

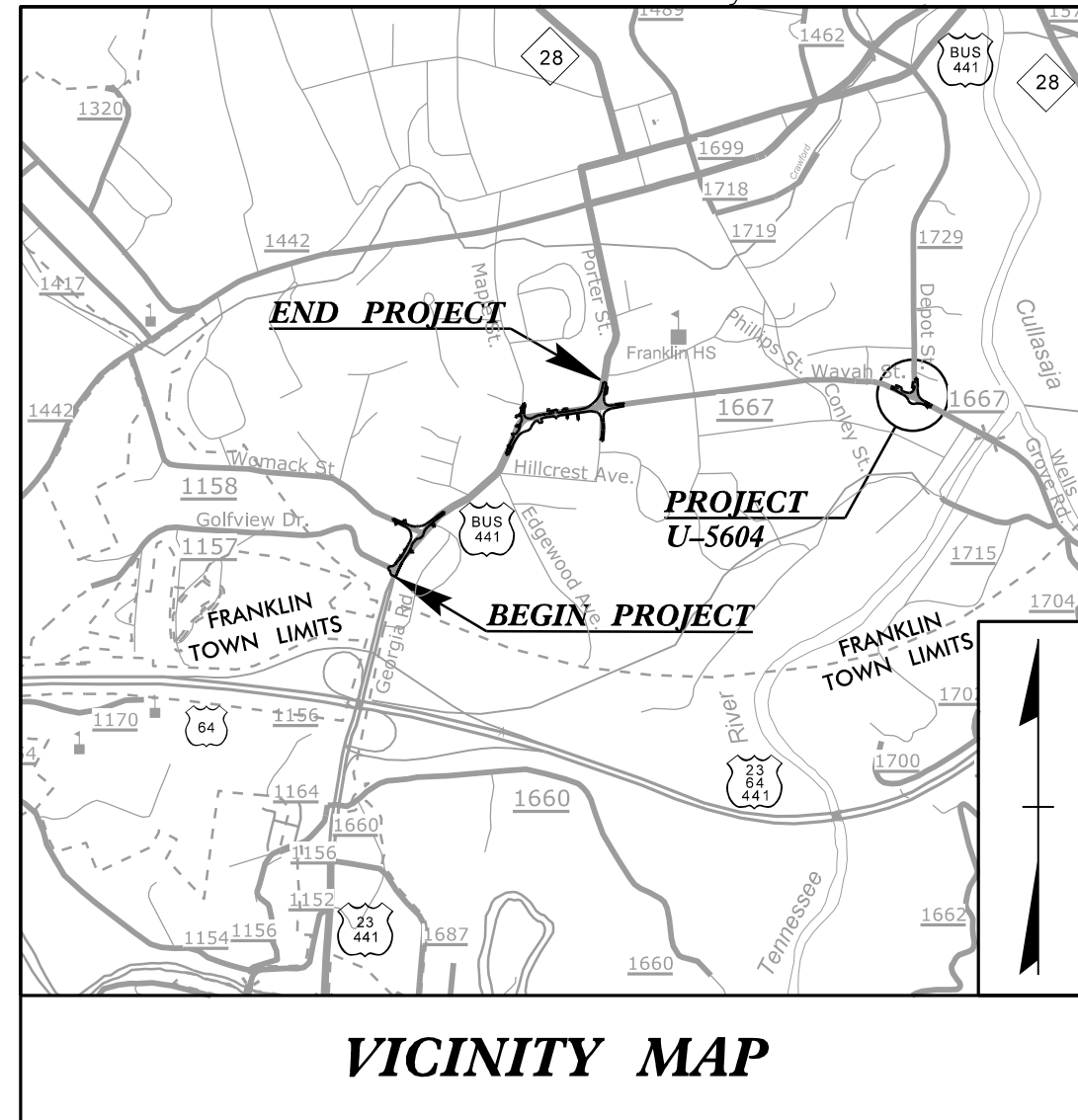
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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5604	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45832.1.1	N/A	PE	
45832.2.1	N/A	RW/UTIL	
45832.3.1	N/A	CONSTR.	

See Sheet 1A For Index of Sheets
 See Sheet 1B For Conventional Symbols
 See Sheet 1C-1 thru 1C-2 For Survey Control Sheets



STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

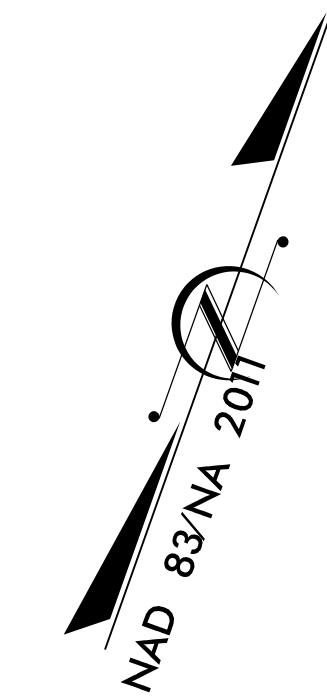
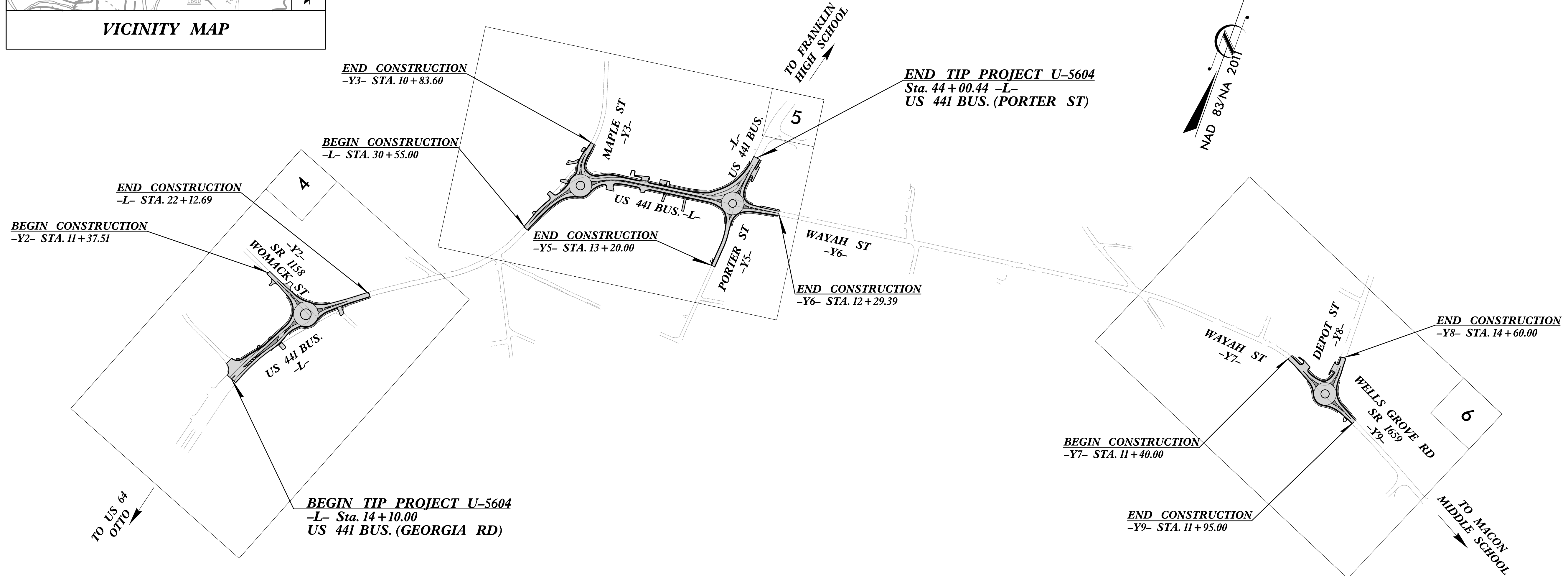
MACON COUNTY

**LOCATION: US 441 BUSINESS /WAYAH STREET INTERSECTIONS
 IMPROVEMENTS FROM WOMACK STREET TO DEPOT STREET**

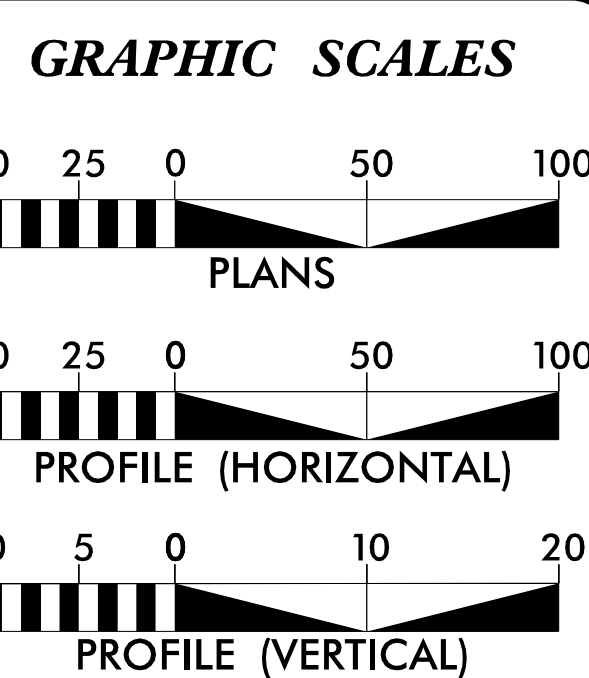
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS,
 AND RETAINING WALLS**

TIP PROJECT: U-5604

CONTRACT: C204216



DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2018	=	14,568
ADT 2040	=	20,800
K	=	10 %
D	=	55 %
T	=	3 % *
V	=	40 MPH

*(2% TTST + 1% DUALS)
 REGIONAL TIER = URBAN COLLECTOR

PROJECT LENGTH

LENGTH OF -L- TIP PROJECT U-5604	=	0.407 miles
LENGTH OF -Y7- TIP PROJECT U-5604	=	0.047 miles
LENGTH OF -Y9- TIP PROJECT U-5604	=	0.037 miles
TOTAL LENGTH TIP PROJECT U-5604	=	0.491 miles

Prepared In The Office of:

Stantec Consulting Services Inc.
 801 Jones Franklin Road
 Suite 300
 Raleigh, NC 27606
 Tel: (919) 851-6866
 www.stantec.com

2610 WYCLIFF ROAD
 SUITE 410
 RALEIGH, NC 27607
 PHONE: 919 881 9939
 NC COA No. F-0929

for the North Carolina Department of Transportation

2018 STANDARD SPECIFICATIONS	STANTEC CONTACT
RIGHT OF WAY DATE: APRIL 21, 2017	STEVE SMALLWOOD, P.E. PROJECT ENGINEER
LETTING DATE: OCTOBER 16, 2018	NCDOT DIVISION 14 CONTACT: KENNETH MCDOWELL ASSISTANT BRIDGE PROGRAM MANAGER

HYDRAULICS ENGINEER

7/13/2018

DocuSign
 STEVEN M. BONNER
 01/03/2018 P.E.

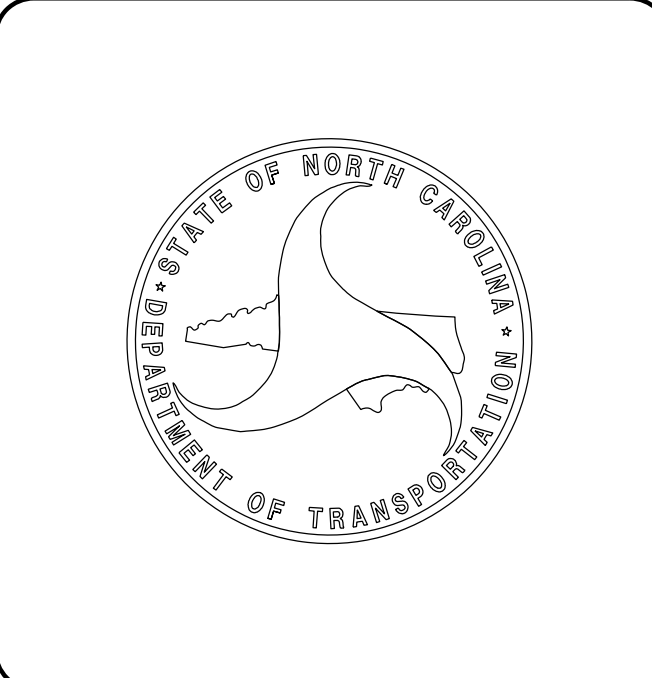
SIGNATURE:

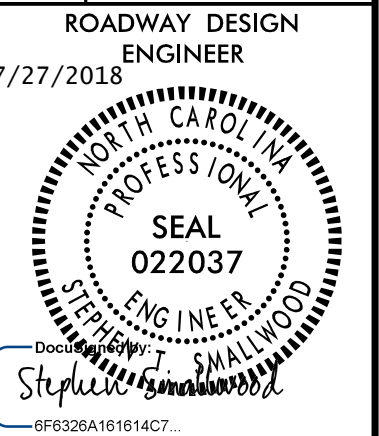
ROADWAY DESIGN ENGINEER

7/12/2018

DocuSign
 STEVE SMALLWOOD
 07/12/2018 P.E.

SIGNATURE:





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SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C-1 THRU 1C-2	SURVEY CONTROL SHEETS
2A-1 THRU 2A-5	PAVEMENT SCHEDULE, WEDGING DETAILS AND TYPICAL SECTIONS
2B-1 THRU 2B-4	INTERSECTION DETAILS
2B-5 THRU 2B-7	DETOUR SHEETS
2C-1	DETAIL OF RETAINING WALL ALUMINUM PICKET FENCE
2C-2	TRANSITION FROM TO 8"x18" TO 2'-6" CURB & GUTTER
2C-3	CURB RAMPS - MEDIAN OR TURN LANE ISLANDS
2C-4	CURB RAMPS - PARALLEL
2C-5	CONVERT EXISTING CB TO JB WITH MANHOLE
2C-6	METHOD FOR PLACEMENT OF DI IN CONCRETE ISLANDS
2C-7	METHOD FOR PLACEMENT OF STEEL DI IN CONCRETE ISLANDS
3B-1	SUMMARY OF ROADWAY QUANTITIES SUMMARY OF EARTHWORK, ASPHALT PAVEMENT REMOVAL SUMMARY AND BREAKING OF EXISTING PAVEMENT SUMMARY
3D-1 THRU 3D-5	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARY
3P-1	PARCEL INDEX SHEETS
4 THRU 6	PLAN SHEETS
7 THRU 13	PROFILE SHEETS
TMP-1 THRU TMP-6B	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-4	PAVEMENT MARKING PLANS
E-1 THRU E-12	LIGHTING PLANS
EC-1 THRU EC-15	EROSION CONTROL PLANS
SIGN-1 THRU SIGN 9	SIGNING PLANS
UC-1 THRU UC-14	UTILITY CONSTRUCTION PLANS
UD-1 THRU UD-4	UTILITIES BY OTHERS PLANS
X-A THRU X-B	CROSS-SECTION INDEX
X-1A	CROSS-SECTION SUMMARY
X-1 THRU X-57	CROSS-SECTIONS
W-1 THRU W-3	RETAINING WALL PLANS

GENERAL NOTES: 2018 SPECIFICATIONS
EFFECTIVE: 01-16-2018
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD 11.

SUPERELEVATION:
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:
ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:
THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

BERM DITCHES:
BERM DITCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 240.01 AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DRIVEWAYS:
DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:
STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

TEMPORARY SHORING:
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE Duke Power,
Town of Franklin, Frontier, Balsamwest Fibernet, Morris Broadband, Toccoa Gas
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:
ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

CURB RAMPS
CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS.
CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.05 and/or 848.06.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superlevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
240.01	Guide for Berm Ditch Construction
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 7 - CONCRETE PAVEMENTS AND SHOULDERS	
700.01	Concrete Pavement Joints - Construction and Contraction Joints
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.04	Concrete Open Throat Catch Basin - 12" thru 48" Pipe
840.05	Brick Open Throat Catch Basin - 12" thru 48" Pipe
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.22	Frames and Wide Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.36	Traffic Bearing Grated Drop Inlet - for Steel (840.37) Double Frame and Grates
840.37	Steel Grate and Frame
840.45	Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
850.01	Concrete Paved Ditches
850.10	Guide for Berm Drainage Outlet - 15" and 18" Pipe
852.01	Concrete Islands
852.10	Median Construction - with Curb and Gutter
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.03	Drainage Ditches with Class 'A' Rip Rap

12/2/2016

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	①23
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	---WLB---
Proposed Wetland Boundary	WLB
Existing Endangered Animal Boundary	---EAB---
Existing Endangered Plant Boundary	---EPB---
Existing Historic Property Boundary	---HPB---
Known Contamination Area: Soil	☠-s-☠
Potential Contamination Area: Soil	☠-s-☠
Known Contamination Area: Water	☠-w-☠
Potential Contamination Area: Water	☠-w-☠
Contaminated Site: Known or Potential	☠?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	▬

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	---JS---
Buffer Zone 1	---BZ 1---
Buffer Zone 2	---BZ 2---
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	▽
Proposed Lateral, Tail, Head Ditch	▬
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	◆
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	○ R W
New Right of Way Line with Pin and Cap	○ R W ◆
New Right of Way Line with Concrete or Granite R/W Marker	○ R W ◆
New Control of Access Line with Concrete C/A Marker	○ C/A
Existing Control of Access	○ C/A
New Control of Access	○ C/A
Existing Easement Line	---E---
New Temporary Construction Easement	---E---
New Temporary Drainage Easement	---TDE---
New Permanent Drainage Easement	---PDE---
New Permanent Drainage / Utility Easement	---DUE---
New Permanent Utility Easement	---PUE---
New Temporary Utility Easement	---TUE---
New Aerial Utility Easement	---AUE---

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	---C---
Proposed Slope Stakes Fill	---F---
Proposed Curb Ramp	---CR---
Existing Metal Guardrail	---T---
Proposed Guardrail	---T---
Existing Cable Guiderail	---□---
Proposed Cable Guiderail	---□---
Equality Symbol	⊕
Pavement Removal	▨

VEGETATION:

Single Tree	☼
Single Shrub	☼

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

Hedge	-----
Woods Line	-----
Orchard	☼
Vineyard	□ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○ S
Storm Sewer	---S---

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	○
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	---P---
U/G Power Line LOS C (S.U.E.*)	---P---
U/G Power Line LOS D (S.U.E.*)	---P---

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	○
U/G Telephone Cable LOS B (S.U.E.*)	---T---
U/G Telephone Cable LOS C (S.U.E.*)	---T---
U/G Telephone Cable LOS D (S.U.E.*)	---T---
U/G Telephone Conduit LOS B (S.U.E.*)	---TC---
U/G Telephone Conduit LOS C (S.U.E.*)	---TC---
U/G Telephone Conduit LOS D (S.U.E.*)	---TC---
U/G Fiber Optics Cable LOS B (S.U.E.*)	---T FO---
U/G Fiber Optics Cable LOS C (S.U.E.*)	---T FO---
U/G Fiber Optics Cable LOS D (S.U.E.*)	---T FO---

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	---W---
U/G Water Line LOS C (S.U.E.*)	---W---
U/G Water Line LOS D (S.U.E.*)	---W---
Above Ground Water Line	---A/G Water---

TV:

TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	○
U/G TV Cable LOS B (S.U.E.*)	---TV---
U/G TV Cable LOS C (S.U.E.*)	---TV---
U/G TV Cable LOS D (S.U.E.*)	---TV---
U/G Fiber Optic Cable LOS B (S.U.E.*)	---TV FO---
U/G Fiber Optic Cable LOS C (S.U.E.*)	---TV FO---
U/G Fiber Optic Cable LOS D (S.U.E.*)	---TV FO---

GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	---G---
U/G Gas Line LOS C (S.U.E.*)	---G---
U/G Gas Line LOS D (S.U.E.*)	---G---
Above Ground Gas Line	---A/G Gas---

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	---SS---
Above Ground Sanitary Sewer	---A/G Sanitary Sewer---
SS Forced Main Line LOS B (S.U.E.*)	---FSS---
SS Forced Main Line LOS C (S.U.E.*)	---FSS---
SS Forced Main Line LOS D (S.U.E.*)	---FSS---

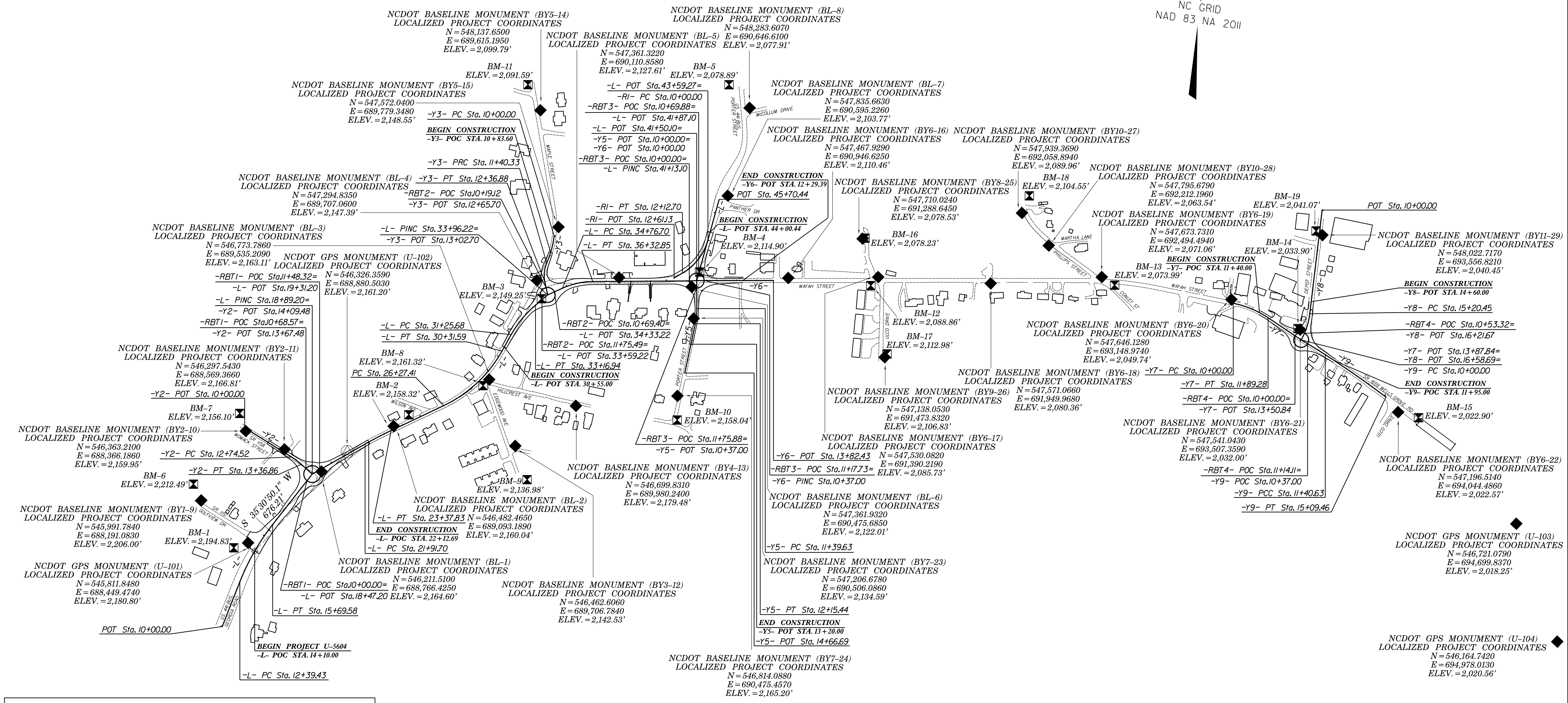
MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	---TU/L---
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
U/G Test Hole LOS A (S.U.E.*)	○
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
U-5604	1C-1
Location and Surveys	

SURVEY CONTROL SHEET U-5604

-FINAL-



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "U-102" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 546326.359(+) EASTING: 688880.503(+) ELEVATION: 2161.20(+)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99977912167

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U102" TO -L- STATION 14+10.00 IS S 35°30'50.1" W 676.21'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

GEOID MODEL - G12ANC
NOTE: DRAWING NOT TO SCALE

NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: [HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)
 - THE FILES TO BE FOUND ARE AS FOLLOWS:
U-5604_LS_CONTROL.TXT
 - SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- ⊙ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

6/2/2019

SURVEY CONTROL SHEET U-5604

-FINAL-

Table with columns: POINT, DESC., NORTH, EAST, ELEVATION, L STATION, OFFSET. Rows 101-8.

Table with columns: POINT, DESC., NORTH, EAST, ELEVATION, Y2 STATION, OFFSET. Rows 10, 11, A1.

Table with columns: POINT, DESC., NORTH, EAST, ELEVATION, Y3 STATION, OFFSET. Rows 14, 15, A4.

Table with columns: POINT, DESC., NORTH, EAST, ELEVATION, Y5 STATION, OFFSET. Rows B6, 23, 24.

Table with columns: POINT, DESC., NORTH, EAST, ELEVATION, Y6 STATION, OFFSET. Rows A6, 16, 17, 18, 19.

Table with columns: POINT, DESC., NORTH, EAST, ELEVATION, Y7 STATION, OFFSET. Rows 20, 21.

Table with columns: POINT, DESC., NORTH, EAST, ELEVATION, Y8 STATION, OFFSET. Rows 29, A21.

Table with columns: POINT, DESC., NORTH, EAST, ELEVATION, Y9 STATION, OFFSET. Rows B6, 22, 26, 27.

BM1 ELEVATION - 2194.03
BY7 STATION 10:51.99
S 41° 35' 46.5" W DIST. 578.86'

BM2 ELEVATION - 2158.32
N 546549 E 689161
BL STATION 15:27.00 18 LEFT

BM3 ELEVATION - 2149.24
N 547207 E 689742
BL STATION 24:40.00 61 RIGHT

BM4 ELEVATION - 2114.89
N 547441 E 690505
BL STATION 33:70.00 9 RIGHT

BM5 ELEVATION - 2078.09
N 548395 E 690530
BL STATION 42:26.14
N 48° 55' 14.6" W DIST. 154.32'

BM6 ELEVATION - 2212.49
N 546067 E 688142
BY1 STATION 5:00.00
N 33° 00' 13.2" W DIST. 89.71'

BM7 ELEVATION - 2156.09
N 546447 E 688325
BY2 STATION 5:00.00 12 LEFT
N 26° 07' 41.1" W DIST. 92.94'

BM8 ELEVATION - 2161.32
N 546740 E 689509
BY3 STATION 5:17.00 39 RIGHT
PUNCH HOLE IN CONCRETE SLAB

BM9 ELEVATION - 2136.98
N 546304 E 689787
BY3 STATION 8:55.35
S 26° 46' 40.8" E DIST. 177.97'

Table with columns: TYPE, STATION, NORTH, EAST. Rows -L- FINAL.

Table with columns: TYPE, STATION, NORTH, EAST. Rows -R1- FINAL.

Table with columns: TYPE, STATION, NORTH, EAST. Rows -RBT1- FINAL.

Table with columns: TYPE, STATION, NORTH, EAST. Rows -RBT2- FINAL.

Table with columns: TYPE, STATION, NORTH, EAST. Rows -RBT3- FINAL.

Table with columns: TYPE, STATION, NORTH, EAST. Rows -Y2- FINAL.

Table with columns: TYPE, STATION, NORTH, EAST. Rows -Y3- FINAL.

Table with columns: TYPE, STATION, NORTH, EAST. Rows -Y5- FINAL.

Table with columns: TYPE, STATION, NORTH, EAST. Rows -Y6- FINAL.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER IRON PIN AND CAP-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER IRON PIN AND CAP-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER IRON PIN AND CAP-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER IRON PIN AND CAP-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER IRON PIN AND CAP-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER IRON PIN AND CAP-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER IRON PIN AND CAP-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER IRON PIN AND CAP-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER IRON PIN AND CAP-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER PERMANENT EASEMENT-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER PERMANENT EASEMENT-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER PERMANENT EASEMENT-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER PERMANENT EASEMENT-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER PERMANENT EASEMENT-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER PERMANENT EASEMENT-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER PERMANENT EASEMENT-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER PERMANENT EASEMENT-E.

Table with columns: ALIGN, STATION, OFFSET, NORTH, EAST. Rows -FINAL- ROW MARKER PERMANENT EASEMENT-E.

DATUM DESCRIPTION
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "U-102" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 546326.359(+) EASTING: 688880.503(+) ELEVATION: 2161.20(+) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99977912167 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U102" TO -L- STATION 14+10.00 IS S 35°30'50.1" W 676.21' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTES:
1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/ U-5604_LS_CONTROL.TXT
SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT. PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

GEOID MODEL - G12ANC
NOTE: DRAWING NOT TO SCALE

PAVEMENT SCHEDULE

FINAL PAVEMENT DESIGN

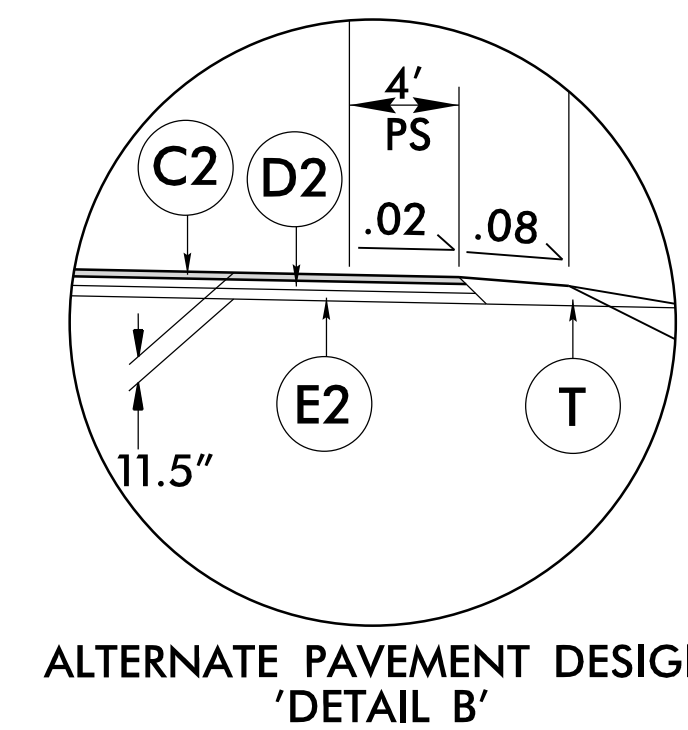
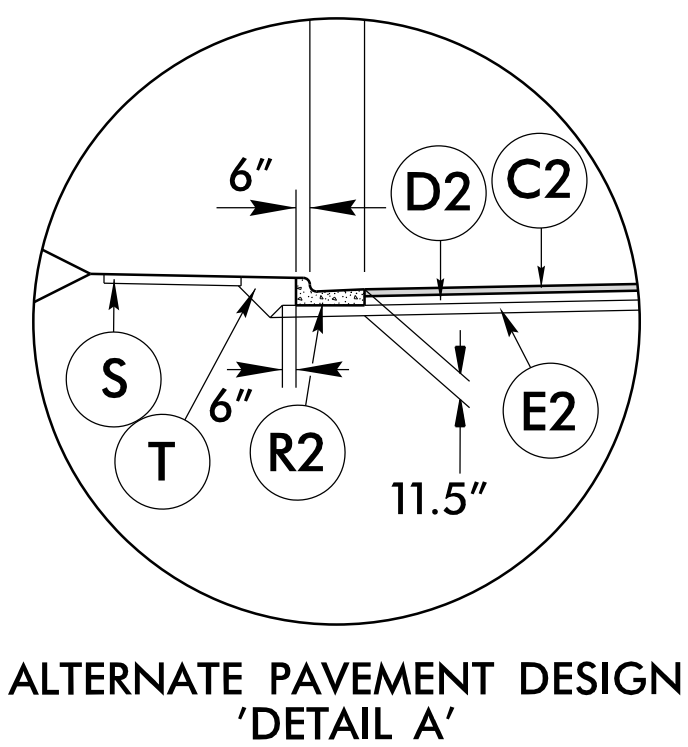
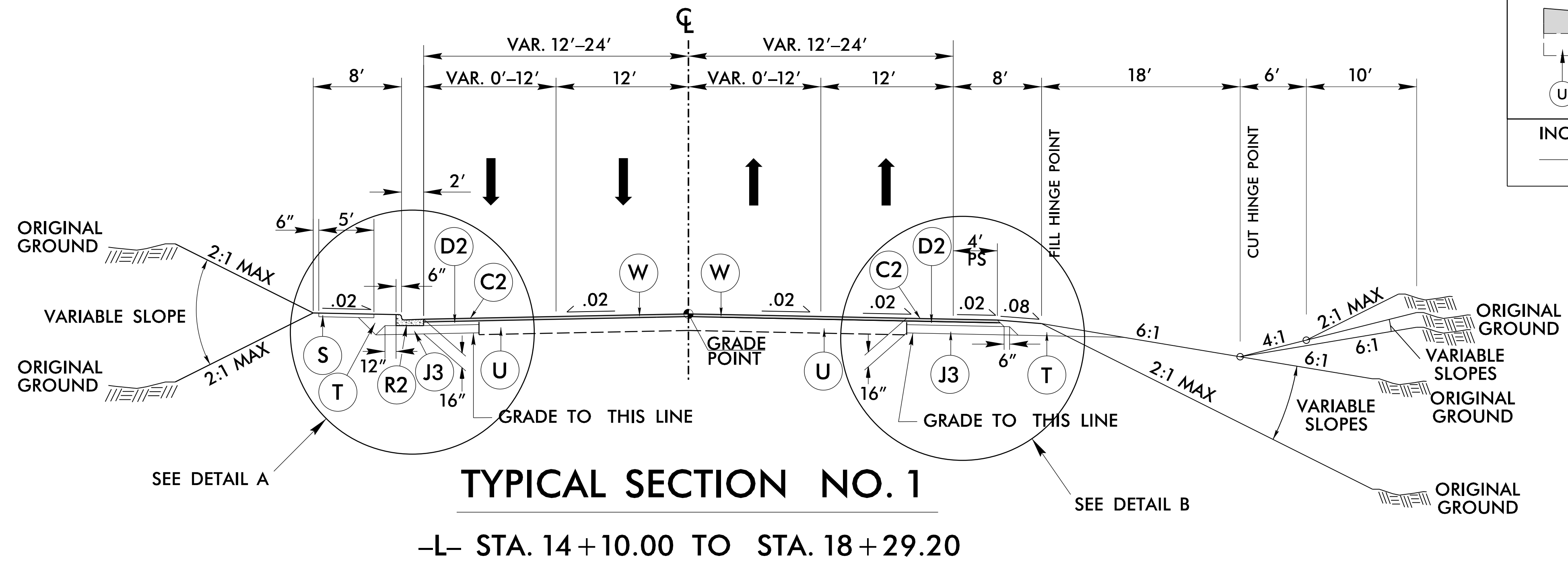
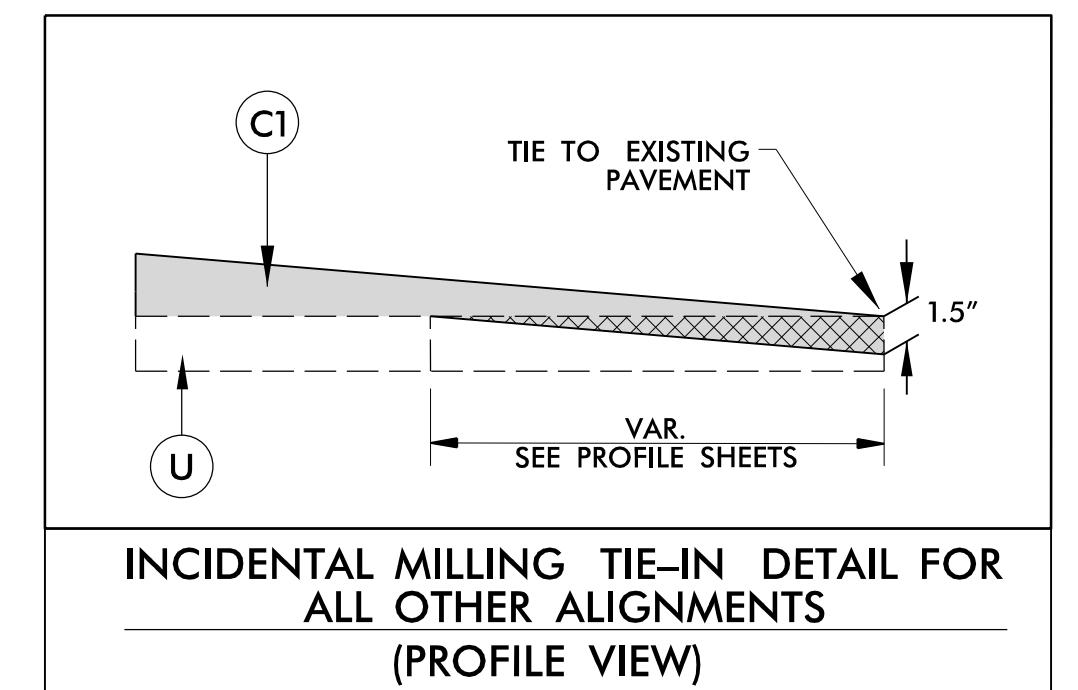
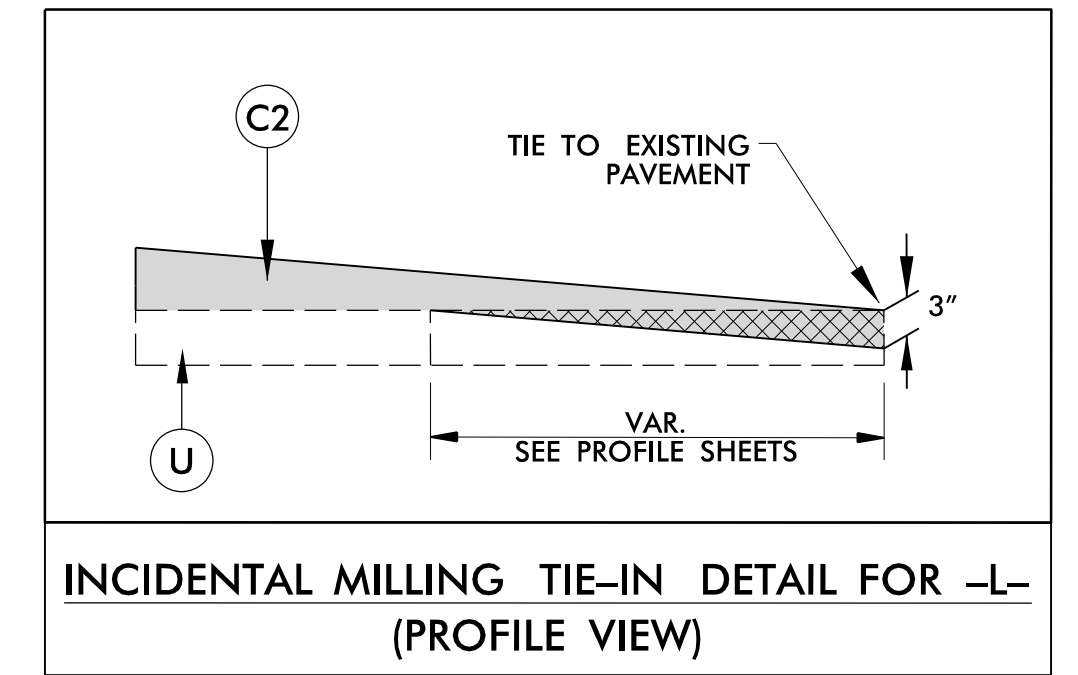
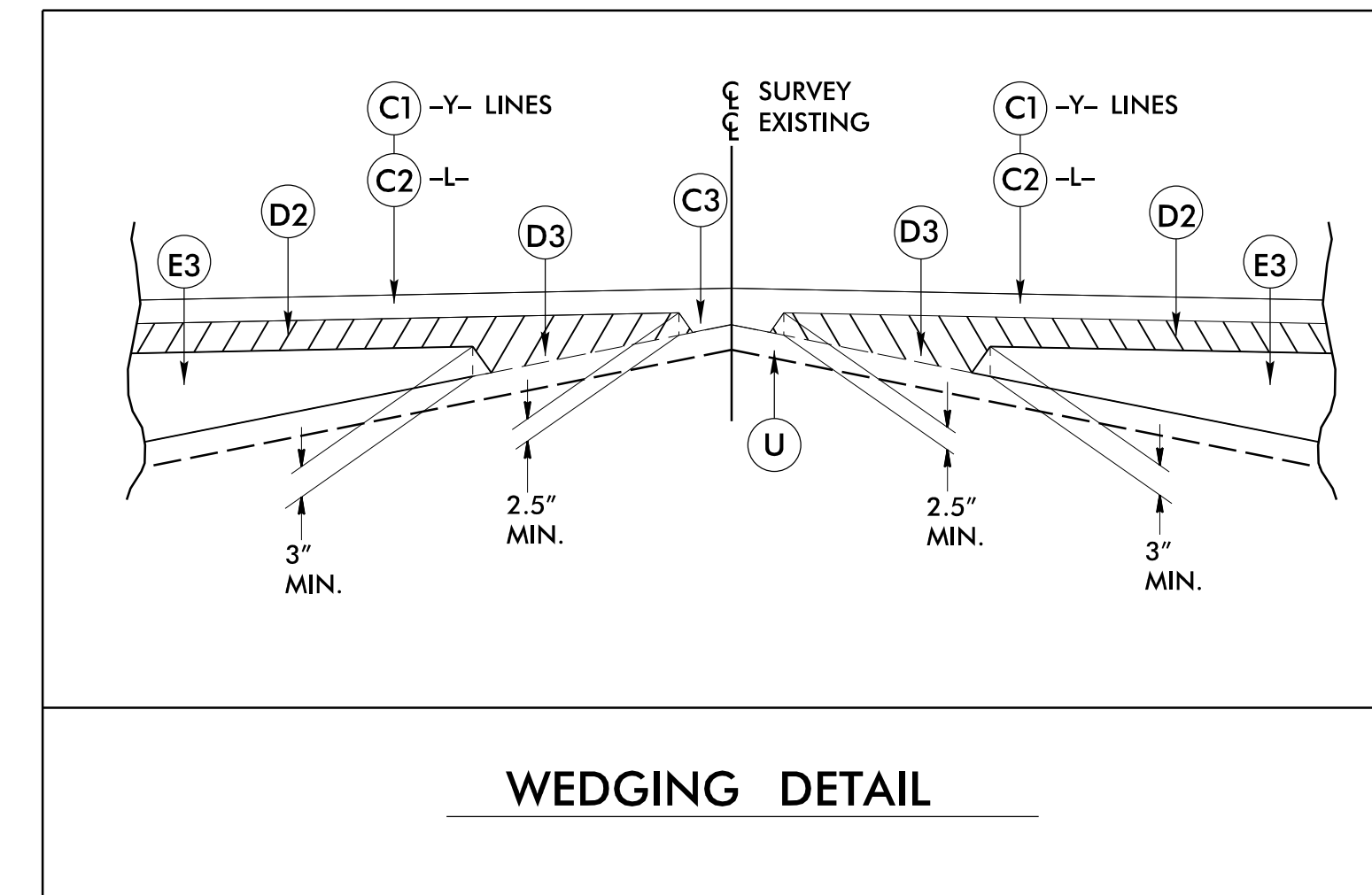
A	12" PORTLAND CEMENT CONCRETE PAVEMENT (WITHOUT DOWELS).	J2	PROP. 8" AGGREGATE BASE COURSE.
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	J3	PROP. 9" AGGREGATE BASE COURSE.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	R1	1'-6" CONCRETE CURB AND GUTTER.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	R2	2'-6" CONCRETE CURB AND GUTTER.
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	R3	8"x18" CONCRETE CURB.
D2	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R4	5" MONOLITHIC CONC. ISLAND (KEYED-IN).
D3	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.	S	4" CONCRETE SIDEWALK.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	T	EARTH MATERIAL.
E2	PROP. APPROX. 4 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
E3	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL THIS SHEET).
J1	PROP. 6" AGGREGATE BASE COURSE.		

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



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PROJECT REFERENCE NO. U-5604	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	



NOTE: SEE PLANS FOR SIDEWALK LOCATIONS

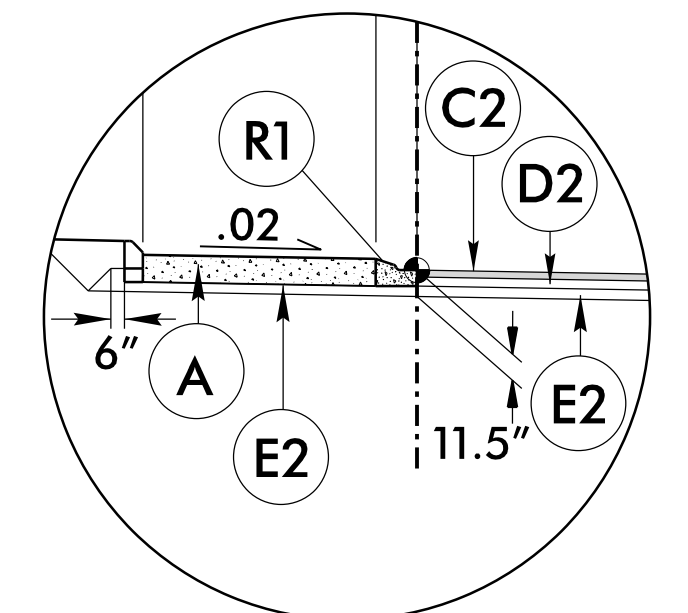
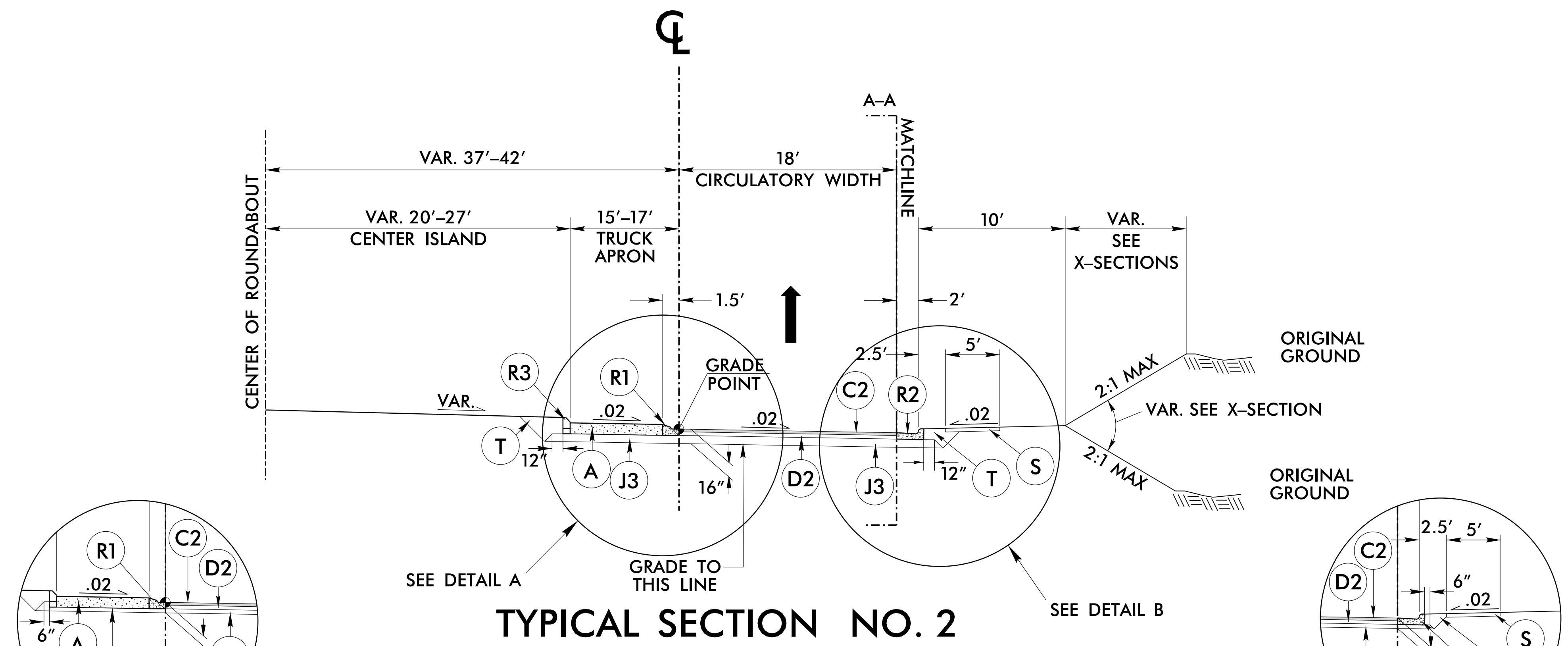
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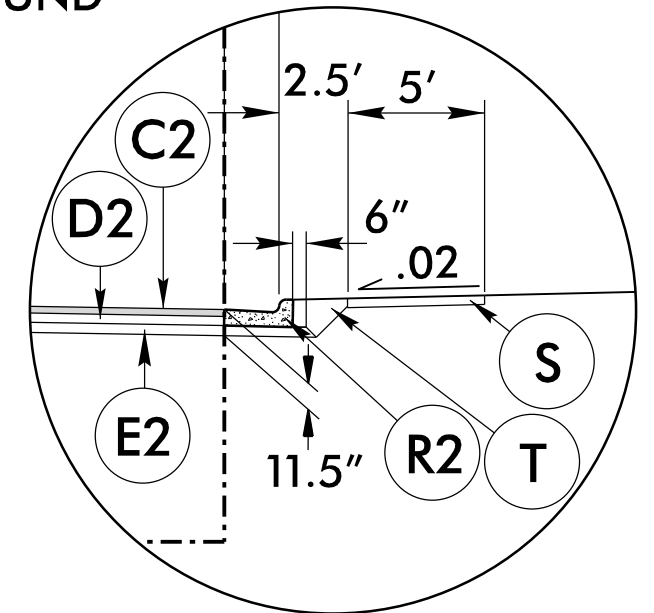
PROJECT REFERENCE NO. <i>U-5604</i>	SHEET NO. <i>2A-2</i>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

A	12" PCCP
C1	1 1/2" S9.5C
C2	3" S9.5C
C3	VAR. S9.5C
D1	2 1/2" I19.5C
D2	4" I19.5C
D3	VAR. I19.0C
E1	4" B25.0C
E2	4 1/2" B25.0C
E3	VAR. B25.0C
J1	6" ABC
J2	8" ABC
J3	9" ABC
R1	1'-6" C & G
R2	2'-6" C & G
R3	8"x18" CURB
R4	5" MCI
S	4" SIDEWALK
T	EARTH
U	EXISTING PVMT
W	WEDGING



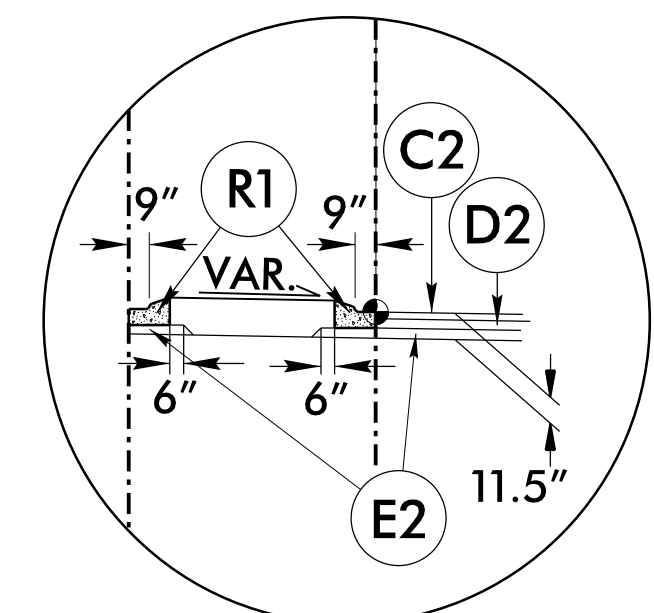
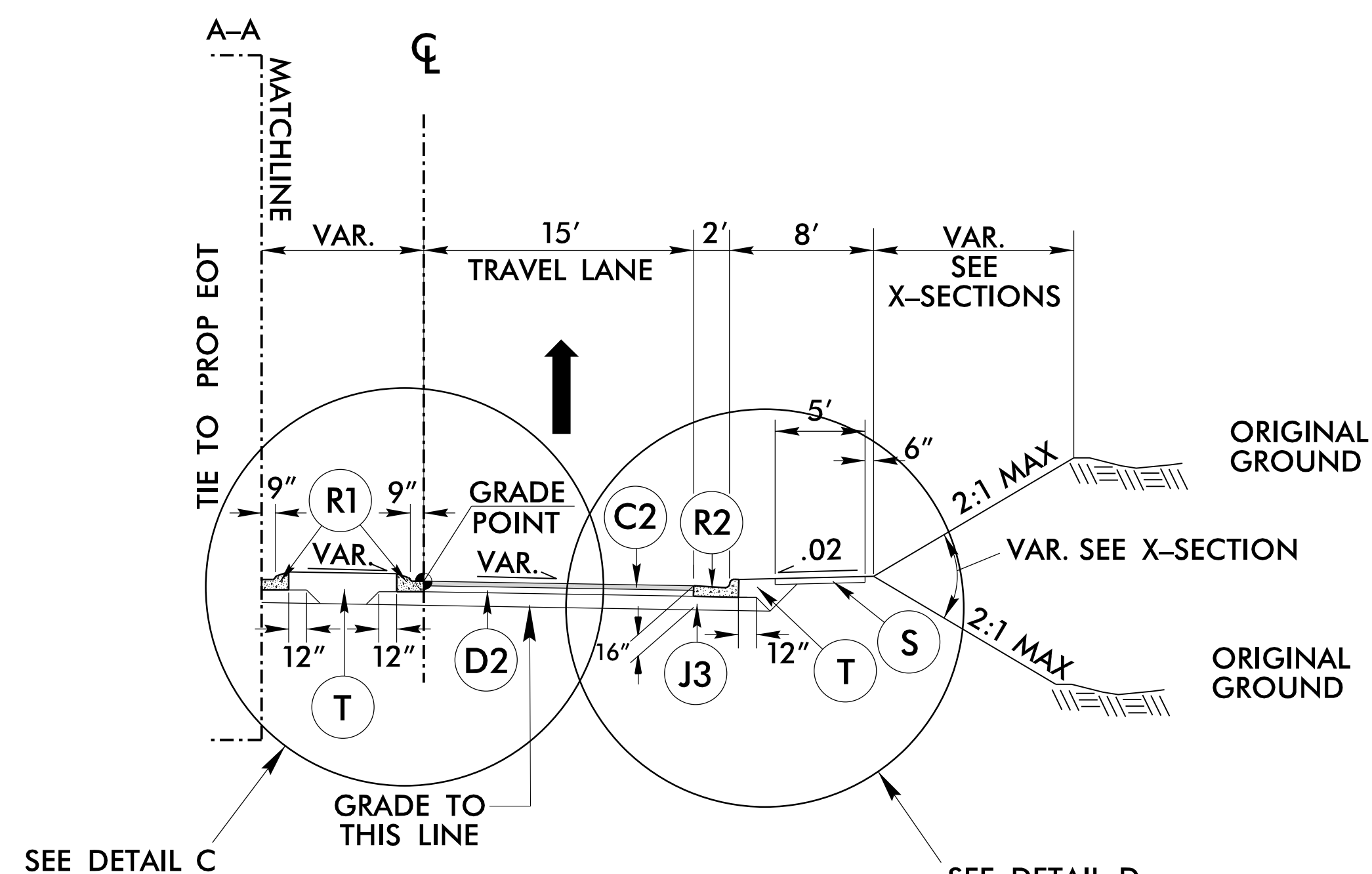
ALTERNATE PAVEMENT DESIGN 'DETAIL A'



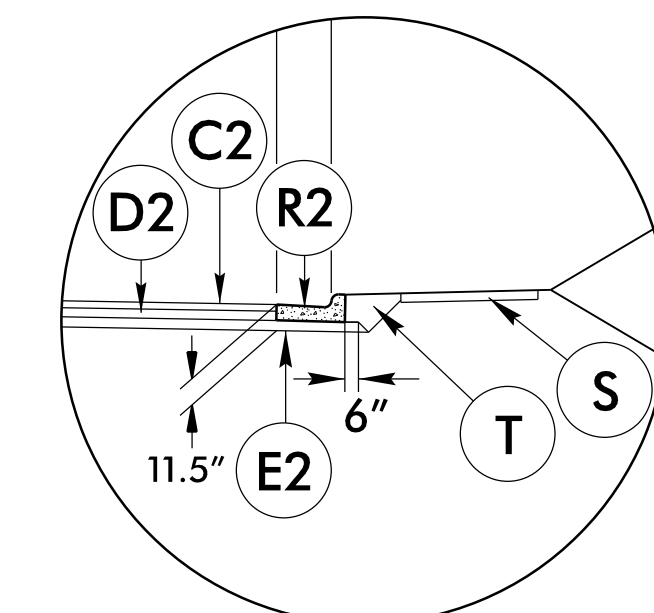
ALTERNATE PAVEMENT DESIGN 'DETAIL B'

TYPICAL SECTION NO. 2

- RBT1- STA. 10 + 00.00 TO STA. 12 + 63.86
- RBT2- STA. 10 + 00.00 TO STA. 12 + 32.47
- RBT3- STA. 10 + 00.00 TO STA. 12 + 32.45
- RBT4- STA. 10 + 00.00 TO STA. 12 + 32.48



ALTERNATE PAVEMENT DESIGN 'DETAIL C'



ALTERNATE PAVEMENT DESIGN 'DETAIL D'

TYPICAL SECTION NO. 3

- R1- STA. 10 + 00.00 TO STA. 12 + 61.13

NOTE: USE A-A FOR -R1- AT -RBT3-
 NOTE: SEE PLANS FOR SIDEWALK LOCATIONS

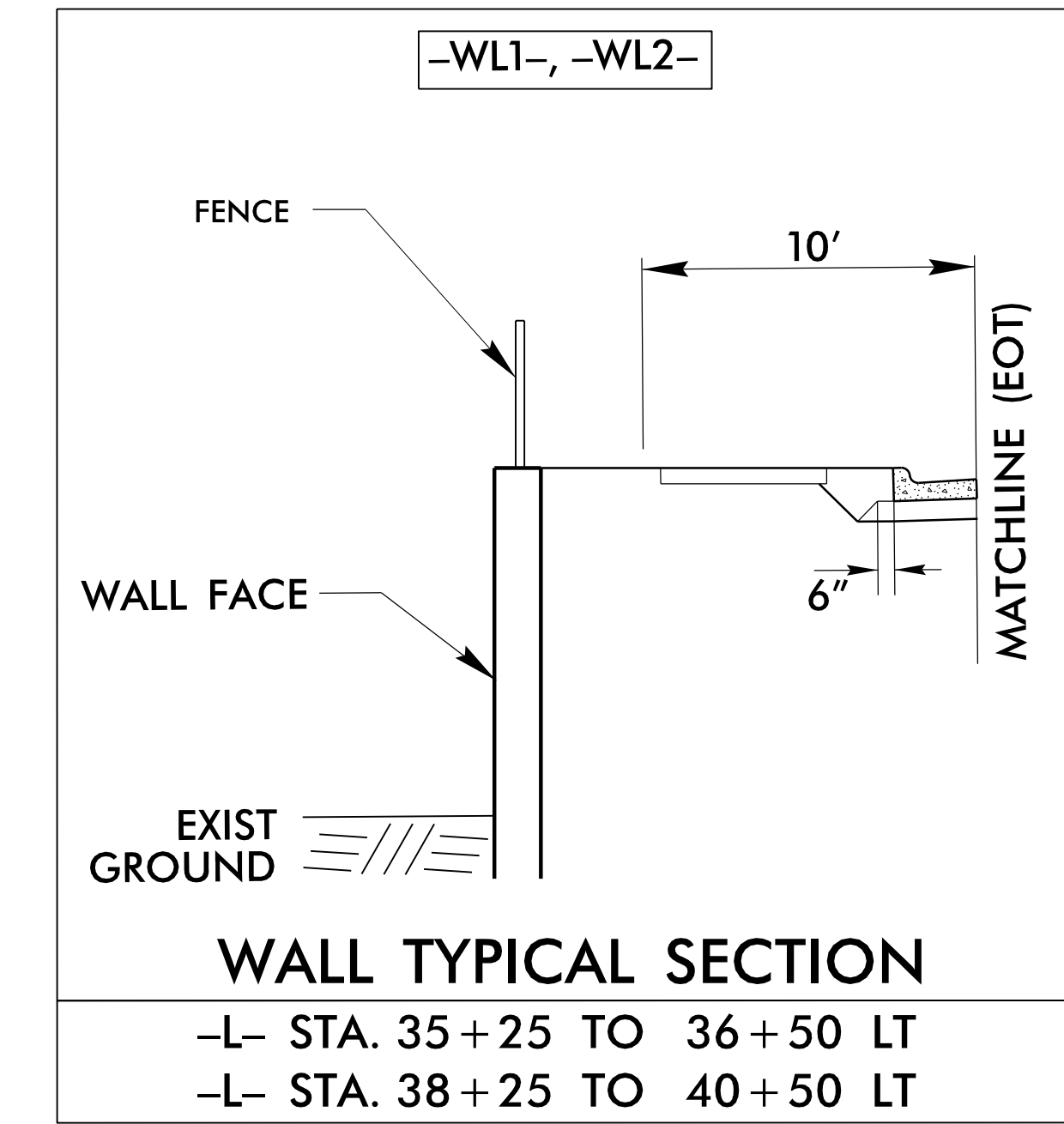
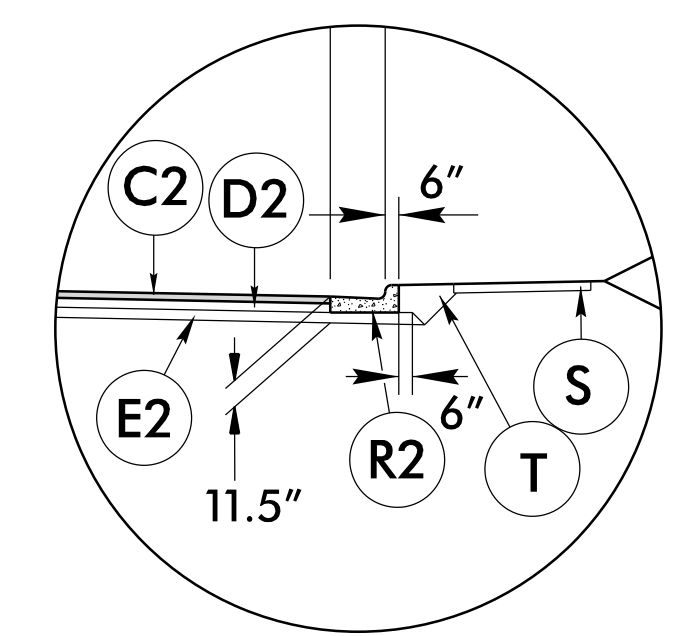
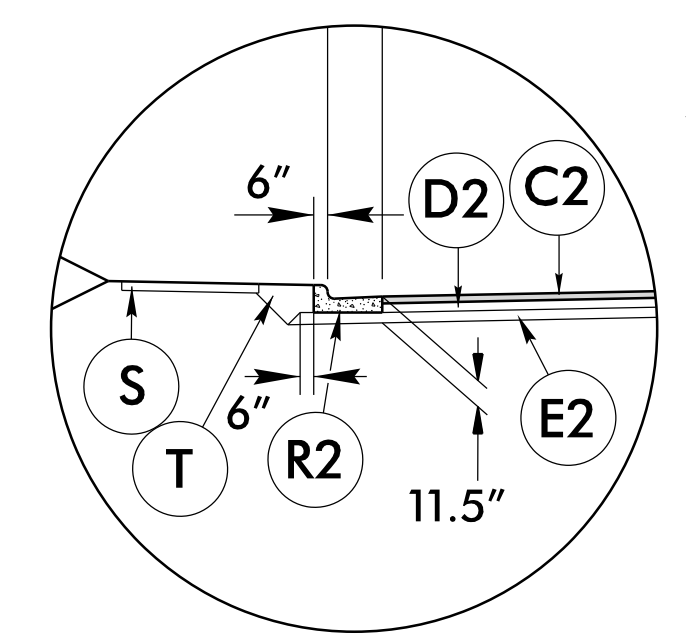
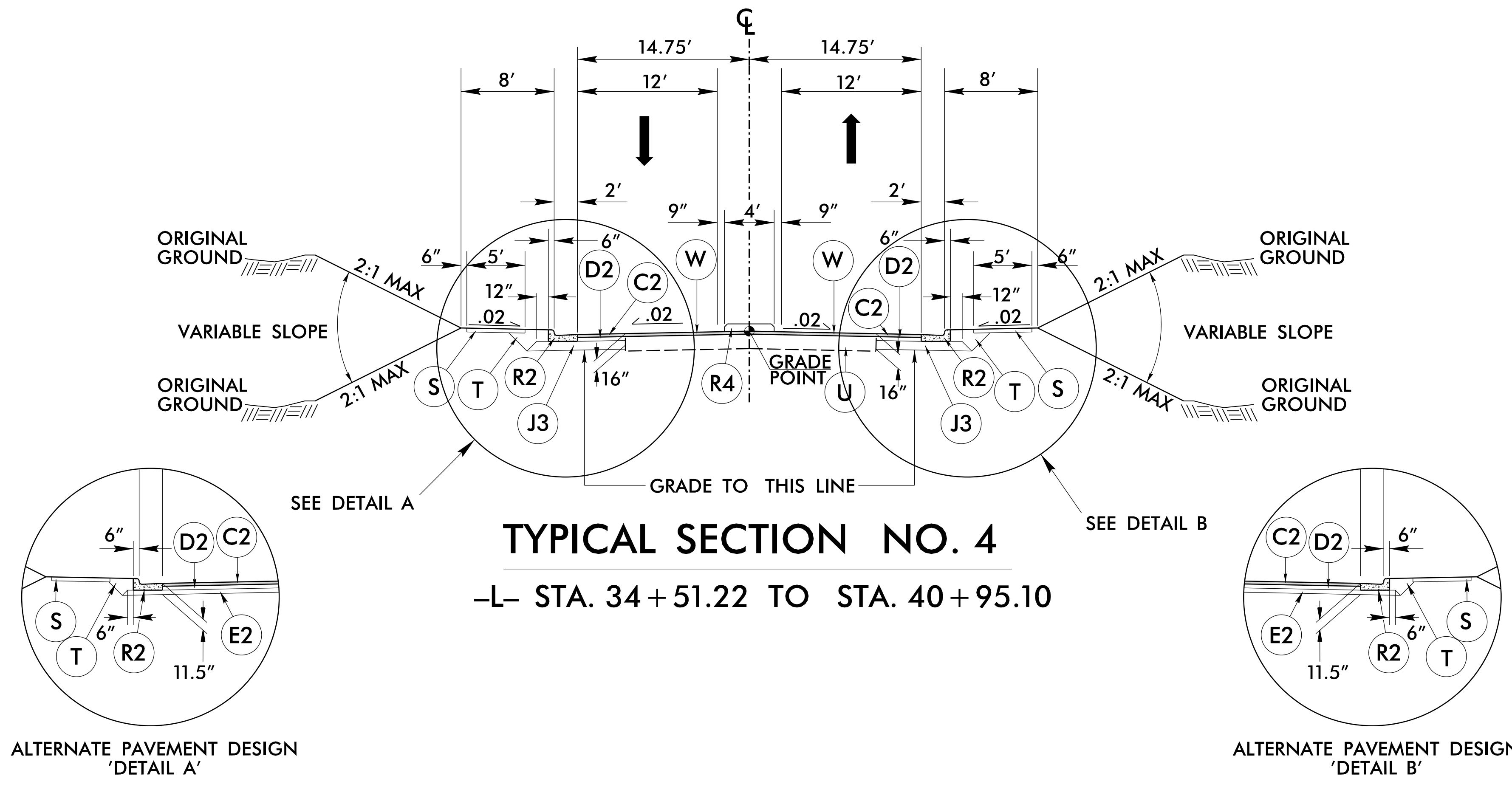
7/26/2018
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6/2/2018

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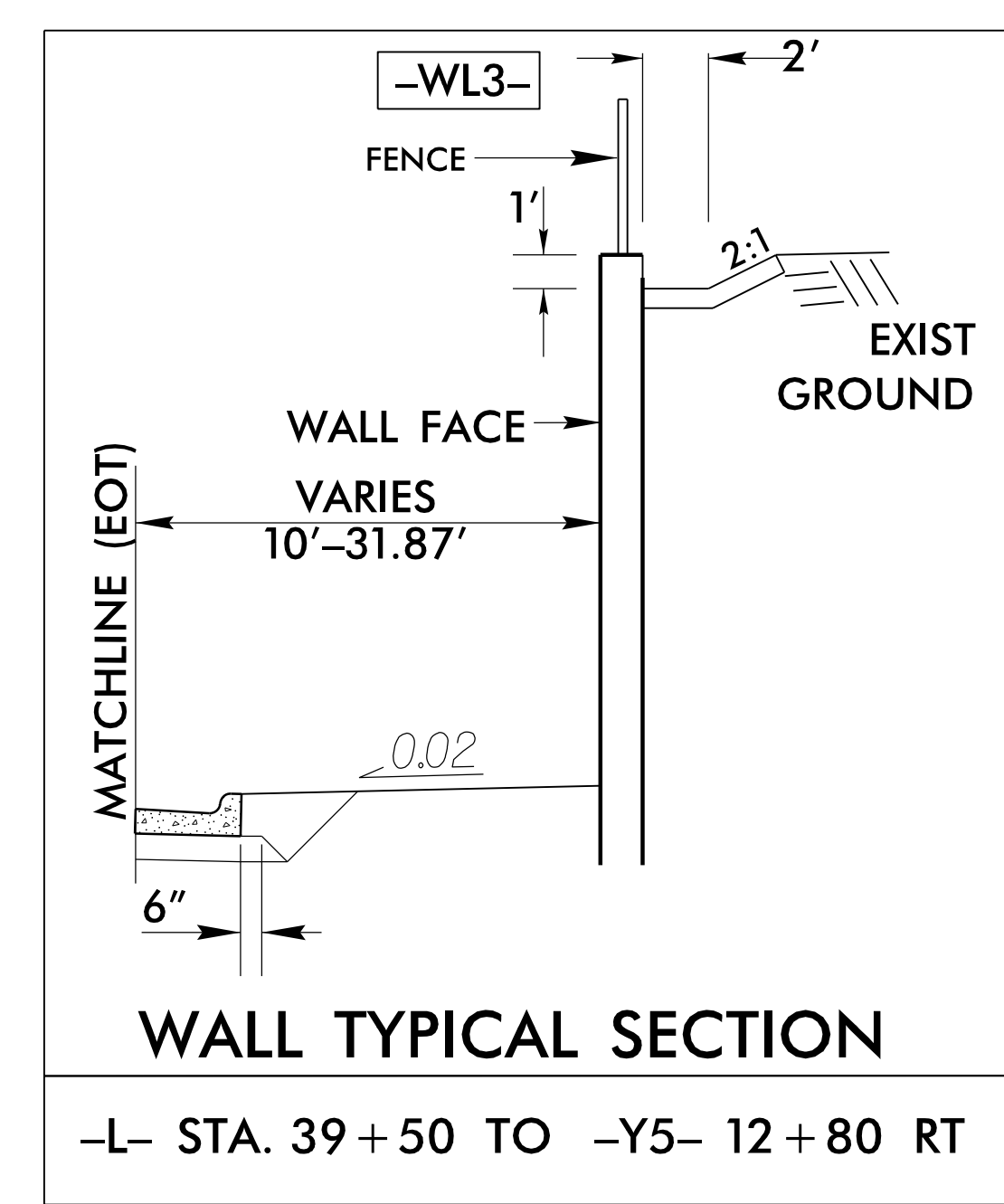
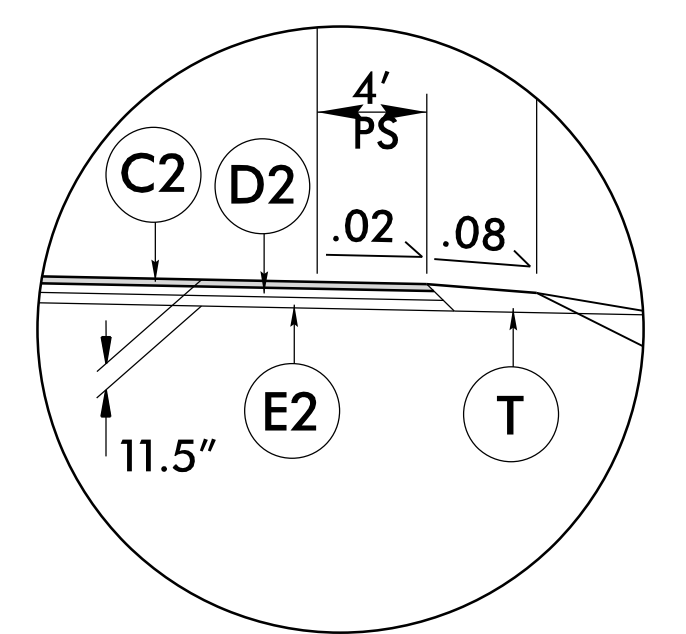
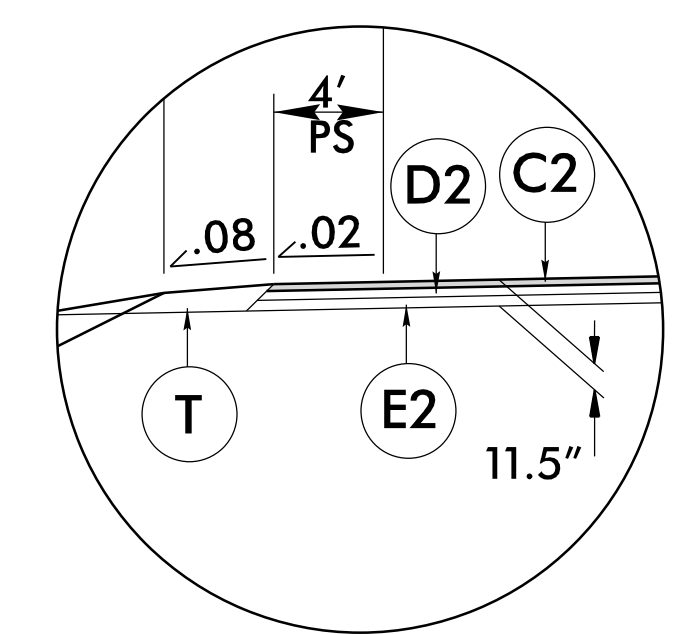
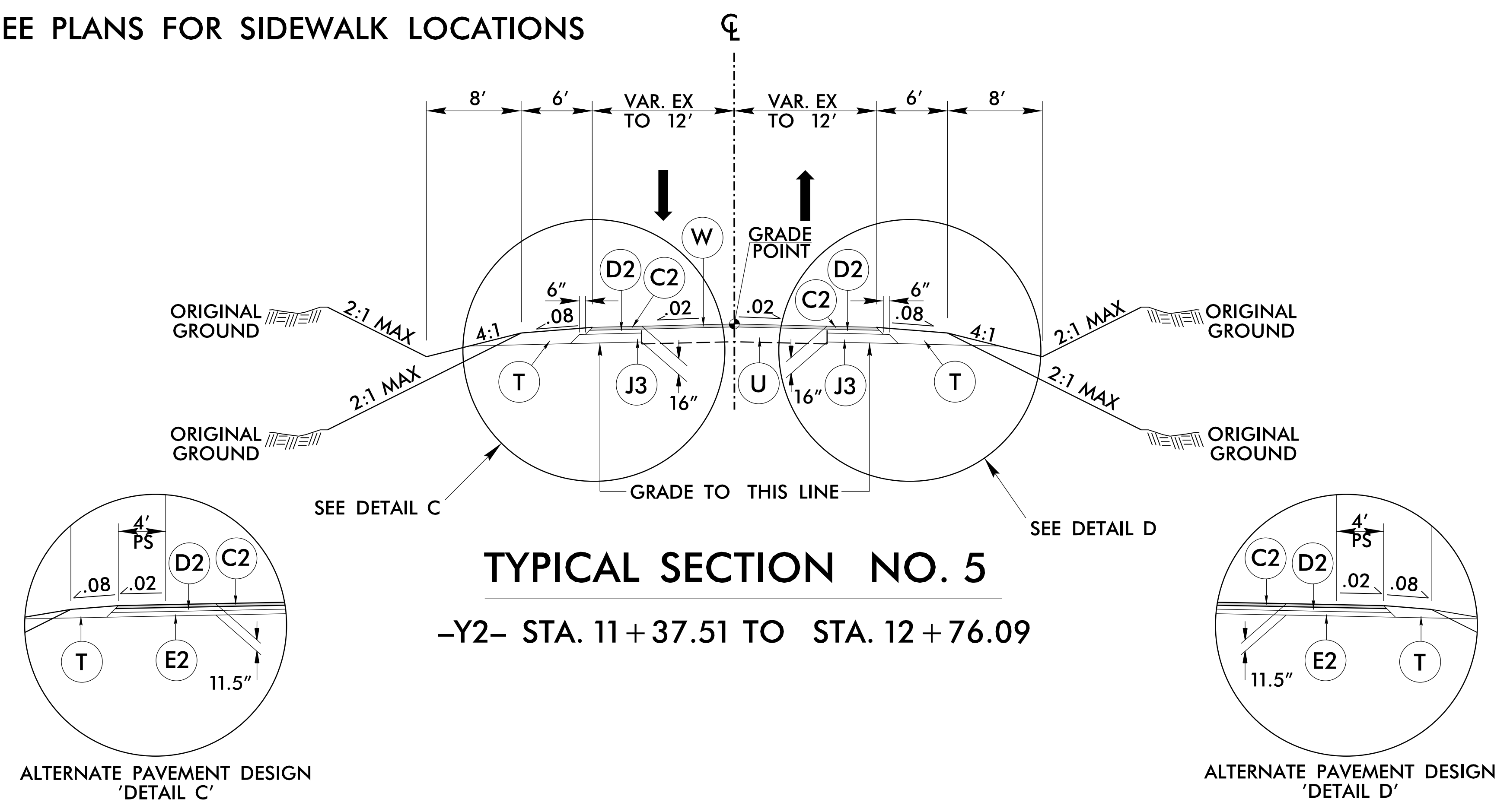
PROJECT REFERENCE NO. <i>U-5604</i>	SHEET NO. <i>2A-3</i>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



A	12" PCCP
C1	1 1/2" S9.5C
C2	3" S9.5C
C3	VAR. S9.5C
D1	2 1/2" I19.5C
D2	4" I19.5C
D3	VAR. I19.5C
E1	4" B25.0C
E2	4 1/2" B25.0C
E3	VAR. B25.0C
J1	6" ABC
J2	8" ABC
J3	9" ABC
R1	1'-6" C & G
R2	2'-6" C & G
R3	8"x18" CURB
R4	5" MCI
S	4" SIDEWALK
T	EARTH
U	EXISTING PVMT
W	WEDGING

NOTE: SEE PLANS FOR SIDEWALK LOCATIONS



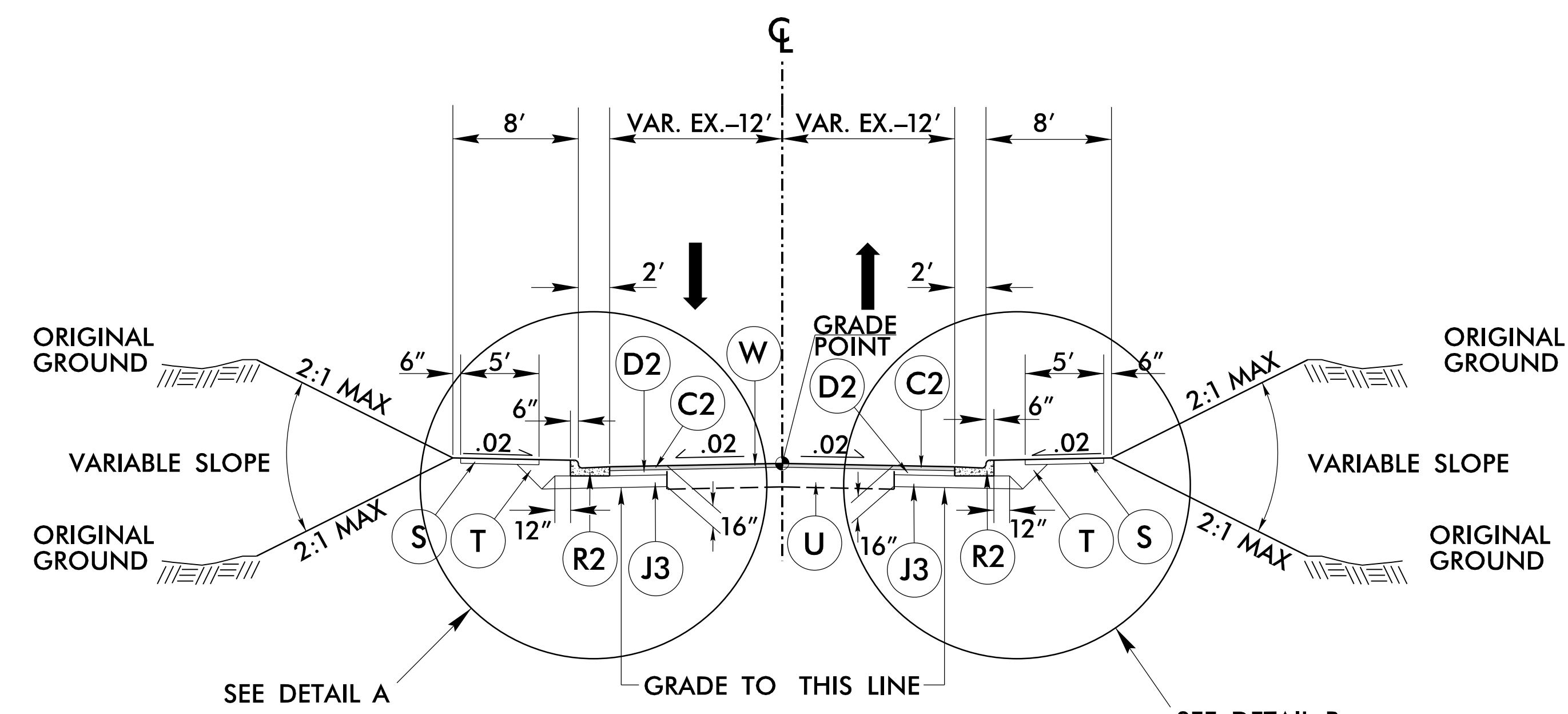
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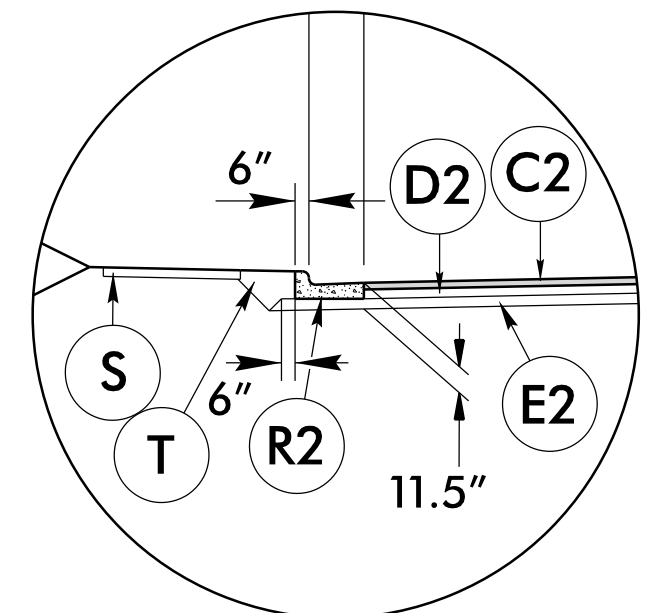
PROJECT REFERENCE NO. U-5604	SHEET NO. 2A-4
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

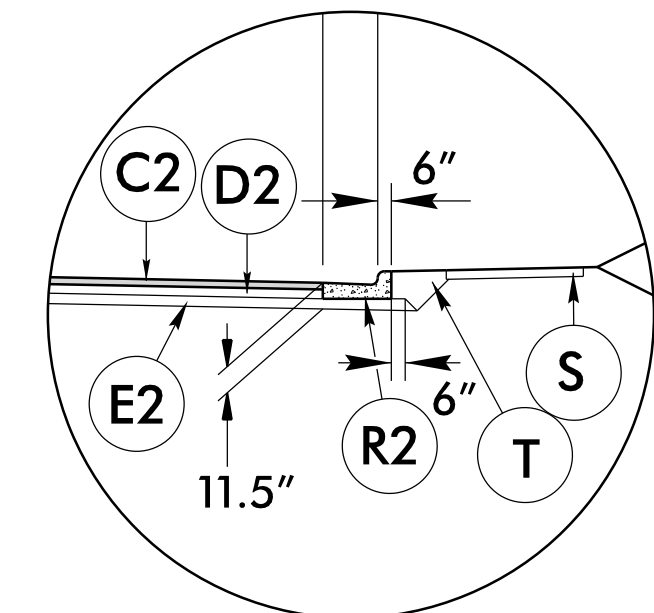


TYPICAL SECTION NO. 6

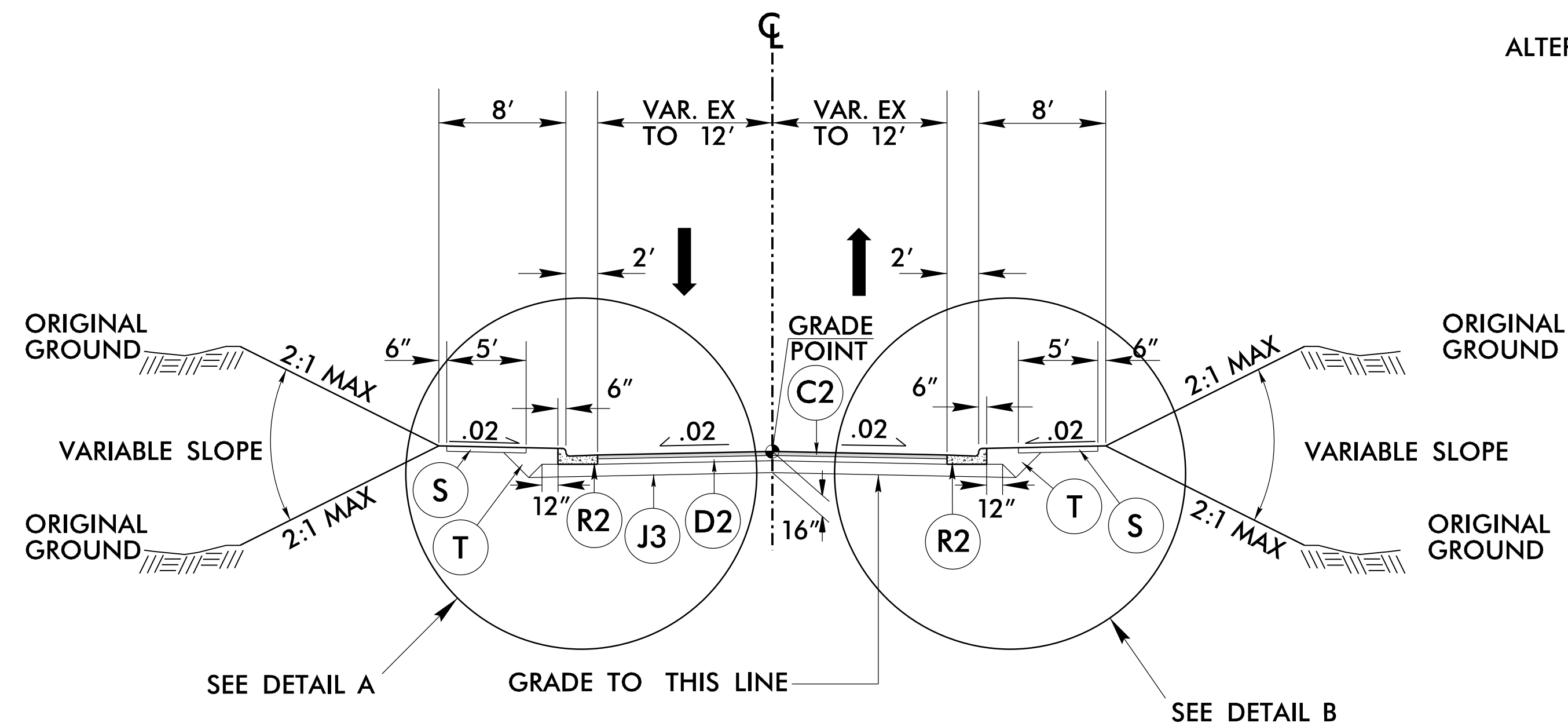
- L- STA. 19+49.20 TO STA. 22+12.69
- L- STA. 30+55.00 TO STA. 33+41.22
- L- STA. 42+05.10 TO STA. 44+00.44
- Y2- STA. 12+76.09 TO STA. 13+49.48
- Y3- STA. 10+83.60 TO STA. 12+47.70
- Y6- STA. 10+55.00 TO STA. 12+29.39
- Y8- STA. 14+60.00 TO STA. 16+03.63
- Y9- STA. 10+55.00 TO STA. 11+95.00



ALTERNATE PAVEMENT DESIGN 'DETAIL A'



ALTERNATE PAVEMENT DESIGN 'DETAIL B'



TYPICAL SECTION NO. 7

- Y5- STA. 10+55.00 TO STA. 13+20.00
- Y7- STA. 11+40.00 TO STA. 13+32.84

NOTE: SEE PLANS FOR SIDEWALK LOCATIONS

7/26/2018
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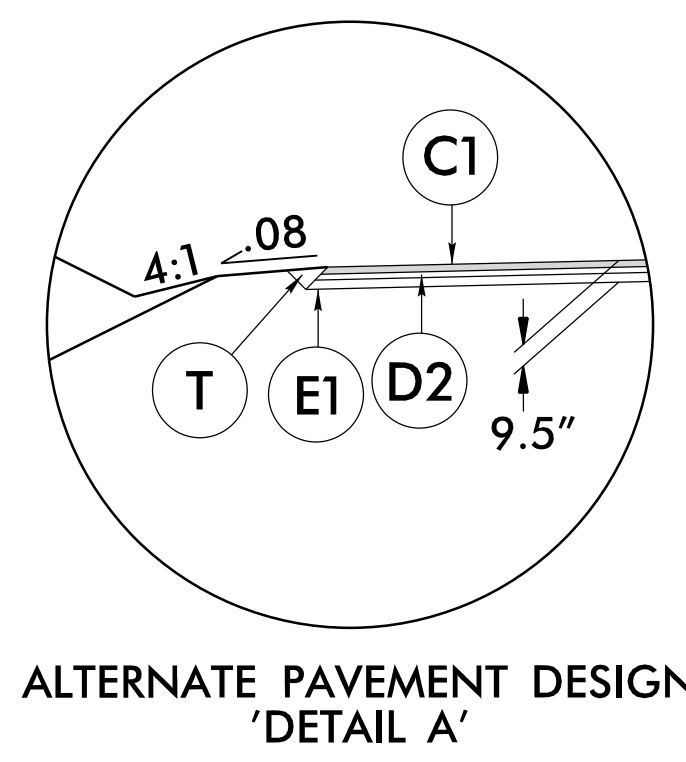
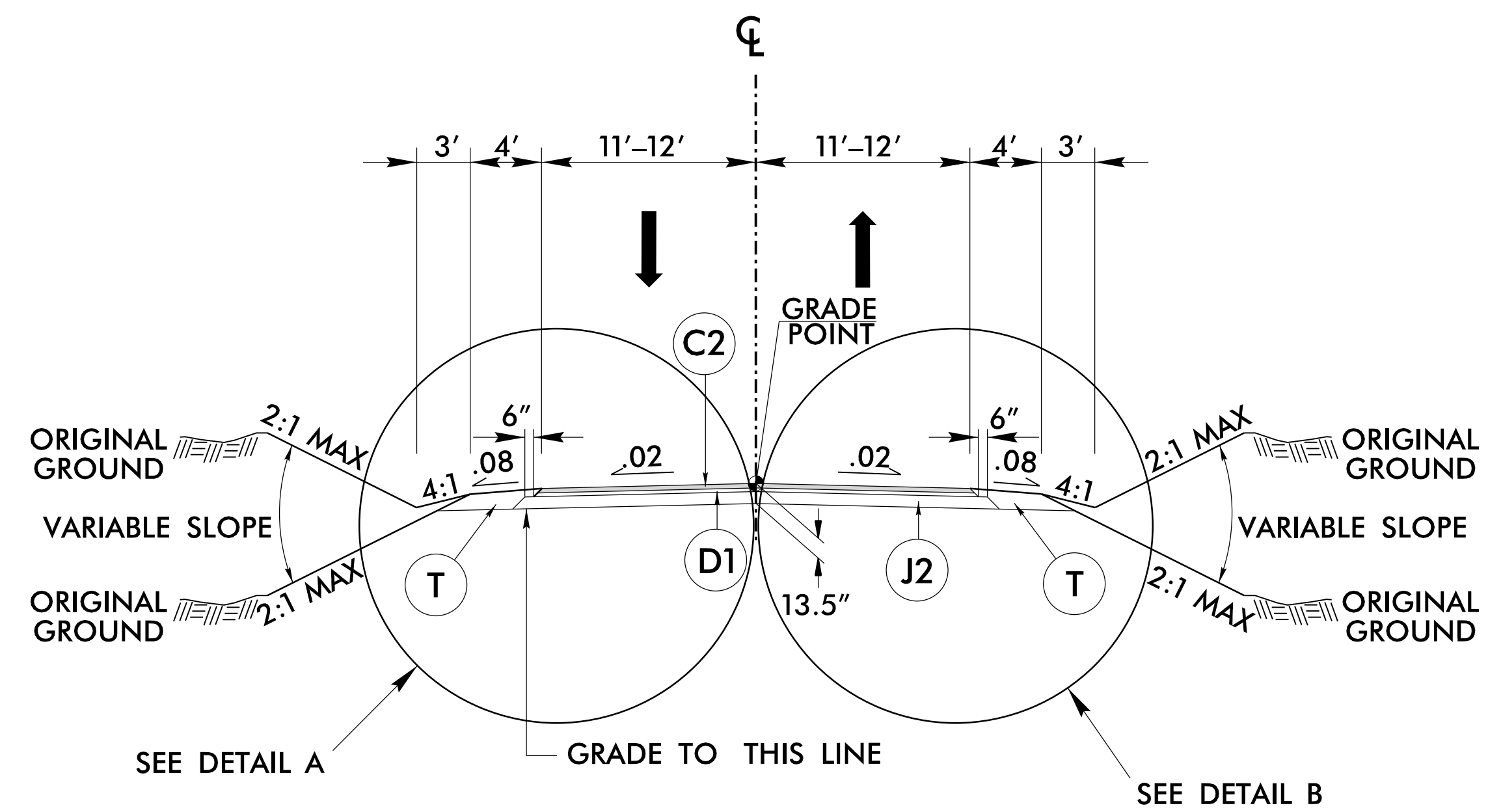
6/2/2018

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PROJECT REFERENCE NO. <i>U-5604</i>	SHEET NO. <i>2A-5</i>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

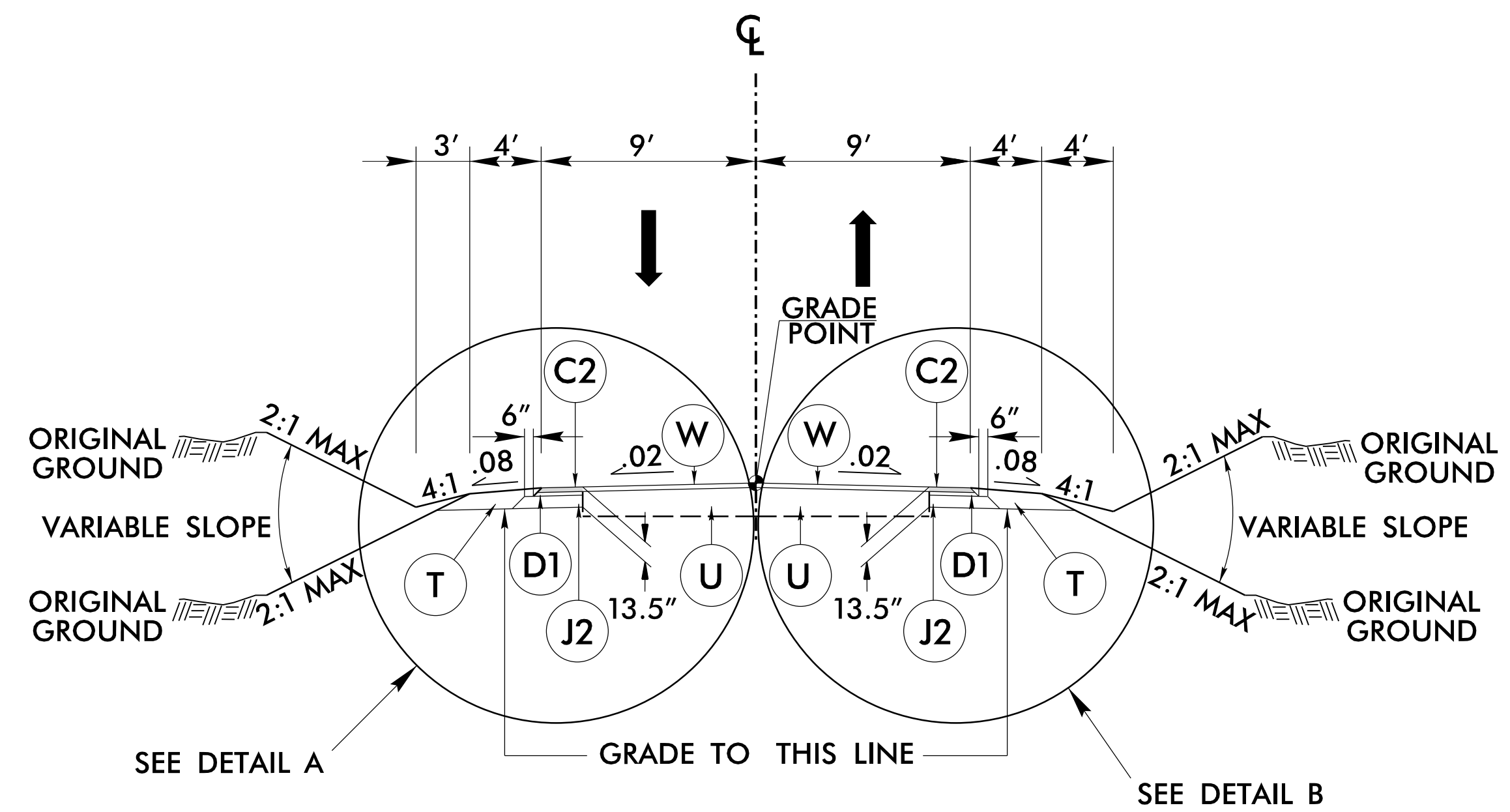
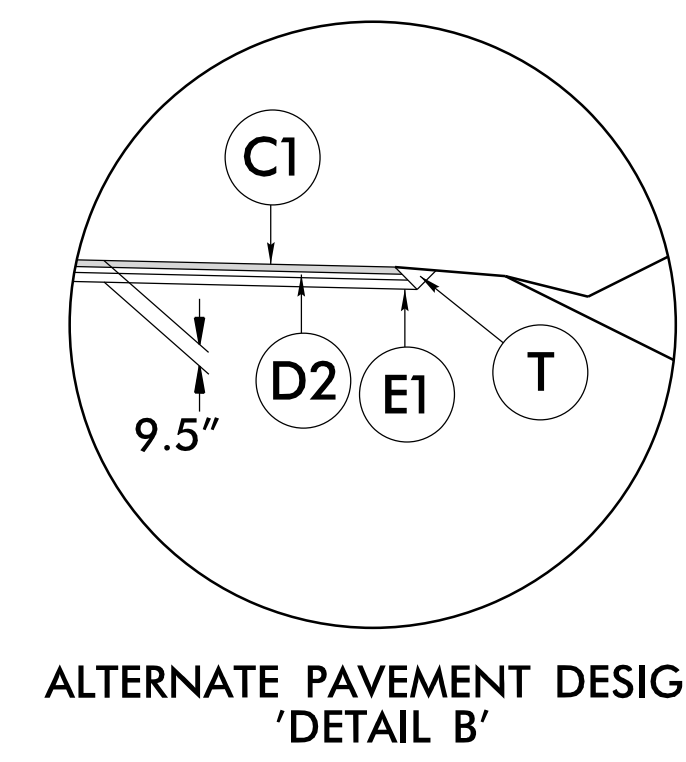
**DOCUMENT NOT CONSIDERED FINAL
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A	12" PCCP
C1	1 1/2" S9.5C
C2	3" S9.5C
C3	VAR. S9.5C
D1	2 1/2" I19.5C
D2	4" I19.5C
D3	VAR. I19.0C
E1	4" B25.0C
E2	4 1/2" B25.0C
E3	VAR. B25.0C
J1	6" ABC
J2	8" ABC
J3	9" ABC
R1	1'-6" C & G
R2	2'-6" C & G
R3	8"x18" CURB
R4	5" MCI
S	4" SIDEWALK
T	EARTH
U	EXISTING PVMT
W	WEDGING



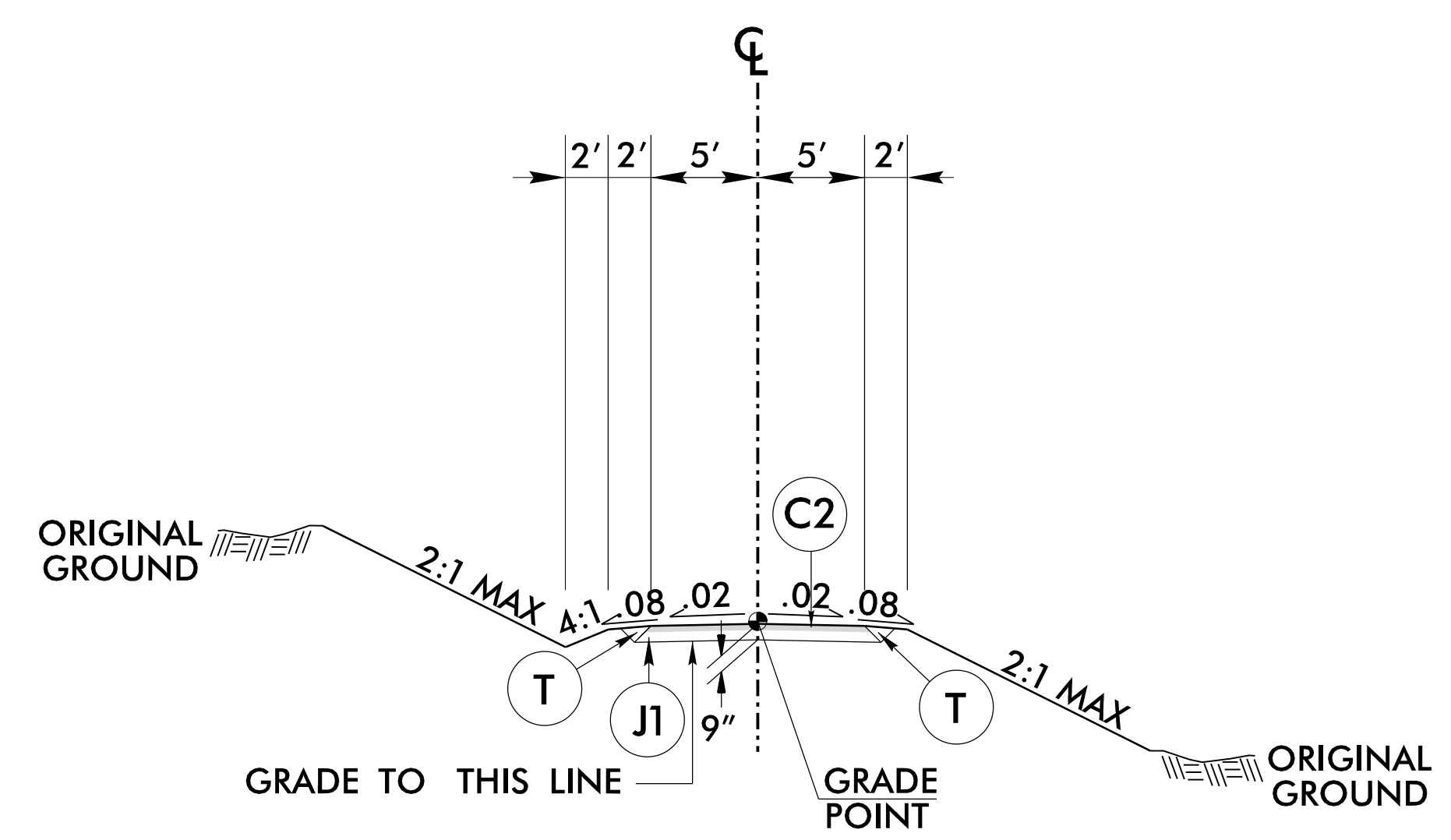
TYPICAL SECTION NO. 8

- DET1- STA. 10+00.00 TO STA. 18+18.85
- DET2- STA. 10+00.00 TO STA. 15+88.85
- DET3- STA. 10+00.00 TO STA. 13+69.48
- DET4- STA. 10+00.00 TO STA. 14+12.16



TYPICAL SECTION NO. 9

- DET1A- STA. 10+00.00 TO STA. 11+72.90



TYPICAL SECTION NO. 10

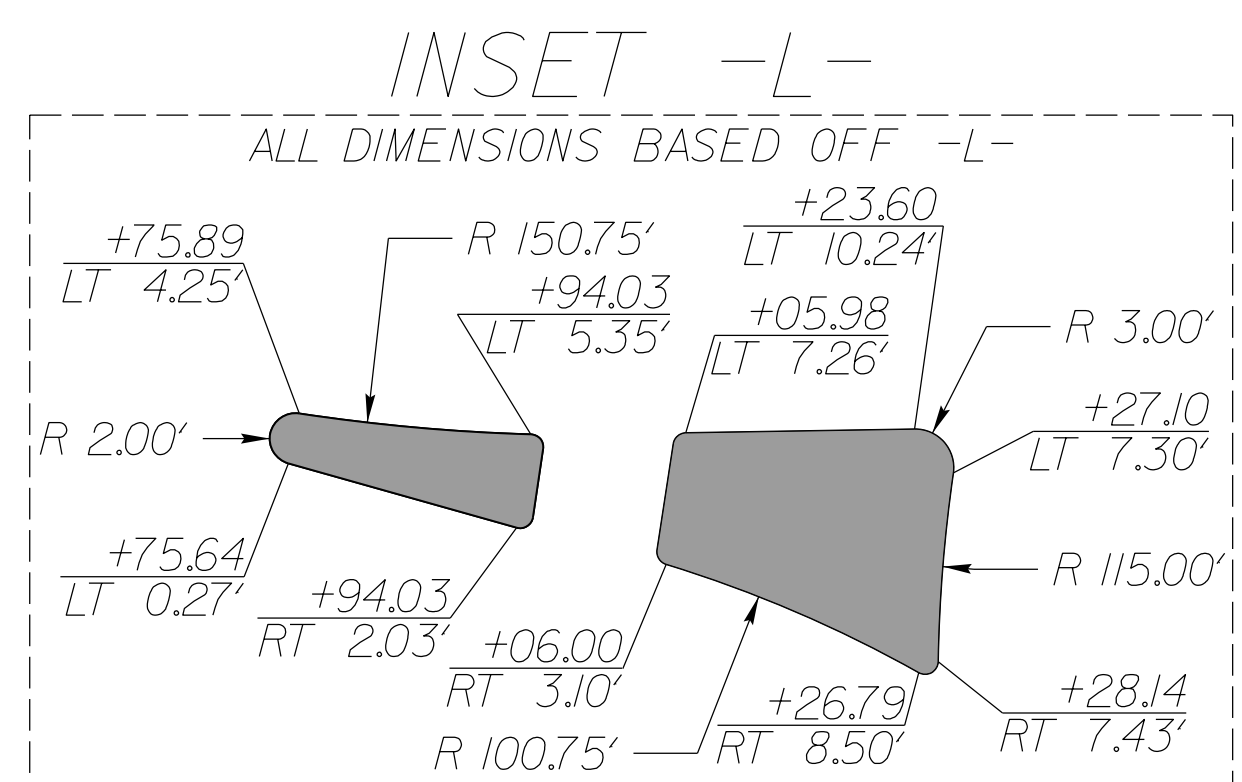
- DRWY1- STA. 10+17.44 TO STA. 10+60.00
- DRWY2- STA. 10+17.25 TO STA. 10+85.72


7/26/2018
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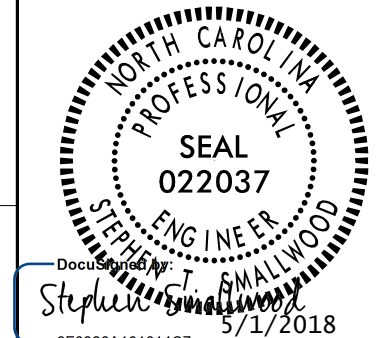
8/17/19

SEE SHEET 7 FOR -L- PROFILE
 SEE SHEET 8 FOR -Y2- PROFILE
 SEE SHEET 10 FOR -RBT1- PROFILE
 SEE PAVEMENT MARKING PLANS FOR EXACT LOCATION OF CURB RAMPS.
 ALL DRIVEWAY RADII ARE 3' UNLESS OTHERWISE NOTED.
 ALL ISLAND RADII ARE 1' UNLESS OTHERWISE NOTED.
 SEE SHEET 2B-5 FOR DETOUR 1
 PAVE ALL DRIVEWAYS TO A MINIMUM OF THE RIGHT-OF-WAY.

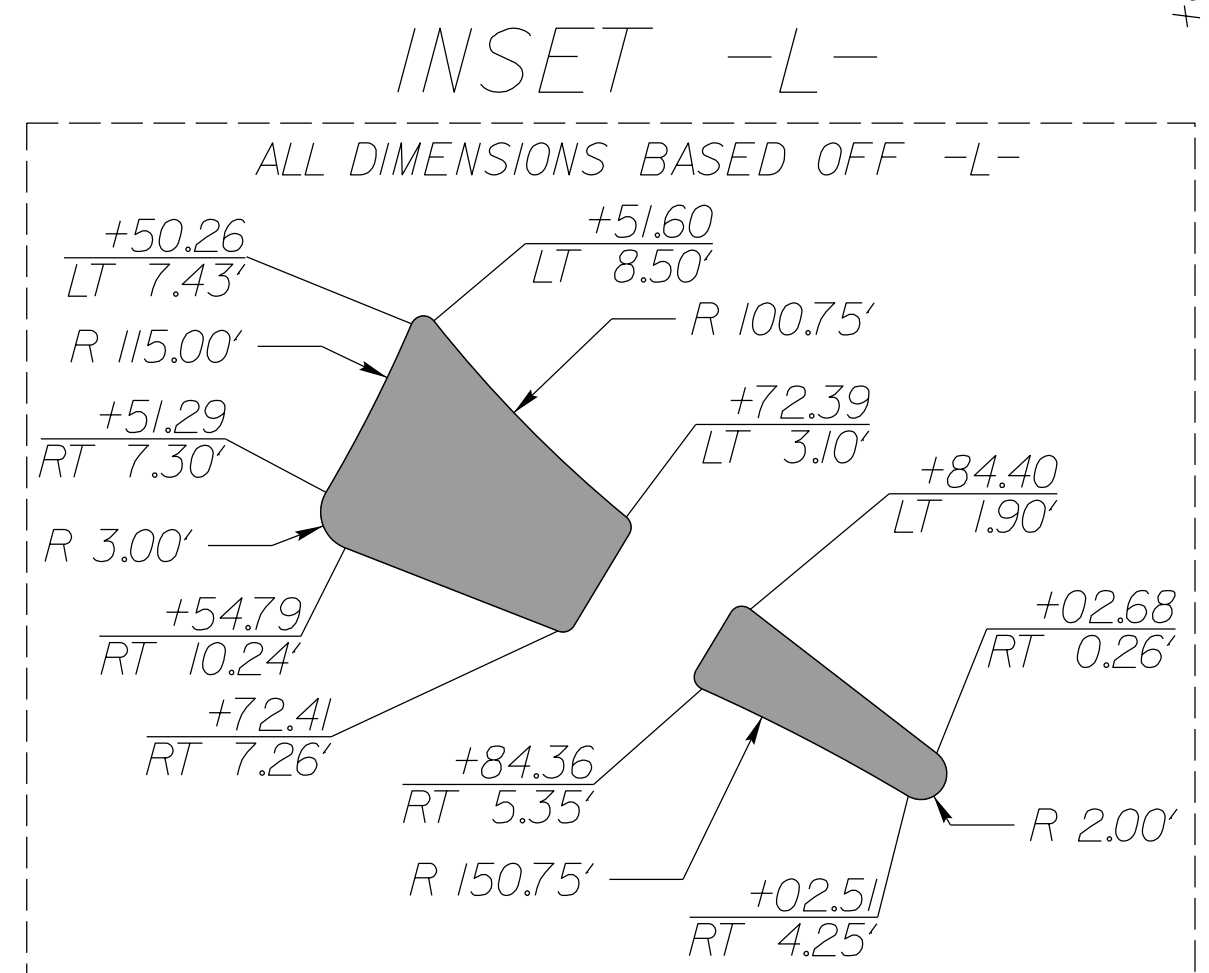
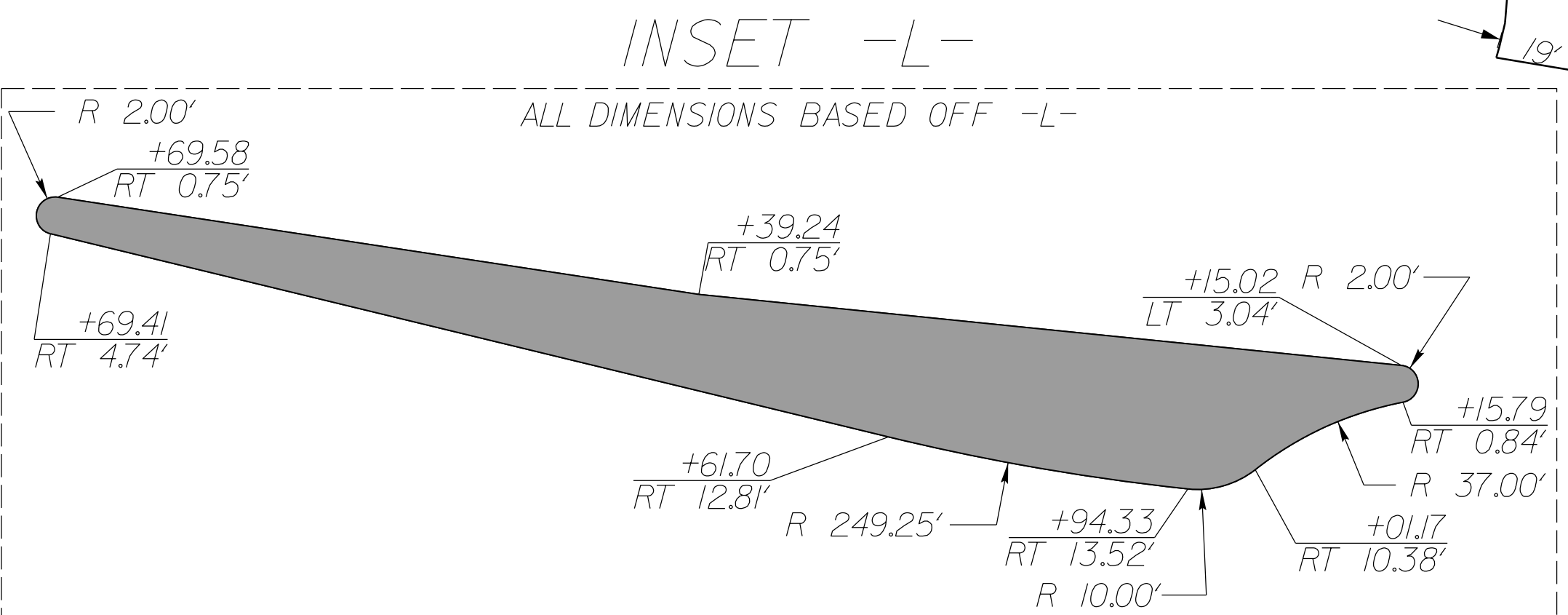
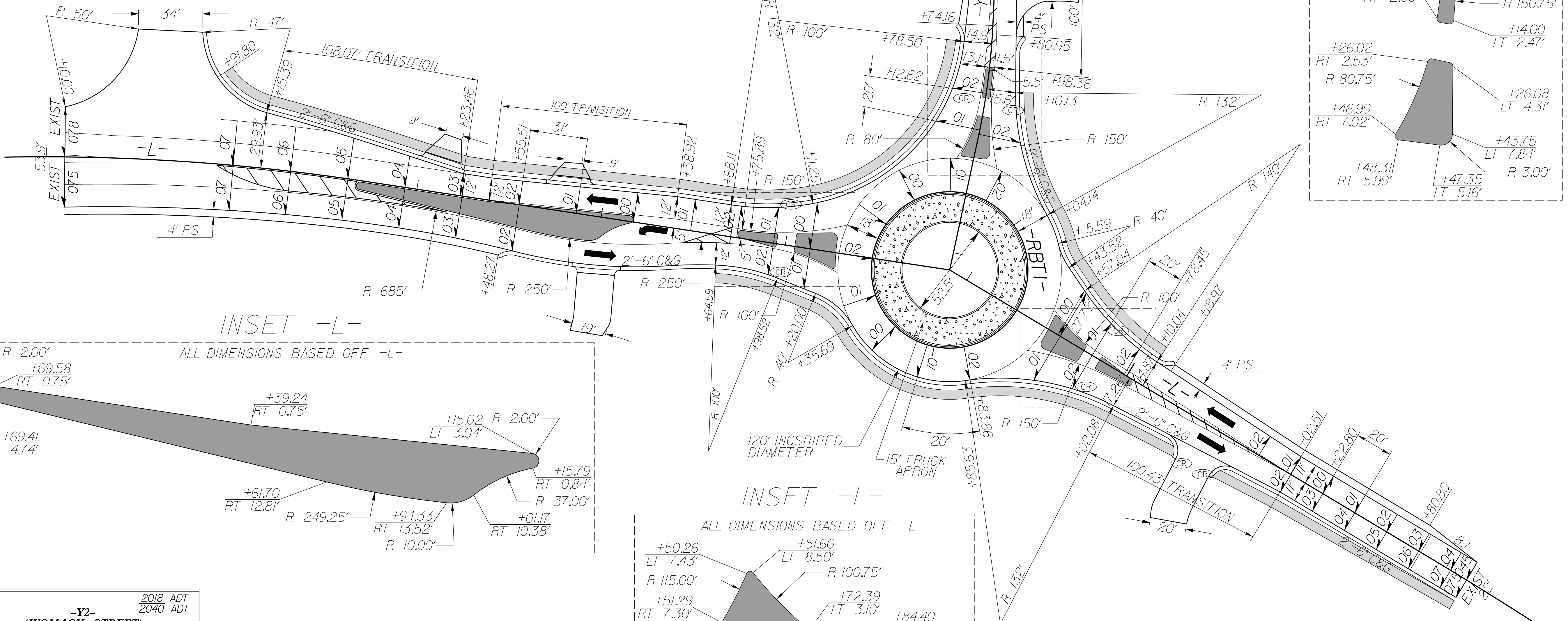
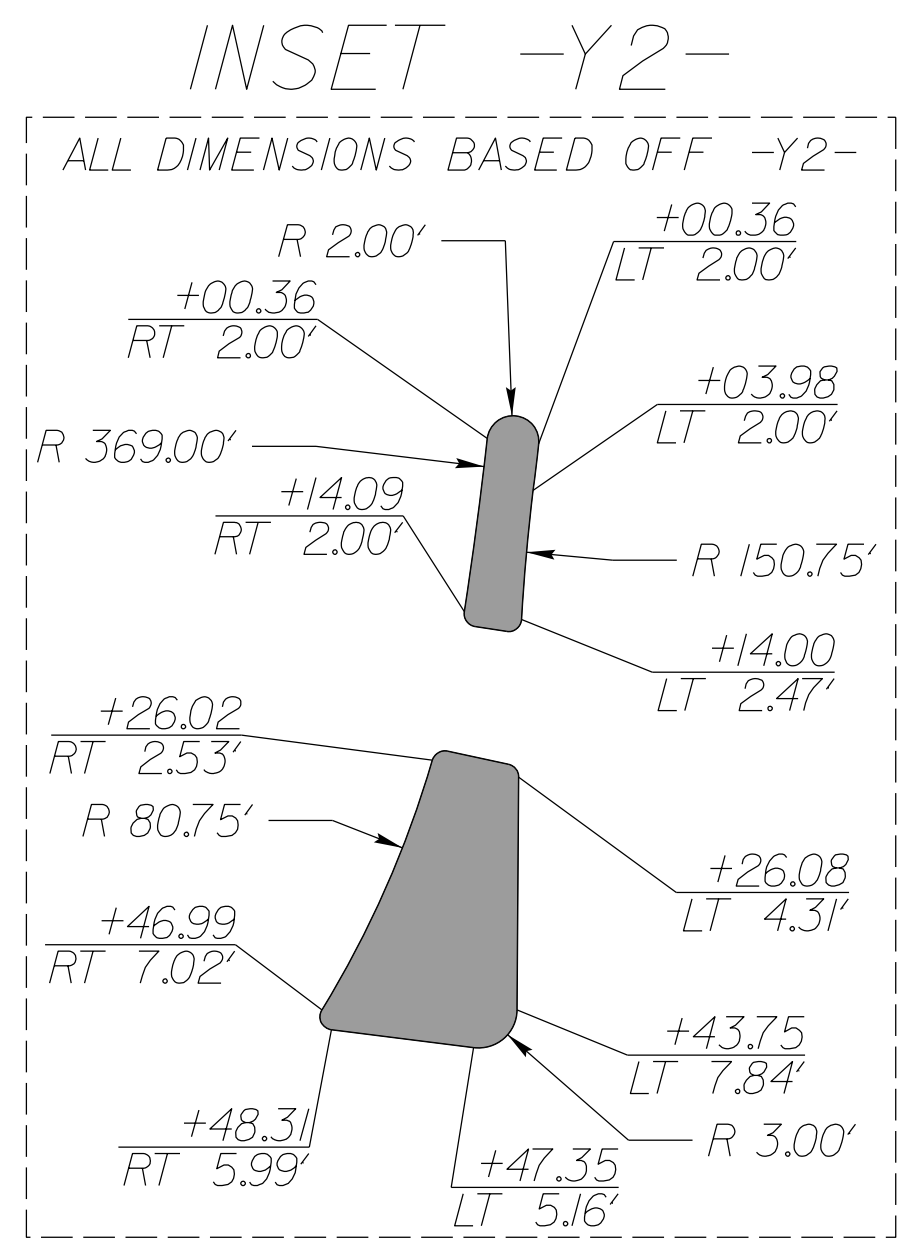
-  MONOLITHIC ISLAND (KEYED-IN)
-  SIDEWALK
-  CURB RAMP
-  TRUCK APRON



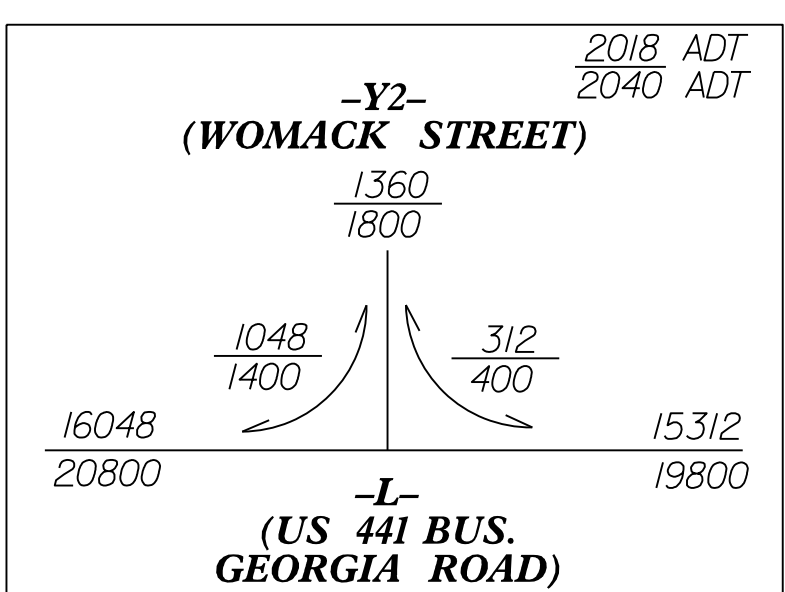
 Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-8866 Fax. (919) 851-7024 www.stantec.com License No. F-0672	PROJECT REFERENCE NO. U-5604	SHEET NO. 2B-1
	ROADWAY DESIGN ENGINEER	



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



INTERSECTION DETAIL NO. 1
-RBT1-



REVISIONS

4/30/2018
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 cpe1100

8/17/99

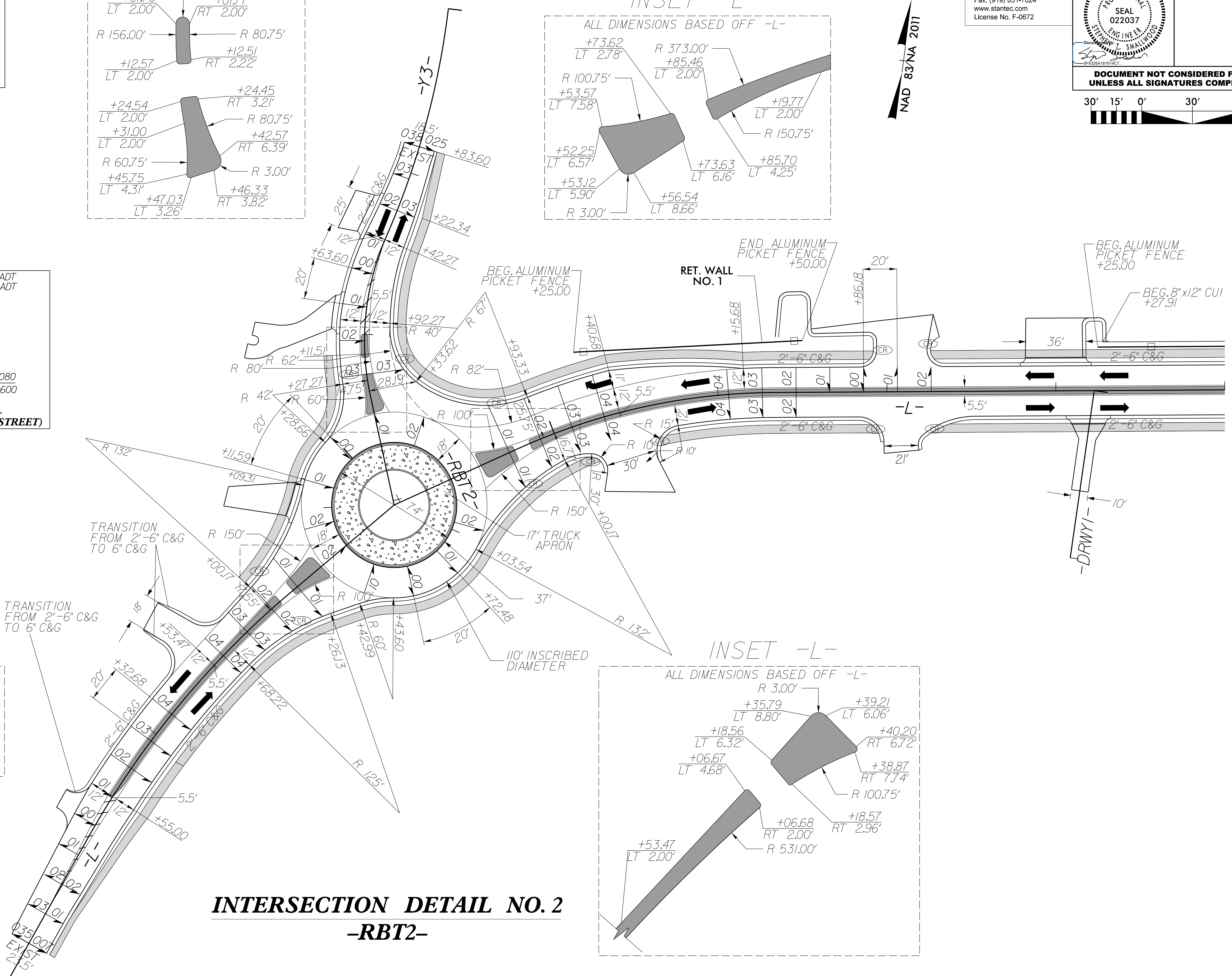
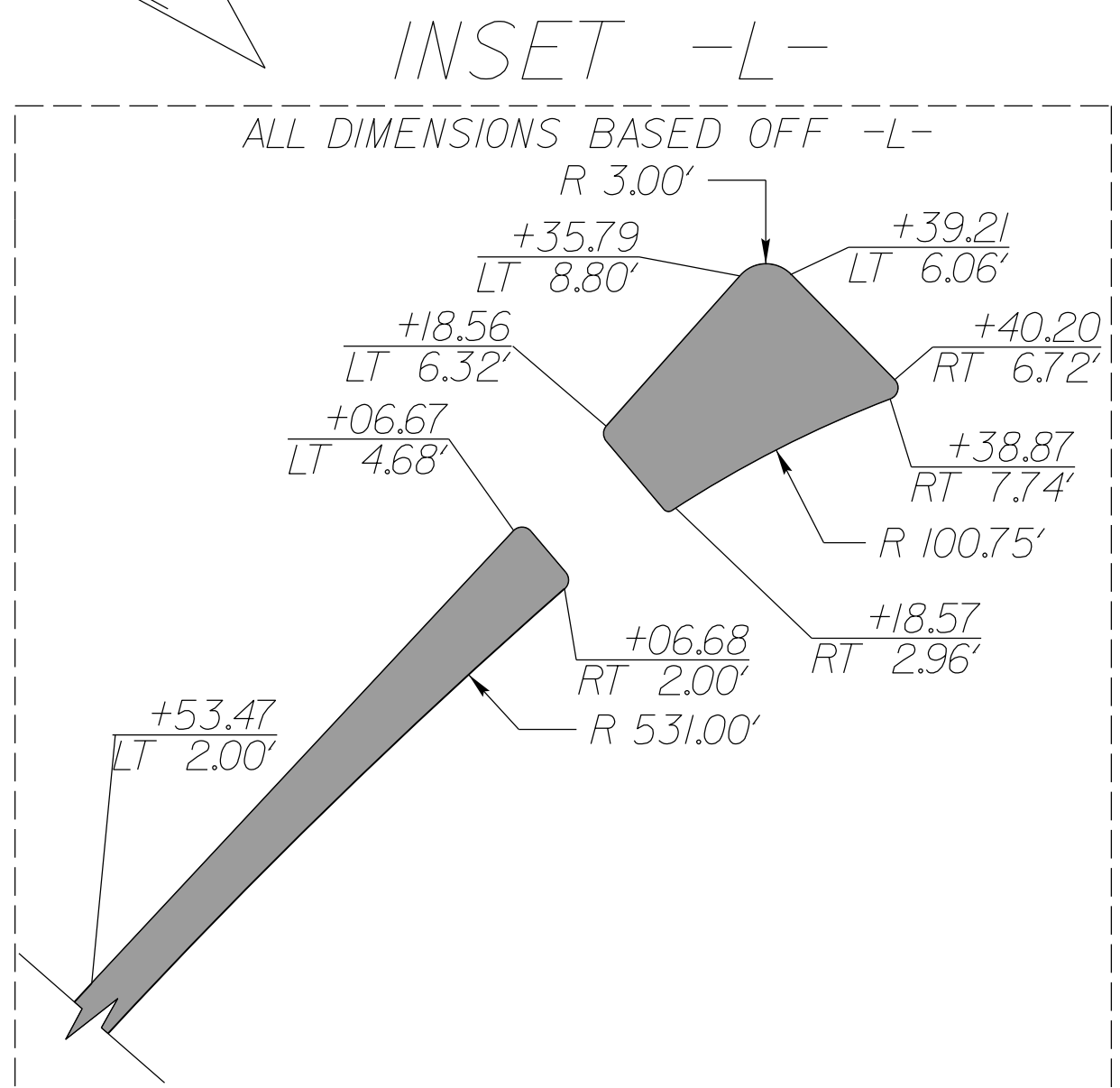
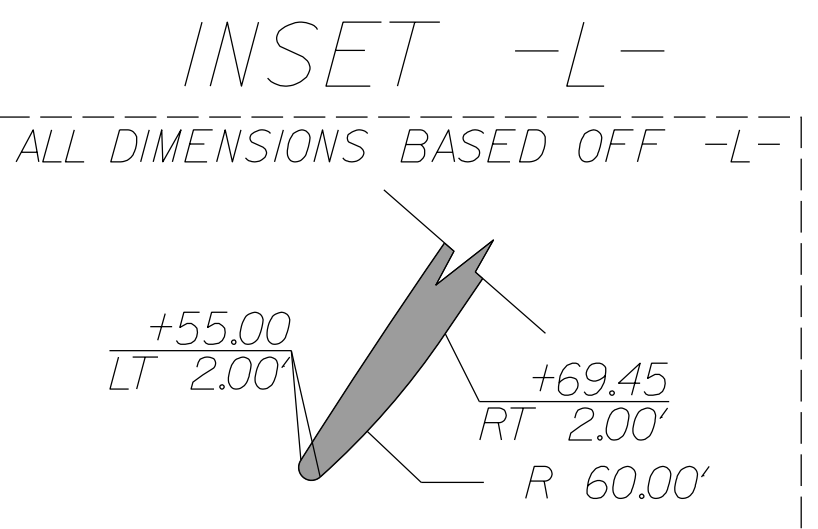
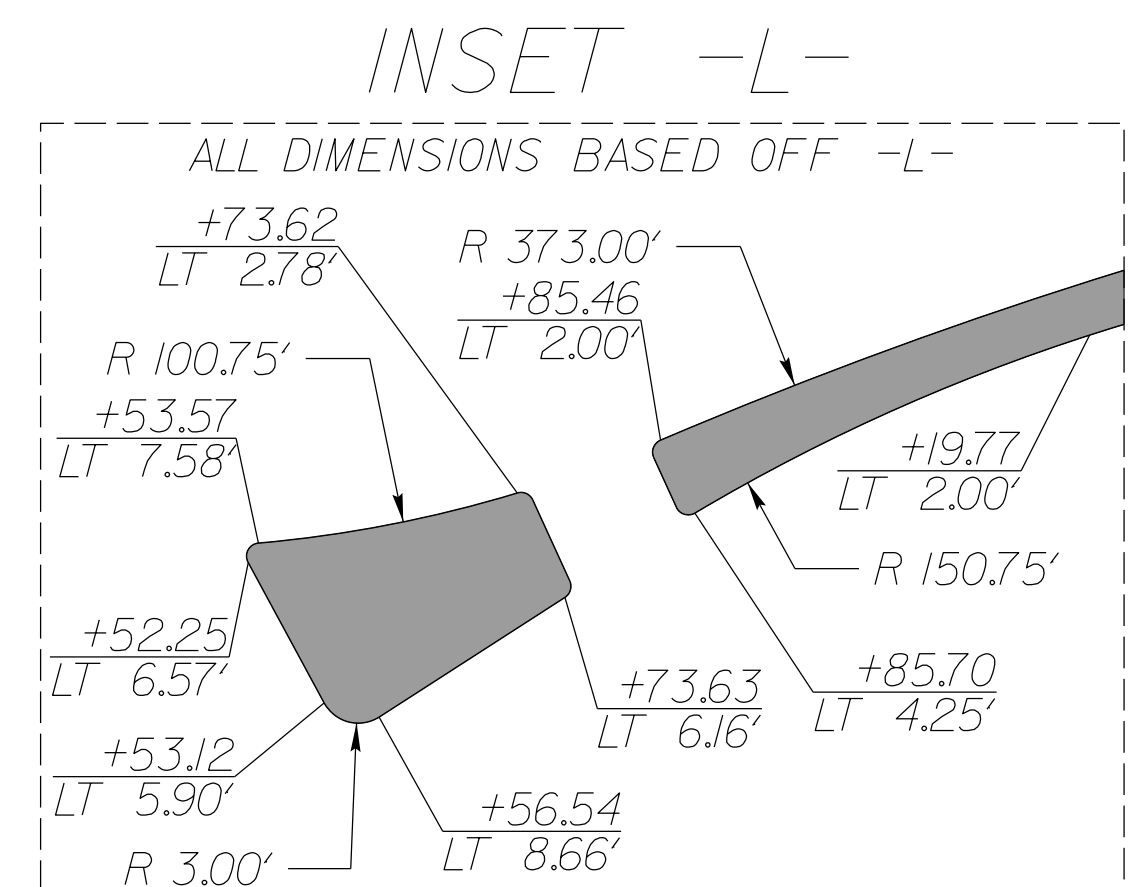
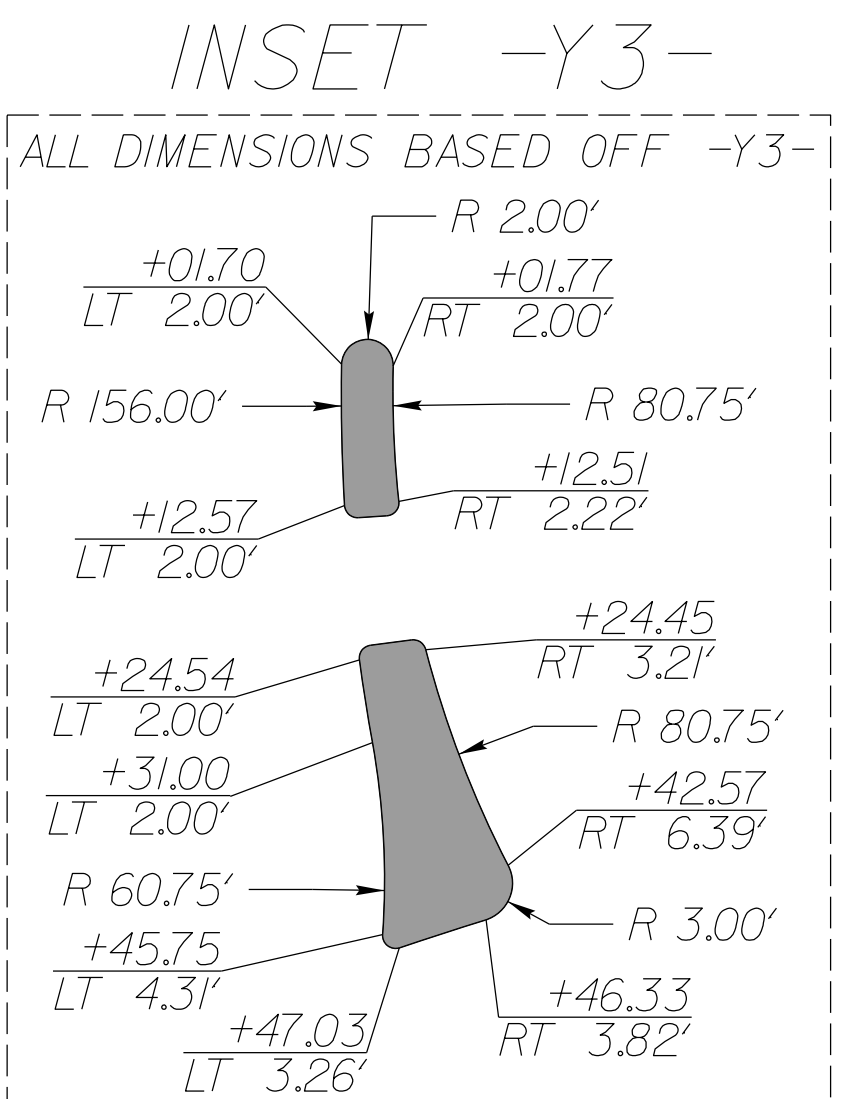
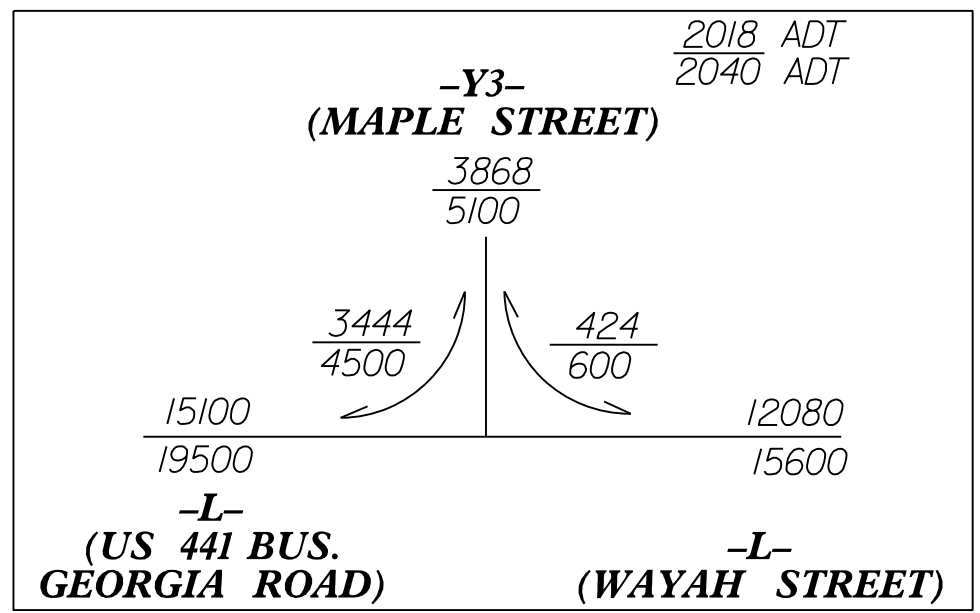
SEE SHEET 8 FOR -L- PROFILE
SEE SHEET 9 FOR -Y3- PROFILE
SEE SHEET 10 FOR -RBT2- PROFILE
SEE PAVEMENT MARKING PLANS,
FOR EXACT LOCATION OF CURB
RAMPS.

ALL DRIVEWAY RADII ARE 3' UNLESS
OTHERWISE NOTED.

ALL ISLAND RADII ARE 1' UNLESS
OTHERWISE NOTED.

SEE SHEET 2B-6 FOR DETOUR 2
PAVE ALL DRIVEWAYS TO A MINIMUM OF
THE RIGHT-OF-WAY.

-  MONOLITHIC ISLAND (KEYED-IN)
-  SIDEWALK
-  CURB RAMP
-  TRUCK APRON



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PROJECT REFERENCE NO. U-5604
SHEET NO. 2B-2
RW SHEET NO.

ROADWAY DESIGN ENGINEER
7/12/2018
SEAL 022037
PROFESSOR OF ENGINEERING
J. SWALLOW

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

30' 15' 0' 30' 60'

REVISIONS

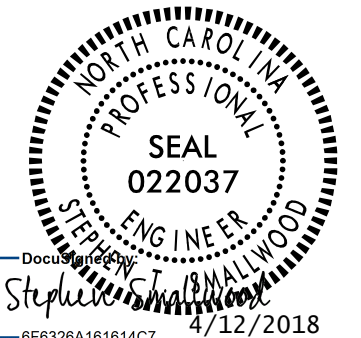
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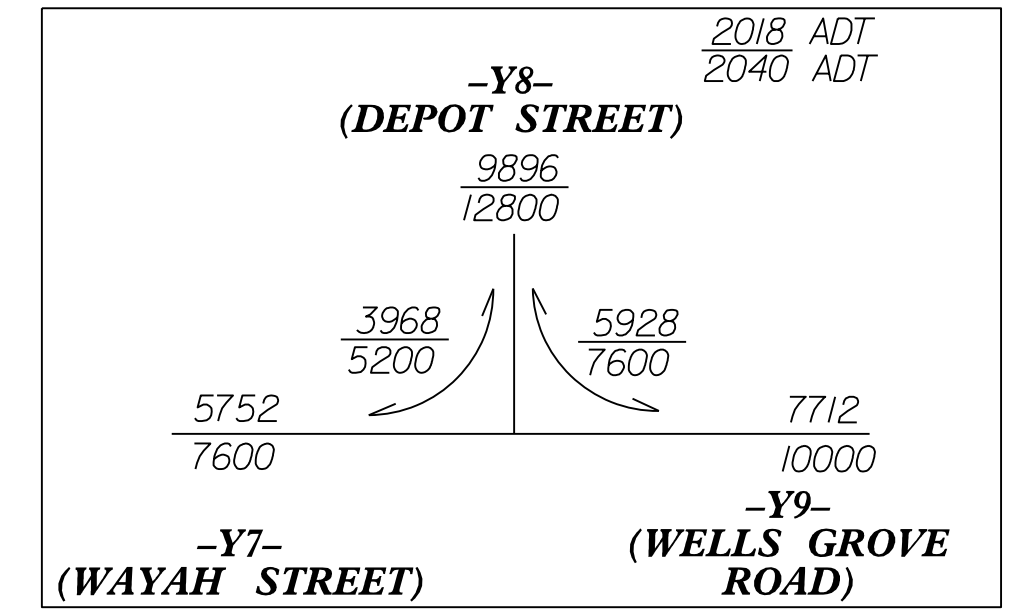
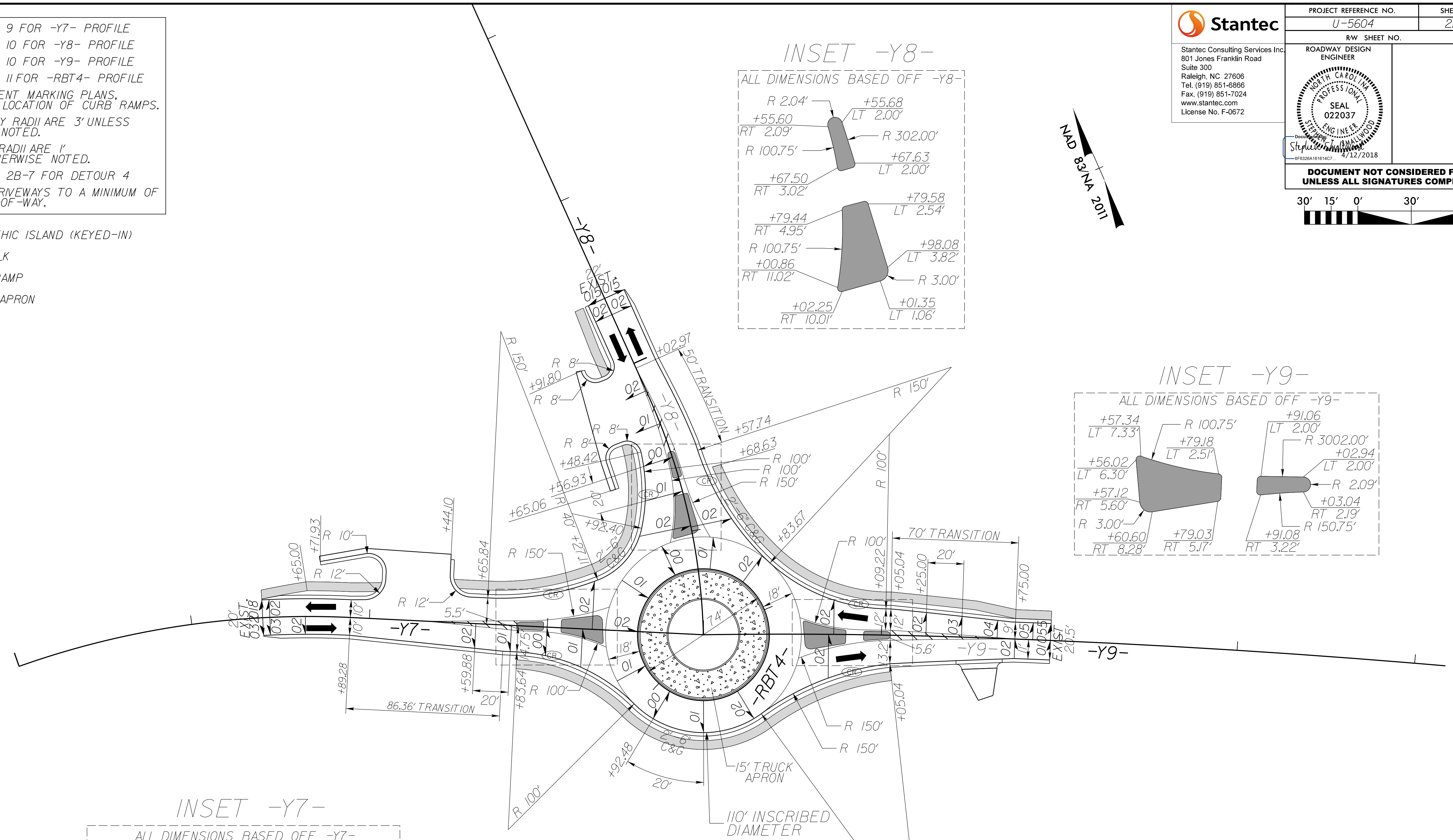
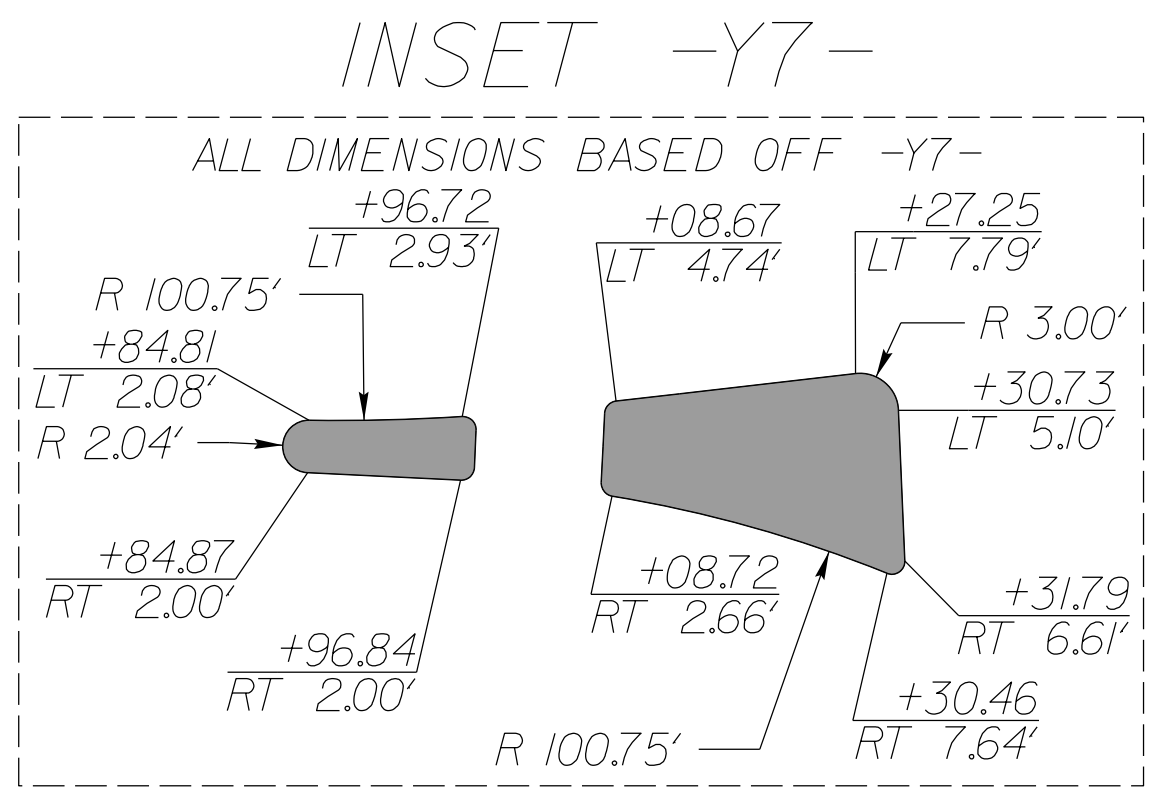
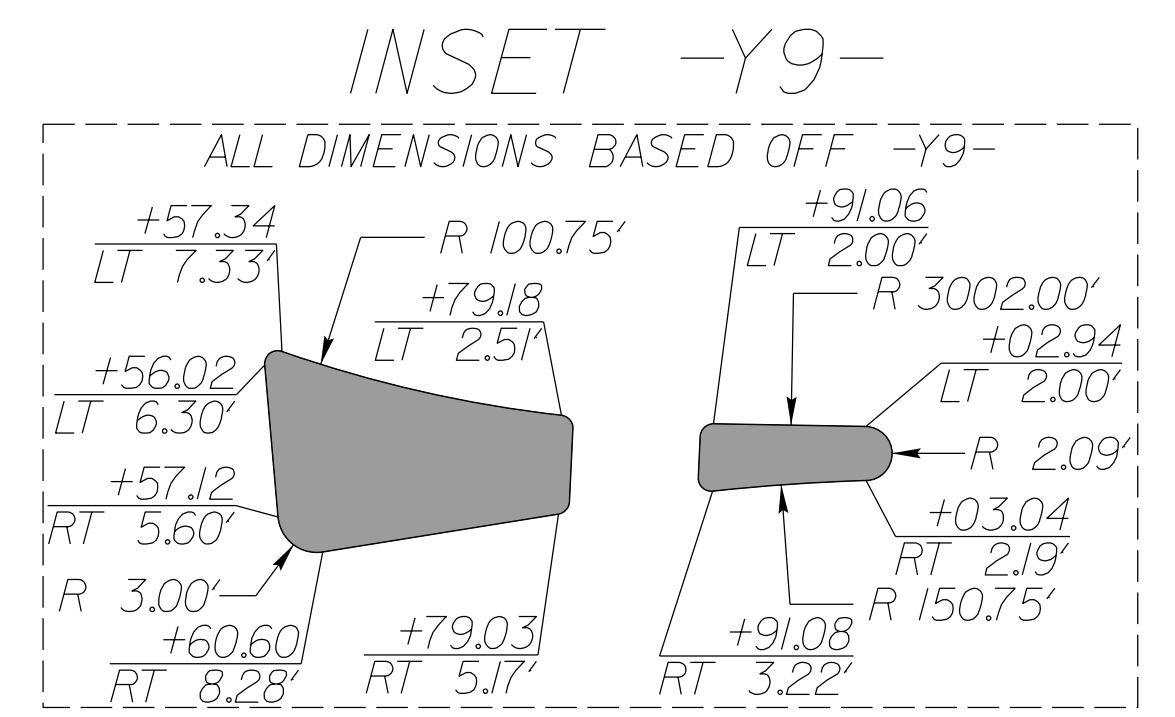
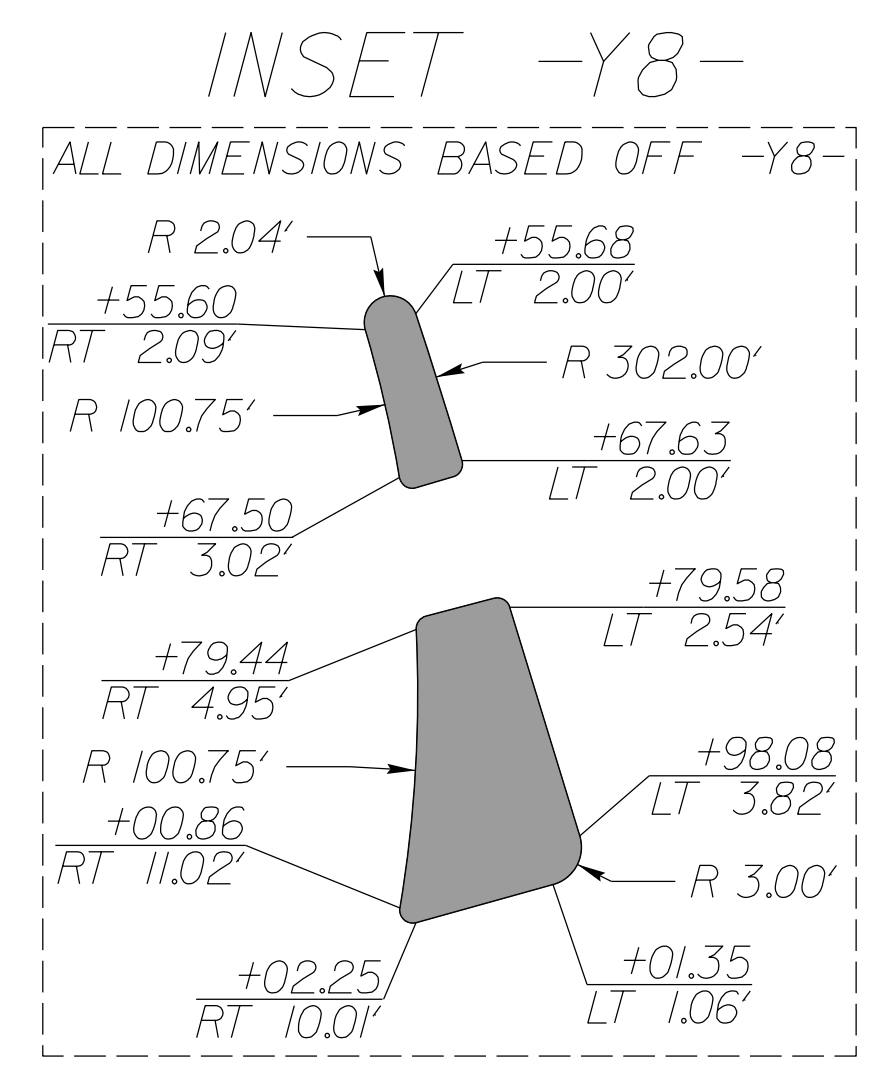
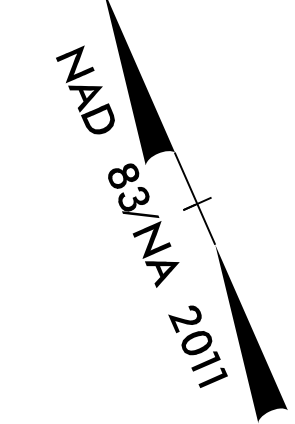
8/17/09

SEE SHEET 9 FOR -Y7- PROFILE
 SEE SHEET 10 FOR -Y8- PROFILE
 SEE SHEET 10 FOR -Y9- PROFILE
 SEE SHEET 11 FOR -RBT4- PROFILE
 SEE PAVEMENT MARKING PLANS,
 FOR EXACT LOCATION OF CURB RAMP.
 ALL DRIVEWAY RADII ARE 3' UNLESS
 OTHERWISE NOTED.
 ALL ISLAND RADII ARE 1' UNLESS
 OTHERWISE NOTED.
 SEE SHEET 2B-7 FOR DETOUR 4
 PAVE ALL DRIVEWAYS TO A MINIMUM OF
 THE RIGHT-OF-WAY.

-  MONOLITHIC ISLAND (KEYED-IN)
-  SIDEWALK
-  CURB RAMP
-  TRUCK APRON

Stantec
 Stantec Consulting Services Inc.
 801 Jones Franklin Road
 Suite 300
 Raleigh, NC 27606
 Tel. (919) 851-8866
 Fax. (919) 851-7024
 www.stantec.com
 License No. F-0672

PROJECT REFERENCE NO. U-5604	SHEET NO. 2B-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



INTERSECTION DETAIL NO. 4
-RBT4-

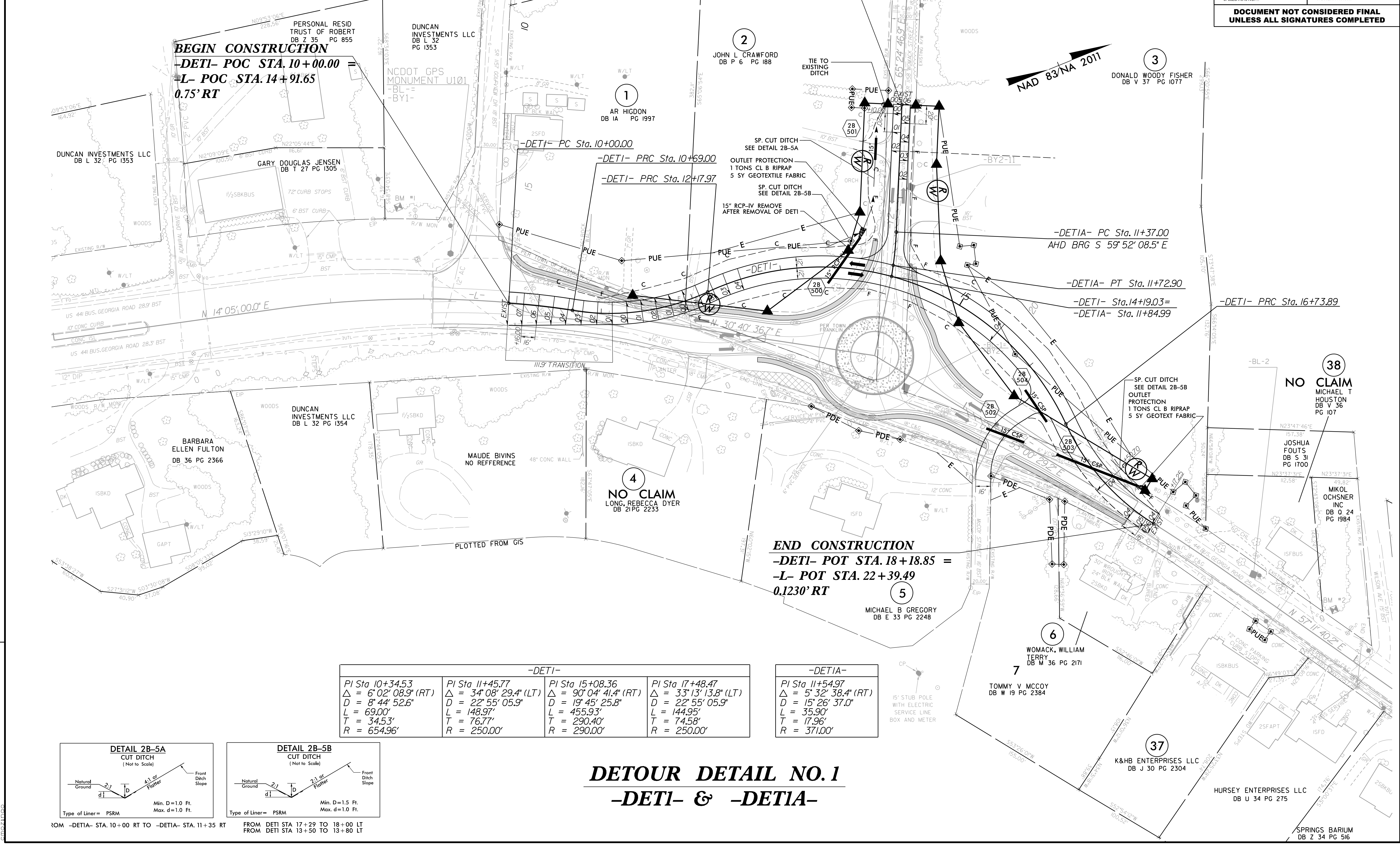
REVISIONS

4/12/2018
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 cmc21100

SEE SHEET 7 FOR -L- PROFILE
 SEE SHEET 8 FOR -Y2- PROFILE
 SEE SHEET 10 FOR -RBT1- PROFILE
 SEE SHEET 12 FOR -DETI- & -DETIA- PROFILES
 SEE PAVEMENT MARKING PLANS FOR EXACT LOCATION OF CURB RAMPS.
 ALL DRIVEWAY RADII ARE 3' UNLESS OTHERWISE NOTED.
 SEE SHEET 2B-1 FOR ROUNDABOUT DETAIL AND TRAFFIC DIAGRAM
 PAVE ALL DRIVEWAYS TO A MINIMUM OF THE RIGHT-OF-WAY.

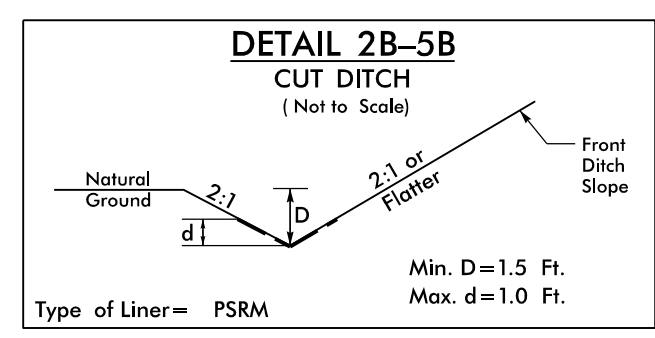
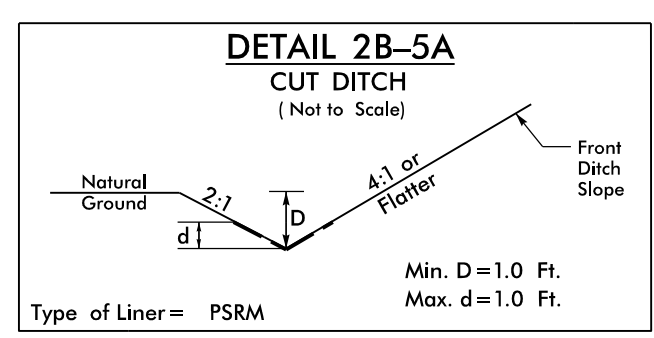
Stantec
 Stantec Consulting Services Inc.
 801 Jones Franklin Road
 Suite 300
 Raleigh, NC 27606
 Tel. (919) 851-8866
 Fax. (919) 851-7024
 www.stantec.com
 License No. F-0672

PROJECT REFERENCE NO. U-5604	SHEET NO. 2B-5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS

-DETI-		-DETI-		-DETI-		-DETI-		-DETIA-	
PI Sta 10+34.53	PI Sta 11+45.77	PI Sta 15+08.36	PI Sta 17+48.47	PI Sta 11+54.97	PI Sta 11+54.97	PI Sta 11+54.97	PI Sta 11+54.97	PI Sta 11+54.97	PI Sta 11+54.97
Δ = 6° 02' 08.9" (RT)	Δ = 34° 08' 29.4" (LT)	Δ = 90° 04' 41.4" (RT)	Δ = 33° 13' 13.8" (LT)	Δ = 5° 32' 38.4" (RT)	Δ = 5° 32' 38.4" (RT)	Δ = 5° 32' 38.4" (RT)	Δ = 5° 32' 38.4" (RT)	Δ = 5° 32' 38.4" (RT)	Δ = 5° 32' 38.4" (RT)
D = 8° 44' 52.6"	D = 22° 55' 05.9"	D = 19° 45' 25.8"	D = 22° 55' 05.9"	D = 15° 26' 37.0"	D = 15° 26' 37.0"	D = 15° 26' 37.0"	D = 15° 26' 37.0"	D = 15° 26' 37.0"	D = 15° 26' 37.0"
L = 69.00'	L = 148.97'	L = 455.93'	L = 144.95'	L = 35.90'	L = 35.90'	L = 35.90'	L = 35.90'	L = 35.90'	L = 35.90'
T = 34.53'	T = 76.77'	T = 290.40'	T = 74.58'	T = 17.96'	T = 17.96'	T = 17.96'	T = 17.96'	T = 17.96'	T = 17.96'
R = 654.96'	R = 250.00'	R = 290.00'	R = 250.00'	R = 371.00'	R = 371.00'	R = 371.00'	R = 371.00'	R = 371.00'	R = 371.00'



DETOUR DETAIL NO. 1
 -DETI- & -DETIA-

FROM -DETIA- STA. 10+00 RT TO -DETIA- STA. 11+35 RT
 FROM DETI STA 17+29 TO 18+00 LT
 FROM DETI STA 13+50 TO 13+80 LT

4/26/2018
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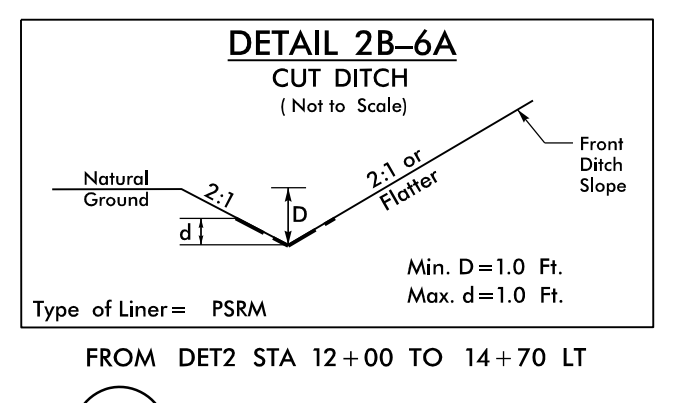


PROJECT REFERENCE NO. U-5604		SHEET NO. 2B-6	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		SEAL 12786	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SEE SHEET 8 FOR -L- PROFILE
 SEE SHEET 9 FOR -Y3- PROFILE
 SEE SHEET 9 FOR -Y5- PROFILE
 SEE SHEET 9 FOR -Y6- PROFILE
 SEE SHEET 10 FOR -RBT2- PROFILE
 SEE SHEET 11 FOR -RBT3- PROFILE
 SEE SHEET 11 FOR -RI- PROFILE
 SEE SHEET 12 FOR -DET2- & -DET3- PROFILES
 SEE PAVEMENT MARKING PLANS FOR EXACT LOCATION OF CURB RAMPS.
 ALL DRIVEWAY RADII ARE 3' UNLESS OTHERWISE NOTED.
 SEE SHEET 2B-2 AND 2B-3 FOR ROUNDABOUT DETAIL AND TRAFFIC DIAGRAM
 PAVE ALL DRIVEWAYS TO A MINIMUM OF THE RIGHT-OF-WAY.

DETOUR DETAIL NO. 2 -DET2- & -DET3-

-DET2-		
PI Sta 10+83.83 Δ = 57° 07' 33.2" (RT) D = 37' 12" 18.2" L = 153.54' T = 83.83' R = 154.00'	PI Sta 12+65.35 Δ = 48° 11' 30.3" (LT) D = 22' 55' 05.9" L = 210.28' T = 111.81' R = 250.00'	PI Sta 14+84.61 Δ = 51° 34' 27.6" (RT) D = 22' 55' 05.9" L = 225.04' T = 120.79' R = 250.00'



FROM DET2 STA 12+00 TO 14+70 LT
 13 ROMAN CATHOLIC DIOCESE OF CHARLOTTE
 DB F 12 PG 160

12 MARY SIMPSON RAY
 DB K 30 PG 1790

11 JAMES W DAVIS
 DB J 23 PG 1179

10 JAMES WAYLAND DAVIS
 DB 122 PG 1841

9 BUBBA AND JUJU LLC
 DB T 11 PG 1475

8 DEBORAH S CRUMPTON
 DB 03 E PG 250

19A KENNETH R KOPP
 DB 0 36 PG 2287

19B KENNETH R KOPP
 DB 0 36 PG 2287

BEGIN CONSTRUCTION
 -DET2- POC STA. 10+00.00 =
 -L- POT STA. 31+25.68

- | | |
|---|---|
| 1 CATHERINE WILLIAMS
DB 0 30 PG 1131 | 3 JERRY RAY LEDFORD
DB R 25 PG 20 |
| 2 JERRY RAY LEDFORD
DB F 25 PG 1275 | 4 CATHERINE WILLIAMS
DB G 25 PG 1303 |

END CONSTRUCTION
 -DET2- POT STA. 15+88.85 =
 -L- POT STA. 37+27.40
 3.6832' LT

HOSPICE HOUSE FOUNDATION OF WNC INC
 DB J 35 PG 2160

14 RESURRECTION LUTHERAN CHURCH OF FRANKLIN
 DB V 28 PG 540

15 MACON COUNTY
 DB Y 9 PG 186

25 CHARLES V NICHOLS
 DB G 35 PG 1

257 FOR PUE

16 FRANKLIN CHAMBER OF COMMERCE
 DB F 8 PG 181

BEGIN CONSTRUCTION
 -DET3- POC STA. 10+00.00 =
 -L- POT STA. 39+34.57
 3.2508' LT

-DET3-	
PI Sta 12+15.86 Δ = 74° 16' 48.6" (LT) D = 20' 06" 13.6" L = 369.48' T = 215.86' R = 285.00'	PAUL KILLIAN DB U 32 PG 202

GEORGE ROCKINGHAM PATILLO IV
 DB H 34 PG 328

26 WILLIAM L HIGDON JR
 DB 0 32 PG 677

27 BRIGITTE J HIGDON
 DB F 36 PG 876

28 CAROL W ANGLE
 DB K 34 PG 2296

17 BRIGITTE HIGDON
 DB F 36 PG 874

18 ARTHUR J OCHSNER JR
 DB V 28 PG 967
 ARTHUR J OCHSNER
 DB U 27 PG 1638
 ARTHUR & SANDRA OCHSNER III
 DB T 21 PG 464

40 MACON COUNTY BOARD OF EDUCATION
 DB N 4 PG 554

REVISIONS

8/17/99

4/16/2018
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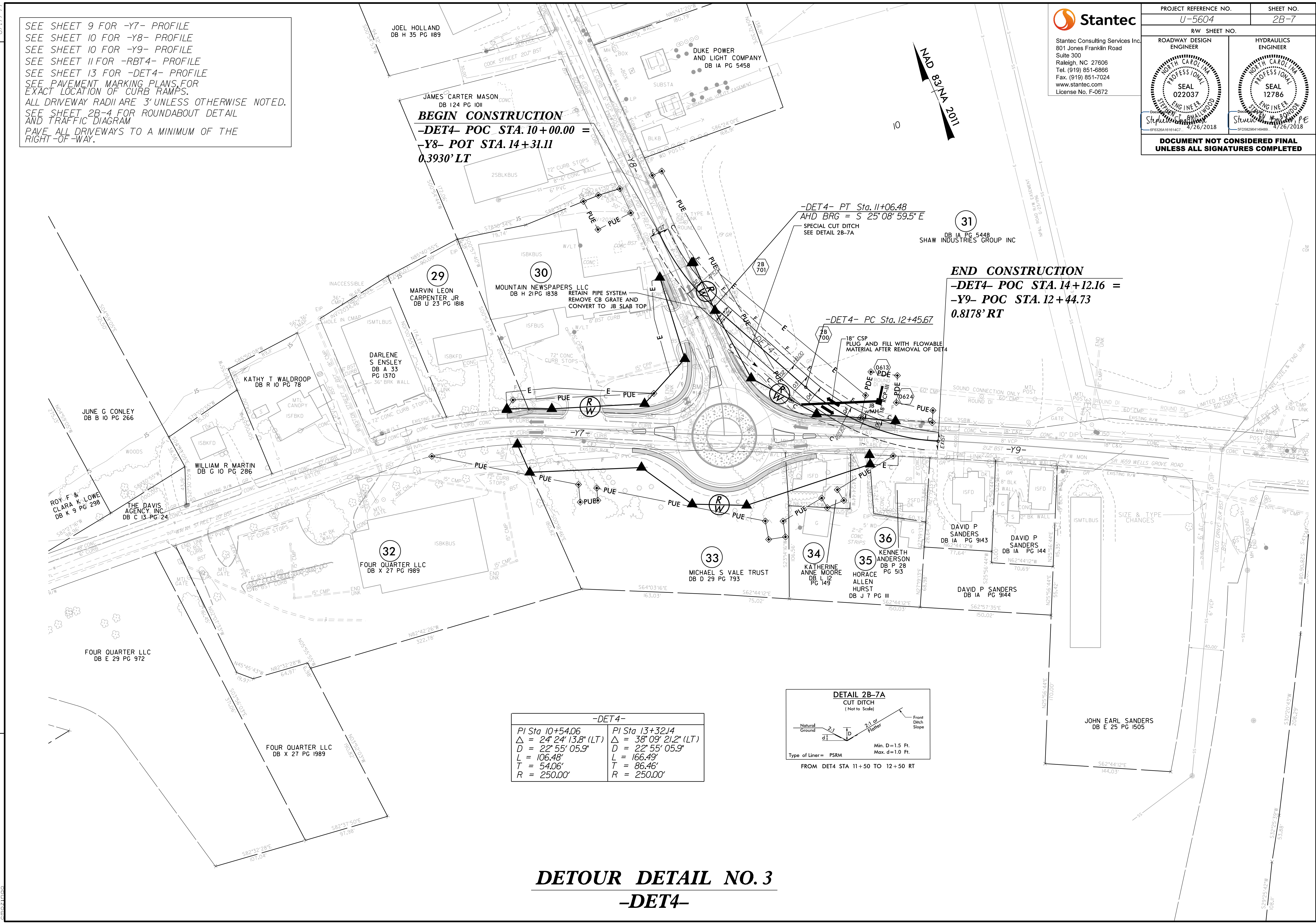


PROJECT REFERENCE NO. U-5604		SHEET NO. 2B-7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

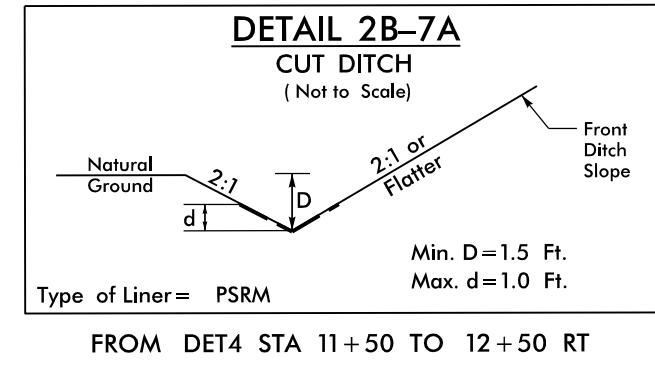
SEE SHEET 9 FOR -Y7- PROFILE
 SEE SHEET 10 FOR -Y8- PROFILE
 SEE SHEET 10 FOR -Y9- PROFILE
 SEE SHEET 11 FOR -RBT4- PROFILE
 SEE SHEET 13 FOR -DET4- PROFILE
 SEE PAVEMENT MARKING PLANS FOR EXACT LOCATION OF CURB RAMPS.
 ALL DRIVEWAY RADII ARE 3' UNLESS OTHERWISE NOTED.
 SEE SHEET 2B-4 FOR ROUNDABOUT DETAIL AND TRAFFIC DIAGRAM
 PAVE ALL DRIVEWAYS TO A MINIMUM OF THE RIGHT-OF-WAY.

BEGIN CONSTRUCTION
 -DET4- POC STA. 10+00.00 =
 -Y8- POT STA. 14+31.11
 0.3930' LT

END CONSTRUCTION
 -DET4- POC STA. 14+12.16 =
 -Y9- POC STA. 12+44.73
 0.8178' RT



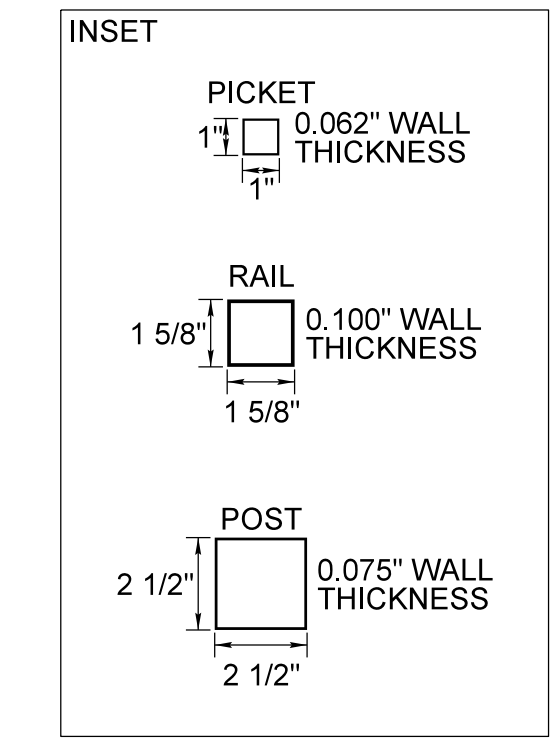
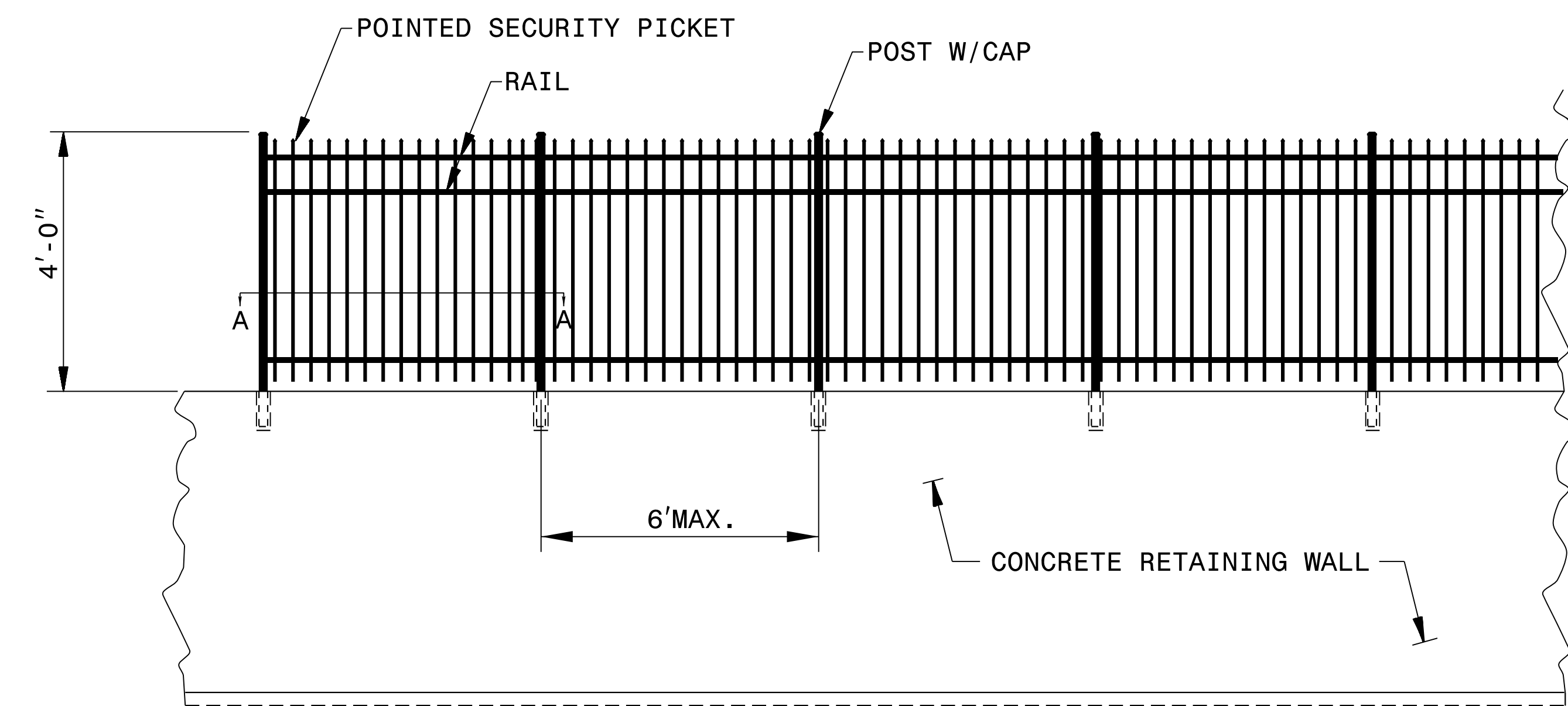
-DET4-	
PI Sta 10+54.06	PI Sta 13+32.14
$\Delta = 24' 24' 13.8''$ (LT)	$\Delta = 38' 09' 21.2''$ (LT)
$D = 22' 55' 05.9''$	$D = 22' 55' 05.9''$
$L = 106.48'$	$L = 166.49'$
$T = 54.06'$	$T = 86.46'$
$R = 250.00'$	$R = 250.00'$



DETOUR DETAIL NO. 3
-DET4-

REVISIONS

4/26/2018
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C:\Users\jrd\Documents\20180426



MATERIAL THICKNESS

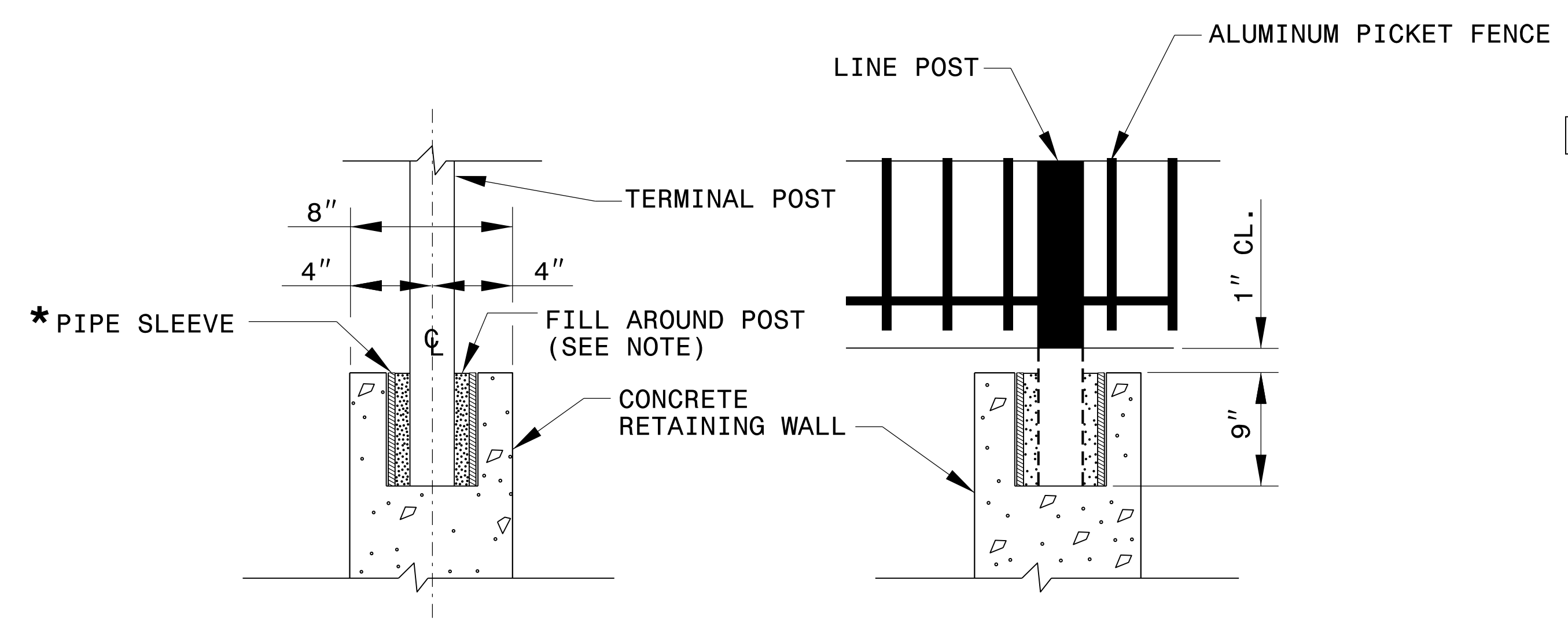
RETAINING WALL MOUNTED ALUMINUM PICKET FENCE

NOTE:

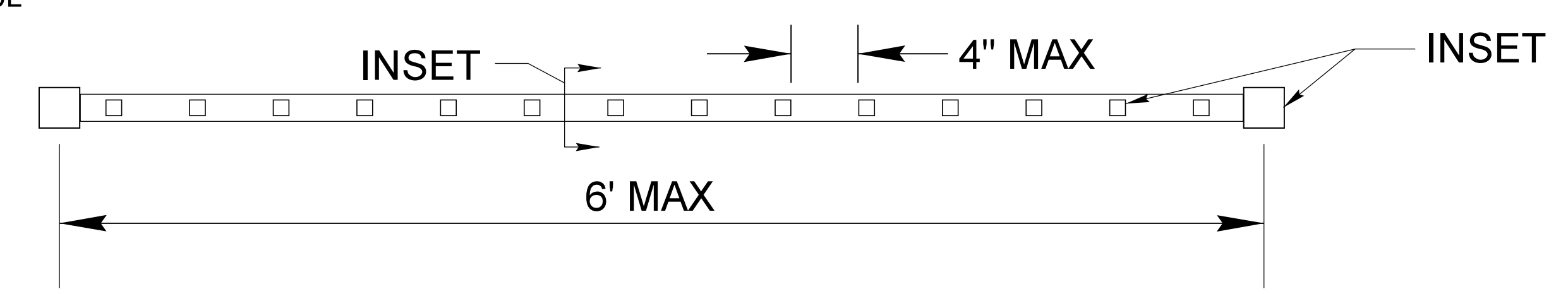
PLACEMENT OF PIPE SLEEVES SHALL CORRESPOND TO LINE POST AND TERMINAL POST AS SHOWN.

* PIPE SLEEVES SHALL BE INSTALLED IN THE CONCRETE RETAINING WALL WITH ALUMINUM ALLOY POST AS INDICATED.

FILL SPACE BETWEEN POST AND PIPE MATERIAL ACCORDING TO FENCE INSTALLATION SPECIFICATIONS OR MATERIAL APPROVED BY ENGINEER.

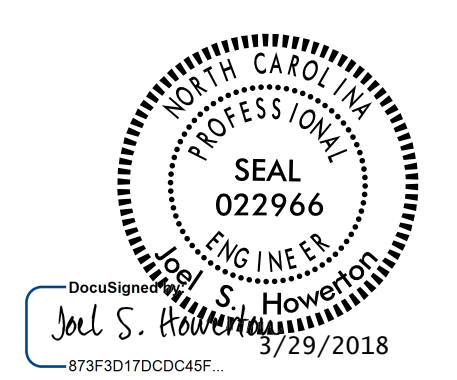


POST EMBEDMENT IN RETAINING WALL



SECTION A-A

- NOTES:**
- 1) SUBMIT ALTERNATE FENCE MATERIAL TO ENGINEER FOR APPROVAL.
 - 2) SUBMIT ANY VARIATIONS IN FENCE DIMENSIONS TO ENGINEER FOR APPROVAL.
 - 3) POST MAY BE DRIVEN IF IT CAUSES NO STRUCTURAL DAMAGE. (SEE MANUFACTURERS RECOMMENDATIONS)
 - 4) THE FENCE WILL BE BLACK POWDER COATED.



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

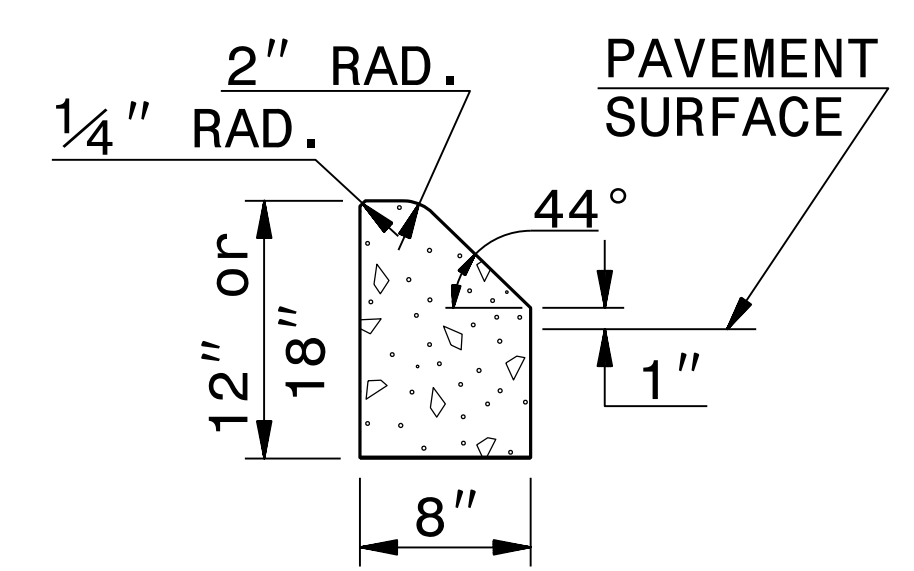
RETAINING WALL ALUMINUM PICKET FENCE

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: rnbritt DATE: 09-16-11
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: details/english/misc/aluminumfenceretwall.dgn

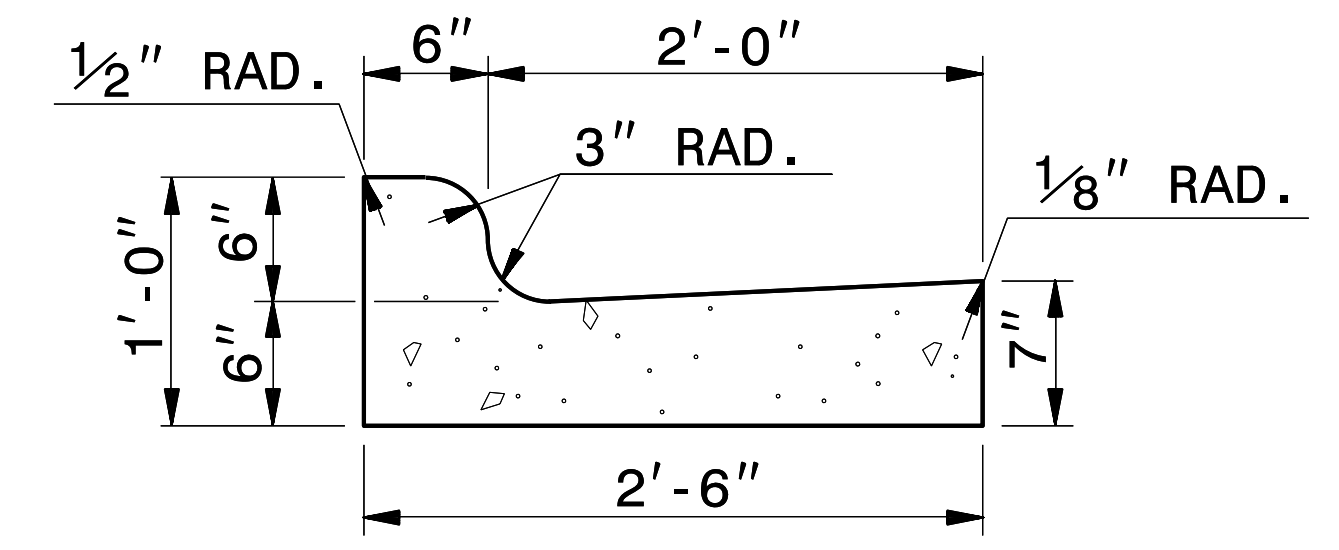
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5/14/99

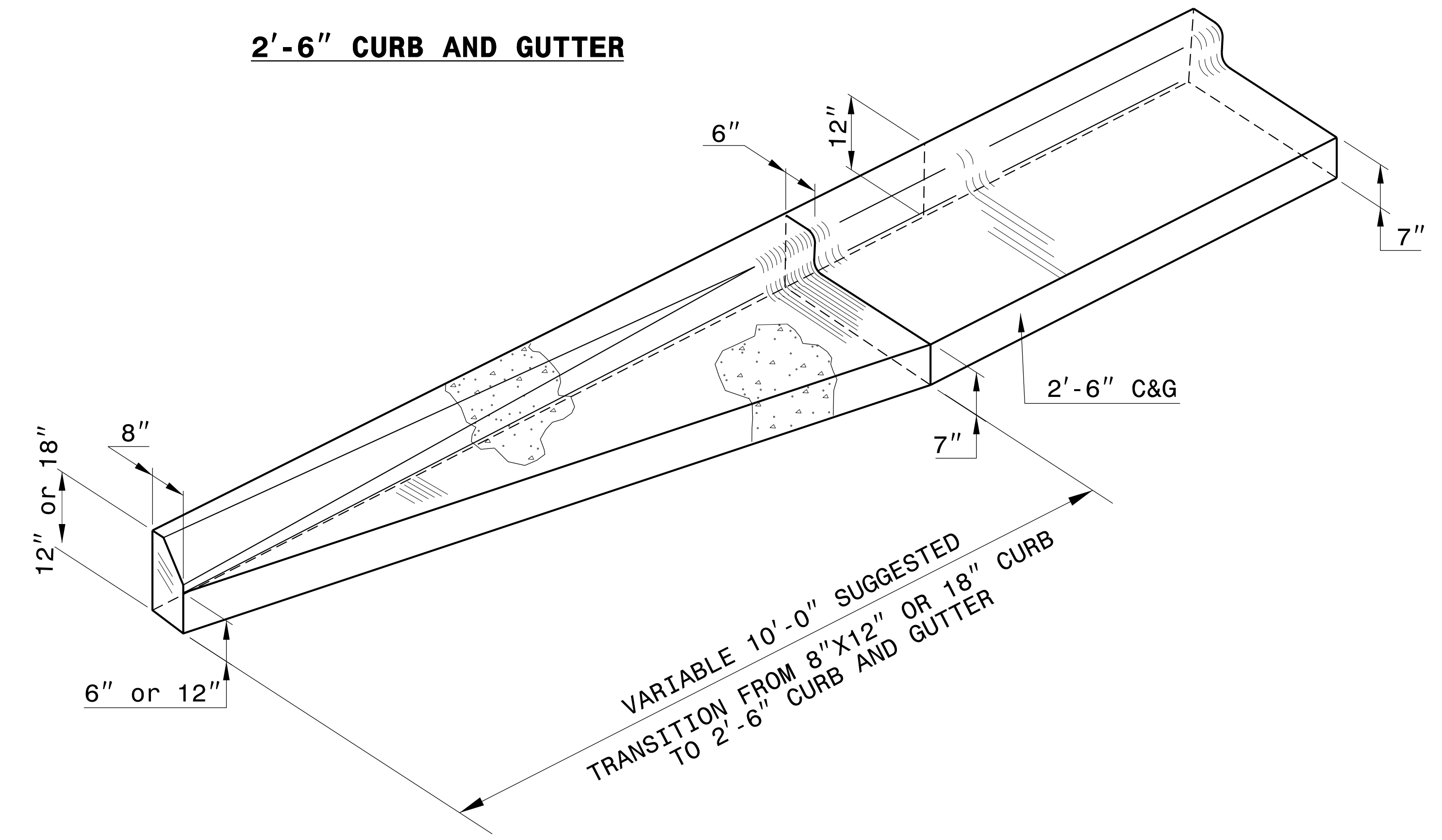
*NOTE: SEE STD. DWG. 846.01 FOR GENERAL NOTES



8" X 12" or 18" CONCRETE CURB



2'-6" CURB AND GUTTER



ISOMETRIC VIEW OF TRANSITION



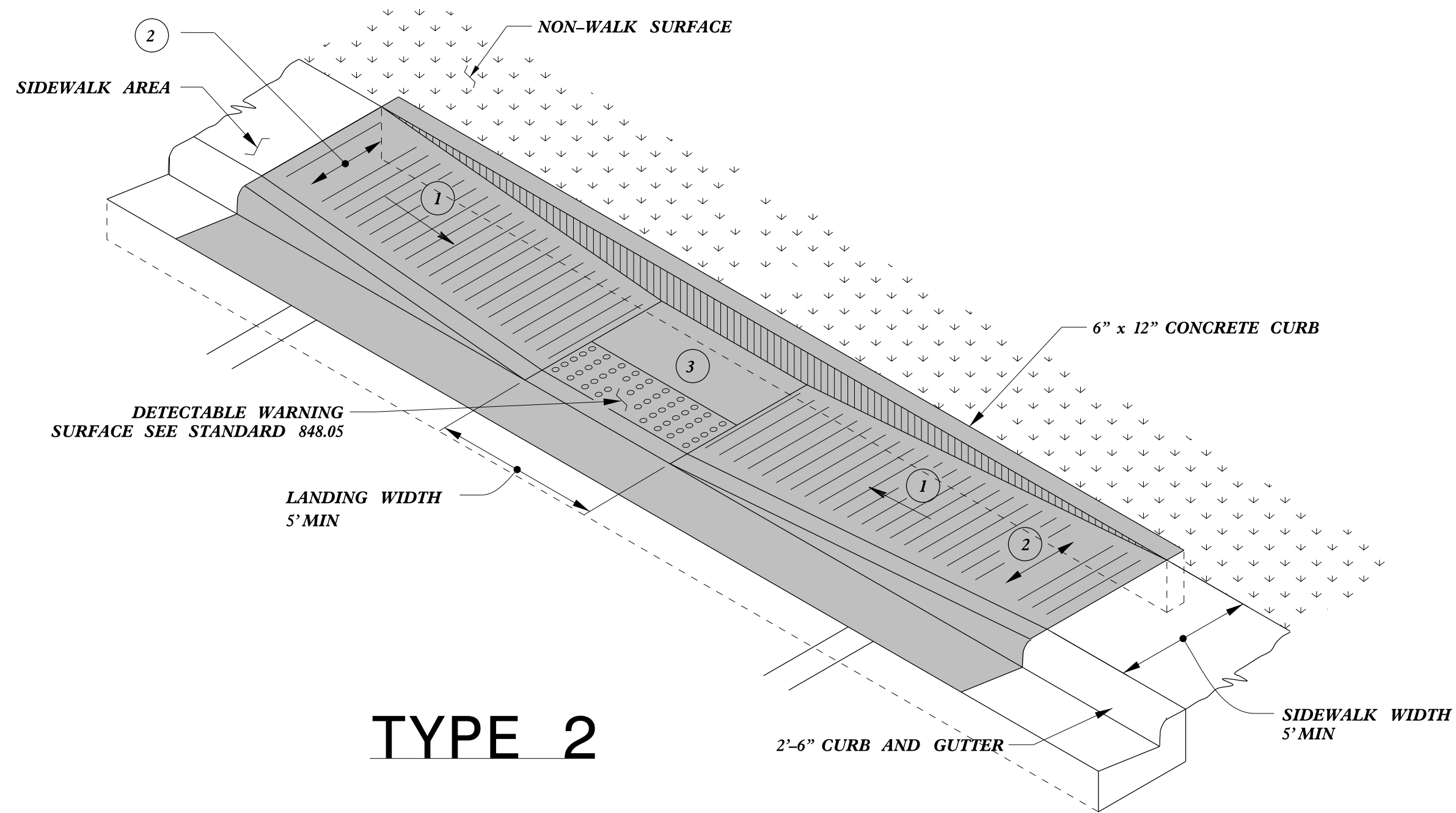
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**PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN**
Office 919-707-6950 FAX 919-250-4119

**DETAIL OF 8" X 12" or 18" CURB
TO 2'-6" CURB & GUTTER
TRANSITION SECTION**

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: K. KEMPF DATE: 10-20-09
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: details/ericward/usr/details/stand/cgtransit.dgn

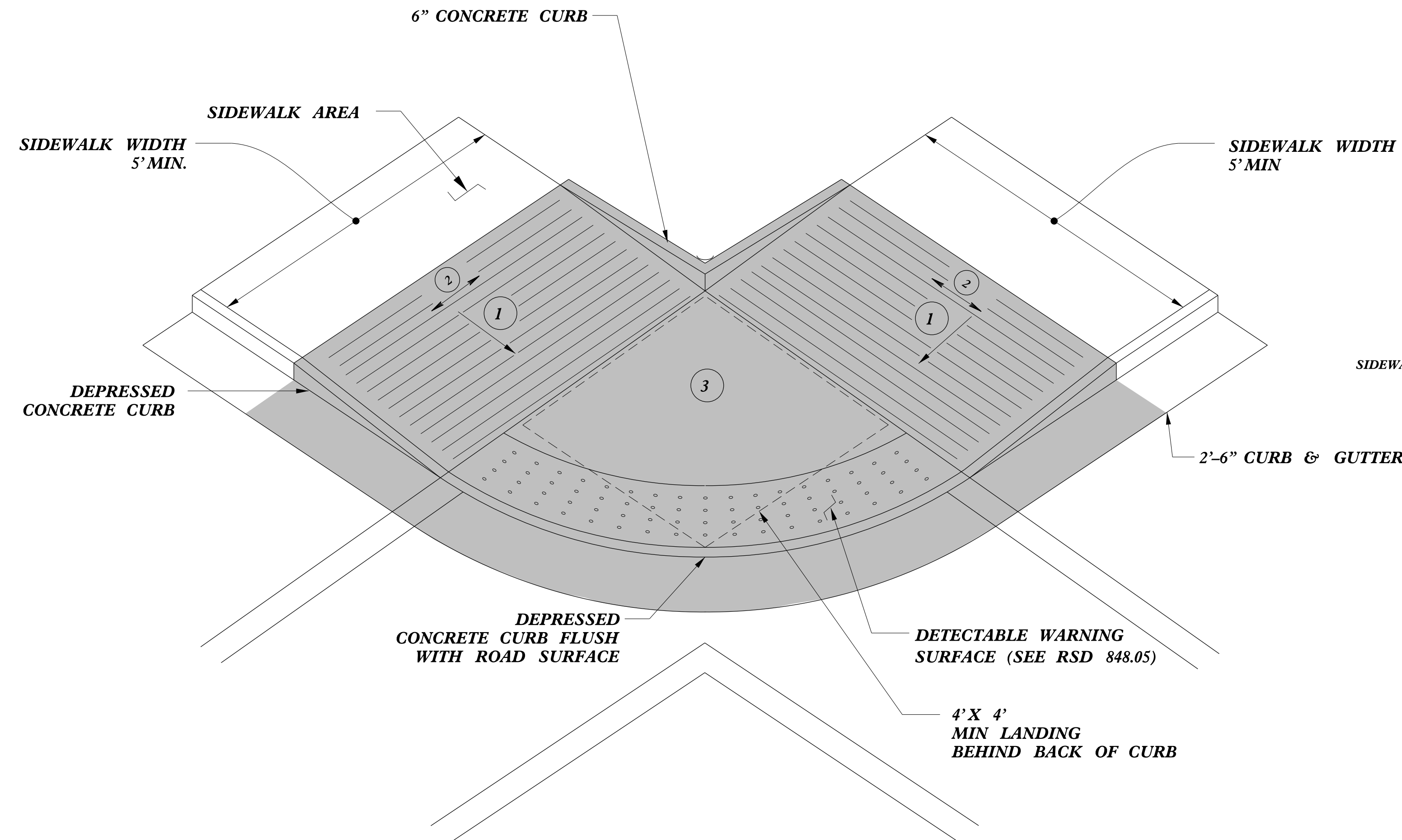
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S:\Contracts\Contractors\Special Details\ericward\usr\details\stand\c&g transition sections.dgn
J.Howerton AT CSD-292595



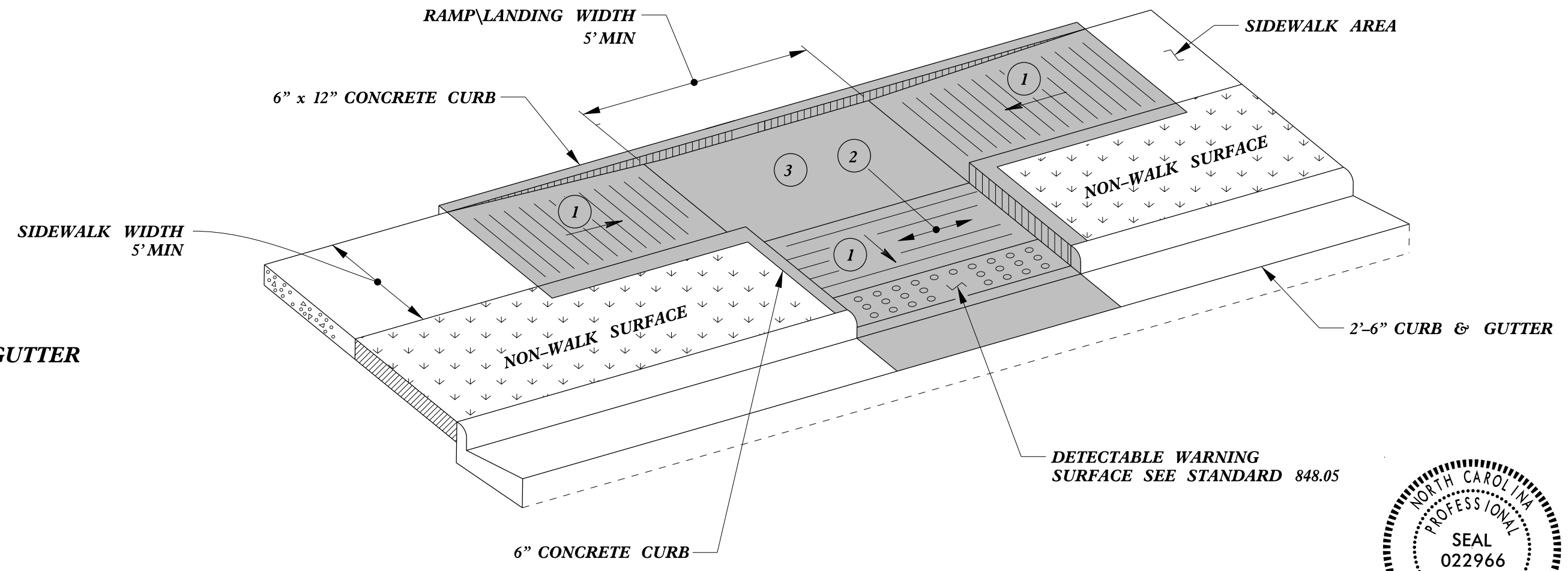
TYPE 2

PAY LIMITS FOR 1 CURB RAMP

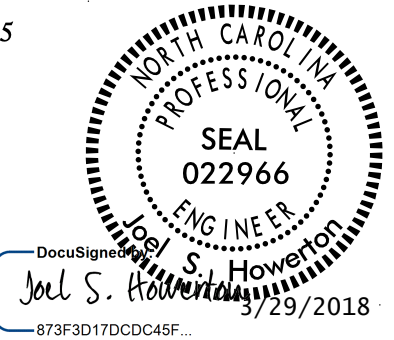
- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



TYPE 2A



TYPE 3



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CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
CURB RAMPS	
Parallel Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: .stds/2012CurbRamp/CurbRampDetails.dgn	

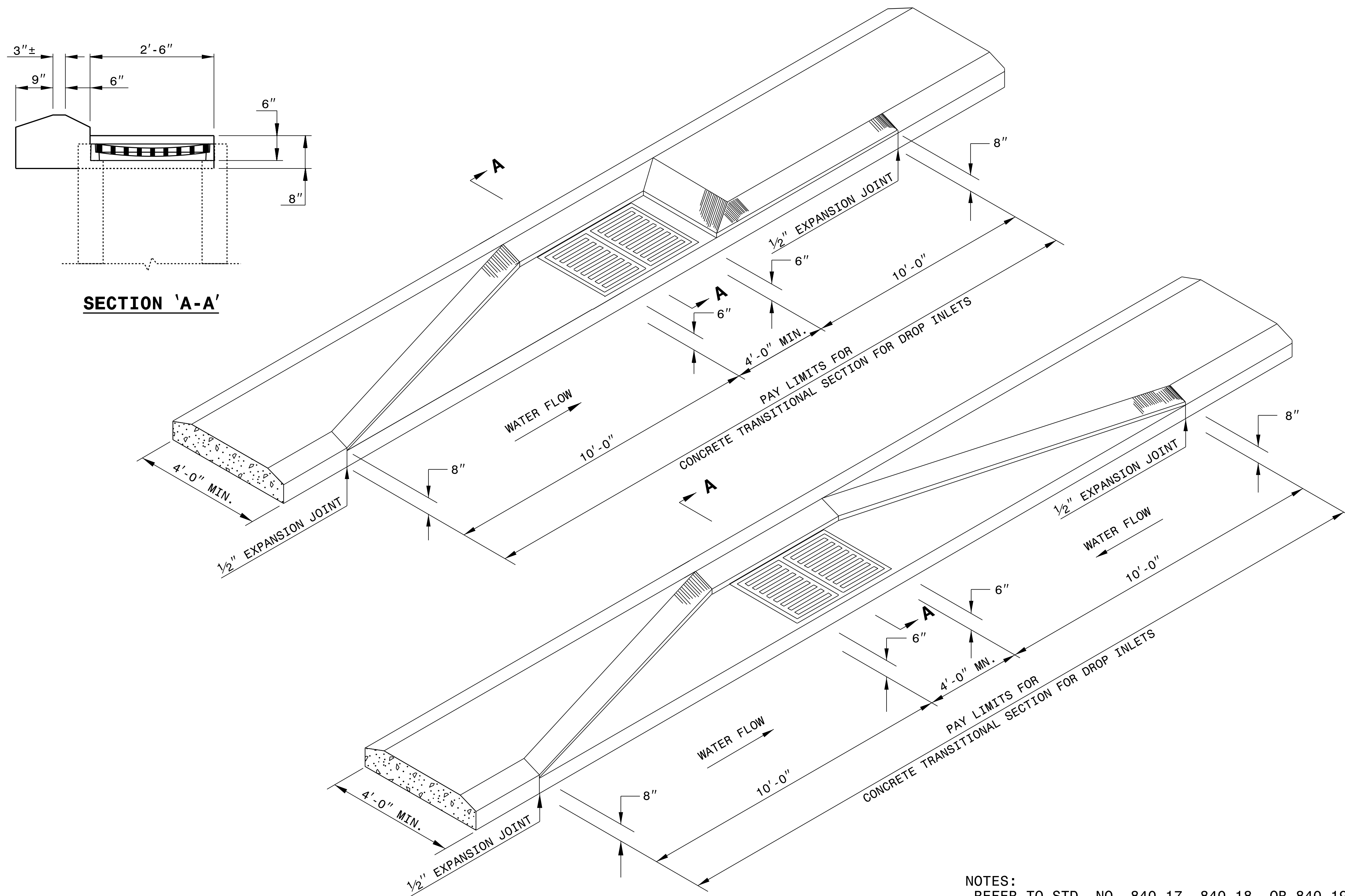
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

5/14/99
SYTIME
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J.S. HOWERTON

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

ENGLISH DETAIL DRAWING FOR
**METHOD FOR PLACEMENT OF
DROP INLETS IN CONCRETE ISLANDS**

SHEET 1 OF 1
852D06



SECTION 'A-A'

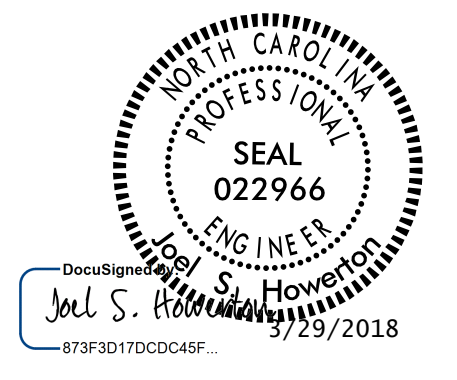
NOTES:
-REFER TO STD. NO. 840.17, 840.18, OR 840.19 FOR DRAINAGE STRUCTURE.
-REFER TO STD. NO. 840.20 OR 840.29 FOR GRATE AND FRAME.

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

ENGLISH DETAIL DRAWING FOR
**METHOD FOR PLACEMENT OF
DROP INLETS IN CONCRETE ISLANDS**

SHEET 1 OF 1
852D06

06-MAR-2018 10:58
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Jpower ton AT_CSD-252595



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

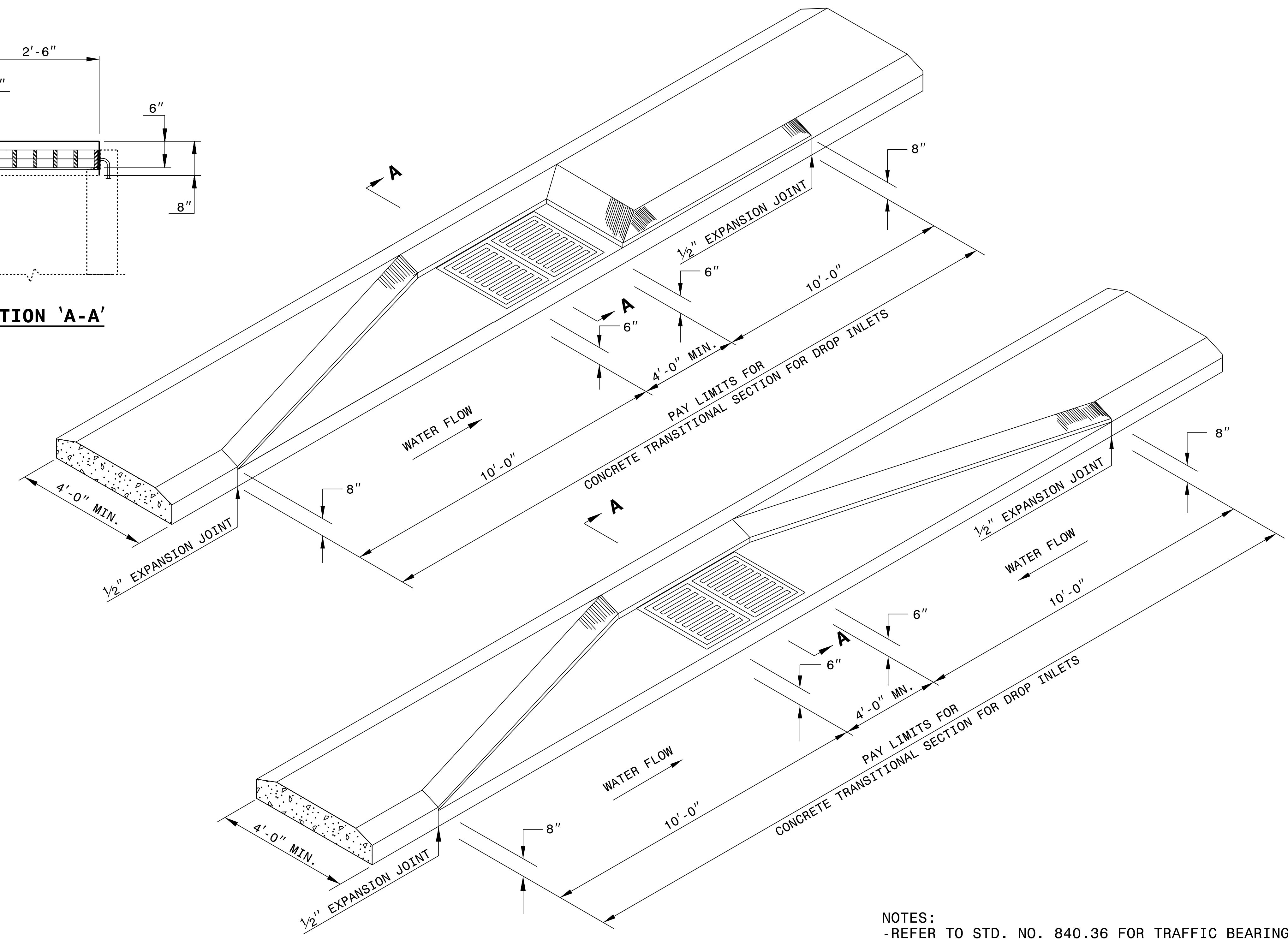
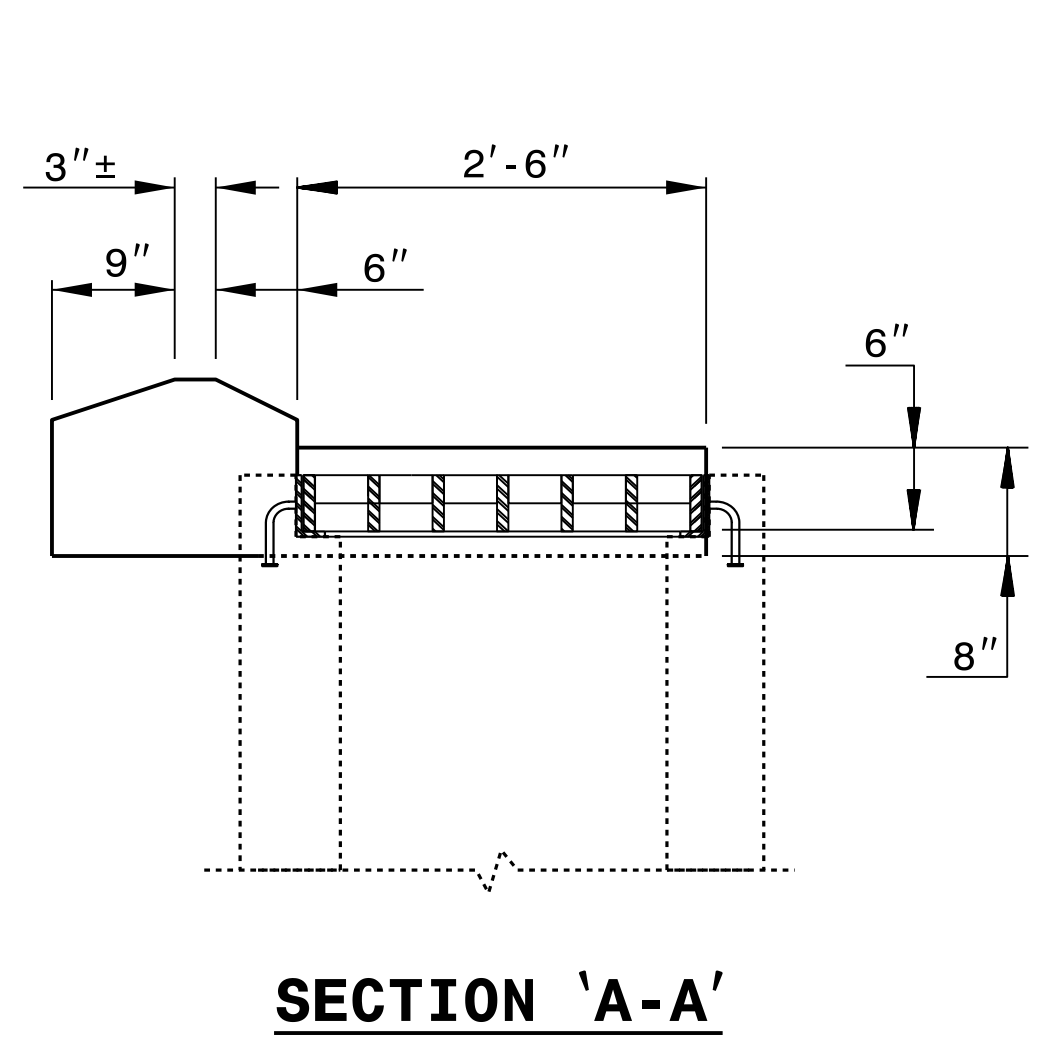
SEE TITLE PLATE

ORIGINAL BY: KKEMPF DATE: 8/2/10
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: KKEMPF\ENGLISH\852D0601.DGN

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

ENGLISH DETAIL DRAWING FOR
**METHOD FOR PLACEMENT OF
DROP INLETS IN CONCRETE ISLANDS**

SHEET 1 OF 1
852D06



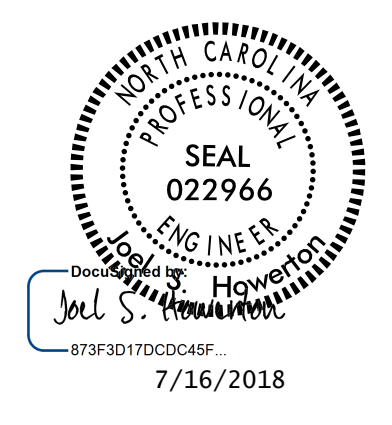
NOTES:
-REFER TO STD. NO. 840.36 FOR TRAFFIC BEARING DRAINAGE STRUCTURE.
-REFER TO STD. NO. 840.37 FOR STEEL GRATE AND FRAME.

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

ENGLISH DETAIL DRAWING FOR
**METHOD FOR PLACEMENT OF
DROP INLETS IN CONCRETE ISLANDS**

SHEET 1 OF 1
852D06

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

SEE TITLE PLATE

ORIGINAL BY: KKEMPF DATE: 8/2/10
 MODIFIED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: KKEMPF\ENGLISH\852D0601.DGN

COMPUTED BY: TSJ DATE: 10/4/2017
 CHECKED BY: CSM DATE: 3/22/2018

PROJECT NO. U-5604 SHEET NO. 3B-1

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

Earthwork Summary Sheet
 (CUBIC YARDS)

STATION	STATION	UNCLASS. EXCAV.	EMBANK. + %	BORROW	WASTE
11+50.00 -DET1-	18+00.00	931	102		829
10+50.00 -DET1A-	11+50.00	34	9		25
15+00.00 -L-	18+29.20	286	262		24
10+00.00 -RBT1-	12+50.00	20	1,947	1,927	
11+50.00 -Y2-	13+49.48	339	252		87
19+49.20 -L-	22+00.00	152	623	471	
10+00.00 DET1 REMOVAL	18+00.00	239	1,084	845	
SUBTOTAL		2,001	4,279	3,243	964
10+00.00 -DET2-	15+50.00	1,276	85		1,191
10+50.00 -DET3-	13+50.00	65	25		40
31+00.00 -L-	33+41.21	728	69		659
10+00.00 -RBT2-	12+25.00	102	1,243	1,141	
11+00.00 -Y3-	12+47.69	169	181	12	
34+51.23 -L-	40+95.08	1,037	1,939	902	
10+00.00 -RBT3-	12+25.00	643	485		158
40+95.08 -L-	44+00.00	537	1,657	1,120	
10+55.00 -Y5-	13+00.00	2,365	2		2,363
10+55.00 -Y6-	12+00.00	273	150		124
10+00.00 DET2 REMOVAL	15+50.00	85	926	841	
SUBTOTAL		7,280	6,762	4,016	4,534
10+50.00 -DET4-	14+00.00	85	213	128	
11+50.00 -Y7-	13+32.84	894	55		839
10+00.00 -RBT4-	12+25.00	486	385		101
15+00.00 -Y8-	16+03.63	76	114	38	
10+55.05 -Y9-	11+50.00	154	91		63
10+50.00 DET4 REMOVAL	14+00.00	120	2		118
SUBTOTAL		1,815	860	166	1,120
TOTAL		11,096	11,901	7,425	6,618
MATERIAL FOR SHOULDER CONSTRUCTION			150	150	
LOSS DUE TO CLEARING & GRUBBING		-1,665		1,665	
WASTE IN LIEU OF BORROW				-6,618	-6,618
PROJECT TOTAL		9,431	12,051	2,622	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				131	
GRAND TOTAL		9,431	12,051	2,753	
SAY		9,500		2,800	
EST. PA VT. STRUCTURE VOLUME = 7242 CU. YDS.					
EARTHWORK TOTALS FOR ALTERNATE PAVEMENT DESIGN					
SUMMARY TOTALS		11,096	11,901	7,425	6,618
ADJUSTMENT FOR ALTERNATE PA VT DESIGN		-1,570	1,433	1,906	-1,096
MATERIAL FOR SHOULDER CONSTRUCTION			115	115	
LOSS DUE TO CLEARING & GRUBBING		-1,665		1,665	
WASTE IN LIEU OF BORROW				-5,522	-5,522
PROJECT TOTAL		7,861	13,449	5,589	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				280	
GRAND TOTAL		7,861	13,449	5,869	
SAY		7,900		5,900	
EST. PA VT. STRUCTURE VOLUME = 5673 CU. YDS.					

NOTE: THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING & GRUBBING, BREAKING OF EXISTING PAVEMENT, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

ESTIMATED DRAINAGE DITCH EXCAVATION = 20 CY
 THE FOLLOWING QUANTITIES ARE PER THE "GEOTECHNICAL SUBSURFACE INVESTIGATION - RECOMMENDATIONS" - LETTER DATED 1/23/18
 ESTIMATED UNDERCUT = 2000 CY (CONTINGENCY)

REMOVAL OF EXISTING ASPHALT PAVEMENT

LINE	STATION	STATION	LOCATION	LENGTH OR AREA (sq. ft)	WIDTH	SQUARE YARDS
-L -	16+68	20+45	RT	5,792		215
-L -	20+06	21+43	LT/RT	2,149		80
-L -	20+66	22+12	RT	879		33
-L -	31+84	[Y3] 11+95	LT	5,051		188
-L -	33+40	33+96	LT	918		34
-L -	34+33	35+59	LT	1,852		69
-Y2-	13+34	13+50	CL	290		11
-Y3-	10+83	12+47		4,085		152
-Y5-	10+04	13+20		5,345		198
-Y7-	11+40	[Y9] 10+55		9,551		354
-DET1-	11+16	14+17		6,797		252
-DET1-	14+30	18+18		8,913		331
-DET2-	10+03	15+55		11,037		409
-DET4-	10+23	14+12		5,942		221
TOTAL						2,547
SAY						2,550

NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING & GRUBBING, BREAKING OF EXISTING PAVEMENT, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

BREAKING OF EXISTING ASPHALT PAVEMENT

LINE	STATION	STATION	LOCATION	LENGTH OR AREA (sq. ft)	WIDTH	SQUARE YARDS
-L -	18+33	19+64		2615		291
-Y2-	13+50	14+09		1177		131
-L -	33+96	35+63		2301		256
-L -	40+45	[Y6] 10+80		9205		1023
-RBT1-				3792		422
-RBT2-				2301		256
-RBT3-				9205		1023
TOTAL						3,402
SAY						3,410

INCIDENTAL MILLING

LINE	STATION	STATION	LOCATION	LENGTH OR AREA (sq. ft)	WIDTH	SQUARE YARDS
-L -	14+10	15+15		4481		498
-L -	21+43	22+12		1437		160
-Y2-	11+37	13+35		3705		412
-L -	30+55	33+01		4563		508
-L -	43+25	44+00		2152		240
-Y6-	11+50	12+29		1621		181
-Y8-	14+60	15+26		1760		196
-Y9-	11+25	11+95		1439		160
TOTAL						2,355
SAY						2,360

ALUMINUM PICKET FENCE - WALL MOUNTED

(BLACK PAINTED OR POWDER COATED)

STATION TO STATION	LT. OR RT.	LENGTH (FT)				LENGTH (FT)
-L- 35+25 TO 36+50	LT.	136				136
-L- 38+25 TO 40+50	LT.	230				230
-L- 39+50 TO -Y5- 12+80	RT.	379				379
TOTAL						745
SAY						745

FOREZBY

COMPUTED BY: C. MOORE DATE: 7/12/18
CHECKED BY: S. BONDOR DATE: 7/12/18

PROJECT NO. U-5604 SHEET NO. 3D-1

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, Invert Elevation, Minimum Required Slope, Pipe Material (RCP, CSP, HDPE, PVC), C.S. Pipe, R.C. Pipe Class III, R.C. Pipe Class IV, Quantities for Drainage Structures, Frame, Grates, and Hood, Concrete Transitional Section, and Abbreviations. Includes a SHEET TOTALS row at the bottom.

FOR 2323

COMPUTED BY: C. MOORE DATE: 7/12/18
CHECKED BY: S. BONDOR DATE: 7/12/18

PROJECT NO. SHEET NO.
U-5604 3D-2

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 III, R. C. PIPE CLASS IV, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, GRATE TYPE, PIPE REMOVAL, and REMARKS. Includes a SHEET TOTALS row at the bottom.

ABBREVIATIONS table listing materials and their 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.

FOREZBY

COMPUTED BY: C. MOORE DATE: 7/12/18
CHECKED BY: S. BONDOR DATE: 7/12/18

PROJECT NO. U-5604 SHEET NO. 3D-3

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, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C.S. PIPE, R.C. PIPE CLASS III, R.C. PIPE CLASS IV, Quantities for Drainage Structures, Frame, Grates, and Hood, Concrete Transitional Section, and Abbreviations. Includes a SHEET TOTALS row at the bottom.

FOREZBY

COMPUTED BY: C. MOORE DATE: 7/12/18
CHECKED BY: S. BONDOR DATE: 7/12/18

PROJECT NO. U-5604 SHEET NO. 3D-4

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, Invert Elevation, Minimum Required Slope, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), C.S. Pipe, R.C. Pipe Class III, R.C. Pipe Class IV, Quantities for Drainage Structures, Frame, Grates, and Hood, Concrete Transitional Section, and Abbreviations. Includes a SHEET TOTALS row at the bottom.

FOR 223V

COMPUTED BY: C. MOORE DATE: 7/12/18
CHECKED BY: S. BONDOR DATE: 7/12/18

PROJECT NO. U-5604 SHEET NO. 3D-5

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 for Line & Station, Offset, Structure Number, Invert Elevations, Pipe Material (Drainage Pipe, C.S. PIPE, R.C. PIPE CLASS III/IV), Quantities for Drainage Structures, Frame/Grates/Hood, Concrete Transitional Section, and Remarks. Includes sub-totals for SHEET TOTALS and PROJECT TOTALS.

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 descriptions.

SHEET TOTALS and PROJECT TOTALS summary rows showing counts for various materials and quantities across the sheet.

COMPUTED BY: GEOTECH DATE: _____
 CHECKED BY: _____ DATE: _____

PROJECT NO.	SHEET NO.
U-5604	3G-1

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

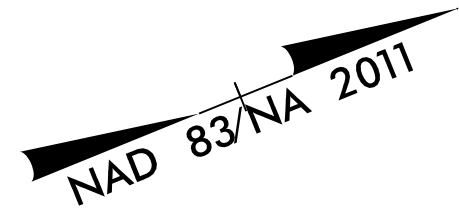
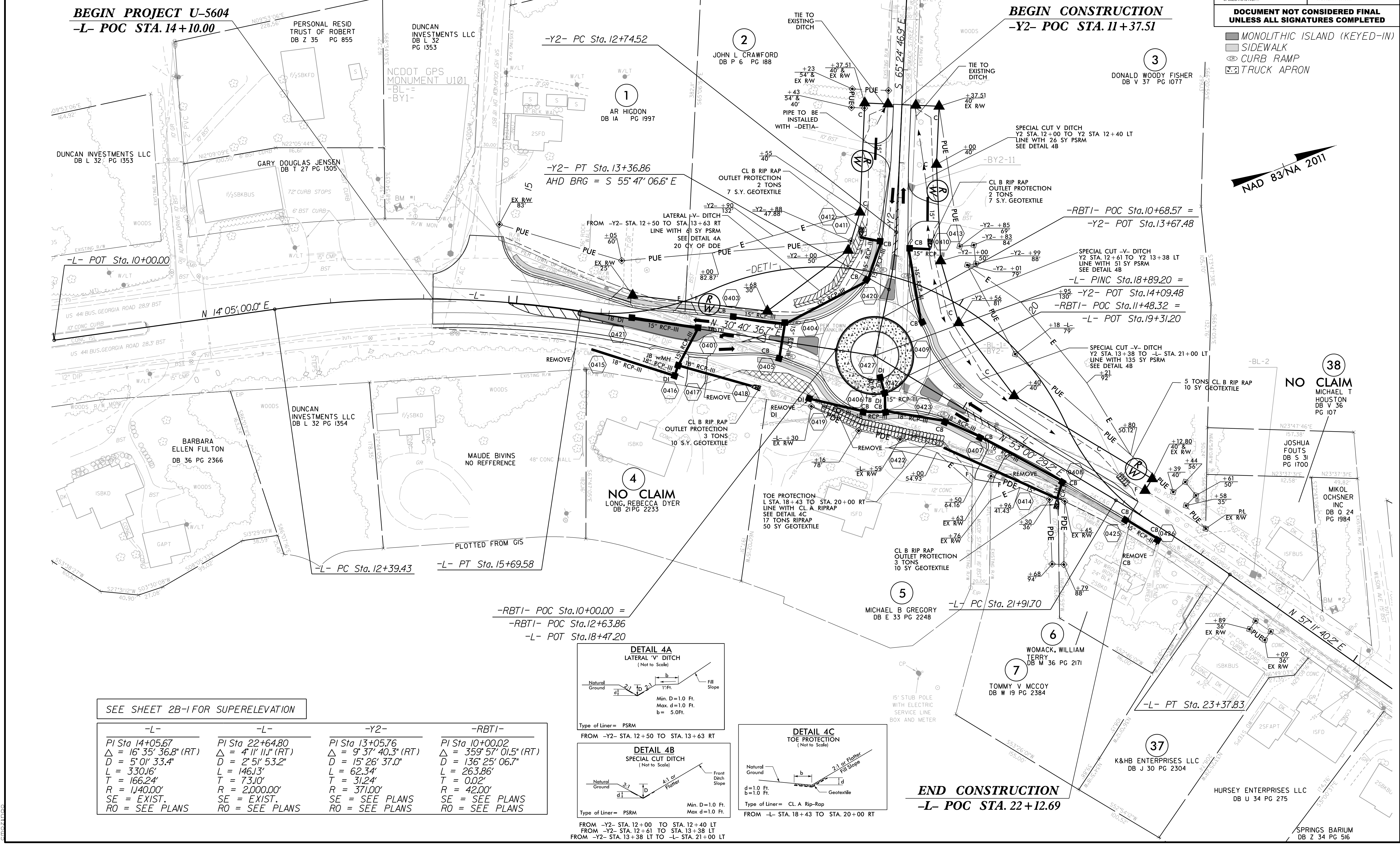
LINE	Station	Station	Aggregate Type ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
			ASU	18	500	1000	1000		
			TOTAL CY/TONS/SY:		500	1000	1000*	0	0

ASU = Aggregate Subgrade, AST = Aggregate Stabilization
 *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 shown in the Item Sheets of the Proposal.



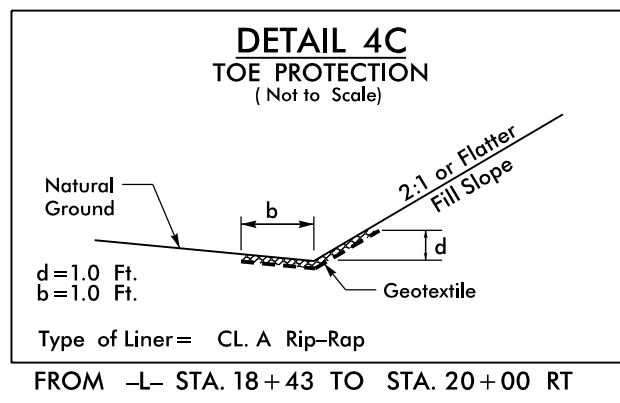
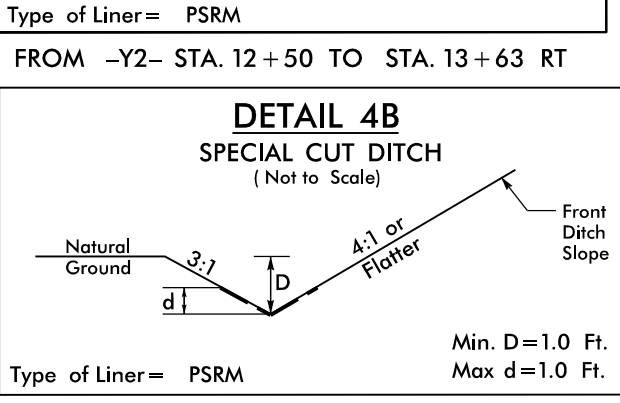
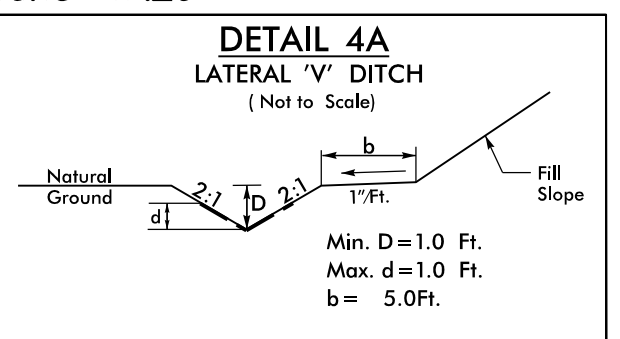
PROJECT REFERENCE NO. U-5604	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
SEAL 022037	SEAL 12786
4/26/2018	4/30/2018

SEE SHEET 7 FOR -L- PROFILE
 SEE SHEET 8 FOR -Y2- PROFILE
 SEE SHEET 10 FOR -RBTI- PROFILE
 SEE SHEET 2B-1 FOR ROUNDABOUT DETAIL AND TRAFFIC DIAGRAM
 SEE SHEET 2B-5 FOR -DETI-
 SEE PAVEMENT MARKING PLANS FOR EXACT LOCATION OF CURB RAMPS.
 ALL DRIVEWAY RADII ARE 3' UNLESS OTHERWISE NOTED.
 PAVE ALL DRIVEWAYS TO A MINIMUM OF THE RIGHT-OF-WAY.



SEE SHEET 2B-1 FOR SUPERELEVATION

-L-	-L-	-Y2-	-RBTI-
PI Sta 14+05.67	PI Sta 22+64.80	PI Sta 13+05.76	PI Sta 10+00.02
$\Delta = 16^{\circ} 35' 36.8''$ (RT)	$\Delta = 4^{\circ} 11' 11.1''$ (RT)	$\Delta = 9^{\circ} 37' 40.3''$ (RT)	$\Delta = 359^{\circ} 57' 01.5''$ (RT)
D = 5' 01" 33.4"	D = 2' 51" 53.2"	D = 15' 26" 37.0"	D = 136' 25" 06.7"
L = 330.16'	L = 146.13'	L = 62.34'	L = 263.86'
T = 166.24'	T = 73.10'	T = 31.24'	T = 0.02'
R = 1,140.00'	R = 2,000.00'	R = 371.00'	R = 42.00'
SE = EXIST.	SE = EXIST.	SE = SEE PLANS	SE = SEE PLANS
RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS



4/26/2018
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8/17/2018

-Y3-	-Y3-	-L-	-L-	-L-	-Y5-
PI Sta 10+70.67 Δ = 16° 45' 03.1" (RT) D = 11' 56" 11.8" L = 140.33' T = 70.67' R = 480.00' SE = EXIST. RO = SEE PLANS	PI Sta 11+90.25 Δ = 35° 55' 11.1" (LT) D = 37' 12" 18.2" L = 96.55' T = 49.92' R = 154.00' SE = SEE PLANS RO = SEE PLANS	PI Sta 28+36.16 Δ = 35° 21' 19.9" (LT) D = 8' 44" 50.8" L = 404.18' T = 208.76' R = 655.00' SE = EXIST. RO = EXIST.	PI Sta 32+22.35 Δ = 20° 33' 34.6" (RT) D = 10' 44" 58.8" L = 191.26' T = 96.67' R = 533.00' SE = SEE PLANS RO = SEE PLANS	PI Sta 35+55.95 Δ = 24° 06' 54.3" (RT) D = 15' 26" 37.0" L = 156.15' T = 79.25' R = 371.00' SE = SEE PLANS RO = SEE PLANS	PI Sta 11+77.69 Δ = 12° 24' 39.2" (RT) D = 16' 22" 12.8" L = 75.8' T = 38.06' R = 350.00' SE = SEE PLANS RO = SEE PLANS

SEE SHEET 8 FOR -L- PROFILE
SEE SHEET 9 FOR -Y3-, -Y5-, AND -Y6- PROFILES
SEE SHEET 10 FOR -RBT2- PROFILE
SEE SHEET 11 FOR -RBT3- AND -RI- PROFILES
SEE SHEET 13 FOR -DRWY1- AND -DRWY2- PROFILES
SEE SHEET 2B-2 AND 2B-3 FOR ROUNDABOUT DETAIL AND TRAFFIC DIAGRAM

SEE SHEET 2B-6 FOR -DET2- AND -DET3-
SEE PAVEMENT MARKING PLANS FOR EXACT LOCATION OF CURB RAMPS.
ALL DRIVEWAY RADII ARE 3' UNLESS OTHERWISE NOTED.
SEE SHEETS W-1 THRU W-3 FOR WALL PLANS
PAVE ALL DRIVEWAYS TO A MINIMUM OF THE RIGHT-OF-WAY.

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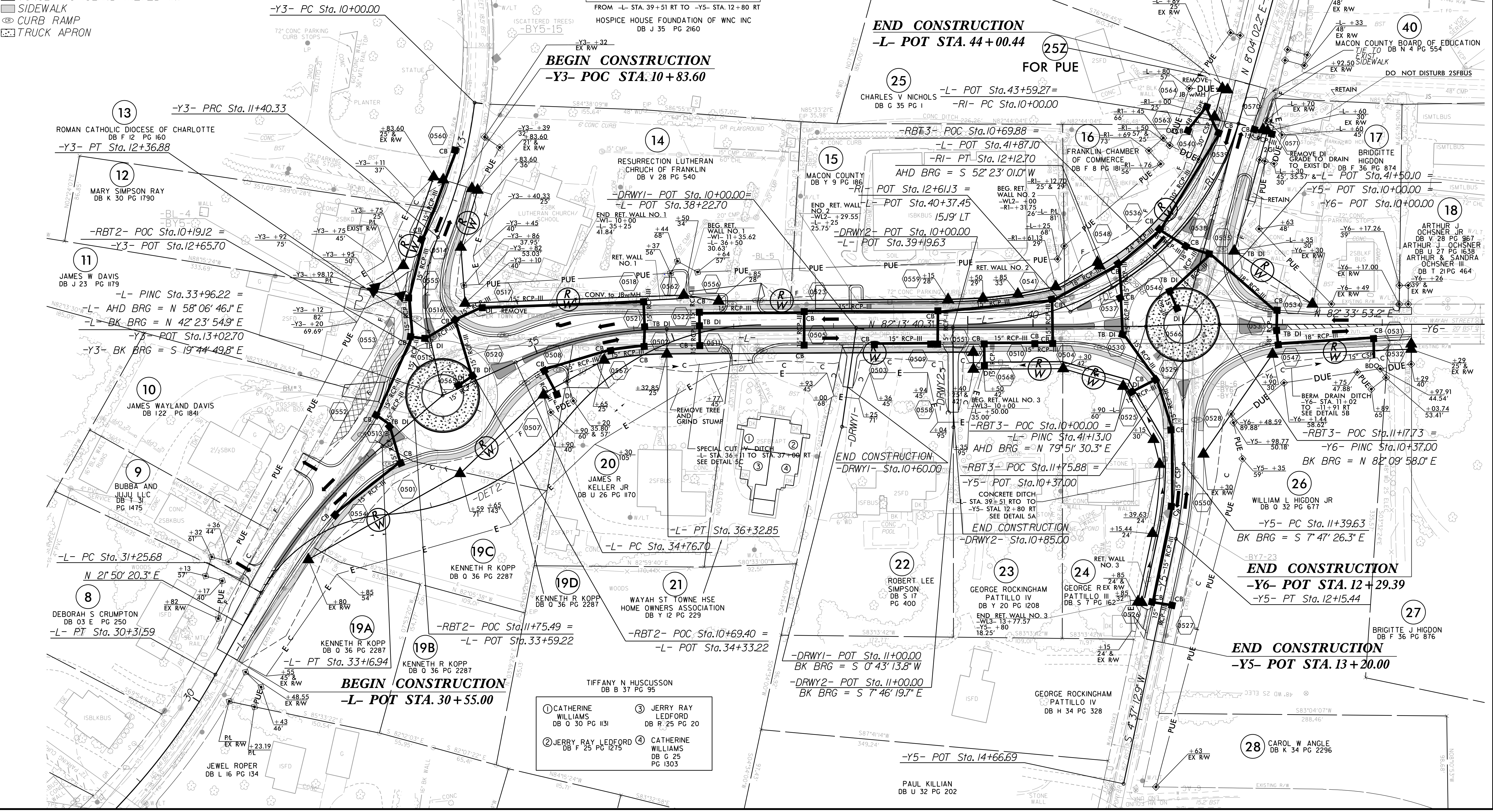
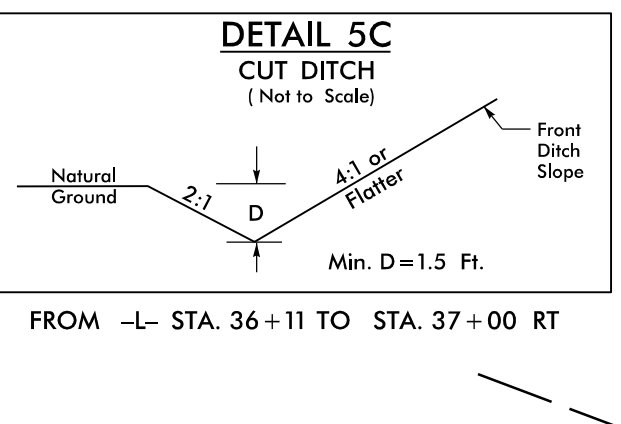
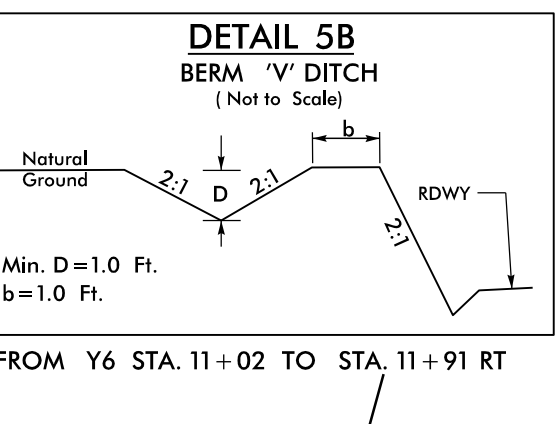
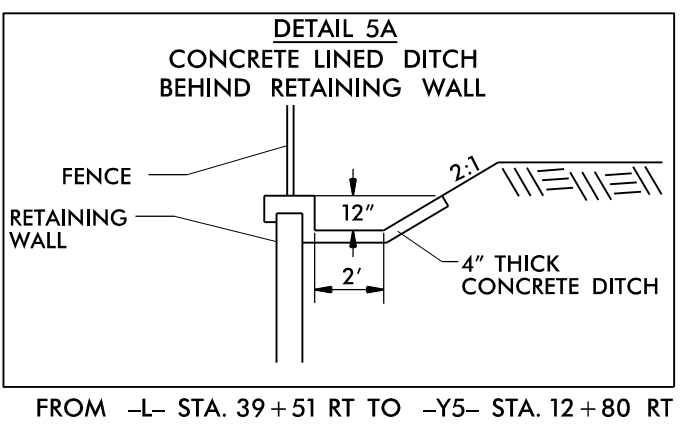
PROJECT REFERENCE NO. U-5604	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
SEAL 022037	SEAL 12786
DATE: 4/26/2018	DATE: 4/26/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-RBT2-	-RBT3-	-RI-
PI Sta 10+00.00 Δ = 359° 59' 12.6" (RT) D = 154' 51" 12.4" L = 232.47' T = 0.00' R = 37.00' SE = SEE PLANS RO = SEE PLANS	PI Sta 10+00.01 Δ = 359° 57' 12.8" (RT) D = 154' 51" 12.4" L = 232.45' T = 0.00' R = 37.00' SE = SEE PLANS RO = SEE PLANS	PI Sta 11+11.99 Δ = 44' 18' 58.7" (RT) D = 20' 50" 05.4" L = 212.70' T = 111.99' R = 275.00' SE = SEE PLANS RO = SEE PLANS

SEE SHEET 2B-2 AND 2B-3 FOR SUPERELEVATION

- MONOLITHIC ISLAND (KEYED-IN)
- SIDEWALK
- CURB RAMP
- TRUCK APRON

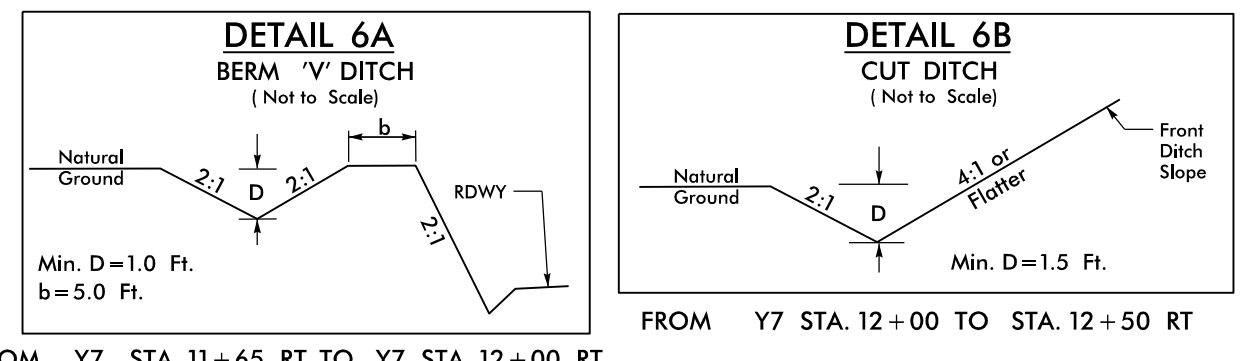


- | | |
|--|---|
| 1 CATHERINE WILLIAMS
DB O 30 PG 131 | 3 JERRY RAY LEDFORD
DB R 25 PG 20 |
| 2 JERRY RAY LEDFORD
DB F 25 PG 1275 | 4 CATHERINE WILLIAMS
DB C 25 PG 1303 |

4/26/2018
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8/17/19

SEE SHEET 9 FOR -Y7- PROFILE
 SEE SHEET 10 FOR -Y8- PROFILE
 SEE SHEET 10 FOR -Y9- PROFILE
 SEE SHEET 11 FOR -RBT4- PROFILE
 SEE SHEET 2B-4 FOR ROUNDABOUT
 DETAIL AND TRAFFIC DIAGRAM
 SEE SHEET 2B-7 FOR -DET4-
 SEE PAVEMENT MARKING PLANS,
 FOR EXACT LOCATION OF CURB RAMPS.
 ALL DRIVEWAY RADII ARE 3' UNLESS OTHERWISE NOTED.
 PAVE ALL DRIVEWAYS TO A MINIMUM OF THE RIGHT-OF-WAY.



FROM -Y7- STA. 11+65 RT TO Y7 STA. 12+00 RT
 FROM -Y7- STA. 12+50 RT TO Y9 STA. 10+40 RT
 FROM -Y9- STA. 10+40 RT TO Y9 STA. 11+50 RT

BEGIN CONSTRUCTION
 -Y7- POC STA. 11+40.00

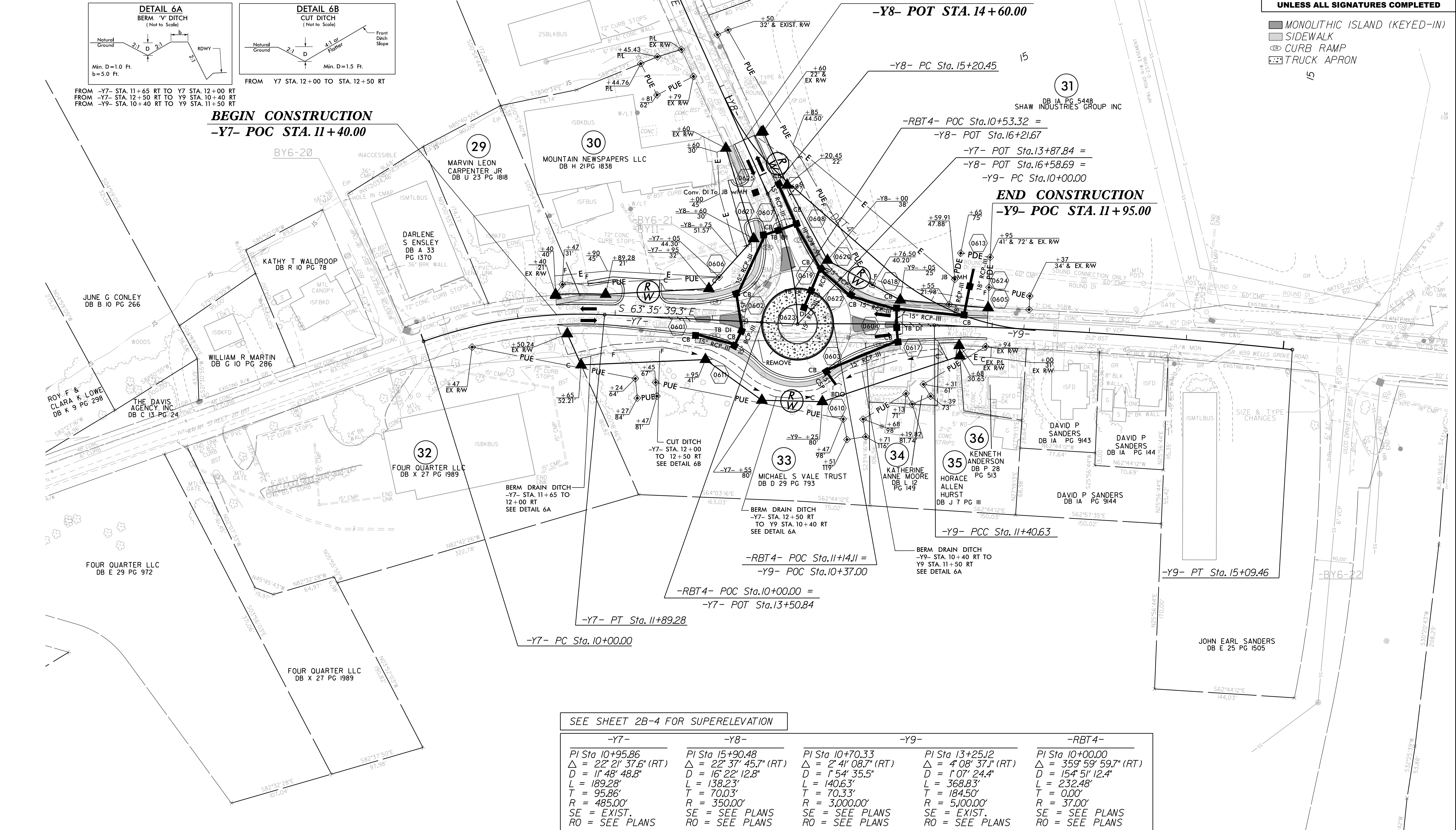
BEGIN CONSTRUCTION
 -Y8- POT STA. 14+60.00

-Y8- PC Sta. 15+20.45

-RBT4- POC Sta. 10+53.32 =
 -Y8- POT Sta. 16+21.67

-Y7- POT Sta. 13+87.84 =
 -Y8- POT Sta. 16+58.69 =
 -Y9- PC Sta. 10+00.00

END CONSTRUCTION
 -Y9- POC STA. 11+95.00



Stantec

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PROJECT REFERENCE NO. U-5604	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
SEAL 022037	SEAL 12786
DATE: 7/27/2018	DATE: 7/27/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

- MONOLITHIC ISLAND (KEYED-IN)
- ▨ SIDEWALK
- ⊙ CURB RAMP
- ▨ TRUCK APRON

SEE SHEET 2B-4 FOR SUPERELEVATION

-Y7-	-Y8-	-Y9-	-RBT4-
PI Sta 10+95.86	PI Sta 15+90.48	PI Sta 10+70.33	PI Sta 13+25.12
Δ = 22' 21" 37.6" (RT)	Δ = 22' 37" 45.7" (RT)	Δ = 2' 41" 08.7" (RT)	Δ = 4' 08" 37.1" (RT)
D = 11' 48" 48.8"	D = 16' 22" 12.8"	D = 1' 54" 35.5"	D = 1' 07" 24.4"
L = 189.28'	L = 138.23'	L = 140.63'	L = 368.83'
T = 95.86'	T = 70.03'	T = 70.33'	T = 184.50'
R = 485.00'	R = 350.00'	R = 3,000.00'	R = 5,100.00'
SE = EXIST.	SE = SEE PLANS	SE = SEE PLANS	SE = EXIST.
RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS

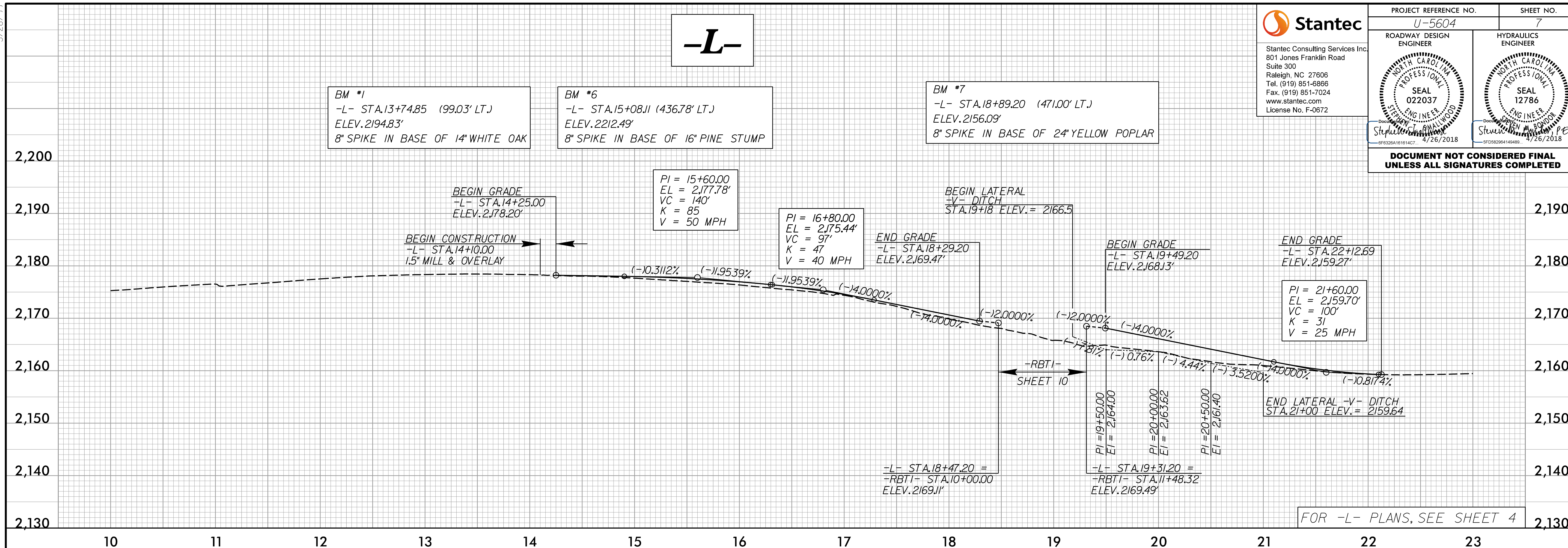
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5/28/18

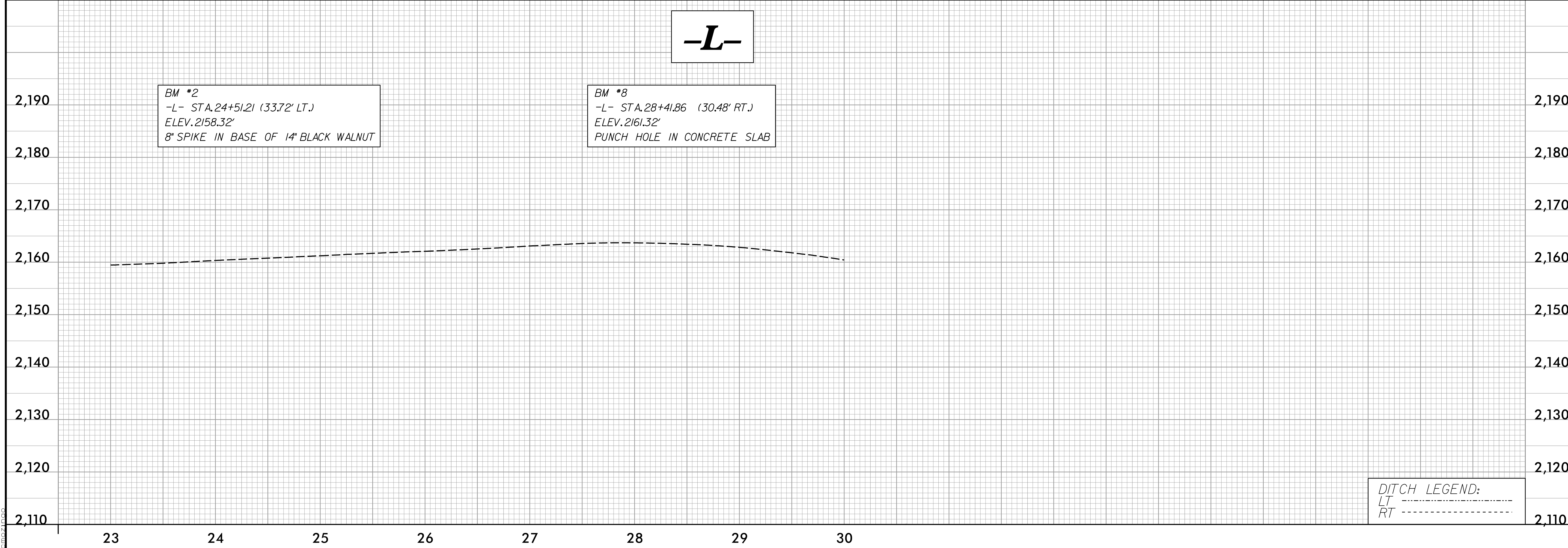


PROJECT REFERENCE NO. U-5604	SHEET NO. 7
ROADWAY DESIGN ENGINEER SEAL 022037 Stacy L. Wood	HYDRAULICS ENGINEER SEAL 12786 Stacy L. Wood
DATE: 5/26/2018	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



FOR -L- PLANS, SEE SHEET 4



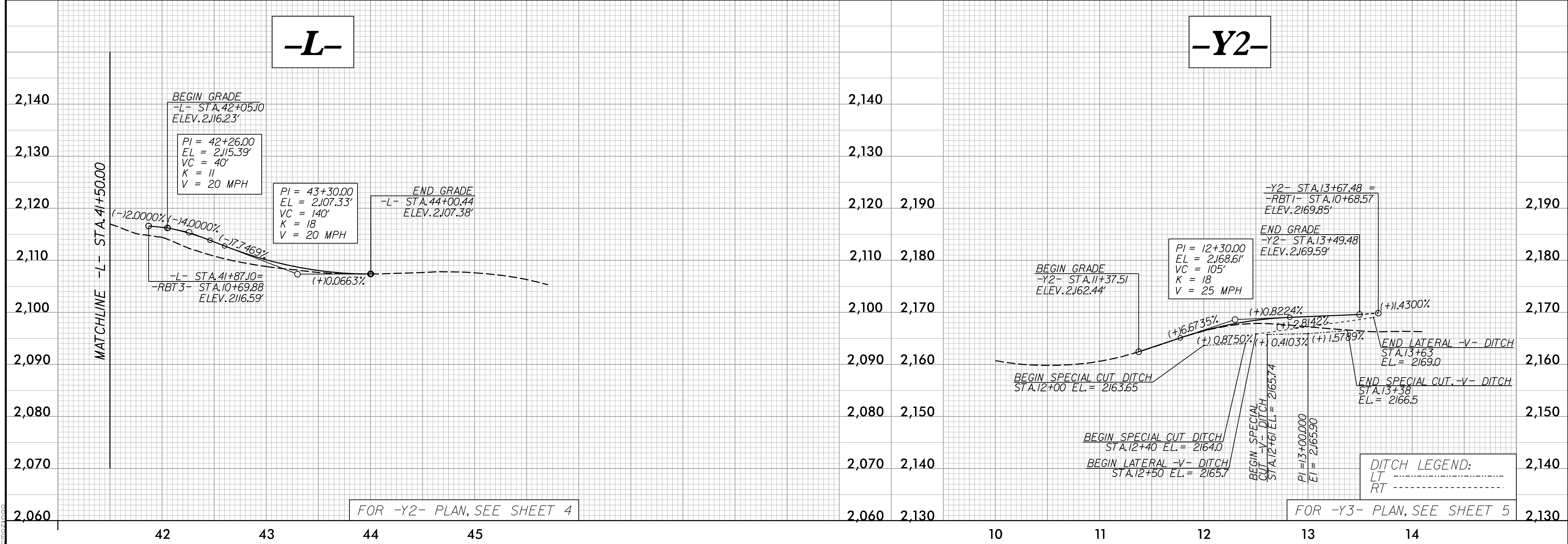
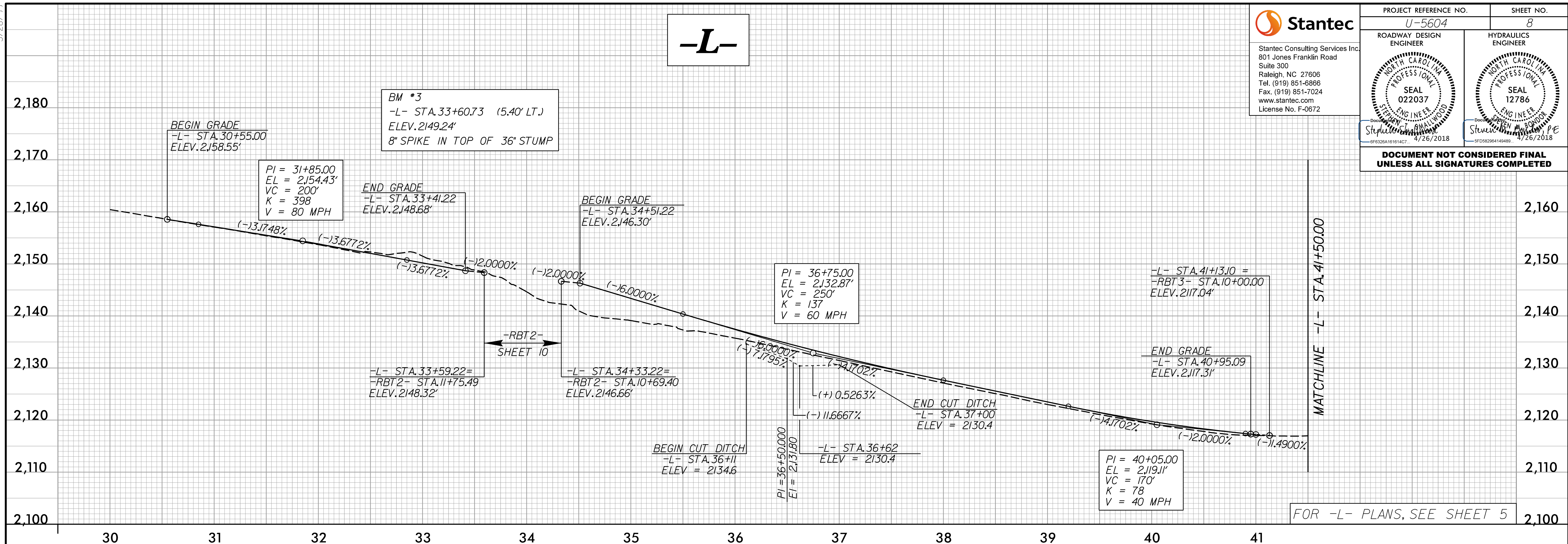
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5/28/18

Stantec
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 Tel. (919) 851-8866
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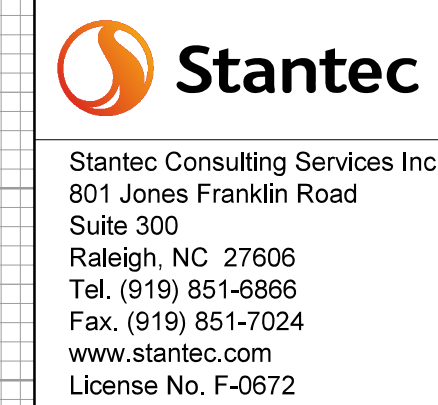
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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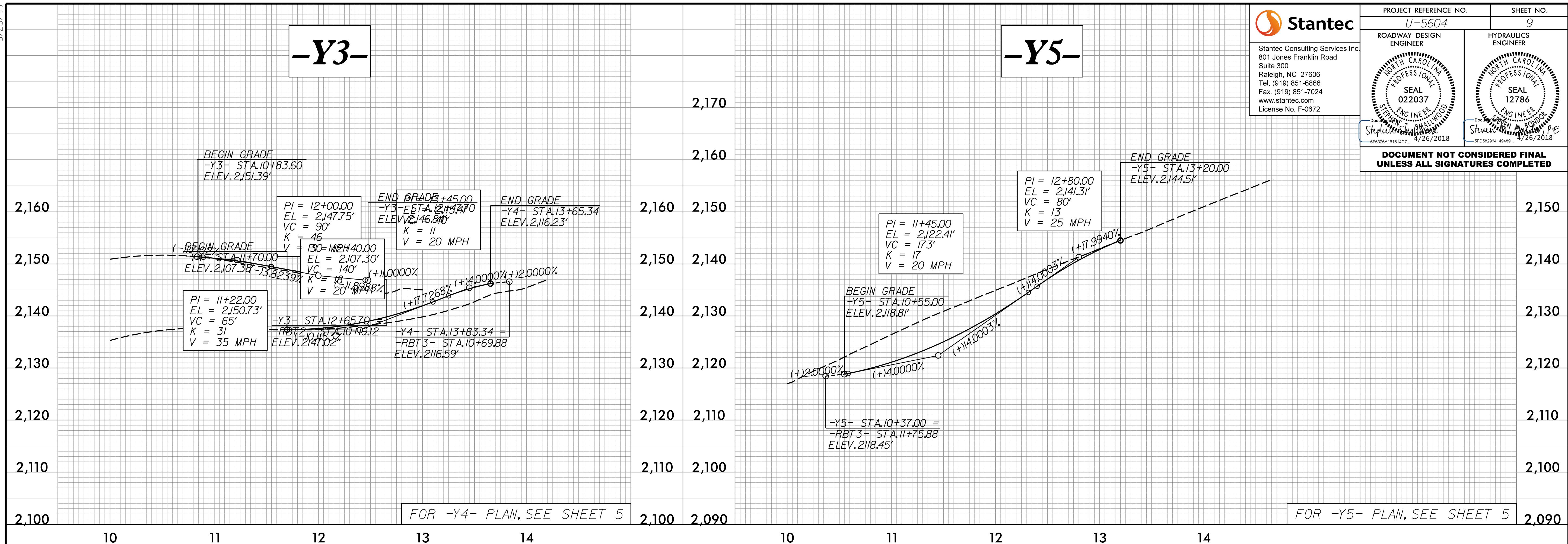
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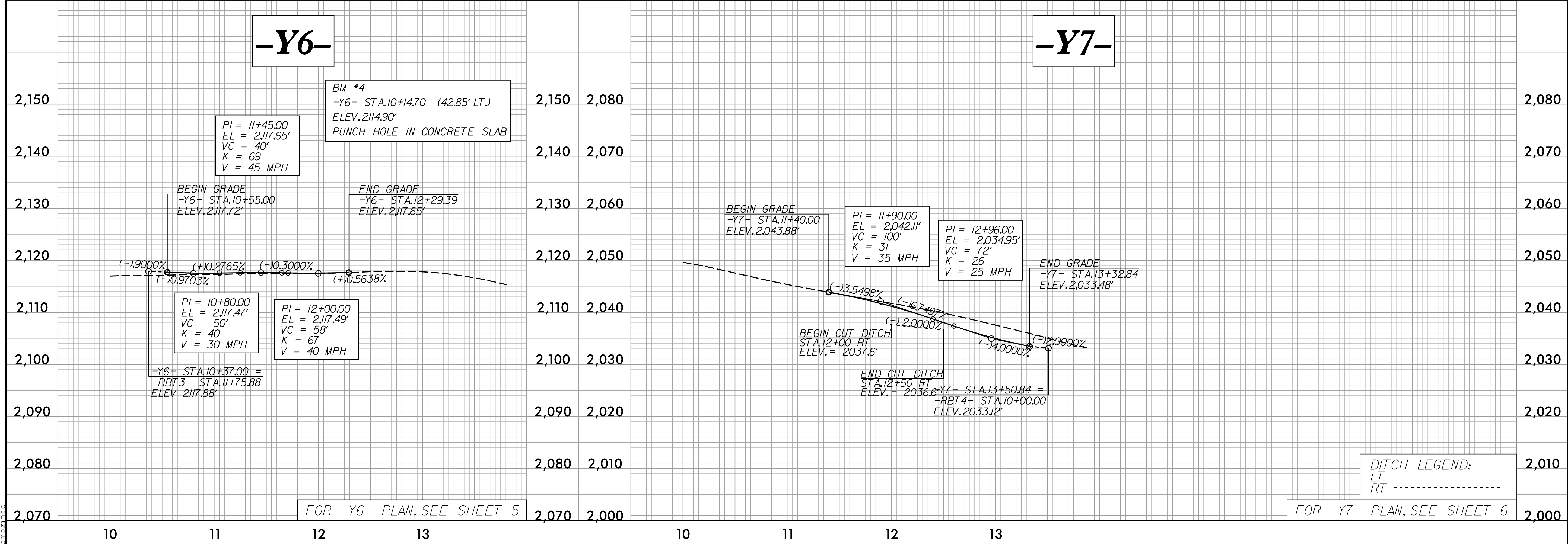
PROJECT REFERENCE NO. U-5604	SHEET NO. 9
ROADWAY DESIGN ENGINEER SEAL 022037 STEPHEN B. BONDY	HYDRAULICS ENGINEER SEAL 12786 STEPHEN B. BONDY
DATE: 5/26/2018	

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FOR -Y4- PLAN, SEE SHEET 5

FOR -Y5- PLAN, SEE SHEET 5



FOR -Y6- PLAN, SEE SHEET 5

FOR -Y7- PLAN, SEE SHEET 6

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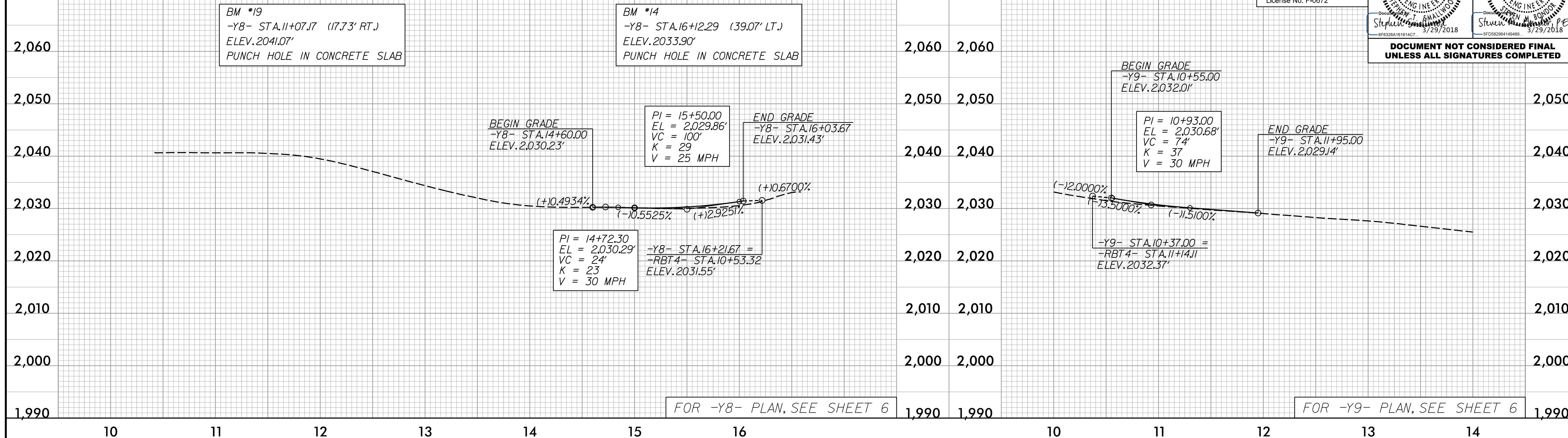
-Y8-

-Y9-

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PROJECT REFERENCE NO. U-5604	SHEET NO. 10
ROADWAY DESIGN ENGINEER <i>[Signature]</i>	HYDRAULICS ENGINEER <i>[Signature]</i>
SEAL 022037 7/29/2018	SEAL 12786 7/29/2018

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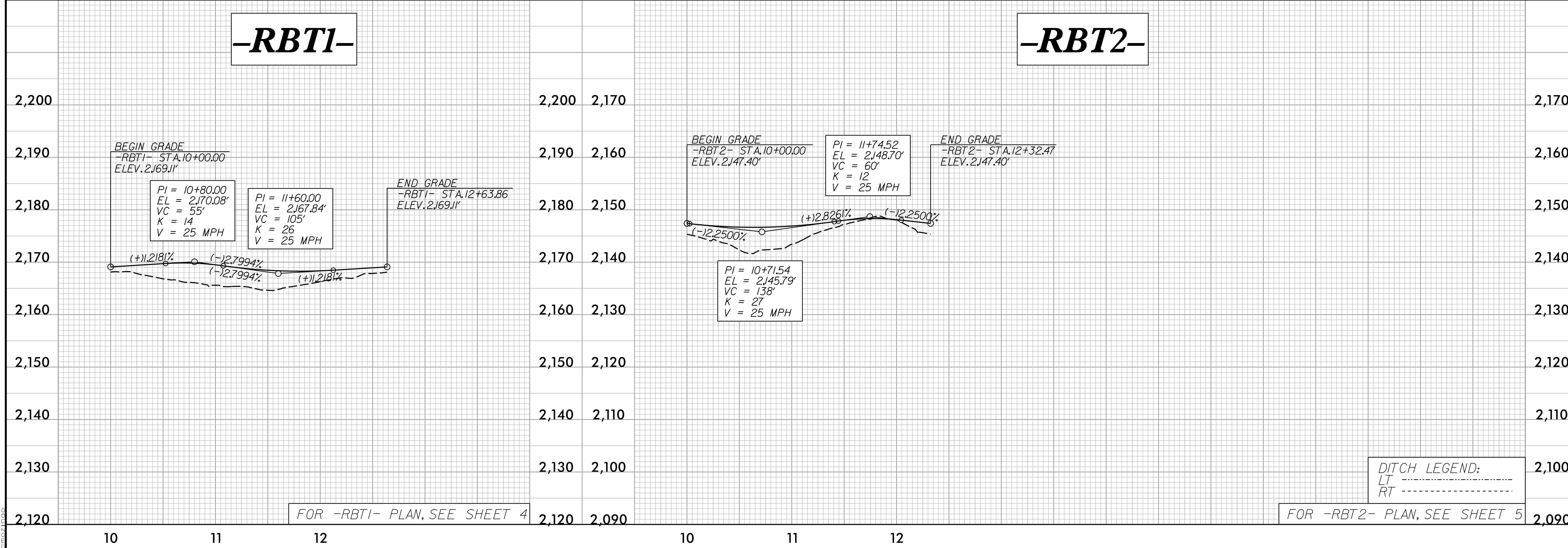


FOR -Y8- PLAN, SEE SHEET 6

FOR -Y9- PLAN, SEE SHEET 6

-RBT1-

-RBT2-



FOR -RBT1- PLAN, SEE SHEET 4

FOR -RBT2- PLAN, SEE SHEET 5

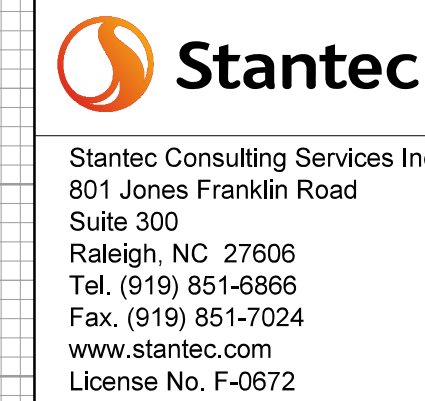
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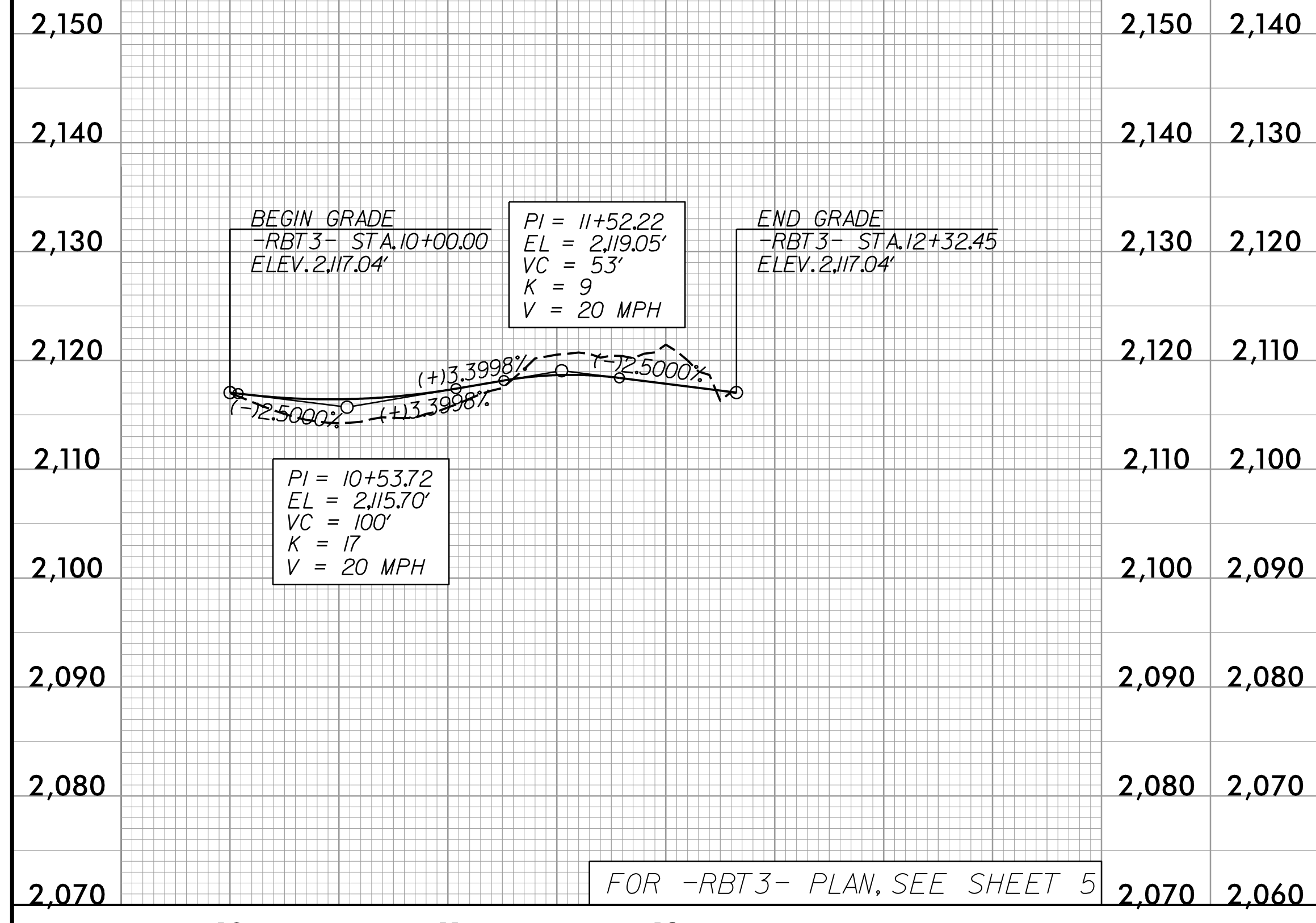
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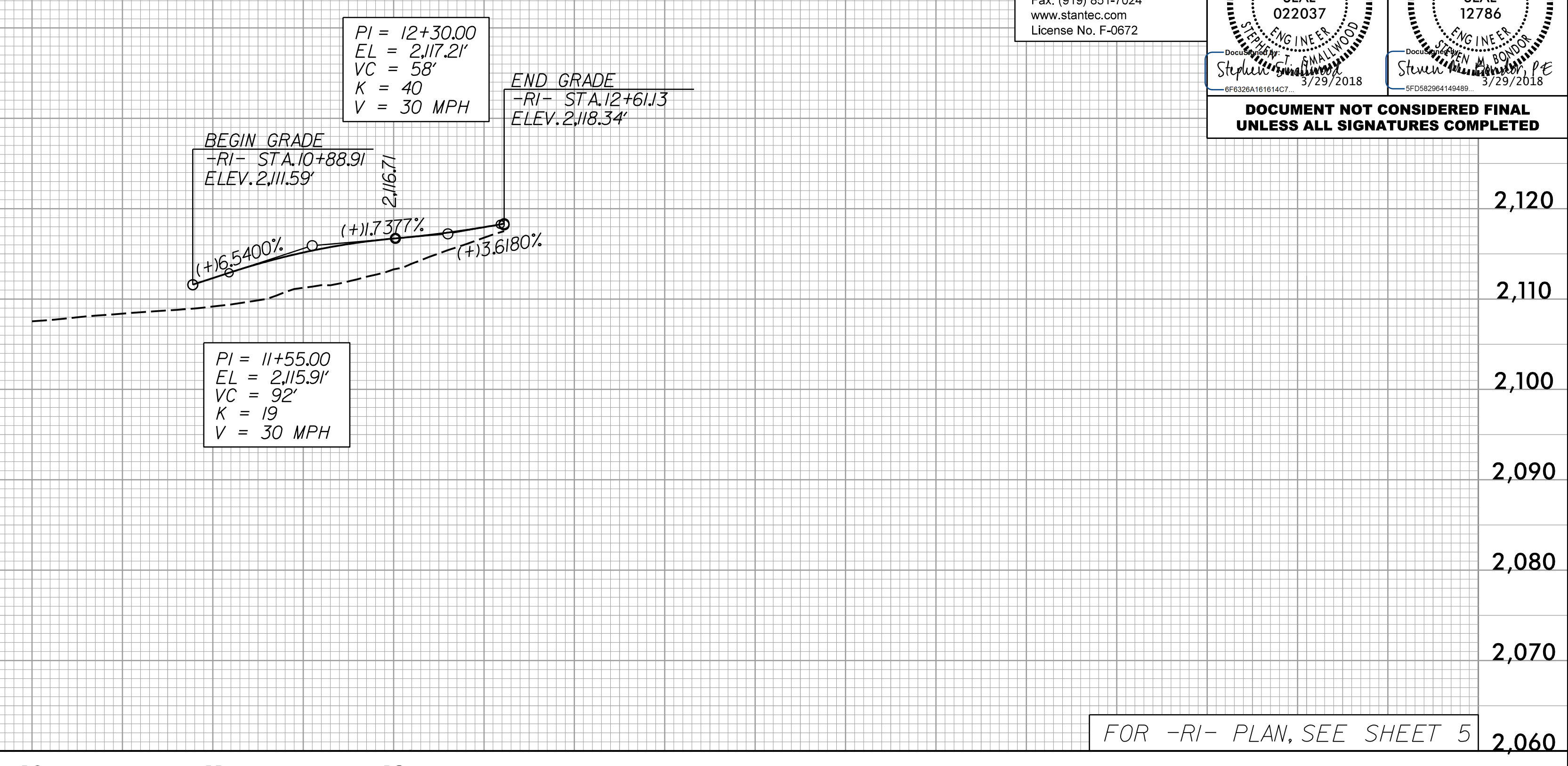


PROJECT REFERENCE NO. U-5604	SHEET NO. 11
ROADWAY DESIGN ENGINEER SEAL 022037 STEPHEN T. SHAWLWOOD	HYDRAULICS ENGINEER SEAL 12786 STEPHEN M. BONDY
DocuSign STEPHEN T. SHAWLWOOD 7/29/2018	DocuSign STEPHEN M. BONDY 7/29/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

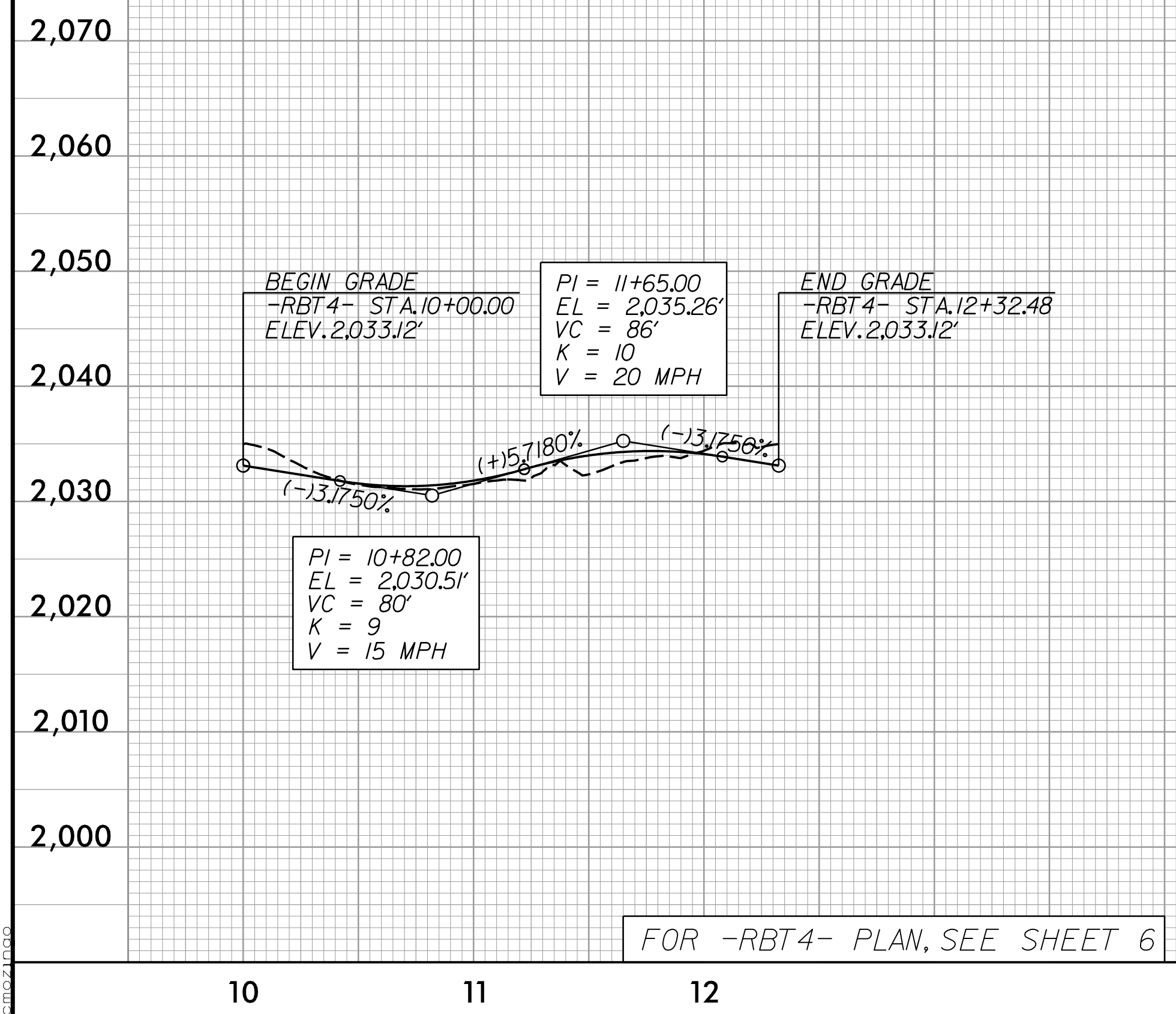


FOR -RBT3- PLAN, SEE SHEET 5



FOR -R1- PLAN, SEE SHEET 5

-RBT4-



FOR -RBT4- PLAN, SEE SHEET 6

DITCH LEGEND:
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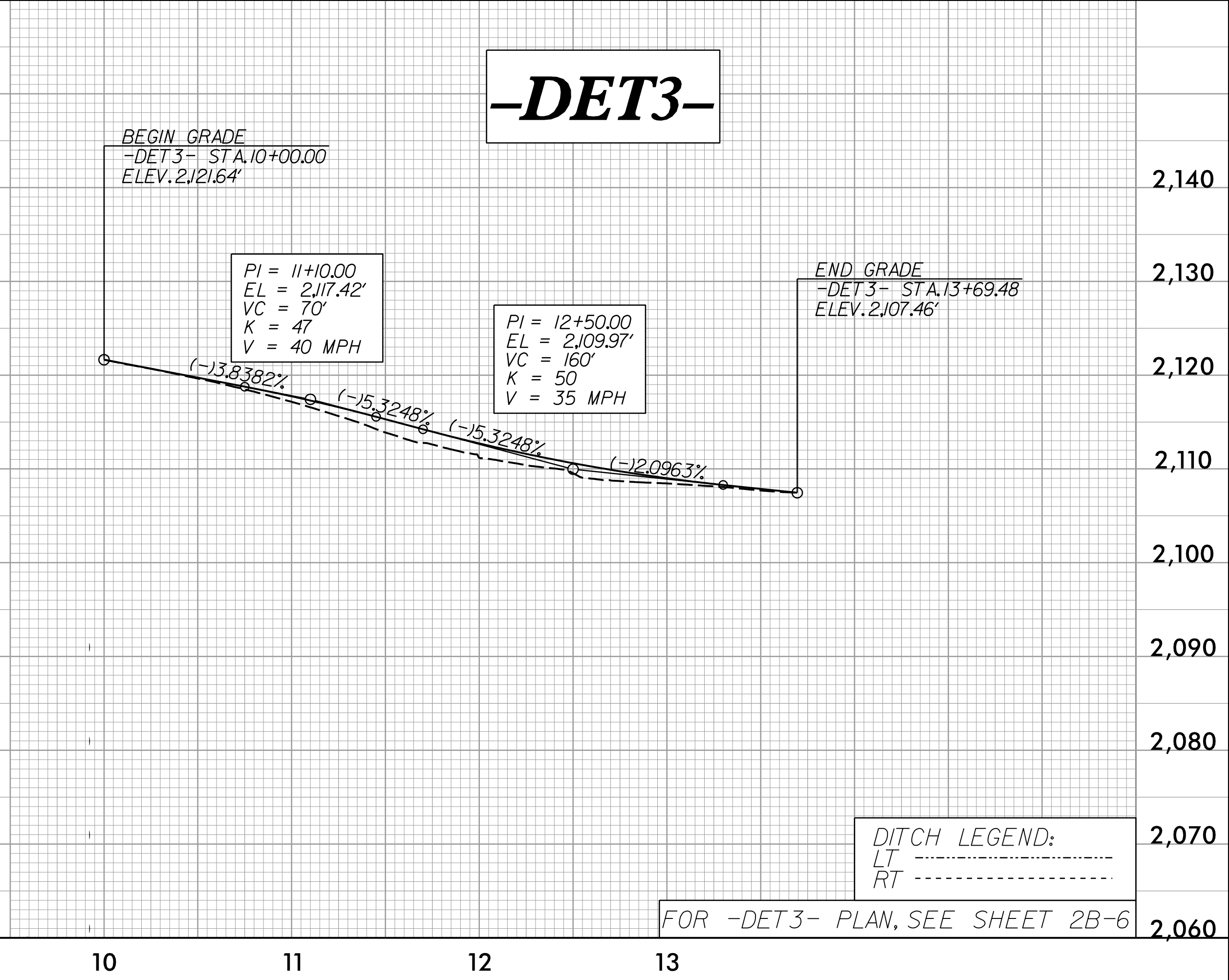
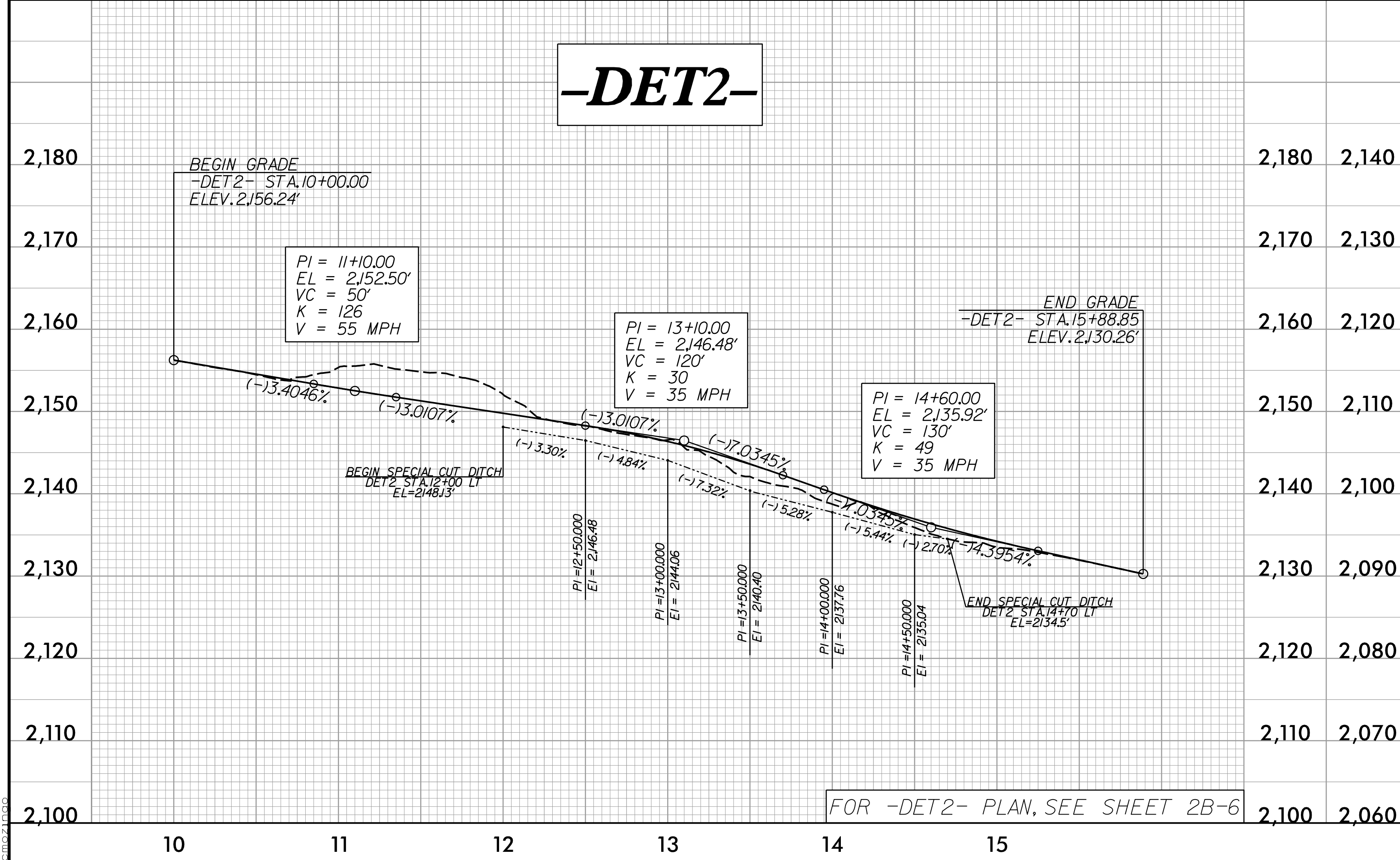
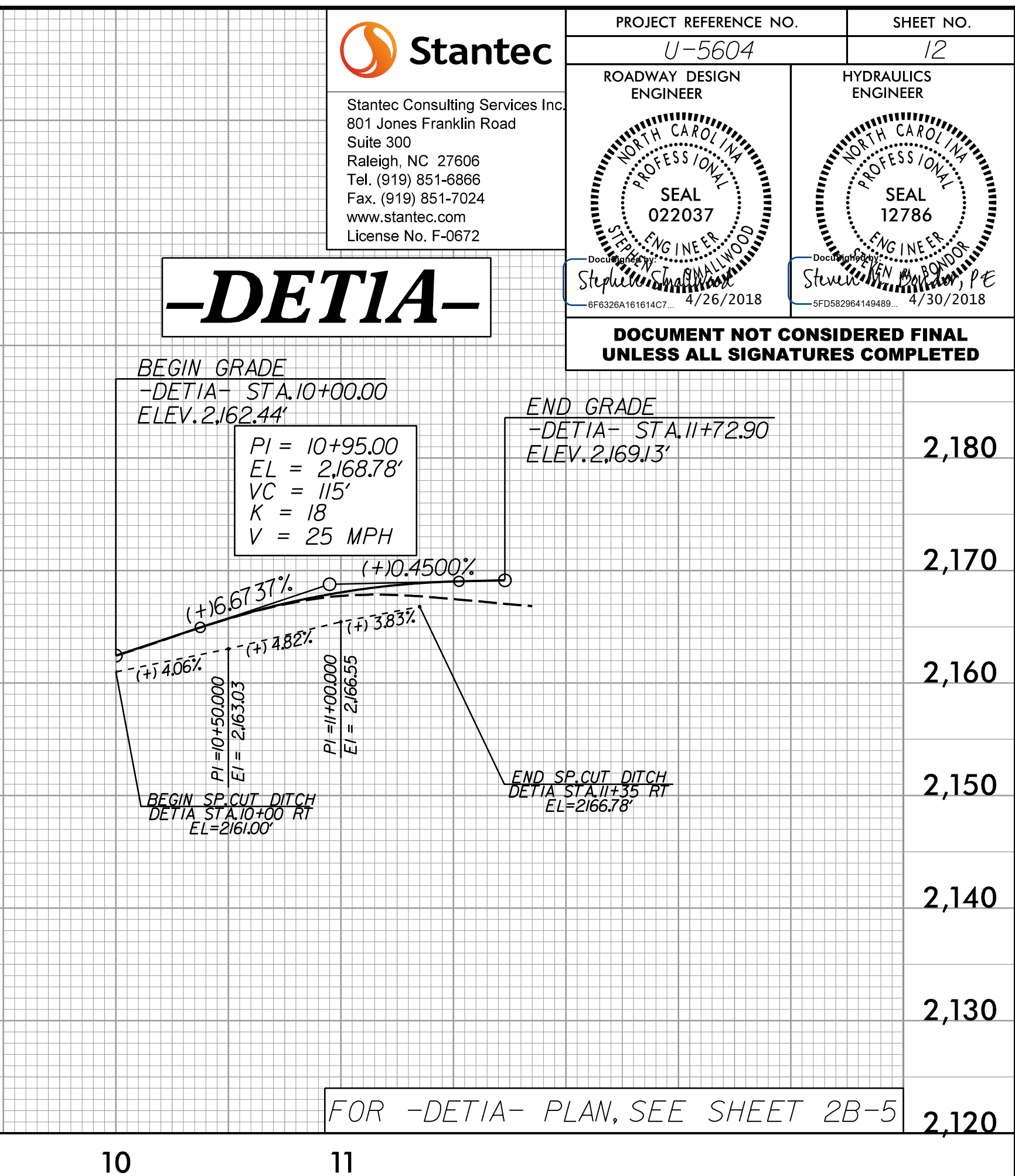
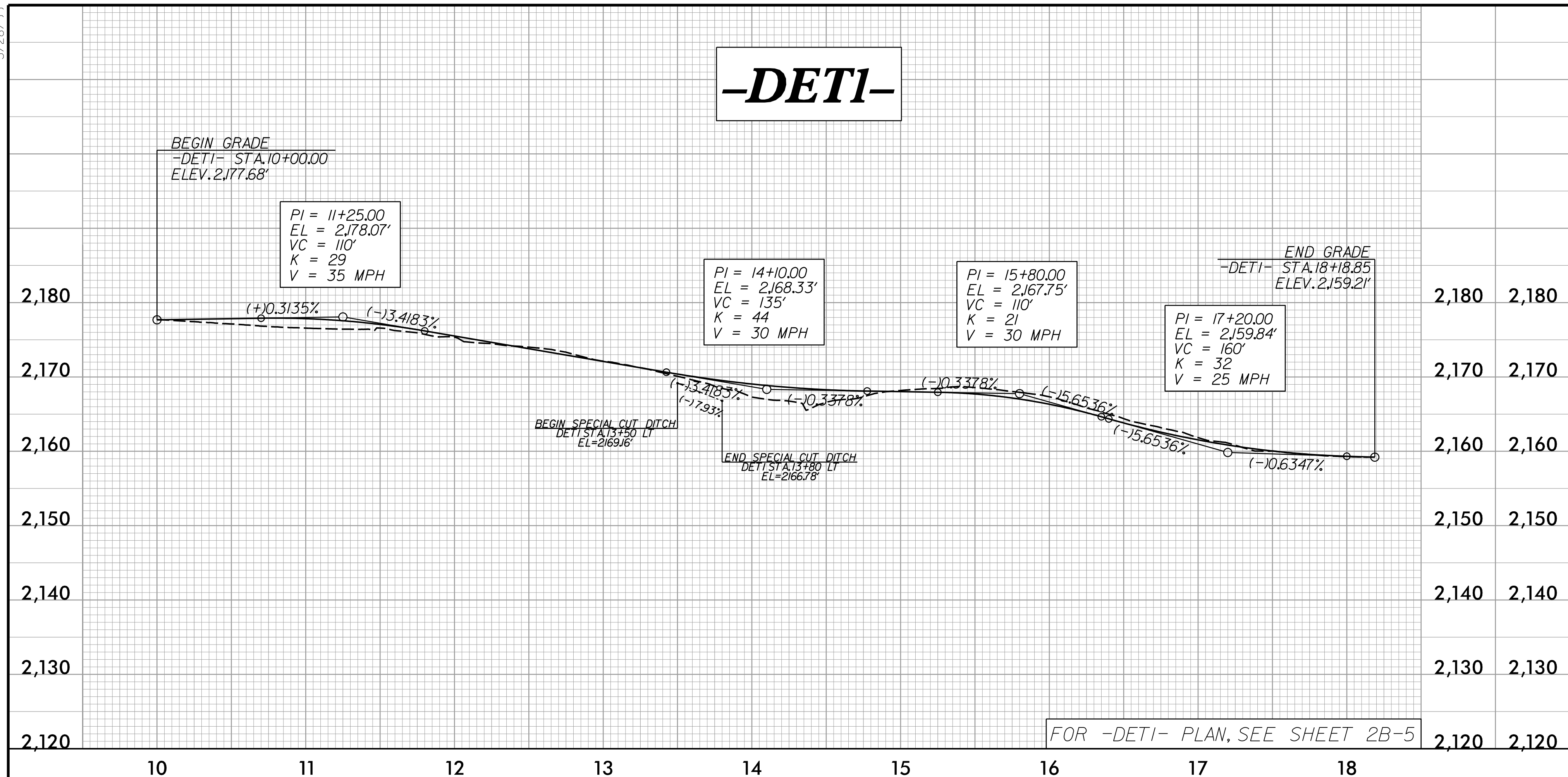
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PROJECT REFERENCE NO. U-5604	SHEET NO. 12
ROADWAY DESIGN ENGINEER SEAL 022037 Stacy M. Wood	HYDRAULICS ENGINEER SEAL 12786 Stacy M. Wood

DATE: 4/26/2018

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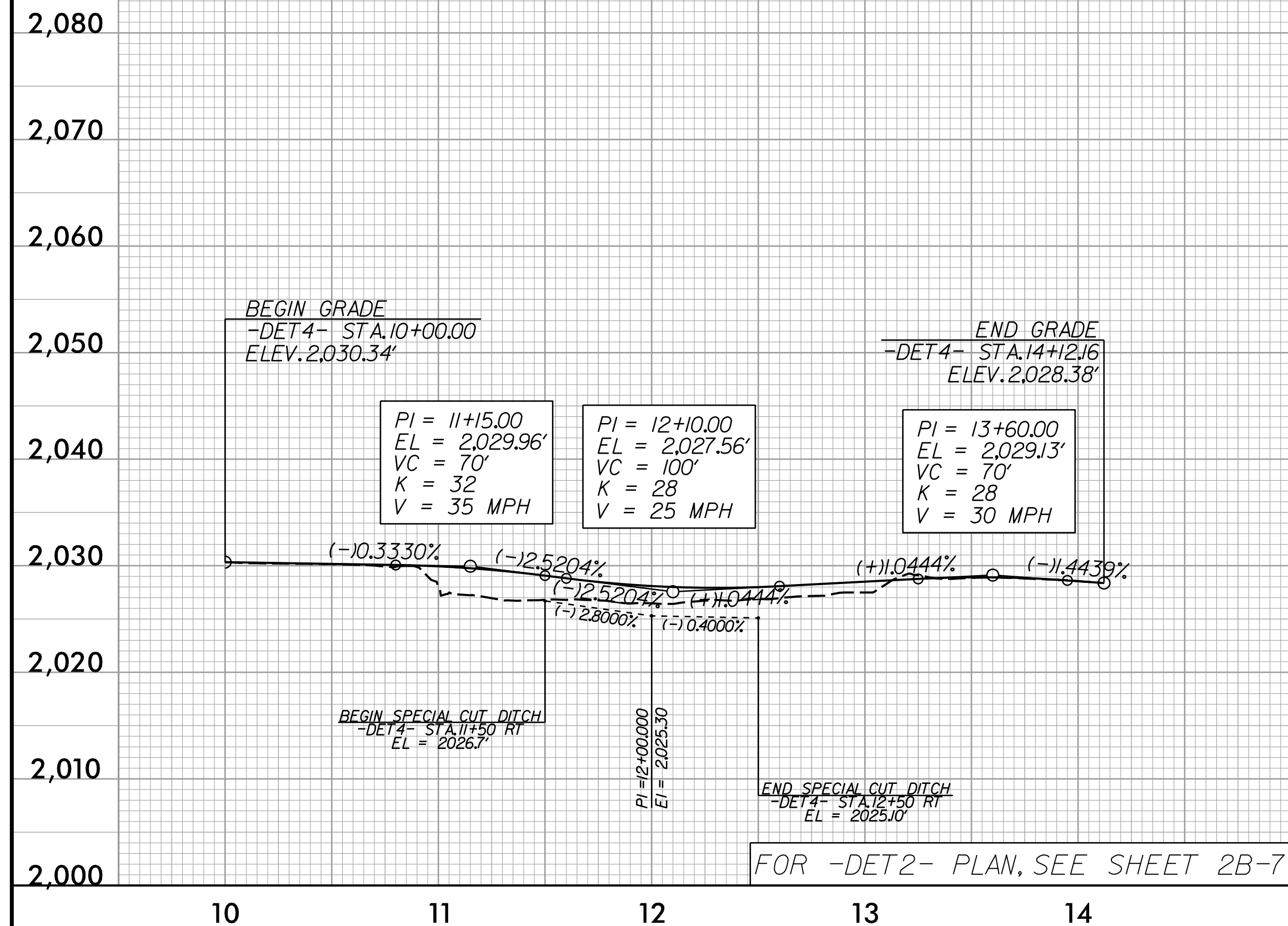
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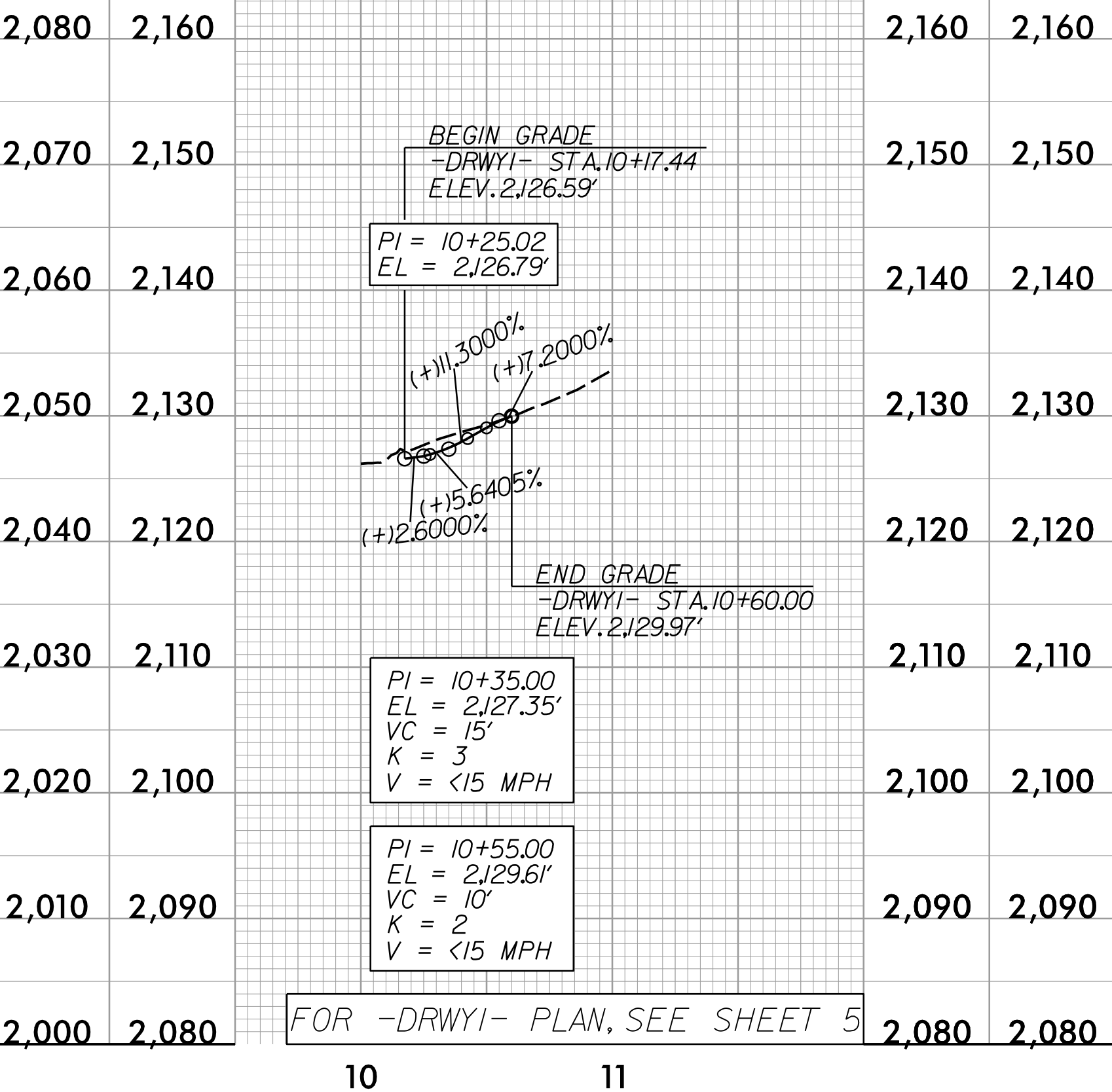


PROJECT REFERENCE NO. U-5604	SHEET NO. 13
ROADWAY DESIGN ENGINEER SEAL 022037 Stefan B. Boudry, P.E.	HYDRAULICS ENGINEER SEAL 12786 Stefan B. Boudry, P.E.
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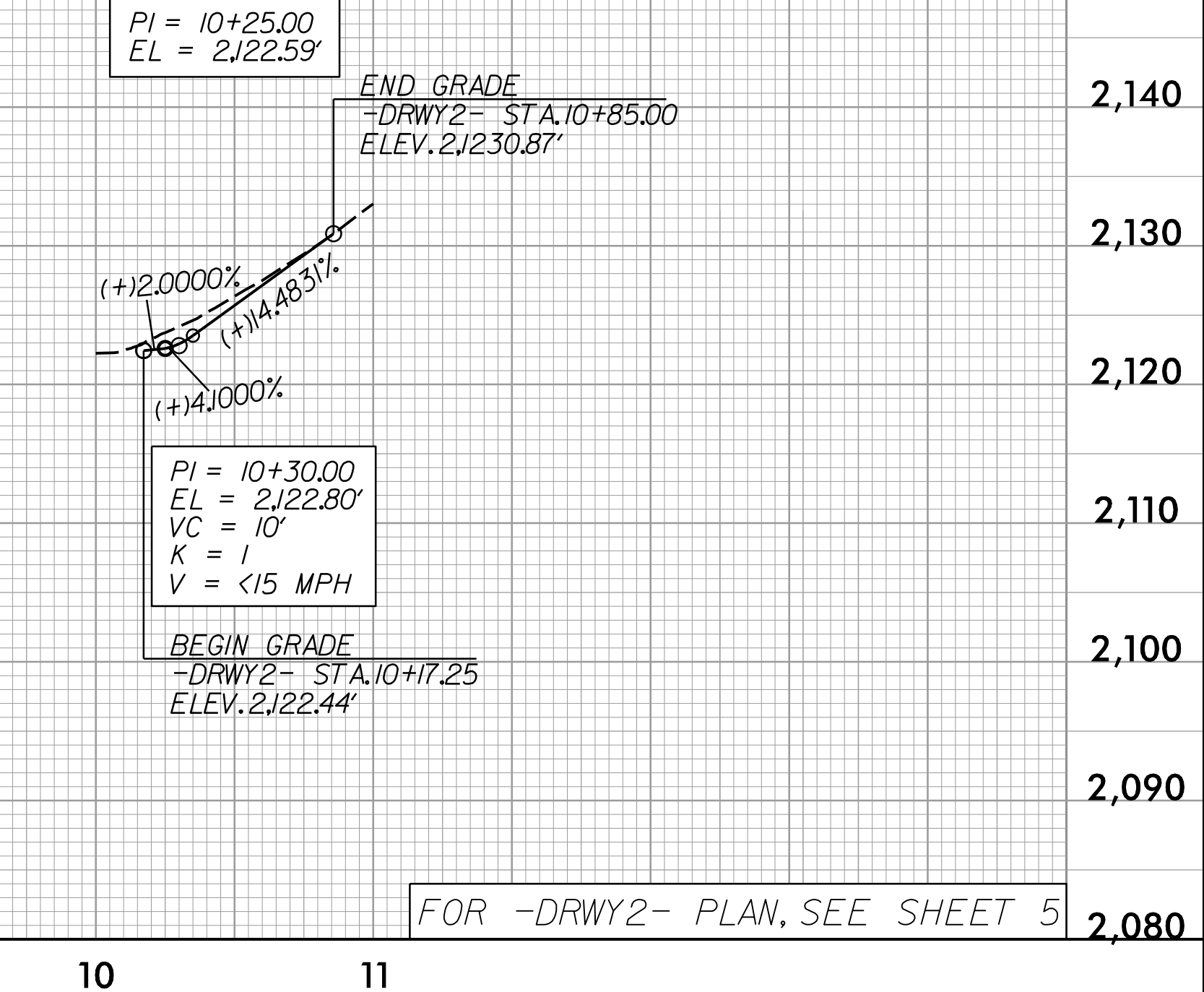
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-DRWY1-



-DRWY2-



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