

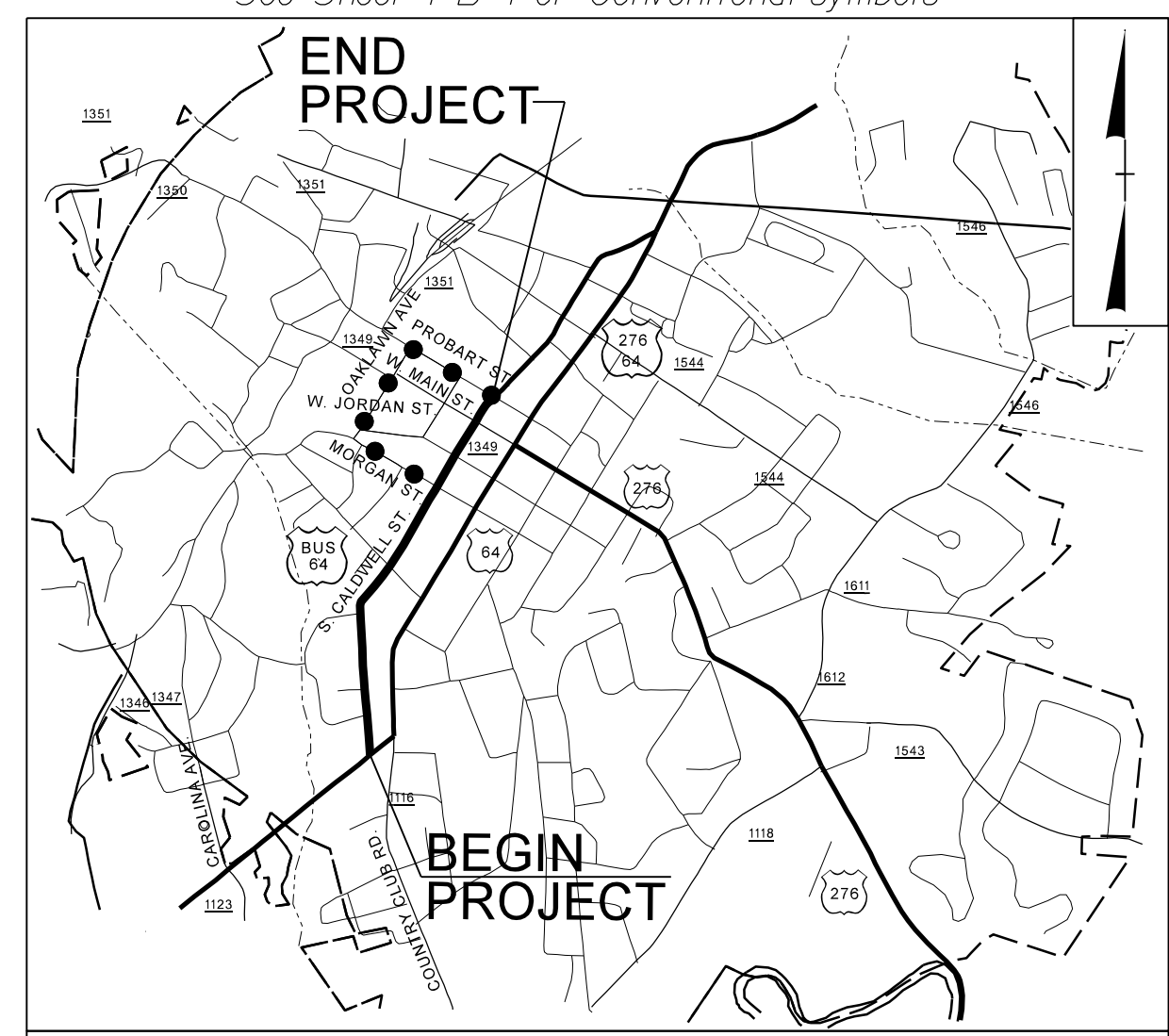
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09_08/2015

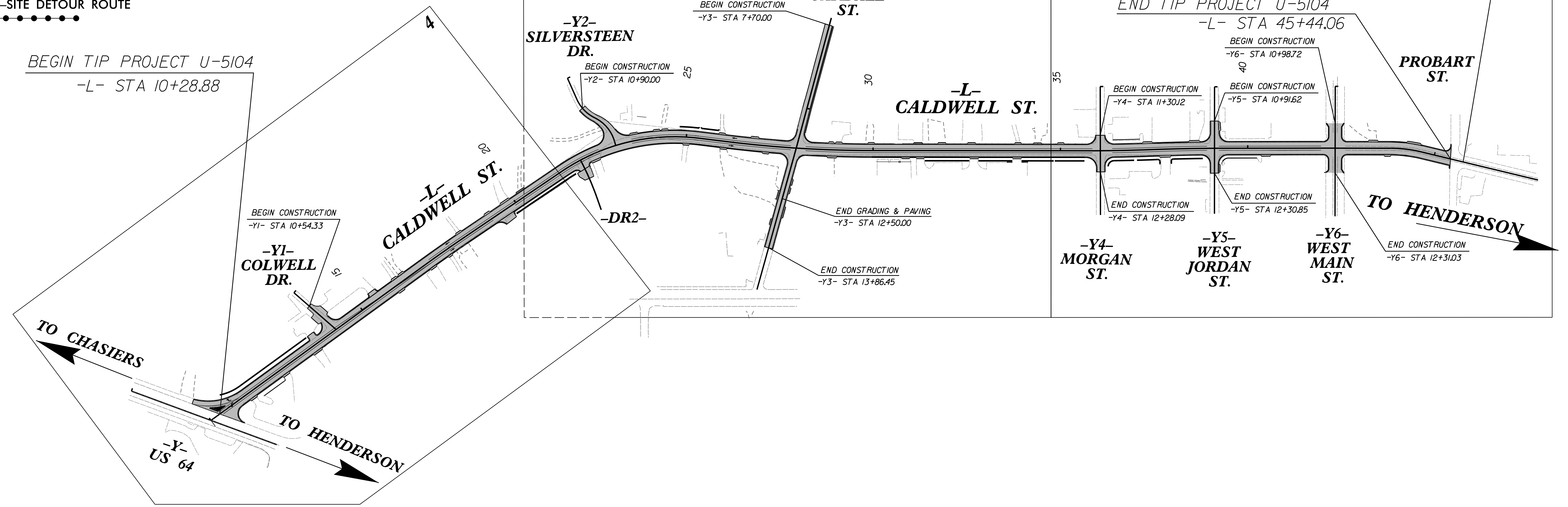
See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional symbols



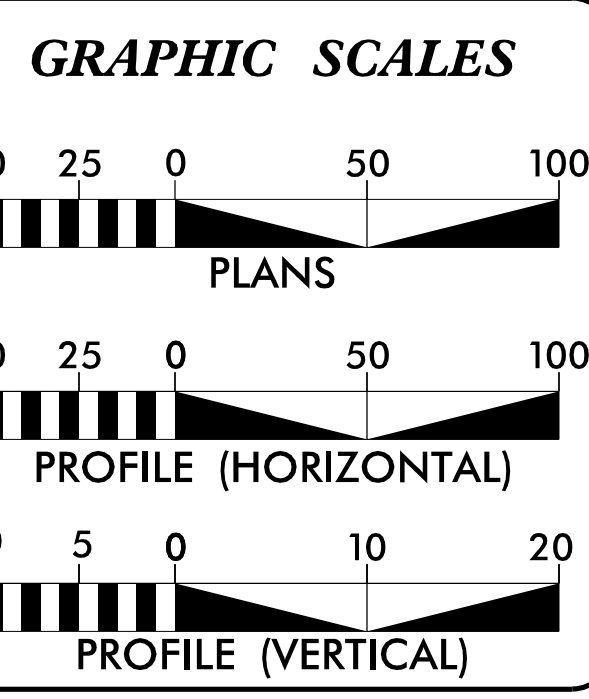
VICINITY MAP

OFF-SITE DETOUR ROUTE
●●●●●●●●

BEGIN TIP PROJECT U-5104
-L- STA 10+28.88



DESIGN EXCEPTION REQUIRED: DESIGN SPEED



DESIGN DATA

| | | |
|-----------------|-------------------------------|--------|
| ADT 2015 | = | 11,600 |
| ADT 2035 | = | 14,215 |
| V | = | 40 MPH |
| CLASSIFICATION: | MAJOR COLLECTOR REGIONAL TIER | |

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5104 = 0.666 Mile

SEPI
ENGINEERING & CONSTRUCTION
1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197

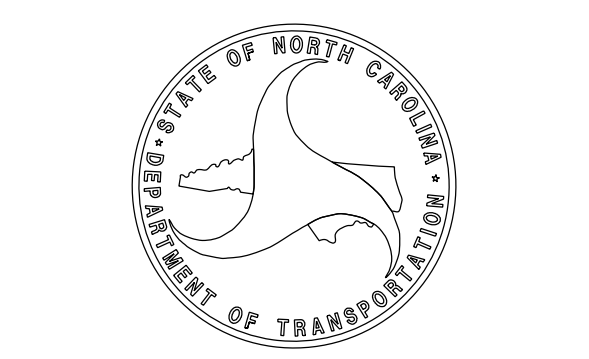
| | | | |
|------------------------------|-------------------------------------|---|--|
| 2012 STANDARD SPECIFICATIONS | RIGHT OF WAY DATE: DECEMBER 2011 | LETTING DATE: OCTOBER 20, 2015 | NCDOT CONTACT |
| | STEVE SCOTT, PE PROJECT ENGINEER | BEN CRAWFORD, PE PROJECT DESIGN ENGINEER | STEPHEN WILLIAMS DIVISION PROJECT MANAGER-NCDOT |

HYDRAULICS ENGINEER
8/27/2015

DocuSigned by:
Brian Margolisi
SIGNATURE

ROADWAY DESIGN ENGINEER
8/27/2015

DocuSigned by:
Steve Scott
SIGNATURE

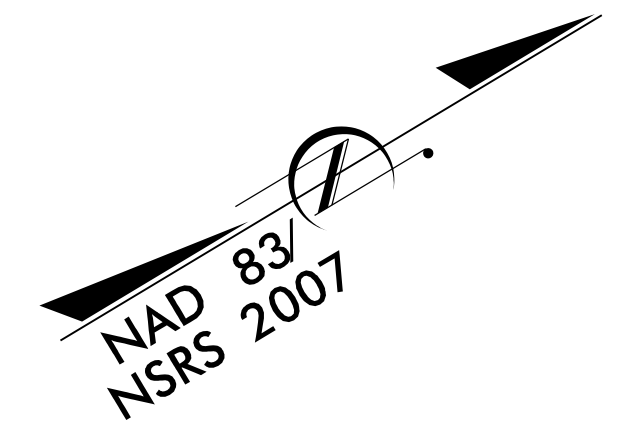


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSYLVANIA COUNTY

LOCATION: CALDWELL STREET FROM US 64 (ROSMAN HIGHWAY)
TO PROBART STREET
TYPE OF WORK: GRADING, DRAINAGE, PAVING,
SIGNALS AND WALLS.

| | | | |
|-----------------|-----------------------------|-------------|--------------|
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
| N.C. | U-5104 | 1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 41902.1.1 | STP-064B(3) | PE | |
| 41902.2.1 | STP-064B(3) | RW/UTIL | |
| 41902.3.FR1 | STP-064B(3) | CONST. | |




PROJECT: U-5104

CONTRACT: C203318

8/27/2015
I:\Roadway\Proj\U5104_Rdy_1\sh.dgn
USER:MCoppie

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

| | |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| U-5104 | 1A |

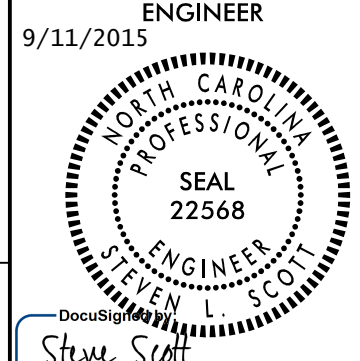


SEPI
ENGINEERING &
CONSTRUCTION

1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197

ROADWAY DESIGN
ENGINEER

9/11/2015



STEVEN L. SCOTT
ENGINEER
SEAL
22568

DocuSign
Steve Scott
08640FEE4629468

INDEX OF SHEETS

| SHEET NUMBER | 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-7 | PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS |
| 2B-1 THRU 2B-2 | INTERSECTION DETAIL SHEETS |
| 2C-1 | 2'-6" C & G TO EXPRESSWAY GUTTER TRANSITION |
| 2C-2 | STAMPED CONCRETE CROSSWALK DETAIL |
| 2C-3 | DETAIL OF CONCRETE STEPS WITH HANDRAIL |
| 2C-4 | DETAIL OF PEDESTRIAN SAFETY RAIL |
| 2D-1 | DETAIL OF PROPOSED OFFSET CATCH BASIN |
| 2G-1 | STANDARD TEMPORARY SHORING |
| 3B-1 | SUMMARY OF EARTHWORK, SUMMARY OF PAVEMENT REMOVAL, SUMMARY OF SUBSURFACE DRAINAGE, SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION, AND SUMMARY OF REPLACEMENT OF CONCRETE STEPS |
| 3D-1 THRU 3D-4 | SUMMARY OF DRAINAGE QUANTITIES |
| 3P-1 | PARCEL INDEX SHEET |
| 4 THRU 6 | PLAN SHEETS |
| 7 THRU 9 | PROFILE SHEETS |
| TMP-1 THRU TMP-8 | TRAFFIC MANAGEMENT PLANS |
| PMP-1 THRU PMP-5 | PAVEMENT MARKING PLANS |
| EC-1 THRU EC-8/CONST.6 | EROSION CONTROL PLANS |
| SIGN-1 THRU SIGN-4 | SIGNING PLANS |
| SIG-1 THRU SCP.11 | SIGNAL PLANS |
| UC-1 THRU UC-4 | UTILITY CONSTRUCTION PLANS |
| UD-1 THRU UD-4 | UTILITIES BY OTHERS PLANS |
| W-1 THRU W-19 | WALL PLANS |
| X-1 | CROSS SECTIONS INDEX |
| X-1A | CROSS SECTIONS SUMMARY |
| X-2 THRU X- 50 | CROSS-SECTIONS |

GENERAL NOTES

GENERAL NOTES: 2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 08/31/11

GRADE LINE:

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.

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3" RADIUS OR RADIUS 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 RADIUS NOTED ON PLANS.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE:
CITY OF BREVARD, DUKE ENERGY, COMPROIUM COMMUNICATIONS, MORRIS BROADBAND NCDOT ITS, PSMC ENERGY, and EDUCATION AND RESEARCH CONSORTIUM OF THE WESTERN CAROLINAS

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.

LIST OF STANDARDS

STANDARD DRAWINGS

2012 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, 2012 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 11 |
| 225.02 | Guide for Grading Subgrade - Secondary and Local |
| 225.04 | Method of Obtaining Superelevation - Two Lane Pavement |
| 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 1 |
| DIVISION 6 - ASPHALT BASES & PAVEMENTS | |
| 654.01 | Pavement Repairs |
| DIVISION 8 - INCIDENTALS | |
| 806.01 | Concrete Right-of-Way Marker |
| 815.02 | Subsurface Drain |
| 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 |
| 840.14 | 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 |
| 840.17 | Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe |
| 840.18 | Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe |
| 840.22 | Frames and Wide Slot Sag Grates |
| 840.24 | Frames and Narrow Slot Sag Grates |
| 840.25 | Anchorage for Frames - Brick or Concrete or Precast |
| 840.26 | Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe |
| 840.27 | Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe |
| 840.29 | Frames and Narrow Slot Flat Grates |
| 840.31 | Concrete Junction Box - 12" thru 66" Pipe |
| 840.32 | Brick Junction Box - 12" thru 66" Pipe |
| 840.34 | Traffic Bearing Junction Box - for Use with Pipes 42" and Under |
| 840.35 | Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates |
| 840.45 | Precast Drainage Structure |
| 840.46 | Traffic Bearing Precast Drainage Structure |
| 840.52 | Precast Manhole 4', 5', and 6' Diameter |
| 840.54 | Manhole Frame and Cover |
| 840.66 | Drainage Structure Steps |
| 840.71 | Concrete and Brick Pipe Plug |
| 840.72 | Pipe Collar |
| 846.01 | Concrete Curb, Gutter and Curb & Gutter |
| 846.02 | Drop Inlet Installation In Expressway Gutter |
| 848.01 | Concrete Sidewalk |
| 848.02 | Driveway Turnout - Radius Type |
| 848.04 | Street Turnout |
| 848.05 | Curb Ramp - Proposed Curb & Gutter |
| 852.01 | Concrete Islands |
| 866.01 | Chain Link Fence - 4', 5' and 6' High Fence |
| 876.02 | Guide for Rip Rap at Pipe Outlets |

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

| | |
|---|------------------|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. I-B |
|  SEPI ENGINEERING & CONSTRUCTION | |
| <small>1025 Wade Avenue Raleigh, NC 27605 Tel: 919-788-9977 Fax: 919-788-9971 License: C-2197</small> | |

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

| | |
|--|-----------|
| State Line | ----- |
| County Line | ----- |
| Township Line | ----- |
| City Line | ----- |
| Reservation Line | ----- |
| Property Line | ----- |
| Existing Iron Pin | ○ EIP |
| Property Corner | -----x |
| 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--- |
| Known Soil Contamination: Area or Site | ☠ |
| Potential Soil Contamination: Area or Site | ? |

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 | ○ |
| Switch | □ |
| RR Abandoned | ----- |
| RR Dismantled | ----- |

RIGHT OF WAY:

| | |
|--|-------|
| Baseline Control Point | ◆ |
| Existing Right of Way Marker | △ |
| Existing Right of Way Line | ----- |
| Proposed Right of Way Line | ----- |
| Proposed Right of Way Line with Iron Pin and Cap Marker | ○ |
| Proposed Right of Way Line with Concrete or Granite Marker | ○ |
| Existing Control of Access | ○ |
| Proposed Control of Access | ○ |
| Existing Easement Line | ----- |
| Proposed Temporary Construction Easement | ----- |
| Proposed Temporary Drainage Easement | ----- |
| Proposed Permanent Drainage Easement | ----- |
| Proposed Permanent Drainage / Utility Easement | ----- |
| Proposed Permanent Utility Easement | ----- |
| Proposed Temporary Utility Easement | ----- |
| Proposed Aerial Utility Easement | ----- |

ROADS AND RELATED FEATURES:

| | |
|--|---------|
| Proposed Permanent Easement with Iron Pin and Cap Marker | ◆ |
| Existing Edge of Pavement | ----- |
| Existing Curb | ----- |
| Proposed Slope Stakes Cut | ---C--- |
| Proposed Slope Stakes Fill | ---F--- |
| Proposed Curb Ramp | ○ |
| Existing Metal Guardrail | ----- |
| Proposed Guardrail | ----- |
| Existing Cable Guiderail | ----- |
| Proposed Cable Guiderail | ----- |
| Equality Symbol | ⊕ |
| Pavement Removal | ▬ |

VEGETATION:

| | |
|--------------|-------|
| Single Tree | ○ |
| Single Shrub | ○ |
| Hedge | ----- |
| Woods Line | ----- |

| | |
|----------|-------|
| Orchard | ----- |
| Vineyard | ----- |

EXISTING STRUCTURES:

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

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 | ● |
| Recorded U/G Power Line | ----- |
| Designated U/G Power Line (S.U.E.*) | ----- |

TELEPHONE:

| | |
|---|-------|
| Existing Telephone Pole | ● |
| Proposed Telephone Pole | ○ |
| Telephone Manhole | ○ |
| Telephone Booth | □ |
| Telephone Pedestal | □ |
| Telephone Cell Tower | ⊕ |
| U/G Telephone Cable Hand Hole | ○ |
| Recorded U/G Telephone Cable | ----- |
| Designated U/G Telephone Cable (S.U.E.*) | ----- |
| Recorded U/G Telephone Conduit | ----- |
| Designated U/G Telephone Conduit (S.U.E.*) | ----- |
| Recorded U/G Fiber Optics Cable | ----- |
| Designated U/G Fiber Optics Cable (S.U.E.*) | ----- |

WATER:

| | |
|-------------------------------------|-------|
| Water Manhole | ○ |
| Water Meter | ○ |
| Water Valve | ⊗ |
| Water Hydrant | ⊕ |
| Recorded U/G Water Line | ----- |
| Designated U/G Water Line (S.U.E.*) | ----- |
| Above Ground Water Line | ----- |

TV:

| | |
|--|-------|
| TV Satellite Dish | ⊕ |
| TV Pedestal | □ |
| TV Tower | ⊗ |
| U/G TV Cable Hand Hole | ○ |
| Recorded U/G TV Cable | ----- |
| Designated U/G TV Cable (S.U.E.*) | ----- |
| Recorded U/G Fiber Optic Cable | ----- |
| Designated U/G Fiber Optic Cable (S.U.E.*) | ----- |

GAS:

| | |
|-----------------------------------|-------|
| Gas Valve | ◇ |
| Gas Meter | ⊕ |
| Recorded U/G Gas Line | ----- |
| Designated U/G Gas Line (S.U.E.*) | ----- |
| Above Ground Gas Line | ----- |

SANITARY SEWER:

| | |
|--|-------|
| Sanitary Sewer Manhole | ⊕ |
| Sanitary Sewer Cleanout | ⊕ |
| U/G Sanitary Sewer Line | ----- |
| Above Ground Sanitary Sewer | ----- |
| Recorded SS Forced Main Line | ----- |
| Designated SS Forced Main Line (S.U.E.*) | ----- |

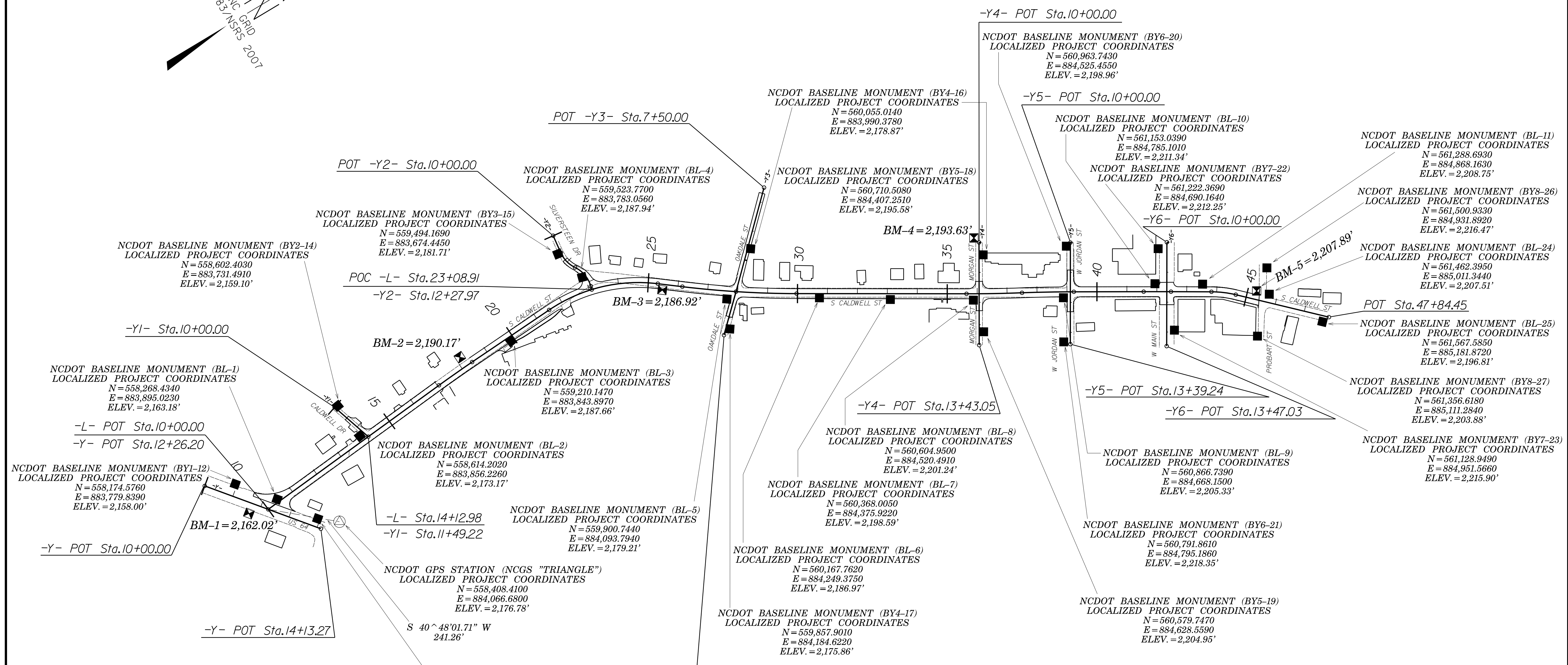
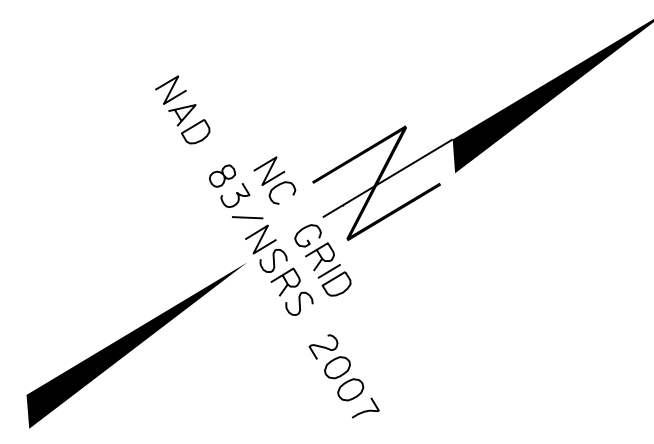
MISCELLANEOUS:

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

| | |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| U-5104 | 1C-1 |
| Location and Surveys | |

SURVEY CONTROL SHEET U-5104

-FINAL-



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "TRIANGLE" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 558408.4100(±) EASTING: 884066.6800(±) ELEVATION: 2176.78(±)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99977257

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "TRIANGLE" TO -L- STATION 10+00.00 IS
S 40°48'01.71" W 241.26'

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

- 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-5104_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.

NOTE: DRAWING NOT TO SCALE

7/23/2015 10:51:04 LS-1c-1.dgn

SURVEY CONTROL SHEET U-5104

-FINAL-

| BL | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|----|-------|-------|-------------|-------------|-----------|-----------|----------|
| 1 | BL-1 | | 558268.4340 | 883895.0230 | 2163.18 | 10+43.73 | 10.18 LT |
| 2 | BL-2 | | 558614.2020 | 883856.2260 | 2173.17 | 13+91.57 | 18.23 LT |
| 3 | BL-3 | | 559210.1470 | 883843.8970 | 2187.66 | 19+86.89 | 14.98 RT |
| 4 | BL-4 | | 559523.7700 | 883783.0560 | 2187.94 | 22+92.18 | 48.98 LT |
| 5 | BL-5 | | 559900.7440 | 884093.7940 | 2179.21 | 27+66.02 | 26.58 RT |
| 6 | BL-6 | | 560167.7620 | 884249.3750 | 2186.97 | 30+73.31 | 13.96 RT |
| 7 | BL-7 | | 560368.0050 | 884375.9220 | 2198.59 | 33+10.13 | 19.25 RT |
| 8 | BL-8 | | 560604.9500 | 884520.4910 | 2201.24 | 35+87.59 | 21.14 RT |
| 9 | BL-9 | | 560866.7390 | 884668.1500 | 2205.33 | 38+88.04 | 19.69 RT |
| 10 | BL-10 | | 561153.0390 | 884785.1010 | 2211.34 | 41+93.89 | 26.71 LT |
| 11 | BL-11 | | 561288.6930 | 884868.1630 | 2208.75 | 43+52.89 | 25.53 LT |
| 24 | BL-24 | | 561462.3950 | 885011.3440 | 2207.51 | 45+72.77 | 28.04 LT |
| 25 | BL-25 | | 561567.5850 | 885181.8720 | 2196.81 | 47+67.32 | 19.85 RT |

| BY1 | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|-----|--------|-------|-------------|-------------|-----------|------------------------|-----------|
| 12 | BY1-12 | | 558174.5760 | 883779.8390 | 2158.00 | OUTSIDE PROJECT LIMITS | |
| 201 | BL-1 | | 558268.4340 | 883895.0230 | 2163.18 | 10+43.73 | 10.18 LT |
| 13 | BY1-13 | | 558351.0820 | 884020.4670 | 2172.14 | 11+14.95 | 122.08 RT |

| BY2 | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|-----|--------|-------|-------------|-------------|-----------|-----------|-----------|
| 14 | BY2-14 | | 558602.4030 | 883731.4910 | 2159.10 | 13+90.86 | 143.52 LT |
| 202 | BL-2 | | 558614.2020 | 883856.2260 | 2173.17 | 13+91.57 | 18.23 LT |

| BY3 | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|-----|--------|-------|-------------|-------------|-----------|-----------|-----------|
| 15 | BY3-15 | | 559494.1690 | 883674.4450 | 2181.71 | 22+51.88 | 150.95 LT |
| 204 | BL-4 | | 559523.7700 | 883783.0560 | 2187.94 | 22+92.18 | 48.98 LT |

| BY4 | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|-----|--------|-------|-------------|-------------|-----------|-----------|-----------|
| 16 | BY4-16 | | 560055.0140 | 883990.3780 | 2178.87 | 28+35.83 | 146.00 LT |
| 205 | BL-5 | | 559900.7440 | 884093.7940 | 2179.21 | 27+66.02 | 26.58 RT |
| 17 | BY4-17 | | 559857.9010 | 884184.6220 | 2175.86 | 27+82.62 | 125.56 RT |

| BY5 | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|-----|--------|-------|-------------|-------------|-----------|-----------|-----------|
| 18 | BY5-18 | | 560710.5080 | 884407.2510 | 2195.58 | 36+21.36 | 130.02 LT |
| 208 | BL-8 | | 560604.9500 | 884520.4910 | 2201.24 | 35+87.59 | 21.14 RT |
| 19 | BY5-19 | | 560579.7470 | 884628.5590 | 2204.95 | 36+20.29 | 127.02 RT |

| BY6 | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|-----|--------|-------|-------------|-------------|-----------|-----------|-----------|
| 20 | BY6-20 | | 560963.7430 | 884525.4550 | 2198.96 | 38+99.00 | 152.50 LT |
| 209 | BL-9 | | 560866.7390 | 884668.1500 | 2205.33 | 38+88.04 | 19.69 RT |
| 21 | BY6-21 | | 560791.8610 | 884795.1860 | 2218.35 | 38+87.86 | 167.15 RT |

| BY7 | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|-----|--------|-------|-------------|-------------|-----------|-----------|-----------|
| 22 | BY7-22 | | 561222.3690 | 884690.1640 | 2212.25 | 42+04.46 | 143.79 LT |
| 210 | BL-10 | | 561153.0390 | 884785.1010 | 2211.34 | 41+93.89 | 26.71 LT |
| 23 | BY7-23 | | 561128.9490 | 884951.5660 | 2215.90 | 42+59.12 | 128.36 RT |

| BY8 | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|-----|--------|-------|-------------|-------------|-----------|-----------|-----------|
| 26 | BY8-26 | | 561500.9330 | 884931.8920 | 2216.47 | 45+44.56 | 111.71 LT |
| 224 | BL-24 | | 561462.3950 | 885011.3440 | 2207.51 | 45+72.77 | 28.04 LT |
| 27 | BY8-27 | | 561356.6180 | 885111.2840 | 2203.88 | 45+67.38 | 117.39 RT |

.....
 BMS1 ELEVATION = 2162.02
 N 558163 E 883888
 L STATION 10+00.00
 S 18°41'37.02" W DIST 66.09
 CHISELED SQUARE IN CONC CURB

 BMS2 ELEVATION = 2190.17
 N 559036 E 883802
 L STATION 18+15.00 36 LEFT
 EIGHT INCH SPIKE SET IN BASE OF SIXTEEN
 INCH SPRUCE PINE

 BMS3 ELEVATION = 2186.92
 N 559731 E 883957
 L STATION 25+50.00 19 RIGHT
 CHISELED SQUARE IN EDGE OF CONC SIDEWALK

 BMS4 ELEVATION = 2193.63
 N 560713 E 884343
 L STATION 35+90.00 187 LEFT
 CHISELED SQUARE IN EDGE OF CONC SIDEWALK

 BMS5 ELEVATION = 2207.89
 N 561432 E 884981
 L STATION 45+29.00 28 LEFT
 CHISELED SQUARE IN CONC SIDEWALK

DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "TRIANGLE" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 558408.4100(±) EASTING: 884066.6800(±) ELEVATION: 2176.78(±)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9997257
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "TRIANGLE" TO L- STATION 10+00.00 IS S 40°48'01.71" W 241.26'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

-FINAL- ROW MARKER IRON PIN AND CAP-E

| ALIGN | STATION | OFFSET | NORTH | EAST |
|-------|----------|--------|-------------|-------------|
| L | 11+21.17 | -30.00 | 558343.8219 | 883868.4297 |
| L | 13+85.59 | -30.00 | 558607.1975 | 883845.0319 |
| L | 14+26.63 | -30.00 | 558648.0770 | 883841.4002 |
| L | 16+37.21 | -30.00 | 558857.8386 | 883822.7654 |
| L | 16+46.22 | -30.00 | 558866.8047 | 883821.9689 |
| L | 17+04.77 | -30.00 | 558925.1271 | 883816.7876 |
| L | 18+40.01 | -30.00 | 559061.0313 | 883807.0266 |
| L | 20+04.36 | -30.00 | 559225.1269 | 883798.0262 |
| L | 20+04.36 | -25.00 | 559225.4608 | 883803.0154 |
| L | 24+62.82 | -30.00 | 559687.0807 | 883866.6427 |
| L | 25+32.05 | -30.00 | 559747.5722 | 883907.6532 |
| L | 26+14.56 | -30.00 | 559812.7181 | 883958.2892 |
| L | 27+79.74 | -30.00 | 559944.4481 | 884055.3313 |
| L | 28+23.20 | -41.64 | 559986.4488 | 884070.0882 |
| L | 28+34.00 | -30.00 | 559988.7874 | 884085.7065 |
| L | 29+96.91 | -30.00 | 560124.9306 | 884172.3371 |
| L | 32+06.77 | -30.00 | 560304.7942 | 884280.4567 |
| L | 32+06.77 | -29.00 | 560304.2790 | 884281.3138 |
| L | 32+22.89 | -29.00 | 560318.0951 | 884289.6190 |
| L | 32+22.89 | -30.00 | 560318.6103 | 884288.7619 |
| L | 35+64.46 | -30.00 | 560611.3536 | 884464.7358 |
| L | 35+86.62 | -41.46 | 560636.1160 | 884466.1926 |
| L | 36+27.06 | -41.15 | 560670.5028 | 884486.8146 |
| L | 36+38.30 | -30.00 | 560674.5394 | 884502.0594 |
| L | 37+49.75 | -30.00 | 560770.9596 | 884556.5321 |
| L | 38+86.00 | -30.00 | 560890.1531 | 884624.2775 |
| L | 38+91.09 | -37.00 | 560898.1188 | 884620.8409 |
| L | 39+44.00 | 26.26 | 560911.3487 | 884702.3168 |
| L | 39+44.00 | 39.50 | 560904.5538 | 884713.6857 |
| L | 39+31.01 | 39.41 | 560893.4484 | 884706.9472 |
| L | 38+90.73 | 43.10 | 560857.1729 | 884689.6889 |
| L | 38+75.50 | 30.00 | 560850.7648 | 884670.7404 |
| L | 37+49.75 | 30.00 | 560742.0551 | 884609.1109 |
| L | 36+35.00 | 30.00 | 560641.5472 | 884552.2832 |
| L | 36+25.97 | 58.00 | 560619.5824 | 884571.8923 |
| L | 35+86.49 | 34.00 | 560597.4265 | 884530.9776 |
| L | 35+64.46 | 30.00 | 560580.4415 | 884516.1600 |
| L | 29+96.91 | 30.00 | 560294.0195 | 884223.7612 |
| L | 28+27.00 | 30.00 | 559949.4481 | 884131.5408 |
| L | 28+27.00 | 36.00 | 559946.0804 | 884136.5119 |
| L | 28+07.53 | 35.50 | 559930.0875 | 884125.0271 |
| L | 27+66.68 | 38.00 | 559894.7158 | 884103.5163 |
| L | 27+60.00 | 30.00 | 559893.8076 | 884093.8878 |
| L | 26+14.56 | 30.00 | 559775.8967 | 884005.6620 |
| L | 25+32.05 | 30.00 | 559710.7507 | 883955.8259 |
| L | 21+50.68 | 30.00 | 559374.5165 | 883849.9225 |
| L | 18+40.01 | 30.00 | 559064.3173 | 883866.9366 |
| L | 17+04.77 | 30.00 | 558930.4364 | 883876.5522 |
| L | 11+21.17 | 29.91 | 558349.1160 | 883929.1010 |

PUE

-FINAL- ROW MARKER PERMANENT EASEMENT-E

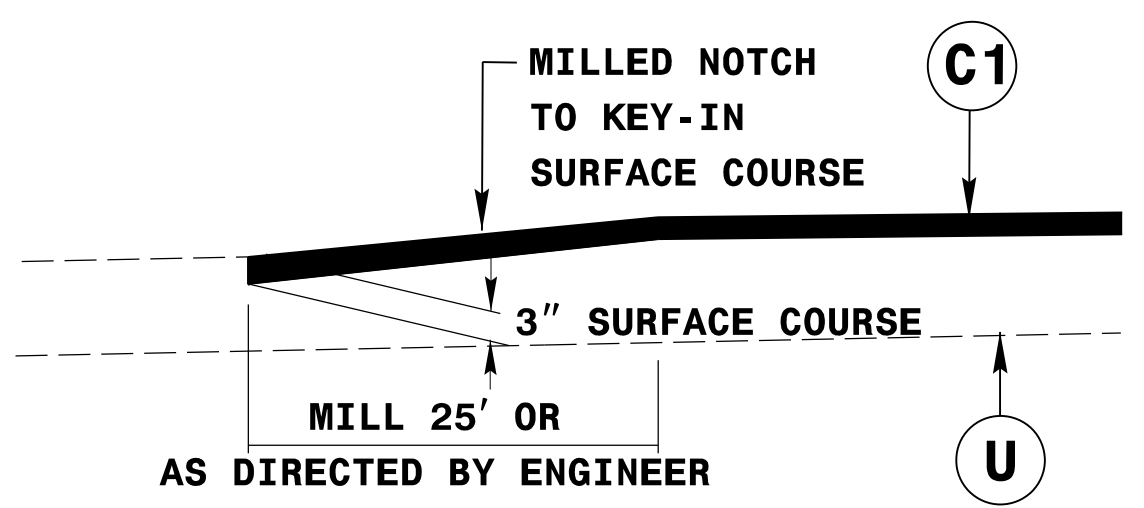
| ALIGN | STATION | OFFSET | NORTH | EAST |
|-------|----------|---------|-------------|-------------|
| L | 14+22.18 | -49.36 | 558641.9360 | 883822.5070 |
| L | 17+67.73 | -45.59 | 558987.2228 | 883796.1255 |
| L | 17+80.35 | -51.06 | 558999.5667 | 883789.7590 |
| L | 18+12.81 | -29.92 | 559033.6729 | 883808.6982 |
| L | 22+73.05 | -138.00 | 559518.7548 | 883691.3897 |
| L | 22+77.59 | -148.29 | 559526.2592 | 883682.2983 |
| L | 23+22.73 | -83.54 | 559565.3235 | 883757.6357 |
| L | 23+77.71 | -57.37 | 559616.1871 | 883801.9983 |
| L | 24+88.51 | -47.76 | 559719.8643 | 883866.0709 |
| L | 27+82.52 | -44.73 | 559955.1208 | 884044.8142 |
| L | 38+38.50 | -30.00 | 560848.8205 | 884600.2772 |
| L | 38+91.18 | -58.33 | 560909.0220 | 884602.5080 |
| L | 39+30.83 | -44.56 | 560936.3724 | 884634.7733 |
| L | 39+40.68 | -44.81 | 560944.9604 | 884639.6115 |
| L | 39+42.86 | -30.00 | 560939.2322 | 884653.4449 |
| L | 41+56.10 | -30.00 | 561122.2700 | 884762.8426 |
| L | 41+95.84 | -38.23 | 561160.6370 | 884776.2261 |
| L | 37+84.38 | 30.00 | 560772.1545 | 884625.7993 |
| L | 37+45.39 | 54.82 | 560726.2407 | 884628.7329 |
| L | 36+47.17 | 46.77 | 560643.7485 | 884572.9440 |
| L | 36+25.90 | 65.15 | 560615.9139 | 884578.0351 |
| L | 35+86.47 | 45.78 | 560591.3845 | 884541.0949 |
| L | 29+35.61 | 44.41 | 560233.6348 | 884203.5852 |
| L | 29+16.12 | 50.37 | 560213.7266 | 884198.0536 |
| L | 28+82.93 | 30.00 | 559996.4898 | 884162.7443 |
| L | 27+63.37 | 54.93 | 559882.2174 | 884115.4213 |
| L | 27+53.00 | 55.00 | 559873.5699 | 884109.3870 |
| L | 27+38.44 | 52.42 | 559863.0168 | 884098.6918 |
| L | 27+37.25 | 30.00 | 559875.1039 | 884079.7666 |
| L | 22+56.55 | 30.00 | 559474.1674 | 883854.3623 |
| L | 22+32.43 | 38.52 | 559450.7351 | 883860.0847 |
| L | 19+87.94 | 44.80 | 559212.8287 | 883873.6092 |
| L | 19+37.27 | 31.85 | 559161.5259 | 883863.4553 |
| L | 19+25.35 | 44.73 | 559150.3344 | 883876.9747 |
| L | 18+99.10 | 51.34 | 559124.4846 | 883885.0054 |
| L | 18+67.72 | 30.00 | 559091.9799 | 883865.4193 |
| L | 14+48.28 | 29.96 | 558674.9512 | 883899.2075 |
| L | 14+55.42 | 58.21 | 558684.5584 | 883926.7151 |
| L | 14+36.08 | 63.34 | 558665.7566 | 883933.5333 |
| L | 14+27.33 | 29.96 | 558654.0879 | 883901.0575 |
| L | 12+91.88 | 29.93 | 558519.1595 | 883913.0223 |
| L | 12+54.54 | 51.20 | 558483.8514 | 883937.5143 |
| L | 10+95.53 | 44.98 | 558324.9172 | 883945.3882 |

-L- FINAL

| TYPE | STATION | NORTH | EAST |
|------|----------|-------------|-------------|
| POT | 10+00.00 | 558225.7790 | 883909.0345 |
| PC | 17+04.77 | 558927.7817 | 883846.6699 |
| PT | 18+40.01 | 559062.6743 | 883836.9816 |
| PC | 21+50.68 | 559372.8735 | 883819.9675 |
| PT | 25+32.05 | 559729.1614 | 883931.3395 |
| PC | 26+14.56 | 559794.3074 | 883981.9756 |
| PT | 29+96.91 | 560109.4745 | 884198.0491 |
| PC | 35+64.46 | 560595.8976 | 884490.4479 |
| PRC | 37+49.75 | 560756.5074 | 884582.8215 |
| PT | 39+22.88 | 560906.6918 | 884668.9461 |
| PC | 41+56.10 | 561106.8791 | 884788.5937 |
| PT | 42+47.38 | 561185.1445 | 884835. |

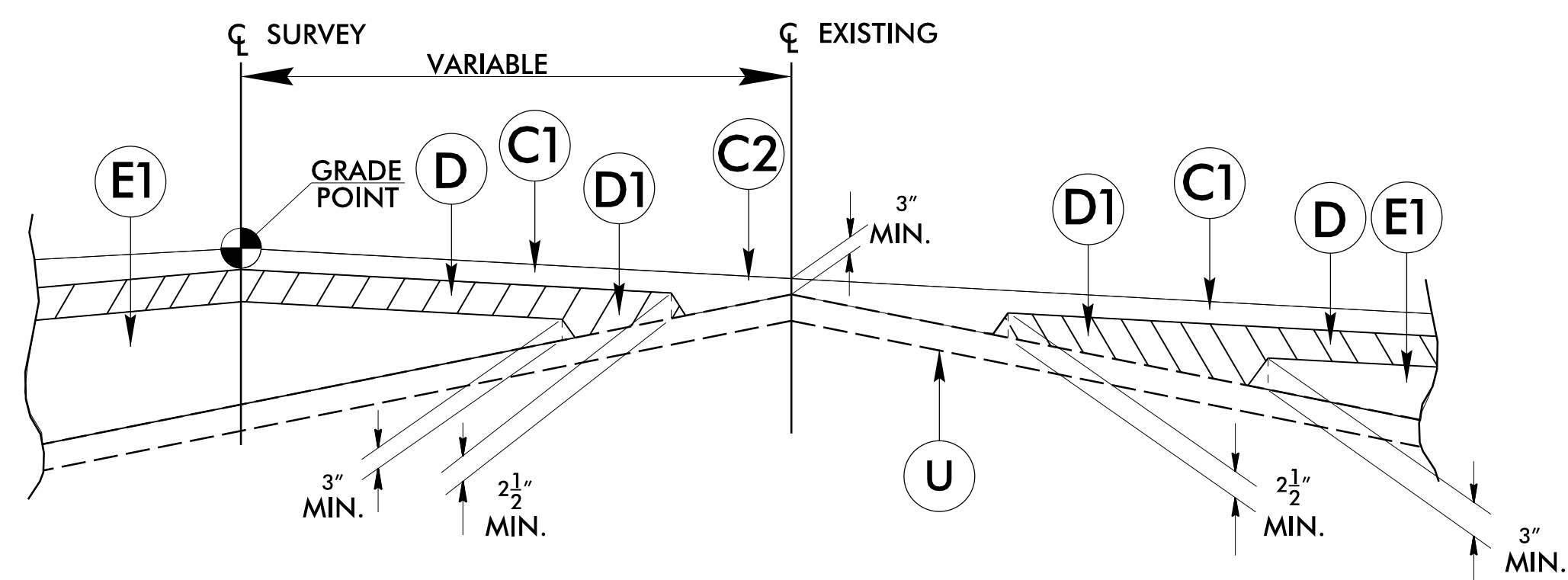
5/14/99

| | |
|--|---|
| PROJECT REFERENCE NO. <i>U-5104</i> | SHEET NO. <i>2A-1</i> |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 8/14/2015 <i>Stevie Scott</i> | PAVEMENT ENGINEER 8/17/2015 <i>Clark Morrison</i> |
| | |
| | |
| 1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197 | |



INCIDENTAL MILLING DETAIL

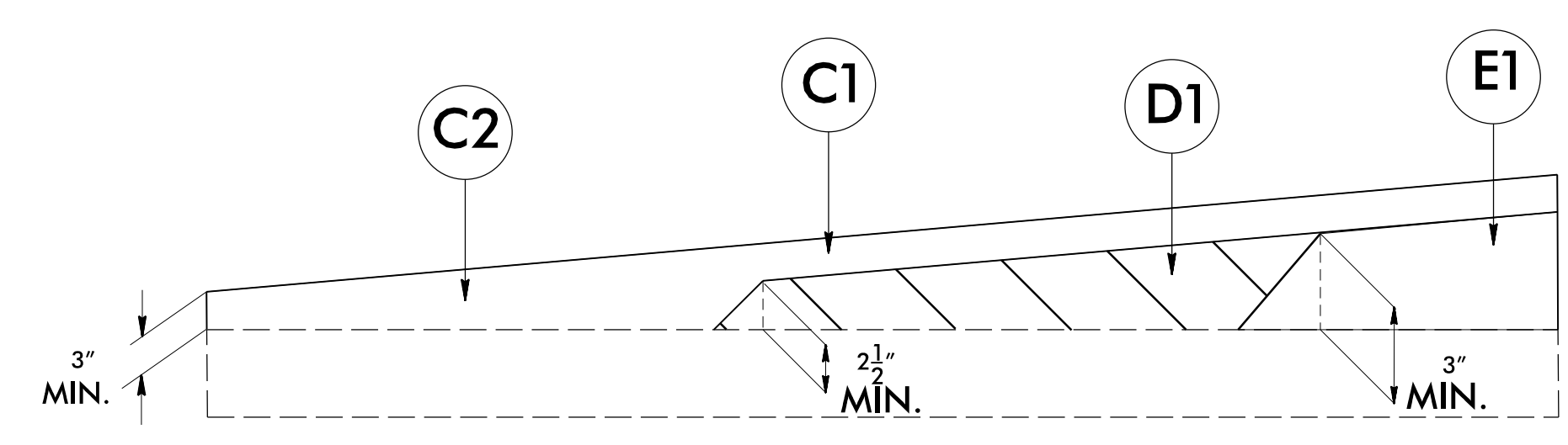
- L- STA. 10+28.80 & 45+44.06
- Y1- STA. 10+54.34
- Y2- STA. 10+90.00
- Y3- STA. 7+70.00 & 13+86.45
- Y4- STA. 11+30.12 & 12+28.09
- Y5- STA. 10+91.62 & 12+30.85
- Y6- STA. 10+98.61 & 12+31.58



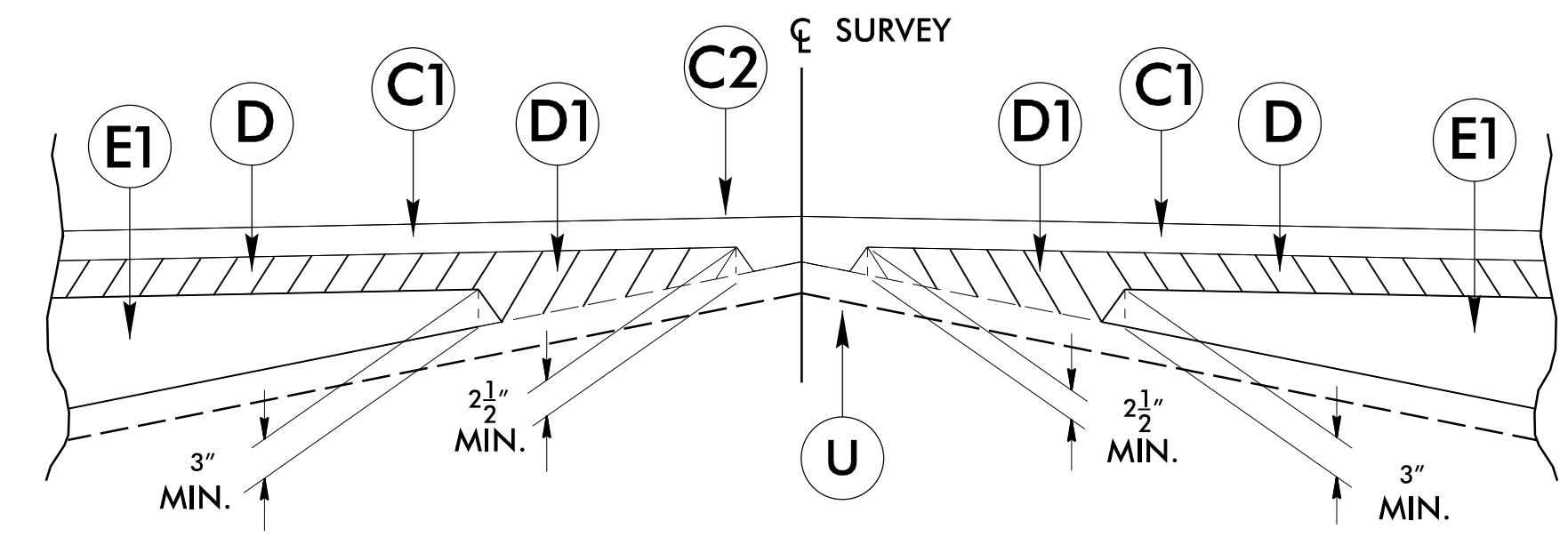
Detail Showing Method Of Wedging: -L-

| PAVEMENT SCHEDULE | |
|-------------------|---|
| C1 | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS/SY IN EACH OF TWO LAYERS. |
| C2 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS/SY/IN TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH. |
| D | PROP. APPROX. 4" ASPH. CONC. INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS/SY. |
| D1 | PROP. VAR. DEPTH ASPH. CONC. INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS/SY/IN. DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" OR GREATER THAN 4" DEPTH. |
| E | PROP. APPROX. 4" ASPH. CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS/SY. |
| E1 | PROP. VAR. DEPTH ASPH. CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS/SY/IN. DEPTH TO BE PLACED IN LAYERS NOT GREATER THAN 5 1/2" OR LESS THAN 3" DEPTH. |
| J1 | 8" AGGREGATE BASE COURSE |
| R1 | 2'-6" CONCRETE CURB AND GUTTER |
| S | 4" SIDEWALK |
| T | EARTH MATERIAL |
| U | EXISTING PAVEMENT |
| X1 | VARIABLE MILLING, 0 - 4" DEPTH |
| X2 | 4" MILLING |
| W | WEDGING |

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



Wedging Detail For Resurfacing: -Y1-, -Y2-, & -Y3-


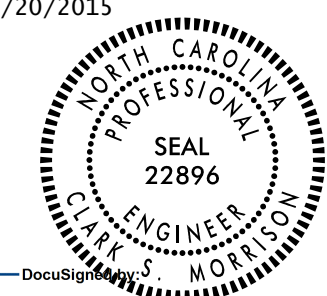


Detail Showing Method of Wedging: -L-

NOT TO SCALE

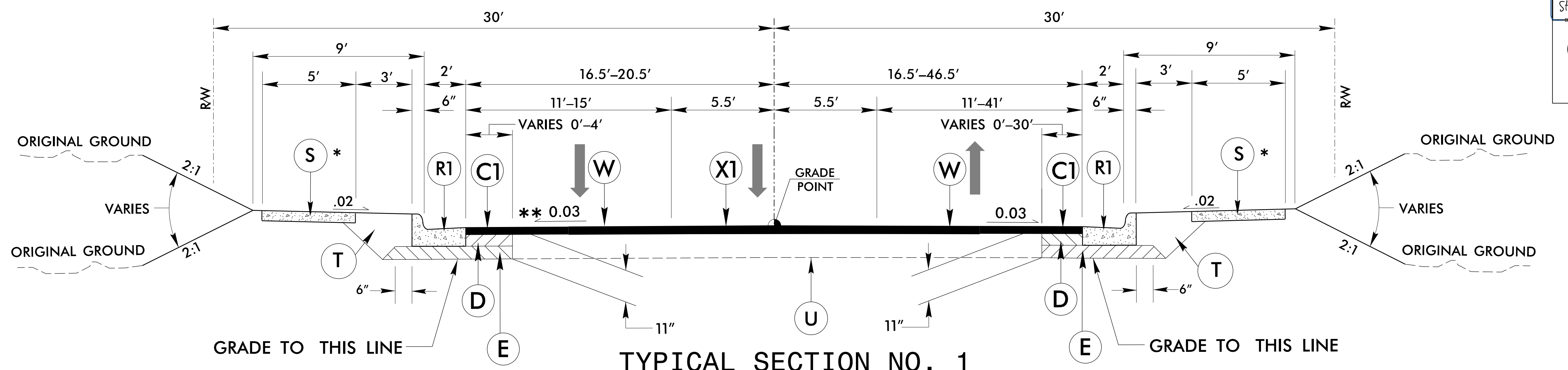
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5/14/14/99

| | |
|---|---|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. 2A-2 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 8/20/2015  | PAVEMENT ENGINEER 8/20/2015  |
| Steven L. Scott | Clark Morrison |

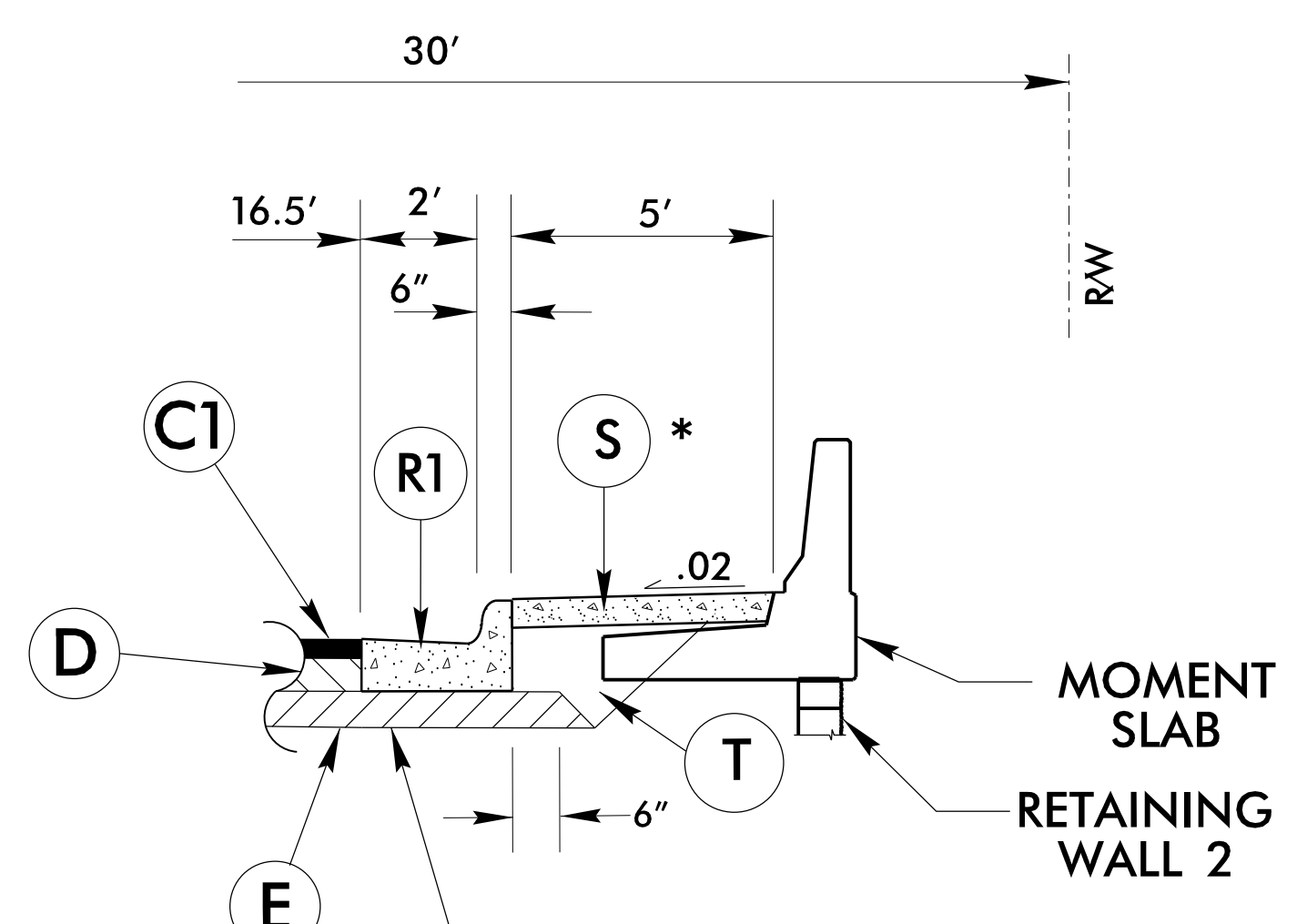
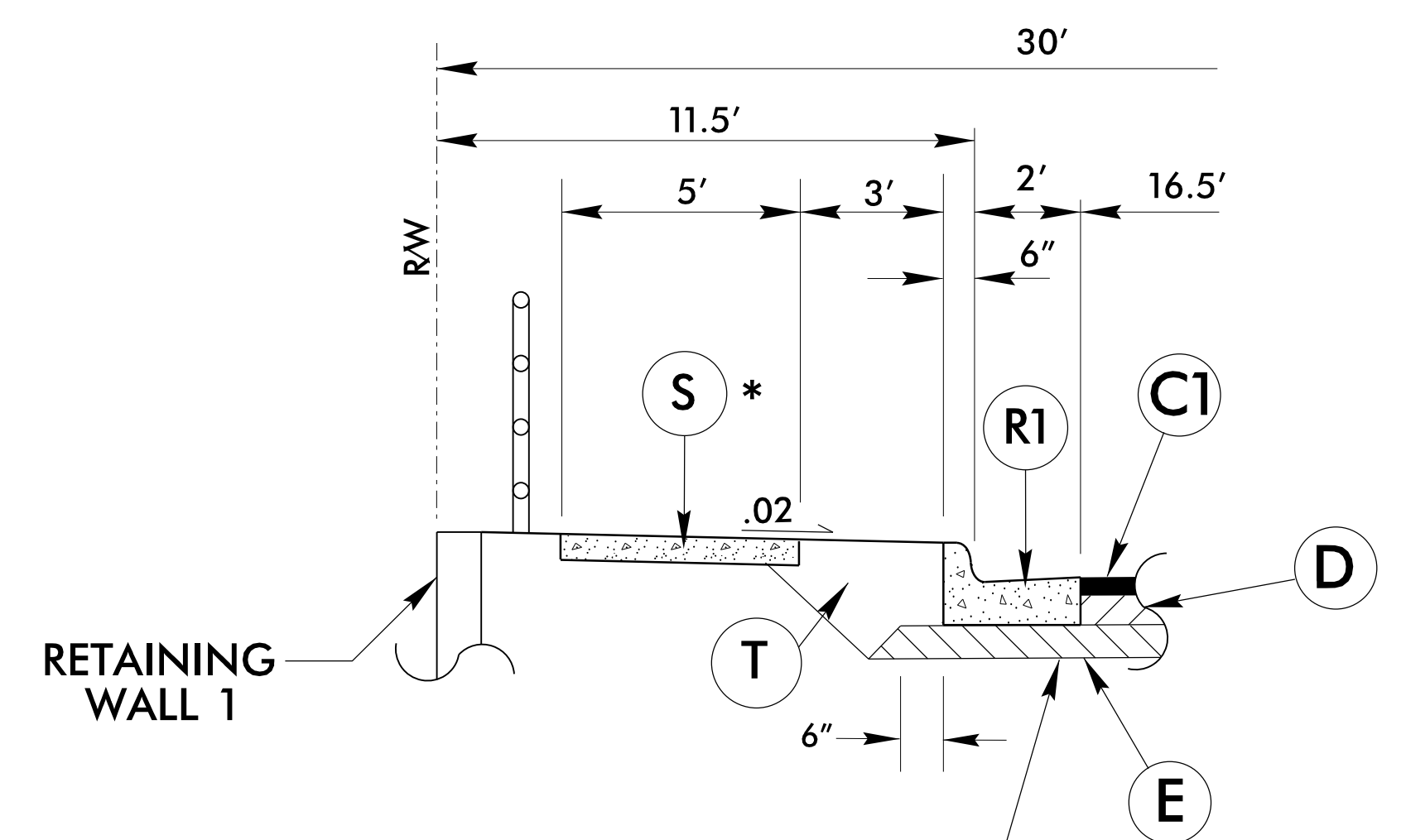
SEPI ENGINEERING & CONSTRUCTION
 1025 Wade Avenue
 Raleigh, NC 27605
 Tel: 919-789-9977
 Fax: 919-789-9591
 License: C-2197

-L- CALDWELL STREET



| | |
|----|------------------|
| C1 | 3" S9.5B |
| C2 | VAR. S9.5B |
| D | 4" I19.0B |
| D1 | VAR. I19.0B |
| E | 4" B25.0B |
| E1 | VAR. B25.0B |
| J1 | 8" ABC |
| R1 | 2'-6" C & G |
| S | 4" SIDEWALK |
| T | EARTH MATERIAL |
| U | EXIST PAVEMENT |
| X1 | VAR MILLING 0-4" |
| X2 | 4" MILLING |
| W | WEDGING |

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

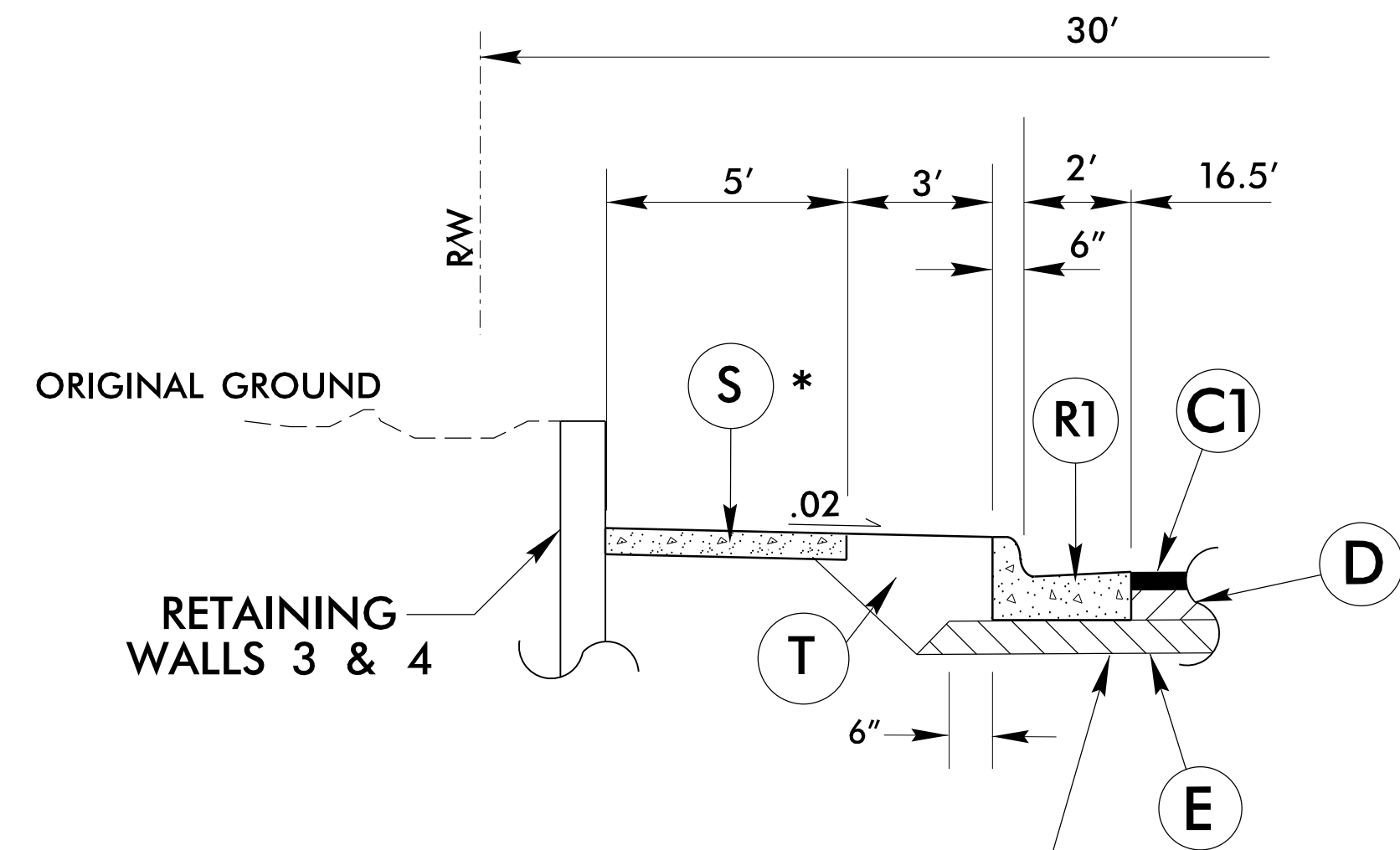


* REFER TO THE ROADWAY PLAN SHEETS FOR STATION APPLICATION OF PROPOSED SIDEWALK

NOT TO SCALE

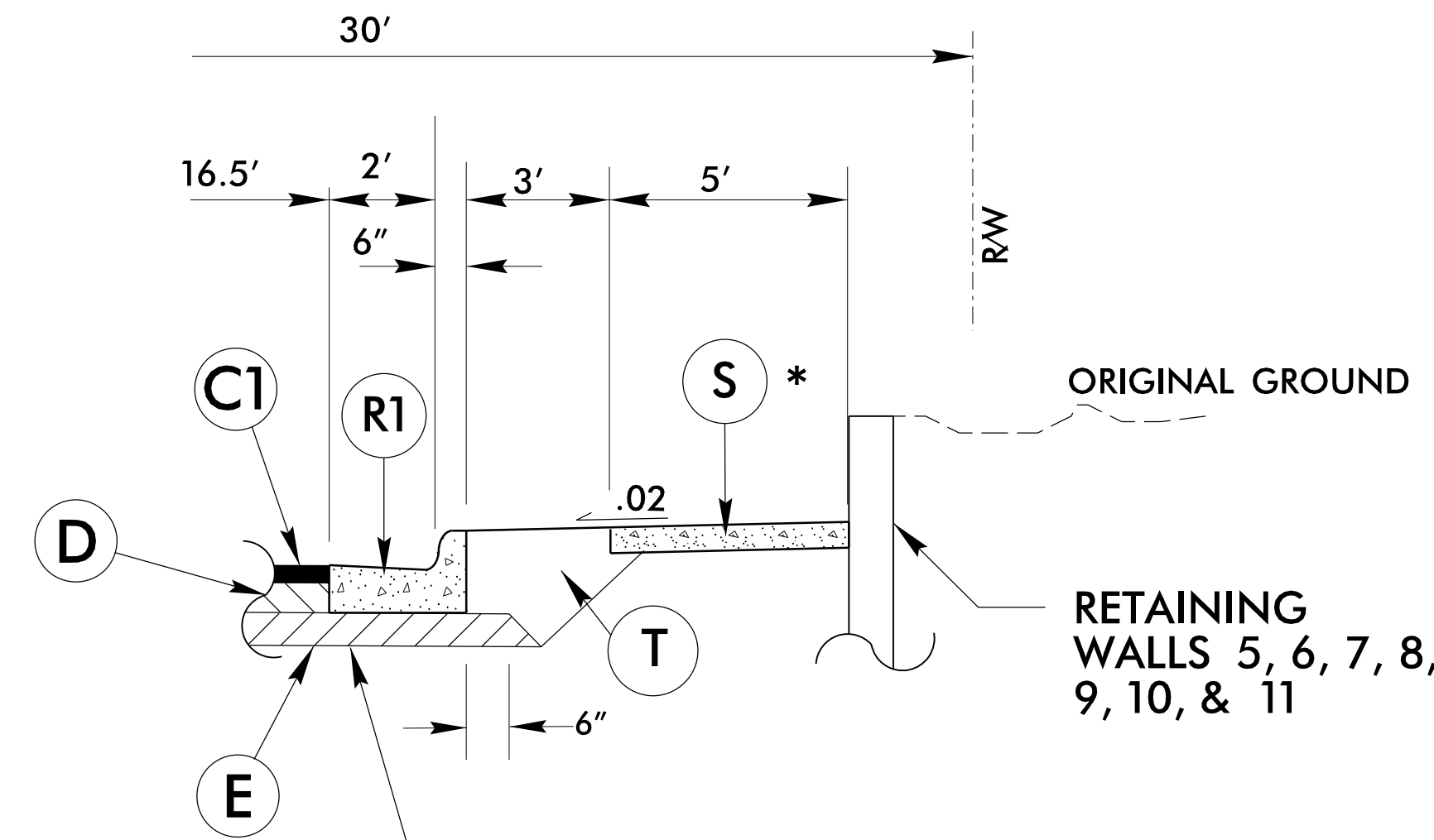
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5/14/09



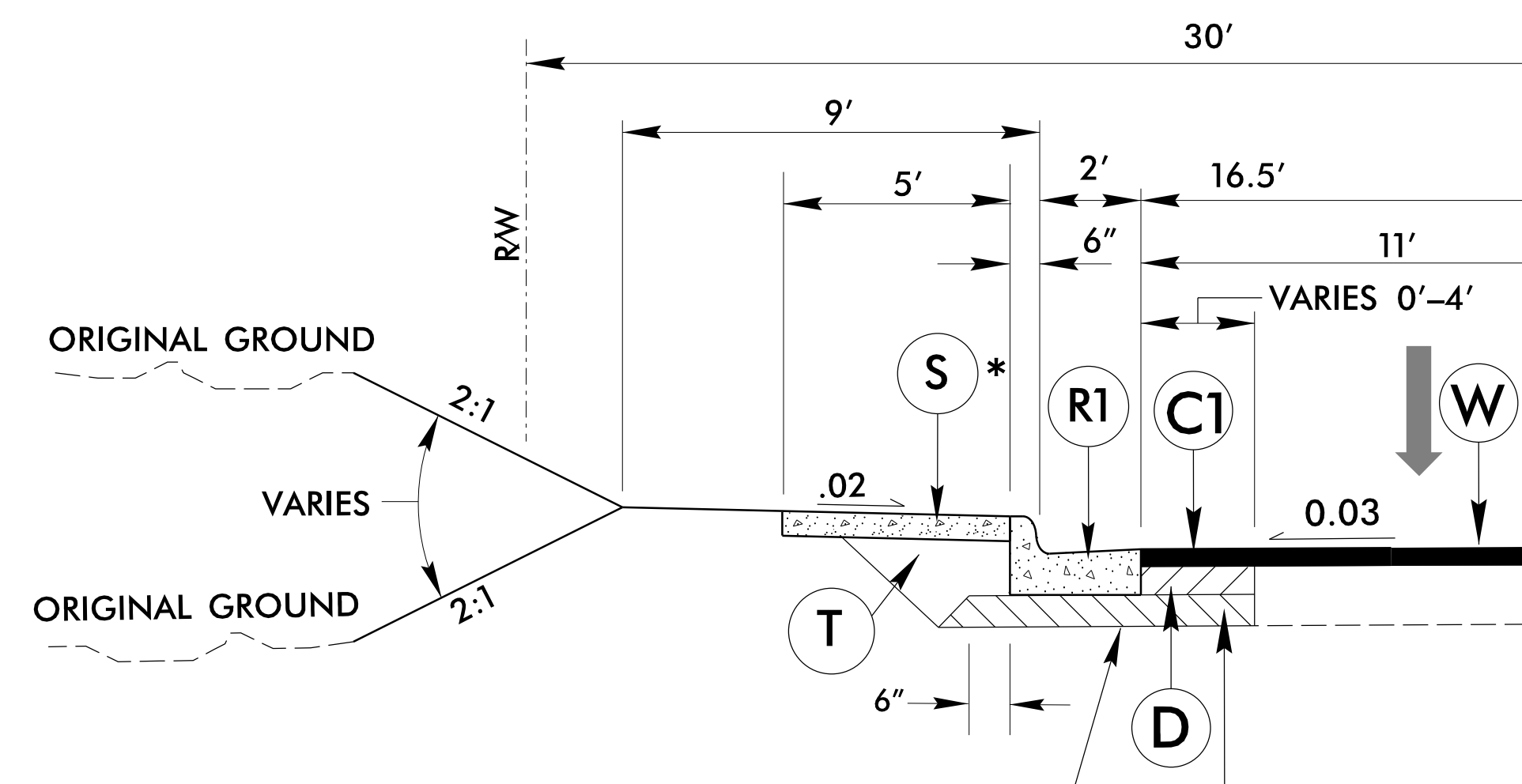
GRADE TO THIS LINE
PARTIAL SECTION NO. 1C

- L- STA. 24+81.38 TO 25+30.89 (WALL 3)
- L- STA. 25+36.78 TO 25+83.90 (WALL 4)



GRADE TO THIS LINE
PARTIAL SECTION NO. 1D

- L- STA. 31+37.76 TO 32+56.71 (WALL 5)
- L- STA. 32+81.09 TO 33+71.43 (WALL 6)
- L- STA. 33+96.83 TO 34+81.91 (WALL 7)
- L- STA. 34+84.97 TO 35+64.00 (WALL 8)
- L- STA. 36+26.77 TO 36+95.92 (WALL 9)
- L- STA. 37+03.59 TO 37+64.42 (WALL 10)
- L- STA. 37+95.06 TO 38+79.80 (WALL 11)



GRADE TO THIS LINE
PARTIAL SECTION NO. 1E

- L- STA. 19+90.69 TO 22+86.14 LT
- L- STA. 31+72.49 TO 32+51.13 LT

| | |
|--|--|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. 2A-3 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 8/20/2015 STEVE SCOTT | PAVEMENT ENGINEER 8/20/2015 CLARK MORRISON |
| | |
| | |
| 1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197 | |

| | |
|----|-------------------|
| C1 | 3" S9.5B |
| C2 | VAR. S9.5B |
| D | 4" I19.0B |
| D1 | VAR. I19.0B |
| E | 4" B25.0B |
| E1 | VAR. B25.0B |
| J1 | 8" ABC |
| R1 | 2'-6" C & G |
| S | 4" SIDEWALK |
| T | EARTH MATERIAL |
| U | EXIST PAVEMENT |
| X1 | VAR MILLING, 0-4" |
| X2 | 4" MILLING |
| W | WEDGING |

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

* REFER TO THE ROADWAY PLAN SHEETS FOR STATION APPLICATION OF PROPOSED SIDEWALK

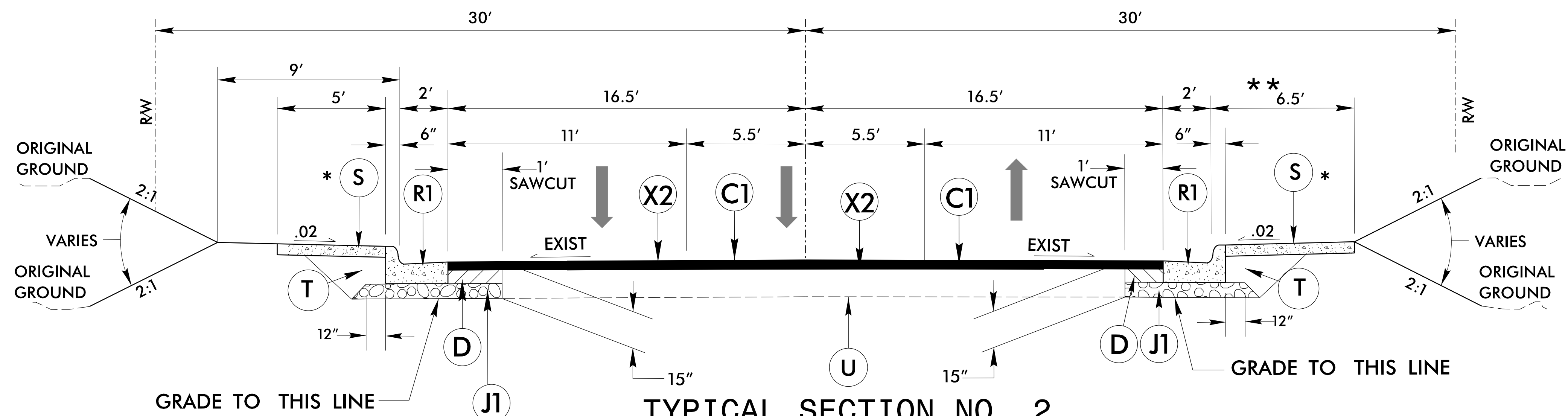
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5/14/15

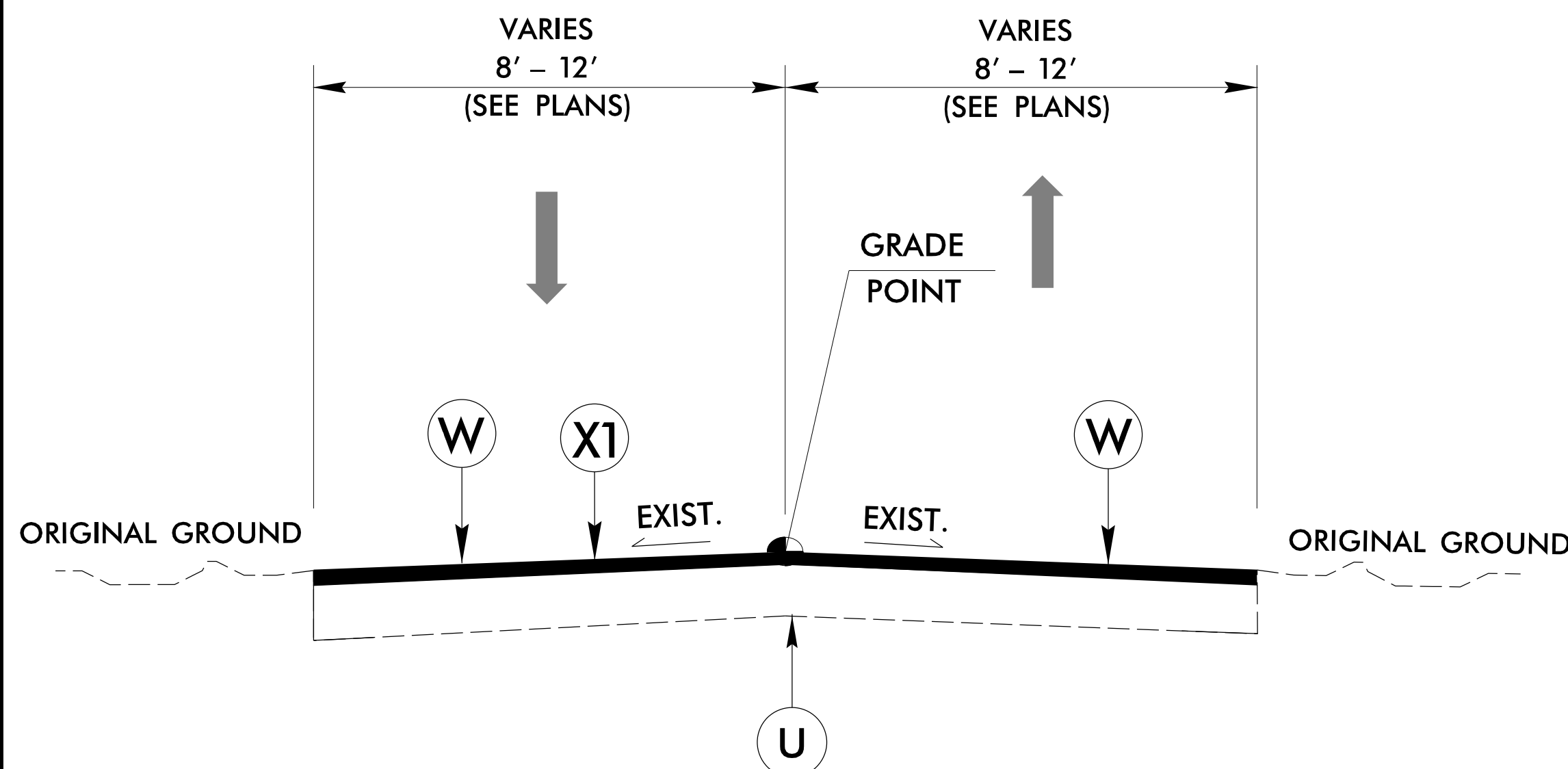
NOTE: -L- STA. 39+30 TO STA. 45+43.75 RT. REPLACE EXISTING C&G AND SIDEWALK WITH PROPOSED C&G AND SIDEWALK AT SAME ELEVATION AS EXISTING.

-L- CALDWELL STREET

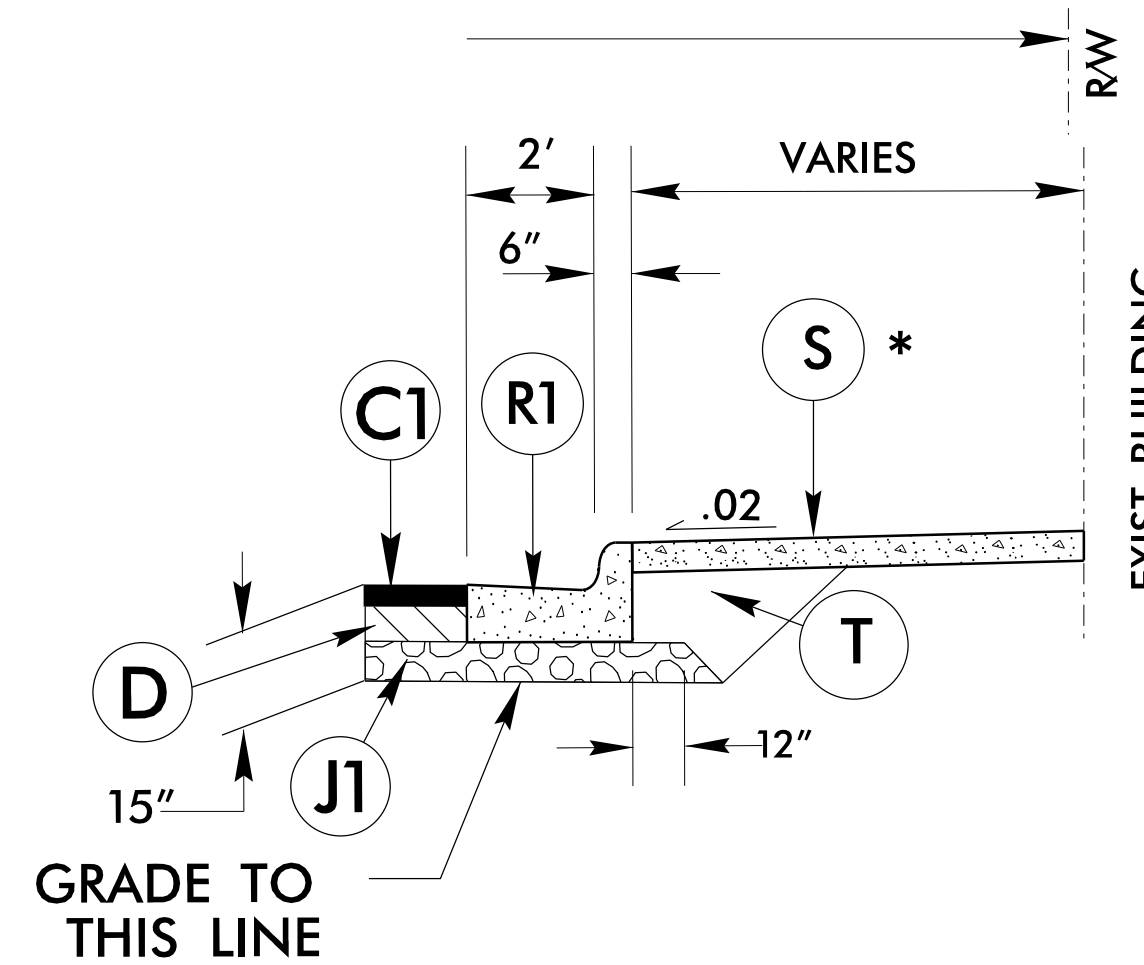


TYPICAL SECTION NO. 2
-L- STA. 41+50.00 TO 45+44.06

-Y1-



TYPICAL SECTION NO. 3
-Y1- STA. 10+54.34 TO 11+32.35



PARTIAL SECTION NO. 2A
** -L- STA. 40+60.67 TO 41+95.67
-L- STA. 42+70.64 TO 43+60.74
-L- STA. 43+79.85 TO 45+40.52

| | |
|--|--|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. 2A-4 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 8/14/2015 STEVEN L. SCOTT | PAVEMENT ENGINEER 8/17/2015 CLARK HARRISON |
| | |
| | |
| 1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197 | |

| | |
|----|-------------------|
| C1 | 3" S9.5B |
| C2 | VAR. S9.5B |
| D | 4" I19.0B |
| D1 | VAR. I19.0B |
| E | 4" B25.0B |
| E1 | VAR. B25.0B |
| J1 | 8" ABC |
| R1 | 2'-6" C & G |
| S | 4" SIDEWALK |
| T | EARTH MATERIAL |
| U | EXIST PAVEMENT |
| X1 | VAR MILLING, 0-4" |
| X2 | 4" MILLING |
| W | WEDGING |

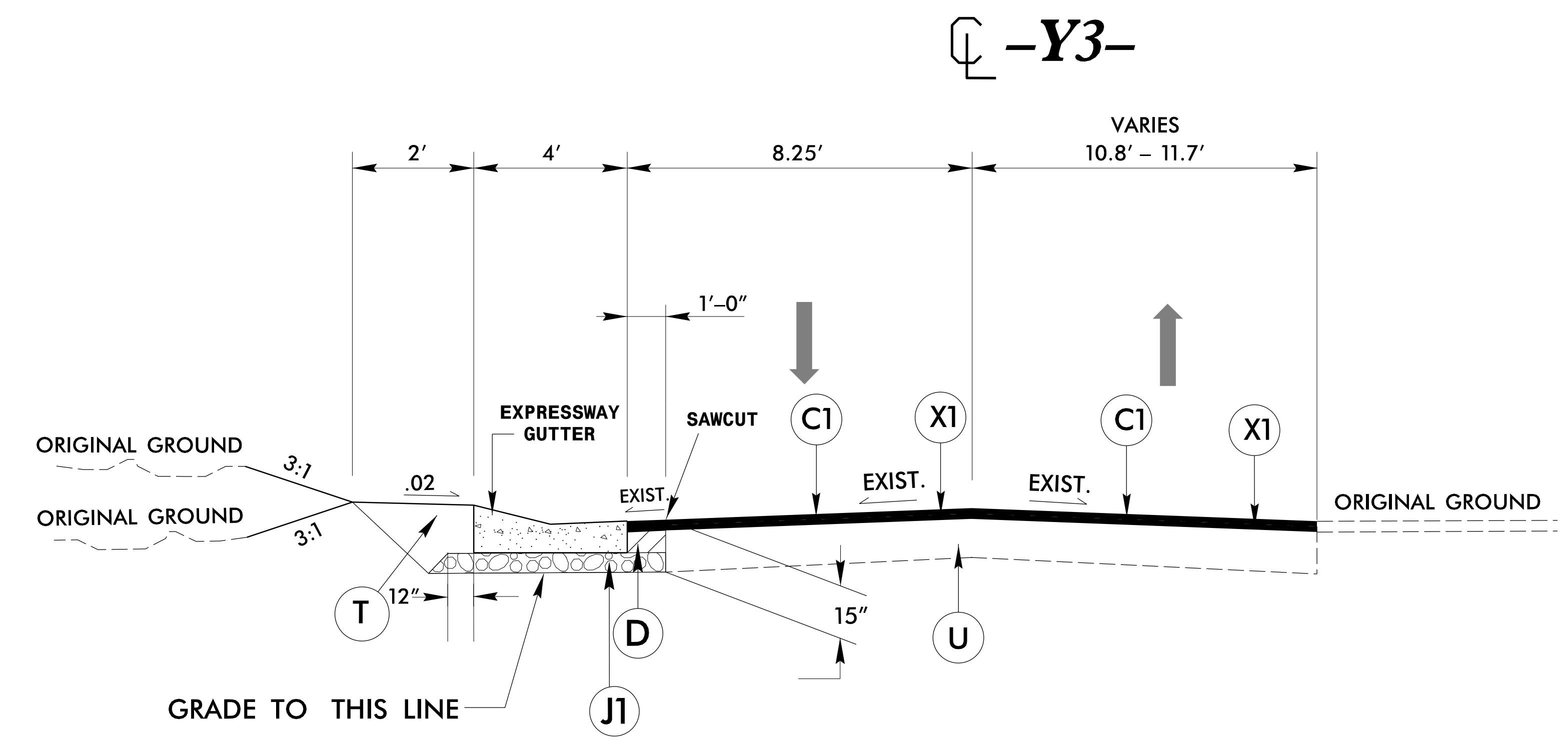
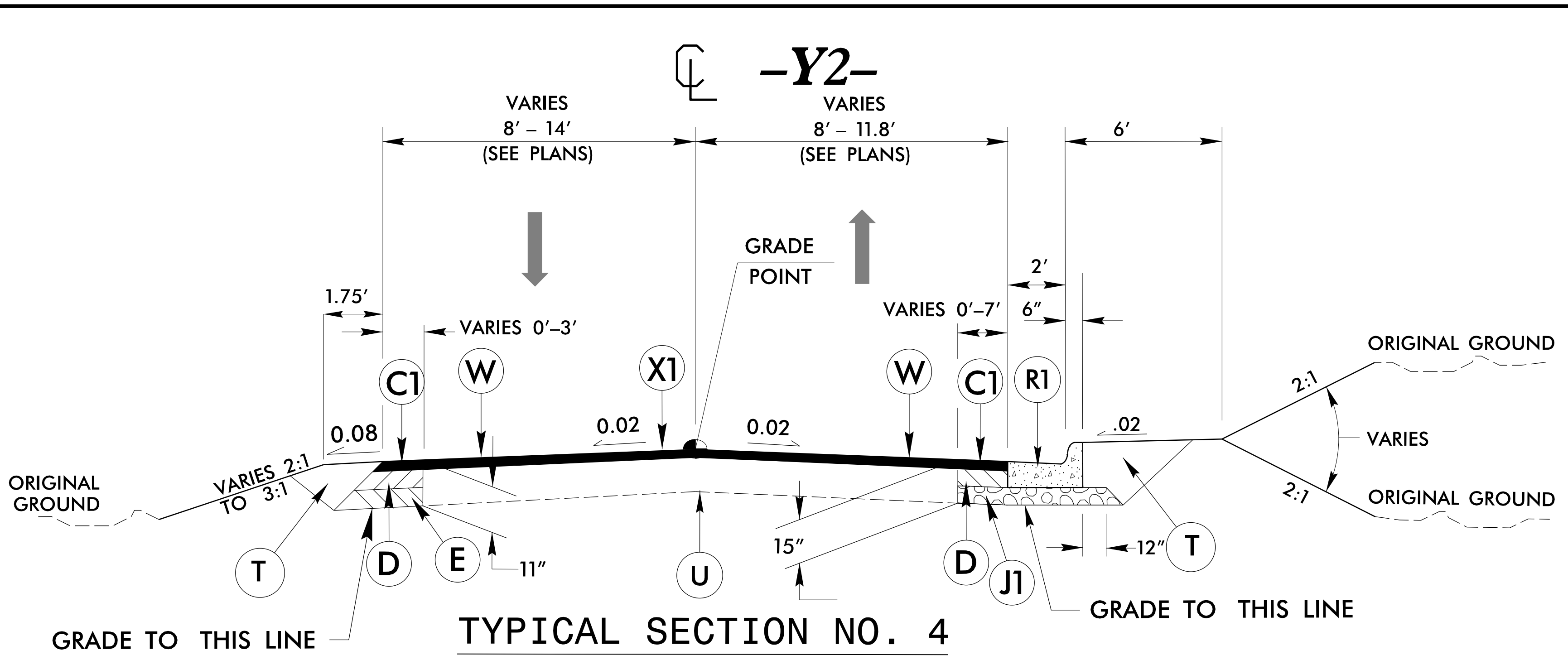
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

* REFER TO THE ROADWAY PLAN SHEETS FOR STATION APPLICATION OF PROPOSED SIDEWALK

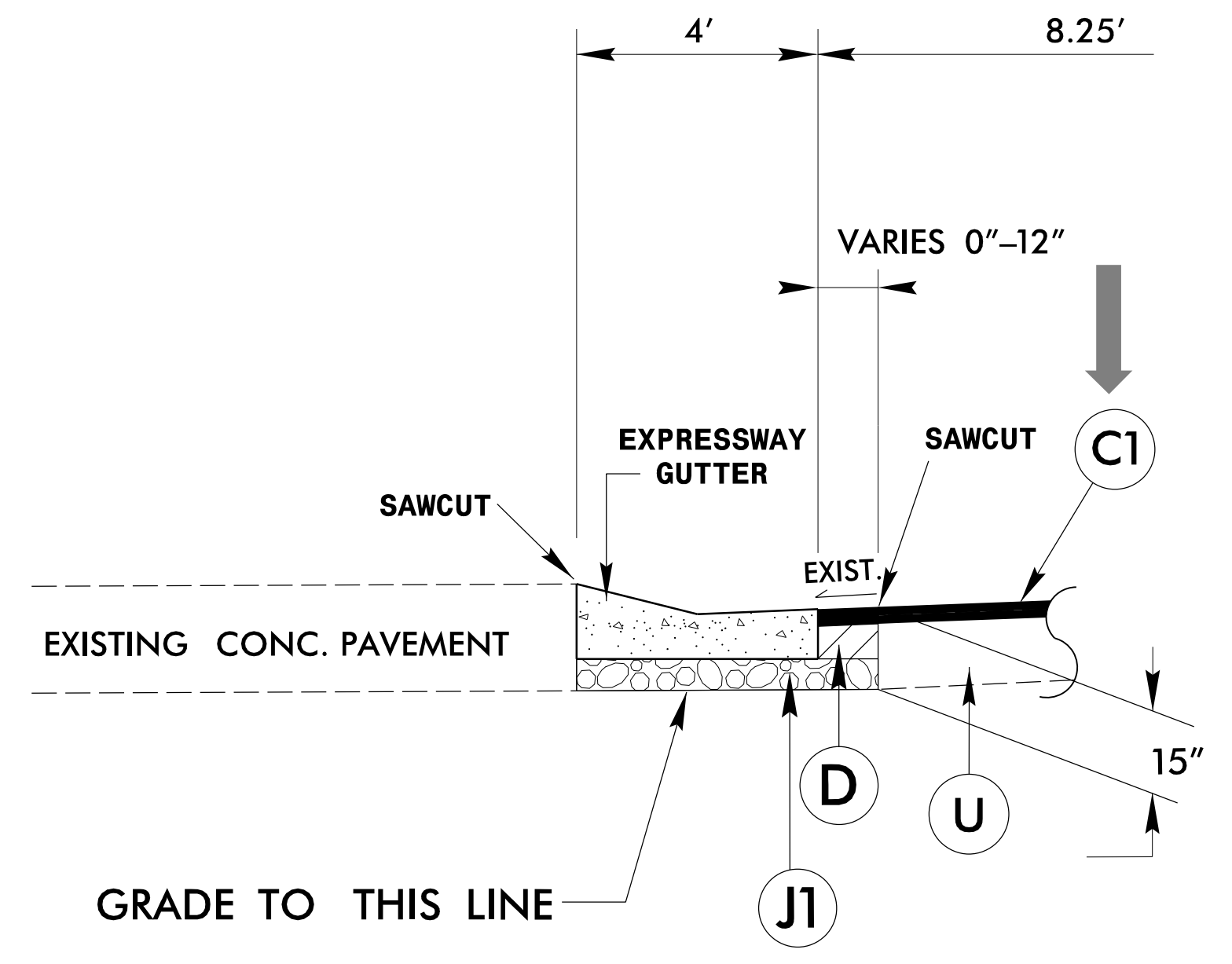
NOT TO SCALE

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5/14/15



* = MILL 1.5" & REPLACE WITH 3.0" OF S9.5B



| | |
|--|--|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. 2A-5 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 8/14/2015 Steve Scott NORTH CAROLINA PROFESSIONAL SEAL 22568 | PAVEMENT ENGINEER 8/17/2015 Clark Morrison NORTH CAROLINA PROFESSIONAL SEAL 22896 |
| | |
| 1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197 | |

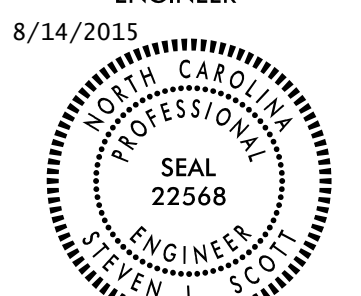
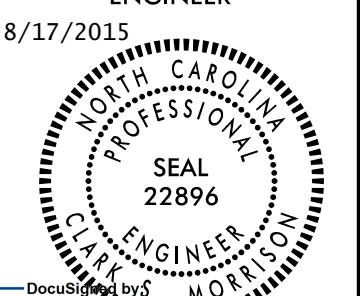

| | |
|----|-------------------|
| C1 | 3" S9.5B |
| C2 | VAR. S9.5B |
| D | 4" I19.0B |
| D1 | VAR. I19.0B |
| E | 4" B25.0B |
| E1 | VAR. B25.0B |
| J1 | 8" ABC |
| R1 | 2'-6" C & G |
| S | 4" SIDEWALK |
| T | EARTH MATERIAL |
| U | EXIST PAVEMENT |
| X1 | VAR MILLING, 0-4" |
| X2 | 4" MILLING |
| W | WEDGING |

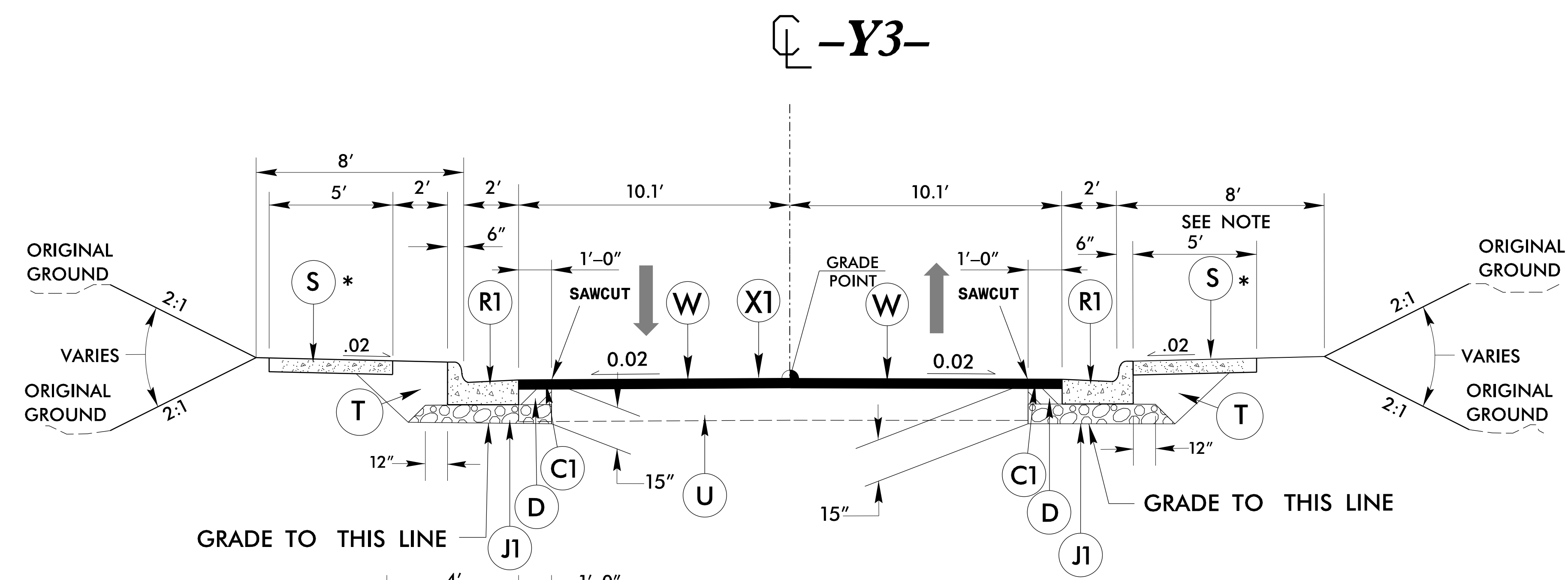
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

NOT TO SCALE

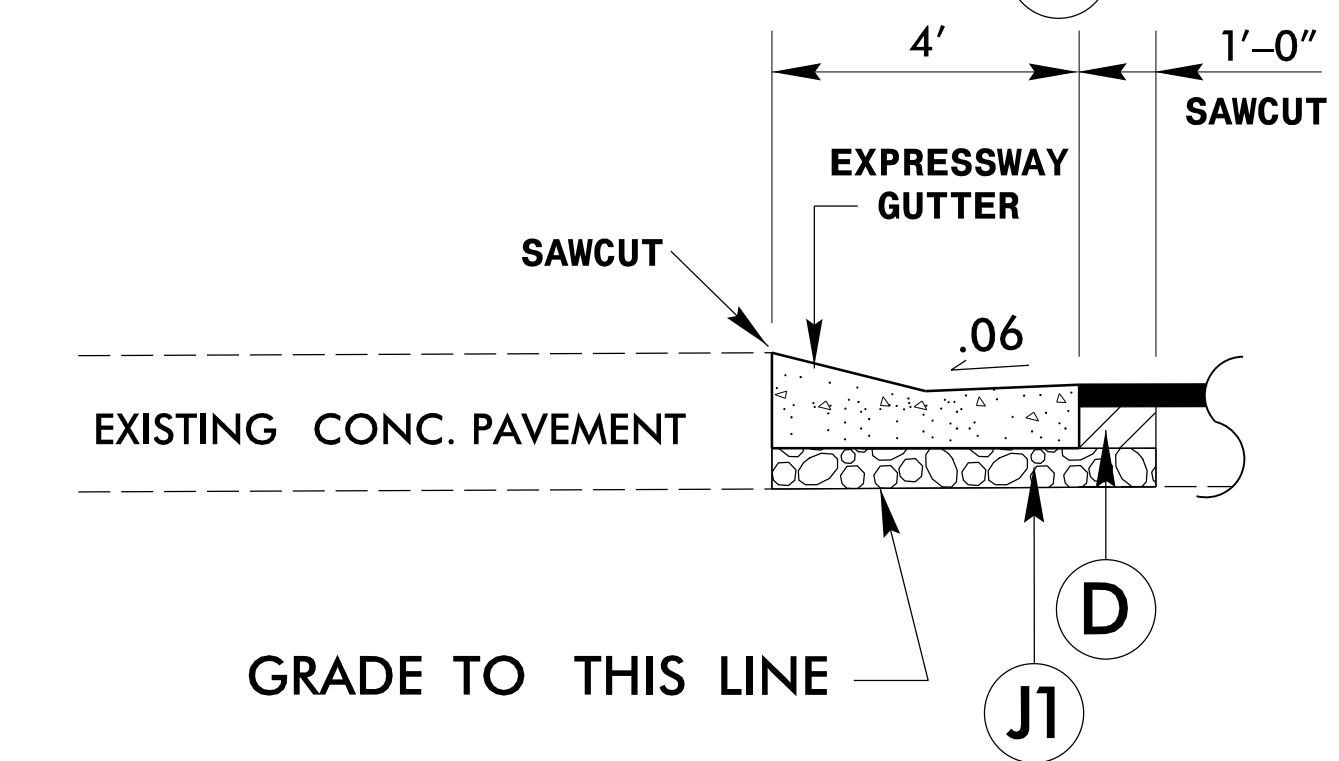
8/12/2015 P:\o\j\5104_RDY_TYP.dgn

5/14/14/99

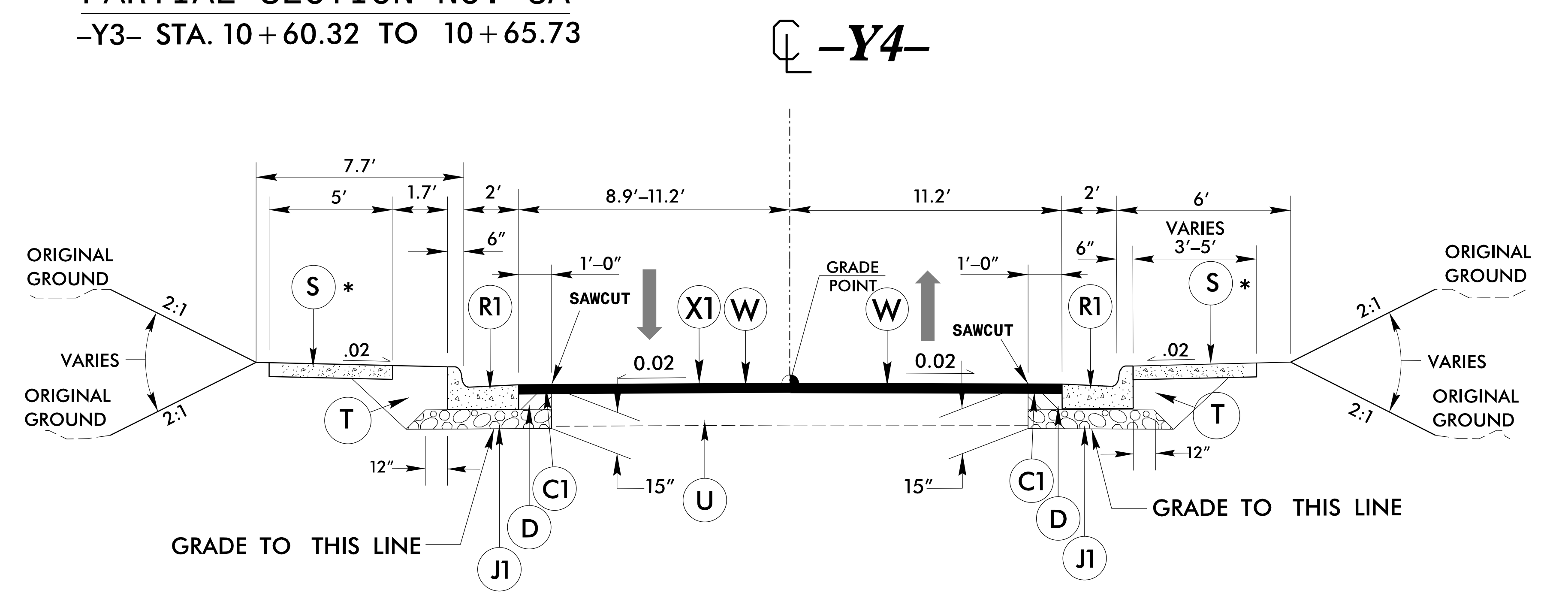
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|--|---|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. 2A-6 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 8/14/2015  | PAVEMENT ENGINEER 8/17/2015  |
|  1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197 | |



TYPICAL SECTION NO. 6
-Y3- STA. 11+59.38 TO 12+50.00



PARTIAL SECTION NO. 6A
-Y3- STA. 10+60.32 TO 10+65.73



TYPICAL SECTION NO. 7
-Y4- STA. 11+87.85 TO 12+28.09

| | |
|----|-------------------|
| C1 | 3" S9.5B |
| C2 | VAR. S9.5B |
| D | 4" I19.0B |
| D1 | VAR. I19.0B |
| E | 4" B25.0B |
| E1 | VAR. B25.0B |
| J1 | 8" ABC |
| R1 | 2'-6" C & G |
| S | 4" SIDEWALK |
| T | EARTH MATERIAL |
| U | EXIST PAVEMENT |
| X1 | VAR MILLING, 0-4" |
| X2 | 4" MILLING |
| W | WEDGING |

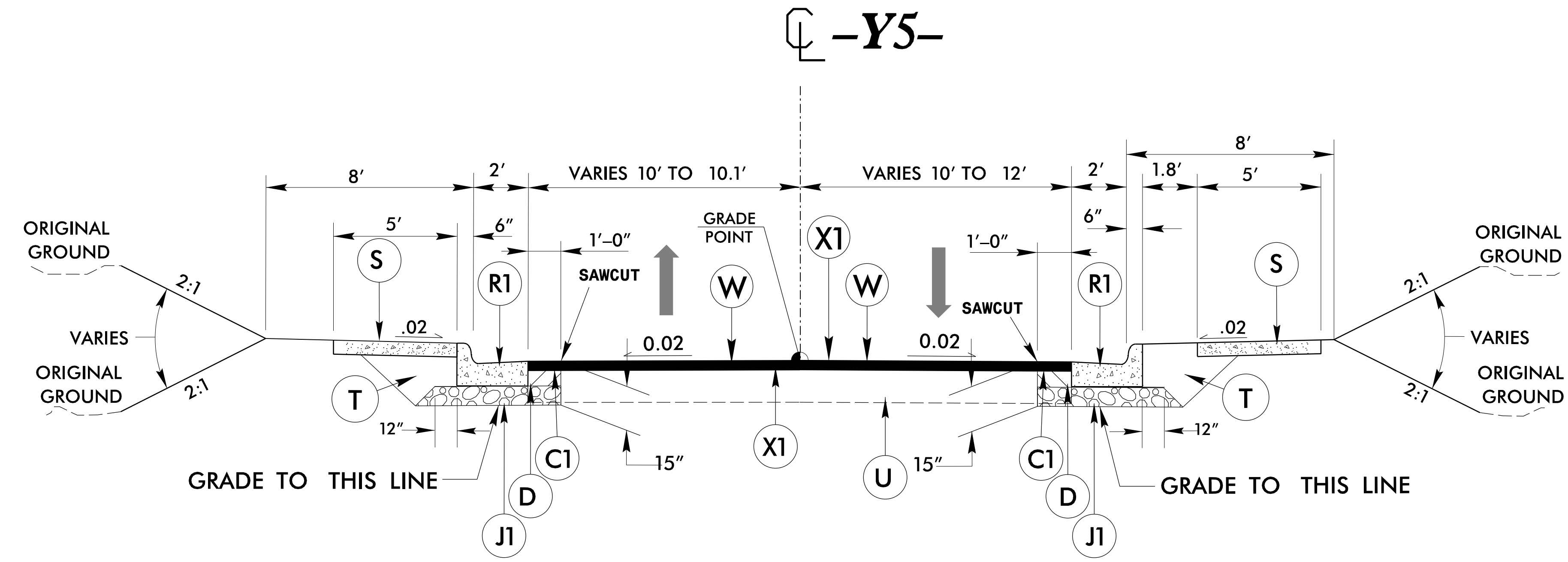
* REFER TO THE ROADWAY PLAN SHEETS FOR STATION APPLICATION OF PROPOSED SIDEWALK

NOT TO SCALE

8/12/2015 P:\o\j\5104_RDY_TYP.dgn

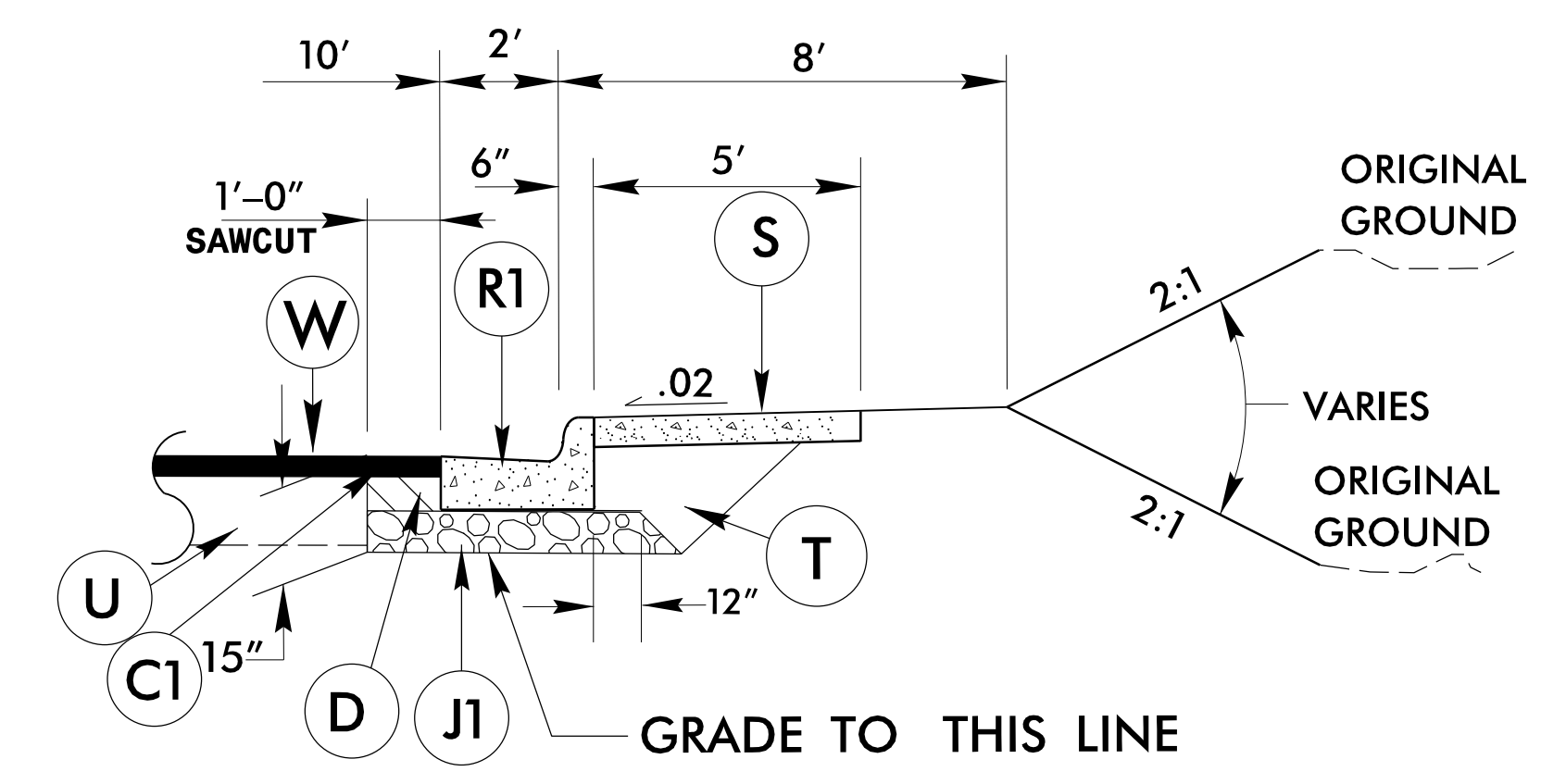
5/14/14/99

| | |
|--|--|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. 2A-7 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 8/14/2015 STEVEN L. SCOTT | PAVEMENT ENGINEER 8/17/2015 CLARK HARRISON |
| | |
| | |
| 1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197 | |



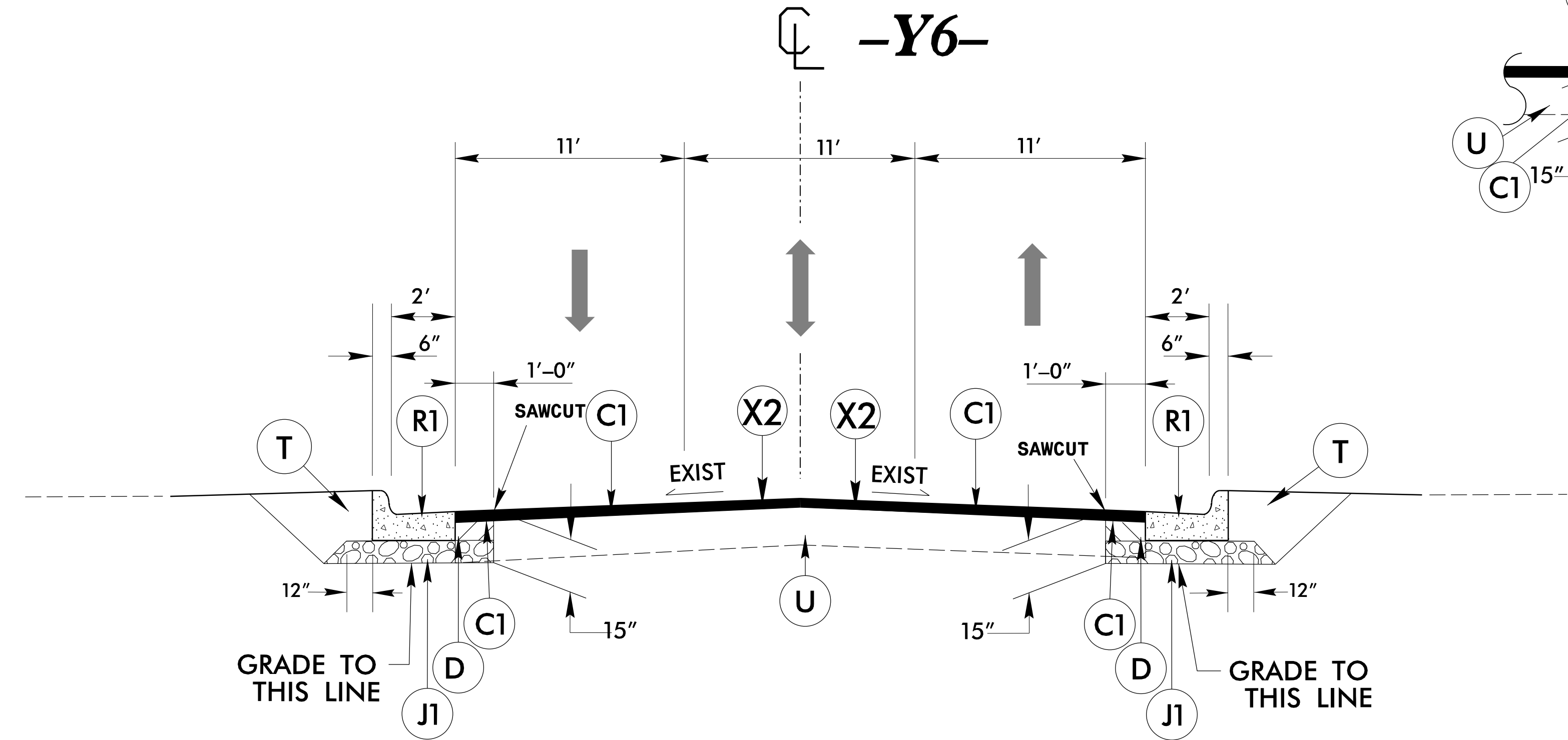
TYPICAL SECTION NO. 8

-Y5- STA. 10+91.62 TO 11+47.85
 -Y5- STA. 11+80.85 TO 12+30.85



PARTIAL SECTION NO. 8A

-Y5- STA. 11+80.85 TO 12+30.85



TYPICAL SECTION NO. 9

-Y6- STA. 10+98.63 TO 11+48.61
 -Y6- STA. 11+81.61 TO 12+31.58

| | |
|----|-------------------|
| C1 | 3" S9.5B |
| C2 | VAR. S9.5B |
| D | 4" I19.0B |
| D1 | VAR. I19.0B |
| E | 4" B25.0B |
| E1 | VAR. B25.0B |
| J1 | 8" ABC |
| R1 | 2'-6" C & G |
| S | 4" SIDEWALK |
| T | EARTH MATERIAL |
| U | EXIST PAVEMENT |
| X1 | VAR MILLING, 0-4" |
| X2 | 4" MILLING |
| W | WEDGING |

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

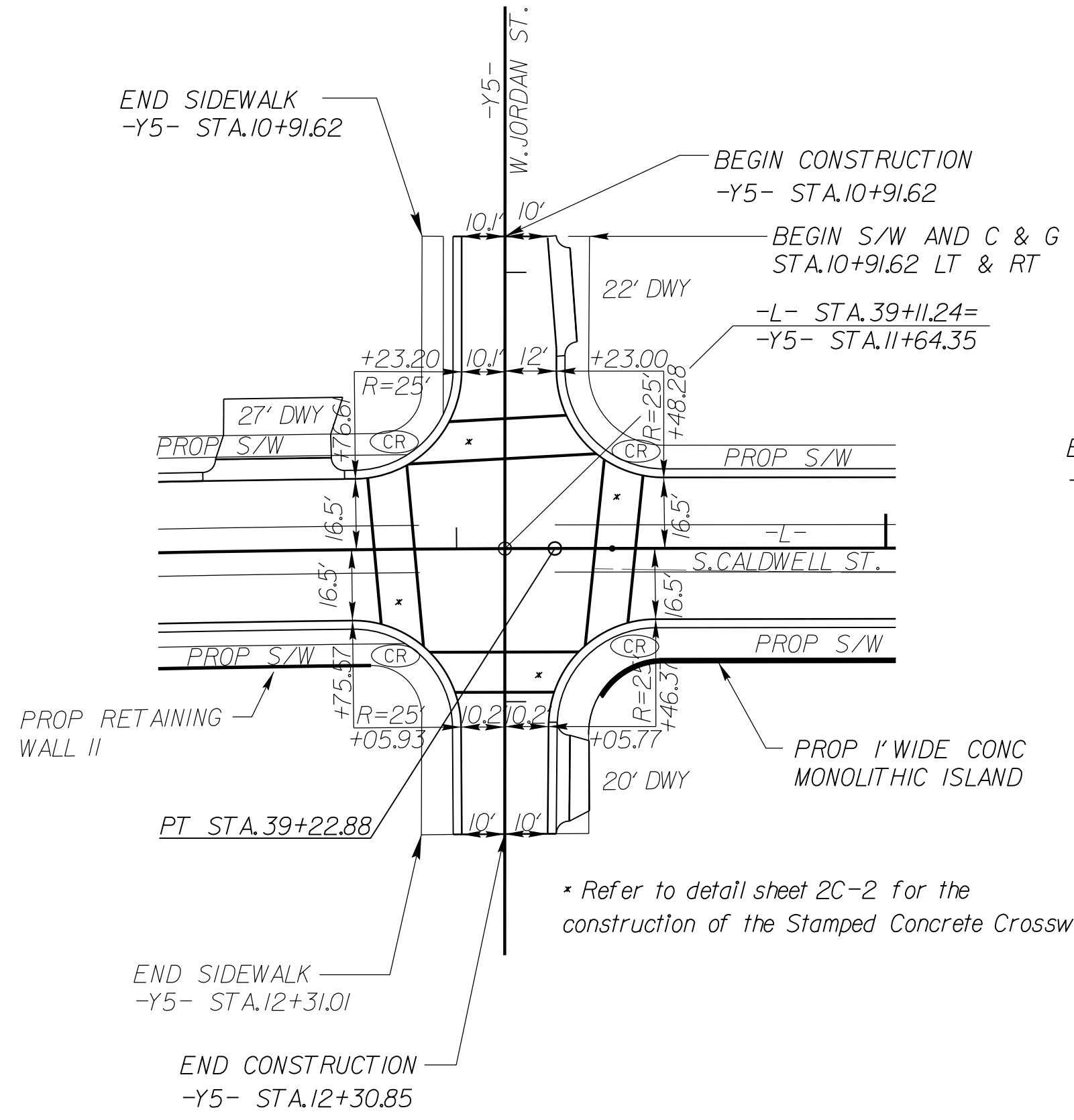
NOT TO SCALE

8/13/2015 P:\o\j\5104_RDY_TYP.dgn

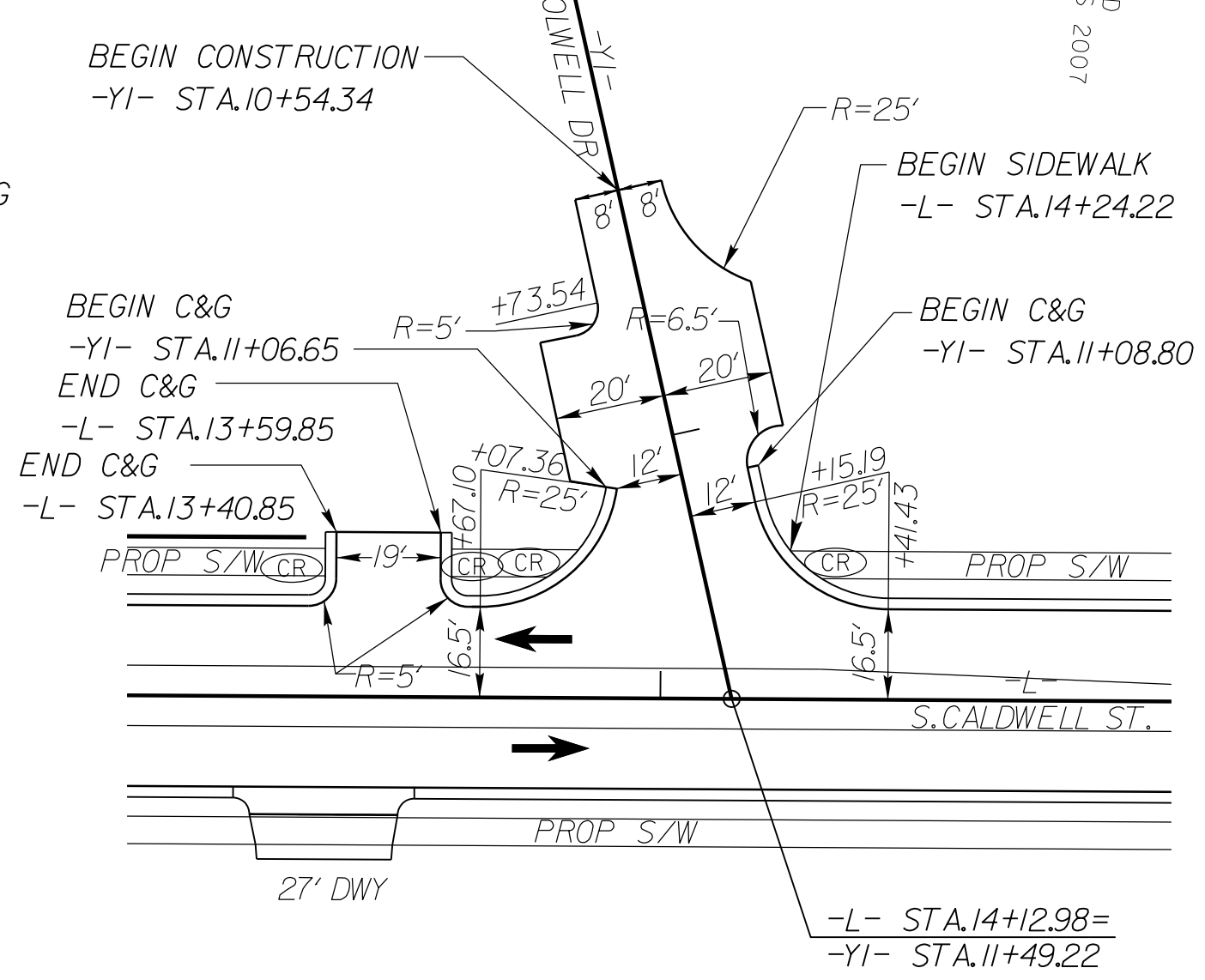
| | |
|---|---|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. 2B-1 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 8/20/2015 SEAL 22568 Steve Scott | HYDRAULICS ENGINEER 8/20/2015 SEAL 33719 Brian Margolici |

INTERSECTION DETAIL SHEET

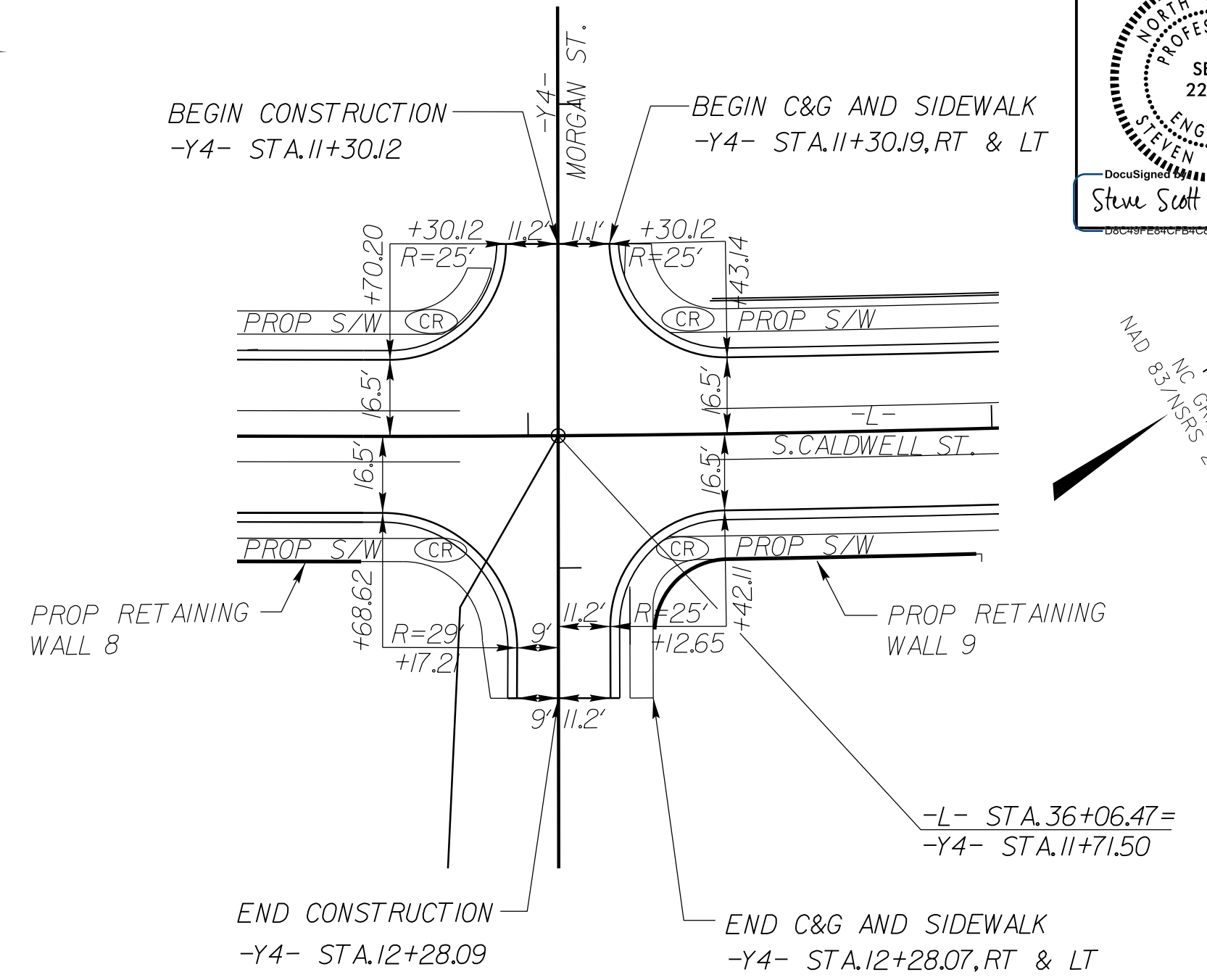
-Y5- WEST JORDAN ST



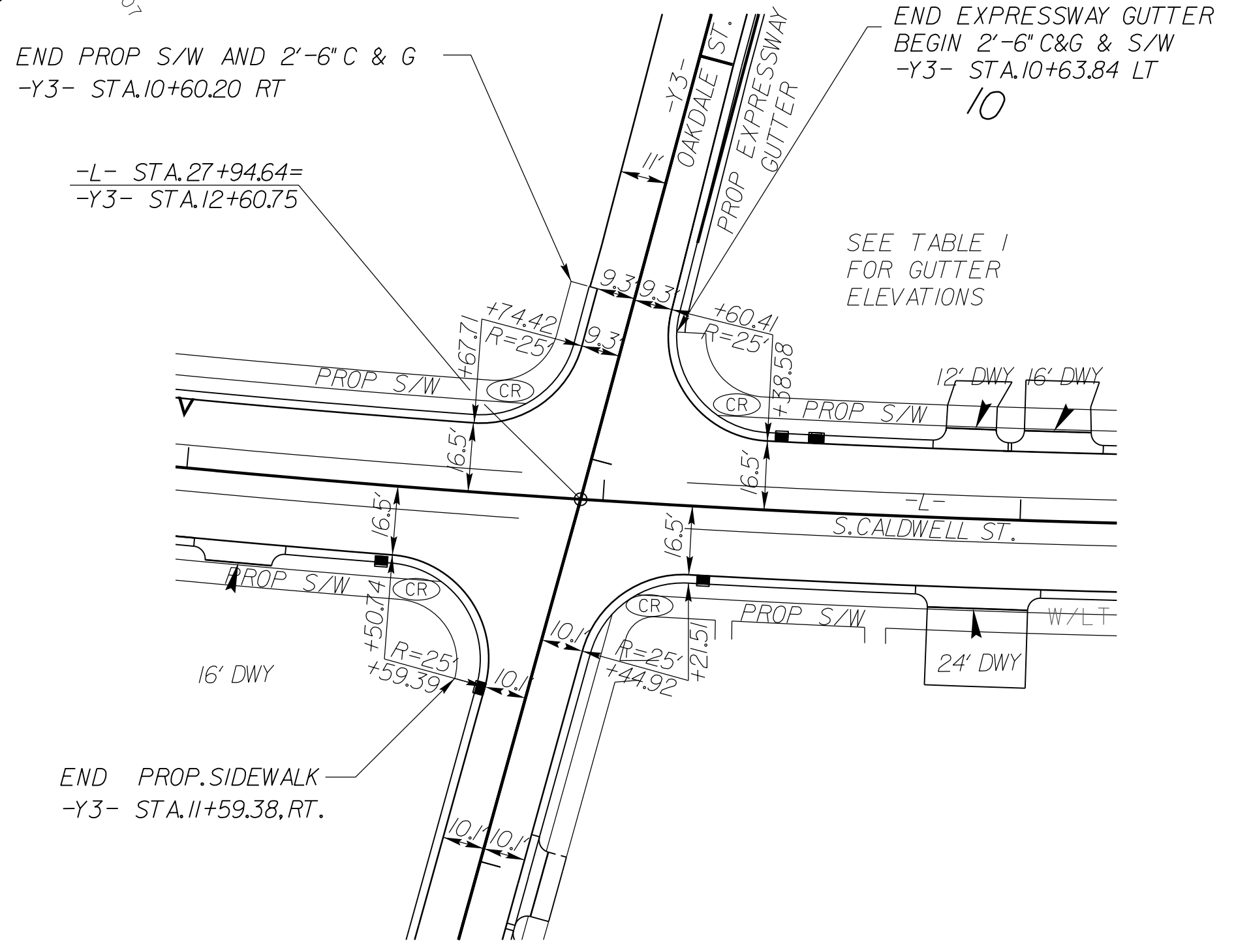
-Y1- COLWELL



-Y4- MORGAN ST



-Y3- OAKDALE ST



-Y- / US 64

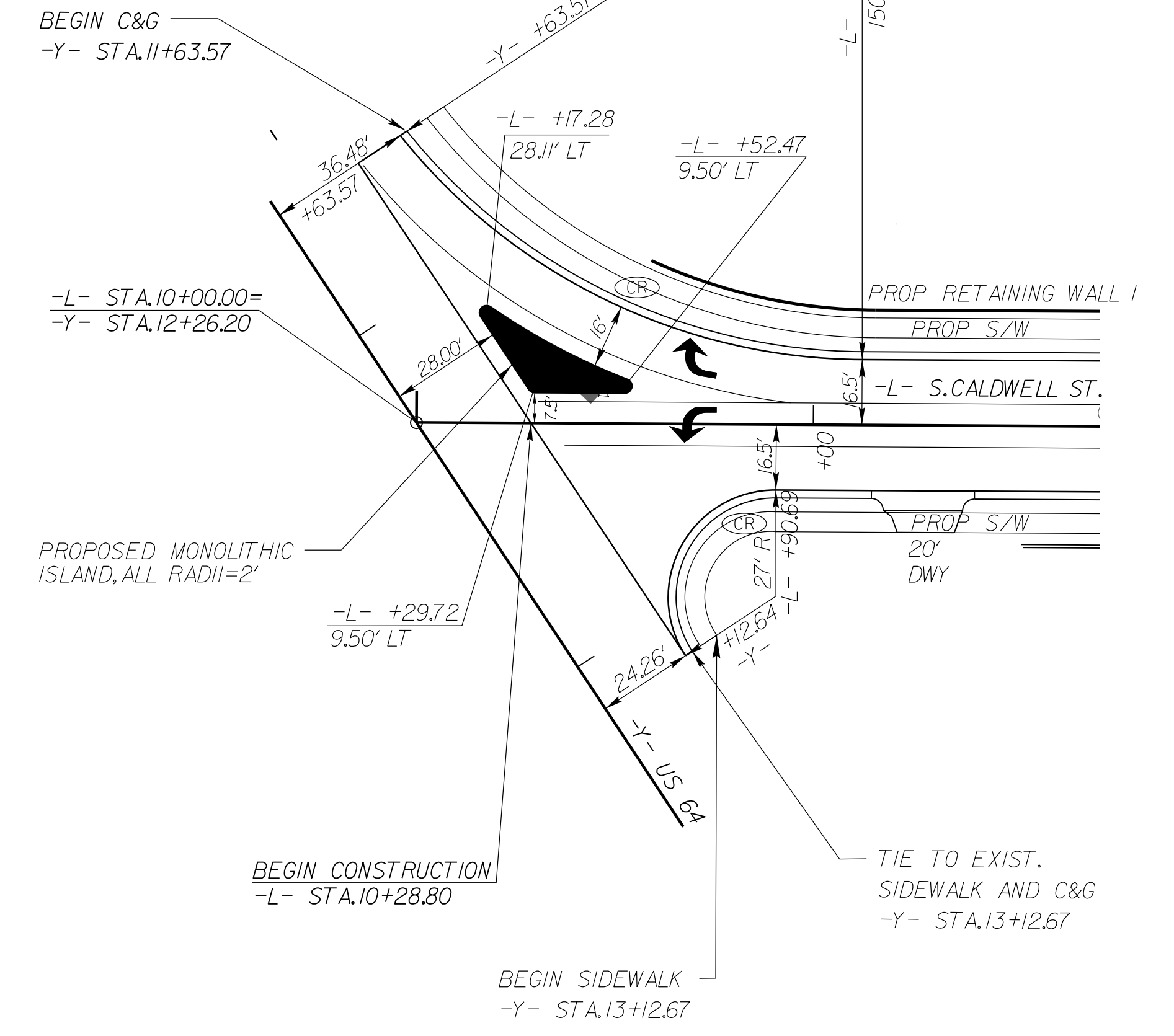
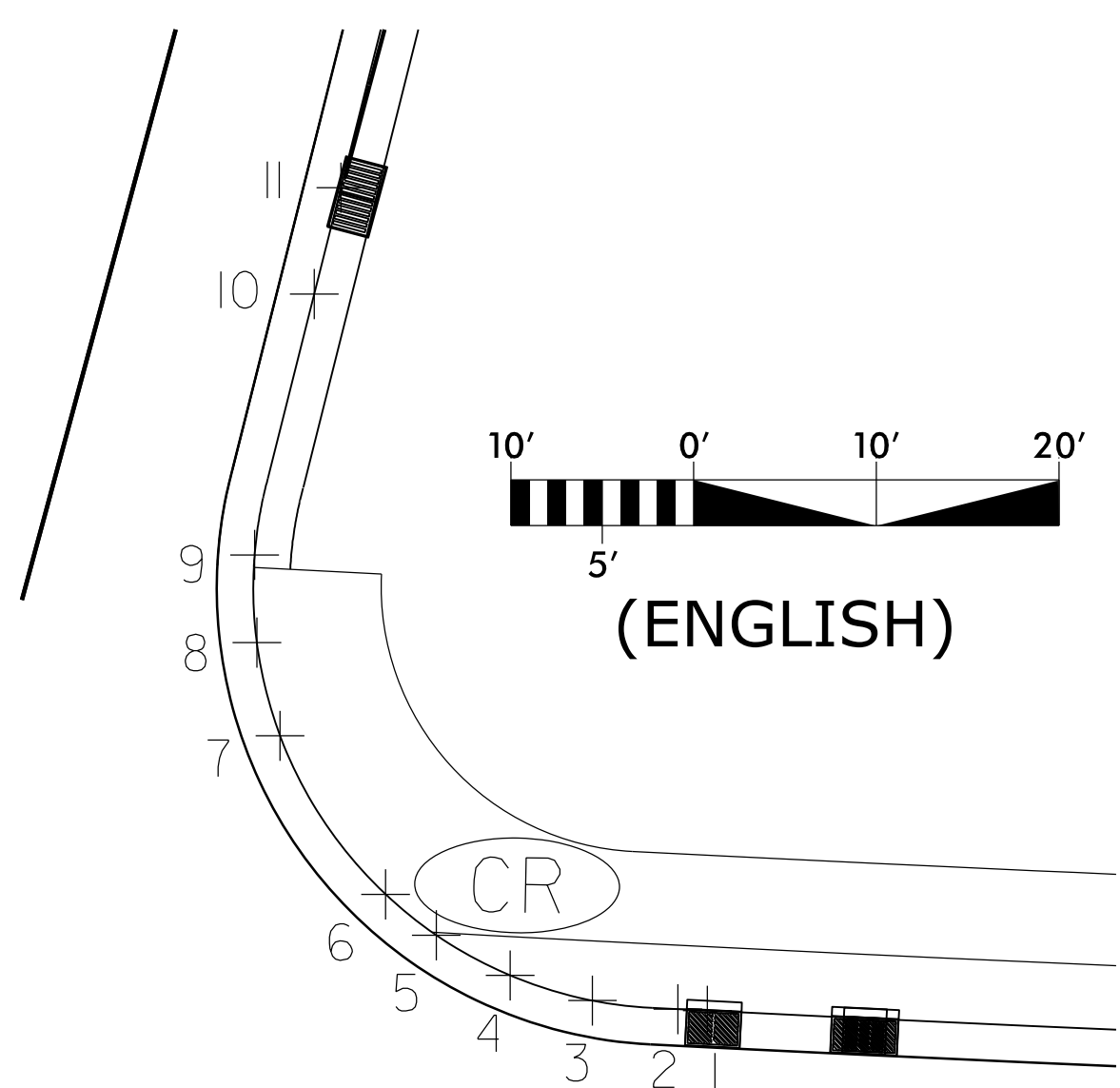


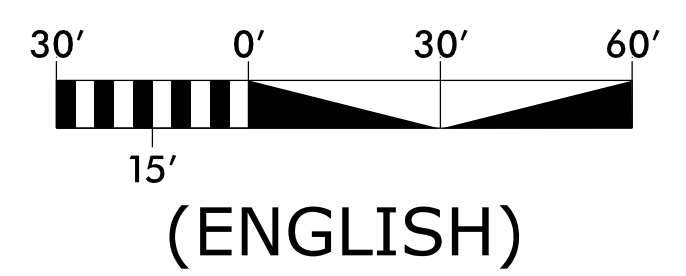
TABLE 1

| Point Number | Gutter Coordinates | | |
|--------------|--------------------|-------------|------------|
| | Northing | Easting | Elevation |
| 1 | 559988.6680 | 884099.4750 | 2179.7363 |
| 2 | 559987.3215 | 884098.5734 | 2179.7278 |
| 3 | 559983.5586 | 884095.7675 | 2179.7008 |
| 4 | 559980.3994 | 884092.2682 | 2179.6608 |
| 5 | 559978.0689 | 884088.3052 | 2179.6065 |
| 6 | 559976.8330 | 884084.9594 | 2179.5490 |
| 7 | 559976.3369 | 884074.5449 | 2179.2352 |
| 8 | 559977.8707 | 884069.5102 | 2179.1345 |
| 9 | 559980.2334 | 884065.3343 | 2179.0534 |
| 10 | 559990.3724 | 884054.7661 | 2178.97150 |
| 11 | 559994.6193 | 884050.5265 | 2178.9227 |



LEGEND

- (CR) CURB RAMP
- MONOLITHIC CONC ISLAND

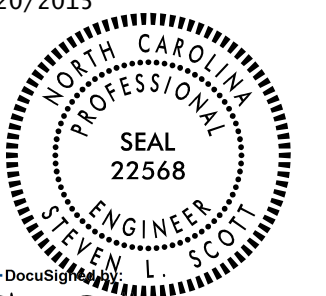


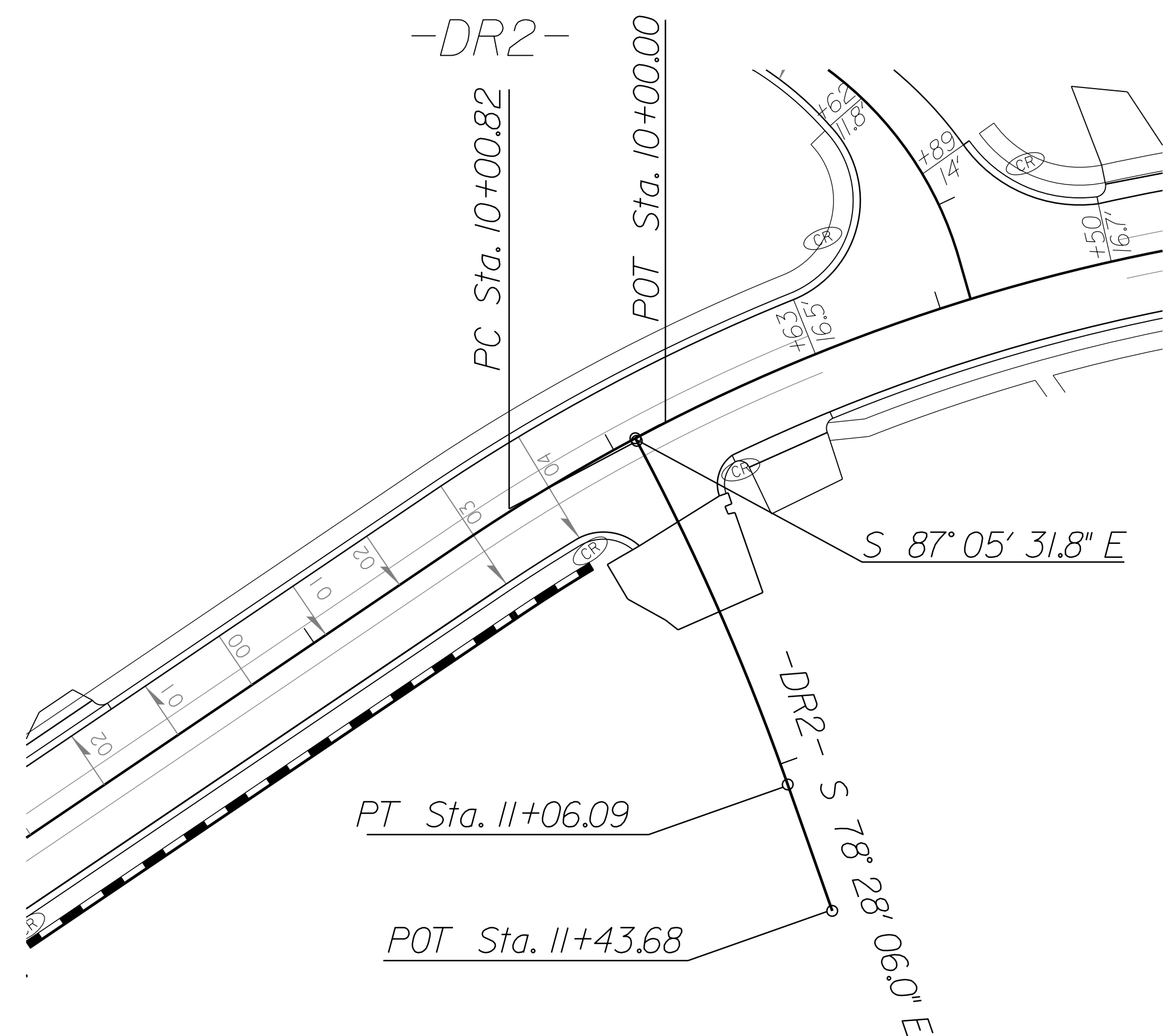
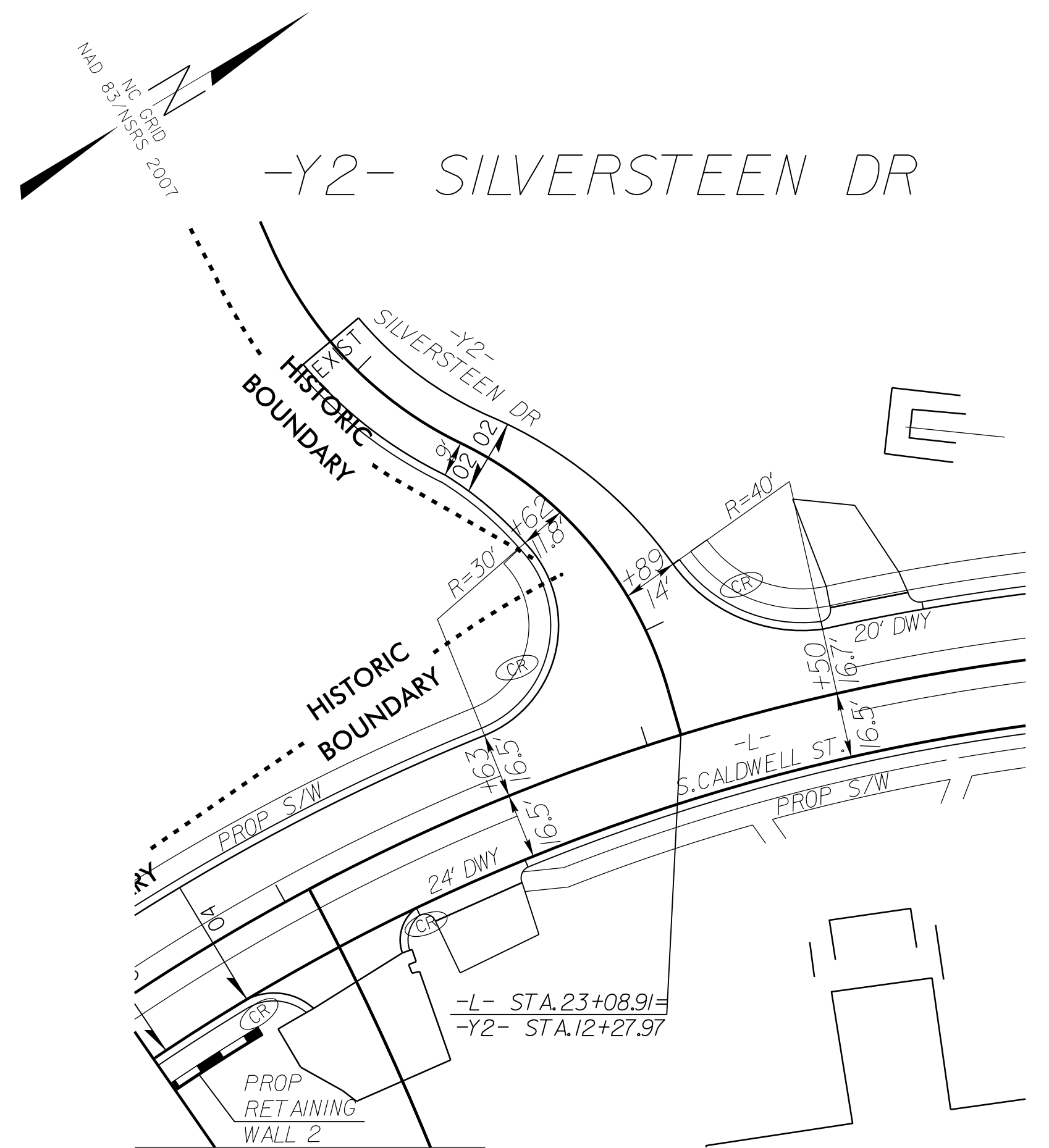
REVISIONS

8/17/09
8/14/2015
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11:51:00 AM

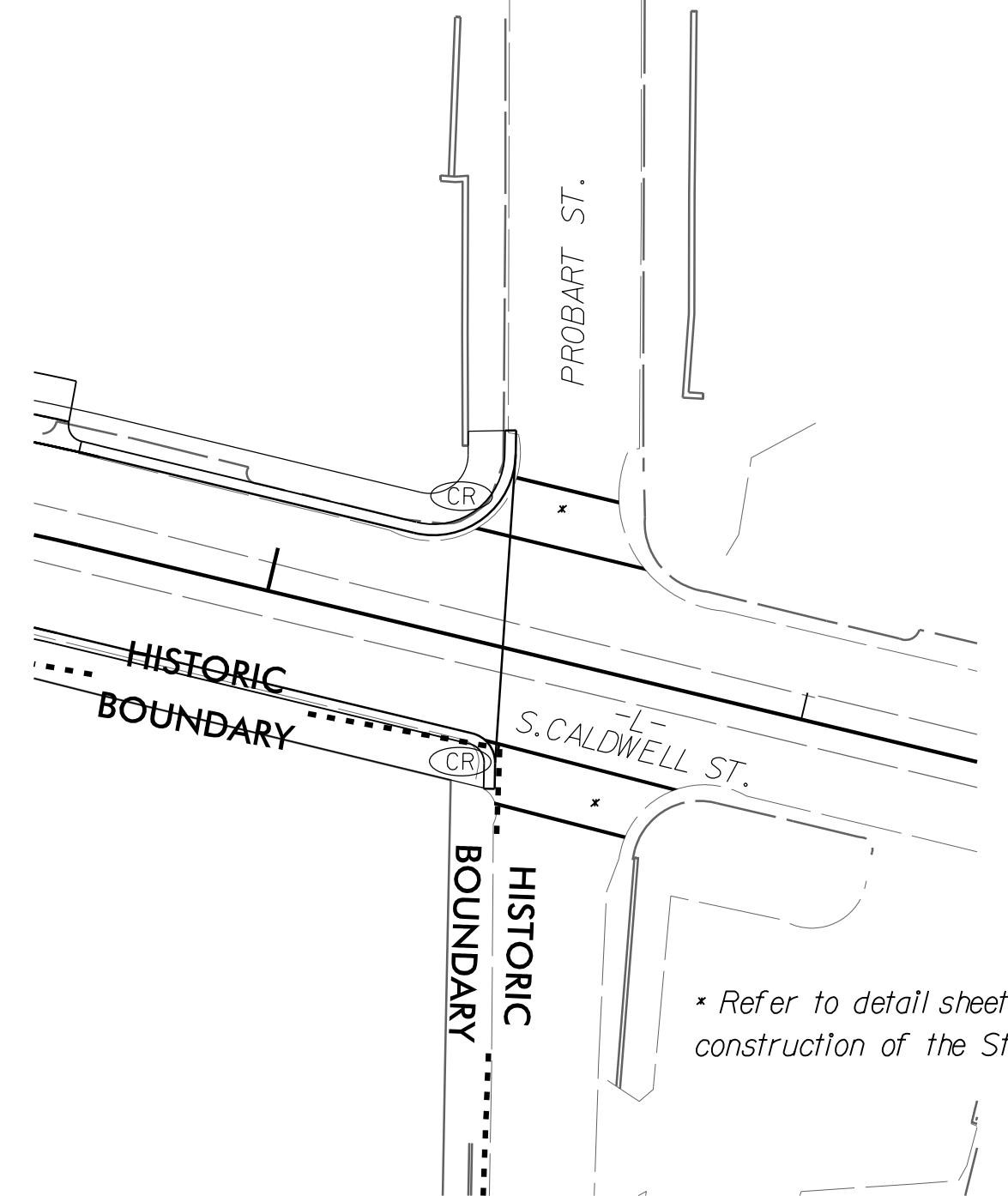
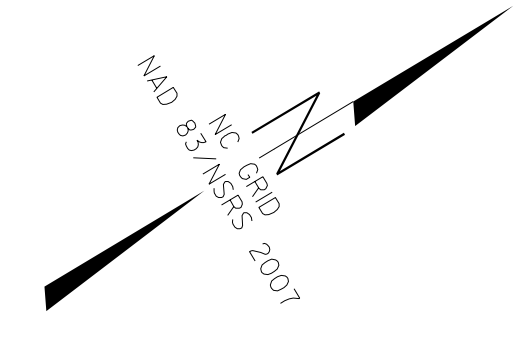
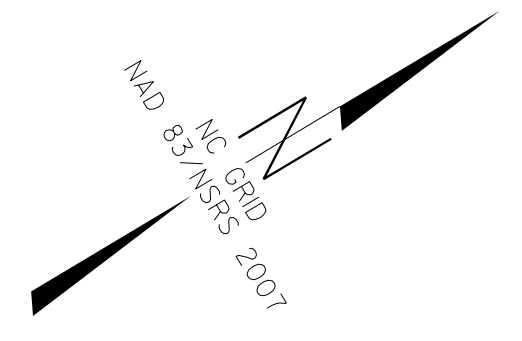
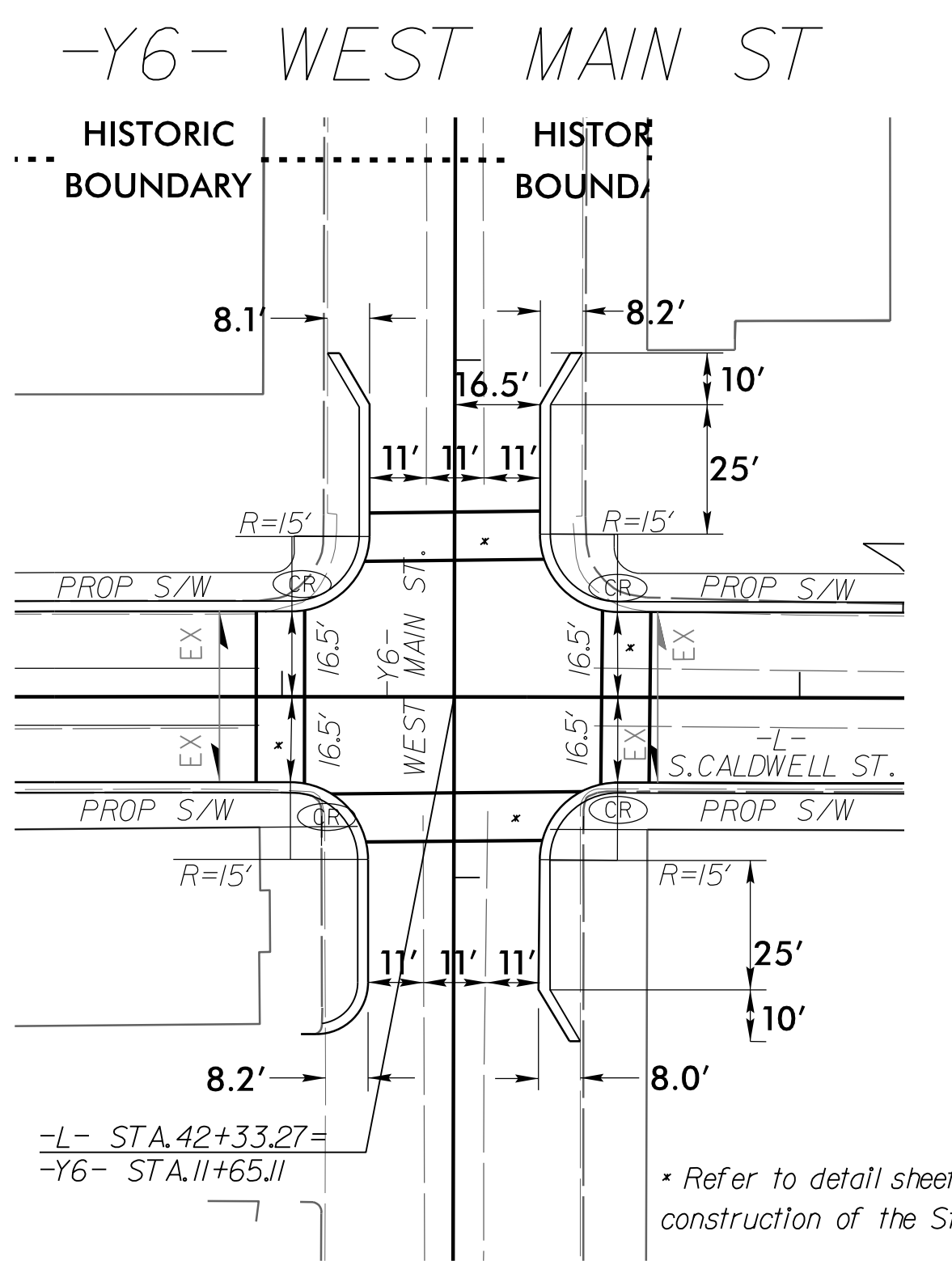
8/17/09

INTERSECTION DETAIL SHEET



| | |
|---|---------------------|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. 2B-2 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 8/20/2015 | HYDRAULICS ENGINEER |
|  | |
| Steven L. Scott | |

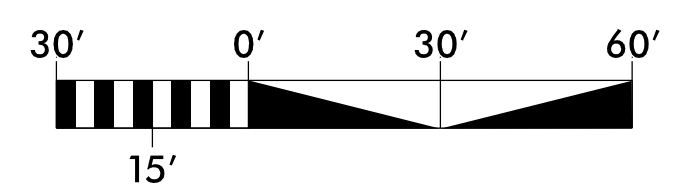


see sheet 5 for curve information
CALDWELL / PROBART



LEGEND

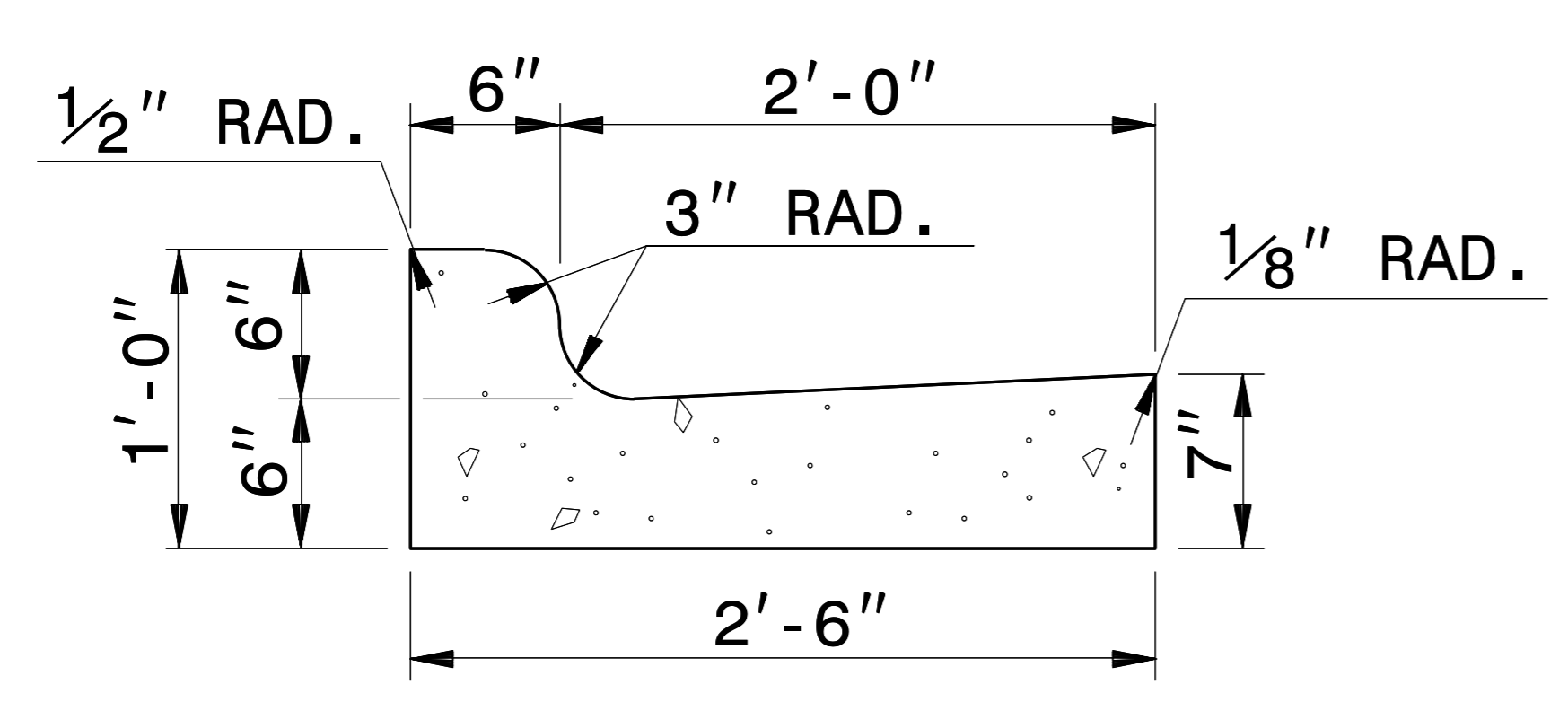
| | |
|---|------------------------|
|  | CURB RAMP |
|  | MONOLITHIC CONC ISLAND |



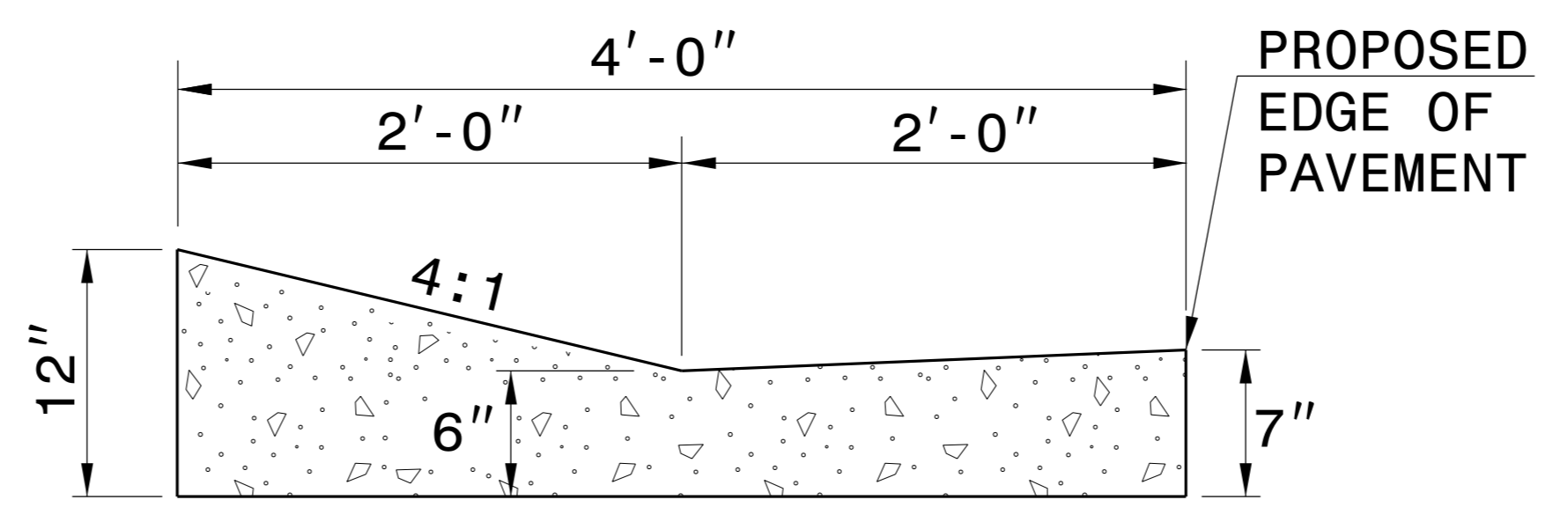
(ENGLISH)

REVISIONS

8/14/2015 U:\04_Rdu_dtl_2B-2.dgn



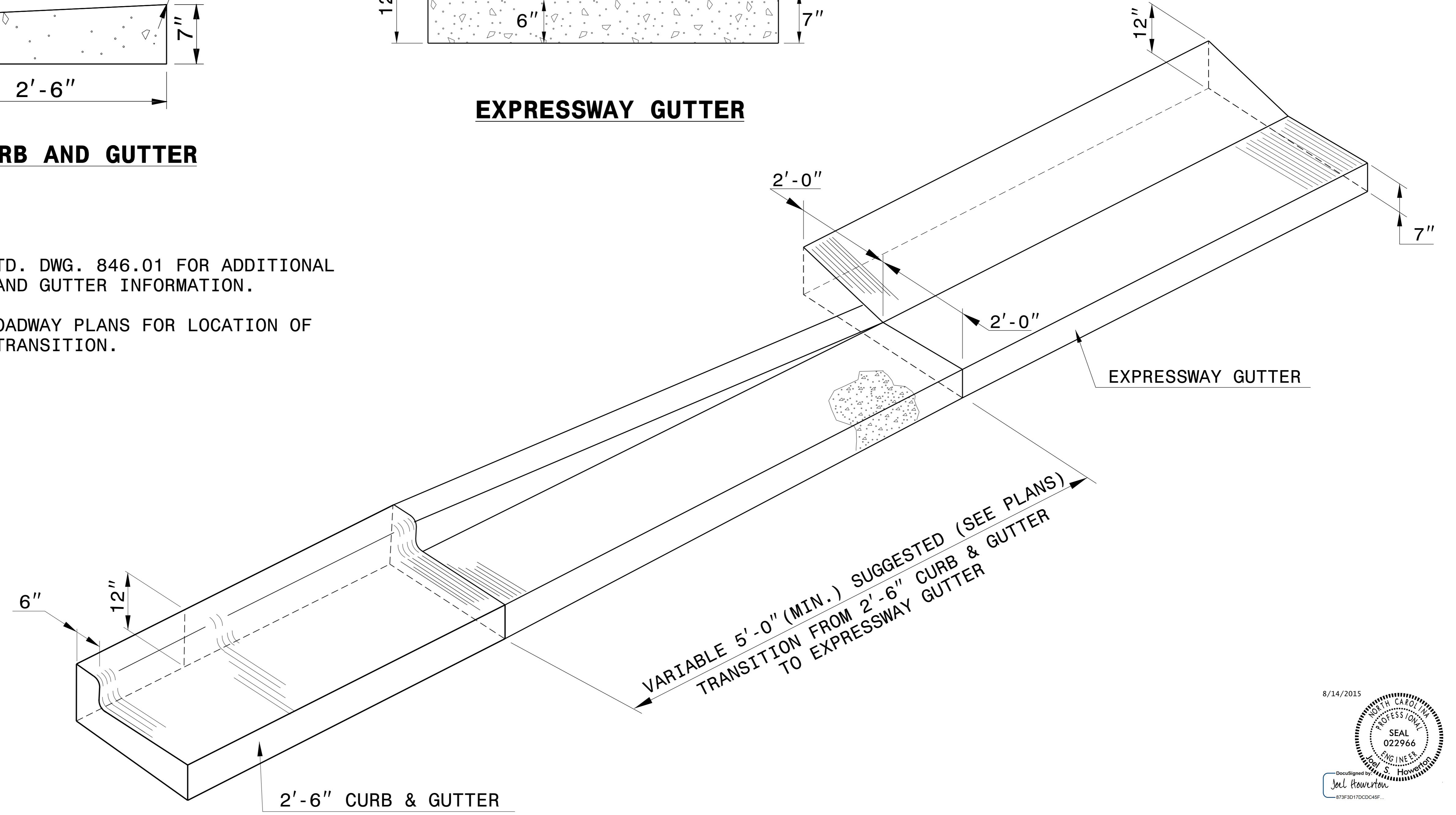
2'-6" CURB AND GUTTER



EXPRESSWAY GUTTER

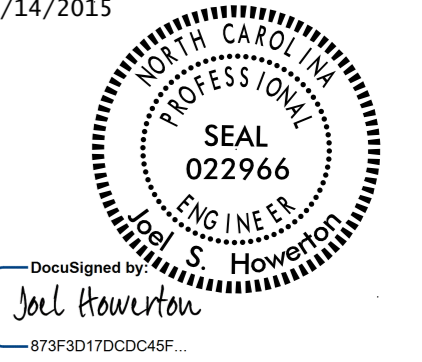
NOTE: SEE STD. DWG. 846.01 FOR ADDITIONAL CURB AND GUTTER INFORMATION.

SEE ROADWAY PLANS FOR LOCATION OF CURB TRANSITION.



ISOMETRIC VIEW OF TRANSITION

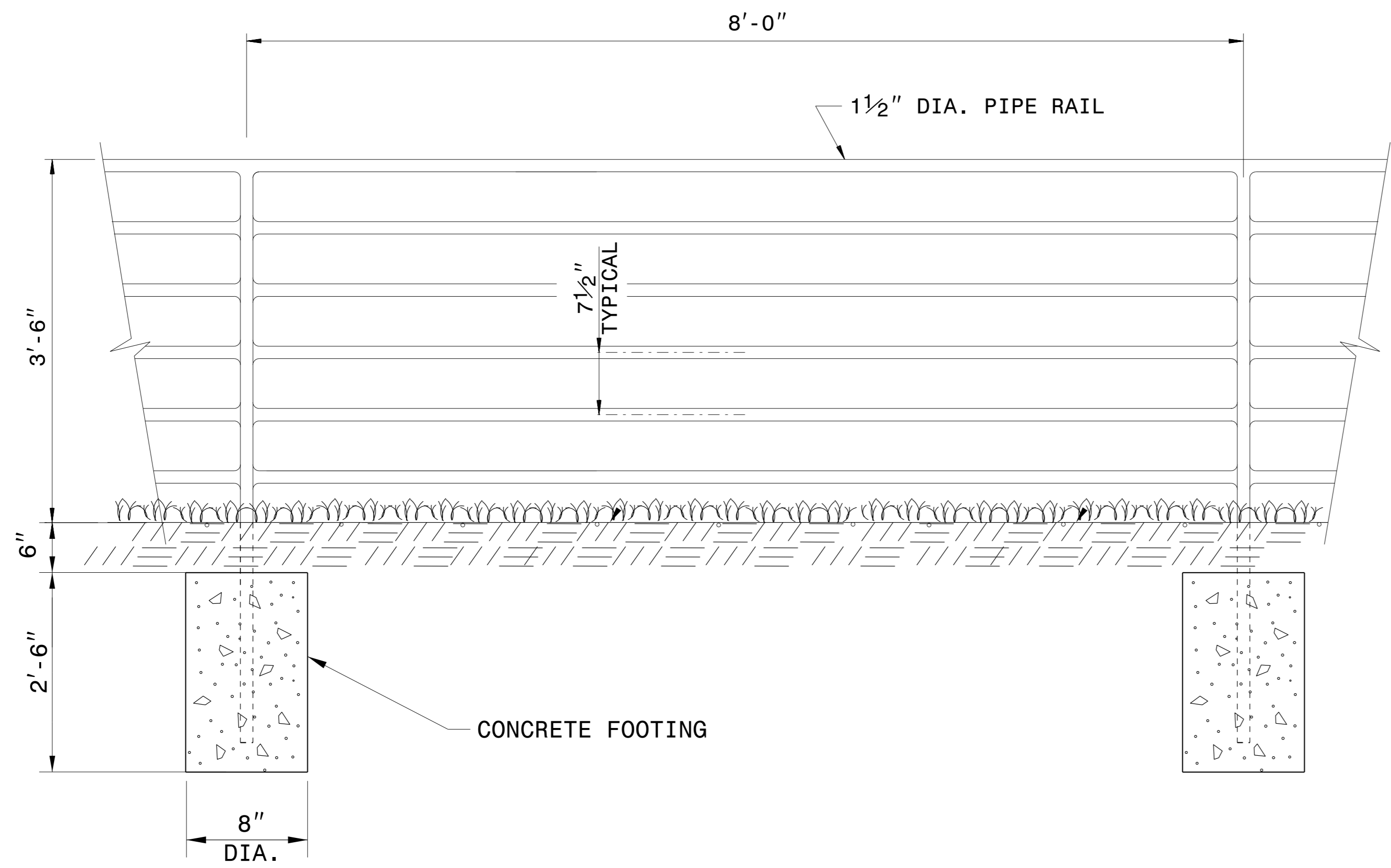
8/14/2015



DocuSigned by:
Carol S. Howerton
873F3D17DCDC45F...

| | |
|--|------------------|
| CONTRACT STANDARDS AND DEVELOPMENT UNIT | |
| Office 919-707-6950 | FAX 919-250-4119 |
| DETAIL OF 2'-6" CURB & GUTTER TO EXPRESSWAY GUTTER TRANSITION SECTION | |
| ORIGINAL BY: T.S. Spell | DATE: 8-13-02 |
| MODIFIED BY: | DATE: |
| CHECKED BY: | DATE: |
| FILE SPEC.: w:usr/details/stand/cgtransit.dgn | |

5/14/99
C:\TIME\SS\COMMON\SS\USER\NAME\SS



ELEVATION OF HANDRAIL

NOTES:

CONSTRUCT PROPOSED STEEL PIPE RAIL OF 1 1/2" DIAMETER SCHEDULE 40 PLAIN END GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A53.

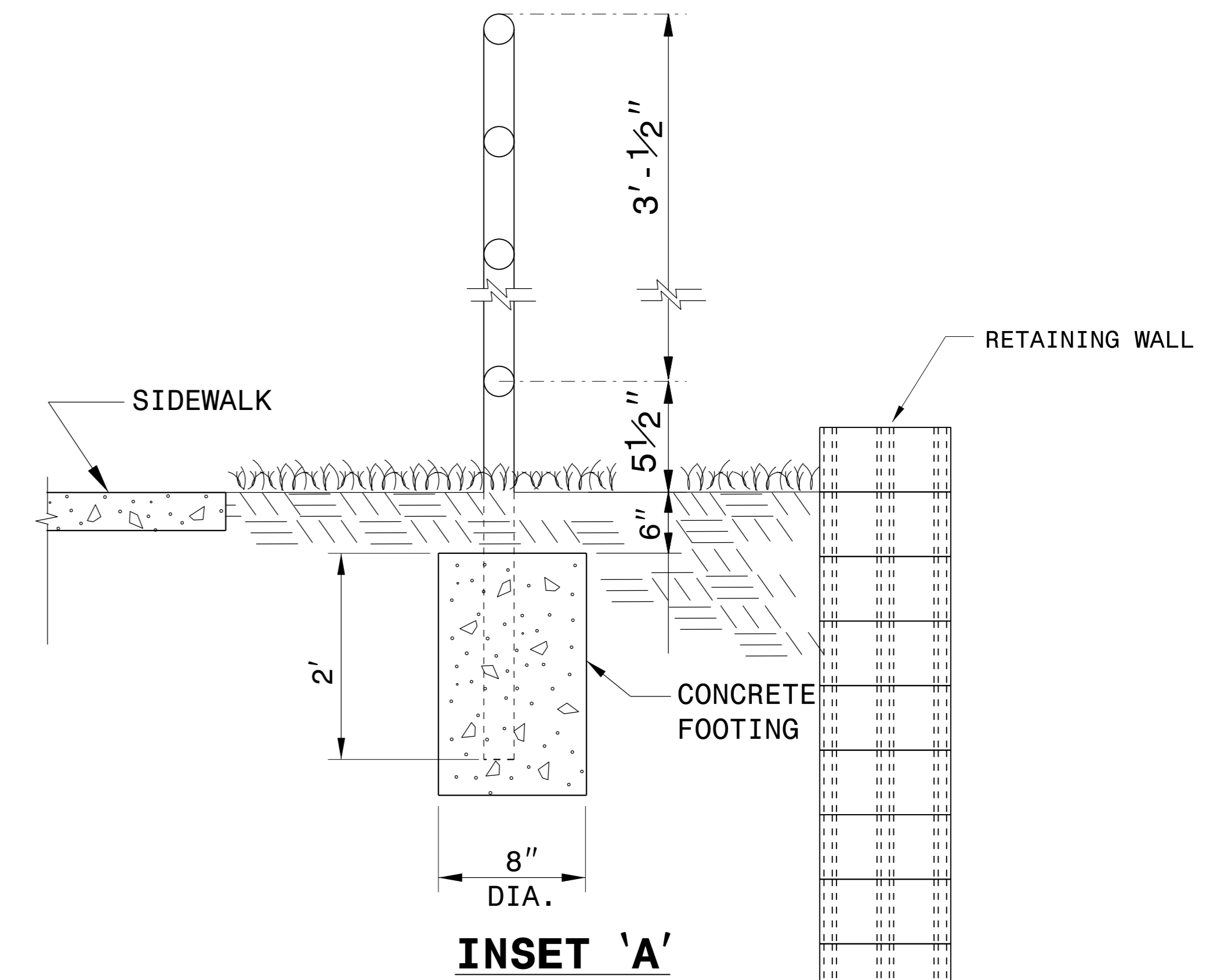
REPAIR GALVANIZING IN ACCORDANCE WITH SECTION 1076 OF THE NCDOT STANDARD SPECIFICATIONS.

PAINT, IF REQUIRED BY THE ENGINEER, IN ACCORDANCE WITH SECTION 1080 OF THE STANDARD SPECIFICATIONS.

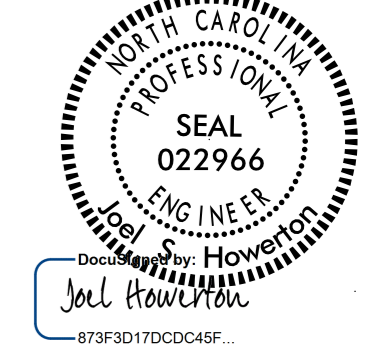
WELD IN ACCORDANCE WITH ARTICLE 1072-18 OF THE STANDARD SPECIFICATIONS.

USE CLASS 'B' CONCRETE FOR HANDRAIL FOOTINGS.

PLACEMENT OF HANDRAIL IN RELATION TO RETAINING WALL AND SIDEWALK MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.



8/24/2015




DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

PROPOSED PEDESTRIAN SAFETY RAIL

ORIGINAL BY: E.E. WARD DATE: 12-99
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.: jhowerton/handrail on retaining_wall.dgn

TIME \$\$\$\$\$\$
DATE \$\$\$\$\$\$
BY \$\$\$\$\$\$
CHECKED \$\$\$\$\$\$
DATE \$\$\$\$\$\$
FILE \$\$\$\$\$\$

| | | |
|--|--|--------------------------|
| PROJECT REFERENCE NO. U-5104 | | SHEET NO. 2G-1 |
| GEOTECHNICAL ENGINEER  SEAL 022246 SCOTT A. HADDEN ENGINEER | | ENGINEER |
| DocuSigned by: Scott A. Hadden 8/7/2015 1730CA8B9F6C4D3 SIGNATURE DATE | | SIGNATURE DATE |

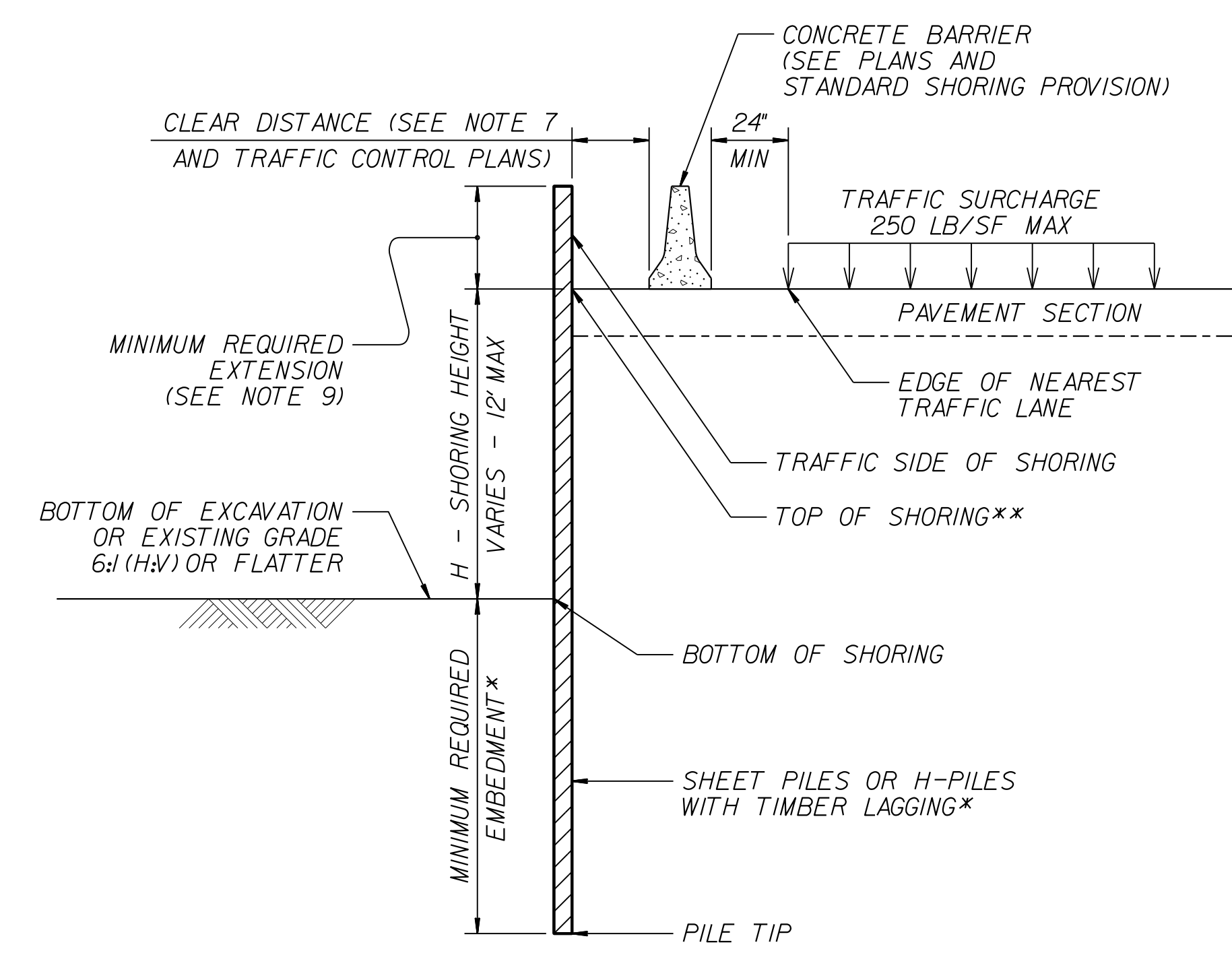
| GROUNDWATER CONDITION (SEE NOTE 6) | H SHORING HEIGHT (FT) | SLOPE OR SURCHARGE CASE WITH NO TRAFFIC IMPACT | | | | | SURCHARGE CASE WITH TRAFFIC IMPACT | | | | |
|--|-----------------------|--|--|--|----------|------|------------------------------------|--|--|----------|------|
| | | SHEET PILES | | H-PILES WITH TIMBER LAGGING | | | SHEET PILES | | H-PILES WITH TIMBER LAGGING | | |
| | | MINIMUM REQUIRED EMBEDMENT (FT) | MINIMUM REQUIRED SECTION MODULUS (IN ³ /FT) | MINIMUM REQUIRED EMBEDMENT* (FT) (SEE NOTE 10) | | | MINIMUM REQUIRED EMBEDMENT (FT) | MINIMUM REQUIRED SECTION MODULUS (IN ³ /FT) | MINIMUM REQUIRED EMBEDMENT* (FT) (SEE NOTE 10) | | |
| | | | HP 10x42 | HP 12x53 | HP 14x73 | | | HP 10x42 | HP 12x53 | HP 14x73 | |
| GROUNDWATER ELEVATION BETWEEN BOTTOM OF SHORING AND PILE TIP | < 6 | 11.5 | 4.5 | 11.5 | 11.5 | 11.5 | 16.0 | 12.0 | 13.0 | 13.0 | 13.0 |
| | 7 | 13.0 | 7.0 | 13.0 | 13.0 | 13.0 | 17.0 | 14.5 | 14.5 | 14.5 | 14.5 |
| | 8 | 15.0 | 10.0 | -- | 15.0 | 15.0 | 18.0 | 17.0 | -- | 15.5 | 15.5 |
| | 9 | 17.0 | 14.0 | -- | 17.0 | 17.0 | 19.0 | 20.0 | -- | 17.0 | 17.0 |
| | 10 | 18.5 | 19.5 | -- | -- | 18.5 | 20.0 | 23.5 | -- | -- | 18.5 |
| | 11 | 20.5 | 26.0 | -- | -- | -- | 21.0 | 28.0 | -- | -- | 20.0 |
| 12 | 22.5 | 33.0 | -- | -- | -- | 22.0 | 33.0 | -- | -- | 21.5 | |
| GROUNDWATER ELEVATION BELOW PILE TIP | < 6 | 7.5 | 3.0 | 8.0 | 8.0 | 8.0 | 11.0 | 10.0 | 9.5 | 9.5 | 9.5 |
| | 7 | 8.5 | 4.5 | 9.5 | 9.5 | 9.5 | 12.0 | 12.0 | 10.5 | 10.5 | 10.5 |
| | 8 | 10.0 | 6.5 | 10.5 | 10.5 | 10.5 | 12.5 | 14.0 | 11.5 | 11.5 | 11.5 |
| | 9 | 11.0 | 9.5 | -- | 12.0 | 12.0 | 13.5 | 16.5 | -- | 12.5 | 12.5 |
| | 10 | 12.5 | 13.0 | -- | -- | 13.5 | 14.0 | 19.5 | -- | 13.5 | 13.5 |
| | 11 | 13.5 | 17.0 | -- | -- | 14.5 | 15.0 | 22.5 | -- | -- | 14.5 |
| 12 | 15.0 | 21.5 | -- | -- | 16.0 | 16.0 | 25.5 | -- | -- | 15.5 | |

MINIMUM REQUIRED EMBEDMENT AND SECTION MODULUS

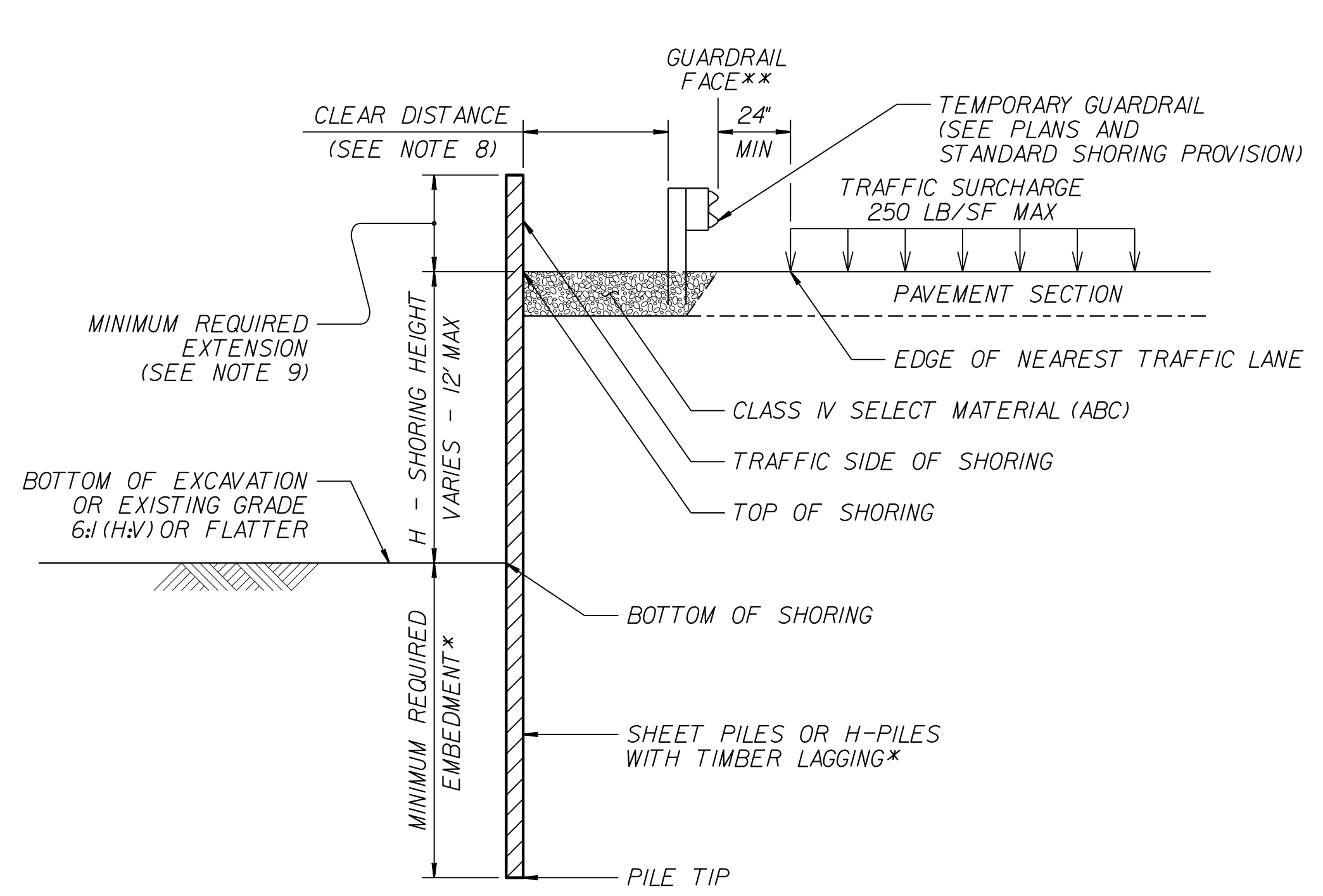
***DO NOT USE H-PILES WITH TIMBER LAGGING FOR GROUNDWATER CONDITION, SHORING HEIGHT AND H-PILE SIZE SHOWN IF MINIMUM REQUIRED EMBEDMENT IS "--".**

NOTES:

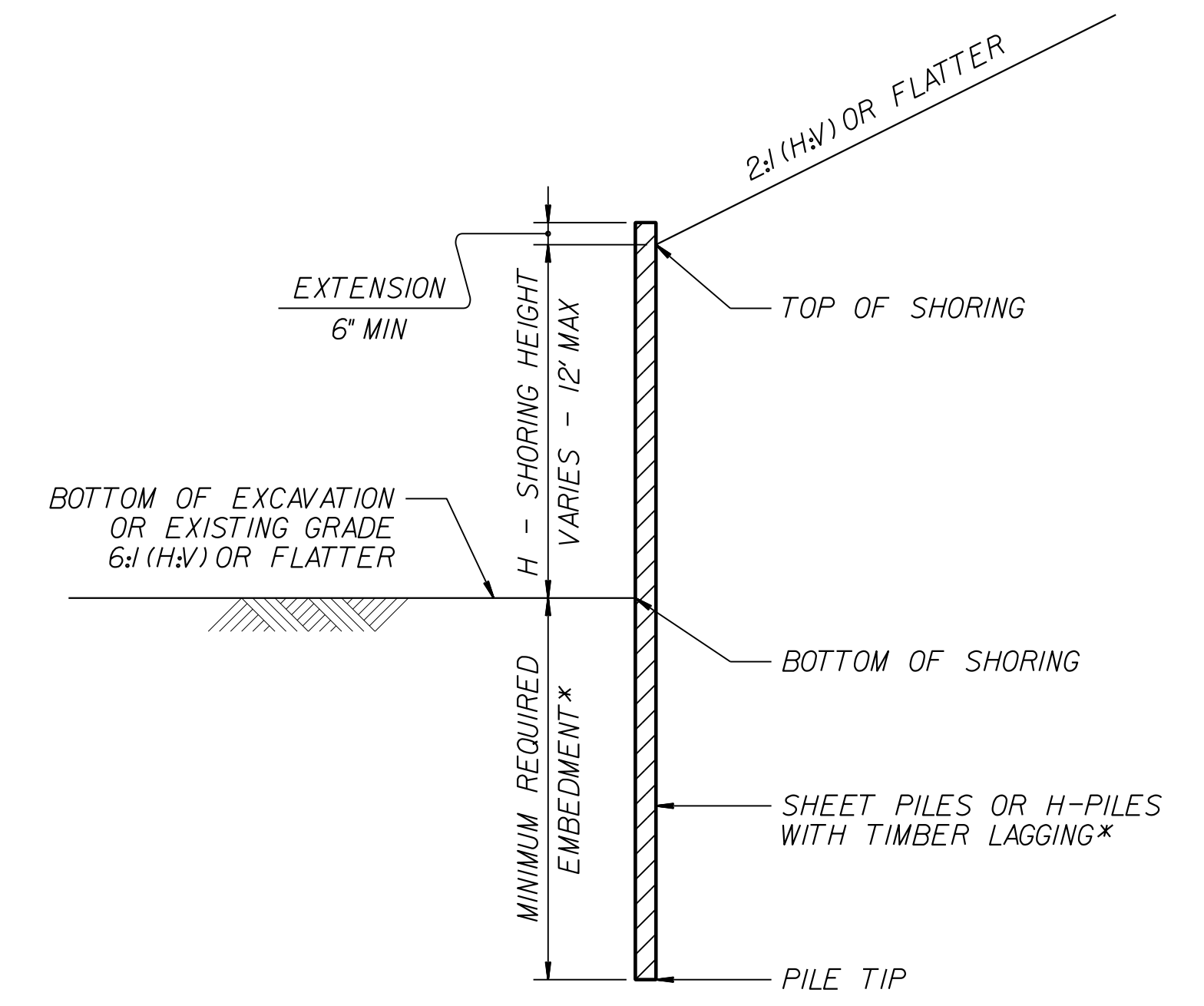
- AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING AS NOTED IN THE PLANS.
- FOR STANDARD TEMPORARY SHORING, SEE STANDARD SHORING PROVISION.
- STANDARD TEMPORARY SHORING IS BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
UNIT WEIGHT, $\gamma = 120$ LB/CF
FRICTION ANGLE, $\phi = 30$ DEGREES
COHESION, $c = 0$ LB/SF
- DO NOT USE STANDARD TEMPORARY SHORING IF ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE.
- DO NOT USE STANDARD TEMPORARY SHORING WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS WITHIN THE EMBEDMENT DEPTH.
- USE GROUNDWATER ELEVATION NOTED IN THE PLANS. IF NO GROUNDWATER ELEVATION IS SHOWN IN THE PLANS, USE "GROUNDWATER ELEVATION BETWEEN BOTTOM OF SHORING AND PILE TIP" FOR GROUNDWATER CONDITION. DO NOT USE STANDARD TEMPORARY SHORING IF GROUNDWATER IS ABOVE BOTTOM OF SHORING.
- AT THE CONTRACTOR'S OPTION OR IF AVAILABLE CLEAR DISTANCE IS LESS THAN THE MINIMUM REQUIRED FOR CONCRETE BARRIER, SET BARRIER NEXT TO AND UP AGAINST TRAFFIC SIDE OF PILES AND USE "SURCHARGE CASE WITH TRAFFIC IMPACT".
- AT THE CONTRACTOR'S OPTION OR IF AVAILABLE CLEAR DISTANCE IS LESS THAN 4' FOR TEMPORARY GUARDRAIL, ATTACH GUARDRAIL TO TRAFFIC SIDE OF PILES AS SHOWN IN THE PLANS AND USE "SURCHARGE CASE WITH TRAFFIC IMPACT".
- MINIMUM REQUIRED EXTENSION IS 6" FOR "SLOPE OR SURCHARGE CASE WITH NO TRAFFIC IMPACT" AND 32" FOR "SURCHARGE CASE WITH TRAFFIC IMPACT".
- MINIMUM REQUIRED EMBEDMENT FOR H-PILES WITH TIMBER LAGGING IS BASED ON DRIVEN H-PILES AT MAXIMUM 6' SPACING. AT THE CONTRACTOR'S OPTION, EMBEDMENT DEPTHS MAY BE REDUCED BY 25% FOR DRILLED-IN H-PILES.
- SUBMIT A "STANDARD TEMPORARY SHORING SELECTION FORM" AT LEAST 7 DAYS BEFORE STARTING TEMPORARY SHORING CONSTRUCTION. UP TO 3 SHORING LOCATIONS MAY BE INCLUDED ON EACH FORM. STANDARD SHORING SELECTION FORMS ARE AVAILABLE FROM:
connect.ncdot.gov/resources/Geological/Pages/Geotech_Forms_Details.aspx
- CONTACT THE ENGINEER IF PILES DO NOT ATTAIN THE MINIMUM REQUIRED EMBEDMENT.



CONCRETE BARRIER
****TOP OF SHORING = EDGE OF PAVEMENT**



TEMPORARY GUARDRAIL
****GUARDRAIL FACE = EDGE OF PAVEMENT**



STANDARD TEMPORARY SHORING (SLOPE CASE)
***SEE TABLE ABOVE.**

STANDARD TEMPORARY SHORING (SURCHARGE CASE)
***SEE TABLE ABOVE.**



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

STANDARD DETAIL NO. 1801.01

STANDARD TEMPORARY SHORING

12/06/07

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

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.
 U-5104 3B-1

SUMMARY OF EARTHWORK

| STATION | STATION | UNCL. EXCAV. | EMBANK. +% | BORROW | WASTE |
|--|----------------|--------------|------------|--------|-------|
| -L- 10+28.80 | -L- 45+43.75 | 2125 | 1778 | | 347 |
| -Y2- 10+90.00 | -Y2- 12+00.00 | 63 | 20 | | 43 |
| -Y3- 7+70.00 | -Y3- 12+00.00 | 45 | 21 | | 24 |
| -Y4- 11+30.12 | -Y4- 12+28.09 | 4 | 2 | | 2 |
| -Y5- 10+91.62 | -Y5- 12+30.85 | 18 | 6 | | 12 |
| -Y6- 10+98.63 | -Y6- 12+28.09 | 1 | | | 1 |
| -DR1- 10+10.70 | -DR1- 10+98.27 | 113 | | | 113 |
| SUBTOTALS: | | 2369 | 1826 | | 543 |
| TOTALS: | | 2369 | 1826 | | 543 |
| Loss due to CL & GR | | -1555 | | 1555 | |
| Waste in Lieu of Borrow | | | | -543 | -543 |
| PROJECT TOTALS: | | 814 | 1826 | 1012 | |
| Est. 5% to replace Topsoil At Borrow Pit | | | | 51 | |
| GRAND TOTALS: | | 814 | | 1063 | |
| SAY: | | 900 | | 1100 | |

SELECT GRANULAR MATERIAL = 100 CUBIC YARDS (CONTINGENCY)
 PER DIVISION RECOMMENDATION, ESTIMATED 200 CUBIC YARDS OF UNDERCUT TO BE USED AT THE DISCRETION OF THE RESIDENT ENGINEER.

Approximate quantities only. Clearing and Grubbing, Unclassified Excavation, Borrow Excavation, Fine Grading, and Removal of Asphalt Pavement will be paid at the Lump Sum price for "Grading".

PAVEMENT REMOVAL SUMMARY

| SURVEY LINE | STATION | STATION | LOCATION LT/RT/CL | YD ² |
|-------------|---------|---------|-------------------|-----------------|
| -L- | 22+57 | 22+79 | LT | 3 |
| -L- | 23+18 | 23+50 | LT | 50 |
| -L- | 23+70 | 24+09 | LT | 6.50 |
| TOTAL: | | | | 59.50 |
| SAY: | | | | 60 |

SUMMARY OF SUBSURFACE DRAINAGE

| SURVEY LINE | STATION | STATION | LOCATION LT/RT/CL | Drain Type * UD/BD/SD | LF |
|-------------|---------|---------|-------------------|--------------------------|-----|
| CONTINGENCY | | | | SD | 200 |
| TOTAL LF: | | | | | 200 |
| SAY: | | | | | |

*UD = Underdrain
 *BD = Blind Drain
 *SD = Subsurface Drain

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

| SURVEY LINE | STATION | STATION | Aggregate type ASU/AST | Aggregate Thickness INCHES | Shallow Undercut CY | Class IV Subgrade Stabilization TONS | Geotextile for Soil Stabilization SY | Geotextile for Soil Stabilization SY | Geotextile for Soil Stabilization SY |
|-------------------|---------|---------|------------------------|----------------------------|---------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| CONTINGENCY | | | ASU | | 100 | 200 | 200 | | |
| TOTAL CY/TONS/SY: | | | | | 100 | 200 | 200* | 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.

SUMMARY OF REPLACEMENT OF CONCRETE STEPS

| SURVEY LINE | STATION | STATION | LOCATION LT/RT/CL | CY |
|-------------|---------|---------|-------------------|------|
| -L- | 17+66 | | LT | 1.8 |
| -L- | 24+62 | | LT | 1.0 |
| -L- | 25+34 | | LT | 0.8 |
| -L- | 27+16 | | LT | 0.6 |
| -L- | 33+33 | | LT | 0.6 |
| -L- | 15+56 | | RT | 1.0 |
| -L- | 16+65 | | RT | 0.6 |
| -L- | 34+83 | | RT | 1.2 |
| -L- | 37+00 | | RT | 1.8 |
| TOTAL: | | | | 9.4 |
| SAY: | | | | 10.0 |

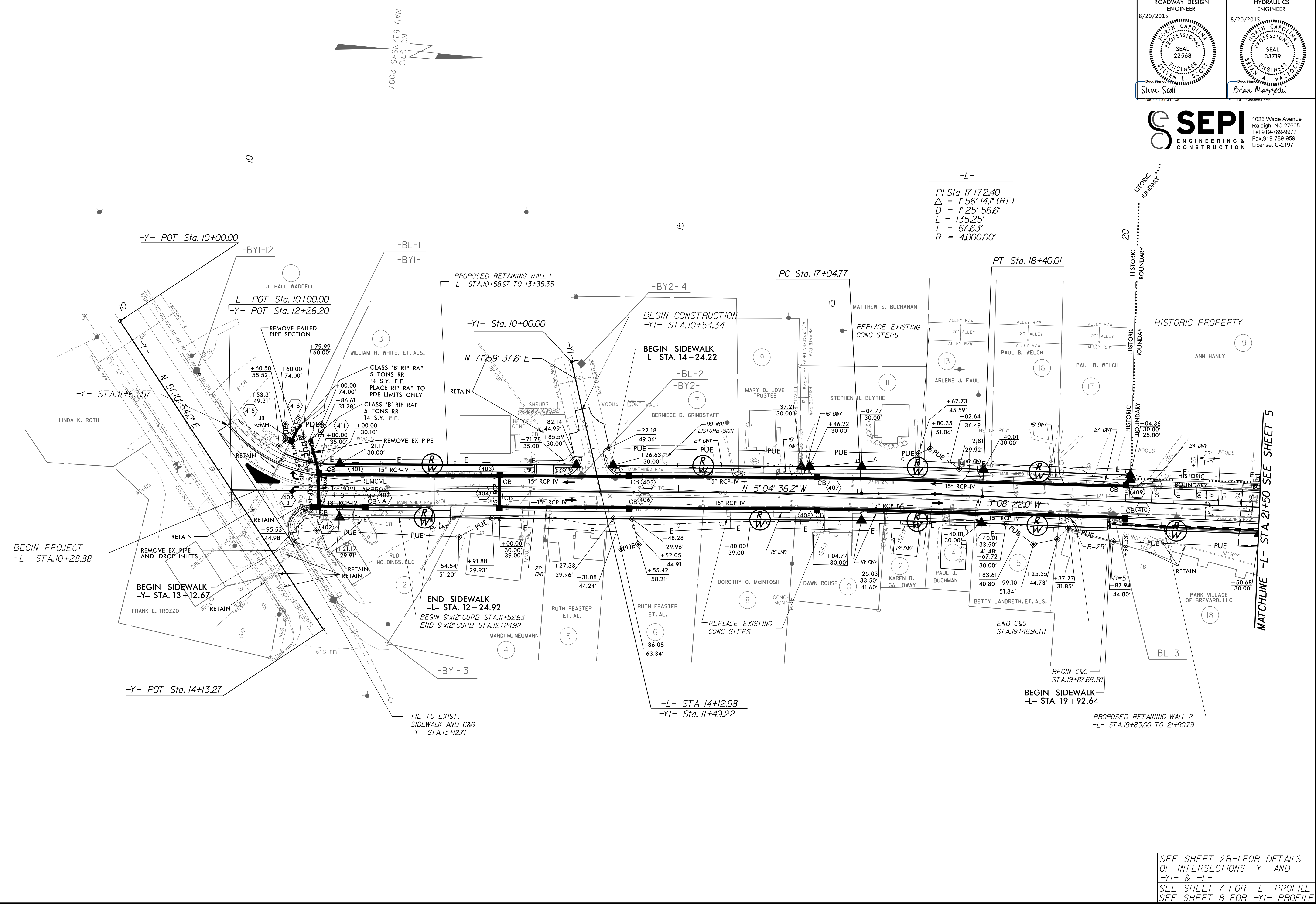
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 USER: jlopez

| | | | |
|--|--|----------------------------------|--|
| PROJECT REFERENCE NO. U-5104 | | SHEET NO. 4 | |
| ROADWAY DESIGN ENGINEER 8/20/2015 | | HYDRAULICS ENGINEER 8/20/2015 | |
| | | | |
| Steve Scott | | Brian Margolici | |
| | | | |
| 1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197 | | | |

8/17/09

8/17/2015 05:04_r.dwg_psh04.dgn

REVISIONS



-L-
 PI Sta. 17+72.40
 $\Delta = 1'56''14.1''(RT)$
 $D = 1'25''56.6''$
 $L = 135.25'$
 $T = 67.63'$
 $R = 4,000.00'$

SEE SHEET 2B-1 FOR DETAILS OF INTERSECTIONS -Y- AND -YI- & -L-
 SEE SHEET 7 FOR -L- PROFILE
 SEE SHEET 8 FOR -YI- PROFILE

| | | | |
|--------------------------------------|--|--|--|
| PROJECT REFERENCE NO. U-5104 | | SHEET NO. 5 | |
| ROADWAY DESIGN ENGINEER 8/14/2015 | | HYDRAULICS ENGINEER 8/14/2015 | |
| | | | |
| | | 1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197 | |

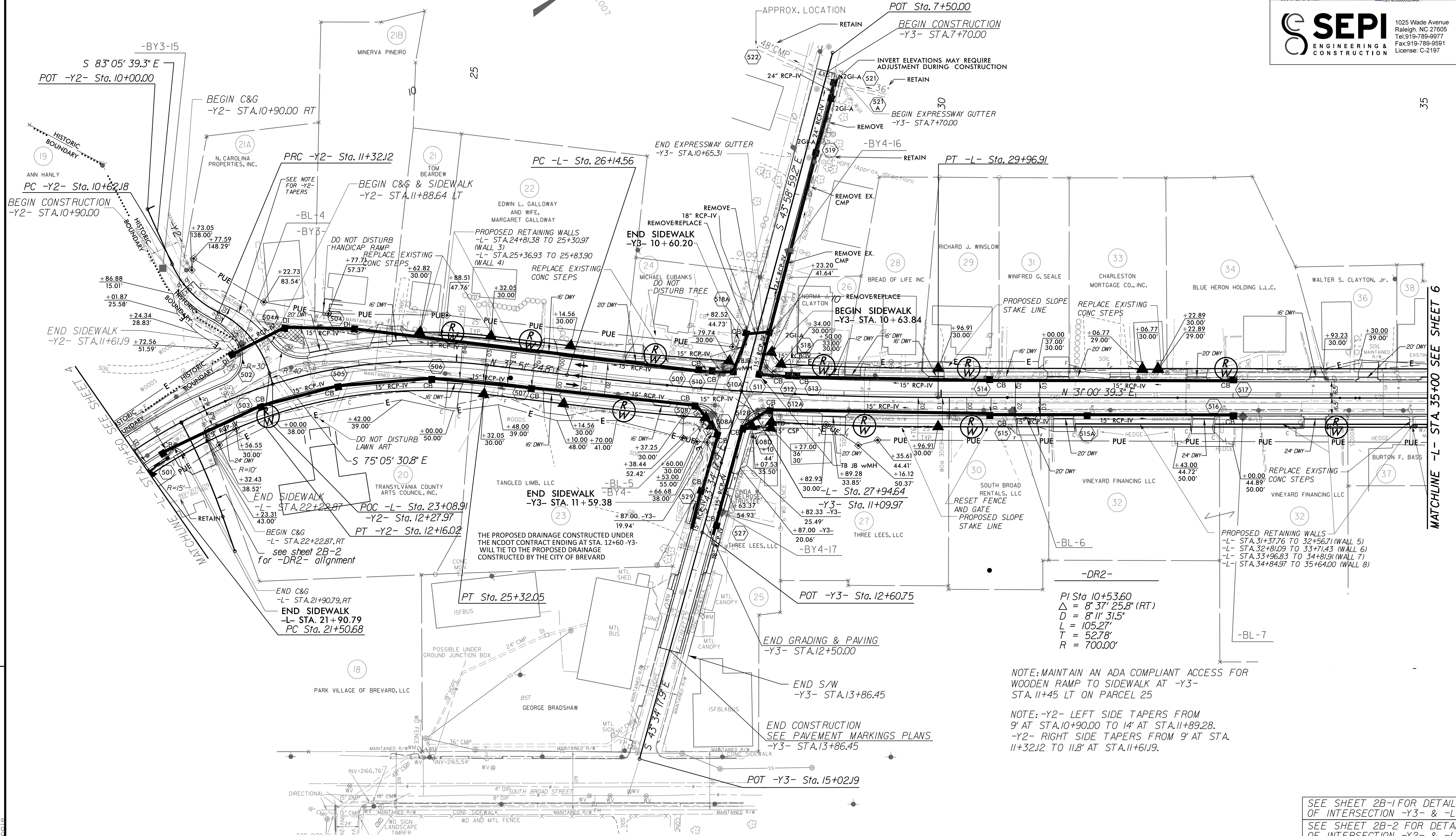
-Y2-
 PI Sta 10+98.64
 $\Delta = 40^{\circ} 04' 22.9"$ (LT)
 $D = 57' 17" 44.8"$
 $L = 69.94'$
 $T = 36.47'$
 $R = 100.00'$

-DR2-
 PI Sta 11+76.72
 $\Delta = 48^{\circ} 04' 31.3"$ (RT)
 $D = 57' 17" 44.8"$
 $L = 83.91'$
 $T = 44.60'$
 $R = 100.00'$

-L-
 PI Sta 10+53.60
 $\Delta = 8^{\circ} 37' 25.8"$ (RT)
 $D = 8' 11' 31.5"$
 $L = 105.27'$
 $T = 52.78'$
 $R = 700.00'$

-L-
 PI Sta 23+49.94
 $\Delta = 40^{\circ} 59' 46.8"$ (RT)
 $D = 10' 44' 58.8"$
 $L = 381.37'$
 $T = 199.26'$
 $R = 533.00'$

-L-
 PI Sta 28+05.97
 $\Delta = 6^{\circ} 50' 45.5"$ (LT)
 $D = 1' 47' 25.8"$
 $L = 382.35'$
 $T = 191.40'$
 $R = 3,200.00'$



REVISIONS

MATCHLINE -L- STA. 35+00 SEE SHEET 6

NOTE: MAINTAIN AN ADA COMPLIANT ACCESS FOR WOODEN RAMP TO SIDEWALK AT -Y3- STA. 11+45 LT ON PARCEL 25

NOTE: -Y2- LEFT SIDE TAPERS FROM 9' AT STA. 10+90.00 TO 14' AT STA. 11+89.28, -Y2- RIGHT SIDE TAPERS FROM 9' AT STA. 11+32.12 TO 11.8' AT STA. 11+61.9.

SEE SHEET 2B-1 FOR DETAIL OF INTERSECTION -Y3- & -L-
 SEE SHEET 2B-2 FOR DETAIL OF INTERSECTION -Y2- & -L-

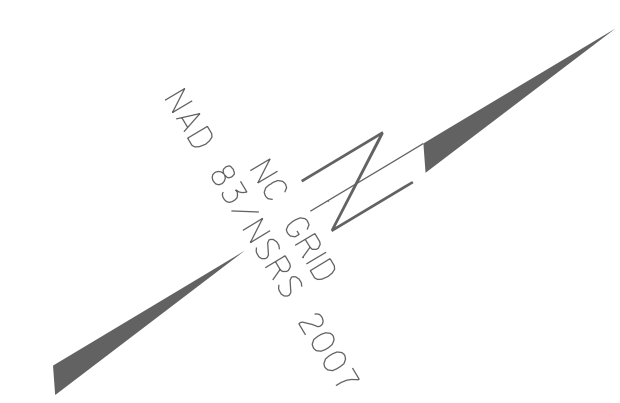
SEE SHEET 7 FOR -L- PROFILE
 SEE SHEET 8 FOR -Y2- & -Y3- PROFILE
 SEE SHEET 9 FOR -DR1- PROFILE

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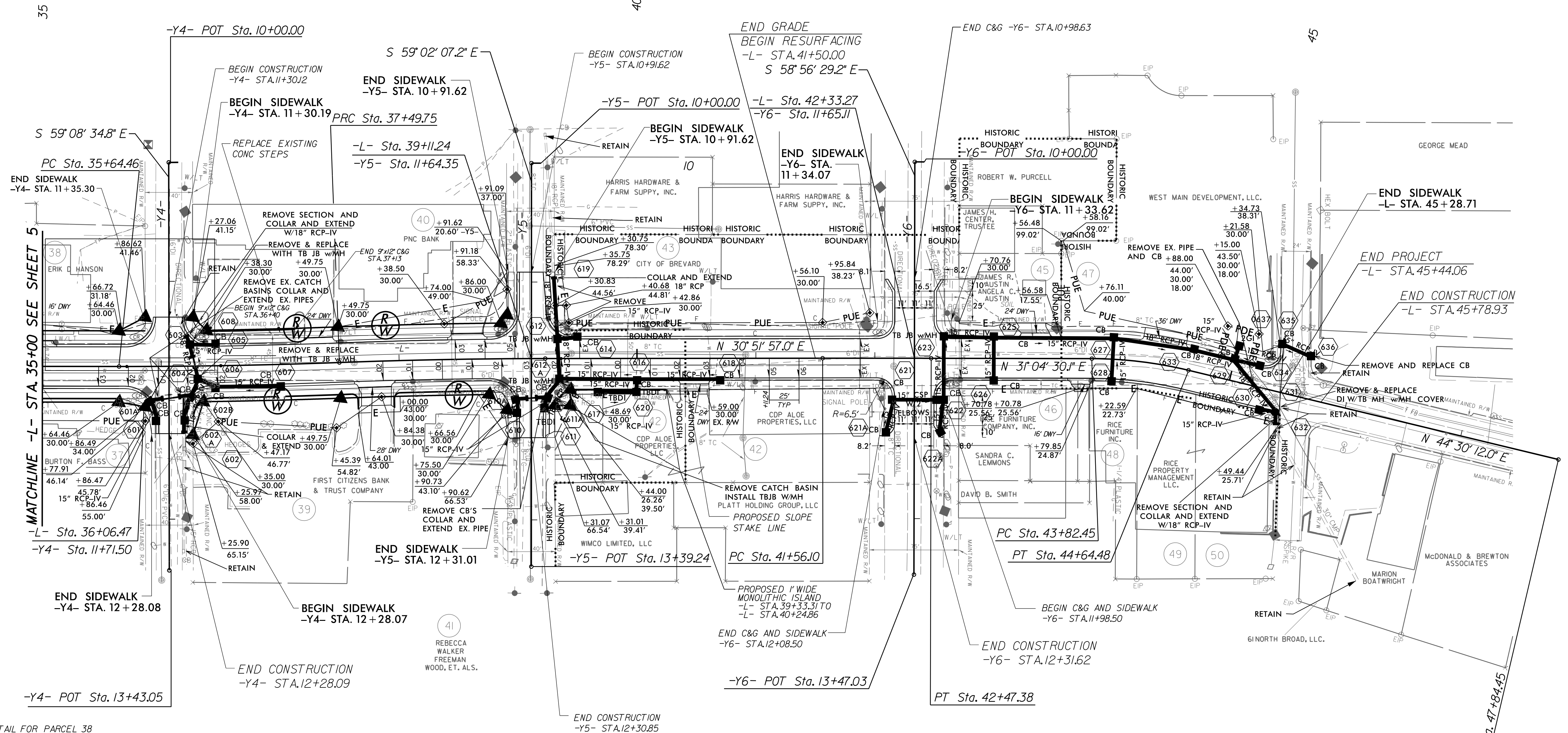
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| | | | |
|--|--|----------------------------------|--|
| PROJECT REFERENCE NO. U-5104 | | SHEET NO. 6 | |
| ROADWAY DESIGN ENGINEER 8/14/2015 | | HYDRAULICS ENGINEER 8/14/2015 | |
| | | | |
| | | | |
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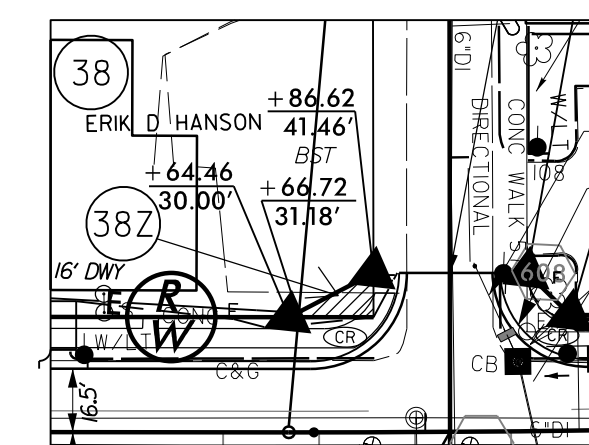
| | | | |
|---|---|---|--|
| PI Sta 36+57.11 $\Delta = 2'12"42.3"$ (LT) $D = 1'11"37.2"$ $L = 185.29'$ $T = 92.66'$ $R = 4,800.00'$ | PI Sta 38+36.32 $\Delta = 2'04"00.0"$ (RT) $D = 1'11"37.2"$ $L = 173.14'$ $T = 86.58'$ $R = 4,800.00'$ | PI Sta 42+01.74 $\Delta = 0'12"33.1"$ (RT) $D = 0'13"45.1"$ $L = 91.28'$ $T = 45.64'$ $R = 25,000.00'$ | PI Sta 44+23.66 $\Delta = 13'25"41.9"$ (RT) $D = 16'22"12.8"$ $L = 82.03'$ $T = 41.20'$ $R = 350.00'$ |
|---|---|---|--|



REVISIONS



Z CLAIM DETAIL FOR PARCEL 38



NOTE: RETAINING WALLS
 -L- STA. 36+26.77 RT -L- STA. 36+95.92 RT (WALL 9)
 -L- STA. 37+03.59 RT -L- STA. 37+64.42 RT (WALL 10)
 -L- STA. 37+95.06 RT -L- STA. 38+79.80 RT (WALL 11)

SEE SHEET 2B-1 FOR DETAILS OF INTERSECTIONS -Y4- AND -Y5- & -L-
 SEE SHEET 2B-2 FOR DETAILS OF INTERSECTION -Y6- & -L-
 SEE SHEETS 7 & 8 FOR -L- PROFILE
 SEE SHEET 9 FOR -Y4- & -Y5- PROFILE

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5/28/15

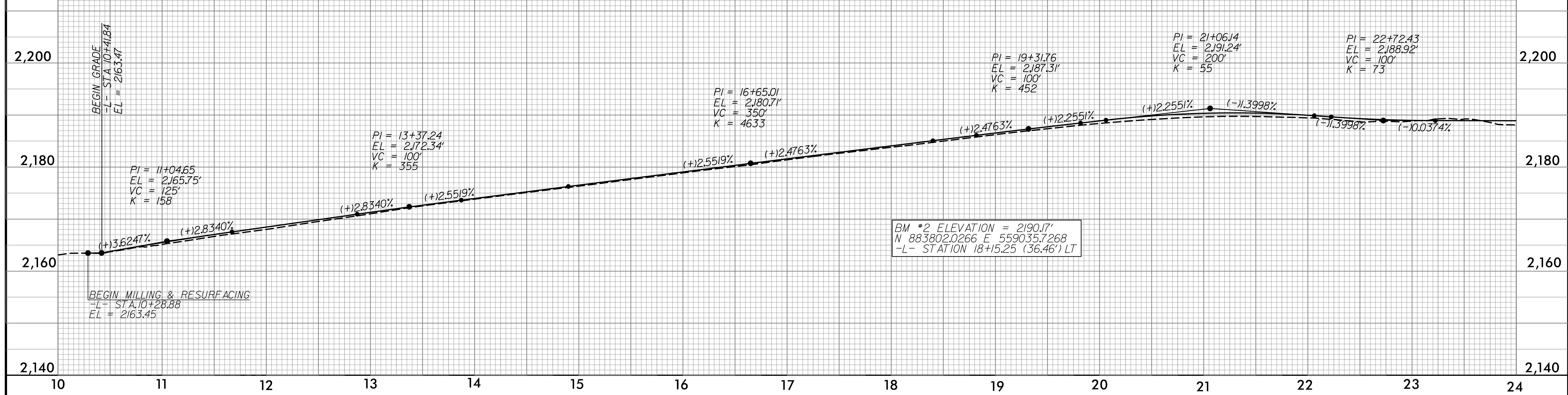


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License: C-2197

| | |
|---|-------------------------------------|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. 7 |
| ROADWAY DESIGN ENGINEER 8/14/2015 | HYDRAULICS ENGINEER 8/14/2015 |
| | |
| DocuSign By: Steve Scott | DocuSign By: Brian Marshall |

BM #1 ELEVATION = 2162.02'
N 883881.7769 E 558163.1503
-Y- STATION 11+70.38 (35.46') RT

-L-



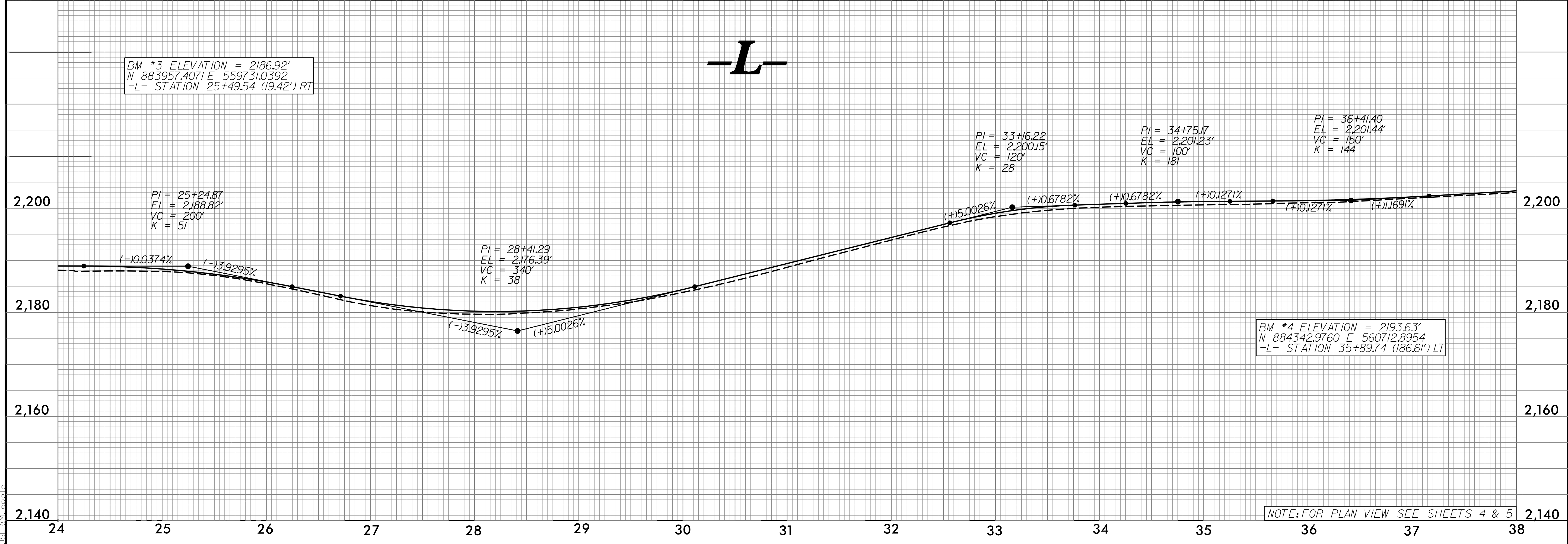
BM #2 ELEVATION = 2190.17'
N 883802.0266 E 559035.7268
-L- STATION 18+15.25 (36.46') LT

BEGIN MILLING & RESURFACING
-L- STA. 10+28.88
EL = 2163.45

BEGIN GRADE
-L- STA. 10+41.84
EL = 2163.47

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11:58:10 am

-L-



BM #3 ELEVATION = 2186.92'
N 883957.4071 E 559731.0392
-L- STATION 25+49.54 (19.42') RT

BM #4 ELEVATION = 2193.63'
N 884342.9760 E 560712.8954
-L- STATION 35+89.74 (186.6') LT

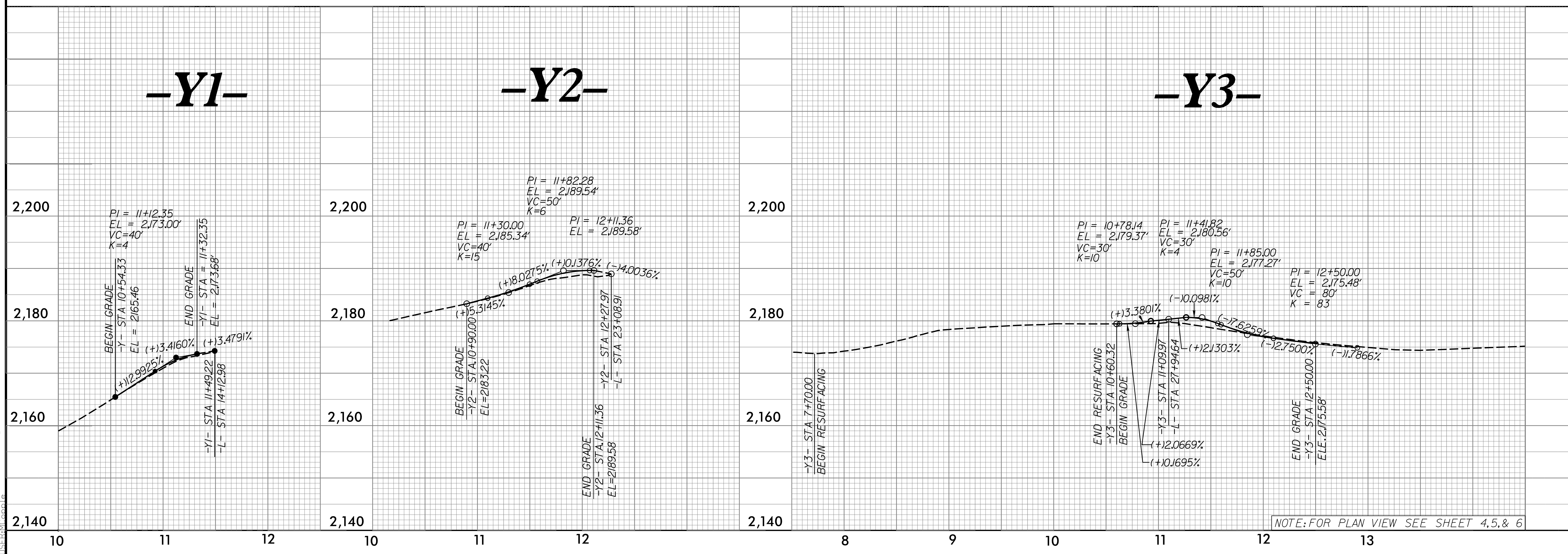
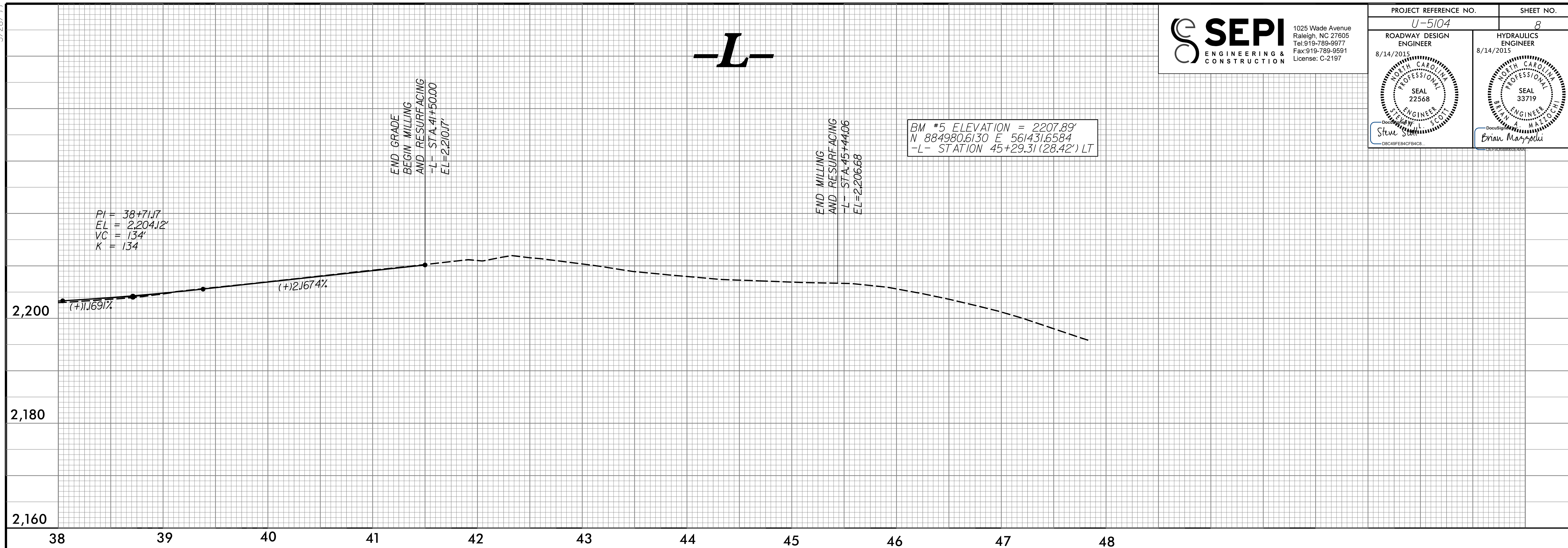
NOTE: FOR PLAN VIEW SEE SHEETS 4 & 5

5/28/15



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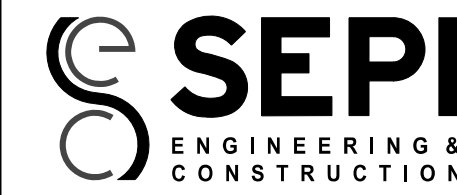
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| PROJECT REFERENCE NO. U-5104 | | SHEET NO. 8 | |
| ROADWAY DESIGN ENGINEER 8/14/2015 | | HYDRAULICS ENGINEER 8/14/2015 | |
| | | | |
| Steve Scott | | Brian Marzulli | |



NOTE: FOR PLAN VIEW SEE SHEET 4,5,& 6

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5/28/15

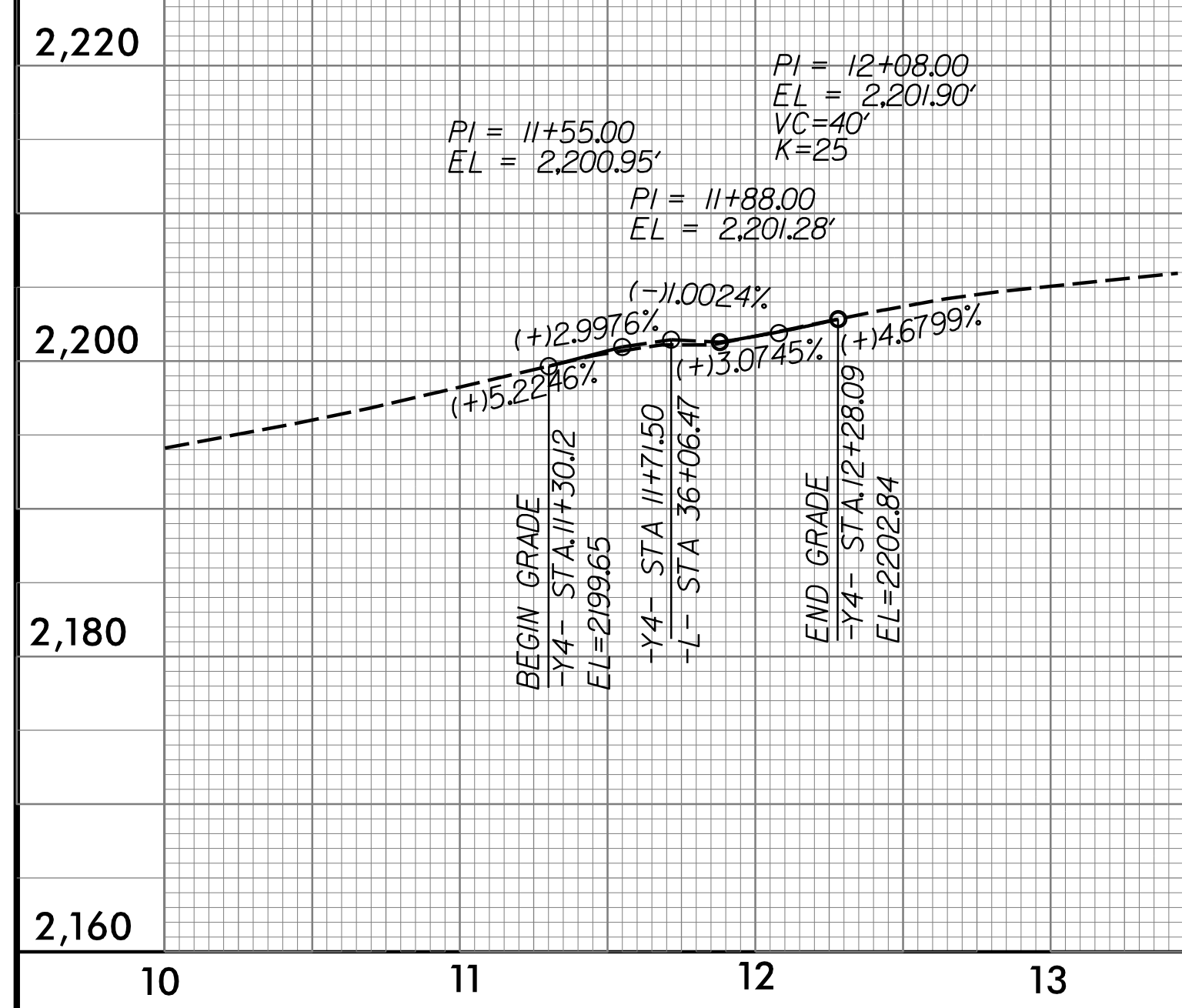


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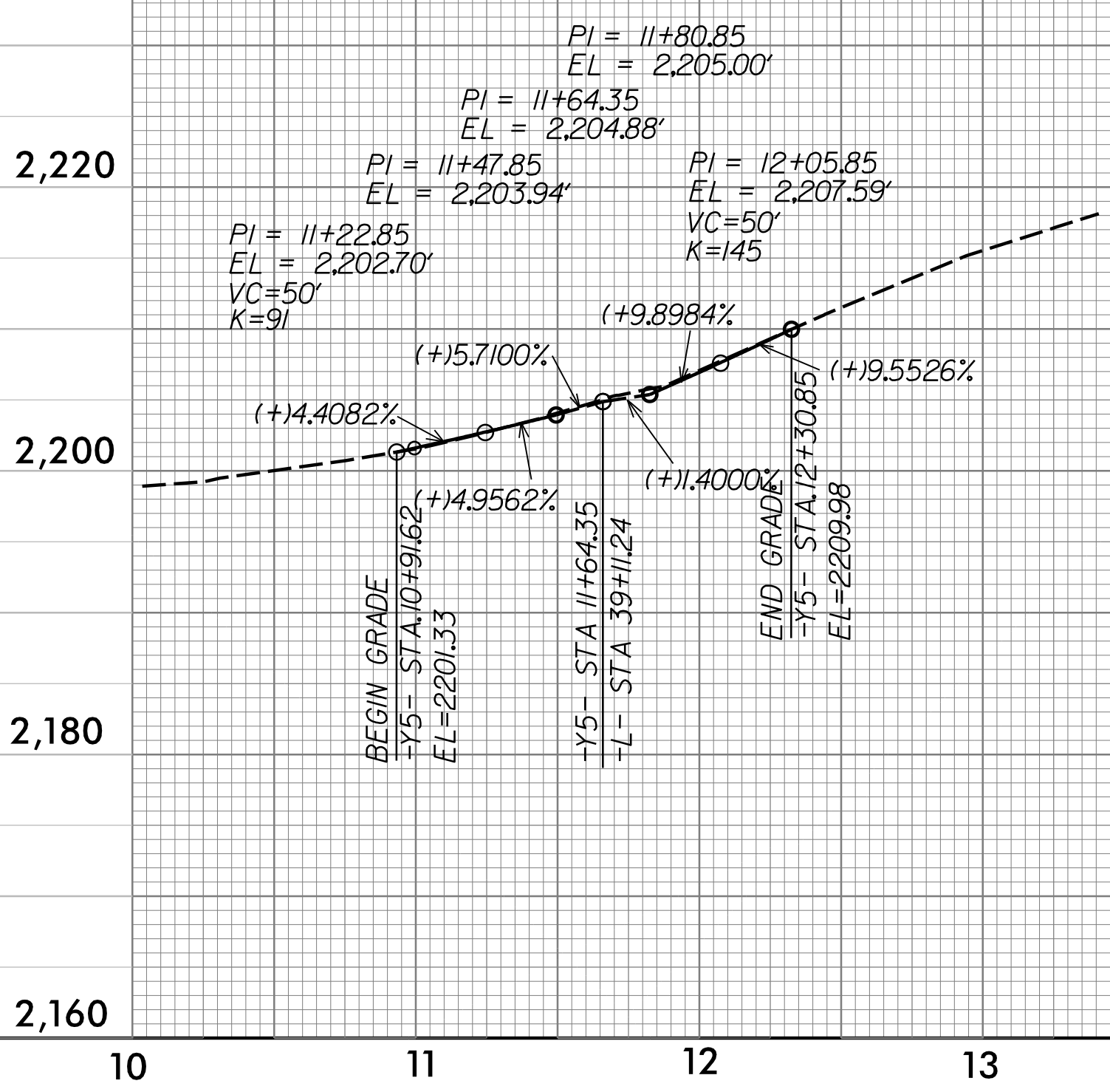
| | |
|--|----------------------------------|
| PROJECT REFERENCE NO. U-5104 | SHEET NO. 9 |
| ROADWAY DESIGN ENGINEER 8/14/2015 | HYDRAULICS ENGINEER 8/14/2015 |
| | |
| DocuSign Steve Scott | DocuSign Brian Mazrochi |

-Y4-

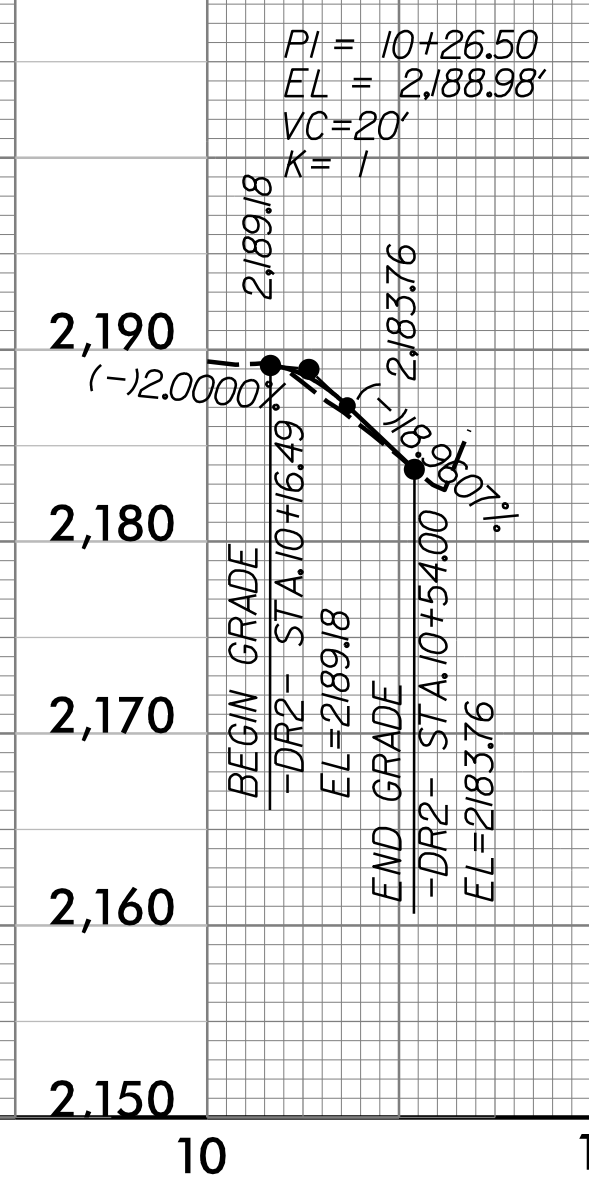
BM #4 ELEVATION = 2193.63'
N 884342.9760 E 560712.8954
-Y4- STATION 10+00.00 (17.20') RT



-Y5-



-DR2-



NOTE: FOR PLAN VIEW SEE SHEETS 5 & 6

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11:58:10