

				80% FEDERAL FUNDING / 20% LOCAL (COUNTY) FUNDING						
				CONSTRUCTION CODE						
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	LOCAL 100%	LOCAL 100%
				ROADWAY	BRIDGE	BRIDGE	RETAINING WALL	TRAINEES	BRIDGE	BRIDGE
				0004	0010	0010	0044	0042	0010	0010
				RURAL	056-4023	056-4022	RURAL	RURAL	056-4023	056-4022
28100109	STONE RIPRAP, CLASS A5	SQ YD	739	55	313	272			68	31
28200200	FILTER FABRIC	SQ YD	706	231	222	184			48	21
28500400	ARTICULATED BLOCK REVETMENT MAT	SQ YD	537		250	209			55	23
30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	764	764						
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	5138	5138						
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	755	755						
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	11874	11874						
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	2265	2265						
40600370	LONGITUDINAL JOINT SEALANT	FOOT	2488	2488						
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	108	108						
40604060	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50	TON	96	96						
40701841	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 8"	SQ YD	3103	3103						
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	142		142					
44000100	PAVEMENT REMOVAL	SQ YD	4381	4381						

# SPECIALTY ITEM


USER NAME = cbsario	DESIGNED - MRQ	REVISED - 10/23/2023 M.C.
PLOT SCALE = 100.0000' / in.	DRAWN - MRQ	REVISED -
PLOT DATE = 11/3/2023	CHECKED - MTC	REVISED -
	DATE - 08/07/2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**


**MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER  
AND SOUTH BRANCH KISHWAUKEE RIVER  
SUMMARY OF QUANTITIES**

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	6
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

SCALE: NTS SHEET 3 OF 9 SHEETS STA. N/A TO STA. N/A

				80% FEDERAL FUNDING / 20% LOCAL (COUNTY) FUNDING						
				CONSTRUCTION CODE						
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	LOCAL 100%	LOCAL 100%
				ROADWAY	BRIDGE	BRIDGE	RETAINING WALL	TRAINEES	BRIDGE	BRIDGE
				0004	0010	0010	0044	0042	0010	0010
				RURAL	056-4023	056-4022	RURAL	RURAL	056-4023	056-4022
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	292	292						
48100500	AGGREGATE SHOULDERS, TYPE A 6"	SQ YD	50	50						
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	2591	2591						
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1		1					
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1			1				
50105220	PIPE CULVERT REMOVAL	FOOT	208	208						
50200100	STRUCTURE EXCAVATION	CU YD	397		180	159			40	18 
50200300	COFFERDAM EXCAVATION	CU YD	1132		513	455			113	51
50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1		1					
50201122	COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1		1					
50201123	COFFERDAM (TYPE 2) (LOCATION - 3)	EACH	1			1				
50201124	COFFERDAM (TYPE 2) (LOCATION - 4)	EACH	1			1				
50300225	CONCRETE STRUCTURES	CU YD	945.5		308.2	273	266.3		67.7	30.3
50300255	CONCRETE SUPERSTRUCTURE	CU YD	599.6		269.6	243.7			59.2	27.1

# SPECIALTY ITEM

USER NAME = cossario	DESIGNED - MRQ	REVISED -  10/23/2023 M.C.
	DRAWN - MRQ	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - MTC	REVISED -
PLOT DATE = 11/3/2023	DATE - 08/07/2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER  
AND SOUTH BRANCH KISHWAUKEE RIVER  
SUMMARY OF QUANTITIES**

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	7
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

SCALE: NTS SHEET 4 OF 9 SHEETS STA. N/A TO STA. N/A

				80% FEDERAL FUNDING / 20% LOCAL (COUNTY) FUNDING						
				CONSTRUCTION CODE						
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	80% FEDERAL 20% LOCAL	LOCAL 100%	LOCAL 100%
				ROADWAY	BRIDGE	BRIDGE	RETAINING WALL	TRAINEES	BRIDGE	BRIDGE
				0004	0010	0010	0044	0042	0010	0010
				RURAL	056-4023	056-4022	RURAL	RURAL	056-4023	056-4022
542A0259	PIPE CULVERTS, CLASS A, TYPE 1 54"	FOOT	42	42						
542A5503	PIPE CULVERTS, CLASS A, TYPE 1 EQUIVALENT ROUND-SIZE 48"	FOOT	34	34						
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	2	2						
54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	4	4						
54213699	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 54"	EACH	4	4						
54214533	PRECAST REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND-SIZE 48"	EACH	2	2						
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	473		89	79	277		20	8
58700300	CONCRETE SEALER	SQ FT	4633		2101	1864			461	207
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	125		57	50			12	6
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	20	12	4	4				
60108204	PIPE UNDERDRAINS, TYPE 2, 4"	FOOT	1191	1191						
60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	207		94	83			21	9
60146305	PIPE UNDERDRAINS FOR STRUCTURES (SPECIAL) 4"	FOOT	136		72	64				
60235300	INLETS, TYPE A, TYPE 1 FRAME, CLOSED LID	EACH	1	1						

# SPECIALTY ITEM

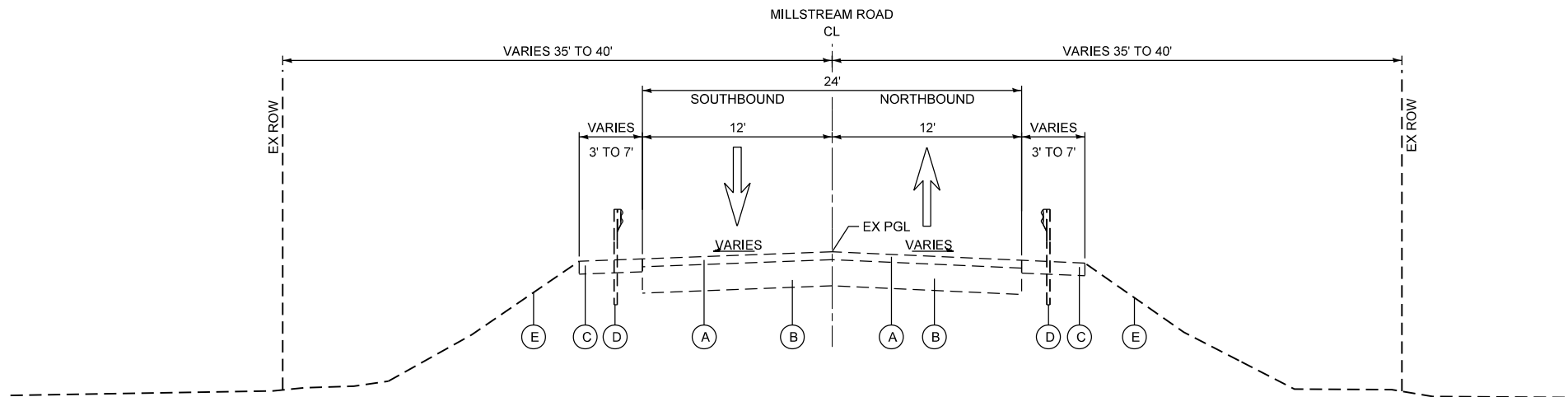
USER NAME = cbsario	DESIGNED - MRQ	REVISED - 10/23/2023 M.C.
	DRAWN - MRQ	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - MTC	REVISED -
PLOT DATE = 11/3/2023	DATE - 08/07/2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER  
AND SOUTH BRANCH KISHWAUKEE RIVER  
SUMMARY OF QUANTITIES**

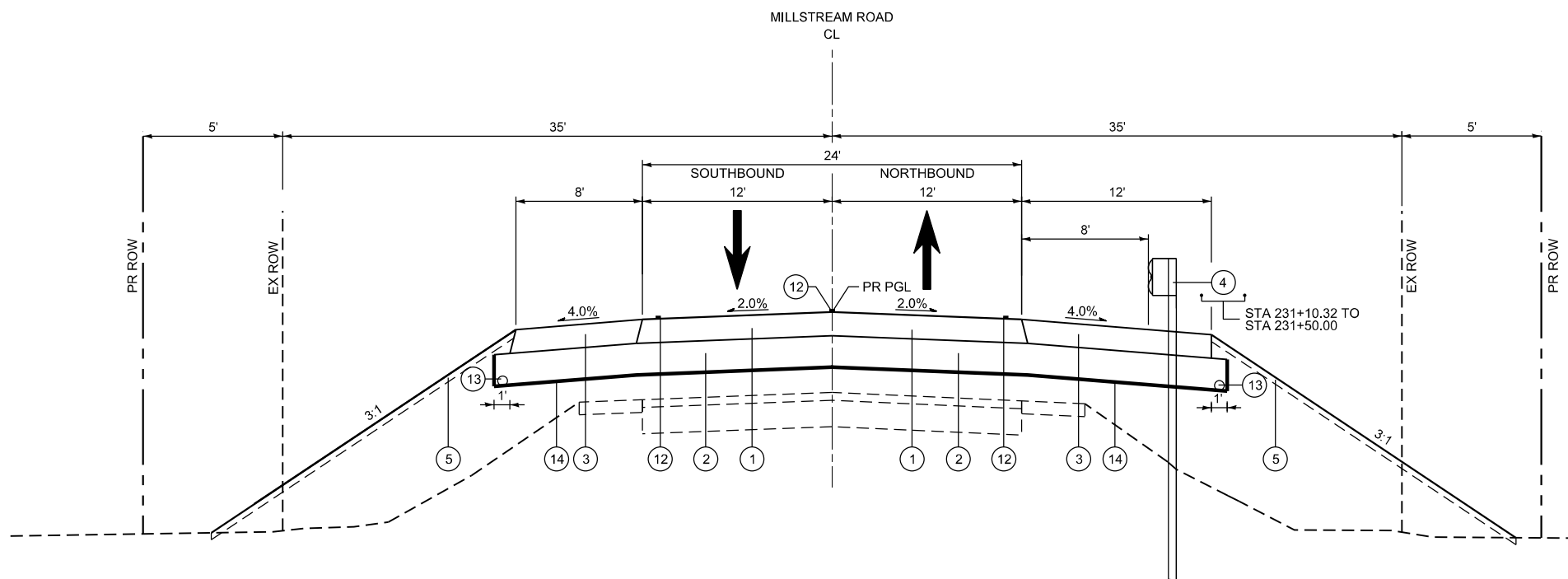
SCALE: NTS SHEET 6 OF 9 SHEETS STA. N/A TO STA. N/A

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	9
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



**EXISTING TYPICAL SECTION**

STA 230+50.00 TO STA 248+00.00, MILLSTREAM ROAD  
 BRIDGE OMISSION BK TO BK ABUTMENTS  
 STA 234+87.07 TO STA 236+43.12  
 STA 242+26.35 TO STA 2343+73.52



**PROPOSED TYPICAL SECTION**

STA 230+50.00 TO STA 231+50.00, MILLSTREAM ROAD

**EXISTING LEGEND**

- (A) EX. HOT-MIX ASPHALT PAVEMENT, 7" (R)
- (B) EX. AGGREGATE BASE COURSE, 11" (R)
- (C) EX. AGGREGATE SHOULDER, 8" (R)
- (D) EX. STEEL PLATE BEAM GUARDRAIL (R)
- (E) EX. GROUND (R)

ITEMS WITH (R) ARE TO BE REMOVED AS SHOWN ON THE TYPICAL SECTIONS AND/OR ON THE PLAN SHEETS.

**PROPOSED LEGEND**

- (1) HOT-MIX ASPHALT PAVEMENT (FULL DEPTH), 8"
- (2) AGGREGATE SUBGRADE IMPROVEMENT, 12"
- (3) HOT-MIX ASPHALT SHOULDER, 8"
- (4) STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FT POST
- (5) TOPSOIL FURNISH & PLACE, 6"  
SEEDING, CL 4B / SEEDING CL 5 (MODIFIED) OR SEEDING CLASS 2A
- (6) STEEL RAILING (SPECIAL) (SEE STRUCTURAL PLANS)
- (7) PERMANENT SHEET PILING (SEE STRUCTURAL PLANS)
- (8) AGGREGATE SHOULDERS, TYPE B, 6"
- (9) MOMENT SLAB (SEE STRUCTURAL PLANS)
- (10) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5), 2"  
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 4"
- (11) AGGREGATE BASE COURSE, TYPE B, 6"
- (12) MODIFIED URETHANE PAVEMENT MARKING - LINE 4"
- (13) PIPE UNDERDRAIN TYPE 2, 4"
- (14) GEOTECHNICAL FABRIC FOR GROUND STABILIZATION

FOR FULL-DEPTH HMA PAVEMENT, THE LONGITUDINAL JOINT SEALANT SHALL BE PLACED UNDER THE TOP LIFT OF BINDER MIX AND UNDER THE SURFACE MIX

HOT-MIX ASPHALT MIXTURE REQUIREMENTS			
MIXTURE TYPE	AIR VOIDS	THICKNESS	QMP
MILLSTREAM ROAD - HMA PAVEMENT (FULL DEPTH), 8"			
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5)	4% @ 70 GYR	2"	LR1030-2
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	4% @ 70 GYR	6"	LR1030-2
MILLSTREAM ROAD - HMA SHOULDERS, 8"			
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5)	4% @ 70 GYR	2"	LR1030-2
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	4% @ 70 GYR	6"	LR1030-2
KUNDE ROAD - HMA PAVEMENT			
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5)	4% @ 50 GYR	2"	LR1030-2
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	4% @ 50 GYR	4"	LR1030-2
DRIVEWAY RECONSTRUCTION - HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 3"			
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5)	4% @ 50 GYR	3"	LR1030-2

QMP DESIGNATIONS: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA); QUALITY CONTROL FOR PERFORMANCE (QCP); PAY FOR PERFORMANCE (PFP)

- THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.
- THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 58-28" UNLESS MODIFIED BY RECLAIMED MATERIALS SPECIFICATIONS.

USER NAME = cossario	DESIGNED - MRQ	REVISED -  10/23/2023 M.C.
	DRAWN - MRQ	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - MTC	REVISED -
PLOT DATE = 10/23/2023	DATE - 08/07/2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

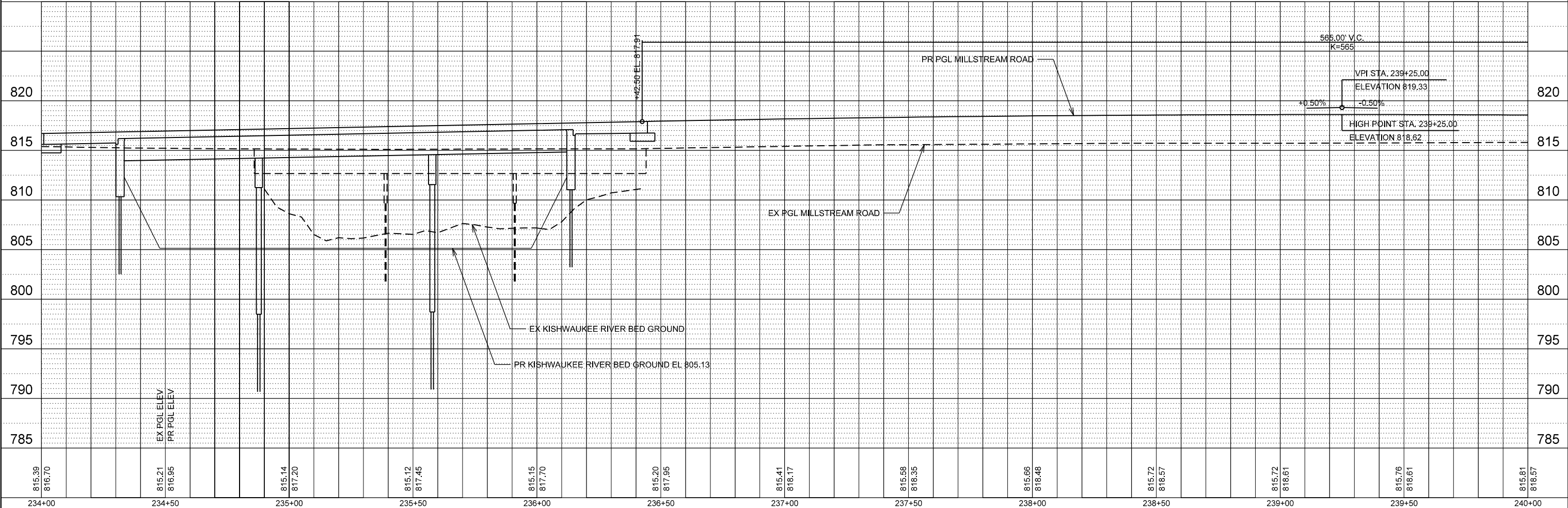
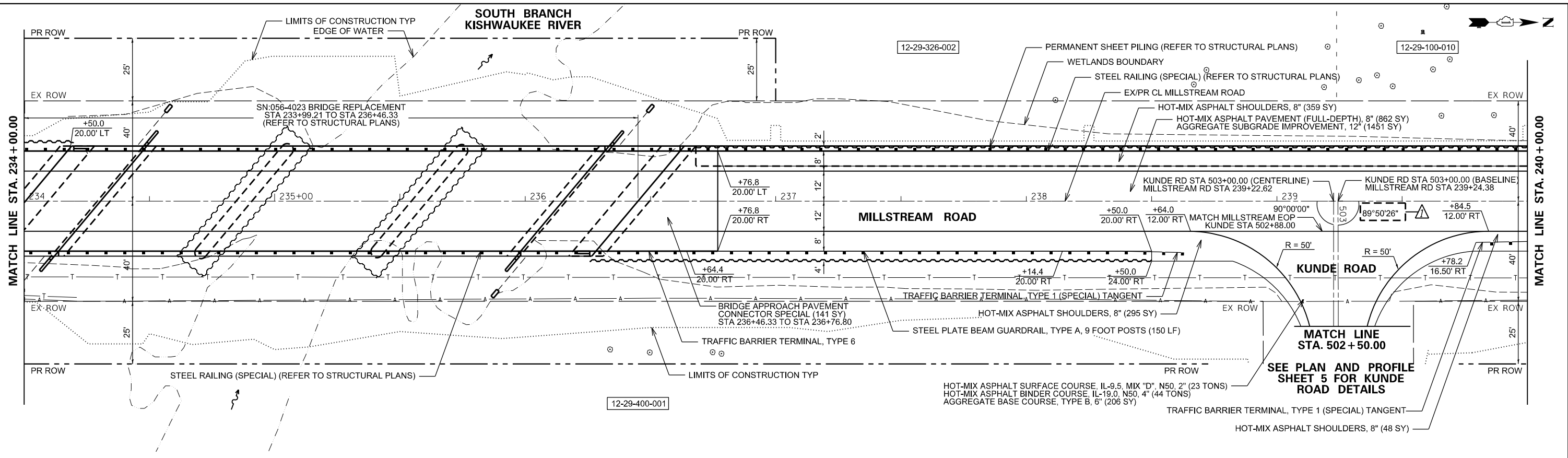
<b>MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER AND SOUTH BRANCH KISHWAUKEE RIVER TYPICAL SECTIONS - MILLSTREAM ROAD</b>			
SCALE: N.T.S.	SHEET 1 OF 6 SHEETS	STA. TO STA.	

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	13
CONTRACT NO. 61J79				
ILLINOIS		FED. AID PROJECT		

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	STRUCTURE NOTATION CHD	
	NO. _____	
	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATION CHD	
	NO. _____	
	FILE NAME	

FILE NAME = V:\1755-028 MCDOT Millstream Bridge Phase I\CAD\18-0482-00-BR\_311\_plan\_profile\_002.dgn



USER NAME =	cessario	DESIGNED -	MRQ	REVISED -	10/23/2023	M.C.
DRAWN -	MRQ	REVISED -		REVISED -		
CHECKED -	MTC	REVISED -		REVISED -		
DATE =	08/07/2023	REVISED -		REVISED -		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER  
AND SOUTH BRANCH KISHWAUKEE RIVER  
PLAN AND PROFILE

SCALE: 1"=20'

SHEET 2 OF 5 SHEETS

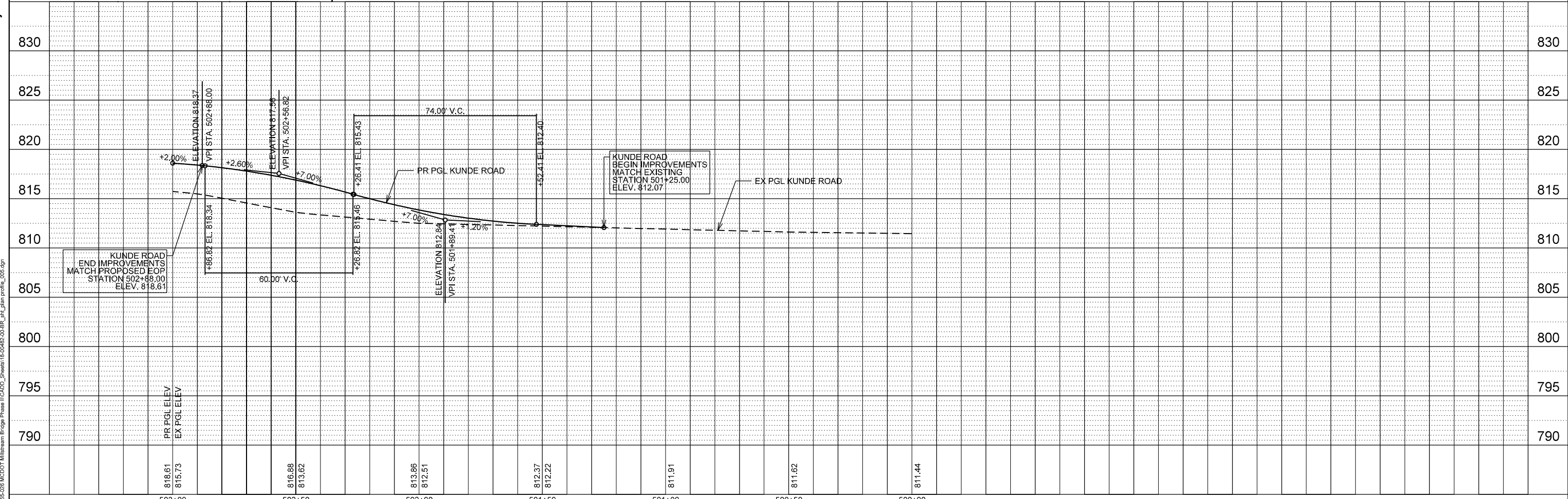
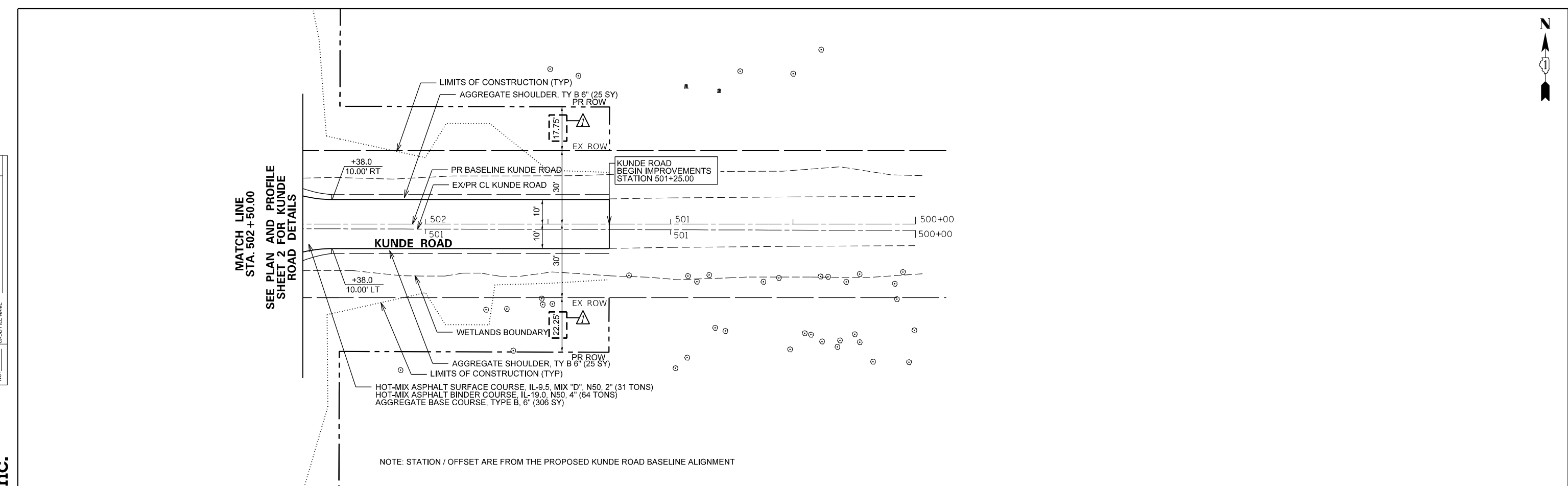
STA. 234+00.00 TO STA. 240+00.00

CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	31
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	GRADE CHECKED	
	STRUCTURE NOTATION CHD	
	NO.	
	DATE	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATION CHD	
	NO.	
	DATE	

**B** BLA, Inc.











USER NAME = cossario	DESIGNED - MRQ	REVISED - 10/23/2023 M.C.	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER</b> <b>AND SOUTH BRANCH KISHWAUKEE RIVER</b> <b>PLAN AND PROFILE</b>	CH RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT SCALE = 40,000' / in.	CHECKED - MTC	REVISED -			CH T64	18-00482-00-BR	MCHENRY	219	34	
PLOT DATE = 10/23/2023	DATE = 08/07/2023	REVISED -			CONTRACT NO. 61J79					
SCALE: 1"=20'					SHEET 5 OF 5 SHEETS			STA. 500+00.00 TO STA. 503+00.00		



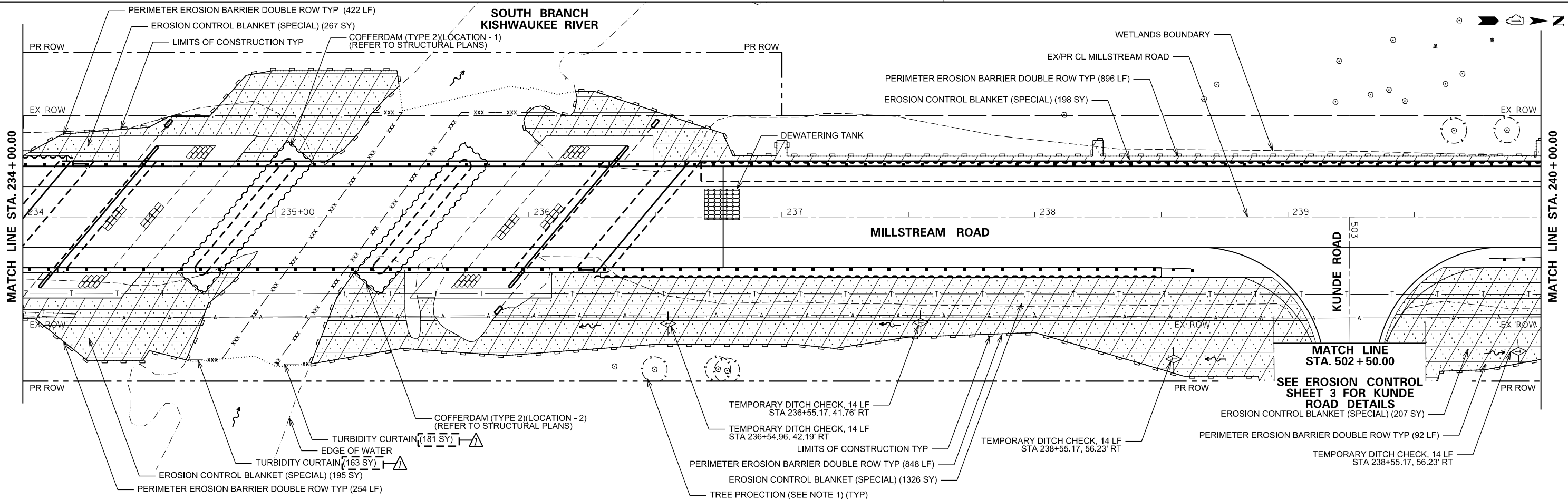
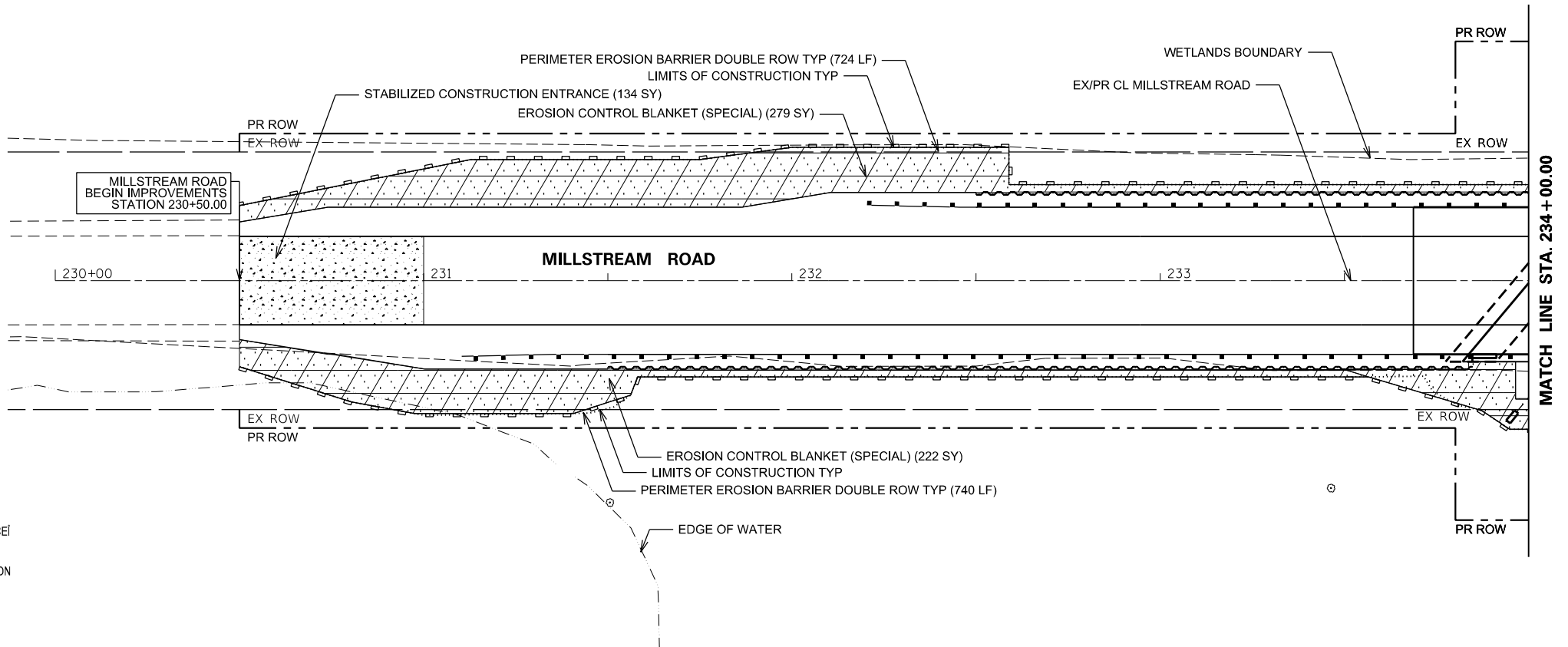
FILE NAME = V:\1755-028 MCDOT Millstream Bridge Phase I\CADD\_Sheets\18-00482-00-BR\_311\_plan\_profile\_005.dgn

**LEGEND**

-  PERIMETER EROSION BARRIER (DOUBLE ROW)
-  STABILIZED CONSTRUCTION ENTRANCE
-  TREE PROTECTION (TEMPORARY FENCE, TREE ROOT PRUNING, TREE PRUNING)
-  EROSION CONTROL BLANKET (SPECIAL)
-  TURBIDITY CURTAIN
-  DEWATERING TRAIN
-  DEWATERING TANK
-  TEMPORARY DITCH CHECKS

**NOTE:**

1. TREE TRUNK PROTECTION SHALL BE PAID FOR BY THE PAY ITEM TEMPORARY FENCE PER THE UNIT OF FOOT.
2. CONTRACTOR SHALL NOT IMPACT ADDITIONAL WETLANDS OUTSIDE CONSTRUCTION LIMITS
3. A NOMINAL QUANTITY FOR TREE ROOT PRUNING, TREE PRUNING (1 TO 10 DIAMETER), AND TREE PRUNING (OVER 10 INCH DIAMETER) HAVE BEEN INCLUDED TO BE USED AT THE DIRECTION OF THE ENGINEER.



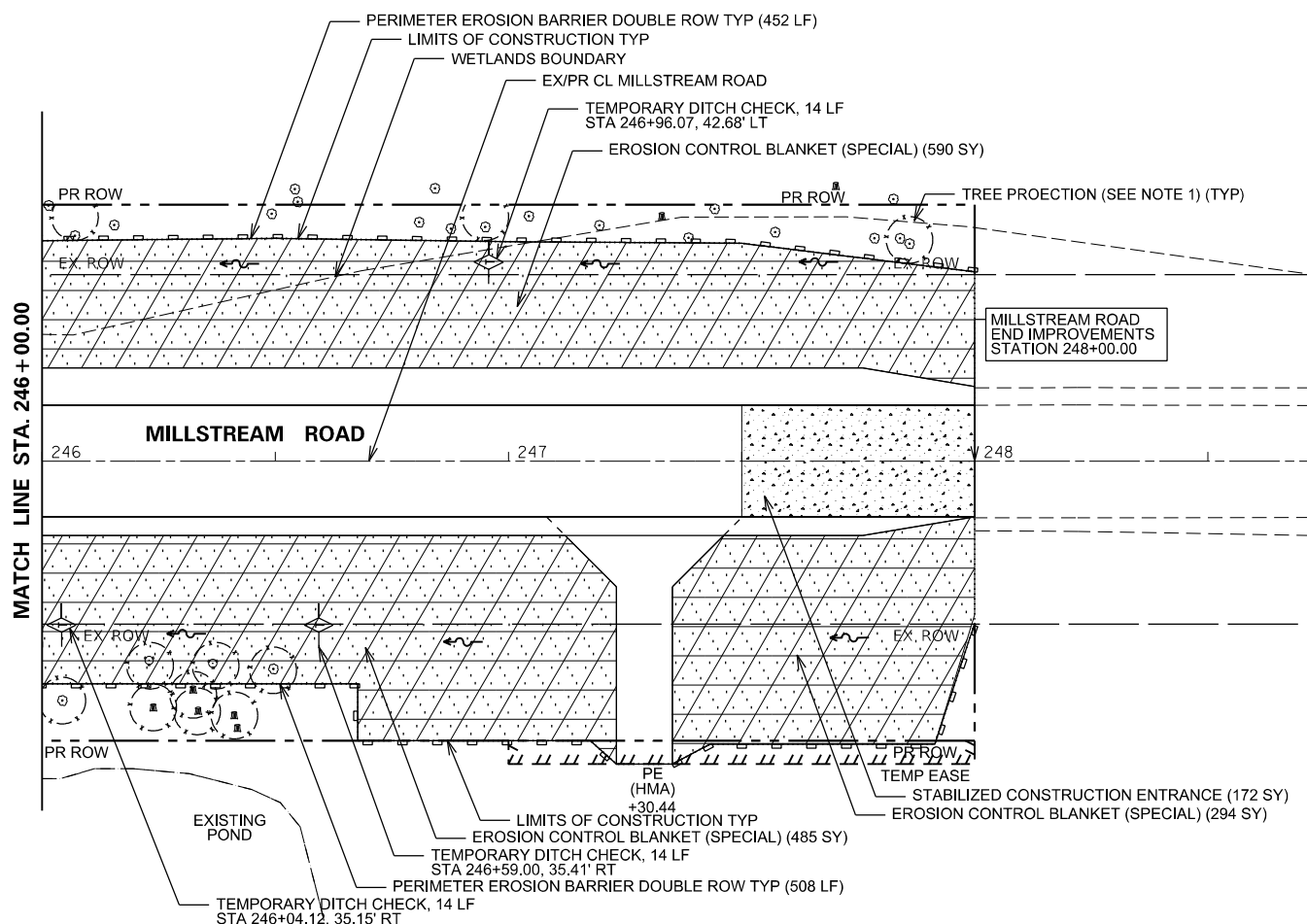
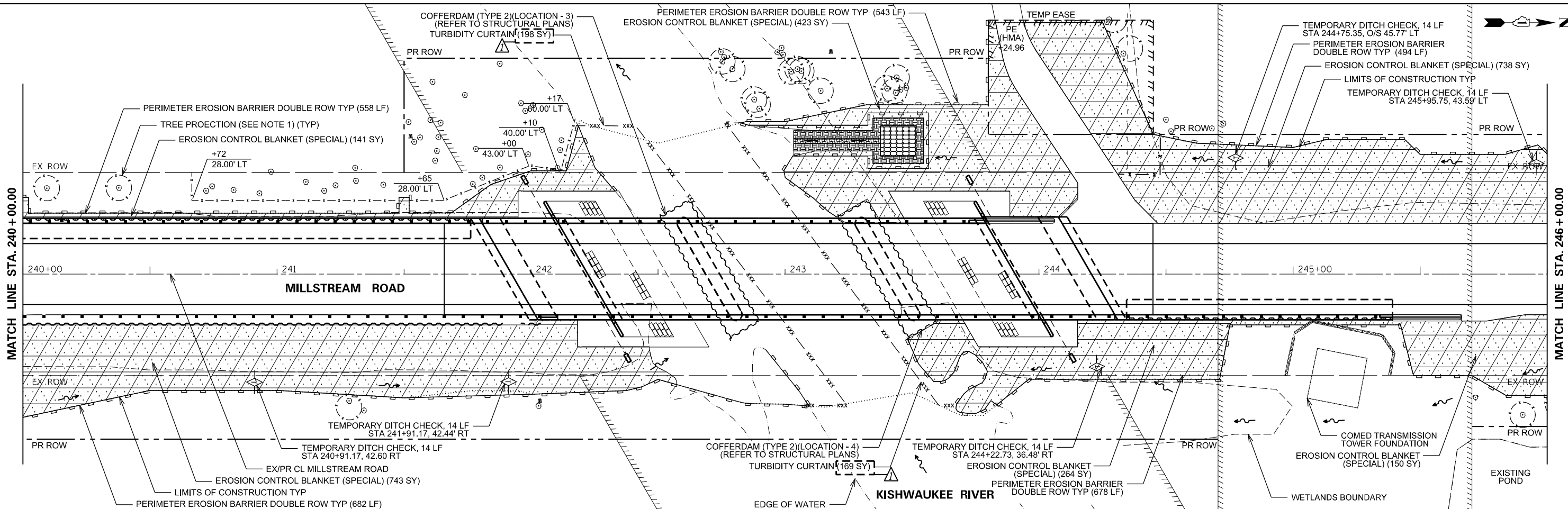
USER NAME = cossario	DESIGNED - MRQ	REVISED - 10/23/2023 M.C.
PLOT SCALE = 40,000' / in.	DRAWN - MRQ	REVISED -
PLOT DATE = 11/1/2023	CHECKED - MTC	REVISED -
	DATE - 08/07/2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER  
AND SOUTH BRANCH KISHWAUKEE RIVER  
SOIL EROSION AND SEDIMENT CONTROL PLAN**

SCALE: 1"=20' SHEET 1 OF 3 SHEETS STA. 230+00.00 TO STA. 240+00.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	39
CONTRACT NO. 61J79			ILLINOIS FED. AID PROJECT	



**LEGEND**

- PERIMETER EROSION BARRIER (DOUBLE ROW)
- STABILIZED CONSTRUCTION ENTRANCE
- TREE PROTECTION (TEMPORARY FENCE, TREE ROOT PRUNING, TREE PRUNING)
- EROSION CONTROL BLANKET (SPECIAL)
- TURBIDITY CURTAIN
- DEWATERING TRAIN
- DEWATERING TANK
- TEMPORARY DITCH CHECKS

**NOTE:**

1. TREE TRUNK PROTECTION SHALL BE PAID FOR BY THE PAY ITEM TEMPORARY FENCE PER THE UNIT OF FOOT.
2. CONTRACTOR SHALL NOT IMPACT ADDITIONAL WETLANDS OUTSIDE CONSTRUCTION LIMITS
3. A NOMINAL QUANTITY FOR TREE ROOT PRUNING, TREE PRUNING (1 TO 10 DIAMETER), AND TREE PRUNING (OVER 10 INCH DIAMETER) HAVE BEEN INCLUDED TO BE USED AT THE DIRECTION OF THE ENGINEER.

USER NAME = cossario	DESIGNED - MRQ	REVISED - 10/23/2023 M.C.
PLOT SCALE = 40,000' / in.	DRAWN - MRQ	REVISED -
PLOT DATE = 11/1/2023	CHECKED - MTC	REVISED -
	DATE - 08/07/2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

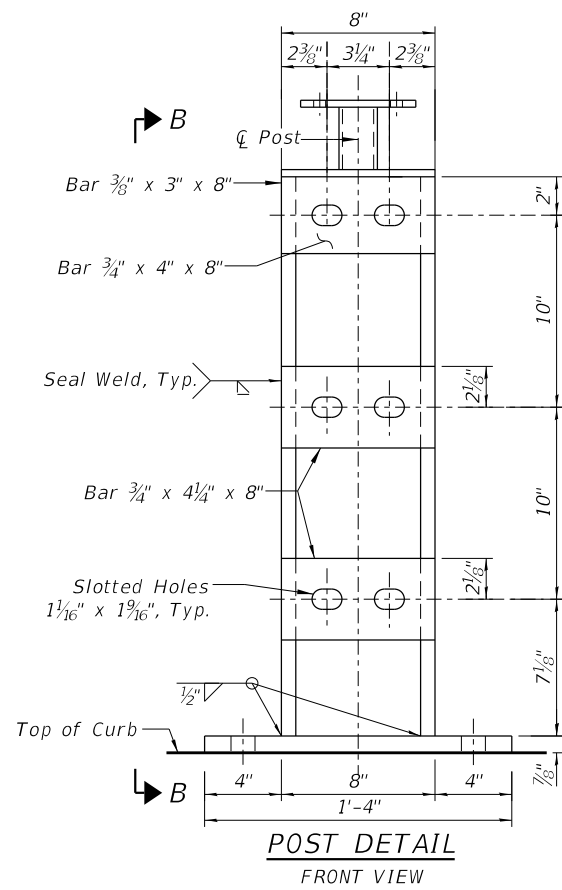
**MILLSTREAM ROAD OVER THE KISHWAUKEE RIVER  
AND SOUTH BRANCH KISHWAUKEE RIVER  
SOIL EROSION AND SEDIMENT CONTROL PLAN**

SCALE: 1"=20' SHEET 2 OF 3 SHEETS STA. 240+00.00 TO STA. 248+00.00

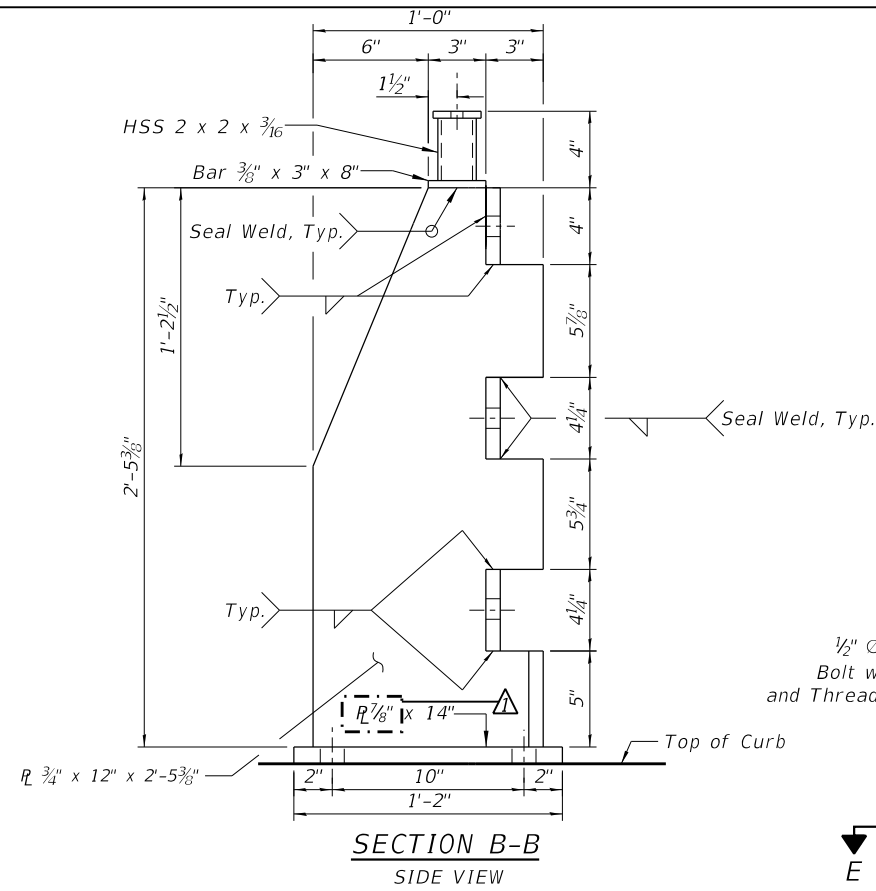
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH T64	18-00482-00-BR	MCHENRY	219	40
CONTRACT NO. 61J79				

ILLINOIS FED. AID PROJECT

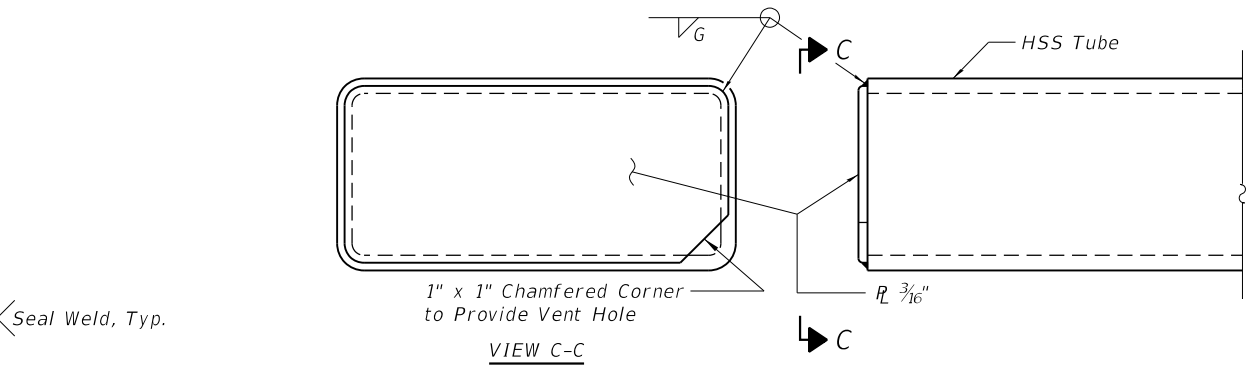




**POST DETAIL**  
FRONT VIEW

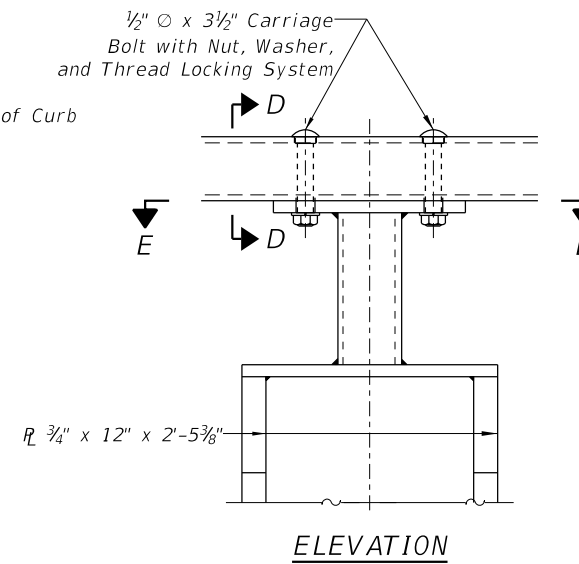


**SECTION B-B**  
SIDE VIEW

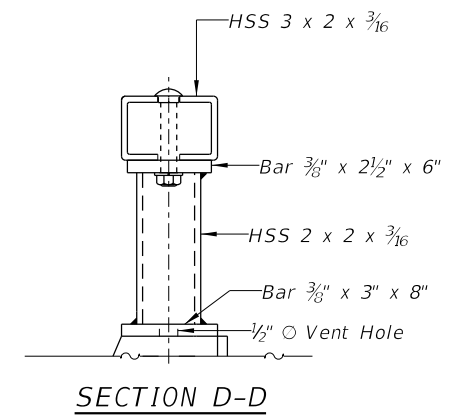


**RAIL END CAP**

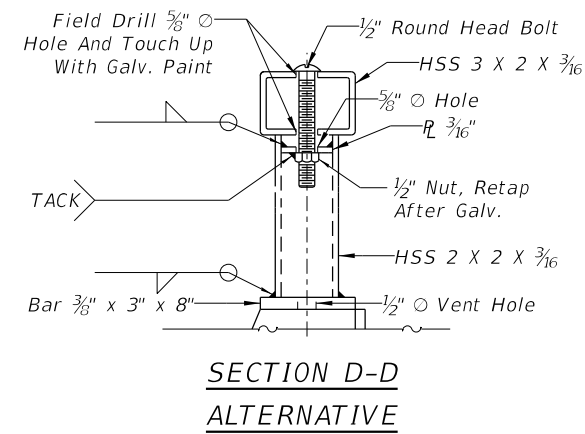
Note: For vehicular rail tube and bicycle railing tubes.



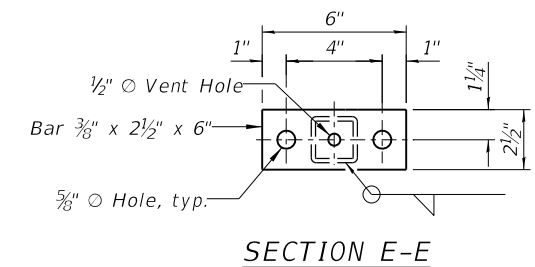
**ELEVATION**



**SECTION D-D**



**SECTION D-D**  
**ALTERNATIVE**



**SECTION E-E**

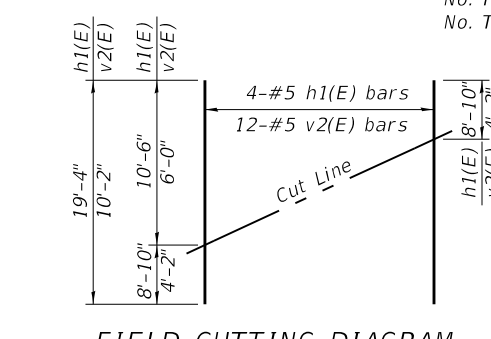
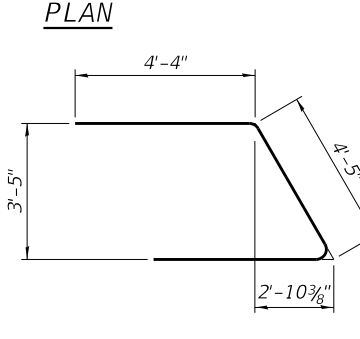
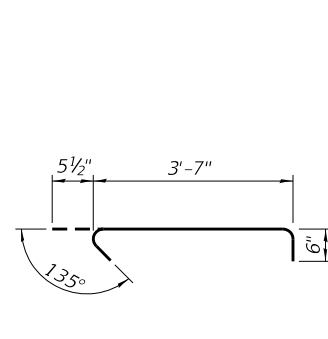
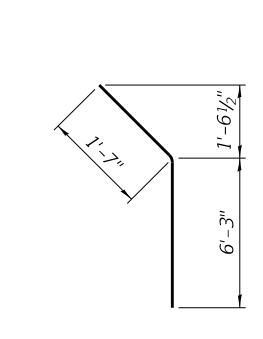
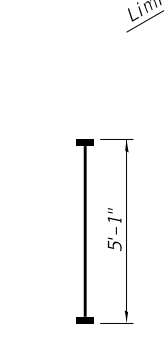
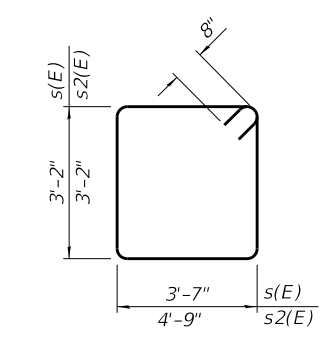
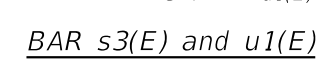
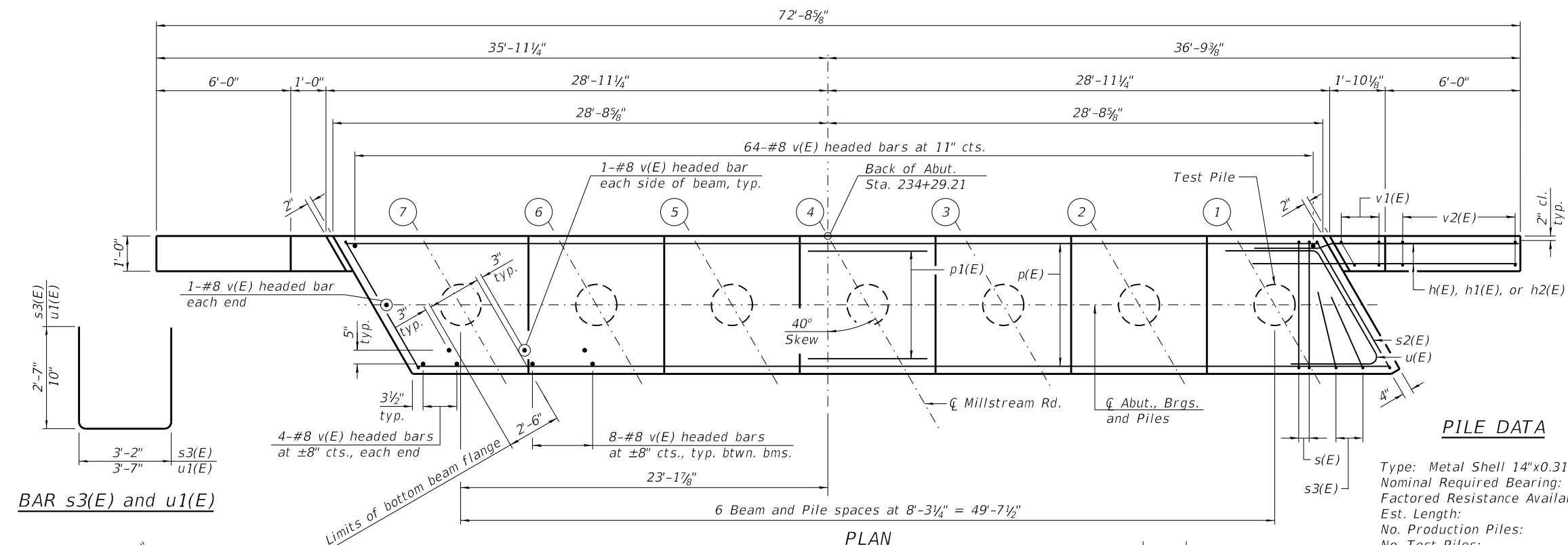
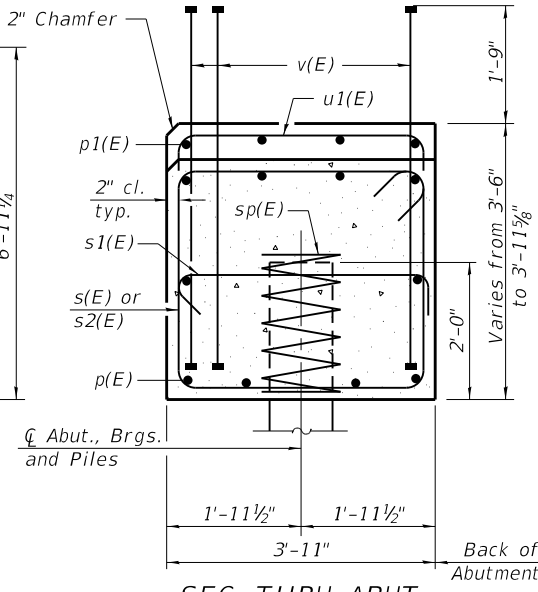
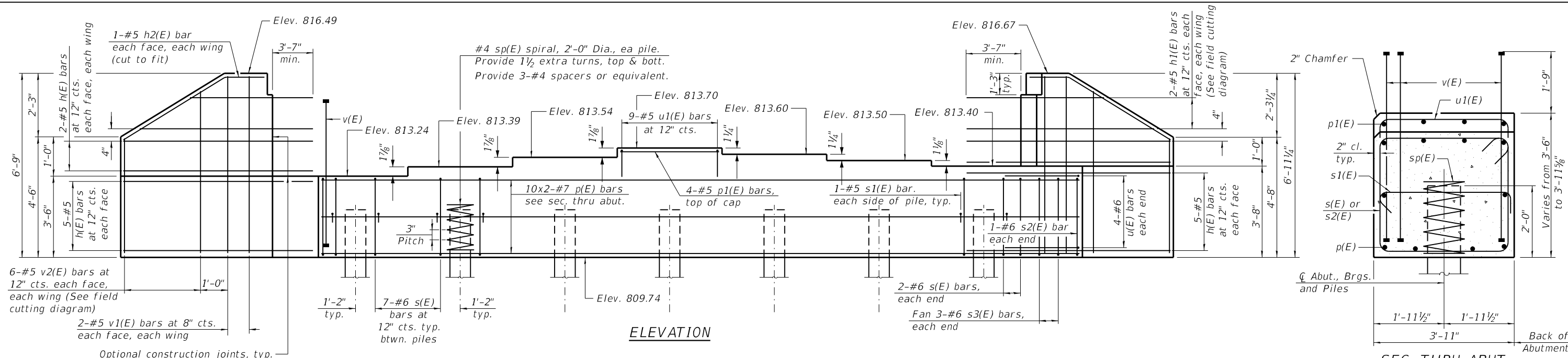
USER NAME = esotelo	DESIGNED - DK	REVISED - 10/23/2023 E.S.
	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 10/30/2023	CHECKED - PD	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING DETAILS III**  
**STRUCTURE NO. 056-4023**

SHEET 21 OF 42 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	87
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



**PILE DATA**

Type: Metal Shell 14"x0.312" with pile shoes  
 Nominal Required Bearing: 550 kips  
 Factored Resistance Available: 240 kips  
 Est. Length: 44 ft.  
 No. Production Piles: 6  
 No. Test Piles: 1

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	28	#5	11'-6"	—
h1(E)	4	#5	19'-4"	—
h2(E)	4	#5	7'-10"	—
p(E)	20	#7	30'-10"	—
p1(E)	4	#5	7'-11"	—
s(E)	46	#6	14'-10"	□
s1(E)	14	#5	4'-7"	□
s2(E)	2	#6	17'-2"	□
s3(E)	6	#6	8'-4"	□
sp(E)	7	#4	2'-0"	WWW
sp14(E)	7	#4	10'-0"	WWW
u(E)	8	#6	13'-1"	—
u1(E)	9	#5	5'-3"	—
v(E)	136	#8	5'-1"	—
v1(E)	8	#5	6'-4"	—
v2(E)	12	#5	10'-2"	—
vpp14(E)	77	#7	10'-6"	—
Concrete Structures	Cu. Yd.		34.5	
Reinforcement Bars, Epoxy Coated	Pound		5,340	
Furnishing Metal Shell Piles 14" X 0.312"	Foot		264	
Driving Piles	Foot		264	
Test Pile Metal Shells	Each		1	
Pile Shoes	Each		7	

\* Length is 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. 811.74 to Elev. 767.74

**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 31 of 42.

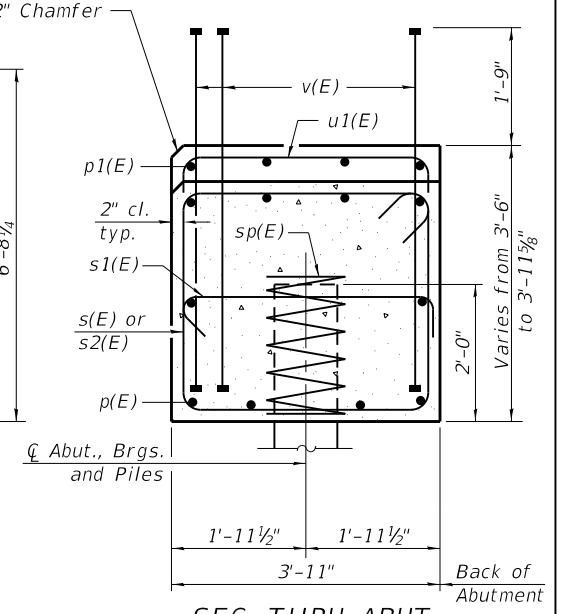
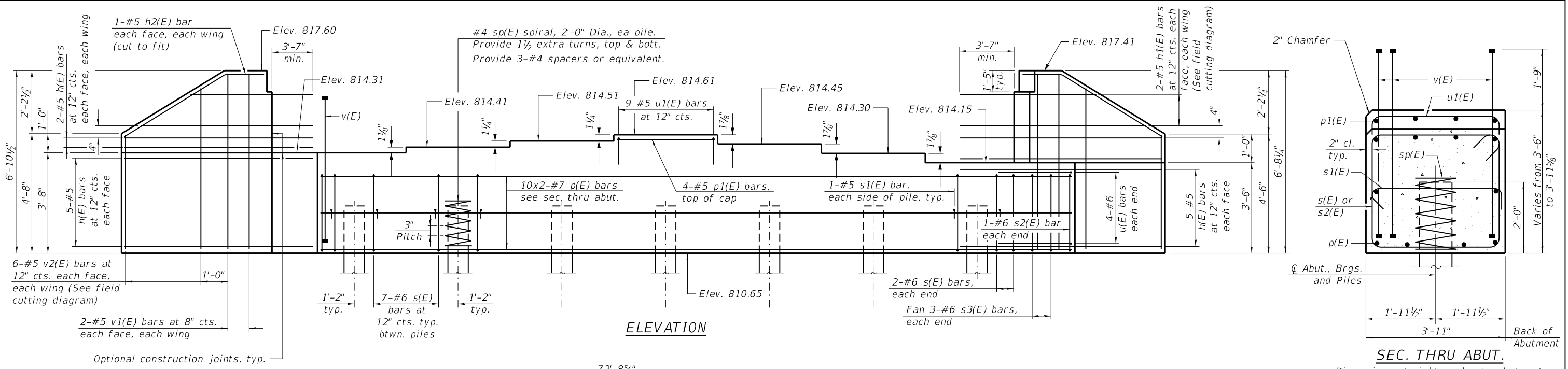
**MINIMUM BAR LAP**  
 #7 bar = 4'-5"

USER NAME = esotelo	DESIGNED - KN	REVISED - 10/23/2023 E.S
CHECKED - PD	REVISIONS -	
PLOT SCALE =	DRAWN - KN	REVISIONS -
PLOT DATE = 10/23/2023	CHECKED - PD	REVISIONS -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SOUTH ABUTMENT DETAILS  
 STRUCTURE NO. 056-4023**

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	93
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



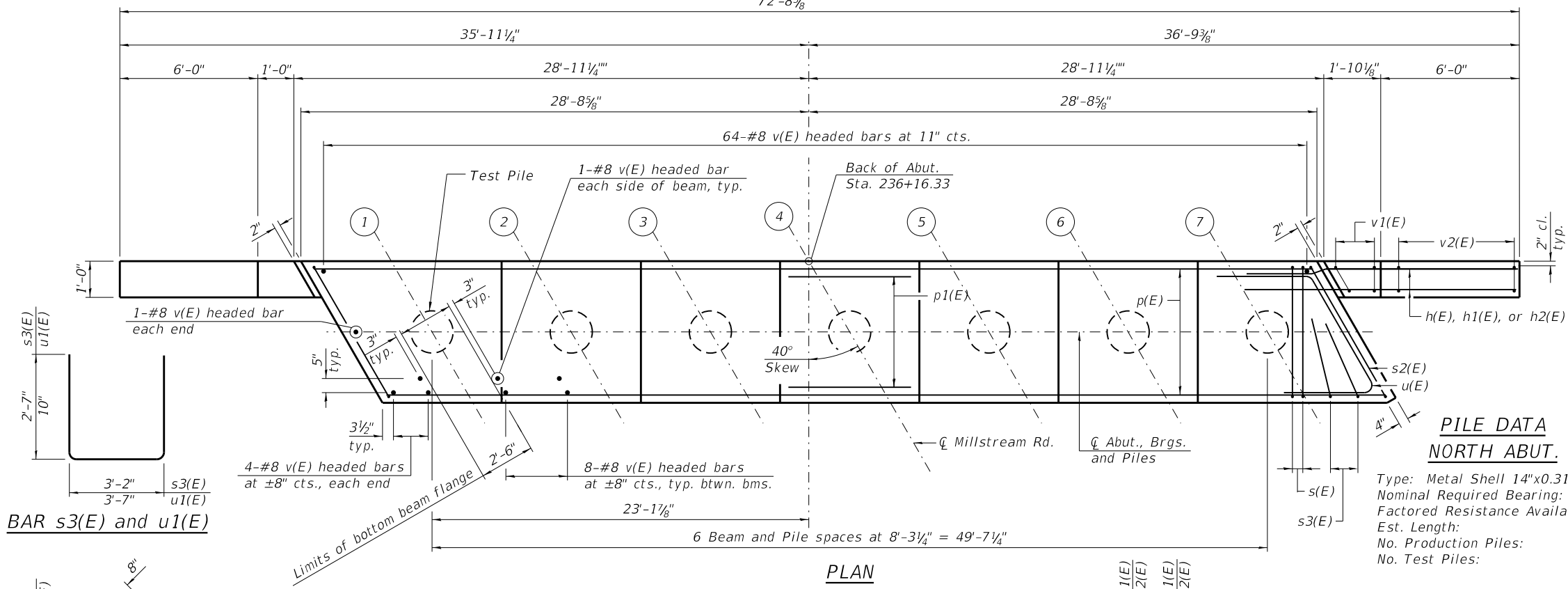
Dimensions at right angles to abutment.

**BILL OF MATERIAL**

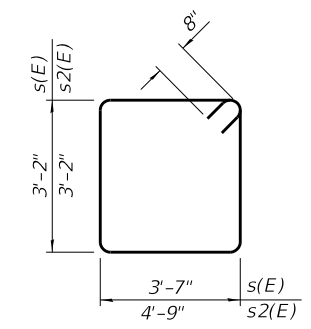
Bar	No.	Size	Length	Shape
h(E)	28	#5	11'-6"	—
h1(E)	4	#5	19'-4"	—
h2(E)	4	#5	7'-10"	—
p(E)	20	#7	30'-10"	—
p1(E)	4	#5	7'-11"	—
s(E)	46	#6	14'-10"	□
s1(E)	14	#5	4'-7"	□
s2(E)	2	#6	17'-2"	□
s3(E)	6	#6	8'-4"	□
sp(E)	7	#4	2'-0"	≡≡≡
sp14(E)	7	#4	10'-0"	≡≡≡
u(E)	8	#6	13'-1"	—
u1(E)	9	#5	5'-3"	—
v(E)	136	#8	5'-1"	—
v1(E)	8	#5	6'-4"	—
v2(E)	12	#5	10'-2"	—
vpp14(E)	77	#7	10'-6"	—
Concrete Structures	Cu. Yd.		34.5	
Reinforcement Bars, Epoxy Coated	Pound		5,340	
Furnishing Metal Shell Piles 14" X 0.312"	Foot		270	
Driving Piles	Foot		270	
Test Pile Metal Shells	Each		1	
Pile Shoes	Each		7	

**PILE DATA NORTH ABUT.**

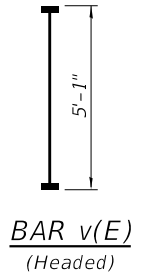
Type: Metal Shell 14"x0.312" with pile shoes  
 Nominal Required Bearing: 550 kips  
 Factored Resistance Available: 240 kips  
 Est. Length: 45 ft.  
 No. Production Piles: 6  
 No. Test Piles: 1



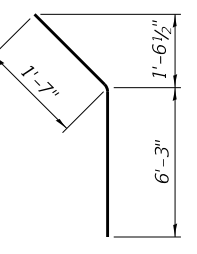
BAR s3(E) and u1(E)



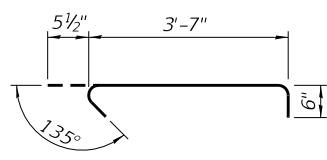
BAR s(E) & s2(E)



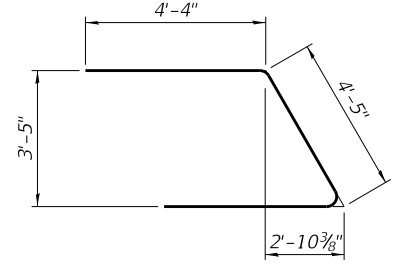
BAR v(E) (Headed)



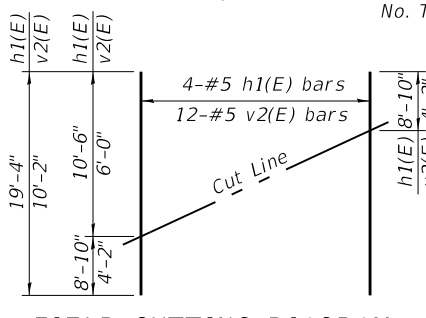
BAR h2(E)



BAR s1(E)



BAR u(E)



FIELD CUTTING DIAGRAM

Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing.

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 31 of 42.

**MINIMUM BAR LAP**

#7 bar = 4'-5"

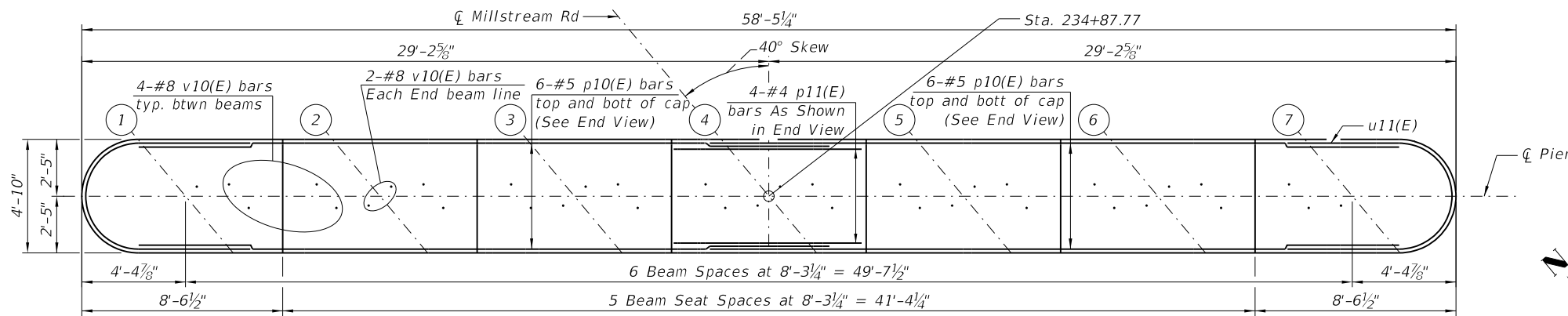
USER NAME = esotelo	DESIGNED - KN	REVISED - 10/23/2023 E.S.
CHECKED - PD	REVISIONS -	
PLOT SCALE =	DRAWN - KN	REVISIONS -
PLOT DATE = 10/23/2023	CHECKED - PD	REVISIONS -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

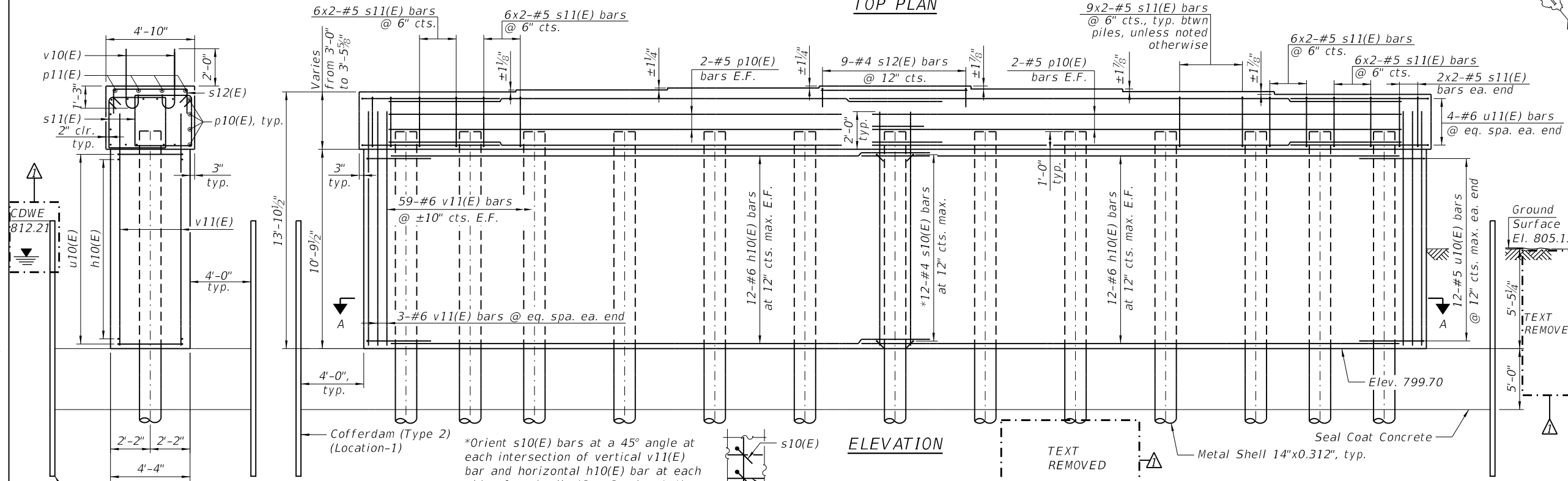
**NORTH ABUTMENT DETAILS  
 STRUCTURE NO. 056-4023**

SHEET 28 OF 42 SHEETS

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	94
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



**TOP PLAN**



**ELEVATION**

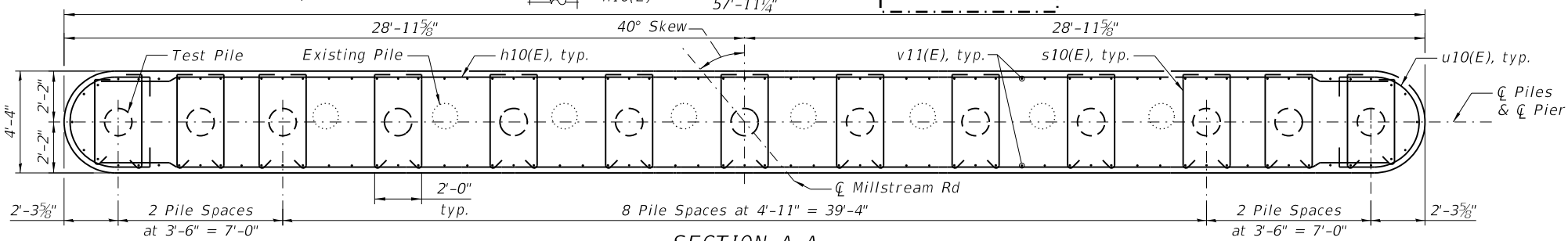
**MINIMUM BAR LAP**

- #5 Bars = 3'-7"
- #6 Bars = 4'-4"
- #7 Bars = 5'-0"

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h10(E)	48	#6	31'-0"	—
p10(E)	32	#7	28'-8"	—
p11(E)	4	#4	8'-0"	—
s15(E)	312	#4	5'-1"	┌
s16(E)	200	#5	12'-11"	□
s17(E)	9	#4	6'-8"	└
u10(E)	24	#5	11'-11"	U
u11(E)	8	#6	15'-9"	U
v10(E)	36	#8	4'-2"	C
v11(E)	124	#6	12'-9"	—
Cofferdam Excavation		Cu. Yd.	315	
Cofferdam (Type 2) (Location - 1)		Each	1	
Concrete Structures		Cu. Yd.	134.3	
Seal Coat Concrete		Cu. Yd.	151	
Reinforcement Bars, Epoxy Coated		Pound	11,190	
* Furnishing Metal Shell Piles 14" X 0.312"		Foot	612	
* Driving Piles		Foot	612	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	13	

\*Measured from top of pile to bottom of pile. From Elev. 811.48 to Elev. 760.48

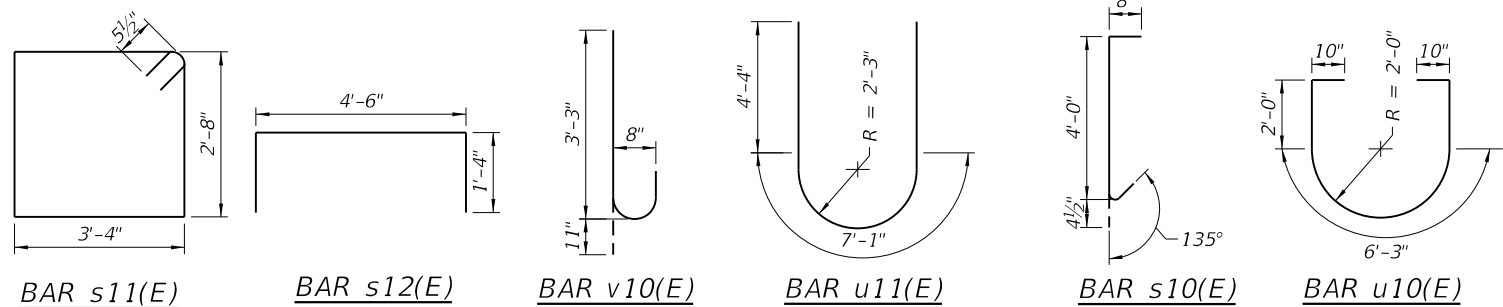


**SECTION A-A**

**END VIEW**

**BEARING SEAT ELEVATIONS**

Beam	Elevation
1	813.67
2	813.77
3	813.87
4	813.97
5	813.82
6	813.67
7	813.51



**PILE DATA**

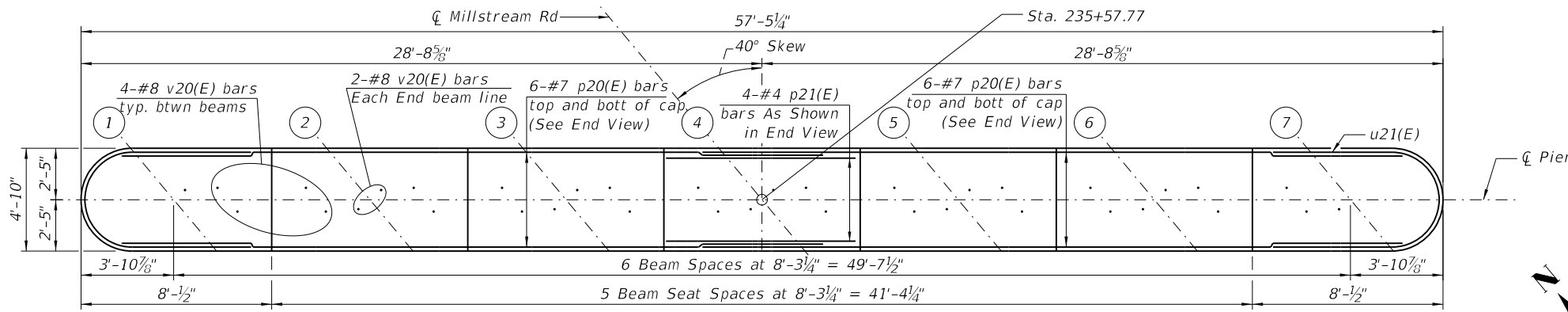
Pile Type and Size: Metal Shell Pile 14" Dia. w/ 0.312" Walls with Pile Shoes  
 Nominal Required Bearing: 500 kips  
 Factored Resistance Available: 220 kips  
 Estimated Length: 51 feet  
 Number of Production Piles: 12  
 Number of Test Piles: 1

**Notes:**

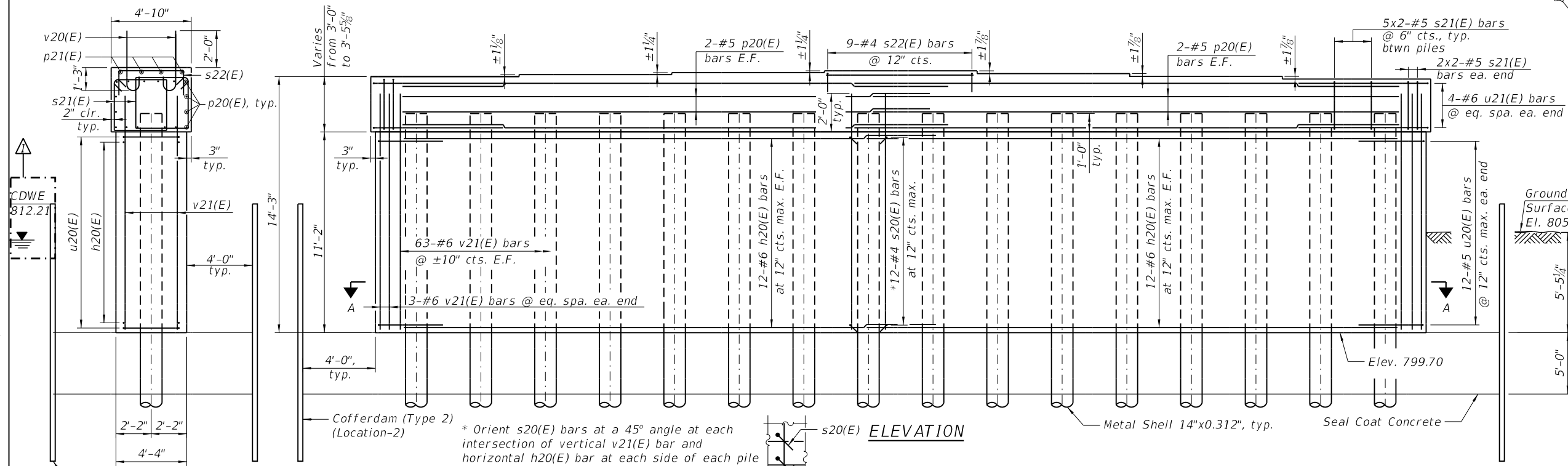
1. Cast steps monolithically with cap.
2. Space cap reinforcement to miss anchor bolts.
3. For pile details, see Sheet 31 of 42.
4. Drive piles to miss existing piles.

USER NAME = esotelo	DESIGNED - ES	REVISED - 10/23/2023 E.S.
CHECKED - PD	REVISIONS -	
PLOT SCALE =	DRAWN - ES	REVISIONS -
PLOT DATE = 10/23/2023	CHECKED - PD	REVISIONS -

C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	95
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



**TOP PLAN**



**ELEVATION**

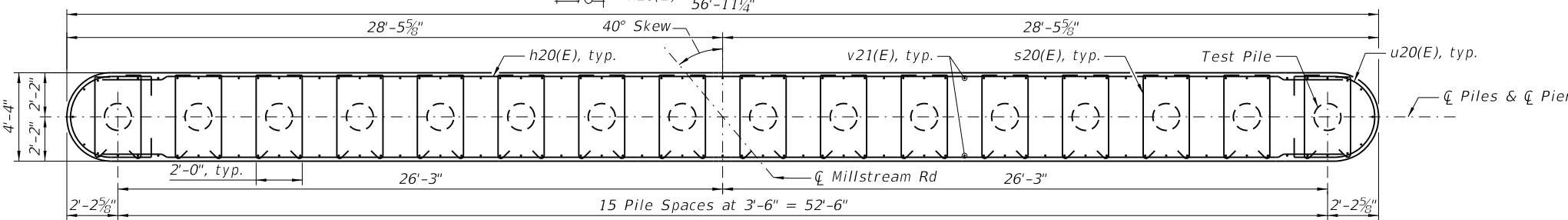
**MINIMUM BAR LAP**

- #5 Bars = 3'-7"
- #6 Bars = 4'-4"
- #7 Bars = 5'-0"

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h20(E)	48	#6	30'-6"	—
p20(E)	32	#7	31'-1"	—
p21(E)	4	#4	8'-0"	—
s25(E)	384	#4	5'-1"	┌
s26(E)	158	#5	12'-11"	┌
s27(E)	9	#4	6'-8"	┌
u20(E)	24	#5	11'-11"	U
u21(E)	8	#6	15'-9"	U
v20(E)	36	#8	4'-2"	┌
v21(E)	132	#6	13'-1"	—
Cofferdam Excavation			Cu. Yd.	311
Cofferdam (Type 2) (Location - 2)			Each	1
Concrete Structures			Cu. Yd.	135.4
Seal Coat Concrete			Cu. Yd.	149
Reinforcement Bars, Epoxy Coated			Pound	11,210
* Furnishing Metal Shell Piles 14" X 0.312"			Foot	720
* Driving Piles			Foot	720
Test Pile Metal Shells			Each	1
Pile Shoes			Each	16

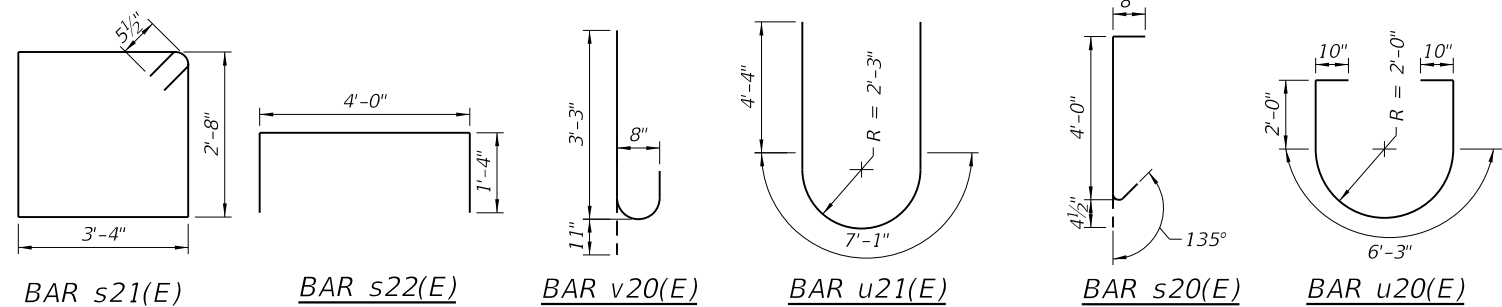
**END VIEW**



**SECTION A-A**

**BEARING SEAT ELEVATIONS**

Beam	Elevation
1	814.02
2	814.12
3	814.22
4	814.32
5	814.17
6	814.02
7	813.86



**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: 48 feet  
 Number of Production Piles: 15  
 Number of Test Piles: 1

**NOTES:**

1. Cast steps monolithically with cap.
2. Space cap reinforcement to miss anchor bolts.
3. For pile details, see Sheet 31 of 42.

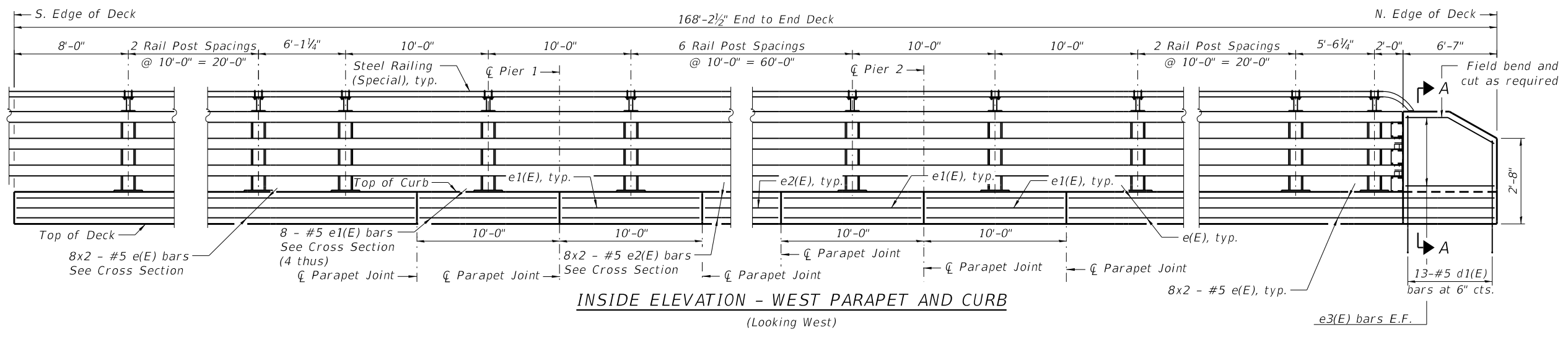
USER NAME = esotelo	DESIGNED - DK	REVISED - 10/23/2023 E.S
CHECKED - PD	REVISIONS -	
PLOT SCALE =	DRAWN - DK	REVISIONS -
PLOT DATE = 10/23/2023	CHECKED - PD	REVISIONS -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

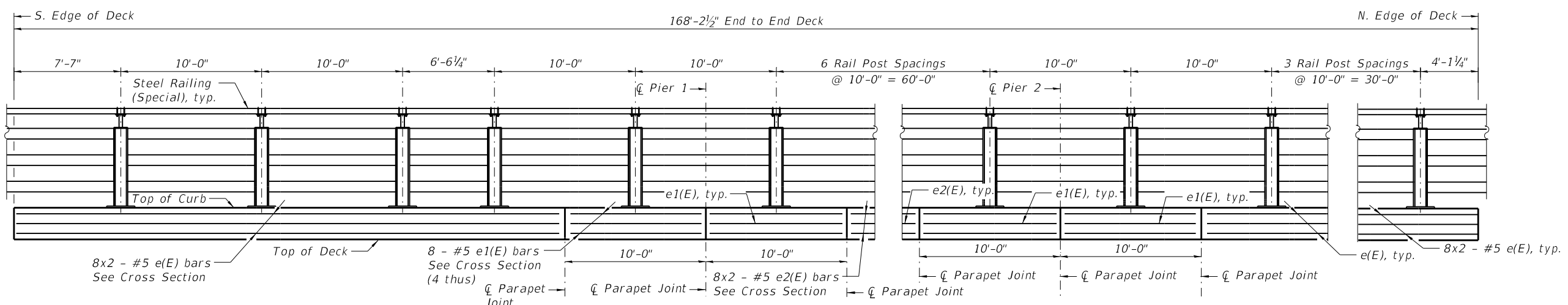
**PIER 2 DETAILS  
STRUCTURE NO. 056-4023**

SHEET 30 OF 42 SHEETS

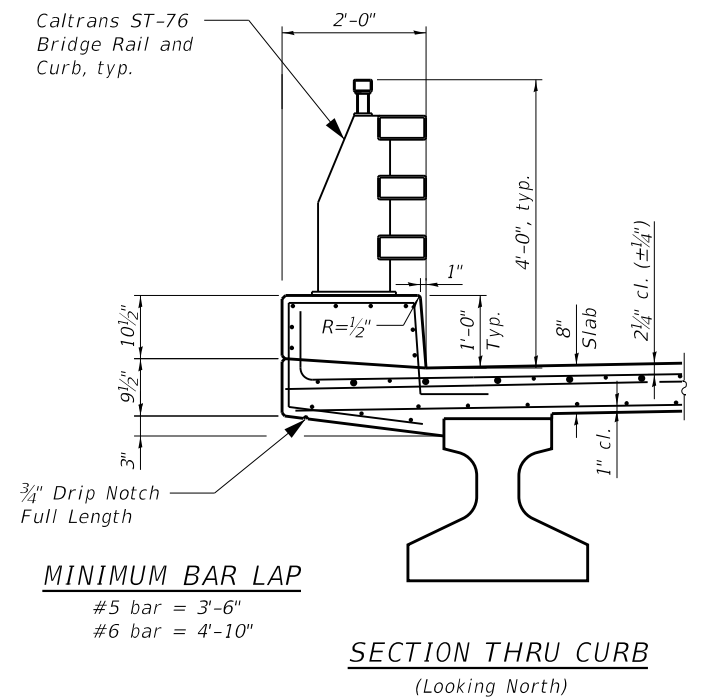
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	96
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



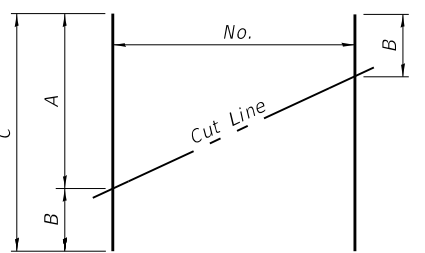
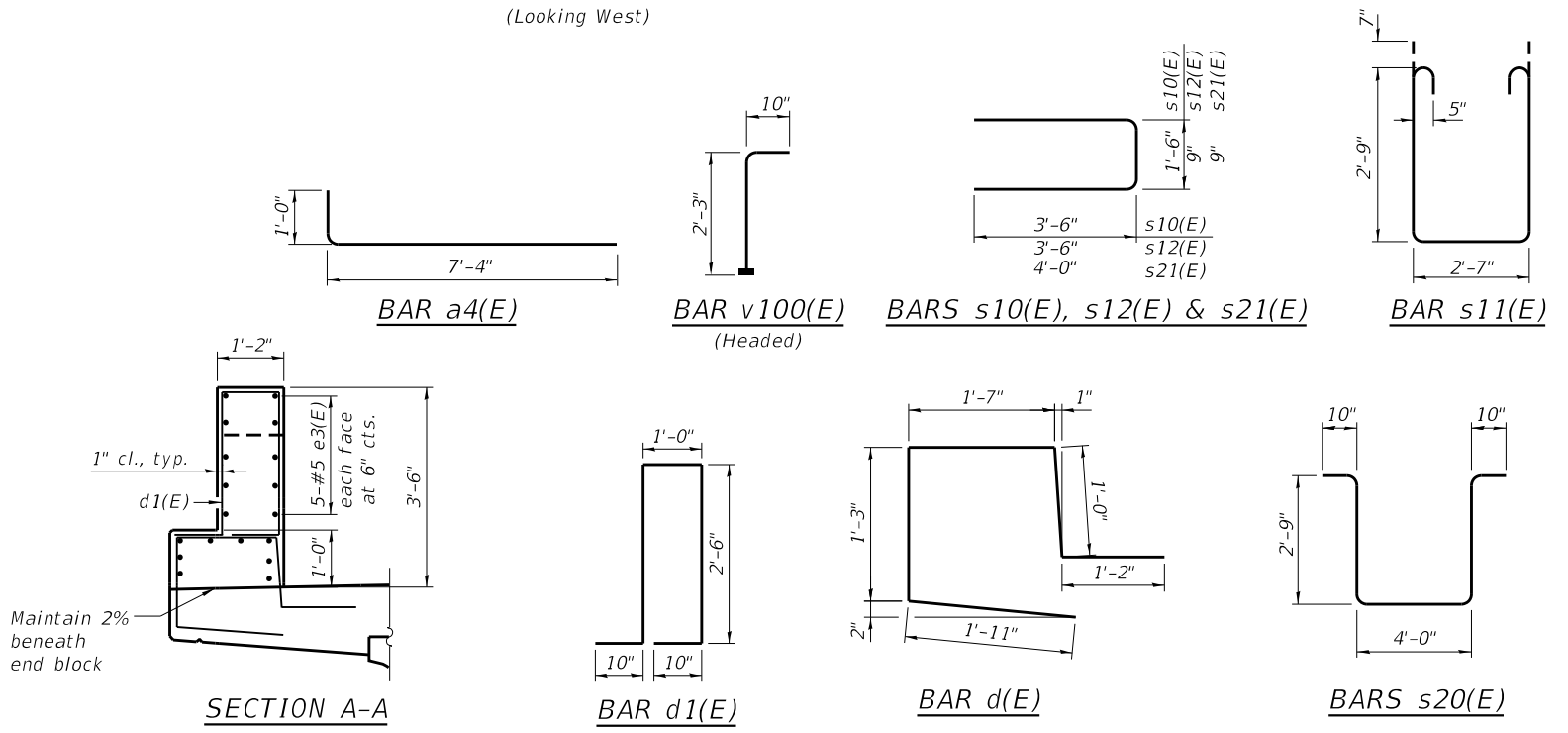
**INSIDE ELEVATION - WEST PARAPET AND CURB**  
(Looking West)



**OUTSIDE ELEVATION - EAST PARAPET AND CURB**  
(Looking West)



**SECTION THRU CURB**  
(Looking North)



**FIELD CUTTING DIAGRAM**

Order a bars full length.  
Cut as shown and use remainder of bars in opposite end of deck.

**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.	262.6	

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

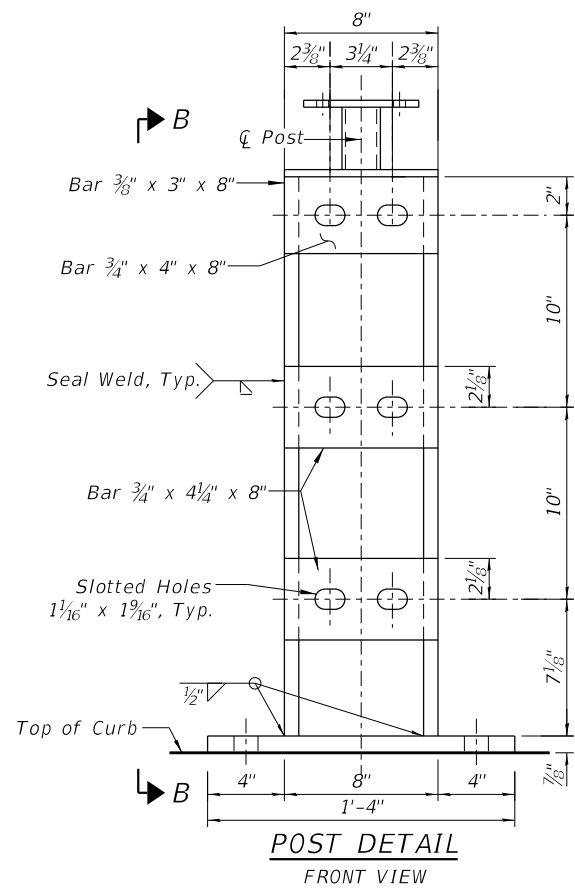
USER NAME = esotelo	DESIGNED - ES	REVISED - 10/23/2023 E.S.
CHECKED - PD	REVISIONS -	
PLOT SCALE =	DRAWN - ES	REVISIONS -
PLOT DATE = 10/23/2023	CHECKED - PD	REVISIONS -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

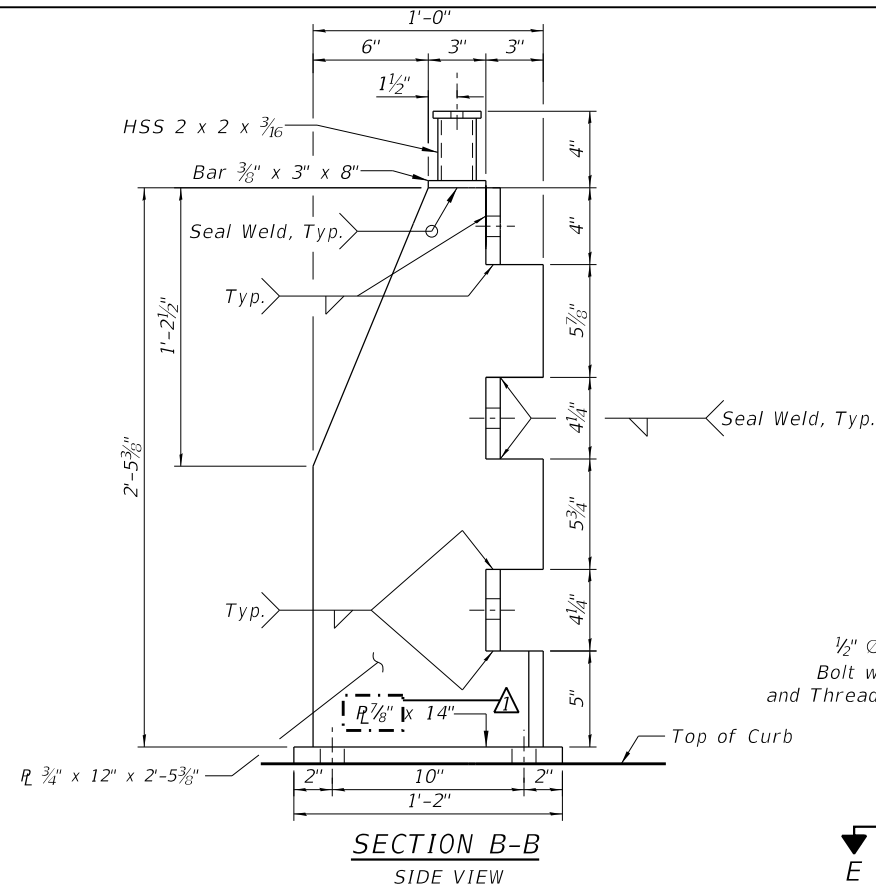
**SUPERSTRUCTURE DETAILS**  
**STRUCTURE NO. 056-4022**

SHEET 12 OF 40 SHEETS

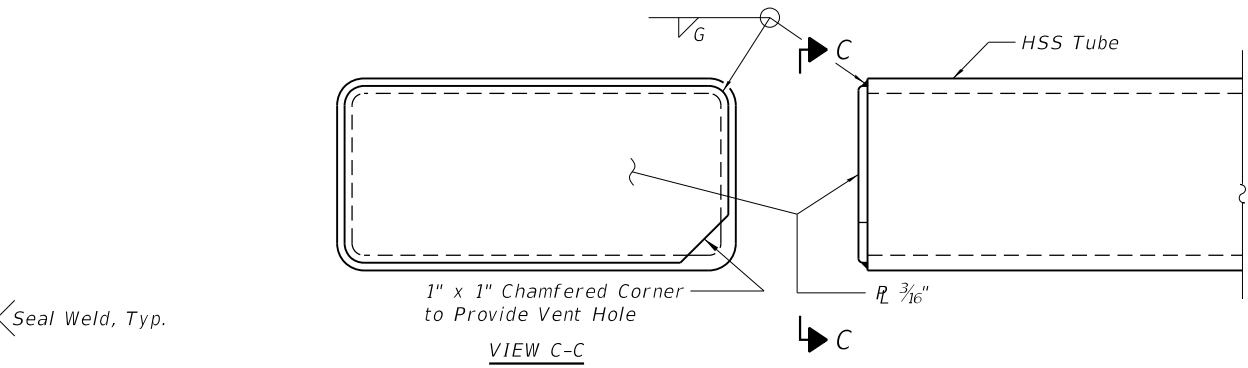
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	120
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				



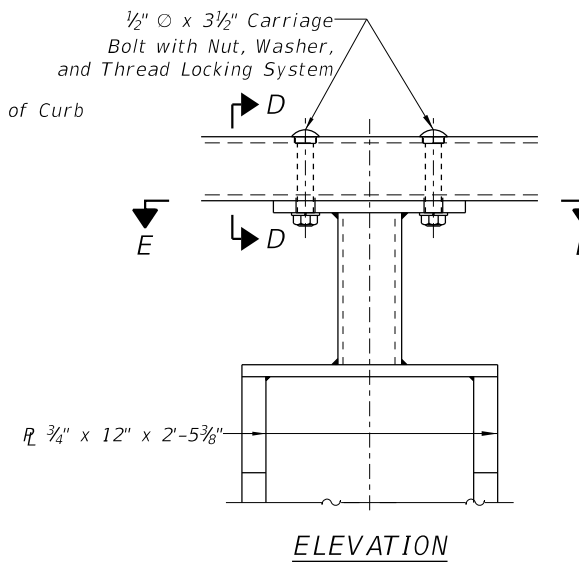
**POST DETAIL**  
FRONT VIEW



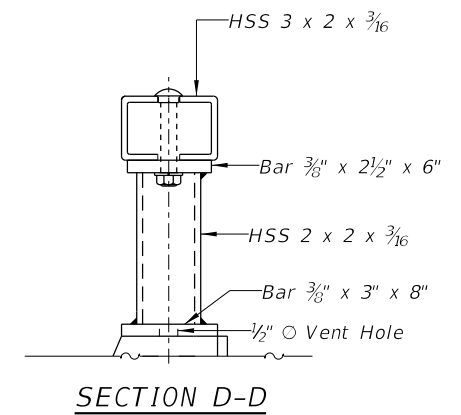
**SECTION B-B**  
SIDE VIEW



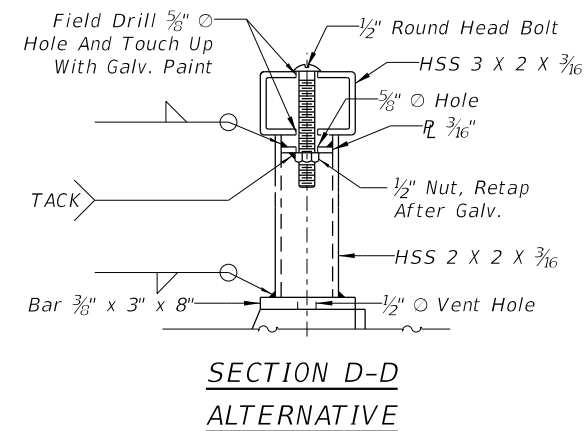
**RAIL END CAP**  
Note: For vehicular rail tube and bicycle railing tubes.



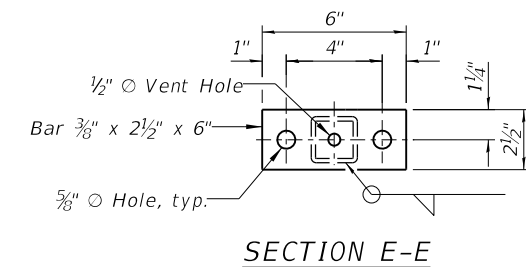
**ELEVATION**



**SECTION D-D**



**SECTION D-D**  
ALTERNATIVE



**SECTION E-E**

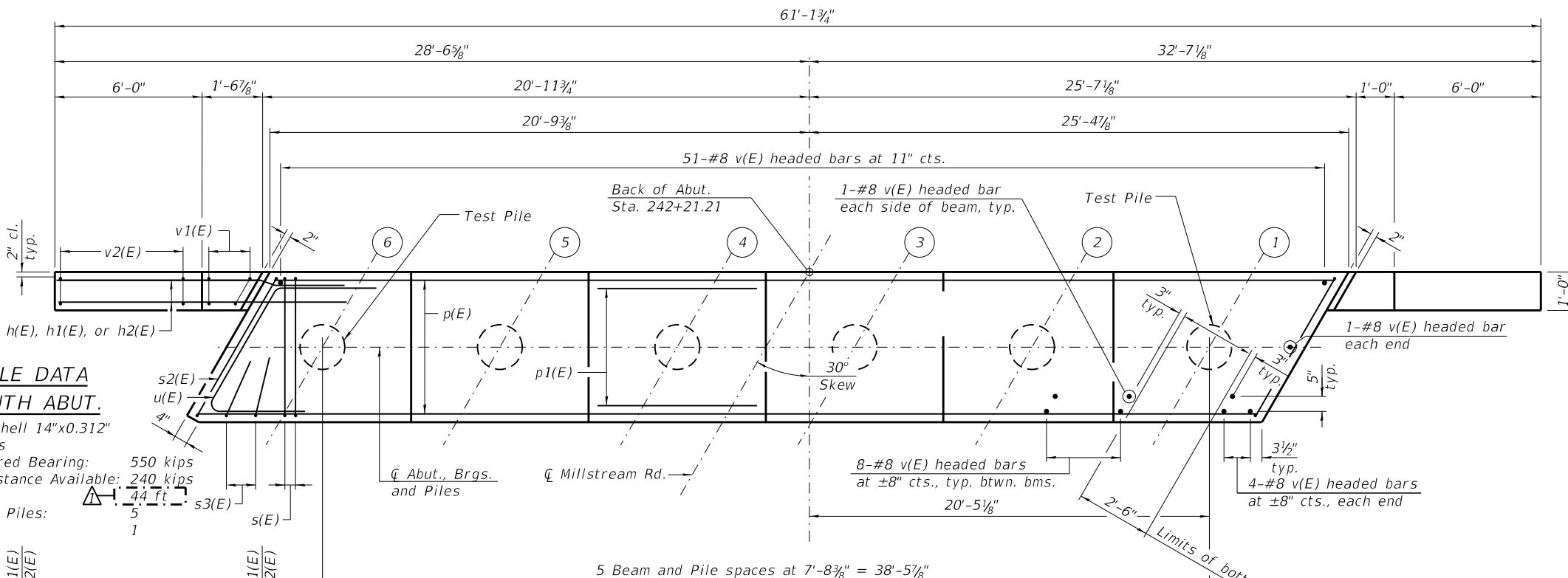
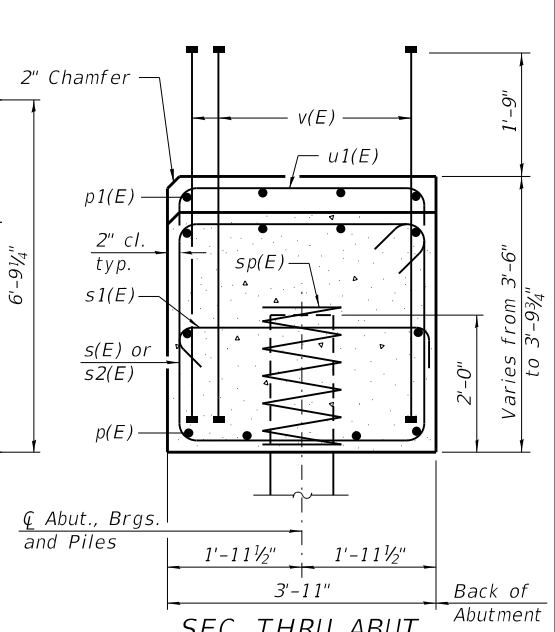
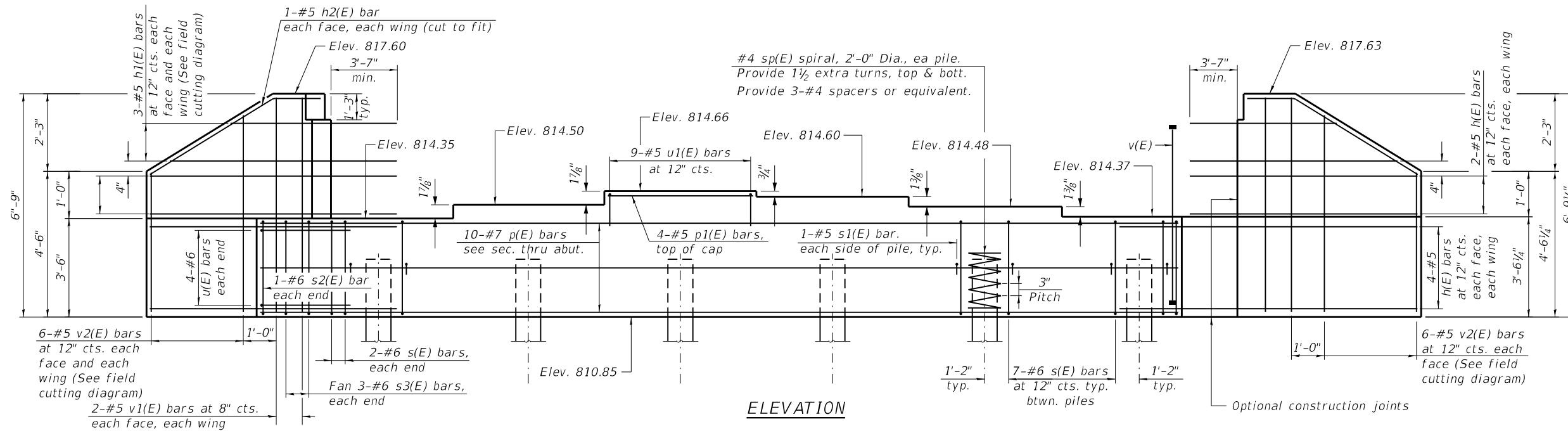
USER NAME = esotelo	DESIGNED - DK	REVISED - 10/23/2023 E.S.
	CHECKED - PD	REVISED -
PLOT SCALE =	DRAWN - DK	REVISED -
PLOT DATE = 10/30/2023	CHECKED - PD	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

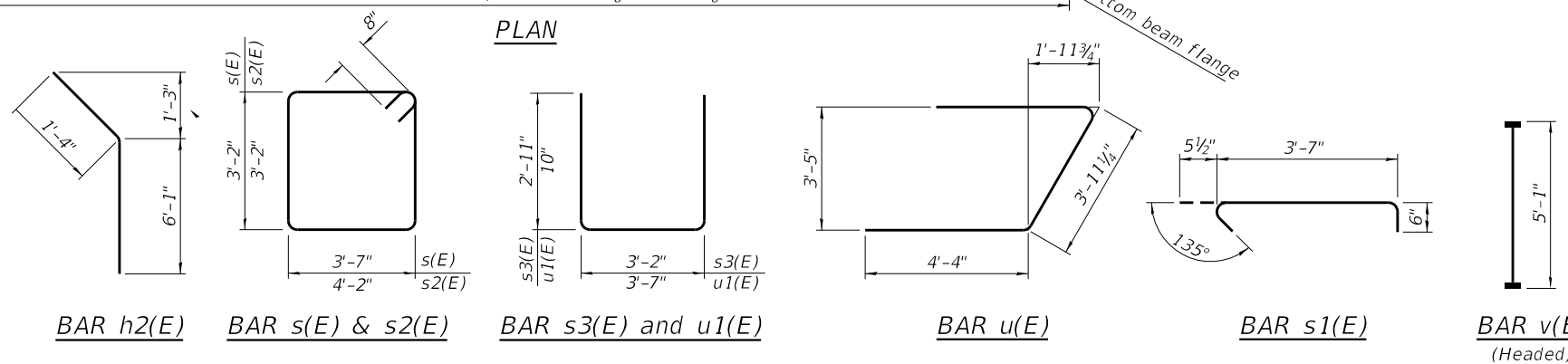
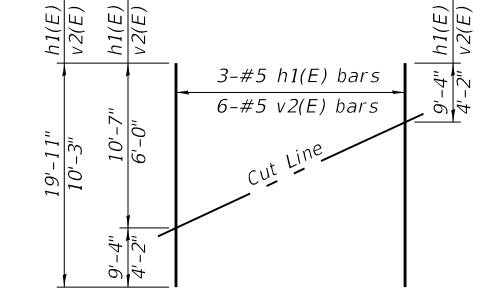
**STEEL RAILING DETAILS III**  
**STRUCTURE NO. 056-4022**

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				



**PILE DATA SOUTH ABUT.**  
 Type: Metal Shell 14"x0.312" with pile shoes  
 Nominal Required Bearing: 550 kips  
 Factored Resistance Available: 240 kips  
 Est. Length: 44 ft  
 No. Production Piles: 5  
 No. Test Piles: 1



**BILL OF MATERIAL**

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"	WWW
sp14(E)	6	#4	10'-0"	WWW
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.

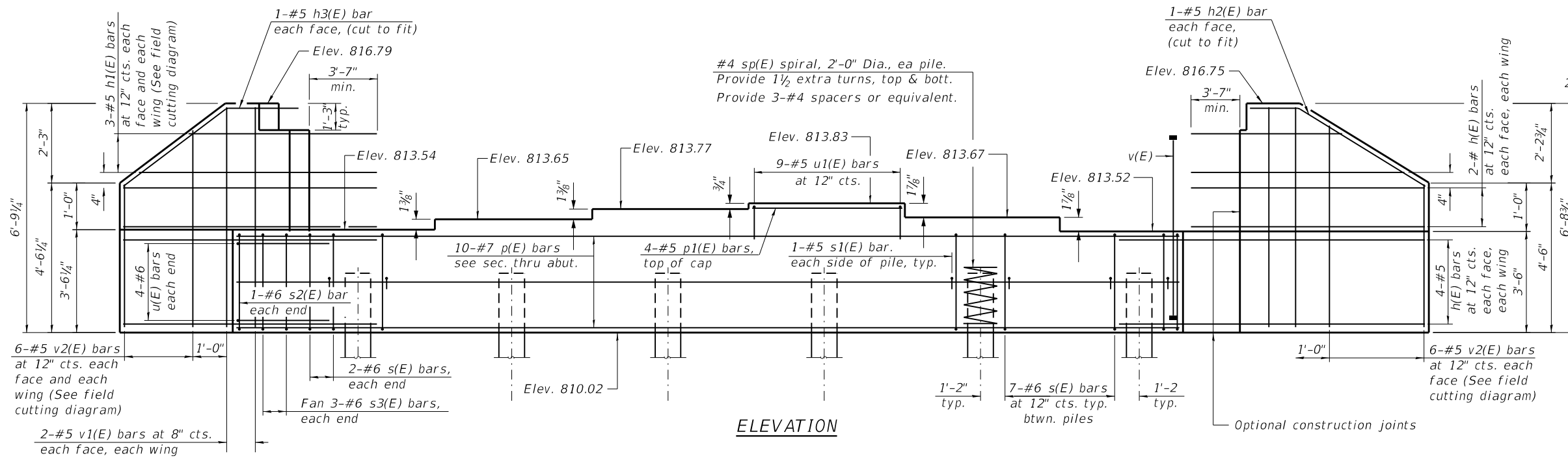
USER NAME = esotelo	DESIGNED - KN	REVISED - 10/23/2023 E.S
CHECKED - PD	REVISIONS -	
PLOT SCALE =	DRAWN - KN	REVISIONS -
PLOT DATE = 10/23/2023	CHECKED - PD	REVISIONS -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

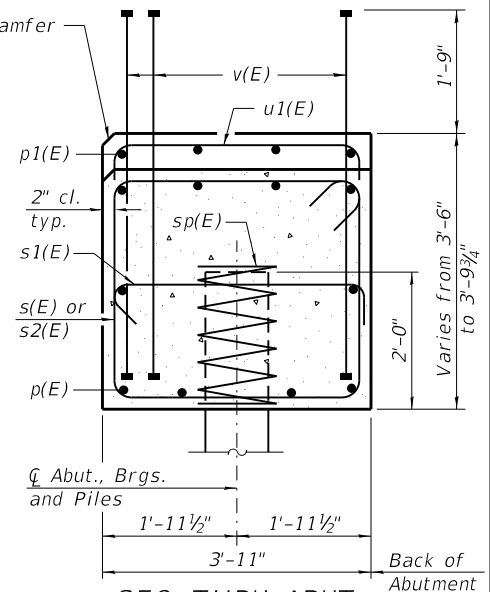
**SOUTH ABUTMENT DETAILS  
 STRUCTURE NO. 056-4022**

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

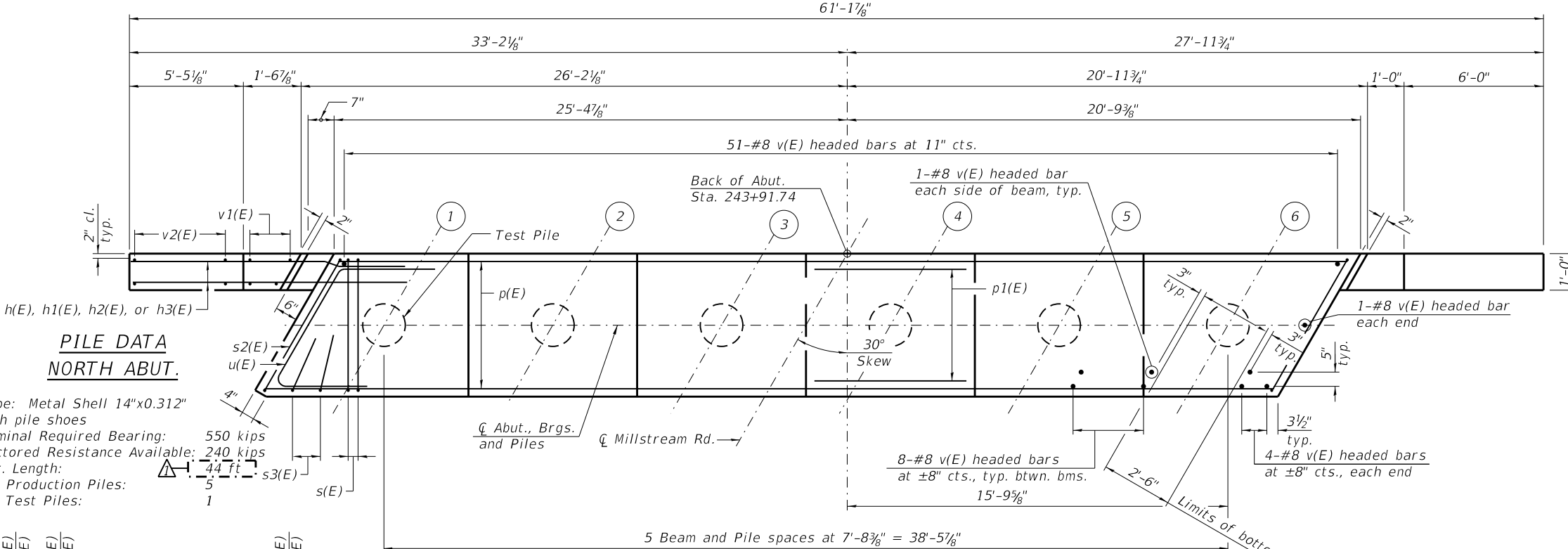




**ELEVATION**



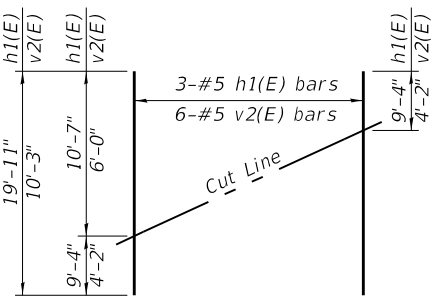
**SEC. THRU ABUT.**  
Dimensions at right angles to abutment.



**PLAN**

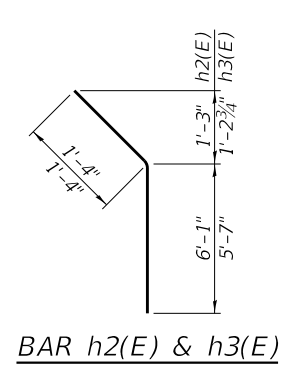
**PILE DATA  
NORTH ABUT.**

Type: Metal Shell 14"x0.312" with pile shoes  
 Nominal Required Bearing: 550 kips  
 Factored Resistance Available: 240 kips  
 Est. Length: 44 ft.  
 No. Production Piles: 5  
 No. Test Piles: 1

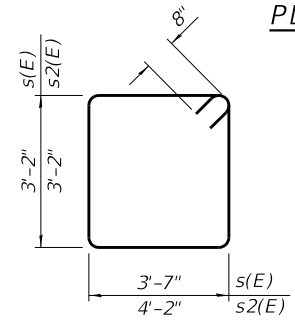


**FIELD CUTTING DIAGRAM**

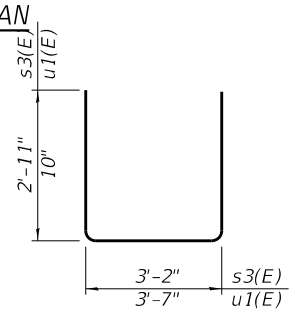
Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing.



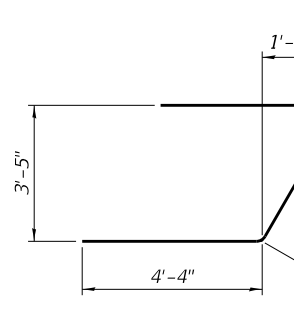
**BAR h2(E) & h3(E)**



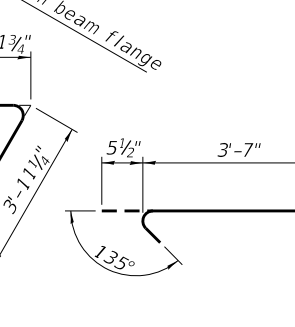
**BAR s(E) & s2(E)**



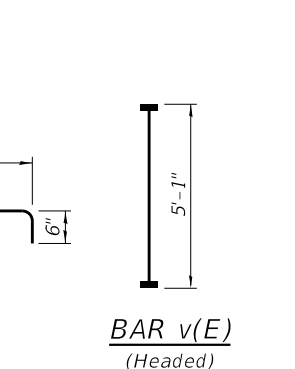
**BAR s3(E) and u1(E)**



**BAR u(E)**



**BAR s1(E)**



**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:  
 Four 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.

USER NAME = esotelo	DESIGNED - KN	REVISED - 10/23/2023 E.S
PLOT SCALE =	CHECKED - PD	REVISED -
PLOT DATE = 10/23/2023	DRAWN - KN	REVISED -
	CHECKED - PD	REVISED -

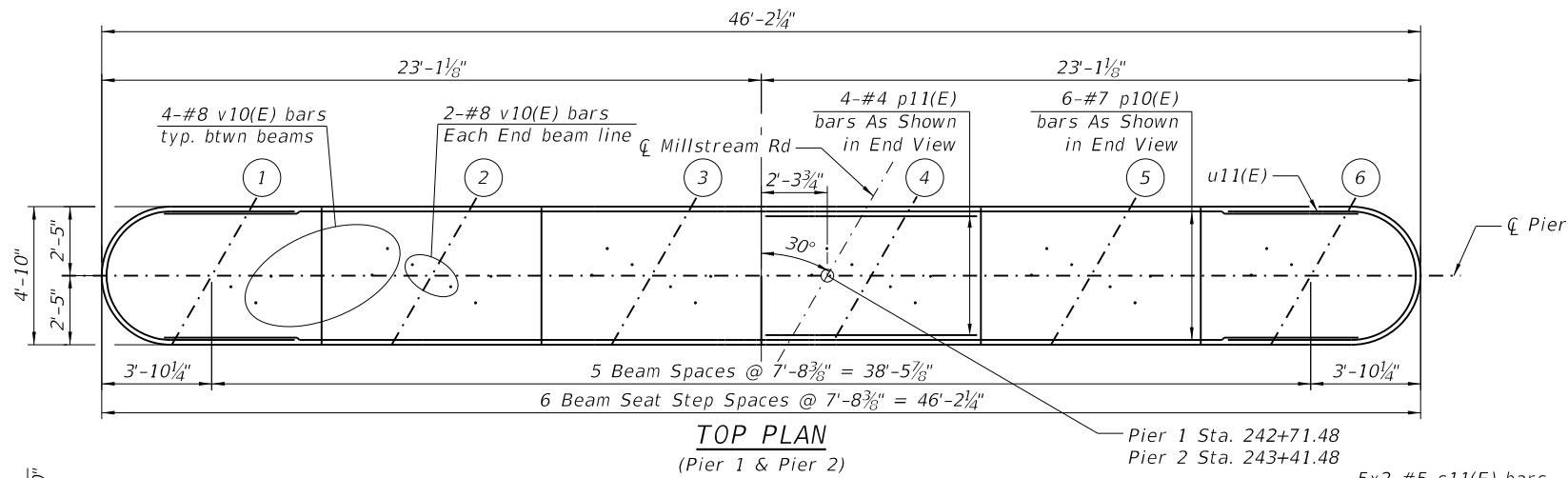
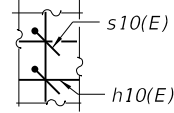
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**NORTH ABUTMENT DETAILS  
STRUCTURE NO. 056-4022**

SHEET 28 OF 40 SHEETS

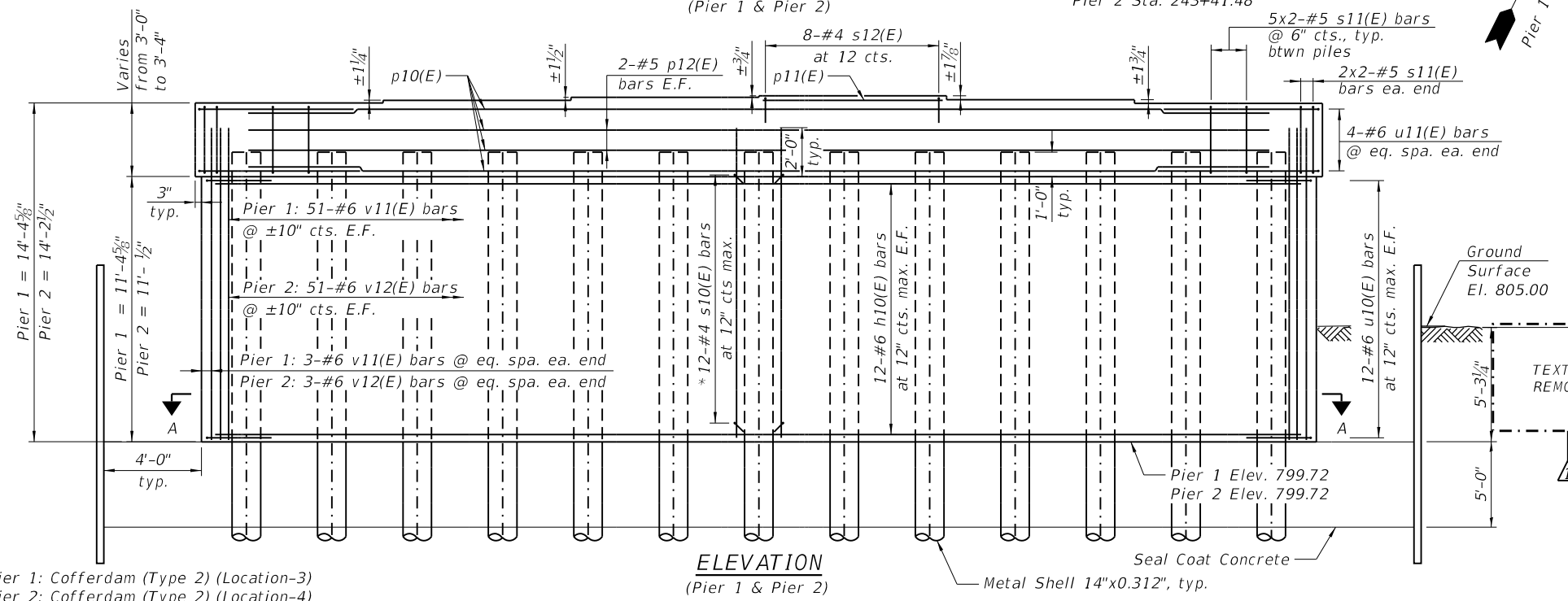
C.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T64	18-00482-00-BR	MCHENRY	219	136
CONTRACT NO. 61J79				
ILLINOIS FED. AID PROJECT				

\* 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)



**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"	U
u11(E)	8	#6	15'-9"	U
v10(E)	30	#8	4'-2"	┌
v11(E)	108	#6	13'-3"	┌
Cofferdam Excavation		Cu. Yd.	253.1	
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	13	

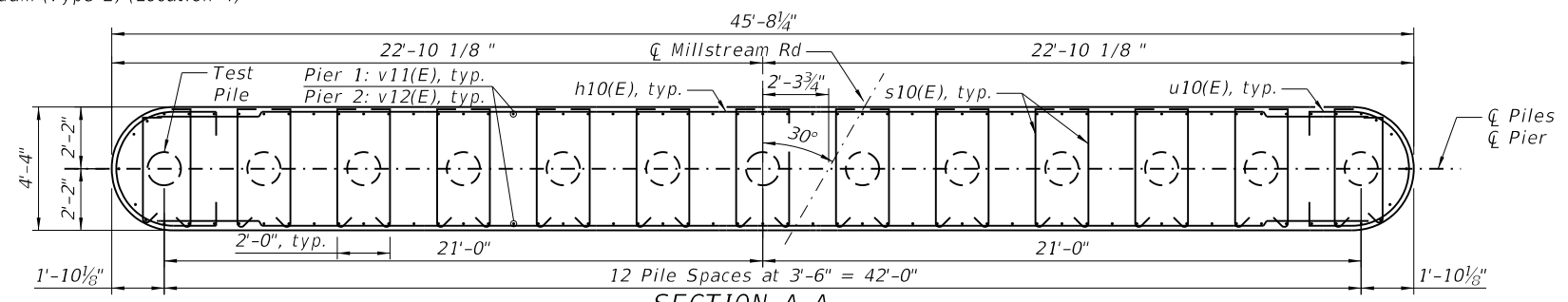


**PIER 2  
BILL OF MATERIAL**

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"	U
u11(E)	8	#6	15'-9"	U
v10(E)	30	#8	4'-2"	┌
v12(E)	108	#6	12'-10"	┌
Cofferdam Excavation		Cu. Yd.	253.1	
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	13	

Tip Elevation to be determined by contractor (typ.)

**END VIEW**  
(Pier 1 & Pier 2)

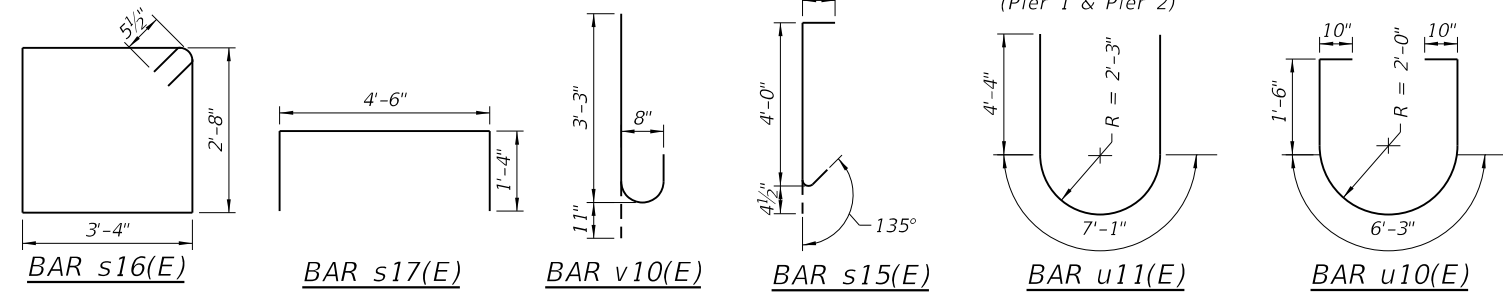


**BEARING SEAT ELEVATIONS**

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"



**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: 48 feet (Pier 1)  
54 feet (Pier 2)

Number of Production Piles: 12

Number of Test Piles: 1

\* 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 = esotelo	DESIGNED - ES	REVISED - 10/23/2023 E.S
CHECKED - PD	REVISIONS -	
PLOT SCALE =	DRAWN - ES	REVISIONS -
PLOT DATE = 10/23/2023	CHECKED - PD	REVISIONS -

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