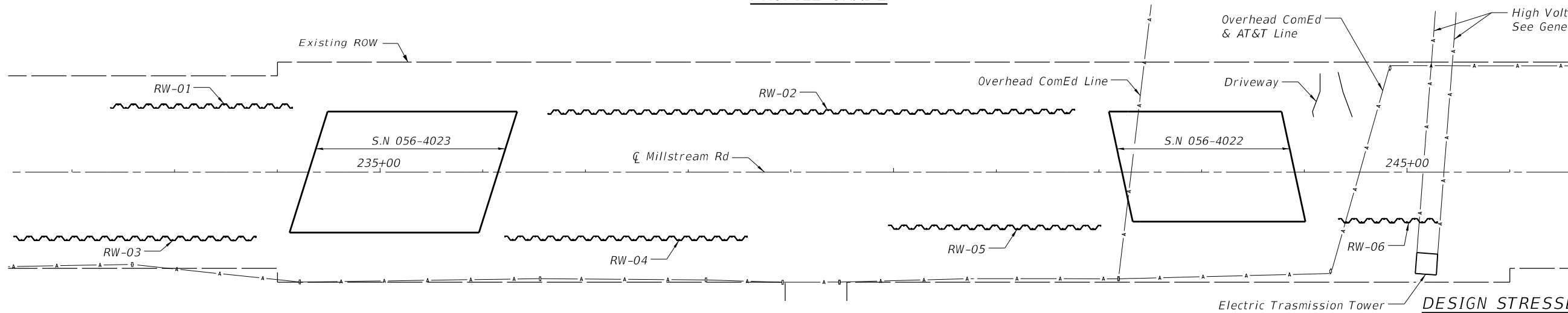
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	148
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

Benchmark: BM1 – Railroad Spike (Set) in First Power Pole North of the Bridge over the South Branch of the Kishwaukee River on the East Side of Millstream Road. NAVD '88 Elevation 812.52

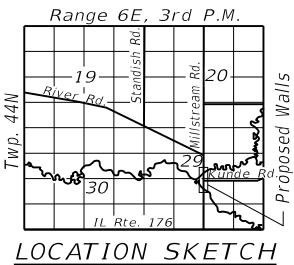
Benchmark: BM2 – Railroad Spike (Set) in First Power Pole South of the Bridge over the Kishwaukee River on the East Side of Millstream Road. NAVD '88 Elevation 811.30



PROFILE GRADE



KEY PLAN



LOCATION SKETCH

INDEX OF SHEETS

- General Data
- Plan and Elevation – RW-01 and RW-03
- Plan and Elevation – RW-02, RW-04 and RW-05
- Plan and Elevation – RW-06
- Sheet Pile Sections
- Moment Slab Plan & Elevation – RW-02 (1 of 6)
- Moment Slab Plan & Elevation – RW-02 (2 of 6)
- Moment Slab Plan & Elevation – RW-02 (3 of 6)
- Moment Slab Plan & Elevation – RW-02 (4 of 6)
- Moment Slab Plan & Elevation – RW-02 (5 of 6)
- Moment Slab Plan & Elevation – RW-02 (6 of 6)
- Moment Slab Plan & Elevation – RW-06
- Drain Details
- Moment Slab Sections and Details
- Boring Logs I
- Boring Logs II
- Boring Logs III
- Boring Logs IV
- Boring Logs V
- Boring Logs VI
- Boring Logs VII
- Boring Logs VIII
- Boring Logs IX
- Boring Logs X

GENERAL NOTES

- All hardware required for sheet pile cap shall be Hot-Dip Galvanized according to Article 1006.08(b) of the Standard Specifications.
- The cost of furnishing and installing the fabricated sheet pile cap, including all the hardware, shall be included in the cost of Permanent Sheet Piling.
- The cost of furnishing and installing the geocomposite wall drain and cutting weep holes in sheet piling is included in the cost of Permanent Sheet Piling.
- Protective coat shall be applied to the top and front face of the curbs for walls RW-02 and RW-06.
- Reinforcement bars designated (E) shall be epoxy coated.
- Work for constructing wall will be performed under low overhead clearance. Contractor shall consider the overhead power lines in addressing all aspects of the project. Estimated elevation of lowest high voltage line is 862.90. The Contractor, ComEd, and AT&T are required to verify clearances during construction. All costs associated with work under low overhead clearance are included with associated pay items.

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 50,000 psi (Structural Steel) (ASTM A572, GR 50)
fy = 50,000 psi (Reinforcement Bars)

*TOTAL BILL OF MATERIAL

	UNIT	SUPER	SUB	TOTAL
Concrete Structures	Cu Yd	266.3	-	266.3
Protective Coat	Sq Yd	206	-	206
Reinforcement Bars, Epoxy Coated	Pound	40,770	-	40,770
Permanent Sheet Piling	Sq Ft	-	33,940	33,940
Granular Backfill For Structures	Cu Yd	-	277	277
Steel Railing (Special)	Foot	614	-	614

* Includes All Retaining Wall and Moment Slab Quantities.

I certify that to the best of my knowledge, information and belief, this design is structurally adequate for the design loading shown on the plans. The design is an economical one of the style of structure and complies with the requirements of the current AASHTO LRFD Bridge Design Specifications.

GENERAL DATA

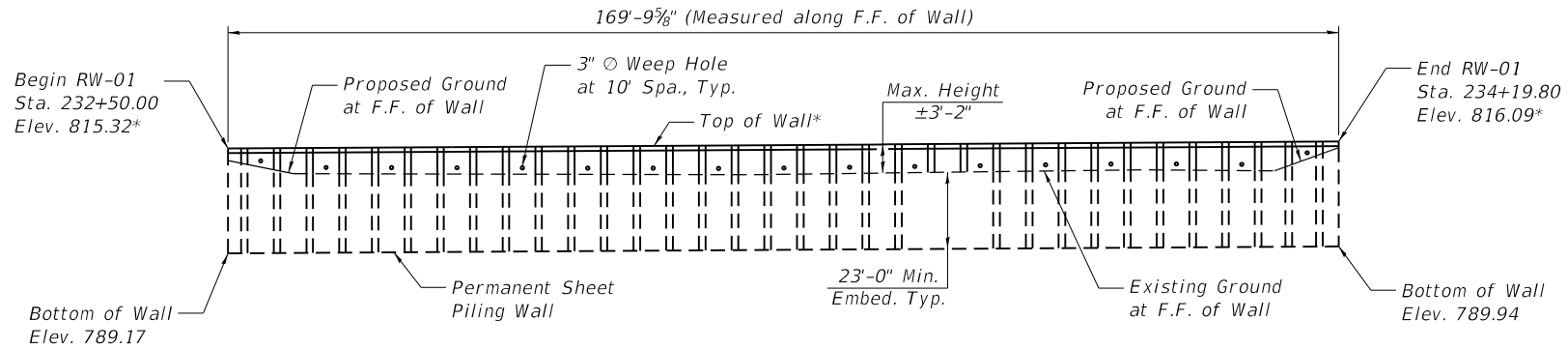
MILLSTREAM ROAD

C.H. RTE T64 – SECTION 18-00482-00-BR

MCHENRY COUNTY

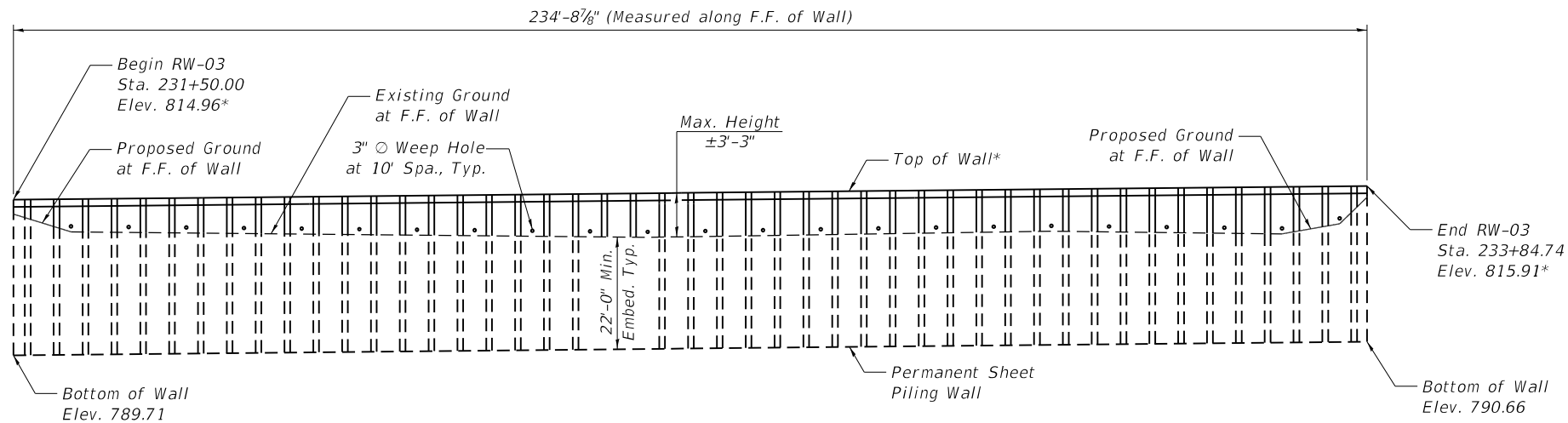
RETAINING WALL RW-01 THROUGH RW-06

	USER NAME = knay	DESIGNED - KN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET 1 OF 24 SHEETS	C.H. RTE. T64	SECTION 18-00482-00-BR	COUNTY MCHENRY	TOTAL SHEETS 219	SHEET NO. 149
		CHECKED - PRD	REVISED -							
	PLOT SCALE =	DRAWN - ES	REVISED -							
	PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -							
								CONTRACT NO. 61J79		
							ILLINOIS	FED. AID PROJECT		



RW-01 ELEVATION
(Looking West at B.F. of Wall)

* Elevation given is the elevation at the top of the sheet pile cap.



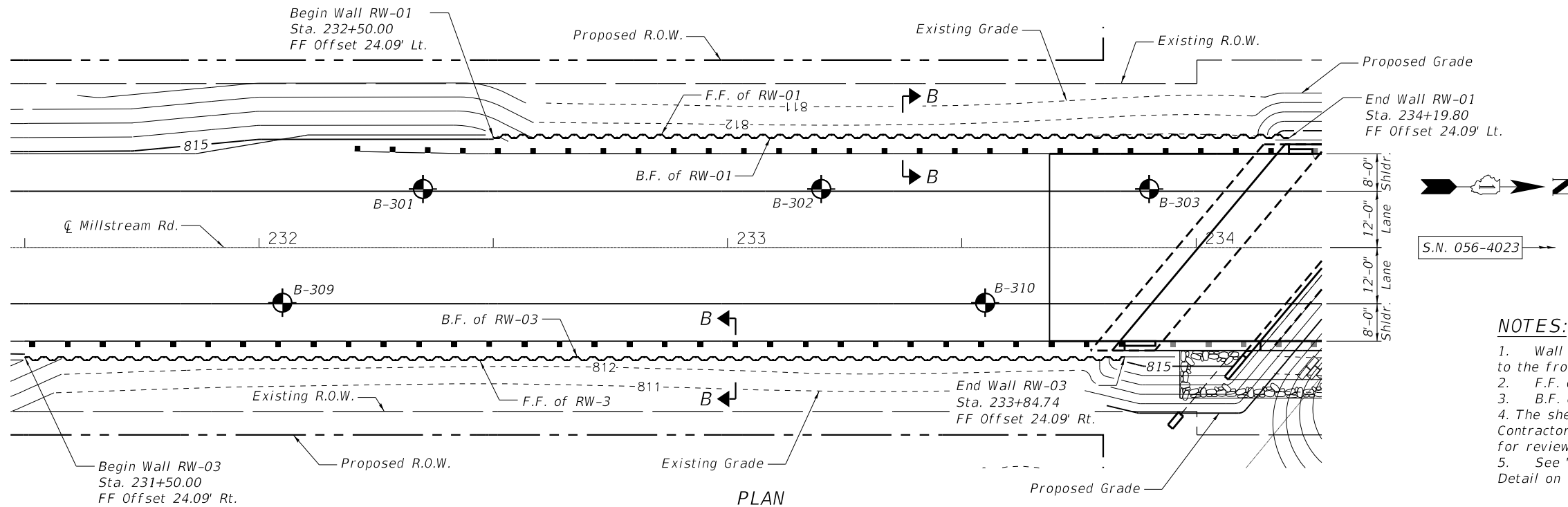
RW-03 ELEVATION
(Looking West at F.F. of Wall)

RW-01 BILL OF MATERIAL

	UNIT	TOTAL
Permanent Sheet Piling	Sq Ft	4441
Granular Backfill For Structures	Cu Yd	12

RW-03 BILL OF MATERIAL

	UNIT	TOTAL
Permanent Sheet Piling	Sq Ft	5928
Granular Backfill For Structures	Cu Yd	16



PLAN

NOTES:

1. Wall offsets are measured from the C of Millstream Road to the front face of the permanent sheet piling wall.
2. F.F. denotes Front Face.
3. B.F. denotes Back Face
4. The sheet piling required for RW-01 and RW-03 is PZ40. Contractor may submit equivalent sections to Engineer of Record for review and approval.
5. See "Section B-B Thru Permanent Sheet Piling Wall at Guardrail" Detail on Sheet 5 of 24.

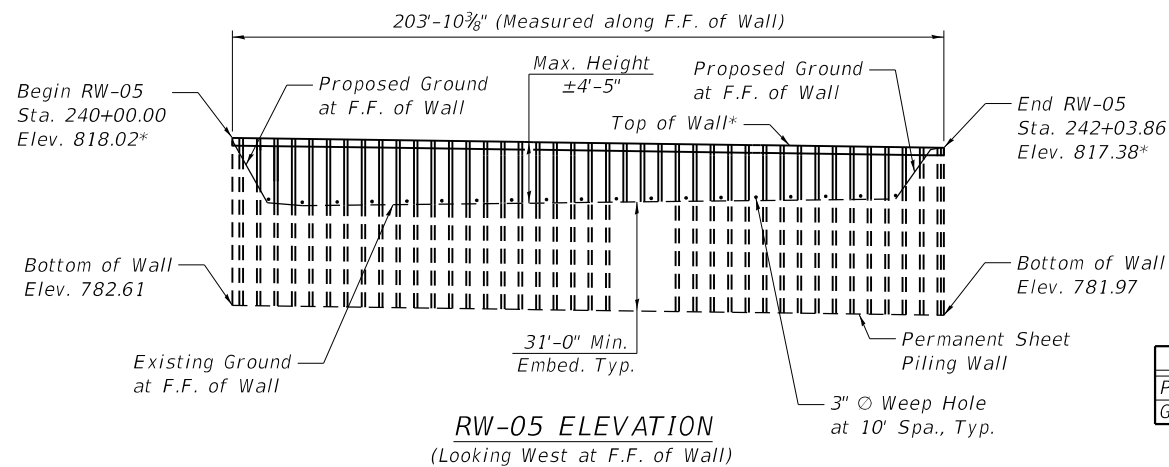
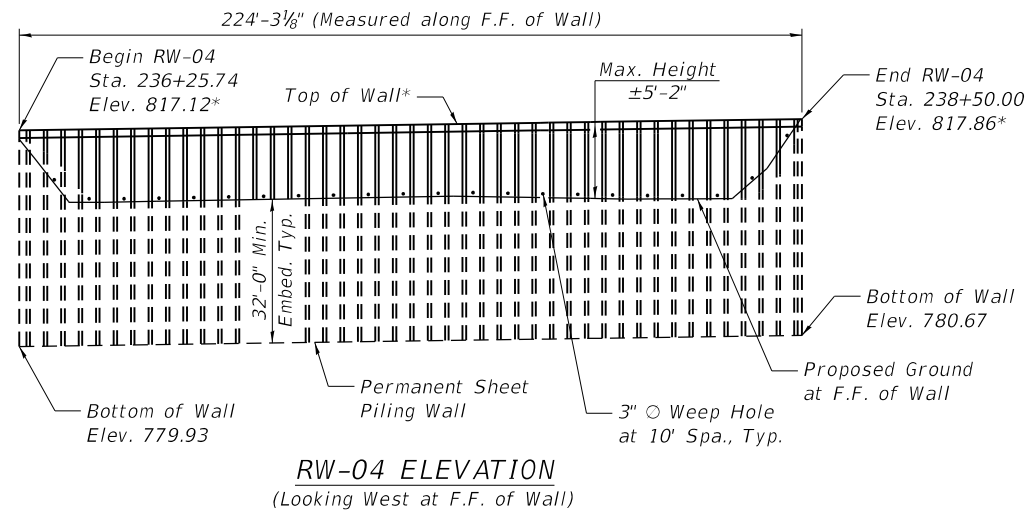
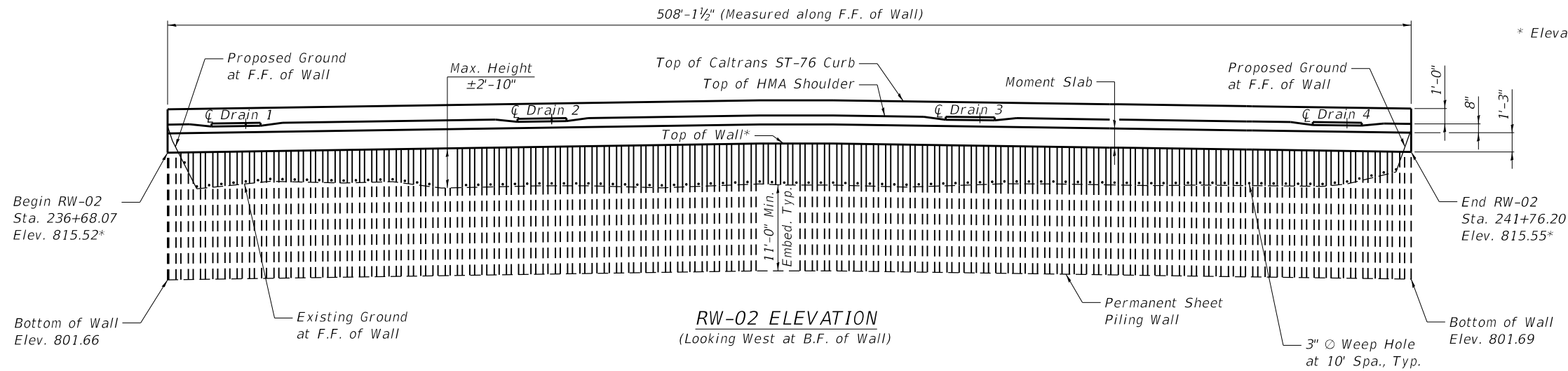
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CHECKED - PRD	DESIGNED - KN	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION - RW-01 and RW-03
MILLSTREAM ROAD RETAINING WALLS

SHEET 2 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	150
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



RW-02 BILL OF MATERIAL

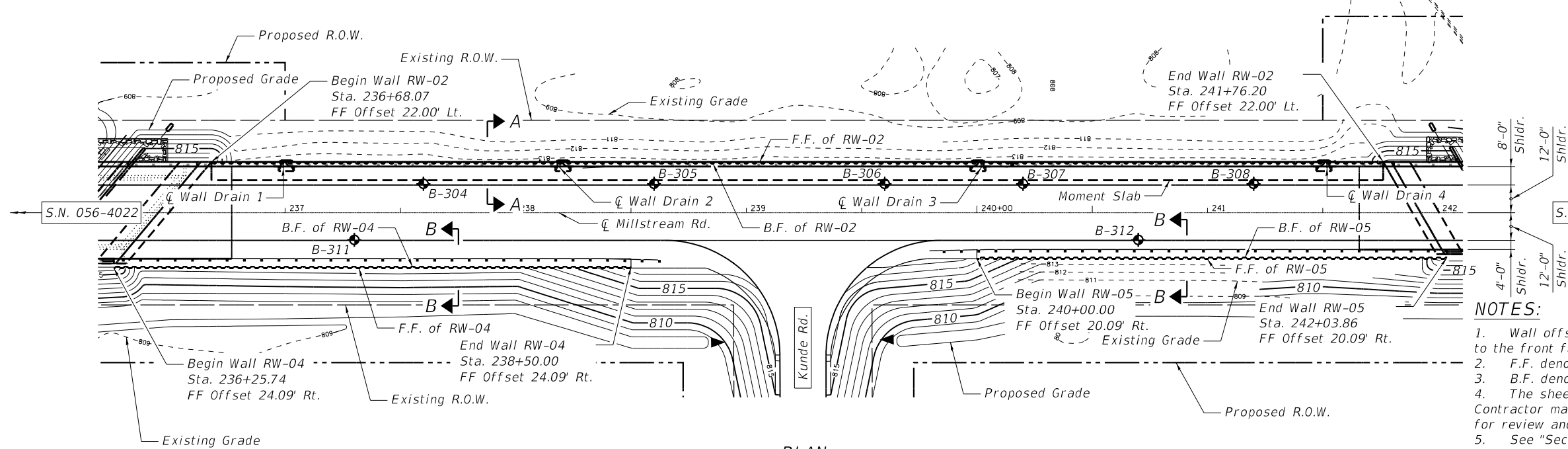
	UNIT	TOTAL
Permanent Sheet Piling	Sq Ft	7043
Granular Backfill For Structures	Cu Yd	179

RW-04 BILL OF MATERIAL

	UNIT	TOTAL
Permanent Sheet Piling	Sq Ft	8341
Granular Backfill For Structures	Cu Yd	40

RW-05 BILL OF MATERIAL

	UNIT	TOTAL
Permanent Sheet Piling	Sq Ft	7219
Granular Backfill For Structures	Cu Yd	25



NOTES:

- Wall offsets are measured from the C of Millstream Road to the front face of the permanent sheet piling wall.
- F.F. denotes Front Face.
- B.F. denotes Back Face
- The sheet piling required for RW-02, RW-04, and RW-05 is PZ40. Contractor may submit equivalent sections to Engineer of Record for review and approval.
- See "Section A-A Thru Permanent Sheet Piling Wall and Anchorage Slab" and "Section B-B Thru Permanent Sheet Piling Wall at Guardrail" details on Sheet 5 of 24.
- See Sheet 13 of 24 for wall drain details.

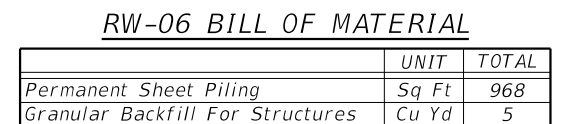
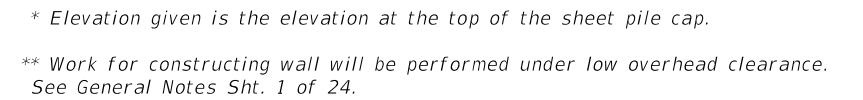
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CHECKED - PRD	REVIS	REVIS
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION - RW-02, RW-04, AND RW-05
MILLSTREAM ROAD RETAINING WALLS

SHEET 3 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	151
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



- NOTES:**
1. Wall offsets are measured from the C of Millstream Road to the front face of the permanent sheet piling wall.
 2. F.F. denotes Front Face.
 3. B.F. denotes Back Face
 4. The sheet piling required for RW-06 is PZ40. Contractor may submit equivalent sections to Engineer of Record for review and approval.
 5. See "Section A-A Thru Permanent Sheet Piling Wall and Anchorage Slab" Detail on Sheet 5 of 24.

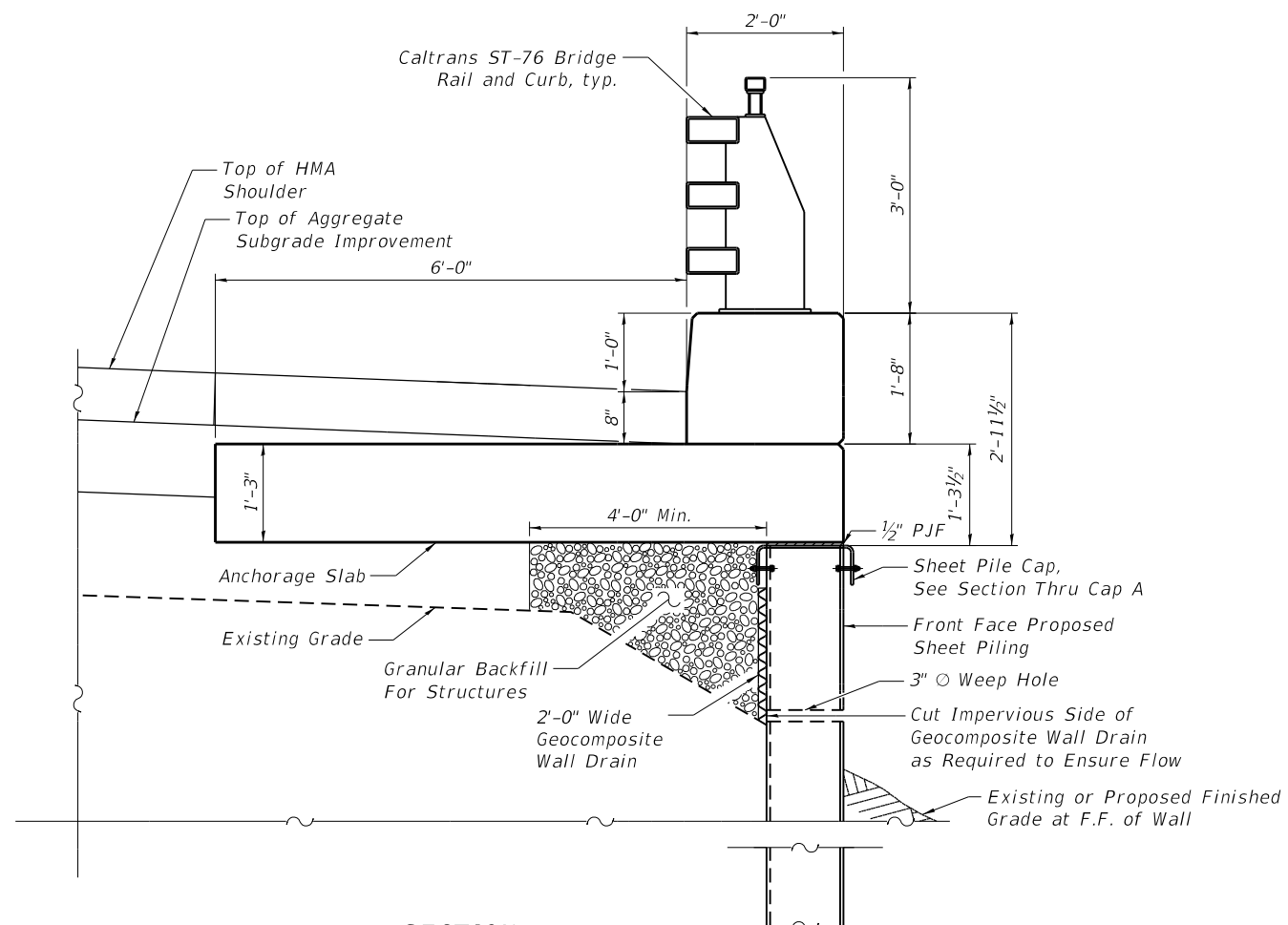
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PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN & ELEVATIONS - RW-06
MILLSTREAM ROAD RETAINING WALLS

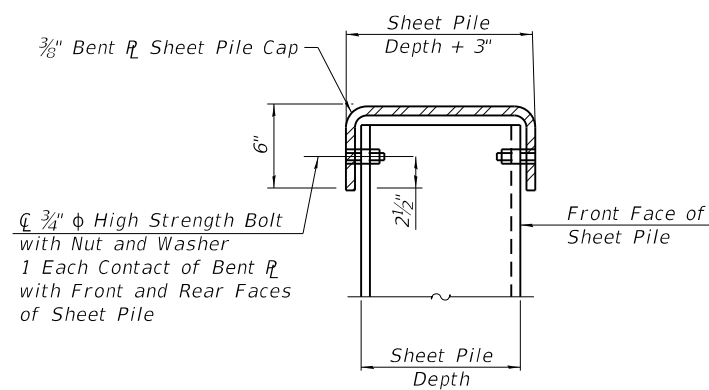
SHEET 4 OF 24 SHEETS

C.H. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61J79				
	ILLINOIS	FED. AID PROJECT		

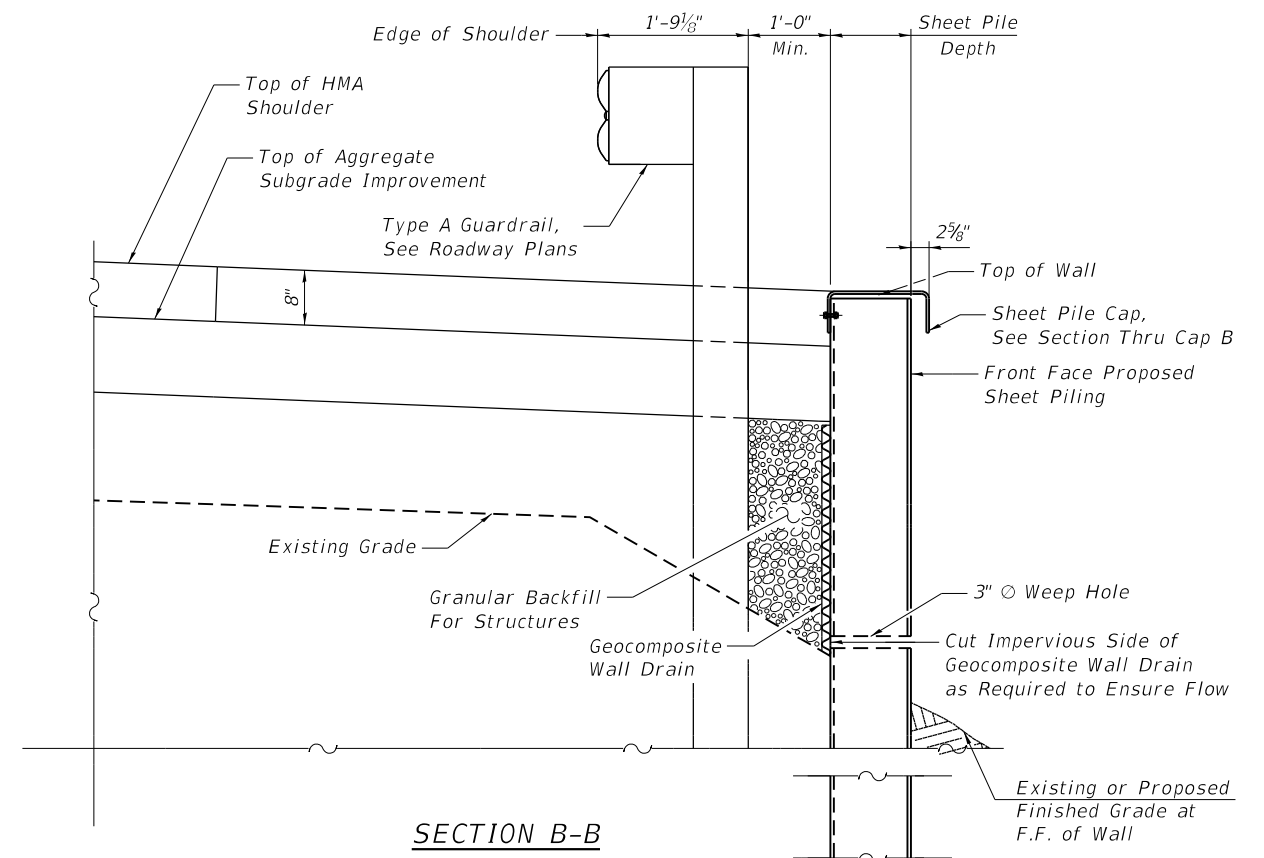


SECTION A-A
THRU PERMANENT SHEET
PILING WALL AND ANCHORAGE SLAB

(At RW-02 and RW-06)

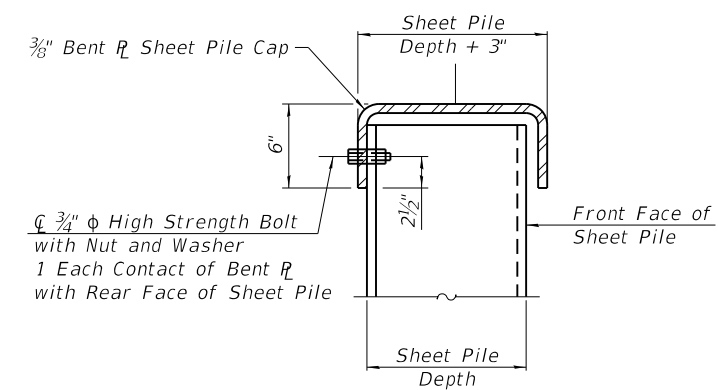


Section Thru Cap A



SECTION B-B
THRU PERMANENT SHEET
PILING WALL AT GUARDRAIL

(At RW-01, RW-03, RW-4, and RW-05)



Section Thru Cap B

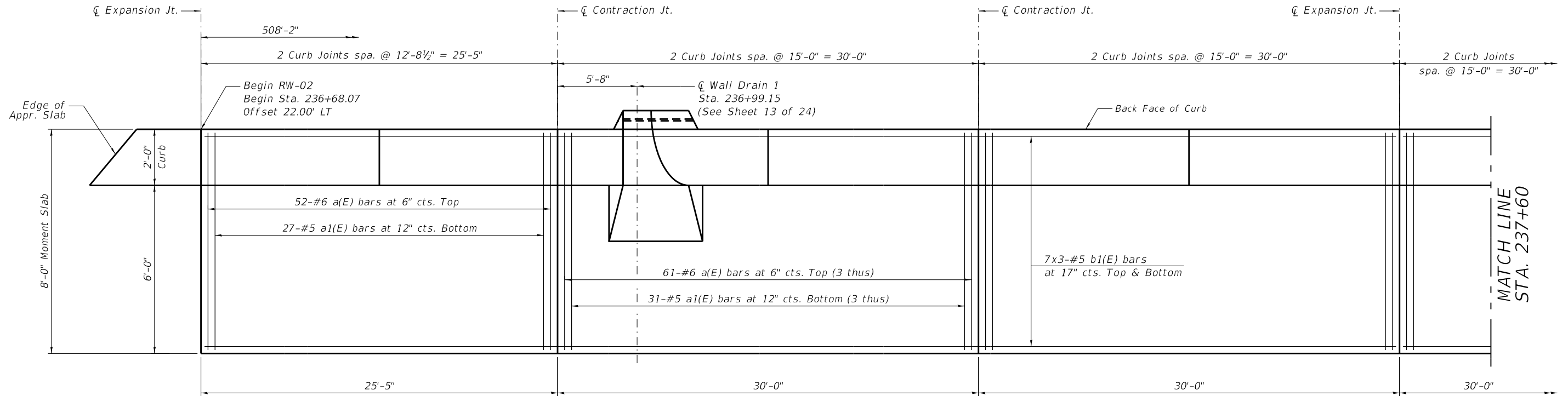
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PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

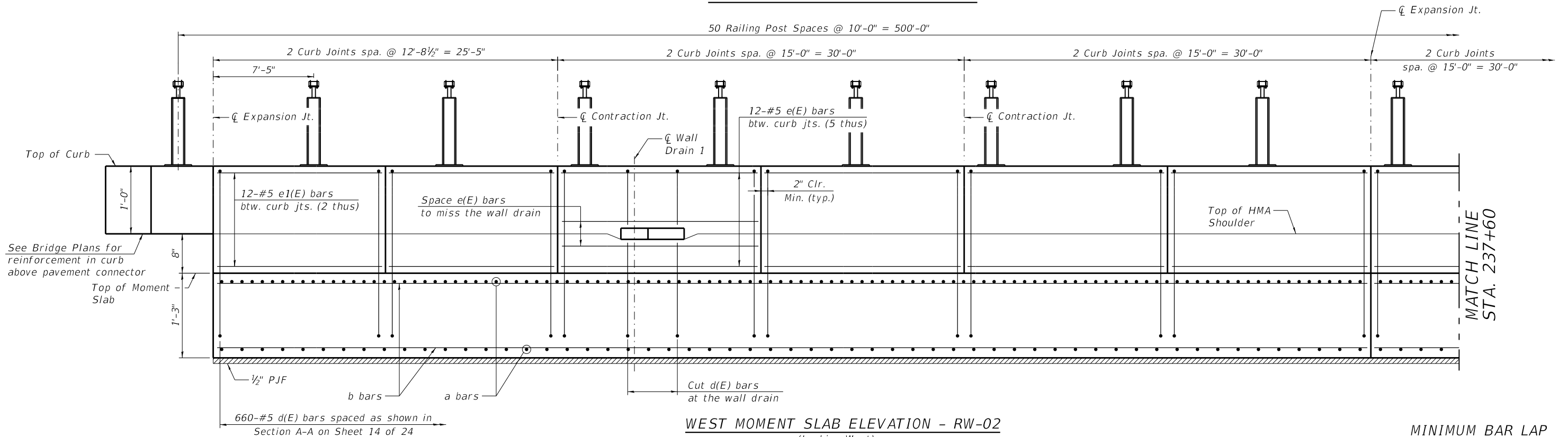
**SHEET PILE SECTIONS
MILLSTREAM ROAD RETAINING WALLS**

SHEET 5 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	153
CONTRACT NO. 61J79				
	ILLINOIS	FED. AID PROJECT		



WEST MOMENT SLAB PLAN - RW-02



WEST MOMENT SLAB ELEVATION - RW-02
(Looking West)

MINIMUM BAR LAP
#5 bar = 3'-2"

NOTES:

Wall drains are not drawn to scale. See Sheet 13 of 24 for wall drain details.

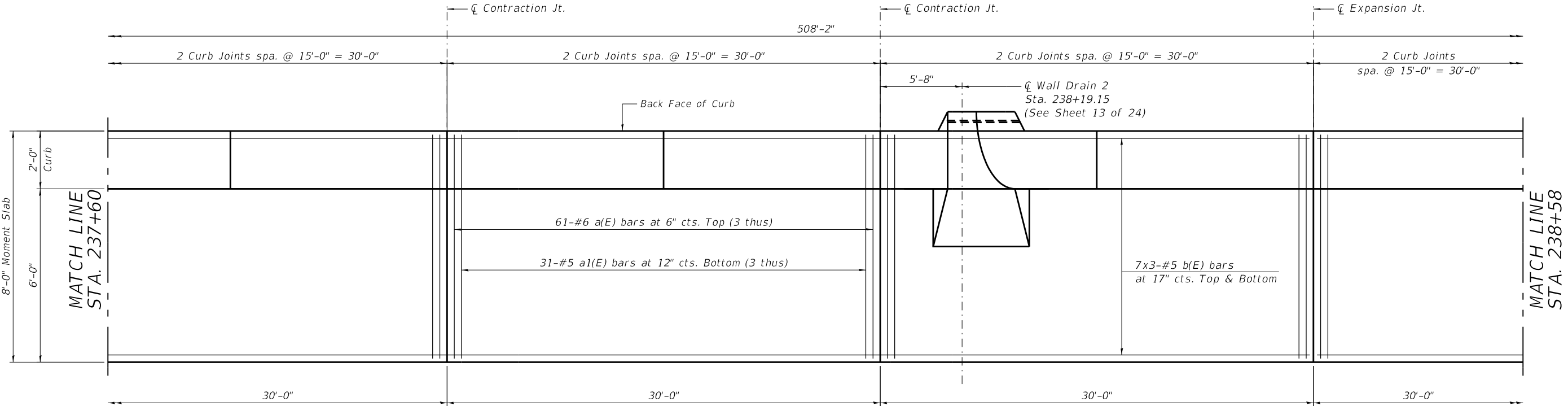
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

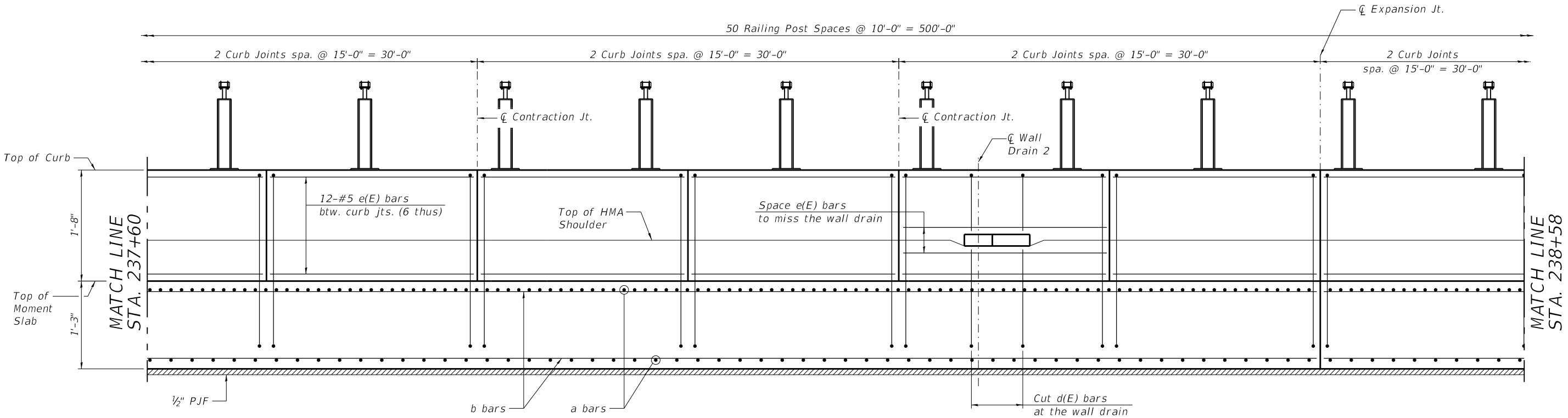
MOMENT SLAB PLAN AND ELEVATION - RW-02 (1 of 6)
MILLSTREAM ROAD MOMENT SLABS

SHEET 6 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	154
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



WEST MOMENT SLAB PLAN - RW-02



WEST MOMENT SLAB ELEVATION - RW-02
(Looking West)

MINIMUM BAR LAP
#5 bar = 3'-2"

NOTES:
Wall drains are not drawn to scale. See Sheet 13 of 24 for wall drain details.

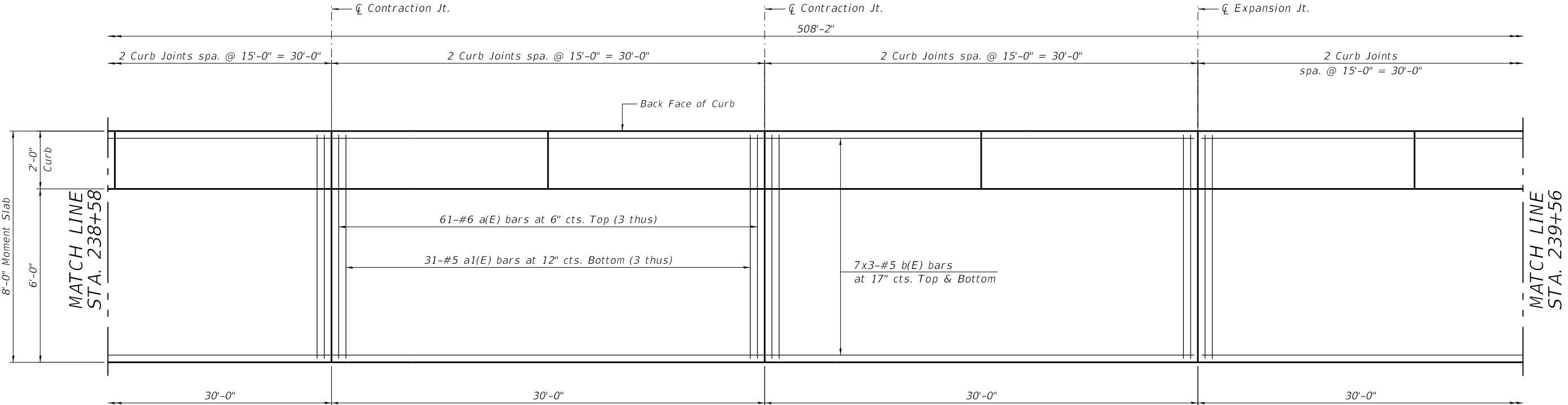
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PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

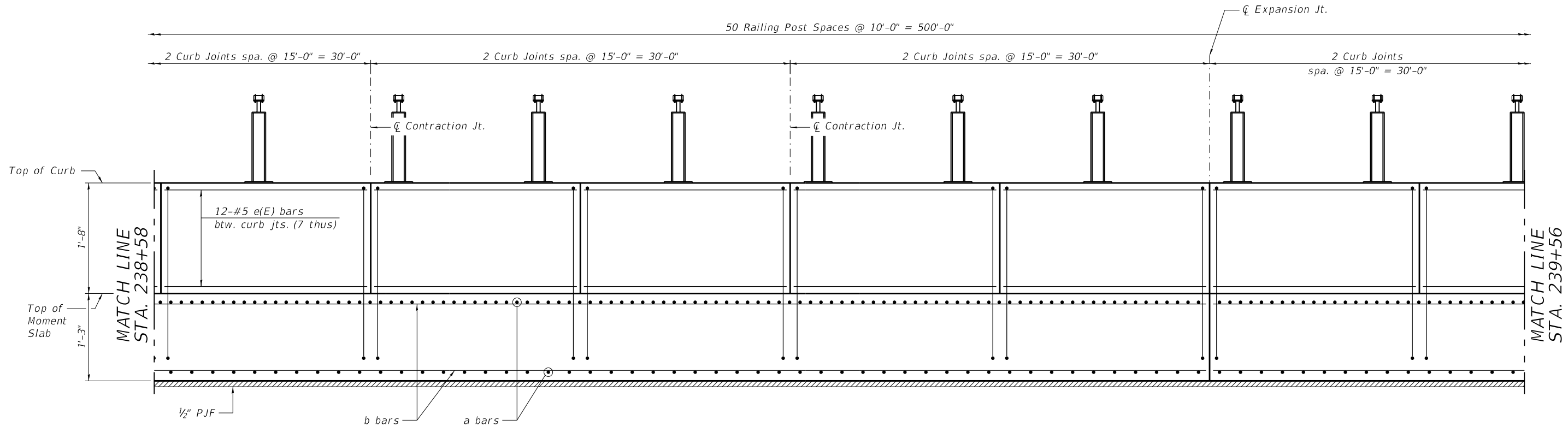
MOMENT SLAB PLAN AND ELEVATION - RW-02 (2 of 6)
MILLSTREAM ROAD MOMENT SLABS

SHEET 7 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	155
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



WEST MOMENT SLAB PLAN - RW-02



WEST MOMENT SLAB ELEVATION - RW-02
(Looking West)

MINIMUM BAR LAP
#5 bar = 3'-2"

USER NAME = knay	DESIGNED - KN	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB PLAN AND ELEVATION - RW-02 (3 of 6)
MILLSTREAM ROAD MOMENT SLABS

SHEET 8 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



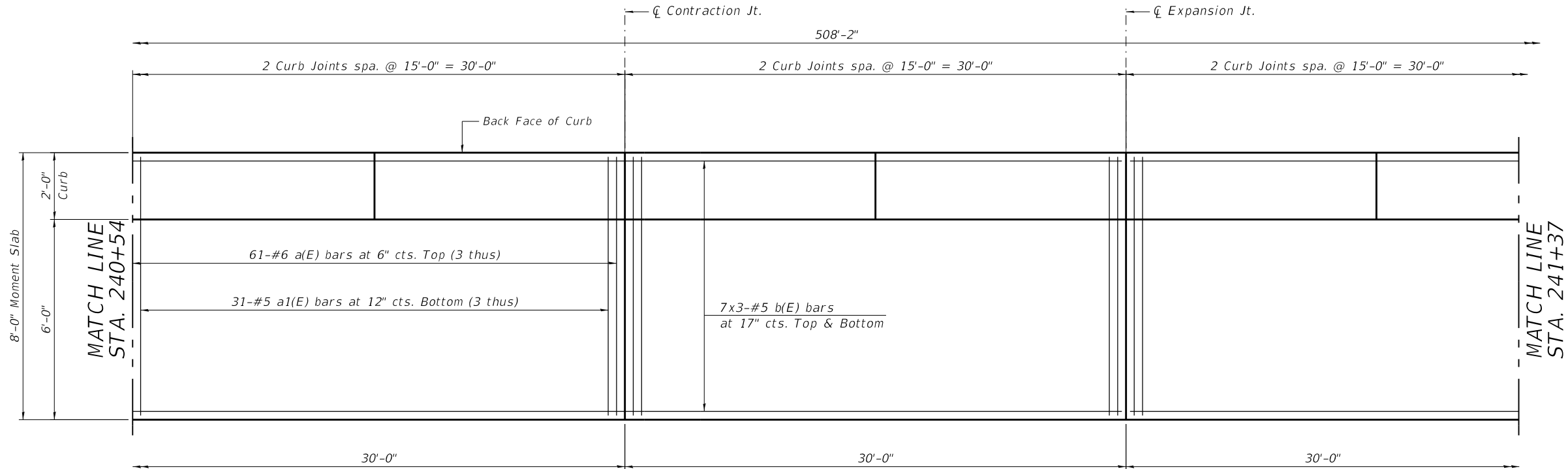
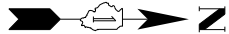
#5 bar = 3'-2"

Wall drains are not drawn to scale. See Sheet 13 of 24 for wall drain details.

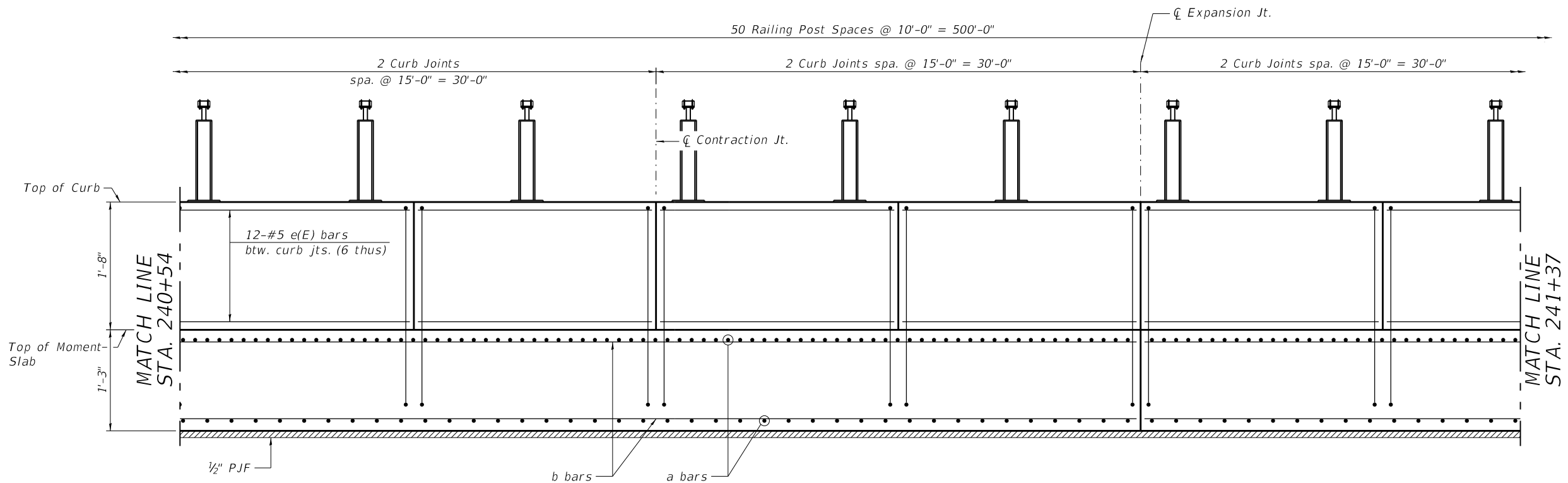
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SHEET 9 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	157
CONTRACT NO. 61J79				
	ILLINOIS	FED. AID PROJECT		



WEST MOMENT SLAB PLAN - RW-02



WEST MOMENT SLAB ELEVATION - RW-02
(Looking West)

MINIMUM BAR LAP
#5 bar = 3'-2"

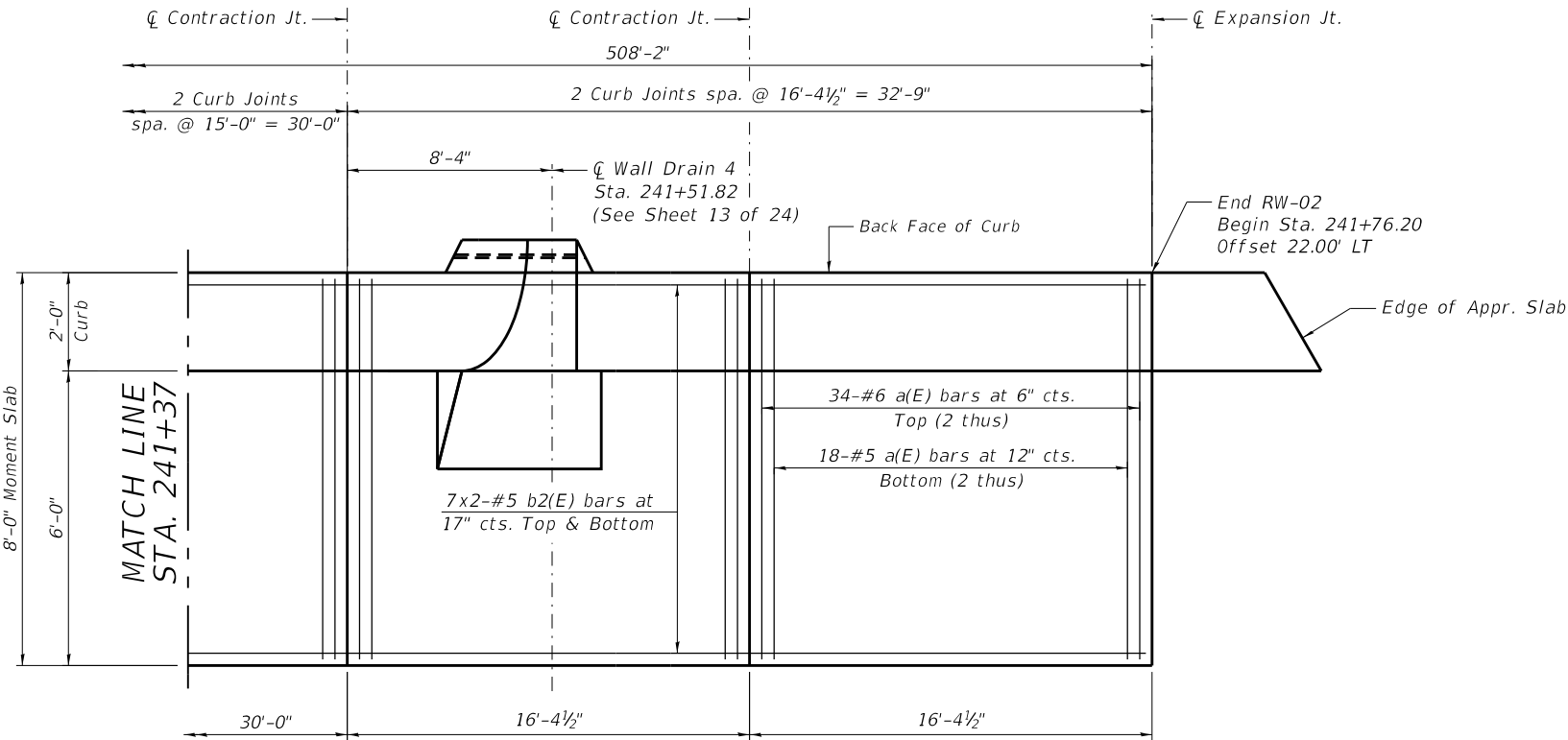
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PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

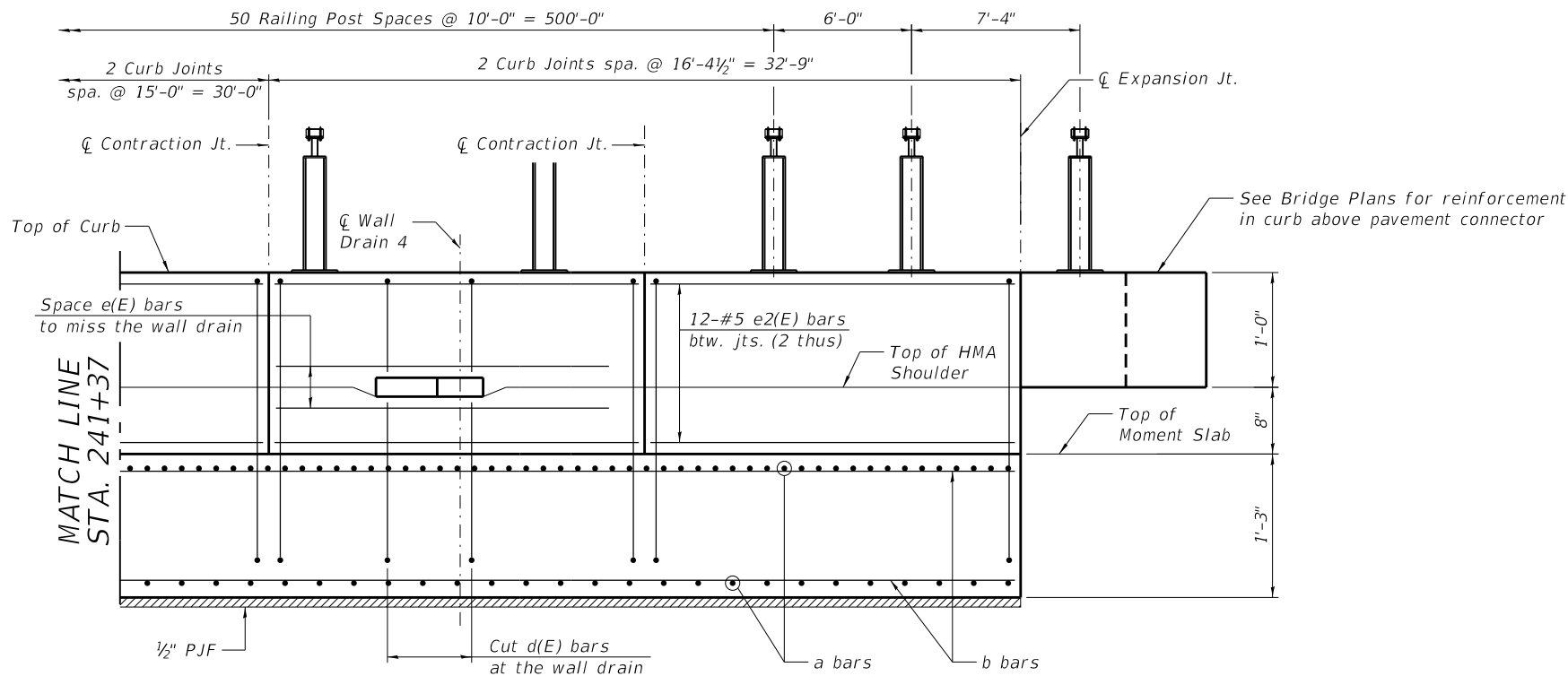
MOMENT SLAB PLAN AND ELEVATION - RW-02 (5 of 6)
MILLSTREAM ROAD MOMENT SLABS

SHEET 10 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	158
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



WEST MOMENT SLAB PLAN - RW-02



WEST MOMENT SLAB ELEVATION - RW-02
(Looking West)

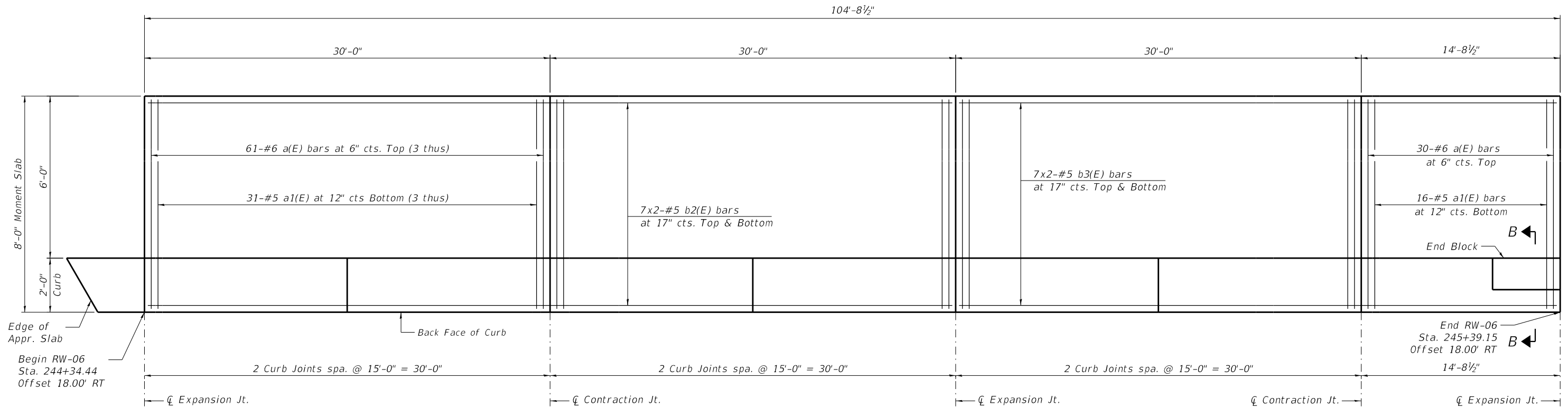
MINIMUM BAR LAP

#5 bar = 3'-2"

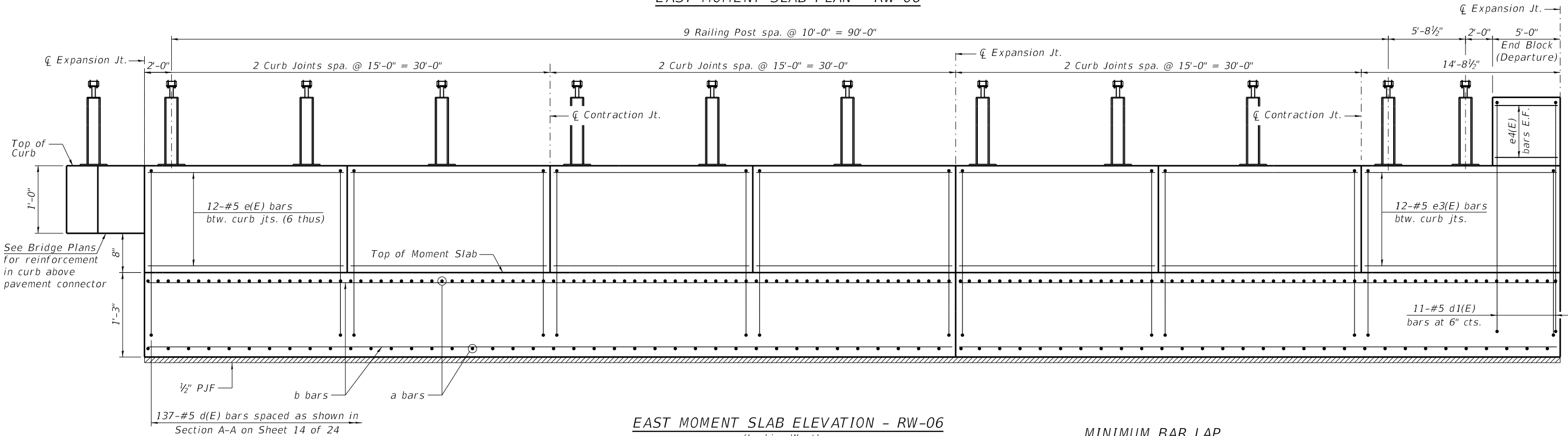
NOTES:

Wall drains are not drawn to scale. See Sheet 13 of 24 for wall drain details.

	USER NAME = knay	DESIGNED - KN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MOMENT SLAB PLAN AND ELEVATION - RW-02 (6 of 6) MILLSTREAM ROAD MOMENT SLABS	C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - PRD	REVISED -			T64	18-00482-00-BR	MCHENRY	219	159
	PLOT SCALE =	DRAWN - KN	REVISED -			CONTRACT NO. 61J79				
	PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -			ILLINOIS FED. AID PROJECT				
						SHEET 11 OF 24 SHEETS				



EAST MOMENT SLAB PLAN - RW-06



EAST MOMENT SLAB ELEVATION - RW-06
(Looking West)

MINIMUM BAR LAP
#5 bar = 3'-2"

Note:
See Sheet 14 of 24 for Section B-B.

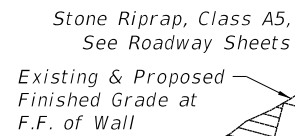
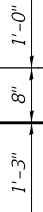
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PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT SLAB PLAN AND ELEVATION - RW-06
MILLSTREAM ROAD MOMENT SLABS

SHEET 12 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	160
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		

 $\vdash A$ 
$$L \rightarrow A$$

Wall Drain 3 and 4 similar but symmetrical to ϕ Drain)

Q WALL DRAIN STATIONING

WALL DRAIN #	STATION
1	236+99.15
2	238+19.15
3	240+01.82
4	241+51.82

USER NAME = knay	DESIGNED - KN	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - KN	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DRAIN DETAILS

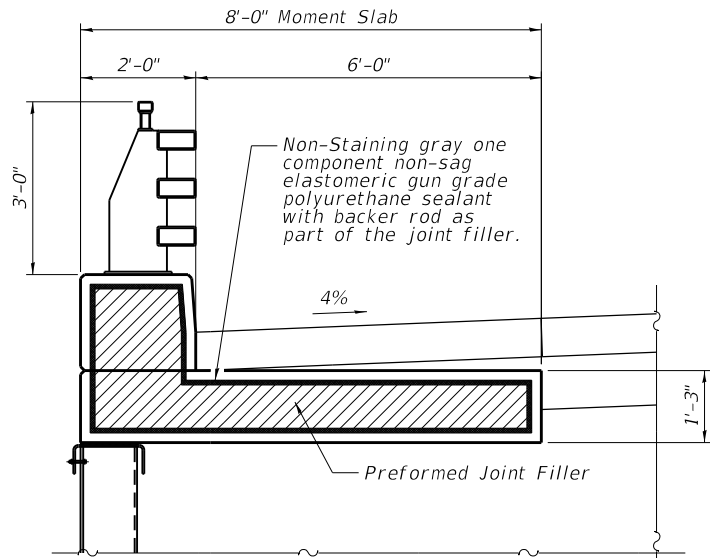
MILLSTREAM ROAD MOMENT SLABS

SHEET 13 OF 24 SHEETS

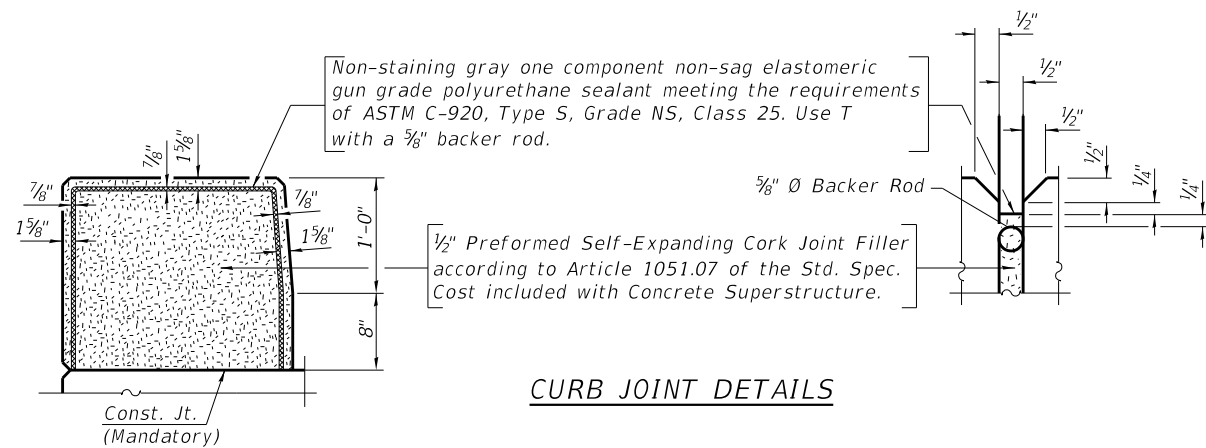
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	161
CONTRACT NO. 61J79				
	ILLINOIS	FED. AID PROJECT		



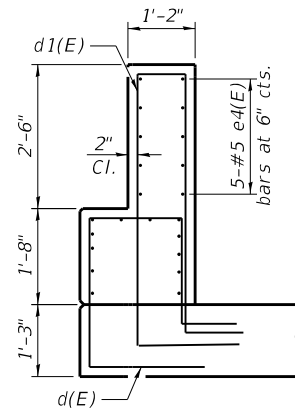
TYPICAL SECTION



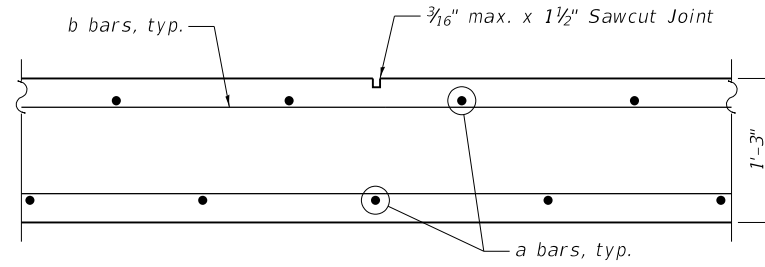
EXPANSION JOINT DETAIL



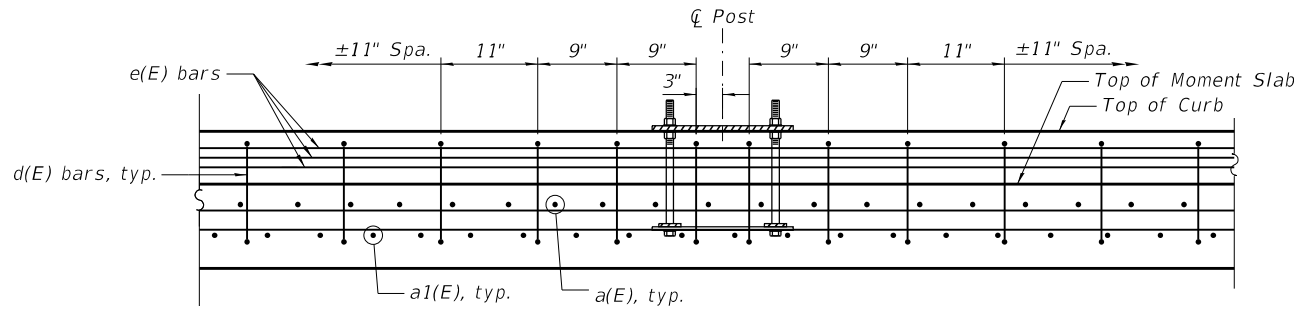
CURB JOINT DETAILS



SECTION B-B

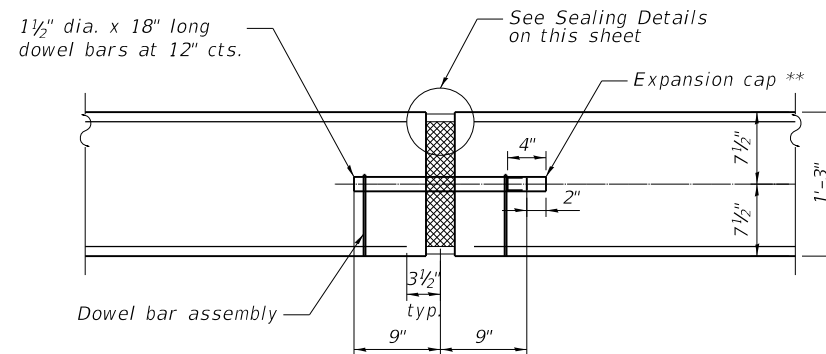


TRANSVERSE CONTRACTION JOINT



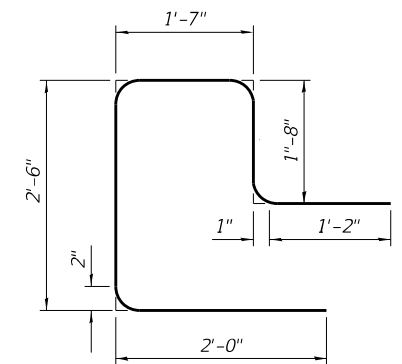
SECTION A-A

Note: Post not shown for clarity.








BAR d1(E)

A diagram of a rectangular plate. The horizontal dimension is labeled $7'-8''$ and the vertical dimension is labeled $1'-0''$.










BAR a1(E)


$$\underline{BAR \ d(E)}$$

BILL OF MATERIAL
MOMENT SLAB - RW-02


Bar	No.	Size	Length	Shape
a(E)	1035	#6	8'-8"	
a1(E)	528	#5	7'-8"	
b(E)	105	#5	32'-0"	
b1(E)	14	#5	33'-0"	
d(E)	660	#5	8'-11"	
e(E)	360	#5	14'-8"	
e1(E)	24	#5	12'-4"	
e2(E)	24	#5	16'-0"	
Concrete Structures			Cu. Yd.	220.4
Protective Coat			Cu. Yd.	170
Reinforcement Bars, Epoxy Coated			Pound	33,560
Steel Railing (Special)			Foot	509

BILL OF MATERIAL
MOMENT SLAB - RW-06

Bar	No.	Size	Length	Shape
a(E)	213	#6	8'-8"	
a1(E)	109	#5	7'-8"	
b2(E)	14	#5	31'-5"	
b3(E)	14	#5	23'-9"	
d(E)	137	#5	8'-11"	
d1(E)	11	#5	13'-0"	
e(E)	72	#5	14'-8"	
e3(E)	12	#5	14'-4"	
e4(E)	10	#5	4'-8"	
Concrete Structures			Cu. Yd.	45.9
Protective Coat			Cu. Yd.	36
Reinforcement Bars, Epoxy Coated			Pound	7,210
Steel Railing (Special)			Foot	105

Bars indicated thus 1 x 3 -#5 etc. indicates
1 line of bars with 3 lengths per line.




	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG 301
Comments _____ _____ _____		Client <u>BLA, Inc.</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Location <u>McHenry County, IL</u>	Sheet <u>1</u> of <u>2</u> Date <u>7/19/22</u> Drilled By <u>AQ</u> CS
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By _____

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
814.3'		Crushed gravel - 8.0"											
		Brown clay & silt, trace sand & gravel, damp, very stiff to hard - Fill						5 4					
					1	SS	18"	4	8	2.25	13.5	120.0	3.2
								4					
								7					
				5	2	SS	18"	6	13	4.5+	11.7	123.6	5.4
								9					
808.5'		Black fine sand & silt, trace clay & roots, damp, loose (topsoil)						4					
					3	SS	18"	3	7		35.3		
807.0'		Brown fine sand & gravel, some medium-coarse sand, saturated, loose to medium dense						3					
								4					
				10	4	SS	12"	2	6		11.9		
								4					
								4					
					5	SS	6"	4	8		13.5		
								7					
								6					
				15	6	SS	12"	7	13		11.3		
								4					
								4					
799.0'		Brown fine sand & gravel, some medium-coarse sand, saturated, loose						5					
					7	SS	12"	5	9		14.1		
								4					
								6					
796.5'		Gray fine sand, some medium-coarse sand & gravel, saturated, medium dense						6					
				20	8	SS	18"	6	12		15.1		

Water Level —	depth, ft.	elev., ft.	B - Standard Penetration Test (SPT), blows 6" interval	W - water content, %
- while drilling:	<u>8.0</u>	<u>807.0</u>	N - SPT, blows/foot to drive 2" O.D. spill-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	<u>2.5</u>	<u>812.5</u>	Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:			Qu - unconfined compressive strength, tons/sq. ft.	


F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	301
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>	
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/19/22</u>	
		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By <u>CS</u>	

[illegible]

Water Level —	depth, ft.	elev., ft.	B - Standard Penetration Test (SPT), blows/6" interval	W - water content, %
- while drilling:	<u>8.0</u>	<u>807.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	<u>2.5</u>	<u>802.5</u>	Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:			Uc - unconfined compressive strength, tons/sq. ft.	

F-111b-2

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>302</u>
Comments _____ _____ _____	Client <u>BLA, Inc.</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Location <u>McHenry County, IL</u>	Sheet <u>1</u> of <u>2</u> Date <u>7/19/22</u> Drilled By <u>AQ</u> CS	
	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By _____	

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
814.3'		Crushed gravel - 8.0"											
		Brown silt, some clay, trace sand & gravel, damp, loose - Fill						4					
								3					
812.0'					1	SS	18"	2	5		13.0		
		Brown clay, & silt, trace sand & gravel, damp, very stiff - Fill						5					
								5					
				5	2	SS	18"	4	9		13.4	126.0	3.1
808.5'								9					
		Black silt, some clay & fine sand, trace roots, damp, loose (topsoil)						4					
807.0'					3	SS	12"	4	8		33.5		
		Brown fine sand & gravel, some medium coarse sand, saturated, loose to medium dense						2					
								1					
				10	4	SS	18"	6	7		18.0		
								3					
								5					
				5	SS	14"	7	12			8.7		
								5					
								6					
				15	6	SS	14"	7	13		10.1		
								8					
								9					
				7	SS	18"	9	18			7.8		
796.5'													
		Gray fine sand, some medium-coarse sand & gravel, saturated, medium dense						5					
								5					
				20	8	SS	18"	5	10		12.4		

Water Level —	depth, ft.	elev. ft.	
- while drilling:	<u>8.0</u>	<u>807.0</u>	
- after drilling:	<u>4.5</u>	<u>810.5</u>	
- hrs. after drilling:			

F-111b-1


USER NAME = knay	DESIGNED - DK	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS I MILLSTREAM ROAD RETAINING WALLS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	163
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		



	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>302</u>
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/19/22</u>
		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By <u>CS</u>

[illegible]

Water Level —	depth, ft.	elev., ft.	B — Standard Penetration Test (SPT), blows/6" interval	W — water content, %
- while drilling:	<u>8.0</u>	<u>807.0</u>	N — SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	<u>4.5</u>	<u>810.5</u>	Pen. — pocket penetrometer reading, tons/sq. ft.	Uw — dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:			Qu — unconfined compressive strength, tons/sq. ft.	


F-111b-2

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	303
	Comments _____	Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>2</u>	
	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/19/22</u>		
	Location <u>McHenry, IL</u>	Drilled By <u>AQ</u>		
	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By _____		CS

[illegible]

Water Level —	depth, ft.	elev., ft.	B - Standard Penetration Test (SPT), blows/ 6" interval	W - water content, %
- while drilling:	<u>8.0</u>	<u>807.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	<u>4.0</u>	<u>811.0</u>	Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:	_____	_____	Qu - unconfined compressive strength, tons/sq. ft.	

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	<u>303</u>
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>	
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/19/22</u>	
		Location <u>McHenry, IL</u>	Drilled By <u>AQ</u>	
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By <u>CS</u>	

[illegible]

Water Level —	depth, ft.	elev. ft.	B - Standard Penetration Test (SPT), blows 6" interval	W - Water content, %
- while drilling:	8.0	807.0	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	4.0	811.0	Pen - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:			Qu - unconfined compressive strength, tons/sq. ft.	

F-111b-2

USER NAME = knay	DESIGNED - DK	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -


**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS II
MILLSTREAM ROAD RETAINING WALLS

SHEET 16 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	164
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		




	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>304</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> <u>Millstream Road over Kishwaukee</u> <u>River Bridge Rehab./Replacement</u>	Sheet <u>1</u> of <u>2</u> Date <u>7/20/22</u>
	Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	
	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By <u>CS</u>	

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
		Crushed gravel											
	814.0'												
		Brown clay & silt, trace sand & gravel, damp, very stiff - Fill			1	SS	18"	5	9	2.25	12.5	125.2	3.8
	811.0'												
		Dark brown sand, silt & gravel, damp, medium dense - Fill	5	2	SS	18"	10	17			7.9		
	808.5'												
		Brown fine sand & gravel, some medium-coarse sand, damp, medium dense - Fill		3	SS	18"	11	16			7.2		
	807.0'												
		Black fine sand, some silt, trace roots, very damp, loose (topsoil)		4	SS	18"	2				36.0		
	806.0'	Dark gray-dark brown fine sand, trace medium-coarse sand, gravel, organic silt & shells, saturated, loose	10	5	SS	18"	5	9			36.6		
	804.0'												
		Dark gray-dark brown fine sand, trace medium-coarse sand, gravel, organic silt & shells, saturated, very loose		6	SS	15"	2	3			15.0		
		Brown fine sand & gravel, some medium-coarse sand, saturated, medium dense											
			15	7	SS	15"	5	10			8.4		
	799.5'												
		Gray fine sand, some medium-coarse sand & gravel, saturated, medium dense											
				8	SS	18"	8	13			10.3		
			20	9	SS	15"	9	15			10.4		

Water Level —	depth, ft.	elev., ft.	S - sample	T - type: J(Jar), SS(split-spoon), ST(shealy tube)	R - recovery length, in
- while drilling:	<u>9.0</u>	<u>806.0</u>	B - Standard Penetration Test(SPT), blows/6" interval		W - water content, %
- after drilling:	<u>4.0</u>	<u>811.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb hammer falling 30"		
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		


F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>304</u>
	Comments _____ _____ _____	Client <u>BLA, Inc.</u> Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Location <u>McHenry County, IL</u>	Sheet <u>2</u> of <u>2</u> Date <u>7/20/22</u> Drilled By <u>AQ</u> CS
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Loaded By _____

[illegible]

Water Level — depth, ft. elev., ft. S - sample T - type (J/LR), SS(split-spoon), ST(sheib tube) R - recovery length, in.
 - while drilling: 9.0 806.0 B - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %
 - after drilling: 4.0 811.0 N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"
 Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.
 - hrs. after drilling: Qu - unconfined compressive strength, tons/sq. ft.

F-111b-2

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>305</u>
	Comments _____	Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>2</u>
_____	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/21/22</u>	
_____	Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	
_____	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By <u>CS</u>	

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
814.2'		Crushed gravel - 10.0"											
		Brown clay & silt, trace sand & gravel, damp, very stiff to hard - Fill			SS		12"	3 3 5	8	3.75	12.2	125.3	3.0
								3 5					
809.5'				5	2	SS	18"	7	12	4.5+	17.1	127.7	4.5
		Dark brown fine sand, some silt, damp, very loose - Fill						2 2					
					3	SS	18"	2	4		16.2		
806.5'								6 6					
		Brown fine sand, some gravel & medium-coarse sand, saturated, medium dense		10	4	SS	18"	6	12		15.8		
804.5'													
		Dark-gray-dark brown fine sand, some gravel & medium-coarse sand, trace organic matter, saturated, very loose			5	SS	15"	1	2		32.4		
802.0'													
		Brown fine sand & gravel, some medium coarse sand, saturated, medium dense						5 5					
799.5'				15	6	SS	12"	5	10		14.7		
		Gray fine sand, trace medium-coarse sand & gravel, saturated, medium dense						4 4					
					7	SS	15"	6	10		14.9		
796.5'													
		Gray fine sand, trace medium-coarse sand & gravel, saturated, loose						3 4					
				20	8	SS	15"	5	9		22.1		

Water Level —	depth, ft.	elev., ft.	S - sample	T - type (J(Jar), SS(split-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>8.5</u>	<u>806.5</u>	B - Standard Penetration Test(SPT), blows/8' interval		W - water content, %
- after drilling:	<u>8.0</u>	<u>807.0</u>	N - SPT, blow/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.	
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

USER NAME = knay	DESIGNED - DK	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS III

MILLSTREAM ROAD RETAINING WALLS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	165
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		




	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>305</u>
	Comments _____	Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>
_____	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/21/22</u>	_____
_____	Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	_____
_____	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By _____	CS

[illegible]

S - sample T - type: J(Jar), SS(split-spoon), ST(sheib tube) R - recovery length, in.
 B - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %
 N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"
 Pen - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.
 Qu - unconfined compressive strength, tons/sq. ft.

F-111b-2

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>306</u>
	Comments _____	Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>2</u>
_____	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/21/22</u>	
_____	Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	
_____	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other		Logged By <u>CS</u>

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	N	Pen.	W	Uw	Qu
814.0'		Crushed gravel										
		Brown clay & silt, trace sand & gravel, damp, hard - Fill			1	SS	18"	11	4.5+	8.0	127.7	5.2
811.5'												
		Brown clay & silt, trace sand & gravel, damp, very stiff - Fill		5	2	SS	18"	11	3.5	21.9	121.9	2.6
809.0'												
		Dark brown fine sand, some gravel & medium-coarse sand, trace silt, damp, loose - Fill			3	SS	18"	8		9.1		
806.5'												
		Tree trunk saturated, very loose to dense		10	4	SS	18"	3		357.0		
802.5'					5	J	Ø	21	33	53.3		
		Brown fine sand & gravel, some medium-coarse sand, saturated, loose										
				15	6	SS	15"	7		11.6		
799.5'												
		Brown fine sand, trace medium-coarse sand, saturated, loose			7	SS	12"	7		18.5		
				20	8	SS	15"	7		21.7		

Water Level —	depth, ft.	elev. ft.	S - sample	T - type: J(Jar), SS(slit-spoon), ST(sheib tube)	R - recovery length, in.
- while drilling:	<u>8.5</u>	<u>806.5</u>	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>5.0</u>	<u>810.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:	_____	_____	Pen. - pocket penetrometer reading, tons/sq. ft.		
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

 <p>SOIL AND MATERIAL CONSULTANTS, INC.</p> <p>Comments _____</p> <p>_____</p> <p>_____</p>	File No. <u>24929</u>	BORING LOG <u>306</u>
	Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>
	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/21/22</u>
	Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>
	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By <u>CS</u>

[illegible]

Water Level — depth, ft. elev., ft.
 - while drilling: 8.5 806.5
 - after drilling: 5.0 810.0
 - hrs. after drilling: _____

S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.
 B - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %
 N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"
 Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs./cu. ft.
 Qu - unconfined compressive strength, tons/sq. ft.


F-111h-2

USER NAME = knay	DESIGNED - DK	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BORING LOGS IV
MILLSTREAM ROAD RETAINING WALLS**


C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	166
CONTRACT NO. 61J79				
		ILLINOIS	FED. AID PROJECT	

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	<u>307</u>
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>2</u>	
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/21/22</u>	
		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By _____	CS

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
814.5'		Crushed gravel - 6.0"											
		Brown clay & silt, trace sand & gravel, damp, hard - Fill											
					1	SS	18"	5	10	4.5+	9.9	130.7	5.2
811.5'													
		Brown clay & silt, trace sand & gravel, damp, very stiff - Fill		5	2	SS	18"	6	11	4.5+	11.5	128.7	3.9
809.0'													
		Brown-dark brown fine sand, trace medium-coarse sand & silt, damp, medium dense - Fill			3	SS	18"	4	10		13.5		
807.0'													
		Black organic silt, some fine sand, very damp, very loose		10	4	SS	18"	2	4		37.1		
804.5'													
		Dark gray-dark brown fine sand & gravel, some medium-coarse sand, trace organic matter, saturated, very loose			5	SS	18"	2	3		23.4		
802.0'													
		Brown fine sand, some medium-coarse sand, saturated, medium dense											
				15	6	SS	18"	6	11		15.0		
799.5'													
		Brown fine sand, trace medium-coarse sand, saturated, medium dense											
					7	SS	18"	7	13		17.3		
				20	8	SS	15"	8	15		17.8		

Water Level — depth, ft. elev., ft. S - sample T - type: J(Jar), SS(split-spoon), ST(shealy tube) R - recovery length, in.
 - while drilling: 8.0 807.0 N - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %
 - after drilling: 6.0 809.0 N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"
 - hrs. after drilling: Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.
 Q - unconfined compressive strength, tons/sq. ft.


F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>307</u>	BORING LOG <u>307</u>
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>
		Project <u>Millstream Road over Kis</u>	Date <u>7/21/22</u>
		Location <u>River Bridge Rehab./Replacement</u>	Date <u>7/21/22</u>
		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By <u>CS</u>

[illegible]

Water Level —	depth, ft.	elev. ft.	S - sample	T - type: J(Jar), SS(split-spools), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>8.0</u>	<u>807.0</u>	B - Standard Penetration Test (SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>6.0</u>	<u>809.0</u>	N - SPT, blows/foot to drive 2" of 0.10 split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Uc - unconfined compressive strength, tons/sq. ft.		

F-111b-2

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u> Client <u>BLA, Inc.</u>	BORING LOG <u>308</u> Sheet <u>1</u> of <u>2</u>
Comments _____ _____ _____	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Location <u>McHenry County, IL</u>	Date <u>7/20/22</u> Drilled By <u>AQ</u>	CS
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By _____

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
814.3'		Crushed gravel - 8.0"											
		Brown clay & silt, trace sand & gravel, damp, very stiff - Fill						6					
								4					
			1	SS	18"			7	11	4.5+	6.6	131.1	3.1
								3					
								4					
			5	2	SS	18"		6	10	4.5+	9.2	123.9	3.8
809.0'													
		Brown fine sand, trace medium-coarse sand & silt, damp-saturated, loose - Fill						5					
								5					
807.0'								4	9		10.9		
		Black organic silt, very damp, very loose											
								1					
								1					
			10	4	SS	18"		2	3		77.5		
804.5'													
		Dark gray-black brown fine sand & gravel, some medium-coarse sand, saturated, very loose						2					
								2					
			5	SS	18"			2	4		12.4		
802.0'													
		Brown fine sand & gravel, some medium-coarse sand, saturated, loose						4					
								4					
			15	6	SS	15"		2	6		8.9		
799.5'													
		Brown fine sand, saturated, medium dense						6					
								5					
								5	10		18.1		
797.0'													
		Brown fine sand & gravel, some medium-coarse sand, saturated, medium dense						5					
								6					
			20	8	SS	15"		5	11		10.3		

Water Level —		depth, ft.	elev., ft.	S - sample	T - type: J(JR), SS(split-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	8.0		807.0	B - Standard Penetration Test (SPT), blows/ 6" interval		W - water content, %
- after drilling:	6.0		809.0	N - STD, blow/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:				Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
				Qu - unconfined compressive strength, tons/sq. ft.		

E-111b-1



	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>308</u>
		Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>
Comments _____		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/30/22</u>
_____		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>
_____		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By <u>CS</u>

[illegible]

Water Level — depth, ft. elev. ft. S - sample T - type: J(Jar), SS(spill-spoun), ST(shelby tube) R - recovery length, in.
 - while drilling: 8.0 807.0 B - Standard Penetration Test(SPT), blows/ 6" interval W - water content, %
 - after drilling: 6.0 809.0 N - SPT, blows/foot to drive 2" O.D. spill-spoun sampler with 140 lb. hammer falling 30"
 hrs. after drilling: Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.
 Qu - unconfined compressive strength, tons/sq. ft.

F-111h-2

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	<u>309</u>
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>1</u>	
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/19/22</u>	
		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By _____	CS

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen	W	Uw	Qu
814.5'	Crushed gravel - 6.0"												
	Brown clay & silt, trace sand & gravel, damp, hard = Fill												
								4					
								5					
			1	SS	18"	5	10	4.5+	9.4				
811.5'													
	Brown clay & silt, trace sand & gravel, damp, very stiff - Fill							3					
								3					
			5	2	SS	18"	3	6	3.25	14.4	115.5	3.1	
808.5'													
	Black silt, some fine sand, trace clay & roots, damp, loose (topsoil)							2					
								2					
807.0'			3	SS	18"	3	5		30.4				
	Brown fine sand, some gravel & medium-coarse sand, saturated, medium dense							5					
805.5'								5			12.7		
	Black organic silt, very damp, very loose		10	5	SS	18"	1	6		19.7			
804.5'													
	Brown fine sand & gravel, some medium-coarse sand, saturated, medium dense							3					
								4					
			6	SS	10"	6	10		10.7				
802.0'													
	Brown fine sand, saturated, loose to medium dense							3					
								3					
			15	7	SS	18"	5	8	22.1				
								4					
								5					
			8	SS	12"	6	11		19.4				
797.0'													
	Brown fine sand, some gravel, trace medium-coarse sand, saturated, medium dense							4					
								5					
			20	9	SS	18"	7	12		11.9			

Water Level —	depth, ft.	elev., ft.	S - sample	T - type: (J) Jar, SS (split-spoon), ST (shelby tube)	R - recovery length, in.
- while drilling:	<u>8.0</u>	<u>807.0</u>	B - Standard Penetration Test (SPT), blows/6" interval		W - water content, %
- after drilling:	<u>4.0</u>	<u>811.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:	_____	_____	Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

 SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u> Client <u>BLA, Inc.</u>	BORING LOG <u>309</u> Sheet <u>2</u> of <u>2</u>
Comments _____ _____ _____	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> Location <u>McHenry County, IL</u>	Date <u>7/19/22</u> Drilled By <u>AQ</u> CS
	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By _____

[illegible]

Water Level — depth, ft. elev. ft.
 - while drilling: 8.0 807.0
 - after drilling: 4.0 811.0
 - hrs. after drilling: _____

S - sample T - type: J(Jar), SS(split-sonic), ST(shelby tube) R - recovery length, in
 B - Standard Penetration Test(SPT), blows/6" interval W - water content, %
 N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"
 Pen - pocket penetrometer reading, tons/sq. ft. U_w - dry unit weight of soil, lbs/cu. ft.
 Qu - unconfined compressive strength, tons/sq. ft.

E_111h_2

USER NAME = knay	DESIGNED - DK	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -


**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS VI
MILLSTREAM ROAD RETAINING WALLS

SHEET 20 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	168
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		




	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	<u>310</u>
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>2</u>	
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/20/22</u>	
		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By <u>CS</u>	

Elev., ft.	815.0'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
814.1'		Crushed gravel - 11.0"											
								4					
		Brown silt, some clay, trace sand & gravel, damp, loose - Fill						4					
					1	SS	18"	5	9		9.3		
811.0'								4					
		Black clay & silt, trace sand & gravel, damp, very stiff - Fill						4					
			6		2	SS	18"	5	9	4.5+	8.2	130.5	2.1
808.5'								2					
		Black silt, some fine sand, trace clay & roots, damp, loose (topsoil)						3					
807.0'					3	SS	18"	3	6		30.0		
		Black organic silt, very damp, loose											
806.0'					4	SS		2			138.0		
		Brown fine sand & gravel, some medium-coarse sand, saturated, medium dense						6					
			10		5	SS	18"	6	12		10.5		
804.0'													
		Brown fine sand & gravel, some medium-coarse sand, saturated, loose						3					
								3					
					6	SS	18"	5	8		42.0		
801.5'													
		Large tree trunk/root						2					
800.5'					7	SS		2			301.5		
			15		8	SS	15"	3			7.9		
		Brown fine sand & gravel, some medium-coarse sand, saturated, loose											
798.5'								4					
								5					
		Gray fine sand, trace medium-coarse sand & gravel, saturated, medium dense			9	SS	15"	7	12		16.1		
796.5'													
								5					
		Gray fine sand, some medium-coarse sand & gravel, saturated, medium dense						7					
			20		10	SS	18"	9	16		13.8		

Water Level —	depth, ft.	elev., ft.	S - sample	T - type: J(Jar), SS(split-spoon), ST(shelby tube)	R - recovery length, in
- while drilling:	<u>8.0</u>	<u>807.0</u>	B - Standard Penetration Test(SPT), blows/6" interval		W - water content, %
- after drilling:	<u>4.0</u>	<u>811.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.	
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG 310
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/20/22</u>
_____ _____		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By <u>CS</u>

[illegible]

Water Level —	depth ft.	elev. ft.	S - sample	T - type: J(Jar), SS(spill-spout), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>8.0</u>	<u>807.0</u>	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>4.0</u>	<u>811.0</u>	N - SPT, blows/foot to drive 2" O.D. spill-spout sampler with 140 lb. hammer falling 30"		Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:	_____	_____	Pen. - pocket penetrometer reading, tons/sq. ft.		
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111h-2

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>311</u>
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>2</u>
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/19/22</u>
_____ _____		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By <u>CS</u>

Elev. ft	815.0'	Description	Depth, ft	0	S	T	R	B	N	Pen.	W	Uw	Qu
814.5	Crushed gravel ~ 6.0"												
	Brown clay & silt, trace sand & gravel, damp, hard - Fill							5					
								6					
812.0'					1	SS	18"	6	12	4.5+	10.6	128.3	5.4
	Brown silt, some clay, trace sand & gravel, damp, loose - Fill												
								4					
810.0'				5	2	SS	18"	5	9		11.1		
	Black silt, some clay & fine sand, trace roots, damp, very loose (topsoil)							4					
	(large rock at 7.0')							1					
807.5'					3	J	Ø	1	25		18.1		
	Black organic silt, very damp, very loose							24					
								1					
								1					
805.0'			10	4	SS	18"		2	3		118.5		
	Brown fine sand & gravel, some medium-coarse sand, saturated, loose												
								2					
								3					
802.0'				5	SS	14"		5	8		11.7		
	Brown fine sand, some medium-coarse sand & gravel, saturated, medium dense												
								4					
								4					
			15	6	SS	18"		6	10		18.0		
								3					
								4					
				7	SS	18"		6	10		8.9		
797.0'													
	Gray fine sand, trace medium-coarse sand & gravel, saturated, medium dense							3					
								6					
			20	8	SS	18"		9	15		16.5		

Water Level —	depth, ft.	elev. ft.	S - sample	T - type: J(Jar), SS(splitt-spoon), ST(shelby tube)	R - recovery length, in.
- while drilling:	<u>7.5</u>	<u>807.5</u>	B - Standard Penetration Test(SPT), blows/ 6" interval		W - water content, %
- after drilling:	<u>4.0</u>	<u>811.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:			Pen. - pocket penetrometer reading, tons/sq. ft.		Uw - dry unit weight of soil, lbs/cu. ft.
			Qu - unconfined compressive strength, tons/sq. ft.		

F-111h-1

USER NAME = knay	DESIGNED - DK	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -


**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS VII
MILLSTREAM ROAD RETAINING WALLS

SHEET 21 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	169
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		




	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	311
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>	
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/19/22</u>	
		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By _____	CS

[illegible]

Water Level —	depth, ft.	elev., ft.	B - Standard Penetration Test (SPT), blows/ 6" interval	W - water content, %
- while drilling:	<u>7.5</u>	<u>807.5</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	<u>4.0</u>	<u>811.0</u>	Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:	_____	_____	Qu - unconfined compressive strength, tons/sq. ft.	

F-111b-2

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	<u>312</u>
		Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>2</u>	
Comments _____ _____ _____	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/21/22</u>		
	Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>		
	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By <u>CS</u>		

Elev., ft.	Description	Depth, ft.	S	T	R	B	N	Pen.	W	Uw	Qu
815.5'	Crushed gravel										
814.5'											
	Brown clay & silt, trace sand & gravel, damp, hard - Fill		1	SS	18"	3 5 6	11	4.5+	9.0	131.8	7.4
						3 5 5					
		5	2	SS	18"	3 5 5	10	4.5+	14.3	119.8	4.4
809.0'						3 2 3					
	Black-dark brown fine sand, trace silt, very damp-saturated, loose-Fill		3	SS	18"	3	5		25.1		
807.5'						2 1 2					
	Black organic silt, very damp, very loose	10	4	SS	18"	2	3		59.1		
804.5'						5 3 5					
	Dark gray-dark brown fine sand & gravel, some medium-coarse sand, trace silt, saturated, loose		5	SS	18"	5	8		15.7		
802.0'						4 4 6					
	Brown fine sand, some medium-coarse sand & gravel, saturated, medium dense	15	6	SS	18"	6	10		11.4		
						4 5 6					
			7	SS	18"	6	11		15.1		
						11 11 13					
		20	8	SS	18"	13	24		11.0		

Water Level —	depth, ft.	elev., ft.	B - Standard Penetration Test (SPT), blows/ 6" interval	W - water content, %
- while drilling:	<u>8.0</u>	<u>807.5</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	<u>5.0</u>	<u>810.5</u>	Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:			Qu - unconfined compressive strength, tons/sq. ft.	

F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>312</u>	BORING LOG <u>312</u>
Comments _____ _____ _____	Client <u>BLA, Inc.</u> _____ Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u> _____ Location <u>McHenry County, IL</u> _____ Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____ _____	Sheet <u>2</u> of <u>2</u> Date <u>7/21/22</u> Drilled By <u>AQ</u> Logged By <u>CS</u>	

[illegible]

Water Level —	depth, ft.	elev., ft.	B - Standard Penetration Test (SPT), blows/ 6" interval	W - water content, %
- while drilling:	<u>8.0</u>	<u>807.5</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	<u>5.0</u>	<u>810.5</u>	Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:	_____	_____	_____	_____
			Pen. - unconfined compressive strength, tons/sq. ft.	

F-111b-2

USER NAME = knay	DESIGNED - DK	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -


**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS VIII
MILLSTREAM ROAD RETAINING WALLS

SHEET 22 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	170
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		




	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG	313
	Comments _____	Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>2</u>	
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/20/22</u>	
		Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By _____	CS

Elev., ft.	815.5'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
814.7'		Crushed gravel - 10.0"											
		Brown clay & silt, trace sand & gravel, damp, very stiff - Fill						2					
								3					
					1	SS	18"	4	7	2.0	14.5	117.7	2.3
								3					
								5					
				5	2	SS	18"	5	10	2.0	14.5	113.5	2.1
809.5'													
		Brown clay & silt, trace sand & gravel, damp, stiff - Fill						2					
								3					
808.0'					3	SS	18"	3	6	1.75	16.0	109.1	1.7
		Black silt, some clay, trace sand & roots, damp (topsoil)				J					29.0		
807.0		Black organic silt, trace fine sand						1					
		806.0' saturated, very loose			5	SS		1			39.3		
		Brown fine sand, saturated, loose		10	6	SS	18"	4	5		18.5		
804.0'								2					
		Brown fine sand & gravel, some medium-coarse sand, saturated, loose to medium dense			7	SS	14"	4	7		13.8		
								4					
								7					
800.5'				15	8	SS	18"	5	12		10.0		
		Brown fine sand, trace medium-coarse sand & gravel, saturated, loose to medium dense											
								3					
								4					
					9	SS	15"	5	9		17.3		
								6					
								9					
				20	10	SS	6"	9	18		13.9		

Water Level —	depth, ft.	elev., ft.	B - Standard Penetration Test (SPT), blows 6" interval	W - water content, %
- while drilling:	<u>8.5</u>	<u>807.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	<u>8.0</u>	<u>807.5</u>	Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:			Qu - unconfined compressive strength, tons/sq. ft.	


F-111b-1

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>313</u>
	Comments _____	Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>
_____	Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/20/22</u>	
_____	Location <u>McHenry, IL</u>	Drilled By <u>AQ</u>	
_____	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other		Logged By <u>CS</u>

[illegible]

Water Level —	depth, ft.	elev., ft.	B - Standard Penetration Test (SPT), blows/ 5" interval	W - water content, %
- while drilling:	<u>8.5</u>	<u>807.0</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	<u>8.0</u>	<u>807.5</u>	Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:			Qu - unconfined compressive strength, tons/sq. ft.	

F-111b-2

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>314</u>
		Client <u>BLA, Inc.</u>	Sheet <u>1</u> of <u>2</u>
Comments _____		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date <u>7/20/22</u>
	Location <u>McHenry County, IL</u>	Drilled By <u>AQ</u>	
	Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other _____	Logged By _____	CS

Elev., ft.	815.5'	Description	Depth, ft.	0	S	T	R	B	N	Pen.	W	Uw	Qu
		Crushed gravel											
	814.5'												
		Brown clay & silt, trace sand & gravel, damp, very stiff - Fill						3					
								3					
					1	SS	15"	4	7	3.5	12.3		
								3					
								4					
				5	2	SS	18"	4	8	2.75	13.3	122.4	3.0
	810.0'												
		Brown-gray silt, some clay, trace sand & gravel, very loose - Fill						1			19.1		
	809.0'				3	SS		2					
		Black silt, some clay & fine sand, trace roots, damp, loose (topsoil)						3	5		26.3		
	807.5'				4	SS	18"						
		Black-dark brown silt, trace clay, fine sand & organic matter, very damp						1					
	806.0'				5	SS		2			31.0		
											23.1		
		Brown fine sand, saturated, loose		10	6	SS	18"	4	6				
	804.5'												
		Brown fine sand, saturated, very loose						3					
								1					
	802.5'				7	SS	15"	2	3		27.6		
		Brown fine sand, trace medium-coarse sand & gravel, saturated, very loose						2					
								2					
	800.0'				15	8	SS	15"	2	4	14.4		
		Brown fine sand, saturated, loose											
								2					
								2					
					9	SS	15"	4	6		23.8		
	797.5'												
		Brown fine sand, some medium-coarse sand, trace gravel, saturated, medium dense						4					
								5					
				20	10	SS	18"	6	11		16.2		

Water Level —	depth, ft.	elev., ft.	B - Standard Penetration Test (SPT), blows/ 6" interval	W - water content, %
- while drilling:	<u>8.0</u>	<u>807.5</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"	
- after drilling:	<u>8.0</u>	<u>807.5</u>	Pen. - pocket penetrometer reading, tons/sq. ft.	Uw - dry unit weight of soil, lbs/cu. ft.
- hrs. after drilling:	_____	_____	Qu - unconfined compressive strength, tons/sq. ft.	

F-111b-1

USER NAME = knay	DESIGNED - DK	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS IX MILLSTREAM ROAD RETAINING WALLS

SHEET 23 OF 24 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	171
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		

	SOIL AND MATERIAL CONSULTANTS, INC.	File No. <u>24929</u>	BORING LOG <u>314</u>
Comments _____ _____ _____		Client <u>BLA, Inc.</u>	Sheet <u>2</u> of <u>2</u>
		Project <u>Millstream Road over Kishwaukee River Bridge Rehab./Replacement</u>	Date _____
		Location <u>McHenry County, IL</u>	Drilled By _____
		Equipment <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> H.A. <input type="checkbox"/> Other	Logged By _____

[illegible]

Water Level — depth, ft. elev., ft.			S - sample T - type (J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.		
- while drilling:	<u>8.0</u>	<u>807.5</u>	B - Standard Penetration Test(SPT), blows/6" interval W - water content, %		
- after drilling:	<u>8.0</u>	<u>807.5</u>	N - SPT, blows/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"		
- hrs. after drilling:	_____	_____	Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs/cu. ft.		
			Qu - unconfined compressive strength, tons/sq. ft.		

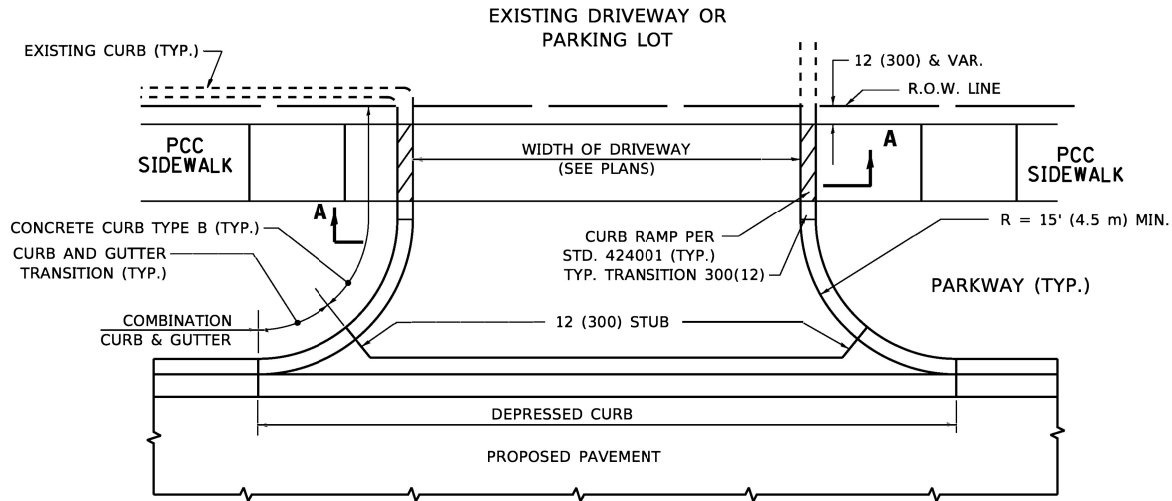
F-111b-2

USER NAME = knay	DESIGNED - DK	REVISED -
	CHECKED - PRD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 8/24/2023	CHECKED - PRD	REVISED -

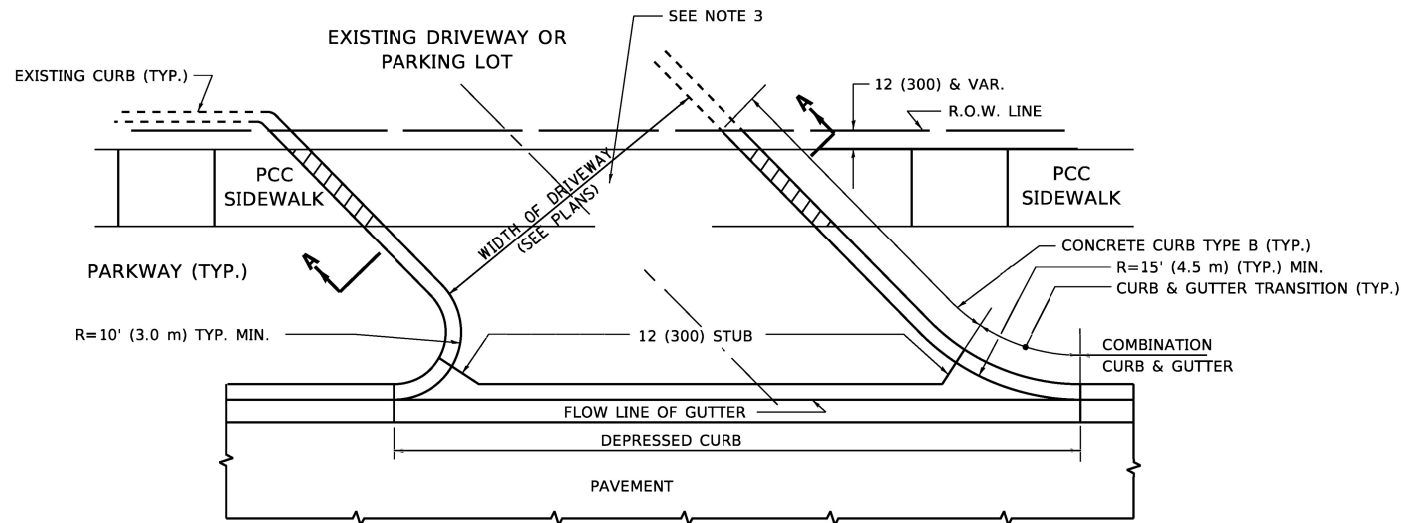
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BORING LOGS X
MILLSTREAM ROAD RETAINING WALLS**

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	172
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		



WITH CONCRETE CURB, TYPE B



WITH CONCRETE CURB, TYPE B

RIGID DRIVEWAY

COMMERCIAL ENTRANCE (CE):
PCC DRIVEWAY PAVEMENT 8 (200)
MEASURED IN SQ. YD. (m²)

PRIVATE ENTRANCE (PE):
PCC DRIVEWAY PAVEMENT 6 (150)
MEASURED IN SQ. YD. (m²)

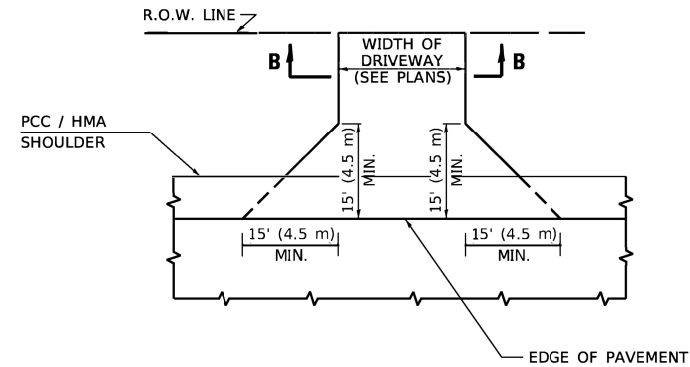
SECTION A-A

HMA DRIVEWAY

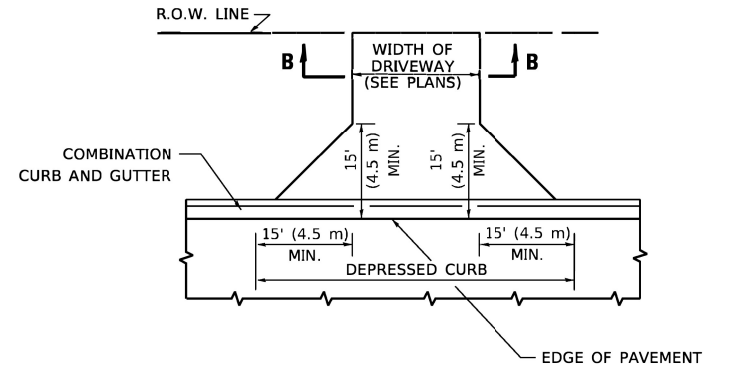
HMA SURFACE COURSE,
MIX "D", IL-9.5, N50, 2 (50)
MEASURED IN TONS (METRIC TONS)

COMMERCIAL ENTRANCE (CE):
HMA BASE COURSE, 8 (200)
MEASURED IN SQ. YD. (m²).

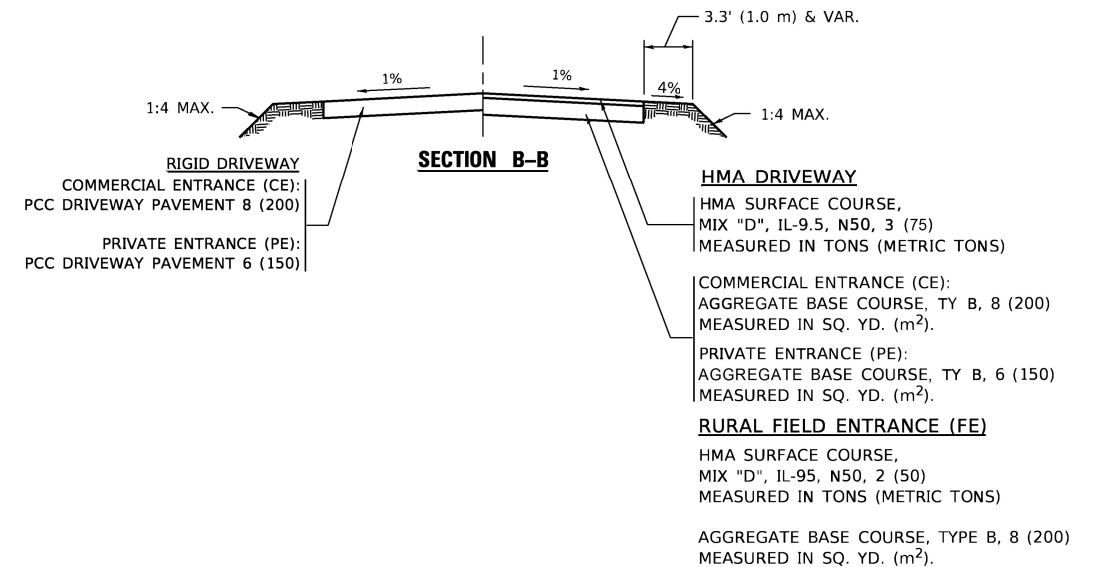
PRIVATE ENTRANCE (PE):
HMA BASE COURSE, 6 (150)
MEASURED IN SQ. YD. (m²).



ADJACENT TO PCC /HMA SHOULDER



ADJACENT TO CURB AND GUTTER



GENERAL NOTES

1. DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.
2. COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE NOTED.

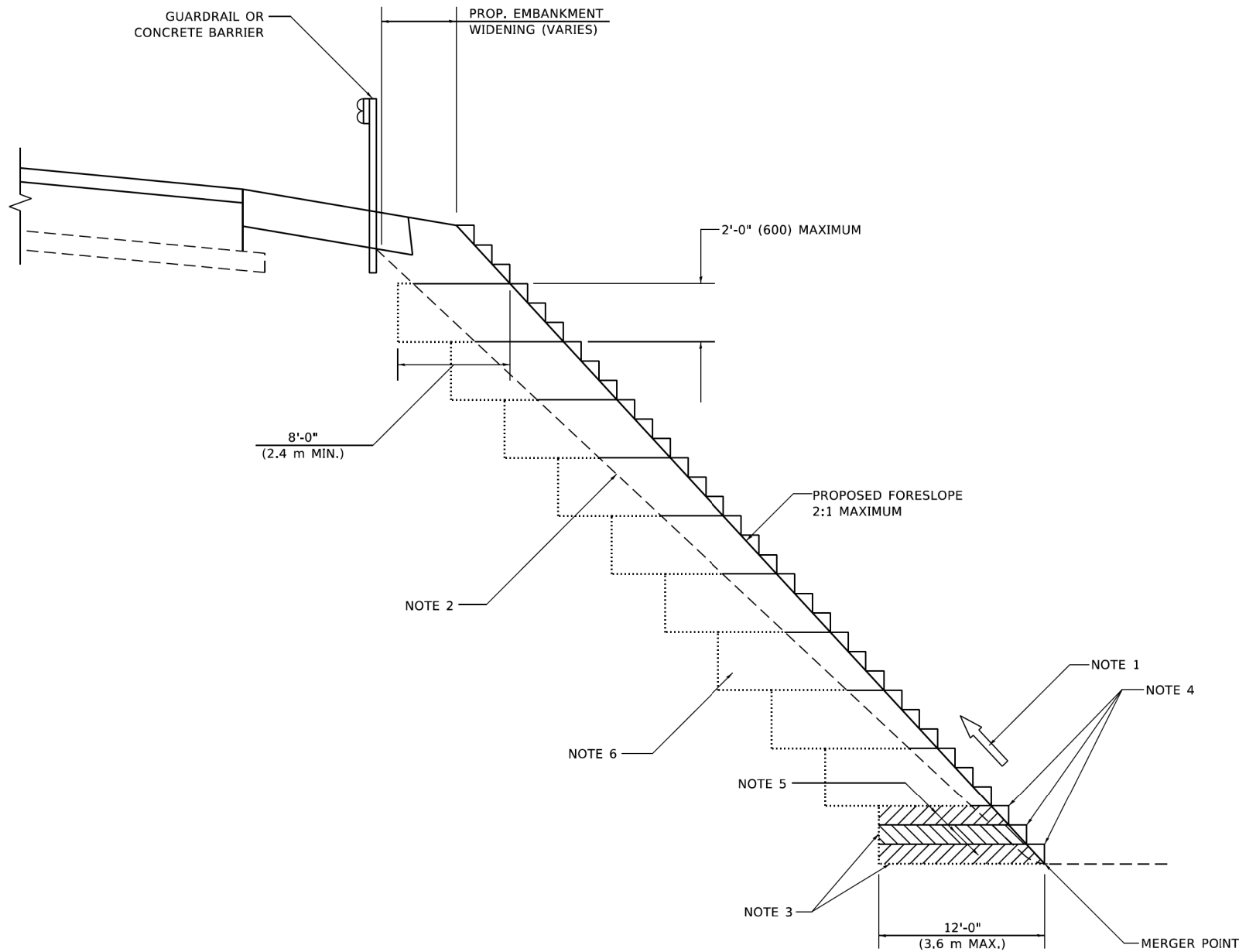
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DRAWN -	REVISED -	
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS - MCDOT

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	173
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

GENERAL NOTES

1. CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
2. EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
3. BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
4. TRIM TO FINAL SLOPE.
5. EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.

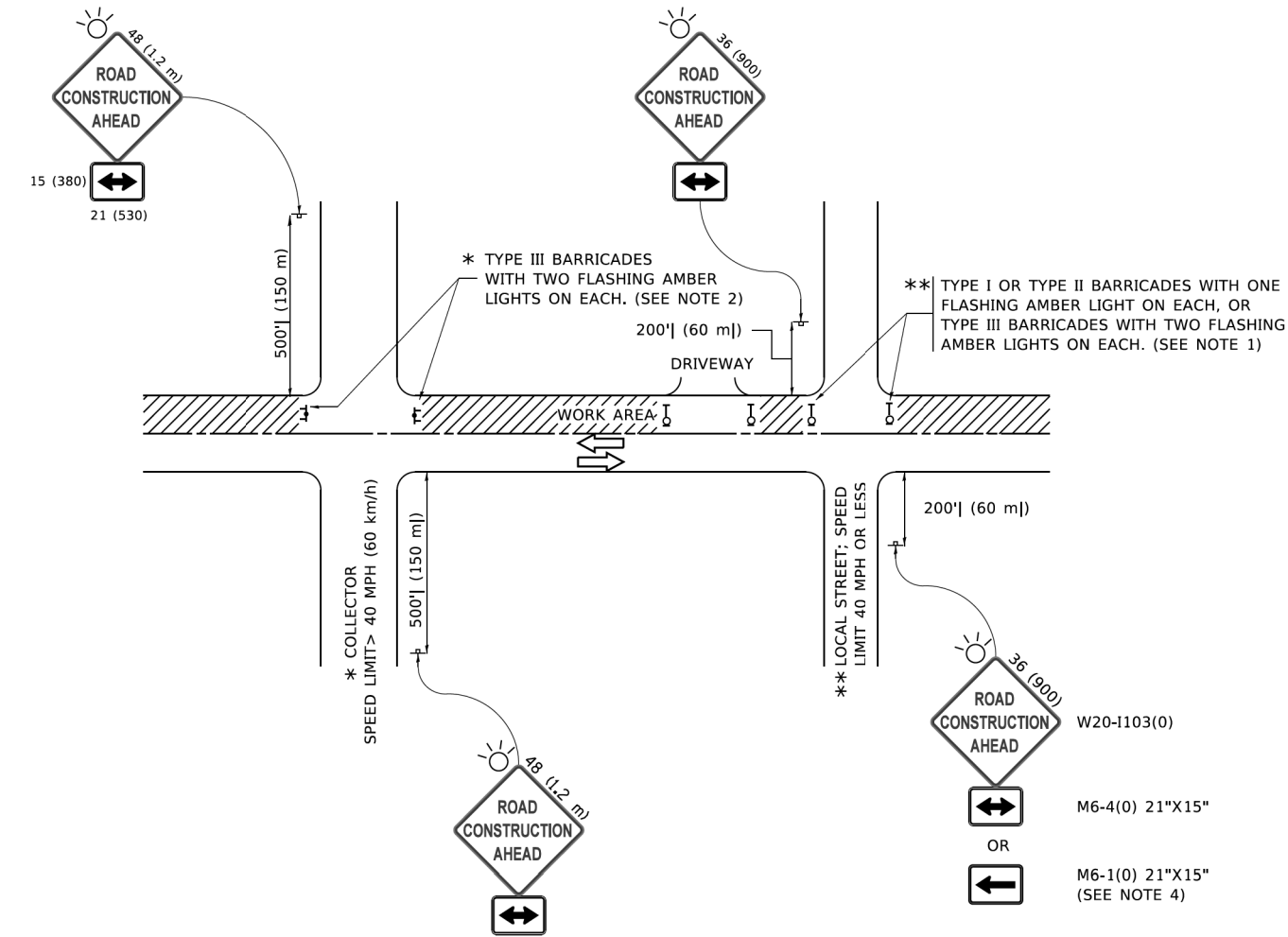
BASIS OF PAYMENT

1. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

	USER NAME = Lawrence,DeManche	DESIGNED -	REVISED - K. SMITH 11-18-22	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BENCHING DETAIL FOR EMBANKMENT WIDENING			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - CADD	REVISED -					CH T64	18-00482-00-BR	MCHENRY	219	174
	PLOT SCALE = 100.0000' / in.	CHECKED - S.E.B.	REVISED -					BD-51				
	PLOT DATE = 11/18/2022	DATE - 06-16-04	REVISED -		SCALE: NONE	SHEET 1	OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

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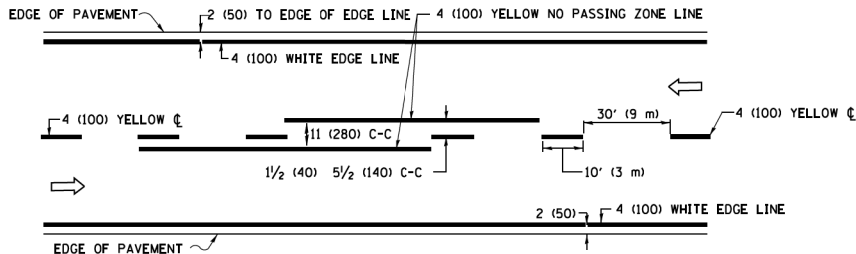


NOTES:

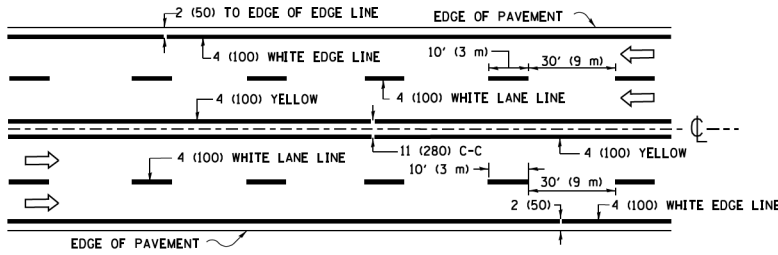
- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE
- SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
- ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
- THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

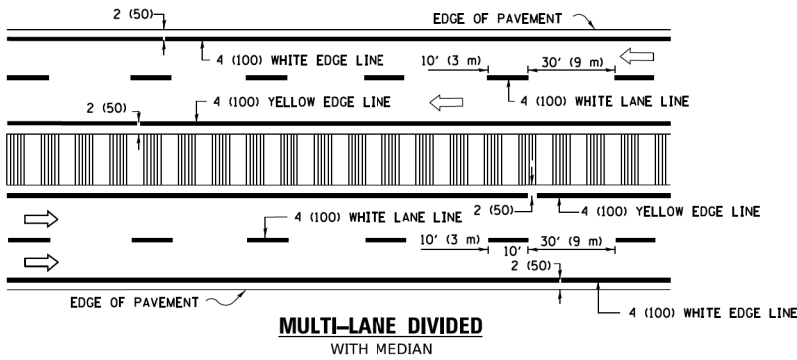
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	DRAWN -	DRAWN -	REVISED - T. RAMMACHER 01-06-00					CH T64	18-00482-00-BR	MCHENRY	219	175
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13		SCALE: NONE			TC-10		CONTRACT NO.		
	PLOT DATE = 3/4/2019	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16		SHEET 1 OF 1 SHEETS			ILLINOIS		FED. AID PROJECT		



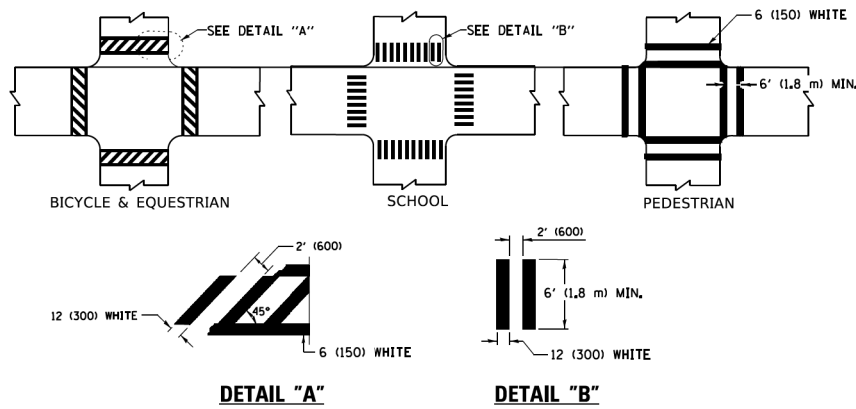
2-LANE ROADWAY



MULTI-LANE UNDIVIDED

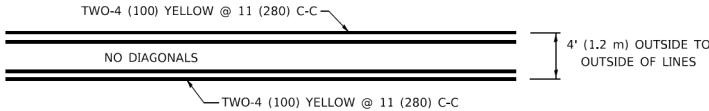


TYPICAL LANE AND EDGE LINE MARKING

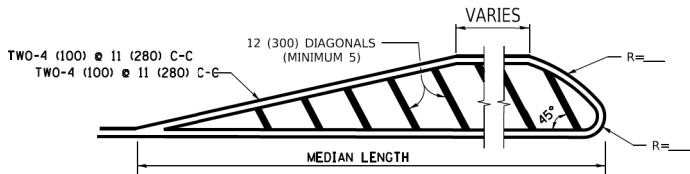


TYPICAL CROSSWALK MARKING

* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES

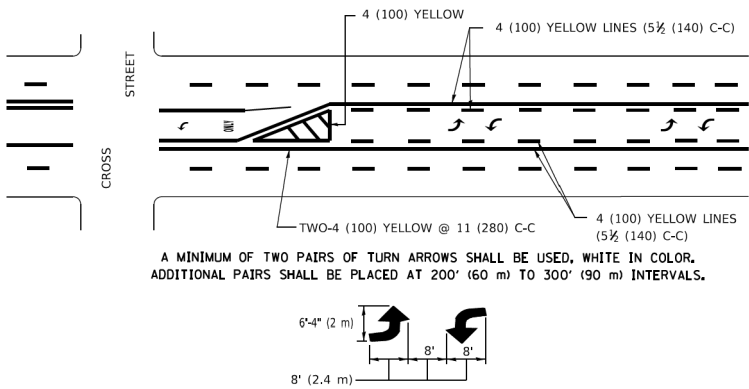


4' (1.2 m) WIDE MEDIANS ONLY



DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

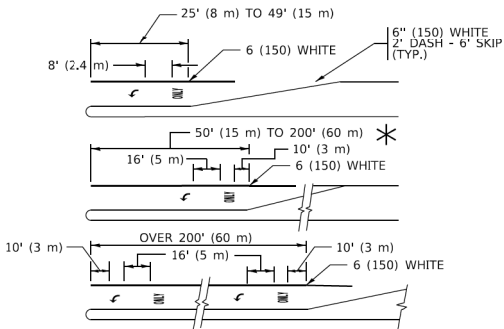
MEDIANS OVER 4' (1.2 m) WIDE



A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.

MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

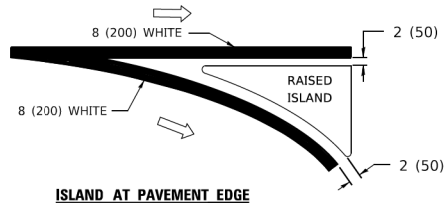
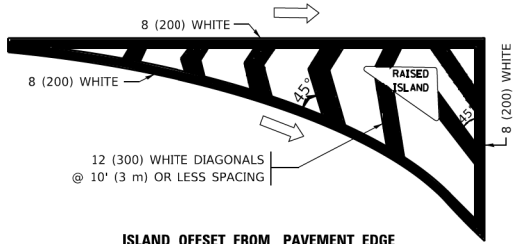


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

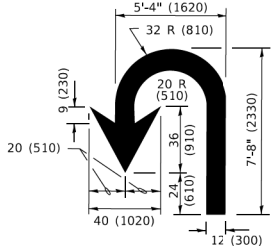
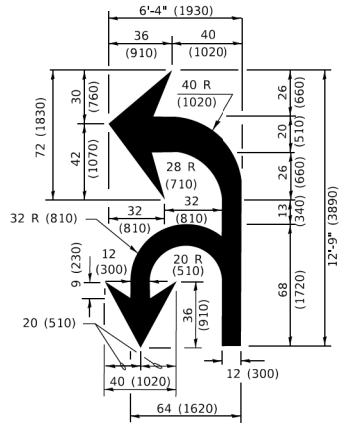
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING



LANE REDUCTION TRANSITION

* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES: "RR" 15 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: *R*=3.6 SQ. FT. (0.33 m ²) EACH *X*=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.


USER NAME = footemj	DESIGNED - EVERS	REVISED - C. JUCIUS 09-09-09
	DRAWN -	REVISED - C. JUCIUS 07-01-13
PLOT SCALE = 50.0000' / in.	CHECKED -	REVISED - C. JUCIUS 12-21-15
PLOT DATE = 3/4/2019	DATE - 03-19-90	REVISED - C. JUCIUS 04-12-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION


DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE SHEET 1 OF 2 SHEETS STA. TO STA.


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	176
TC-13		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		




FOR U.S. ROUTES
M1-40-2424




FOR ILLINOIS ROUTES
M1-50-2424




R.R. UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND




M5-1L-2115




M5-1R-2115



M6-1-2115



M6-1-2115



M6-3-2115

NORTH

M3-1-2412

EAST

M3-2-2412

SOUTH

M3-3-2412

WEST

M3-4-2412

DETOUR

M4-8-2412

* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

USER NAME	= footemj	DESIGNED	-	10-18-02
		DRAWN	-	R. BORO 09-14-09
PLOT SCALE	= 50.0000 ' / in.	CHECKED	-	
PLOT DATE	= 3/4/2019	DATE	-	

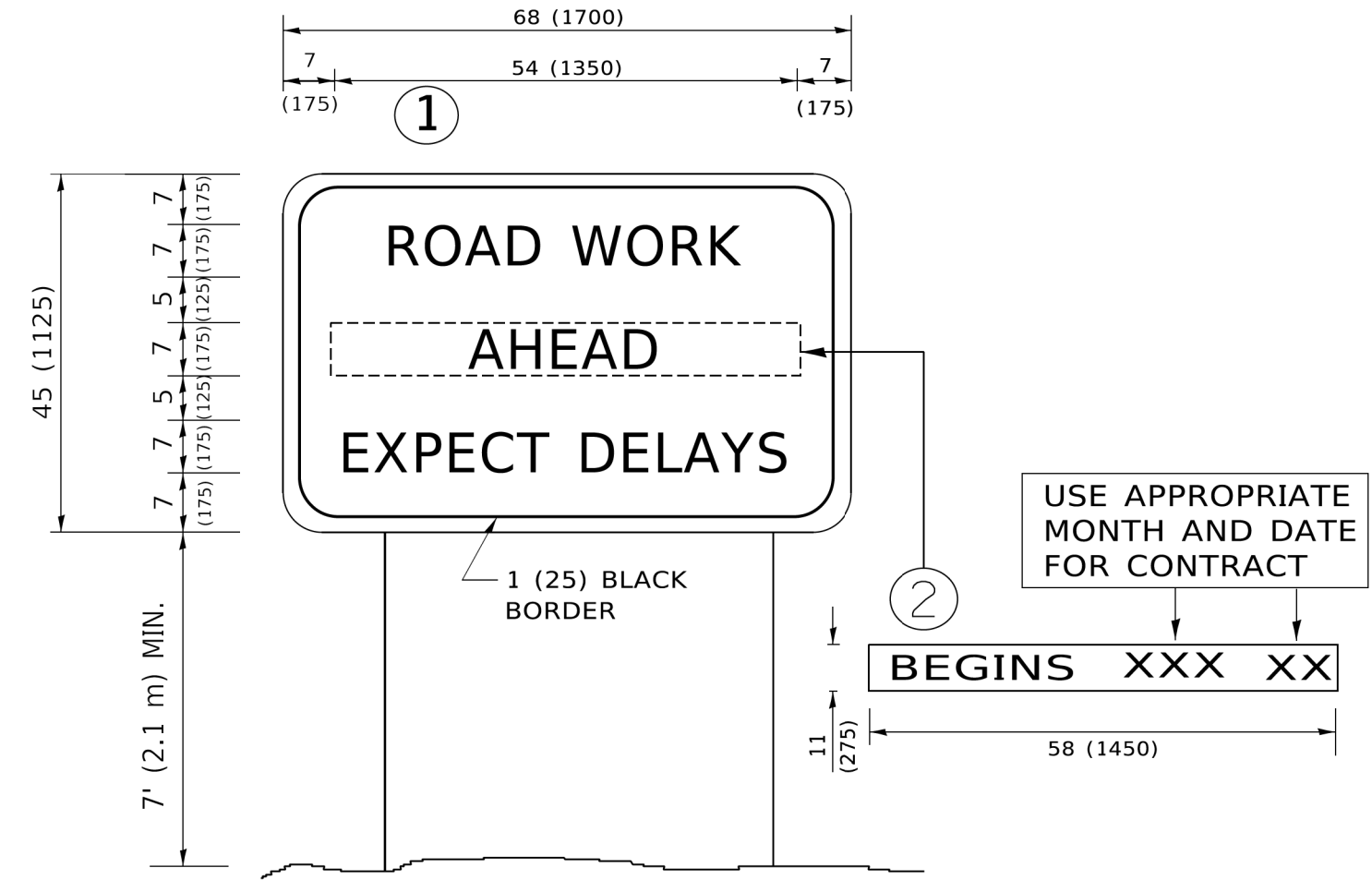
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR SIGNING
FOR CLOSING STATE HIGHWAYS

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	177
TC-21		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		

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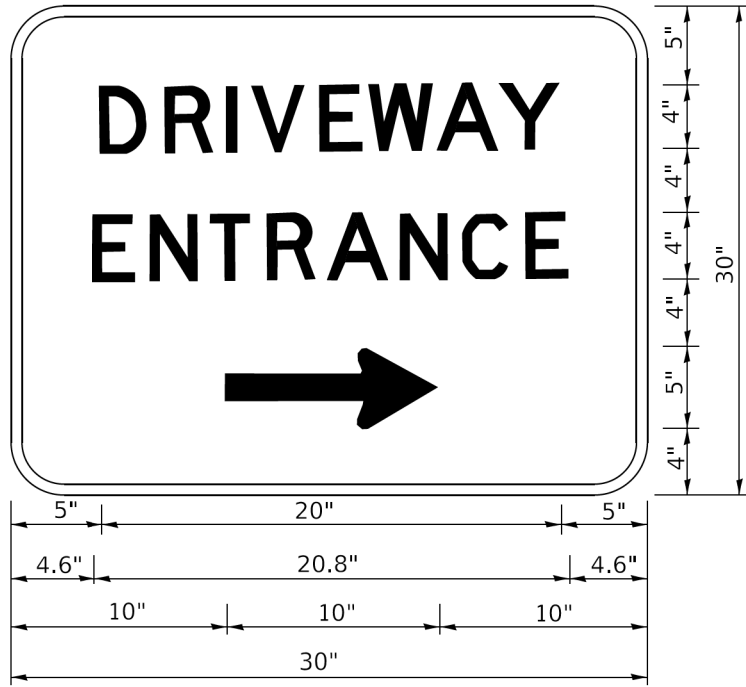


NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN①WITH INSTALLED PANEL②ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL②SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

	USER NAME = footemj	DESIGNED -	REVISED - R. MIRS 09-15-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. MIRS 12-11-97						CH T64	18-00482-00-BR	MCHENRY	219	178
	PLOT SCALE = 50,0000 ' / in.	CHECKED -	REVISED -T. RAMMACHER 02-02-99		TC-22		CONTRACT NO.						
	PLOT DATE = 3/4/2019	DATE -	REVISED - C. JUCIUS 01-31-07		SCALE: NONE	SHEET 1	OF 1 SHEETS	STA.	TO STA.				

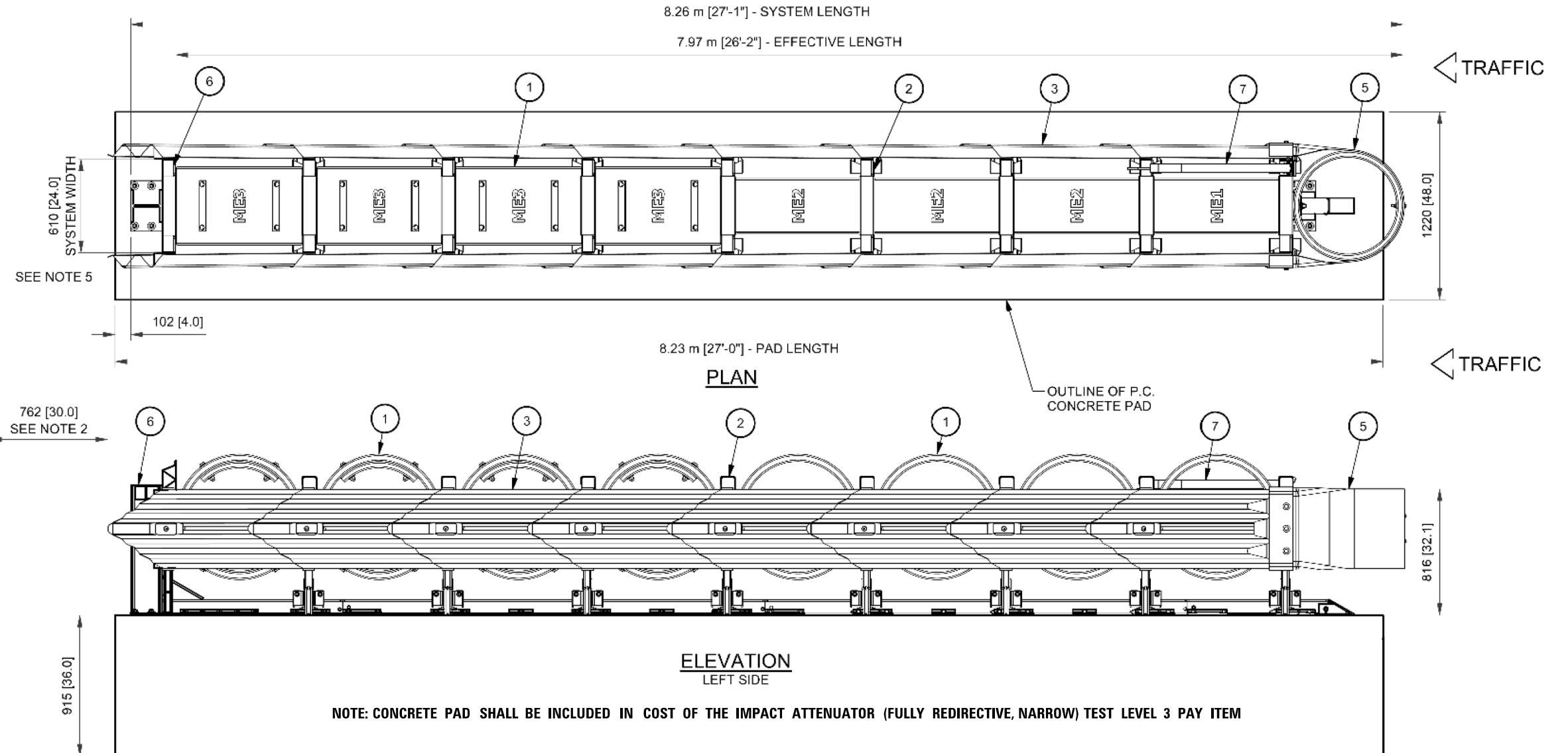


3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED
"DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

- NOTES:
- 1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
 - 2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE
PLACED BACK-TO-BACK: ONE WITH A RIGHT HAND ARROW (SHOWN)
SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY
AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE
FAR LEFT SIDE OF THE DRIVEWAY.
 - 3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

MODEL: Default
FILE: Name: p:\u084E\BID\NTEC\Illinois.gov\PIWDOT\Documents\DOT Offices\District 1\Projects\Dist5\2223\1\CADData\CAD\Sheet\TC26.dgn

	USER NAME = footemj	DESIGNED -	REVISED - C. JUCIUS 02-15-07	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRIVEWAY ENTRANCE SIGNING			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					CH T64	18-00482-00-BR	MCHENRY	219	179
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -		TC-26			CONTRACT NO.				
	PLOT DATE = 3/4/2019	DATE -	REVISED -		SCALE: NONE	SHEET 1	OF 2 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		



NOTES:

1. IN COMPLIANCE WITH THE AASHTO 2011 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
2. PROVISION SHALL BE MADE FOR REAR FENDER PANELS TO SLIDE REARWARD UPON IMPACT 762 [30.0] MIN.
3. 150 [6.0] MIN. REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE PAD OR 203 [8.0] MIN. NON-REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE ROADWAY (MEASURING AT LEAST 3.7m [12'-0"] WIDE AND 15.2m [50'-0"] LONG).

KEY

- | | |
|-----------------|-----------------|
| ① BAY ASSEMBLY | ⑦ HIT INDICATOR |
| ② DIAPHRAGM | |
| ③ FENDER PANEL | |
| ④ MONORAIL | |
| ⑤ NOSE ASSEMBLY | |
| ⑥ BACKUP | |

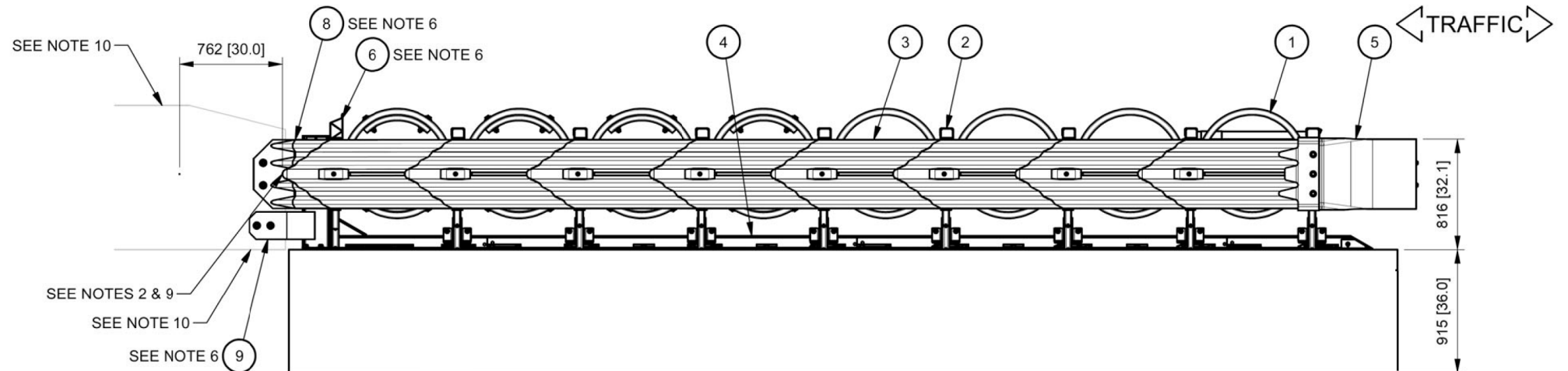
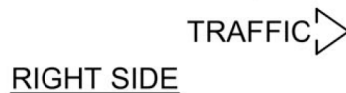
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	DRAWN - MRQ	REVISED -
PLOT SCALE = 100.0000 / ft.	CHECKED - MTC	REVISED -
PLOT DATE = 9/1/2023	DATE - 08/07/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER
AND SOUTH BRANCH KISHWAUKEE RIVER
IMPACT ATTENUATOR DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	180
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



1. IN COMPLIANCE WITH THE AASHTO 2011 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
2. PROVISION SHALL BE MADE FOR REAR FENDER PANELS TO SLIDE REARWARD UPON IMPACT 762 [30.0] MIN.
3. 150 [6.0] MIN. REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE PAD WITH ANCHOR BLOCK OR 203 [8.0] MIN. NON-REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE ROADWAY, MEASURING AT LEAST 3.66 m [12'-0"] WIDE BY 15.24 m [50'-0"] LONG. ANCHOR BLOCK IS NOT REQUIRED WHEN USING 203 [8.0] CONCRETE PAD INSTALLED AGAINST AN IMMOVABLE STRUCTURE SUCH AS A CONCRETE WALL OR ABUTMENT.
4. **REFER TO THE PRODUCT MANUAL FOR DESCRIPTIONS OF IMPACT CHARACTERISTICS, PERFORMANCE, AND DESIGN LIMITATIONS.**

5. WHERE NECESSARY, THE CUSTOMER SHALL SUPPLY AN ADEQUATE TRANSITION FROM THE **IMPACT ATTENUATOR** SYSTEM TO THE OBJECT BEING SHIELDED.
6. **END SHOE AND TRANSITIONS SHALL BE INCLUDED IN COST OF THE IMPACT ATTENUATOR (FULLY REDIRECTIVE, NARROW) TEST LEVEL 3 PAY ITEM**
7. THE **IMPACT ATTENUATOR SYSTEM SHALL BE** TESTED TO MASH TEST LEVEL 3.
8. FOR PROPER IMPACT PERFORMANCE, THE UNIT MUST BE RESTORED TO ITS ORIGINAL LENGTH AFTER EACH IMPACT.
9. MAXIMUM GAP FROM FENDER PANEL OVERLAP SHOULD NOT EXCEED 20 [8].
10. CONCRETE BARRIER WITH CHAMFERED CORNERS AT 1:4 RATE IS ACCEPTABLE IN PLACE OF WHEEL DEFLECTORS. IF BARRIER HEIGHT IS MORE THAN 813 [32], TRIM TOP AT 1:4 TAPER TO PREVENT VEHICLE CONTACT WITH BLUNT END.

	NOSE COLOR
	GRAY
	YELLOW

11. CAUTION: CENTERLINE OF **IMPACT ATTENUATOR** SYSTEM SHALL BE PARALLEL WITH CENTERLINE OF BARRIER $\pm 1^\circ$.
12. CAUTION: MAX. 160 [7.0] CLEARANCE BETWEEN BACKUP AND BARRIER WALL. ZERO CLEARANCE RECOMMENDED. 127 [5.0] MIN. RECOMMENDED IF WHEEL DEFLECTORS ARE USED.

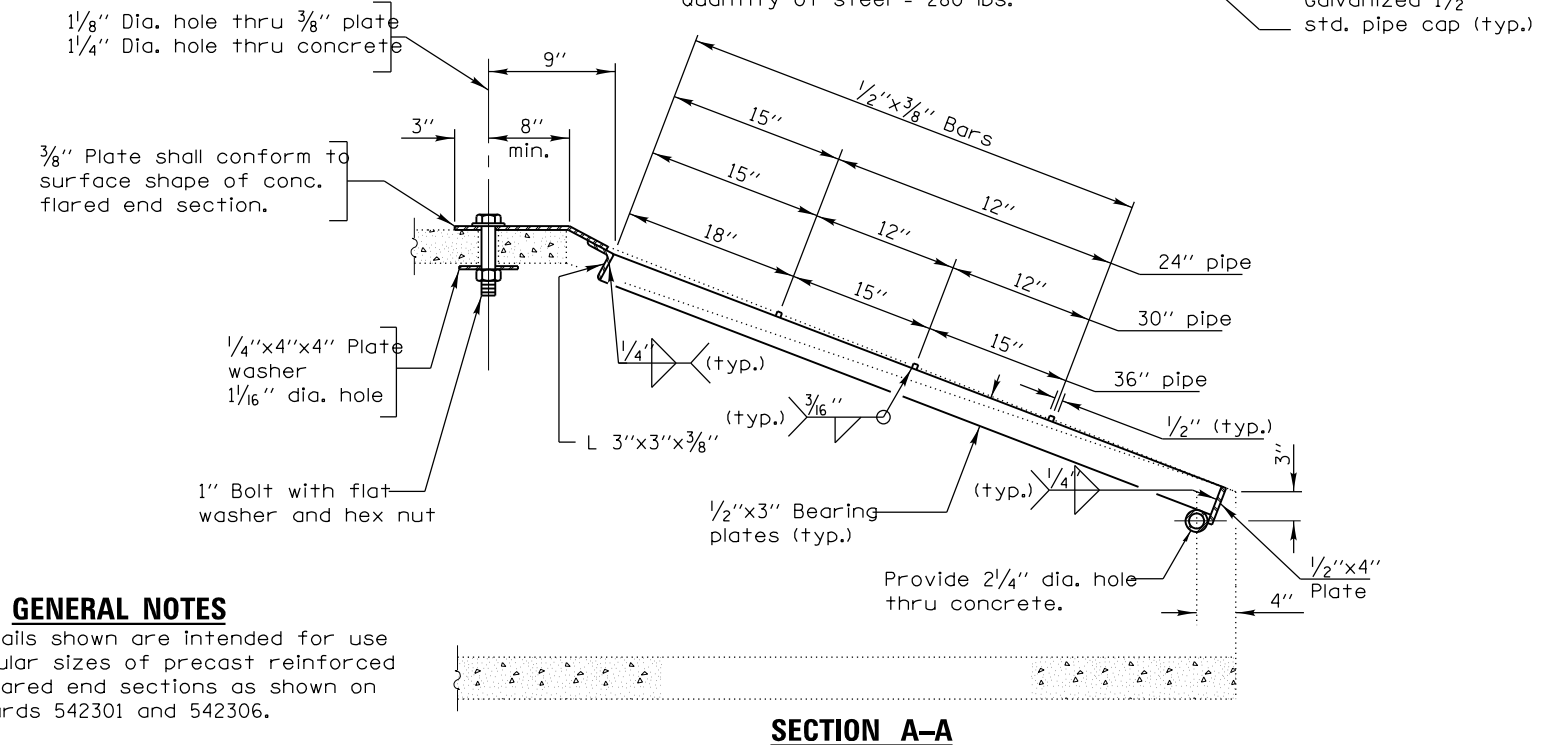
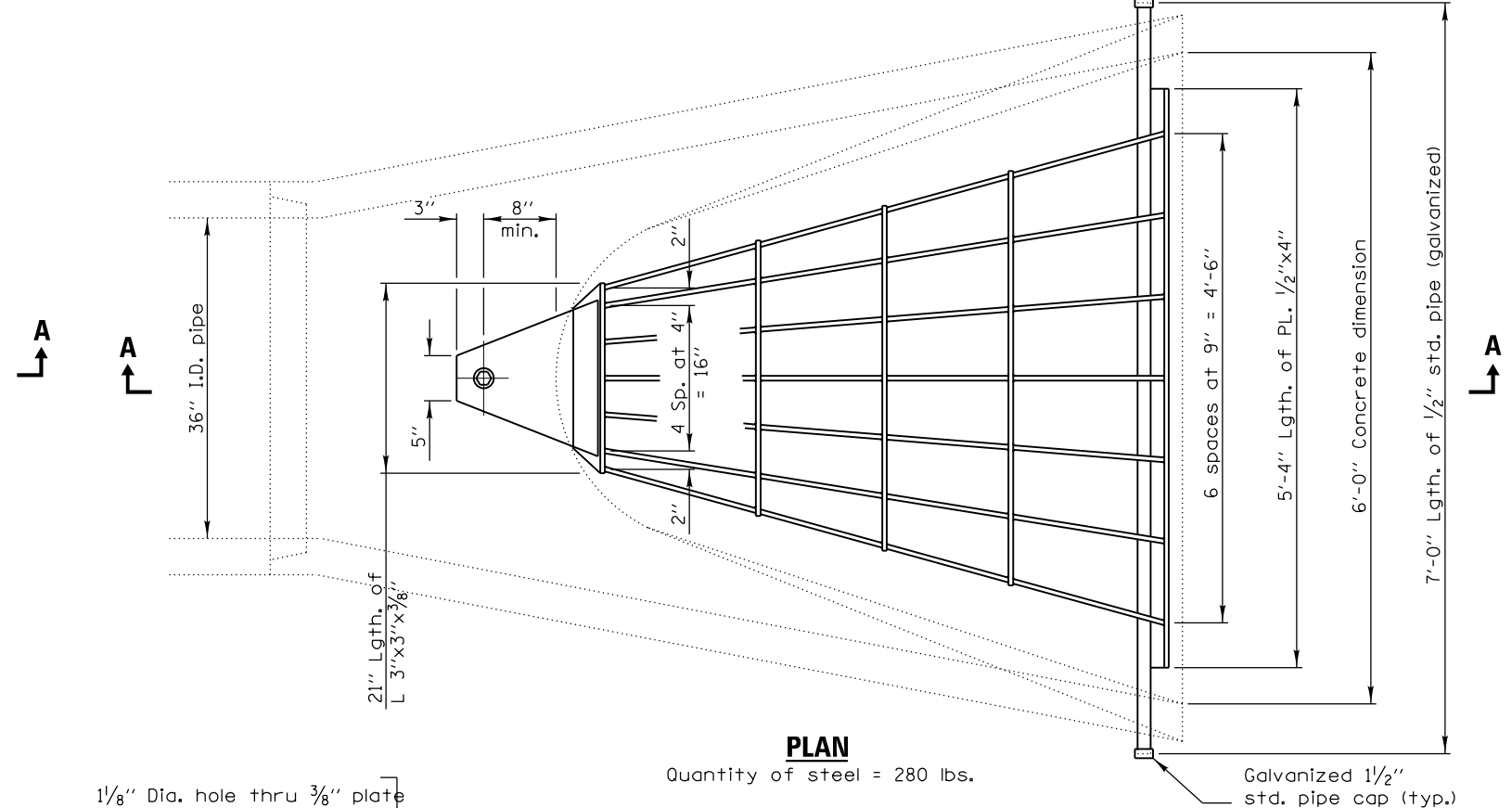
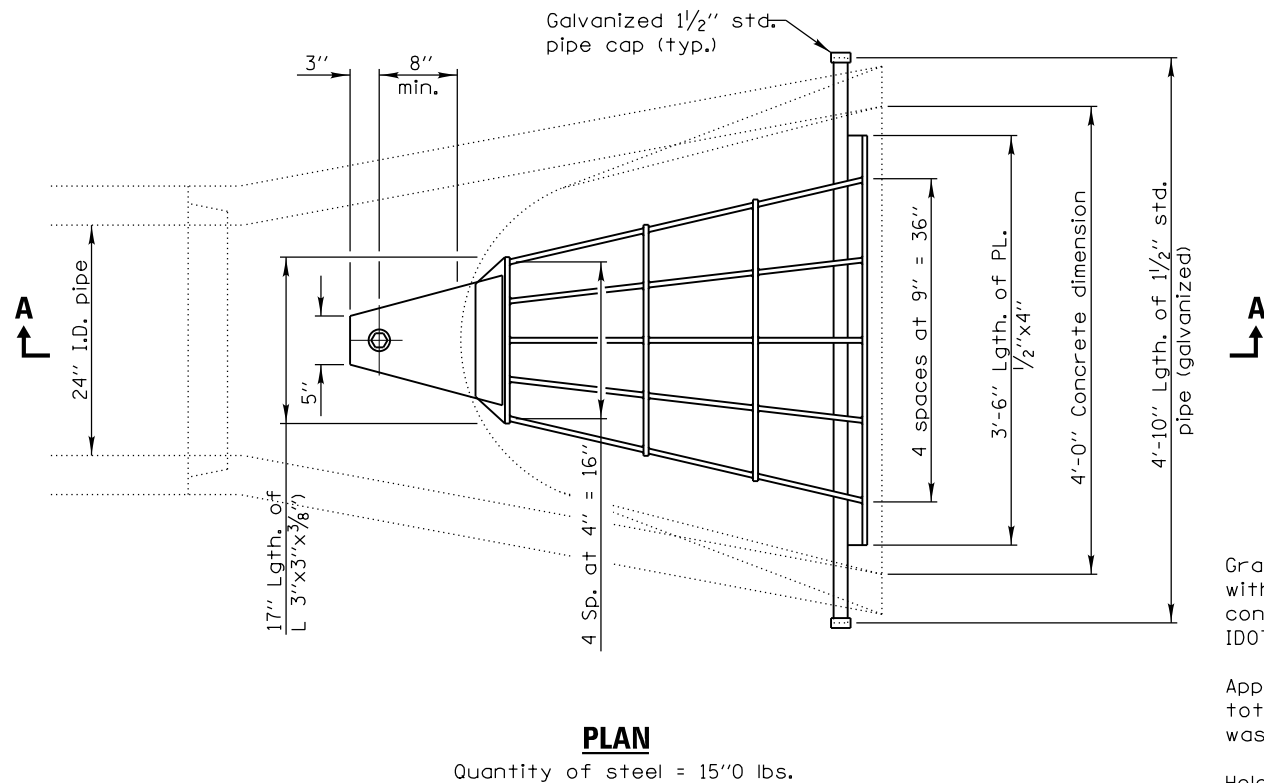
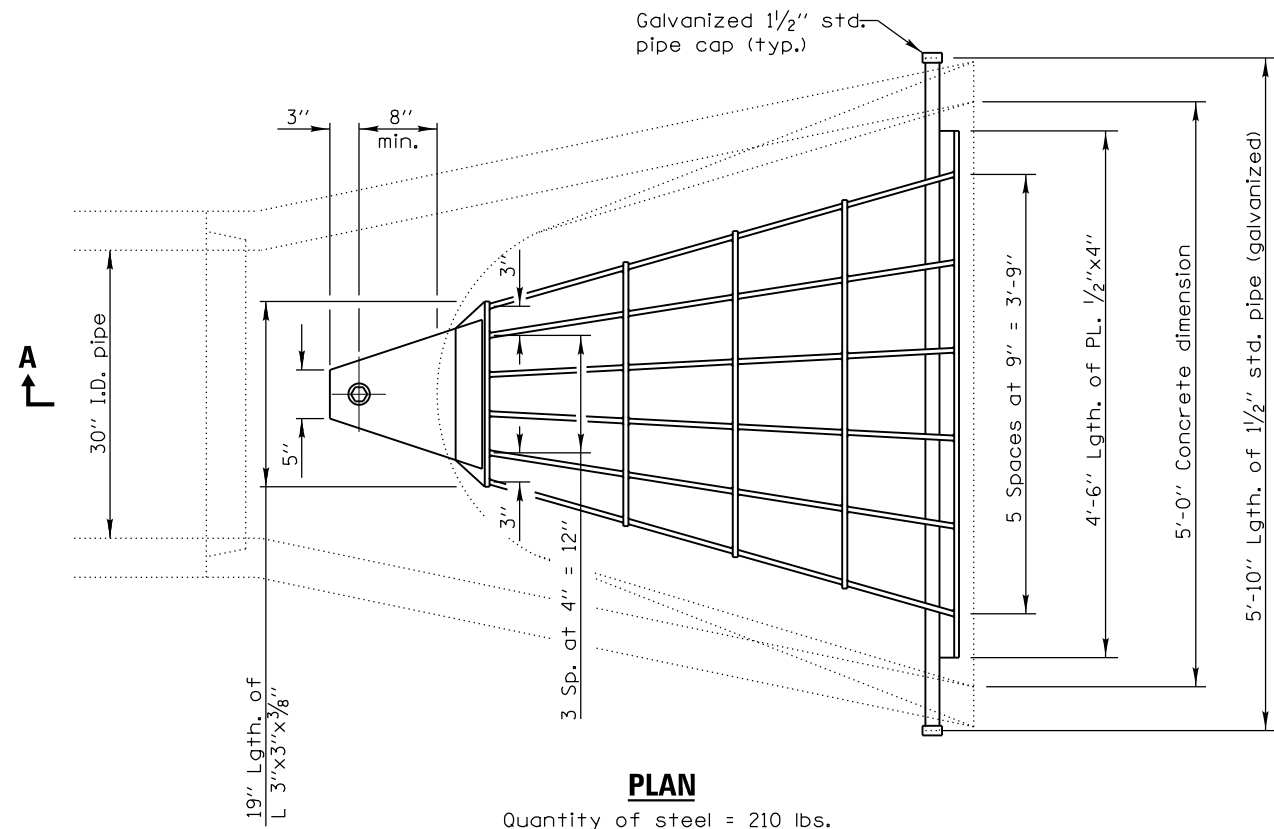
① BAY ASSEMBLY	⑦ HIT INDICATOR
② DIAPHRAGM	⑧ END SHOE
③ FENDER PANEL	⑨ WHEEL DEFLECTOR
④ MONORAIL	
⑤ NOSE ASSEMBLY	
⑥ BACKUP	

USER NAME = cesario	DESIGNED - MRQ	REVISED -
	DRAWN - MRQ	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - MTC	REVISED -
PLOT DATE = 9/1/2023	DATE = 08/07/2023	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER
AND SOUTH BRANCH KISHWAUKEE RIVER
IMPACT ATTENUATOR END SHOE DETAIL**

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	181
		CONTRACT NO. 61J79		
	ILLINOIS	FED. AID PROJECT		



GENERAL NOTES

Grating details shown are intended for use with particular sizes of precast reinforced concrete flared end sections as shown on IDOT standards 542301 and 542306.

Approximate quantity of steel shown includes total quantity of grating, bolts, nuts, washers and steel pipe.

Holes in the precast concrete flared end sections shall be cored to the diameters noted. If cone-out on the other end of the hole occurs, the hole shall be filled with grout to correct the diameter of the hole.

**GRATING FOR CONCRETE
FLARED END SECTIONS
(24"-54")**

SHEET 1 OF 2

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER				CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DESIGNED - MRQ				SCALE:				CH T64	18-00482-00-BR	MCHENRY	219	182
DRAWN - MRQ				SHEET OF SHEETS				CONTRACT NO. 61J79				
CHECKED - MTC				STA. TO STA.				ILLINOIS FED. AID PROJECT				
PLOT SCALE = 100.0000' / in.												
PLOT DATE = 8/2/2023												
DATE = 08/07/2023												
REVISED -												
REVISED -												
REVISED -												
REVISED -												



PLAN

Quantity of steel = 320 lbs.



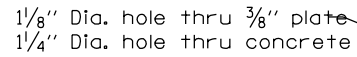
PLAN

Quantity of steel = 400 lbs.



PLAN

Quantity of steel = 425 lbs.



3/8" Plate shall conform to surface shape of conc. flared end section.

L 4"x4"x1/4"
Plate washer

1" Bolt with
flat washer
and hex nut

1/2"x3" Bearing
plates (typ.)

Provide 2 1/4" d
thru concrete

1/2"x4"
Plate

SECTION A-A

GRATING FOR CONCRETE FLARED END SECTIONS (24"–54")

SHEET 2 OF 2

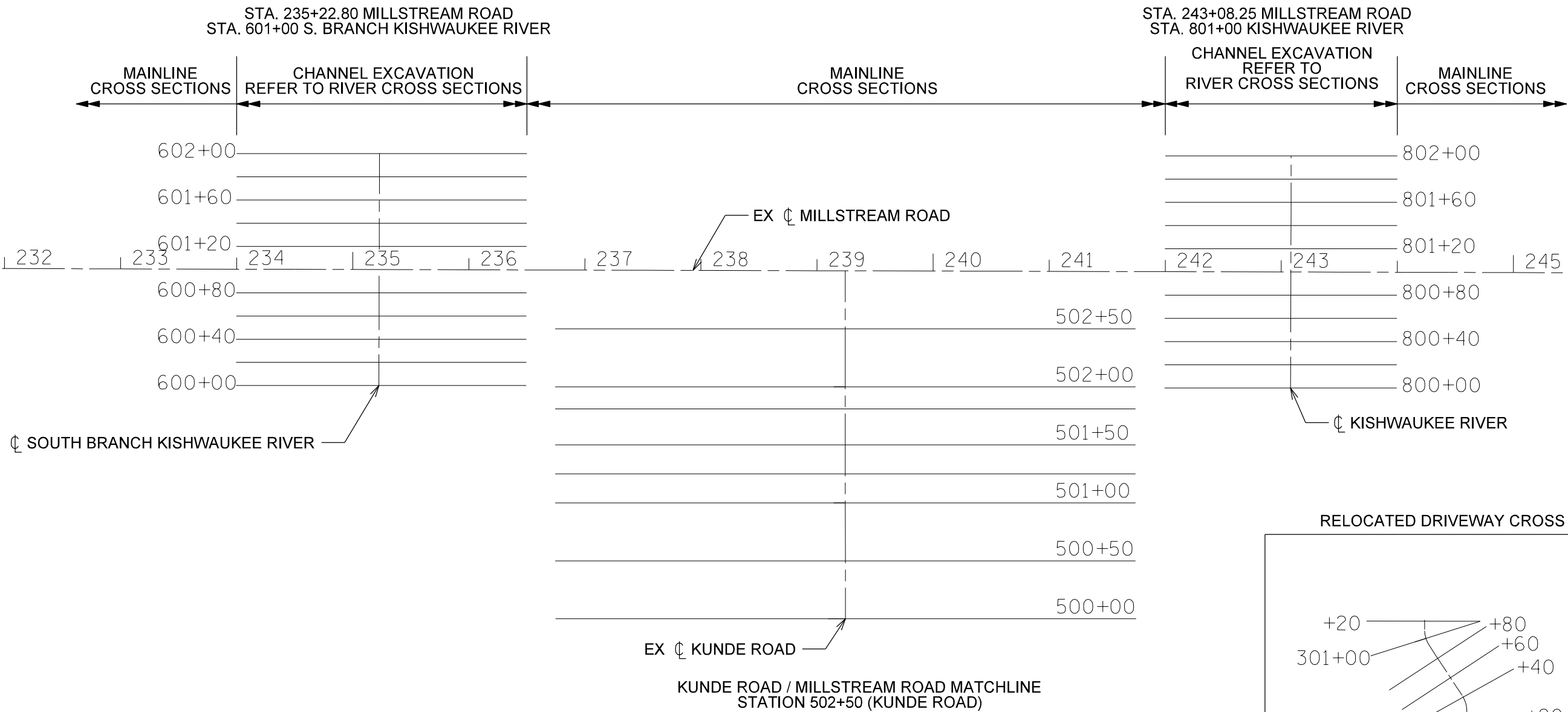
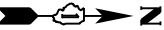
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	DRAWN - MRQ	REVISED -
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PLOT DATE = 8/2/2023	DATE - 08/07/2023	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

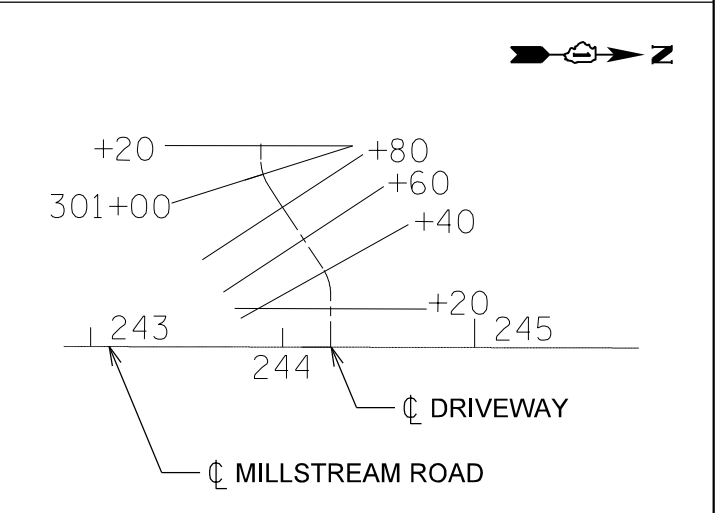
**MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER
AND SOUTH BRANCH KISHWAUKEE RIVER**

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
--------	-------	----	--------	------	---------

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	183
		CONTRACT NO. 61J79		
ILLINOIS		FED. AID PROJECT		



RELOCATED DRIVEWAY CROSS SECTION



USER NAME = cesario	DESIGNED - MRQ	REVISED -
	DRAWN - MRQ	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - MTC	REVISED -
PLOT DATE = 8/2/2023	DATE - 08/07/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

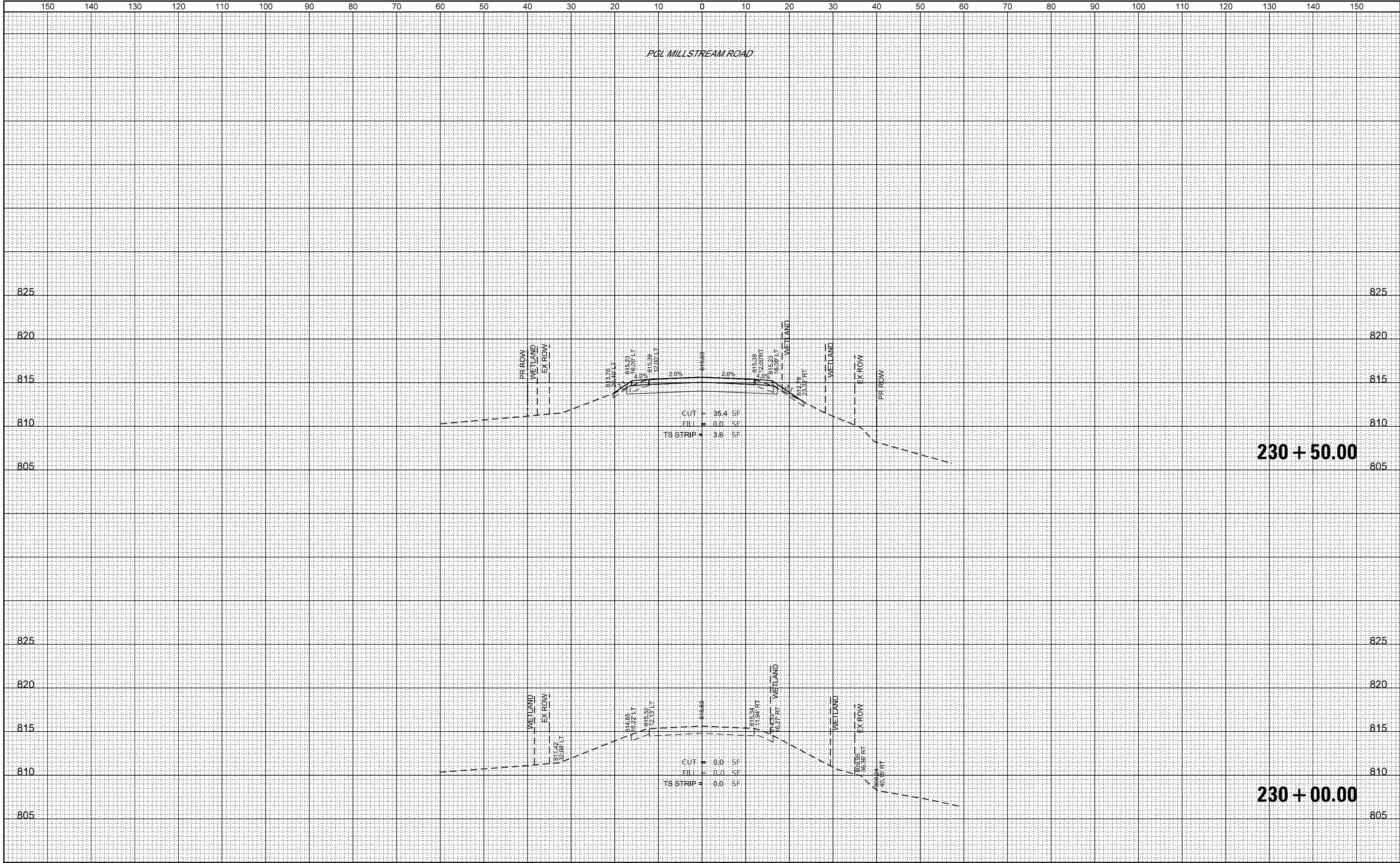
MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER CROSS SECTION LOCATION LEGEND			
SCALE: N.T.S.	SHEET 1 OF 1 SHEETS	STA. 230+00	TO STA. 252+00

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	184
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

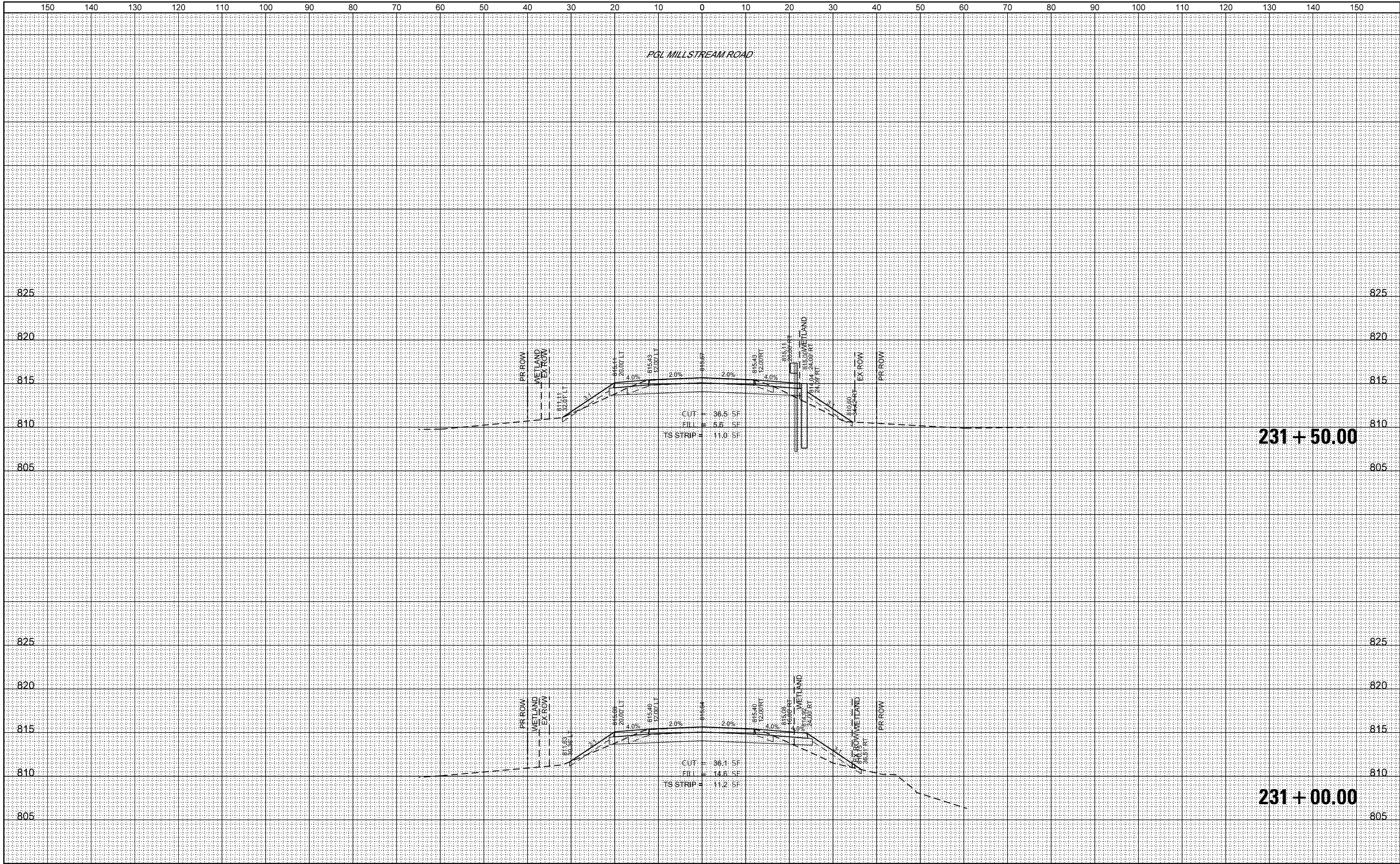
B BLA, Inc.



FILE NAME =	USER NAME = cessito	DESIGNED - MRQ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00482-00-BR_sht_cross sections roadway.dgn		DRAWN - MRQ	REVISED -									CH T64	18-00482-00-BR	MCHENRY	219	185
PLOT SCALE = 20.0009" / in.		CHECKED - MTC	REVISED -												CONTRACT NO. 61J79	
PLOT DATE = 9/1/2023		DATE - 08/07/2023	REVISED -												ILLINOIS	FED. AID PROJECT
Default								SCALE: 1"=5' V 1"=10' H	SHEET 1 OF 23 SHEETS	STA. 230+00.00	TO STA. 230+50.00					

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____		
	AREAS _____		
NO _____	AREAS CHECKED _____		

B BLA, Inc.

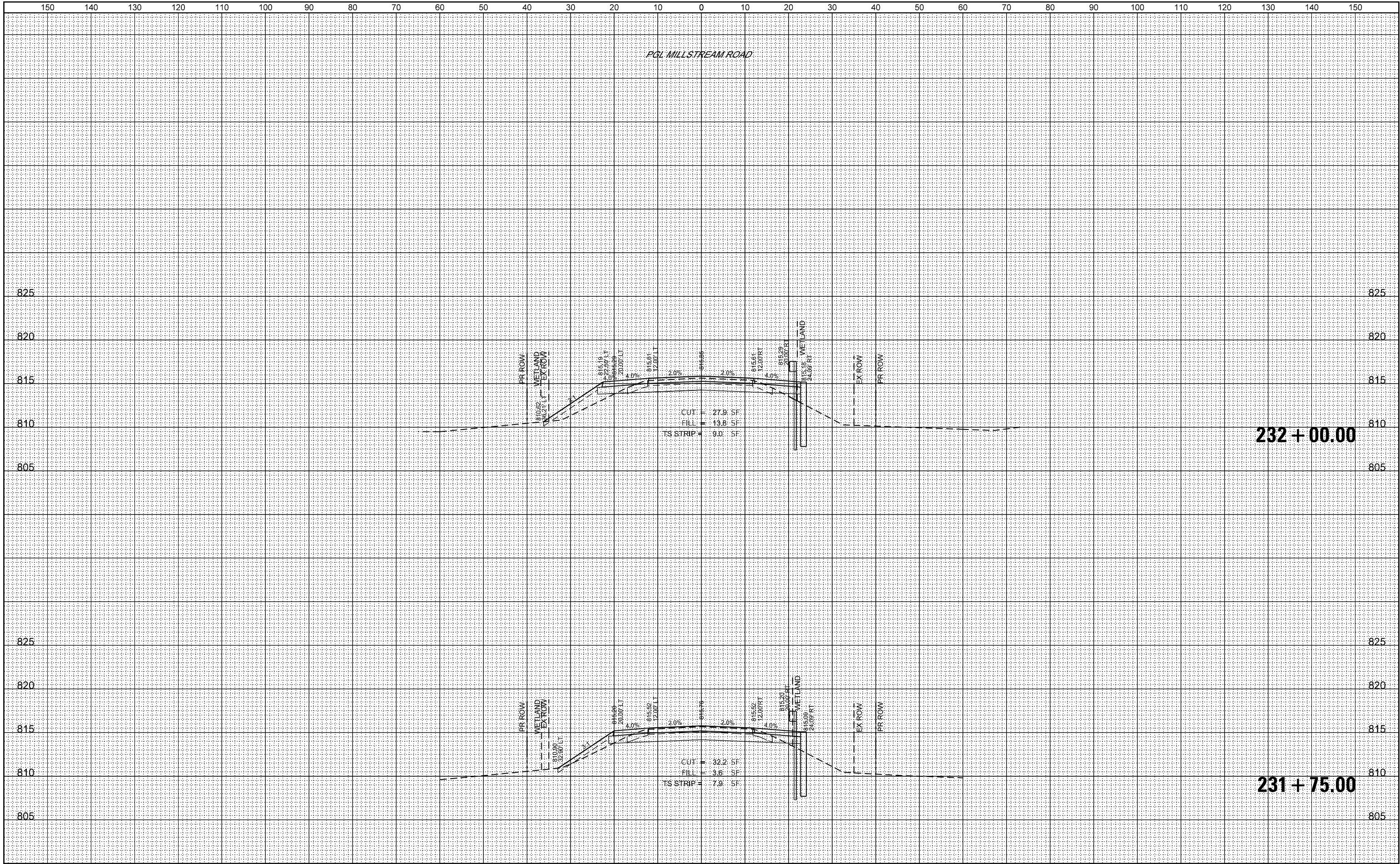


FILE NAME =	USER NAME = cesario	DESIGNED - MRQ	REVISED -	<div>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</div>	<div>MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS</div>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00-62-00-BR_sh_cross sections roadway.dgn	DRAWN - MRQ	REVISED -	CH T64			18-00482-00-BR	MCHENRY	219	186	
PLOT SCALE = 20.0009' / in.	CHECKED - MTC	REVISED -	CONTRACT NO. 61J79							
PLOT DATE = 9/1/2023	DATE = 08/07/2023	REVISED -								
Default				SCALE: 1"=5' V 1"=10' H	SHEET 2 OF 23 SHEETS	STA. 231+00.00 TO STA. 231+50.00				

FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____		
	AREAS _____		
NO. _____	AREAS CHECKED _____		

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ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____		
	AREAS _____		
NO _____	AREAS CHECKED _____		

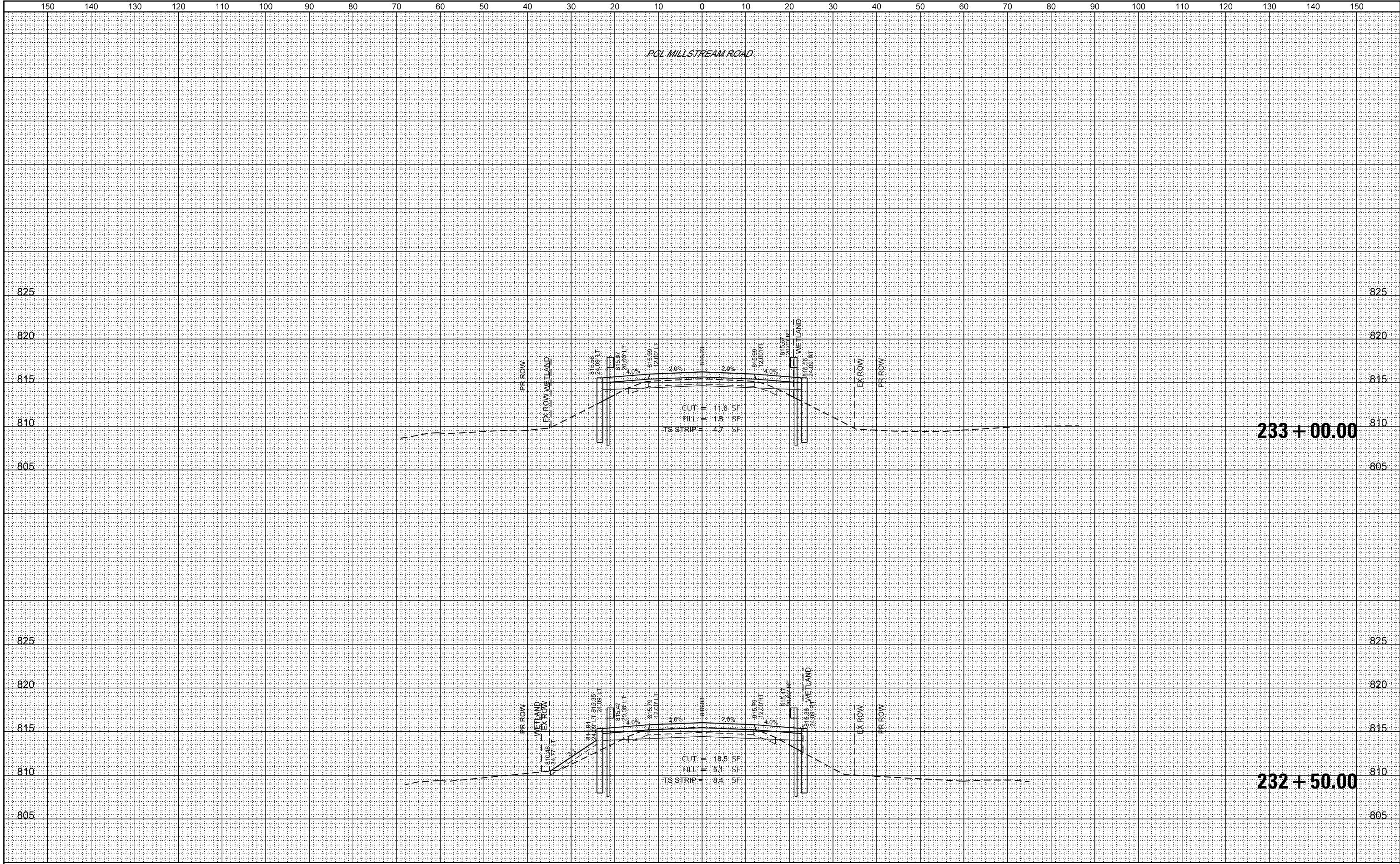


FILE NAME =	USER NAME = cesario	DESIGNED = MRQ	REVISED =	<div>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</div>	<div>MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS</div>				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00-02-00-BR_sh_cross sections roadway.dgn	DRAWN = MRQ	REVISED =							CH T64	18-00482-00-BR	MCHENRY	219	187
PLOT SCALE = 20.0009' / in.	CHECKED = MTC	REVISED =			CONTRACT NO. 61J79								
PLOT DATE = 9/1/2023	DATE = 08/07/2023	REVISED =			SCALE: 1"=5' V 1"=10' H	SHEET 3 OF 23 SHEETS	STA. 231+75.00 TO STA. 232+00.00		ILLINOIS FED. AID PROJECT				

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.

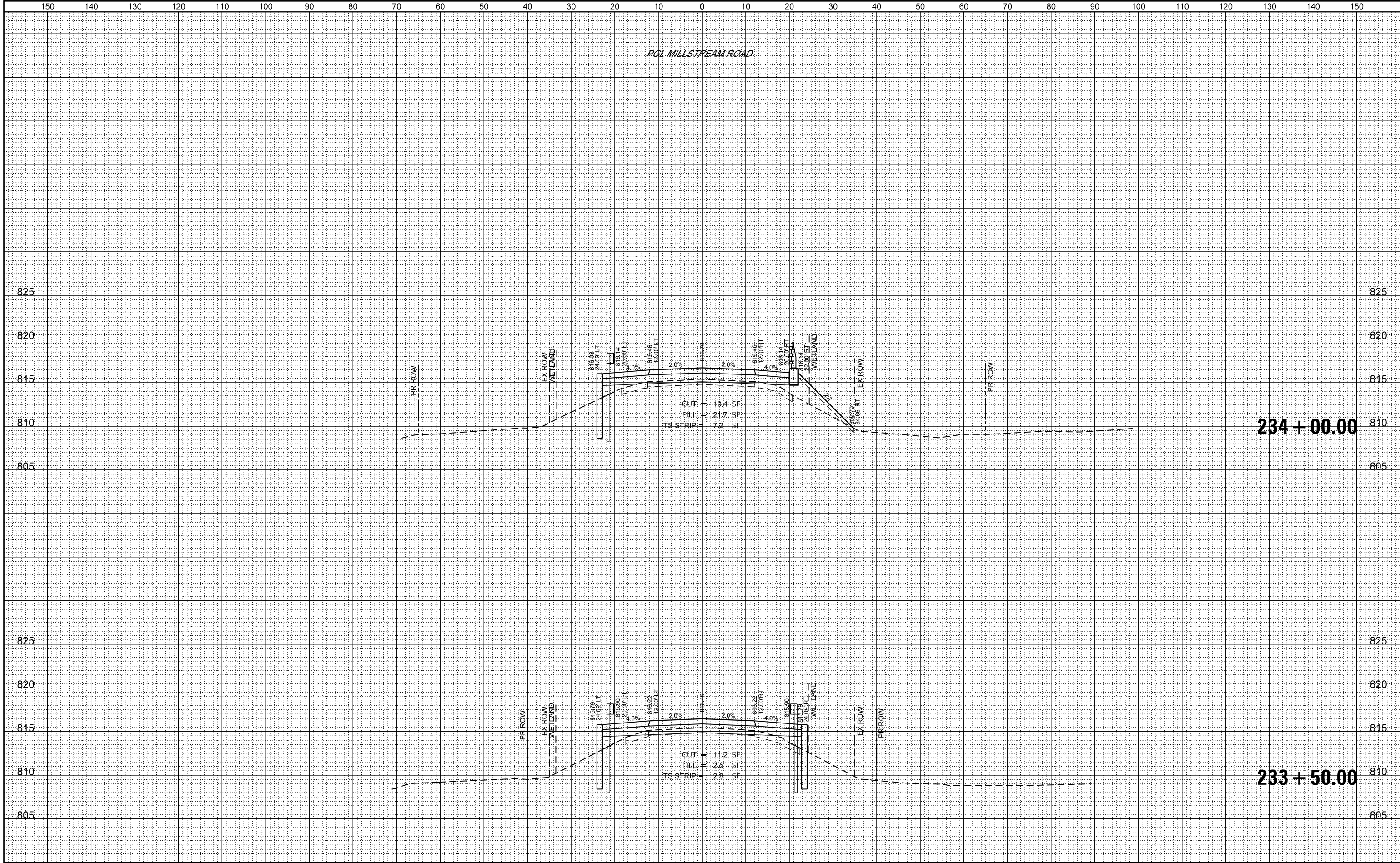


150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150			
FILE NAME =			USER NAME = cesaito			DESIGNED - MRQ			REVISED -			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION										MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS						F.A. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00482-00-BR_sht_cross sections roadway.dgn						DRAWN - MRQ			REVISED -													CH T64	18-00482-00-BR		MCHENRY	219	188						
						PLOT SCALE = 20.0009' / in.			CHECKED - MTC													REVISED -								CONTRACT NO. 61J79			
Default						PLOT DATE = 9/1/2023			DATE - 08/07/2023													REVISED -			SCALE: 1"=5' V 1"=10' H		SHEET 4 OF 23 SHEETS		STA. 232+50.00 TO STA. 233+00.00				ILLINOIS

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.

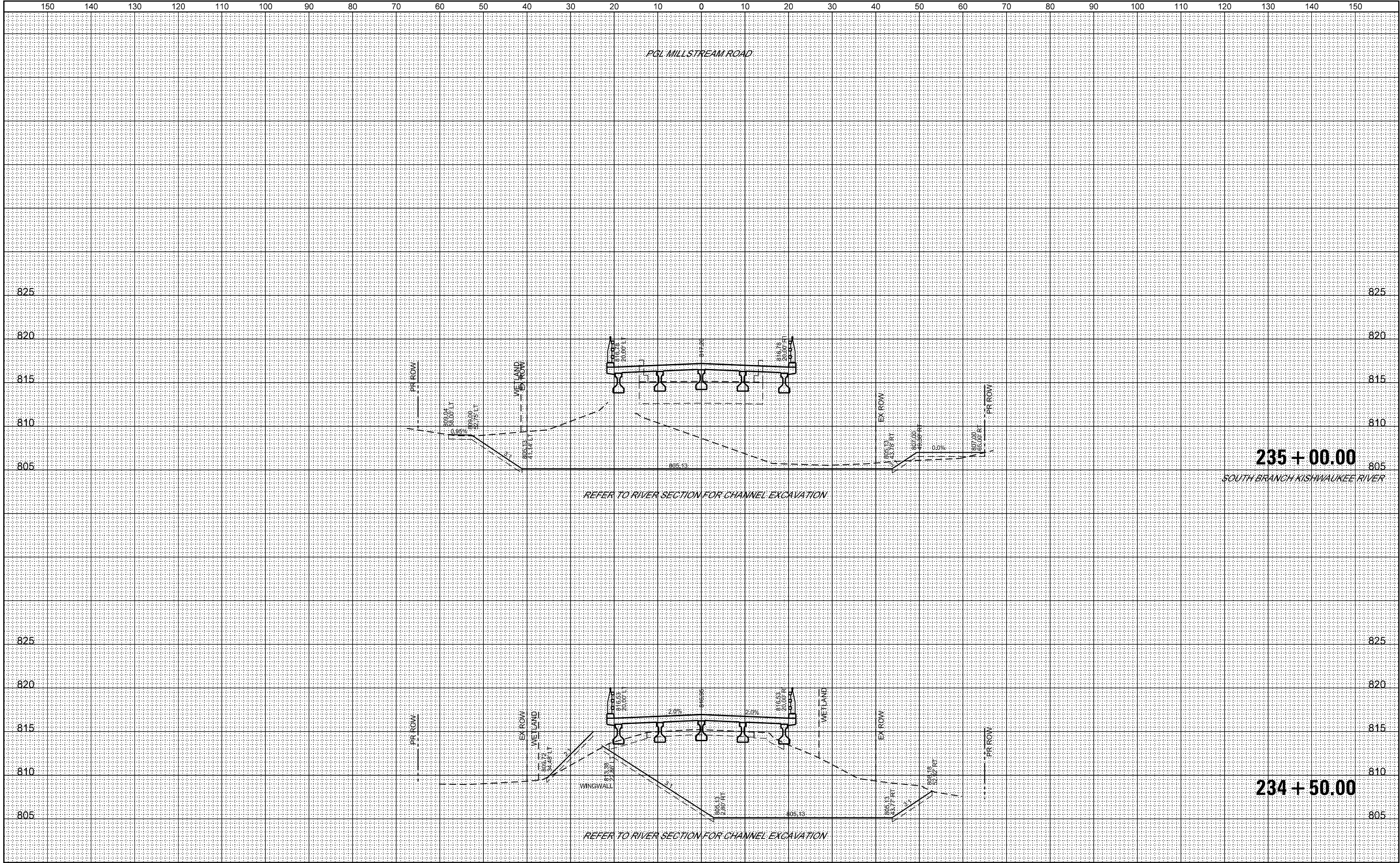


FILE NAME	USER NAME	DESIGNED	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00-02-00-BR_sht_cross sections roadway.dgn	cessario	DRAWN	REVISED									CH T64	18-00482-00-BR	MCHENRY	219	189
PLOT SCALE	PLOT DATE	CHECKED	REVISED									CONTRACT NO. 61J79				
Default	9/1/2023	DATE	REVISED									ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED BY	DATE

ORIGINAL SURVEY NO.	SURVEYED BY	DATE

B BLA, Inc.

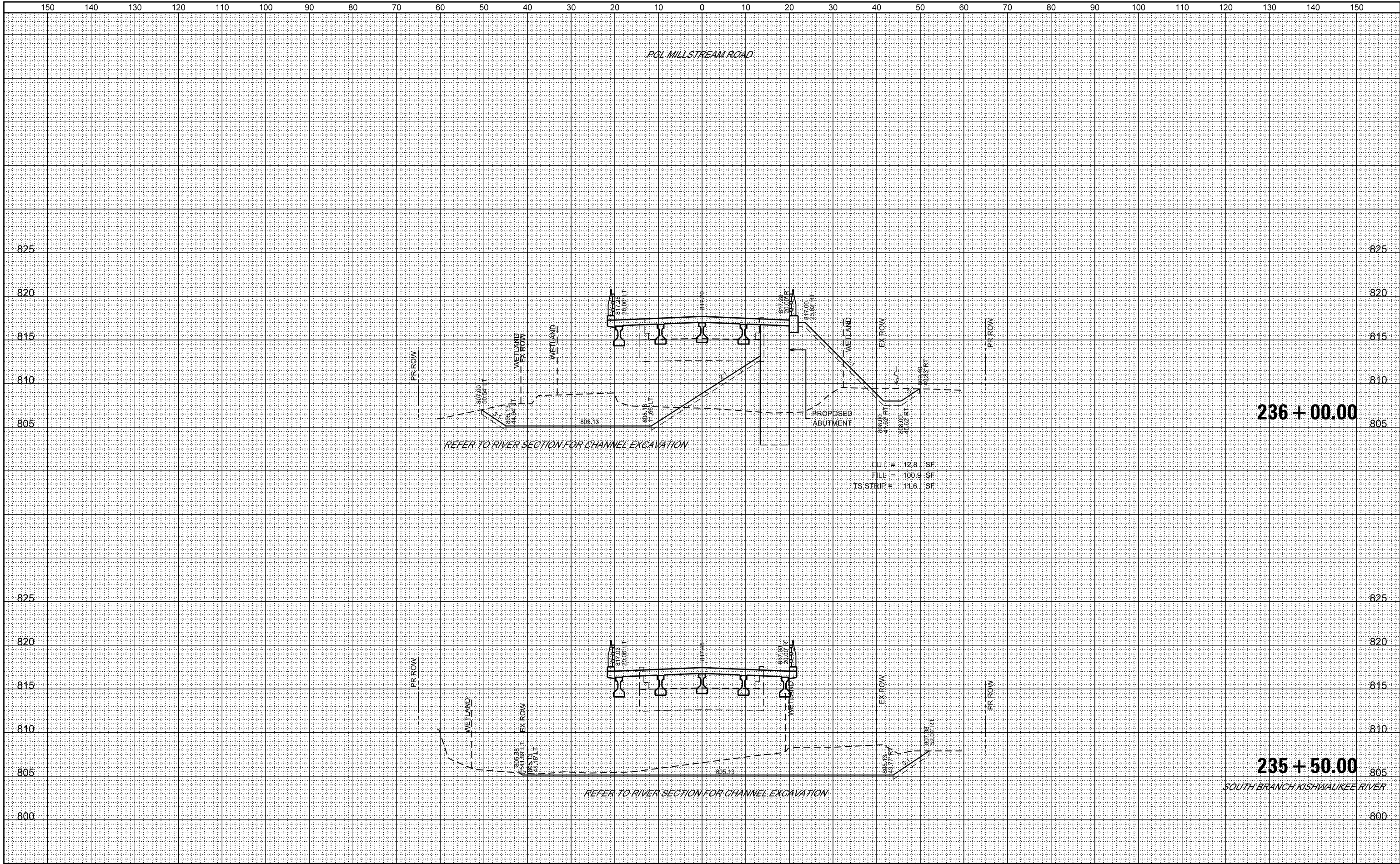


FILE NAME -	USER NAME - cessato	DESIGNED - MRQ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00-02-00-BR_sht_cross sections roadway.dgn		DRAWN - MRQ	REVISED -									CH T64	18-00482-00-BR	MCHENRY	219	190
PLOT SCALE - 20.0009" / in.		CHECKED - MTC	REVISED -													CONTRACT NO. 61J79
PLOT DATE - 9/1/2023		DATE - 08/07/2023	REVISED -													
Default								SCALE: 1"=5' V 1"=10' H	SHEET 6	OF 23 SHEETS	STA. 234+50.00	TO STA. 235+00.00	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

B BLA, Inc.

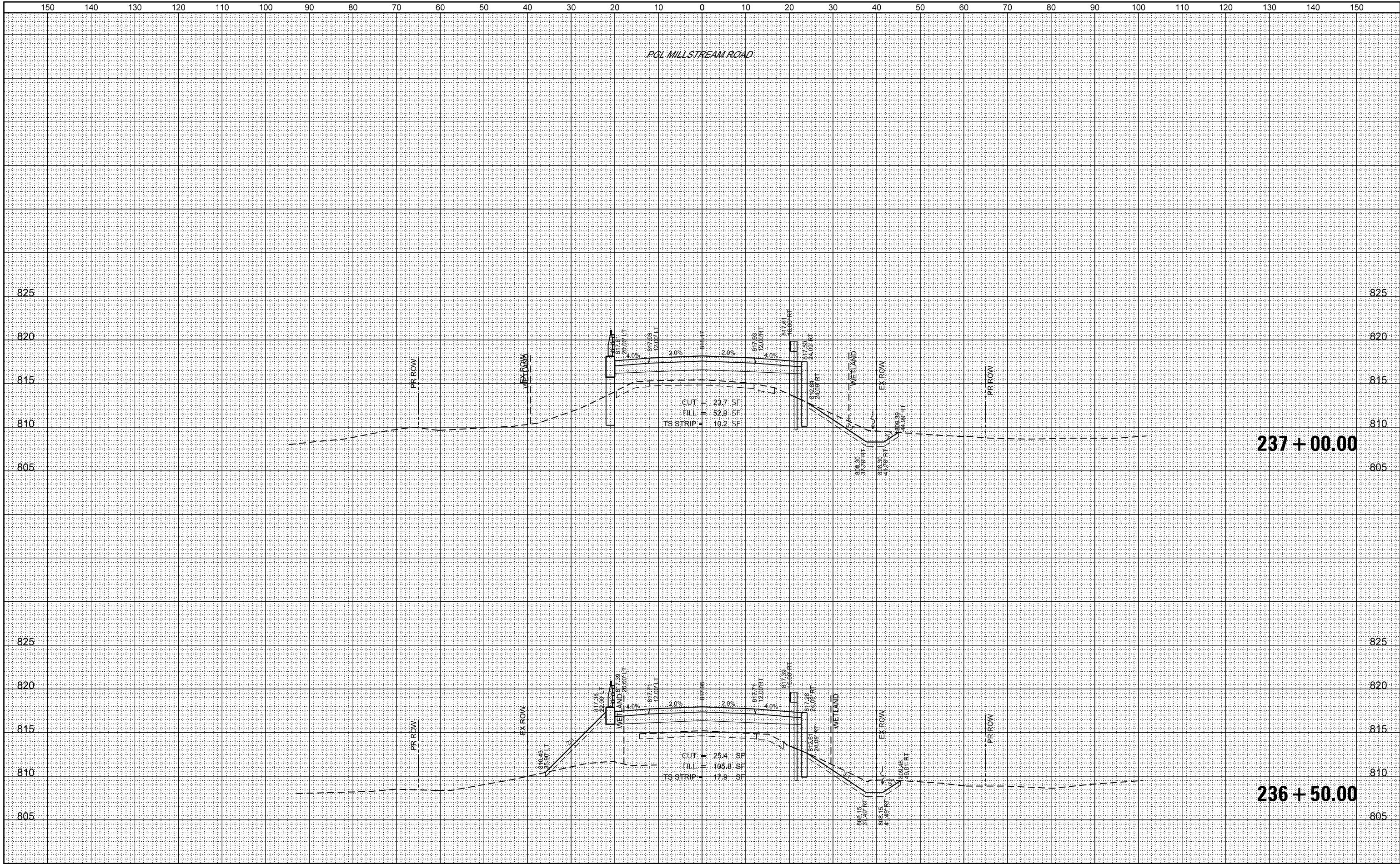


FILE NAME -	USER NAME - cessito	DESIGNED - MRQ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00-02-00-BR_sht_cross sections roadway.dgn		DRAWN - MRQ	REVISED -									CH T64	18-00482-00-BR	MCHENRY	219	191
PLOT SCALE - 20.0009' / in.		CHECKED - MTC	REVISED -									CONTRACT NO. 61J79				
PLOT DATE - 9/1/2023		DATE - 08/07/2023	REVISED -									ILLINOIS FED. AID PROJECT				
Default								SCALE: 1"=5' V 1"=10' H	SHEET 7 OF 23 SHEETS	STA. 235+50.00	TO STA. 236+00.00					

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.

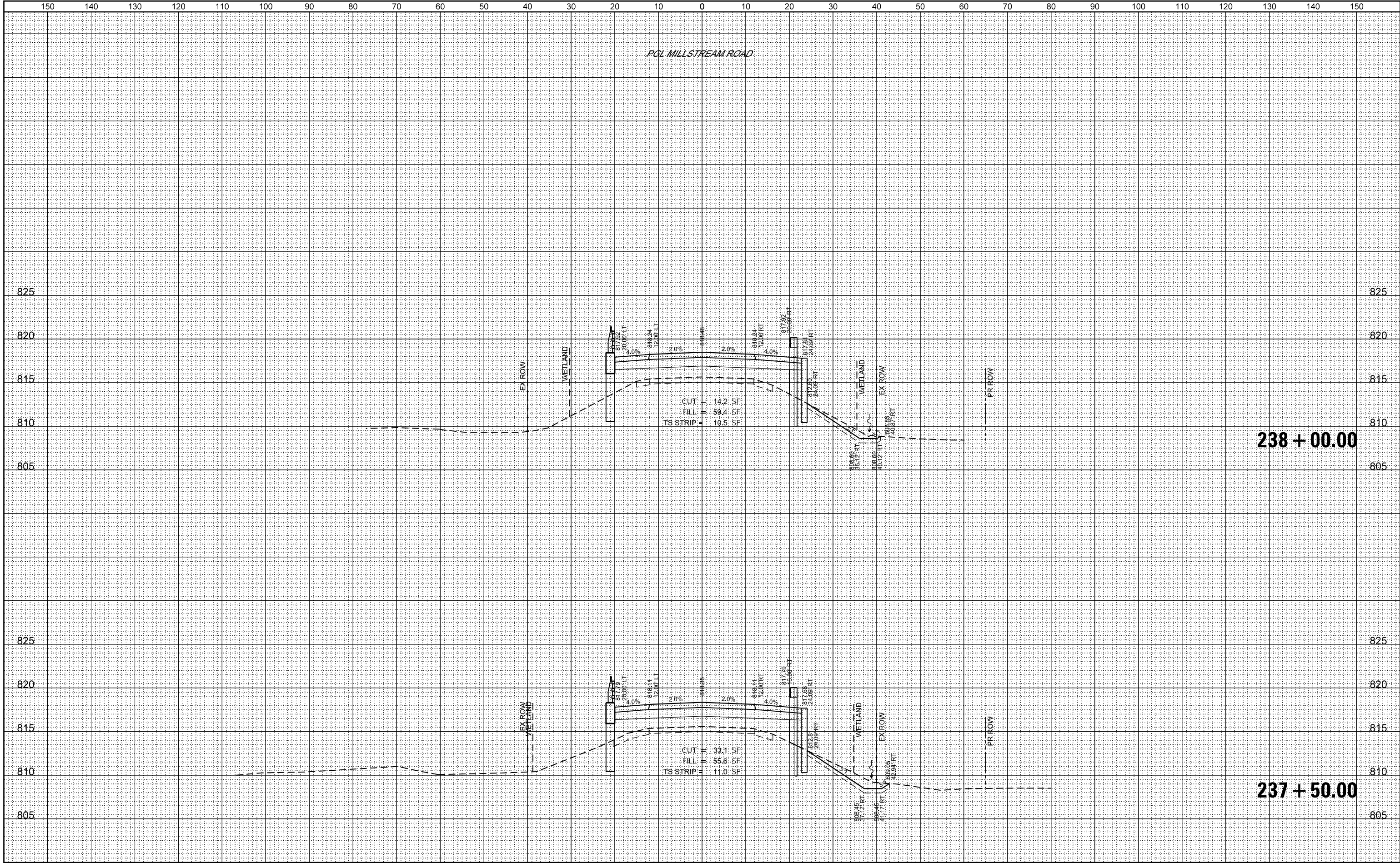


FILE NAME -	USER NAME - cessato	DESIGNED - MRQ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00482-00-BR_sht_cross sections roadway.dgn		DRAWN - MRQ	REVISED -									CH T64	18-00482-00-BR	MCHENRY	219	192
PLOT SCALE - 20.0009" / ft.		CHECKED - MTC	REVISED -													CONTRACT NO. 61J79
PLOT DATE - 9/1/2023		DATE - 08/07/2023	REVISED -													
Default								SCALE: 1"=5' V 1"=10' H	SHEET 8	OF 23 SHEETS	STA. 236+50.00	TO STA. 237+00.00	ILLINOIS FED. AID PROJECT			

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.

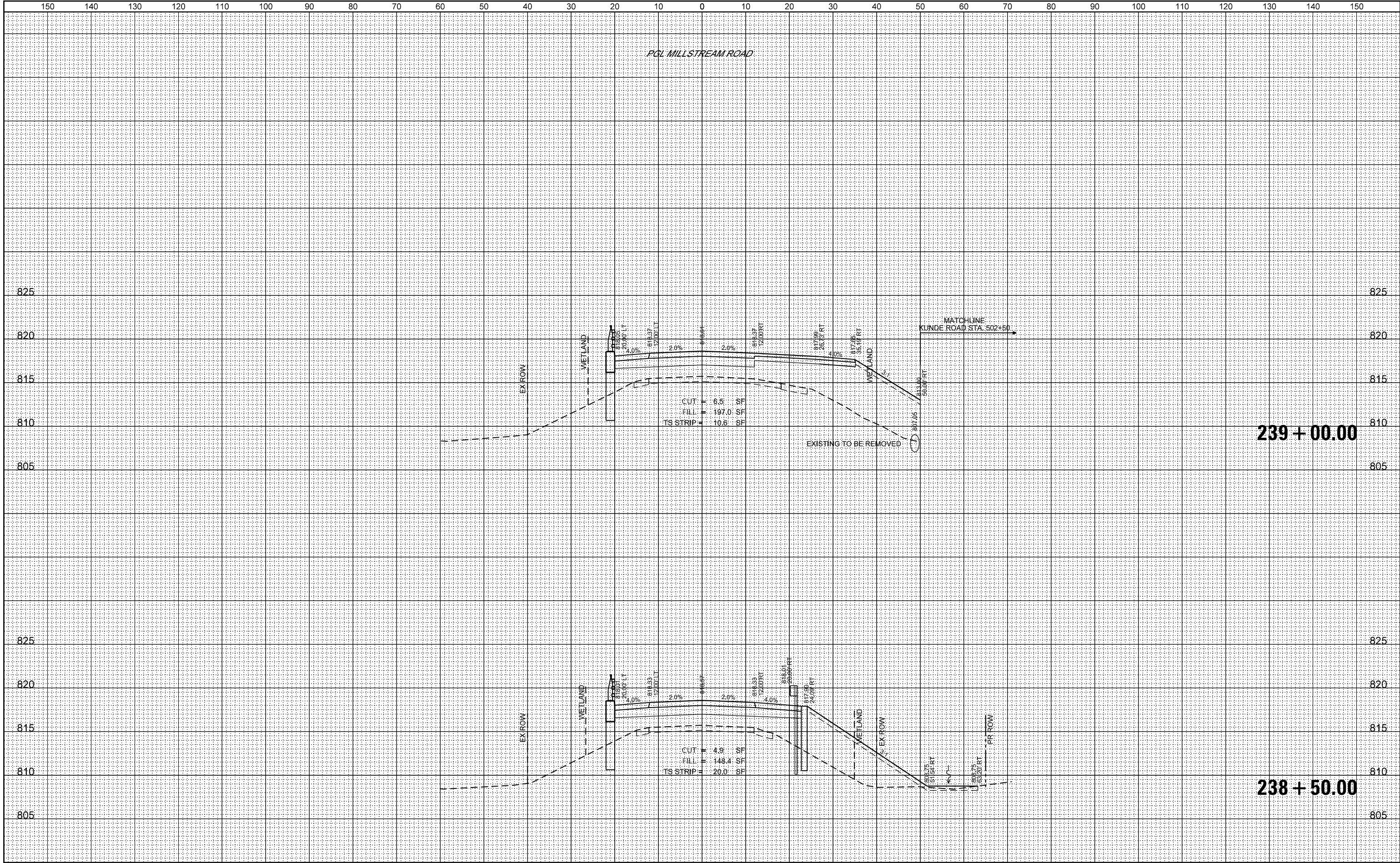


FILE NAME	USER NAME	DESIGNED	REVISED	MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00-02-00-BR_sht_cross sections roadway.dgn	cessario	- MRQ	-			CH T64	18-00482-00-BR	MCHENRY	219	193
PLOT SCALE	PLOT DATE	CHECKED	REVIS	SCALE: 1"=5' V 1"=10' H		SHEET 9 OF 23 SHEETS		TO STA. 238+00.00		CONTRACT NO. 61J79
Default	9/1/2023	DATE	REVIS					ILLINOIS		FED. AID PROJECT

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.

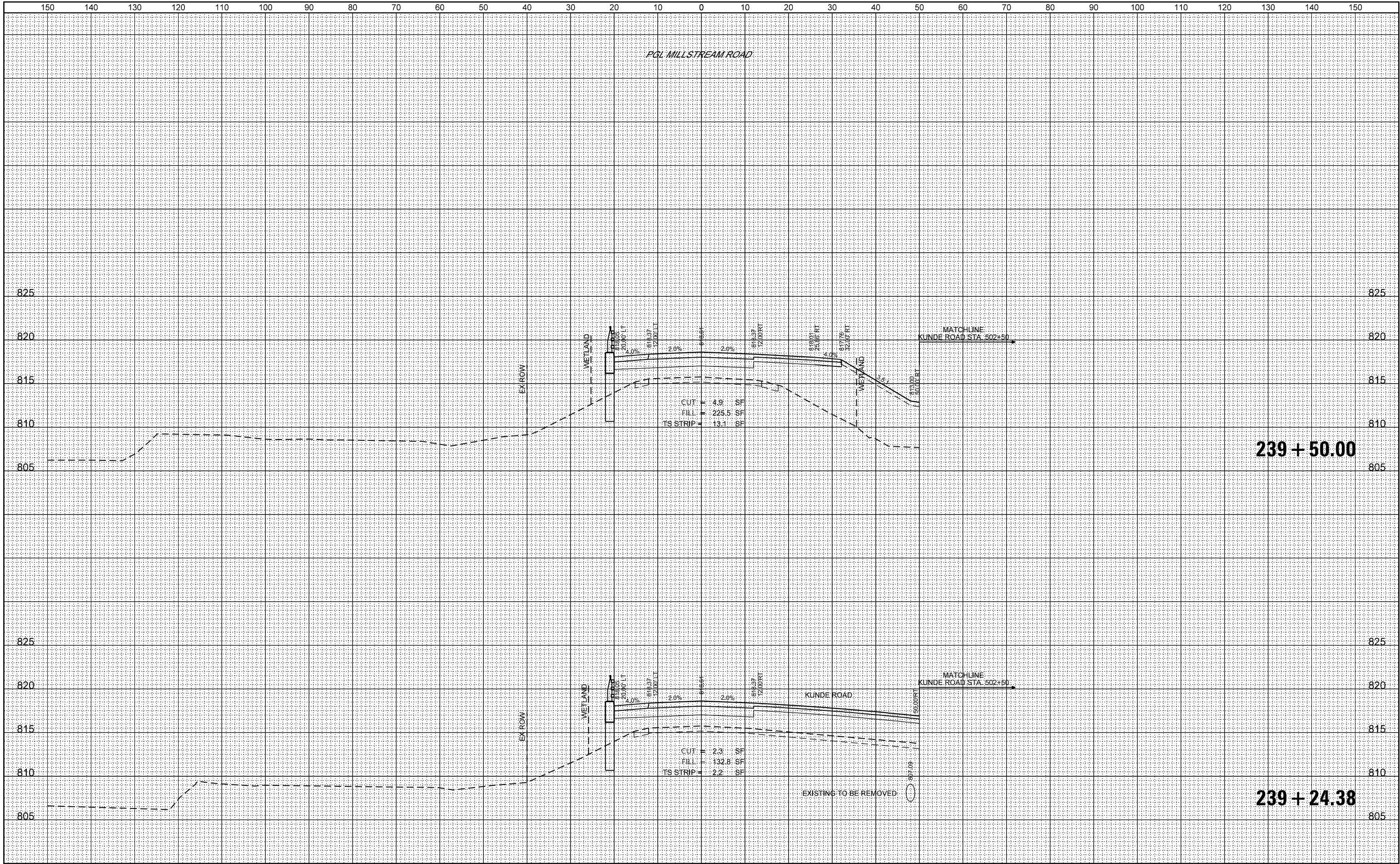


150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150			
FILE NAME =			USER NAME = cesario			DESIGNED - MRQ			REVISED -			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION										MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS					F.A. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00482-00-BR_sht_cross sections roadway.dgn			DRAWN - MRQ			REVISED -			CH T64	18-00482-00-BR																	MCHENRY	219	194				
			CHECKED - MTC			REVISED -																							CONTRACT NO.	61J79			
Default			PLOT DATE = 9/1/2023			DATE - 08/07/2023			REVISED -																		SCALE: 1"=5' V 1"=10' H					SHEET 10 OF 23 SHEETS	

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.

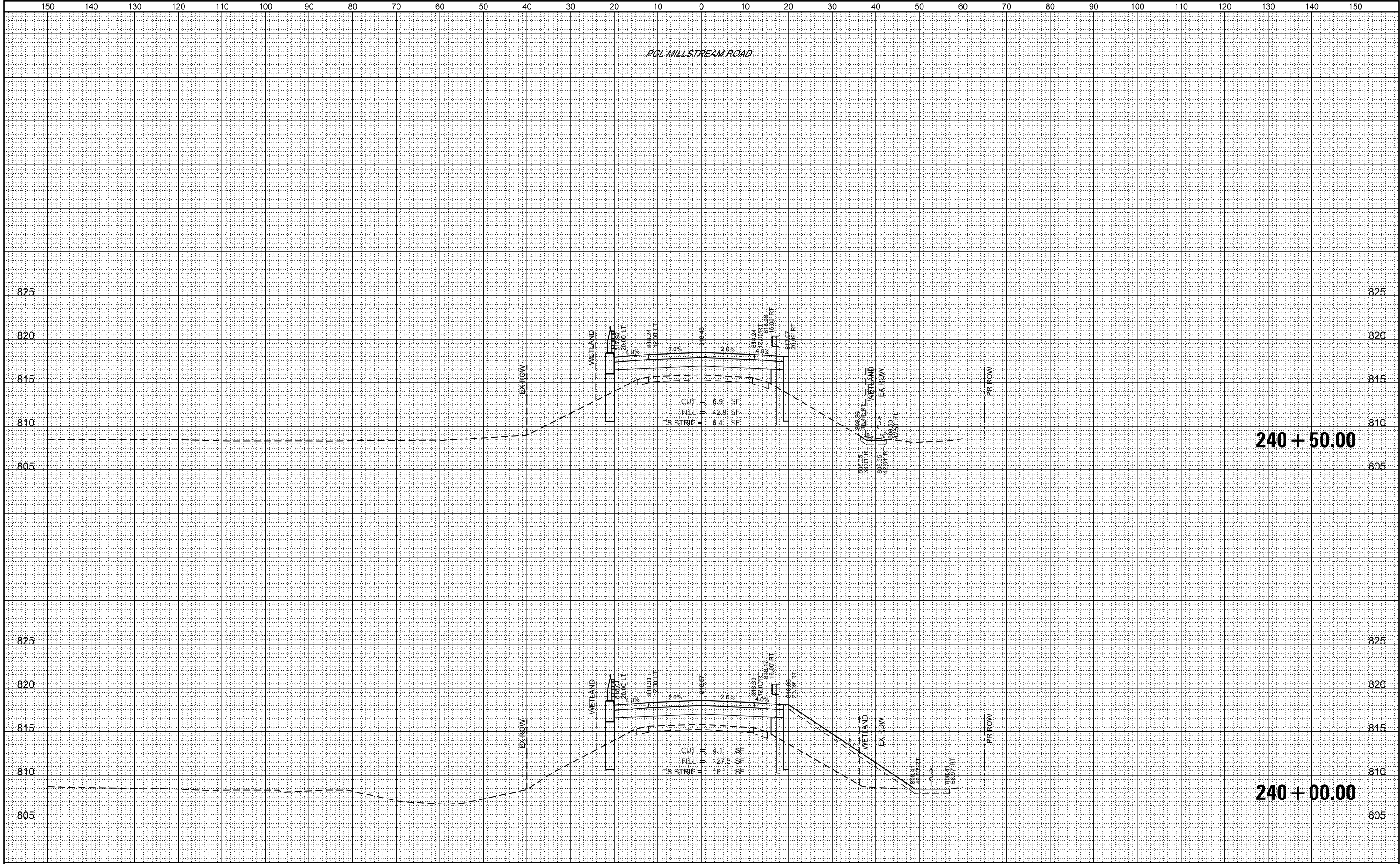


FILE NAME =	USER NAME = ccsaito	DESIGNED - MRQ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00482-00-BR_sht_cross sections roadway.dgn		DRAWN - MRQ	REVISED -									CH T64	18-00482-00-BR	MCHENRY	219	195
PLOT SCALE = 20.0009' / in.		CHECKED - MTC	REVISED -												CONTRACT NO. 61J79	
PLOT DATE = 9/1/2023		DATE - 08/07/2023	REVISED -									SCALE: 1"=5' V 1"=10' H	SHEET 11 OF 23 SHEETS	STA. 239+24.38 TO STA. 239+50.00	ILLINOIS	FED. AID PROJECT

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.

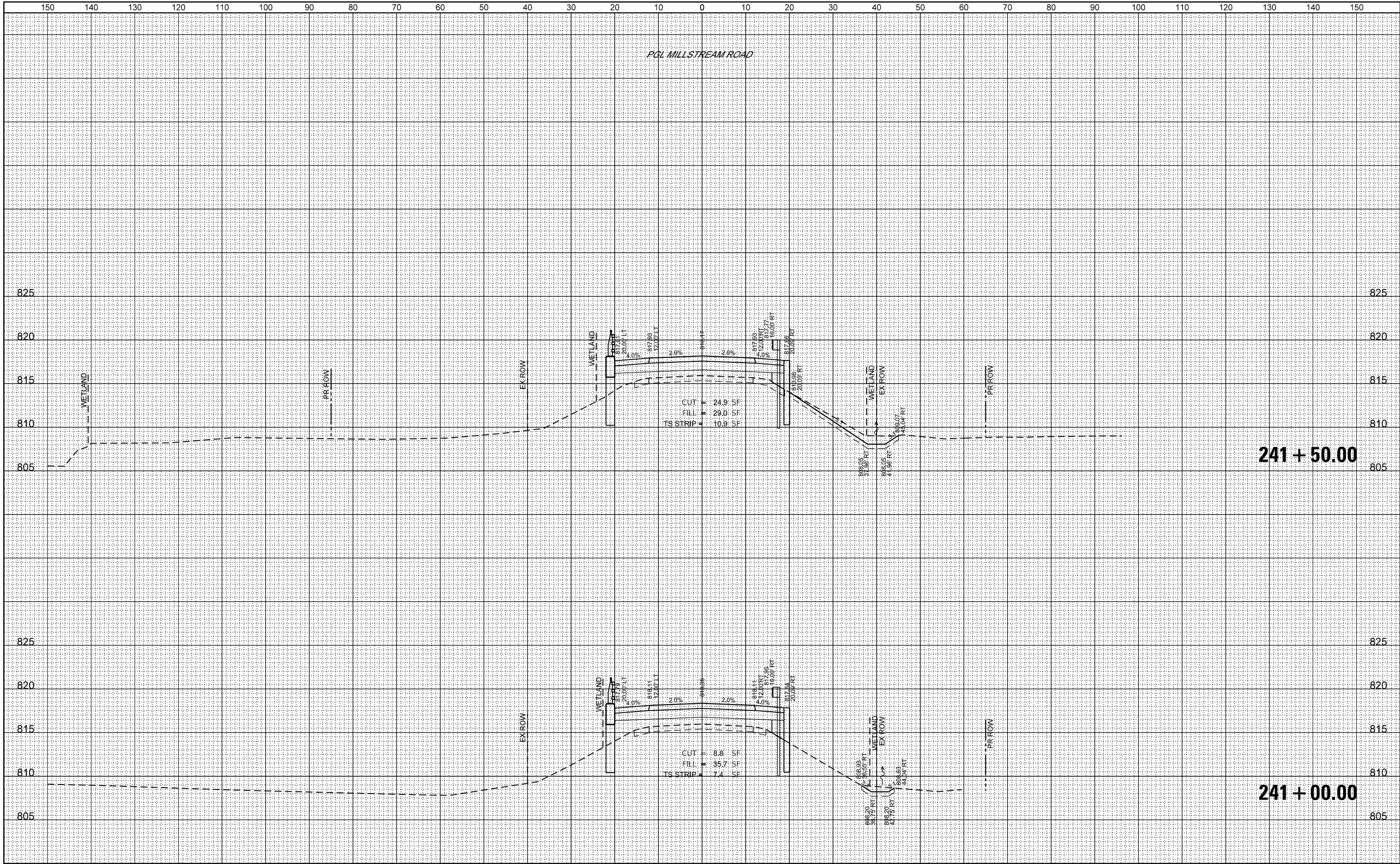


FILE NAME -	USER NAME - ccsaito	DESIGNED - MRQ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-0042-00-BR_sht_cross sections roadway.dgn		DRAWN - MRQ	REVISED -									CH T64	18-00482-00-BR	MCHENRY	219	196
PLOT SCALE - 20.0009' / in.		CHECKED - MTC	REVISED -									CONTRACT NO. 61J79				
PLOT DATE - 9/1/2023		DATE - 08/07/2023	REVISED -									ILLINOIS FED. AID PROJECT				
Default								SCALE: 1"=5' V 1"=10' H	SHEET 12 OF 23 SHEETS	STA. 240+00.00	TO STA. 240+50.00					

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.



FILE NAME -	USER NAME - cessato	DESIGNED - MRQ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00-02-00-BR_sht_cross sections roadway.dgn		DRAWN - MRQ	REVISED -									CH T64	18-00482-00-BR	MCHENRY	219	197
PLOT SCALE - 20.0009" / ft.		CHECKED - MTC	REVISED -													CONTRACT NO. 61J79
PLOT DATE - 9/1/2023		DATE - 08/07/2023	REVISED -													ILLINOIS FED. AID PROJECT

SCALE: 1"=5' V
1"=10' H

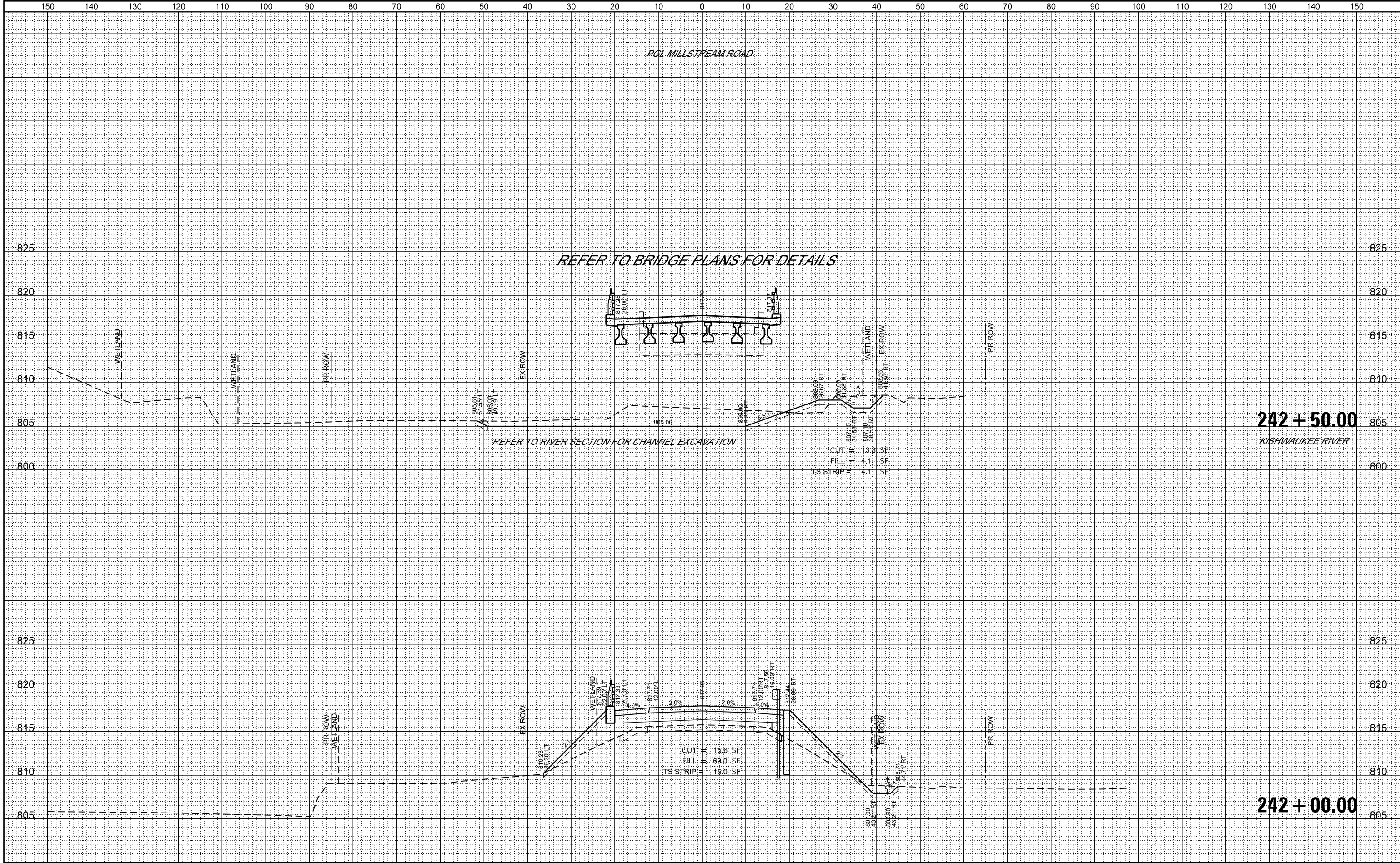
SHEET 13 OF 23 SHEETS

STA. 241+00.00 TO STA. 241+50.00

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.

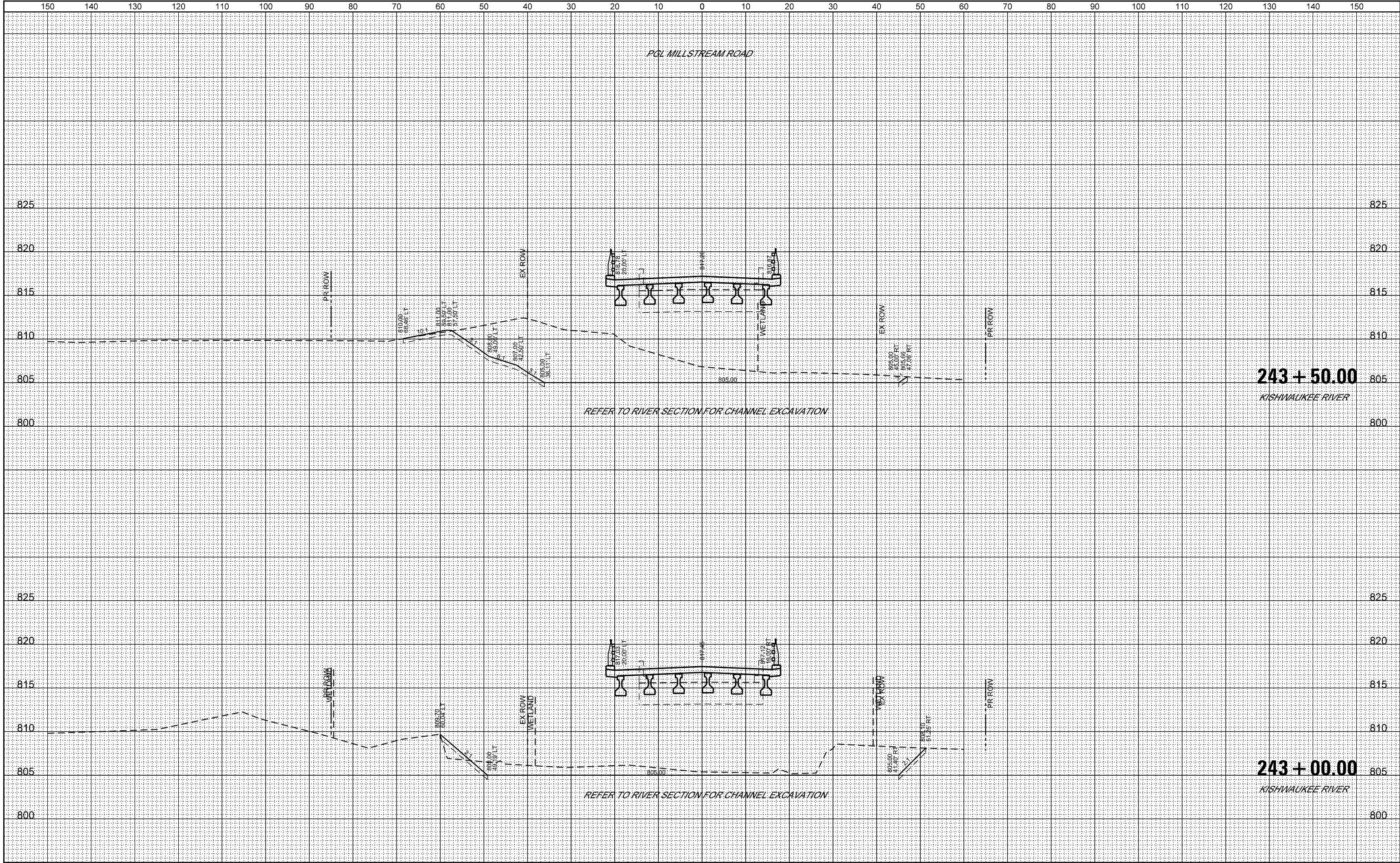


FILE NAME	USER NAME	DESIGNED	REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00-02-00-BR_sht_cross sections roadway.dgn	cessario	MRQ	REVISED					CH T64	18-00482-00-BR	MCHENRY	219	198
PLOT SCALE	PLOT DATE	CHECKED	REVISIONS							CONTRACT NO.		61J79
20.0009' / in.	9/1/2023	MTG	REVISED							ILLINOIS		FED. AID PROJECT
Default		DATE	REVISED			SCALE: 1"=5' V 1"=10' H		SHEET 14 OF 23 SHEETS		STA. 242+00.00 TO STA. 242+50.00		

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.

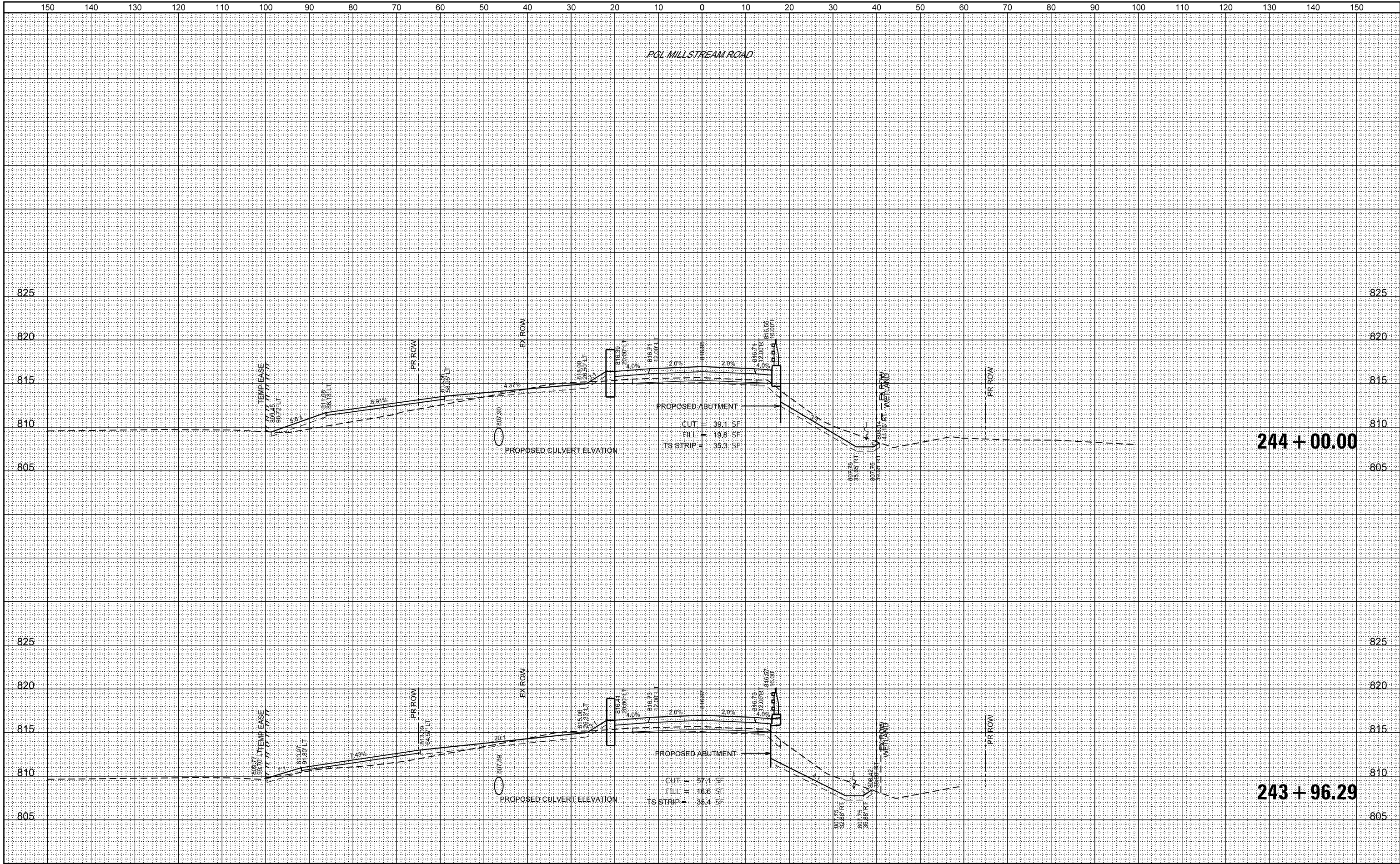


FILE NAME =	USER NAME = cessato	DESIGNED - MRQ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00-02-00-BR_sht_cross sections roadway.dgn		DRAWN - MRQ	REVISED -									CH T64	18-00482-00-BR	MCHENRY	219	199
PLOT SCALE = 20.0009" / ft.		CHECKED - MTC	REVISED -												CONTRACT NO. 61J79	
PLOT DATE = 9/1/2023		DATE - 08/07/2023	REVISED -												ILLINOIS	FED. AID PROJECT
Default				SCALE: 1"=5' V 1"=10' H				SHEET 15 OF 23 SHEETS				STA. 243+00.00 TO STA. 243+50.00				

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

B BLA, Inc.



FILE NAME	USER NAME	DESIGNED	MRQ	REVISED	MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER MILLSTREAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\755-026 MCDOT Millstream Bridge Phase II\CADD_Sheets\18-00-02-00-BR_sht_cross sections roadway.dgn	cesario	DRAWN	MRQ	REVISED	SCALE: 1"=5' V 1"=10' H				CH T64	18-00482-00-BR	MCHENRY	219	200
Default	PLOT SCALE = 20.0009" / in.	CHECKED	MTC	REVISED	SHEET 16 OF 23 SHEETS				CONTRACT NO. 61J79		ILLINOIS FED. AID PROJECT		
	PLOT DATE = 9/1/2023	DATE	08/07/2023	REVISED	STA. 243+96.29 TO STA. 244+00.00								