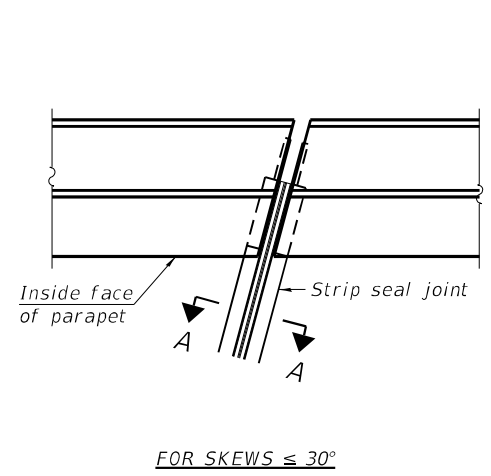
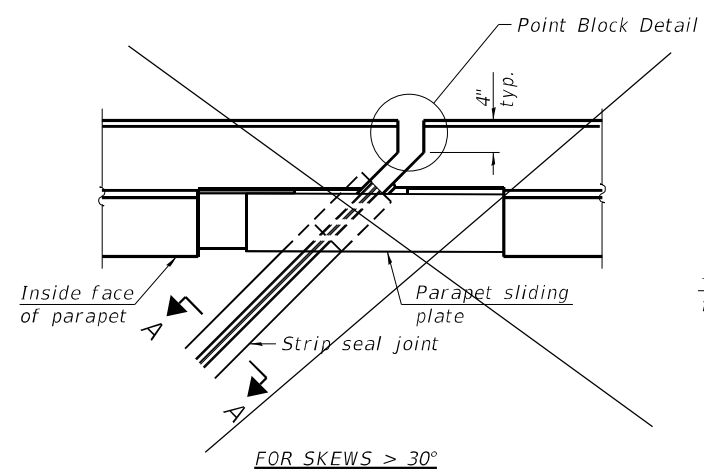


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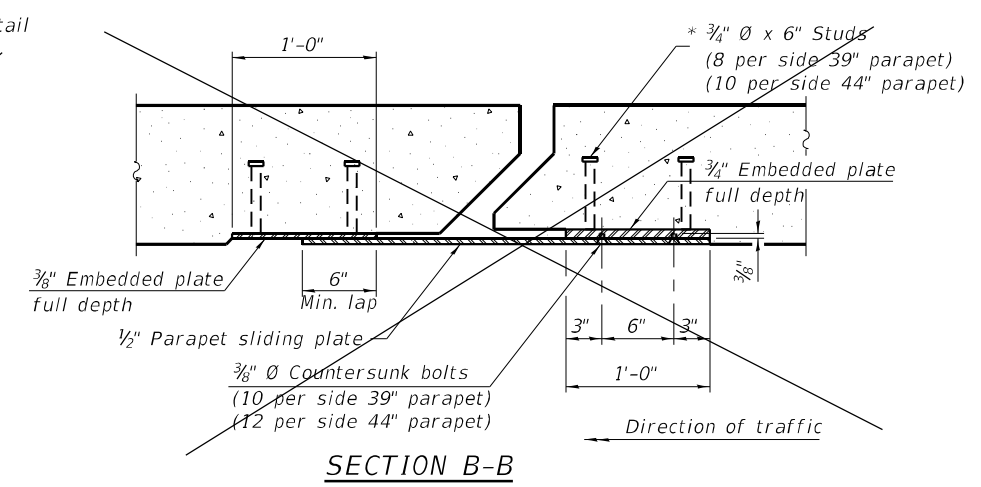


FOR SKEWS $\leq 30^\circ$

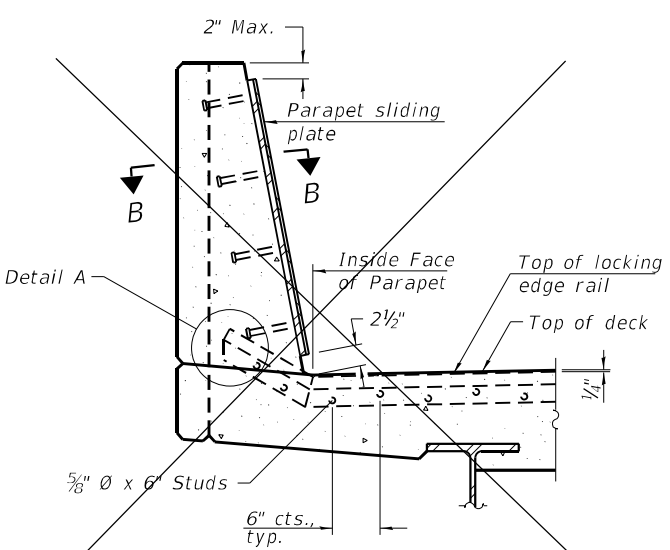
PLAN AT PARAPET



FOR SKEWS $> 30^\circ$

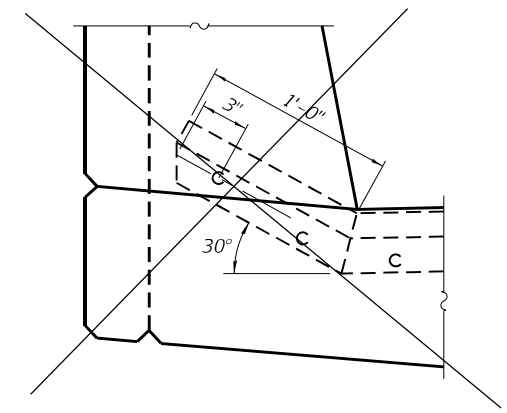


SECTION B-B

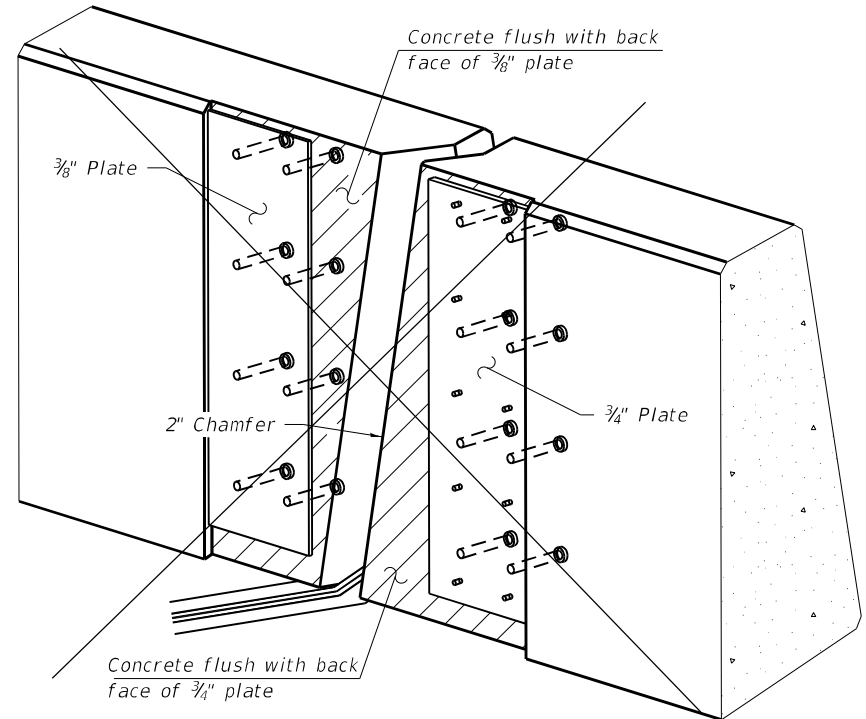


SECTION AT PARAPET

(Skews $> 30^\circ$ shown. Skews $\leq 30^\circ$ similar except as shown in plan view.)

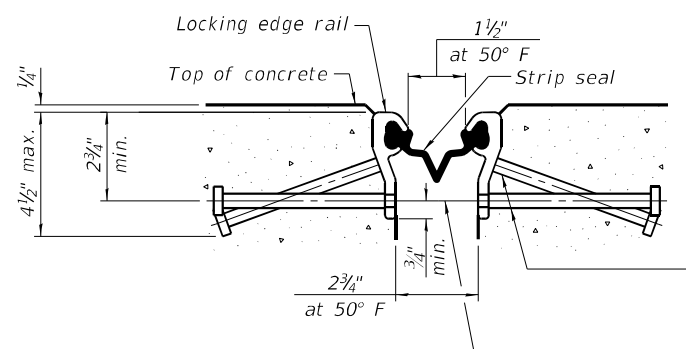


DETAIL A



TRIMETRIC VIEW

(Showing embedded plates only)



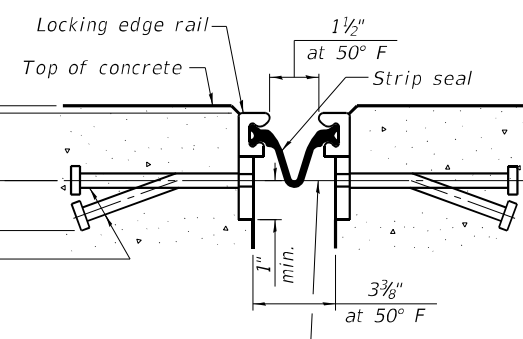
SHOWING ROLLED RAIL JOINT

* $5/8"$ ϕ x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

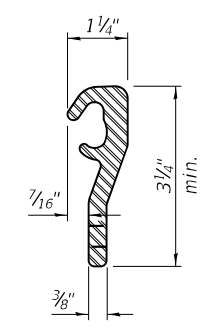
$3/8"$ ϕ threaded rods in $1/16"$ ϕ holes at $\pm 4'-0"$ cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

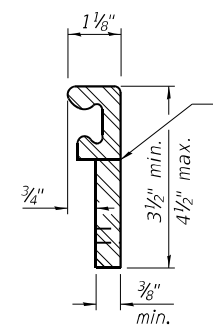
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



SHOWING WELDED RAIL JOINT



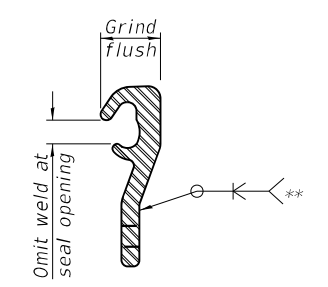
ROLLED (EXTRUDED) RAIL



WELDED RAIL

LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	268



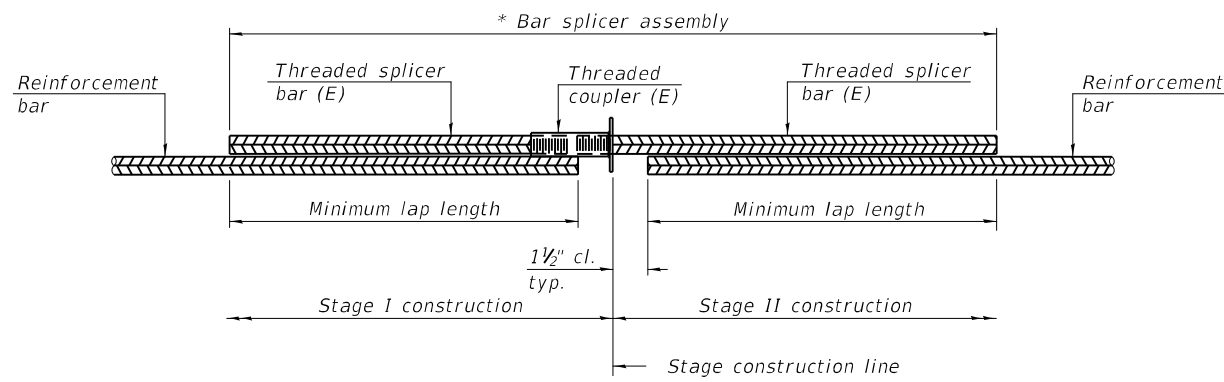
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PLOT SCALE =	CHECKED - SPS	REVISED -
PLOT DATE =	DRAWN - SAT	REVISED -
	CHECKED - JMT	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
 STRUCTURE NO. 049-0690

SHEET 21 OF 56 SHEETS

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 101
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				

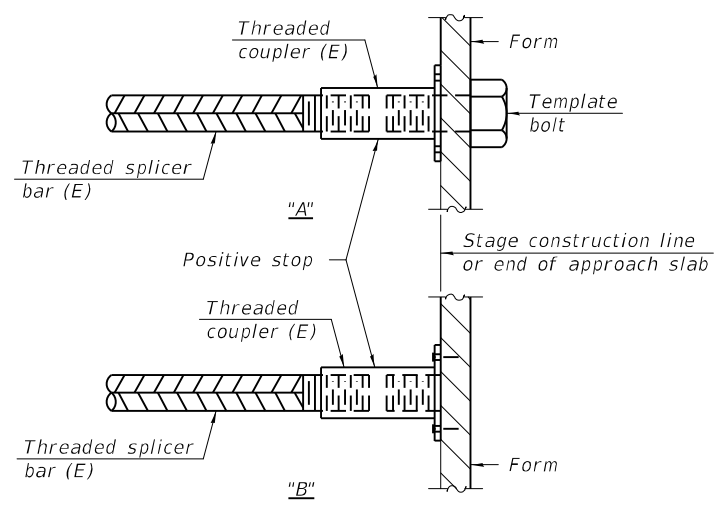


STANDARD BAR SPLICER ASSEMBLY PLAN
 (All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

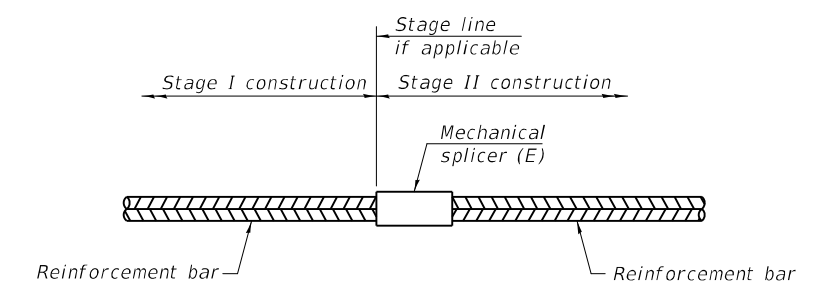
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length	
Superstructure				
Top	a3(E)	#6	1839	4'-0"
Bottom	a(E)	#7	1839	4'-2"
Haunch	a(E)	#7	98	4'-2"
Approach Slab - East				
Top	a5(E) & a10(E)	#5	46	3'-4"
Bottom	a6(E)	#8	60	4'-9"
Footing (Top)	w10(E)	#5	20	3'-4"
Footing (Bott.)	w10(E)	#5	20	3'-0"
Approach Slab - West				
Top	a5(E)	#5	46	3'-4"
Bottom	a6(E)	#8	60	4'-9"
Footing (Top)	w10(E)	#5	20	3'-4"
Footing (Bott.)	w10(E)	#5	20	3'-0"



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.

MODEL: Default
 FILE NAME: C:\Engineering\Live\Projects\13020_IL_132_Land Bridge\CADD\CADD Sheets\Structural\049-0690-62\A53-022-Bar_Splicer.dgn

BSD-1 1-1-2020



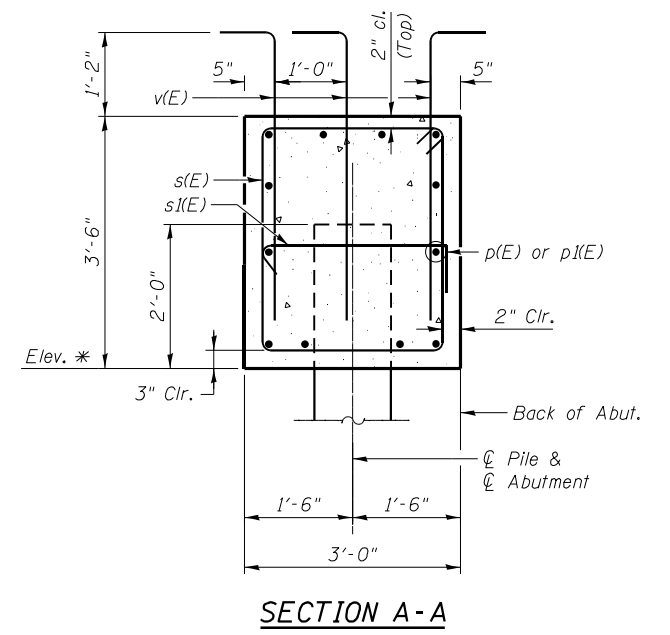
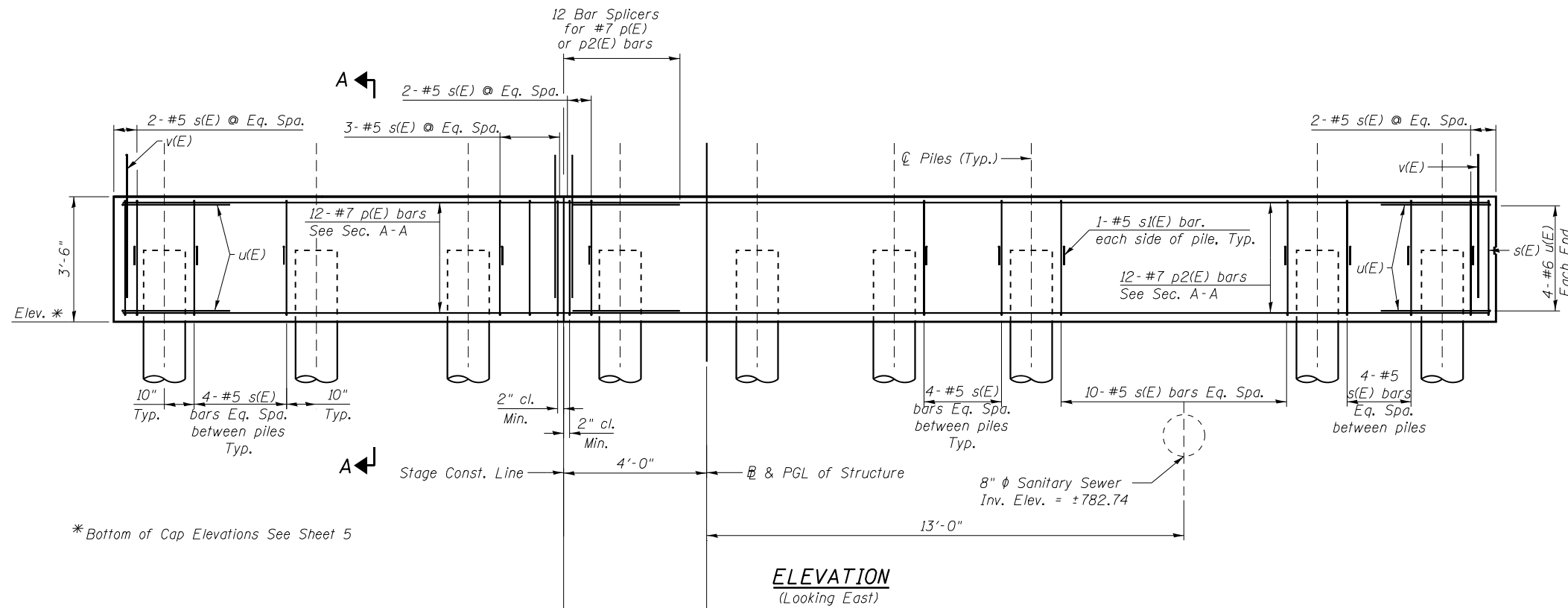
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CHECKED - SPS	REVISIONS -	
PLOT SCALE =	DRAWN - JN	REVISED -
PLOT DATE =	CHECKED - JMT	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 049-0690**

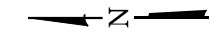
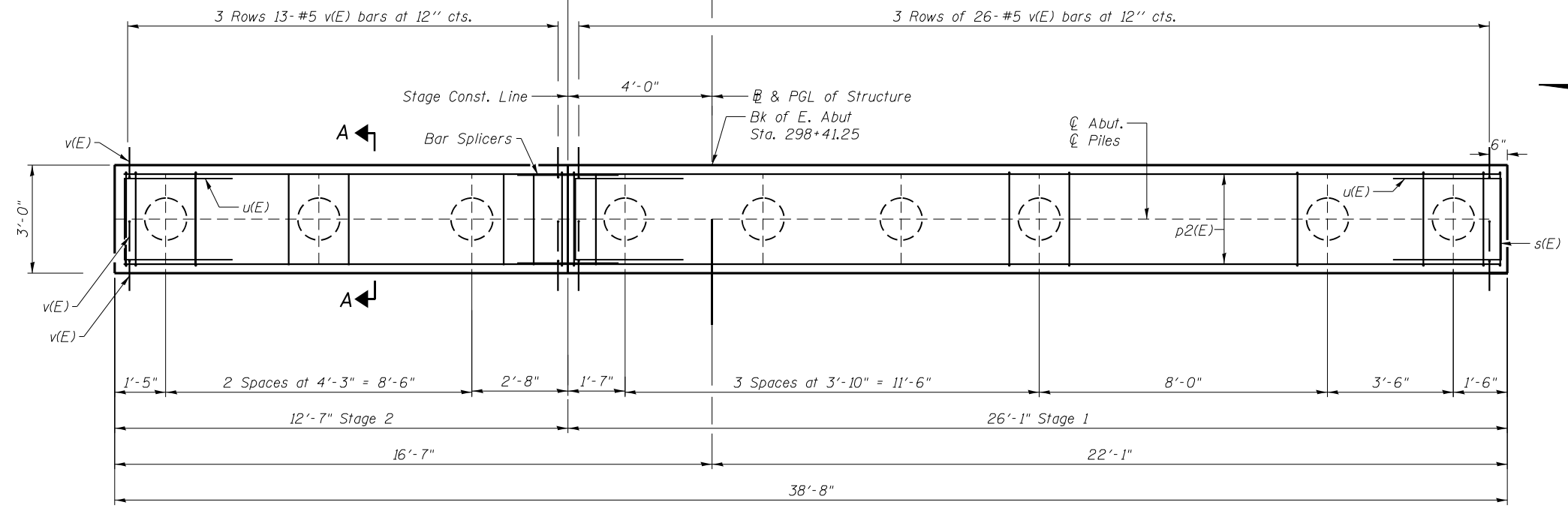
SHEET 22 OF 56 SHEETS

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 102
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)



BILL OF MATERIAL
(East ABUTMENT)

Bar	No.	Size	Length	Shape	
p2(E)	12	#7	25'-8"	—	
p(E)	12	#7	12'-2"	—	
s(E)	43	#5	12'-5"	□	
s(I(E))	18	#5	3'-7"	U	
u(E)	8	#6	10'-2"	U	
v(E)	117	#5	4'-10"	└	
Structure Excavation				Cu. Yd.	39
Concrete Structures				Cu. Yd.	15.0
Reinforcement Bars, Epoxy Coated				Pound	2270
Bar Splicers				Each	12
Furnishing - Piles				Foot	360
Driving Piles				Foot	360
Test Piles				Each	1

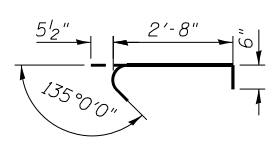
p2(E) = Stage 1
p(E) = Stage 2

PILE DATA

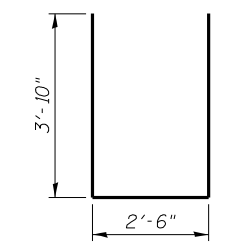
Type: Metal Shell 14"φ w/0.25" walls
Nominal Required Bearing: 304 Kips
Factored Resistance Available: 167 Kips
Est. Length: 45'
No. Production Piles: 8
No. Test Piles: 1
Furnish / Drive Piles: 360 Ft.

East Abut.
304 Kips
167 Kips
45'
8
1
360 Ft.

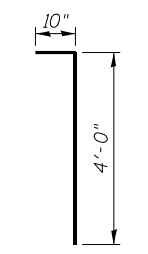
PLAN



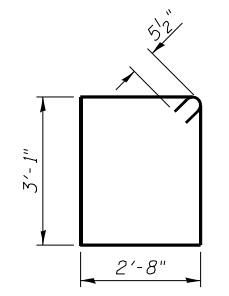
BAR s(I(E))



BAR u(E)



BAR v(E)



BAR s(E)

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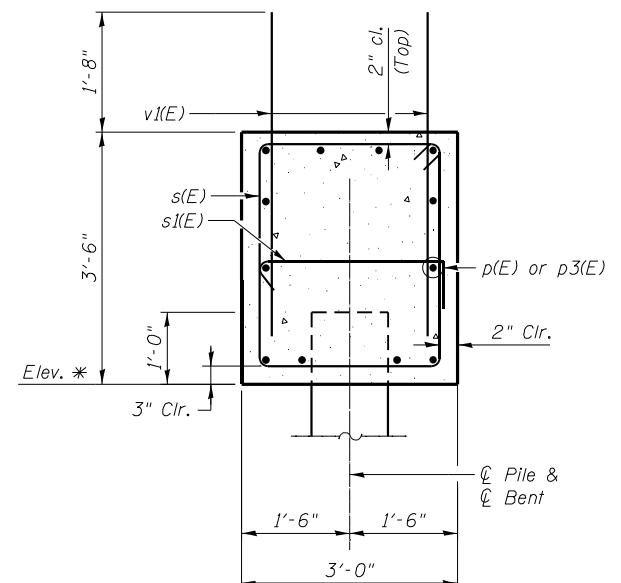
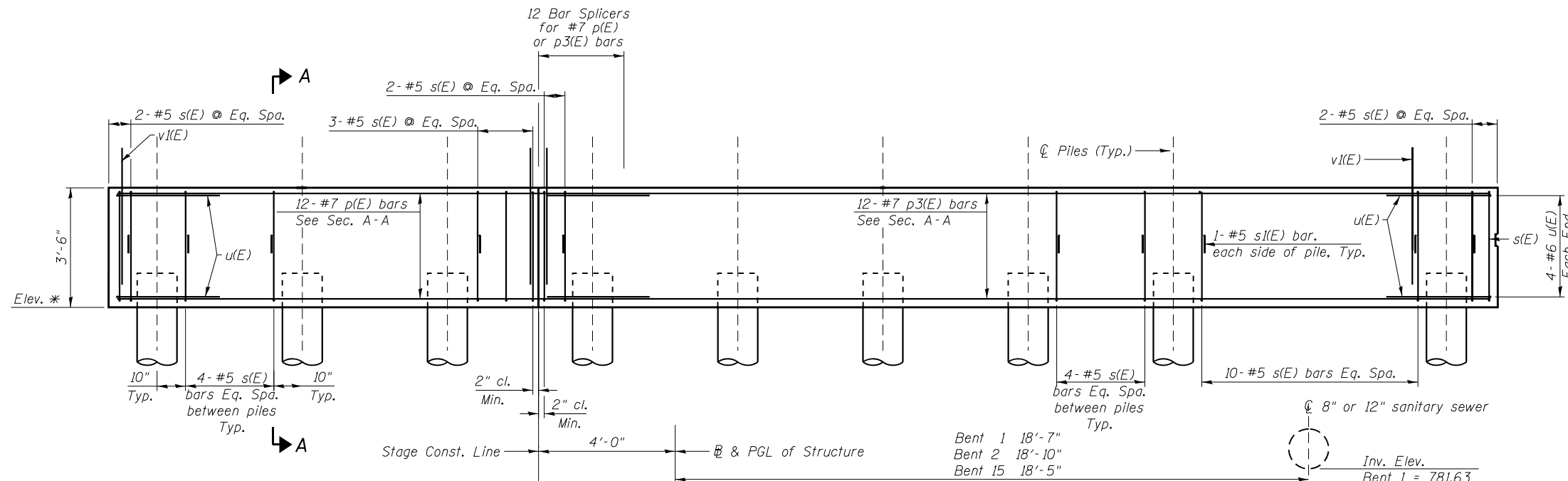
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DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT	
STRUCTURE NO. 049-0690	
SCALE:	SHEET 24 OF 56 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	104
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				

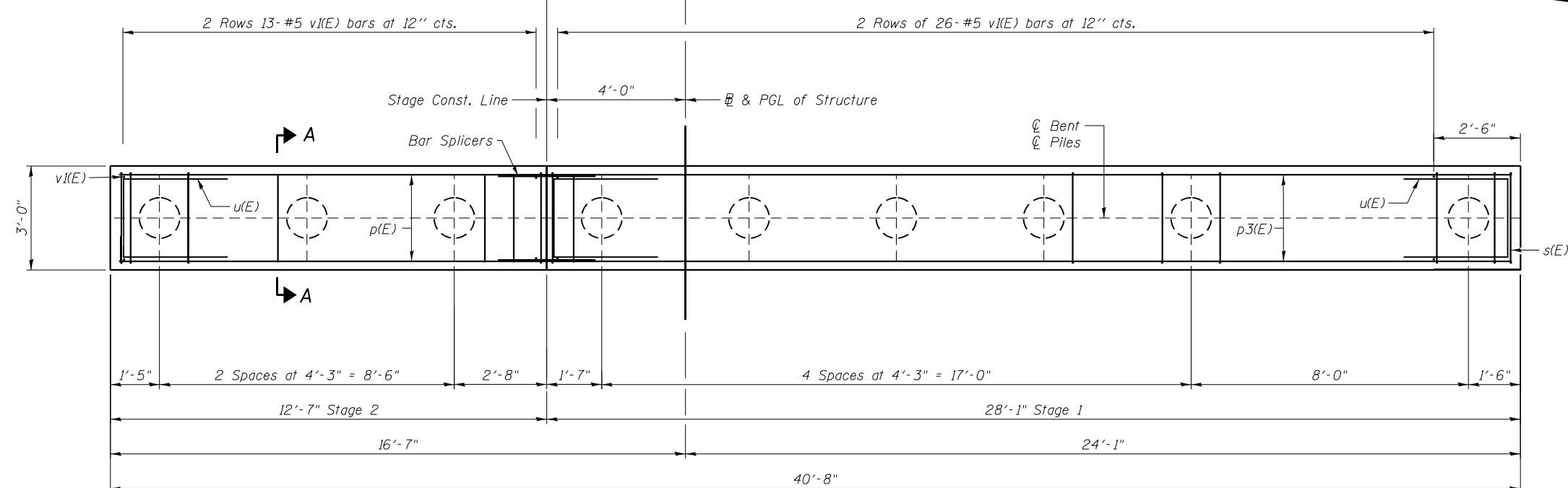


SECTION A-A

*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)

Inv. Elev.
Bent 1 = 781.63
Bent 2 = 781.57
Bent 15 = 780.61



PLAN

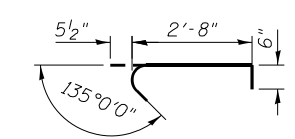
BILL OF MATERIAL
(One Bent)

Bar	No.	Size	Length	Shape
p ₃ (E)	12	#7	27'-8"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s ₁ (E)	18	#5	3'-7"	□
u(E)	8	#6	10'-2"	□
v ₁ (E)	78	#5	4'-6"	
Structure Excavation Cu. Yd. 41				
Concrete Structures Cu. Yd. 15.8				
Reinforcement Bars, Epoxy Coated Pound 2100				
Bar Splicers Each 12				
3 Bents				
Furnishing - Piles Foot 1404				
Driving Piles Foot 1404				
Test Piles Each 1				

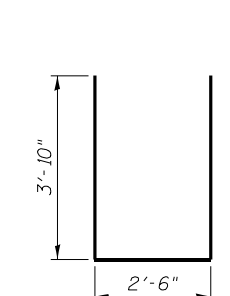
p₃(E) = Stage 1
p(E) = Stage 2

PILE DATA

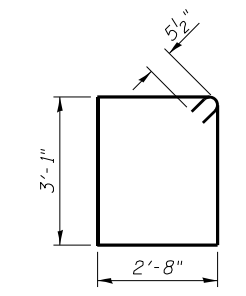
Type: Metal Shell 14"φ w/0.25" walls	Bent 1	Bent 2	Bent 15
Nominal Required Bearing:	335 Kips	335 kips	335 kips
Factored Resistance Available:	184 Kips	184 kips	184 kips
Est. Length:	54'	54'	54'
No. Production Piles:	9	8	9
No. Test Piles:	0	1	0
Furnish / Drive Piles	486 Ft.	432 Ft.	486 Ft.



BAR s₁(E)

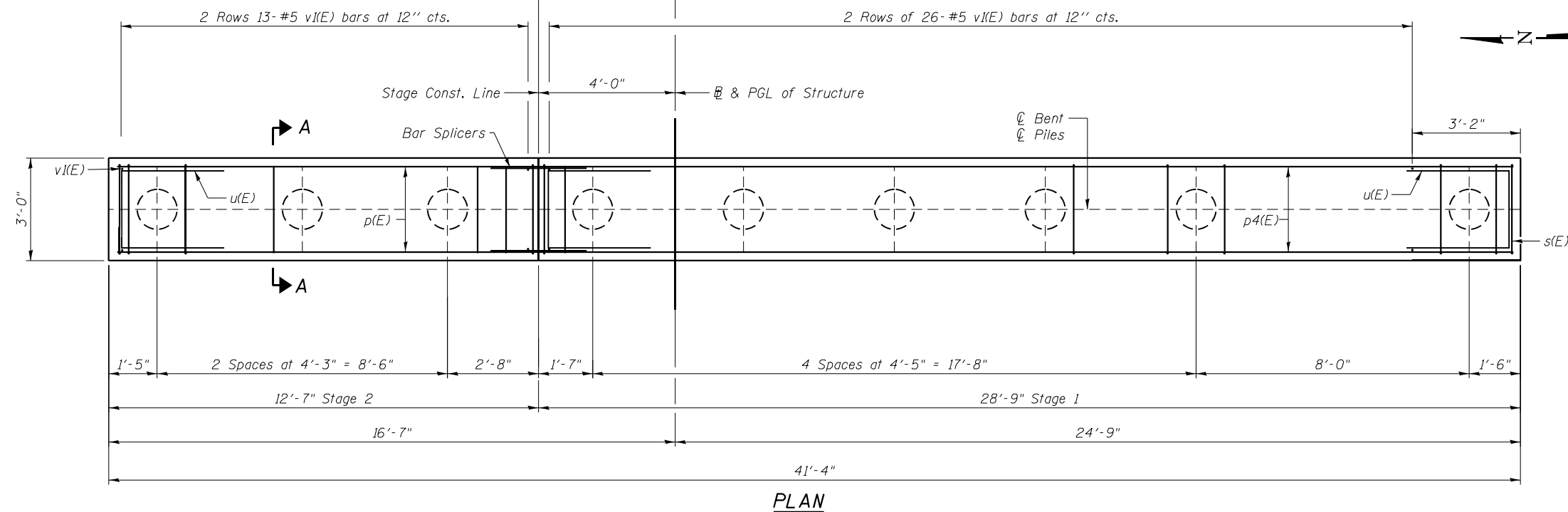
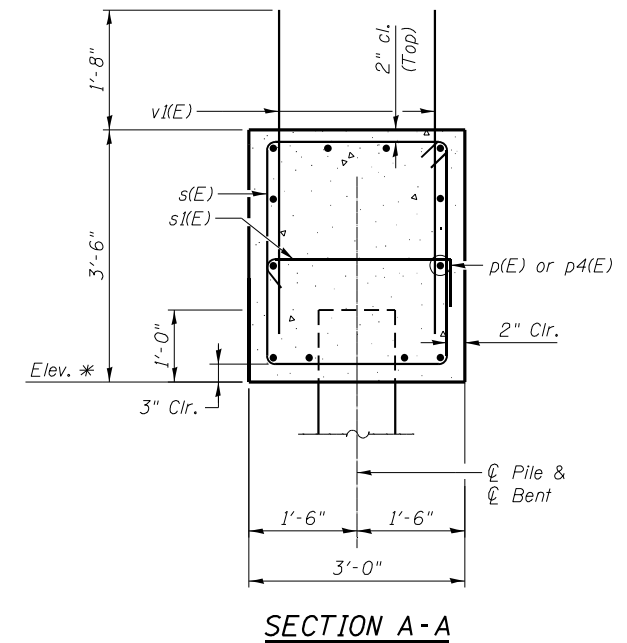
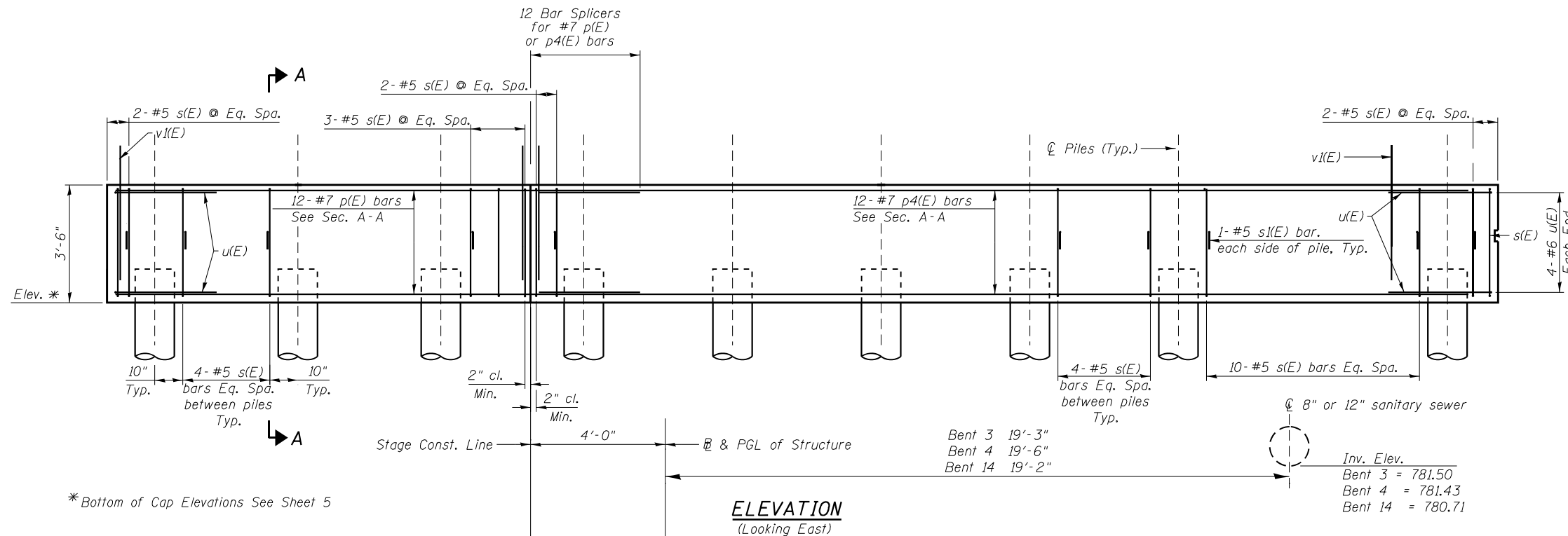


BAR u(E)



BAR s(E)

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BILL OF MATERIAL

(One Bent)

Bar	No.	Size	Length	Shape
p ₄ (E)	12	#7	28'-4"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s ₁ (E)	18	#5	3'-7"	U
u(E)	8	#6	10'-2"	U
v(E)	78	#5	4'-6"	

Structure Excavation	Cu. Yd.	41
Concrete Structures	Cu. Yd.	16.1
Reinforcement Bars, Epoxy Coated	Pound	2100
Bar Splicers	Each	12

3 Bents

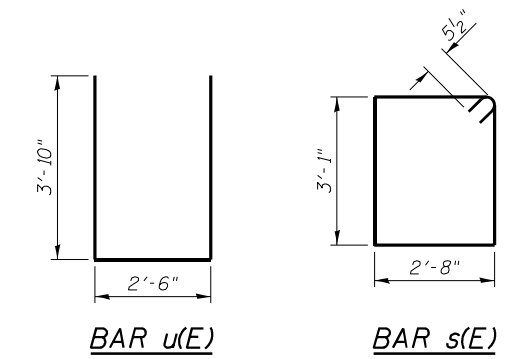
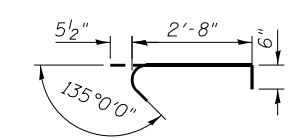
Furnishing - Piles	Foot	1548
Driving Piles	Foot	1548
Test Piles	Each	0

p₄(E) = Stage 1
p(E) = Stage 2

PILE DATA

Type: Metal Shell 14"φ w/0.25" walls
Nominal Required Bearing:
Factored Resistance Available:
Est. Length:
No. Production Piles:
No. Test Piles:
Furnish / Drive Piles

	Bent 3	Bent 4	Bent 14
Nominal Required Bearing:	337 Kips	337 Kips	337 Kips
Factored Resistance Available:	185 Kips	185 Kips	185 Kips
Est. Length:	54'	66'	52'
No. Production Piles:	9	9	9
No. Test Piles:	0	0	0
Furnish / Drive Piles	486 Ft.	594 Ft.	468 Ft.



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DATE - 10/19/2022	REVISED -

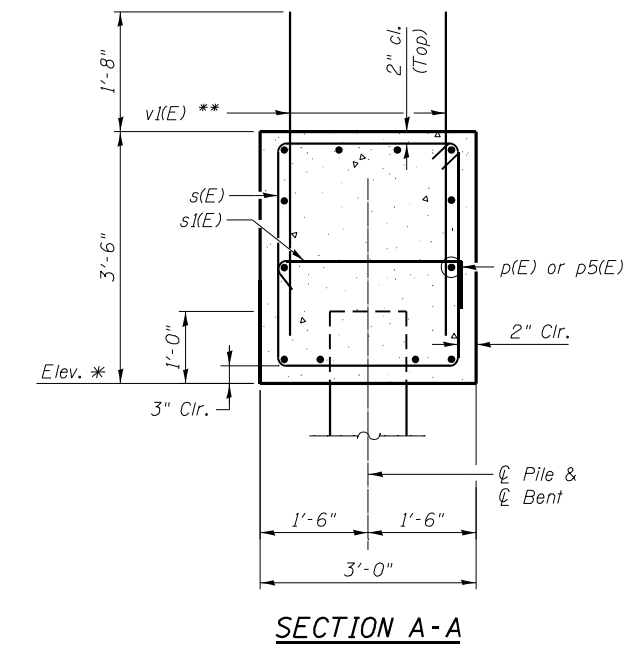
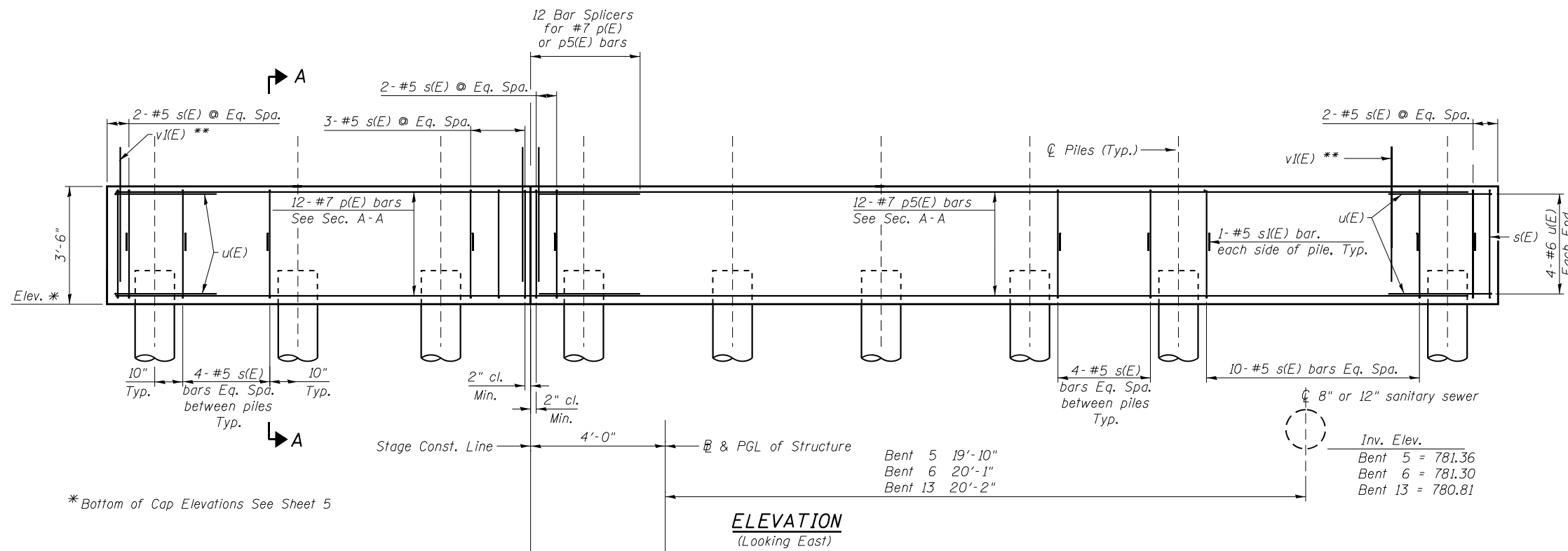
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR PILE BENTS (GROUP B)
STRUCTURE NO. 049-0690

SCALE: SHEET 26 OF 56 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	106

CONTRACT NO. 62A53
ILLINOIS FED. AID PROJECT

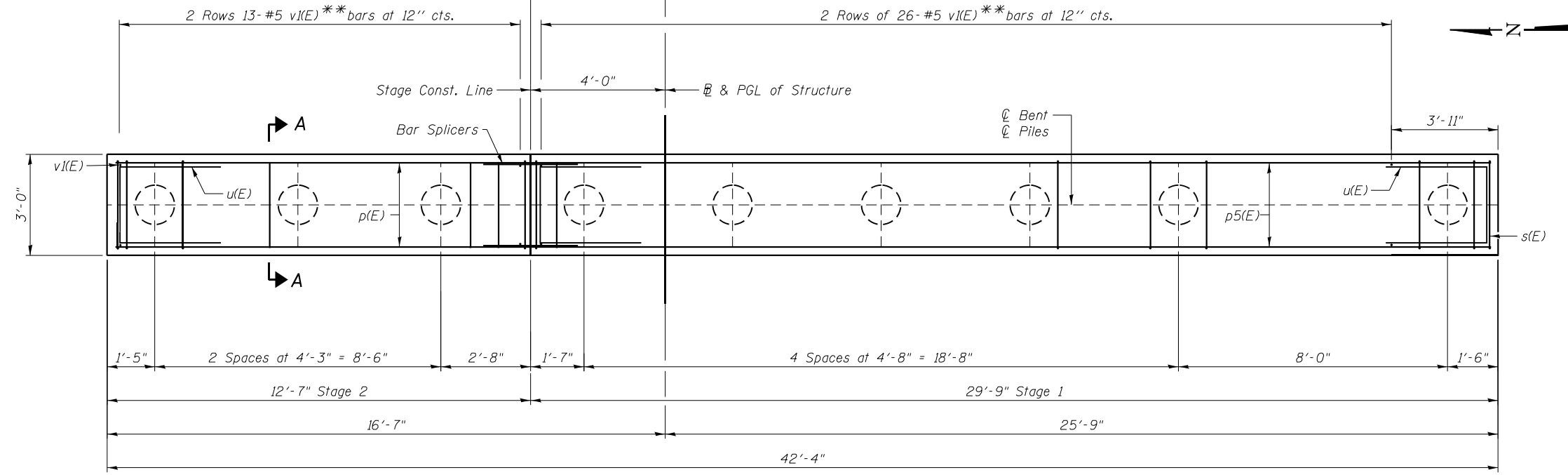


*Bottom of Cap Elevations See Sheet 5

BILL OF MATERIAL
(One Bent)

Bar	No.	Size	Length	Shape
p ₅ (E)	12	#7	29'-0"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s(I(E)	18	#5	3'-7"	U
u(E)	8	#6	10'-2"	U
** v(I(E)	78	#5	4'-6"	
Structure Excavation		Cu. Yd.	42	
Concrete Structures		Cu. Yd.	16.3	
Reinforcement Bars, Epoxy Coated		Pound	2130	
Bar Splicers		Each	12	
3 Bents				
Furnishing - Piles		Foot	1991	
Driving Piles		Foot	1991	
Test Piles		Each	2	

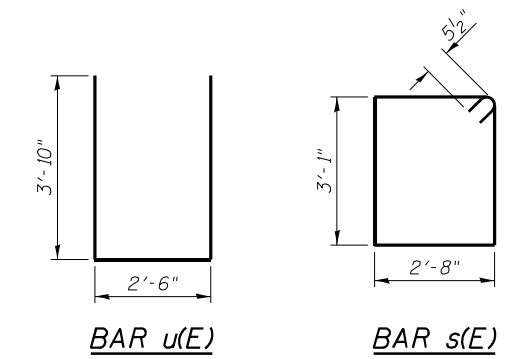
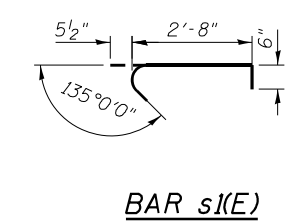
** Omit v(I(E) Bars on Bent 6
p₅(E) = Stage 1
p(E) = Stage 2



PILE DATA

Type: Metal Shell 14"φ w/0.25" walls
Nominal Required Bearing:
Factored Resistance Available:
Est. Length:
No. Production Piles:
No. Test Piles:
Furnish / Drive Piles

	Bent 5	Bent 6	Bent 13
340 Kips	340 Kips	340 Kips	340 Kips
187 Kips	187 Kips	187 Kips	187 Kips
87'	87'	64'	64'
8	9	8	8
1	0	1	1
696 Ft.	783 Ft.	512 Ft.	512 Ft.



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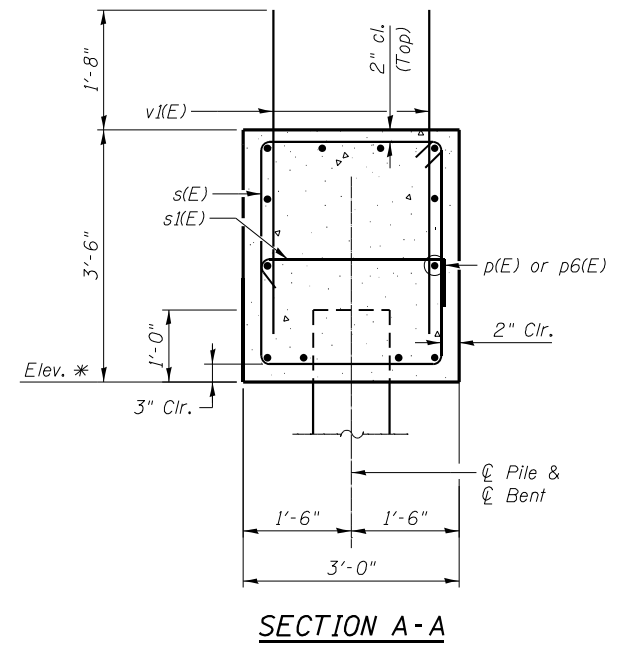
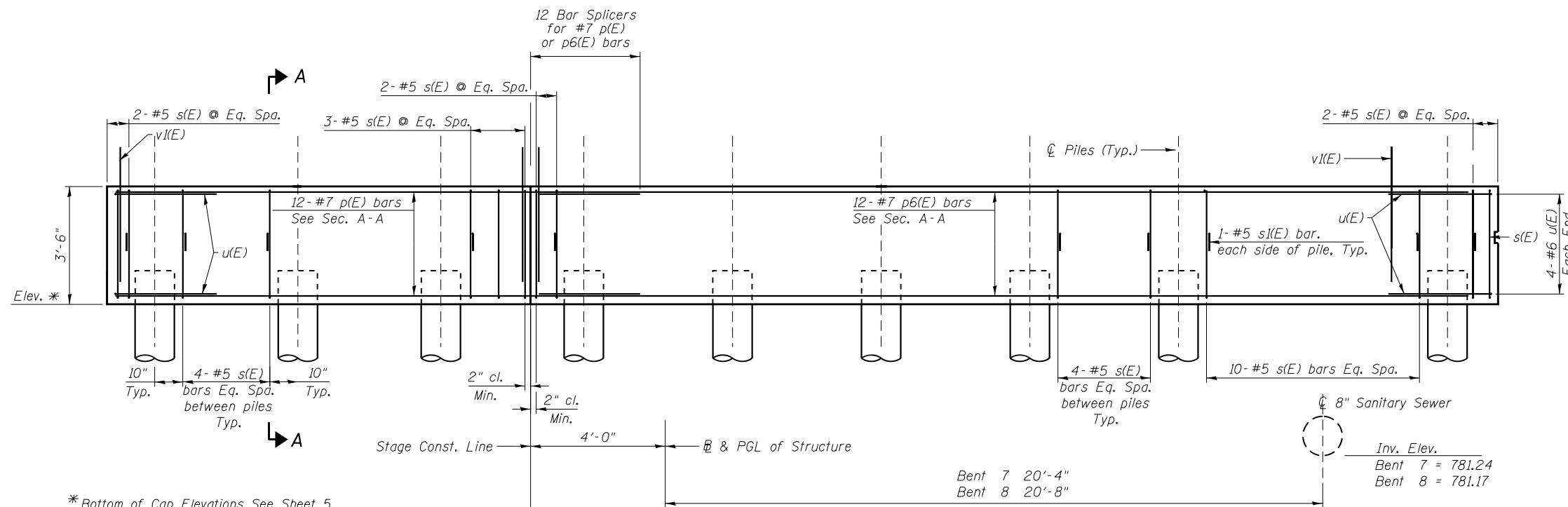
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DRAWN - JKR	REVISD -
CHECKED - SEA	REVISD -
DATE - 10/19/2022	REVISD -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR PILE BENTS (GROUP C)
STRUCTURE NO. 049-0690

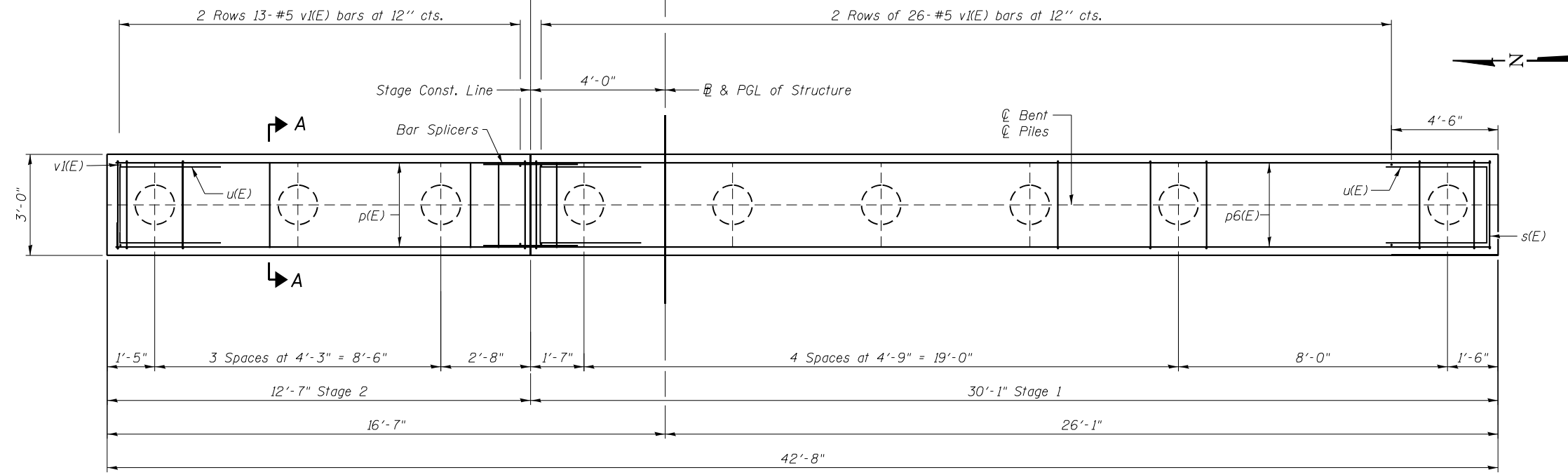
SCALE: SHEET 27 OF 56 SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 107
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)



PLAN

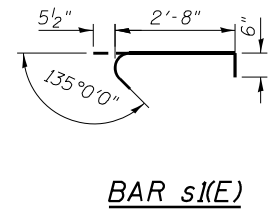
PILE DATA

Type: Metal Shell 14"φ w/0.25" walls	Bent 7	Bent 8
Nominal Required Bearing:	340 Kips	340 Kips
Factored Resistance Available:	187 Kips	187 Kips
Est. Length:	67'	67'
No. Production Piles:	9	9
No. Test Piles:	0	0
Furnish / Drive Piles	603 Ft.	603 Ft.

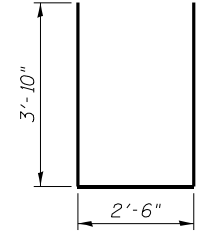
BILL OF MATERIAL
(One Bent)

Bar	No.	Size	Length	Shape
p ₆ (E)	12	#7	29'-8"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s ₁ (E)	18	#5	3'-7"	□
u(E)	8	#6	10'-2"	□
v(E)	78	#5	4'-6"	
Structure Excavation		Cu. Yd.	42	
Concrete Structures		Cu. Yd.	16.6	
Reinforcement Bars, Epoxy Coated		Pound	2150	
Bar Splicers		Each	12	
2 Bents				
Furnishing - Piles		Foot	1206	
Driving Piles		Foot	1206	
Test Piles		Each	0	

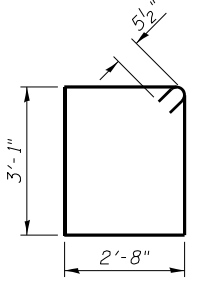
p₆(E) = Stage 1
p(E) = Stage 2



BAR s₁(E)



BAR u(E)



BAR s(E)

10/19/2022 \\abna\joh\15\15\15\Cadd\Drawings\04906596-0162653-028-Crup.dgn

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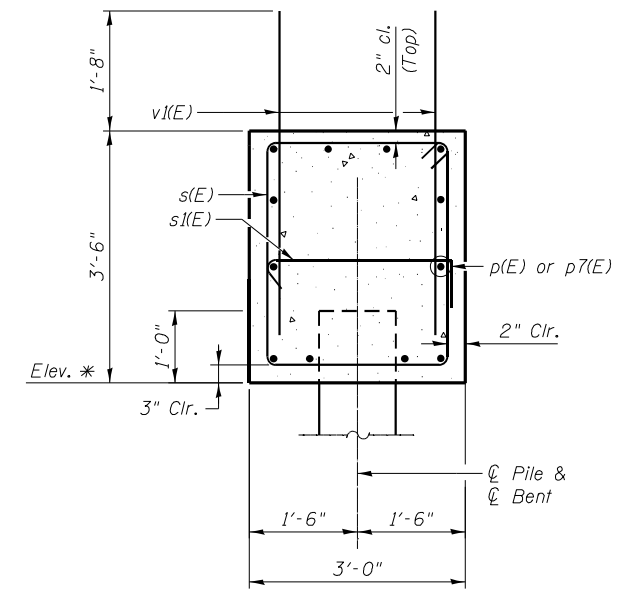
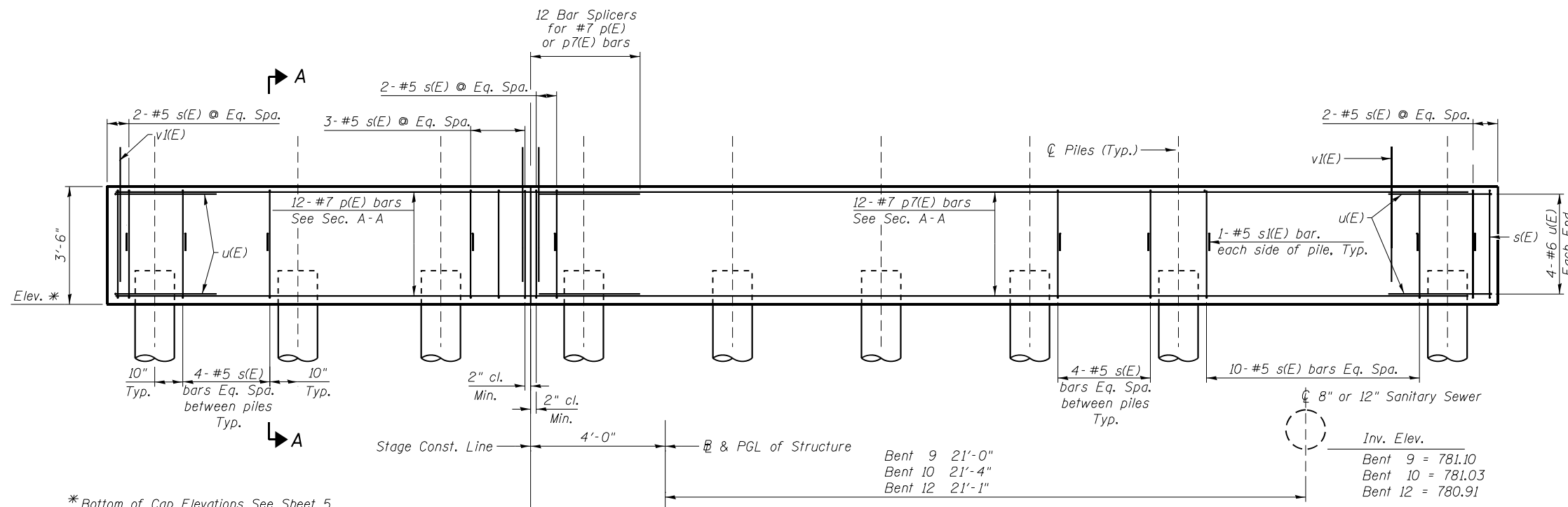
DESIGNED - FH	REVISED -
DRAWN - JKR	REVISED -
CHECKED - SEA	REVISED -
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DEPARTMENT OF TRANSPORTATION

INTERIOR PILE BENTS (GROUP D)
STRUCTURE NO. 049-0690

SCALE: SHEET 28 OF 56 SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 108
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



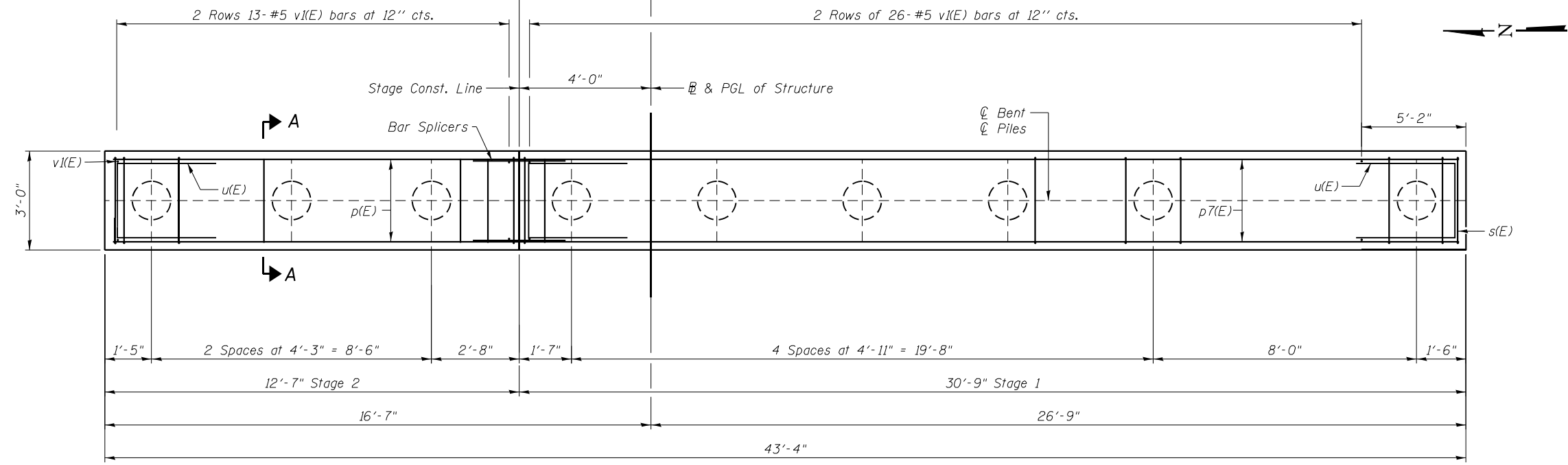
SECTION A-A

Inv. Elev.

Bent 9	21'-0"	781.10
Bent 10	21'-4"	781.03
Bent 12	21'-1"	780.91

*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)



PLAN

BILL OF MATERIAL

(One Bent)

Bar	No.	Size	Length	Shape
p7(E)	12	#7	30'-4"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s1(E)	18	#5	3'-7"	U
u(E)	8	#6	10'-2"	U
v(E)	78	#5	4'-6"	

Structure Excavation	Cu. Yd.	43
Concrete Structures	Cu. Yd.	16.9
Reinforcement Bars, Epoxy Coated	Pound	2160
Bar Splicers	Each	12

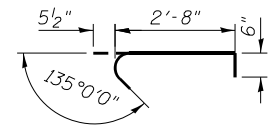
3 Bents

Furnishing - Piles	Foot	1553
Driving Piles	Foot	1553
Test Piles	Each	1

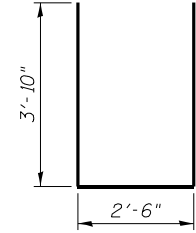
p7(E) = Stage 1
p(E) = Stage 2

PILE DATA

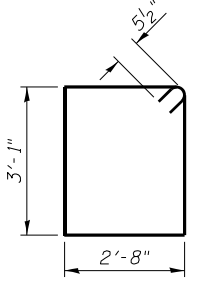
Type: Metal Shell 14"φ w/0.25" walls	Bent 9	Bent 10	Bent 12
Nominal Required Bearing:	342 Kips	342 Kips	342 Kips
Factored Resistance Available:	188 Kips	188 Kips	188 Kips
Est. Length:	58'	58'	63'
No. Production Piles:	8	9	9
No. Test Piles:	1	0	0
Furnish / Drive Piles	464 Ft.	522 Ft.	567 Ft.



BAR s1(E)



BAR u(E)



BAR s(E)

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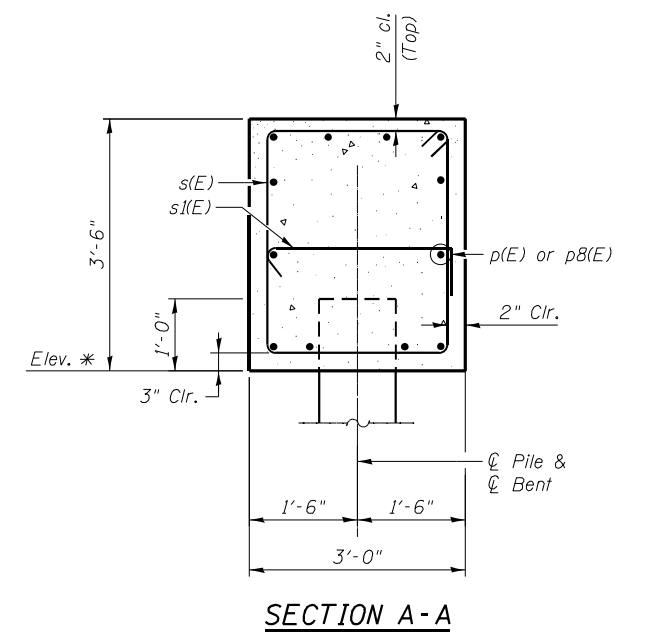
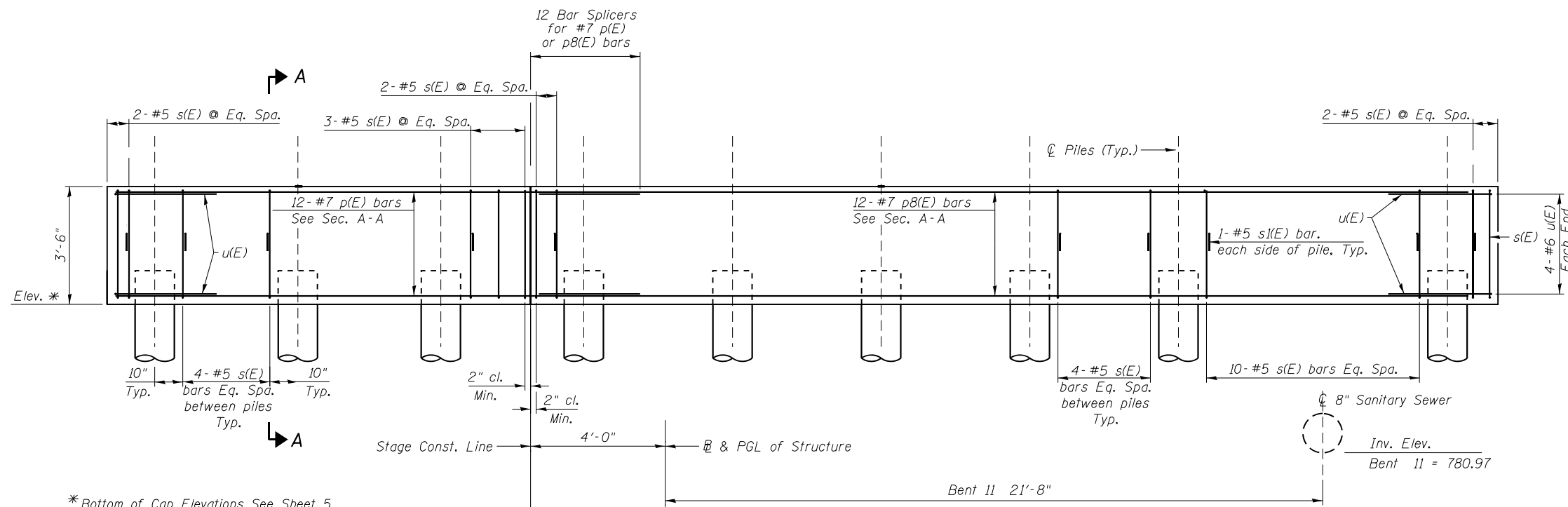
DESIGNED - FH	REVISD -
DRAWN - JKR	REVISD -
CHECKED - SEA	REVISD -
DATE - 10/19/2022	REVISD -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR PILE BENTS (GROUP E)
STRUCTURE NO. 049-0690

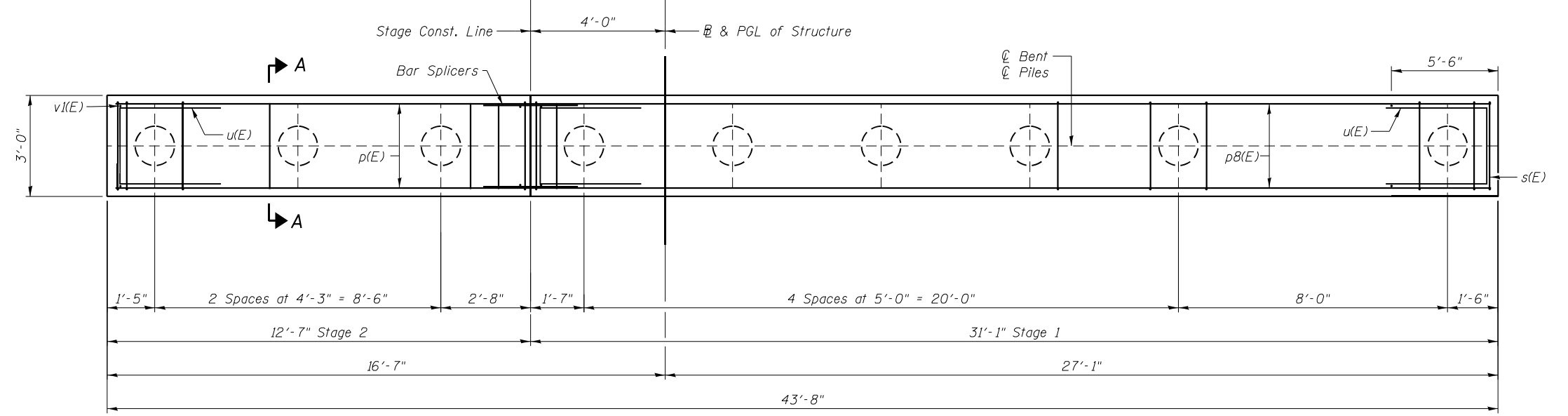
SCALE: SHEET 29 OF 56 SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 109
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)



PLAN

BILL OF MATERIAL
(One Bent)

Bar	No.	Size	Length	Shape
p8(E)	12	#7	30'-8"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s(E)	18	#5	3'-7"	□
u(E)	8	#6	10'-2"	□
Structure Excavation		Cu. Yd.	43	
Concrete Structures		Cu. Yd.	17.0	
Reinforcement Bars, Epoxy Coated		Pound	1770	
Bar Splicers		Each	12	
Furnishing - Piles		Foot	472	
Driving Piles		Foot	472	
Test Piles		Each	1	

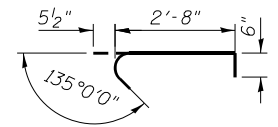
p8(E) = Stage 1
p(E) = Stage 2

PILE DATA

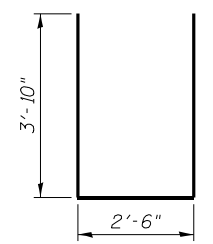
Type: Metal Shell 14"φ w/0.25" walls
Nominal Required Bearing: 344 Kips
Factored Resistance Available: 189 Kips
Est. Length: 59'
No. Production Piles: 8
No. Test Piles: 1
Furnish / Drive Piles: 472 Ft.

EXP.

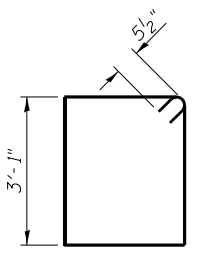
Bent II
344 Kips
189 Kips
59'
8
1
472 Ft.



BAR s(E)

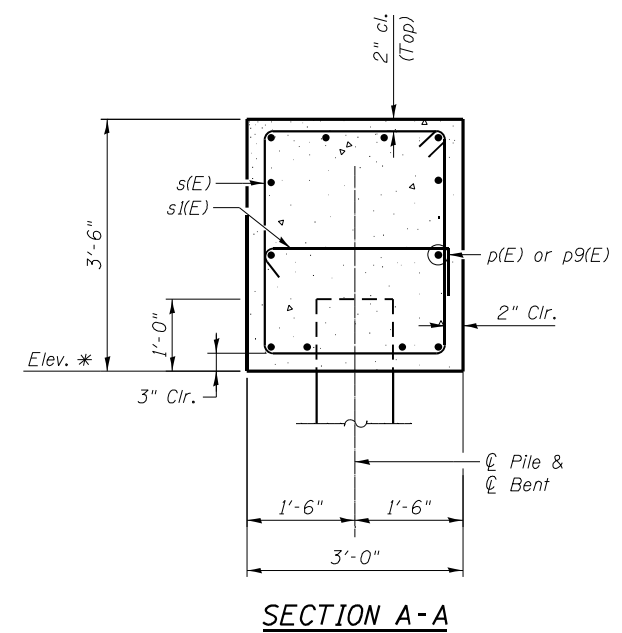
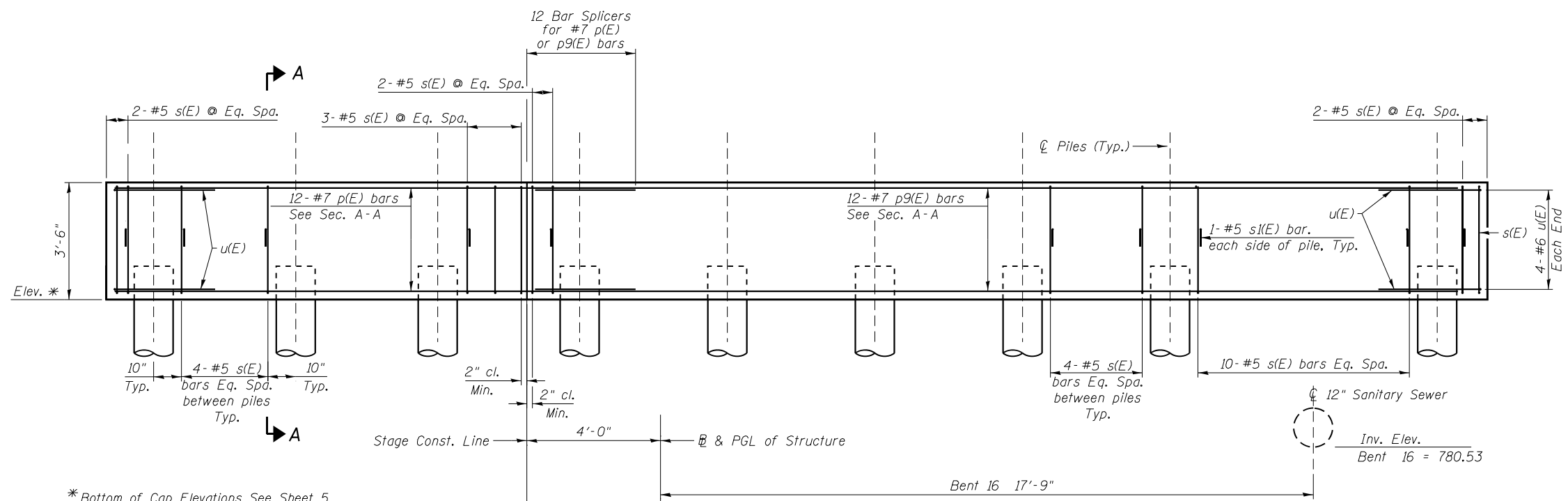


BAR u(E)



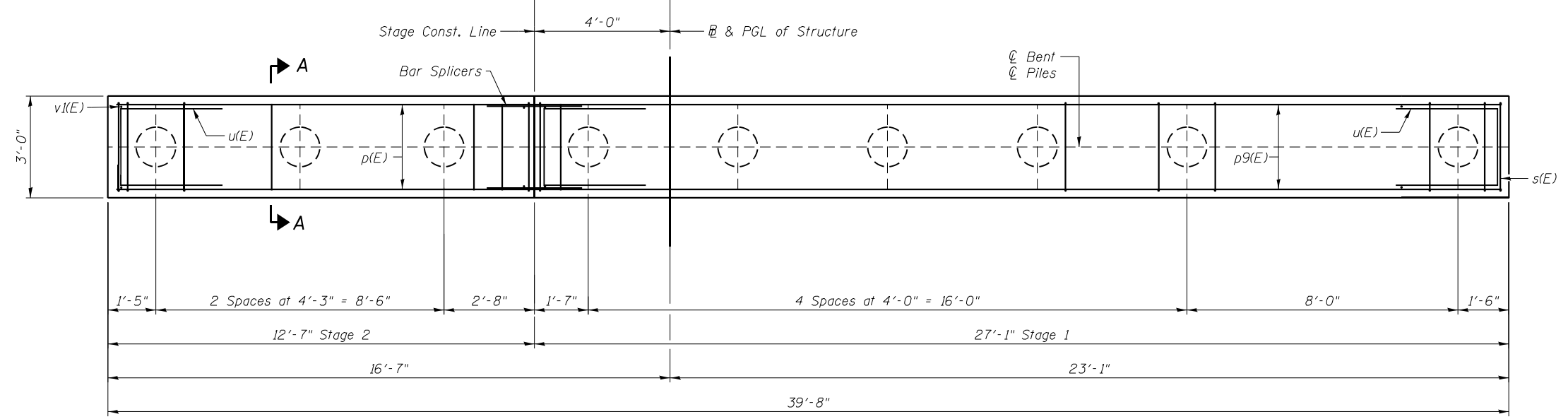
BAR s(E)

10/19/2022 \\abna\jobs\12015\611\1\1\Cadd\Drawings\04-906-90-D162053-030-GroupF.dgn



*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)



PLAN

BILL OF MATERIAL

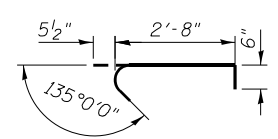
(One Bent)

Bar	No.	Size	Length	Shape
p9(E)	12	#7	26'-8"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s1(E)	18	#5	3'-7"	U
u(E)	8	#6	10'-2"	U
Structure Excavation		Cu. Yd.	40	
Concrete Structures		Cu. Yd.	15.4	
Reinforcement Bars, Epoxy Coated		Pound	1770	
Bar Splicers		Each	12	
Furnishing - Piles		Foot	459	
Driving Piles		Foot	45+9	
Test Piles		Each	0	

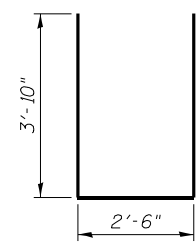
p9(E) = Stage 1
p(E) = Stage 2

PILE DATA

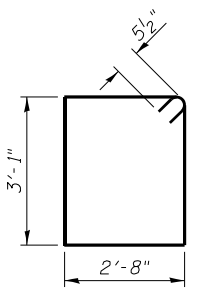
	EXP.
Type: Metal Shell 14"φ w/0.25" walls	Bent 16
Nominal Required Bearing:	331 Kips
Factored Resistance Available:	182 Kips
Est. Length:	51'
No. Production Piles:	9
No. Test Piles:	0
Furnish / Drive Piles	459 Ft.



BAR s1(E)



BAR u(E)



BAR s(E)

10/19/2022 \\abna\joh\files\2015\611\1\1\1\Cadd\Drawings\04906590-D162053-031-Group.dwg

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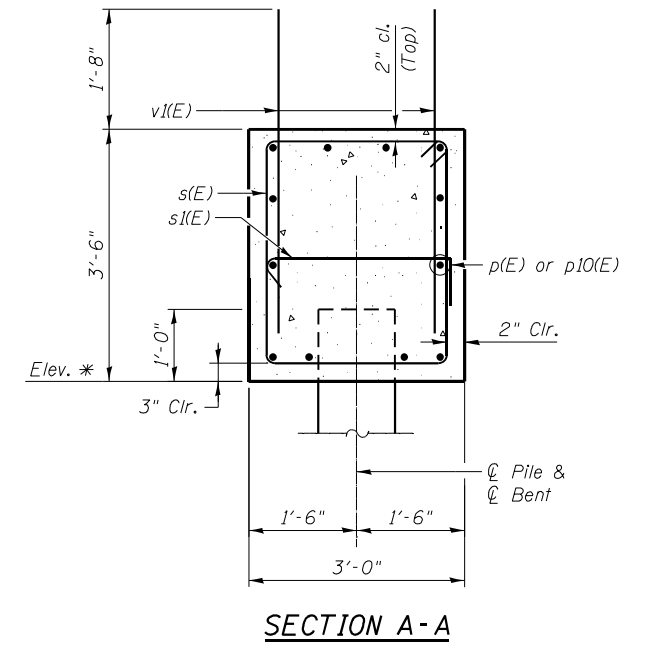
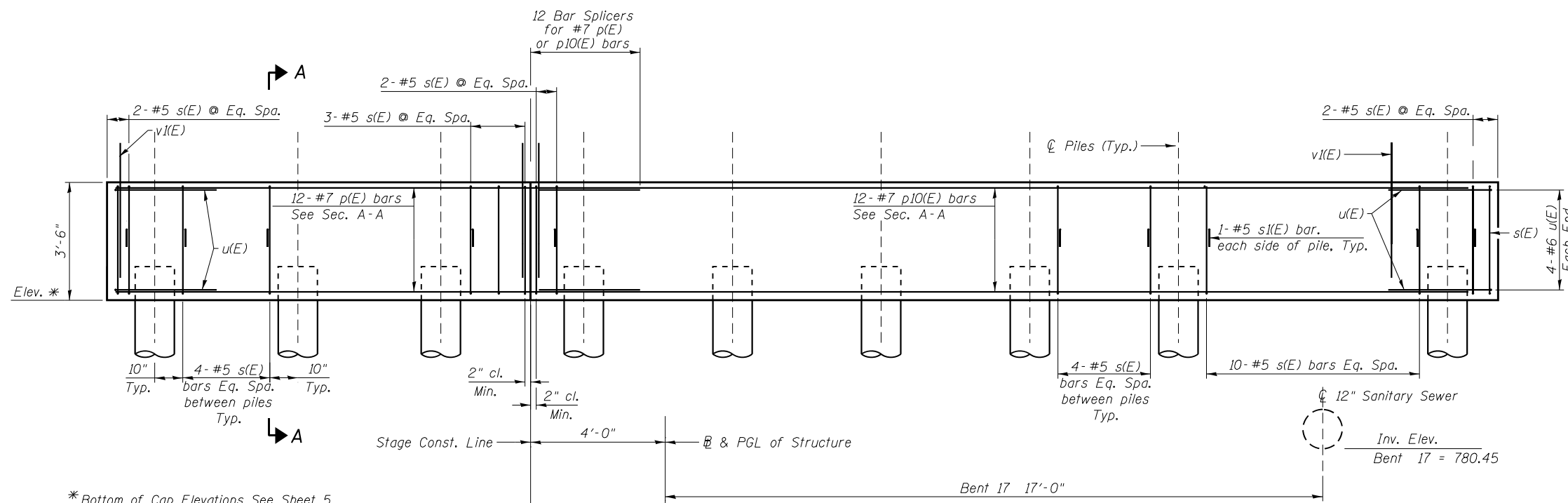
DESIGNED - FH	REVISED -
DRAWN - JKR	REVISED -
CHECKED - SEA	REVISED -
DATE - 10/19/2022	REVISED -

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INTERIOR PILE BENTS (GROUP G)
STRUCTURE NO. 049-0690

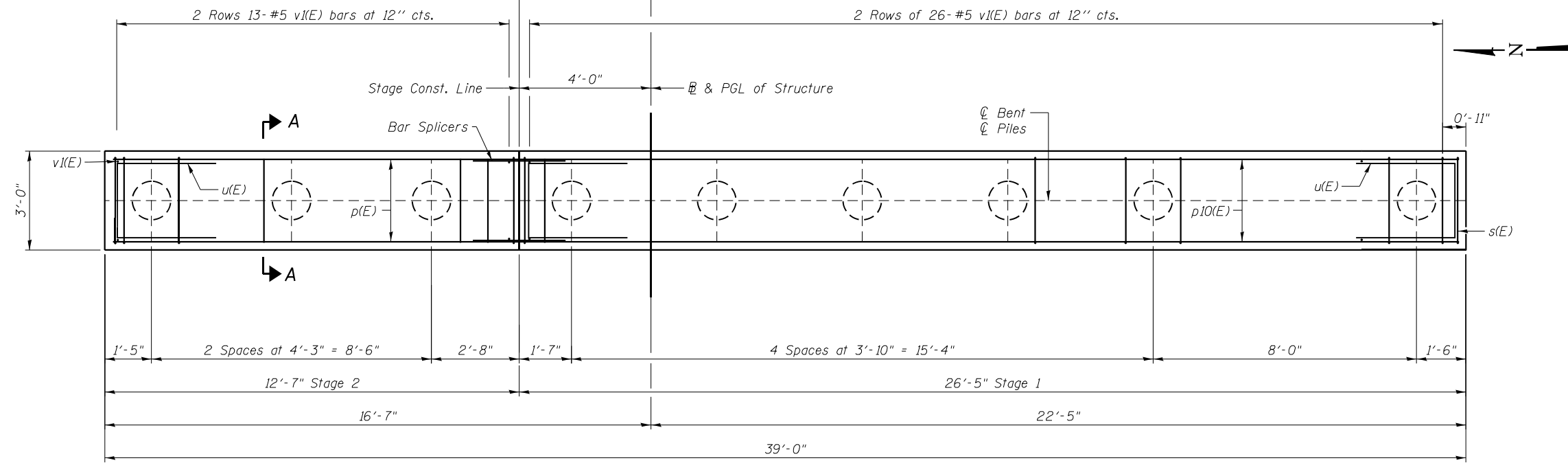
SCALE: SHEET 31 OF 56 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	111
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)



PLAN

BILL OF MATERIAL

(One Bent)

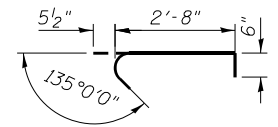
Bar	No.	Size	Length	Shape
p10(E)	12	#7	26'-0"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s1(E)	18	#5	3'-7"	U
u(E)	8	#6	10'-2"	U
v(E)	78	#5	4'-6"	
Structure Excavation		Cu. Yd.	39	
Concrete Structures		Cu. Yd.	15.2	
Reinforcement Bars, Epoxy Coated		Pound	2020	
Bar Splicers		Each	12	
Furnishing - Piles		Foot	352	
Driving Piles		Foot	352	
Test Piles		Each	1	

p10(E) = Stage 1
p(E) = Stage 2

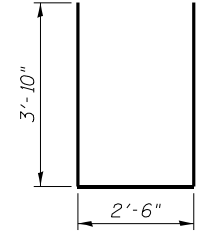
PILE DATA

Type: Metal Shell 14"φ w/0.25" walls
Nominal Required Bearing: 331 Kips
Factored Resistance Available: 182 Kips
Est. Length: 44'
No. Production Piles: 8
No. Test Piles: 1
Furnish / Drive Piles: 352 Ft.

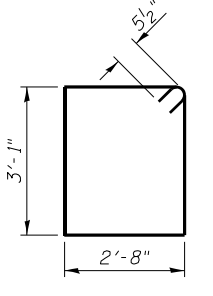
Bent 17
331 Kips
182 Kips
44'
8
1
352 Ft.



BAR s1(E)



BAR u(E)



BAR s(E)

10/19/2022 \\abna\jobs\12015\611\1\1\Cadd\Drawings\04906590-D1620653-032-GroupH.dgn

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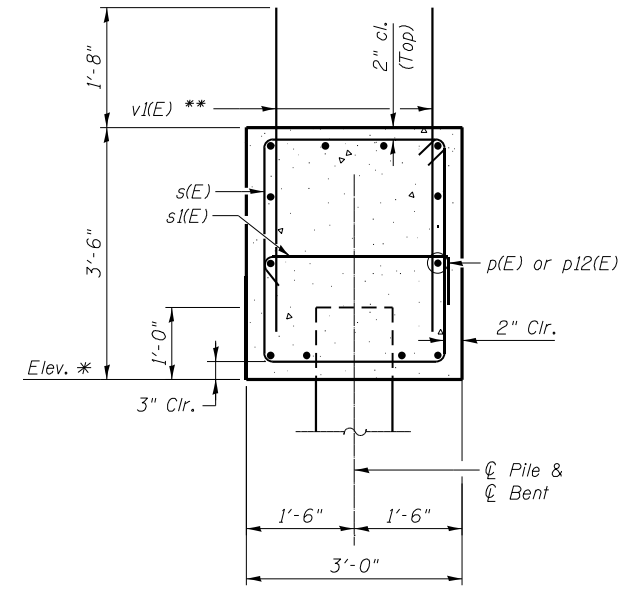
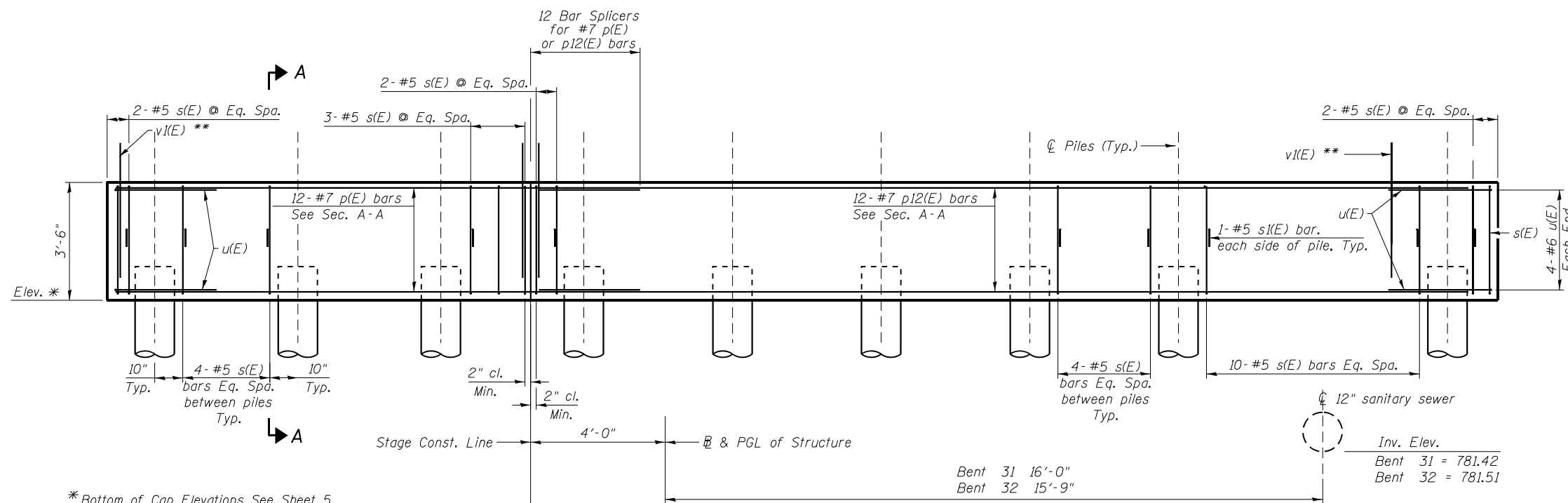
DESIGNED - FH	REVISED -
DRAWN - JKR	REVISED -
CHECKED - SEA	REVISED -
DATE - 10/19/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR PILE BENTS (GROUP H)
STRUCTURE NO. 049-0690

SCALE: SHEET 32 OF 56 SHEETS STA. TO STA.

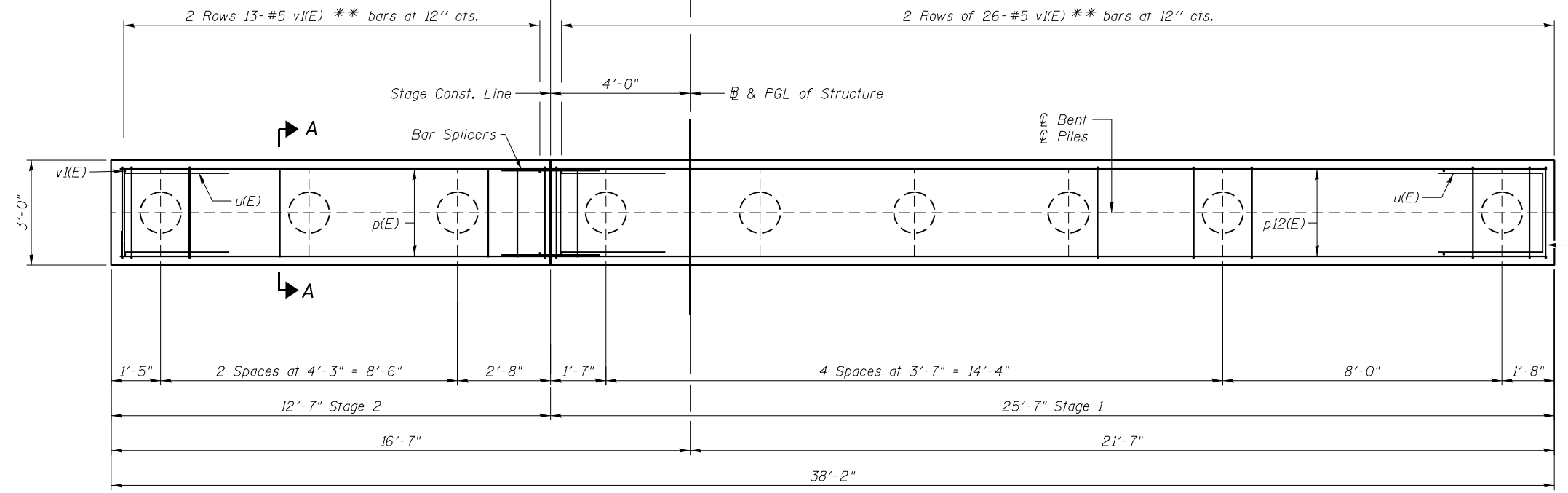
F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 112
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



SECTION A-A

*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)



PLAN

BILL OF MATERIAL

(One Bent)

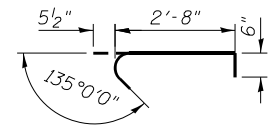
Bar	No.	Size	Length	Shape
p12(E)	12	#7	25'-2"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	U
s1(E)	18	#5	3'-7"	U
u(E)	8	#6	10'-2"	U
**				
v1(E)	78	#5	4'-6"	I
Structure Excavation Cu. Yd. 38				
Concrete Structures Cu. Yd. 14.8				
Reinforcement Bars, Epoxy Coated Pound 2040				
Bar Splicers Each 12				
2 Bents				
Furnishing - Piles Foot 828				
Driving Piles Foot 828				
Test Piles Each 1				

** Omit v1(E) Bars on Bent 31
p12(E) = Stage 1
p(E) = Stage 2

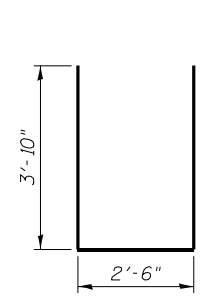
PILE DATA

Type: Metal Shell 14"Ø w/0.25" walls
Nominal Required Bearing: 326 Kips
Factored Resistance Available: 179 Kips
Est. Length: 44'
No. Production Piles: 9
No. Test Piles: 0
Furnish / Drive Piles: 396 Ft.

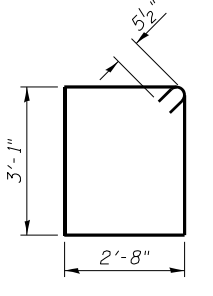
	EXP.	
	Bent 31	Bent 32
	326 Kips	326 kips
	179 Kips	179 kips
	44'	54'
	9	8
	0	1
	396 Ft.	432 Ft.



BAR s1(E)



BAR u(E)



BAR s(E)

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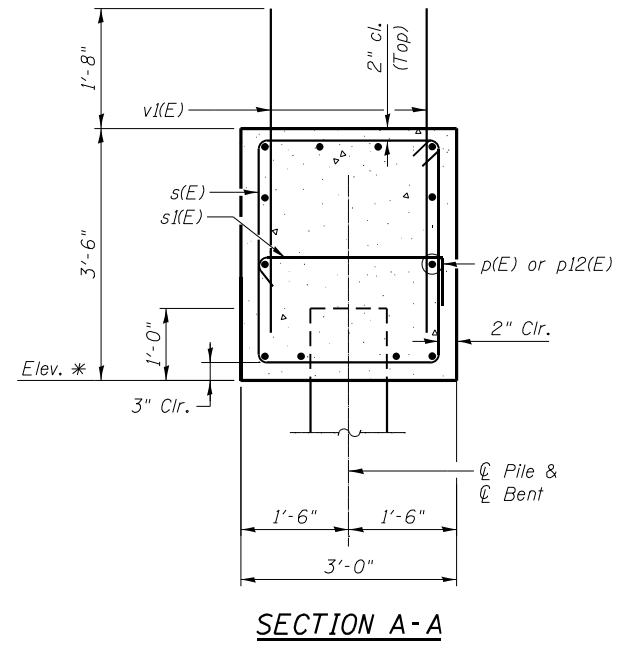
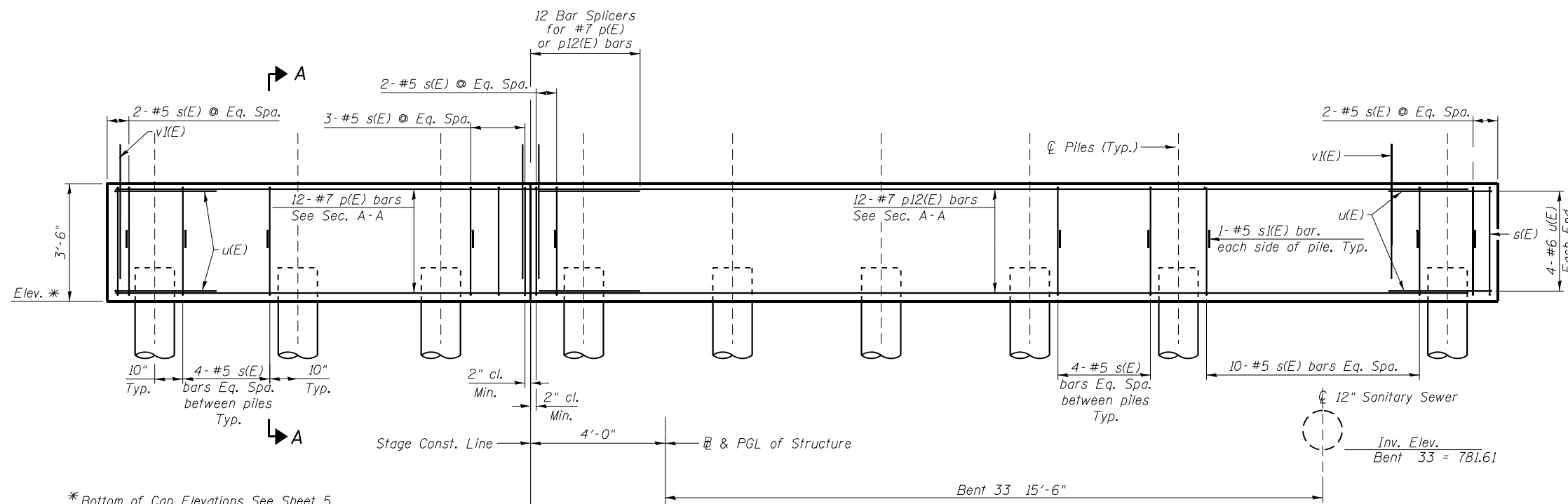
DESIGNED - FH	REvised -
DRAWN - JKR	REvised -
CHECKED - SEA	REvised -
DATE - 10/19/2022	REvised -

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INTERIOR PILE BENTS (GROUP J)
STRUCTURE NO. 049-0690

SCALE: SHEET 34 OF 56 SHEETS STA. TO STA.

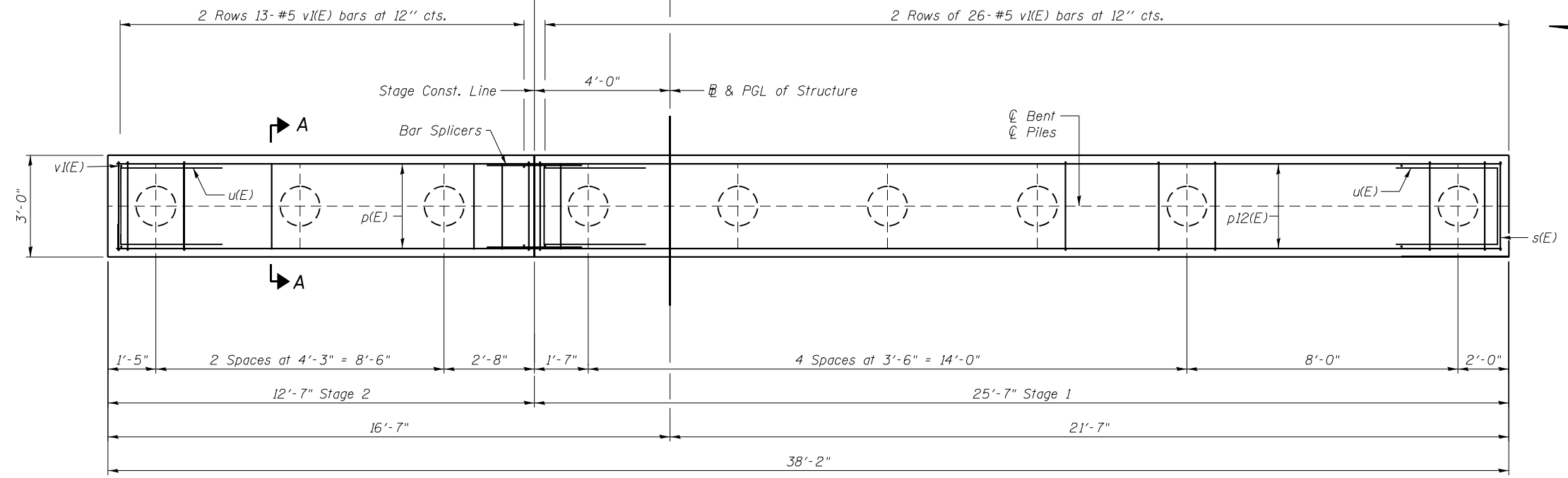
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	114
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



ELEVATION
(Looking East)

SECTION A-A

*Bottom of Cap Elevations See Sheet 5



PLAN

BILL OF MATERIAL

(One Bent)

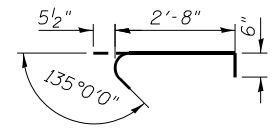
Bar	No.	Size	Length	Shape
p ₁₂ (E)	12	#7	25'-2"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s1(E)	18	#5	3'-7"	U
u(E)	8	#6	10'-2"	U
v(E)	78	#5	4'-6"	
Structure Excavation Cu. Yd. 38				
Concrete Structures Cu. Yd. 14.8				
Reinforcement Bars, Epoxy Coated Pound 2040				
Bar Splicers Each 12				
1 Bent				
Furnishing - Piles Foot 486				
Driving Piles Foot 486				
Test Piles Each 0				

p₁₂(E) = Stage 1
p(E) = Stage 2

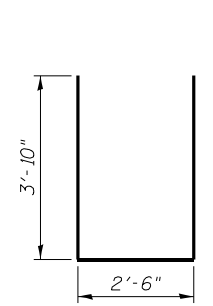
PILE DATA

Type: Metal Shell 14"φ w/0.25" walls
Nominal Required Bearing: 319 Kips
Factored Resistance Available: 175 Kips
Est. Length: 54'
No. Production Piles: 9
No. Test Piles: 0
Furnish / Drive Piles: 486 Ft.

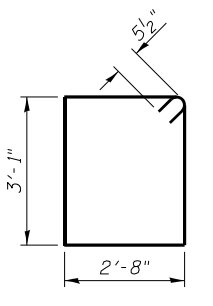
Bent 33
319 Kips
175 Kips
54'
9
0
486 Ft.



BAR s1(E)



BAR u(E)



BAR s(E)

10/19/2022 \\abna\jobs\15\1511\1511\Cadd\Drawings\04-906-90-D162053-035-GroupK.dgn

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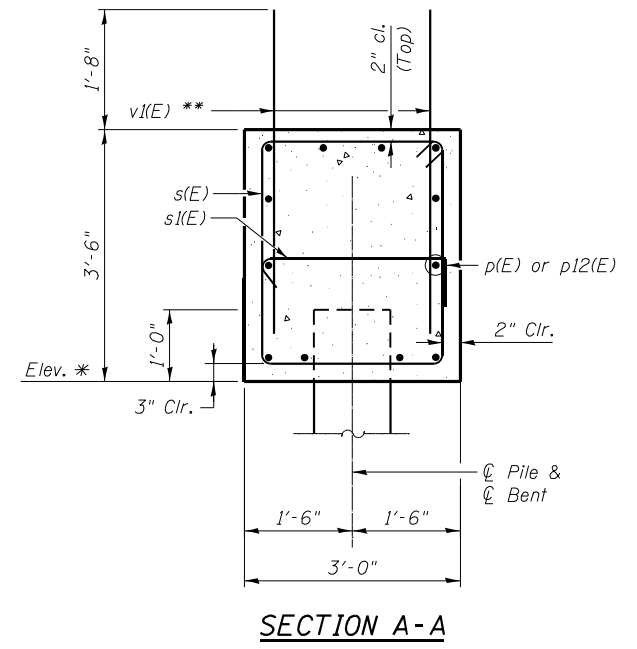
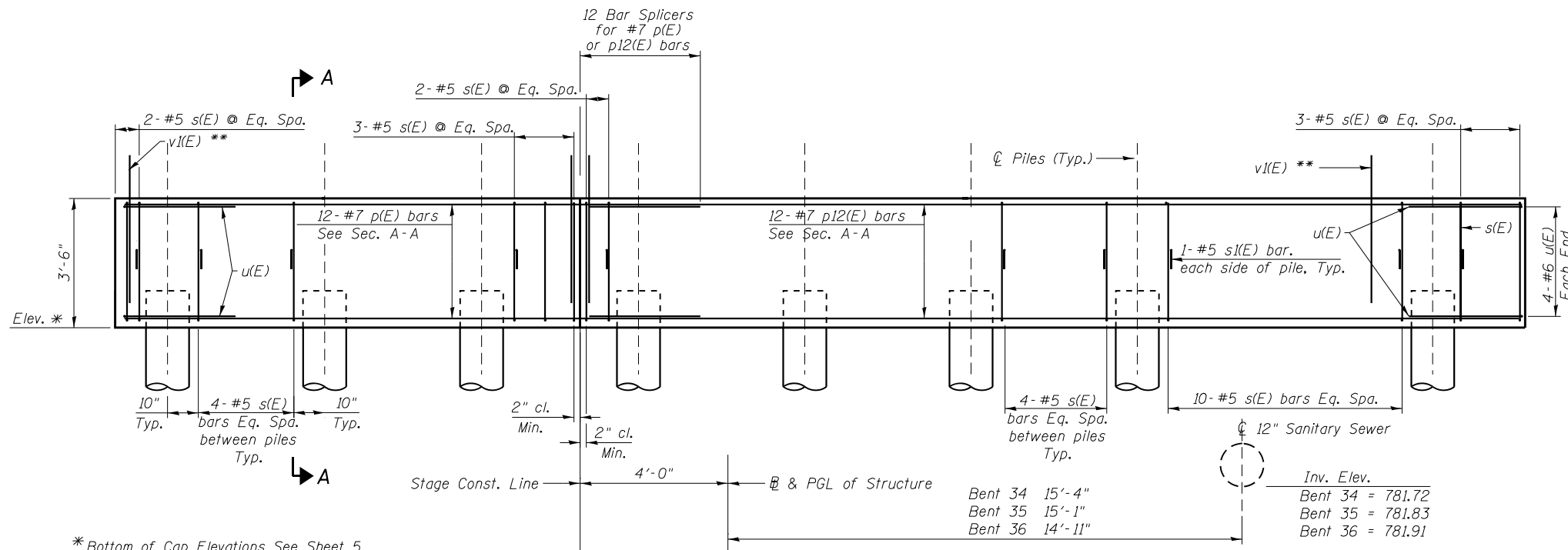
DESIGNED - FH	REVISED -
DRAWN - JKR	REVISED -
CHECKED - SEA	REVISED -
DATE - 10/19/2022	REVISED -

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INTERIOR PILE BENTS (GROUP K)
STRUCTURE NO. 049-0690

SCALE: SHEET 35 OF 56 SHEETS STA. TO STA.

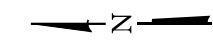
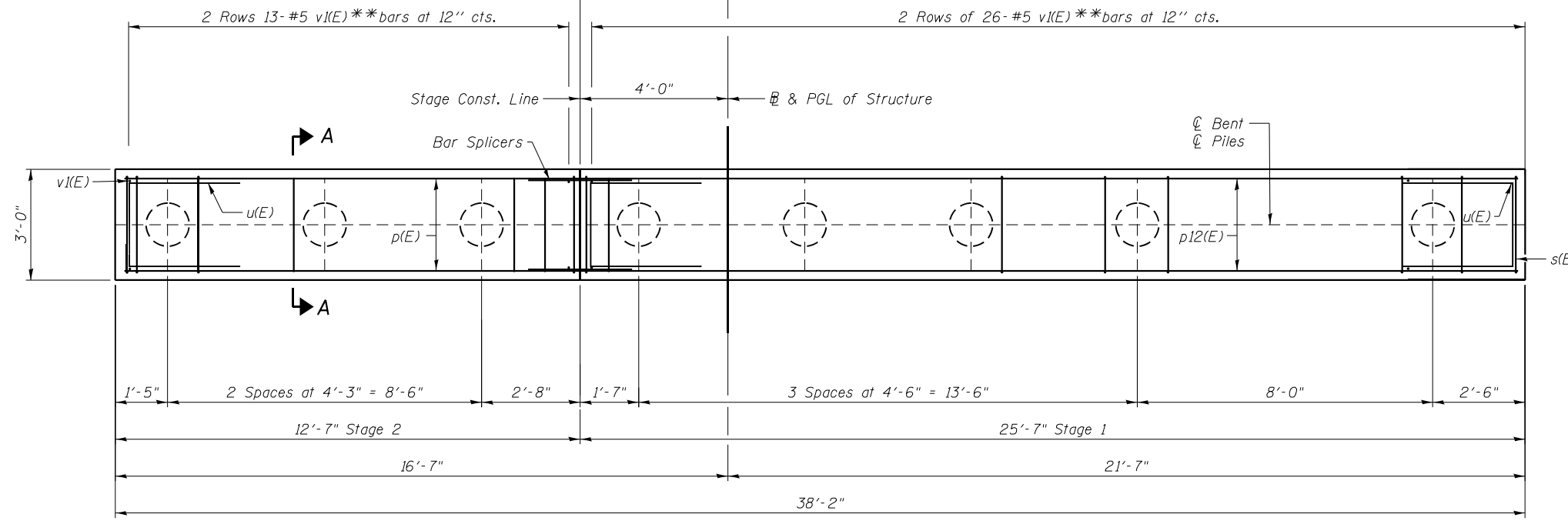
F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 115
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)

Inv. Elev.	
Bent 34	15'-4"
Bent 35	15'-1"
Bent 36	14'-11"



PLAN

BILL OF MATERIAL

(One Bent)				
Bar	No.	Size	Length	Shape
p12(E)	12	#7	25'-2"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s1(E)	16	#5	3'-7"	U
u(E)	8	#6	10'-2"	U

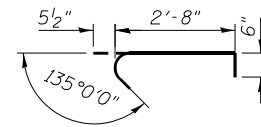
v(E)	78	#5	4'-6"	
Structure Excavation		Cu. Yd.		38
Concrete Structures		Cu. Yd.		14.8
Reinforcement Bars, Epoxy Coated		Pound		2030
Bar Splicers		Each		12
3 Bents				
Furnishing - Piles		Foot		1192
Driving Piles		Foot		1192
Test Piles		Each		0

*** Omit v(E) Bars on Bent 36
 p12(E) = Stage 1
 p(E) = Stage 2

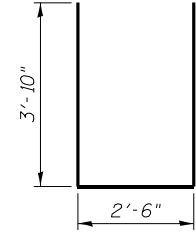
PILE DATA

Type: Metal Shell 14"φ w/0.25" walls	Bent 34	Bent 35	Bent 36
Nominal Required Bearing:	313 Kips	313 kips	313 kips
Factored Resistance Available:	172 Kips	172 kips	172 kips
Est. Length:	52'	52'	45'
No. Production Piles:	8	8	8
No. Test Piles:	0	0	0
Furnish / Drive Piles	416 Ft.	416 Ft.	360 Ft.

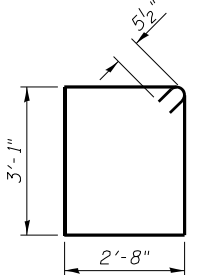
EXP.



BAR s1(E)



BAR u(E)



BAR s(E)

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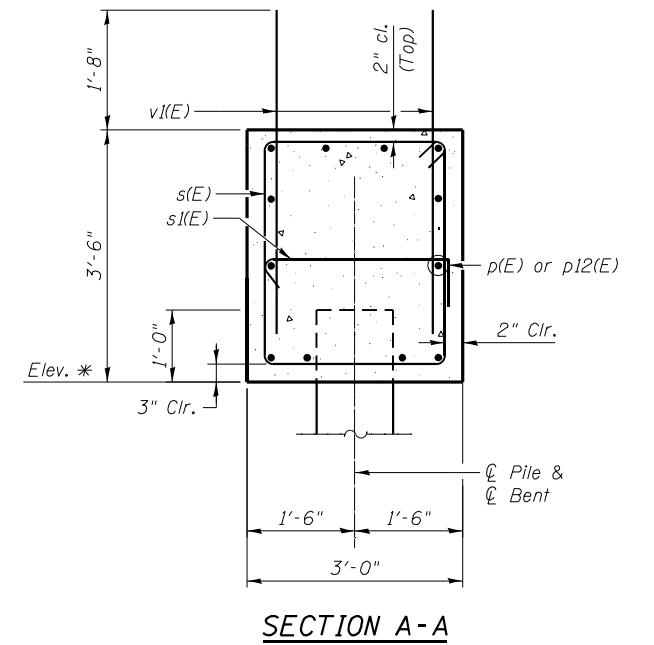
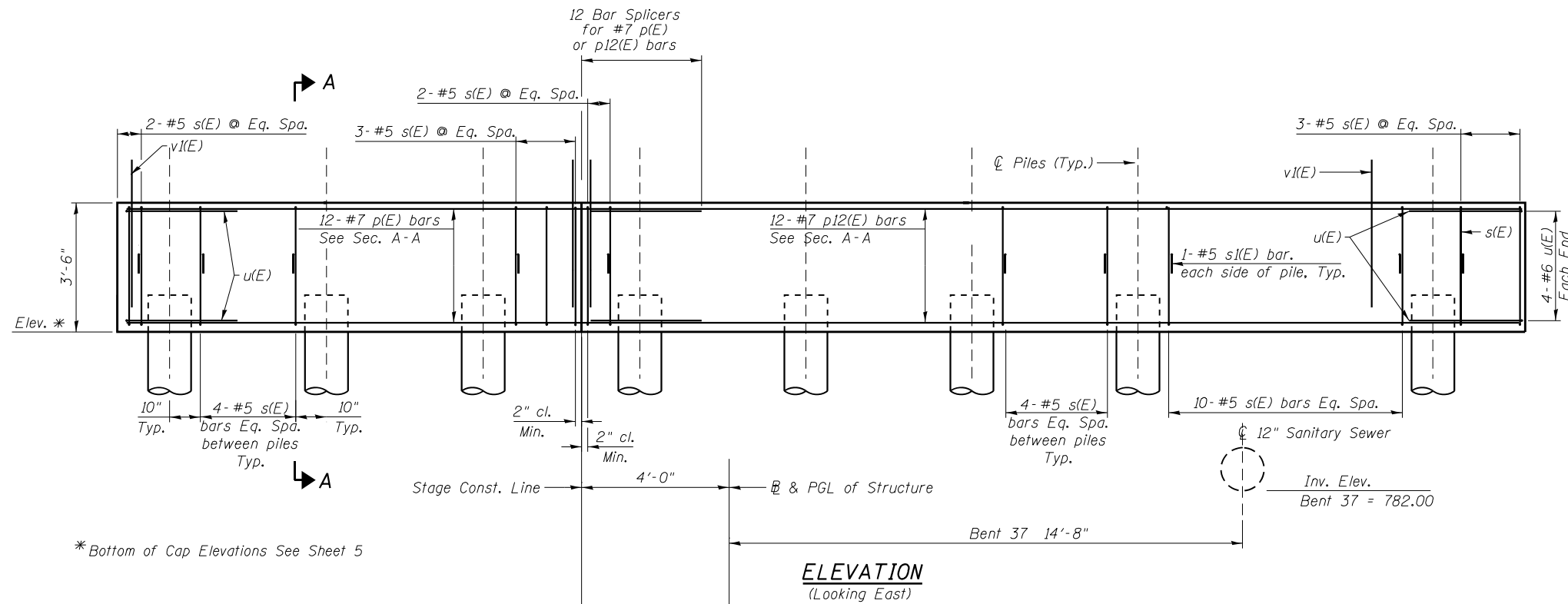
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DRAWN - JKR	REVISION
CHECKED - SEA	REVISION
DATE - 10/19/2022	REVISION

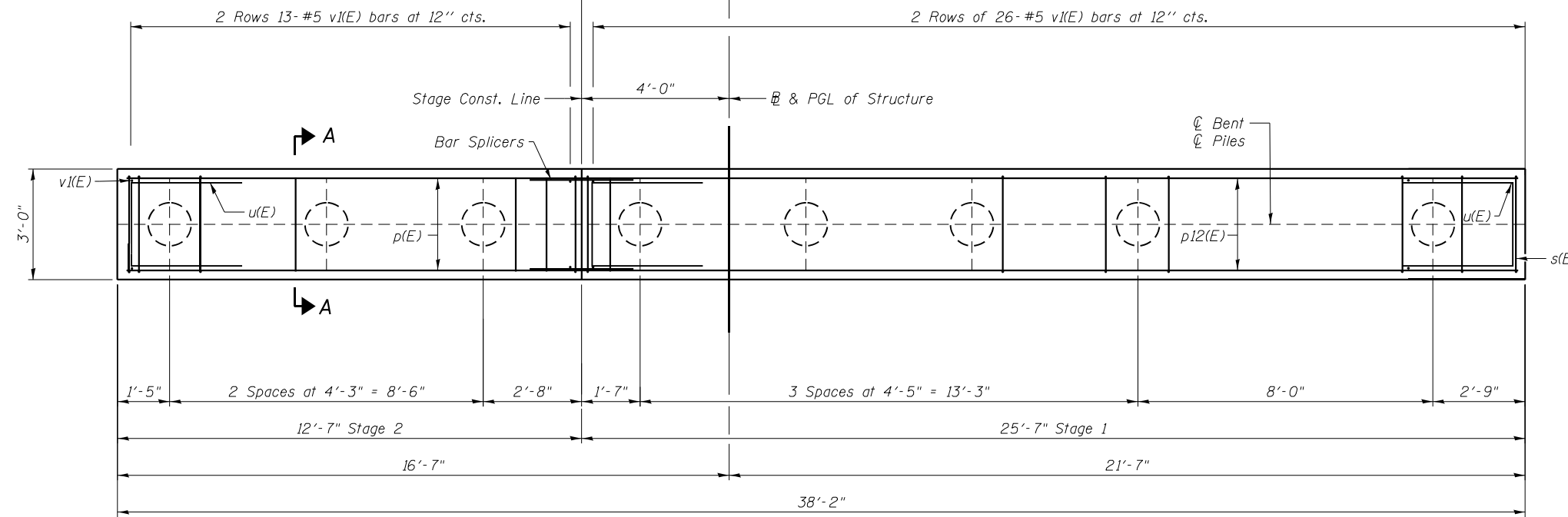
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR PILE BENTS (GROUP L)
STRUCTURE NO. 049-0690
 SCALE: SHEET 36 OF 56 SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 116
CONTRACT NO. 62A53			ILLINOIS FED. AID PROJECT	



ELEVATION
(Looking East)



PLAN

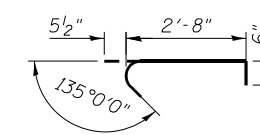
PILE DATA

Type: Metal Shell 14"φ w/0.25" walls	Bent 37
Nominal Required Bearing:	313 Kips
Factored Resistance Available:	172 Kips
Est. Length:	45'
No. Production Piles:	7
No. Test Piles:	1
Furnish / Drive Piles	315 Ft.

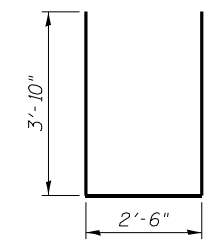
BILL OF MATERIAL

One Bent				
Bar	No.	Size	Length	Shape
p12(E)	12	#7	27'-8"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s1(E)	16	#5	3'-7"	U
u(E)	8	#6	10'-1"	U
v(E)	78	#5	4'-6"	
Structure Excavation			Cu. Yd.	38
Concrete Structures			Cu. Yd.	14.8
Reinforcement Bars, Epoxy Coated			Pound	2040
Bar Splicers			Each	12
Furnishing - Piles			Foot	315
Driving Piles			Foot	315
Test Piles			Each	1

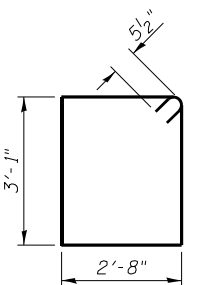
p12(E) = Stage 1
p(E) = Stage 2



BAR s1(E)



BAR u(E)



BAR s(E)

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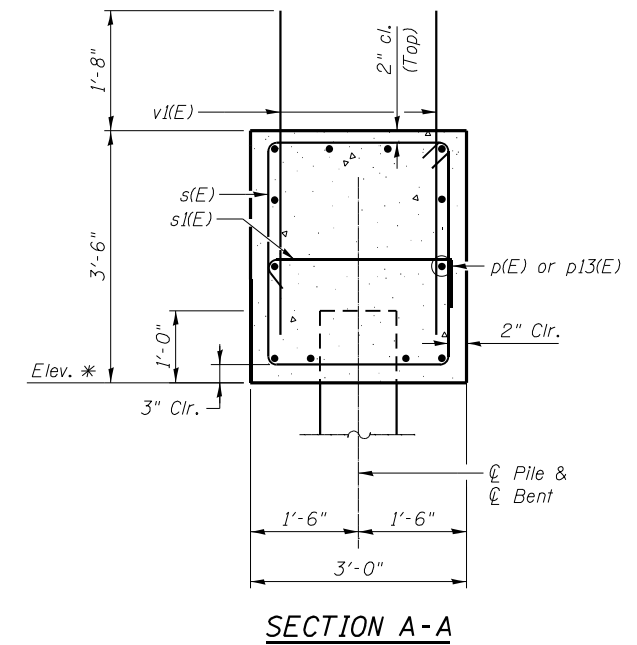
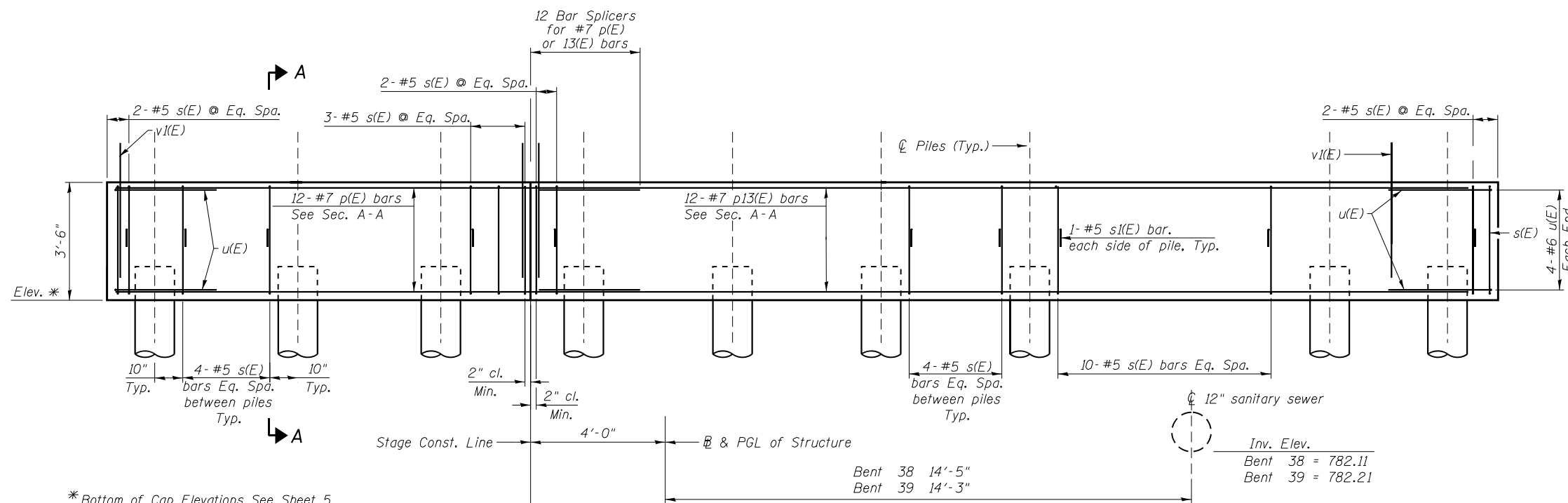
DESIGNED - FH	REVISED -
DRAWN - JKR	REVISED -
CHECKED - SEA	REVISED -
DATE - 10/19/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERIOR PILE BENTS (GROUP M)
STRUCTURE NO. 049-0690**

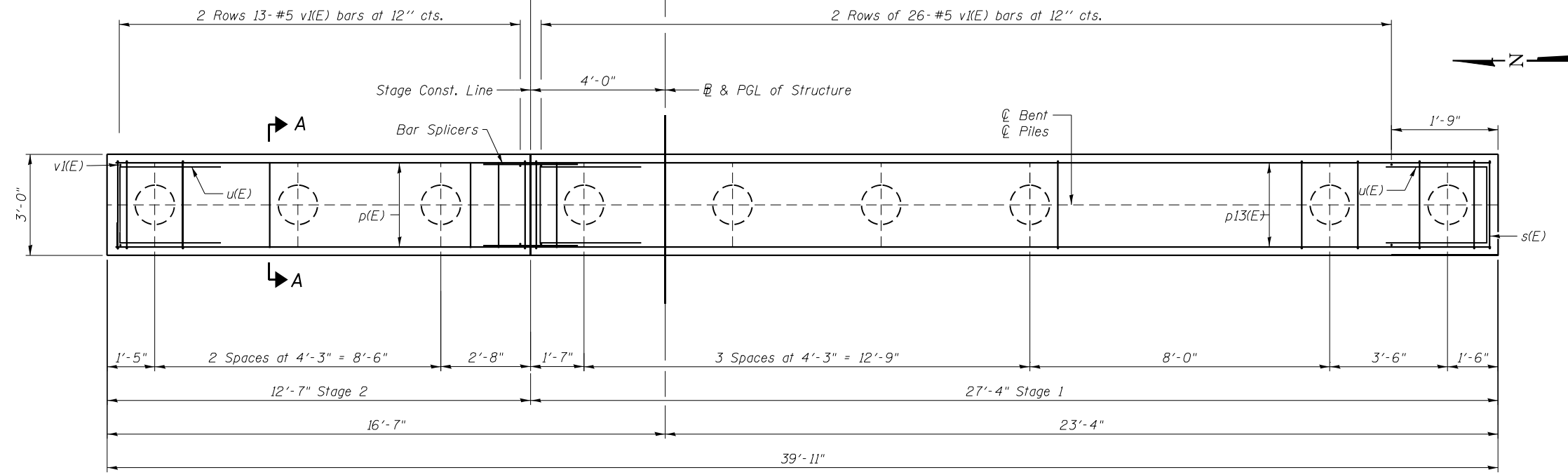
SCALE: SHEET 37 OF 56 SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 117
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)



PLAN

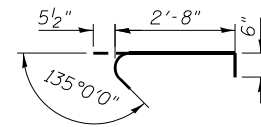
PILE DATA

Type: Metal Shell 14"φ w/0.25" walls	Bent 38	Bent 39
Nominal Required Bearing:	308 Kips	308 kips
Factored Resistance Available:	169 Kips	169 kips
Est. Length:	45'	45'
No. Production Piles:	9	9
No. Test Piles:	0	0
Furnish / Drive Piles	405 Ft.	405 Ft.

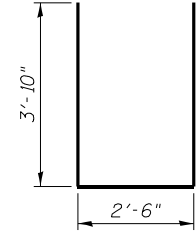
BILL OF MATERIAL

One Bent				
Bar	No.	Size	Length	Shape
p13(E)	12	#7	26'-11"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s1(E)	18	#5	3'-7"	U
u(E)	8	#6	10'-2"	U
v1(E)	78	#5	4'-6"	
Structure Excavation		Cu. Yd.	40	
Concrete Structures		Cu. Yd.	15.5	
Reinforcement Bars, Epoxy Coated		Pound	2140	
Bar Splicers		Each	12	
2 Bents				
Furnishing - Piles		Foot	810	
Driving Piles		Foot	810	
Test Piles		Each	0	

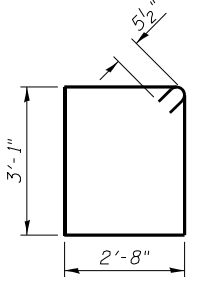
p13(E) = Stage 1
p(E) = Stage 2



BAR s1(E)



BAR u(E)



BAR s(E)

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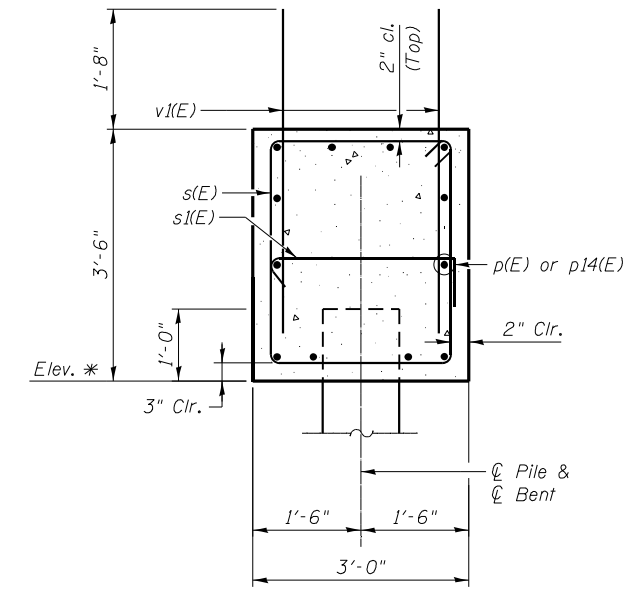
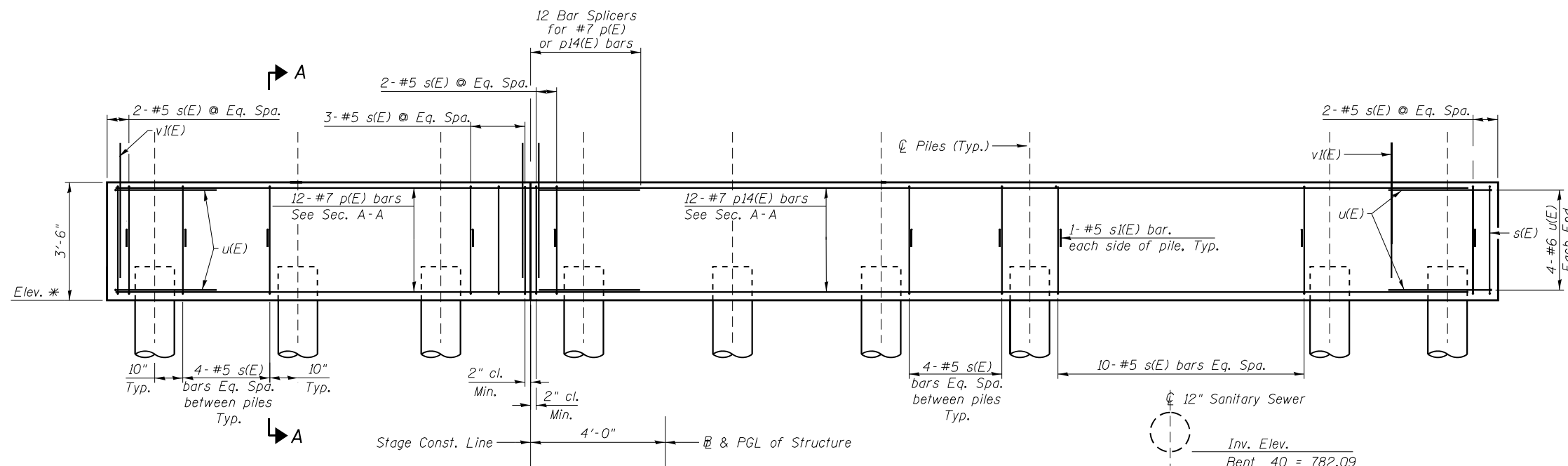
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DRAWN - JKR	REVISIONS
CHECKED - SEA	REVISIONS
DATE - 10/19/2022	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR PILE BENTS (GROUP N)
STRUCTURE NO. 049-0690

SCALE: SHEET 38 OF 56 SHEETS STA. TO STA.

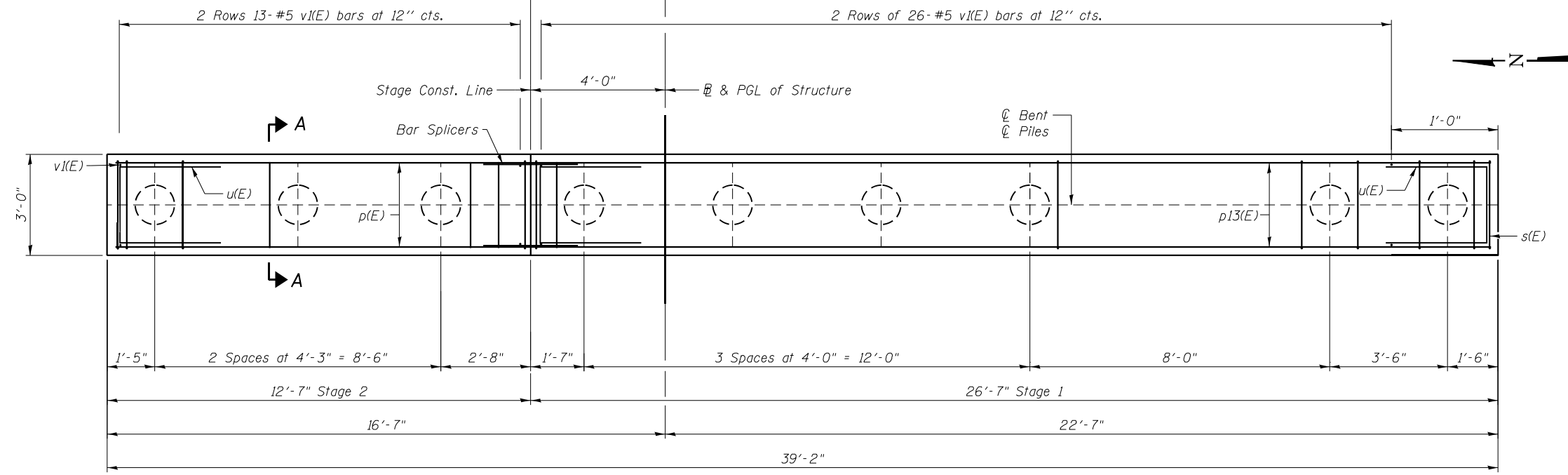
F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 118
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



SECTION A-A

*Bottom of Cap Elevations See Sheet 5

ELEVATION
(Looking East)



PLAN

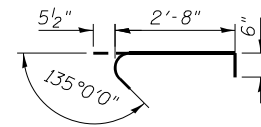
PILE DATA

Type: Metal Shell 14"φ w/0.25" walls	Bent 40
Nominal Required Bearing:	306 Kips
Factored Resistance Available:	168 Kips
Est. Length:	45'
No. Production Piles:	9
No. Test Piles:	0
Furnish / Drive Piles	405 Ft.

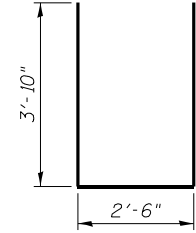
BILL OF MATERIAL

One Bent				
Bar	No.	Size	Length	Shape
p14(E)	12	#7	26'-2"	—
p(E)	12	#7	12'-2"	—
s(E)	43	#5	12'-5"	□
s1(E)	18	#5	3'-7"	U
u(E)	8	#6	10'-2"	U
v1(E)	78	#5	4'-6"	
Structure Excavation		Cu. Yd.	39	
Concrete Structures		Cu. Yd.	15.0	
Reinforcement Bars, Epoxy Coated		Pound	2060	
Bar Splicers		Each	12	
1 Bent				
Furnishing - Piles		Foot	405	
Driving Piles		Foot	405	
Test Piles		Each	0	

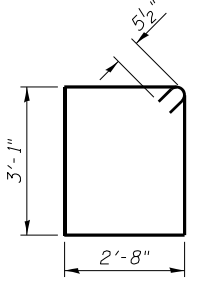
p14(E) = Stage 1
p(E) = Stage 2



BAR s1(E)



BAR u(E)



BAR s(E)

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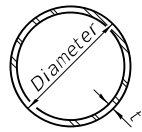
DESIGNED - FH	REVISED -
DRAWN - JKR	REVISED -
CHECKED - SEA	REVISED -
DATE - 10/19/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR PILE BENTS (GROUP 0)
STRUCTURE NO. 049-0690

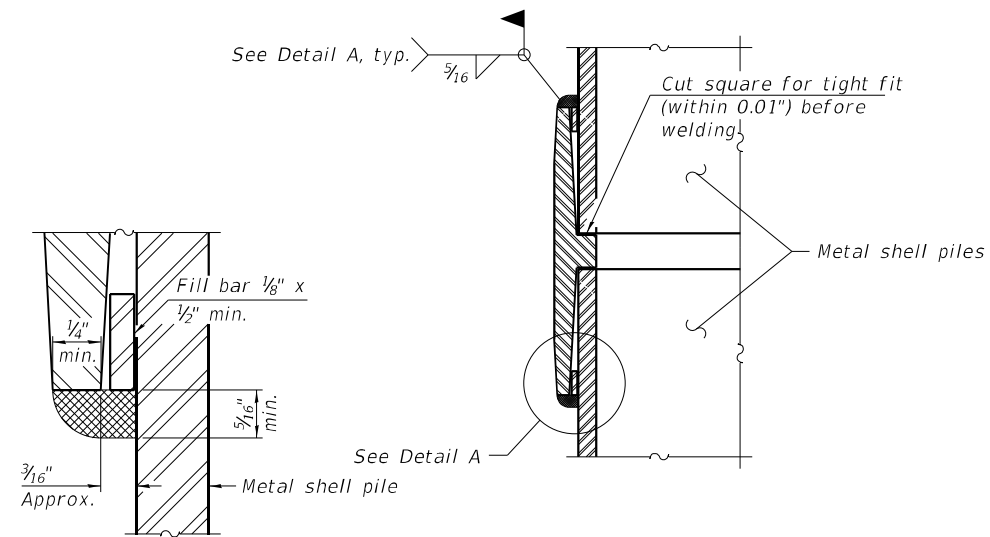
SCALE: SHEET 39 OF 56 SHEETS STA. TO STA.

F.A.P. R.T.E. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 119
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



METAL SHELL PILE TABLE

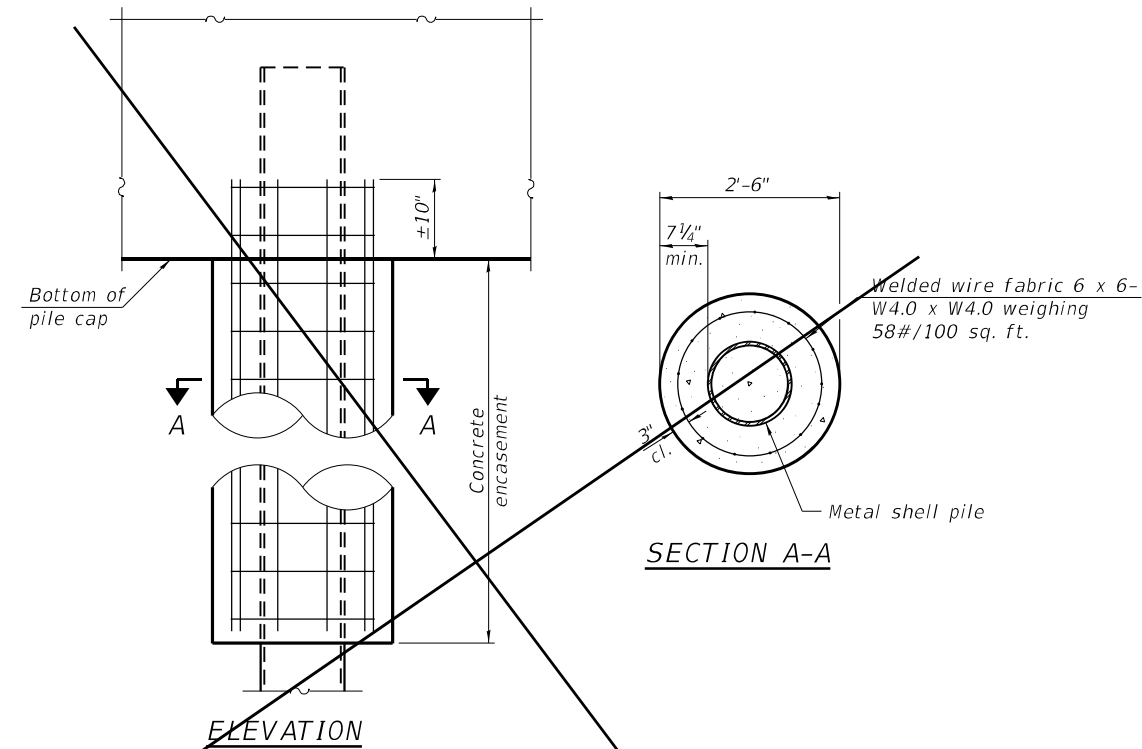
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



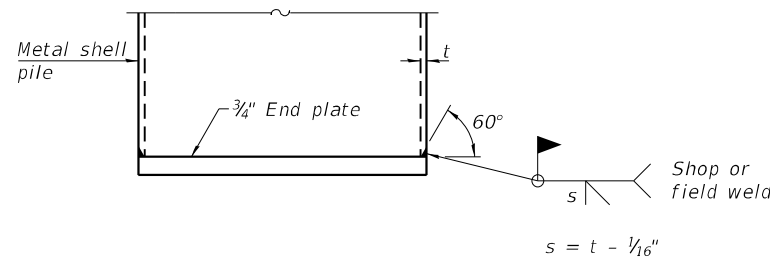
DETAIL A

WELDED COMMERCIAL SPLICE

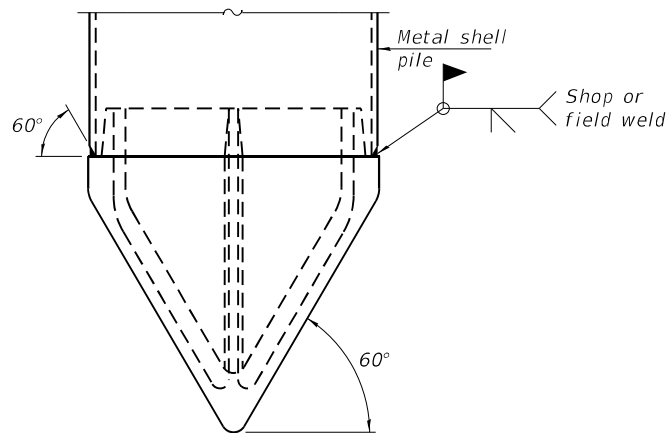
Notes:
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.



INDIVIDUAL PILE CONCRETE ENCASEMENT AT PIERS

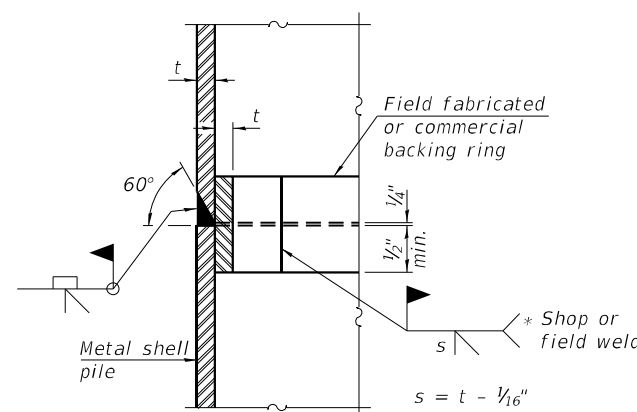


END PLATE ATTACHMENT



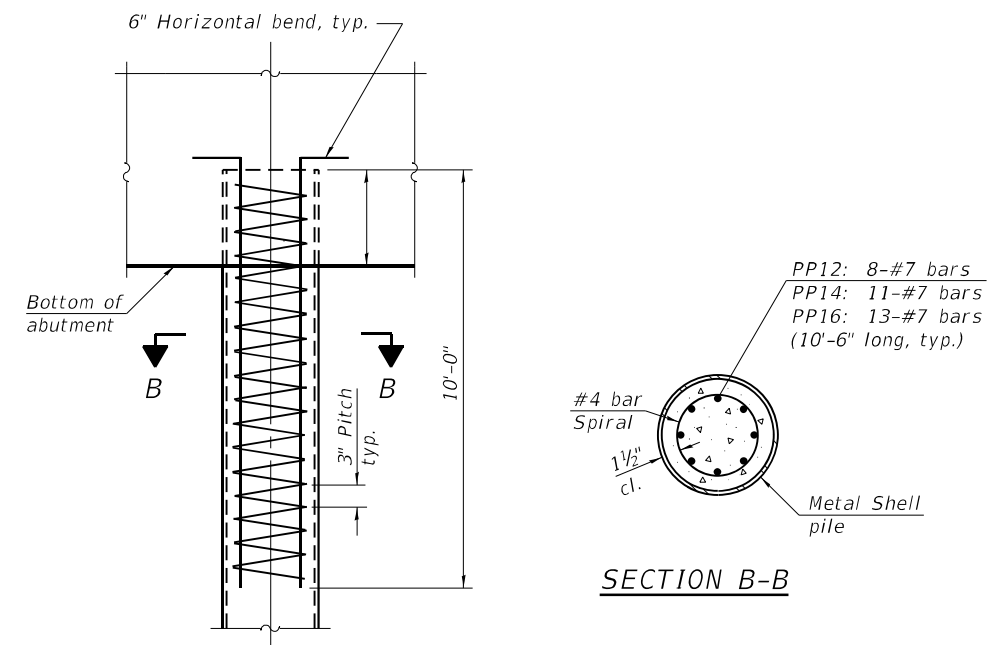
PILE SHOE ATTACHMENT

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).



COMPLETE PENETRATION WELD SPLICE

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



ELEVATION

REINFORCEMENT AT ABUTMENTS

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

F-MS 8-11-2017

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DATE - 10/19/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**METAL SHELL PILE DETAILS
 STRUCTURE NO. 049-0690**

SCALE: SHEET 40 OF 56 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	120
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



SOIL BORING LOG

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

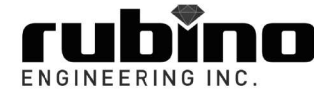
SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (D, B, U, M, E, L, C, O, P, O, S, I, T, H, S, Qu, T).

Main soil log data table with columns for soil type, depth (ft), blow count (B), penetration (P), and SPT value (T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (D, B, U, M, E, L, C, O, P, O, S, I, T, H, S, Qu, T).

Main soil log data table with columns for soil type, depth (ft), blow count (B), penetration (P), and SPT value (T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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Table with columns for USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, and their respective values.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - I STRUCTURE NO. 049-0690

SHEET 41 OF 56 SHEETS

Table with columns for F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., and CONTRACT NO.

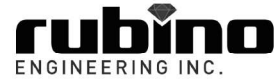


SOIL BORING LOG

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K. SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for soil parameters: SURFACE WATER ELEV., STREAM BED ELEV., GROUNDWATER ELEV., etc. Includes soil descriptions like 'Black PEAT Organic content: 71 - 77%' and test results.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K. SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for soil parameters: SURFACE WATER ELEV., STREAM BED ELEV., GROUNDWATER ELEV., etc. Includes soil descriptions like 'A-6: Soft to hard gray silty CLAY' and test results.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K. SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for soil parameters: SURFACE WATER ELEV., STREAM BED ELEV., GROUNDWATER ELEV., etc. Includes soil descriptions like 'A-6: Soft to hard gray silty CLAY' and test results.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

MODEL: Default FILE NAME: C:\Engineering\Live\Projects\13020 IL 132 Land Bridge\CADD\CADD_Sheets\Structural\049-0690-62A53-029-Bor-3.dgn



Table with columns: USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, REVISED, DRAWN, CHECKED.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - III STRUCTURE NO. 049-0690

SHEET 43 OF 56 SHEETS

Table with columns: F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO. 62A53, ILLINOIS FED. AID PROJECT



SOIL BORING LOG

Date 9/27/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (D, B, U, M, P, O, S, I, T, H, S, Qu, T).

Main soil log data table with columns for soil type, elevation, and blow count.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/27/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (D, B, U, M, P, O, S, I, T, H, S, Qu, T).

Main soil log data table with columns for soil type, elevation, and blow count.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

MODEL: Default FILE NAME: Q:\Engineering\Live\Projects\13020 IL 132 Land Bridge\CADD\CADD Sheets\Structural\049-0690-62A53-030-030-04.dgn



Table with columns for USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, and REVISED.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - IV STRUCTURE NO. 049-0690

SHEET 44 OF 56 SHEETS

Table with columns for F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., and CONTRACT NO.

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (D, B, U, M, P, L, C, O, I, S, T, H, W, Qu, T). Includes groundwater elevation data.

Main soil log table with columns for depth (ft), soil type (e.g., Black PEAT, A-6: Medium stiff to stiff gray silty CLAY), and blow count data (D, B, U, M, P, L, C, O, I, S, T, H, W, Qu, T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (D, B, U, M, P, L, C, O, I, S, T, H, W, Qu, T).

Main soil log table with columns for depth (ft), soil type (e.g., A-6: Medium stiff to hard gray silty CLAY), and blow count data (D, B, U, M, P, L, C, O, I, S, T, H, W, Qu, T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (D, B, U, M, P, L, C, O, I, S, T, H, W, Qu, T).

Main soil log table with columns for depth (ft), soil type (e.g., A-6: Medium stiff to hard gray silty CLAY), and blow count data (D, B, U, M, P, L, C, O, I, S, T, H, W, Qu, T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

MODEL: Default FILE NAME: C:\Engineering\Live\Projects\13020 IL 132 Land Bridge\CADD\CADD_Sheets\Structural\049-0690-62A53-031-Bor-5.dgn



Table with columns for USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, and their respective values (JMT, SAT, JN, SPS).

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - V STRUCTURE NO. 049-0690 SHEET 45 OF 56 SHEETS

Table with columns for F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO., ILLINOIS, FED. AID PROJECT.



SOIL BORING LOG

Date 9/27/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY J.W.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for D, B, U, M, O, I, S, T and values for Surface Water Elev., Stream Bed Elev., Groundwater Elev., etc.

Main soil log data table with columns for depth (ft), blow counts (B, U), and soil descriptions (e.g., A-3: Loose to medium dense gray poorly-graded fine SAND).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/27/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY J.W.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for D, B, U, M, O, I, S, T and values for Surface Water Elev., Stream Bed Elev., Groundwater Elev., etc.

Main soil log data table with columns for depth (ft), blow counts (B, U), and soil descriptions (e.g., A-6: Medium stiff to very stiff gray silty CLAY).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/27/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY J.W.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for D, B, U, M, O, I, S, T and values for Surface Water Elev., Stream Bed Elev., Groundwater Elev., etc.

Main soil log data table with columns for depth (ft), blow counts (B, U), and soil descriptions (e.g., End of boring at 80 feet).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

MODEL: Default FILE NAME: Q:\Engineering\LiveProjects\13020 IL 132 Land Bridge\CADD\CADD_Sheets\Structural\049-0690-62A53-032-Bor6.dgn



Table with columns for USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, REVISED, etc.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - VI STRUCTURE NO. 049-0690

SHEET 46 OF 56 SHEETS

Table with columns for F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO. 62A53, ILLINOIS, FED. AID PROJECT



SOIL BORING LOG

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	Land Bridge	D	B	U	M	Surface Water Elev.	N/A	ft	D	B	U	M
Station	N/A	E	L	C	O	Stream Bed Elev.	N/A	ft	E	L	C	O
BORING NO.	LB-08	P	O	S	I	Groundwater Elev.:			P	O	S	I
Station	292+00	T	W	Q	S	First Encounter	23	ft	H	S	Qu	T
Offset	55 S of CL	H	S			Upon Completion	N/A	ft				
Ground Surface Elev.	791.00	(ft)	(/6")	(tsf)	(%)	After N/A Hrs.	N/A	ft	(ft)	(/6")	(tsf)	(%)
Approximately 3 inches of ASPHALT BASE												
Approximately 9 inches of GRAVEL BASE												
FILL: Black, brown, and gray LOAM												
790.75												
790.00												
Black PEAT												
Organic content: 22 - 91%												
783.00												
A-6: Very soft to very stiff gray silty CLAY (continued)												
779.50												
A-6: Very soft to very stiff gray silty CLAY												

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	Land Bridge	D	B	U	M	Surface Water Elev.	N/A	ft	D	B	U	M
Station	N/A	E	L	C	O	Stream Bed Elev.	N/A	ft	E	L	C	O
BORING NO.	LB-08	P	O	S	I	Groundwater Elev.:			P	O	S	I
Station	292+00	T	W	Q	S	First Encounter	23	ft	H	S	Qu	T
Offset	55 S of CL	H	S			Upon Completion	N/A	ft				
Ground Surface Elev.	791.00	(ft)	(/6")	(tsf)	(%)	After N/A Hrs.	N/A	ft	(ft)	(/6")	(tsf)	(%)
A-6: Very soft to very stiff gray silty CLAY (continued)												
A-6: Very soft to very stiff gray silty CLAY (continued)												

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	Land Bridge	D	B	U	M	Surface Water Elev.	N/A	ft	D	B	U	M
Station	N/A	E	L	C	O	Stream Bed Elev.	N/A	ft	E	L	C	O
BORING NO.	LB-08	P	O	S	I	Groundwater Elev.:			P	O	S	I
Station	292+00	T	W	Q	S	First Encounter	23	ft	H	S	Qu	T
Offset	55 S of CL	H	S			Upon Completion	N/A	ft				
Ground Surface Elev.	791.00	(ft)	(/6")	(tsf)	(%)	After N/A Hrs.	N/A	ft	(ft)	(/6")	(tsf)	(%)
A-6: Very soft to very stiff gray silty CLAY (continued)												
A-6: Very soft to very stiff gray silty CLAY (continued)												
End of boring at 85 feet.												
705.00												
-85 14												
-100												

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

MODEL: Default
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USER NAME =	DESIGNED - JMT	REVISED -
CHECKED - SAT	REVISED -	
PLOT SCALE =	DRAWN - JN	REVISED -
PLOT DATE =	CHECKED - SPS	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - VII STRUCTURE NO. 049-0690

SHEET 47 OF 56 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	127
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil test results (D, B, U, M, P, L, O, S, T, H, W, Qu, T).

Table with columns for Soil Description, Surface Water Elev., Stream Bed Elev., Groundwater Elev., and test results (D, B, U, M, P, L, O, S, T, H, W, Qu, T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil test results (D, B, U, M, P, L, O, S, T, H, W, Qu, T).

Table with columns for Soil Description, Surface Water Elev., Stream Bed Elev., Groundwater Elev., and test results (D, B, U, M, P, L, O, S, T, H, W, Qu, T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil test results (D, B, U, M, P, L, O, S, T, H, W, Qu, T).

Table with columns for Soil Description, Surface Water Elev., Stream Bed Elev., Groundwater Elev., and test results (D, B, U, M, P, L, O, S, T, H, W, Qu, T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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Table with columns for USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, and REVISED status.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - VIII STRUCTURE NO. 049-0690

SHEET 48 OF 56 SHEETS

Table with columns for F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., and CONTRACT NO.



SOIL BORING LOG

Page 1 of 2

Date 9/28/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Land Bridge Station N/A	D E L C O S I S T W H S	B L P O S I S T W H S	U C S I S T W H S	M O I S T W H S	Surface Water Elev. N/A ft Stream Bed Elev. N/A ft	D E L C O S I S T W H S	B L P O S I S T W H S	U C S I S T W H S	M O I S T W H S
--	--	---	---	--------------------------------------	---	--	---	---	--------------------------------------

Soil Description	Elev. (ft)	B (ft)	L (ft)	P (ft)	S (ft)	T W	H S	U (tsf)	C (tsf)	M (%)	Soil Description									
											(ft)	(ft)	(ft)	(%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.	Notes		
FILL: Black, brown, and gray LOAM Organic content: 33%			4										6	3.9		20				
			2										9	B						
			4										10							
		1											3	2.7		21				
		2											5	B						
		-5	2										-25	6						
	781.70	1											5	2.7		23				
A-6: Soft gray silty CLAY		1			0.0								10	B						
		2											15							
	779.70																			
A-2: Loose to medium dense gray poorly-graded fine SAND		3											5	6.2		22				
		3											9	B						
		-10	3										-30	11						
		3																		
		4																		
		6																		
	774.70																			
A-6: Stiff to very stiff gray silty CLAY		3			5.0								3	2.7		16				
		5			B								4	B		24				
		-15	7										-35	5						
		9			4.7															
		12			B															
		16																		
		2			3.3								3	2.7		16				
		4			B								4	B		25				
		-20	6										-40	5						

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

BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 2 of 2

Date 9/28/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Land Bridge Station N/A	D E L C O S I S T W H S	B L P O S I S T W H S	U C S I S T W H S	M O I S T W H S	Surface Water Elev. N/A ft Stream Bed Elev. N/A ft	D E L C O S I S T W H S	B L P O S I S T W H S	U C S I S T W H S	M O I S T W H S
--	--	---	---	--------------------------------------	---	--	---	---	--------------------------------------

Soil Description	Elev. (ft)	B (ft)	L (ft)	P (ft)	S (ft)	T W	H S	U (tsf)	C (tsf)	M (%)	Soil Description									
											(ft)	(ft)	(ft)	(%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.	Notes		
A-6: Stiff to very stiff gray silty CLAY (continued)																				
		3			2.7								5	5.6		22				
		4			B								9	B						
		-45	6										-65	11						
		1			3.3								4	2.7		20				
		4			B								5	B						
		-50	6										-70	c						
		3			2.9								3	2.3		19				
		4			B								5	B						
		-55	6										-75							
		3			2.3								5	B						
		4			B								5	B						
		-60	6										-80							

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

BBS, from 137 (Rev. 8-99)

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PLOT SCALE =	DRAWN - JN	REVISED -
PLOT DATE =	CHECKED - SPS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - IX
STRUCTURE NO. 049-0690

SHEET 49 OF 56 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	129
		CONTRACT NO. 62A53		
ILLINOIS		FED. AID PROJECT		



SOIL BORING LOG

Date 9/29/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C. SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns: STRUCT. NO., BORING NO., Ground Surface Elev., D E P T H (ft), B U L G E (in), U C S (tsf), M O I S T (%), and soil descriptions like 'A-7: Very soft to soft gray silty CLAY of high plasticity'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/29/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C. SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns: STRUCT. NO., BORING NO., Ground Surface Elev., D E P T H (ft), B U L G E (in), U C S (tsf), M O I S T (%), and soil descriptions like 'A-6: Stiff to hard gray silty CLAY (continued)'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/29/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C. SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns: STRUCT. NO., BORING NO., Ground Surface Elev., D E P T H (ft), B U L G E (in), U C S (tsf), M O I S T (%), and soil descriptions like 'A-6: Stiff to hard gray silty CLAY (continued)'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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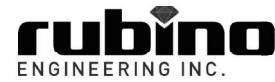


Table with columns: USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, REVISED, and initials.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - X STRUCTURE NO. 049-0690 SHEET 50 OF 56 SHEETS

Table with columns: F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO. 62A53, ILLINOIS FED. AID PROJECT.



SOIL BORING LOG

Page 1 of 3

Date 9/29/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., and SOIL PROPERTIES (D, B, U, M, E, L, C, O, P, O, S, T, H, W, S, Qu, T). Includes values for Land Bridge, LB-15, and Ground Surface Elev. 787.70 ft.

Main soil log data table with columns for depth (ft), soil type, and blow counts. Includes descriptions like 'Black, brown, and gray LOAM' and 'Black PEAT Organic content: 63 - 75%'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 2 of 3

Date 9/29/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., and SOIL PROPERTIES (D, B, U, M, E, L, C, O, P, O, S, T, H, W, S, Qu, T). Includes values for Land Bridge, LB-15, and Ground Surface Elev. 787.70 ft.

Main soil log data table with columns for depth (ft), soil type, and blow counts. Includes descriptions like 'A-6: Stiff to very stiff gray silty CLAY' and 'A-3: Medium dense gray poorly-graded fine SAND'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 3 of 3

Date 9/29/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.C.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., and SOIL PROPERTIES (D, B, U, M, E, L, C, O, P, O, S, T, H, W, S, Qu, T). Includes values for Land Bridge, LB-15, and Ground Surface Elev. 787.70 ft.

Main soil log data table with columns for depth (ft), soil type, and blow counts. Includes descriptions like 'A-6: Stiff to very stiff gray silty CLAY' and 'End of boring at 85 feet.'

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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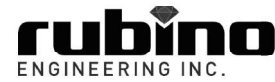


Table with columns for USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, and REVISIONS (JMT, SAT, JN, SPS).

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - XII STRUCTURE NO. 049-0690 SHEET 52 OF 56 SHEETS

Table with columns for F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., and CONTRACT NO. 62A53.



SOIL BORING LOG

Date 10/5/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns: STRUCT. NO., Station, BORING NO., Station, Offset, Ground Surface Elev., and columns for soil properties (D, B, U, M, P, L, C, O, S, T, H, W, Qu, T).

Main data table for boring log with columns for depth (ft), soil type (e.g., A-6: Stiff to hard gray silty CLAY), and soil properties (D, B, U, M, P, L, C, O, S, T, H, W, Qu, T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 10/5/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns: STRUCT. NO., Station, BORING NO., Station, Offset, Ground Surface Elev., and columns for soil properties (D, B, U, M, P, L, C, O, S, T, H, W, Qu, T).

Main data table for boring log with columns for depth (ft), soil type (e.g., A-6: Medium stiff to very stiff gray silty CLAY), and soil properties (D, B, U, M, P, L, C, O, S, T, H, W, Qu, T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 10/5/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

Table with columns: STRUCT. NO., Station, BORING NO., Station, Offset, Ground Surface Elev., and columns for soil properties (D, B, U, M, P, L, C, O, S, T, H, W, Qu, T).

Main data table for boring log with columns for depth (ft), soil type (e.g., A-6: Medium stiff to very stiff gray silty CLAY), and soil properties (D, B, U, M, P, L, C, O, S, T, H, W, Qu, T).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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Table with columns: USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE, and corresponding values (JMT, SAT, JN, SPS).

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - XIII STRUCTURE NO. 049-0690 SHEET 53 OF 56 SHEETS

Table with columns: F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO. 62A53, ILLINOIS FED. AID PROJECT



SOIL BORING LOG

Date 10/3/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY J.W.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	Land Bridge	Station	N/A	DEPTH	DESCRIPTION	DEPTH	DESCRIPTION	DEPTH	DESCRIPTION
BORING NO.	LB-17	Station	296+50	Offset	23 N of CL	Ground Surface Elev.	788.20	ft	(ft) (6") (tsf) (%)

DEPTH (ft)	DESCRIPTION	DEPTH (ft)	DESCRIPTION	DEPTH (ft)	DESCRIPTION
0	FILL: Black, brown, and gray LOAM Organic content: 17%	0	A-6: Stiff to very stiff gray silty CLAY (continued)	0	Surface Water Elev. N/A ft
3		4		3	Stream Bed Elev. N/A ft
5		8		5	Groundwater Elev.: First Encounter 10 ft
2		3		2	Upon Completion N/A ft
2		5		2	After N/A Hrs. 10 ft
5		25		5	
782.20				782.20	
0	A-6: Very soft gray silty CLAY	3		0	Surface Water Elev. N/A ft
0		5		0	Stream Bed Elev. N/A ft
0		8		0	Groundwater Elev.: First Encounter 10 ft
780.20		3		780.20	
2	A-3: Medium dense gray poorly-graded fine SAND	10		2	Upon Completion N/A ft
3		10		3	After N/A Hrs. 10 ft
7		30		7	
775.95				775.95	
1	A-6: Stiff to very stiff gray silty CLAY	5		1	Surface Water Elev. N/A ft
3		5		3	Stream Bed Elev. N/A ft
6		5		6	Groundwater Elev.: First Encounter 10 ft
7		36		7	Upon Completion N/A ft
8		40		8	After N/A Hrs. 10 ft
749.70				749.70	
4	A-6: Medium stiff to very stiff gray silty CLAY	3		4	Surface Water Elev. N/A ft
7		3		7	Stream Bed Elev. N/A ft
10		40		10	Groundwater Elev.: First Encounter 10 ft

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 10/3/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY J.W.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	Land Bridge	Station	N/A	DEPTH	DESCRIPTION	DEPTH	DESCRIPTION	DEPTH	DESCRIPTION
BORING NO.	LB-17	Station	296+50	Offset	23 N of CL	Ground Surface Elev.	788.20	ft	(ft) (6") (tsf) (%)

DEPTH (ft)	DESCRIPTION	DEPTH (ft)	DESCRIPTION	DEPTH (ft)	DESCRIPTION
0	A-6: Medium stiff to very stiff gray silty CLAY (continued)	0	A-6: Medium stiff to very stiff gray silty CLAY (continued)	0	Surface Water Elev. N/A ft
2		2		2	Stream Bed Elev. N/A ft
4		4		4	Groundwater Elev.: First Encounter 10 ft
45		45		4	Upon Completion N/A ft
788.20				4	After N/A Hrs. 10 ft
5		5		5	
5		5		5	
50		50		50	
708.20				708.20	
5		5		5	
5		5		5	
60		60		60	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 10/3/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY J.W.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	Land Bridge	Station	N/A	DEPTH	DESCRIPTION	DEPTH	DESCRIPTION	DEPTH	DESCRIPTION
BORING NO.	LB-17	Station	296+50	Offset	23 N of CL	Ground Surface Elev.	788.20	ft	(ft) (6") (tsf) (%)

DEPTH (ft)	DESCRIPTION	DEPTH (ft)	DESCRIPTION	DEPTH (ft)	DESCRIPTION
0	End of boring at 80 feet.	0		0	Surface Water Elev. N/A ft
					Stream Bed Elev. N/A ft
					Groundwater Elev.: First Encounter 10 ft
					Upon Completion N/A ft
					After N/A Hrs. 10 ft

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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PLOT DATE =	CHECKED - SPS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SOIL BORING - XIV
STRUCTURE NO. 049-0690**

SHEET 54 OF 56 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	134
CONTRACT NO. 62A53				

ILLINOIS FED. AID PROJECT



SOIL BORING LOG

Page 1 of 2

Date 10/3/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Land Bridge
Station N/A
BORING NO. LB-19
Station 297+50
Offset 14 N of CL
Ground Surface Elev. 790.50 ft (ft) (/6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	U	M	Surface Water Elev.	D	B	U	M
(ft)	(/6")	(tsf)	(%)	N/A ft	(ft)	(/6")	(tsf)	(%)
FILL: Black, brown, and gray LOAM								
3			17		7	2.5	19	
4					9			
4					10			
1			23		4	2.0	18	
2					6			
-5	2				-25	8		
2			21		5	3.1	25	
2					10			
3					12			
A-6: Stiff to very stiff gray silty CLAY (continued)								
A-3: Medium dense gray poorly-graded fine SAND								
3	0.0		17		5			
5					8			
-10	8				-30	8		
5	4.1		16					
8								
10								
A-6: Medium stiff to very stiff gray silty CLAY								
5	2.1		16		4	1.8	21	
7					6			
-15	9				-35	7		
6	2.9		17					
9								
11								
3	2.5		18		2	2.3	24	
5					3			
-20	7				-40	5		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 2 of 2

Date 10/3/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Land Bridge
Station N/A
BORING NO. LB-19
Station 297+50
Offset 14 N of CL
Ground Surface Elev. 790.50 ft (ft) (/6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	U	M	Surface Water Elev.	D	B	U	M
(ft)	(/6")	(tsf)	(%)	N/A ft	(ft)	(/6")	(tsf)	(%)
FILL: Black, brown, and gray LOAM								
3			17		7	2.5	19	
4					9			
4					10			
1			23		4	2.0	18	
2					6			
-5	2				-25	8		
2			21		5	3.1	25	
2					10			
3					12			
A-6: Medium stiff to very stiff gray silty CLAY (continued)								
A-3: Medium dense gray poorly-graded fine SAND								
3	0.0		17		5			
5					8			
-10	8				-30	8		
5	4.1		16					
8								
10								
A-6: Medium stiff to very stiff gray silty CLAY								
5	2.1		16		4	1.8	21	
7					6			
-15	9				-35	7		
6	2.9		17					
9								
11								
3	2.5		18		2	2.3	24	
5					3			
-20	7				-40	5		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

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CHECKED - SAT	REVISED -	
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PLOT DATE =	CHECKED - SPS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS - XV
STRUCTURE NO. 049-0690

SHEET 55 OF 56 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	135
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



SOIL BORING LOG

Page 1 of 1

Date 9/30/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	Land Bridge	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	N/A	Hrs.
Station	N/A	E	L	C	O	N/A	N/A						
BORING NO.	SB-3	P	W	H	S								
Station	299+00	T	W	Qu	S								
Offset	23 N of CL	H	S										
Ground Surface Elev.	793.90	(ft)	(/6")	(tsf)	(%)								
Approximately 5/8 inches of ASPHALT 793.44													
Approximately 4 1/2 inches of sandy GRAVEL BASE 792.90													
FILL: Black, brown, and gray LOAM Organic content: 10% 791.40													
A-6: Medium stiff to stiff brown silty CLAY 787.90													
A-3: Medium dense brown poorly-graded fine SAND 784.90													
A-6: Stiff to very stiff gray silty CLAY 783.90													
End of boring at 10 feet.													

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 1 of 1

Date 10/4/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	Land Bridge	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	N/A	Hrs.
Station	N/A	E	L	C	O	N/A	N/A						
BORING NO.	SB-4	P	W	H	S								
Station	302+00	T	W	Qu	S								
Offset	53 S of CL	H	S										
Ground Surface Elev.	800.10	(ft)	(/6")	(tsf)	(%)								
Approximately 12 inches of TOPSOIL 799.10													
A-6: Stiff to very stiff brown silty CLAY 790.10													
End of boring at 10 feet.													

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 1 of 1

Date 10/4/16

ROUTE IL 132 / Grand Avenue DESCRIPTION Phase II design services for IL 132 from Oak Lane Drive to McKinley Avenue on IL Rt. 132 LOGGED BY D.K.

SECTION WR(2)-R-1 LOCATION Oak Lane Drive to McKinley Avenue

COUNTY Lake County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	Land Bridge	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	N/A	Hrs.
Station	N/A	E	L	C	O	N/A	N/A						
BORING NO.	SB-5	P	W	H	S								
Station	306+00	T	W	Qu	S								
Offset	27 N of CL	H	S										
Ground Surface Elev.	795.90	(ft)	(/6")	(tsf)	(%)								
FILL: Black, brown, and gray LOAM 792.40													
A-6: Soft to medium stiff brown silty CLAY 789.90													
A-3: Loose brown poorly-graded fine SAND 788.65													
A-6: Very stiff gray silty CLAY 785.90													
End of boring at 10 feet.													

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
 BBS, from 137 (Rev. 8-99)

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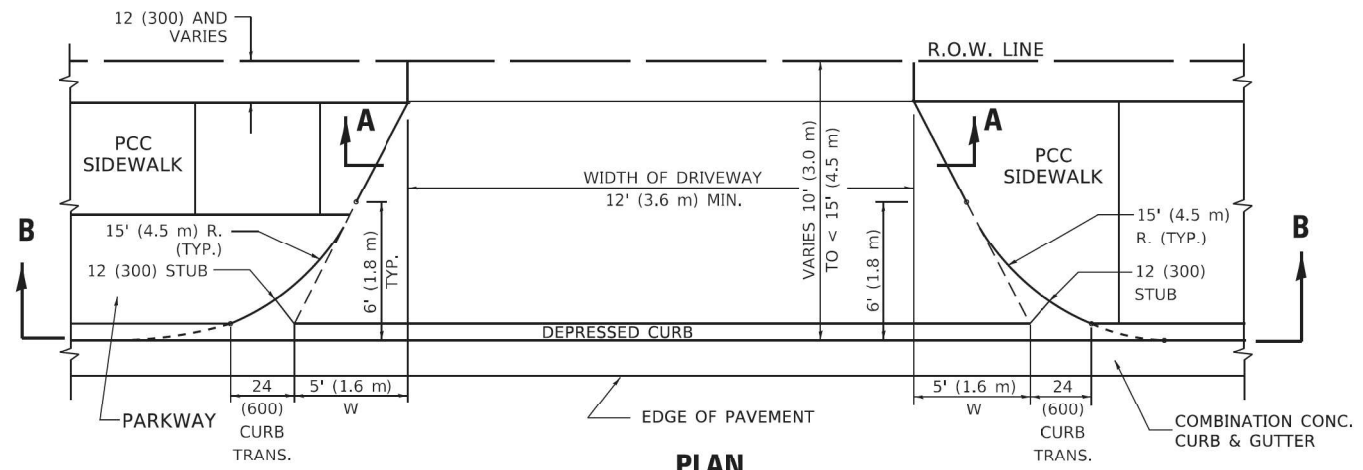
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

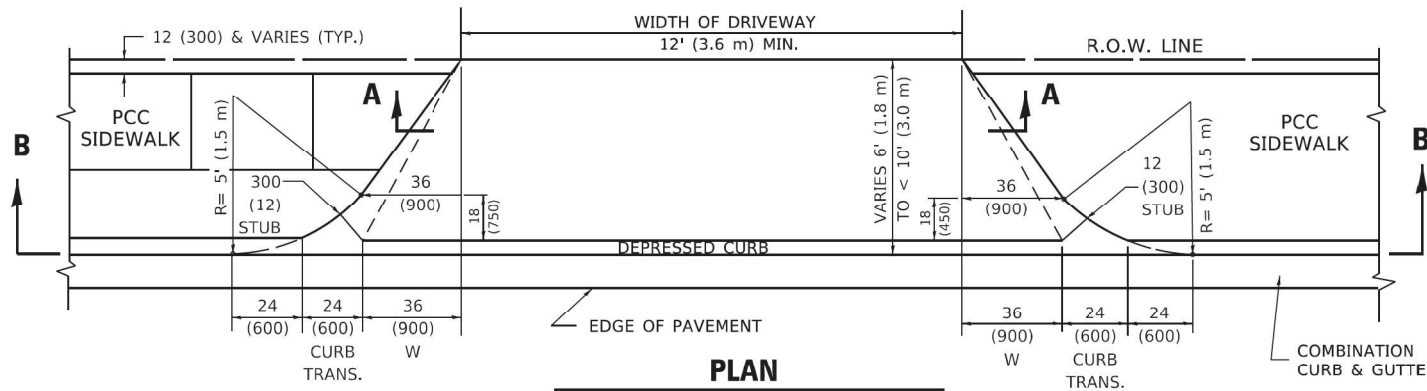
SOIL BORING LOGS - XVI
 STRUCTURE NO. 049-0690

SHEET 56 OF 56 SHEETS

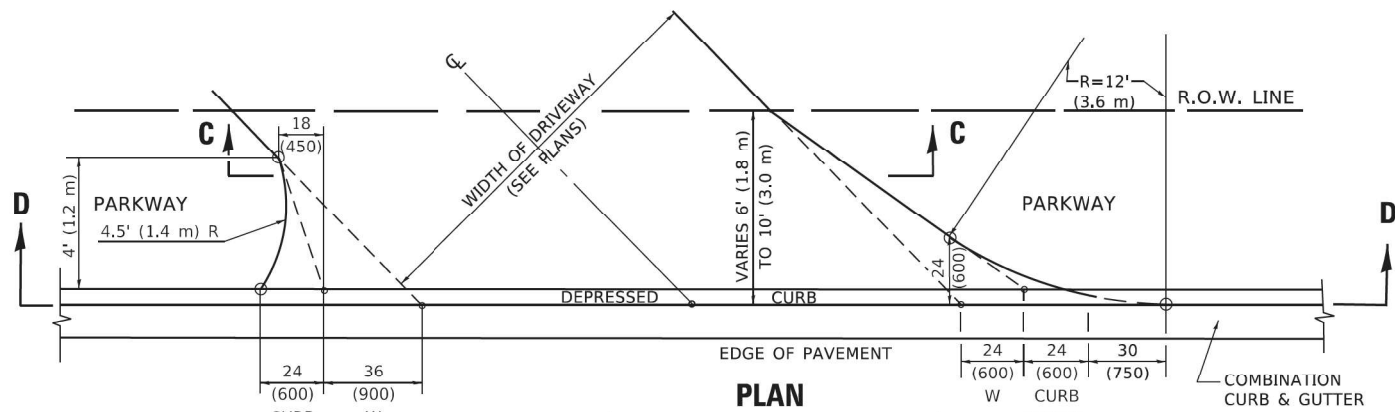
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CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



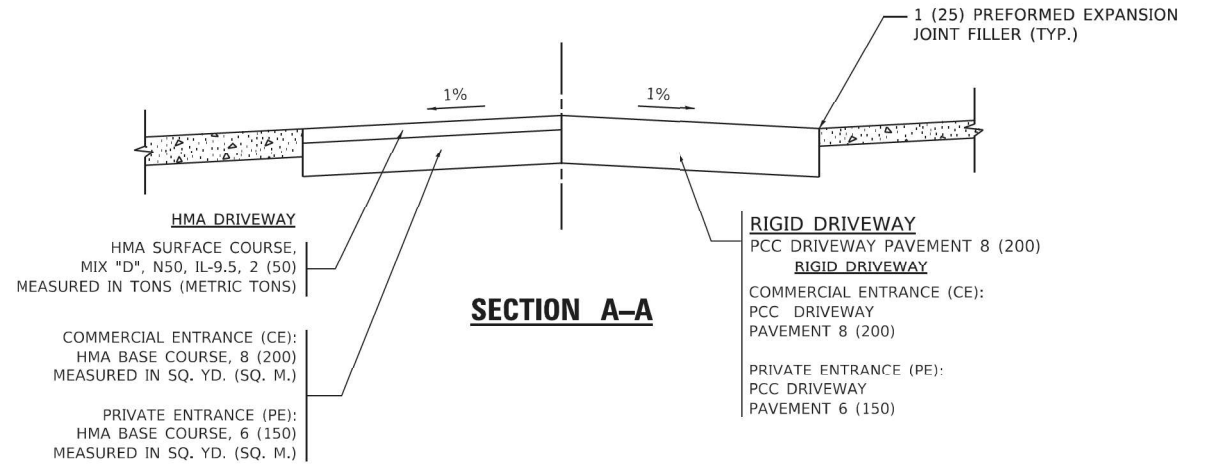
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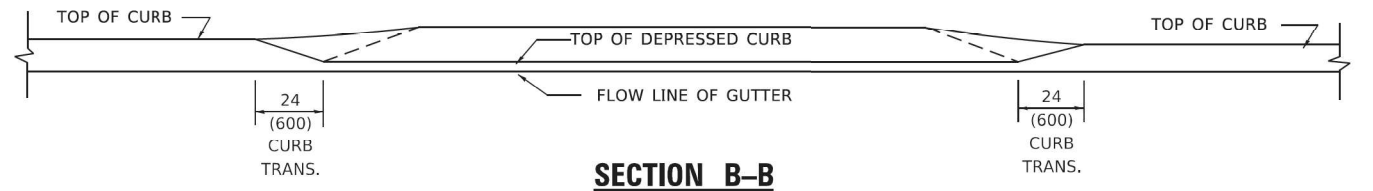
PLAN
6' (1.8 m) TO < 10' (3.0 m)



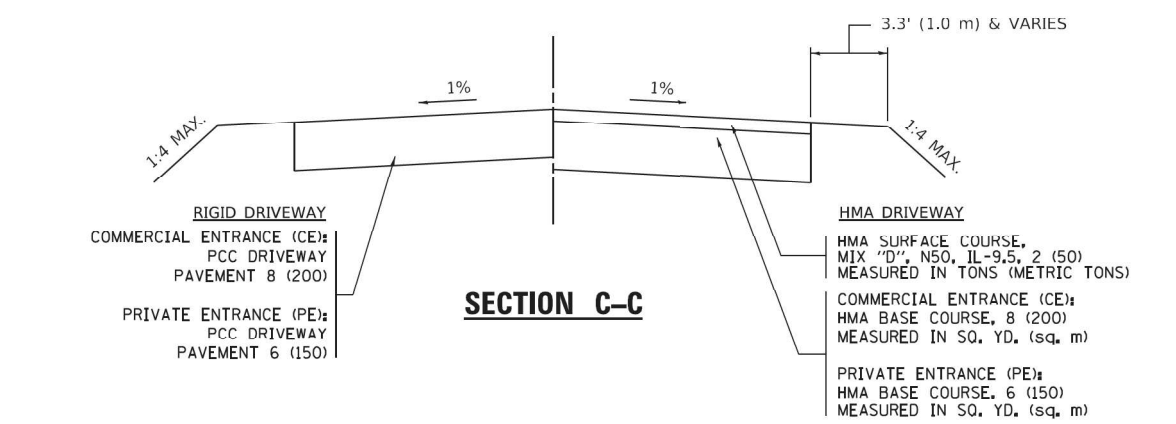
PLAN
6' (1.8 m) TO 10' (3.0 m)



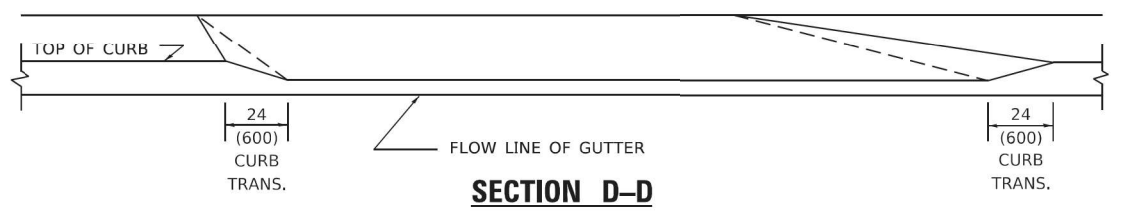
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

GENERAL NOTES

1. DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.
2. WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE PCC SIDEWALK SHALL EXTEND TO THE BACK OF CURB.
3. "W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

**BD400-02 (BD-2)
DRIVEWAY DETAILS
DISTANCE BETWEEN ROW AND FACE OF CURB < 15'**

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

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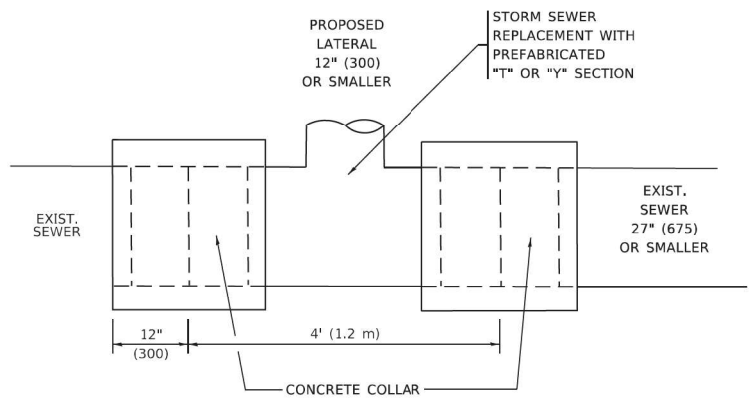


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PLOT DATE = 10/18/2022	CHECKED - TPP	REVISED -
	DATE - 10/18/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

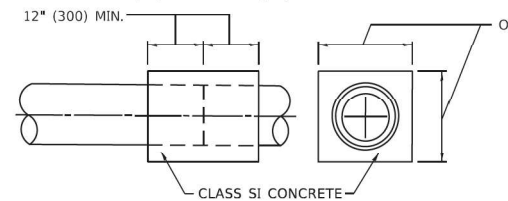
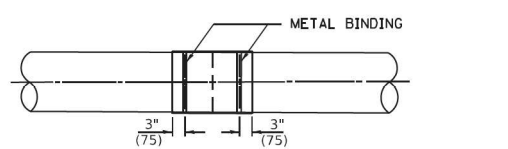
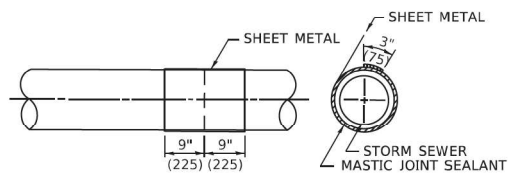
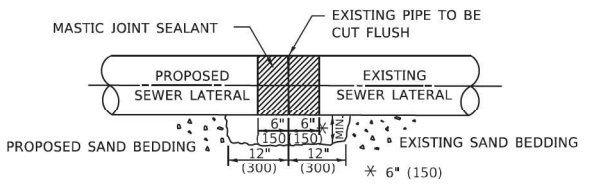
**IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
DISTRICT 1 STANDARDS**
SCALE: NTS SHEET 1 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	137
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



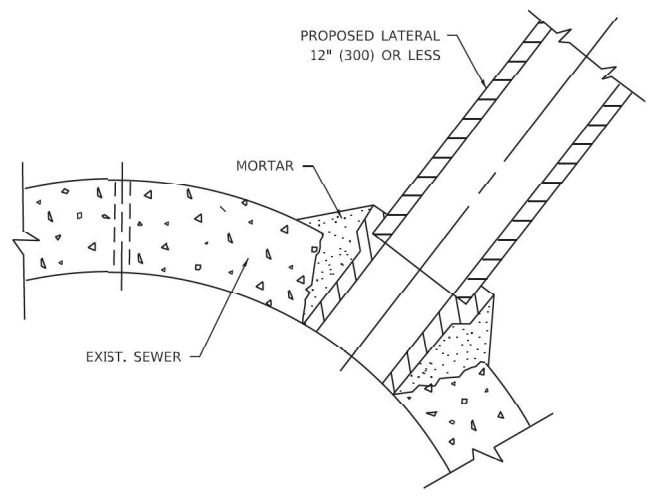
DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER



DETAIL "B"

CLASS SI CONCRETE COLLAR



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12' x 6' (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.

NOTES:

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

- CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.
- CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

- TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.
- REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.
- TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.
- CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

**BD50-02 (BD-7)
DETAIL OF STORM SEWER
CONNECTION TO EXISTING SEWER**

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

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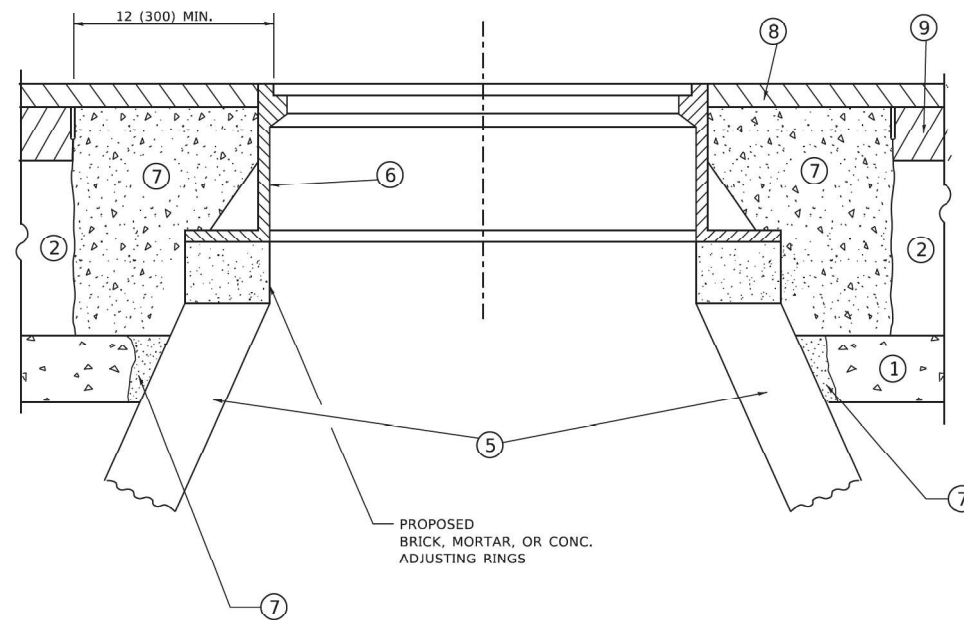
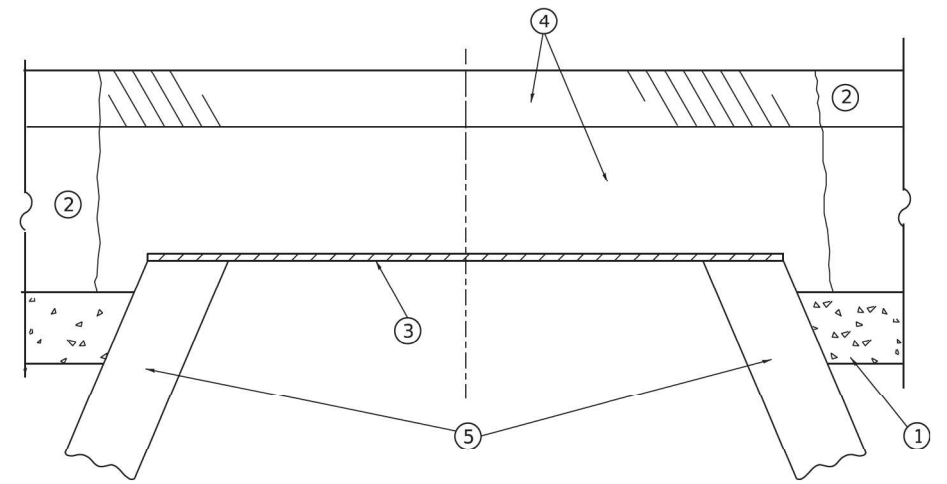
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
DISTRICT 1 STANDARDS**

SCALE: NTS SHEET 2 OF 14 SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 138
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



**DETAILS FOR FRAMES AND LIDS ADJUSTMENT
WITH MILLING**

CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND HMA SURFACE MIX APPROVED BY THE ENGINEER. (MIN. 1 1/2 (40) HMA TO REMAIN AFTER MILLING).

STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS*PP-1 CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

LEGEND

- | | |
|--|-------------------------------|
| ① SUB-BASE GRANULAR MATERIAL | ⑥ FRAME AND LID (SEE NOTES) |
| ② EXISTING PAVEMENT | ⑦ CLASS*PP-1 CONCRETE |
| ③ 36 (900) DIAMETER METAL PLATE | ⑧ PROPOSED HMA SURFACE COURSE |
| ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX | ⑨ PROPOSED HMA BINDER COURSE |
| ⑤ EXISTING STRUCTURE | |

LOCATION OF STRUCTURES

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT

- 1. REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."
- 2. THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.
- 3. NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.
- 4. WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

NOTES

- 1. EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.
- 2. IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.
- 3. CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.
- 4. THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

**BD600-03 (BD-8)
DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING**

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE	
DISTRICT 1 STANDARDS	
SCALE: NTS	SHEET 3 OF 14 SHEETS STA. TO STA.

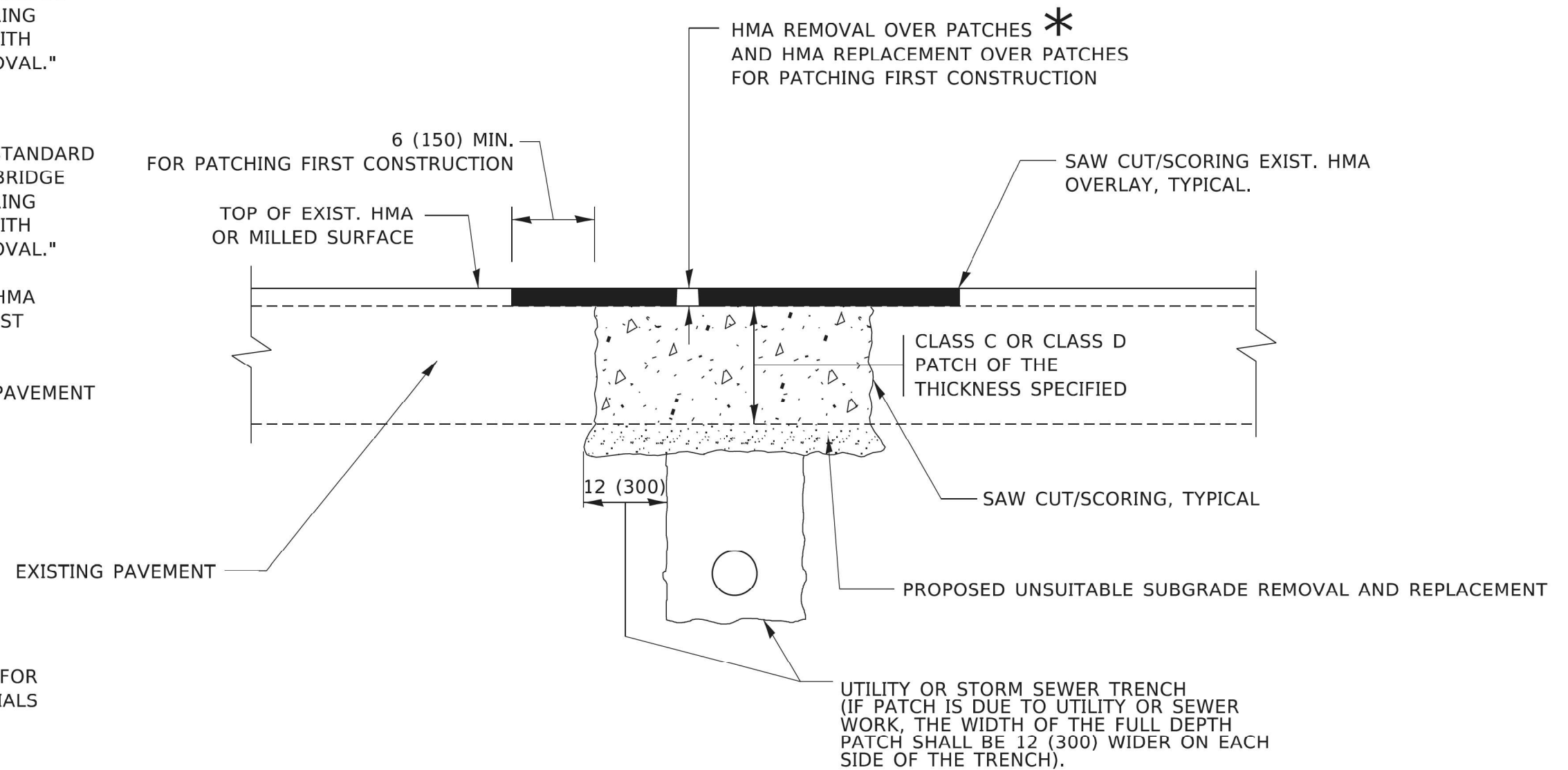
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	139
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				

METHOD OF MEASUREMENT

REFER TO SECTION 442 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL."

BASIS OF PAYMENT

1. REFER TO SECTION 442 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL."
2. SAW CUT/SCORING OF EXISTING HMA OVERLAY IS INCLUDED IN THE COST OF PAVEMENT PATCHING.
3. SAW CUT/SCORING OF EXISTING PAVEMENT IS INCLUDED IN THE COST OF PAVEMENT PATCHING.



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

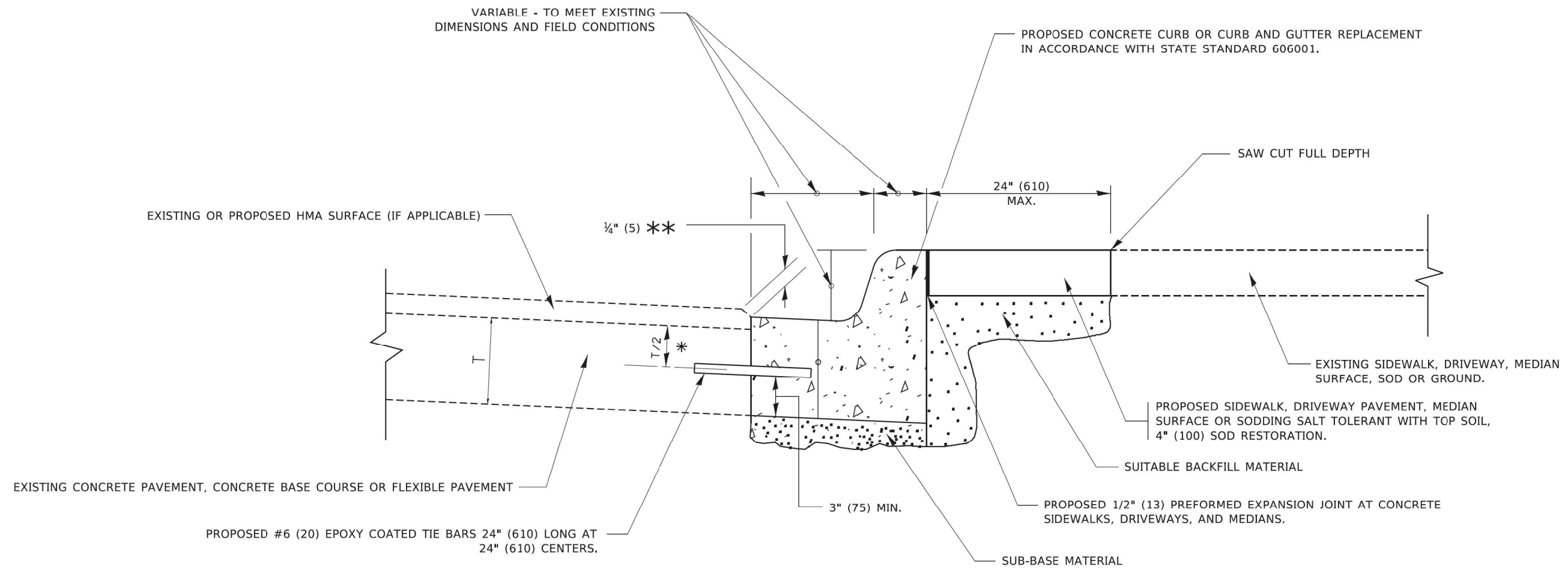
1. MILL HMA FIRST IF THERE IS AT LEAST 4½ INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

**BD400-04 (BD-22)
PAVEMENT PATCHING FOR
HMA SURFACED PAVEMENT**

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

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						CONTRACT NO. 62A53			ILLINOIS FED. AID PROJECT				



- * 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
- ** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

**BD600-06 (BD-24)
CURB OR CURB AND GUTTER
REMOVAL AND REPLACEMENT**

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
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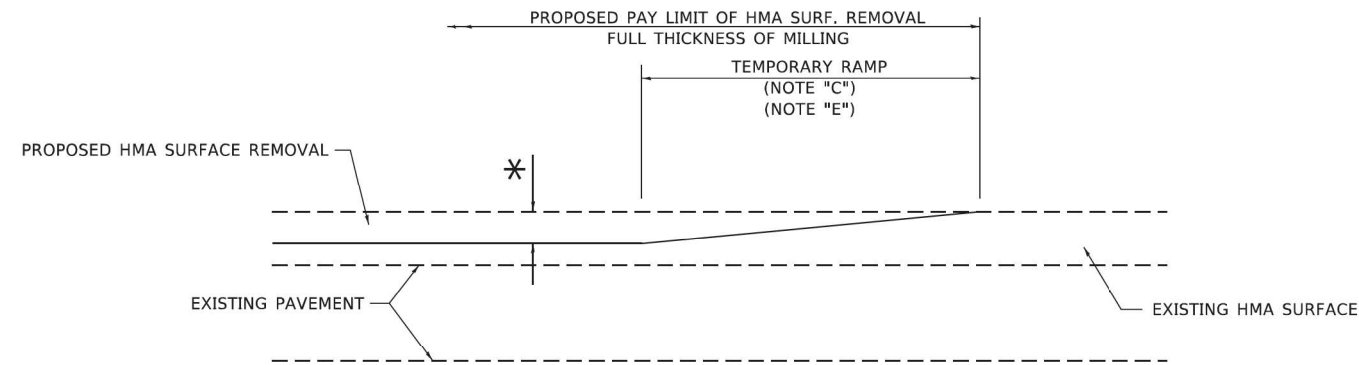


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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

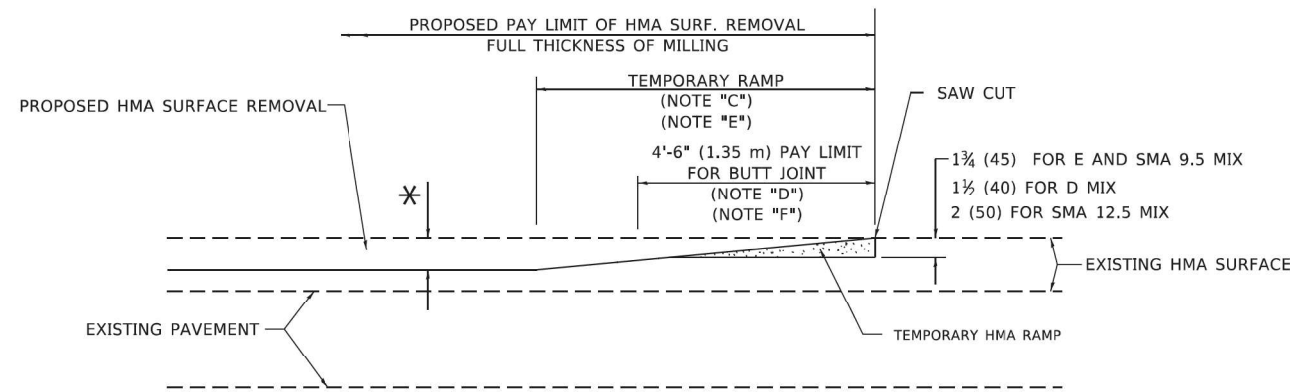
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DISTRICT 1 STANDARDS			
SCALE: NTS	SHEET 5	OF 14 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	141
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



MILLED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

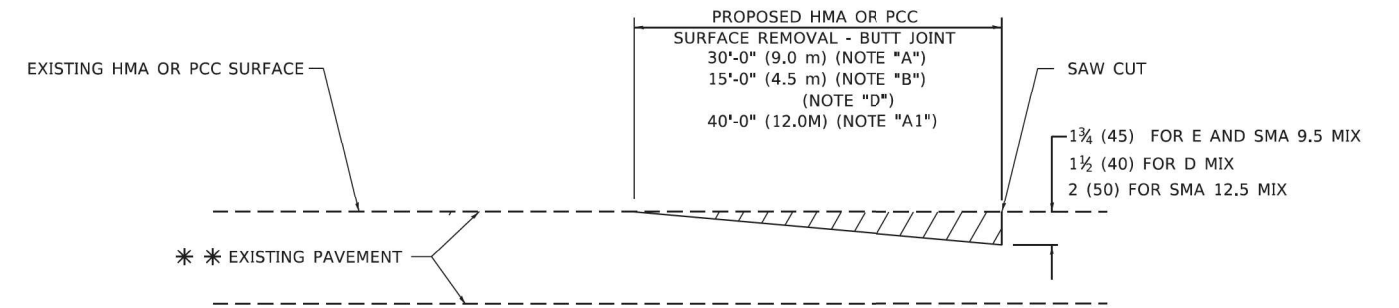
OPTION 1



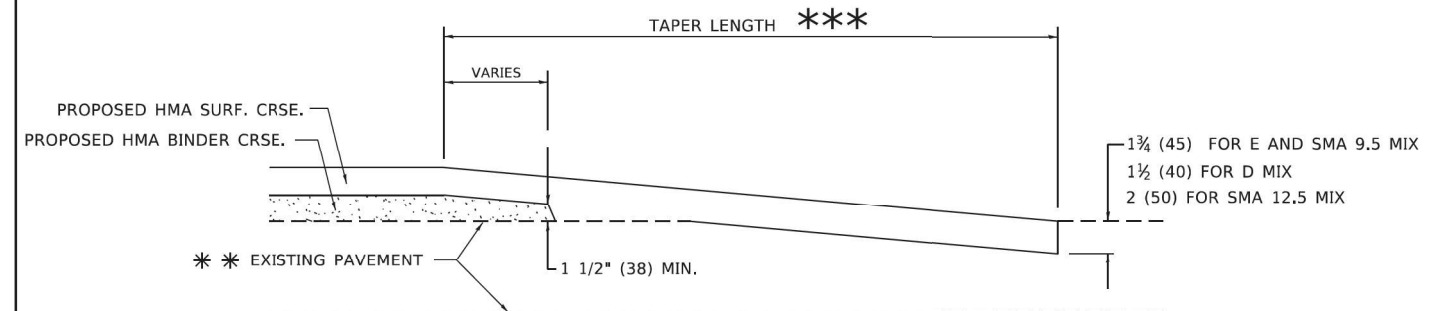
HMA CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 2

TYPICAL TEMPORARY RAMP



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

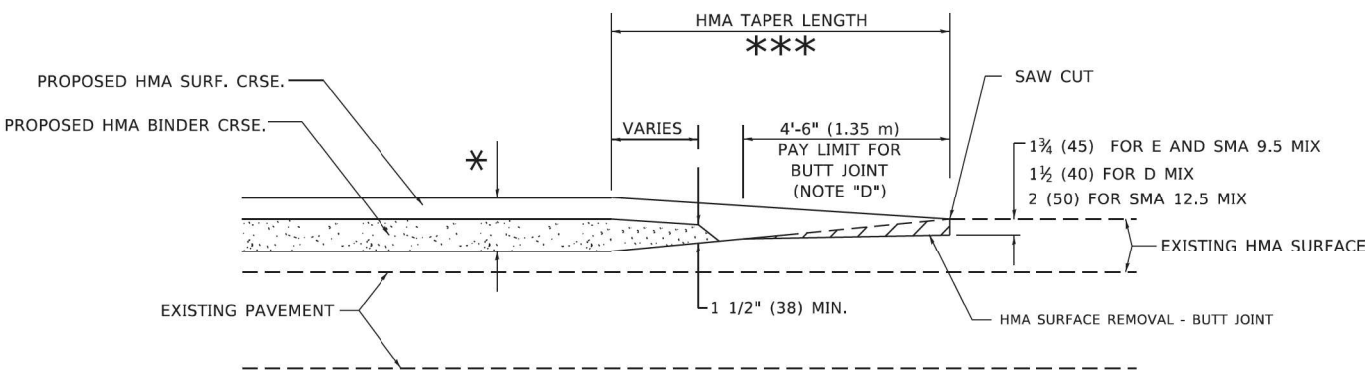
*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

GENERAL NOTES

- A. MAINLINE ARTERIAL ROADWAYS AND MAJOR SIDE ROADS.
- A1. INTERSTATES
- B. MINOR SIDE ROADS.
- C. THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D. THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E. TAPER THE TEMP. RAMP AT A RATE OF 3' - 4" (1.02m) PER 1 INCH (25 mm) OF MILLING THICKNESS.
* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- F. SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT

- 1. THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".
- 2. THE TEMPORARY RAMP AND SAW CUT SHALL BE INCLUDED IN THE UNIT COST FOR HMA OR PCC SURFACE REMOVAL-BUTT JOINT.



BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

**BD400-05 BD-32
BUTT JOINT AND
HMA TAPER DETAIL**

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

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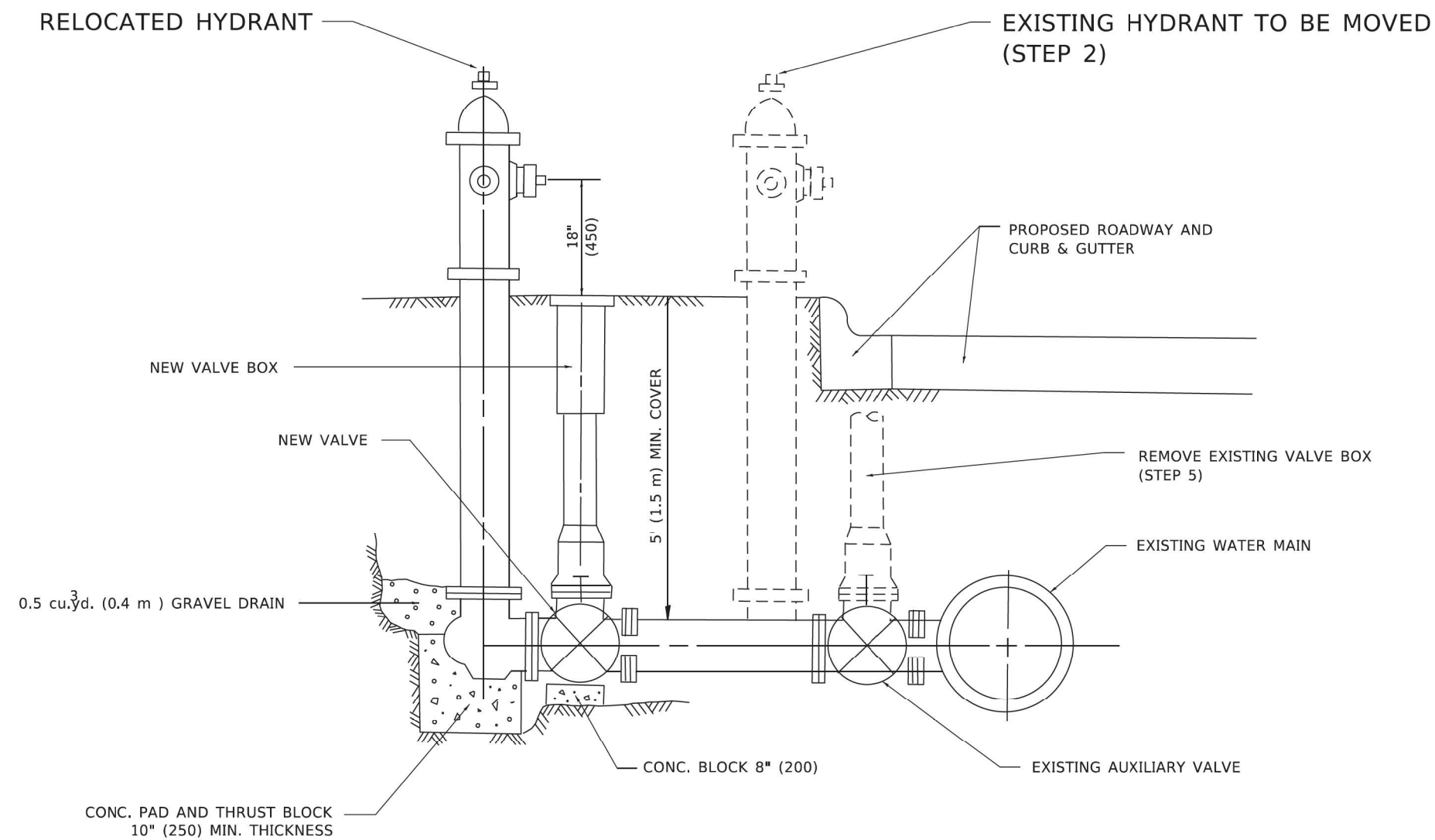


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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE	
DISTRICT 1 STANDARDS	
SCALE: NTS	SHEET 6 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	142
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



SEQUENCE OF CONSTRUCTION:

1. CLOSE EXISTING VALVE.
2. REMOVE EXISTING HYDRANT.
3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
4. RELOCATE EXISTING HYDRANT.
5. OPEN EXISTING VALVE, REMOVE BOX.
6. BACKFILL.
7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

NOTE:

ALL WORK TO BE DONE IN ACCORDANCE WITH SECTION 564 OF THE STANDARD SPECIFICATIONS. NEW VALVE AND BOX SHALL BE SAME MAKE AND MODEL AS EXISTING.

FIRE HYDRANT TO BE MOVED

BD-36
FIRE HYDRANT TO BE MOVED

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

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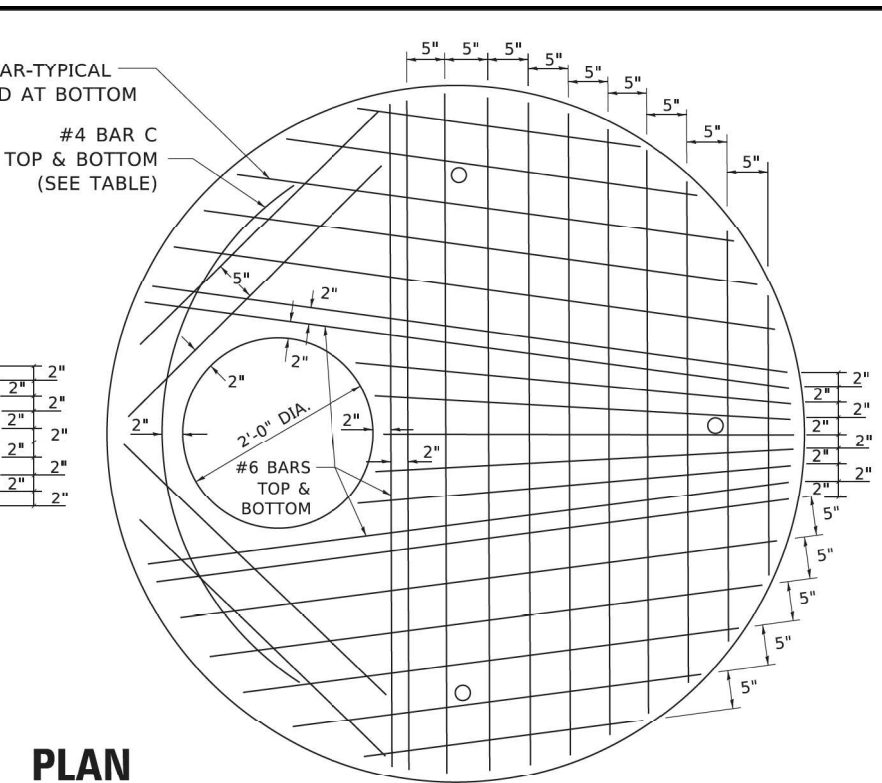
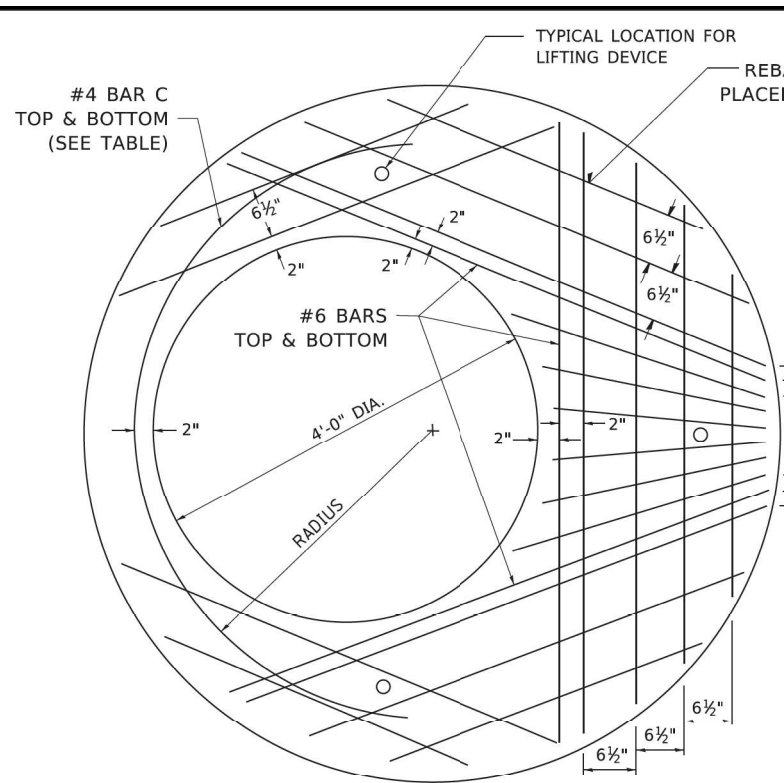


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DEPARTMENT OF TRANSPORTATION

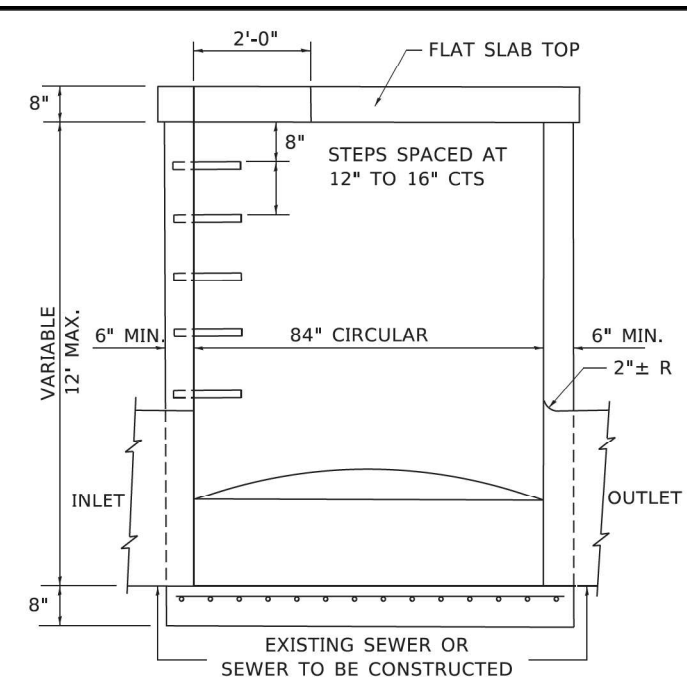
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DISTRICT 1 STANDARDS			
SCALE: NTS	SHEET 7	OF 14 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	143
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



PLAN

SHOWING REBAR REINFORCEMENT



ELEVATION

GENERAL NOTES

ALTERNATE MATERIAL FOR THE WALLS MAY BE CONCRETE MASONRY UNITS, PRECAST REINFORCED CONCRETE SECTIONS OR CAST-IN-PLACE CONCRETE. THE CAST IRON STEPS AS DETAILED HEREON ARE TYPICAL. STEPS OF OTHER DESIGN AND MATERIAL THAT CONFORM TO THE MINIMUM REQUIREMENTS OF THE STEPS SHOWN MAY BE USED WHEN APPROVED BY THE ENGINEER.

CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 1006.14 OF THE STANDARD SPECIFICATIONS.

STEPS SHALL BE EMBEDDED INTO THE WALL A MINIMUM OF THREE (3) INCHES. STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE.

STEPS SHALL BE OMITTED FOR WORK IN COOK COUNTY WHEN THE DEPTH OF THE MANHOLE IS TEN (10') OR LESS.

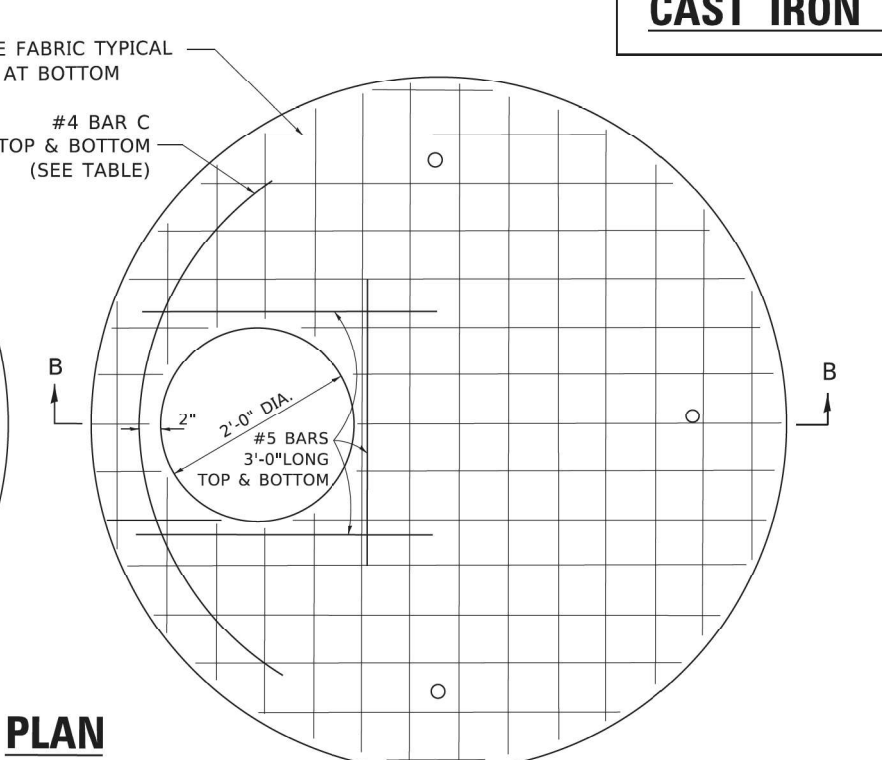
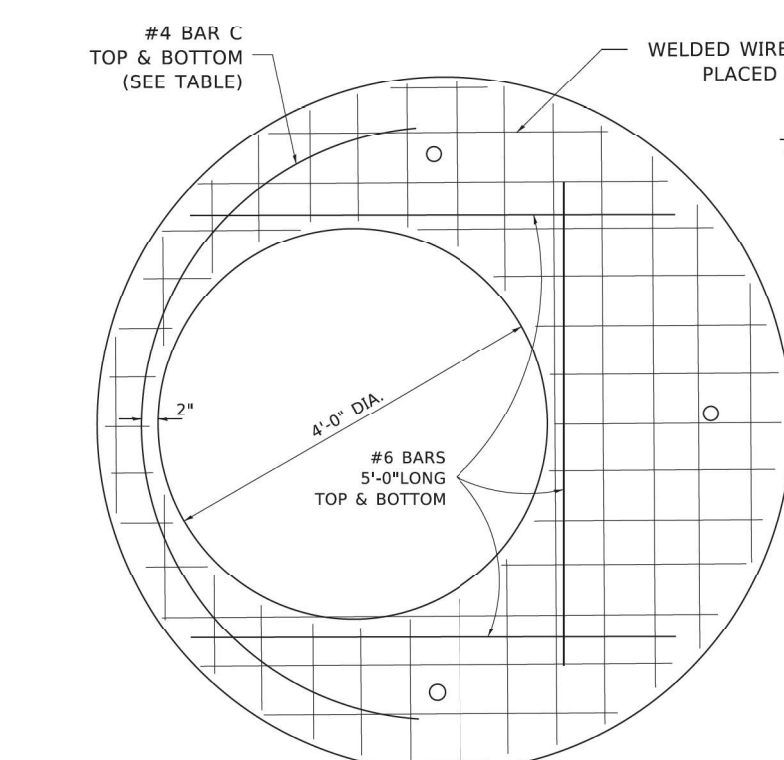
IN ADDITION TO THE REQUIREMENTS OF ARTICLE 612.13 OF THE STANDARD SPECIFICATIONS, THE CONTRACT UNIT PRICE FOR MANHOLES, TYPE A, 7'-DIAMETER SHALL INCLUDE THE SAND CUSHION WHEN REQUIRED, FURNISHING AND INSTALLING STEPS WHEN REQUIRED, FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL, AND FURNISHING AND INSTALLING FLAT SLAB TOP.

PRECAST FLAT SLAB TOP SHALL CONFORM TO ARTICLES 505.01 THRU 505.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE CONCRETE STRENGTH SHALL BE 4,000 PSI AFTER 28 DAYS. REINFORCEMENT BARS AND WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 1006.10. ONLY GRADE 60 REINFORCEMENT BARS WILL BE PERMITTED.

BOTTOM SLAB SHALL BE REINFORCED BY EITHER REINFORCEMENT BARS OR WELDED WIRE FABRIC. THE MINIMUM REINFORCEMENT SHALL BE 0.46 SQUARE INCH PER LINEAR FOOT IN BOTH DIRECTIONS.

JOINT CONFIGURATION AND DIMENSIONS OF FLAT SLAB TOP SHALL MATCH AND FIT THE RISER JOINT DETAIL.

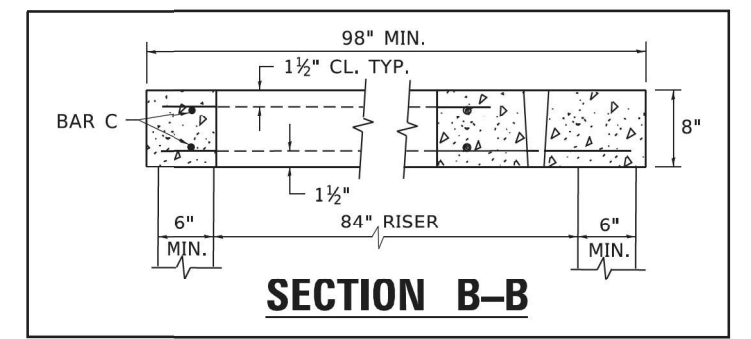
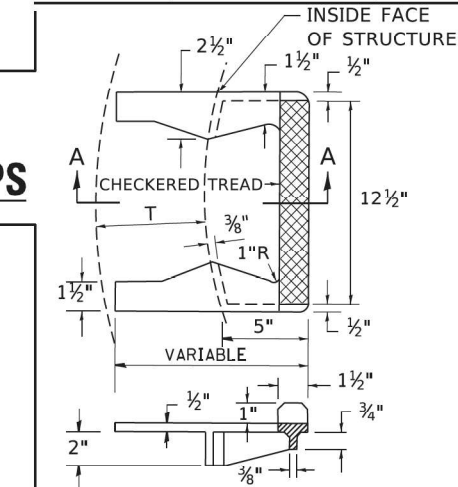
LIFTING DEVICES SHALL BE APPROVED BY THE ENGINEER.



PLAN

SHOWING WELDED WIRE FABRIC REINFORCEMENT

**SEC. A-A
CAST IRON STEPS**



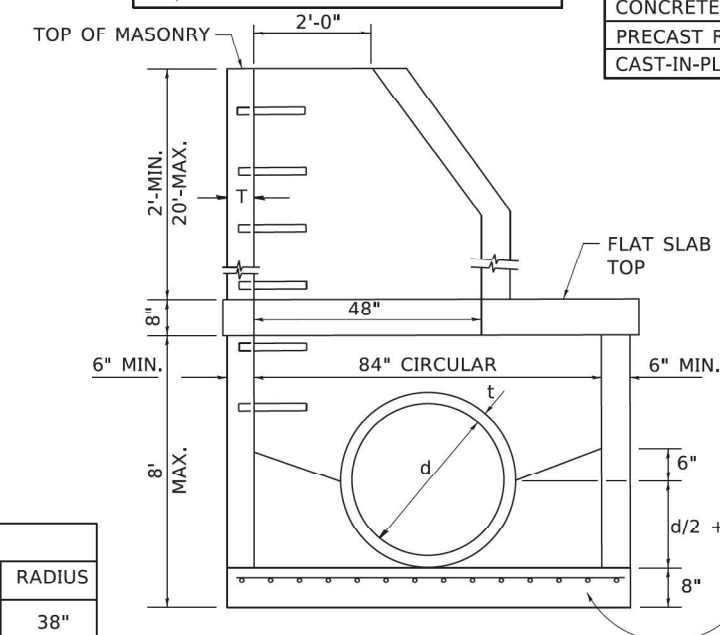
SECTION B-B

ALTERNATE MATERIALS FOR RISERS	T (MIN.)
CONCRETE MASONRY UNITS	5"
PRECAST REINFORCED CONCRETE SECTIONS	4"
CAST-IN-PLACE CONCRETE	6"

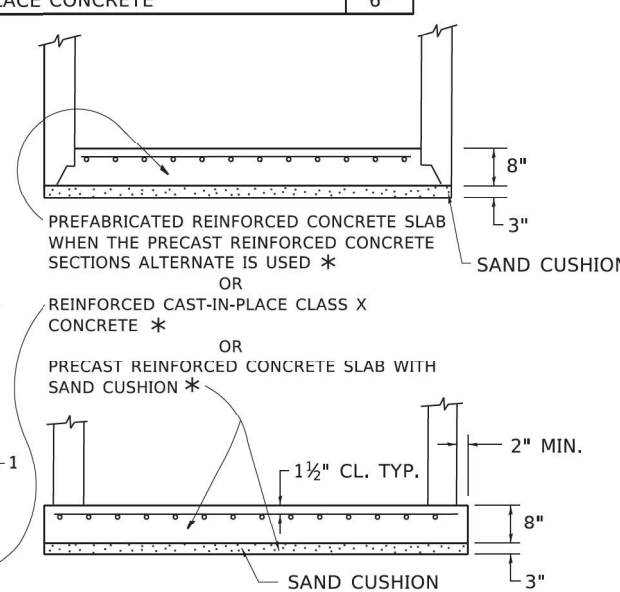
NOTE:
THIS STRUCTURE SHOULD BE USED WITH PIPES SIZE 54" DIA. OR SMALLER.

TABLE

DIAMETER OF OPENING	REINFORCEMENT "A _s " WWF OR BAR SIZE EACH DIRECTION	BAR SIZE	BAR C		
			SIZE	LENGTH	RADIUS
2'-0"	1.06 SQ.IN./LIN.FT.	#6	#4	6'-0"	38"
4'-0"	0.82 SQ.IN./LIN.FT.	#6	#4	9'-0"	38"



ELEVATION



BD600-11 (BD-37) MANHOLE TYPE A 7 FOOT DIAMETER

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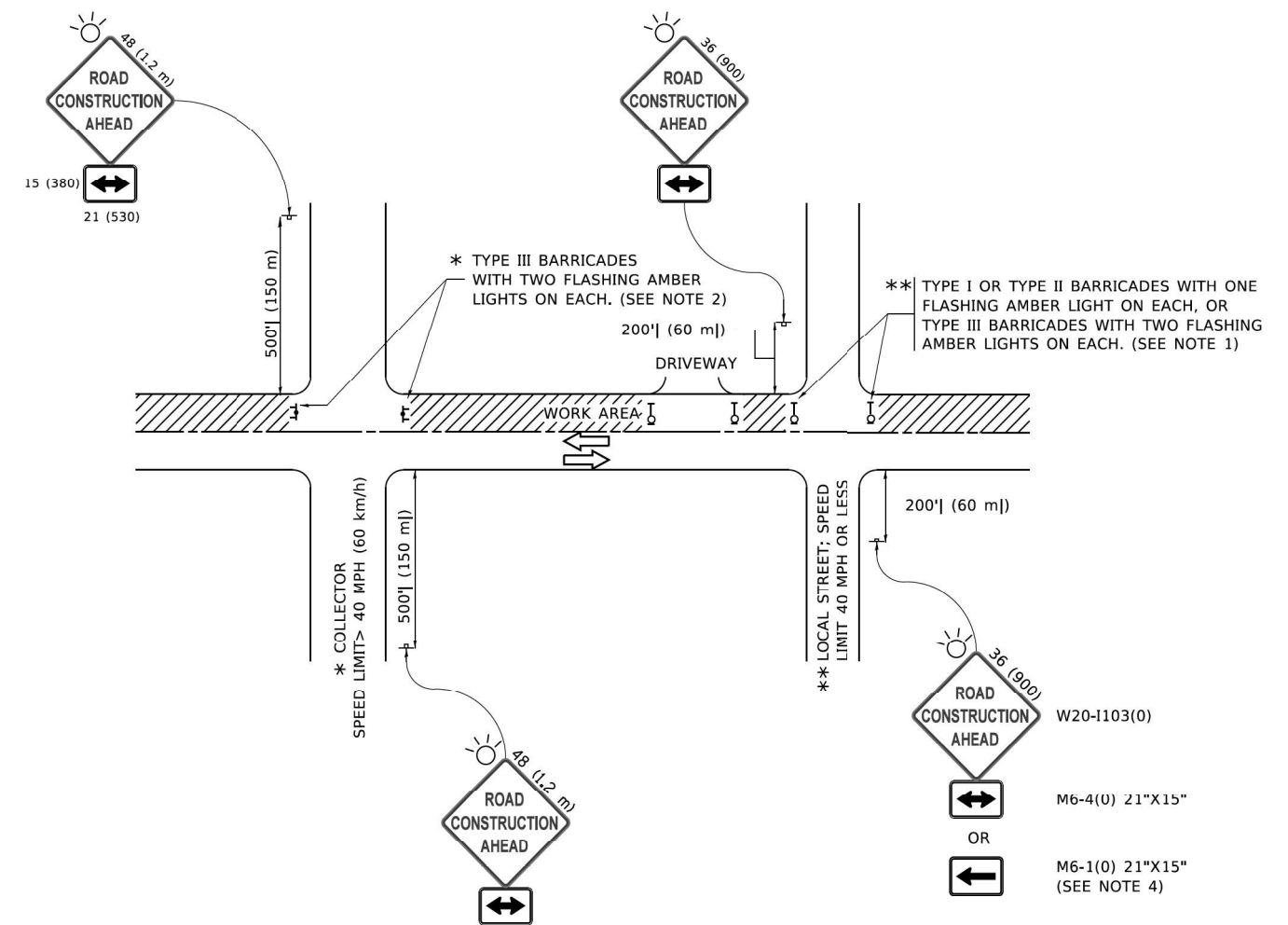
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PLOT DATE = 10/18/2022	DATE - 10/18/2022	REVISIONS -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
DISTRICT 1 STANDARDS**

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 144
CONTRACT NO. 62A53				ILLINOIS FED. AID PROJECT



NOTES:

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

TC-10
TRAFFIC CONTROL PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

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

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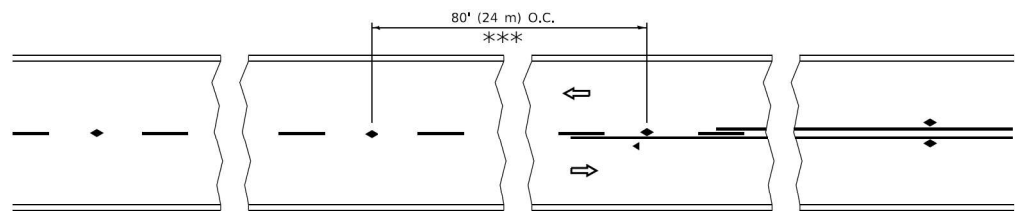


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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

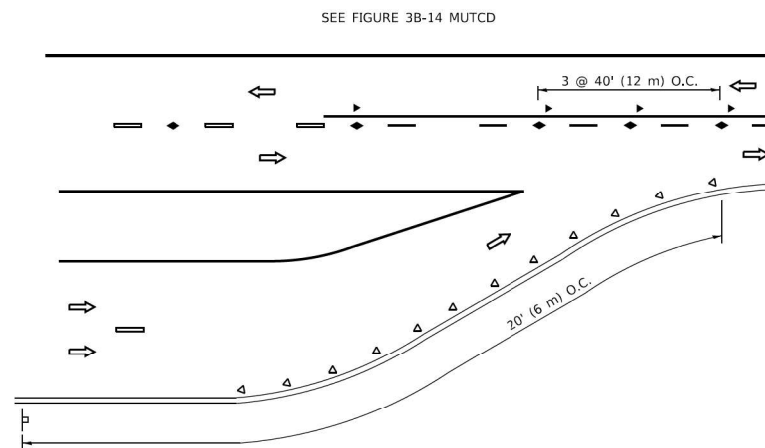
IL 132 (GRAND AVE) – CLEVELAND AVE TO CENTRAL AVE
DISTRICT 1 STANDARDS
 SCALE: NTS SHEET 8 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	145
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				

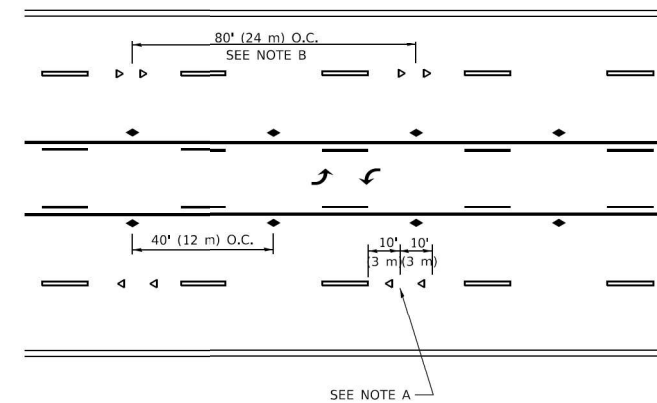


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

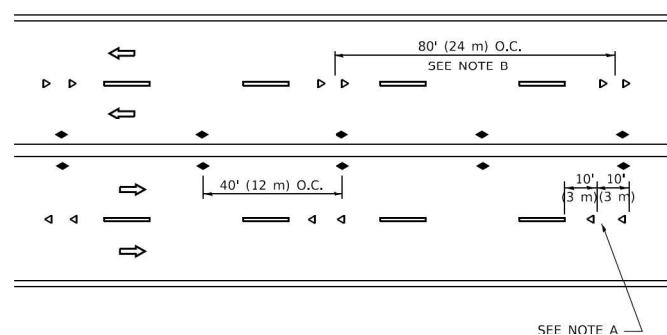
TWO-LANE/TWO-WAY



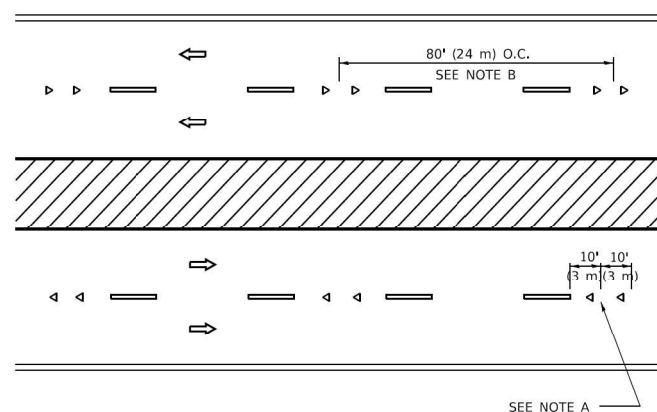
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.
4. MARKERS ARE TO BE USED ADJACENT TO BOTH SOLID WHITE LINES IN DUAL LEFT TURN LANES

SYMBOLS

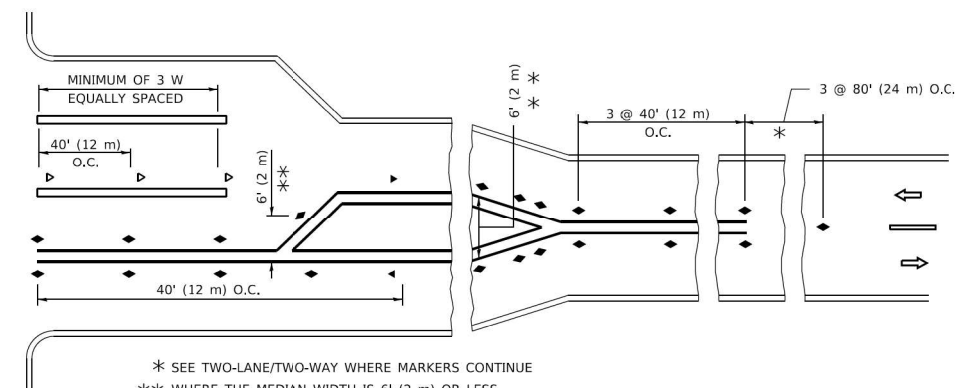
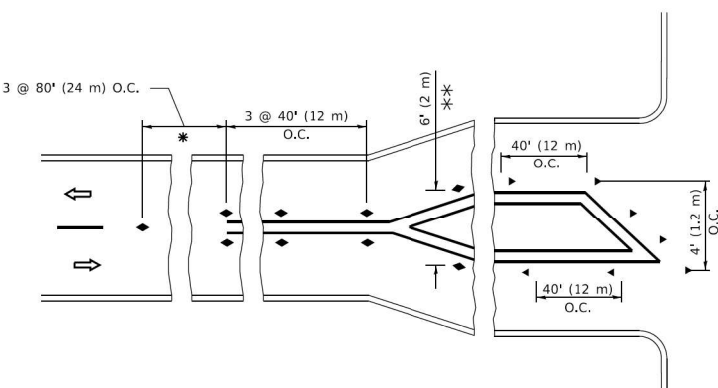
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◀ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



TURN LANES

* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

**TC-11
 TYPICAL APPLICATIONS
 RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)**

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

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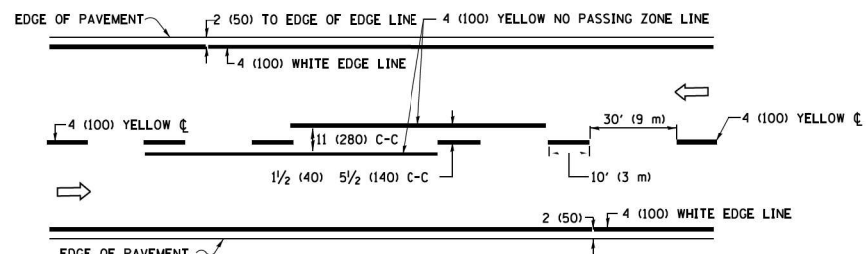
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

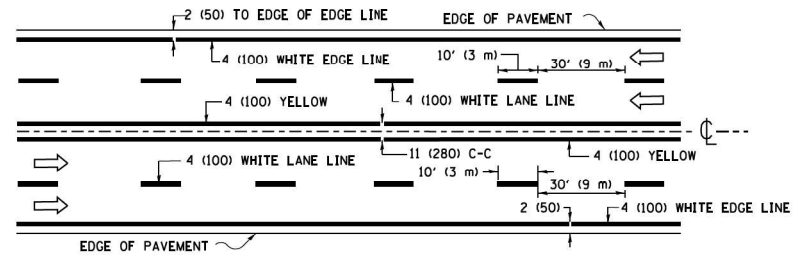
**IL 132 (GRAND AVE) – CLEVELAND AVE TO CENTRAL AVE
 DISTRICT 1 STANDARDS**

SCALE: NTS SHEET 9 OF 14 SHEETS STA. TO STA.

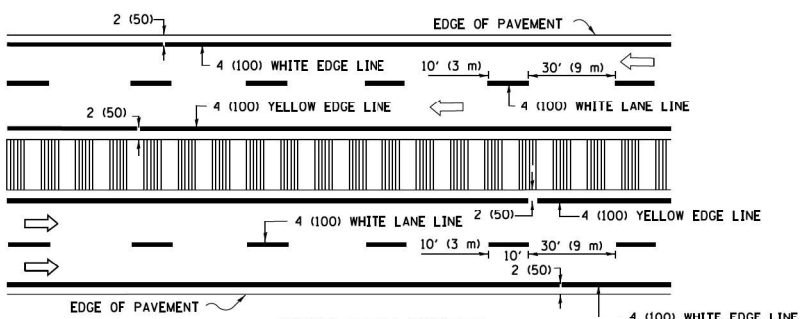
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	146
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



2-LANE ROADWAY

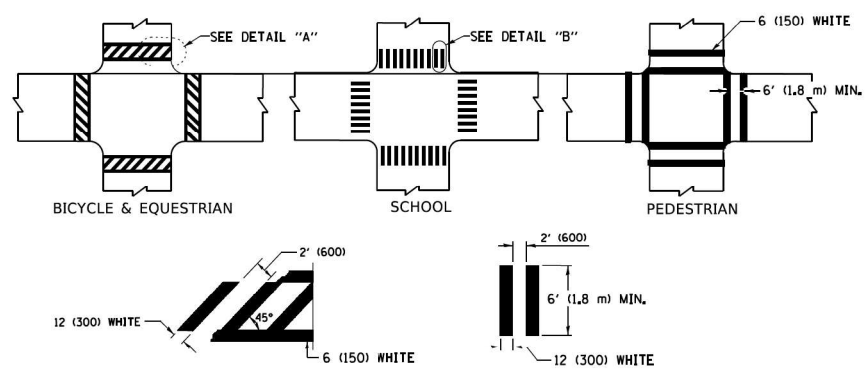


MULTI-LANE UNDIVIDED



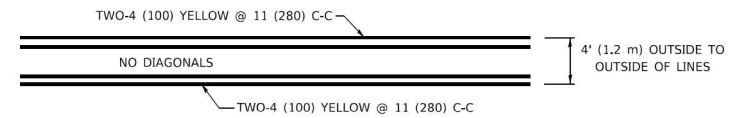
MULTI-LANE DIVIDED WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

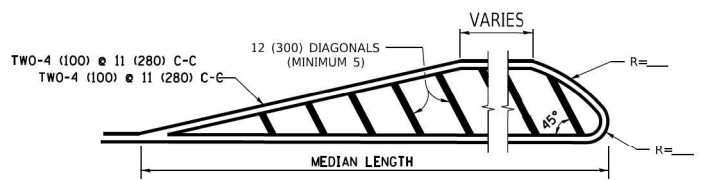


TYPICAL CROSSWALK MARKING

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

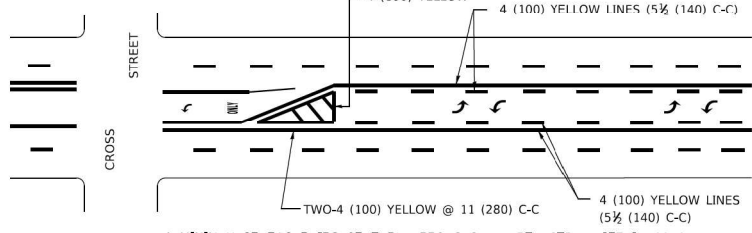


4' (1.2 m) WIDE MEDIANS ONLY



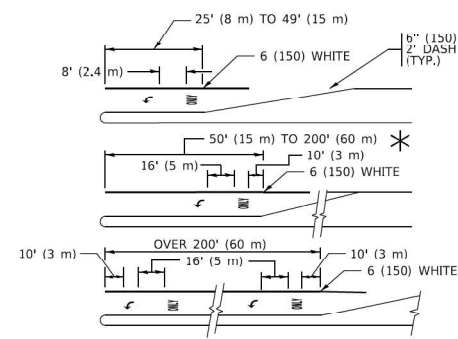
MEDIANS OVER 4' (1.2 m) WIDE

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



MEDIAN WITH TWO-WAY LEFT TURN LANE

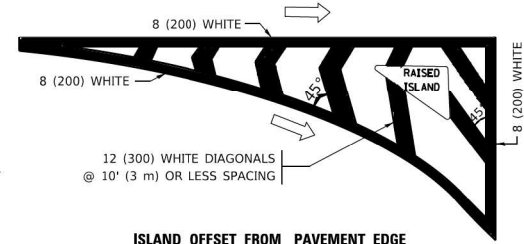
TYPICAL PAINTED MEDIAN MARKING



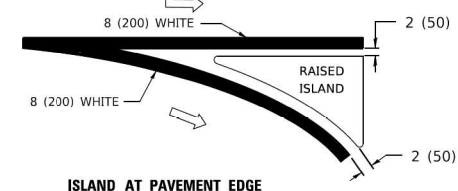
FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

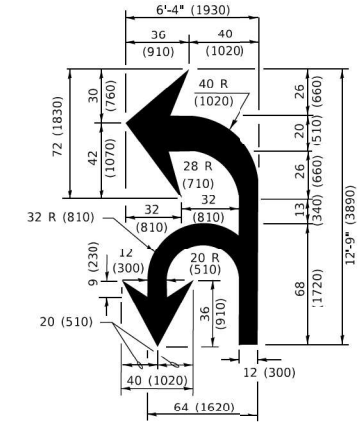


ISLAND OFFSET FROM PAVEMENT EDGE

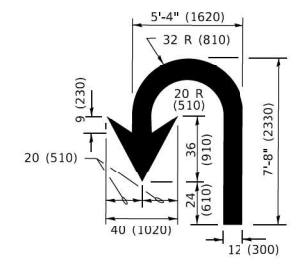


ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING



COMBINATION LEFT AND U-TURN



U-TURN

LANE REDUCTION TRANSITION

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

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE: FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	7 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE.
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES: "RR" 15 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: *R*=3.6 SQ. FT. (0.33 m ²) EACH *X*=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS > 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

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

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

TC-13 DISTRICT ONE TYPICAL PAVEMENT MARKINGS

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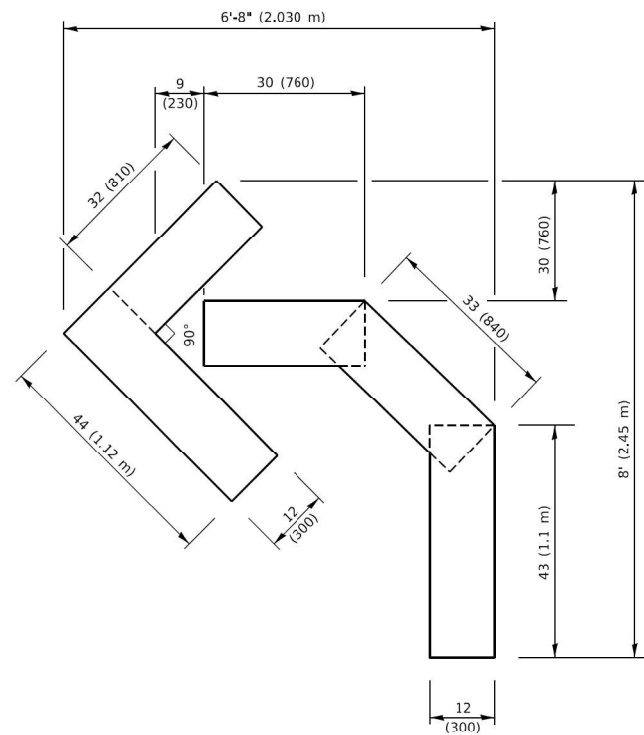
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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
DISTRICT 1 STANDARDS

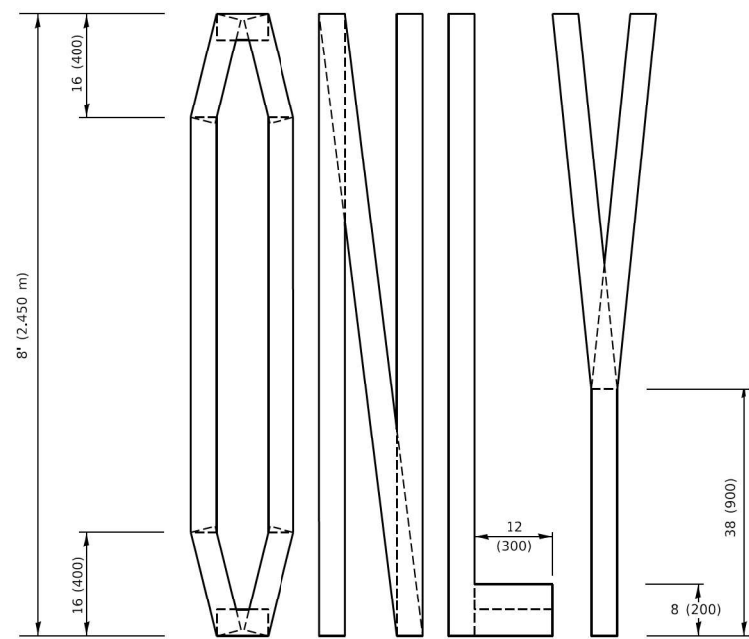
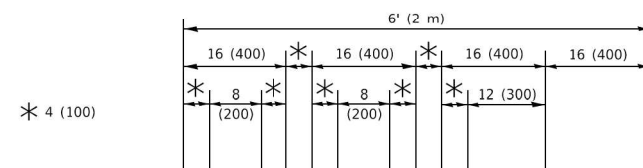
SCALE: NTS SHEET 10 OF 14 SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 147
CONTRACT NO. 62A53				ILLINOIS FED. AID PROJECT



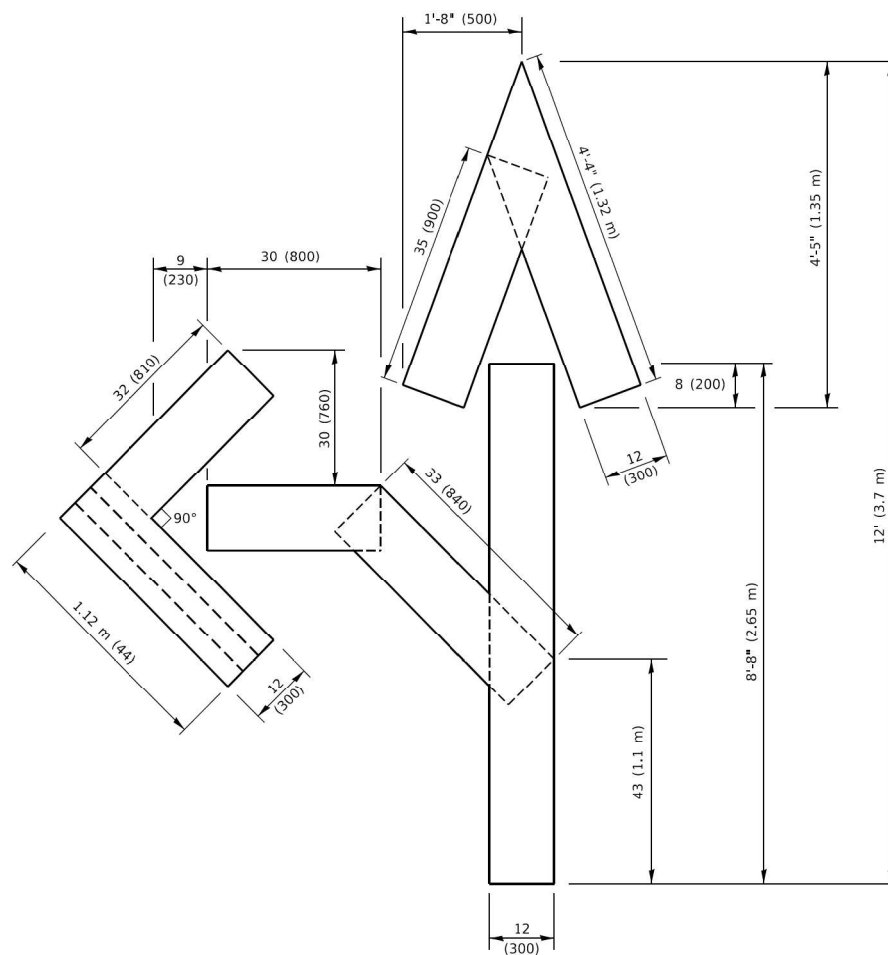
QUANTITY

4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.41 sq. m)



QUANTITY

4 (100) LINE = 64.1 ft. (19.5 m)
21.4 sq. ft. (1.99 sq. m)

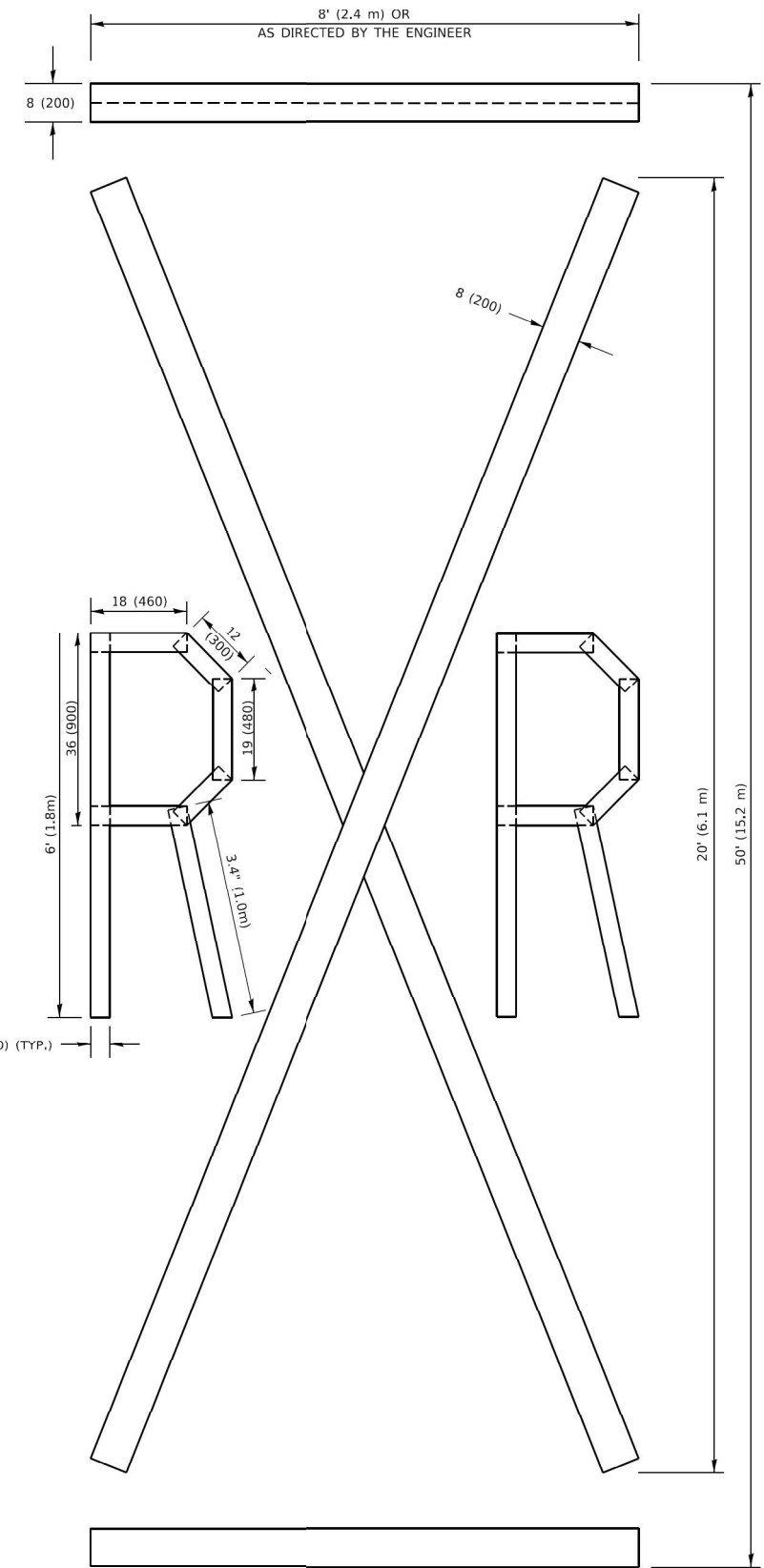


QUANTITY

4 (100) LINE = 82.5 ft. (25.1 m)
27.5 sq. ft. (2.53 sq. m)

NOTE:

ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



QUANTITY

4 (100) LINE = 225.9 ft. (68.9 m)
75.3 sq. ft. (6.99 sq. m)

**TC-16
SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS**

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

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
DISTRICT 1 STANDARDS**

SCALE: NTS SHEET 11 OF 14 SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 148
CONTRACT NO. 62A53				ILLINOIS FED. AID PROJECT

ROUTE MARKERS

FOR U.S. ROUTES
M1-40-2424

FOR ILLINOIS ROUTES
M1-50-2424

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

ARROWS SIGNS

M5-1L-2115

M5-1R-2115

M6-1-2115

M6-2-2115

M6-3-2115

CARDINAL DIRECTION & DETOUR SIGNS

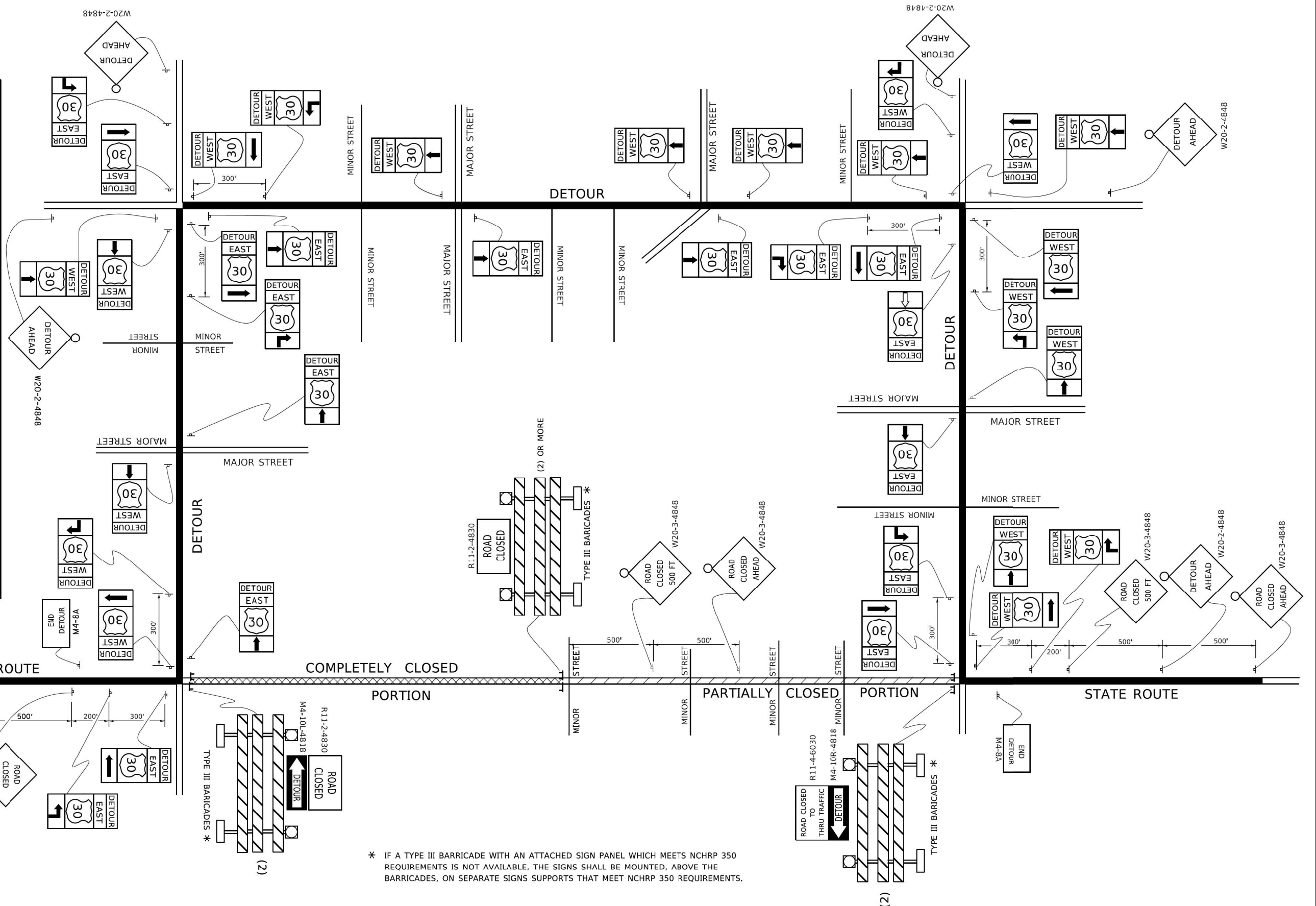
NORTH M3-1-2412

EAST M3-2-2412

SOUTH M3-3-2412

WEST M3-4-2412

DETOUR M4-8-2412



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

**TC-21
DETOUR SIGNING
FOR CLOSING STATE HIGHWAYS**

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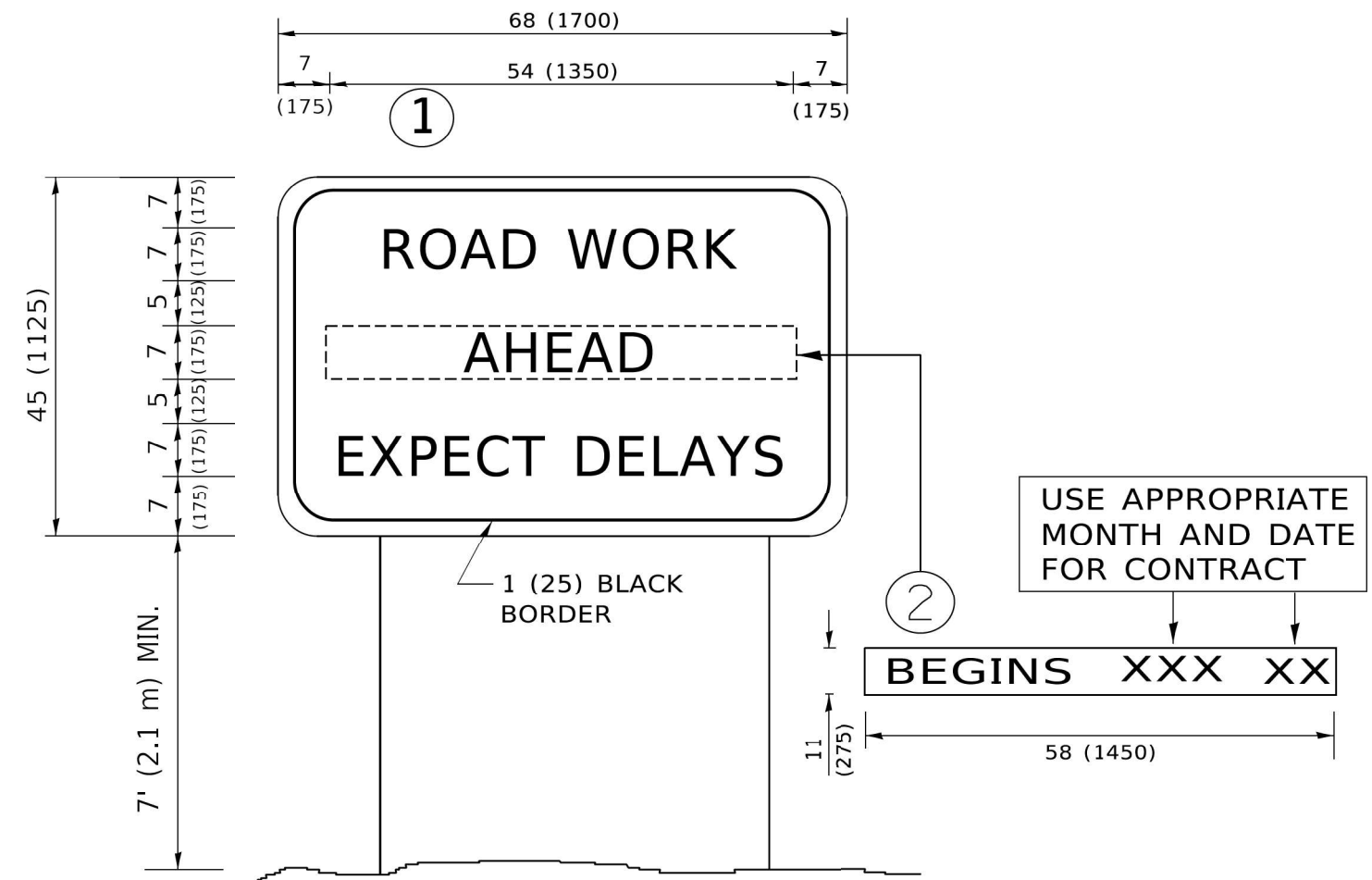
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
DISTRICT 1 STANDARDS**

SCALE: NTS SHEET 12 OF 14 SHEETS STA. TO STA.

F.A.P. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 149
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



NOTES:

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

**TC-22
ARTERIAL ROAD
INFORMATION SIGN**

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

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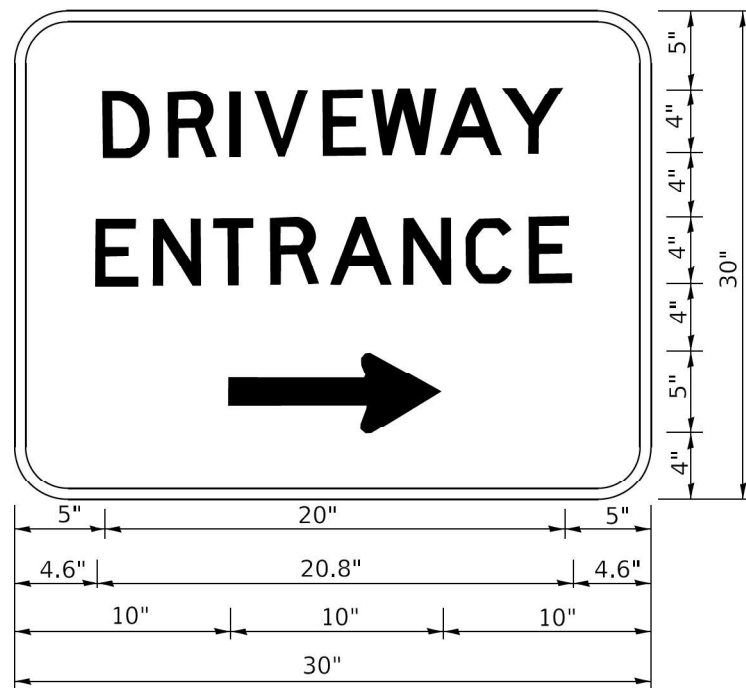


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PLOT DATE = 10/18/2022	DATE - 10/18/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

IL 132 (GRAND AVE) – CLEVELAND AVE TO CENTRAL AVE			
DISTRICT 1 STANDARDS			
SCALE: NTS	SHEET 13 OF 14 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	150
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				



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

NOTES:

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

TC-26
DRIVEWAY ENTRANCE SIGNING

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 132 (GRAND AVE) – CLEVELAND AVE TO CENTRAL AVE
DISTRICT 1 STANDARDS

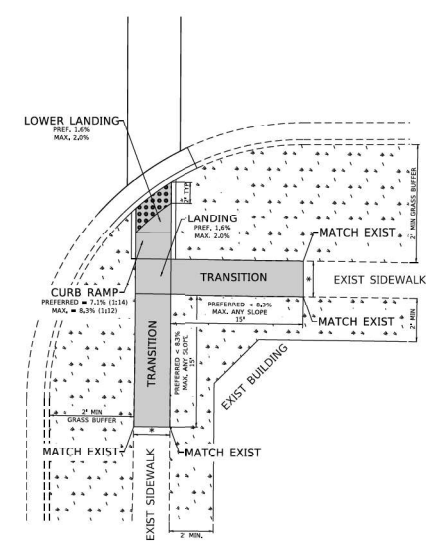
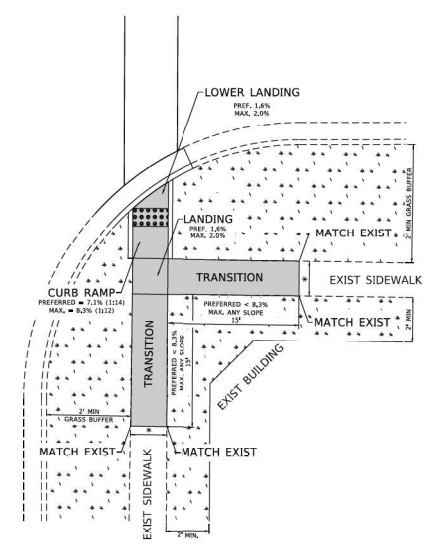
SCALE: NTS SHEET 14 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	151
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				

ADA DETAIL FOR SINGLE PERPENDICULAR CURB RAMPS W/ TURNING SPACE

PD-04A

PD-04B



LEGEND

- EXIST. GRASS
- PROPOSED SIDEWALK
- DETECTABLE WARNINGS
- PROPOSED SIDE CURB

CONSTRUCTION NOTES:

- 1) ALL CROSS SLOPES ARE PREFERRED 1.6% (1:64), MAXIMUM 2% (1:50) EXCEPT WHEN TRANSITIONING TO EXISTING SIDEWALK
- * MATCH EXISTING SIDEWALK WIDTH

DESIGNED -	MBJ	REVISIONS	
DRAWN -	R. LEDEZMA	REVISIONS	
CHECKED -	TPP	REVISIONS	
DATE	10/02/2019	REVISIONS	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

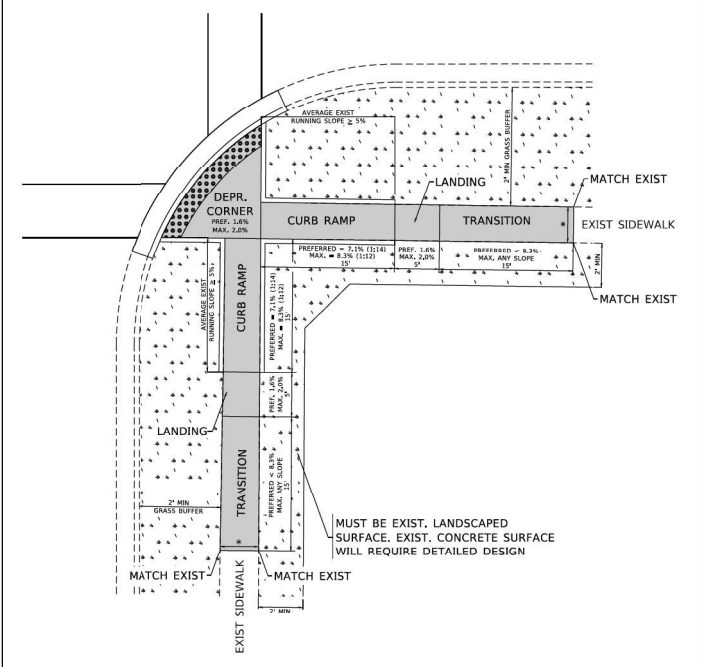
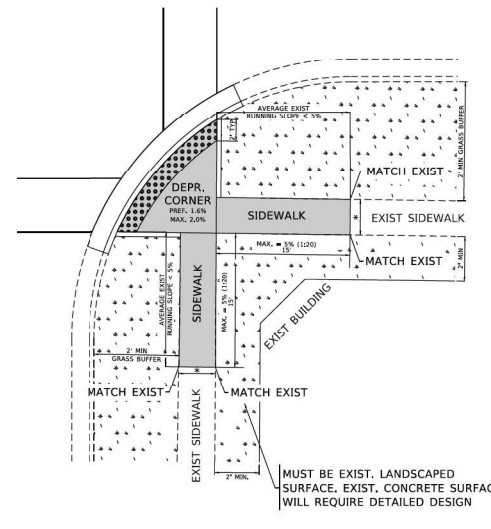
PROJECT DETAIL FOR SINGLE PERPENDICULAR CURB RAMPS WITH TURNING SPACE (PD-04)

SCALE: NONE	SHEET	OF	SHEETS	STA.	TO STA.
	PD-04				

ADA DETAIL FOR DEPRESSED CORNER CURB RAMPS

PD-05A

PD-05B



LEGEND

- EXIST. GRASS
- PROPOSED SIDEWALK
- DETECTABLE WARNINGS
- PROPOSED SIDE CURB

CONSTRUCTION NOTES:

- 1) ALL CROSS SLOPES ARE PREFERRED 1.6% (1:64), MAXIMUM 2% (1:50) EXCEPT WHEN TRANSITIONING TO EXISTING SIDEWALK
- * MATCH EXISTING SIDEWALK WIDTH

DESIGNED -	MBJ	REVISIONS	
DRAWN -	R. LEDEZMA	REVISIONS	
CHECKED -	TPP	REVISIONS	
DATE	10/02/2019	REVISIONS	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT DETAIL FOR DEPRESSED CORNER CURB RAMPS (PD-05)

SCALE: NONE	SHEET	OF	SHEETS	STA.	TO STA.
	PD-05				

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USER NAME =	IDOTCAD	DESIGNED -	MBJ	REVISIONS	
		DRAWN -	MBJ	REVISIONS	
		CHECKED -	TPP	REVISIONS	
		DATE	10/18/2022	REVISIONS	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

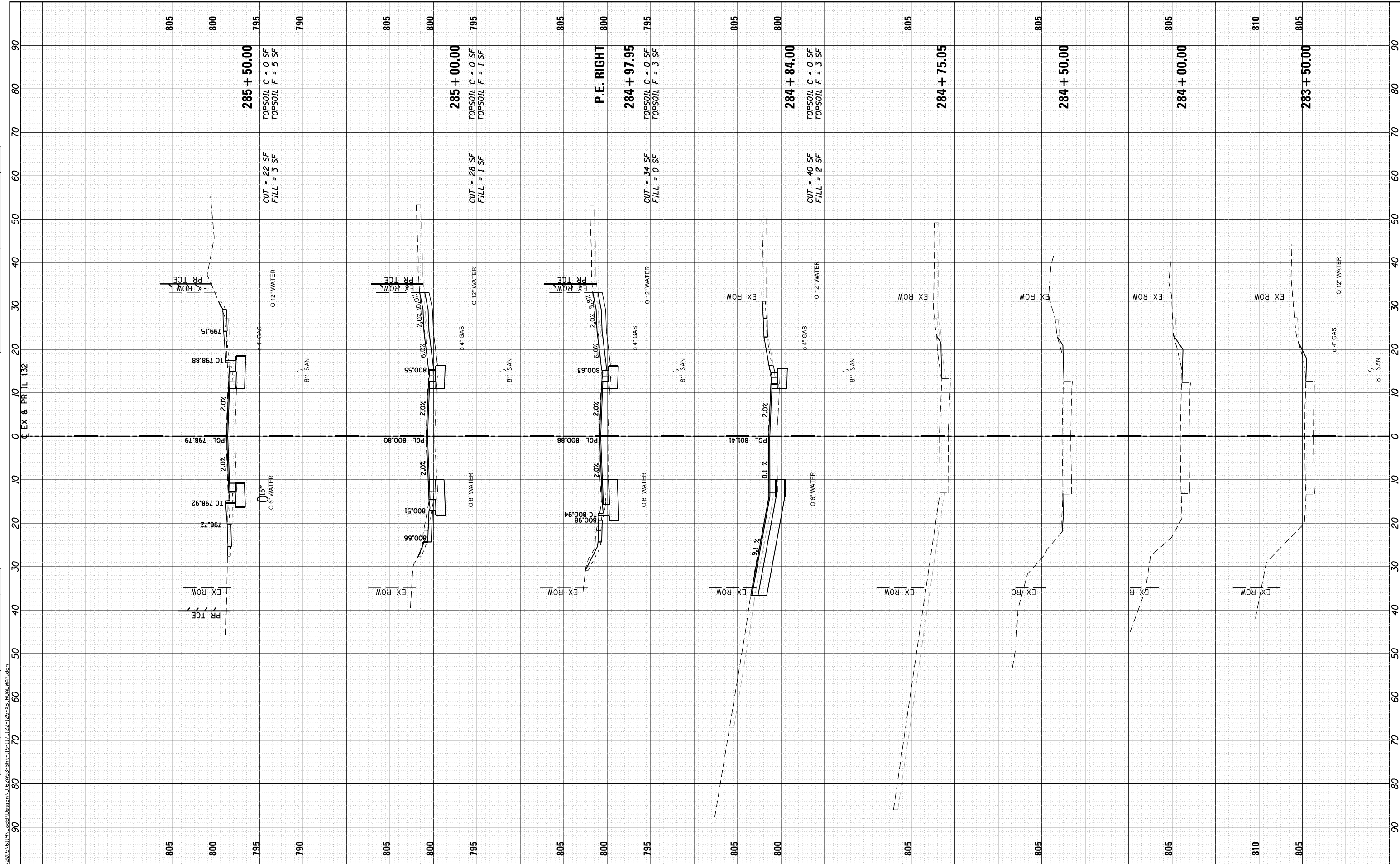
IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
(PD-04) & (PD-05)

SCALE: NTS SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	153
			CONTRACT NO. 62A53	
ILLINOIS FED. AID PROJECT				

FINIAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		



USER NAME = 100TCA0	DESIGNED - MBJ	REVISD -
PLOT SCALE = 20.0000' / IN.	DRAWN - MBJ	REVISD -
PLOT DATE = 10/18/2022	CHECKED - TPP	REVISD -
	DATE - 10/18/2022	REVISD -

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
CROSS SECTIONS**

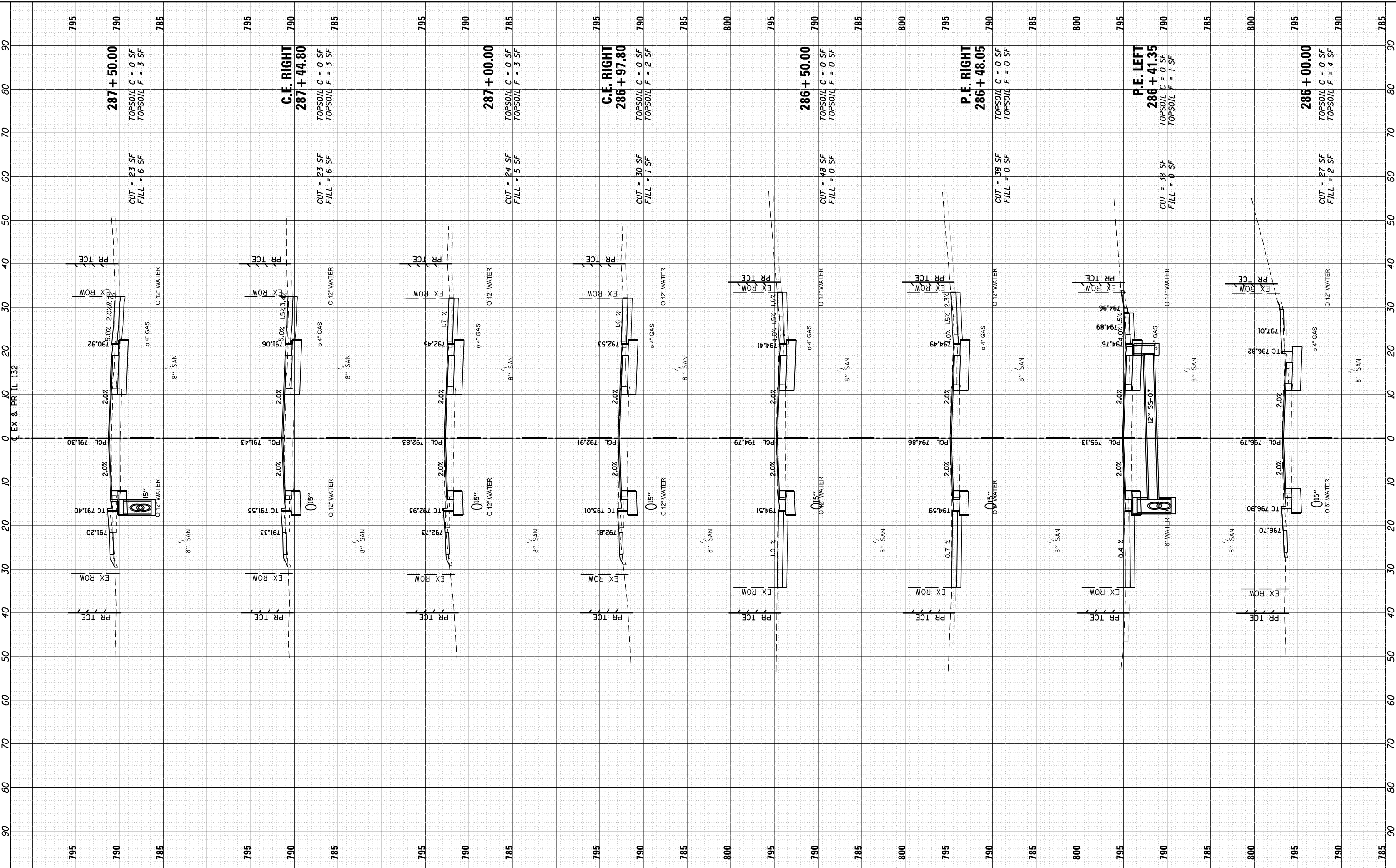
SCALE: 1"=10'(H)5'(V) SHEET 1 OF 11 SHEETS STA. 283+50.00 TO STA. 285+50.00

F.A. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 154
CONTRACT NO. 62A53				ILLINOIS FED. AID PROJECT

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		

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USER NAME =	100TCA0
DESIGNED -	MBJ
DRAWN -	MBJ
CHECKED -	TPP
DATE -	10/18/2022
PLOT SCALE =	20.0000' / 1"
PLOT DATE =	10/18/2022

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REVISED -	-
REVISED -	-
REVISED -	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

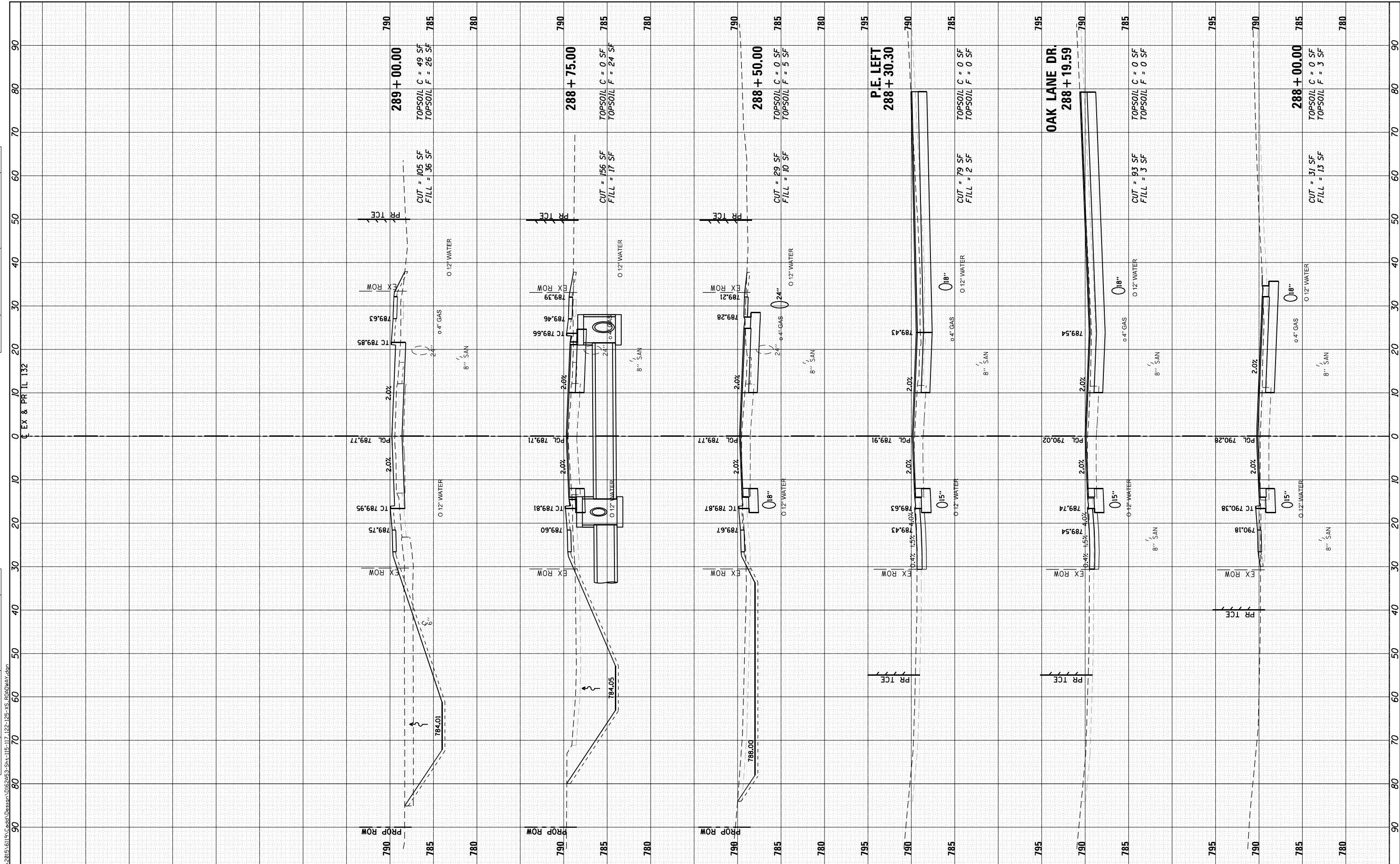
**IL 132 (GRAND AVE) – CLEVELAND AVE TO CENTRAL AVE
CROSS SECTIONS**

SCALE: 1"=10'(H)5'(V) SHEET 2 OF 11 SHEETS STA. 286+00.00 TO STA. 287+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	155
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	DATE
NO. _____	PLOTTED	_____
_____	TEMPLATE	_____
_____	AREAS CHECKED	_____

ORIGINAL SURVEY	SURVEYED	DATE
NO. _____	PLOTTED	_____
_____	TEMPLATE	_____
_____	AREAS CHECKED	_____



USER NAME = 100TCA0
 PLOT SCALE = 20.0000' / 1"
 PLOT DATE = 10/18/2022

DESIGNED - MBJ
 DRAWN - MBJ
 CHECKED - TPP
 DATE - 10/18/2022

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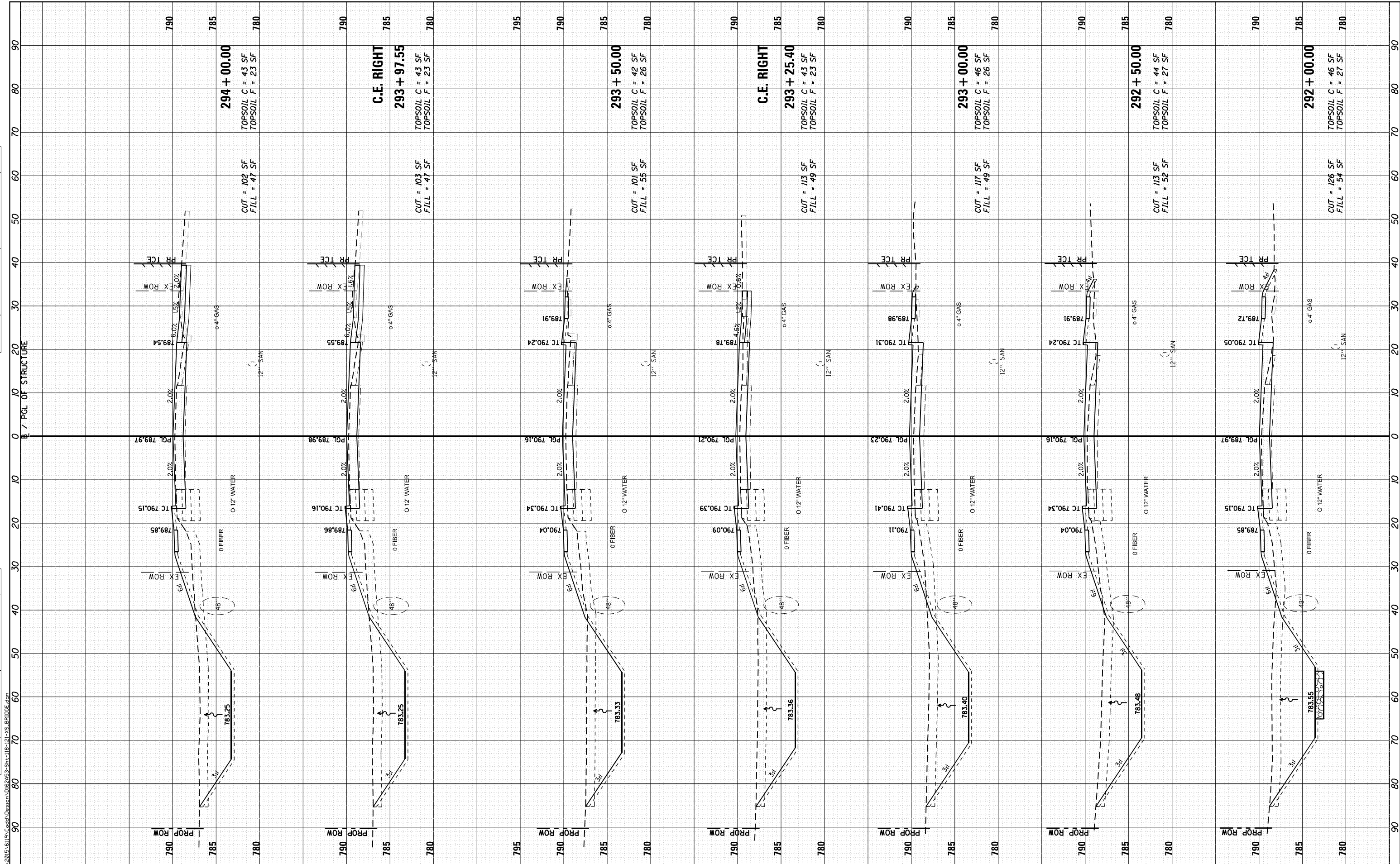
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
 CROSS SECTIONS
 SCALE: 1" = 10'(H) 5'(V) SHEET 3 OF 11 SHEETS STA. 288+00.00 TO STA. 289+00.00

F.A. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 156
CONTRACT NO. 62A53			ILLINOIS FED. AID PROJECT	

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	



USER NAME = 100TCA0
DESIGNED - MBJ
DRAWN - MBJ
CHECKED - TPP
DATE - 10/18/2022
PLOT SCALE = 20.0000' / 1"
PLOT DATE = 10/18/2022

REVISIONS	NO.	DATE	DESCRIPTION

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

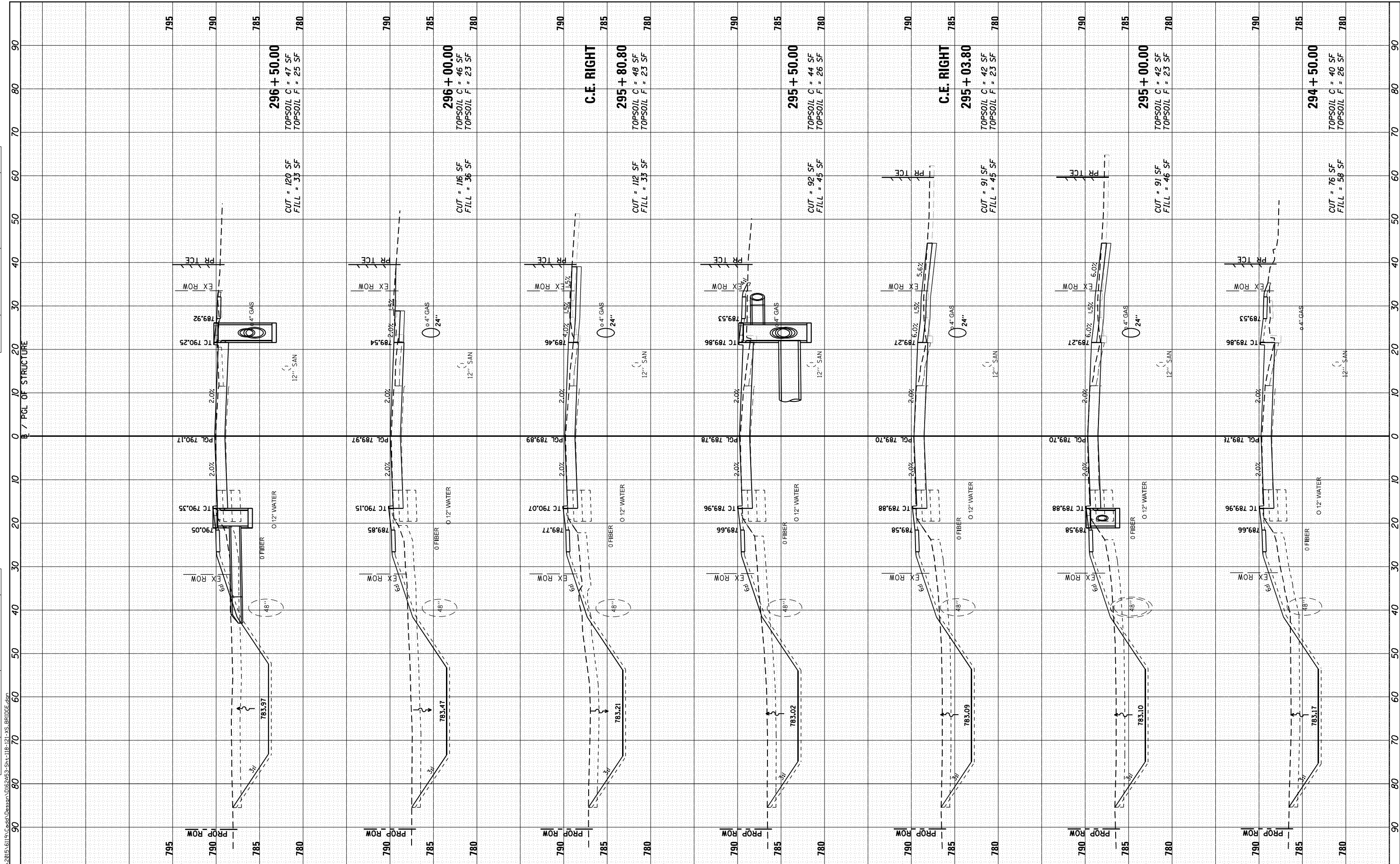
**IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
CROSS SECTIONS**

SCALE: 1"=10'(H)5'(V) SHEET 5 OF 11 SHEETS STA. 292+00.00 TO STA. 294+00.00

F.A. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 158
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
AREAS CHECKED	



USER NAME = 100TCA0
DESIGNED - MBJ
DRAWN - MBJ
CHECKED - TPP
DATE - 10/18/2022
PLOT SCALE = 20.0000' / 1\"/>

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

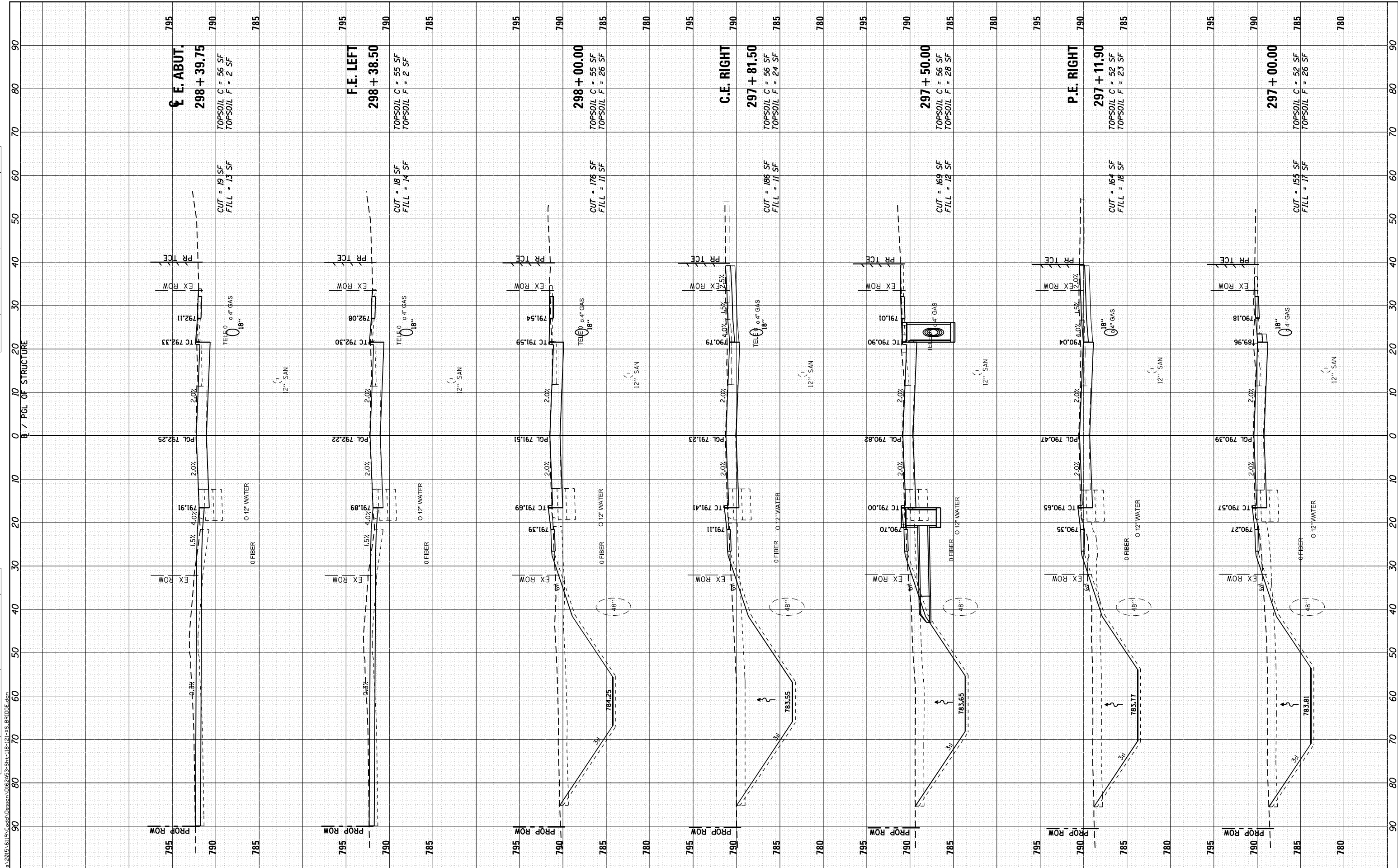
**IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
CROSS SECTIONS**

SCALE: 1"=10'(H)5'(V) SHEET 6 OF 11 SHEETS STA. 294+50.00 TO STA. 296+50.00

F.A. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 159
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				

BY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

BY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



USER NAME =	100TCA0
DESIGNED -	MBJ
DRAWN -	MBJ
CHECKED -	TPP
DATE -	10/18/2022

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

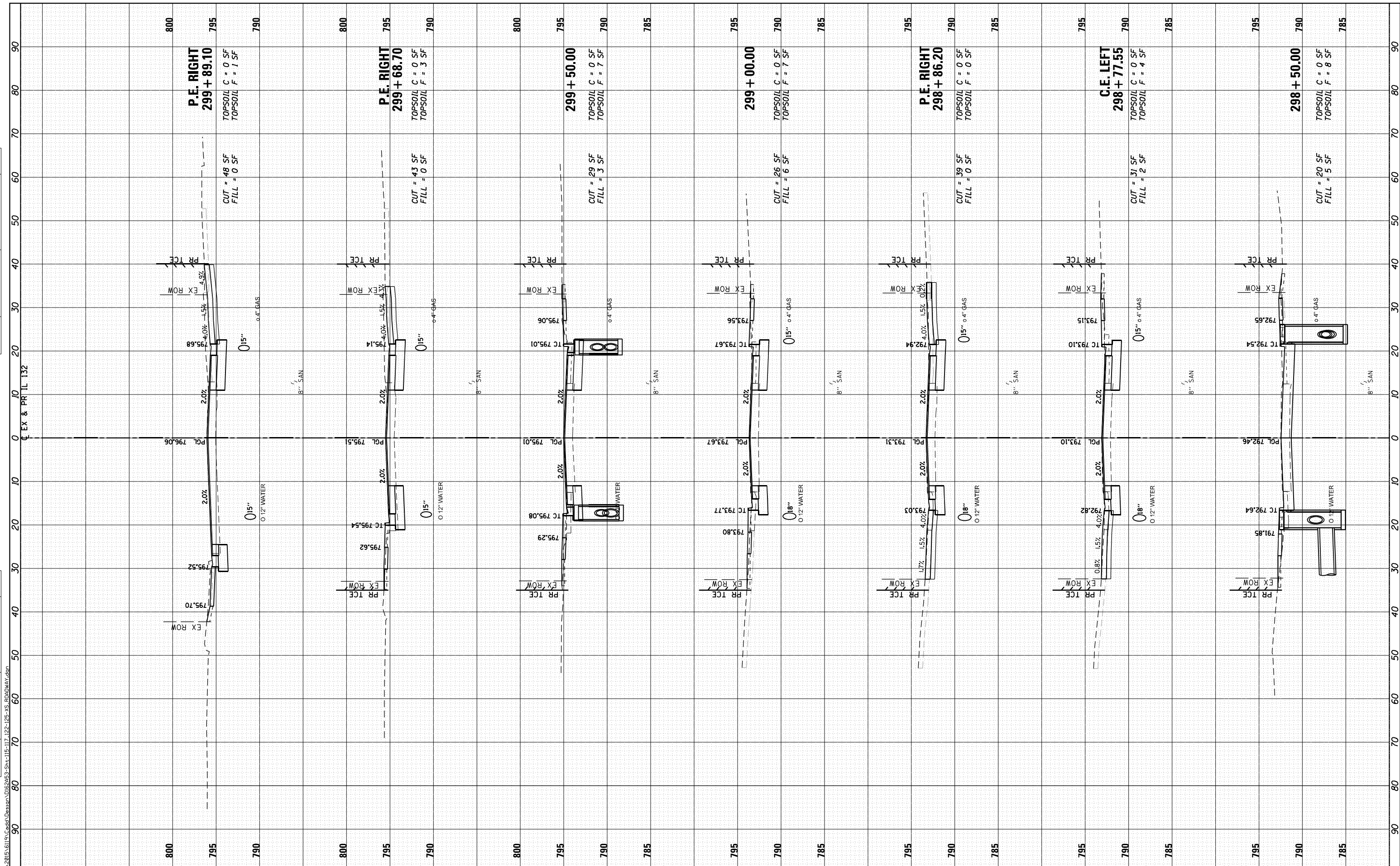
**IL 132 (GRAND AVE) – CLEVELAND AVE TO CENTRAL AVE
CROSS SECTIONS**

SCALE: 1"=10'(H)5'(V) SHEET 7 OF 11 SHEETS STA. 297+00.00 TO STA. 298+38.50

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	160
CONTRACT NO. 62A53				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		



USER NAME = 100TCA0	DESIGNED - MBJ	REVISED -
PLOT SCALE = 20.0000' / 1"	DRAWN - MBJ	REVISED -
PLOT DATE = 10/18/2022	CHECKED - TPP	REVISED -
	DATE - 10/18/2022	REVISED -

DESIGNED - MBJ	REVISED -
DRAWN - MBJ	REVISED -
CHECKED - TPP	REVISED -
DATE - 10/18/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

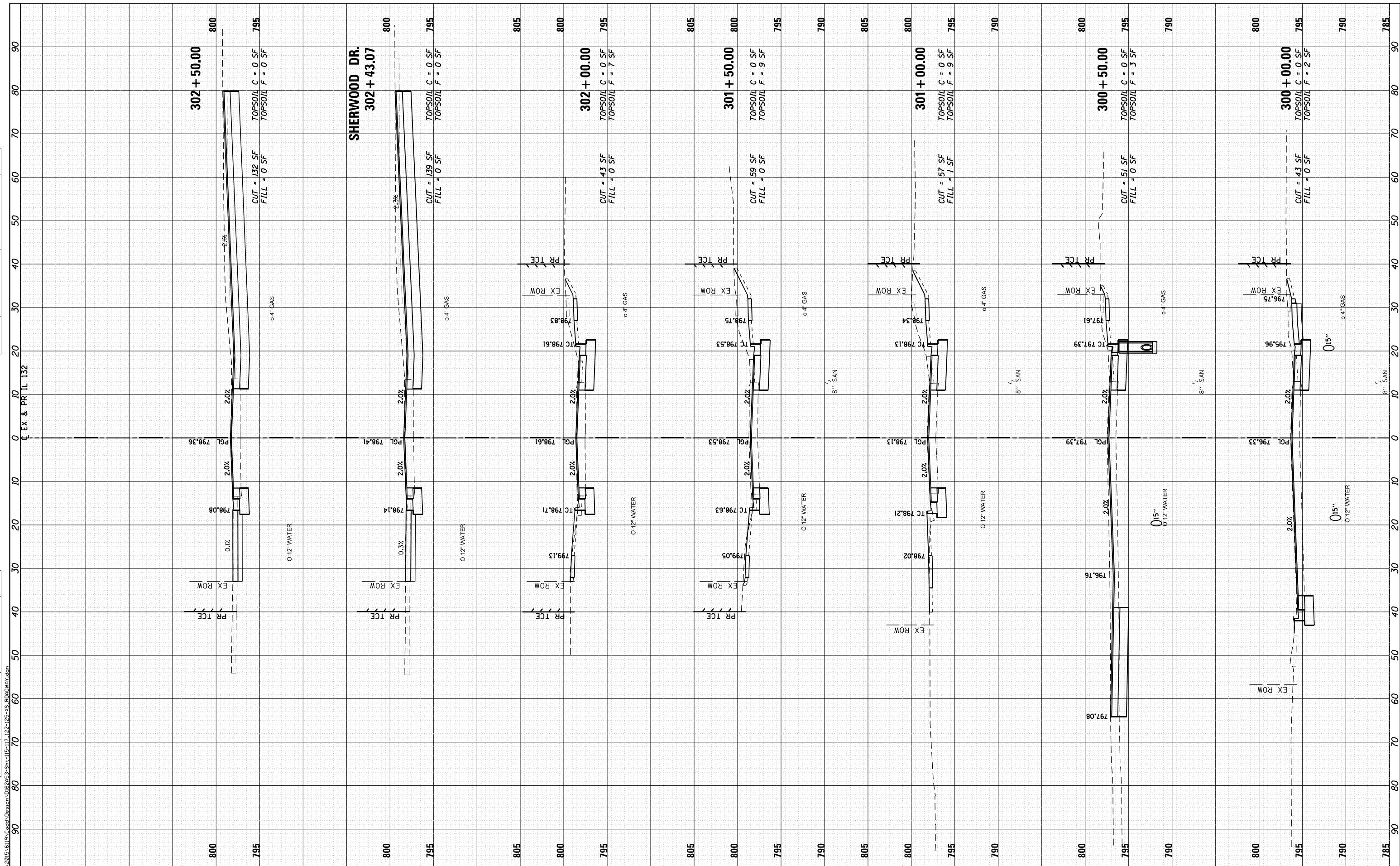
**IL 132 (GRAND AVE) – CLEVELAND AVE TO CENTRAL AVE
CROSS SECTIONS**

SCALE: 1"=10'(H)5'(V) SHEET 8 OF 11 SHEETS STA. 298+50.00 TO STA. 299+89.10

F.A. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 161
CONTRACT NO. 62A53				ILLINOIS FED. AID PROJECT

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		



USER NAME = 100TCA0
 PLOT SCALE = 20.0000' / 1"
 PLOT DATE = 10/18/2022

DESIGNED - MBJ
 DRAWN - MBJ
 CHECKED - TPP
 DATE - 10/18/2022

REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
 CROSS SECTIONS

SCALE: 1"=10'(H)5'(V) SHEET 9 OF 11 SHEETS STA. 300+00.00 TO STA. 302+50.00

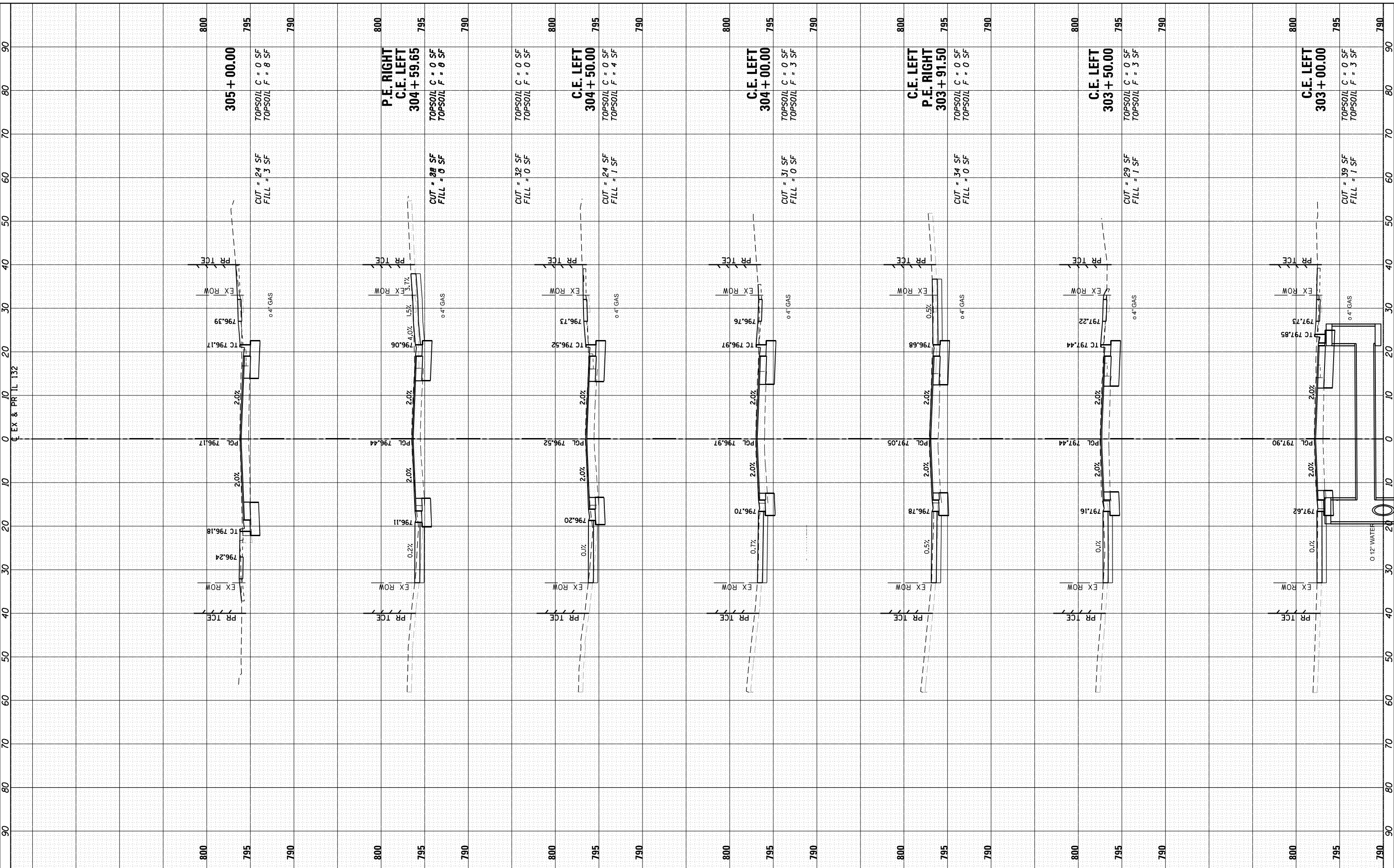
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	WR(2)-R-1	LAKE	164	162
CONTRACT NO. 62A53				

ILLINOIS FED. AID PROJECT

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		

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USER NAME = 100TCA0	DESIGNED - MBJ	REVISD -
PLOT SCALE = 20.0000' / 1"	DRAWN - MBJ	REVISD -
PLOT DATE = 10/18/2022	CHECKED - TPP	REVISD -
	DATE - 10/18/2022	REVISD -

DESIGNED - MBJ	REVISD -
DRAWN - MBJ	REVISD -
CHECKED - TPP	REVISD -
DATE - 10/18/2022	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

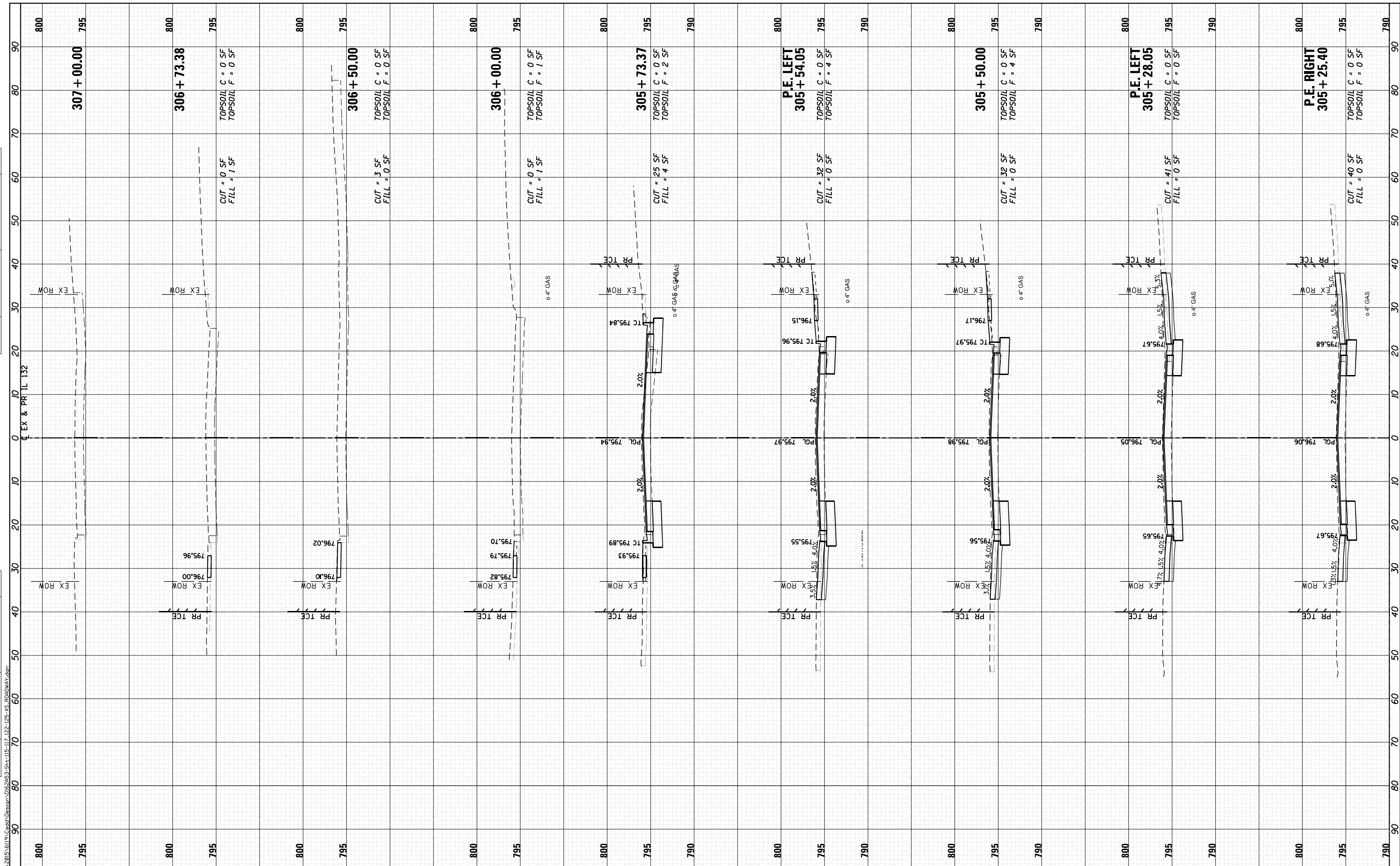
**IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
CROSS SECTIONS**

SCALE: 1"=10'(H)5'(V) SHEET 10 OF 11 SHEETS STA. 303+00.00 TO STA. 305+00.00

F.A. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 163
CONTRACT NO. 62A53				ILLINOIS FED. AID PROJECT

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

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



USER NAME = 100TCA0	DESIGNED - MBJ	REVISIONS
PLOT SCALE = 20.0000' / 1"	DRAWN - MBJ	REVISIONS
PLOT DATE = 10/18/2022	CHECKED - TPP	REVISIONS
	DATE - 10/18/2022	REVISIONS

REVISIONS	-
REVISIONS	-
REVISIONS	-
REVISIONS	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 132 (GRAND AVE) - CLEVELAND AVE TO CENTRAL AVE
CROSS SECTIONS
SCALE: 1"=10'(H)5'(V) SHEET 11 OF 11 SHEETS STA. 305+25.40 TO STA. 307+00.00

F.A. RTE. 541	SECTION WR(2)-R-1	COUNTY LAKE	TOTAL SHEETS 164	SHEET NO. 164
CONTRACT NO. 62A53				ILLINOIS FED. AID PROJECT