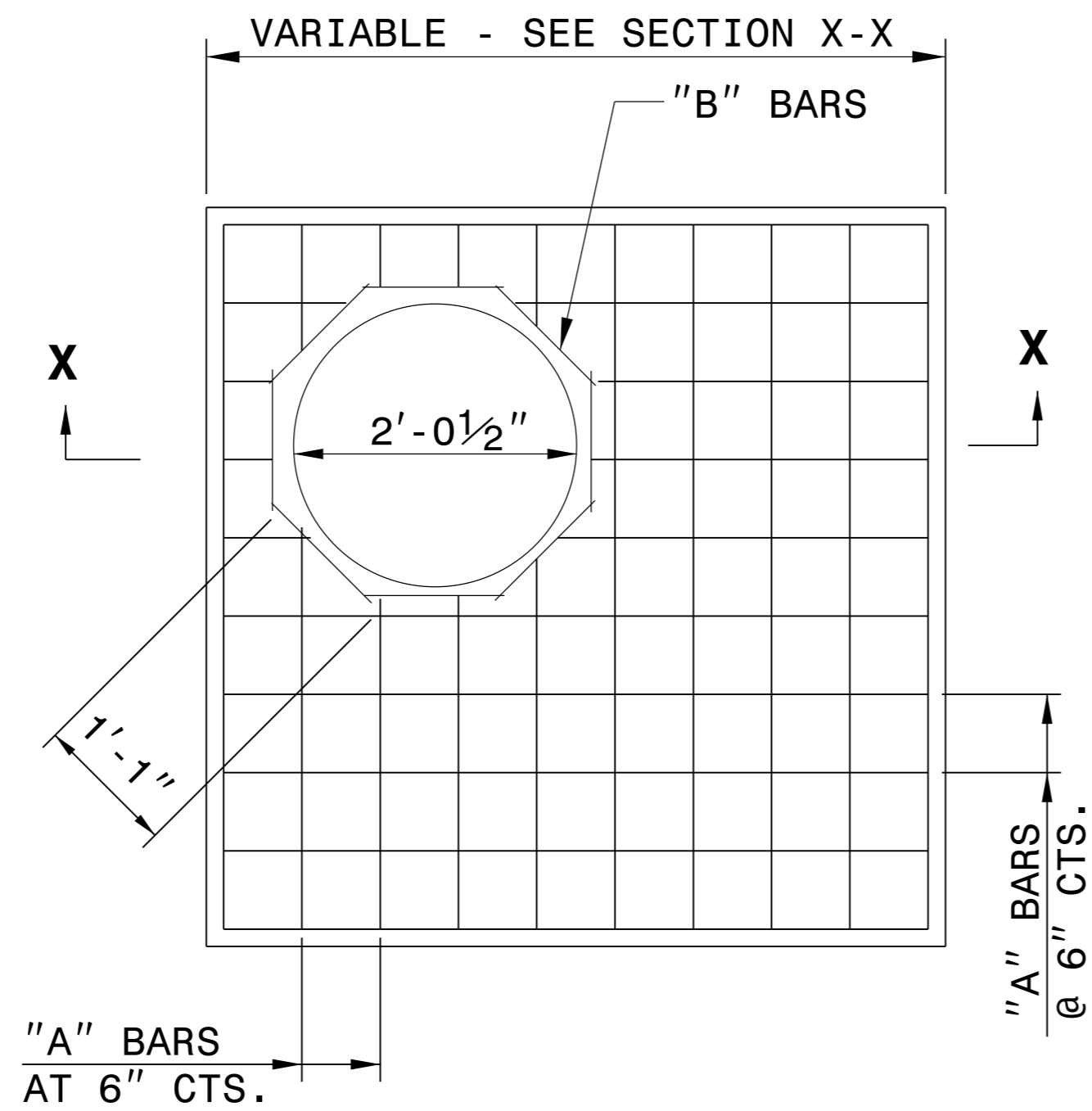
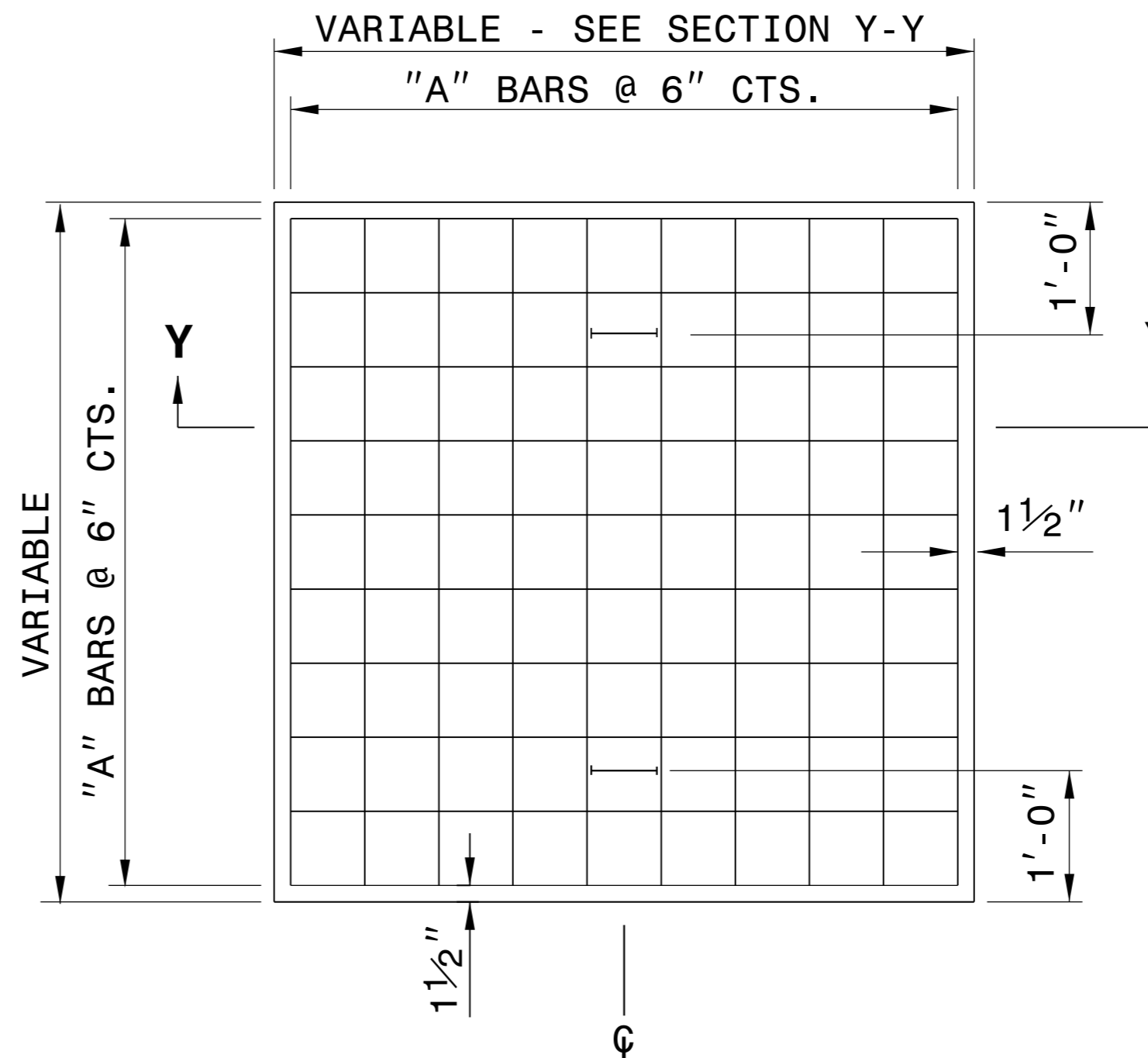


**PARTIAL SECTION**



**PLAN**



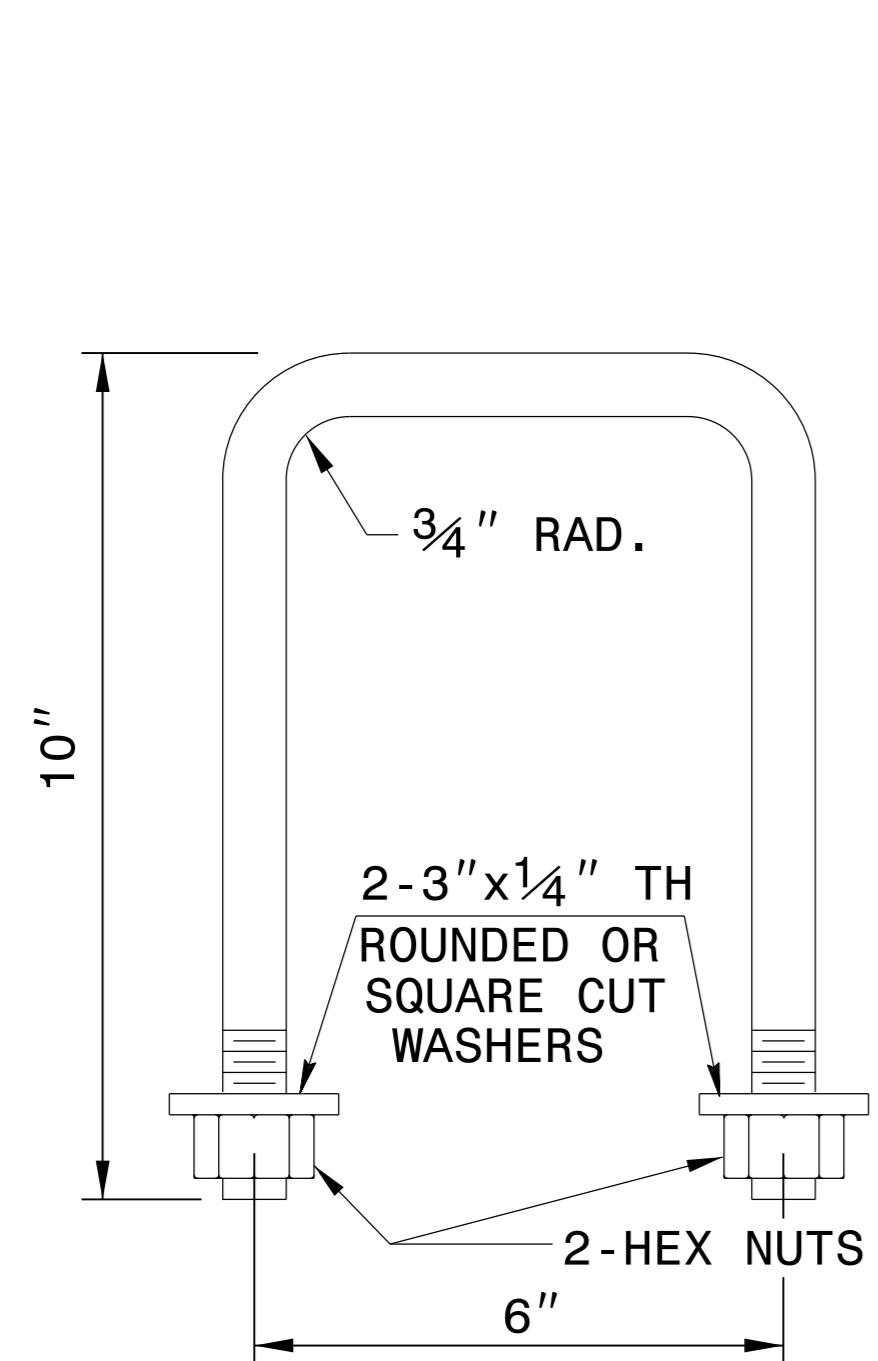
**PLAN**

**GENERAL NOTES:**

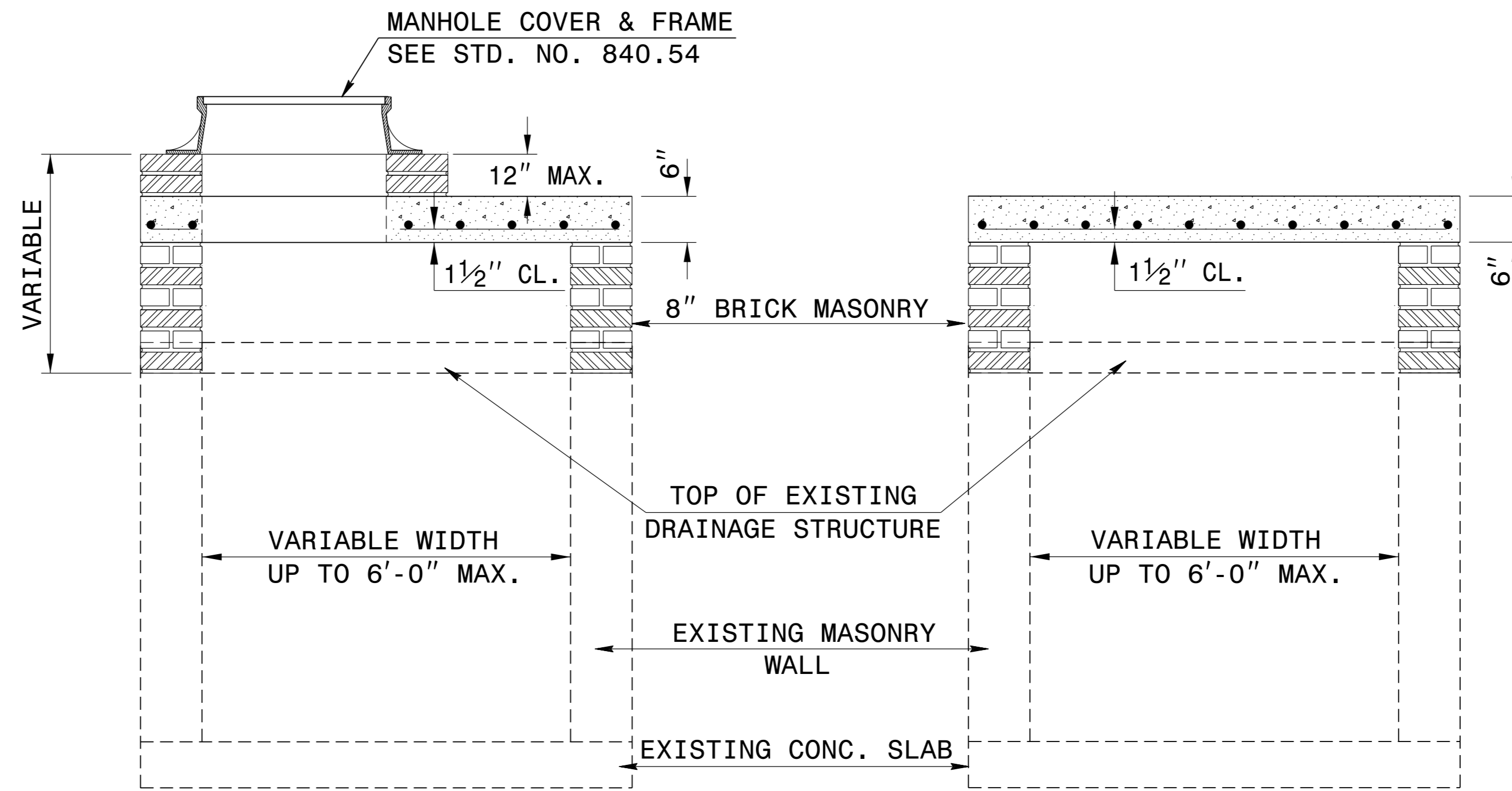
CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.

THE DIMENSIONS FOR THE EXISTING BOXES ARE APPROXIMATE AND MAY VARY SLIGHTLY.

DETAIL INTENDED FOR NON-TRAFFIC BEARING DRAINAGE STRUCTURES.



**DETAIL OF HANDLE**



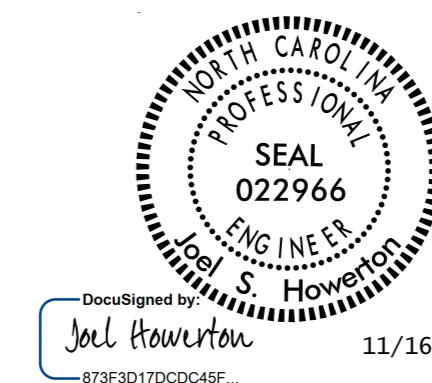
**SECTION X-X**

**SECTION Y-Y**

**BILL OF MATERIALS**

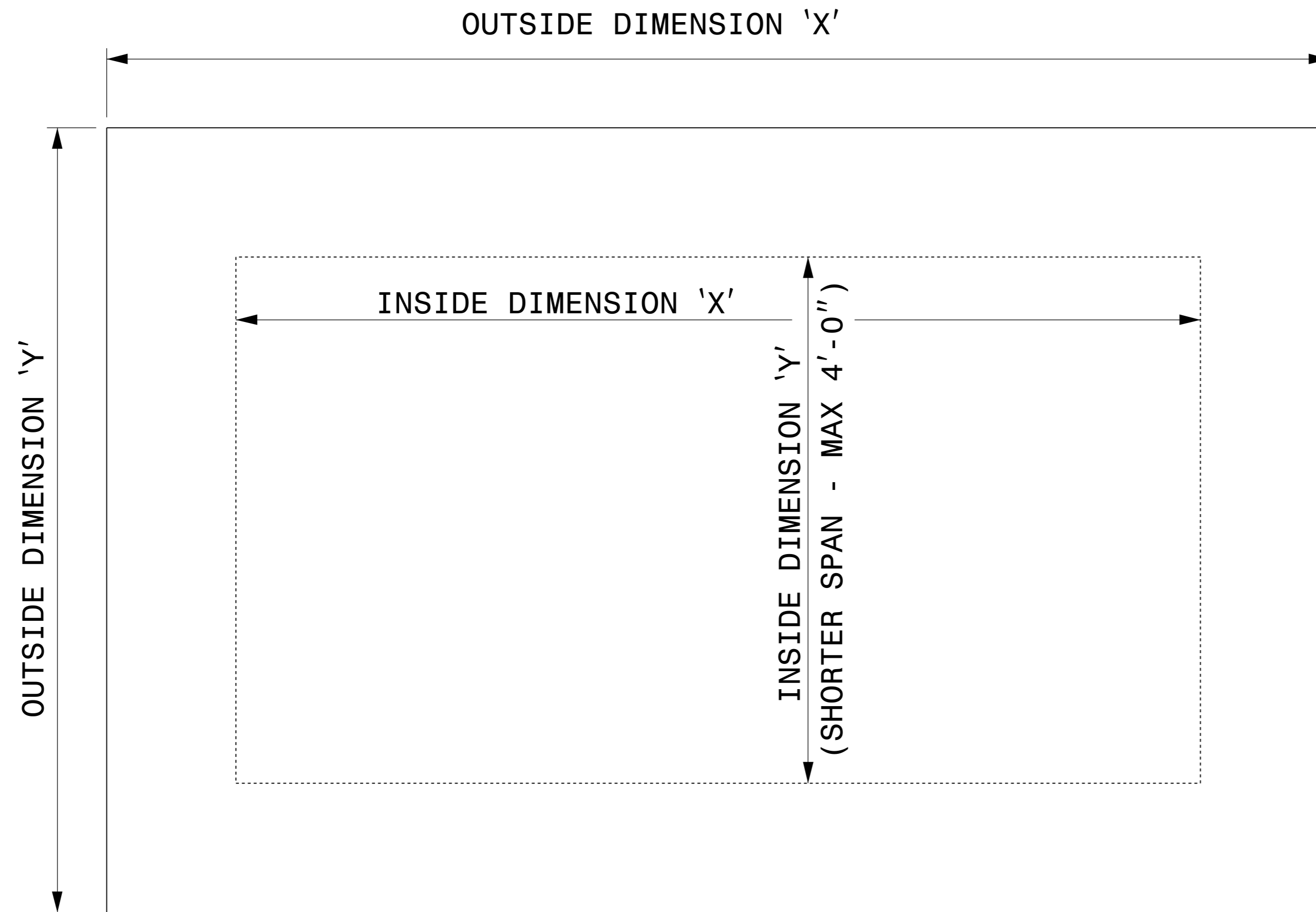
REINFORCING STEEL				
CODE	SIZE	QTY.	LENGTH	REINF. STEEL LBS.
A	#4	20	4'-6"	60.12
B	#4	8	1'-1"	5.79
<b>TOTAL</b>				<b>65.91 *</b>
MASONRY				CU YDS
TOP SLAB CONCRETE CLASS "B"				.4326 *
BRICK MASONRY PER FT HT (MIN)				.4111

**\* NOTE:**  
QUANTITIES BASED ON 3'-6" X 3'-6" DRAINAGE STRUCTURE. ADJUST QUANTITIES FOR LARGER STRUCTURES AND MANHOLE CONSTRUCTION.



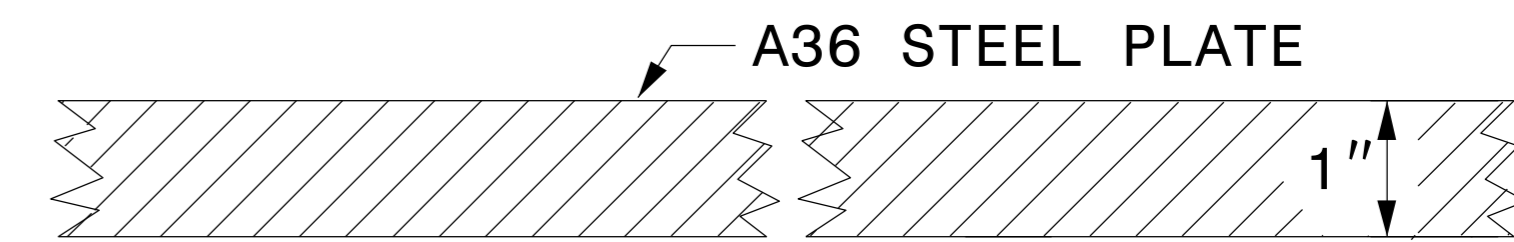
<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>DETAIL TO CONVERT EXISTING DI, CB, OTCB or GI TO JUNCTION BOX (MANHOLE OPTIONAL)</b>	
ORIGINAL BY: T.S.S.	DATE: NOV. 1997
MODIFIED BY: T.S.S.	DATE: FEB. 2000
CHECKED BY:	DATE:
FILE SPEC.: ds174:/usr/details/stand/boxtojb.dgn	

873F3017DC0C45F... 11/16/2015



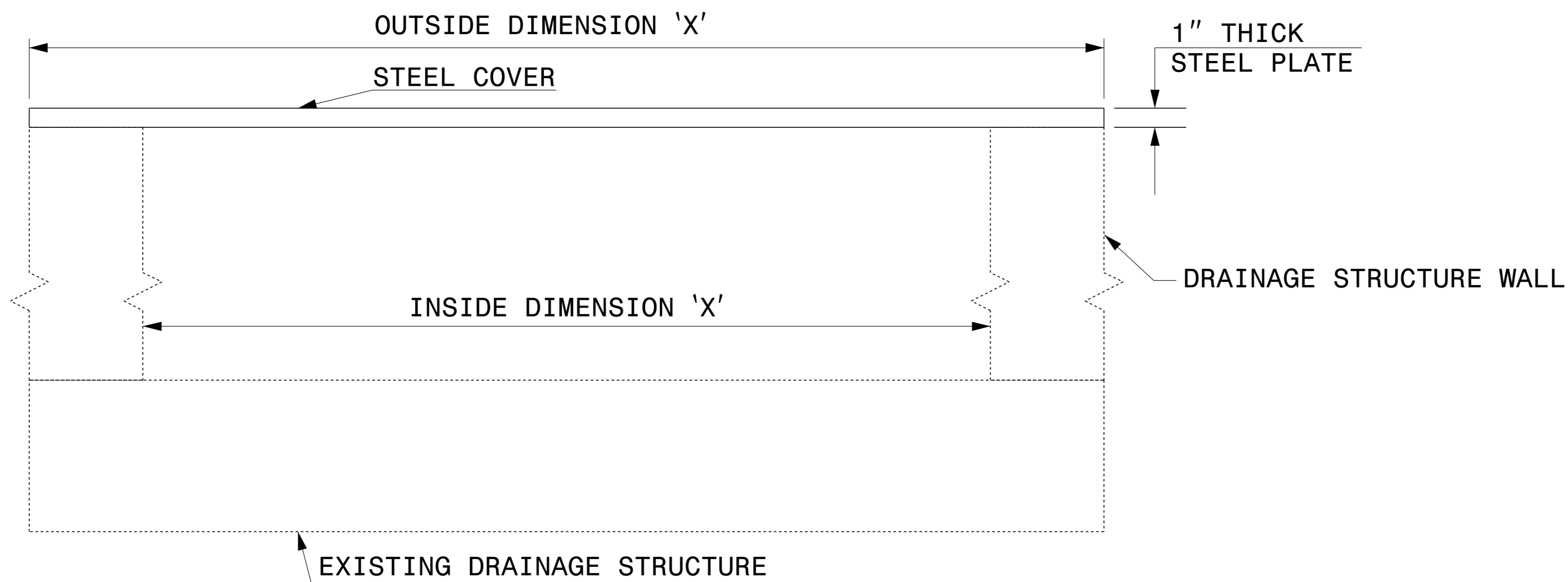
**GENERAL NOTES:**

- USE GRADE A36 STEEL
- STEEL COVERS ARE FOR TEMPORARY USE DURING PHASE CONSTRUCTION.
- FILL SHALL BE PLACED DIRECTLY OVER THE STEEL PLATES.
- SEE ROADWAY PLANS AND PROVISIONS FOR LOCATIONS
- QUANTITIES TO BE PAID FOR AT THE UNIT PRICE BID PER EACH.



**SECTION VIEW OF STEEL TOP PLATE**

**PLAN VIEWS**



**ELEVATION VIEWS**



DocuSigned by:  
Joel Howerton  
11/16/2015

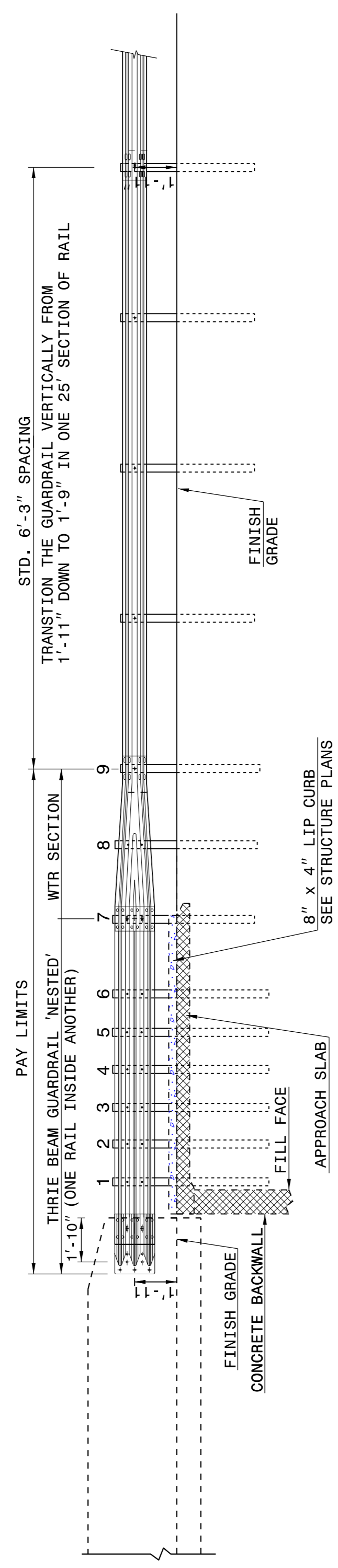
<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>DETAIL OF TEMPORARY 1" STEEL COVER OVER DRAINAGE STRUCTURE</b>	
ORIGINAL BY: E.E. WARD	DATE: 2-2-98
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: eric:/usr/details/metric/stand/st1cvr2.dgn	

\$\$\$CUTIME\$\$\$\$  
 \$\$\$CON\$\$\$\$  
 \$\$\$USERNAME\$\$\$\$

STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

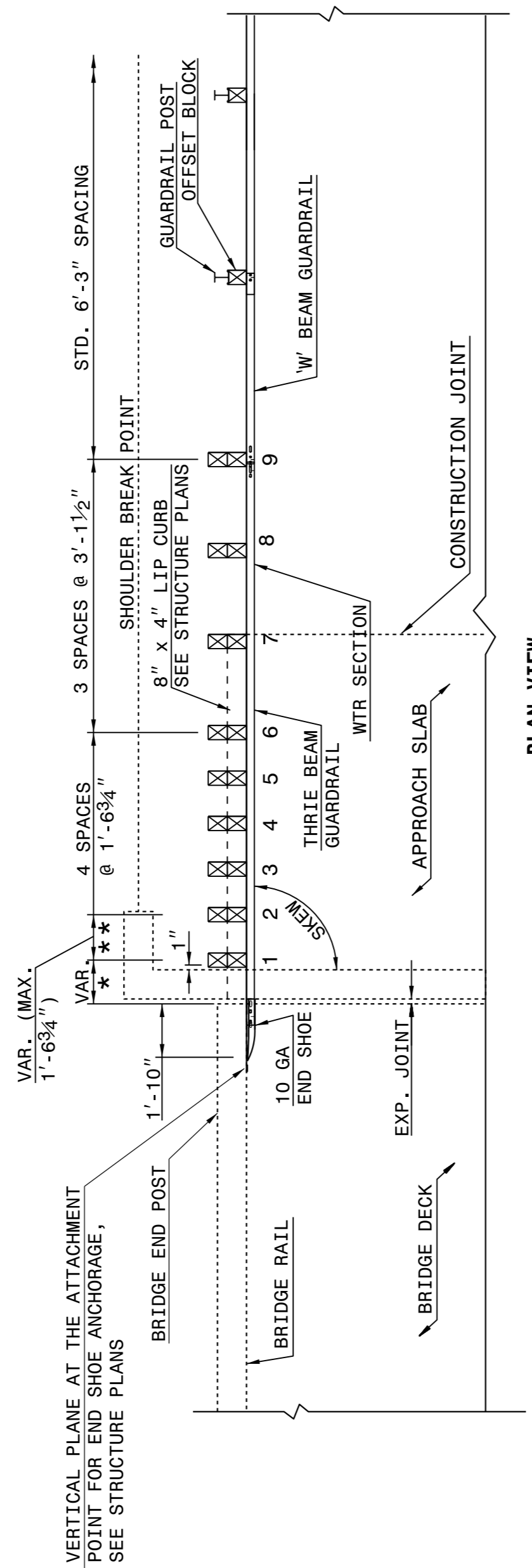
ENGLISH DETAIL DRAWING FOR  
**STRUCTURE ANCHOR UNITS**  
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO  
RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7  
**862d03**



**NOTE:**  
 \*\*POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.  
 \*THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½". IF CONCRETE BACKWALL IS NOT PRESENT.  
 -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.  
 -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).  
 -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.  
 -SEE SHEET 5 FOR POST SECTIONS 1 THRU 9.

**ELEVATION**



**PLAN VIEW**

**GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO  
RAIL ON BRIDGE - SUB REGIONAL TIER**

STATE OF  
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DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

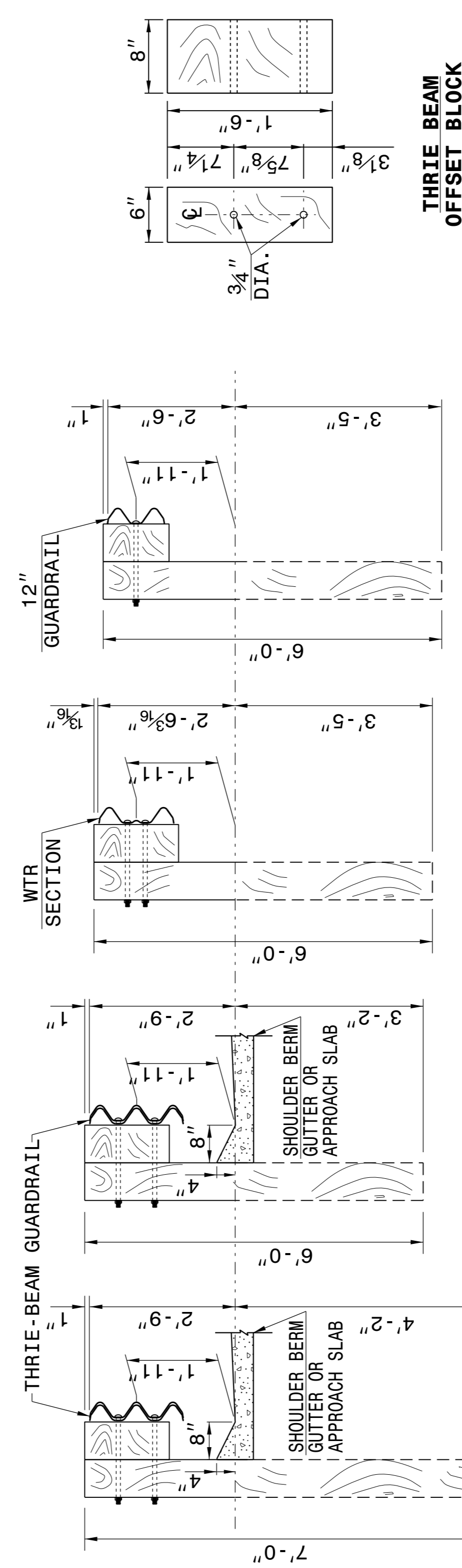
ENGLISH DETAIL DRAWING FOR  
**STRUCTURE ANCHOR UNITS**  
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO  
RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7  
**862d03**

STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**STRUCTURE ANCHOR UNITS**  
GUARDRAIL ANCHOR UNIT, TYPE III

SHEET 3 OF 7  
**862d03**

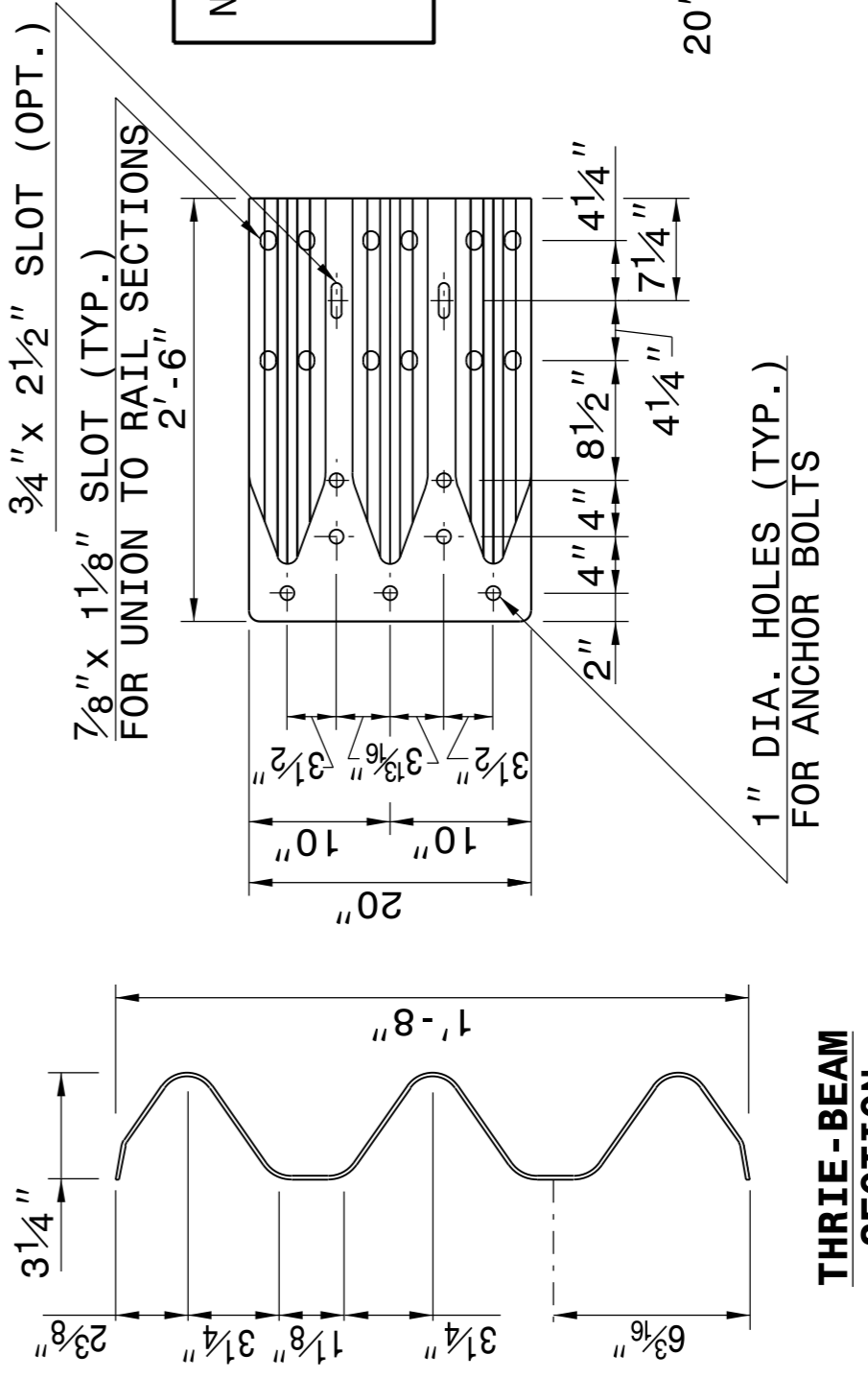


**SECTION OF THRIE BEAM  
POSTS 1 THRU 6**

**SECTION OF THRIE  
BEAM POST 7**

**SECTION OF WTR  
BEAM POST 8**

**SECTION OF 'W'  
BEAM POST 9**



**THRIE-BEAM  
SECTION**

**END SHOE**

**NOTE:** THE MID POST AND OFFSET BLOCK OF THE WTR SECTION WILL REQUIRE SPECIAL BOLT HOLE DRILLING IN THE THRIE BEAM OFFSET BLOCK AND LINE POST.

**THRIE BEAM  
OFFSET BLOCK**

**THRIE BEAM  
LINE POST**

**WTR SECTION  
ELEVATION VIEW**

STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

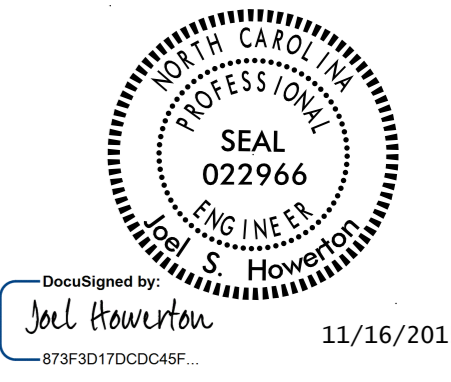
ENGLISH DETAIL DRAWING FOR  
**STRUCTURE ANCHOR UNITS**  
GUARDRAIL ANCHOR UNIT, TYPE III

SHEET 3 OF 7  
**862d03**

**CONTRACT STANDARDS  
AND DEVELOPMENT UNIT**  
Office 919-707-6950 FAX 919-250-4119

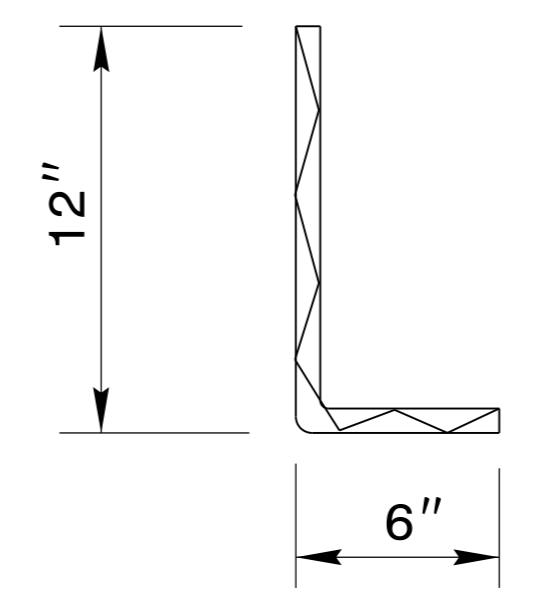
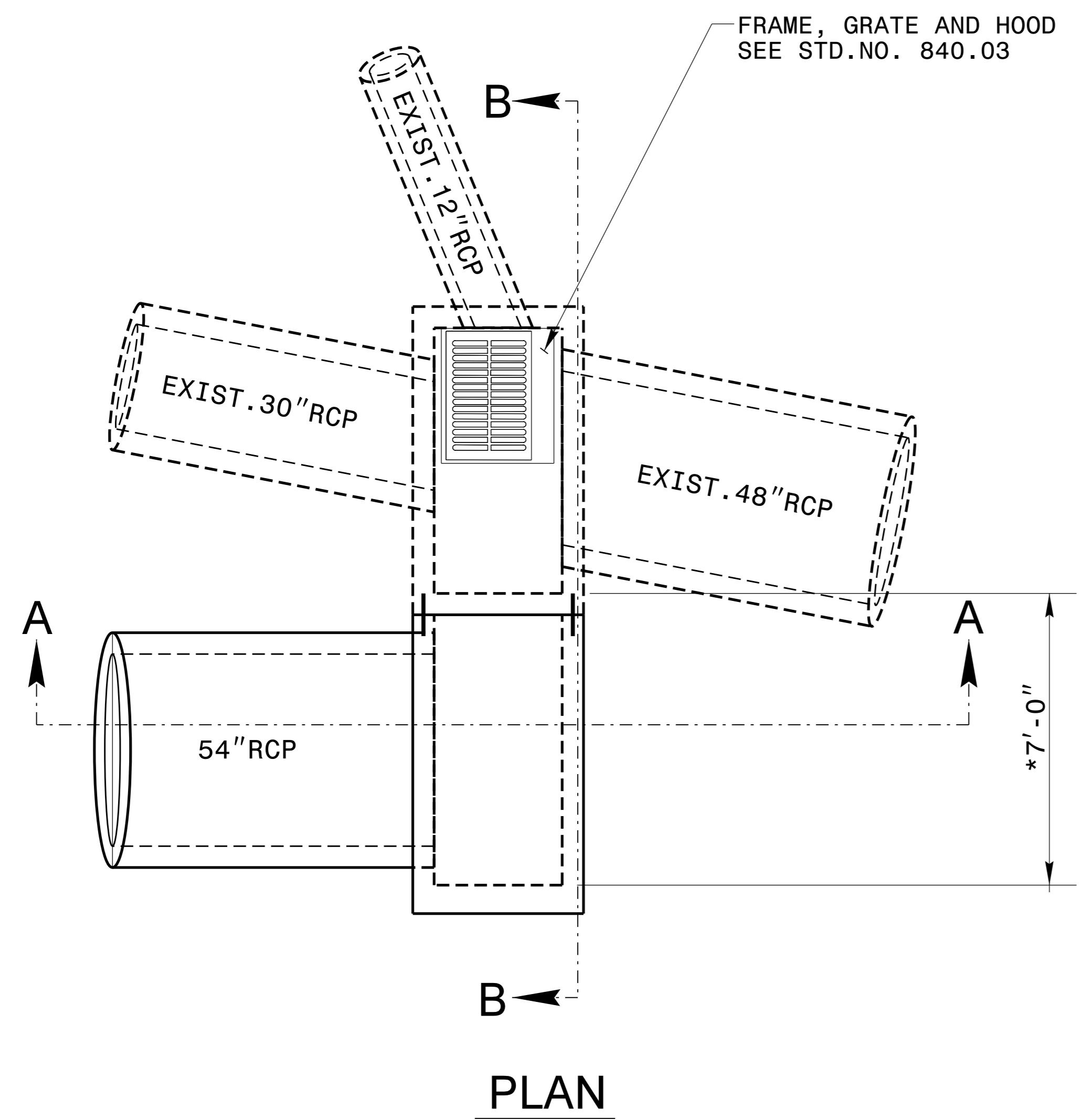
**SEE TITLE BLOCK**

ORIGINAL BY: J. HOWERTON DATE: 06-22-12  
 MODIFIED BY: DATE:  
 CHECKED BY: DATE:  
 FILE SPEC.: DATE:



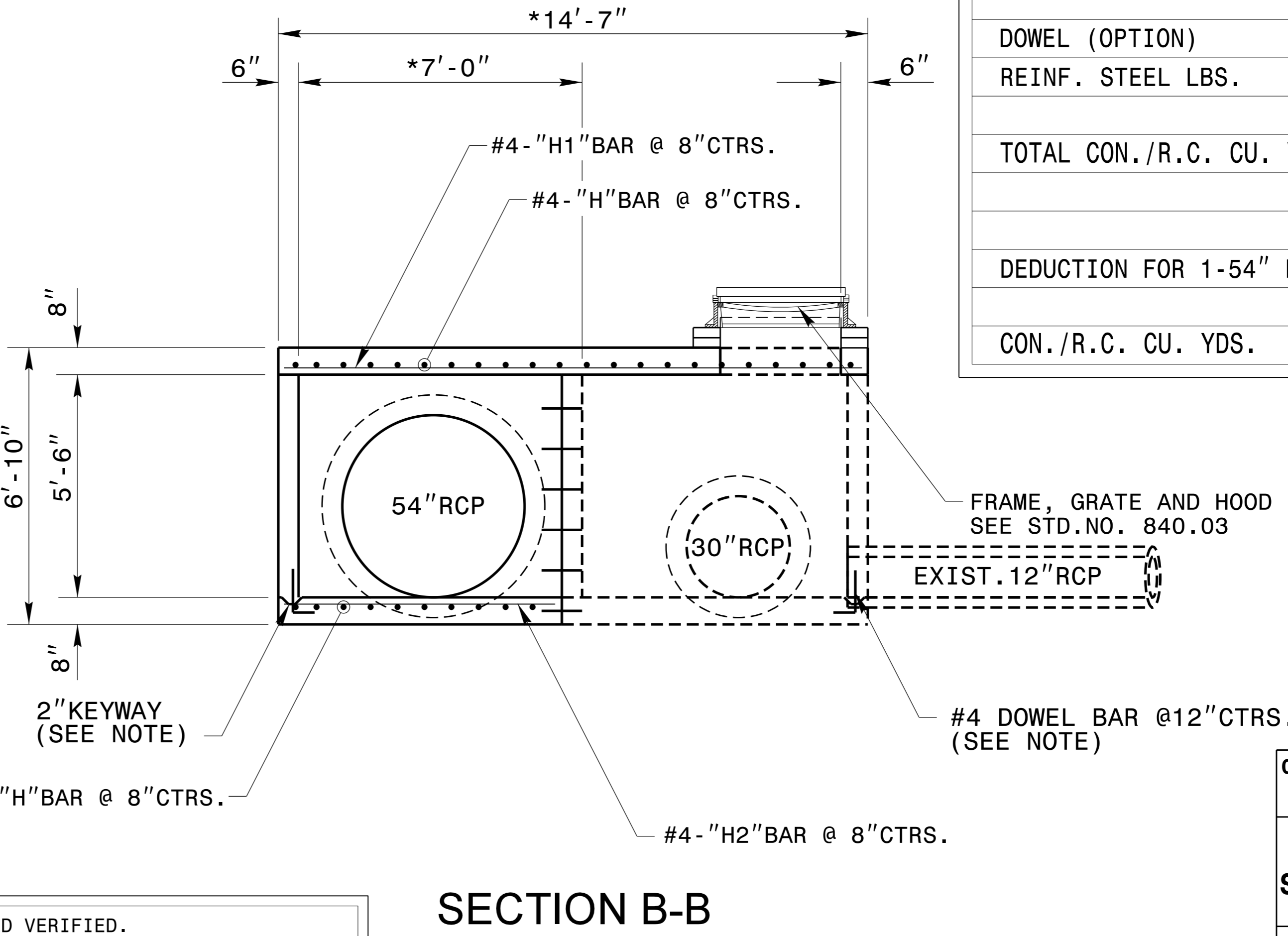
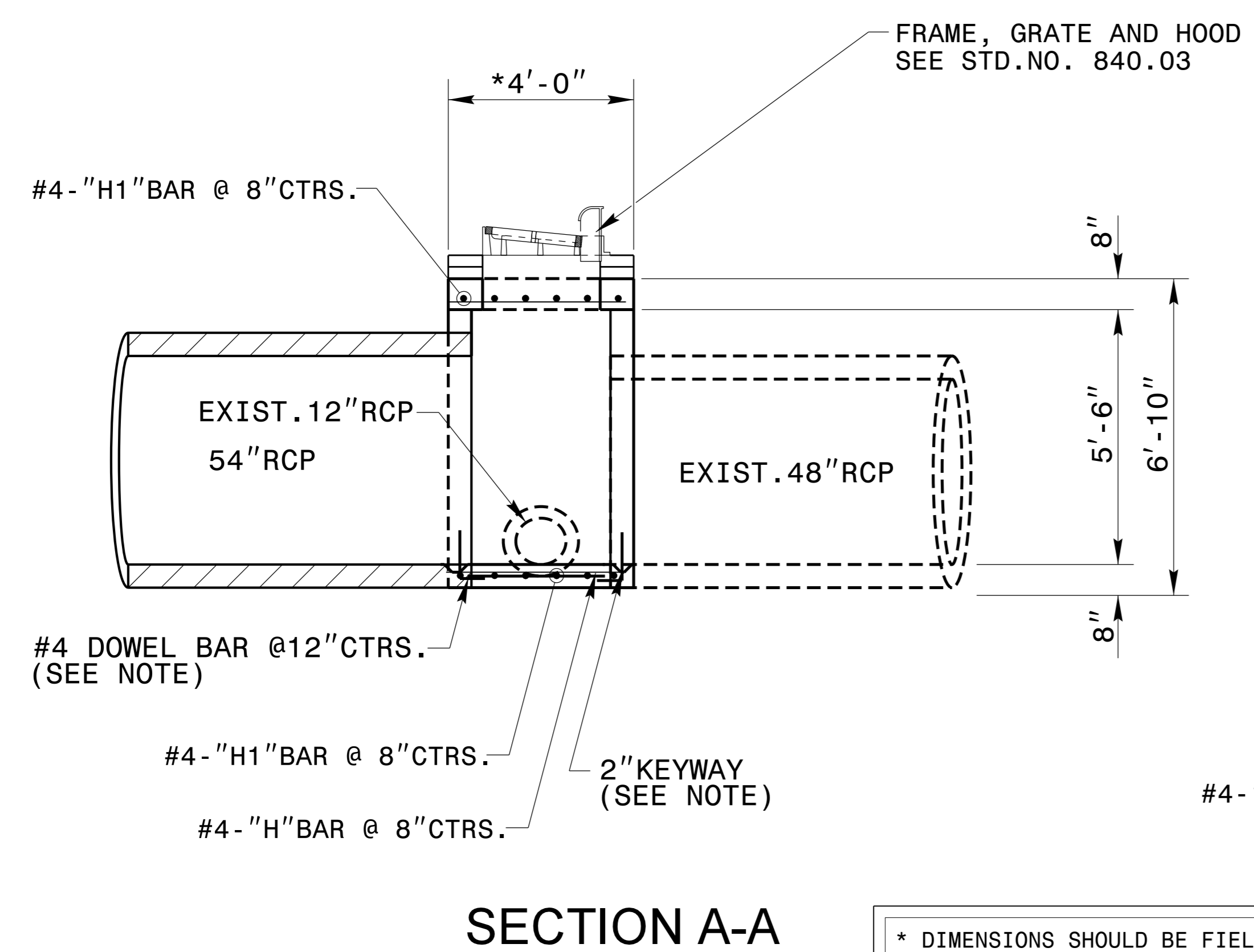
11/16/2015

**NOTES:**  
 USE CLASS "B" CONCRETE THROUGHOUT.  
 ALL REINFORCING STEEL SHOULD BE ASTM A615-GRADE 60.  
 ALL REINFORCING STEEL SHOULD BE DEFORMED BARS. WHERE SPLICING OF REINFORCEMENT IS NECESSARY, BARS ARE TO BE LAPPED 45 DIAMETERS. ALL DIMENSIONS RELATIVE TO REINFORCEMENT ARE TO CENTERS OF BARS.  
 REINFORCING STEEL TO BE CUT, BENT OR RELOCATED TO POSITION CATCH BASIN AS DIRECTED BY THE ENGINEER.  
 ALL EXPOSED CORNERS ARE TO BE CHAMFERED 1".  
 ALL MATERIAL AND WORKMANSHIP AS PER N.C. DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.  
 OPTIONAL CONSTRUCTION, MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

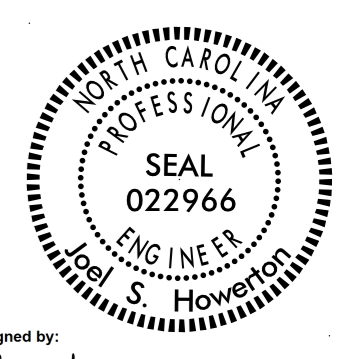


**BILL OF MATERIAL**  
 REINFORCING STEEL

BAR	SIZE	LENGTH	NO.	WEIGHT
H	#4	3'-8"	32	79
H1	#4	14'-3"	6	58
H2	#4	6'-8"	6	27
DOWEL (OPTION)			14	
REINF. STEEL LBS.				164
TOTAL CON./R.C. CU. YDS.				3.2
DEDUCTION FOR 1-54" RCP				-0.5
CON./R.C. CU. YDS.				2.7



\* DIMENSIONS SHOULD BE FIELD VERIFIED.  
 \* DIMENSIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.



Designed by: *Joel Howerton*  
 873F3D17DCDC45F... 5/17/2016

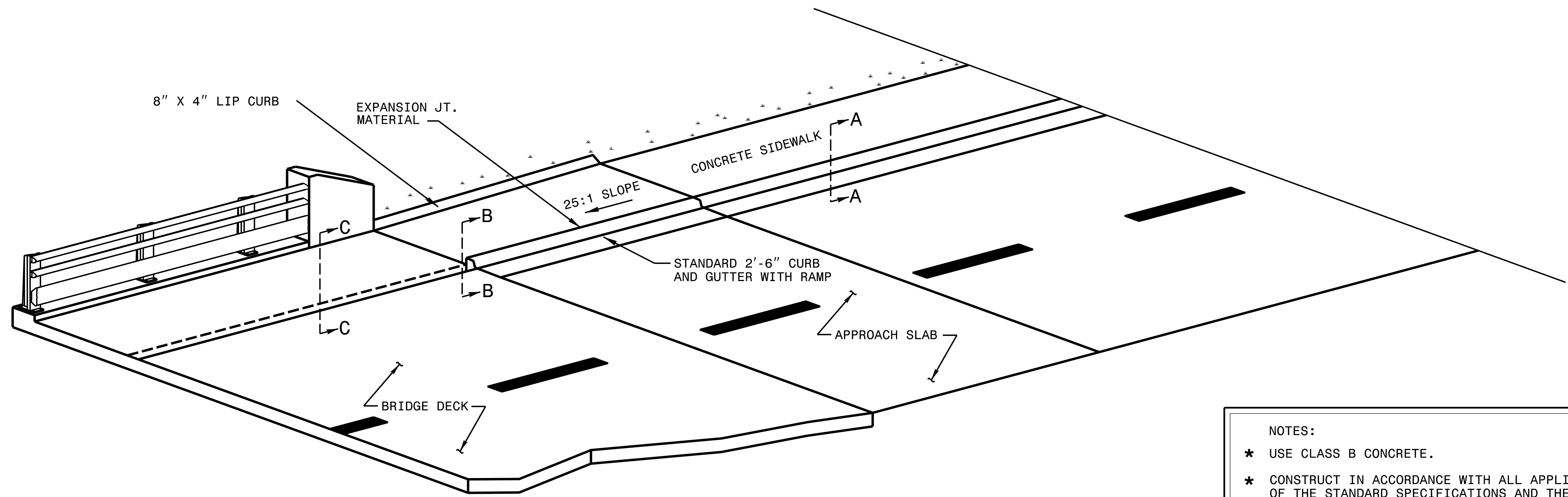
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT SERVICES & DEVELOPMENT UNIT  
 STANDARDS AND SPECIAL DESIGN  
 Office 919-707-6900 FAX 919-250-4119

**DETAIL OF TEMPORARY SPECIAL CATCH BASIN EXTENSION**

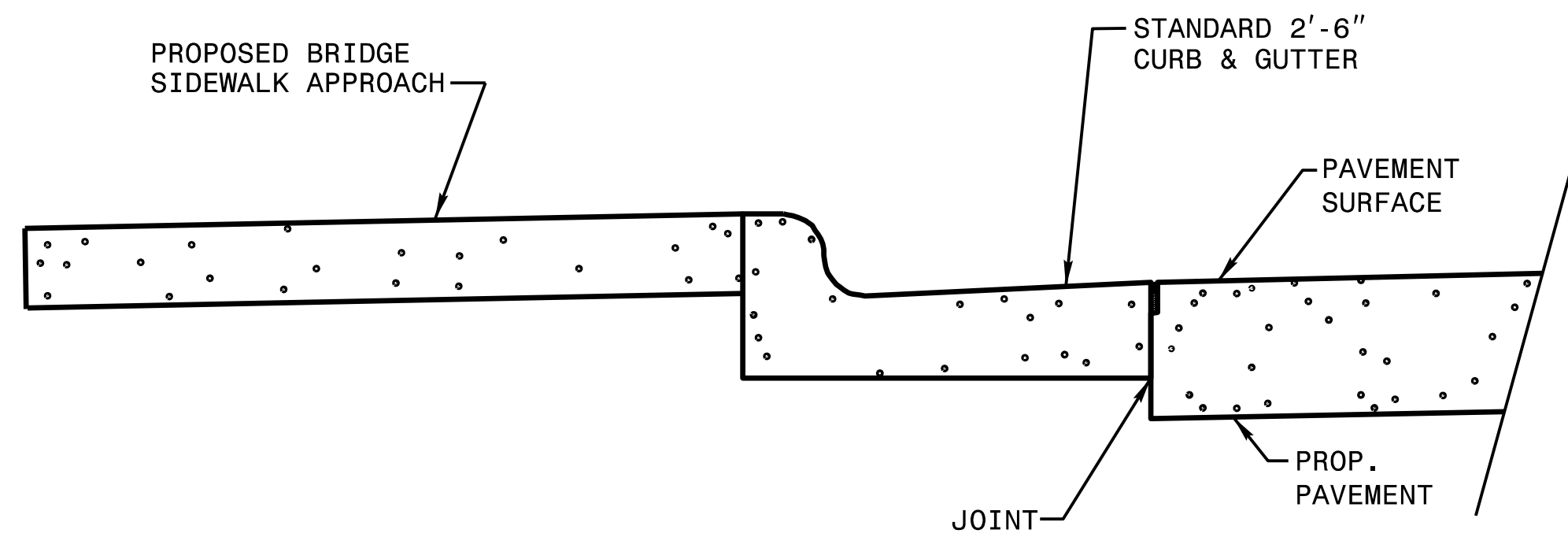
ORIGINAL BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 MODIFIED BY: *rnbritt* DATE: 05-16-2016  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FILE SPEC.: *details\rbritt\english\urban\U3308 temp cb.dgn*

C:\TIME\PROJECTS\CONCRETE\DRAWINGS\USER\NAME.DWG

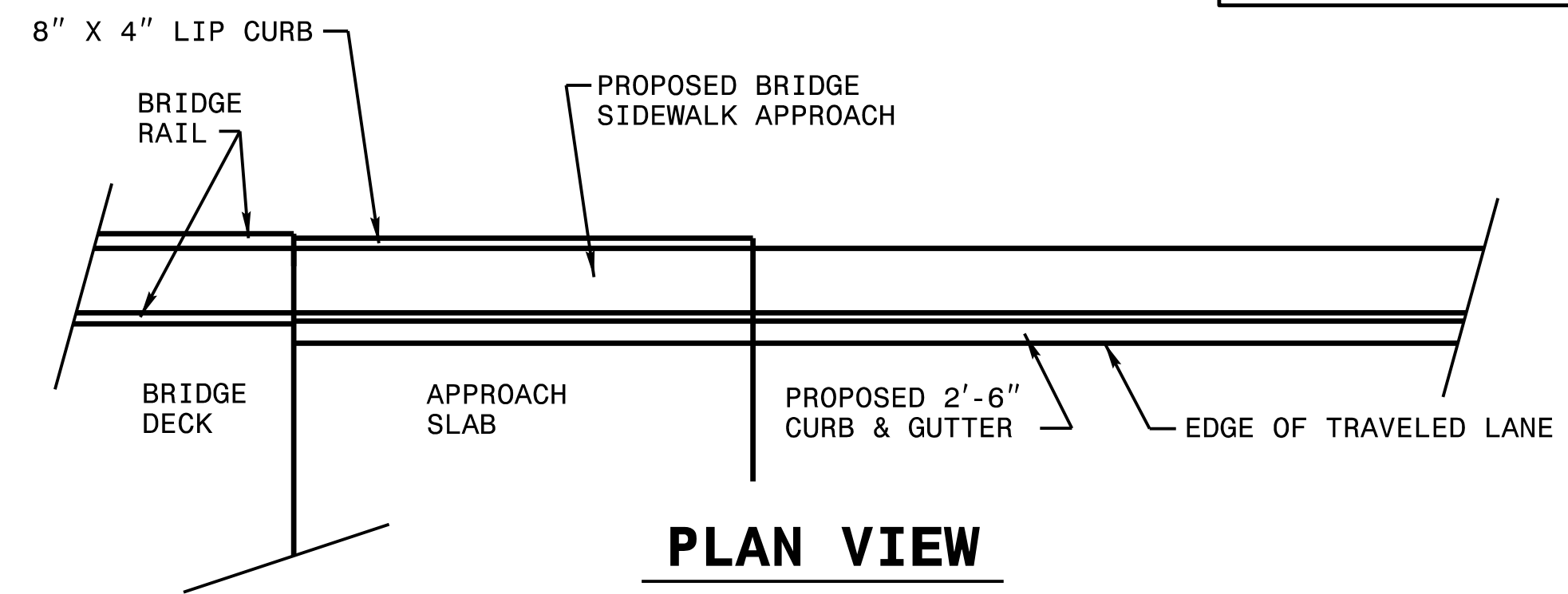


**DETAIL OF PROPOSED CONCRETE BRIDGE SIDEWALK APPROACH**

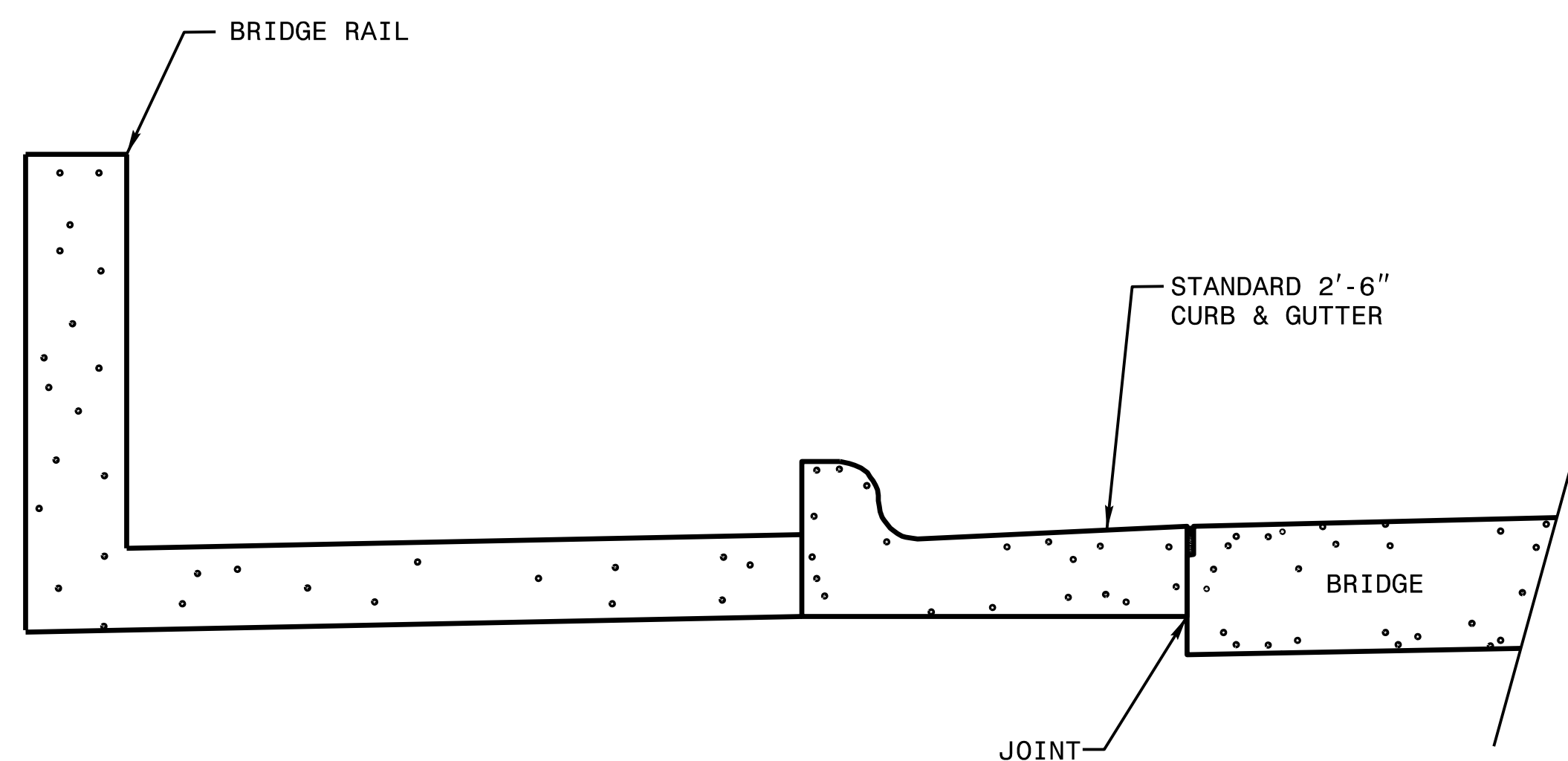
- NOTES:**
- \* USE CLASS B CONCRETE.
  - \* CONSTRUCT IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE ROADWAY DRAWINGS OR AS DIRECTED BY THE ENGINEER.
  - \* SEE ROADWAY PLANS FOR GUARDRAIL PLACEMENT.
  - \* GUARDRAIL AND BARRIER ADJACENT TO TRAVEL LANE REMOVED FOR CLARITY.
  - \* CHAIN LINK FENCE ADJACENT TO SIDEWALK REMOVED FOR CLARITY. SEE ROADWAY PLANS FOR PLACEMENT.



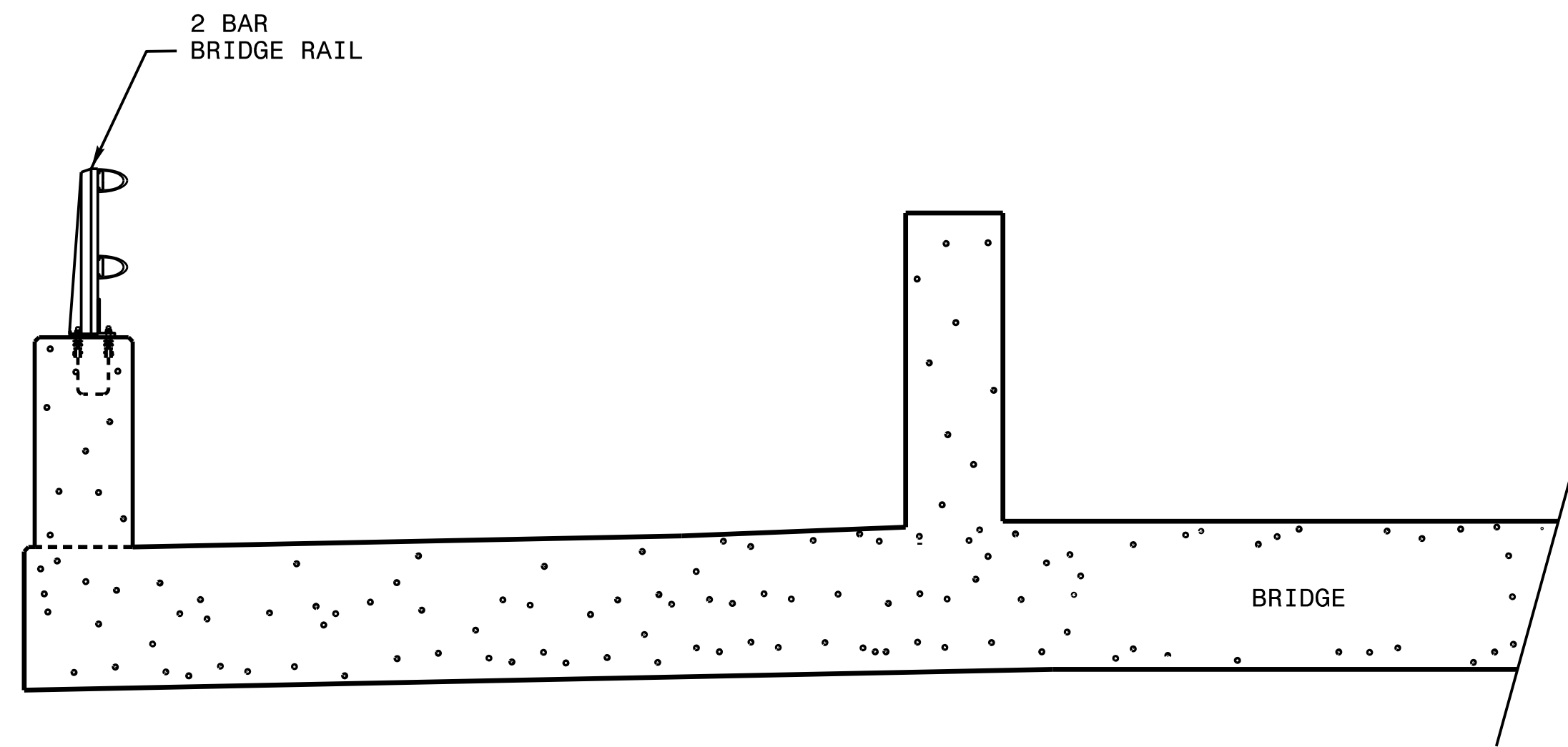
**SECTION A-A**



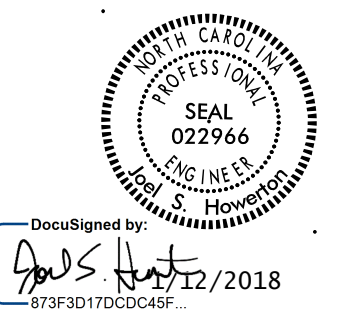
**PLAN VIEW**



**SECTION B-B**



**SECTION C-C**



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS & DEVELOPMENT UNIT  
STANDARDS AND SPECIAL DESIGN**  
Office 919-707-6950 FAX 919-250-4119

**DETAIL OF CONCRETE BRIDGE  
SIDEWALK APPROACH**

ORIGINAL BY: cnbritt	DATE: 02-02-16
MODIFIED BY: kakempf	DATE: 11-30-17
CHECKED BY:	DATE:
FILE SPEC: *details/kkempf/english/U3308_sidewalk_approach.dgn	

\$\$\$\$\$\$  
 CONSTRUCTION  
 \$\$\$\$\$\$

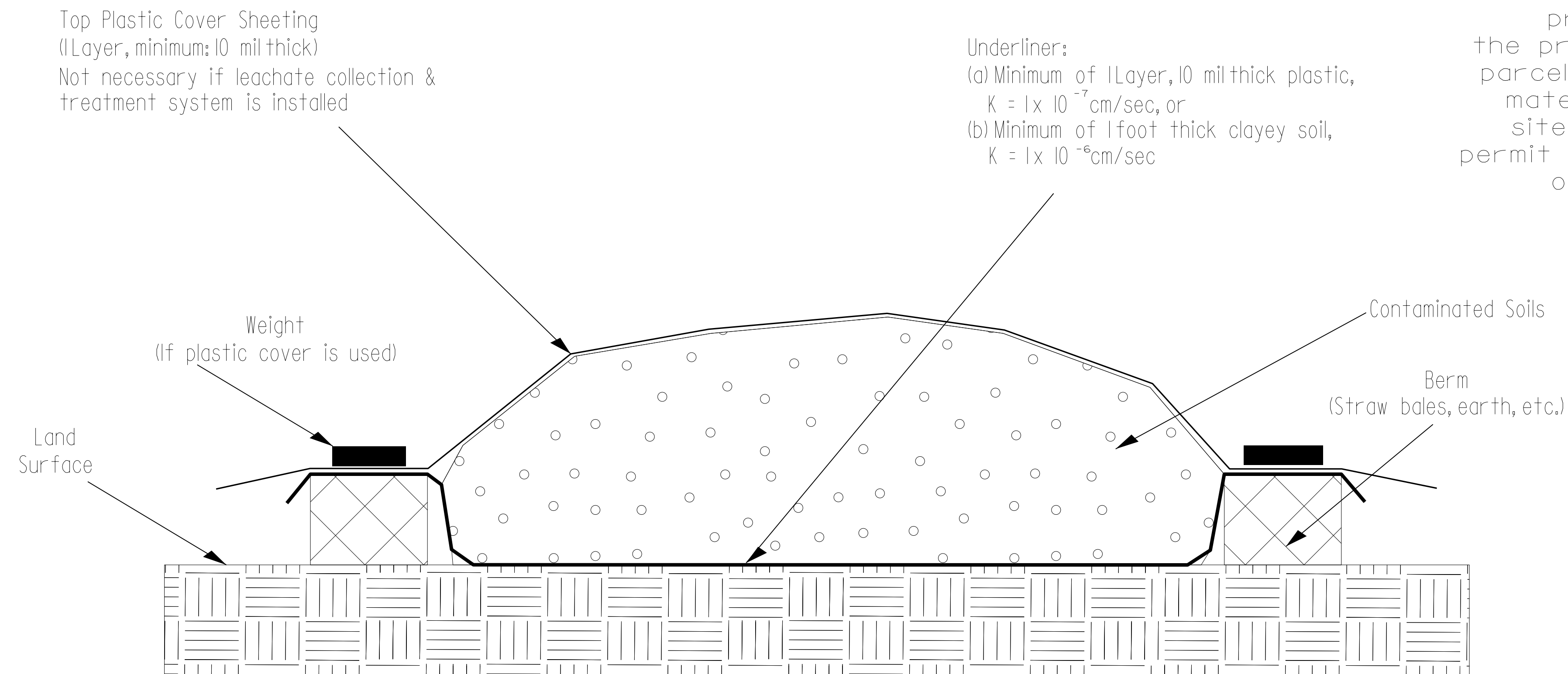


DocuSigned by:  
Cyrus Parker 4/24/2015

SIGNATURE DATE SIGNATURE DATE

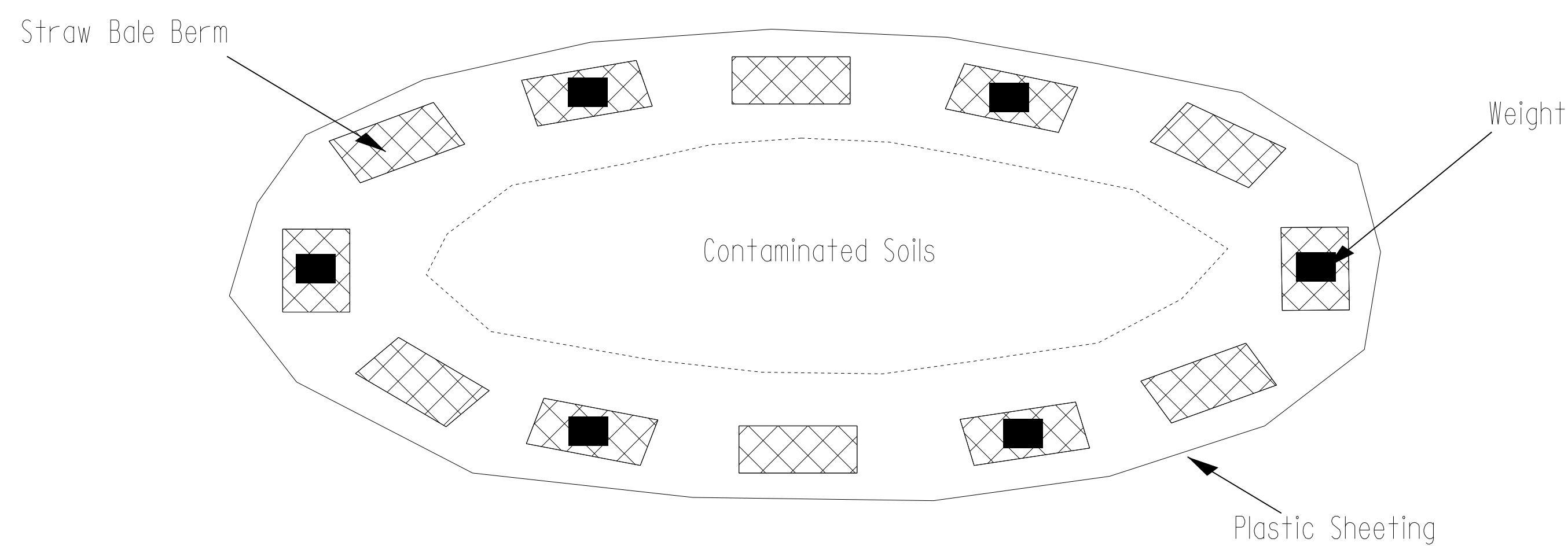
# Detail for Temporary Containment of Contaminated Soil

## Cross-Section View



**NOTE:**  
The Contractor shall stockpile all contaminated soil excavated from a property in a location within the property boundaries of the source parcel. If the volume of contaminated material exceeds available space on site, the Contractor shall obtain a permit from the NCDENR UST Section for off-site temporary storage.

## Map View



**GEOTECHNICAL ENGINEERING UNIT**

- EASTERN REGIONAL OFFICE
- WESTERN REGIONAL OFFICE
- CONTRACT OFFICE

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

### STOCKPILE CONTAINMENT DETAIL

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

PREPARED BY:	DATE:
REVIEWED BY:	DATE:

# EARTHWORK SUMMARY

## IN CUBIC YARDS

\* PAVEMENT STRUCTURE VOLUME 13,550 cu yds  
 \*\* FOR ALTERNATE PAVEMENT DESIGN 9,100 cu yds

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
<b>SUMMARY #1 (LEFT SIDE)</b>					
Sta. 13+50.00 to 15+55.95 (Bridge) -LALT-	74		679	605	
Sta. 11+00.00 to 14+80.05 -R1-	203		1285	1082	
<b>SUMMARY #1 TOTAL</b>	<b>277</b>		<b>1964</b>	<b>1687</b>	
<b>SUMMARY #2 (LEFT SIDE)</b>					
17+36.20 (Bridge) to 46+50.00 -LALT-	21009		3332		17677
Sta. 10+31.00 to 13+60.00 -R3-	83		1255	1172	
Sta. 9+99.63 to 12+06.62 -Y3-	149		185	36	
Sta. 10+00.00 to 12+68.53 -Y3A-	142		170	28	
Sta. 12+00.00 to 16+27.05 (Bridge) -Y-	153		598	445	
Sta. 11+00.00 to 12+40.92 -Y1-	141		25		116
Sta. 10+16.47 to 12+45.00 -Y4-	33		77	44	
Sta. 9+89.71 to 11+55.00 -Y6-	378		16		362
Sta. 9+93.63 to 13+89.00 -Y8-	389		41		348
Sta. 10+10.69 to 14+00.00 -Y10-	243		72		171
Sta. 10+29.77 to 14+20.00 -Y12-	85		94	9	
<b>SUMMARY #2 TOTAL</b>	<b>22805</b>		<b>5864</b>	<b>1733</b>	<b>18674</b>
<b>SUMMARY #3 (LEFT SIDE)</b>					
Sta. 46+50.00 to 66+10.00 -LALT-	6023		965		5058
Sta. 10+39.75 to 11+40.00 -Y14-	274				274
Sta. 10+36.07 to 11+85.00 -Y16-	244		5		239
Sta. 10+20.00 to 13+49.29 -Y18-(Intersection)	2267		48		2219
Sta. 10+25.00 to 10+84.92 -Y20-	66		10		56
Sta. 12+55.00 to 13+80.42 -Y22-(Intersection)	61		40		21
<b>SUMMARY #3 TOTAL</b>	<b>8935</b>		<b>1066</b>		<b>7868</b>
<b>SUMMARY #4 (RIGHT SIDE)</b>					
Sta. 13+50.00 to 15+55+95 -LALT-(Bridge)	54		578	524	
Sta. 10+60.37 to 11+00.00 -R2-	12		16	4	
<b>SUMMARY #4 TOTAL</b>	<b>66</b>		<b>594</b>	<b>528</b>	

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
<b>SUMMARY #5 (RIGHT SIDE)</b>					
Sta. 17+36.20 (Bridge) to 46+50.00 -LALT-	10309		775		9534
Sta. 10+52.68 to 12+30.00 -R4-	7		241	234	
Sta. 10+31.43 to 11+50.00 -R5-	157				157
Sta. 17+84.55 (Bridge) to 24+50.00 -Y-	511		4712	4201	
Sta. 10+49.52 to 11+00.00 -Y2-	69		6		63
Sta. 10+52.26 to 11+55.00 -Y5-	404		2		402
Sta. 10+76.58 to 12+50.00 -Y7-	466		2		464
Sta. 10+72.37 to 11+35.00 -Y9-	75		4		71
Sta. 10+55.37 to 10+90.00 -Y11-	18		2		16
Sta. 10+62.00 to 11+22.00 -Y13-	153		4		149
<b>SUMMARY #5 TOTAL</b>	<b>12169</b>		<b>5749</b>	<b>4435</b>	<b>10,855</b>
<b>SUMMARY #6 (RIGHT SIDE)</b>					
Sta. 46+50.00 to 66+10.00 -LALT-	3259		1405		1854
Sta. 10+27.50 to 16+20.00 -Y15-	327		894	567	
Sta. 10+17.00 to 10+80.00 -Y15A-	47		7		40
Sta. 10+29.99 to 11+45.00 -Y17-	45		154	109	
Sta. 14+15.34(Intersect.) to 17+83.00 -Y18-	207		203		4
Sta. 10+33.05 to 11+25.00 -Y21-	119		5		114
Sta. 14+46.43(Intersect.) to 18+40.00 -Y22-	176		72		104
<b>SUMMARY #6 TOTAL</b>	<b>4180</b>		<b>2739</b>	<b>675</b>	<b>2116</b>
<b>SUMMARY #7</b>					
DETOUR RAIL-LINE	2882		101		2781
FINAL RAIL-LINE	5873		50		5823
<b>SUMMARY #7 TOTAL</b>	<b>8755</b>		<b>151</b>		<b>8604</b>
<b>SUMMARY TOTALS</b>					
<b>WASTE IN LIEU OF BORROW</b>				-9058	-9058
<b>GRAND TOTAL</b>	<b>57,187</b>		<b>18,127</b>		<b>39,059</b>
SAY	60000				
<b>EARTHWORK TOTALS FOR ALTERNATE PAVT DESIGN</b>					
<b>SUMMARY TOTAL</b>	<b>57,187</b>		<b>18,127</b>	<b>9058</b>	<b>48,117</b>
<b>ADJ. FOR ALT. PAV'T DESIGN</b>	<b>-3350</b>		<b>2574</b>	<b>5924</b>	
<b>WASTE IN LIEU OF BORROW</b>				<b>-14,982</b>	<b>-14,982</b>
<b>PROJECT TOTALS</b>					
<b>TOTAL</b>	<b>53,837</b>		<b>20,701</b>		<b>33,135</b>
SAY	55000				

CONTINGENCY UNDERCUT = 1,950 CY  
 CONTINGENCY SHALLOW UNDERCUT = 1000 CY  
 SHALLOW UNDERCUT BY STATION = 450 CY  
 TOTAL SHALLOW UNDERCUT = 1450 CY  
 GEOTEXTILE FOR SOIL STABILIZATION = 5,100 SY  
 SELECT GRANULAR MATERIAL = 750 CY  
 CLASS IV SUBGRADE STABILIZATION = 2,800 TONS

NOTE: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

Note: "Quantities are approximate only. The Resident Engineer will re-cross-section the work accurately when the project is staked out. These cross-section notes will be used in computing the final quantities for which the contractor will be paid."

5/7/9/06

20-MAY-2015 14:55  
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RD266183

COMPUTED BY: L. JAH DATE: 01/12/2015  
CHECKED BY: A.K. WHITE DATE: 11/16/2015

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PROJECT NO. U-3308 SHEET NO. 3D-5

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.  
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C. S. PIPE, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, BIT COAT CORRUGATED METAL PIPE, ENDWALLS, REINFORCED ENDWALLS, DRAINAGE STRUCTURE, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, CS PIPE ELBOWS NO. & SIZE, FLOWABLE FILL, CONCRETE COLLARS CL. "B" STD. 840.72, CONCRETE AND BRICK PIPE PLUG STD. 840.71, PIPE REMOVAL, and REMARKS. Includes a SHEET TOTALS row at the bottom.

ABBREVIATIONS  
C.A.A. CORRUGATED ALUMINIUM ALLOY  
C.B. CATCH BASIN  
C.S. CORRUGATED STEEL  
D.I. DROP INLET  
G.D.I. GRATED DROP INLET  
H.D.P.E. HIGH DENSITY POLYETHYLENE  
J.B. JUNCTION BOX  
M.H. MANHOLE  
N.S. NARROW SLOT  
P.V.C. POLYVINYL CHLORIDE  
R.C. REINFORCED CONCRETE  
T.B.D.I. TRAFFIC BEARING DROP INLET  
T.B.J.B. TRAFFIC BEARING JUNCTION BOX  
W.S. WIDE SLOT

SHEET TOTALS

RD266183

COMPUTED BY: L. JAH DATE: 01/12/2015
CHECKED BY: A.K. WHITE DATE: 11/16/2015

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. SHEET NO.
U-3308 3D-6

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Table with columns for Line & Station, Offset, Structure Number, Top Elevation, Invert Elevations, Minimum Required Slope, Drainage Pipe, C.S. Pipe, R.C. Pipe Class IV/V, Bit Coat, Endwalls, Reinforced Endwalls, Drainage Structure, Quantities for Drainage Structures, Frame, Grates, and Hood, Concrete Transitional Section, and Abbreviations.

SHEET TOTALS

RD266183

COMPUTED BY: L. JAH DATE: 01/12/2015  
CHECKED BY: A.K. WHITE DATE: 11/16/2015

PROJECT NO. U-3308 SHEET NO. 3D-7

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.  
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Main data table with columns: LINE & STATION, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C. S. PIPE, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, BIT COAT CORRUGATED METAL PIPE, ENDWALLS, REINFORCED ENDWALLS, MASONRY, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, CS PIPE ELBOWS NO. & SIZE, FLOWABLE FILL, CONCRETE COLLARS CL. "B" STD. 840.72, CONCRETE AND BRICK PIPE PLUG STD. 840.71, PIPE REMOVAL, REMARKS.

ABBREVIATIONS table listing codes like C.A.A., C.B., C.S., D.I., G.D.I., H.D.P.E., J.B., M.H., N.S., P.V.C., R.C., T.B.D.I., T.B.J.B., W.S. and their corresponding material names.

SHEET TOTALS

1092 304 72

25 19 10 9 2 6 6



COMPUTED BY: L. JAH DATE: 01/12/2015
CHECKED BY: A.K. WHITE DATE: 11/16/2015

PROJECT NO. U-3308 SHEET NO. 3D-8

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Table with columns: LINE & STATION, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C. S. PIPE, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, BIT COAT CORRUGATED METAL PIPE, ENDWALLS, REINFORCED ENDWALLS, DRAINAGE STRUCTURE, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, CS PIPE ELBOWS NO. & SIZE, FLOWABLE FILL, CONCRETE COLLARS CL. "B" STD. 840.72, CONCRETE AND BRICK PIPE PLUG STD. 840.71, PIPE REMOVAL, REMARKS, ABBREVIATIONS.

SHEET TOTALS

COMPUTED BY: L. JAH DATE: 01/12/2015
CHECKED BY: A.K. WHITE DATE: 11/16/2015

PROJECT NO. SHEET NO.
U-3308 3D-9

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C. S. PIPE, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, BIT COAT CORRUGATED METAL PIPE, ENDWALLS, REINFORCED ENDWALLS, DRAINAGE STRUCTURE, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, CS PIPE ELBOWS NO. & SIZE, FLOWABLE FILL, CONCRETE COLLARS CL. "B" STD. 840.72, CONCRETE AND BRICK PIPE PLUG STD. 840.71, PIPE REMOVAL, and REMARKS.

SHEET TOTALS

348

112

92

328

15

2.9

13

1

5

7

2

2

979







### SUMMARY OF SUBSURFACE DRAINAGE

LINE	STATION	STATION	LOCATION L/RT/CL	DRAIN TYPE* UD/BD/SD	LF
	CONTINGENCY			UD	1,000
				TOTAL LF	1,000

\*UD = UNDERDRAIN  
 \*BD = BLIND DRAIN  
 \*SD = SUBSURFACE DRAIN

### SUMMARY OF GEOTEXTILE FOR PAVEMENT STABILIZATION

LINE	STATION	STATION	OFFSET	SY
	CONTINGENCY			5,000
			TOTAL SY	5,000

### SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	STATION	STATION	Aggregate Type ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization
-LALT-	36 + 40.00	38 + 15.00	ASU	12"	450	900	1350		
	CONTINGENCY		ASU	12"	1000	1900	3000		
	CONTINGENCY		AST					500	
				TOTAL CY/TONS	1450	2800	4350*	500	

AST = AGGREGATE STABILIZATION  
 ASU = AGGREGATE SUBGRADE

\*Total square yards of Geotextile for Soil Stabilization is only the estimated quantity for ASU/AST and may only represent a portion of the geotextile quantity

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
10	4	RALPH & ELVIRA HUNT (NO CLAIM)
11	4	RUSSELL MEMORIAL CHRISTIAN METHODIST EPISCOPAL (NO CLAIM)
12	4	RUSSELL MEMORIAL CHRISTIAN METHODIST EPISCOPAL (NO CLAIM)
13	4	KARIS INC (NO CLAIM)
14	4	JOYNER ENTERPRISES, INC. (NO CLAIM)
15	4	CITY OF DURHAM (NO CLAIM)
16	4	NC STATE HIGHWAY COMMISSION (NO CLAIM)
17	4	CITY OF DURHAM
18	4	FILEMON AGUILERA
19	4, 5, 5A, 15, & 15A	FOWLER INC. M M
20	4, 5, 5A, 16, & 16A	RESEARCH TRIANGLE REGIONAL PUBLIC TRANSPORTATION AUTHORITY
21	5, 5A, & 6	SOUTHERN REPAIR SERVICE, INC.
22	5 & 5A	NCDOT
23	5 & 5A	LENORA HILLIARD
24	5, 5A, & 6	LOVETT SQUARE LIMITED PARTNERSHIP
25	6	JOSE & NORA SANDOVAL (NO CLAIM)
26	6	MAXINE W. OWENS
27	6	TRUSTEES OF ASBURY TEMPLE UNITED METHODIST CHURCH
28	6	ASBURY TEMPLE UNITED METHODIST CHURCH
29	6 & 7	RESCUE MISSION MINISTRIES INC
30	6 & 7	CITY OF DURHAM
31	7	FRANK C. FELDER & JOHN C. BLACKWOOD
32	7	CLAYBORNE L. EVANS (NO CLAIM)
33	7	JOHN C. BLACKWOOD & FRANK CHRISTIAN FELDER
34	7	MARY E. PARKER (NO CLAIM)
35	7	FRANK C. FELDER
36	7	CLAYBORNE L. EVANS (NO CLAIM)
37	7	KOOLWATER LLC
38	7	STEVENSON ROCHELLE
39	7, 8 & 18	RESCUE MISSION MINISTRIES INC
40	7 & 8	KHAWAJA LLC
43	8	AHMED SADEO & ABDULLA AL-QASEM
45	8	VINSTON BRASWELL
46	8 & 9	RESCUE MISSION MINISTRIES, INC.
47	8 & 9	JOHNNIE L. & ETHEL CRAWFORD
49	9	RESCUE MISSION MINISTRIES INC.
50	9	MARGARITA MENDEZ FLORES
51	9	RESCUE MISSION MINISTRIES INC.
52	9	THOMAS H. FOWLER
53	9	TERRY WAYNE FISHER
54	9	GUY E. HURLEY
55	10	MAXINE W. OWENS
56	10	RALPH E. OWENS
57	10, 11, 20, & 23	DURHAM PUBLIC SCHOOLS BOARD OF EDUCATION

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
58	10	JEROME SMITH
58A	10	JEROME SMITH & HAROLD SMITH
59	10	ECCLESIA HOUSE OF PRAYER INC.
60	10 & 11	SOUTHERN REPAIR SERVICE INC.
61	11	M.M. FOWLER INC.
62	11	ECCLESIA COMMUNITY DEVELOPMENT
63	11	LEO'S SEAFOOD OF DURHAM L.D.R. INC.
64	11	ALI A. ISSA
65	11, 12, & 23	THE SALVATION ARMY
65A	11 & 12	CITY OF DURHAM
66	11 & 12	SHAKEEL AHMAD & WAHEEDA J. ALI
67	12	HENRY M. & GLENN CHERRY
68	12	SAMI & SENGDEUANE HANNA
68A	12	CITY OF DURHAM
69	12	EARL M. & DELORES EVANS
70	12	CHARLES R. WELLONS FOUNDATION
70A	12	CITY OF DURHAM
71	12 & 13	ADAMS INVESTMENT CO. INC.
72	12 & 13	ERWIN DISTRIBUTING CORP INC.
73	13	YARBORO & HESSEE WAREHOUSE LLC
74	13 & 24	CITY OF DURHAM
77	4	KATHRYN Y SHEPARD (NO CLAIM)
78	4	SHARON DENISE MURRAY (NO CLAIM)
79	4	VINSTON BRASWELL (NO CLAIM)
80	4	MECHANICS & FARMERS BANK (NO CLAIM)
81	4	CITY OF DURHAM (NO CLAIM)
82	4	VEREA DENSON ET AL
83	4, 15, & 15A	EAGLE VILLAGE COMM. DEVELOPMENT (NO CLAIM)
84	15 & 15A	KELSEY PROPERTIES, LLC
85	14 & 14A	JOHN AVERY BOYS & GIRLS CLUB (NO CLAIM)
86	14 & 14A	GWENDOLYN LOUDERMILK (NO CLAIM)
87	14 & 14A	HASKELL PROPERTIES INC (NO CLAIM)
88	14 & 14A	DUANE WILLIAMS & WIFE JACQUELINE WILLIAMS (NO CLAIM)
89	14 & 14A	MERCY RUGUARU (NO CLAIM)
90	14, 14A, 15, & 15A	RONALD E. & LILLIAS COLEMAN (NO CLAIM)
91	15 & 15A	MARY H. COOKE
93	16, 16A, 17, & 17A	CITY OF DURHAM
94	17 & 17A	SOUTHERN REPAIR SERVICE INC. (NO CLAIM)
95, 96, & 97	17 & 17A	SOUTHERN REPAIR SERVICE INC. (NO CLAIM)

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

## PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
110	6 & 7	WILLIAM R. WATSON
111	6 & 7	MANUEL ESTEBAN LOPEZ
112	6 & 7	JAMES W. PERRY
114	7 & 8	EVANGELISTIC PRAYER BAND., INC. (NO CLAIM)
118	7	RESCUE MISSION MINISTRIES, INC.
121	8 & 19	TCB-DIVI MORNING GLORY LLC
124	8 & 18	RESCUE MISSION MINISTRIES, INC.
125	18	RESCUE MISSION MINISTRIES, INC.
126	18	RESCUE MISSION MINISTRIES INC. (NO CLAIM)
127	18	KAREN A. JONES & PETER H. EDWARDS (NO CLAIM)
129	19	ALBERTA COLEMAN
130	19	BRITTANY R PEAKS
131	8	RESCUE MISSION MINISTRIES, INC.
132	8 & 19	SHANICA L. MAYES
134	8	OTHA J. & ALICE K. WILLIAMS
135	8 & 18	RESCUE MISSION MINISTRIES, INC. (NO CLAIM)
136	8 & 18	RESCUE MISSION MINISTRIES, INC. (NO CLAIM)
137, 138, & 139	18	RESCUE MISSION MINISTRIES INC. (NO CLAIM)
140	18	DURHAM RESCUE MISSION (NO CLAIM)
141	18	RESCUE MISSION MINISTRIES INC.
142	19	MARSHA Y. HENDRIX
143	19	BRENTLEY ALLEN COBB
144	19	GRACIELA SEILA
145	19	ANTHONY R. BAILEY
146	9 & 19	WILLIAM R WATSON JR
147	9	HARVEY L. & BEVERLY B. CRAIG
148	9	CEMCO INVESTMENT
149	8 & 9	GRADY T. & JOSEPHINE VEASEY
150	8	RESCUE MISSION MINISTRIES INC. (NO CLAIM)
158	21	MELISSA NORTON
159	21	PAUL J. EVANS
160	21	RESCUE MISSION MINISTRIES INC
161	21	RESCUE MISSION MINISTRIES INC
162	9 & 21	RESCUE MISSION MINISTRIES INC
163	9 & 21	JESSICA KATELYN ADAM
164	9	BILLY W. FOWLER SR.
165	9	RESCUE MISSION MINISTRIES INC
166	9	TERRY WAYNE FISHER
175	21	TOUSSAINT & SHERRI AVENT (NO CLAIM)

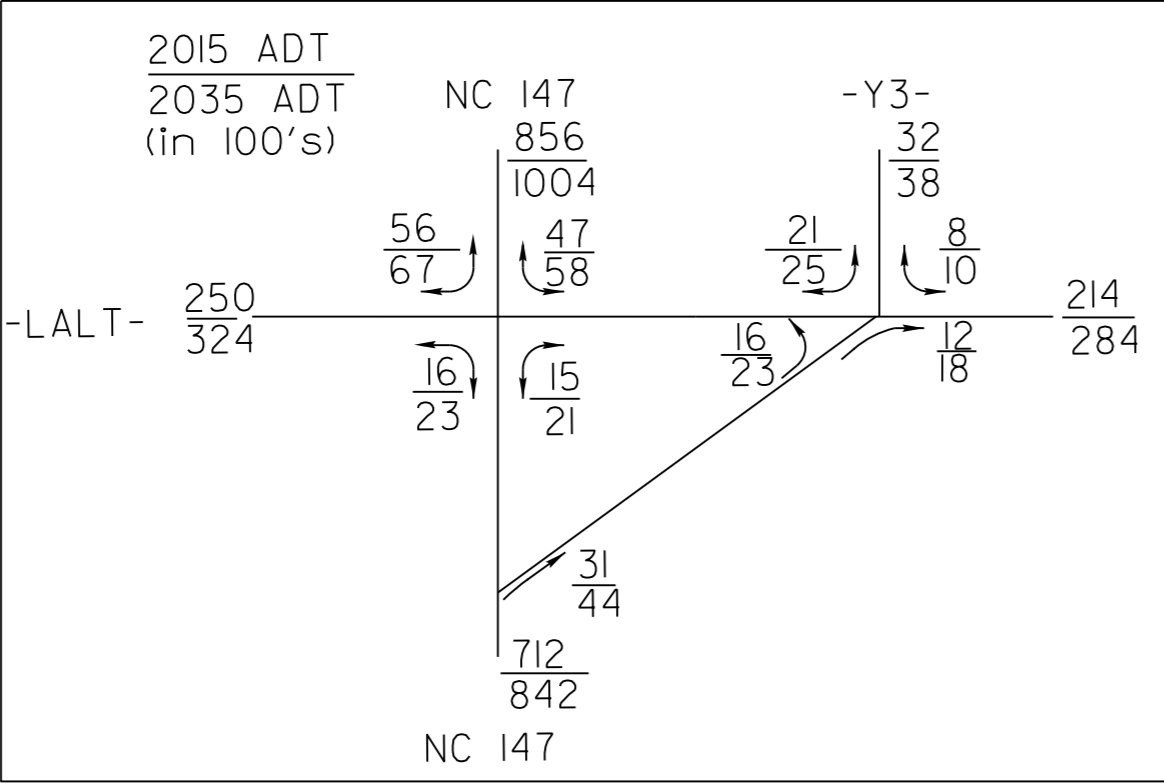
PARCEL No.	SHEET No.	PROPERTY OWNER NAME
176	21	TOUSSAINT & SHERRI AVENT (NO CLAIM)
177	21	LOUIS V. NIEMEYER (NO CLAIM)
178	10	WILLIE H. & EVANGELINE S. HOOD (NO CLAIM)
181	10	RALPH E. OWENS
182	10	ROBERT L. ELLIS
183	10	WILLIAM A. THOMAS
184	20	THOMAS A. DORSEY
185	20	RICHARD L. SOLES
186	20	TCB-DVI HOLMAN HOMES LLC (NO CLAIM)
187	11 & 22	SOUTHERN PINE PROPERTY
188	11	DOCK TERRELL
189	11	JEAN C. TRAWICK
190	11 & 12	CAROLYN A. BROWNING (NO CLAIM)
191	12	JEANETTE TUCKER
192	11 & 22	CREEDMORE HOLDING COMPANY LLC
200	12	JIMMIE L. & GERALDINE K. YOUNG (NO CLAIM)
202	12	DAVID MCQUEEN SR.
203	12 & 13	DAVID MCQUEEN SR.
204	12 & 24	THE EMIEL AUBREY GOOCH JR. REVOCABLE TRUST
205	24	TERRY L. YARBOROUGH
206	24	BUCKHEAD MANAGEMENT GROUP, LLC
207	24	DAVID MCQUEEN SR.
208	23 & 24	CITY OF DURHAM
210	24	YARBORO & HESSEE WAREHOUSE LLC (NO CLAIM)
211	22	PATRICIA ANN REAMS
212	22	CHURCH OF THE APOSTOLIC REVIVAL

5/28/99

07-MAY-2015 14:10 U-3308\_rdy-ParcelIndex.dgn  
14:10:00



REVISIONS  
 RIGHT OF WAY REVISION 10/16/2017 - AKW  
 PARCEL 17 - ADDED TCE



- (17) CITY OF DURHAM  
DB 312 PG 131
- (80) MECHANICS & FARMERS BANK  
DB 2734 PG 941
- (81) CITY OF DURHAM  
DB 314 PG 609

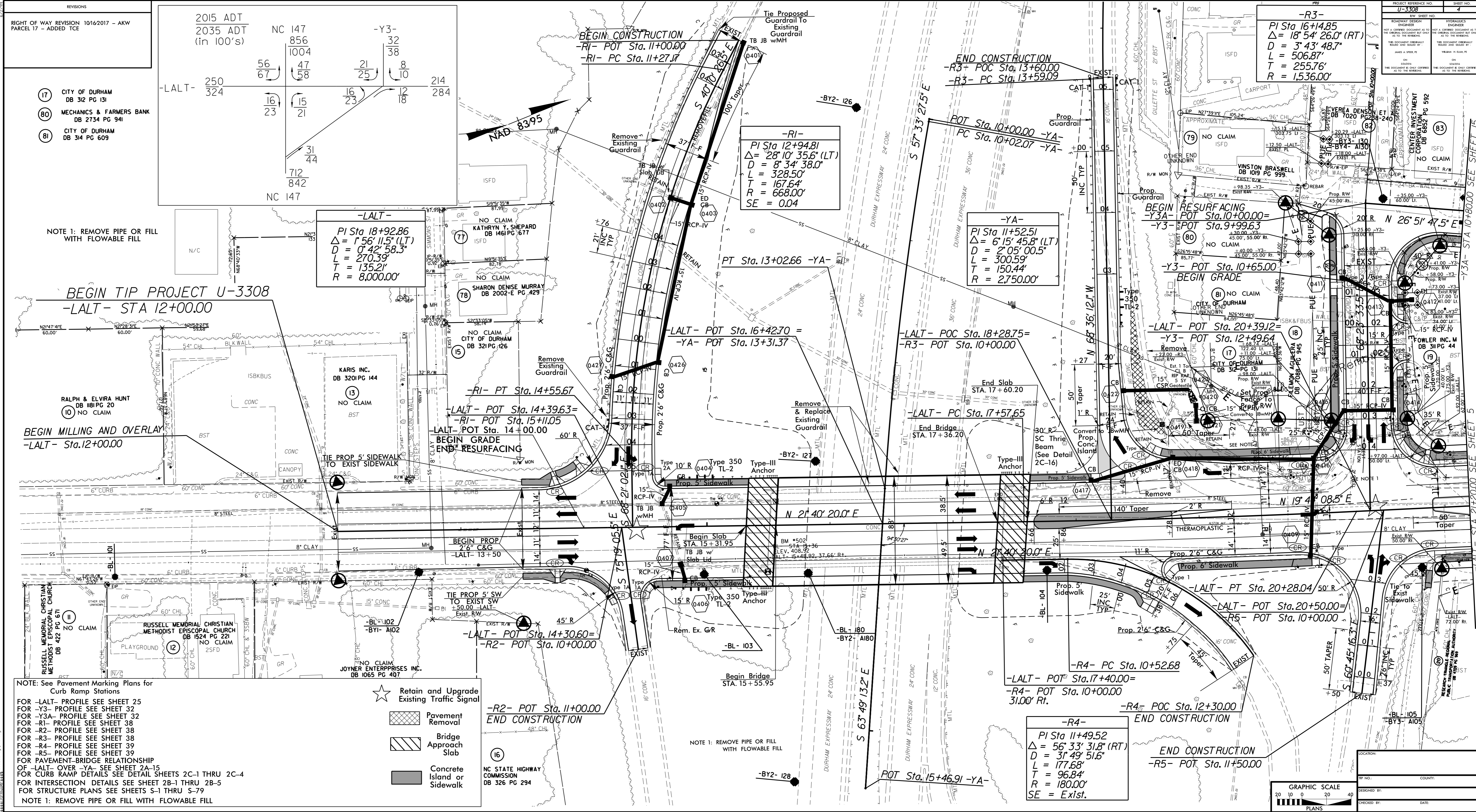
NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

BEGIN TIP PROJECT U-3308  
 -LALT- STA 12+00.00

BEGIN MILLING AND OVERLAY  
 -LALT- Sta.12+00.00

NOTE: See Pavement Marking Plans for Curb Ramp Stations  
 FOR -LALT- PROFILE SEE SHEET 25  
 FOR -Y3- PROFILE SEE SHEET 32  
 FOR -Y3A- PROFILE SEE SHEET 32  
 FOR -R1- PROFILE SEE SHEET 38  
 FOR -R2- PROFILE SEE SHEET 38  
 FOR -R3- PROFILE SEE SHEET 38  
 FOR -R4- PROFILE SEE SHEET 39  
 FOR -R5- PROFILE SEE SHEET 39  
 FOR PAVEMENT-BRIDGE RELATIONSHIP OF -LALT- OVER -YA- SEE SHEET 2A-15  
 FOR CURB RAMP DETAILS SEE DETAIL SHEETS 2C-1 THRU 2C-4  
 FOR INTERSECTION DETAILS SEE SHEET 2B-1 THRU 2B-5  
 FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-79  
 NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

- ★ Retain and Upgrade Existing Traffic Signal
- ▨ Pavement Removal
- ▨ Bridge Approach Slab
- ▨ Concrete Island or Sidewalk

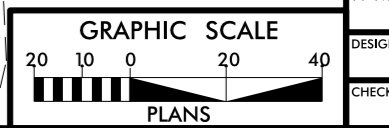


-R3-  
 PI Sta 16+14.85  
 $\Delta = 18^\circ 54' 26.0''$  (RT)  
 $D = 3^\circ 43' 48.7''$   
 $L = 506.87'$   
 $T = 255.76'$   
 $R = 1536.00'$

-R1-  
 PI Sta 12+94.81  
 $\Delta = 28^\circ 10' 35.6''$  (LT)  
 $D = 8^\circ 34' 38.0''$   
 $L = 328.50'$   
 $T = 167.64'$   
 $R = 668.00'$   
 $SE = 0.04$

-YA-  
 PI Sta 11+52.51  
 $\Delta = 6^\circ 15' 45.8''$  (LT)  
 $D = 2^\circ 05' 00.5''$   
 $L = 300.59'$   
 $T = 150.44'$   
 $R = 2750.00'$

-R4-  
 PI Sta 11+49.52  
 $\Delta = 56^\circ 33' 31.8''$  (RT)  
 $D = 3^\circ 49' 51.6''$   
 $L = 177.68'$   
 $T = 96.84'$   
 $R = 180.00'$   
 $SE = Exst.$



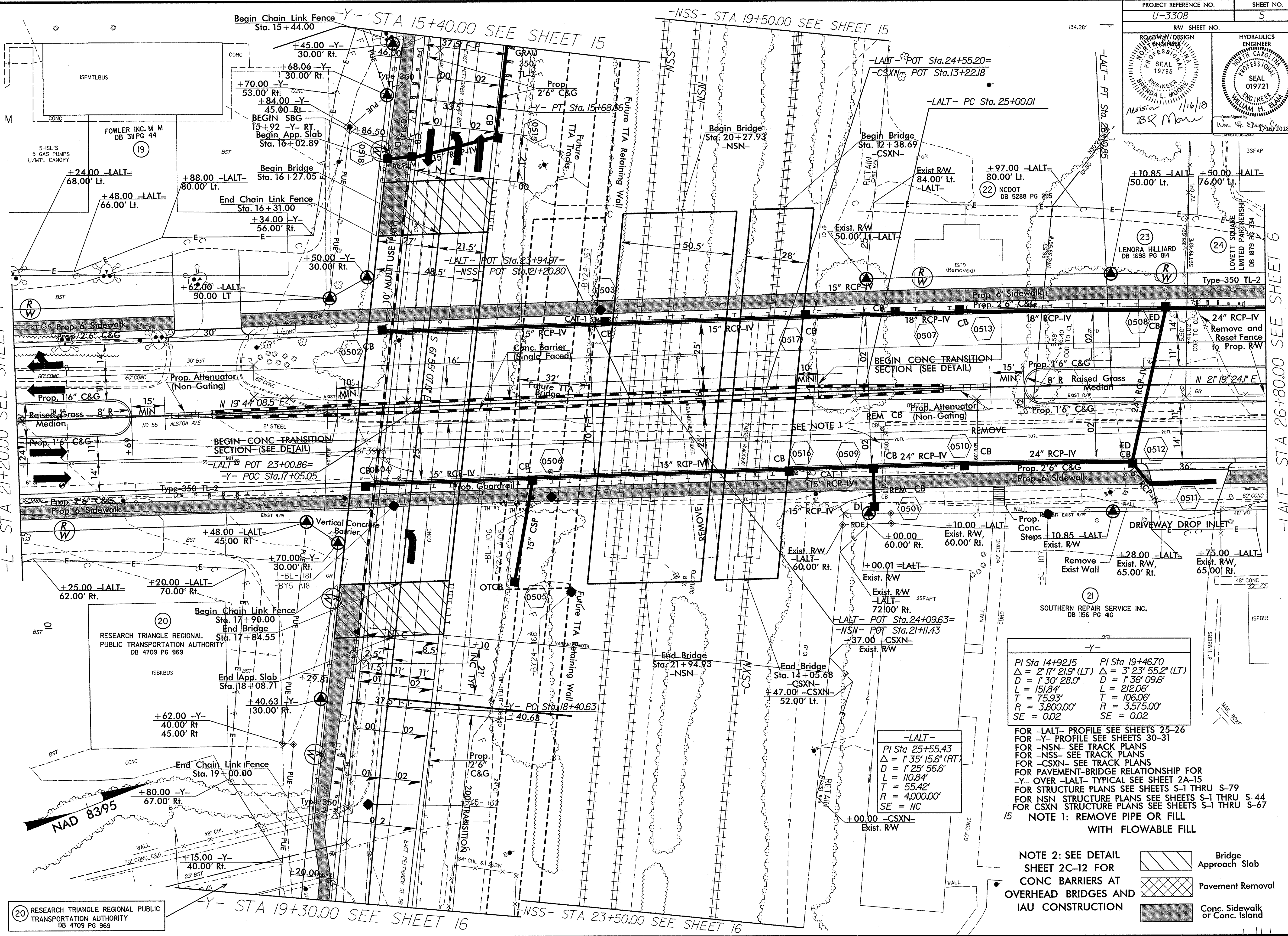
PROJECT REFERENCE NO. U-3308  
 SHEET NO. 7  
 ROADWAY DESIGN ENGINEER  
 THE DOCUMENT IS THE PROPERTY OF THE ENGINEER AND IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN.  
 THE ENGINEER ASSUMES NO LIABILITY FOR THE ACCURACY OF THE INFORMATION PROVIDED BY THE CLIENT OR ANY OTHER SOURCE.  
 THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED BY THE ENGINEER.  
 THE DOCUMENT IS NOT TO BE USED FOR ANY OTHER PROJECT OR SITE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

DATE: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_

CONSTRUCTION REVISION 1/6/2018 JBG - MODIFIED ROADWAY APPROACH, LANE CONFIGURATION AND SIDEWALK TO ACCOMMODATE A WALKWAY ON THE PETTIGREW STREET BRIDGE FROM STA. 12+00.00 TO STA. 20+40.63

-L- STA 21+20.00 SEE SHEET 4

-LALT- STA 26+80.00 SEE SHEET 6



$PI\ Sta\ 14+92.15$ $\Delta = 2^\circ 17' 21.9" (LT)$ $D = 1^\circ 30' 28.0"$ $L = 151.84'$ $T = 75.93'$ $R = 3,800.00'$ $SE = 0.02$	$PI\ Sta\ 19+46.70$ $\Delta = 3^\circ 23' 55.2" (LT)$ $D = 1^\circ 36' 09.6"$ $L = 212.06'$ $T = 106.06'$ $R = 3,575.00'$ $SE = 0.02$
--	---

FOR -LALT- PROFILE SEE SHEETS 25-26  
 FOR -Y- PROFILE SEE SHEETS 30-31  
 FOR -NSN- SEE TRACK PLANS  
 FOR -NSS- SEE TRACK PLANS  
 FOR -CSXN- SEE TRACK PLANS  
 FOR PAVEMENT-BRIDGE RELATIONSHIP FOR -Y- OVER -LALT- TYPICAL SEE SHEET 2A-15  
 FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-79  
 FOR NSN STRUCTURE PLANS SEE SHEETS S-1 THRU S-44  
 FOR CSXN STRUCTURE PLANS SEE SHEETS S-1 THRU S-67

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

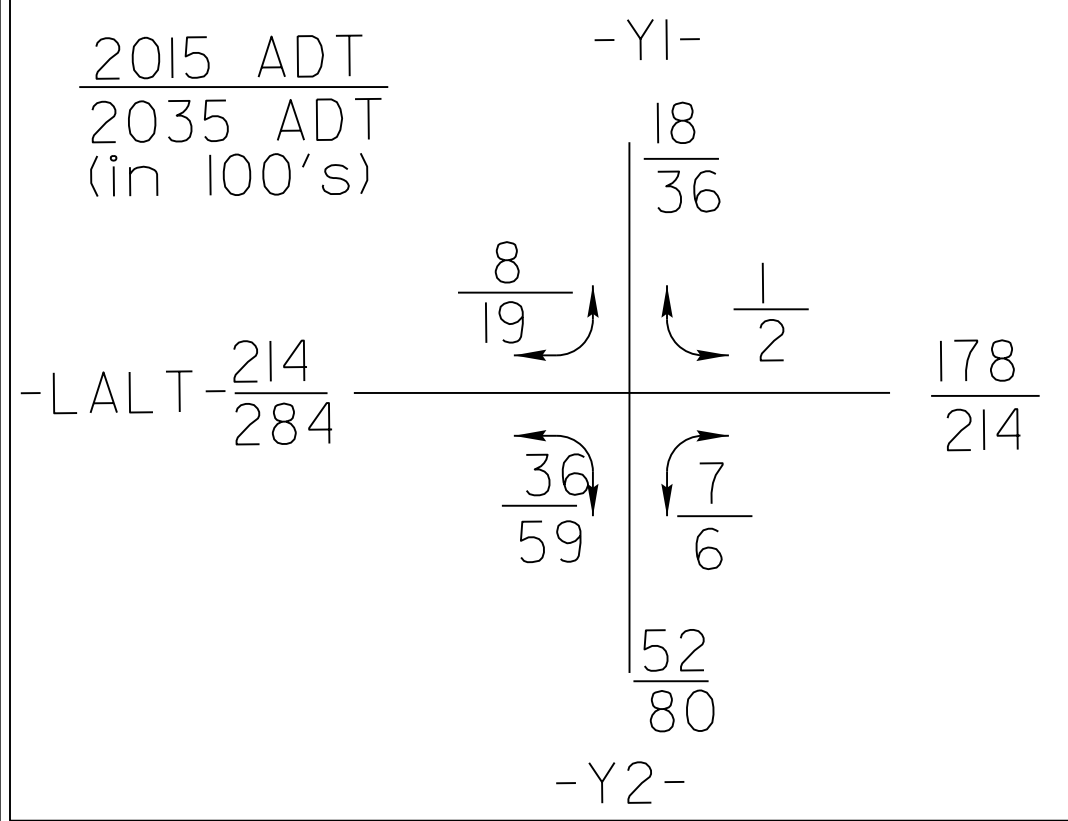
NOTE 2: SEE DETAIL SHEET 2C-12 FOR CONC BARRIERS AT OVERHEAD BRIDGES AND IAU CONSTRUCTION

	Bridge Approach Slab
	Pavement Removal
	Conc. Sidewalk or Conc. Island

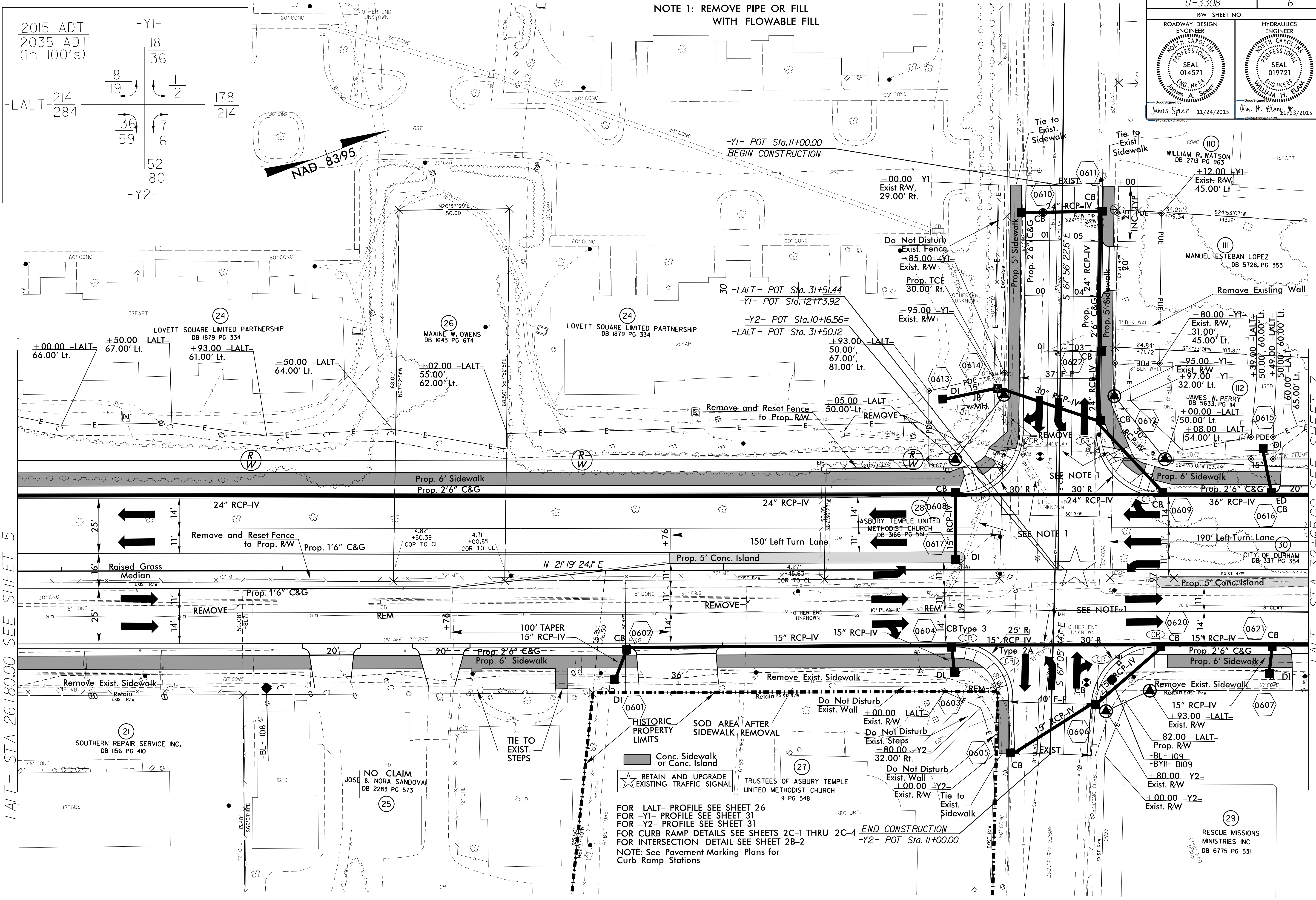
20 RESEARCH TRIANGLE REGIONAL PUBLIC TRANSPORTATION AUTHORITY DB 4709 PG 969

8/17/99

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NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL



-LALT- STA 26+80.00 SEE SHEET 5

-LALT- STA 32+65.00 SEE SHEET 7

FOR -LALT- PROFILE SEE SHEET 26  
 FOR -Y1- PROFILE SEE SHEET 31  
 FOR -Y2- PROFILE SEE SHEET 31  
 FOR CURB RAMP DETAILS SEE SHEETS 2C-1 THRU 2C-4  
 FOR INTERSECTION DETAIL SEE SHEET 2B-2  
 NOTE: See Pavement Marking Plans for Curb Ramp Stations

8/17/99

23-NOV-2015 10:45  
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2015 ADT  
2035 ADT  
(in 100's)

-LALT- 178  
214

15/32 18/29 178/206

8/9 5/4

-Y5-

34/48

FOR -LALT- PROFILE SEE SHEETS 26-27  
FOR -Y4- PROFILE SEE SHEET 32  
FOR -Y5- PROFILE SEE SHEET 32  
FOR CURB RAMP DETAILS SEE SHEETS  
2C-1 THRU 2C-4  
FOR INTERSECTION DETAILS SEE SHEET 2B-2  
NOTE: See Pavement Marking Plans for  
Curb Ramp Stations

-LALT-  
PI Sta 36+80.37  
 $\Delta = 17' 27" 39.2' (RT)$   
 $D = 2' 51" 53.2'$   
 $L = 400.06'$   
 $T = 200.70'$   
 $R = 2,000.00'$   
SE = 0.02

-Y5-  
PI Sta 11+73.67  
 $\Delta = 17' 22" 24.63' (LT)$   
 $D = 1' 27" 33.0'$   
 $L = 151.61'$   
 $T = 76.39'$   
 $R = 500.00'$   
SE = SEE PLANS

NAD 83/95

PROJECT REFERENCE NO. U-3308	SHEET NO. 7
ROADWAY DESIGN ENGINEER JAMES A. SPEER SEAL 014571 James Speer 5/26/2016	HYDRAULICS ENGINEER WILLIAM H. ELAM SEAL 019721 Wm. H. Elam, Jr. 5/26/2016

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

POT 11+00.00 -Y4-  
Begin Resurfacing  
End Grade Tie to  
Exist. Sidewalk

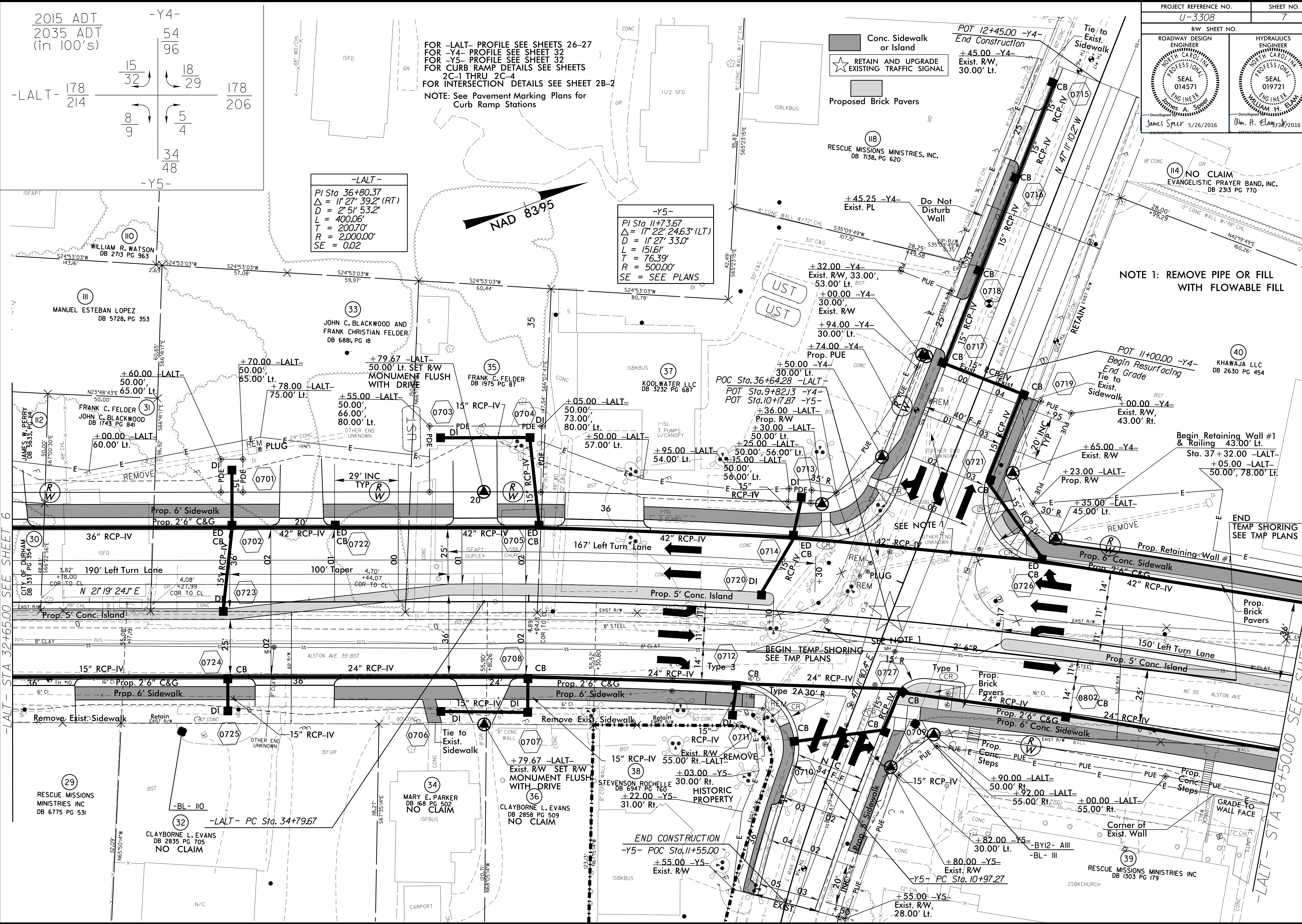
Begin Retaining Wall #1  
& Railing 43.00' Lt.  
Sta. 37+32.00 -LALT-  
+05.00 -LALT-  
50.00', 78.00' Lt.

- Conc. Sidewalk or Island
- RETAIN AND UPGRADE EXISTING TRAFFIC SIGNAL
- Proposed Brick Pavers

118 RESCUE MISSIONS MINISTRIES, INC.  
DB 7138, PG 620

114 NO CLAIM  
EVANGELISTIC PRAYER BAND, INC.  
DB 2313 PG 770

40 KHAWAJA LLC  
DB 2630 PG 454



Revisions

-LALT- STA 32+65.00 SEE SHEET 6

-LALT- STA 38+50.00 SEE SHEET 8

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33308-RW-15-01-2016-12-27

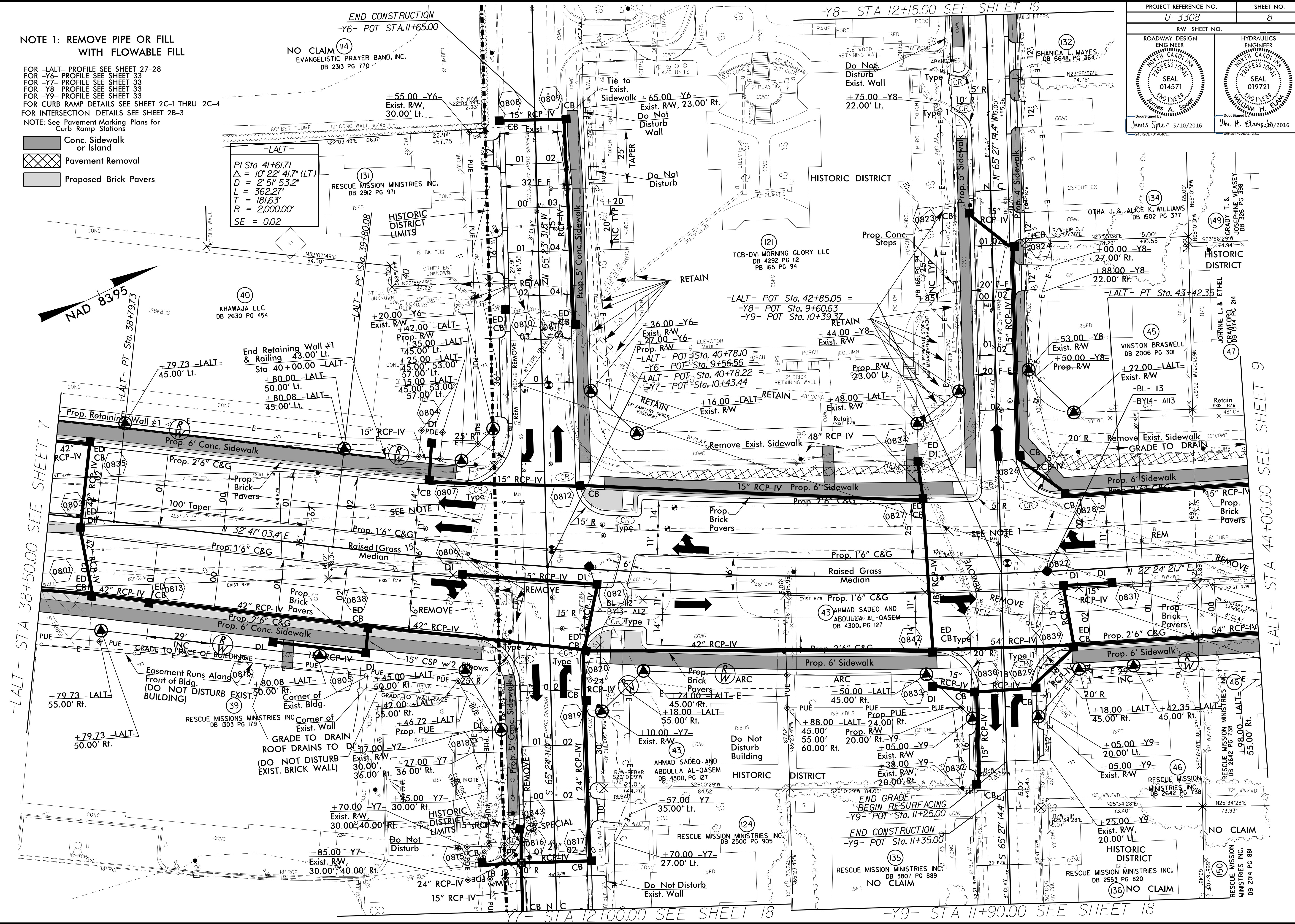
**NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL WITH FLOWABLE FILL**

FOR -LALT- PROFILE SEE SHEET 27-28  
 FOR -Y6- PROFILE SEE SHEET 33  
 FOR -Y7- PROFILE SEE SHEET 33  
 FOR -Y8- PROFILE SEE SHEET 33  
 FOR -Y9- PROFILE SEE SHEET 33  
 FOR CURB RAMP DETAILS SEE SHEET 2C-1 THRU 2C-4  
 FOR INTERSECTION DETAILS SEE SHEET 2B-3

NOTE: See Pavement Marking Plans for Curb Ramp Stations

- Conc. Sidewalk or Island
- Pavement Removal
- Proposed Brick Pavers

**-LALT-**  
 PI Sta 41+61.71  
 $\Delta = 10' 22' 41.7" (LT)$   
 $D = 2' 51' 53.2"$   
 $L = 362.27'$   
 $T = 181.63'$   
 $R = 2,000.00'$   
 $SE = 0.02$



-LALT- STA 38+50.00 SEE SHEET 7

-LALT- STA 44+00.00 SEE SHEET 9

-Y6- STA 12+00.00 SEE SHEET 18

-Y9- STA 11+90.00 SEE SHEET 18

REVISIONS

8/17/99

10-MAY-2016 08:52 33308-rdy-ps08.dgn  
 33308-RW-PLAN-8-18-16

PROJECT REFERENCE NO.	SHEET NO.
U-3308	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY:	THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY:
JAMES A. SPEER	WILLIAM H. ELAM
014571 ON 11/24/15	019721 ON 11/23/15
THIS MEDIUM SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT	THIS MEDIUM SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT




-Y10- STA 12+60.00 SEE SHEET 19

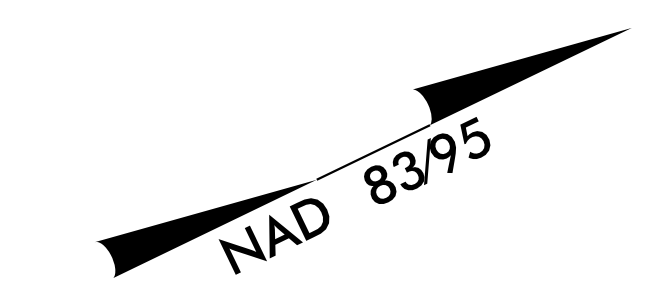
-Y12- STA 12+70.00 SEE SHEET 21

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

FOR -LALT- PROFILE SEE SHEET 28  
 FOR -Y10- PROFILE SEE SHEET 34  
 FOR -Y11- PROFILE SEE SHEET 34  
 FOR -Y12- PROFILE SEE SHEET 34  
 FOR -Y13- PROFILE SEE SHEET 34  
 FOR CURB RAMP DETAILS SEE SHEETS 2C-1 THRU 2C-4

NOTE: See Pavement Marking Plans for Curb Ramp Stations

-  Conc. Sidewalk or Island
-  Pavement Removal
-  Proposed Brick Pavers

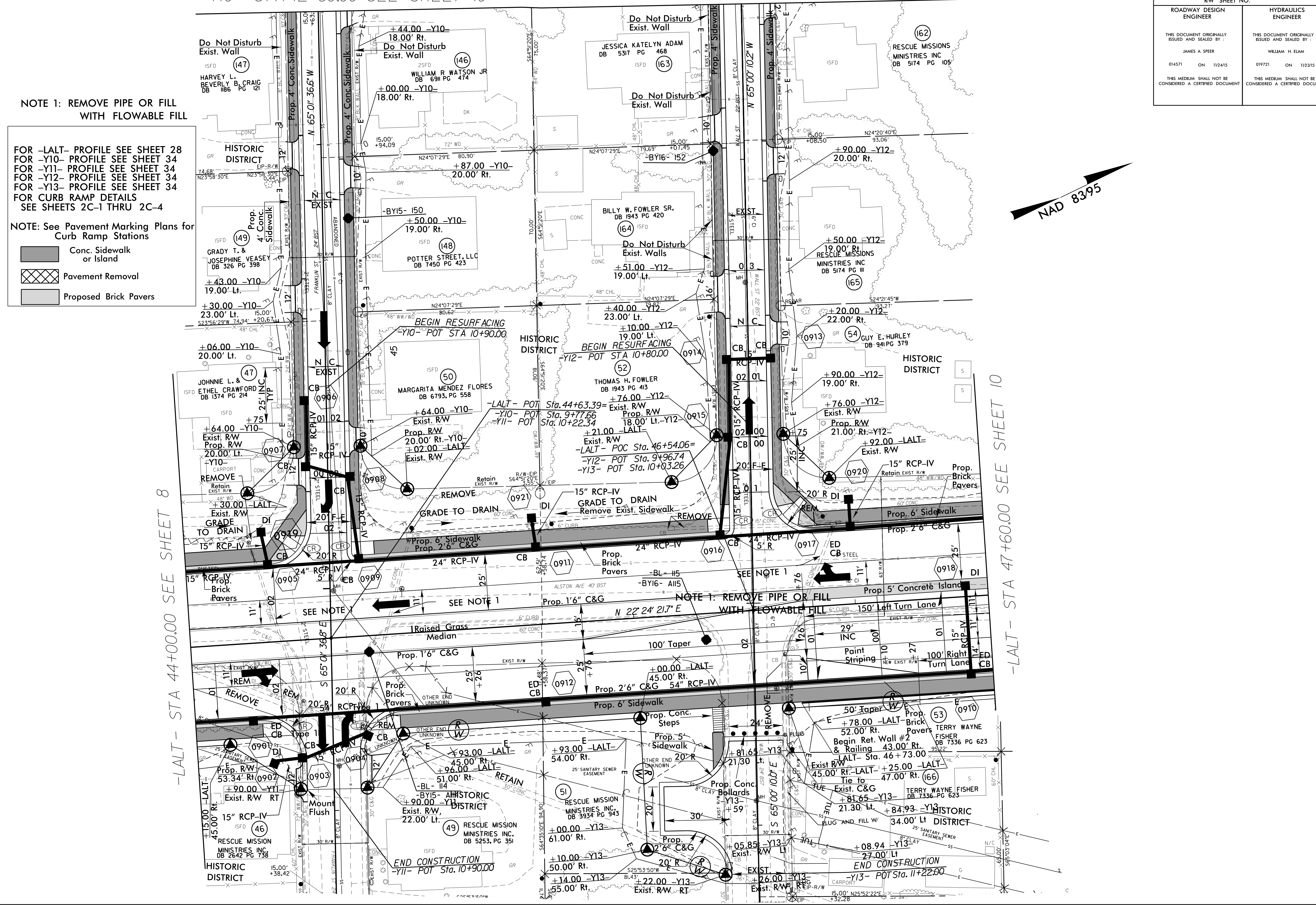


-LALT- STA 44+00.00 SEE SHEET 8

-LALT- STA 47+60.00 SEE SHEET 10

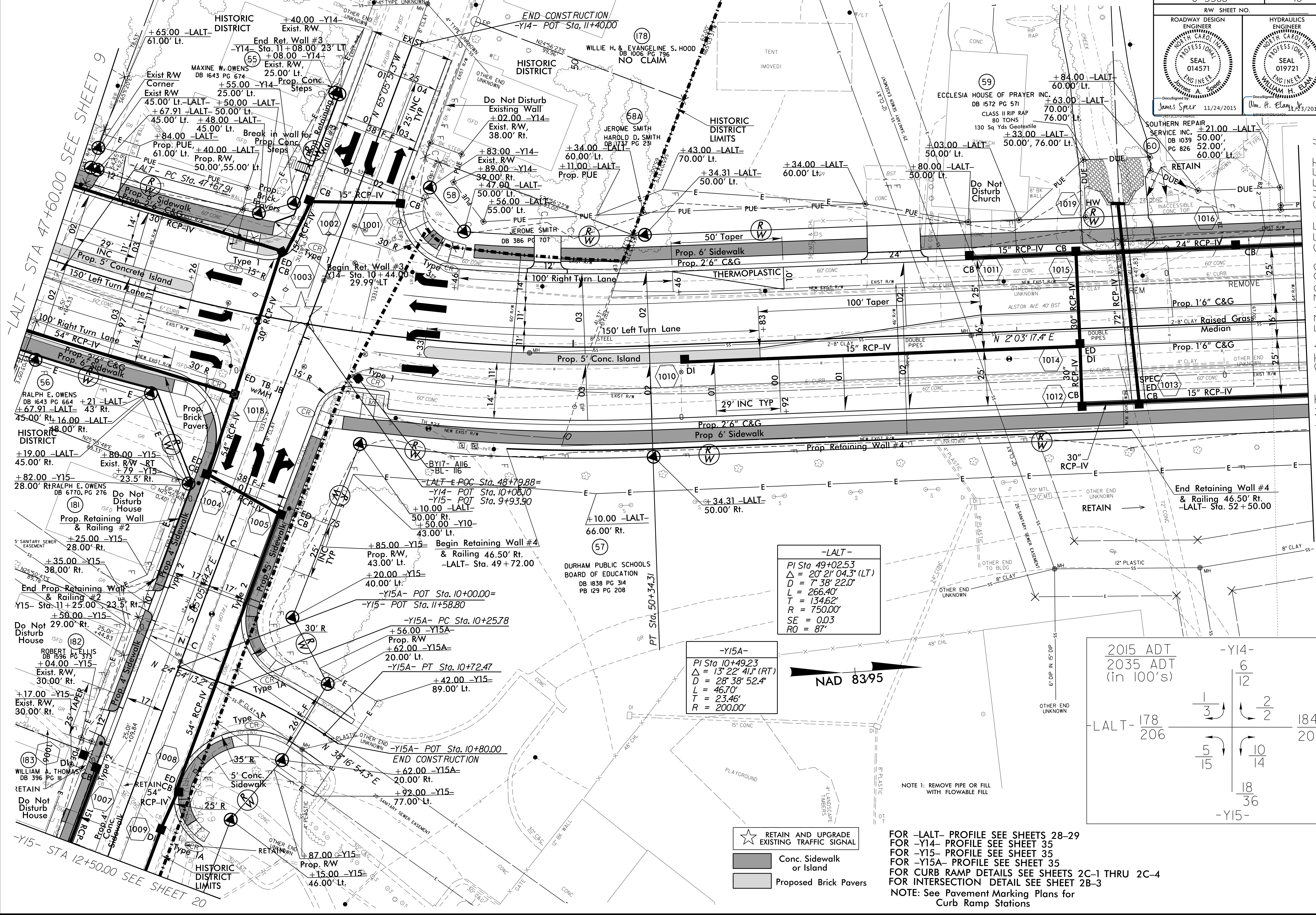
RW REVISION: 12/21/18 - UPDATED THE PROPERTY INFORMATION TO REMOVE AN EXISTING 25' SANITARY SEWER EASEMENT. - TLW

Revisions: 8/17/99 21-DEC-2018 [p:25] U:\3308\_rdw\ps01.dgn



MATCH LINE SHEET 21

PROJECT REFERENCE NO. U-3308	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER CAROL M. JAMES PROFESSIONAL SEAL 014571 JAMES A. SPEER	HYDRAULICS ENGINEER CAROL M. JAMES PROFESSIONAL SEAL 019721 WILLIAM H. BLUM
James Speer 11/24/2015	Wm. H. Blum 11/23/2015



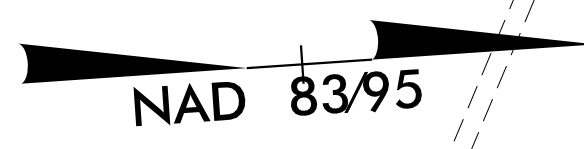
REVISIONS

-LALT- STA 47+60.00 SEE SHEET 9

-LALT- STA 53+30.00 SEE SHEET 11

-LALT-  
PI Sta 49+02.53  
Δ = 20° 21' 04.3" (LT)  
D = 7' 38" 22.0"  
L = 266.40'  
T = 134.62'  
R = 750.00'  
SE = 0.03  
RO = 87'

-Y15A-  
PI Sta 10+49.23  
Δ = 13° 22' 41" (RT)  
D = 28' 38" 52.4"  
L = 46.70'  
T = 23.46'  
R = 200.00'



2015 ADT	-Y14-	
2035 ADT	6	
(in 100's)	12	
	1/3	2/2
LALT- 178		184
206		204
	5/15	10/14
	18	
	36	
	-Y15-	

- ☆ RETAIN AND UPGRADE EXISTING TRAFFIC SIGNAL
- Conc. Sidewalk or Island
- Proposed Brick Pavers

FOR -LALT- PROFILE SEE SHEETS 28-29  
 FOR -Y14- PROFILE SEE SHEET 35  
 FOR -Y15- PROFILE SEE SHEET 35  
 FOR -Y15A- PROFILE SEE SHEET 35  
 FOR CURB RAMP DETAILS SEE SHEETS 2C-1 THRU 2C-4  
 FOR INTERSECTION DETAIL SEE SHEET 2B-3  
 NOTE: See Pavement Marking Plans for Curb Ramp Stations

23-NOV-2015 10:45 U3308.rdy-ps10.dgn

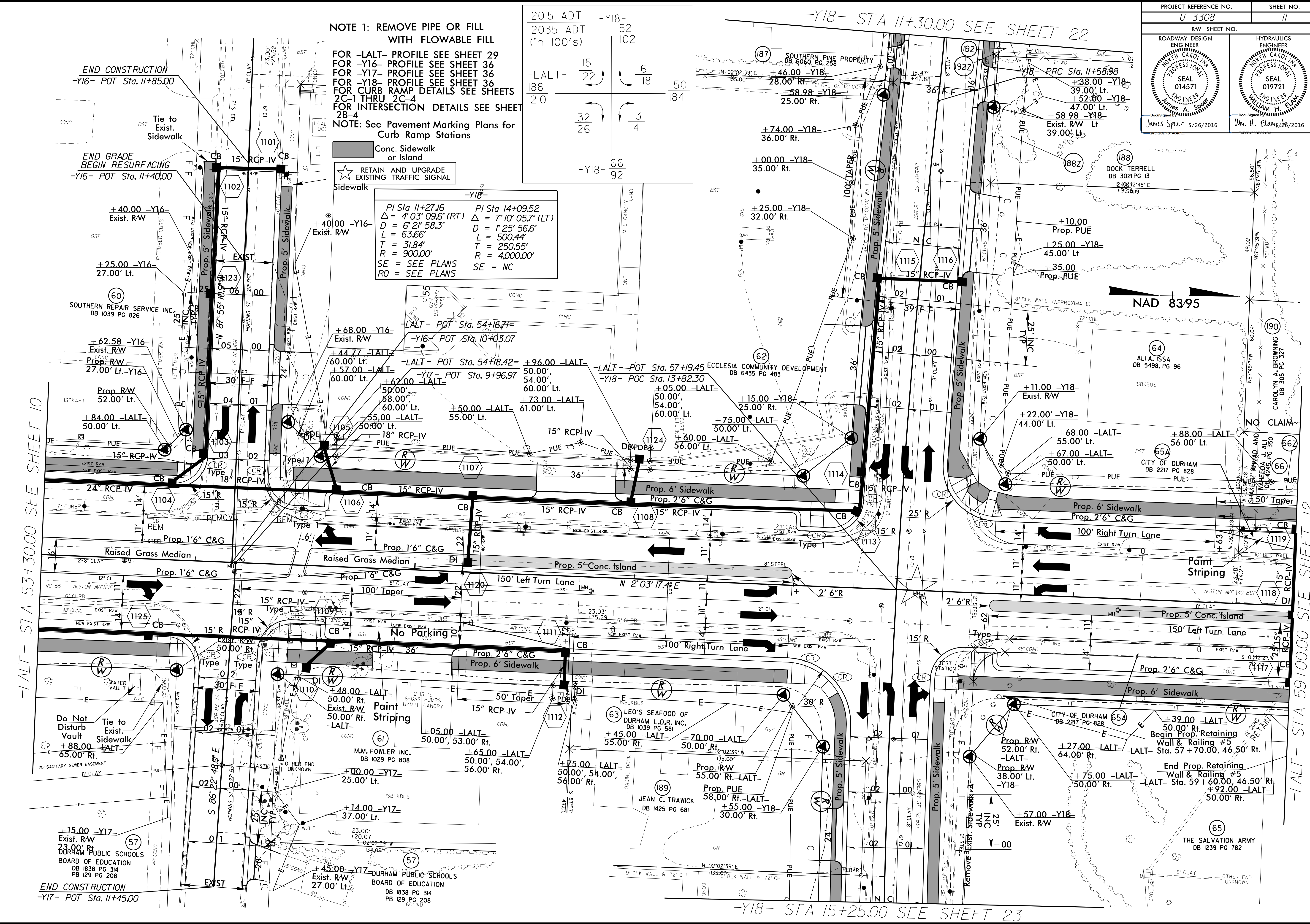
-Y15- STA 12+50.00 SEE SHEET 20

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL  
 FOR -Y16- PROFILE SEE SHEET 36  
 FOR -Y17- PROFILE SEE SHEET 36  
 FOR -Y18- PROFILE SEE SHEET 36  
 FOR CURB RAMP DETAILS SEE SHEETS 2C-1 THRU 2C-4  
 FOR INTERSECTION DETAILS SEE SHEET 2B-4  
 NOTE: See Pavement Marking Plans for Curb Ramp Stations

2015 ADT	-Y18-	52
2035 ADT		102
(in 100's)		
-LALT-	15	6
188	22	18
210		150
	32	3
	26	4
-Y18-	66	92

Conc. Sidewalk or Island  
 RETAIN AND UPGRADE EXISTING TRAFFIC SIGNAL  
 Sidewalk

-Y18-  
 PI Sta 11+27.16 Δ = 4°03'09.6" (RT) Δ = 7°10'05.7" (LT)  
 D = 6'21'58.3" D = 1'25'56.6"  
 L = 63.66' L = 500.44'  
 T = 31.84' T = 250.55'  
 R = 900.00' R = 4,000.00'  
 SE = SEE PLANS SE = NC  
 RO = SEE PLANS



-LALT- STA 53+30.00 SEE SHEET 10

-LALT- STA 59+00.00 SEE SHEET 12

-Y18- STA 15+25.00 SEE SHEET 23

-Y18- STA 11+30.00 SEE SHEET 22

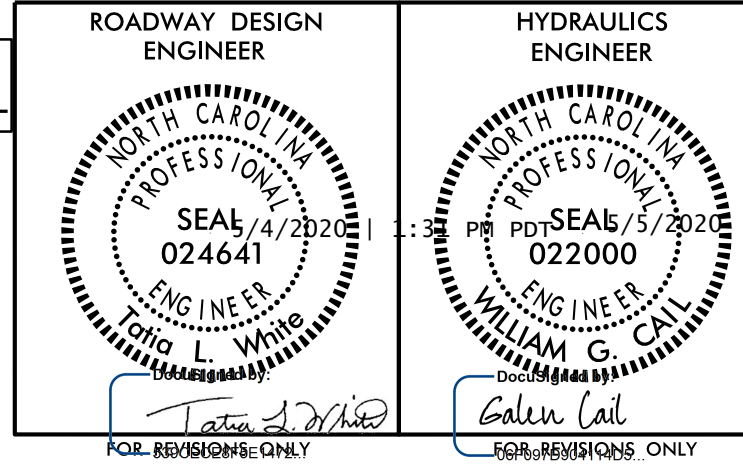
NAD 83/95

Revisions

8/17/99

23 MAY 2016 15:41 3308\_rdy.psl.dgn  
 3308.rdy.psl.dgn



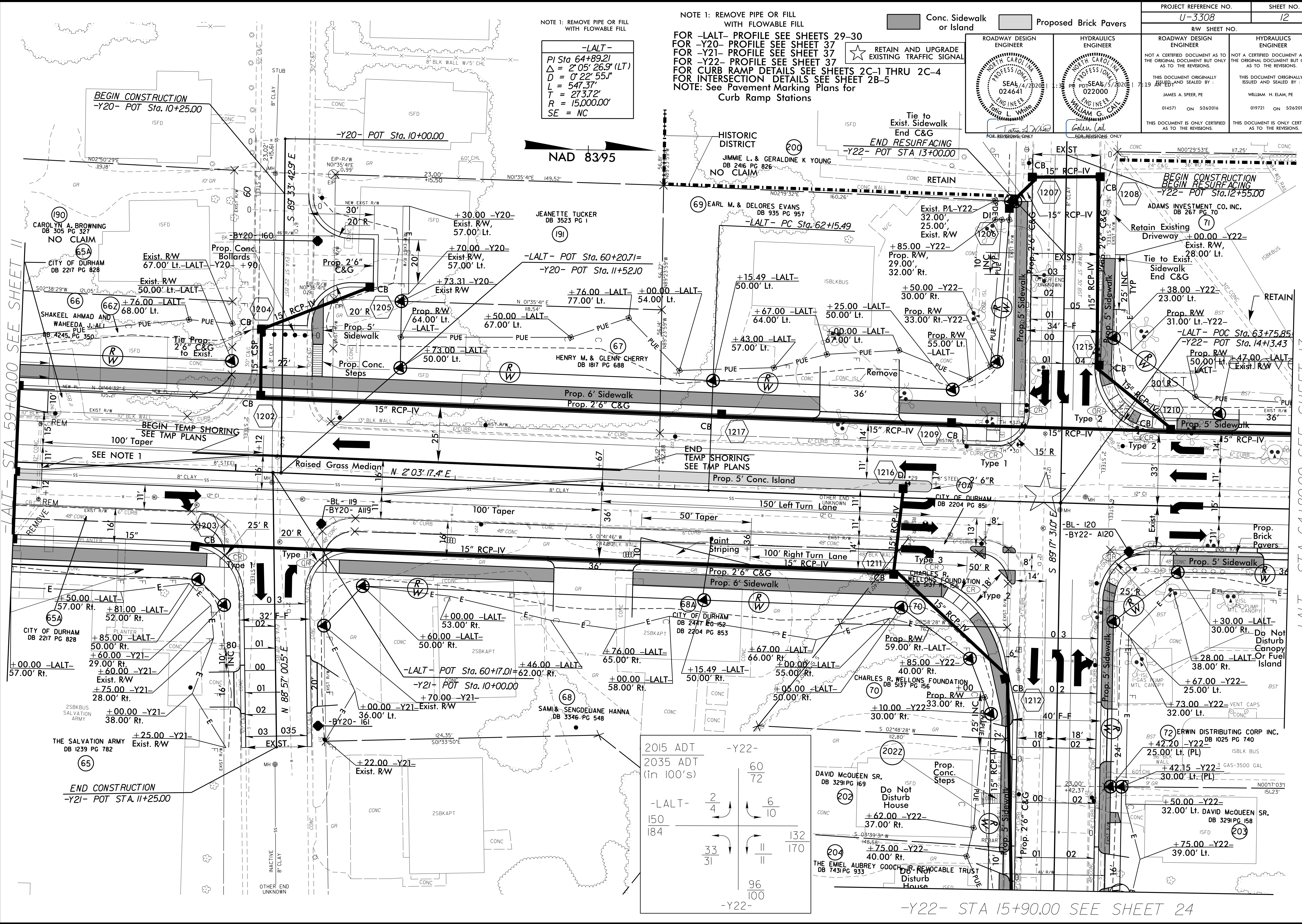


NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

FOR -LALT- PROFILE SEE SHEETS 29-30  
 FOR -Y20- PROFILE SEE SHEET 37  
 FOR -Y21- PROFILE SEE SHEET 37  
 FOR -Y22- PROFILE SEE SHEET 37  
 FOR CURB RAMP DETAILS SEE SHEETS 2C-1 THRU 2C-4  
 FOR INTERSECTION DETAILS SEE SHEET 2B-5  
 NOTE: See Pavement Marking Plans for Curb Ramp Markings

RETAIN AND UPGRADE EXISTING TRAFFIC SIGNAL

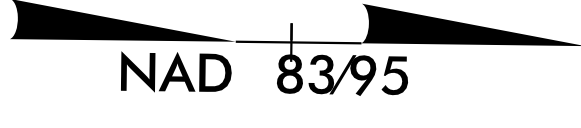
-LALT-  
 PI Sta 64+89.21  
 $\Delta = 2'05''26.9''(LT)$   
 $D = 0'22''55.1''$   
 $L = 547.37'$   
 $T = 273.72'$   
 $R = 15,000.00'$   
 SE = NC



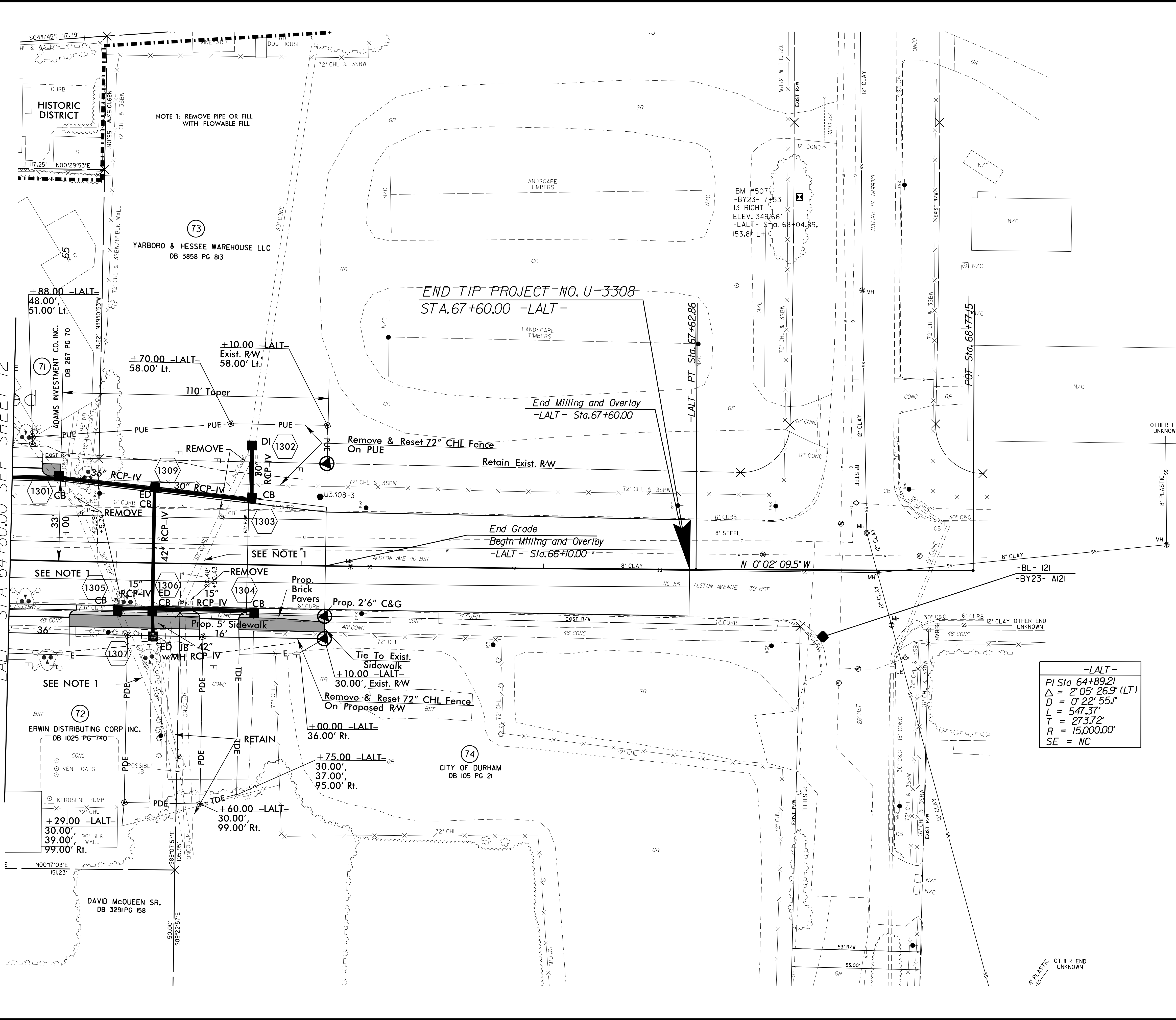
2015 ADT	-Y22-
2035 ADT (in 100's)	60 / 72
-LALT-	2 / 4      6 / 10
150	33 / 31      11 / 170
184	96 / 100
	-Y22-

8/17/99  
 5/5/2020 CONSTRUCTION REVISION - Y22 VERTICAL ALIGNMENT LOWERED FROM STATION 15+00 TO STATION 18+50  
 04 MAY 2020 15:55 3308.rdy.psl2.dgn  
 3308.rdy.psl2.dgn  
 3308.rdy.psl2.dgn

-LALT- STA 59+00.00 SEE SHEET 11  
 -LALT- STA 64+80.00 SEE SHEET 13  
 -Y22- STA 15+90.00 SEE SHEET 24



8/17/99  
23-MAY-2016 15:42 3308.rdy-ps13.dgn  
3308-PLAN-REVISIONS



**-LALT-**  
 PI Sta 64+89.21  
 $\Delta = 2^{\circ}05'26.9''$  (LT)  
 $D = 0^{\circ}22'55.1''$   
 $L = 547.37'$   
 $T = 273.72'$   
 $R = 15,000.00'$   
 $SE = NC$

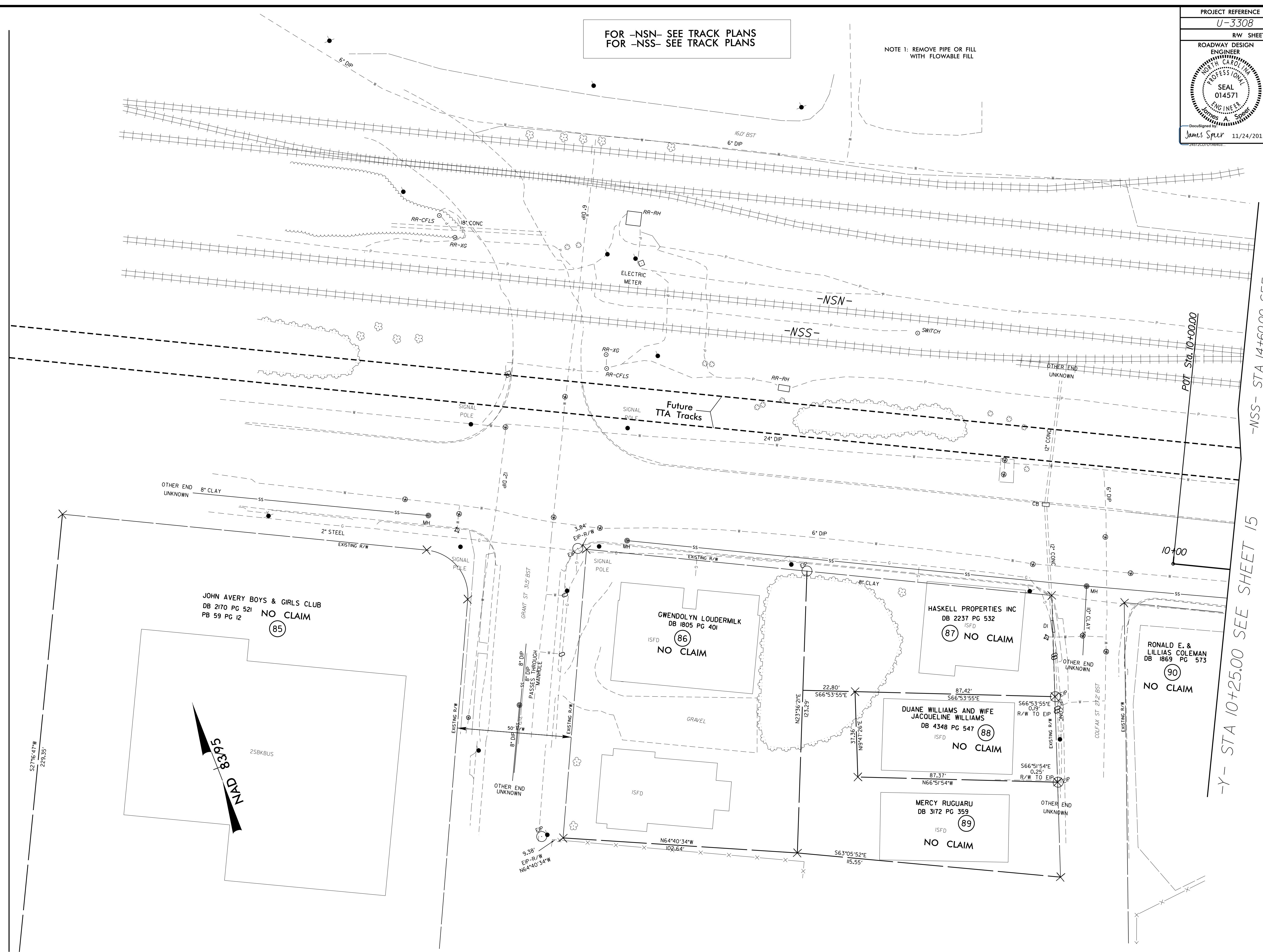
**NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL**

- Proposed Brick Pavers
- Conc. Sidewalk or Island

FOR -LALT- PROFILE SEE SHEET 30

FOR -NSN- SEE TRACK PLANS  
FOR -NSS- SEE TRACK PLANS

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL



-Y- STA 10+25.00 SEE SHEET 15

-NSS- STA 14+60.00 SEE SHEET 15

JOHN AVERY BOYS & GIRLS CLUB  
DB 2170 PG 521  
PB 59 PG 12  
NO CLAIM  
85

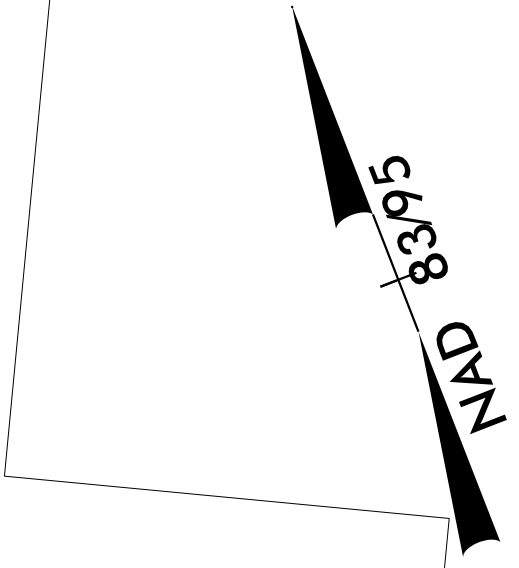
GWENDOLYN LOUDERMILK  
DB 1805 PG 401  
ISFD  
NO CLAIM  
86

HASKELL PROPERTIES INC  
DB 2237 PG 532  
ISFD  
NO CLAIM  
87

DUANE WILLIAMS AND WIFE  
JACQUELINE WILLIAMS  
DB 4348 PG 547  
ISFD  
NO CLAIM  
88

MERCY RUGUARU  
DB 3172 PG 359  
ISFD  
NO CLAIM  
89

RONALD E. &  
LILLIAS COLEMAN  
DB 1869 PG 573  
NO CLAIM  
90



REVISIONS

8/17/99

23-NOV-2015 10:45 U:\3308.r\dj.psl4.dgn  
3:38:58 PM

CONSTRUCTION REVISION 1/16/2018 JBG - MODIFIED ROADWAY APPROACH, LANE CONFIGURATION, AND SIDEWALK TO ACCOMMODATE A WALKWAY ON THE PETTIGREW STREET BRIDGE FROM -Y- STA. 12+00.00 TO STA. 20+40.63

8/17/99

-Y- STA 10+25.00 SEE SHEET 14 -NSS- STA 14+60.00 SEE SHEET 14

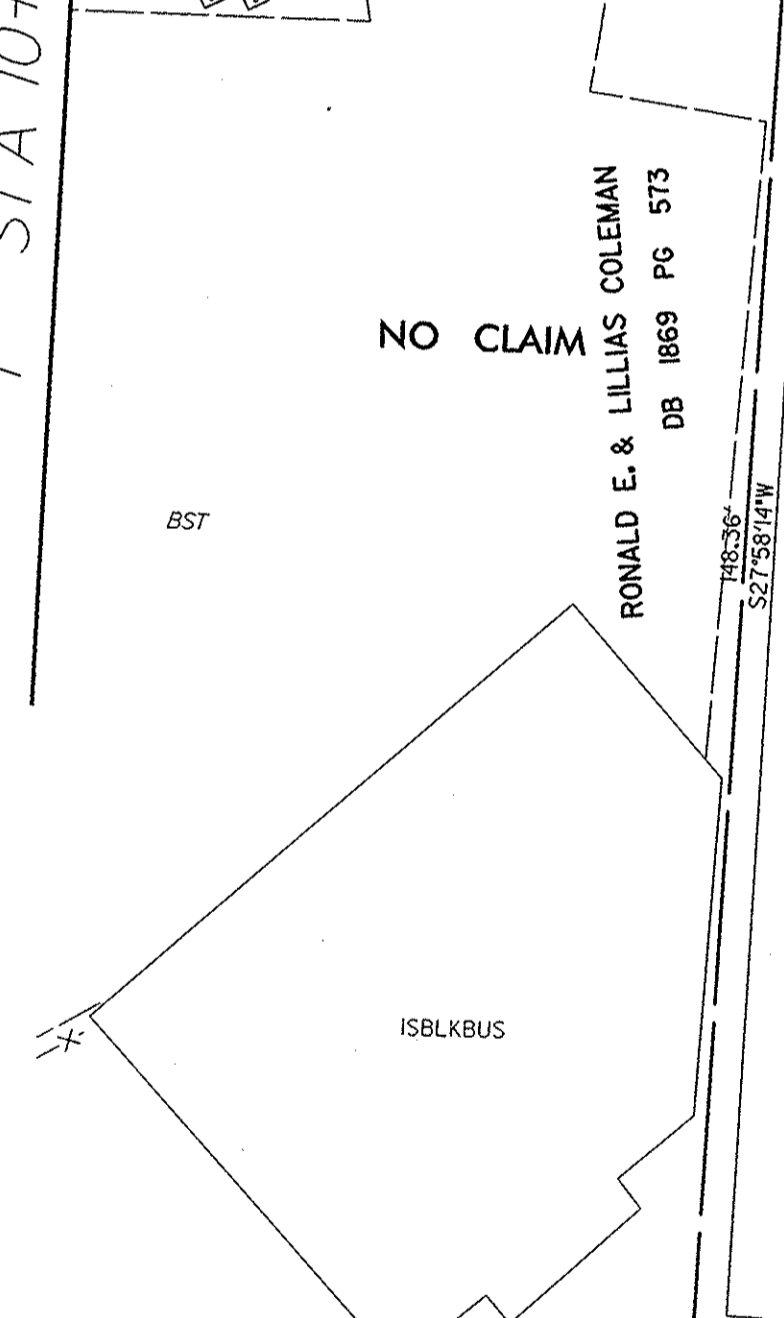
-Y- STA 15+40.00 SEE SHEET 5

-Y-

PI Sta 13+15.92 Δ = 3° 01' 31.6" (RT) D = 1' 30" 28.0" L = 200.66' T = 100.35' R = 3,800.00' SE = 0.02	PI Sta 14+92.15 Δ = 2° 17' 21.9" (LT) D = 1' 30" 28.0" L = 151.84' T = 75.93' R = 3,800.00' SE = 0.02
--	---

-Y- POT Sta. 11+50.00  
BEGIN CONSTRUCTION  
S 62° 39' 16.8" E

-Y- PC Sta. 12+15.57  
-Y- POT Sta. 12+00.00  
BEGIN GRADE  
Transition Prop. C&G into Existing Curb



NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

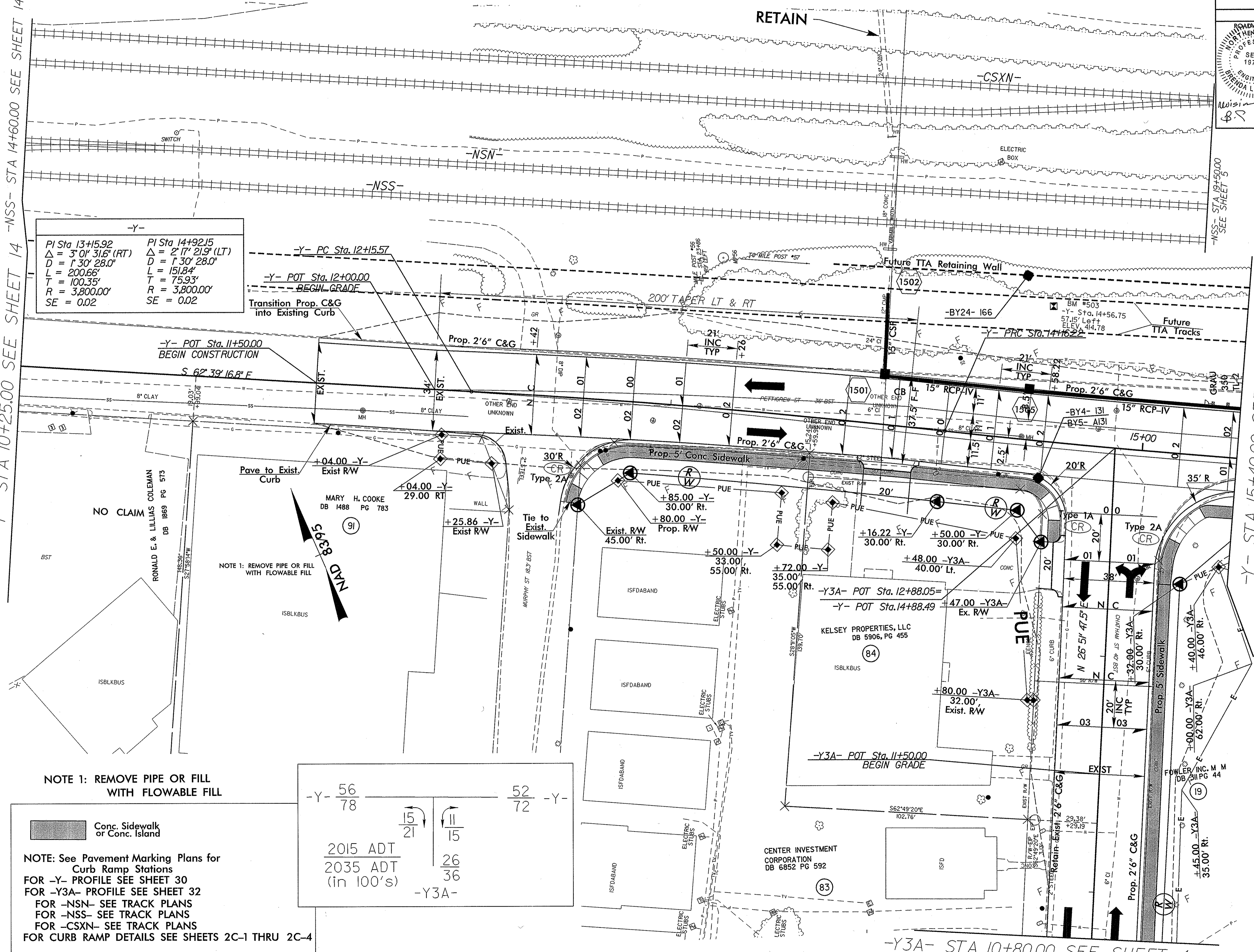
Conc. Sidewalk or Conc. Island

NOTE: See Pavement Marking Plans for Curb Ramp Stations  
 FOR -Y- PROFILE SEE SHEET 30  
 FOR -Y3A- PROFILE SEE SHEET 32  
 FOR -NSN- SEE TRACK PLANS  
 FOR -NSS- SEE TRACK PLANS  
 FOR -CSXN- SEE TRACK PLANS  
 FOR CURB RAMP DETAILS SEE SHEETS 2C-1 THRU 2C-4

-Y- 56/78      52/72 -Y-

2015 ADT 2035 ADT (in 100's)	15/21	11/15	26/36
------------------------------------	-------	-------	-------

-Y3A-



-Y3A- STA 10+80.00 SEE SHEET 4

CONSTRUCTION REVISION 1/16/2018 JBG - MODIFIED ROADWAY APPROACH, LANE CONFIGURATION, AND SIDEWALK TO ACCOMMODATE A WALKWAY ON THE PETTIGREW STREET BRIDGE FROM -Y- STA. 12+00.00 TO STA. 20+40.63

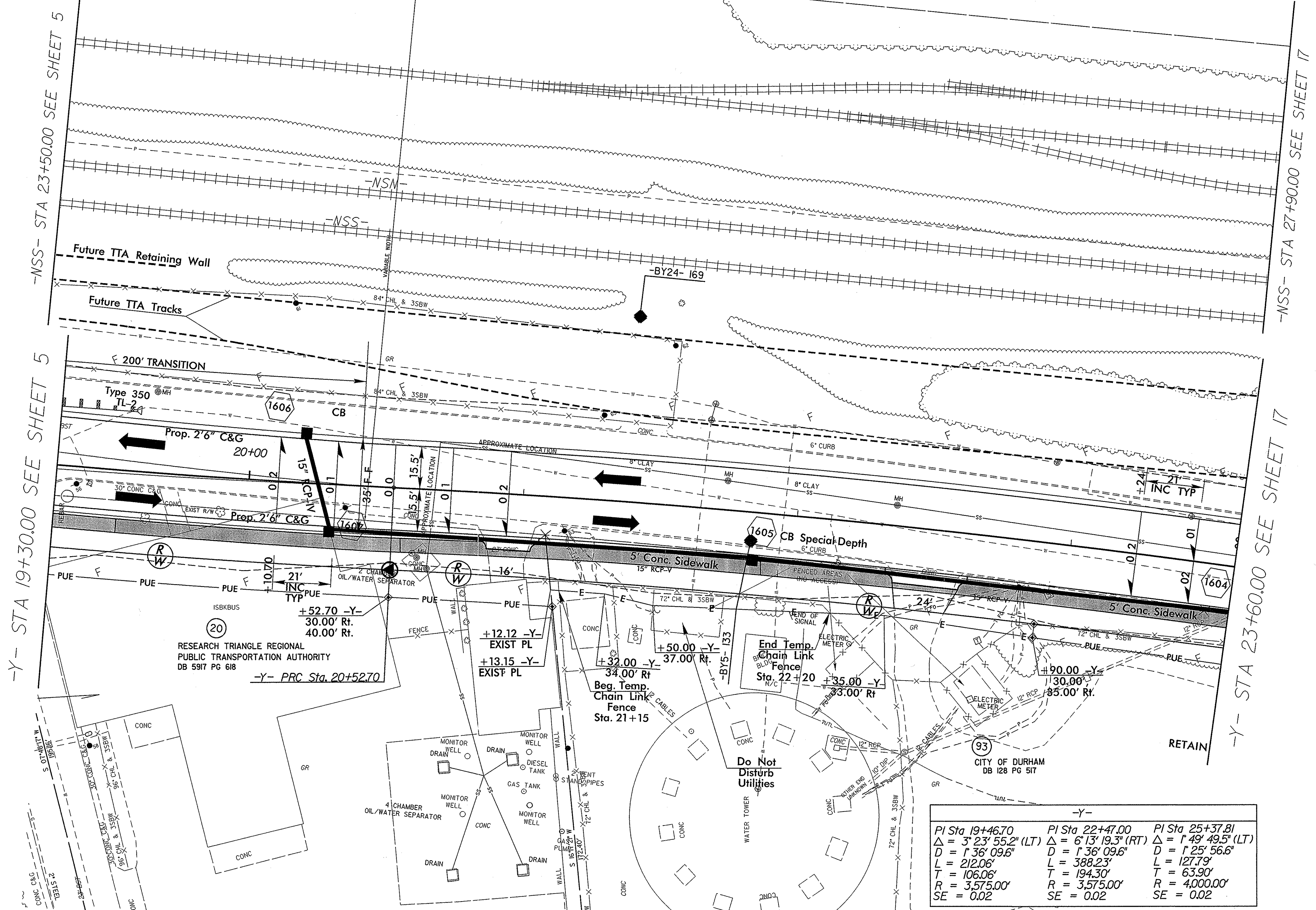
8/17/89

12-JAN-2018 09:45  
 R:\Roadway\Proj\13308.rdy-ps16.dgn  
 \$\$\$\$\$\$13308.rdy\$\$\$\$\$

FOR -Y- PROFILE SEE SHEETS 30 & 31  
 FOR -CSXN- SEE TRACK PLANS  
 FOR -NSN- SEE TRACK PLANS  
 FOR -NSS- SEE TRACK PLANS

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

PROJECT REFERENCE NO. U-3308	SHEET NO. 16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER PROFESSIONAL SEAL 19795 Wm. H. Moore 1/16/18	HYDRAULICS ENGINEER PROFESSIONAL SEAL 019721 Wm. H. Moore 1/16/2018



-Y- STA 19+30.00 SEE SHEET 5

-NSS- STA 23+50.00 SEE SHEET 5

-NSS- STA 27+90.00 SEE SHEET 17

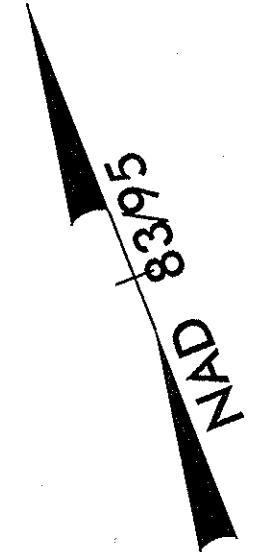
-Y- STA 23+60.00 SEE SHEET 17

RESEARCH TRIANGLE REGIONAL  
 PUBLIC TRANSPORTATION AUTHORITY  
 DB 5917 PG 618

+12.12 -Y- EXIST PL  
 +13.15 -Y- EXIST PL  
 +32.00 -Y- 34.00' Rt  
 Beg. Temp. Chain Link Fence Sta. 21+15

+50.00 -Y- 37.00' Rt  
 +35.00 -Y- 33.00' Rt  
 End Temp. Chain Link Fence Sta. 22+20

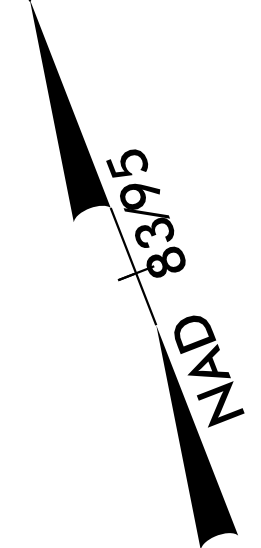
-Y-		
PI Sta 19+46.70	PI Sta 22+47.00	PI Sta 25+37.81
$\Delta = 3' 23' 55.2''$ (LT)	$\Delta = 6' 13' 19.3''$ (RT)	$\Delta = 1' 49' 49.5''$ (LT)
D = 1' 36' 09.6"	D = 1' 36' 09.6"	D = 1' 25' 56.6"
L = 212.06'	L = 388.23'	L = 127.79'
T = 106.06'	T = 194.30'	T = 63.90'
R = 3,575.00'	R = 3,575.00'	R = 4,000.00'
SE = 0.02	SE = 0.02	SE = 0.02



PROJECT REFERENCE NO. U-3308	SHEET NO. 17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 014571 JAMES A. SPEER	HYDRAULICS ENGINEER SEAL 019721 WILLIAM H. ELAM
DocuSigned by: James Speer 11/24/2015	DocuSigned by: Wm. H. Elam 11/23/2015

FOR -NSS- SEE TRACK PLANS  
FOR -NSN- SEE TRACK PLANS  
FOR -Y- PROFILE SEE SHEET 31

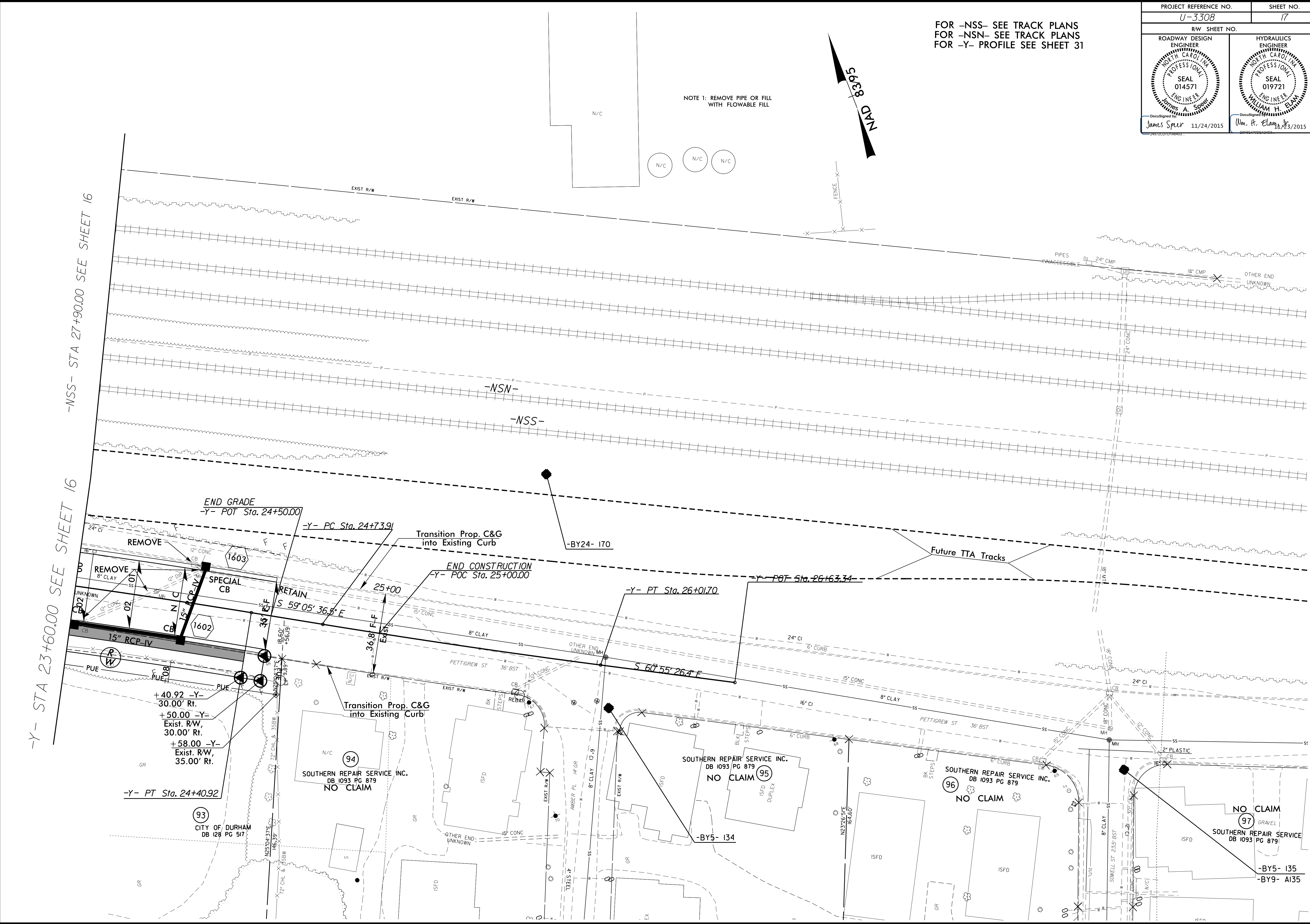
NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL



-Y- STA 23+60.00 SEE SHEET 16  
 -NSS- STA 27+90.00 SEE SHEET 16

8/17/99  
 23-NOV-2015 10:45 U3308.rdy.psl7.dgn  
 3:44:58 PM JAMES A. SPEER

REVISIONS



+40.92 -Y-  
30.00' Rt.  
 +50.00 -Y-  
30.00' Rt.  
 +58.00 -Y-  
35.00' Rt.  
 -Y- PT Sta. 24+40.92

(94)  
 SOUTHERN REPAIR SERVICE INC.  
 DB 1093 PG 879  
 NO CLAIM

(95)  
 SOUTHERN REPAIR SERVICE INC.  
 DB 1093 PG 879  
 NO CLAIM

(96)  
 SOUTHERN REPAIR SERVICE INC.  
 DB 1093 PG 879  
 NO CLAIM

(97)  
 SOUTHERN REPAIR SERVICE  
 DB 1093 PG 879  
 NO CLAIM

-BY5- 135  
-BY9- A135

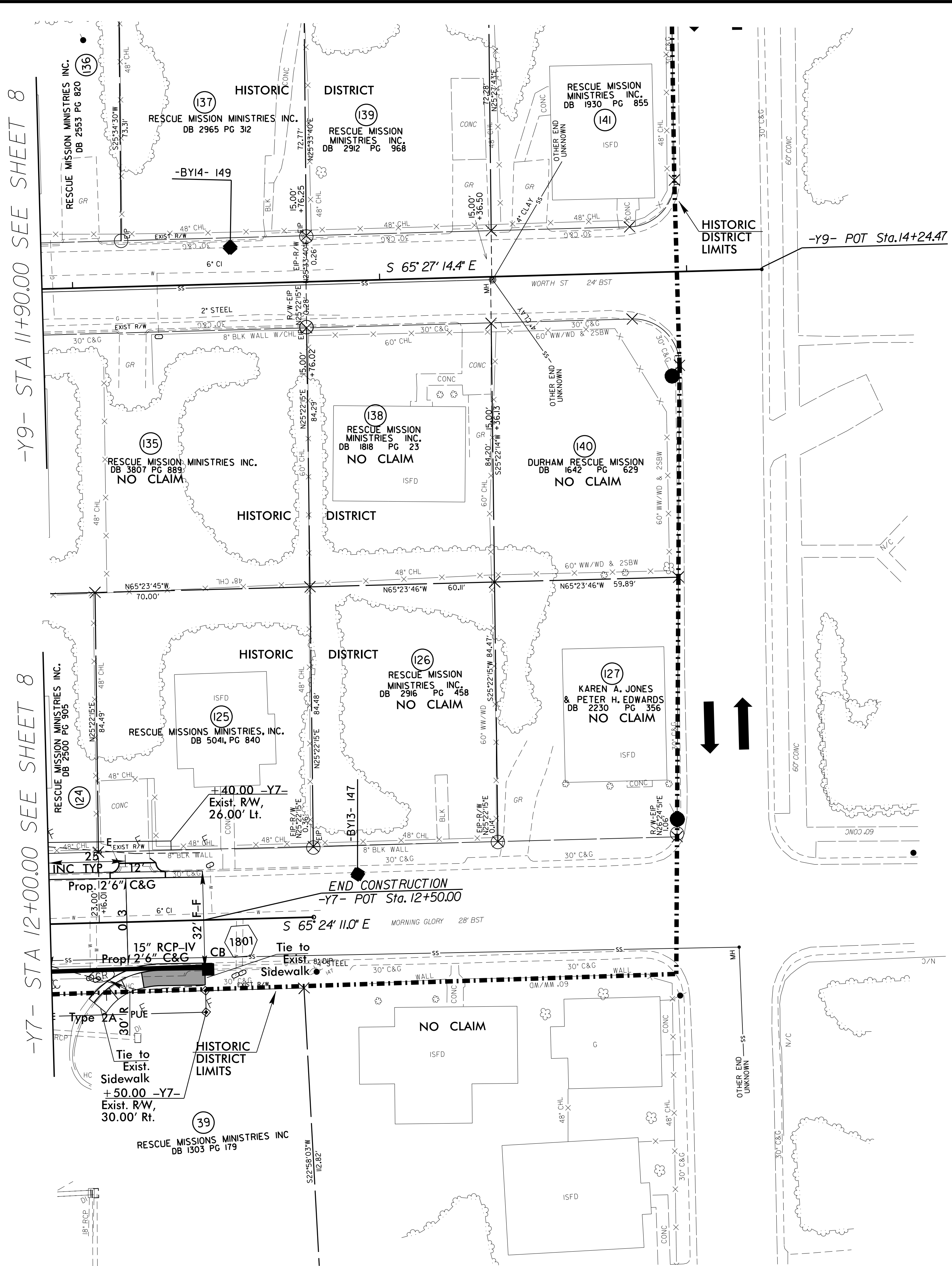
NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

-Y7- STA 12+00.00 SEE SHEET 8

-Y9- STA 11+90.00 SEE SHEET 8

8/17/99

REVISIONS

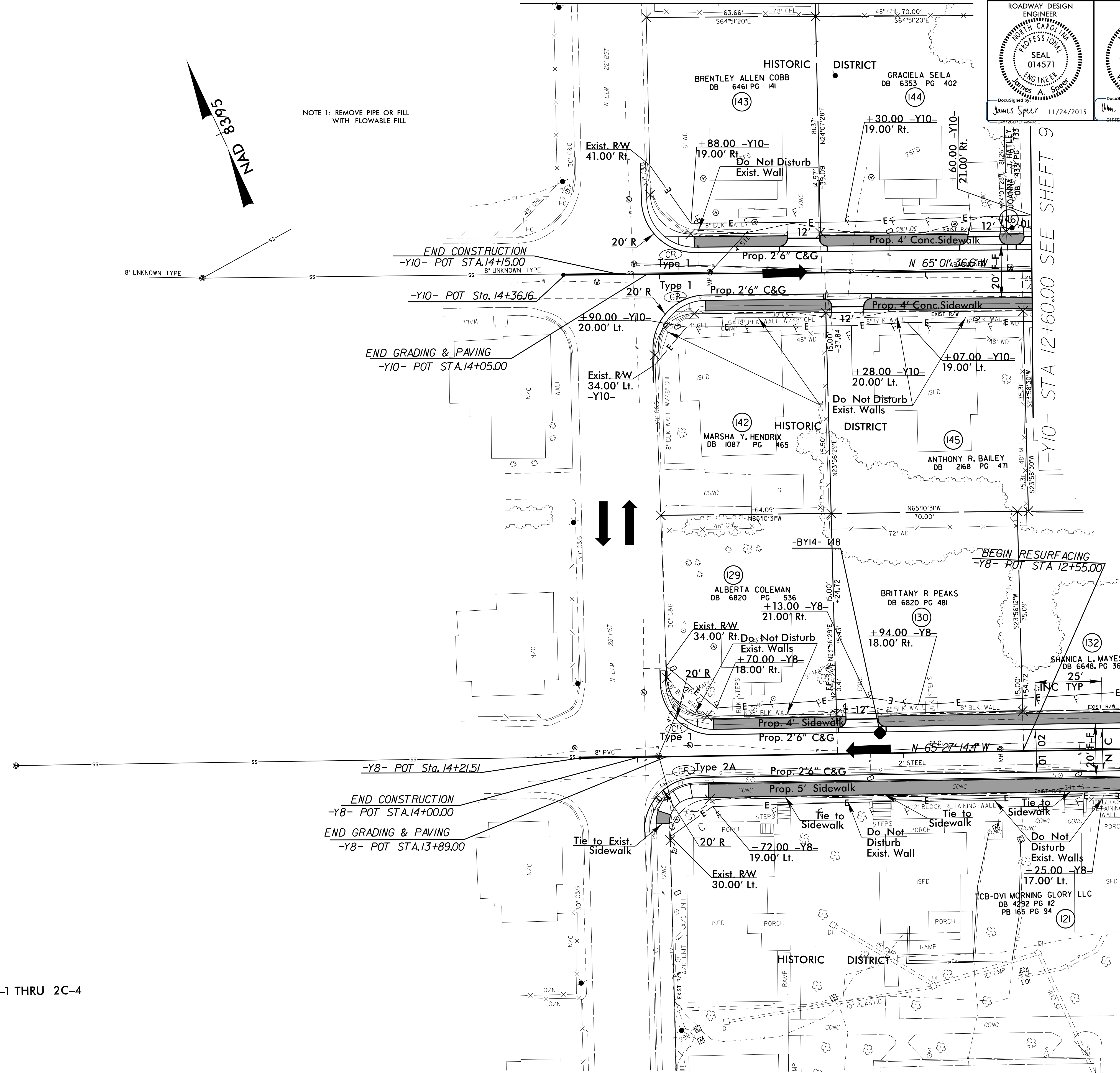
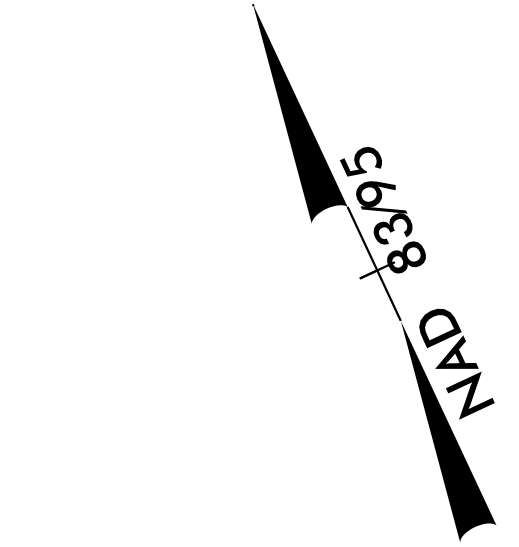


Conc. Sidewalk or Island  
 FOR -Y7- PROFILE SEE SHEET 33

23-NOV-2015 10:45 U3308\_rdy-ps18.dgn  
 8:58 AM JAS/SPEER/WHE

MATCH LINE SHEET 21

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL



-Y10- STA 12+60.00 SEE SHEET 9

-Y8- STA 12+15.00 SEE SHEET 8

Conc. Sidewalk or Island  
 FOR -Y8- PROFILE SEE SHEET 33  
 FOR -Y10- PROFILE SEE SHEET 34  
 FOR RAMP CURB DETAILS SEE SHEET 2C-1 THRU 2C-4  
 NOTE: See Pavement Marking Plans for Curb Ramp Stations

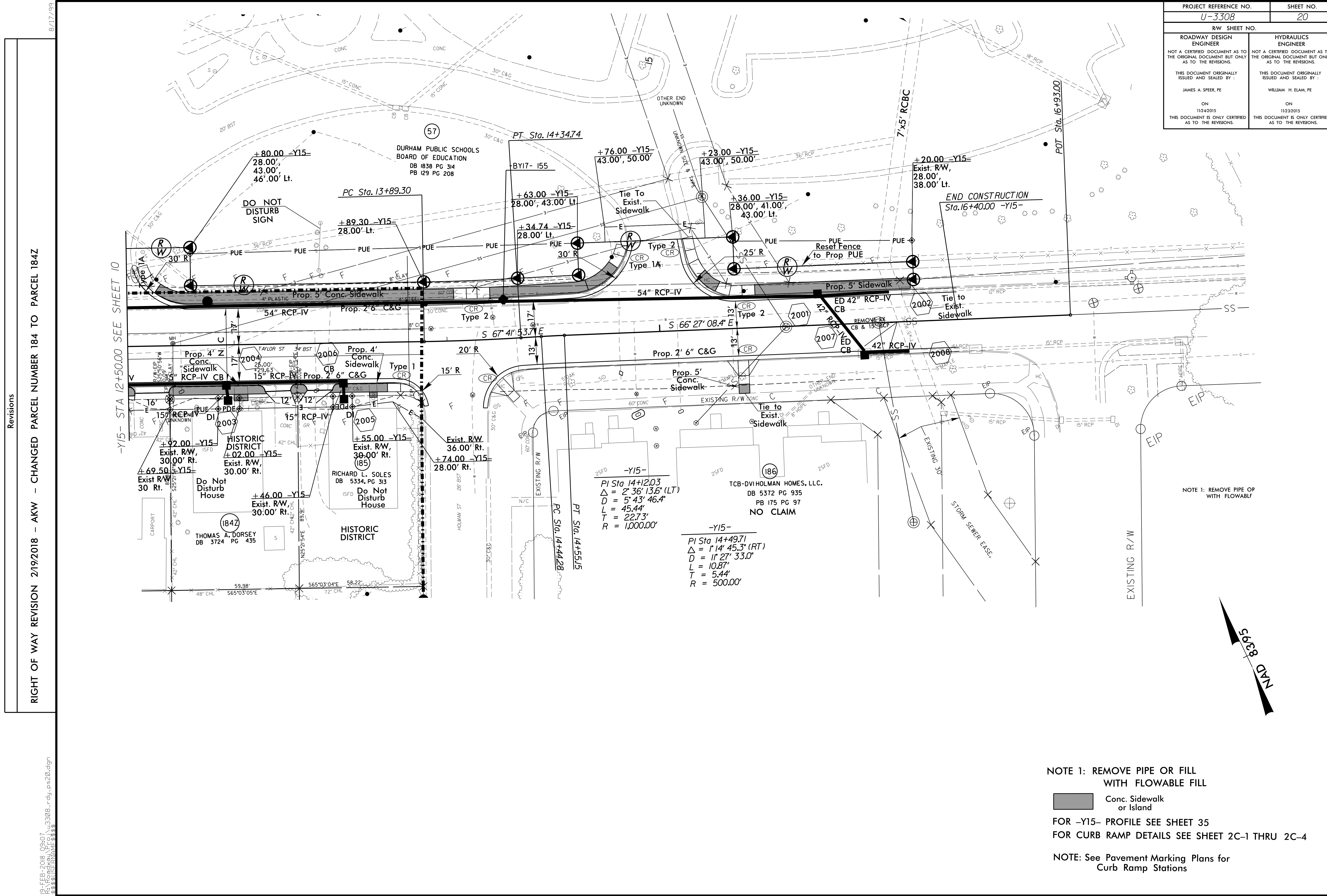
REVISIONS

8/17/99

23-NOV-2015 10:46 3308.rdy-ps19.dgn



PROJECT REFERENCE NO. <i>U-3308</i>	SHEET NO. <i>20</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS. THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY: JAMES A. SPEER, PE ON 11/24/2015 THIS DOCUMENT IS ONLY CERTIFIED AS TO THE REVISIONS.	HYDRAULICS ENGINEER NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS. THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY: WILLIAM H. ELAM, PE ON 11/23/2015 THIS DOCUMENT IS ONLY CERTIFIED AS TO THE REVISIONS.



RIGHT OF WAY REVISION 2/19/2018 - AKW - CHANGED PARCEL NUMBER 184 TO PARCEL 184Z

Revisions

19-FEB-2016 09:07  
3388055-REVISED.dwg  
3388055-REVISED.dwg

NOTE 1: REMOVE PIPE OR WITH FLOWABLE

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

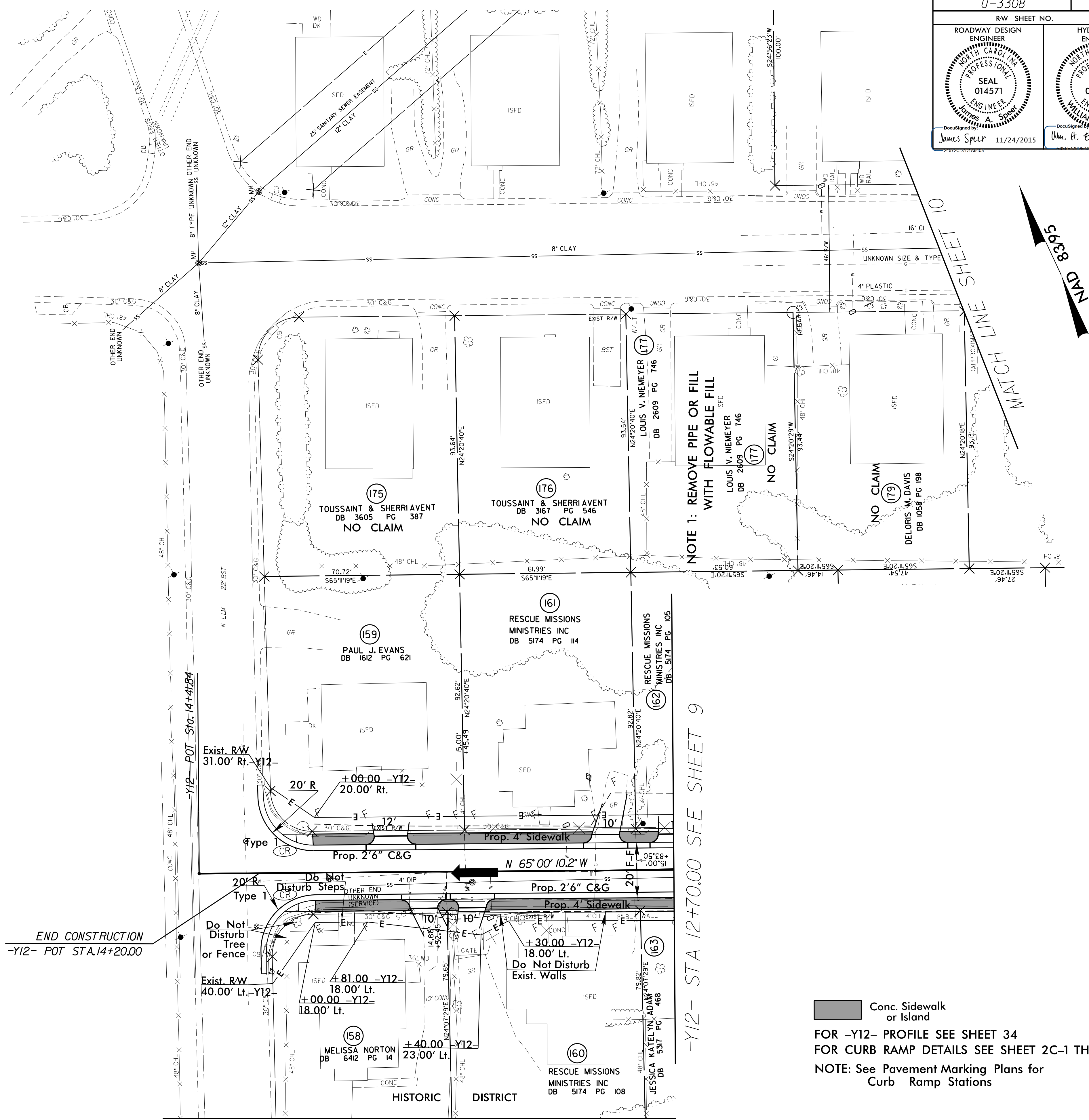
Conc. Sidewalk or Island

FOR -Y15- PROFILE SEE SHEET 35  
FOR CURB RAMP DETAILS SEE SHEET 2C-1 THRU 2C-4

NOTE: See Pavement Marking Plans for Curb Ramp Stations

NAD 83 93

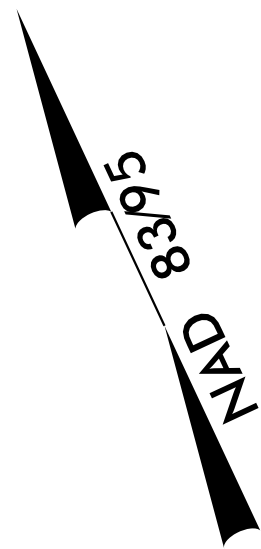
PROJECT REFERENCE NO. <i>U-3308</i>	SHEET NO. <i>21</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER JAMES A. SPEER PROFESSIONAL SEAL 014571 ENGINEER DocuSigned by James A. Speer 11/24/2015 12:20:07 PM	HYDRAULICS ENGINEER WILLIAM H. ELAM PROFESSIONAL SEAL 019721 ENGINEER DocuSigned by Wm. H. Elam 11/23/2015 12:20:07 PM



NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

Conc. Sidewalk or Island  
 FOR -Y12- PROFILE SEE SHEET 34  
 FOR CURB RAMP DETAILS SEE SHEET 2C-1 THRU 2C-4  
 NOTE: See Pavement Marking Plans for Curb Ramp Stations



MATCH LINE SHEET 10

MATCH LINE SHEET 19

-Y12- STA 12+70.00 SEE SHEET 9

Revisions

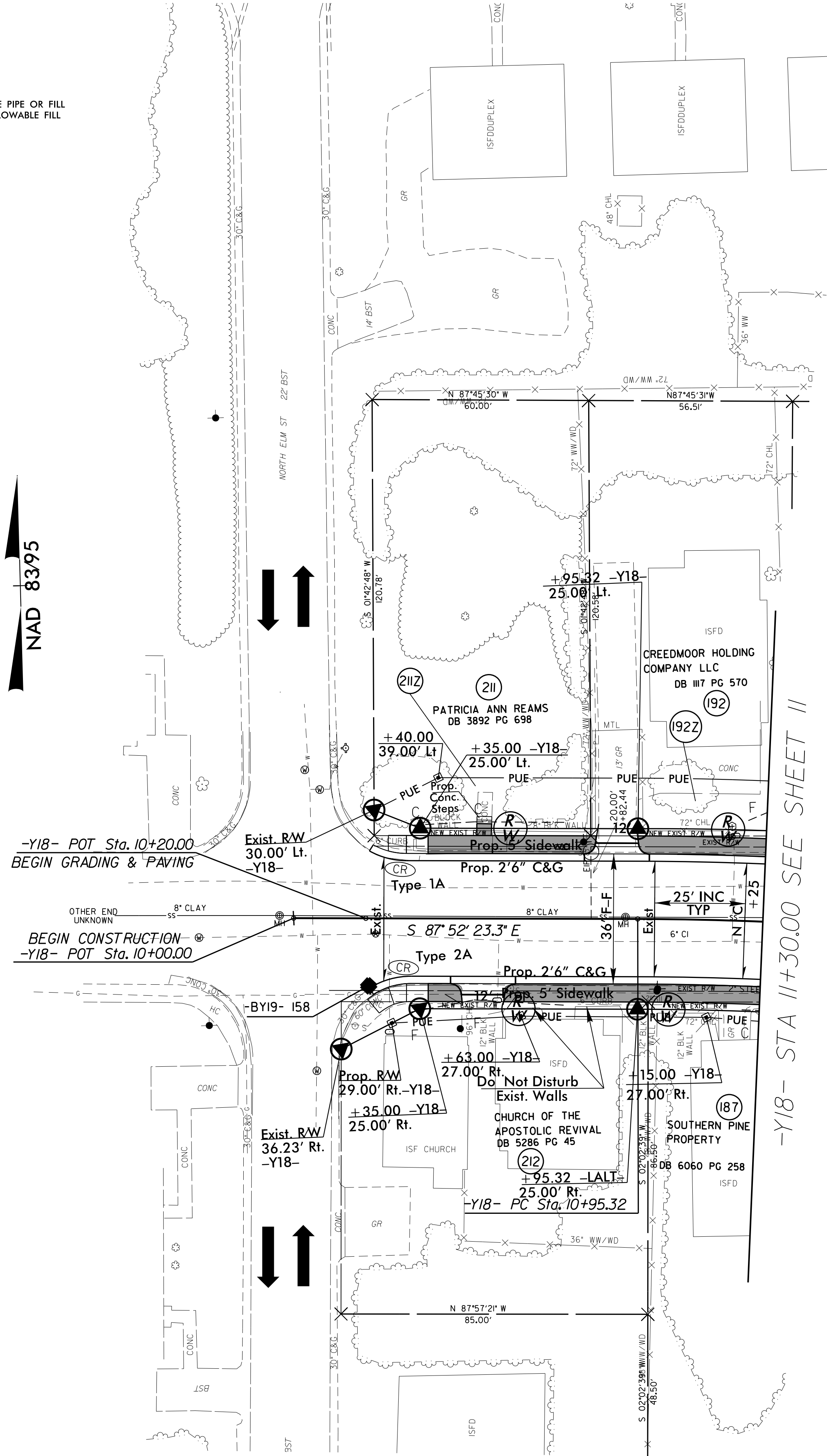
8/17/99

23-NOV-2015 10:46 U3308.rdy-ps21.dgn  
 JAS:SPER:WME:R:R:R

-Y18-  
 PI Sta 11+27.16  
 $\Delta = 4' 03'' 09.6'' (RT)$   
 $D = 6' 21'' 58.3''$   
 $L = 63.66'$   
 $T = 31.84'$   
 $R = 900.00'$   
 SE = SEE PLANS  
 RO = SEE PLANS

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

NAD 83/95



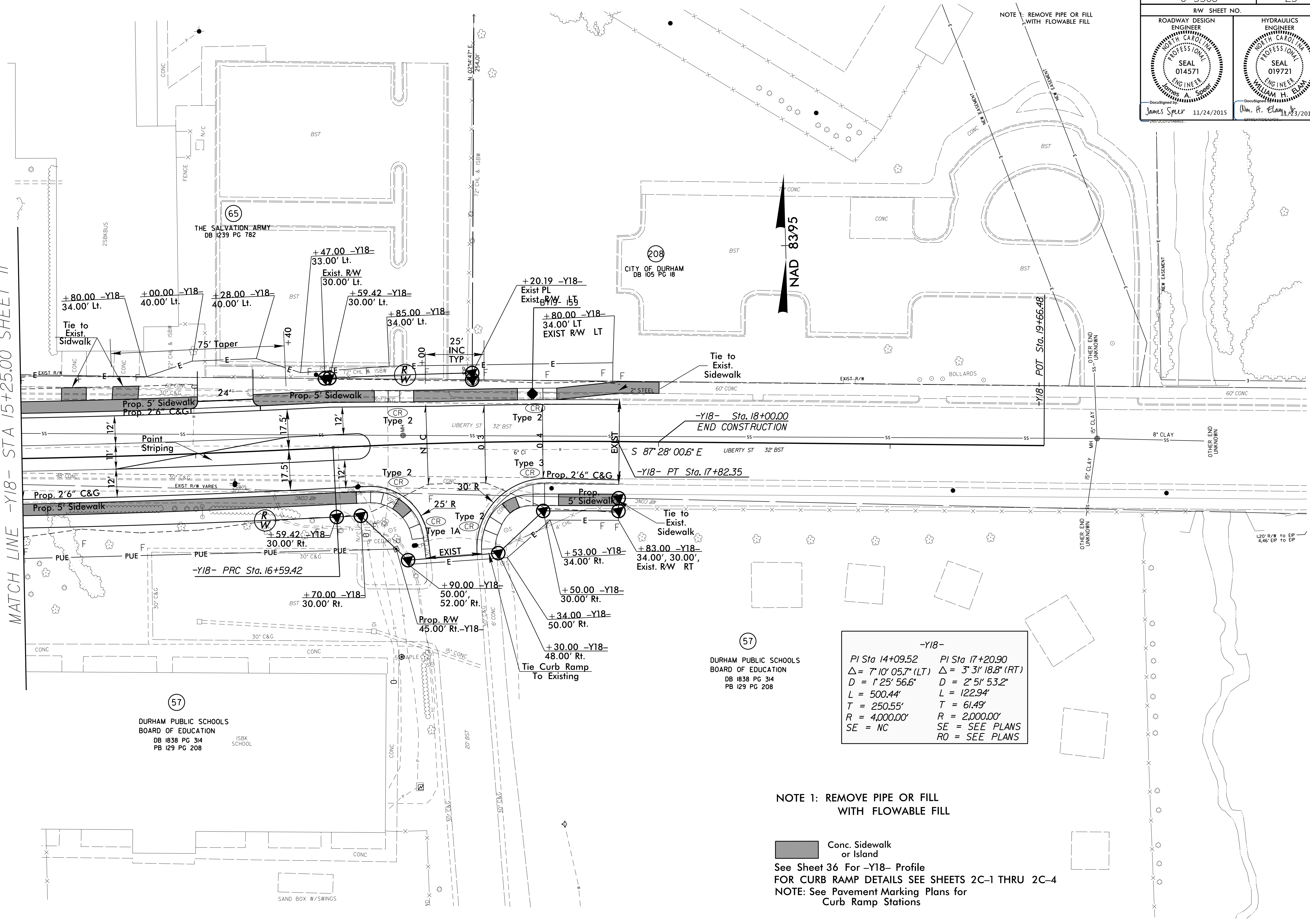
-Y18- STA 11+30.00 SEE SHEET 11

Conc. Sidewalk or Island  
 FOR -Y18- PROFILE SEE SHEET 36  
 FOR CURB RAMP DETAILS SEE SHEETS 2C-1 THRU 2C-4  
 NOTE: See Pavement Marking Plans for Curb Ramp Stations

REVISIONS  
 23-NOV-2015 10:46 3308\_rdy-ps22.dgn  
 8/17/99

MATCH LINE -Y18- STA 15+25.00 SHEET II

REVISIONS



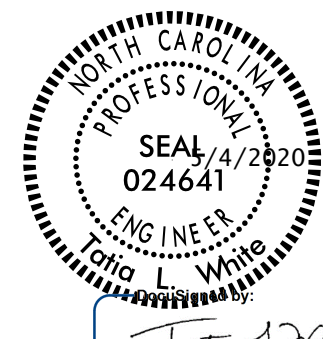

-Y18-	
PI Sta 14+09.52	PI Sta 17+20.90
$\Delta = 7^{\circ} 10' 05.7" (LT)$	$\Delta = 3^{\circ} 31' 18.8" (RT)$
$D = 1^{\circ} 25' 56.6"$	$D = 2^{\circ} 51' 53.2"$
$L = 500.44'$	$L = 122.94'$
$T = 250.55'$	$T = 61.49'$
$R = 4,000.00'$	$R = 2,000.00'$
$SE = NC$	$SE = SEE PLANS$
	$RO = SEE PLANS$

NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

Conc. Sidewalk or Island  
 See Sheet 36 For -Y18- Profile  
 FOR CURB RAMP DETAILS SEE SHEETS 2C-1 THRU 2C-4  
 NOTE: See Pavement Marking Plans for Curb Ramp Stations

8/17/99

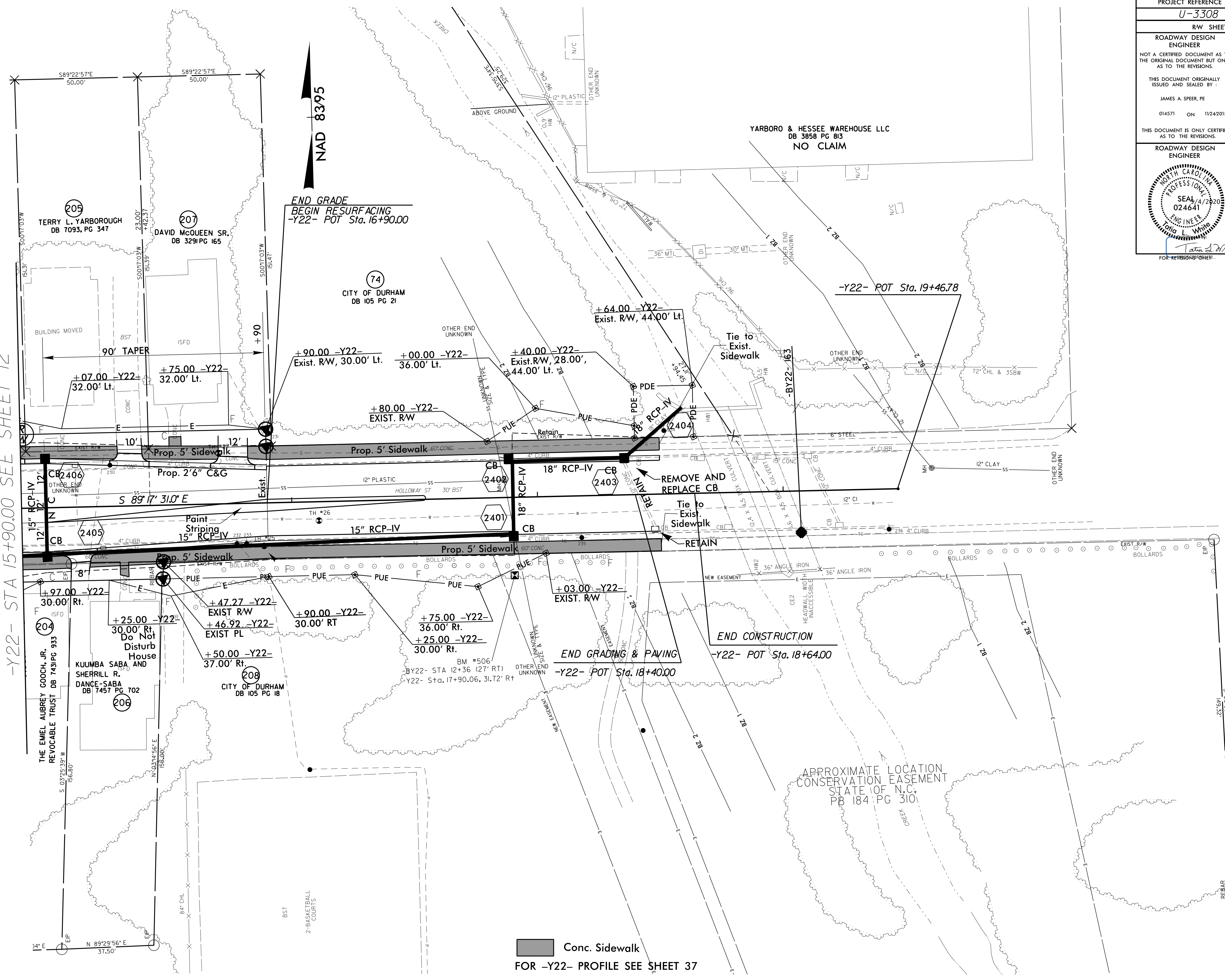
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PROJECT REFERENCE NO. <b>U-3308</b>	SHEET NO. <b>24</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS. THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY: JAMES A. SPEER, PE 014571 ON 11/24/2015	HYDRAULICS ENGINEER NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS. THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY: WILLIAM H. ELAM, PE 019721 ON 11/23/2015
THIS DOCUMENT IS ONLY CERTIFIED AS TO THE REVISIONS.	THIS DOCUMENT IS ONLY CERTIFIED AS TO THE REVISIONS.
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
FOR REVISIONS ONLY	FOR REVISIONS ONLY

5/5/2020 CONSTRUCTION REVISION - Y22 VERTICAL ALIGNMENT LOWERED FROM STATION 15+00 TO STATION 18+50

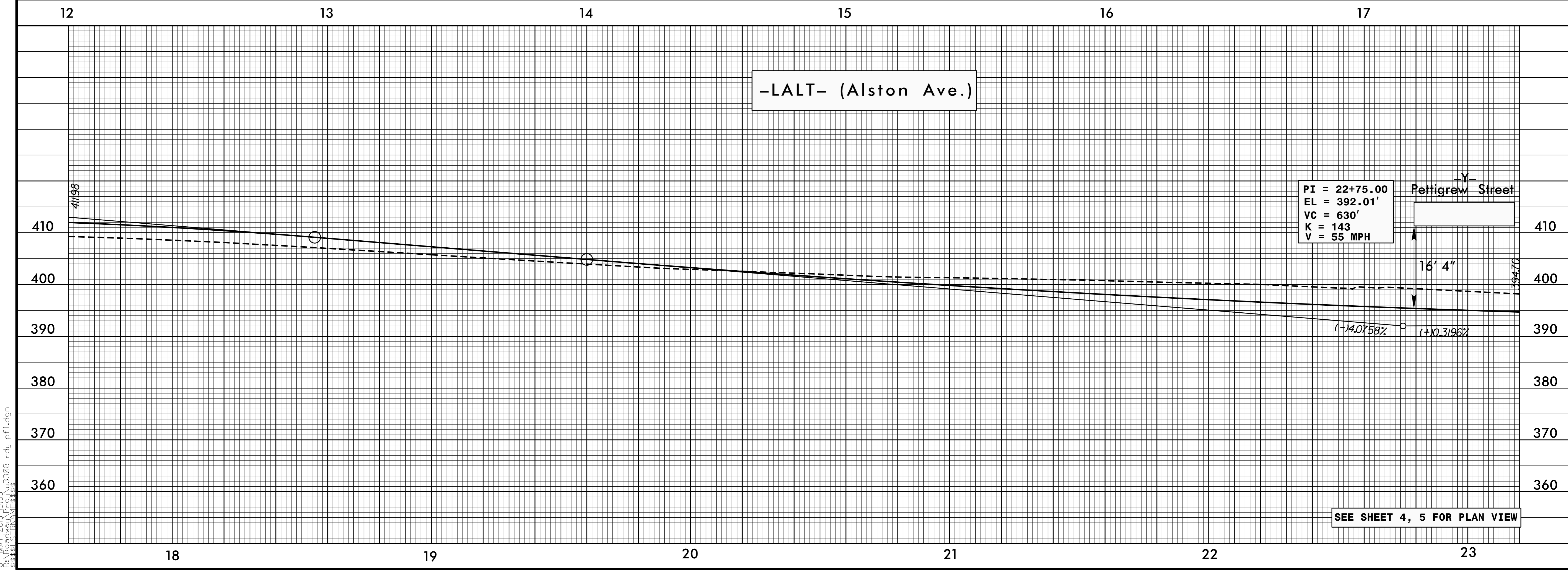
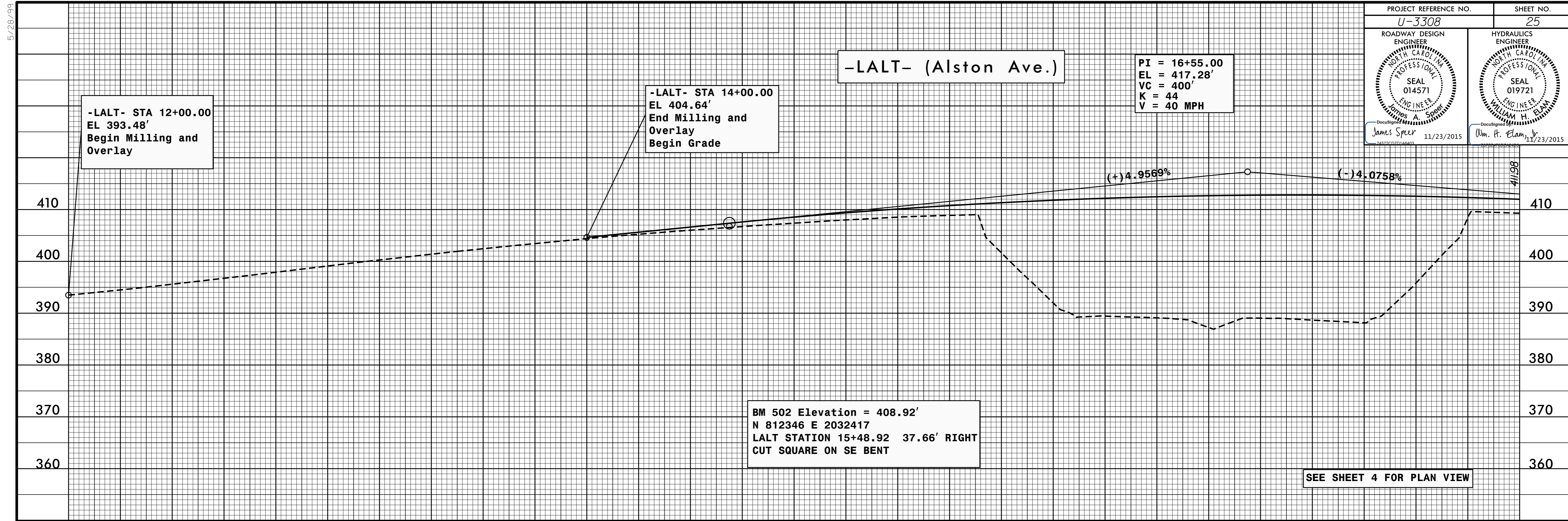
8/17/99

-Y22- STA 15+90.00 SEE SHEET 12



 Conc. Sidewalk  
 FOR -Y22- PROFILE SEE SHEET 37  
 NOTE 1: REMOVE PIPE OR FILL WITH FLOWABLE FILL

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3:58:05 PM WF 3:58:05 PM

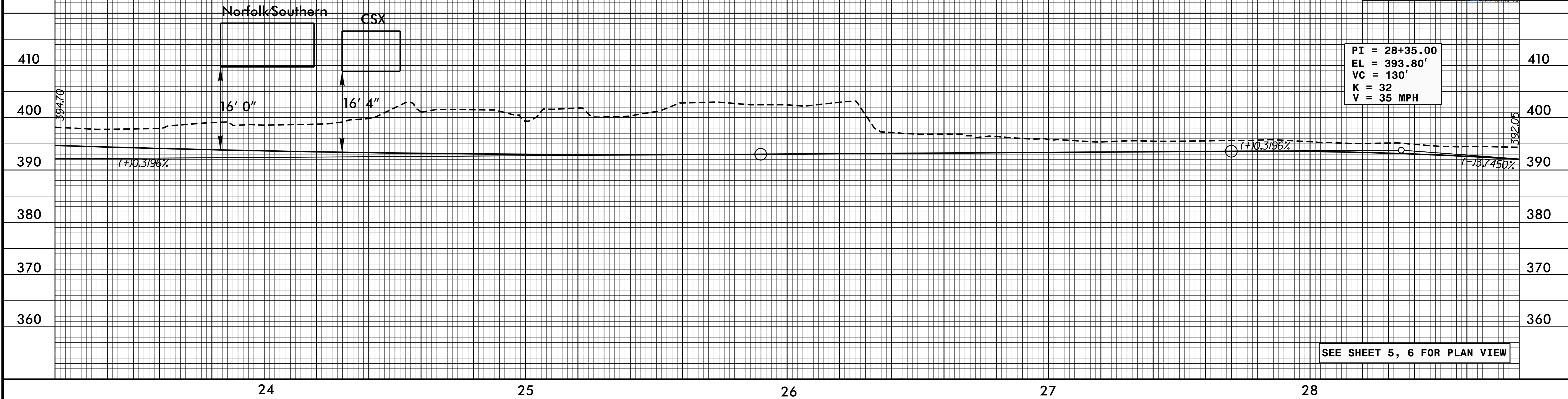


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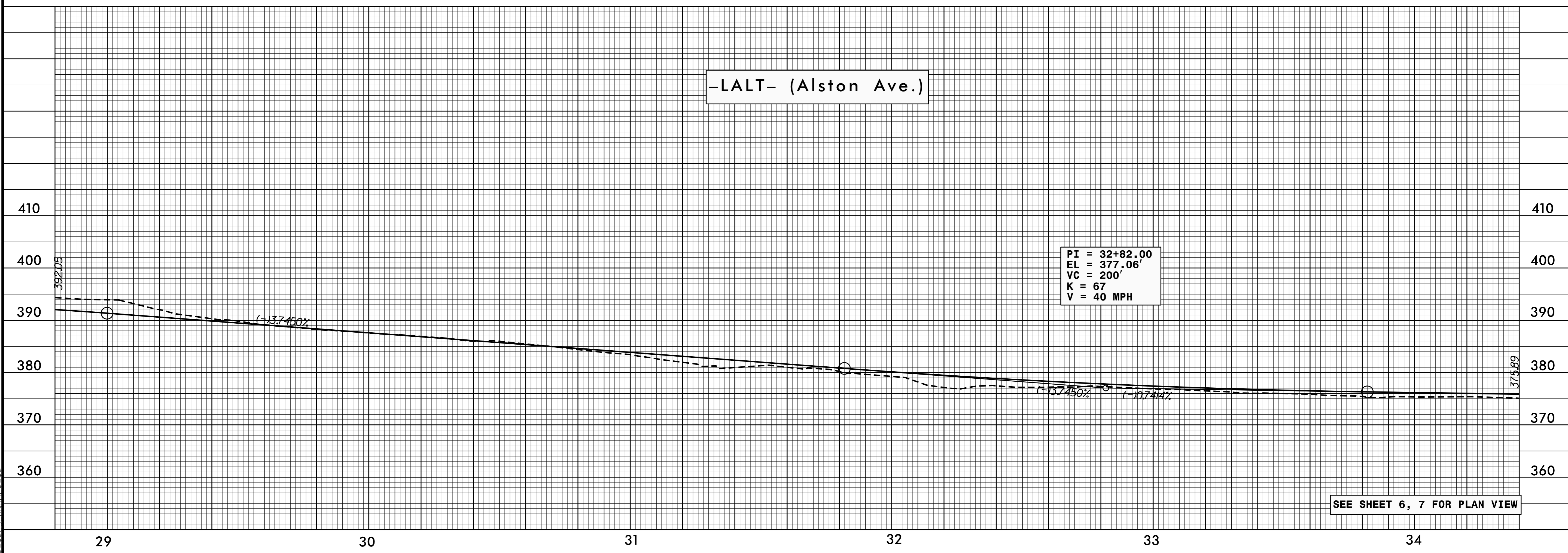
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PROJECT REFERENCE NO. U-3308	SHEET NO. 26
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 014571 JAMES A. SPEER	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 019721 WILLIAM H. ELAM
James Speer 11/23/2015	Wm. H. Elam 11/23/2015

-LALT- (Alston Ave.)



-LALT- (Alston Ave.)

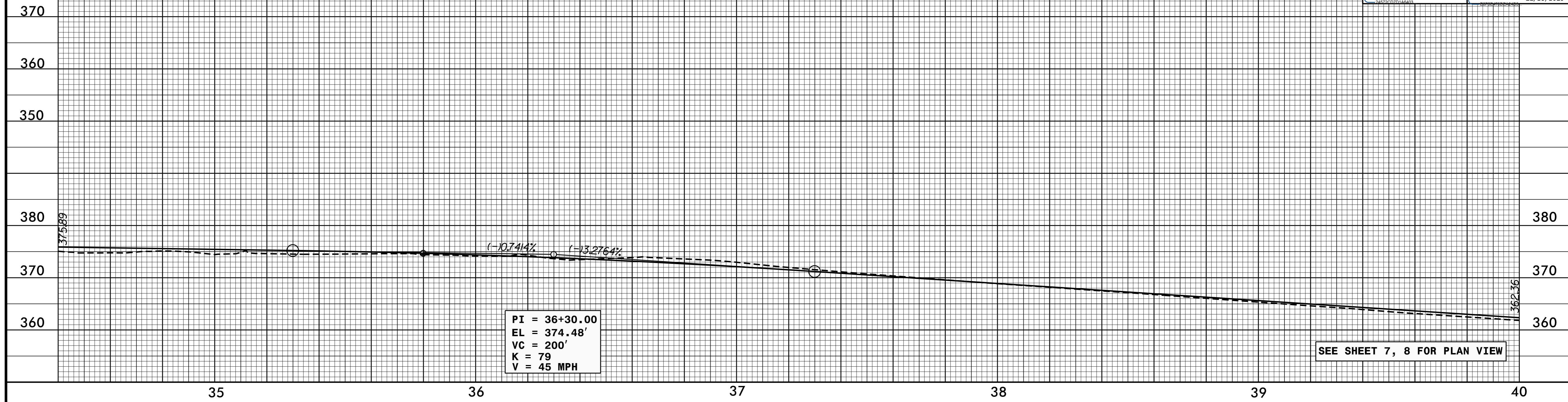


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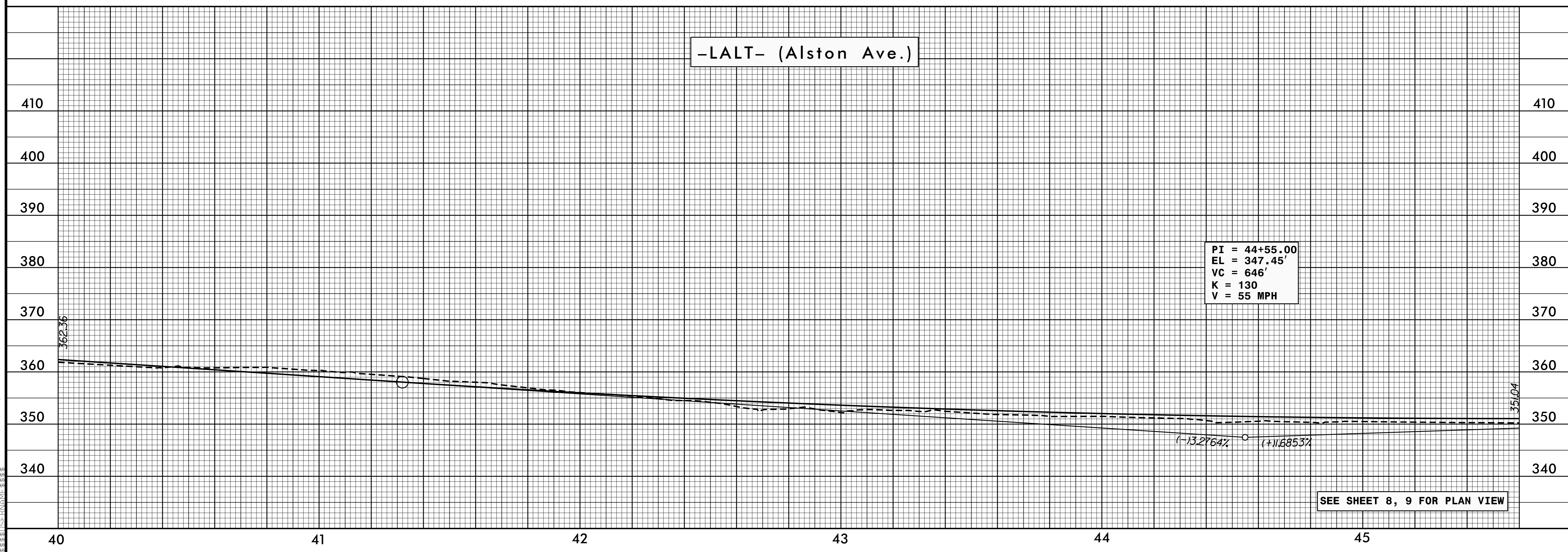
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-LALT- (Alston Ave.)

PROJECT REFERENCE NO. U-3308	SHEET NO. 27
ROADWAY DESIGN ENGINEER JAMES A. SPEER SEAL 014571 PROFESSOR NORTH CAROLINA	HYDRAULICS ENGINEER WILLIAM H. BLAM SEAL 019721 PROFESSOR NORTH CAROLINA
DocuSigned James Speer 11/23/2015	DocuSigned Wm. H. Blam, Jr. 11/23/2015



-LALT- (Alston Ave.)



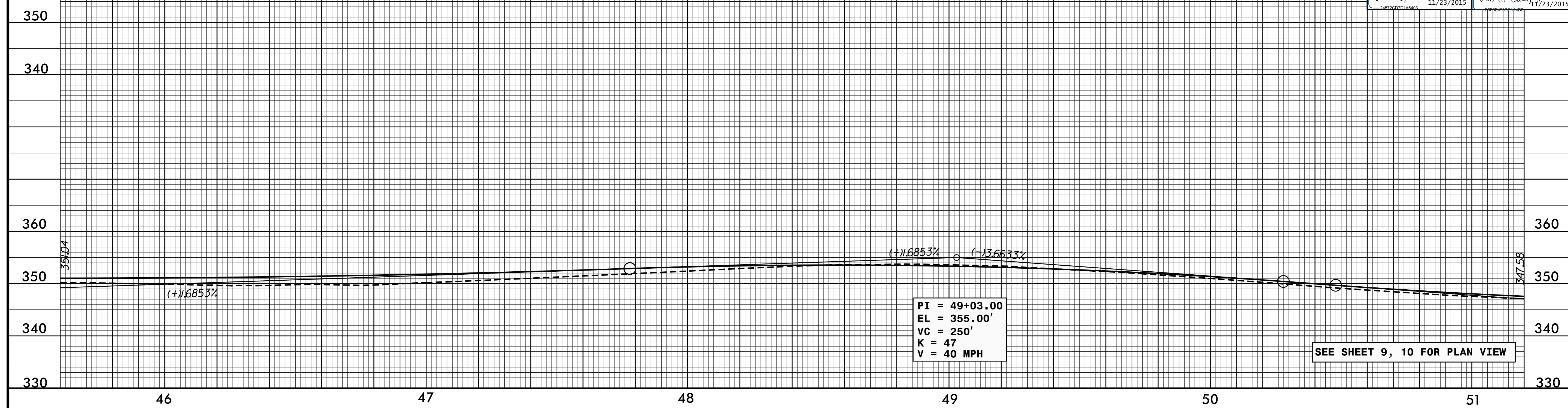
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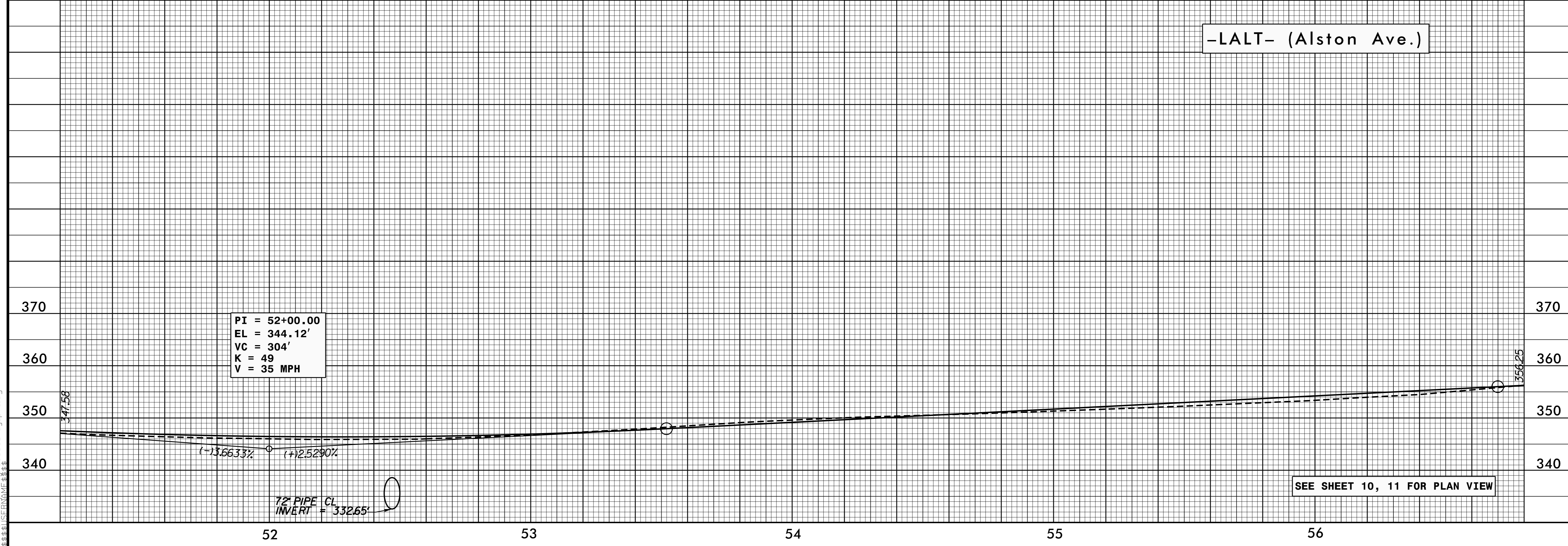
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PROJECT REFERENCE NO. U-3308	SHEET NO. 28
ROADWAY DESIGN ENGINEER JAMES A. SPEER SEAL 014571 NORTH CAROLINA PROFESSIONAL ENGINEER	HYDRAULICS ENGINEER WILLIAM H. ELAM, JR. SEAL 019721 NORTH CAROLINA PROFESSIONAL ENGINEER
James Speer 11/23/2015	Wm. H. Elam, Jr. 11/23/2015

-LALT- (Alston Ave.)

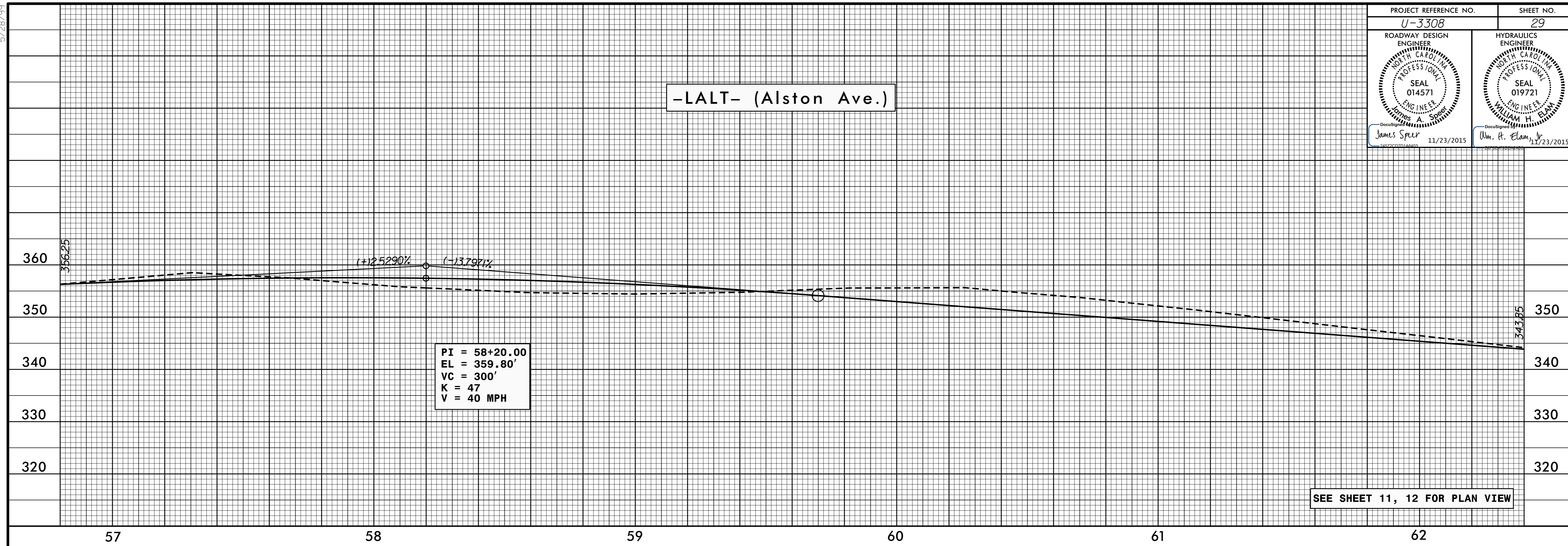


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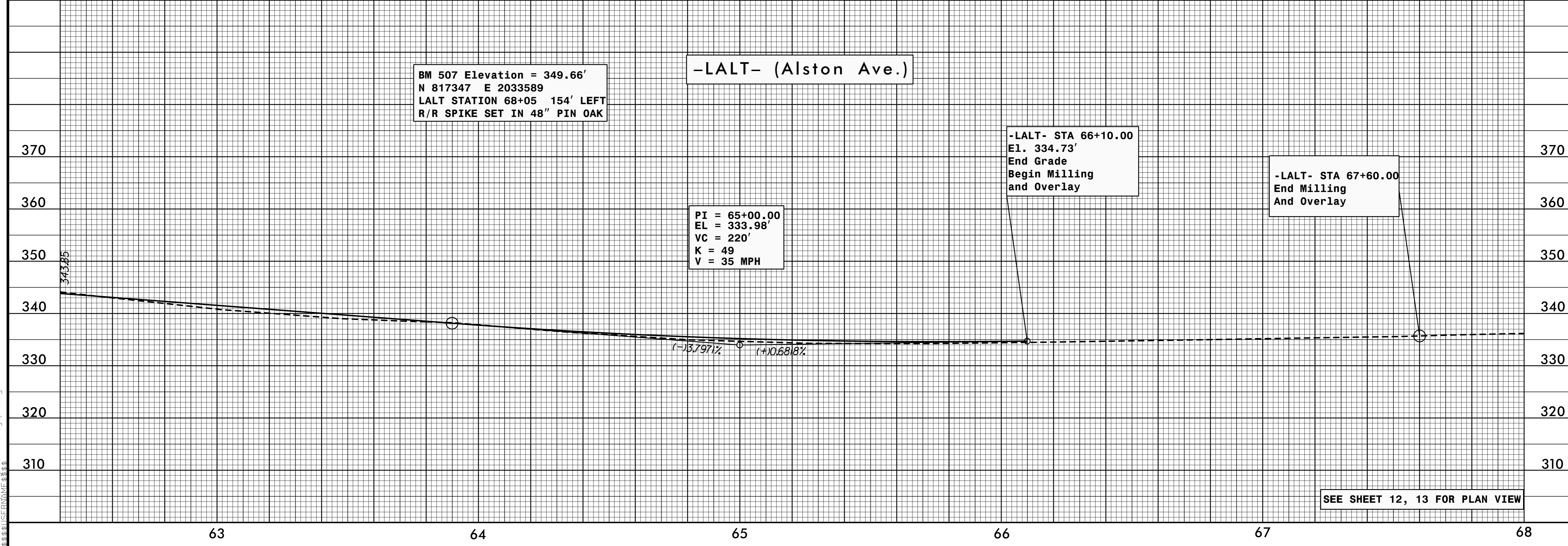


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**-LALT- (Alston Ave.)**



**-LALT- (Alston Ave.)**



5/28/99

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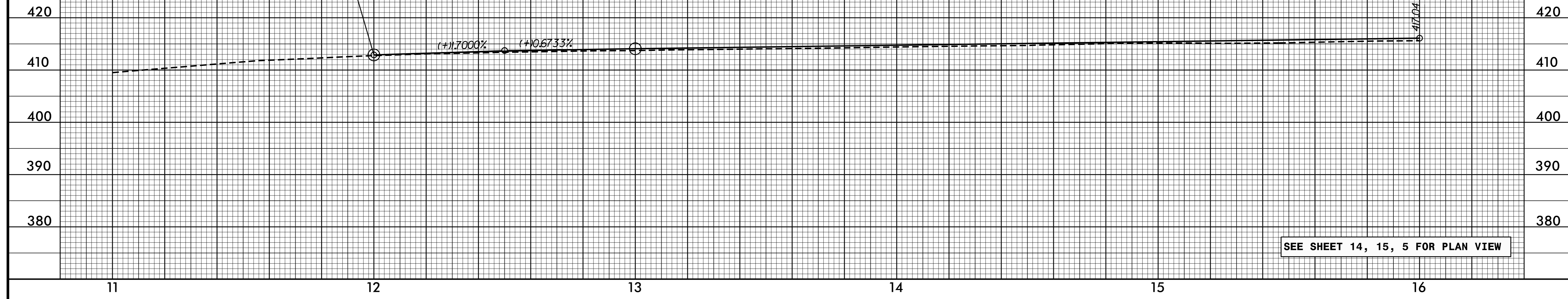
5/28/99

BM503 ELEVATION = 414.78'  
N 813231 E 2032457  
Y STATION 14+56.75, 57.15' RIGHT  
R/R SPIKE SET IN 15" PIN OAK

-Y- (Pettigrew St.)

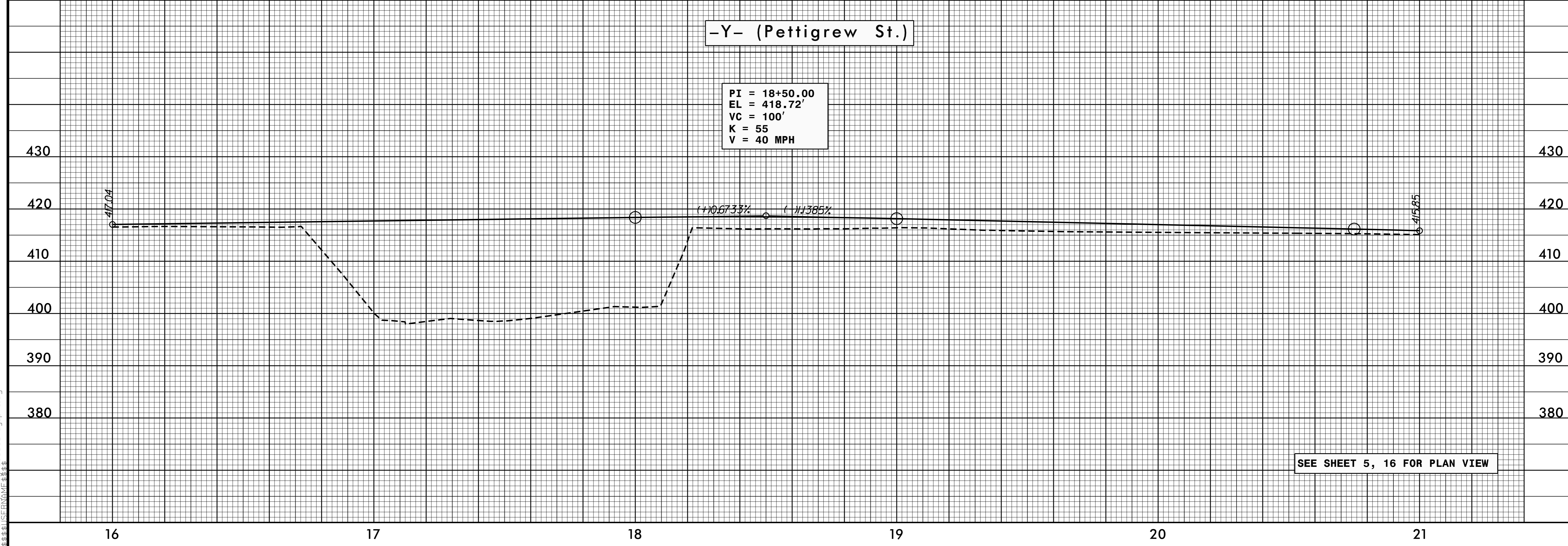
-Y- STA 12+00.00  
EL = 413.83'  
Begin Grade

PI = 12+50.00  
EL = 414.68'  
VC = 100'  
K = 97  
V = 50 MPH



-Y- (Pettigrew St.)

PI = 18+50.00  
EL = 418.72'  
VC = 100'  
K = 55  
V = 40 MPH

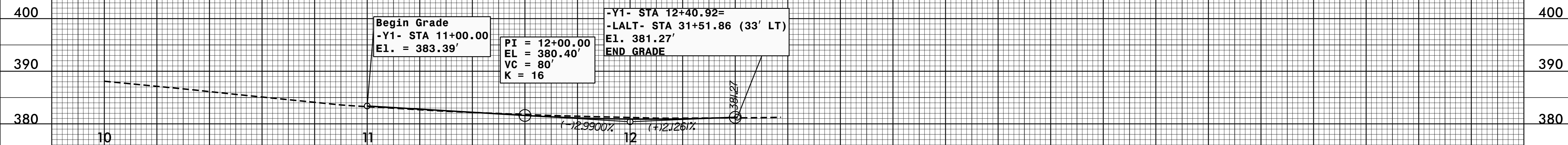


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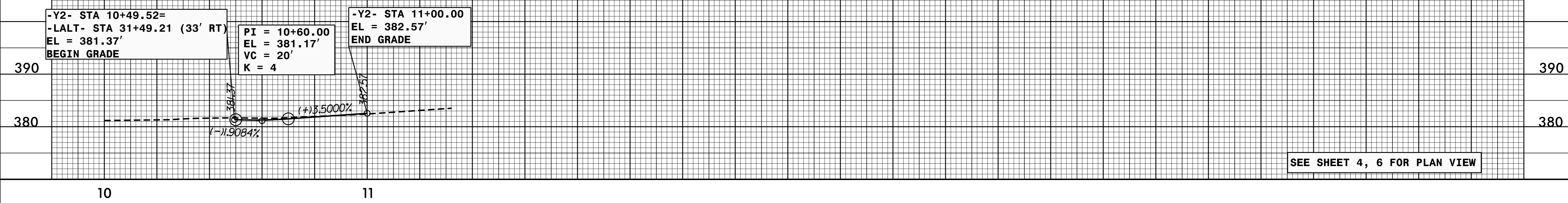
-Y- (Pettigrew St.)



-Y1- (Angier Ave.)



-Y2- (Angier Ave.)



5/28/99

07 MAY 2015 15:53  
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