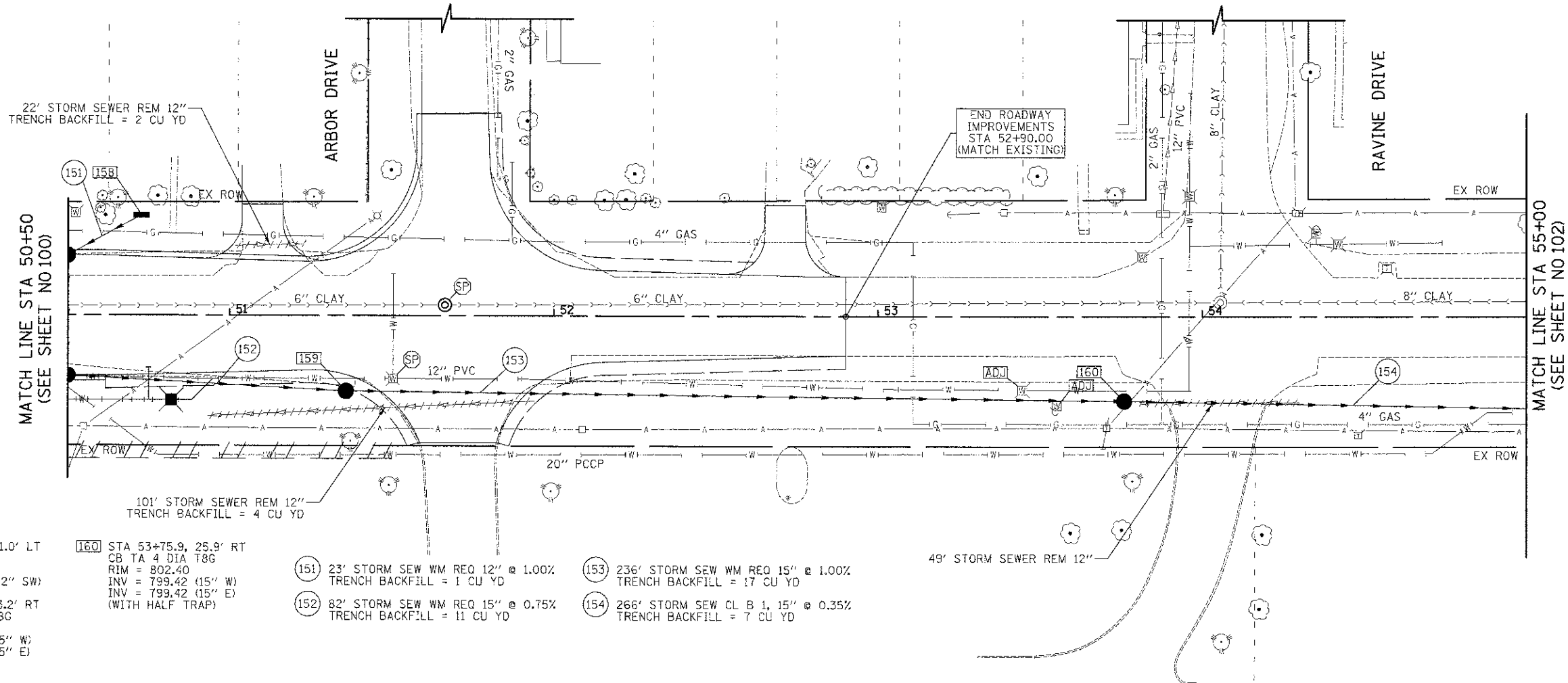
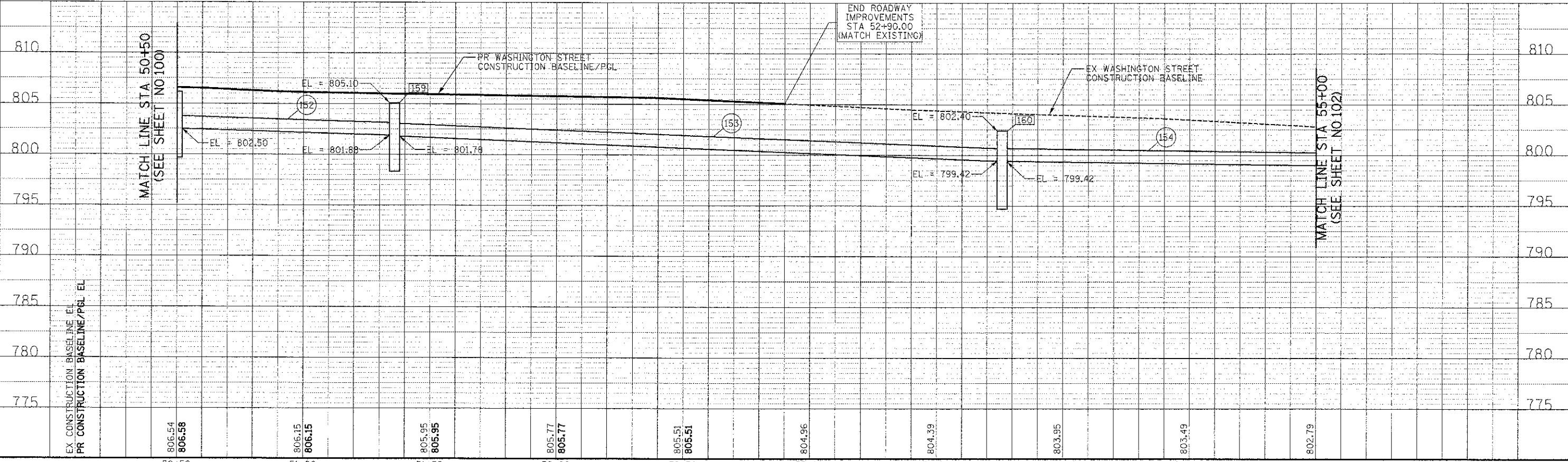


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- 158 STA 50+72.7, 31.0' LT  
INLETS TA T8G  
RIM = 805.52  
INV = 803.26 (12" SW)
- 159 STA 51+35.8, 23.2' RT  
CB TA 4 DIA T8G  
RIM = 805.10  
INV = 801.88 (15" W)  
INV = 801.78 (15" E)
- 160 STA 53+75.9, 25.9' RT  
CB TA 4 DIA T8G  
RIM = 802.40  
INV = 799.42 (15" W)  
INV = 799.42 (15" E)  
(WITH HALF TRAP)
- 151 23' STORM SEW WM REQ 12" @ 1.00%  
TRENCH BACKFILL = 1 CU YD
- 152 82' STORM SEW WM REQ 15" @ 0.75%  
TRENCH BACKFILL = 11 CU YD
- 153 236' STORM SEW WM REQ 15" @ 1.00%  
TRENCH BACKFILL = 17 CU YD
- 154 266' STORM SEW CL B 1, 15" @ 0.35%  
TRENCH BACKFILL = 7 CU YD



EX CONSTRUCTION BASELINE E.L.	806.54	806.15	805.95	805.77	805.51	804.96	804.39	803.95	803.49	802.79
PR CONSTRUCTION BASELINE/PCL E.L.	806.58	806.15	805.95	805.77	805.51	804.96	804.39	803.95	803.49	802.79
	50+50	51+00	51+50	52+00	52+50	53+00	53+50	54+00	54+50	55+00

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DEPARTMENT OF TRANSPORTATION

VERT. SCALES  
0 5 10  
HORIZ. SCALES  
0 20 40

DRAINAGE AND UTILITIES

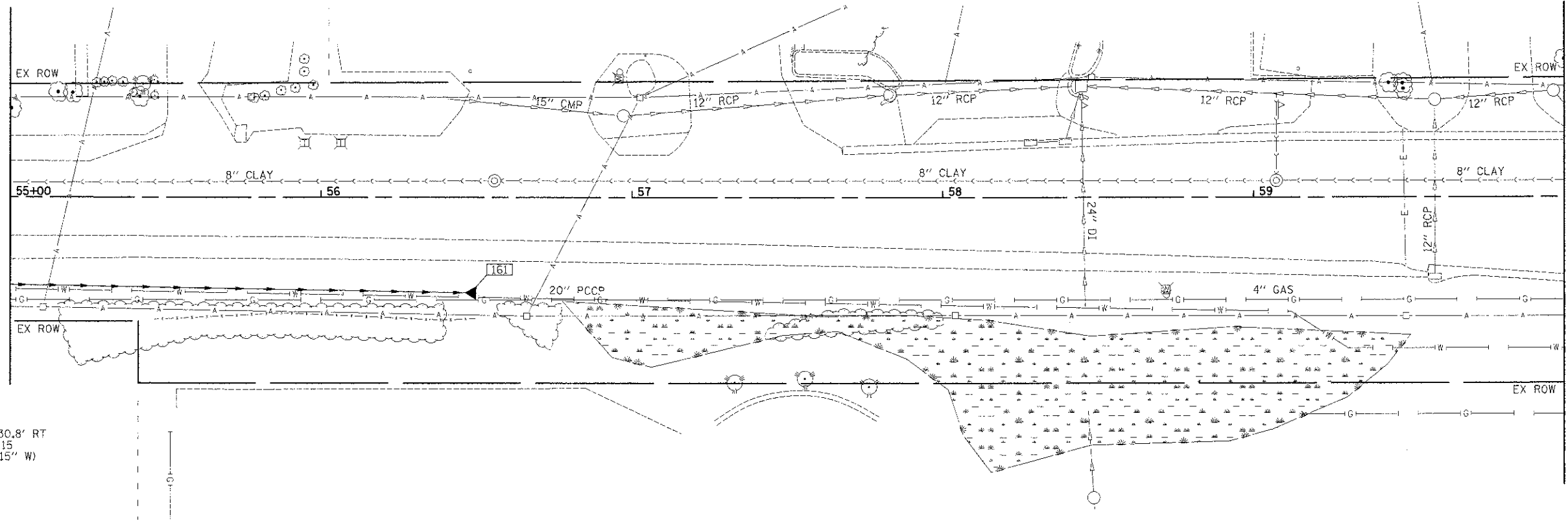
SHEET NO. 11 OF 15 SHEETS STA. 50+50 TO STA. 55+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C187	05-00121-07-WR	LAKE	223	101
CONTRACT NO. 63765			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	

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MATCH LINE STA 55+00  
(SEE SHEET NO 101)

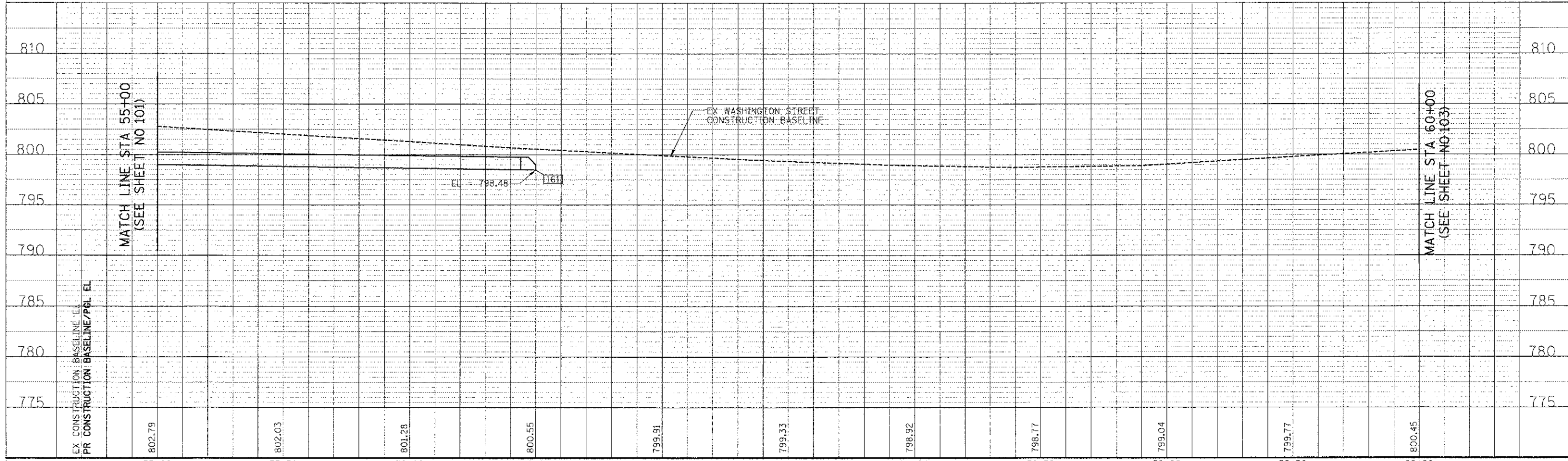


MATCH LINE STA 60+00  
(SEE SHEET NO 103)



161 STA 56+50.0, 30.8' RT  
END SECTIONS 15  
INV = 798.48 (15" W)

WASHINGTON STREET

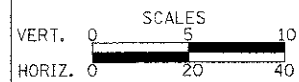


EX CONSTRUCTION BASELINE/EL	802.79	802.03	801.28	800.55	799.91	799.33	798.92	798.77	799.04	799.77	800.45
PR CONSTRUCTION BASELINE/POL EL	802.79	802.03	801.28	800.55	799.91	799.33	798.92	798.77	799.04	799.77	800.45
	55+00	55+50	56+00	56+50	57+00	57+50	58+00	58+50	59+00	59+50	60+00

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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

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



**DRAINAGE AND UTILITIES**

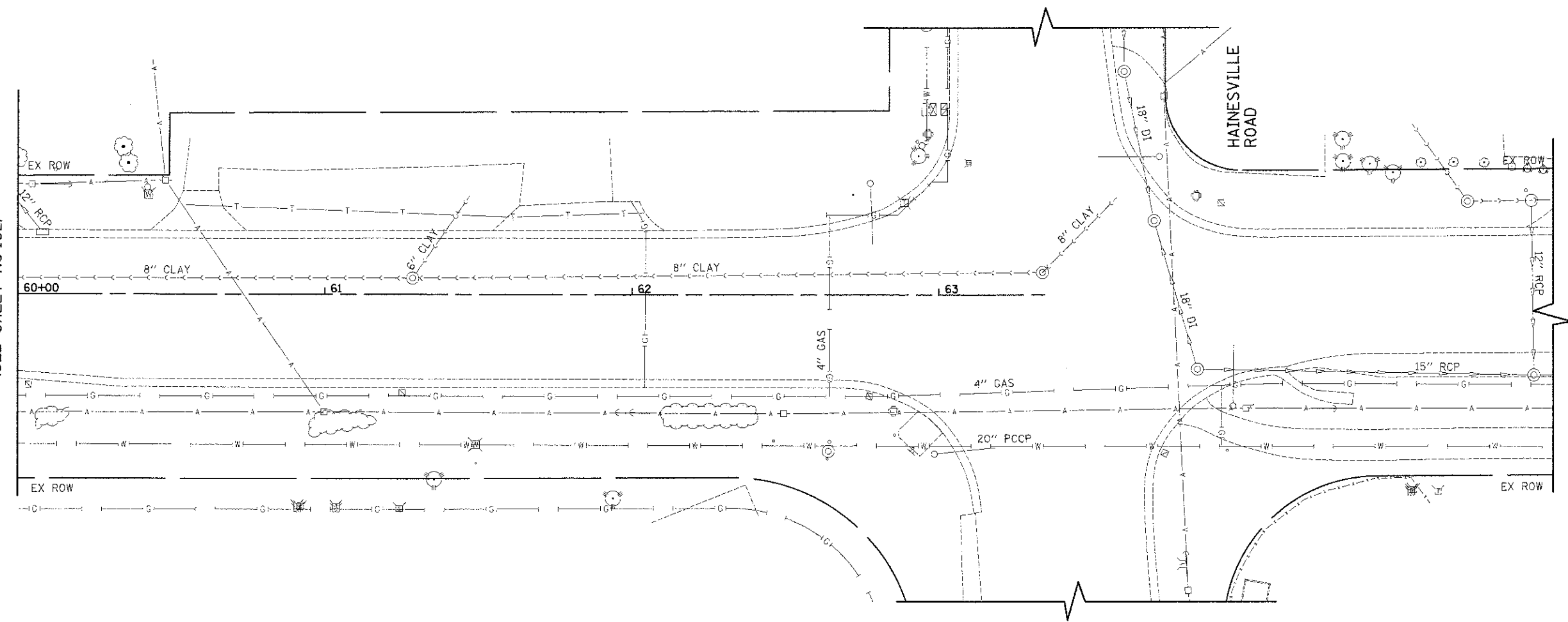
SHEET NO. 12 OF 15 SHEETS STA. 55+00 TO STA. 60+00

F.A.I.L. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
0187	05-00121-07-WR	LAKE	223 / 102
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63765

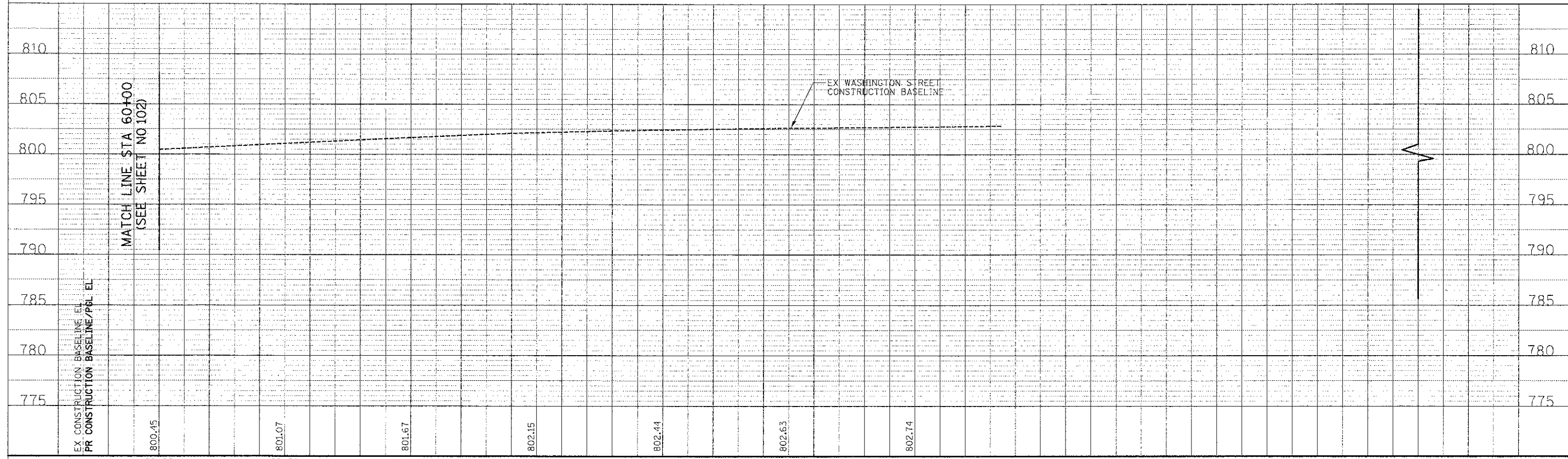
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MATCH LINE STA 60+00  
(SEE SHEET NO 102)



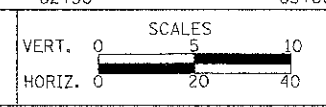
WASHINGTON STREET



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CHECKED - RTM	REVISED -
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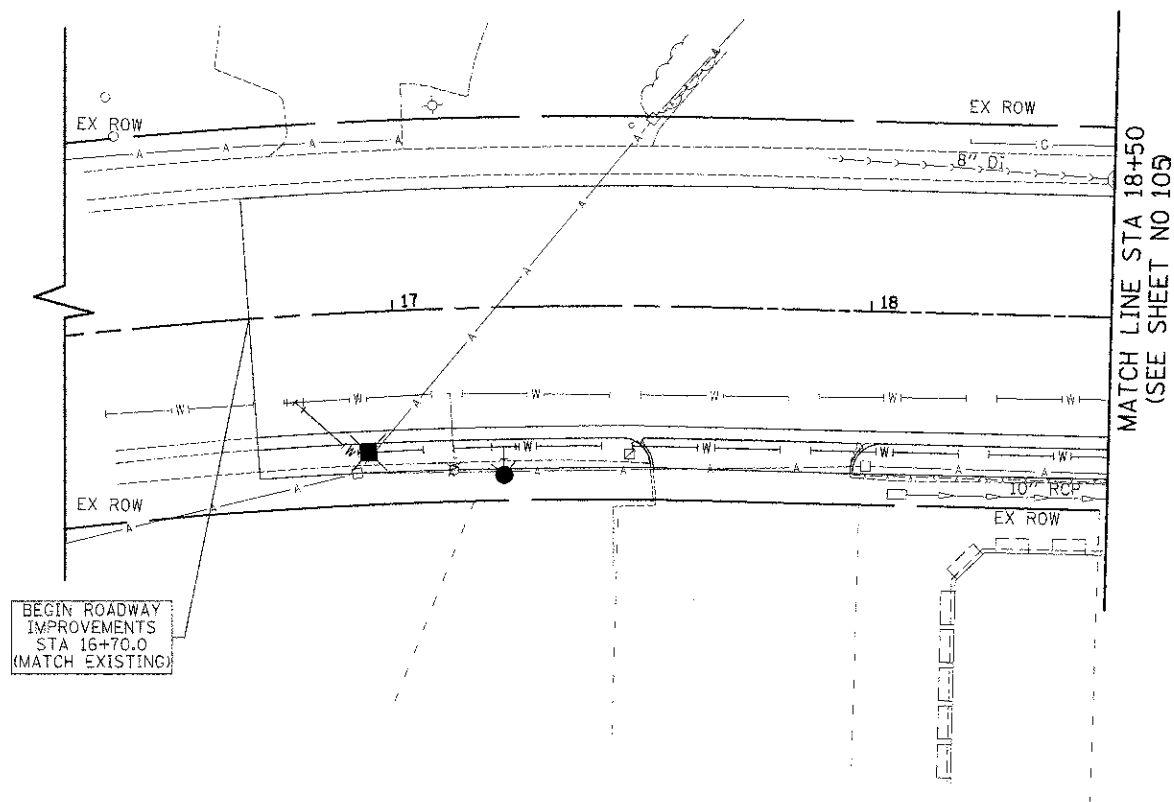


**DRAINAGE AND UTILITIES**  
SHEET NO. 13 OF 15 SHEETS | STA. 60+00 TO STA. 63+00

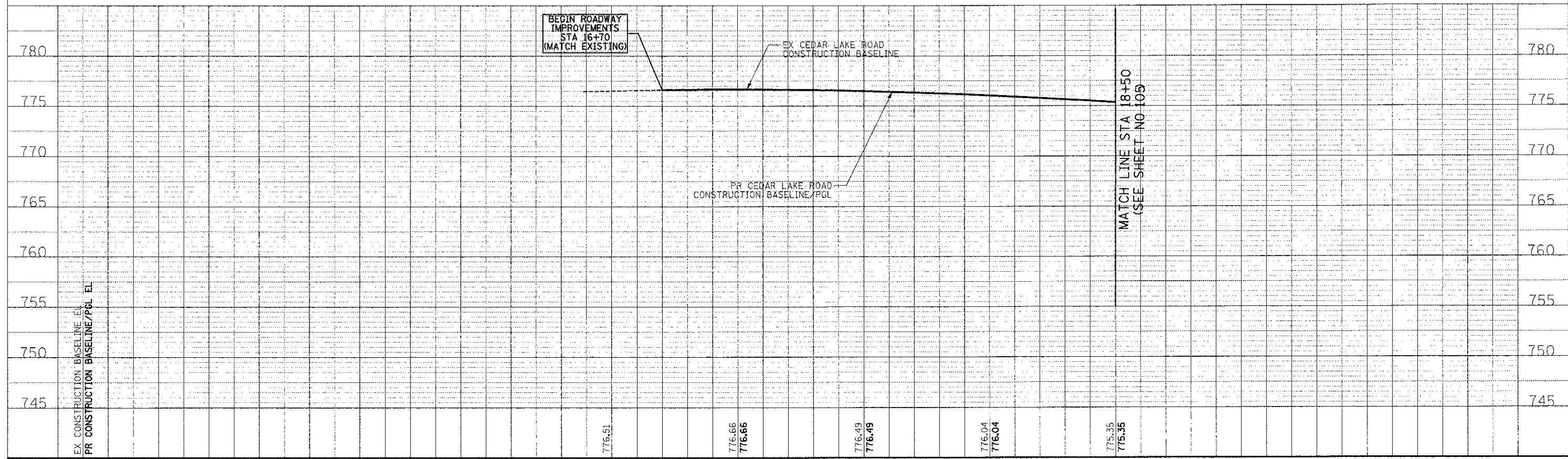
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	103
				CONTRACT NO. 63765
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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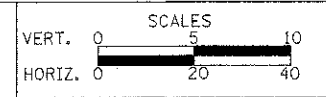
CEDAR LAKE ROAD



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**DEPARTMENT OF TRANSPORTATION**



**DRAINAGE AND UTILITIES**  
 SHEET NO. 14 OF 15 SHEETS STA. 18+80 TO STA. 24+00

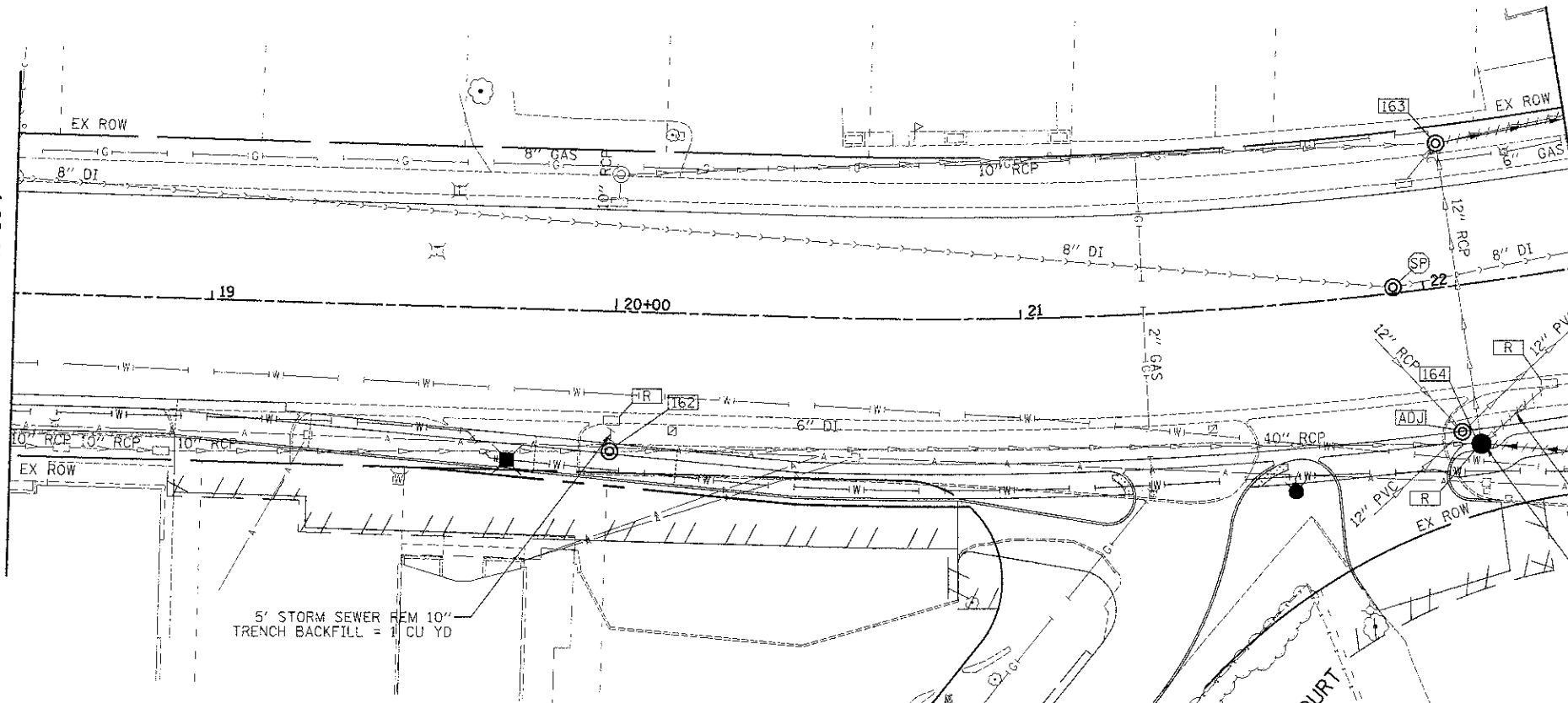
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	104
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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MATCH LINE STA 18+50  
(SEE SHEET NO 104)

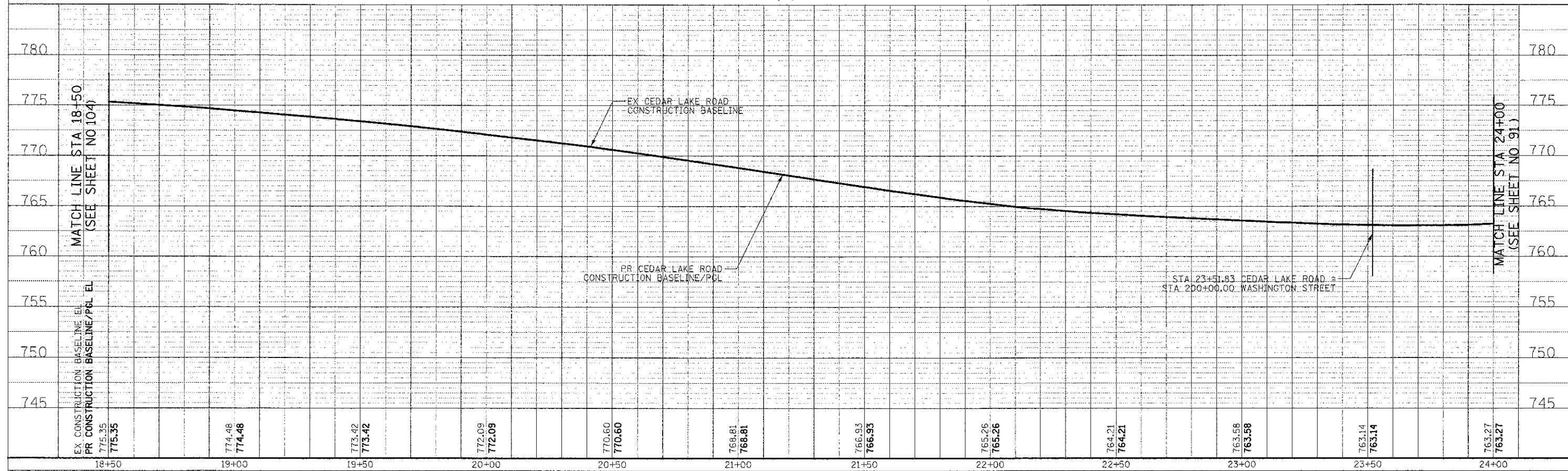
MATCH LINE STA 22+40  
(SEE SHEET NO 91)



<b>162</b> STA 19+99.3, 34.7' RT MAN ADJUST FR & GRATES T24 RIM = 772.00 INV = 767.10 (EX 10" SW) INV = 766.70 (EX 10" NE)	<b>163</b> STA 22+07.6, 35.8' LT MAN ADJUST FR & LIDS T1 CL RIM = 764.64 INV = 758.40 (EX 12" SE) INV = 758.40 (EX 12" S) INV = 758.30 (EX 12" SW) INV = 758.30 (15" NE)	<b>164</b> STA 22+09.2, 39.7' RT CB TA 4 DIA T24F&G RIM = 765.50 INV = 759.60 (12" NE) INV = 759.70 (EX 12" SW) INV = 759.60 (EX 12" NW)
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**NOTE:**  
1. CURB OFFSET AND STRUCTURE SHOWN BEHIND THE EDGE OF PAVEMENT TO AVOID CONFLICTS WITH EXISTING MANHOLE TO BE ADJUSTED IN THE CURBLINE. PROPOSED STRUCTURE IT WILL BE BUILT IN THE CURBLINE IF AFTER EXCAVATION IT WILL BE DETERMINED THAT THE CONFLICTS CAN BE AVOIDED.

CEDAR LAKE ROAD



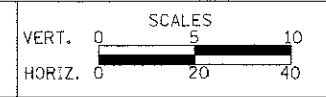
EX CONSTRUCTION BASELINE/EL	775.35	775.35	774.48	774.48	773.42	773.42	772.09	772.09	770.60	770.60	768.81	768.81	766.93	766.93	765.26	765.26	764.21	764.21	763.58	763.58	763.14	763.14	763.27	763.27
PR CONSTRUCTION BASELINE/PCL EL																								

18+50 19+00 19+50 20+00 20+50 21+00 21+50 22+00 22+50 23+00 23+50 24+00

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DRAINAGE AND UTILITIES

SHEET NO. 15 OF 15 SHEETS STA. 18+80 TO STA. 24+00

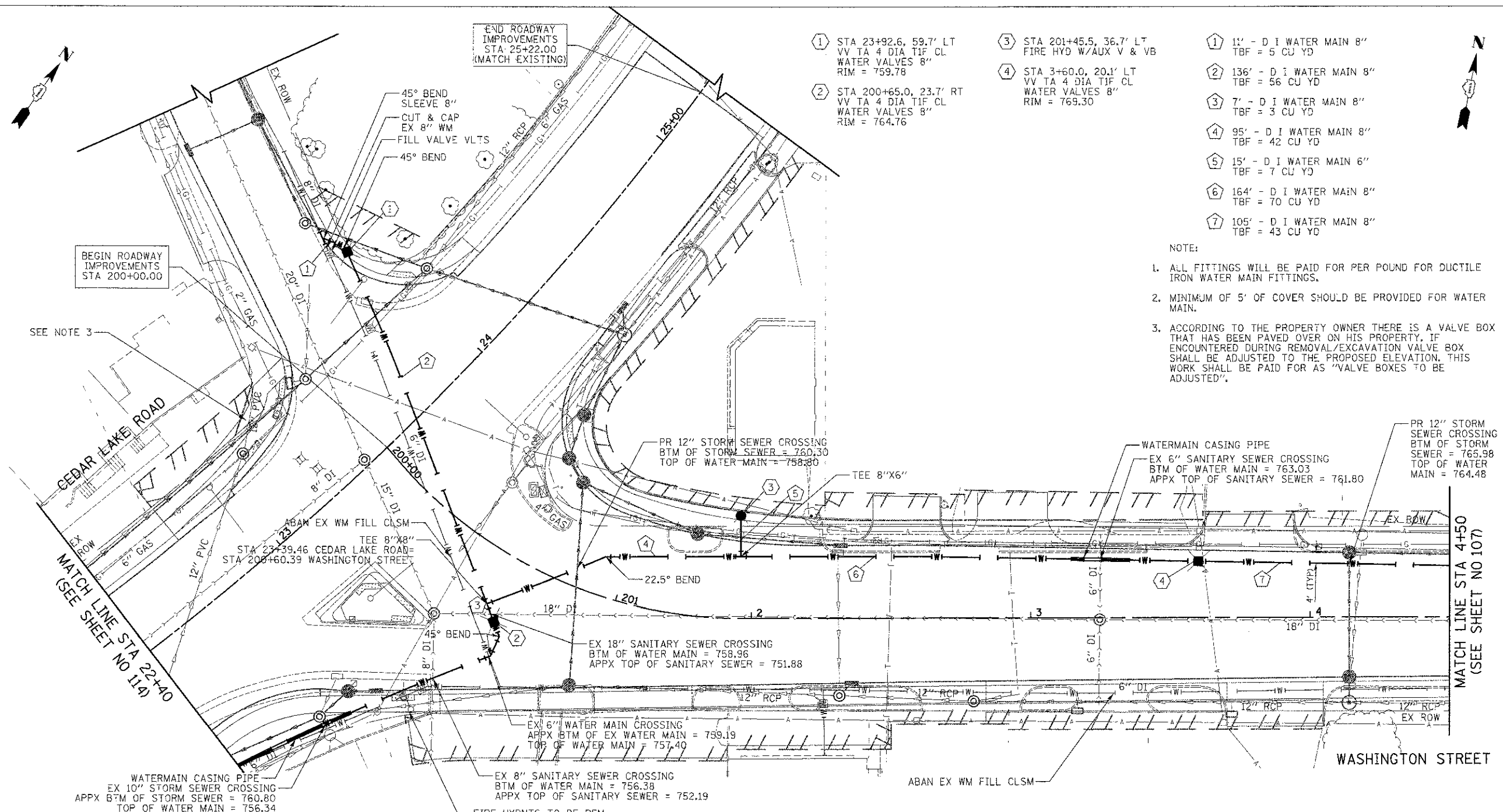
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C187	05-00121-07-WR	LAKE	223	105
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT			CONTRACT NO. 63765	



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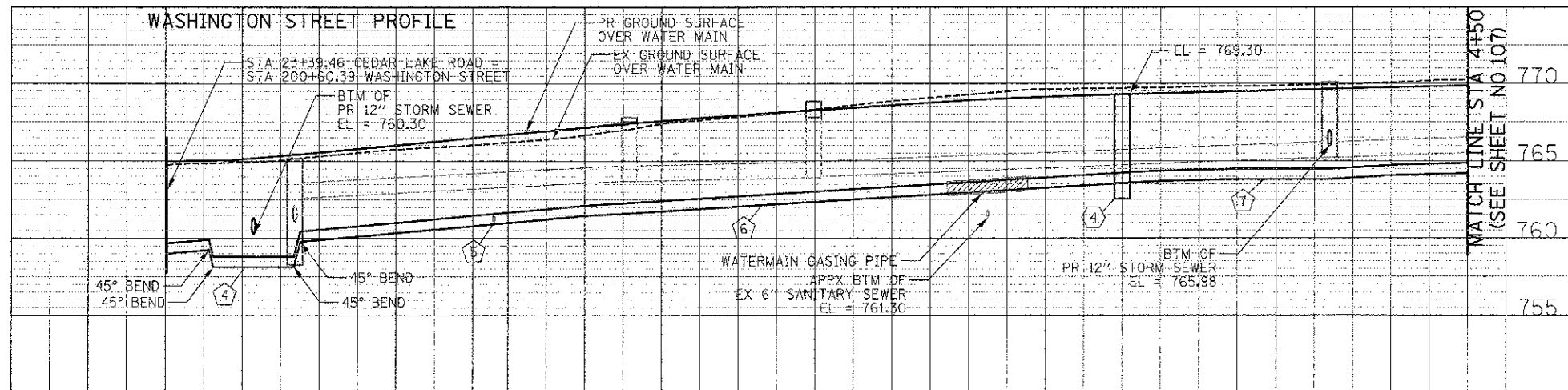
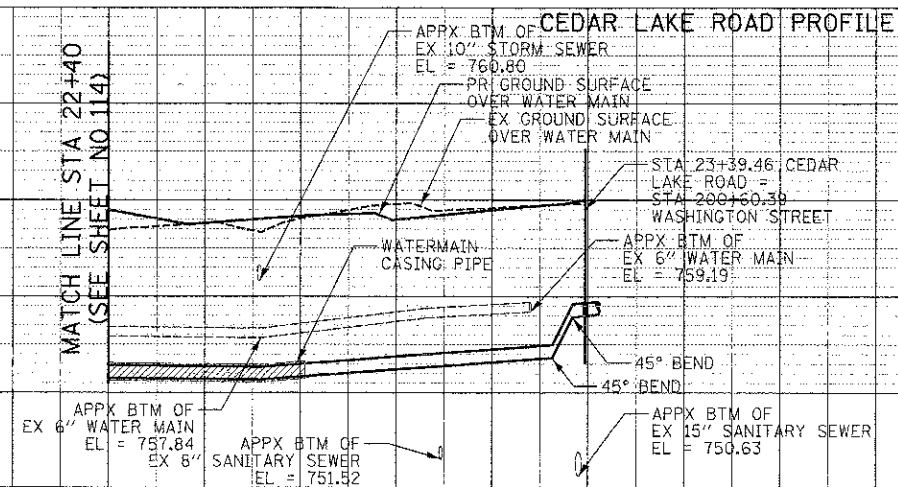
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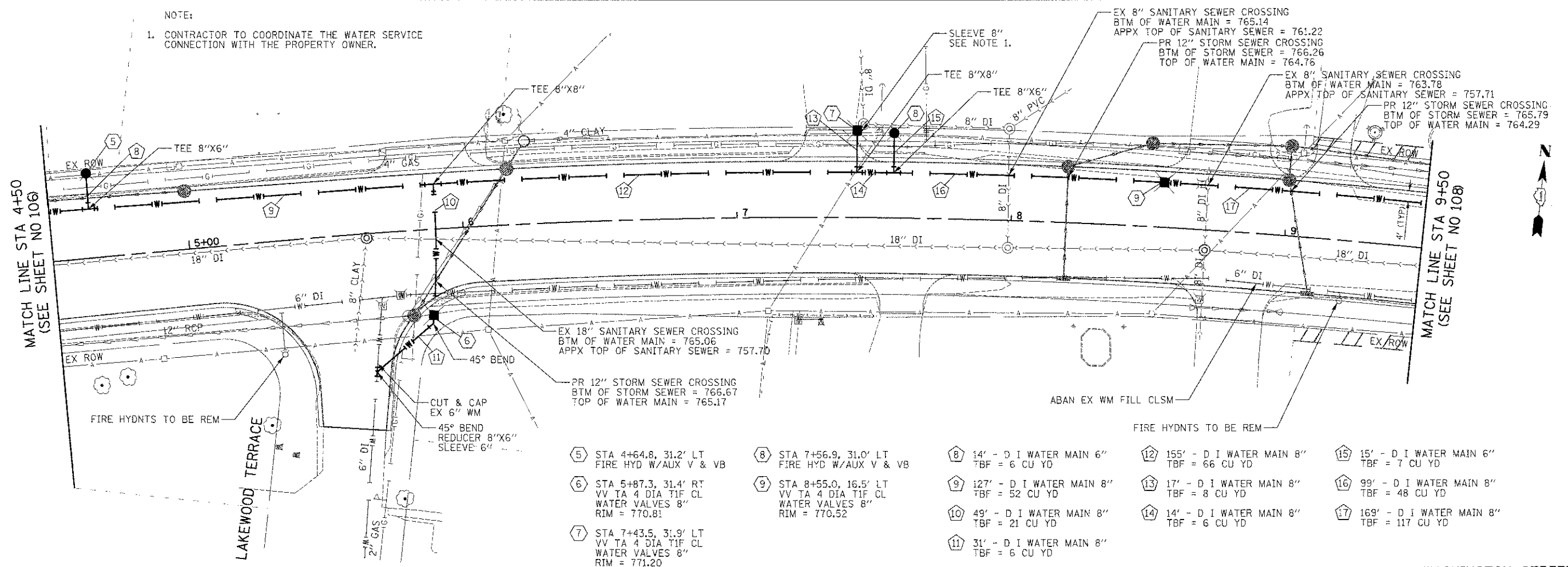
- ① STA 23+92.6, 59.7' LT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 759.78
- ② STA 200+65.0, 23.7' RT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 764.76
- ③ STA 201+45.5, 36.7' LT FIRE HYD W/AUX V & VB TBF = 5 CU YD
- ④ STA 3+60.0, 20.1' LT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 769.30
- ① 11' - D I WATER MAIN 8" TBF = 5 CU YD
- ② 136' - D I WATER MAIN 8" TBF = 56 CU YD
- ③ 7' - D I WATER MAIN 8" TBF = 3 CU YD
- ④ 95' - D I WATER MAIN 8" TBF = 42 CU YD
- ⑤ 15' - D I WATER MAIN 6" TBF = 7 CU YD
- ⑥ 164' - D I WATER MAIN 8" TBF = 70 CU YD
- ⑦ 105' - D I WATER MAIN 8" TBF = 43 CU YD

NOTE:

- ALL FITTINGS WILL BE PAID FOR PER POUND FOR DUCTILE IRON WATER MAIN FITTINGS.
- MINIMUM OF 5' OF COVER SHOULD BE PROVIDED FOR WATER MAIN.
- ACCORDING TO THE PROPERTY OWNER THERE IS A VALVE BOX THAT HAS BEEN PAVED OVER ON HIS PROPERTY. IF ENCOUNTERED DURING REMOVAL/EXCAVATION VALVE BOX SHALL BE ADJUSTED TO THE PROPOSED ELEVATION. THIS WORK SHALL BE PAID FOR AS "VALVE BOXES TO BE ADJUSTED".



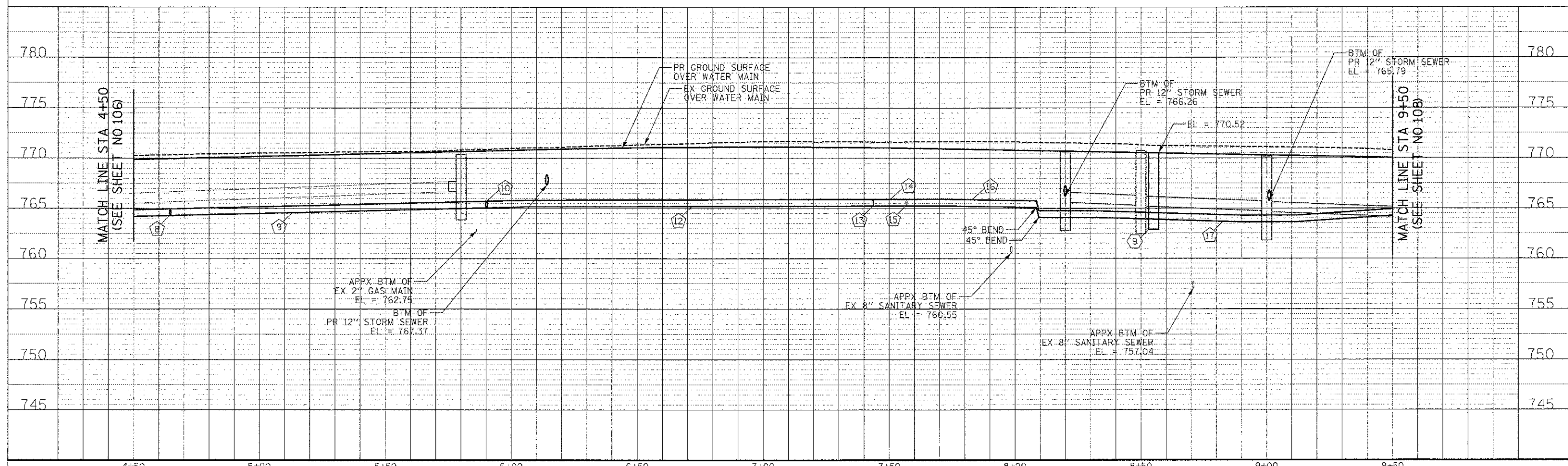
NOTE:  
1. CONTRACTOR TO COORDINATE THE WATER SERVICE CONNECTION WITH THE PROPERTY OWNER.



- ⑤ STA 4+64.8, 31.2' LT FIRE HYD W/AUX V & VB
- ⑥ STA 5+87.3, 31.4' RT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 770.81
- ⑦ STA 7+43.5, 31.9' LT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 771.20
- ⑧ STA 7+56.9, 31.0' LT FIRE HYD W/AUX V & VB
- ⑨ STA 8+55.0, 16.5' LT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 770.52
- ⑩ 14' - D I WATER MAIN 6" TBF = 6 CU YD
- ⑪ 127' - D I WATER MAIN 8" TBF = 52 CU YD
- ⑫ 49' - D I WATER MAIN 8" TBF = 21 CU YD
- ⑬ 31' - D I WATER MAIN 8" TBF = 6 CU YD
- ⑭ 155' - D I WATER MAIN 8" TBF = 66 CU YD
- ⑮ 17' - D I WATER MAIN 8" TBF = 8 CU YD
- ⑯ 14' - D I WATER MAIN 8" TBF = 6 CU YD
- ⑰ 15' - D I WATER MAIN 6" TBF = 7 CU YD
- ⑱ 99' - D I WATER MAIN 8" TBF = 48 CU YD
- ⑲ 169' - D I WATER MAIN 8" TBF = 117 CU YD

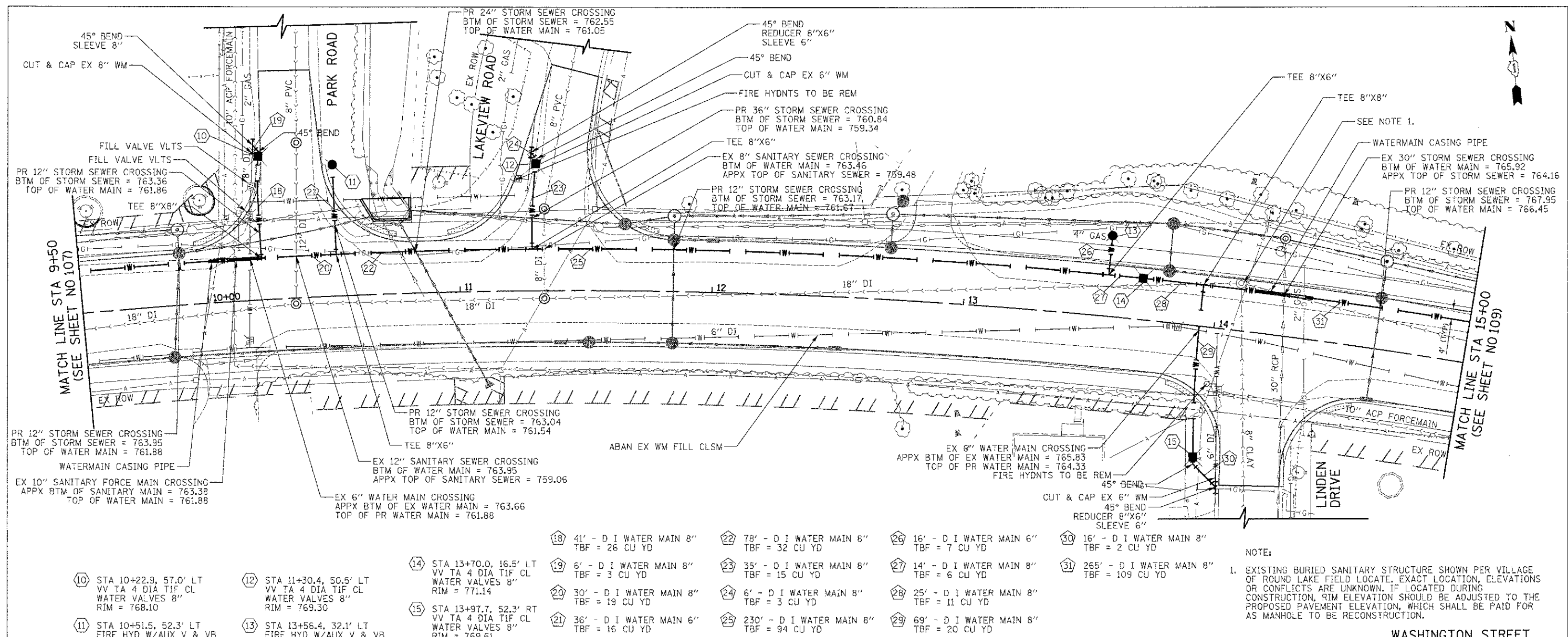
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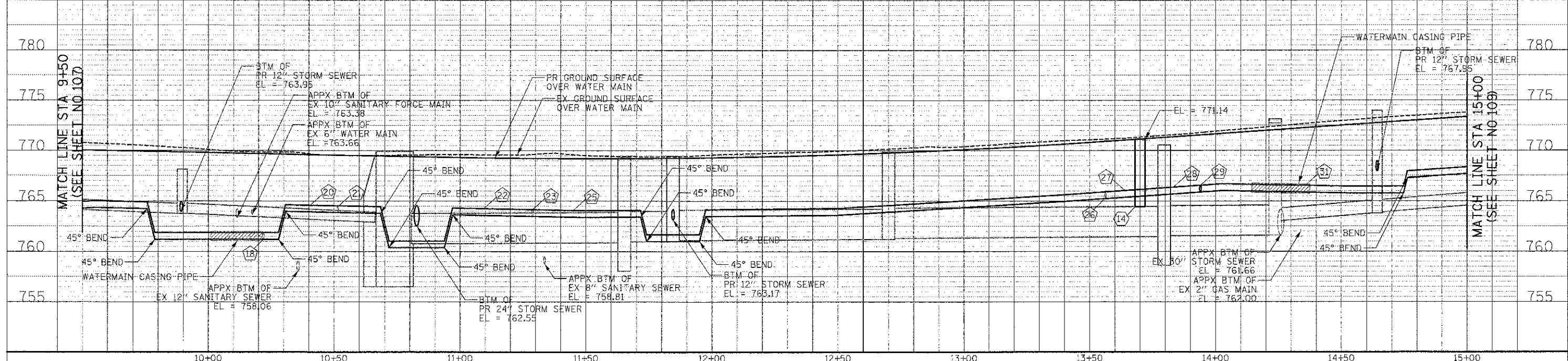
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- ⑩ STA 10+22.9, 57.0' LT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 768.10
- ⑪ STA 10+51.5, 52.3' LT FIRE HYD W/AUX V & VB
- ⑫ STA 11+30.4, 50.5' LT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 769.30
- ⑬ STA 13+56.4, 32.1' LT FIRE HYD W/AUX V & VB
- ⑭ STA 13+70.0, 16.5' LT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 771.14
- ⑮ STA 13+97.7, 52.3' RT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 769.61
- ⑯ 41' - D I WATER MAIN 8" TBF = 26 CU YD
- ⑰ 6' - D I WATER MAIN 8" TBF = 3 CU YD
- ⑱ 30' - D I WATER MAIN 8" TBF = 19 CU YD
- ⑲ 36' - D I WATER MAIN 6" TBF = 16 CU YD
- ⑳ 78' - D I WATER MAIN 8" TBF = 32 CU YD
- ㉑ 35' - D I WATER MAIN 8" TBF = 15 CU YD
- ㉒ 6' - D I WATER MAIN 8" TBF = 3 CU YD
- ㉓ 230' - D I WATER MAIN 8" TBF = 94 CU YD
- ㉔ 16' - D I WATER MAIN 6" TBF = 7 CU YD
- ㉕ 14' - D I WATER MAIN 8" TBF = 6 CU YD
- ㉖ 25' - D I WATER MAIN 8" TBF = 11 CU YD
- ㉗ 69' - D I WATER MAIN 8" TBF = 20 CU YD
- ㉘ 16' - D I WATER MAIN 8" TBF = 2 CU YD
- ㉙ 265' - D I WATER MAIN 8" TBF = 109 CU YD

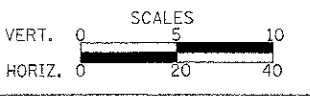
NOTE:  
 1. EXISTING BURIED SANITARY STRUCTURE SHOWN PER VILLAGE OF ROUND LAKE FIELD LOCATE. EXACT LOCATION, ELEVATIONS OR CONFLICTS ARE UNKNOWN. IF LOCATED DURING CONSTRUCTION, RIM ELEVATION SHOULD BE ADJUSTED TO THE PROPOSED PAVEMENT ELEVATION, WHICH SHALL BE PAID FOR AS MANHOLE TO BE RECONSTRUCTION.



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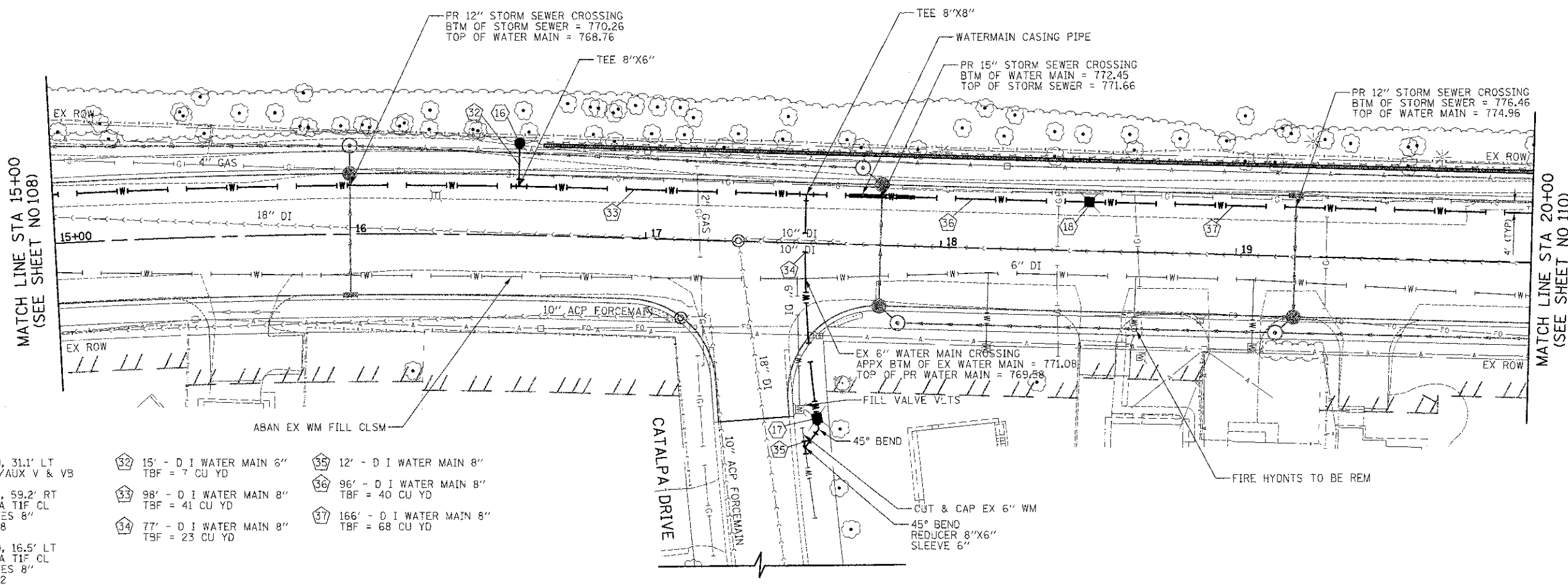
WATER MAIN PLAN AND PROFILE  
 SHEET NO. 3 OF 9 SHEETS STA. 9+50 TO STA. 15+00

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0197	05-00121-07-WR	LAKE	223	108
CONTRACT NO. 63765				



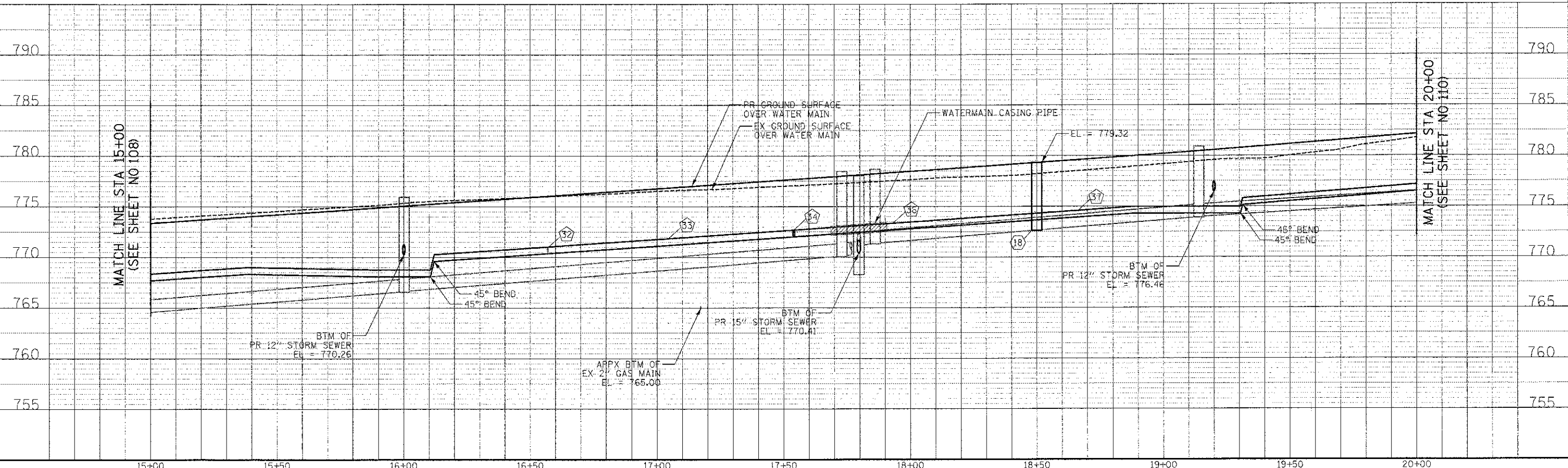
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- ①6 STA 16+56.9, 31.1' LT  
FIRE HYD W/AUX V & VS
- ①7 STA 17+59.8, 59.2' RT  
VV TA 4 DIA TIF CL  
WATER VALVES 8"  
RIM = 773.58
- ①8 STA 18+50.0, 16.5' LT  
VV TA 4 DIA TIF CL  
WATER VALVES 8"  
RIM = 779.32
- ③2 15' - D I WATER MAIN 6"  
TBF = 7 CU YD
- ③3 98' - D I WATER MAIN 8"  
TBF = 41 CU YD
- ③4 77' - D I WATER MAIN 8"  
TBF = 23 CU YD
- ③5 12' - D I WATER MAIN 8"  
TBF = 7 CU YD
- ③6 96' - D I WATER MAIN 8"  
TBF = 40 CU YD
- ③7 166' - D I WATER MAIN 8"  
TBF = 68 CU YD

WASHINGTON STREET

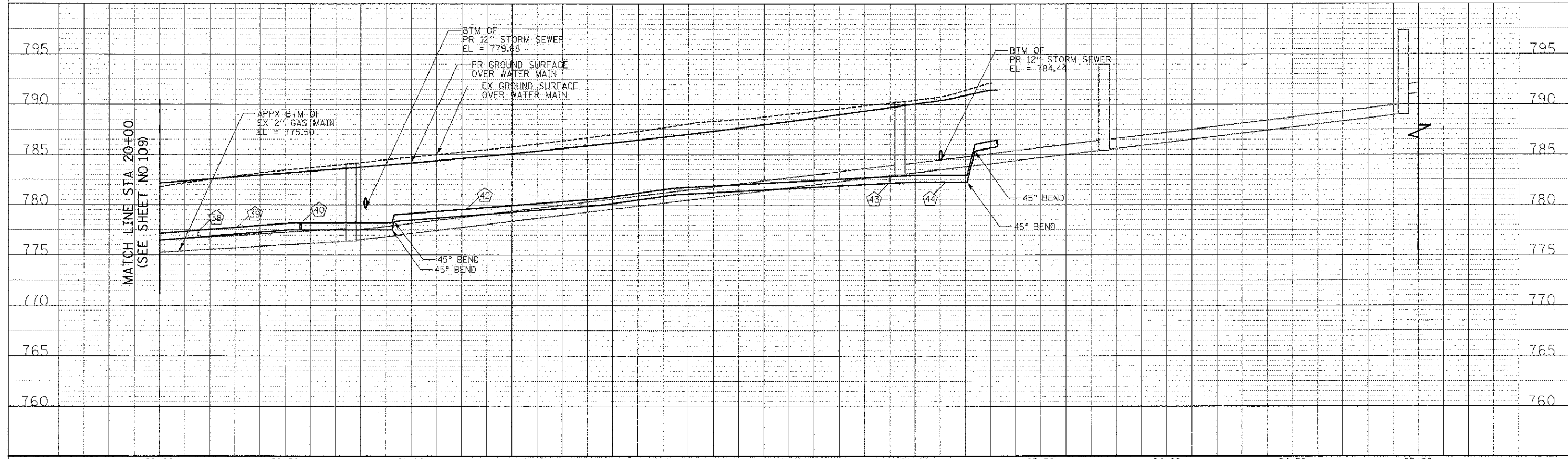
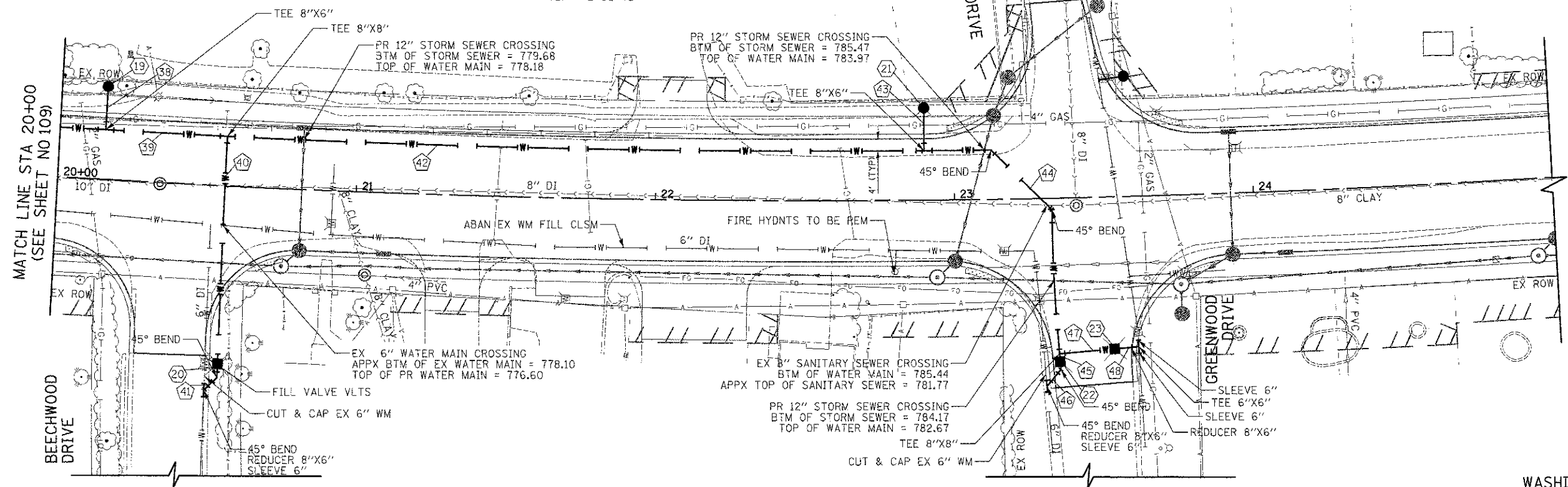


<p>450 E Devon Ave, Suite 300 Itasca, Illinois 60143 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com</p>	<table border="1"> <tr><td>DESIGNED - PK</td><td>REVISED -</td></tr> <tr><td>DRAWN - JRR</td><td>REVISED -</td></tr> <tr><td>CHECKED - RTM</td><td>REVISED -</td></tr> <tr><td>DATE - 12/17/2012</td><td>REVISED -</td></tr> </table>	DESIGNED - PK	REVISED -	DRAWN - JRR	REVISED -	CHECKED - RTM	REVISED -	DATE - 12/17/2012	REVISED -	<p><b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b></p>	<p>VERT. 0 5 10 HORIZ. 0 20 40</p>	<p><b>WATER MAIN PLAN AND PROFILE</b></p> <p>SHEET NO. 4 OF 9 SHEETS STA. 15+00 TO STA. 20+00</p>	<table border="1"> <tr><td>F.A.U. RTE.</td><td>SECTION</td><td>COUNTY</td><td>TOTAL SHEETS</td><td>SHEET NO.</td></tr> <tr><td>0187</td><td>05-03121-07-WR</td><td>LAKE</td><td>223</td><td>109</td></tr> <tr><td colspan="3">FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT</td><td colspan="2">CONTRACT NO. 63765</td></tr> </table>	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	0187	05-03121-07-WR	LAKE	223	109	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63765	
DESIGNED - PK	REVISED -																											
DRAWN - JRR	REVISED -																											
CHECKED - RTM	REVISED -																											
DATE - 12/17/2012	REVISED -																											
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.																								
0187	05-03121-07-WR	LAKE	223	109																								
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63765																									

- |   |   |  |  |   |
|---|---|--|--|---|
| (19) STA 20+15.3, 31.0' LT<br>FIRE HYD W/AUX V & VB                                 | (22) STA 23+34.3, 54.9' RT<br>VV TA 4 DIA TIF CL<br>WATER VALVES 8"<br>RIM = 793.65 | (38) 15' - D I WATER MAIN 6"<br>TBF = 7 CU YD  | (42) 233' - D I WATER MAIN 8"<br>TBF = 137 CU YD | (46) 10' - D I WATER MAIN 8"<br>TBF = 5 CU YD |
| (20) STA 20+56.5, 59.8' RT<br>VV TA 4 DIA TIF CL<br>WATER VALVES 8"<br>RIM = 784.70 | (23) STA 23+52.4, 51.1' RT<br>VV TA 4 DIA TIF CL<br>WATER VALVES 8"<br>RIM = 793.93 | (39) 41' - D I WATER MAIN 8"<br>TBF = 17 CU YD | (43) 15' - D I WATER MAIN 6"<br>TBF = 10 CU YD   | (47) 19' - D I WATER MAIN 8"<br>TBF = 8 CU YD |
| (21) STA 22+89.9, 30.8' LT<br>FIRE HYD W/AUX V & VB                                 |   | (40) 77' - D I WATER MAIN 8"<br>TBF = 32 CU YD | (44) 100' - D I WATER MAIN 8"<br>TBF = 58 CU YD  | (48) 9' - D I WATER MAIN 8"<br>TBF = 4 CU YD  |
|   |   | (41) 11' - D I WATER MAIN 8"<br>TBF = 2 CU YD  | (45) 3' - D I WATER MAIN 8"<br>TBF = 2 CU YD     |   |

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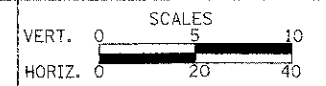
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ENGINEER	
PLANNING	
PLATE	
NO. OF SHEETS	
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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

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DEPARTMENT OF TRANSPORTATION



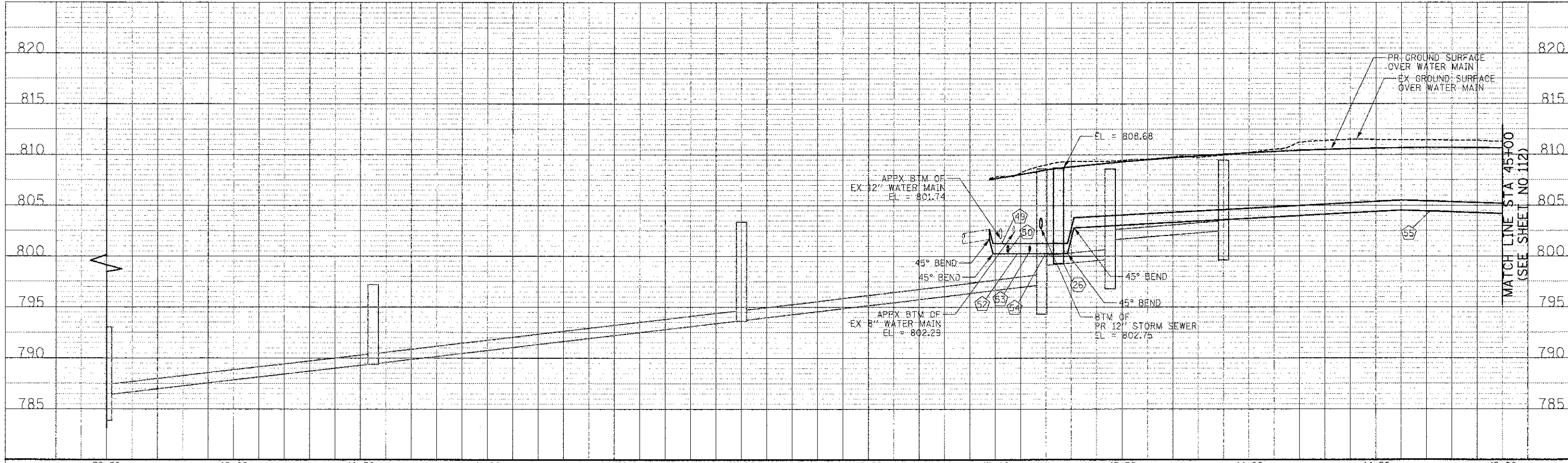
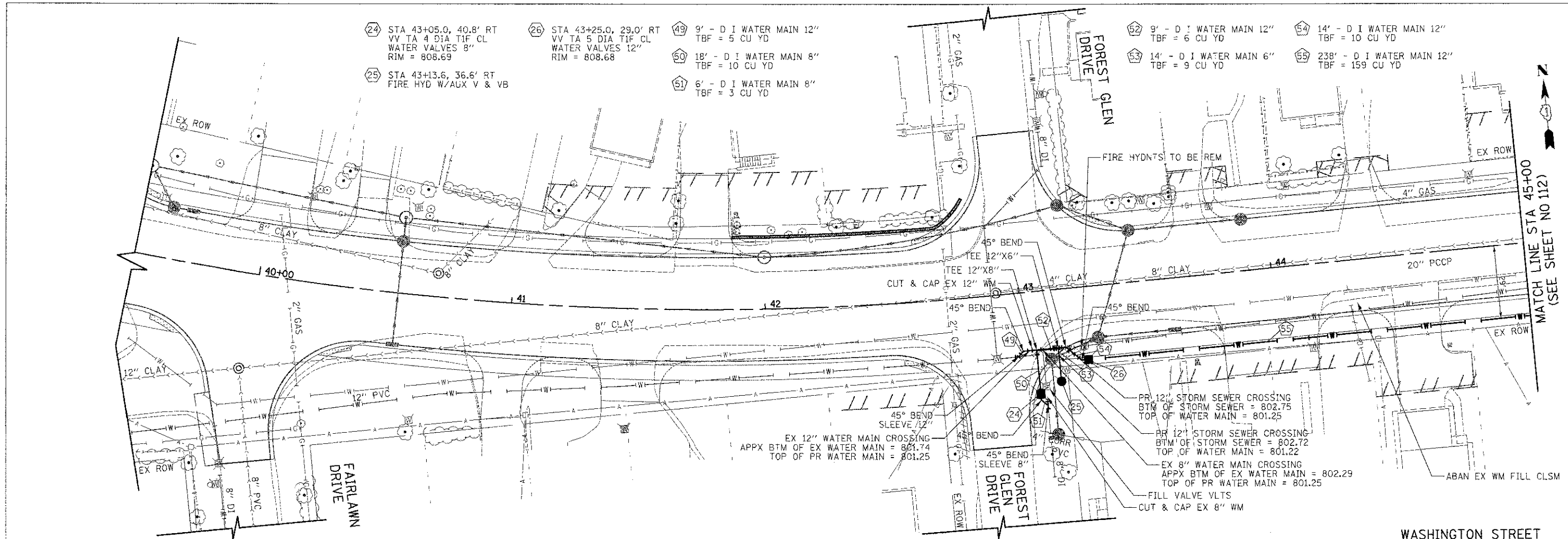
**WATER MAIN PLAN AND PROFILE**

SHEET NO. 5 OF 9 SHEETS | STA. 20+00 TO STA. 25+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	110
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63765	

DATE	
BY	
SURVEY	
NOTED	
REVISIONS	
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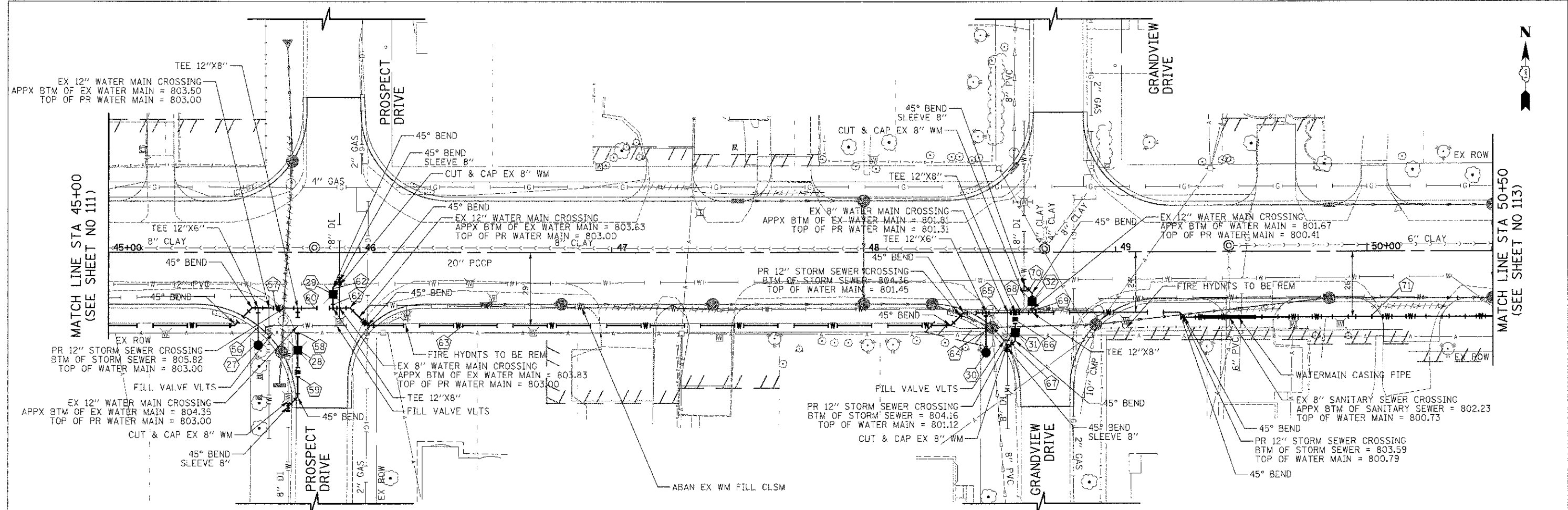
DATE	
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SURVEY	
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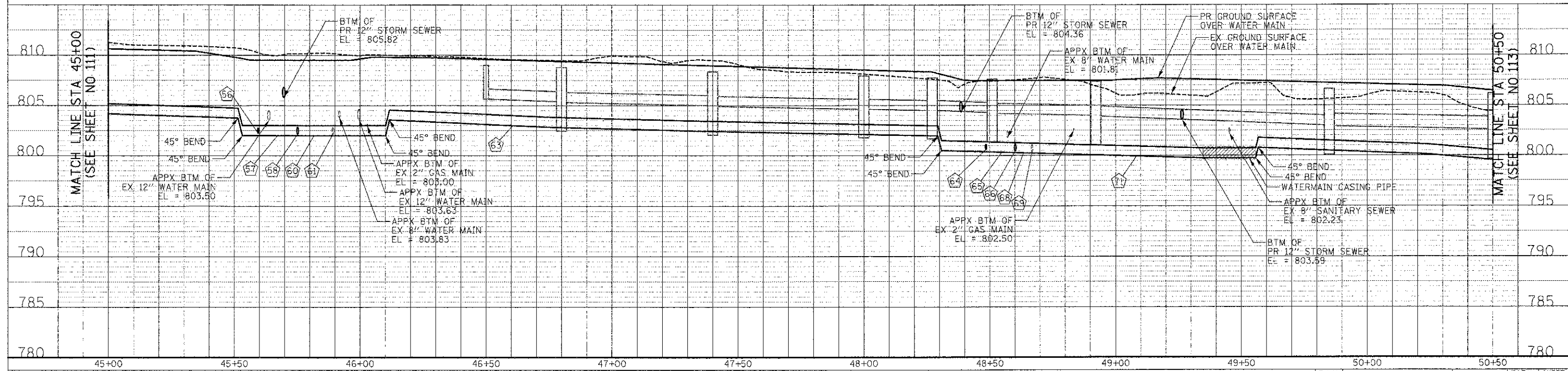


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DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012

DATE	
BY	
DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012

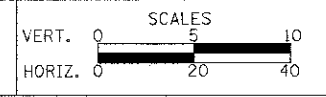


27 STA 45+59.5, 36.9' RT FIRE HYD W/AUX V & VB	30 STA 48+48.5, 39.9' RT FIRE HYD W/AUX V & VB	56 15' - D I WATER MAIN 6" TBF = 8 CU YD	60 14' - D I WATER MAIN 12" TBF = 9 CU YD	64 16' - D I WATER MAIN 6" TBF = 9 CU YD	68 7' - D I WATER MAIN 12" TBF = 4 CU YD
28 STA 45+75.2, 38.8' RT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 810.21	31 STA 48+60.2, 32.0' RT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 807.55	57 16' - D I WATER MAIN 12" TBF = 10 CU YD	61 6' - D I WATER MAIN 8" TBF = 4 CU YD	65 12' - D I WATER MAIN 12" TBF = 7 CU YD	69 5' - D I WATER MAIN 8" TBF = 3 CU YD
29 STA 45+89.2, 16.5' RT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 809.51	32 STA 48+66.9, 19.6' RT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 807.48	58 17' - D I WATER MAIN 8" TBF = 9 CU YD	62 7' - D I WATER MAIN 8" TBF = 3 CU YD	66 8' - D I WATER MAIN 8" TBF = 4 CU YD	70 8' - D I WATER MAIN 8" TBF = 4 CU YD
		59 25' - D I WATER MAIN 8" TBF = 11 CU YD	63 265' - D I WATER MAIN 12" TBF = 150 CU YD	67 8' - D I WATER MAIN 8" TBF = 4 CU YD	71 209' - D I WATER MAIN 12" TBF = 109 CU YD



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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

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DEPARTMENT OF TRANSPORTATION**



**WATER MAIN PLAN AND PROFILE**

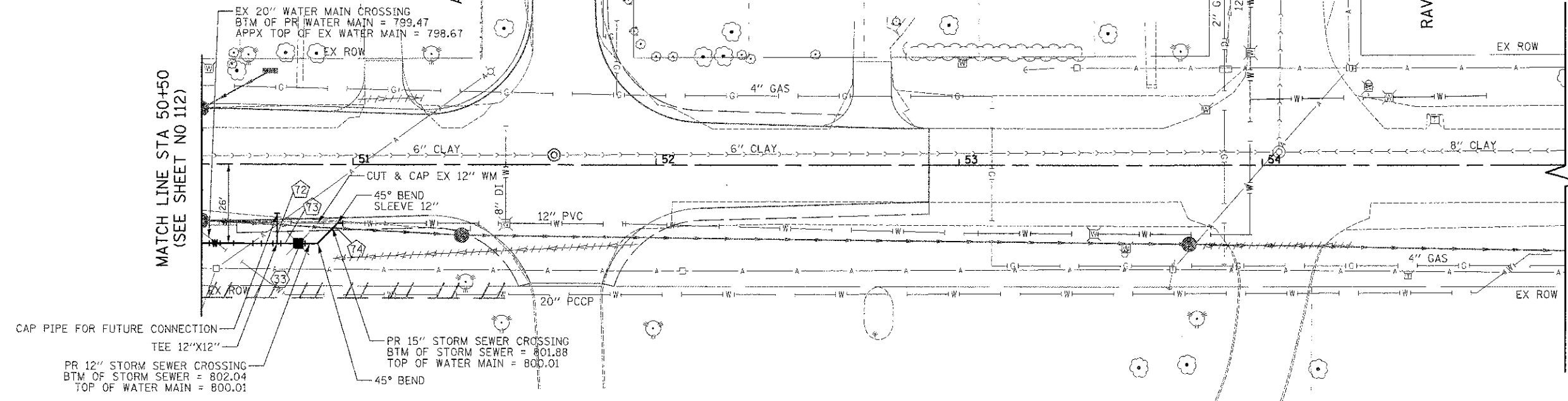
SHEET NO. 7 OF 9 SHEETS STA. 45+00 TO STA. 50+50

F.A.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C187	05-00121-07-WR	LAKE	223	112
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 63765	

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DESCRIPTION
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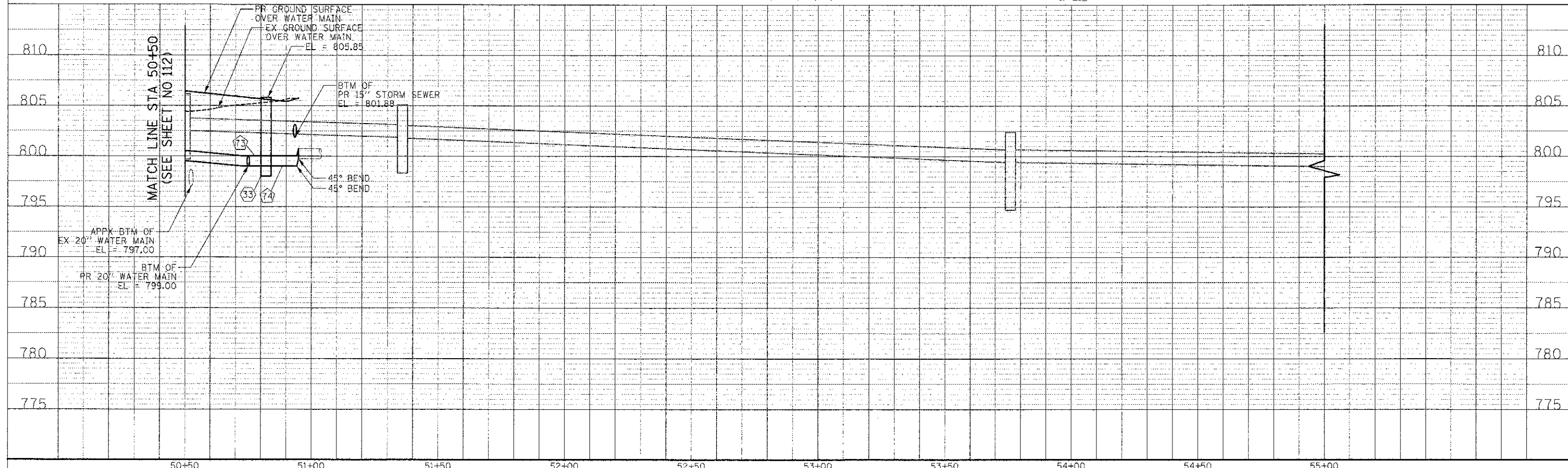
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DESCRIPTION
DATE

MATCH LINE STA 50+50  
(SEE SHEET NO 112)

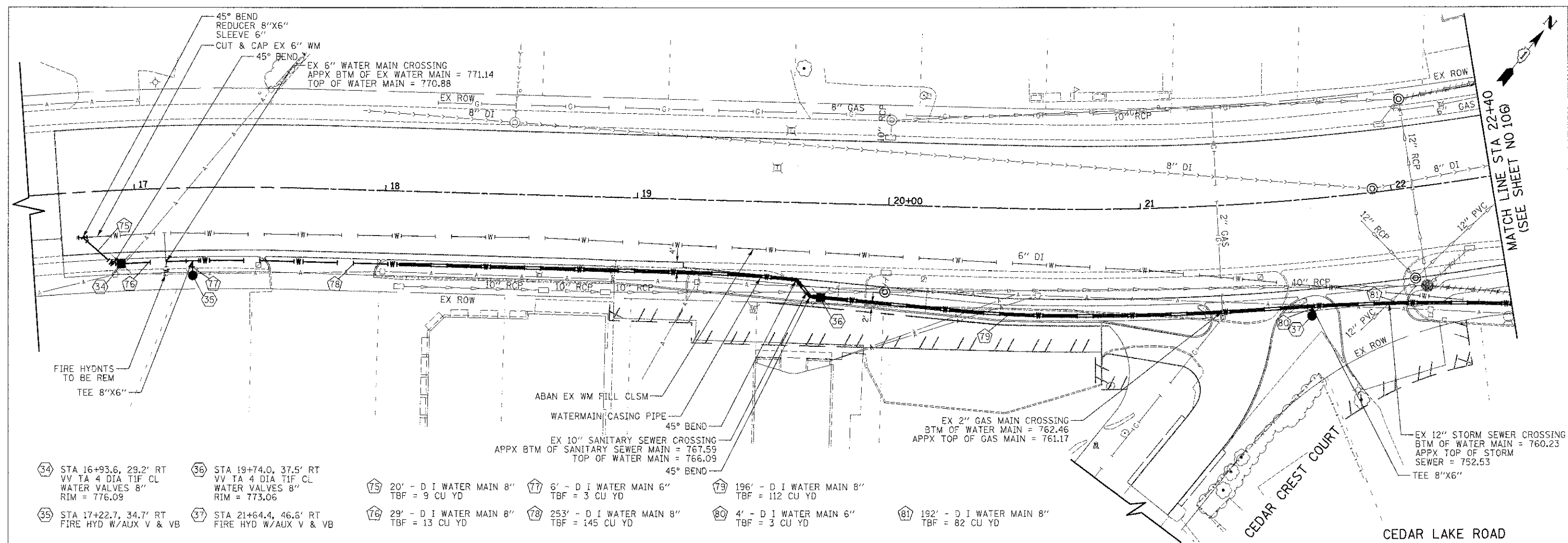


- 33 STA 50+82.0, 26.0' RT  
VV TA 5 DIA TIF CL  
WATER VALVES 12"  
RIM = 805.85
- 72 10' - D I WATER MAIN 12"  
TBF = 5 CU YD
- 73 7' - D I WATER MAIN 12"  
TBF = 4 CU YD
- 74 16' - D I WATER MAIN 12"  
TBF = 8 CU YD

MATCH LINE STA 50+50  
(SEE SHEET NO 112)

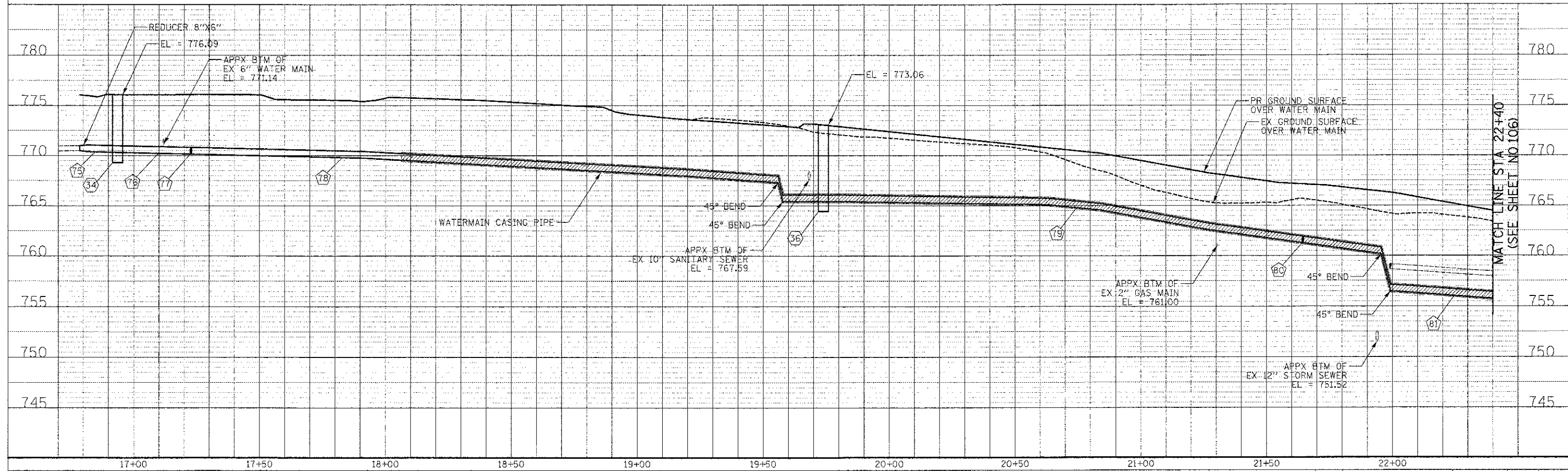


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- 34 STA 16+93.6, 29.2' RT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 776.09
- 35 STA 17+22.7, 34.7' RT FIRE HYD W/AUX V & VB
- 36 STA 19+74.0, 37.5' RT VV TA 4 DIA TIF CL WATER VALVES 8" RIM = 773.06
- 37 STA 21+64.4, 46.6' RT FIRE HYD W/AUX V & VB
- 75 20' - D I WATER MAIN 8" TBF = 9 CU YD
- 76 29' - D I WATER MAIN 8" TBF = 13 CU YD
- 77 6' - D I WATER MAIN 6" TBF = 3 CU YD
- 78 253' - D I WATER MAIN 8" TBF = 145 CU YD
- 79 196' - D I WATER MAIN 8" TBF = 112 CU YD
- 80 4' - D I WATER MAIN 6" TBF = 3 CU YD
- 81 192' - D I WATER MAIN 8" TBF = 82 CU YD

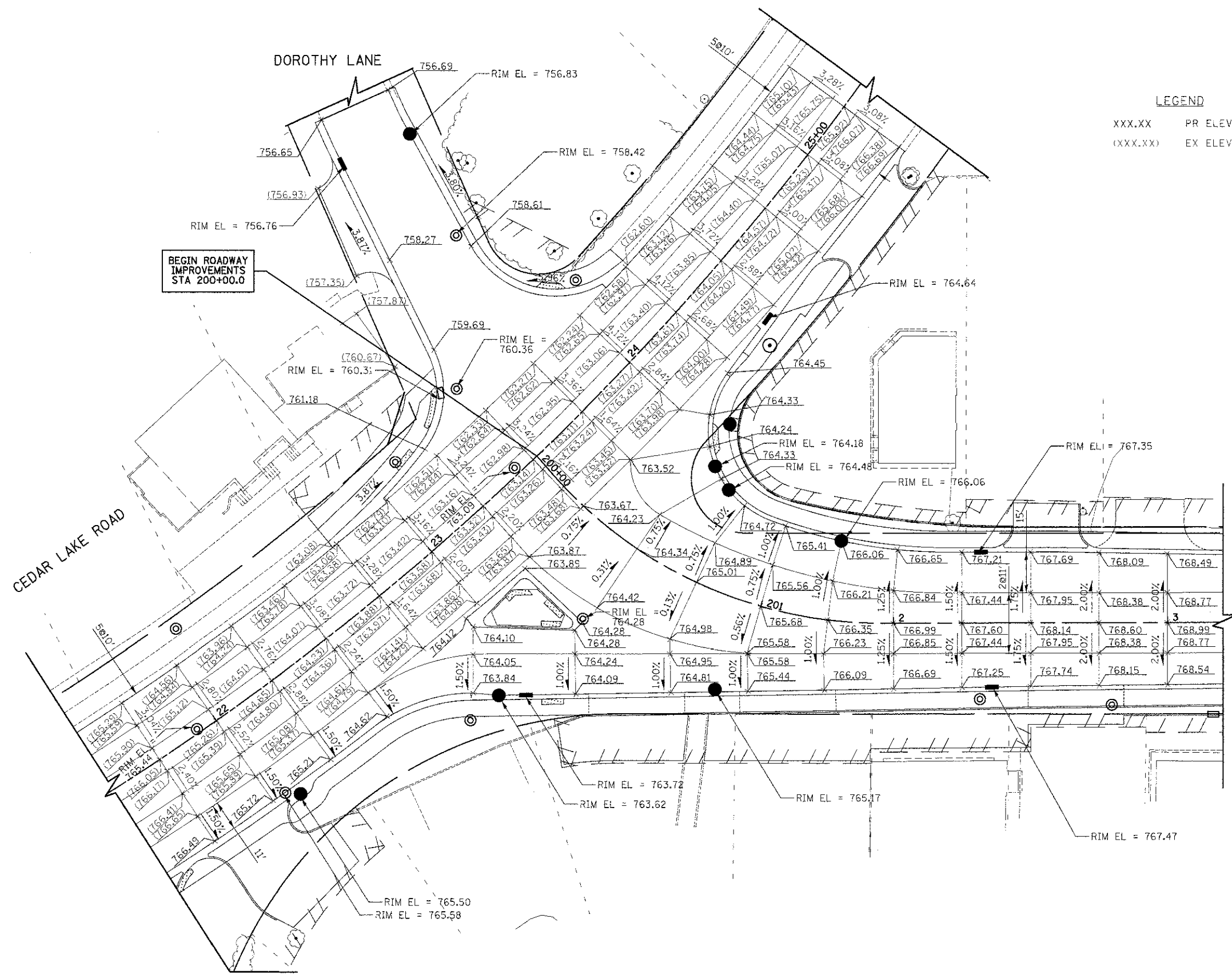
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SURVEY	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



**LEGEND**  
 XXX.XX PR ELEVATION  
 (XXX.XX) EX ELEVATION

WASHINGTON STREET

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DATE - 12/17/2012	REVISED -

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



**GRADING PLAN**  
**WASHINGTON STREET AND CEDAR LAKE ROAD**

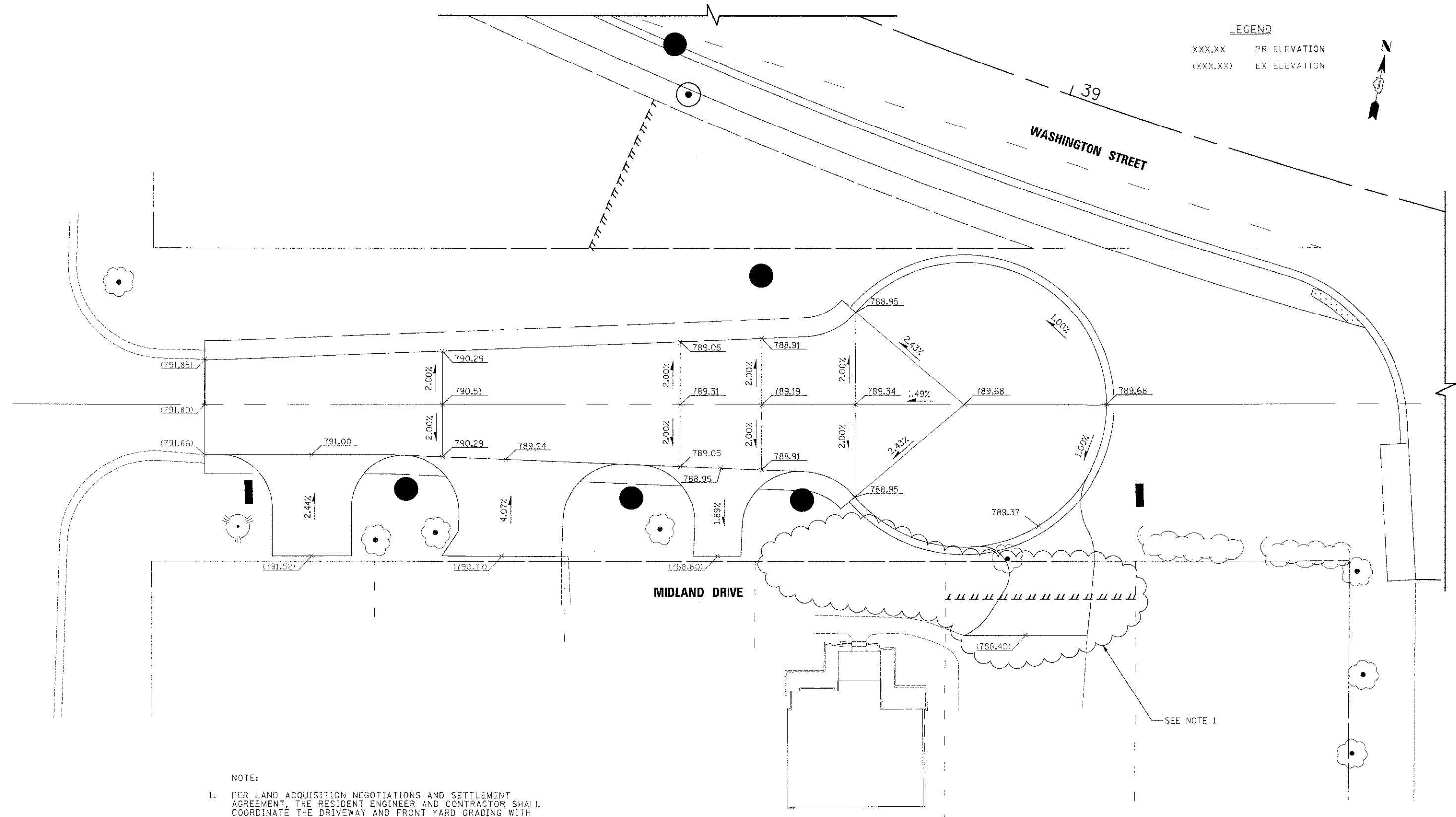
SHEET NO. 1 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	115
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				

DATE	
BY	
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PLOTTED	
TEMPLATE	
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DATE	
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LEGEND  
 XXX.XX PR ELEVATION  
 (XXX.XX) EX ELEVATION



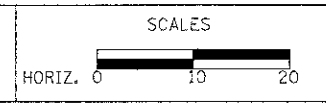
NOTE:  
 1. PER LAND ACQUISITION NEGOTIATIONS AND SETTLEMENT AGREEMENT, THE RESIDENT ENGINEER AND CONTRACTOR SHALL COORDINATE THE DRIVEWAY AND FRONT YARD GRADING WITH THE PROPERTY OWNER.

SEE NOTE 1

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DATE - 12/17/2012	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



GRADING PLAN  
 MIDLAND DRIVE  
 SHEET NO. 2 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	116
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



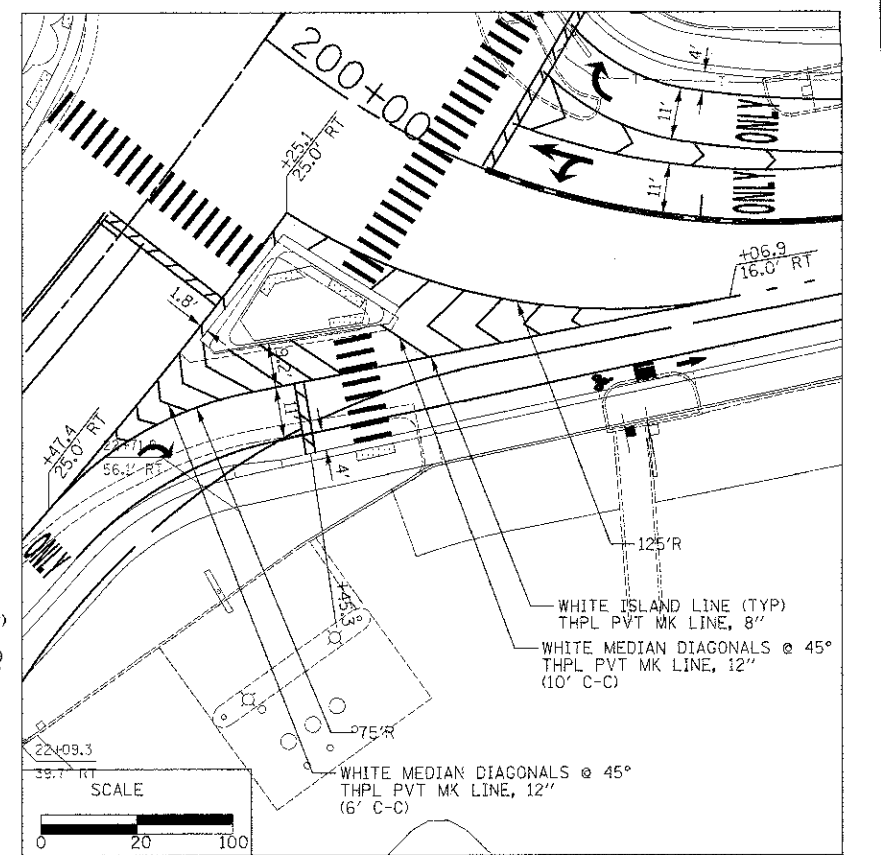
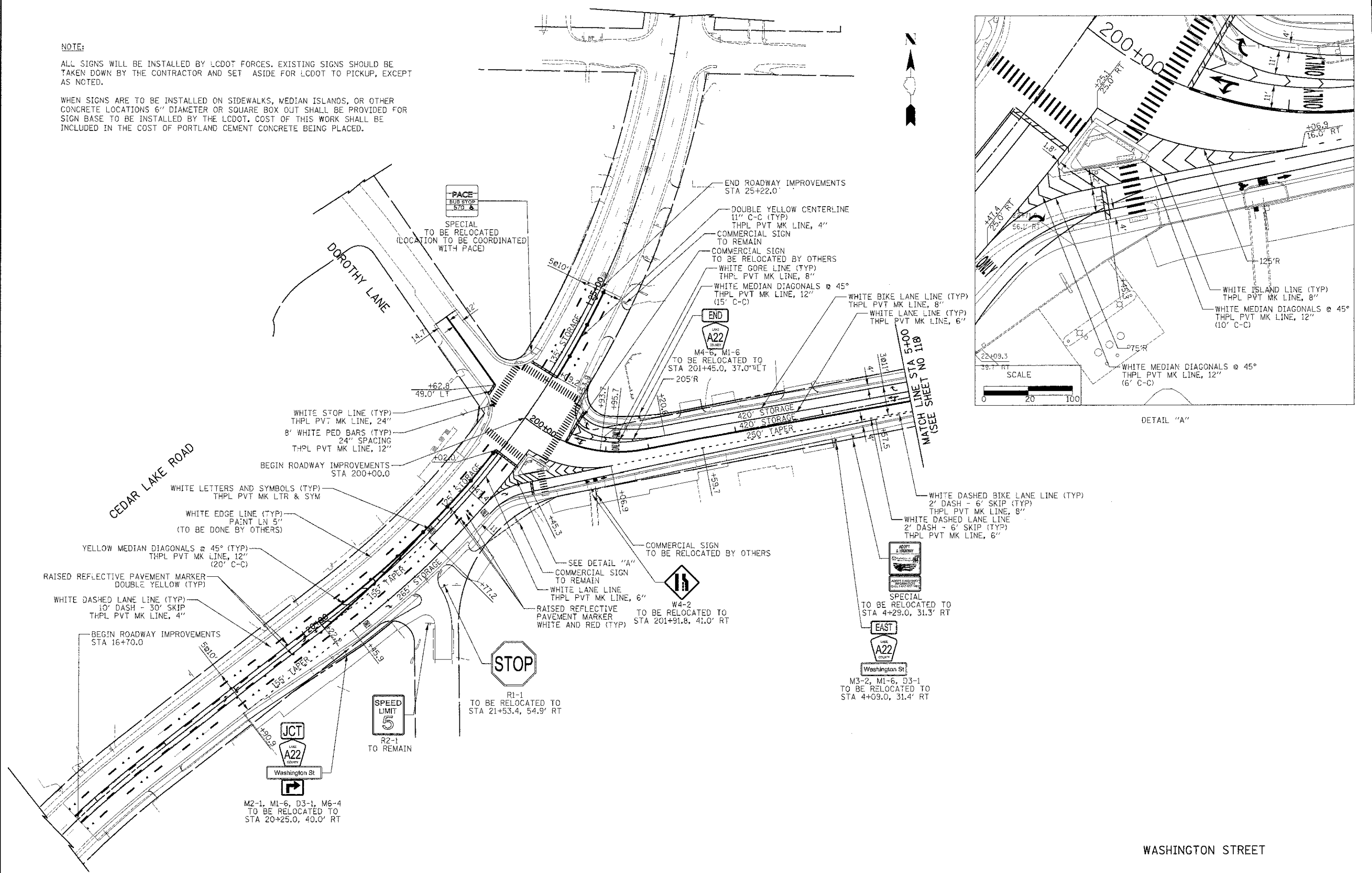
**NOTE:**

ALL SIGNS WILL BE INSTALLED BY LCDOT FORCES. EXISTING SIGNS SHOULD BE TAKEN DOWN BY THE CONTRACTOR AND SET ASIDE FOR LCDOT TO PICKUP, EXCEPT AS NOTED.

WHEN SIGNS ARE TO BE INSTALLED ON SIDEWALKS, MEDIAN ISLANDS, OR OTHER CONCRETE LOCATIONS 6" DIAMETER OR SQUARE BOX OUT SHALL BE PROVIDED FOR SIGN BASE TO BE INSTALLED BY THE LCDOT. COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF PORTLAND CEMENT CONCRETE BEING PLACED.

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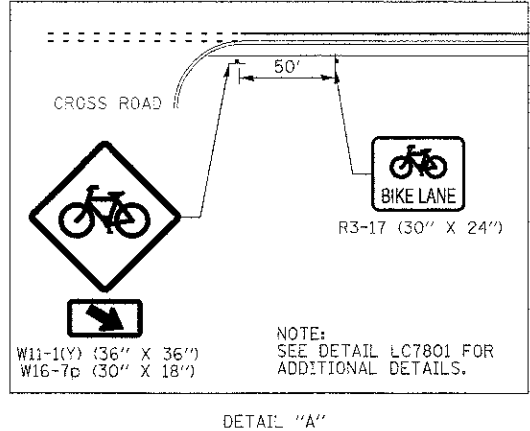
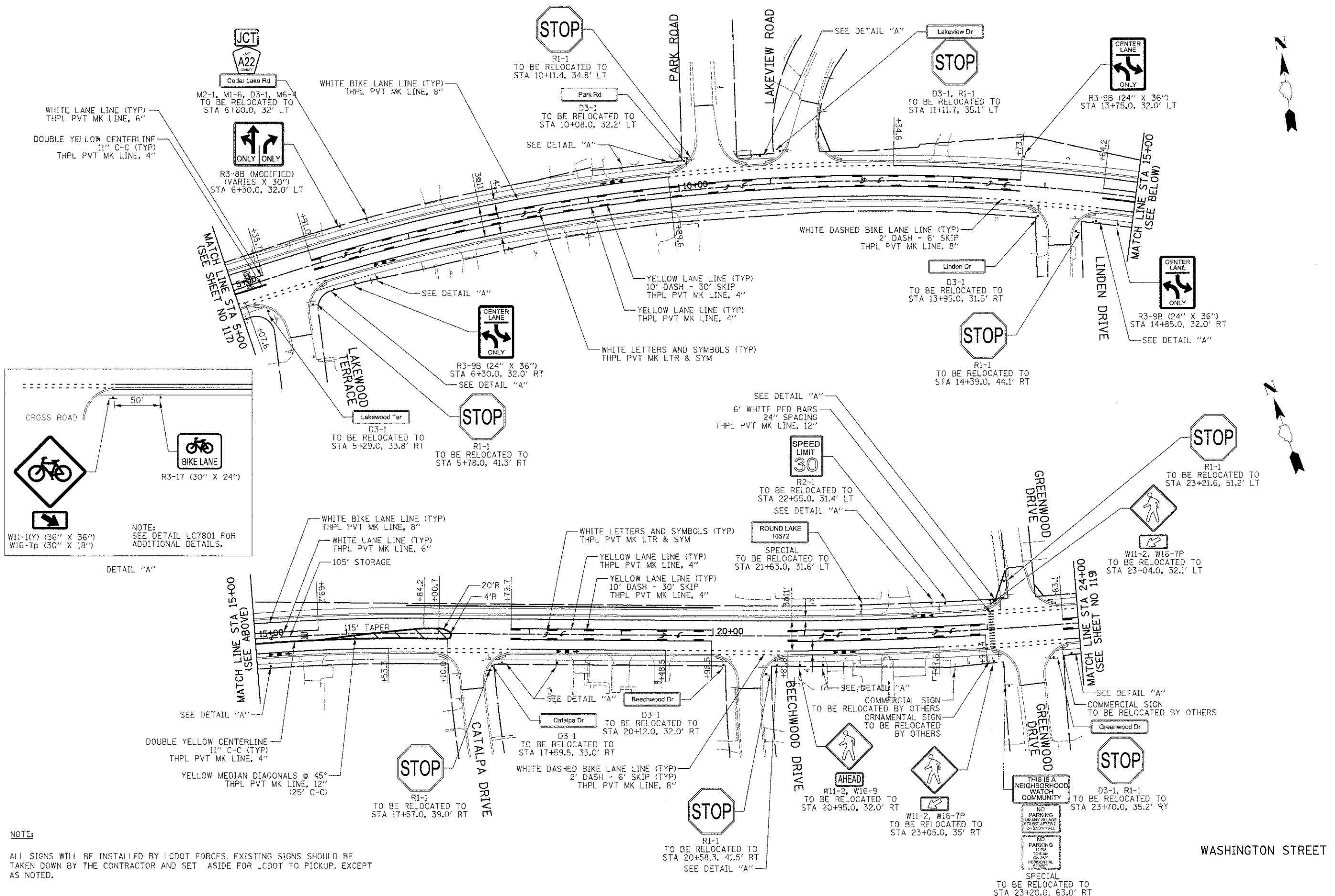
DETAIL "A"

WASHINGTON STREET

	450 E Devon Ave. Suite 300 Itasca, Illinois 60143 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com	DESIGNED - PK DRAWN - JRR CHECKED - RTM DATE - 12/17/2012	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE 0 50 100	<b>PAVEMENT MARKING AND SIGNING</b>	F.A.I. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO. 0187 05-00121-07-WR LAKE 223 117
	SHEET NO. 1 OF 4 SHEETS STA. 200+00 TO STA. 5+00		FED. ROAD DIST. NO. 1 ILLINOIS/FED. AID PROJECT				

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SKETCHED	
PLOTTED	
TEMPLATE	
AREAS	
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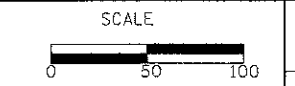
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SKETCHED	
PLOTTED	
TEMPLATE	
AREAS	
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ORIGINAL	
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NOTE:  
ALL SIGNS WILL BE INSTALLED BY LCDOT FORCES. EXISTING SIGNS SHOULD BE TAKEN DOWN BY THE CONTRACTOR AND SET ASIDE FOR LCDOT TO PICKUP, EXCEPT AS NOTED.

DESIGNED - PK	REVISED -
DRAWN - JRR	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**



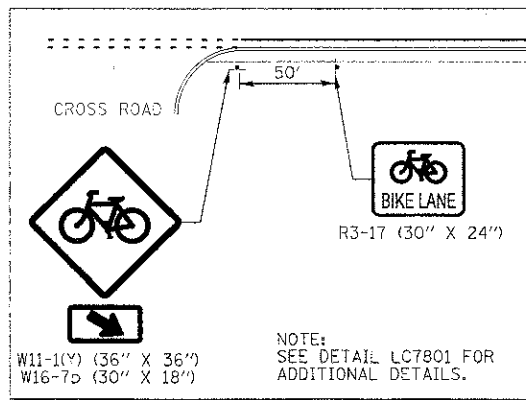
**PAVEMENT MARKING AND SIGNING**

SHEET NO. 2 OF 4 SHEETS    STA. 5+00 TO STA. 24+00

F.A.D. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	118
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				CONTRACT NO. 63765

DATE	
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DATE	

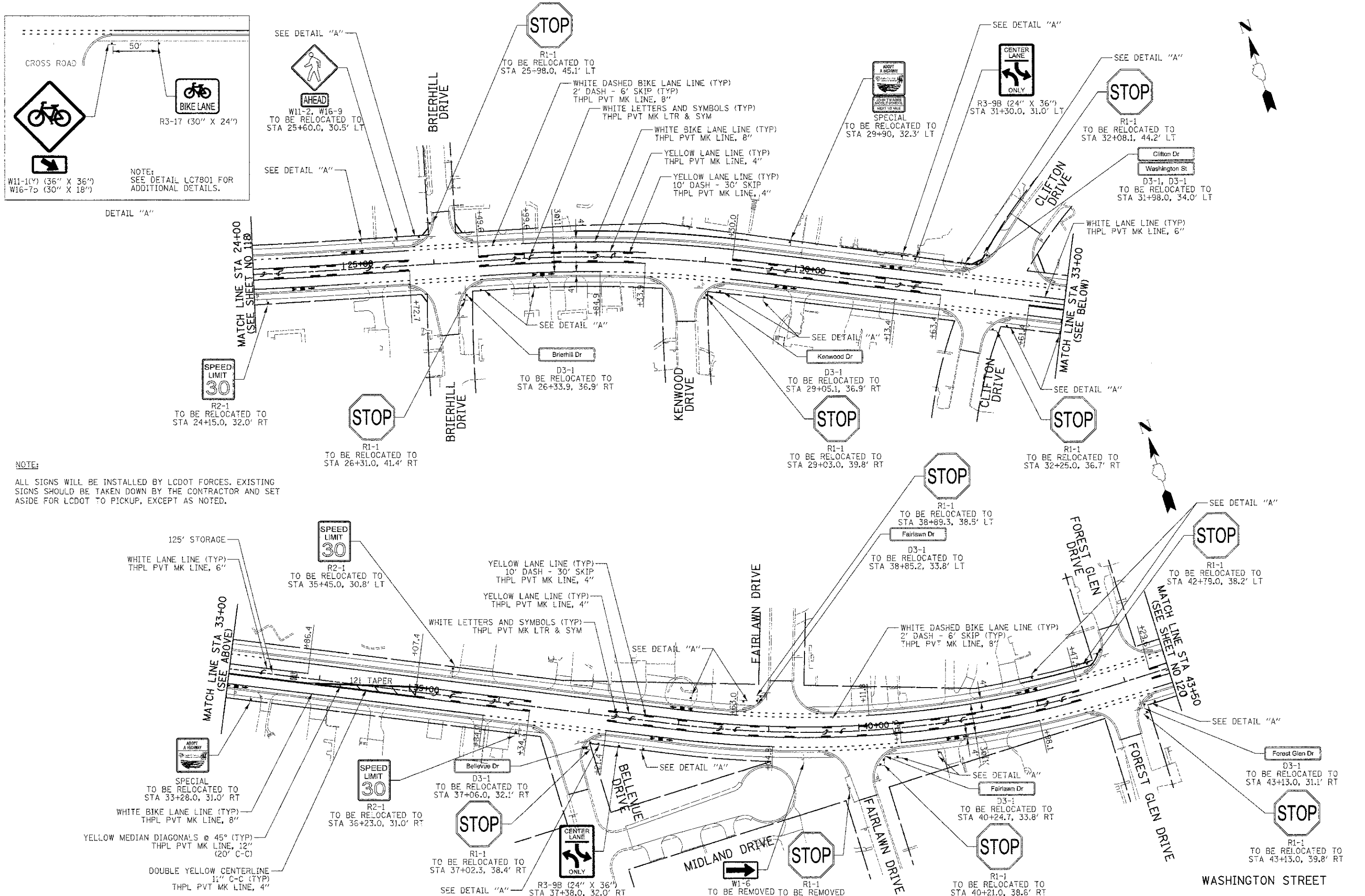
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DETAIL "A"

**NOTE:**

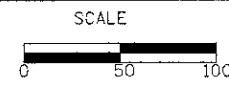
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DATE -	12/17/2012	REVISED -	

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**



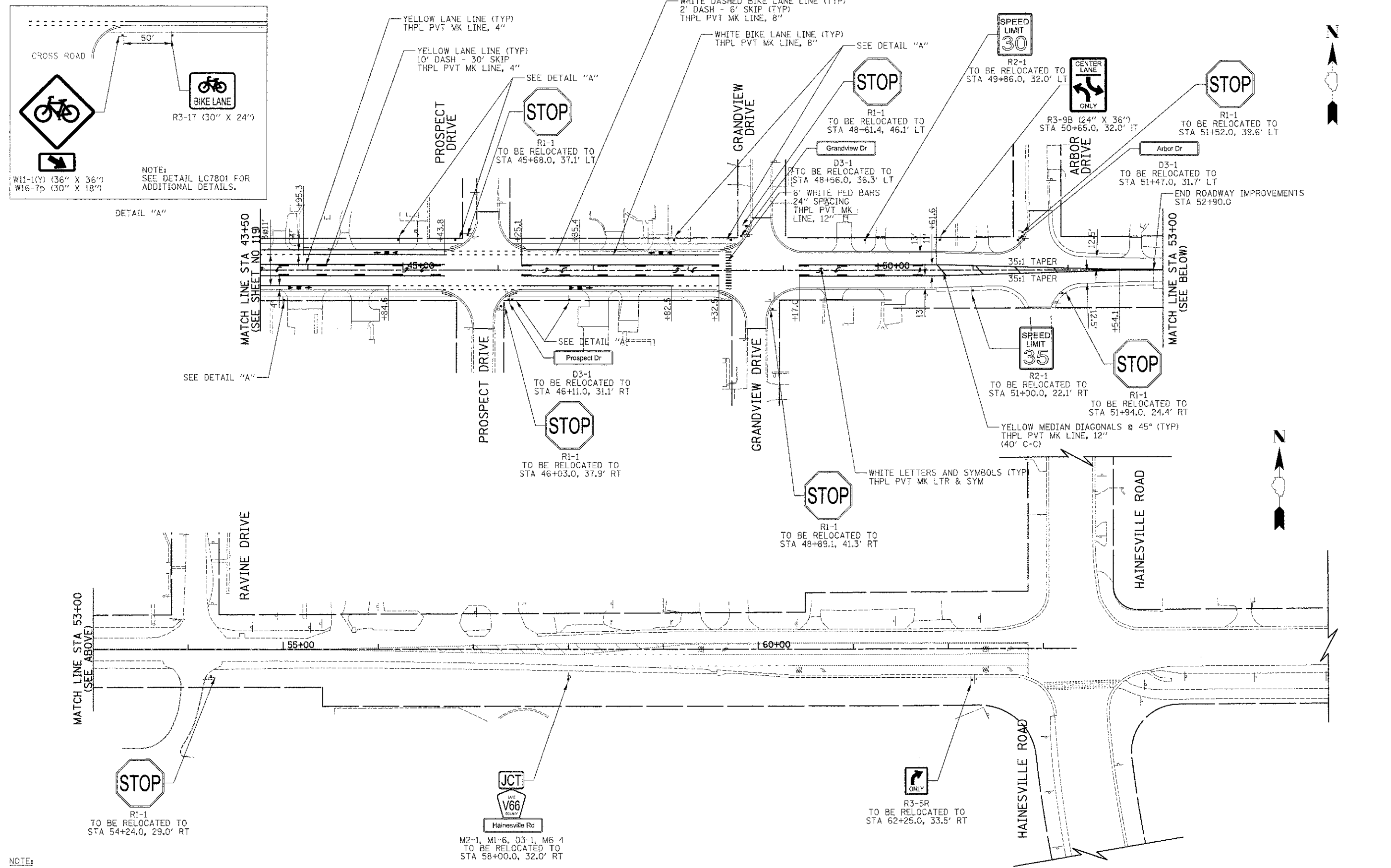
**PAVEMENT MARKING AND SIGNING**

SHEET NO. 3 OF 4 SHEETS STA. 24+00 TO STA. 43+50

F.A.D. RTE.	SECTION	COUNTY	TOTAL SHEETS
0187	05-00121-07-WR	LAKE	223 119
CONTRACT NO. 63765			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

DATE	
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DATE	12/17/2012

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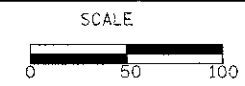


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 DEPARTMENT OF TRANSPORTATION



PAVEMENT MARKING AND SIGNING

SHEET NO. 4 OF 4 SHEETS STA. 43+50 TO STA. 63+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	120
FED. ROAD DIST. NO. 1				ILLINOIS FED. AID PROJECT
CONTRACT NO. 63765				

RESTORATION OF WORK AREA.  
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE L.E.D. AND 12" (300 mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT. WIRELESS INTERCONNECT IS ACCEPTABLE FOR TEMPORARY INTERCONNECT INSTALLATION WITH APPROVAL OF THE ENGINEER. IF WIRELESS INTERCONNECT IS USED, IT MUST HAVE THE CAPABILITY TO TRANSMIT VIDEO IMAGERY IN ADDITION TO PROVIDING WIRELESS COMMUNICATION WITH THE TRAFFIC SIGNAL SYSTEM. THE FURNISHING, INSTALLATION, AND MAINTENANCE OF ANY TEMPORARY TRAFFIC SIGNAL INTERCONNECT SYSTEM, INCLUDING WIRELESS INTERCONNECT, SHALL BE INCLUDED IN THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".
- THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
- UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
- DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
- WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.
- ALL STATIONS AND OFFSETS SHALL BE DIMENSIONED FROM THE CENTERLINE OF CEDAR LAKE ROAD.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF LCDOT AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- 1 EACH CONTROLLER AND CABINET, COMPLETE
- 1 EACH MASTER CONTROLLER
- 1 EACH UNINTERRUPTIBLE POWER SUPPLY

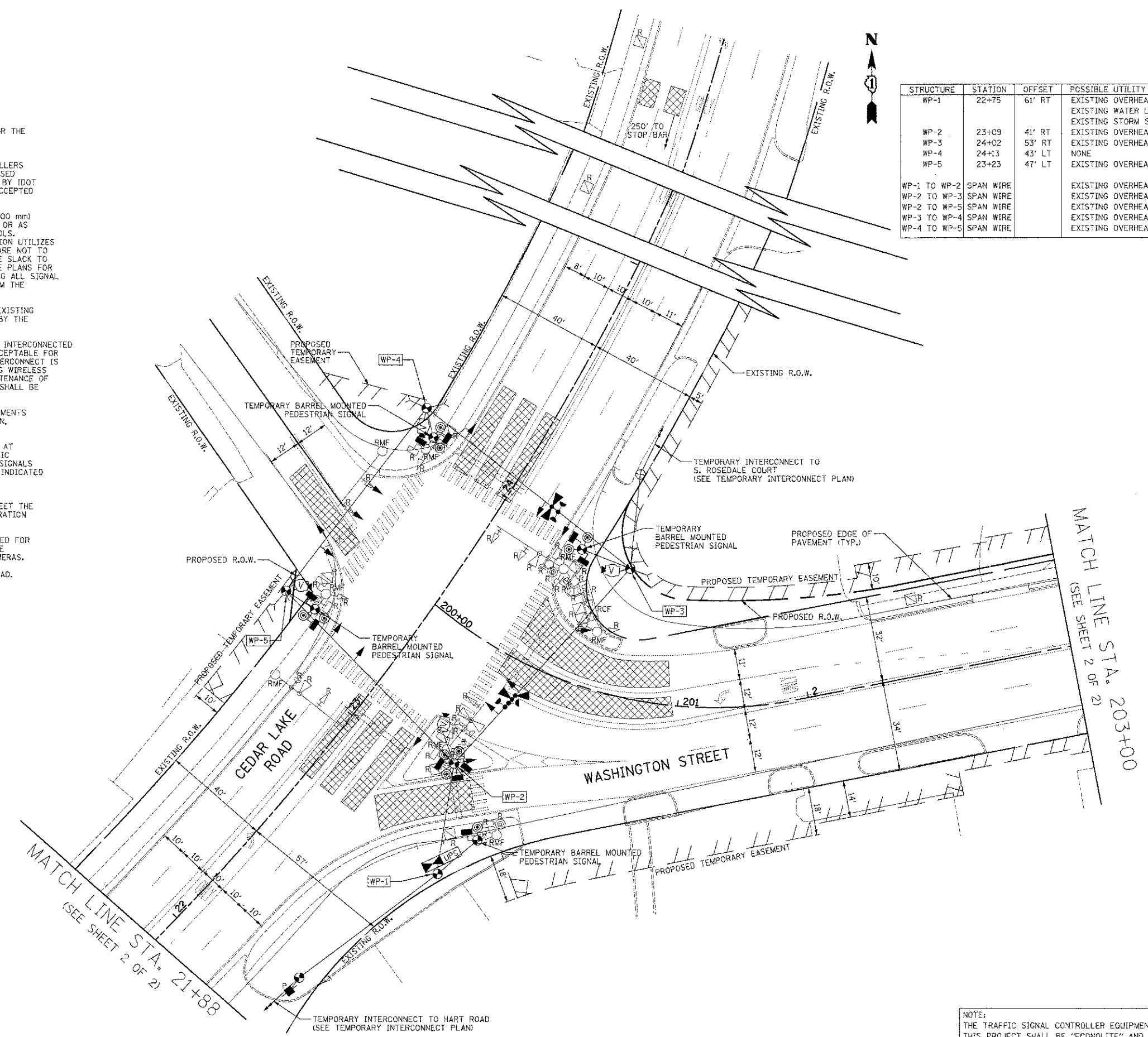
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 6 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 4 EACH SIGNAL HEAD, 1-FACE, 4-SECTION
- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 1 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 3 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 1 EACH PEDESTRIAN SIGNAL HEAD, 3-FACE
- 9 EACH PEDESTRIAN PUSH BUTTON
- 7 EACH TRAFFIC SIGNAL BACKPLATE
- 4 EACH STEEL MAST ARM ASSEMBLY AND POLE
- 4 EACH SIGNAL POST
- 1 EACH SERVICE INSTALLATION
- 1 EACH TELEPHONE SERVICE INSTALLATION

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE LAKE ZURICH RURAL FIRE PROTECTION DISTRICT. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LAKE ZURICH RURAL FIRE PROTECTION DISTRICT AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- 3 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER

STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICTS
WP-1	22+75	61' RT	EXISTING OVERHEAD LINE EXISTING WATER LINE EXISTING STORM SEWER
WP-2	23+09	41' RT	EXISTING OVERHEAD LINE
WP-3	24+02	53' RT	EXISTING OVERHEAD LINE
WP-4	24+13	43' LT	NONE
WP-5	23+23	47' LT	EXISTING OVERHEAD LINE
WP-1 TO WP-2	SPAN WIRE		EXISTING OVERHEAD LINES
WP-2 TO WP-3	SPAN WIRE		EXISTING OVERHEAD LINES
WP-2 TO WP-5	SPAN WIRE		EXISTING OVERHEAD LINES
WP-3 TO WP-4	SPAN WIRE		EXISTING OVERHEAD LINES
WP-4 TO WP-5	SPAN WIRE		EXISTING OVERHEAD LINES



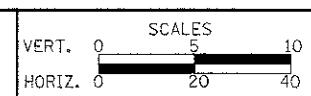
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REVISION	
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CHECKED - JJE	REVISED -
DATE - 12/17/2012	REVISED -

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



**WASHINGTON STREET AT CEDAR LAKE ROAD**  
**TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVAL PLAN**  
 SCALE: 1"=20' SHEET NO. 1 OF 2 SHEETS

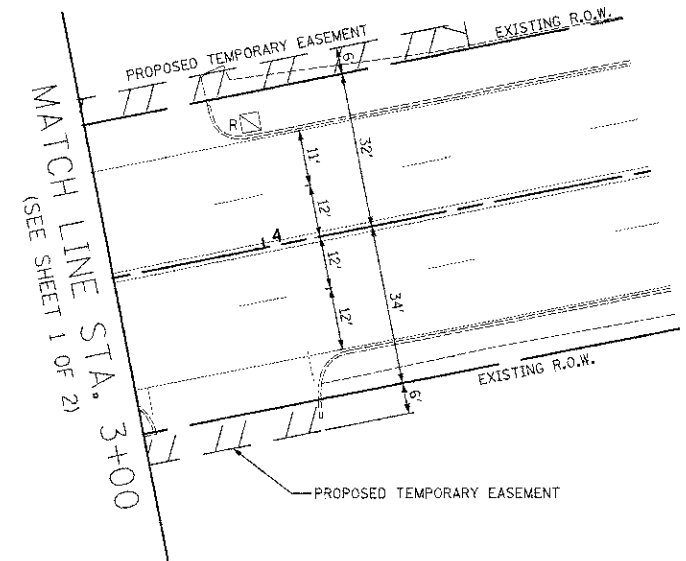
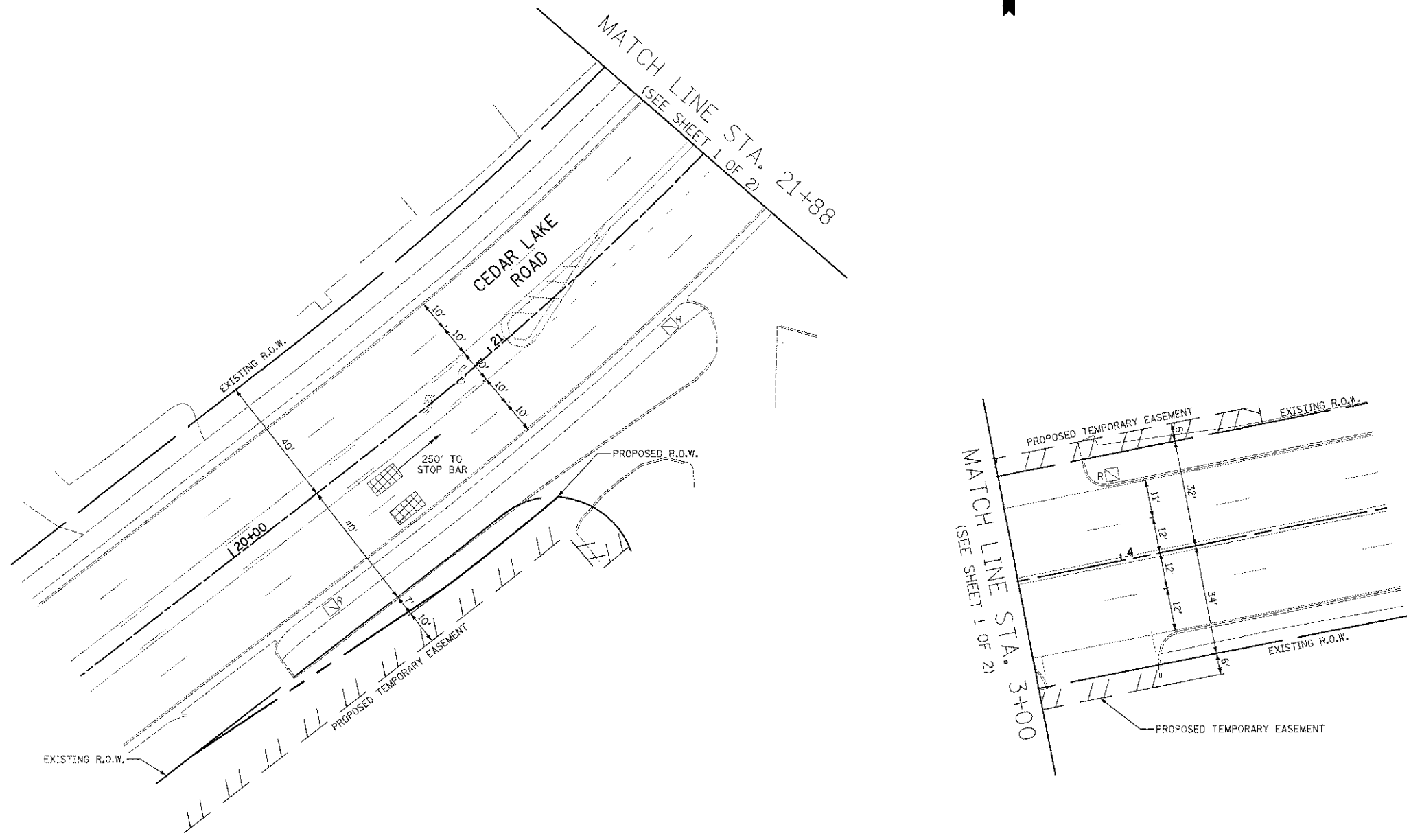
F.A.D. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-67-WR	LAKE	223	121
<b>CONTRACT NO. 63765</b>				

NOTE:  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" AND NTCIP COMPLIANT TO MATCH THE EXISTING ADJACENT SYSTEM.

**RESTORATION OF WORK AREA.**  
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOO, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

1. ALL CONTROL EQUIPMENT INCLUDING VIDEO DETECTION, EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL. AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. ALL STATIONS AND OFFSETS ARE DIMENSIONED FROM THE CENTERLINE OF CEDAR LAKE ROAD.



DATE	BY	NO.

DATE	BY	NO.

NOTE:  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" AND NTCIP COMPLIANT TO MATCH THE EXISTING ADJACENT SYSTEM.

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CHECKED - JJE	REVISED -
DATE - 12/17/2012	REVISED -

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

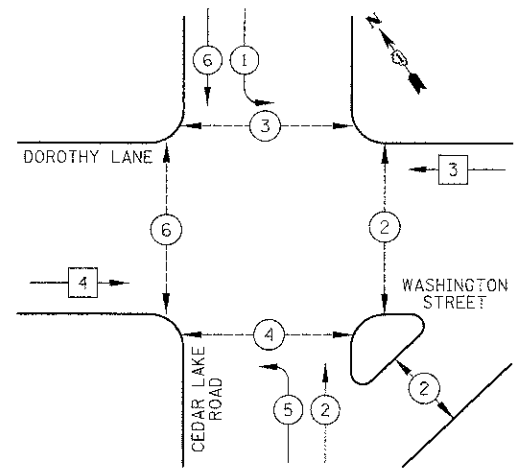
**WASHINGTON STREET AT CEDAR LAKE ROAD**  
**TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVAL PLAN**  
 SCALE: 1"=20' SHEET NO. 2 OF 2 SHEETS

F.A.U. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187 05-00121-07-WR	LAKE	223	122
CONTRACT NO. 63765			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

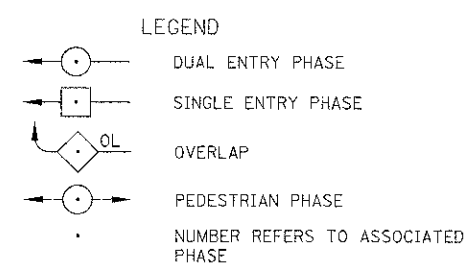
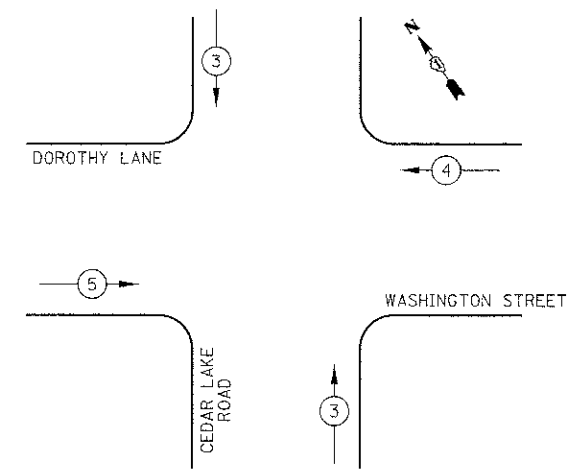
DATE	
BY	
FINAL SURVEY	
SUBMITTED	
NOTIFIED	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	
NO. 11	
NO. 12	
NO. 13	
NO. 14	
NO. 15	
NO. 16	
NO. 17	
NO. 18	
NO. 19	
NO. 20	
NO. 21	
NO. 22	
NO. 23	
NO. 24	
NO. 25	
NO. 26	
NO. 27	
NO. 28	
NO. 29	
NO. 30	

DATE	
BY	
ORIGINAL SURVEY	
SUBMITTED	
NOTIFIED	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	
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NO. 15	
NO. 16	
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NO. 20	
NO. 21	
NO. 22	
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NO. 25	
NO. 26	
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NO. 29	
NO. 30	

TEMPORARY CONTROLLER SEQUENCE



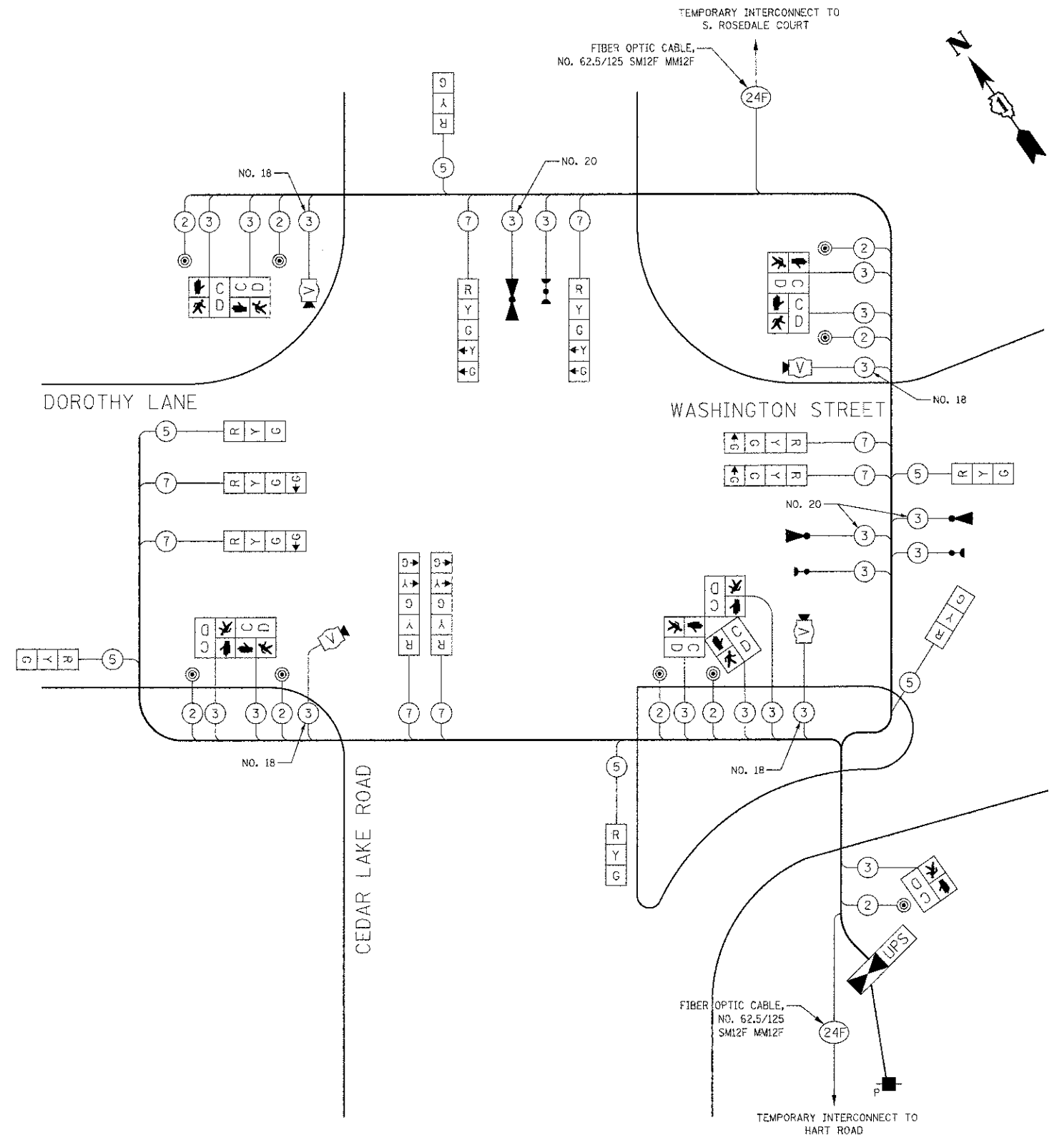
TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

PHASE DESIGNATION DIAGRAM



TEMPORARY CABLE PLAN  
NOT TO SCALE

L.C.D.O.T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATION	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	14		10	0.50	70.0
(YELLOW)	14		19	0.25	66.5
(GREEN)	18		11	0.25	49.5
ARROW	8		9	0.10	7.2
PED. SIGNAL	10		9	1.00	90.0
CONTROLLER	1		100	1.00	100.0
VIDEO SYSTEM	1		150	1.00	150.0
LUMINAIRE		250		0.50	
LED STREET NAME SIGNS			64	0.50	
BATTERY BACKUP	1		25	1.00	25.0
FLASHER				0.50	
TOTAL =					558.2

ENERGY COSTS TO: LAKE COUNTY DIVISION OF TRANSPORTATION  
600 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

ENERGY SUPPLY: CONTACT: KIM KANGAS  
PHONE: (647) 816-5497  
COMPANY: COM ED

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" AND NTCIP COMPLIANT TO MATCH THE EXISTING ADJACENT SYSTEM.

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DATE - 12/17/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

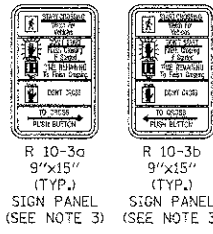
WASHINGTON STREET AT CEDAR LAKE ROAD  
TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM,  
AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE

NO SCALE SHEET NO. 1 OF 1 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	123
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63765	

**TRAFFIC SIGNAL NOTES**

1. ALL STATIONS AND OFFSETS ARE DIMENSIONED FROM THE CENTERLINE OF CEDAR LAKE ROAD.
2. ALL DETECTION ZONES ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.
3. THE R10-3 PEDESTRIAN PUSH BUTTON SIGNS ARE TO BE INCLUDED IN THE PAY ITEM "PEDESTRIAN PUSH-BUTTON".
4. A BLUETOOTH DETECTOR SHALL BE MOUNTED TO THIS MAST ARM POLE. THE BLUETOOTH DETECTOR SHALL BE MOUNTED AT A MINIMUM OF 10 FEET ABOVE THE FINISHED GRADE. SEE THE SPECIAL PROVISIONS FOR MORE INFORMATION.



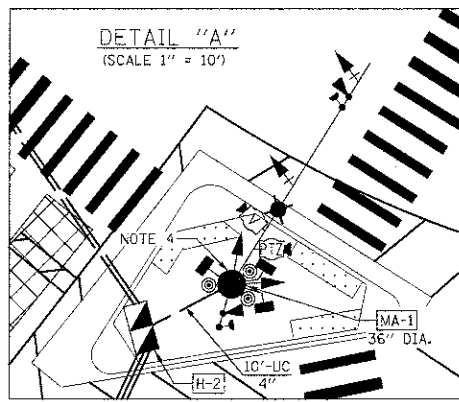
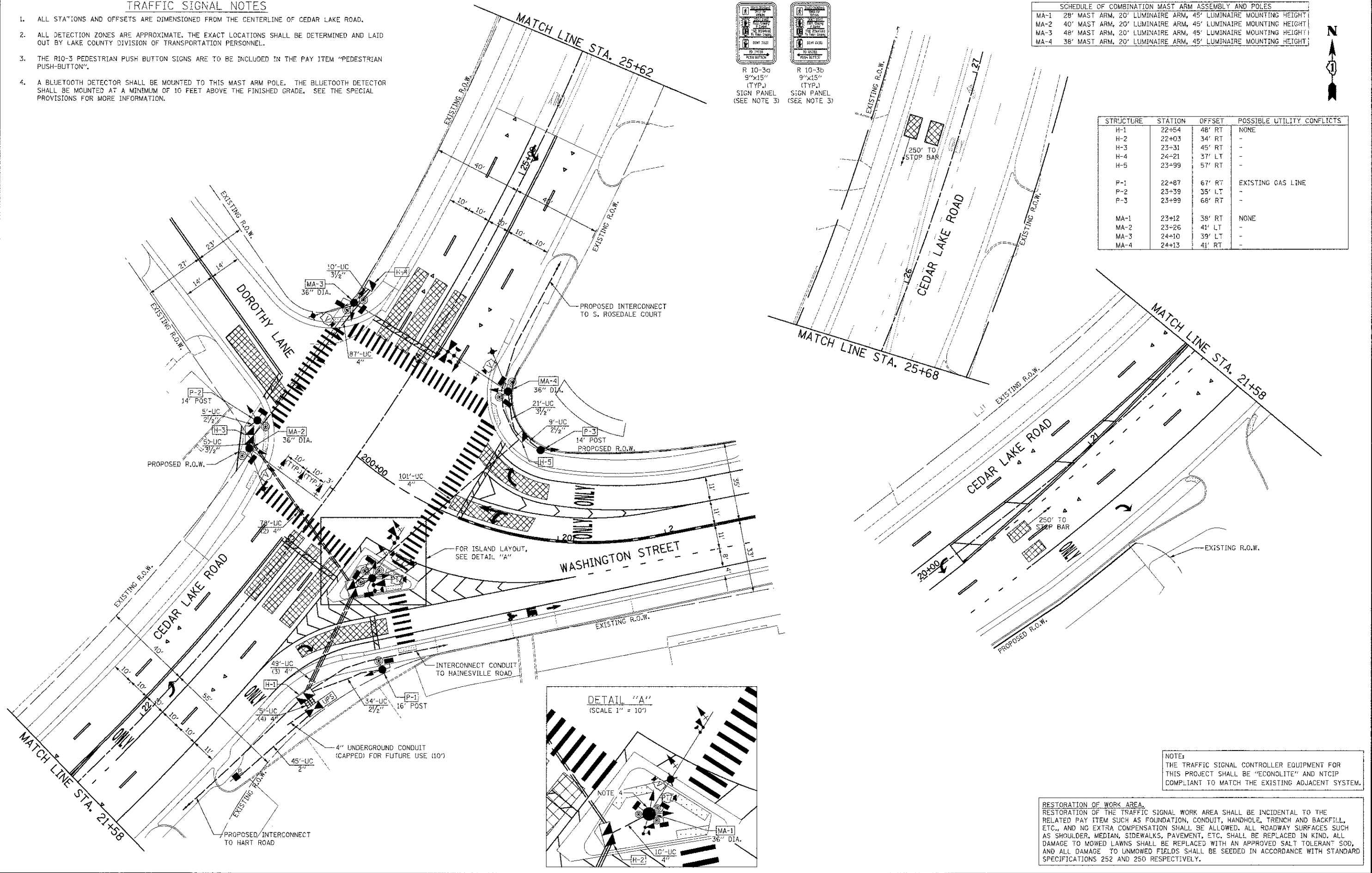
SCHEDULE OF COMBINATION MAST ARM ASSEMBLY AND POLES			
MA-1	28' MAST ARM, 20' LUMINAIRE ARM, 45' LUMINAIRE MOUNTING HEIGHT		
MA-2	40' MAST ARM, 20' LUMINAIRE ARM, 45' LUMINAIRE MOUNTING HEIGHT		
MA-3	48' MAST ARM, 20' LUMINAIRE ARM, 45' LUMINAIRE MOUNTING HEIGHT		
MA-4	38' MAST ARM, 20' LUMINAIRE ARM, 45' LUMINAIRE MOUNTING HEIGHT		



STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICTS
H-1	22+54	48' RT	NONE
H-2	22+03	34' RT	-
H-3	23+31	45' RT	-
H-4	24-21	37' LT	-
H-5	23+99	57' RT	-
P-1	22+87	67' RT	EXISTING GAS LINE
P-2	23+39	35' LT	-
P-3	23+99	68' RT	-
MA-1	23+12	38' RT	NONE
MA-2	23+26	41' LT	-
MA-3	24+10	39' LT	-
MA-4	24+13	41' RT	-

DATE	BY	REVISION

DATE	BY	REVISION



NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" AND NTCIP COMPLIANT TO MATCH THE EXISTING ADJACENT SYSTEM.

RESTORATION OF WORK AREA.  
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOG, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

SCALE: 1" = 20'  
SHEET NO. 1 OF 1 SHEETS

**WASHINGTON STREET AT CEDAR LAKE ROAD  
TRAFFIC SIGNAL MODERNIZATION PLAN**

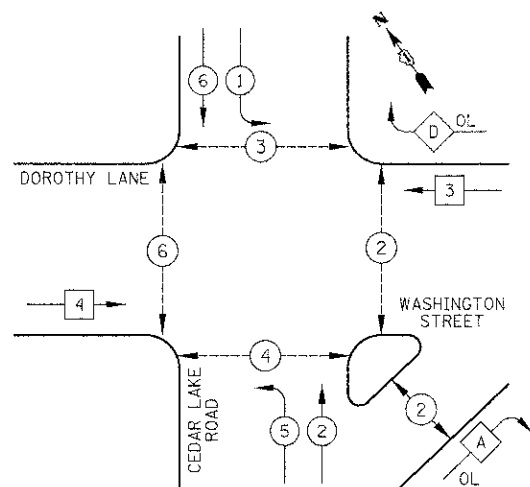
F.A.U. RTE. 0187	SECTION 05-00121-07-WR	COUNTY LAKE	TOTAL SHEETS 223	SHEET NO. 124
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QNTY.
SERVICE INSTALLATION, POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	45
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	48
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	36
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	531
HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	3
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	2694
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2563
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1675
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2835
ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2C	FOOT	69
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	861
CONCRETE FOUNDATION, TYPE A	FOOT	12
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	5
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-4 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	3
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	11
LIGHT DETECTOR	EACH	3
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	10
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	11
REMOVE EXISTING DOUBLE HANDHOLE	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION)	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	533
ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	165
ELECTRIC CABLE IN CONDUIT, VIDEO, NO. 20 4 C	FOOT	165
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. (SPECIAL)	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	3
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
REMOTE CONTROLLED VIDEO SYSTEM	EACH	1
LAYER II (DATA LINK) SWITCH	EACH	1
ELECTRIC CABLE IN CONDUIT, VIDEO, NO. 18 3C	FOOT	1047
VIDEO ENCODER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT. (SPECIAL)	EACH	1
ROADSIDE DETECTOR	EACH	1
OUTDOOR RATED NETWORK CABLE	FOOT	110

PROPOSED CONTROLLER SEQUENCE



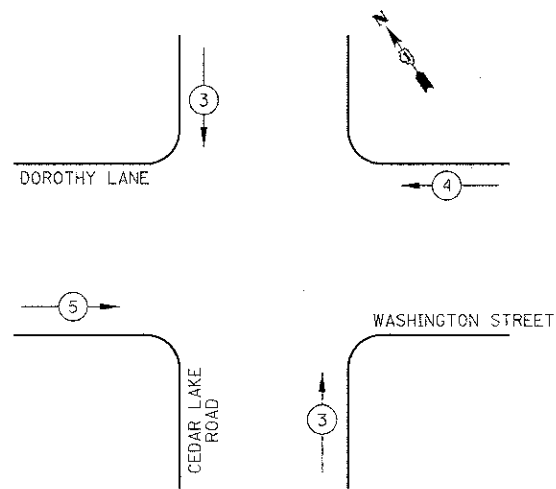
LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2	+ 3
D	= 3	+ 1

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

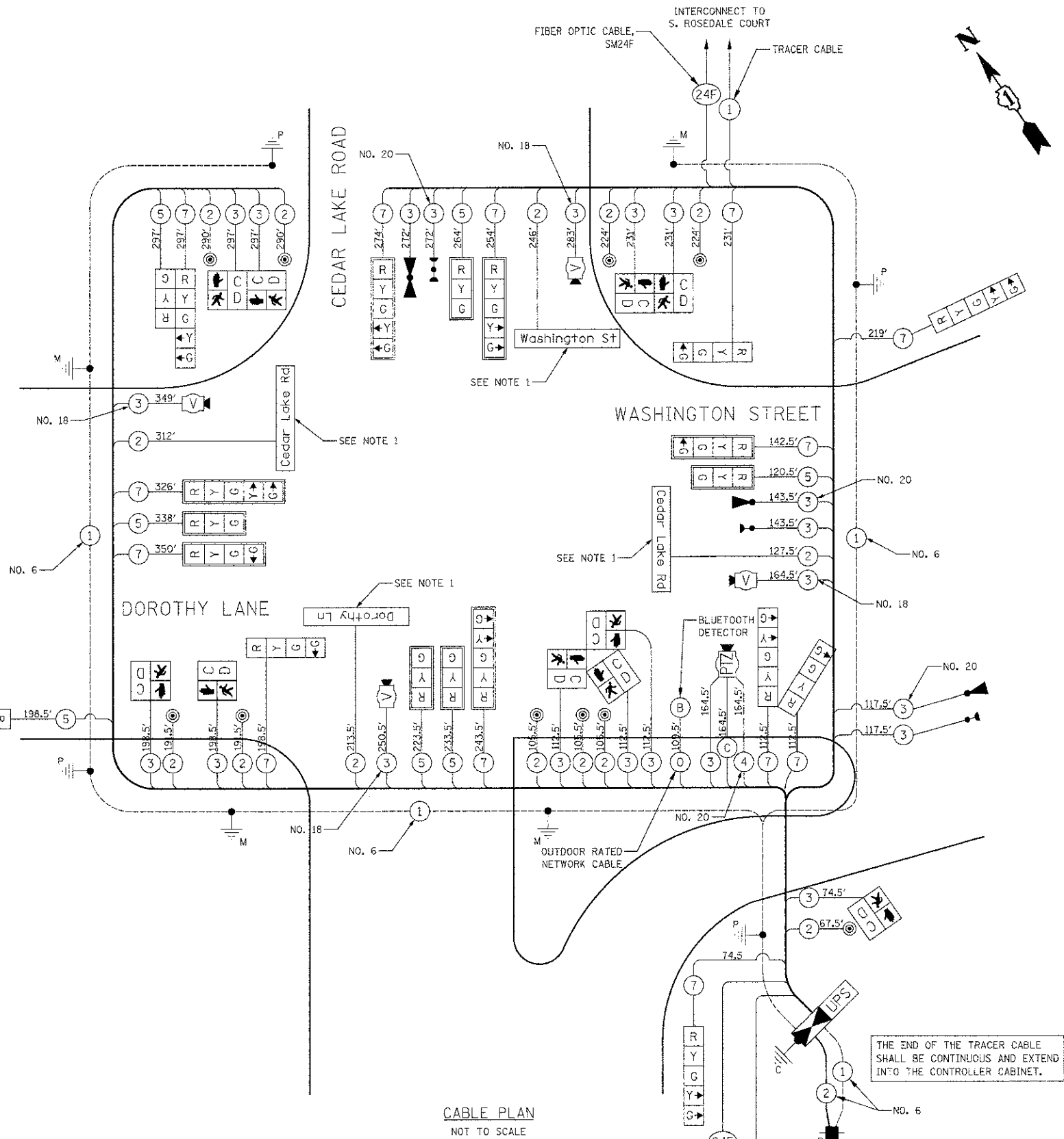


PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	21	INCAND.	LED	0.50	105.0
(YELLOW)	21			0.25	
(GREEN)	26			0.25	
ARROW	14			0.10	12.6
PED. SIGNAL	10			1.00	90.0
CONTROLLER	1			1.00	100.0
VIDEO SYSTEM	1			1.00	150.0
LUMINAIRE		250		0.50	
LED STREET NAME SIGNS	4			0.50	128.0
BATTERY BACKUP	1			1.00	25.0
FLASHER				0.50	
TOTAL =					781.9

ENERGY COSTS TO: LAKE COUNTY DIVISION OF TRANSPORTATION  
600 W. WINCHESTER ROAD  
LIBERTYVILLE, IL 60048

ENERGY SUPPLY: CONTACT: KIM KANGAS  
PHONE: (647) 816-5497  
COMPANY: COM ED



NOTES FOR TRAFFIC SIGNALS

- L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN

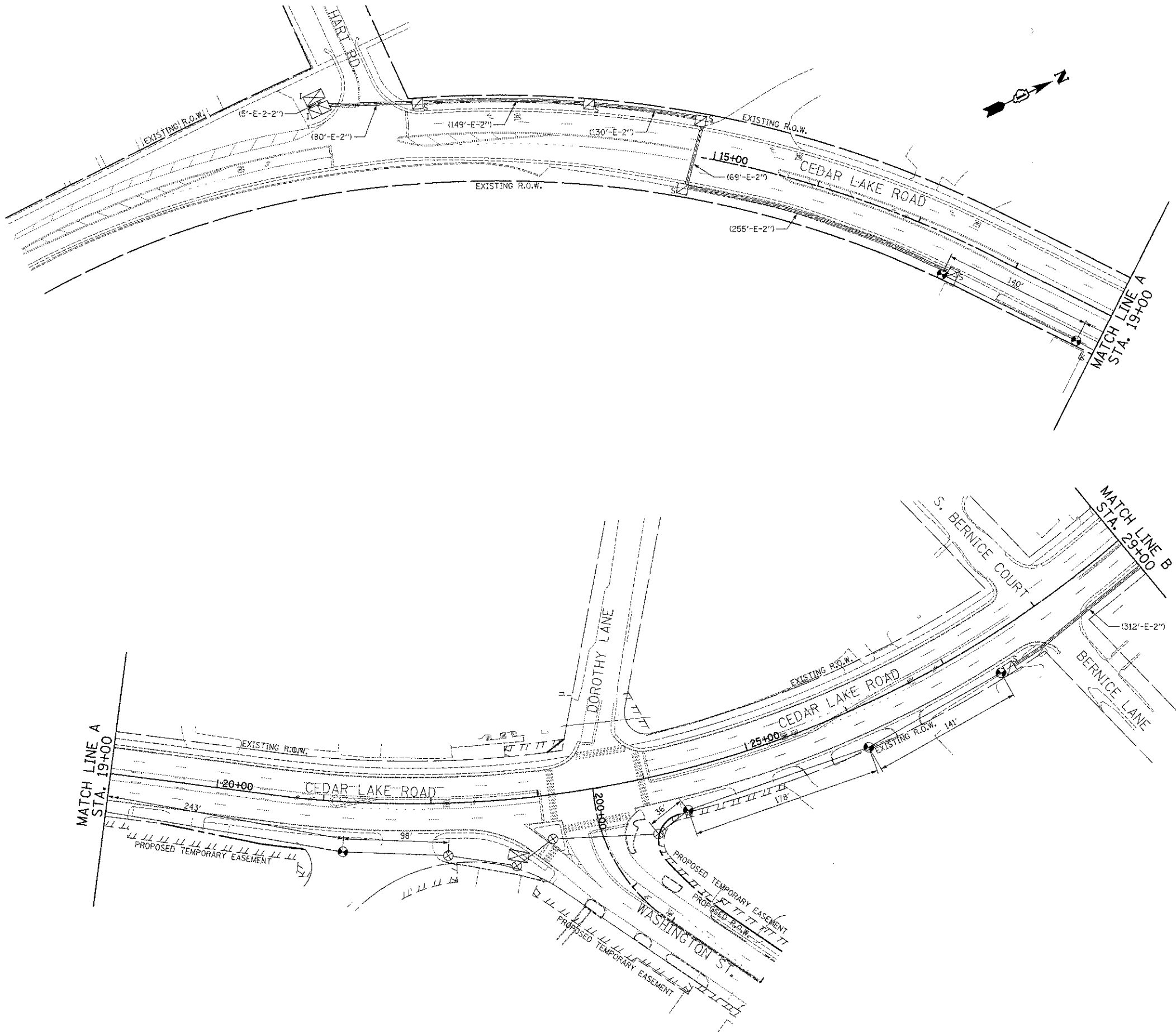
NOTE: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" AND NTICP COMPLIANT TO MATCH THE EXISTING ADJACENT SYSTEM.

DATE	
BY	
REVISION	
NO.	

DATE	
BY	
REVISION	
NO.	

DATE	
BY	
NO.	
FINAL SURVEY	
NOTED BOOK	
AREAS	
AREAS CHECKED	

DATE	
BY	
NO.	
ORIGINAL SURVEY	
NOTED BOOK	
AREAS	
AREAS CHECKED	



NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" AND NTCIP COMPLIANT TO MATCH THE EXISTING ADJACENT SYSTEM.

RESTORATION OF WORK AREA.  
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**CIVILTECH**  
450 E Devon Ave, Suite 300  
Itasca, Illinois 60143  
Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

DESIGNED - BRD	REVISED -
DRAWN - MFB	REVISED -
CHECKED - JJE	REVISED -
DATE - 12/17/2012	REVISED -

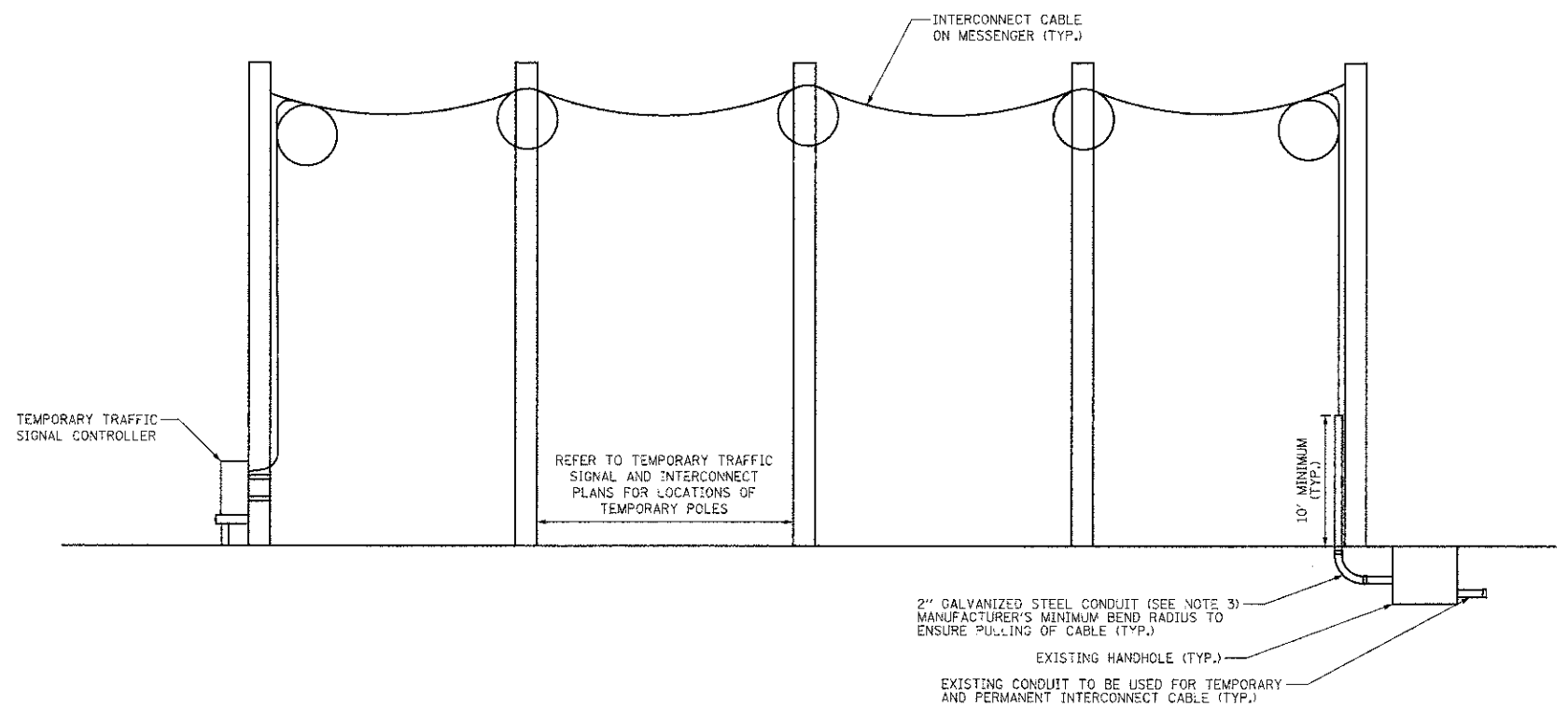
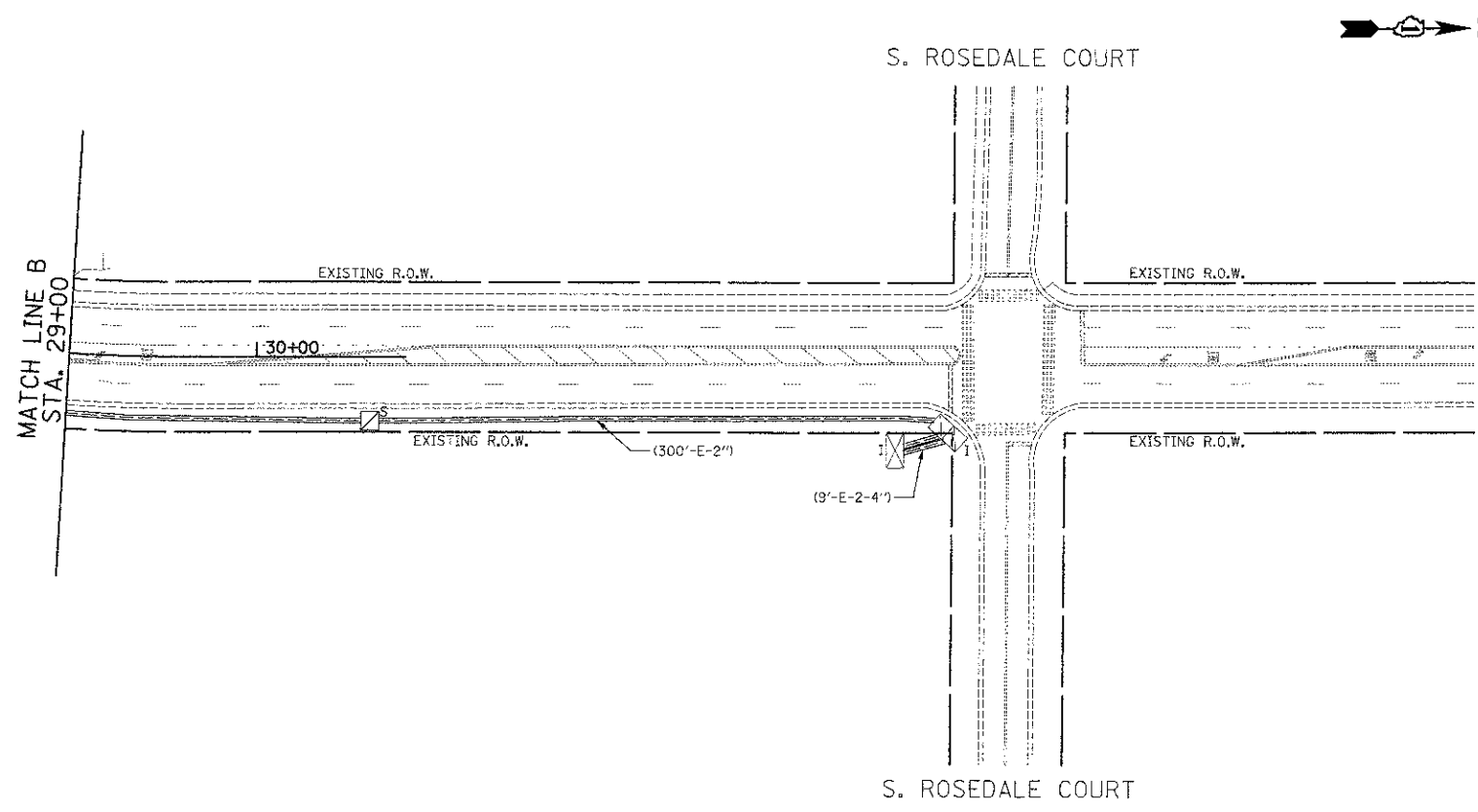
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TEMPORARY INTERCONNECT PLAN**  
**CEDAR LAKE ROAD**  
**HART ROAD TO S. ROSEDALE ROAD**  
SCALE: 1" = 50'  
SHEET NO. 1 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	126
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

DATE	
SUBMITTED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
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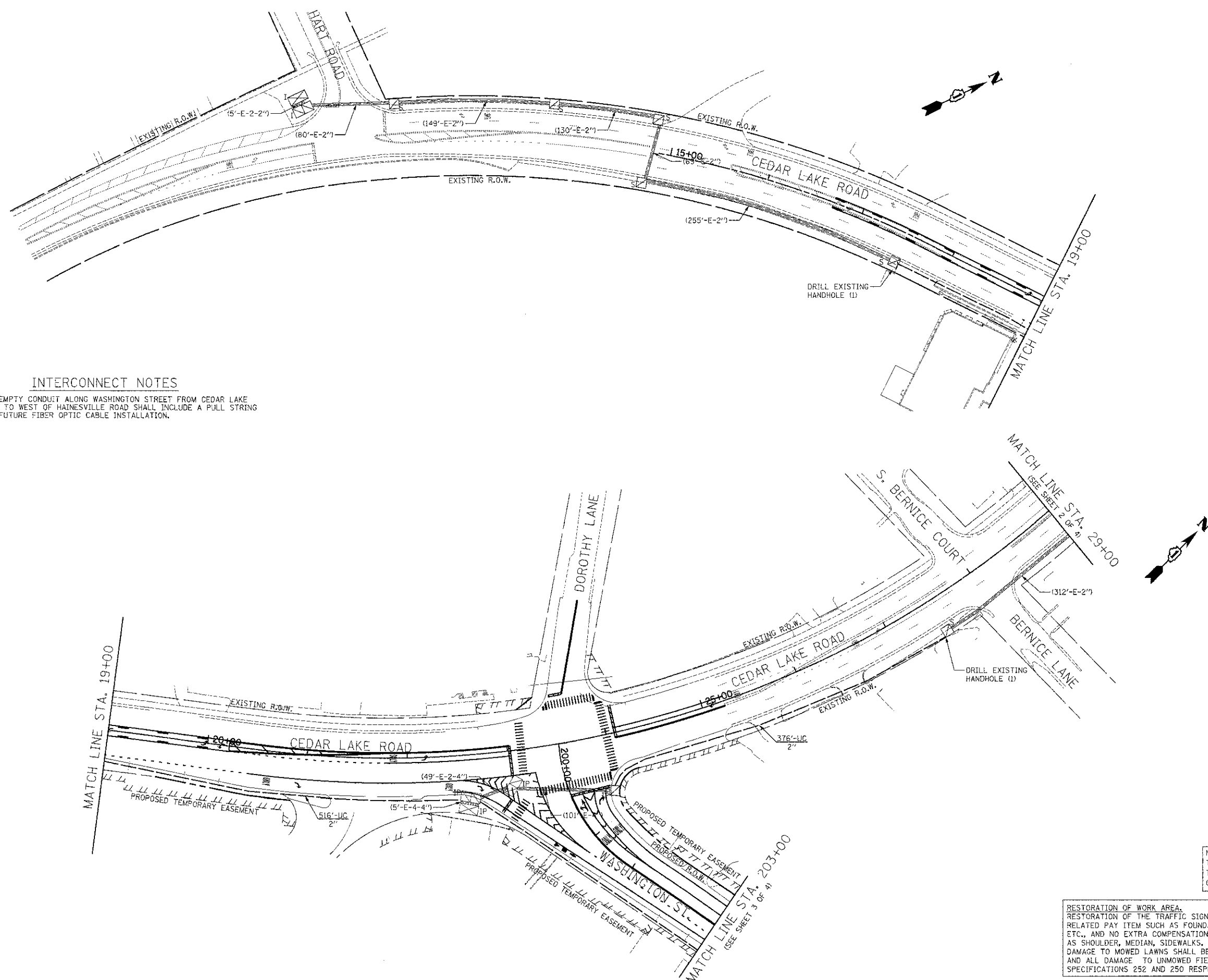
**CEDAR LAKE ROAD  
AERIALLY SUPPORTED INTERCONNECT CABLE**  
(NOT TO SCALE)

TEMPORARY INTERCONNECT NOTES

- TRANSFER OF EXISTING TO TEMPORARY INTERCONNECT (FIBER OPTIC OR WIRELESS) AND TEMPORARY INTERCONNECT TO PROPOSED MUST BE COMPLETED IN ONE WORKING DAY DURING NON-PEAK HOURS OR AS DIRECTED BY THE ENGINEER.
- AFTER THE PROPOSED INTERCONNECT IS TURNED ON AND OPERATING TO THE SATISFACTION OF THE ENGINEER, THE TEMPORARY INTERCONNECT SHALL BE REMOVED.
- THE 2" CONDUIT USED FOR THE TEMPORARY INTERCONNECT CABLE (IF INSTALLED) SHALL BE REMOVED TO BELOW GRADE AND CAPPED AT THE TIME THE TEMPORARY INTERCONNECT IS REMOVED.
- THE CONTRACTOR MUST NOTIFY THE LCDOT SIGNAL SYSTEM ENGINEER A MINIMUM OF SEVEN WORKING DAYS PRIOR TO THE START OF ANY WORK ON THE TRAFFIC SIGNAL INTERCONNECT.
- TEMPORARY WIRELESS INTERCONNECT MAY BE USED ON THIS PROJECT PROVIDED THAT SUFFICIENT LINE-OF-SIGHT EXISTS BETWEEN THE INTERSECTIONS TO ESTABLISH WIRELESS COMMUNICATION. THE WIRELESS INTERCONNECT SHALL HAVE THE CAPABILITY OF TRANSMITTING VIDEO IMAGERY IN ADDITION TO MAINTAINING CONTROLLER COMMUNICATIONS FOR THE TRAFFIC SIGNAL SYSTEM. IF THE WIRELESS INTERCONNECT DOES NOT FUNCTION TO THE SATISFACTION OF THE ENGINEER AT INSTALLATION OR FAILS DURING CONSTRUCTION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH AND INSTALL TEMPORARY FIBER OPTIC INTERCONNECT AT NO ADDITIONAL COST TO THE CONTRACT.
- ALL WORK AND MATERIALS INVOLVED IN THE INSTALLATION OF THE TEMPORARY INTERCONNECT AND ESTABLISHING SYSTEM OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE LCDOT SIGNAL SYSTEM ENGINEER SHALL BE INCLUDED IN THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION." THIS APPLIES TO BOTH TEMPORARY FIBER OPTIC AND WIRELESS INTERCONNECT INSTALLATIONS.

NO.	DATE	BY	REVISION

NO.	DATE	BY	REVISION



**INTERCONNECT NOTES**

1. THE EMPTY CONDUIT ALONG WASHINGTON STREET FROM CEDAR LAKE ROAD TO WEST OF HAINESVILLE ROAD SHALL INCLUDE A PULL STRING FOR FUTURE FIBER OPTIC CABLE INSTALLATION.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONCLITE" AND NTCIP COMPLIANT TO MATCH THE EXISTING ADJACENT SYSTEM.

RESTORATION OF WORK AREA.  
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOO, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**CIVILTECH**  
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www.civiltechinc.com

DESIGNED - BRD	REVISED -
DRAWN - MFB	REVISED -
CHECKED - JJE	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

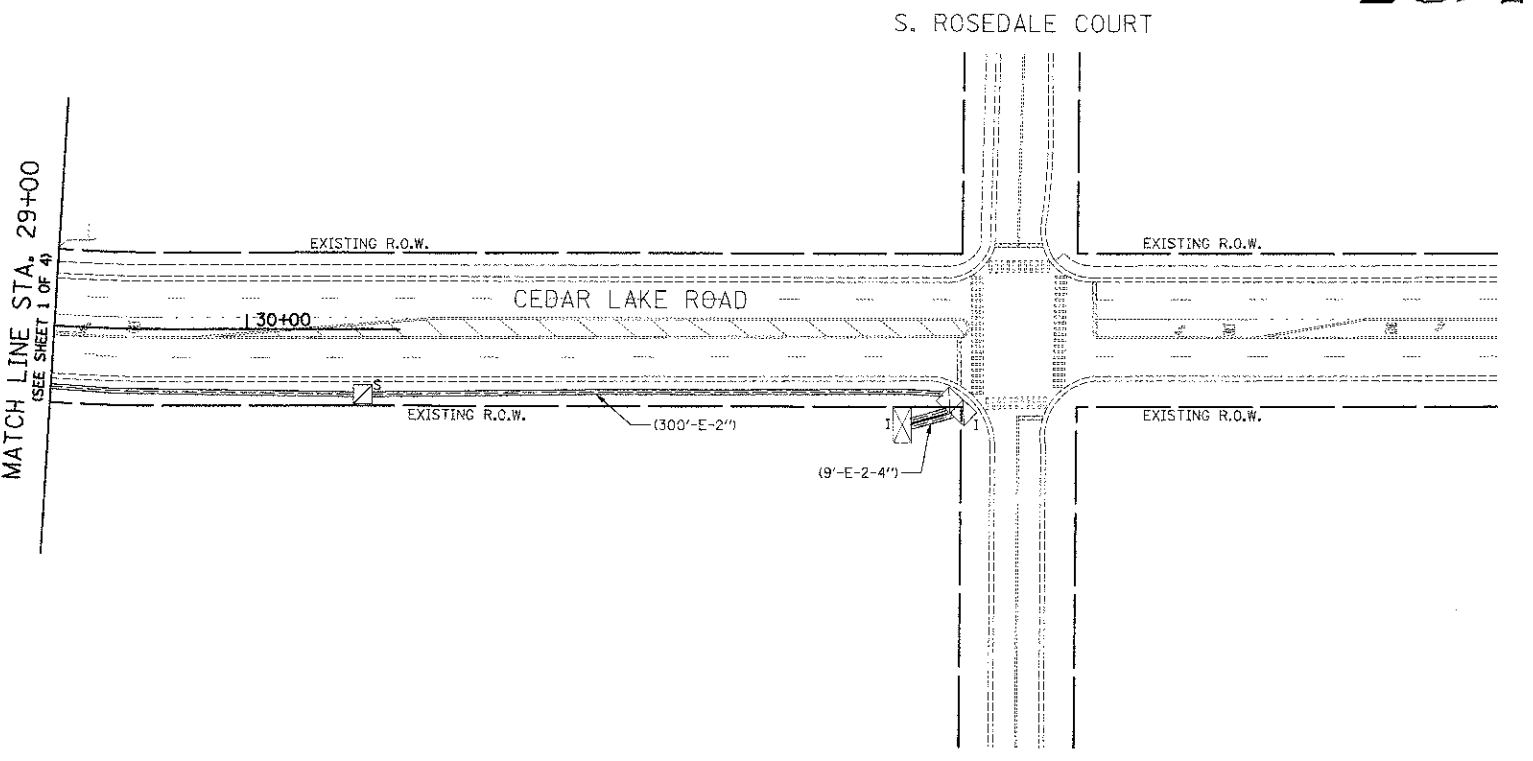
**INTERCONNECT PLAN  
CEDAR LAKE ROAD  
HART ROAD TO S. ROSEDALE ROAD**  
SCALE: 1" = 50'  
SHEET NO. 1 OF 4 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D187	05-00121-07-WR	LAKE	223	128
				CONTRACT NO. 63765
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

FINAL	SUBMITTED	DATE
SHEETS	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	AREAS CHECKED	

ORIGINAL	SUBMITTED	DATE
SHEETS	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	AREAS CHECKED	

MATCH LINE STA. 29+00  
(SEE SHEET 1 OF 4)



**INTERCONNECT NOTES**

1. THE EMPTY CONDUIT ALONG WASHINGTON STREET FROM CEDAR LAKE ROAD TO WEST OF HAINESVILLE ROAD SHALL INCLUDE A PULL STRING FOR FUTURE FIBER OPTIC CABLE INSTALLATION.

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DESIGNED - BRD	REVISED -
DRAWN - MFB	REVISED -
CHECKED - JJE	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

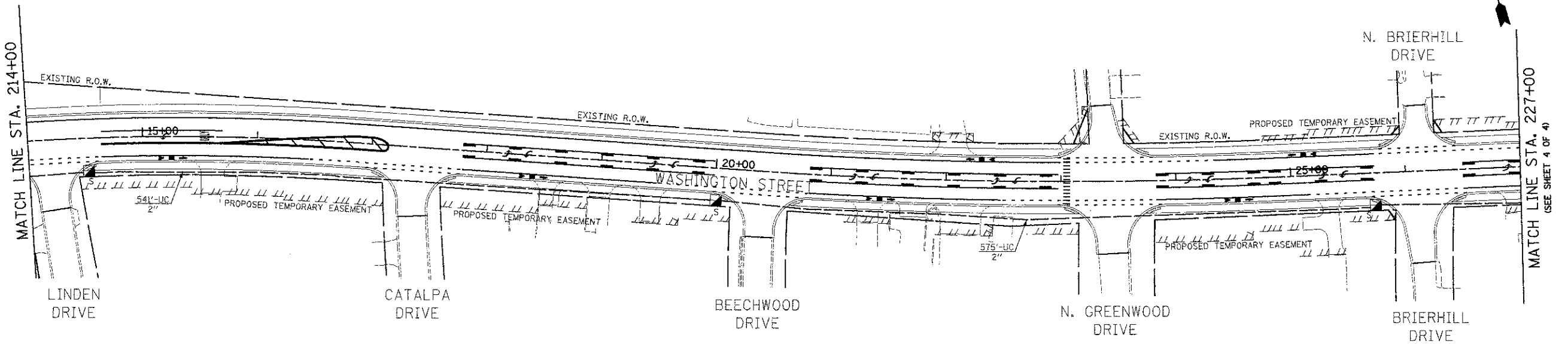
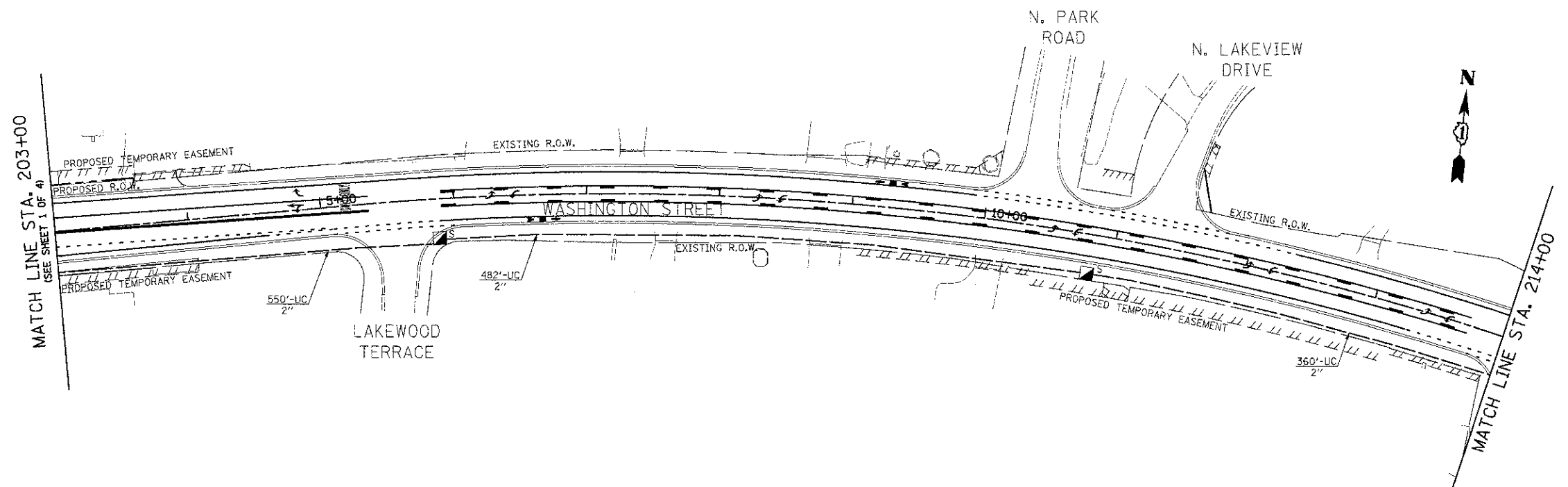
**INTERCONNECT PLAN  
CEDAR LAKE ROAD  
HART ROAD TO S. ROSEDALE ROAD**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	129
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63765	

SCALE: 1" = 50' SHEET NO. 2 OF 4 SHEETS

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	



**INTERCONNECT NOTES**

1. THE EMPTY CONDUIT ALONG WASHINGTON STREET FROM CEDAR LAKE ROAD TO WEST OF HAINESVILLE ROAD SHALL INCLUDE A PULL STRING FOR FUTURE FIBER OPTIC CABLE INSTALLATION.

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DESIGNED - BRD	REVISED -
DRAWN - MF8	REVISED -
CHECKED - JJE	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

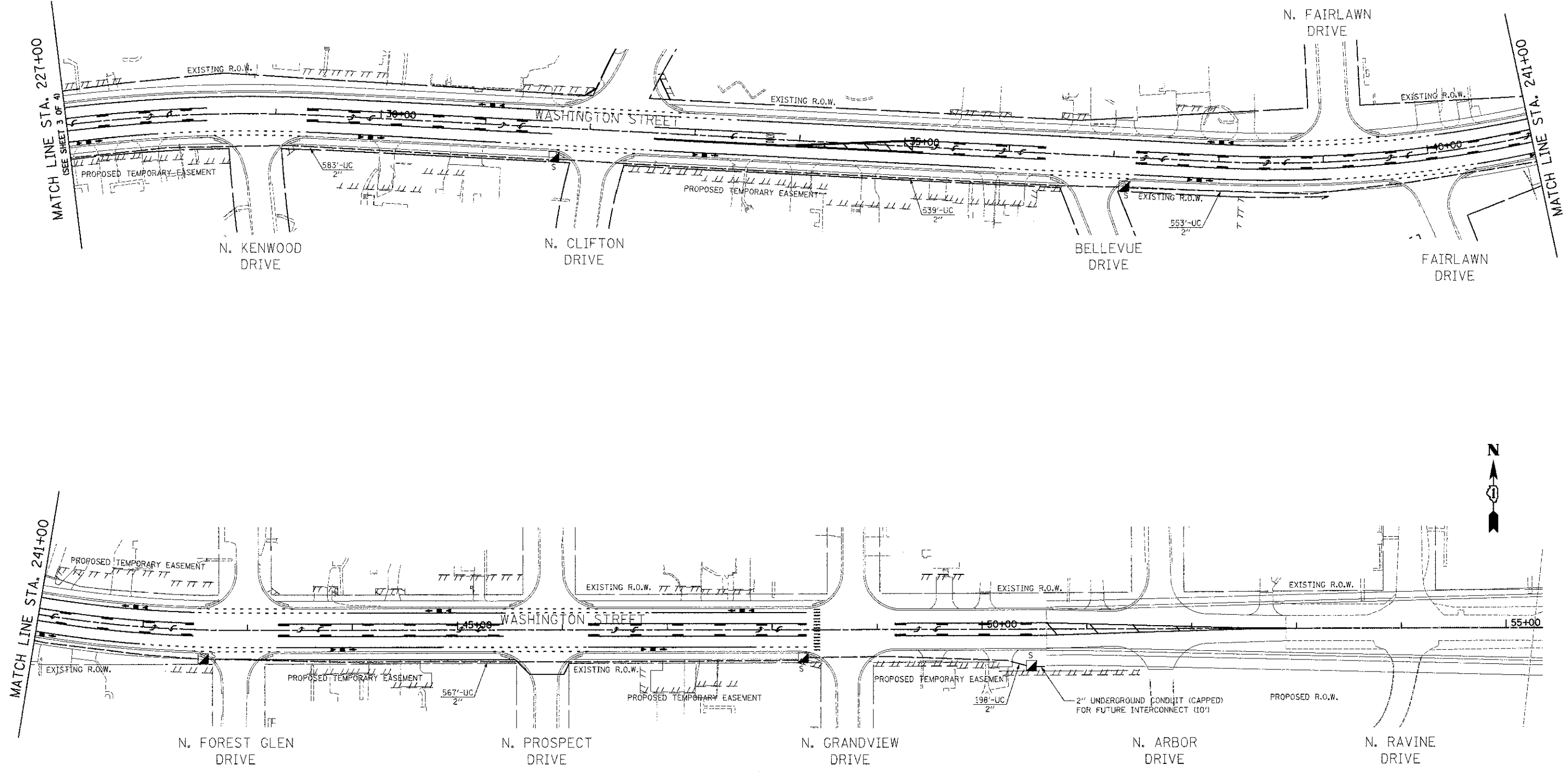
**INTERCONNECT PLAN  
 WASHINGTON STREET  
 CEDAR LAKE ROAD TO HAINESVILLE ROAD**

SCALE: 1" = 50' SHEET NO. 3 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	130
				CONTRACT NO. 63765
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				

DATE	
BY	
REVISIONS	
1. SURVEY	
2. PLOTTED	
3. TEMPLATE	
4. NOTE BOOK	
5. AREAS CHECKED	

DATE	
BY	
REVISIONS	
1. SURVEY	
2. PLOTTED	
3. TEMPLATE	
4. NOTE BOOK	
5. AREAS CHECKED	



**INTERCONNECT NOTES**

- THE EMPTY CONDUIT ALONG WASHINGTON STREET FROM CEDAR LAKE ROAD TO WEST OF HAINESVILLE ROAD SHALL INCLUDE A PULL STRING FOR FUTURE FIBER OPTIC CABLE INSTALLATION.

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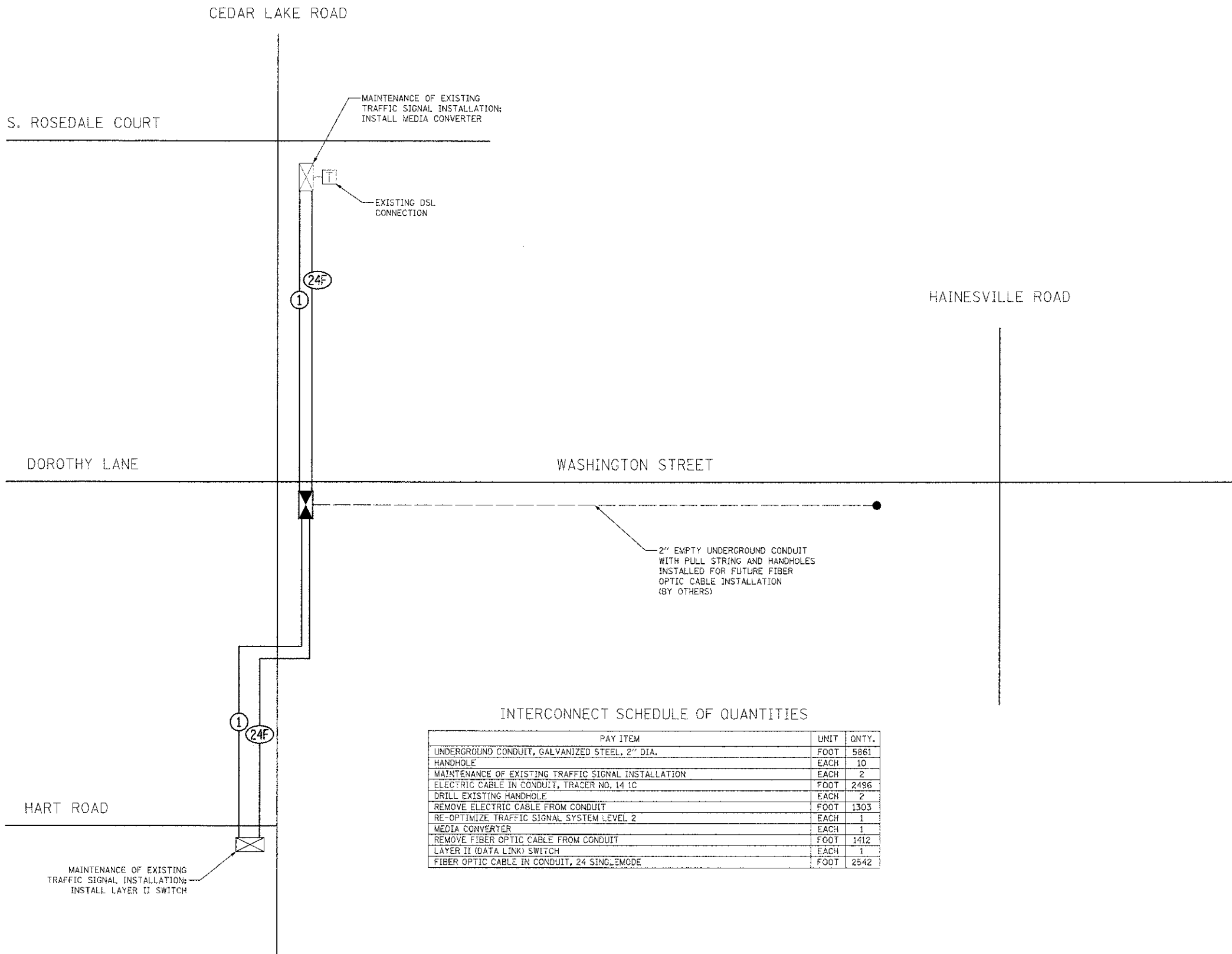
DESIGNED - BRD	REVISED -
DRAWN - MFB	REVISED -
CHECKED - JJE	REVISED -
DATE - 12/17/2012	REVISED -

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

**INTERCONNECT PLAN**  
**WASHINGTON STREET**  
**CEDAR LAKE ROAD TO HAINESVILLE ROAD**  
 SCALE: 1" = 50' SHEET NO. 4 OF 4 SHEETS

F.A.U. RTE. 0187	SECTION 05-00121-07-WR	COUNTY LAKE	TOTAL SHEETS 223	SHEET NO. 131
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

CONTRACT NO. 63765



INTERCONNECT SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QNTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	5861
HANDHOLE	EACH	10
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	2496
DRILL EXISTING HANDHOLE	EACH	2
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1303
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	1
MEDIA CONVERTER	EACH	1
REMOVE FIBER OPTIC CABLE FROM CONDUIT	FOOT	1412
LAYER II (DATA LINK) SWITCH	EACH	1
FIBER OPTIC CABLE IN CONDUIT, 24 SING. MODE	FOOT	2542

DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
NO.	

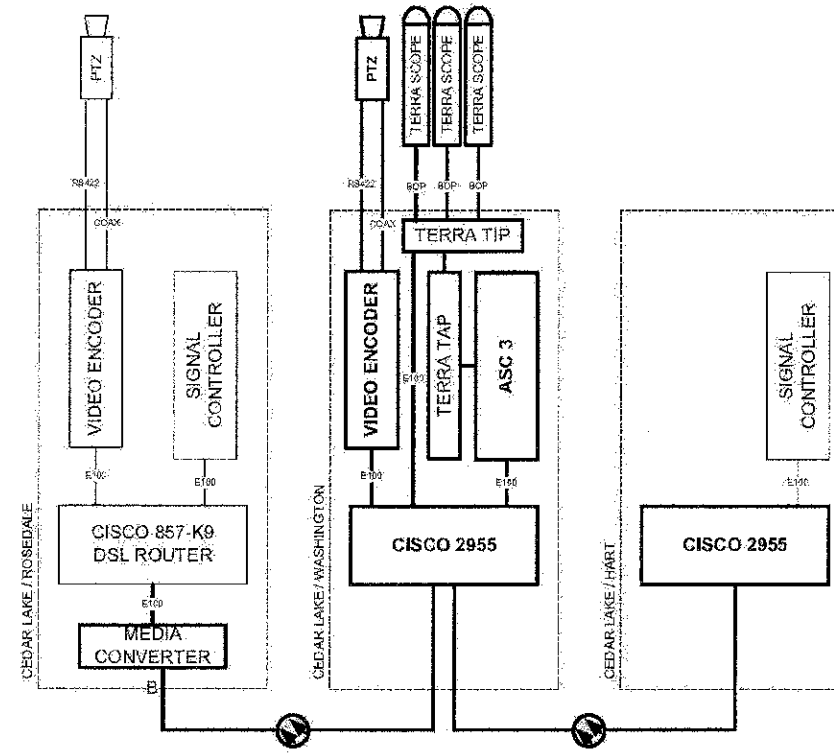
DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

NOTE:  
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DATE	
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APPROVED	
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CLIENT:



VS.0	12/10	QUENTIN/ENSELL
DATE		
FILE NAME		FILE\$

DWG. NO.	DJG	3/12
DRAWN	DJG	3/12
CHECKED	DJG	3/12
SCALE	NOT TO SCALE	
DATE	3/28/2012	

PROJECT NO. LAKE COUNTY ATMS FINAL DESIGN AND INTEGRATION

SHEET OF DRAWING I.G. CABINET DETAIL - WASHINGTON / CEDAR LAKE

**CIVILTECH**  
450 E Devon Ave, Suite 300  
Itasca, Illinois 60143  
Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

DESIGNED	- BRD	REVISED	-
DRAWN	- MFB	REVISED	-
CHECKED	- JJE	REVISED	-
DATE	- 12/17/2012	REVISED	-

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

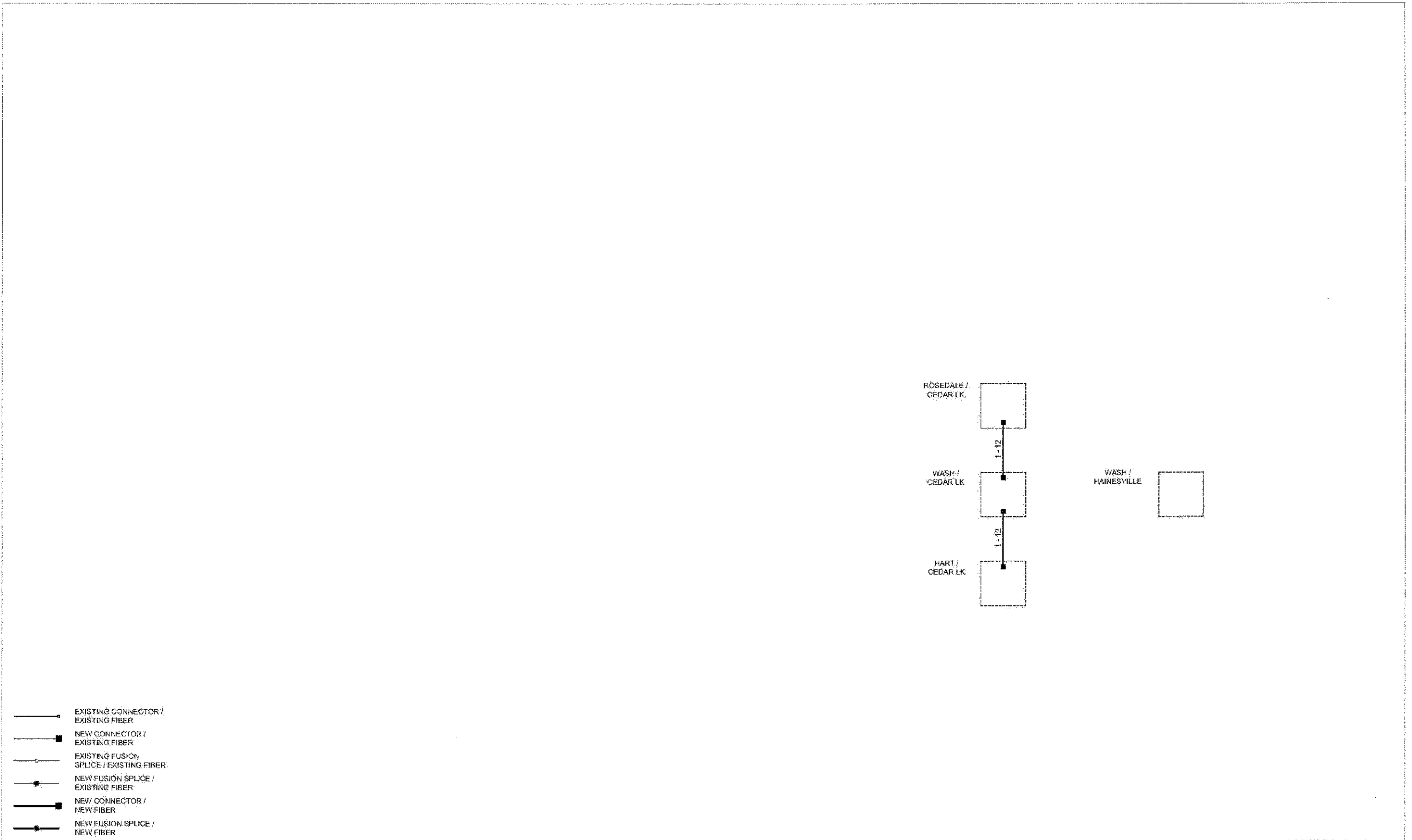
**LAKE COUNTY ATMS  
TRAFFIC SIGNAL CABINET DETAIL  
WASHINGTON STREET & CEDAR LAKE ROAD**

SHEET NO. 1 OF 1 SHEETS

F.A.U. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	133
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

FINAL SURVEY	DATE
IS REVISIONS	
NOTE BOOK	
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ORIGINAL SURVEY	DATE
IS REVISIONS	
NOTE BOOK	
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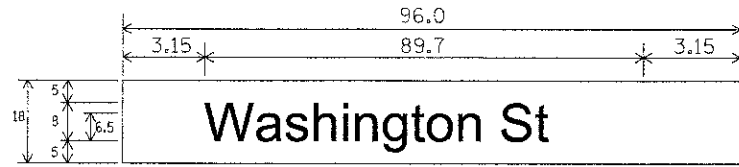


- EXISTING CONNECTOR / EXISTING FIBER
- NEW CONNECTOR / EXISTING FIBER
- EXISTING FUSION SPLICE / EXISTING FIBER
- NEW FUSION SPLICE / EXISTING FIBER
- NEW CONNECTOR / NEW FIBER
- NEW FUSION SPLICE / NEW FIBER

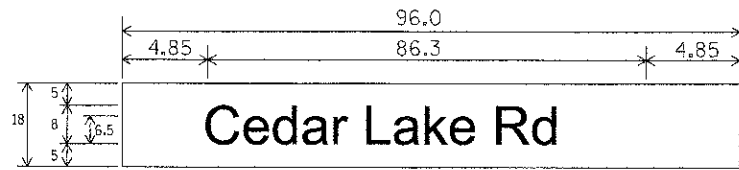
		NO. 10710	QUENTIN / ENSELL	DESIGN	DJG	3/12	TITLE: LAKE COUNTY ATMS FINAL DESIGN AND INTEGRATION	PROJECT NO.
				DRAWN	DJG	3/12		
				CHECKED	DJG	3/12	FIBER SPLICING DIAGRAM WASHINGTON / CEDAR LAKE	SHEET OF
				SCALE	NOT TO SCALE			DRAWING NO.
		DATE		DATE		3/28/2012		

**NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS.**

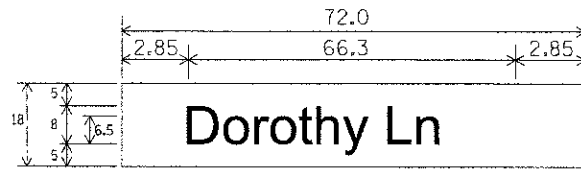
L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGNS



**12.0** SQ. FT. EACH  
**1** REQUIRED (DOUBLE SIDED)  
 \_\_\_\_\_ REQUIRED (SINGLE SIDED)  
 CLEARVIEW HWY S-W-R FONT



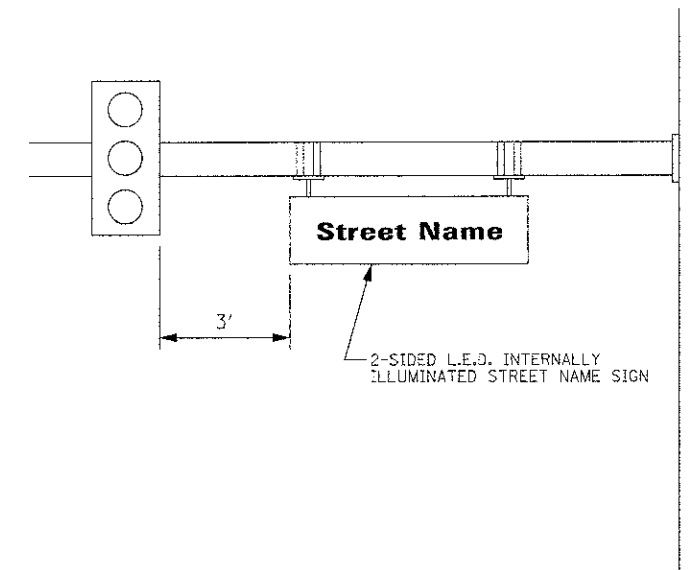
**12.0** SQ. FT. EACH  
**2** REQUIRED (DOUBLE SIDED)  
 \_\_\_\_\_ REQUIRED (SINGLE SIDED)  
 CLEARVIEW HWY S-W-R FONT



**9.0** SQ. FT. EACH  
**1** REQUIRED (DOUBLE SIDED)  
 \_\_\_\_\_ REQUIRED (SINGLE SIDED)  
 CLEARVIEW HWY S-W-R FONT

ALL DIMENSIONS SHOWN IN INCHES

NOTE: L.E.D. ILLUMINATED STREET NAME SIGNS AVAILABLE ONLY IN 2 FOOT INCREMENTS



DATE	
BY	
CHECKED	
DESIGNED	
PLOTTED	
TEMP. AREAS	
AREAS CHECKED	
NO.	

DATE	
BY	
CHECKED	
DESIGNED	
PLOTTED	
TEMP. AREAS	
AREAS CHECKED	
NO.	

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DESIGNED - BRD	REVISED -
DRAWN - MFB	REVISED -
CHECKED - JJE	REVISED -
DATE - 12/17/20:2	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

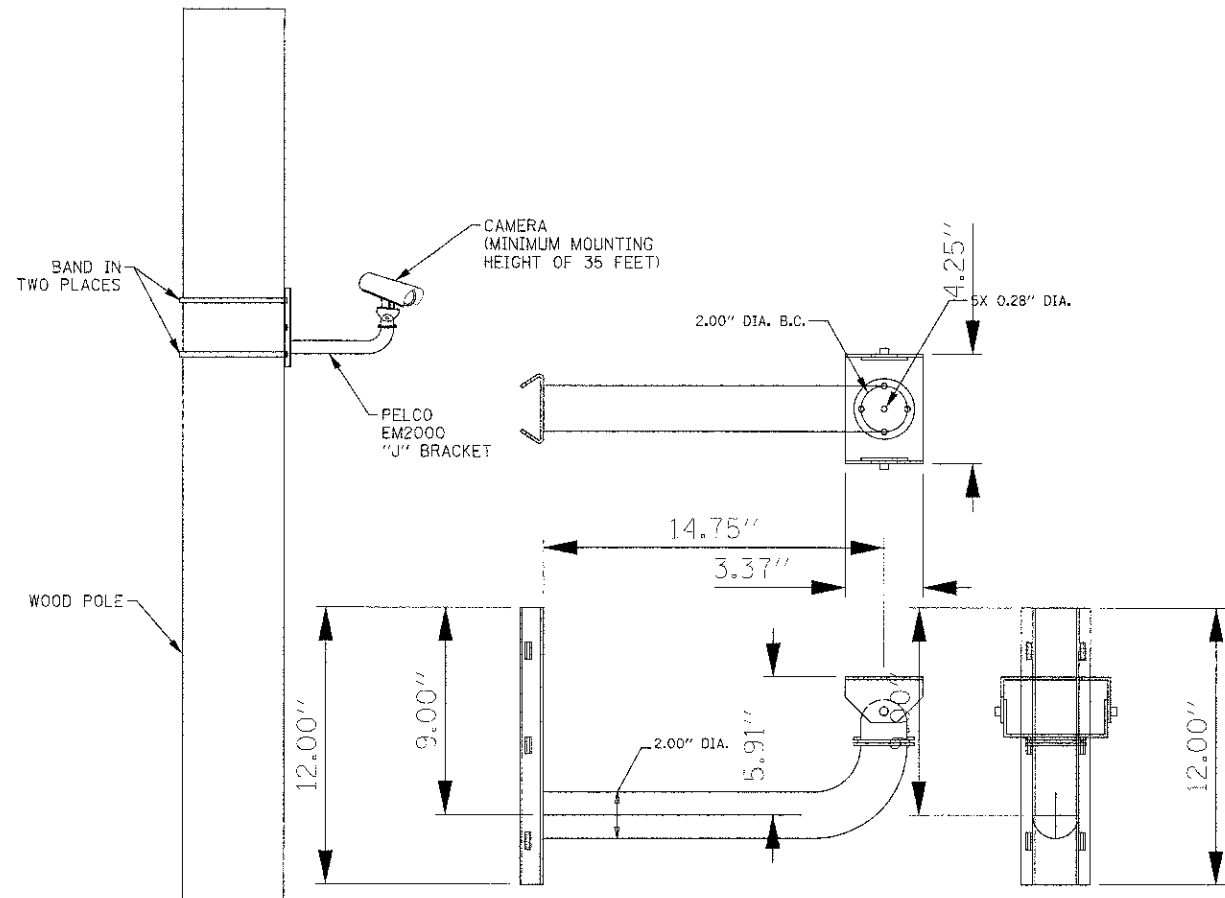
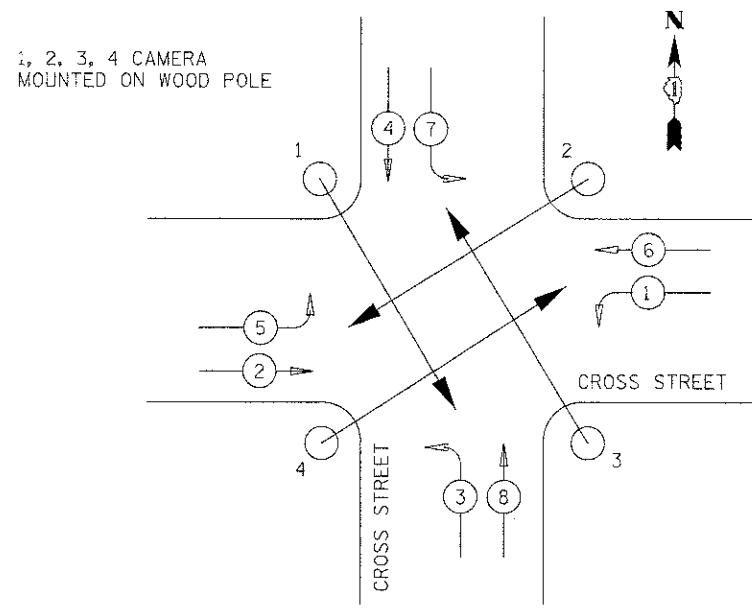
**MAST ARM MOUNTED  
 L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN DETAIL**

NO SCALE SHEET NO. 1 OF 1 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	135
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				CONTRACT NO. 63765

DATE	
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EM2000 DIMENSION DRAWING

TEMPORARY CAMERA MOUNTING DETAILS  
(NOT TO SCALE)

REVISIONS	DATE		APPROVED BY: A. KHAWAJA DATE: APRIL 1, 2007	
			<p style="text-align: center;"><b>TEMPORARY AUTOSCOPE INSTALLATION</b></p>	LC8901

F.A.U. RTE. 0187	SECTION 05-00121-07-WR	COUNTY LAKE	TOTAL SHEETS 223	SHEET NO. 136
FEDERAL ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				

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www.civiltechinc.com

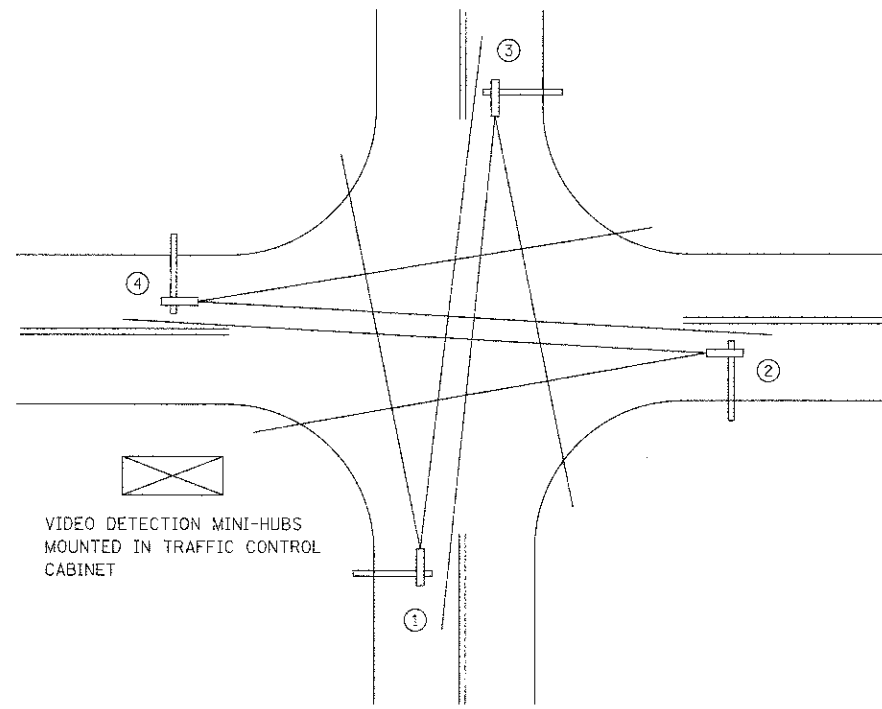
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DRAWN - MFB	REVISED -
CHECKED - JJE	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**LCDOT STANDARD 8901  
TEMPORARY AUTOSCOPE INSTALLATION DETAILS**

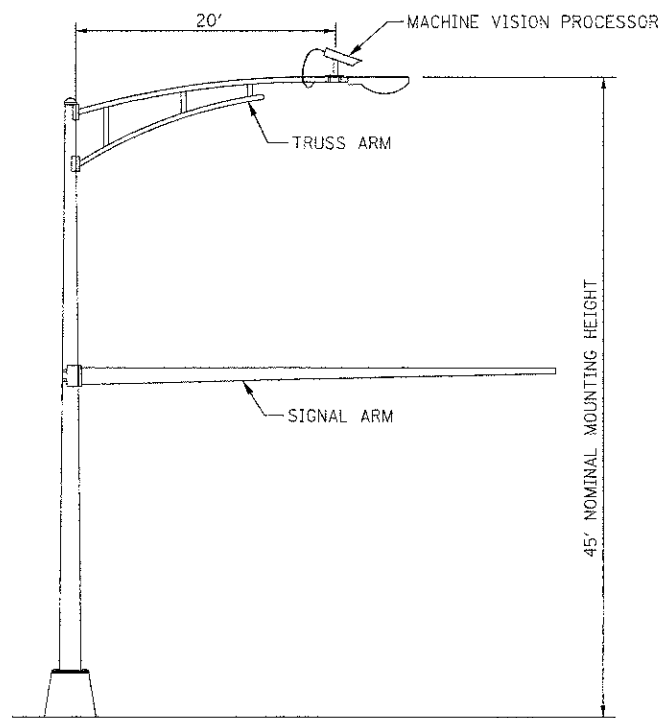
NO SCALE SHEET NO. 1 OF 1 SHEETS

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BY	
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DRAWN	MFB
CHECKED	JJE
DATE	12/17/2012
REVISIONS	
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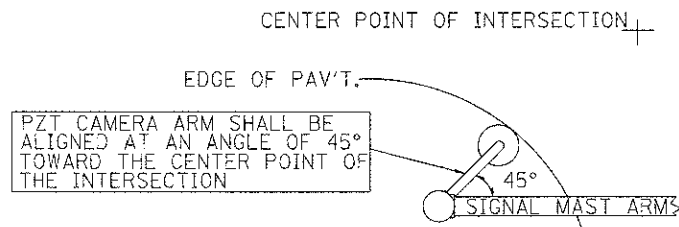


**TYPICAL VIDEO VEHICLE DETECTION SYSTEM**  
(NOT TO SCALE)

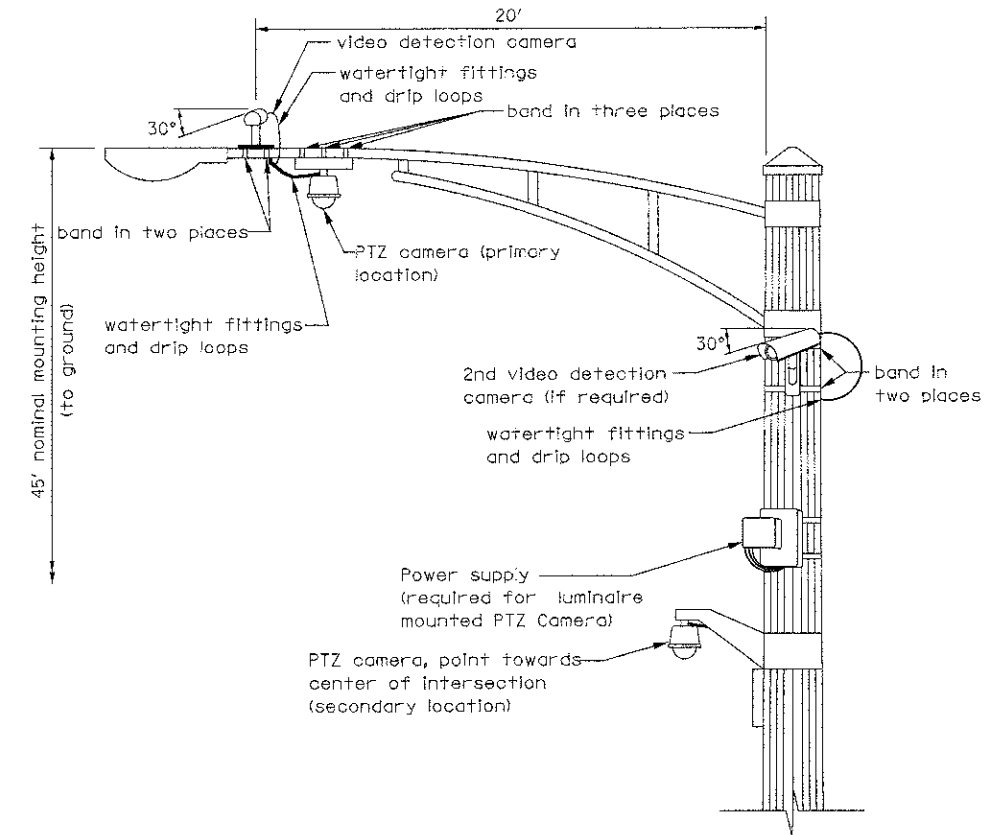
(4) MACHINE VISION PROCESSOR ASSEMBLIES AND BRACKETS ① ② ③ ④  
POWER CABLE TO EACH MACHINE VISION PROCESSOR (24 VAC)



**COMBINATION MAST ARM ASSEMBLY AND POLE DIMENSIONS**  
(NOT TO SCALE)

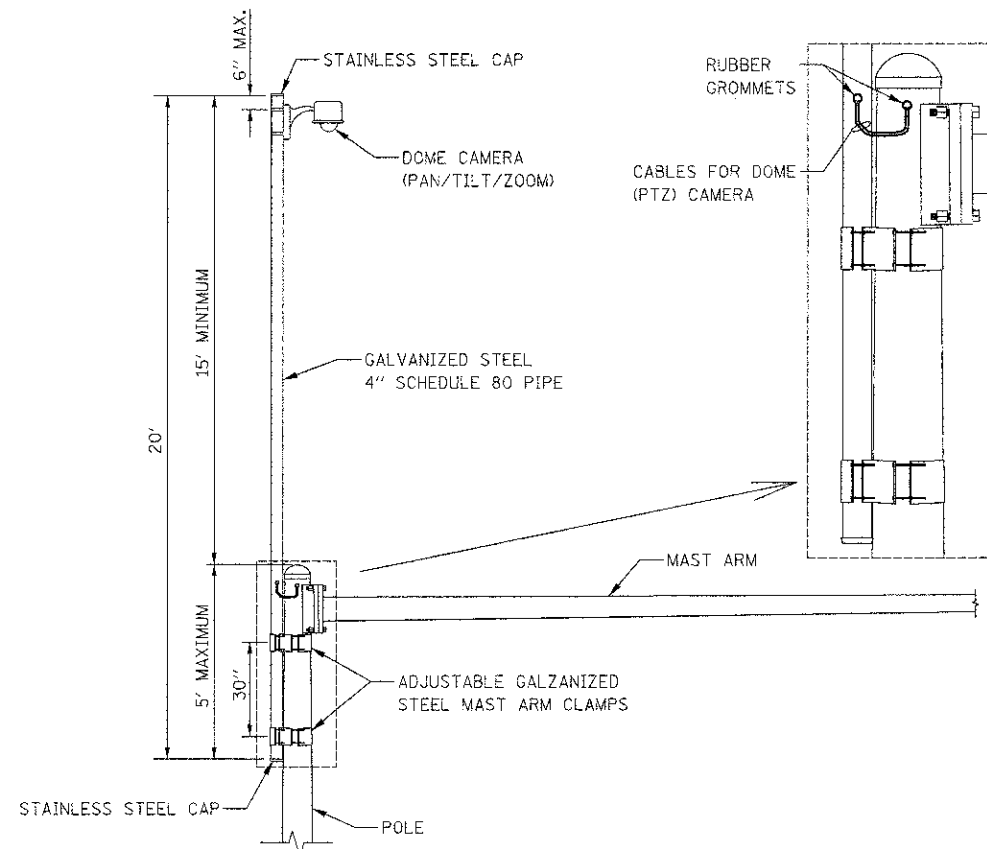


**IMAGE SENSOR MOUNTING DETAILS**  
(NO SCALE)



**VIDEO DETECTION CAMERA(S) AND DOME (PTZ) CAMERA MOUNTING DETAIL**  
(NOT TO SCALE)

- NOTES FOR SINGLE, DUAL AND MULTIPLE MVP MOUNTING:
- MOUNT LUMINAIRE MOUNTING BRACKET AS HIGH AS POSSIBLE.
  - AIM BRACKET TOWARD DIRECTION OF TRAFFIC TO BE DETECTED.
  - MOUNT MACHINE VISION PROCESSOR AIMING DOWN AT 30 DEGREE ANGLE.



**CAMERA MOUNTING ASSEMBLY DETAIL**  
(NOT TO SCALE)

REVISIONS	DATE	APPROVED BY: A. KHAWAJA
Mounting Details Revised	5/1/08	DATE: APRIL 1, 2007
2nd Camera Locat. added	4/14/09	

**CIVILTECH**  
450 E Devon Ave, Suite 300  
Itasca, Illinois 60143  
Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

DESIGNED - BRD	REVISED -
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CHECKED - JJE	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**LCDOT STANDARD 8900  
VIDEO DETECTION DETAILS**

NO SCALE SHEET NO. 1 OF 1 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 63765				

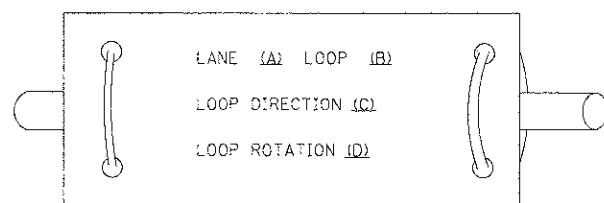
FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

108900

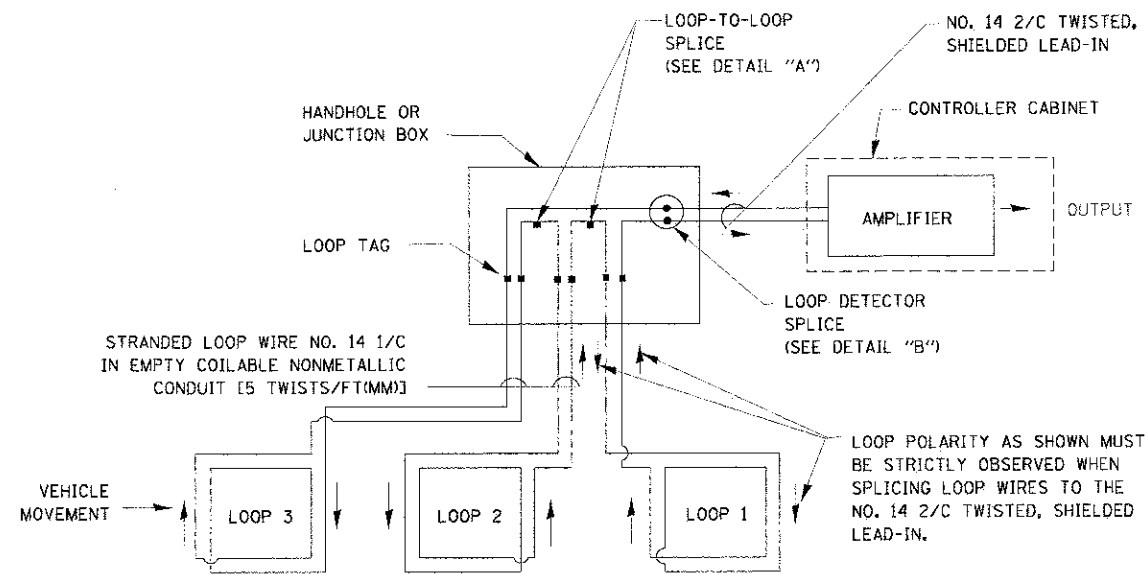
**LOOP DETECTOR NOTES**

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

**LOOP LEAD-IN CABLE TAG**

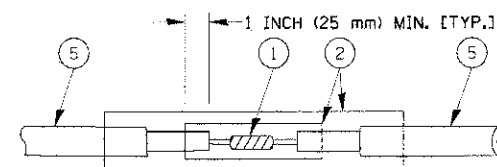


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

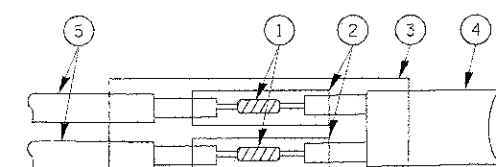


**DETECTOR LOOP WIRING SCHEMATIC**

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

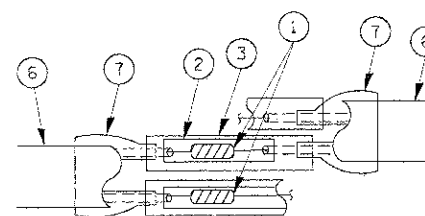


**DETAIL "A"  
LOOP-TO-LOOP SPLICE**



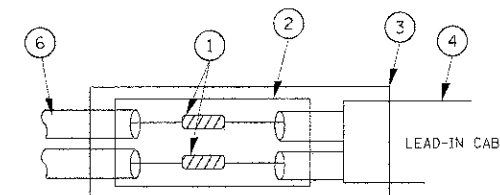
**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

**TYPE I LOOP**



**DETAIL "A"  
LOOP-TO-LOOP SPLICE**

**PREFORMED LOOP**



**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

**LOOP DETECTOR SPLICE**

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PREFORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = kenthphixayba	DESIGNED - DAD	REVISED -
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PLOT SCALE = 20,0000 / 1"	CHECKED - DAD	REVISED -	REVISED -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

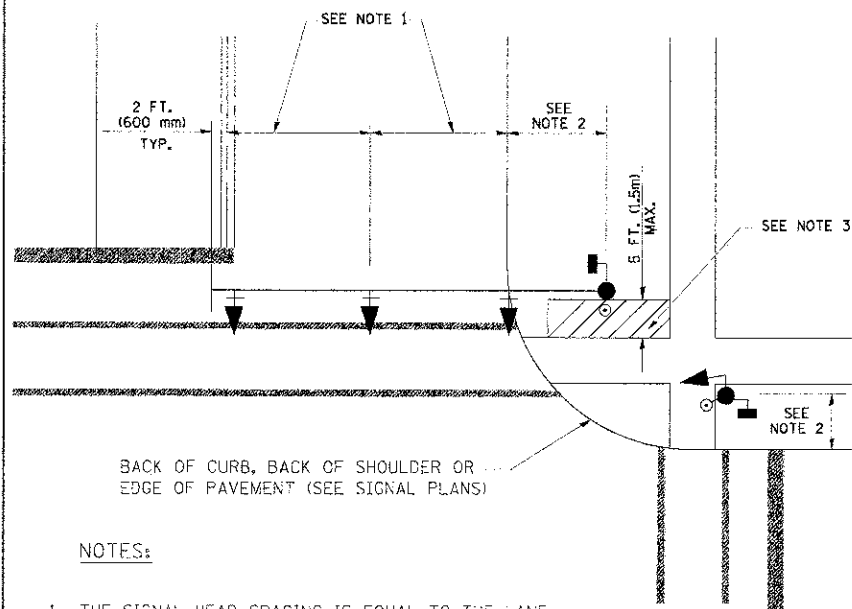
**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: SHEET NO. 1 OF 6 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	136
CONTRACT NO. 63765			ILLINOIS FED. AID PROJECT	

**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST**

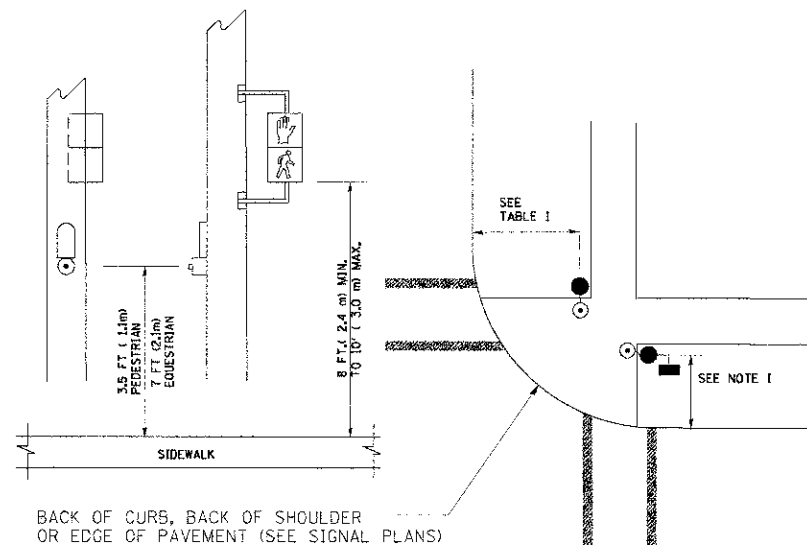
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



**NOTES:**

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

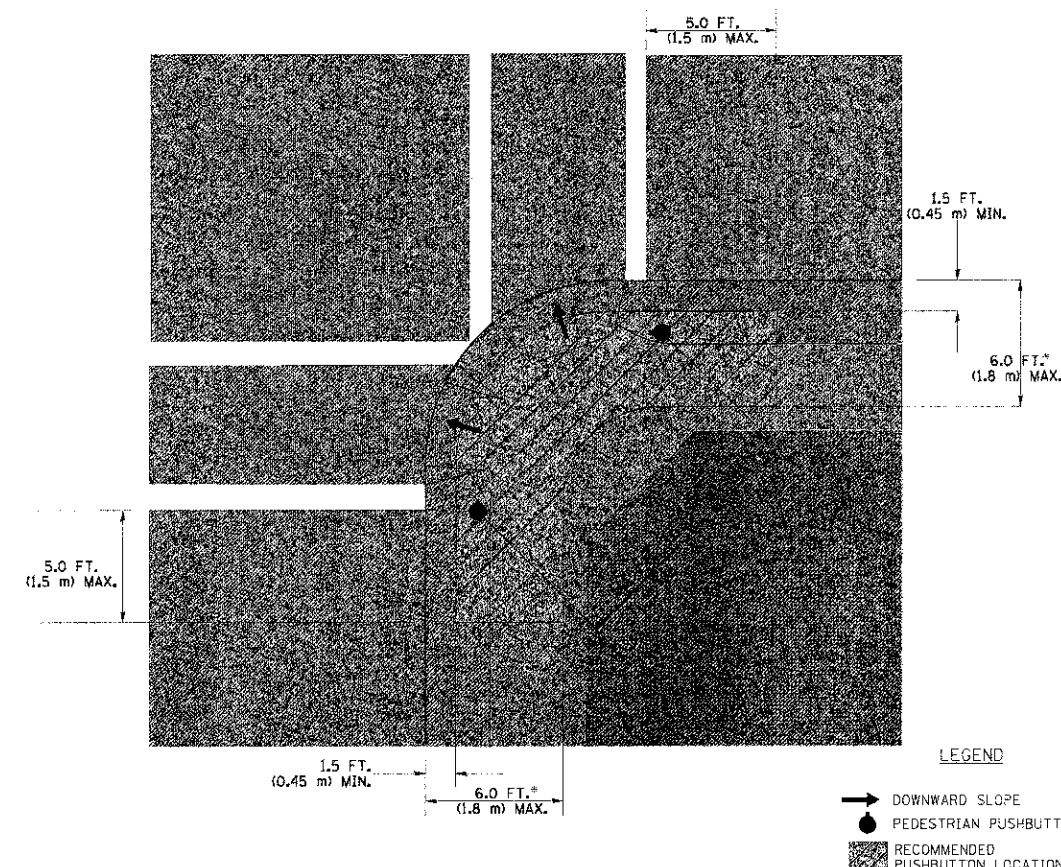
**PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST**



**NOTES:**

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

**RECOMMENDED PUSHBUTTON LOCATIONS**



- \* WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- \*\* WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

**NOTES:**

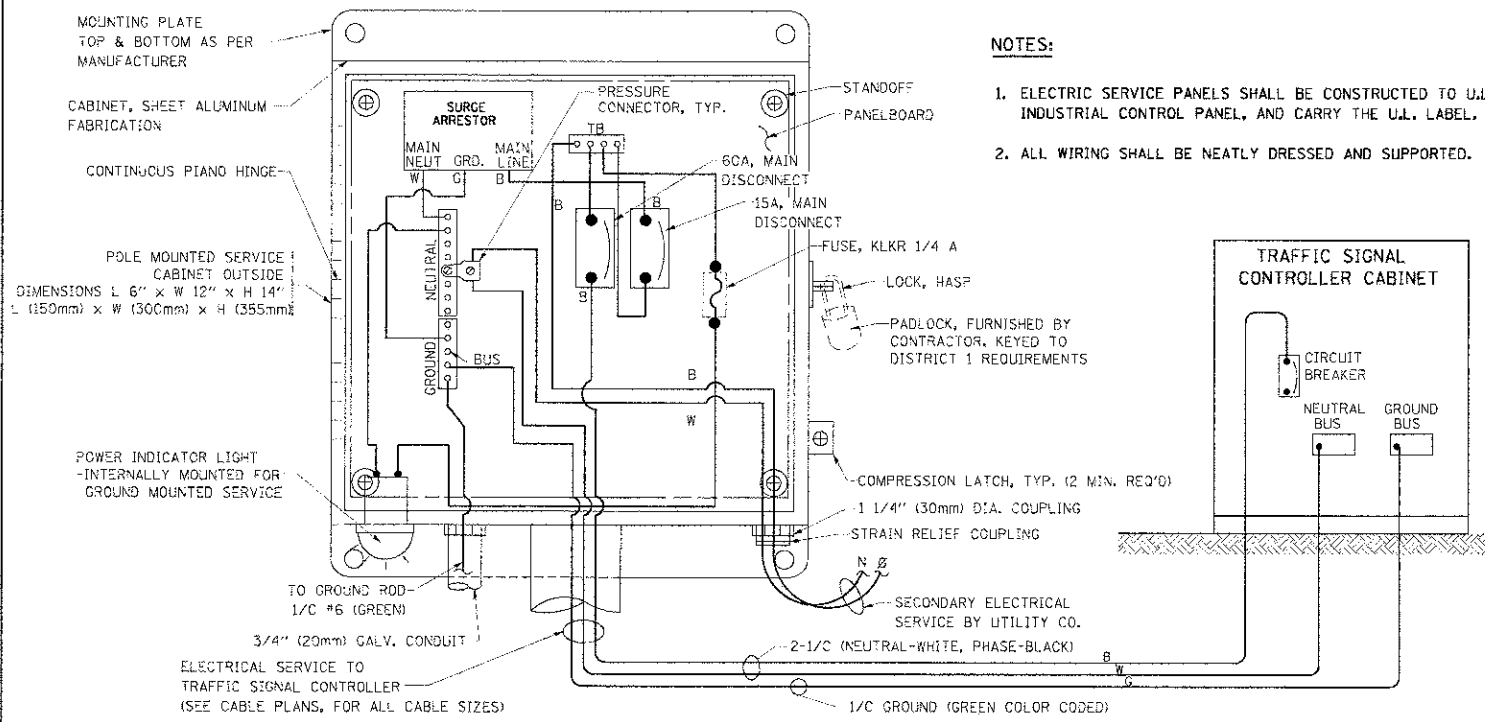
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

**TRAFFIC SIGNAL EQUIPMENT OFFSET**

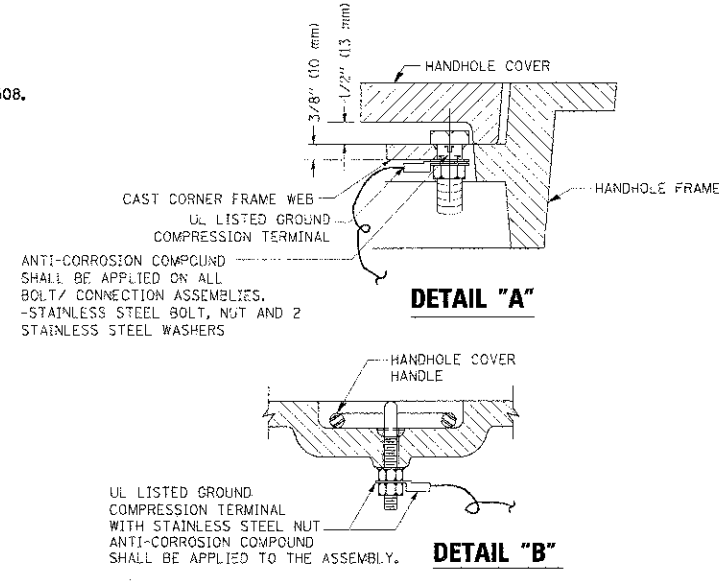
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

**NOTES:**

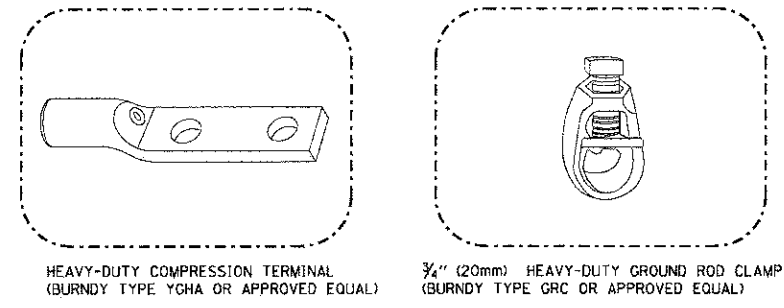
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.



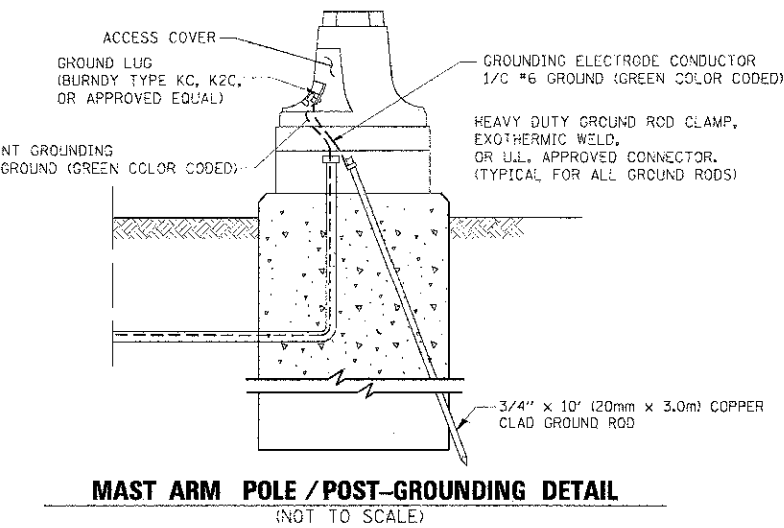
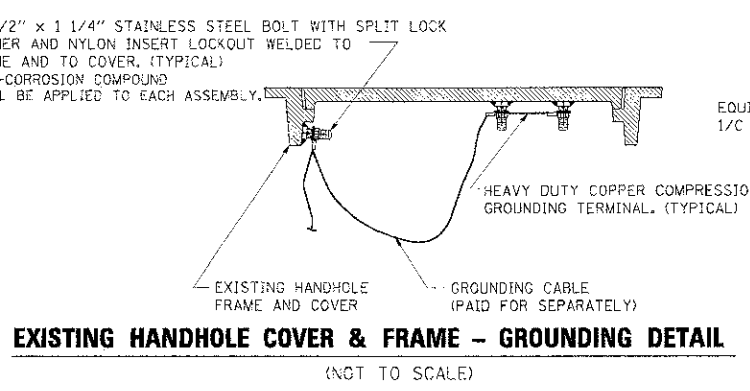
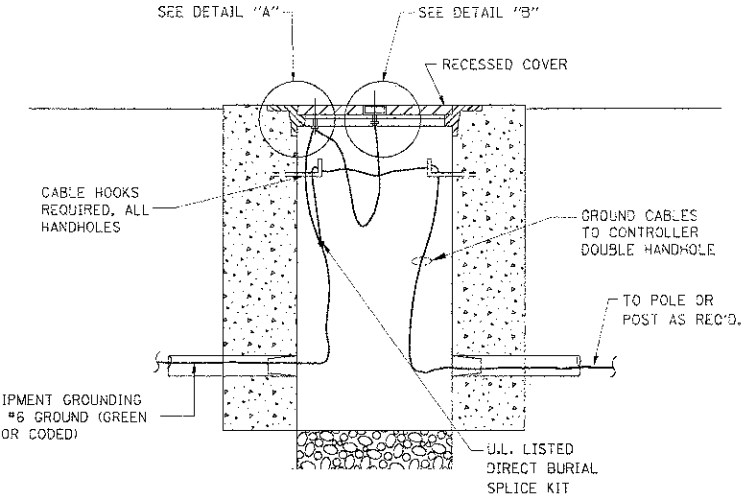
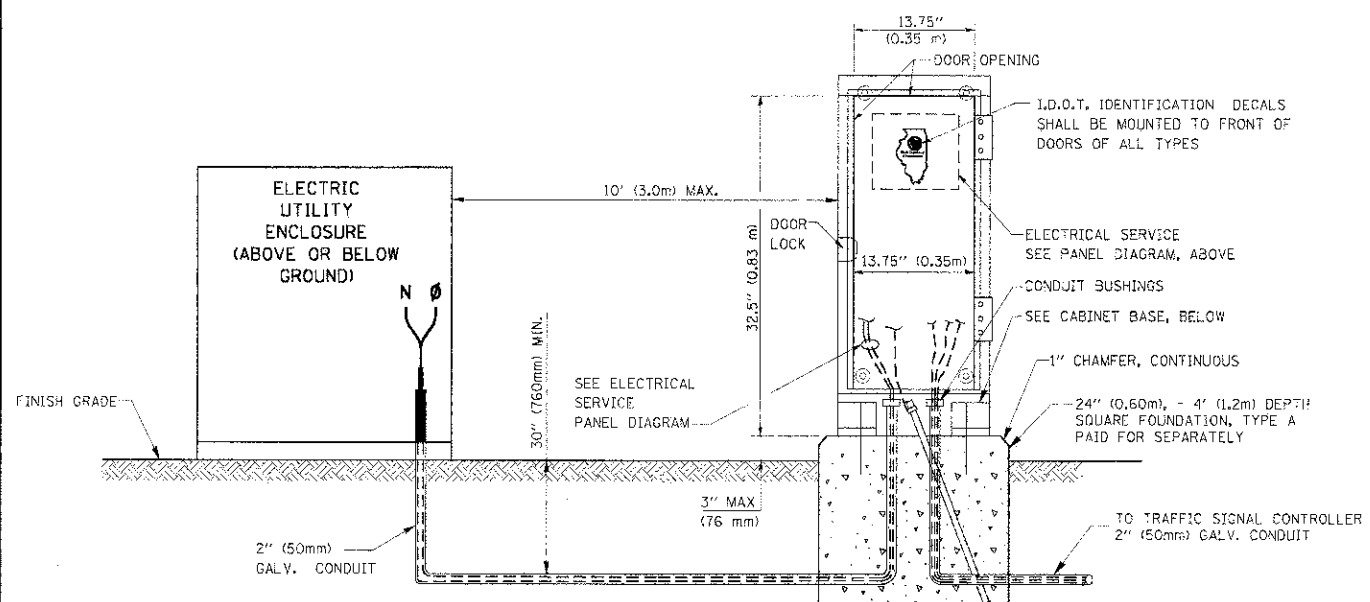
**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
 (NOT TO SCALE)



- NOTES:**
- GROUNDING SYSTEM**
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
  2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
  3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
  4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, U.L. APPROVED.
  - GROUND CABLE SHALL BE LOOPEO OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



**SERVICE INSTALLATION GROUND MOUNT**  
 (NOT TO SCALE)

**CABINET - BASE BOLT PATTERN**  
 (NOT TO SCALE)

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	PLT DATE = 10/16/2009	DATE - 10/28/09	REVISED -

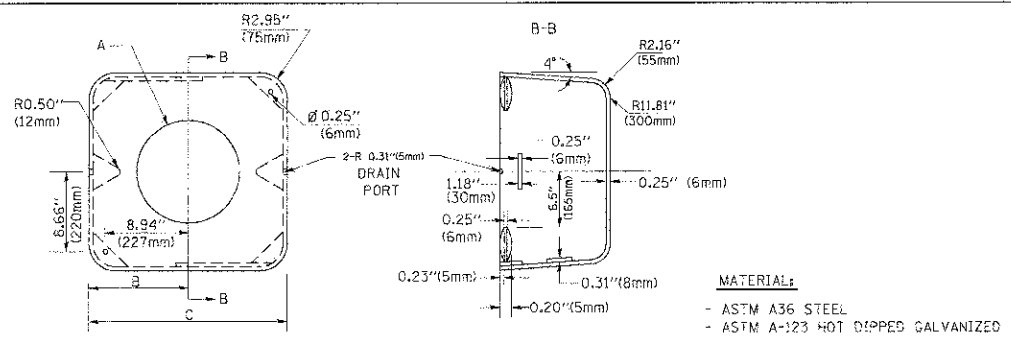
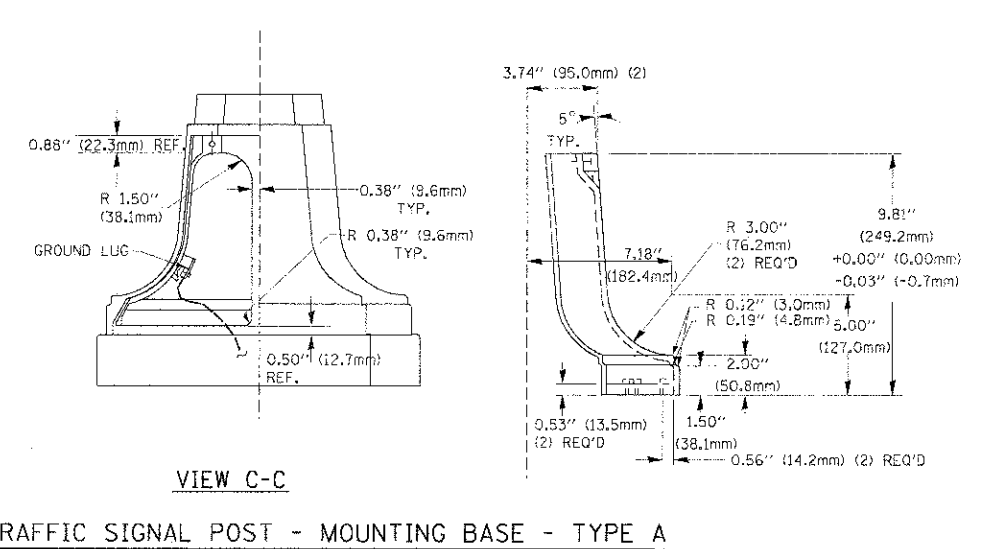
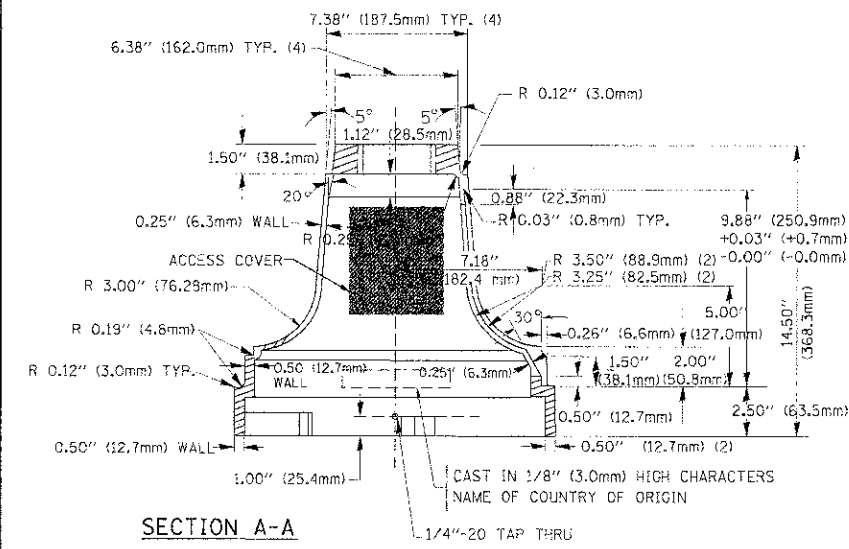
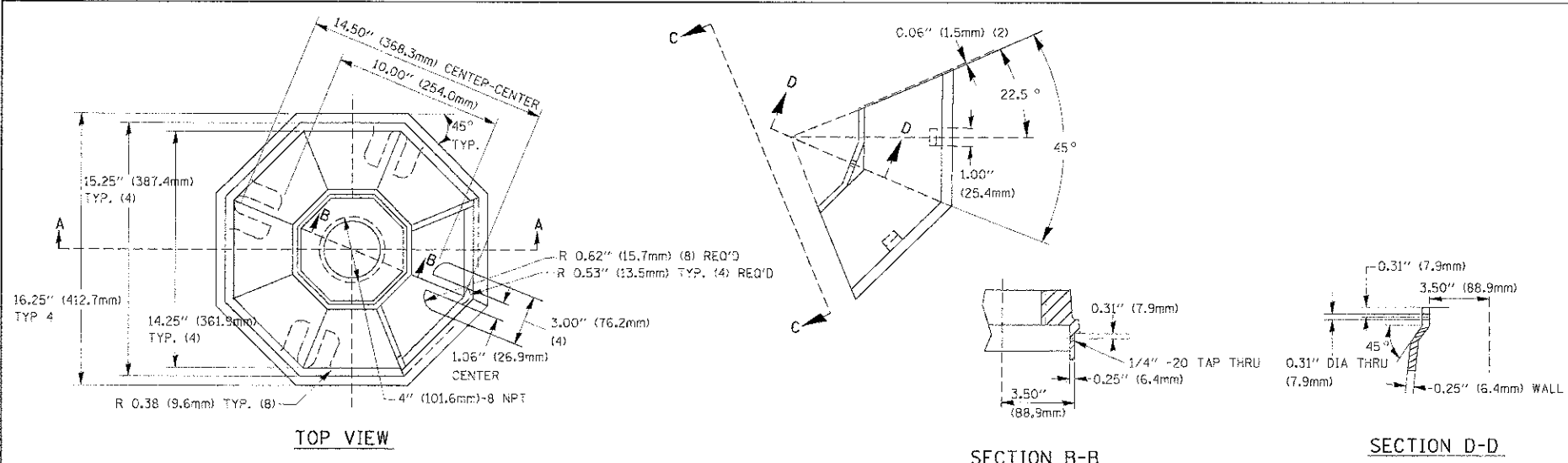
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1**  
**STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

P.L.D. RTE.	SECTION	COUNTY	TOTAL SHEET
0187	05-00121-07-WR	LAKE	223 / 140
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT			CONTRACT NO. 63765

SCALE: SHEET NO. 3 OF 6 SHEETS STA. TO STA.

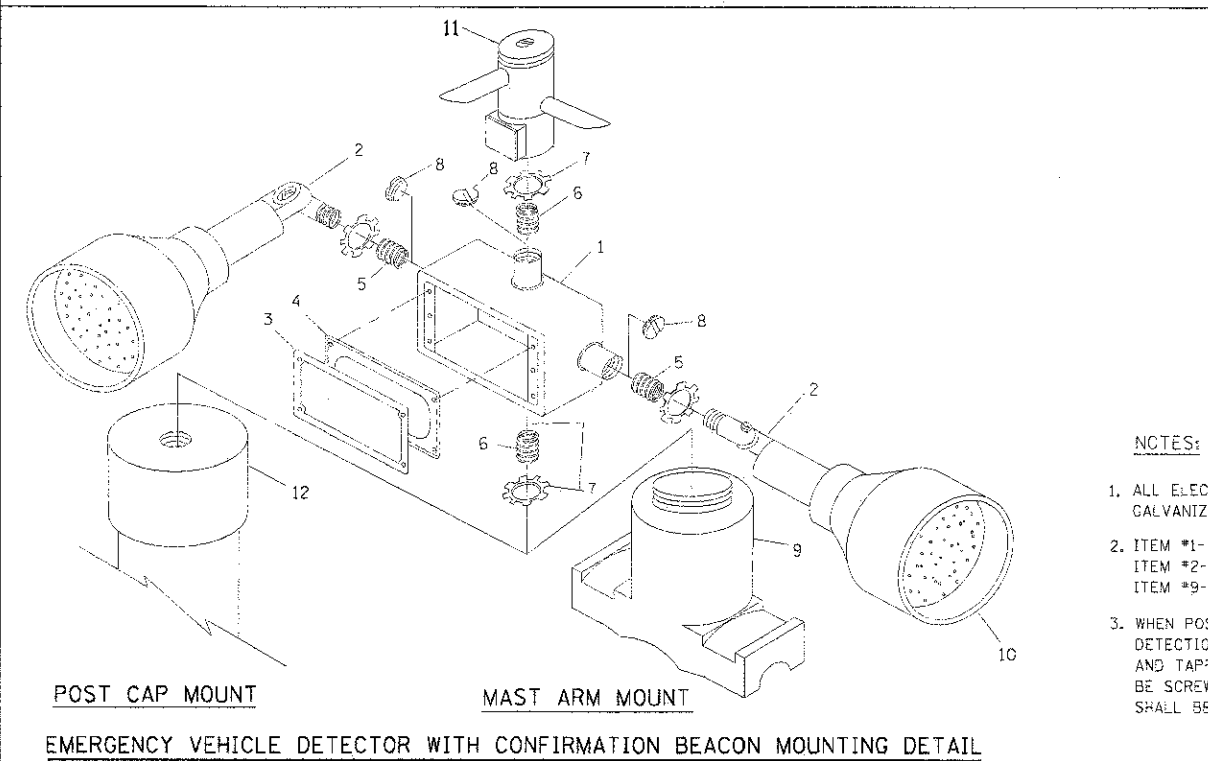




A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\" (241mm)	19\" (483mm)	7\" (178mm) - 12\" (300mm)	53 lbs (24kg)
VARIABLES	10.75\" (273mm)	21.5\" (546mm)	7\" (178mm) - 12\" (300mm)	68 lbs (31 kg)
VARIABLES	13.0\" (330mm)	26\" (660mm)	7\" (178mm) - 12\" (300mm)	81 lbs (37 kg)
VARIABLES	18.5\" (470mm)	37\" (940mm)	7\" (178mm) - 12\" (300mm)	126 lbs (57 kg)

**NOTES:**

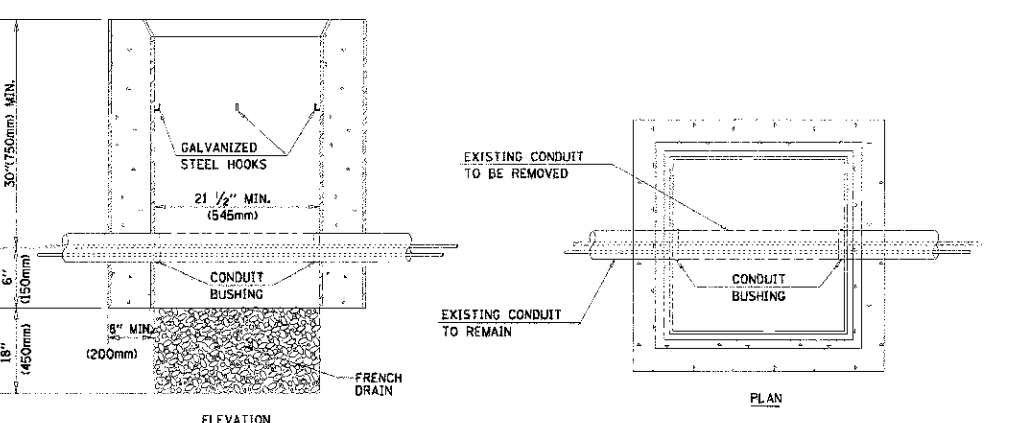
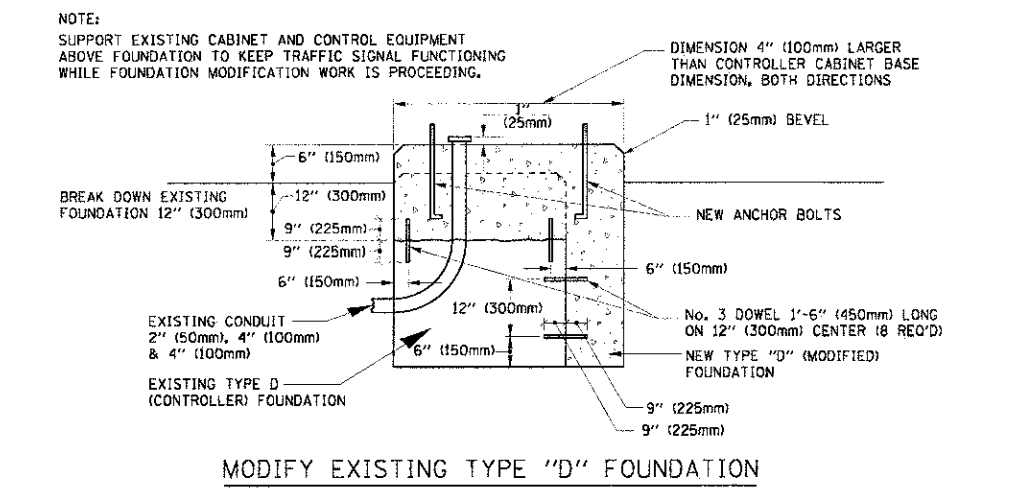
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



ITEM NO.	IDENTIFICATION
1	OUTLET BOX - GALV. 21 CLIN. (0.00034 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\" (19 mm) CLOSE NIPPLE
7	3/4\" (19 mm) LOCKNUT
8	3/4\" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP (18 FT. (5.4 m) POST MIN.)

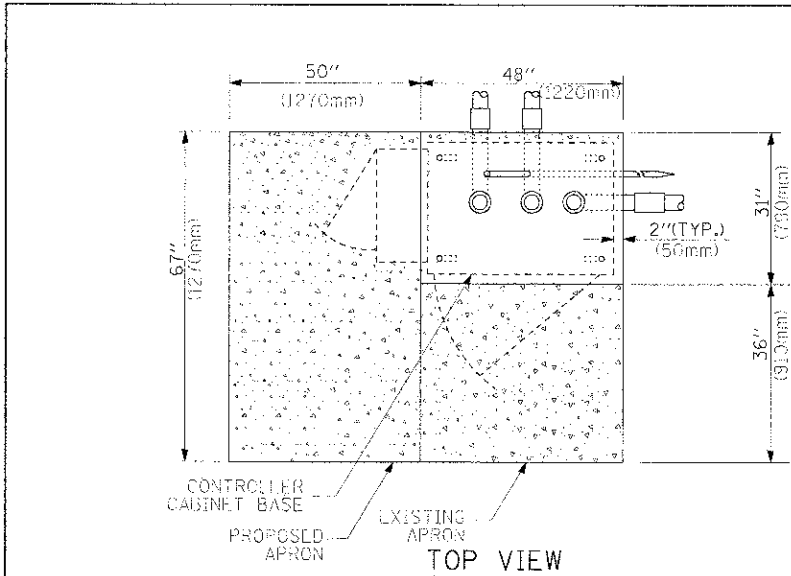
**NOTES:**

- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT  
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4\" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

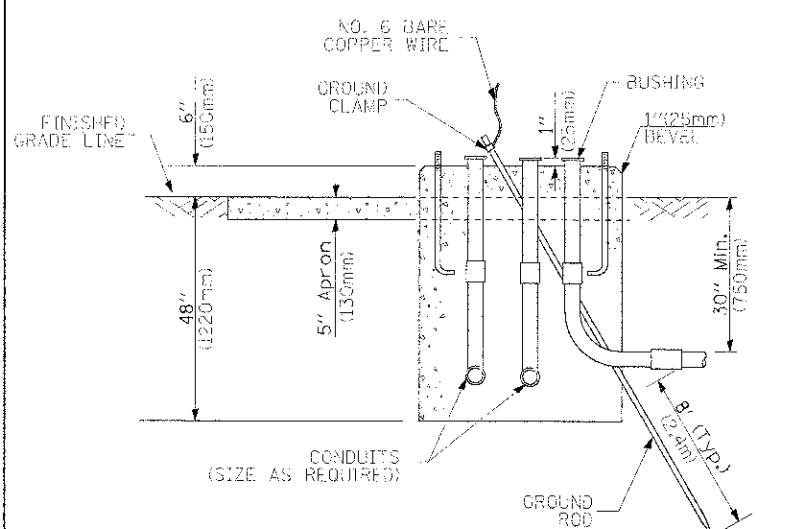


**NOTES:**

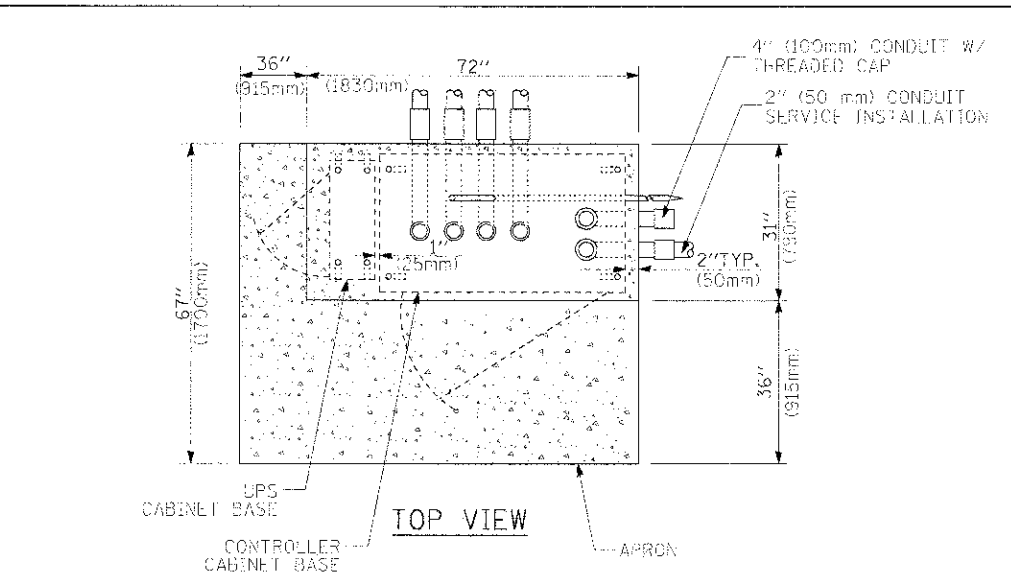
- HAND-OLE CONSTRUCTED PER STATE STANDARD 814001.
- REMOVAL OF THE EXISTING CONDUIT FROM THE HAND-OLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HAND-OLE.



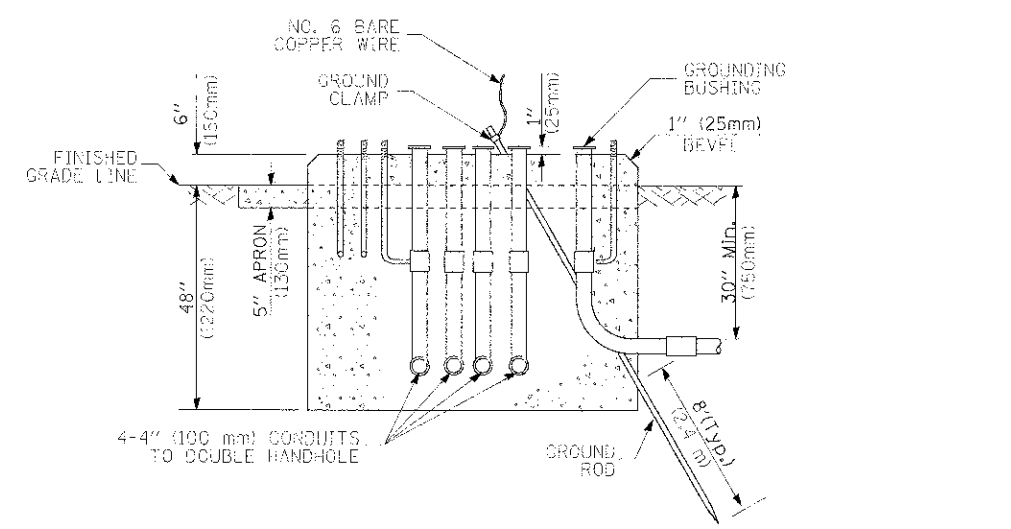
TOP VIEW



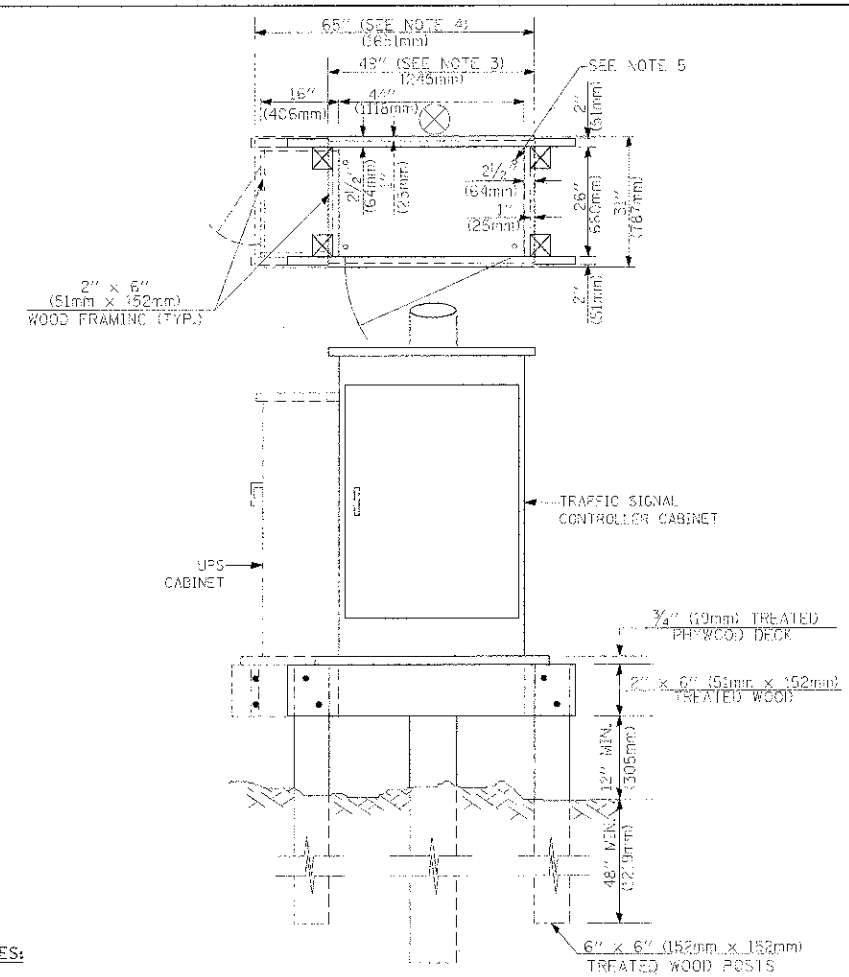
TYPE D  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET



TOP VIEW



TYPE C  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET



- NOTES:
1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
  2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
  3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
  4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
  5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
  6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

TEMPORARY SIGNAL CONTROLLER  
WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

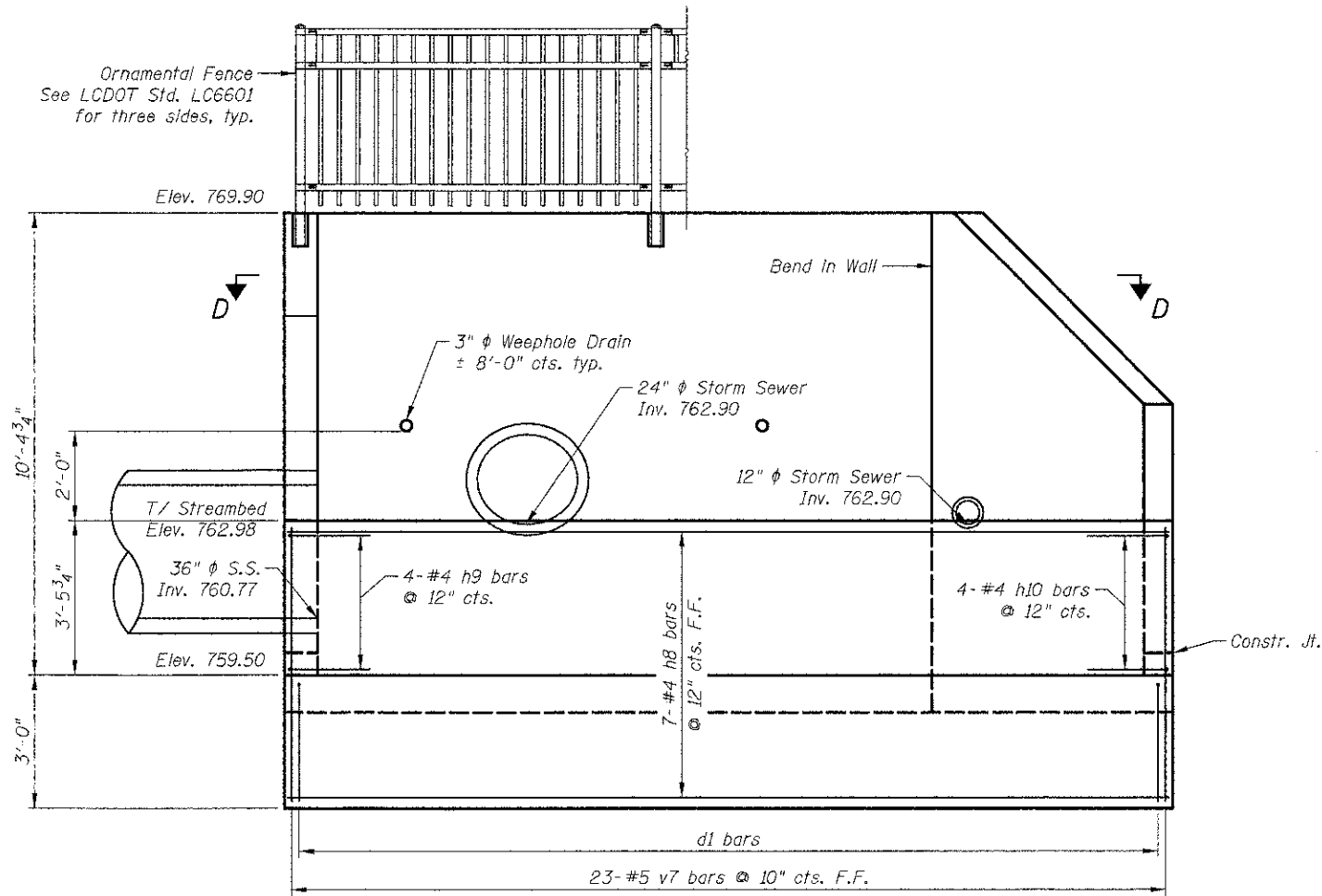
MAST ARM LENGTH	FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and up to 56' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

- NOTES:
1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
  2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
  3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
  4. For mast arm assemblies with dual arms refer to state standard 878001.

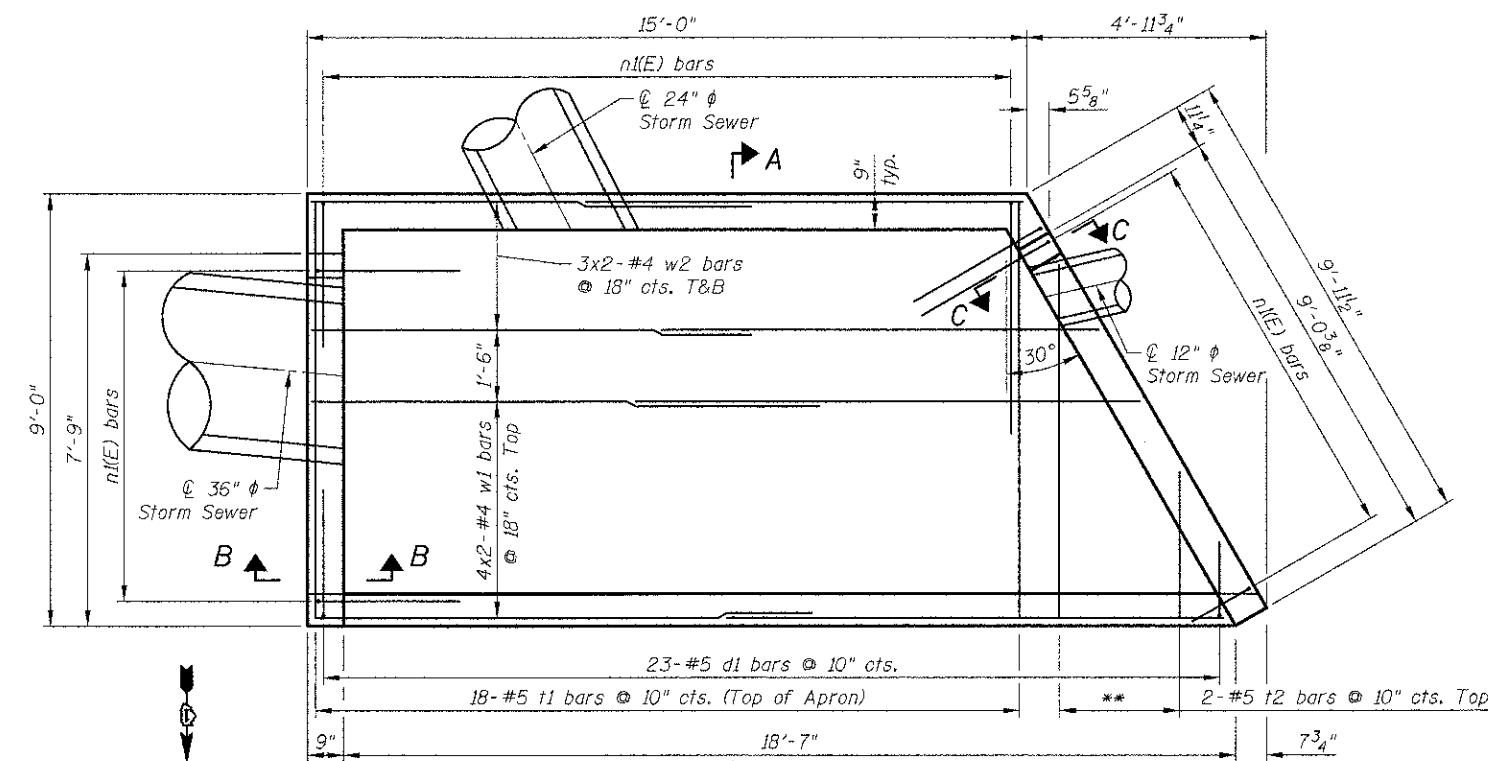
DEPTH OF MAST ARM FOUNDATIONS, TYPE E

# TRAFFIC SIGNAL LEGEND

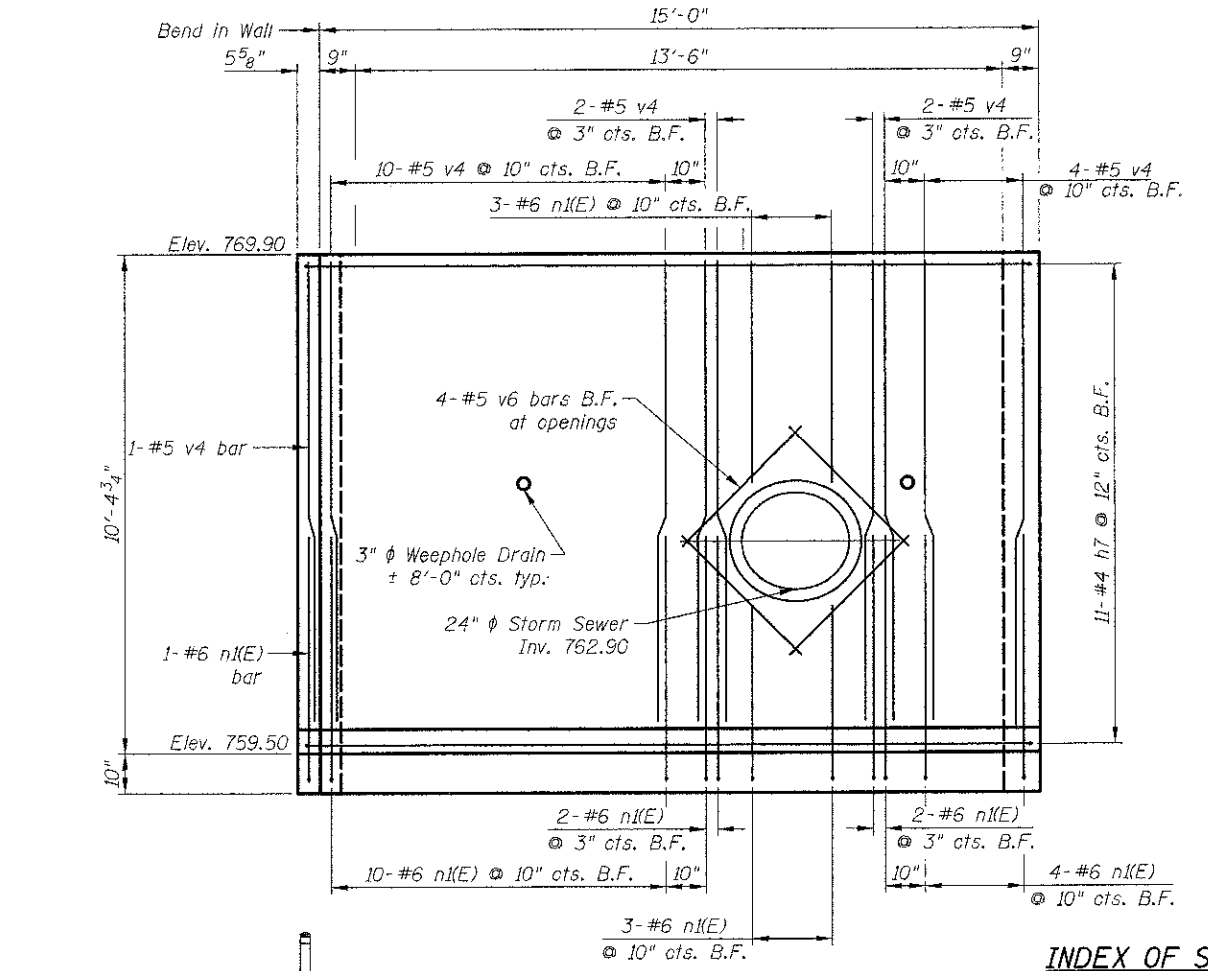
ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED																	
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE																				
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE																				
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA																				
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED																				
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F																				
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F																				
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F																				
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)																				
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE																				
ALUMINUM MAST ARM ASSEMBLY AND POLE				COLLABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED																				
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED																				
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM				ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED																				
SIGNAL POST				REMOVE ITEM				STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED																				
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM				SIGNAL POST AND FOUNDATION TO BE REMOVED																				
GUY WIRE				ABANDON ITEM				INTERSECTION & SAMPLING (SYSTEM) DETECTOR																				
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR																				
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				EXISTING INTERSECTION LOOP DETECTOR																				
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR																				
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				EXISTING PREFORMED INTERSECTION LOOP DETECTOR																				
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR																				
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR																				
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID				PREFORMED SAMPLING (SYSTEM) DETECTOR																				
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER				<h2 style="margin: 0;">RAILROAD SYMBOLS</h2> <table style="width: 100%; border: none;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 25%; text-align: center;">EXISTING</th> <th style="width: 25%; text-align: center;">PROPOSED</th> </tr> </thead> <tbody> <tr> <td>RAILROAD CONTROL CABINET</td> <td></td> <td></td> </tr> <tr> <td>RAILROAD CANTILEVER MAST ARM</td> <td></td> <td></td> </tr> <tr> <td>FLASHING SIGNAL</td> <td></td> <td></td> </tr> <tr> <td>CROSSING GATE</td> <td></td> <td></td> </tr> <tr> <td>CROSSBUCK</td> <td></td> <td></td> </tr> </tbody> </table>				EXISTING	PROPOSED	RAILROAD CONTROL CABINET			RAILROAD CANTILEVER MAST ARM			FLASHING SIGNAL			CROSSING GATE			CROSSBUCK		
	EXISTING	PROPOSED																										
RAILROAD CONTROL CABINET																												
RAILROAD CANTILEVER MAST ARM																												
FLASHING SIGNAL																												
CROSSING GATE																												
CROSSBUCK																												
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT																								
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER																								
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED																								
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)																								
MICROWAVE VEHICLE SENSOR																												
VIDEO DETECTION CAMERA																												
VIDEO DETECTION ZONE																												
PAN, TILT, ZOOM CAMERA																												
WIRELESS DETECTOR SENSOR																												
WIRELESS ACCESS POINT																												



**END VIEW ELEVATION**

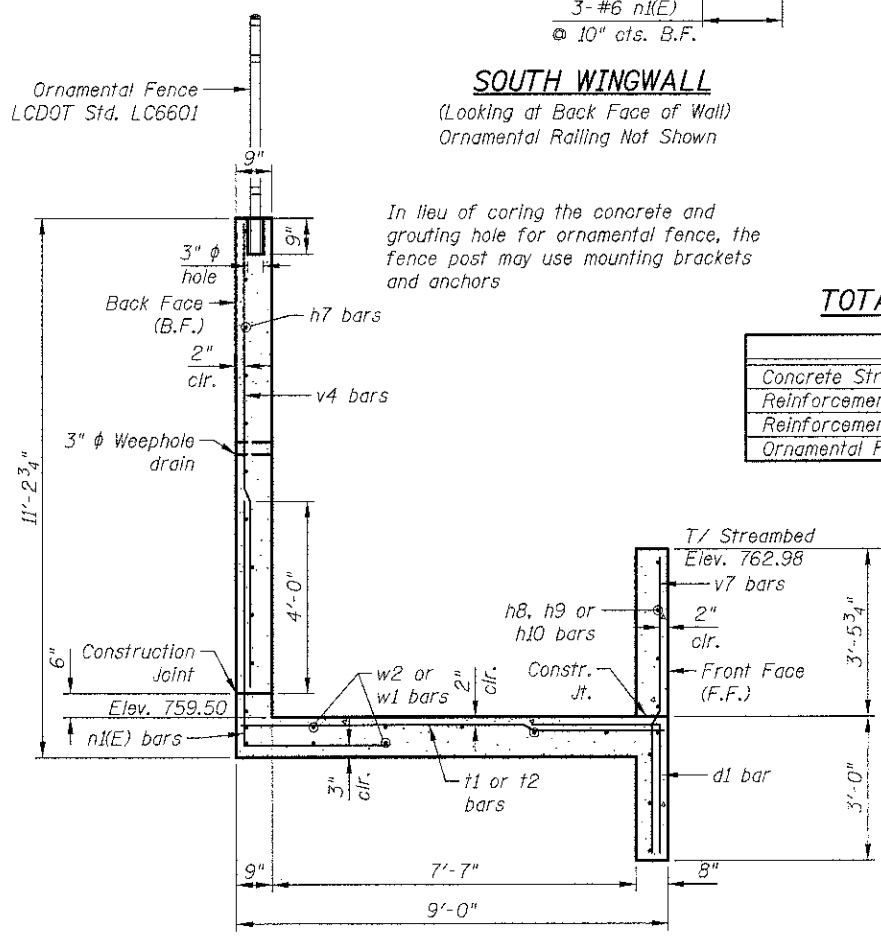


**FOOTING PLAN**



**SOUTH WINGWALL**  
(Looking at Back Face of Wall)  
Ornamental Railing Not Shown

Ornamental Fence  
See LCDOT Std. LC6601



**SECTION A-A**

In lieu of coring the concrete and grouting hole for ornamental fence, the fence post may use mounting brackets and anchors

**INDEX OF SHEETS**

- S1 Culvert Headwall Details I
- S2 Culvert Headwall Details II

**DESIGN STRESSES**

**FIELD UNITS**

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

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Concrete Structures	Cu. Yd.	16.4
Reinforcement Bars	Pound	1,380
Reinforcement Bars, Epoxy Coated	Pound	560
Ornamental Fence	Foot	32

Notes:  
See Sheet S2 for Sections B-B, C-C and D-D.  
Bars indicated thus 3x2-#4 etc. indicates 3 lines of bars with 2 lengths per line.  
\*\* See field Cutting Diagram

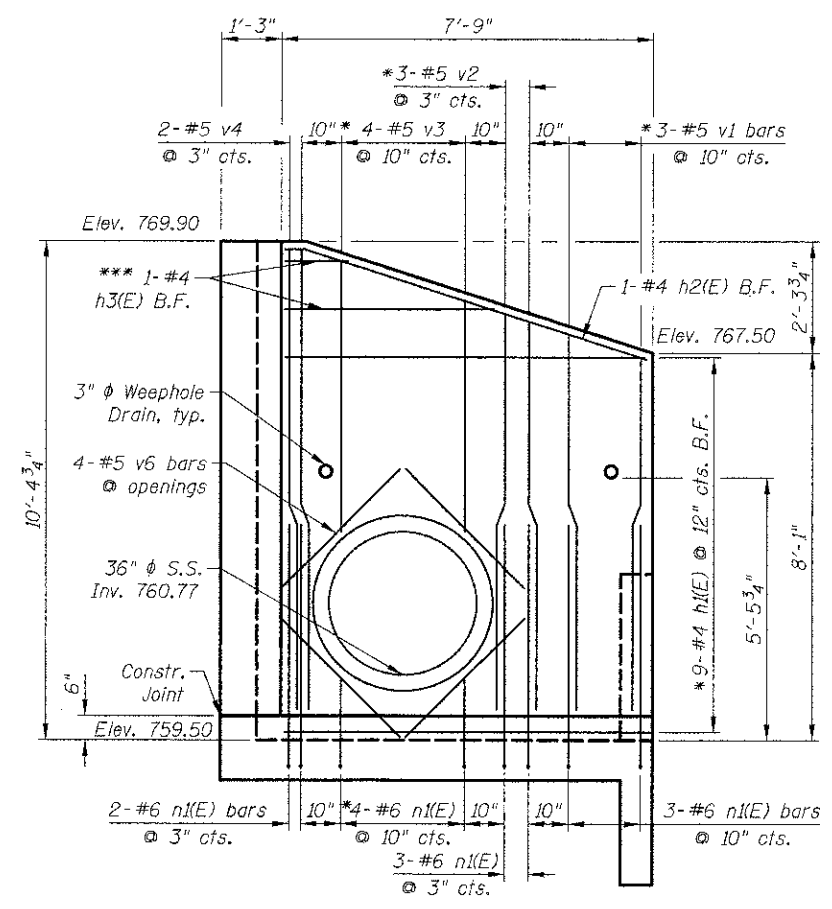
**MINIMUM BAR LAP**

#4 bar = 1'-9"  
#6(E) bar = 3'-10"

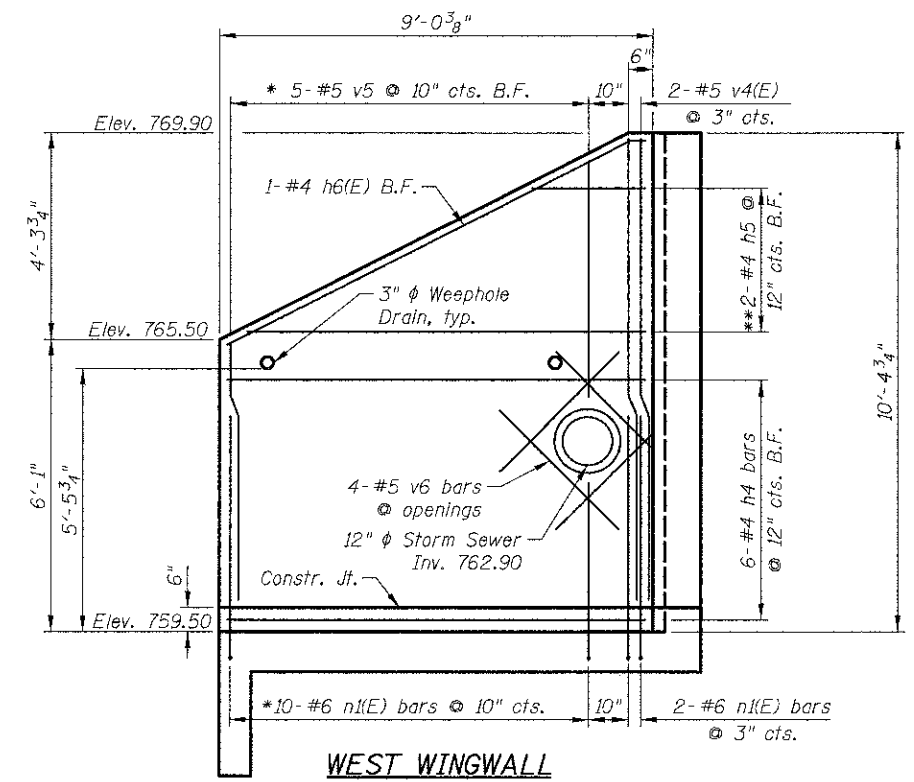
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**BILL OF MATERIAL**

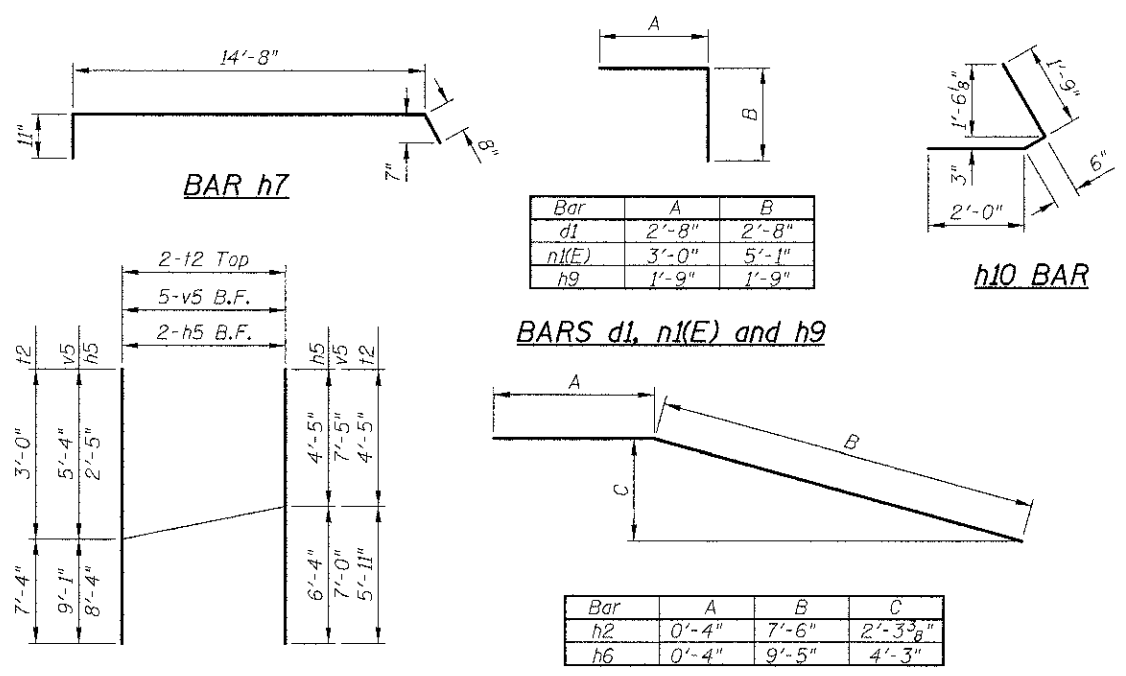
Bar	No.	Size	Length	Shape
d1	23	#5	5'-4"	L
h1	9	#4	7'-5"	—
h2	1	#4	7'-10"	—
h3	1	#4	5'-7"	—
h4	6	#4	8'-8"	—
h5	2	#4	10'-9"	—
h6	1	#4	9'-9"	—
h7	11	#4	16'-3"	—
h8	7	#4	19'-8"	—
h9	4	#4	3'-6"	—
h10	4	#4	4'-3"	—
n1(E)	46	#6	8'-1"	L
t1	18	#5	8'-8"	—
t2	2	#5	10'-4"	—
v1	3	#5	7'-10"	—
v2	3	#5	8'-3"	—
v3	4	#5	5'-7"	—
v4	26	#5	9'-6"	—
v5	5	#5	14'-5"	—
v6	12	#5	3'-6"	—
v7	23	#5	6'-0"	—
w1	8	#4	10'-6"	—
w2	12	#4	9'-1"	—
Item	Unit	Quantity		
Concrete Structures	Cu. Yd.	16.4		
Reinforcement Bars	Pound	1,380		
Reinforcement Bars, Epoxy Coated	Pound	560		



**EAST WINGWALL**  
(Looking at Back Face of Wall)  
Ornamental Railing Not Shown

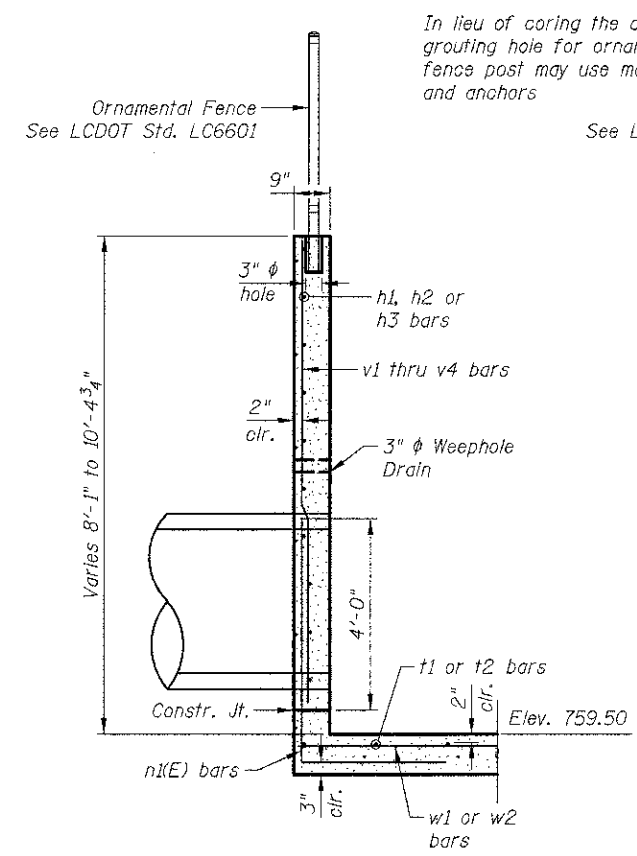


**WEST WINGWALL**  
(Looking at Back Face of Wall)  
Ornamental Railing Not Shown

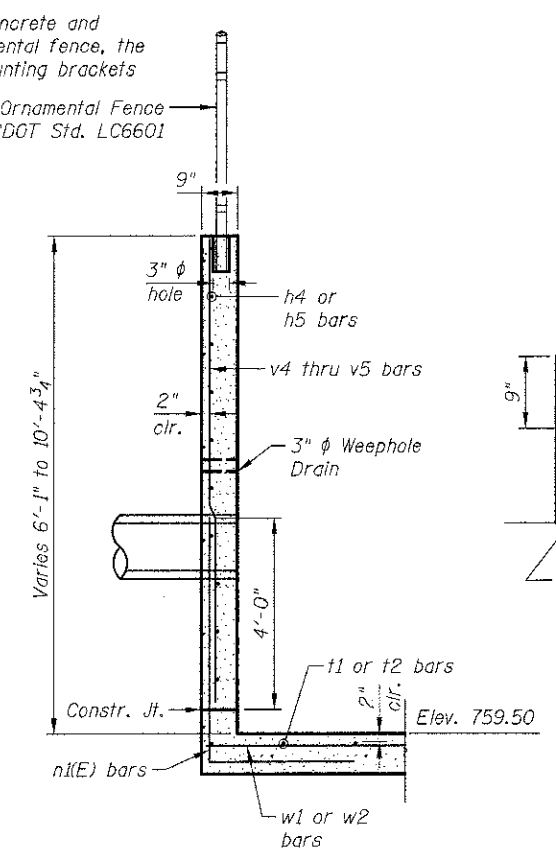


**FIELD CUTTING DIAGRAM**

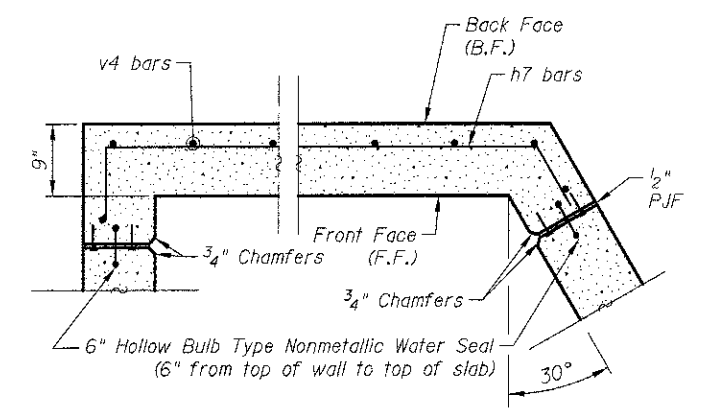
**BARS h2 and h6**



**SECTION B-B**



**SECTION C-C**



**SECTION D-D**

**Sheet Notes:**  
 \* Indicates field cut as required for storm sewer.  
 \*\* See field Cutting Diagram.  
 \*\*\* Order h3 and t2 bars full length. Cut to fit and use the remainder as designated.  
 See Section A-A on Sheet S1.

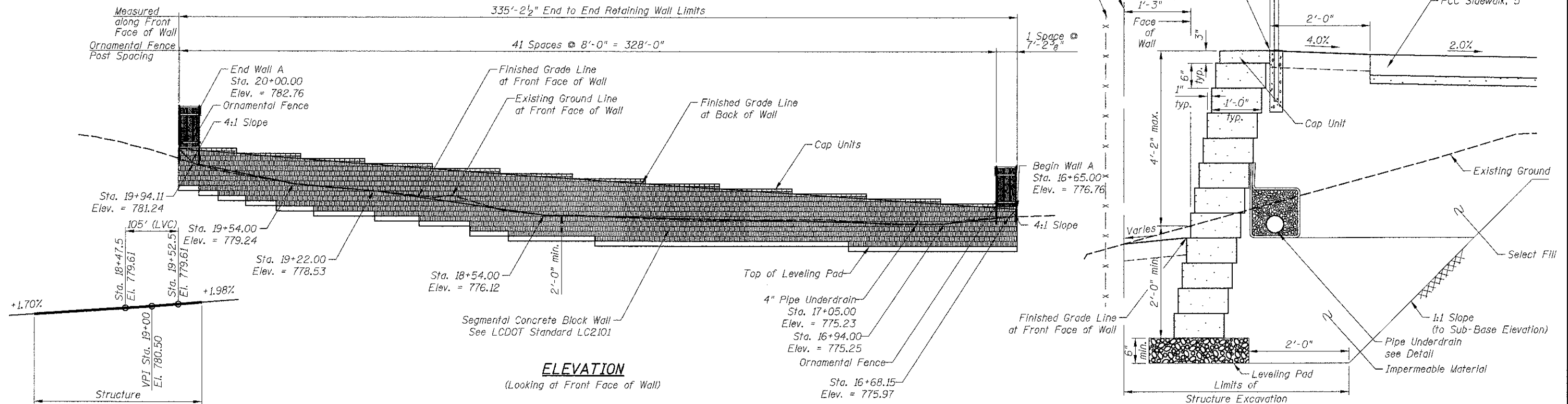
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**INDEX OF SHEETS**

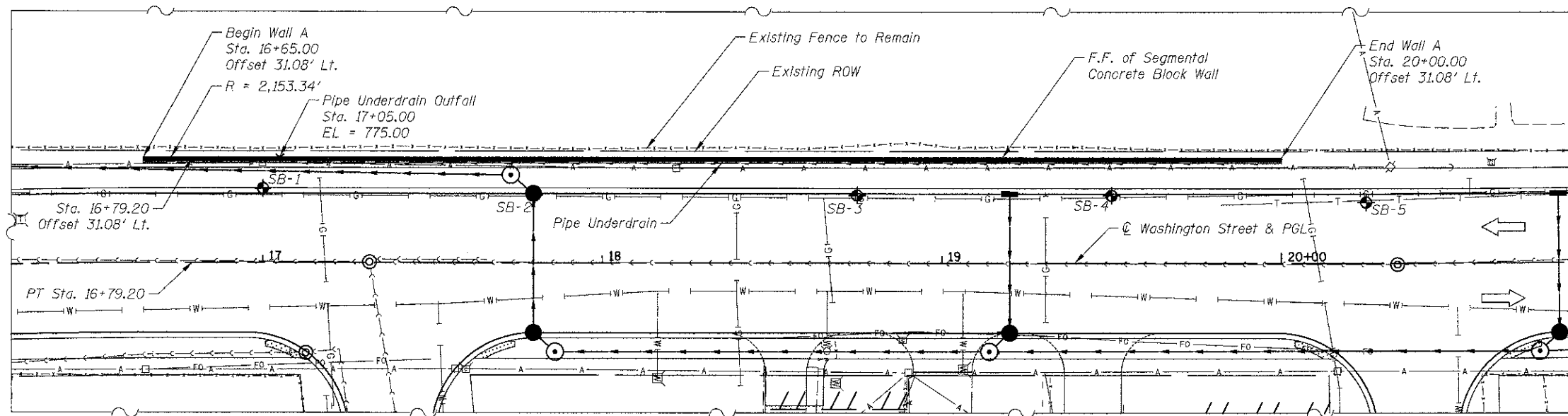
WA1 General Plan and Elevation  
 WA2 Boring Logs I  
 WA3 Boring Logs II

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	TOTAL QUANTITY
Pipe Underdrains for Structures 4"	Foot	337
Segmental Concrete Block Wall	Sq. Ft.	1,746
Ornamental Fence	Foot	336



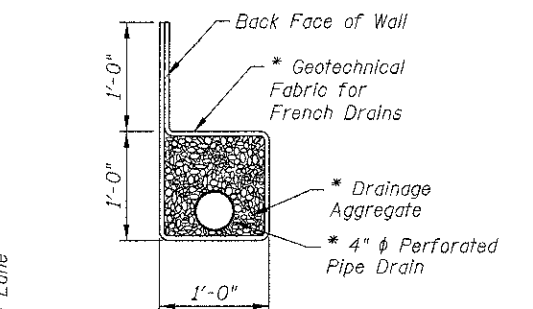
**PROPOSED PROFILE WASHINGTON STREET**



**PLAN**

Offsets are measured from the  $\phi$  of Washington Street to the Front Face of Segmental Concrete Block Wall

**TYPICAL SECTION**



**PIPE UNDERDRAIN DETAIL**

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

**GENERAL NOTES:**

1. Design and installation of segmented Concrete Block Walls (including need for Soil Reinforcement) to be accordance with wall system Manufacturer Design Requirements and Specifications
2. See cross section sheets for additional information

**LEGEND**

- $\bullet$  Soil Borings
- Existing Aerial Lines
- Existing Telephone
- Existing Gasline
- Existing Electrical
- Existing Fiber Optics
- Existing Water Main

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DRAWN	- PK	REVISED	-
DESIGNED	- PK	REVISED	-
CHECKED	- RTM	REVISED	-
DATE	- 12/17/2012	REVISED	-

F.A.I.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	146
			CONTRACT NO. 63765	
ILLINOIS FED. AID PROJECT				

MSET PROJECT NO.: 88279		LOG OF BORING NO. SB-1		Page 1 of 1					
PROJECT: Washington Street			SITE LOCATION: Round Lake, Illinois						
BORING LOCATION: Sta. 17+00, 22' N of CL			CLIENT: Civiltech Engineering, Inc.						
DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	Elevation	SAMPLE		TESTS		REMARKS	
				TYPE/INTERVAL	No.	N-VALUE Blows per ft.	Wc%		Dry Unit Weight, pcf
		Ground Surface	±776.0						
		4" Concrete Sidewalk							
		Brown and Dark Brown Silty Clay LOAM, A-6: FILL	775.7	SS	1	12	15	-	2.5 (Qp)
		Dark Brown Clay LOAM, A-6	773.5						
		Brown and Grey CLAY, A-6	772.5	SS	2	16	19	-	4.11
5									
				SS	3	19	17	-	6.12
				SS	4	23	17	-	7.29
				SS	5	22	17	-	8.53
				SS	6	21	17	-	9.49
15		Grey CLAY, A-6	760.5	SS	7	18	19	-	3.41
				SS	8	18	22	-	5.19
20		End of Boring @ 20.0'	756.0						

**WATER LEVEL OBSERVATIONS, ft.**  
 During Drilling:  none  
 Immediately After Drilling:  dry  
 Delayed Reading After - Days  -



BORING STARTED: 10/17/08  
 BORING COMPLETED: 10/17/08  
 LOGGED BY: SPE  
 BORING METHOD: HSA

Midland Standard Engineering & Testing, Inc. 26575 West Commerce Drive Unit 607 Volo, IL 60073 (847) 270-0832 f(847) 270-0836

MSET PROJECT NO.: 88279		LOG OF BORING NO. SB-2		Page 1 of 1					
PROJECT: Washington Street			SITE LOCATION: Round Lake, Illinois						
BORING LOCATION: Sta. 17+80, 20' N of CL			CLIENT: Civiltech Engineering, Inc.						
DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	Elevation	SAMPLE		TESTS		REMARKS	
				TYPE/INTERVAL	No.	N-VALUE Blows per ft.	Wc%		Dry Unit Weight, pcf
		Ground Surface	±777.0						
		Dark Brown Clay LOAM, A-6(10)*		SS	1	5	15	-	1.36
		Brown Clay LOAM, A-6	774.0	SS	2	7	23	-	1.78
5									
		Brown and Grey CLAY, A-6	771.5	SS	3	21	17	-	8.45
				SS	4	22	17	-	9.22
				SS	5	20	17	-	9.26
				SS	6	21	18	-	7.44
15		Grey CLAY, A-6	759.0	SS	7	21	17	-	5.70
				SS	8	19	17	-	4.57
20		End of Boring @ 20.0'	757.0						

**WATER LEVEL OBSERVATIONS, ft.**  
 During Drilling:  none  
 Immediately After Drilling:  dry  
 Delayed Reading After - Days  -



BORING STARTED: 10/17/08  
 BORING COMPLETED: 10/17/08  
 LOGGED BY: SPE  
 BORING METHOD: HSA

Midland Standard Engineering & Testing, Inc. 26575 West Commerce Drive Unit 607 Volo, IL 60073 (847) 270-0832 f(847) 270-0836

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**CIVILTECH**  
 450 E Devon Ave, Suite 300  
 Itasca, Illinois 60143  
 Tel: 630.773.3900 Fax: 630.773.3975  
 www.civiltechinc.com

DRAWN - PK	REVISED -
DESIGNED - PK	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BORING LOGS I  
 WALL A; WASHINGTON STREET**  
 SHEET NO. WA2 OF WA3 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	147
CONTRACT NO. 63765				ILLINOIS FED. AID PROJECT

MSET PROJECT NO.: 88279		LOG OF BORING NO. SB-3		Page 1 of 1					
PROJECT: Washington Street		SITE LOCATION: Round Lake, Illinois							
BORING LOCATION: Sta. 18+75, 20' N of CL		CLIENT: Civiltech Engineering, Inc.							
DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	Elevation	SAMPLE		TESTS		REMARKS	
				TYPE/INTERVAL	No.	N-VALUE Blows per ft.	Wc% Dry Unit Weight, pcf Unconfined Compressive Strength, tsf		
		Ground Surface	±778.5						
		4" Concrete Sidewalk Brown and Dark Brown Clay LOAM, A-6: FILL	778.2	SS 1	7	14	1.74		
		Olive-Grey Clay LOAM, trace Roots, A-6	775.5	SS 2	9	19	2.05		
5		wet Sand seam @ 6.0' Brown and Grey CLAY, A-6	772.0	SS 3	14	15	9.03		
				SS 4	23	16	9.11		
10				SS 5	29	16	9.11		
				SS 6	32	18	6.78		
15		Grey CLAY, A-6	763.0	SS 7	18	17	4.46		
				SS 8	19	21	4.01		
20		End of Boring @ 20.0'	758.5						
WATER LEVEL OBSERVATIONS, ft.		BORING STARTED: 10/17/08		BORING COMPLETED: 10/17/08		LOGGED BY: SPE		BORING METHOD: HSA	
During Drilling: none		Immediately After Drilling: dry		Delayed Reading After: Days -		MSET			

Midland Standard Engineering & Testing, Inc. 28575 West Commerce Drive Unit 607 Volo, IL 60073 (847) 270-0832 (847) 270-0836

MSET PROJECT NO.: 88279		LOG OF BORING NO. SB-4		Page 1 of 1					
PROJECT: Washington Street		SITE LOCATION: Round Lake, Illinois							
BORING LOCATION: Sta. 19+50, 20' N of CL		CLIENT: Civiltech Engineering, Inc.							
DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	Elevation	SAMPLE		TESTS		REMARKS	
				TYPE/INTERVAL	No.	N-VALUE Blows per ft.	Wc% Dry Unit Weight, pcf Unconfined Compressive Strength, tsf		
		Ground Surface	±780.5						
		5" Concrete Shoulder Brown and Black Clay LOAM, A-6: FILL	780.1	SS 1	8	14	2.48		
		Black Clay LOAM, A-6 Brown CLAY, A-6	778.0 777.5	SS 2	10	26	3.76		
5				SS 3	16	18	5.31		
		Brown and Grey		SS 4	25	16	9.30		
10				SS 5	25	17	9.57		
		Brown-Grey		SS 6	24	21	6.28		
15		Grey CLAY, A-6	765.0	SS 7	16	21	3.48		
				SS 8	21	19	3.55		
20		End of Boring @ 20.0'	760.5						
WATER LEVEL OBSERVATIONS, ft.		BORING STARTED: 10/17/08		BORING COMPLETED: 10/17/08		LOGGED BY: SPE		BORING METHOD: HSA	
During Drilling: none		Immediately After Drilling: dry		Delayed Reading After: Days -		MSET			

Midland Standard Engineering & Testing, Inc. 28575 West Commerce Drive Unit 607 Volo, IL 60073 (847) 270-0832 (847) 270-0836

MSET PROJECT NO.: 88279		LOG OF BORING NO. SB-5		Page 1 of 1					
PROJECT: Washington Street		SITE LOCATION: Round Lake, Illinois							
BORING LOCATION: Sta. 20+25, 18' N of CL		CLIENT: Civiltech Engineering, Inc.							
DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	Elevation	SAMPLE		TESTS		REMARKS	
				TYPE/INTERVAL	No.	N-VALUE Blows per ft.	Wc% Dry Unit Weight, pcf Unconfined Compressive Strength, tsf		
		Ground Surface	±783.5						
		4" Dark Brown Silty CLAY/ TOPSOIL	783.2	SS 1	11	18	3.5 (Qp)		
		Brown and Grey		SS 2	23	15	4.15		
5				SS 3	22	16	7.48		
				SS 4	25	16	7.21		
10		Brown-Grey		SS 5	22	17	8.29		
				SS 6	22	22	6.51		
15		Grey CLAY, A-6	768.0	SS 7	11	15	2.40		
				SS 8	11	15	2.05		
20		End of Boring @ 20.0'	763.5						
WATER LEVEL OBSERVATIONS, ft.		BORING STARTED: 10/17/08		BORING COMPLETED: 10/17/08		LOGGED BY: SPE		BORING METHOD: HSA	
During Drilling: 15.5'		Immediately After Drilling: 14.1'		Delayed Reading After: Days -		MSET			

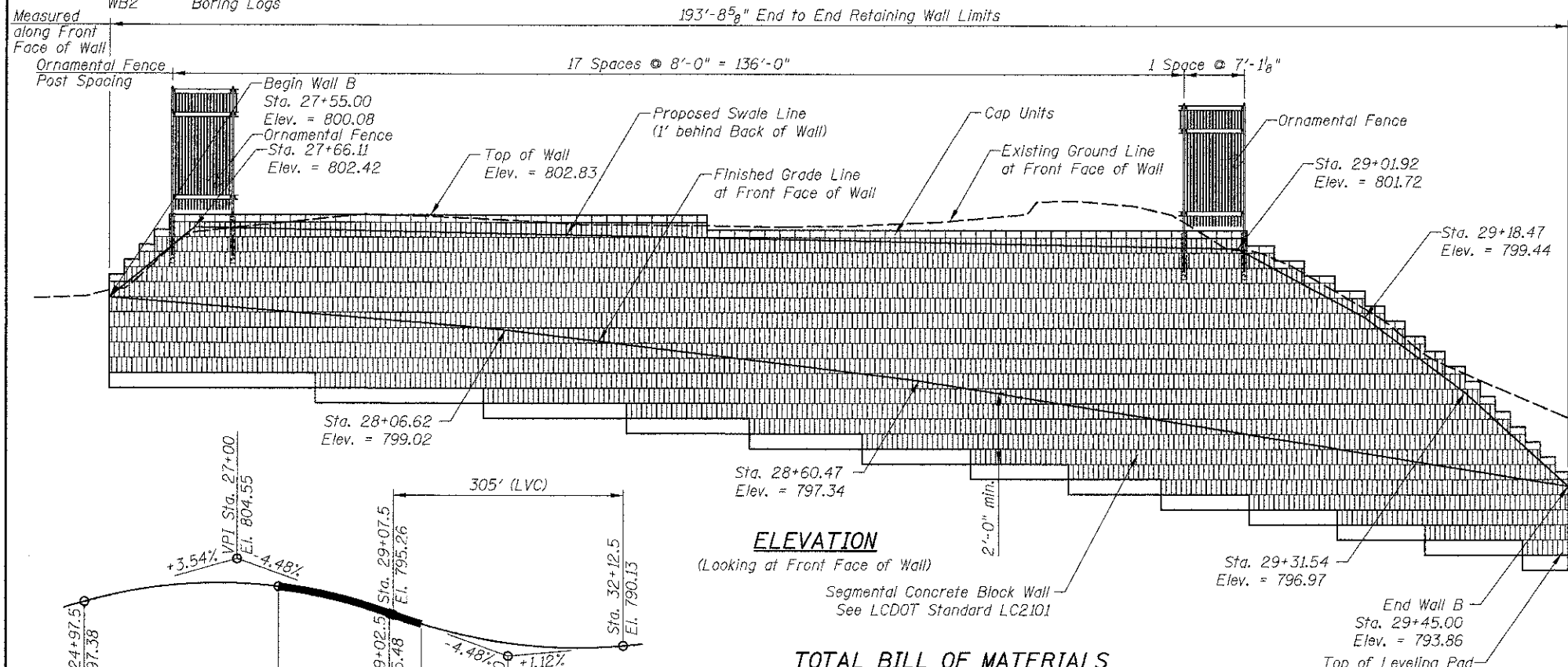
Midland Standard Engineering & Testing, Inc. 28575 West Commerce Drive Unit 607 Volo, IL 60073 (847) 270-0832 (847) 270-0836

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**INDEX OF SHEETS**

WB1 General Plan and Elevation  
WB2 Boring Logs

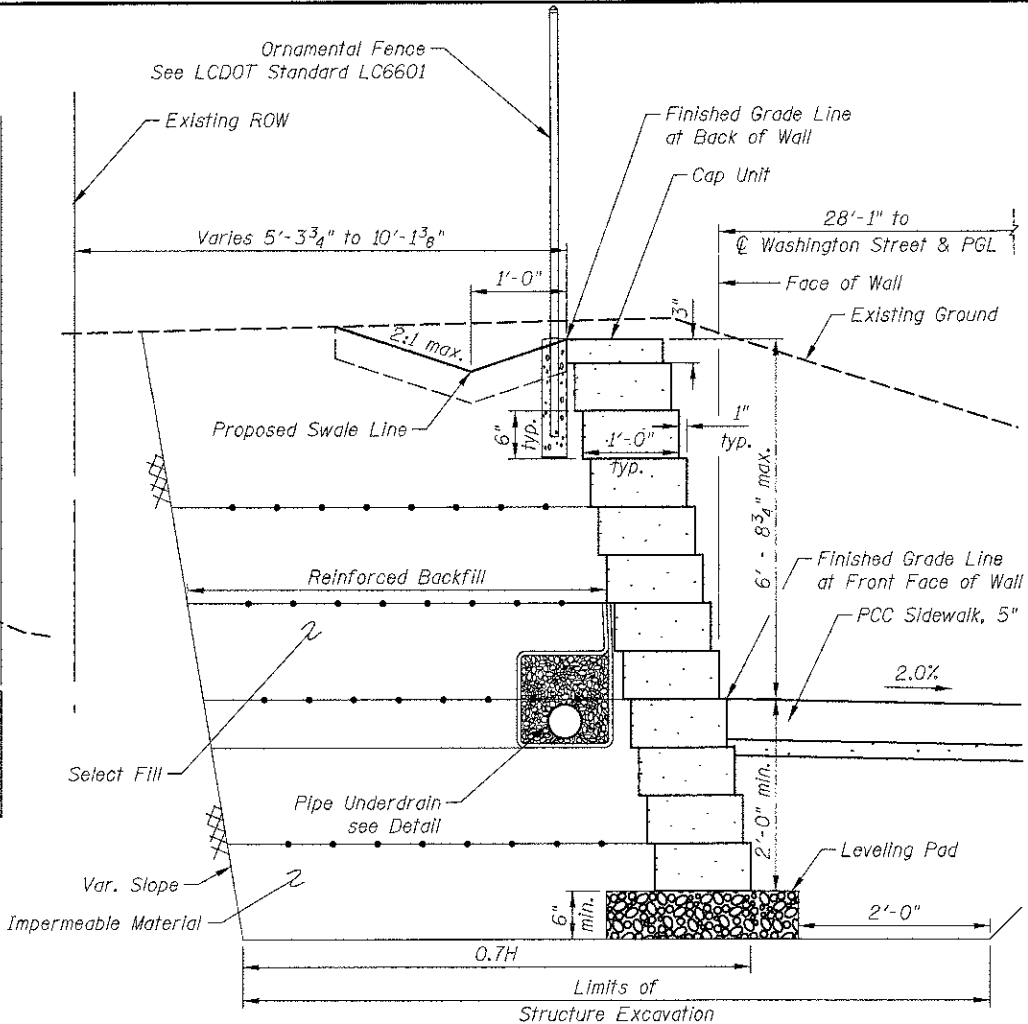


**ELEVATION**  
(Looking at Front Face of Wall)

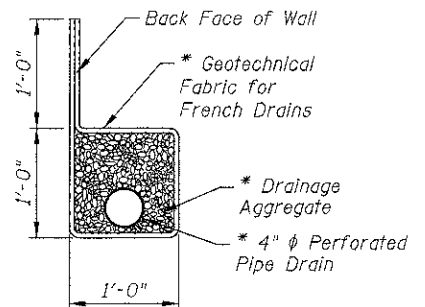
Segmental Concrete Block Wall  
See LCDOT Standard LC2101

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	TOTAL QUANTITY
Pipe Underdrains for Structures 4"	Foot	182
Segmental Concrete Block Wall	Sq. Ft.	1,263
Ornamental Fence	Foot	144



**TYPICAL SECTION**



**PIPE UNDERDRAIN DETAIL**

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

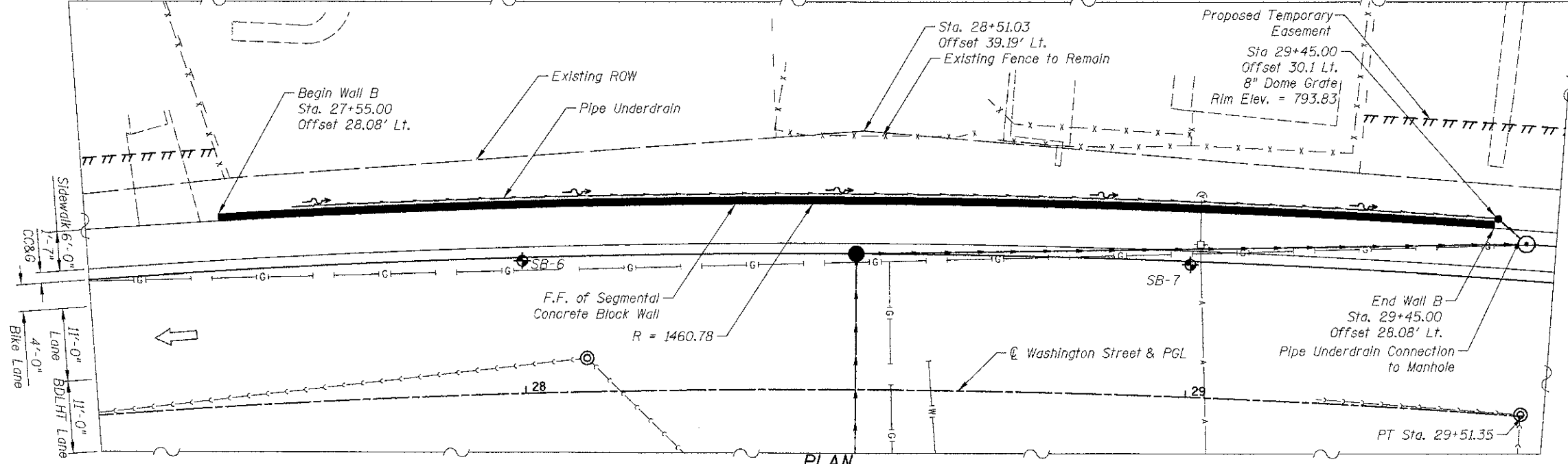
**GENERAL NOTES:**

- Design and installation of segmented Concrete Block Walls (including need for Soil Reinforcement) to be accordance with wall system Manufacturer Design Requirements and Specifications
- See cross section sheets for additional information

**LEGEND**

- ⊕ Soil Borings
- Existing Aerial Lines
- Existing Telephone
- Existing Gasline
- Existing Electrical
- Existing Fiber Optics
- Existing Water Main

**PROPOSED PROFILE WASHINGTON STREET**



**PLAN**

Offsets are measured from the @ of Washington Street to the Front Face of Segmental Concrete Block Wall

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**CIVILTECH**  
450 E Devon Ave, Suite 300  
Itasca, Illinois 60143  
Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

DRAWN - PK	REVISED -
DESIGNED - PK	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION  
WALL B; WASHINGTON STREET**  
SHEET NO. WB1 OF WB2 SHEETS

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	149
				CONTRACT NO. 63765
ILLINOIS FED. AID PROJECT				

DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	Elevation	SAMPLE		TESTS			REMARKS
				TYPE/ INTERVAL	No.	N-VALUE Blows per ft.	Wc%	Dry Unit Weight, pcf	
		Ground Surface	±801.5						
		Silty CLAY/TOPSOIL, mixed FILL							
		Brown and Grey CLAY, A-6	800.0	SS	1	14	13	-	2.5 (Qp)
5		Brown		SS	2	20	13	-	12.40
		Brown-Grey		SS	3	24	16	-	5.93
10				SS	4	20	15	-	11.12
				SS	5	20	15	-	4.81
15				SS	6	15	13	-	3.49
				SS	7	13	15	-	3.49
		Grey CLAY, A-6	784.0						
20		End of Boring @ 20.0'	781.5	SS	8	11	14	-	2.36

**WATER LEVEL OBSERVATIONS, ft.**  
 During Drilling: none  
 Immediately After Drilling: dry  
 Delayed Reading After - Days: -



BORING STARTED: 10/21/08  
 BORING COMPLETED: 10/21/08  
 LOGGED BY: CD  
 BORING METHOD: HSA

Midland Standard Engineering & Testing, Inc. 26575 West Commerce Drive Unit 607 Volo, IL 60073 (847) 270-0832 f(847) 270-0836

DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	Elevation	SAMPLE		TESTS			REMARKS
				TYPE/ INTERVAL	No.	N-VALUE Blows per ft.	Wc%	Dry Unit Weight, pcf	
		Ground Surface	±800.0						
		Dark Brown and Orange-Brown Sandy CLAY/TOPSOIL							
		Brown and Grey CLAY, A-6	798.0	SS	1	9	15	-	5.43
5				SS	2	17	14	-	4.5+ (Qp)
				SS	3	16	17	-	6.32
10				SS	4	23	17	-	3.14
				SS	5	22	16	-	6.47
15				SS	6	22	16	-	6.08
		Brown-Grey		SS	7	18	15	-	6.05
20		End of Boring @ 20.0'	780.0	SS	8	18	15	-	6.01

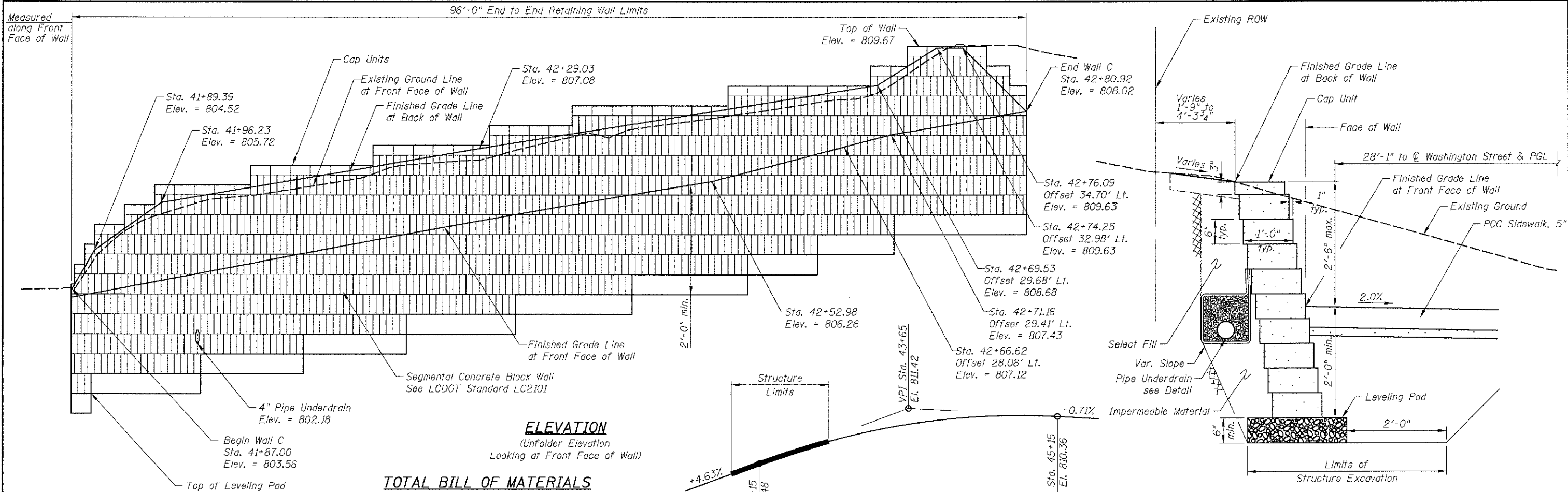
**WATER LEVEL OBSERVATIONS, ft.**  
 During Drilling: none  
 Immediately After Drilling: dry  
 Delayed Reading After - Days: -



BORING STARTED: 10/21/08  
 BORING COMPLETED: 10/21/08  
 LOGGED BY: CD  
 BORING METHOD: HSA

Midland Standard Engineering & Testing, Inc. 26575 West Commerce Drive Unit 607 Volo, IL 60073 (847) 270-0832 f(847) 270-0836

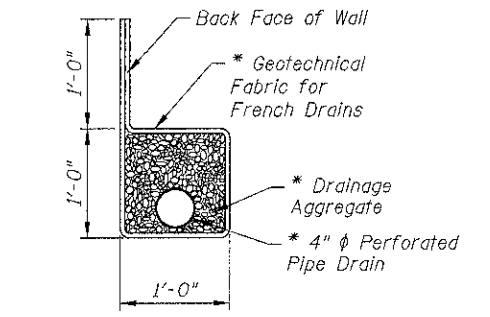
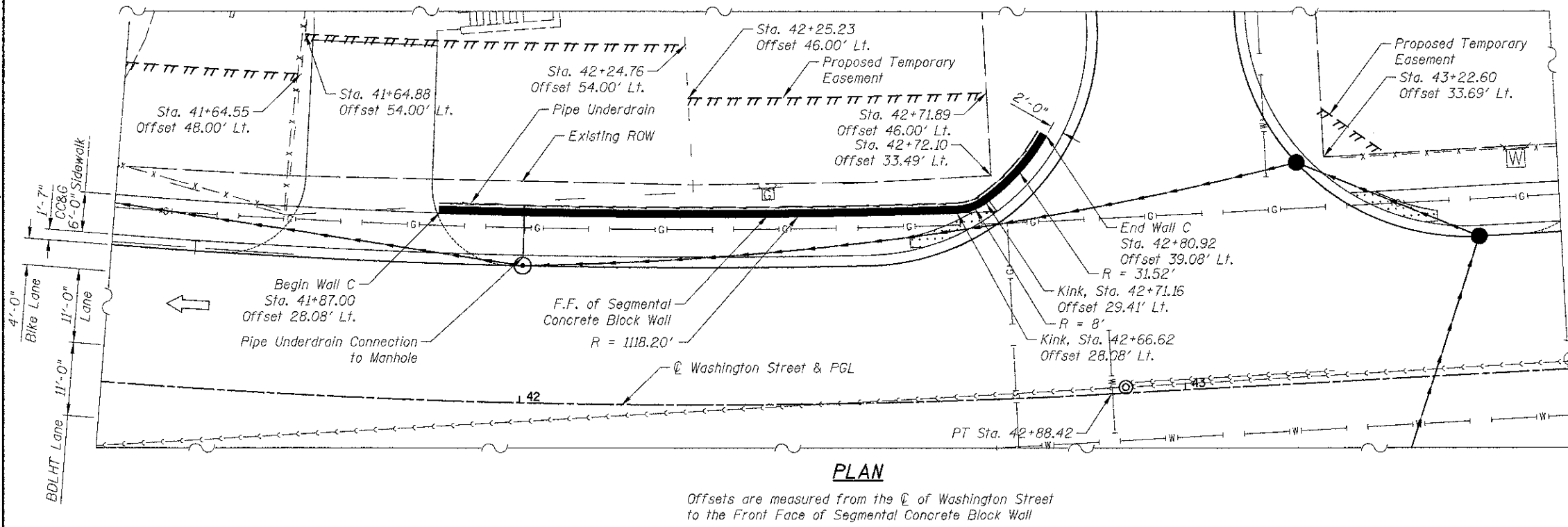
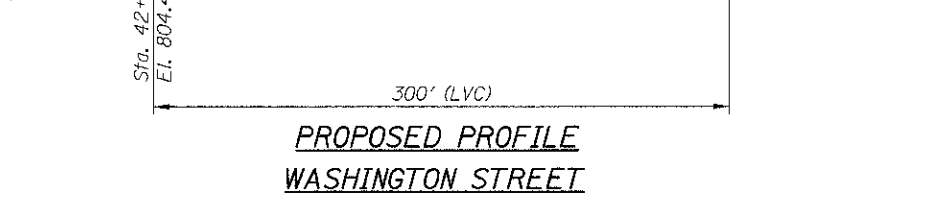
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**ELEVATION**  
(Unfolder Elevation  
Looking at Front Face of Wall)

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	TOTAL QUANTITY
Pipe Underdrains for Structures 4"	Foot	102
Segmental Concrete Block Wall	Sq. Ft.	411



- GENERAL NOTES:**
- Design and installation of segmented Concrete Block Walls (including need for Soil Reinforcement) to be accordance with wall system Manufacturer Design Requirements and Specifications
  - See cross section sheets for additional information

**LEGEND**

	Soil Borings
	Existing Aerial Lines
	Existing Telephone
	Existing Gasline
	Existing Electrical
	Existing Fiber Optics
	Existing Water Main

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**CIVILTECH**  
450 E Devon Ave, Suite 300  
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Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

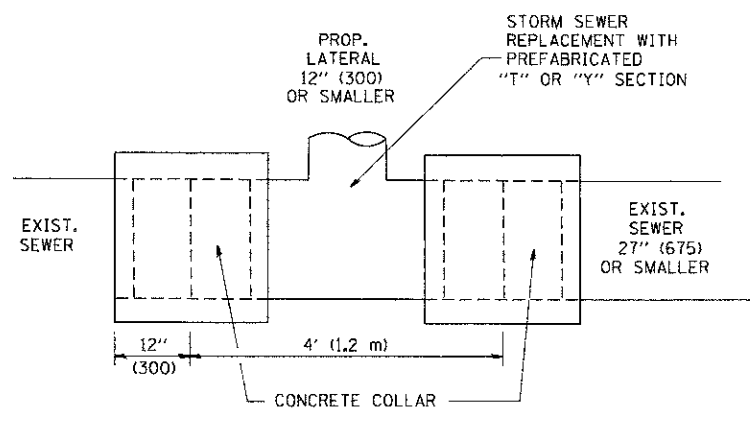
DRAWN - PK	REVISED -
DESIGNED - PK	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION  
WALL C; WASHINGTON STREET**

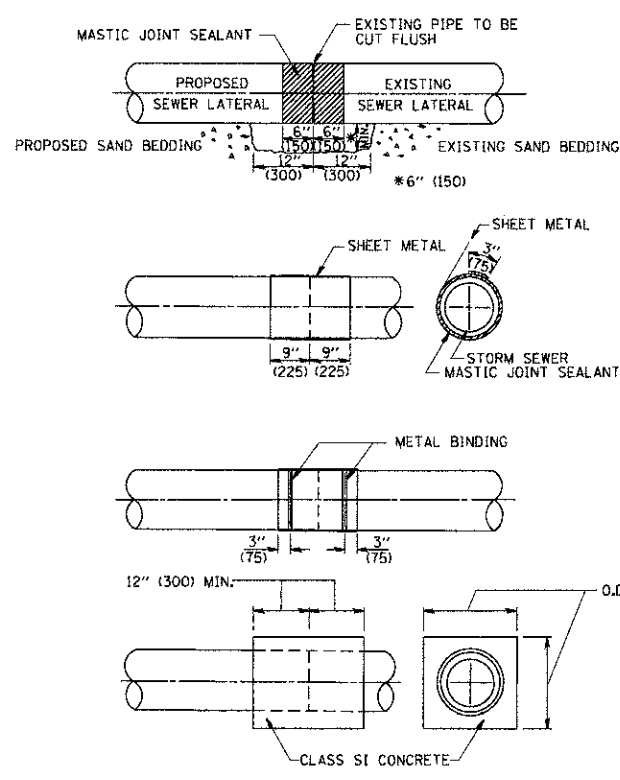
SHEET NO. WC1 OF WC1 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	151
CONTRACT NO. 63765				
(ILLINOIS) FED. AID PROJECT				



DETAIL "A"

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

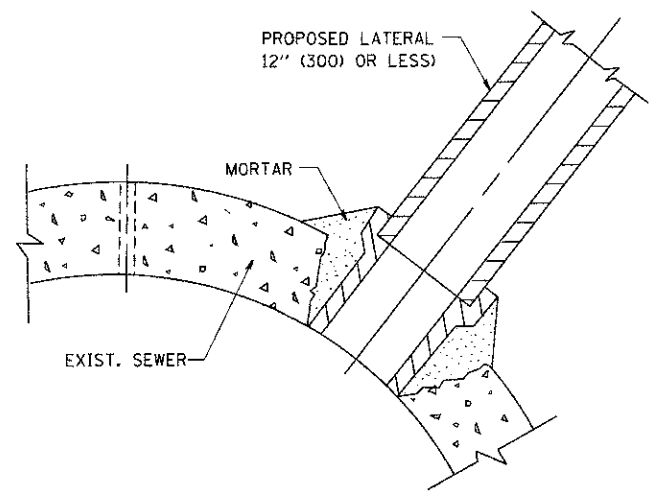


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12' x 6' (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 L1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OZZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

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

NOTES

MATERIAL

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

CONSTRUCTION METHODS

I. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.

II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:

- A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
- B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

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

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

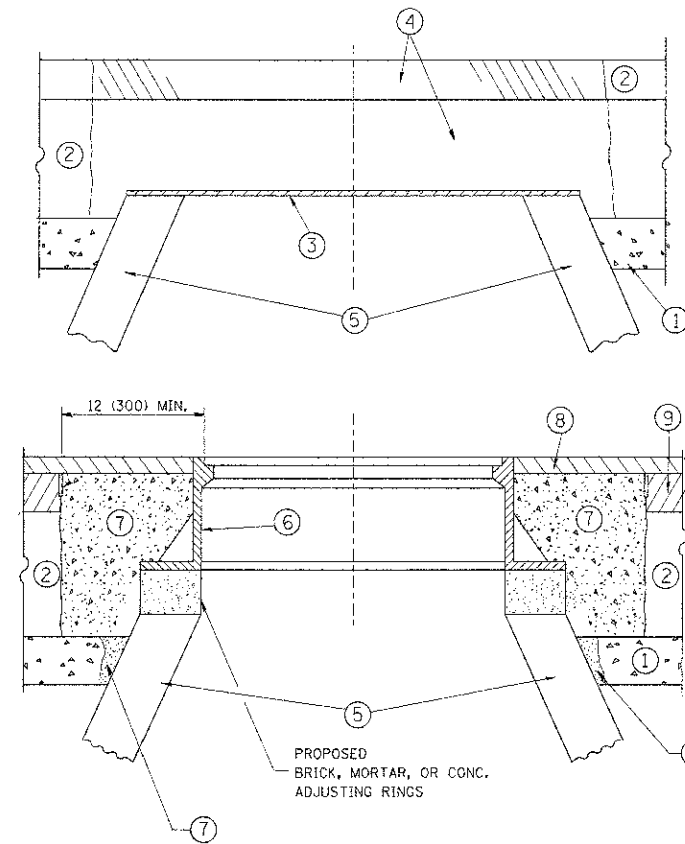
REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

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

FILE NAME = W:\dists\d\22x34\bd07.dgn	USER NAME = geglrobt	DESIGNED - M. DE YONG	REVISED - M. DE YONG 05-08-92	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER</b>		F.A. RTE. 0187	SECTION 05-00121-07-WR	COUNTY LAKE	TOTAL SHEET NO. 222	SHEET NO. 152
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - R. SHAH 09-09-94		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	BD500-01 (BD-7)		CONTRACT NO. 63765	
	PLOT DATE = 1/4/2008	DATE - 07-25-90	REVISED - R. SHAH 10-25-94								
					FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT						



**CONSTRUCTION PROCEDURES**

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

- STAGE 2 (AFTER PAVEMENT MILLING)**
- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
  - B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
  - C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1\* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.
- \* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 803 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

**LEGEND**

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

**NOTES:**

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

**LOCATION OF STRUCTURES:**

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

**BASIS OF PAYMENT:**

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

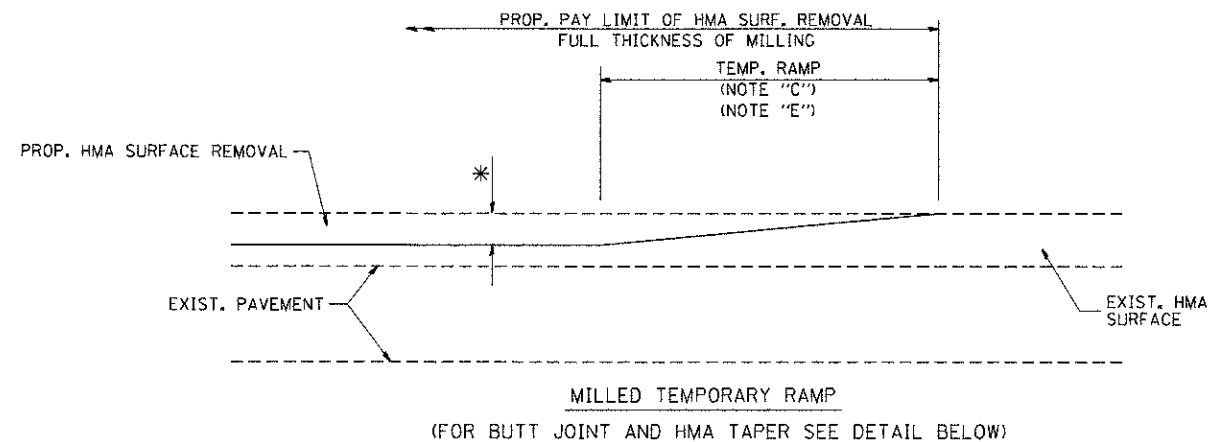
THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

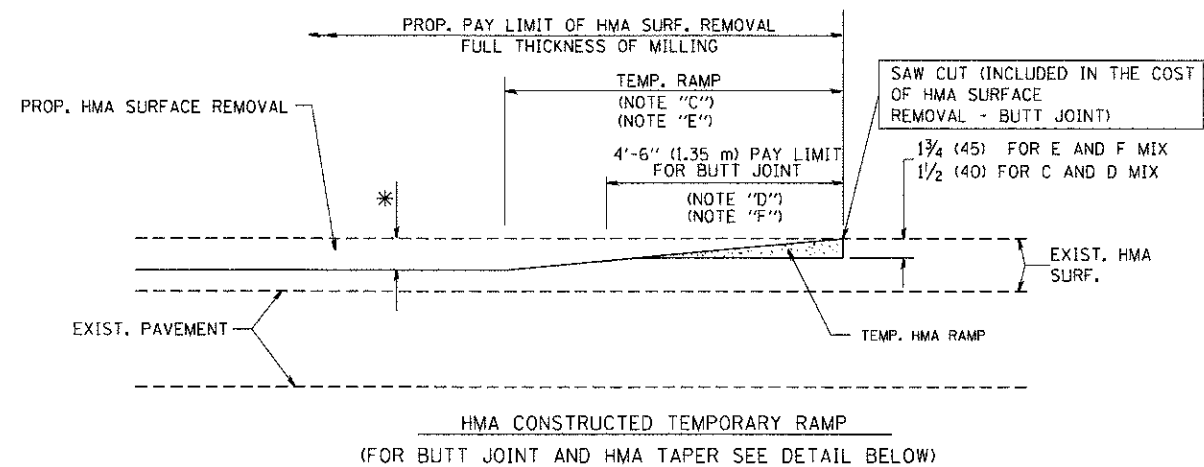
**DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING**

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

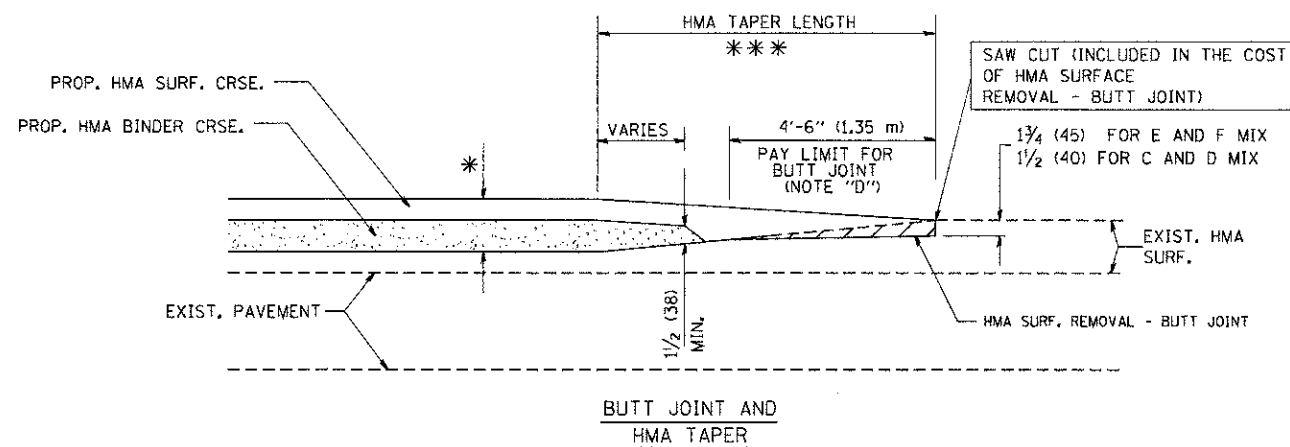
FILE NAME *	JSEI1 NAME * bauer.d	DESIGNED - R. SHAH	REVISED - R. WIEDEMAN 05-14-04	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING</b>			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\work\pdsos\baue\rd\102100315\bd98.dgn		DRAWN -	REVISED - R. BORO 01-01-07		0187	05-00121-07-WR	Lake	222	153			
PLOT SCALE * 1/8" = 1'-0"		CHECKED -	REVISED - R. BORO 03-09-11		<b>BD600-03 (BD-8)</b>			<b>CONTRACT NO. 63765</b>				
PLOT DATE * 12/5/2011		DATE - 10-25-94	REVISED - R. BORO 12-06-11		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. :	ILLINOIS FED. AID PROJECT			



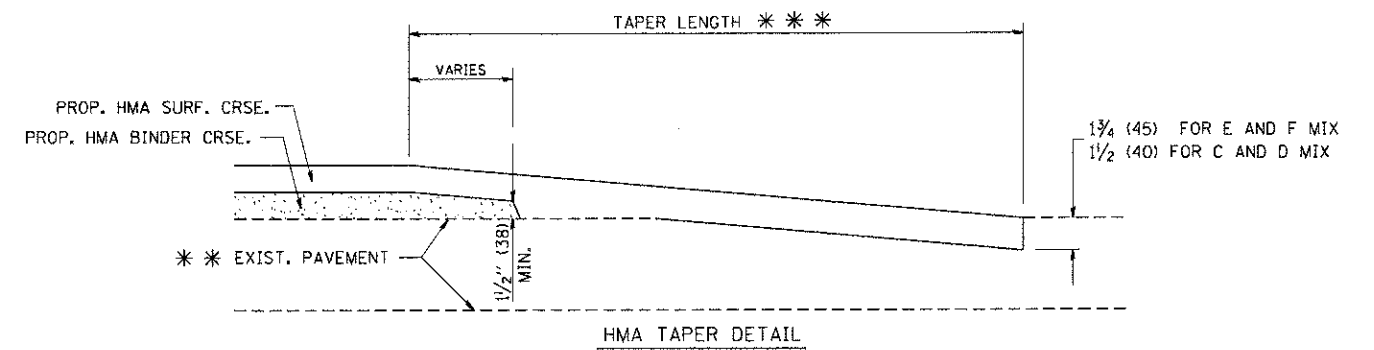
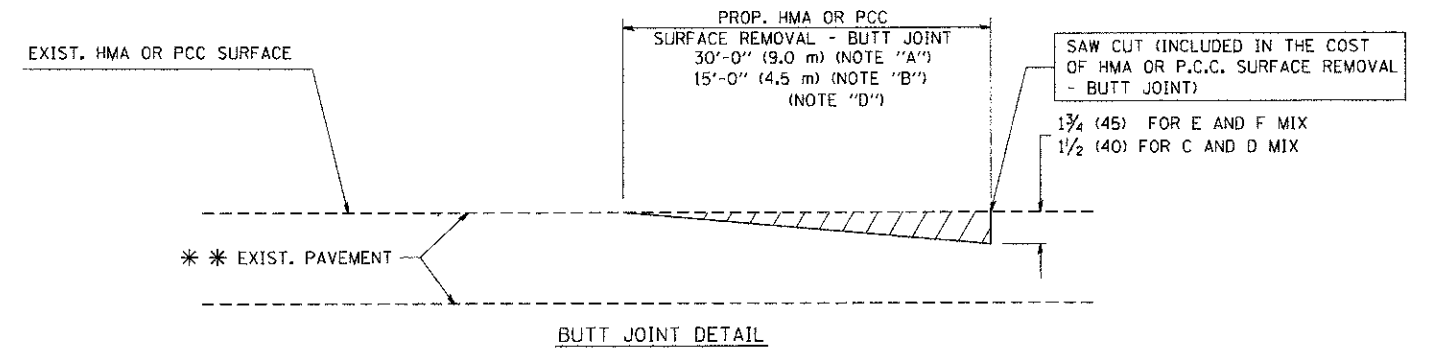
**OPTION 1**



**OPTION 2  
TYPICAL TEMPORARY RAMP**



**TYPICAL BUTT JOINT AND HMA TAPER  
FOR MILLING AND RESURFACING**



**TYPICAL BUTT JOINT AND HMA TAPER  
FOR RESURFACING ONLY**

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

**NOTES**

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
  - B: MINOR SIDE ROADS.
  - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
  - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
  - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
  - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
  - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- \*\*\* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")  
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

**BASIS OF PAYMENT:**

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

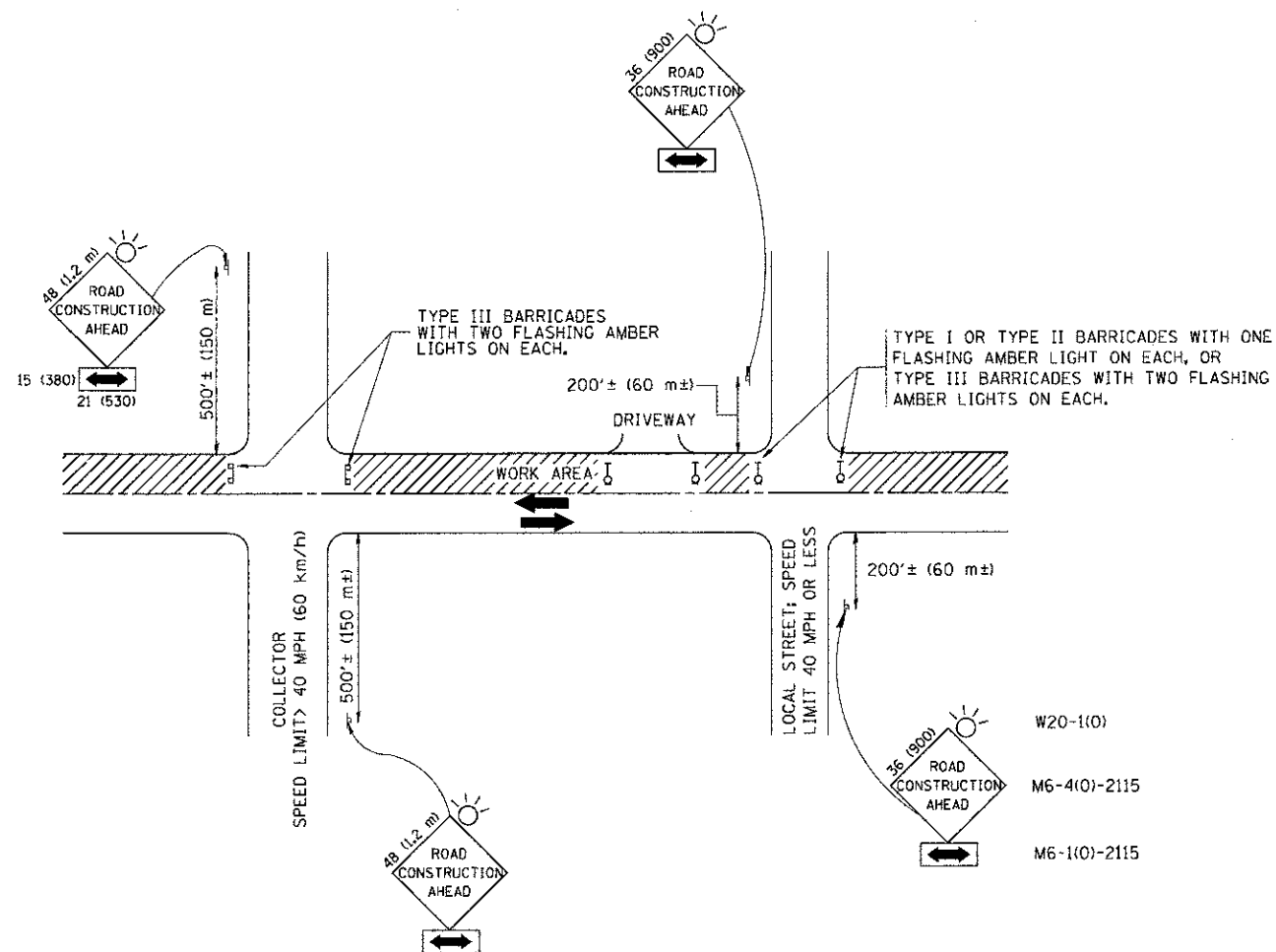
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\dststd\22x34\bd32.dgn	USER NAME = goglianob	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50,0000' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2000	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>BUTT JOINT AND HMA TAPER DETAILS</b>			
SCALE: NONE	SHEET NO. 1	OF 1 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	222	154
BD400-05 BD32		CONTRACT NO. 63765		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



## TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

### NOTES:

#### A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
  - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
  - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

#### B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

#### C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

#### D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

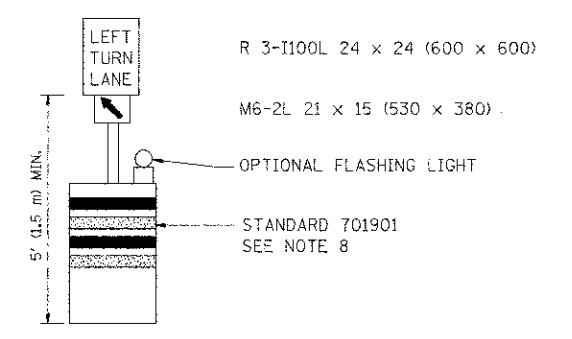
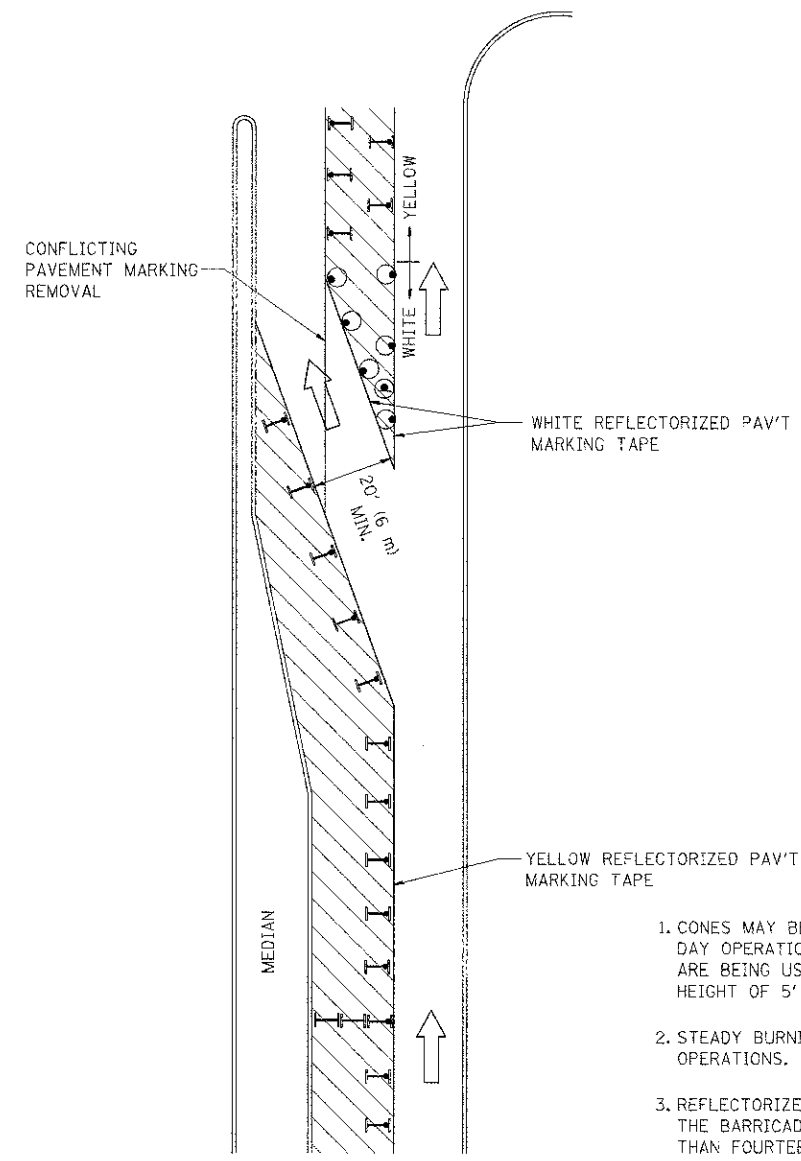
FILE NAME *	USER NAME * gaglianobt	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
W:\distsstd\22x34\to18.dgn		DRAWN -	REVISED - A. HOUSEH 03-06-96
		CHECKED -	REVISED - A. HOUSEH 10-15-96
		DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR  
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	222	155
TC-10			CONTRACT NO. 63755	
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				

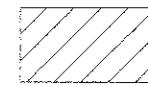







**GENERAL NOTES**

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

**LEGEND**

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

FILE NAME =	USER NAME = drivakosgn	REVISED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09
o:\ppl\work\PKIDOT\DRIVAKOSGN\d8:08315\td	td.dgn	REVISED - A. HOUSEH 11-07-95	REVISED -
		REVISED - A. HOUSEH 10-12-96	REVISED -
		REVISED - T. RAMMACHER 01-06-00	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

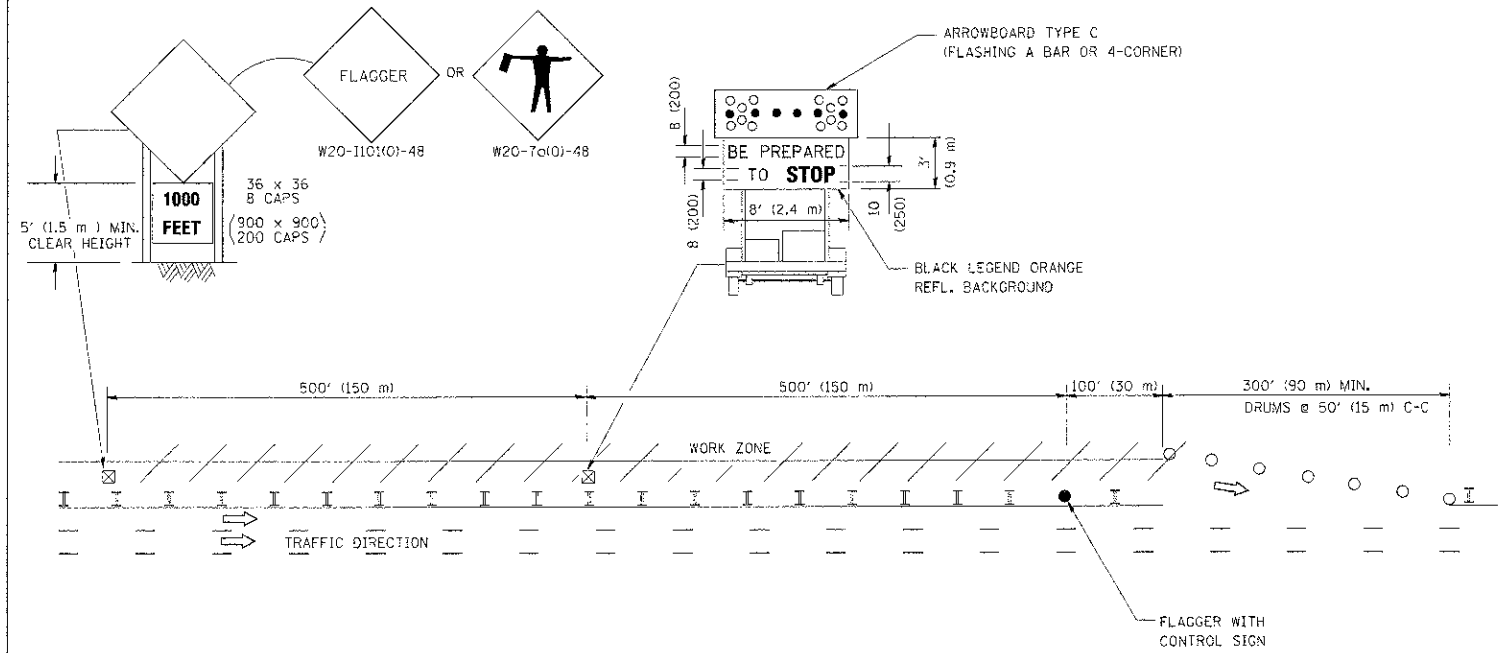
<b>TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)</b>			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	155A
TC-14		CONTRACT NO. 63765		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

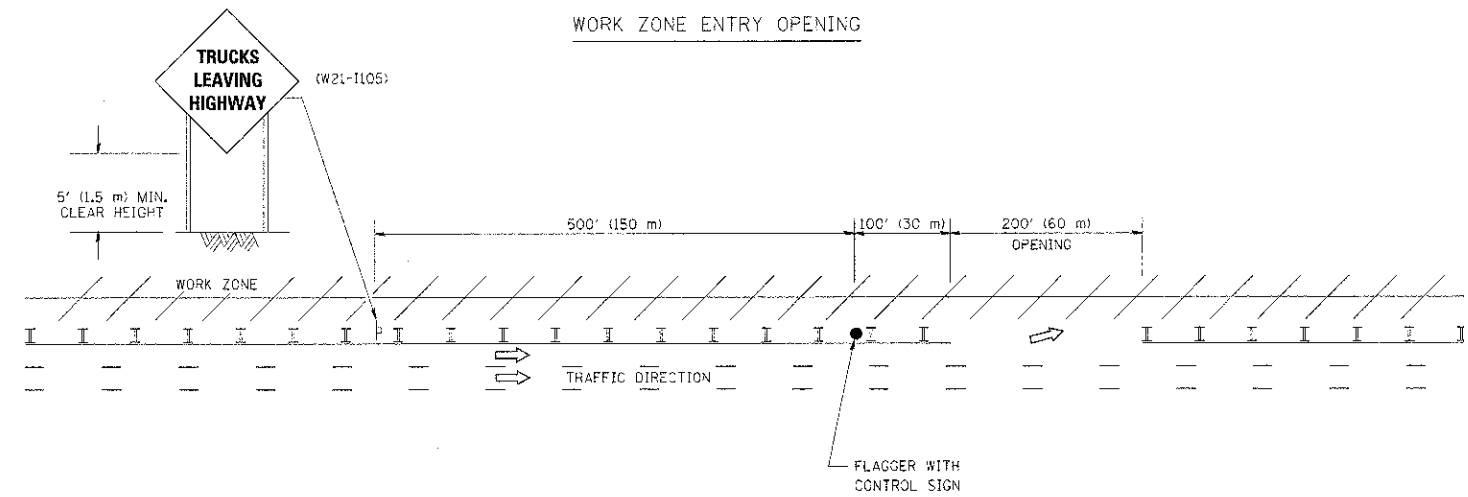


SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. THE ARROWBOARD, THE FLAGGER AHEAD SIGN AND THE TRUCKS LEAVING HIGHWAY SIGN SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE EXIT OPENINGS SHOULD BE A MINIMUM OF ONE HALF MILE APART.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = jaysa	DESIGNED -	REVISED - J.A.F. 04-03
W:\cstest\22x34\cc18.dgn		DRAWN -	REVISED - J.A.F. 02-06
		CHECKED -	REVISED - S.P.B. 01-07
		DATE -	REVISED - S.P.B. 12-09

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SIGNING FOR FLAGGING OPERATIONS  
AT WORK ZONE OPENINGS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TC STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	222	156
TC-18		CONTRACT NO. 63765		
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				

**ROUTE MARKERS**

FOR U.S. ROUTES  
M1-40-2424

FOR ILLINOIS ROUTES  
M1-50-2424

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

**ARROWS SIGNS**

M5-1L-2115

M5-1R-2115

M6-1-2115

M6-1-2115

M6-3-2115

**CARDINAL DIRECTION & DETOUR SIGNS**

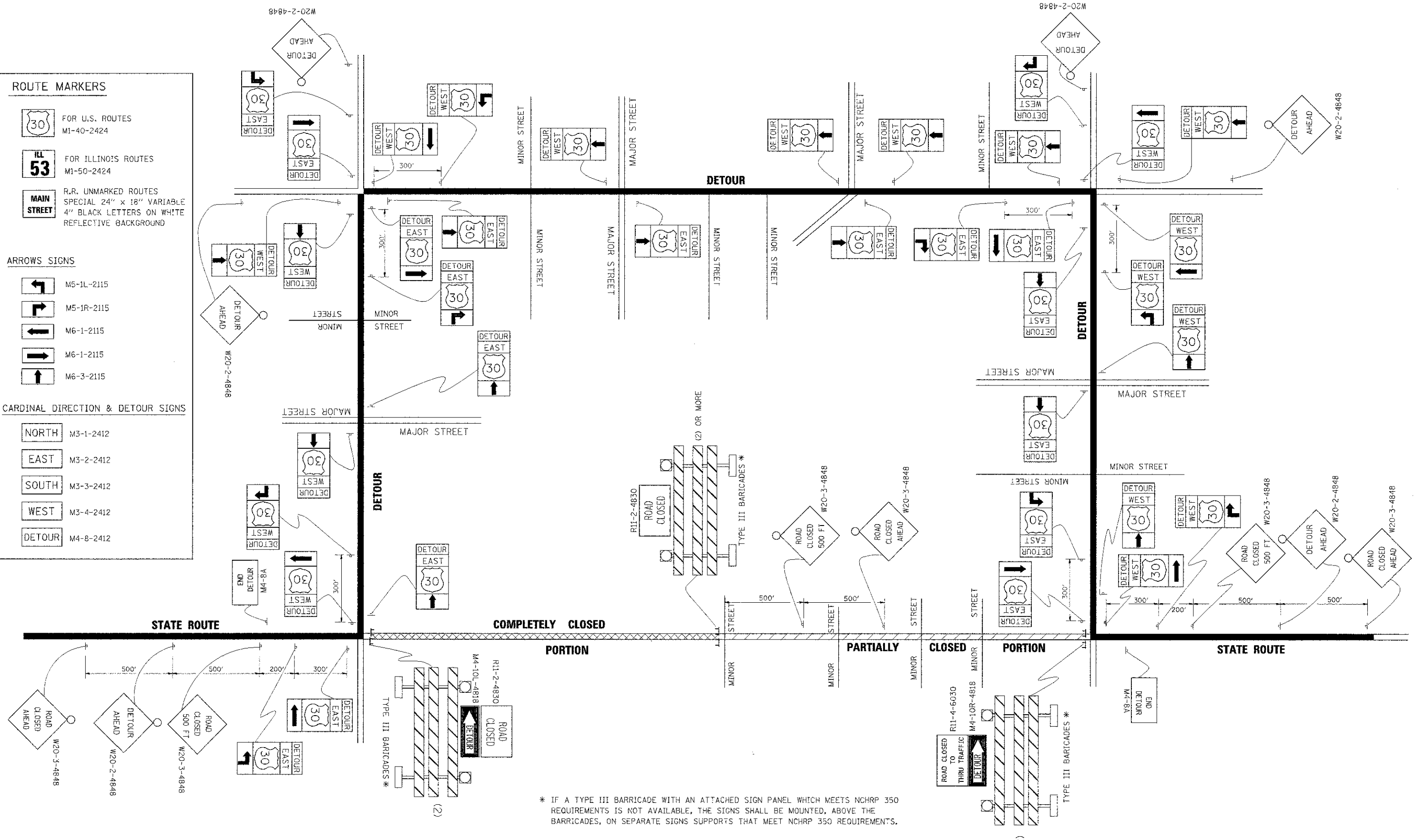
NORTH M3-1-2412

EAST M3-2-2412

SOUTH M3-3-2412

WEST M3-4-2412

DETOUR M4-8-2412



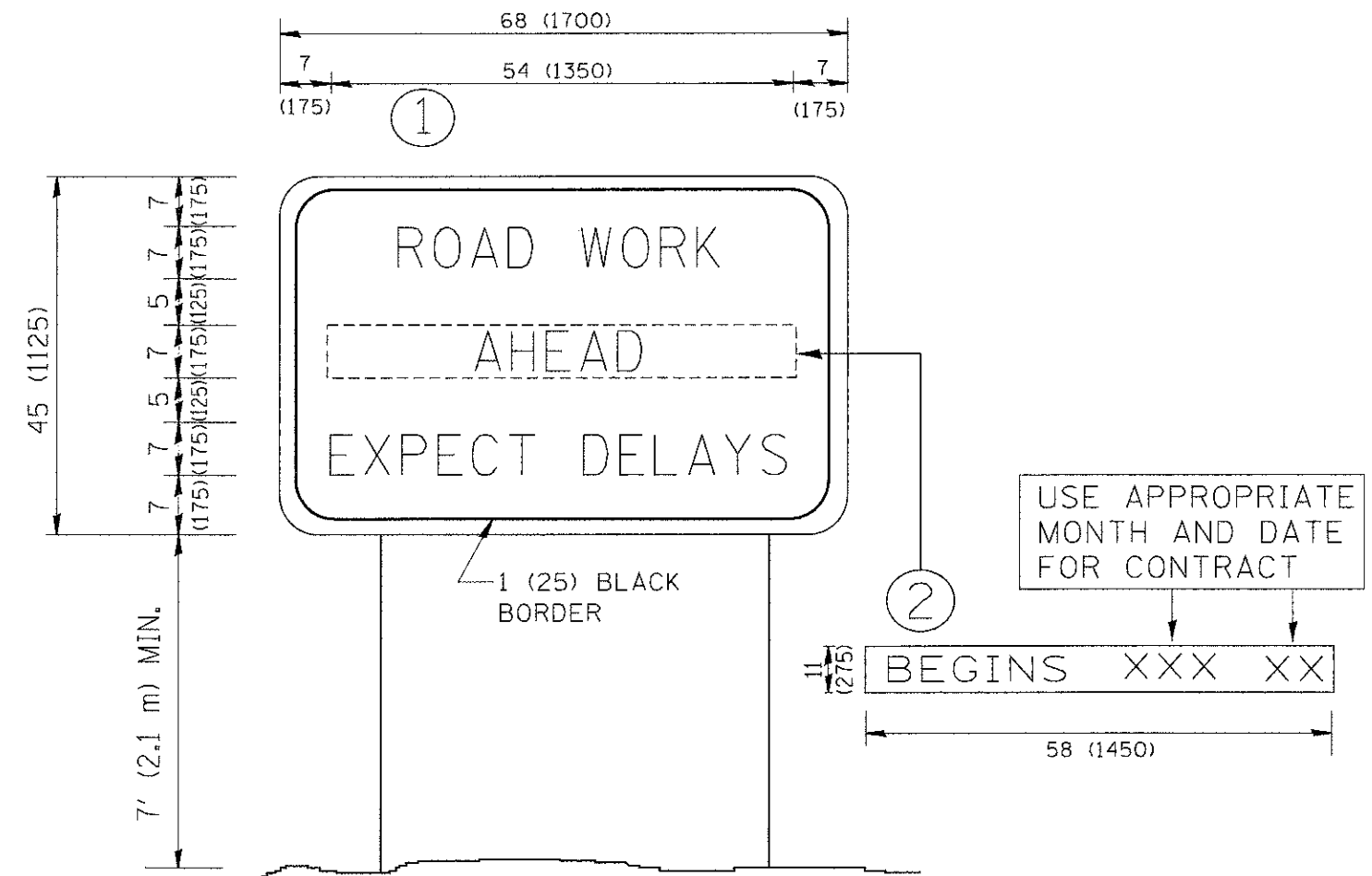
\* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

FILE NAME =	USER NAME = drivakoagn	DESIGNED -	REVISED - 10-16-02
c:\pw\work\1PW\DOT\DRIVAKOAGN\0808315	ZLggn	DRAWN -	REVISED - R. BORO 09-14-09
PLOT SCALE = 49,9999 / IN.	CHECKED -	REVISOR -	REVISED -
PLOT DATE = 9/14/2009	DATE -	REVISOR -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>DETOUR SIGNING FOR CLOSING STATE HIGHWAYS</b>	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	156A
TC-21				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**NOTES:**

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

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

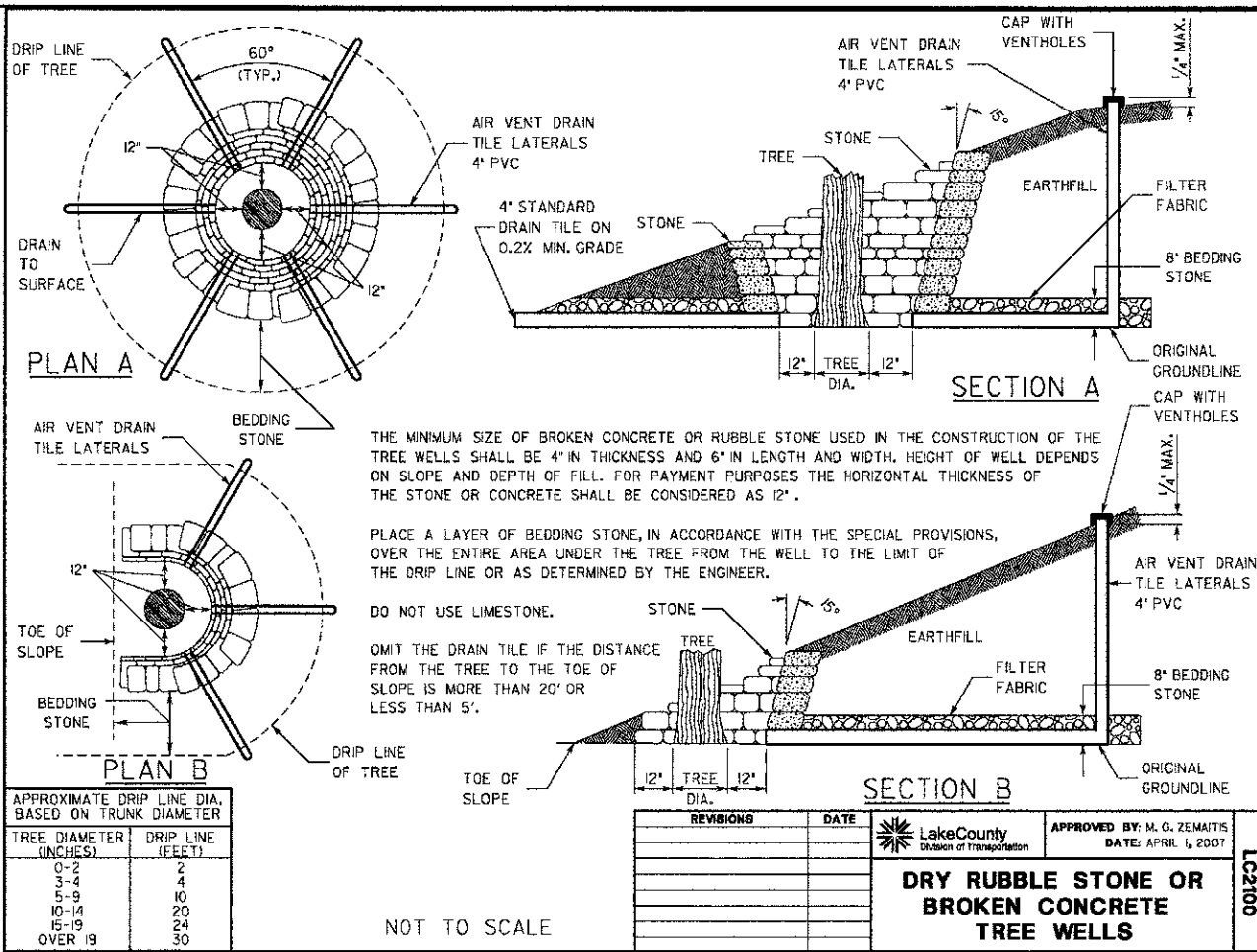
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		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD  
INFORMATION SIGN**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	222	157
TC-22			CONTRACT NO. 63765	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

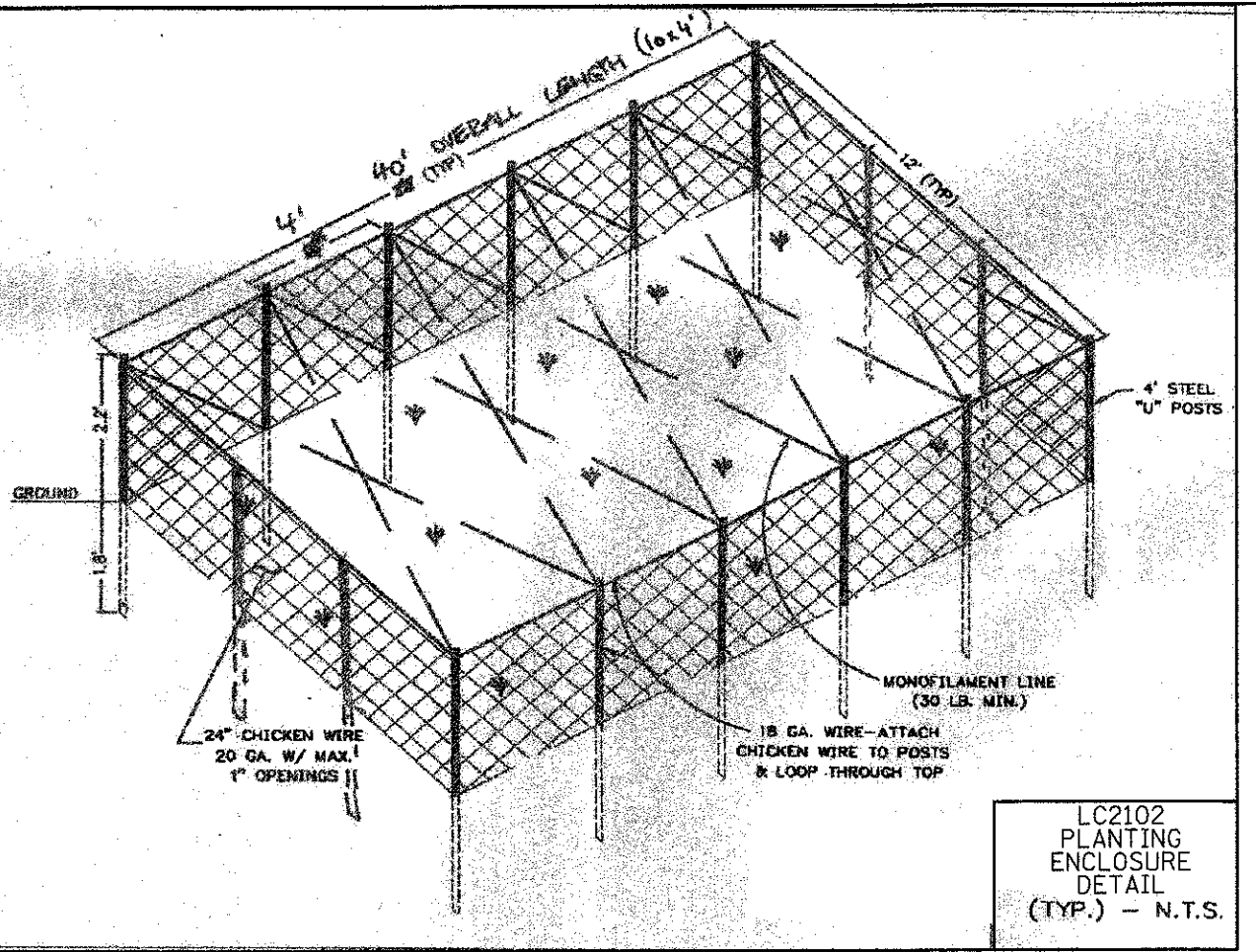


APPROXIMATE DRIP LINE DIA. BASED ON TRUNK DIAMETER

TREE DIAMETER (INCHES)	DRIP LINE (FEET)
0-2	2
3-4	4
5-9	10
10-14	20
15-19	24
OVER 19	30

NOT TO SCALE

REVISIONS: \_\_\_\_\_ DATE: \_\_\_\_\_  
**LakeCounty**  
 Division of Transportation  
 APPROVED BY: M. G. ZEMAITIS  
 DATE: APRIL 1, 2007  
**LC2100**  
**DRY RUBBLE STONE OR BROKEN CONCRETE TREE WELLS**

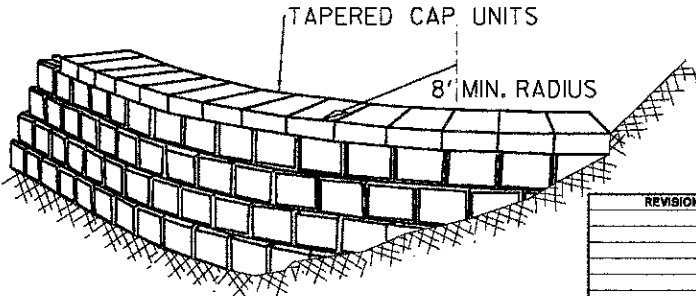


**LC2102**  
**PLANTING ENCLOSURE DETAIL**  
 (TYP.) - N.T.S.

- BLOCK FACING IS SPLIT FACE
- CAP UNITS TO BE APPLIED WITH ADHESIVE. APPLICATION RATE IS ONE 10.5 OZ TUBE PER 18 FEET OF CAP LENGTH.
- PLACEMENT METHOD IS BY HAND
- STACKING ALIGNMENT MAY BE EITHER BATTERED OR VERTICAL
- MINIMUM FACE RADIUS IN CURVE = 8'
- DESIGN NOTE: MAX HEIGHT GRAVITY ONLY = 3 FEET
- RETAINING WALL BLOCKS MUST BE CERTIFIED BY IDOT'S QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

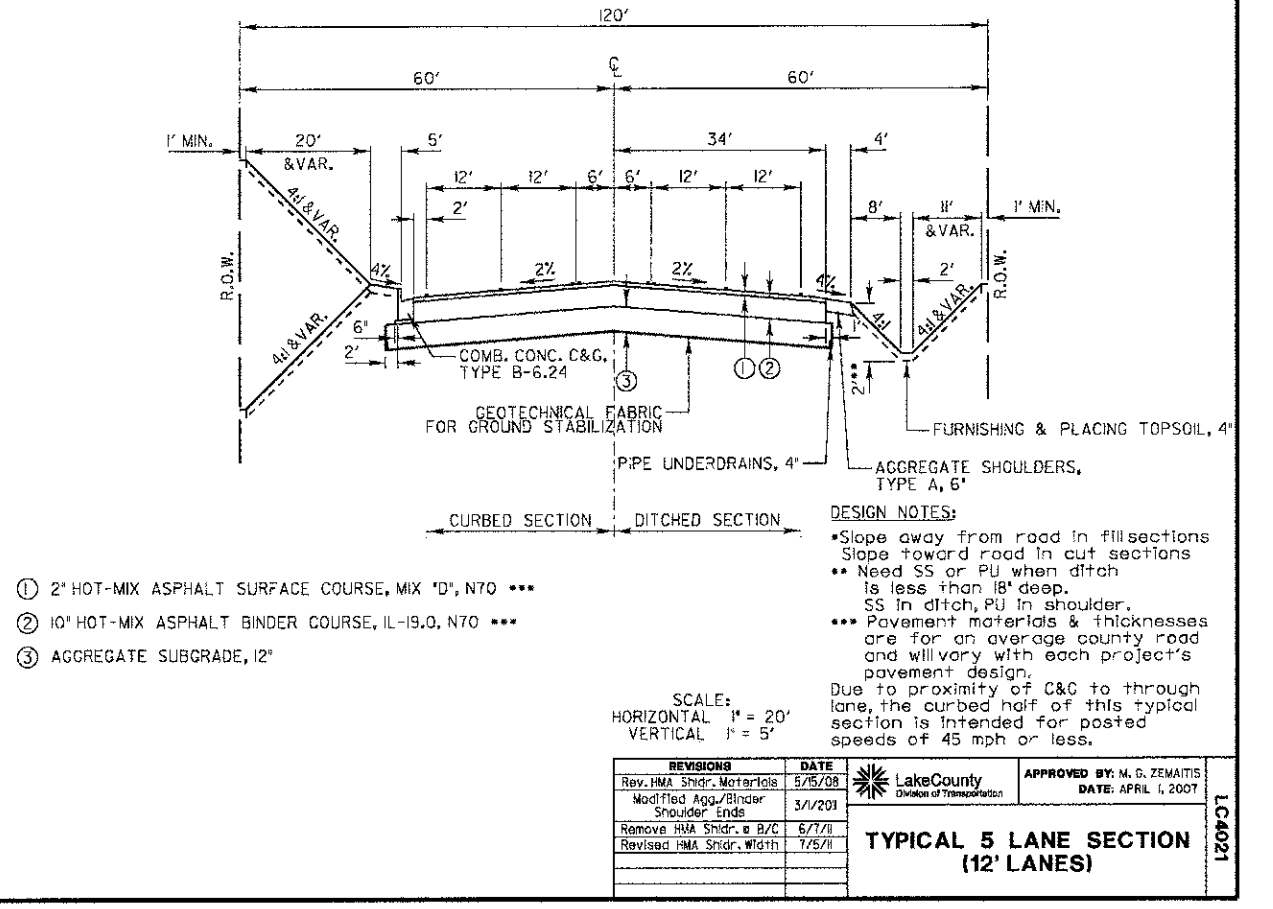
SEGMENTAL CONCRETE BLOCK DETAILS

	FACE WIDTH	BACK WIDTH	HEIGHT	DEPTH	WEIGHT
STANDARD UNIT	8"	8"	6"	12"	45 LBS
TAPERED UNIT	8"	6 7/8"	6"	12"	43 LBS
TAPERED CAP	8"	7"	3"	14"	22 LBS
RECTANGULAR CAP	24"	24"	3"	12"	68 LBS



CURVED RETURN INTO BANK

REVISIONS: \_\_\_\_\_ DATE: \_\_\_\_\_  
**LakeCounty**  
 Division of Transportation  
 APPROVED BY: M. G. ZEMAITIS  
 DATE: APRIL 1, 2007  
**LC2101**  
**SEGMENTAL CONCRETE BLOCK WALL**



- ① 2\"/>

SCALE:  
 HORIZONTAL 1" = 20'  
 VERTICAL 1" = 5'

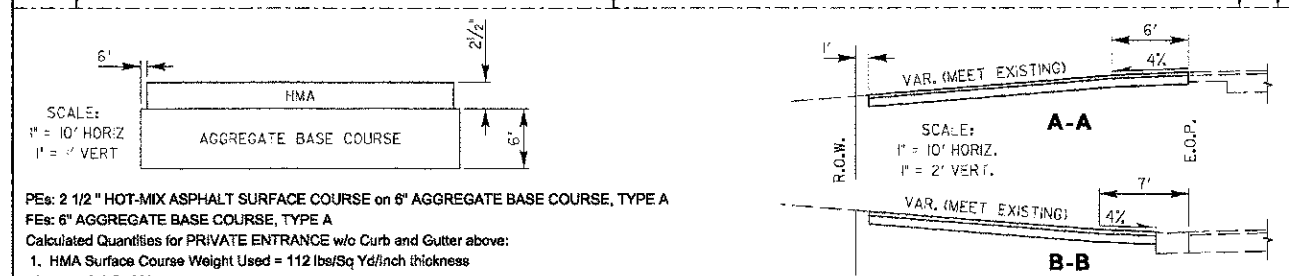
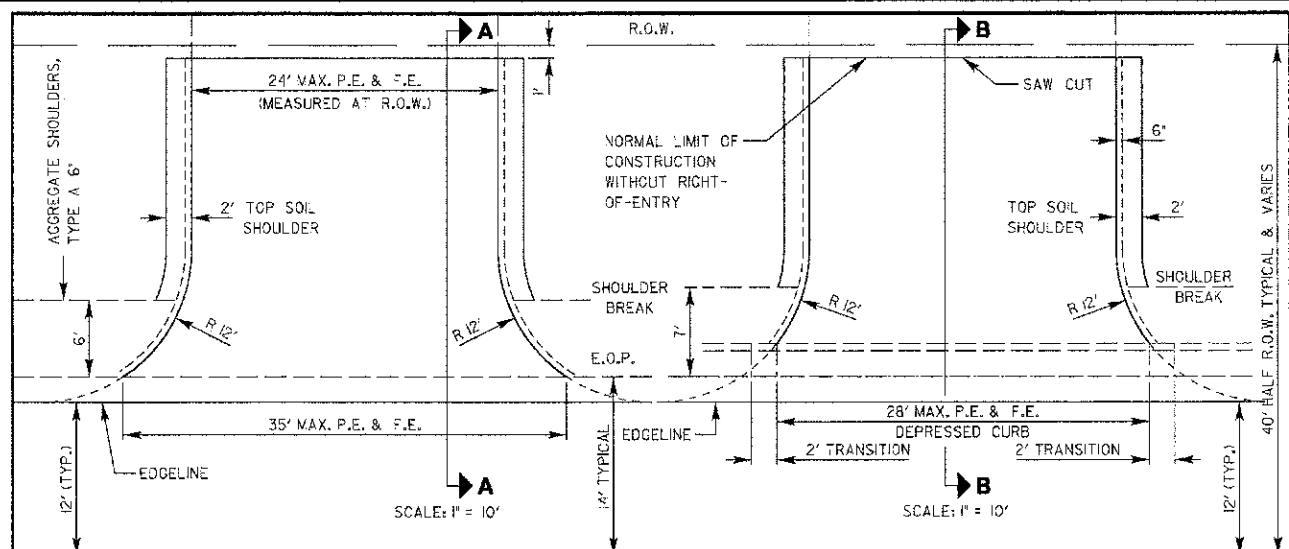
REVISIONS: \_\_\_\_\_ DATE: \_\_\_\_\_  
**LakeCounty**  
 Division of Transportation  
 APPROVED BY: M. G. ZEMAITIS  
 DATE: APRIL 1, 2007  
**LC4021**  
**TYPICAL 5 LANE SECTION (12' LANES)**

DATE	
BY	
SURVEY	
PLotted	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
SURVEY	
PLotted	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
NO.	
REVISIONS	
1. DATE	
2. DATE	
3. DATE	
4. DATE	
5. DATE	
6. DATE	
7. DATE	
8. DATE	
9. DATE	
10. DATE	

DATE	
BY	
NO.	
REVISIONS	
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9. DATE	
10. DATE	



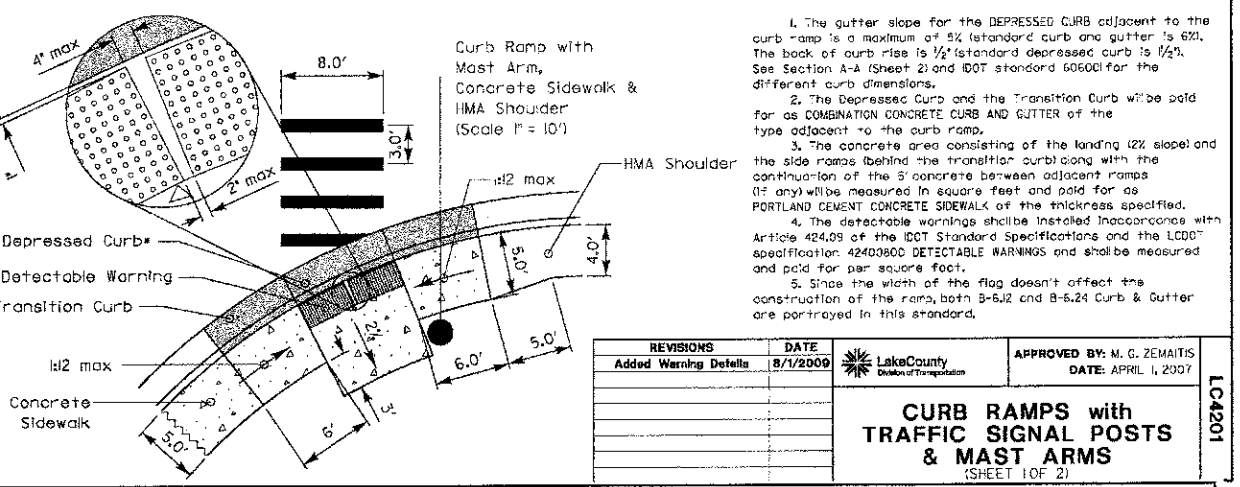
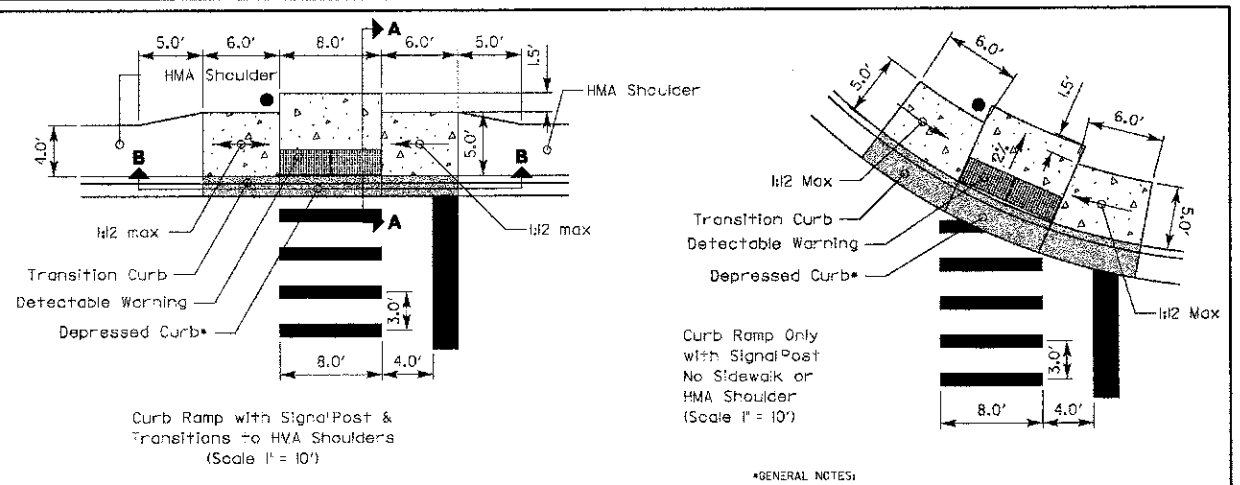
**PEs: 2 1/2" HOT-MIX ASPHALT SURFACE COURSE ON 6" AGGREGATE BASE COURSE, TYPE A**  
**FEs: 6" AGGREGATE BASE COURSE, TYPE A**  
 Calculated Quantities for PRIVATE ENTRANCE w/o Curb and Gutter above:  
 1. HMA Surface Course Weight Used = 112 lbs/Sq Yd/inch thickness  
 Area = 72.6 Sq Yd  
 72.6 Sq Yd x 112 lb/Sq Yd/inch x 2.5 inches = 20,328.0 lb  
 Converting to Tons = 20,328.0 lb/2000 lb/Ton = 10.16 Ton  
 Round to = **10 Ton**  
 2. Aggregate Base Course Weight Used = 2 Ton/Cu Yd  
 75.63 Sq Yd x 2 Ton/Cu Yd x 0.1667 Yd thickness = 25.22 Ton  
 Round to = **25 Ton**

REVISIONS	DATE	APPROVED BY: M. G. ZEMAITIS
Removed Prime Coat Qty	5/20/08	DATE: APRIL 1, 2007
Revised Entrance EOP Radius	6/4/10	

Lake County Division of Transportation

**TYPICAL MINOR ACCESS (PRIVATE ENTRANCE)**

LC4100



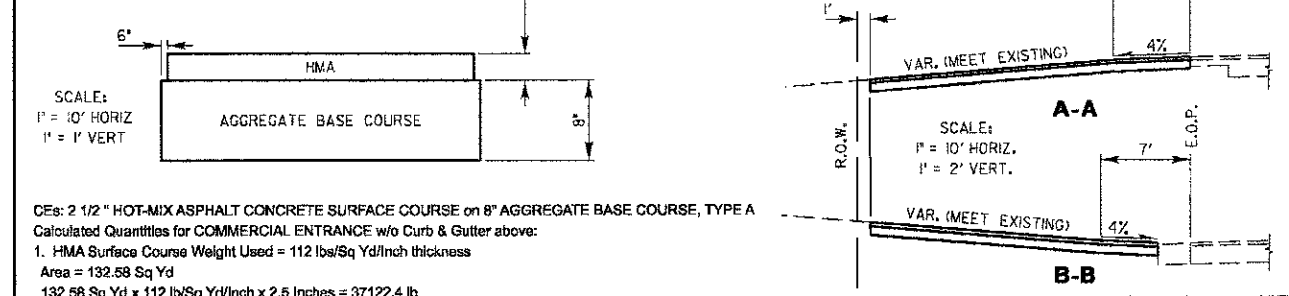
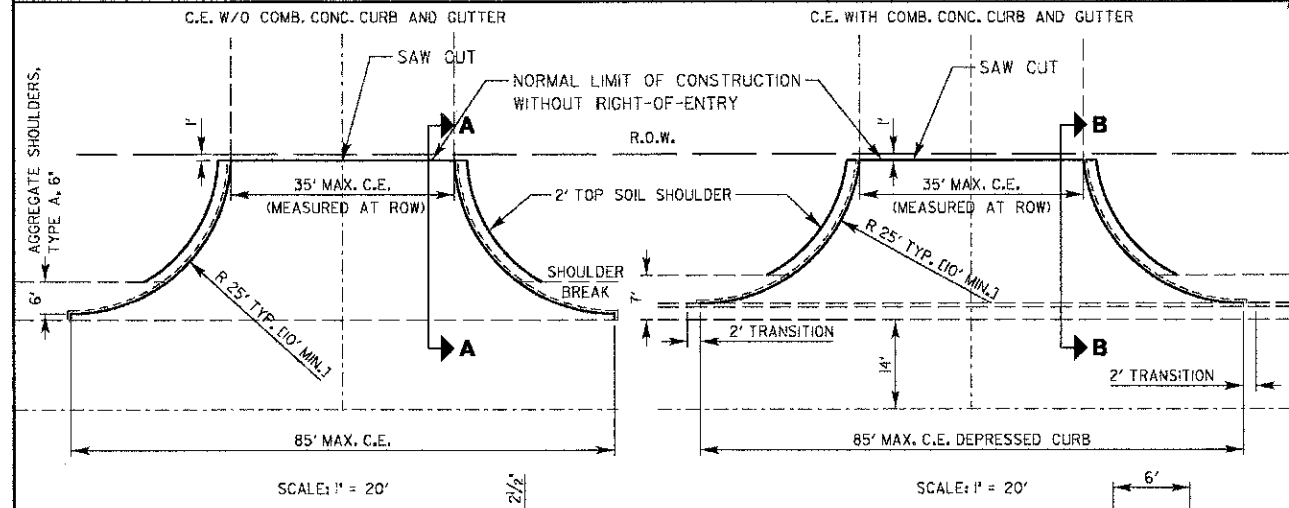
**\*GENERAL NOTES:**  
 1. The gutter slope for the DEPRESSED CURB adjacent to the curb ramp is a maximum of 5% (standard curb and gutter is 6%). The back of curb rise is 1/2" standard depressed curb is 1/2". See Section A-A (Sheet 2) and IDOT standard 60500 for the different curb dimensions.  
 2. The depressed curb and the transition curb will be paid for as COMBINATION CONCRETE CURB AND GUTTER of the type adjacent to the curb ramp.  
 3. The concrete area consisting of the landing (2% slope) and the side ramps (behind the transition curb) along with the continuation of the 5% concrete between adjacent ramps (if any) will be measured in square feet and paid for as PORTLAND CEMENT CONCRETE SIDEWALK of the thickness specified.  
 4. The detectable warnings shall be installed in accordance with Article 424.09 of the IDOT Standard Specifications and the LCDOT specification 4240800 DETECTABLE WARNINGS and shall be measured and paid for per square foot.  
 5. Since the width of the flag doesn't affect the construction of the ramp, both B-6J2 and B-6J4 Curb & Gutter are portrayed in this standard.

REVISIONS	DATE	APPROVED BY: M. G. ZEMAITIS
Added Warning Details	8/1/2009	DATE: APRIL 1, 2007

Lake County Division of Transportation

**CURB RAMPS with TRAFFIC SIGNAL POSTS & MAST ARMS (SHEET 1 OF 2)**

LC4201



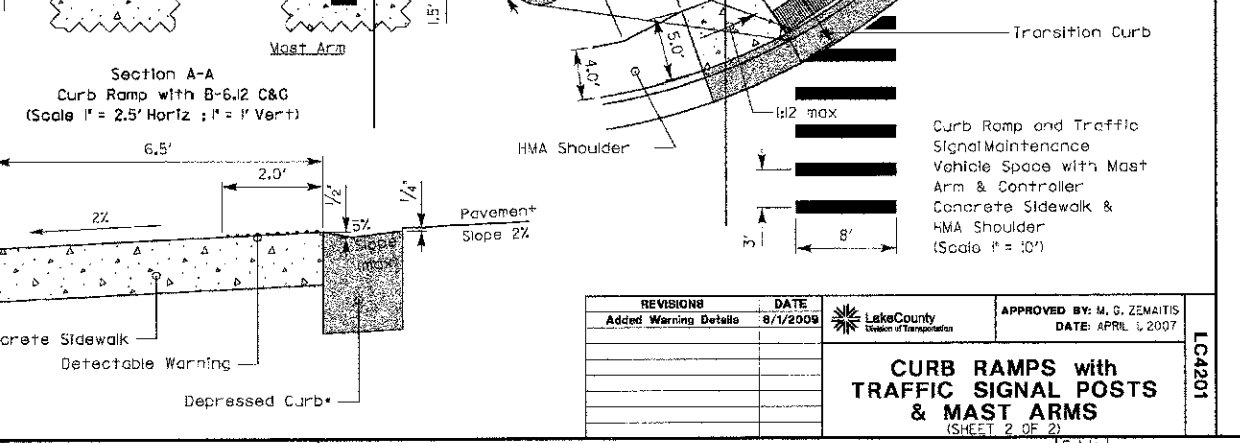
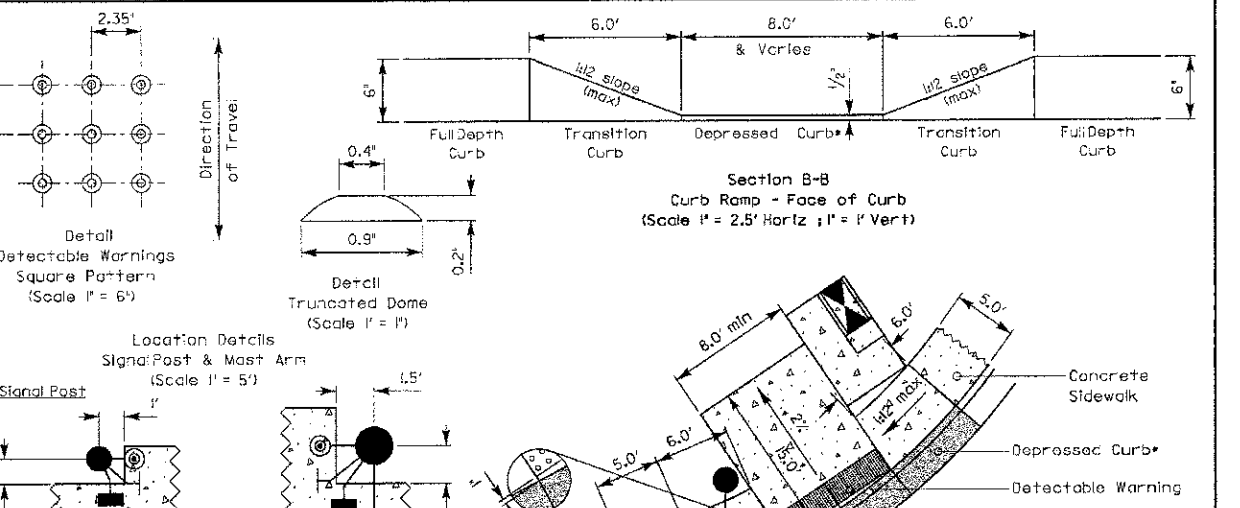
**CEs: 2 1/2" HOT-MIX ASPHALT CONCRETE SURFACE COURSE ON 8" AGGREGATE BASE COURSE, TYPE A**  
**Calculated Quantities for COMMERCIAL ENTRANCE w/o Curb & Gutter above:**  
 1. HMA Surface Course Weight Used = 112 lbs/Sq Yd/inch thickness  
 Area = 132.58 Sq Yd  
 132.58 Sq Yd x 112 lb/Sq Yd/inch x 2.5 inches = 37122.4 lb  
 Converting to Tons = 37122.4 lb/2000 lb/Ton = 18.56 Ton  
 Round to = **19 Ton**  
 2. Aggregate Base Course Weight Used = 2 Ton/Cu Yd  
 138.94 Sq Yd x 2 Ton/Cu Yd x 0.22 Yd thickness = 60.25 Ton  
 Round to = **60 TON**

REVISIONS	DATE	APPROVED BY: M. G. ZEMAITIS
Removed Prime Coat Qty	6/20/08	DATE: APRIL 1, 2007

Lake County Division of Transportation

**TYPICAL MAJOR ACCESS (COMMERCIAL ENTRANCE)**

LC4101



REVISIONS	DATE	APPROVED BY: M. G. ZEMAITIS
Added Warning Details	8/1/2009	DATE: APRIL 1, 2007

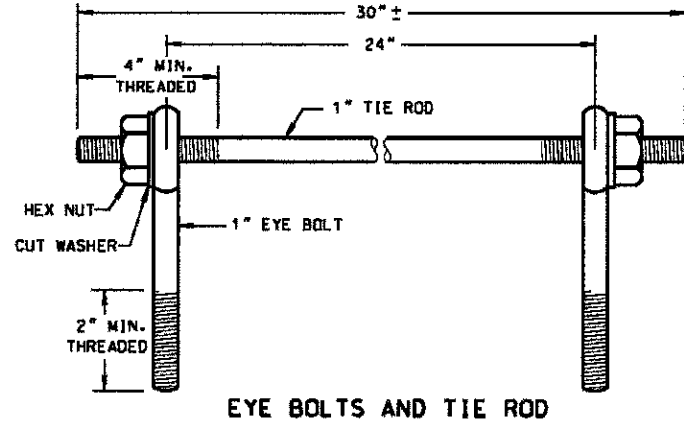
Lake County Division of Transportation

**CURB RAMPS with TRAFFIC SIGNAL POSTS & MAST ARMS (SHEET 2 OF 2)**

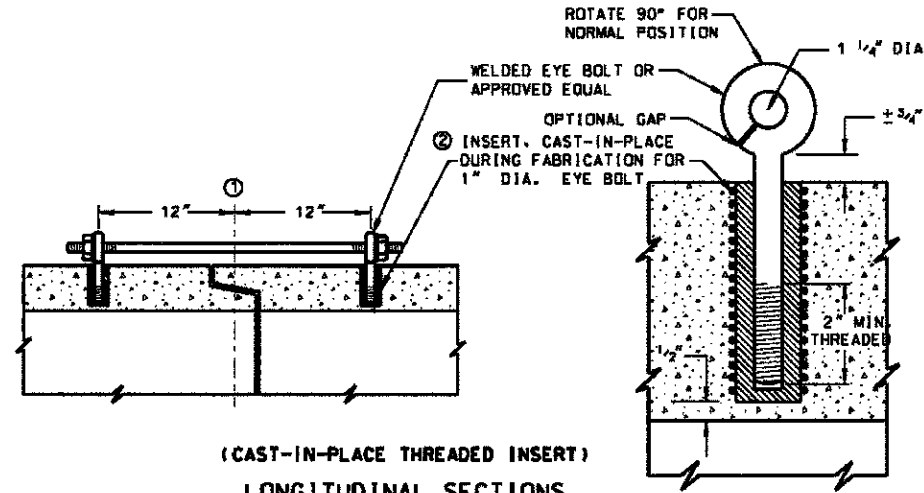
LC4201

DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 SURVEYED: \_\_\_\_\_  
 PLOTTED: \_\_\_\_\_  
 TEMPLATE: \_\_\_\_\_  
 AREAS: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 NO.: \_\_\_\_\_

DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 SURVEYED: \_\_\_\_\_  
 PLOTTED: \_\_\_\_\_  
 TEMPLATE: \_\_\_\_\_  
 AREAS: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 NO.: \_\_\_\_\_



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)  
LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS. JOINT TIES AND HARDWARE SHALL BE GALVANIZED STEEL.

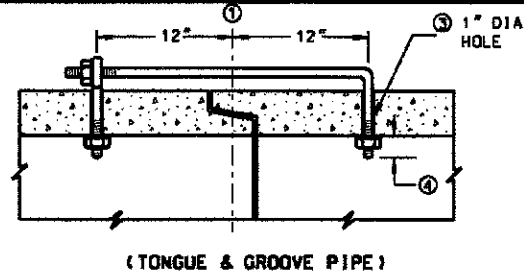
CONCRETE CULVERT PIPE AND SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT THE LAST THREE JOINTS BEFORE A FLARED END SECTION

THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR CONCRETE PIPE.

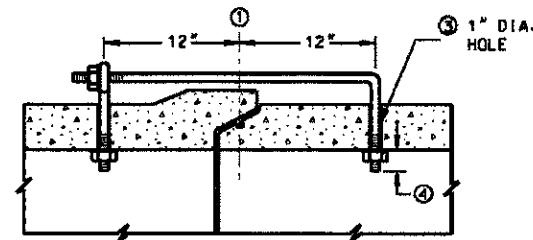
UNLESS OTHERWISE STATED IN THE CONTRACT THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE CULVERT PIPE AS INDICATED ON THE PLANS AND BY THIS DETAIL WILL BE CONSIDERED INCLUDED IN THE COST OF PIPE CULVERTS OR STORM SEWERS.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR GALVANIZED STEEL JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

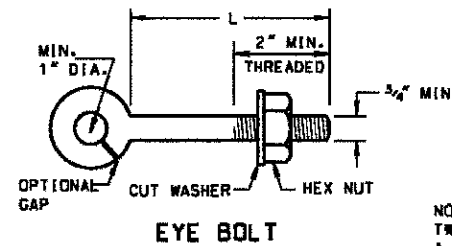
- ① 1/2" OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12" FROM 1/2" OF TONGUE AND GROOVE.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2".
- ⑤ OPENING TO BE ROD DIAMETER + 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)  
LONGITUDINAL SECTION

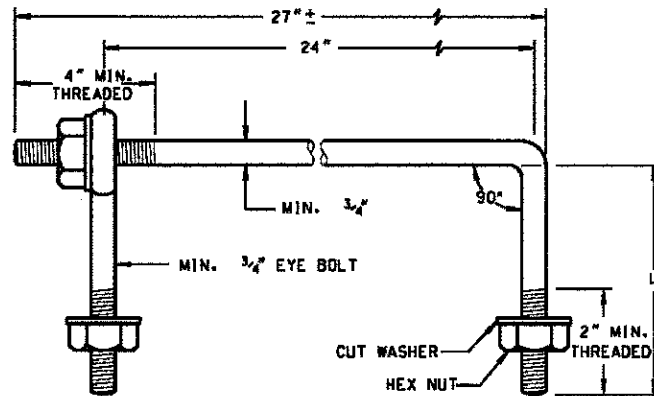


(MODIFIED BELL PIPE)  
LONGITUDINAL SECTION



EYE BOLT

NOTE:  
TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



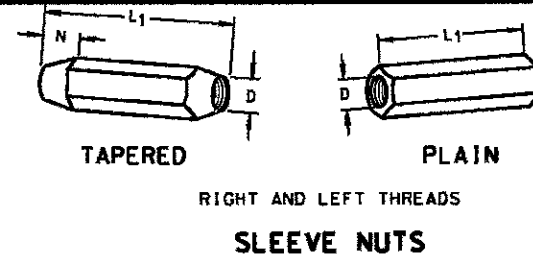
EYE BOLT AND TIE ROD

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

**EYE BOLT DIMENSION TABLE**

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	

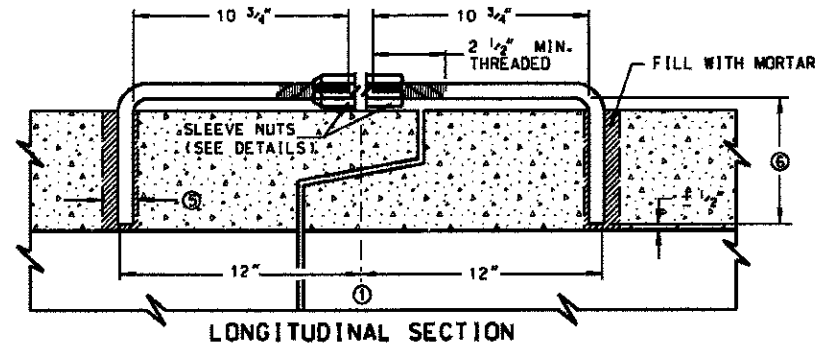


TAPERED

PLAIN

RIGHT AND LEFT THREADS

**SLEEVE NUTS**



LONGITUDINAL SECTION

(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

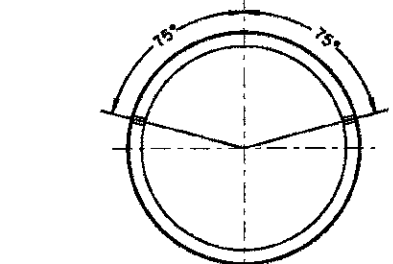
**ADJUSTABLE TIE ROD TABLE**

PIPE DIAMETER	TIE ROD DIAMETER	D	L1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/4

DIMENSIONS SHOWN ARE IN INCHES

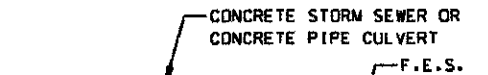
NOT TO SCALE

REVISIONS	DATE
ADDED JOINT TIE MAT'L	7/8/11



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



TYPICAL JOINT TIE LOCATIONS

NO.	REVISIONS / REMARKS	DATE	BY	SURVEYOR

FILE NAME: C:\Documents and Settings\harmc\My Documents\1\ITS\LC5402 JOINT TIES FOR CONCRETE PIPE.dgn

LakeCounty  
Division of Transportation

**PROJECT NAME**

LAKE COUNTY STANDARDS & DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
CH		- - -	XX	XX

CIVILTECH  
460 E Devon Ave, Suite 300  
Itasca, Illinois 60143  
Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

DESIGNED	REVISIONS
- FK	-
DRAWN - JRR	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

HIGHWAY STANDARDS

SHEET NO. 3 OF 10 SHEETS

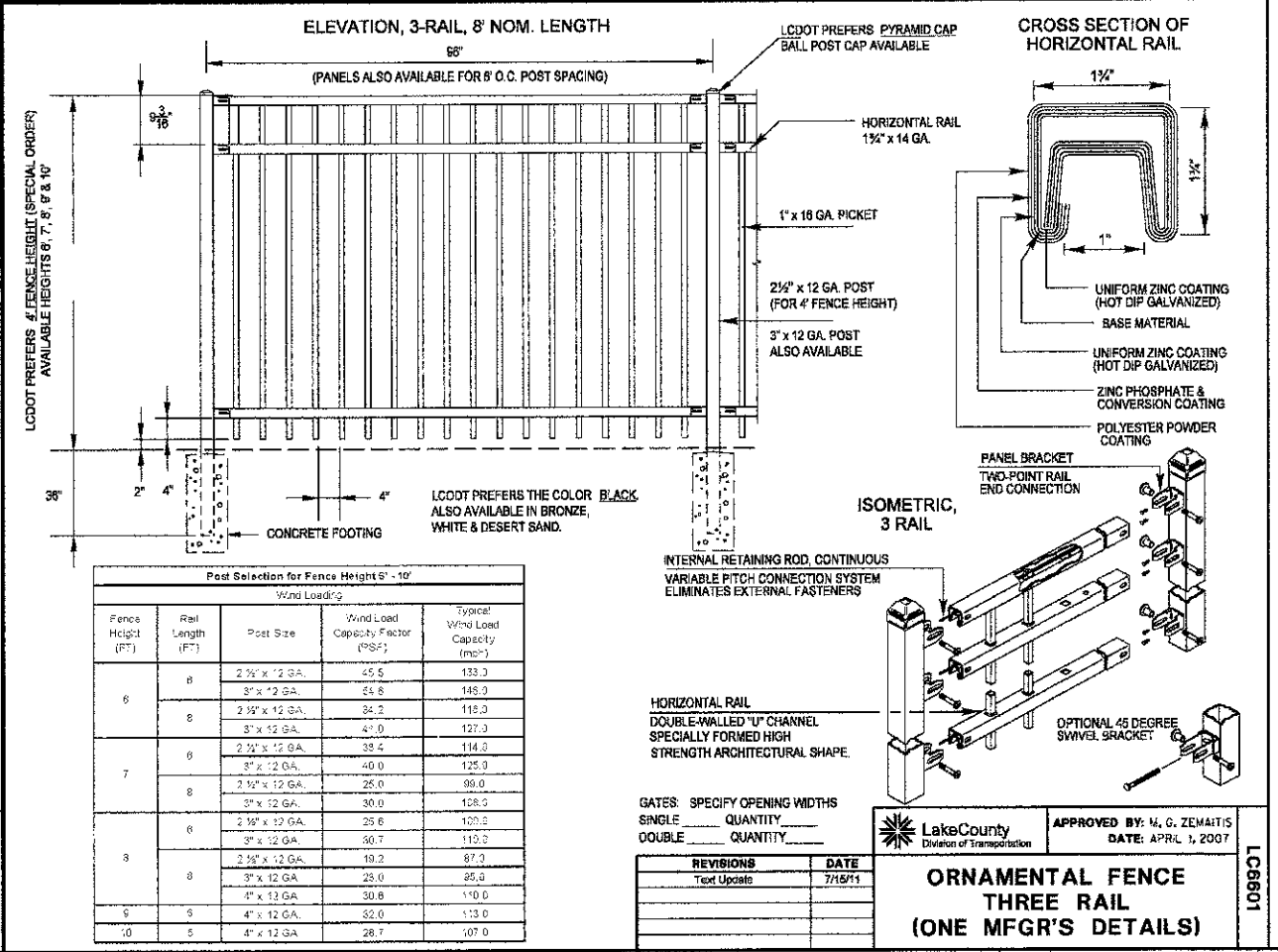
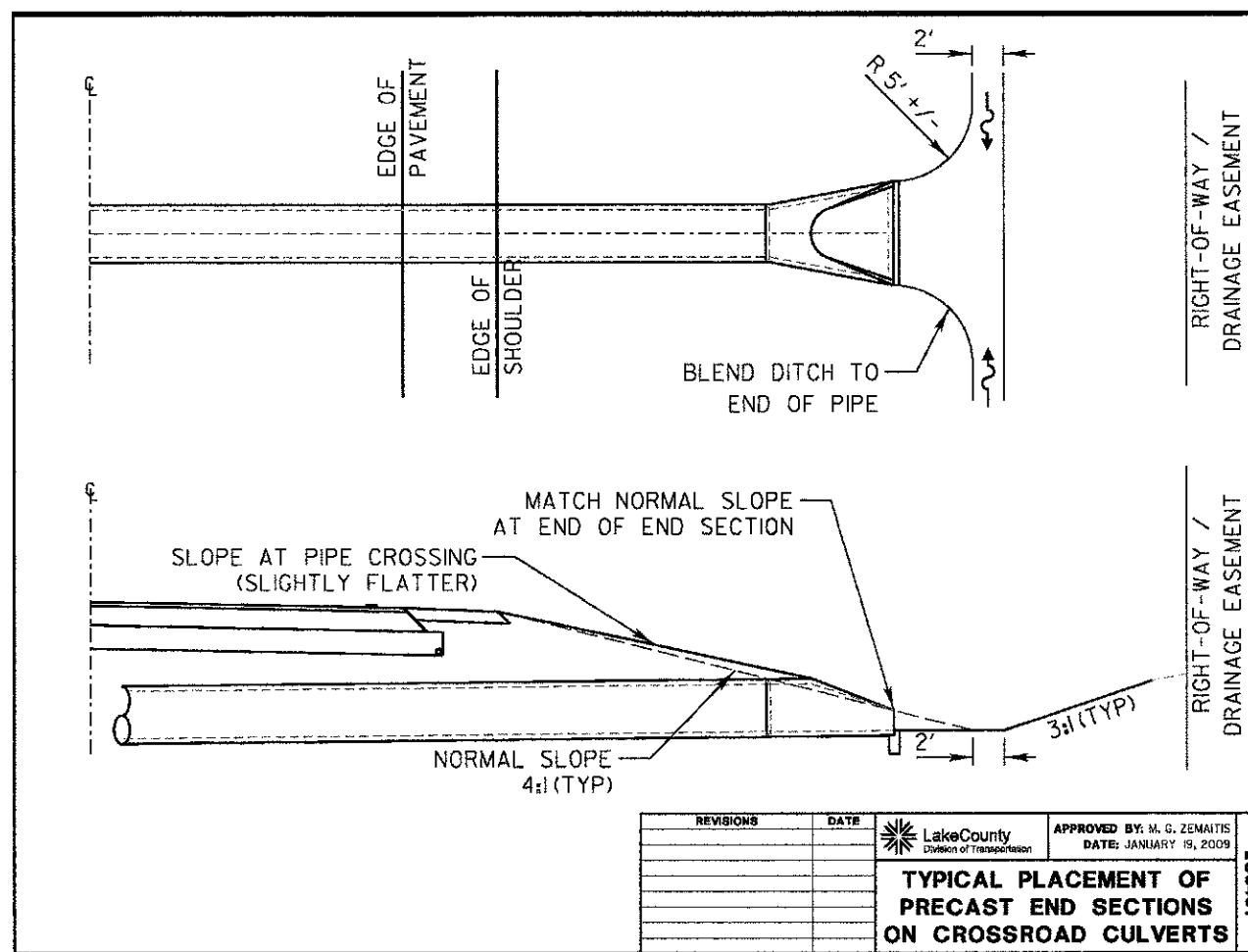
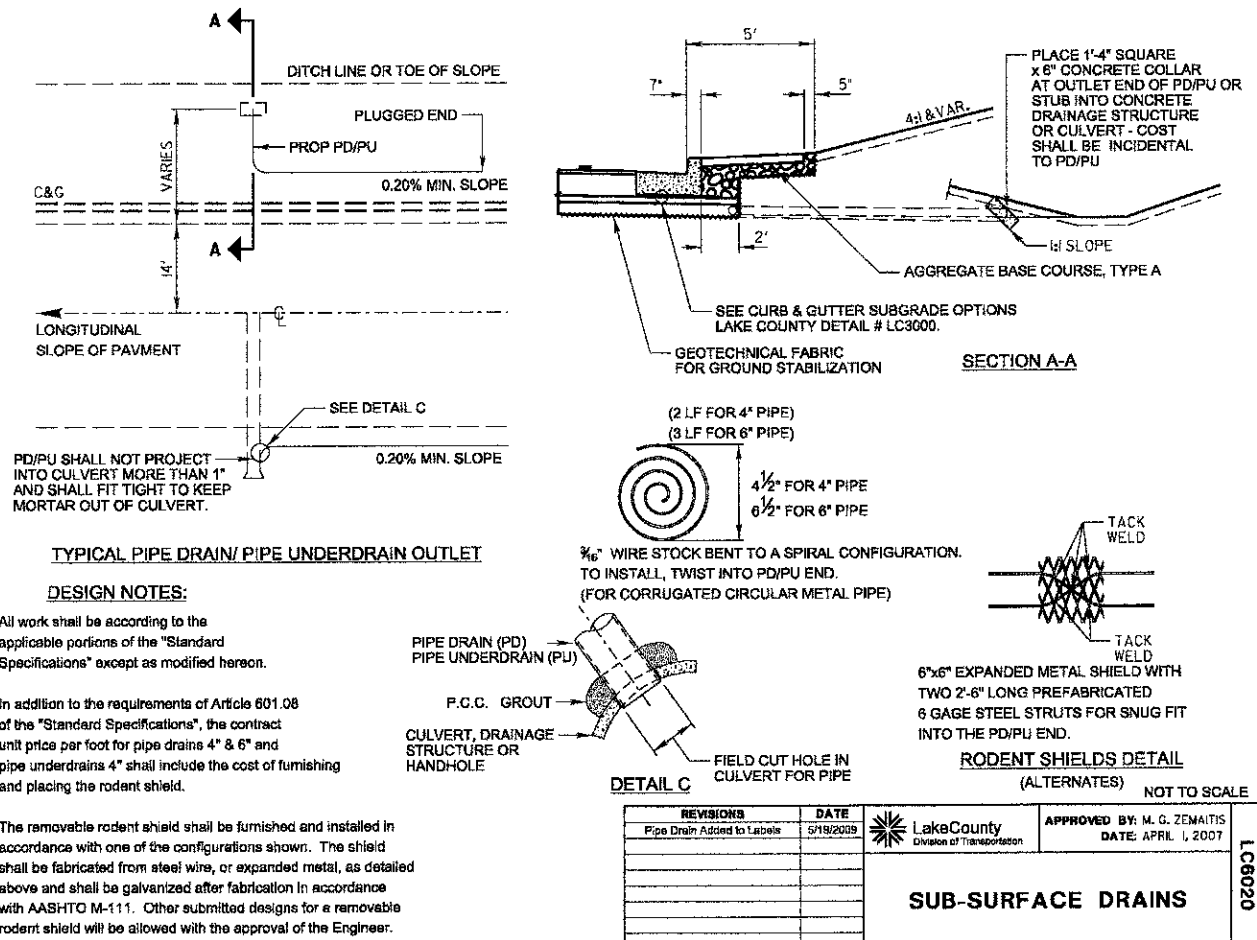
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	160

CONTRACT NO. 63765  
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

LC5402

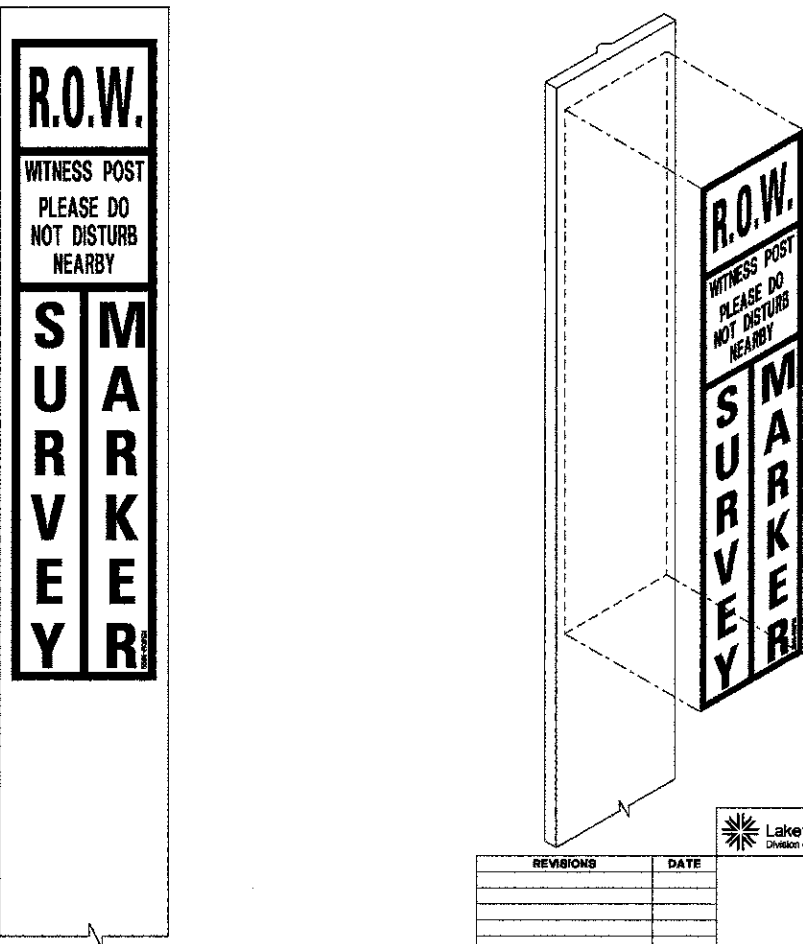
DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	



DATE	BY	REVISIONS

DATE	BY	REVISIONS



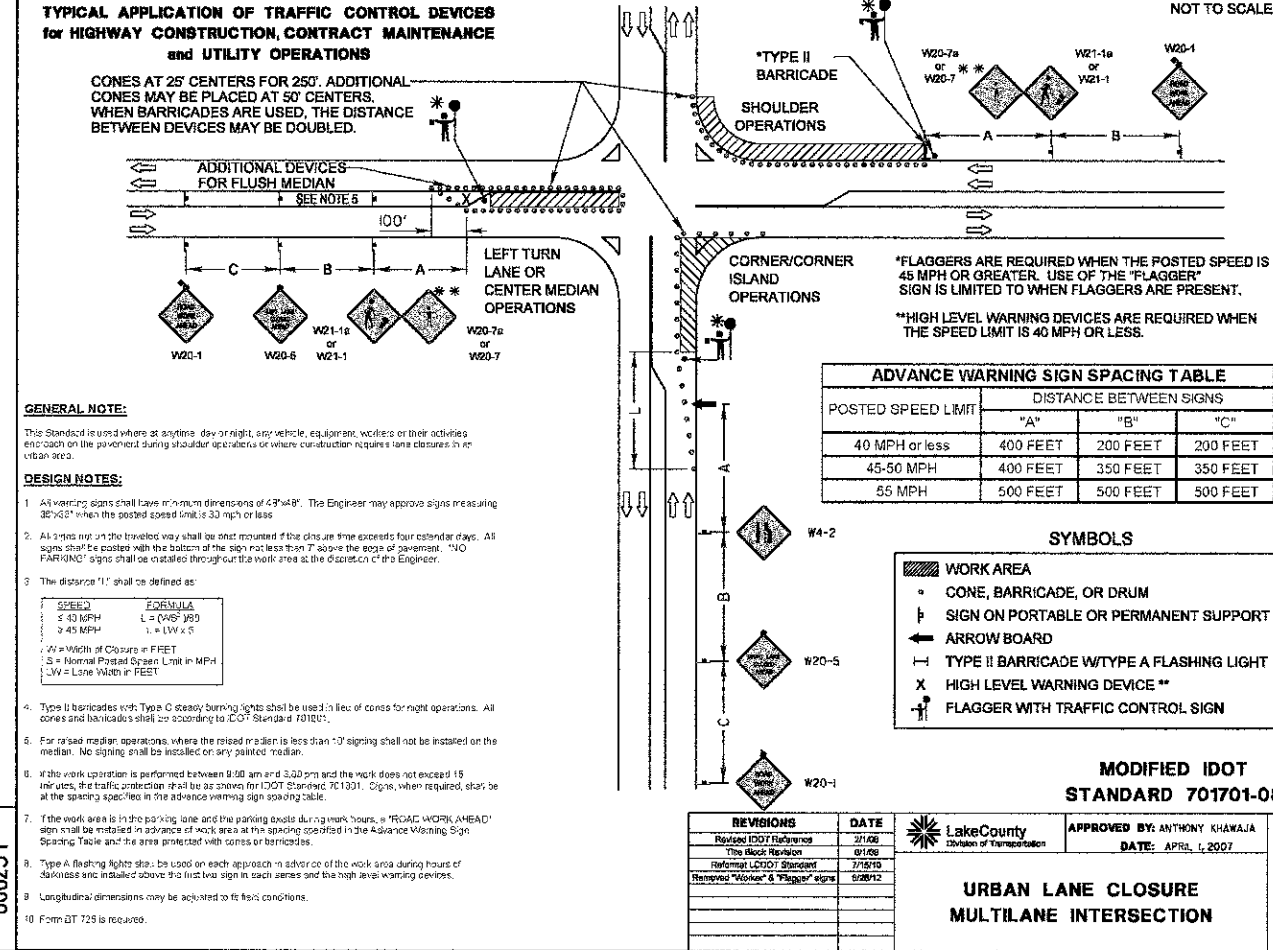
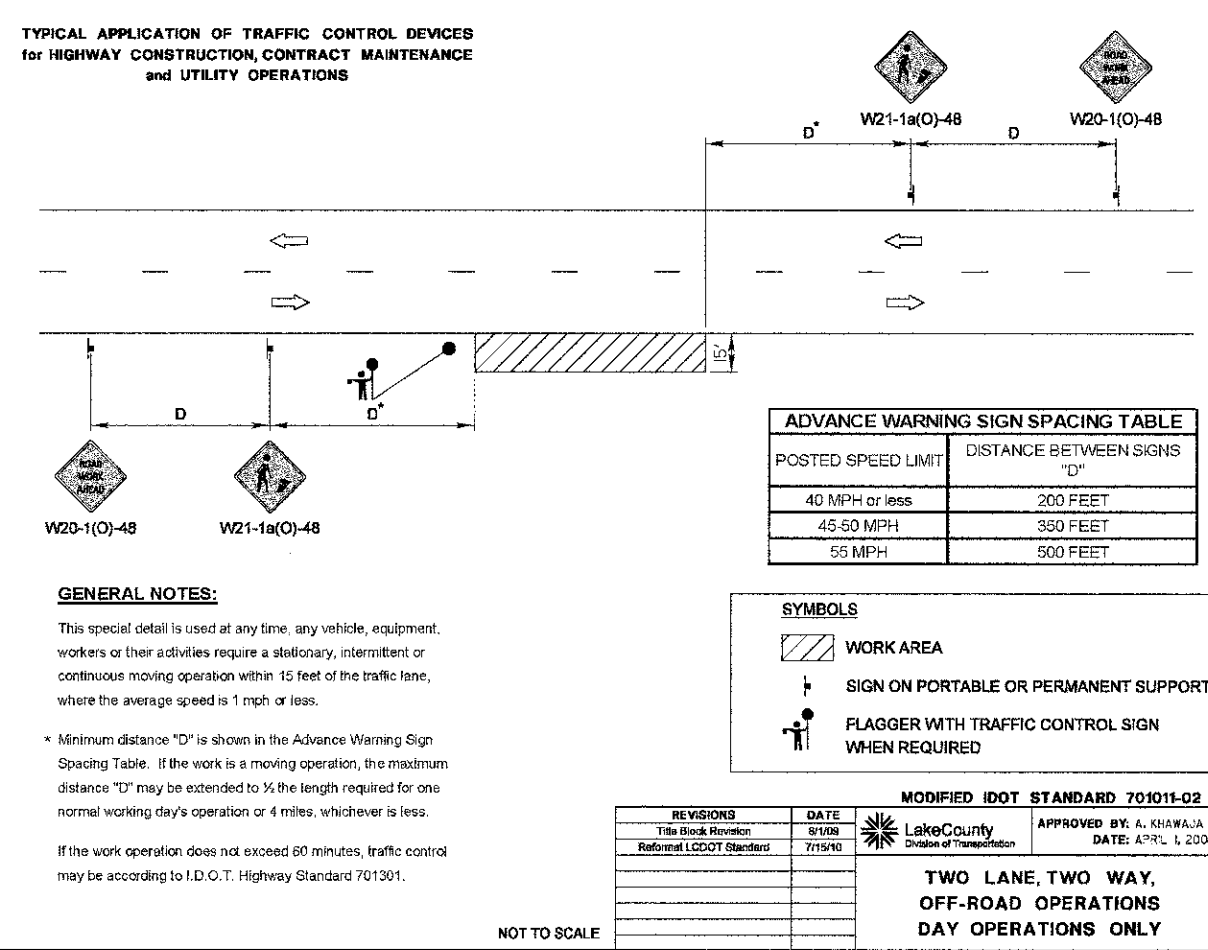
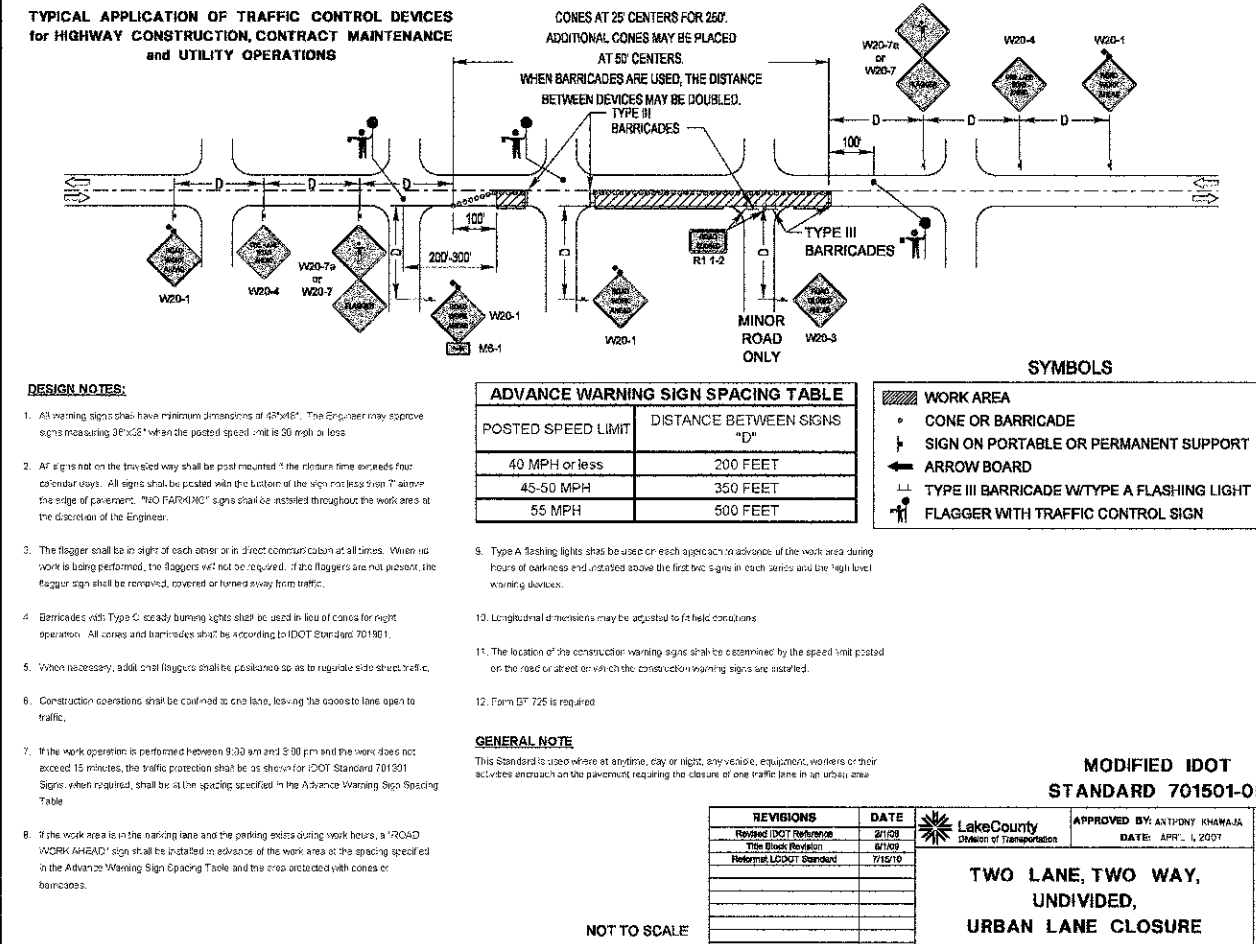
REVISIONS	DATE

LakeCounty  
Division of Transportation

APPROVED BY: M. G. ZEMAITIS  
DATE: APRIL 1, 2007

**WITNESS POST**

LC6650



450 E Devon Ave, Suite 300  
Itasca, Illinois 60143  
Tel: 630.773.3900 Fax: 630.773.3975  
www.civiltechinc.com

DESIGNED - PK	REVISED -
DRAWN - JRR	REVISED -
CHECKED - RTM	REVISED -
DATE - 1/7/2013	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

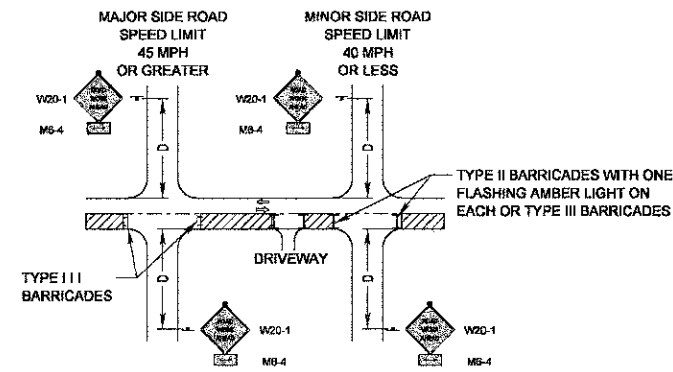
HIGHWAY STANDARDS

SHEET NO. 5 OF 10 SHEETS

F.A.D. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	162
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES**  
for HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE  
and UTILITY OPERATIONS



**SYMBOLS**

- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE WITH A FLASHING LIGHT
- TYPE III BARRICADE

**ADVANCE WARNING SIGN SPACING TABLE**

POSTED SPEED LIMIT	DISTANCE BETWEEN SIGNS "D"
40 MPH or less	200 FEET
45-50 MPH	350 FEET
55 MPH	500 FEET

**GENERAL NOTE:**

This Standard is used where at anytime, day or night, any vehicle, equipment, workers or their activities encroach on the pavement or where construction requires lane closures.

**DESIGN NOTES:**

- For a side road with a speed limit of 40 mph or less, the closed portion of the main route shall be protected by blocking with Type II or Type III barricades, 1/2 of the cross section of the closed portion of the roadway.
- For a side road with a speed limit of 45 mph or greater, the closed portion of the main route shall be protected by blocking with Type II barricades, 1/2 of the cross section of the closed portion of the roadway.
- All W20-1 "ROADWORK AHEAD" signs shall be 48" x 48" with fluorescent orange reflective sheeting with an amber Type A flashing light mounted on the sign.
- When the side road lies between the beginning of the mainline signing and the work zone, a M5-1 Single Headed Arrow shall be used in lieu of the M5-4 Double Headed Arrow.
- For a lane closure on a side road or driveway, use the applicable portions of the appropriate Highway Standard or Traffic Control Detail. The spacing of the signs and barricades shall be adjusted for field conditions as directed by the engineer. The directional arrow shall be covered or removed when no longer consistent with the side road lane closure.
- Advance warning signs shall be omitted on driveways unless otherwise noted.
- The traffic control and protection for side roads and intersections shall be included in the contract unit time schedule for "TRAFFIC CONTROL AND PROTECTION."

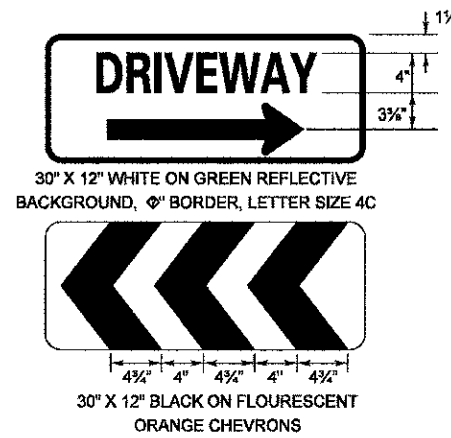
**MODIFIED IDOT DISTRICT ONE**  
**SIDE ROAD DETAIL**

REVISIONS	DATE	APPROVED BY:	DATE:
This Block Revision	8/1/08	ANTHONY K. KHAWAJA	APRIL 1, 2007
Revised Signs & Text	7/15/11		
Text Updates			

Lake County Division of Transportation

**TRAFFIC CONTROL and PROTECTION**  
for SIDEROADS, INTERSECTIONS  
and DRIVEWAYS

NOT TO SCALE



**TEMPORARY CONSTRUCTION INFORMATION SIGNING NOTES:**

- The driveway and chevron signs shall be mounted back to back on the near side of the roadway where the entrance is located. There will be two sign assemblies per driveway.
- Temporary construction information signs shall be post mounted 7' above the near edge of pavement and shall be a minimum of 6' beyond the edge of the nearest traveled lane, or as directed by the Engineer.
- The retroreflective sign face shall be a minimum of Type "A" material.
- The temporary construction information signs shall be removed or relocated when the Engineer determines the signs to be no longer necessary.
- Existing traffic control signs and messages that are in conflict with the proposed maintenance of traffic shall be covered or modified with a temporary overlay as shown in the plans and/or as directed by the Engineer.
- Install additional temporary sign panel assemblies as shown in the plans and/or directed by the Engineer.

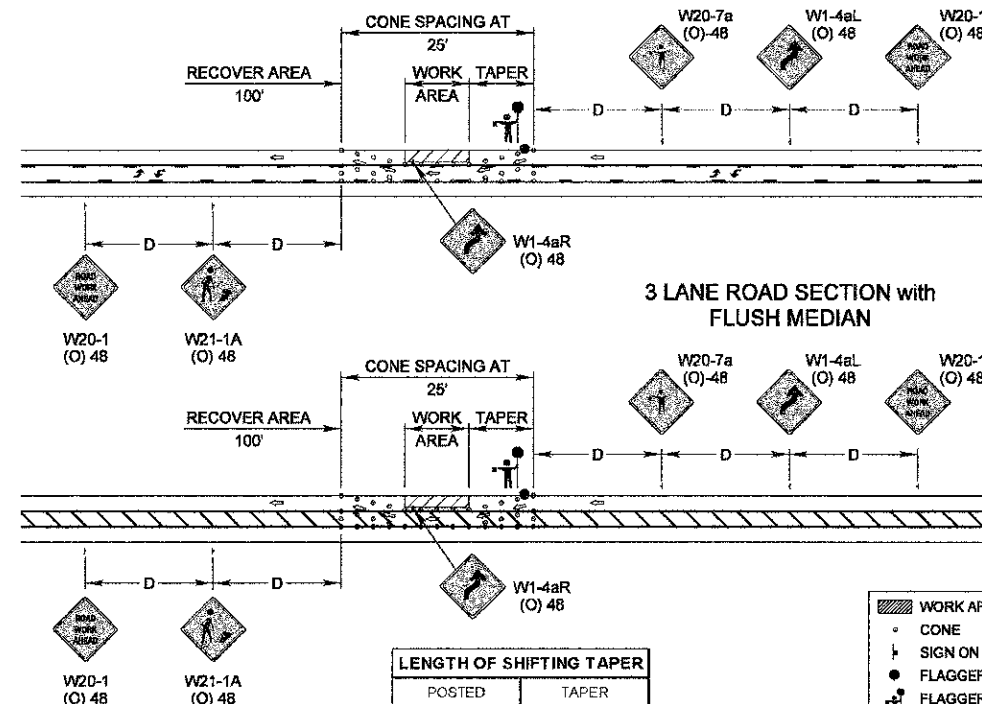
REVISIONS	DATE	APPROVED BY:	DATE:
Revised Signs & Text	1/1/08	A. KHAWAJA	APRIL 1, 2007
Text Updates	7/15/11		

Lake County Division of Transportation

**TEMPORARY CONSTRUCTION INFORMATION SIGNS**

SHEET 1 OF 2

**TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES**  
for HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE  
and UTILITY OPERATIONS



**GENERAL NOTE:**

This Standard is used where during the day only, any vehicle, equipment, workers or their activities encroach on a 3 lane two way pavement requiring the closure of one traffic lane.

**SYMBOLS**

- WORK AREA
- CONE
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER STATION
- FLAGGER WITH SLOW PADDLE

**LENGTH OF SHIFTING TAPER**

POSTED SPEED LIMIT	TAPER LENGTH
30 MPH	100'
35 MPH	125'
40 MPH	150'
45 MPH	275'
50 MPH	300'
55 MPH	325'

**ADVANCE WARNING SIGN SPACING TABLE**

POSTED SPEED LIMIT	DISTANCE BETWEEN SIGNS "D"
40 MPH or less	200 FEET
45-50 MPH	350 FEET
55 MPH	500 FEET

REVISIONS	DATE	APPROVED BY:	DATE:
This Block Revision	8/1/08	A. KHAWAJA	APRIL 1, 2007
Revised Signs & Text	7/15/11		
Text Updates			

Lake County Division of Transportation

**TYPICAL LANE CLOSURE**  
**3 LANE ROAD SECTION**

NOT TO SCALE



**48" X 38"**  
BLACK ON FLUORESCENT ORANGE  
REFLECTIVE BACKGROUND  
1" BORDER WITH 1/4" INSET  
LETTER SIZE 6D  
\*LETTER SIZE 6E BOLD

REVISIONS	DATE	APPROVED BY:	DATE:
Revised Signs & Text	1/1/08	A. KHAWAJA	APRIL 1, 2007
Text Updates	7/15/11		

Lake County Division of Transportation

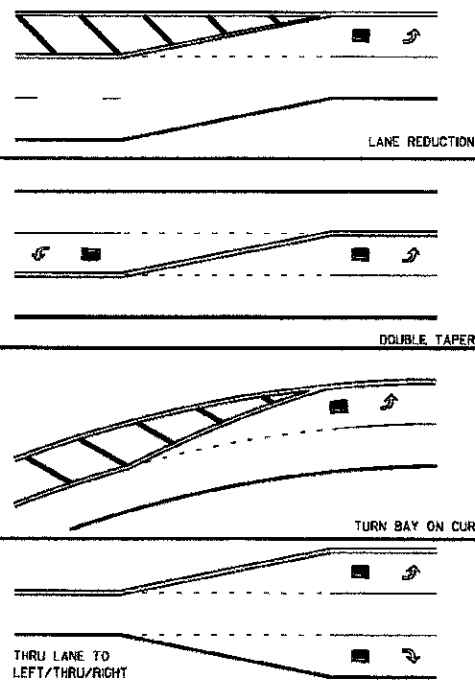
**TEMPORARY CONSTRUCTION INFORMATION SIGNS**

SHEET 2 OF 2

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 SURVEYED: \_\_\_\_\_ PLOTTED: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 AREAS CHECKED: \_\_\_\_\_  
 NO. \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 SURVEYED: \_\_\_\_\_ PLOTTED: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 AREAS CHECKED: \_\_\_\_\_  
 NO. \_\_\_\_\_

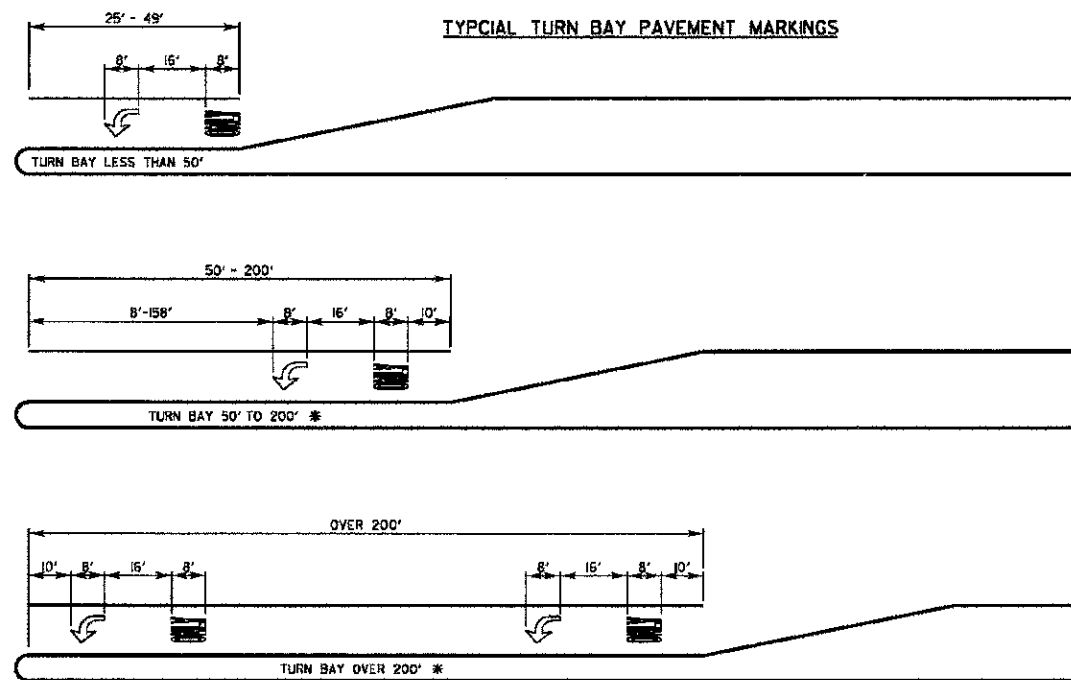
**TYPICAL MINI-SKIP PAVEMENT MARKINGS**



MINI-SKIPS ARE 2 FEET WHITE LINE WITH 6 FEET SPACING. THE MINI-SKIP IS THE SAME WIDTH AS THE PAVEMENT MARKING LINE, IT EXTENDS.

**TYPICAL PAVEMENT MARKINGS**

**TYPICAL TURN BAY PAVEMENT MARKINGS**



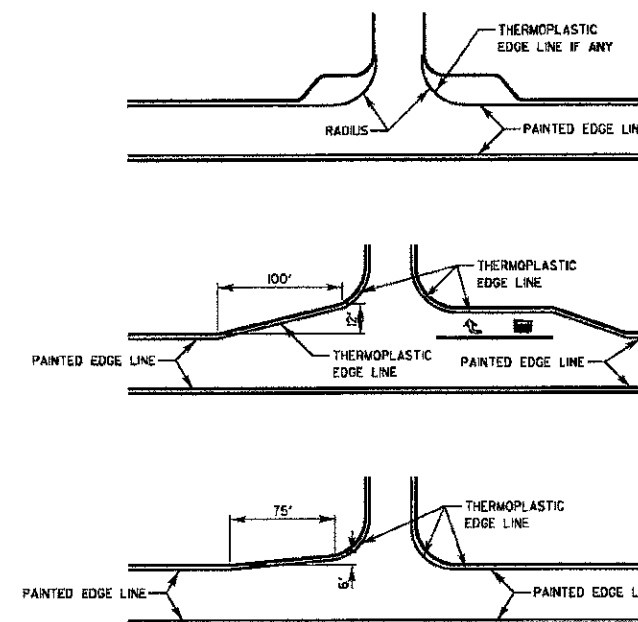
\* AT INTERSECTIONS WITH VIDEO DETECTION, THE ARROW AND ONLY PAVEMENT MARKINGS SHALL BE A MINIMUM OF 30' BEHIND THE STOP BAR.

AREA = 15.6 SQ. FT.

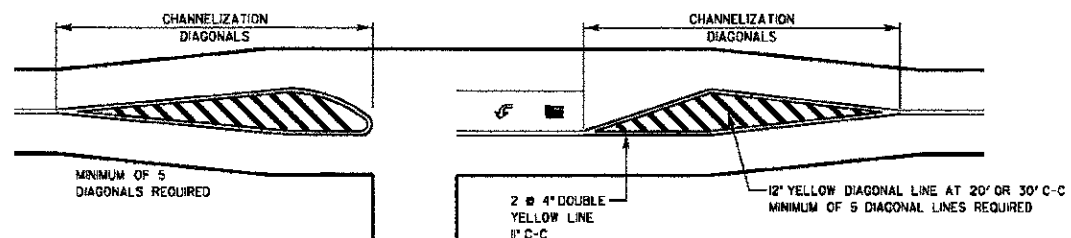
AREA = 20.8 SQ. FT.

FULL SIZE LETTERS (8") AND ARROWS SHALL BE USED. TURN LANES IN EXCESS OF 400' IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW W/ "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW W/ "ONLY".

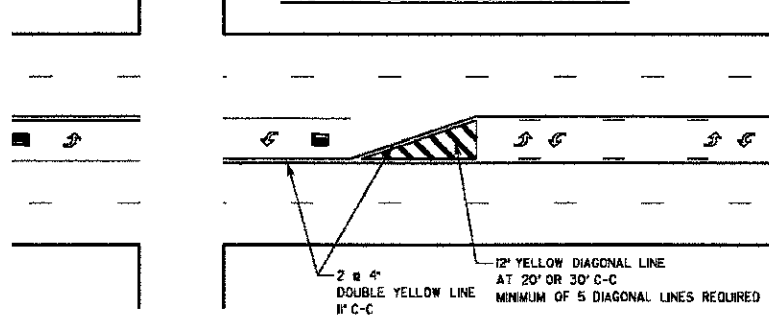
**EDGE LINE RADIUS AT SIDE STREETS**



**TWO LANE ROAD**



**TWO-WAY LEFT TO LEFT TURN BAY**



**TYPICAL DIAGONAL SPACING**

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION
30-45 MPH	75 FT.	20 FT.
OVER 45 MPH	150 FT.	30 FT.

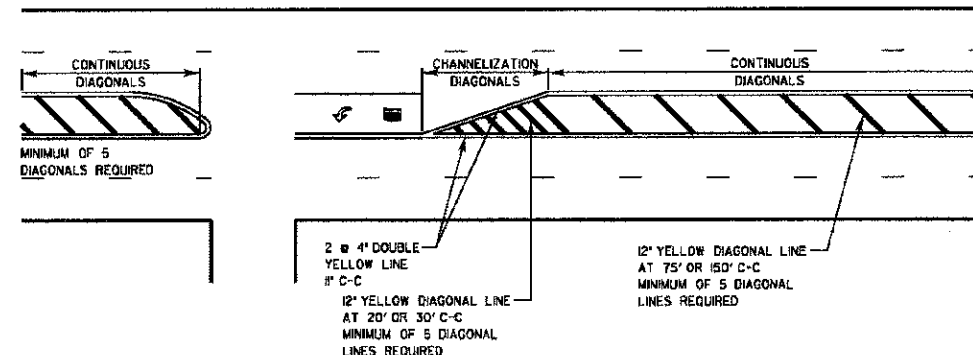
**DUAL LEFT TURN ARROWS**



3/2 SQ. FT. MINIMUM OF 2 SETS REQUIRED

A MINIMUM OF TWO PAIRS OF DUAL LEFT TURN ARROWS SHALL BE USED. THE DUAL LEFT TURN ARROWS SHALL BE WHITE IN COLOR. THE INTERVAL BETWEEN SETS OF DUAL LEFT TURN ARROWS SHOULD BE 200' AND 300'.

**3 TO 5 LANE ROAD**



REVISION	DATE	APPROVED BY
Revised Railroad Sheet	9/2/2008	A. KHAWAJA

Lake County  
Division of Transportation

DATE: APRIL 1, 2007

**TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS**  
SHEET 1 OF 2

NO.	REVISIONS / REMARKS	DATE	BY	SURVEYOR
1	DESIGN/PLANNING			
2	PLOTTED BY	12/17/2012		

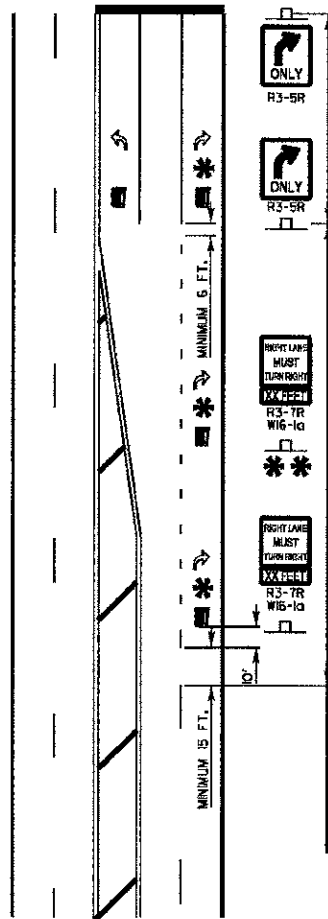


ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
CHXX	XXX	XX-XXXXX-XX-XX	XXX	XXX

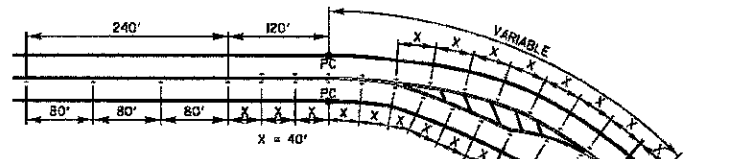
LC8700

FILE NAME: C:\Documents and Settings\NDR\My Documents\For Review\LC8700.dgn

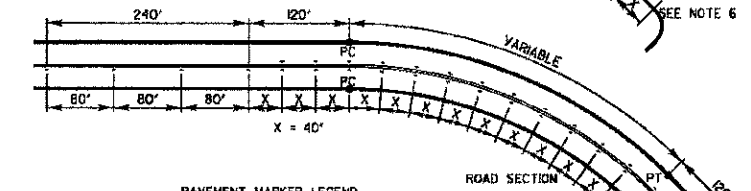
THRU LANE TO TURN LANE CONVERSION



# TYPICAL PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS



TYPICAL RAISED PAVEMENT MARKER INSTALLATION



- NOTES:
- CENTERLINE RAISED PAVEMENT MARKERS (RPM's) SHALL BE PLACED ON ALL CURVES OVER 3 1/2 DEGREES ON ALL TWO AND THREE LANE HIGHWAYS, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
  - SPACING = 40' FOR CENTERLINE MARKERS.
  - ALL RPM's ON CENTERLINE ARE 2-WAY YELLOW. LANE LINE MARKERS ARE WHITE/RED.
  - MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH F.H.W.A. MEMORANDUM 180-21.
  - MARKERS SHALL BE FIELD ADJUSTED TO BE LOCATED IN CENTER OF THE 30' GAP OF A 30'/10' SKIP/DASH CENTERLINE.
  - RPM's WHICH ARE TO BE LOCATED WITHIN THE INTERSECTION OF A CROSS STREET, SHALL NOT BE INSTALLED.
  - A MINIMUM OF 4 WHITE/RED MARKERS SHALL BE INSTALLED ALONG THE TURN LANE LINE.
  - RPM's INSTALLED ON MULTI-LANE ROAD SECTIONS SHALL BE INSTALLED ON THE WHITE SKIP-DASH LANE LINE ONLY. THESE RPM's SHALL BE INSTALLED IN PAIRS AND SHALL BE 80' CENTER TO CENTER. SPACING WITHIN EACH PAIR SHALL BE 10', CENTERED WITHIN THE 30' SKIP.

MINIMUM TRANSITION ZONE LENGTH

POSTED SPEED	LENGTH
25 M.P.H.	255 FT.
30 M.P.H.	330 FT.
35 M.P.H.	405 FT.
40 M.P.H.	480 FT.
45 M.P.H.	555 FT.
50 M.P.H.	630 FT.
55 M.P.H.	705 FT.

LOCATION OF PAV'T MARKINGS

POSTED SPEED	LOCATION OF PAV'T MARKINGS
25 M.P.H.	10 FT., 250 FT.
30 M.P.H.	10 FT., 170 FT., 340 FT.
35 M.P.H.	10 FT., 210 FT., 410 FT.
40 M.P.H.	10 FT., 170 FT., 330 FT., 490 FT.
45 M.P.H.	10 FT., 190 FT., 370 FT., 560 FT.
50 M.P.H.	10 FT., 170 FT., 330 FT., 490 FT., 640 FT.
55 M.P.H.	10 FT., 180 FT., 350 FT., 520 FT., 710 FT.

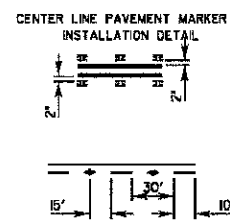
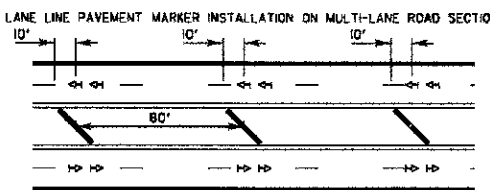
TURN BAY  
6' WHITE LINE  
(ADDITIONAL PAV'T MARKINGS AS SHOWN ON SHEET ONE OF THE L.C.D.O.T. PAV'T MARKINGS DETAIL SHEETS)

TRANSITION ZONE  
6' WHITE 3 1/2' SKIP DASH LANE LINE

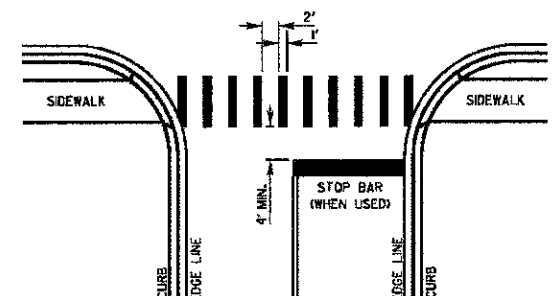
THRU LANE  
4' WHITE 10' / 30' SKIP DASH LANE LINE

FOR POSTED SPEEDS 40 M.P.H. OR GREATER A SECOND R3-7/R3-10 SIGN INSTALLATION SHALL BE LOCATED HALFWAY BETWEEN THE BEGINNING OF THE TRANSITION ZONE AND THE BEGINNING OF THE TURN LANE

PAVEMENT MARKER LEGEND  
 RAISED PAVEMENT MARKER, DOUBLE YELLOW  
 RAISED PAVEMENT MARKER, WHITE AND RED

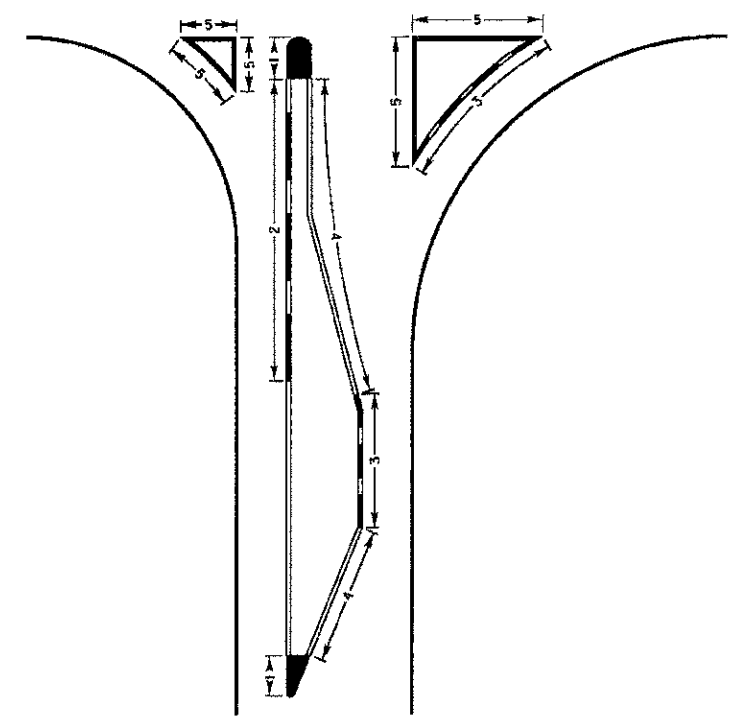


CROSSWALKS

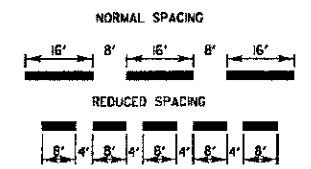


- WIDTH OF THE CROSSWALK IS GENERALLY 6' EXCEPT AT SCHOOL CROSSINGS AND BICYCLE CROSSINGS, WHICH CAN BE 8'.
- THE STOP BAR SHOULD BE INSTALLED A MINIMUM OF 4' IN ADVANCE OF THE CROSSWALK.

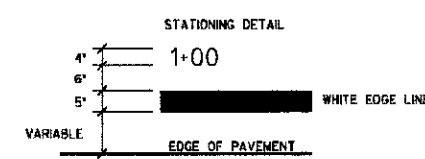
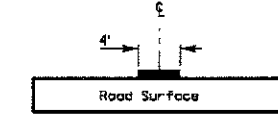
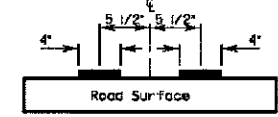
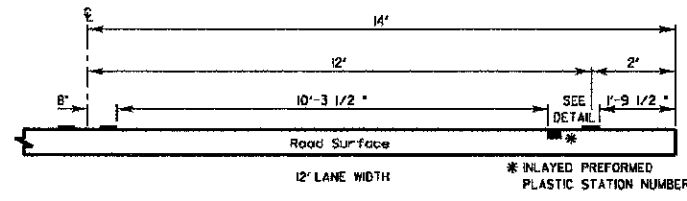
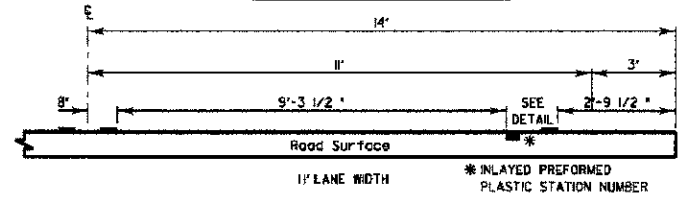
CURB MARKING



- NOTES:
- PAINT CURB AND NOSE SOLID FOR 10' OR RADIUS OF NOSE, WHICHEVER IS GREATER.
  - PAINT MINIMUM OF 3 STRIPES IN DIRECTION OF TRAFFIC.
  - REDUCED SPACING USED TO OBTAIN 3 STRIPE MINIMUM.
  - STRIPING RECOMMENDED ONLY WHERE OPERATIONAL PROBLEMS DICTATE.
  - PAINT SOLID WHERE A MINIMUM OF 3 STRIPES CANNOT BE PLACED.



PAVEMENT CROSS SECTION SHOWING TYPICAL PAVEMENT MARKINGS (2-LANE ROADWAY)



DOUBLE STRIPE CENTERLINE DETAIL  
 Notes: Centerline markings are 4' lines at 1' centers.

PAVEMENT MARKING GUIDELINES				
TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE OF 2 LANE PAVEMENT	4 IN.	SKIP-DASH	YELLOW	10 FT. LINE WITH 30 FT. SPACE
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 IN.	SOLID	YELLOW	5 1/2 IN. C.C. FROM SKIP-DASH CENTERLINE
CENTERLINE ON MULTI-LANE UNDIVIDED	2 @ 4 IN.	SOLID	YELLOW	11 IN. C.C.
LANE LINES	4 IN.	SKIP-DASH	WHITE	10 FT. LINE WITH 30 FT. SPACE
DOTTED LINES EXTENSIONS OF CENTERLINE OR TURN LANE MARKINGS	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2 FT. LINE WITH 6 FT. SPACE
EDGE LINES	5 IN. WHITE 4 IN. YELLOW	SOLID	WHITE - RIGHT YELLOW - LEFT	OUTLINE RAISED MEDIANS IN YELLOW
TURN LANE MARKINGS	6 IN. LINE FULL SIZE LETTERS AND SYMBOLS (8 FT.)	SOLID	WHITE	TURN ARROW 55 SOFT. STRAIGHT AHEAD 115 SOFT. ONLY 208 SOFT. COMBINATION 850 SOFT.
TWO WAY LEFT TURN MARKING	2 @ 4 IN. EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10 FT. LINE WITH 30 FT. SPACE FOR SKIP-DASH 5 1/2 IN. C.C. BETWEEN SKIP-DASH LINE AND SOLID LINE
CROSSWALK	12 IN. @ 90	IN PAIRS	WHITE	SEE TYPICAL CROSSWALK MARKING DETAIL
STOP BARS	24 IN.	SOLID	WHITE	PLACE 4 FT. IN ADVANCE OF AND PARALLEL TO CROSSWALK IF PRESENT, OTHERWISE PLACE AT DESIRED STOPPING POINT.
PAINTED MEDIANS	2 @ 4 IN. WITH 1 IN. DIAGONALS @ 45° NO DIAGONALS USED FOR 4 FT. WIDE MEDIAN	SOLID	YELLOW - 2-WAY TRAFFIC WHITE - 1-WAY TRAFFIC	11 IN. C.C. FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING DETAIL. MINIMUM OF 5 DIAGONALS
GORE MARKING AND CHANNELIZING LINES	8 IN. WITH 12 IN. DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS 15 FT. C.C. (LESS THAN 30 M.P.H.) 20 FT. C.C. (30 TO 45 M.P.H.) 30 FT. C.C. (OVER 45 M.P.H.) MINIMUM OF 5 DIAGONALS
R.R. CROSSING	24 IN. TRANSVERSE LINES OR 15 @ 6 FT. LETTER IS IN LINE FOR 'X'	SOLID	WHITE	SEE 11007 STD 78000 SOFT. AREA OF 1/4" X 3/8 SOFT. / 1/4" X 5/8 SOFT.
SHOULDER DIAGONALS	12 IN. @ 45	SOLID	WHITE - RIGHT YELLOW - LEFT	50 FT. C.C. (LESS THAN 30 M.P.H.) 75 FT. C.C. (30 TO 45 M.P.H.) 100 FT. C.C. (OVER 45 M.P.H.) MINIMUM OF 5 DIAGONALS

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO PART 111 MARKINGS IN THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ILLINOIS HIGHWAY STANDARD 78000 EFFECTIVE JAN. 1998.

DATE	BY	REVISION

DATE	BY	REVISION

REVISIONS	DATE	APPROVED BY
Revised	8/2/2009	A. KHANAJA

LAKE COUNTY  
Division of Transportation

DATE: APRIL 1, 2007

TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS SHEET 2 OF 2

NO.	DESCRIPTION	DATE	BY	SURVEYOR



ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
CHXX	XXX	XX-XXXXX-XX-XX	XXX	XXX



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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

HIGHWAY STANDARDS

SHEET NO. 8 OF 10 SHEETS

F.A.D. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	165

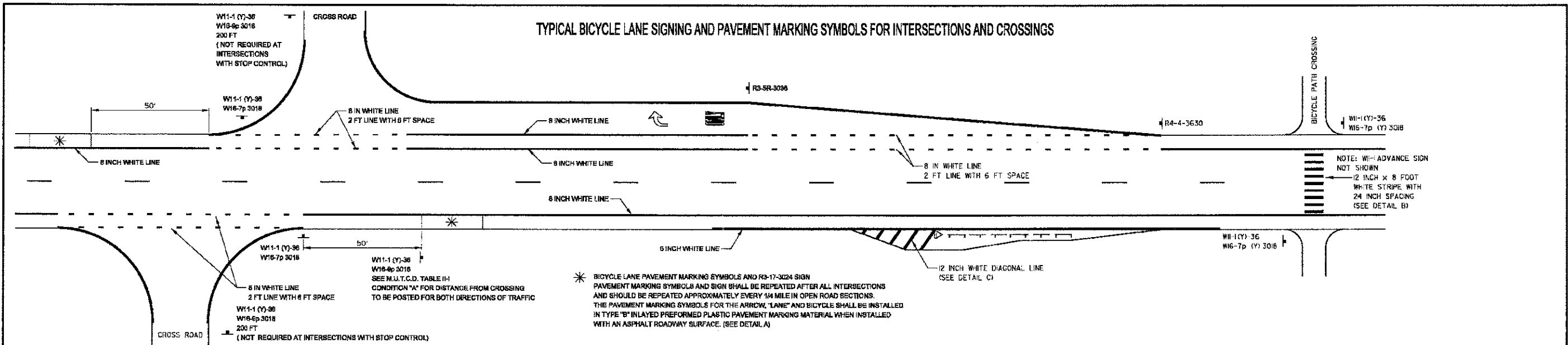
CONTRACT NO. 63765

FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT

DATE	
BY	
SKETCHED	
SURVEY	
PLOTTED	
TEMPLATE	
MARK'S BOOK	
AREAS CHECKED	
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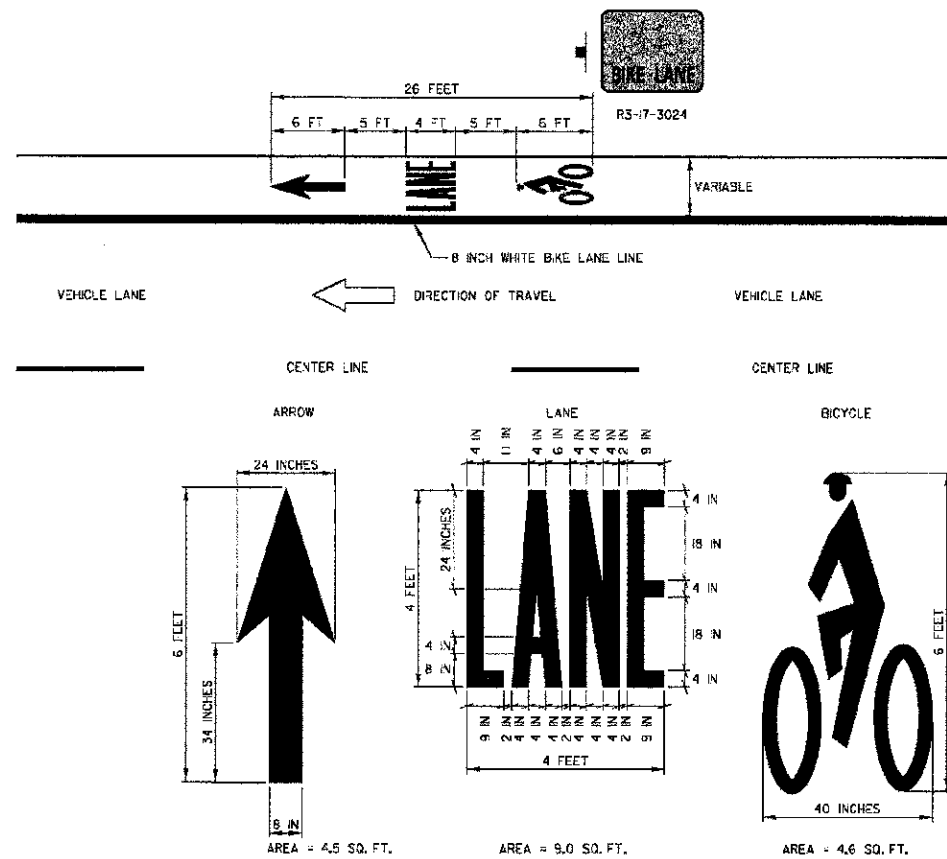
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SKETCHED	
SURVEY	
PLOTTED	
TEMPLATE	
MARK'S BOOK	
AREAS CHECKED	
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### TYPICAL BICYCLE LANE SIGNING AND PAVEMENT MARKING SYMBOLS FOR INTERSECTIONS AND CROSSINGS

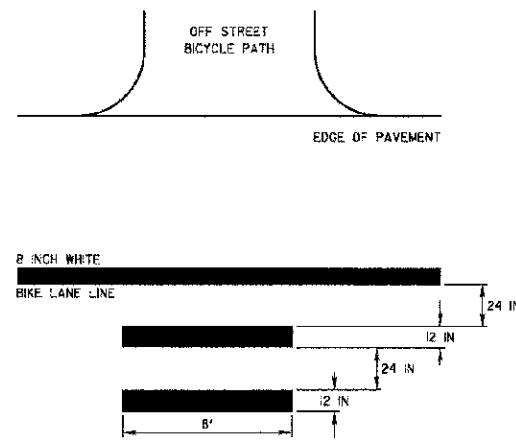


\* BICYCLE LANE PAVEMENT MARKING SYMBOLS AND R3-17-3024 SIGN PAVEMENT MARKING SYMBOLS AND SIGN SHALL BE REPEATED AFTER ALL INTERSECTIONS AND SHOULD BE REPEATED APPROXIMATELY EVERY 1/4 MILE IN OPEN ROAD SECTIONS. THE PAVEMENT MARKING SYMBOLS FOR THE ARROW, "LANE" AND BICYCLE SHALL BE INSTALLED IN TYPE "B" INLAYED PREFORMED PLASTIC PAVEMENT MARKING MATERIAL WHEN INSTALLED WITH AN ASPHALT ROADWAY SURFACE. (SEE DETAIL A)

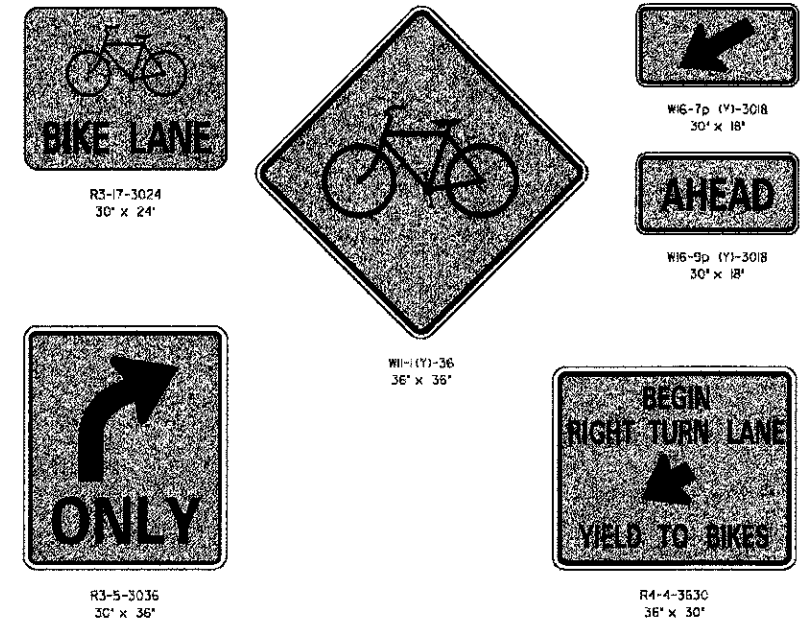
#### BICYCLE LANE PAVEMENT MARKINGS DETAIL A



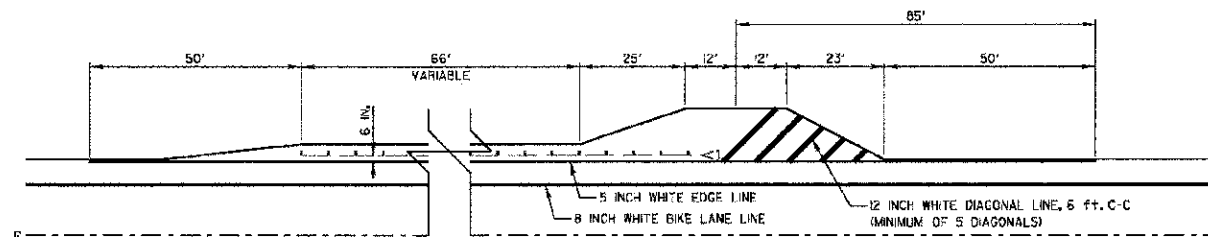
#### TYPICAL BICYCLE PATH CROSSING DETAIL B



#### TYPICAL BICYCLE LANE SIGNS



#### BICYCLE LANE PAVEMENT MARKINGS AT GUARD RAIL SECTIONS DETAIL C



DATE	
BY	
SKETCHED	
SURVEY	
PLOTTED	
TEMPLATE	
MARK'S BOOK	
AREAS CHECKED	
NO.	

REVISIONS / REMARKS			
NO.	DESCRIPTION	DATE	BY



#### PROJECT NAME

LAKE COUNTY STANDARDS & DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
CHXX	XXX	XX-XXXXX-XX-XX	XXX	XXX

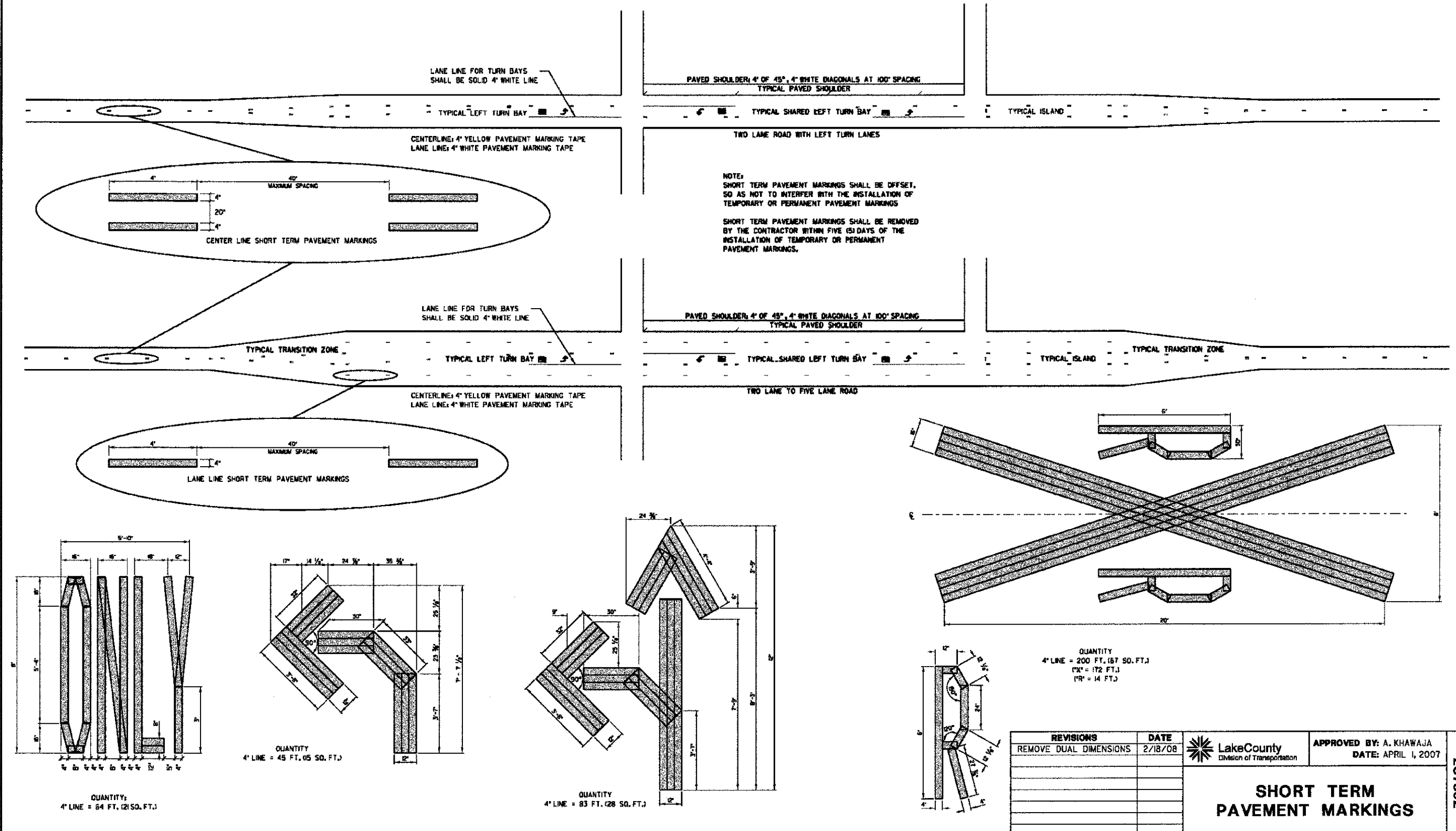
10/07

FILE NAME: L:\ADOT\ITS\LC\78010N STREET BICYCLE LANE PAVEMENT MARKING AND SIGNING DETAILS.dgn

# TYPICAL SHORT TERM PAVEMENT MARKINGS

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
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DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	



NO.	REVISIONS / REMARKS	DATE	BY	SURVEYOR
1	DESIGN/LIAISON			
2	PLOTTED BY	hdmpg	5/23/2008	

 Lake County Division of Transportation	PROJECT NAME		ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
	LAKE COUNTY STANDARDS & DETAILS		CHXX	XXX	XX-XXXXX-XX-XX	XX	XX

REVISIONS	DATE	APPROVED BY: A. KHAWAJA
REMOVE DUAL DIMENSIONS	2/18/08	DATE: APRIL 1, 2007

QUANTITY  
 4" LINE = 200 FT. (67 SQ. FT.)  
 1"X" = 172 FT.  
 1"R" = 14 FT.

QUANTITY:  
 4" LINE = 64 FT. (21 SQ. FT.)

QUANTITY  
 4" LINE = 45 FT. (45 SQ. FT.)

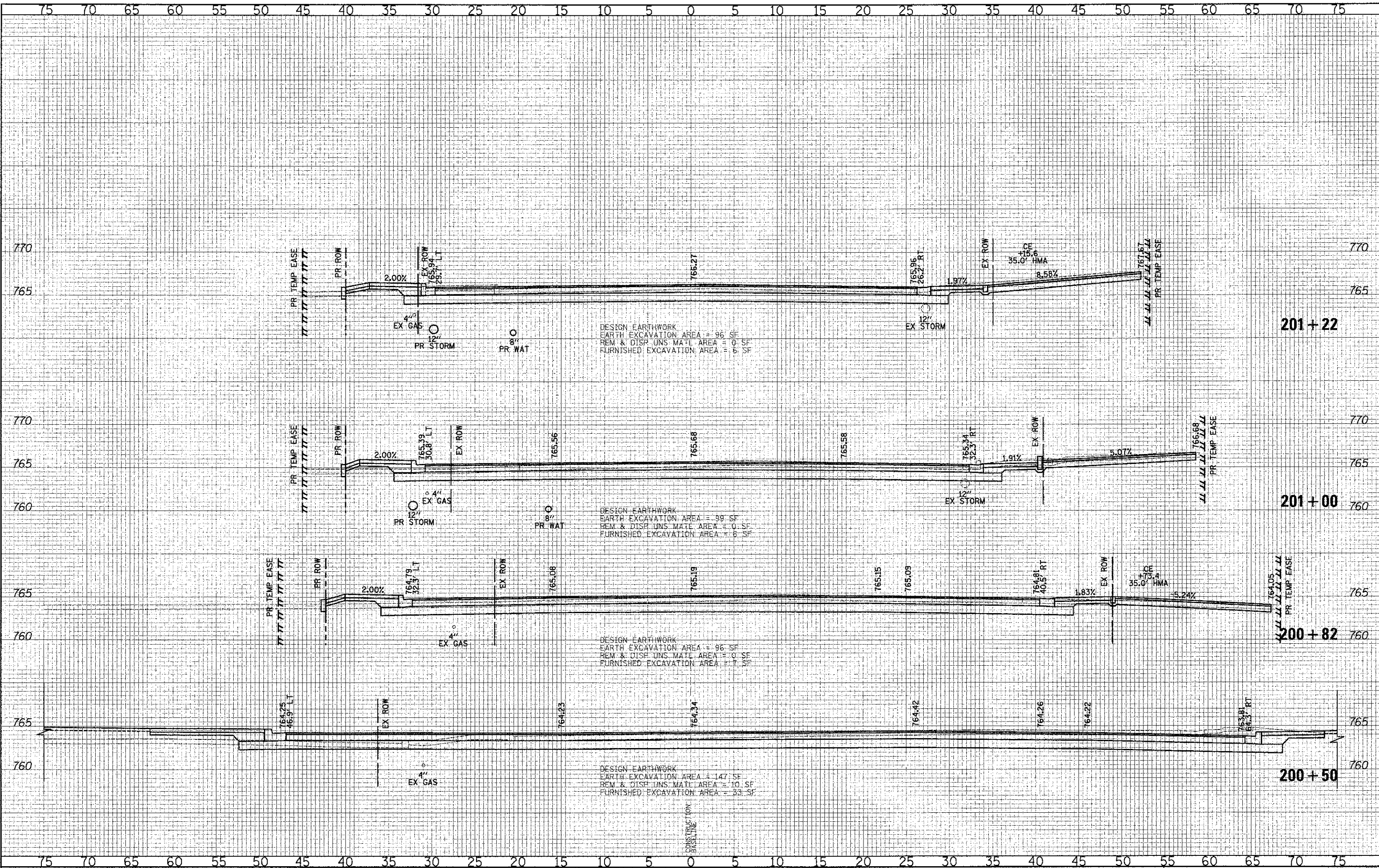
QUANTITY  
 4" LINE = 83 FT. (28 SQ. FT.)

LC7802

FILE NAME: C:\Documents and Settings\hdm\My Documents\LCDOT DETAIL\SLC7802 SHORT TERM PAVEMENT MARKINGS.dgn

BY	DATE
DESIGNED - PK	
DRAWN - JRR	
CHECKED - RTM	
DATE - 12/17/2012	

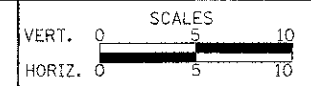
BY	DATE
DESIGNED - PK	
DRAWN - JRR	
CHECKED - RTM	
DATE - 12/17/2012	



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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**



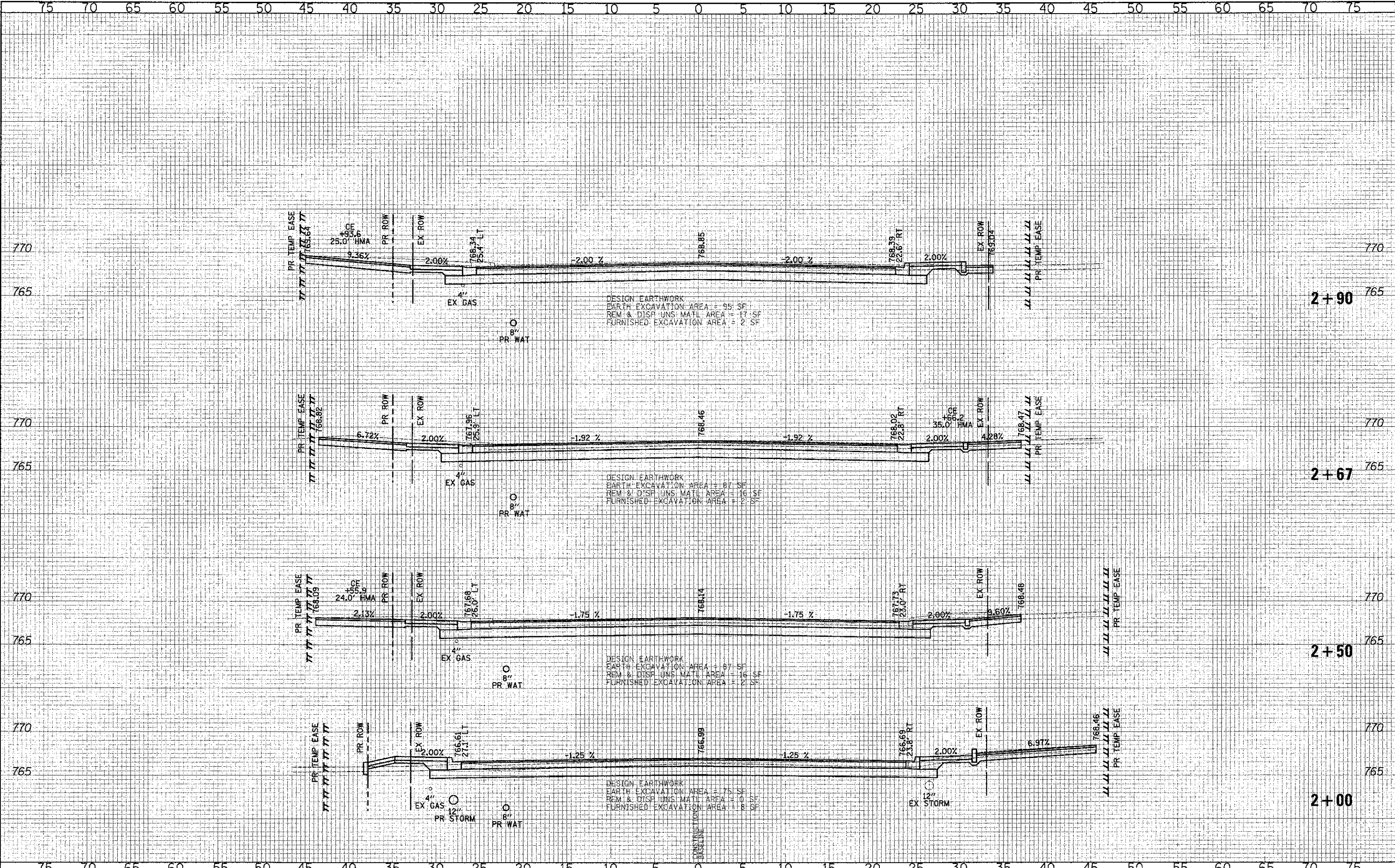
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 1 OF 49 SHEETS STA. 200+50.00 TO STA. 201+22.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS
0187	05-00121-07-WR	LAKE	223 168
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63765

DATE	
BY	
DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012

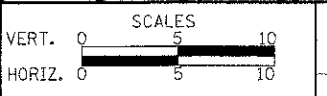
DATE	
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DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012



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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

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

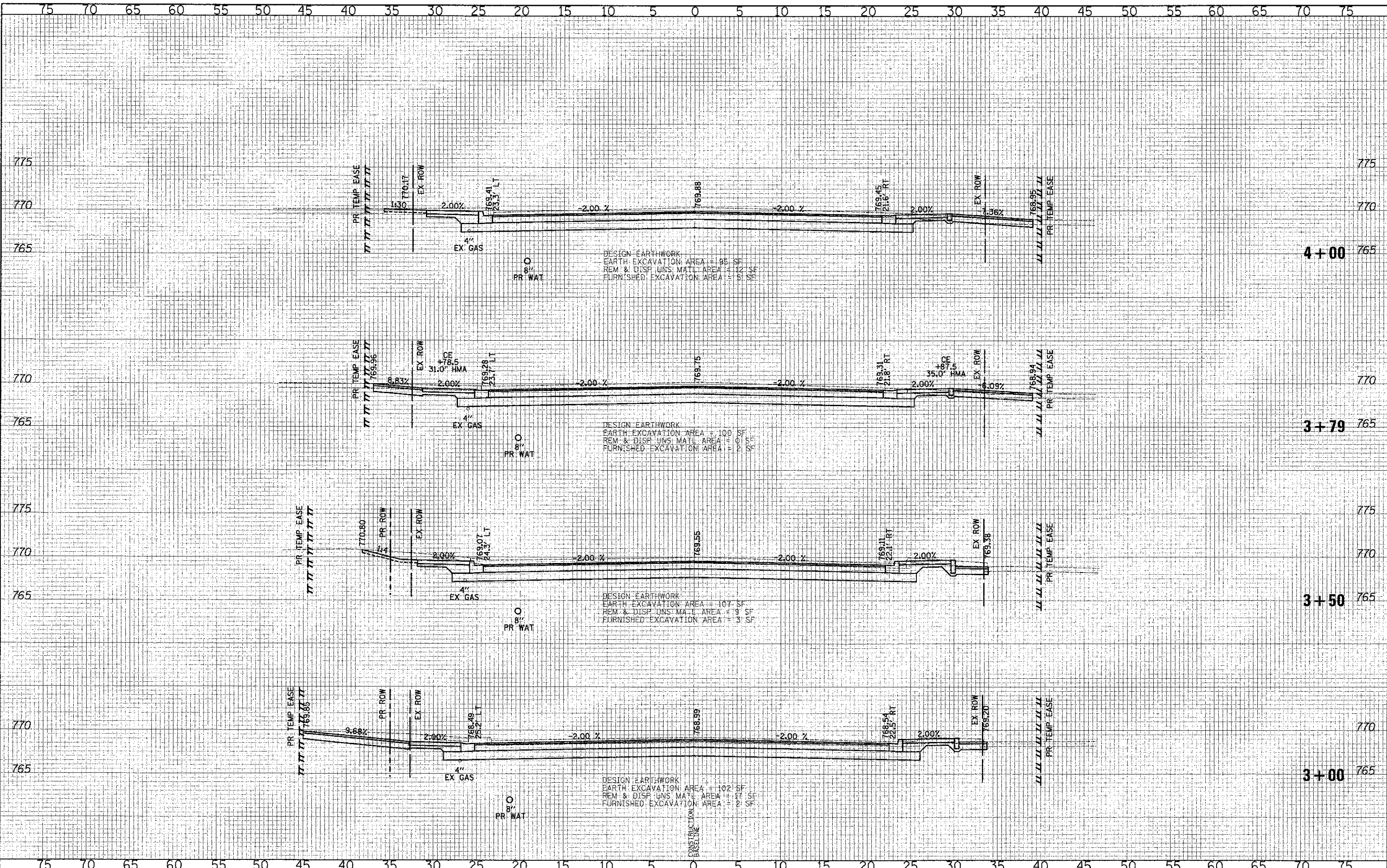


**CROSS SECTIONS - WASHINGTON STREET**  
 SHEET NO. 2 OF 49 SHEETS  
 STA. 2+00.00 TO STA. 2+90.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	169
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

DATE	
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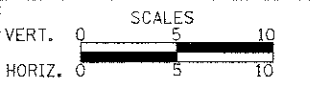


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DESIGNED	- PK	REVISED	-
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DATE	- 12/17/2012	REVISED	-

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**



**CROSS SECTIONS - WASHINGTON STREET**

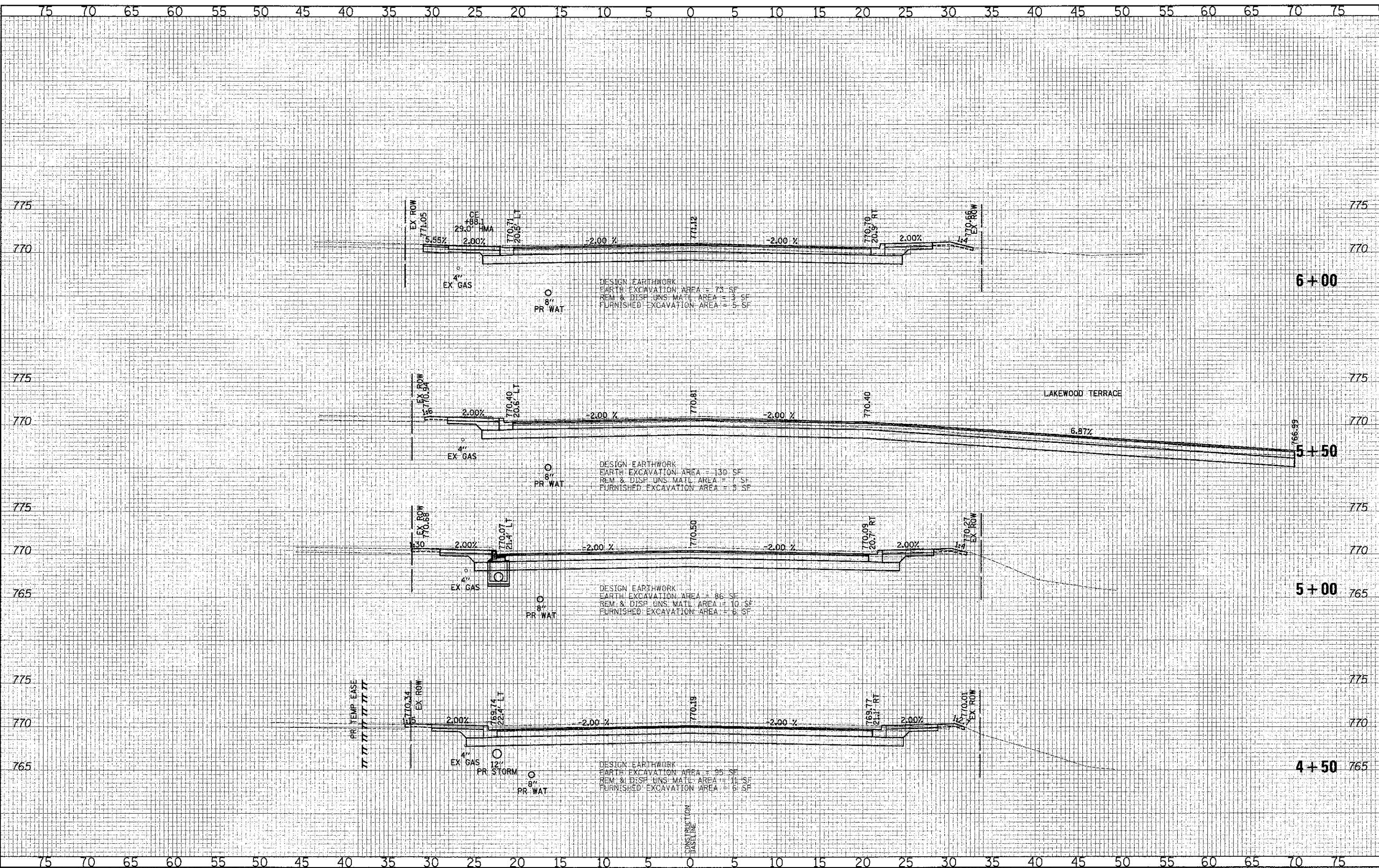
SHEET NO. 3 OF 49 SHEETS | STA. 3+00.00 TO STA. 4+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS
0187	05-00121-07-WR	LAKE	223
			NO. 170
			CONTRACT NO. 63765
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			



DATE	
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FINAL SURVEY	
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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**



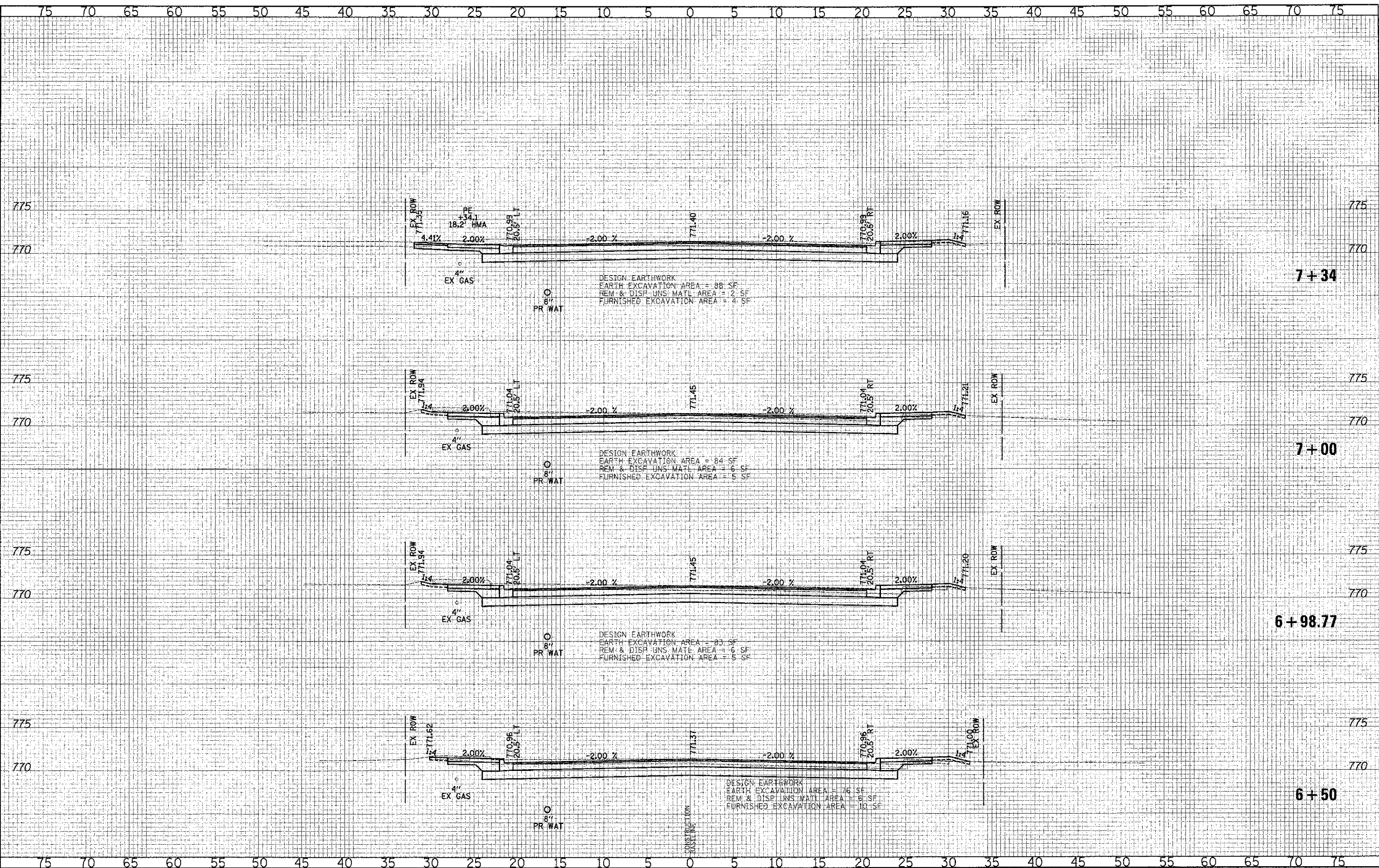
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 4 OF 49 SHEETS STA. 4+50.00 TO STA. 6+00.00

F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
G187	05-00121-07-WR	LAKE	223	171
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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CHECKED -	RTM	REVISED -	
DATE -	12/17/2012	REVISED -	

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

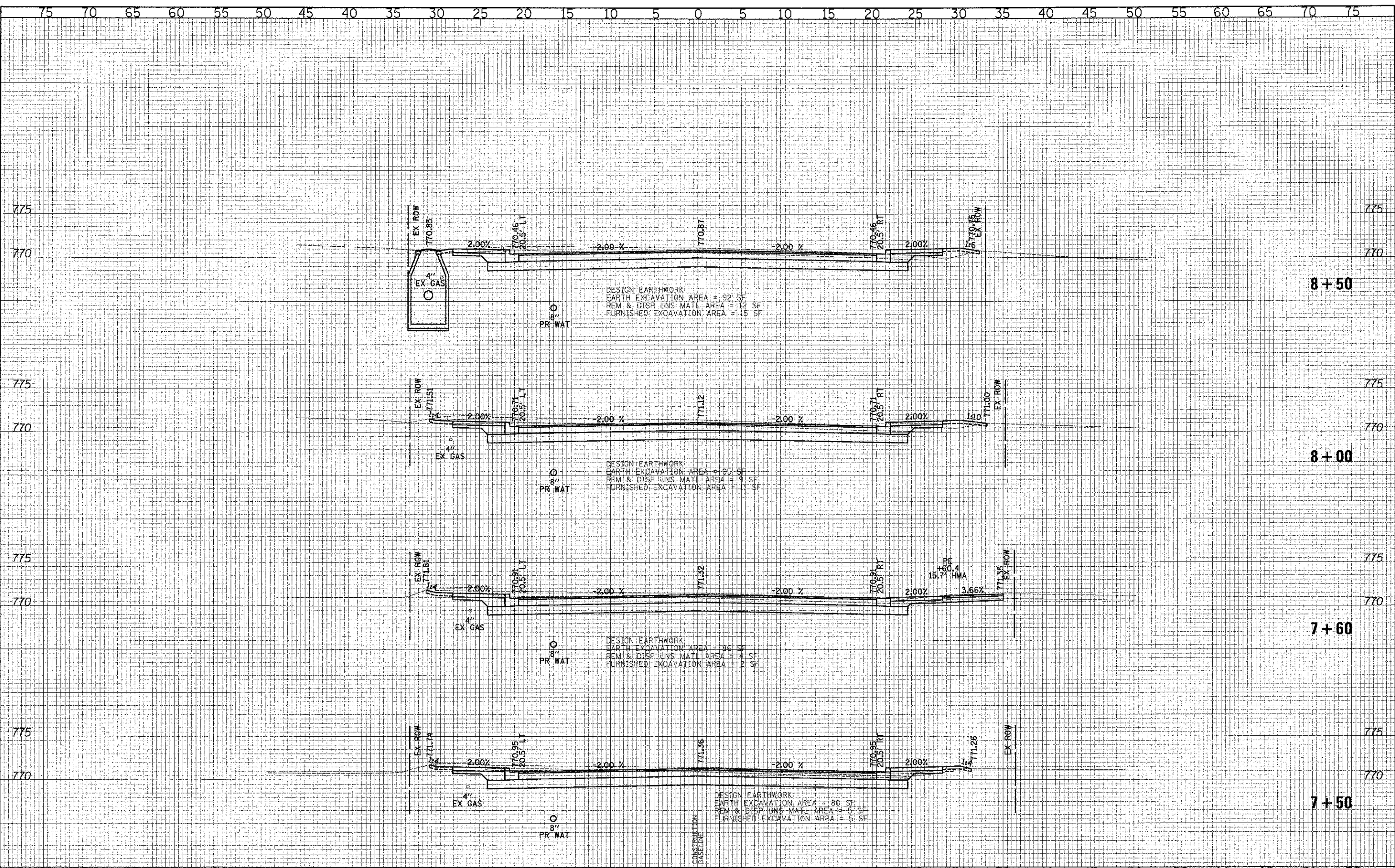


**CROSS SECTIONS - WASHINGTON STREET**  
 SHEET NO. 5 OF 49 SHEETS STA. 6+50.00 TO STA. 7+34.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	172
				<b>CONTRACT NO. 63765</b>
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				

DATE	
BY	
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NO.	
ORIGINAL SURVEY	
NOTED BOOK	
TEMPLATE	
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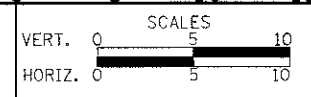
DATE	
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NOTED BOOK	
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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

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



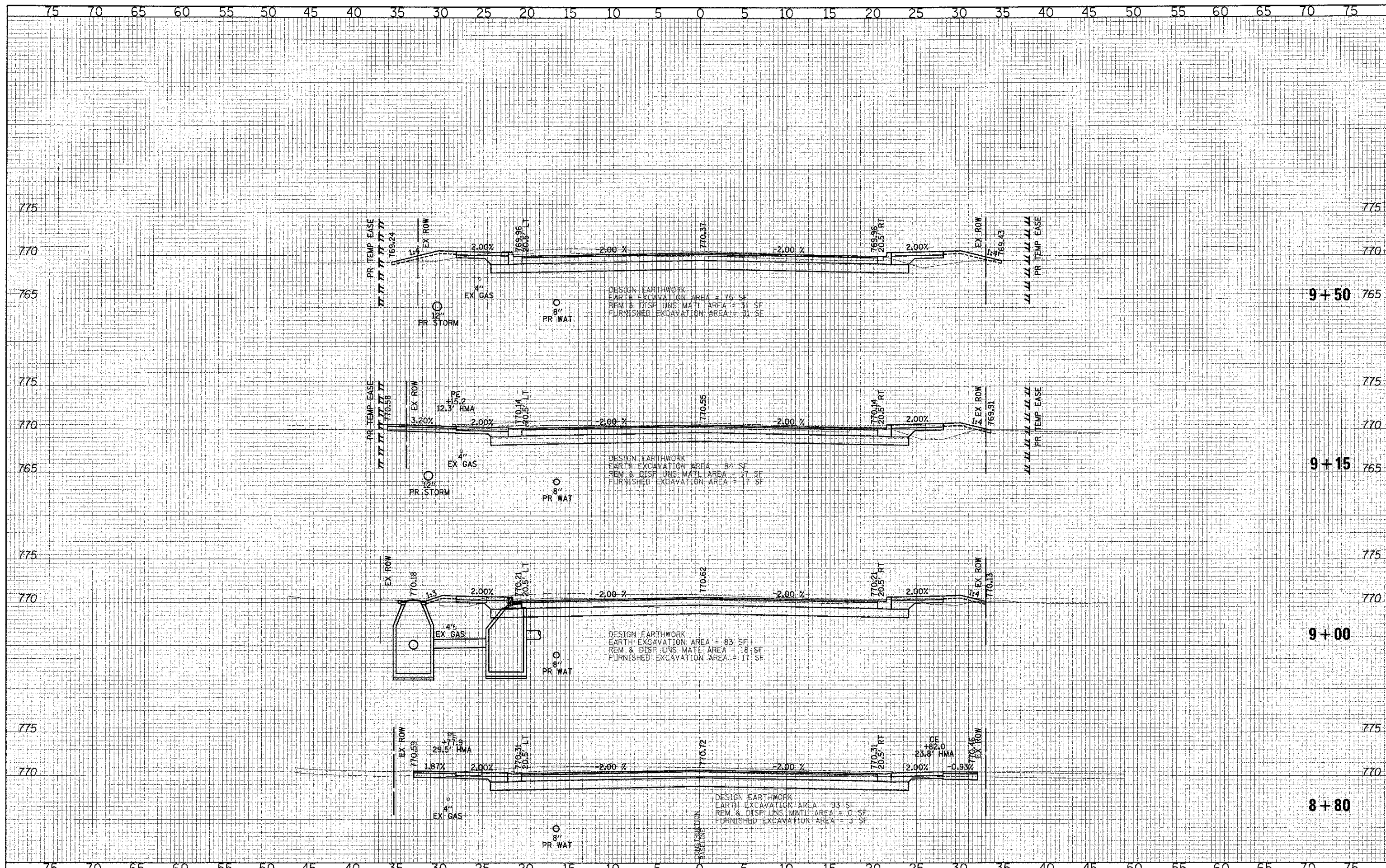
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 6 OF 49 SHEETS | STA. 7+50.00 TO STA. 8+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00123-07-WR	LAKE	223	173
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				

DATE	
BY	
FINISHED	
STARTED	
PLOTTED	
NOTE BOOK	
AREAS	
REVISIONS	
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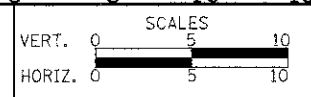
DATE	
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REVISION	
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REVISIONS	
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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS**  
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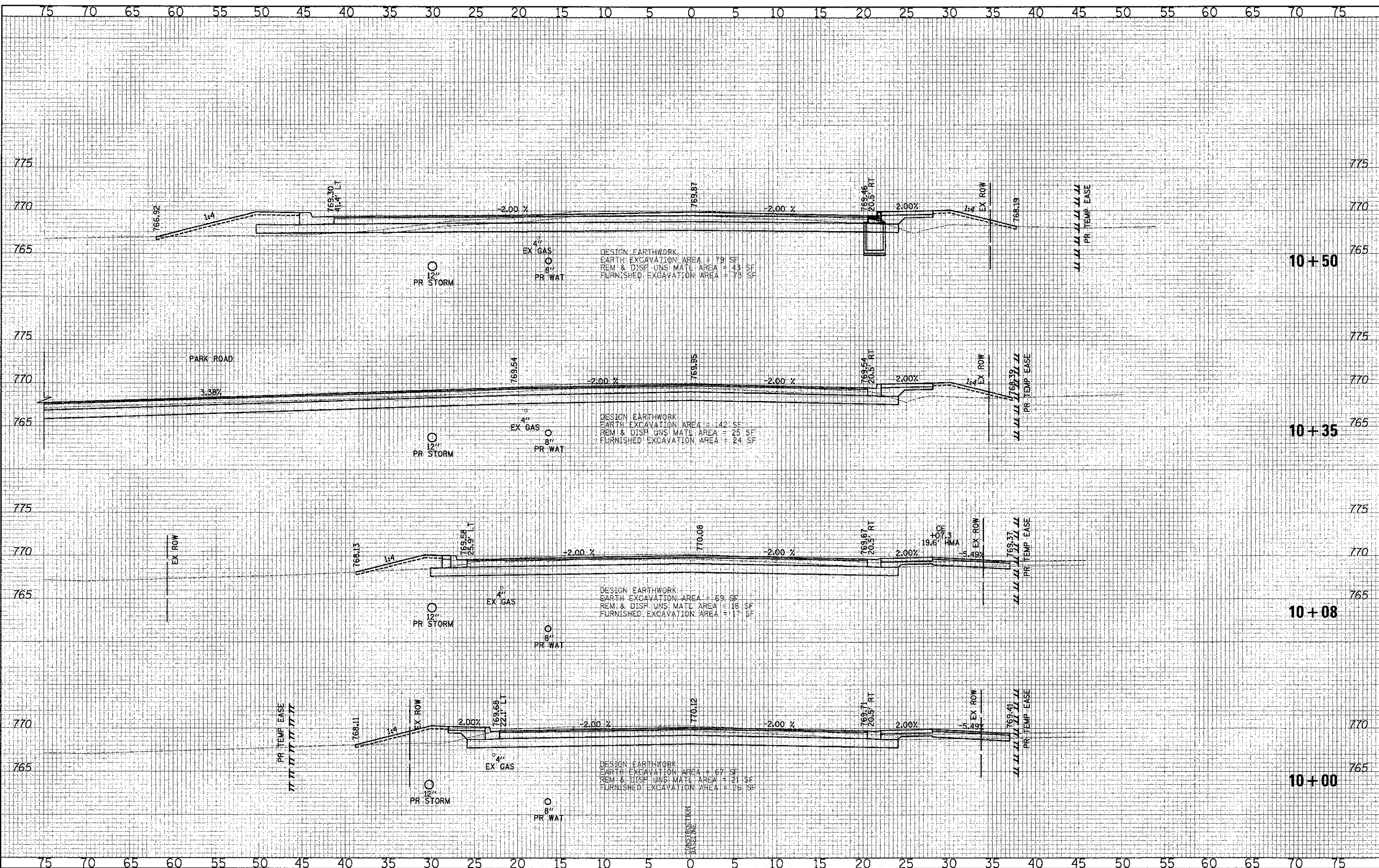
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 7 OF 49 SHEETS STA. 8+80.00 TO STA. 9+50.00

F.A.U. R.T.E. 0187	SECTION 05-00121-07-WR	COUNTY LAKE	TOTAL SHEETS 223	SHEET NO. 174
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

DATE	
BY	
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NOTE BOOK	
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AREAS CHECKED	

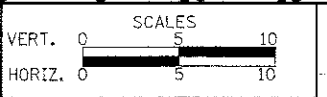
DATE	
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NOTE BOOK	
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AREAS CHECKED	



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DRAWN - JRR	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

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

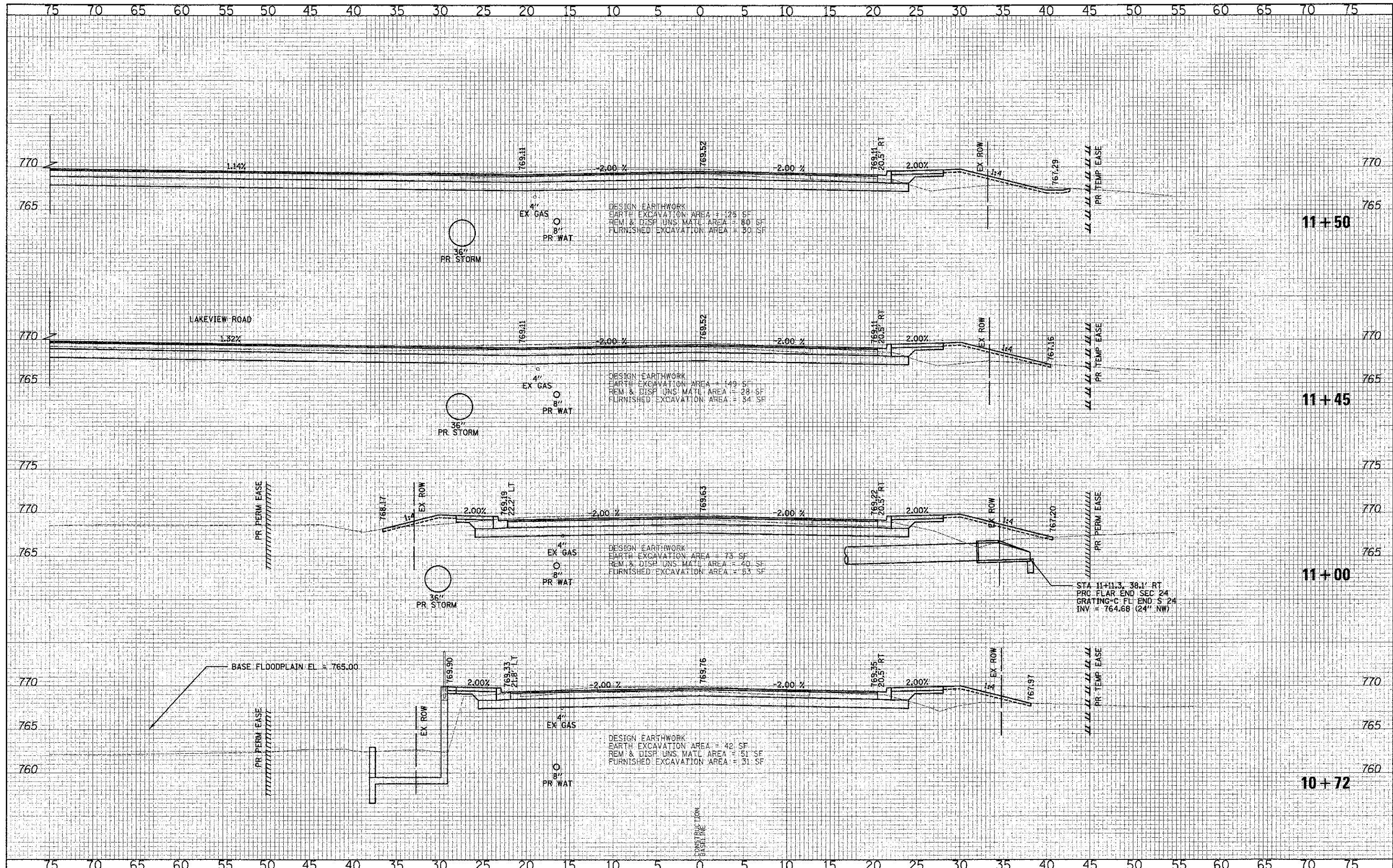


**CROSS SECTIONS - WASHINGTON STREET**  
 SHEET NO. 8 OF 49 SHEETS STA. 10+00.00 TO STA. 10+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	175
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

DATE	BY
SURVEYED	PLOTTED
NOTED	TEMPERATURE
NO.	AREAS CHECKED

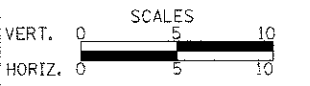
DATE	BY
SURVEYED	PLOTTED
NOTED	TEMPERATURE
NO.	AREAS CHECKED



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DRAWN - JRR	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**



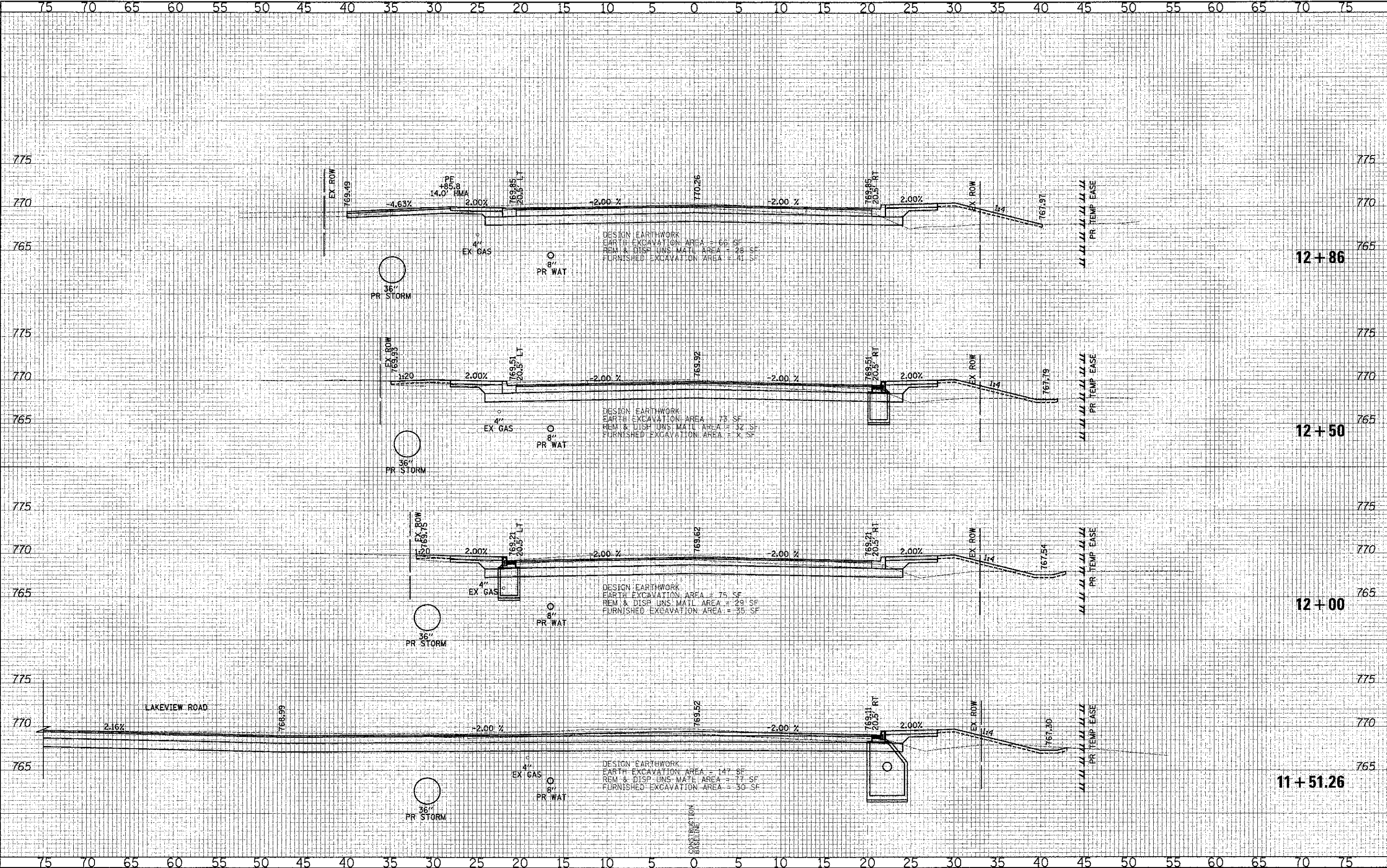
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 9 OF 49 SHEETS    STA. 10+72.00    TO STA. 11+50.00

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS
0187	05-00121-07-WR	LAKE	223 / 176
CONTRACT NO. 63765			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

DATE	
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CHECKED	
DATE	

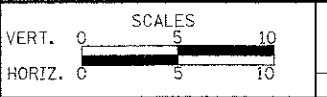
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DRAWN - JRR	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
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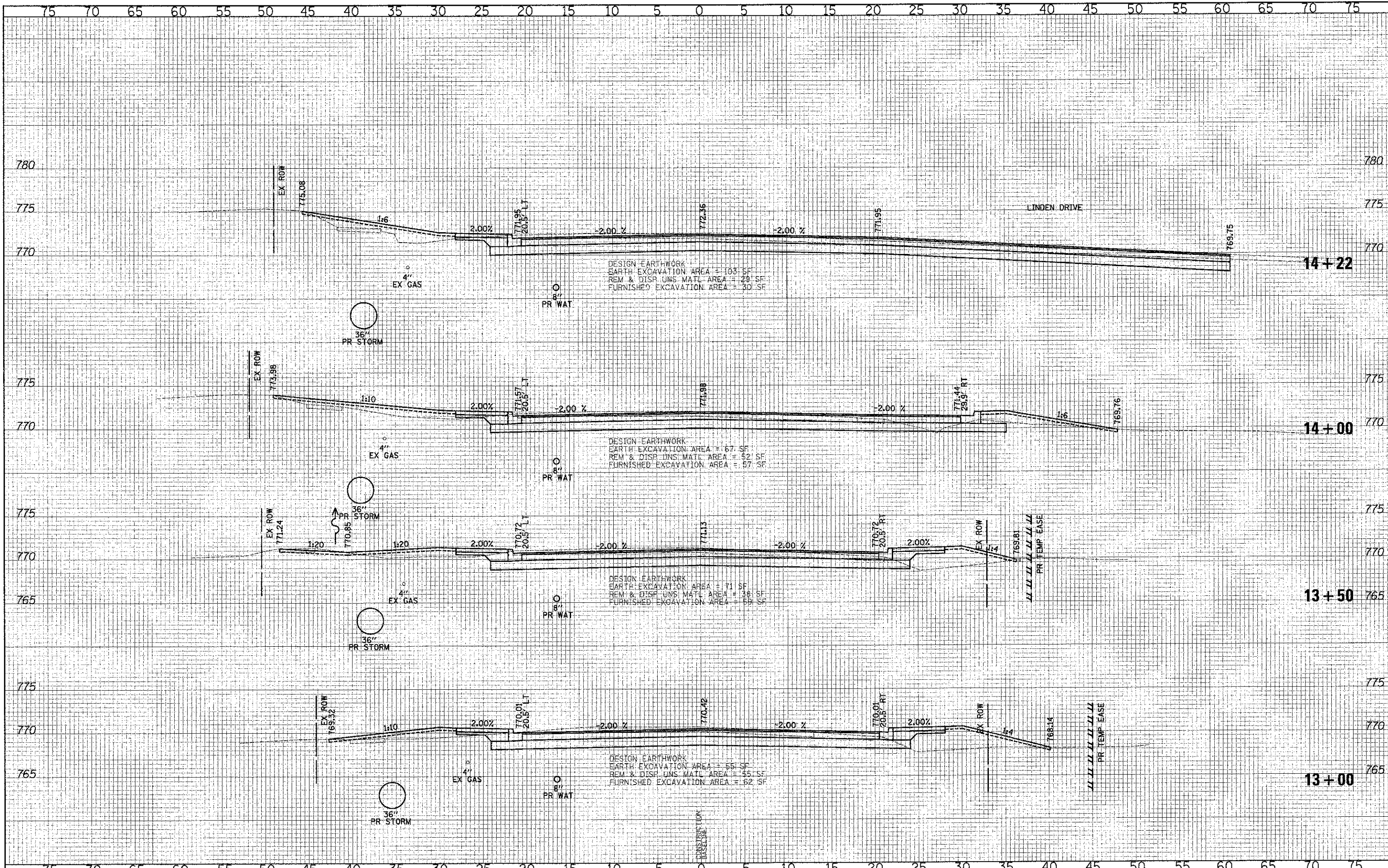
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 10 OF 49 SHEETS    STA. 11+51.26    TO STA. 12+86.00

F.A.H. RTE.	SECTION	COUNTY	TOTAL SHEETS
0187	05-00121-07-WR	LAKE	223 / 177
CONTRACT NO. 63765			
FED. ROAD DIST. NO. 1 ILLINOIS/FED. AID PROJECT			

DATE	BY
REVISIONS	NO.
1. SURVEYED	
2. PLOTTED	
3. TEMPLATE	
4. AREAS	
5. CHECKED	
6. DATE	
7. BY	
8. NO.	
9. ORIGINAL SURVEY	
10. NOTE BOOK	
11. AREAS	
12. CHECKED	
13. DATE	
14. BY	
15. NO.	

DATE	BY
REVISIONS	NO.
1. SURVEYED	
2. PLOTTED	
3. TEMPLATE	
4. AREAS	
5. CHECKED	
6. DATE	
7. BY	
8. NO.	
9. ORIGINAL SURVEY	
10. NOTE BOOK	
11. AREAS	
12. CHECKED	
13. DATE	
14. BY	
15. NO.	



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VERT. SCALE 1" = 5'  
 HORIZ. SCALE 1" = 10'

CROSS SECTIONS - WASHINGTON STREET  
 SHEET NO. 11 OF 49 SHEETS | STA. 13+00.00 TO STA. 14+22.00

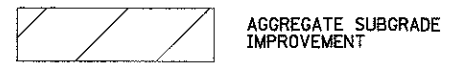
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	178
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 SURVEYED: \_\_\_\_\_ PLOTTED: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_ TEMPLATE: \_\_\_\_\_  
 AREAS CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 SURVEYED: \_\_\_\_\_ PLOTTED: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_ TEMPLATE: \_\_\_\_\_  
 AREAS CHECKED: \_\_\_\_\_

**LEGEND**

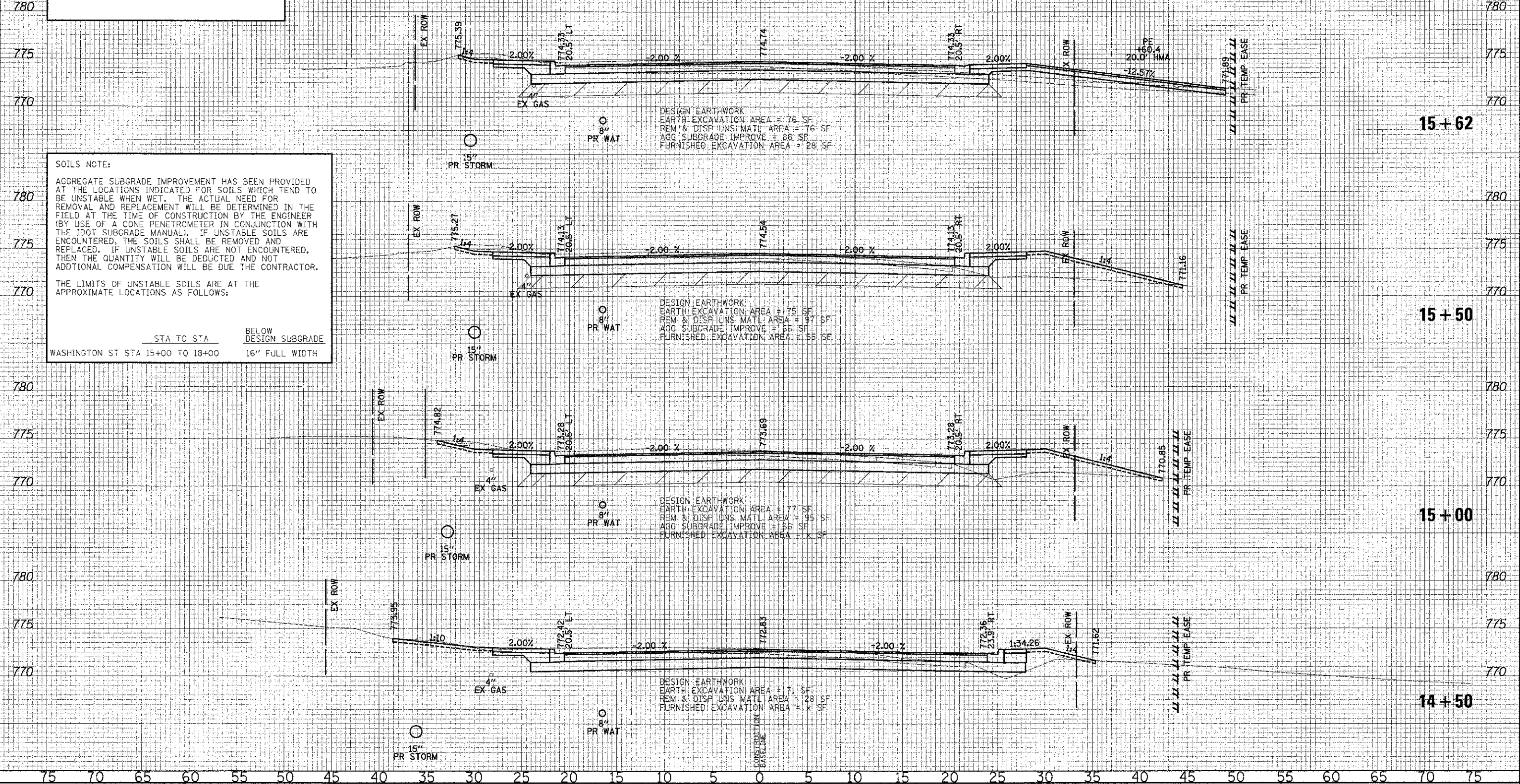


**SOILS NOTE:**

AGGREGATE SUBGRADE IMPROVEMENT HAS BEEN PROVIDED AT THE LOCATIONS INDICATED FOR SOILS WHICH TEND TO BE UNSTABLE WHEN WET. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE ENGINEER (BY USE OF A CONE PENETROMETER IN CONJUNCTION WITH THE IDOT SUBGRADE MANUAL). IF UNSTABLE SOILS ARE ENCOUNTERED, THE SOILS SHALL BE REMOVED AND REPLACED. IF UNSTABLE SOILS ARE NOT ENCOUNTERED, THEN THE QUANTITY WILL BE DEDUCTED AND NOT ADDITIONAL COMPENSATION WILL BE DUE THE CONTRACTOR.

THE LIMITS OF UNSTABLE SOILS ARE AT THE APPROXIMATE LOCATIONS AS FOLLOWS:

STA TO STA	BELOW DESIGN SUBGRADE
WASHINGTON ST STA 15+00 TO 18+00	16" FULL WIDTH

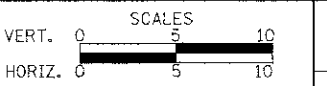


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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**



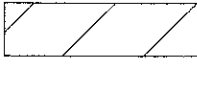
**CROSS SECTIONS - WASHINGTON STREET**  
 SHEET NO. 12 OF 49 SHEETS STA. 14+50.00 TO STA. 15+62.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS
0187	05-00121-07-WR	LAKE	223 179
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			<b>CONTRACT NO. 63765</b>

DATE	
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**LEGEND**

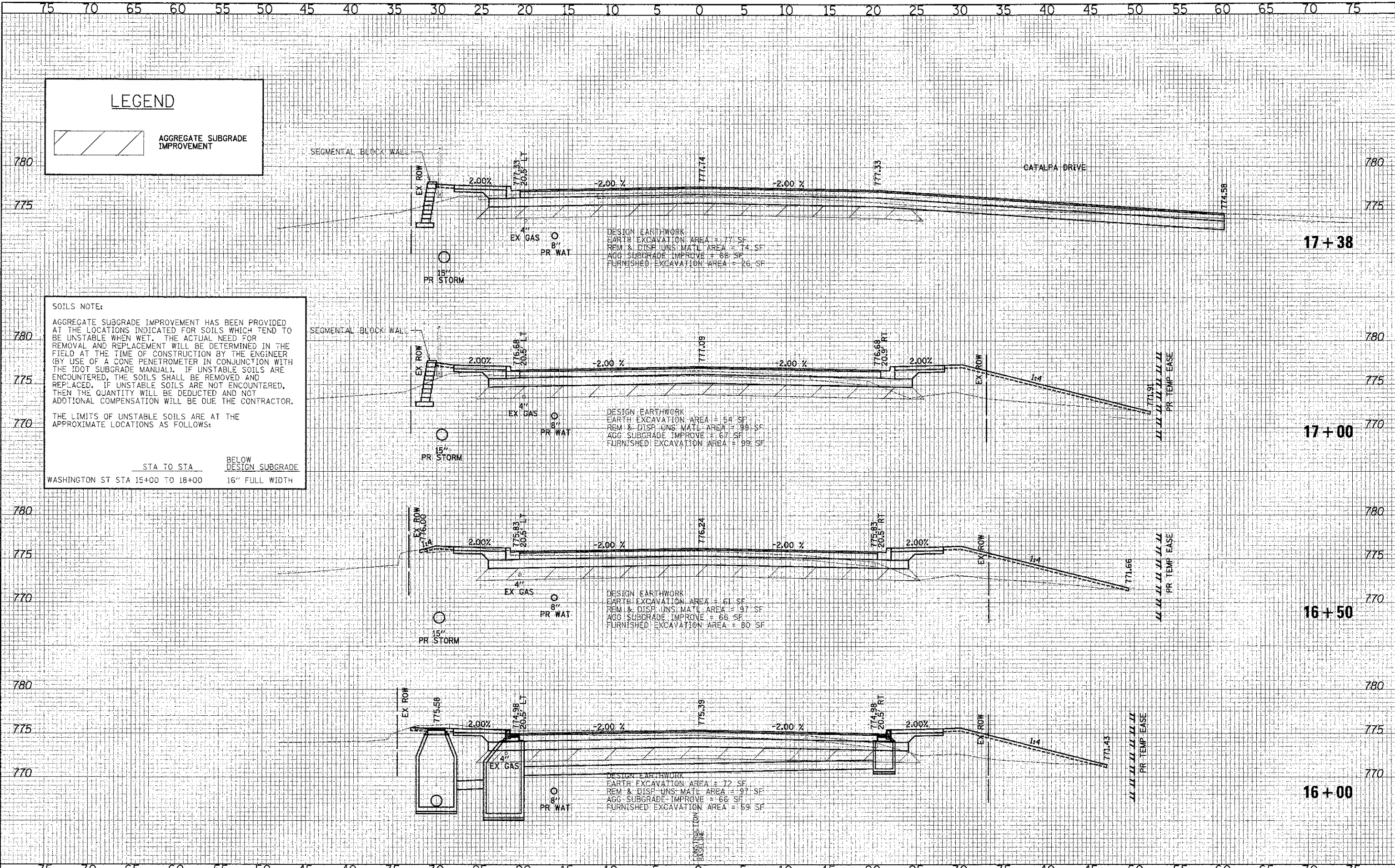
 AGGREGATE SUBGRADE IMPROVEMENT

**SOILS NOTE:**

AGGREGATE SUBGRADE IMPROVEMENT HAS BEEN PROVIDED AT THE LOCATIONS INDICATED FOR SOILS WHICH TEND TO BE UNSTABLE WHEN WET. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE ENGINEER (BY USE OF A CONE PENETROMETER IN CONJUNCTION WITH THE IDOT SUBGRADE MANUAL). IF UNSTABLE SOILS ARE ENCOUNTERED, THE SOILS SHALL BE REMOVED AND REPLACED. IF UNSTABLE SOILS ARE NOT ENCOUNTERED, THEN THE QUANTITY WILL BE DEDUCTED AND NOT ADDITIONAL COMPENSATION WILL BE DUE THE CONTRACTOR.

THE LIMITS OF UNSTABLE SOILS ARE AT THE APPROXIMATE LOCATIONS AS FOLLOWS:

STA TO STA	BELOW DESIGN SUBGRADE
WASHINGTON ST STA 15+00 TO 18+00	16" FULL WIDTH



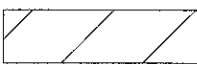
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75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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**LEGEND**

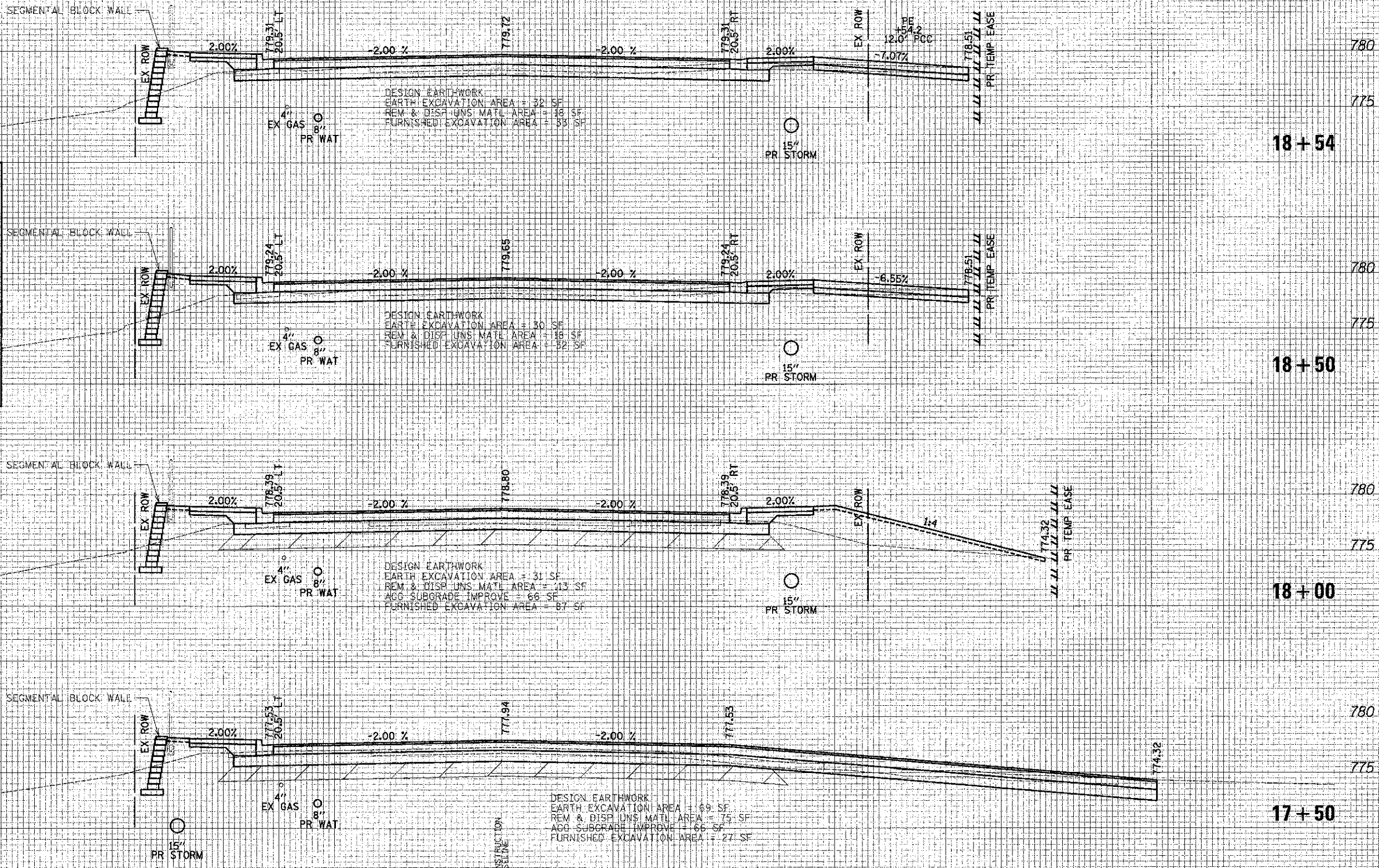
 AGGREGATE SUBGRADE IMPROVEMENT

**SOILS NOTE:**

AGGREGATE SUBGRADE IMPROVEMENT HAS BEEN PROVIDED AT THE LOCATIONS INDICATED FOR SOILS WHICH TEND TO BE UNSTABLE WHEN WET. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE ENGINEER (BY USE OF A CONE PENETROMETER IN CONJUNCTION WITH THE IDOT SUBGRADE MANUAL). IF UNSTABLE SOILS ARE ENCOUNTERED, THE SOILS SHALL BE REMOVED AND REPLACED. IF UNSTABLE SOILS ARE NOT ENCOUNTERED, THEN THE QUANTITY WILL BE DEDUCTED AND NOT ADDITIONAL COMPENSATION WILL BE DUE THE CONTRACTOR.

THE LIMITS OF UNSTABLE SOILS ARE AT THE APPROXIMATE LOCATIONS AS FOLLOWS:

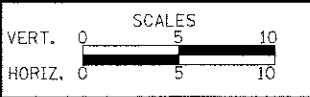
STA TO STA      BELOW DESIGN SUBGRADE  
 WASHINGTON ST STA 15+00 TO 18+00      16" FULL WIDTH



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DRAWN -	JRR	REVISED -	
CHECKED -	RTM	REVISED -	
DATE -	12/17/2012	REVISED -	

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

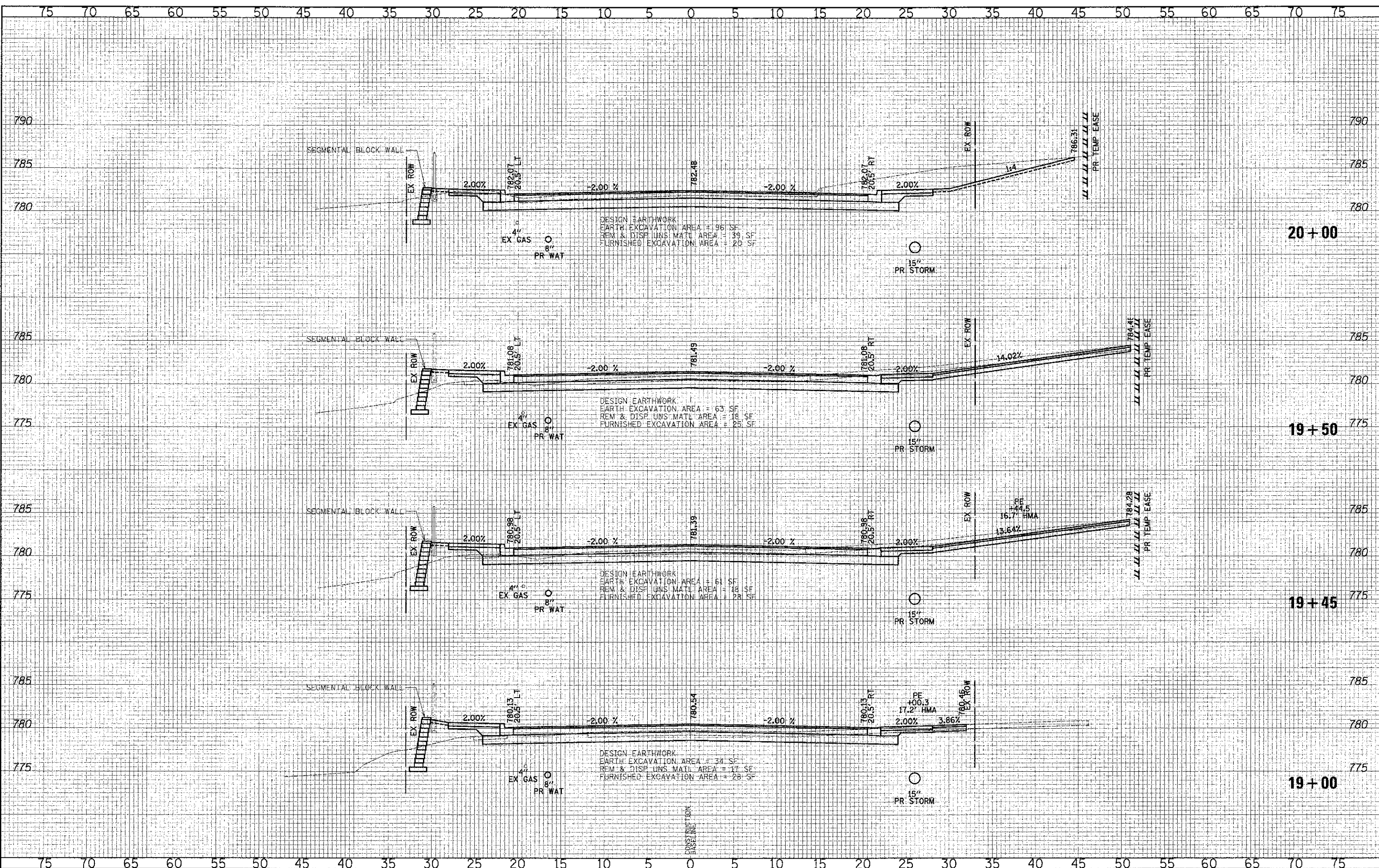


**CROSS SECTIONS - WASHINGTON STREET**  
 SHEET NO. 14 OF 49 SHEETS    STA. 17+50.00 TO STA. 18+54.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	181
				CONTRACT NO. 63765
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

DATE	
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REVISIONS	
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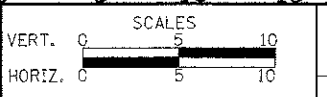
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DRAWN - JRR	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

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

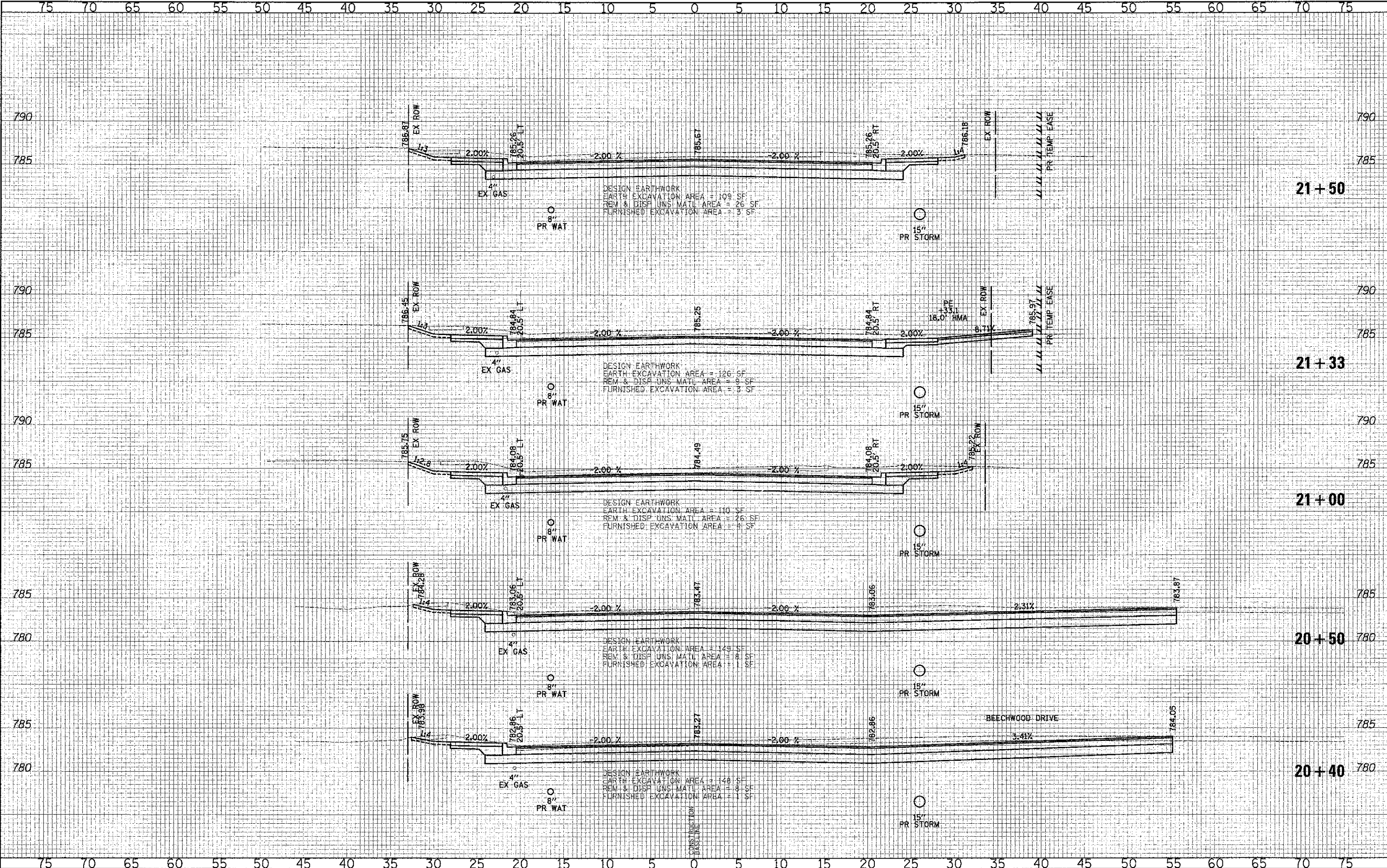


**CROSS SECTIONS - WASHINGTON STREET**  
 SHEET NO. 15 OF 49 SHEETS STA. 19+00.00 TO STA. 20+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	182
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

DATE	
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SHIRLEY	
NOTE BOOK	
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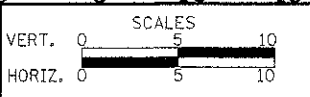
DATE	
BY	
SHIRLEY	
NOTE BOOK	
AREAS CHECKED	
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DRAWN - JRR	REVISED -
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DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
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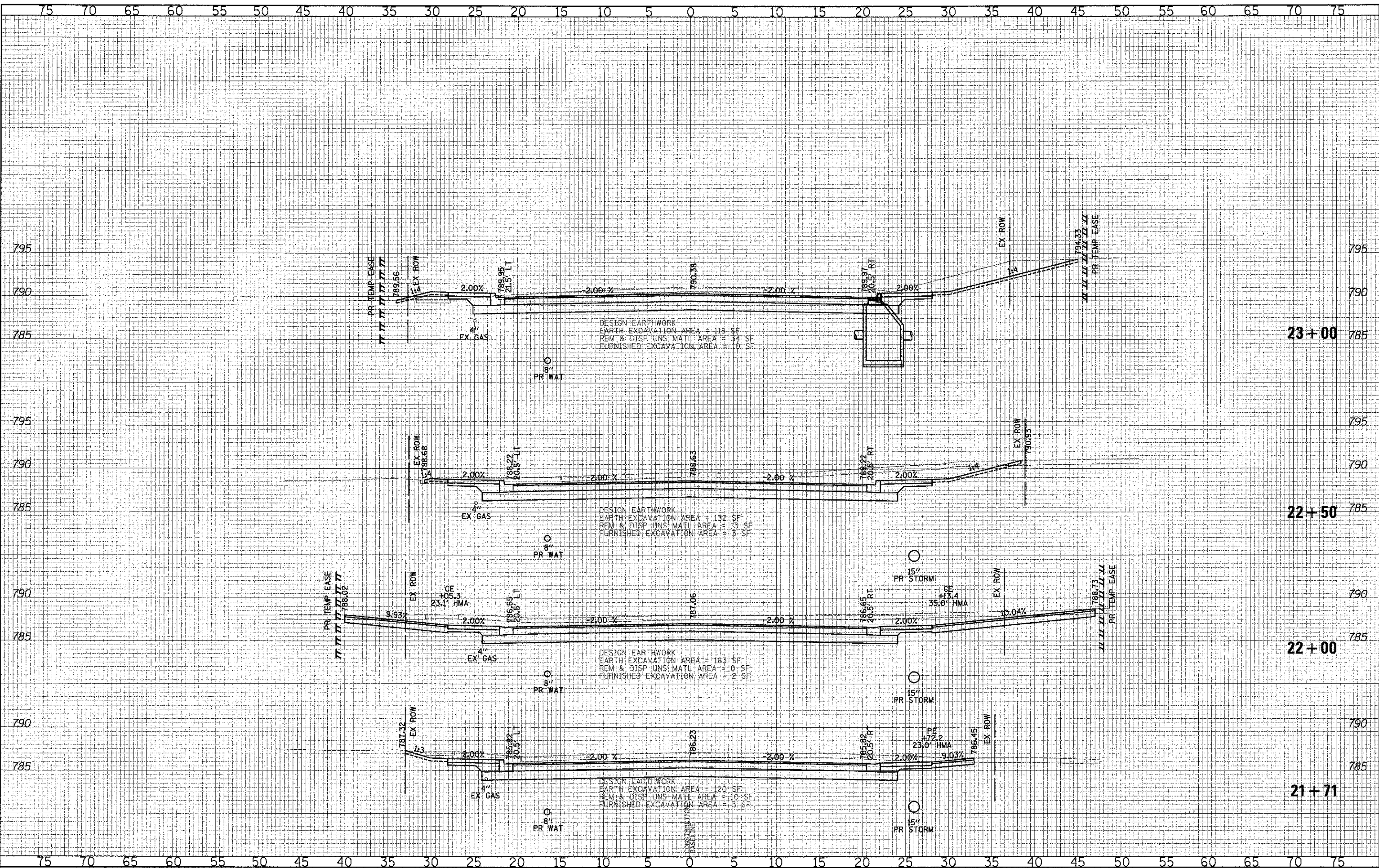
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 16 OF 49 SHEETS    STA. 20+40.00 TO STA. 21+50.00

F.A.L. R.T.E. 0187	SECTION 05-C0121-07-WR	COUNTY LAKE	TOTAL SHEETS 223	SHEET NO. 183
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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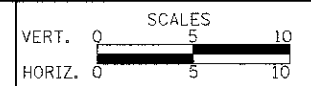
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DATE - 12/17/2012	REVISED -

STATE OF ILLINOIS  
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CROSS SECTIONS - WASHINGTON STREET

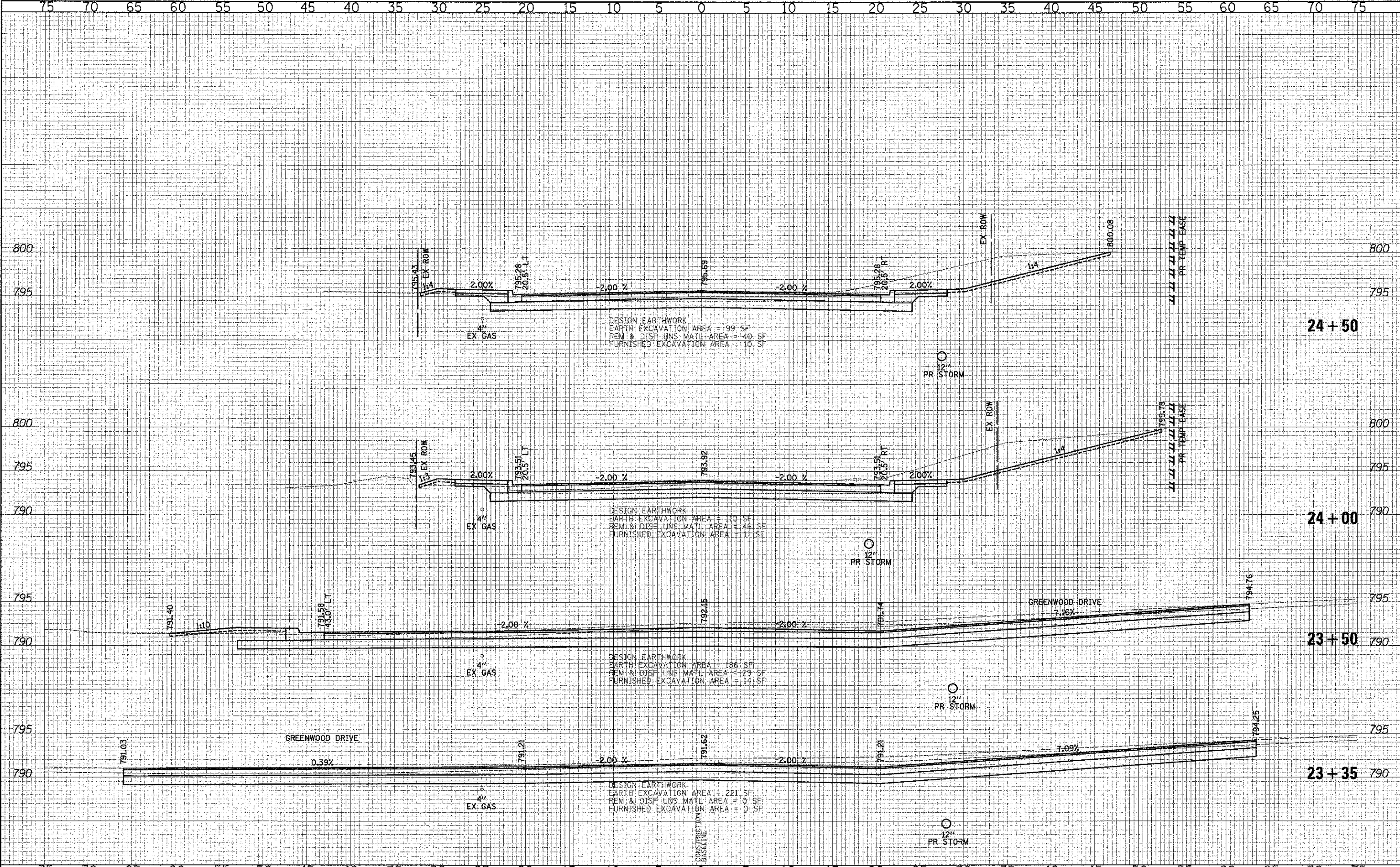
SHEET NO. 17 OF 49 SHEETS STA. 21+71.00 TO STA. 23+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	184
				CONTRACT NO. 63765

FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT

DATE	
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AREAS CHECKED	

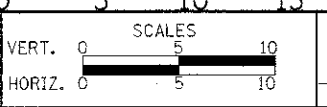
DATE	
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TEMPERATURE	
NO. OF SHEETS	
AREAS CHECKED	



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DRAWN - JRR	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS  
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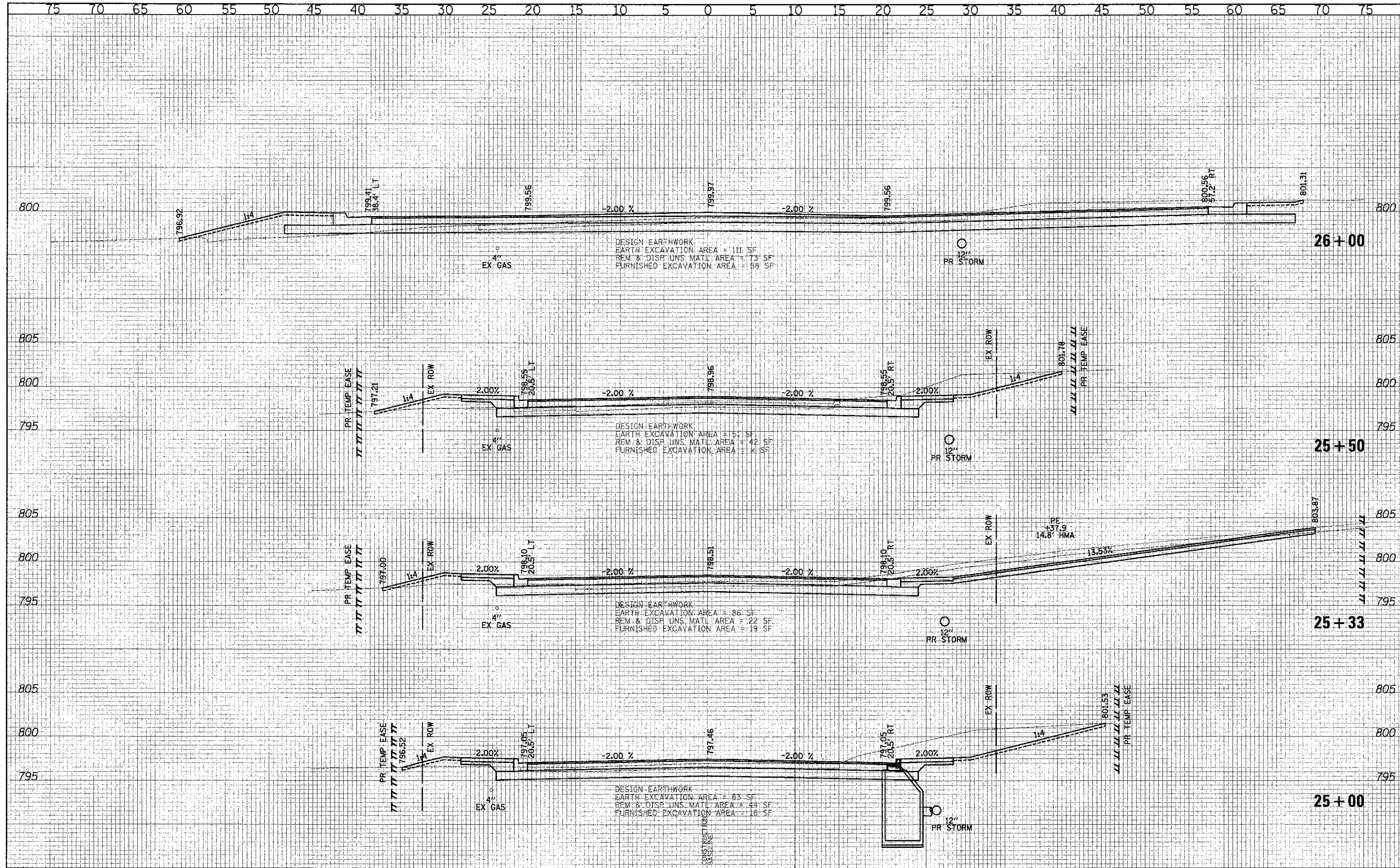
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 18 OF 49 SHEETS | STA. 23+35.00 TO STA. 24+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	225	185
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				CONTRACT NO. 63765

DATE	
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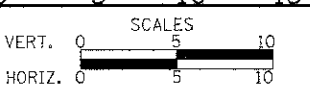
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DRAWN -	JRR	REVISED -	
CHECKED -	RTM	REVISED -	
DATE -	12/17/2012	REVISED -	

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



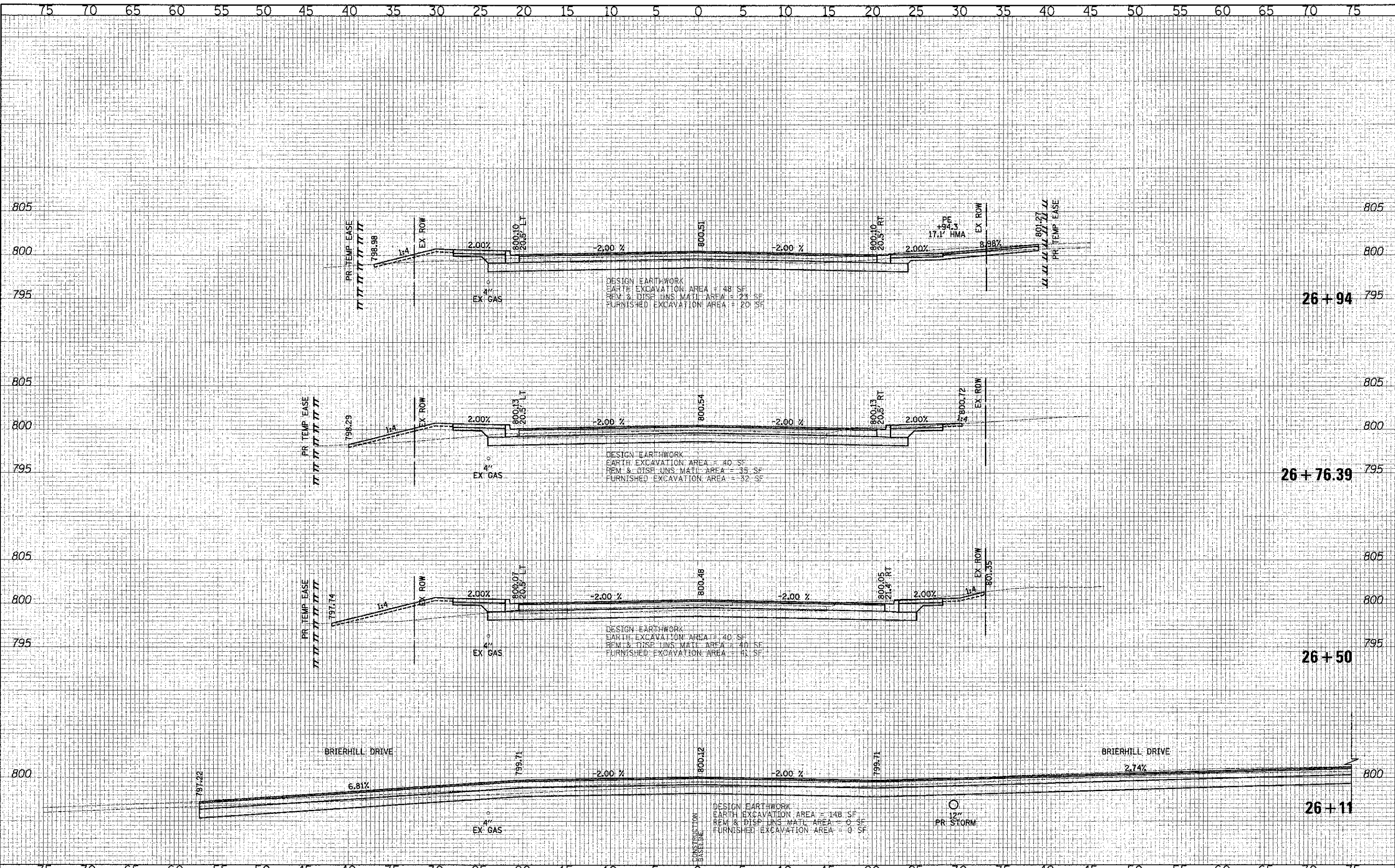
**CROSS SECTIONS - WASHINGTON STREET**  
 SHEET NO. 19 OF 49 SHEETS | STA. 25+00.00 TO STA. 26+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	186
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				



DATE	
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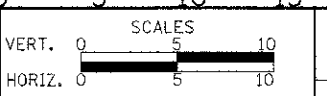


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CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

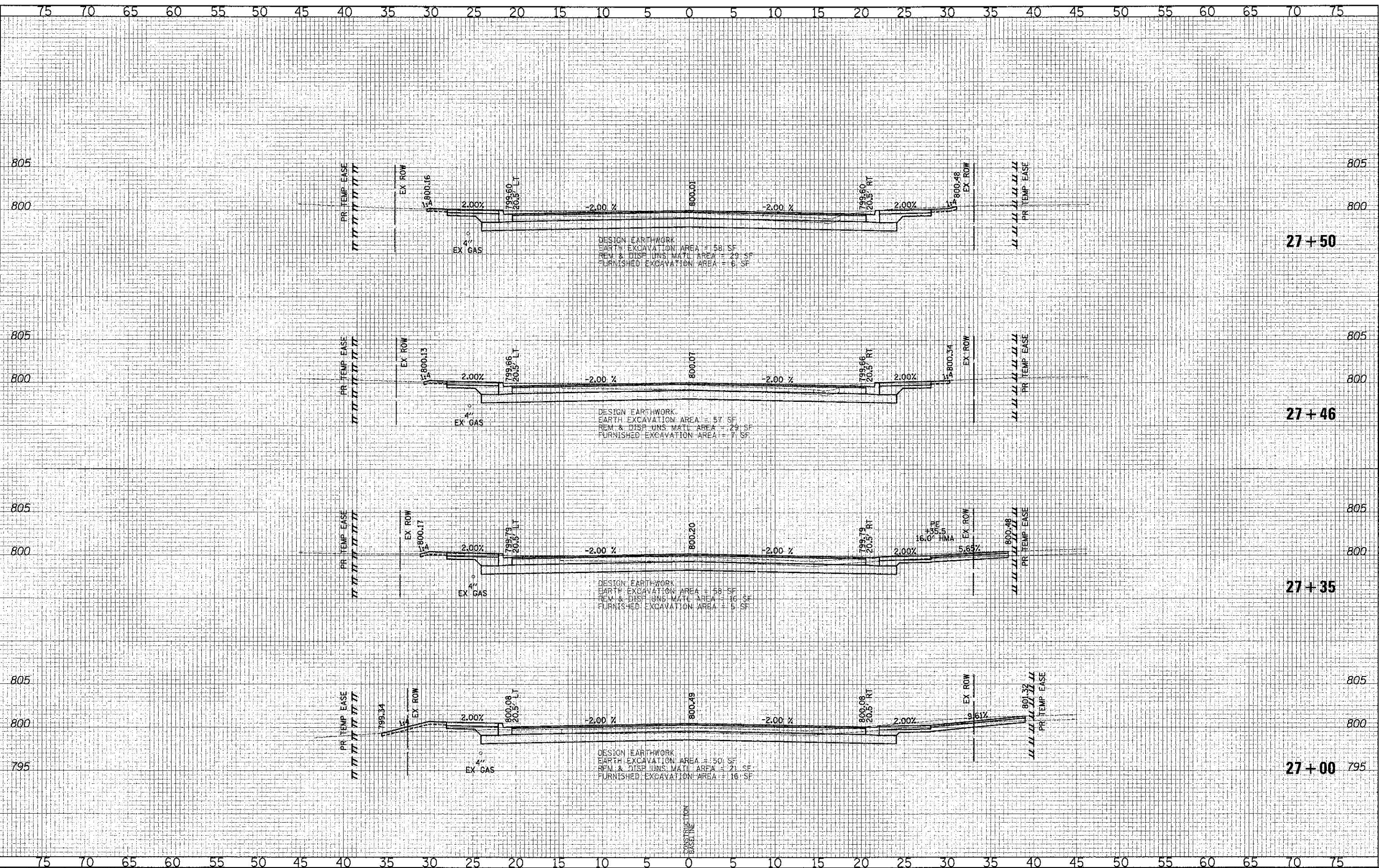


CROSS SECTIONS - WASHINGTON STREET  
SHEET NO. 20 OF 49 SHEETS STA. 26+11.00 TO STA. 26+94.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
0187	05-00121-07-WR	LAKE	223 187
CONTRACT NO. 63765			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

DATE	
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PLOTTED	
NOTE BOOK	
AREAS DERIVED	
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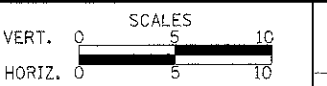
DATE	
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NOTE BOOK	
AREAS DERIVED	
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DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS**  
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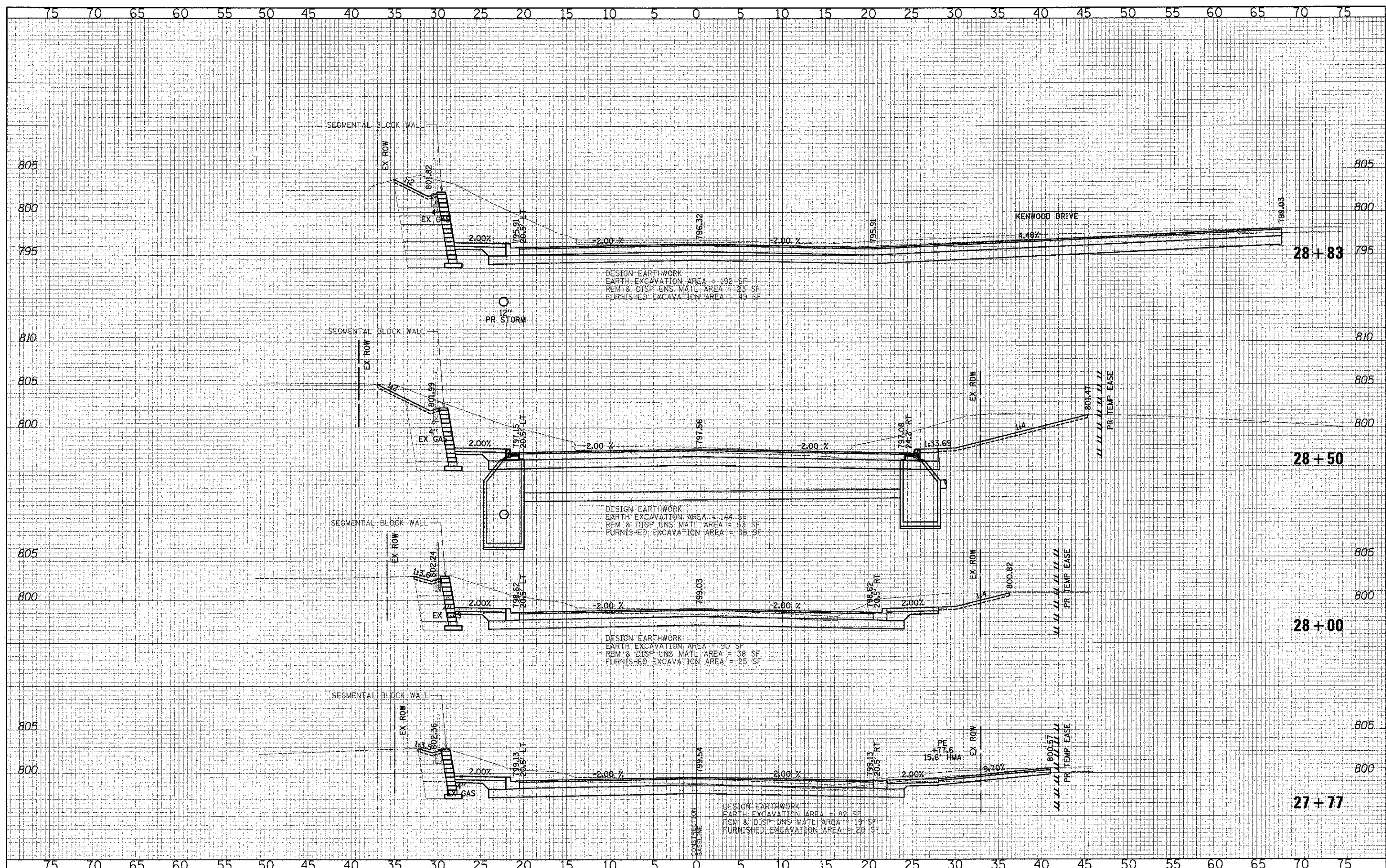
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 21 OF 49 SHEETS STA. 27+00.00 TO STA. 27+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
0187	05-00121-07-WR	LAKE	223 189
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63765

DATE	
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NOTE BOOK	
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DESIGN EARTHWORK  
 EARTH EXCAVATION AREA = 192 SF  
 REM & DISP UNS. MATL. AREA = 23 SF  
 FURNISHED EXCAVATION AREA = 49 SF

DESIGN EARTHWORK  
 EARTH EXCAVATION AREA = 144 SF  
 REM & DISP UNS. MATL. AREA = 33 SF  
 FURNISHED EXCAVATION AREA = 56 SF

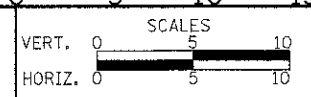
DESIGN EARTHWORK  
 EARTH EXCAVATION AREA = 90 SF  
 REM & DISP UNS. MATL. AREA = 38 SF  
 FURNISHED EXCAVATION AREA = 25 SF

DESIGN EARTHWORK  
 EARTH EXCAVATION AREA = 82 SF  
 REM & DISP UNS. MATL. AREA = 19 SF  
 FURNISHED EXCAVATION AREA = 20 SF

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DRAWN - JRR	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

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



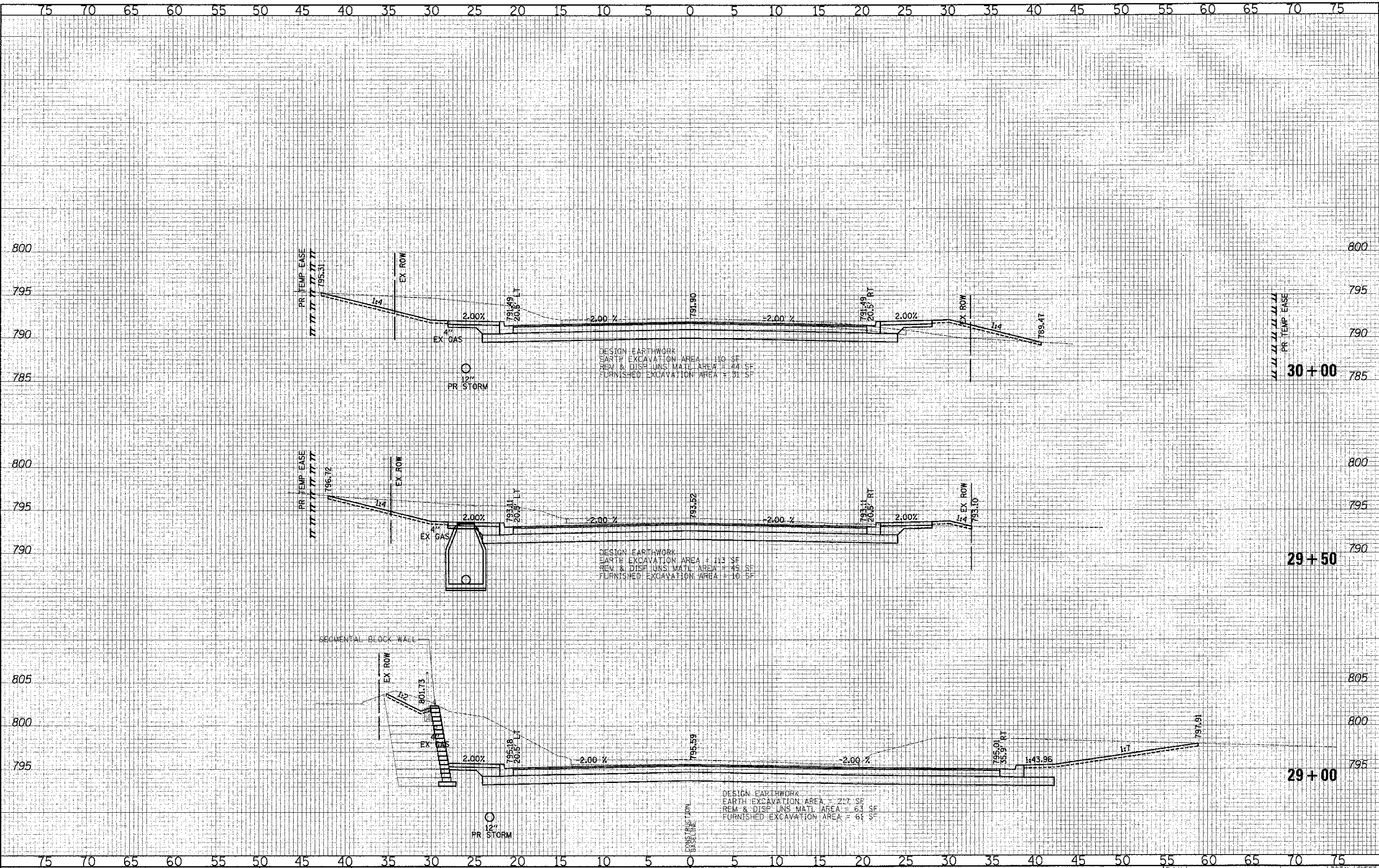
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 22 OF 49 SHEETS STA. 27+77.00 TO STA. 28+83.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	189
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

DATE	
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DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012
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DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012
REVISED	
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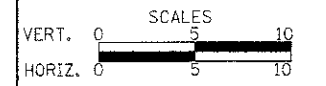
DATE	
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DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012
REVISED	
REVISIONS	
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DESIGNED	PK
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REVISIONS	
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DATE	- 12/17/2012	REVISED	-

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

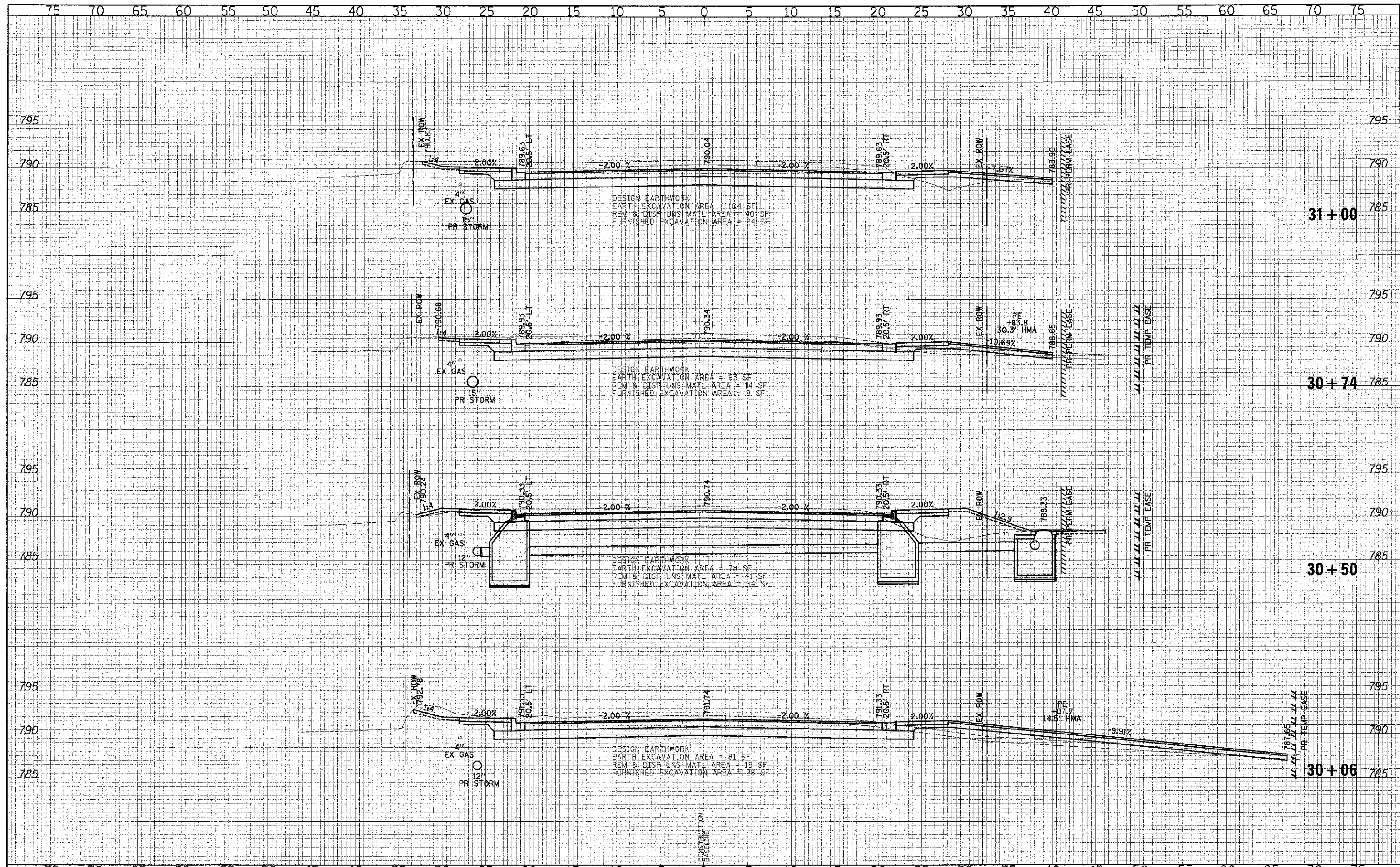


**CROSS SECTIONS - WASHINGTON STREET**  
 SHEET NO. 23 OF 49 SHEETS | STA. 29+00.00 TO STA. 30+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	190
				CONTRACT NO. 63765
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SUBMITTED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SUBMITTED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS CHECKED

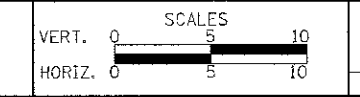


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CHECKED -	RTM	REVISED -	
DATE -	12/17/2012	REVISED -	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

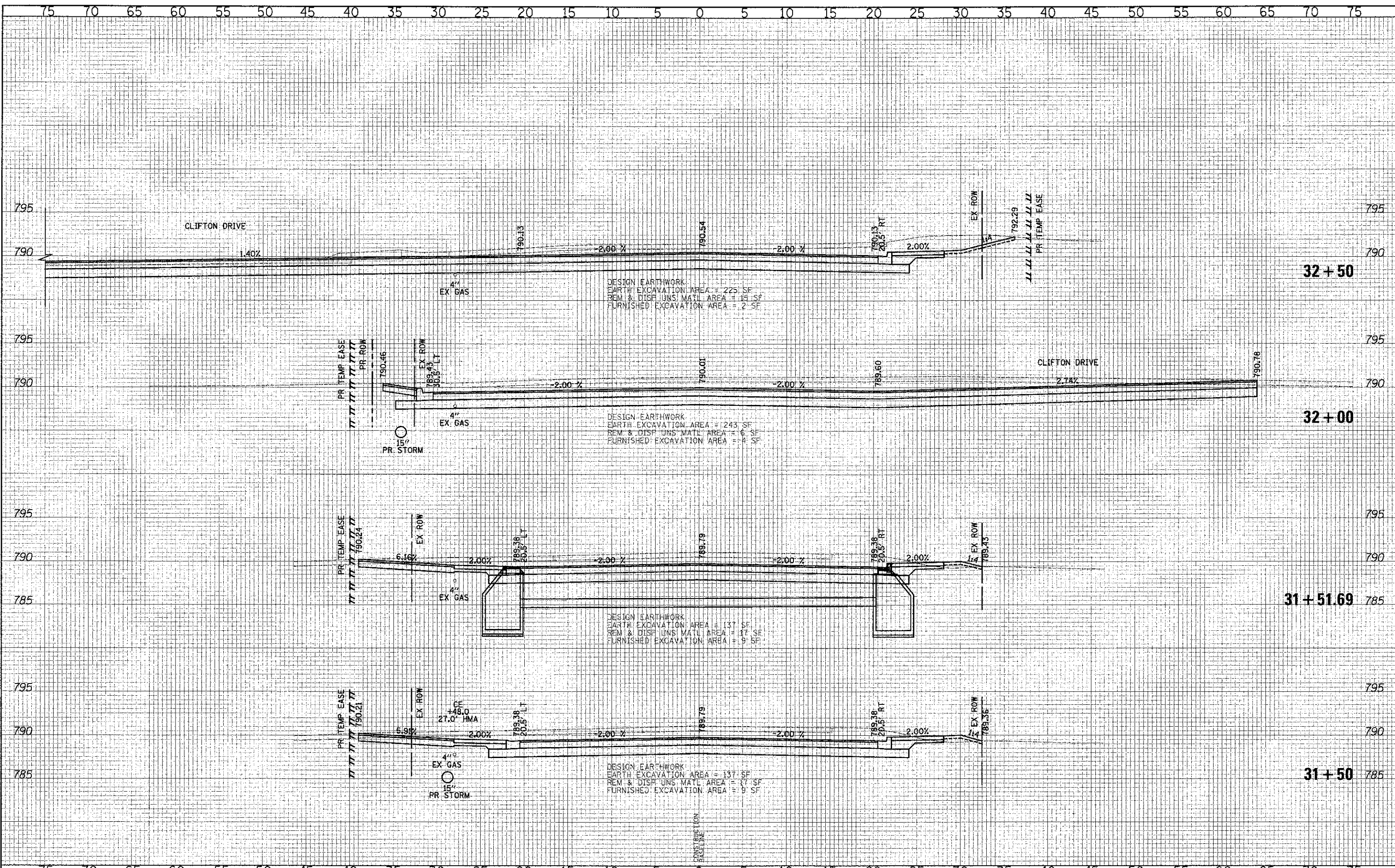


CROSS SECTIONS - WASHINGTON STREET  
SHEET NO. 24 OF 49 SHEETS | STA. 30+06.00 TO STA. 31+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-0012-07-WR	LAKE	223	191
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				

DATE	
BY	
DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012

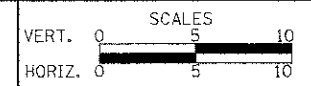
DATE	
BY	
DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012



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DRAWN	- JRR	REVISED	-
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DATE	- 12/17/2012	REVISED	-

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



**CROSS SECTIONS - WASHINGTON STREET**

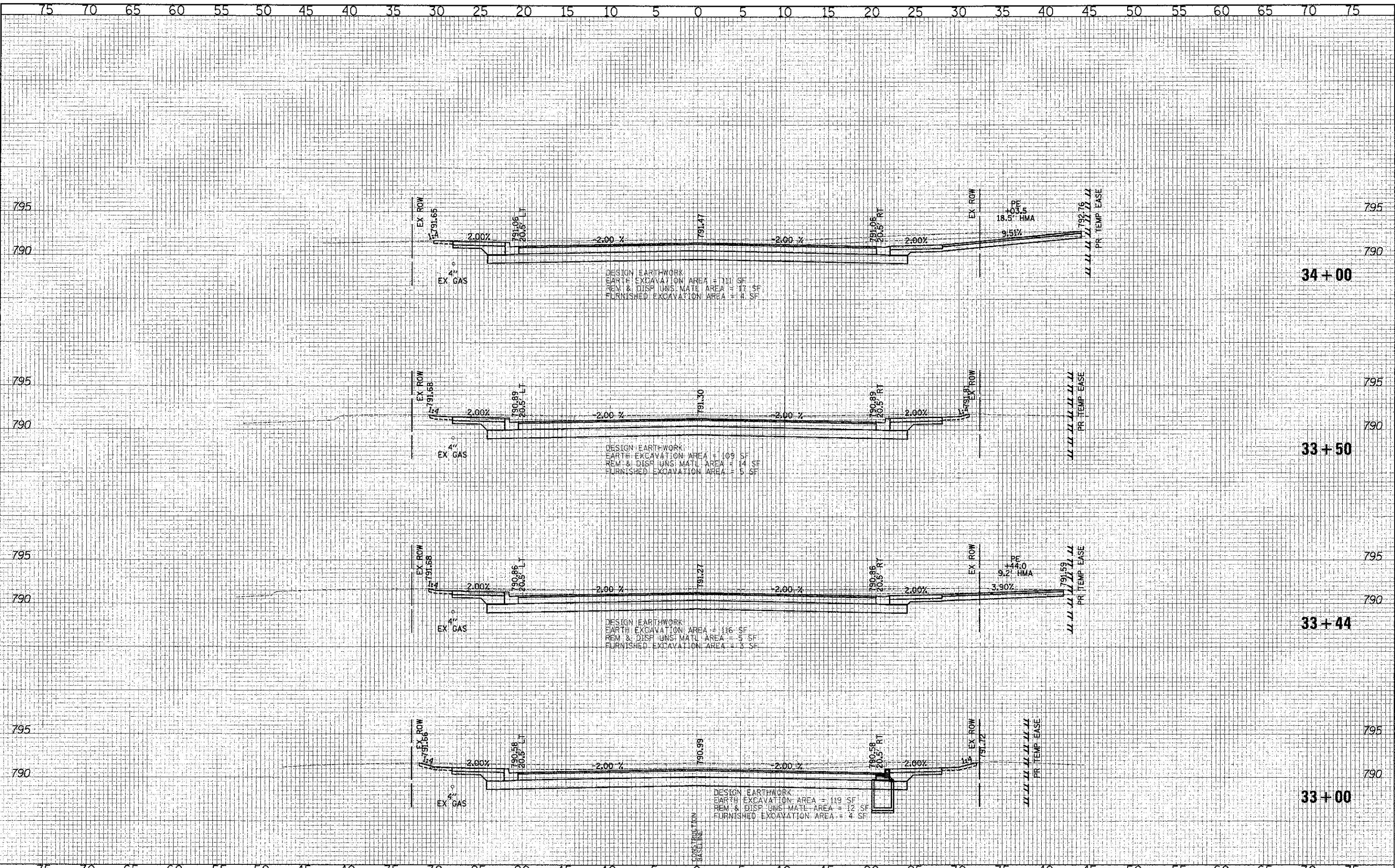
SHEET NO. 25 OF 49 SHEETS | STA. 31+50.00 TO STA. 32+50.00

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	192
CONTRACT NO. 63765				

FED. ROAD DIST. NO. : ILLINOIS FED. AID PROJECT

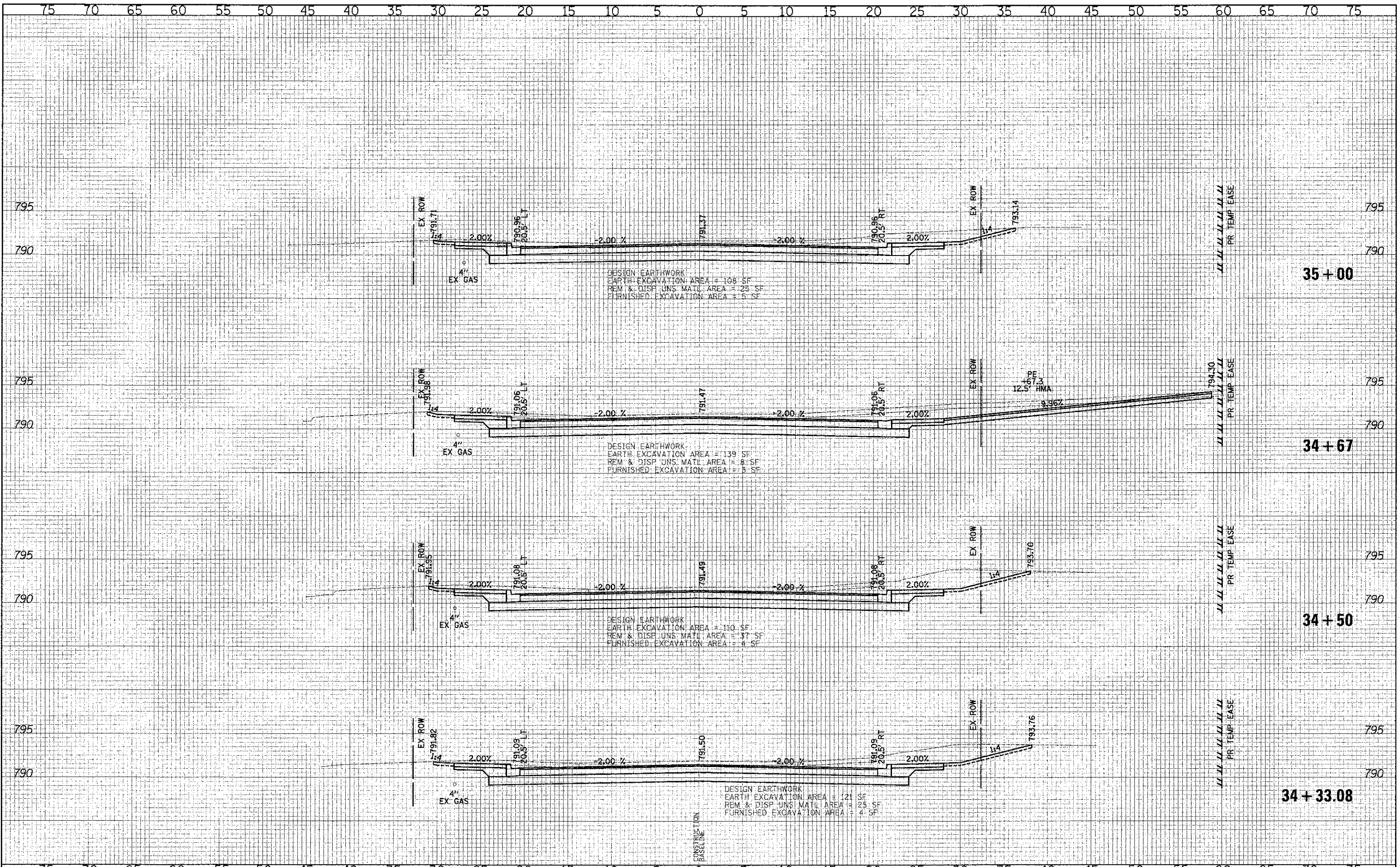
FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED  
 BY: DATE:

ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED  
 BY: DATE:



FINAL	CHECKED	DATE
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NOTE BOOK	TEMP-LATE	
NO.	AREAS CHECKED	

BY	DATE	
ORIGINAL	CHECKED	DATE
SURVEY	PLOTTED	
NO. OF BOOK	TEMP-LATE	
NO.	AREAS CHECKED	



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DATE	- 12/17/2012	REVISED	-

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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**CROSS SECTIONS - WASHINGTON STREET**

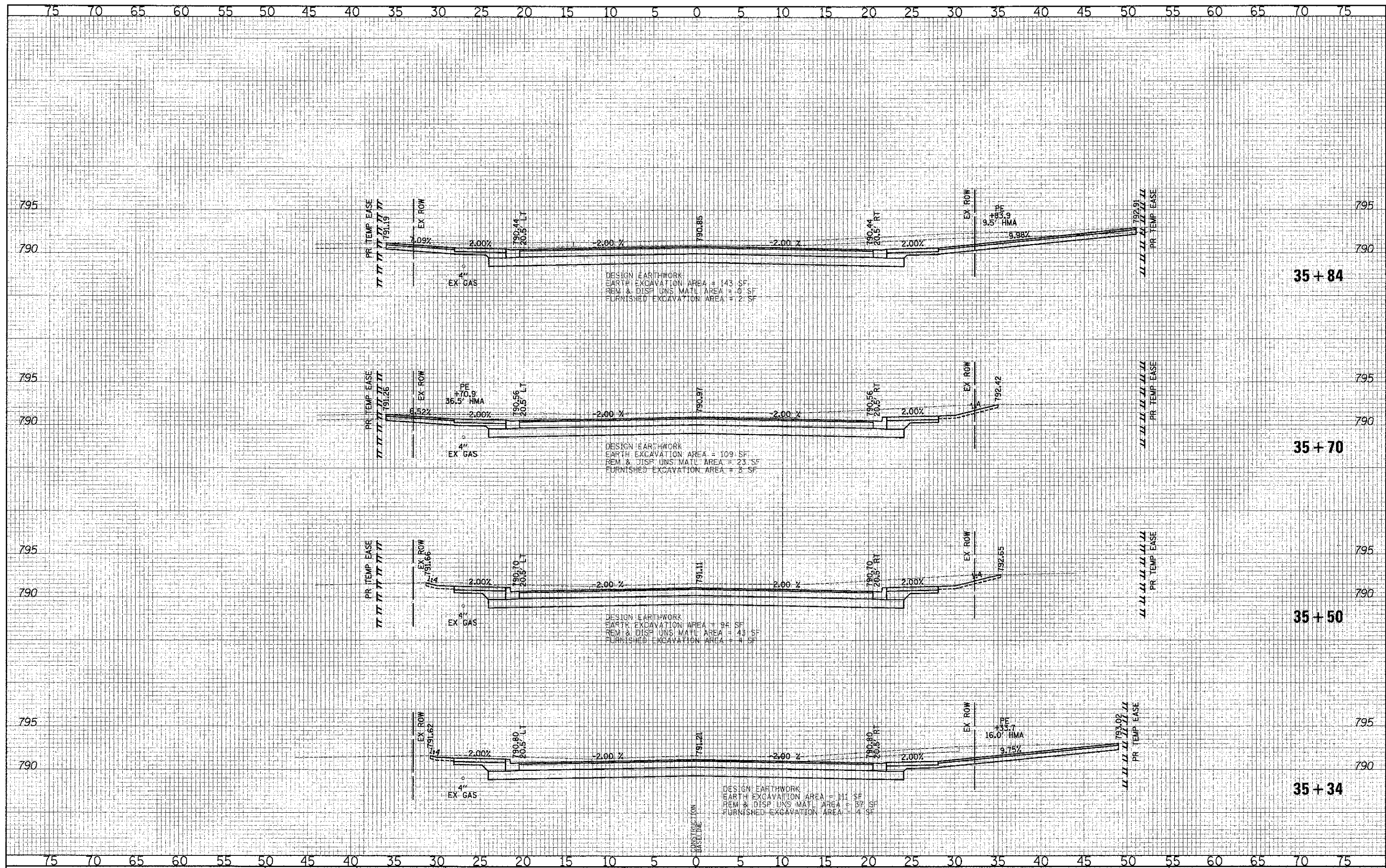
SHEET NO. 27 OF 49 SHEETS | STA. 34+33.08 TO STA. 35+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	194
				CONTRACT NO. 63765
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				



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 BY: \_\_\_\_\_  
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 PLOTTED BY: \_\_\_\_\_  
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DRAWN - JRR	REVISED -
CHECKED - RTM	REVISED -
DATE - 12/17/2012	REVISED -

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

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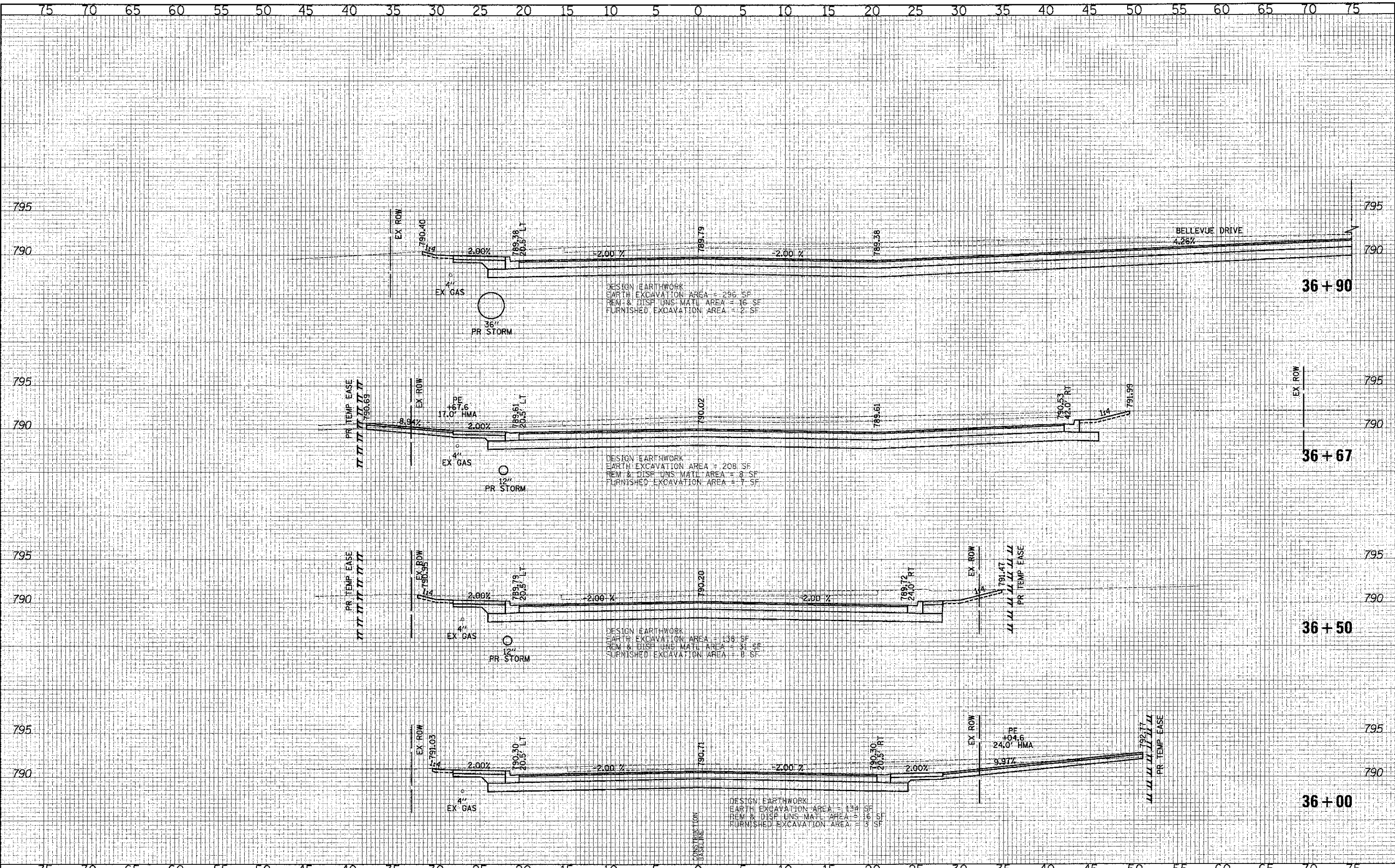
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 28 OF 49 SHEETS STA. 35+34.00 TO STA. 35+84.00

F.A.U. RTE. 1	SECTION 05-00121-07-WR	COUNTY LAKE	TOTAL SHEETS 223	SHEET NO. 195
CONTRACT NO. 63765			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	

DATE	
BY	
FINAL SURVEY	PLOTTED
NOTE BOOK	AREAS CHECKED

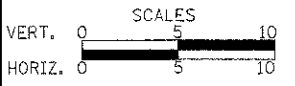
DATE	
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ORIGINAL SURVEY	PLOTTED
NOTE BOOK	AREAS CHECKED



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DATE - 12/17/2012	REVISED -

**STATE OF ILLINOIS**  
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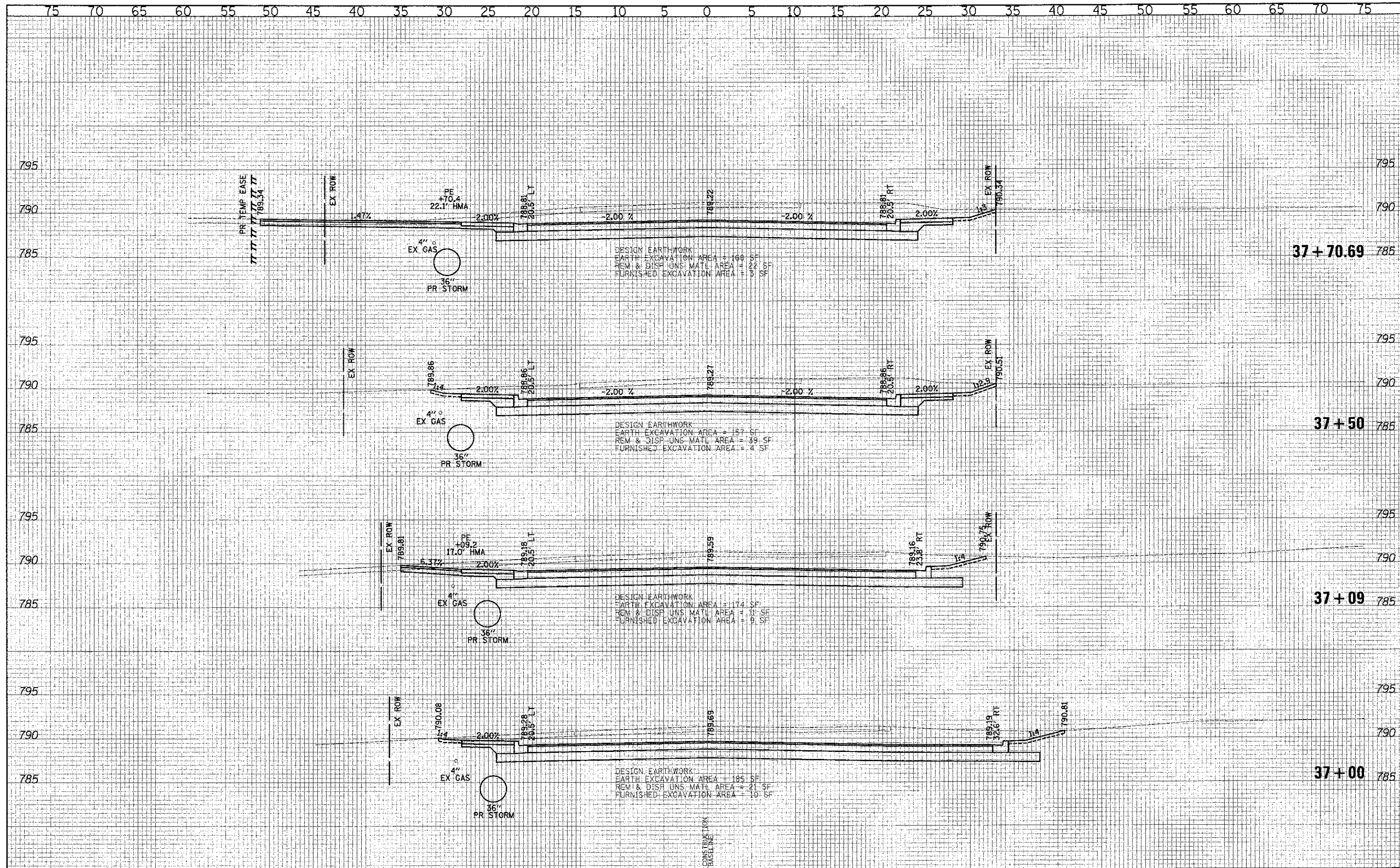
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 29 OF 49 SHEETS STA. 36+00.00 TO STA. 36+90.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS
0187	05-00121-07-WR	LAKE	223 196
CONTRACT NO. 63765			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

DATE	
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NO. 1	DESIGNED - PK
NO. 2	DRAWN - JRR
NO. 3	CHECKED - RTM
NO. 4	DATE - 12/17/2012
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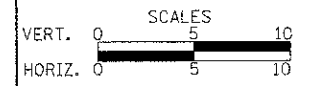
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NO. 2	DRAWN - JRR
NO. 3	CHECKED - RTM
NO. 4	DATE - 12/17/2012
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DATE - 12/17/2012	REVISION -

**STATE OF ILLINOIS**  
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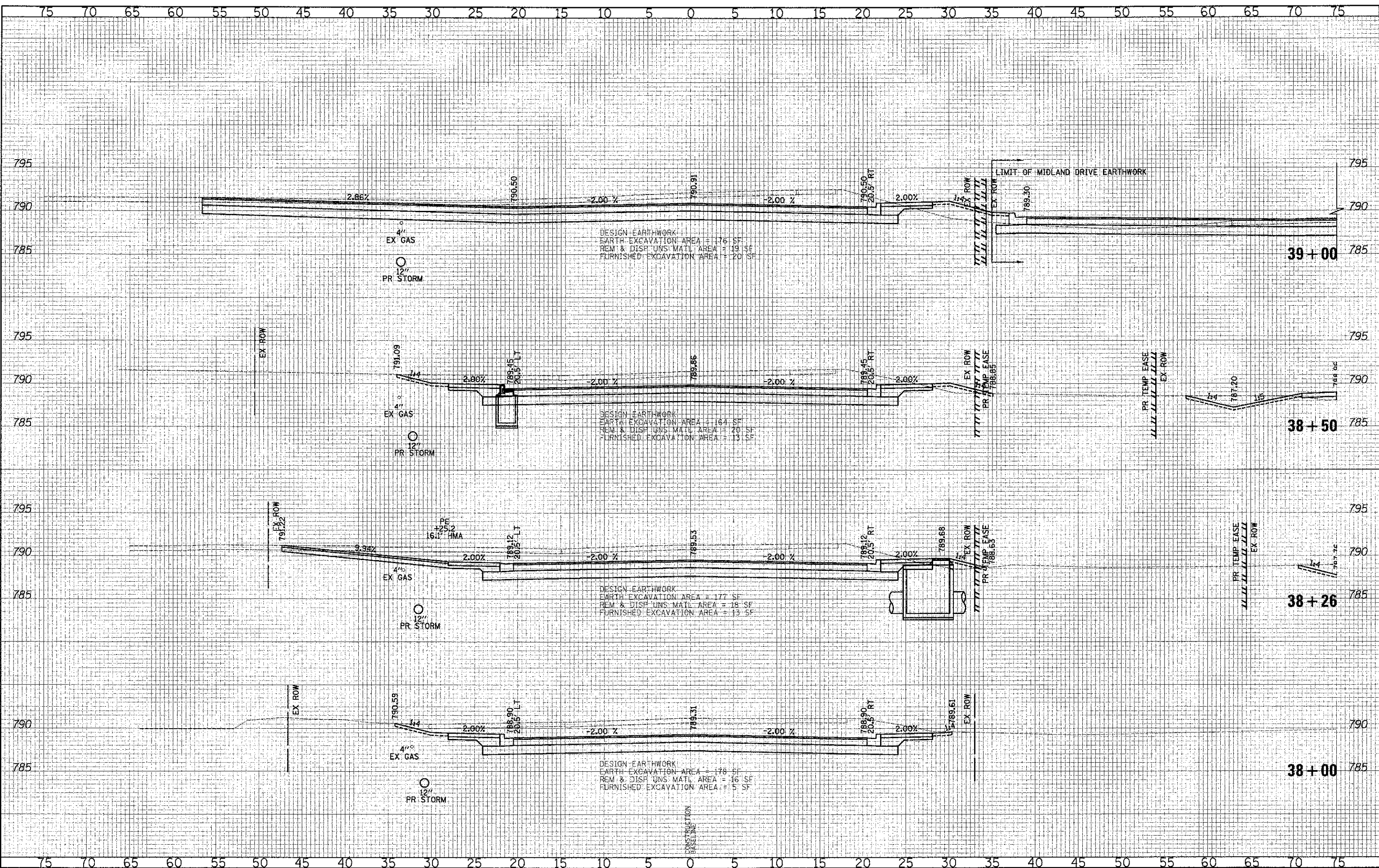
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 30 OF 49 SHEETS STA. 37+00.00 TO STA. 37+70.69

F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	197
CONTRACT NO. 63765				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

DATE	
BY	
DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012

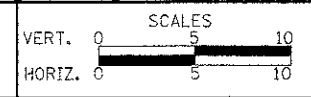
DATE	
BY	
DESIGNED	PK
DRAWN	JRR
CHECKED	RTM
DATE	12/17/2012



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DESIGNED	- PK	REVISED	-
DRAWN	- JRR	REVISED	-
CHECKED	- RTM	REVISED	-
DATE	- 12/17/2012	REVISED	-

**STATE OF ILLINOIS**  
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**CROSS SECTIONS - WASHINGTON STREET**

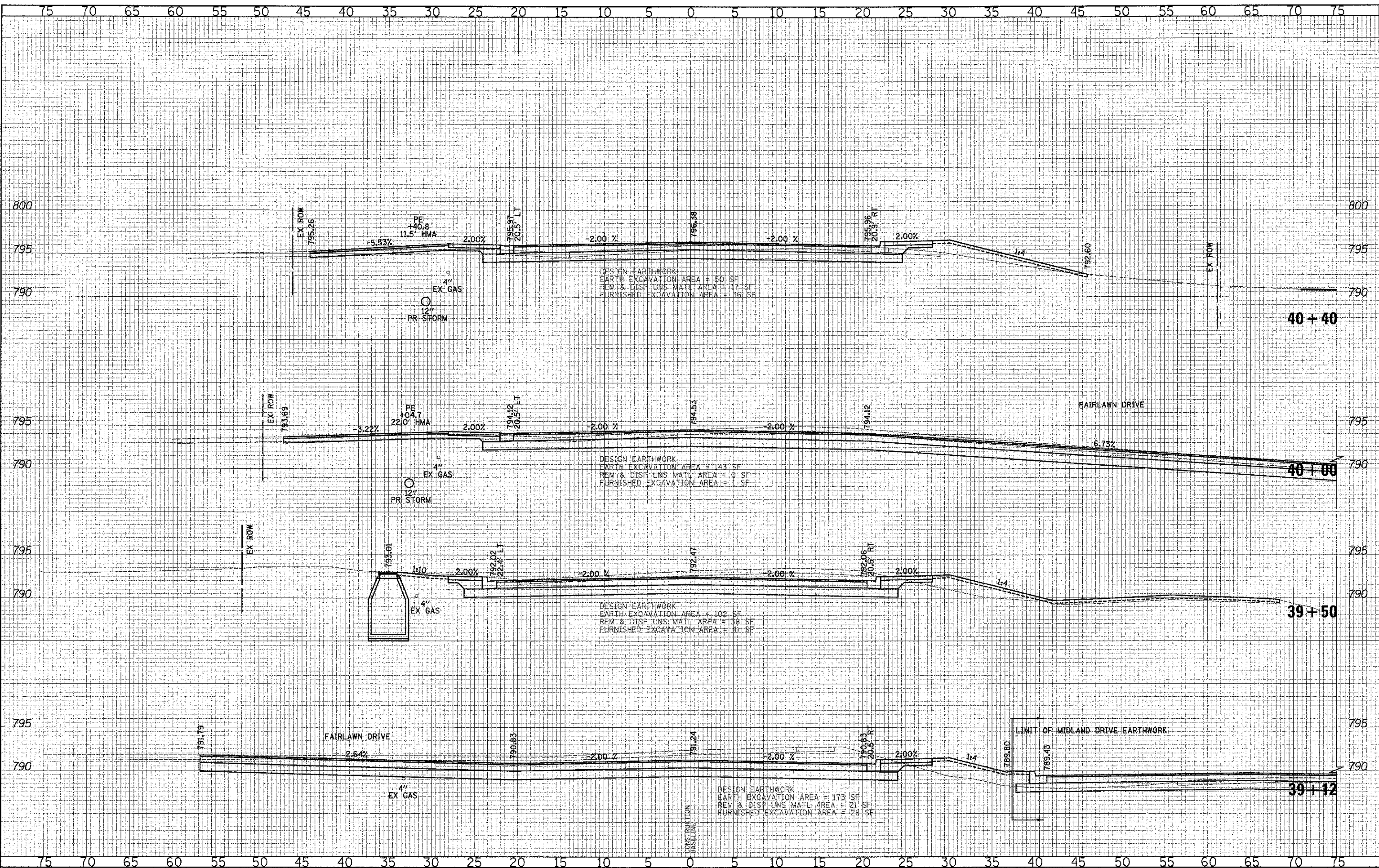
SHEET NO. 31 OF 49 SHEETS | STA. 38+00.00 TO STA. 39+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	198
CONTRACT NO. 63765				

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

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AREAS	CHECKED
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PL. 01710	
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FINAL SURVEY	
NOTE BOOK	

DATE	
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TEMP. AT F	
PI. 01710	
PL. 01710	
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ORIGINAL SURVEY	
NOTE BOOK	



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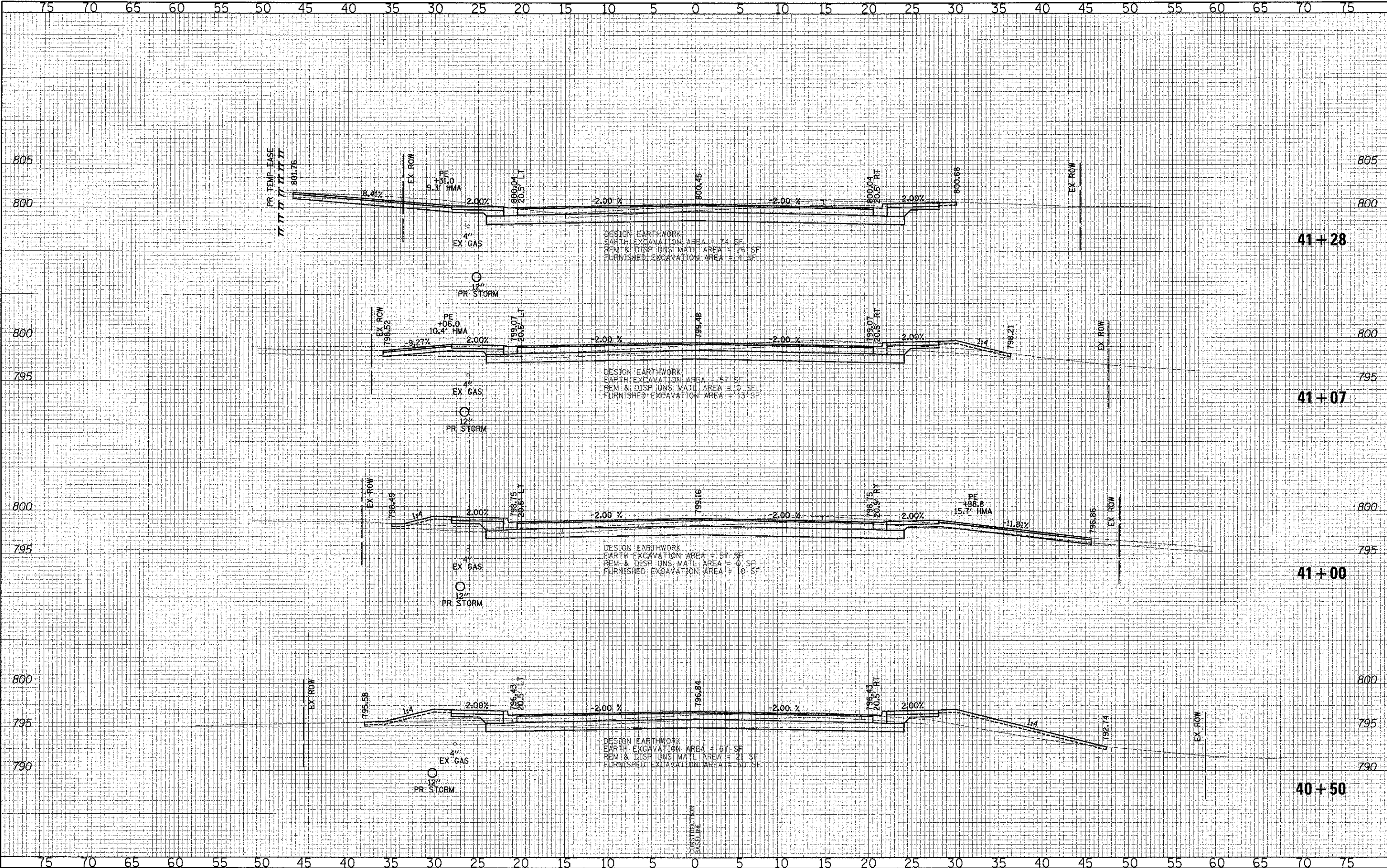
**CROSS SECTIONS - WASHINGTON STREET**

SHEET NO. 32 OF 49 SHEETS STA. 39+12.00 TO STA. 40+40.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0187	05-00121-07-WR	LAKE	223	199
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63765	

DATE	
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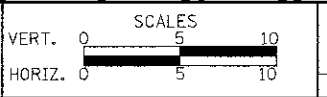
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DESIGNED	- PK	REVISED	-
DRAWN	- JRR	REVISED	-
CHECKED	- RTM	REVISED	-
DATE	- 12/17/2012	REVISED	-

STATE OF ILLINOIS  
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CROSS SECTIONS - WASHINGTON STREET  
 SHEET NO. 33 OF 49 SHEETS STA. 40+50.00 TO STA. 41+28.00

SECTION	COUNTY	TOTAL SHEETS
05-00121-07-WR	LAKE	223 / 200
CONTRACT NO. 63765		