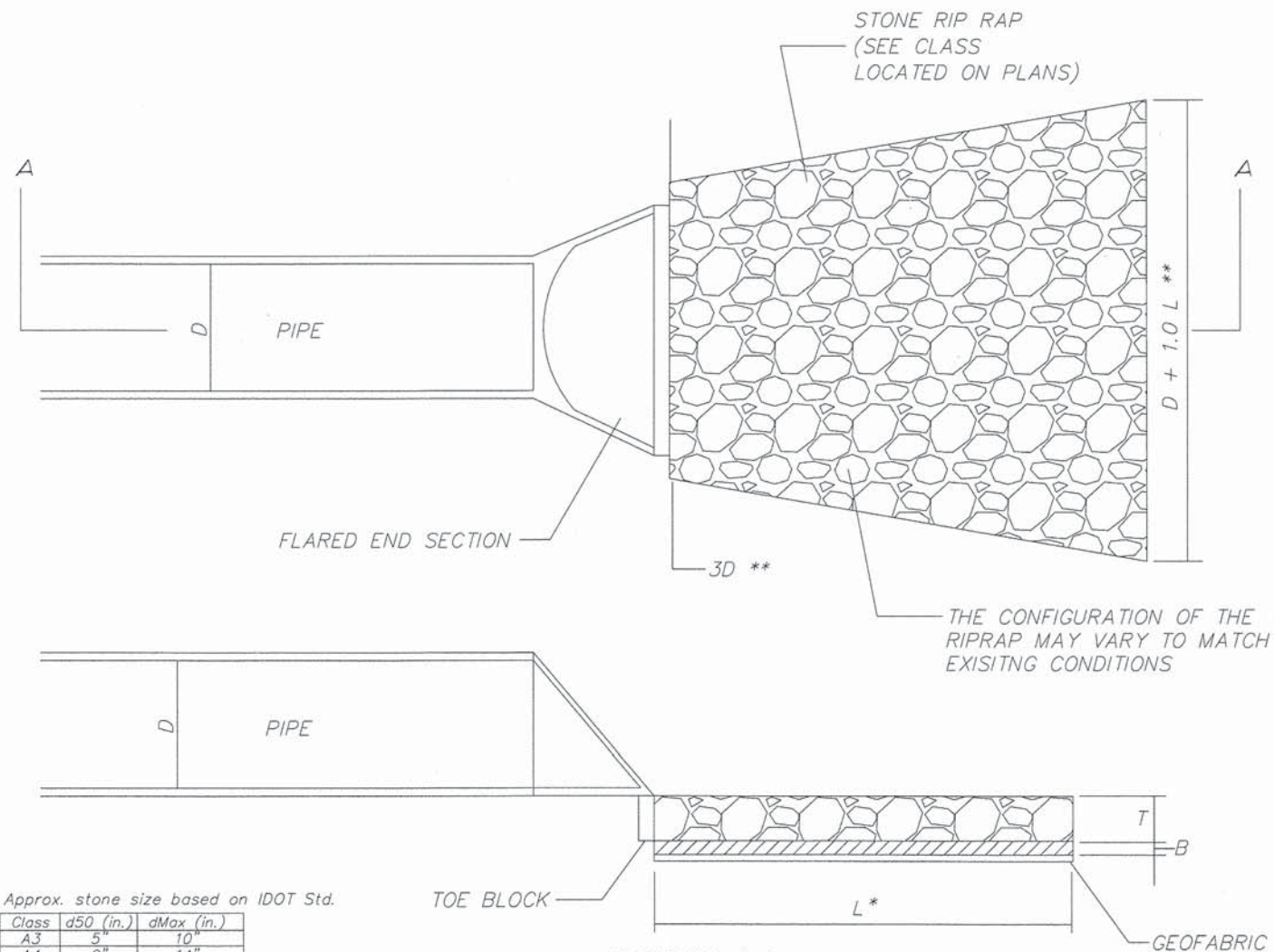


**STONE RIP RAP DETAIL**  
FOR ANY TAILWATER CONDITION



Approx. stone size based on IDOT Std.

Class	d50 (in.)	dMax (in.)
A3	5"	10"
A4	9"	14"
A5	12"	19"
A6	15"	22"

**SECTION A-A**

- \* WHEN "L" EXTENDS BEYOND BACK OF DITCH, RIPRAP SHALL TERMINATE AT BACK EDGE OF THE DITCH, THE PROPOSED QUANTITY SHALL NOT CHANGE.
- \*\* NOTE: WHEN OUTLETING TO A DEFINED CHANNEL, WIDTH AND AREA OF APRON SHALL CONFORM TO TOP OF CHANNEL BANK

LOW VELOCITY (<5fps)				
D	T	L	B	-
Pipe Size in.	Rock Class (Min. Thickness)	Length of Apron	Bedding Class (Thickness)	Quantity SY. **
10"	A2 (6")	10'	-	8
12"	A3 (15")	12'	-	11
15"	A3 (15")	13'	-	13
18"	A3 (15")	14'	-	16
21"	A3 (15")	15'	-	18
24"	A3 (15")	16'	-	21
27"	A3 (15")	17'	-	25
30"	A3 (15")	18'	-	28
33"	A4 (16")	19'	A1 (6")	32
36"	A4 (16")	20'	A1 (6")	36
42"	A4 (16")	22'	A1 (6")	44
48"	A4 (16")	24'	A1 (6")	53

Note See current Illinois Department of Transportation Standard Specification to verify rock size and bedding thickness.

RIPRAP

COMPANY NAME: HRGreen  
 PROJECT CONTACT: HRGreen.com  
 CLIENT: Illinois Professional Design Firm  
 DATE PLOTTED: 10/24/2013 12:10:04 PM  
 FILE NAME: 080622-drt-21.dgn  
 PLOT DRIVER: pdfLpr  
 PEN TABLE: s:fontcolor-trans.tbl

**HRGreen**  
 Illinois Professional Design Firm  
 #184-001322

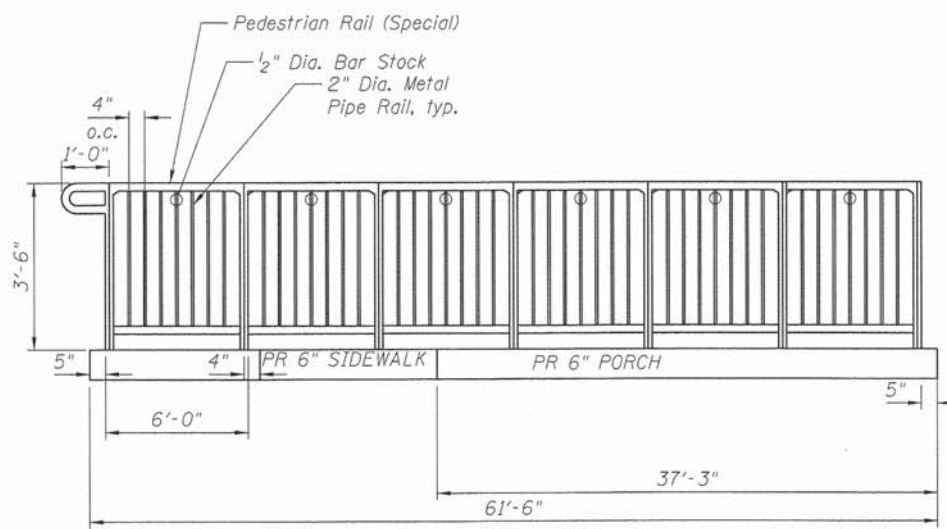
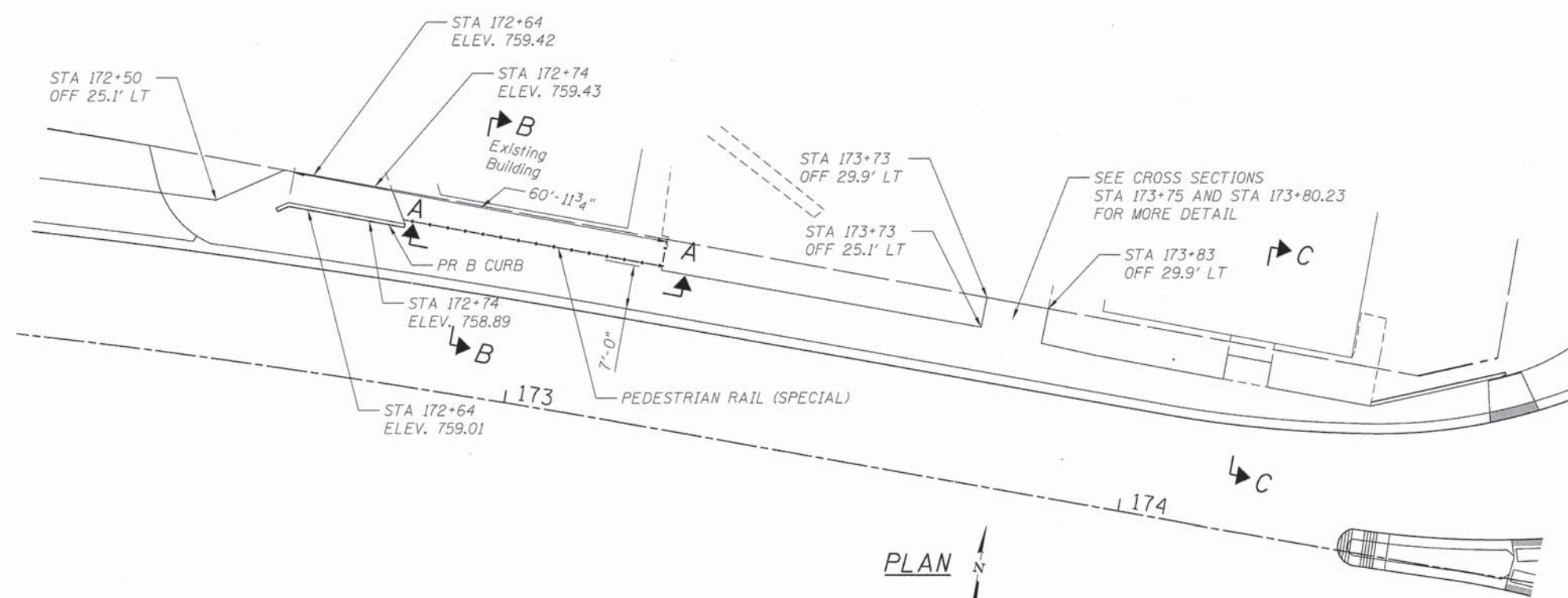
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

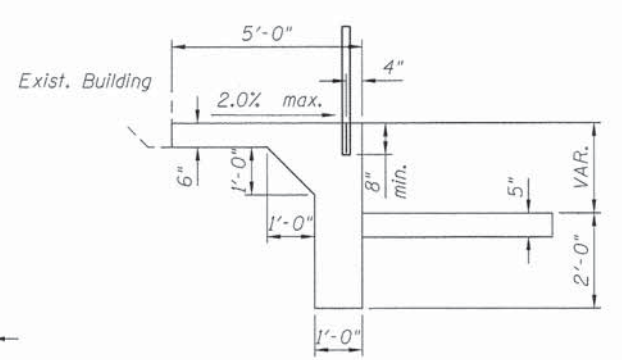
**RIPRAP DETAIL**

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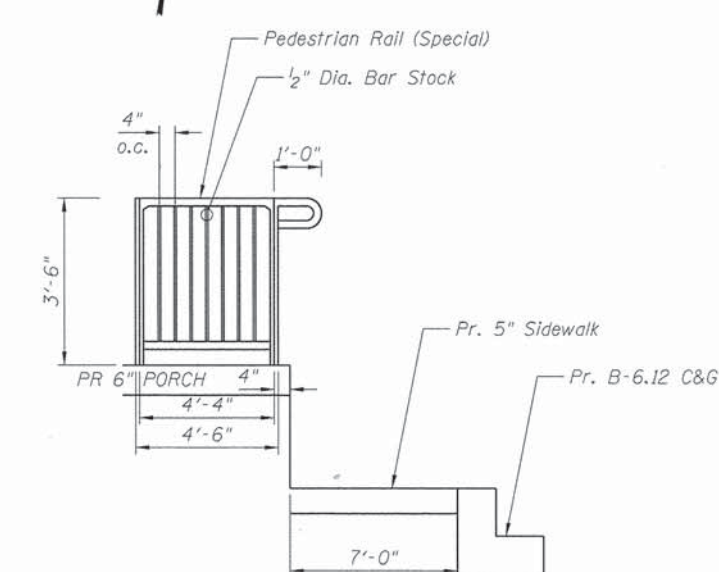
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
168	05-00314-03-WR	MCHENRY	120	101
CONTRACT NO. 63870				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



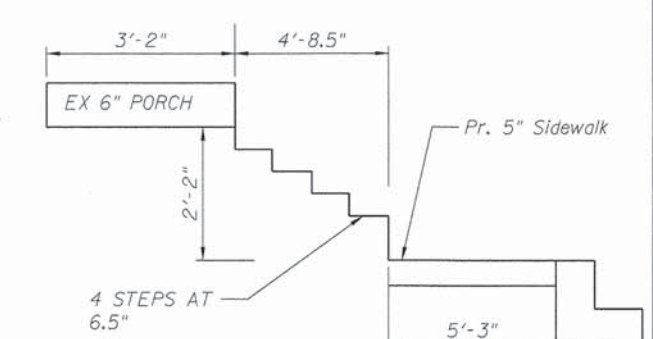
**SECTION A-A**  
STA 172+60.00 TO STA 173+21.50



**SECTION B-B**



**SECTION B-B**  
@ STA 173+21.50



**SECTION C-C**  
@ STA 174+16

COMPANY NAME: HRGreen  
 PROJECT CONTACT: HRGreen.com  
 CLIENT: Illinois Professional Design Firm  
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 FILE NAME: 080622-001-22.dgn  
 PLOT DRIVER: pdfLdt  
 PEN TABLE: standard-trans.tbl



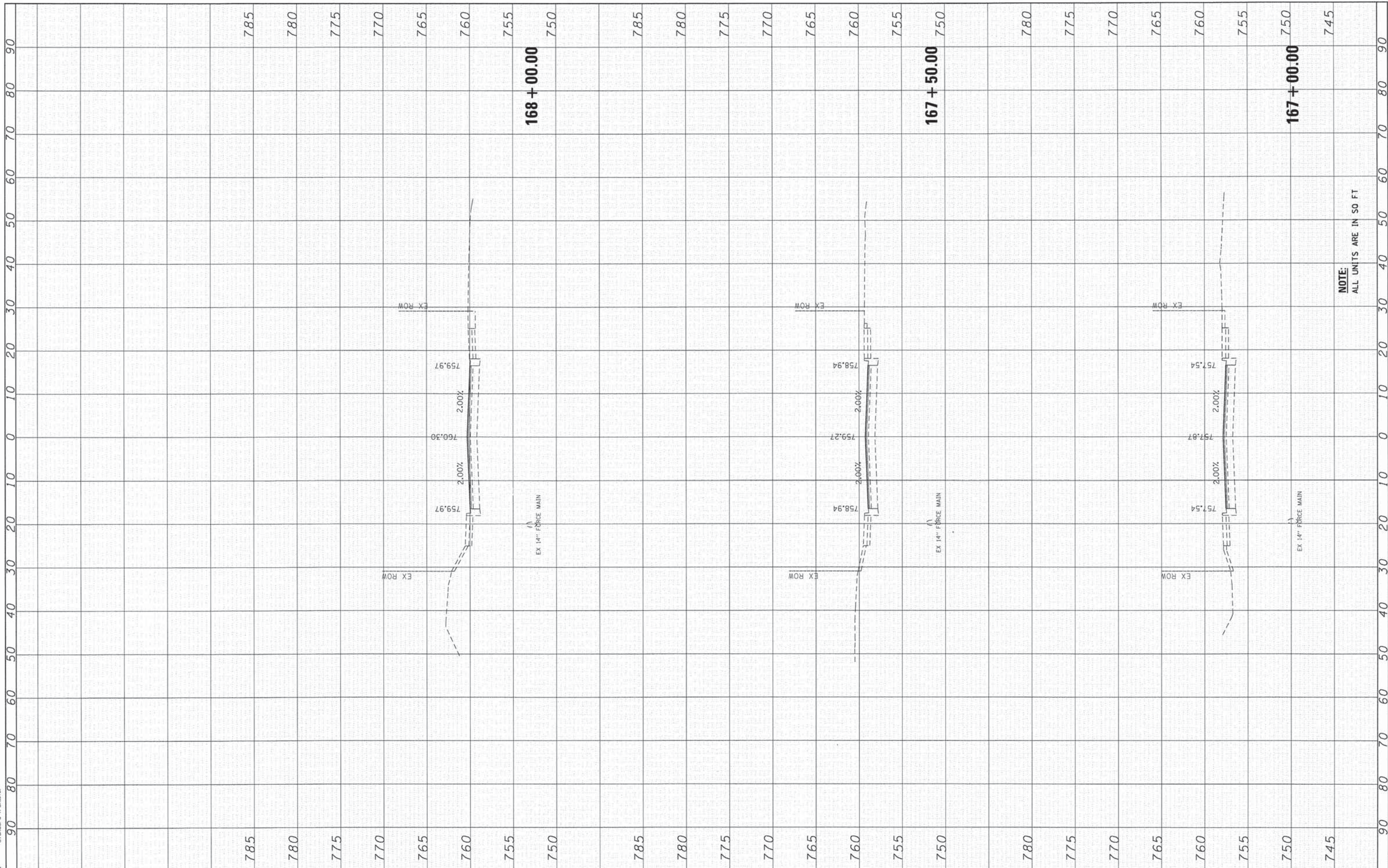
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PLOT DATE = 10/24/2013	DATE = 10/24/13	REVISED -

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

**PORCH & CONCRETE STEPS DETAIL**  
 SCALE: SHEET NO. 18 OF 18 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
168	05-00314-03-WR	MCHENRY	120	102
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 63870	

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		NOTE BOOK		
		AREAS CHECKED		
		NO.		



**NOTE:**  
ALL UNITS ARE IN 50 FT

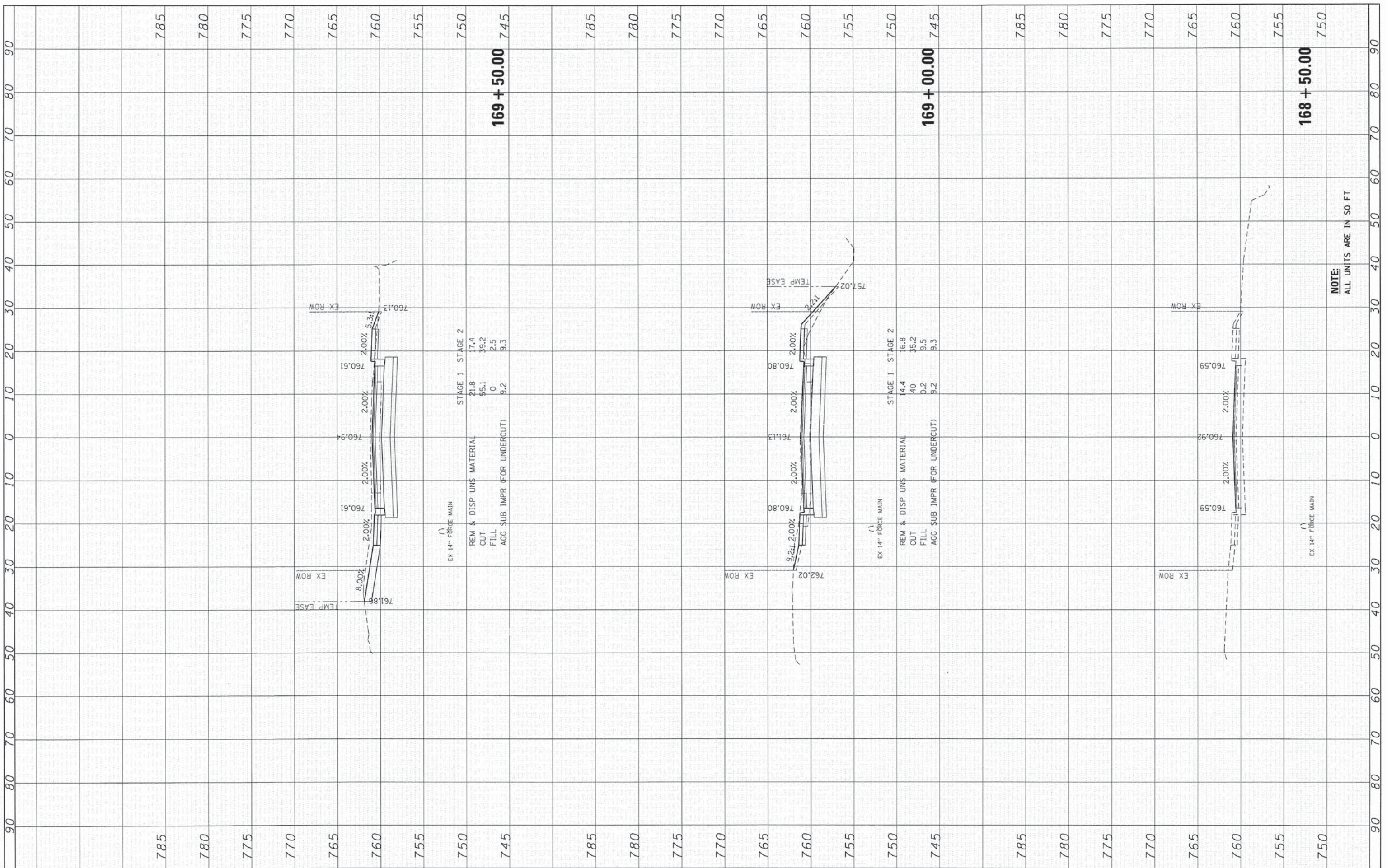
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		DRAWN -	REVISED -
		RCB	-
		CHECKED -	REVISED -
		TH	-
		DATE -	REVISED -
		10/24/13	-

<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>		<b>CROSS SECTIONS</b> <b>JOHNSBURG ROAD</b>		F.A. RTE. 168	SECTION 05-00314-03-WR	COUNTY MCHENRY	TOTAL SHEETS 120	SHEET NO. 103
SCALE: 1"=10' SHEET 1 OF 13 SHEETS		STA. 167+00.00 TO STA.168+00.00		CONTRACT NO. 63870		ILLINOIS FED. AID PROJECT		

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

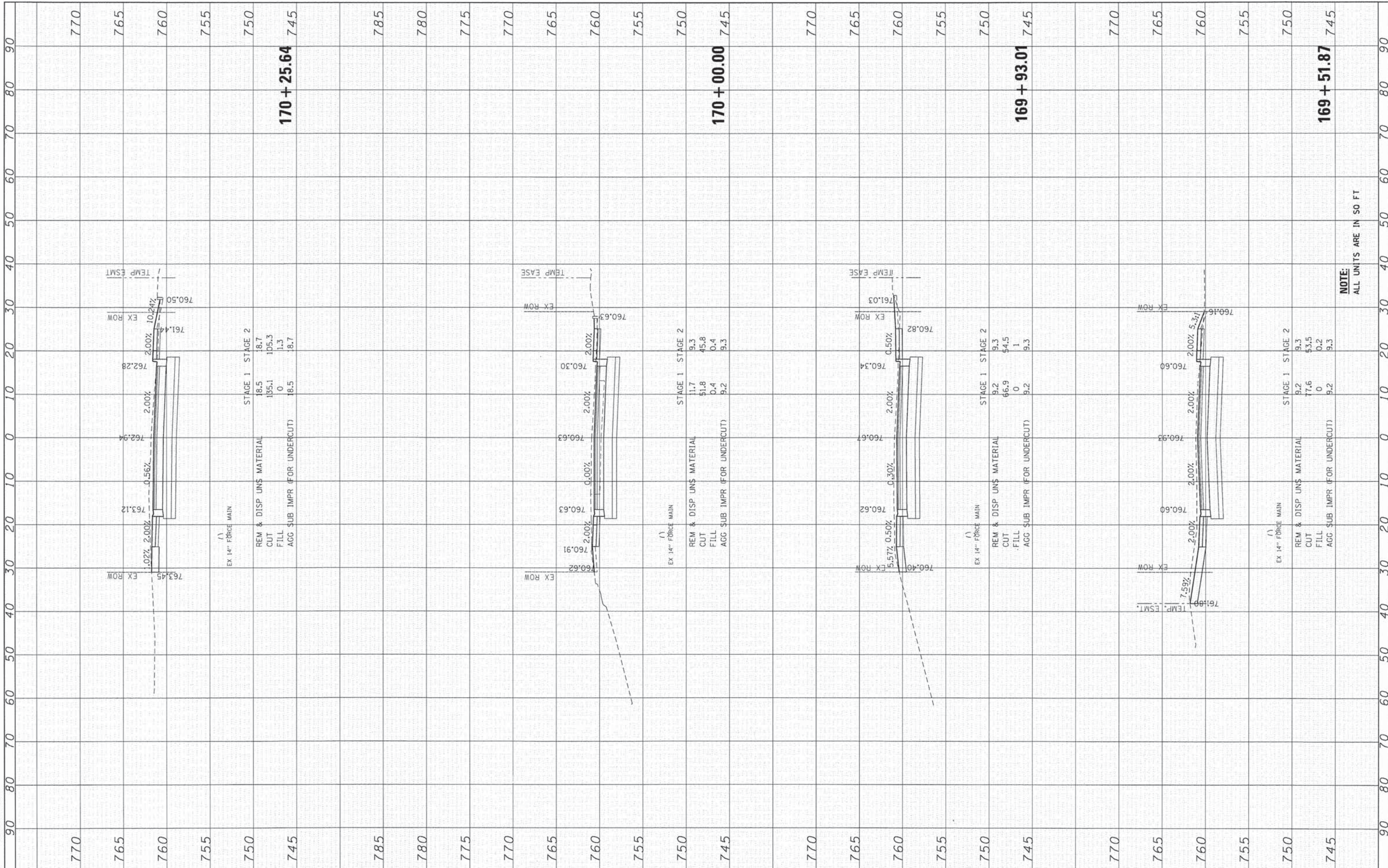
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SURVEYED	BY
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

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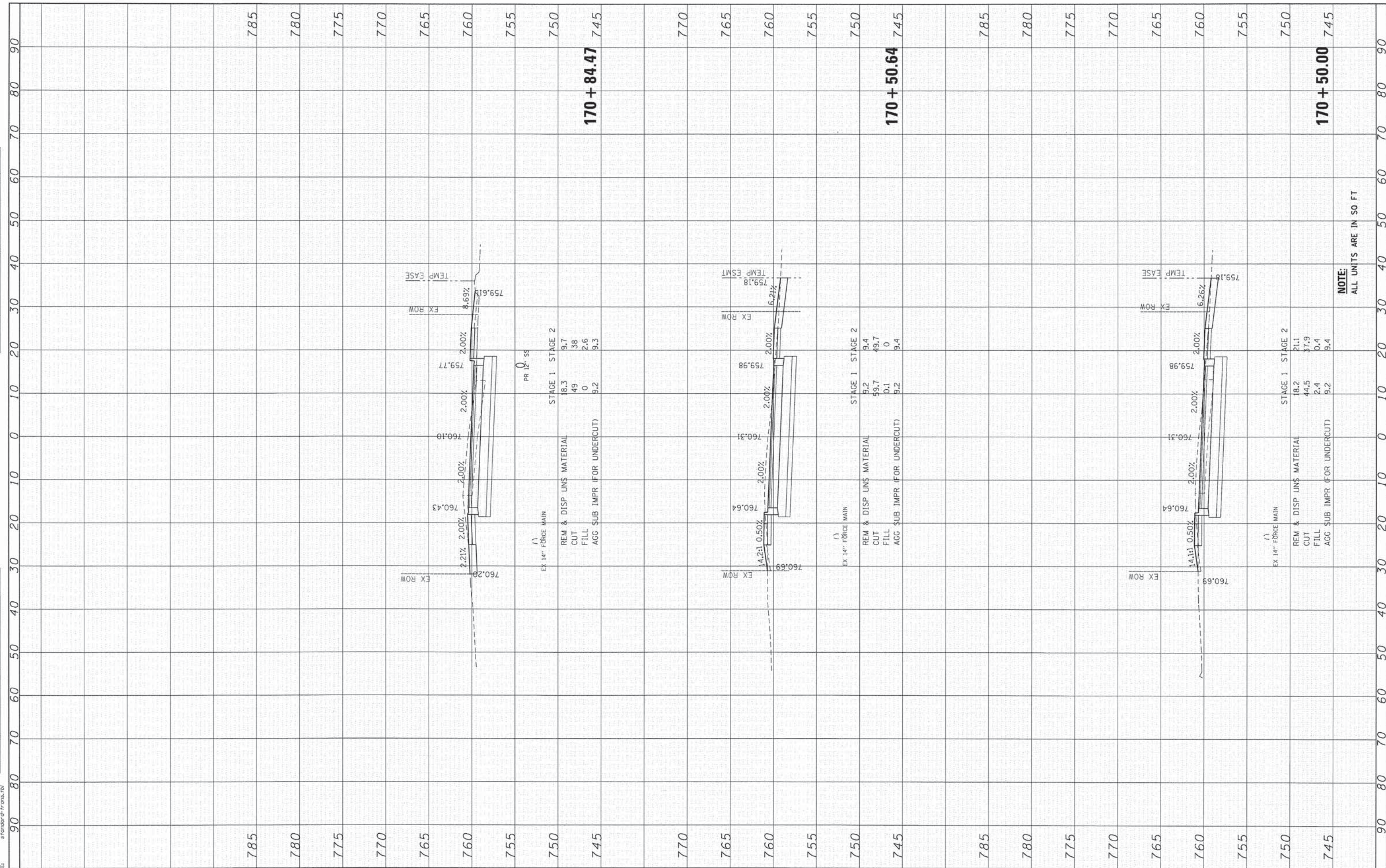


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PLOT DATE = 10/24/2013		DATE - 10/24/13	REVISED -									
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											ILLINOIS FED. AID PROJECT	

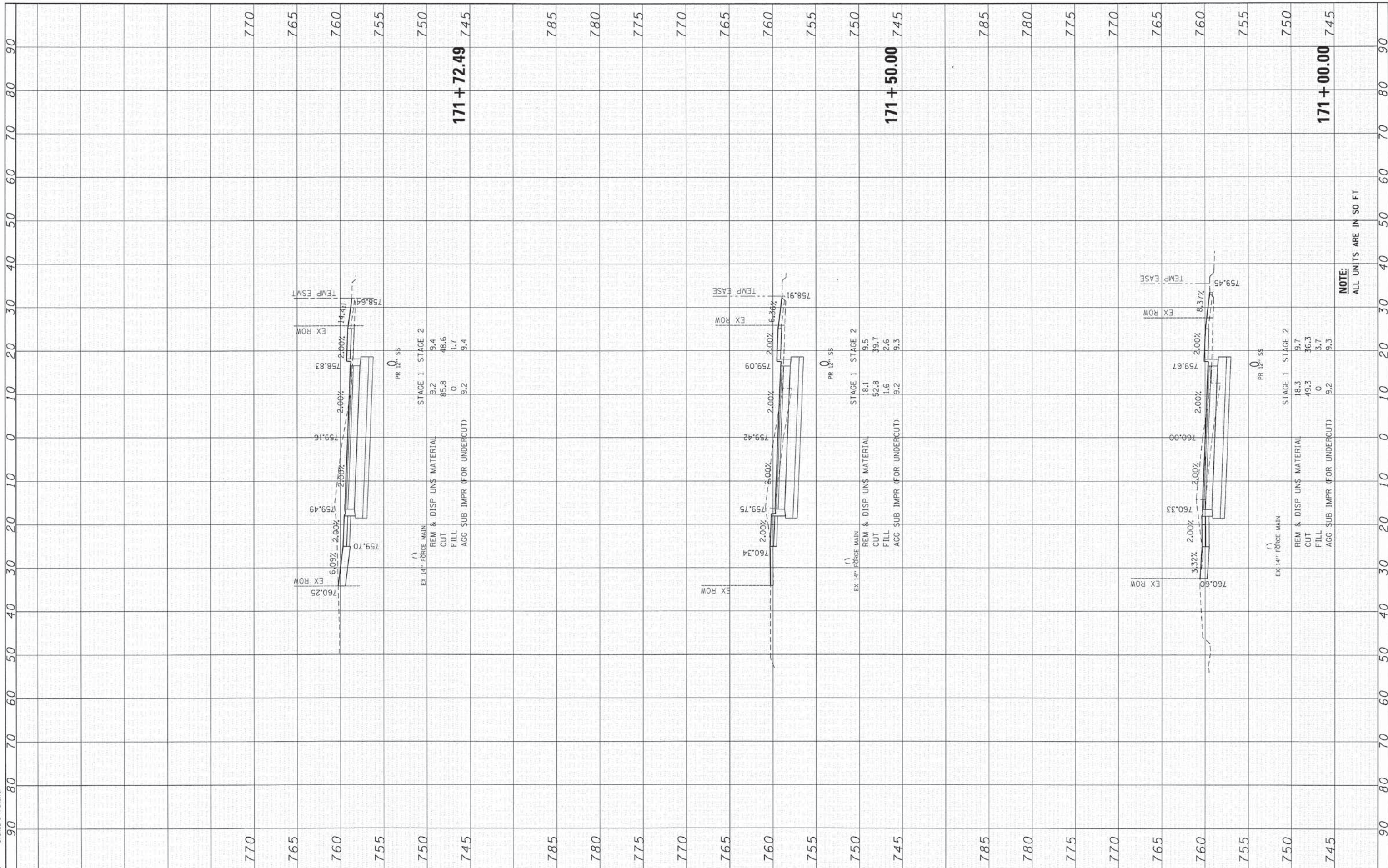
NOTE:  
ALL UNITS ARE IN 50 FT



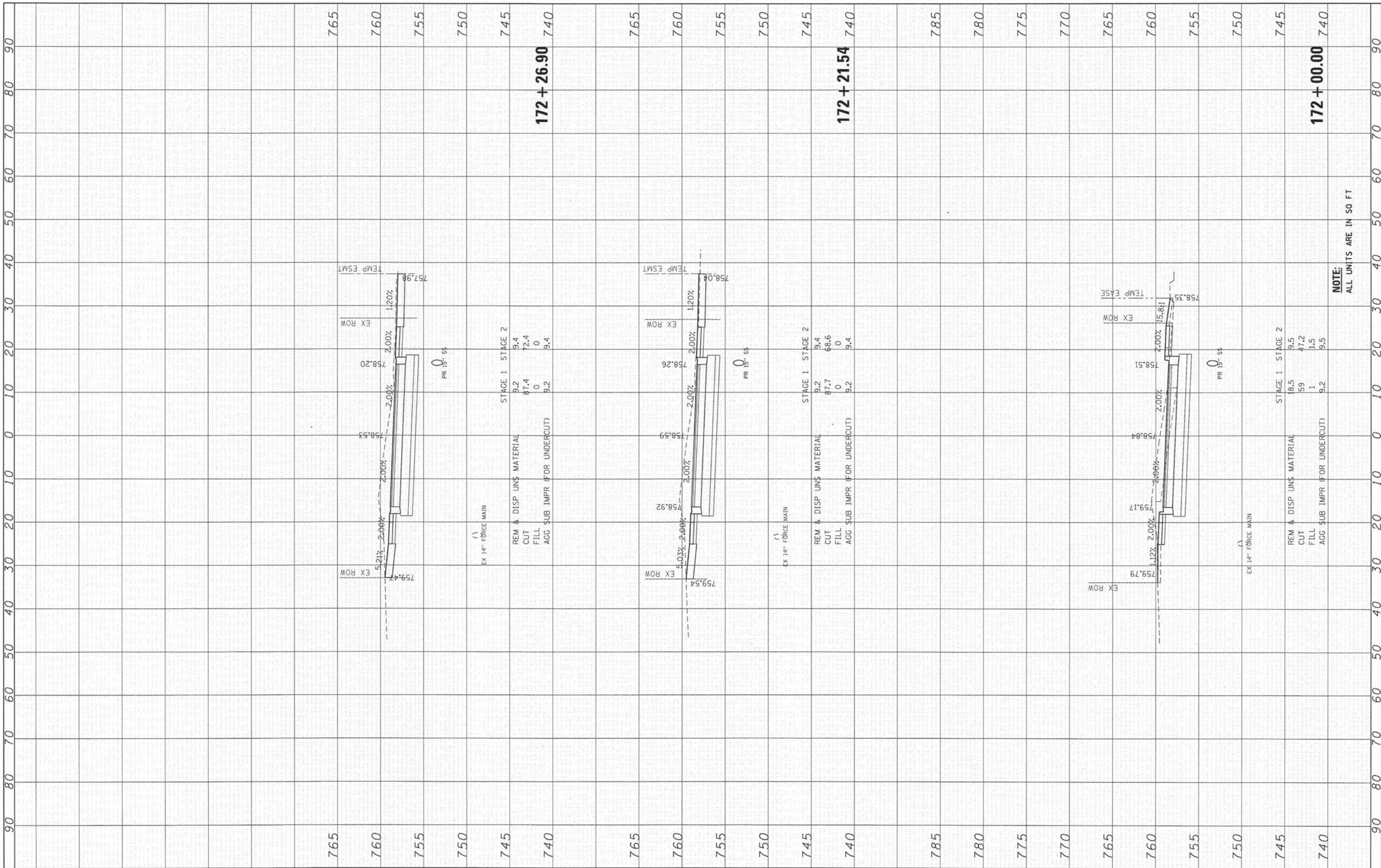
NOTE:  
ALL UNITS ARE IN 50 FT



**NOTE:**  
ALL UNITS ARE IN 50 FT



NOTE:  
ALL UNITS ARE IN 50 FT



NOTE:  
ALL UNITS ARE IN 50 FT



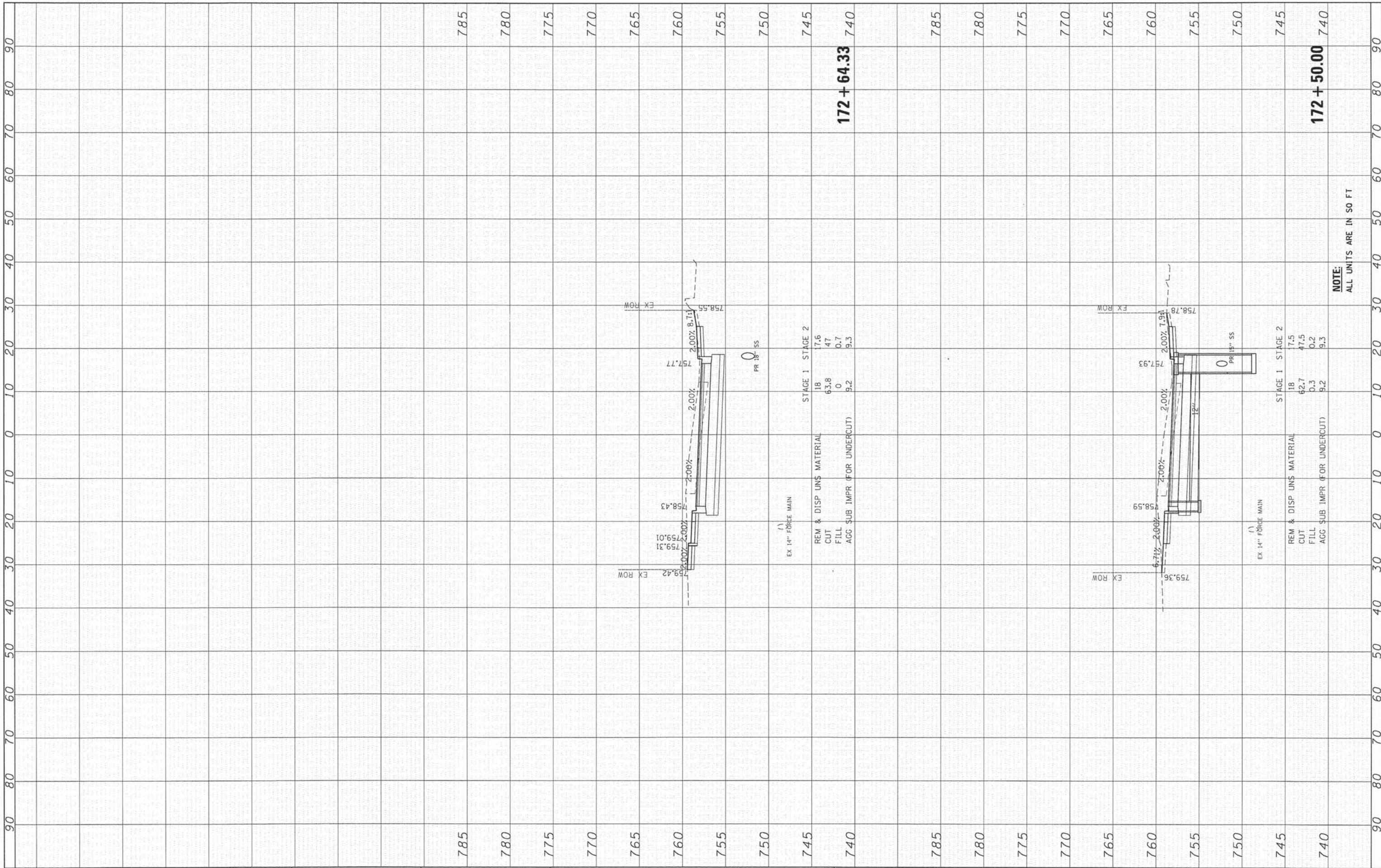
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ORIGINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

FINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	



NOTE:  
ALL UNITS ARE IN SO FT

FILE NAME =	USER NAME = gfourtr	DESIGNED - JRM	REVISED -
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PLOT DATE = 10/24/13		DATE - 10/24/13	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
JOHNSBURG ROAD

SCALE: 1"=10' SHEET 7 OF 13 SHEETS STA. 172+50.00 TO STA. 172+64.33

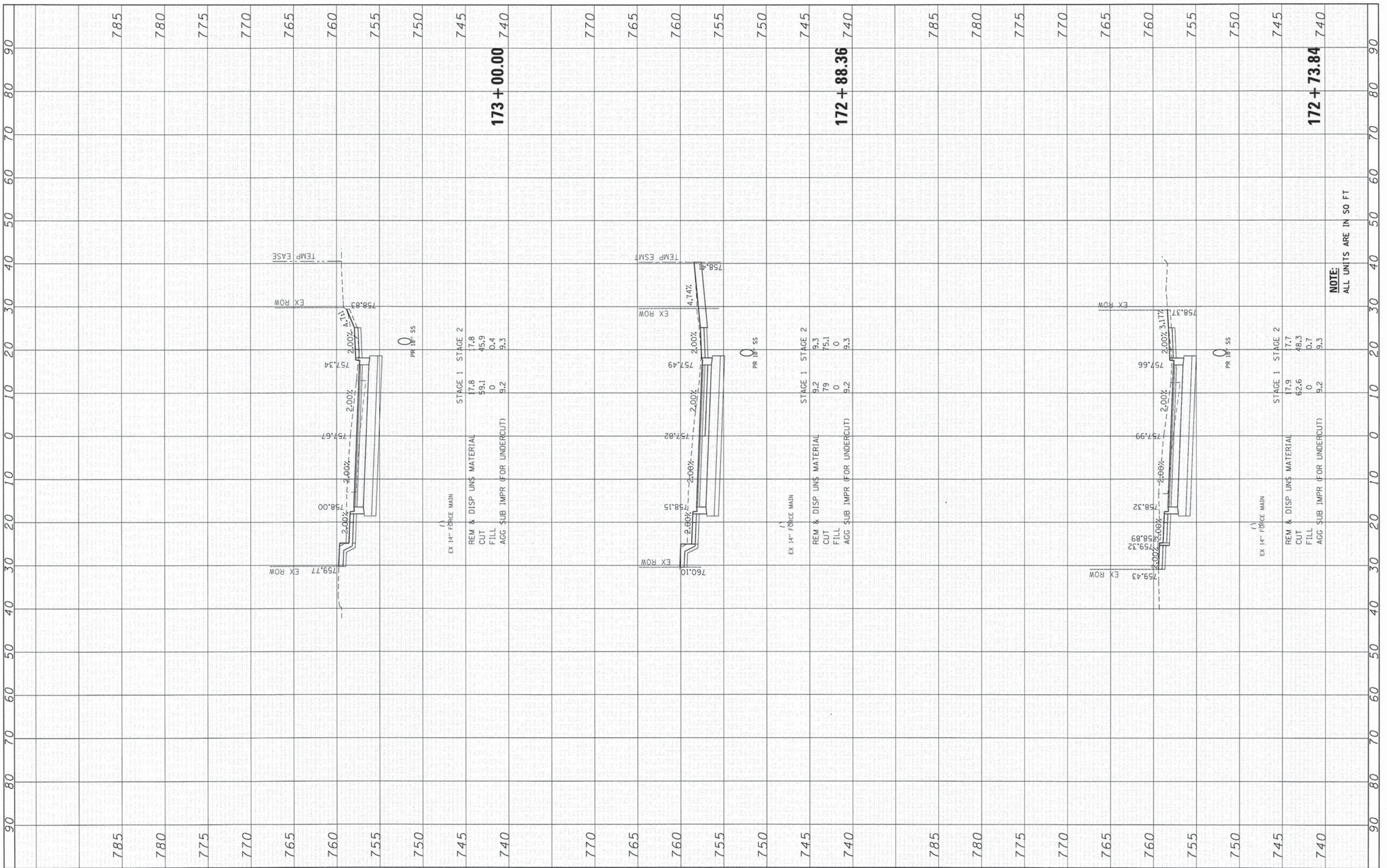
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
168	05-00314-03-WR	MCHENRY	120	109
CONTRACT NO. 63870				

ILLINOIS FED. AID PROJECT

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

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

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DESIGNED - JRM	REVISED -
DRAWN - RCB	REVISED -
CHECKED - TH	REVISED -
DATE - 10/24/13	REVISED -

REMOVED & DISPOSED MATERIAL	7.8
CUT	93.1
FILL	0
AGG SUB IMPR (FOR UNDERCUT)	9.2
STAGE 1	7.8
STAGE 2	45.9
PR 18\"/>	

REMOVED & DISPOSED MATERIAL	9.2
CUT	79
FILL	0
AGG SUB IMPR (FOR UNDERCUT)	9.2
STAGE 1	9.2
STAGE 2	75.1
PR 18\"/>	

REMOVED & DISPOSED MATERIAL	7.7
CUT	62.6
FILL	0
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STAGE 2	48.3
PR 18\"/>	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

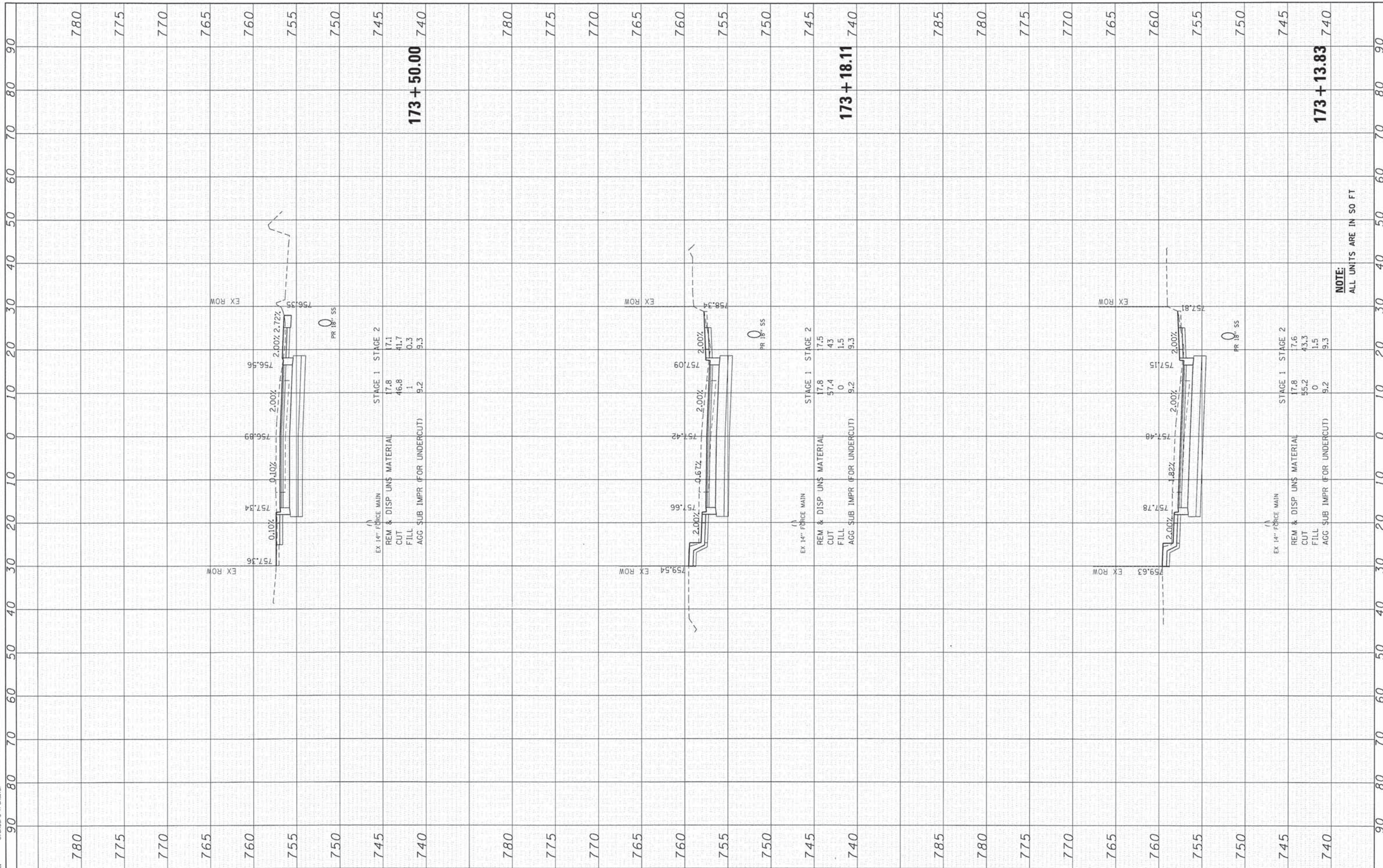
CROSS SECTIONS  
JOHNSBURG ROAD

SCALE: 1"=10' SHEET 8 OF 13 SHEETS STA. 172+73.84 TO STA.173+00.00

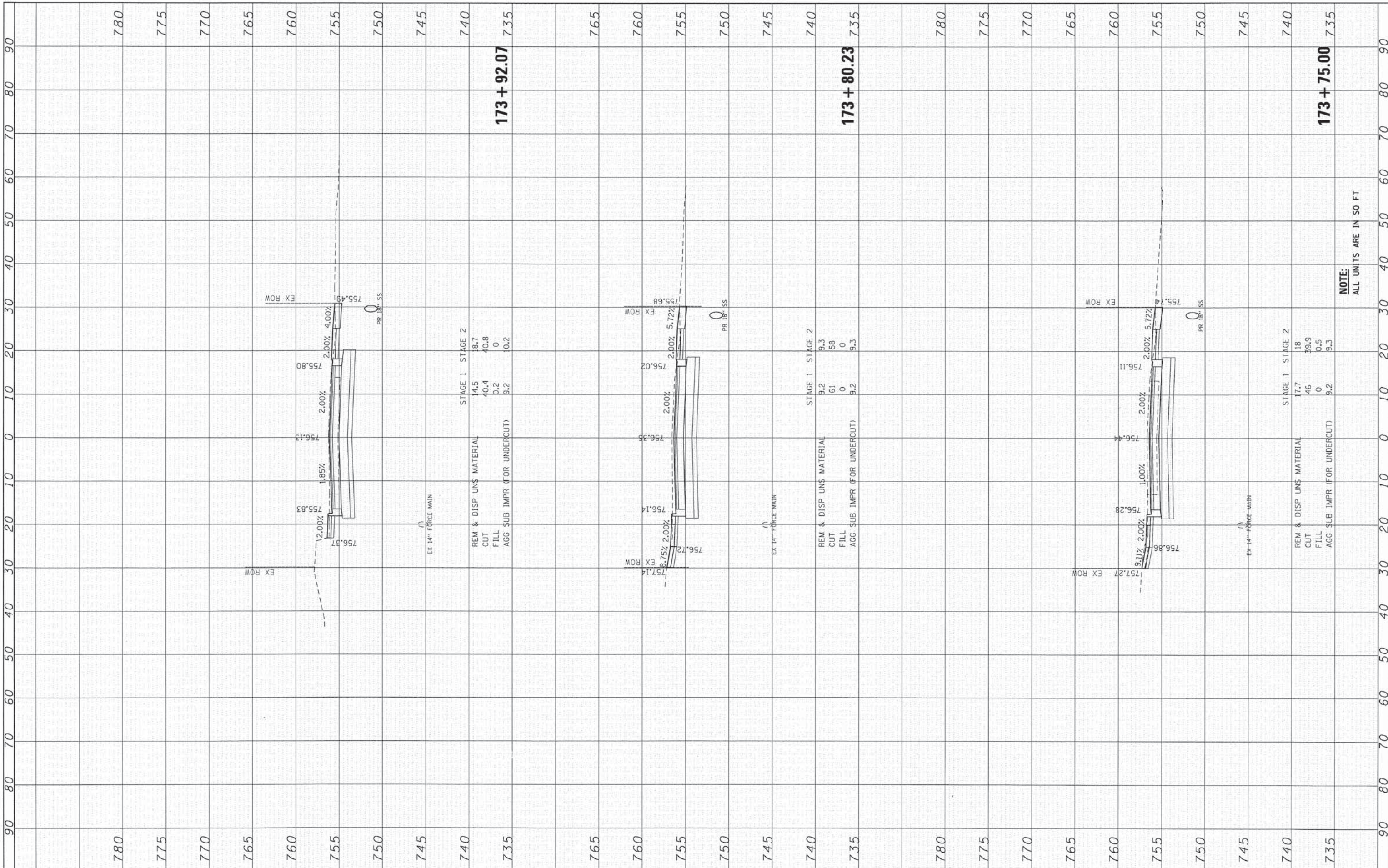
F.A.R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
168	05-00314-03-WR	MCHENRY	120	110
CONTRACT NO. 63870				
ILLINOIS FED. AID PROJECT				

NOTE:  
ALL UNITS ARE IN 50 FT

COMPANY NAME:	PROJECT CONTACT:	ORIGINAL SURVEY	BY	DATE
05-00314-03-WR	10/24/2013 12:20:01 PM	SURVEYED		
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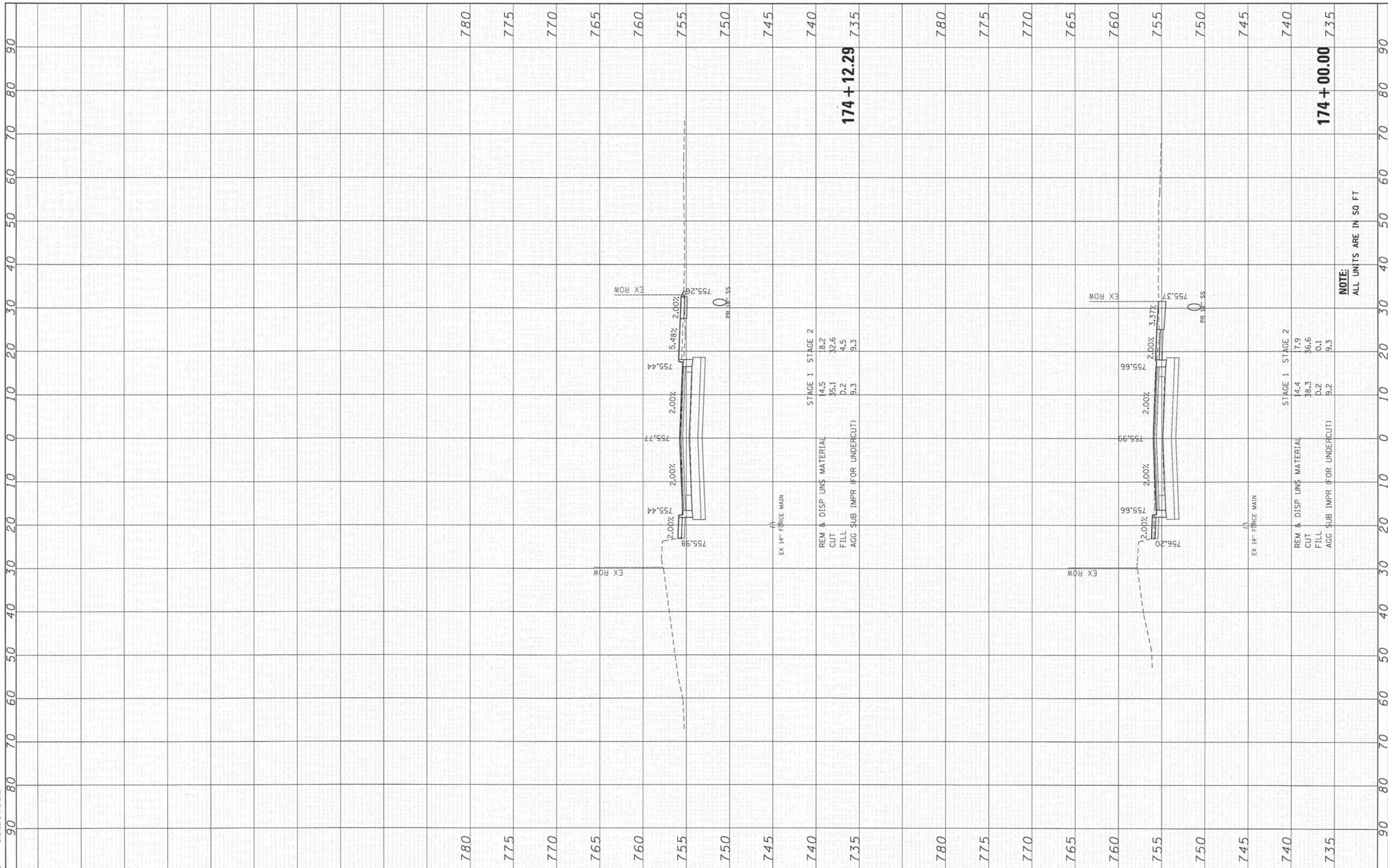


**NOTE:**  
ALL UNITS ARE IN SO FT



NOTE:  
ALL UNITS ARE IN 50 FT

COMPANY NAME:	PROJECT CONTACT:	ORIGINAL SURVEY	BY	DATE
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		AREAS CHECKED		



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PLOT DATE = 10/24/2013		DATE - 10/24/13	REVISED -

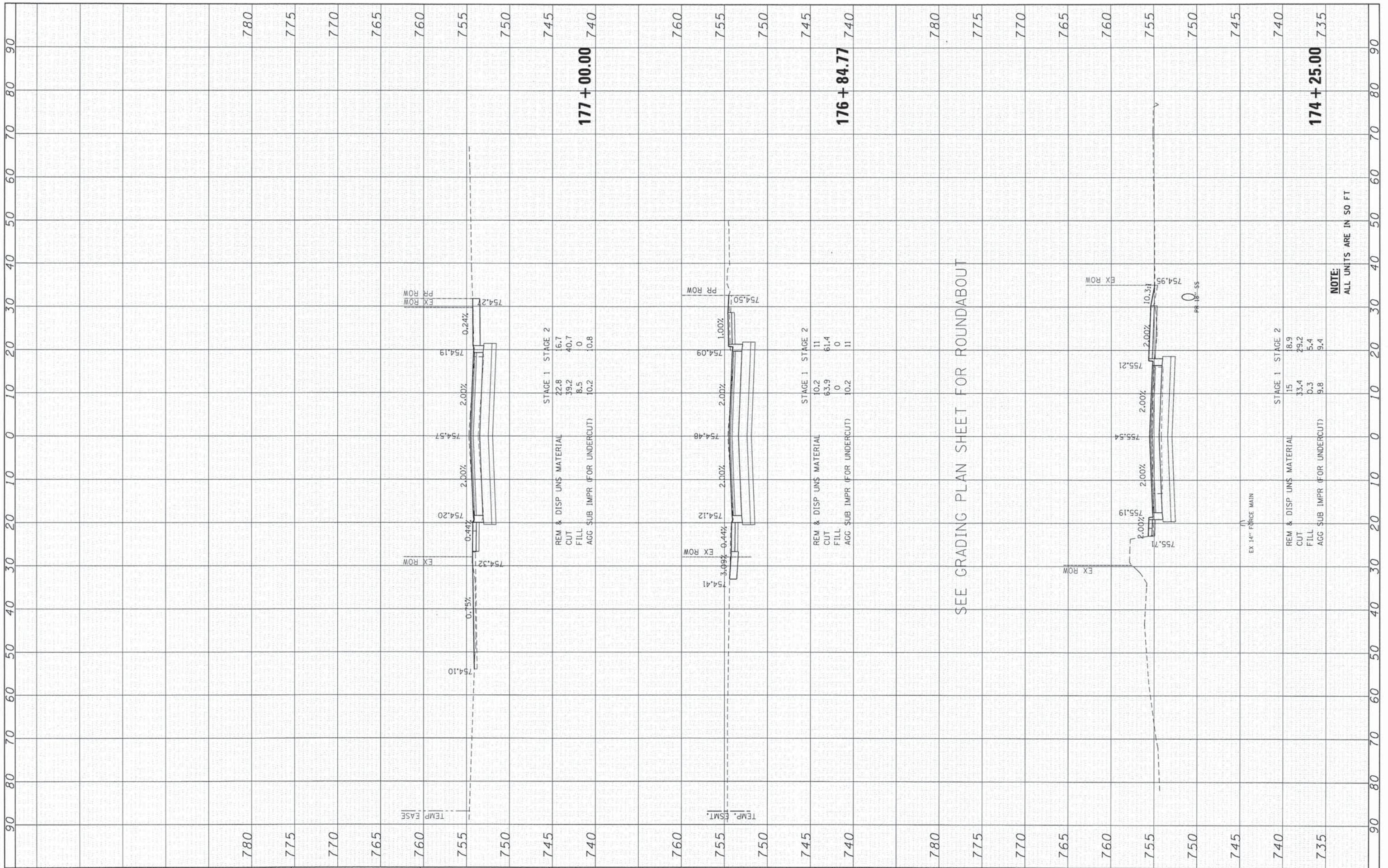
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
JOHNSBURG ROAD**

SCALE: 1"=10' SHEET 11 OF 13 SHEETS STA. 174+00.00 TO STA. 174+12.29

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
168	05-00314-03-WR	MCHENRY	120	113
CONTRACT NO. 63870			ILLINOIS FED. AID PROJECT	

**NOTE:**  
ALL UNITS ARE IN 50 FT



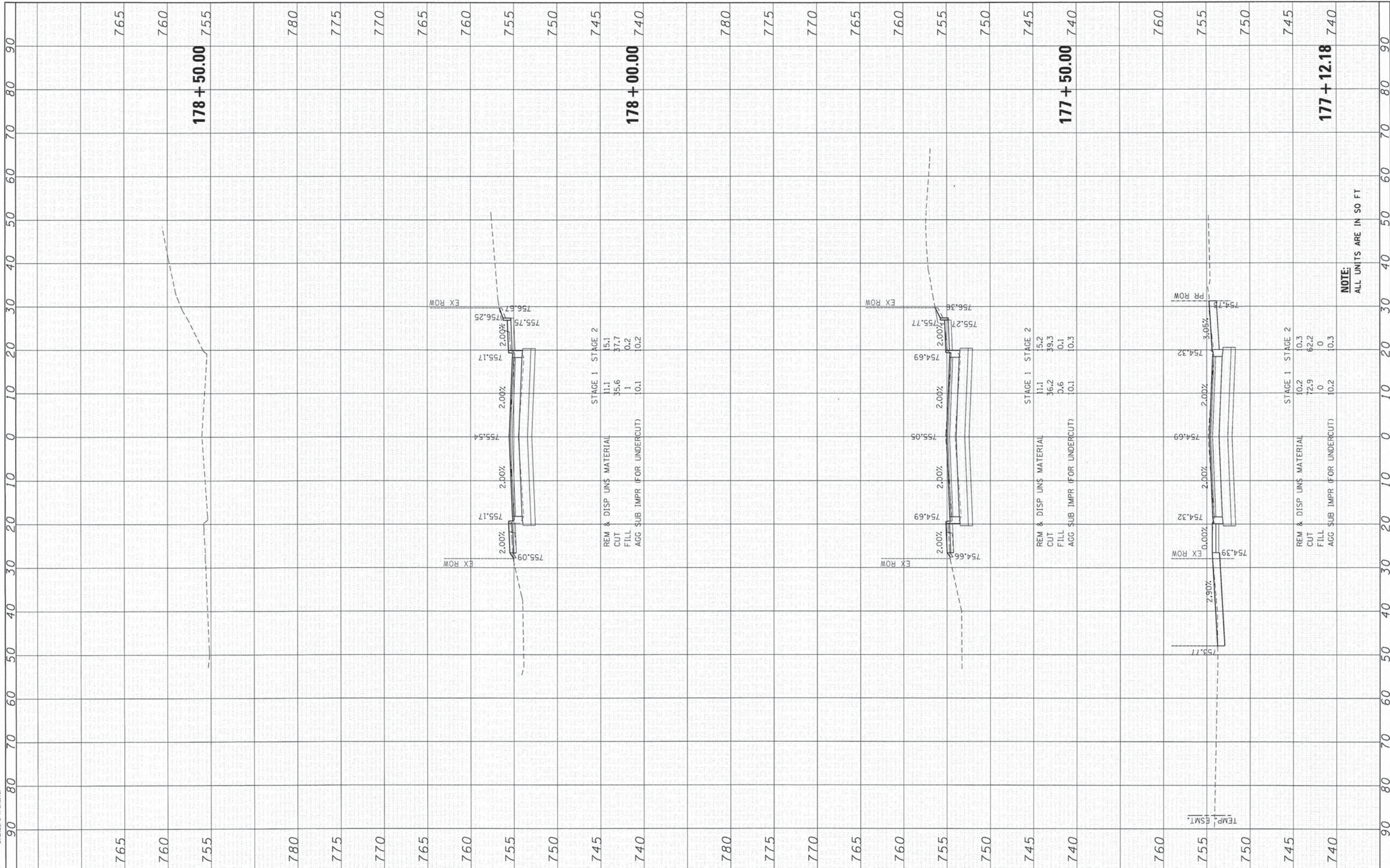
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PLOT DATE = 10/24/13		DATE - 10/24/13	REVISED -

NOTE:  
ALL UNITS ARE IN SO FT

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

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

PROJECT CONTACT:  
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 FILE NAME: 080622-PRXSheets.dgn  
 PLOT DRIVER: pdfplot  
 PEN TABLE: standard-trans.tbl



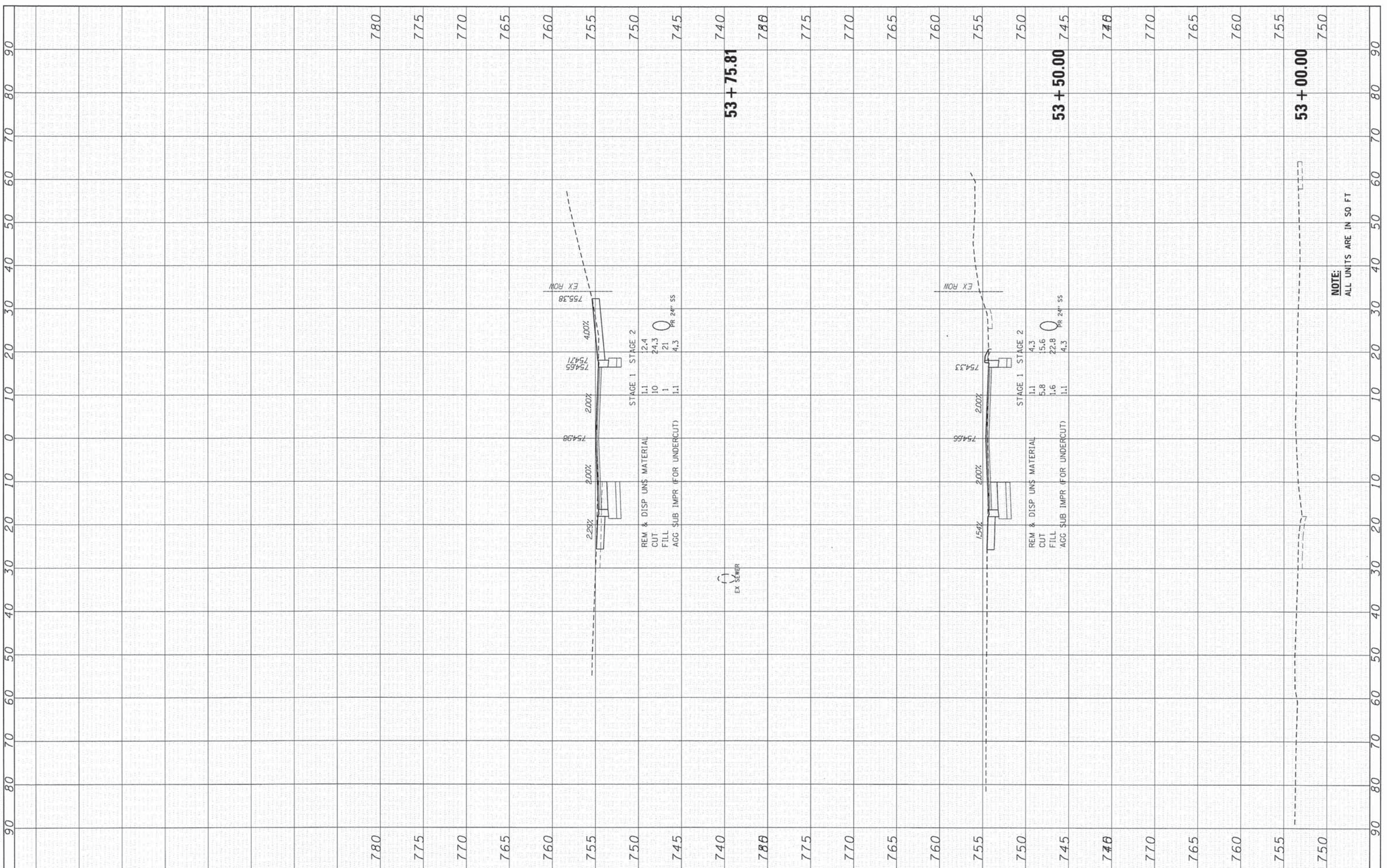
NOTE:  
ALL UNITS ARE IN SO FT

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\\hrgm\hns\data\080622.02\Cad\Trans\Sheets\080622-PRXSheets.dgn		DRAWN - RCB	REVISED -					168	05-00314-03-WR	MCHENRY	120	115
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PLOT DATE = 10/24/2013		DATE - 10/24/13	REVISED -					[ILLINOIS] FED. AID PROJECT				
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FINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	
NOTE BOOK	
NO.	

ORIGINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	
NOTE BOOK	
NO.	

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 DATE PLOTTED: 10/24/2013  
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 PEN TABLE: sfstandar-d-trans.tbl



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		CHECKED - TH	REVISED -
#MODELNAME#		DATE - 10/24/2013	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
CHAPEL HILL ROAD**

SCALE: 1"=10' SHEET 1 OF 4 SHEETS STA. 53+00.00 TO STA. 53+75.81

F.A. RTE. 168	SECTION 05-00314-03-WR	COUNTY MCHENRY	TOTAL SHEETS 120	SHEET NO. 116
CONTRACT NO. 63870				(ILLINOIS) FED. AID PROJECT

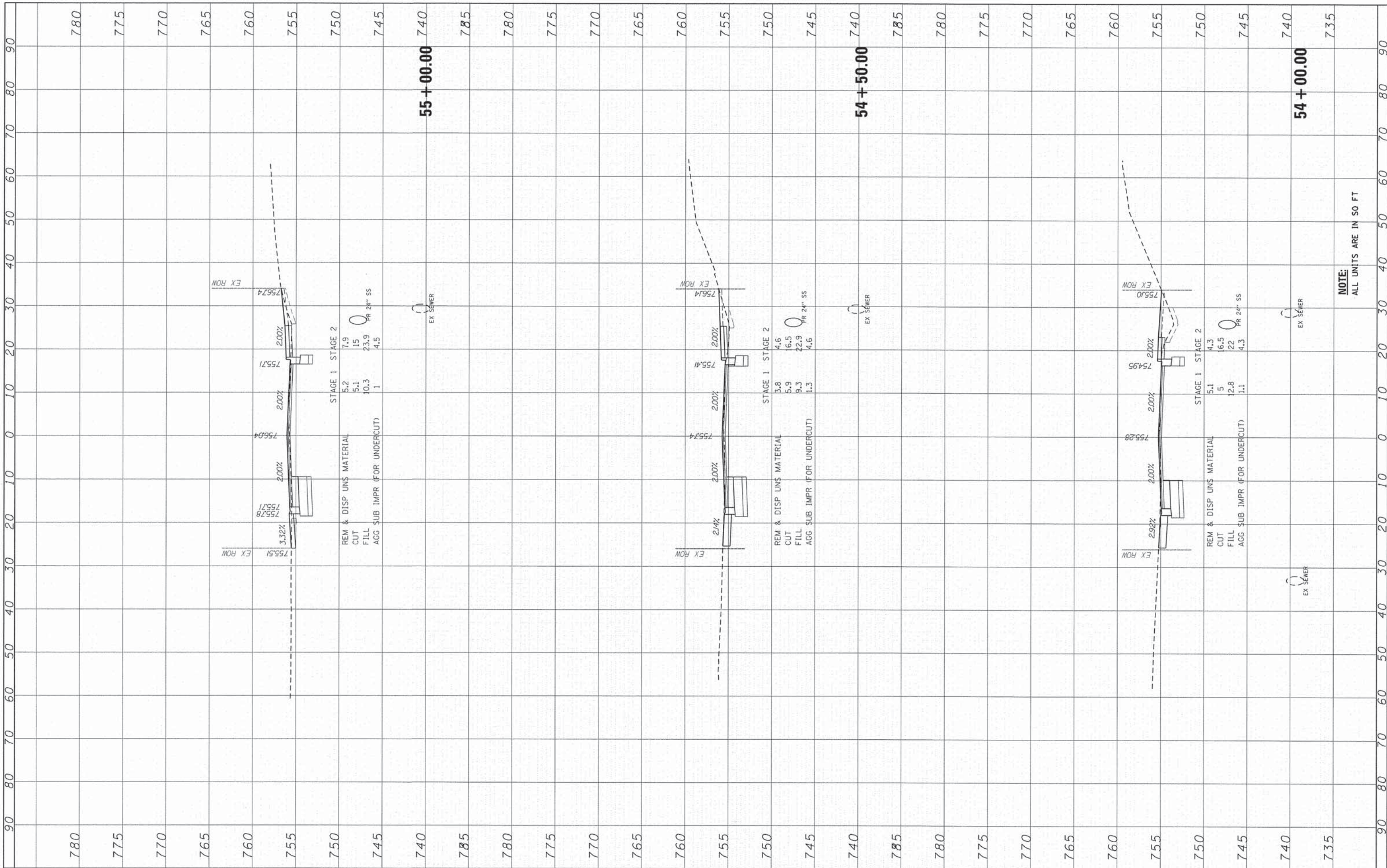
060622-XSChapelHillsheets.dgn



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

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

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 PROJECT CONTACT:   
 CLIENT: 11/4/2013 8:20:21 AM   
 DATE PLOTTED: 090622-XSChapelHillSheets.dgn   
 FILE NAME:   
 PLOT DRIVER: pdf.plt   
 PEN TABLE: standard-trans.tbl



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DESIGNED - JRM	REVISD -
DRAWN - RCB	REVISD -
CHECKED - TH	REVISD -
DATE - 11/4/13	REVISD -

DESIGNED - JRM	REVISD -
DRAWN - RCB	REVISD -
CHECKED - TH	REVISD -
DATE - 11/4/13	REVISD -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

SCALE: 1"=10'	SHEET 2 OF 4 SHEETS	STA. 54+00.00 TO STA. 55+00.00
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**CROSS SECTIONS  
CHAPEL HILL ROAD**

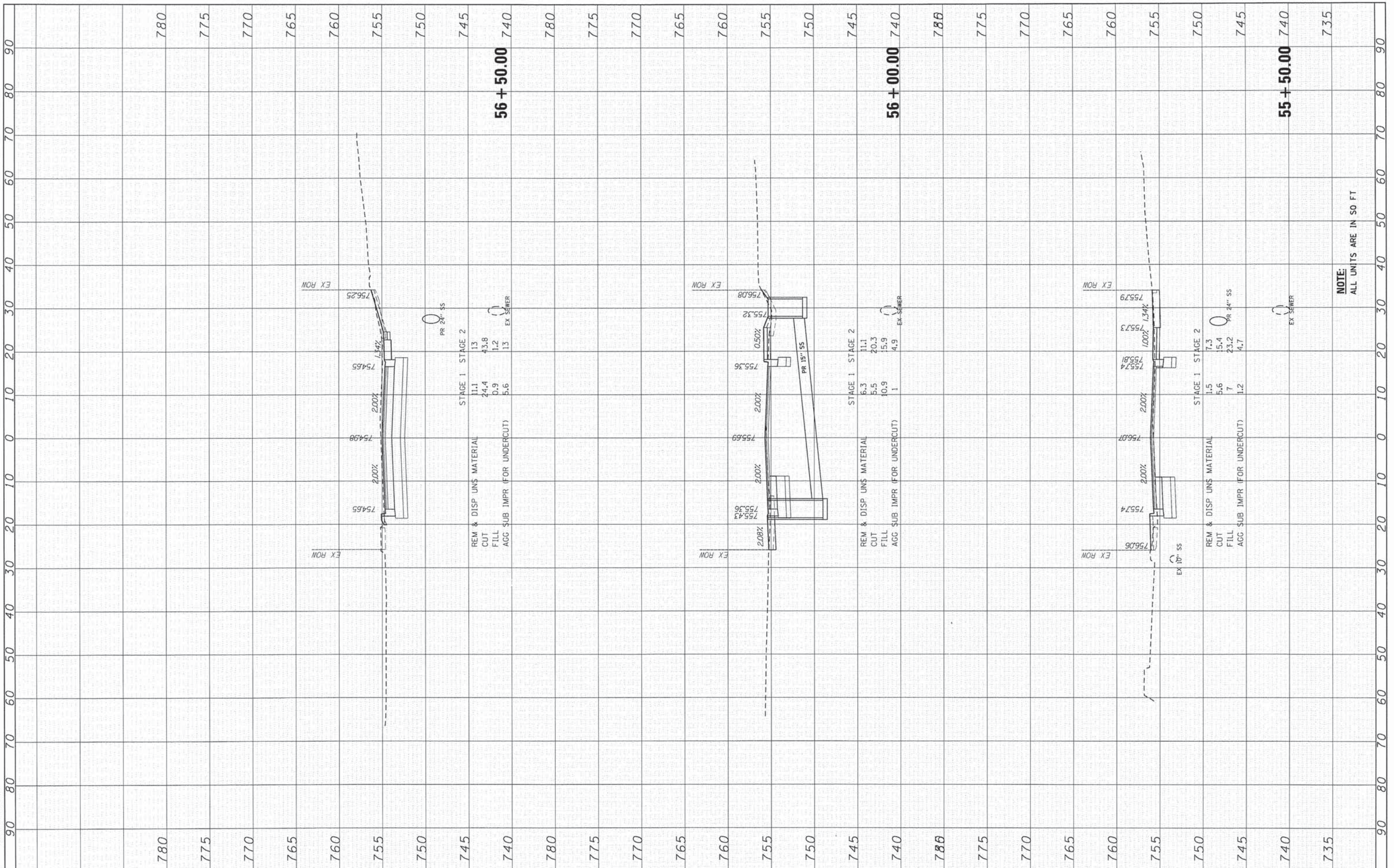
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
168	05-00314-03-WR	MCHENRY	120	117
CONTRACT NO. 63870			ILLINOIS FED. AID PROJECT	

**NOTE:**  
ALL UNITS ARE IN SO FT

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

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

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 CLIENT: 10/24/2013 12:45 PM   
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 PEN TABLE: standard-trans.tbl



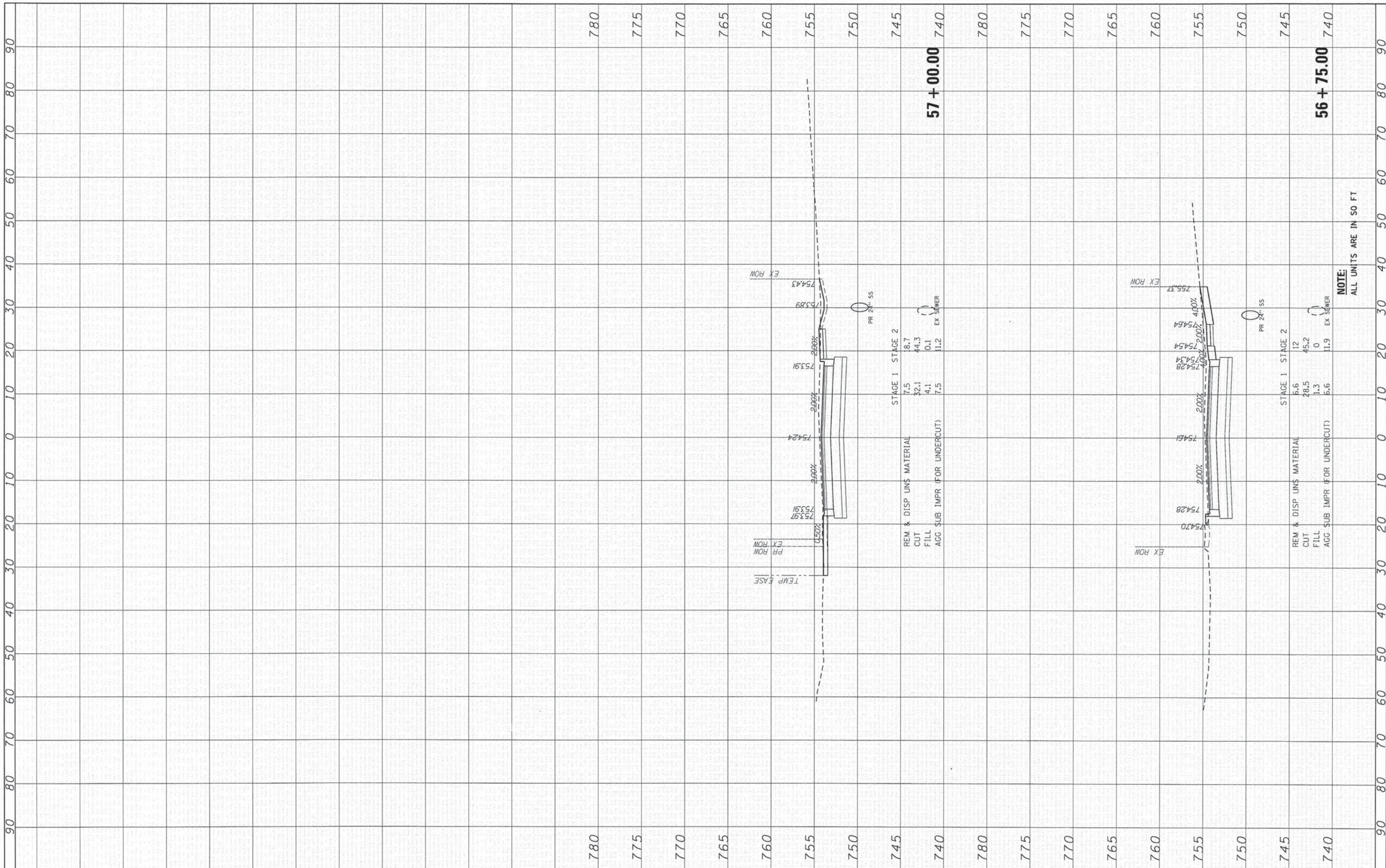
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DESIGNED - JRM	DRAWN - RCB	CHECKED - TH	REVISED -		SCALE: 1"=10'	SHEET 3 OF 4 SHEETS	STA. 55+50.00 TO STA. 56+50.00	CONTRACT NO. 63870				
DESIGNED - JRM	DRAWN - RCB	CHECKED - TH	REVISED -		ILLINOIS FED. AID PROJECT							
DESIGNED - JRM	DRAWN - RCB	CHECKED - TH	REVISED -									

NOTE: ALL UNITS ARE IN SO FT

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
DATE		
AREAS CHECKED		
NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
DATE		
AREAS CHECKED		
NO.		

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 PROJECT CONTACT:   
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 PLOT DRIVER: pdt4.plt   
 PEN TABLE: sf1andor-d-Trns.tbl



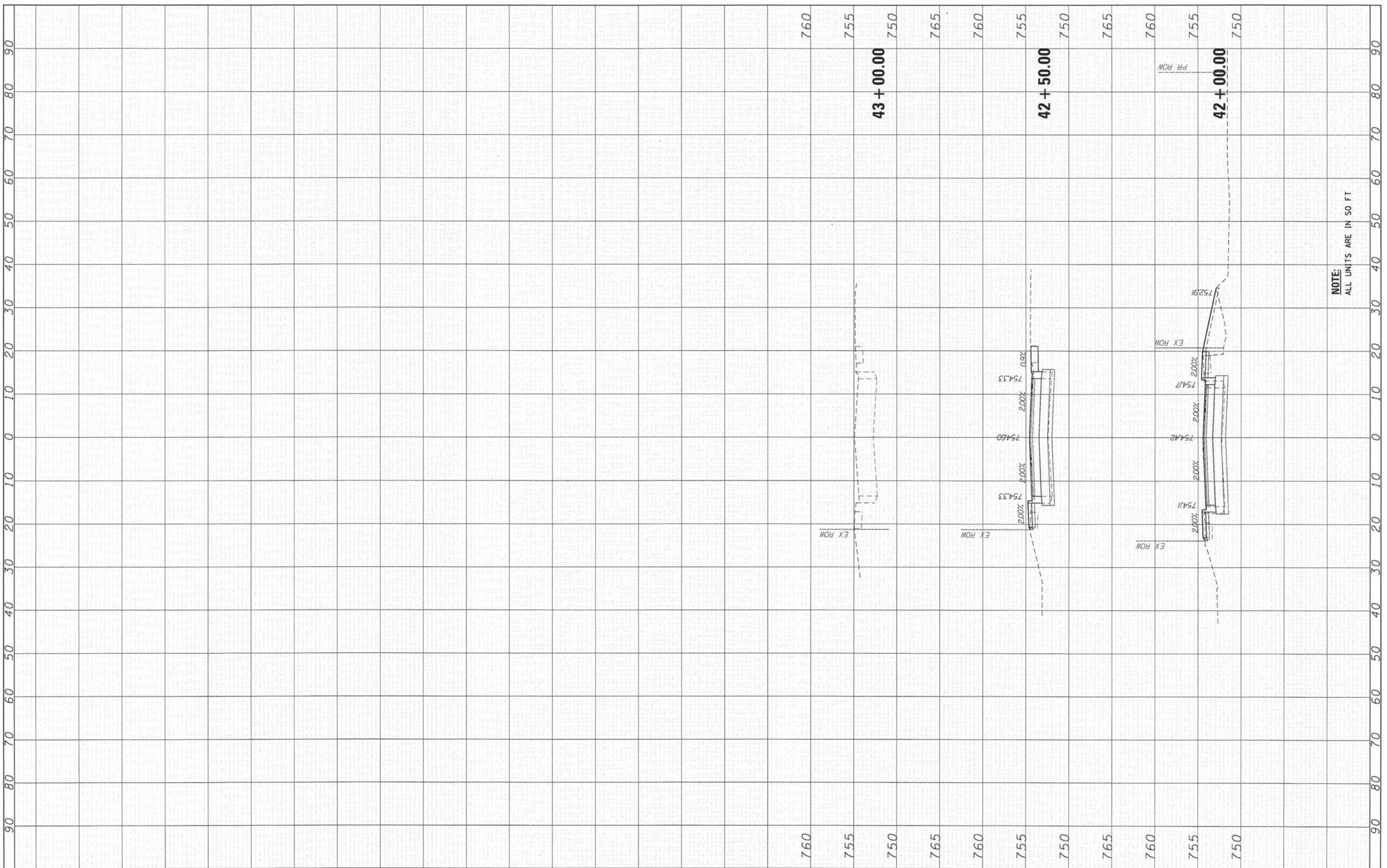
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	PLOT DATE = 10/24/2013	DATE - 10/24/13	REVISED -		ILLINOIS FED. AID PROJECT							

NOTE:  
ALL UNITS ARE IN SO FT

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
NO.		

COMPANY NAME:  
 PROJECT CONTACT:  
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 PLOT DRIVER: pdr.plt  
 PEN TABLE: standard-trans.tbl



NOTE:  
ALL UNITS ARE IN 50 FT

FILE NAME: \\hrg\hns\data\080622.02\Cad\Trans\Sheets\080622-X551-JohnsSheets.dgn	USER NAME: gfourti	DESIGNED: JRM	REVISED:
		DRAWN: RCB	REVISED:
		CHECKED: TH	REVISED:
		DATE: 10/24/13	REVISED:

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ST. JOHN'S AVENUE		168	05-00314-03-WR	MCHENRY	120	120
SCALE: 1"=10'	SHEET 1 OF 1 SHEETS	STA. 42+00.00 TO STA. 43+00.00		CONTRACT NO. 63870		

ILLINOIS FED. AID PROJECT