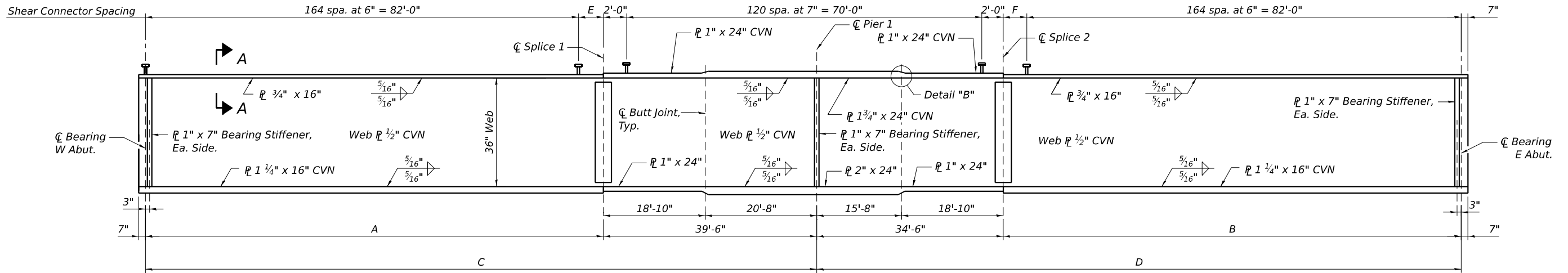
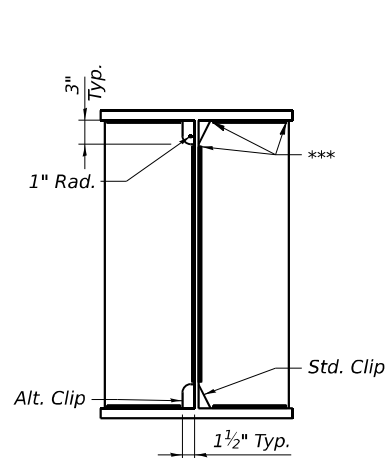


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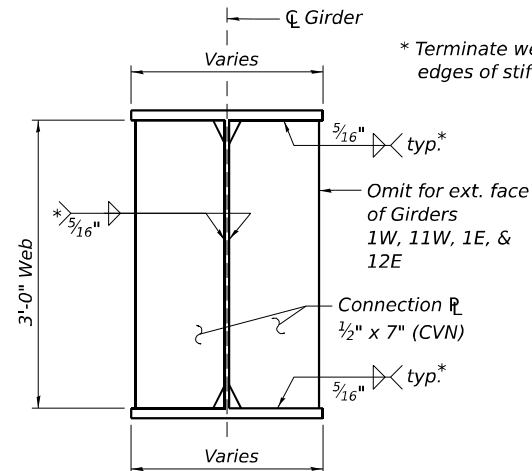
GIRDER ELEVATION

"CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.



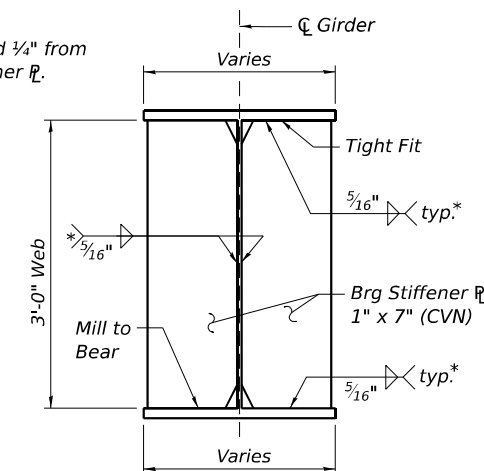
WELD LIMIT AND CLIP DETAILS

*** Stop welds 1/4" ($\pm 1/8$ ") from edges as shown. Typ.



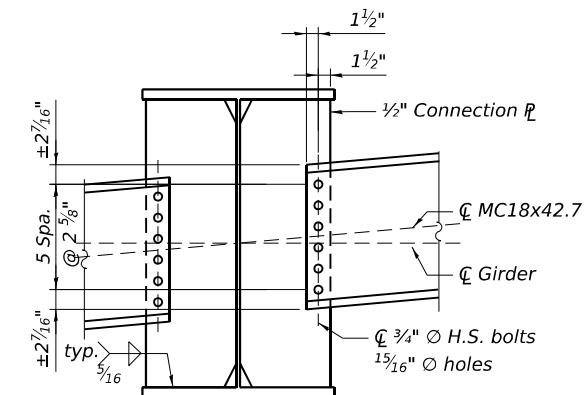
CONNECTION PLATE

(No. of Plates Req'd = 504)



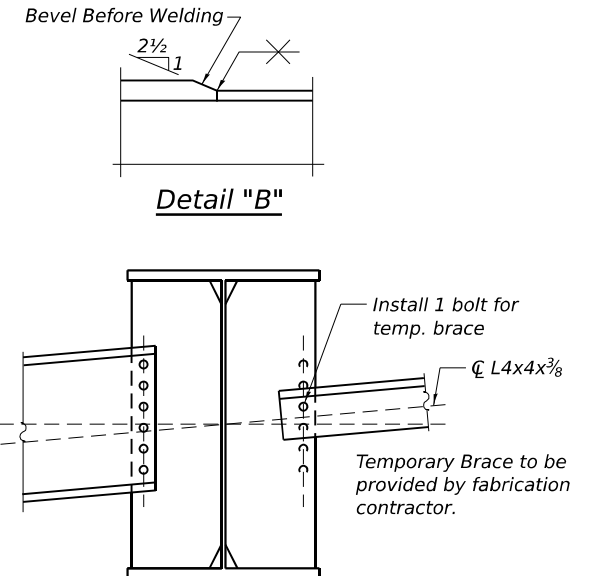
BEARING STIFFENER AT ABUTMENTS & PIER

(No. of Plates Req'd = 138)



DIAPHRAGM DETAIL

(No. Diaphragms Req'd = 273)



TEMPORARY BRACE DETAIL AT STAGE CONSTRUCTION LINE

(No. of Braces Req'd = 26)

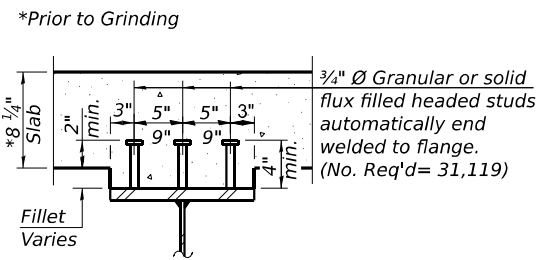
1. Install temporary brace prior to Stage II deck pour.
2. After Stage II deck has cured remove temporary brace and install diaphragm detail.
3. Pour concrete deck closure pour.

NOTES:

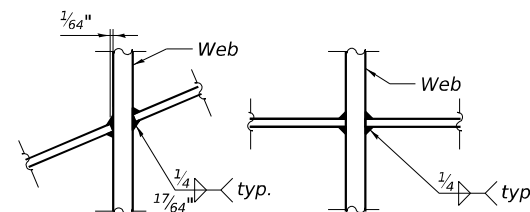
1. See sheet SD-33 for framing plan.
2. All flange plates, web plates, and bearing stiffeners shall be AASHTO M270 Grade 50 Steel.
3. Two hardened washers required for each set of oversized holes
4. Alternate channels of equal depth and larger weight are permitted to facilitate material acquisition. Alternate channels, if utilized, shall be provided at no additional cost to Department.
5. Holes shall be field drilled for bridge mounted sign support (See signing plans)

GIRDER DIMENSION TABLE

BEAM	A	B	C	D	E	F
W1-W11 & E1-E9	84'-0"	84'-0"	123'-6"	118'-6"	2'-0"	2'-0"
E10	84'-0 1/16"	84'-0 1/16"	123'-6 1/16"	118'-6 1/16"	2'-0 1/16"	2'-0 1/16"
E11	84'-0 1/4"	84'-0 1/4"	123'-6 3/8"	118'-6 5/16"	2'-0 1/4"	2'-0 1/4"
E12	84'-0 9/16"	84'-0 9/16"	123'-6 13/16"	118'-6 3/4"	2'-0 9/16"	2'-0 9/16"



SECTION A-A



WEB WELD DETAIL



USER NAME = cstanuch	DESIGNED - LRG	REVISED -
PLOT SCALE =	CHECKED - CRS	REVISED -
PLOT DATE = 8/8/2023	DRAWN - LRG	REVISED -
	CHECKED - CRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER ELEVATION AND STEEL DETAILS
STRUCTURE NO. 099-8316 & 099-8317

SHEET SD-34 OF SD-52 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	801
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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8/8/2023 11:25:38 AM

INTERIOR GIRDER 2W MOMENT TABLE			
		* 0.4 Sp. 1 or 0.6 Sp. 2	Pier
I_s	(in ⁴)	12,475	34,130
$I_C(n)$	(in ⁴)	33,407	63,027
$I_C(3n)$	(in ⁴)	24,221	---
$I_C(cr)$	(in ⁴)	---	38,123
S_s	(in ³)	769.59	1805.82
$S_C(n)$	(in ³)	1040.39	---
$S_C(3n)$	(in ³)	960.77	---
$S_C(cr)$	(in ³)	---	1871
DC1	(k/')	0.882	1.126
M_{DC1}	('k)	822	2085
DC2	(k/')	0.104	0.104
M_{DC2}	('k)	101	223
DW	(k/')	0.3	0.3
M_{DW}	('k)	292	644
LLDF		0.479	0.514
$M_{\text{L}} + IM$	('k)	1393	1794
M_U	('k)	4029.5	6990.5
$\phi_f M_N$	('k)	4959.4	8198.9
f_s DC1	(ksi)	12.82	13.86
f_s DC2	(ksi)	1.26	1.43
f_s DW	(ksi)	3.65	4.13
f_s (L+IM)	(ksi)	16.07	11.51
f_s (Service II)	(ksi)	38.61	34.38
$0.95R_h F_{yf}$	(ksi)	47.5	47.5
f_s (Total)(Strength I)	(ksi)	---	---
$\phi_f F_N$	(ksi)	---	---
V_f	(k)	57.05	57.1

* 0.4 Span 1 Moment control design of
positive moment section, 0.6 Span 2
Moments are similar, but slightly smaller

GIRDER 2W REACTION TABLE			
	W. Abut.	Pier	E. Abut.
LLDF	0.695	0.695	0.695
OCF	1	1	1
R_{DC1}	(k) 39.24	151.59	36.01
R_{DC2}	(k) 4.62	16.27	4.28
R_{DW}	(k) 13.31	46.94	12.34
R_L	(k) 68.63	141.46	67.57
R_{Im}	(k) 14.9	26.1	14.84
R_{Total}	(k) 140.7	382.36	135.04

EXTERIOR GIRDER 12E MOMENT TABLE				
		0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in ⁴)	12,475	34,130	12,475
$I_C(n)$	(in ⁴)	31,902	61,279	33,074
$I_C(3n)$	(in ⁴)	22,884	---	23,915
$I_C(cr)$	(in ⁴)	---	38,123	---
S_s	(in ³)	769.59	1805.82	769.59
$S_C(n)$	(in ³)	1029.10	---	1037.78
$S_C(3n)$	(in ³)	946.01	---	957.37
$S_C(cr)$	(in ³)	---	1974	---
DC1	(k/')	0.923	1.198	1.004
M_{DC1}	('k)	759	2088	742
DC2	(k/')	0.104	0.104	0.104
M_{DC2}	('k)	101	224	86
DW	(k/')	0.286	0.296	0.306
M_{DW}	('k)	273	630	261
LLDF		0.425	0.479	0.471
$M_L + IM$	('k)	1232	1673	1304
M_U	('k)	3640.5	6762.75	3708.5
$\phi_f M_N$	('k)	4826.3	8198.9	4928
f_s DC1	(ksi)	11.83	13.88	11.57
f_s DC2	(ksi)	1.28	1.36	1.08
f_s DW	(ksi)	3.46	3.83	3.27
f_s (L+IM)	(ksi)	14.37	10.17	15.08
f_s (Service II)	(ksi)	35.25	32.28	35.52
$0.95R_h F_y f$	(ksi)	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	---	---	---
$\phi_f F_N$	(ksi)	---	---	---
V_f	(k)	56.94	57.14	54.34

GIRDER 12E REACTION TABLE			
	W. Abut.	Pier	E. Abut.
LLDF	0.599	0.648	0.696
OCF	1	1	1
R_{DC1}	(k) 36.45	151.61	38.83
R_{DC2}	(k) 4.61	16.29	4.27
R_{DW}	(k) 12.48	46.19	12.86
R_L	(k) 59.09	131.91	67.73
R_{Im}	(k) 12.84	24.34	14.86
R_{Total}	(k) 125.47	370.34	138.55

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

$I_C(n), S_C(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in⁴ and in³).

$I_C(3n), S_C(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).

$I_C(cr), S_C(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in⁴ and in³).

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

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

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

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

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

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

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

M_U (Strength II): Factored design moment (kip-ft.).

1.25 ($M_{DC1} + M_{DC2}$) + 1.5 $M_{DW} + 1.75 M_{\text{L}} + IM$

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

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

M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).

$M_{DC2} / S_C(3n)$ or $M_{DC2} / S_C(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).

$M_{DW} / S_C(3n)$ or $M_{DW} / S_C(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).

$M_{\text{L}} + IM / S_C(n)$ or $M_{\text{L}} + IM / S_C(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).

$f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (L + IM)$

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

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).

1.25 ($f_s DC1 + f_s DC2$) + 1.5 $f_s DW + 1.75 f_s (L + IM)$

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

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



USER NAME = cstanugch	DESIGNED - LRG	REVISED -
	CHECKED - CRS	REVISED -
PLOT SCALE =	DRAWN - LRG	REVISED -
PLOT DATE = 8/8/2023	CHECKED - CRS	REVISED -

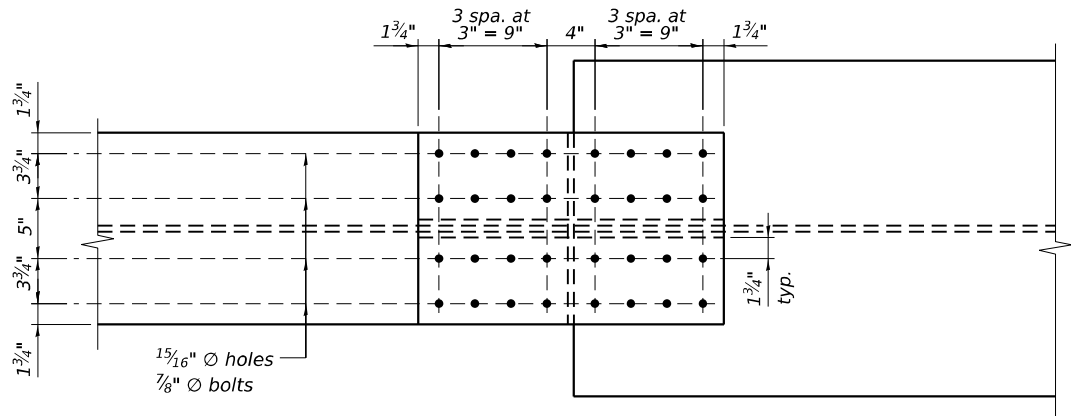
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT AND REACTION TABLE
STRUCTURE NO. 099-8316 & 099-8317

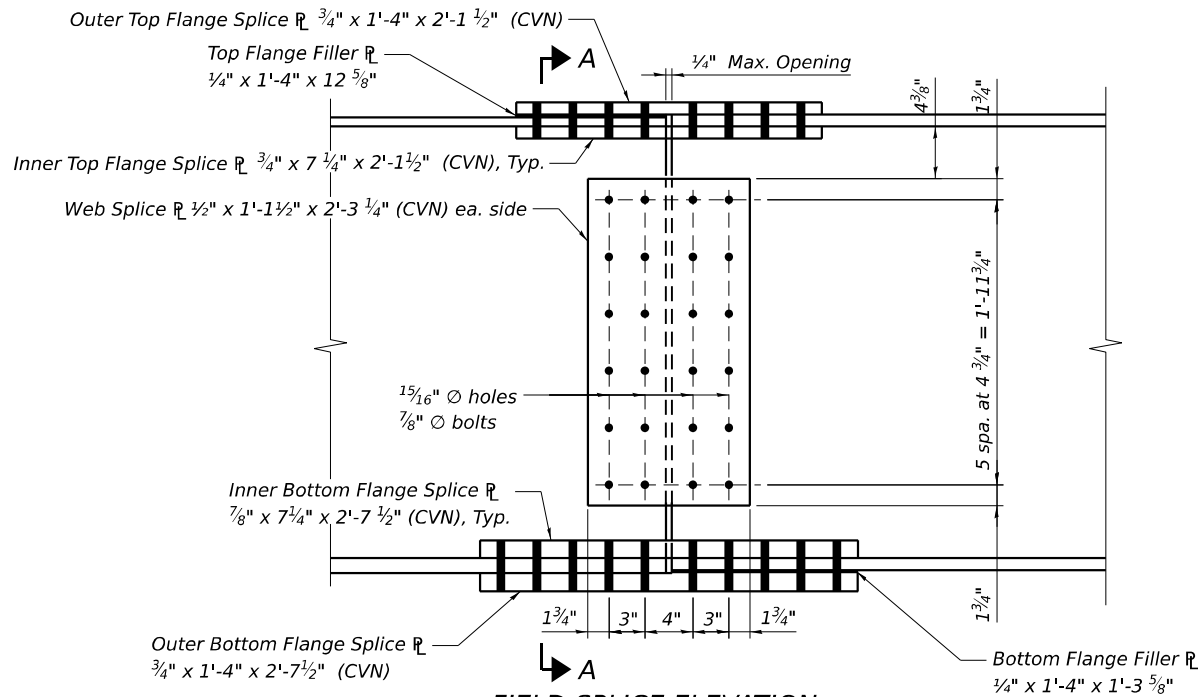
SHEET SD-35 OF SD-52 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62R28				
ILLINOIS		FED. AID PROJECT		

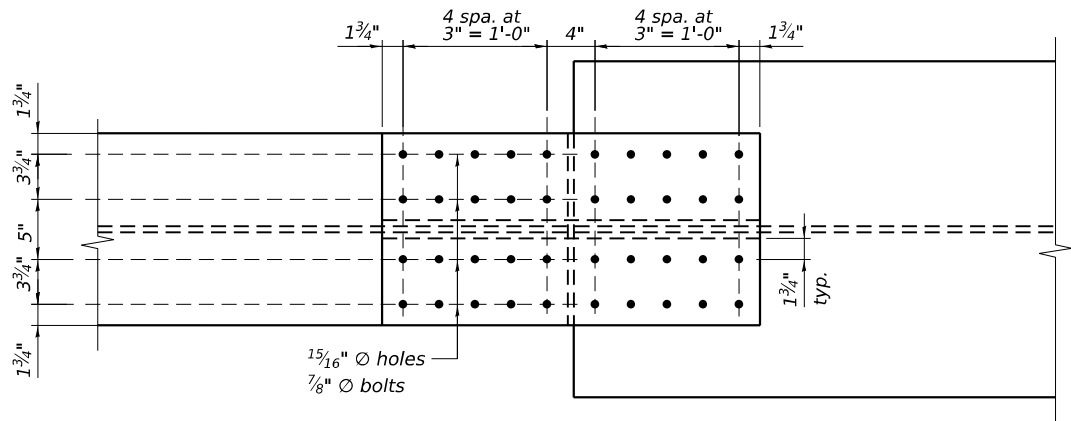
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8/8/2023 11:25:40 AM



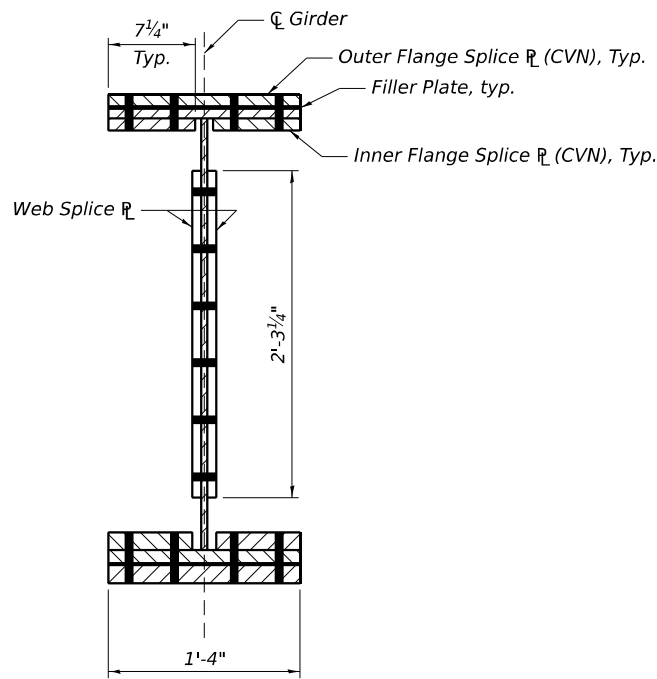
PLAN - TOP FLANGE SPLICE PLATE
(32 bolts per top flange splice)



FIELD SPLICE ELEVATION
(24 bolts per web splice, No. Splices Req'd = 46)



PLAN - BOTTOM FLANGE SPLICE PLATE
(40 bolts per bottom flange splice)

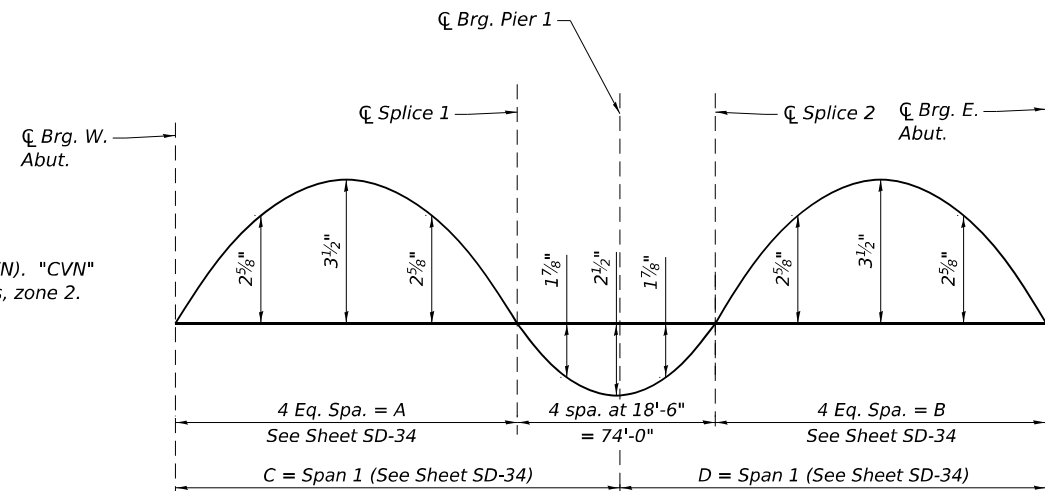


SECTION A-A

Note:
Splice plates are to be AASHTO M270, Grade 50 (CVN). "CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.

TOP OF WEB ELEVATIONS
(For fabrication only)

BEAM	℄ Brg. W. Abut.	Field Splice 1	℄ Brg. Pier 1	Field Splice 2	℄ Brg. E. Abut.
W1	610.84	610.18	609.49	609.27	608.22
W2	610.96	610.30	609.61	609.40	608.34
W3	611.09	610.43	609.74	609.52	608.47
W4	611.21	610.55	609.85	609.64	608.58
W5	611.30	610.64	609.95	609.73	608.68
W6	611.31	610.65	609.95	609.74	608.68
W7	611.21	610.55	609.86	609.64	608.59
W8	611.10	610.44	609.75	609.53	608.48
W9	610.97	610.31	609.62	609.40	608.35
W10	610.84	610.18	609.49	609.28	608.22
W11	610.72	610.06	609.37	609.15	608.10
E1	610.72	610.06	609.37	609.15	608.10
E2	610.84	610.18	609.49	609.28	608.22
E3	610.97	610.31	609.62	609.40	608.35
E4	611.10	610.44	609.75	609.53	608.48
E5	611.21	610.55	609.86	609.64	608.59
E6	611.31	610.65	609.95	609.74	608.68
E7	611.30	610.64	609.95	609.73	608.68
E8	611.21	610.55	609.85	609.64	608.58
E9	611.09	610.43	609.74	609.52	608.47
E10	611.00	610.32	609.62	609.40	608.32
E11	610.91	610.21	609.50	609.27	608.18
E12	610.82	610.10	609.39	609.15	608.04



CAMBER DIAGRAM



USER NAME = cstanuch	DESIGNED - LRG	REVISED -
PLOT SCALE =	CHECKED - CRS	REVISED -
PLOT DATE = 8/8/2023	DRAWN - LRG	REVISED -
	CHECKED - CRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

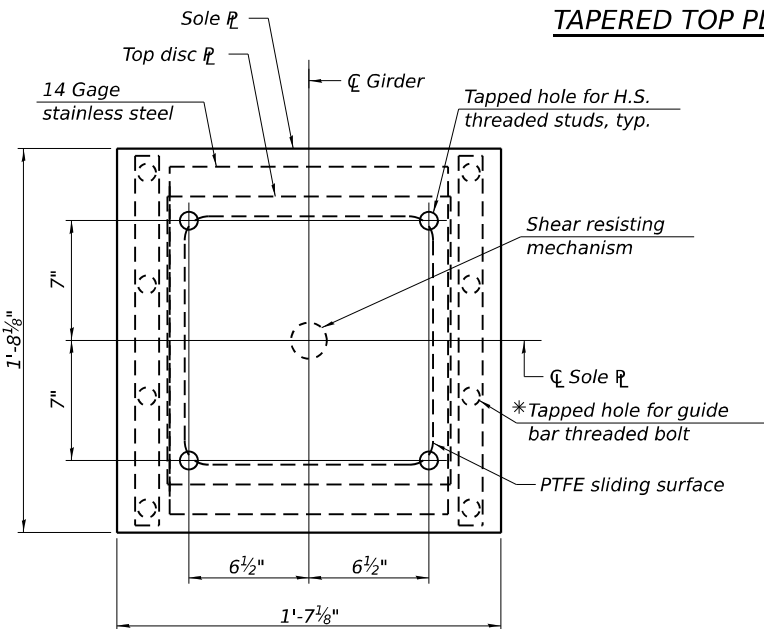
SPLICE AND CAMBER DETAILS
STRUCTURE NO. 099-8316 & 099-8317

SHEET SD-36 OF SD-52 SHEETS

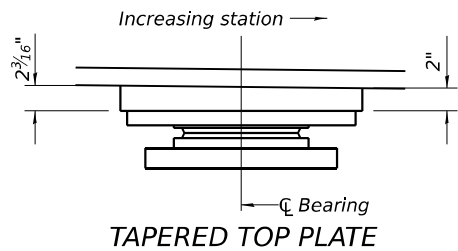
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	803
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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8/8/2023 11:25:42 AM

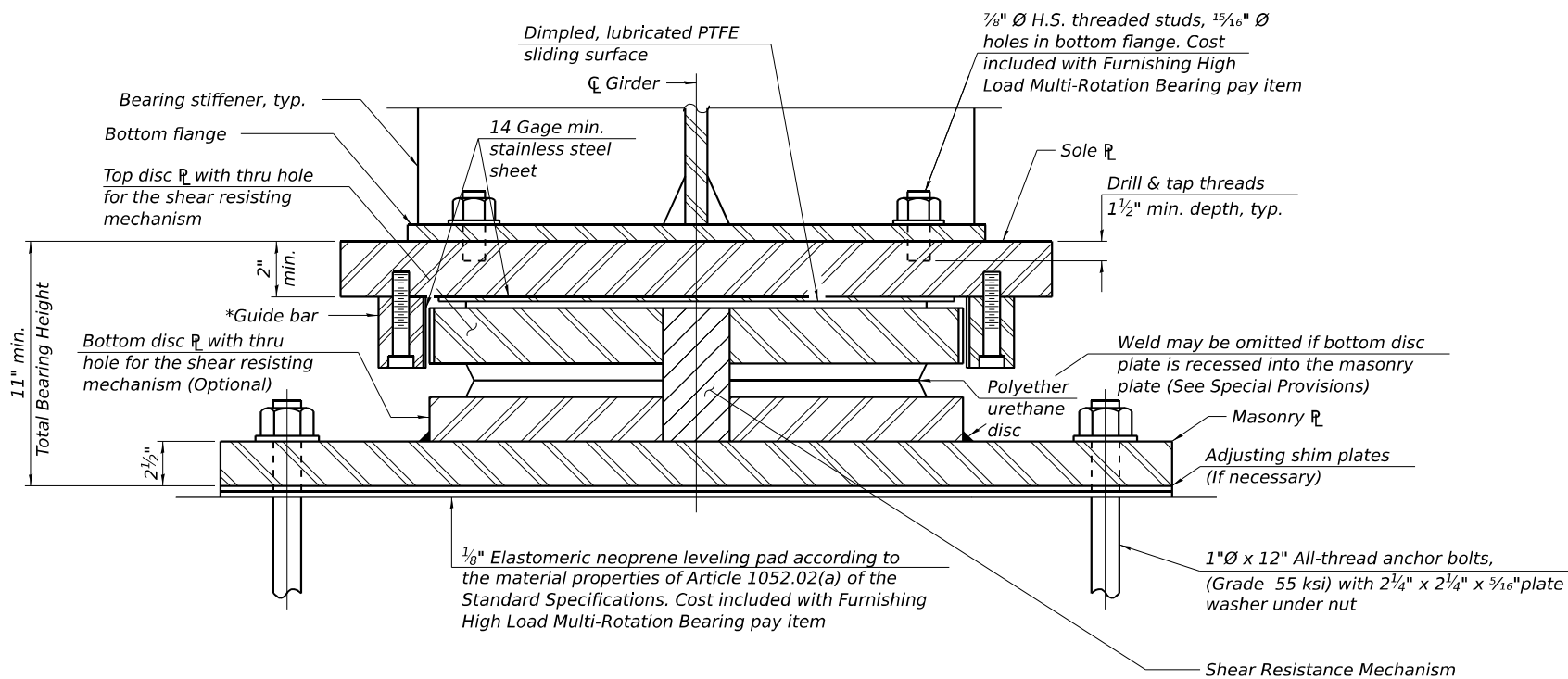
* As alternates to the bolted connection shown, the guide bars may be connected to the sole plate by groove welds or the guide bars and sole plate may be fabricated as a single piece.



SOLE PLATE AND TOP DISC PLATE PLAN



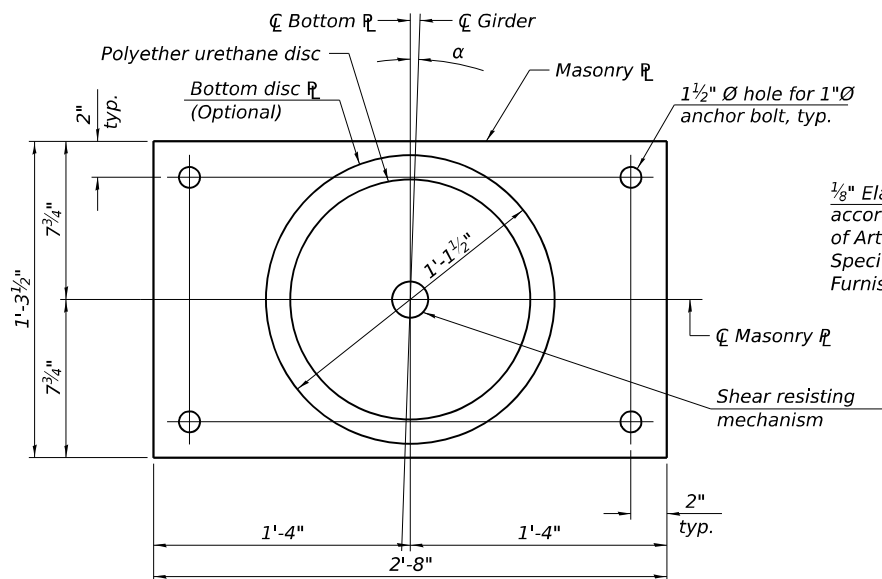
TAPERED TOP PLATE



SECTION THRU BEARING

NOTES:

- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details. Shim plates not included in total bearing height. Cost included with Contract 62U26.
- Total bearing height is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The Contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier concrete.



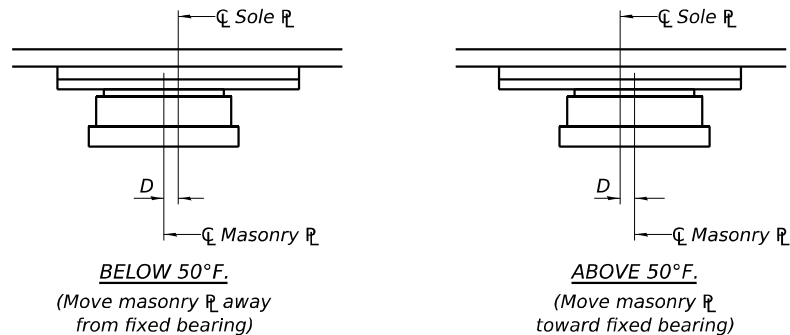
MASONRY PLATE AND
BOTTOM DISC PLATE PLAN

Beam No.	α
1W thru 9E	0°0'0"
10E	0°37'19"
11E	1°14'38"
12E	1°51'56"

Unfactored Vertical Dead Load Reaction (R_{DC})	196 kips
Unfactored Vertical Wearing Surface Reaction (R_{DW})	47 kips
Unfactored Vertical Live Load without Impact Reaction (R_{LL})	141 kips
Maximum Strength or Extreme Event Lateral Reaction (H_U)	49 kips
*Maximum Strength Limit State Rotation (Θ_U according to Article 14.4.2.2)	0.017 rad
Unfactored Design Thermal Movement from 50° F (ΔT)	0.014 in.
Service I Factored Lateral Reaction	28 kips
Service I Take Out Limit Rotation	0.004 rad
**Strength I Factored Longitudinal Movement	0.016 in.
Service I Factored Vertical Reaction	385 kips
Strength I Factored Vertical Reaction	563 kips

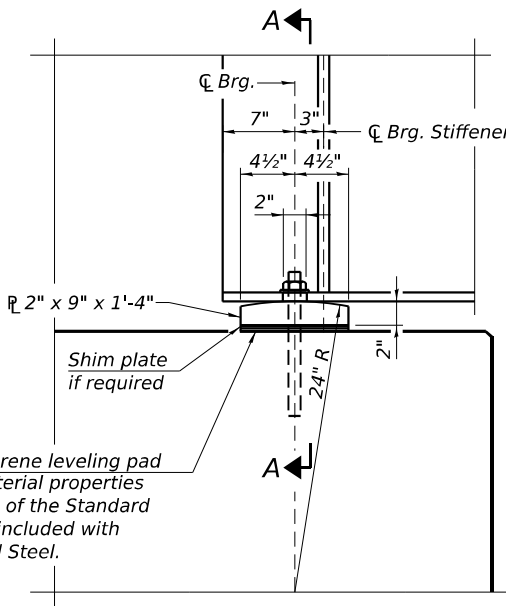
Service I Load Factors = 1.0DC + 1.0DW + 1.00LL
Strength I Load Factors = 1.25DC + 1.5DW + 1.75LL + 1.2TU
Extreme Event Load Factors = 1.0EQ

*Rotation allowances for fabrication tolerances (0.005 radians), installation uncertainties (0.005 radians) are included
**Bearing shall be designed to accommodate 1 inch of movement from 50 degrees

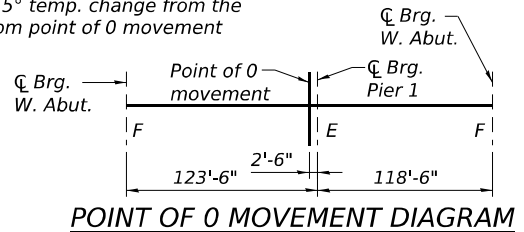


SETTING ANCHOR BOLTS AT EXPANSION BEARING

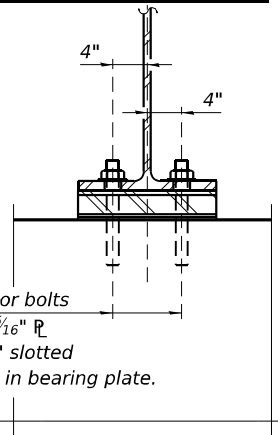
$D = 1/8$ " per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F. Pier bearing is 2.50' from point of 0 movement



ELEVATION AT ABUTMENT



POINT OF 0 MOVEMENT DIAGRAM



SECTION A-A

FIXED BEARING - INTEGRAL ABUTMENT

(46 Required - Cost Included with Furnishing Structural Steel)

BILL OF MATERIAL

Item	Unit	Total
** Erecting High Load Multi-Rotational Bearings, Disc, Guided Expansion-400k Anchor Bolts, 1"	Each	23
	Each	184

**The value specified in the pay item name is an approximate vertical load capacity that is use for letting and bidding purposes only. Exact bearing capacity will vary subject to manufacturer design.



USER NAME = cstanuch	DESIGNED CRS	REVISED -
CHECKED DTS	REVISED -	
PLOT SCALE =	DRAWN CRS	REVISED -
PLOT DATE = 8/8/2023	CHECKED DTS	REVISED -

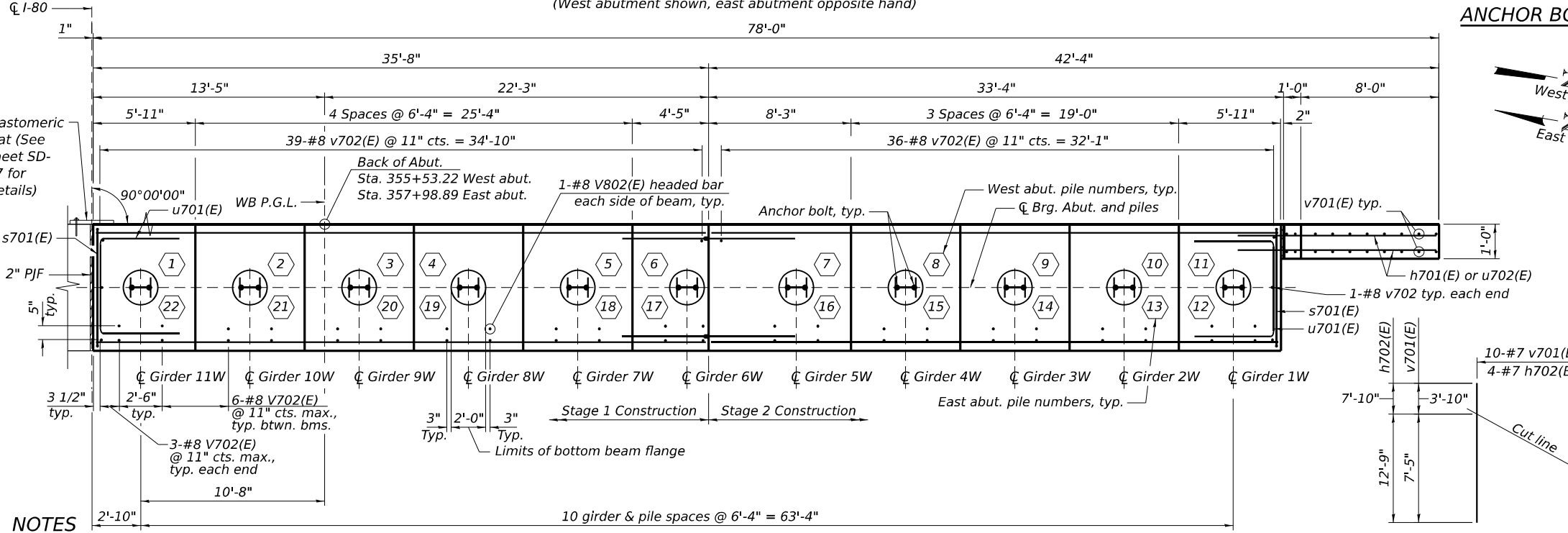
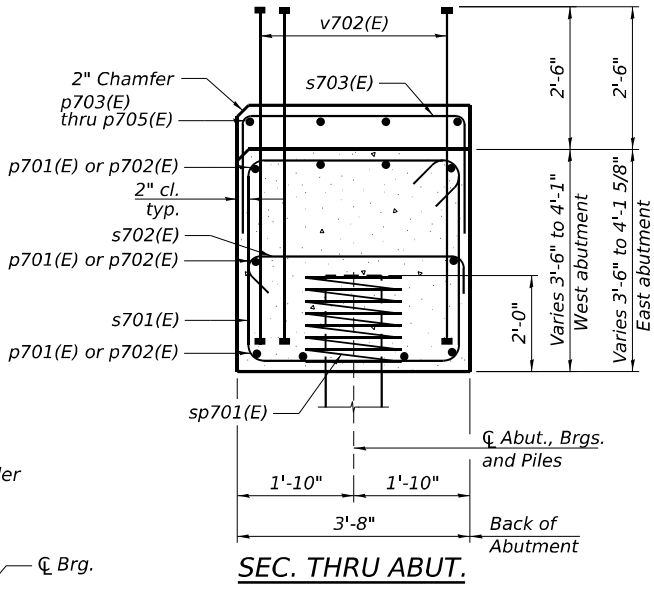
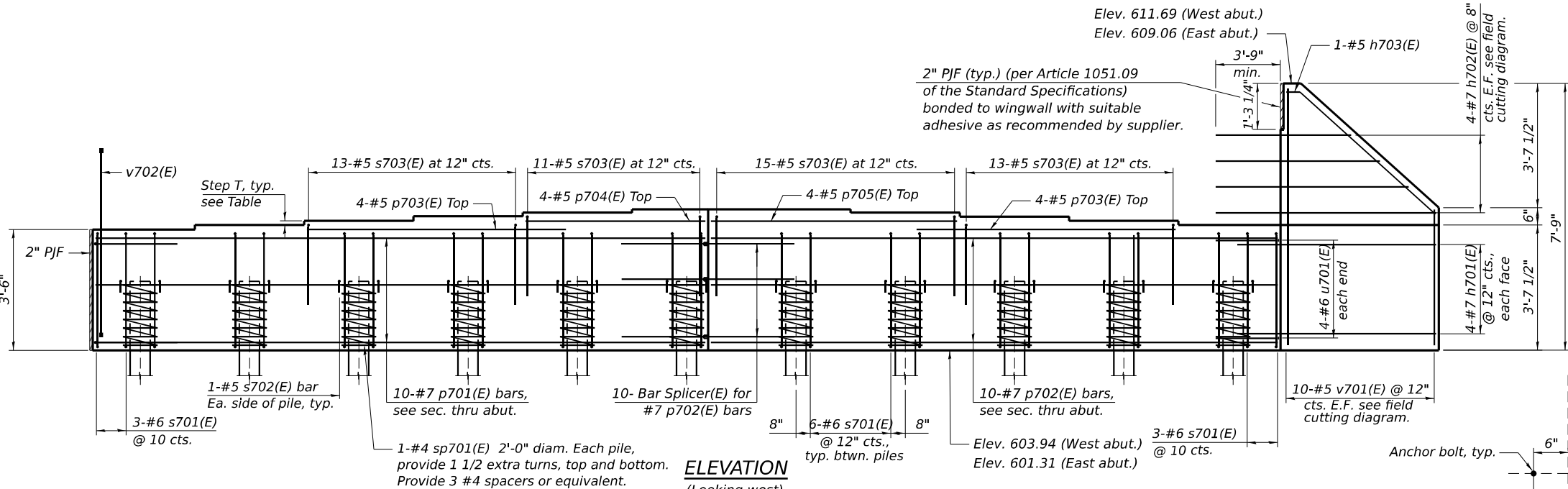
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 099-8316 & 099-8317

SHEET SD-37 OF SD-52 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	804
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

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8/8/2023 11:25:44 AM



NOTES

1. Space reinforcement bars to miss anchor bolts.
2. Pour steps monolithically with cap.
3. 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.
4. See Sheet SD-03 for additional Pile Layout details.
5. Abutment piles shall be driven through 30" diameter precored holes extending to elevation 593.96 at west abutment and elevation 591.09 at east abutment according to Article 512.09(c) of the Standard Specifications except that the void space outside of the pile shall be filled with bentonite according to the manufacturer's recommendations to achieve a Qu of 1.5 tsf. Cost included with driving piles.
6. For details of piles, see Sheet SD-43.

LEGEND

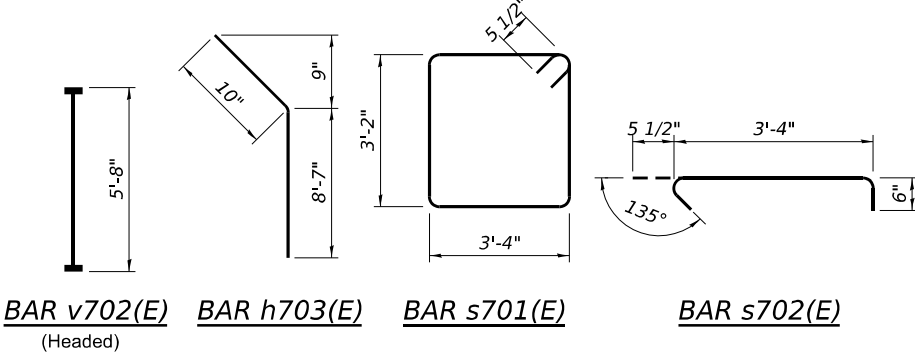
E.F. = Each Face
7 pile number

PILE DATA

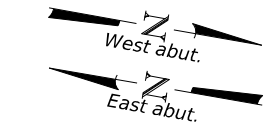
Type: HP14x73 with pile shoes
Nominal Required Bearing: 578K
Factored Resistance Available: 318K
Est. Length: 35 ft.
No. Production Piles: 20
No. test Piles: 2, drive in Stage 1

PLAN

(West abutment shown, east abutment opposite hand)

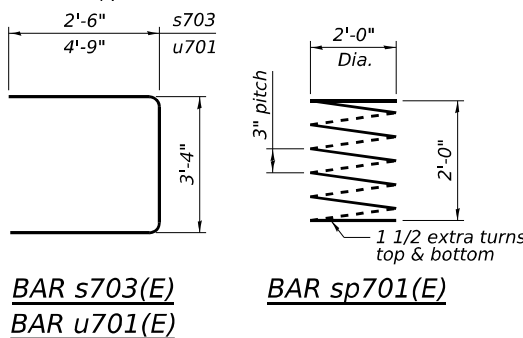


ANCHOR BOLT LAYOUT



FIELD CUTTING DIAGRAM

Order v701(E) and h702(E) full length, cut as shown and use remainder of bars on opposite face.



WEST ABUTMENT			EAST ABUTMENT		
GIRDER	BRG. SEAT ELEVATION	STEP T -inch	GIRDER	BRG. SEAT ELEVATION	STEP T -inch
1W	607.56	1 1/2	1W	604.93	1 1/2
2W	607.68	1 1/2	2W	605.06	1 1/2
3W	607.81	1 1/2	3W	605.19	1 1/2
4W	607.92	1 3/8	4W	605.30	1 3/8
5W	608.02	1 1/4	5W	605.40	1 1/4
6W	608.02	0	6W	605.40	0
7W	607.93	1 1/8	7W	605.31	1 1/8
8W	607.82	1 3/8	8W	605.19	1 1/2
9W	607.69	1 1/2	9W	605.07	1 1/2
10W	607.56	1 1/2	10W	604.94	1 1/2
11W	607.44	1 1/2	11W	604.81	1 1/2

TWO ABUTMENTS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p701(E)	20	#7	35'-4"	
p702(E)	20	#7	32'-10"	
p703(E)	16	#5	15'-0"	
p704(E)	8	#5	10'-5"	
p705(E)	8	#5	14'-3"	
h701(E)	16	#7	14'-9"	
h702(E)	8	#7	20'-7"	
h703(E)	4	#5	9'-5"	
s701(E)	132	#6	13'-11"	
s702(E)	44	#5	4'-3 1/2"	
s703(E)	104	#5	8'-4"	
sp701(E)	22	#4	2'-0"	
u701(E)	16	#6	12'-10"	
v701(E)	20	#5	11'-3"	
v702(E)	330	#8	5'-8"	
Concrete Structures			Cu. Yd.	75.8
Reinforcement Bars, Epoxy Coated			Pound	15,040
Structure Excavation			Cu. Yd.	593
Driving Piles			Foot	700
Test Pile Steel HP14x73			Each	2
Pile Shoes			Each	22
Furnishing Steel Piles HP14x73			Foot	700

* Length is height of spiral



USER NAME = cstanuch	DESIGNED - MRS	REVISED -
PLOT SCALE =	CHECKED - EDA	REVISED -
PLOT DATE = 8/8/2023	DRAWN - ALH	REVISED -
	CHECKED - MRS	REVISED -

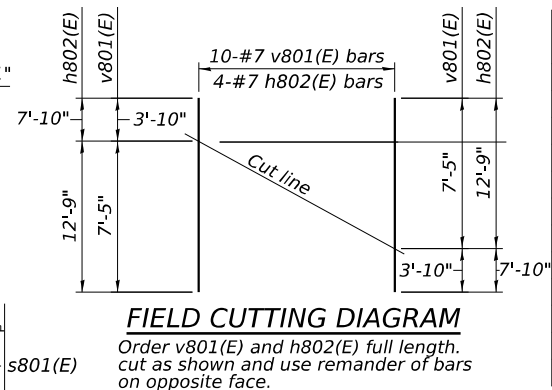
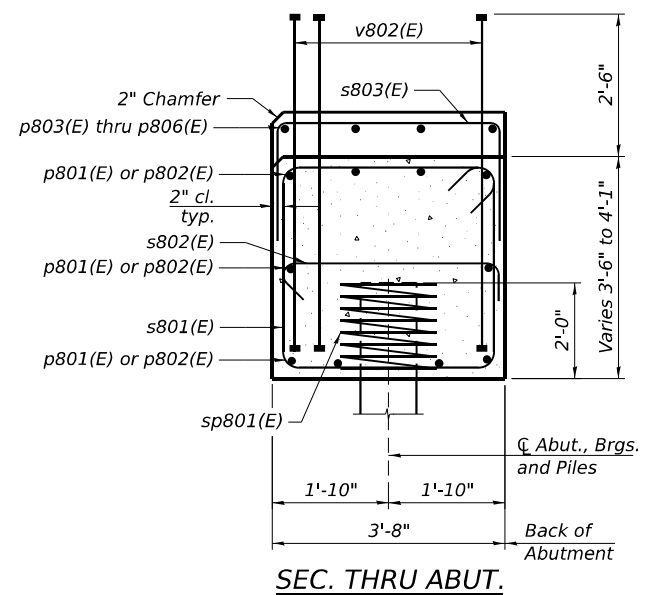
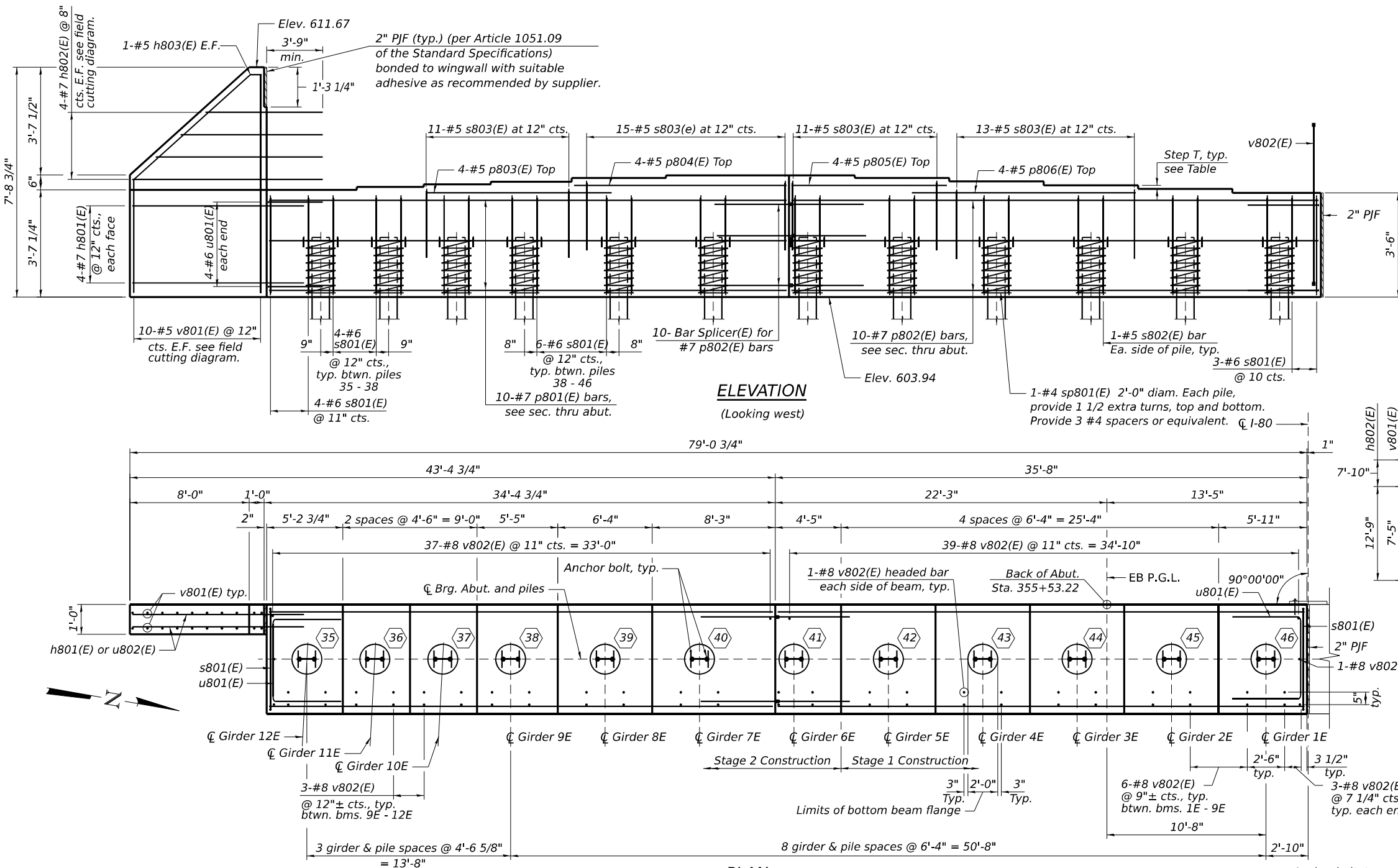
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WB ABUTMENT PLANS
STRUCTURE NO. 099-8317

SHEET SD-38 OF SD-52 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	805
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: pw://transsystems-pw.bentley.com/transscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Stantec/CAD/ML-04_62R28/04-Sheets/04-Structures/099-831668317-62R28-039-EB West Abutment Plan.dgn
8/8/2023 11:25:46 AM



GIRDER	BRG. SEAT ELEVATION	STEP T -inch
1E	607.44	1 1/2
2E	607.56	1 1/2
3E	607.69	1 1/2
4E	607.82	1 3/8
5E	607.93	1 1/8
6E	608.02	0
7E	608.02	1 1/4
8E	607.92	1 3/8
9E	607.81	1 1/8
10E	607.72	1 1/8
11E	607.63	1 1/8
12E	607.54	1 1/8

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p801(E)	10	#7	34'-0"	—
p802(E)	10	#7	35'-4"	—
p803(E)	8	#5	12'-5"	—
p804(E)	4	#5	14'-3"	—
p805(E)	4	#5	10'-5"	—
p806(E)	4	#5	15'-0"	—
h801(E)	8	#7	14'-0"	—
h802(E)	4	#7	20'-7"	—
h803(E)	2	#5	9'-5"	—
s801(E)	66	#6	13'-11"	□
s802(E)	24	#5	4'-3 1/2"	□
s803(E)	50	#5	8'-4"	□
sp801(E)	12	#4	2'-0"	W
u801(E)	8	#6	12'-10"	□
v801(E)	10	#5	11'-2"	—
v802(E)	160	#8	5'-8"	—
Concrete Structures		Cu. Yd.	38.4	
Reinforcement Bars, Epoxy Coated		Pound	7,540	
Structure Excavation		Cu. Yd.	294	
Driving Piles		Foot	420	
Test Pile Steel HP14x73		Each	0	
Pile Shoes		Each	12	
Furnishing Steel Piles HP14x73		Foot	420	

* Length is height of spiral

NOTES

- Space reinforcement bars to miss anchor bolts.
- 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.
- See Sheet SD-03 for additional Pile Layout details.
- Abutment piles shall be driven through 30" diameter precored holes extending to elevation 593.96 according to Article 512.09(c) of the Standard Specifications except that the void space outside of the pile shall be filled with bentonite according to the manufacturer's recommendations to achieve a Q_u of 1.5 tsf. Cost included with driving piles.
- For details of piles, see Sheet SD-43.

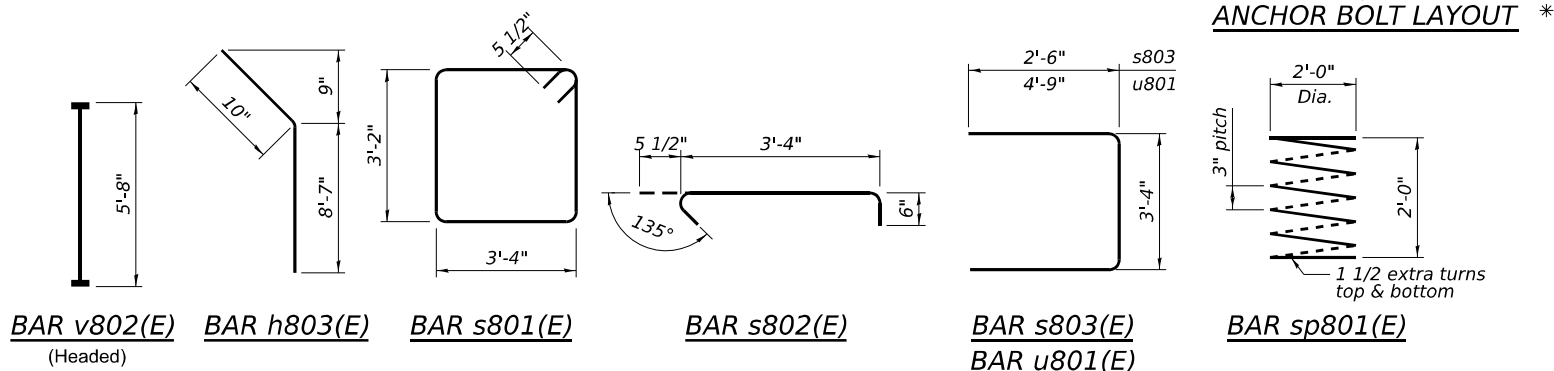
LEGEND

E.F. = Each Face
7 pile number

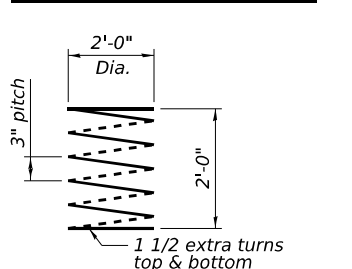
PILE DATA

Type: HP14x73 with pile shoes
Nominal Required Bearing: 578K
Factored Resistance Available: 318K
Est. Length: 35 ft.
No. Production Piles: 12
No. test Piles: 0

PLAN



ANCHOR BOLT LAYOUT



USER NAME = cstanuch	DESIGNED - MRS	REVISED -
PLOT SCALE =	CHECKED - EDA	REVISED -
PLOT DATE = 8/8/2023	DRAWN - ALH	REVISED -
	CHECKED - MRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EB WEST ABUTMENT PLAN
STRUCTURE NO. 099-8316

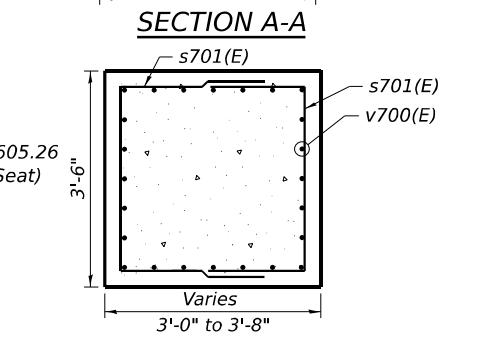
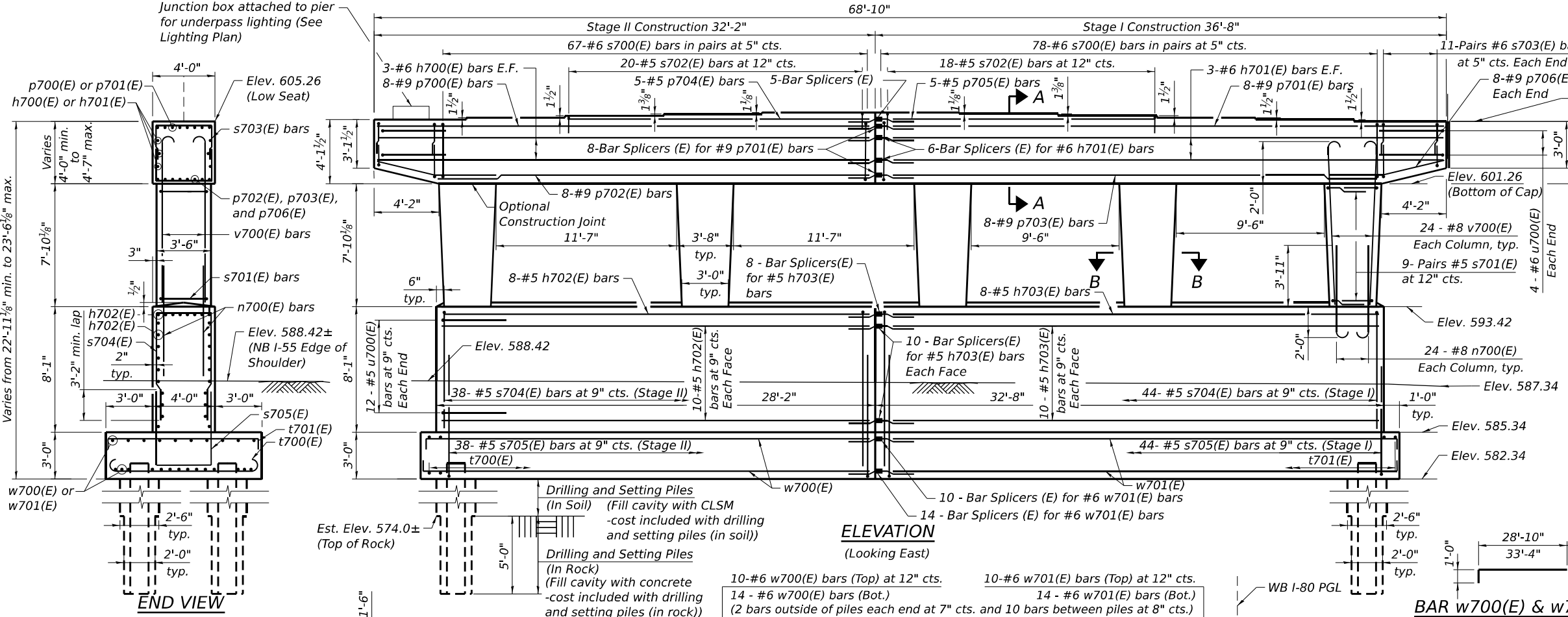
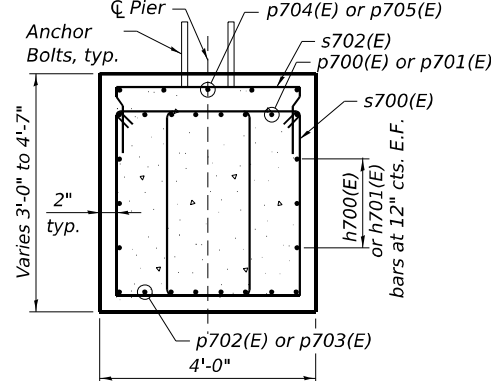
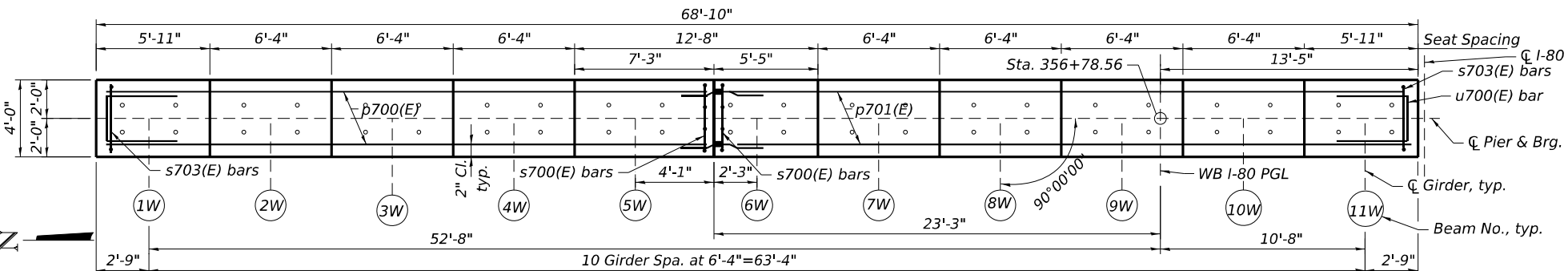
SHEET SD-39 OF SD-52 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	806
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see Sheet SD-43.
Additional 10' added to piles in rock.

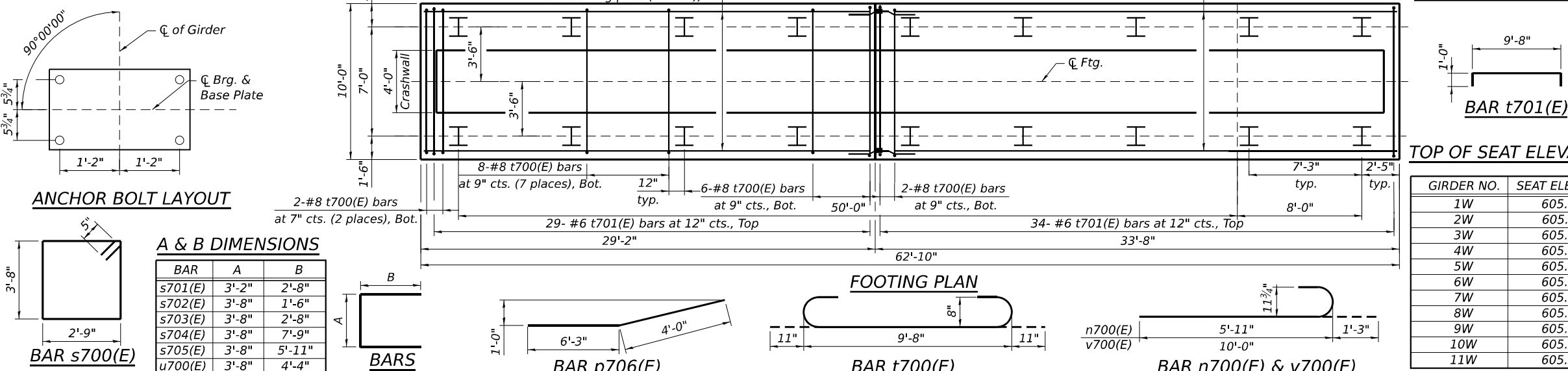
PILE DATA

Type: HP 14x73
Nominal Required Bearing: Set in Rock
Factored Resistance Available: 749 kips
Est. Length: 25 feet
No. Production Piles: 18
No. Test Piles: 0

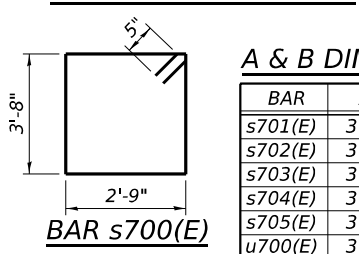


BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h700(E)	6	#6	31'-10"	
h701(E)	6	#6	36'-4"	
h702(E)	28	#5	27'-10"	
h703(E)	28	#5	32'-4"	
n700(E)	120	#8	7'-2"	
p700(E)	8	#9	31'-10"	
p701(E)	8	#9	36'-4"	
p702(E)	8	#9	27'-8"	
p703(E)	8	#9	32'-2"	
p704(E)	5	#5	19'-7"	
p705(E)	5	#5	17'-9"	
p706(E)	16	#9	10'-3"	
s700(E)	290	#6	13'-8"	
s701(E)	90	#5	8'-6"	
s702(E)	38	#5	6'-8"	
s703(E)	44	#6	9'-0"	
s704(E)	82	#5	19'-2"	
s705(E)	82	#5	12'-4"	
t700(E)	68	#8	11'-6"	
t701(E)	63	#6	11'-8"	
u700(E)	32	#6	12'-4"	
v700(E)	120	#8	11'-3"	
w700(E)	24	#6	29'-10"	
w701(E)	24	#6	34'-4"	
Structure Excavation		Cu. Yd.	175	
Concrete Structures		Cu. Yd.	203.4	
Reinforcement Bars, Epoxy Coated		Pound	28,910	
Furnishing Steel Piles HP 14x73		Foot	450	
Drilling and Setting Piles (In Soil)		Cu. Ft.	646.8	
Drilling and Setting Piles (In Rock)		Cu. Ft.	282.7	

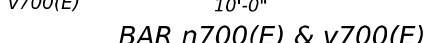
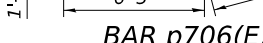
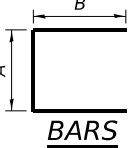


ANCHOR BOLT LAYOUT



A & B DIMENSIONS

BAR	A	B
s701(E)	3'-2"	2'-8"
s702(E)	3'-8"	1'-6"
s703(E)	3'-8"	2'-8"
s704(E)	3'-8"	7'-9"
s705(E)	3'-8"	5'-11"
u700(E)	3'-8"	4'-4"



TOP OF SEAT ELEVATION

GIRDER NO.	SEAT ELEVATION
1W	605.38
2W	605.51
3W	605.64
4W	605.75
5W	605.85
6W	605.85
7W	605.76
8W	605.64
9W	605.52
10W	605.39
11W	605.26



USER NAME = cstanuch	DESIGNED - HMH	REVISED -
PLOT SCALE =	CHECKED - DTS	REVISED -
PLOT DATE = 8/8/2023	DRAWN - HMH	REVISED -
	CHECKED - DTS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WB PIER ELEVATION
STRUCTURE NO. 099-8317

SHEET SD-41 OF SD-52 SHEETS

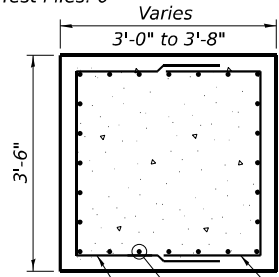
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	808
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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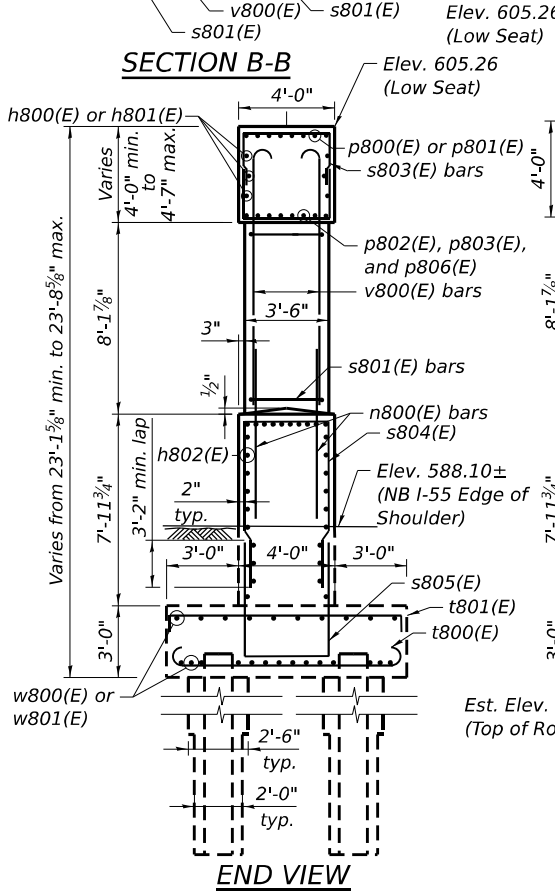
Notes:
Additional information on SD-41

PILE DATA

Type: HP 14x73
Nominal Required Bearing: Set in Rock
Factored Resistance Available: 749 kips
Est. Length: 25 feet
No. Production Piles: 20
No. Test Piles: 0



SECTION B-B



END VIEW

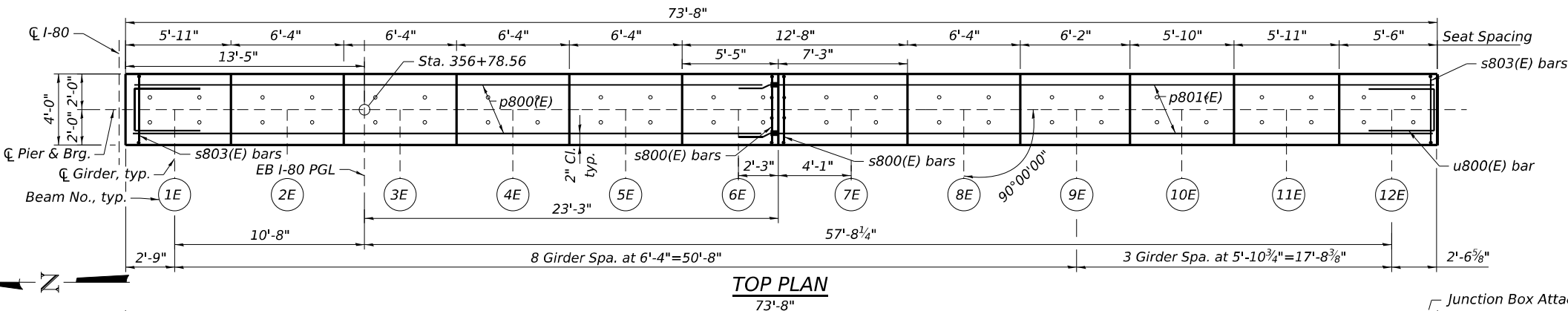
BAR p806(E)

BAR s800(E)

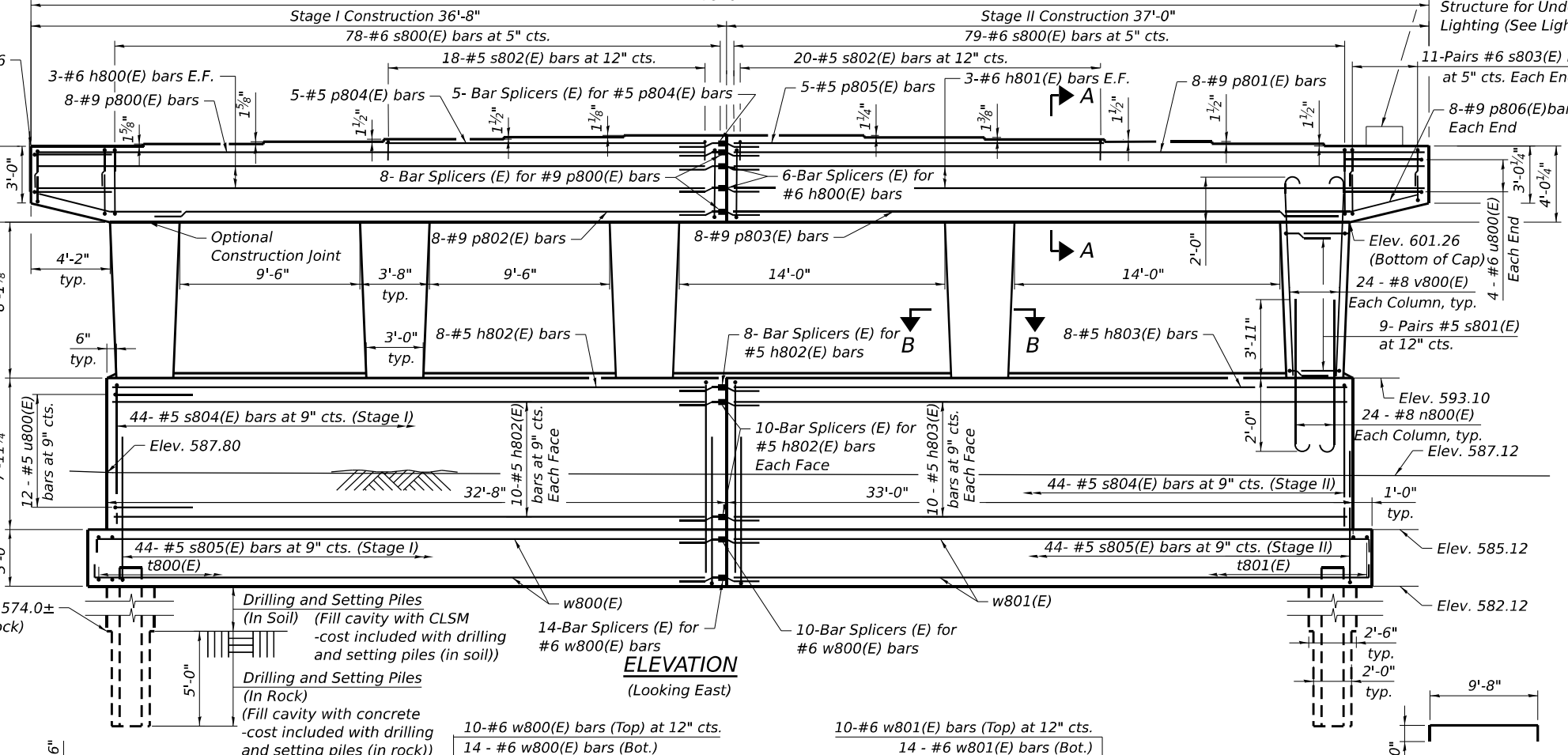
BAR w800(E) & w801(E)

TOP OF SEAT ELEVATION

GIRDER NO.	SEAT ELEVATION
1E	605.26
2E	605.39
3E	605.52
4E	605.64
5E	605.76
6E	605.85
7E	605.85
8E	605.75
9E	605.64
10E	605.52
11E	605.40
12E	605.28

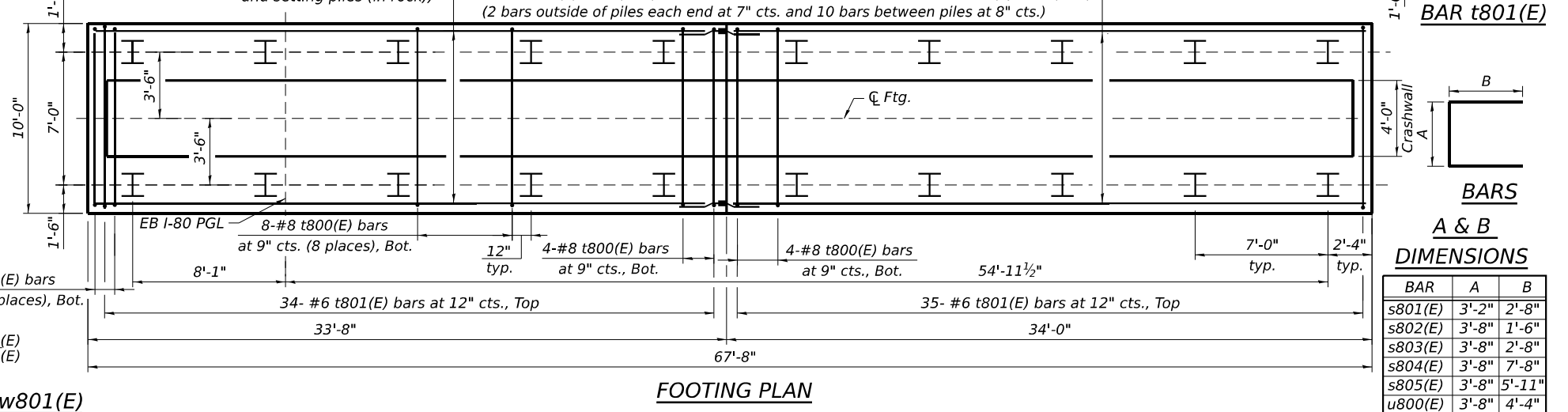


TOP PLAN

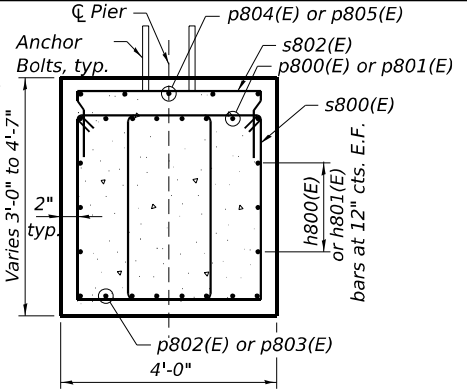


ELEVATION

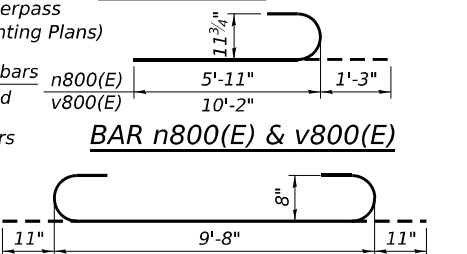
(Looking East)



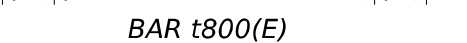
FOOTING PLAN



SECTION A-A



BAR n800(E) & v800(E)



BAR t800(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h800(E)	6	#6	36'-4"	
h801(E)	6	#6	36'-8"	
h802(E)	28	#5	32'-4"	
h803(E)	28	#5	32'-8"	
n800(E)	120	#8	7'-2"	
p800(E)	8	#9	36'-4"	
p801(E)	8	#9	36'-8"	
p802(E)	8	#9	32'-2"	
p803(E)	8	#9	32'-6"	
p804(E)	5	#5	19'-7"	
p805(E)	5	#5	17'-9"	
p806(E)	16	#9	10'-3"	
s800(E)	314	#6	13'-8"	
s801(E)	90	#5	8'-6"	
s802(E)	38	#5	6'-8"	
s803(E)	44	#6	9'-0"	
s804(E)	88	#5	19'-0"	
s805(E)	88	#5	15'-6"	
t800(E)	76	#8	11'-6"	
t801(E)	69	#6	11'-8"	
u800(E)	32	#6	12'-4"	
v800(E)	120	#8	11'-5"	
w800(E)	24	#6	34'-4"	
w801(E)	24	#6	34'-8"	
Structure Excavation		Cu. Yd.	190	
Concrete Structures		Cu. Yd.	217.0	
Reinforcement Bars, Epoxy Coated		Pound	30,900	
Furnishing Steel Piles HP 14x73		Foot	500	
Drilling and Setting Piles (In Soil)		Cu. Ft.	549.8	
Drilling and Setting Piles (In Rock)		Cu. Ft.	314.2	

BAR t801(E)

BAR t801(E)

BARS

A & B

DIMENSIONS

BAR	A	B
s801(E)	3'-2"	2'-8"
s802(E)	3'-8"	1'-6"
s803(E)	3'-8"	2'-8"
s804(E)	3'-8"	7'-8"
s805(E)	3'-8"	5'-11"
u800(E)	3'-8"	4'-4"



USER NAME = cstanuch
PLOT SCALE =
PLOT DATE = 8/8/2023

DESIGNED - HMH	REVISED -
CHECKED - DTS	REVISED -
DRAWN - HMH	REVISED -
CHECKED - DTS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

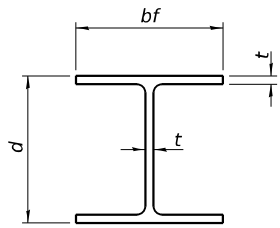
EB PIER ELEVATION
STRUCTURE NO. 099-8316

SHEET SD-42 OF SD-52 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	809
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

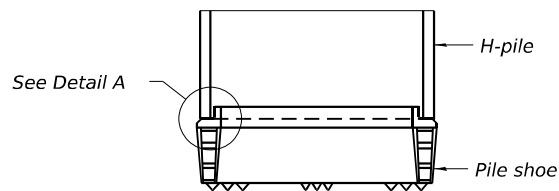
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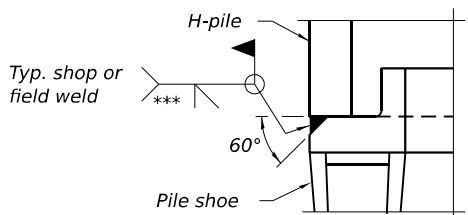


STEEL PILE TABLE

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



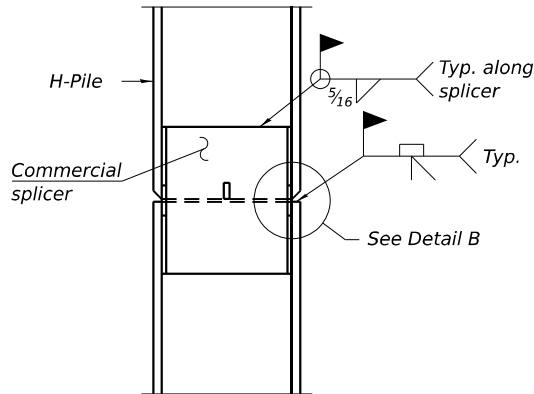
ELEVATION



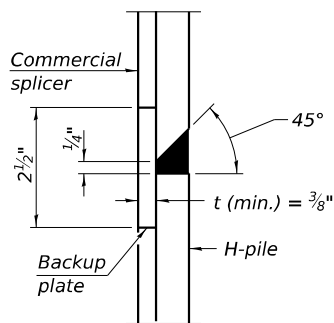
DETAIL A

SHOE ATTACHMENT

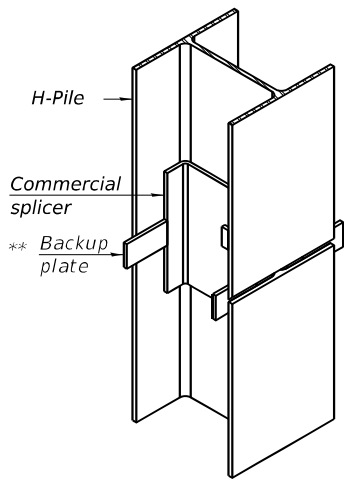
Note:
The steel H-piles shall be according to
AASHTO M270 Grade 50.



ELEVATION

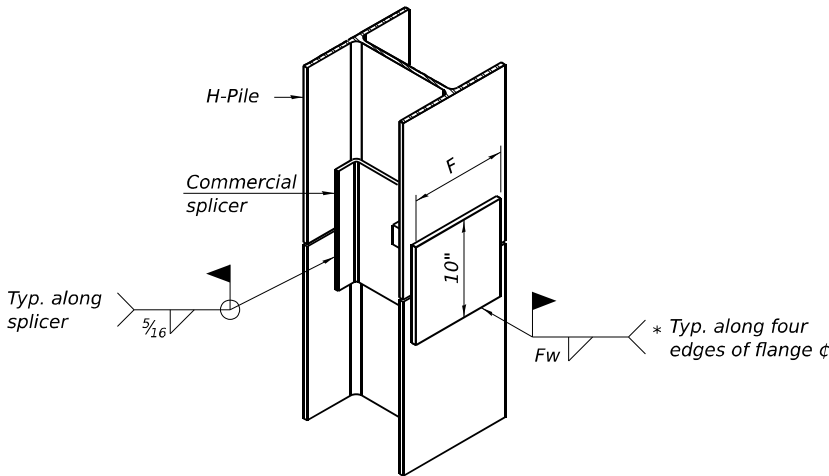


DETAIL "B"



ISOMETRIC VIEW

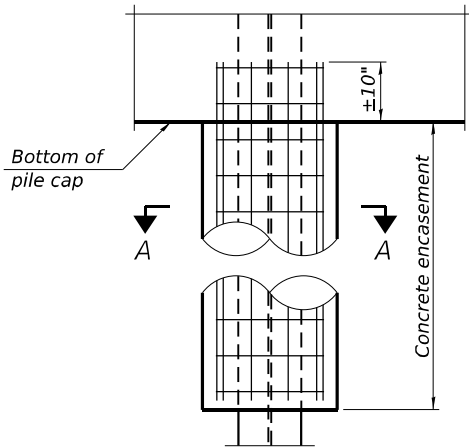
WELDED COMMERCIAL SPLICE



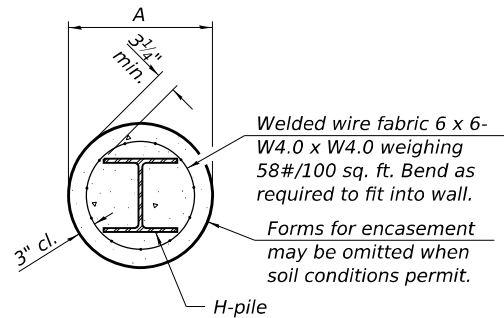
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

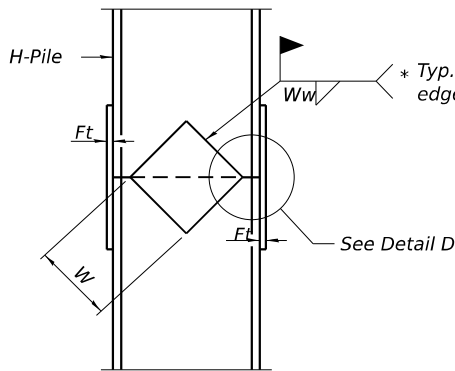


ELEVATION

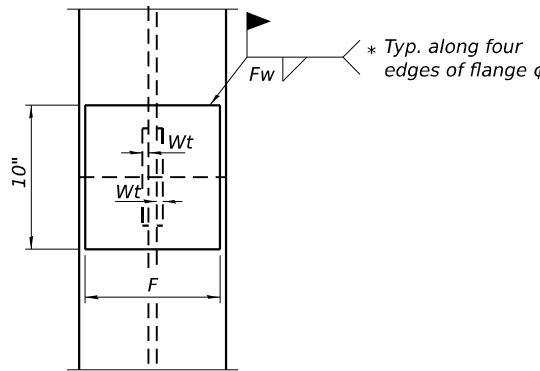


SECTION A-A

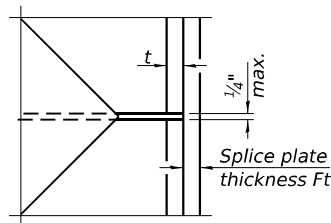
INDIVIDUAL PILE
CONCRETE ENCASEMENT
(when speci ed)



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

F-HP

1-1-2020



USER NAME	= cstanuch
PLOT SCALE	=
PLOT DATE	= 8/8/2023

DESIGNED	- DTS
CHECKED	- CRS
DRAWN	- DTS
CHECKED	- CRS

REVISED	-
REVISED	-
REVISED	-
REVISED	-

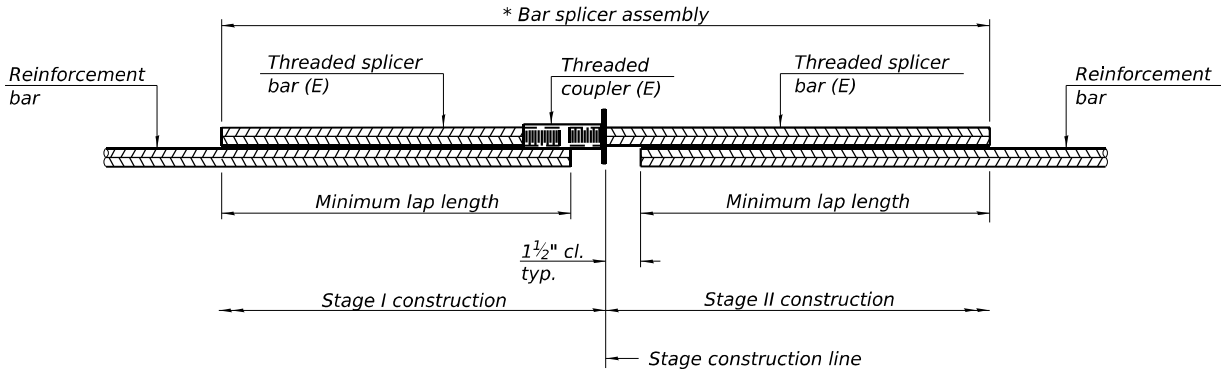
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 099-8316 & 099-8317

SHEET SD-43 OF SD-52 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	810
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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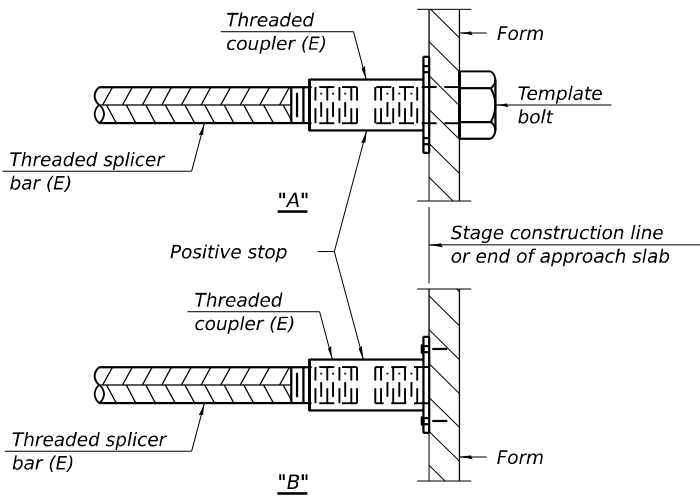


STANDARD BAR SPLICER ASSEMBLY PLAN
(All components shall be provided from one supplier)

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

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

Location	Bar size	No. assemblies required	Minimum lap length
WB Deck	#5	1544	3'-6"
EB Deck	#5	1544	3'-6"
WB Diaphragm	#6	36	4'-4"
EB Diaphragm	#6	36	4'-4"
WB Abutment	#7	20	5'-0"
EB Abutment	#7	20	5'-0"
WB Pier Cap	#5	5	3'-7"
WB Pier Cap	#6	6	4'-4"
WB Pier Cap	#9	16	7'-1"
WB Pier Crashwall	#5	28	3'-9"
WB Pier Footing	#6	24	4'-4"
EB Pier Cap	#5	5	3'-7"
EB Pier Cap	#6	6	4'-4"
EB Pier Cap	#9	16	7'-1"
EB Pier Crashwall	#5	28	3'-9"
EB Pier Footing	#6	24	4'-4"
WB Approach Slab Top	#5	92	3'-6"
WB Approach Slab Bottom	#8	120	7'-10"
WB Approach Footing	#5	80	3'-6"
EB Approach Slab Top	#5	92	3'-6"
EB Approach Slab Bottom	#8	120	7'-10"
EB Approach Footing	#5	80	3'-6"

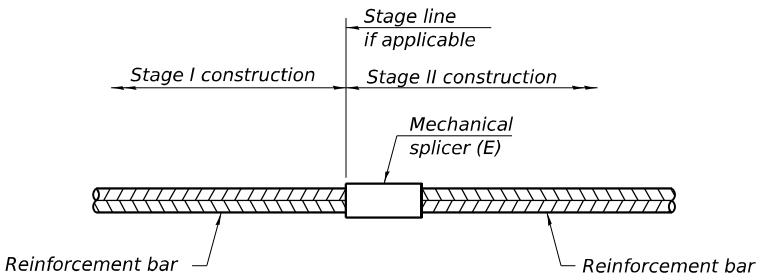


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-1-2020



USER NAME = cstanugch	DESIGNED - ALH	REVISED -
	CHECKED - DTS	REVISED -
PLOT SCALE =	DRAWN - ALH	REVISED -
PLOT DATE = 8/8/2023	CHECKED - DTS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 099-8316 & 099-8317

SHEET SD-44 OF SD-52 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	811
CONTRACT NO. 62R28				
		ILLINOIS	FED. AID PROJECT	

antec	USER NAME = cstanyuch__	DESIGNED - DTS	REVISED -	DEPA
		CHECKED - CRS	REVISED -	
	PLOT SCALE = ____	DRAWN - DTS	REVISED -	
	PLOT DATE = 8/8/2023__	CHECKED - CRS	REVISED -	

STATION	SOIL BORINGS (1 OF 8) STRUCTURE NO. 099-8316 & 099-8317	F.A.I. RTE.	SECTION	
		80	FAI 80 21 STRUCTURE 7	
	SHEET SD-45 OF SD-52 SHEETS	ILLINOIS FED. AID		

WANGENGINC 2553901.GPJ WANGENG.GDT 2/18/22

WANGENGING 2553901 GP.I WANGENG GDT 2/18/22

WANGENGINC 2553901.GPJ WANGENG.GDT 2/18/22

WANGENGING 2553901 GP.I WANGENG GDT 2/18/22

8/8/2023 11:26:11 AM

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8/8/2023 11:26:16 AM

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WANGENGINC 2553901.GPJ WANGENG.GDT 2/18/22

WANGENGING 2553901 GP.I WANGENG GDT 2/18/22

Benchmark: (BM 13) 3 1/2" DOH brass disc on headwall at south east corner of SN 099-0046. Elev. 558.009.

Existing Structures: SN 099-0046 E.B. and SN 099-0047 W.B. Built in 1963 as F.A.I. Rte.80, Section 99-2B, at Sta. 94+40.00. Existing dual structures each consist of 3-span continuous reinforced concrete haunched slab supported by cast-in-place reinforced concrete stub abutments and solid pier stems. 104'-9" Back to Back abutments, 44'-0" out-to-out deck, with no skew. Structures to be removed and replaced. Traffic to be maintained utilizing staged construction.

No Salvage.

INDEX OF SHEETS

SG-1.	General Plan and Elevation
SG-2.	General Data
SG-3.	Foundation Layout
SG-4 - SG-5.	Stage Construction Details
SG-6.	Temporary Concrete Barrier
SG-7 - SG-11.	Top of Slab Elevations
SG-12 - SG-15.	Top of Approach Slab Elevations
SG-16.	Superstructure - WB
SG-17.	Superstructure - EB
SG-18 - SG-19.	Superstructure Details
SG-20 - SG-21.	Pier Diaphragms
SG-22 - SG-23.	Abutment Diaphragms
SG-24 - SG-29.	Bridge Approach Slab Details
SG-30.	Concrete Parapet Slipforming Option
SG-31 - SG-32.	Framing Details
SG-33.	IL 27N Beam - Spans 1 and 3
SG-34.	IL 27N Beam - Span 2
SG-35.	IL 27N Beam Details
SG-36.	West Abutment - WB
SG-37.	West Abutment - EB
SG-38.	East Abutment - WB
SG-39.	East Abutment - EB
SG-40.	Pier 1 Details - WB
SG-41.	Pier 1 Details - EB
SG-42.	Pier 2 Details - WB
SG-43.	Pier 2 Details - EB
SG-44.	HP Pile Details
SG-45.	Bar Splicer Assembly and Mechanical Splicer Details
SG-46 - SG-47.	Soil Boring Data

LOADING HL-93

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

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f'_c = 4,000$ psi (Superstructure)
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (Piles)

PRECAST PRESTRESSED UNITS

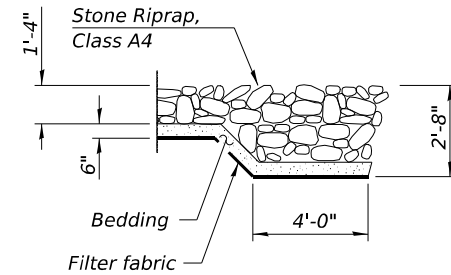
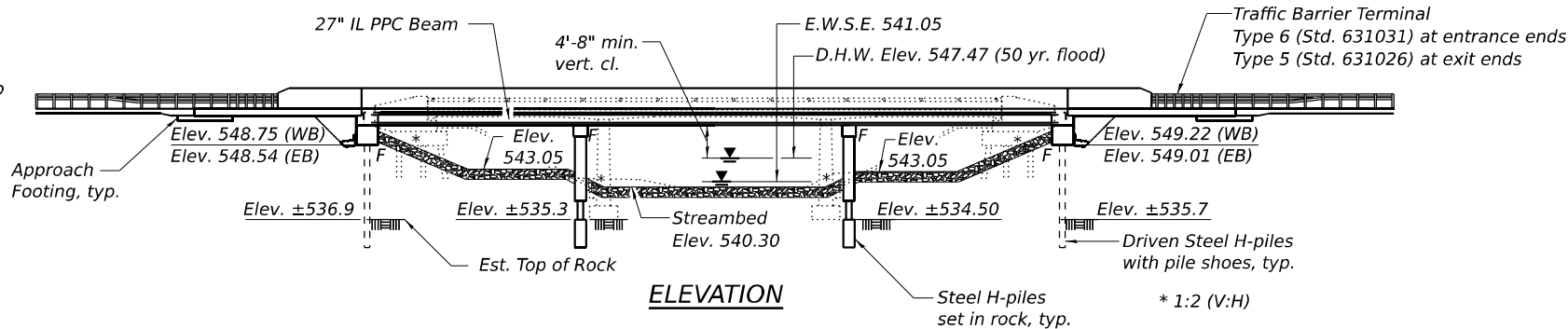
$f'_ci = 6,500$ psi
 $f'_c = 8,500$ psi
 $f_{pu} = 270,000$ psi (0.6" $\varnothing$ low lax strands)
 $f_{pbt} = 202,300$ psi (0.6" $\varnothing$ low lax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.068g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.127g
Soil Site Class = C

LEGEND

Soil Boring
Existing Fiber Optic Cable



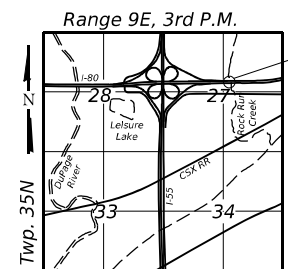
SECTION A-A



Michael T. Haley 06/20/2023
Michael T. Haley
Licensed Structural Engineer
State of Illinois No. 081-005991
Expires 11/30/2024

APPROVED
For Structural Adequacy Only

Engineer of Bridges & Structures



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

I-80 OVER ROCK RUN CREEK

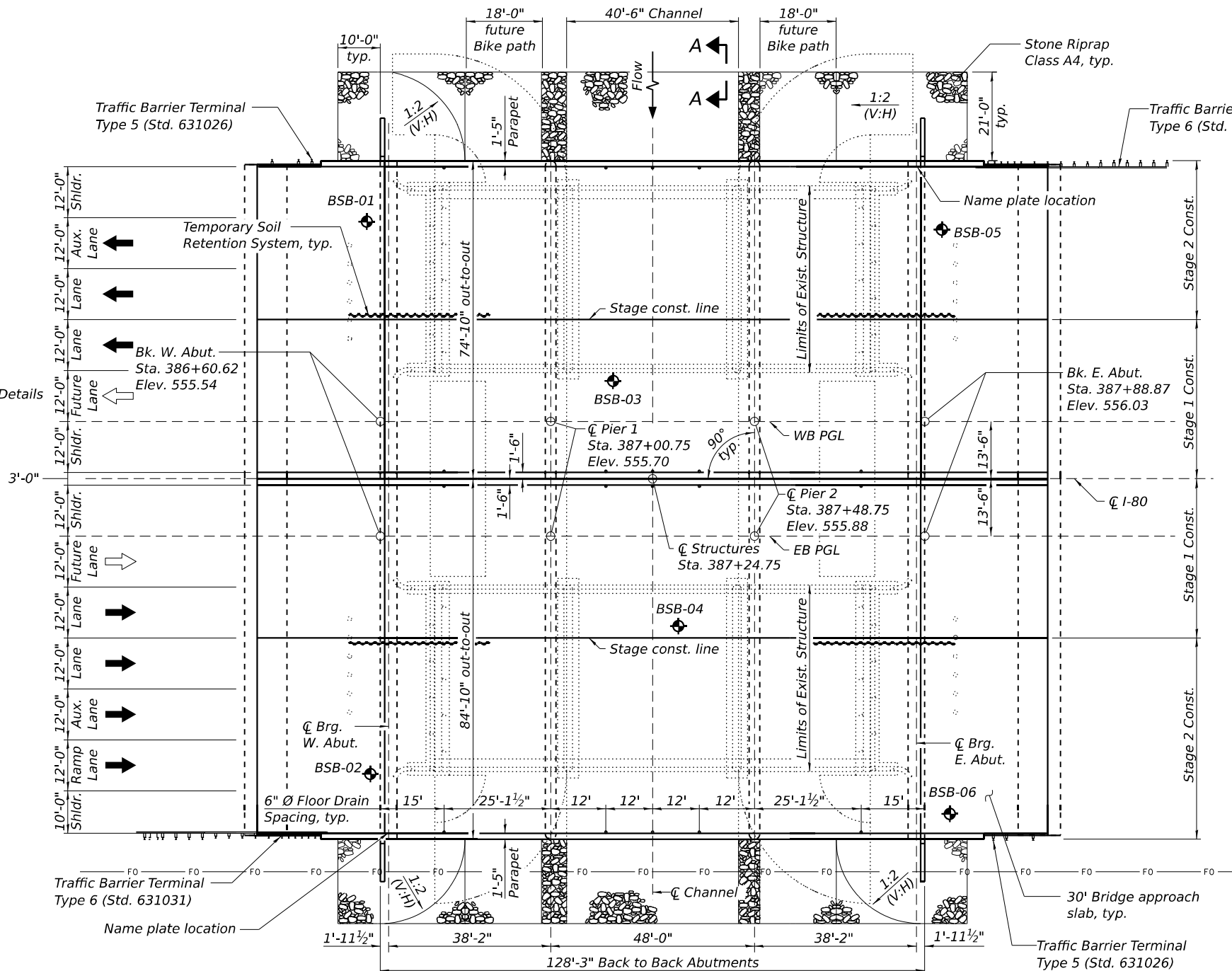
F.A.I. ROUTE 80 - SEC. FAI 80 21 STRUCTURE 7

WILL COUNTY

STA. 387+24.75

STRUCTURE NO. 099-8318 (EB)

STRUCTURE NO. 099-8319 (WB)



PLAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET SG-1 OF 47 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	820
CONTRACT NO. 62R28				

ILLINOIS FED. AID PROJECT

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- 3. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
- 4. Slipforming of the median parapet is not allowed. Slipforming of the outside parapets is allowed.
- 5. The finishing machine rails shall be placed on the top of the top flange of the exterior beams within the deck pour. Beam blocks shall be placed between beams at all tie locations in each bay for the full width of the deck pour.
- 6. For Removal of Existing Structures, the existing eastbound bridge (SN 099-0046) is considered "No. 8" while the existing westbound bridge (SN 099-0047) is considered "No. 9".

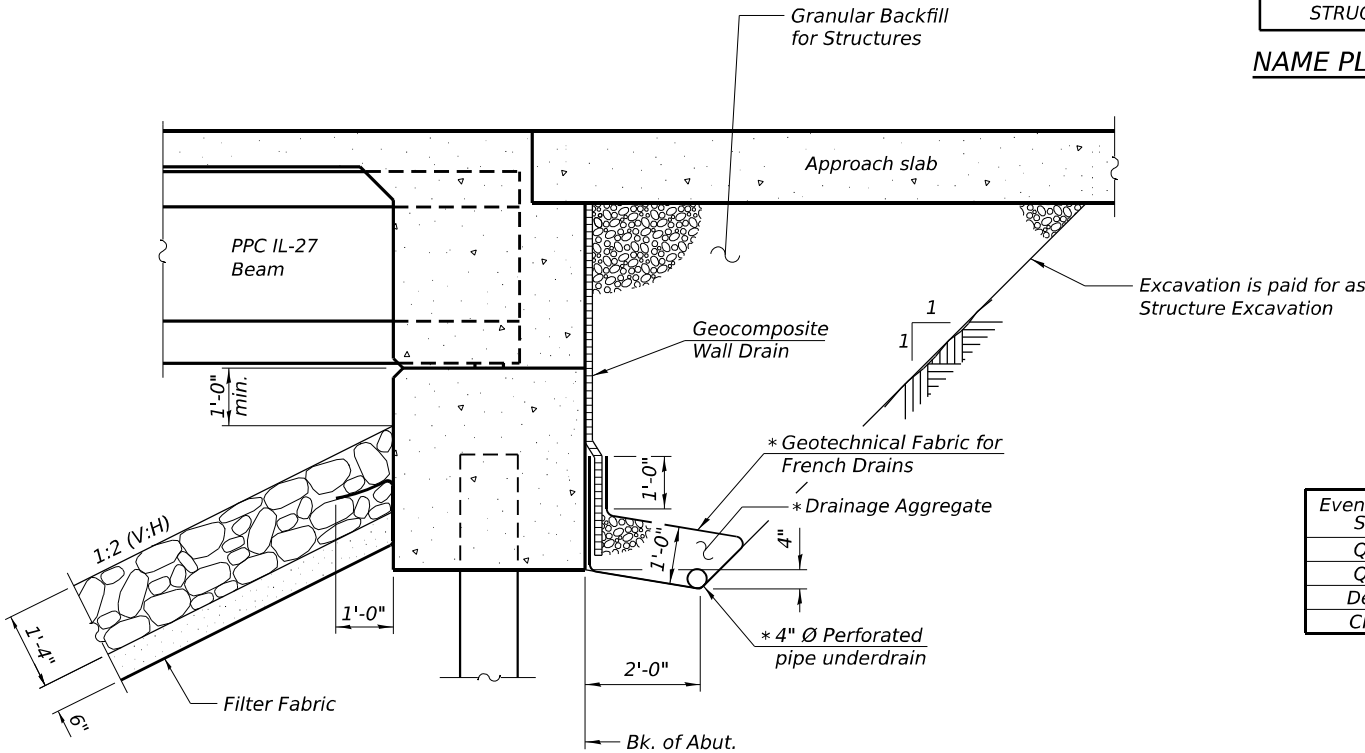
STATION 387+24.75
BUILT BY
STATE OF ILLINOIS
F.A.I. RT. 80 SEC. FAI 80 21 STRUCTURE 7
LOADING HL-93
STRUCTURE NO. 099-8318 (EB)

NAME PLATE - EB STRUCTURE
See Std. 515001

STATION 387+24.75
BUILT BY
STATE OF ILLINOIS
F.A.I. RT. 80 SEC. FAI 80 21 STRUCTURE 7
LOADING HL-93
STRUCTURE NO. 099-8319 (WB)

NAME PLATE - WB STRUCTURE
See Std. 515001

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.	0	2,742	2,742
Filter Fabric	Sq. Yd.	0	2,742	2,742
Removal of Existing Structures No. 8	Each	1	0	1
Removal of Existing Structures No. 9	Each	1	0	1
Structure Excavation	Cu. Yd.	0	933	933
Floor Drains	Each	20	0	20
Concrete Structures	Cu. Yd.	0	698.5	698.5
Concrete Superstructure	Cu. Yd.	796.5	0	796.5
Bridge Deck Grooving	Sq. Yd.	3,105	0	3,105
Protective Coat	Sq. Yd.	3,533	0	3,533
Concrete Superstructure (Approach Slab)	Cu. Yd.	444.6	0	444.6
Furnishing and Erecting Precast Prestressed Concrete Beams, IL27N	Foot	2,101	0	2,101
Reinforcement Bars, Epoxy Coated	Pound	370,740	58,920	429,660
Bar Splicers	Each	1,446	368	1,814
Furnishing Steel Piles HP14x89	Foot	0	1,547	1,547
Driving Piles	Foot	0	646	646
Pile Shoes	Each	0	34	34
Drilling and Setting Piles (In Soil)	Cu. Ft.	0	306	306
Drilling and Setting Piles (In Rock)	Cu. Ft.	0	1,070	1,070
Name Plates	Each	2	0	2
Preformed Joint Seal 3½"	Foot	187.0	0	187.0
Temporary Soil Retention System	Sq. Ft.	0	610	610
Granular Backfill for Structures	Cu. Yd.	0	373	373
Geocomposite Wall Drain	Sq. Yd.	0	215	215
Pipe Underdrains for Structures 4"	Foot	0	378	378



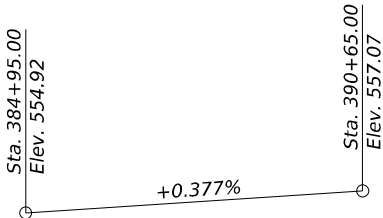
SECTION THRU INTEGRAL ABUTMENT

*Included in the cost of Pipe Underdrains for Structures.

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. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)				Item 113
	W. Abut.	Pier 1	Pier 2	E. Abut.	
Q100	548.54	531.01	531.01	549.01	5
Q200	548.54	529.87	529.87	549.01	
Design	548.54	531.01	531.01	549.01	
Check	548.54	529.87	529.87	549.01	



PROFILE GRADE

(along EB and WB I-80 PGLs)

WATERWAY INFORMATION

Drainage Area = 14.1 mi. ²		Exist. Overtopping Elev. 554.20 @ Sta. 384+24.57							
		Prop. Overtopping Elev. 555.12 @ Sta. 383+78.74							
Flood	Freq. Yr.	Q C.F.S.	Opening Ft ²		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Ten-Year	10	567	242.7	288.5	544.97	0.15	0.13	545.12	545.10
Design	50	1,103	411.1	552.0	547.72	0.00	0.00	547.72	547.72
Base	100	1,460	624.3	880.8	550.63	0.00	0.00	550.63	550.63
Max. Calc.	500	2,795	685.4	975.4	551.35	0.00	0.00	551.35	551.35

10 year velocity through existing bridge = 2.34 fps
10 year velocity through prop. bridge = 1.97 fps

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LIN ENGINEERING,LTD.

Consulting Engineers

Springfield, Illinois

USER NAME	=	_____	DESIGNED	-	AGJ	REVISED	-	
			CHECKED	-	MSS	REVISED	-	
PLOT SCALE	=	_____	DRAWN	-	AJF	REVISED	-	
PLOT DATE	=	_____	CHECKED	-	CL	REVISED	-	

STATE OF ILLINOIS

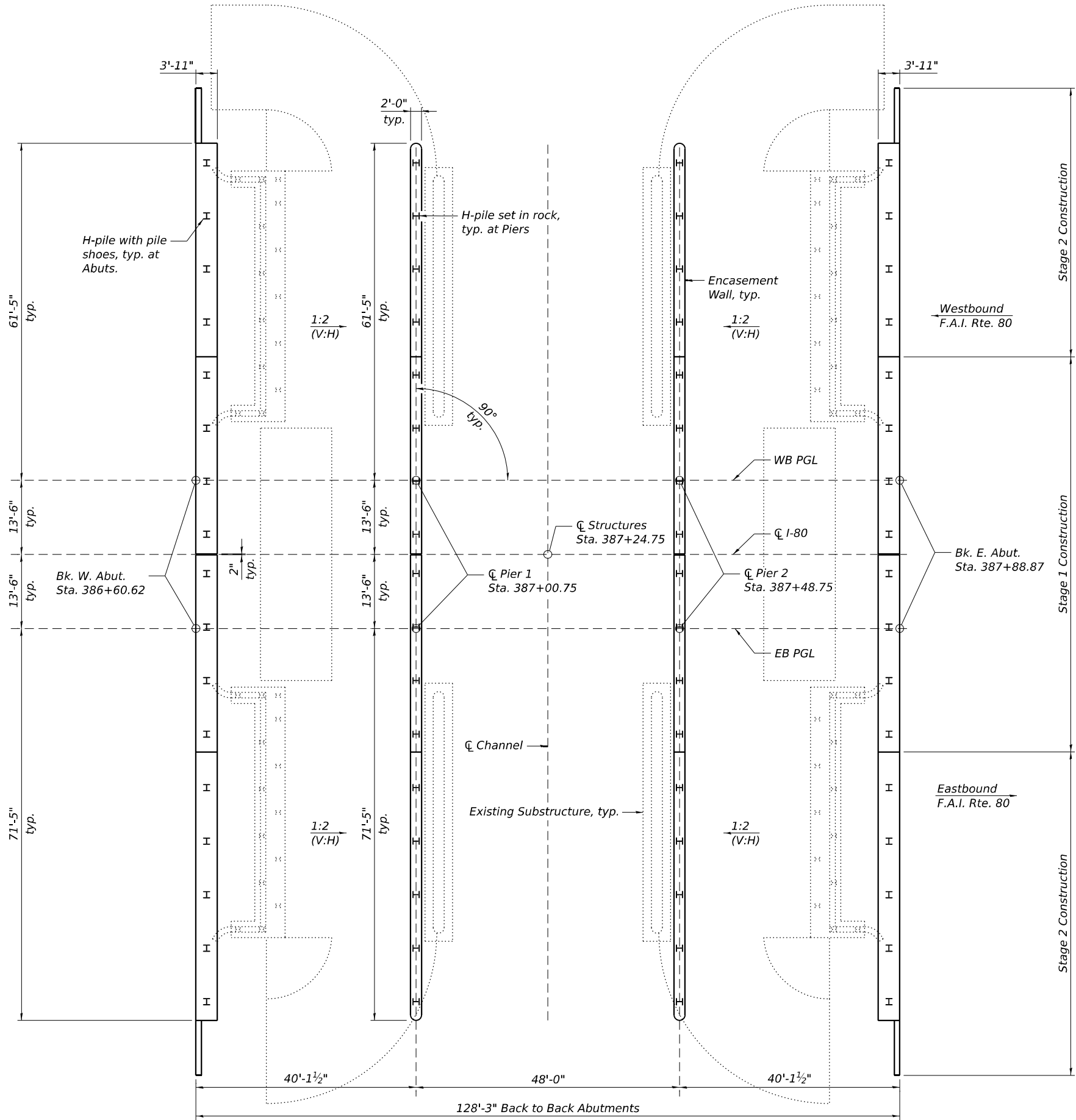
DEPARTMENT OF TRANSPORTATION

FOUNDATION LAYOUT

STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)

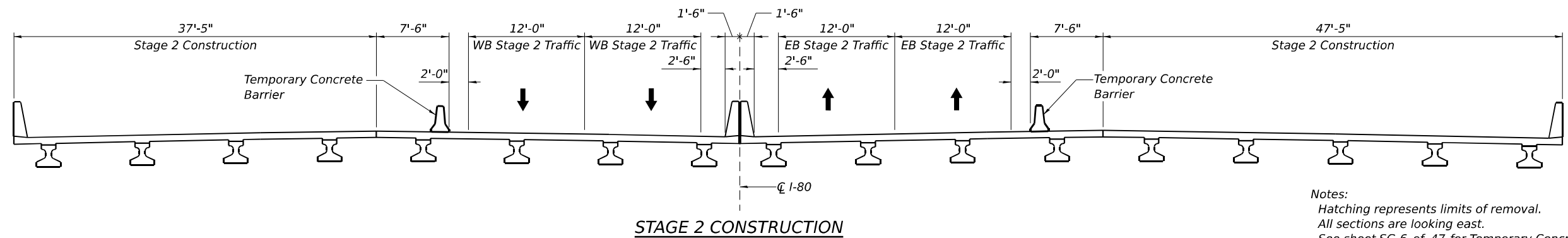
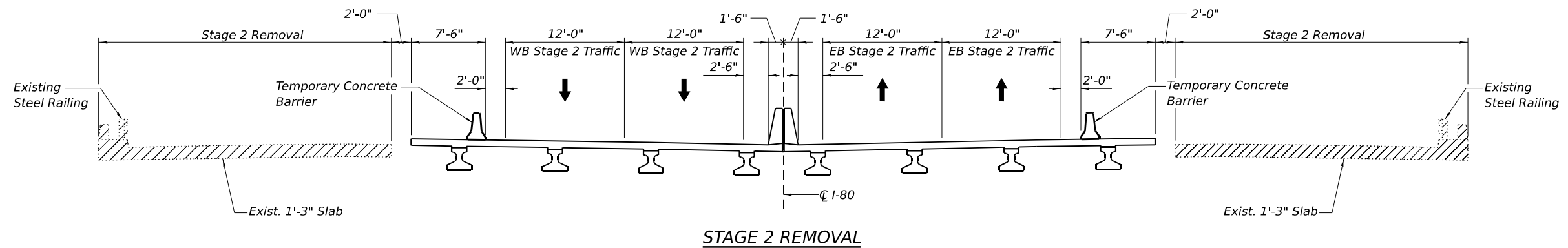
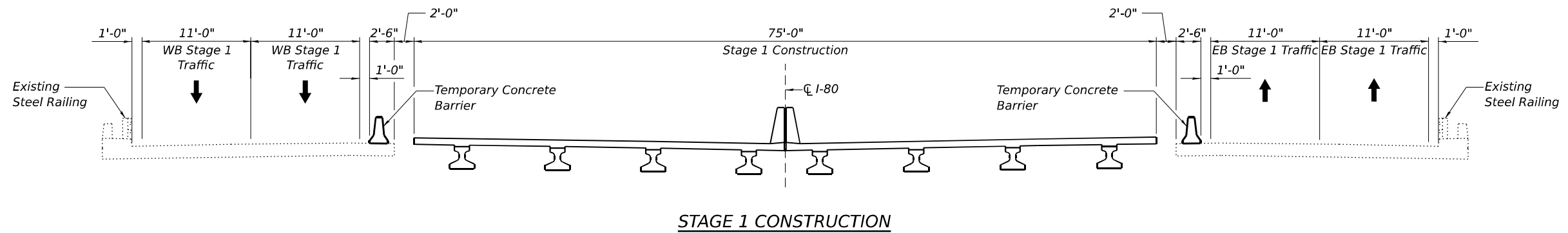
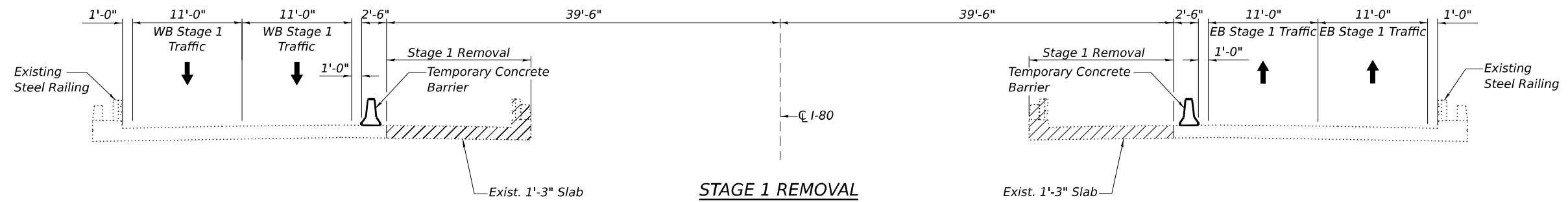
SHEET SG-3 OF 47 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	822
CONTRACT NO. 62R28				
ILLINOIS		FED. AID PROJECT		



PLAN

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Notes:
Hatching represents limits of removal.
All sections are looking east.
See sheet SG-6 of 47 for Temporary Concrete Barrier Details. See Roadway plans for quantity.

(Sheet 1 of 2)



USER NAME =	DESIGNED - CZ	REVISED -
CHECKED - AGJ	REVISED -	
PLOT SCALE =	DRAWN - LAV	REVISED -
PLOT DATE =	CHECKED - CL	REVISED -

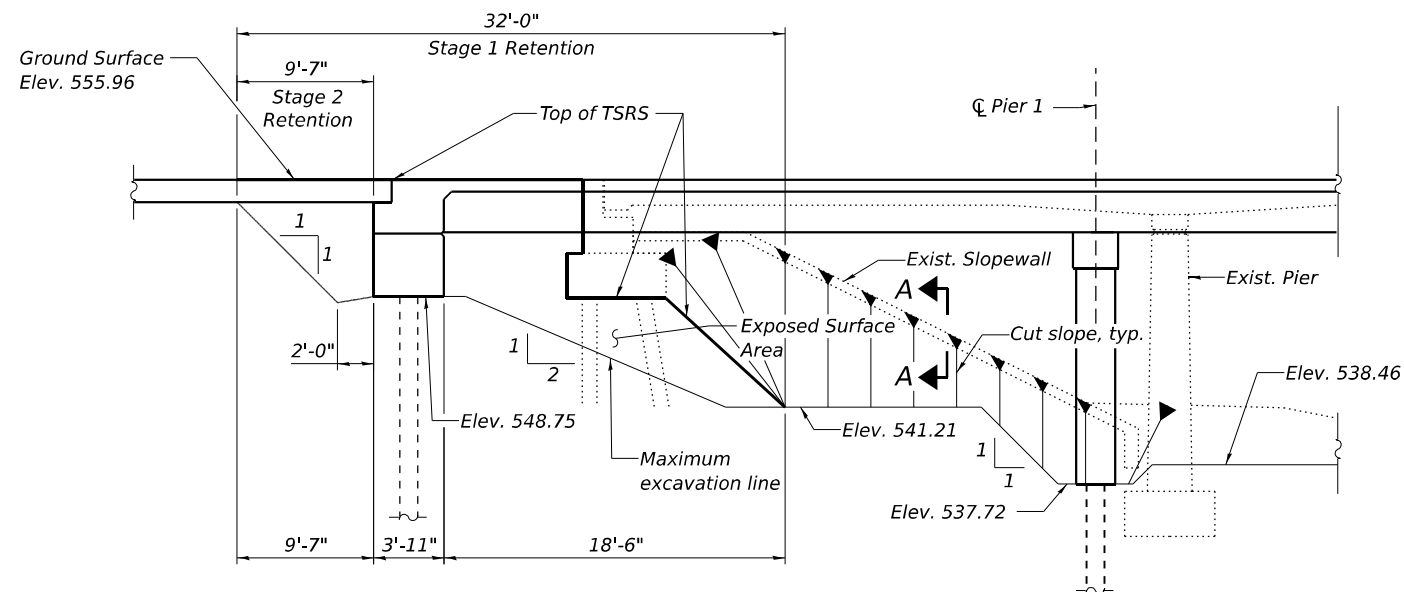
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)

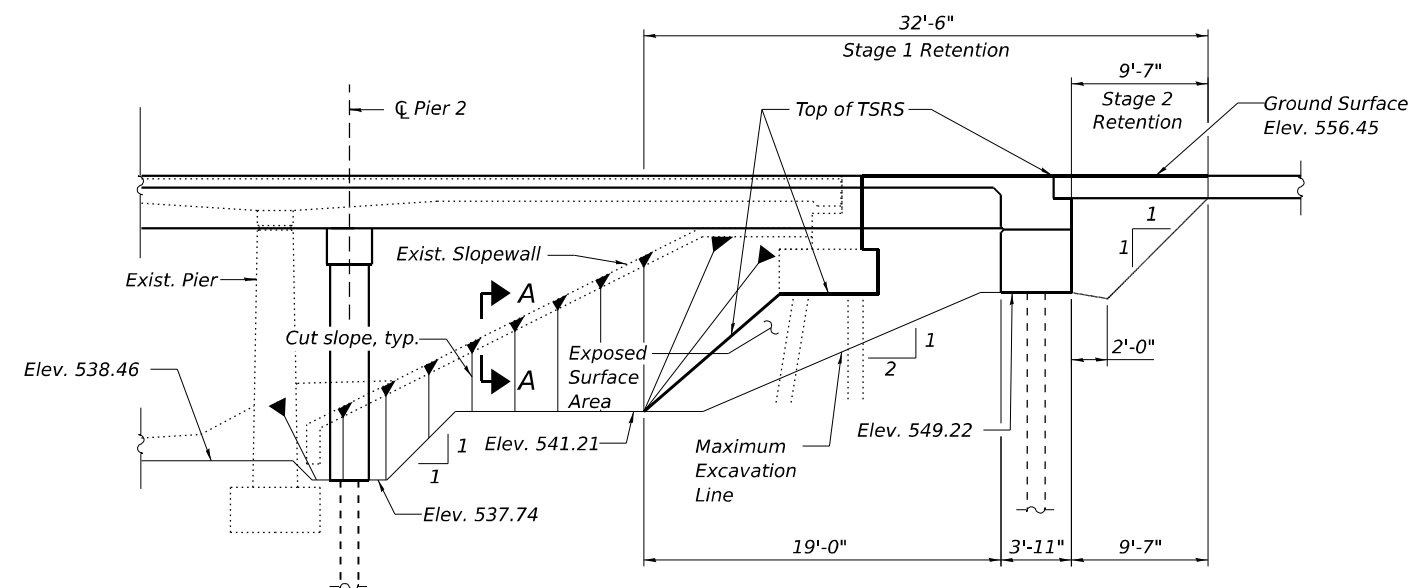
SHEET SG-4 OF 47 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

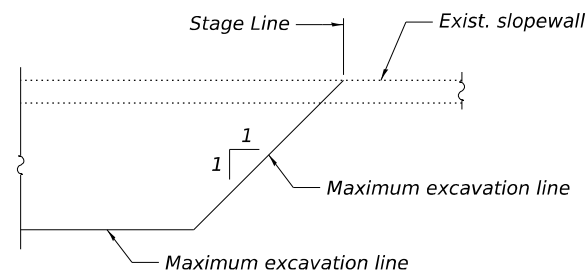
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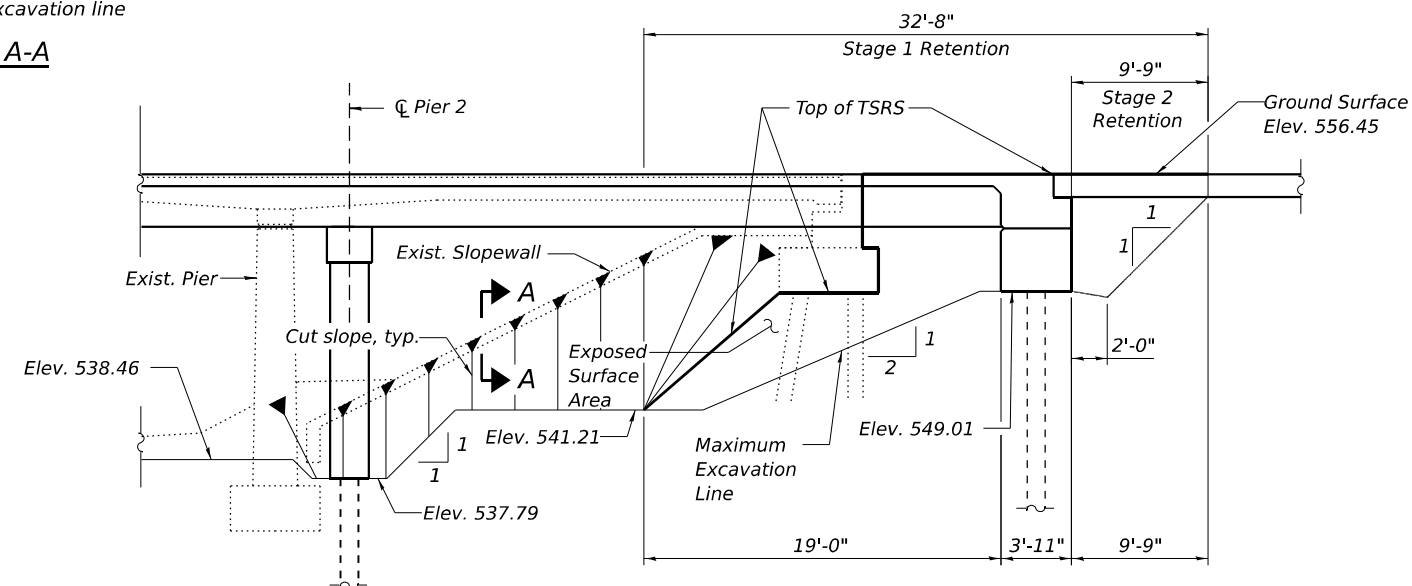
**TEMPORARY SOIL RETENTION SYSTEM
AT WB WEST ABUTMENT**
(Looking North)



**TEMPORARY SOIL RETENTION SYSTEM
AT WB EAST ABUTMENT**
(Looking North)



SECTION A-A



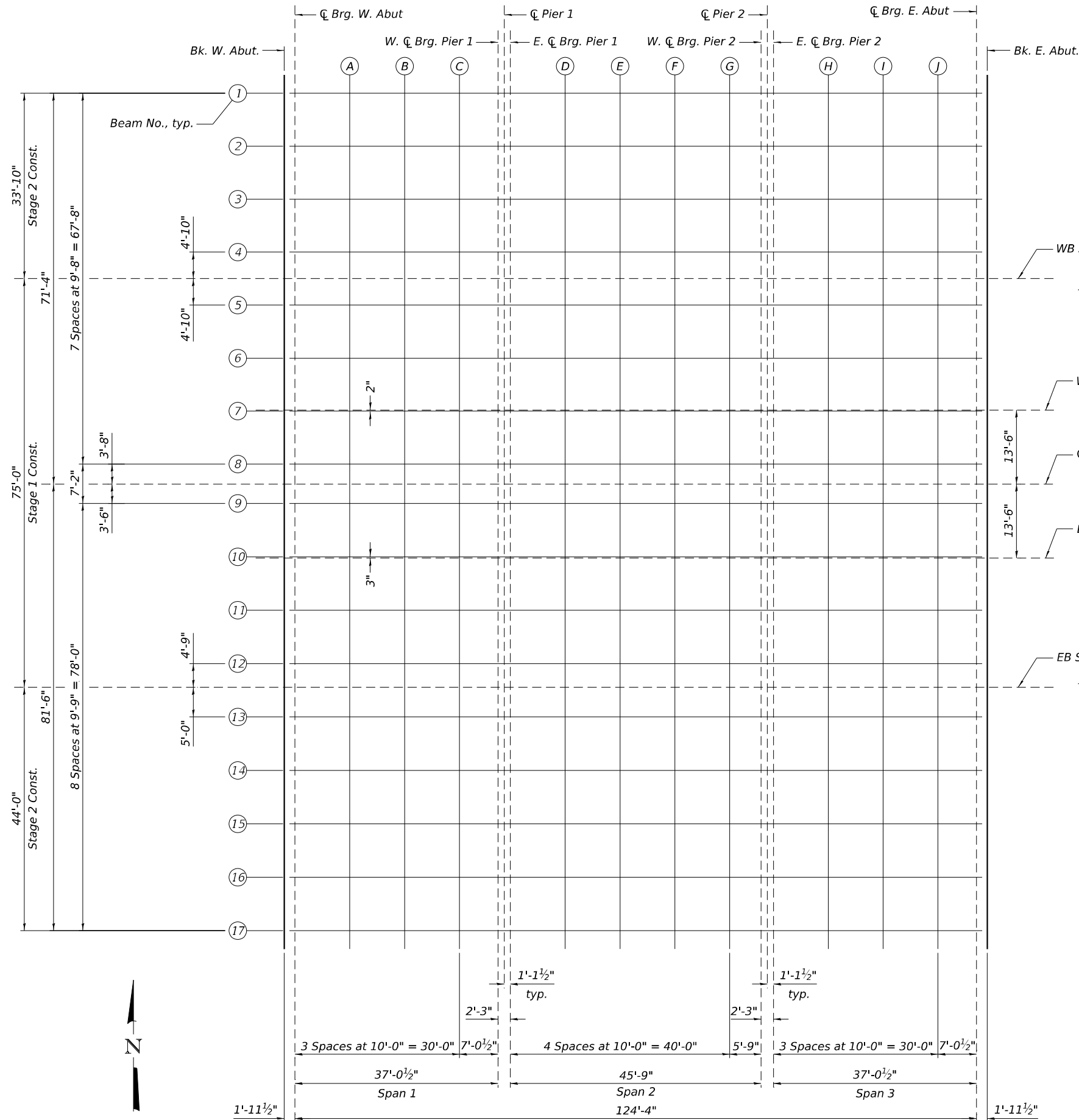
**TEMPORARY SOIL RETENTION SYSTEM
AT EB EAST ABUTMENT**
(Looking North)

**TEMPORARY SOIL RETENTION SYSTEM
AT EB WEST ABUTMENT**
(Looking North)

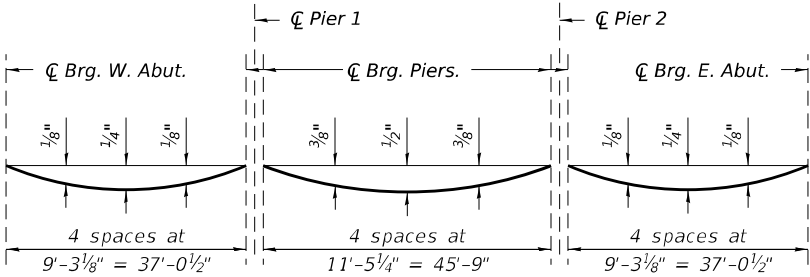
Note:
A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

(Sheet 2 of 2)

MODEL: Default
FILE NAME: pw://transsystems-pw.bentley.com/transscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Structures/04-Sheets/04-Structures/099-8318 & 8319 180 over Rock Run/Final Plans/0998318&8319-62R28-007-Top Slab Elevations.dgn



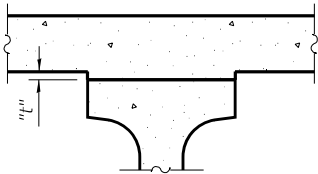
PLAN



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 on sheets SG-8 thru SG-11 of 47.



To determine "t": After all concrete beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets SG-8 thru SG-11 of 47, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

(Sheet 1 of 5)

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = _____	DESIGNED - AGJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)	F.A.I. RTE. 80 SECTION FAI 80 21 STRUCTURE 7 COUNTY WILL TOTAL SHEETS 1059 SHEET NO. 826				
	PLOT SCALE = _____	CHECKED - MSS	REVISED -			CONTRACT NO. 62R28				
	PLOT DATE = _____	DRAWN - AJF	REVISED -							
		CHECKED - CL	REVISED -							
SHEET SG-7 OF 47 SHEETS				ILLINOIS FED. AID PROJECT						

MODEL: Default
FILE NAME: pw:/transsystems-pw/bentley.com/transscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Structures/099-8318 & 8319 180 over Rock Run/Final Plans/0998318&8319-62R28-008-TopSlabElevations.dgn

BEAM 1				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	-71.33	555.35	555.35
⌒ Brg. W. Abut.	386+62.58	-71.33	555.36	555.36
A	386+72.58	-71.33	555.39	555.41
B	386+82.58	-71.33	555.43	555.45
C	386+92.58	-71.33	555.47	555.48
W. ⌒ Brg. Pier 1	386+99.62	-71.33	555.49	555.49
⌒ Pier 1	387+00.75	-71.33	555.50	555.50
E. ⌒ Brg. Pier 1	387+01.87	-71.33	555.50	555.50
D	387+11.87	-71.33	555.54	555.57
E	387+21.87	-71.33	555.58	555.62
F	387+31.87	-71.33	555.62	555.65
G	387+41.87	-71.33	555.65	555.67
W. ⌒ Brg. Pier 2	387+47.62	-71.33	555.68	555.68
⌒ Pier 2	387+48.75	-71.33	555.68	555.68
E. ⌒ Brg. Pier 2	387+49.87	-71.33	555.68	555.68
H	387+59.87	-71.33	555.72	555.73
I	387+69.87	-71.33	555.76	555.78
J	387+79.87	-71.33	555.80	555.81
⌒ Brg. E. Abut.	387+86.91	-71.33	555.82	555.82
Bk. E. Abut.	387+88.87	-71.33	555.83	555.83

BEAM 2				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	-61.67	555.54	555.54
⌒ Brg. W. Abut.	386+62.58	-61.67	555.55	555.55
A	386+72.58	-61.67	555.59	555.60
B	386+82.58	-61.67	555.62	555.64
C	386+92.58	-61.67	555.66	555.67
W. ⌒ Brg. Pier 1	386+99.62	-61.67	555.69	555.69
⌒ Pier 1	387+00.75	-61.67	555.69	555.69
E. ⌒ Brg. Pier 1	387+01.87	-61.67	555.70	555.70
D	387+11.87	-61.67	555.73	555.76
E	387+21.87	-61.67	555.77	555.81
F	387+31.87	-61.67	555.81	555.85
G	387+41.87	-61.67	555.85	555.87
W. ⌒ Brg. Pier 2	387+47.62	-61.67	555.87	555.87
⌒ Pier 2	387+48.75	-61.67	555.87	555.87
E. ⌒ Brg. Pier 2	387+49.87	-61.67	555.88	555.88
H	387+59.87	-61.67	555.92	555.93
I	387+69.87	-61.67	555.95	555.97
J	387+79.87	-61.67	555.99	556.00
⌒ Brg. E. Abut.	387+86.91	-61.67	556.02	556.02
Bk. E. Abut.	387+88.87	-61.67	556.02	556.02

BEAM 3				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	-52.00	555.73	555.73
⌒ Brg. W. Abut.	386+62.58	-52.00	555.74	555.74
A	386+72.58	-52.00	555.78	555.80
B	386+82.58	-52.00	555.82	555.84
C	386+92.58	-52.00	555.85	555.86
W. ⌒ Brg. Pier 1	386+99.62	-52.00	555.88	555.88
⌒ Pier 1	387+00.75	-52.00	555.89	555.89
E. ⌒ Brg. Pier 1	387+01.87	-52.00	555.89	555.89
D	387+11.87	-52.00	555.93	555.96
E	387+21.87	-52.00	555.97	556.01
F	387+31.87	-52.00	556.00	556.04
G	387+41.87	-52.00	556.04	556.06
W. ⌒ Brg. Pier 2	387+47.62	-52.00	556.06	556.06
⌒ Pier 2	387+48.75	-52.00	556.07	556.07
E. ⌒ Brg. Pier 2	387+49.87	-52.00	556.07	556.07
H	387+59.87	-52.00	556.11	556.12
I	387+69.87	-52.00	556.15	556.16
J	387+79.87	-52.00	556.18	556.19
⌒ Brg. E. Abut.	387+86.91	-52.00	556.21	556.21
Bk. E. Abut.	387+88.87	-52.00	556.22	556.22

BEAM 4				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	-42.33	555.89	555.89
⌒ Brg. W. Abut.	386+62.58	-42.33	555.90	555.90
A	386+72.58	-42.33	555.94	555.95
B	386+82.58	-42.33	555.97	555.99
C	386+92.58	-42.33	556.01	556.02
W. ⌒ Brg. Pier 1	386+99.62	-42.33	556.04	556.04
⌒ Pier 1	387+00.75	-42.33	556.04	556.04
E. ⌒ Brg. Pier 1	387+01.87	-42.33	556.05	556.05
D	387+11.87	-42.33	556.09	556.11
E	387+21.87	-42.33	556.12	556.17
F	387+31.87	-42.33	556.16	556.20
G	387+41.87	-42.33	556.20	556.22
W. ⌒ Brg. Pier 2	387+47.62	-42.33	556.22	556.22
⌒ Pier 2	387+48.75	-42.33	556.22	556.22
E. ⌒ Brg. Pier 2	387+49.87	-42.33	556.23	556.23
H	387+59.87	-42.33	556.27	556.28
I	387+69.87	-42.33	556.30	556.32
J	387+79.87	-42.33	556.34	556.35
⌒ Brg. E. Abut.	387+86.91	-42.33	556.37	556.37
Bk. E. Abut.	387+88.87	-42.33	556.38	556.38

WB STAGE CONSTRUCTION LINE				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	-37.50	555.96	555.96
⌒ Brg. W. Abut.	386+62.58	-37.50	555.97	555.97
A	386+72.58	-37.50	556.01	556.02
B	386+82.58	-37.50	556.05	556.07
C	386+92.58	-37.50	556.08	556.09
W. ⌒ Brg. Pier 1	386+99.62	-37.50	556.11	556.11
⌒ Pier 1	387+00.75	-37.50	556.12	556.12
E. ⌒ Brg. Pier 1	387+01.87	-37.50	556.12	556.12
D	387+11.87	-37.50	556.16	556.19
E	387+21.87	-37.50	556.20	556.24
F	387+31.87	-37.50	556.23	556.27
G	387+41.87	-37.50	556.27	556.29
W. ⌒ Brg. Pier 2	387+47.62	-37.50	556.29	556.29
⌒ Pier 2	387+48.75	-37.50	556.30	556.30
E. ⌒ Brg. Pier 2	387+49.87	-37.50	556.30	556.30
H	387+59.87	-37.50	556.34	556.35
I	387+69.87	-37.50	556.38	556.40
J	387+79.87	-37.50	556.41	556.43
⌒ Brg. E. Abut.	387+86.91	-37.50	556.44	556.44
Bk. E. Abut.	387+88.87	-37.50	556.45	556.45

BEAM 5				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	-32.67	555.89	555.89
⌒ Brg. W. Abut.	386+62.58	-32.67	555.90	555.90
A	386+72.58	-32.67	555.94	555.95
B	386+82.58	-32.67	555.97	555.99
C	386+92.58	-32.67	556.01	556.02
W. ⌒ Brg. Pier 1	386+99.62	-32.67	556.04	556.04
⌒ Pier 1	387+00.75	-32.67	556.04	556.04
E. ⌒ Brg. Pier 1	387+01.87	-32.67	556.05	556.05
D	387+11.87	-32.67	556.09	556.11
E	387+21.87	-32.67	556.12	556.17
F	387+31.87	-32.67	556.16	556.20
G	387+41.87	-32.67	556.20	556.22
W. ⌒ Brg. Pier 2	387+47.62	-32.67	556.22	556.22
⌒ Pier 2	387+48.75	-32.67	556.22	556.22
E. ⌒ Brg. Pier 2	387+49.87	-32.67	556.23	556.23
H	387+59.87	-32.67	556.27	556.28
I	387+69.87	-32.67	556.30	556.32
J	387+79.87	-32.67	556.34	556.35
⌒ Brg. E. Abut.	387+86.91	-32.67	556.37	556.37
Bk. E. Abut.	387+88.87	-32.67	556.38	556.38

Note:
Offsets measured from ⌒ roadway.

(Sheet 2 of 5)

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = _____	DESIGNED - MSS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - AGJ	REVISED -			80	FAI 80 21 STRUCTURE 7	WILL	1059	827
	PLOT SCALE = _____	DRAWN - AJF	REVISED -			CONTRACT NO. 62R28				
	PLOT DATE = _____	CHECKED - CL	REVISED -			ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: pw:/transyscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Structures/CAD/ML-04_62R28/04-Sheets/04-Structures/099-8318 & 8319 180 over Rock Run/Final Plans/0998318&8319-62R28-009-TopSlabElevations.dgn

BEAM 6				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	-23.00	555.73	555.73
℄ Brg. W. Abut.	386+62.58	-23.00	555.74	555.74
A	386+72.58	-23.00	555.78	555.80
B	386+82.58	-23.00	555.82	555.84
C	386+92.58	-23.00	555.85	555.86
W. ℄ Brg. Pier 1	386+99.62	-23.00	555.88	555.88
℄ Pier 1	387+00.75	-23.00	555.89	555.89
E. ℄ Brg. Pier 1	387+01.87	-23.00	555.89	555.89
D	387+11.87	-23.00	555.93	555.96
E	387+21.87	-23.00	555.97	556.01
F	387+31.87	-23.00	556.00	556.04
G	387+41.87	-23.00	556.04	556.06
W. ℄ Brg. Pier 2	387+47.62	-23.00	556.06	556.06
℄ Pier 2	387+48.75	-23.00	556.07	556.07
E. ℄ Brg. Pier 2	387+49.87	-23.00	556.07	556.07
H	387+59.87	-23.00	556.11	556.12
I	387+69.87	-23.00	556.15	556.16
J	387+79.87	-23.00	556.18	556.19
℄ Brg. E. Abut.	387+86.91	-23.00	556.21	556.21
Bk. E. Abut.	387+88.87	-23.00	556.22	556.22

WB PGL				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	-13.50	555.54	555.54
℄ Brg. W. Abut.	386+62.58	-13.50	555.55	555.55
A	386+72.58	-13.50	555.59	555.61
B	386+82.58	-13.50	555.63	555.65
C	386+92.58	-13.50	555.66	555.67
W. ℄ Brg. Pier 1	386+99.62	-13.50	555.69	555.69
℄ Pier 1	387+00.75	-13.50	555.70	555.70
E. ℄ Brg. Pier 1	387+01.87	-13.50	555.70	555.70
D	387+11.87	-13.50	555.74	555.77
E	387+21.87	-13.50	555.78	555.82
F	387+31.87	-13.50	555.81	555.85
G	387+41.87	-13.50	555.85	555.87
W. ℄ Brg. Pier 2	387+47.62	-13.50	555.87	555.87
℄ Pier 2	387+48.75	-13.50	555.88	555.88
E. ℄ Brg. Pier 2	387+49.87	-13.50	555.88	555.88
H	387+59.87	-13.50	555.92	555.93
I	387+69.87	-13.50	555.96	555.97
J	387+79.87	-13.50	555.99	556.00
℄ Brg. E. Abut.	387+86.91	-13.50	556.02	556.02
Bk. E. Abut.	387+88.87	-13.50	556.03	556.03

BEAM 7				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	-13.33	555.54	555.54
℄ Brg. W. Abut.	386+62.58	-13.33	555.55	555.55
A	386+72.58	-13.33	555.59	555.60
B	386+82.58	-13.33	555.62	555.64
C	386+92.58	-13.33	555.66	555.67
W. ℄ Brg. Pier 1	386+99.62	-13.33	555.69	555.69
℄ Pier 1	387+00.75	-13.33	555.69	555.69
E. ℄ Brg. Pier 1	387+01.87	-13.33	555.70	555.70
D	387+11.87	-13.33	555.73	555.76
E	387+21.87	-13.33	555.77	555.81
F	387+31.87	-13.33	555.81	555.85
G	387+41.87	-13.33	555.85	555.87
W. ℄ Brg. Pier 2	387+47.62	-13.33	555.87	555.87
℄ Pier 2	387+48.75	-13.33	555.87	555.87
E. ℄ Brg. Pier 2	387+49.87	-13.33	555.88	555.88
H	387+59.87	-13.33	555.92	555.93
I	387+69.87	-13.33	555.95	555.97
J	387+79.87	-13.33	555.99	556.00
℄ Brg. E. Abut.	387+86.91	-13.33	556.02	556.02
Bk. E. Abut.	387+88.87	-13.33	556.02	556.02

BEAM 8				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	-3.67	555.35	555.35
℄ Brg. W. Abut.	386+62.58	-3.67	555.36	555.36
A	386+72.58	-3.67	555.39	555.41
B	386+82.58	-3.67	555.43	555.45
C	386+92.58	-3.67	555.47	555.48
W. ℄ Brg. Pier 1	386+99.62	-3.67	555.49	555.49
℄ Pier 1	387+00.75	-3.67	555.50	555.50
E. ℄ Brg. Pier 1	387+01.87	-3.67	555.50	555.50
D	387+11.87	-3.67	555.54	555.57
E	387+21.87	-3.67	555.58	555.62
F	387+31.87	-3.67	555.62	555.65
G	387+41.87	-3.67	555.65	555.67
W. ℄ Brg. Pier 2	387+47.62	-3.67	555.68	555.68
℄ Pier 2	387+48.75	-3.67	555.68	555.68
E. ℄ Brg. Pier 2	387+49.87	-3.67	555.68	555.68
H	387+59.87	-3.67	555.72	555.73
I	387+69.87	-3.67	555.76	555.78
J	387+79.87	-3.67	555.80	555.81
℄ Brg. E. Abut.	387+86.91	-3.67	555.82	555.82
Bk. E. Abut.	387+88.87	-3.67	555.83	555.83

BEAM 9				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	3.50	555.34	555.34
℄ Brg. W. Abut.	386+62.58	3.50	555.35	555.35
A	386+72.58	3.50	555.39	555.40
B	386+82.58	3.50	555.43	555.44
C	386+92.58	3.50	555.46	555.47
W. ℄ Brg. Pier 1	386+99.62	3.50	555.49	555.49
℄ Pier 1	387+00.75	3.50	555.50	555.50
E. ℄ Brg. Pier 1	387+01.87	3.50	555.50	555.50
D	387+11.87	3.50	555.54	555.56
E	387+21.87	3.50	555.58	555.61
F	387+31.87	3.50	555.61	555.65
G	387+41.87	3.50	555.65	555.67
W. ℄ Brg. Pier 2	387+47.62	3.50	555.67	555.67
℄ Pier 2	387+48.75	3.50	555.68	555.68
E. ℄ Brg. Pier 2	387+49.87	3.50	555.68	555.68
H	387+59.87	3.50	555.72	555.73
I	387+69.87	3.50	555.76	555.77
J	387+79.87	3.50	555.79	555.80
℄ Brg. E. Abut.	387+86.91	3.50	555.82	555.82
Bk. E. Abut.	387+88.87	3.50	555.83	555.83

BEAM 10				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	13.25	555.54	555.54
℄ Brg. W. Abut.	386+62.58	13.25	555.55	555.55
A	386+72.58	13.25	555.58	555.60
B	386+82.58	13.25	555.62	555.64
C	386+92.58	13.25	555.66	555.67
W. ℄ Brg. Pier 1	386+99.62	13.25	555.69	555.69
℄ Pier 1	387+00.75	13.25	555.69	555.69
E. ℄ Brg. Pier 1	387+01.87	13.25	555.69	555.69
D	387+11.87	13.25	555.73	555.76
E	387+21.87	13.25	555.77	555.81
F	387+31.87	13.25	555.81	555.85
G	387+41.87	13.25	555.85	555.87
W. ℄ Brg. Pier 2	387+47.62	13.25	555.87	555.87
℄ Pier 2	387+48.75	13.25	555.87	555.87
E. ℄ Brg. Pier 2	387+49.87	13.25	555.88	555.88
H	387+59.87	13.25	555.91	555.93
I	387+69.87	13.25	555.95	555.97
J	387+79.87	13.25	555.99	556.00
℄ Brg. E. Abut.	387+86.91	13.25	556.02	556.02
Bk. E. Abut.	387+88.87	13.25	556.02	556.02

Note:
Offsets measured from ℄ roadway.

(Sheet 3 of 5)

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = _____	DESIGNED - MSS	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - AGJ	REVISED - _____			80	FAI 80 21 STRUCTURE 7	WILL	1059	828
	PLOT SCALE = _____	DRAWN - AJF	REVISED - _____			CONTRACT NO. 62R28				
	PLOT DATE = _____	CHECKED - CL	REVISED - _____			ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: pw://transyscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Structures/099-8318 & 8319 180 over Rock Run/Final Plans/0998318&8319-62R28-01-0-TopSlabElevations.dgn

EB PGL				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	13.50	555.54	555.54
⌒ Brg. W. Abut.	386+62.58	13.50	555.55	555.55
A	386+72.58	13.50	555.59	555.61
B	386+82.58	13.50	555.63	555.65
C	386+92.58	13.50	555.66	555.67
W. ⌒ Brg. Pier 1	386+99.62	13.50	555.69	555.69
⌒ Pier 1	387+00.75	13.50	555.70	555.70
E. ⌒ Brg. Pier 1	387+01.87	13.50	555.70	555.70
D	387+11.87	13.50	555.74	555.77
E	387+21.87	13.50	555.78	555.82
F	387+31.87	13.50	555.81	555.85
G	387+41.87	13.50	555.85	555.87
W. ⌒ Brg. Pier 2	387+47.62	13.50	555.87	555.87
⌒ Pier 2	387+48.75	13.50	555.88	555.88
E. ⌒ Brg. Pier 2	387+49.87	13.50	555.88	555.88
H	387+59.87	13.50	555.92	555.93
I	387+69.87	13.50	555.96	555.98
J	387+79.87	13.50	555.99	556.00
⌒ Brg. E. Abut.	387+86.91	13.50	556.02	556.02
Bk. E. Abut.	387+88.87	13.50	556.03	556.03

BEAM 11				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	23.00	555.73	555.73
⌒ Brg. W. Abut.	386+62.58	23.00	555.74	555.74
A	386+72.58	23.00	555.78	555.80
B	386+82.58	23.00	555.82	555.84
C	386+92.58	23.00	555.85	555.86
W. ⌒ Brg. Pier 1	386+99.62	23.00	555.88	555.88
⌒ Pier 1	387+00.75	23.00	555.89	555.89
E. ⌒ Brg. Pier 1	387+01.87	23.00	555.89	555.89
D	387+11.87	23.00	555.93	555.96
E	387+21.87	23.00	555.97	556.01
F	387+31.87	23.00	556.00	556.04
G	387+41.87	23.00	556.04	556.06
W. ⌒ Brg. Pier 2	387+47.62	23.00	556.06	556.06
⌒ Pier 2	387+48.75	23.00	556.07	556.07
E. ⌒ Brg. Pier 2	387+49.87	23.00	556.07	556.07
H	387+59.87	23.00	556.11	556.12
I	387+69.87	23.00	556.15	556.17
J	387+79.87	23.00	556.18	556.19
⌒ Brg. E. Abut.	387+86.91	23.00	556.21	556.21
Bk. E. Abut.	387+88.87	23.00	556.22	556.22

BEAM 12				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	32.75	555.89	555.89
⌒ Brg. W. Abut.	386+62.58	32.75	555.90	555.90
A	386+72.58	32.75	555.94	555.95
B	386+82.58	32.75	555.98	555.99
C	386+92.58	32.75	556.01	556.02
W. ⌒ Brg. Pier 1	386+99.62	32.75	556.04	556.04
⌒ Pier 1	387+00.75	32.75	556.04	556.04
E. ⌒ Brg. Pier 1	387+01.87	32.75	556.05	556.05
D	387+11.87	32.75	556.09	556.11
E	387+21.87	32.75	556.12	556.17
F	387+31.87	32.75	556.16	556.20
G	387+41.87	32.75	556.20	556.22
W. ⌒ Brg. Pier 2	387+47.62	32.75	556.22	556.22
⌒ Pier 2	387+48.75	32.75	556.23	556.23
E. ⌒ Brg. Pier 2	387+49.87	32.75	556.23	556.23
H	387+59.87	32.75	556.27	556.28
I	387+69.87	32.75	556.31	556.32
J	387+79.87	32.75	556.34	556.35
⌒ Brg. E. Abut.	387+86.91	32.75	556.37	556.37
Bk. E. Abut.	387+88.87	32.75	556.38	556.38

EB STAGE CONSTRUCTION LINE				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	37.50	555.96	555.96
⌒ Brg. W. Abut.	386+62.58	37.50	555.97	555.97
A	386+72.58	37.50	556.01	556.02
B	386+82.58	37.50	556.05	556.07
C	386+92.58	37.50	556.08	556.09
W. ⌒ Brg. Pier 1	386+99.62	37.50	556.11	556.11
⌒ Pier 1	387+00.75	37.50	556.12	556.12
E. ⌒ Brg. Pier 1	387+01.87	37.50	556.12	556.12
D	387+11.87	37.50	556.16	556.19
E	387+21.87	37.50	556.20	556.24
F	387+31.87	37.50	556.23	556.27
G	387+41.87	37.50	556.27	556.29
W. ⌒ Brg. Pier 2	387+47.62	37.50	556.29	556.29
⌒ Pier 2	387+48.75	37.50	556.30	556.30
E. ⌒ Brg. Pier 2	387+49.87	37.50	556.30	556.30
H	387+59.87	37.50	556.34	556.35
I	387+69.87	37.50	556.38	556.40
J	387+79.87	37.50	556.41	556.43
⌒ Brg. E. Abut.	387+86.91	37.50	556.44	556.44
Bk. E. Abut.	387+88.87	37.50	556.45	556.45

BEAM 13				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	42.50	555.89	555.89
⌒ Brg. W. Abut.	386+62.58	42.50	555.90	555.90
A	386+72.58	42.50	555.93	555.95
B	386+82.58	42.50	555.97	555.99
C	386+92.58	42.50	556.01	556.02
W. ⌒ Brg. Pier 1	386+99.62	42.50	556.04	556.04
⌒ Pier 1	387+00.75	42.50	556.04	556.04
E. ⌒ Brg. Pier 1	387+01.87	42.50	556.04	556.04
D	387+11.87	42.50	556.08	556.11
E	387+21.87	42.50	556.12	556.16
F	387+31.87	42.50	556.16	556.20
G	387+41.87	42.50	556.20	556.22
W. ⌒ Brg. Pier 2	387+47.62	42.50	556.22	556.22
⌒ Pier 2	387+48.75	42.50	556.22	556.22
E. ⌒ Brg. Pier 2	387+49.87	42.50	556.23	556.23
H	387+59.87	42.50	556.26	556.28
I	387+69.87	42.50	556.30	556.32
J	387+79.87	42.50	556.34	556.35
⌒ Brg. E. Abut.	387+86.91	42.50	556.37	556.37
Bk. E. Abut.	387+88.87	42.50	556.37	556.37

BEAM 14				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	52.25	555.73	555.73
⌒ Brg. W. Abut.	386+62.58	52.25	555.74	555.74
A	386+72.58	52.25	555.77	555.79
B	386+82.58	52.25	555.81	555.83
C	386+92.58	52.25	555.85	555.86
W. ⌒ Brg. Pier 1	386+99.62	52.25	555.88	555.88
⌒ Pier 1	387+00.75	52.25	555.88	555.88
E. ⌒ Brg. Pier 1	387+01.87	52.25	555.88	555.88
D	387+11.87	52.25	555.92	555.95
E	387+21.87	52.25	555.96	556.00
F	387+31.87	52.25	556.00	556.04
G	387+41.87	52.25	556.04	556.06
W. ⌒ Brg. Pier 2	387+47.62	52.25	556.06	556.06
⌒ Pier 2	387+48.75	52.25	556.06	556.06
E. ⌒ Brg. Pier 2	387+49.87	52.25	556.07	556.07
H	387+59.87	52.25	556.10	556.12
I	387+69.87	52.25	556.14	556.16
J	387+79.87	52.25	556.18	556.19
⌒ Brg. E. Abut.	387+86.91	52.25	556.21	556.21
Bk. E. Abut.	387+88.87	52.25	556.21	556.21

Note:
Offsets measured from ⌒ roadway.

(Sheet 4 of 5)

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = _____	DESIGNED - MSS	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - AGJ	REVISED - _____			80	FAI 80 21 STRUCTURE 7	WILL	1059	829
	PLOT SCALE = _____	DRAWN - AJF	REVISED - _____			CONTRACT NO. 62R28				
	PLOT DATE = _____	CHECKED - CL	REVISED - _____			SHEET 5G-10 OF 47 SHEETS				
							ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: pw://transsystems-pw.bentley.com/transscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Structures/099-8318 & 8319 180 over Rock Run/Final Plans/0998318&8319-62R28-011-TopSlabElevations.dgn

BEAM 15

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	62.00	555.53	555.53
℄ Brg. W. Abut.	386+62.58	62.00	555.54	555.54
A	386+72.58	62.00	555.58	555.60
B	386+82.58	62.00	555.62	555.64
C	386+92.58	62.00	555.65	555.66
W. ℄ Brg. Pier 1	386+99.62	62.00	555.68	555.68
℄ Pier 1	387+00.75	62.00	555.69	555.69
E. ℄ Brg. Pier 1	387+01.87	62.00	555.69	555.69
D	387+11.87	62.00	555.73	555.76
E	387+21.87	62.00	555.77	555.81
F	387+31.87	62.00	555.80	555.84
G	387+41.87	62.00	555.84	555.86
W. ℄ Brg. Pier 2	387+47.62	62.00	555.86	555.86
℄ Pier 2	387+48.75	62.00	555.87	555.87
E. ℄ Brg. Pier 2	387+49.87	62.00	555.87	555.87
H	387+59.87	62.00	555.91	555.92
I	387+69.87	62.00	555.95	555.97
J	387+79.87	62.00	555.98	555.99
℄ Brg. E. Abut.	387+86.91	62.00	556.01	556.01
Bk. E. Abut.	387+88.87	62.00	556.02	556.02

BEAM 16

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	71.75	555.34	555.34
℄ Brg. W. Abut.	386+62.58	71.75	555.35	555.35
A	386+72.58	71.75	555.38	555.40
B	386+82.58	71.75	555.42	555.44
C	386+92.58	71.75	555.46	555.47
W. ℄ Brg. Pier 1	386+99.62	71.75	555.49	555.49
℄ Pier 1	387+00.75	71.75	555.49	555.49
E. ℄ Brg. Pier 1	387+01.87	71.75	555.49	555.49
D	387+11.87	71.75	555.53	555.56
E	387+21.87	71.75	555.57	555.61
F	387+31.87	71.75	555.61	555.65
G	387+41.87	71.75	555.65	555.67
W. ℄ Brg. Pier 2	387+47.62	71.75	555.67	555.67
℄ Pier 2	387+48.75	71.75	555.67	555.67
E. ℄ Brg. Pier 2	387+49.87	71.75	555.68	555.68
H	387+59.87	71.75	555.71	555.73
I	387+69.87	71.75	555.75	555.77
J	387+79.87	71.75	555.79	555.80
℄ Brg. E. Abut.	387+86.91	71.75	555.82	555.82
Bk. E. Abut.	387+88.87	71.75	555.82	555.82

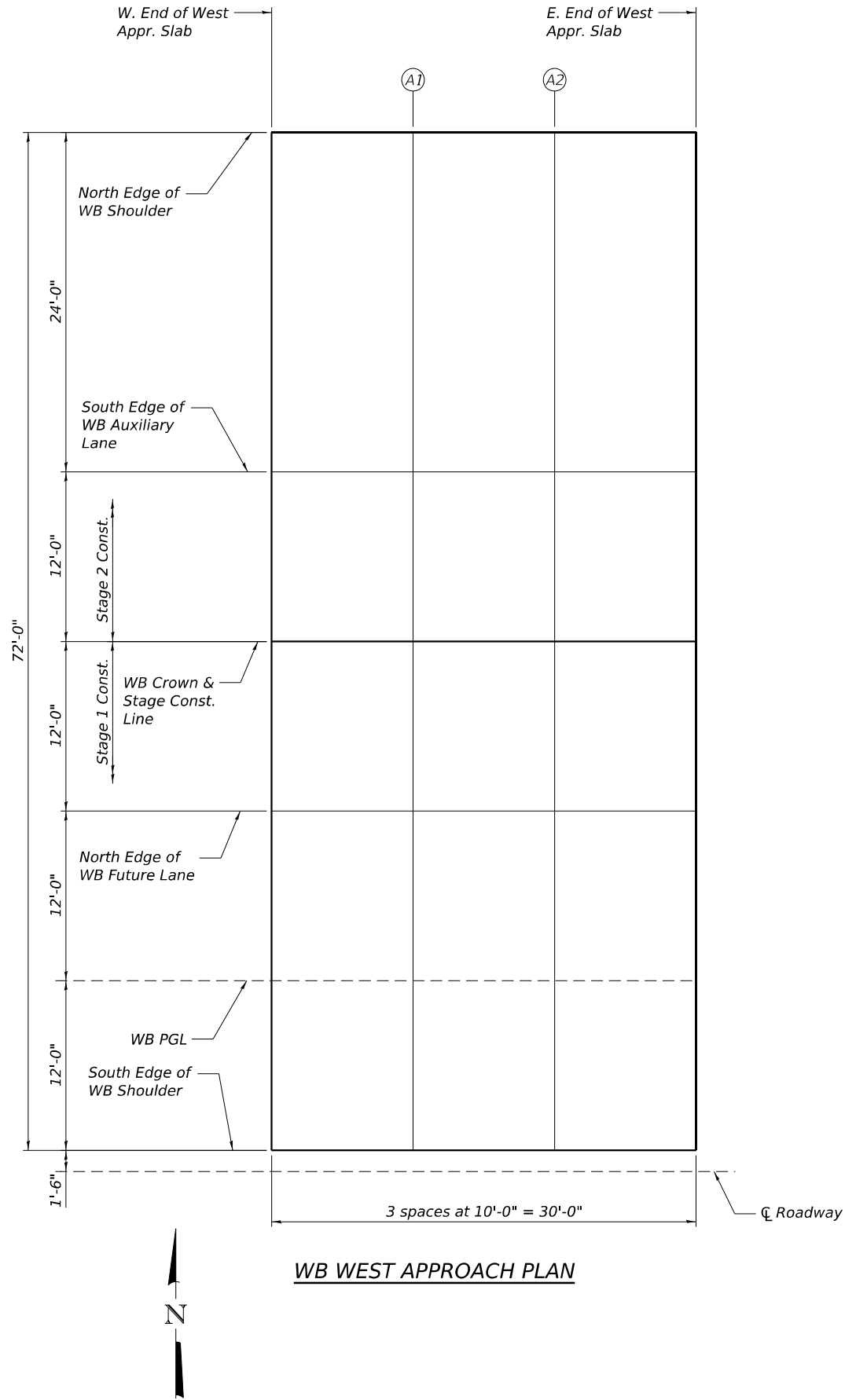
BEAM 17

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	386+60.62	81.50	555.14	555.14
℄ Brg. W. Abut.	386+62.58	81.50	555.15	555.15
A	386+72.58	81.50	555.19	555.20
B	386+82.58	81.50	555.23	555.24
C	386+92.58	81.50	555.26	555.27
W. ℄ Brg. Pier 1	386+99.62	81.50	555.29	555.29
℄ Pier 1	387+00.75	81.50	555.30	555.30
E. ℄ Brg. Pier 1	387+01.87	81.50	555.30	555.30
D	387+11.87	81.50	555.34	555.36
E	387+21.87	81.50	555.38	555.41
F	387+31.87	81.50	555.41	555.45
G	387+41.87	81.50	555.45	555.47
W. ℄ Brg. Pier 2	387+47.62	81.50	555.47	555.47
℄ Pier 2	387+48.75	81.50	555.48	555.48
E. ℄ Brg. Pier 2	387+49.87	81.50	555.48	555.48
H	387+59.87	81.50	555.52	555.53
I	387+69.87	81.50	555.56	555.57
J	387+79.87	81.50	555.59	555.60
℄ Brg. E. Abut.	387+86.91	81.50	555.62	555.62
Bk. E. Abut.	387+88.87	81.50	555.63	555.63

Note:
Offsets measured from ℄ roadway.

(Sheet 5 of 5)

MODEL: Default
FILE NAME: pw://transsystems-pw.bentley.com/transscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Structures/04-Sheets/04-Sheets/CAD/ML-04_62R28/04-Sheets/04-Structures/099-8318 & 8319 180 over Rock Run/Final Plans/0998318&8319-62R28-012-Top Approach Elevations.dgn



WB WEST APPROACH PLAN

NORTH EDGE OF WB SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	386+31.62	-73.50	555.20
A1	386+41.62	-73.50	555.23
A2	386+51.62	-73.50	555.27
E. End of West Appr. Slab	386+61.62	-73.50	555.31

WB CROWN & STAGE CONST. LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	386+31.62	-37.50	555.86
A1	386+41.62	-37.50	555.89
A2	386+51.62	-37.50	555.93
E. End of West Appr. Slab	386+61.62	-37.50	555.97

WB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	386+31.62	-13.50	555.44
A1	386+41.62	-13.50	555.47
A2	386+51.62	-13.50	555.51
E. End of West Appr. Slab	386+61.62	-13.50	555.55

SOUTH EDGE OF WB AUXILIARY LANE

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	386+31.62	-49.50	555.68
A1	386+41.62	-49.50	555.71
A2	386+51.62	-49.50	555.75
E. End of West Appr. Slab	386+61.62	-49.50	555.79

NORTH EDGE OF WB FUTURE LANE

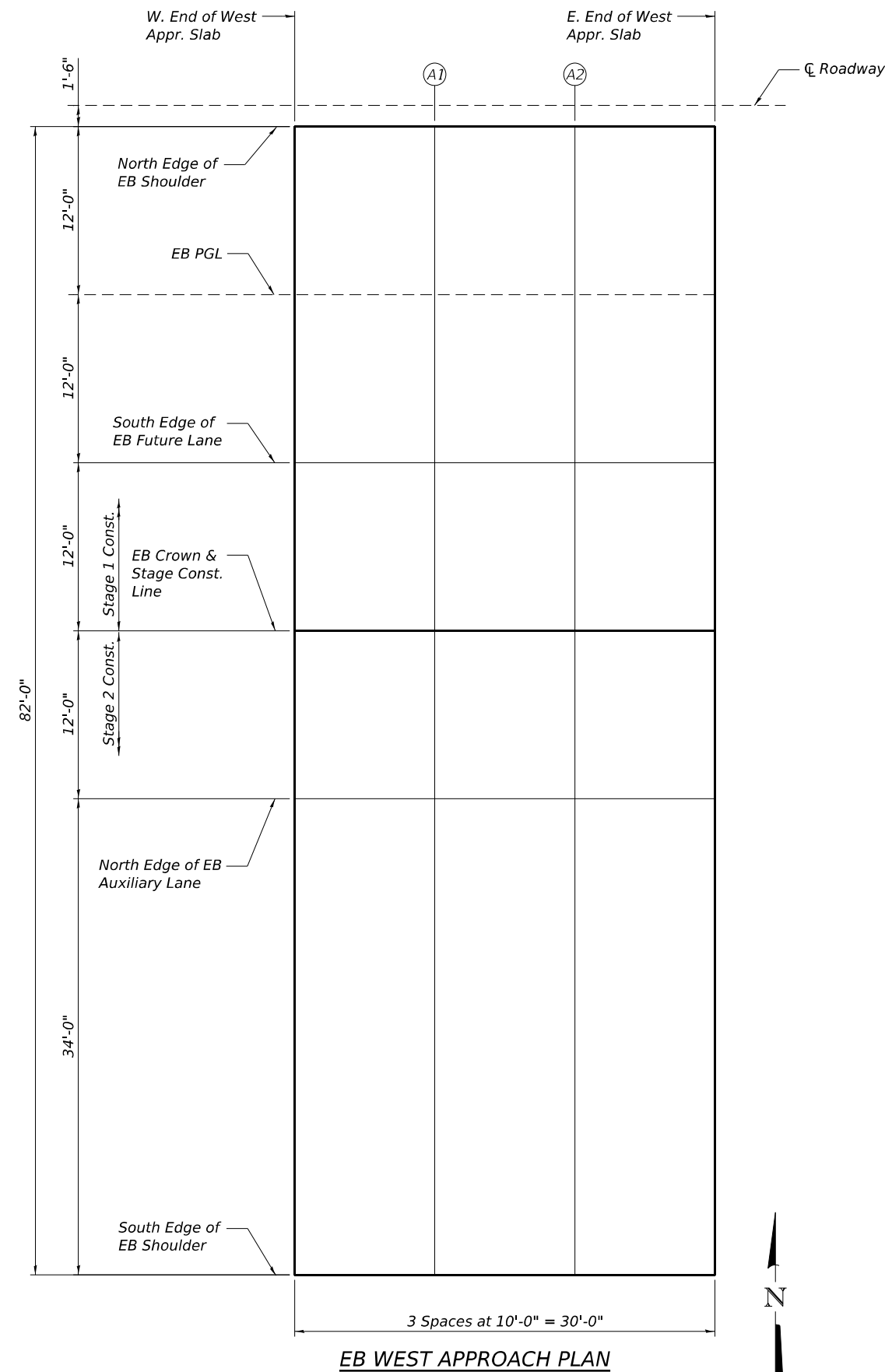
Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	386+31.62	-25.50	555.68
A1	386+41.62	-25.50	555.71
A2	386+51.62	-25.50	555.75
E. End of West Appr. Slab	386+61.62	-25.50	555.79

SOUTH EDGE OF WB SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	386+31.62	-1.50	555.20
A1	386+41.62	-1.50	555.23
A2	386+51.62	-1.50	555.27
E. End of West Appr. Slab	386+61.62	-1.50	555.31

Note:
Offsets measured from CL roadway.

(Sheet 1 of 4)



EB WEST APPROACH PLAN

NORTH EGDE OF EB SHOULDER

<i>Location</i>	<i>Station</i>	<i>Offset</i>	<i>Theoretical Grade Elevations</i>
<i>W. End of West Appr. Slab</i>	<i>386+31.62</i>	<i>1.50</i>	<i>555.20</i>
<i>A1</i>	<i>386+41.62</i>	<i>1.50</i>	<i>555.23</i>
<i>A2</i>	<i>386+51.62</i>	<i>1.50</i>	<i>555.27</i>
<i>E. End of West Appr. Slab</i>	<i>386+61.62</i>	<i>1.50</i>	<i>555.31</i>

EB PGL

<i>Location</i>	<i>Station</i>	<i>Offset</i>	<i>Theoretical Grade Elevations</i>
<i>W. End of West Aprr. Slab</i>	386+31.62	13.50	555.44
A1	386+41.62	13.50	555.47
A2	386+51.62	13.50	555.51
<i>E. End of West Aprr. Slab</i>	386+61.62	13.50	555.55

SOUTH EDGE OF EB FUTURE LANE

<i>Location</i>	<i>Station</i>	<i>Offset</i>	<i>Theoretical Grade Elevations</i>
<i>W. End of West Appr. Slab</i>	<i>386+31.62</i>	<i>25.50</i>	<i>555.68</i>
<i>A1</i>	<i>386+41.62</i>	<i>25.50</i>	<i>555.71</i>
<i>A2</i>	<i>386+51.62</i>	<i>25.50</i>	<i>555.75</i>
<i>E. End of West Appr. Slab</i>	<i>386+61.62</i>	<i>25.50</i>	<i>555.79</i>

EB CROWN & STAGE CONST. LINE

<i>Location</i>	<i>Station</i>	<i>Offset</i>	<i>Theoretical Grade Elevations</i>
<i>W. End of West Aprpr. Slab</i>	386+31.62	37.50	555.86
A1	386+41.62	37.50	555.89
A2	386+51.62	37.50	555.93
<i>E. End of West Aprpr. Slab</i>	386+61.62	37.50	555.97

NORTH EDGE OF EB AUXILIARY LANE

<i>Location</i>	<i>Station</i>	<i>Offset</i>	<i>Theoretical Grade Elevations</i>
<i>W. End of West Appr. Slab</i>	386+31.62	49.50	555.68
<i>A1</i>	386+41.62	49.50	555.71
<i>A2</i>	386+51.62	49.50	555.75
<i>E. End of West Appr. Slab</i>	386+61.62	49.50	555.79

SOUTH EDGE OF EB SHOULDER

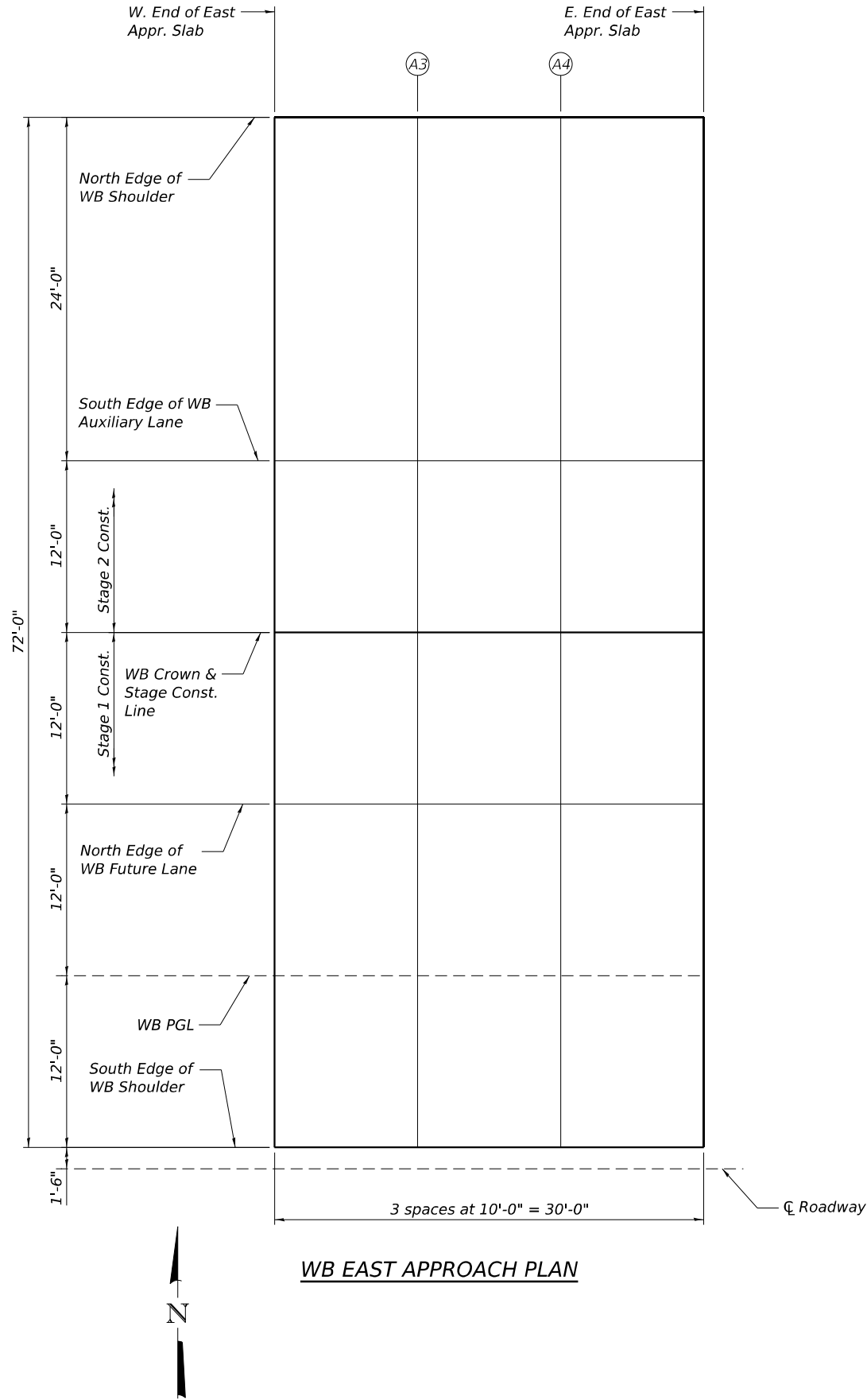
<i>Location</i>	<i>Station</i>	<i>Offset</i>	<i>Theoretical Grade Elevations</i>
<i>W. End of West Aprr. Slab</i>	<i>386+31.62</i>	<i>83.50</i>	<i>555.00</i>
<i>A1</i>	<i>386+41.62</i>	<i>83.50</i>	<i>555.03</i>
<i>A2</i>	<i>386+51.62</i>	<i>83.50</i>	<i>555.07</i>
<i>E. End of West Aprr. Slab</i>	<i>386+61.62</i>	<i>83.50</i>	<i>555.11</i>

Note:
Offsets measured from $\mathbb{C}$ roadway.

(Sheet 2 of 4)

 LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = _____	DESIGNED - AGJ	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF APPROACH SLAB ELEVATIONS STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = _____	CHECKED - MSS	REVISED - _____			80	FAI 80 21 STRUCTURE 7	WILL	1059	832
	PLOT DATE = _____	DRAWN - LAV	REVISED - _____			CONTRACT NO. 62R28				
	PLOT DATE = _____	CHECKED - CL	REVISED - _____			SHEET 5G-13 OF 47 SHEETS				

MODEL: Default
FILE NAME: pw://transsystems-pw.bentley.com/transscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Structures/04-Sheets/04-Sheets/CAD/ML-04_62R28/04-Sheets/099-8318 & 8319 180 over Rock Run/Final Plans/0998318&8319-62R28-014-Top Approach Elevations.dgn



WB EAST APPROACH PLAN

NORTH EDGE OF WB SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	-73.50	555.78
A3	387+97.87	-73.50	555.82
A4	388+07.87	-73.50	555.86
E. End of East Appr. Slab	388+17.87	-73.50	555.90

WB CROWN & STAGE CONST. LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	-37.50	556.44
A3	387+97.87	-37.50	556.48
A4	388+07.87	-37.50	556.52
E. End of East Appr. Slab	388+17.87	-37.50	556.56

WB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	-13.50	556.02
A3	387+97.87	-13.50	556.06
A4	388+07.87	-13.50	556.10
E. End of East Appr. Slab	388+17.87	-13.50	556.14

SOUTH EDGE OF WB AUXILIARY LANE

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	-49.50	556.26
A3	387+97.87	-49.50	556.30
A4	388+07.87	-49.50	556.34
E. End of East Appr. Slab	388+17.87	-49.50	556.38

NORTH EDGE OF WB FUTURE LANE

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	-25.50	556.26
A3	387+97.87	-25.50	556.30
A4	388+07.87	-25.50	556.34
E. End of East Appr. Slab	388+17.87	-25.50	556.38

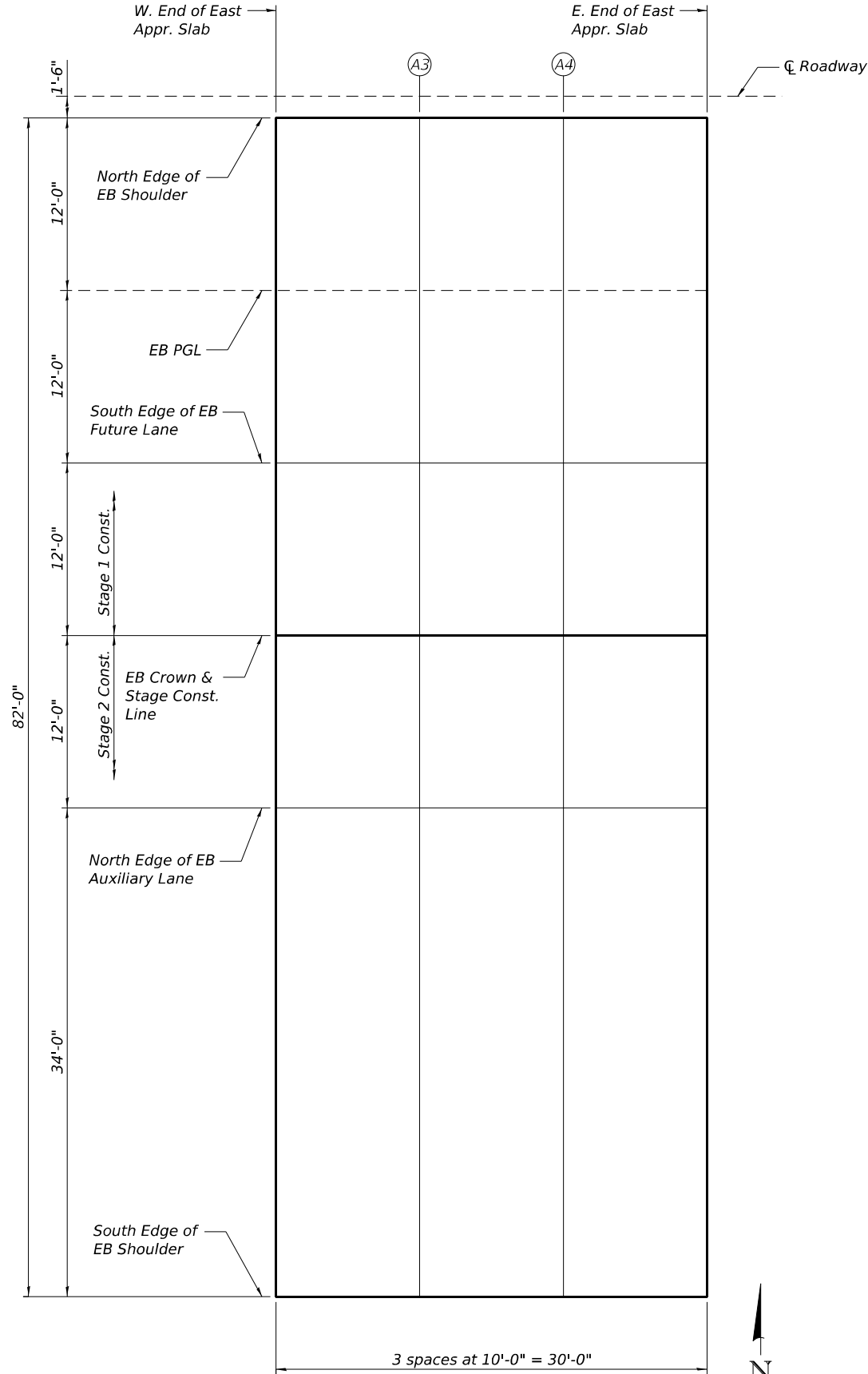
SOUTH EDGE OF WB SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	-1.50	555.78
A3	387+97.87	-1.50	555.82
A4	388+07.87	-1.50	555.86
E. End of East Appr. Slab	388+17.87	-1.50	555.90

Note:
Offsets measured from CL roadway.

(Sheet 3 of 4)

MODEL: Default
FILE NAME: pw://transsystems-pw.bentley.com/transscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Structures/04-Sheets/04-Sheets/CAD/ML-04_62R28/04-Sheets/04-Sheets/04-Structures/099-8318 & 8319 180 over Rock Run/Final Plans/0998318&8319-62R28-01.5-TopApproachElevations.dgn



EB EAST APPROACH PLAN

NORTH EDGE OF EB SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	1.50	555.78
A3	387+97.87	1.50	555.82
A4	388+07.87	1.50	555.86
E. End of East Appr. Slab	388+17.87	1.50	555.90

EB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	13.50	556.02
A3	387+97.87	13.50	556.06
A4	388+07.87	13.50	556.10
E. End of East Appr. Slab	388+17.87	13.50	556.14

SOUTH EDGE OF EB FUTURE LANE

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	25.50	556.26
A3	387+97.87	25.50	556.30
A4	388+07.87	25.50	556.34
E. End of East Appr. Slab	388+17.87	25.50	556.38

EB CROWN & STAGE CONST. LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	37.50	556.44
A3	387+97.87	37.50	556.48
A4	388+07.87	37.50	556.52
E. End of East Appr. Slab	388+17.87	37.50	556.56

NORTH EDGE OF EB AUXILIARY LANE

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	49.50	556.26
A3	387+97.87	49.50	556.30
A4	388+07.87	49.50	556.34
E. End of East Appr. Slab	388+17.87	49.50	556.38

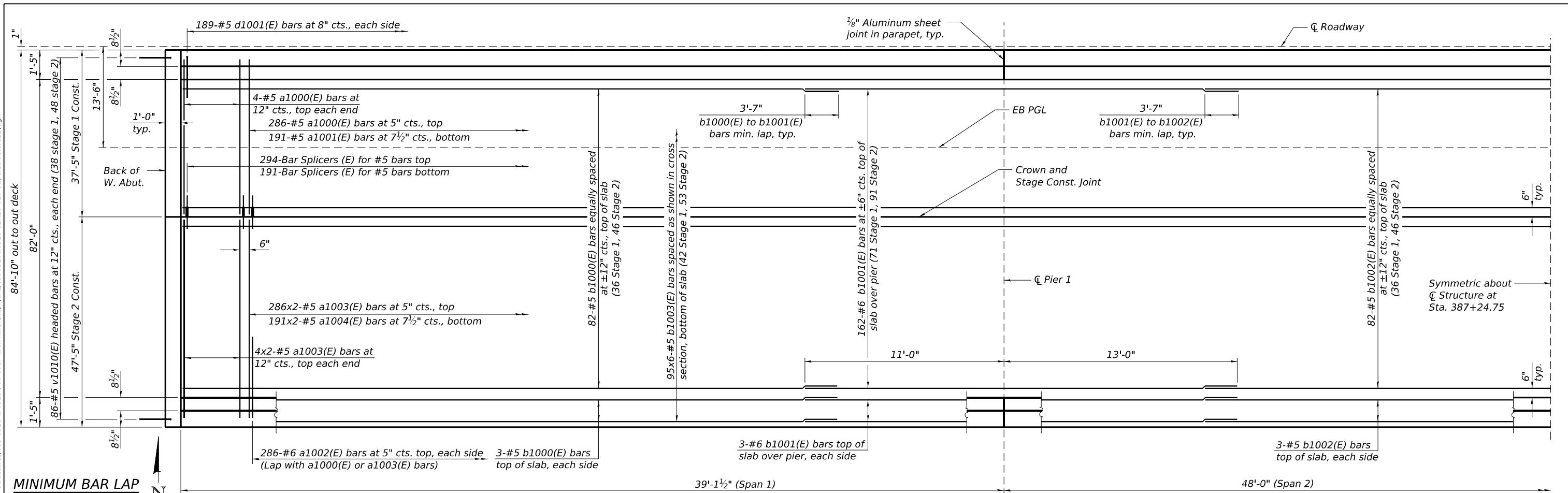
SOUTH EDGE OF EB SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	387+87.87	83.50	555.58
A3	387+97.87	83.50	555.62
A4	388+07.87	83.50	555.66
E. End of East Appr. Slab	388+17.87	83.50	555.70

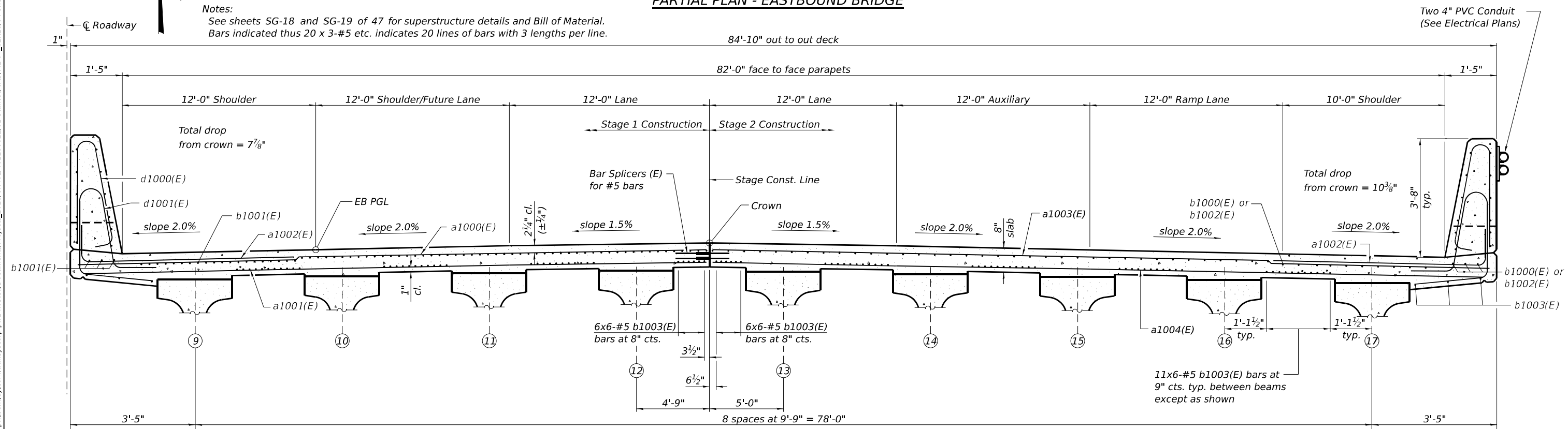
Note:
Offsets measured from C roadway.

(Sheet 4 of 4)

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PARTIAL PLAN - EASTBOUND BRIDGE

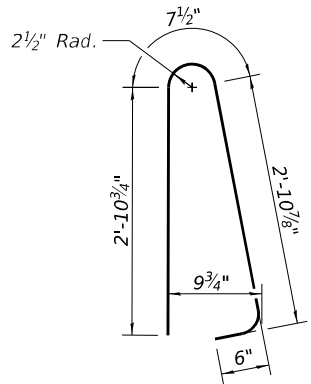


CROSS SECTION - EASTBOUND BRIDGE
(Looking East)

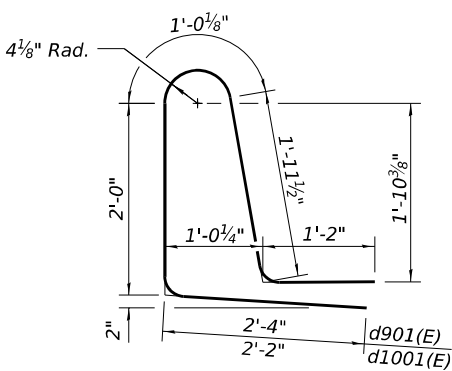
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		CHECKED - AGJ	REVISED - _____			80	FAI 80 21 STRUCTURE 7	WILL	1059	836
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	PLOT DATE = _____	CHECKED - CZ	REVISED - _____							
SHEET 5G-17 OF 47 SHEETS					ILLINOIS FED. AID PROJECT					

8/9/2023 12:32:57 PM

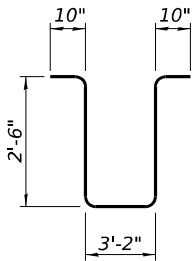
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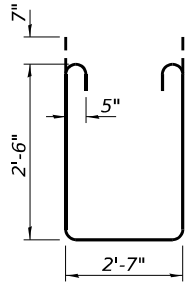
BARS d900(E) & d1000(E)



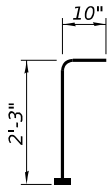
BARS d901(E) & d1001(E)



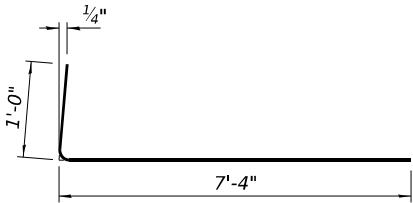
BARS s920(E) & s1020(E)



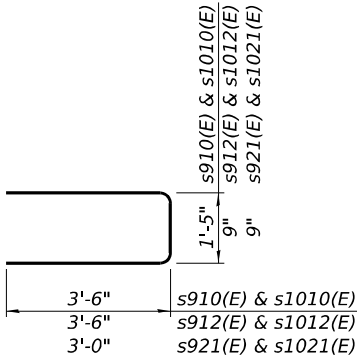
BARS s911(E) & s1011(E)



BARS v910(E) & v1010(E)
(Headed)



BARS a902(E) & a1002(E)



BARS s910(E), s912(E), s921(E),
s1010(E), s1012(E) & s1021(E)

WB SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a900(E)	588	#5	37'-1"	_____
a901(E)	382	#5	36'-9"	_____
a902(E)	572	#6	8'-4"	_____
b900(E)	156	#5	31'-9"	_____
b901(E)	296	#6	24'-0"	_____
b902(E)	78	#5	29'-2"	_____
b903(E)	504	#5	24'-0"	_____
d900(E)	378	#5	7'-0"	_____
d901(E)	378	#5	8'-6"	_____
e900(E)	64	#4	19'-3"	_____
e901(E)	48	#4	15'-9"	_____
e902(E)	16	#4	38'-10"	_____
e903(E)	16	#4	25'-2"	_____
m910(E)	16	#6	37'-1"	_____
m911(E)	24	#6	8'-6"	_____
m912(E)	8	#6	2'-10"	_____
m913(E)	12	#6	6'-10"	_____
m914(E)	4	#6	2'-0"	_____
m915(E)	32	#5	4'-0"	_____
m920(E)	24	#6	6'-10"	_____
m921(E)	48	#6	8'-6"	_____
m922(E)	32	#5	4'-0"	_____
s910(E)	124	#5	8'-5"	_____
s911(E)	124	#5	8'-9"	_____
s912(E)	64	#5	7'-9"	_____
s920(E)	112	#5	9'-10"	_____
s921(E)	28	#5	6'-9"	_____
v910(E)	152	#5	3'-1"	_____
Reinforcement Bars, Epoxy Coated			Pound	90,560
Concrete Superstructure			Cu. Yd.	363.6
Protective Coat			Sq. Yd.	1,663
Preformed Joint Seal 3 1/2"			Foot	187
Bridge Deck Grooving			Sq. Yd.	1,449

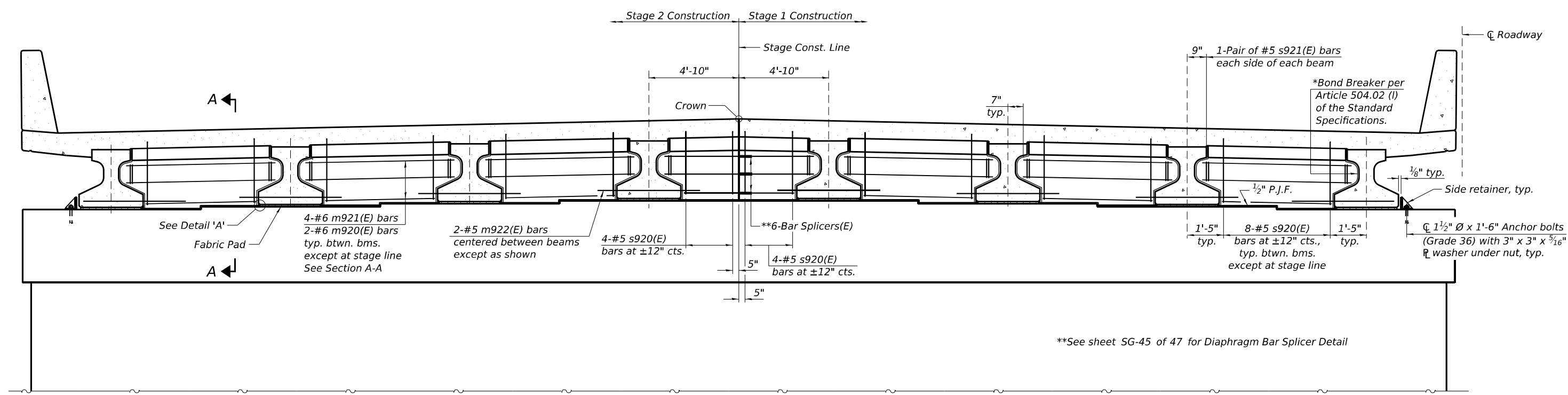
EB SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1000(E)	294	#5	37'-1"	_____
a1001(E)	191	#5	36'-9"	_____
a1002(E)	572	#6	8'-4"	_____
a1003(E)	588	#5	25'-4"	_____
a1004(E)	382	#5	25'-2"	_____
b1000(E)	176	#5	31'-9"	_____
b1001(E)	336	#6	24'-0"	_____
b1002(E)	88	#5	29'-2"	_____
b1003(E)	570	#5	24'-0"	_____
d1000(E)	378	#5	7'-0"	_____
d1001(E)	378	#5	8'-4"	_____
e1000(E)	64	#4	19'-3"	_____
e1001(E)	48	#4	15'-9"	_____
e1002(E)	16	#4	38'-10"	_____
e1003(E)	16	#4	25'-2"	_____
m1010(E)	8	#6	37'-1"	_____
m1011(E)	28	#6	8'-7"	_____
m1012(E)	8	#6	2'-8"	_____
m1013(E)	14	#6	6'-11"	_____
m1014(E)	4	#6	1'-10"	_____
m1015(E)	36	#5	4'-0"	_____
m1016(E)	8	#6	25'-7"	_____
m1020(E)	28	#6	6'-11"	_____
m1021(E)	56	#6	8'-7"	_____
m1022(E)	36	#5	4'-0"	_____
s1010(E)	140	#5	8'-5"	_____
s1011(E)	140	#5	8'-9"	_____
s1012(E)	72	#5	7'-9"	_____
s1020(E)	128	#5	9'-10"	_____
s1021(E)	32	#5	6'-9"	_____
v1010(E)	172	#5	3'-1"	_____
Reinforcement Bars, Epoxy Coated			Pound	102,160
Concrete Superstructure			Cu. Yd.	407.7
Protective Coat			Sq. Yd.	1,870
Bridge Deck Grooving			Sq. Yd.	1,656

Note:
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.

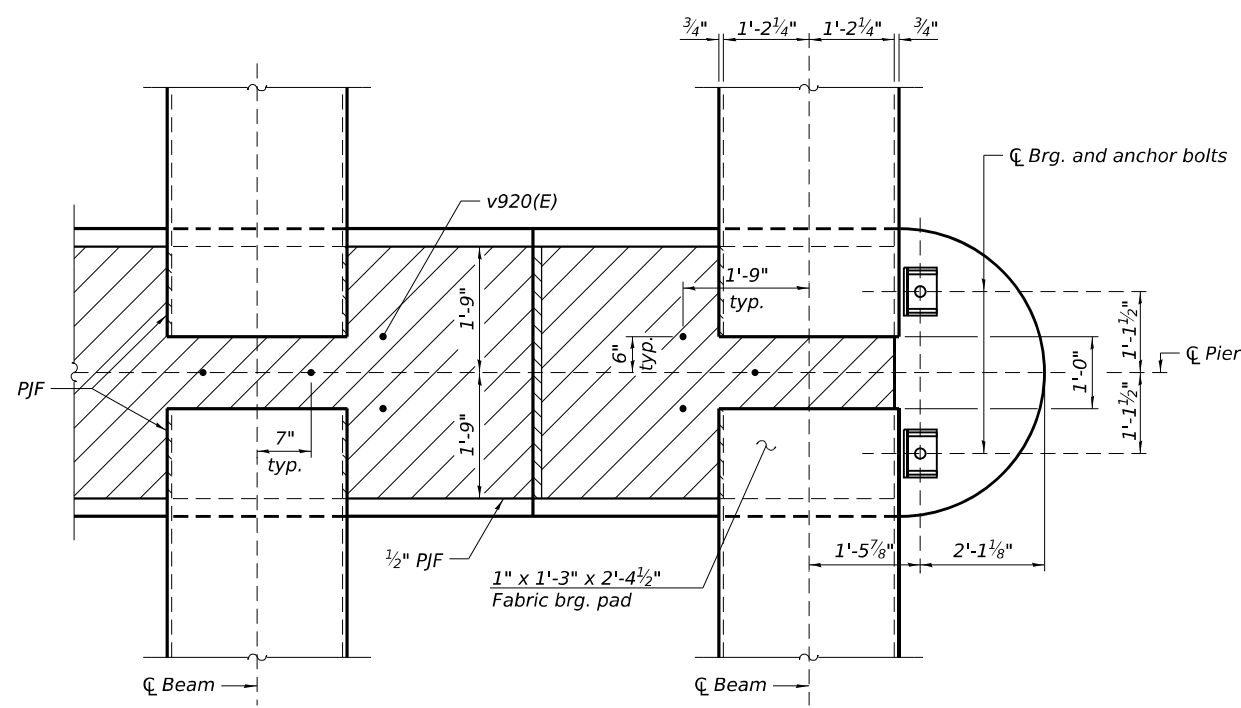
(Sheet 2 of 2)

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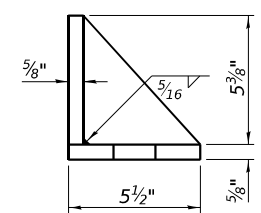


DIAPHRAGM AT WB PIER

*Bonded to sides of beams embedded into diaphragm.
(Looking East)



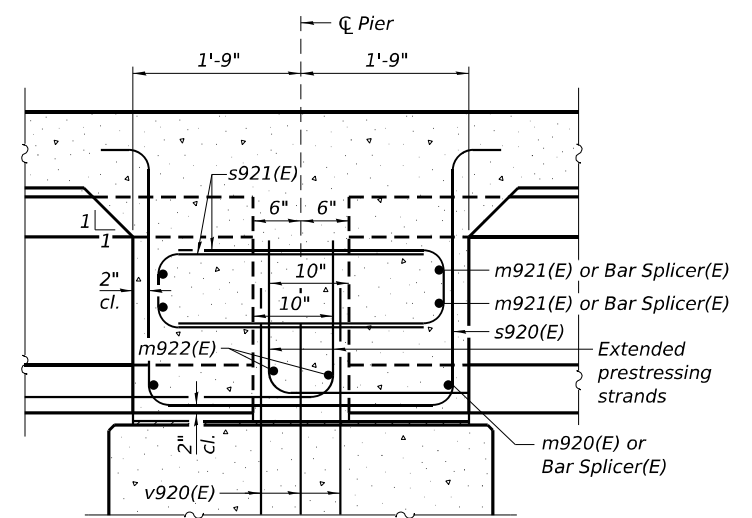
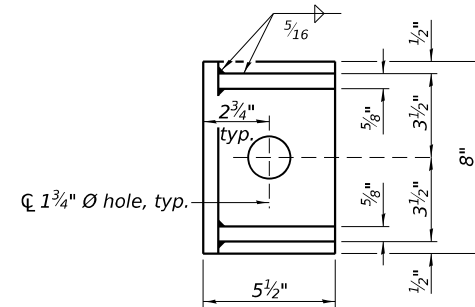
PLAN AT WB PIER
(Showing bearing pads and P/JF details)



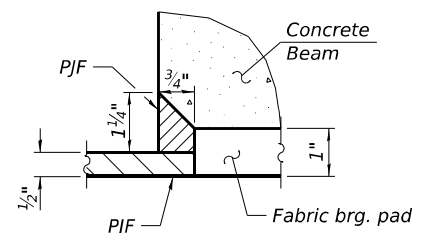
SIDE RETAINER

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

Notes:
See sheets SG-18 and SG-19 of 47 for superstructure details and Bill of Material.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.
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.



SECTION A-A



DETAIL 'A'

(Sheet 1 of 2)

FILE NAME:

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = _____

DESIGNED - AGJ

REVIS

REVISED -

CHECKED - MSS

REVIS

REVISED -

PLOT SCALE = _____

DRAWN - LAV

REVISED -

PLOT DATE = _____

CHECKED - CZ

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER DIAPHRAGMS
STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)

SHEET SG-20 OF 47 SHEETS

F.A.I. RTE.

SECTION

COUNTY

TOTAL SHEETS

SHEET NO.

80

FAI 80 21 STRUCTURE 7

WILL

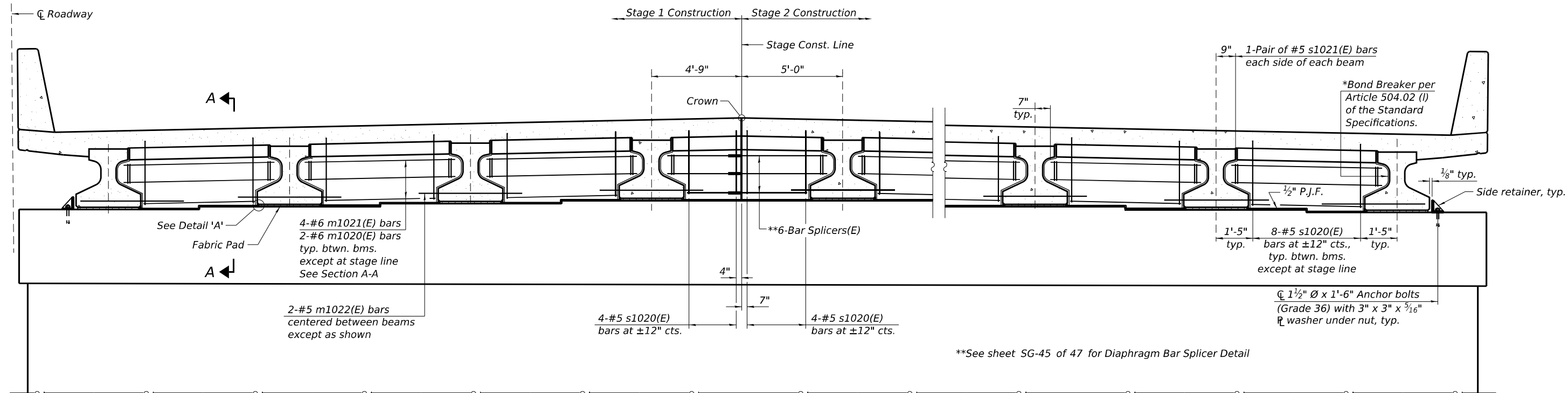
1059

839

CONTRACT NO. 62R28

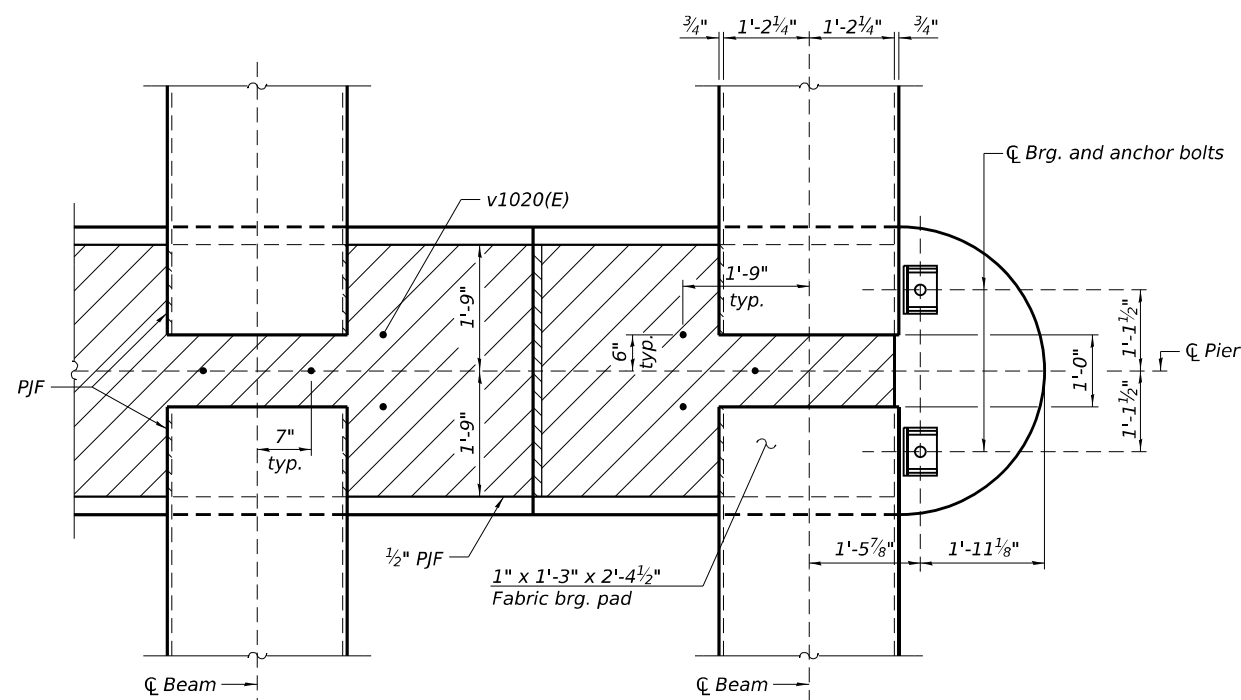
ILLINOIS FED. AID PROJECT

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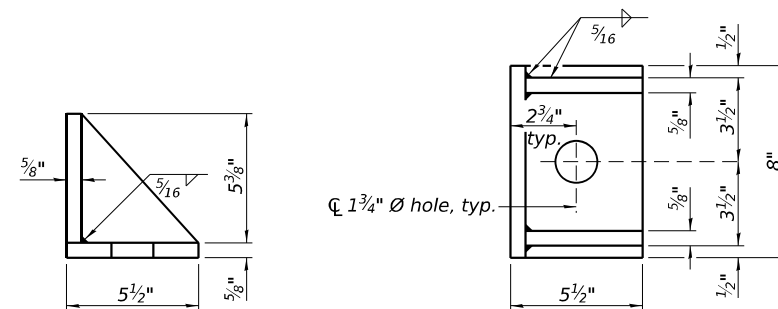


DIAPHRAGM AT EB PIER

*Bonded to sides of beams embedded into diaphragm.
(Looking East)

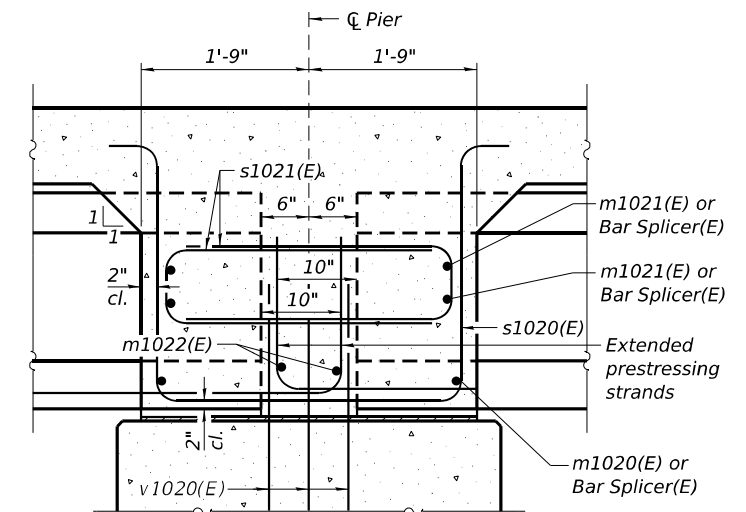


PLAN AT EB PIER
(Showing bearing pads and P/JF details)



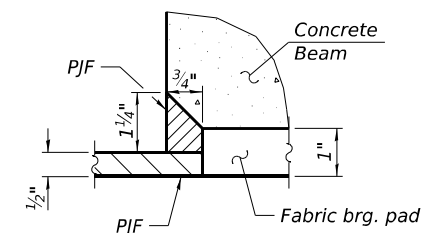
SIDE RETAINER

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



SECTION A-A

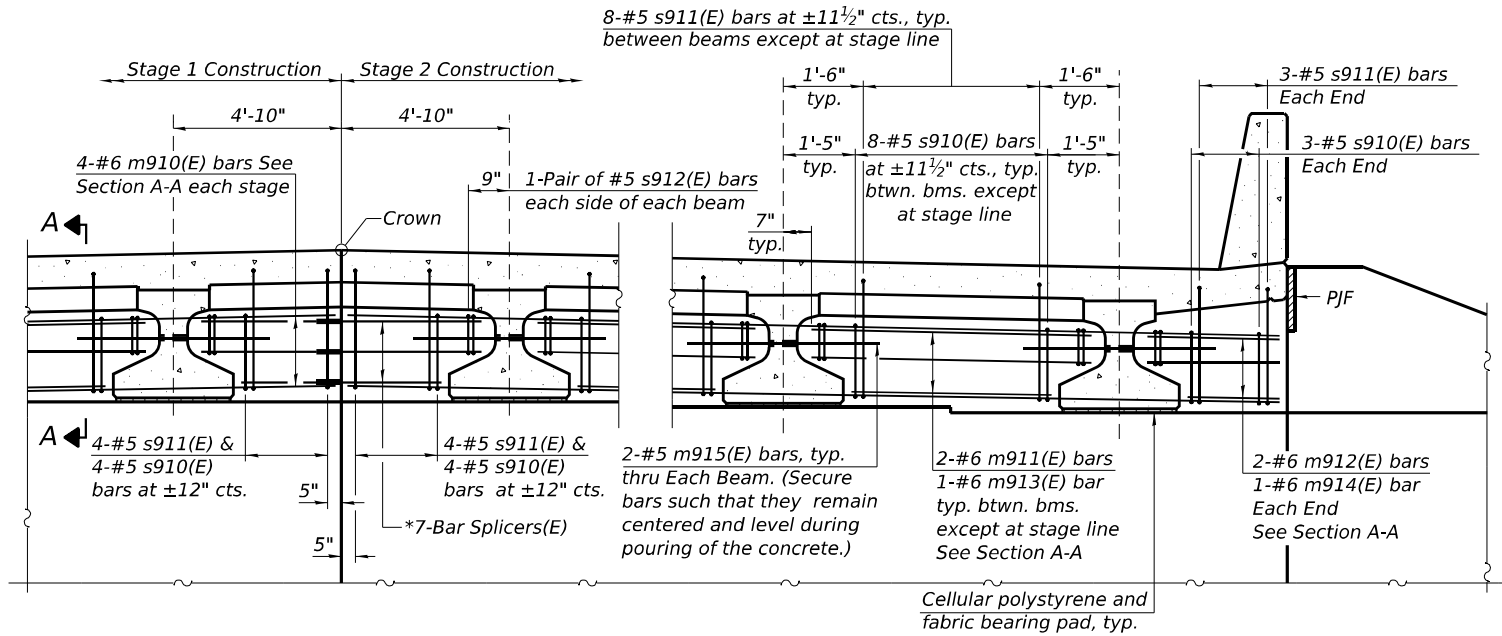
Notes:
See sheets SG-18 and SG-19 of 47 for superstructure details and Bill of Material.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot 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.



DETAIL 'A'

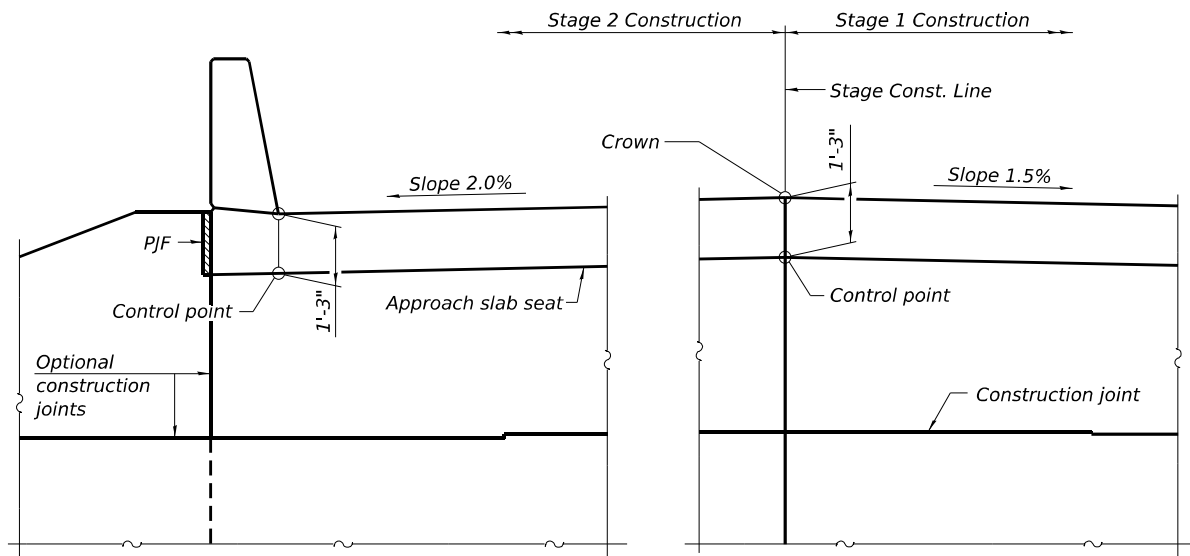
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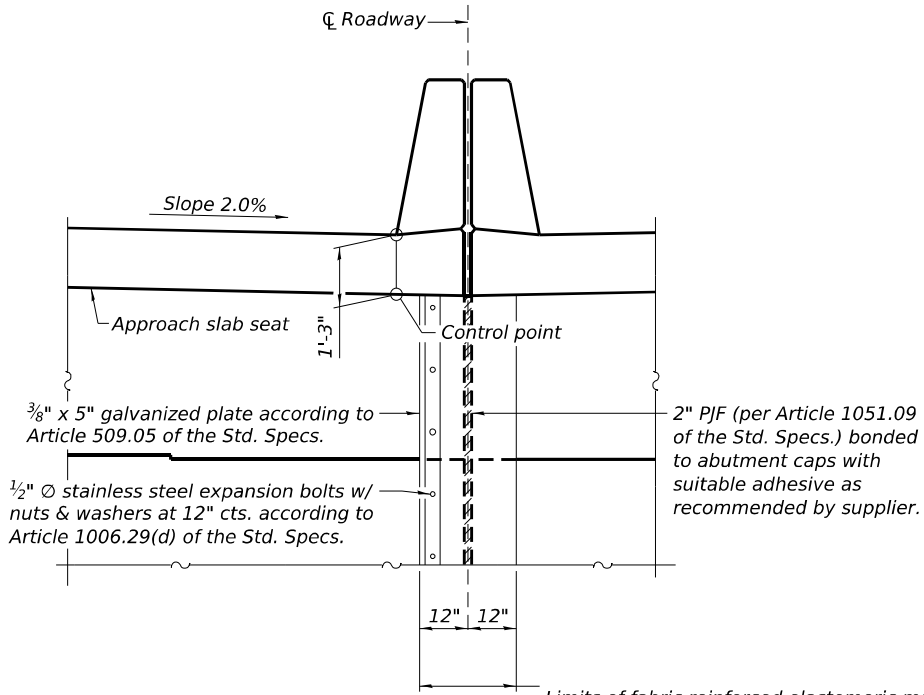


DIAPHRAGM AT WB ABUTMENT
(Looking West)

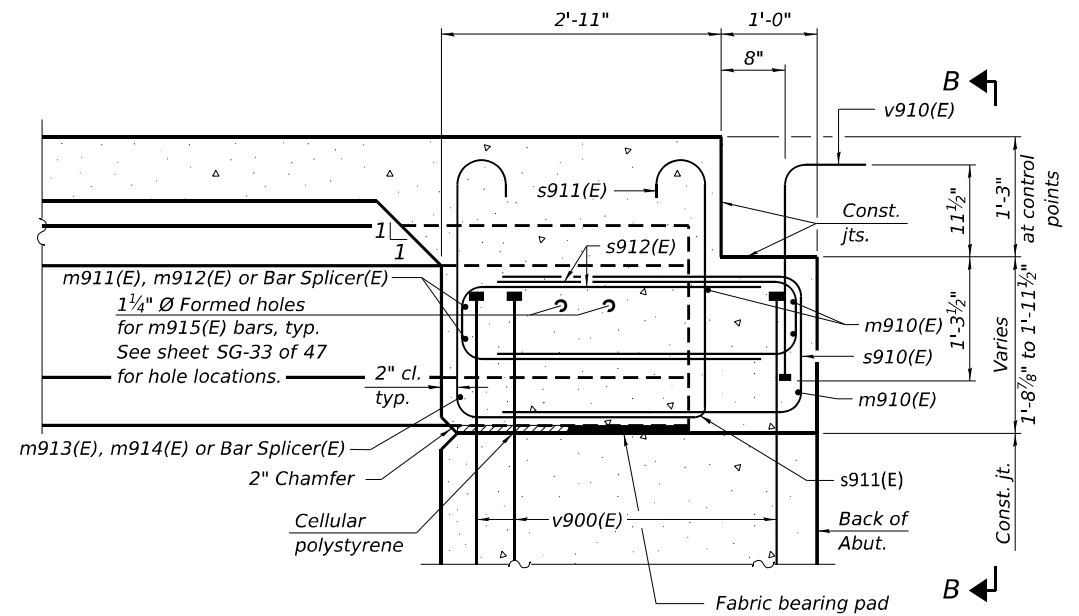
*See sheet SG-45 of 47 for Diaphragm Bar Splicer Detail



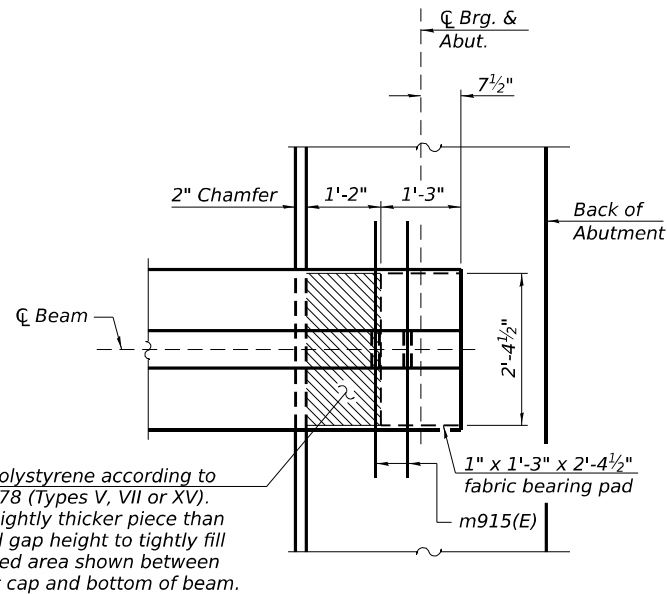
VIEW B-B



Limits of fabric reinforced elastomeric mat according to Section 1028 of the Std. Specs. and installed according to applicable requirements of Article 520.09 of the Std. Specs. Vertical limits of fabric reinforced elastomeric mat are from bottom of approach slab to bottom of abutment cap. See detail on sheets SG-36 and SG-38 of 47.



SECTION A-A

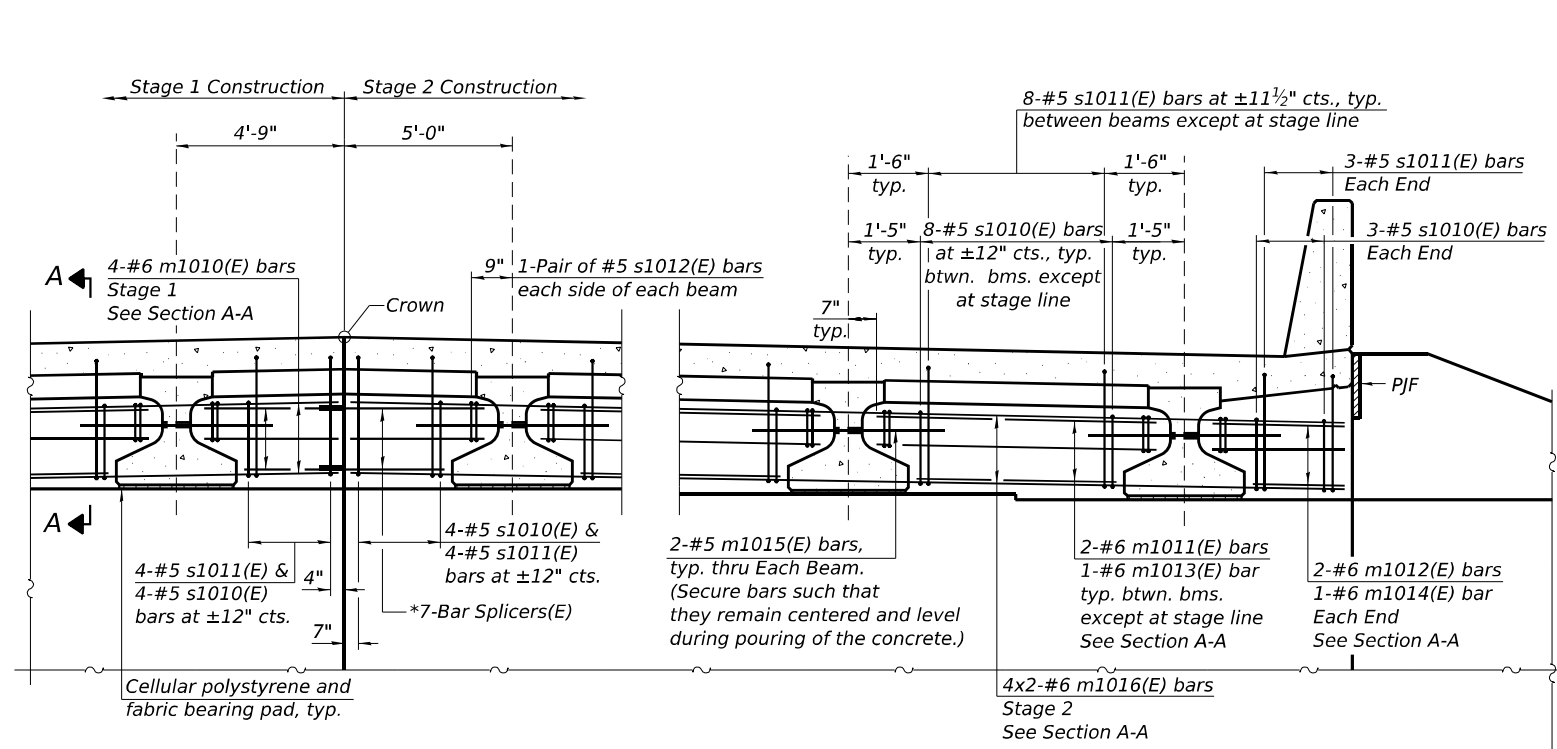


PLAN AT WB ABUTMENT
(Showing bottom flange of beam)

Notes:
See sheets SG-18 and SG-19 of 47 for superstructure details and Bill of Material.
See sheet SG-28 of 47 for PJF details at wing walls.
The approach slab seat shall have a constant slope determined from the control points shown.
Cost of cellular polystyrene is included with Concrete Superstructure.
Cost of fabric reinforced elastomeric mat, galvanized plate, stainless steel expansion bolts with nuts & washers and installation are included with Concrete Superstructure.

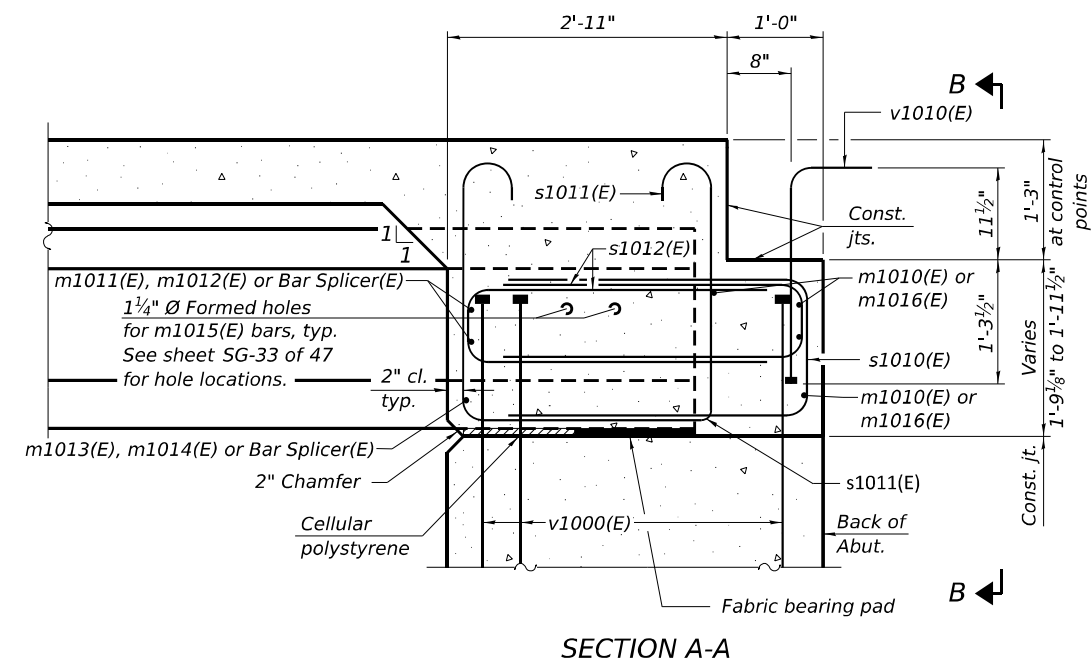
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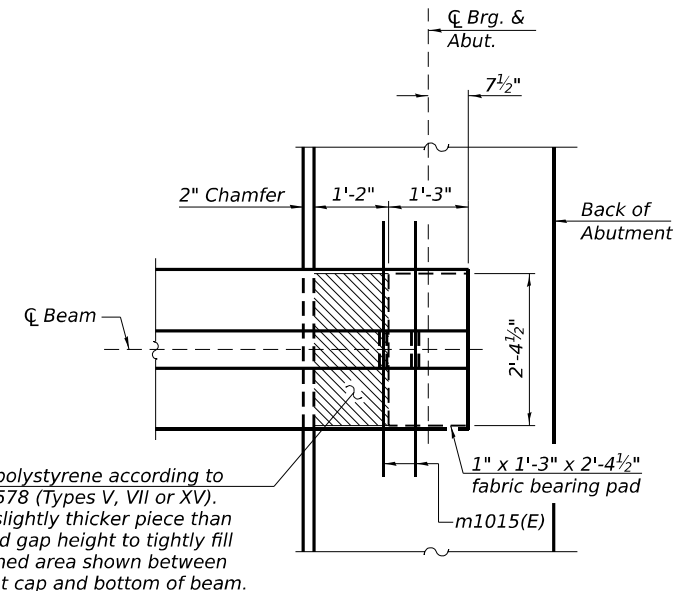
DIAPHRAGM AT EB ABUTMENT
(Looking East)

*See sheet SG-45 of 47 for Diaphragm Bar Splicer Detail



SECTION A-A

MIN. BAR LAP
#6 bar = 4'-0"



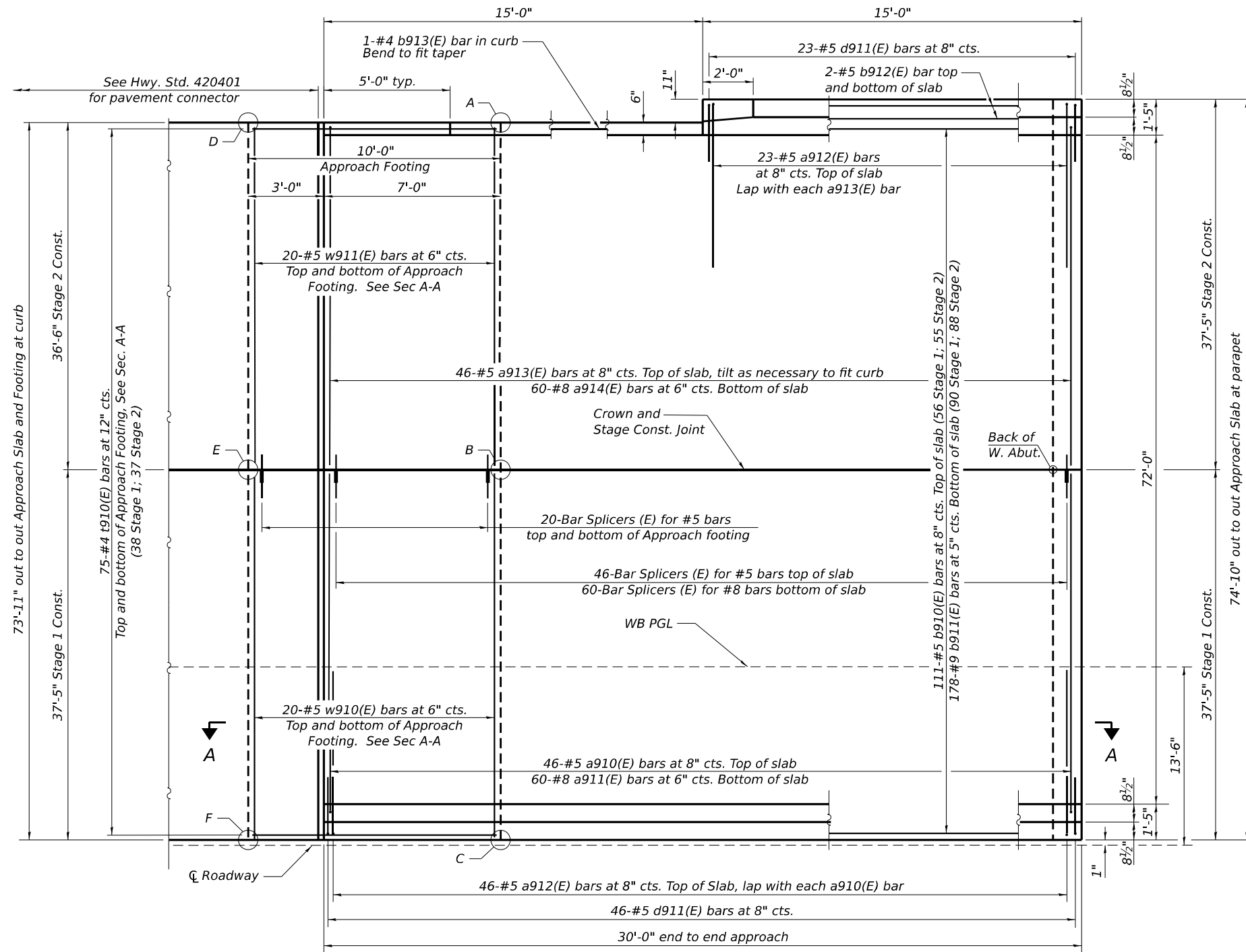
PLAN AT EB ABUTMENT
(Showing bottom flange of beam)

Notes:
See sheets SG-18 and SG-19 of 47 for superstructure details and Bill of Material.
See sheet SG-28 of 47 for P.J.F. details at wing walls.
The approach slab seat shall have a constant slope determined from the control points shown.
Cost of cellular polystyrene is included with Concrete Superstructure.
Bars indicated thus 4x2-#6 etc. indicates 4 lines of bars with 2 lengths per line.
Cost of fabric reinforced elastomeric mat, galvanized plate, stainless steel expansion bolts with nuts & washers and installation are included with Concrete Superstructure.

(Sheet 2 of 2)

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = _____	DESIGNED - AGJ	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENT DIAPHRAGMS STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = _____	DRAWN - LAV	REVISED - _____			CONTRACT NO. 62R28				
		CHECKED - CZ	REVISED - _____			ILLINOIS FED. AID PROJECT				
SHEET SG-23 OF 47 SHEETS										

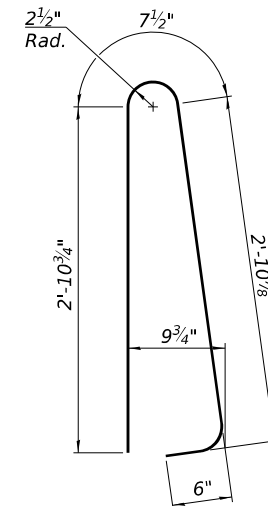
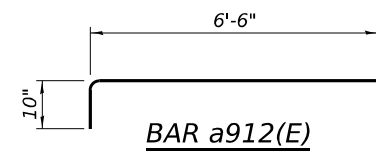
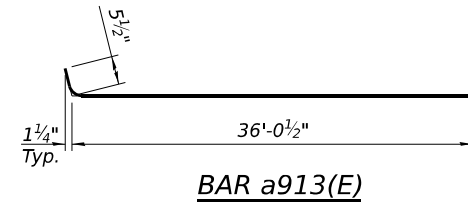
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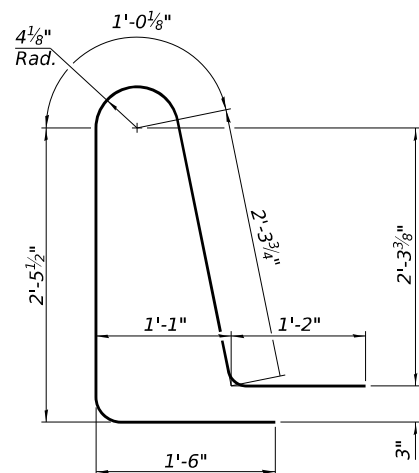
WEST APPROACH PLAN - WB

**TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING**

West Approach-WB		
Point/ Location	Top	Bottom
A/ NE	553.96	553.13
B/ E. Stage	554.63	553.80
C/ SE	553.94	553.11
D/ NW	553.92	553.09
E/ W. Stage	554.59	553.76
F/ SW	553.91	553.07



BAR d910(E)



BAR d911(E)

Note:
See sheet SG-29 of 47 for section A-A.

(Sheet 1 of 6)



USER NAME =	DESIGNED - MSS	REVISED -
PLOT SCALE =	CHECKED - AGJ	REVISED -
PLOT DATE =	DRAWN - NMD	REVISED -
	CHECKED - CZ	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS
STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)**

SHEET SG-24 OF 47 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				



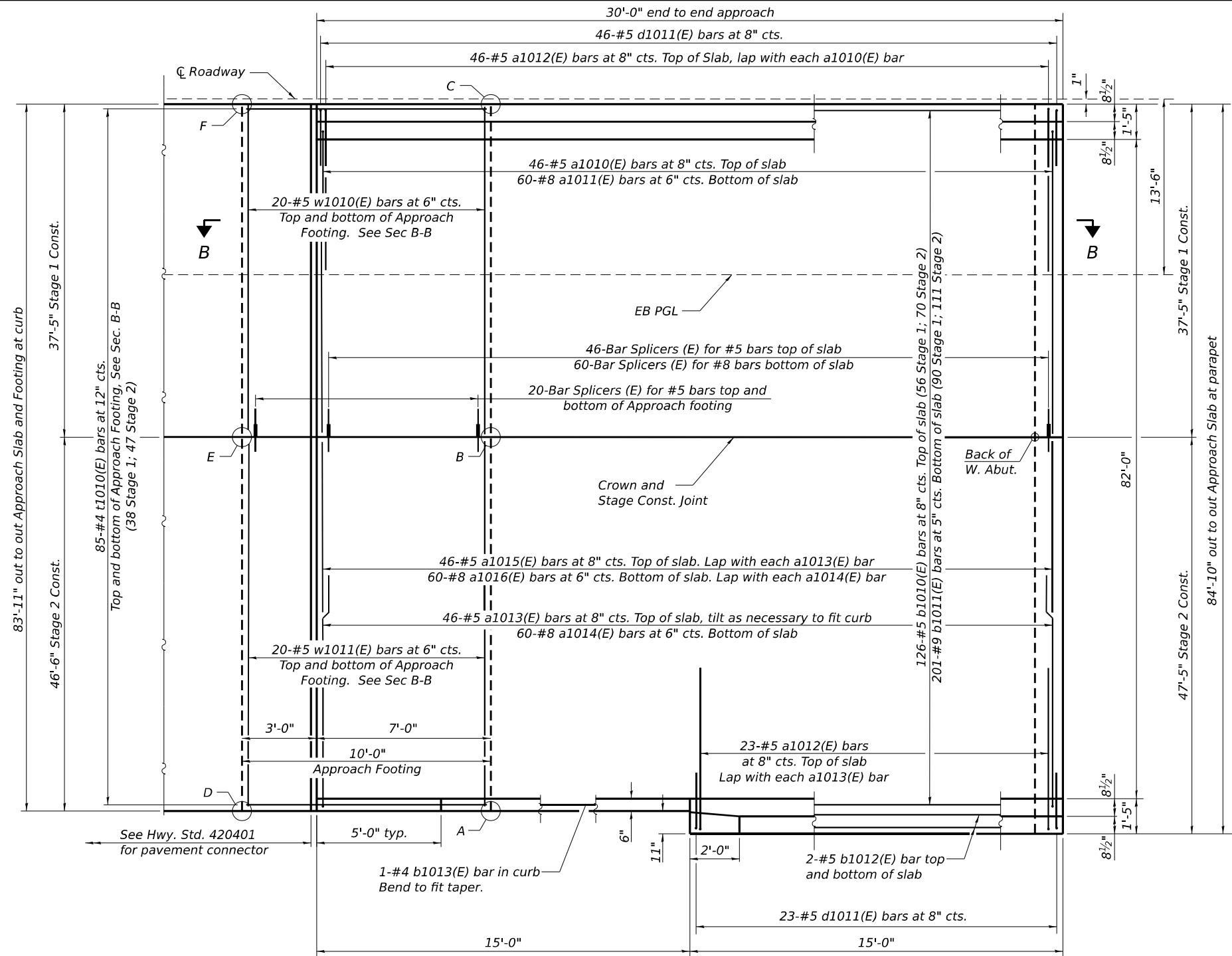
WB EAST APPROACH
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a910(E)	46	#5	35'-10"	=====
a911(E)	60	#8	37'-1"	=====
a912(E)	69	#5	7'-4"	=====
a913(E)	46	#5	36'-6"	=====
a914(E)	60	#8	36'-2"	=====
b910(E)	111	#5	29'-8"	=====
b911(E)	178	#9	29'-8"	=====
b912(E)	4	#5	14'-8"	=====
b913(E)	1	#4	14'-8"	=====
d910(E)	69	#5	7'-0"	=====
d911(E)	69	#5	8'-6"	=====
e910(E)	28	#4	14'-8"	=====
e911(E)	4	#4	29'-8"	=====
t910(E)	150	#4	9'-8"	=====
w910(E)	40	#5	37'-1"	=====
w911(E)	40	#5	36'-2"	=====
Concrete Superstructure			Cu. Yd.	6.3
Concrete Superstructure (Approach Slab)			Cu. Yd.	104.2
Concrete Structures			Cu. Yd.	22.8
Reinforcement Bars, Epoxy Coated			Pound	42,690

TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING

Note:
See sheet SG-29 of 47 for section A-A.

MODEL: Default
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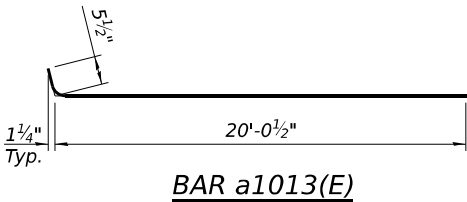


WEST APPROACH PLAN - EB

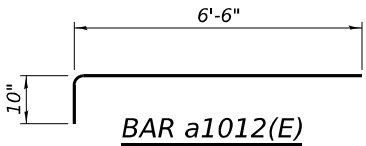
TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING

West Approach - EB		
Point/ Location	Top	Bottom
A/ SE	553.76	552.93
B/ E. Stage	554.63	553.80
C/ NE	553.94	553.11
D/ SW	553.72	552.89
E/ W. Stage	554.59	553.76
F/ NW	553.91	553.07

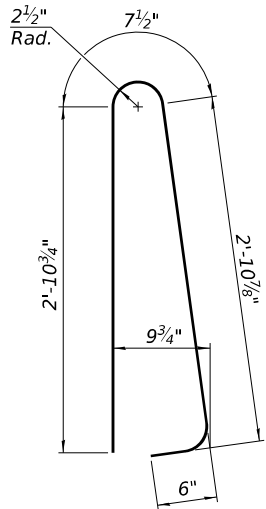
MIN. BAR LAP
#5 bar = 3'-4"
#8 bar = 4'-9"



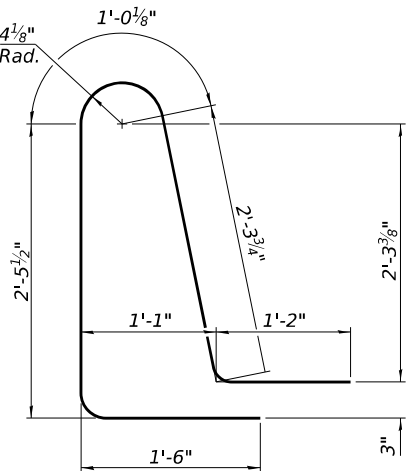
BAR a1013(E)



BAR a1012(E)



BAR d1010(E)



BAR d1011(E)

Note:
See sheet SG-29 of 47 for section B-B.

(Sheet 3 of 6)



USER NAME =	DESIGNED - MSS	REVISED -
PLOT SCALE =	CHECKED - AGJ	REVISED -
PLOT DATE =	DRAWN - NMD	REVISED -
	CHECKED - CZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

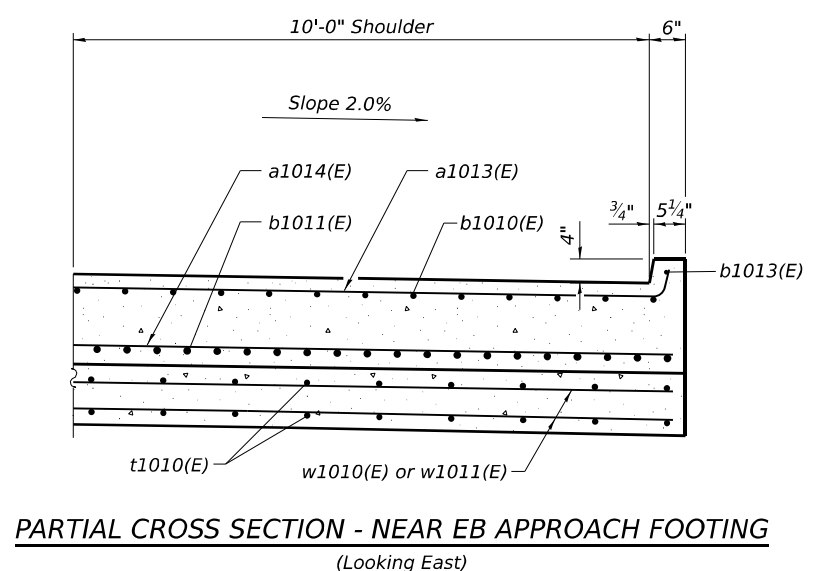
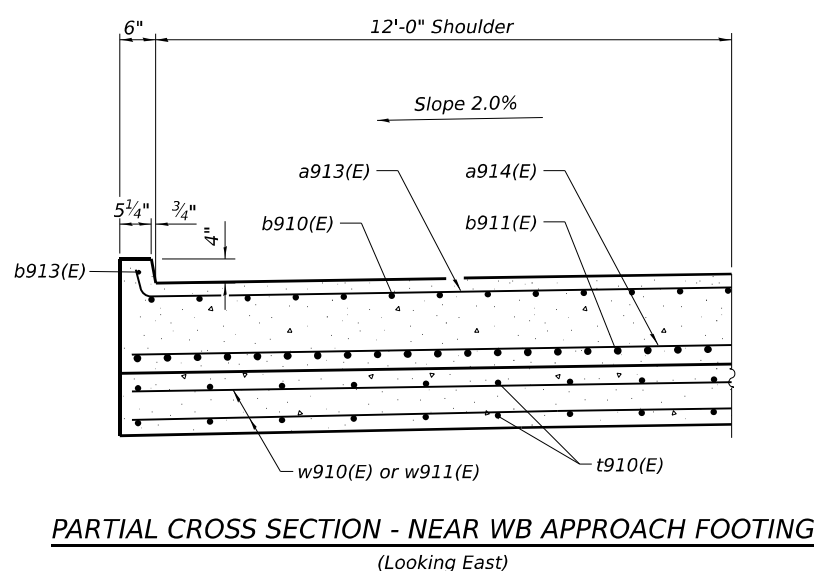
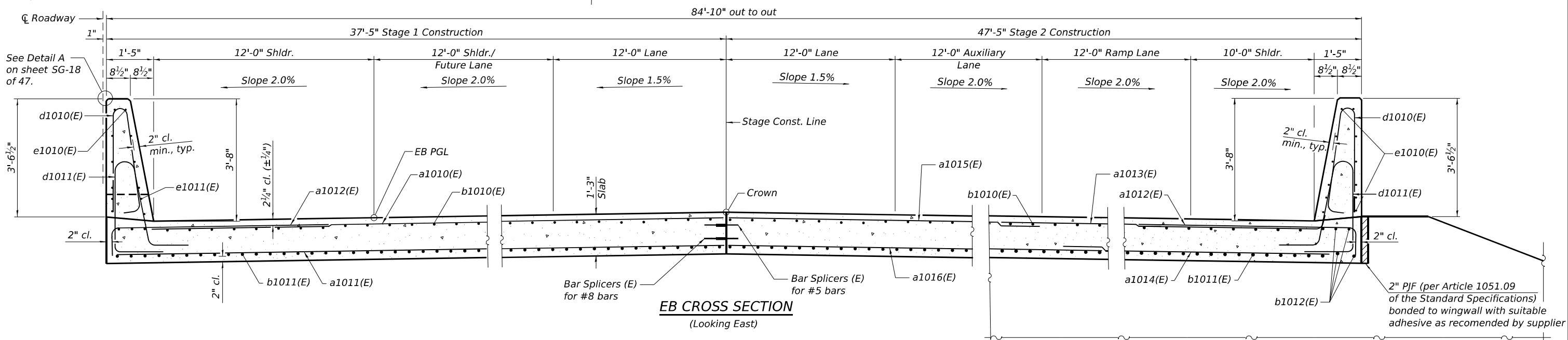
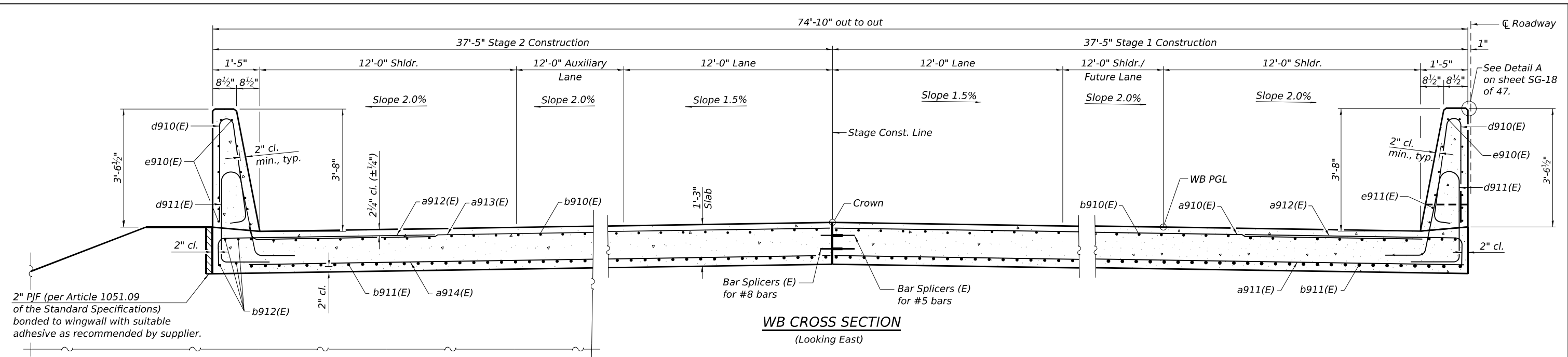
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)

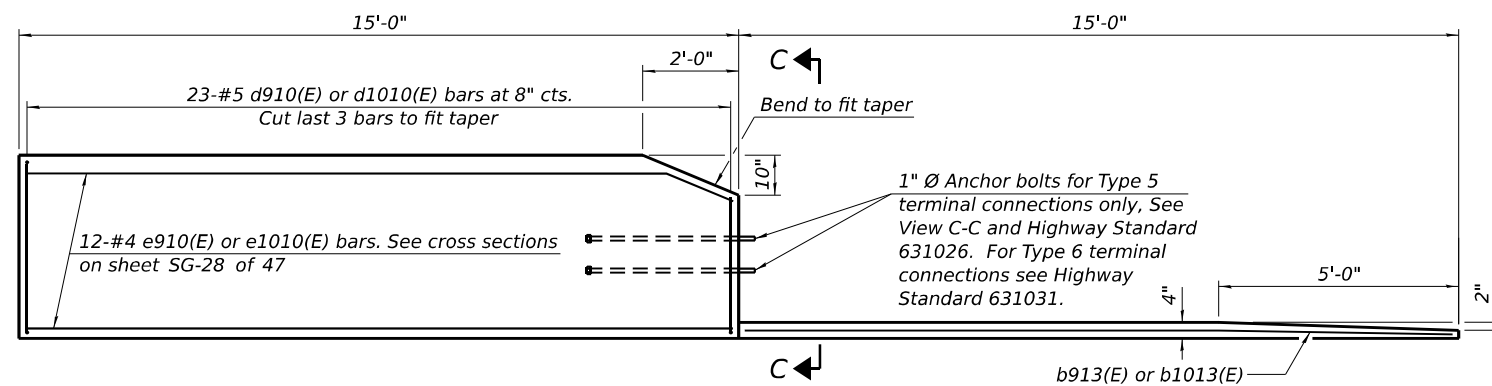
SHEET SG-26 OF 47 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	845
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

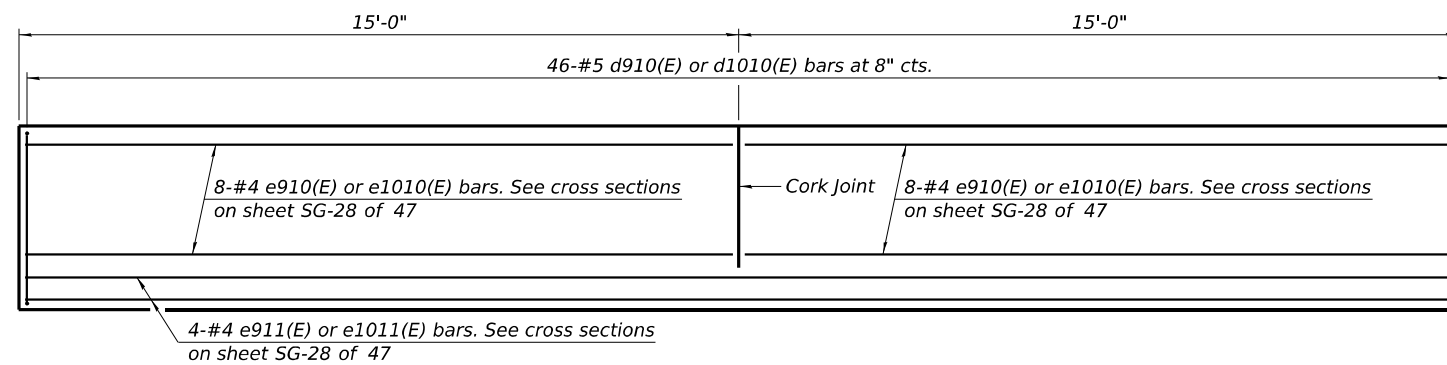


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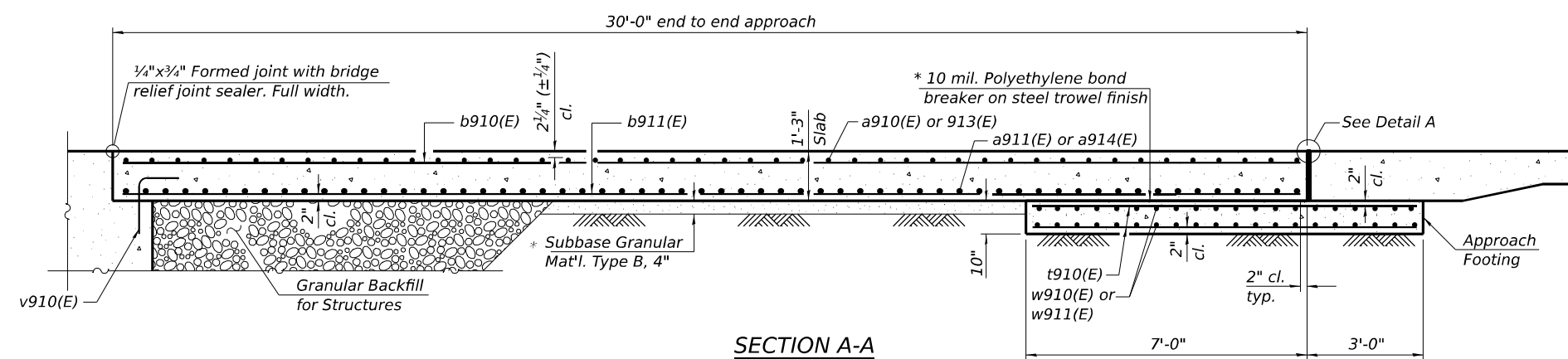




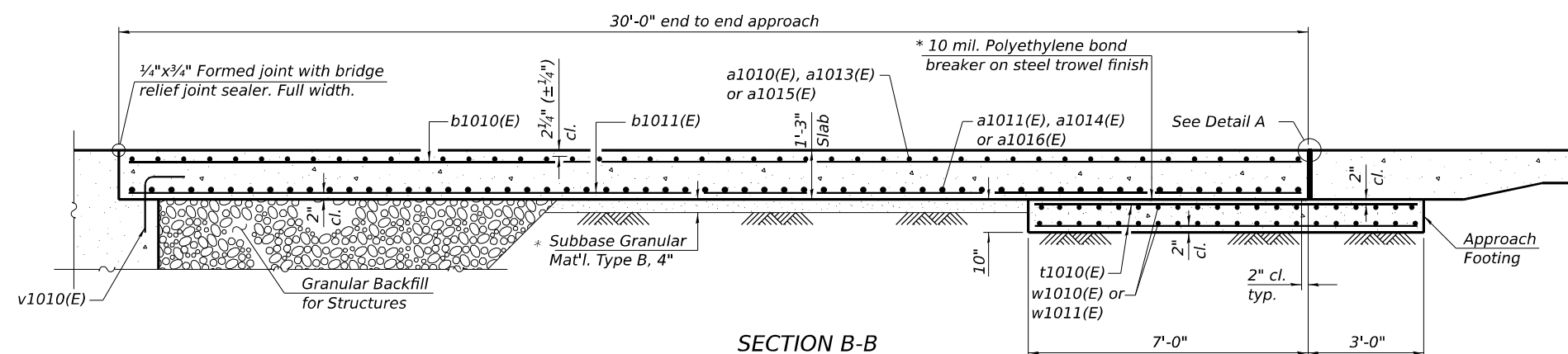
INSIDE ELEVATION OF EXTERIOR PARAPET AND CURB



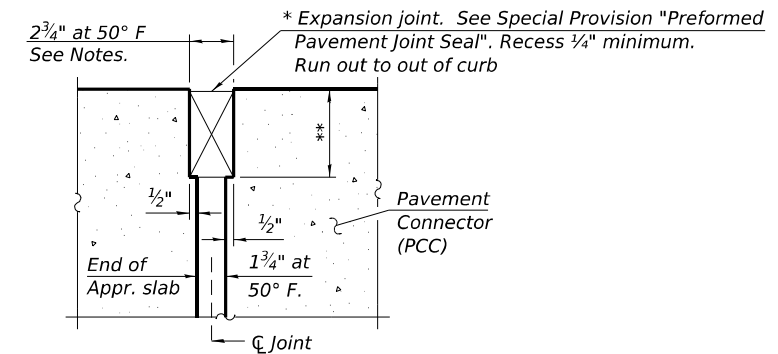
INSIDE ELEVATION OF MEDIAN PARAPET



SECTION A-A

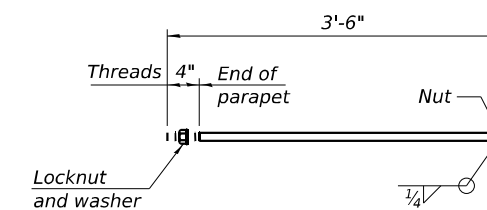


SECTION B-B

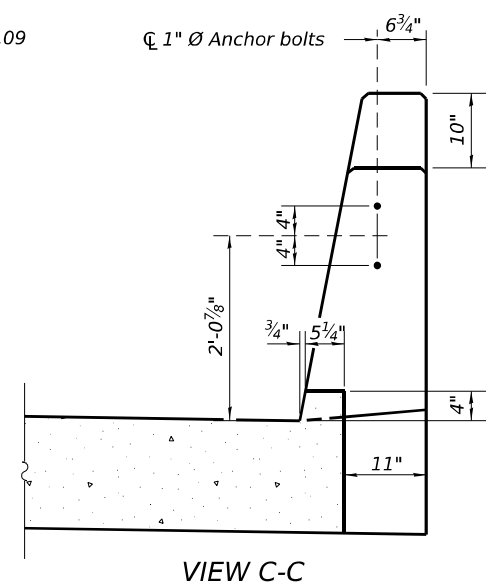


DETAIL A

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



***1" Ø ANCHOR BOLT**
(Anchor bolt assemblies shall be
galvanized according to Article 1006.09
of the Standard Specifications)



VIEW C-C

(Sheet 6 of 6)

 LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = _____	DESIGNED - MSS	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = _____	CHECKED - AGJ	REVISED - _____			80	FAI 80 21 STRUCTURE 7	WILL	1059	848
	PLOT DATE = _____	DRAWN - NMD	REVISED - _____			CONTRACT NO. 62R28				
	PLOT DATE = _____	CHECKED - CZ	REVISED - _____			SHEET 5G-29 OF 47 SHEETS				

MODEL: Default
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LIN ENGINEERING, LTD.

Consulting Engineers

Springfield, Illinois

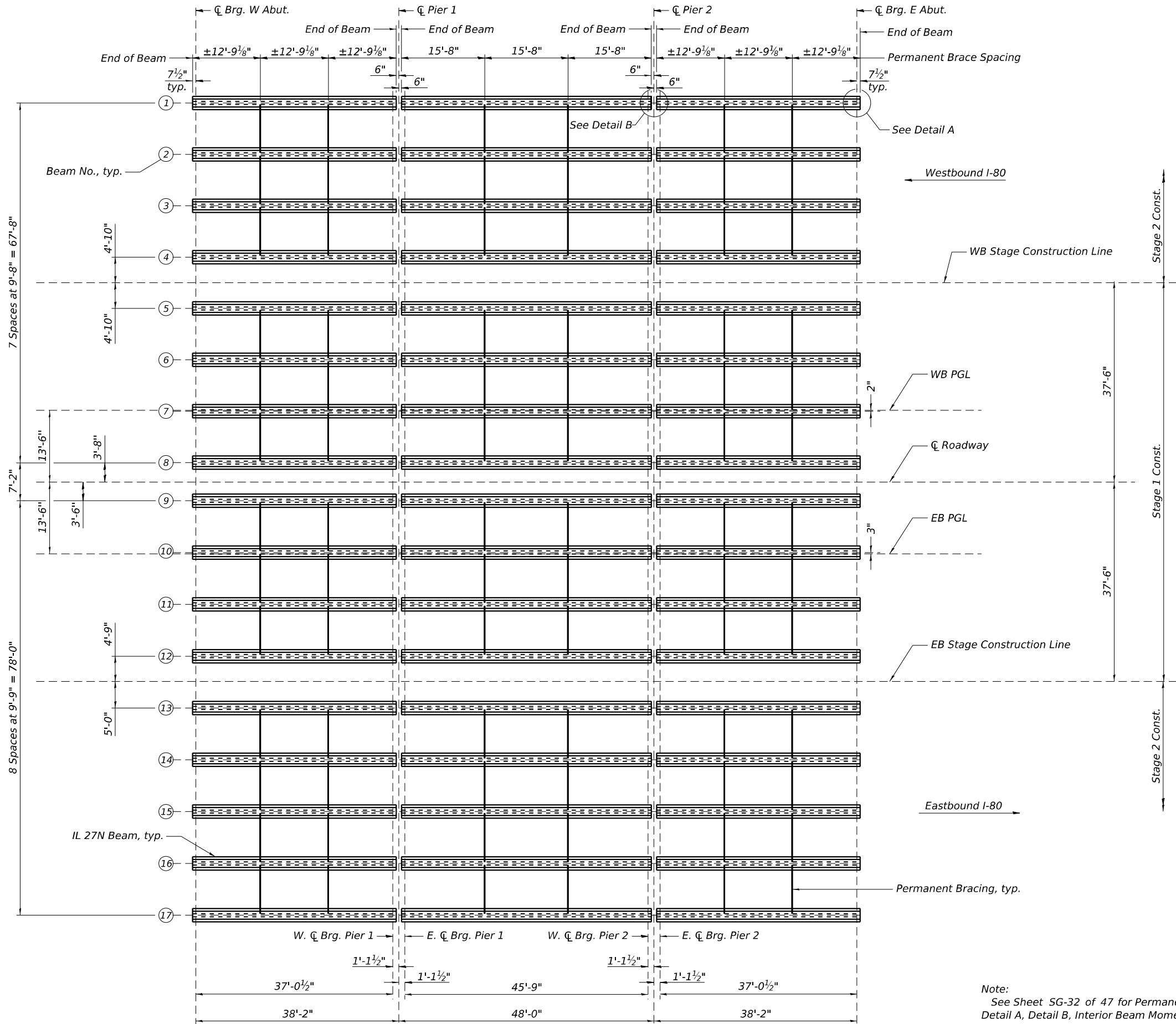
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			CHECKED	-	MSS	REVISED	-	_____
PLOT SCALE	=	_____	DRAWN	-	AJF	REVISED	-	_____
PLOT DATE	=	_____	CHECKED	-	CL	REVISED	-	_____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING DETAILS
STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)

SHEET SG-31 OF 47 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	850
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				



FRAMING PLAN

(Sheet 1 of 2)

Note:
See Sheet SG-32 of 47 for Permanent Bracing Details,
Detail A, Detail B, Interior Beam Moment Table and
Beam Reaction Table.

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WB INTERIOR BEAM MOMENT TABLE				
	0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2	
I	(in ⁴)	33,879	33,879	33,879
I'	(in ⁴)	149,131	149,131	149,131
Sb	(in ³)	3,060	3,060	3,060
Sb'	(in ³)	6,406	6,406	6,406
St	(in ³)	2,127	2,127	2,127
St'	(in ³)	40,089	40,089	40,089
DC1	(k/')	1.460	1.460	1.460
MDC1	('k)	241	0	384
DC2	(k/')	0.190	0.190	0.190
MDC2	('k)	18	33	25
DW	(k/')	0.483	0.483	0.483
MDW	('k)	46	80	46
LLDF		0.862	0.834	0.810
M _L + IM	('k)	471	422	467

WB INTERIOR BEAM REACTION TABLE				
	Abutments	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2	
LLDF	0.929	0.929	0.929	
OCF	1.0	1.0	1.0	
RDC1	(k)	27.1	27.1	35.4
RDC2	(k)	2.0	3.4	3.4
RDW	(k)	6.4	10.8	10.8
R _L + IM	(k)	73.8	56.3	56.3
RTotal (Strength I)(Impact)	(k)	173.5	150.2	160.5
RTotal (Strength I)(No Impact)	(k)	146.0	132.3	142.7

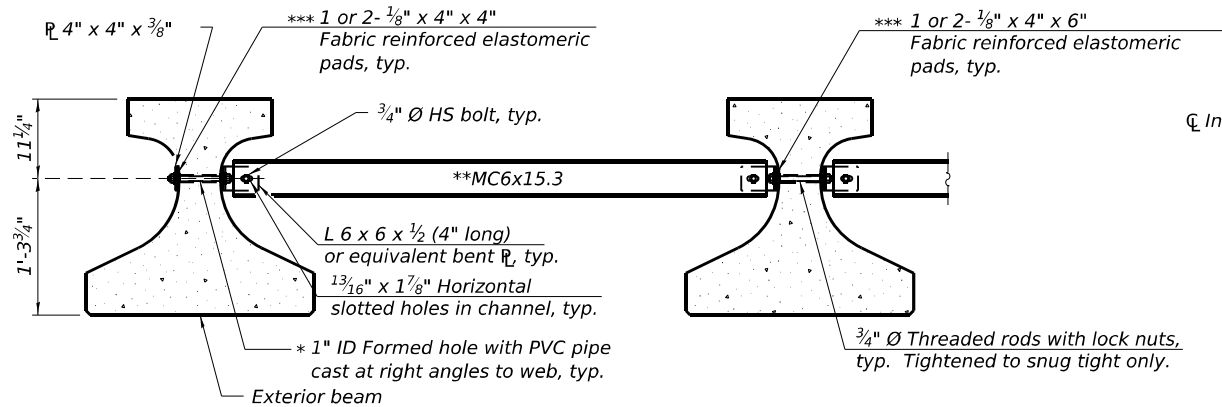
⊕ At continuous piers, reactions from composite loads are assumed to be equally distributed to each bearing line.

EB INTERIOR BEAM MOMENT TABLE				
	0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2	
I	(in ⁴)	33,879	33,879	33,879
I'	(in ⁴)	149,533	149,533	149,533
Sb	(in ³)	3,060	3,060	3,060
Sb'	(in ³)	6,412	6,412	6,412
St	(in ³)	2,127	2,127	2,127
St'	(in ³)	40,634	40,634	40,634
DC1	(k/')	1.470	1.470	1.470
MDC1	('k)	243	0	386
DC2	(k/')	0.190	0.190	0.190
MDC2	('k)	18	33	25
DW	(k/')	0.488	0.488	0.488
MDW	('k)	47	81	47
LLDF		0.868	0.839	0.815
M _L + IM	('k)	474	424	470

EB INTERIOR BEAM REACTION TABLE				
	Abutments	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2	
LLDF	0.935	0.935	0.935	
OCF	1.0	1.0	1.0	
RDC1	(k)	27.2	27.2	35.6
RDC2	(k)	1.8	3.0	3.0
RDW	(k)	6.4	10.9	10.9
R _L + IM	(k)	74.3	56.7	56.7
RTotal (Strength I)(Impact)	(k)	174.3	150.6	161.1
RTotal (Strength I)(No Impact)	(k)	146.6	132.6	143.1

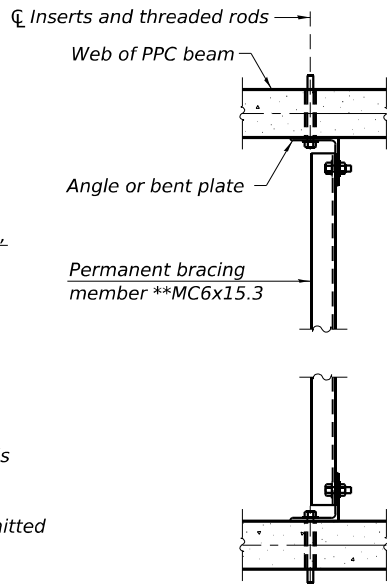
⊕ At continuous piers, reactions from composite loads are assumed to be equally distributed to each bearing line.

I: Non-composite moment of inertia of beam section (in.⁴).
I': Composite moment of inertia of beam section (in.⁴).
Sb: Non-composite section modulus for the bottom fiber of the prestressed beam (in.³).
Sb': 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.).
LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.
OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.
R_{DC1}: Un-factored reaction due to non-composite dead load (kip).
R_{DC2}: Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).
R_{DW}: Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).
R_L: Un-factored live load reaction (kip).
R_{IM}: Un-factored dynamic load allowance (impact) (kip).
RTotal (Strength I)(Impact): Total factored reaction including dynamic load allowance (Impact) (kip).
RTotal (Strength I)(No Impact): Total factored reaction not including dynamic load allowance (Impact) (kip).

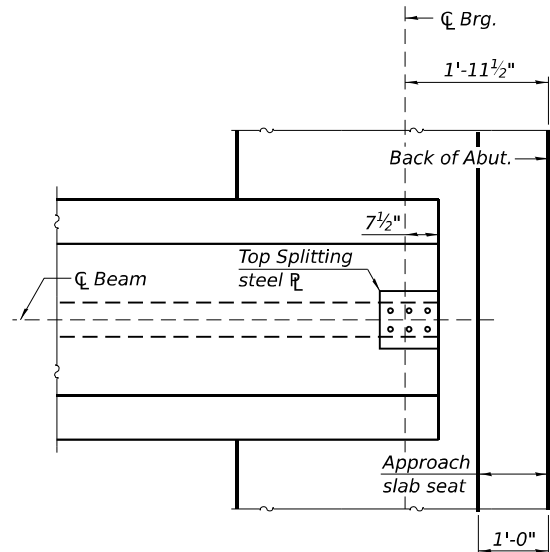


Notes:
All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
Two hardened washers are required for each set of oversized holes.
All holes shall be 1 5/16" Ø unless otherwise noted.
5/16" x 3" x 3" plate washers are required over all slotted holes.
All bolts, 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, IL27N.

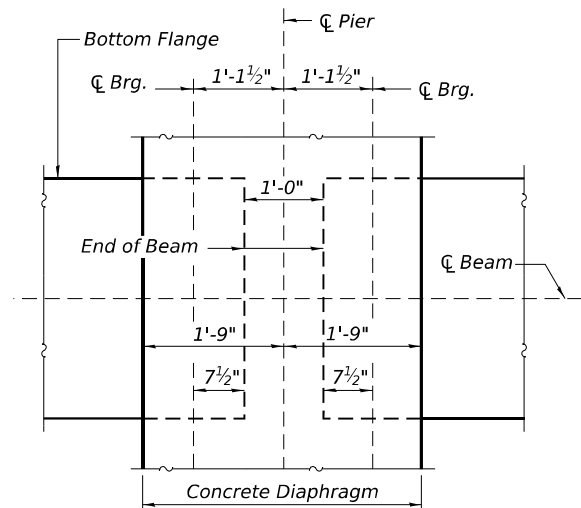
* Fabricator shall locate to miss strands within permissible tolerances.
** Alternate MC6x18 channels are permitted to facilitate material acquisition.
*** Place pads as necessary to provide a flat mounting surface between the steel and concrete.



PLAN



DETAIL A

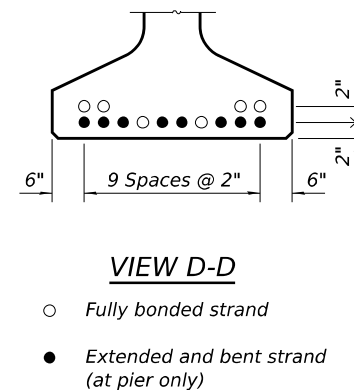
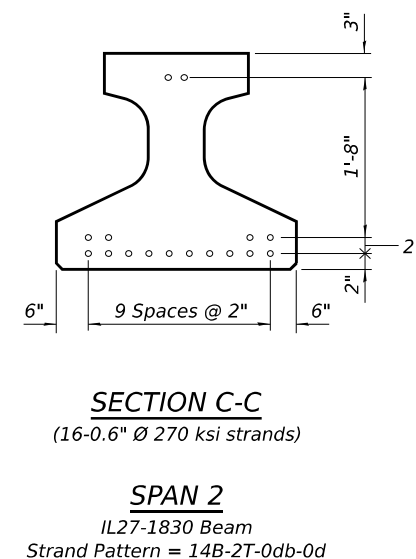
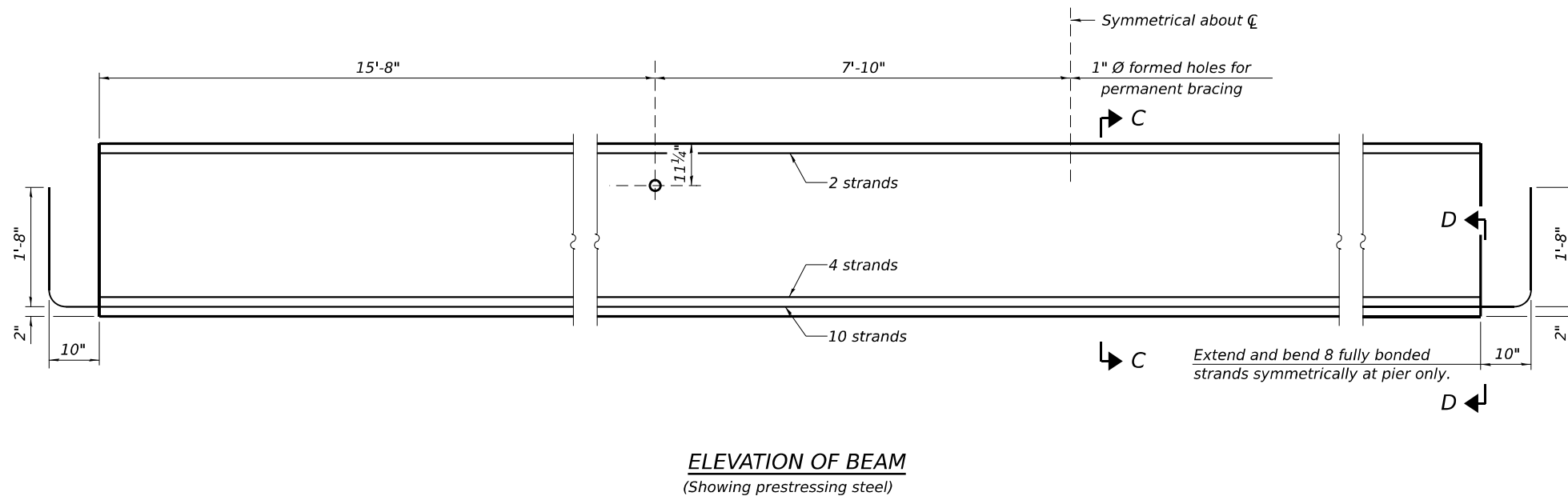
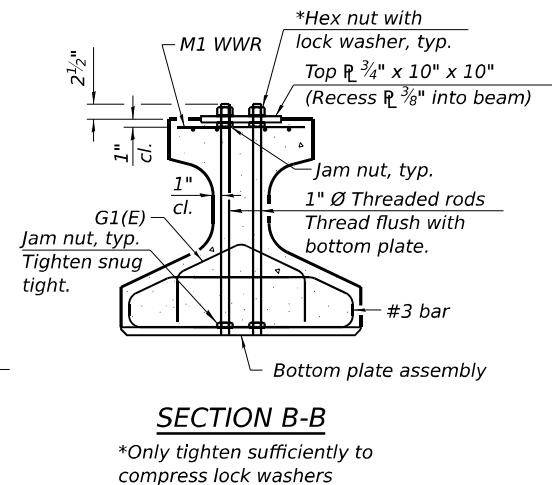
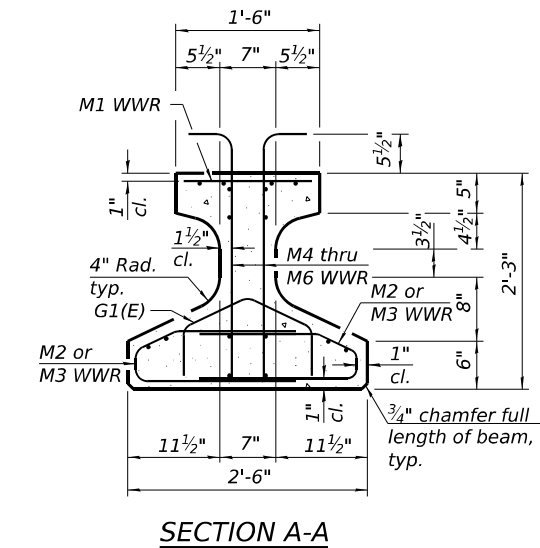
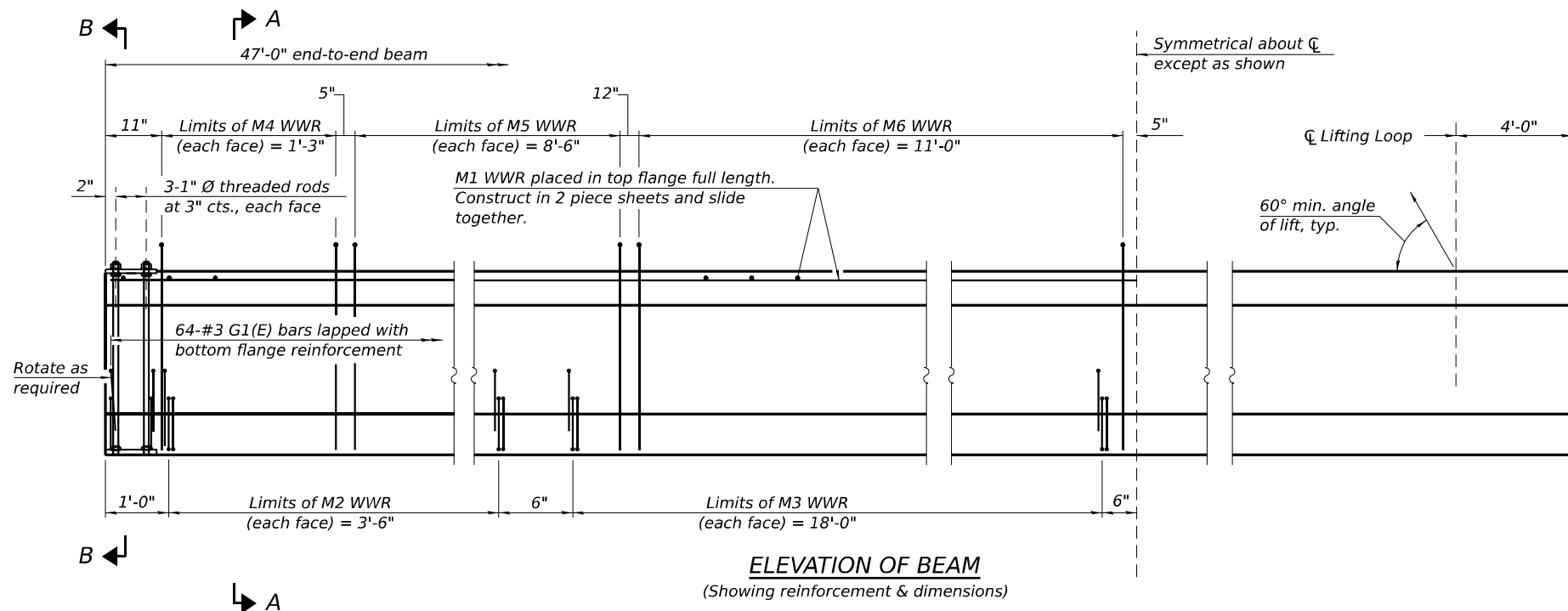


DETAIL B

PERMANENT BRACING DETAILS FOR IL27N BEAMS

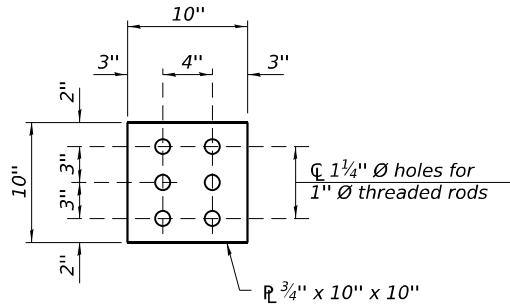
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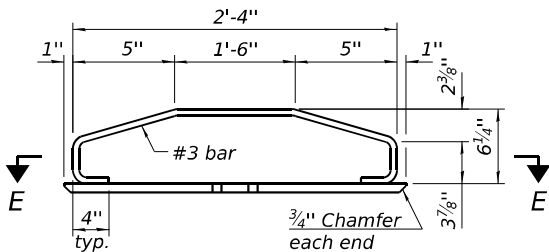


Note:
See sheet SG-35 of 47 for additional details and Bill of Material.

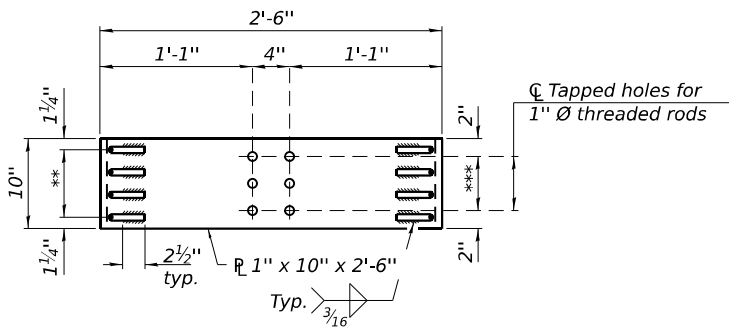
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PLAN - TOP PLATE



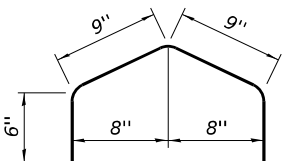
ELEVATION - BOTTOM
PLATE ASSEMBLY



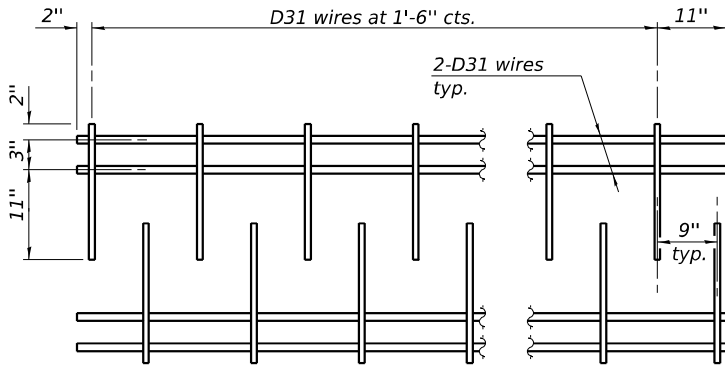
SECTION E-E

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

*** 2 Spaces at 3" = 6"

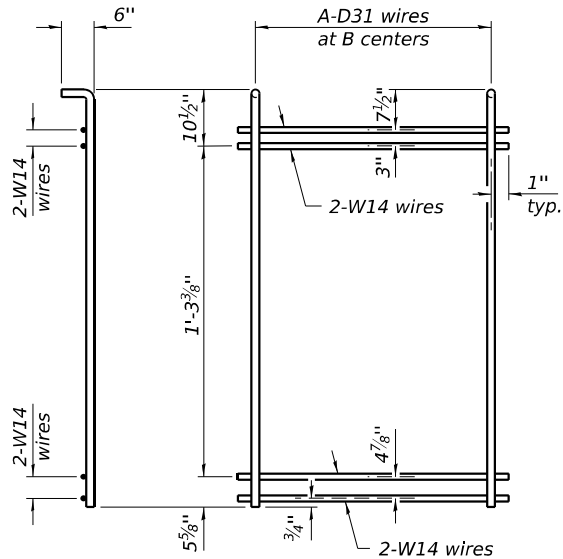


BAR G1(E)



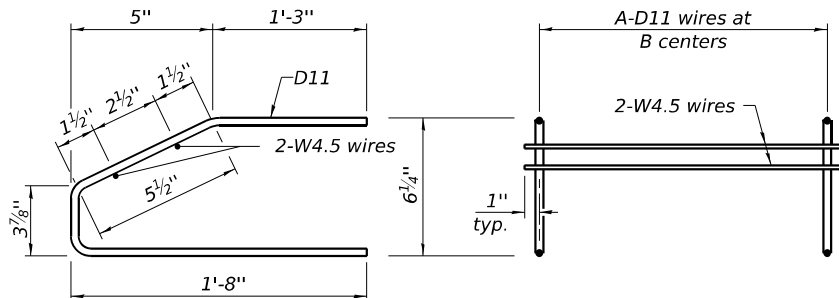
M1 WWR DETAIL

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)

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.

TABLE OF DIMENSIONS

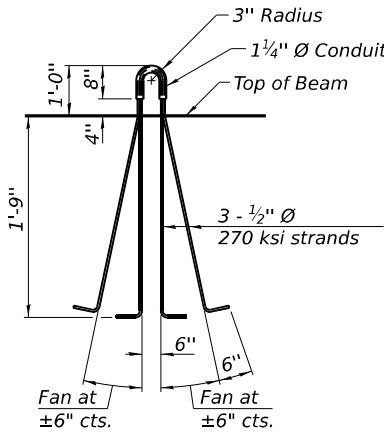
(The WWR designs assume grade 60. If necessary, this permits the fabricator to directly substitute grade 60 rebar as detailed in the Manual for Fabrication of Precast Prestressed Concrete Products.)

SPANS 1 AND 3

WWR	A	B
M2	15	3"
M3	10	1'-6"
M4	6	3"
M5	18	6"
M6	8	1'-0"

SPAN 2

WWR	A	B
M2	15	3"
M3	13	1'-6"
M4	6	3"
M5	18	6"
M6	12	1'-0"



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL27N	Ft.	2,101

IL27-1830D

8-13-2021

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

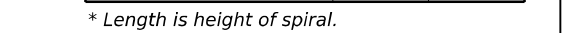
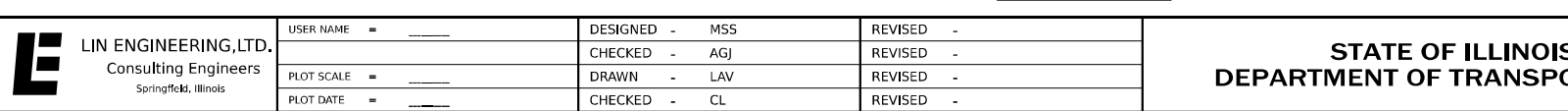
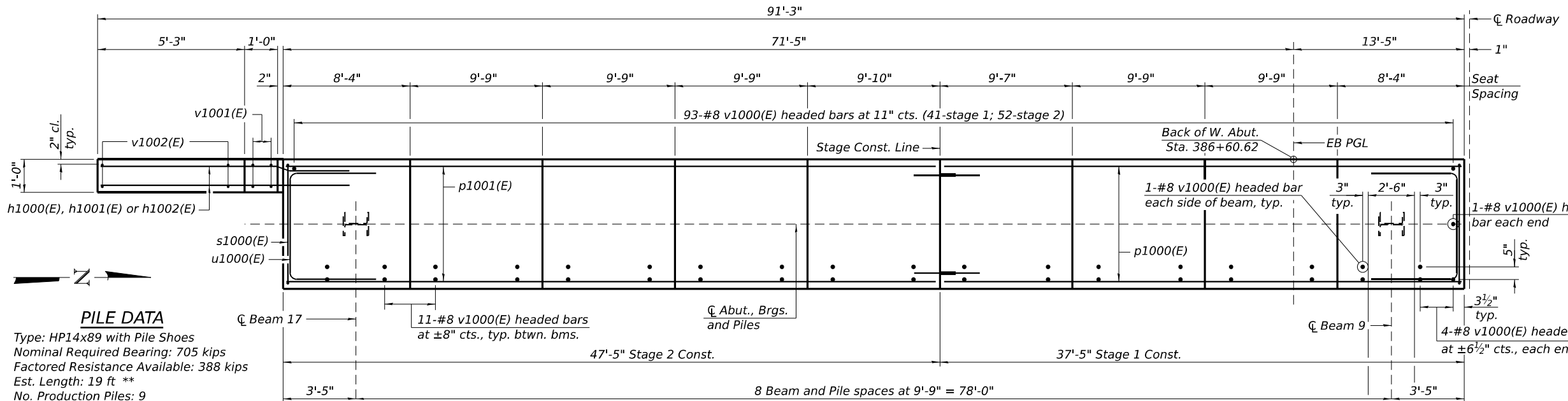
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

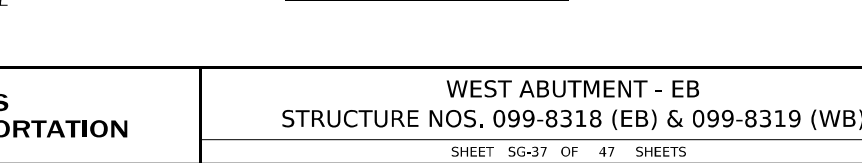
IL 27N BEAM DETAILS
STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)

SHEET SG-35 OF 47 SHEETS

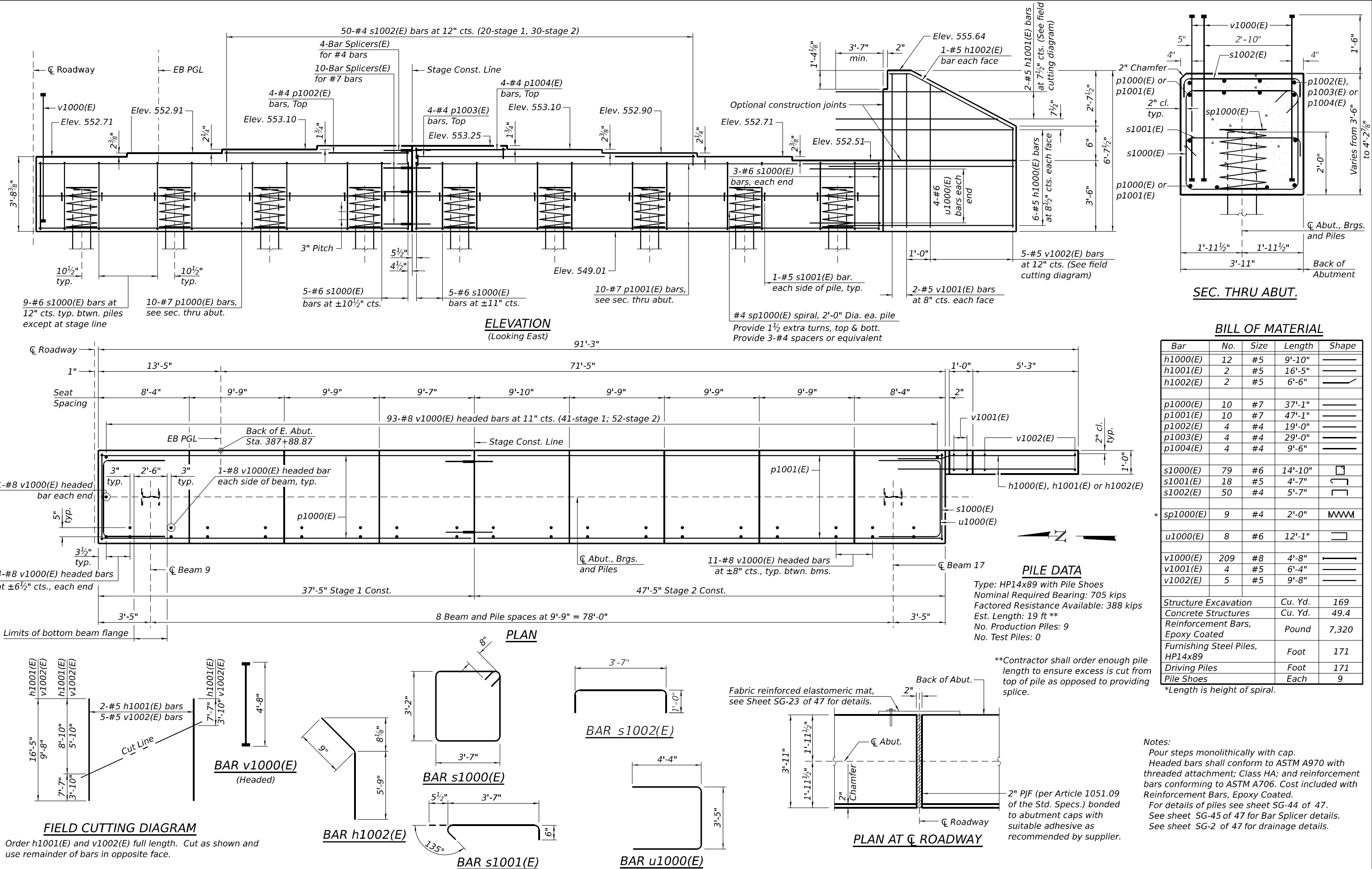
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	854
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				



	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	80	FAI 80 21 STRUCTURE 7	WILL	1059	856
				CONTRACT NO. 62R28	
	ILLINOIS		FED. AID PROJECT		



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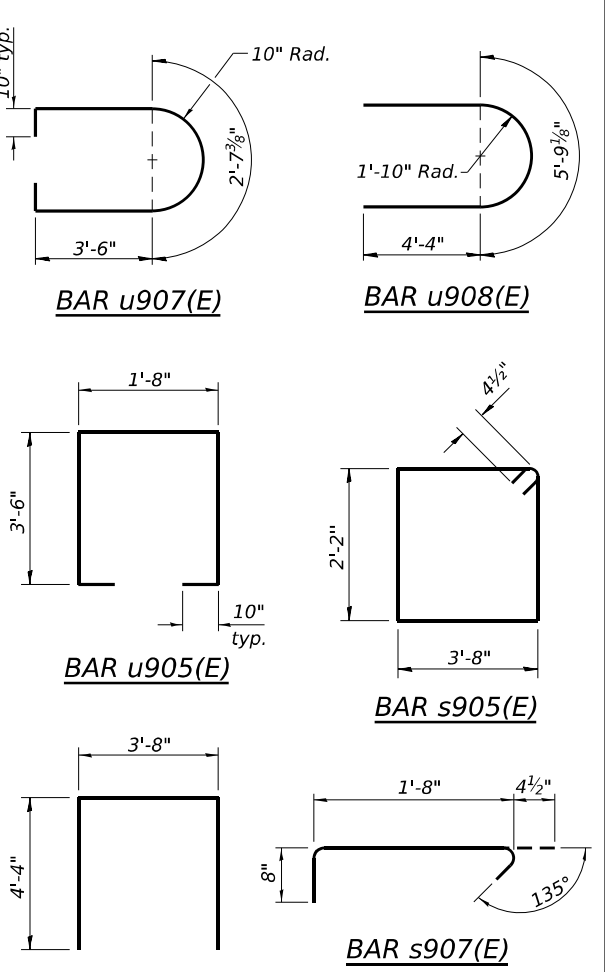
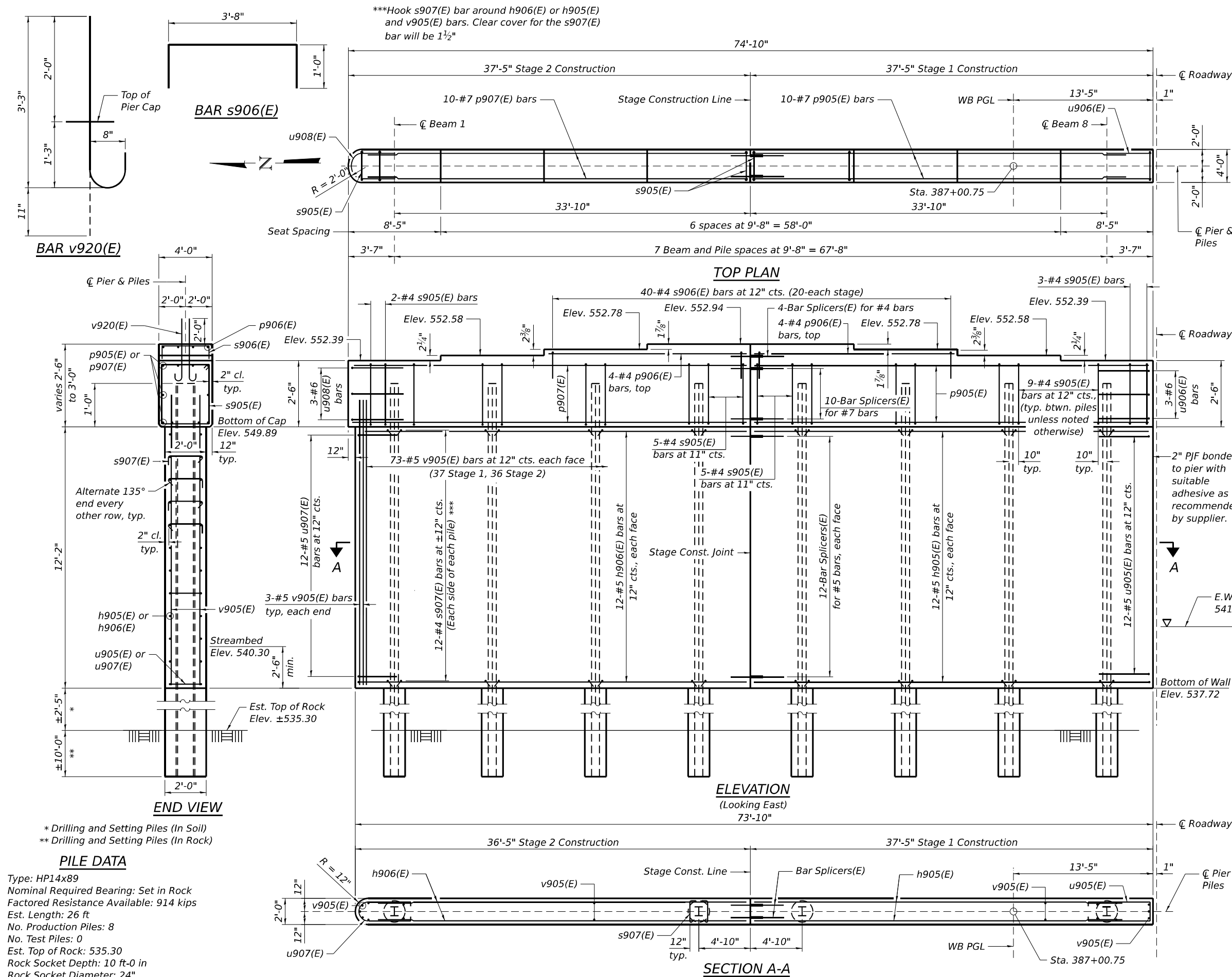


BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
h1000(E)	12	#5	9'-10"	
h1001(E)	2	#5	16'-5"	
h1002(E)	2	#5	6'-6"	
p1000(E)	10	#7	37'-1"	
p1001(E)	10	#7	47'-1"	
p1002(E)	4	#4	19'-0"	
p1003(E)	4	#4	29'-0"	
p1004(E)	4	#4	9'-6"	
s1000(E)	79	#6	14'-10"	
s1001(E)	18	#5	4'-7"	
s1002(E)	50	#4	5'-7"	
* sp1000(E)	9	#4	2'-0"	WWW
u1000(E)	8	#6	12'-1"	
v1000(E)	209	#8	4'-8"	
v1001(E)	4	#5	6'-4"	
v1002(E)	5	#5	9'-8"	
Structure Excavation			Cu. Yd.	169
Concrete Structures			Cu. Yd.	49.4
Reinforcement Bars, Epoxy Coated			Pound	7,320
Furnishing Steel Piles, HP14x89			Foot	171
Driving Piles			Foot	171
Pile Shoes			Each	9

	USER NAME =		DESIGNED - MSS	REVISED -
	PLOT SCALE =		CHECKED - AGJ	REVISED -
	PLOT DATE =		DRAWN - LAV	REVISED -
			CHECKED - CL	REVISED -

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		EAST ABUTMENT - EB STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)		F.A.I. RTE. 80	SECTION FAI 80 21 STRUCTURE 7	COUNTY WILL	TOTAL SHEETS 1059	SHEET NO. 858
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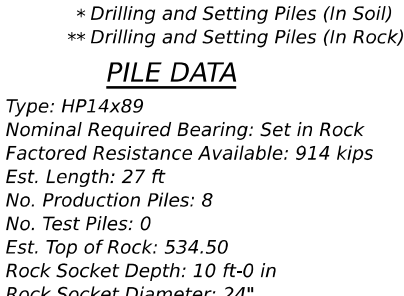


**WB PIER 1
BILL OF MATERIAL**

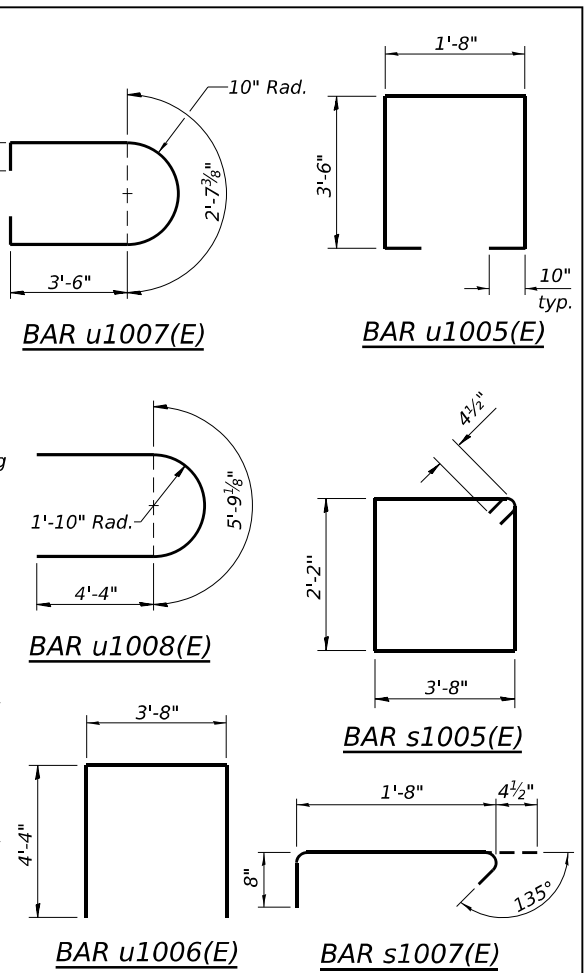
Bar	No.	Size	Length	Shape
h905(E)	24	#5	37'-1"	—
h906(E)	24	#5	35'-3"	—
p905(E)	10	#7	37'-1"	—
p906(E)	8	#4	19'-0"	—
p907(E)	10	#7	35'-3"	—
s905(E)	69	#4	12'-5"	□
s906(E)	40	#4	5'-8"	┌┐
s907(E)	192	#4	2'-9"	┌┐
u905(E)	12	#5	10'-4"	□
u906(E)	3	#6	12'-4"	┌┐
u907(E)	12	#5	11'-4"	┌┐
u908(E)	3	#6	14'-5"	┌┐
v905(E)	152	#5	13'-4"	—
v920(E)	30	#8	4'-2"	┌┐
Structure Excavation			Cu. Yd.	67
Furnishing Steel Piles, HP14x89			Foot	208
Drilling and Setting Piles (In Soil)			Cu. Ft.	61
Drilling and Setting Piles (In Rock)			Cu. Ft.	252
Concrete Structures			Cu. Yd.	96.5
Reinforcement Bars, Epoxy Coated			Pound	7,310

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
See sheet SG-44 of 47 for Pile details.
See sheet SG-45 of 47 for Bar Splicer details.
See sheet SG-20 of 47 for Anchor Bolt locations.
See sheet SG-20 of 47 for v920(E) bar locations.

PILE DATA
Type: HP14x89
Nominal Required Bearing: Set in Rock
Factored Resistance Available: 914 kips
Est. Length: 26 ft
No. Production Piles: 8
No. Test Piles: 0
Est. Top of Rock: 535.30
Rock Socket Depth: 10 ft-0 in
Rock Socket Diameter: 24"

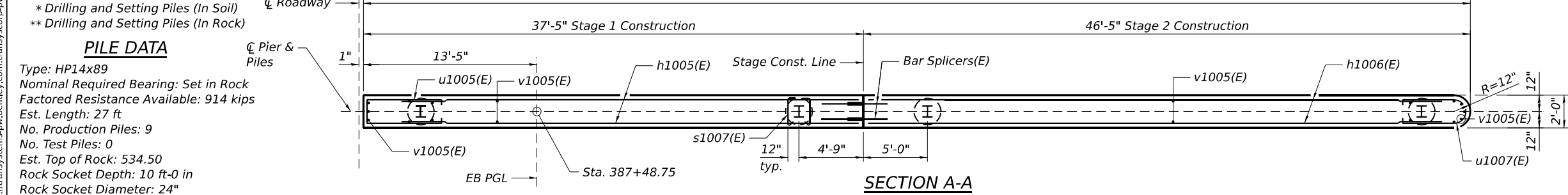


Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 See sheet SG-44 of 47 for Pile details.
 See sheet SG-45 of 47 for Bar Splicer details.
 See sheet SG-20 of 47 for Anchor Bolt locations.
 See sheet SG-20 of 47 for v920(E) bar locations.

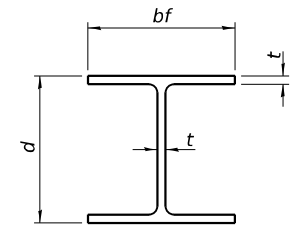


Bar	No.	Size	Length	Shape
h1005(E)	24	#5	37'-1"	=====
h1006(E)	24	#5	45'-3"	=====
p1005(E)	10	#7	37'-1"	=====
p1006(E)	4	#4	19'-0"	=====
p1007(E)	10	#7	45'-3"	=====
p1008(E)	4	#4	29'-0"	=====
p1009(E)	4	#4	9'-6"	=====
s1005(E)	78	#4	12'-5"	⌌
s1006(E)	50	#4	5'-8"	⌌
s1007(E)	216	#4	2'-9"	⌌
u1005(E)	12	#5	10'-4"	⌌
u1006(E)	3	#6	12'-4"	⌌
u1007(E)	12	#5	11'-4"	⌌
u1008(E)	3	#6	14'-5"	⌌
v1005(E)	172	#5	13'-1"	=====
v1020(E)	34	#8	4'-2"	=====
Structure Excavation			Cu. Yd.	69
Furnishing Steel Piles, HP14x89			Foot	243
Drilling and Setting Piles (In Soil)			Cu. Ft.	92
Drilling and Setting Piles (In Rock)			Cu. Ft.	283
Concrete Structures			Cu. Yd.	110.9
Reinforcement Bars, Epoxy Coated			Pound	8,250

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 See sheet SG-44 of 47 for Pile details.
 See sheet SG-45 of 47 for Bar Splicer details.
 See sheet SG-21 of 47 for Anchor Bolt locations.
 See sheet SG-21 of 47 for v1020(E) bar locations.

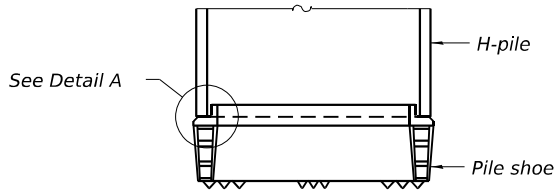


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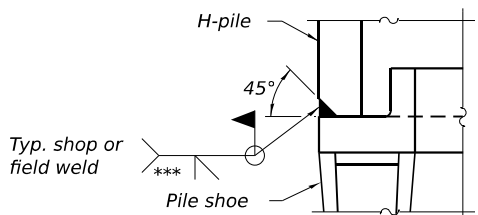


STEEL PILE TABLE

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



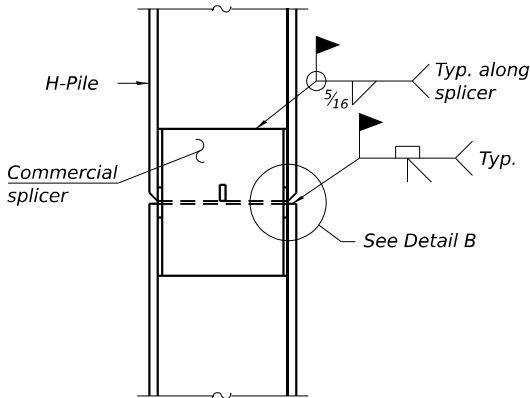
ELEVATION



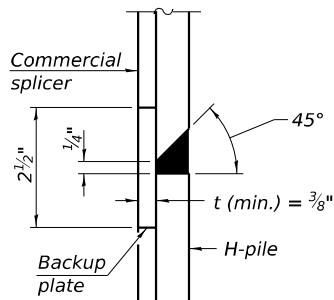
DETAIL A

SHOE ATTACHMENT

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

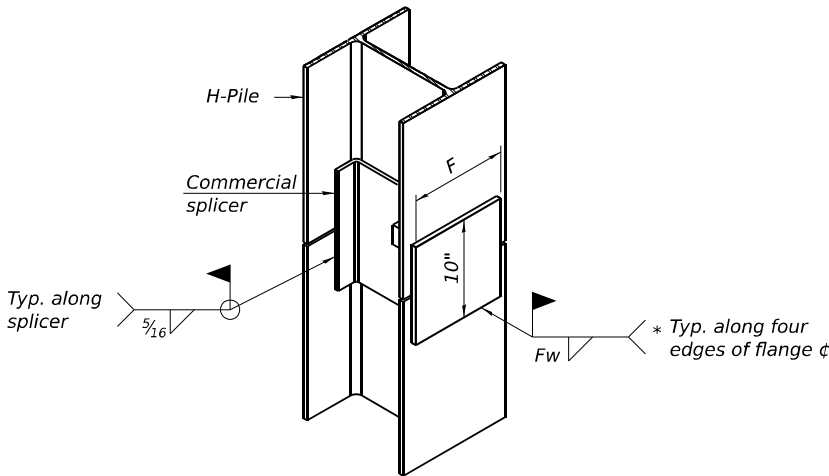


ELEVATION



DETAIL "B"

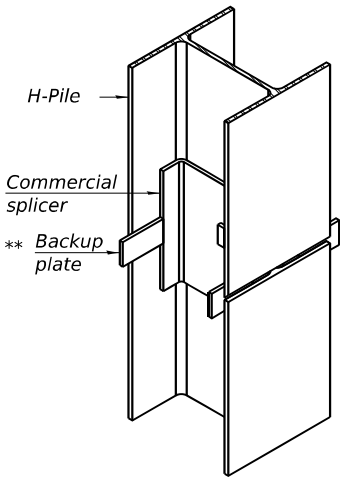
WELDED COMMERCIAL SPLICE



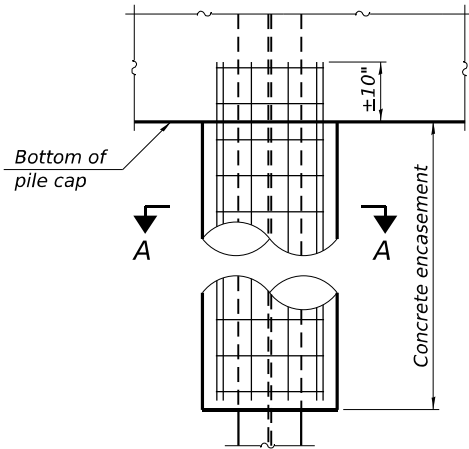
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

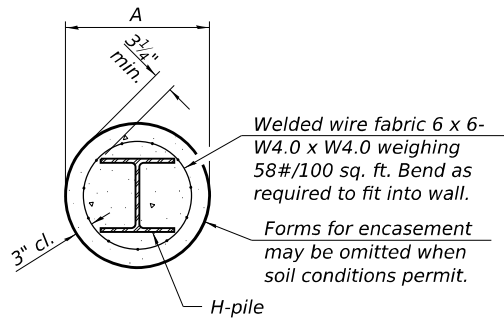
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).



ISOMETRIC VIEW

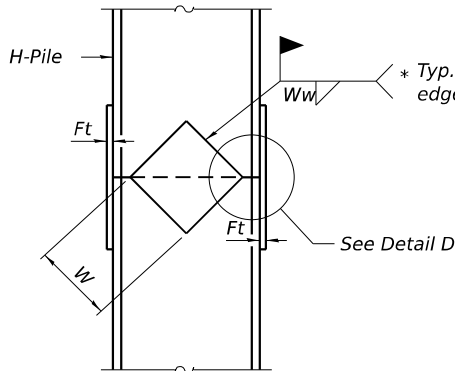


ELEVATION

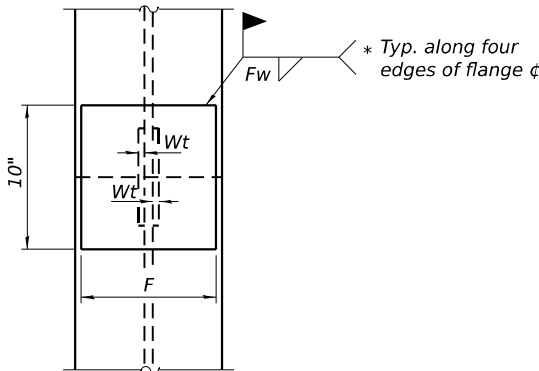


SECTION A-A

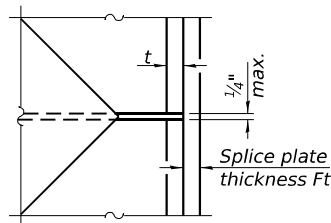
INDIVIDUAL PILE
CONCRETE ENCASEMENT
(when specified)



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

F-HP

2-1-2023

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME	=	_____
PLOT SCALE	=	_____
PLOT DATE	=	_____

DESIGNED	-	MSS
CHECKED	-	AGJ
DRAWN	-	AJF
CHECKED	-	CZ

REVISED	-	_____
REVISED	-	_____
REVISED	-	_____
REVISED	-	_____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NOS. 099-8318 (EB) & 099-8319 (WB)

SHEET SG-44 OF 47 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	863
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				



wangengr@wangengr.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG RRC-BSB-01

WEI Job No.: 255-39-01
 Client: **Stantec**
 Project: **I-80 Reconstruction, Ridge Road to Houbolt Road**
 Location: **Will County, Illinois**

Datum: NAVD 88
 Elevation: 554.86 ft
 North: 1755592.99 ft
 East: 1024452.16 ft
 Station: 386+52.00
 Offset: 55.2 LT

SOIL AND ROCK DESCRIPTION		Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)	Profile	SOIL AND ROCK DESCRIPTION		Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)	
14-inch thick ASPHALT PAVEMENT--		553.7							--Recovery: 100% --RQD: 0%								
Brown SANDY GRAVEL; damp		552.9		1	6 8 9	1.25 P	11		--RUN 2: 22.0 to 30.0 feet-- --Recovery: 58% --RQD: 0%				10				
--AGGREGATE BASE--																	
Stiff, brown and gray SILTY CLAY LOAM, some gravel; damp		551.6		2	7 9 11	NP	9		--RUN 3: 30.0 to 37.0 feet-- --Recovery: 99% --RQD: 10%								
--FILL-- --RDR 2-3--																	
Medium dense to dense, brown and gray Gravelly SILTY LOAM to LOAM; damp to moist				3	6 16 25	NP	9										
--FILL-- --RDR 2-3-- -L ₁ (%)=24, P ₁ (%)=15-- --%Gravel=30.0-- --%Sand=25.7-- --%Silt=35.1-- --%Clay=9.1-- --A-4 (1)--													11				
				4	7 17 24	NP	8										
				5	5 14 13	NP	7										
				6	6 17 18	NP	8										
		539.4		7	27 50/2"	0.25 P	13		--RUN 4: 37.0 to 42.0 feet-- --Recovery: 55% --RQD: 15%				12				
Soft, gray and brown SILTY CLAY LOAM, some gravel; damp																	
--RDR 3--																	
		536.9		8	50/2"	NP	1		--RUN 5: 42.0 to 46.0 feet-- --Recovery: 100% --RQD: 17%				13				
Very dense, gray Weathered BEDROCK																	
--RDR 3-4--																	
Strong, light bluish gray, very poor quality, shaly and vuggy DOLOSTONE; closely spaced, highly to moderately weathered, horizontal, oblique, and vertical joints, with <0.05 inch opening, slightly rough walls, and <0.2 inch thick clay and silty infill.				9					Boring terminated at 46.00 ft								
--RUN 1: 20.0 to 22.0 feet--																	

GENERAL NOTES

Begin Drilling 08-15-2021 Complete Drilling 08-16-2021
 Drilling Contractor Wang Testing Services Drill Rig 20D50T [80%]
 Driller R&A Logger M. Sadowski Checked by C. Marin
 Drilling Method 2.25" ID HSA; boring backfilled upon completion

WATER LEVEL DATA

While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling 24 hours
 Depth to Water 19.00 ft

The stratification lines represent the approximate boundary between soil horizons. The actual transition may be gradual.



wawangeng@wawangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG RRC-BSB-02

WEI Job No.: 255-39-01
Stantec
Project I-80 Reconstruction, Ridge Road to Houbold Road
Location VIII County, Illinois

Datum: NAVD 00
Elevation: 554.93 ft
North: 1755473.76 ft
East: 1024456.87 ft
Station: 386+53.04
Offset: 64.2 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Qu (ksf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Qu (ksf)	Moisture Content (%)
553.7	15-inch thick ASPHALT								—RUN 1: 20.0 to 27.0 feet—						
553.2	—PAVEMENT—								—Recovery: 18%—						
553.2	Brown and gray SANDY GRAVEL; damp			1	3 6 11	NP	13		—poor water return top 4 feet; bottom 3 feet no water return—						
	—AGGREGATE BASE—								—RUN 2: 27.0 to 34.0 feet—						
	Medium dense, brown and gray Gravelly SILTY LOAM to LOAM; damp			2	5 7 14	NP	9		—Recovery: 31%—						
	—FILL—								—RQD: 0%—						
	—RDR 2-3—														
	—L ₁ (%) = 22, P ₁ (%) = 15—														
	—% Gravel = 29.1—														
	—% Sand = 26.0—														
	—% Silt = 37.4—														
	—% Clay = 7.4—														
	—A-4 (0)—								—no water return after 31 feet—						
546.9	Medium dense, brown Gravelly SANDY LOAM; damp			3	4 6 17	NP	11								
544.4	—RDR 3—														
	Very stiff, brown to gray Gravelly CLAY LOAM			4	8 10 10	NP	8								
	—RDR 2-3—														
541.9	Medium dense, brown and gray Gravelly LOAM; damp			5	7 15 18	3.25 P	8								
	—RDR 2-3—														
	Medium dense, brown and gray Gravelly BEDROCK—			6	6 7 13	NP	20		—RUN 3: 34.0 to 38.0 feet—						
	—Weathered BEDROCK—								—Recovery: 79%—						
	—RDR 2-15—								—RQD: 0%—						
539.4	Medium dense, gray, SILTY LOAM, some gravel; damp			7	7 9 15	NP	21		Medium strong, light bluish gray, poor quality, shaly and vuggy DOLOSTONE						
	—Weathered BEDROCK—								—RUN 4: 38.0 to 40.5 feet—						
	—RDR 2-3—								—Recovery: 97%—						
									—RQD: 0%—						
	Very strong, light bluish gray, very poor quality, vuggy DOLOSTONE, occasional shale partings; moderately to highly weathered, horizontal, oblique, and vertical joints, with 0.05 - 0.2 inch opening, slightly rough walls, and <0.2 inch thick clay and silty greenish infill.			8	50/2"	NP			Strong, light gray to dark brownish and grayish gray, very poor quality, shaly and vuggy DOLOSTONE; closely spaced, moderately weathered, horizontal and oblique joints, with 0.05 - 0.2 inch opening, slightly rough walls, and <0.2 inch thick silty infill.						
									—RUN 5: 40.5 to 44.0 feet—						
									—Recovery: 50%—						
									—RQD: 0%—						
									Boring terminated at 44.00 ft						

GENERAL NOTES

Begin Drilling **08-09-2021** Complete Drilling **08-0**

Page 1 of 1

BORING LOG RRC-BB-03

wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WE Job No.: 255-39-01

Date: NAVD 88
Elevation: 555.34 ft
North: 1755568.83 ft
East: 1024517.34 ft
Station: 387+16.41
Offset: 29 LT

Client **Statearc**
Project **I-80 Reconstruction, Ridge Road to Houbolt Road**
Location **Will County, Illinois**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
553.8	18-inch thick CONCRETE --bridge deck pavement--	0						553.8	inch opening, slightly rough walls, and <0.2 inch thick, greenish clay and silty infill. --RUN 1: 20.0 to 28.5 feet-- --Recovery: 57%-- --RQD: 10%-- --no water return after 21 feet-- --QU=11,678 psi-- --RUN 2: 28.5 to 33.5 feet-- --Recovery: 55%-- --RQD: 0%--	0					
	--Drilled from bridge deck--	5								5					
		10								10					
		15						518.3		15					
541.8	Creek water level								Boring terminated at 37.00 ft	20					
540.3	Very soft, black and gray SILTY CLAY LOAM, some organic matter; saturated	25								25					
537.6	--organic content= 11.2%-- --L _i (%)=69, P _i (%)=32-- --%Gravel=0.8-- --%Sand=4.6-- --%Silt=68.5-- --%Clay=26.1-- --A-7-5 (42)--	30								30					
535.3	Gray SANDY GRAVEL; saturated	35								35					
	Strong, light bluish gray, very poor quality, vuggy DOLOSTONE; very closely to closely spaced, moderately weathered, horizontal, oblique, and vertical joints, with <0.05	40								40					
		45								45					
		50								50					

GENERAL NOTES

Begin Drilling **08-18-2021** Complete Drilling **08-18-2021**
Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**
Driller **R&N** Logger **M. Sadowski** Checked by **C. Martin**
Drilling Method **2.25" ID HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **13.50 ft**
At Completion of Drilling **13.50 ft**
Time After Drilling **NA**
Depth to Water **NA**

The stratification lines represent the approximate boundary between soil boxes; the actual transition may be gradual.



wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG RRC-BSB-04

WEI Job No.: 255-39-01

Datum: NAVD 88
 Elevation: 555.47 ft
 North: 1755504.55 ft
 East: 1024539.18 ft
 Station: 387+35.28
 Offset: 35.9 RT

Client: **Stantec**

Project: **I-80 Reconstruction, Ridge Road to Houboolt Road**

Location: **Will County, Illinois**

Profile	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
554.0	18-inch thick CONCRETE --bridge deck pavement--								horizontal, oblique, and vertical joints, with 0-0.2 inch opening, slightly rough walls, and <0.2 inch thick, greenish clay and silty infill.						
		5							--RUN 1: 21.0 to 28.0 feet-- --Recovery: 100%-- --RQD: 10%-- --Qu=7,494 psi-- --RUN 2: 28.0 to 33.3 feet-- --Recovery: 100%-- --RQD: 8%--						
		10							--RUN 3: 33.3 to 36.0 feet-- --Recovery: 100%-- --RQD: 41%--						
		15							Boring terminated at 36.00 ft						
541.5	Creek water level														
539.5	Very soft (<0.25P), black and gray SILTY CLAY LOAM, saturated		1	22	392	NP	5								
537	Very dense, gray SANDY GRAVEL; saturated		2	34	NP	9									
534.5	Very dense, gray SILTY LOAM, few gravel; wet														
	Highly weathered BEDROCK--														
	Very strong, light bluish gray, very poor to poor quality, vuggy DOLOSTONE, few shale partings; moderately to closely spaced, highly fragmented, highly to moderately weathered,		3												

GENERAL NOTES

Begin Drilling **08-08-2021** Complete Drilling **08-08-2021**

Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**

Driller **RBA** Logger **M. Sadowski** Checked by **C. Marin**

Drilling Method **2.25" ID HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **14.00 ft**

At Completion of Drilling **14.00 ft**

Time After Drilling **NA**

Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

Page 1 of 1

BORING LOG RRC-BSB-05																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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wangeng@wangeng.com 1145 N Main Street Lombard, IL 60148 Telephone: 630 953-9928 Fax: 630 953-9938 Client _____ Stantec Project I-80 Reconstruction, Ridge Road to Houbolt Road Location _____ Will County, Illinois																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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damp</td><td></td><td></td><td>2</td><td>19</td><td>NP</td><td>9</td><td></td><td>--RUN 2: 27.5 to 35.0 feet--</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>--FILL--</td><td></td><td></td><td></td><td>32</td><td></td><td></td><td></td><td>--Recovery: 98%--</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>--RDR 2--</td><td></td><td></td><td></td><td>21</td><td></td><td></td><td></td><td>--RQD: 14%--</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>5</td><td></td><td>3</td><td>25</td><td>NP</td><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>44</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>50/2"</td><td></td><td></td><td></td><td>Boring terminated at 35.00 ft</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>4</td><td>60/6"</td><td>NP</td><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>10</td><td></td><td>5</td><td>50/5"</td><td>NP</td><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>Very dense, gray SANDY GRAVEL; 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wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG RRC-BB-06

WEI Job No.: 255-SP-01

Date: NAVD 88
Elevation: 555.68 ft
North: 1755480.43 ft
East: 1024594.60 ft
Station: 387+90.91
Offset: 61.7 RT

Client: **Stantec**
Project: **I-80 Reconstruction, Ridge Road to Houboit Road**
Location: **Willi County, Illinois**

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Type	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
	554.5	14-inch thick ASPHALT --PAVEMENT-- Medium dense, brown and gray Gravelly SILTY LOAM to CLAY LOAM; damp --FILL-- --RDR 2-3-- --L _c (%)=25, P _t (%)=16-- --%Gravel=23.7-- --%Sand=22.3-- --%Silt=42.8-- --%Clay=11.2-- --A4 (2)--	1	1	NP	8 7 8		15				closely spaced, moderately weathered, horizontal, oblique, and vertical joints, with 0.05 - 0.2 inch opening, slightly rough walls, and >0.2 inch thick, greenish clay and silty infill. --RUN 1: 21.0 to 29.0 feet-- --Recovery: 63%-- --RQD: 4%-- --RUN 2: 29.0 to 36.0 feet-- --Recovery: 95%-- --RQD: 4%--	8				
	546.7	Very stiff, black SILTY CLAY; damp --Buried TOPSOIL--	10	4	P	7 7 7	2.50	30									
	545.2	Very stiff, brown and gray CLAY to SILTY CLAY, trace wood fragments; damp --RDR 2--	5	5	B	6 6 6	3.12	17		519.7	Boring terminated at 36.00 ft	35					
	542.7	Hard, brown and light gray SILTY CLAY LOAM; damp --RDR 2-- --L _c (%)=33, P _t (%)=16-- --%Gravel=0.1-- --%Sand=5.0-- --%Silt=69.6-- --%Clay=25.2-- --A-6 (16)--	6	6	S	6 11 12	4.18	18					40				
	537.7	Very dense, gray GRAVEL; damp to wet --Weathered BEDROCK-- --RDR 2-3--	20	7	P	3 9 18	4.50	17					45				
	534.7	--poor recovery of rock core possibly due to gummy shale in core sample-- Strong, light bluish gray, very poor quality, vuggy DOLOSTONE, SHALE and MUDSTONE interbedded;	25	8	NP	54		7				50					

GENERAL NOTES

Begin Drilling **08-05-2021** Complete Drilling **08-05-2021**
Drilling Contractor **Wang Testing Services** Drill Rig **20D50T [80%]**
Driller **RBR** Logger **M. Sadowski** Checked by **C. Marin**
Drilling Method **2.25" ID HSA to 10 ft; mud rotary thereafter; boring backfilled upon completion**

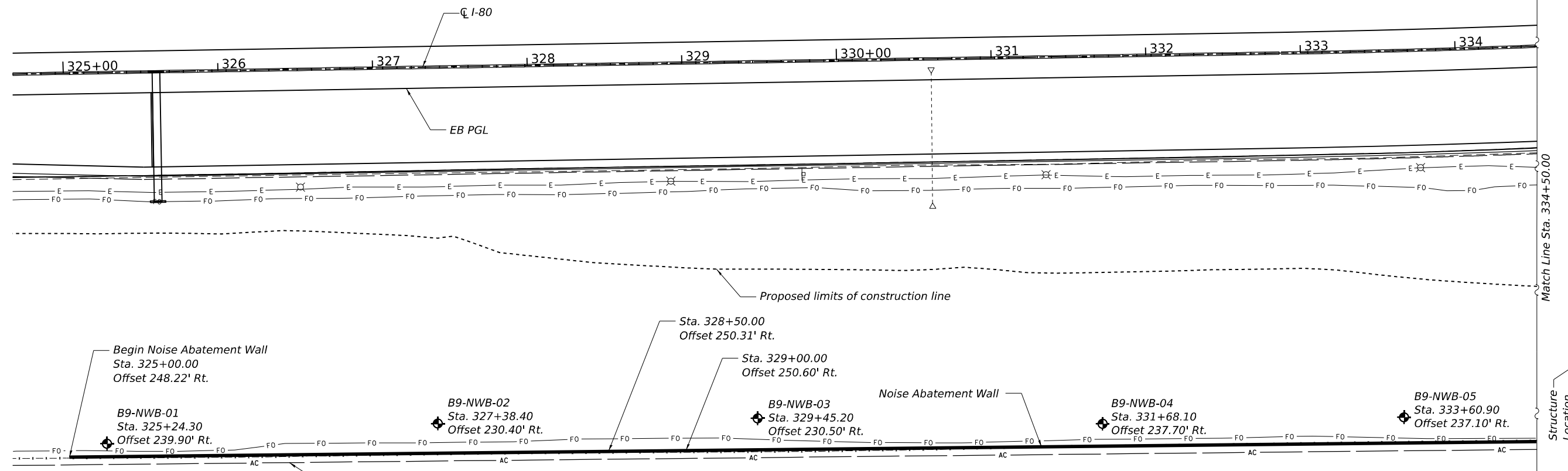
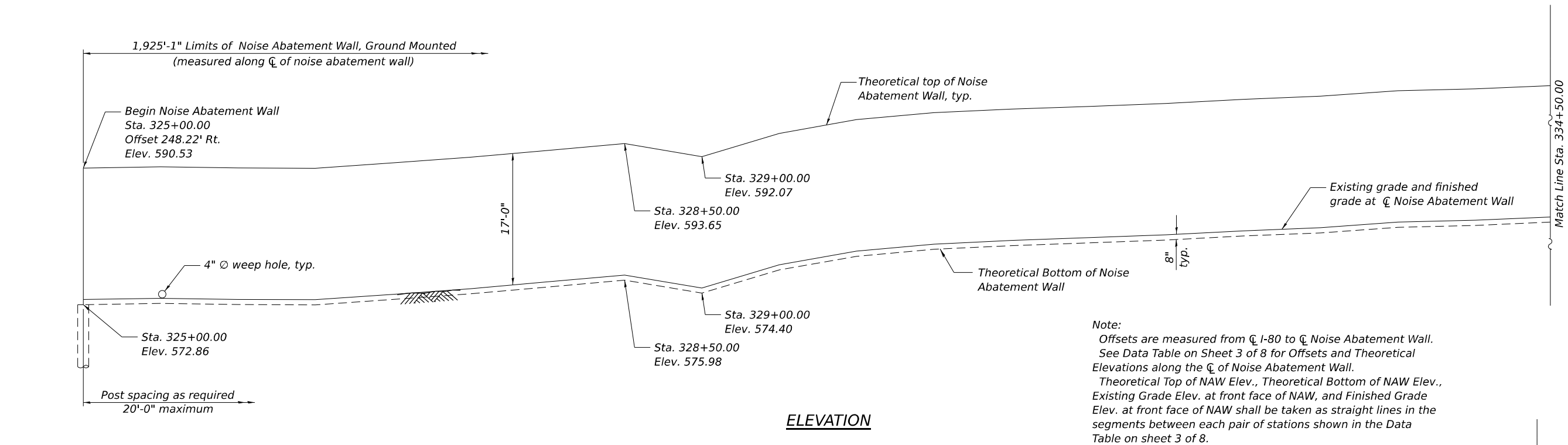
WATER LEVEL DATA

While Drilling **18.50 ft**
At Completion of Drilling **mud in the borehole**
Time After Drilling **NA**
Depth to Water **NA**

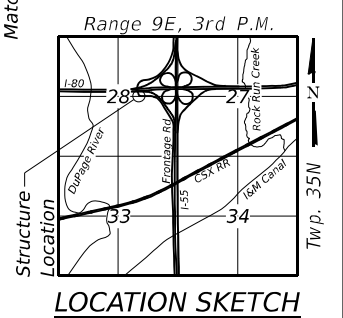
The stratification lines represent the approximate boundary between soil types; the actual transition may be irregular.

WANGENG 255307.GPJ WANGENG.DOT 8/19/22

MODEL: Default
FILE NAME: p:\projects\transsystems-pw\1-hosted\Documents\Projects_2018\CH401\401180022\01-Structures\Noise Wall\099N1000_D162R28-shl-noisewall-001-GPE.dgn



- LEGEND**
- Noise Abatement Wall Soil Boring
 - Existing Fence
 - AC Access Control
 - E Underground Electric
 - F0 Fiber Optic
 - Ex ROW



GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 80 - SEC. FAI 80 21 STRUCTURE 7
WILL COUNTY
STA. 325+00.00 TO 344+00.00
STRUCTURE NO. 099-N1000

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

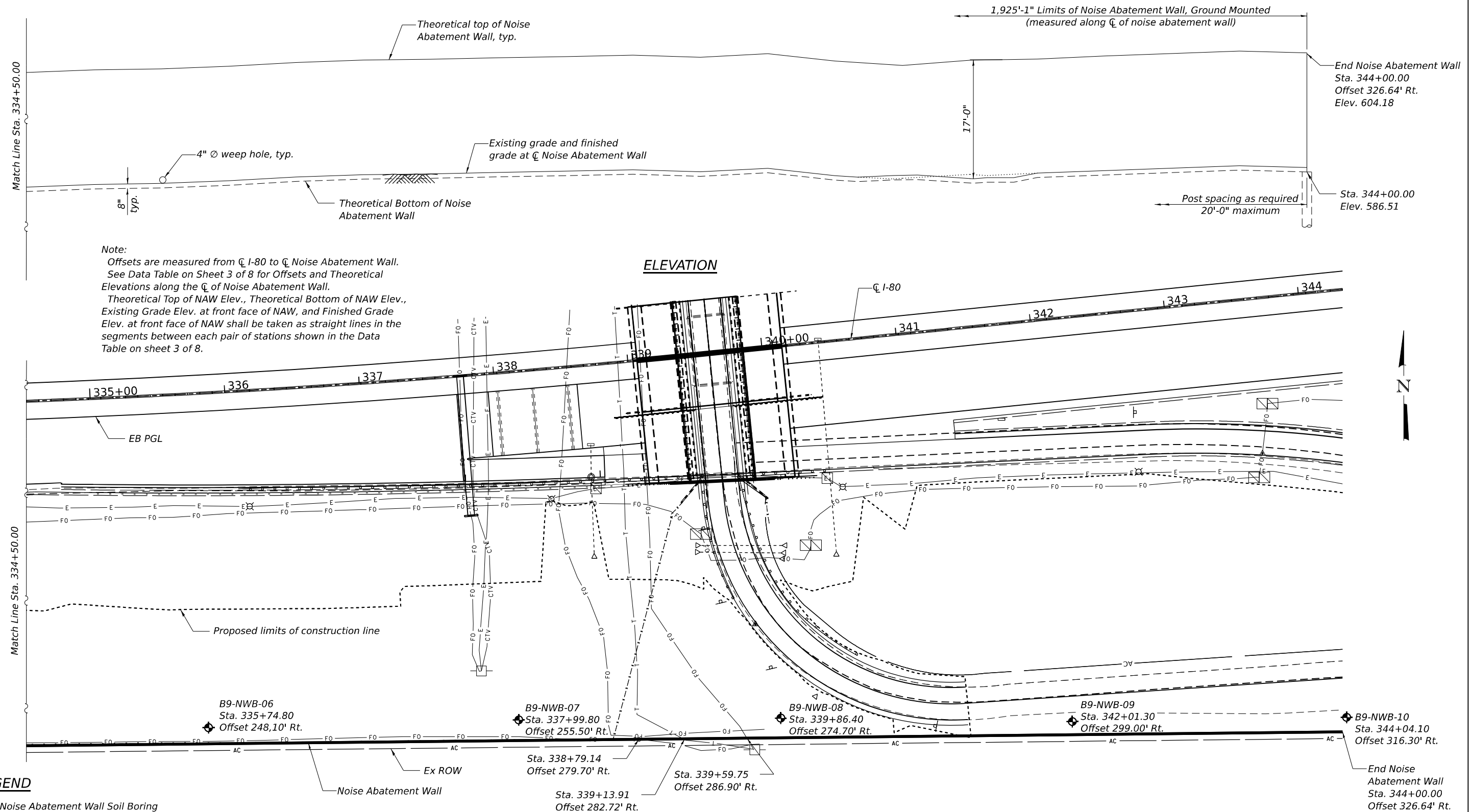
SHEET 1 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 7	WILL	1059	867
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME =	DESIGNED - MS	REVISED -
PLOT SCALE =	CHECKED - CZ	REVISED -
PLOT DATE =	DRAWN - AJF	REVISED -
	CHECKED - CZ	REVISED -

MODEL: Default
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Note:
Offsets are measured from CL I-80 to CL Noise Abatement Wall.
See Data Table on Sheet 3 of 8 for Offsets and Theoretical Elevations along the CL of Noise Abatement Wall.
Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at front face of NAW, and Finished Grade Elev. at front face of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 3 of 8.

LEGEND

- ◆ Noise Abatement Wall Soil Boring
- - - Existing Fence
- AC — Access Control
- E — Underground Electric
- F — Fiber Optic
- T — Underground Telephone
- CTV — Underground Cable TV

PLAN

GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 80 - SEC. FAI 80 21 STRUCTURE 7
WILL COUNTY
STA. 325+00.00 TO 344+00.00
STRUCTURE NO. 099-N1000

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME =	DESIGNED - MS	REVISED -
PLOT SCALE =	CHECKED - CZ	REVISED -
PLOT DATE =	DRAWN - AJF	REVISED -
	CHECKED - CZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 2 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 7	WILL	1059	868
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

1. The Contractor shall field verify location of the existing utilities prior to construction. The Contractor shall take precautions not to damage existing utilities. Any such damage shall be repaired by the Contractor at no additional cost.
2. Noise Abatement Wall drilled shaft foundation diameter, depth and spacing to be determined by the Contractor.
3. Contractor shall provide 4" $\varnothing$ weep holes at ground level in the bottom of the wall at a spacing of 8 ft. Cost shall be included with Noise Abatement Wall, Ground Mounted.
4. Contractor shall provide Rolled Ashlar Stone Finish on both faces of Noise Abatement Wall.
5. Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at front face of NAW and Finished Grade Elev. at front face of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on this sheet.
6. Any rock excavation required for the noise wall construction will not be paid separately and will be included with the Noise Abatement Wall, Ground Mounted.

CURVE DATA

P.I. Sta. = 336+16.87
 $\Delta = 04^{\circ}49'03''$ (Lt.)
 $D = 0^{\circ}43'54''$
 $R = 7,830'$
 $T = 329.38'$
 $L = 658.37'$
 $E = 6.92'$
P.C. Sta. = 332+87.50
P.T. Sta. = 339+45.86

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge
Design Specifications, 9th Edition

DESIGN LOADS

Strength III or V Wind : 35 psf
Service I Wind : 15 psf

DESIGN STRESSES

FIELD UNITS

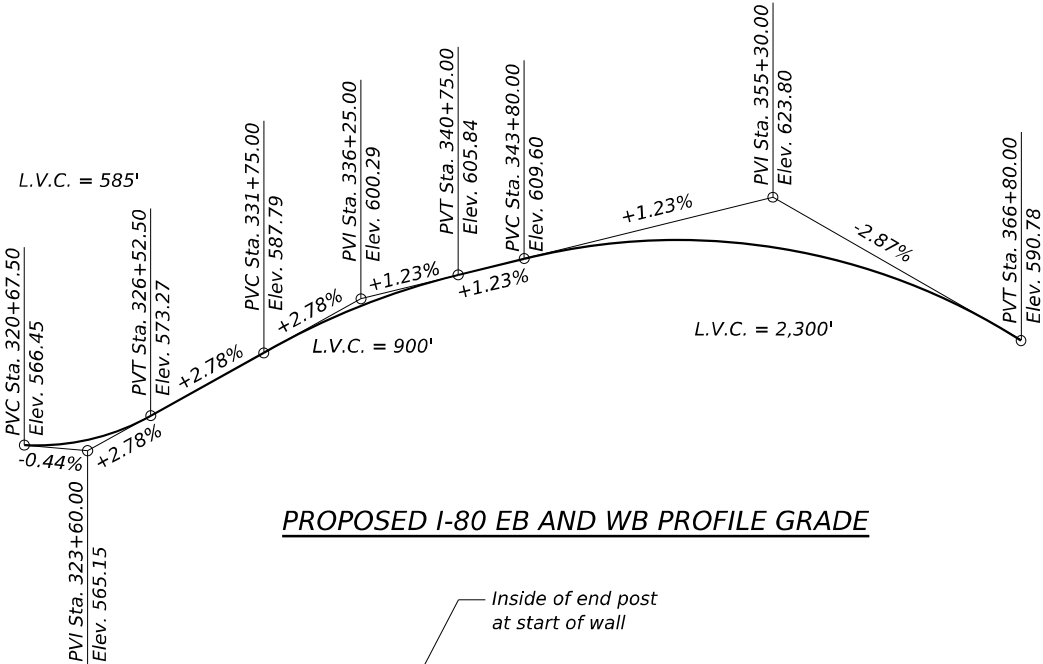
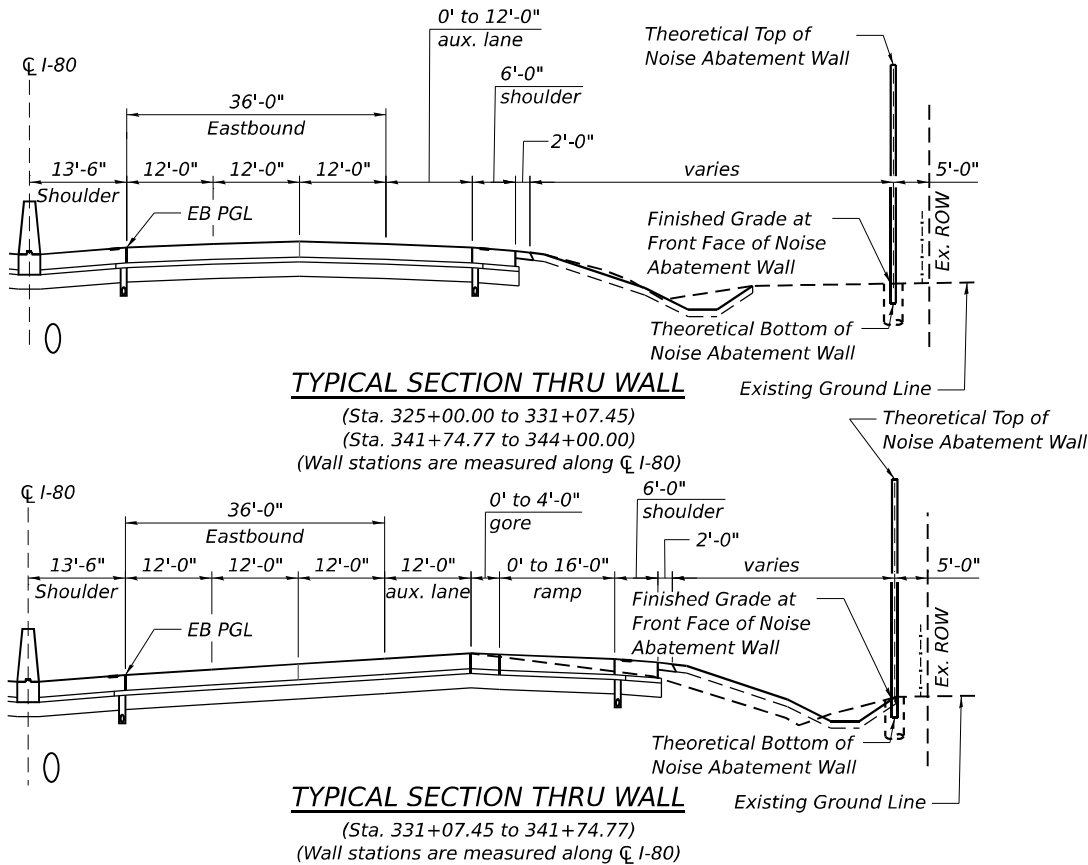
$f_c = 4,000$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (Struct. Steel, M270 Grade 50, posts)
 $f_y = 36,000$ psi (Struct. Steel, M270 Grade 36, all other structural steel)

PRECAST UNITS

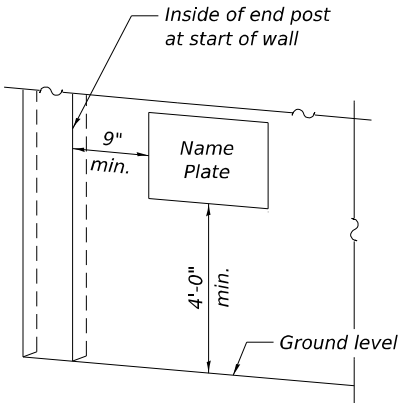
$f_c = 4,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 65,000$ psi (Welded Wire Reinforcement)

INDEX OF SHEETS

1. General Plan & Elevation I
2. General Plan & Elevation II
3. General Details
4. Noise Abatement Wall Detail
5-8. Soil Boring Data



PROPOSED I-80 EB AND WB PROFILE GRADE



FOR NOISE ABATEMENT WALL
GROUND MOUNTED

ROCK ELEVATION TABLE

Boring	Station	Offset (ft)	Top of Rock Elev. (ft)
B9-NWB-01	325+24.30	239.90	559.5
B9-NWB-02	327+38.40	230.40	562.3
B9-NWB-03	329+45.20	230.50	566.9
B9-NWB-04	331+68.10	237.70	565.2
B9-NWB-05	333+60.90	237.10	564.8
B9-NWB-06	335+74.80	248.10	567.5
B9-NWB-07	337+99.80	255.50	567.5
B9-NWB-08	339+86.40	274.70	568.9
B9-NWB-09	342+01.30	299.00	568.8
B9-NWB-10	344+04.10	316.30	565.8

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Noise Abatement Wall, Ground Mounted	Sq. Ft.	34,009
Name Plates	Each	1

NOISE REDUCTION DATA TABLE

Noise Wall Structure Number	Face	From Sta.	To Sta.	Noise Reduction Coefficient	Comments
099-N1000	I-80 face	325+00.00	344+00.00	Reflective	-
	residential face	325+00.00	344+00.00	Reflective	-

DATA TABLE

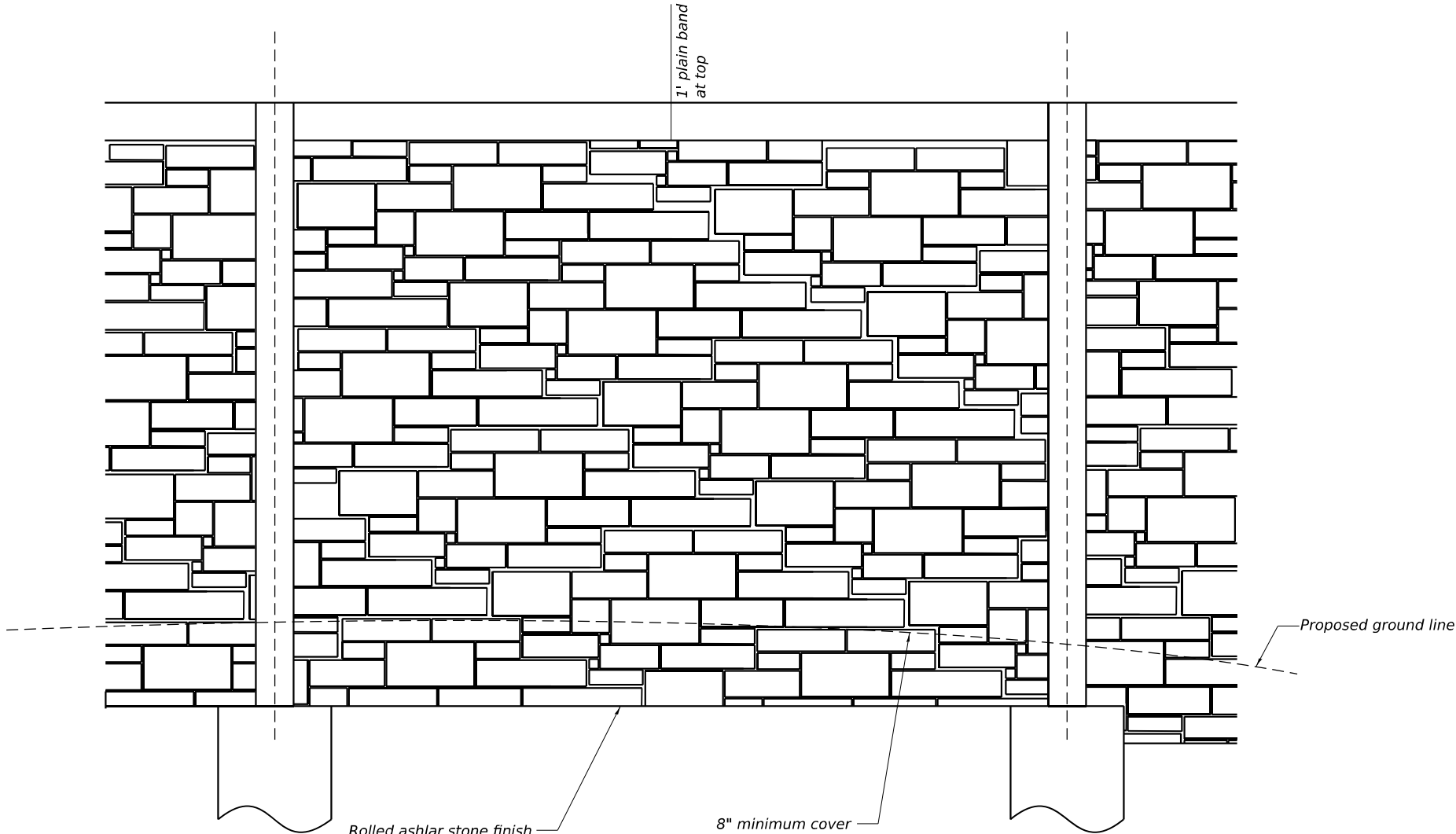
Station	Offset to $\varnothing$ Wall (ft)	Theor. Top of NAW Elev.	Exist. Grade Elev. at Front Face of NAW	Finished Grade Elev. at Front Face of NAW	Theor. Bottom of NAW Elev.
325+00	248.22	590.53	573.53	573.53	572.86
325+50	248.52	590.68	573.68	573.68	573.01
325+80	248.70	590.79	573.79	573.79	573.12
326+00	248.82	590.43	573.43	573.43	572.76
326+17.85	248.92	590.10	573.10	573.10	572.43
326+50	249.11	590.61	573.61	573.61	572.94
327+00	249.41	591.29	574.29	574.29	573.62
327+50	249.71	591.98	574.98	574.98	574.31
328+00	250.01	592.81	575.81	575.81	575.14
328+50	250.31	593.65	576.65	576.65	575.98
328+65.22	250.40	593.93	576.93	576.93	576.26
328+70.40	250.43	590.33	573.33	573.33	572.66
329+00	250.60	592.07	575.07	575.07	574.40
329+50	250.90	595.09	578.09	578.09	577.42
329+71.17	251.03	596.32	579.32	579.32	578.65
330+00	251.20	596.85	579.85	579.85	579.18
330+50	251.50	597.78	580.78	580.78	580.11
330+55.71	251.53	597.89	580.89	580.89	580.22
331+00	251.79	598.21	581.21	581.21	580.54
331+50	252.09	598.58	581.58	581.58	580.91
332+00	252.39	598.96	581.96	581.96	581.29
332+50	252.69	599.36	582.36	582.36	581.69
333+00	253.00	599.77	582.77	582.77	582.10
333+50	253.55	600.17	583.17	583.17	582.50
334+00	254.44	600.57	583.57	583.57	582.90
334+50	255.65	600.74	583.74	583.74	583.07
335+00	257.20	601.38	584.38	584.38	583.71
335+50	259.07	601.78	584.78	584.78	584.11
336+00	261.28	602.18	585.18	585.18	584.51
336+50	263.81	602.62	585.62	585.62	584.95
337+00	266.68	603.07	586.07	586.07	585.40
337+50	269.89	603.51	586.51	586.51	585.84
338+00	273.42	603.58	586.58	586.58	585.91
338+50	277.29	603.63	586.63	586.63	585.96
339+00	281.49	603.73	586.73	586.73	586.06
339+50	286.02	603.85	586.85	586.85	586.18
340+00	290.53	604.03	587.03	587.03	586.36
340+26.54	292.93	604.55	587.55	587.55	586.88
340+39.01	294.05	602.98	585.98	585.98	585.31
340+50	295.04	602.87	585.87	585.87	585.20
340+66.83	296.56	602.71	585.71	585.71	585.04
340+93.07	298.93	602.96	585.45	585.96	585.29
341+00	299.56	603.01	585.53	586.01	585.34
341+11.13	300.56	603.02	585.67	586.02	585.35
341+50	304.07	602.51	586.13	585.51	584.84
341+52.55	304.30	602.47	586.08	585.47	584.80
341+62.82	305.23	602.64	585.96	585.64	584.97
341+82.47	307.00	602.63	586.15	585.63	584.96
342+00	308.59	603.32	586.32	586.32	585.65
342+50	313.10	603.80	586.80	586.80	586.13
343+00	317.61	604.19	587.19	587.19	586.52
343+50	322.13	604.51	587.51	587.51	586.84
343+57.56	322.81	604.56	587.56	587.56	586.89
343+61.57	323.17	604.21	587.21	587.21	586.54
344+00	326.64	604.18	587.18	587.18	586.51

NOISE ABATEMENT WALL
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 80
SEC. F.A.I. 80 21 STRUCTURE 7
FROM STA. 325+00.00 TO STA. 344+00.00
STRUCTURE NO. 099-N1000

NAME PLATE

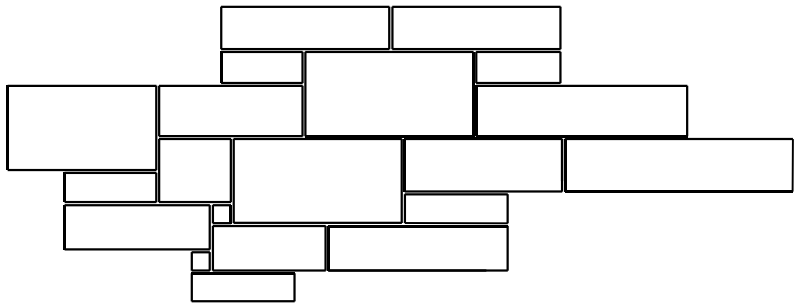
See Std. 515001

MODEL: Default
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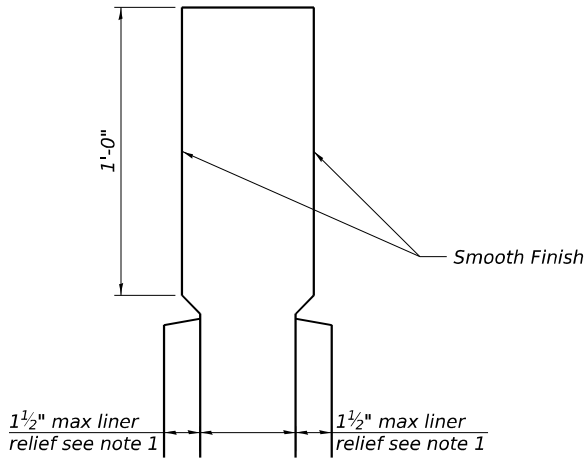
Note:
Each side of the noise wall panels shall have a rolled ashlar stone finish.
The finish shall have a 1½" relief for noise abatement wall, ground mounted
and a ¾" relief for noise abatement wall, structure mounted. The color of
both sides of the panels, plain band, posts and all other visible elements
shall follow the special provisions.

ELEVATION



STONE PATTERN SIZES
3" x 3" - 14" x 28"

ENLARGED PATTERN DETAIL



ENLARGED CAP DETAIL

USER NAME	=	_____	DESIGNED	-	MS	REVISED	-	_____
			CHECKED	-	CZ	REVISED	-	_____
PLOT SCALE	=	_____	DRAWN	-	AJF	REVISED	-	_____
PLOT DATE	=	_____	CHECKED	-	CZ	REVISED	-	_____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 7	WILL	1059	870
CONTRACT NO. 62R28				
		ILLINOIS	FED. AID PROJECT	

[illegible]

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth Sample Type recovery	Sample No.	SPT Values (blows/6 in)	Cu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth	Sample Type recovery	Sample No.	SPT Values (blows/6 in)	Cu (tsf)	Moisture Content (%)
	573.8	12-inch thick, brown SILTY CLAY; dry														
		--TOPSOIL-- Medium stiff to very stiff, brown and gray SILTY CLAY LOAM, little gravel; damp to wet --RDR 2--		1	5 6 7	3.00 P	15		562.3	Boring terminated at 22.50 ft						
	570.8	--Qu: 0.50P-- Loose, brown SANDY LOAM, little gravel; saturated --RDR 2--		2	4 4 4	NP	14				25					
	568.7	Very stiff, brown and gray LOAM to CLAY LOAM, trace to little gravel; wet --RDR 2-3--		3	2 2 8	2.46 B	14									
		--rig chatter; possible cobbles--		4	19 29 25	2.00 P	12				30					
	563.7	Very dense, light gray SANDY LOAM; wet --RDR 3-4--		5	13 15 50/2*	NP	12									
	562.3	Strong, dark gray, fair rock mass quality, bedded shaly DOLOSTONE; closely spaced, slightly weathered, horizontal and oblique joint, with 0-0.2 inch opening, rough walls, and <0.2 inch thick sand infill. --Run 1: 12.5 to 22.5 feet-- --Recovery: 95%-- --RGD: 60%--		6							35					
											40					
GENERAL NOTES								WATER LEVEL DATA								
Begin Drilling 09-21-2022				Complete Drilling 09-21-2022				While Drilling ▽ 6.00 ft								
Drilling Contractor Wang Testing Services				Drill Rig 21D50A [84%]				At Completion of Drilling ▼ 5.00 ft								
Driller KS&AC				Logger B. Miller				Time After Drilling NA								
Drilling Method 3.25" ID HSA; boring backfilled upon completion				Checked by C. Marin				Depth to Water ▾ NA								
The stratification lines represent the approximate boundary between soil cores; the actual transition may be gradual																

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		20-inch thick, black SILTY CLAY															
	577.7	--TOPSOIL--			1	14 10 8	NP	5		566.9							
	576.4	Medium dense, orangish brown SANDY LOAM, little gravel; dry --RDR 2--			2	5 4 6	4.00 P	20			Boring terminated at 22.50 ft						
		Hard, brown SILTY CLAY to SILTY CLAY LOAM, trace to little gravel; damp --RDR 2--	5									25					
					3	4 7 9	4.92 B	17									
					4	5 7 10	4.76 B	15				30					
	568.1	Very dense, gray LOAM, little gravel; damp --RDR 3--			5	23 50 30	NP	14									
	566.9	Strong, dark gray, poor rock mass quality, bedded, slightly cherty, slightly wuggy DOLOSTONE; closely spaced, slightly weathered, mainly horizontal and rarely oblique joints, with <0.05 inch opening, rough walls, and 0 - 0.2 inch thick sand infill.										35					
		--Run 1: 12.5 to 22.5 feet-- --Recovery: 89%-- --RQD: 45%--			6							40					
			20														
GENERAL NOTES									WATER LEVEL DATA								
Begin Drilling 09-21-2022 Complete Drilling 09-21-2022									While Drilling ▽ DRY								
Drilling Contractor Wang Testing Services Drill Rig 21D50A [84%]									At Completion of Drilling ▾ DRY								
Driller KS&AC Logger B. Miller Checked by C. Marin									Time After Drilling NA								
Drilling Method 3.25" ID HSA; boring backfilled upon completion									Depth to Water ▾ NA								
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.																	

Wang Engineering wangeng@wangeng.com 1145 N Main Street Lombard, IL, 60148 Telephone: 630 953 9928 Fax: 630 953 9938		BORING LOG B9-NWB-04 WEI Job No.: 255 39 01 Client Stantec Project I-80 Reconstruction, Ridge Road to Houbolt Road Location Will County, Illinois		Datum: NAVD 88 Elevation: 581.70 ft North: 1755042.53 ft East: 1018982.03 ft Station: 331+68.1 Offset: 237.7 RT													
Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Q _v (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Q _v (tsf)	Moisture Content (%)
		18-inch thick, brown SILTY CLAY									--Run 1: 16.5 to 26.5 feet--						
	580.2	--TOPSOIL--									--Recovery: 95%--						
		Medium dense, orangish brown SANDY LOAM; damp			1	8 9 8	NP	12			--RQD: 39%--			8			
		--RDR 2--									--Q _v @16.5 feet=10,477 psi						
											--Q _v @17.0 feet=9,852 psi						
			5		2	5 4 6	NP	8									
	576.2	Very stiff, brown and gray SILTY CLAY, trace gravel; damp			3	3 4 5	3.20 B	24		565.2	Boring terminated at 26.50 ft						
		--RDR 2--															
	573.7	Stiff to very stiff, brown and gray CLAY LOAM to LOAM, trace to some gravel; damp to wet			4	3 4 6	2.05 B	15									
		--RDR 2--	10														
					5	9 7 11	3.12 B	12									
			15		6	17 13 11	1.50 P	10									
	566.2	Very dense, light gray Gravelly SAND; saturated			7	50	NP	18									
	565.2	--RDR 4--															
		Strong, gray, poor rock mass quality, cherty DOLOSTONE; closely spaced, slightly weathered, horizontal, oblique, and vertical joints, with <0.05 inch opening, rough walls, and <0.2 inch thick sand infill.					CORE										
			20														

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling 09-21-2022	Complete Drilling 09-21-2022				
Drilling Contractor Wang Testing Services	Drill Rig 21D50A [84%]				
Driller KS&AG	Logger B. Miller	Checked by C. Marin			
Drilling Method 3.25" ID HSA; boring backfilled upon completion					
While Drilling ▽ 14.00 ft At Completion of Drilling ▽ 12.00 ft Time After Drilling NA Depth to Water ▽ NA					
The stratification lines represent the approximate boundary between soil types. All voids backfilled with cement grout.					

[illegible]

Wang Engineering wangeng@wangeng.com 1145 N Main Street Lombard, IL 60148 Telephone: 630 953 9928 Fax: 630 953 9938	BORING LOG B9-NWB-06 WEI Job No.: 255-39-01 Stantec Project I-80 Reconstruction, Ridge Road to Houbolt Road Location Will County, Illinois	Datum: NAVD 88 Elevation: 584.96 ft North: 1755044.41 ft East: 1019397.77 ft Station: 335+74.8 Offset: 248.1 RT																																																																																																																																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Profile</th> <th style="width: 10%;">Elevation (ft)</th> <th style="width: 45%;">SOIL AND ROCK DESCRIPTION</th> <th style="width: 5%;">Depth (ft)</th> <th style="width: 5%;">Sample Type</th> <th style="width: 5%;">Sample No.</th> <th style="width: 10%;">SPT Values (blows/in)</th> <th style="width: 5%;">CU (tsf)</th> <th style="width: 10%;">Moisture Content (%)</th> </tr> </thead> <tbody> <tr> <td></td> <td>584.2</td> <td>9-inch thick, brown SILTY CLAY; dry</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>--TOPSOIL-- Hard, brown CLAY LOAM, trace to some gravel; damp</td> <td>1</td> <td>X</td> <td>8</td> <td>7</td> <td>4.50 P</td> <td>17</td> </tr> <tr> <td></td> <td></td> <td>--FILL-- --RDR 2--</td> <td>2</td> <td>X</td> <td>6</td> <td>12</td> <td>10.25 B</td> <td>17</td> </tr> <tr> <td></td> <td></td> <td></td> <td>3</td> <td>X</td> <td>5</td> <td>7</td> <td>8.20 B</td> <td>13</td> </tr> <tr> <td></td> <td>577.0</td> <td>Very stiff to hard, brown and gray SILTY CLAY, trace gravel; dry to moist</td> <td>4</td> <td>X</td> <td>4</td> <td>6</td> <td>4.50 P</td> <td>20</td> </tr> <tr> <td></td> <td></td> <td>--RDR 2--</td> <td>5</td> <td>X</td> <td>4</td> <td>8</td> <td>3.50 P</td> <td>20</td> </tr> <tr> <td></td> <td></td> <td></td> <td>6</td> <td>X</td> <td>3</td> <td>3</td> <td>3.20 B</td> <td>31</td> </tr> <tr> <td></td> <td>569.5</td> <td>--silt seam; wet--</td> <td>7</td> <td>X</td> <td>3</td> <td>16</td> <td>NP</td> <td>13</td> </tr> <tr> <td></td> <td>567.5</td> <td>Very dense, gray LOAM, trace gravel; saturated</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>--RDR 3--</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Strong, gray, good rock mass quality, shaly DOLOSTONE; closely spaced, slightly weathered, horizontal joints, with 0-0.2 inch opening, rough walls, and <0.2 inch thick sand</td> <td>20</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	CU (tsf)	Moisture Content (%)		584.2	9-inch thick, brown SILTY CLAY; dry									--TOPSOIL-- Hard, brown CLAY LOAM, trace to some gravel; damp	1	X	8	7	4.50 P	17			--FILL-- --RDR 2--	2	X	6	12	10.25 B	17				3	X	5	7	8.20 B	13		577.0	Very stiff to hard, brown and gray SILTY CLAY, trace gravel; dry to moist	4	X	4	6	4.50 P	20			--RDR 2--	5	X	4	8	3.50 P	20				6	X	3	3	3.20 B	31		569.5	--silt seam; wet--	7	X	3	16	NP	13		567.5	Very dense, gray LOAM, trace gravel; saturated									--RDR 3--									Strong, gray, good rock mass quality, shaly DOLOSTONE; closely spaced, slightly weathered, horizontal joints, with 0-0.2 inch opening, rough walls, and <0.2 inch thick sand	20						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Profile</th> <th style="width: 10%;">Elevation (ft)</th> <th style="width: 45%;">SOIL AND ROCK DESCRIPTION</th> <th style="width: 5%;">Depth (ft)</th> <th style="width: 5%;">Sample Type</th> <th style="width: 5%;">Sample No.</th> <th style="width: 10%;">SPT Values (blows/in)</th> <th style="width: 5%;">CU (tsf)</th> <th style="width: 10%;">Moisture Content (%)</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>infill.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>--Run 1: 17.5 to 27.5 feet-- --Recovery: 99%-- --RQD: 75%--</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>557.5</td> <td>Boring terminated at 27.50 ft</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	CU (tsf)	Moisture Content (%)			infill.									--Run 1: 17.5 to 27.5 feet-- --Recovery: 99%-- --RQD: 75%--								557.5	Boring terminated at 27.50 ft						
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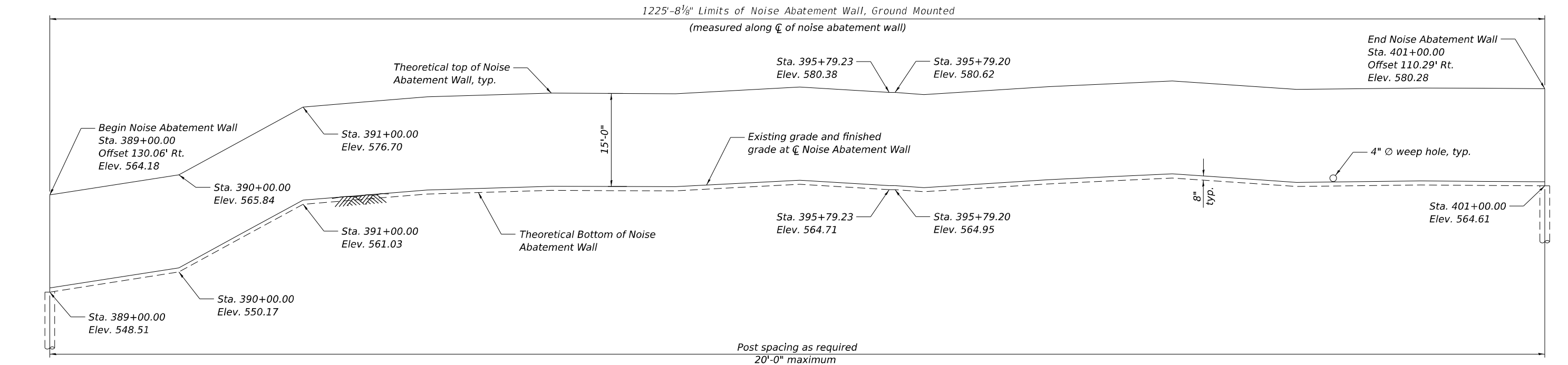
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Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	
	587.7	8-inch thick, brown SILTY CLAY; dry								568.8	rock mass quality, shaly DOLOSTONE; closely spaced, slightly weathered, horizontal joints, with <0.05 inch opening, rough walls, and <0.2 inch thick sand infill.							
		--TOPSOIL-- Very stiff, brown CLAY LOAM, trace gravel; dry to damp	1	3 4	3.50 P	18												
		--FILL-- --RDR 2--	2	4 5 6	3.00 P	23												
			5															
	582.8	Very stiff to hard, brown and gray SILTY CLAY, trace gravel; dry to damp	3	5 7 9	7.54 B	19												
		--RDR 2--	4	3 4 6	7.95 B	21												
			10															
			5	4 5 8	5.08 B	23												
	571.4	Gray LOAM, little gravel; saturated	7	3 9 11	2.46 B	22				568.8								
	570.3	--RDR 2--	8	8	NP	20												
		Very dense, gray, silty GRAVEL; saturated																
		--RDR 3--	20															
	568.8	Strong, gray, very poor to fair																
GENERAL NOTES Begin Drilling 09-26-2022 Complete Drilling 09-26-2022 Drilling Contractor Wang Testing Services Drill Rig 21D50A [84%] Driller KS&AC Logger B. Miller Checked by C. Marin Drilling Method 3.25" ID HSA; boring backfilled upon completion									WATER LEVEL DATA While Drilling 17.00 ft At Completion of Drilling 12.00 ft Time After Drilling NA Depth to Water NA The stratification lines represent the approximate boundary between cuttings; the actual transition may be gradual									

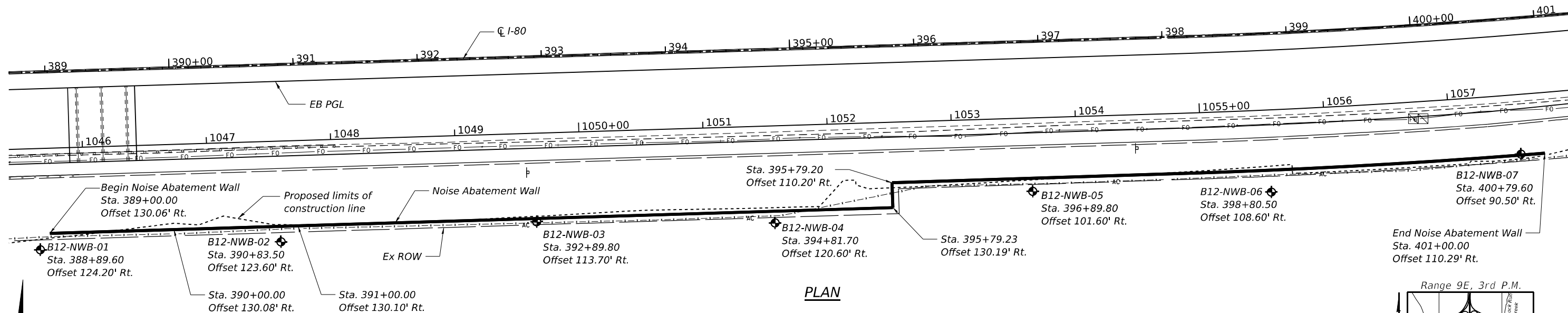
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FILE NAME: pw:/

Wang Engineering wangeng@wangeng.com 1145 N Main Street Lombard, IL, 60148 Telephone: 630 953 9928 Fax: 630 953 9938		BORING LOG B9-NWB-10 WEI Job No.: 255-39-01				Page 1 of 1 Datum: NAVD 88 Elevation: 599.31 ft North: 1755052.05 ft East: 1020242.18 ft Station: 344+04.1 Offset: 316.3 RT									
		Client: Stantec		Project: I-80 Reconstruction, Ridge Road to Houbolt Road		Location: Will County, Illinois									
Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)
	597.8	Hard, brown SILTY CLAY, trace gravel; dry --TOPSOIL--								--RDR 3-4--					
		Stiff to hard, brown and gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; dry to damp --RDR 2--	1	4	4.00 P	17			595.8	Strong, dark gray, poor rock mass quality, shaly DOLOSTONE; closely spaced, slightly weathered, horizontal and oblique joints, with <0.05 inch opening, rough walls, and <0.2 inch thick sand infill. --Run 1: 23.5 to 33.5 feet-- --Recovery: 98%-- --RQD: 40%--	9	50/6	NP	10	
			2	3	2.38 B	21									
			3	5	7.46 B	20									
			4	4	7.30 B	19									
			5	4	NP	22									
	597.8	Loose, orange SANDY LOAM, trace gravel; saturated --RDR 2--	6	1	1.31 B	21									
	598.3	Medium stiff to very stiff, gray SILTY CLAY LOAM to SILTY LOAM, trace to some gravel; moist to wet --RDR 2--15	7	2	0.74 B	15									
			8	7	NP	10									
	597.3	Very dense, gray Gravelly LOAM; saturated	20	24											
				33											
GENERAL NOTES								WATER LEVEL DATA							
Begin Drilling 09-26-2022 Complete Drilling 09-26-2022								While Drilling 12.50 ft							
Drilling Contractor Wang Testing Services Drill Rig 21D50A [84%]								At Completion of Drilling 9.00 ft							
Driller KS&AG Logger B. Miller Checked by C. Marin								Time After Drilling NA							
Drilling Method 3.25" ID HSA; boring backfilled upon completion								Depth to Water NA							
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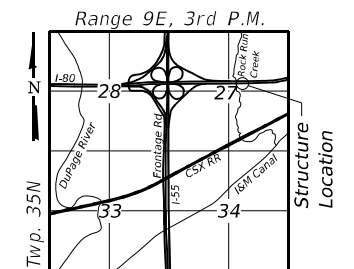
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ELEVATION



PLAN



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 80 - SEC. FAI 80 21 STRUCTURE 7
WILL COUNTY
STA. 389+00.00 TO 401+00.00
STRUCTURE NO. 099-N1001

Note:
Offsets are measured from CL I-80 to CL Noise Abatement Wall.
See Data Table on Sheet 2 of 6 for Offsets and Theoretical Elevations along the CL of Noise Abatement Wall.
Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at front face of NAW, and Finished Grade Elev. at front face of NAW shall be taken as straight lines in the segments between each pair of station shown in the Data Table on sheet 2 of 6.

LEGEND

- Noise Abatement Wall Soil Boring
- Existing Fence
- AC Access Control
- F0 Fiber Optic

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME =	DESIGNED - MS	REVISED -
	CHECKED - CZ	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - CZ	REVISED -

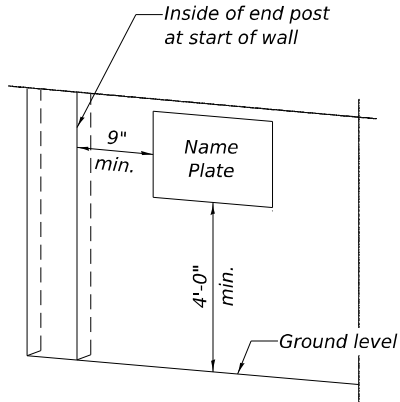
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 7	WILL	1059	875
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

1. The Contractor shall field verify location of the existing utilities prior to construction. The Contractor shall take precautions not to damage existing utilities. Any such damage shall be repaired by the Contractor at no additional cost.
2. Noise Abatement Wall drilled shaft foundation diameter, depth and spacing to be determined by the Contractor.
3. Contractor shall provide 4" $\varnothing$ weep holes at ground level in the bottom of the wall at a spacing of 8 ft. Cost shall be included with Noise Abatement Wall, Ground Mounted.
4. Contractor shall provide Rolled Ashlar Stone Finish on both faces of Noise Abatement Wall.
5. Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at front face of NAW, and Finished Grade Elev. at front face of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on this sheet.
6. Any rock excavation required for the noise wall construction will not be paid separately and will be included with the Noise Abatement Wall, Ground Mounted.



FOR NOISE ABATEMENT WALL
GROUND MOUNTED

ROCK ELEVATION TABLE

Boring	Station	Offset (ft)	Top of Rock Elev. (ft)
B12-NWB-01	388+89.60	124.20	542.0
B12-NWB-02	390+83.50	123.60	555.2
B12-NWB-03	392+89.80	113.70	558.7
B12-NWB-04	394+81.70	120.60	561.2
B12-NWB-05	396+89.80	101.60	560.6
B12-NWB-06	398+80.50	108.60	556.9
B12-NWB-07	400+79.60	90.50	558.4

NOISE ABATEMENT WALL
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 80
SEC. F.A.I. 80 21 STRUCTURE 7
FROM STA. 389+00.00 TO STA. 401+00.00
STRUCTURE NO. 099-N1001

NAME PLATE

See Std. 515001

DATA TABLE

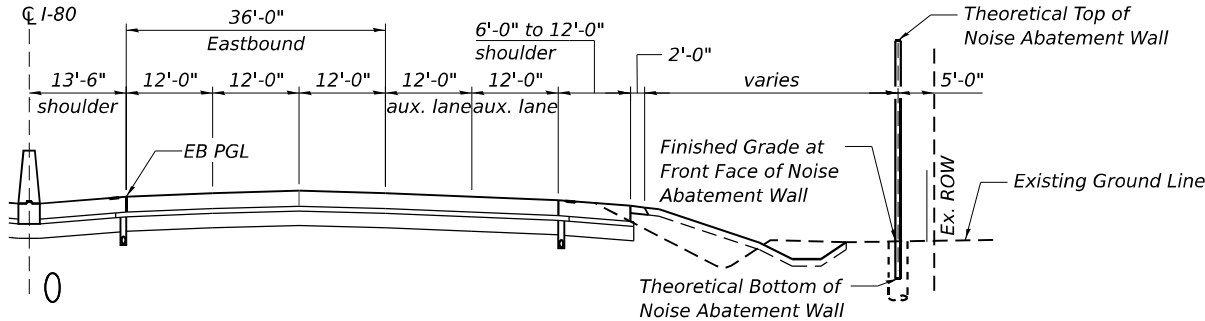
Station	Offset to $\varnothing$ Wall (ft)	Theor. Top of NAW Elev.	Exist. Grade Elev. at Front Face of NAW	Finished Grade Elev. at Front Face of NAW	Theor. Bottom of NAW Elev.
389+00	130.06	564.18	549.18	549.18	548.51
389+50	130.07	565.17	550.17	550.17	549.50
390+00	130.08	565.84	550.84	550.84	550.17
390+04.94	130.08	565.91	550.91	550.91	550.24
390+50	130.09	571.74	556.74	556.74	556.07
390+90.80	130.10	576.52	561.52	561.52	560.85
391+00	130.10	576.70	561.70	561.70	561.03
391+50	130.11	577.63	562.63	562.63	561.96
391+90.90	130.12	578.46	563.46	563.46	562.79
392+00	130.12	578.45	563.45	563.45	562.78
392+50	130.13	578.69	563.69	563.69	563.02
393+00	130.14	578.94	563.94	563.94	563.27
393+50	130.15	578.80	563.80	563.80	563.13
393+78.90	130.15	578.72	563.72	563.72	563.05
394+00	130.15	578.89	563.89	563.89	563.22
394+50	130.16	579.47	564.47	564.47	563.80
395+00	130.17	579.89	564.89	564.89	564.22
395+50	130.18	580.37	565.37	565.37	564.70
395+79.20	110.20	580.62	565.62	565.62	564.95
395+79.23	130.19	580.38	565.38	565.38	564.71
396+00	110.16	580.47	565.47	565.47	564.80
396+50	110.08	580.64	565.64	565.64	564.97
397+00	110.01	580.53	565.53	565.53	564.86
397+50	109.93	580.63	565.63	565.63	564.96
398+00	109.80	580.93	565.93	565.93	565.26
398+04.72	109.81	580.96	565.96	565.96	565.29
398+50	109.89	580.92	565.92	565.92	565.25
399+00	109.97	580.88	565.88	565.88	565.21
399+50	110.05	580.83	565.83	565.83	565.16
400+00	110.13	580.80	565.80	565.80	565.13
400+50	110.21	580.71	565.71	565.71	565.04
400+95.86	110.28	580.53	565.53	565.53	564.86
401+00	110.29	580.28	565.28	565.28	564.61

INDEX OF SHEETS

1. General Plan & Elevation
2. General Details
3. Noise Abatement Wall Detail
4-6. Soil Boring Data

CURVE DATA

P.I. Sta. = 422+52.00
 Δ = 46°06'50" (Lt)
D = 00°59'47"
R = 5,750'
T = 2,447.48'
L = 4,627.83'
E = 499.21'
P.C. Sta. = 398+04.52
P.T. Sta. = 444+32.35



TYPICAL SECTION THRU WALL

(Sta. 384+32.53 to 394+75.85)
(Wall stations are mesaured along $\varnothing$ I-80)

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge
Design Specifications, 9th Edition

DESIGN LOADS

Strength III or V Wind : 35 psf
Service I Wind : 15 psf

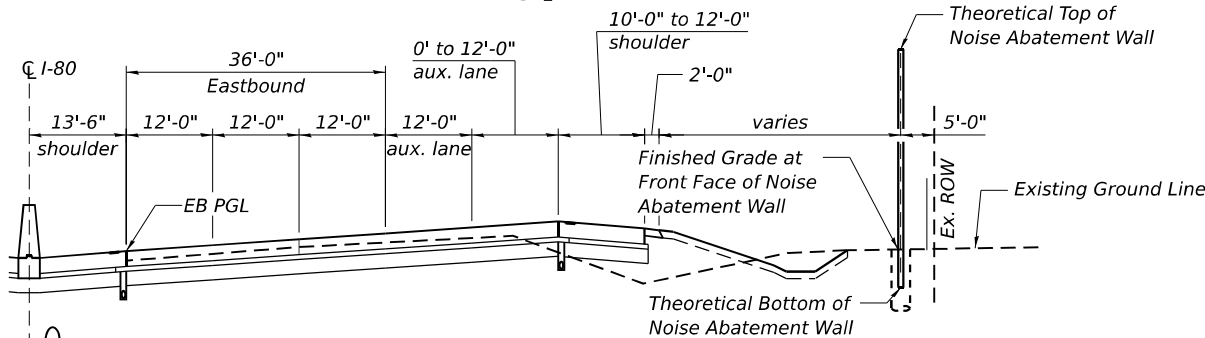
DESIGN STRESSES

FIELD UNITS

f_c = 4,000 psi
 f_y = 60,000 psi (Reinforcement)
 f_y = 50,000 psi (Struct. Steel, M270 Grade 50, posts)
 f_y = 36,000 psi (Struct. Steel, M270 Grade 36, all other structural steel)

PRECAST UNITS

f_c = 4,500 psi
 f_y = 60,000 psi (Reinforcement)
 f_y = 65,000 psi (Welded Wire Reinforcement)



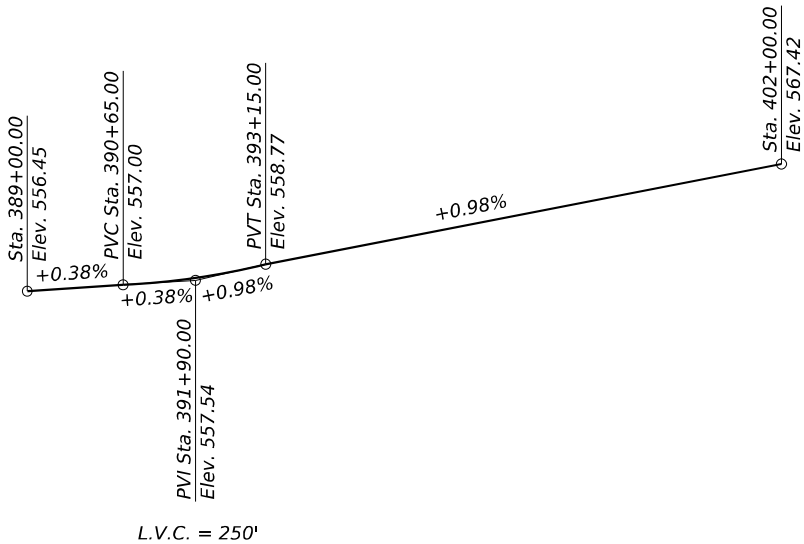
TYPICAL SECTION THRU WALL

(Sta. 394+75.85 to 410+00.00)
(Wall stations are measured along $\varnothing$ I-80)

NOISE REDUCTION DATA TABLE

Noise Wall Structure Number	Face	From Sta.	To Sta.	Noise Reduction Coefficient	Comments
099-N1001	I-80 face	389+00.00	401+00.00	Reflective	-
	commercial face	389+00.00	401+00.00	Reflective	-

PROPOSED I-80 EB AND WB PROFILE GRADE



BILL OF MATERIAL

ITEM	UNIT	TOTAL
Noise Abatement Wall, Ground Mounted	Sq. Ft.	19,210
Name Plates	Each	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DETAILS
STRUCTURE NO. 099-N1001

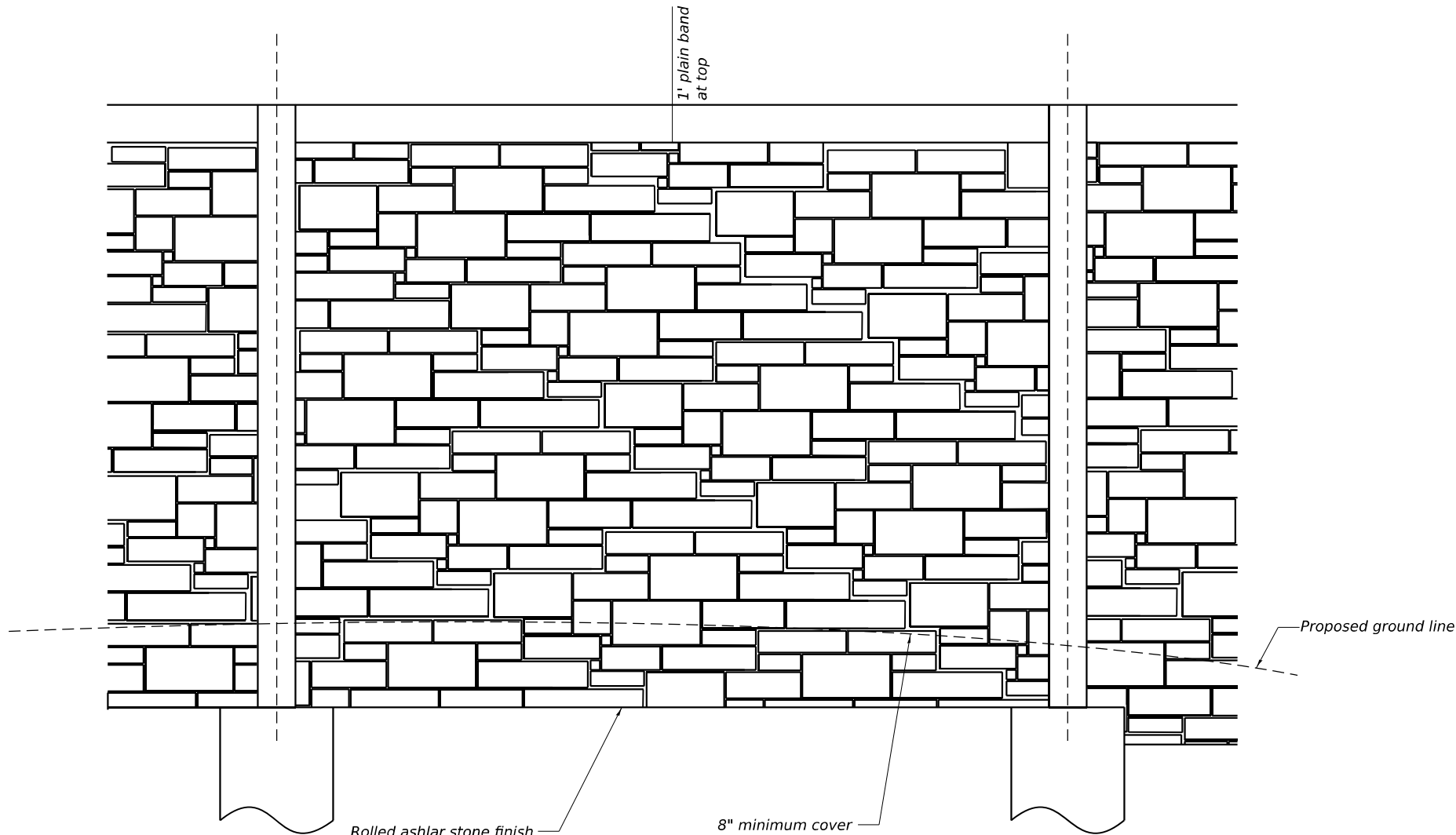
SHEET 2 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 7	WILL	1059	876
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

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Consulting Engineers
Springfield, Illinois

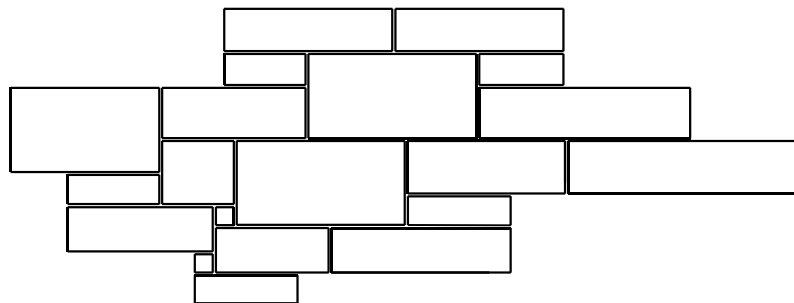
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CHECKED - XX	REVISED -	
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PLOT DATE =	CHECKED - XX	REVISED -

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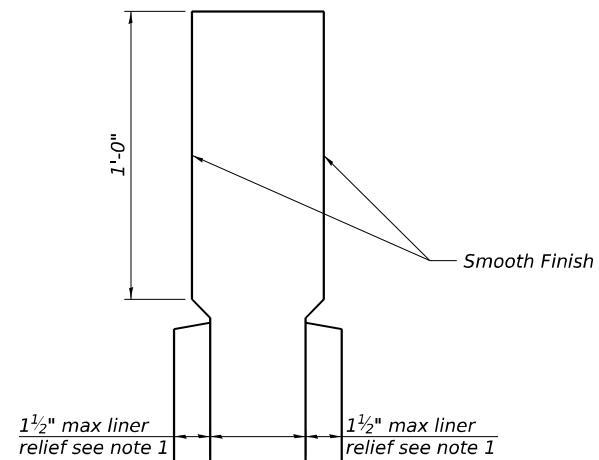


Note:
Each side of the noise wall panels shall have a rolled ashlar stone finish. The finish shall have a 1½" relief for noise abatement wall, ground mounted and a ¾" relief for noise abatement wall, structure mounted. The color of both sides of the panels, plain band, posts and all other visible elements shall follow the special provisions.

ELEVATION



ENLARGED PATTERN DETAIL



ENLARGED CAP DETAIL

USER NAME	=	_____	DESIGNED	-	MS	REVISED	-	_____
			CHECKED	-	CZ	REVISED	-	_____
PLOT SCALE	=	_____	DRAWN	-	AJF	REVISED	-	_____
PLOT DATE	=	_____	CHECKED	-	CZ	REVISED	-	_____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 7	WILL	1059	877
CONTRACT NO. 62R28				
ILLINOIS		FED. AID PROJECT		

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	Elevation (ft)	Profile	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blow/in)	Qu (tsf)	Moisture Content (%)
			9-inch thick, brown SILTY CLAY; dry															
			--TOP SOIL-- Very dense, orange, brown and light gray LOAM to SILTY LOAM, trace gravel; dry --RDR 2-5--		X	1		50/6"	NP	5								
					X	2		50/6"	NP	5								
	558.7			5														
			Strong, brown to gray, very poor rock mass quality, bedded shaly DOLOSTONE; closely spaced, moderately to slightly weathered, horizontal, oblique, and vertical joints, with <0.05 inch opening, rough walls, and <0.2 inch thick clay and sand infill. --Run 1: 5.0 to 15.0 feet-- --Recovery: 98%-- --RQD: 7%--10 --Q _a @10.0 feet=12,652 psi					CORE										
						3												
				15														
	548.7		Boring terminated at 15.00 ft															
				20														
GENERAL NOTES										WATER LEVEL DATA								
Begin Drilling 09-28-2022 Complete Drilling 09-28-2022										While Drilling ▽ DRY								
Drilling Contractor Wang Testing Services Drill Rig 21D50A [84%] ..										At Completion of Drilling ▾ DRY								
Driller K&SAC Logger B. Miller Checked by C. Marin										Time After Drilling NA								
Drilling Method 3.25" ID HSA; boring backfilled upon completion										Depth to Water ▼ NA								
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual																		

Profile	SOIL AND ROCK DESCRIPTION	Depth	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	SOIL AND ROCK DESCRIPTION	Depth	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
563.7 562.4 561.2 561.2	12-inch thick, brown SILTY CLAY; dry --TOPSOIL-- Brown SILTY CLAY; dry --FILL-- Very dense, orange and light gray LOAM, little gravel; dry --RDR 2-3-- Medium strong, brown to light gray, very poor rock mass quality, bedded shaly DOLOSTONE; closely spaced, slightly to moderately weathered, mainly horizontal and rarely oblique and vertical joints, with <0.05 inch opening, rough walls, and <0.2 inch thick clay infill. --Run 1: 3.5 to 13.5 feet-- --Recovery: 99%-- --RQD: 4%-- Boring terminated at 13.50 ft	1 5 10 15 20		18 31 50	NP	3									
GENERAL NOTES Begin Drilling 09-28-2022 Complete Drilling 09-28-2022 Drilling Contractor Wang Testing Services Drill Rig 21D50A [84%] Driller KS&AG Logger B. Miller Checked by C. Marin Drilling Method 3.25" ID HSA; boring backfilled upon completion								WATER LEVEL DATA While Drilling ▽ DRY At Completion of Drilling ▼ DRY Time After Drilling NA Depth to Water ▼ NA The stratification lines represent the approximate boundary between soil types. The actual stratification may be different.							

[illegible]

Profile	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	12-inch thick, brown SILTY CLAY; dry	0													
	Brown SILTY CLAY; dry	1		19	26	23	NP	4							
	Dense to very dense, orange and light gray LOAM to SILTY LOAM, little to some gravel; dry	2		50	6		NP	4							
		3		50	4		NP	4							
	Strong, light gray, very poor rock mass quality, bedded shaly DOLOSTONE; closely spaced, moderately to slightly weathered, horizontal and oblique joints, with <0.05 inch opening, slightly rough walls, and 0 - 0.2 inch thick sand infill.	4		50	5		NR								
	--Run 1: 9.0 to 19.0 feet-- --Recovery: 99%-- --RQD: 11%-- --Q _u @ 12.0 feet=15,433 psi	5													
	--Q _u @ 18.5 feet=16,405 psi Boring terminated at 19.00 ft	20													
GENERAL NOTES Begin Drilling 09-27-2022 Complete Drilling 09-27-2022 Drilling Contractor Wang Testing Services Drill Rig 21D50A [84%] Driller KS&AC Logger B. Miller Checked by C. Marin Drilling Method 3.25" ID HSA; boring backfilled upon completion								WATER LEVEL DATA While Drilling ▽ DRY At Completion of Drilling ▽ wash 8' Time After Drilling NA Depth to Water ▽ NA The stratification lines represent the approximate boundary between soil horizons. The actual transition may be gradual.							

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USER NAME	=	_____	DESIGNED	-	MS	REVISED	-	_____
CHECKED	-	CZ	REVIS	-	_____	REVISED	-	_____
PLOT SCALE	=	_____	DRAWN	-	AJF	REVISED	-	_____
PLOT DATE	=	_____	CHECKED	-	CZ	REVISED	-	_____

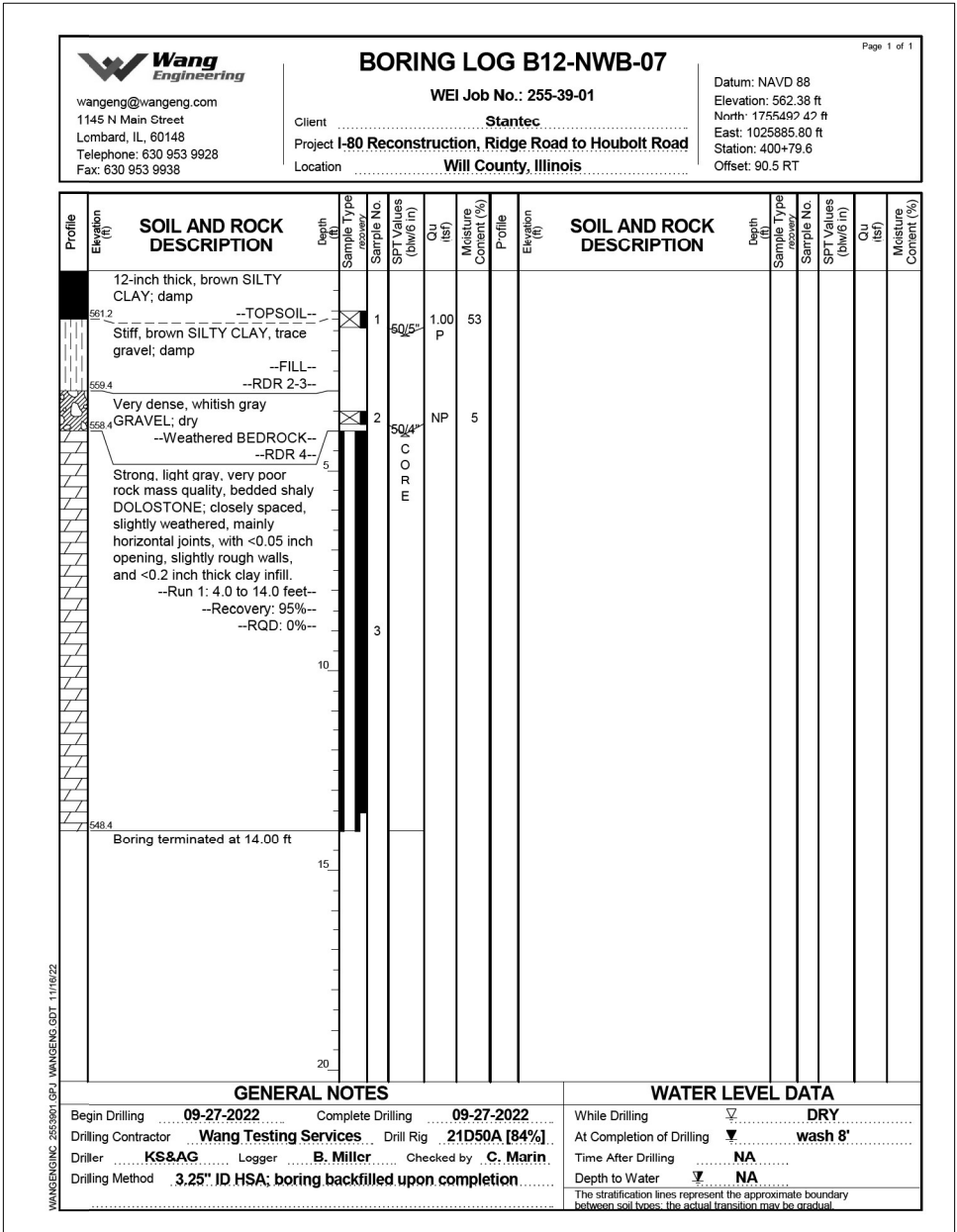
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING DATA
STRUCTURE NO. 099-N1001

SOIL BORING DATA
STRUCTURE NO. 099-N1001

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 7	WILL	1059	880
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				



GENERAL NOTES

Begin Drilling: 09-27-2022
Complete Drilling: 09-27-2022
Drilling Contractor: Wang Testing Services
Drill Rig: 21D50A [84%]
Driller: KS&AG
Logger: B. Miller
Checked by: C. Marin
Drilling Method: 3.25" ID HSA; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: DRY
At Completion of Drilling: wash 8"
Time After Drilling: NA
Depth to Water: NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC. 2553901.GPJ WANGENG.GDT 11/10/22

Benchmark:

Existing Structure: None
Salvage: None

HIGHWAY CLASSIFICATION

FAI Rte. 80 - I-80
Functional Class: Interstate
ADT: 65,200 (2019); 93,900 (2040)
ADTT: 15,170 (2019); 21,840 (2040)
DHV: 11,270 (2040)
Design Speed: 70 m.p.h.
Posted Speed: 70 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50

DESIGN SPECIFICATIONS

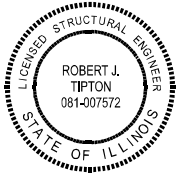
2020 AASHTO LRFD Bridge Design
Specifications, 9th Edition

DESIGN STRESSES

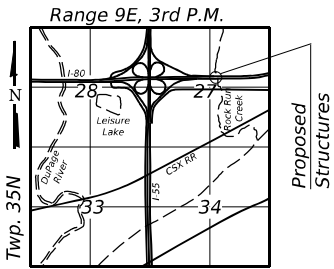
$f'_c = 3,500$ psi
 $f_y = 50,000$ psi (Piles)
 $f_y = 60,000$ psi (Reinforcement)

LEGEND:

Soil Boring
Fence
Guardrail



Robert J. Tipton



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

I-80 WEST OF ROCK RUN CREEK

F.A.I. ROUTE 80

WILL COUNTY

STA. 380+00 - STA. 386+50 (EB)

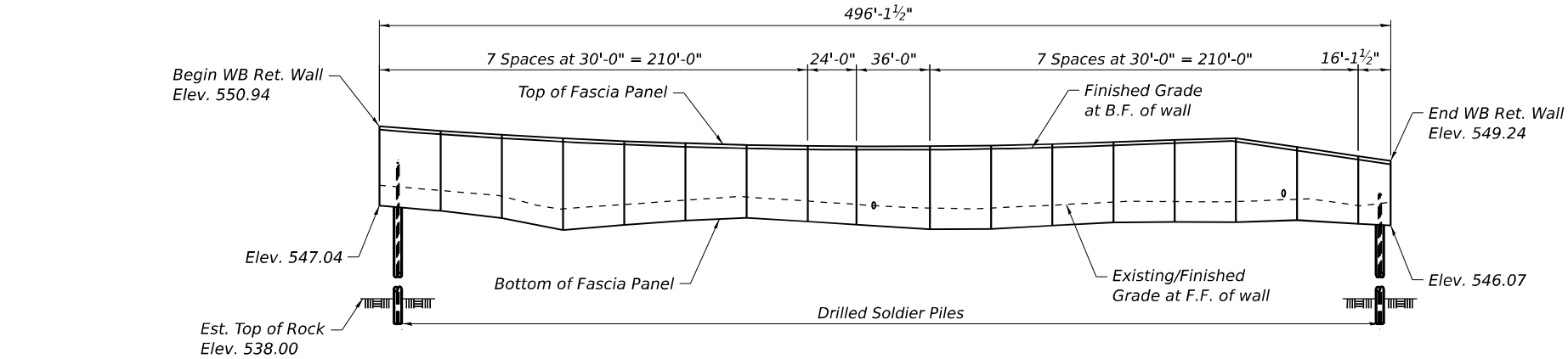
STA. 381+00 - STA. 386+00 (WB)

STRUCTURE NO. 099-W041 (EB)

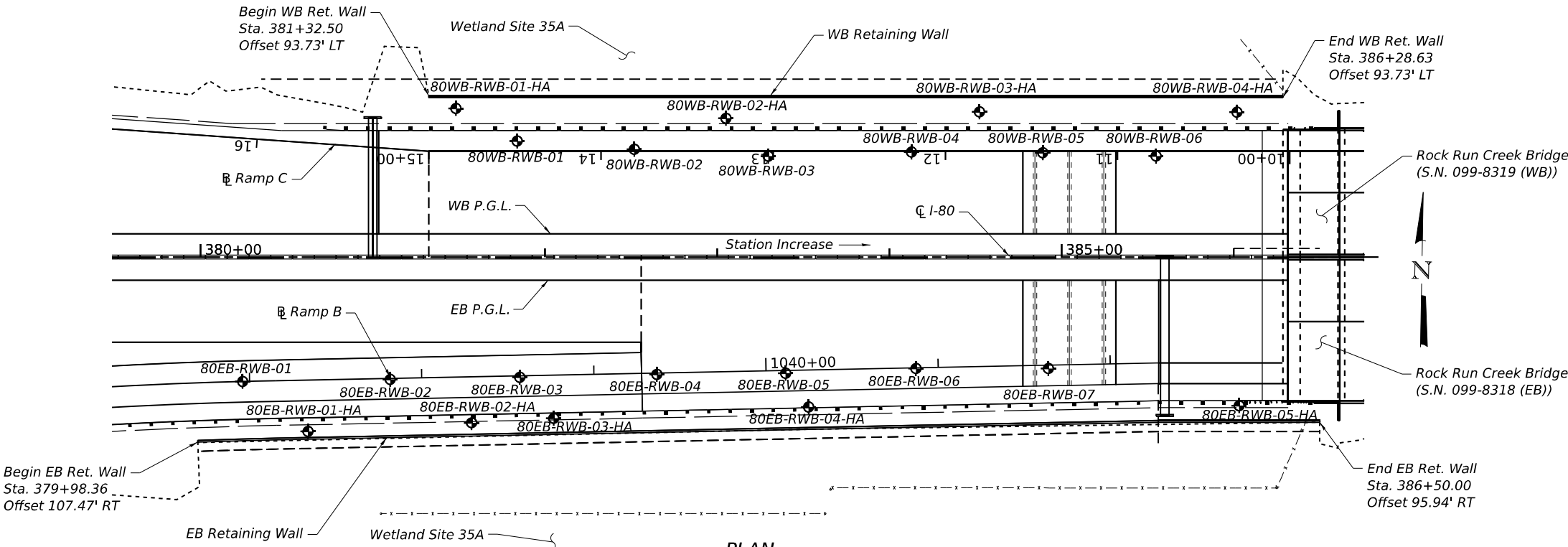
STRUCTURE NO. 099-W042 (WB)

NOTE:

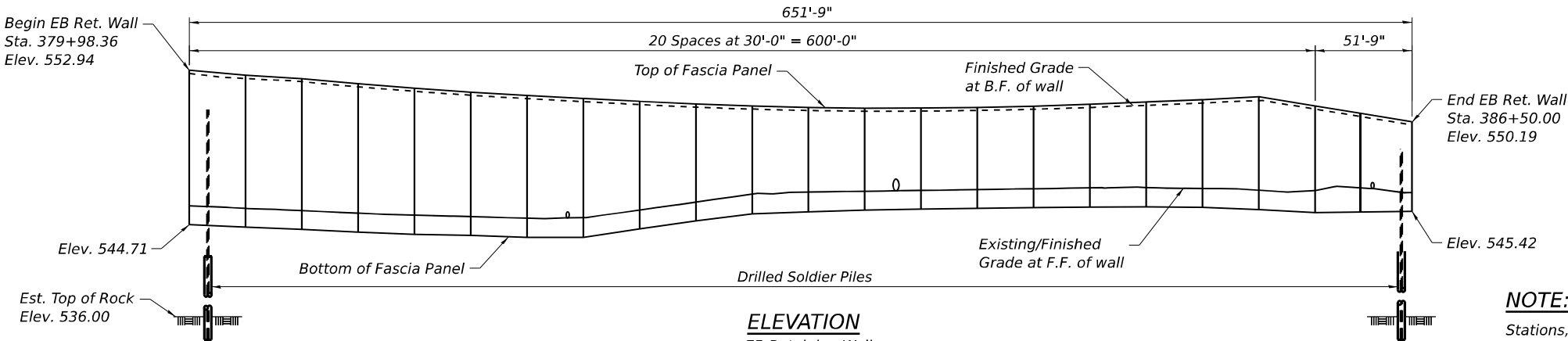
Stations, offsets and spacings are measured
along the F.F. of walls from CL I-80 .



ELEVATION
WB Retaining Wall
(Looking at Back Face of Wall)



PLAN



ELEVATION
EB Retaining Wall
(Looking at Front Face of Wall)



USER NAME = eosku	DESIGNED - EAO	REVISED -
PLOT SCALE =	CHECKED - JZ	REVISED -
PLOT DATE = 8/8/2023	DRAWN - EAO	REVISED -
	CHECKED - JZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 099-W041 & 099-W042

SHEET RW-01 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	881
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

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GENERAL NOTES:

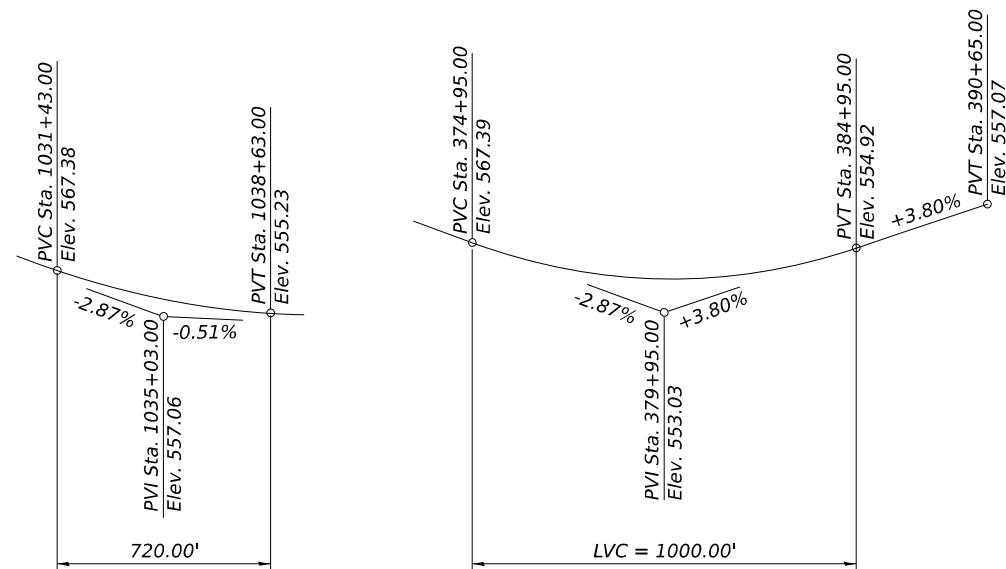
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Protective Coat shall be applied to exposed surfaces of the panels.
3. Wall to be built along straight chords between construction and expansion joints.
4. Soldier piles shall be cleaned and given one shop coat of Inorganic Zinc Rich Primer. Cost included with Furnishing Soldier Piles (HP Section).
5. The Contractor shall field verify locations of existing underground utilities. The Contractor shall take precautions to protect existing utilities during construction of the wall. Any damage to the existing utilities shall be the responsibility of the Contractor. The existing utilities in conflict with retaining wall construction shall be abandoned or relocated according to directions given on the Civil Plans.
6. Any storage of construction equipment and material behind wall is not allowed.
7. Earth excavation in front of wall shall be gradual and no more than 4'-0" of earth shall be excavated at a time in front of the wall. The elevation difference between adjacent excavated areas in front of wall shall not vary more than 6'-0" over a distance of 50'-0" as measured along the length of the wall.
8. A layer of weathered bedrock is present at the project site as indicated in the soil boring logs. The Contractor shall provide a method to insure the soldier piles achieve at least the plan tip elevations.
9. Commonwealth Edison (ComEd) overhead power line and towers exist near, and cross, the proposed improvement. The Contractor shall coordinate with ComEd by providing detailed staging plans that indicate equipment type (such as crane boom heights) and placement for ComEd review/approval prior to construction activities.
10. The Contractor shall exercise extreme caution in drilling and setting the soldier piles under Aerial Power Lines. The Contractor is responsible to coordinate with utilities to deenergize these lines if required. The Contractor shall make necessary adjustments to the lengths of the soldier piles and to the auguring equipment to maintain adequate clearance to the Aerial Power Lines as specified in OSHA safety requirements. Lengths of soldier piles and any necessary splice details shall be approved by the Engineer prior to the start of work.

INDEX OF SHEETS

RW-01	General Plan and Elevation
RW-02	General Notes, Index of Sheets & Total BOM
RW-03	WB Retaining Wall Plan and Elevation (1 of 3)
RW-04	WB Retaining Wall Plan and Elevation (2 of 3)
RW-05	WB Retaining Wall Plan and Elevation (3 of 3)
RW-06	EB Retaining Wall Plan and Elevation (1 of 4)
RW-07	EB Retaining Wall Plan and Elevation (2 of 4)
RW-08	EB Retaining Wall Plan and Elevation (3 of 4)
RW-09	EB Retaining Wall Plan and Elevation (4 of 4)
RW-10	Wall Cross Section and Details (1 of 3)
RW-11	Wall Cross Section and Details (2 of 3)
RW-12	Wall Cross Section and Details (3 of 3)
RW-13	Boring Logs (1 of 11)
RW-14	Boring Logs (2 of 11)
RW-15	Boring Logs (3 of 11)
RW-16	Boring Logs (4 of 11)
RW-17	Boring Logs (5 of 11)
RW-18	Boring Logs (6 of 11)
RW-19	Boring Logs (7 of 11)
RW-20	Boring Logs (8 of 11)
RW-21	Boring Logs (9 of 11)
RW-22	Boring Logs (10 of 11)
RW-23	Boring Logs (11 of 11)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu Yd	426.0
Concrete Structures	Cu Yd	225.5
Protective Coat	Sq Yd	698
Stud Shear Connectors	Each	1,184
Reinforcement Bars, Epoxy Coated	Pound	29,590
Name Plates	Each	2
Furnishing Soldier Piles (HP Section)	Foot	2,330
Drilling And Setting Soldier Piles (In Soil)	Cu Ft	6910.0
Drilling And Setting Soldier Piles (In Rock)	Cu Ft	3122.5
Untreated Timber Lagging	Sq Ft	6,090
Granular Backfill for Structures	Cu Yd	618.6
Geocomposite Wall Drain	Sq Yd	464
Pipe Underdrains for Structures 4"	Foot	1,148



PROFILE GRADE
Ramp B

PROFILE GRADE
(along EB and WB I-80 PGLs)

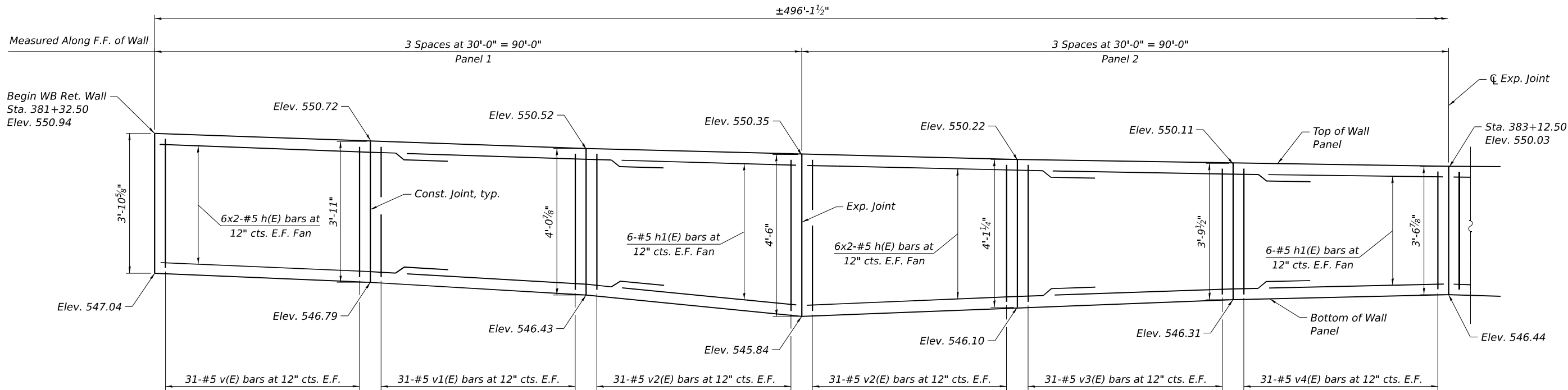
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BUILT 20-- BY
STATE OF ILLINOIS
F.A.I. RTE. I-80 SEC. FAI 80 21 STRUCTURE 7
LOADING HL-93
STRUCTURE NO. 099-W042

NAME PLATE
See Std. 515001

STATION 380+00 LT TO STATION 386+50
BUILT 20-- BY
STATE OF ILLINOIS
F.A.I. RTE. I-80 SEC. FAI 80 21 STRUCTURE 7
LOADING HL-93
STRUCTURE NO. 099-W041

NAME PLATE
See Std. 515001

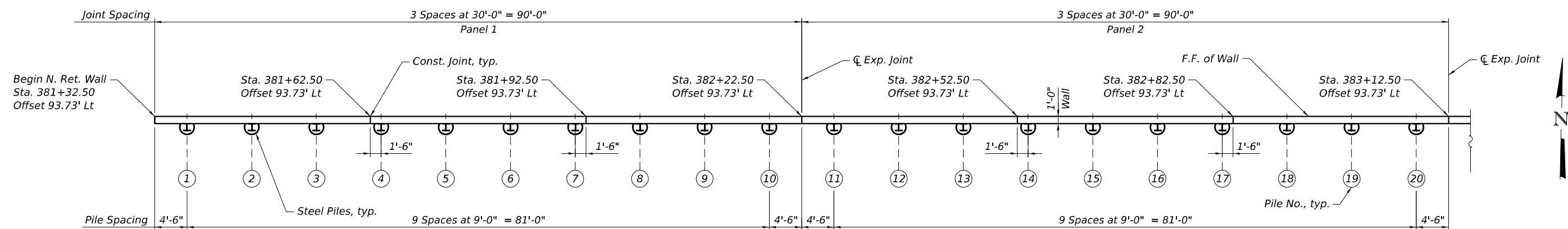
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PARTIAL REFLECTED ELEVATION - SOLDIER PILE WALL
WB Retaining Wall (Panels 1 and 2)

NOTES:

1. For soldier pile wall Bill of Material, see sheet RW-11.
2. Stations and offsets on this sheet are given to the front face of wall and are measured from C.I.-80.
3. Pile and Joint dimensions and spacings are measured along the front face of wall.



PARTIAL PLAN - SOLDIER PILE WALL
WB Retaining Wall (Panels 1 and 2)



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	CHECKED - JZ	REVISED -
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PLOT DATE = 8/8/2023	CHECKED - JZ	REVISED -

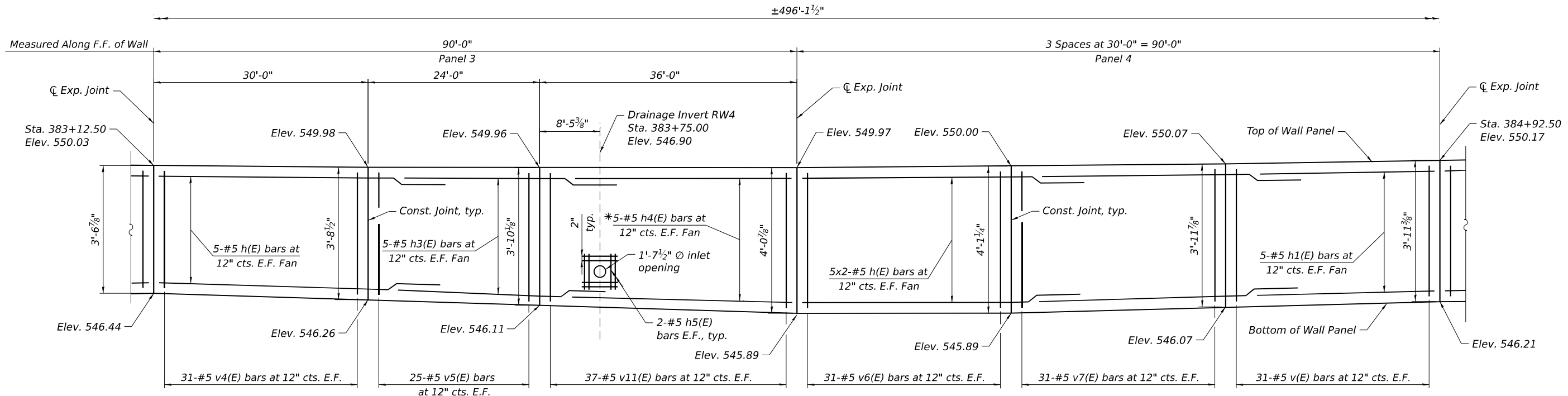
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WB SOLDIER PILE WALL LAYOUT PLAN (1 OF 3)
STRUCTURE NO. 099-W042

SHEET RW-03 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	883
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

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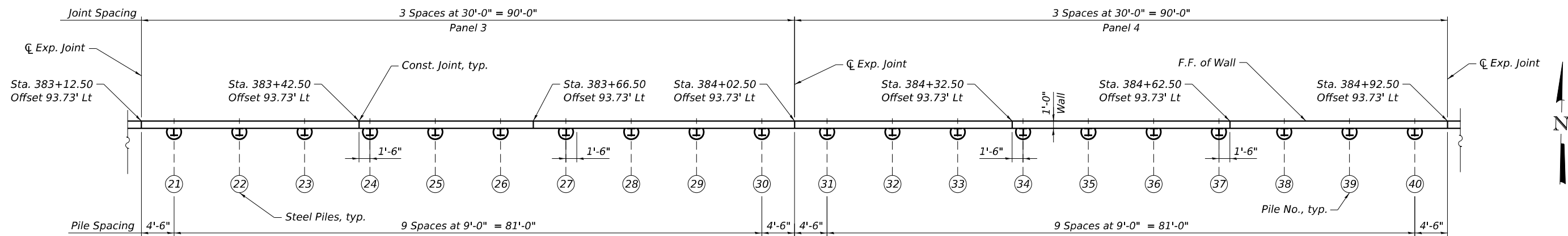


PARTIAL REFLECTED ELEVATION - SOLDIER PILE WALL
WB Retaining Wall (Panels 3 and 4)

* Cut and Place in the field as needed.

NOTES:

1. For soldier pile wall Bill of Material, see sheet RW-11.
2. Stations and offsets on this sheet are given to the front face of wall and are measured from C/L-80.
3. Pile and Joint dimensions and spacings are measured along the front face of wall.



PARTIAL PLAN - SOLDIER PILE WALL
WB Retaining Wall (Panels 3 and 4)



USER NAME = eoskqu	DESIGNED - EAO	REVISED -
	CHECKED - JZ	REVISED -
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PLOT DATE = 8/8/2023	CHECKED - JZ	REVISED -

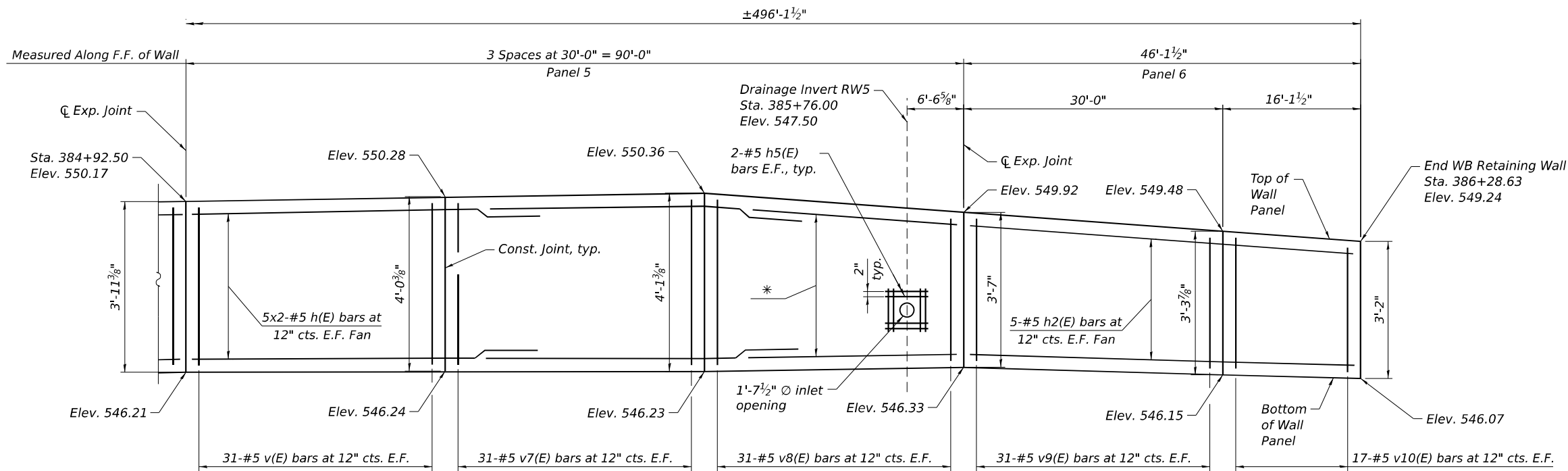
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WB SOLDIER PILE WALL LAYOUT PLAN (2 OF 3)
STRUCTURE NO. 099-W042

SHEET RW-04 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

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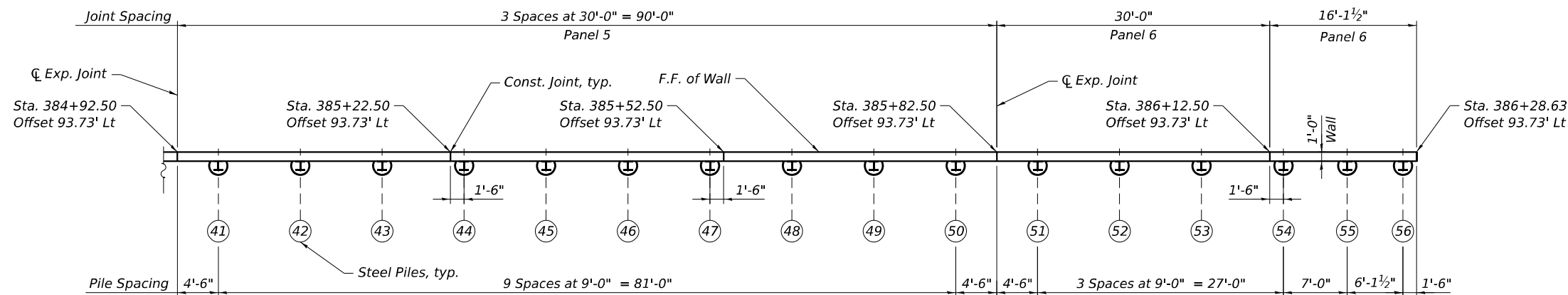


* 5-#5 h1(E) bars at 12" cts. E.F. Fan. Cut and Place in the field as needed

PARTIAL REFLECTED ELEVATION - SOLDIER PILE WALL
WB Retaining Wall (Panels 5 and 6)

NOTES:

1. For soldier pile wall Bill of Material, see sheet RW-11.
2. Stations and offsets on this sheet are given to the front face of wall and are measured from CL I-80.
3. Pile and joint dimensions and spacings are measured along the front face of wall.



PARTIAL PLAN - SOLDIER PILE WALL
WB Retaining Wall (Panels 5 and 6)



USER NAME = eoskqu	DESIGNED - EAO	REVISED -
	CHECKED - JZ	REVISED -
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PLOT DATE = 8/8/2023	CHECKED - JZ	REVISED -

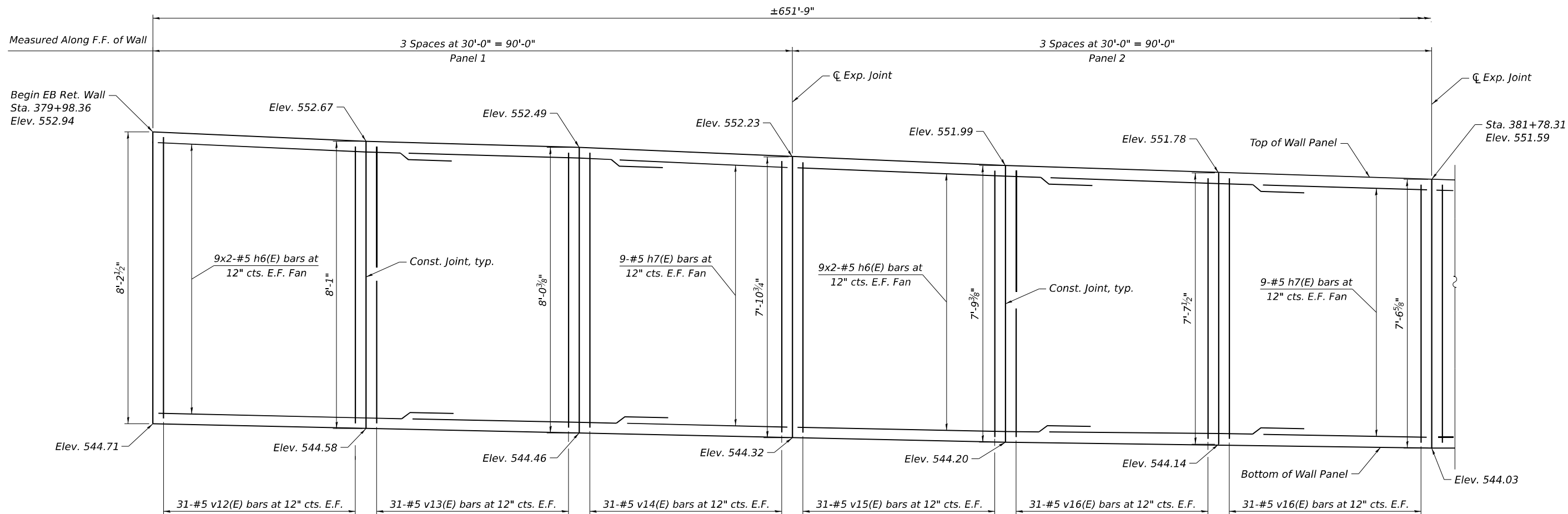
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WB SOLDIER PILE WALL LAYOUT PLAN (3 OF 3)
STRUCTURE NO. 099-W042

SHEET RW-05 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	885
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

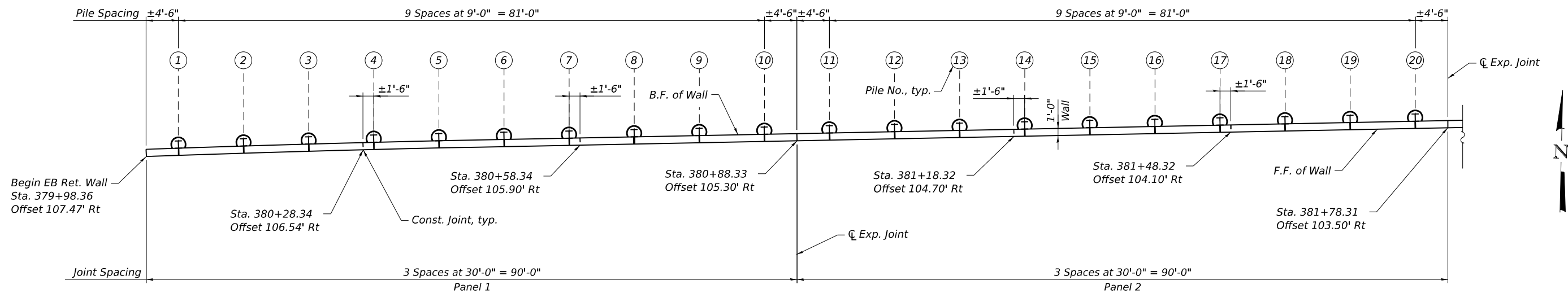
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PARTIAL ELEVATION - SOLDIER PILE WALL
EB Retaining Wall (Panels 1 and 2)

NOTES:

1. For soldier pile wall Bill of Material, see sheet RW-12.
2. Stations and offsets on this sheet are given to the front face of wall and are measured from CL-80 .
3. Joint dimensions and spacings are measured along the front face of wall.
4. Pile dimensions and spacings are measured along the front face of wall.



PARTIAL PLAN - SOLDIER PILE WALL
EB Retaining Wall (Panels 1 and 2)



USER NAME = eoskqu	DESIGNED - EAO	REVISED -
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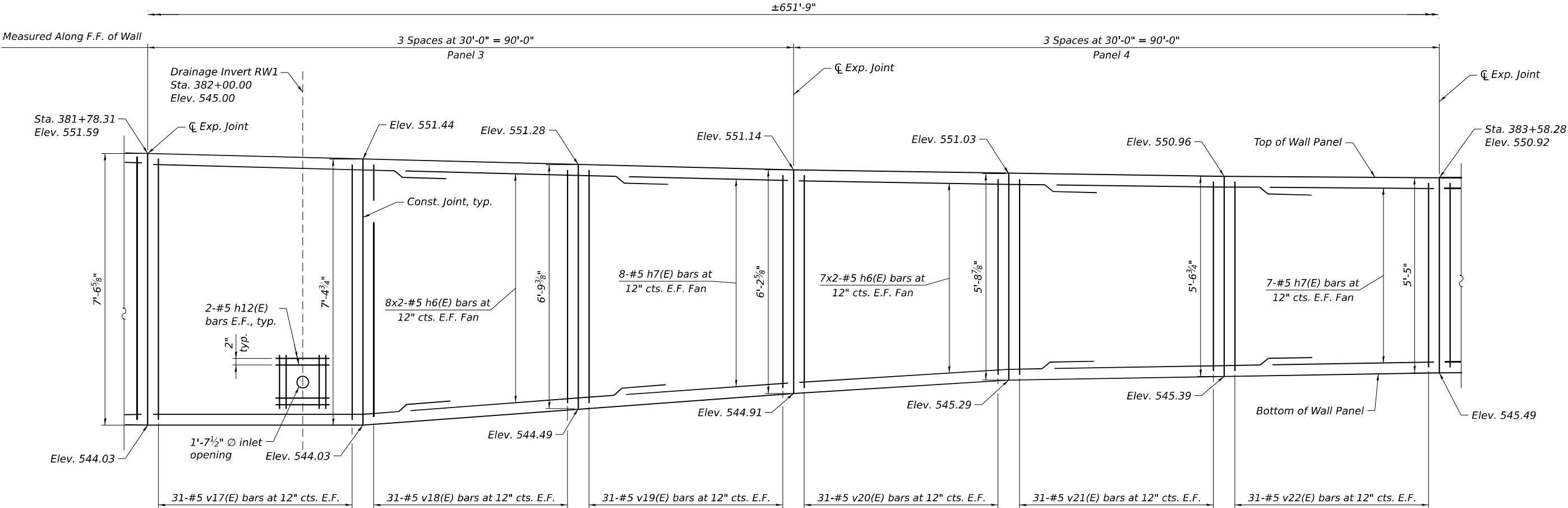
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WB SOLDIER PILE WALL LAYOUT PLAN (1 OF 4)
STRUCTURE NO. 099-W041

SHEET RW-06 OF RW-23 SHEETS

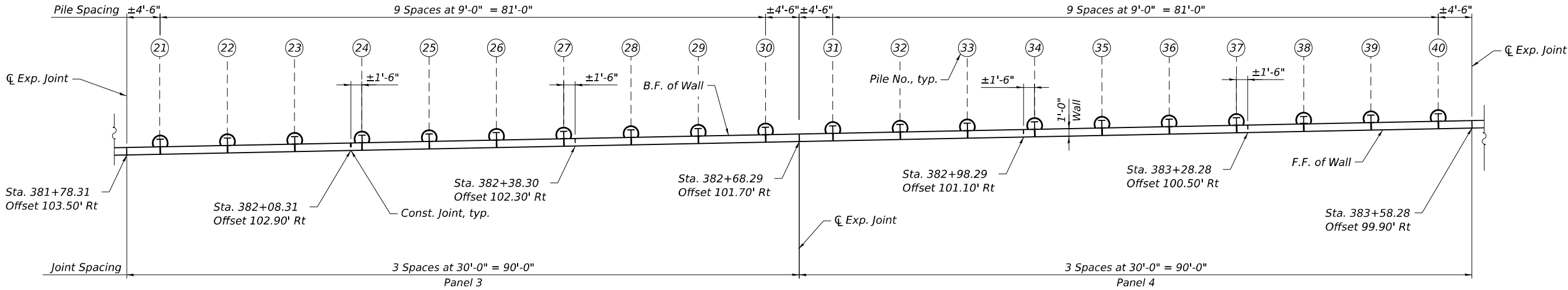
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

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PARTIAL ELEVATION - SOLDIER PILE WALL
EB Retaining Wall (Panels 3 and 4)

- NOTES:**
1. For soldier pile wall Bill of Material, see sheet RW-12.
 2. Stations and offsets on this sheet are given to the front face of wall and are measured from C.L. I-80 .
 3. Joint dimensions and spacings are measured along the front face of wall.
 4. Pile dimensions and spacings are measured along the front face of wall.



PARTIAL PLAN - SOLDIER PILE WALL
EB Retaining Wall (Panels 3 and 4)



USER NAME = eoskqu	DESIGNED - EAO	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE =	DRAWN - EAO	REVISED -
PLOT DATE = 8/8/2023	CHECKED - JZ	REVISED -

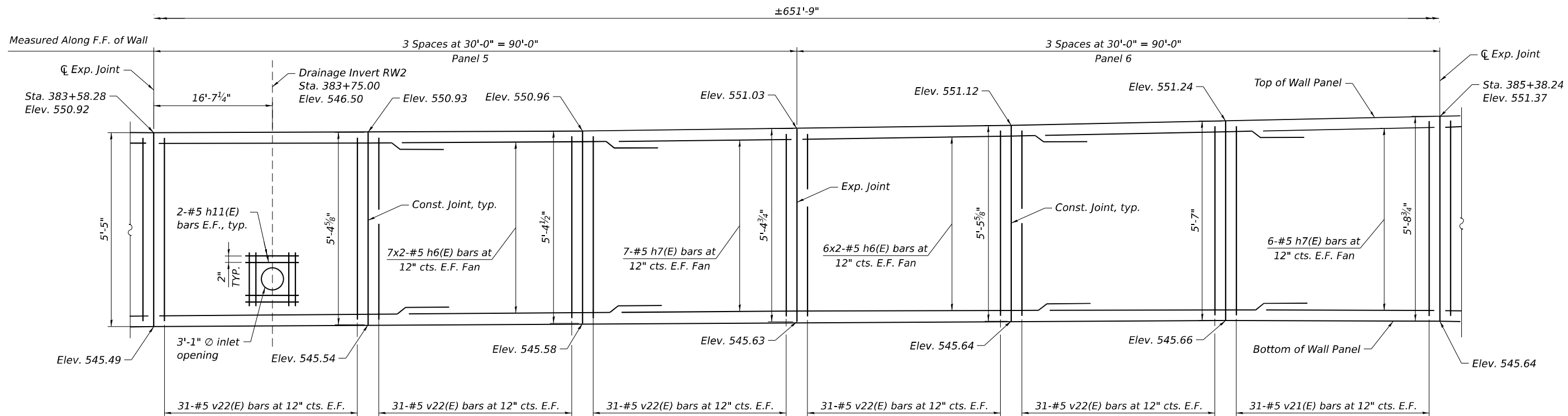
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EB SOLDIER PILE WALL LAYOUT PLAN (2 OF 4)
STRUCTURE NO. 099-W041

SHEET RW-07 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	887
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

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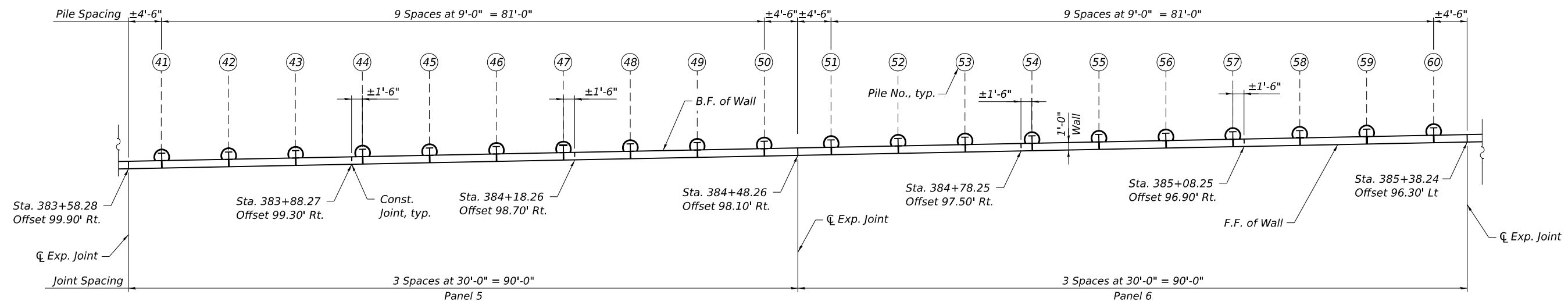


PARTIAL ELEVATION - SOLDIER PILE WALL

EB Retaining Wall (Panels 5 and 6)

NOTES:

1. For soldier pile wall Bill of Material, see sheet RW-12.
2. Stations and offsets on this sheet are given to the front face of wall and are measured from CL I-80 .
3. Joint dimensions and spacings are measured along the front face of wall.
4. Pile dimensions and spacings are measured along the front face of wall.



PARTIAL PLAN - SOLDIER PILE WALL

EB Retaining Wall (Panels 5 and 6)



USER NAME = eoskquj	DESIGNED - EAO	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE =	DRAWN - EAO	REVISED -
PLOT DATE = 8/8/2023	CHECKED - JZ	REVISED -

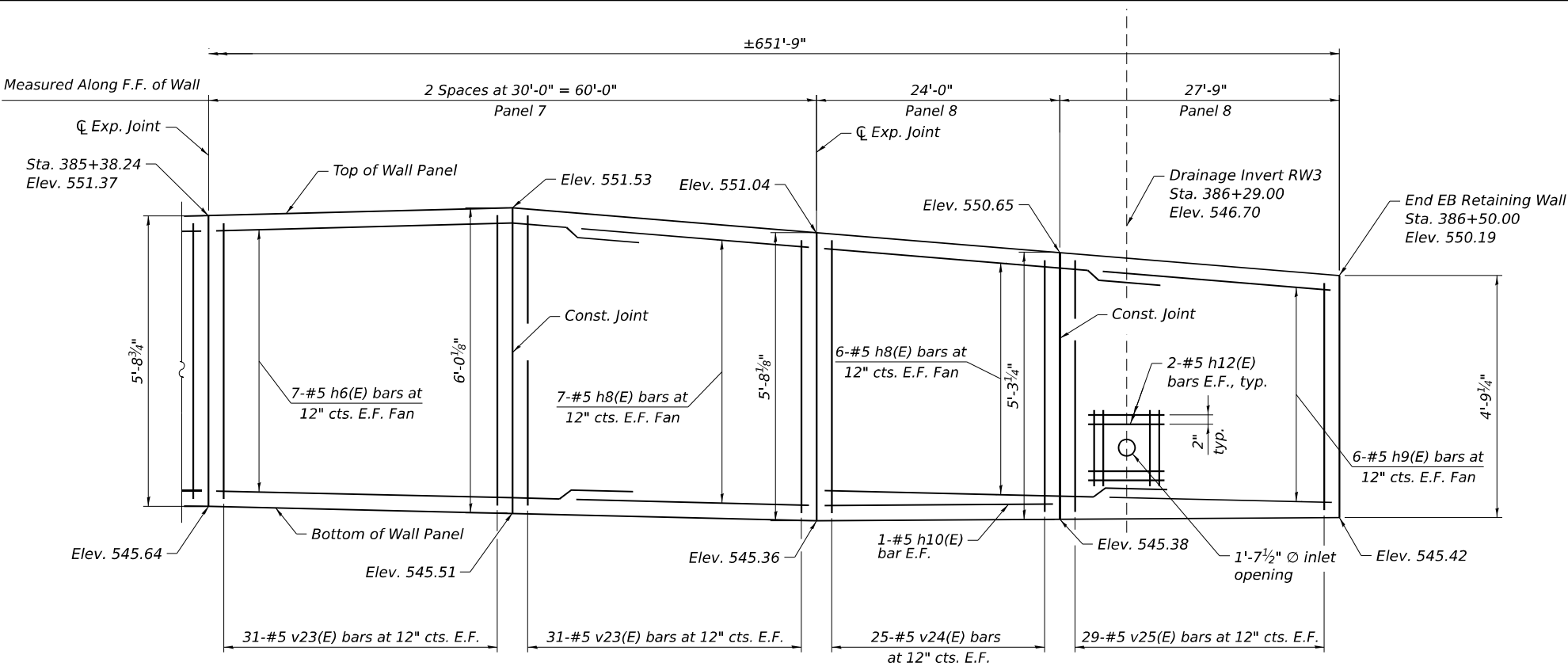
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EB SOLDIER PILE WALL LAYOUT PLAN (3 OF 4)
STRUCTURE NO. 099-W041

SHEET RW-08 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	888
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

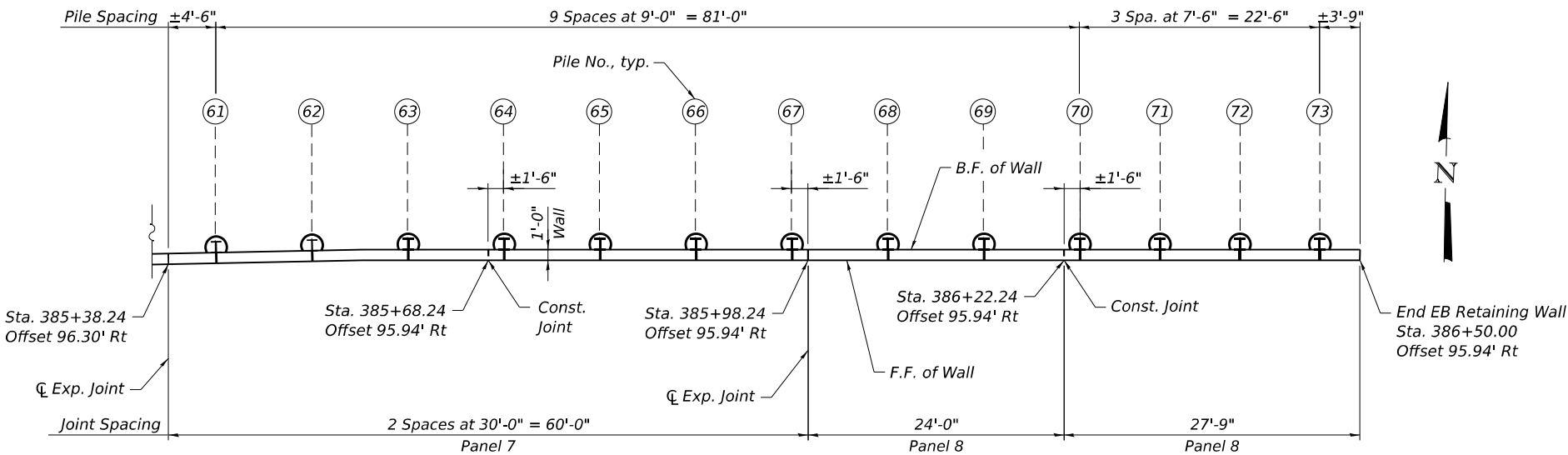
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PARTIAL ELEVATION - SOLDIER PILE WALL
EB Retaining Wall (Panels 7 and 8)

NOTES:

1. For soldier pile wall Bill of Material, see sheet RW-12.
2. Stations and offsets on this sheet are given to the front face of wall and are measured from C I-80.
3. Joint dimensions and spacings are measured along the front face of wall.
4. Pile dimensions and spacings are measured along the front face of wall.



PARTIAL PLAN - SOLDIER PILE WALL
EB Retaining Wall (Panels 7 and 8)



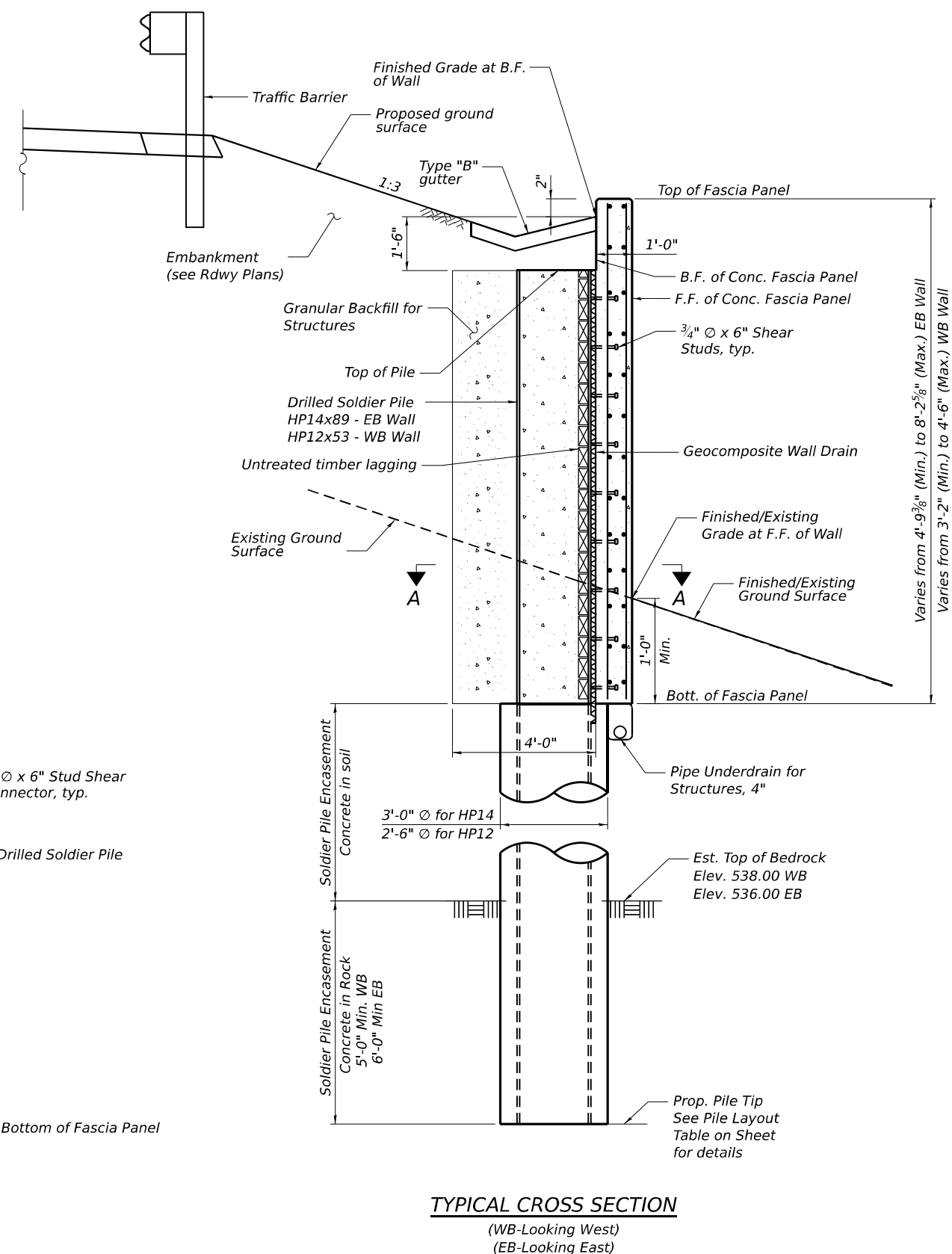
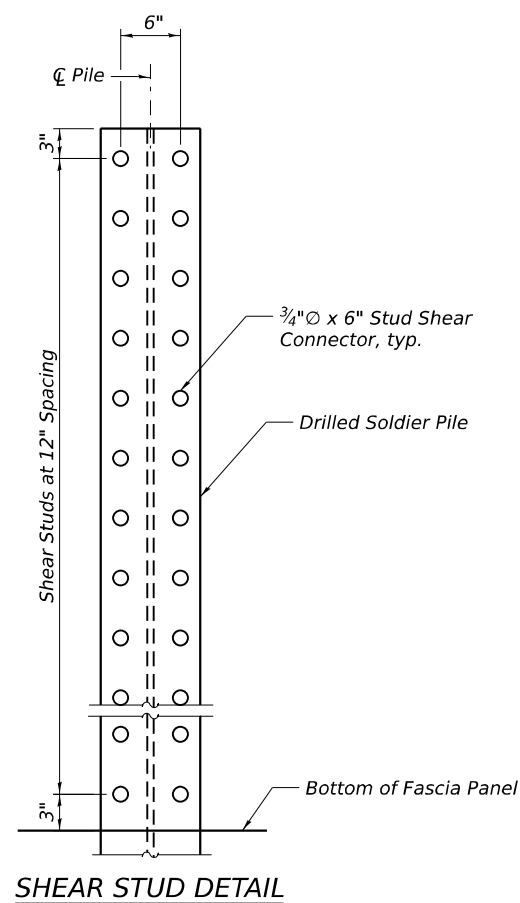
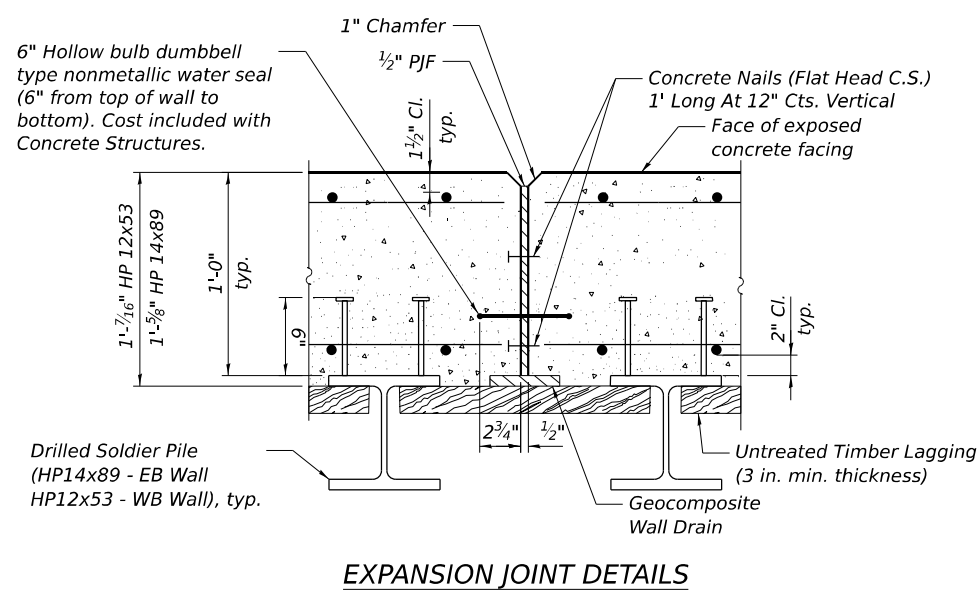
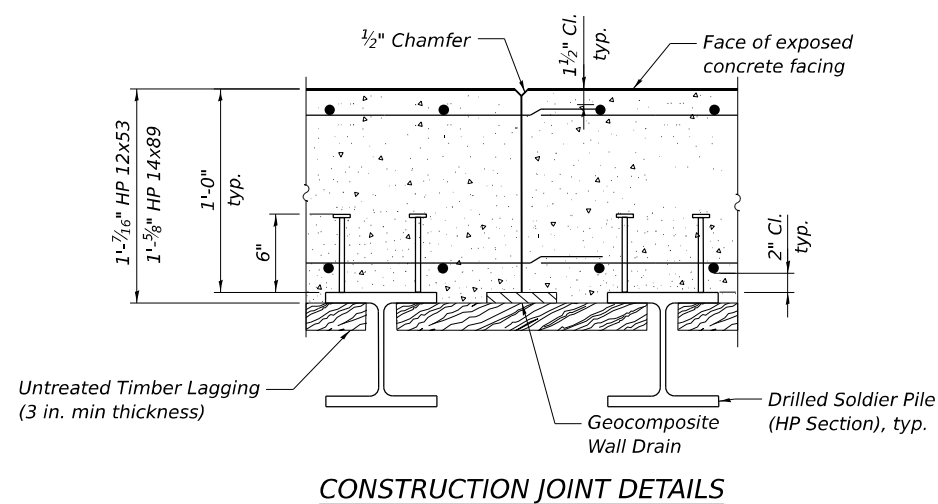
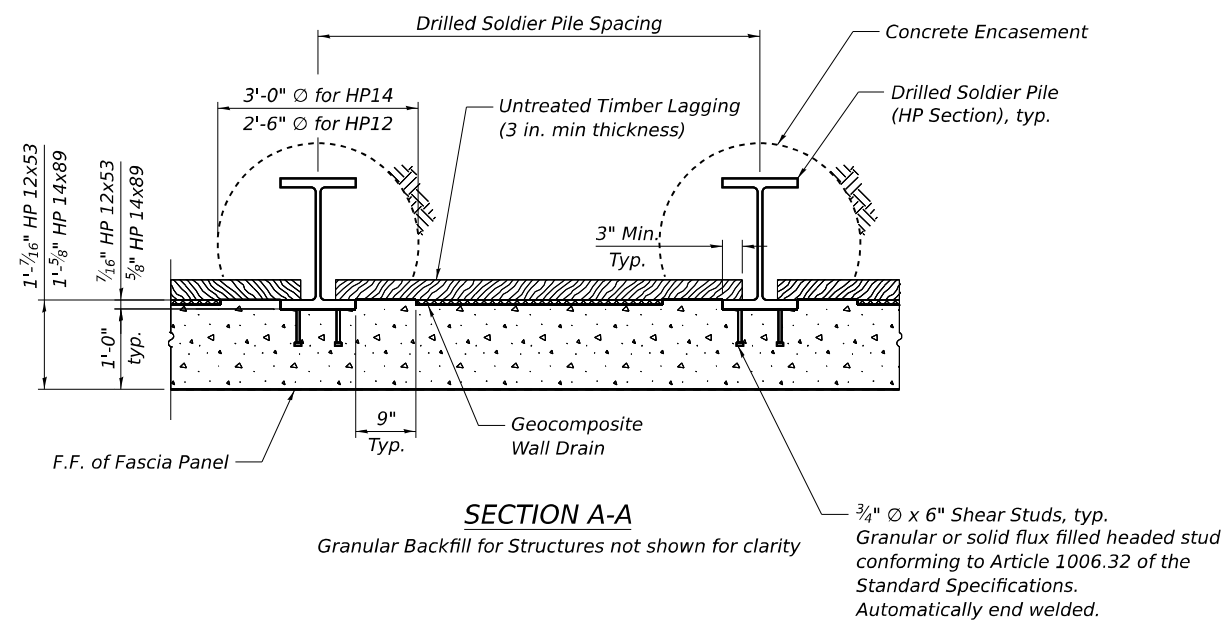
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	CHECKED - JZ	REVISED -
PLOT SCALE =	DRAWN - EAO	REVISED -
PLOT DATE = 8/8/2023	CHECKED - JZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EB SOLDIER PILE WALL LAYOUT PLAN (4 OF 4)
STRUCTURE NO. 099-W041

SHEET RW-09 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	889
CONTRACT NO. 62R28				
ILLINOIS		FED. AID PROJECT		

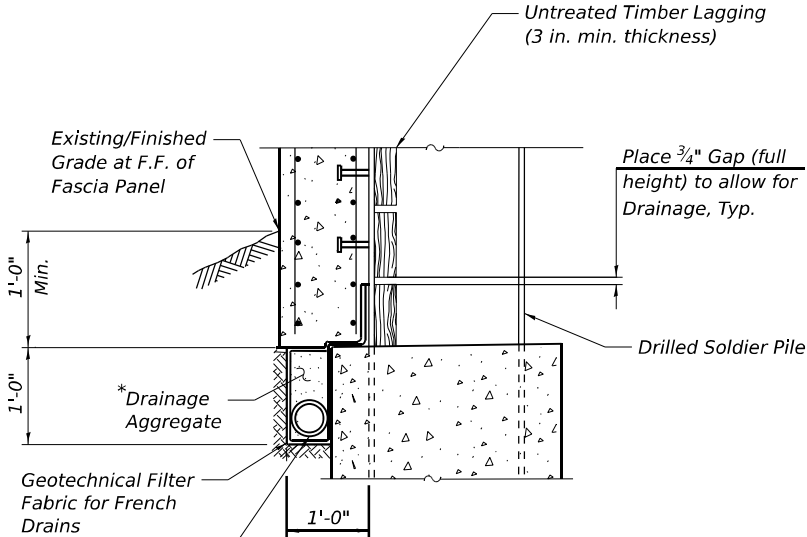


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8/8/2023 2:40:56 PM

WB PILE LAYOUT

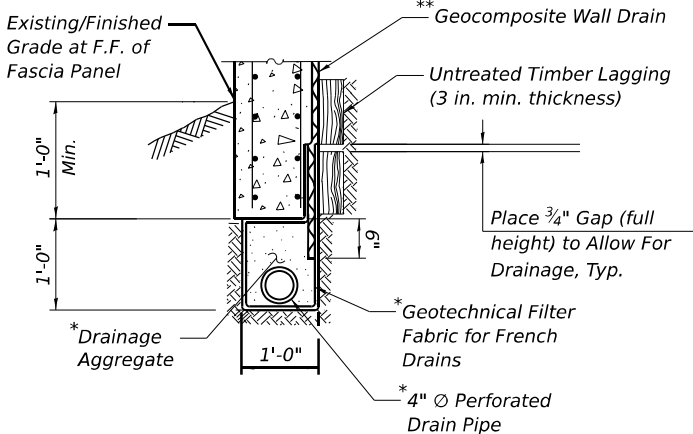
Pile	Station	Offset	Top of Pile Elevation	Top of Encasement	Section	Pile Tip Elevation	Pile Length
1	381+37.00	92.23' Lt	549.24	547.01	HP 12x53	532.99	16.25
2	381+46.00	92.23' Lt	549.17	546.93	HP 12x53	532.92	16.25
3	381+55.00	92.23' Lt	549.10	546.85	HP 12x53	532.85	16.25
4	381+64.00	92.23' Lt	549.04	546.77	HP 12x53	533.04	16.00
5	381+73.00	92.23' Lt	548.98	546.66	HP 12x53	532.98	16.00
6	381+82.00	92.23' Lt	548.92	546.56	HP 12x53	532.92	16.00
7	381+91.00	92.23' Lt	548.86	546.45	HP 12x53	532.86	16.00
8	382+00.00	92.23' Lt	548.81	546.29	HP 12x53	532.81	16.00
9	382+09.00	92.23' Lt	548.76	546.11	HP 12x53	532.76	16.00
10	382+18.00	92.23' Lt	548.71	545.93	HP 12x53	532.71	16.00
11	382+27.00	92.23' Lt	548.67	545.88	HP 12x53	532.67	16.00
12	382+36.00	92.23' Lt	548.62	545.96	HP 12x53	533.12	15.50
13	382+45.00	92.23' Lt	548.58	546.03	HP 12x53	533.08	15.50
14	382+54.00	92.23' Lt	548.54	546.11	HP 12x53	533.04	15.50
15	382+63.00	92.23' Lt	548.51	546.17	HP 12x53	533.01	15.50
16	382+72.00	92.23' Lt	548.48	546.23	HP 12x53	532.98	15.50
17	382+81.00	92.23' Lt	548.45	546.3	HP 12x53	532.95	15.50
18	382+90.00	92.23' Lt	548.42	546.34	HP 12x53	532.92	15.50
19	382+99.00	92.23' Lt	548.40	546.38	HP 12x53	532.90	15.50
20	383+08.00	92.23' Lt	548.37	546.42	HP 12x53	532.87	15.50
21	383+17.00	92.23' Lt	548.35	546.42	HP 12x53	532.85	15.50
22	383+26.00	92.23' Lt	548.34	546.36	HP 12x53	532.84	15.50
23	383+35.00	92.23' Lt	548.32	546.31	HP 12x53	532.82	15.50
24	383+44.00	92.23' Lt	548.31	546.25	HP 12x53	532.81	15.50
25	383+53.00	92.23' Lt	548.30	546.19	HP 12x53	532.80	15.50
26	383+62.00	92.23' Lt	548.30	546.14	HP 12x53	532.80	15.50
27	383+71.00	92.23' Lt	548.29	546.08	HP 12x53	532.79	15.50
28	383+80.00	92.23' Lt	548.29	546.02	HP 12x53	532.79	15.50
29	383+89.00	92.23' Lt	548.29	545.97	HP 12x53	532.79	15.50
30	383+98.00	92.23' Lt	548.30	545.91	HP 12x53	532.80	15.50
31	384+07.00	92.23' Lt	548.30	545.89	HP 12x53	532.80	15.50
32	384+16.00	92.23' Lt	548.32	545.89	HP 12x53	532.82	15.50
33	384+25.00	92.23' Lt	548.33	545.89	HP 12x53	532.83	15.50
34	384+34.00	92.23' Lt	548.34	545.9	HP 12x53	532.84	15.50
35	384+43.00	92.23' Lt	548.36	545.95	HP 12x53	532.86	15.50
36	384+52.00	92.23' Lt	548.38	546.01	HP 12x53	532.88	15.50
37	384+61.00	92.23' Lt	548.40	546.06	HP 12x53	532.90	15.50
38	384+70.00	92.23' Lt	548.43	546.1	HP 12x53	532.93	15.50
39	384+79.00	92.23' Lt	548.46	546.15	HP 12x53	532.96	15.50
40	384+88.00	92.23' Lt	548.49	546.19	HP 12x53	532.99	15.50
41	384+97.00	92.23' Lt	548.52	546.22	HP 12x53	533.02	15.50
42	385+06.00	92.23' Lt	548.55	546.22	HP 12x53	533.05	15.50
43	385+15.00	92.23' Lt	548.58	546.23	HP 12x53	533.08	15.50
44	385+24.00	92.23' Lt	548.62	546.24	HP 12x53	533.12	15.50
45	385+33.00	92.23' Lt	548.64	546.24	HP 12x53	533.14	15.50
46	385+42.00	92.23' Lt	548.66	546.24	HP 12x53	533.16	15.50
47	385+51.00	92.23' Lt	548.69	546.23	HP 12x53	533.19	15.50
48	385+60.00	92.23' Lt	548.58	546.26	HP 12x53	533.08	15.50
49	385+69.00	92.23' Lt	548.45	546.29	HP 12x53	532.95	15.50
50	385+78.00	92.23' Lt	548.32	546.31	HP 12x53	532.82	15.50
51	385+87.00	92.23' Lt	548.18	546.3	HP 12x53	532.68	15.50
52	385+96.00	92.23' Lt	548.05	546.25	HP 12x53	532.55	15.50
53	386+05.00	92.23' Lt	547.92	546.2	HP 12x53	532.42	15.50
54	386+14.00	92.23' Lt	547.79	546.14	HP 12x53	532.79	15.00
55	386+21.00	92.23' Lt	547.69	546.11	HP 12x53	532.69	15.00
56	386+27.13	92.23' Lt	547.60	546.08	HP 12x53	532.60	15.00

Minimum Bar Lap	
Bar	Lap
#5	3'-9"

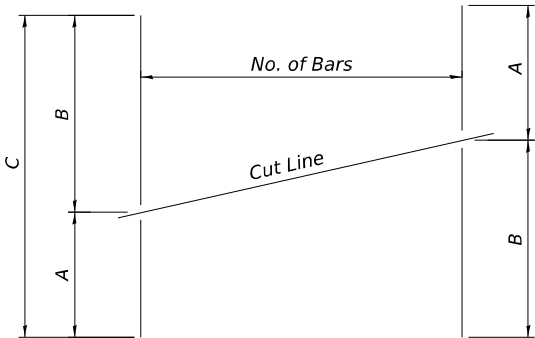


PIPE UNDERDRAIN DETAIL
AT SOLDIER PILE

* Included in the cost of Pipe Underdrains for Structures, 4"
** Maximum thickness for Geocomposite wall Drain is 7/8"



PIPE UNDERDRAIN DETAIL
BETWEEN SOLDIER PILES

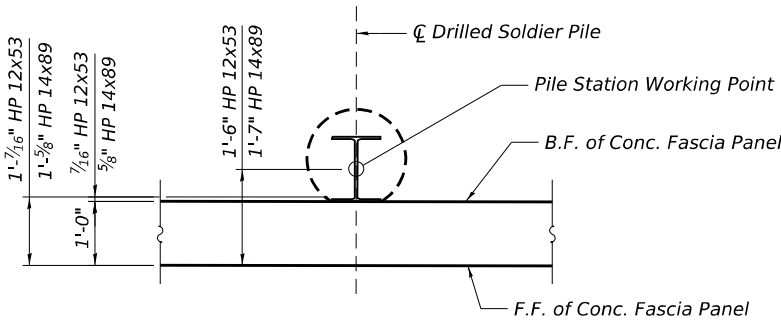


SERIES OF BAR CUTTING DIAGRAM

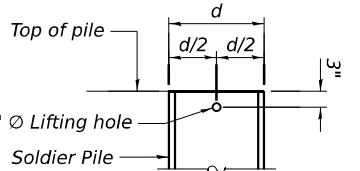
See table for dimensions. Make all cuts normal to bar axis

WB BAR TABLE SCHEDULE

Bar	No. of Sets Req'd	Bar No.	No. of Bars Per Set	A	B	C
v1(E)	1	#5	31	3'-7"	3'-9"	7'-4"
v2(E)	2	#5	31	3'-9"	4'-2"	7'-11"
v3(E)	1	#5	31	3'-9"	3'-5"	7'-2"
v4(E)	2	#5	31	3'-5"	3'-3"	6'-8"
v5(E)	1	#5	25	3'-4"	3'-6"	6'-10"
v8(E)	1	#5	31	3'-9"	3'-3"	7'-0"
v9(E)	1	#5	31	3'-3"	3'-0"	6'-3"
v10(E)	1	#5	17	3'-0"	2'-10"	5'-10"
v11(E)	1	#5	37	3'-6"	3'-9"	7'-3"



SOLDIER PILE WORKING POINT



LIFTING HOLE DETAIL

NOTE:

Pile Stations and Offsets are measured to the center of pile and along C-I-80.



USER NAME = eoskui	DESIGNED - EAO	REVISED -
PLOT SCALE =	CHECKED - JZ	REVISED -
PLOT DATE = 8/8/2023	DRAWN - EAO	REVISED -
	CHECKED - JZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL CROSS SECTION AND DETAILS (2 OF 3)
STRUCTURE NO. 099-W041 & 099-W042

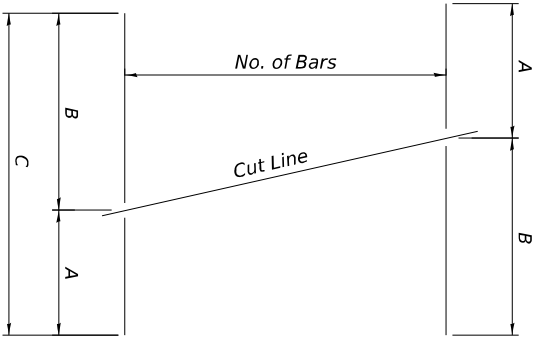
SHEET RW-11 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	891
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: pw:///transysystems-pw.bentley.com/transyscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Stantec/CAD/ML-04_62R28/04-Sheets/04-Structures/Retaining Walls/Final Plans/RETAINING WALL-62R28-012-Wall Cross Sections and Details (3 of 3).dgn

EB PILE LAYOUT

Pile	Station	Offset	Top of Pile Elevation	Top of Encasement	Section	Pile Tip Elevation	Pile Length
1	380+02.80	105.74' Rt	551.23	544.69	HP 14x89	529.73	21.50
2	380+11.80	105.44' Rt	551.15	544.65	HP 14x89	529.65	21.50
3	380+20.80	105.18' Rt	551.07	544.61	HP 14x89	529.57	21.50
4	380+29.80	104.94' Rt	550.99	544.57	HP 14x89	529.99	21.00
5	380+38.81	104.72' Rt	550.94	544.53	HP 14x89	529.94	21.00
6	380+47.81	104.54' Rt	550.89	544.5	HP 14x89	529.89	21.00
7	380+56.80	104.36' Rt	550.84	544.46	HP 14x89	529.84	21.00
8	380+65.83	104.18' Rt	550.76	544.42	HP 14x89	529.76	21.00
9	380+74.80	104.00' Rt	550.68	544.38	HP 14x89	529.68	21.00
10	380+83.80	103.82' Rt	550.6	544.34	HP 14x89	530.10	20.50
11	380+92.80	103.64' Rt	550.52	544.3	HP 14x89	530.02	20.50
12	381+01.80	103.46' Rt	550.45	544.26	HP 14x89	529.95	20.50
13	381+10.79	103.28' Rt	550.38	544.23	HP 14x89	529.88	20.50
14	381+19.79	103.10' Rt	550.31	544.19	HP 14x89	529.81	20.50
15	381+28.79	102.92' Rt	550.25	544.18	HP 14x89	529.75	20.50
16	381+37.79	102.74' Rt	550.18	544.19	HP 14x89	529.68	20.50
17	381+46.79	102.56' Rt	550.12	544.14	HP 14x89	529.62	20.50
18	381+55.78	102.38' Rt	550.06	544.11	HP 14x89	529.56	20.50
19	381+64.78	102.20' Rt	550.01	544.08	HP 14x89	529.51	20.50
20	381+73.78	102.02' Rt	549.96	544.05	HP 14x89	529.96	20.00
21	381+82.78	101.84' Rt	549.9	544.03	HP 14x89	529.90	20.00
22	381+97.78	101.66' Rt	549.86	544.03	HP 14x89	529.86	20.00
23	382+00.78	101.48' Rt	549.81	544.03	HP 14x89	529.81	20.00
24	382+09.77	101.30' Rt	549.76	544.05	HP 14x89	529.76	20.00
25	382+18.77	101.12' Rt	549.72	544.19	HP 14x89	529.72	20.00
26	382+27.77	100.94' Rt	549.67	544.33	HP 14x89	529.67	20.00
27	382+36.77	100.76' Rt	549.62	544.47	HP 14x89	529.62	20.00
28	382+45.77	100.58' Rt	549.58	544.6	HP 14x89	529.58	20.00
29	382+54.76	100.40' Rt	549.54	544.72	HP 14x89	529.54	20.00
30	382+36.76	100.22' Rt	549.5	544.85	HP 14x89	530.00	19.50
31	382+72.76	100.04' Rt	549.46	544.97	HP 14x89	529.96	19.50
32	382+81.76	99.86' Rt	549.43	545.08	HP 14x89	529.93	19.50
33	382+90.76	99.68' Rt	549.39	545.19	HP 14x89	529.89	19.50
34	382+99.76	99.50' Rt	549.36	545.29	HP 14x89	529.86	19.50
35	383+08.75	99.32' Rt	549.34	545.32	HP 14x89	529.84	19.50
36	383+17.75	99.14' Rt	549.32	545.35	HP 14x89	529.82	19.50
37	383+26.75	98.96' Rt	549.3	545.39	HP 14x89	529.80	19.50
38	383+35.75	98.78' Rt	549.29	545.42	HP 14x89	529.79	19.50
39	383+44.75	98.60' Rt	549.27	545.45	HP 14x89	529.77	19.50
40	383+53.74	98.42' Rt	549.26	545.48	HP 14x89	529.76	19.50
41	383+62.74	98.24' Rt	549.25	545.5	HP 14x89	529.75	19.50
42	383+71.74	98.06' Rt	549.26	545.51	HP 14x89	529.76	19.50
43	383+80.74	97.88' Rt	549.26	545.52	HP 14x89	529.76	19.50
44	383+89.74	97.70' Rt	549.26	545.54	HP 14x89	529.76	19.50
45	383+98.74	97.52' Rt	549.26	545.55	HP 14x89	529.76	19.50
46	384+07.73	97.34' Rt	549.28	545.57	HP 14x89	529.78	19.50
47	384+16.73	97.16' Rt	549.29	545.58	HP 14x89	529.79	19.50
48	384+25.73	96.98' Rt	549.31	545.59	HP 14x89	529.81	19.50
49	384+34.73	96.80' Rt	549.33	545.61	HP 14x89	529.83	19.50
50	384+43.73	96.62' Rt	549.35	545.62	HP 14x89	529.85	19.50
51	384+52.73	96.44' Rt	549.38	545.63	HP 14x89	529.88	19.50
52	384+61.72	96.26' Rt	549.4	545.63	HP 14x89	529.90	19.50
53	384+70.72	96.08' Rt	549.43	545.64	HP 14x89	529.93	19.50
54	384+79.72	95.90' Rt	549.46	545.64	HP 14x89	529.96	19.50
55	384+88.72	95.72' Rt	549.5	545.65	HP 14x89	530.00	19.50
56	384+97.72	95.54' Rt	549.53	545.65	HP 14x89	530.03	19.50
57	385+06.71	95.36' Rt	549.57	545.66	HP 14x89	530.07	19.50
58	385+15.71	95.18' Rt	549.61	545.65	HP 14x89	529.61	20.00
59	385+24.71	95.00' Rt	549.65	545.65	HP 14x89	529.65	20.00
60	385+33.71	94.82' Rt	549.69	545.64	HP 14x89	529.69	20.00
61	385+42.71	94.64' Rt	549.73	545.62	HP 14x89	529.73	20.00
62	385+51.71	94.46' Rt	549.78	545.58	HP 14x89	529.78	20.00
63	385+60.74	94.37' Rt	549.82	545.54	HP 14x89	529.82	20.00
64	385+69.74	94.37' Rt	549.84	545.5	HP 14x89	529.84	20.00
65	385+78.74	94.37' Rt	549.69	545.45	HP 14x89	529.69	20.00
66	385+87.74	94.37' Rt	549.54	545.41	HP 14x89	529.54	20.00
67	385+96.74	94.37' Rt	549.4	545.36	HP 14x89	529.90	19.50
68	386+05.74	94.37' Rt	549.25	545.36	HP 14x89	529.75	19.50
69	386+14.74	94.37' Rt	549.1	545.37	HP 14x89	529.60	19.50
70	386+23.74	94.37' Rt	548.95	545.39	HP 14x89	529.95	19.00
71	386+31.24	94.37' Rt	548.83	545.39	HP 14x89	529.83	19.00
72	386+38.74	94.37' Rt	548.71	545.4	HP 14x89	529.71	19.00
73	386+46.24	94.37' Rt	548.59	545.41	HP 14x89	529.59	19.00



SERIES OF BAR CUTTING DIAGRAM

See table for dimensions. Make all cuts normal to bar axis

EB BAR TABLE SCHEDULE

Bar	No. of Sets Req'd	Bar No.	No. of Bars Per Set	A	B	C
v18(E)	1	#5	31	7'-1"	6'-5"	13'-6"
v19(E)	1	#5	31	6'-5"	5'-10"	12'-3"
v20(E)	1	#5	31	5'-10"	5'-5"	11'-3"
v23(E)	2	#5	62	5'-4"	5'-8"	11'-0"
v24(E)	1	#5	25	5'-4"	4'-11"	10'-3"
v25(E)	1	#5	29	4'-11"	4'-5"	9'-4"

EB WALL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h6(E)	198	#5	34'-7"	=====
h7(E)	92	#5	28'-4"	=====
h8(E)	26	#5	28'-11"	=====
h9(E)	12	#5	26'-3"	=====
h10(E)	2	#5	20'-0"	=====
h11(E)	16	#5	5'-0"	=====
h12(E)	32	#5	3'-6"	=====
v12(E)	62	#5	7'-9"	=====
v13(E)	62	#5	7'-8"	=====
v14(E)	62	#5	7'-7"	=====
v15(E)	62	#5	7'-5"	=====
v16(E)	124	#5	7'-3"	=====
v17(E)	62	#5	7'-1"	=====
v18(E)	31	#5	13'-6"	=====
v19(E)	31	#5	12'-3"	=====
v20(E)	31	#5	11'-3"	=====
v21(E)	124	#5	5'-3"	=====
v22(E)	372	#5	5'-1"	=====
v23(E)	62	#5	11'-0"	=====
v24(E)	25	#5	10'-3"	=====
v25(E)	29	#5	9'-4"	=====
Structure Excavation			Cu. Yd.	242.0
Concrete Structures			Cu. Yd.	154.6
Protective Coat			Sq. Yd.	476
Stud Shear Connectors			Each	836
Reinforcement Bars, Epoxy Coated			Pound	19,690
Furnishing Soldier Piles (HP Section)			Foot	1457
Drilling and Setting Soldier Piles (In Soil)			Cu. Ft.	4650.0
Drilling and Setting Soldier Piles (In Rock)			Cu. Ft.	2221.7
Untreated Timber Lagging			Sq. Ft.	4175
Granular Backfill for Structures			Cu. Yd.	457.5
Geocomposite Wall Drain			Sq. Yd.	343
Pipe Underdrain for Structures 4"			Foot	652



USER NAME	= eoskqui_
PLOT SCALE	=
PLOT DATE	= 8/8/2023

DESIGNED	-	EAO
CHECKED	-	JZ
DRAWN	-	EAO
CHECKED	-	JZ

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL CROSS SECTION AND DETAILS (3 OF 3)
STRUCTURE NO. 099-W041 & 099-W042

SHEET RW-12 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	892
CONTRACT NO. 62R28				
ILLINOIS		FED. AID PROJECT		

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
		23-inch thick ASPHALT --PAVEMENT--															
	552.9	6-inch thick CRUSHED STONE --BASE COURSE--															
	552.4	Hard, brown SANDY CLAY LOAM, some gravel; dry			1	12 9 9	4.50 P	9									
	549.4	--FILL-- --RDR 3--			2	8 5 11	NP	9									
	546.9	Medium dense, gray SANDY GRAVEL, little clay loam; damp			3	4 6 6	0.75 P	22									
		--FILL-- --RDR 4--			4	7 8 5	NR										
	543.1	Medium stiff, dark brown Gravelly SILTY LOAM to CLAY LOAM; moist			5	12 7 26	NP	19									
	541.2	--L _t (%)=35, P _L (%)=17-- --%Gravel=23.2-- --%Sand=22.8-- --%Silt=39.3-- --%Clay=14.7--															
	539.4	Stiff (1.0P), black SILTY CLAY; damp															
		--Buried TOPSOIL--															
		Dense, brown SANDY GRAVEL, trace silty clay; moist															
		--RDR 4--															
		--Auger REFUSAL-- Boring terminated at 15.50 ft															
			20														
			25														
GENERAL NOTES										WATER LEVEL DATA							
Begin Drilling 05-23-2023 Complete Drilling 05-23-2023										While Drilling ☒ DRY							
Drilling Contractor Wang Testing Services Drill Rig 21GeoA[96%]										At Completion of Drilling ☒ DRY							
Driller AG&KD Logger N. Karahalios Checked by C. Marin										Time After Drilling NA							
Drilling Method 3.25" ID HSA; boring backfilled upon completion										Depth to Water ☒ NA							
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual																	

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	550.0	Medium stiff (0.5P), dark gray and black SILTY CLAY LOAM, trace gravel; damp	1	PUSH	0.50 P	19											
	548.0	Light brown Gravelly SAND to SANDY LOAM; damp	2	PUSH	NP	17											
		Stiff, dark gray SILTY CLAY, trace gravel; damp	3	PUSH	1.00 P	29											
			4	PUSH	1.00 P	32											
	541.5		5	PUSH	1.00 P	34											
		--Sampler REFUSAL-- Boring terminated at 10.00 ft															
GENERAL NOTES Begin Drilling 05-30-2023 Complete Drilling 05-30-2023 Drilling Contractor Wang Testing Services Drill Rig Geoprobe HA Driller AG&GW Logger M. Rojo Checked by C. Marin Drilling Method 1" ID HSA; boring backfilled upon completion										WATER LEVEL DATA While Drilling DRY At Completion of Drilling DRY Time After Drilling NA Depth to Water NA The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

MODEL: Default
FILE NAME: pw://transystems-pw.bentley.com/transystems-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Stantec/CAD/ML-04_62R28/04-Sheets/04-Structures/Retaining Walls/Final Plans/RETAINING WALL-62R28-01-4-Soil Boring (Sheet 2 of 11).dgn
8/8/2023 2:41:31 PM



wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 80WB-RWB-02

WEI Job No.: 255-39-01

Client **Stantec**

Project **I-80 Reconstruction, Ridge Road to Houbolt Road**

Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 554.55 ft
North: 1755588.14 ft
East: 1024052.05 ft
Station: 382+51.9
Offset: 62.6 LT

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		22-inch thick ASPHALT --PAVEMENT--								528.6	Boring terminated at 26.00 ft						
	552.7	552.26-inch thick CRUSHED STONE --BASE COURSE--															
		Hard, brown SANDY CLAY LOAM, little to some gravel; dry to damp			1	11 24 14	> 4.50 P	9									
		--FILL-- --RDR 3--	5														
	547.7	Stiff to hard, brown SILTY CLAY LOAM, trace to little gravel; damp			2	9 9 10	> 4.50 P	14									
		--FILL-- --RDR 3--	10		3	5 6 7	1.15 S	18									
					4	3 8 14	> 4.50 P	17									
	541.6	Stiff, black SILTY CLAY, trace gravel; damp			5	4 48 34	1.31 B	37									
		--Buried TOPSOIL--	15														
	538.6	Strong, light gray, very poor quality, DOLOSTONE; Closely spaced, slightly to moderately weathered, horizontal, oblique, and vertical JOINTS, with 0-0.2 inch opening, slightly rough walls, and <0.2 inch thick clay infill.			6												
		--RUN 1: 16.0 to 22.0 feet-- --Recovery: 95%-- --RQD: 7%--	20														
		--RUN 2: 22.0 to 26.0 feet-- --Recovery: 98%-- --RQD: 8%--	25		7												
GENERAL NOTES									WATER LEVEL DATA								
Begin Drilling 05-23-2023 Complete Drilling 05-23-2023									While Drilling 13.50 ft								
Drilling Contractor Wang Testing Services Drill Rig 21GeoA[96%]									At Completion of Drilling 14.00 ft								
Driller AG&KD Logger N. Karahalios Checked by C. Marin									Time After Drilling NA								
Drilling Method 3.25" ID HSA; boring backfilled upon completion									Depth to Water NA								
									The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual								



wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 80WB-RWB-02HA

WEI Job No.: 255-39-01

Client **Stantec**

Project **I-80 Reconstruction, Ridge Road to Houbolt Road**

Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 551.30 ft
North: 1755607.80 ft
East: 1024104.90 ft
Station: 383+05.4
Offset: 80.6 LT

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	550.8	6-inch thick, medium stiff (0.5P), black SILTY CLAY LOAM, trace gravel															
		--TOPSOIL--															
	548.8	Light brown SANDY GRAVEL; damp			1		1.00 P	16									
		Stiff, brown and gray CLAY LOAM, trace gravel; damp to moist															
	546.3	--FILL--	5														
		Very stiff, dark gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp to moist			2		2.05 B	26									
					3		2.13 B	31									
	539.3	--wet sample--															
		--Sampler REFUSAL-- Boring terminated at 12.00 ft															
GENERAL NOTES									WATER LEVEL DATA								
Begin Drilling 05-30-2023 Complete Drilling 05-30-2023									While Drilling 12.00 ft								
Drilling Contractor Wang Testing Services Drill Rig 21GeoA[96%]									At Completion of Drilling 12.00 ft								
Driller AG&GW Logger M. Rojo Checked by C. Marin									Time After Drilling NA								
Drilling Method 1" IDA Hydraulic Geoprobe; boring backfilled upon completion									Depth to Water NA								
									The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual								

USER NAME = eoskquj	DESIGNED - EAO	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE =	DRAWN - EAO	REVISED -
PLOT DATE = 8/8/2023	CHECKED - JZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS (2 OF 11)
STRUCTURE NO. 099-W041 & 099-W042

SHEET RW-14 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	894
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: pw://transsystems-pw.bentley.com/transcorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/01-Stantec/CAD/ML-04_62R28/04-Sheets/04-Structures/Retaining Walls/Final Plans/RETAINING WALL-62R28-01-6-Soil Boring (Sheet 4 of 11).dgn
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wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 80WB-RWB-04

WEI Job No.: 255-39-01

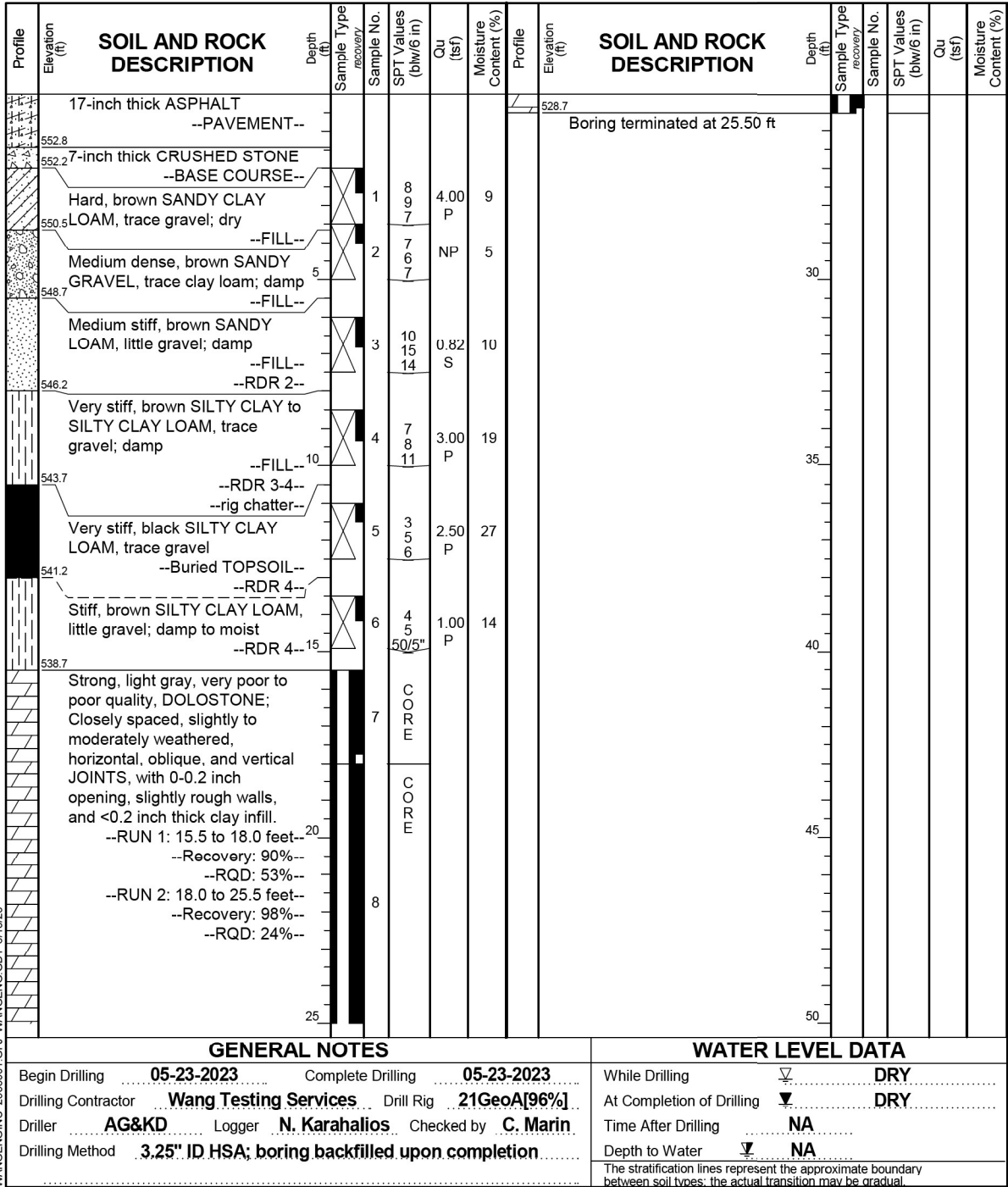
Client **Stantec**

Project **I-80 Reconstruction, Ridge Road to Houbolt Road**

Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 554.17 ft
North: 1755591.47 ft
East: 1024212.98 ft
Station: 384+12.9
Offset: 61.0 LT

Page 1 of 1





wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 80WB-RWB-04HA

WEI Job No.: 255-39-01

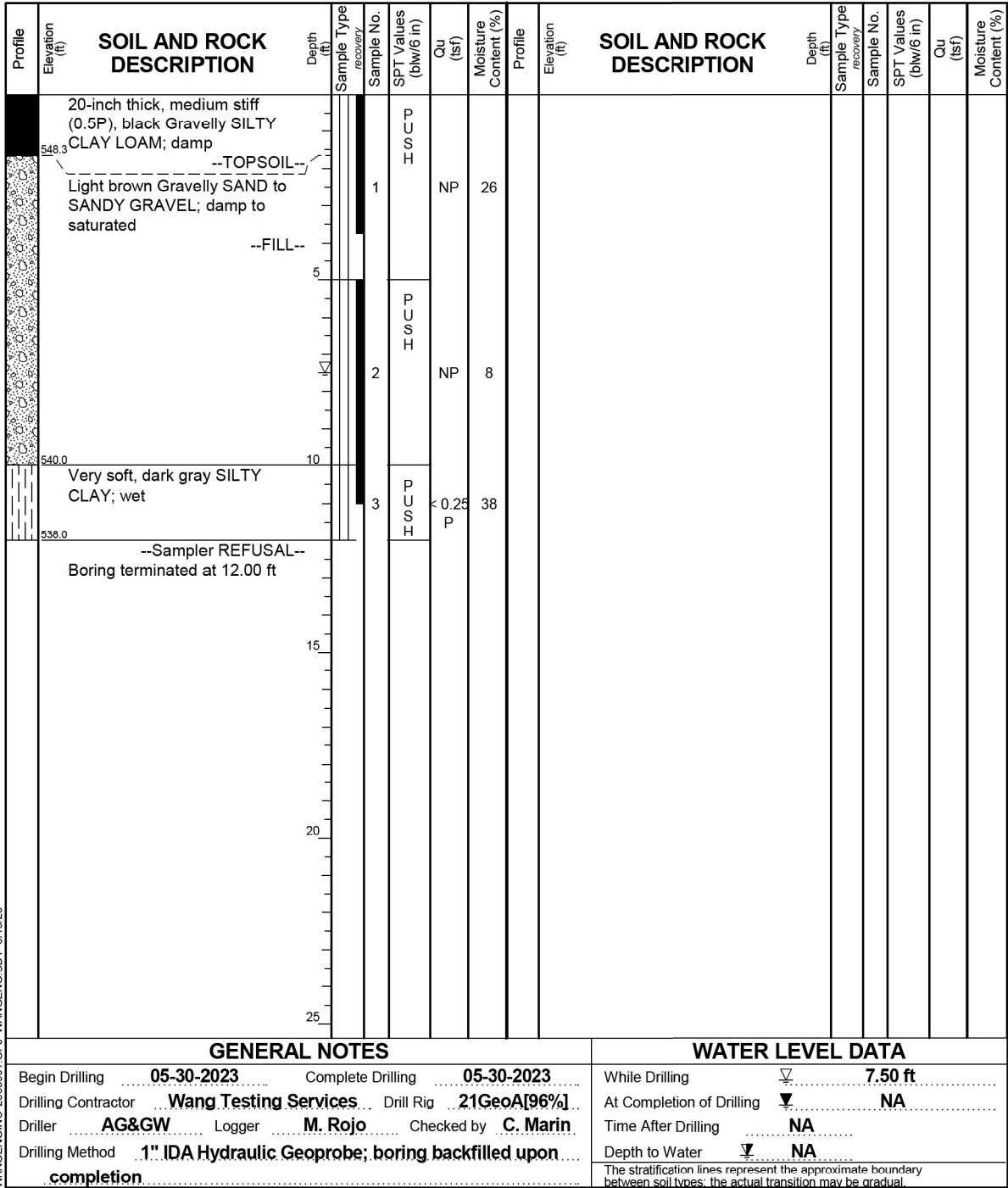
Client **Stantec**

Project **I-80 Reconstruction, Ridge Road to Houbolt Road**

Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 549.98 ft
North: 1755620.41 ft
East: 1024401.14 ft
Station: 386+01.9
Offset: 84.1 LT

Page 1 of 1



USER NAME = eoskqu1	DESIGNED - EAO	REVISED -
PLOT SCALE =	CHECKED - JZ	REVISED -
PLOT DATE = 8/8/2023	DRAWN - EAO	REVISED -
	CHECKED - JZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS (4 OF 11)
STRUCTURE NO. 099-W041 & 099-W042

SHEET RW-16 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	896
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
	553.0	16-inch thick ASPHALT --PAVEMENT--						
	552.3	8-inch thick CRUSHED STONE --BASE COURSE--						
	551.1	Medium dense, brown SANDY GRAVEL; damp		X	1	10 11 11	NP	6
		--FILL--		X	2	4 6 8	0.50 P	12
	548.0	Very stiff, dark brown and black SILTY CLAY LOAM, trace gravel	5					
	547.8	Brown SANDY GRAVEL; damp		X	3	3 15 6	2.50 P	52
	546.3	Very stiff, dark brown and black SILTY CLAY LOAM, trace gravel		X	4	17 24 8	NP	5
		--organic content= 4.1%--	10					
	543.8	Dense, brown SANDY GRAVEL, little asphalt fragments; damp		X	5	4 6 8	3.00 P	25
		Stiff to very stiff, dark brown and green SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp		X	6	5 5 9	1.50 P	14
	538.8	--RDR 2-3--						
	537.3	Very dense, gray SANDY GRAVEL, trace silty clay loam			7	50/1"	NP	
		--Weathered BEDROCK-- --RDR 5-- Boring terminated at 17.00 ft						
			20					
			25					

ec	USER NAME = eoskgul	DESIGNED - EAO	REVISED -
		CHECKED - JZ	REVISED -
	PLOT SCALE =	DRAWN - EAO	REVISED -
	PLOT DATE = 8/8/2023	CHECKED - JZ	REVISED -

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type <i>recovery</i>	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	553.2	17-inch thick ASPHALT --PAVEMENT--						
	552.6	7-inch thick CRUSHED STONE --BASE COURSE--						
	551.3	Very stiff, dark brown SILTY CLAY LOAM, trace gravel; damp			1	11 10 10	3.00 P	20
		--FILL--			2	7 7 8	NP	8
	549.3	Medium dense, brown SANDY GRAVEL; damp			3	2 6 18	3.00 P	18
		--FILL--			4	10 17 15	2.50 P	10
		--RDR 2-4--			5	5 6 8	NP	10
	544.1	Medium dense, brown SANDY GRAVEL; damp			6	4 8 6	1.00 P	25
541.6	Stiff, black SILTY CLAY LOAM, trace gravel; damp			7		NP	18	
539.1	Very dense, gray SILTY LOAM to SILTY CLAY LOAM, little gravel; damp				50/1"			
537.6	--Weathered BEDROCK--							
	Strong, light gray, poor quality, DOLOSTONE; Closely spaced, highly to moderately weathered, horizontal, oblique, and vertical JOINTS, with 0-0.2 inch opening, slightly rough walls, and <0.2 inch thick sand infill. --RUN 1: 17.0 to 27.0 feet-- --Recovery: 98%-- --RQD: 32%-- --Q _i =6,981 psi	20		8				
		25						

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORINGS (5 OF 11) STRUCTURE NO. 099-W041 & 099-W042		F.A.I. RTE. 80	SECTION FAI 80 21 STRUCTURE 7	COUNTY WILL	TOTAL SHEETS 1059	SHEET NO. 897
	SHEET RW-17 OF RW-23 SHEETS		CONTRACT NO. 62R28				
			ILLINOIS	FED. AID PROJECT			

MODEL: Default
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wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 80EB-RWB-01

WEI Job No.: 255-39-01

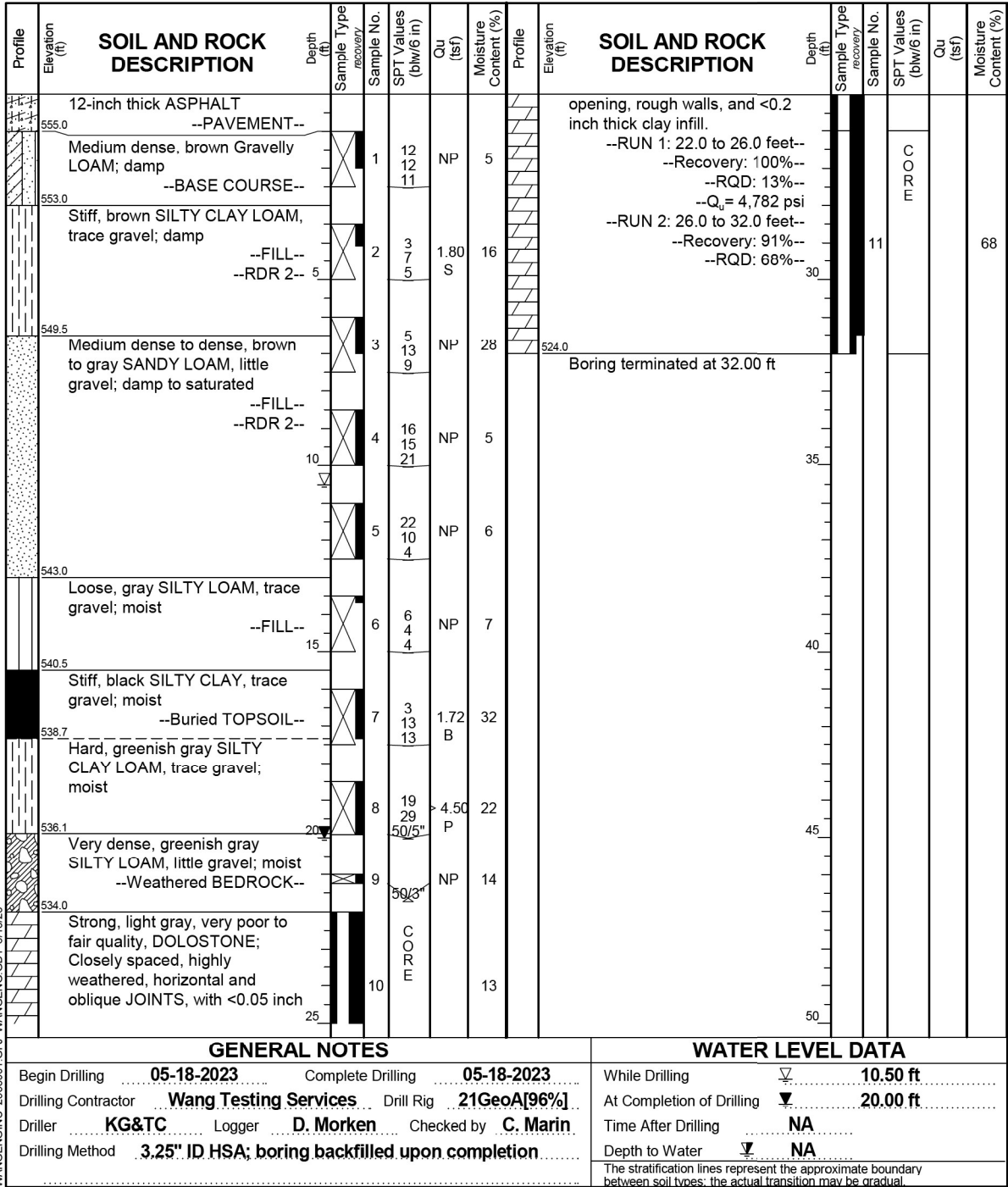
Client **Stantec**

Project **I-80 Reconstruction, Ridge Road to Houbolt Road**

Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 555.98 ft
North: 1755445.94 ft
East: 1023828.78 ft
Station: 380+24.4
Offset: 72.6 RT

Page 1 of 1





wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 80EB-RWB-01HA

WEI Job No.: 255-39-01

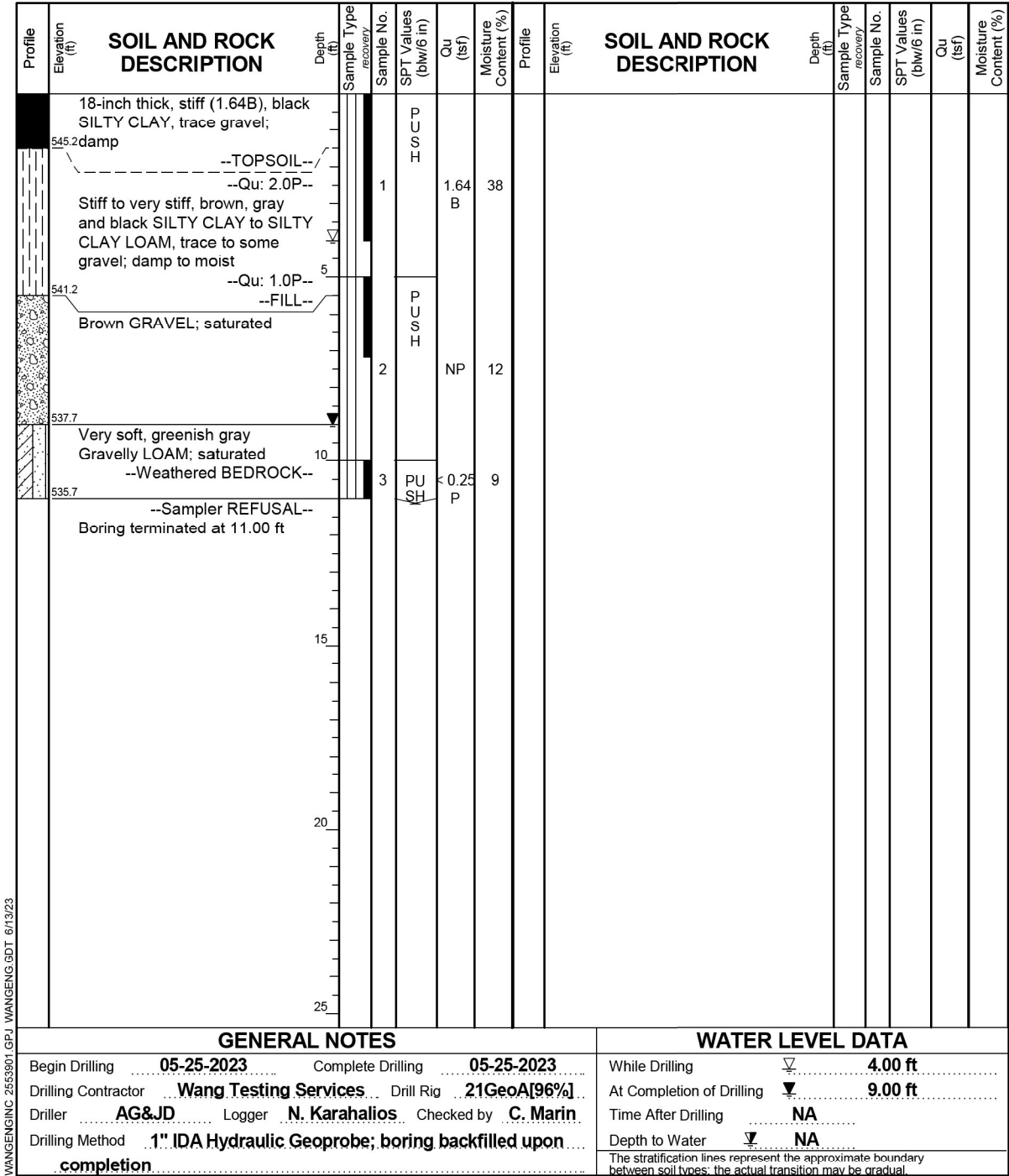
Client **Stantec**

Project **I-80 Reconstruction, Ridge Road to Houbolt Road**

Location **Will County, Illinois**

Datum: NAVD 88
Elevation: 546.72 ft
North: 1755418.56 ft
East: 1023867.62 ft
Station: 380+62.4
Offset: 101.2 RT

Page 1 of 1



MODEL: Default
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8/8/2023 2:42:22 PM



wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 80EB-RWB-02

WEI Job No.: 255-39-01

Datum: NAVD 88
Elevation: 555.16 ft
North: 1755450.21 ft
East: 1023914.41 ft
Station: 381+10.1
Offset: 71.0 RT

Client: Stantec

Project: I-80 Reconstruction, Ridge Road to Houbolt Road

Location: Will County, Illinois

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		15-inch thick ASPHALT --PAVEMENT--															
	553.9																
		Dense, brown Gravelly LOAM; damp			1	35 30 14	NP	1									
	551.9	--BASE COURSE--															
		Stiff, brown Gravelly SILTY LOAM; damp			2	5 8 9	1.50 P	15									
		--FILL--	5														
		--RDR 2-3--															
		--L _L (%)=26, P _L (%)=16--															
		--%Gravel=36.2--															
		--%Sand=11.8--															
		--%Silt=39.7--															
	547.2	--%Clay=12.3--			3	5 6 10	1.50 P	13									
		Hard, black SILTY CLAY, trace gravel; moist			4	4 10 6	4.35 B	31									
	544.7	--Buried TOPSOIL--															
		--RDR 2--	10														
		Medium dense, brown LOAM, little gravel; damp to saturated			5	8 8 7	NP	13									
		--RDR 3--															
					6	3 4 7	NP	4									
	539.7		15														
		Very dense, gray Gravelly SILTY LOAM; moist			7	50 4	NP	13									
	538.2	--RDR 4--															
		--Auger REFUSAL--															
		Boring terminated at 17.00 ft															
			20														



wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 80EB-RWB-02HA

WEI Job No.: 255-39-01

Datum: NAVD 88
Elevation: 547.52 ft
North: 1755426.45 ft
East: 1023962.42 ft
Station: 381+57.4
Offset: 96.2 RT

Client: Stantec

Project: I-80 Reconstruction, Ridge Road to Houbolt Road

Location: Will County, Illinois

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		10-inch thick, very stiff (2.00P), black SILTY CLAY LOAM, trace gravel; damp --TOPSOIL--															
	546.7																
	544.9	Brown SANDY GRAVEL; damp --FILL--			1		2.54 B	36									
		Stiff to very stiff, black and dark gray SILTY CLAY LOAM, trace gravel; damp --Buried TOPSOIL-- --Qu: 1.5P--	5														
	540.4																
		Stiff to very stiff (3.94B), dark gray and black SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --Weathered BEDROCK--			2		3.99 B	37									
	537.3		10														
	536.5	Very stiff, gray and brown CLAY LOAM, some gravel; damp --Sampler REFUSAL-- Boring terminated at 11.00 ft			3	PUSH	2.50 P	14									
			15														
			20														
			25														
GENERAL NOTES										WATER LEVEL DATA							
Begin Drilling 05-25-2023 Complete Drilling 05-25-2023										While Drilling ▽ DRY							
Drilling Contractor Wang Testing Services Drill Rig 21GeoA[96%]										At Completion of Drilling ▼ DRY							
Driller AG&JD Logger N. Karahalios Checked by C. Marin										Time After Drilling NA							
Drilling Method 1" IDA Hydraulic Geoprobe; boring backfilled upon completion										Depth to Water ▼ NA							
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.																	



USER NAME = eoskqu	DESIGNED - EAO	REVISED -
	CHECKED - JZ	REVISED -
PLOT SCALE =	DRAWN - EAO	REVISED -
PLOT DATE = 8/8/2023	CHECKED - JZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS (7 OF 11)
STRUCTURE NO. 099-W041 & 099-W042

SHEET RW-19 OF RW-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 STRUCTURE 7	WILL	1059	899
CONTRACT NO. 62R28				
ILLINOIS FED. AID PROJECT				

ec	USER NAME = eocajuj	DESIGNED - EAO	REVISED -	STA DEPARTMENT
		CHECKED - JZ	REVISED -	
	PLOT SCALE =	DRAWN - EAO	REVISED -	
	PLOT DATE = 8/8/2023	CHECKED - JZ	REVISED -	

NOTATION	SOIL BORINGS (8 OF 11) STRUCTURE NO. 099-W041 & 099-W042	F.A.I. RTE.	SECTION		C
		80	FAI 80 21 STRUCTURE 7		
	SHEET RW-20 OF RW-23 SHEETS			ILLINOIS	FED. AID PROJ