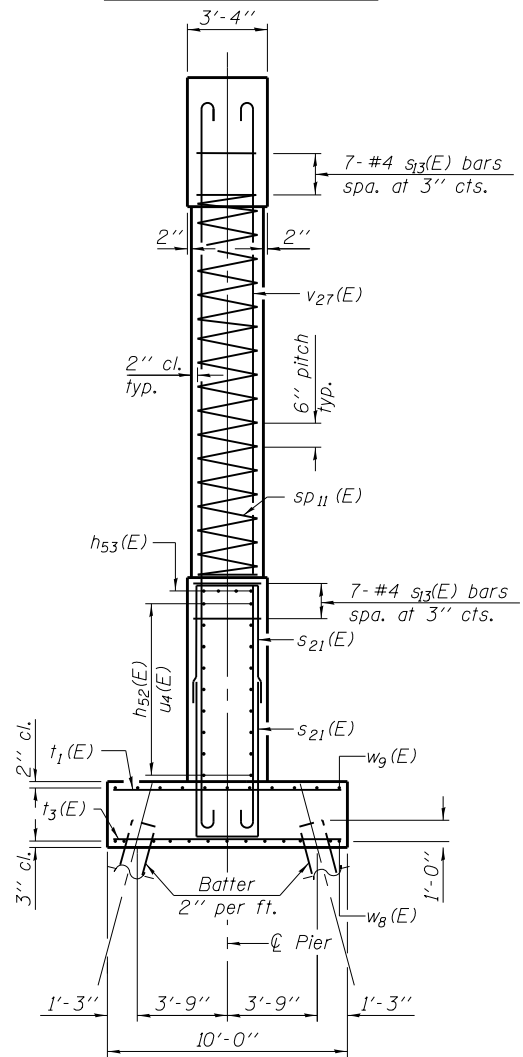


**ANCHOR BOLT LAYOUT**

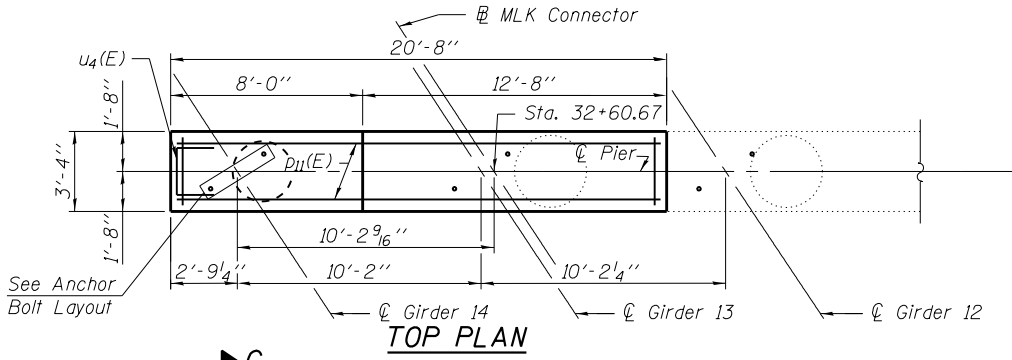
**TABLE OF VARIABLE DIMENSIONS**

Girder	C	D
12	8'-3 1/4"	1'-1 1/4"
13	8'-3 1/4"	1'-1 1/4"
14	8'-1 1/6"	1'-5 5/16"

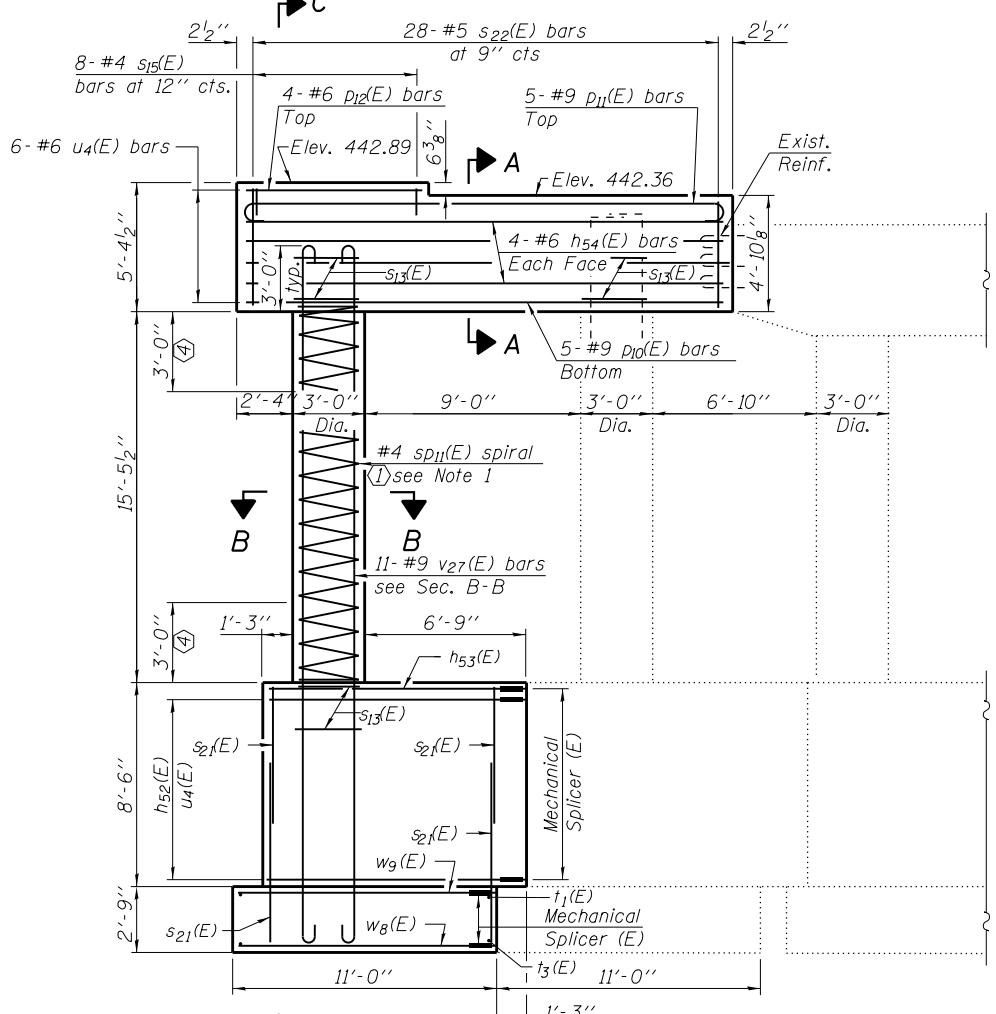


**SECTION C-C**

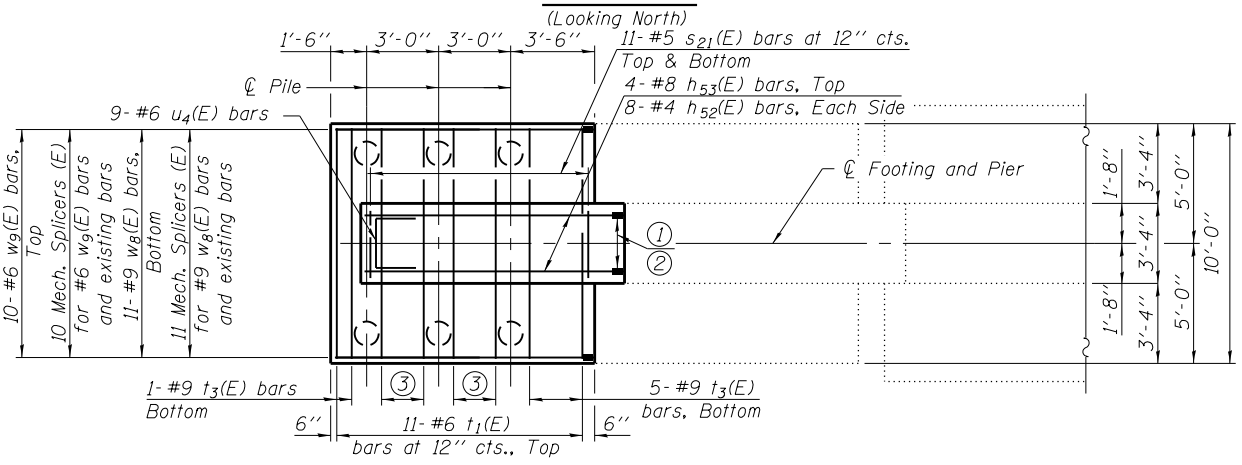
- ① 4-Mechanical Splicers (E) for #8 h53(E) and existing bars
- ② 16-Mechanical Splicers (E) for #4 h52(E) and existing bars
- ③ 4-#9 t3(E) bars, Bottom



**TOP PLAN**



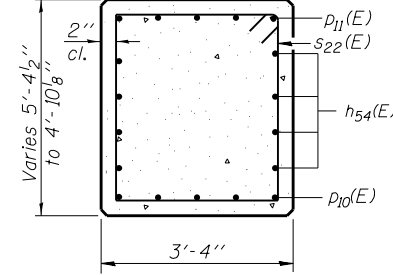
**ELEVATION**  
(Looking North)



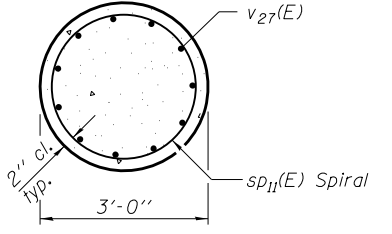
**FOOTING PLAN**

**PILE DATA**

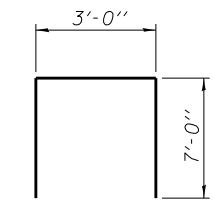
Type:	Metal Shell - 14" $\phi$ x 0.250" wall
Nominal Required Bearing:	354 kips
Allowable Resistance Available:	118 kips
Est. Length:	44 feet
No. Production Piles:	5
No. Test Piles:	1



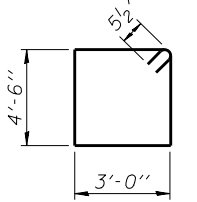
**SECTION A-A**



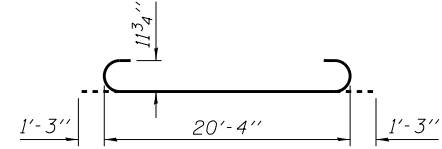
**SECTION B-B**



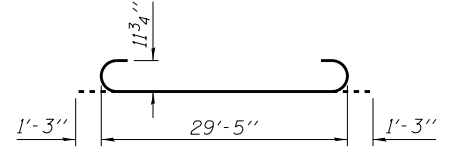
**BAR s21(E)**



**BAR s22(E)**

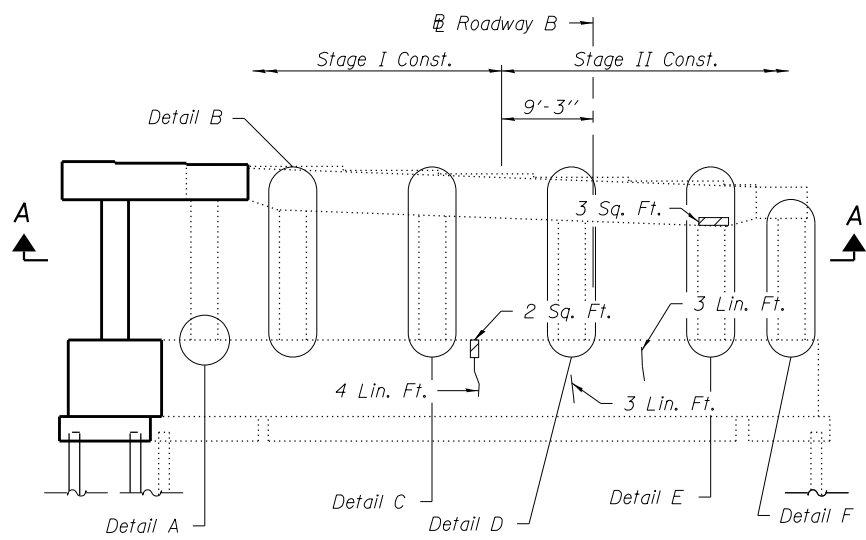


**BARS p11(E)**

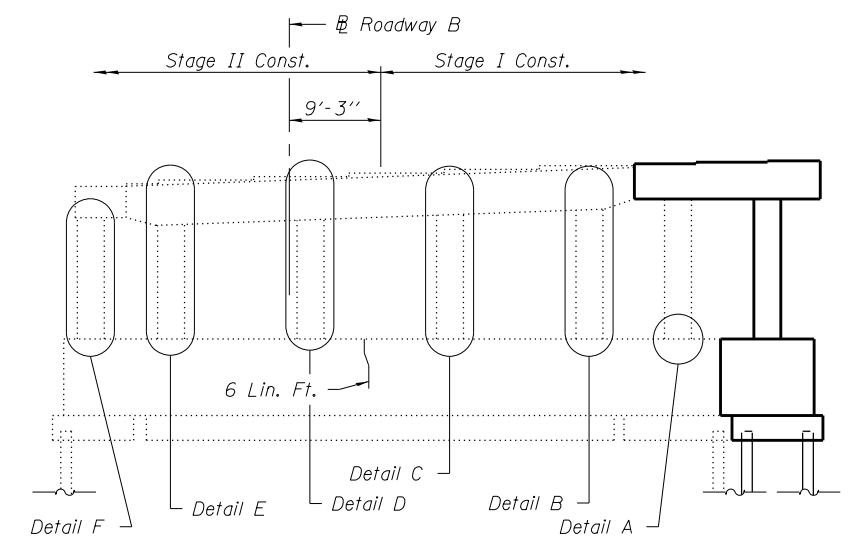


**BARS v27(E)**

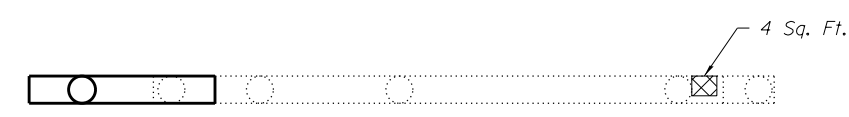
**Notes:**  
 For Note 1 thru Note 4 and ① thru ④, see sheet 110 of 143.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 For details of piles, see sheet 124 of 143.  
 For Mechanical Splicer details, see sheet 125 of 143.  
 For s13(E), s15(E) and u4(E) bending diagrams, see sheet 103 of 143.



**ELEVATION**  
(Looking North)



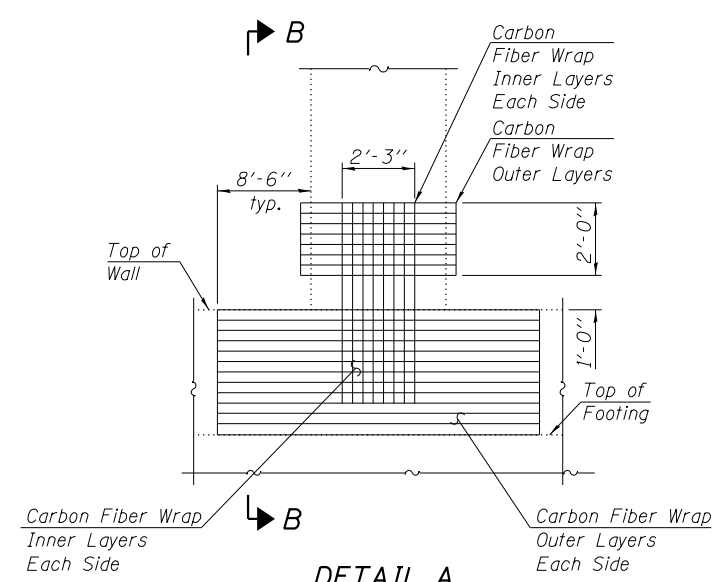
**ELEVATION**  
(Looking South)



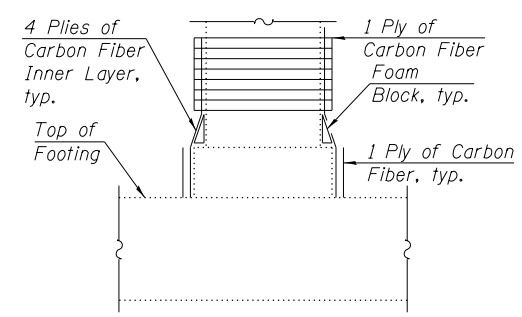
**SECTION A-A**

**LEGEND**

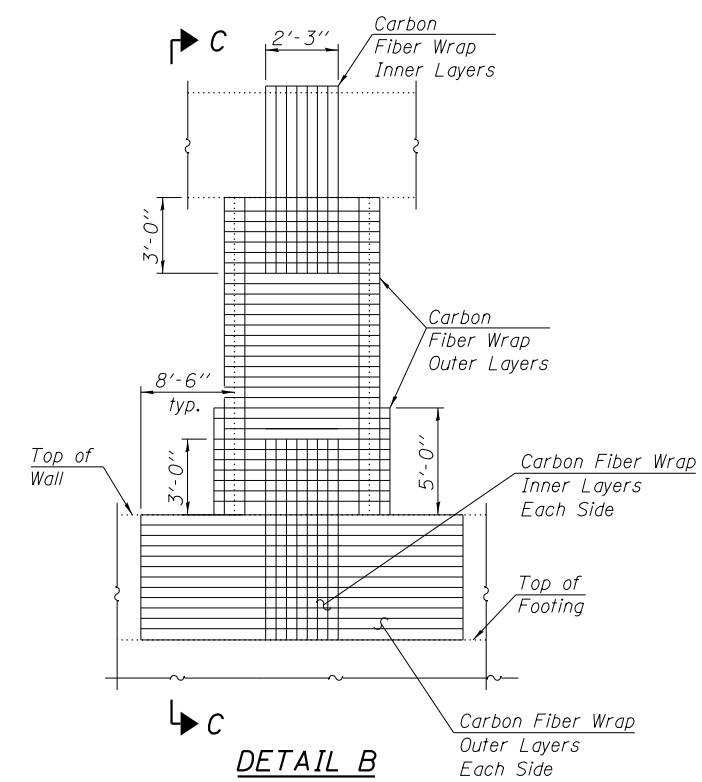
- Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)
- Structural Repair of Concrete (Depth Greater Than 5 inches)
- Epoxy Crack Injection



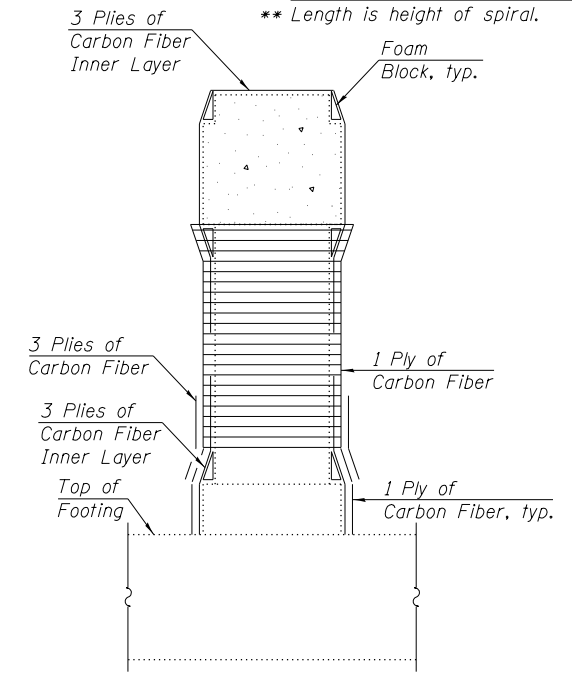
**DETAIL A**



**SECTION B-B**



**DETAIL B**



**SECTION C-C**

Note 1:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap and crashwall. Provide 4-#4 spacers or equivalent.

Note 2:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Provide 4-#4 spacers or equivalent.

Note 3:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap. Provide 4-#4 spacers or equivalent.

Note 4:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into crashwall. Provide 4-#4 spacers or equivalent.

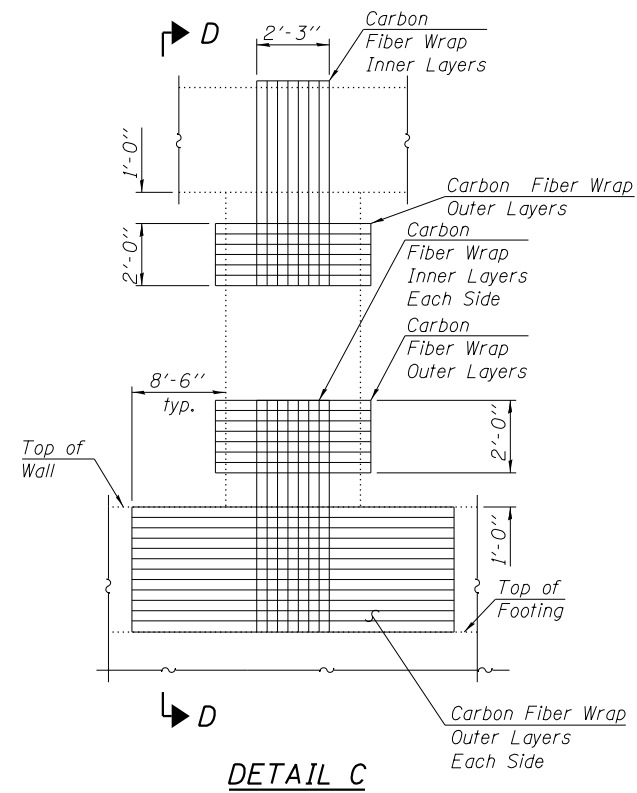
- ① Allowable substitution: Provide 1/2 extra turns top and bottom with 135° standard hook into core at each end of spiral.
- ② Allowable substitution: Provide 1/2 extra turns top with 135° standard hook into core at each end of spiral.
- ③ Allowable substitution: Provide 1/2 extra turns bottom with 135° standard hook into core at each end of spiral.
- ④ Splicing of bars will not be allowed in this region.

Notes:  
When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall terminate with a 135° standard hook.  
Existing reinforcement shall be cleaned and incorporated into new construction. Cost included in concrete removal. Cut ends of existing reinforcement extending into new construction to maintain 1/2" minimum clearance.  
For substructure removal details, see sheet 18 of 143. For Details C thru F, see sheet 111 of 143.

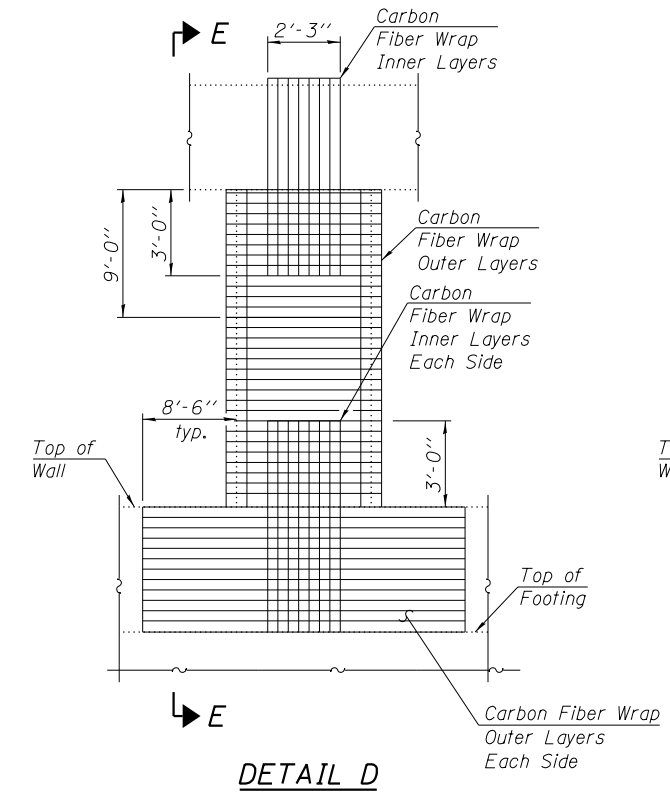
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h <sub>52</sub> (E)	16	#4	10'-8"	—
h <sub>53</sub> (E)	4	#8	10'-8"	—
h <sub>54</sub> (E)	8	#6	20'-4"	—
D <sub>10</sub> (E)	5	#9	20'-4"	—
D <sub>11</sub> (E)	5	#9	22'-10"	—
D <sub>12</sub> (E)	4	#6	7'-8"	—
s <sub>13</sub> (E)	21	#4	10'-2"	○
s <sub>15</sub> (E)	8	#4	5'-0"	U
s <sub>21</sub> (E)	22	#5	17'-0"	U
s <sub>22</sub> (E)	28	#5	15'-11"	□
** s <sub>D11</sub> (E)	1	#4	15'-9"	—
t <sub>1</sub> (E)	11	#6	9'-8"	—
t <sub>3</sub> (E)	15	#9	9'-8"	—
u <sub>4</sub> (E)	15	#6	6'-10"	U
v <sub>27</sub> (E)	11	#9	31'-11"	—
w <sub>8</sub> (E)	11	#9	10'-8"	—
w <sub>9</sub> (E)	10	#6	10'-8"	—
Concrete Removal		Cu. Yd.	5.5	
Structure Excavation		Cu. Yd.	30	
Concrete Structures		Cu. Yd.	39.9	
Reinforcement Bars, Epoxy Coated		Pound	4,940	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	225	
Driving Piles		Foot	225	
Test Pile Metal Shells		Each	1	
Mechanical Splicers		Each	41	
Epoxy Crack Injection		Foot	16	
Acrylic Coating		Sq. Yd.	259	
Fiber Wrap		Sq. Ft.	2,327	
Structural Repair of Concrete (Depth Equal to or Less Than 5")		Sq. Ft.	5	
Structural Repair of Concrete (Depth Greater Than 5")		Sq. Ft.	4	

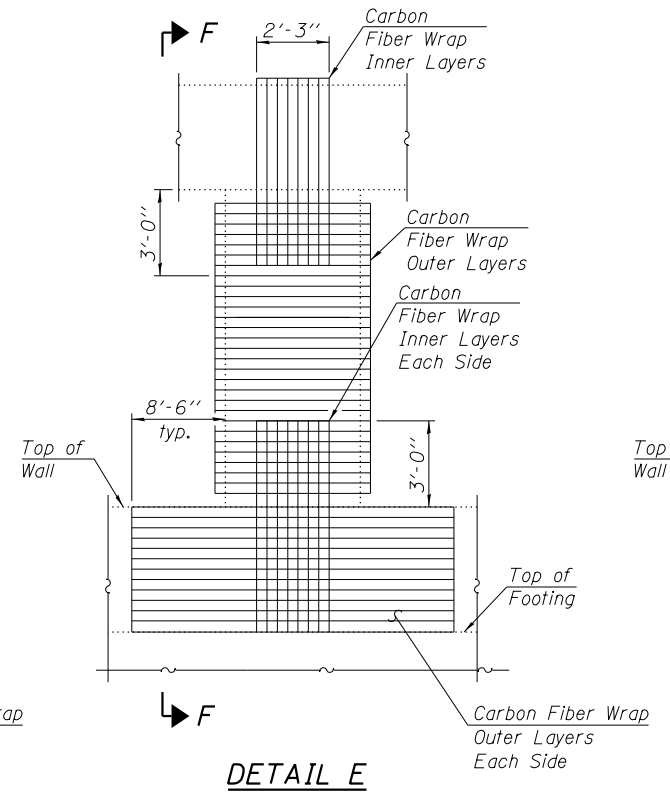
\*\* Length is height of spiral.



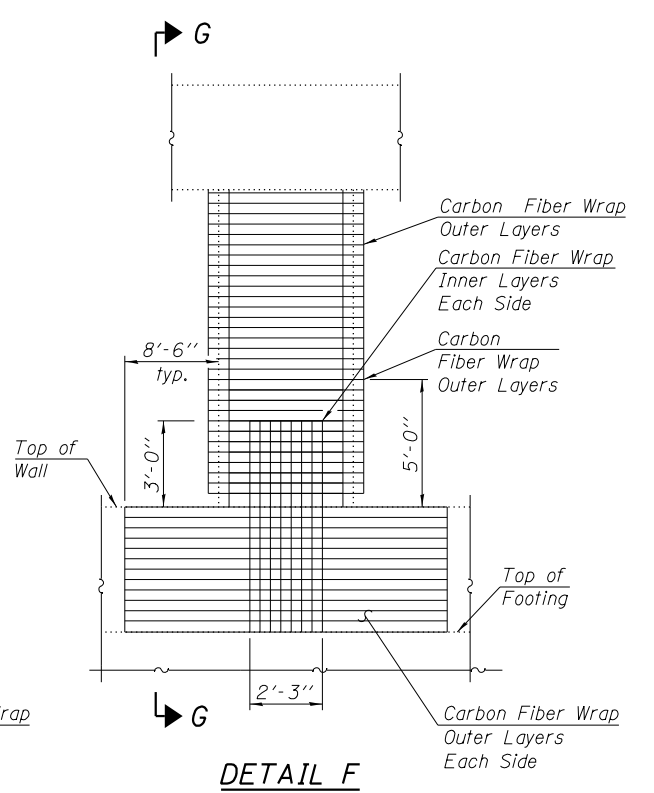
**DETAIL C**



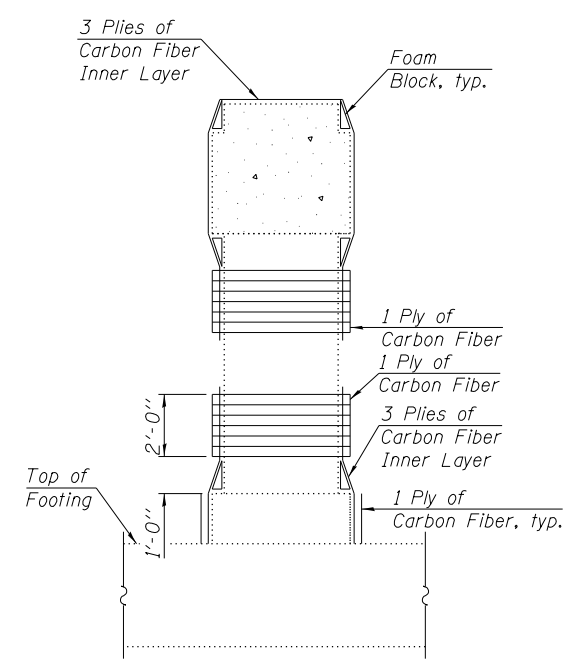
**DETAIL D**



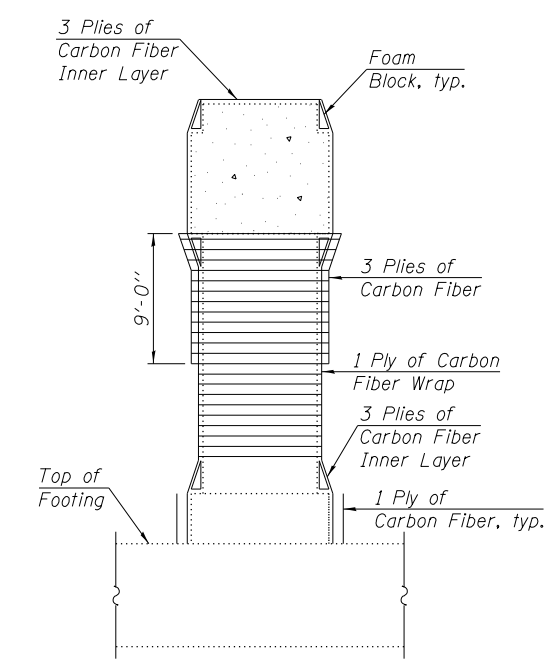
**DETAIL E**



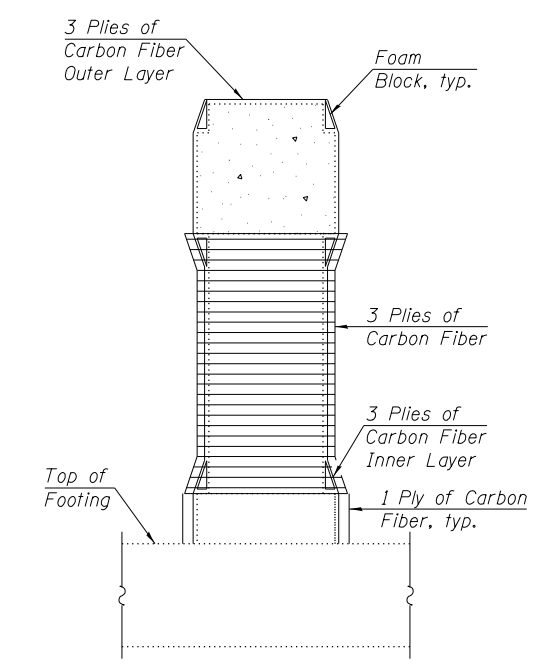
**DETAIL F**



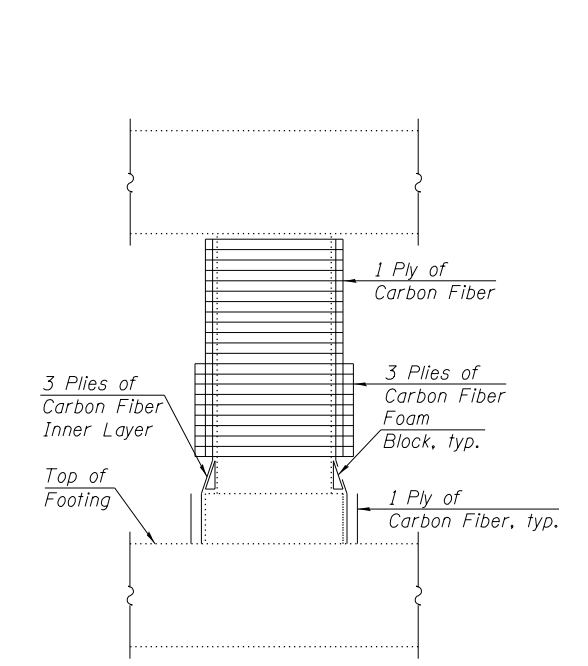
**SECTION D-D**



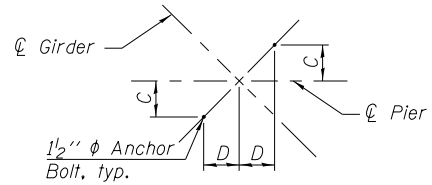
**SECTION E-E**



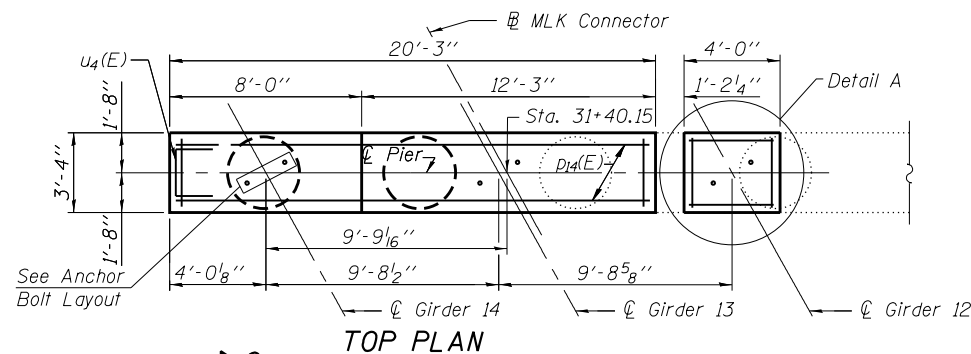
**SECTION F-F**



**SECTION G-G**



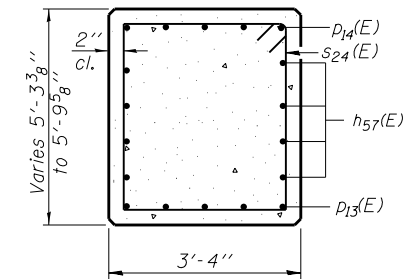
**ANCHOR BOLT LAYOUT**



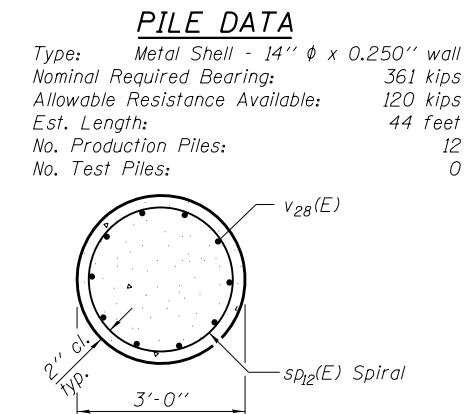
**TOP PLAN**

**TABLE OF VARIABLE DIMENSIONS**

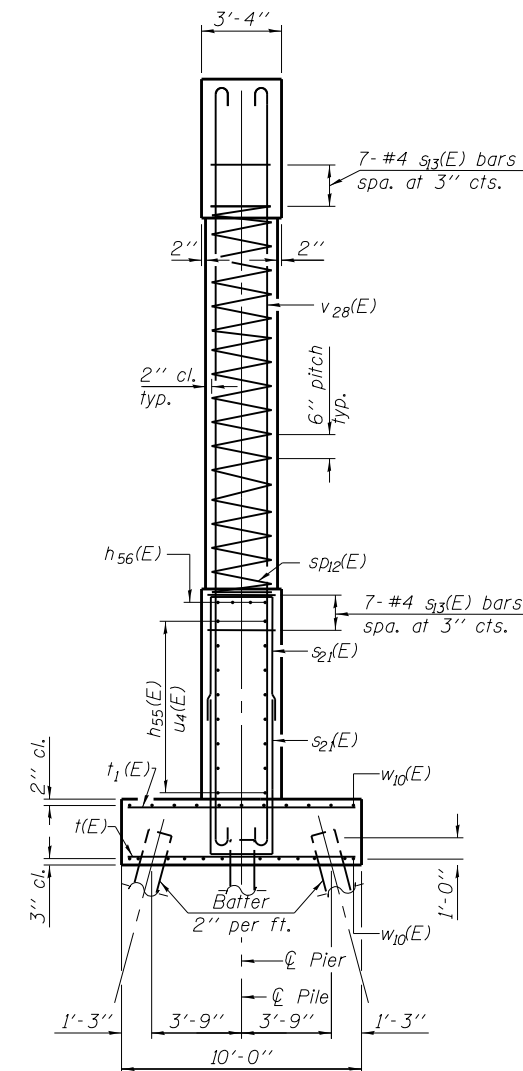
Girder	C	D
12	5' 3/8"	9' 5/8"
13	5' 5/16"	9' 5/8"
14	5' 5/16"	9' 3/8"



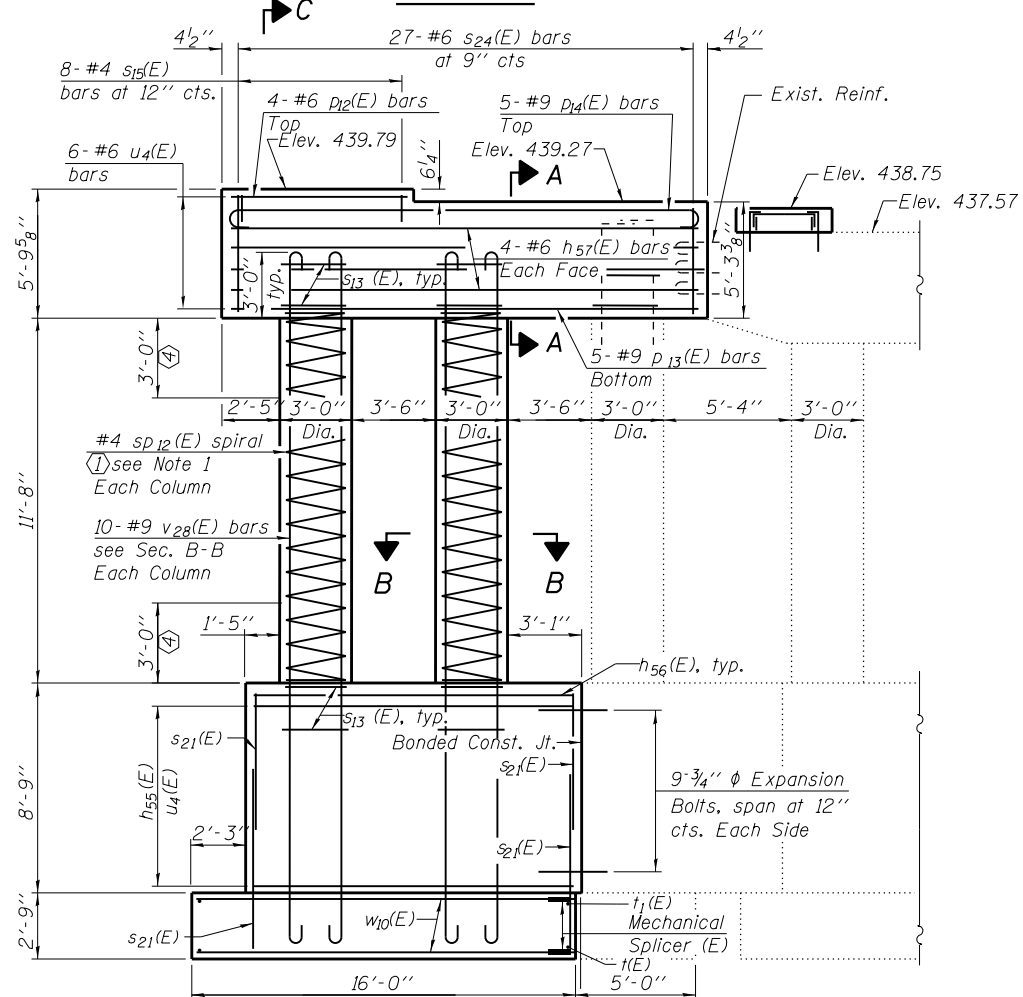
**SECTION A-A**



**SECTION B-B**

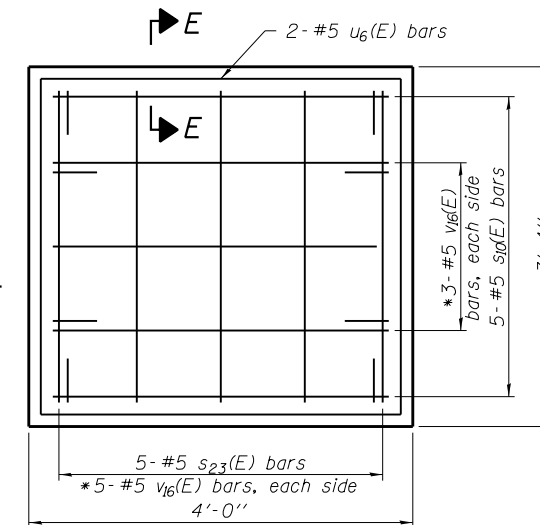


**SECTION C-C**

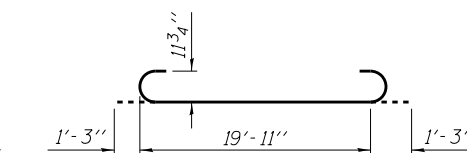


**ELEVATION**  
(Looking North)

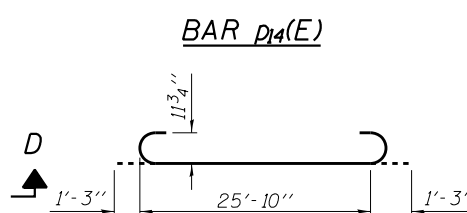
\*Drill and epoxy grout reinforcement to section 584 of the standard specification



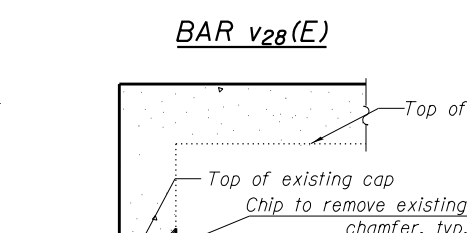
**DETAIL A**



**BAR s24(E)**



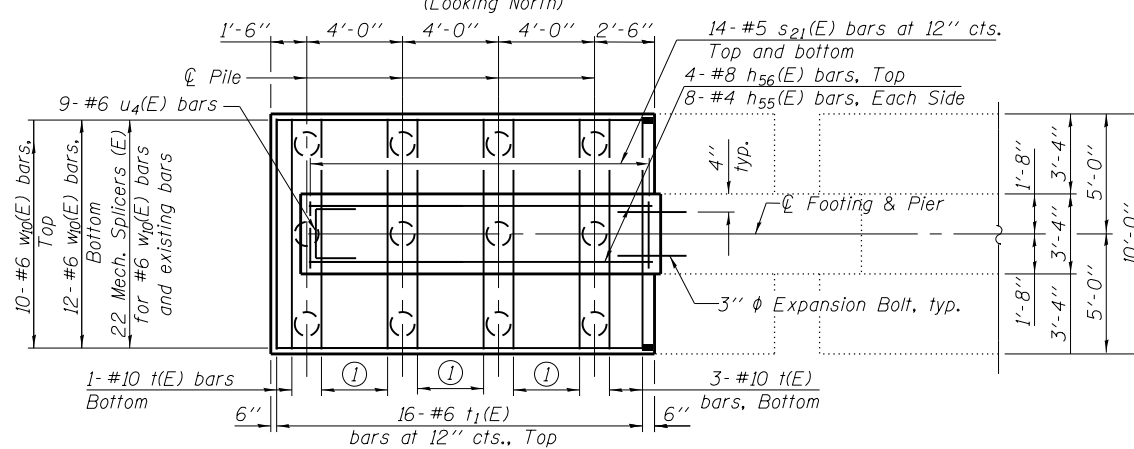
**BAR p14(E)**



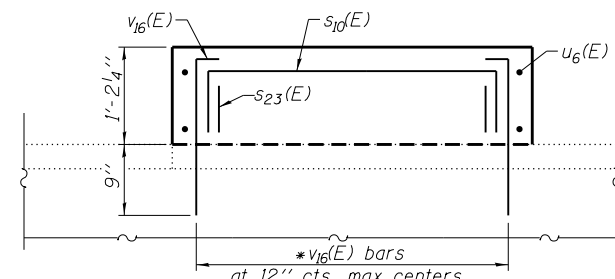
**BAR v28(E)**

Top of existing step  
Top of existing cap  
Chip to remove existing chamfer, typ.

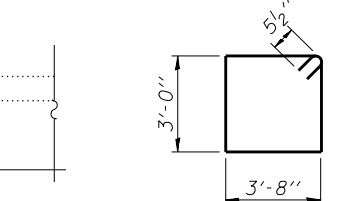
**SECTION E-E**



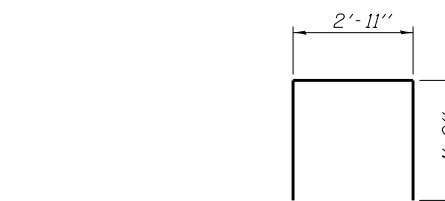
**FOOTING PLAN**



**SECTION D-D**



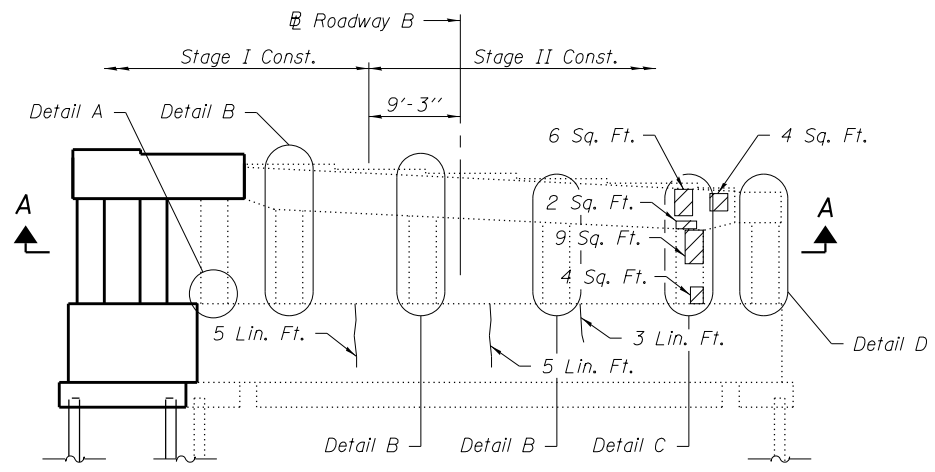
**BAR u6(E)**



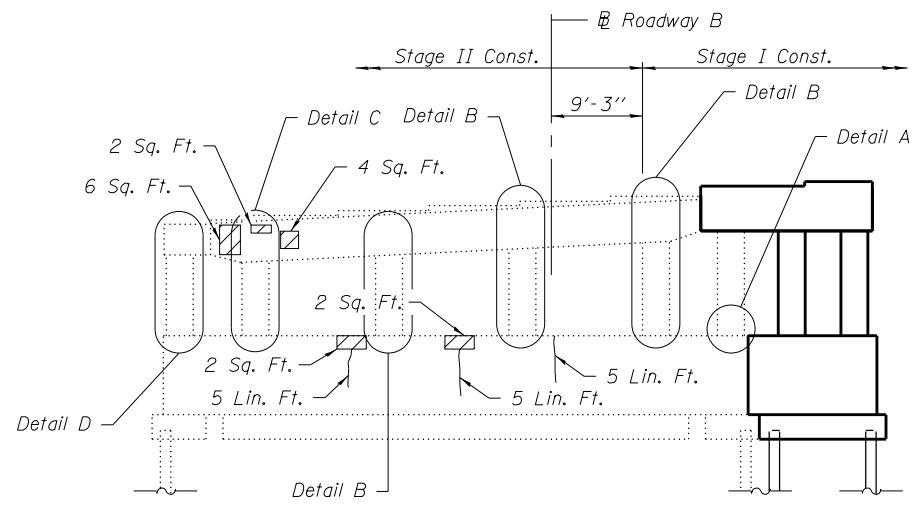
**BAR s23(E)**

Notes:  
For 1 thru 4 and (1) thru (4), see sheet 113 of 143.  
For bending diagrams s10(E), s33(E), s35(E) see sheet 103 of 143.  
For bending diagram v16(E), see sheet 101 of 143.  
For bending diagram s2(E), see sheet 109 of 143.  
For mechanical splicer details, see sheet 125 of 143.  
Space reinforcement in cap to miss anchor bolts.  
Pour steps monolithically with cap.  
For details of piles, see sheet 124 of 143.

(1) 4-#10 t(E) bars, Bottom



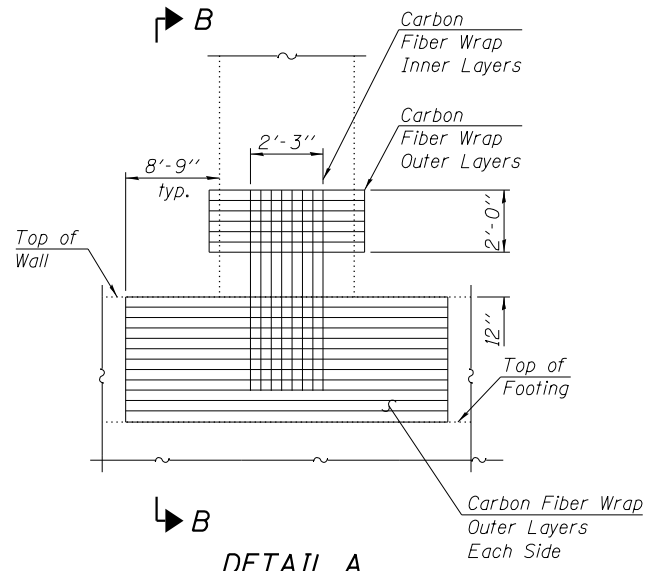
**ELEVATION**  
(Looking North)



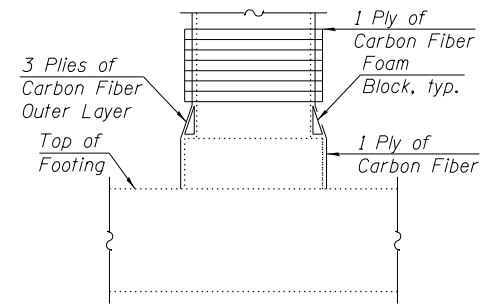
**ELEVATION**  
(Looking South)



**SECTION A-A**



**DETAIL A**



**SECTION B-B**

**Note 1:**  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap and crashwall. Provide 4- #4 spacers or equivalent.

**Note 2:**  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Provide 4- #4 spacers or equivalent.

**Note 3:**  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap. Provide 4- #4 spacers or equivalent.

**Note 4:**  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into crashwall. Provide 4- #4 spacers or equivalent.

- ① Allowable substitution: Provide 1/2 extra turns top and bottom with 135° standard hook into core at each end of spiral.
- ② Allowable substitution: Provide 1/2 extra turns top with 135° standard hook into core at each end of spiral.
- ③ Allowable substitution: Provide 1/2 extra turns bottom with 135° standard hook into core at each end of spiral.
- ④ Splicing of bars will not be allowed in this region.

**Notes:**  
When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall terminate with a 135° standard hook.  
Existing reinforcement shall be cleaned and incorporated into new construction. Cost included in concrete removal. Cut ends of existing reinforcement extending into new construction to maintain 1/2" minimum clearance.  
For substructure removal details, see sheet 18 of 143. For Details B thru D, see sheet 114 of 143.

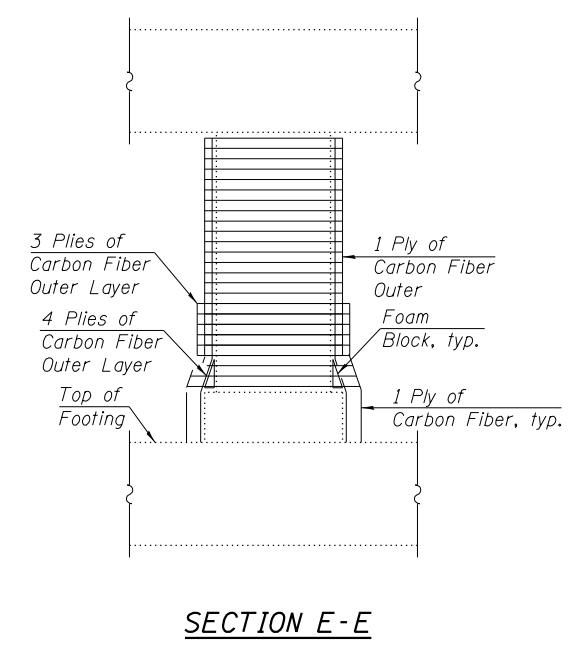
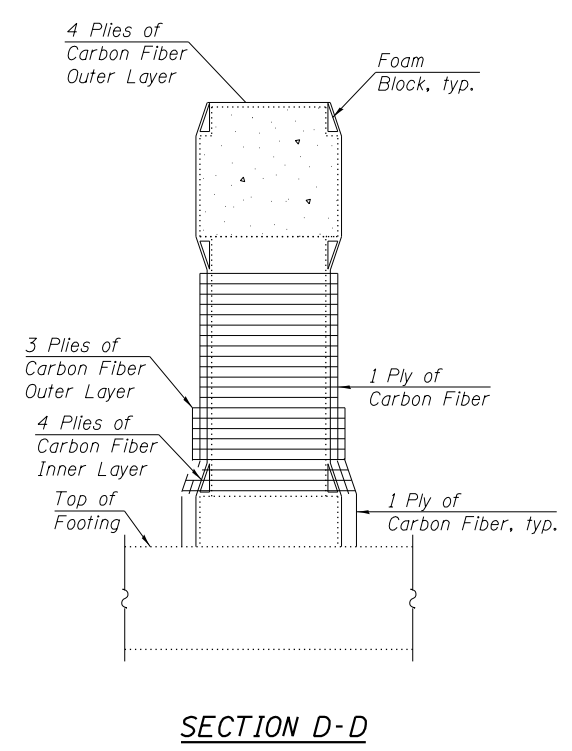
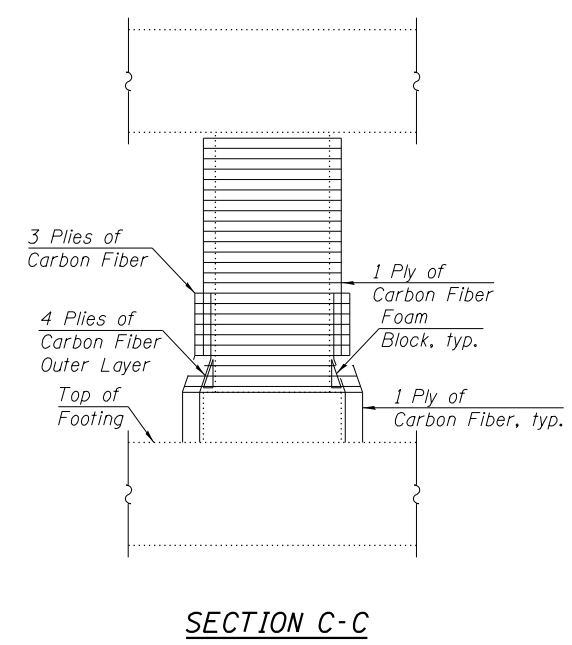
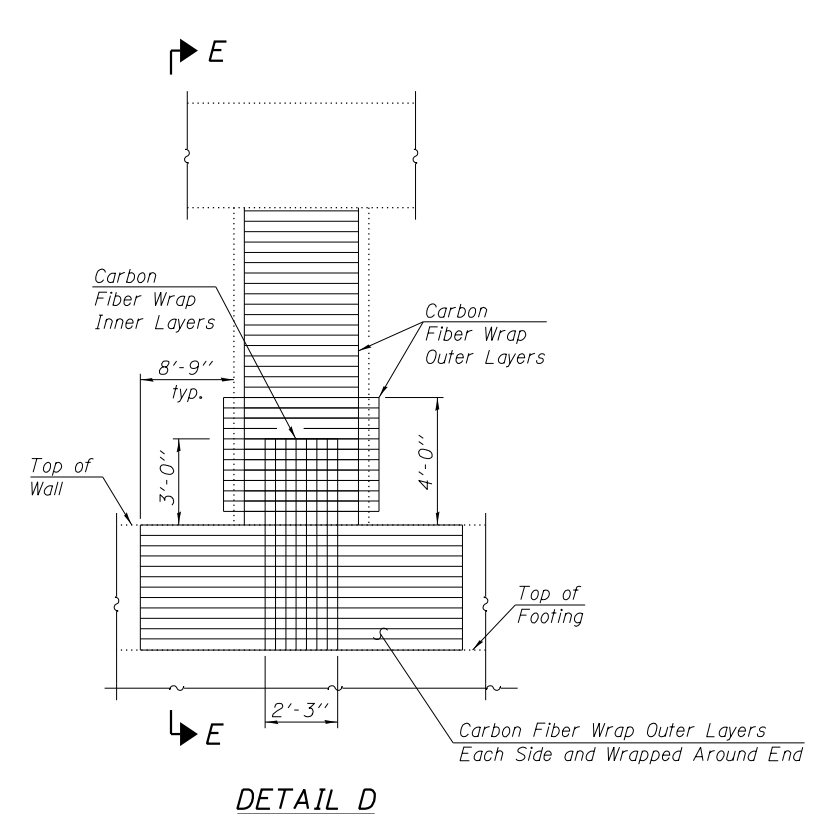
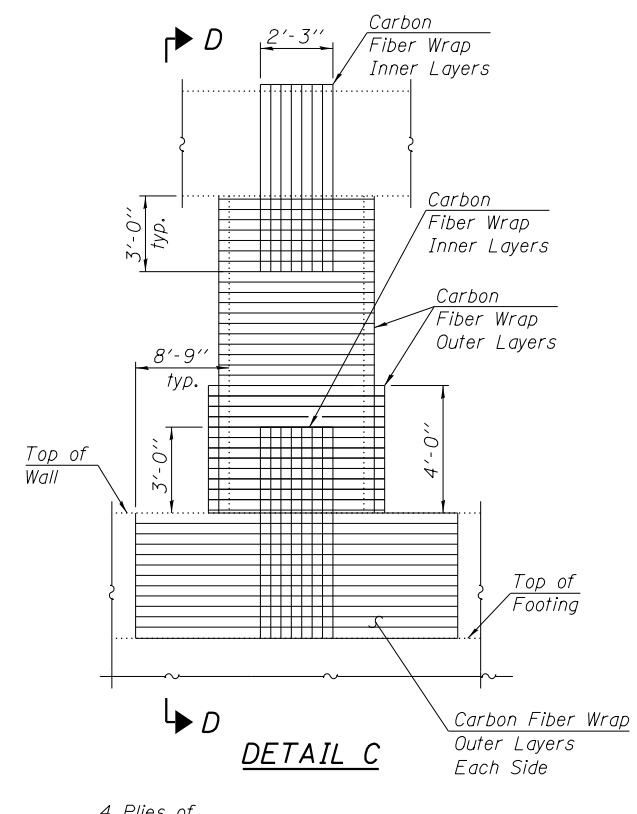
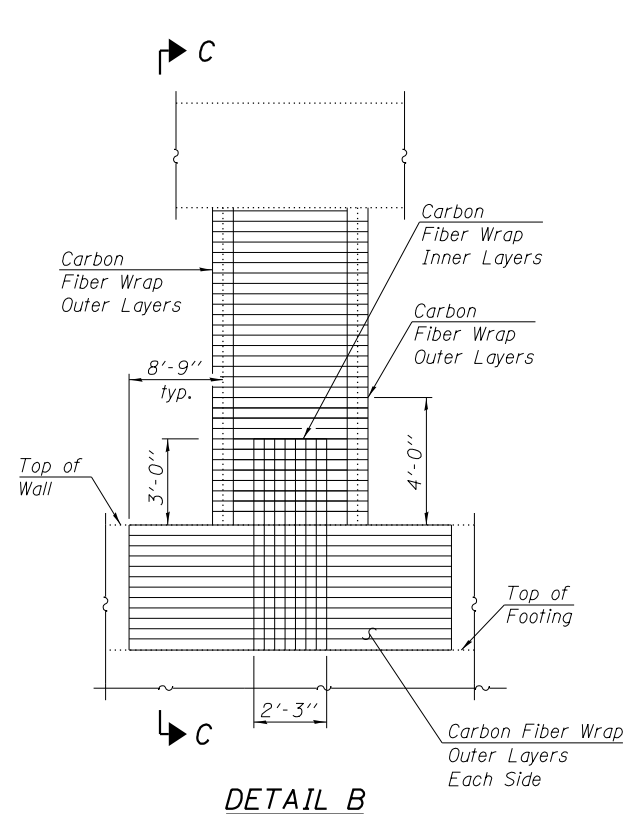
**BILL OF MATERIAL**

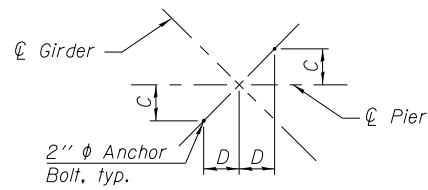
Bar	No.	Size	Length	Shape
h55(E)	16	#4	13'-8"	—
h56(E)	4	#8	13'-8"	—
h57(E)	8	#6	19'-11"	—
D12(E)	4	#6	7'-8"	—
D13(E)	5	#9	19'-11"	—
D14(E)	5	#9	22'-5"	⊂
S10(E)	5	#5	5'-0"	⊂
S13(E)	35	#4	10'-2"	○
S15(E)	8	#4	5'-0"	⊂
S21(E)	28	#5	17'-0"	⊂
S23(E)	5	#5	4'-11"	⊂
S24(E)	27	#6	17'-2"	⊂
** S12(E)	2	#4	12'-0"	⊂
T(E)	16	#10	9'-8"	—
T1(E)	17	#6	9'-8"	—
U4(E)	15	#6	6'-10"	⊂
U6(E)	2	#5	14'-3"	⊂
V16(E)	16	#5	2'-2"	⊂
V28(E)	10	#9	28'-4"	⊂
W10(E)	22	#6	15'-8"	—
Concrete Removal			Cu. Yd.	3.5
Structure Excavation			Cu. Yd.	45
Concrete Structures			Cu. Yd.	52.0
Reinforcement Bars, Epoxy Coated			Pound	5,590
Furnishing Metal Shell Piles 14" x 0.250"			Foot	540
Driving Piles			Foot	540
Expansion Bolts 3/4"			Each	18
Mechanical Splicers			Each	22
Epoxy Crack Injection			Foot	27
Acrylic Coating			Sq. Yd.	199
Fiber Wrap			Sq. Ft.	1,792
Structural Repair of Concrete (Depth Equal to or Less Than 5")			Sq. Ft.	41

\*\* Length is height of spiral.

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)
- Structural Repair of Concrete (Depth Greater Than 5 inches)
- Epoxy Crack Injection

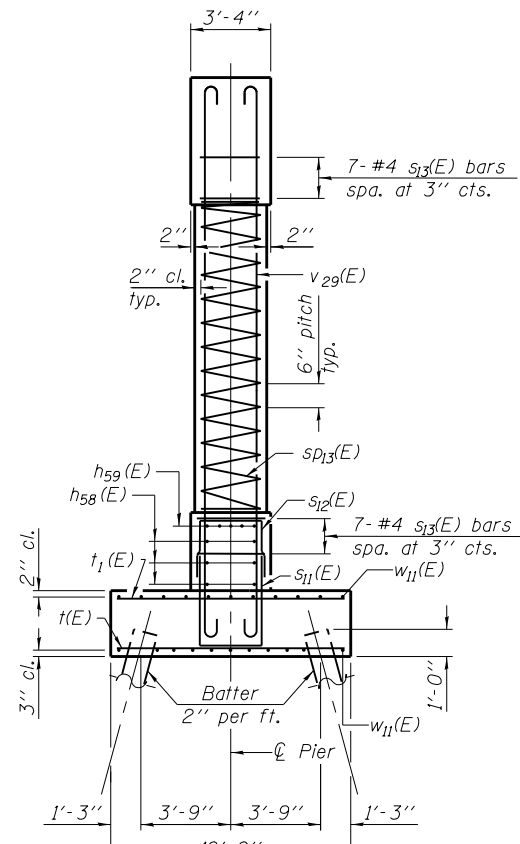




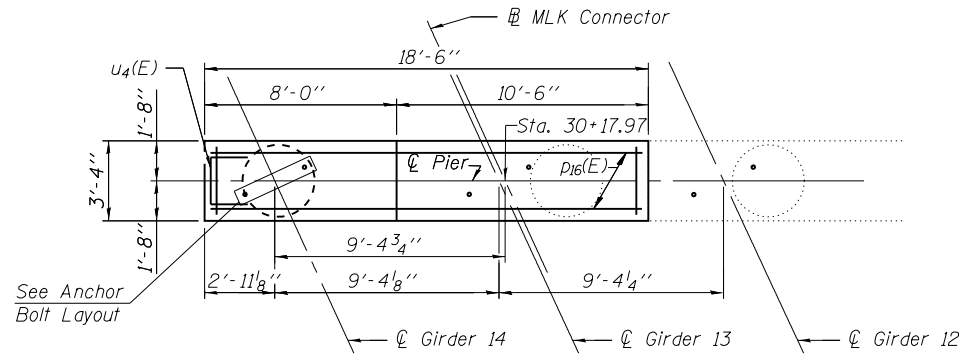
**ANCHOR BOLT LAYOUT**

**TABLE OF VARIABLE DIMENSIONS**

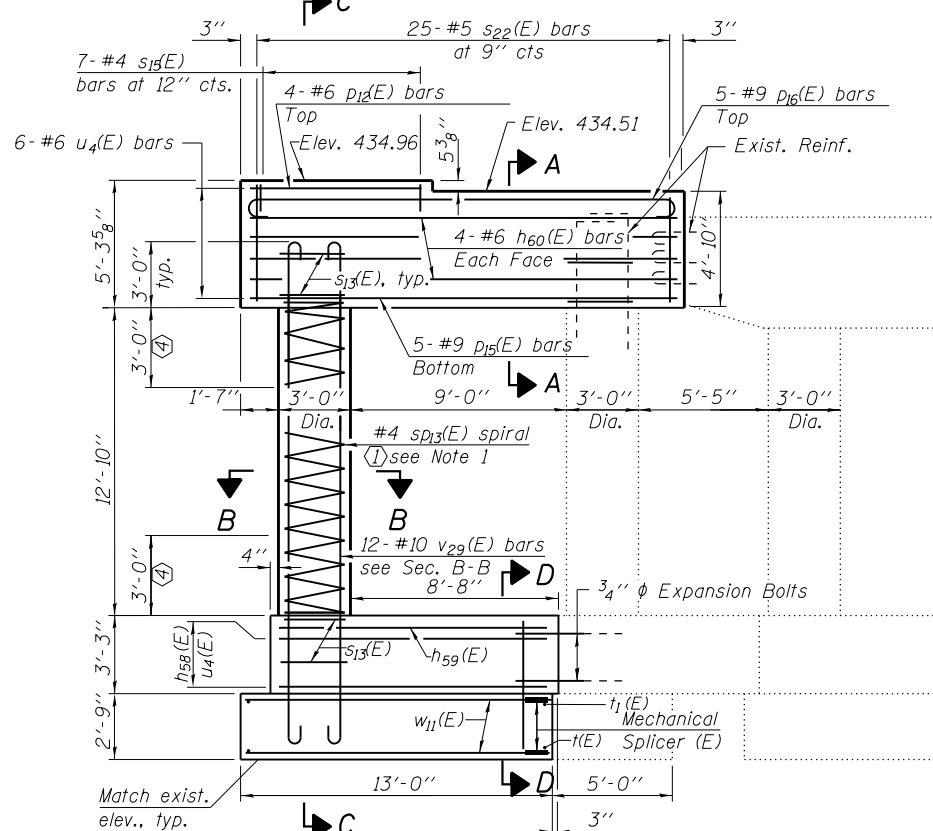
Girder	C	D
12	6' 7/8"	1'-2 7/8"
13	6' 13/16"	1'-2 7/8"
14	6' 13/16"	1'-2 7/8"



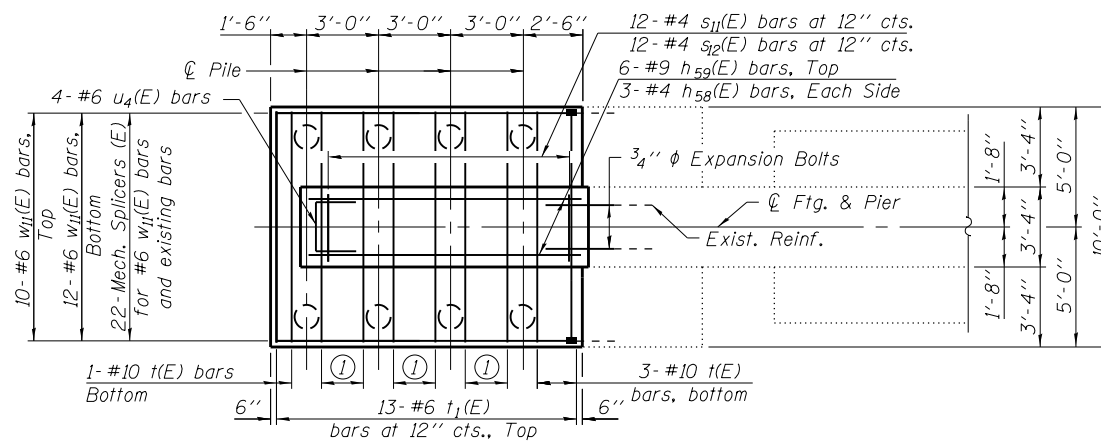
**SECTION C-C**



**TOP PLAN**

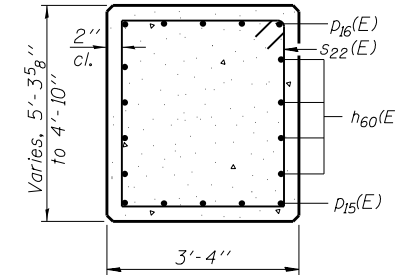


**ELEVATION  
(Looking North)**

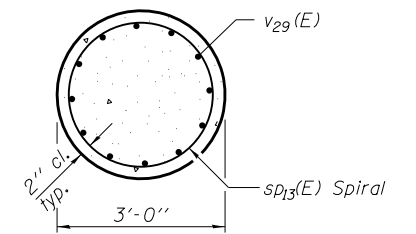


**FOOTING PLAN**

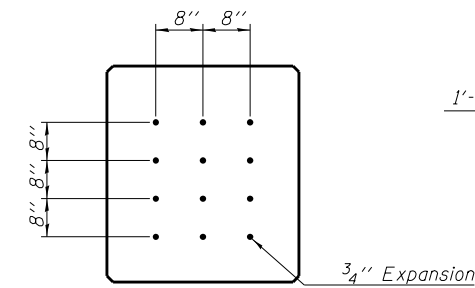
① 4-#10-t(E) bars, Bottom



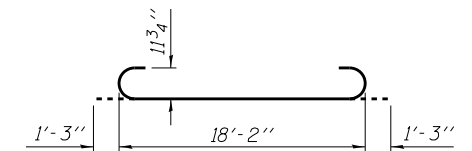
**SECTION A-A**



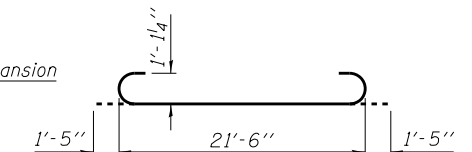
**SECTION B-B**



**SECTION D-D  
(12 required)**



**BARS p16(E)**

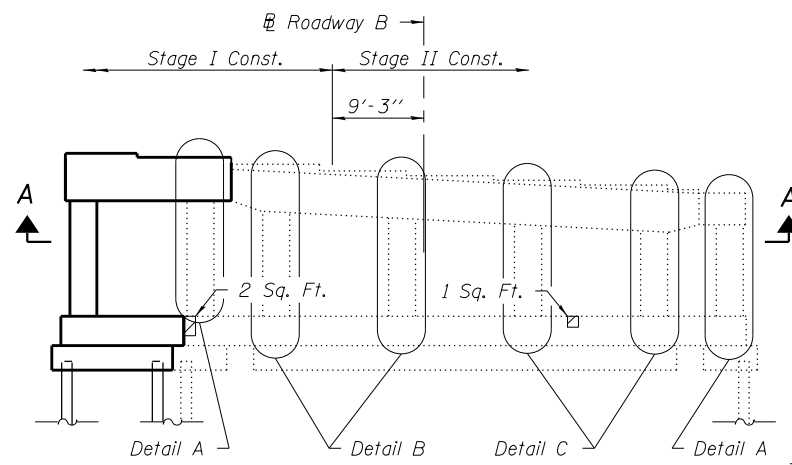


**BARS v29(E)**

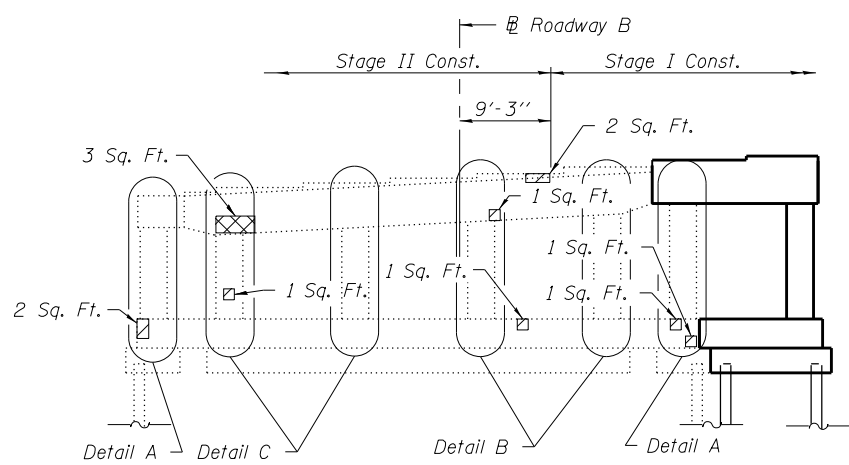
**PILE DATA**

Type: Metal Shell - 14"  $\phi$  x 0.250" wall  
 Nominal Required Bearing: 351 kips  
 Allowable Resistance Available: 117 kips  
 Est. Length: 56 feet  
 No. Production Piles: 8  
 No. Test Piles: 0

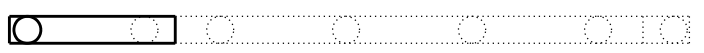
Notes:  
 For Note 1 thru Note 4 and ① thru ④, see sheet 115 of 143.  
 Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.  
 For details of piles, see sheet 124 of 143.  
 For bars s11(E), s12(E), s13(E), s15(E), and u4(E) bar bending diagrams, see sheet 103 of 143.  
 For bar s22(E) bar bending diagram, see sheet 109 of 143.  
 For details of Mechanical Splicers, see sheet 125 of 143.



**ELEVATION**  
(Looking North)



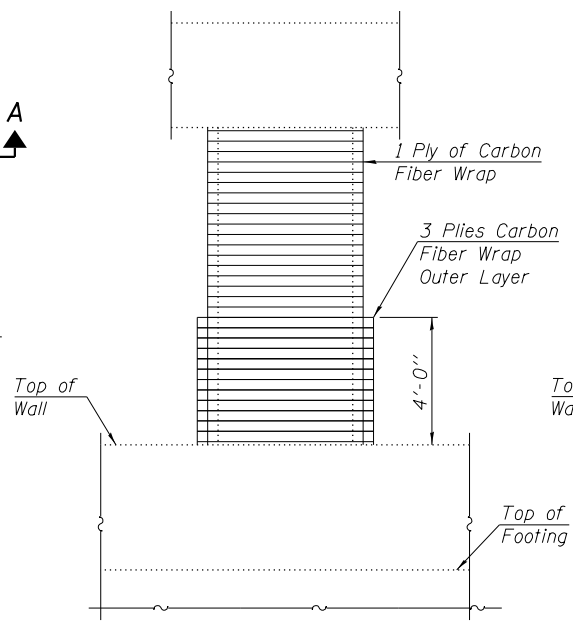
**ELEVATION**  
(Looking South)



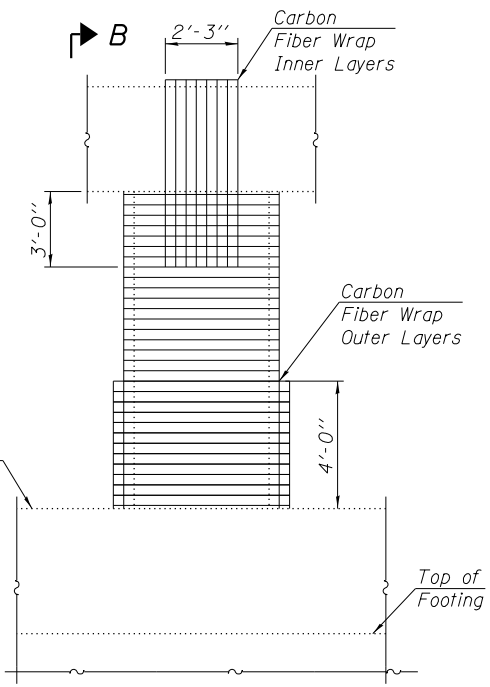
**SECTION A-A**

**LEGEND**

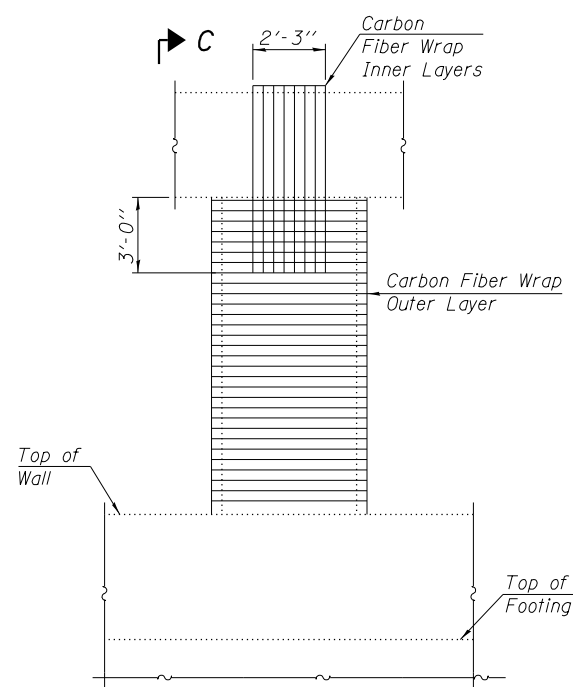
- Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)
- Structural Repair of Concrete (Depth Greater Than 5 inches)
- Epoxy Crack Injection



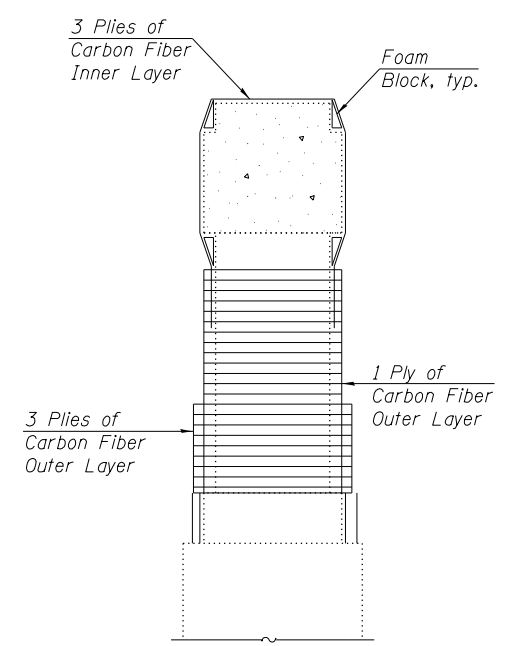
**DETAIL A**



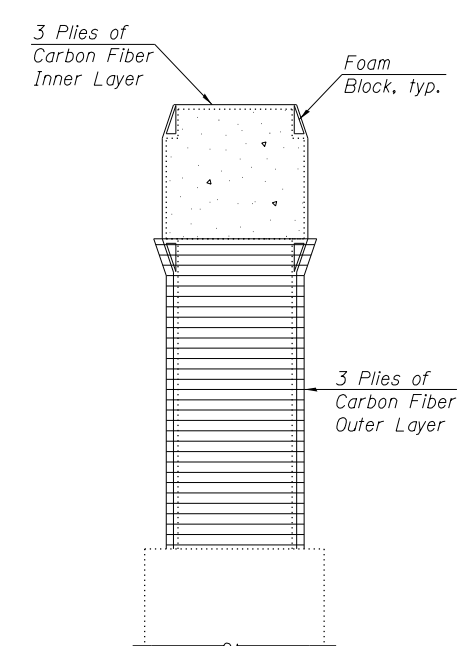
**DETAIL B**



**DETAIL C**



**SECTION B-B**



**SECTION C-C**

- Note 1:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap and crashwall. Provide 4- #4 spacers or equivalent.
- Note 2:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Provide 4- #4 spacers or equivalent.
- Note 3:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap. Provide 4- #4 spacers or equivalent.
- Note 4:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into crashwall. Provide 4- #4 spacers or equivalent.
- ① Allowable substitution:  
Provide 1/2 extra turns top and bottom with 135° standard hook into core at each end of spiral.
- ② Allowable substitution:  
Provide 1/2 extra turns top with 135° standard hook into core at each end of spiral.
- ③ Allowable substitution:  
Provide 1/2 extra turns bottom with 135° standard hook into core at each end of spiral.
- ④ Splicing of bars will not be allowed in this region.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h <sub>58</sub> (E)	6	#4	11'-8"	—
h <sub>59</sub> (E)	6	#9	11'-8"	—
h <sub>60</sub> (E)	8	#6	18'-2"	—
p <sub>12</sub> (E)	4	#6	7'-8"	—
p <sub>15</sub> (E)	5	#9	18'-2"	—
p <sub>16</sub> (E)	5	#9	20'-8"	U
s <sub>11</sub> (E)	12	#4	13'-8"	U
s <sub>12</sub> (E)	12	#4	9'-0"	U
s <sub>13</sub> (E)	21	#4	10'-2"	O
s <sub>15</sub> (E)	7	#4	5'-0"	U
s <sub>22</sub> (E)	25	#5	15'-11"	B
** s <sub>D13</sub> (E)	1	#4	13'-2"	W
t(E)	19	#10	9'-8"	—
t <sub>1</sub> (E)	13	#6	9'-8"	—
u <sub>4</sub> (E)	10	#6	6'-11"	U
v <sub>29</sub> (E)	12	#10	24'-4"	U
w <sub>11</sub> (E)	22	#6	12'-8"	—
Concrete Removal			Cu. Yd.	3.8
Structure Excavation			Cu. Yd.	37
Concrete Structures			Cu. Yd.	33.0
Reinforcement Bars, Epoxy Coated			Pound	4,820
Furnishing Metal Shell Piles 14" x 0.250"			Foot	448
Driving Piles			Foot	448
Expansion Bolts 3/4"			Each	12
Mechanical Splicers			Each	22
Acrylic Coating			Sq. Yd.	82
Fiber Wrap			Sq. Ft.	737
Structural Repair of Concrete (Depth Equal to or Less Than 5")			Sq. Ft.	12
Structural Repair of Concrete (Depth Greater Than 5")			Sq. Ft.	3

\*\* Length is height of spiral.

Notes:  
When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall terminate with a 135° standard hook.  
Existing reinforcement shall be cleaned and incorporated into new construction. Cost included in concrete removal. Cut ends of existing reinforcement extending into new construction to maintain 1/2" minimum clearance.  
For Substructure Removal details, see sheet 18 of 143.

FILE NAME = X:\1309400-MLK\Cad\5\082010-76009.dgn	DESIGNED - J.J. Derner	REVISED
USER NAME = elagemann	CHECKED - M.A. Chorkey	REVISED
PLOT SCALE =	DRAWN - J.N. Bailey	REVISED
PLOT DATE = 8/7/2014	CHECKED - T.S. Friederich	REVISED

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

**PIER 9B**  
**STRUCTURE NO. 082-0010**

SHEET NO. 116 OF 143 SHEETS

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1(A)B-1	ST. CLAIR	406	308

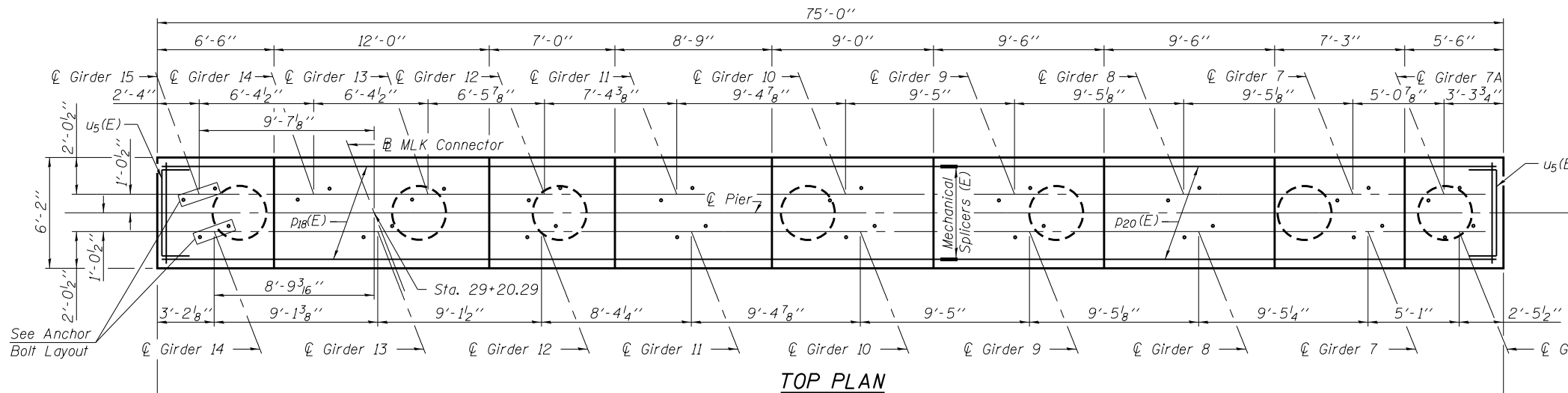
CONTRACT NO. 76G09  
ILLINOIS FED. AID PROJECT



**PILE DATA**

Type: Metal Shell - 14"  $\phi$  x 0.250" wall  
 Nominal Required Bearing: 321 kips  
 Allowable Resistance Available: 107 kips  
 Est. Length: 51 feet  
 No. Production Piles: 8  
 No. Test Piles: 1

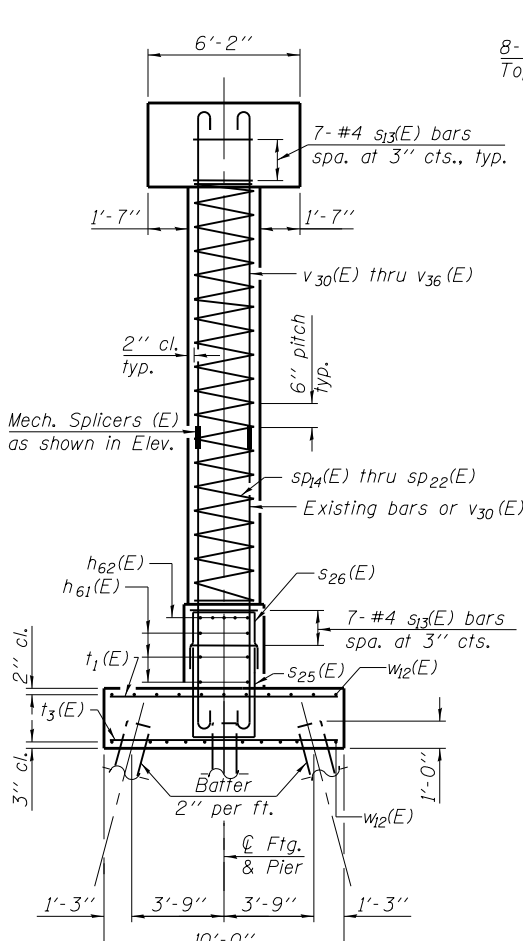
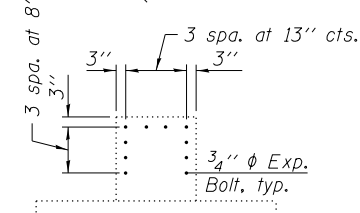
- ① 5-Mechanical Splicers (E) for #8 h<sub>64</sub>(E) & h<sub>66</sub>(E) bars
- ② 4-#9-t<sub>3</sub>(E) bars, Bottom
- ③ 6-Mechanical Splicers (E) for #4 h<sub>63</sub>(E) & h<sub>65</sub>(E) bars, Ea. Side
- ④ 10-Mechanical Splicers (E) for #9 v<sub>31</sub>(E) & Existing bars
- ⑤ 6-Mechanical Splicers (E) for #6 h<sub>67</sub>(E) & h<sub>68</sub>(E) bars
- ⑥ 8-Mechanical Splicers (E) for #8 p<sub>17</sub>(E) & p<sub>19</sub>(E) bars
- ⑦ 8-Mechanical Splicers (E) for #8 p<sub>18</sub>(E) & p<sub>20</sub>(E) bars



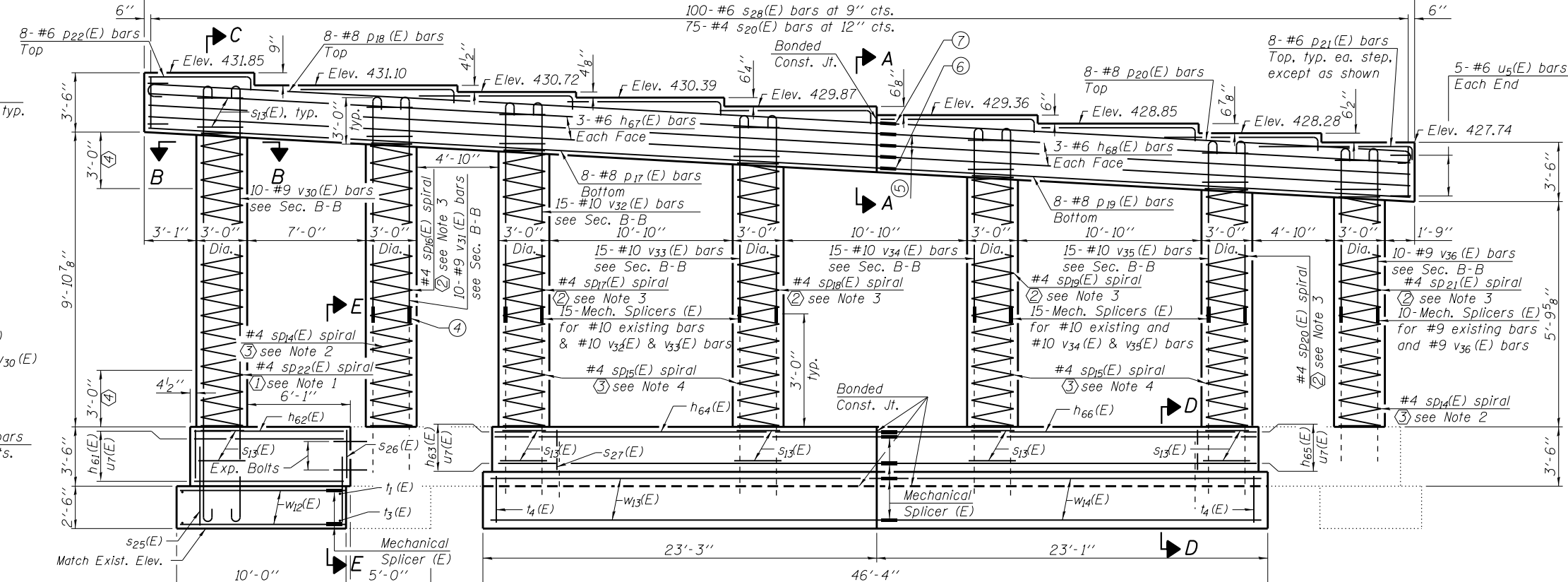
**TOP PLAN**

**SECTION E-E**

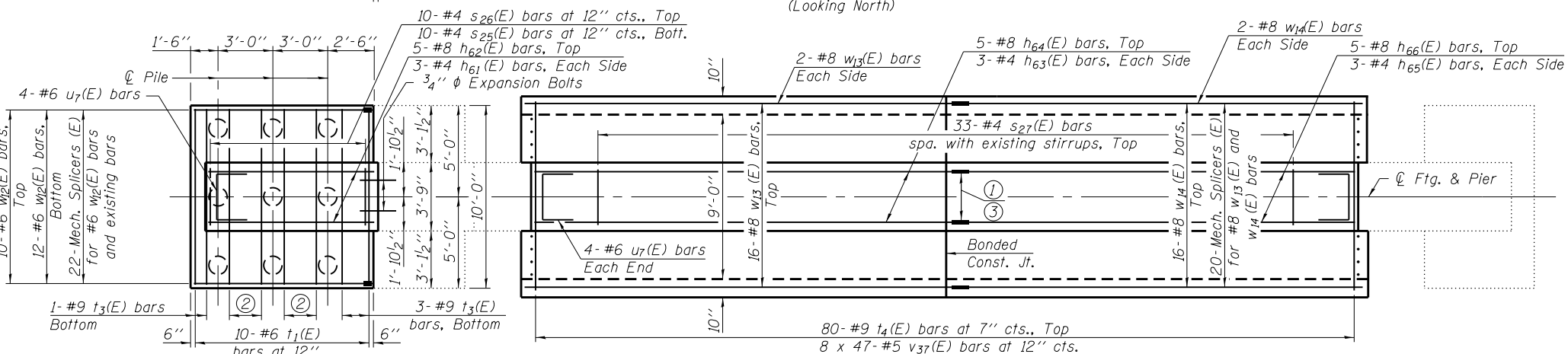
Note:  
Footing reinforcement is omitted for clarity



**SECTION C-C**

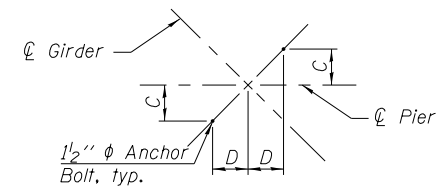


**ELEVATION**  
(Looking North)

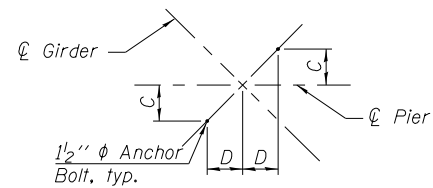


**FOOTING PLAN**

Notes:  
 For Note 1 thru Note 4 and ① thru ④, see sheet 118 of 143.  
 For Sections A-A, B-B, and D-D, see sheet 118 of 143.  
 For Anchor Bolt Layout, see sheet 118 of 143.  
 For additional notes see sheet 118 of 143.



ANCHOR BOLT LAYOUT - UNIT 3



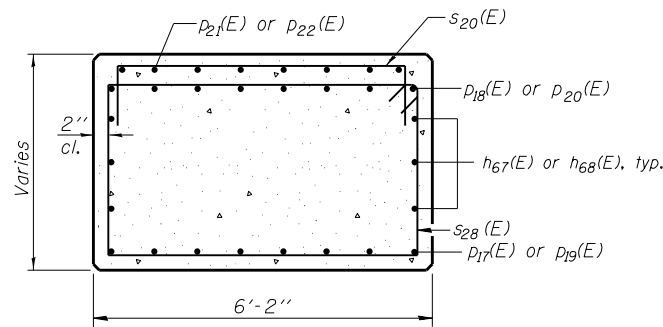
ANCHOR BOLT LAYOUT - UNIT 4

TABLE OF VARIABLE DIMENSIONS

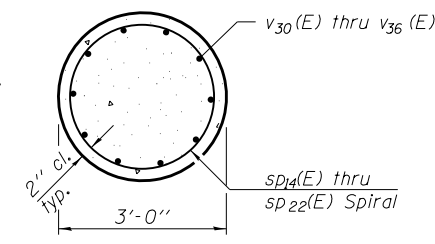
Girder	C	D
7A	4 1/16"	10 1/8"
7	4 1/16"	10 1/8"
8	4 1/16"	10 1/8"
9	4"	10 1/8"
10	3 5/16"	10 1/8"
11	3 5/16"	10 1/8"
12	3 7/8"	10 1/8"
13	3 3/4"	10 1/8"
14	3 1/6"	10 1/8"

TABLE OF VARIABLE DIMENSIONS

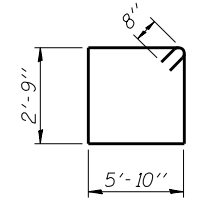
Girder	C	D
7A	4 1/16"	10 1/8"
7	4"	10 1/8"
8	4"	10 1/8"
9	4"	10 1/8"
10	3 5/16"	10 1/8"
11	3 5/16"	10 1/8"
12	4 1/4"	11 1/8"
13	3 3/4"	11 1/4"
14	3 5/16"	11 1/4"
15	4"	11 1/8"



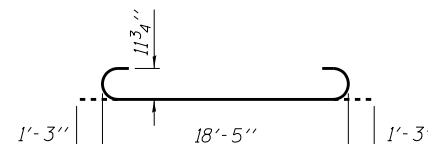
SECTION A-A



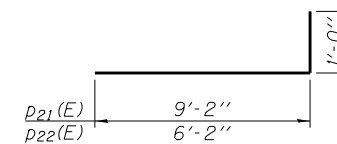
SECTION B-B



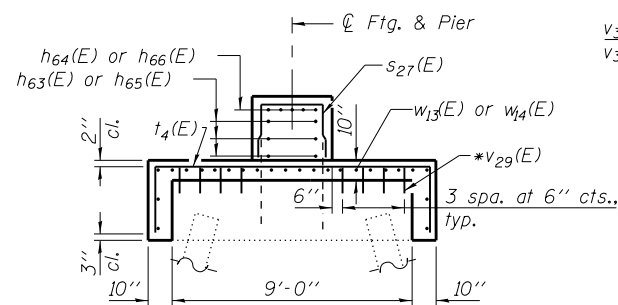
BAR s28(E)



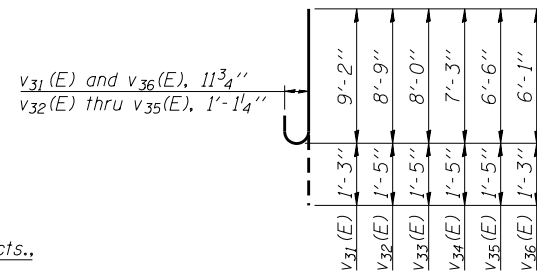
BAR v30(E)



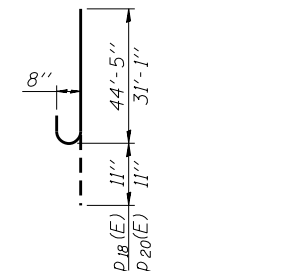
BARS p21(E) & p22(E)



SECTION D-D



BARS v31(E), v32(E), v33(E), v34(E), v35(E), & v36(E)



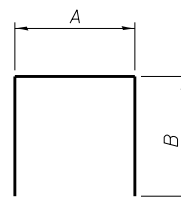
BARS p18(E) & p20(E)

- Note 1:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap and crashwall. Provide 4-#4 spacers or equivalent.
- Note 2:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Provide 4-#4 spacers or equivalent.
- Note 3:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap. Provide 4-#4 spacers or equivalent.
- Note 4:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into crashwall. Provide 4-#4 spacers or equivalent.

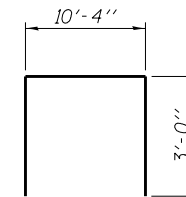
\*Grout bars 6" into existing concrete in accordance with Section 584 of the Standard Specification.

- Notes:  
When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall terminate with a 135° standard hook.  
Existing reinforcement shall be cleaned and incorporated into new construction. Cost included in Concrete Removal. Cut ends of existing reinforcement extending into new construction to maintain 1/2" minimum clearance. For substructure removal details, see sheet 18 of 143.

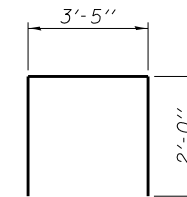
- ① Allowable substitution:  
Provide 1/2 extra turns top and bottom with 135° standard hook into core at each end of spiral.  
② Allowable substitution:  
Provide 1/2 extra turns top with 135° standard hook into core at each end of spiral.  
③ Allowable substitution:  
Provide 1/2 extra turns bottom with 135° standard hook into core at each end of spiral.  
④ Splicing of bars will not be allowed in this region.



BARS s25(E), s26(E) & s27(E)



BAR t4(E)



BAR U7(E)

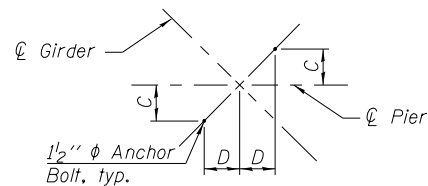
A & B DIMENSIONS

Bar	A	B
s25(E)	3'-5"	5'-4"
s26(E)	3'-5"	3'-0"
s27(E)	3'-5"	2'-7"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h61(E)	6	#4	9'-1"	—
h62(E)	5	#8	9'-1"	—
h63(E)	6	#4	23'-7"	—
h64(E)	5	#8	23'-7"	—
h65(E)	6	#4	21'-4"	—
h66(E)	5	#8	21'-4"	—
h67(E)	6	#6	44'-1"	—
h68(E)	6	#6	30'-9"	—
p17(E)	8	#8	44'-1"	—
p18(E)	8	#8	45'-4"	—
p19(E)	8	#8	30'-9"	—
p20(E)	8	#8	32'-0"	—
p21(E)	64	#6	10'-2"	—
p22(E)	8	#6	7'-2"	—
s13(E)	84	#4	10'-2"	○
s20(E)	75	#4	7'-10"	U
s25(E)	10	#4	14'-1"	U
s26(E)	10	#4	9'-5"	U
s27(E)	33	#4	8'-7"	U
s28(E)	100	#6	18'-6"	□
sD14(E)	2	#4	3'-0"	—
sD15(E)	4	#4	3'-2"	—
sD16(E)	1	#4	6'-5"	—
sD17(E)	1	#4	5'-11"	—
sD18(E)	1	#4	5'-2"	—
sD19(E)	1	#4	4'-5"	—
sD20(E)	1	#4	3'-8"	—
sD21(E)	1	#4	3'-3"	—
sD22(E)	1	#4	10'-1"	—
t1(E)	10	#6	9'-8"	—
t3(E)	13	#9	9'-8"	—
t4(E)	80	#4	16'-4"	U
u5(E)	10	#6	9'-8"	U
u7(E)	12	#6	7'-4"	U
v30(E)	10	#9	20'-11"	U
v31(E)	10	#9	10'-5"	U
v32(E)	15	#10	10'-2"	U
v33(E)	15	#10	9'-5"	U
v34(E)	15	#10	8'-8"	U
v35(E)	15	#10	7'-11"	U
v36(E)	10	#9	7'-4"	U
v37(E)	376	#5	1'-2"	—
w12(E)	22	#6	9'-0"	—
w13(E)	20	#8	24'-1"	—
w14(E)	20	#8	22'-0"	—
Concrete Removal		Cu. Yd.	72.0	
Structure Excavation		Cu. Yd.	58	
Concrete Structures		Cu. Yd.	127.6	
Reinforcement Bars, Epoxy Coated		Pound	19,140	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	408	
Driving Piles		Foot	408	
Test Pile Metal Shells		Each	1	
Concrete Sealer		Sq. Ft.	2,564	
Mechanical Splicers		Each	155	

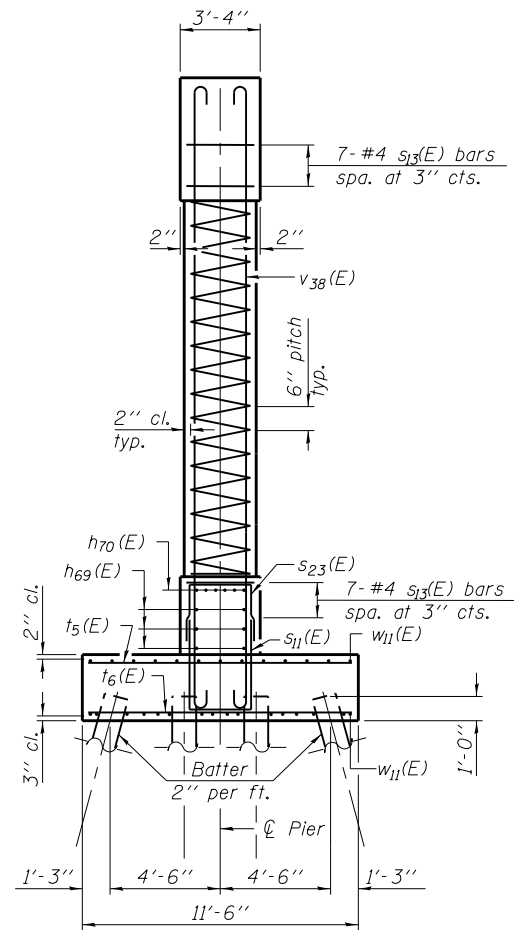
- \*\* Length is height of spiral.
- Notes:  
Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. For details of piles, see sheet 124 of 143. For Mechanical Splicer details, see sheet 125 of 143. For s13(E) bar bending diagram, see sheet 103 of 143. For s20(E) and u5(E) bending diagrams, see sheet 108 of 143.



**ANCHOR BOLT LAYOUT**

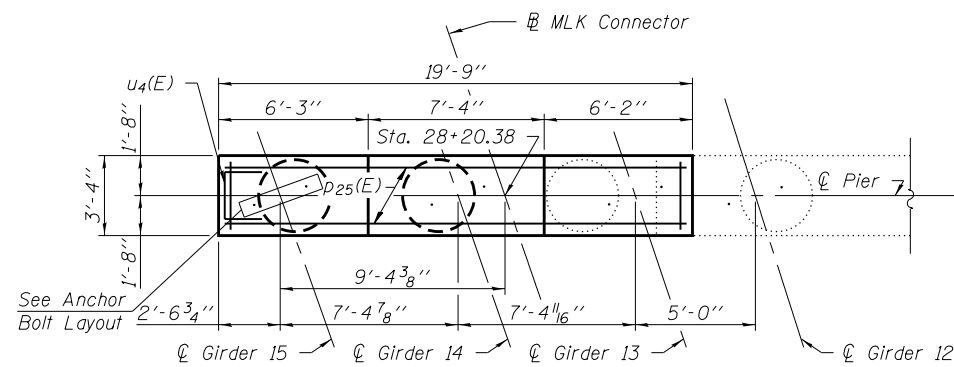
**TABLE OF VARIABLE DIMENSIONS**

Girder	C	D
12	4 1/8"	1'-1 1/8"
13	4 3/8"	1'-1 1/8"
14	4 1/2"	1'-1"
15	4 5/8"	1'-1"

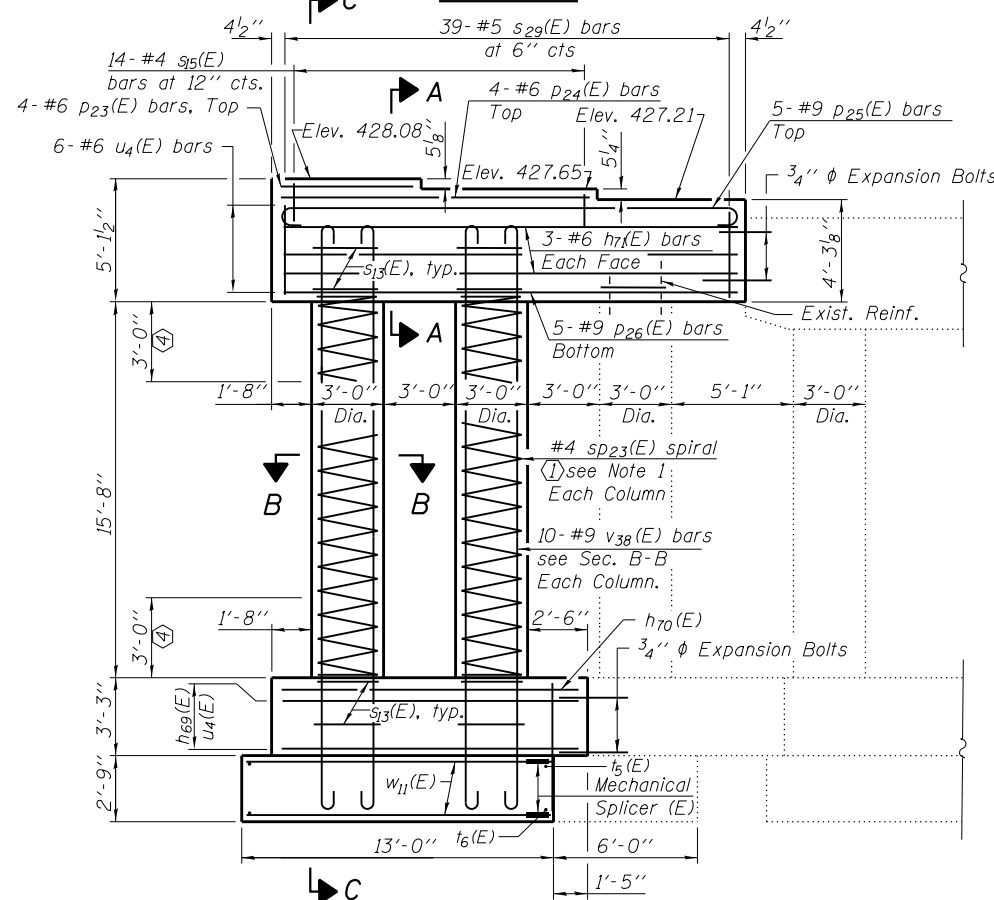


**SECTION C-C**

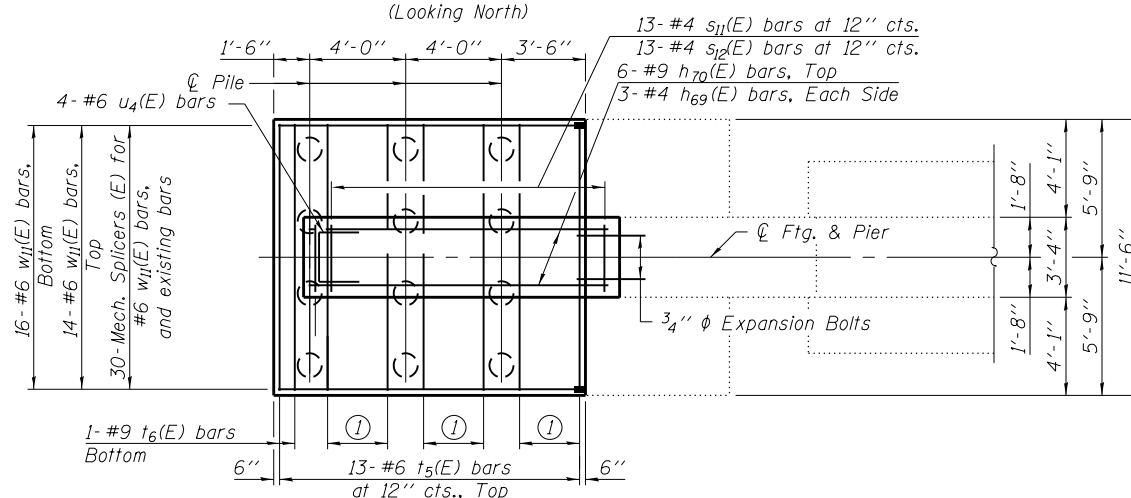
① 5-#9 t6(E) bars, Bottom



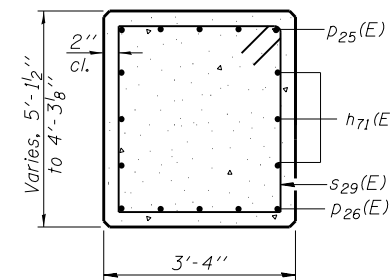
**TOP PLAN**



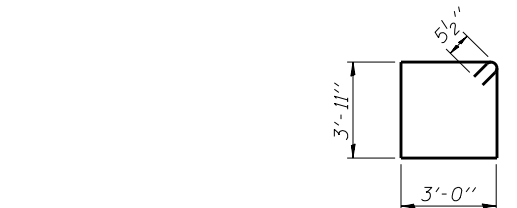
**ELEVATION**  
(Looking North)



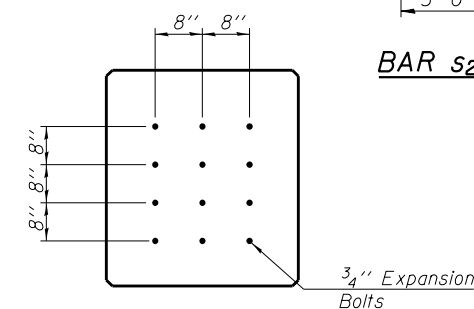
**FOOTING PLAN**



**SECTION A-A**

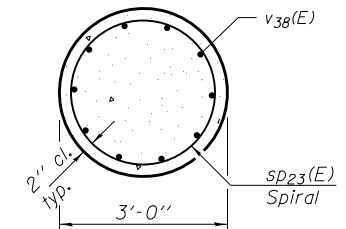


**BAR s29(E)**

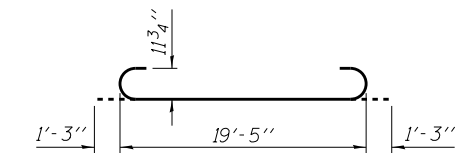


**EXPANSION BOLT DETAIL**  
(12 required)

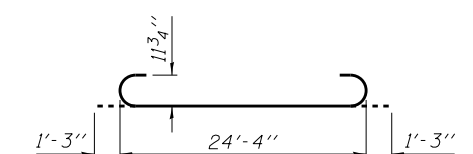
**PILE DATA**  
 Type: Metal Shell - 14"  $\phi$  x 0.250" wall  
 Nominal Required Bearing: 323 kips  
 Allowable Resistance Available: 108 kips  
 Est. Length: 54 feet  
 No. Production Piles: 12  
 No. Test Piles: 0



**SECTION B-B**

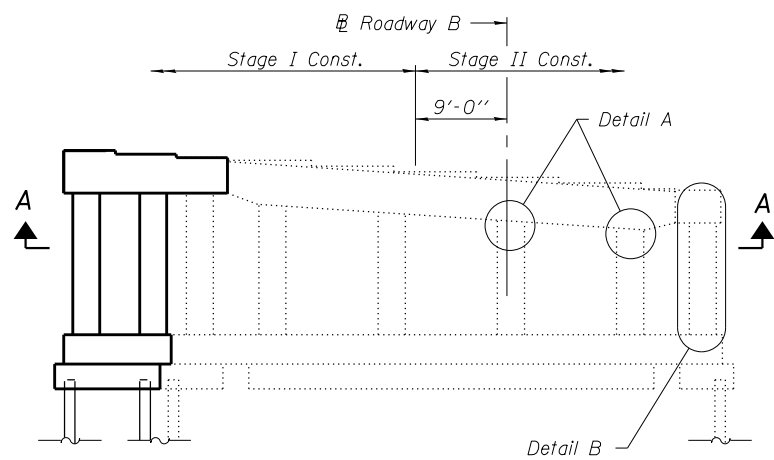


**BARS p25(E)**

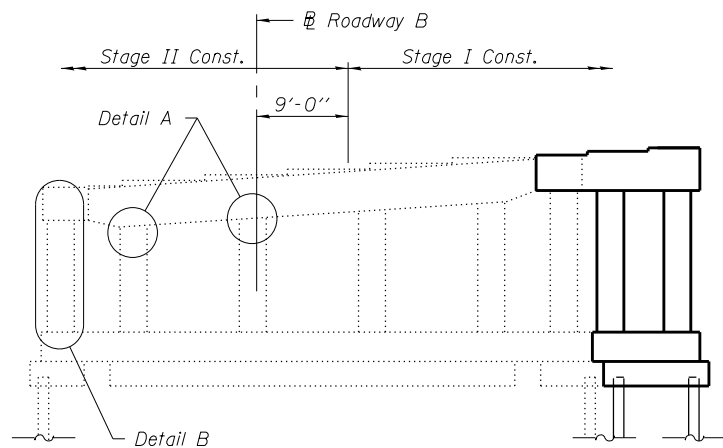


**BARS v37(E)**

Notes:  
 For Note 1 thru Note 4 and ① thru ④, see sheet 120 of 143.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 For details of piles, see sheet 124 of 143.  
 For details of Mechanical Splicers, see sheet 125 of 143.  
 For s11(E), s12(E), s33(E), s35(E), and u4(E), see sheet 103 of 143.



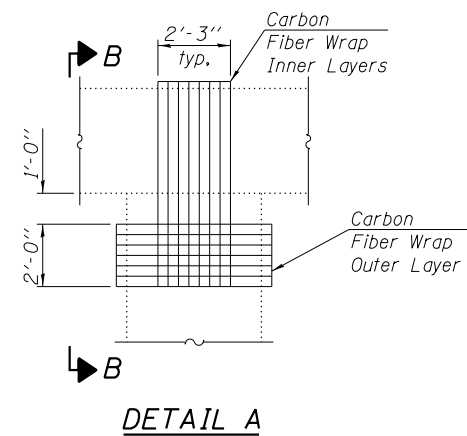
**ELEVATION**  
(Looking North)



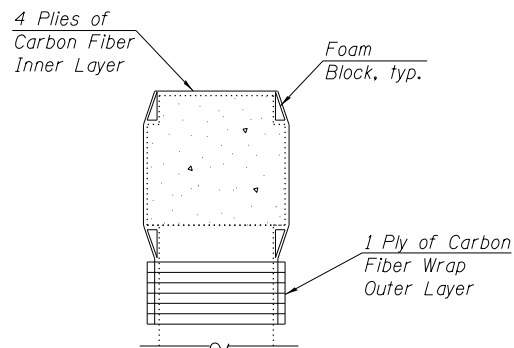
**ELEVATION**  
(Looking South)



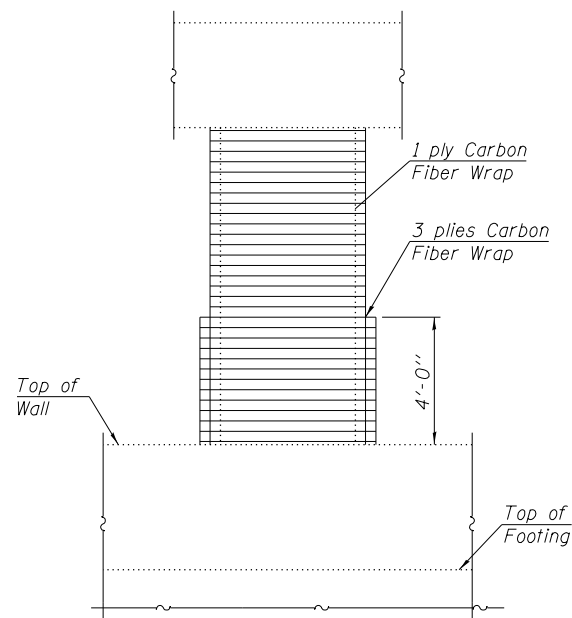
**SECTION A-A**



**DETAIL A**



**SECTION B-B**



**DETAIL B**

Note 1:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap and crashwall. Provide 4-#4 spacers or equivalent.

Note 2:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Provide 4-#4 spacers or equivalent.

Note 3:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap. Provide 4-#4 spacers or equivalent.

Note 4:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into crashwall. Provide 4-#4 spacers or equivalent.

- ① Allowable substitution: Provide 1/2 extra turns top and bottom with 135° standard hook into core at each end of spiral.
- ② Allowable substitution: Provide 1/2 extra turns top with 135° standard hook into core at each end of spiral.
- ③ Allowable substitution: Provide 1/2 extra turns bottom with 135° standard hook into core at each end of spiral.
- ④ Splicing of bars will not be allowed in this region.

Notes:  
When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall terminate with a 135° standard hook.  
Existing reinforcement shall be cleaned and incorporated into new construction. Cost included in concrete removal. Cut ends of existing reinforcement extending into new construction to maintain 1/2" minimum clearance.  
For substructure removal details, see sheet 18 of 143.

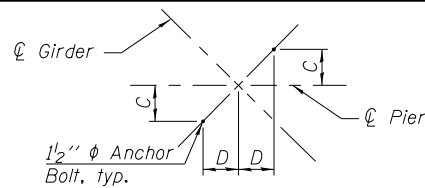
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h69(E)	6	#4	12'-10"	—
h70(E)	6	#9	12'-10"	—
h71(E)	6	#6	19'-5"	—
p23(E)	4	#6	5'-11"	—
p24(E)	4	#6	13'-3"	—
p25(E)	5	#9	21'-11"	—
p26(E)	5	#9	19'-5"	—
s11(E)	13	#4	13'-8"	U
s12(E)	13	#4	9'-0"	U
s13(E)	35	#4	10'-2"	O
s15(E)	14	#4	5'-0"	U
s29(E)	39	#5	14'-9"	□
** sp23(E)	2	#4	16'-0"	~
t5(E)	13	#6	11'-2"	—
t6(E)	17	#9	11'-2"	—
u4(E)	10	#6	6'-11"	U
v38(E)	20	#9	26'-10"	—
w11(E)	30	#6	12'-8"	—
Concrete Removal		Cu. Yd.	4.4	
Structure Excavation		Cu. Yd.	120	
Concrete Structures		Cu. Yd.	40.2	
Reinforcement Bars, Epoxy Coated		Pound	5,960	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	612	
Driving Piles		Foot	612	
Expansion Bolts 3/4"		Each	24	
Mechanical Splicers		Each	30	
Acrylic Coating		Sq. Yd.	24	
Fiber Wrap		Sq. Ft.	216	

\*\* Length is height of spiral.

- Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)
- Structural Repair of Concrete (Depth Greater Than 5 inches)
- Epoxy Crack Injection

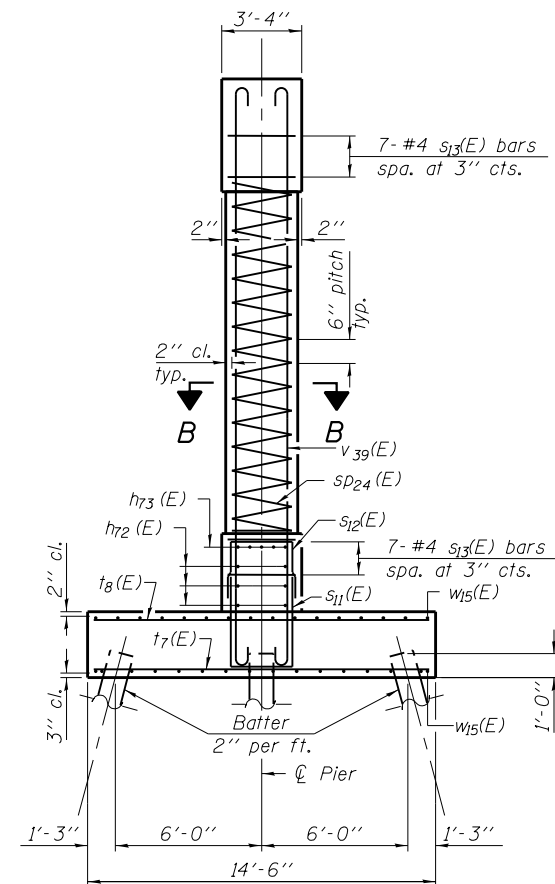
**LEGEND**



**ANCHOR BOLT LAYOUT**

**TABLE OF VARIABLE DIMENSIONS**

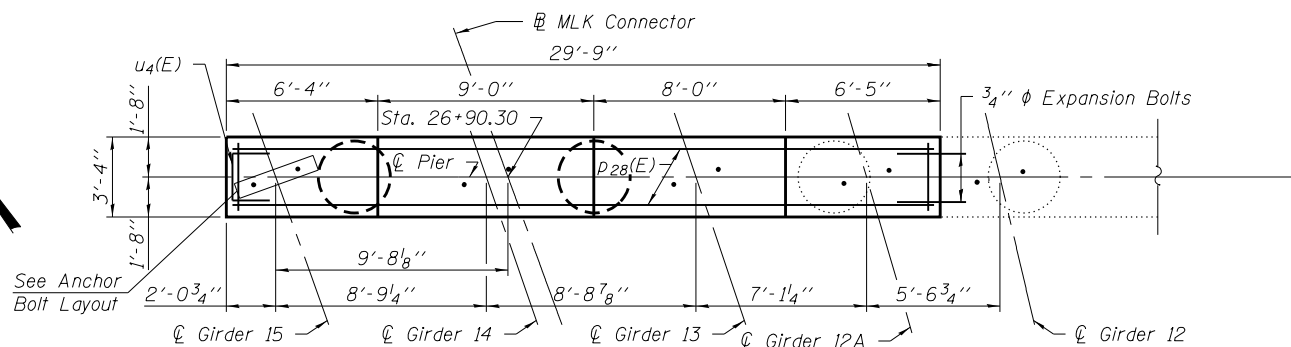
Girder	C	D
12	2 <sup>13</sup> / <sub>16</sub> "	1'-0 <sup>3</sup> / <sub>16</sub> "
12A	3 <sup>1</sup> / <sub>2</sub> "	1'-0"
13	4"	11 <sup>1</sup> / <sub>8</sub> "
14	4 <sup>1</sup> / <sub>8</sub> "	11 <sup>13</sup> / <sub>16</sub> "
15	4 <sup>1</sup> / <sub>4</sub> "	11 <sup>3</sup> / <sub>4</sub> "



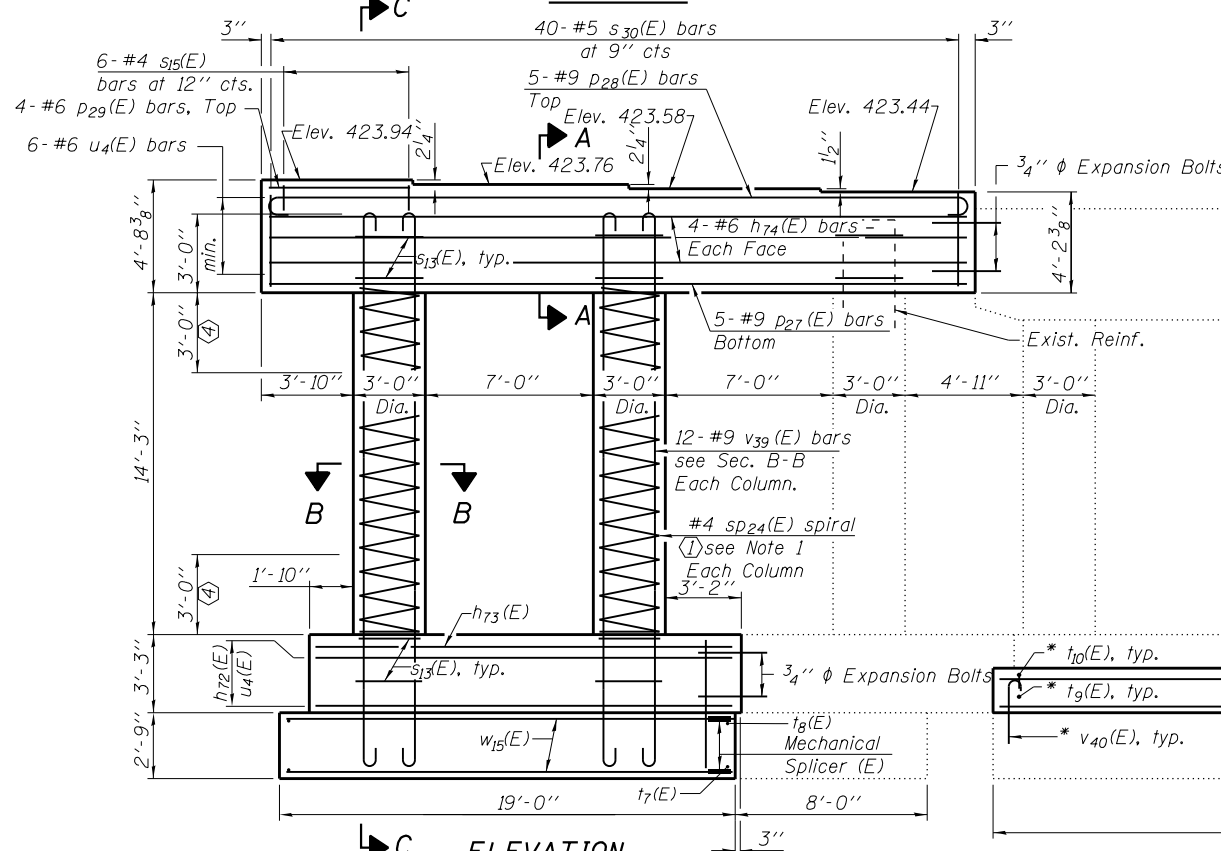
**SECTION C-C**

Notes:  
 For Note 1 thru Note 4 and (1) thru (4), see sheet 122 of 143.  
 Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.  
 For details of piles, see sheet 124 of 143.  
 For details of Mechanical Splicer, see sheet 125 of 143.  
 Bars indicated thus 5x2-#6 etc. indicates 5 lines of bars with 2 lengths per line.  
 For s11(E), s12(E), s13(E), s13(E), and u4(E), see sheet 103 of 143.

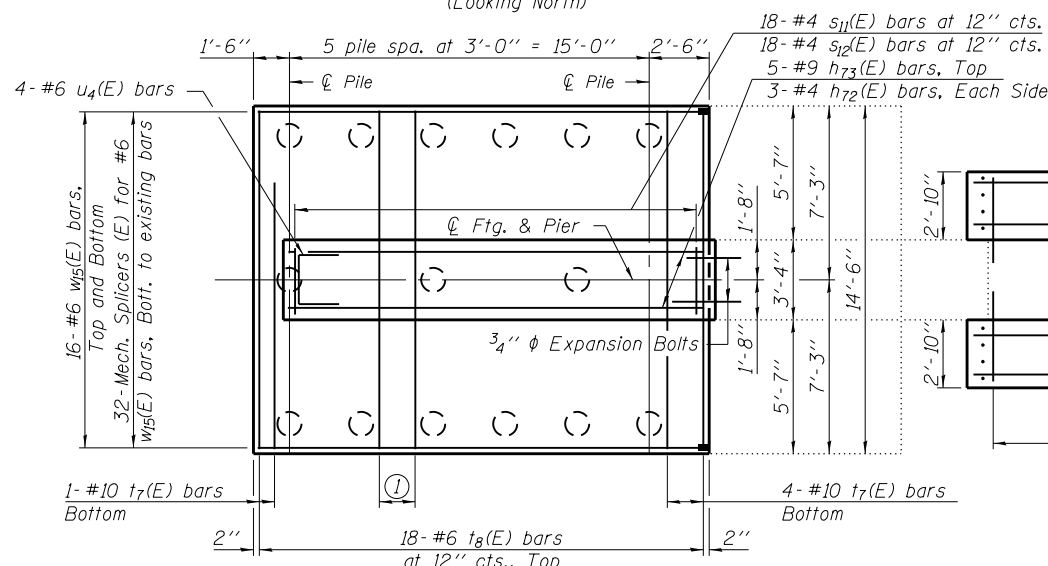
(1) 5-#10 t7(E) bars, typ. btw'n piles, Bottom



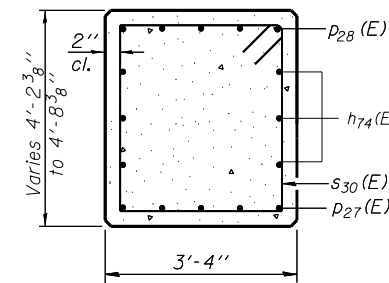
**TOP PLAN**



**ELEVATION**  
(Looking North)

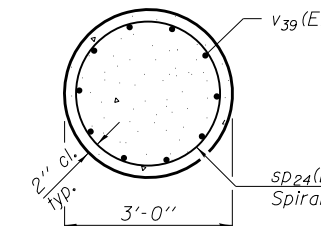


**FOOTING PLAN**

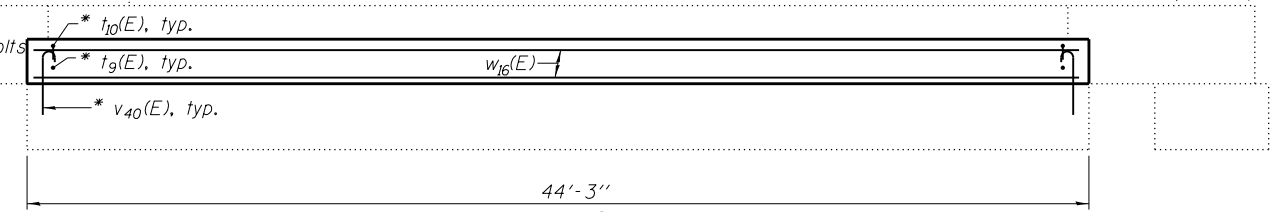


**SECTION A-A**

**PILE DATA**  
 Type: Metal Shell - 14" φ x 0.250" wall  
 Nominal Required Bearing: 364 kips  
 Allowable Resistance Available: 121 kips  
 Est. Length: 63 feet  
 No. Production Piles: 15  
 No. Test Piles: 0



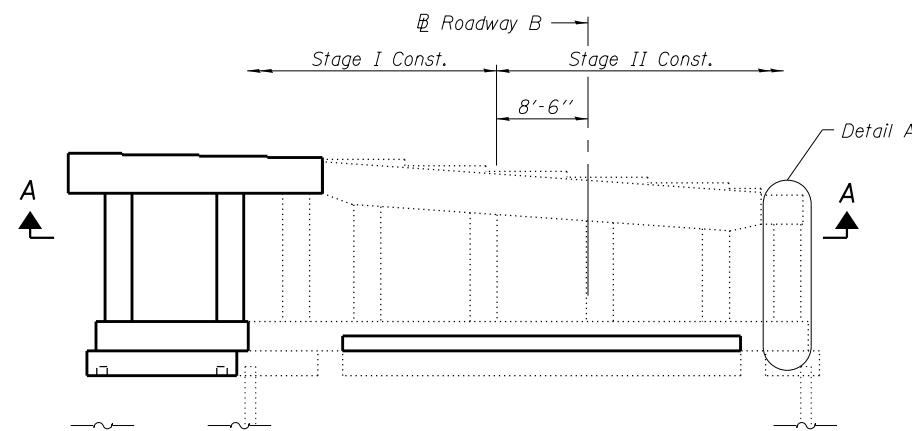
**SECTION B-B**



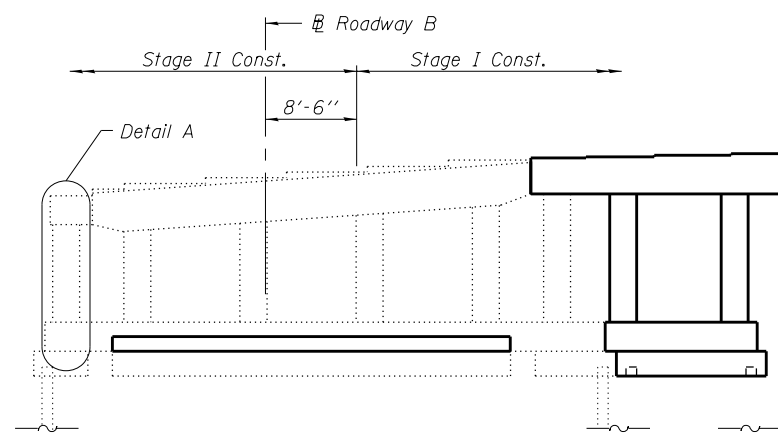
**MINIMUM BAR LAP**  
#6 Bar = 4'-5"

\* 66-#5 t10(E) bars at 8" cts., Each Side, Top  
 \* 66-#5 t9(E) bars at 8" cts., Each Side, Bottom  
 \* 66 x 8-#5 v40(E) bars at 8" cts.

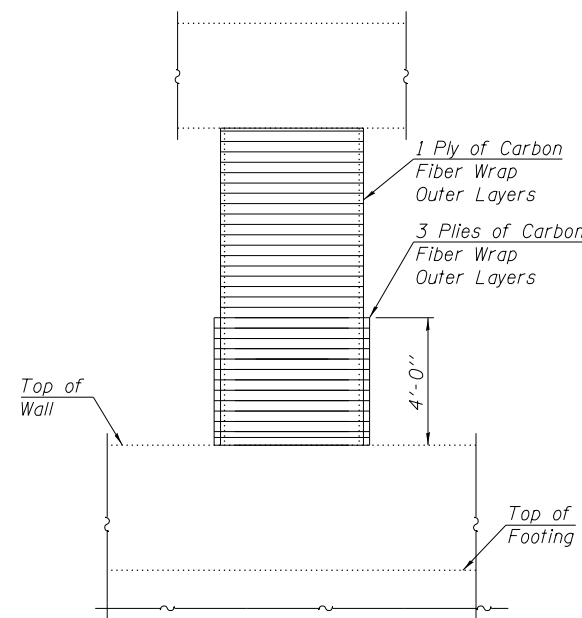
\* Grout bars 12" into existing concrete in accordance with Section 584 of the Standard Specification.



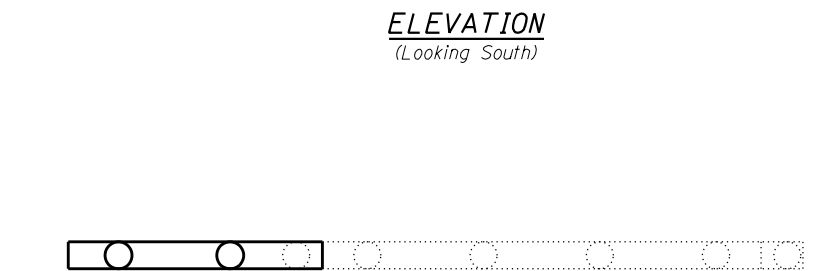
**ELEVATION**  
(Looking North)



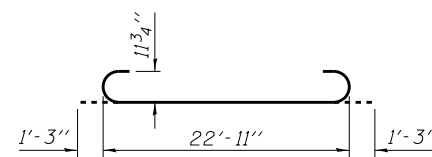
**ELEVATION**  
(Looking South)



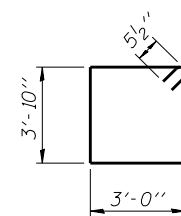
**DETAIL A**



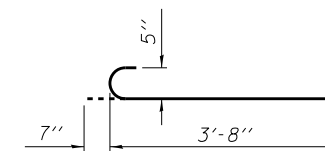
**SECTION A-A**



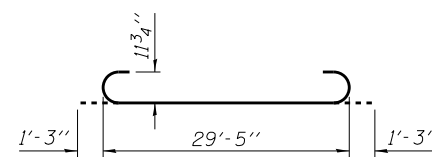
**BAR v39(E)**



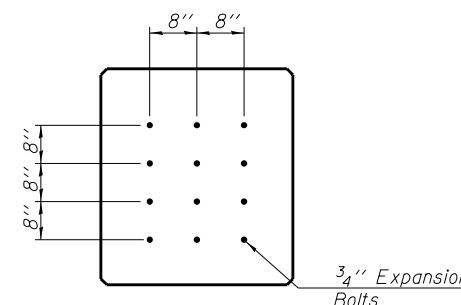
**BAR s30(E)**



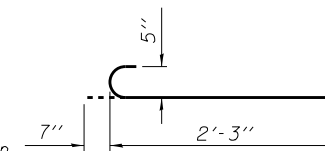
**BAR t10(E)**



**BAR p28(E)**



**EXPANSION BOLT DETAIL**  
(24 required)

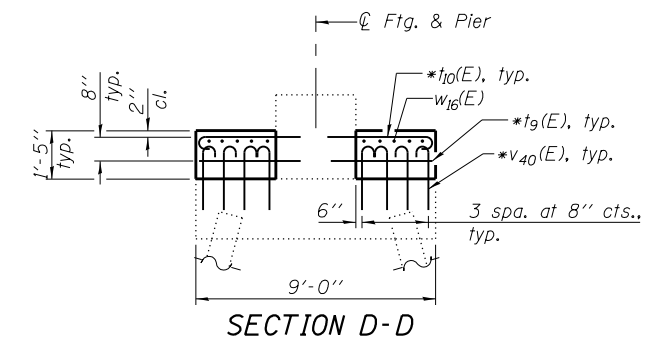


**BAR v40(E)**

- Note 1:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap and crashwall. Provide 4- #4 spacers or equivalent.
- Note 2:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Provide 4- #4 spacers or equivalent.
- Note 3:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap. Provide 4- #4 spacers or equivalent.
- Note 4:  
Provide 1/2 extra turns shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into crashwall. Provide 4- #4 spacers or equivalent.

- ① Allowable substitution:  
Provide 1/2 extra turns top and bottom with 135° standard hook into core at each end of spiral.
- ② Allowable substitution:  
Provide 1/2 extra turns top with 135° standard hook into core at each end of spiral.
- ③ Allowable substitution:  
Provide 1/2 extra turns bottom with 135° standard hook into core at each end of spiral.
- ④ Splicing of bars will not be allowed in this region.

Notes:  
When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall terminate with a 135° standard hook.  
Existing reinforcement shall be cleaned and incorporated into new construction. Cost included in concrete removal. Cut ends of existing reinforcement extending into new construction to maintain 1/2" minimum clearance.  
For substructure removal details, see sheet 18 of 143.



**SECTION D-D**

\* Grout bars 12" into existing concrete in accordance with Section 584 of the Standard Specification.

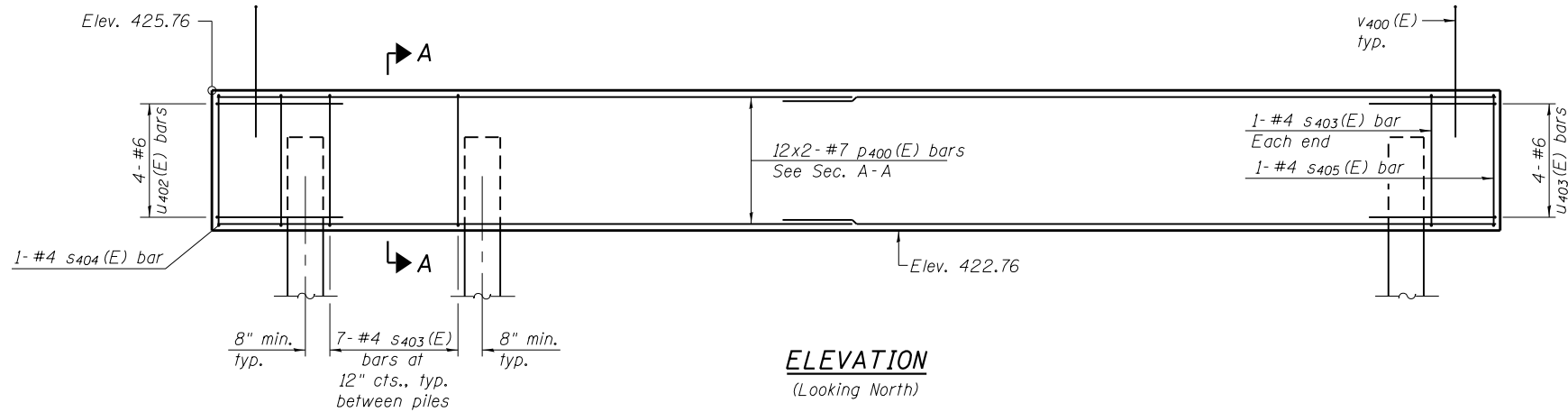
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h72(E)	6	#4	17'-8"	—
h73(E)	5	#9	17'-8"	—
h74(E)	8	#6	29'-5"	—
p27(E)	5	#9	29'-5"	—
p28(E)	5	#9	31'-11"	U
p29(E)	4	#6	6'-0"	—
s11(E)	18	#4	13'-8"	U
s12(E)	18	#4	9'-0"	U
s13(E)	35	#4	10'-2"	O
s15(E)	6	#4	5'-0"	U
s30(E)	40	#5	14'-7"	□
SD24(E)	2	#4	14'-7"	W
t7(E)	31	#10	14'-2"	—
t8(E)	18	#6	14'-2"	—
t9(E)	132	#5	3'-8"	—
t10(E)	132	#5	4'-3"	—
u4(E)	10	#6	6'-11"	U
v39(E)	24	#9	25'-5"	U
v40(E)	528	#5	2'-10"	U
w15(E)	32	#6	18'-8"	—
w16(E)	20	#6	24'-3"	—
Concrete Removal			Cu. Yd.	4.2
Structure Excavation			Cu. Yd.	179
Concrete Structures			Cu. Yd.	59.1
Reinforcement Bars, Epoxy Coated			Pound	11,870
Furnishing Metal Shell Piles 14" x 0.250"			Foot	945
Driving Piles			Foot	945
Expansion Bolts 3/4"			Each	24
Acrylic Coating			Sq. Yd.	11
Fiber Wrap			Sq. Ft.	102
Mechanical Splicers			Each	32

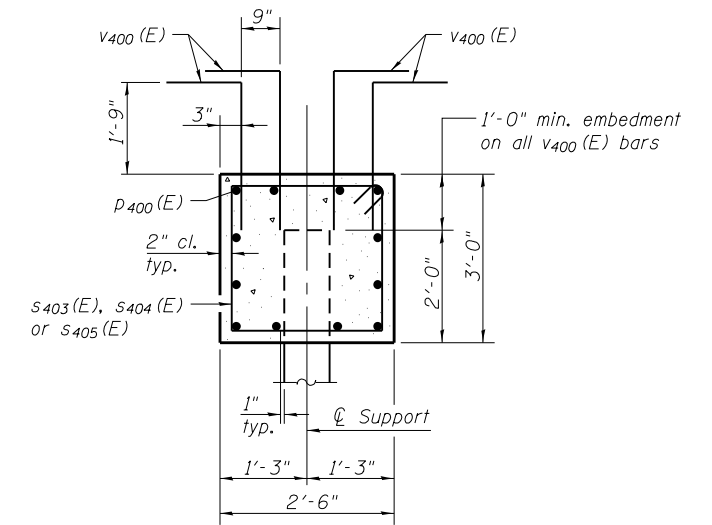
\*\* Length is height of spiral.

- Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)
- Structural Repair of Concrete (Depth Greater Than 5 inches)
- Epoxy Crack Injection

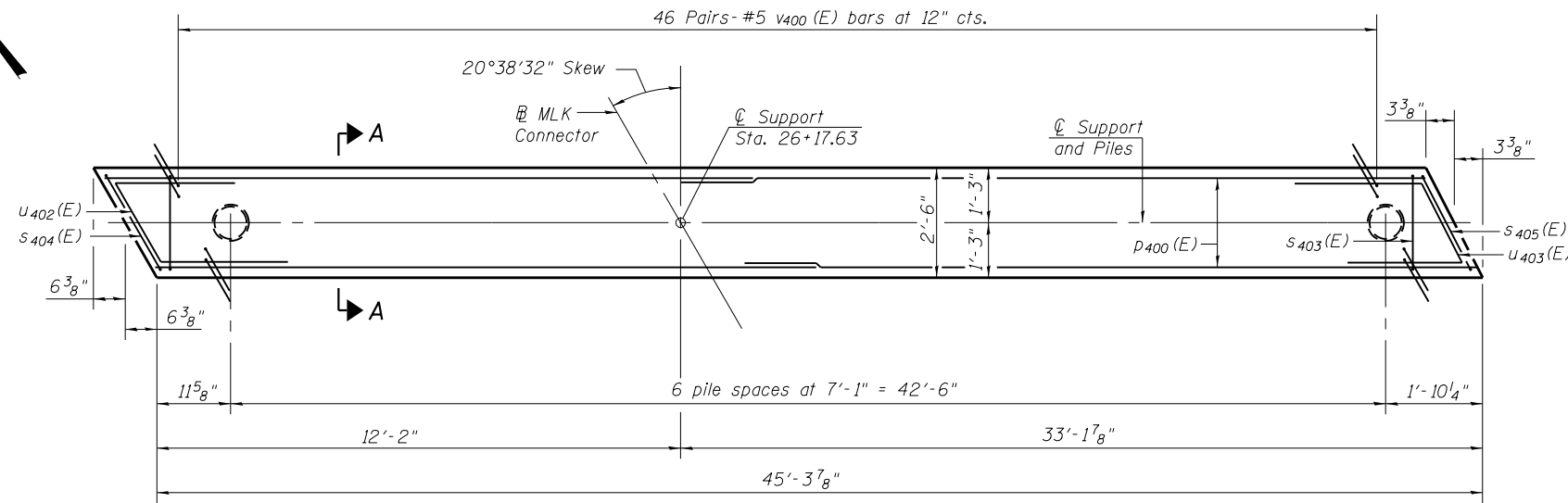
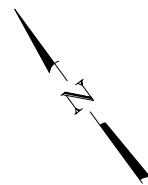
**LEGEND**



**ELEVATION**  
(Looking North)



**SECTION A-A**

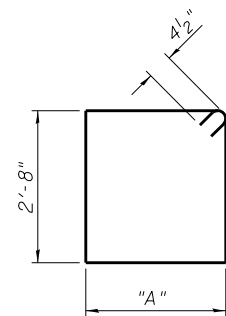


**PLAN**

**MINIMUM BAR LAP**  
#7 bar = 5'-2"

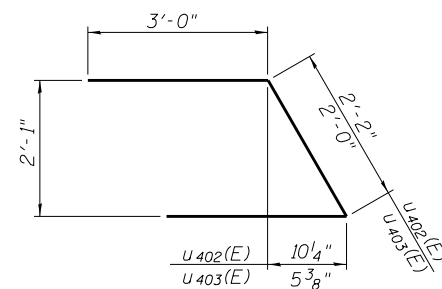
**PILE DATA**

Type: Metal Shell Piles 14" x 0.250"  
Nominal Required Bearing: 331 Kips  
Allowable Resistance Available: 110 Kips  
Est. Length: 55'-0"  
No. Production Piles: 7  
No. Test Piles: 0

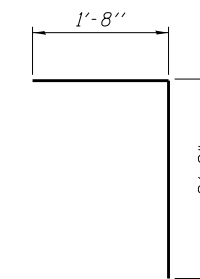


Bar	"A"
S403(E)	2'-2"
S404(E)	2'-4"
S405(E)	2'-3"

**BARS S403(E), S404(E) & S405(E)**



**BARS U402(E) & U403(E)**

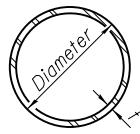


**BAR V400(E)**

**BILL OF MATERIAL**

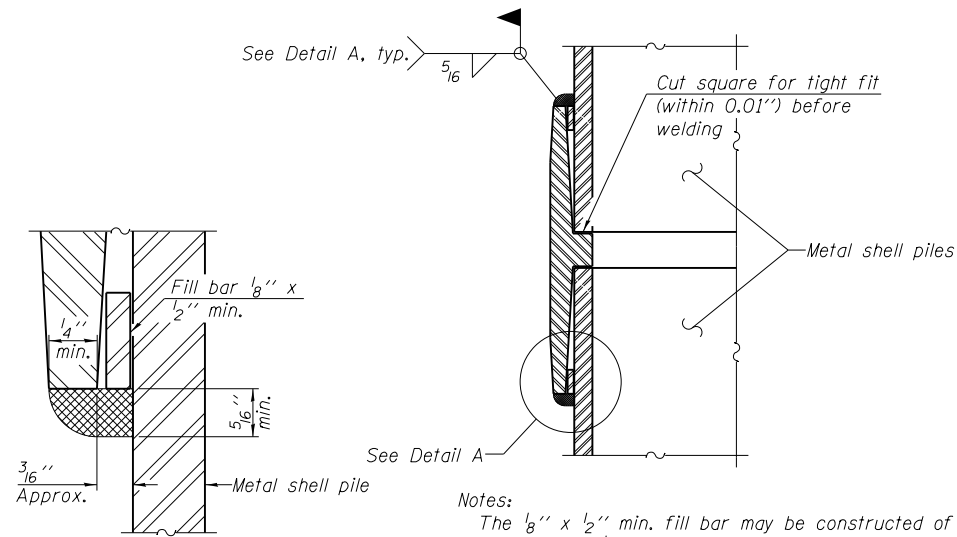
Bar	No.	Size	Length	Shape
P400(E)	24	#7	25'-1"	—
S403(E)	44	#4	10'-5"	□
S404(E)	1	#4	10'-9"	□
S405(E)	1	#4	10'-7"	□
U402(E)	4	#6	8'-2"	⌒
U403(E)	4	#6	8'-0"	⌒
V400(E)	184	#5	4'-5"	⌒
Structure Excavation		Cu. Yd.	35.8	
Concrete Structures		Cu. Yd.	12.7	
Reinforcement Bars, Epoxy Coated		Pound	2500	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	385	
Driving Piles		Foot	385	

082000-76009-123-Approach Support 5 Details.dgn



**METAL SHELL PILE TABLE**

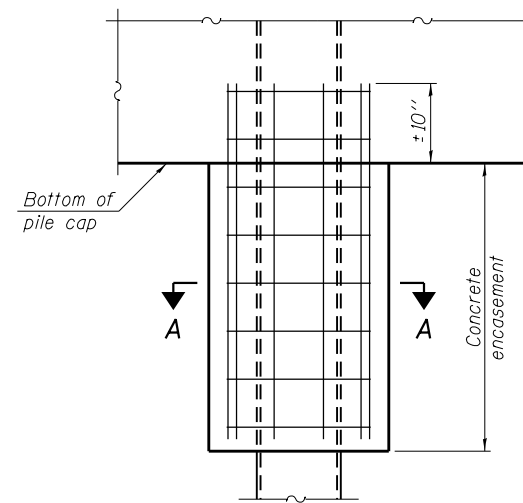
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. <sup>3</sup> /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



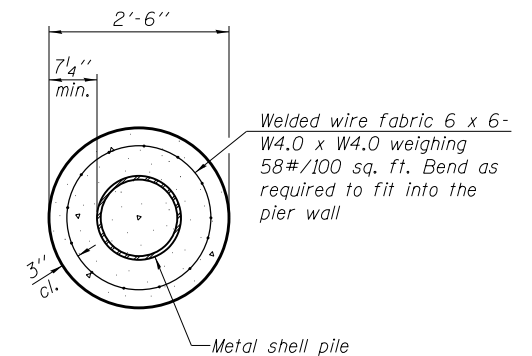
**DETAIL A**

**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.

**WELDED COMMERCIAL SPLICE**



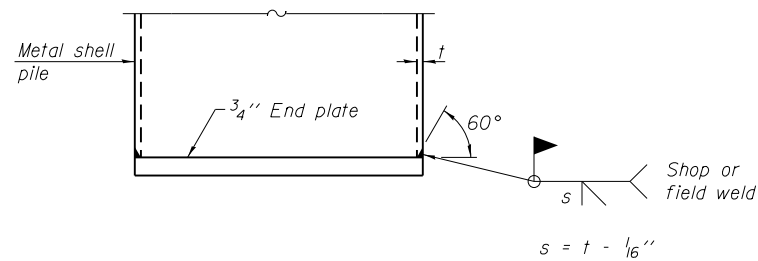
**ELEVATION**



**SECTION A-A**

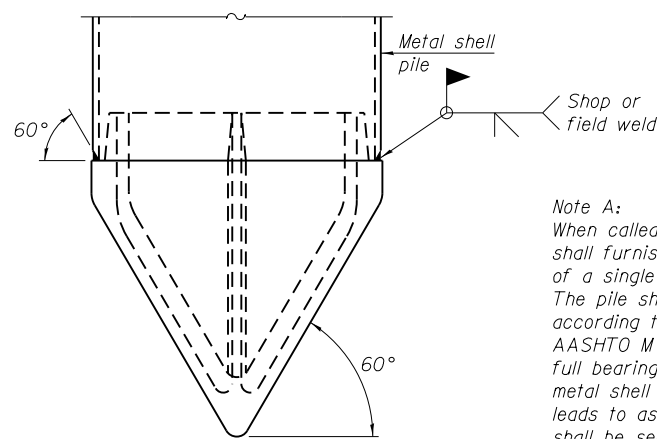
**Note:**  
 Forms for encasement may be omitted when soil conditions permit.

**CONCRETE ENCASEMENT AT PIERS**



**END PLATE ATTACHMENT**

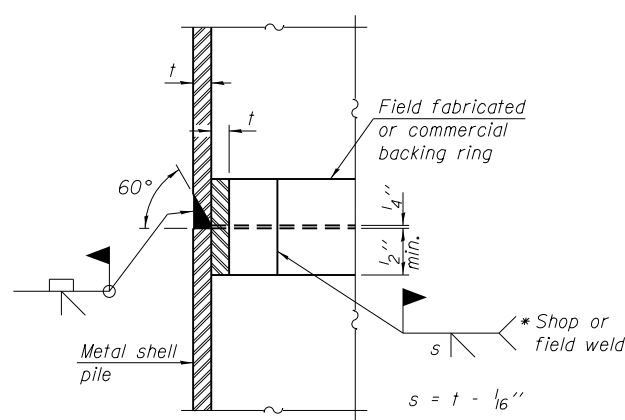
$s = t - 1/16"$



**METAL SHELL PILE SHOE ATTACHMENT**

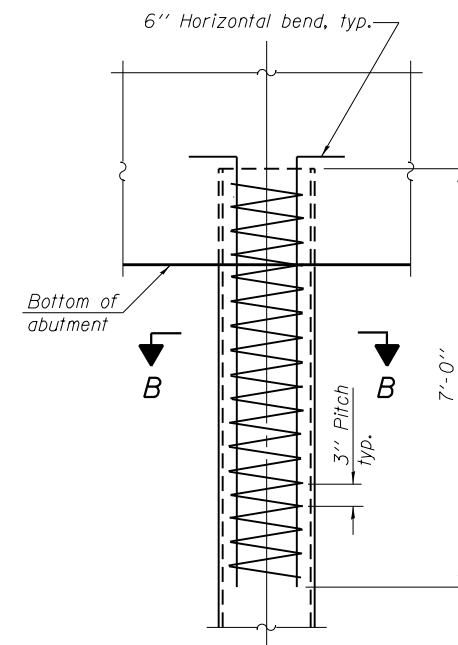
(See Note A)

**Note A:**  
 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.



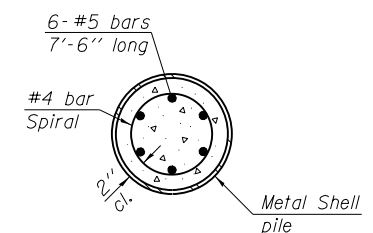
**COMPLETE PENETRATION WELD SPLICE**

\* 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**

**METAL SHELL REINFORCEMENT AT ABUTMENTS**



**SECTION B-B**

**Note:**  
 The metal shell piles shall be according to ASTM A 252 Grade 3.

F-MS 1-27-12

FILE NAME = X:\1309400-MLK\Cad\5\082010-76009.dgn	DESIGNED -	REVISED
USER NAME = elagemann	CHECKED -	REVISED
PLOT SCALE =	DRAWN - J.N. Bailey	REVISED
PLOT DATE = 8/7/2014	CHECKED - E.M. Lagemann	REVISED

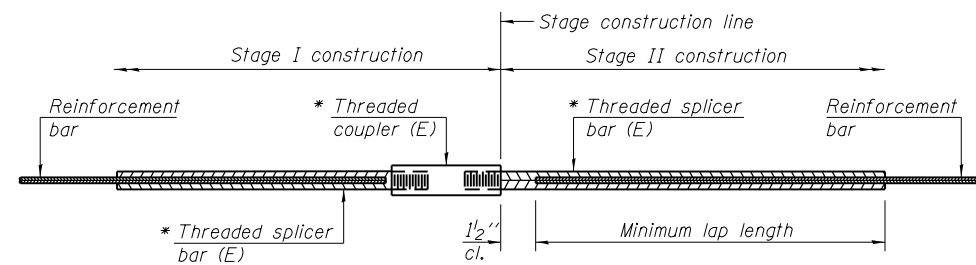
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PILE DETAILS  
 STRUCTURE NO. 082-0010**

SHEET NO. 124 OF 143 SHEETS

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	316
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				





**STANDARD BAR SPLICER ASSEMBLY**

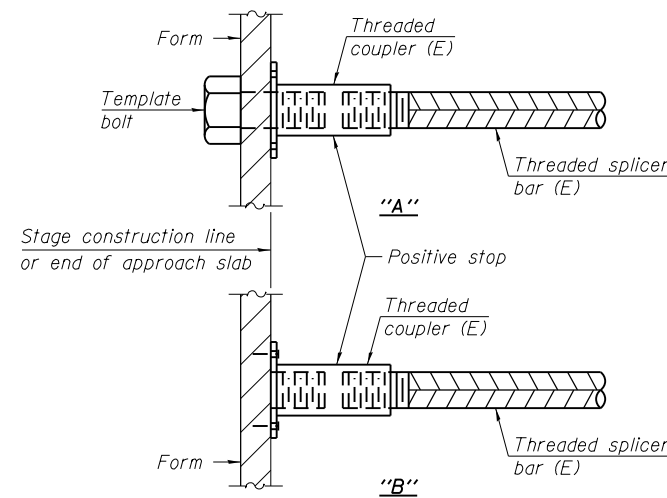
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

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

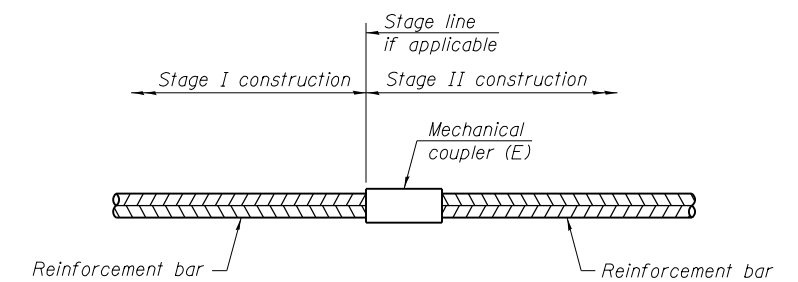
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Expansion Joint, S. Abut.	#6	4	Table 5
Expansion Joint, Pier 3B	#6	4	Table 5
Expansion Joint, Hinge	#5	2	Table 5
Expansion Joint, Hinge	#6	8	Table 5
Expansion Joint, N. Abut.	#5	3	Table 5
Expansion Joint, N. Abut.	#6	8	Table 5
S. Abut	#5	14	Table 5



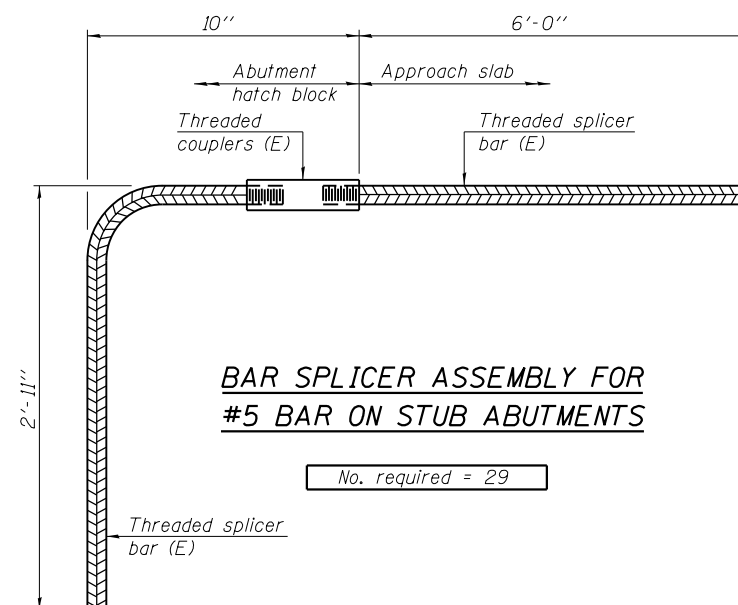
**INSTALLATION AND SETTING METHODS**

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



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required
Pier 4B	#4	6
Pier 4B	#8	11
Pier 4B	#9	19
Pier 5B	#4	6
Pier 5B	#6	22
Pier 5B	#9	5
Pier 6B	#4	12
Pier 6B	#6	16
Pier 6B	#8	40
Pier 6B	#9	100
Pier 7B	#4	16
Pier 7B	#6	10
Pier 7B	#8	4
Pier 7B	#9	11
Pier 8B	#6	22
Pier 9B	#6	22
Pier 10B	#4	6
Pier 10B	#6	28
Pier 10B	#8	41
Pier 10B	#9	20
Pier 10B	#10	60
Pier 11B	#6	30
Pier 12B	#6	32



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

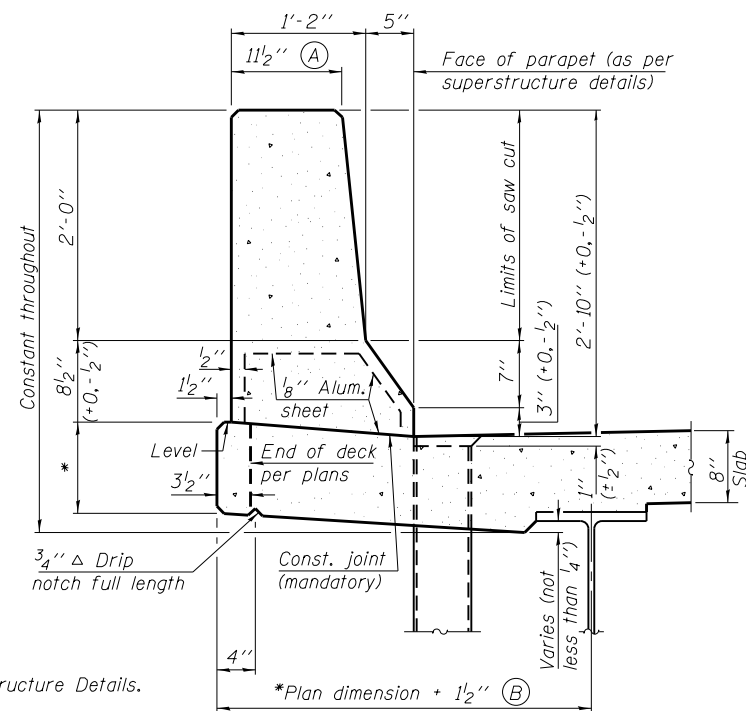
No. required = 29

**NOTES**

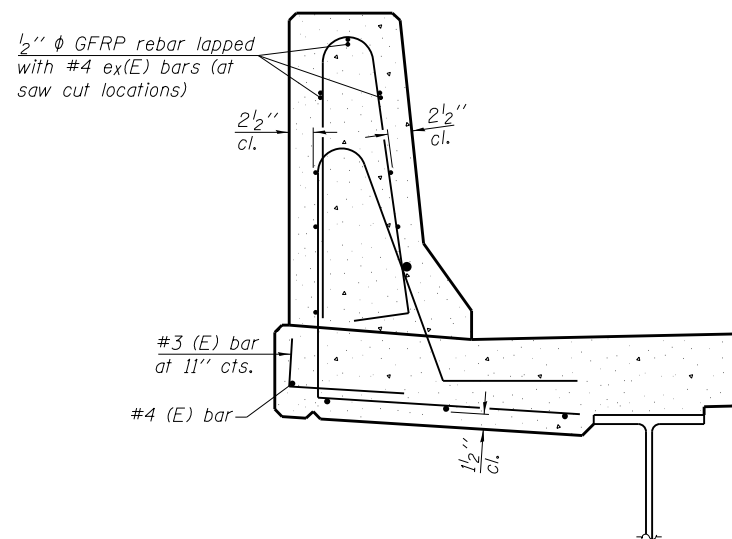
- Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
- All reinforcement shall be lapped and tied to the splicer bars.
- Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.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

**GENERAL NOTES**

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler. Steel superstructure shown. Other superstructure types similar.

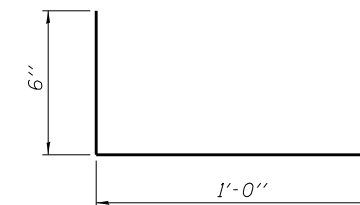


**34" F SHAPE PARAPET SECTION**  
(Showing dimensions)

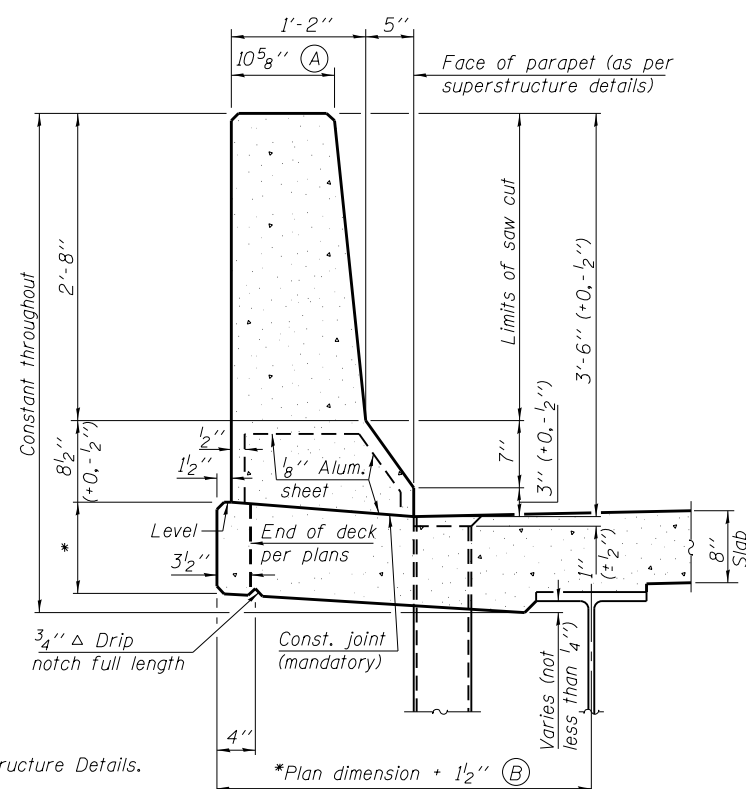


**SECTION**

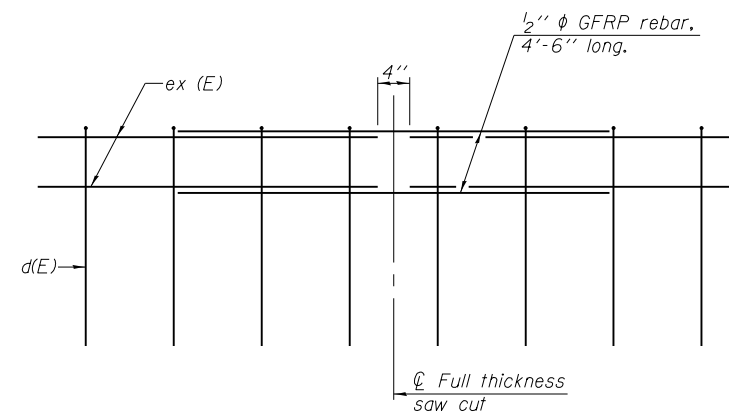
(34" parapet shown - 42" parapet similar)  
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



**#3 (E) BAR**

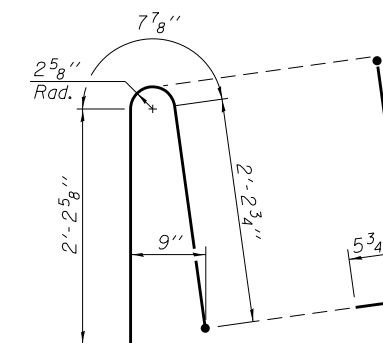


**42" F SHAPE PARAPET SECTION**  
(Showing dimensions)

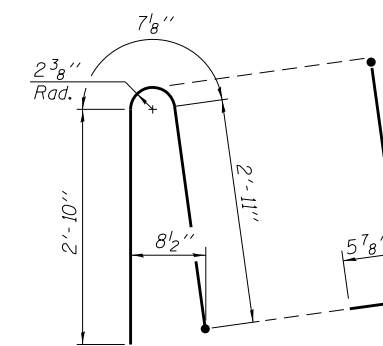


**GFRP REBAR STIFFENING DETAIL**

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



**ALTERNATE BAR d(E)**  
(For 34" parapet when conduit is present)



**ALTERNATE BAR d(E)**  
(For 42" parapet when conduit is present)

SFP 34-42 8-16-12

FILE NAME = X:\1309400-MLK\Cad\15\082200-7600.dgn	DESIGNED -	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE PARAPET SLIPFORMING OPTION STRUCTURE NO. 082-0010	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
USER NAME = elagemann	CHECKED -	REVISED			64	82-(1,4)B-1	ST. CLAIR	406	318	
PLOT SCALE =	DRAWN - E.M. Lagemann	REVISED			CONTRACT NO. 76G09					
PLOT DATE = 8/7/2014	CHECKED - T.S. Friederich	REVISED			SHEET NO. 126 OF 143 SHEETS					





Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/27-10/1/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed North Abutment, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BULGE, UCS, MOISTURE).

Main soil log table with columns for soil description, depth, and soil properties. Includes entries like 'FILL: Brown, silt, trace roots, crushed rock, slag, A-4' and 'SAND: Brown, fine to coarse, A-3 (continued)'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
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SOIL BORING LOG

Date 9/27-10/1/2013

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COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BULGE, UCS, MOISTURE).

Main soil log table with columns for soil description, depth, and soil properties. Includes entries like 'SAND: Gray, fine, A-3 (continued)' and 'SAND: Gray, fine to coarse, trace gravel, A-1'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
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SOIL BORING LOG

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COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil descriptions with corresponding depth and classification data.

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Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/26-27/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil descriptions with corresponding depth and classification data.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/26-27/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 Station DEPTHS (ft) (ft) (ft) (ft) BULGES (in) (in) (in) (in) UCS (tsf) (%) MOISTURE (%) SURFACE WATER ELEV. Stream Bed Elev. GROUNDWATER ELEV.: First Encounter Upon Completion After N/A Hrs.

Table with columns for depth, soil description, and test results. Includes soil types like SAND and A-1-b, and groundwater levels.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/26-27/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 Station DEPTHS (ft) (ft) (ft) (ft) BULGES (in) (in) (in) (in) UCS (tsf) (%) MOISTURE (%) SURFACE WATER ELEV. Stream Bed Elev. GROUNDWATER ELEV.: First Encounter Upon Completion After N/A Hrs.

Table with columns for depth, soil description, and test results. Includes soil types like SAND, GRAVEL, and LIMESTONE, and groundwater levels.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/18-19/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010  
Station

BORING NO. BB-10  
Station 28+34.11  
Offset 12 ft RT  
Ground Surface Elev. 416.2 ft

Table with columns: DEPTH (ft), BLOW COUNT (blows/ft), UCS (tsf), MOISTURE (%), and SOIL DESCRIPTION. Includes data for various soil layers like CONCRETE RUBBLE, CRUSHED ROCK, SAND, and SILTY LOAM.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
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SOIL BORING LOG

Date 9/18-19/2013

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SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010  
Station

BORING NO. BB-10  
Station 28+34.11  
Offset 12 ft RT  
Ground Surface Elev. 416.2 ft

Table with columns: DEPTH (ft), BLOW COUNT (blows/ft), UCS (tsf), MOISTURE (%), and SOIL DESCRIPTION. Includes data for various soil layers like SANDY LOAM, SAND, and GRAVEL.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/18-19/2013

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SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BLOW COUNT, UCS, MOISTURE).

Main soil log table with columns for description, depth, blow count, UCS, and moisture. Includes entries for SAND, GRAVEL, and Limestone.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/17-18/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BLOW COUNT, UCS, MOISTURE).

Main soil log table with columns for description, depth, blow count, UCS, and moisture. Includes entries for FILL, SAND, SILTY LOAM, and CLAY.

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**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering Inc

# SOIL BORING LOG

Page 2 of 3

Date 9/17-18/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 DEPT H S Qu T Surface Water Elev. -- ft DEPT H S Qu T  
 Station 29+15.08 Stream Bed Elev. -- ft DEPT H S Qu T  
 BORING NO. BB-11 Groundwater Elev.: First Encounter 386.6 ft ▼ DEPT H S Qu T  
 Station 29+15.08 Upon Completion N/A ft DEPT H S Qu T  
 Offset 14 ft RT After N/A Hrs. N/A ft DEPT H S Qu T  
 Ground Surface Elev. 415.1 ft (ft) (/6") (tsf) (%) (ft) (/6") (tsf) (%)

SANDY LOAM: Brown, with organics, A-2 (continued)					SAND: Gray, fine, with gravel, A-3 (continued)				
SAND: Gray, fine, trace gravel, A-3									
2.5" clay layer	9		NC	28		17		NC	
	7					27			
	13					33			
SAND: Brown, fine to coarse, with gravel, A-1-b					SAND: Gray, fine to coarse, with gravel A-1-b				
	2		NC			6		NC	
	3					4			
	6					6			
Becomes gray, trace gravel	6		NC			7		NC	
	8					5			
	11					6			
SAND: Gray, fine, with gravel, A-3					SAND: Gray, fine to coarse, trace gravel and organics, A-3				
	9		NC			5		NC	
	9					11			
	14					11			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering Inc

# SOIL BORING LOG

Page 3 of 3

Date 9/17-18/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 DEPT H S Qu T Surface Water Elev. -- ft DEPT H S Qu T  
 Station 29+15.08 Stream Bed Elev. -- ft DEPT H S Qu T  
 BORING NO. BB-11 Groundwater Elev.: First Encounter 386.6 ft ▼ DEPT H S Qu T  
 Station 29+15.08 Upon Completion N/A ft DEPT H S Qu T  
 Offset 14 ft RT After N/A Hrs. N/A ft DEPT H S Qu T  
 Ground Surface Elev. 415.1 ft (ft) (/6") (tsf) (%) (ft) (/6") (tsf) (%)

SAND: Gray, fine to coarse, trace gravel and organics, A-3 (continued)					SAND: Gray, fine to coarse, trace gravel, A-1 (continued)				
Possible boulder, rough drilling observed	8		NC			19		NC	
	9					33			
	43					34			
SAND: Gray, fine to coarse, with gravel, A-1					SAND: Gray, fine to coarse, with gravel, A-1				
Possible boulder, rough drilling observed	16		NC		Possible boulder, little recovery Rough drilling observed	50/2"		NC	
	17								
	25								
	15		NC		SANDY SHALEY CLAY LOAM: Gray, with sand layers, trace gravel, A-4	59		0.6	9
	23					50/4"		S/5	
	26								
					LIMESTONE	10/0"			
					Boring terminated at 117.0 ft. Boring grouted to 117 ft.				
Trace gravel	15		NC						
	21								
	25								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)





SOIL BORING LOG

Date 9/16-17/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

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

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/16-17/2013

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COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

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

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)





Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/24-25/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BLOW COUNT, UCS, MOISTURE).

Main soil log table with columns for soil description, depth, blow count, UCS, and moisture content. Includes entries for SAND, CLAY, and various soil observations.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/24-25/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BLOW COUNT, UCS, MOISTURE).

Main soil log table with columns for soil description, depth, blow count, UCS, and moisture content. Includes entries for SAND, CLAY, and various soil observations.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/20-24/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 Station DEPTHS (ft) (6") (tsf) (%) SURFACE WATER ELEV. Stream Bed Elev. GROUNDWATER ELEV.: First Encounter Upon Completion After N/A Hrs.

Table with columns for depth, soil description, and classification. Includes entries for SAND (A-3, A-2, A-1), CLAY (A-7-6), and Brick and Concrete.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

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SOIL BORING LOG

Date 9/20-24/2013

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SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 Station DEPTHS (ft) (6") (tsf) (%) SURFACE WATER ELEV. Stream Bed Elev. GROUNDWATER ELEV.: First Encounter Upon Completion After N/A Hrs.

Table with columns for depth, soil description, and classification. Includes entries for SAND (A-1, A-3), CLAY (A-1-b), and Brick and Concrete.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/20-24/2013

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SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BLOW COUNT, UCS, MOISTURE).

Main soil log table with columns for description, depth, blow count, UCS, and moisture. Includes entries for SAND, GRAVEL, and SHALEY CLAY LOAM.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/12-13/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BLOW COUNT, UCS, MOISTURE).

Main soil log table with columns for description, depth, blow count, UCS, and moisture. Includes entries for SAND, GRAVEL, and SHALEY CLAY LOAM.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/12-13/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil data columns (DEPTH, BLOW COUNT, etc.).

Main soil log table with columns for soil description, elevation, and blow count data. Includes entries like 'SAND: Gray, fine to coarse, trace gravel, A-1-b' and 'SANDY LOAM: Gray, trace gravel, A-2'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/12-13/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil data columns (DEPTH, BLOW COUNT, etc.).

Main soil log table with columns for soil description, elevation, and blow count data. Includes entries like 'SAND: Gray, fine to coarse, trace gravel and organics, A-1' and 'LIMESTONE'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/11-12/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 Station DEPTHS (ft) (ft) (ft) (ft) BULGE (in) (in) (in) (in) UCS (tsf) (tsf) (tsf) (tsf) M O I S T GROUNDWATER ELEV.: First Encounter 387.2 ft Upon Completion N/A ft After N/A Hrs. N/A ft

Table with columns for depth, soil description, and classification. Includes entries like 'FILL: Brown, silty clay loam...', 'SAND: Brown, fine, A-3', and 'Trace organics'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/11-12/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 Station DEPTHS (ft) (ft) (ft) (ft) BULGE (in) (in) (in) (in) UCS (tsf) (tsf) (tsf) (tsf) M O I S T GROUNDWATER ELEV.: First Encounter 387.2 ft Upon Completion N/A ft After N/A Hrs. N/A ft

Table with columns for depth, soil description, and classification. Includes entries like 'SAND: Brown, fine, A-3', 'Trace gravel', 'Becomes gray', and 'No gravel'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/11-12/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 Station DEPTHS (ft) (ft) (ft) (ft) BULGE (ft) (ft) (ft) (ft) UCS (tsf) (%) MOISTURE (%) Surface Water Elev. Stream Bed Elev. Groundwater Elev.: First Encounter Upon Completion After N/A Hrs.

Table with columns for depth, soil type, and test results. Includes entries for SAND, GRAVEL, Limestone, and various soil descriptions with corresponding depth and test data.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering Inc

SOIL BORING LOG

Date 9/10-11/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (BCR/JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 Station DEPTHS (ft) (ft) (ft) (ft) BULGE (ft) (ft) (ft) (ft) UCS (tsf) (%) MOISTURE (%) Surface Water Elev. Stream Bed Elev. Groundwater Elev.: First Encounter Upon Completion After N/A Hrs.

Table with columns for depth, soil type, and test results. Includes entries for CRUSHED ROCK, FILL, CLAY, SAND, and various soil descriptions with corresponding depth and test data.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)







SOIL BORING LOG

Date 9/9-10/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (BCR)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 Station DEPTHS (ft) BLOW S (ft) UCS (tsf) MOIST (%) Surface Water Elev. -- ft Stream Bed Elev. -- ft Groundwater Elev.: First Encounter 387.7 ft Upon Completion N/A ft After N/A Hrs. N/A ft

Table with columns for depth, blow count, UCS, moisture, and soil description. Includes entries for fill, sandy loam, silty loam, and sand.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 9/9-10/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (BCR)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010 Station DEPTHS (ft) BLOW S (ft) UCS (tsf) MOIST (%) Surface Water Elev. -- ft Stream Bed Elev. -- ft Groundwater Elev.: First Encounter 387.7 ft Upon Completion N/A ft After N/A Hrs. N/A ft

Table with columns for depth, blow count, UCS, moisture, and soil description. Includes entries for sand, gravel, and wood.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



**Illinois Department  
of Transportation**

Division of Highways  
SCI Engineering Inc

# SOIL BORING LOG

Page 3 of 3

Date 9/9-10/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (BCR)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0010

Station \_\_\_\_\_

BORING NO. BB-18

Station 37+22.40

Offset 23 ft RT

Ground Surface Elev. 412.2 ft

D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. _____ ft	D E P T H	B L O W S	U C S Qu	M O I S T	
(ft)	(/6")	(tsf)	(%)	Stream Bed Elev. _____ ft	(ft)	(/6")	(tsf)	(%)	
				Groundwater Elev.:					
				First Encounter <u>387.7</u> ft ▽					
				Upon Completion <u>N/A</u> ft					
				After <u>N/A</u> Hrs. <u>N/A</u> ft					
GRAVEL: With fine to coarse sand, A-1 (continued)				SAND: Gray, fine to coarse, trace gravel, A-1 (continued)					
330.2									
SAND: Gray, fine to coarse, trace gravel, A-1				Possible cobbles					
9		NC			23		NC		
11					23				
-85	16				-105	57			
				GRAVEL: With fine to coarse sand, A-1					
305.2									
14		NC			32		NC		
20					29				
-90	22				-110	39			
				LIMESTONE					
299.2									
298.7									
16		NC			25/0"				
27									
-95	41				-115				
Becomes brown				Boring terminated at 113.5 ft. Boring grouted to 113.5 ft.					
26		NC							
24									
-100	17				-120				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

FILE NAME = X:\1309400-MLK\Cad\10-76009.dgn	DESIGNED -	REVISED
USER NAME = elagemann	CHECKED -	REVISED
PLOT SCALE =	DRAWN - S.R. Hooker	REVISED
PLOT DATE = 8/7/2014	CHECKED - J.J. Derner	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BORING LOGS  
STRUCTURE NO. 082-0010**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	335
			CONTRACT NO. 76G09	
SHEET NO. 143 OF 143 SHEETS				ILLINOIS FED. AID PROJECT



Bench Mark: Chiseled square on Southeast end of the M.L. King Bridge, on Southwest corner of concrete slab. Elev. 439.63.

Existing Structure: None.

**INDEX OF SHEETS**

1. General Plan & Elevation
2. General Data
3. MSE Wall Details
4. MSE Wall Details for Drainage Structures
5. Stage Construction Details
- 6.-7. Permanent Steel Sheet Piling
- 8.-12. Anchor Slab & Parapet Details
- 13.-25. Soil Borings

STATION 6+20.12  
BUILT BY  
STATE OF ILLINOIS  
F.A.I. 64 SECTION 82-(1, 4)B-1  
LOADING HL-93  
STRUCTURE NO. 082-W314

**NAME PLATE**  
See Std. 515001

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 2  
Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.24g  
Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.54g  
Soil Site Class = D

**DESIGN SPECIFICATIONS**

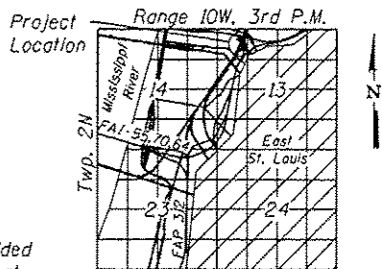
2012 AASHTO LRFD Design Specifications,  
6th Edition with 2013 Interims

**DESIGN STRESSES**

**FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)  
fy = 50,000 psi (Permanent Steel Sheet Piling)

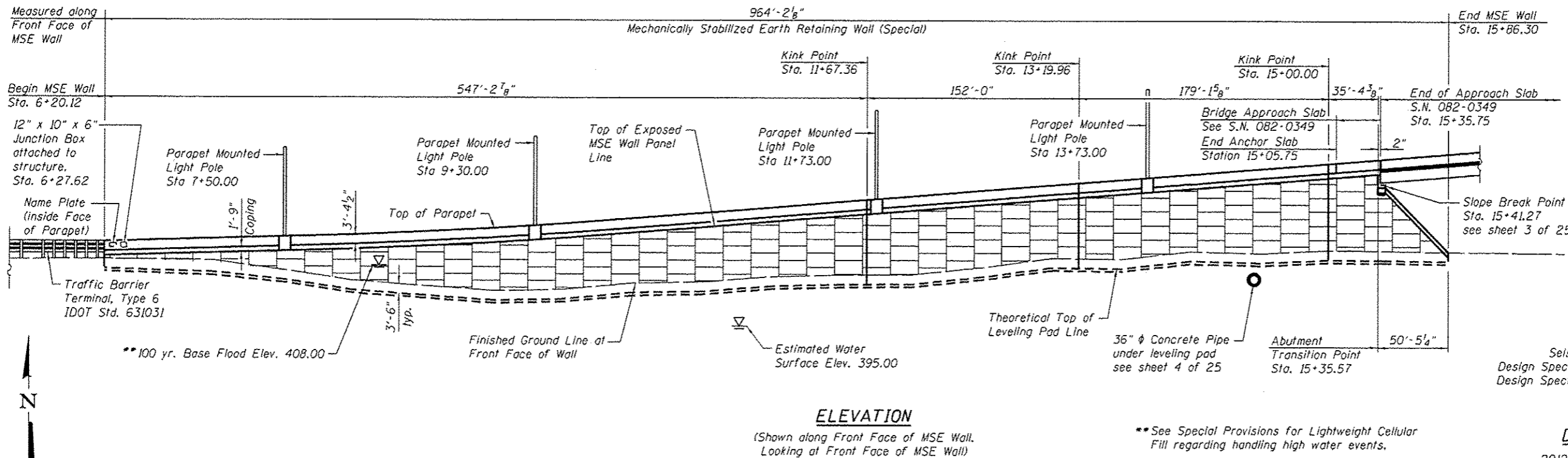
**PRECAST UNITS**  
f'c = 4,500 psi (Precast Panels)

**LIGHTWEIGHT CELLULAR CONCRETE FILL**  
Maximum Cast Density 37 pcf  
f'c = 5,000 pcf



**GENERAL PLAN & ELEVATION**

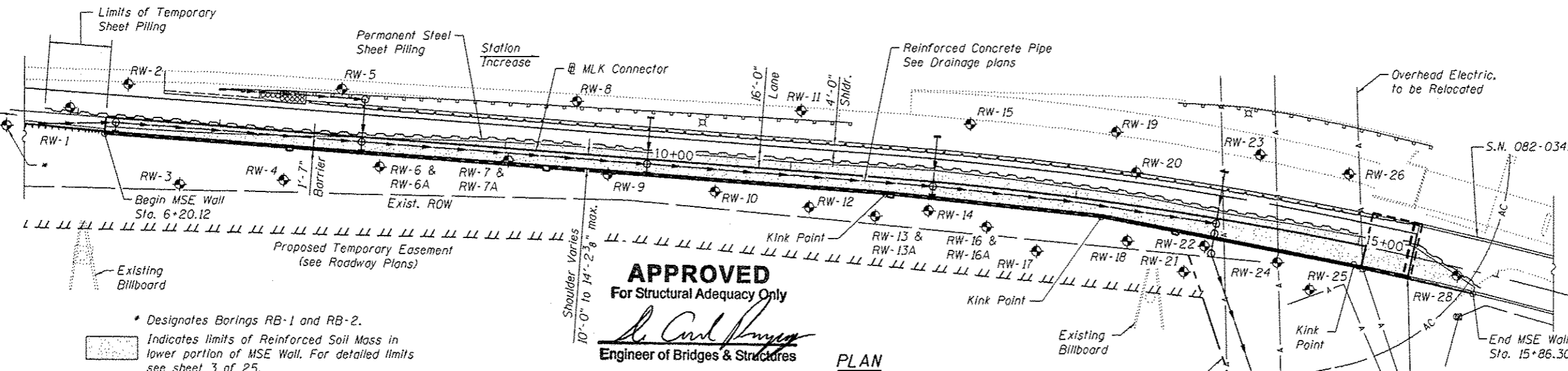
**MLK CONNECTOR OVER IL RTE. 3,  
UPRR AND TRRA  
F.A.I. 64 - SECTION 82-(1,4)B-1  
ST. CLAIR COUNTY  
STATION 6+20.12 TO 15+86.30  
STRUCTURE NO. 082-W314**



**ELEVATION**

(Shown along Front Face of MSE Wall,  
Looking at Front Face of MSE Wall)

\*\* See Special Provisions for Lightweight Cellular  
Fill regarding handling high water events.



**APPROVED**  
For Structural Adequacy Only

*Carl P. ...*  
Engineer of Bridges & Structures

**PLAN**

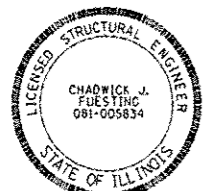
**Notes:**

- See sheet 3 of 25 for Typical Section thru Mechanically Stabilized Earth Retaining Wall (Special) and Abutment Transition information.
- See sheet 2 of 25 for Additional Elevation Information.
- See sheet 4 of 25 for Drainage Details.
- See sheet 6 of 25 for Temporary Sheet Piling.
- See sheets 8 thru 12 of 25 for Anchor Slab Details.
- See sheet 12 of 25 for Light Pole Pedestal Details.
- AC indicates Access Control for Temporary Right of Way.
- All wall mounted lights are 40 foot aluminum poles with 15 foot davit arms.
- See Electrical Plans for Lighting, Conduit and Junction Box Quantities.
- MSE Wall will be anchored by Approach Slab for S.N. 082-0349 between Stations 15+05.75 and Station 15+35.75. See S.N. 082-0349 plans for details.

**MSE WALL CONTROL POINTS**

Description	Station	Offset	Top of Exposed MSE Wall Panel Line	Finished Grade
Begin MSE Wall	6+20.12	11'-3"	414.86	415.98
Kink Point	11+67.36	11'-3"	429.96	406.79
Kink Point	13+19.96	11'-3"	436.06	413.48
Kink Point	15+00.00	15'-3"	443.11	417.25
Abutment Transition	15+35.57	15'-3 1/4"	444.70	417.25
Abutment Transition	15+35.57	15'-3 1/4"	438.05	417.25
Slope Break Point	15+41.27	15'-3 3/4"	438.05	417.17
End MSE Wall	15+86.30	15'-3"	416.90	416.90

(Offsets are Referenced from MLK Baseline to Front Face of Wall)

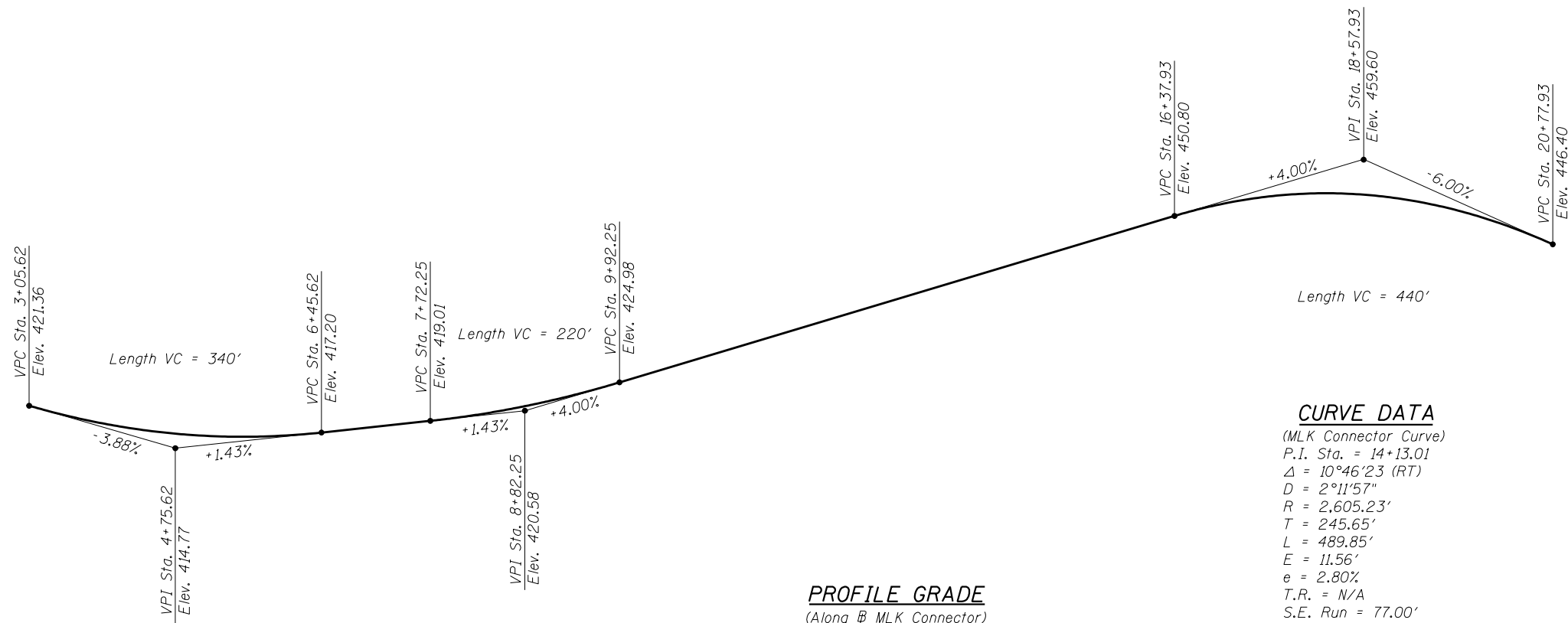


EXP. 11-30-2014  
Chadwick Justin Fuesting

USER NAME: dbeibel	DESIGNED: BB	REVISIONS:
Illinois Design Firm Number 184.001670	CHECKED: JD	REVISIONS:
PLLOT SCALE:	DRAWN: WS	REVISIONS:
PLLOT DATE: 9/22/2014	CHECKED: CJF	REVISIONS:

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,4/8-1	ST. CLAIR	406	336
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



**PROFILE GRADE**  
(Along MLK Connector)

**CURVE DATA**  
(MLK Connector Curve)  
P.I. Sta. = 14+13.01  
 $\Delta = 10^{\circ}46'23$  (RT)  
 $D = 2^{\circ}11'57$ "  
 $R = 2,605.23'$   
 $T = 245.65'$   
 $L = 489.85'$   
 $E = 11.56'$   
 $e = 2.80\%$   
 $T.R. = N/A$   
 $S.E. Run = 77.00'$   
 $P.C. Sta. = 11+67.36$   
 $P.C.C. Sta. = 16+57.21$

**MSE WALL ELEVATION TABLE**

Station	Offset	Top of Exposed MSE Wall Panel Line	Finished Grade
6+20.12	11'-3"	414.86	415.98
6+50.00	11'-3"	415.24	412.18
7+00.00	11'-3"	415.95	411.39
7+50.00	11'-3"	416.66	408.79
8+00.00	11'-3"	417.42	405.47
8+50.00	11'-3"	418.45	403.17
9+00.00	11'-3"	419.76	402.03
9+50.00	11'-3"	421.37	402.35
10+00.00	11'-3"	423.27	403.00
10+50.00	11'-3"	425.27	404.39
11+00.00	11'-3"	427.27	406.36
11+50.00	11'-3"	429.27	406.90
11+67.36	11'-3"	429.96	406.79
12+00.00	12'-0"	431.24	406.58
12+50.00	12'-4"	433.22	409.07
13+00.00	11'-9"	435.24	412.69
13+19.96	11'-3"	436.06	413.48
13+50.00	12'-9"	437.20	414.67
14+00.00	14'-6"	439.13	416.67
14+50.00	15'-4"	441.10	416.18
15+00.00	15'-3"	443.11	417.25
15+35.57	15'-3"	444.70	417.25
15+35.57	15'-3"	438.05	417.25
15+41.27	15'-3"	438.05	417.17
15+86.30	15'-3"	416.90	416.90

(Offsets are referenced from MLK Baseline to Front Face of MSE Wall)

**GENERAL NOTES**

- Slipforming of Parapet is Not Allowed.
- Reinforcement bars designated (E) shall be epoxy coated.
- Protective Coat shall be applied to the top of the anchor slab and along the front face & top surface of the parapet.
- Mechanically Stabilized Earth Retaining Wall, Special will use Lightweight Cellular Concrete Fill as select backfill.
- The driving or coring of metal shell piles through the Lightweight Cellular Concrete Fill shall not be allowed. For metal shell pile locations see structure plans for S.N. 082-0349.
- The design of the MSE wall internal stability shall be completed by using the assumption that the Lightweight Cellular Concrete within the reinforced mass has the properties of a granular soil with an internal angle of friction of 34 degrees and a unit weight of 120 pounds per cubic foot. For the materials behind the reinforced earth mass and above the sheeting, the design shall assume an embankment of granular soils with a weight of 120 pounds per cubic foot and internal angle of friction of 30 degrees.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Protective Coat	Sq. Yd.	1517
Structure Excavation	Cu. Yd.	3811
Concrete Superstructures	Cu. Yd.	653.4
Reinforcement Bars, Epoxy Coated	Pound	91,220
Name Plate	Each	1
Mechanically Stabilized Earth Retaining Wall, Special	Sq. Ft.	20,705
Braced Excavation	Cu. Yd.	55.0
Permanent Steel Sheet Piling	Sq. Ft.	27,463
Temporary Sheet Piling	Sq. Ft.	174
Pipe Drains 4" (Special)	Foot	662
Lightweight Cellular Concrete Fill	Cu. Yd.	13,620

FILE NAME: S:\ProJects\12-0024-025\_MLK\_Connector\Bridges\ogn\S\082W314\_MSE\_Wall\_Final\_Plans\082W314-76009-002-General Data.dgn



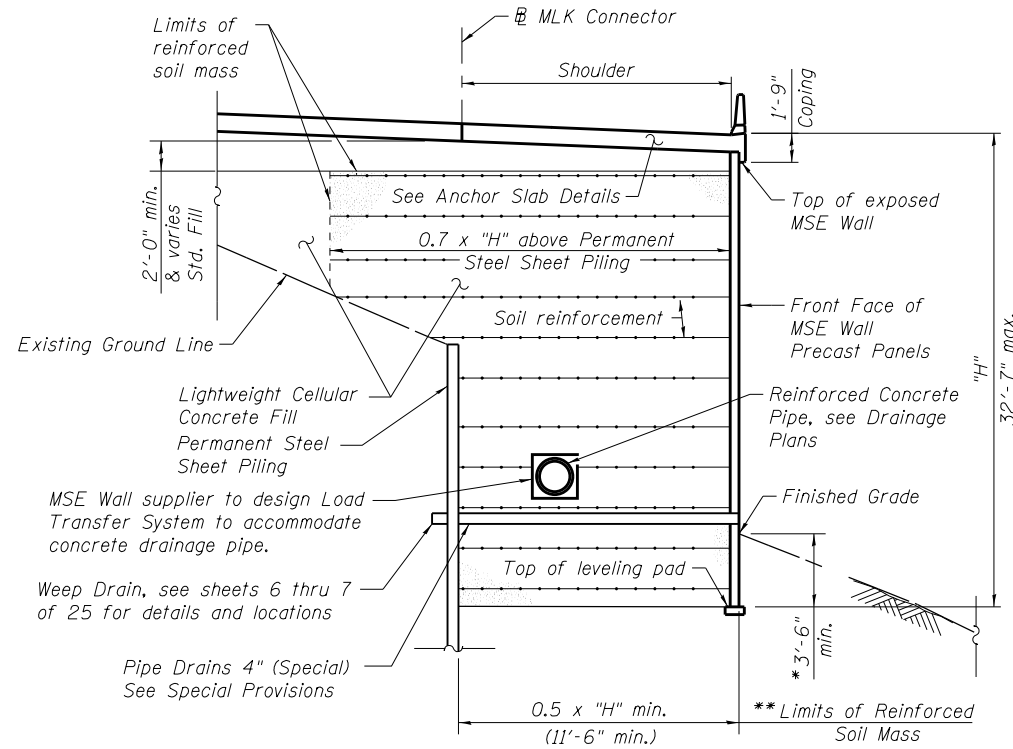
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Illinois Design Firm Number 184.001670	CHECKED - JD	REVISED
PLOT SCALE =	DRAWN - WS	REVISED
PLOT DATE = 11/20/2014	CHECKED - CJF	REVISED

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

**GENERAL DATA**  
**STRUCTURE NO. 082-W314**

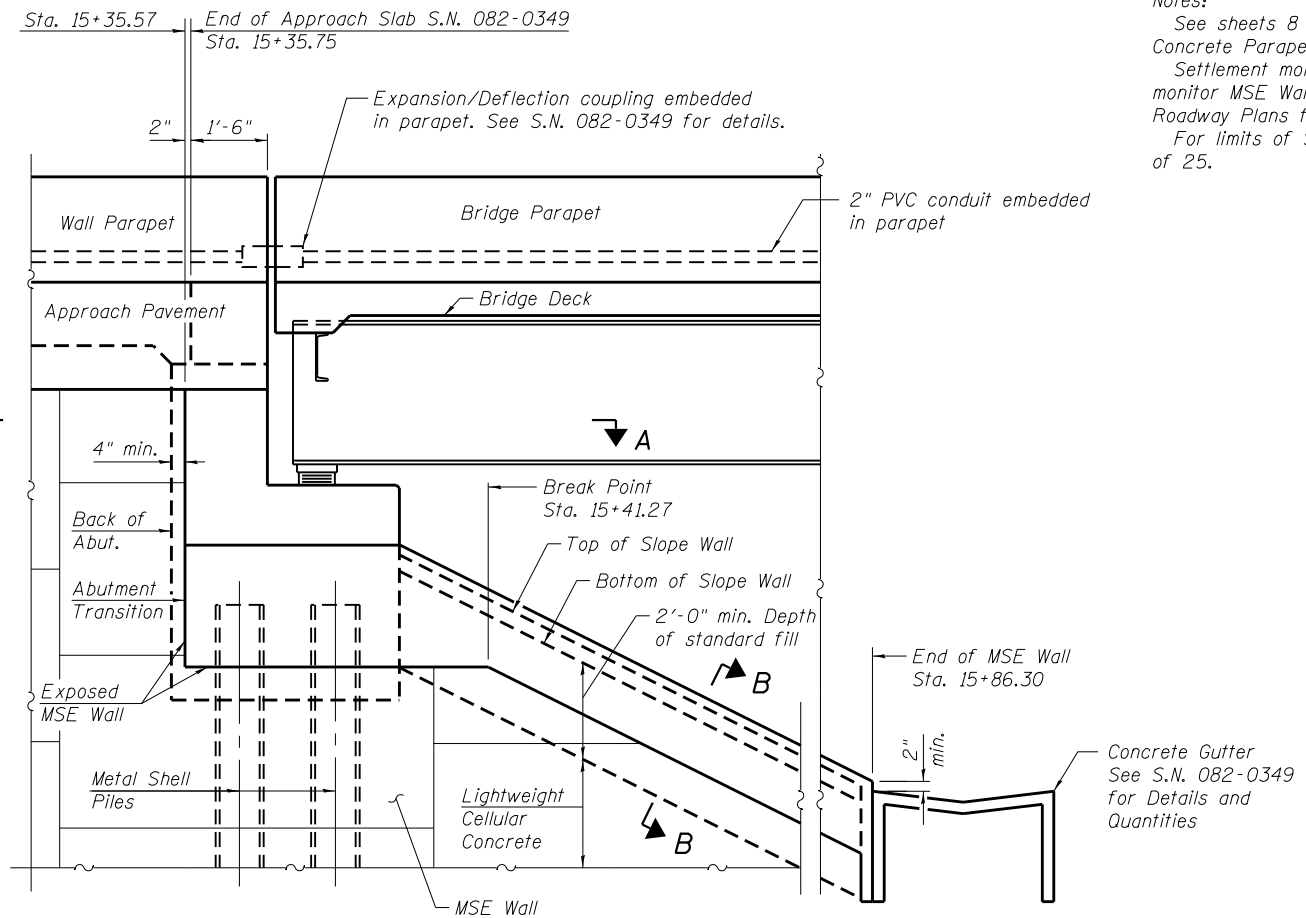
SHEET NO. 2 OF 25 SHEETS

F.A.I. RTE. 64	SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 337
CONTRACT NO. 76009			ILLINOIS FED. AID PROJECT	



**TYPICAL SECTION THRU MSE WALL**

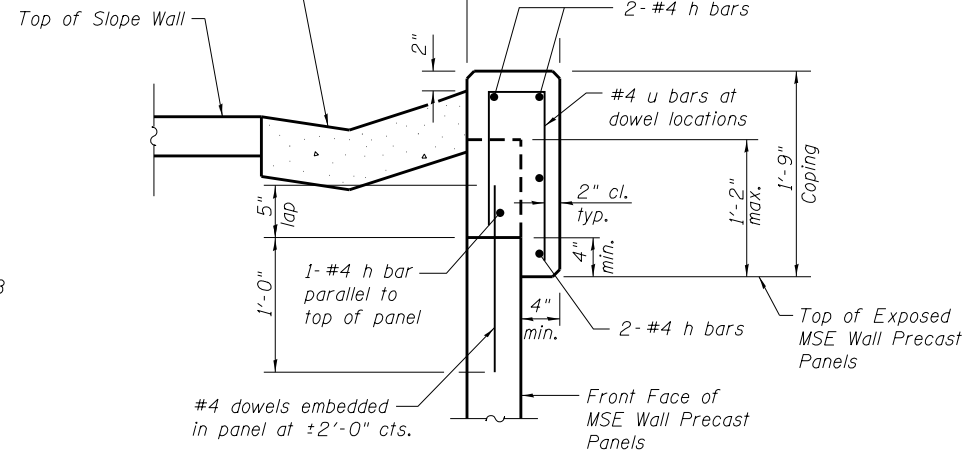
- \* The minimum dimension to the leveling pad must accommodate drainage structures as required. See Drainage Plans.
- \*\* The MSE wall supplier's internal stability design shall account for the Anchor Slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft of wall.



**END VIEW AT ABUTMENT & SLOPEWALL**

Notes:  
 See sheets 8 thru 12 of 25 for Anchor Slab and Concrete Parapet Details.  
 Settlement monitoring devices shall be installed to monitor MSE Wall, Special and fill embankment. See Roadway Plans for locations of monitoring devices.  
 For limits of Structure Excavation see sheet 5 of 25.

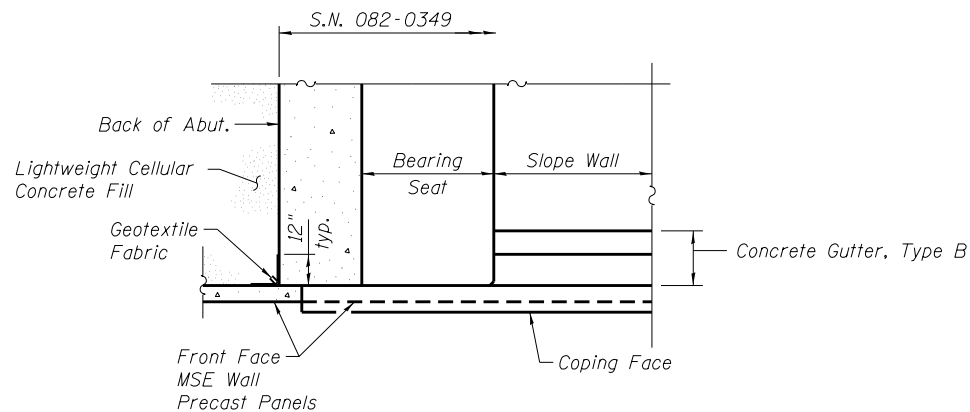
Concrete Gutter, Type B  
 IDOT Standard 606201-02  
 Cost included with  
 S.N. 082-0349



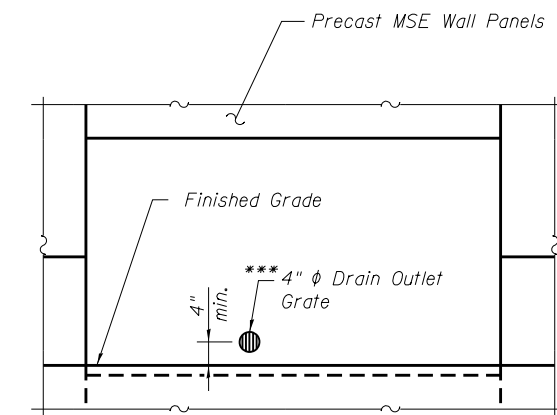
**SECTION B-B**

(Reinforcement shown is referenced for Cast in Place Coping option)

\*\*\*The 4"  $\phi$  Drain Outlet Grate hole may be preformed in the MSE Wall Panel or drilled in the field. The locations of the holes must be coordinated with the locations of the weep holes in the Permanent Steel Sheet Piling. See sheets 5, 6 and 7 of 25 for additional provisions related to Construction Staging and weep hole locations.



**SECTION A-A**



**MSE WALL DRAIN OUTLET**

FILE NAME: S:\Pro\Jobs\12-02-04-025 MLK Connector\Bridges\082W314\_MSE\_Wall\_Final\_Plans\082W314-7609-003-MSE\_Wall\_Details.dgn



USER NAME = BSe/bel  
 Illinois Design Firm Number 184,001670  
 PLOT SCALE = 0/1667' / 1in.  
 PLOT DATE = 11/20/2014

DESIGNED - BB  
 CHECKED - JD  
 DRAWN - WS  
 CHECKED - CJF

REVISED  
 REVISED  
 REVISED  
 REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

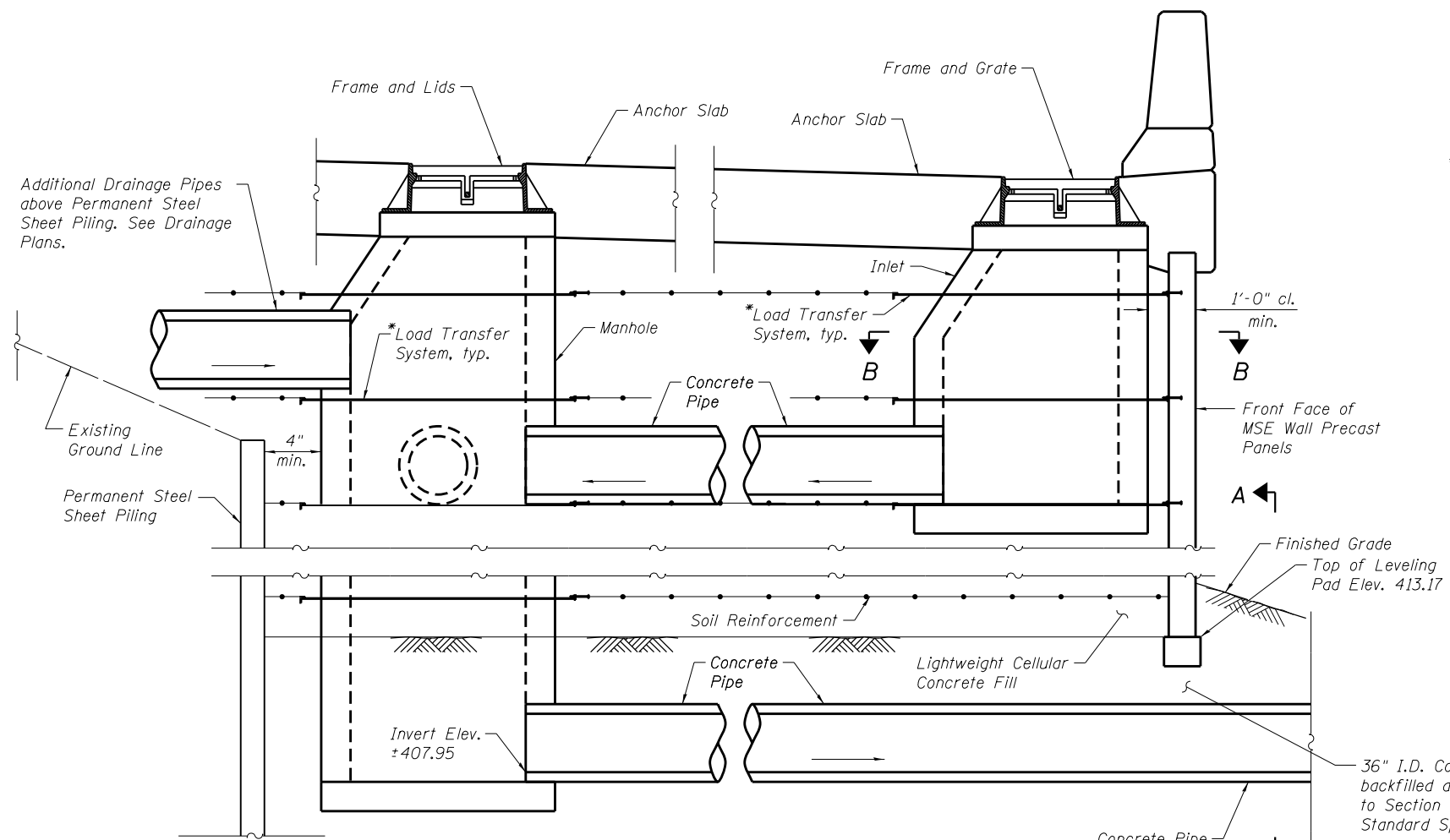
MSE WALL DETAILS  
 STRUCTURE NO. 082-W314

SHEET NO. 3 OF 25 SHEETS

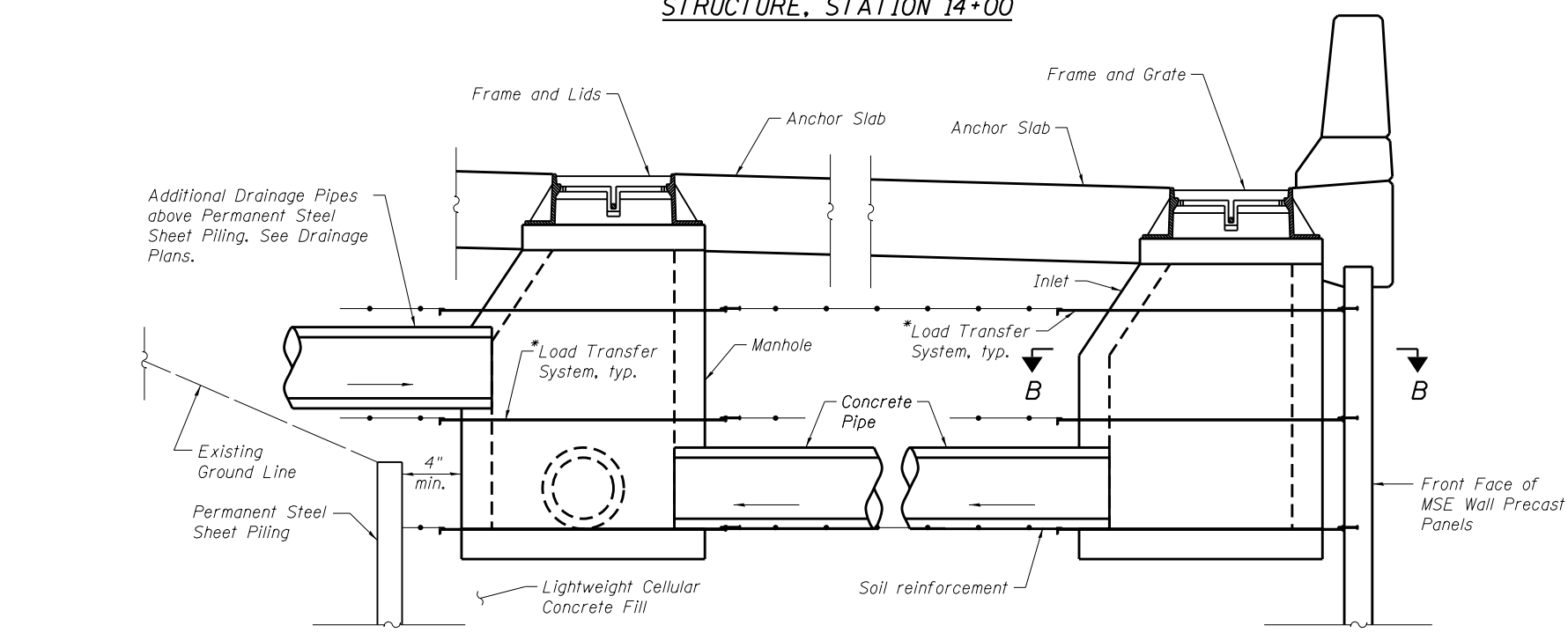
F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	338
CONTRACT NO. 76G09				

ILLINOIS FED. AID PROJECT

FILE NAME: S:\Proj\Jobs\412-0024-025\_MLK\_Connector\Bridges\082W314\_MSE\_Wall\Final\_Plans\082W314-MSE-Wall-Details-For-Drainage.dgn

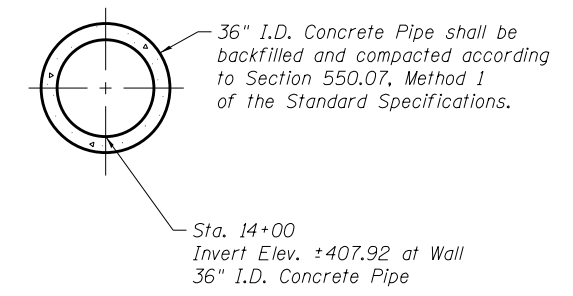
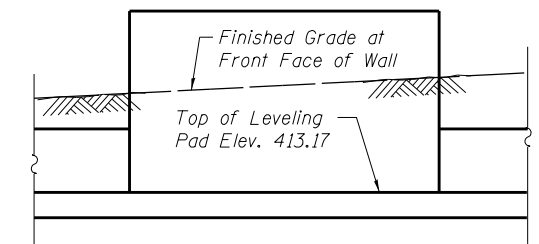


**SECTION THRU DRAINAGE STRUCTURE, STATION 14+00**



**SECTION THRU TYPICAL DRAINAGE STRUCTURE**

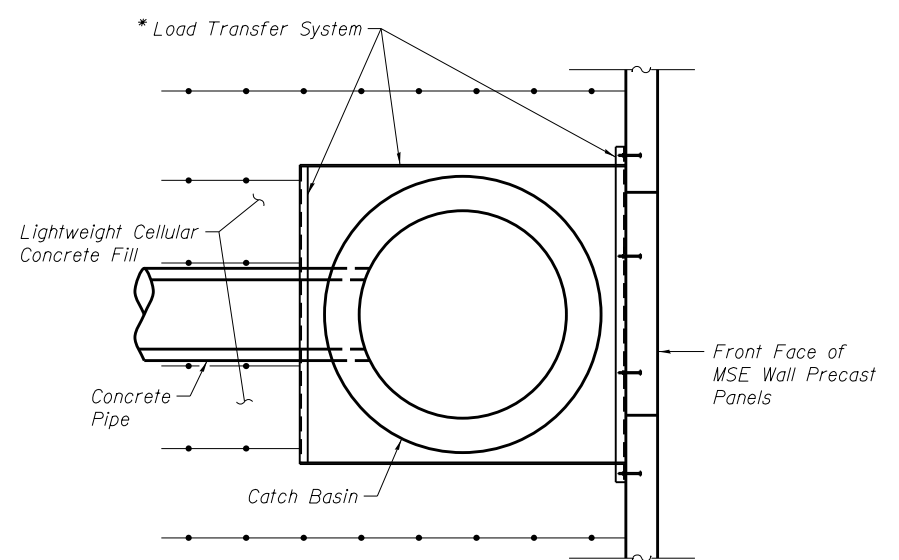
\*M.S.E. supplier to design a Load Transfer System to accommodate concrete pipe, inlets and Manholes. The Load Transfer System shall not attach to the Permanent Steel Sheet Piling.



**SECTION A-A**

\*\* Wall Supplier to determine required dimensions.

36" I.D. Concrete Pipe shall be backfilled and compacted according to Section 550.07, Method 1 of the Standard Specifications.



**SECTION B-B**

Notes:  
 For Concrete Pipe size and elevations, see Drainage Plans.  
 See sheet 12 of 25 for Anchor Slab Reinforcement placement at Drainage Structures.  
 For Drainage Structure elevations, location, type and size, see Drainage Plans.



USER NAME = BSeibel	DESIGNED - BB	REVISED
Illinois Design Firm Number 184.001670	CHECKED - JD	REVISED
PLOT SCALE = 0/1667' / 1in.	DRAWN - WS	REVISED
PLOT DATE = 11/20/2014	CHECKED - CJF	REVISED

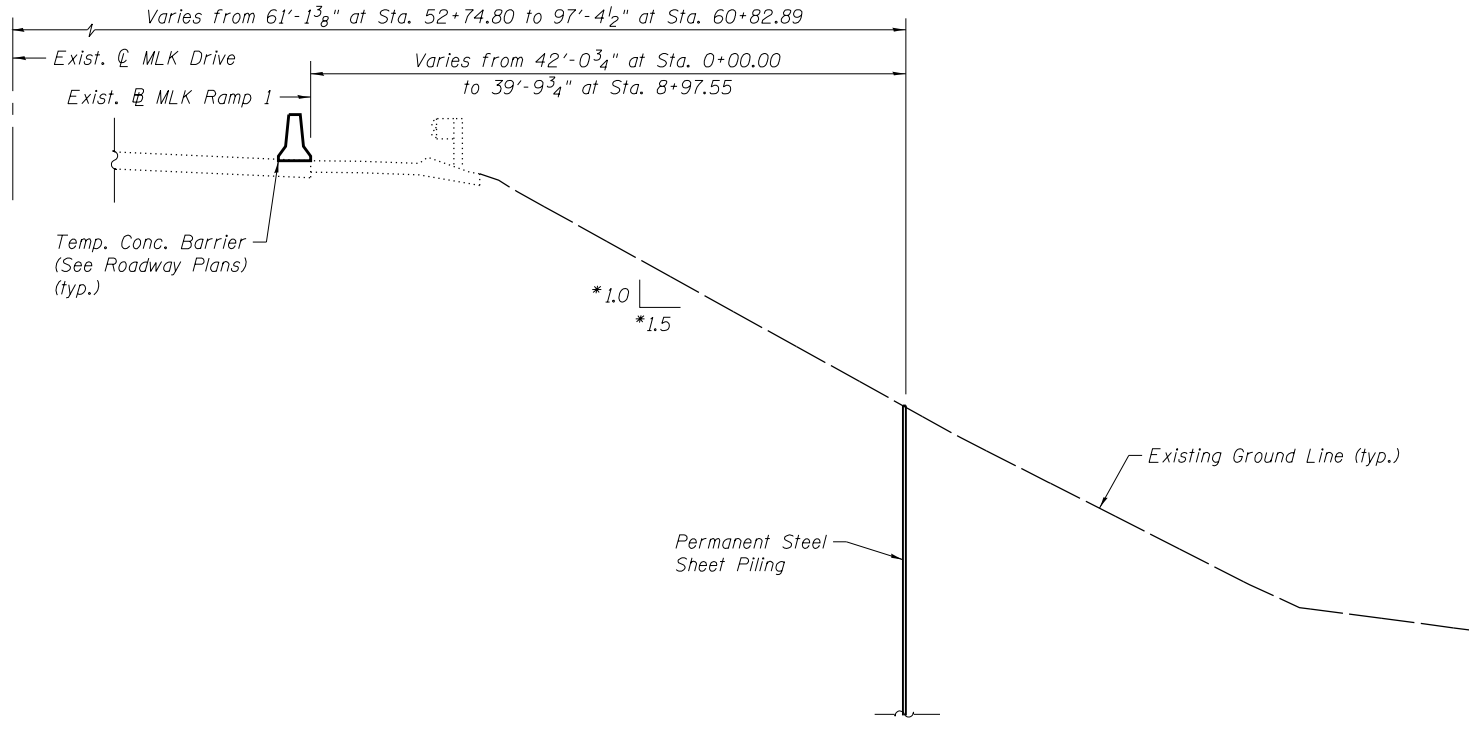
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**MSE WALL DETAILS FOR DRAINAGE STRUCTURES  
 STRUCTURE NO. 082-W314**

SHEET NO. 4 OF 25 SHEETS

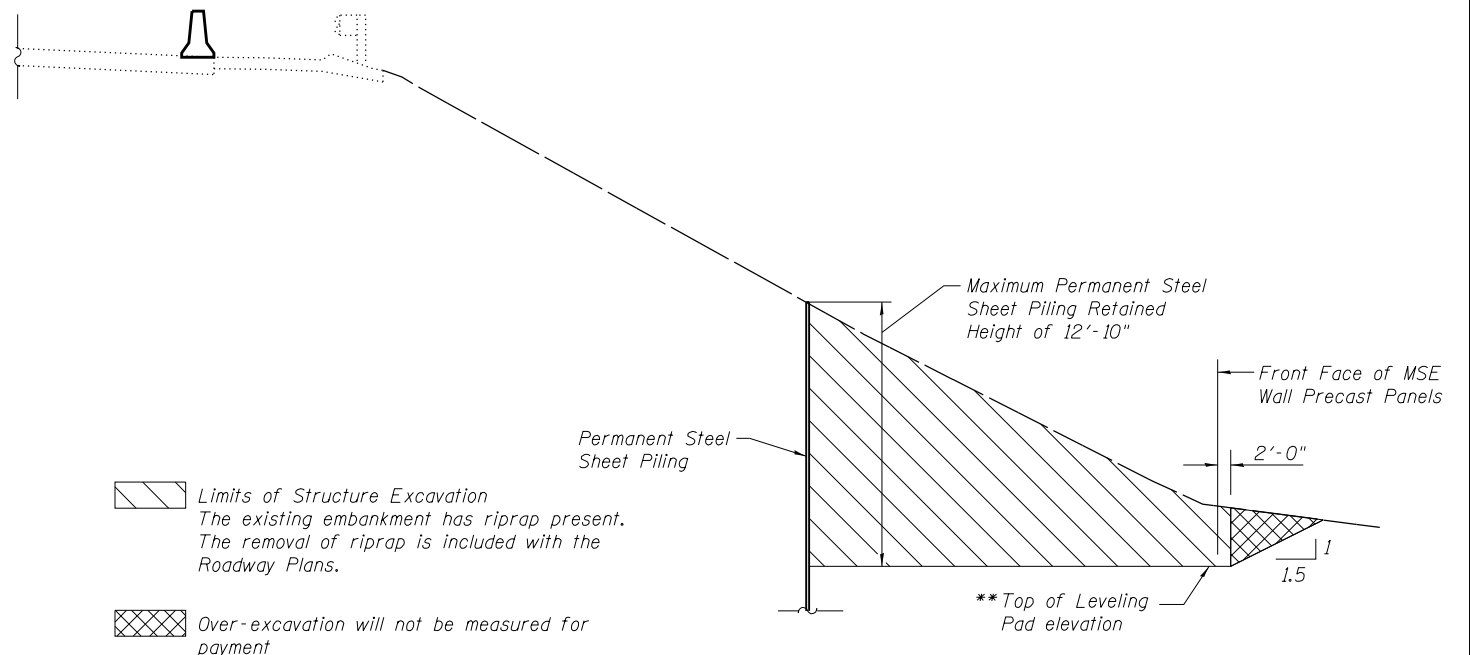
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	339
CONTRACT NO. 76G09				

ILLINOIS FED. AID PROJECT



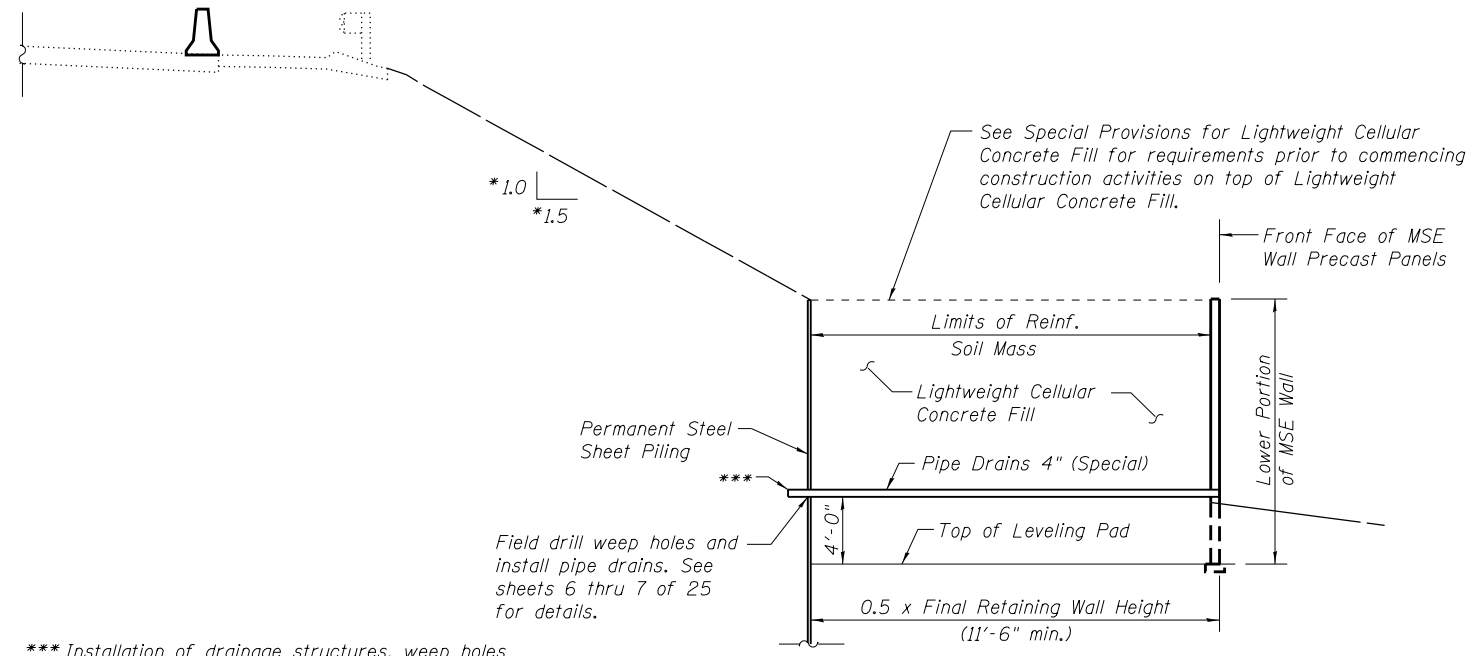
**STAGE 1**  
Install Permanent Sheet Piling to size and dimensions shown on sheets 6 thru 7 of 25

\* Maximum allowed slope

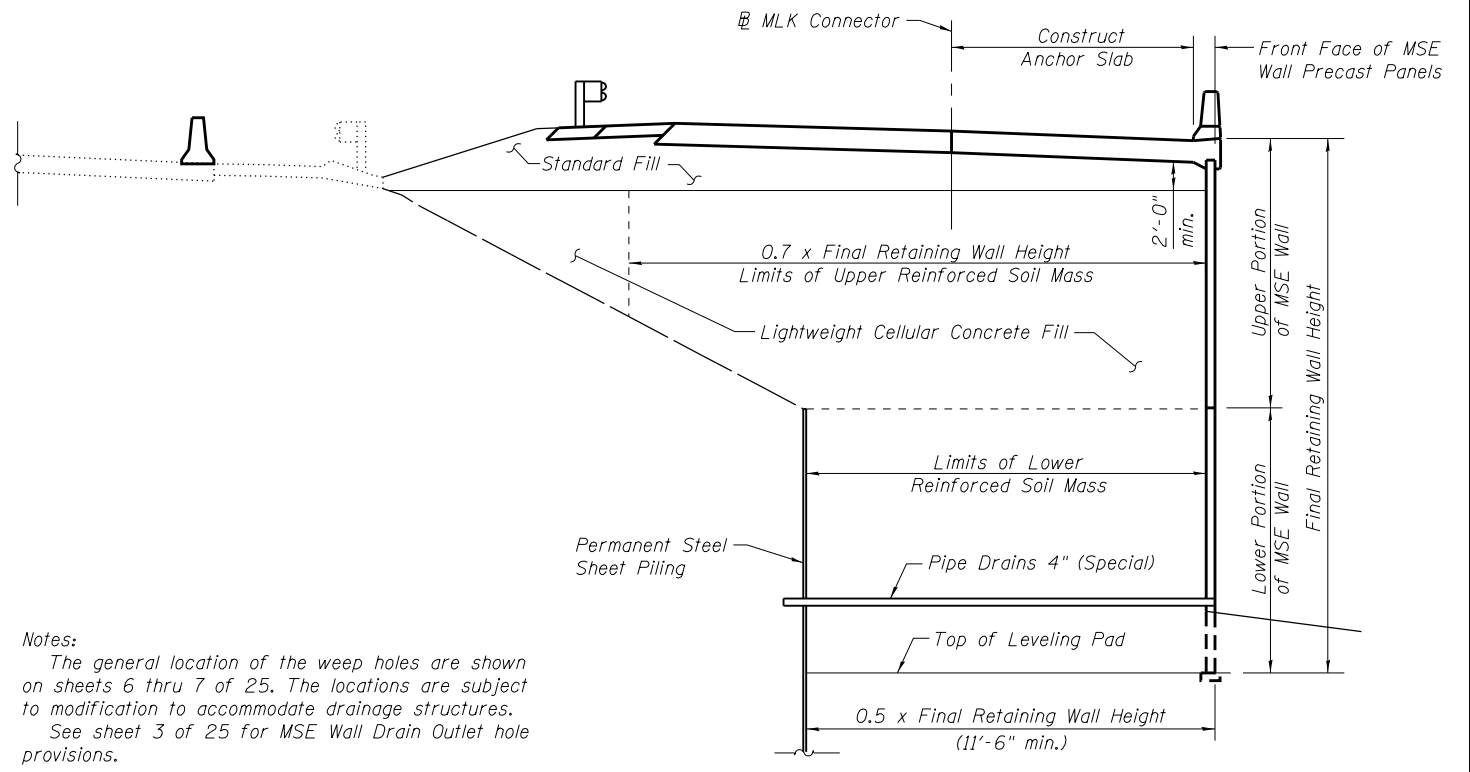


**STAGE 2**  
Excavate for Lower Portion of MSE Wall

\*\* Placement of Lightweight Cellular Concrete Fill will not be measured for payment at elevations lower than the top of leveling pad or below the elevations as defined by the Max Excavation Line on sheets 6 and 7 of 25.



**STAGE 3**  
Construct Lower Portion of MSE Wall



**STAGE 4**  
Construct Upper Portion of MSE Wall and Anchor Slab

Notes:  
The general location of the weep holes are shown on sheets 6 thru 7 of 25. The locations are subject to modification to accommodate drainage structures. See sheet 3 of 25 for MSE Wall Drain Outlet hole provisions.

FILE NAME: S:\Proj\Jobs\12-0024-025 MLK Connector\Bridges\082W314 MSE Wall\Final\_Plans\082W314-MSE-Wall-Final\_Plans\082W314-76609-005-Stage\_Construction\_Details.dgn



USER NAME = BSe/bel	DESIGNED - BB	REVISED
Illinois Design Firm Number 184.001670	CHECKED - JD	REVISED
PLOT SCALE = 0.1667' / 1in.	DRAWN - WS	REVISED
PLOT DATE = 11/20/2014	CHECKED - CJF	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

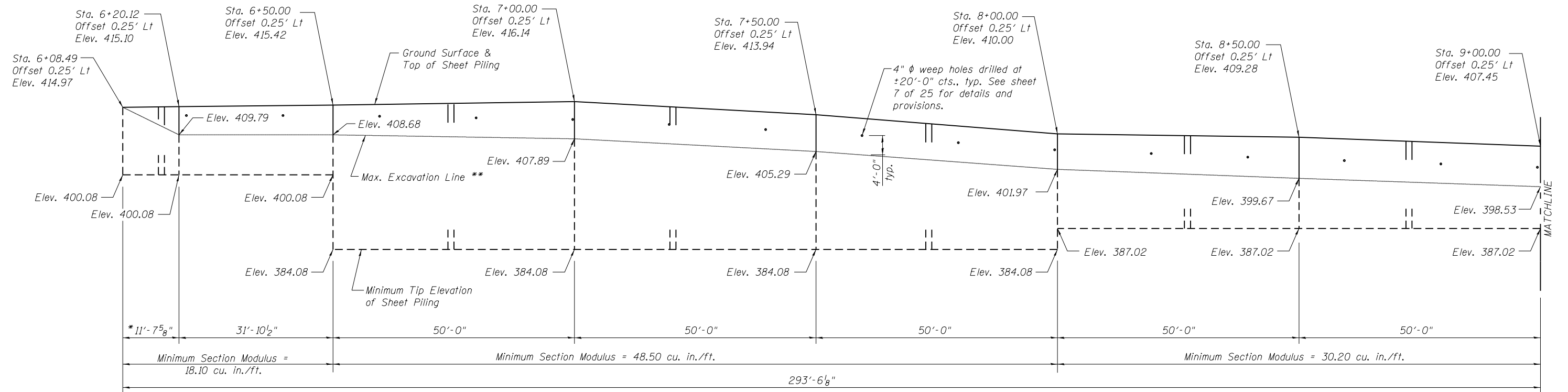
**STAGE CONSTRUCTION DETAILS  
STRUCTURE NO. 082-W314**

SHEET NO. 5 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	340
CONTRACT NO. 76G09				

ILLINOIS FED. AID PROJECT





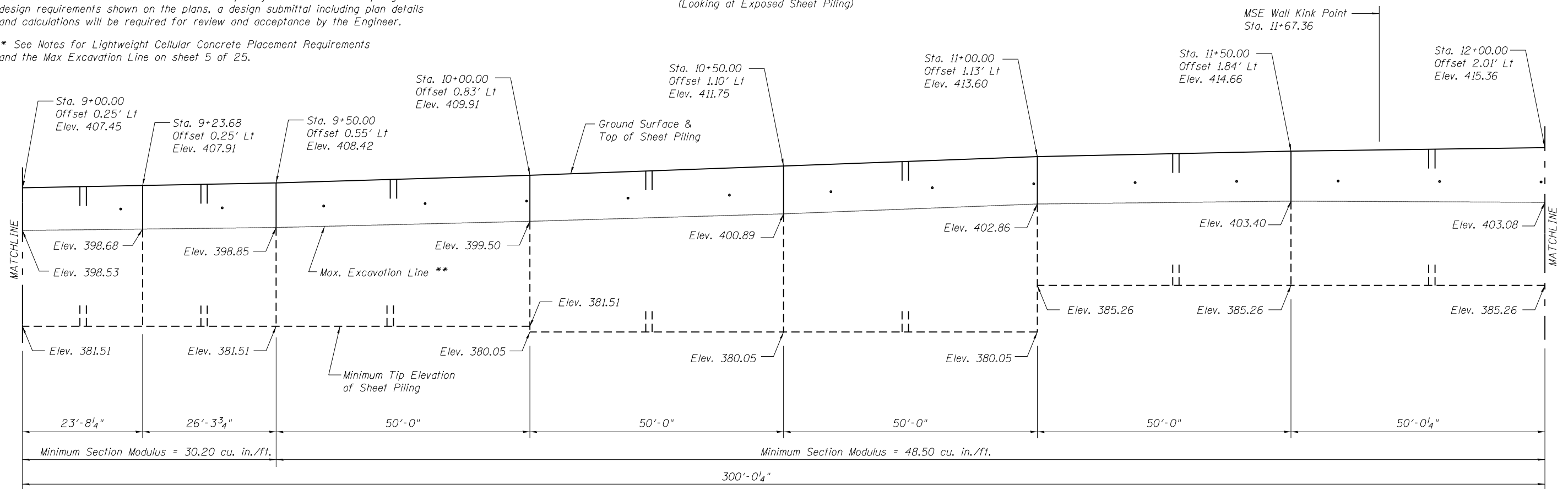
**\* Limits of Temporary Sheet Piling**

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

\*\* See Notes for Lightweight Cellular Concrete Placement Requirements and the Max Excavation Line on sheet 5 of 25.

**SHEET PILING ELEVATION**

(Looking at Exposed Sheet Piling)



**SHEET PILING ELEVATION**

(Looking at Exposed Sheet Piling)

Notes:  
See sheet 7 of 25 for additional notes and elevations.  
All sheet piling shown is permanent unless otherwise noted.

FILE NAME: S:\Proj\Jobs\112-0024-025\_MLK\_Connector\Bridges\Sign\082W314\_MSE\_Wall\_Final\_Plans\082W314-76G09-006-Permanent\_SSI\_Sheet\_Piling.dgn



USER NAME = Bsetbel  
Illinois Design Firm Number 184.001670  
PLOT SCALE = 0.1667' / 1 in.  
PLOT DATE = 11/20/2014

DESIGNED - BB  
CHECKED - JD  
DRAWN - WS  
CHECKED - CJF

REVISED  
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REVISED  
REVISED

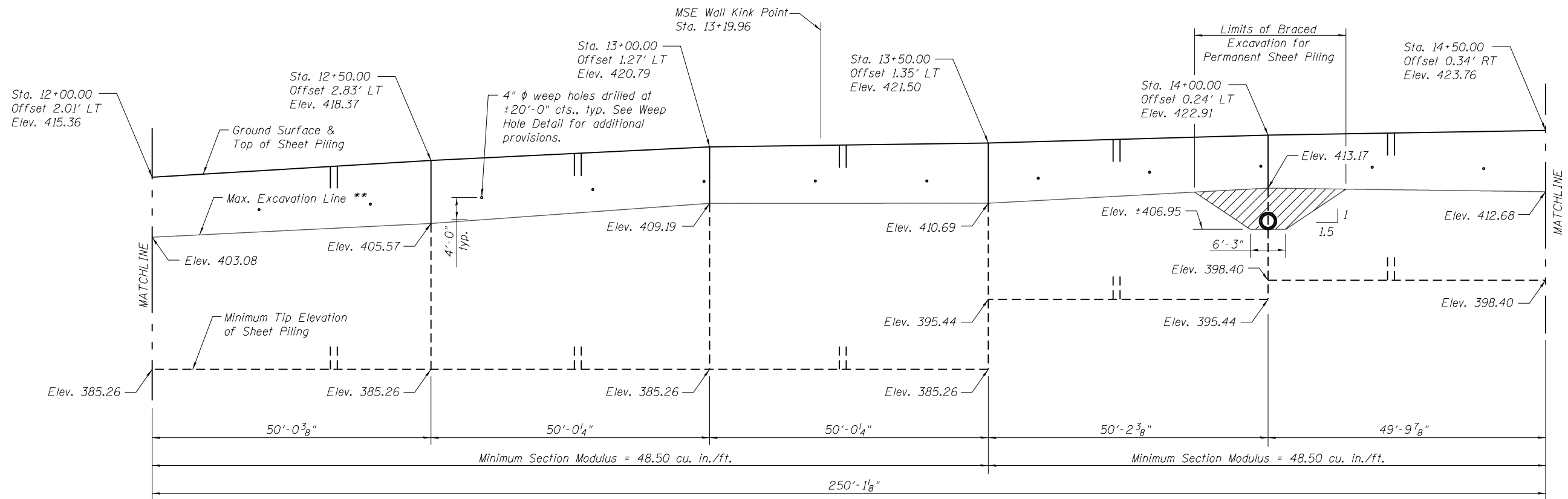
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DEPARTMENT OF TRANSPORTATION


PERMANENT STEEL SHEET PILING  
STRUCTURE NO. 082-W314

SHEET NO. 6 OF 25 SHEETS

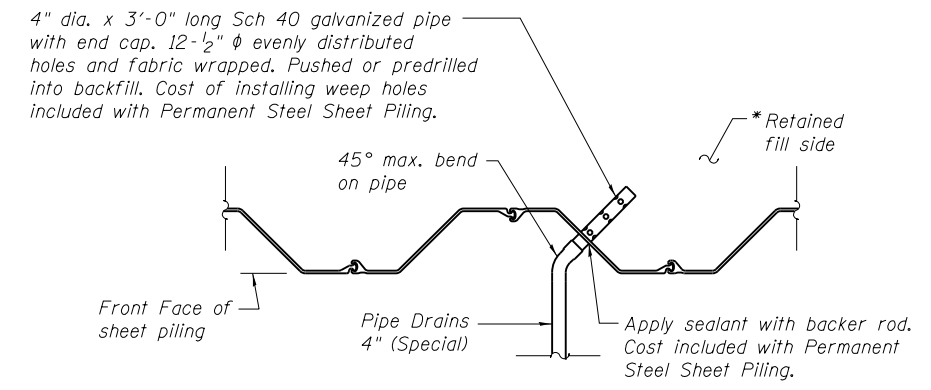
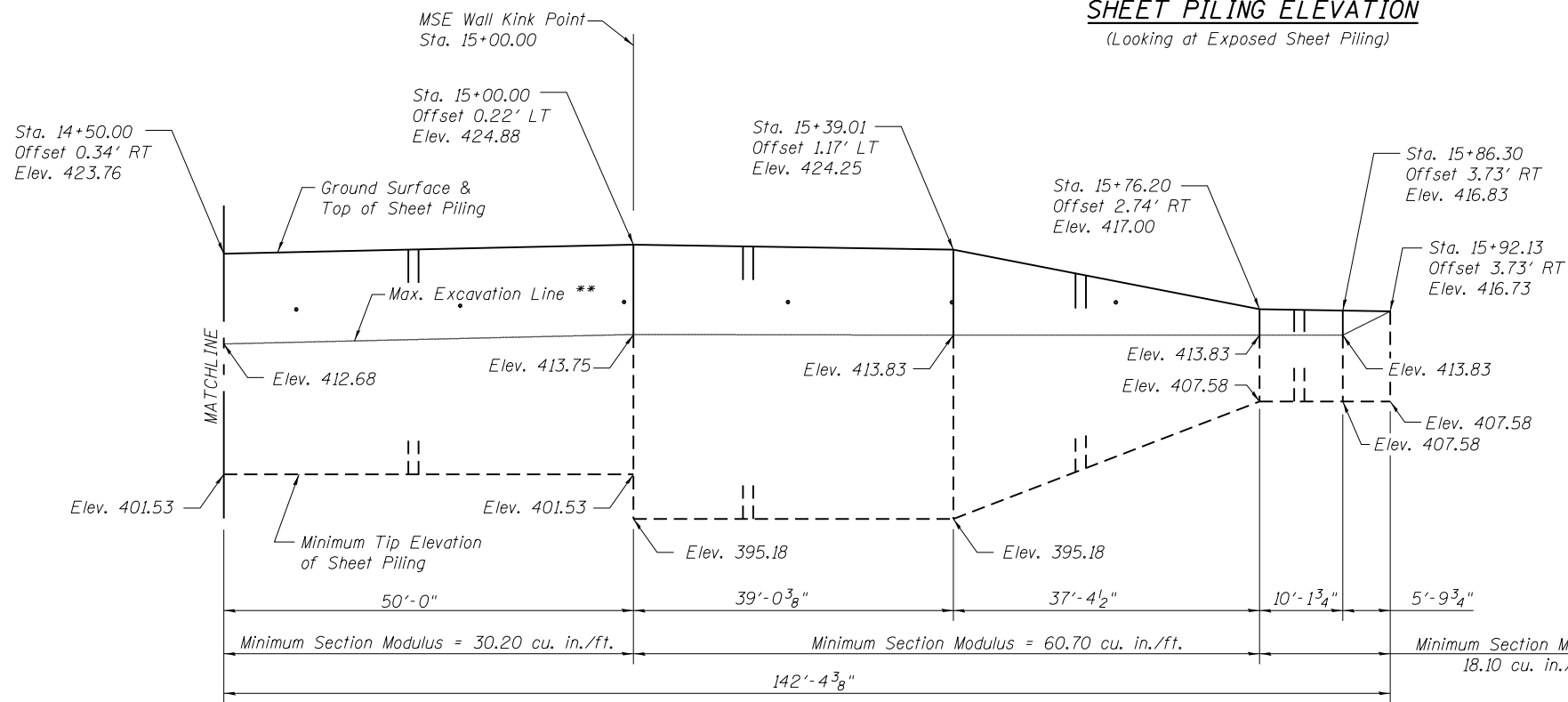
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	341
CONTRACT NO. 76G09				

ILLINOIS FED. AID PROJECT



 Indicates Braced Excavation for installation of drainage structures and concrete pipes. See sheet 4 of 25 for additional details.

**SHEET PILING ELEVATION**  
(Looking at Exposed Sheet Piling)



\*The retained fill is predominately sand. The Contractor shall ensure the weep hole does not leak sand during the drilling of the weep hole and after the pipe drain is installed. If the installation of the pipe drain is delayed after the weep hole is drilled, the Contractor shall cover the weep hole to prevent leakage of the retained fill.

\*\* See Notes for Lightweight Cellular Concrete Placement Requirements and the Max Excavation Line on sheet 5 of 25.

**BILL OF MATERIAL**

Item	Unit	Total
Braced Excavation	Cu. Yd.	55.0
Permanent Steel Sheet Piling	Sq. Ft.	27,463
Temporary Sheet Piling	Sq. Ft.	174

Notes:  
The location of the weep holes along the wall are subject to modification to accommodate drainage structures.  
Offsets are referenced from MLK baseline to front face of Sheet Piling. For location of front face of Sheet Piling see Weep Hole Detail.

**SHEET PILING ELEVATION**  
(Looking at Exposed Sheet Piling)

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PERMANENT STEEL SHEET PILING  
STRUCTURE NO. 082-W314

SHEET NO. 7 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	342

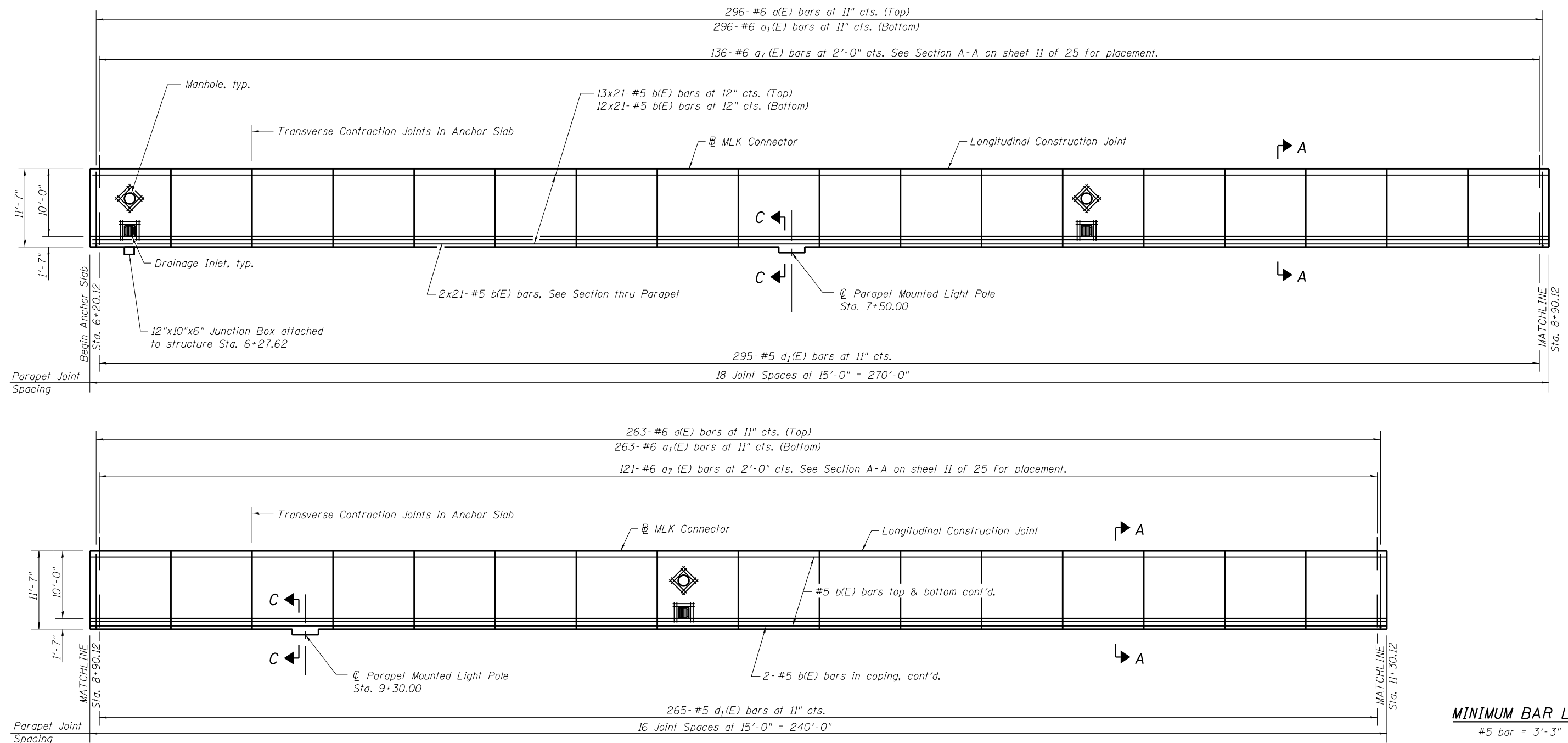
CONTRACT NO. 76G09  
ILLINOIS FED. AID PROJECT

FILE NAME: S:\Projects\12-02-2024\025\_MLK\_Connector\Bridges\082W314\_MSE\_Wall\Final\_Plans\082W314\_MSE\_Wall\Final\_Plans\082W314-76G09-007-Permanent SH Sheet Piling.dgn



USER NAME = BSetber	DESIGNED - BB	REVISOR
Illinois Design Firm Number 184.001670	CHECKED - JD	REVISION
PLOT SCALE = 0/1667' / 1/4"	DRAWN - WS	REVISION
PLOT DATE = 11/20/2014	CHECKED - CJF	REVISION

Notes:  
 Cut reinforcement to clear drainage Manholes and Frame and Grates.  
 Anchor Slab and Parapet concrete shall be paid for as Concrete Superstructures.  
 See sheet 11 of 25 for Section A-A.  
 See sheet 11 of 25 for Joint Details.  
 See sheet 12 of 25 for Light Pole Mount Details.  
 See sheet 12 of 25 for Parapet Joint Details and Section C-C.  
 See sheet 12 of 25 for Bar Bends and Bill of Materials.  
 See sheet 12 of 25 for reinforcement placement around drainage structure and manholes.  
 Bars indicated thus 13x21- #5 etc. indicates 13 lines of bars with 21 lengths per line.



ANCHOR SLAB PLAN VIEW

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

FILE NAME: S:\Projects\12-0024-025 MLK Connector\Bridges\082\082\14-MSE-MatL-Final\_Plans\082\14-7609-008-Anchor\_Slab\_Parapet\_Details.dgn



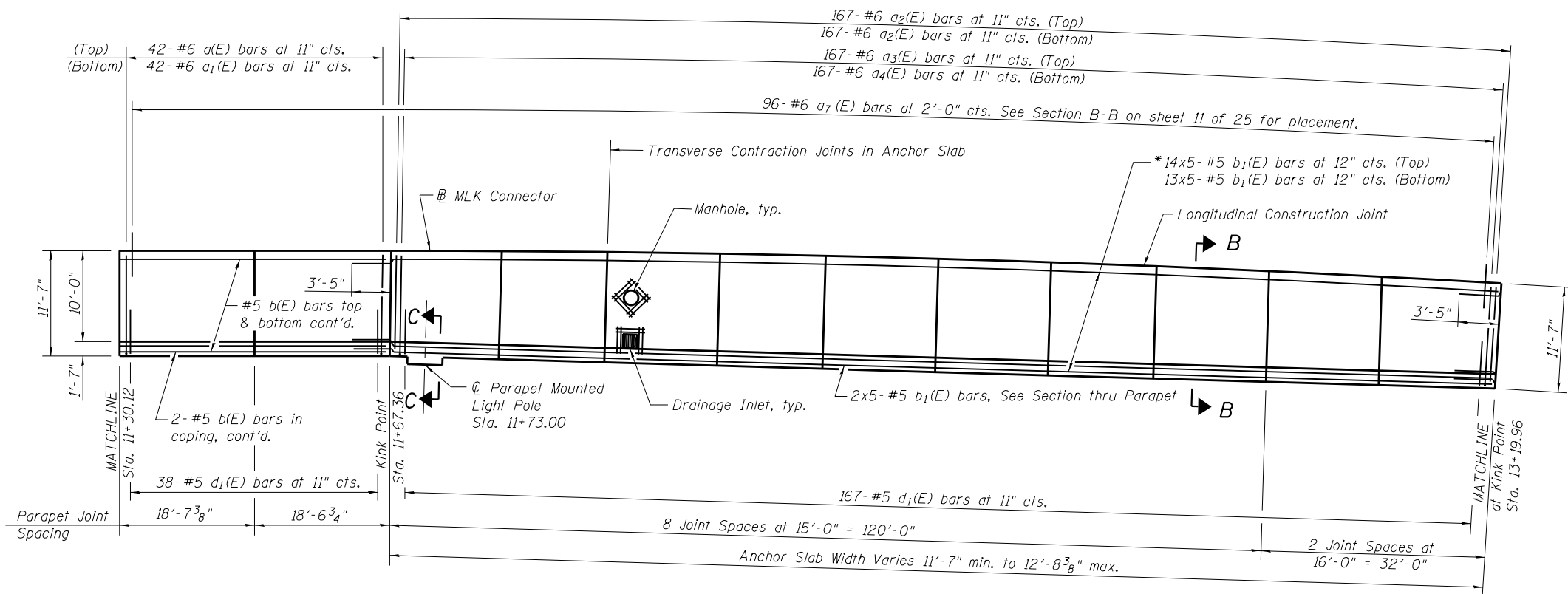
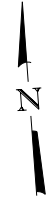
USER NAME = bsebel	DESIGNED - BB	REVISED
Illinois Design Firm Number 184,001670	CHECKED - JD	REVISED
PLOT SCALE = 0/1667' / 1"	DRAWN - WS	REVISED
PLOT DATE = 9/19/2014	CHECKED - CJF	REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ANCHOR SLAB & PARAPET DETAILS  
 STRUCTURE NO. 082-W314

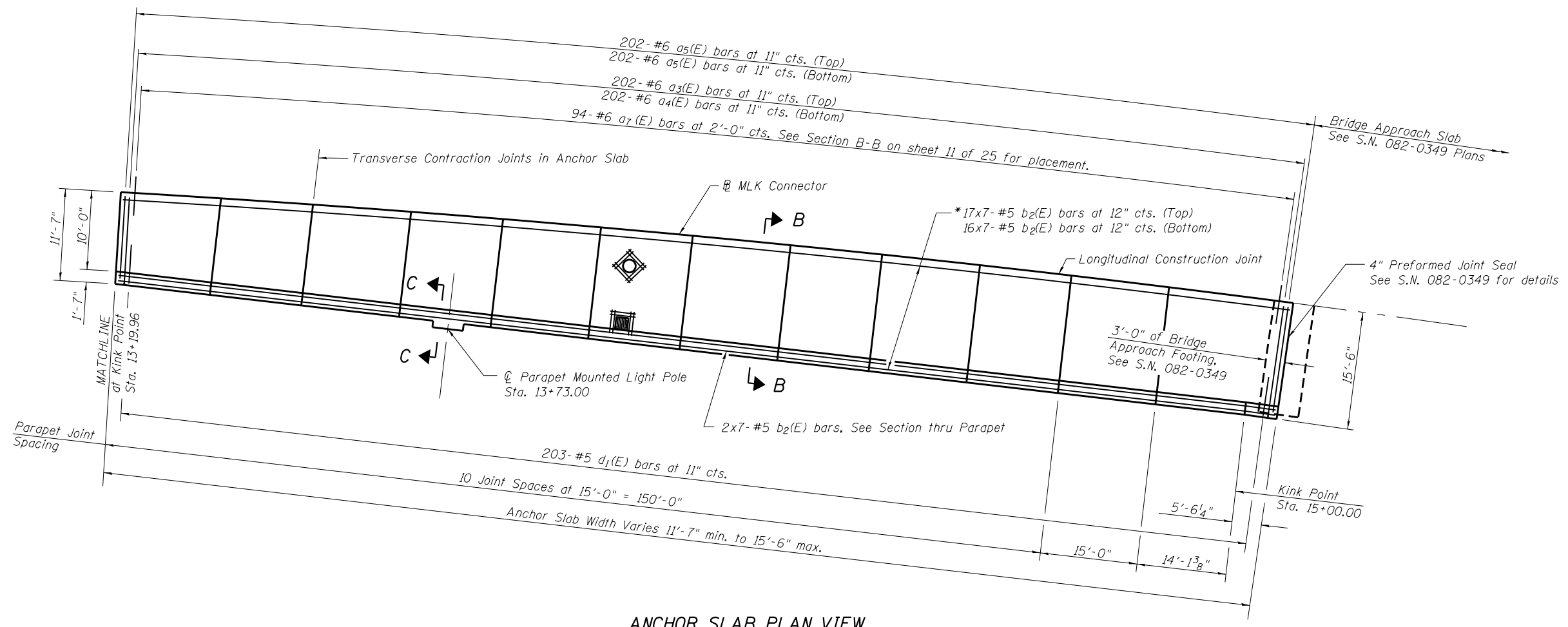
SHEET NO. 8 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	343
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



Notes:  
 Field cut reinforcement to clear drainage Manholes and Frame and Grates.  
 Anchor Slab and Parapet concrete shall be paid for as Concrete Superstructures.  
 See sheet 11 of 25 for Section B-B.  
 See sheet 11 of 25 for Joint Details.  
 See sheet 12 of 25 for Section C-C.  
 See sheet 12 of 25 for Light Pole Mount Details.  
 See sheet 12 of 25 for Parapet Joint Details.  
 See sheet 12 of 25 for Bar Bends and Bill of Materials.  
 See sheet 12 of 25 for reinforcement placement around drainage structure and manholes.  
 Bars indicated thus 14x5-#5 etc. indicates 14 lines of bars with 5 bars per line.

\*Lap #5 b1(E) and b2(E) bars to match varying anchor slab width



ANCHOR SLAB PLAN VIEW

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

FILE NAME: S:\Projects\12-0024-025 MLK Connector\Bridges\082\0314\_MSE\_MatL\_Final\_Plans\082\14-76609-009-Ancor\_Slab\_Parapet\_Details.dgn



USER NAME = bsebel  
 Illinois Design Firm Number 184.001670  
 PLOT SCALE = 0/1667' / 1in.  
 PLOT DATE = 9/19/2014

DESIGNED - BB  
 CHECKED - JD  
 DRAWN - WS  
 CHECKED - CJF

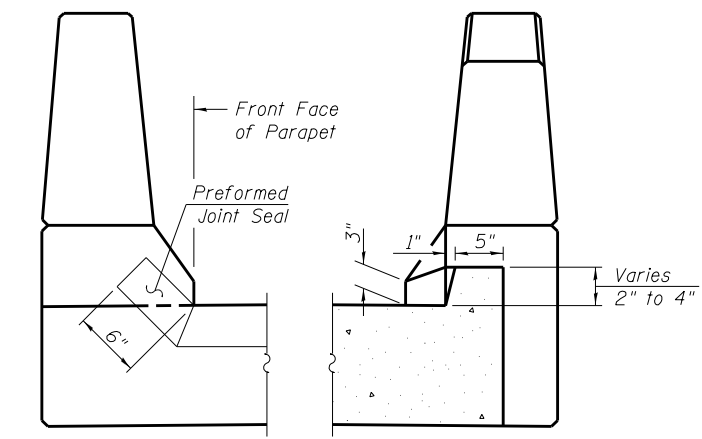
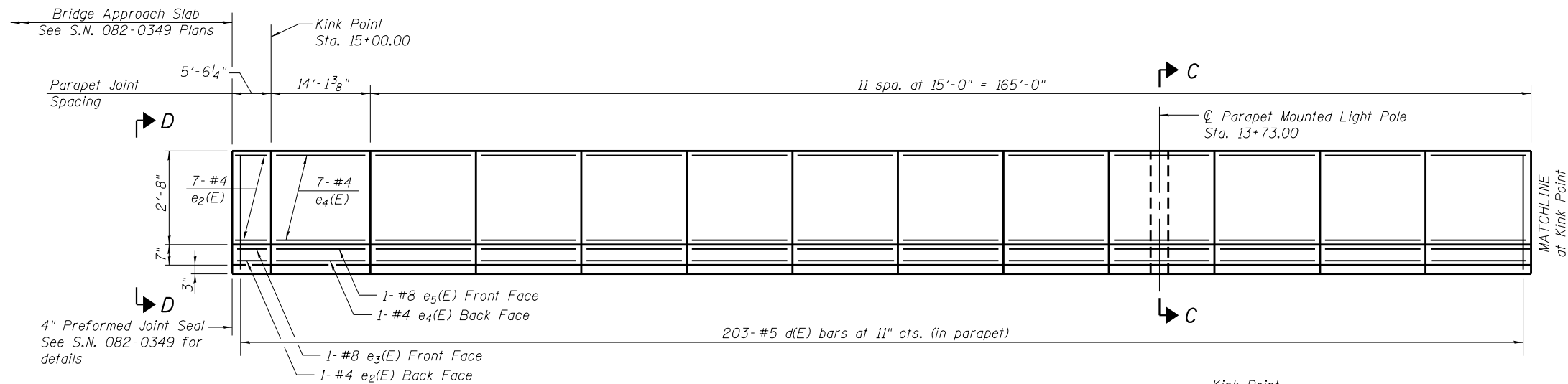
REVISED  
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 REVISED

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 DEPARTMENT OF TRANSPORTATION

ANCHOR SLAB & PARAPET DETAILS  
 STRUCTURE NO. 082-W314  
 SHEET NO. 9 OF 25 SHEETS

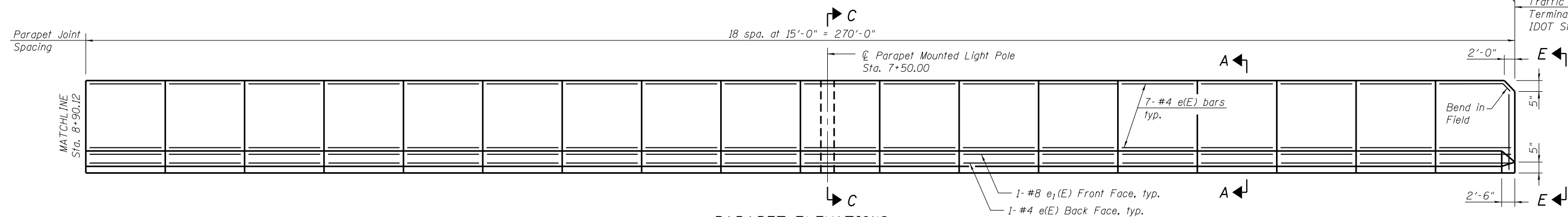
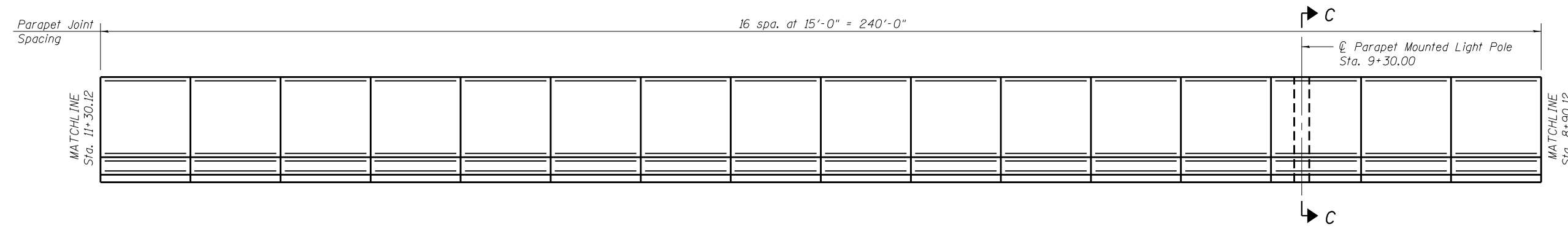
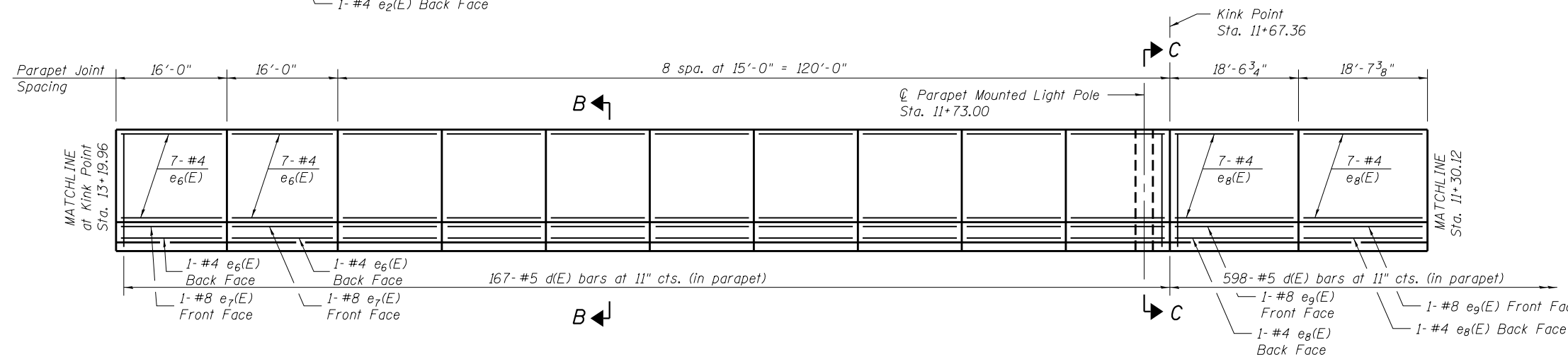
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	344
CONTRACT NO. 76G09				

ILLINOIS FED. AID PROJECT



VIEW D-D VIEW E-E

Notes:  
 See Sections A-A, B-B and C-C on sheets 11 & 12 of 25 for reinforcement placement.  
 Dimensions shown taken along the Front Face of Parapet.  
 See sheet 12 of 25 for Parapet Joint Details.  
 See sheet 12 of 25 for Bar Bends and Bill of Materials.



PARAPET ELEVATIONS  
 (Looking at Front Face of Parapet)

FILE NAME: S:\Proj\Jobs\12-0024-025\_MLK\_Connector\Bridges\082W314\_MSE\_Mat\Final\_Plans\082W314-7609-00-Ancor\_Slab\_Parapet\_Details.dgn



USER NAME = bselbel	DESIGNED - BB	REVISED
Illinois Design Firm Number 184,001670	CHECKED - JD	REVISED
PLOT SCALE = 0/1667' / 1in.	DRAWN - WS	REVISED
PLOT DATE = 9/23/2014	CHECKED - CJF	REVISED

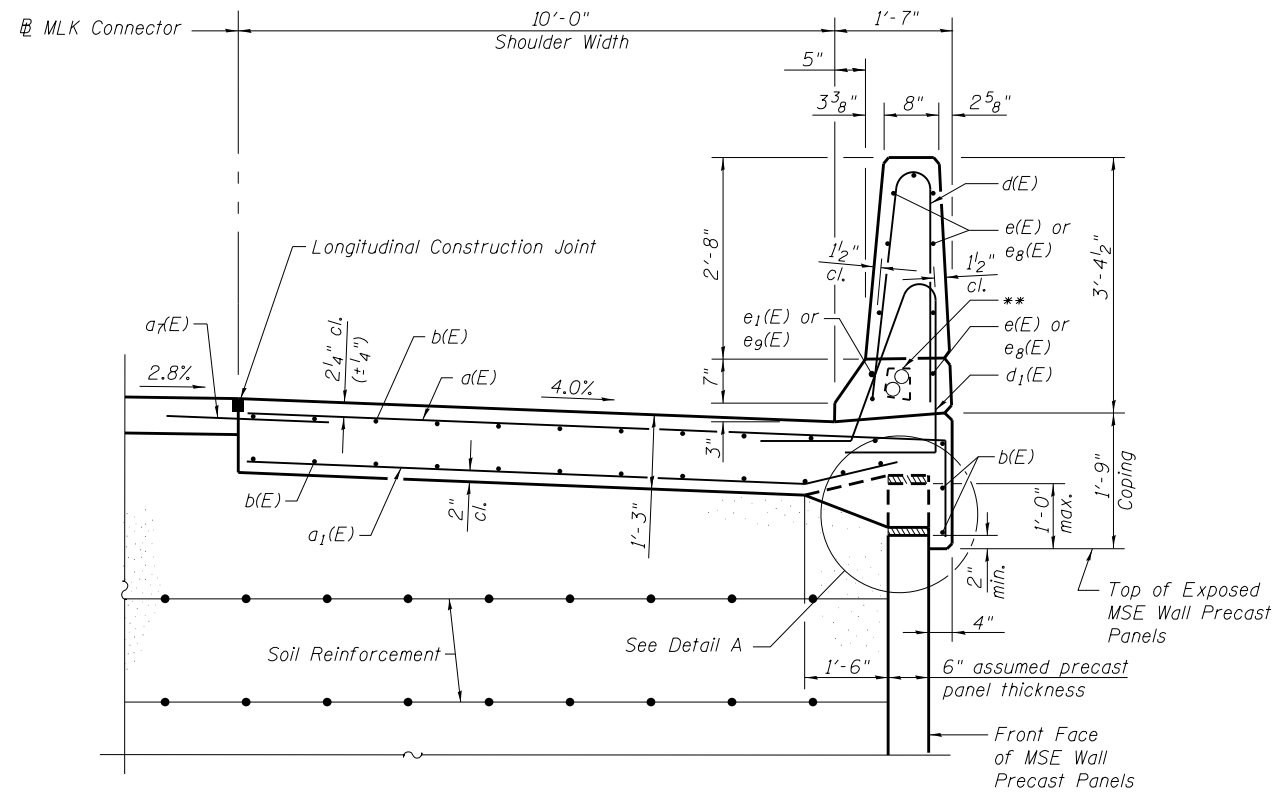
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ANCHOR SLAB & PARAPET DETAILS  
 STRUCTURE NO. 082-W314

SHEET NO. 10 OF 25 SHEETS

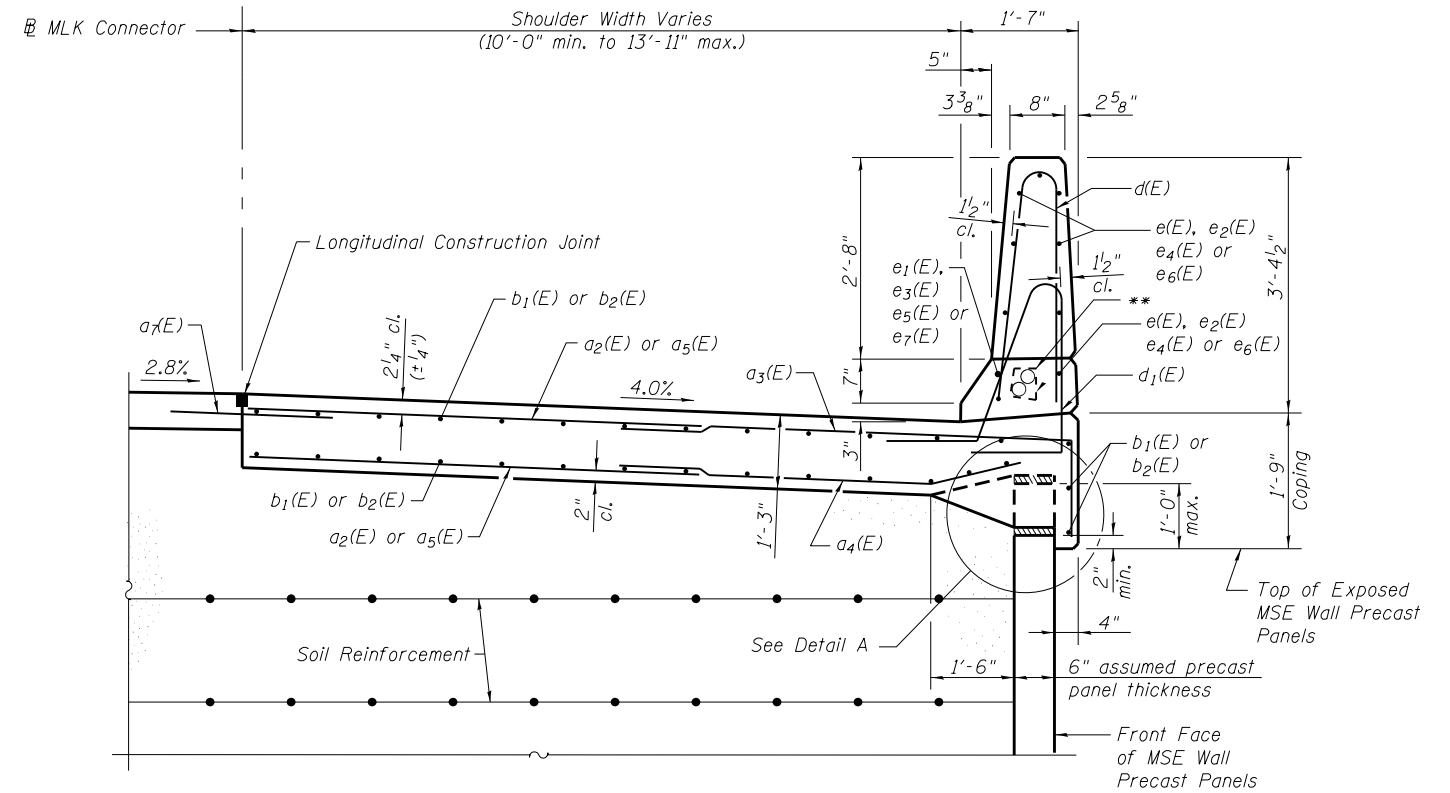
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	345
CONTRACT NO. 76G09				

ILLINOIS FED. AID PROJECT



**SECTION A-A**

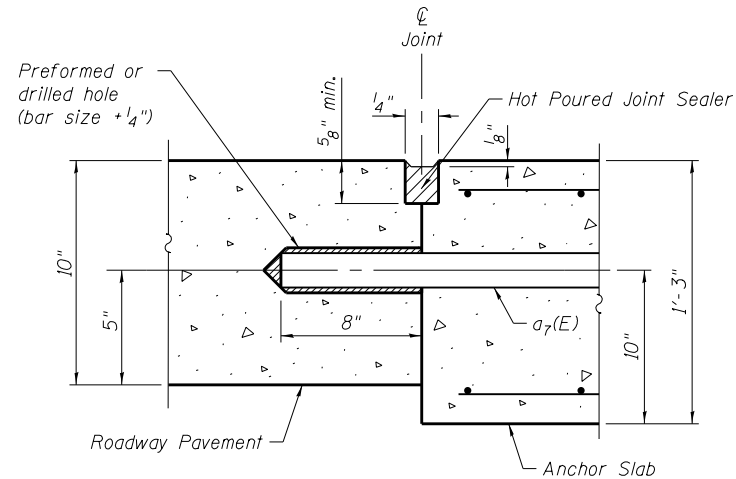
(Sta. 6+20.12 to Sta. 11+67.36)



**SECTION B-B**

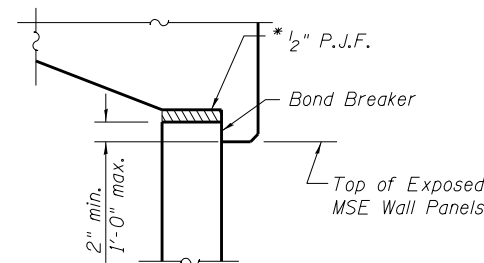
(Sta. 11+67.36 to Sta. 15+05.75)

\*\* Location of electrical conduit  
Provide 1/2" cl. min. to all rebar



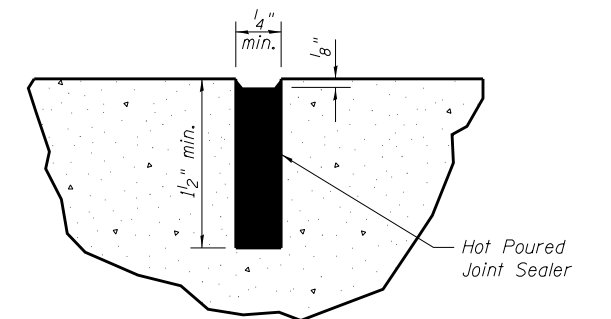
**LONGITUDINAL CONSTRUCTION JOINT**

(Tie bar grouted in place)  
See Article 420.05 & 420.12 of the Standard Specifications.  
The Contractor may substitute grout in place tie bars.  
Tie bar length can be reduced by 6".



**DETAIL A**

\* The Contractor Shall ensure that the top of the P.J.F. is clear of fill or other debris prior to placing anchor slab concrete.



**TRANSVERSE CONTRACTION JOINT DETAIL**

(See Article 420.05c of the Standard Specs.)

FILE NAME: S:\Projects\12-0024-025 MLK Connector\Bridges\082W314 MSE Wall\Final Plans\082W314 MSE Wall\Anchor Slab Parapet Detail.dgn



USER NAME = bselbel  
Illinois Design Firm Number 184.001670  
PLOT SCALE = 0/1667' / 1 in.  
PLOT DATE = 9/19/2014

DESIGNED - BB  
CHECKED - JD  
DRAWN - WS  
CHECKED - CJF

REVISED  
REVISED  
REVISED  
REVISED

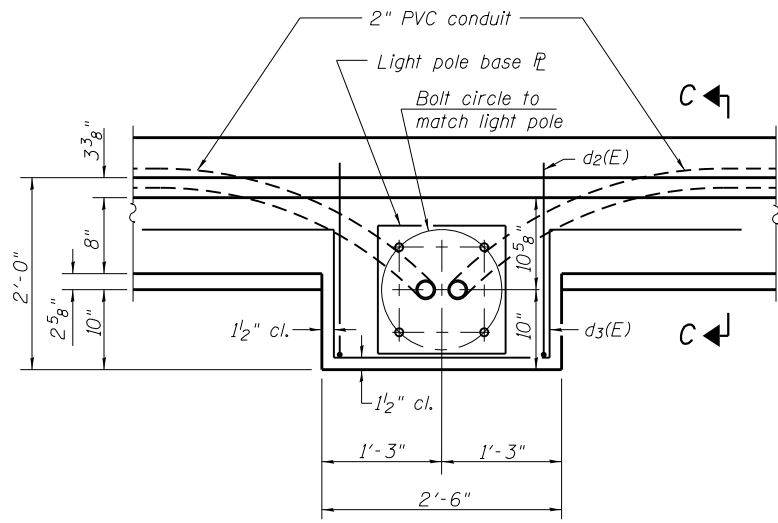
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ANCHOR SLAB & PARAPET DETAILS  
STRUCTURE NO. 082-W314

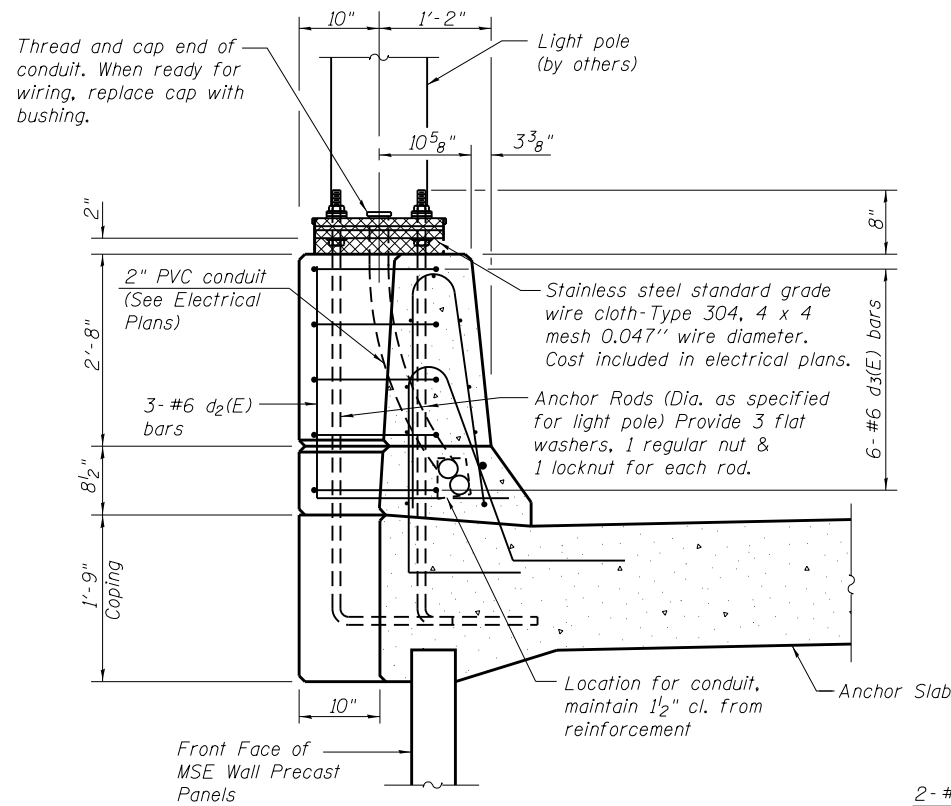
SHEET NO. 11 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	346
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

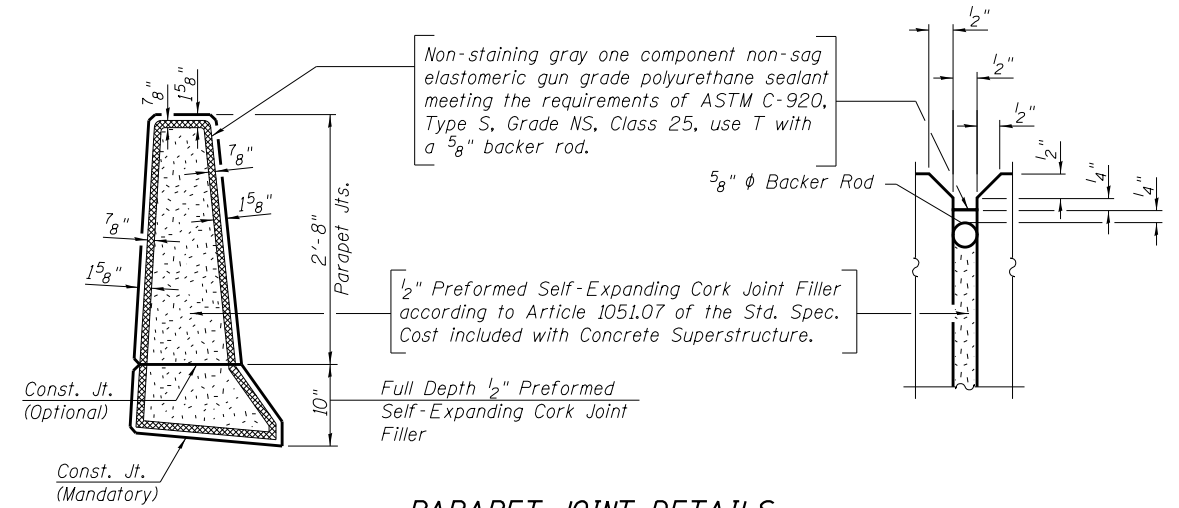
Notes:  
 Cost of anchor rods is included with Concrete Superstructure.  
 Cut longitudinal reinforcement to clear drainage Frame and Grate.  
 Cost of conduit is included in electrical plans.



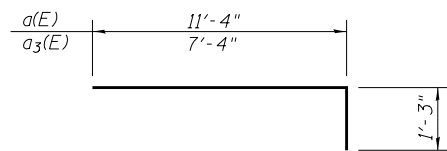
**LIGHT POLE PEDESTAL PLAN**



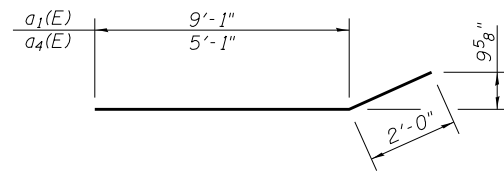
**SECTION C-C**



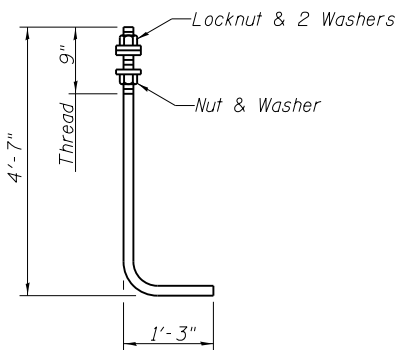
**PARAPET JOINT DETAILS**



**BAR a(E) & a3(E)**

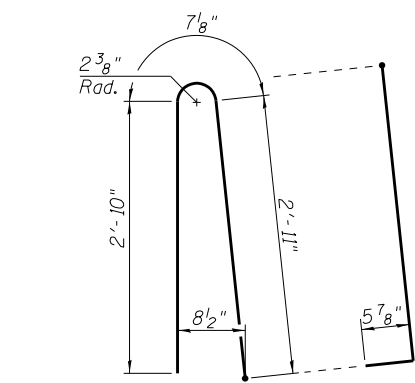


**BAR a1(E) & a4(E)**

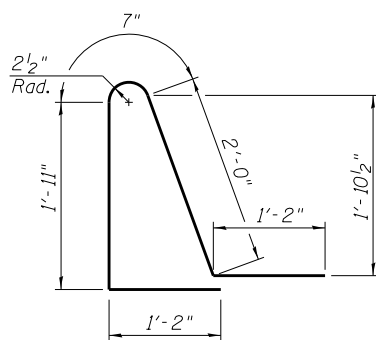


**ANCHOR ROD**

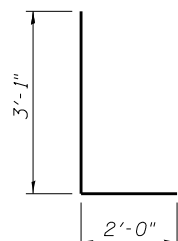
Diameter as specified for light poles.  
 (ASTM F 1554 Grade 105)  
 (Hot Dipped Galvanized)



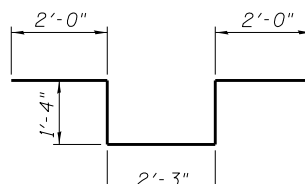
**BAR d(E)**



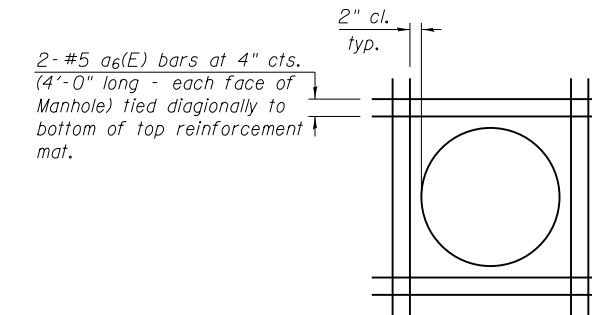
**BAR d1(E)**



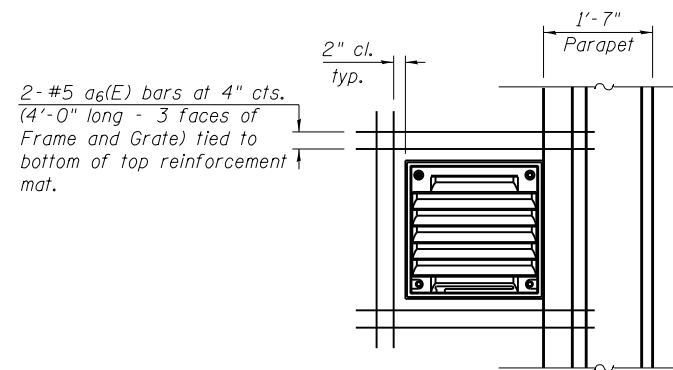
**BAR d2(E)**



**BAR d3(E)**



**PLAN AT DRAINAGE MANHOLE OPENING**



**PLAN AT DRAINAGE INLET OPENING**

**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	601	#6	12'-7"	
a1(E)	601	#6	11'-1"	
a2(E)	334	#6	8'-11"	
a3(E)	369	#6	8'-7"	
a4(E)	369	#6	7'-1"	
a5(E)	202	#6	11'-9"	
a6(E)	70	#5	4'-0"	
a7(E)	447	#6	2'-6"	
b(E)	567	#5	29'-2"	
b1(E)	145	#5	33'-10"	
b2(E)	245	#5	29'-10"	
d(E)	968	#5	6'-10"	
d1(E)	968	#5	6'-10"	
d2(E)	12	#6	5'-1"	
d3(E)	24	#6	8'-11"	
e(E)	424	#4	14'-9"	
e1(E)	53	#8	14'-9"	
e2(E)	8	#4	5'-3"	
e3(E)	1	#8	5'-3"	
e4(E)	8	#4	13'-10"	
e5(E)	1	#8	13'-10"	
e6(E)	16	#4	15'-9"	
e7(E)	2	#8	15'-9"	
e8(E)	16	#4	18'-3"	
e9(E)	2	#8	18'-3"	
Concrete Superstructure			Cu. Yds.	653.4
Reinforcement Bars, Epoxy Coated			Pound	91,220

FILE NAME: S:\Projects\412-0024-025\_MLK\_Connector\Bridges\082W314\_MSE\_Wall\_Final\_Plans\082W314-MSE-Wall-Final-Anchor\_Slab\_Parapet\_Details.dgn



USER NAME = bse/bel  
 Illinois Design Firm Number 184,001670  
 PLOT SCALE = 0/1667' / 1/4"  
 PLOT DATE = 9/19/2014

DESIGNED - BB  
 CHECKED - JD  
 DRAWN - WS  
 CHECKED - CJF

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 REVISED  
 REVISED

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**ANCHOR SLAB & PARAPET DETAILS STRUCTURE NO. 082-W314**

SHEET NO. 12 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	347
				CONTRACT NO. 76C09

ILLINOIS FED. AID PROJECT



Illinois Department  
of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 1

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/09/13

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO. 082-W314  
Station \_\_\_\_\_  
BORING NO. RW-01  
Station 5+95.97  
Offset 4 ft LT  
Ground Surface Elev. 416.0 ft (ft) (/6") (tsf) (%)  
Surface Water Elev. -- ft  
Stream Bed Elev. -- ft  
Groundwater Elev.:  
First Encounter None ft  
Upon Completion None ft  
After N/A Hrs. N/A ft

DEPTH (ft)	DESCRIPTION	U	M
CRUSHED ROCK, with silty loam, A-1			
414.3	FILL: Brown, sand, fine to coarse, trace gravel, A-1	NC	4
6		NC	3
8		NC	2
408.5	Boring terminated at 7.5 ft. Boring grouted to 7.5 ft.		
-10			
-15			
-20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department  
of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 1

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/15/13

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with CFA HAMMER TYPE Automatic

STRUCT. NO. 082-W314  
Station \_\_\_\_\_  
BORING NO. RW-02  
Station 6+34.88  
Offset 27 ft LT  
Ground Surface Elev. 417.4 ft (ft) (/6") (tsf) (%)  
Surface Water Elev. -- ft  
Stream Bed Elev. -- ft  
Groundwater Elev.:  
First Encounter None ft  
Upon Completion None ft  
After N/A Hrs. N/A ft

DEPTH (ft)	DESCRIPTION	U	M
ASPHALT - 8.5 inches			
416.7	CRUSHED ROCK - 3 inches		
416.5	FILL: Brown, sand, fine to coarse, trace gravel and crushed rock, A-1	NC	3
10			
12		NC	3
13			
No crushed rock			
11		NC	5
17			
20			
A-1-b			
12		NC	11
13			
14			
11		NC	2
14			
15			
-10			
11			
13		NC	1
16			
6		NC	2
10			
10			
402.4	Boring terminated at 15.0 ft. Boring backfilled with bentonite to 15 ft.		
-15			
-20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department  
of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 1

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/08/13

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO. 082-W314  
Station \_\_\_\_\_  
BORING NO. RW-03  
Station 6+84.36  
Offset 70 ft RT  
Ground Surface Elev. 395.6 ft (ft) (/6") (tsf) (%)  
Surface Water Elev. -- ft  
Stream Bed Elev. -- ft  
Groundwater Elev.:  
First Encounter None ft  
Upon Completion None ft  
After 15 Hrs. None ft

DEPTH (ft)	DESCRIPTION	U	M
FILL: Brown, sand, fine to coarse, trace crushed rock, A-1			
3			
5		NC	3
7			
392.1	SAND: Gray, with iron stains, A-2	NC	40
391.5		0.5	
391.1	CLAY LOAM: Dark gray, A-7-6	B	
		0.8	
	CLAY: Gray, with iron stains, trace organics, A-7	P	30
390.1	SAND: Brown, fine to coarse, trace organics, A-1		
7		NC	4
8			
9			
388.1	Boring terminated at 7.5 ft. Boring backfilled with bentonite to 7.5 ft.		
-10			
-15			
-20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

FILE NAME: S:\ProJects\412-0024-025 MLK Connector\Borings\082W314-T6G09-013-Boring\_Log.dgn



USER NAME = bselbel  
Illinois Design Firm Number 184,001670  
PLOT SCALE = 0.1667" / 1 in.  
PLOT DATE = 8/7/2014

DESIGNED - BB	REVISED
CHECKED - JD	REVISED
DRAWN - WS	REVISED
CHECKED - CJF	REVISED

### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

### SOIL BORING LOGS STRUCTURE NO. 082-W314

SHEET NO. 13 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	348
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	





FILE NAME: S:\ProJecst\412-002-025\_MLK\_Connecto\Bridges\082W314-MSE\_Wall\Final\_Plans\082W314-MSE-Wall-Final-Plans\082W314-76G09-015-Boring\_Log.dgn

**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 1

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/08/13

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	Station	D E P T H S Qu T	B L O C S	U C S T	M O I S T	Surface Water Elev.	
						ft	ft
082-W314						--	--
RW-06A	8+19.08						
	24 ft RT						
	Ground Surface Elev.	402.8	ft	(ft)	(/6")	(tsf)	(%)
No soil sampling performed.							
SAND: Brown, A-2 ----- 391.8 SANDY CLAY LOAM: Dark gray, A-7-6 ----- 391.0 Consolidation Test Performed ----- 390.6 SANDY LOAM: Dark gray ----- 389.8 Boring terminated at 13.0 ft. Boring backfilled with bentonite to 13 ft. ----- 15 ----- 20							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 1

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/08/13

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	Station	D E P T H S Qu T	B L O C S	U C S T	M O I S T	Surface Water Elev.	
						ft	ft
082-W314						--	--
RW-07	9+05.76						
	11 ft RT						
	Ground Surface Elev.	402.1	ft	(ft)	(/6")	(tsf)	(%)
FILL: Crushed rock, with silty loam, A-1 ----- 401.1 FILL: Brown, sand, fine to coarse, trace gravel, A-1 ----- 6 ----- 6 Trace organics ----- 3 ----- 4 ----- 4 ----- 3 ----- 3 ----- 5 ----- 3 ----- 5 ----- 6 CLAY LOAM: Dark gray, A-7-6 ----- 391.6 CLAY: Gray, A-7 ----- 390.6 SAND: Brown, fine, A-3 ----- 389.9 ----- 7 ----- 10 ----- 10 ----- 8 ----- 14 ----- 16 SAND: Brown, fine to coarse, A-1 ----- 385.6 ----- 7 ----- 8 SAND: Brown, fine, A-3 ----- 382.9 ----- 8 ----- 10 ----- 20							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 1

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/08/13

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	Station	D E P T H S Qu T	B L O C S	U C S T	M O I S T	Surface Water Elev.	
						ft	ft
082-W314						--	--
RW-07A	9+08.64						
	11 ft RT						
	Ground Surface Elev.	402.1	ft	(ft)	(/6")	(tsf)	(%)
No soil sampling performed.							
SILTY CLAY LOAM: Brown to gray ----- 391.1 CLAY: Gray, A-7-5 ----- 390.6 ----- 389.1 Boring terminated at 13.0 ft. Boring backfilled with bentonite to 13 ft. ----- 15 ----- 20							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



USER NAME = <u>bsebel</u>	DESIGNED = <u>BB</u>	REVISED
Illinois Design Firm Number <u>184,001670</u>	CHECKED = <u>JD</u>	REVISED
PLOT SCALE = <u>0/1667' / 1 in.</u>	DRAWN = <u>WS</u>	REVISED
PLOT DATE = <u>8/7/2014</u>	CHECKED = <u>CJF</u>	REVISED

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

**SOIL BORING LOGS**  
**STRUCTURE NO. 082-W314**

SHEET NO. 15 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	350
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 2

Date 10/14/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	Station	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	D	B	U	M
082-W314		E	L	C	O	--	--	E	L	C	O
		P	O	S	I			P	O	S	I
BORING NO.	Station	T	W	Qu	T	Groundwater Elev.:	First Encounter	H	S	Qu	T
RW-08	9+50.30	H	S			384.1 ft	382.6 ft				
	Offset					Upon Completion	After N/A Hrs.	(ft)	(/6")	(tsf)	(%)
	39 ft LT										
	Ground Surface Elev.										
	423.6 ft	(ft)	(/6")	(tsf)	(%)						
ASPHALT - 10 inches											
FILL: Gray, sandy clay, trace crushed rock, A-4											
FILL: Brown, silty loam, A-4											
FILL: Brown, sand, fine to coarse, trace gravel, A-1											
A-1-b											
FILL: Brown, sand, fine to coarse, with gravel, A-1 (continued)											
No gravel											
Becomes gray											
Boring terminated at 45.0 ft. Boring grouted to 45 ft.											
FILL: Brown, sand, fine to coarse, A-3											
SAND: Gray, fine, A-2											
Trace organics											
CLAY: Gray, A-7											
SAND: Brown, fine, A-3											
With gravel											
Trace gravel											
With gravel											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 2 of 2

Date 10/14/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	Station	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	D	B	U	M
082-W314		E	L	C	O	--	--	E	L	C	O
		P	O	S	I			P	O	S	I
BORING NO.	Station	T	W	Qu	T	Groundwater Elev.:	First Encounter	H	S	Qu	T
RW-08	9+50.30	H	S			384.1 ft	382.6 ft				
	Offset					Upon Completion	After N/A Hrs.	(ft)	(/6")	(tsf)	(%)
	39 ft LT										
	Ground Surface Elev.										
	423.6 ft	(ft)	(/6")	(tsf)	(%)						
SAND: Brown, fine, A-3 (continued)											
Becomes gray											
Boring terminated at 45.0 ft. Boring grouted to 45 ft.											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 1

Date 10/08/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	Station	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	D	B	U	M
082-W314		E	L	C	O	--	--	E	L	C	O
		P	O	S	I			P	O	S	I
BORING NO.	Station	T	W	Qu	T	Groundwater Elev.:	First Encounter	H	S	Qu	T
RW-09	9+76.44	H	S			385.5 ft	None				
	Offset					Upon Completion	After N/A Hrs.	(ft)	(/6")	(tsf)	(%)
	17 ft RT										
	Ground Surface Elev.										
	402.2 ft	(ft)	(/6")	(tsf)	(%)						
FILL: Brown, silty clay loam, with crushed rock, A-6											
FILL: Brown, sand, fine to coarse, A-3											
Becomes fine											
SAND: Brown and gray, fine, with iron stains, A-3											
SAND: Gray, fine to medium											
CLAY: Gray											
With sand seams											
SAND: Brown, fine, A-3											
SAND: Brown, fine, A-2											
Trace fine gravel											
Boring terminated at 20.0 ft. Boring backfilled with bentonite to 20 ft.											
*Hole collapsed at 17.0 ft. after drilling											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

FILE NAME: S:\Proj\Jobs\412-002-025 MLK\_Connector\Bridges\Sign\082W314\_MSE\_Mail\_Final\_Plans\082W314-7609-016-Boring\_Log.dgn



USER NAME = bselbel  
Illinois Design Firm Number 184,001670  
PLOT SCALE = 0.1667" / 1"  
PLOT DATE = 8/7/2014

DESIGNED - BB  
CHECKED - JD  
DRAWN - WS  
CHECKED - CJF

REVISED  
REVISED  
REVISED  
REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOIL BORING LOGS  
STRUCTURE NO. 082-W314**

SHEET NO. 16 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	351
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	





Illinois Department of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Date 10/7-8/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO. 082-W314  
Station  
BORING NO. RW-12  
Station 11+12.95  
Offset 27 ft RT  
Ground Surface Elev. 405.6 ft (ft) (/6") (tsf) (%)

Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	N/A	Hrs.	N/A	ft
--	--		394.6	None	N/A				
FILL: Brown, silty clay loam, A-6 7 >4.5 10 7 1 P 8 NC FILL: Brown, sand, fine to coarse, trace gravel and crushed rock, A-1 402.6 FILL: Brown, sand, fine, A-3 6 6 NC 4 6 6 -5 Becomes fine to coarse 4 4 NC 1 6 6 4 4 NC 3 5 5 -10 SAND: Gray, fine, A-3 393.9 Trace coal 4 CLAY: Dark gray, trace shells, A-7 392.1 1 0.5 44 SAND: Gray, fine to coarse, A-1 391.6 1 S/15 15 CLAY: Gray, A-7 391.3 2 0.6 41 2 B SAND: Brown, fine, A-2 390.1 1 1 NC 23 9 11 5 7 NC 32 9 9 385.6 -20 Boring terminated at 20.0 ft. Boring backfilled with bentonite to 20 ft.									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Date 10/07/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO. 082-W314  
Station  
BORING NO. RW-13  
Station 11+64.56  
Offset 32 ft RT  
Ground Surface Elev. 402.9 ft (ft) (/6") (tsf) (%)

Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	N/A	Hrs.	N/A	ft
--	--		393.4	N/A	N/A				
FILL: Brown, sandy loam, A-2 401.9 FILL: Crushed rock, asphalt, and glass, A-1 401.6 10 8 NC 3 8 8 7 7 2 2 4 4 NC 1 4 4 -5 4 Boring terminated at 25.0 ft. Boring backfilled with bentonite to 25 ft. *Hole collapsed at 9.0 ft. after drilling 377.9 -26 3 3 4 4 NC 2 5 5 5 5 NC 5 -10 4 FILL: Gray, sand, fine to coarse, trace gravel, A-1 392.4 10 4 NC 16 4 3 FILL: Dark gray, silty clay, trace cinders, A-4 389.9 1 <0.25 P 46 1 1 CLAY: Gray, with iron stains, A-7 388.4 -15 1 1.0 B 36 SAND: Brown, fine, A-3 386.4 9 9 NC 27 11 11 11 11 3 3 NC 22 6 6 8 8 -20 8 -40									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Date 10/07/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO. 082-W314  
Station  
BORING NO. RW-13A  
Station 11+66  
Offset 32 ft RT  
Ground Surface Elev. 402.5 ft (ft) (/6") (tsf) (%)

Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	N/A	Hrs.	N/A	ft
--	--		None	None	N/A				
No soil sampling performed. -15 ST 22 Boring terminated at 16.0 ft. Boring backfilled with bentonite to 16 ft. 386.5 -20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

FILE NAME: S:\Proj\Jobs\12-0024-025\_MLK\_Connector\Bridges\Sign\082W314\_MSE\_Wall\_Final\_Plans\082W314-7609-01B-Boring\_Log.dgn



USER NAME = bsebel  
Illinois Design Firm Number 184,001670  
PLOT SCALE = 0.1667" / 1 in.  
PLOT DATE = 8/7/2014

DESIGNED - BB  
CHECKED - JD  
DRAWN - WS  
CHECKED - CJF

REVISED  
REVISED  
REVISED  
REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS  
STRUCTURE NO. 082-W314

SHEET NO. 18 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	353
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				













Illinois Department of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 2

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/10/13

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	Station	D	B	U	M	Surface Water Elev.	ft	D	B	U	M
BORING NO.	Station	P	L	C	O	Stream Bed Elev.	ft	P	L	C	O
Offset	Ground Surface Elev.	T	W	S	Qu	First Encounter	ft	H	S	Qu	T
Ground Surface Elev.	ft	(ft)	(/6")	(tsf)	(%)	Upon Completion	ft	(ft)	(/6")	(tsf)	(%)
082-W314	14+29.22					390.9					
RW-23	43 ft LT					N/R					
	440.9					N/A					
ASPHALT - 15 inches											
CRUSHED ROCK - 3 inches											
FILL: Gray, silty loam, trace crushed rock and cinders, A-4											
CRUSHED ROCK - 2 inches											
FILL: Brown and gray, silty clay loam, A-6											
FILL: Brown, silty clay loam, trace gravel, A-4											
QU Test Performed											
SILTY CLAY: Brown											
FILL: Brown, silty loam, A-4											
FILL: Brown, sand, fine to coarse, trace gravel, A-1											
With charcoal											
CLAY: Gray, with iron stains, A-7											
A-7-6											
No iron stains, with fine sand seams											
QU Test Performed											
No sand seams											
With iron stains											
CU Test Performed											
LOAM: Brown, A-4											
SILTY LOAM: Gray, with iron stains, A-7											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 2 of 2

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/10/13

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	Station	D	B	U	M	Surface Water Elev.	ft	D	B	U	M
BORING NO.	Station	P	L	C	O	Stream Bed Elev.	ft	P	L	C	O
Offset	Ground Surface Elev.	T	W	S	Qu	First Encounter	ft	H	S	Qu	T
Ground Surface Elev.	ft	(ft)	(/6")	(tsf)	(%)	Upon Completion	ft	(ft)	(/6")	(tsf)	(%)
082-W314	14+29.22					390.9					
RW-23	43 ft LT					N/R					
	440.9					N/A					
CLAY: Gray, with iron stains, A-7 (continued)											
SAND: Brown, fine, A-2											
Becomes gray											
CLAY LOAM: Gray, A-6											
Boring terminated at 55.0 ft. Boring grouted to 55 ft.											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 1

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/03/13

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	Station	D	B	U	M	Surface Water Elev.	ft	D	B	U	M
BORING NO.	Station	P	L	C	O	Stream Bed Elev.	ft	P	L	C	O
Offset	Ground Surface Elev.	T	W	S	Qu	First Encounter	ft	H	S	Qu	T
Ground Surface Elev.	ft	(ft)	(/6")	(tsf)	(%)	Upon Completion	ft	(ft)	(/6")	(tsf)	(%)
082-W314	14+51.78					None					
RW-24	19 ft RT					None					
	415.4					None					
FILL: Brown, silty clay loam, A-6											
FILL: Cinders, slag, sand, trace gravel, A-1											
Trace brick fragments											
FILL: Gray, clay, with iron stains, A-7											
SANDY LOAM: Brown, A-2											
CLAY: Gray, with iron stains, A-7											
A-7-6											
CU Test Performed											
LOAM: Brown, A-4											
SILTY LOAM: Gray, with iron stains, A-7											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

FILE NAME: S:\Pro\Jobs\412-0024-025 MLK Connector\Bridges\Sign\082W314 MSE Wall\Final\_Plans\082W314-MSE-Wall-Final\_Plans\082W314-Boring\_Log.dgn



USER NAME = bsebel  
Illinois Design Firm Number 184,001670  
PLOT SCALE = 0.1667" / 1 in.  
PLOT DATE = 8/7/2014

DESIGNED - BB  
CHECKED - JD  
DRAWN - WS  
CHECKED - CJF

REVISED  
REVISED  
REVISED  
REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS  
STRUCTURE NO. 082-W314  
SHEET NO. 23 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	358
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



Illinois Department of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 1

Date 10/02/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	BORING NO.	Station	Offset	Ground Surface Elev.	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After
082-W314	RW-25	14+84.43	51 ft RT	414.4 ft	(ft)	(/6")	(tsf)	(%)	-- ft	-- ft	None ft	None ft	None ft	14 Hrs.
FILL: Dark brown, silty loam, trace glass and slag, A-4														
Poor recovery														
3														
4 NC 20														
3														
With crushed rock														
3														
5 NC 24														
-9 12														
SILTY CLAY LOAM: Gray, with gravel														
406.4														
ST														
53														
CLAY: Gray, A-7														
QU Test Performed A-7-6														
ST														
0.2 43														
With iron stains														
-10														
2														
3 1.3 B 33														
4														
SAND: Brown, fine, A-2														
399.9														
-15 6 NC 12														
2-inch silty loam layer														
4														
4 NC 11														
8														
LOAM: Brown, A-4														
396.4														
2														
-- 26														
SAND: Brown, fine, A-3														
394.9														
7														
394.4 -20 11 NC 6														

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 1 of 2

Date 10/09/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	BORING NO.	Station	Offset	Ground Surface Elev.	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After
082-W314	RW-26	14+75.22	41 ft LT	442.4 ft	(ft)	(/6")	(tsf)	(%)	-- ft	-- ft	392.4 ft	N/R ft	N/A ft	N/A Hrs.
ASPHALT - 15 inches														
441.1														
440.9														
CRUSHED ROCK - 4 inches														
FILL: Gray, silty loam, with crushed rock, A-4														
2														
1 -- 20														
2														
Trace cinders and crushed rock														
4														
4 1.0 S/10 19														
6														
-9														
FILL: Brown, sand, fine to coarse, trace gravel, A-1 (continued)														
419.4														
7														
9 NC 4														
11														
14														
14														
-26														
FILL: Brown, sand, fine to coarse, trace gravel, A-1														
416.9														
7														
10 NC 3														
12														
-397.5 -46														
SILT LOAM: Gray, with iron stains, A-4														
395.4														
SAND: Brown, fine, A-3														
6														
7 NC 25														
7														
-50														
FILL: Brown, silty clay loam, with crushed rock, A-6														
434.6														
3														
9 1.3 B 32														
6														
-10														
FILL: Brown, sand, fine to coarse, trace gravel, A-1														
431.9														
8														
9 NC 3														
7														
FILL: Dark gray, loam, with cinders and coal, A-4														
410.4														
2														
0.3 S/10 30														
408.1														
2														
0.8 S/10 24														
-36 4														
LOAM: Gray, A-4														
CLAY: Gray, with iron stains, A-7														
405.4														
A-1-b														
6														
9 NC 3														
7														
-20 10														
A-7-5														
2														
4 1.8 S/15 29														
-40 5														

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation  
Division of Highways  
SCI Engineering, Inc.

### SOIL BORING LOG

Page 2 of 2

Date 10/09/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	BORING NO.	Station	Offset	Ground Surface Elev.	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After
082-W314	RW-26	14+75.22	41 ft LT	442.4 ft	(ft)	(/6")	(tsf)	(%)	-- ft	-- ft	392.4 ft	N/R ft	N/A ft	N/A Hrs.
CLAY: Gray, with iron stains, A-7 (continued)														
3														
4 1.8 B 39														
5														
SILT LOAM: Gray, with iron stains, A-4														
397.5 -46														
SAND: Brown, fine, A-3														
395.4														
6														
7 NC 25														
7														
-50														
LOAM: Gray, with organic layers, A-4														
390.4														
2														
0.8 P 29														
3														
1.6 B 32														
387.4 -56 9														
CLAY LOAM: Gray, with clay layers, A-6														
387.4 -56														
SAND: Brown, fine, A-3														
Boring terminated at 55.0 ft. Boring grouted to 55 ft.														
-80														

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

FILE NAME: S:\Proj\Jobs\412-0024-025 MLK\_Connector\Bridges\Sign\082W314\_MSE\_Mail\_Final\_Plans\082W314\_MSE\_Mail\_Final\_Plans\082W314-7609-024-Boring\_Log.dgn



USER NAME = bsebel  
Illinois Design Firm Number 184,001670  
PLOT SCALE = 0.1667" / 1 in.  
PLOT DATE = 8/7/2014

DESIGNED - BB  
CHECKED - JD  
DRAWN - WS  
CHECKED - CJF

REVISED  
REVISED  
REVISED  
REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS  
STRUCTURE NO. 082-W314

SHEET NO. 24 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	359
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

**SOIL BORING LOG**

Page 1 of 1

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/02/13

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

STRUCT. NO.	Station	DEPTH (ft)	BULGE	UCS	Penetration (tsf)	Soil Description	DEPTH (ft)	BULGE	UCS	Penetration (tsf)
082-W314						Surface Water Elev. -- ft				
						Stream Bed Elev. -- ft				
						Groundwater Elev.: None ft				
						First Encounter Upon Completion After 16 Hrs. None ft				
						Ground Surface Elev. 416.6 ft				
						FILL: Brown, silty clay loam, trace cinders, brick, crushed rock, and roots, A-6				
						FILL: Black, sand, fine to coarse, trace gravel, A-2				
						FILL: Dark gray, slag and cinders, A-1				
						FILL: Gray, loam, with iron stains, A-4				
						SILTY LOAM: Gray, with iron stains, A-4				
						CLAY: Gray, with iron stains, A-7				
						SILTY CLAY LOAM: Brown, A-4				
						Consolidation Test Performed				
						SILTY CLAY: Brown, A-6				
						SILTY CLAY LOAM: Gray, with iron stains, A-6				
						CLAY: Gray, with iron stains, A-7				
						SAND: Gray, fine, with iron stains, A-2				
						SAND: Brown, fine, A-3				
						SILTY LOAM: Gray, with iron stains, trace iron nodules, A-4				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

**SOIL BORING LOG**

Page 1 of 1

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/14/13

SECTION 82-(1,4)B-1 LOCATION Proposed Ramp Widening, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with CFA HAMMER TYPE Automatic

STRUCT. NO.	Station	DEPTH (ft)	BULGE	UCS	Penetration (tsf)	Soil Description	DEPTH (ft)	BULGE	UCS	Penetration (tsf)
N/A						Surface Water Elev. -- ft				
						Stream Bed Elev. -- ft				
						Groundwater Elev.: None ft				
						First Encounter Upon Completion After N/A Hrs. N/A ft				
						Ground Surface Elev. 433.5 ft				
						ASPHALT - 9 inches				
						FILL: Brown, sand, fine to coarse, trace gravel, A-1				
						FILL: Crushed rock, trace silty clay loam, A-1				
						FILL: Brown, sand, fine to coarse, trace gravel, A-1				
						Boring terminated at 25.0 ft. Boring backfilled with bentonite to 25 ft.				
						Boring terminated at 7.5 ft. Boring backfilled with bentonite to 7.5 ft.				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

**SOIL BORING LOG**

Page 1 of 1

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS) Date 10/14/13

SECTION 82-(1,4)B-1 LOCATION Proposed Ramp Widening, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with CFA HAMMER TYPE Automatic

STRUCT. NO.	Station	DEPTH (ft)	BULGE	UCS	Penetration (tsf)	Soil Description	DEPTH (ft)	BULGE	UCS	Penetration (tsf)
N/A						Surface Water Elev. -- ft				
						Stream Bed Elev. -- ft				
						Groundwater Elev.: None ft				
						First Encounter Upon Completion After N/A Hrs. N/A ft				
						Ground Surface Elev. 421.5 ft				
						ASPHALT - 8 inches				
						FILL: Brown, sand, fine to coarse, with gravel, A-1				
						A-1-b				
						Boring terminated at 7.5 ft. Boring backfilled with bentonite to 7.5 ft.				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

FILE NAME: S:\Proj\Jobs\412-0024-025\_MLK\_Connector\Bridges\Sign\082W314\_MSE\_Mall\_Traffic\_Plans\082W314-76609-025-Boring\_Log.dgn



USER NAME = bselbel  
Illinois Design Firm Number 184,001670  
PLOT SCALE = 0.1667" / 1 in.  
PLOT DATE = 8/7/2014

DESIGNED - BB  
CHECKED - JD  
DRAWN - WS  
CHECKED - CJF

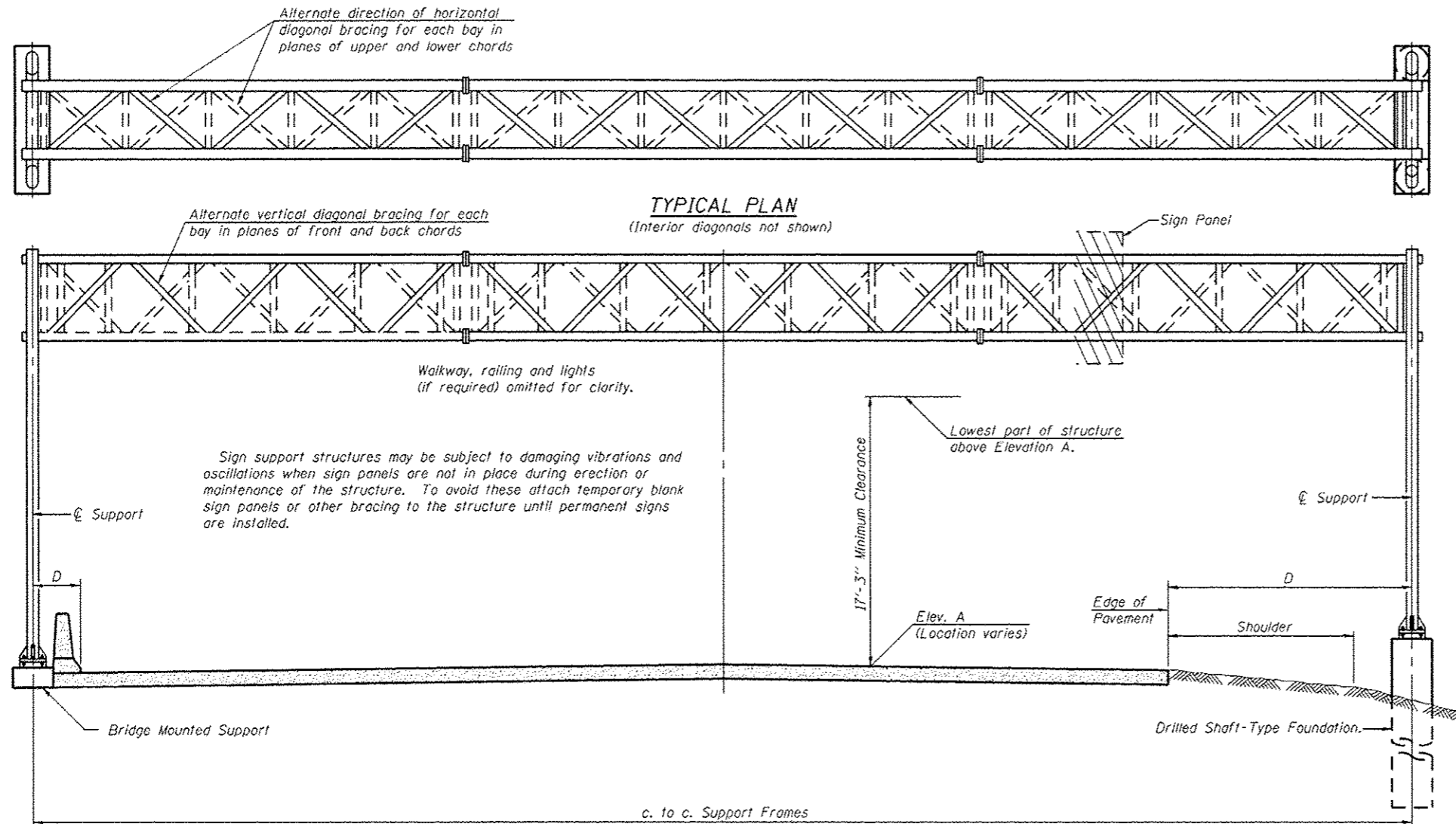
REVISED  
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REVISED  
REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOIL BORING LOGS  
STRUCTURE NO. 082-W314**

SHEET NO. 25 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	360
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



**GENERAL NOTES**

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:  
Field Units  
F<sub>c</sub> = 3,500 p.s.i.  
F<sub>y</sub> = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W\*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer. The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

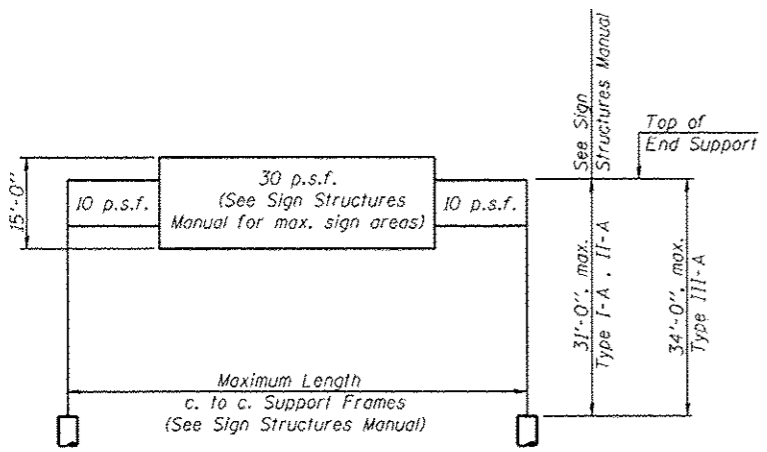
**TYPICAL ELEVATION**  
(Looking at Face of Signs)\*\*

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
BS0821055L001.6	106+72.04	II-A	78'-8"	451.16	3'-1"	16'-6"	585
BS0821055L001.7	116+00.00	II-A	80'-0"	423.07	19'-0"	16'-6"	585

\*\*Looking upstation for structures with signs both sides.

\* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.



**DESIGN WIND LOADING DIAGRAM**

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

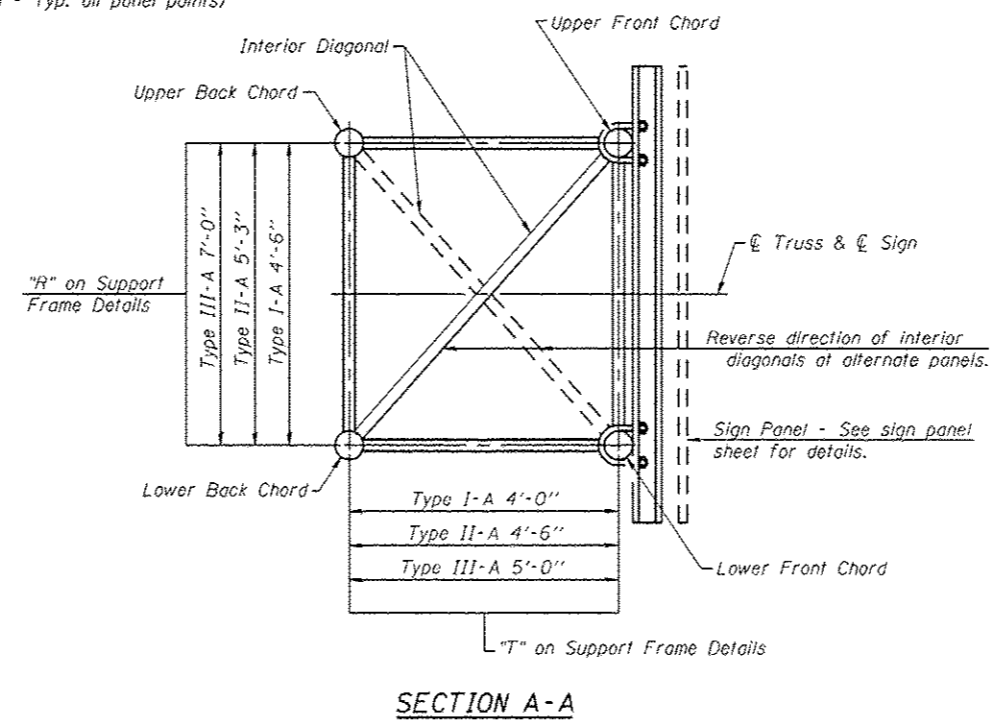
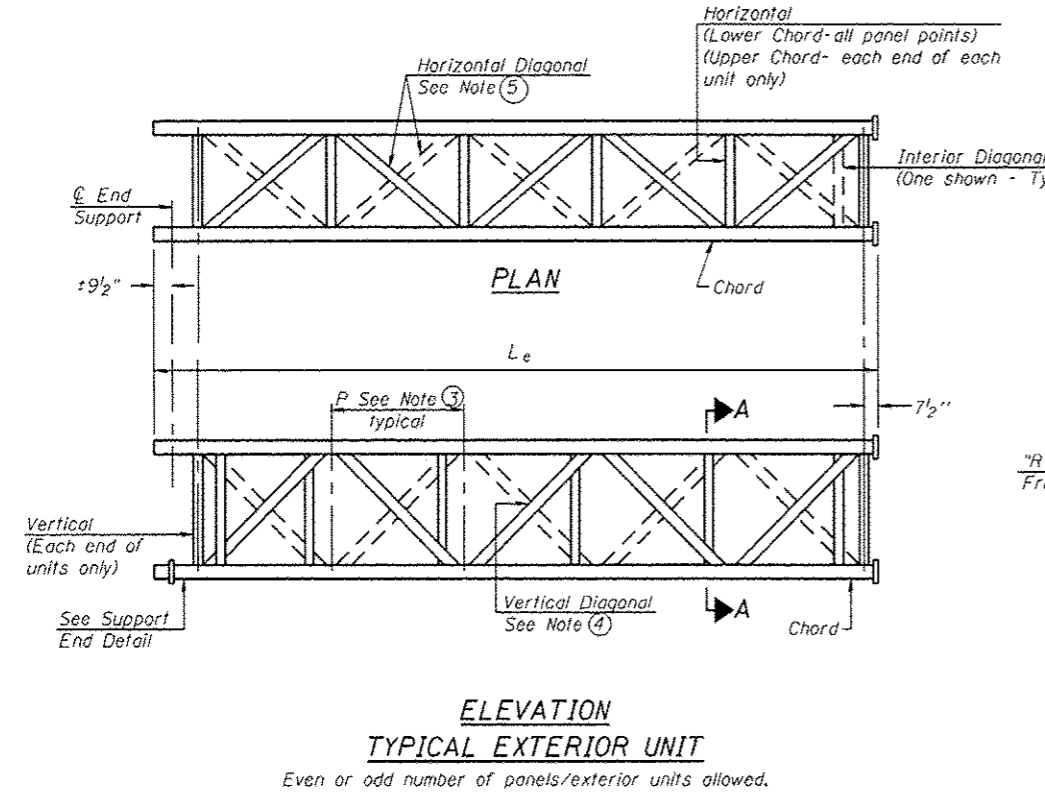
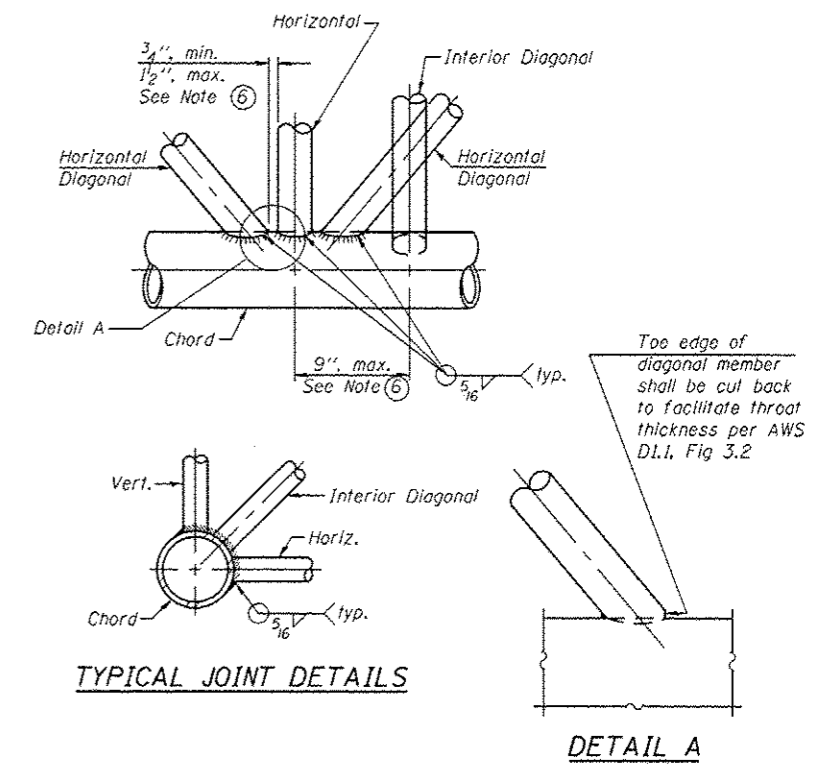
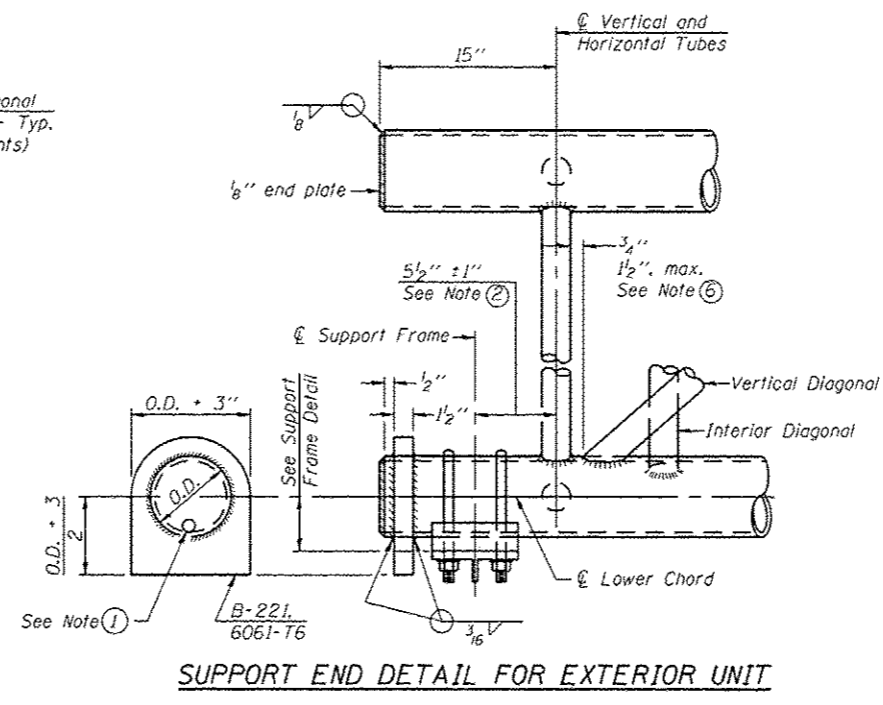
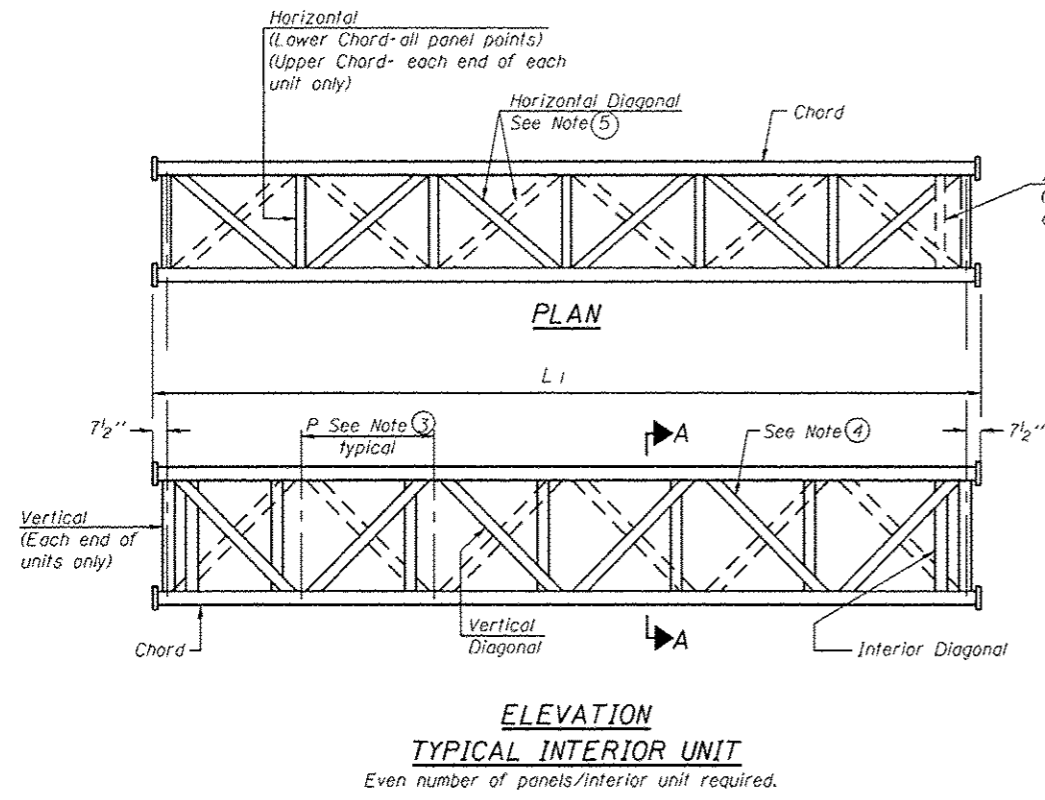
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	159
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	120
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	20.9

OS-A-1

8-21-13

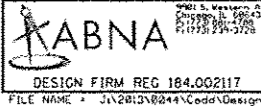
<p>DESIGN FIRM REG 184,002117</p>	<p>USER NAME = jengelmann</p> <p>DESIGNED - MB/JJE</p> <p>CHECKED - SEA</p> <p>DRAWN - JJE</p> <p>CHECKED - SEA/MB</p>	<p>REVISOR</p> <p>REVISION</p> <p>REVISION</p> <p>REVISION</p>	<p>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p>OVERHEAD SIGN STRUCTURES - GENERAL PLAN &amp; ELEVATION - ALUMINUM TRUSS &amp; STEEL SUPPORTS</p>	<p>F.A. RTE. = 64</p>	<p>SECTION = 82-(1,4B)-1</p>	<p>COUNTY = ST. CLAIR</p>	<p>TOTAL SHEETS = 406</p>	<p>SHEET NO. = 361</p>
	<p>PLOT SCALE =</p> <p>PLOT DATE = 9/23/2014</p>	<p>FILE NAME = J:\2813\8244\Cadd\Design\Sign Structures\BS0821064L001.5\Overhead Sign Structures.dgn</p>			<p>SHEET NO. 1 OF 10 SHEETS</p>	<p>CONTRACT NO. 76G09</p>	<p>ILLINOIS FED. AID PROJECT</p>		



- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" φ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" end dimension may vary by ± 1" to provide uniform panel spacing (P).
- ③ Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
- ④ Vertical Diagonals in front and back face shall alternate.
- ⑤ Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
- ⑥ All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a 3/4" minimum to 1 1/2" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

OS-A-2

6-1-12



USER NAME : jengalmann	DESIGNED - MB/JJE	REVISED
CHECKED - SEA	REVISED	
DRAWN - JJE	REVISED	
CHECKED - SEA/MB	REVISED	

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

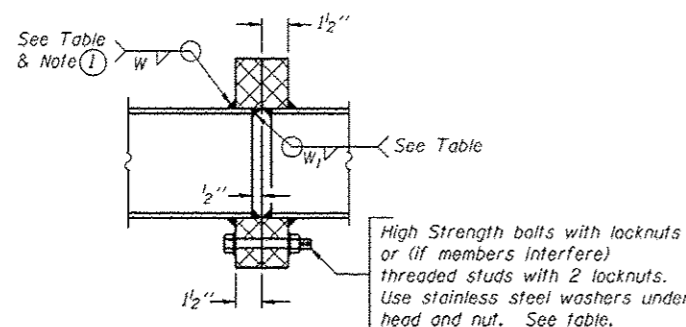
**OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS**  
**DETAILS FOR TRUSS TYPES I-A, II-A AND III-A**

SHEET NO. 2 OF 10 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-II,4B-1	ST. CLAIR	406	362
				CONTRACT NO. 76G09
ILLINOIS FED. AID PROJECT				

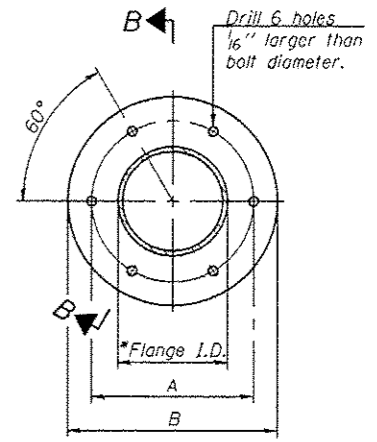
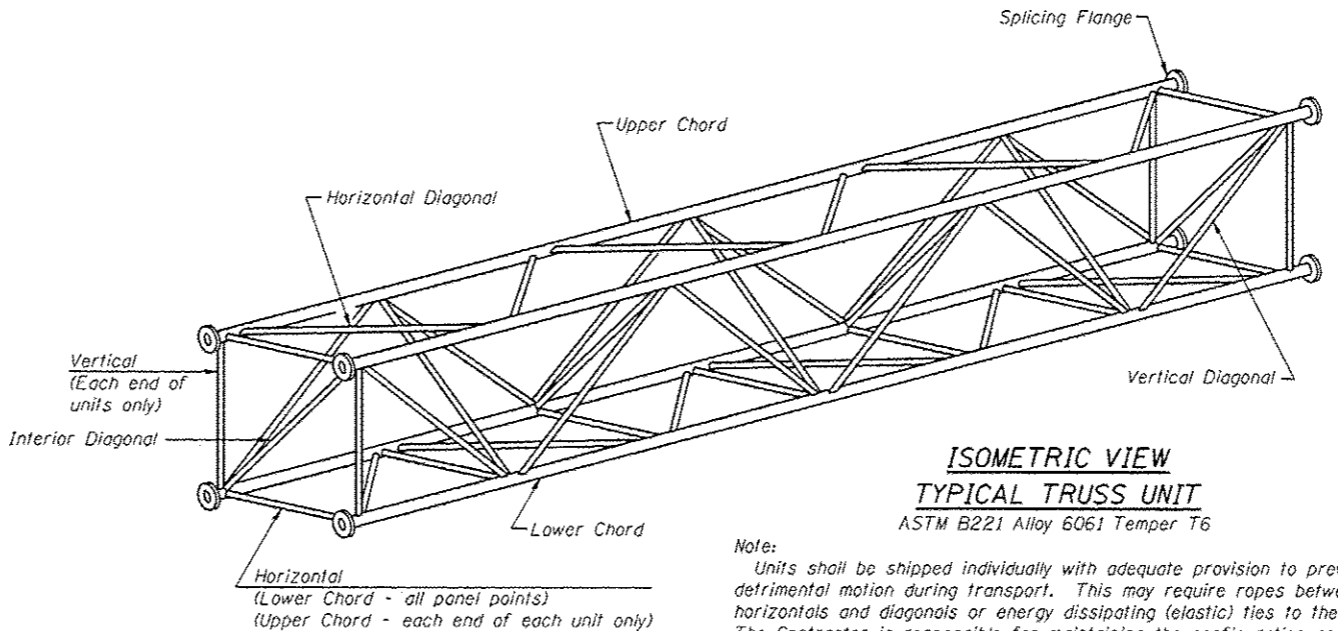
**TRUSS UNIT TABLE**

Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L <sub>u</sub> )	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L <sub>i</sub> )	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W <sub>1</sub>		
8S0821055L001.6	106+72.04	II-A	5	28'-10 1/4"	5'-4 3/4"	1	4	22'-10"	5'-4 3/4"	5 1/2"	5/16"	3"	5/16"	1 7/8"	6	7/8"	3/8"	1/4"	9 1/4"	12 1/4"
8S0821055L001.7	116+00.00	II-A	5	29'-2"	5'-5 1/2"	1	4	23'-1"	5'-5 1/2"	5 1/2"	5/16"	3"	5/16"	2"	6	7/8"	3/8"	1/4"	9 1/4"	12 1/4"

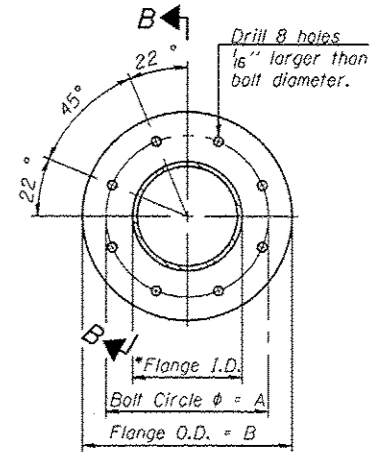


**SECTION B-B**

① Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or locks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.



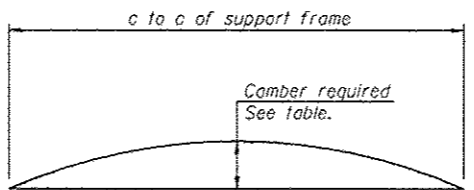
**TRUSS TYPES I-A, II-A, & III-A**



**TRUSS TYPES II-A & III-A**

**SPLICING FLANGES**

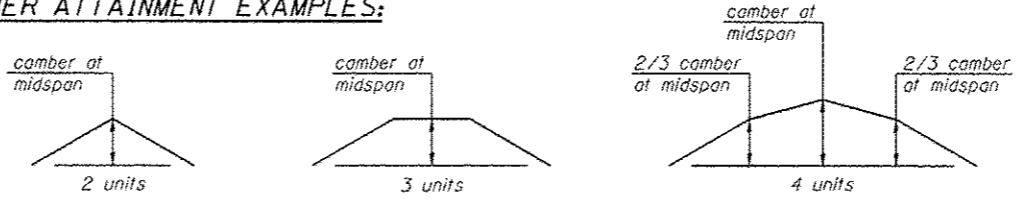
ASTM B221, Alloy 6061-T6 or ASTM B209, Alloy 6061-T651  
\*To fit O.D. of Chord with maximum gap of 1/16".



**CAMBER DIAGRAM**

Camber curve shown is theoretical. Actual camber attained by slope changes of splices between units.

**CAMBER ATTAINMENT EXAMPLES:**



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)

OS4-A-2

6-1-12

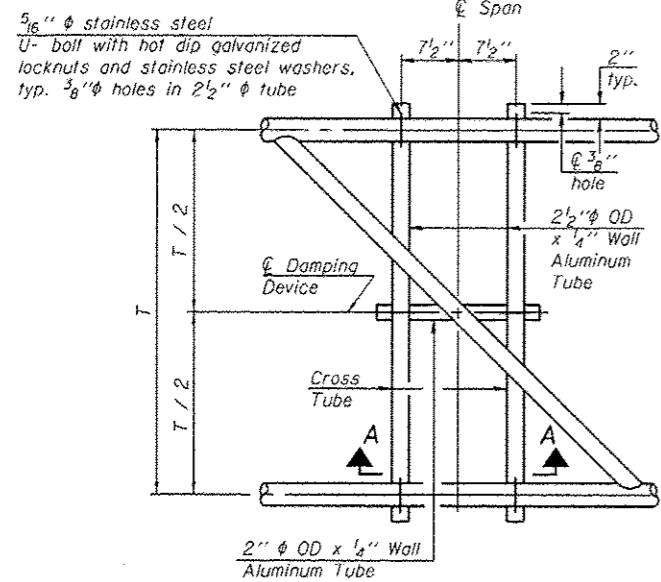


USER NAME : jengelmann	DESIGNED - MB/JJE	REVISED
	CHECKED - SEA	REVISED
PLOT SCALE :	DRAWN - JJE	REVISED
PLOT DATE : 9/23/2014	CHECKED - SEA/MB	REVISED

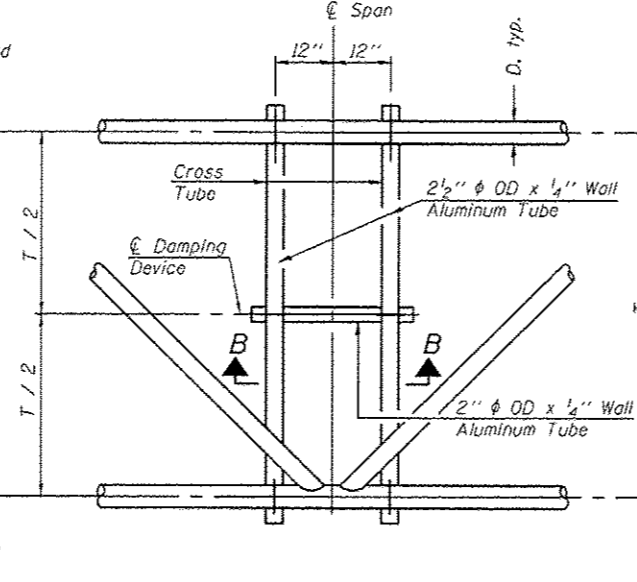
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A**

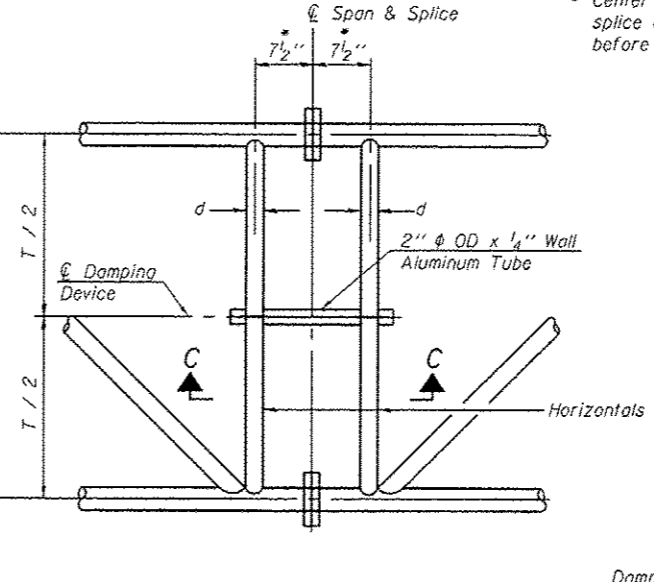
F.A. RTE. 64	SECTION 82-11.4B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 363
SHEET NO. 3 OF 10 SHEETS			CONTRACT NO. 76G09	



**PLAN DETAIL "A"**  
Span between Panel Points



**PLAN DETAIL "B"**  
Span at Panel Point



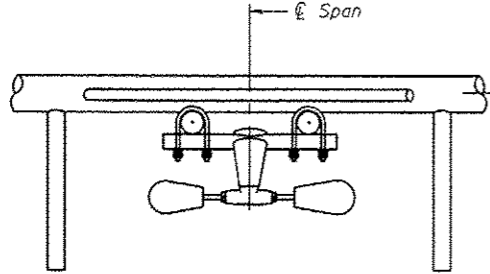
**PLAN DETAIL "C"**  
Span at Chord Splice

Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

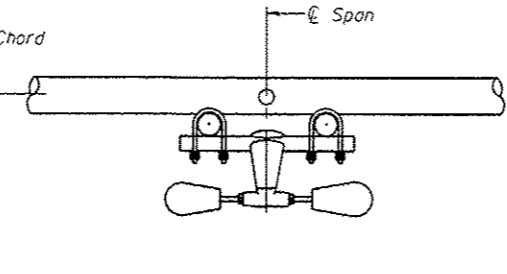
**NOTES**

**Damper:** One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...

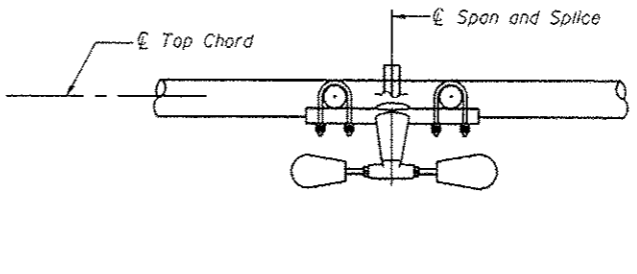
**Materials:** Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



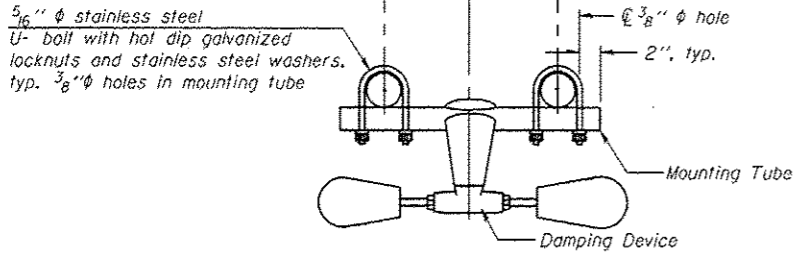
**SECTION A-A**



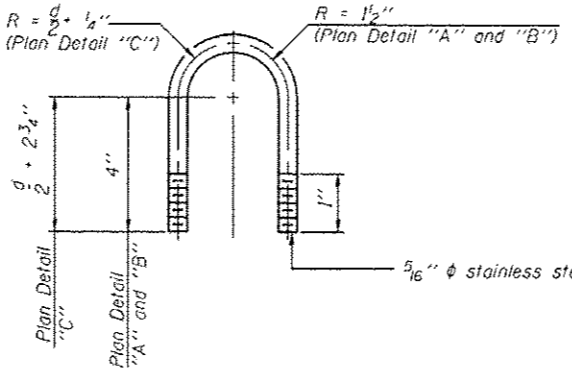
**SECTION B-B**



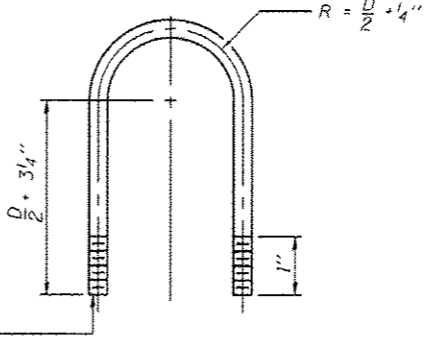
**SECTION C-C**



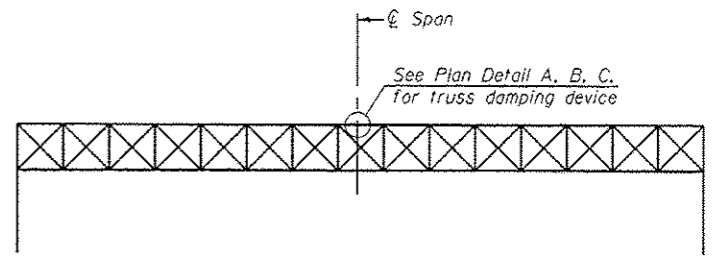
**TRUSS DAMPING DEVICE CONNECTION DETAIL**  
(Typical)



**DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL**  
(Typical)



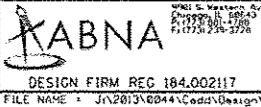
**TOP CHORD TO CROSS TUBE U-BOLT DETAIL**  
(Typical - Detail "A" and "B")



**ELEVATION**  
Aluminum Overhead Sign Truss

OS-A-D

6-1-12



USER NAME : jangelsann	DESIGNED - MB/JJE	REVISOR
	CHECKED - SEA	REVISION
	DRAWN - JJE	REVISION
	CHECKED - SEA/MB	REVISION

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

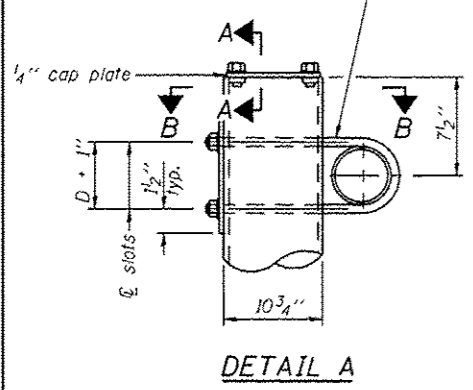
OVERHEAD SIGN STRUCTURE  
DAMPING DEVICE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	B2-1, A1B-1	ST. CLAIR	406	364
			CONTRACT NO. 76G09	
ILLINOIS FED. AID PROJECT				

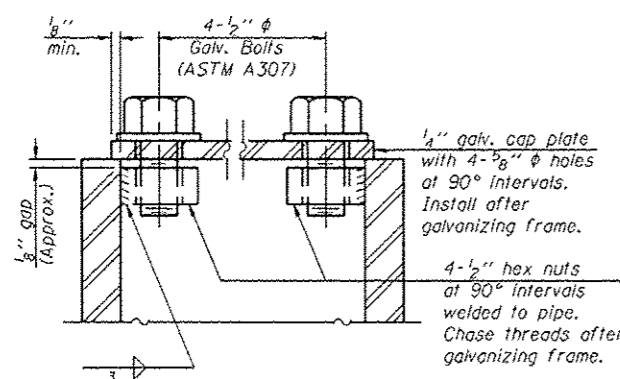
SHEET NO. 4 OF 10 SHEETS



3/4" φ stainless steel U-bolt.  
Provide two washers and two hexagon locknuts. (4)  
1 3/16" x 2" slots on 10" φ pipe.  
(4 slots required per pipe)

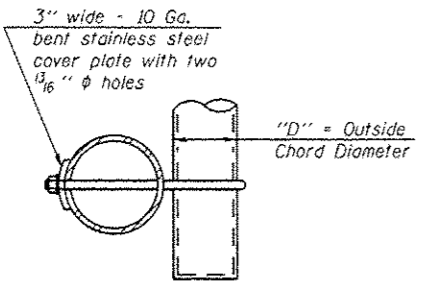


DETAIL A

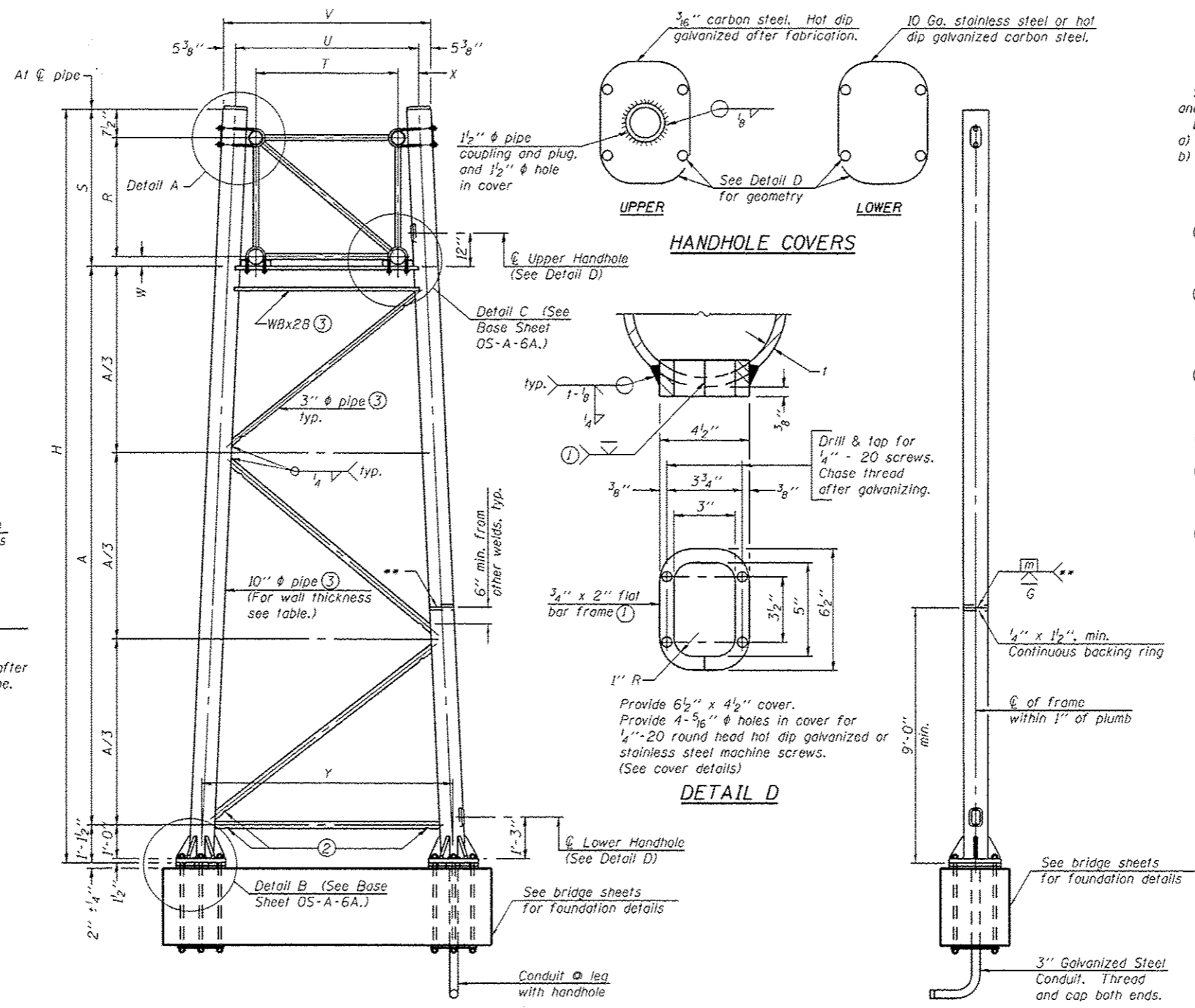


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

Truss Type	Dimensions							
	R	S	T	U	V	W	X	Y
I-A	4'-6"	5'-5 1/2"	4'-0"	5'-6"	6'-4 3/4"	4"	9"	8'-3"
II-A (5)	5'-3"	6'-3 1/4"	4'-6"	6'-1"	6'-11 3/4"	4 3/4"	9 1/2"	8'-3"

10" φ PIPE TRUSS SUPPORT FRAME

\*\* One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.  
Load combinations checked include deadload plus:  
a) 100% wind normal to sign, 20% parallel to sign  
b) 60% wind normal to sign, 30% parallel to sign

- In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.
- Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
- See General Notes for fasteners.
- Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- "H" based on 15'-0" or actual sign height, whichever is greater.

END ELEVATION

Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H (6)	A
		Left	Right				
850821055L001.6	106+72.04		X	II-A	0.500	29'-8 1/16"	22'-3 1/16"
850821055L001.6	106+72.04	X		II-A	0.500	31'-2 9/16"	23'-9 13/16"
850821055L001.7	116+00.00	X		II-A	0.365	19'-11"	12'-6 1/4"
850821055L001.7	116+00.00		X	II-A	0.365	26'-11"	19'-6 1/4"

OS-A-6

6-1-12



USER NAME = jengelmann	DESIGNED - MB/JJE	REVISED
CHECKED - SEA	REVISIONS	
DRAWN - JJE	REVISIONS	
CHECKED - SEA/MB	REVISIONS	

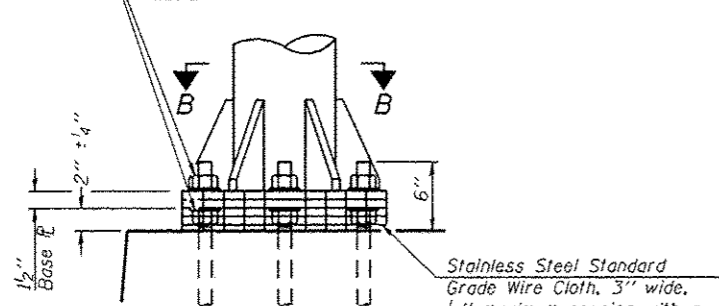
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES  
SUPPORT FRAME FOR ALUMINUM TRUSS

F.A. RTE. 64	SECTION B2-(1,406-1)	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 365
CONTRACT NO. 76G09				ILLINOIS FED. AID PROJECT

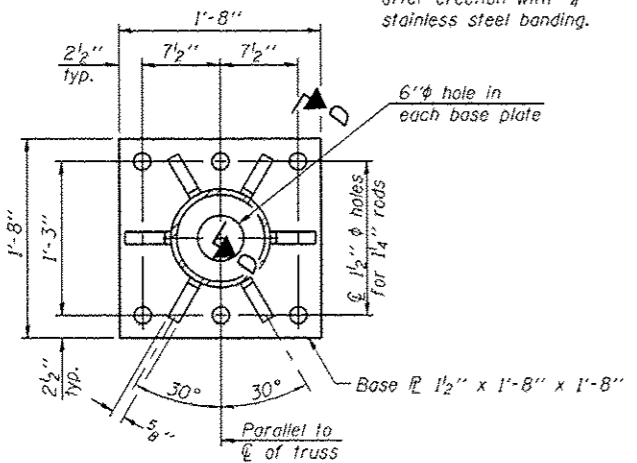
SHEET NO. 5 OF 10 SHEETS

Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.

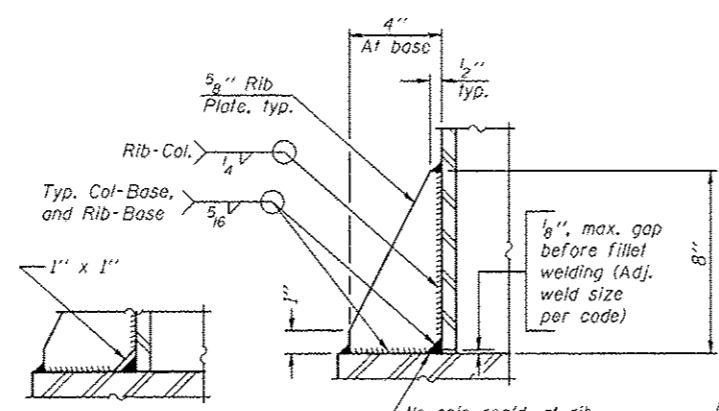


**DETAIL B**

Ribs shall be cut to fit slope of pipe. Stainless Steel Standard Grade Wire Cloth, 3" wide, 1/4" maximum opening with a minimum wire diameter of AWG. No. 16 with a minimum 2" lap. Secure to base plate after erection with 3/4" stainless steel banding.

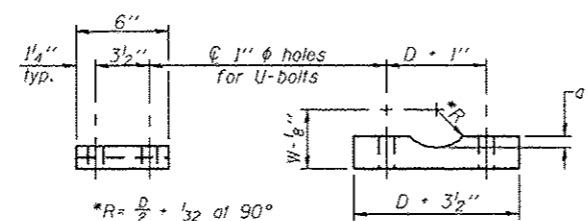


**SECTION B-B**



**SECTION D-D**

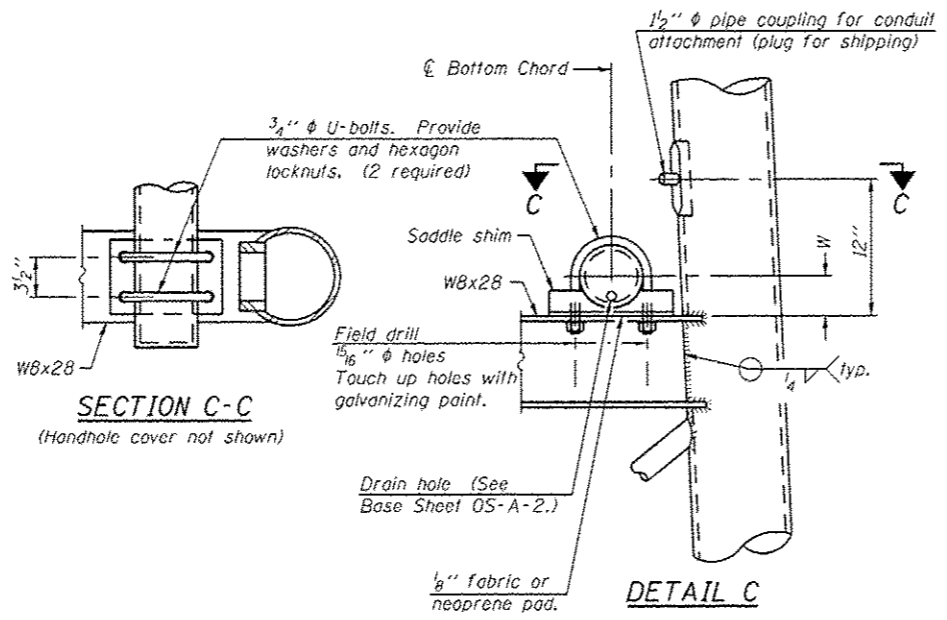
\*\* Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip. No snip req'd. at rib inside corner if placed before col. to base plate welding.



**SADDLE SHIM DETAIL**

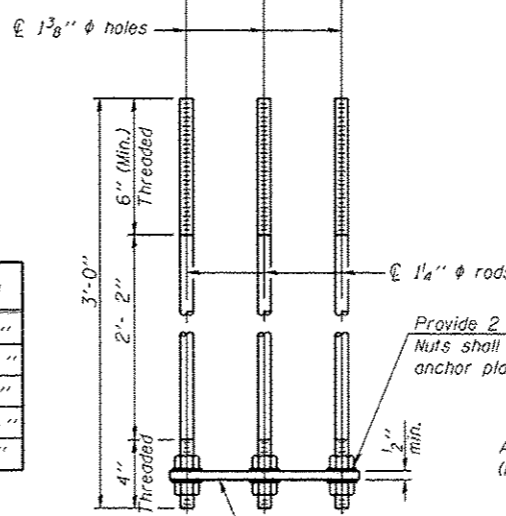
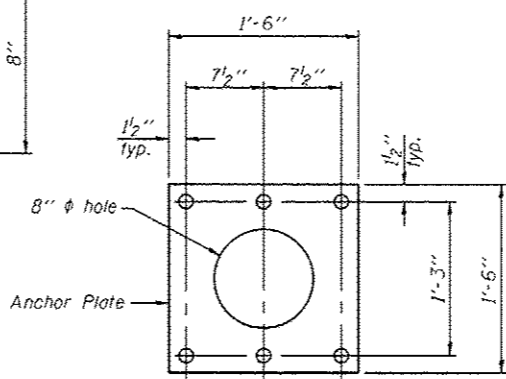
ASTM B26 Alloy 356-F or ASTM B209 Alloy 6061-T651 (4 required per sign truss)

Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	13/16"
6"	7/8"
6 1/2"	15/16"
7"	1"



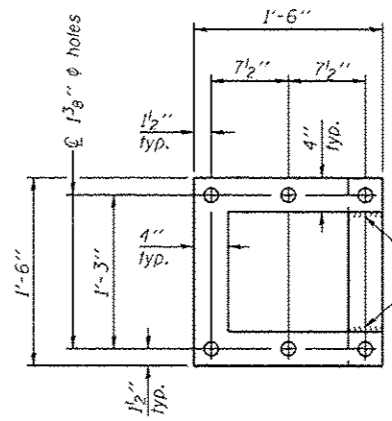
**SECTION C-C**

**DETAIL C**



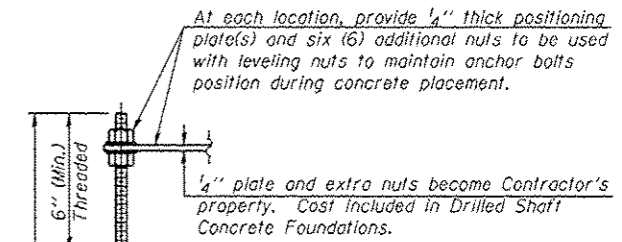
**ANCHOR ROD DETAIL**

Spread Footing Foundation



**POSITIONING PLATE(S)**

Optionally may use four (4) separate bars. Weld to maintain perpendicularity.



**ANCHOR ROD DETAIL**

Drilled Shaft Foundation

**10" Ø PIPE SUPPORT FRAME DETAILS**

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

OS-A-6A

6-1-12



DESIGNED - MB/JJE  
CHECKED - SEA  
DRAWN - JJE  
CHECKED - SEA/MB

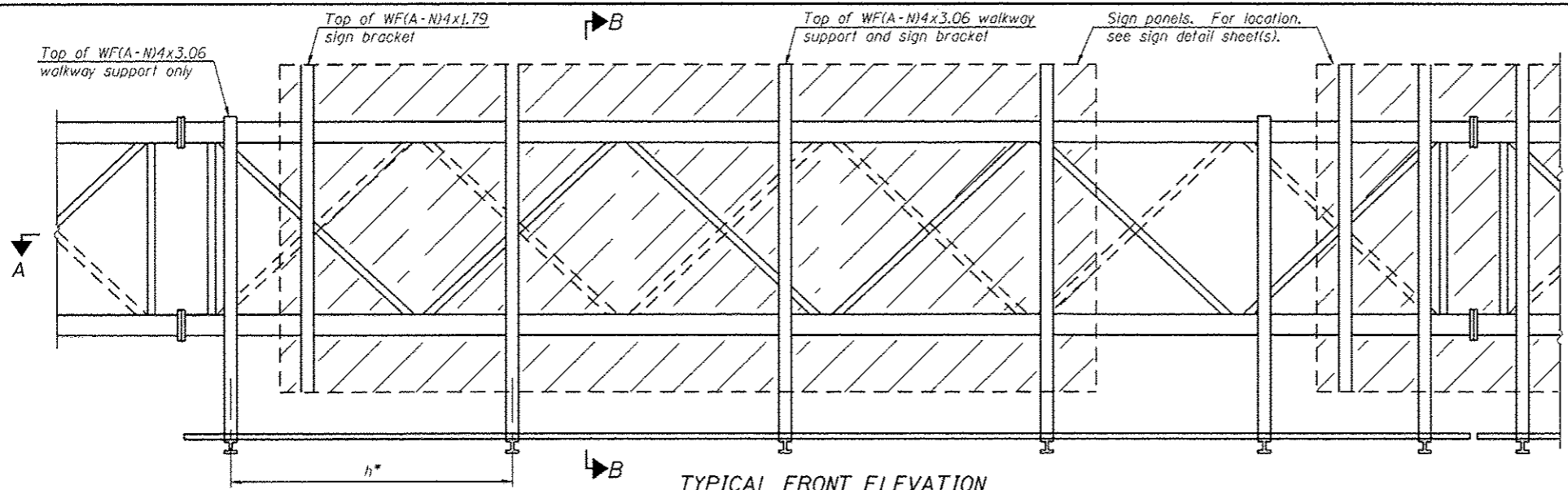
REVISOR  
REVISION  
REVISION  
REVISION

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

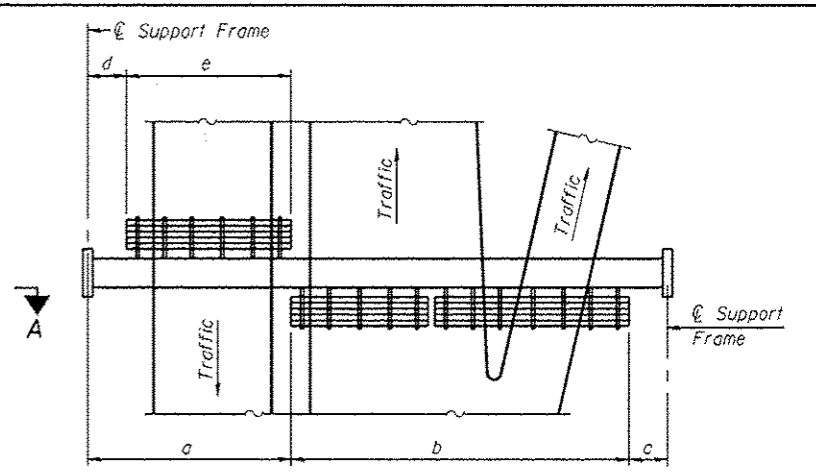
OVERHEAD SIGN STRUCTURES  
SUPPORT FRAME DETAILS - ALUMINUM TRUSS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	366
			CONTRACT NO. 76G09	
ILLINOIS FED. AID PROJECT				

SHEET NO. 6 OF 10 SHEETS



**TYPICAL FRONT ELEVATION**  
 With lights and handrail omitted for clarity.  
 For Section B-B, see Base Sheet OS-A-10.



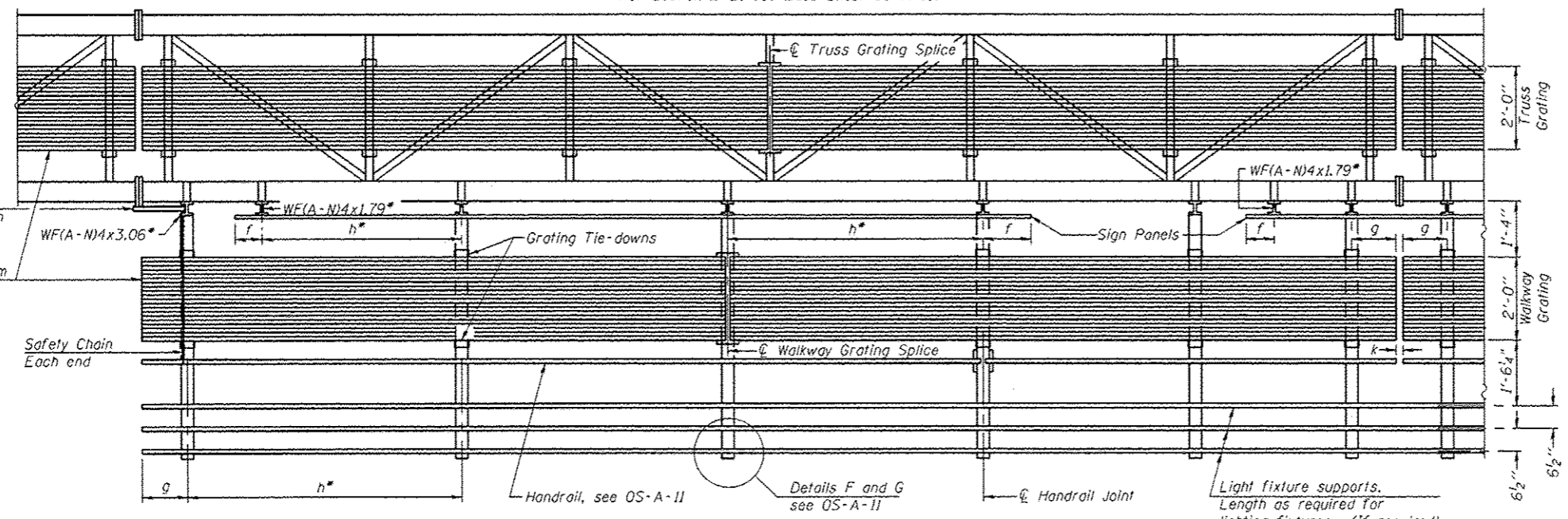
**PLAN WALKWAY AND HANDRAIL SKETCH**  
 (Road plan beneath truss varies)

**BRACKET TABLE**

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
8'-0"	8'-0"	2
14'-0"	14'-0"	3
20'-0"	20'-0"	4
26'-0"	26'-0"	5
32'-0"	32'-0"	6

- Notes:
- Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
  - f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
  - g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
  - h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
  - k = 2" maximum gap between adjacent walkway grating sections and handrail ends

- If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.
- For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.
- For Handrail Details see Base Sheet OS-A-11.



**SECTION A-A**  
 Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints.  
 Place all sign and walkway brackets as close to panel points as practical.  
 Handrail joints, grating, and light support splices placed as needed.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
BS0821055L001.6	106+72.04	1'-4"	76'-0"	1'-4"			76'-0"
BS0821055L001.7	116+00.00	21'-0"	44'-0"	15'-0"			44'-0"

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses.  
 Cost of truss grating is included in "Overhead Sign Structure".

Walkway and Truss Grating width dimensions are nominal and may vary ±1/2" based on available standard widths.

OS-A-9 6-1-12



DESIGNED - MB/JJE  
 CHECKED - SEA  
 DRAWN - JJE  
 PLOT DATE - 9/23/2014

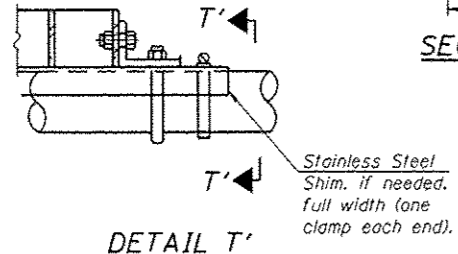
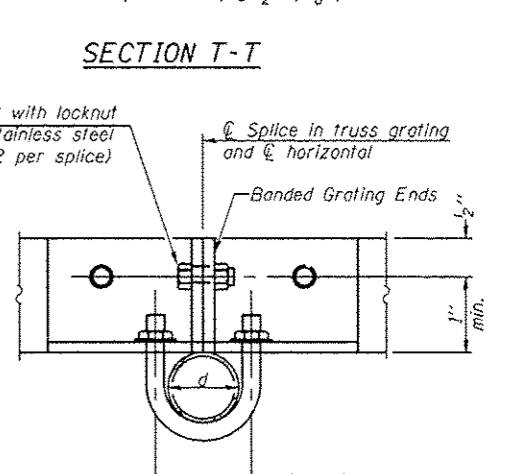
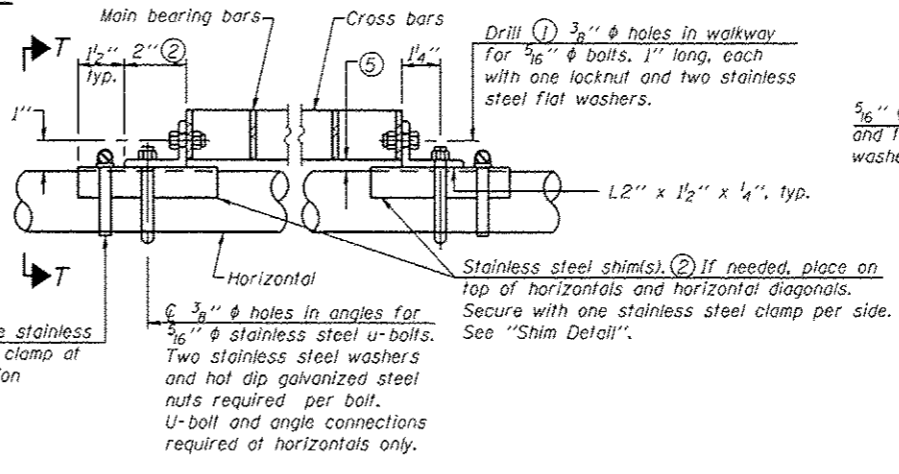
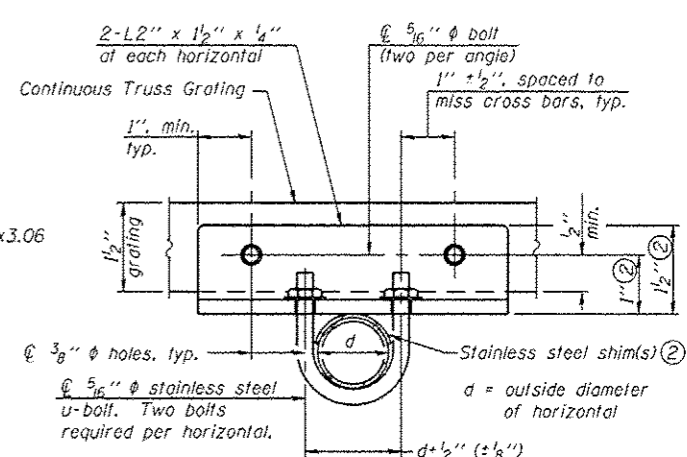
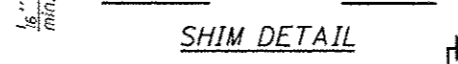
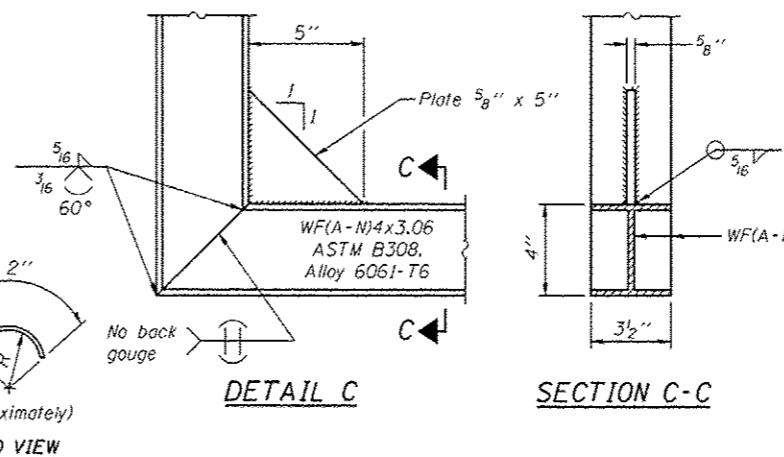
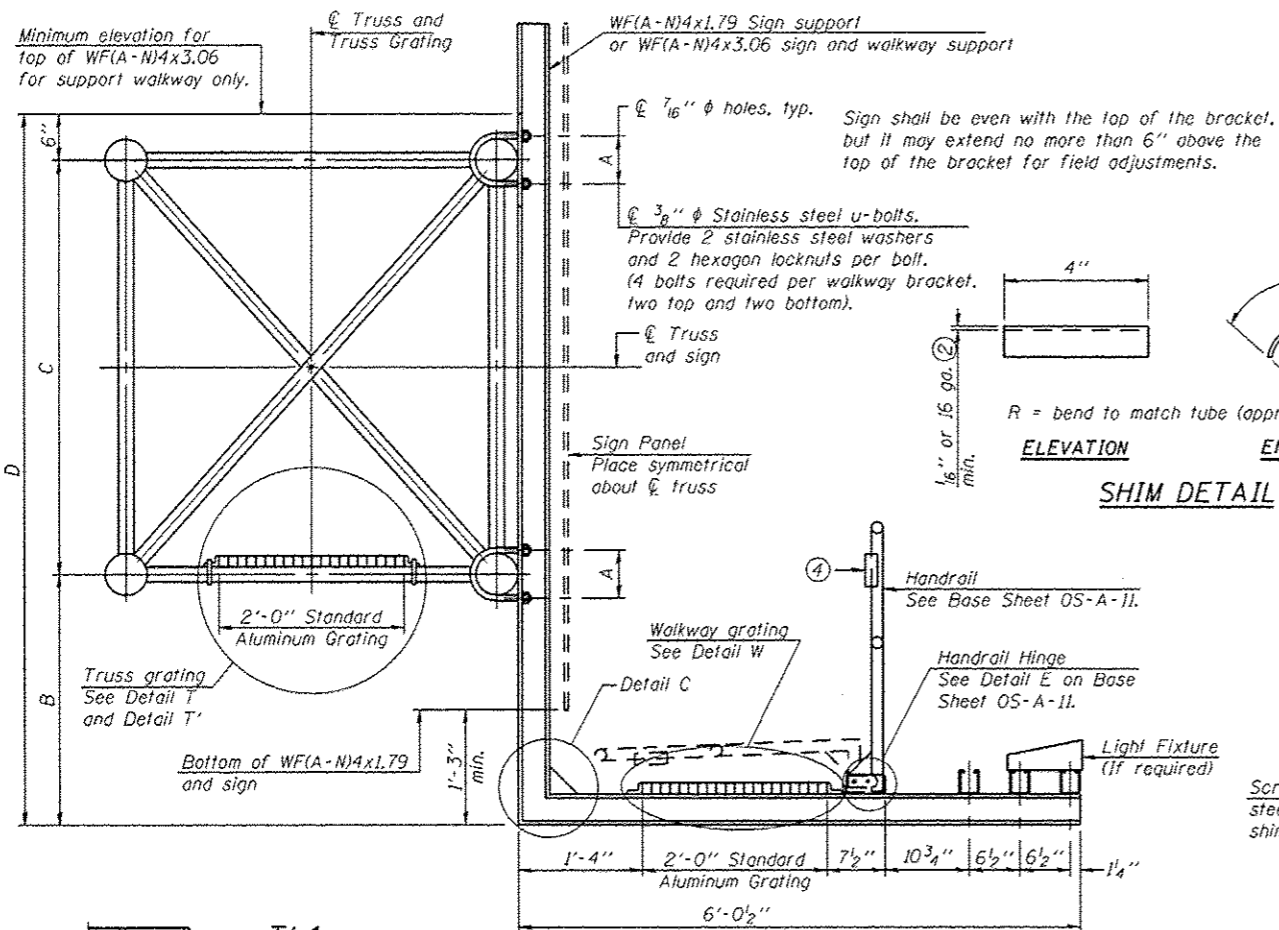
REVISOR  
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 REVISION  
 REVISION

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

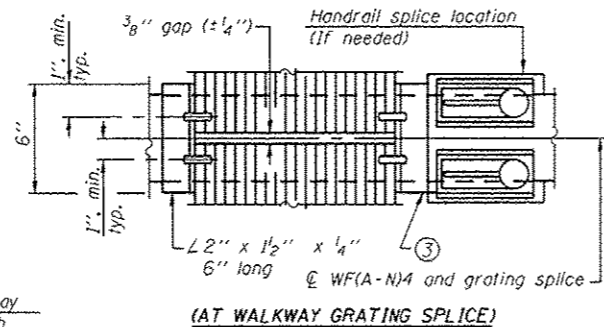
OVERHEAD SIGN STRUCTURES  
 ALUMINUM WALKWAY DETAILS

SHEET NO. 7 OF 10 SHEETS

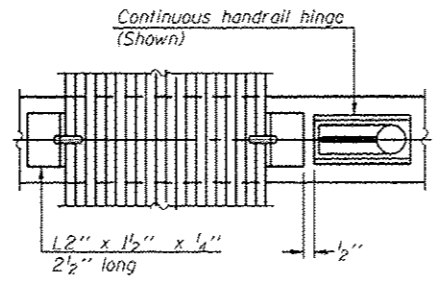
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,418-1	ST. CLAIR	406	367
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



**DETAIL T'**  
(Truss grating splice)  
Details not shown same as Detail T.  
Alternate materials may be used subject to the Engineer's review and approval.

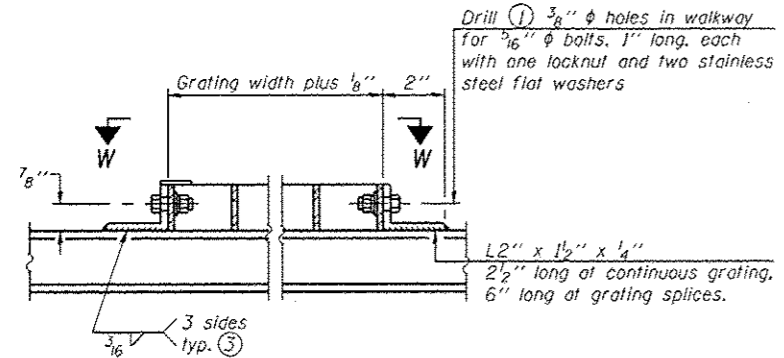


(AT WALKWAY GRATING SPLICE)



(CONTINUOUS WALKWAY GRATING)

SECTION W-W



**DETAIL W**  
(Walkway grating)

**SPECIFICATIONS FOR STANDARD ALUMINUM GRATING**

Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.  
Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:  
Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.<sup>3</sup> per bar, a depth of 1 1/2", spaced on 1 3/16" centers.  
Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

Structure Number	Station	A	⑤ B	C	⑥ D
8S0821055L001.6	106+72.04	6"	6'-10 1/2"	5'-3"	12'-7 1/2"
8S0821055L001.7	116+00.00	6"	6'-10 1/2"	5'-3"	12'-7 1/2"

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- Based on actual height of tallest sign given on OS-A-1.

OS-A-10

6-1-12

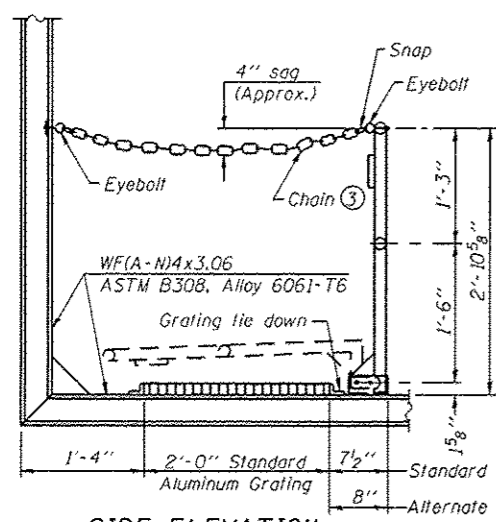
<p>DESIGN FIRM REG 184,002117</p>	USER NAME : jengalmann USER : jengalmann	DESIGNED - MB/JJE	REVISED
	PLOT SCALE : PLOT DATE : 9/23/2014	CHECKED - SEA	REVISED
		DRAWN - JJE	REVISED
		CHECKED - SEA/MB	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

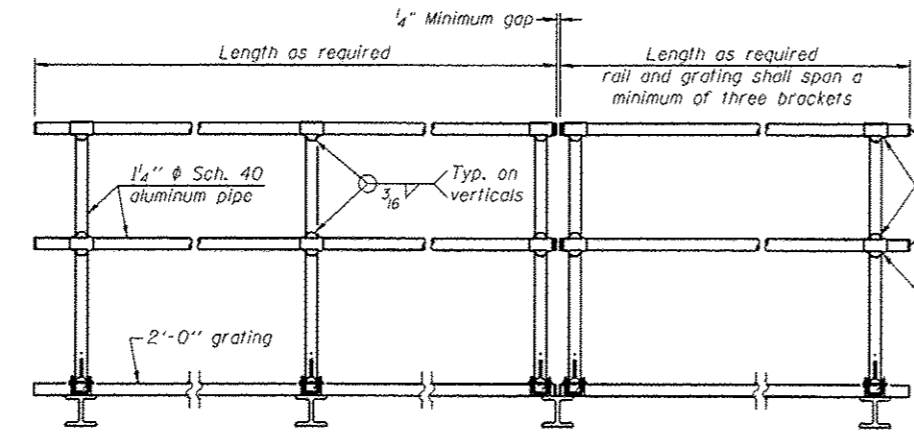
OVERHEAD SIGN STRUCTURES  
ALUMINUM WALKWAY DETAILS

SHEET NO. 8 OF 10 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-11,4B-1	ST. CLAIR	406	368
CONTRACT NO. 76C09			ILLINOIS FED. AID PROJECT	



**SIDE ELEVATION**  
(Showing safety chain w/o sign)

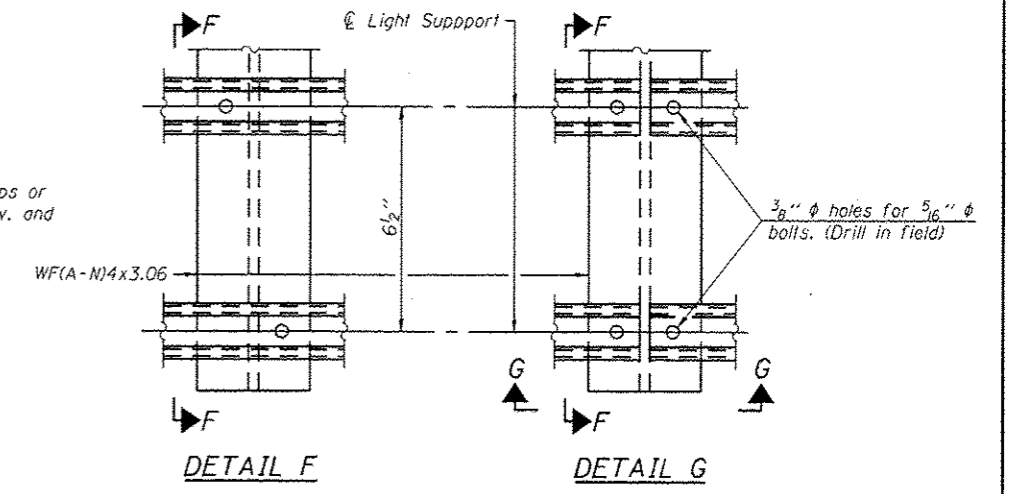


**FRONT ELEVATION**

**HANDRAIL DETAILS**

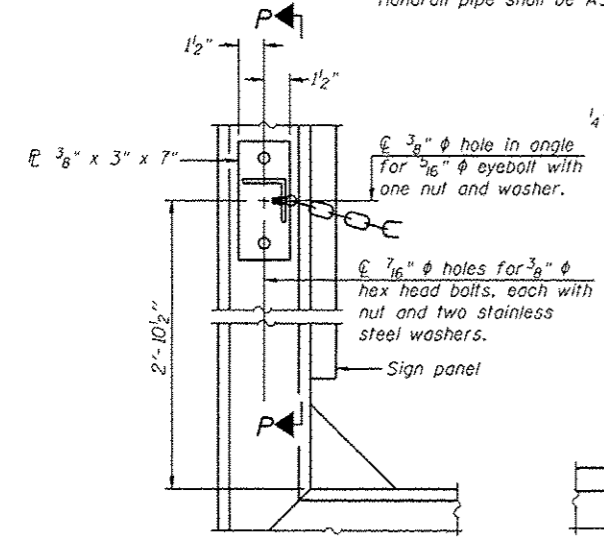
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

- ① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)
- ② Horizontal handrail member shall be continuous thru fitting. Provide 1/16" hole in fitting for 3/8" bolt. Field drill 1/16" hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 1/16" holes on top rail at ends only.)



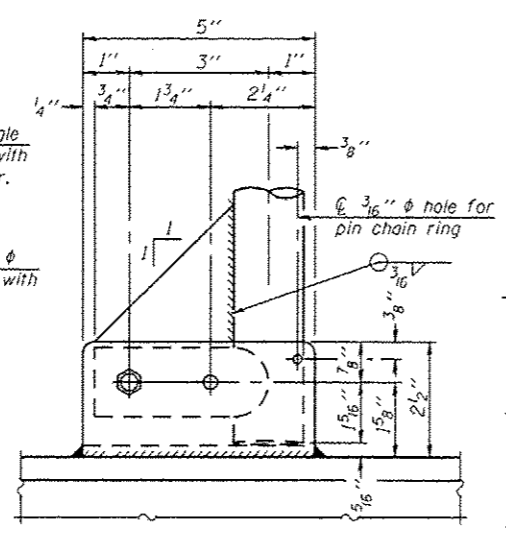
**DETAIL F**

**DETAIL G**

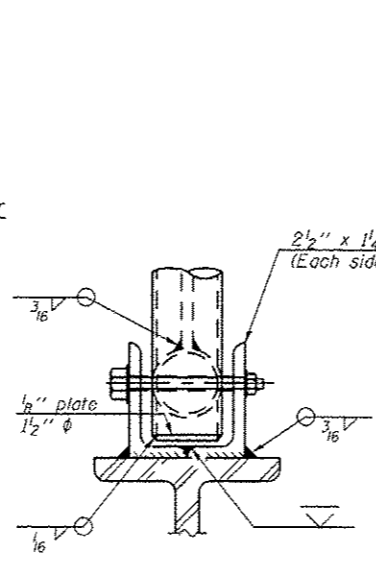


**ALTERNATE SAFETY CHAIN ATTACHMENT**  
(With Sign Present)

Items not shown same as "Side Elevation" of "Handrail Details"

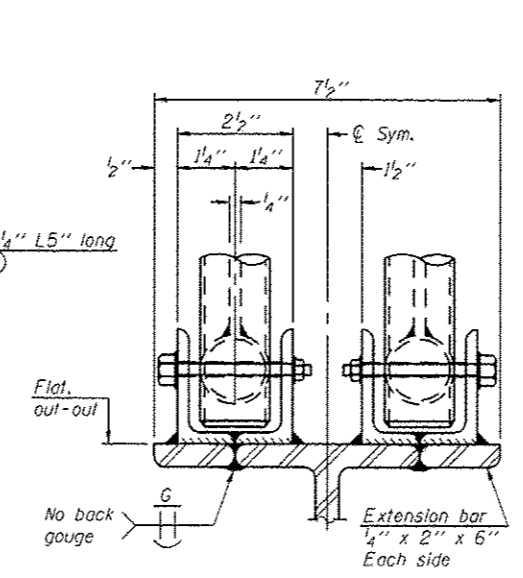


**SIDE ELEVATION**

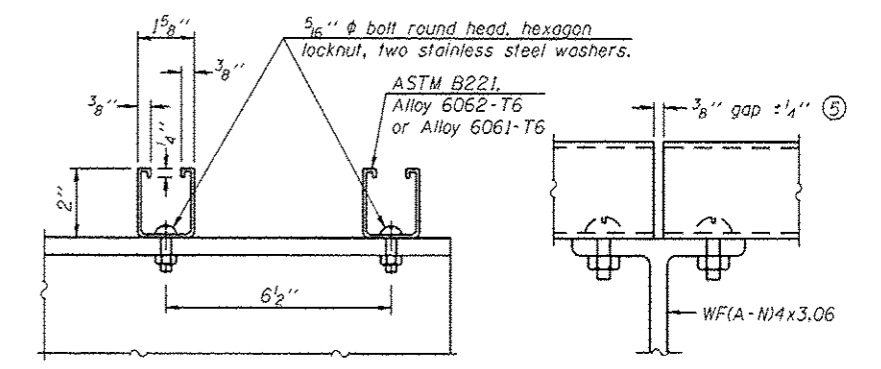


**FRONT ELEVATION**

See "Elevation" at right for dimensions.



**ELEVATION AT HANDRAIL JOINT**

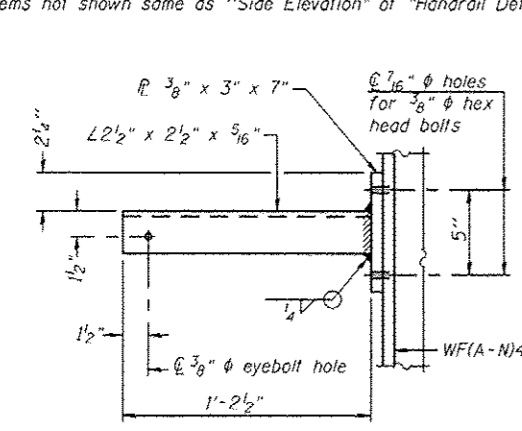


**SECTION F-F**

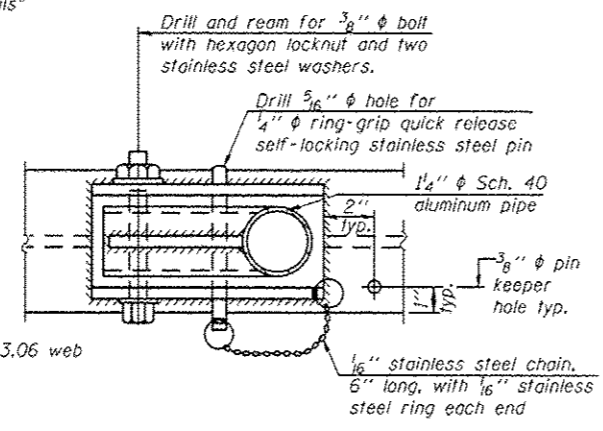
**SECTION G-G**

**LIGHTING FIXTURE MOUNTS (IF REQUIRED)**

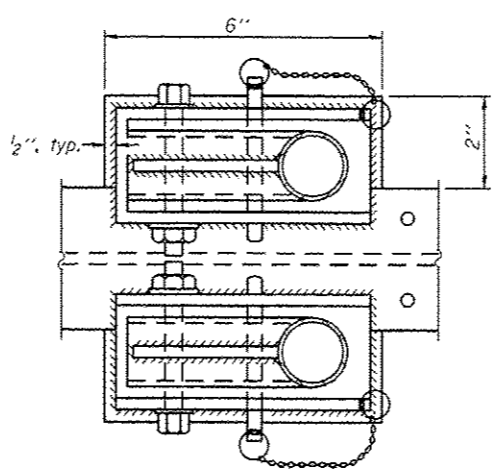
- ⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



**SECTION P-P**

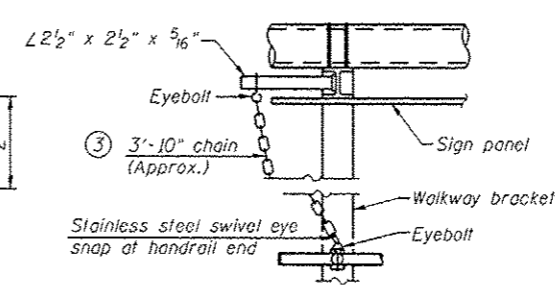


**PLAN DETAIL E HANDRAIL HINGE**



**PLAN AT HANDRAIL JOINT**

Details not shown same as "PLAN"

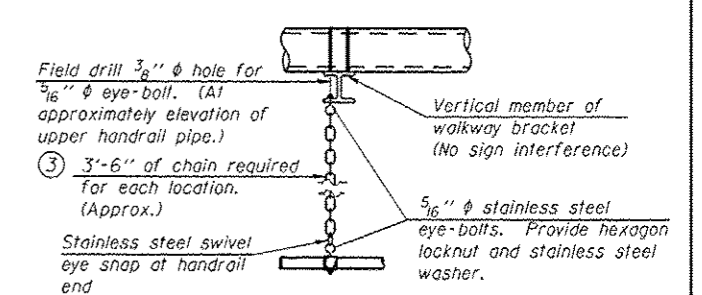


**ALTERNATE SAFETY CHAIN ATTACHMENT**

Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)

- ③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.

- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.

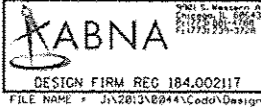


**SAFETY CHAIN**

One required for each end of each walkway.

OS-A-11

6-1-12



USER NAME : jengaleann	DESIGNED - MB/JJE	REVISED
PLOT SCALE :	CHECKED - SEA	REVISED
PLOT DATE : 9/23/2014	DRAWN - JJE	REVISED
CHECKED - SEA/MB	REVISED	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES  
ALUMINUM HANDRAIL DETAILS

SHEET NO. 9 OF 10 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	369
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

**BAR LIST - EACH FOUNDATION**

Bar Number	Size	Length	Shape
v4(E) 24	#9	F less 5"	—
#4 bar spiral (E) - see Side Elevation			

**NOTES:**

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength ( $Q_u$ ) of at least 1.25 tsf, which must be determined by previous soil investigations of the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

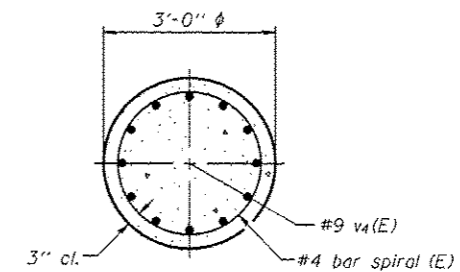
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

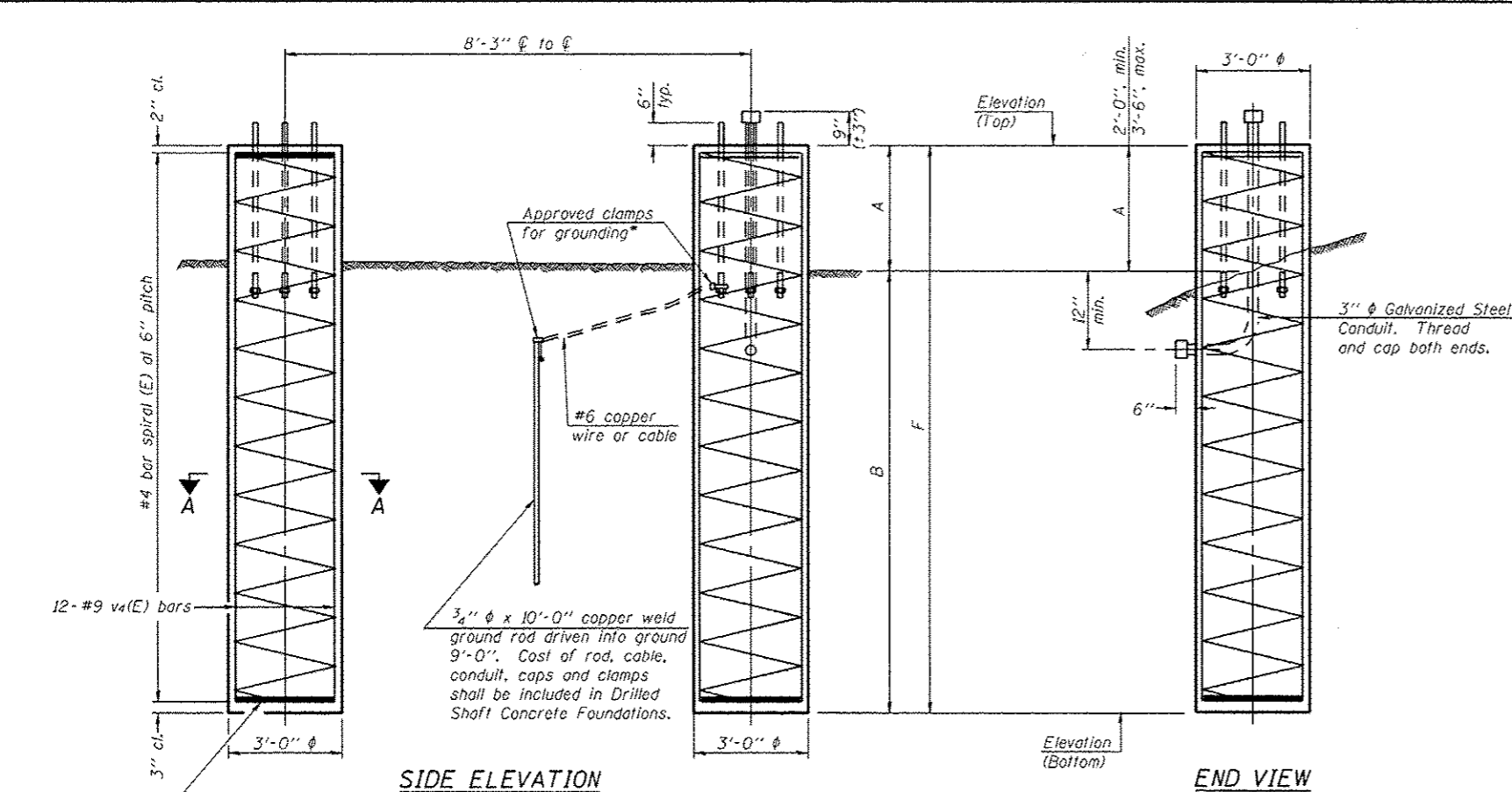
Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



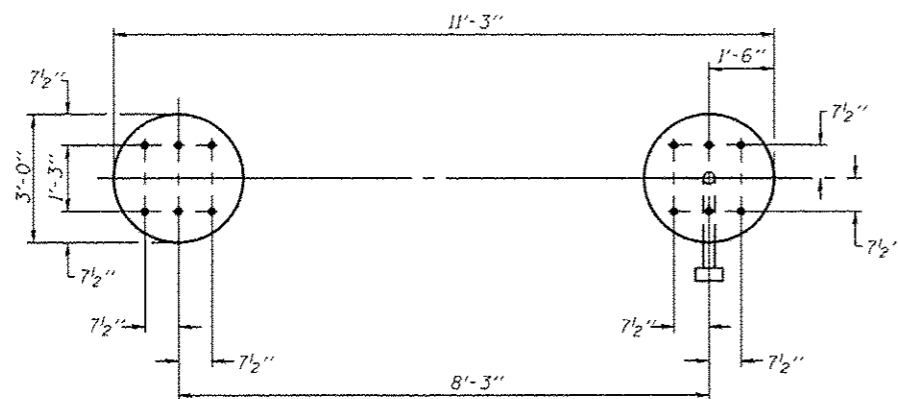
**SECTION A-A**



**SIDE ELEVATION**

**END VIEW**

3 hoops minimum top and bottom



**PLAN**

For anchor rod size and placement, see Support Frame Detail Sheet.

\* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

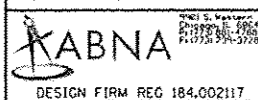
**DETAILS FOR 10"  $\phi$  SUPPORT FRAME TYPE I-A or II-A TRUSS**

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
850821055L001.7	116+00.00	433.00	412.83	2'-8"	17'-6"	20'-2"	426.00	406.33	2'-2"	17'-6"	19'-8"	20.9

Structure number 850821064L001.5 is bridge mounted.

OS4-F3

8-21-13



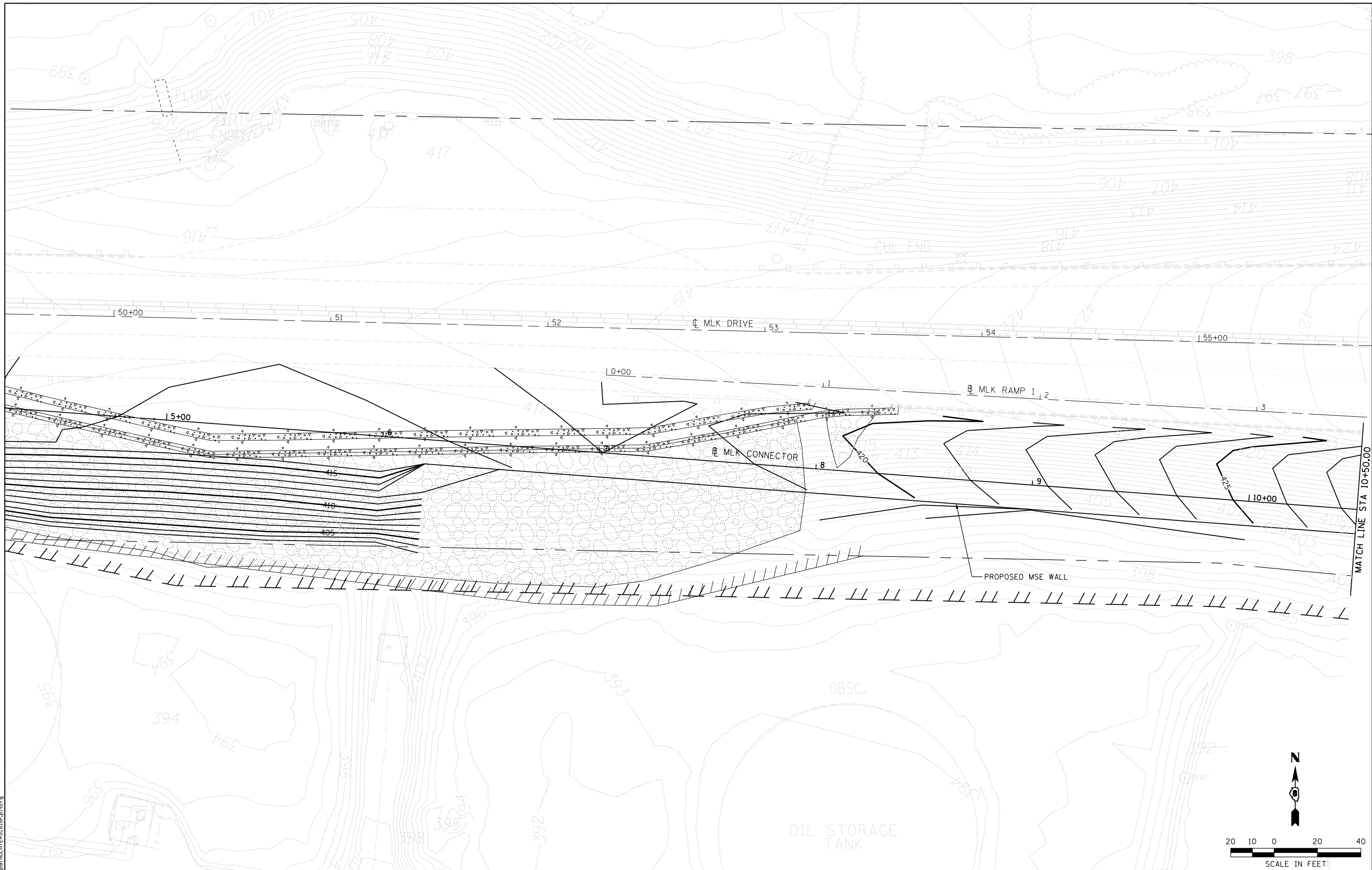
USER NAME: jangelmann	DESIGNED: MB/JJE	REVISED:
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PLOT DATE: 9/23/2014	DRAWN: JJE	REVISED:
	CHECKED: SEA/MB	REVISED:

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES  
DRILLED SHAFT DETAILS

SHEET NO. 10 OF 10 SHEETS

F.A. RTE. 64	SECTION 82-11.41B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 370
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



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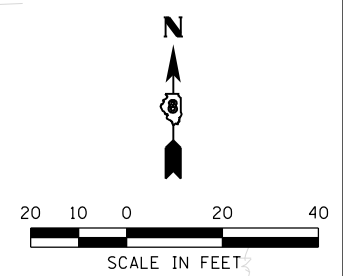
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**HORNER &  
 SHIRIN, INC.  
 ENGINEERS**

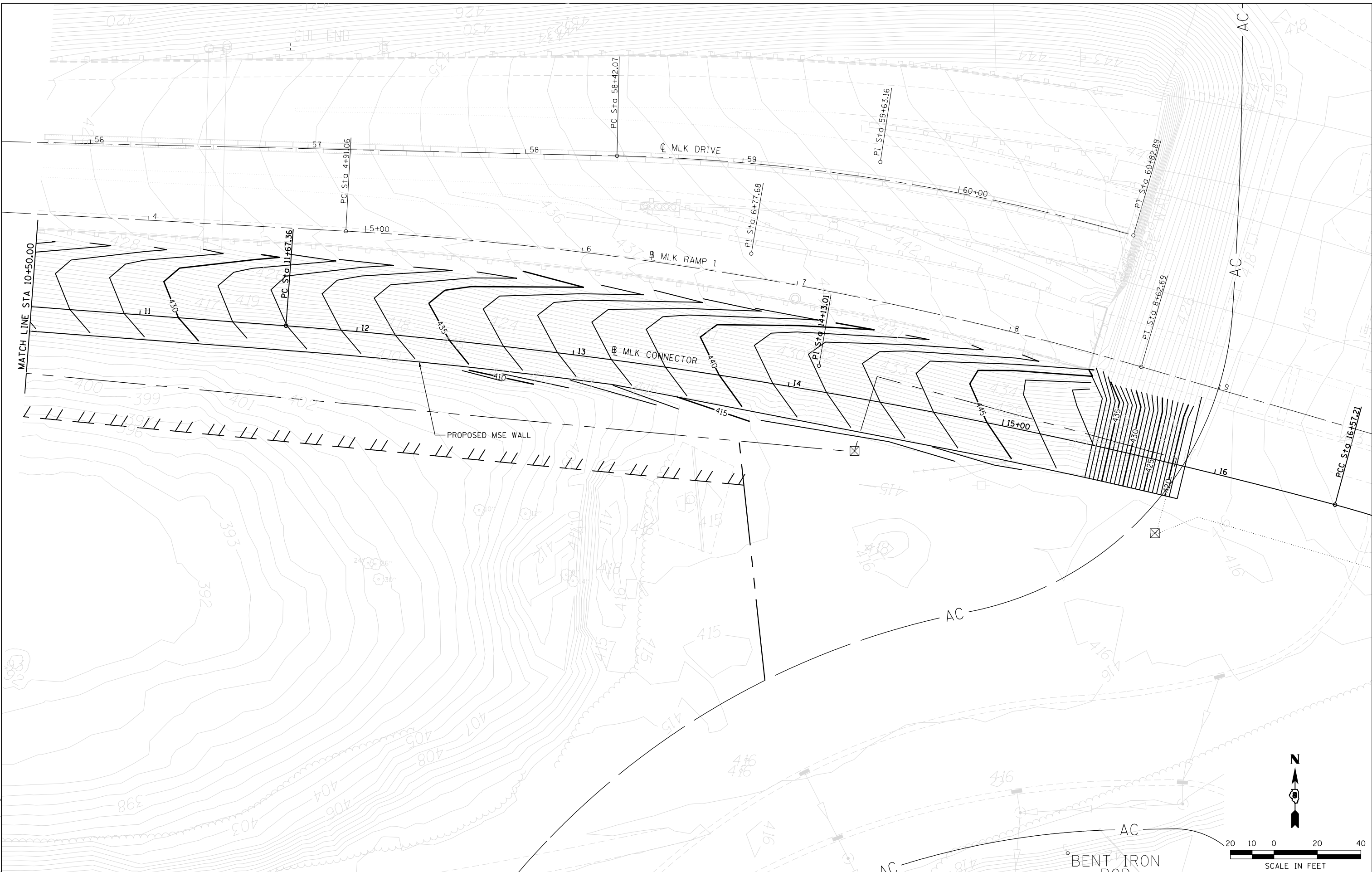
**GRADING PLAN  
 MLK CONNECTOR**

SCALE: 1' = 20' SHEET NO. 1 OF 3 SHEETS STA. 5+00.00 TO STA. 10+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	371
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



MATCH LINE STA 10+50.00



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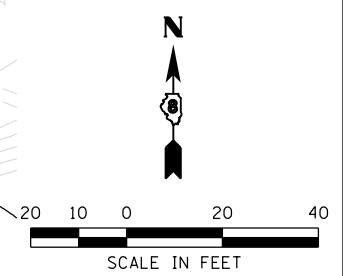
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**



**GRADING PLAN**  
 MLK CONNECTOR

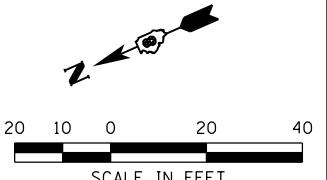
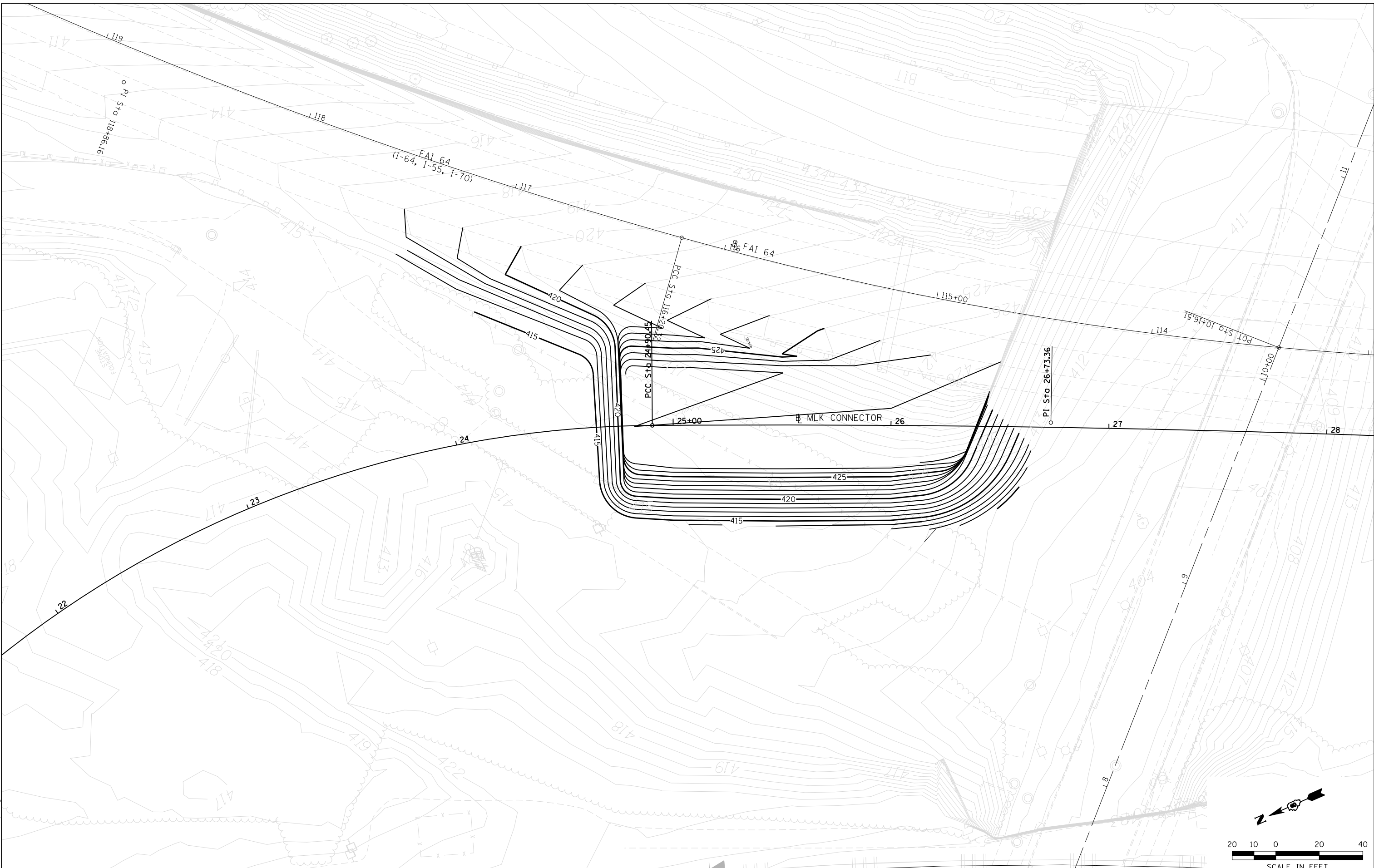
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	372
CONTRACT NO. 76G09				

SCALE: 1' = 20'      SHEET NO. 2 OF 3 SHEETS      STA. 10+50.00 TO STA. 15+86.00



ILLINOIS FED. AID PROJECT





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



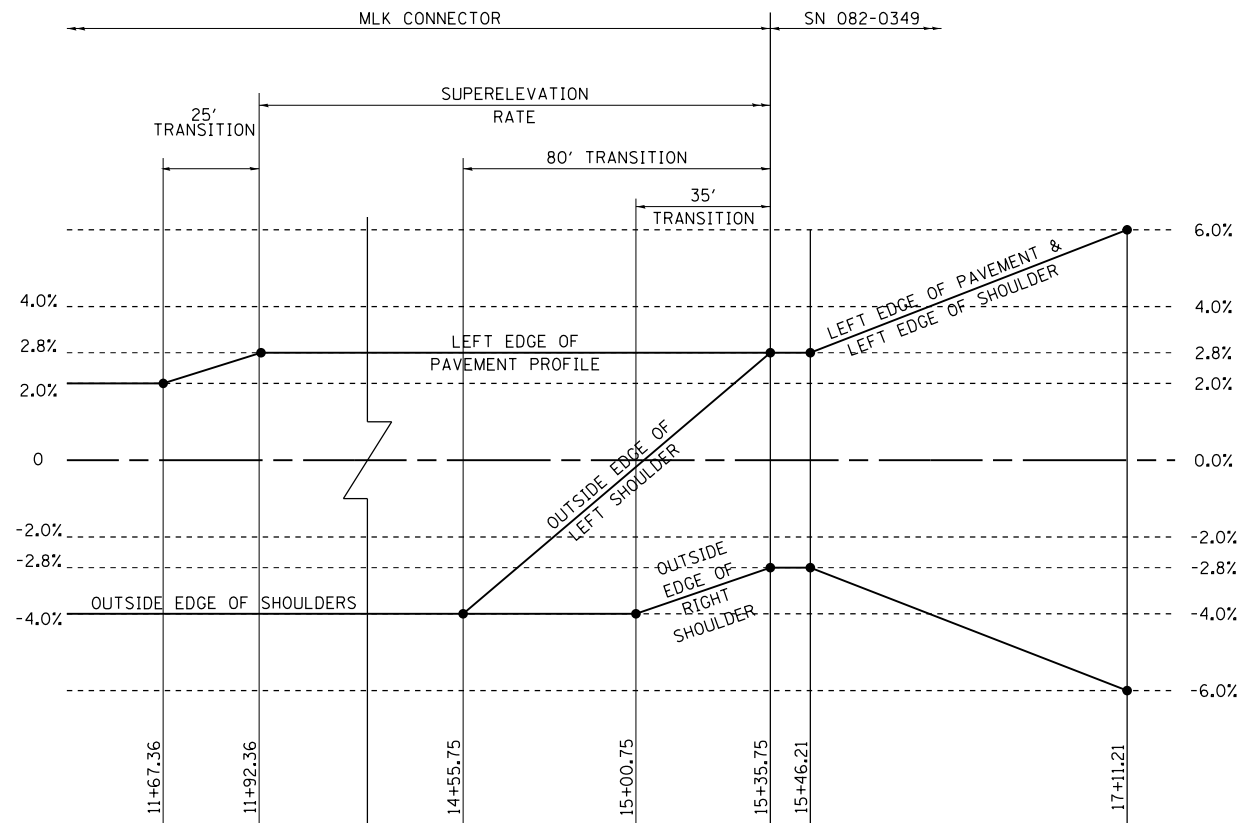
SCALE: 1' = 20'

**GRADING PLAN**  
 MLK CONNECTOR

SHEET NO. 3 OF 3 SHEETS

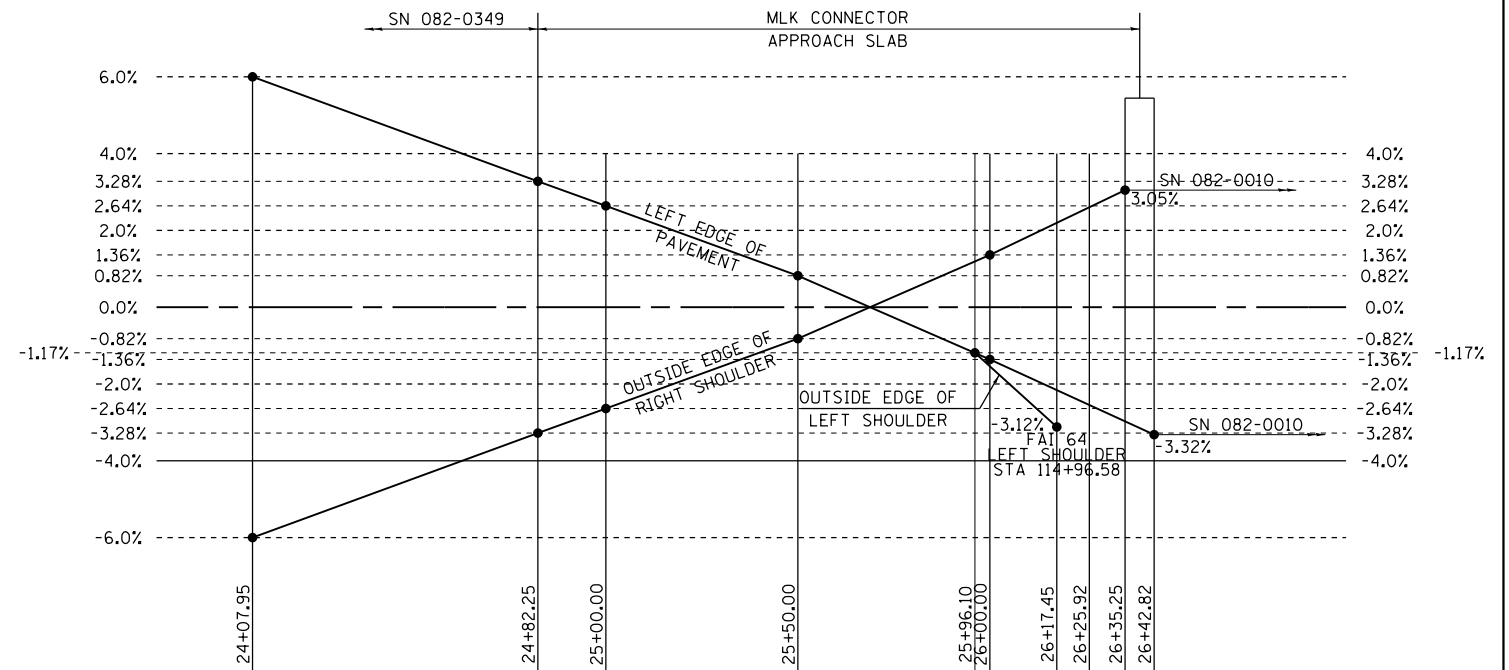
STA. 23+90.00 TO STA. 27+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	373
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



**MLK CONNECTOR SUPERELEVATION DETAIL (CURVE 1)**

MLK CONNECTOR SUPERELVATION DETAIL				
STA	EOS LT ELEV	EOP LT ELEV	Ø ELEV	EOS RT ELEV
11+67.36	432.03	432.30	431.98	431.58
11+75.00	432.38	432.65	432.29	431.88
11+92.36	433.16	433.43	432.98	432.56
14+55.75	443.70	443.97	443.52	442.95
14+75.00	444.58	444.74	444.29	443.72
15+00.00	445.71	445.73	445.29	444.73
15+00.75	445.75	445.77	445.32	444.76
15+25.00	446.86	446.74	446.29	446.29
15+35.75	447.35	447.17	446.72	446.32
15+46.21	447.75	447.58	447.14	446.74
15+50.00	447.92	447.75	447.29	446.89
15+75.00	449.03	448.82	448.29	447.82
16+00.00	450.13	449.90	449.29	448.75
16+25.00	451.24	450.98	450.29	449.68
16+50.00	452.33	452.04	451.27	450.60
16+75.00	453.30	452.98	452.13	451.39
17+00.00	454.12	453.77	452.85	452.04
17+11.21	454.45	454.09	453.13	452.29



**MLK CONNECTOR SUPERELEVATION DETAIL (APPROACH SLAB)**

MLK CONNECTOR SUPERELVATION DETAIL				
STA	EOS LT ELEV	EOP LT ELEV	Ø ELEV	EOS RT ELEV
24+50.00	429.46	429.19	428.48	427.85
24+75.00	428.88	428.67	428.10	427.60
24+82.25	428.73	428.54	428.01	427.55
25+00.00	428.43	428.27	427.85	427.48
25+25.00	428.10	428.00	427.72	427.48
25+50.00	427.90	427.85	427.72	427.61
25+75.00	427.79	427.81	427.85	427.88
25+96.10	427.80	427.87	428.06	428.20
26+00.00	427.77	427.89	428.11	428.26
26+17.45	427.78	428.01	428.36	428.60
26+25.00	-	427.93	428.49	428.76
26+25.92	-	427.94	428.50	428.78
26+35.25	-	427.79	428.68	428.99
26+42.82	-	427.88	428.84	-

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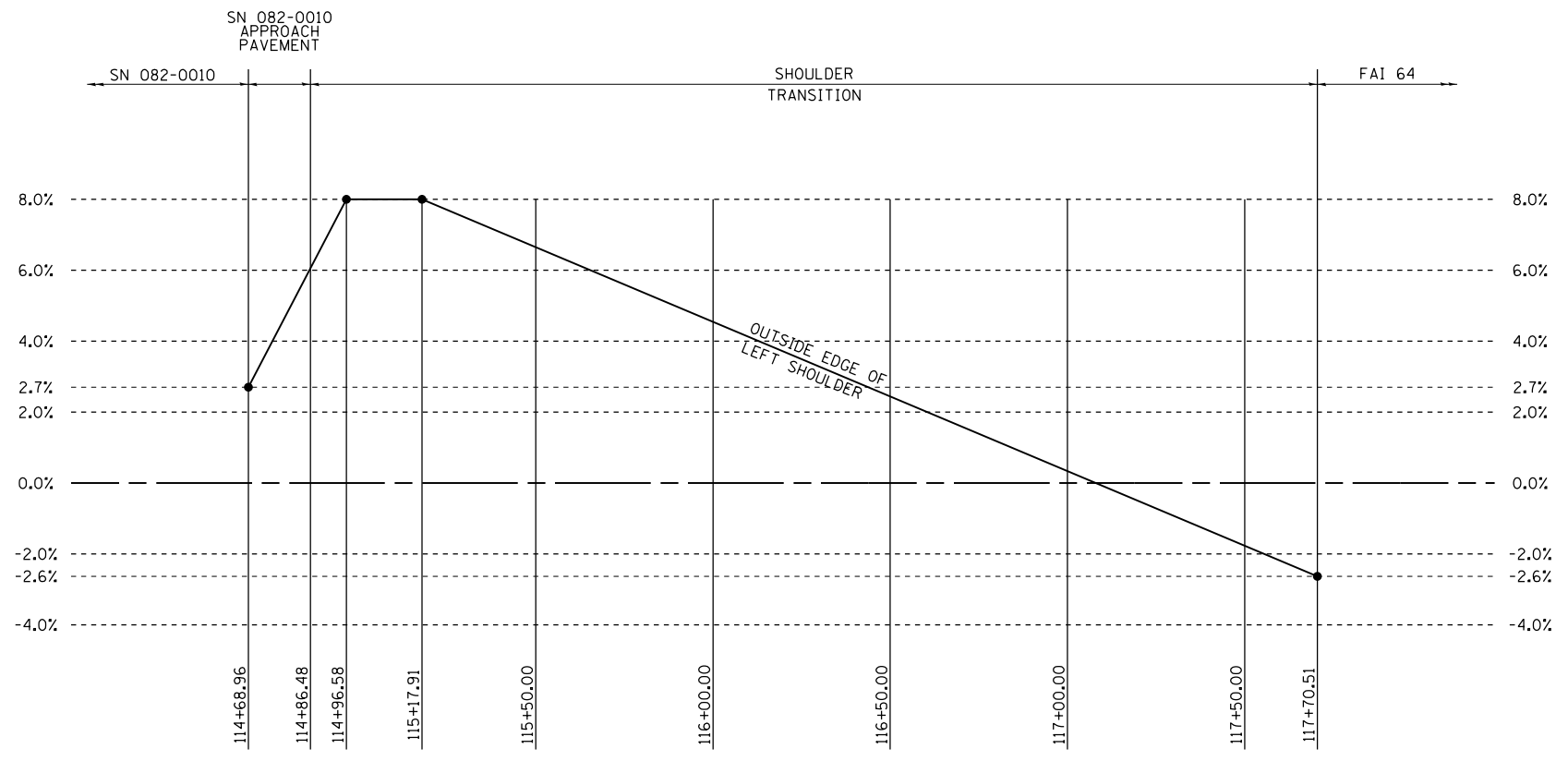
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



MISCELLANEOUS DETAILS  
 SUPERELEVATION DETAILS

SCALE: NO SCALE SHEET NO. 1 OF 3 SHEETS STA. TO STA.

F.A.I. RTE. 64	SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 374
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



**FAI 64 LEFT SHOULDER TRANSITION DETAIL**

FAI 64 SHOULDER TRANSITION		
STA	EOP ELEV	EOS ELEV
114+68.96	428.00	428.27
114+86.48	427.34	427.94
114+96.58	426.93	427.74
115+00.00	426.80	427.61
115+17.91	426.14	427.20
115+25.00	425.88	426.90
115+50.00	424.87	425.76
115+75.00	423.92	424.67
116+00.00	423.06	423.66
116+25.00	422.18	422.64
116+50.00	421.33	421.65
116+75.00	420.50	420.69
117+00.00	419.61	419.66
117+25.00	418.71	418.62
117+50.00	417.84	417.64
117+70.51	417.18	416.92

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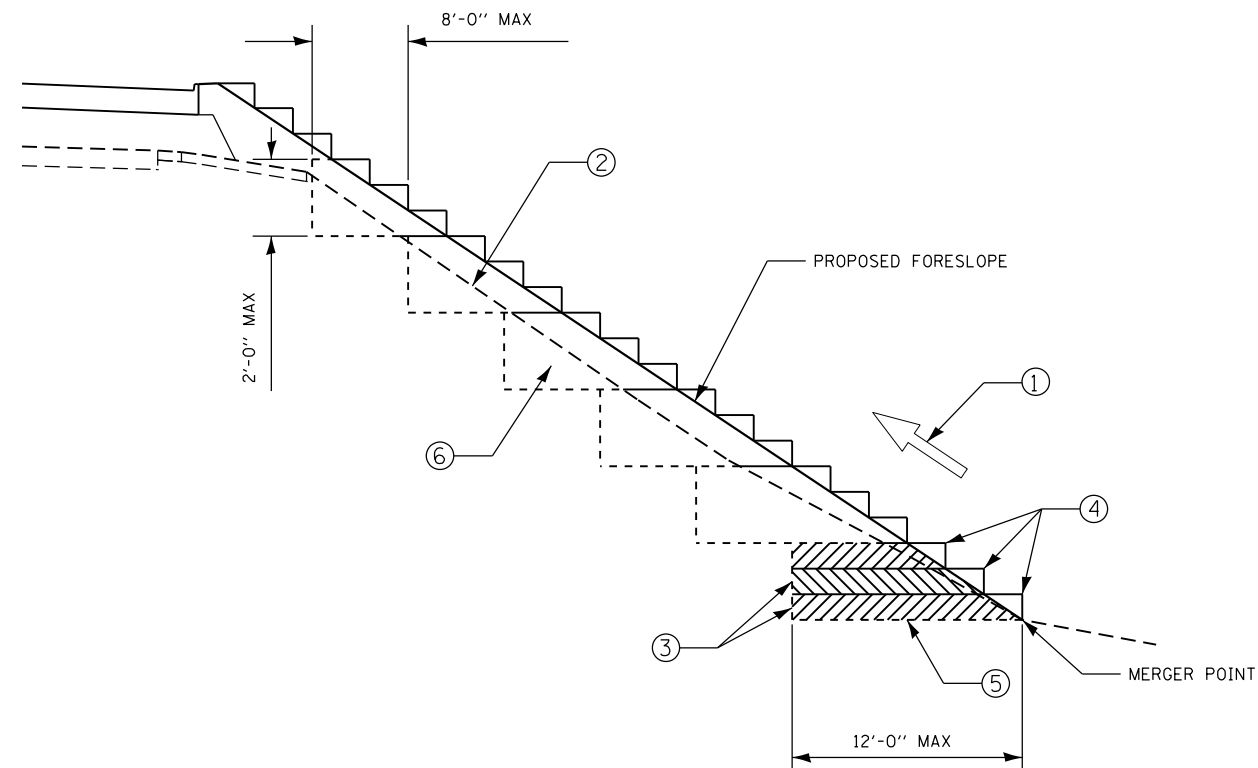
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**



**MISCELLANEOUS DETAILS**  
 FAI 64 SHOULDER TRANSITION DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	375
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

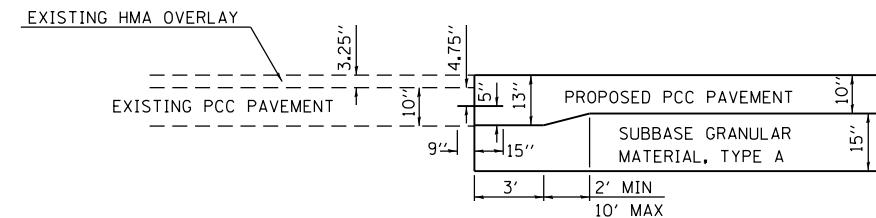
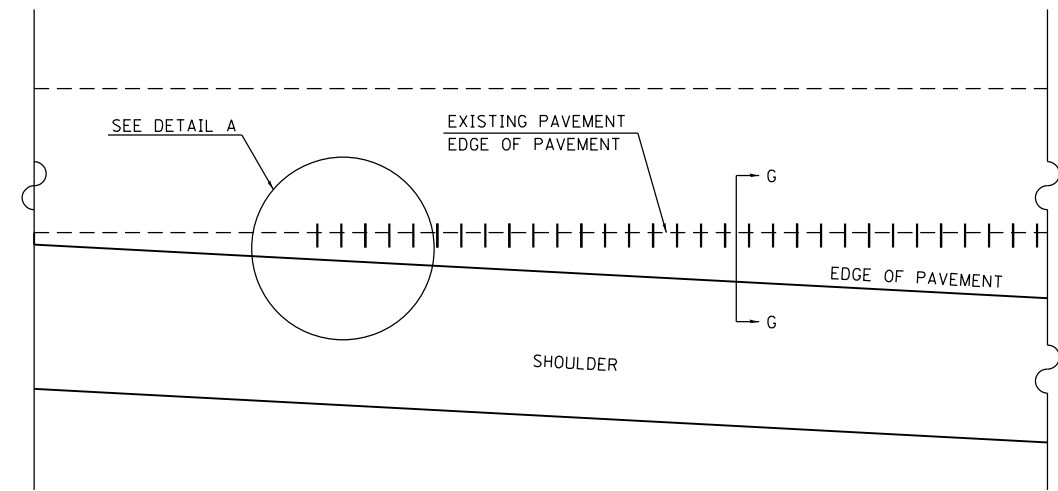
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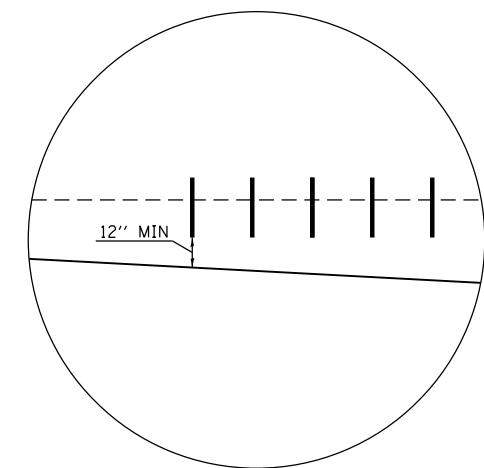
**TYPICAL BENCHING FOR EMBANKMENT DETAIL**

SCALE: NONE

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03
- ③ BENCH CUT EXISTING FINAL SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED AS INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION, AND THEIR CONSTRUCTION SHALL BE INCLUDED IN THE PRICES FOR THESE ITEMS.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'.



**SECTION G-G**



**DETAIL A**

**GENERAL NOTES**

SEE STANDARD 42001 FOR JOINT DETAILS NOT SHOWN.  
 SEE STANDARD 420301 FOR EXIT RAMP TERMINAL DETAILS NOT SHOWN.  
 SEE STANDARD 483001 FOR PCC SHOULDER DETAILS NOT SHOWN.

**PAVEMENT TRANSITION DETAIL**

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**HORNER &  
 SHIRIN, INC  
 ENGINEERS**

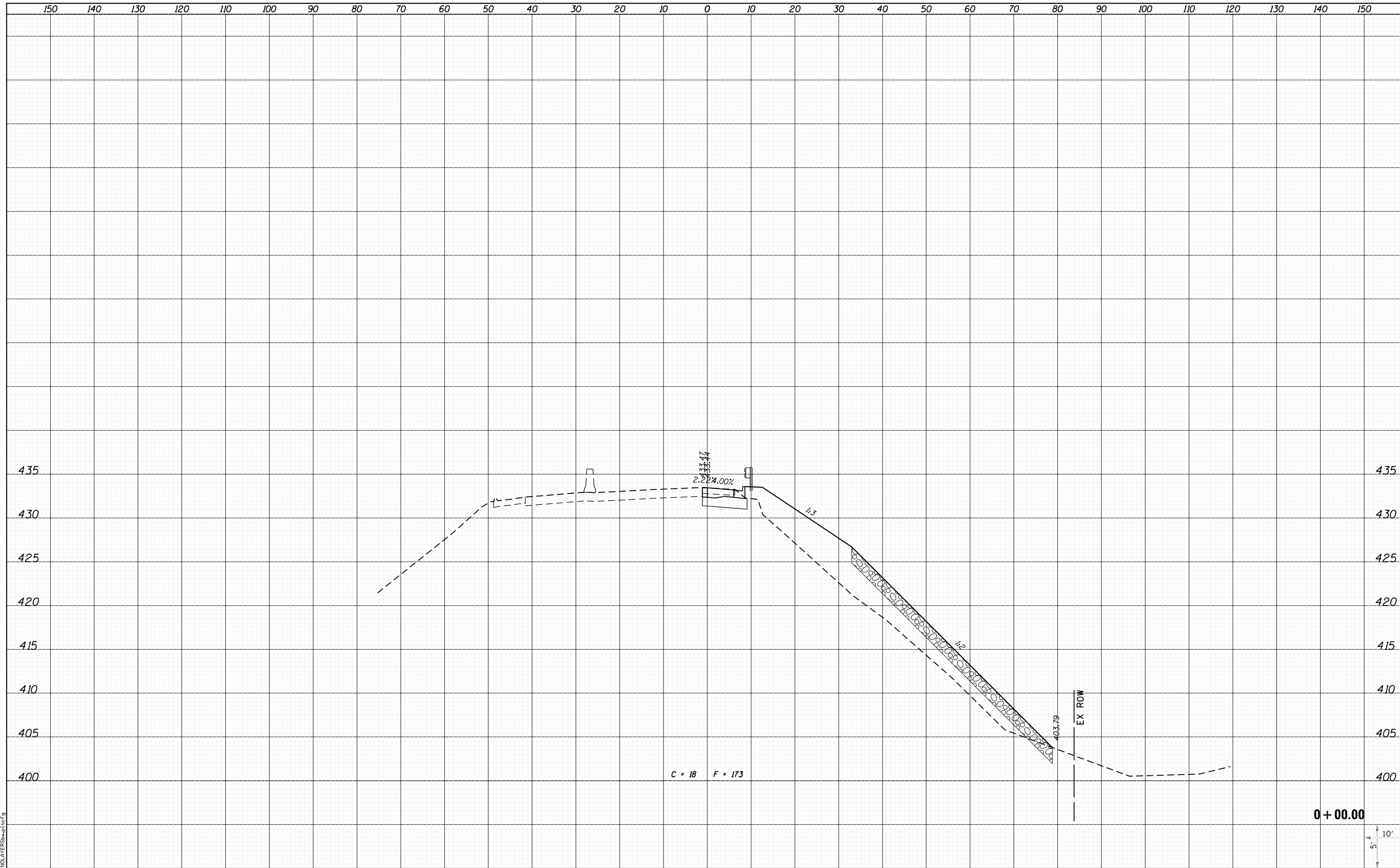
**MISCELLANEOUS DETAILS**  
 BENCHING DETAIL AND PAVEMENT TRANSITION DETAIL

SCALE: NO SCALE SHEET NO. 3 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	376
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				

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

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



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-HAIF-01  
 PLOT DRIVER = PLOTDRIVER\$PLOT\$G

FILE NAME =	USER NAME = jepettibone	DESIGNED -	REVISED -
X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -
PLOT SCALE = 20.0000' / in.			
PLOT DATE = 8/6/2014 3:04:45 PM			

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



CROSS SECTIONS  
 MLK CONNECTOR  
 SCALE: 10H:5V SHEET 1 OF 27 SHEETS STA. +00.00 TO STA. +00.00

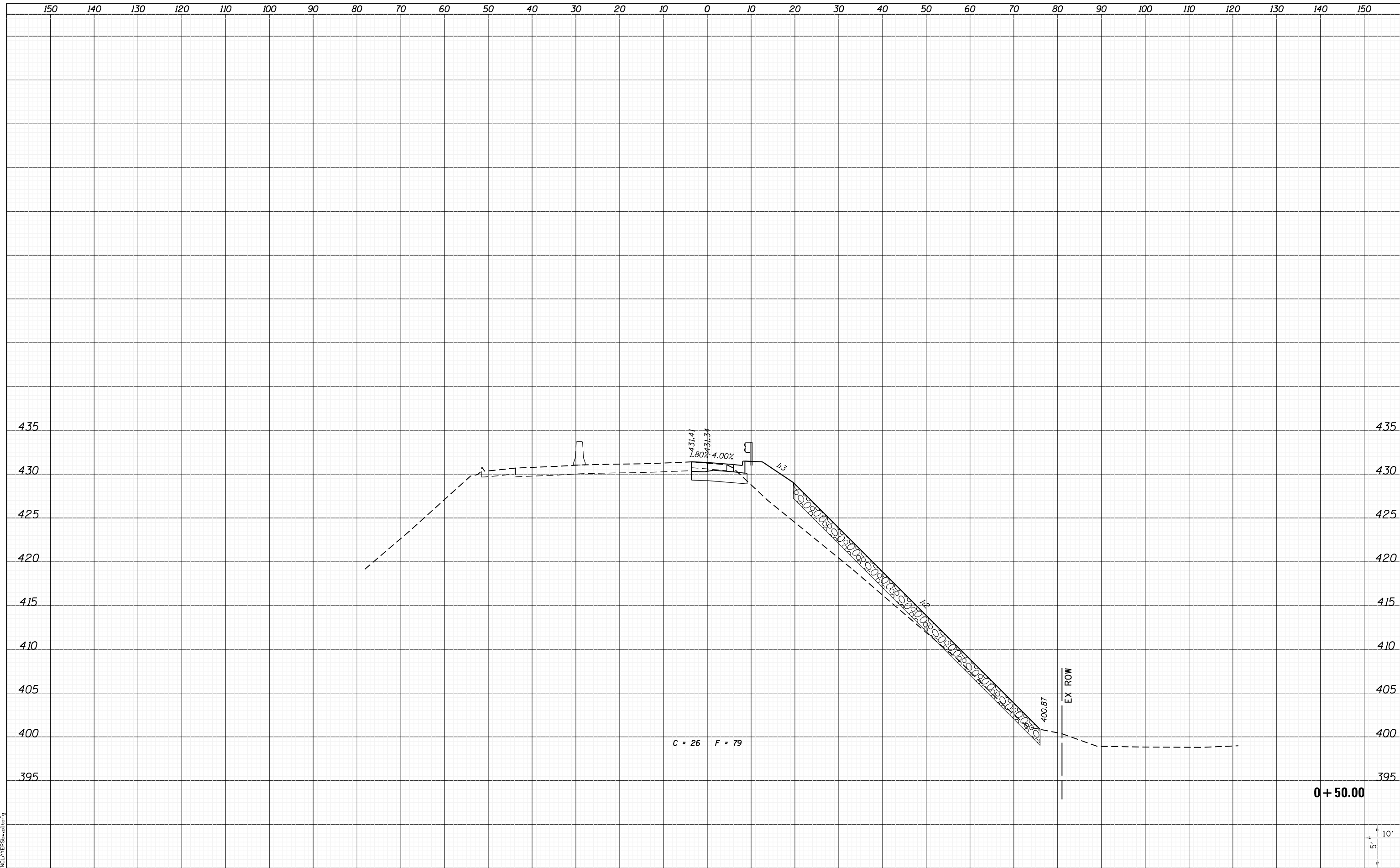
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	377
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

0 + 00.00



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-H&E-1.rdl  
 PLOT DRIVER = PdfPlotterSW.batcf9

FILE NAME =	USER NAME = jepettibone	DESIGNED -	REVISED -
X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -
PLOT SCALE = 20.0000' / in.			
PLOT DATE = 8/6/2014 3:04:45 PM			

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



CROSS SECTIONS  
 MLK CONNECTOR  
 SCALE: 10H:5V SHEET 2 OF 27 SHEETS STA. +50.00 TO STA. +50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	378
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				

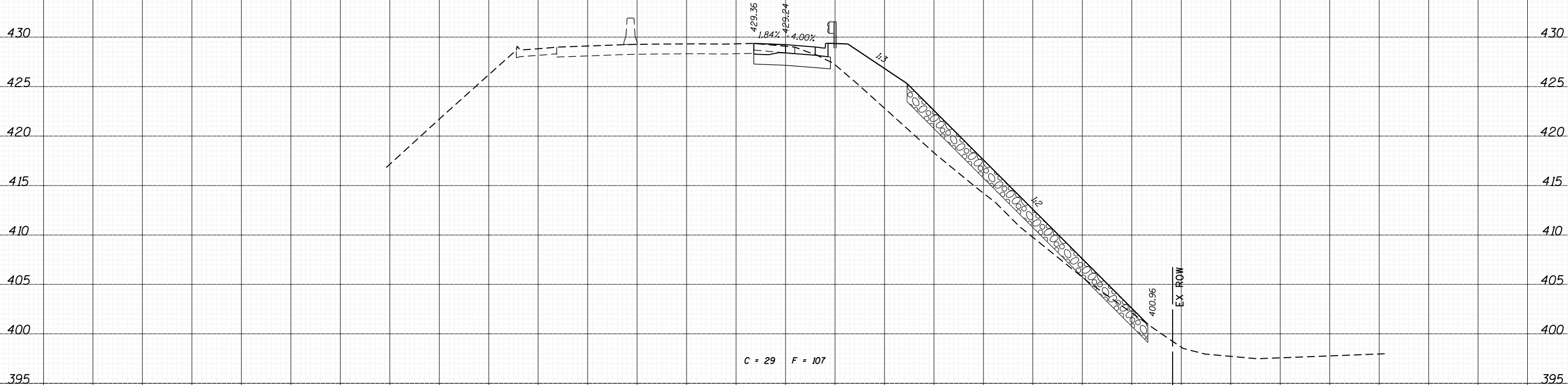
0 + 50.00



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS
	CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS
	CHECKED



C = 29 F = 107

1 + 00.00

LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-Hair.tbl  
 PLOT DRIVER = PdfPlotterSW.bat

FILE NAME =	X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn
USER NAME =	jepettibone
PLOT SCALE =	20.0000' / in.
PLOT DATE =	8/6/2014 3:04:45 PM

DESIGNED -	REVISÉ -
DRAWN -	REVISÉ -
CHECKED -	REVISÉ -
DATE -	REVISÉ -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

HORNER &  
 SHIRIN, INC.  
 ENGINEERS

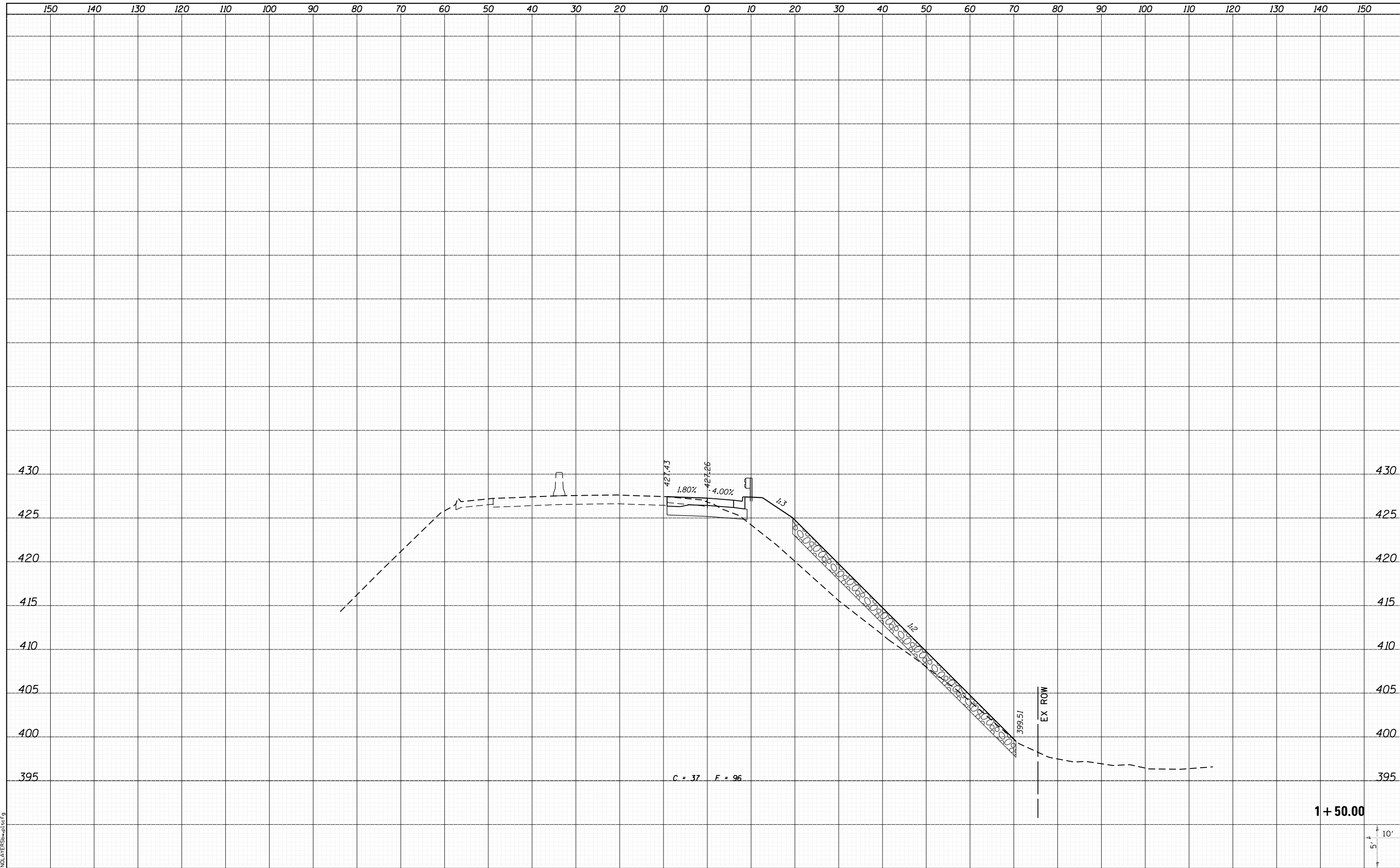
CROSS SECTIONS  
 MLK CONNECTOR

SCALE: 10H:5V SHEET 3 OF 27 SHEETS STA. 1+00.00 TO STA. 1+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	379
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				

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

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



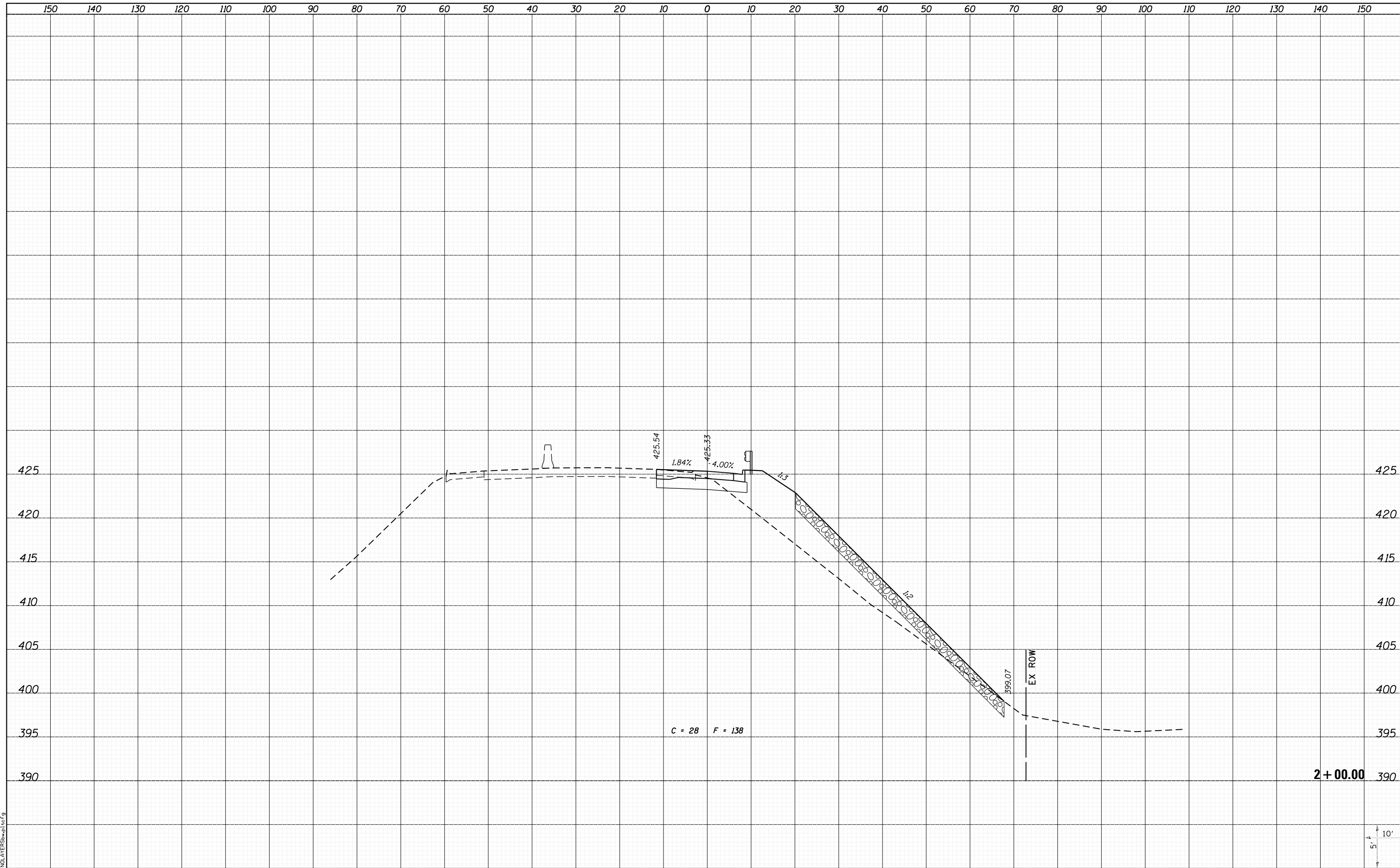
LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-HAI-FBI  
 PLOT DRIVER = BDI-MULTIERSHWPLTFC9

FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISÉD -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>HORNER &amp; SHIRIN, INC.</b> <b>ENGINEERS</b>	<b>CROSS SECTIONS</b>		F.A.I. RTE. = 64	TOTAL SHEETS = 406	SHEET NO. = 380
		DRAWN -	REVISÉD -			SECTION = 82-(1,4)B-1	COUNTY = ST. CLAIR	CONTRACT NO. 76G09		
		CHECKED -	REVISÉD -			SCALE: 10H:5V	SHEET 4 OF 27 SHEETS	STA. 1+50.00	TO STA. 1+50.00	ILLINOIS FED. AID PROJECT
		DATE = 8/6/2014 3:04:46 PM	REVISÉD -							



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

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



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-H&I-F&E  
 PLOT DRIVER = BDFINDLTERSHPLOTFC9

FILE NAME	= X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn
PLOT SCALE	= 20.0000' / in.
PLOT DATE	= 8/6/2014 3:04:46 PM

USER NAME	= jepettibone	DESIGNED	-	REVISIED	-
		DRAWN	-	REVISIED	-
		CHECKED	-	REVISIED	-
		DATE	-	REVISIED	-

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



CROSS SECTIONS  
 MLK CONNECTOR  
 SCALE: 10H:5V SHEET 5 OF 27 SHEETS STA. 2+00.00 TO STA. 2+00.00

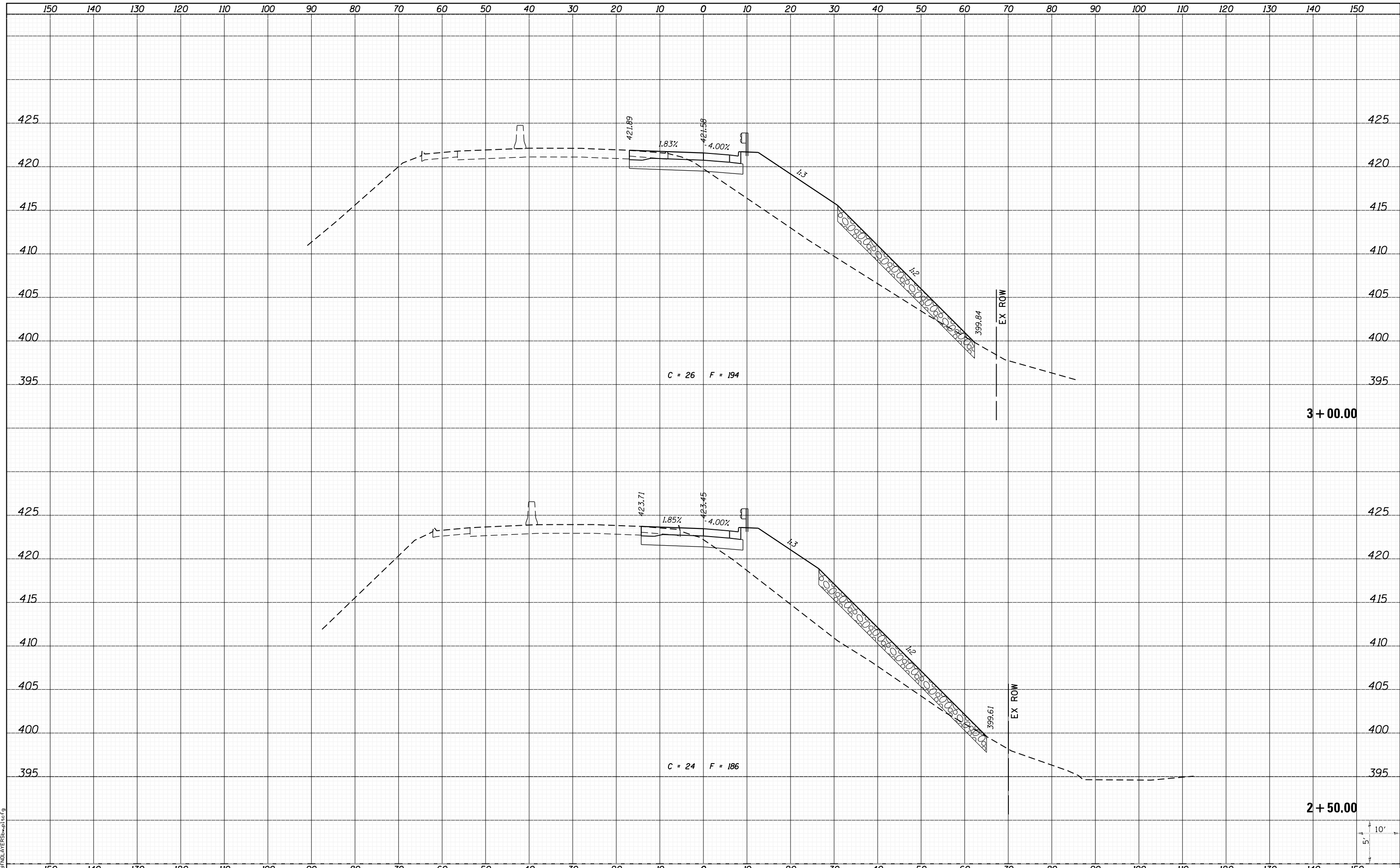
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	381
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



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

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

LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-Hair.tbl  
 PLOT DRIVER = PdfPlotterSW.bat

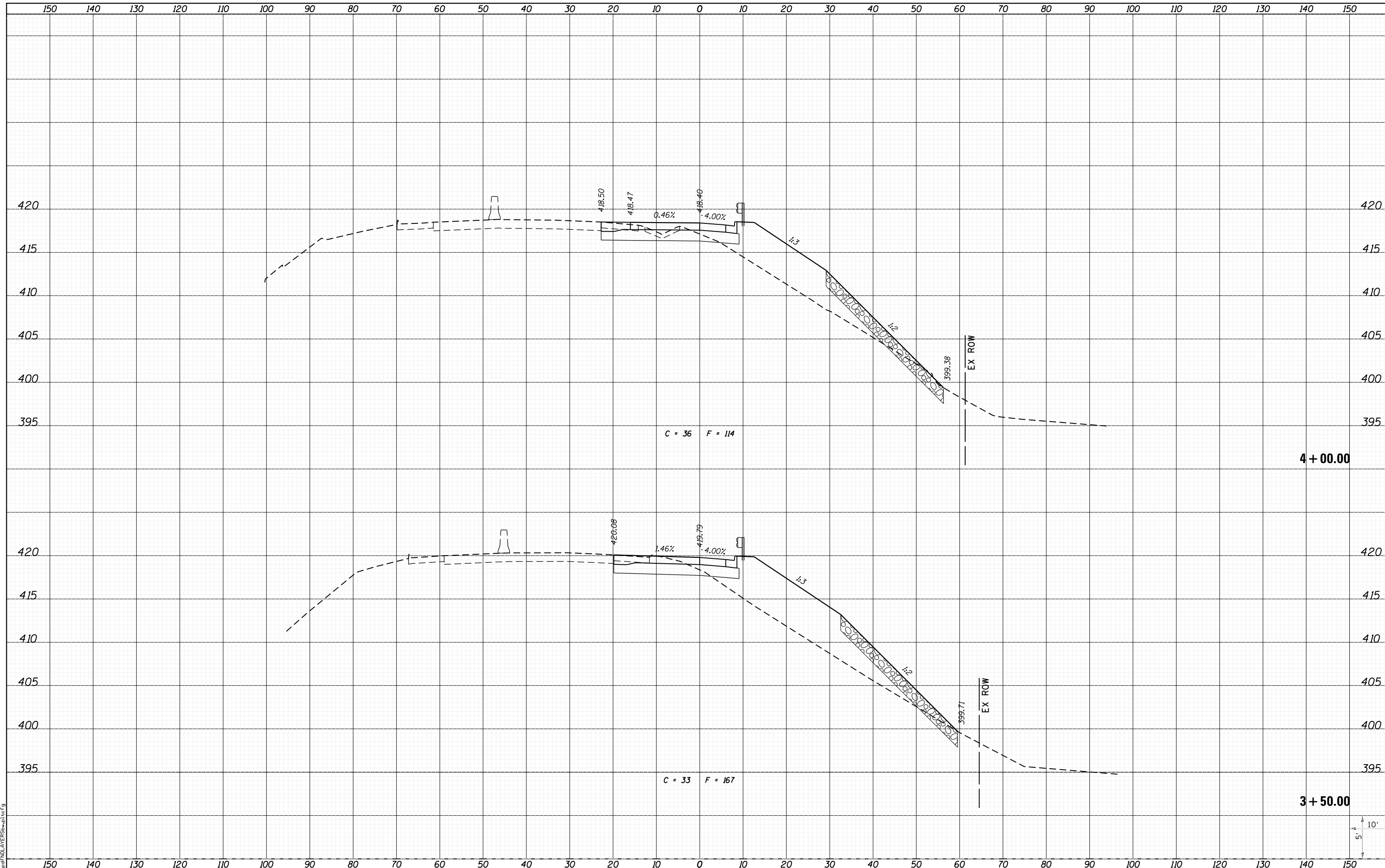


FILE NAME =	USER NAME = jepettibone	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>		<b>CROSS SECTIONS</b>		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn		DRAWN -	REVISED -			64	82-(1,4)B-1	ST. CLAIR	406	382		
PLOT SCALE = 20.0000' / in.		CHECKED -	REVISED -			CONTRACT NO. 76009						
PLOT DATE = 8/6/2014 3:04:47 PM		DATE -	REVISED -			ILLINOIS FED. AID PROJECT						
					SCALE: 10H:5V		SHEET 6 OF 27 SHEETS		STA. 2+50.00 TO STA. 3+00.00			

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

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

LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-Half.tbl  
 PLOT DRIVER = PdfPlotterSW.bat



FILE NAME = X:\1309400-MLK\Cad\T\Plans\900\_0876009-sht-Xsht-MLK.dgn

USER NAME = jepettibone	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/6/2014 3:04:47 PM	DATE -	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



CROSS SECTIONS  
 MLK CONNECTOR

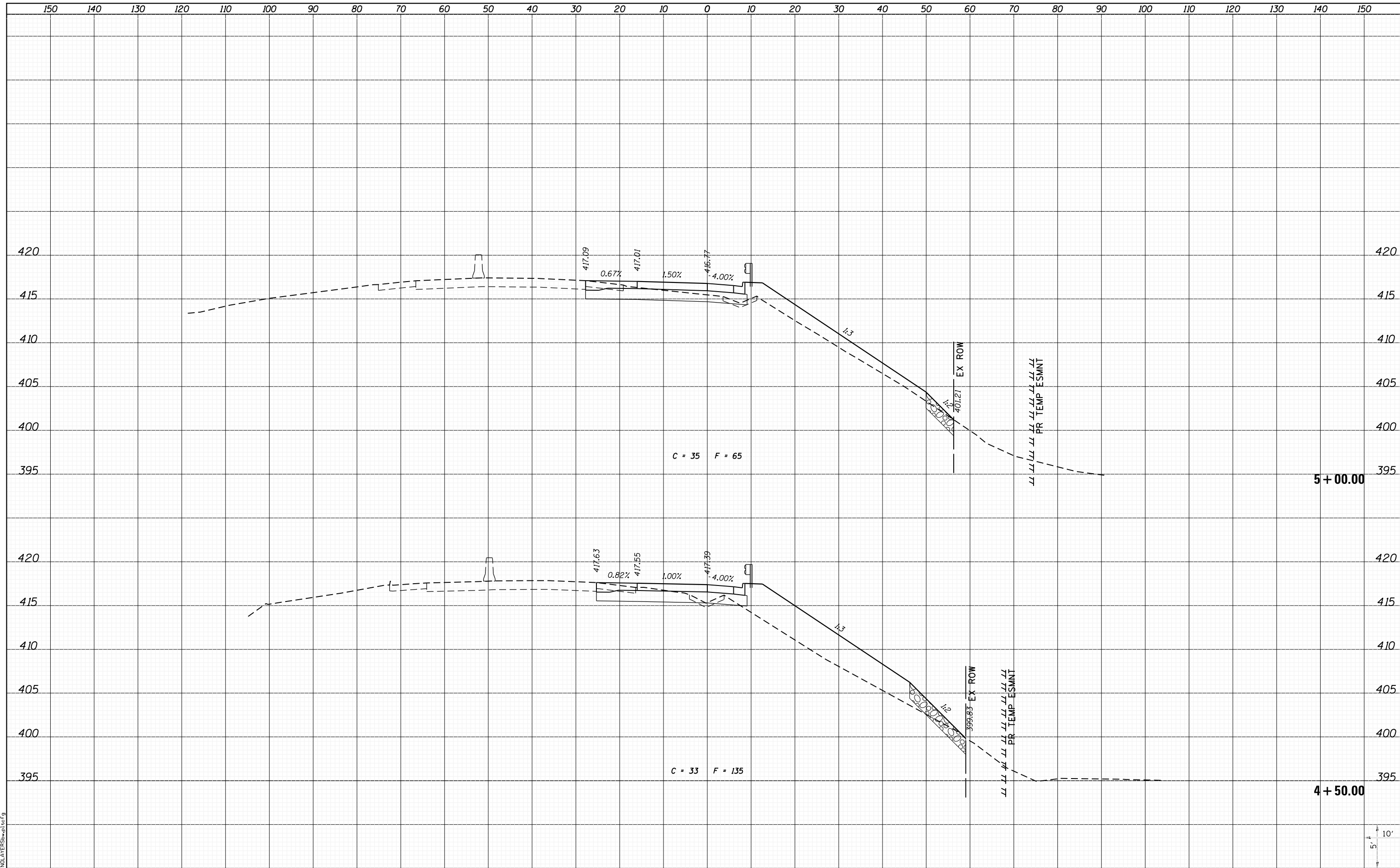
SCALE: 10H:5V SHEET 7 OF 27 SHEETS STA. 3+50.00 TO STA. 4+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	383
				CONTRACT NO. 76G09
ILLINOIS FED. AID PROJECT				



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



C = 35 F = 65

C = 33 F = 135

5 + 00.00

4 + 50.00

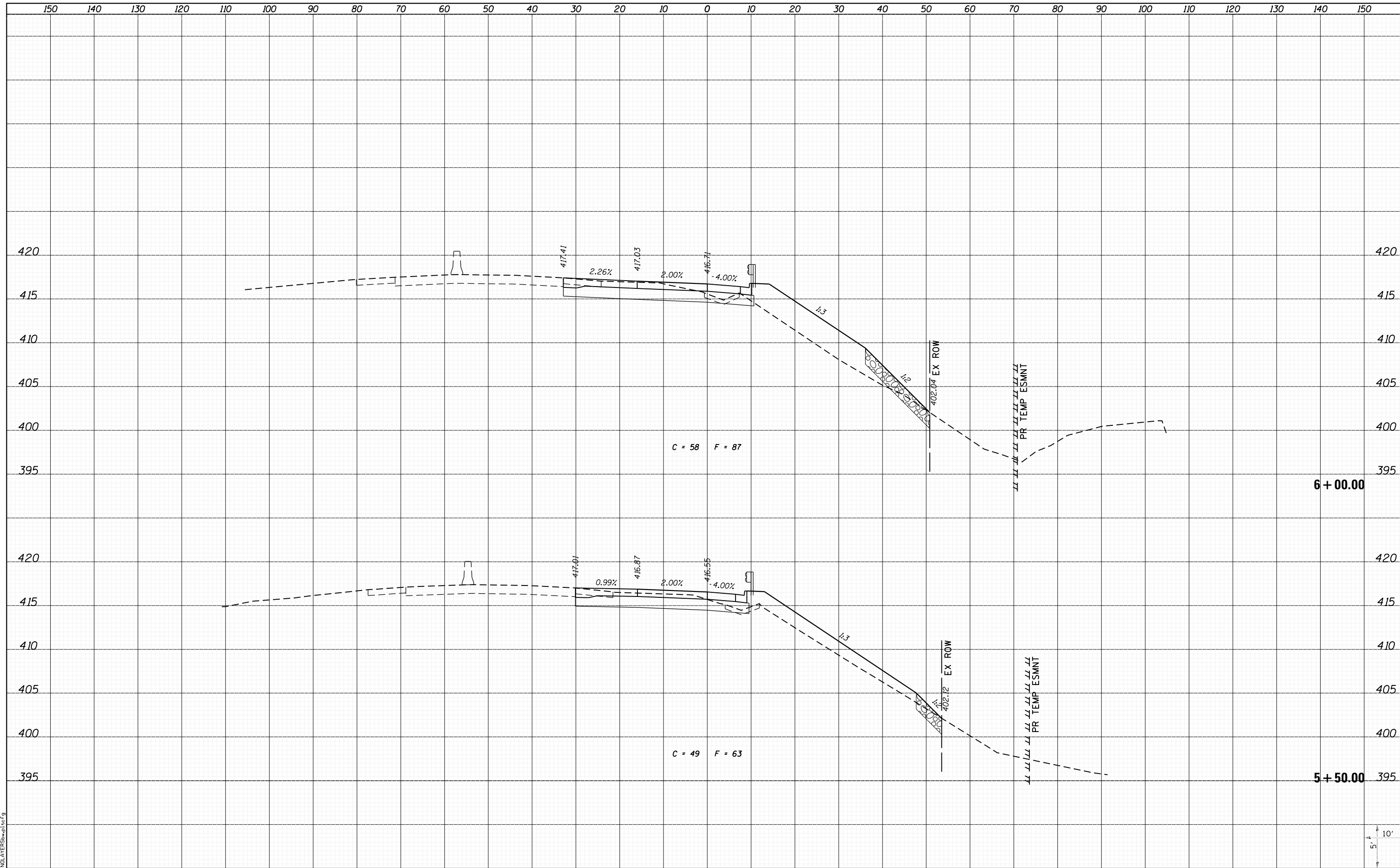


LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-Hair.tbl  
 PLOT DRIVER = PdfPlotterSW.batcf9

FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_087609-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISIED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>		<b>CROSS SECTIONS</b>		F.A.I. R.T.E. = 64	TOTAL SHEETS = 406	SHEET NO. = 384
PLOT SCALE = 20.0000' / in.	CHECKED -	REVISIED -	MLK CONNECTOR			SECTION = 82-(1,4)B-1	COUNTY = ST. CLAIR	CONTRACT NO. = 76G09		
PLOT DATE = 8/6/2014 3:04:47 PM	DATE -	REVISIED -	SCALE: 10H:5V			SHEET 8 OF 27 SHEETS	STA. 4+50.00 TO STA. 5+00.00	ILLINOIS FED. AID PROJECT		

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

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



C = 58 F = 87

C = 49 F = 63

6 + 00.00

5 + 50.00



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-Hair.tbl  
 PLOT DRIVER = PdfPlotterSW.bat

FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISÉD -
		DRAWN -	REVISÉD -
		CHECKED -	REVISÉD -
		DATE -	REVISÉD -
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PLOT DATE = 8/6/2014 3:04:48 PM			

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



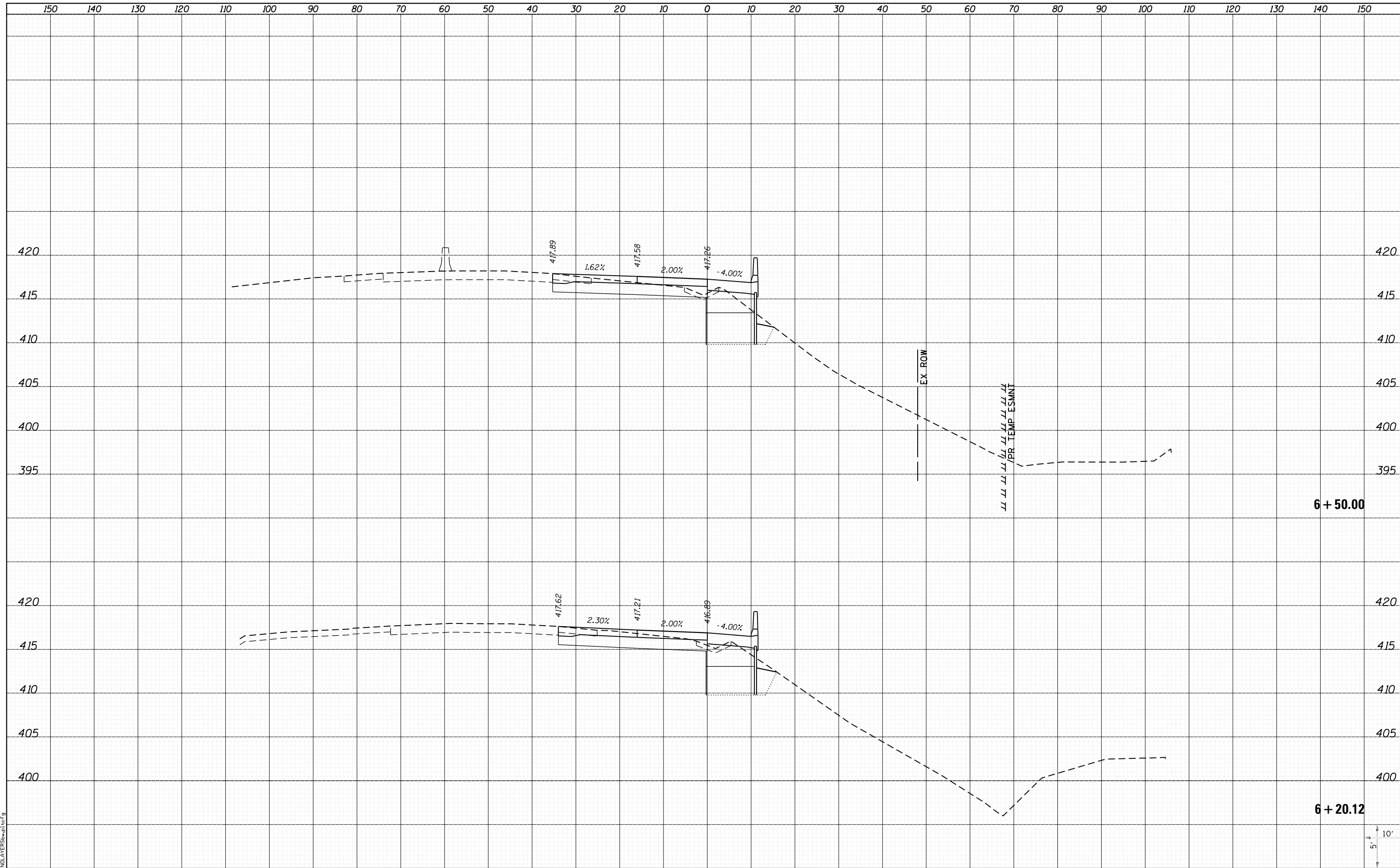
SCALE: 10H:5V SHEET 9 OF 27 SHEETS STA. 5+50.00 TO STA. 6+00.00

CROSS SECTIONS  
 MLK CONNECTOR

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	385
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

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

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



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-HAI-FBI  
 PLOT DRIVER = PLOTCLTERSHPLOTFCG

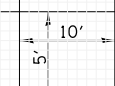
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		DRAWN -	REVISIED -
		CHECKED -	REVISIED -
		DATE -	REVISIED -
PLOT SCALE = 20.0000' / in.			
PLOT DATE = 8/6/2014 3:04:48 PM			

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



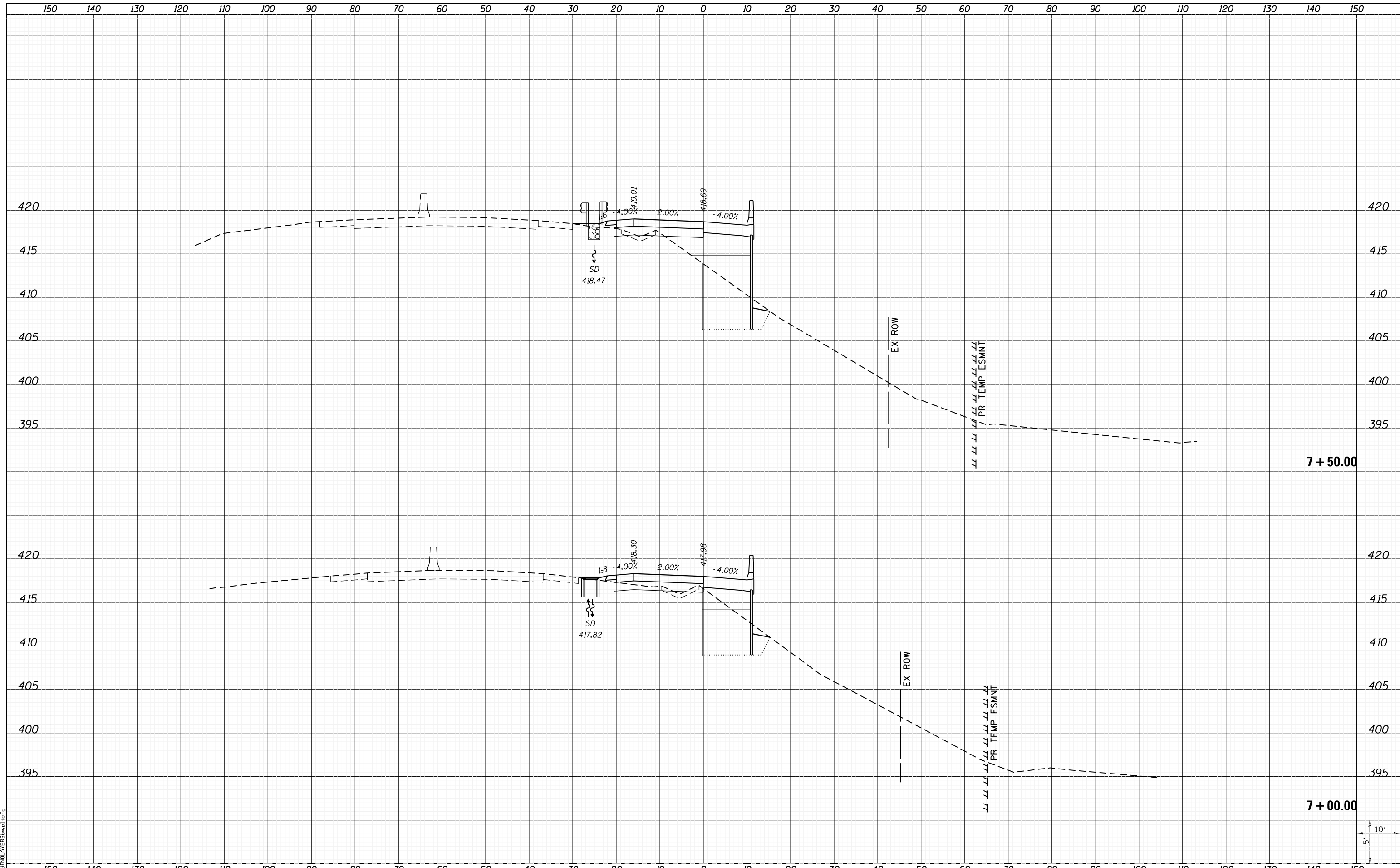
CROSS SECTIONS  
 MLK CONNECTOR  
 SCALE: 10H:5V  
 SHEET 10 OF 27 SHEETS  
 STA. 6+20.12 TO STA. 6+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	386
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



DATE	
BY	
FINISHED SURVEY	
PLOTTED TEMPLATE	
NOTE BOOK AREAS CHECKED	
NO.	

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

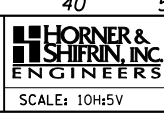


LAST SAVED = 8/6/2014  
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DESIGNED -	REVISD -
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -
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PLOT DATE =	8/6/2014 3:04:48 PM

DESIGNED -	REVISD -
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**



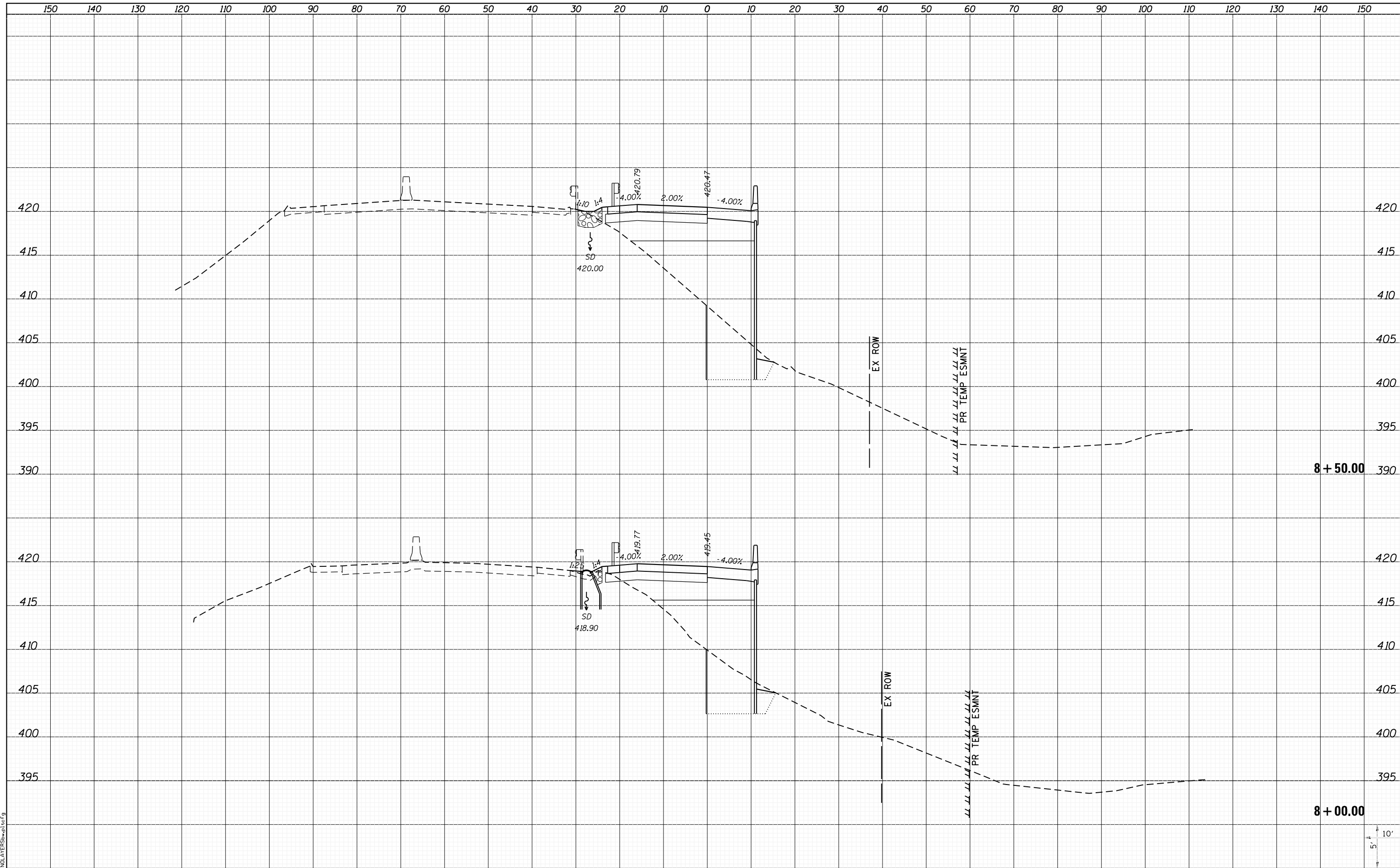
**CROSS SECTIONS**  
MLK CONNECTOR

SCALE: 10H:5V     SHEET 11 OF 27 SHEETS     STA. 7+00.00 TO STA. 7+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	387
CONTRACT NO. 76G09				ILLINOIS FED. AID PROJECT

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

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



LAST SAVED = 8/6/2014  
PEN TABLE = VBI-HAIR.tbl  
PLOT DRIVER = PLOTCLTERSPLOTcf9

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DESIGNED -	REVISIED -
DRAWN -	REVISIED -
CHECKED -	REVISIED -
DATE -	REVISIED -

PLOT SCALE =	20.0000' / in.
PLOT DATE =	8/6/2014 3:04:49 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



CROSS SECTIONS  
MLK CONNECTOR

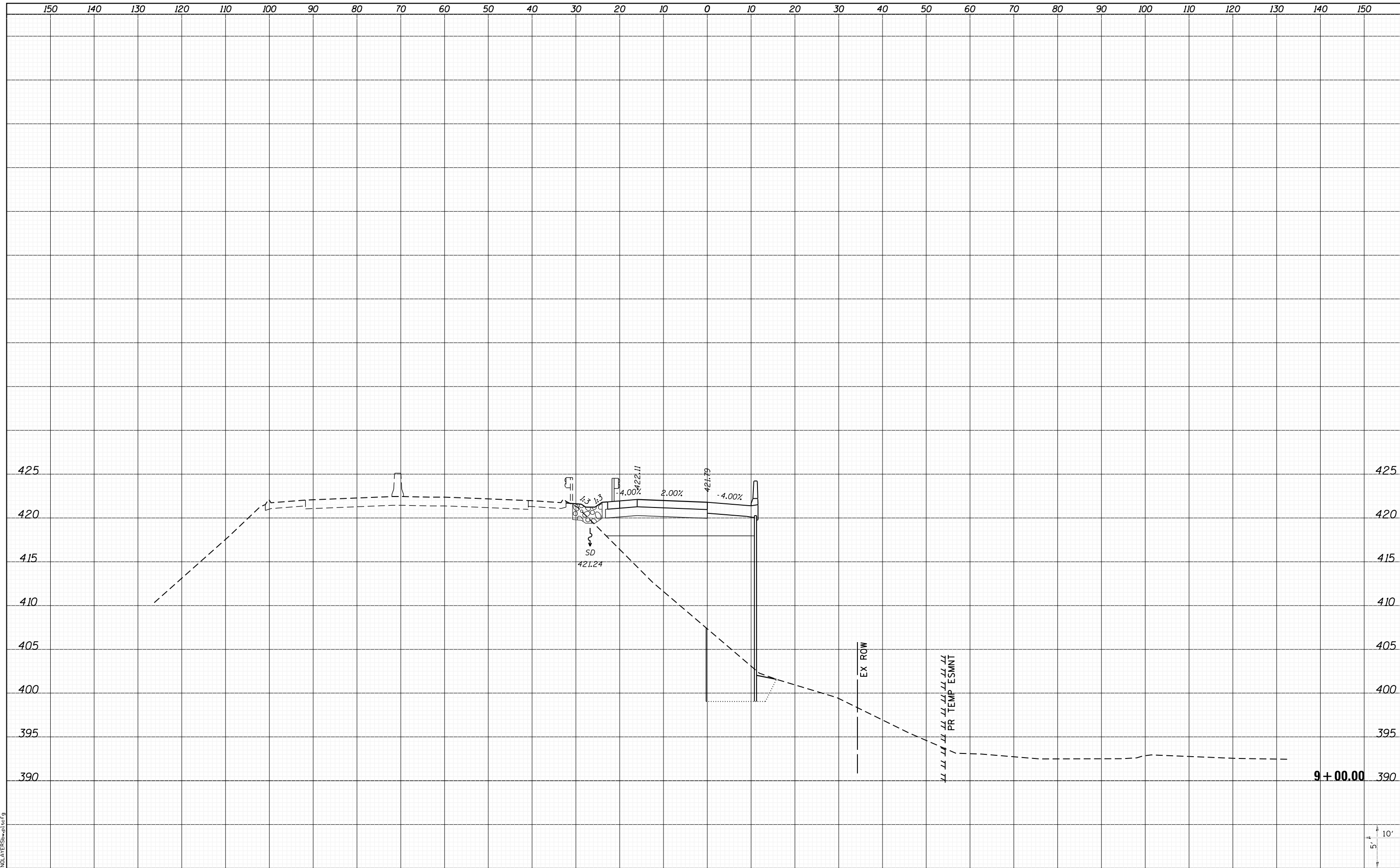
SCALE: 10H:5V SHEET 12 OF 27 SHEETS STA. 8+00.00 TO STA. 8+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	388
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



LAST SAVED = 8/6/2014  
 PEN TABLE = hb\hdt\tbl  
 PLOT DRIVER = hb\hdt\tbl

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DESIGNED -	REVISIED -
DRAWN -	REVISIED -
CHECKED -	REVISIED -
DATE -	REVISIED -
PLOT SCALE = 20.0000' / in.	
PLOT DATE = 8/6/2014 3:04:49 PM	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**



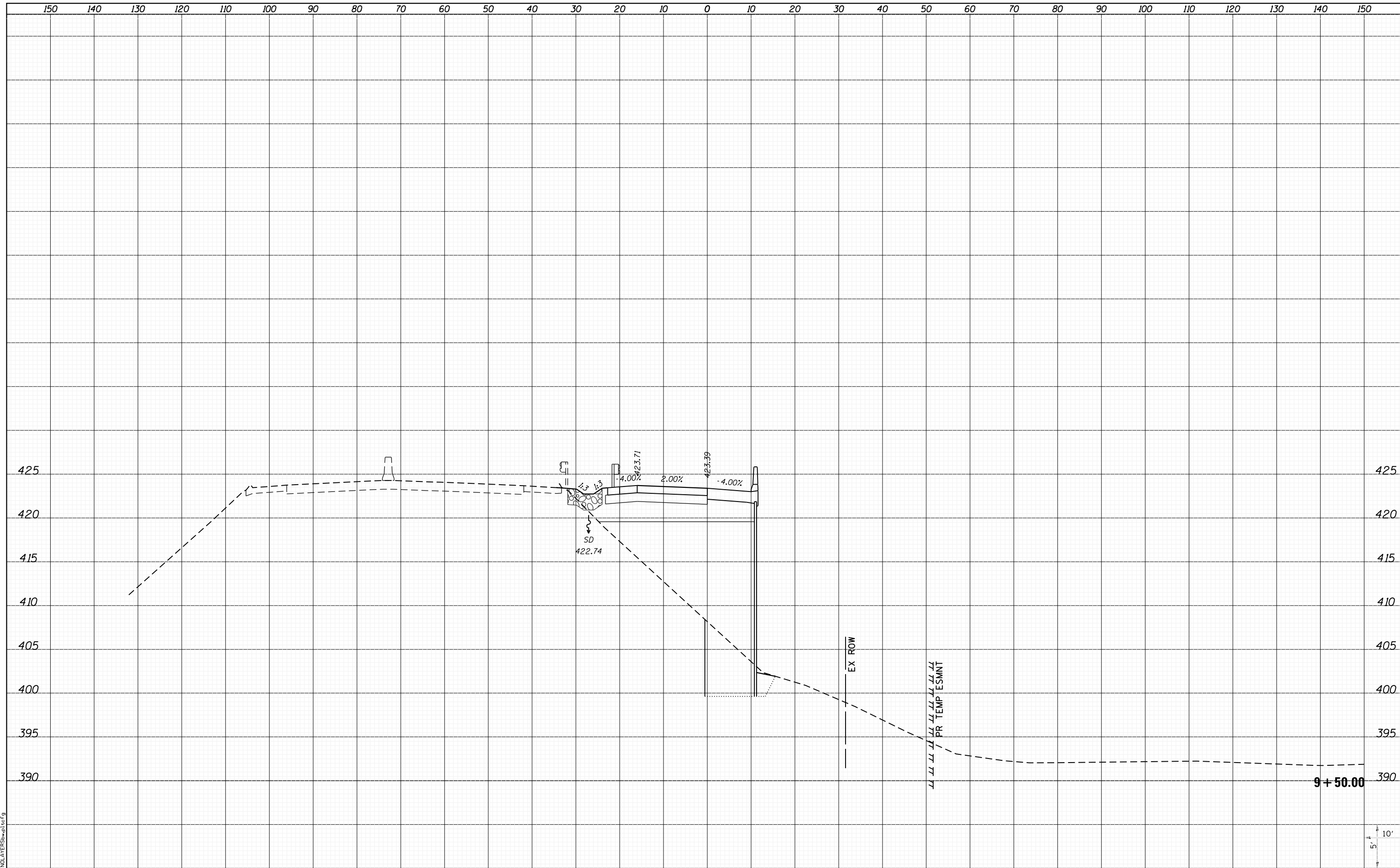
**CROSS SECTIONS  
MLK CONNECTOR**

SCALE: 10H:5V SHEET 13 OF 27 SHEETS STA. 9+00.00 TO STA. 9+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	389
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-HAI-FBI  
 PLOT DRIVER = B:\PLOTTERS\pwtcf9

FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISIED -
		DRAWN -	REVISIED -
		CHECKED -	REVISIED -
		DATE -	REVISIED -
PLOT SCALE = 20.0000' / in.	PLOT DATE = 8/6/2014 3:04:49 PM		

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



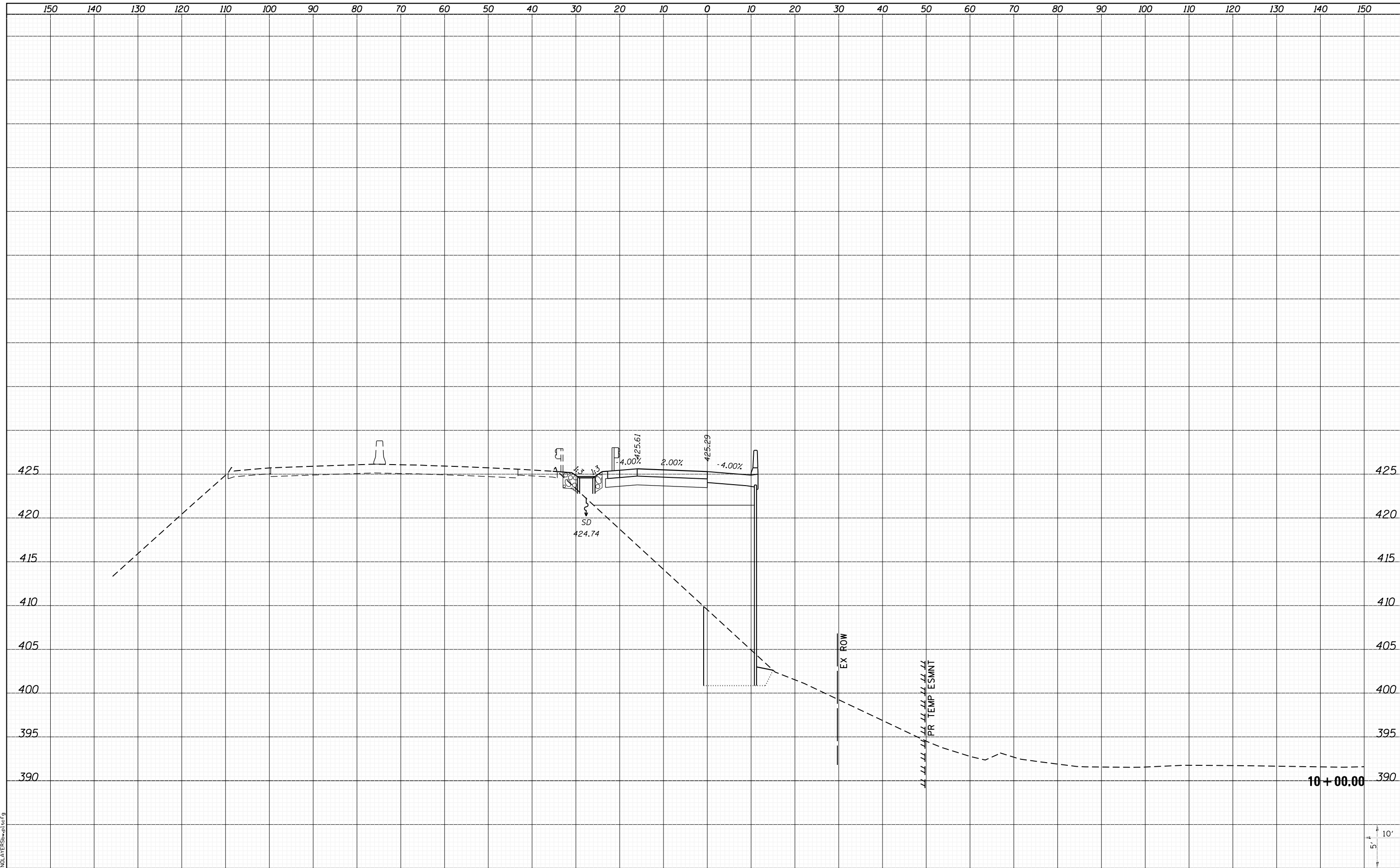
SCALE: 10H:5V SHEET 14 OF 27 SHEETS STA. 9+50.00 TO STA. 9+50.00

CROSS SECTIONS  
 MLK CONNECTOR

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	390
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-H&S-F&B  
 PLOT DRIVER = PLOTDRIVER.bat

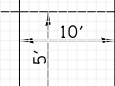
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DESIGNED -	REVISIED -
DRAWN -	REVISIED -
CHECKED -	REVISIED -
DATE -	REVISIED -
PLOT SCALE =	20.0000' / in.
PLOT DATE =	8/6/2014 3:04:50 PM

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



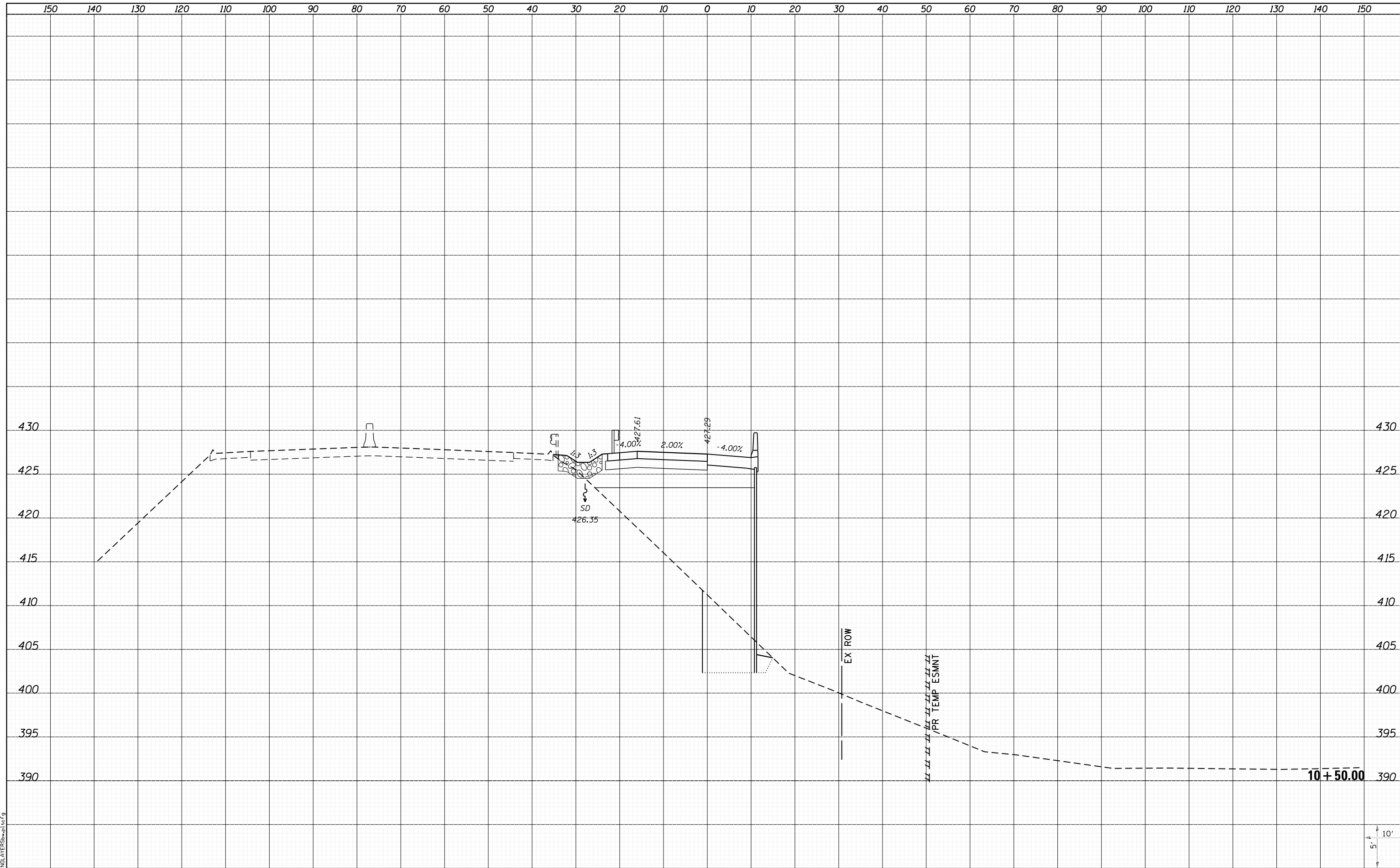
CROSS SECTIONS  
 MLK CONNECTOR  
 SCALE: 10H:5V  
 SHEET 15 OF 27 SHEETS  
 STA. 10+00.00 TO STA. 10+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	391
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-HAIFR.DLL  
 PLOT DRIVER = PLOTCLTERSWPLOTCLF9

FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISIED -
		DRAWN -	REVISIED -
		CHECKED -	REVISIED -
		DATE -	REVISIED -
PLOT SCALE = 20.0000' / in.			
PLOT DATE = 8/6/2014 3:04:50 PM			

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

HORNER &  
 SHIRIN, INC.  
 ENGINEERS

CROSS SECTIONS  
 MLK CONNECTOR

SCALE: 10H:5V SHEET 16 OF 27 SHEETS STA. 10+50.00 TO STA. 10+50.00

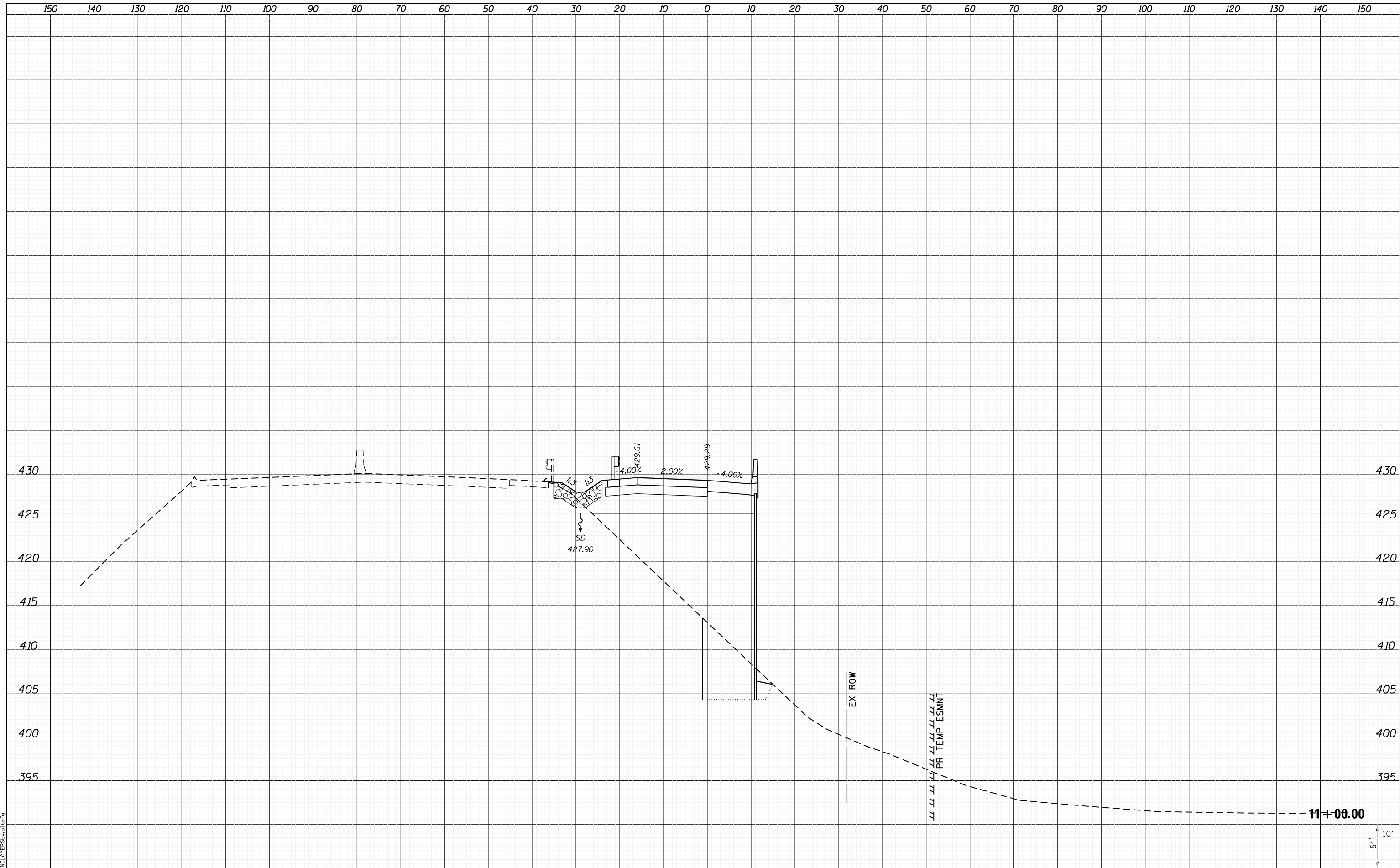
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	392
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

10'  
5'

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

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

LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-H&E-101  
 PLOT DRIVER = PLOTCLTERSHPLOTCLF9

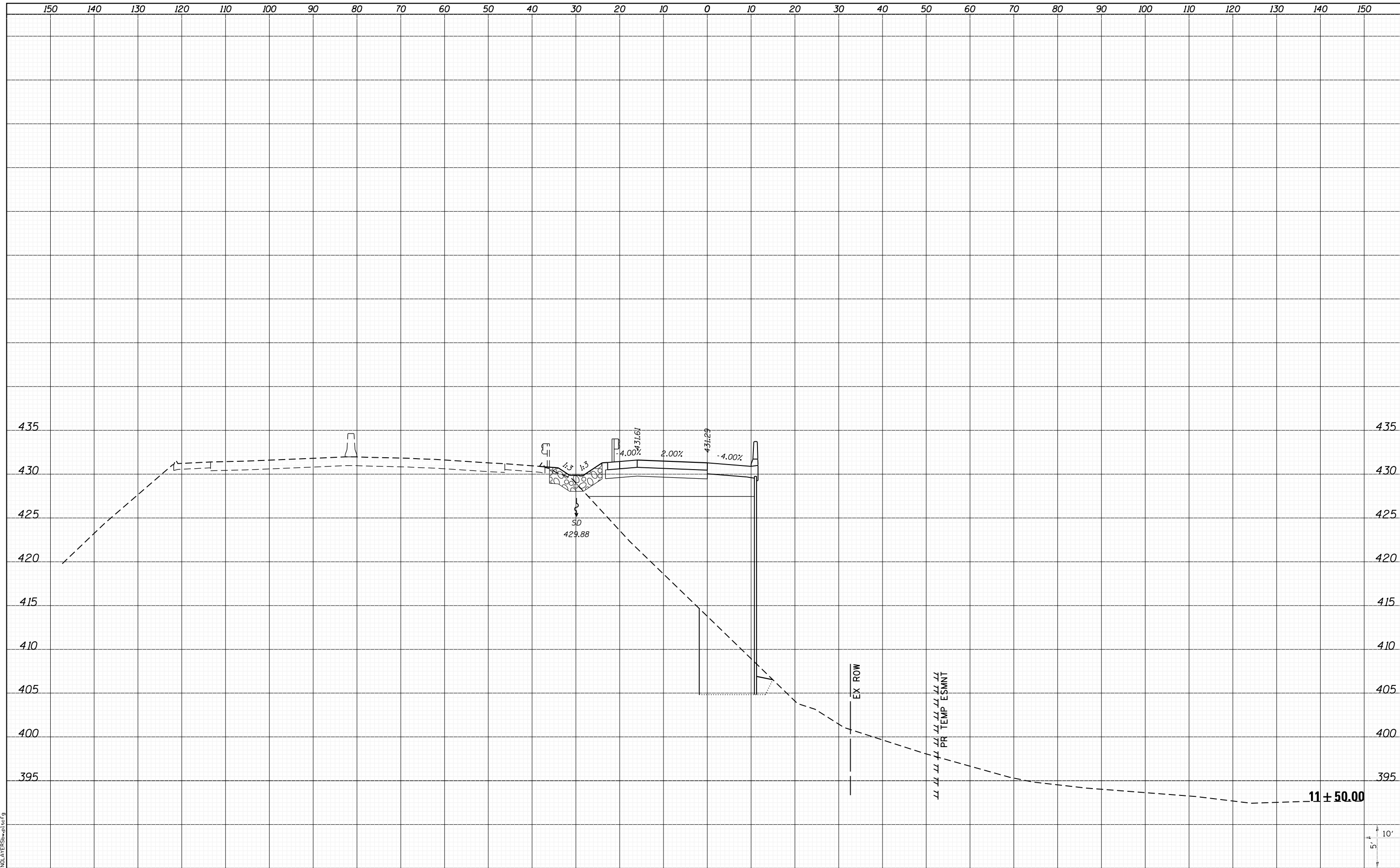


FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISD -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>		<b>CROSS SECTIONS</b>		F.A.I. RTE. = 64	TOTAL SHEETS = 406	SHEET NO. = 393
PLOT SCALE = 20.0000' / in.	CHECKED -	REVISD -	SECTION = 82-(1,4)B-1			COUNTY = ST. CLAIR	CONTRACT NO. = 76G09			
PLOT DATE = 8/6/2014 3:04:50 PM	DATE -	REVISD -	ILLINOIS FED. AID PROJECT							
			SCALE: 10H:5V			SHEET 17 OF 27 SHEETS	STA. 11+00.00 TO STA. 11+00.00			

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

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

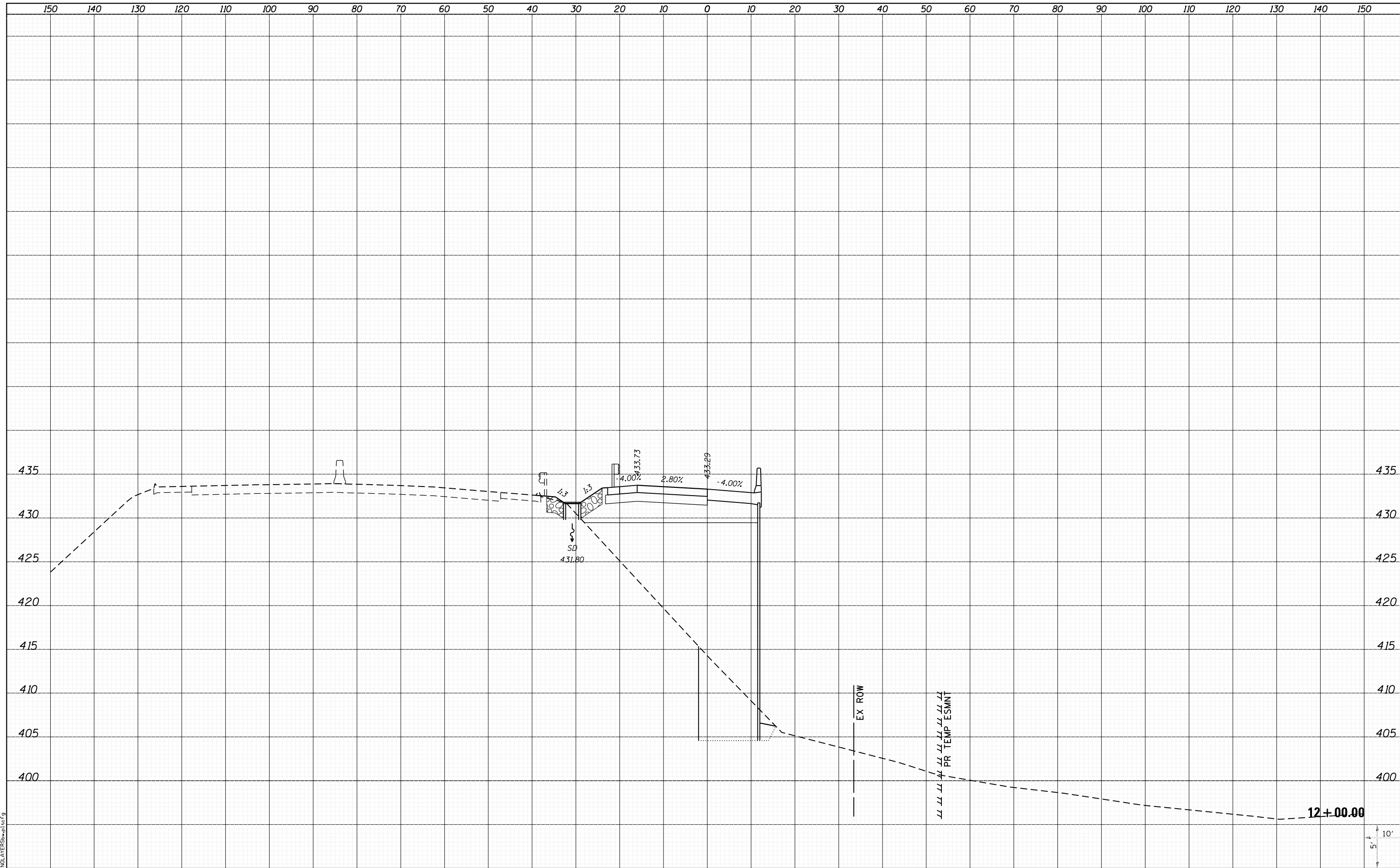
LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-H&S-F&E  
 PLOT DRIVER = PLOTDRIVER\$PLOT\$CF\$G



FILE NAME =	USER NAME = jepettibone	DESIGNED -	REVISIED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>HORNER &amp; SHIRIN, INC.</b> <b>ENGINEERS</b>	<b>CROSS SECTIONS</b>		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISIED -			64	82-(1,4)B-1	ST. CLAIR	406	394		
		CHECKED -	REVISIED -			CONTRACT NO. 76G09						
		DATE -	REVISIED -			ILLINOIS FED. AID PROJECT						
		PLOT SCALE = 20.0000' / in.			SCALE: 10H:5V	SHEET 18	OF 27 SHEETS	STA. 11+50.00	TO STA. 11+50.00			

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-H&I-F&I  
 PLOT DRIVER = PLOTCLTERSHPLOTCLF9

FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISIED -
		DRAWN -	REVISIED -
		CHECKED -	REVISIED -
		DATE -	REVISIED -
PLOT SCALE = 20.0000' / in.			
PLOT DATE = 8/6/2014 3:04:51 PM			

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



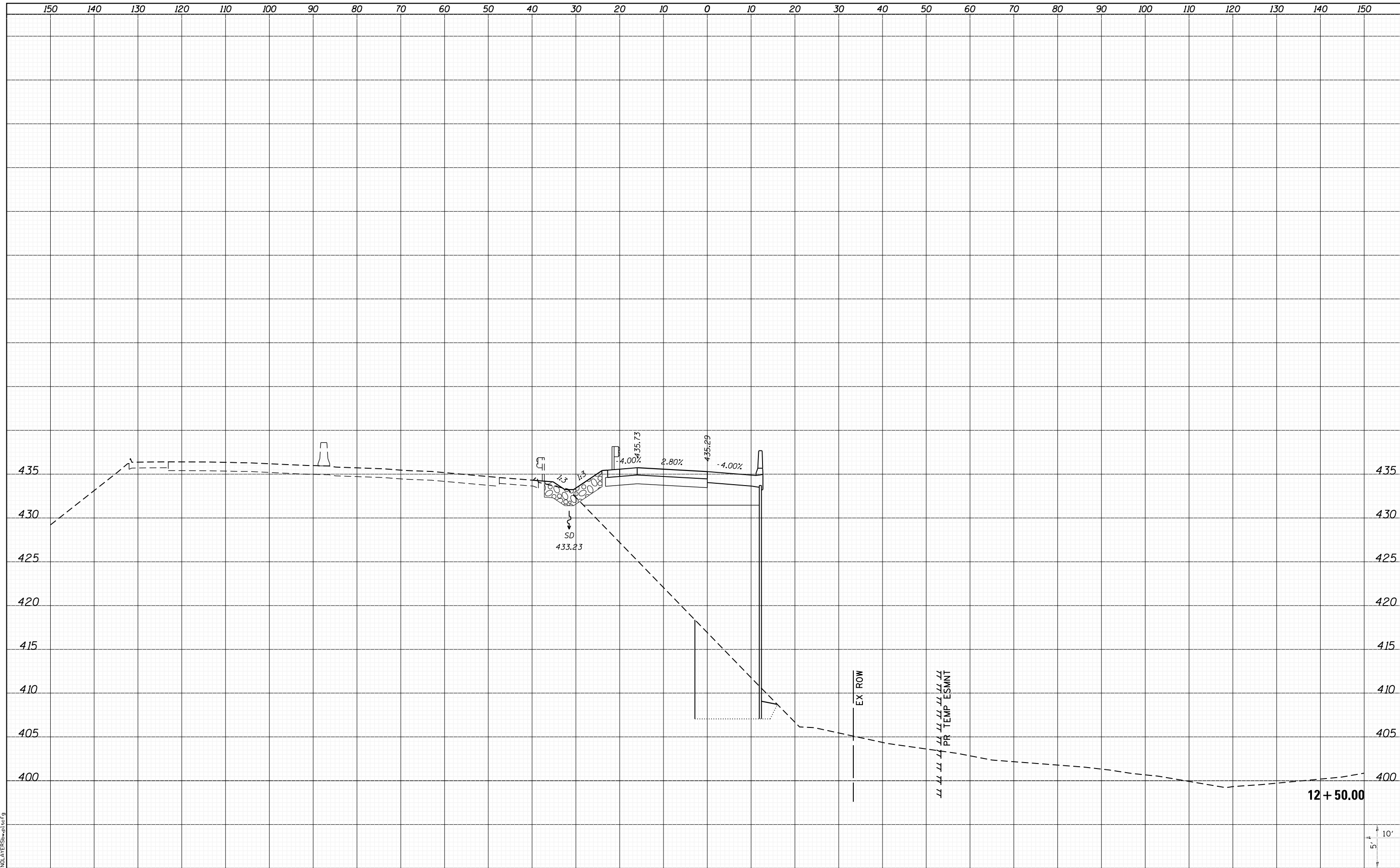
SCALE: 10H:5V SHEET 19 OF 27 SHEETS STA. 12+00.00 TO STA. 12+00.00

CROSS SECTIONS  
 MLK CONNECTOR

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	395
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

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

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



LAST SAVED = 8/6/2014  
 PEN TABLE = hb\hpltbl  
 PLOT DRIVER = hb\hpltbl

FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -
PLOT SCALE = 20.0000' / in.			
PLOT DATE = 8/6/2014 3:04:51 PM			

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



SCALE: 10H:5V SHEET 20 OF 27 SHEETS STA. 12+50.00 TO STA. 12+50.00

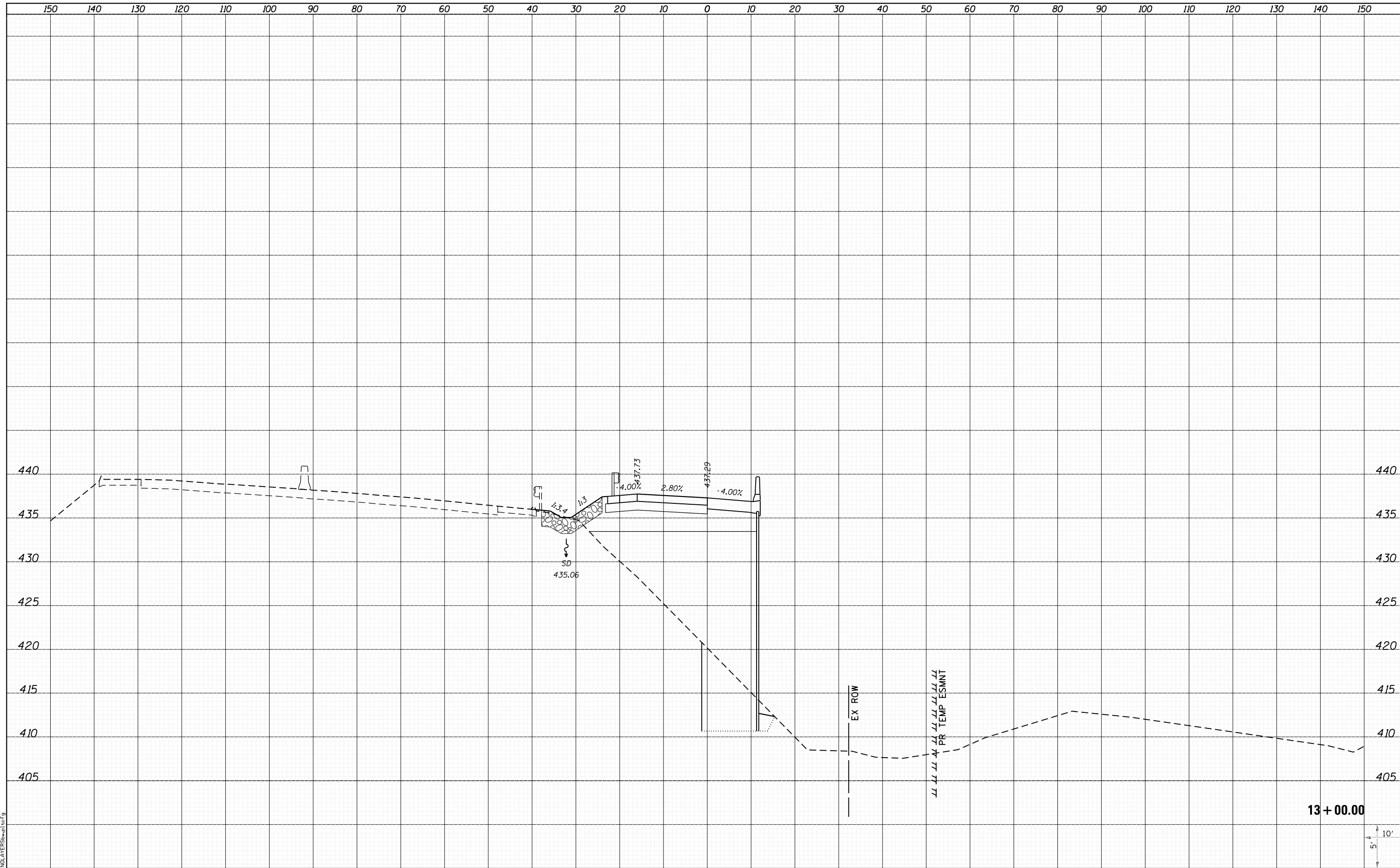
CROSS SECTIONS  
 MLK CONNECTOR

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	396
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



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

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



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-H&I-F&I  
 PLOT DRIVER = PdfPlotterSpw.batcf9

FILE NAME =	X:\1309400-MLK\Cad\T\Plns\900_0876009-sht-Xsht-MLK.dgn
USER NAME =	jepettibone
DESIGNED -	REVISIED -
DRAWN -	REVISIED -
CHECKED -	REVISIED -
DATE -	REVISIED -
PLOT SCALE =	20.0000" / in.
PLOT DATE =	8/6/2014 3:04:52 PM

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



SCALE: 10H:5V SHEET 21 OF 27 SHEETS STA. 13+00.00 TO STA. 13+00.00

CROSS SECTIONS  
 MLK CONNECTOR

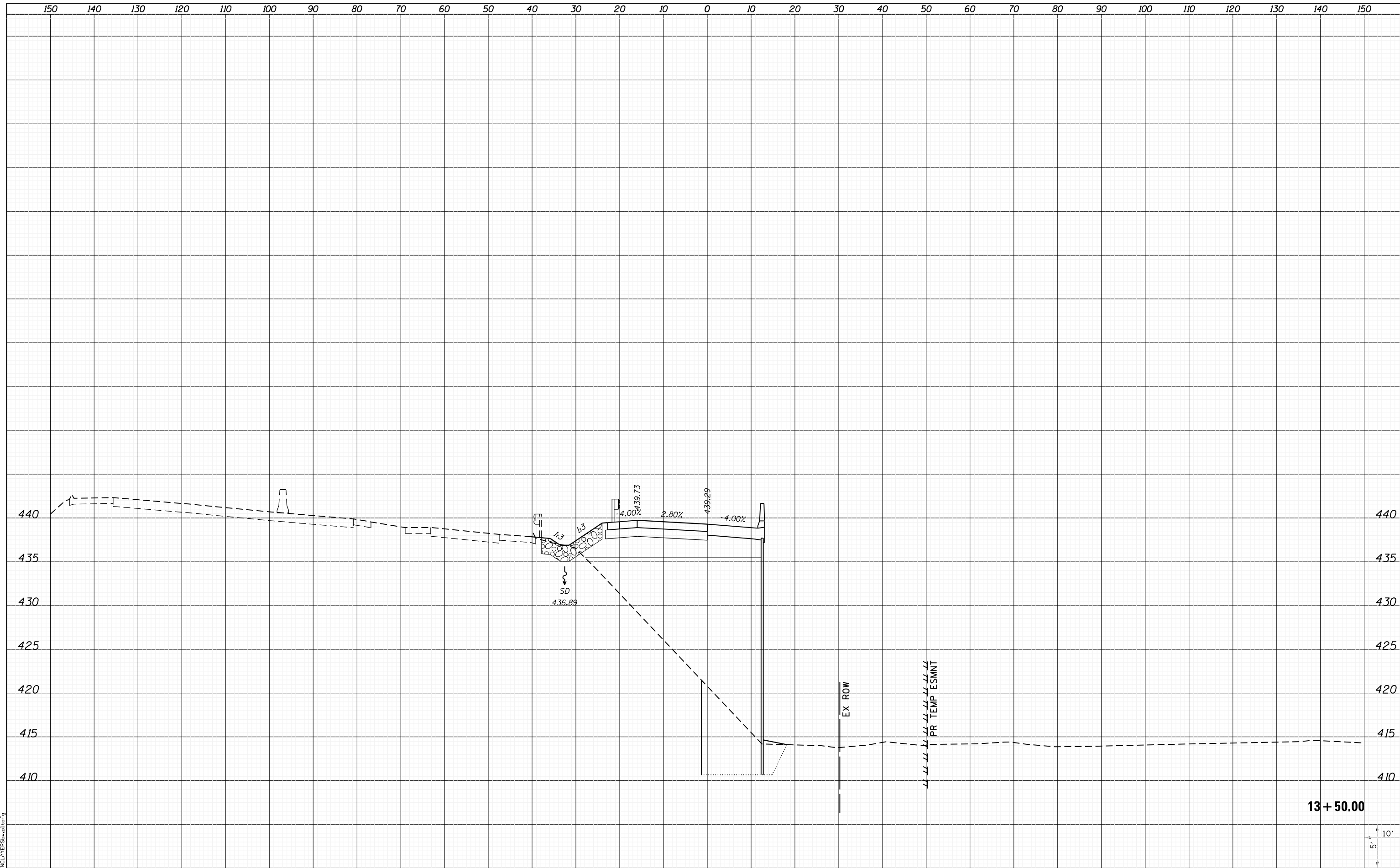
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	397
			CONTRACT NO. 76G09	
ILLINOIS FED. AID PROJECT				

13 + 00.00

10'  
5'

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



13 + 50.00

10'  
5'

LAST SAVED = 8/6/2014  
PEN TABLE = VBI-H&I-F&I  
PLOT DRIVER = PdfPlotterServer.batcf9

FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISD -
		DRAWN -	REVISD -
		CHECKED -	REVISD -
		DATE -	REVISD -
PLOT SCALE = 20.0000' / in.			
PLOT DATE = 8/6/2014 3:04:52 PM			

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**HORNER & SHIRIN, INC.**  
ENGINEERS

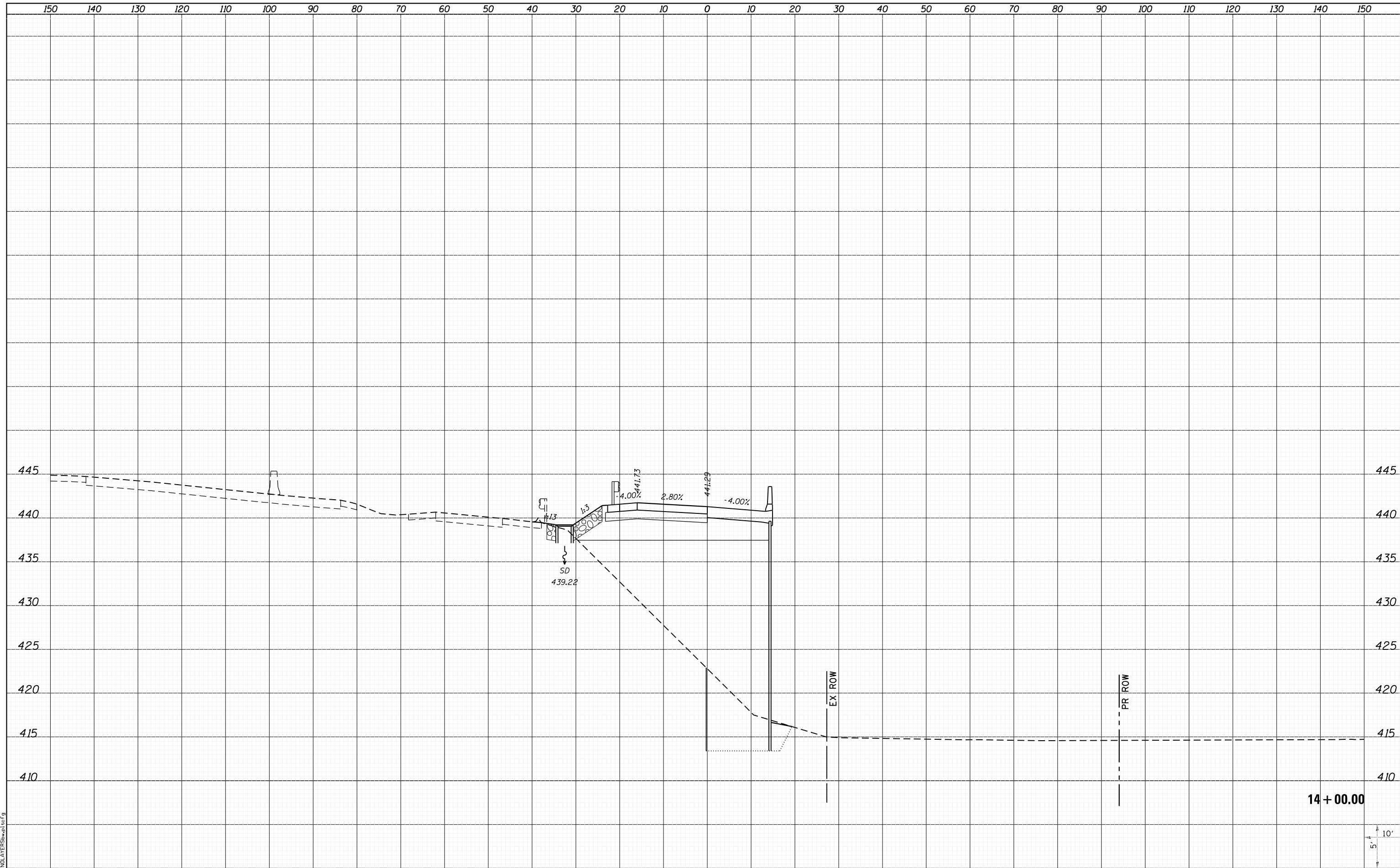
**CROSS SECTIONS**  
MLK CONNECTOR

SCALE: 10H:5V SHEET 22 OF 27 SHEETS STA. 13+50.00 TO STA. 13+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	398
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

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

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



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-H&I-F&E1  
 PLOT DRIVER = BDFINDLTERSHPW16CF9

FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISIED -
		DRAWN -	REVISIED -
		CHECKED -	REVISIED -
		DATE -	REVISIED -
PLOT SCALE = 20.0000' / in.			
PLOT DATE = 8/6/2014 3:04:52 PM			

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



SCALE: 10H:5V SHEET 23 OF 27 SHEETS STA. 14+00.00 TO STA. 14+00.00

CROSS SECTIONS  
 MLK CONNECTOR

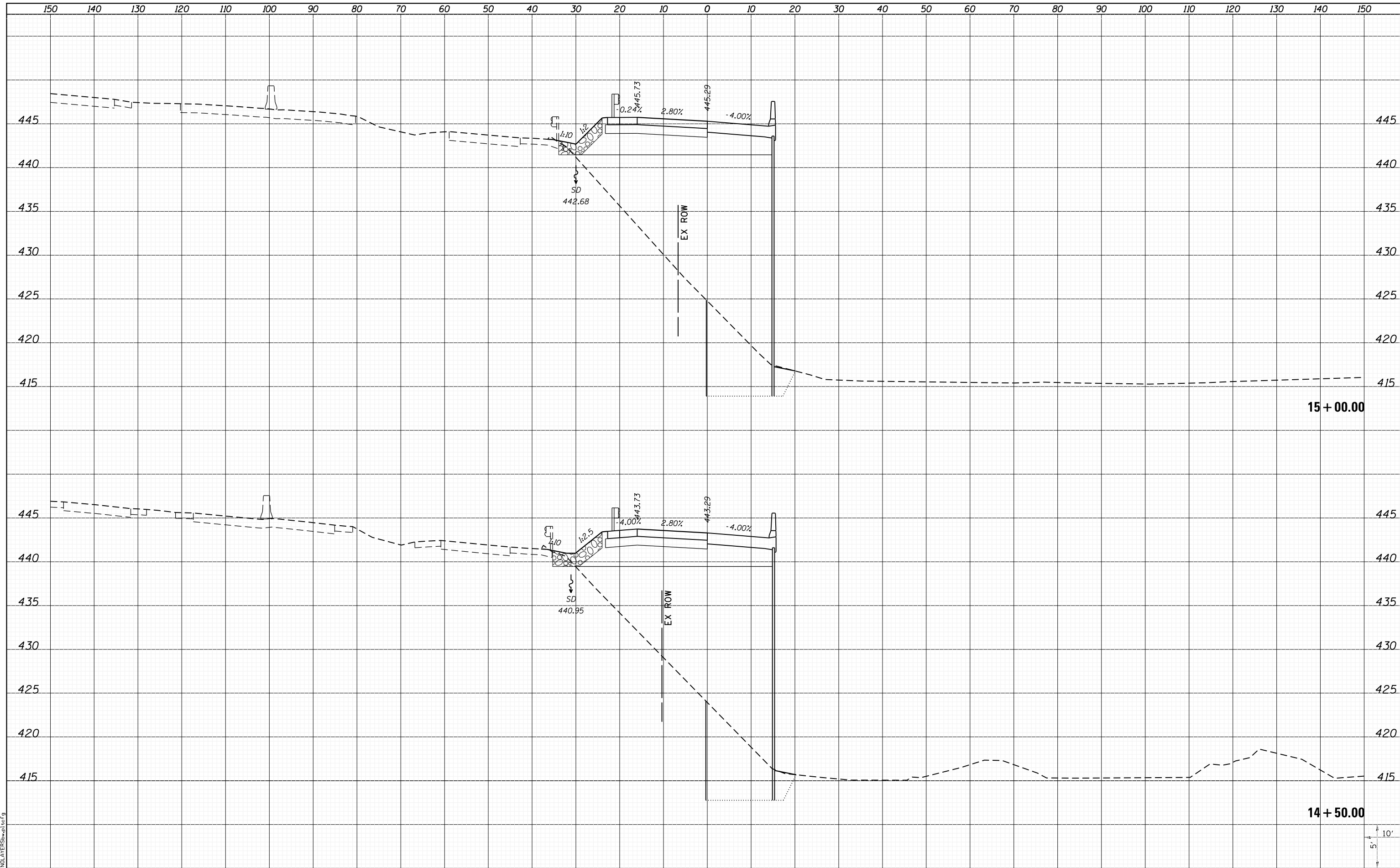
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	399
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

14 + 00.00



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

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



15 + 00.00

14 + 50.00



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-HAIF-101  
 PLOT DRIVER = PLOTDRIVER.bat

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		DRAWN -	REVISÉD -
		CHECKED -	REVISÉD -
		DATE -	REVISÉD -
PLOT SCALE = 20.0000' / in.	PLOT DATE = 8/6/2014 3:04:52 PM		

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



CROSS SECTIONS  
 MLK CONNECTOR

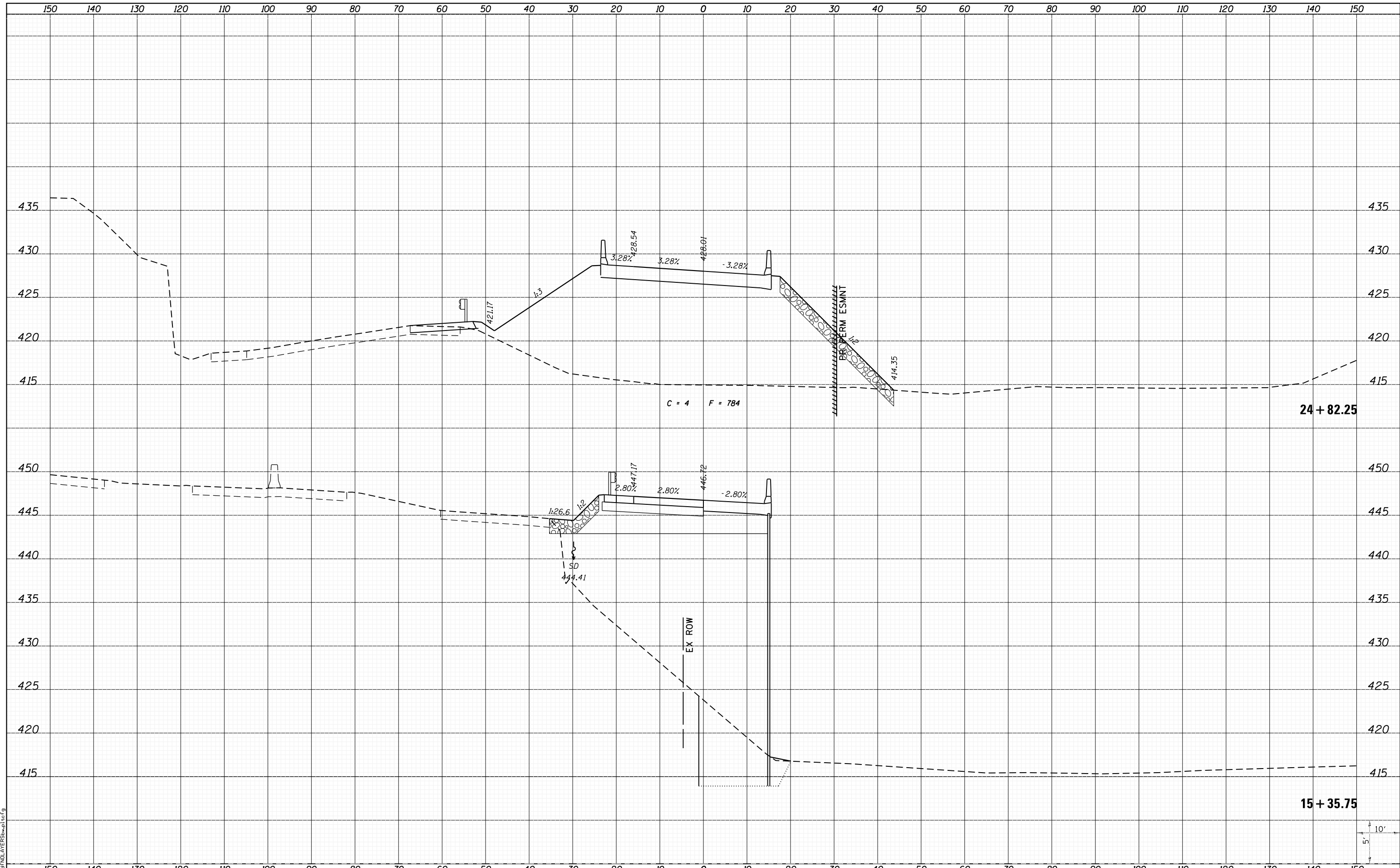
SCALE: 10H:5V SHEET 24 OF 27 SHEETS STA. 14+50.00 TO STA. 15+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	400
CONTRACT NO. 76009			ILLINOIS FED. AID PROJECT	

BY	DATE

BY	DATE

LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-HALF.DWI  
 PLOT DRIVER = HPGLAFTER\$HPGL\$PLOT\$G

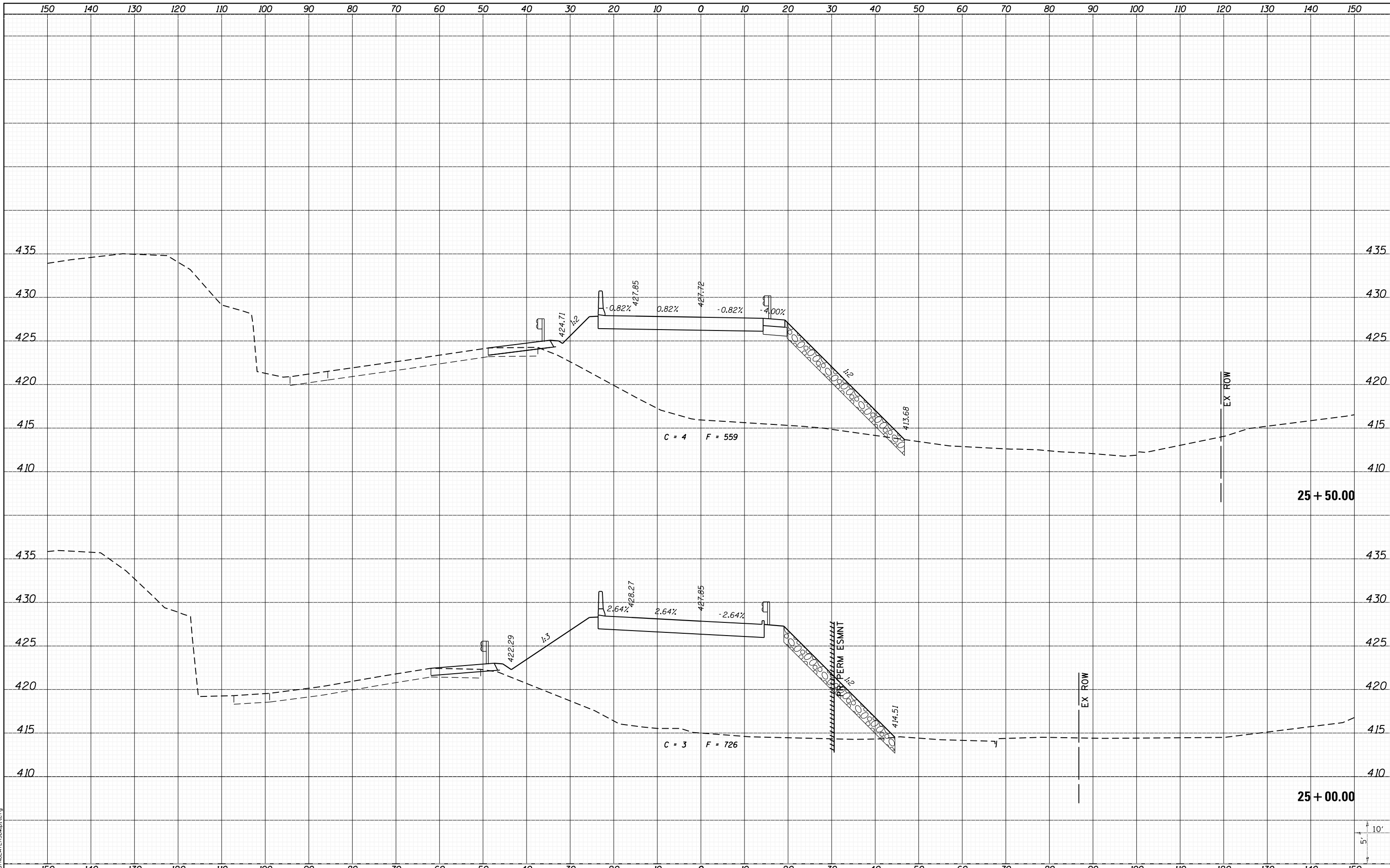


FILE NAME =	USER NAME = jepettibone	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>		<b>CROSS SECTIONS MLK CONNECTOR</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
X:\1309400-MLK\Cad\T\Plans\900_087609-sht-Xsht-MLK.dgn	DRAWN -	REVISED -	64				82-(1,4)B-1	ST. CLAIR	406	401	
PLOT SCALE = 20.0000' / in.	CHECKED -	REVISED -	CONTRACT NO. 76G09								
PLOT DATE = 8/6/2014 3:04:53 PM	DATE -	REVISED -	ILLINOIS FED. AID PROJECT								
SCALE: 10H:5V							SHEET 25 OF 27 SHEETS			STA. 15+35.75 TO STA. 24+82.25	

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

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

LAST SAVED = 8/6/2014  
PEN TABLE = \\H:\h1\1\1  
PLOT DRIVER = PdfPlotterSWplotcf9



FILE NAME =	X:\1309400-MLK\Cad\1\Plans\900_0876009-sht-Xsht-MLK.dgn
USER NAME = jepettibone	
DESIGNED -	REVISD -
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -
PLOT SCALE = 20.0000' / in.	
PLOT DATE = 8/6/2014 3:04:53 PM	

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

**HORNER & SHIRIN, INC.**  
**ENGINEERS**

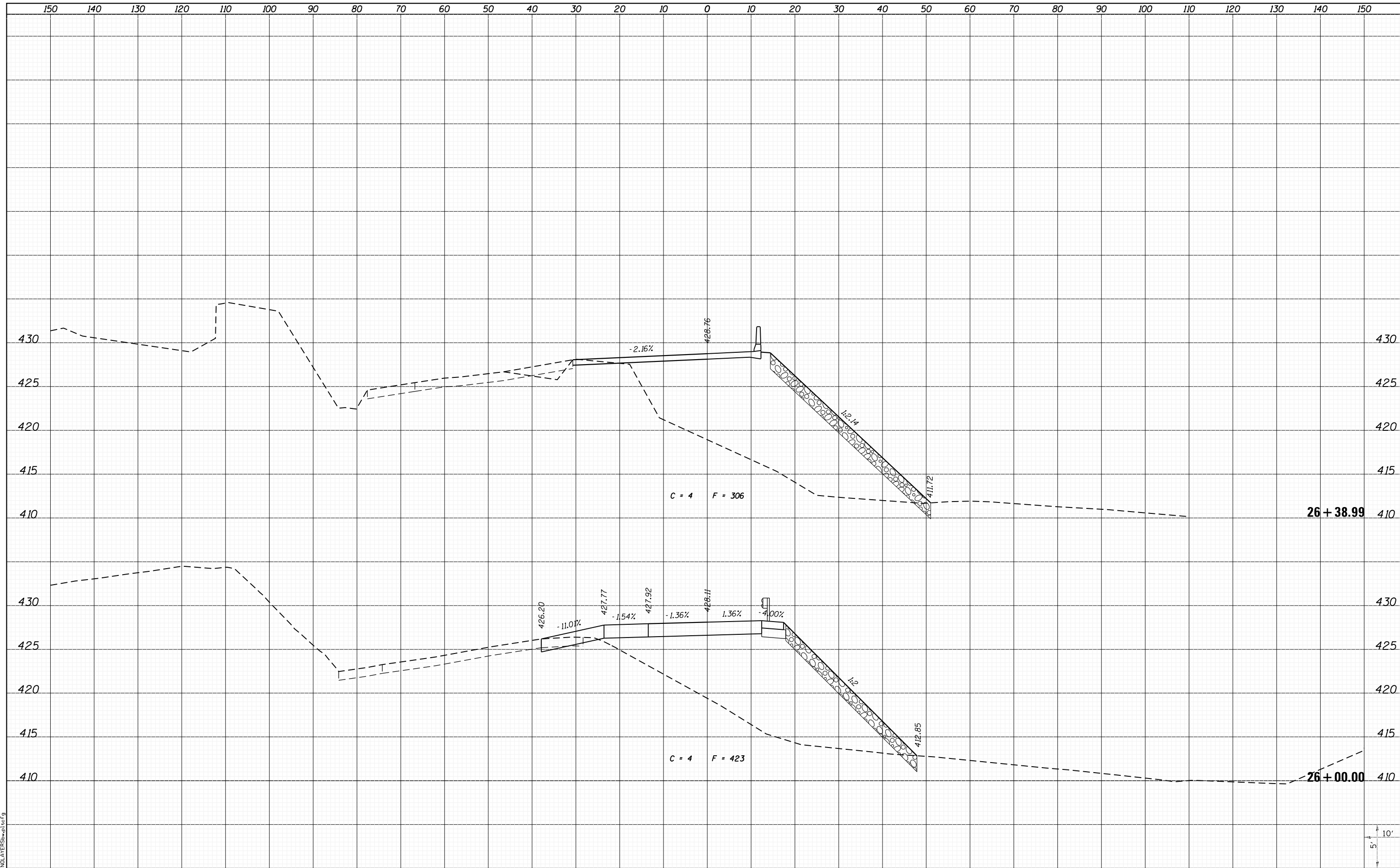
**CROSS SECTIONS**  
**MLK CONNECTOR**

SCALE: 10H:5V     SHEET 26 OF 27 SHEETS     STA. 25+00.00 TO STA. 25+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	402
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				

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

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



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-Half.rdl  
 PLOT DRIVER = PdfPlotterSpw.bat

FILE NAME = X:\1309400-MLK\Cad\T\Plans\900_0876009-sht-Xsht-MLK.dgn	USER NAME = jepettibone	DESIGNED -	REVISÉD -
		DRAWN -	REVISÉD -
		CHECKED -	REVISÉD -
		DATE -	REVISÉD -
PLOT SCALE = 20.0000' / in.			
PLOT DATE = 8/6/2014 3:04:54 PM			

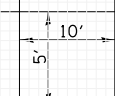
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



CROSS SECTIONS  
 MLK CONNECTOR

SCALE: 10H:5V SHEET 27 OF 27 SHEETS STA. 26+00.00 TO STA. 26+38.99

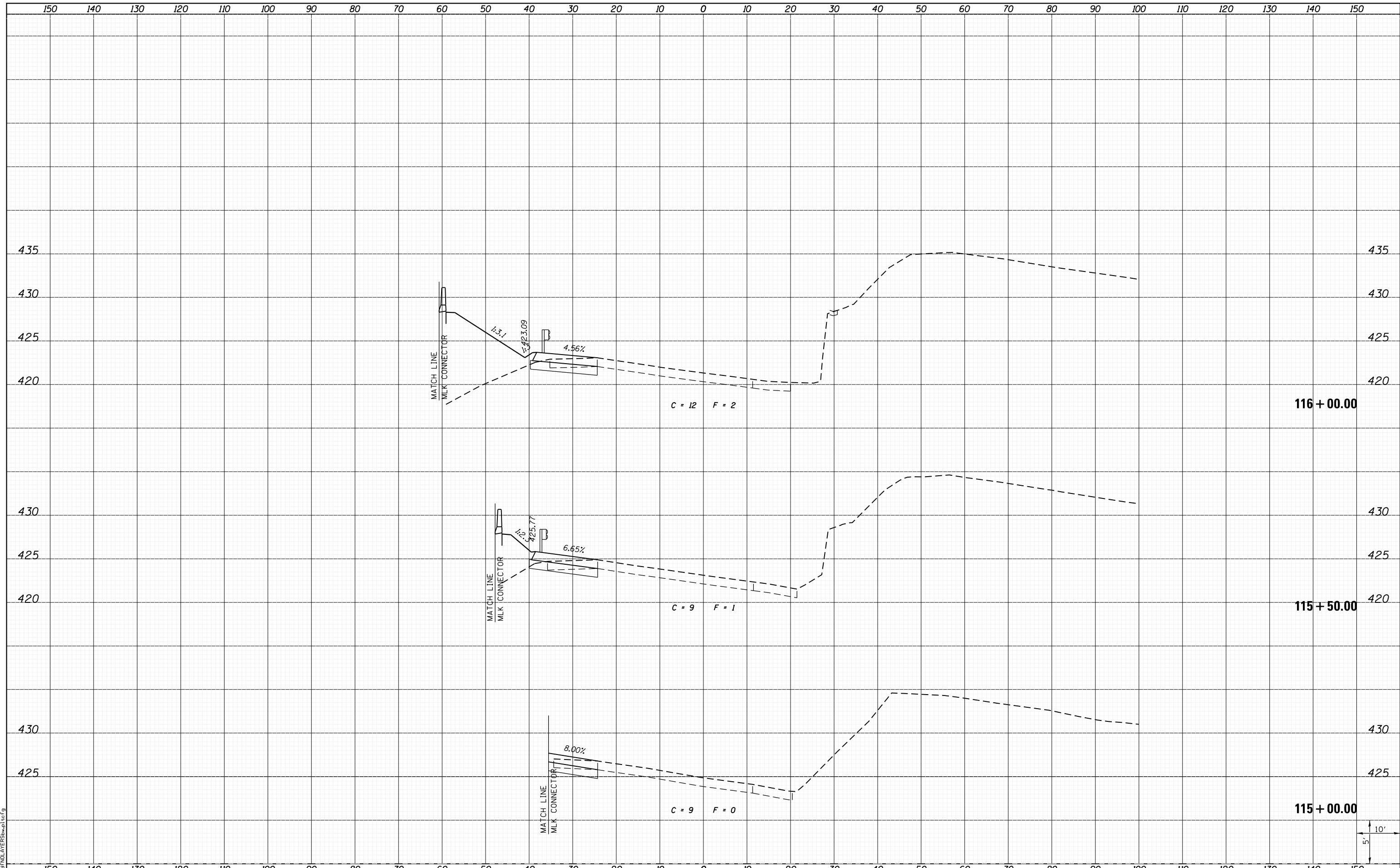
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	403
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-Half.rdl  
 PLOT DRIVER = PdfPlotterSpw.pltcf9



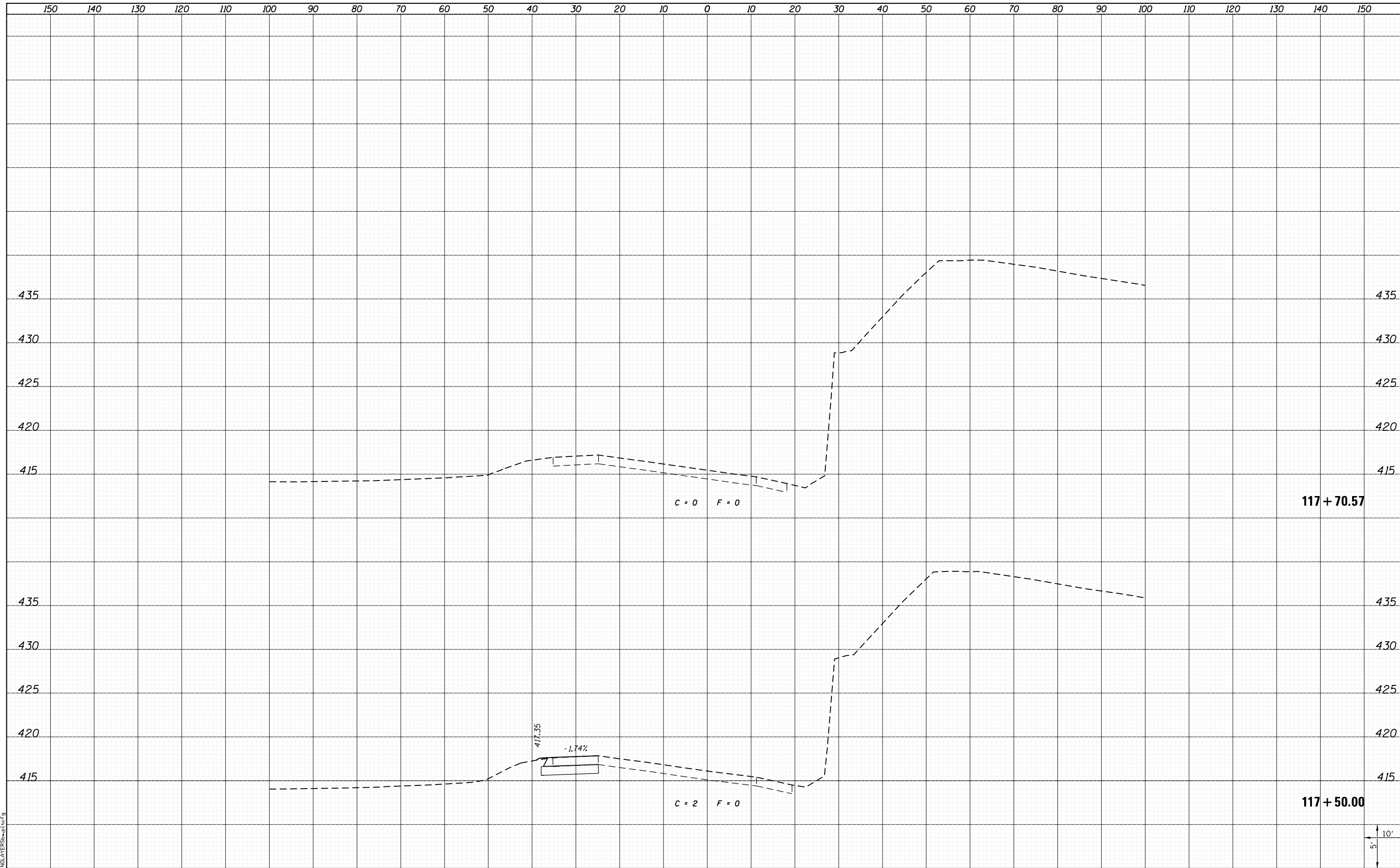
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PLOT SCALE = 20.0000' / in.	PLOT DATE = 8/6/2014 3:04:54 PM	DRAWN -	REVISD -			SCALE: 10H:5V	SHEET 1 OF 3 SHEETS	STA. 115+00.00 TO STA. 116+00.00	CONTRACT NO. 76G09		ILLINOIS FED. AID PROJECT		
		CHECKED -	REVISD -										
		DATE -	REVISD -										





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

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



LAST SAVED = 8/6/2014  
 PEN TABLE = VBI-HAI-FBI  
 PLOT DRIVER = BDI-PLTDRSHPW16CF9

FILE NAME =	USER NAME = jepettibone	DESIGNED -	REVISED -
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		CHECKED -	REVISED -
		DATE -	REVISED -
PLOT SCALE = 20.0000' / in.			
PLOT DATE = 8/6/2014 3:04:55 PM			

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



CROSS SECTIONS  
 FAI-64

SCALE: 10H:5V SHEET 3 OF 3 SHEETS STA. 117+50.00 TO STA. 117+70.57

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	406
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	