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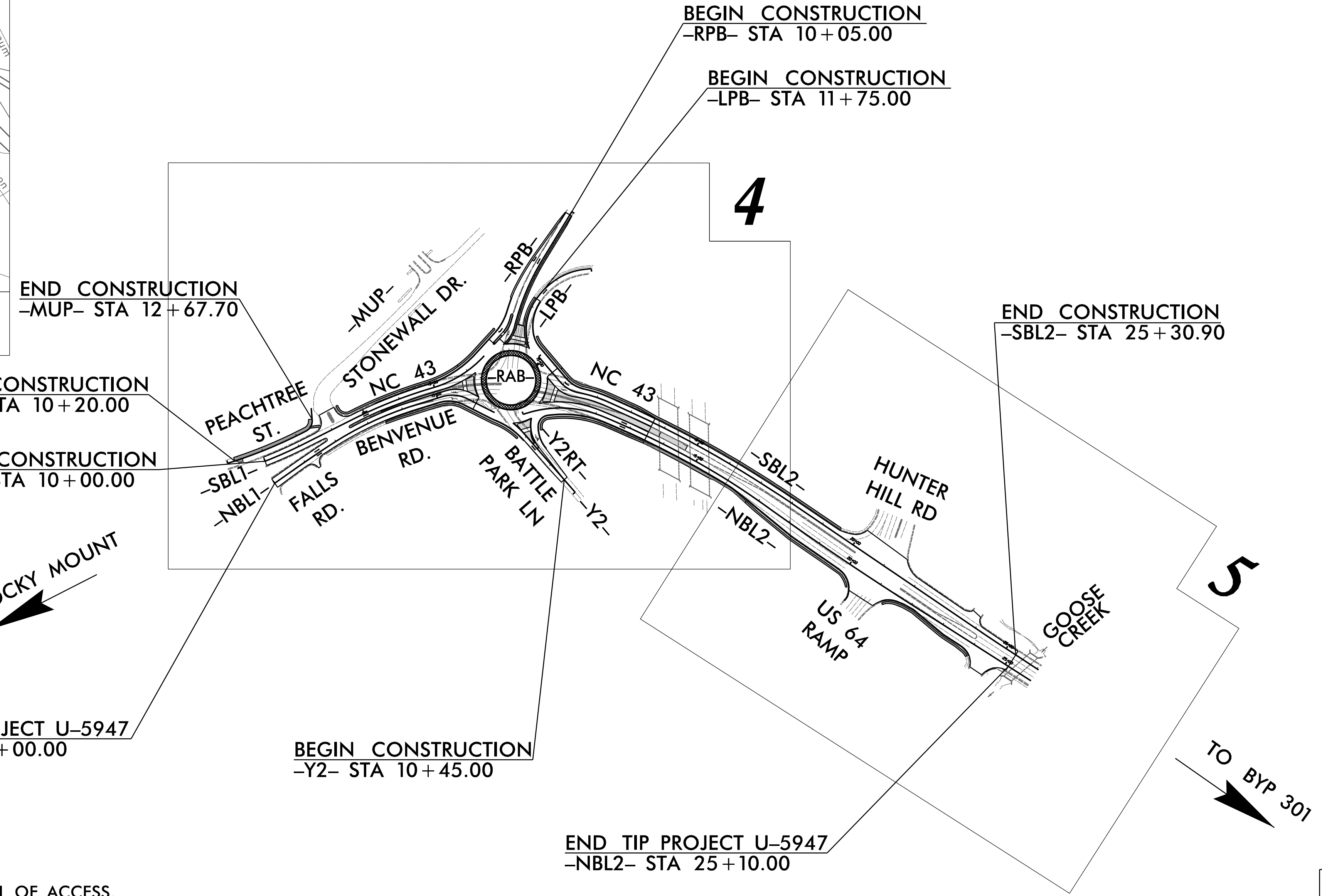
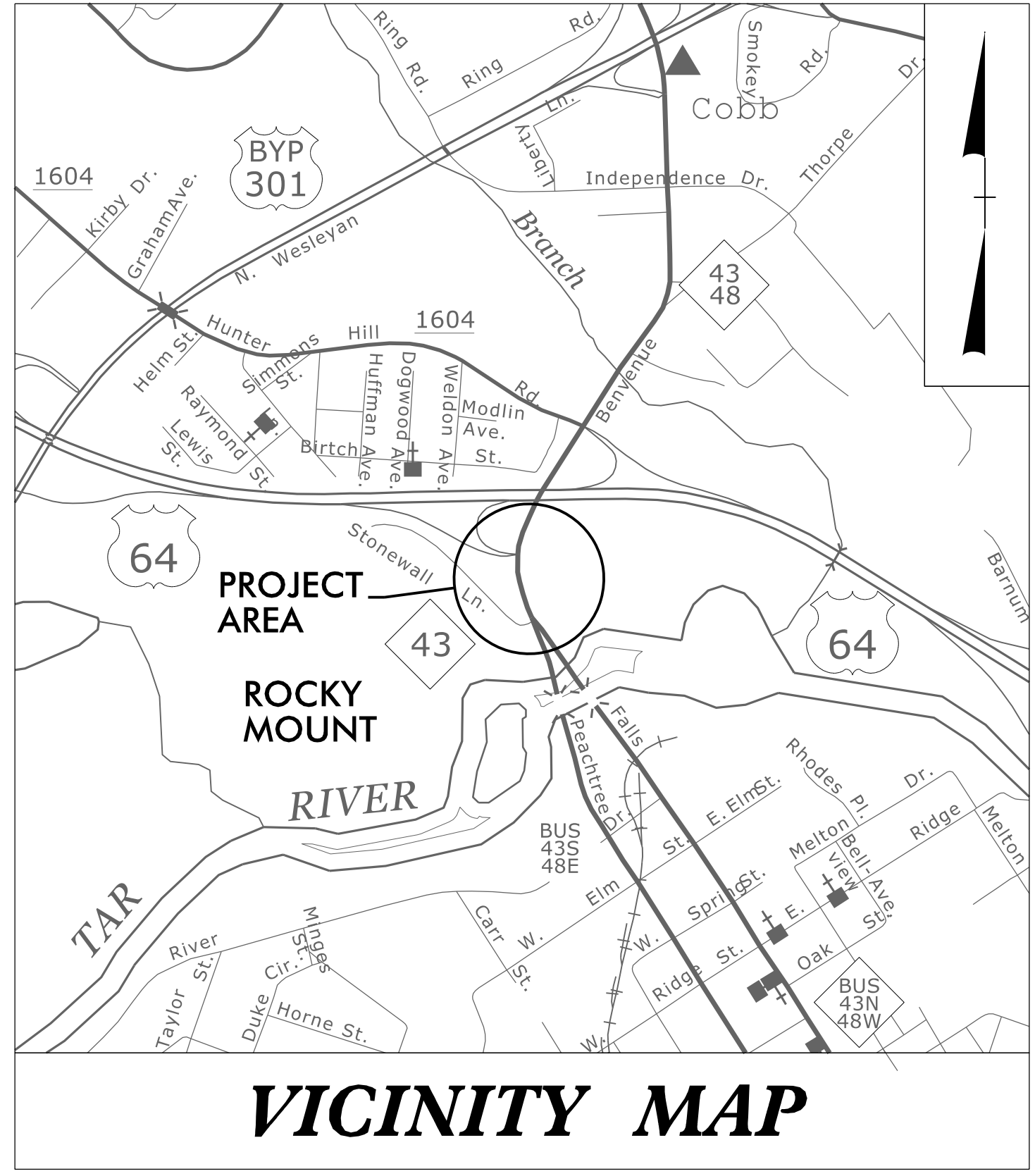
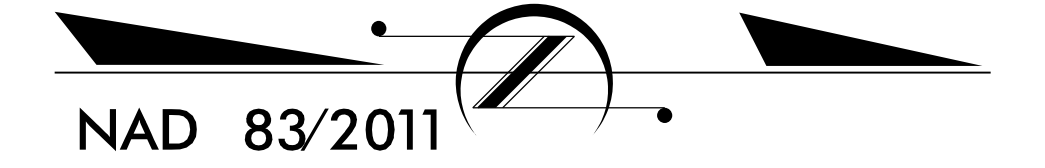
09_08/2019

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS **NASH COUNTY**

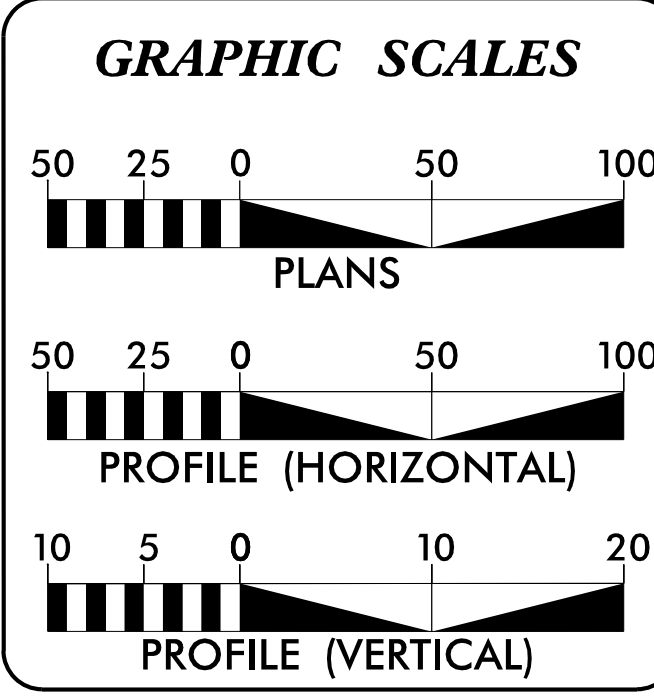
LOCATION: INTERCHANGE OF US 64 BYPASS & NC 43 (BENVENUE ROAD)
TYPE OF WORK: GRADING, DRAINAGE, AND PAVING

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|--------------|--------------|
| N.C. | U-5947 | 1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 46884.1.1 | - | P.E. | |
| 46884.2.1 | - | ROW & UTIL | |
| 46884.3.1 | - | CONSTRUCTION | |
| | | | |
| | | | |
| | | | |



PORTIONS OF THIS PROJECT HAVE PARTIAL AND/OR FULL CONTROL OF ACCESS.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

| | |
|---------------|----------------|
| ADT 2022 = | 17500 |
| ADT 2040 = | 19000 |
| K = | 9 % |
| D = | 55 % |
| T = | 3 % * |
| V = | 50 MPH |
| * TTST = | 1% DUAL 2% |
| FUNC CLASS = | MINOR ARTERIAL |
| REGIONAL TIER | |

PROJECT LENGTH

| | | |
|---|---|-------------|
| LENGTH ROADWAY TIP PROJECT U-5947 | = | 0.488 MILES |
| TOTAL LENGTH TIP PROJECT U-5947 | = | 0.488 MILES |
| PROJECT LENGTH DETERMINED BY -NBL1-, -NBL2-, AND -RAB- | | |
| RUSSELL BROADWELL, PE NCDOT CONTACT, DIVISION 4 | | |

Prepared in the Office of:

320 Executive Ct.
Hillsborough, NC 27278-8551
Voice: (919) 732-3883
Fax: (919) 732-6776
www.summitde.com

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: SEPTEMBER 3, 2021
LETTING DATE: APRIL 26, 2022

BRANDON W. JOHNSON, PE
PROJECT ENGINEER

FAITH E. JAHNKE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

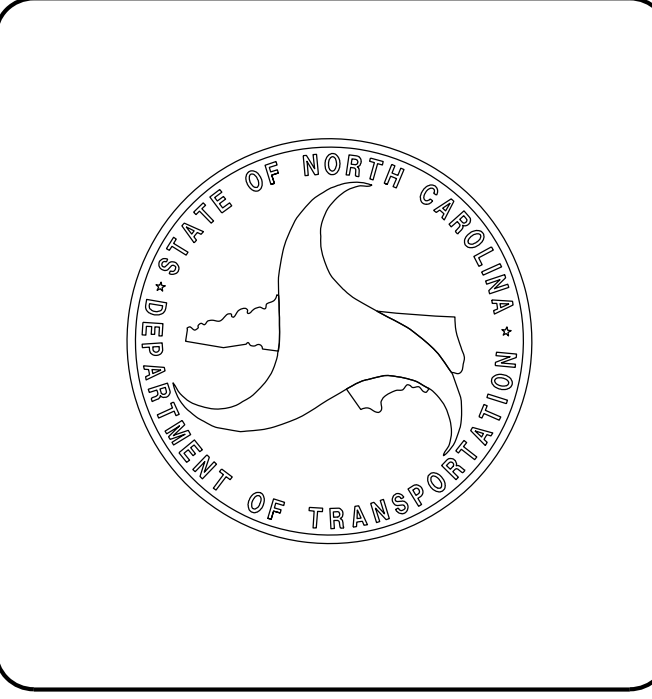
3/9/2022

DocuSigned by:
Jason M. Patkoski
SEAL 046226
JASON M. PATKOSKI
P.E.

ROADWAY DESIGN ENGINEER

3/8/2022

DocuSigned by:
Brandon W. Johnson
SEAL 034371
BRANDON W. JOHNSON
P.E.

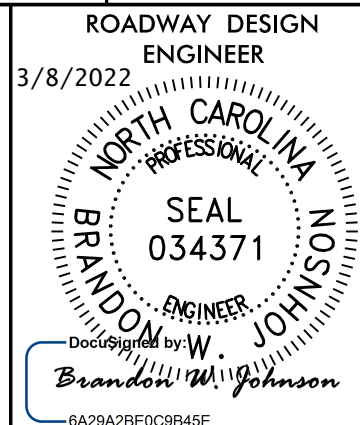
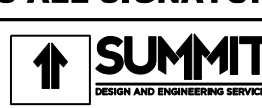


TIP PROJECT: U-5947

CONTRACT: DD00379

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spencer.merritt

8/17/99

| | |
|--|---|
| PROJECT REFERENCE NO. <i>U-5947</i> | SHEET NO. <i>1A</i> |
| ROADWAY DESIGN ENGINEER 3/8/2022  SEAL 034371 BRANDON W. JOHNSON 6A29A2B2E0C9B45E | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of: |  NC FIRM LICENSE No. P-0339 420 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) |

| | | | |
|---------------------|---|--|-------------------------|
| | INDEX OF SHEETS | | EFF. 01-16-2018 REV. |
| | | 2018 ROADWAY ENGLISH STANDARD DRAWINGS | |
| SHEET NUMBER | SHEET | 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: | |
| 1 | TITLE SHEET | | |
| 1A | INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS | | |
| 1B | CONVENTIONAL SYMBOLS | | |
| 2A-1 THRU 2A-4 | PAVEMENT SCHEDULE AND TYPICAL SECTIONS | | |
| 2B-1 THRU 2B-2 | ROADWAY DETAILS | | |
| 2D-1 | DRAINAGE DETAILS | | |
| 3B-1 | ROADWAY SUMMARIES | | |
| 3D-1 THRU 3D-3 | DRAINAGE SUMMARIES | | |
| 3G-1 | GEOTECH SUMMARIES | | |
| 4 THRU 8 | PLAN AND PROFILE SHEET | | |
| RW2C-1 THRU RW2C-3 | SURVEY CONTROL SHEETS | | |
| TMP-1 THRU TMP-10 | TRAFFIC MANAGEMENT PLANS | | |
| PMP-1 THRU PMP-3 | PAVEMENT MARKING PLANS | | |
| EC-1 THRU EC-7 | EROSION CONTROL PLANS | | |
| SIGN-1 THRU SIGN-5A | SIGNING PLANS | | |
| UD-1 THRU UD-3 | UTILITIES BY OTHERS PLANS | | |
| X-1 THRU X-1A | CROSS-SECTION SUMMARY SHEET | | |
| X-2 THRU X-30 | CROSS-SECTIONS | | |

| STD. NO. | TITLE |
|--|--|
| DIVISION 2 - EARTHWORK | |
| 200.03 | Method of Clearing - Method III |
| 225.02 | Guide for Grading Subgrade - Secondary and Local |
| 225.04 | Method of Obtaining Super-elevation - Two Lane Pavement |
| 225.05 | Method of Obtaining Super-elevation - Divided Highways |
| DIVISION 3 - PIPE CULVERTS | |
| 300.01 | Method of Pipe Installation |
| DIVISION 5 - SUBGRADE, BASES AND SHOULDERS | |
| 560.01 | Method of Shoulder Construction - High Side of Super-elevated Curve - Method I |
| DIVISION 6 - ASPHALT BASES AND PAVEMENTS | |
| 654.01 | Pavement Repairs |
| DIVISION 8 - INCIDENTALS | |
| 840.02 | Concrete Catch Basin - 12" thru 54" Pipe |
| 840.03 | Frame, Grates and Hood - for Use on Standard Catch Basin |
| 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 |
| 840.20 | Frames and Wide Slot Flat Grates |
| 840.24 | Frames and Narrow Slot Sag Grates |
| 840.26 | Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe |
| 840.27 | Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe |
| 840.31 | Concrete Junction Box - 12" thru 66" Pipe |
| 840.32 | Brick Junction Box - 12" thru 66" Pipe |
| 840.53 | Precast Manhole with Masonry Base - 12" thru 42" Pipe |
| 840.54 | Manhole Frame and Cover |
| 848.04 | Street Turnout |
| 848.05 | Curb Ramp - Proposed Curb & Gutter |
| 848.06 | Curb Ramp - Existing Curb & Gutter |
| 850.01 | Concrete Paved Ditches |
| 852.01 | Concrete Islands |
| 852.02 | Concrete Mountable Median - for Use with Rigid or Flexible Pavement |
| 852.06 | Method for Placement of Drop Inlets in Concrete Islands |
| 866.02 | Woven Wire Fence - with Wood Post |
| 876.02 | Guide for Rip Rap at Pipe Outlets |
| 876.04 | Drainage Ditches with Class 'B' Rip Rap |

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 III.

SUPERELEVATION:
 ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.05 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. 560.02

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.

STREET TURNOUT:
 STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADIUS 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.
 ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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

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

Note: Not to Scale

BOUNDARIES AND PROPERTY:

| | |
|---------------------------------------|-----------|
| State Line | ----- |
| County Line | ----- |
| Township Line | ----- |
| City Line | ----- |
| Reservation Line | ----- |
| Property Line | ----- |
| Existing Iron Pin (EIP) | ○ |
| Computed Property Corner | × |
| Existing Concrete 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 | ○ |
| Well | ○ |
| 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 & PROJECT CONTROL:

| | |
|--|-------|
| Primary Horiz Control Point | ----- |
| Primary Horiz and Vert Control Point | ----- |
| Secondary Horiz and Vert Control Point | ----- |
| Vertical Benchmark | ----- |
| Existing Right of Way Monument | △ |
| Proposed Right of Way Monument (Rebar and Cap) | ▲ |
| Proposed Right of Way Monument (Concrete) | ▲ |
| Existing Permanent Easement Monument | ◇ |
| Proposed Permanent Easement Monument (Rebar and Cap) | ◇ |
| Existing C/A Monument | ▲ |
| Proposed C/A Monument (Rebar and Cap) | ▲ |
| Proposed C/A Monument (Concrete) | ▲ |
| Existing Right of Way Line | ----- |
| Proposed Right of Way Line | ----- |
| Existing Control of Access Line | ----- |
| Proposed Control of Access Line | ----- |
| Proposed ROW and CA Line | ----- |
| 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:

| | |
|----------------------------|---------|
| 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:

** SUE - Subsurface Utility Engineering
LOS - Level of Service - A,B,C or D (Accuracy)*

| | |
|---|-------|
| 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 Test Hole (SUE - LOS A)* | ----- |
| U/G Power Line (SUE - LOS B)* | ----- |
| U/G Power Line (SUE - LOS C)* | ----- |
| U/G Power Line (SUE - LOS D)* | ----- |
| TELEPHONE: | |
| Existing Telephone Pole | ● |
| Proposed Telephone Pole | ○ |
| Telephone Manhole | ○ |
| Telephone Pedestal | □ |
| Telephone Cell Tower | ● |
| U/G Telephone Cable Hand Hole | ----- |
| U/G Telephone Test Hole (SUE - LOS A)* | ----- |
| U/G Telephone Cable (SUE - LOS B)* | ----- |
| U/G Telephone Cable (SUE - LOS C)* | ----- |
| U/G Telephone Cable (SUE - LOS D)* | ----- |
| U/G Telephone Conduit (SUE - LOS B)* | ----- |
| U/G Telephone Conduit (SUE - LOS C)* | ----- |
| U/G Telephone Conduit (SUE - LOS D)* | ----- |
| U/G Fiber Optics Cable (SUE - LOS B)* | ----- |
| U/G Fiber Optics Cable (SUE - LOS C)* | ----- |
| U/G Fiber Optics Cable (SUE - LOS D)* | ----- |

WATER:

| | |
|---|-------|
| Water Manhole | ○ |
| Water Meter | ○ |
| Water Valve | ⊗ |
| Water Hydrant | ○ |
| U/G Water Line Test Hole (SUE - LOS A)* | ----- |
| U/G Water Line (SUE - LOS B)* | ----- |
| U/G Water Line (SUE - LOS C)* | ----- |
| U/G Water Line (SUE - LOS D)* | ----- |
| Above Ground Water Line | ----- |
| TV: | |
| TV Pedestal | □ |
| TV Tower | ⊗ |
| U/G TV Cable Hand Hole | ----- |
| U/G TV Test Hole (SUE - LOS A)* | ----- |
| U/G TV Cable (SUE - LOS B)* | ----- |
| U/G TV Cable (SUE - LOS C)* | ----- |
| U/G TV Cable (SUE - LOS D)* | ----- |
| U/G Fiber Optic Cable (SUE - LOS B)* | ----- |
| U/G Fiber Optic Cable (SUE - LOS C)* | ----- |
| U/G Fiber Optic Cable (SUE - LOS D)* | ----- |

GAS:

| | |
|---------------------------------------|-------|
| Gas Valve | ◇ |
| Gas Meter | ◇ |
| U/G Gas Line Test Hole (SUE - LOS A)* | ----- |
| U/G Gas Line (SUE - LOS B)* | ----- |
| U/G Gas Line (SUE - LOS C)* | ----- |
| U/G Gas Line (SUE - LOS D)* | ----- |
| Above Ground Gas Line | ----- |

SANITARY SEWER:

| | |
|---|-------|
| Sanitary Sewer Manhole | ⊕ |
| Sanitary Sewer Cleanout | ⊕ |
| U/G Sanitary Sewer Line | ----- |
| Above Ground Sanitary Sewer | ----- |
| SS Force Main Line Test Hole (SUE - LOS A)* | ----- |
| SS Force Main Line (SUE - LOS B)* | ----- |
| SS Force Main Line (SUE - LOS C)* | ----- |
| SS Force Main Line (SUE - LOS D)* | ----- |

MISCELLANEOUS:

| | |
|---|-------|
| Utility Pole | ● |
| Utility Pole with Base | □ |
| Utility Located Object | ○ |
| Utility Traffic Signal Box | □ |
| Utility Unknown U/G Line (SUE - LOS B)* | ----- |
| U/G Tank; Water, Gas, Oil | ----- |
| Underground Storage Tank, Approx. Loc. | ----- |
| A/G Tank; Water, Gas, Oil | ----- |
| Geoenvironmental Boring | ● |
| Abandoned According to Utility Records | ----- |
| End of Information | ----- |

6/2/2022

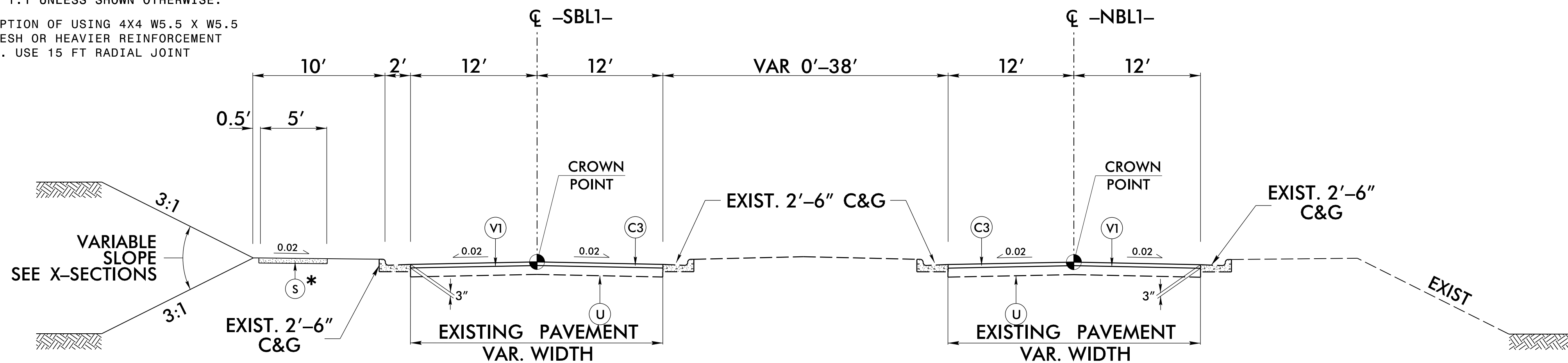
PAVEMENT SCHEDULE

(FINAL PAVEMENT DESIGN)

| | | | | | |
|----|--|----|--|----|---|
| A1 | 12" PORTLAND CEMENT CONCRETE PAVMENT, JOINTED WITH WELDED WIRE MESH. | E1 | PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. | R4 | 5" MONOLITHIC CONCRETE ISLAND, KEYED-IN |
| C1 | PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. | E2 | 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. | S | 4" CONCRETE SIDEWALK. |
| C2 | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. | J1 | PROP. 8" AGGREGATE BASE COURSE. | T | EARTH MATERIAL |
| C3 | 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. | P | PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD. | U | EXISTING PAVEMENT |
| C4 | 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. | R1 | 1'-6" CONCRETE CURB AND GUTTER. | V1 | 3" MILLING. |
| D1 | PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. | R2 | 2'-6" CONCRETE CURB AND GUTTER. | W | WEDGING |
| D2 | 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. | R3 | 2'-6" CONCRETE SPILL CURB AND GUTTER | | |

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

NOTE: THE CONTRACTOR HAS THE OPTION OF USING 4X4 W5.5 X W5.5 OR 6X6 W8.5XW8.5 WELDED WIRE MESH OR HEAVIER REINFORCEMENT FOR PROPOSED CONCRETE PAVEMENT. USE 15 FT RADIAL JOINT SPACING FOR THE TRUCK APRON.

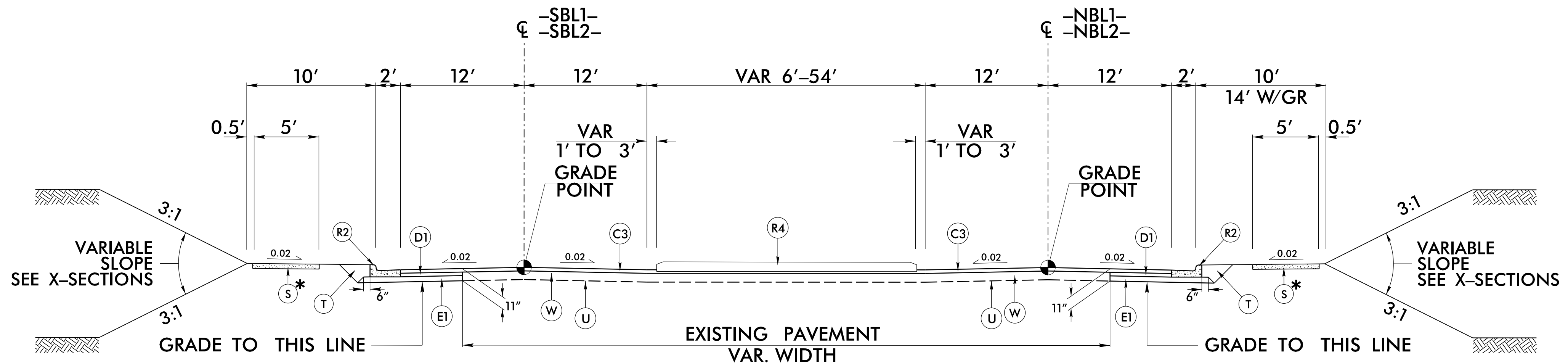


TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1

-NBL1- STA 10+00.00 TO STA 13+45.00
-SBL1- STA 10+00.00 TO STA 13+35.00

* SEE PLAN SHEET FOR SIDEWALK LOCATION



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2

-NBL1- STA 13+45.00 TO STA 16+09.25
-SBL1- STA 13+35.00 TO STA 16+15.61

-NBL2- STA 10+46.84 TO STA 13+50.00
-SBL2- STA 10+56.60 TO STA 13+66.00

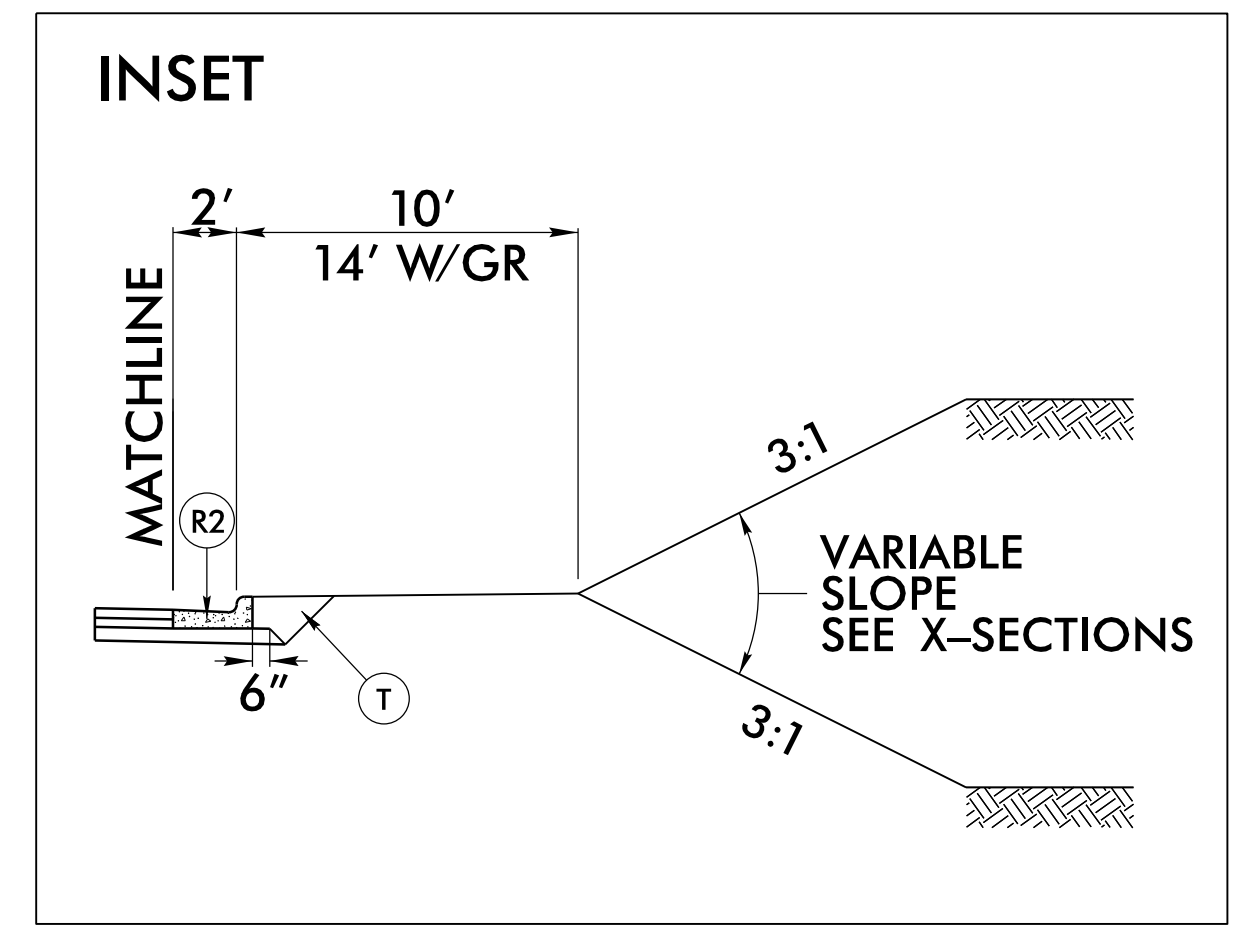
* SEE PLAN SHEET FOR SIDEWALK LOCATION

| | |
|---|---|
| PROJECT REFERENCE NO. U-5947 | SHEET NO. 2A-1 |
| ROADWAY DESIGN ENGINEER 3/8/2022 BRANDON W. JOHNSON SEAL 034371 | PAVEMENT DESIGN ENGINEER 3/10/2022 ANDREW V. WARR SEAL 044590 |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of: SUMMIT DESIGN AND ENGINEERING SERVICES | |

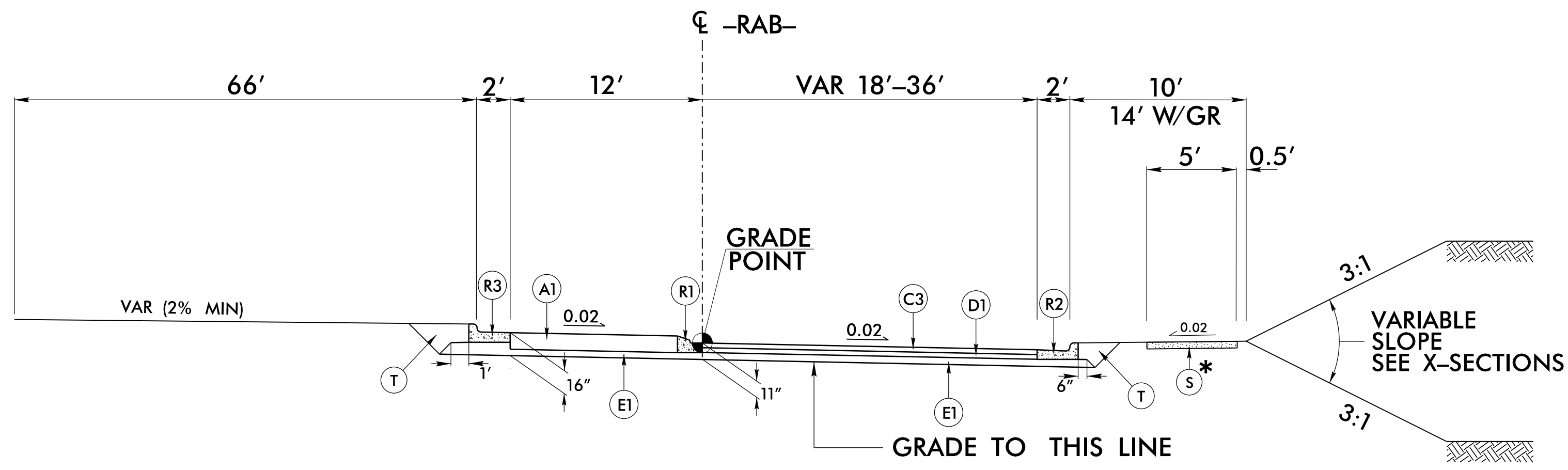
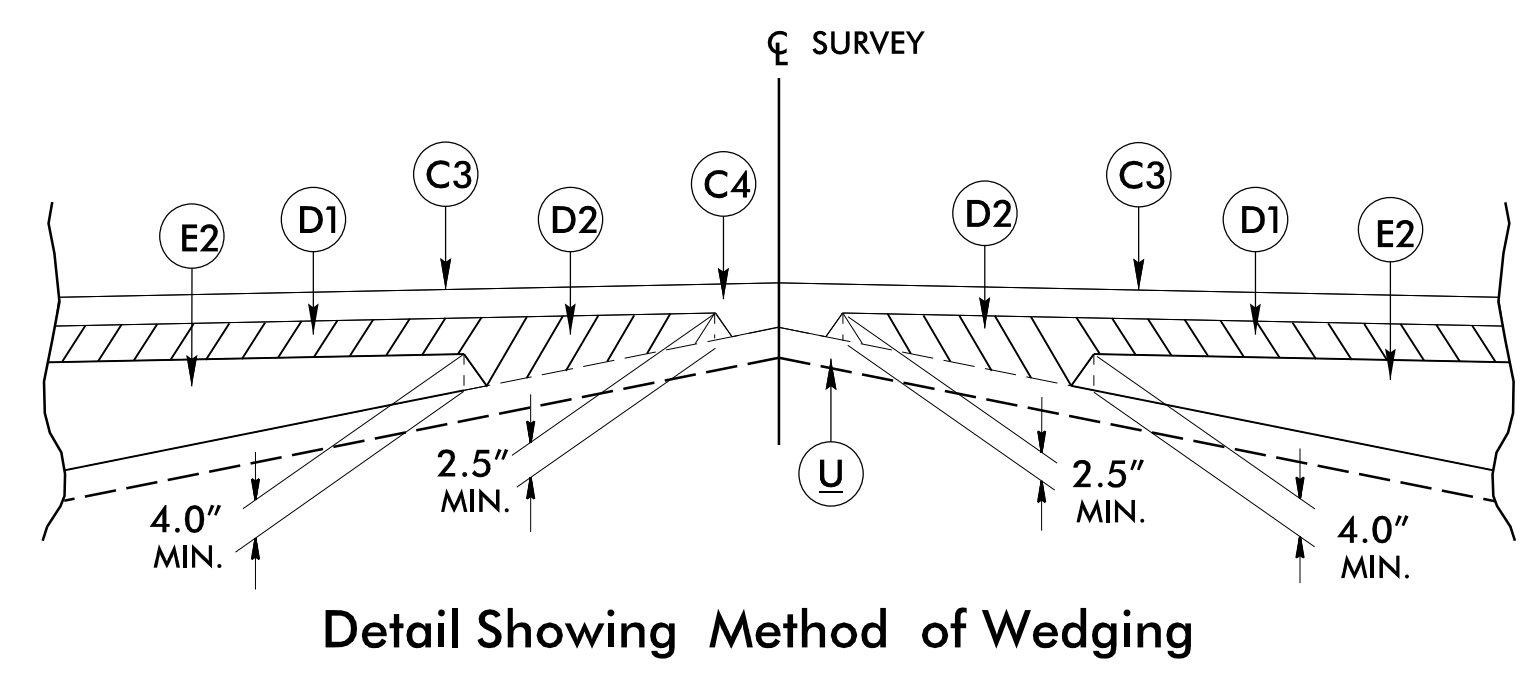
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DESIGN FOR PAVEMENT
SPACENUMBER: 111

6/2/2022

| PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN) | |
|--|------------------|
| A1 | 12" PCCP |
| C1 | 2" S9.5B |
| C2 | 3" S9.5B |
| C3 | 3" S9.5C |
| C4 | VAR. S9.5C |
| D1 | 4" I19.5C |
| D2 | VAR. I19.0C |
| E1 | 4" B25.0C |
| E2 | VAR. B25.0C |
| J1 | 8" ABC |
| P | PRIME COAT |
| R1 | 1'x6" CURB |
| R2 | 2'x6" CURB |
| R3 | 2'x6" SPILL CURB |
| R4 | 5" MCI |
| S | 4" SIDEWALK |
| T | EARTH MATERIAL |
| U | EXIST PAVEMENT |
| V1 | 3" MILLING |
| W | WEDGING |

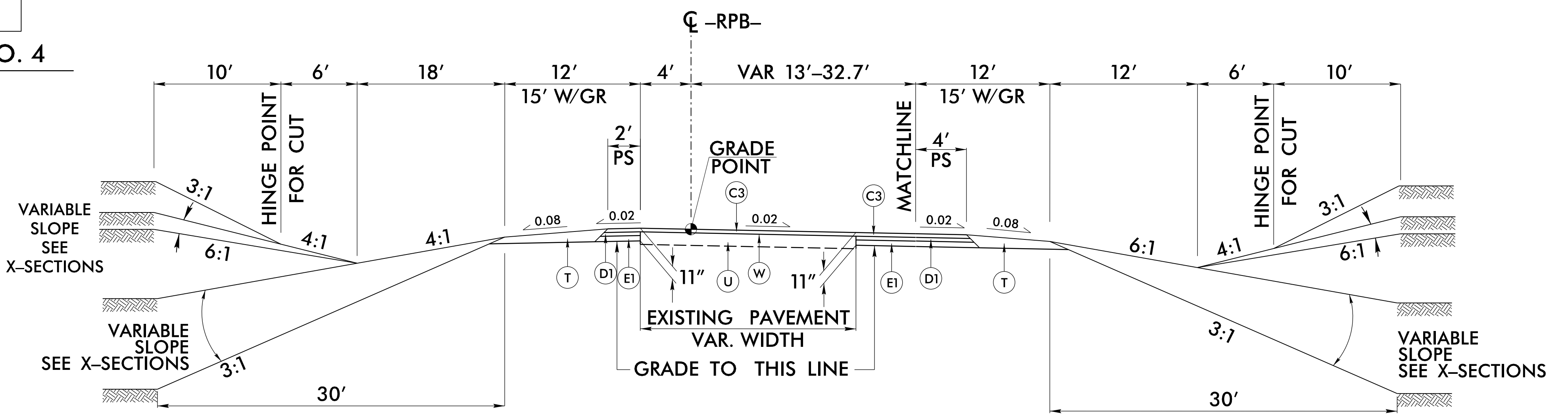


USE INSET WITH TYPICAL SECTION NO. 4
-RPB- STA 12+78.17 TO STA 13+40.00



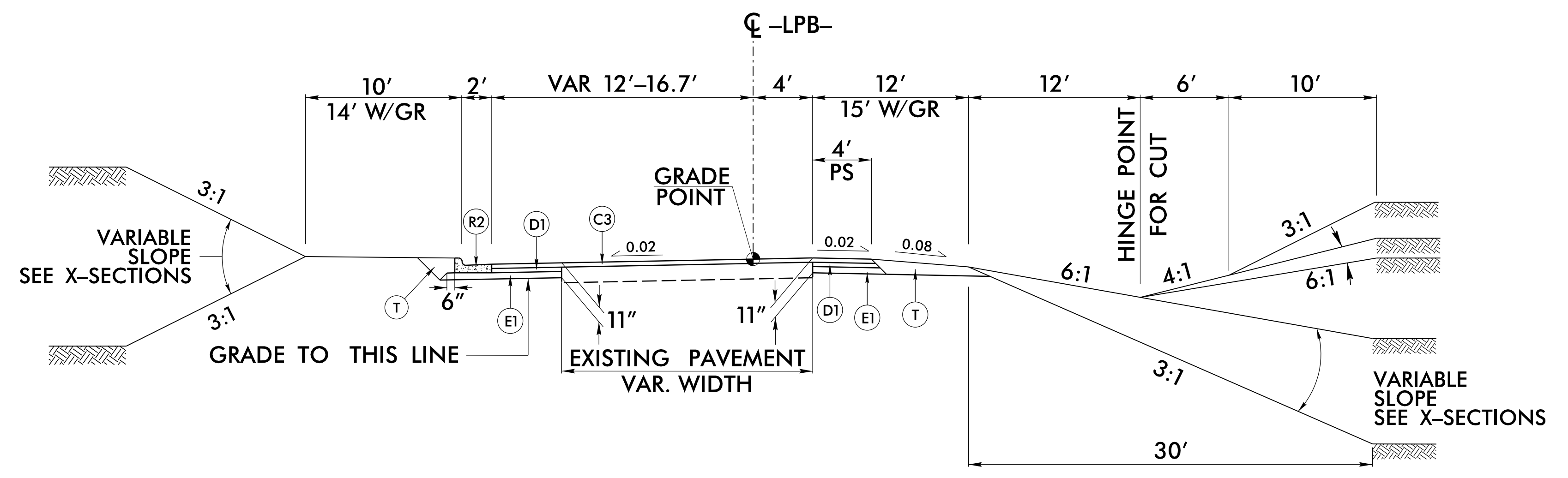
TYPICAL SECTION NO. 3
(ROUNDBOUT)

USE TYPICAL SECTION NO. 3
-RAB- STA 10+00.00 TO STA 15+02.65
* SEE PLAN SHEET FOR SIDEWALK LOCATIONS



TYPICAL SECTION NO. 4
(RAMP)

USE TYPICAL SECTION NO. 4
-RPB- STA 10+10.00 TO STA 13+40.00



TYPICAL SECTION NO. 5
(LOOP)

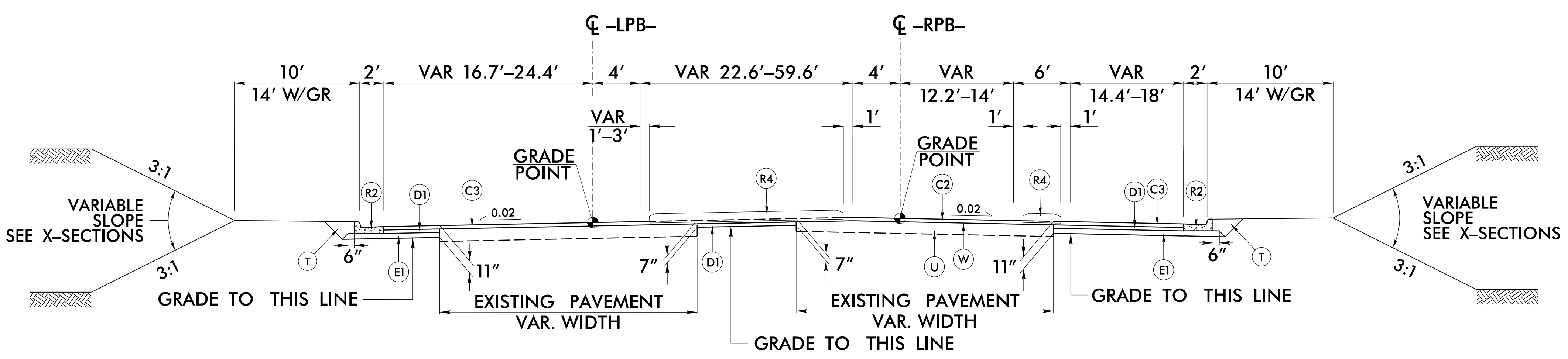
USE TYPICAL SECTION NO. 5
-LPB- STA 11+75 TO STA 12+54.54

| | |
|--|--|
| PROJECT REFERENCE NO. U-5947 | SHEET NO. 2A-2 |
| ROADWAY DESIGN ENGINEER 3/8/2022 BRANDON W. JOHNSON SEAL 034371 NORTH CAROLINA PROFESSIONAL ENGINEER | PAVEMENT DESIGN ENGINEER 3/10/2022 ANDREW D. WARR SEAL 044590 NORTH CAROLINA PROFESSIONAL ENGINEER |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of: SUMMIT DESIGN AND ENGINEERING SERVICES | |

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DESIGN FOR DESIGN

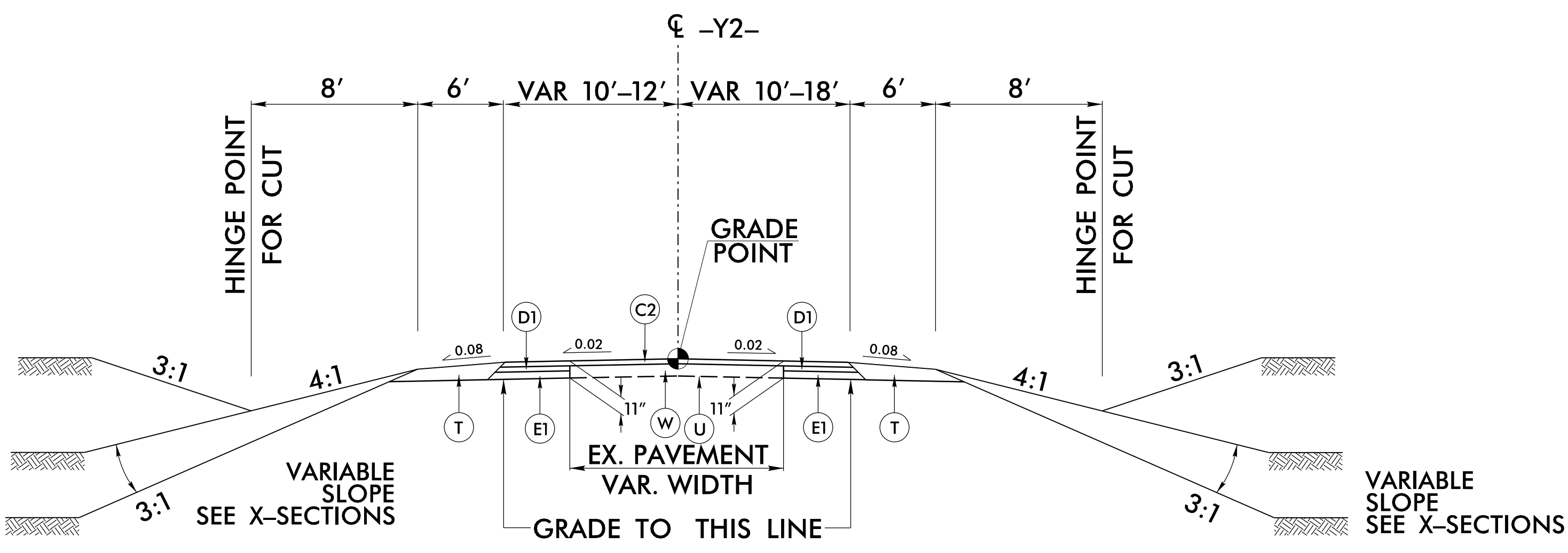
6/2/2022

| PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN) | |
|--|------------------|
| A1 | 12" PCCP |
| C1 | 2" S9.5B |
| C2 | 3" S9.5B |
| C3 | 3" S9.5C |
| C4 | VAR. S9.5C |
| D1 | 4" I19.5C |
| D2 | VAR. I19.0C |
| E1 | 4" B25.0C |
| E2 | VAR. B25.0C |
| J1 | 8" ABC |
| P | PRIME COAT |
| R1 | 1'x6" CURB |
| R2 | 2'x6" CURB |
| R3 | 2'x6" SPILL CURB |
| R4 | 5" MCI |
| S | 4" SIDEWALK |
| T | EARTH MATERIAL |
| U | EXIST PAVEMENT |
| V1 | 3" MILLING |
| W | WEDGING |



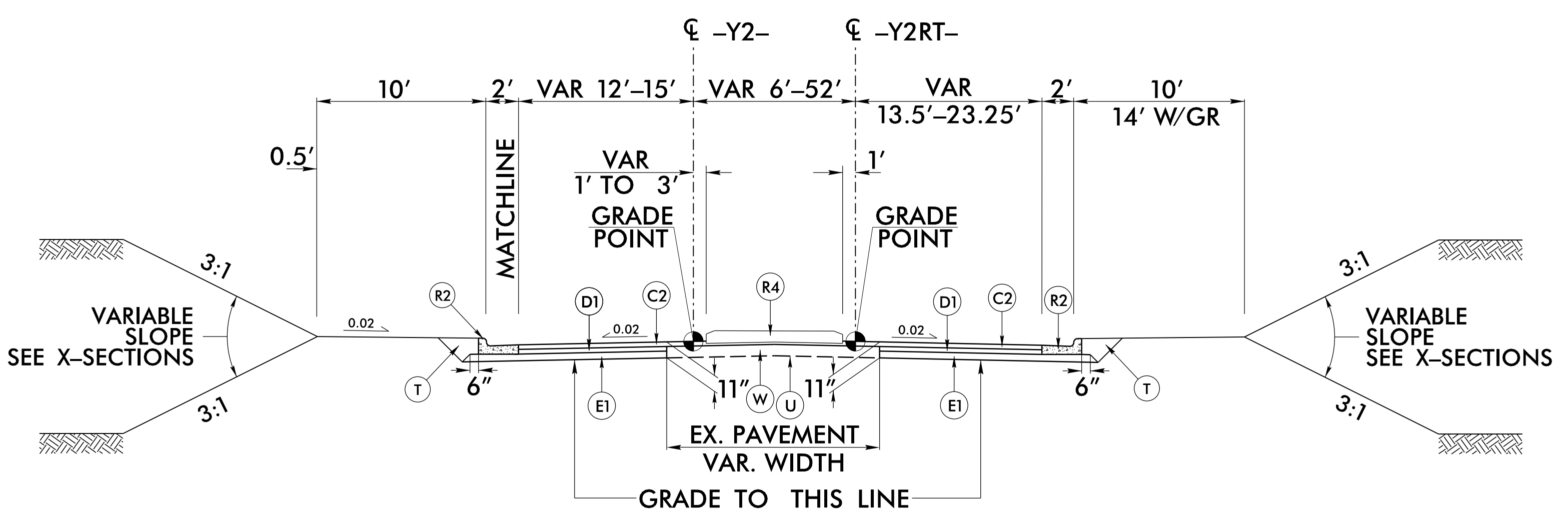
TYPICAL SECTION NO. 6
(RAMP & LOOP)

USE TYPICAL SECTION NO. 6
-RPB- STA 13+40.00 TO STA 14+02.07
-LPB- STA 12+54.54 TO STA 13+13.52



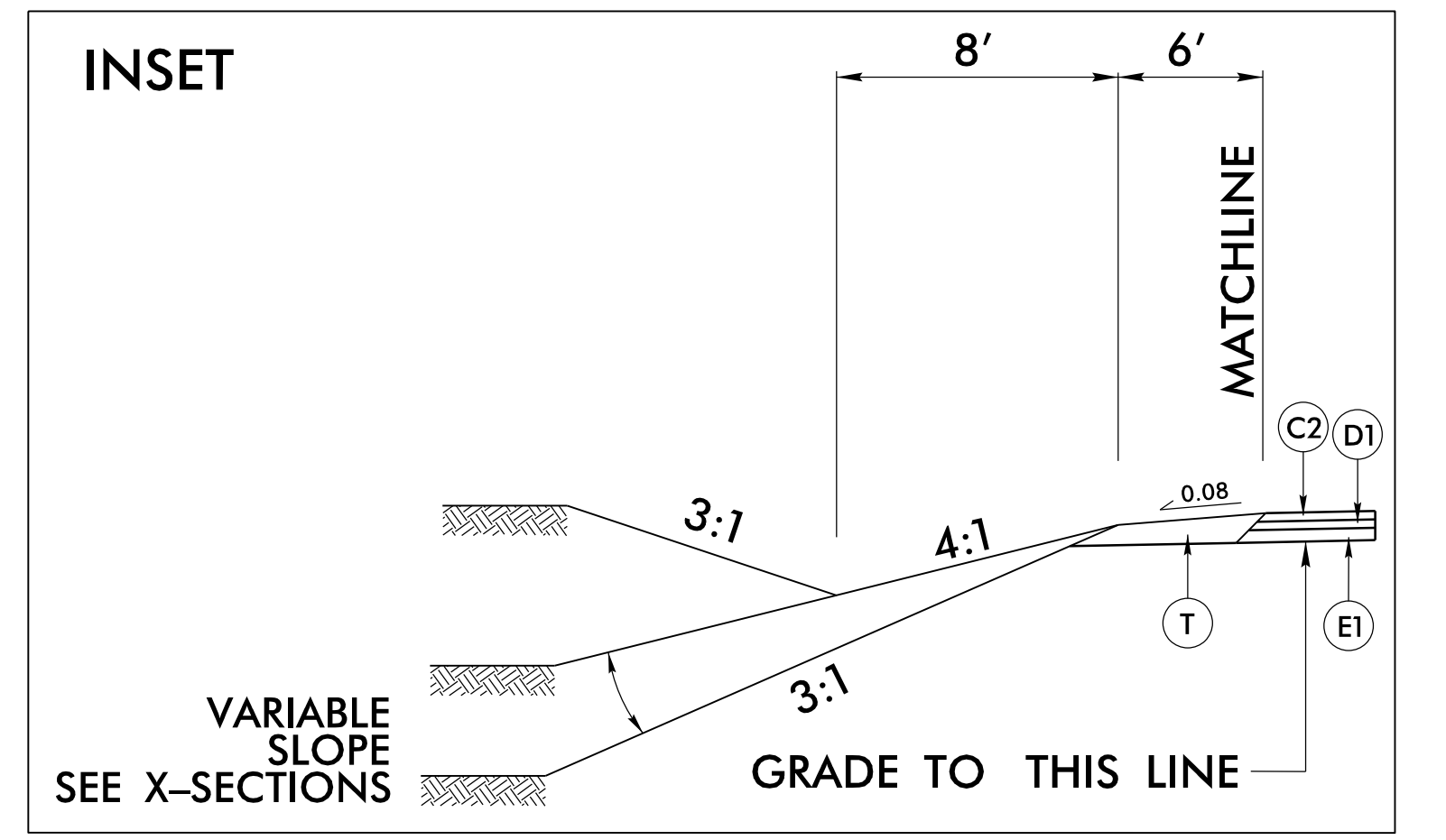
TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7
-Y2- STA 10+45.00 TO STA 11+56.20



TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 8
-Y2- STA 11+56.20 TO STA 12+51.65
-Y2RT- STA 10+00.00 TO STA 10+84.79



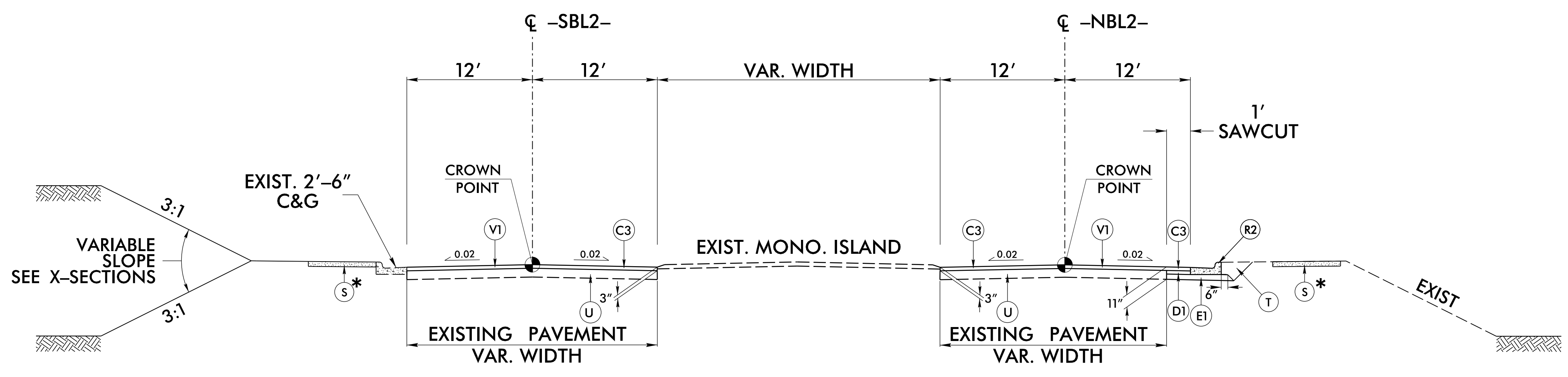
USE INSET WITH TYPICAL SECTION NO. 8
-Y2- STA 11+56.20 TO STA 11+96.61

| | |
|---|---|
| PROJECT REFERENCE NO. U-5947 | SHEET NO. 2A-3 |
| ROADWAY DESIGN ENGINEER 3/8/2022 NORTH CAROLINA PROFESSIONAL SEAL 034371 BRANDON W. JOHNSON | PAVEMENT DESIGN ENGINEER 3/10/2022 NORTH CAROLINA PROFESSIONAL SEAL 044590 ANDREW D. WARR |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of: SUMMIT DESIGN AND ENGINEERING SERVICES | NC FIRM LICENSE No. P-0339 420 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) |

05-MAR-2022 15:33
DESIGN FOR MILLING
spencer.miller

6/2/2022

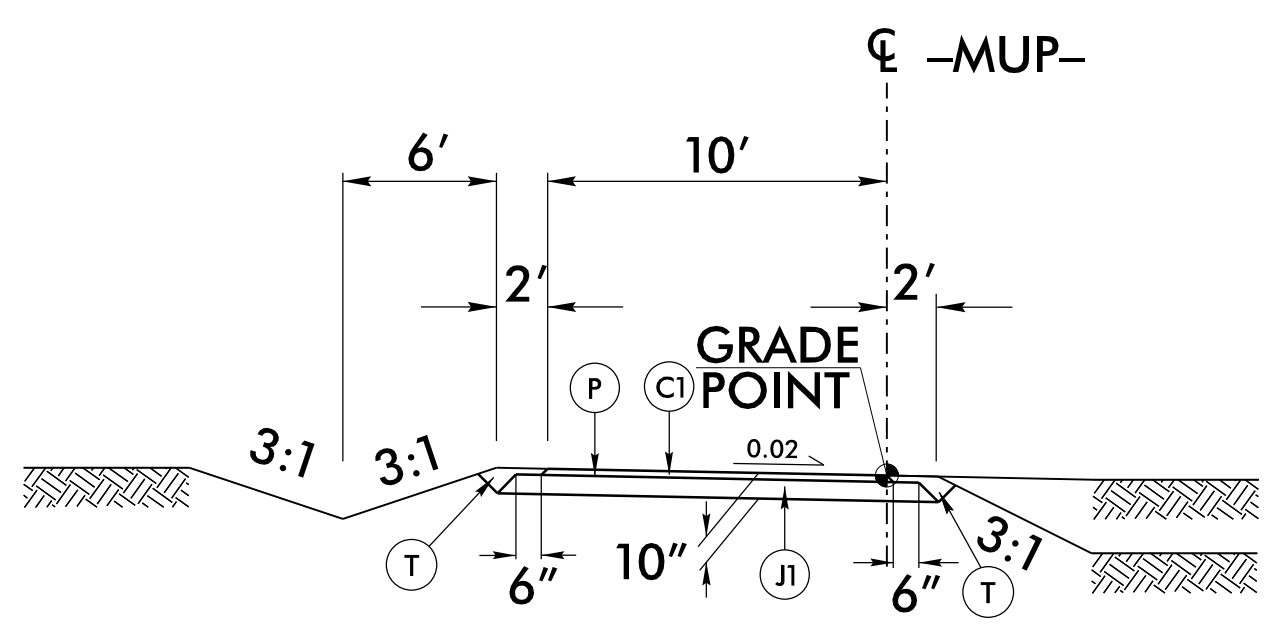
| PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN) | |
|--|------------------|
| A1 | 12" PCCP |
| C1 | 2" S9.5B |
| C2 | 3" S9.5B |
| C3 | 3" S9.5C |
| C4 | VAR. S9.5C |
| D1 | 4" I19.5C |
| D2 | VAR. I19.0C |
| E1 | 4" B25.0C |
| E2 | VAR. B25.0C |
| J1 | 8" ABC |
| P | PRIME COAT |
| R1 | 1'x6" CURB |
| R2 | 2'x6" CURB |
| R3 | 2'x6" SPILL CURB |
| R4 | 5" MCI |
| S | 4" SIDEWALK |
| T | EARTH MATERIAL |
| U | EXIST PAVEMENT |
| V1 | 3" MILLING |
| W | WEDGING |



TYPICAL SECTION NO. 9

USE TYPICAL SECTION NO. 9

-NBL2- STA 13+50.00 TO STA 25+10.00
 -SBL2- STA 13+66.00 TO STA 25+31.03
 * SEE PLAN SHEET FOR SIDEWALK LOCATION



**TYPICAL SECTION NO. 10
(MULTI-USE-PATH)**

USE TYPICAL SECTION NO. 10

-MUP- STA 10+22.22 TO 12+67.70

| | |
|--|--|
| PROJECT REFERENCE NO. <i>U-5947</i> | SHEET NO. <i>2A-4</i> |
| ROADWAY DESIGN ENGINEER 3/8/2022 <i>Brandon W. Johnson</i> | PAVEMENT DESIGN ENGINEER 3/10/2022 <i>Andrew D. Warrp</i> |
| | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of: | NC FIRM LICENSE No P-0339 420 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) |

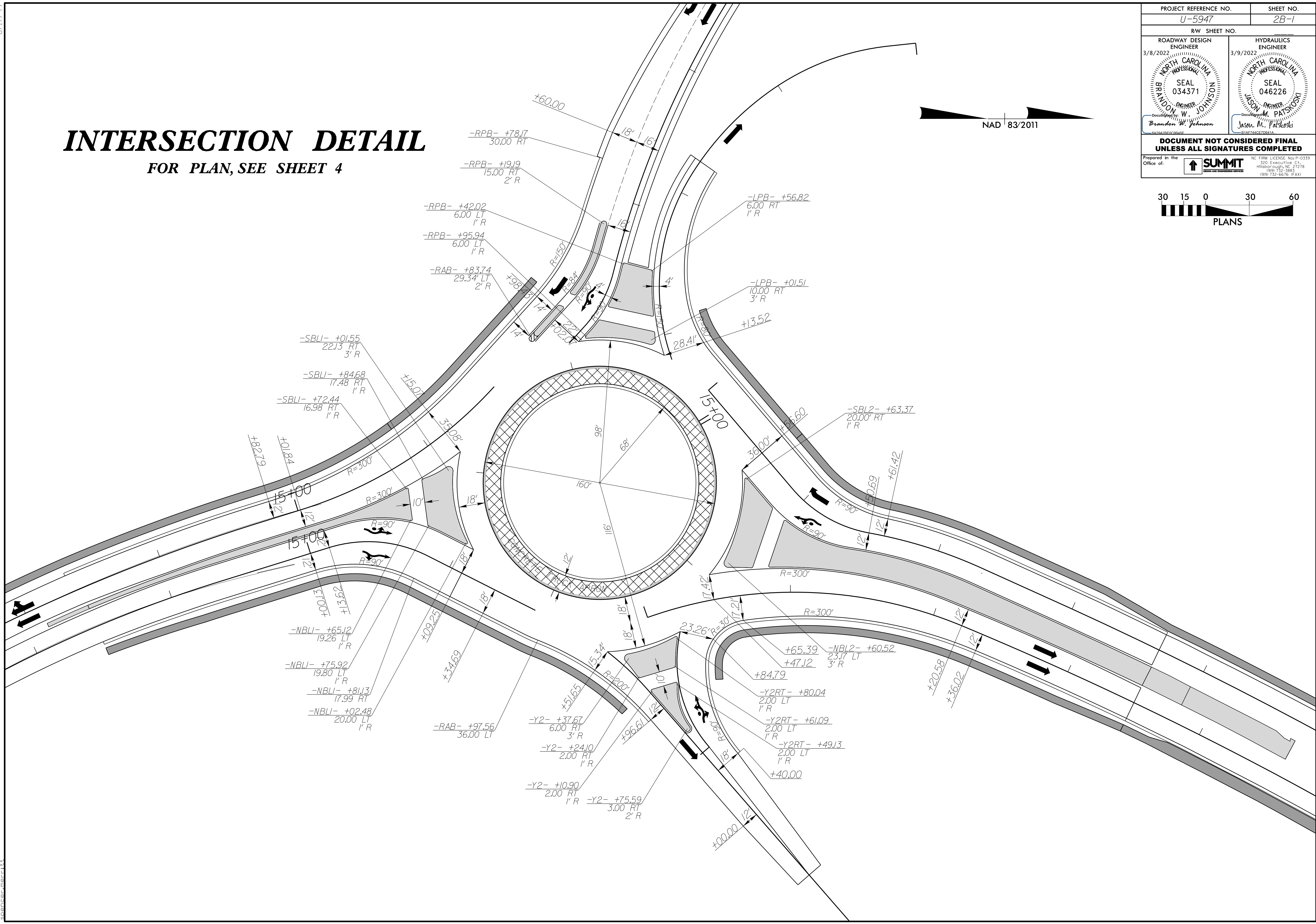
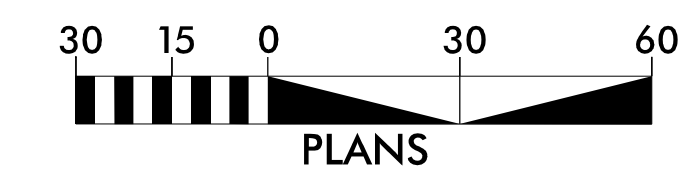
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INTERSECTION DETAIL

FOR PLAN, SEE SHEET 4

| | |
|---|---|
| PROJECT REFERENCE NO. U-5947 | SHEET NO. 2B-1 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 3/8/2022 NORTH CAROLINA PROFESSIONAL SEAL 034371 BRANDON W. JOHNSON | HYDRAULICS ENGINEER 3/9/2022 NORTH CAROLINA PROFESSIONAL SEAL 046226 JASON M. PATSKO |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of: SUMMIT | NC FIRM LICENSE No: P-0339 300 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) |



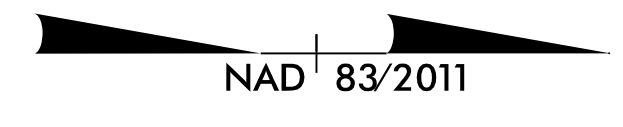
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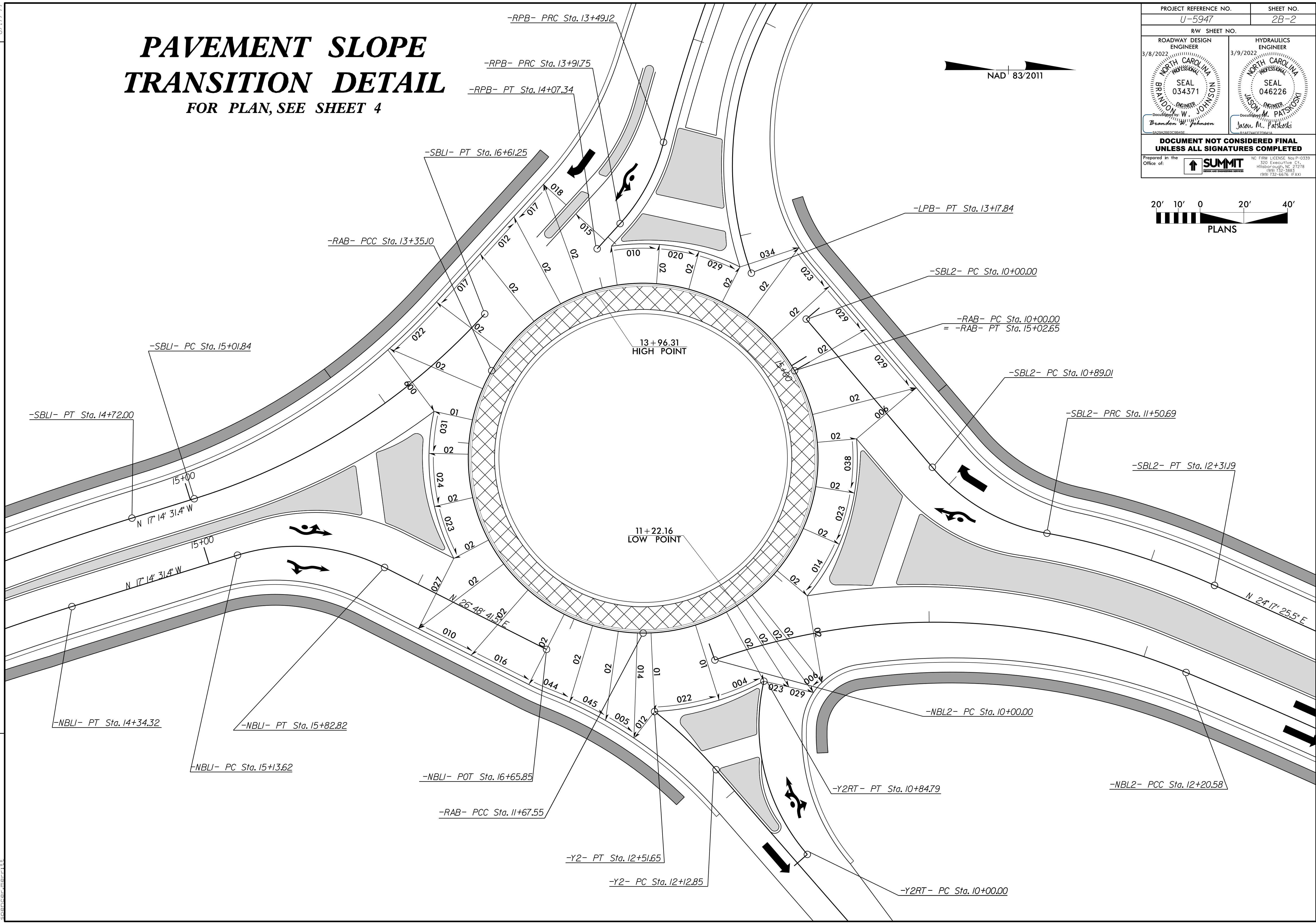
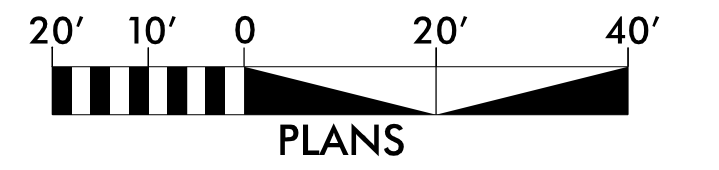
PAVEMENT SLOPE TRANSITION DETAIL

FOR PLAN, SEE SHEET 4

-RPB- PRC Sta. 13+49.12
-RPB- PRC Sta. 13+91.75
-RPB- PT Sta. 14+07.34



| | |
|---|---|
| PROJECT REFERENCE NO. U-5947 | SHEET NO. 2B-2 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 3/8/2022 NORTH CAROLINA PROFESSIONAL SEAL 034371 Brandon W. Johnson | HYDRAULICS ENGINEER 3/9/2022 NORTH CAROLINA PROFESSIONAL SEAL 046226 Jason M. Patkoski |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of: | NC FIRM LICENSE No: P-0339 300 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) |



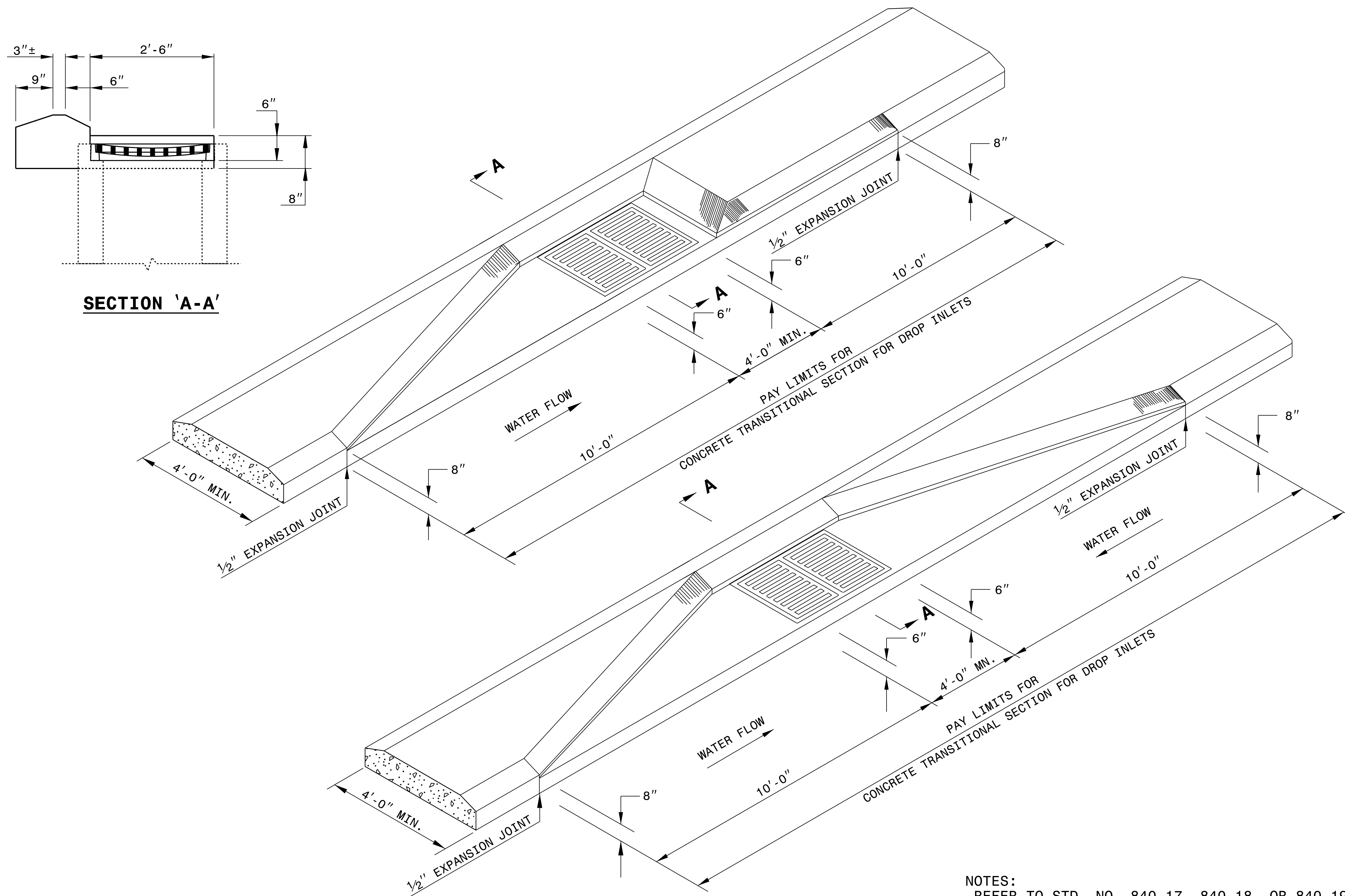
REVISIONS

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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. 840.17, 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

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Jpower ton AT_CSD-252595

3/9/2022



DocuSigned by
Ron Davenport
F81B8D38A47442

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

**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
DIVISION OF HIGHWAYS

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

SUMMARY OF EARTHWORK IN CUBIC YARDS

| LOCATION | UNCLASSIFIED EXCAVATION | EMBT + 20% | BORROW | WASTE |
|--------------------------------------|-------------------------|------------|--------|-------|
| -NBL1- STA. 12 + 50.00 TO 16 + 09.25 | 589 | 245 | 149 | 493 |
| -NBL2- STA. 10 + 47.12 TO 13 + 50.00 | 881 | 161 | | 720 |
| -MUP- STA. 10 + 20.00 TO 17 + 63.38 | 8 | 210 | 202 | |
| -RAB- STA. 10 + 00.00 TO 15 + 02.65 | 1,359 | 11,994 | 11,636 | 1,001 |
| SUB TOTAL | 2,837 | 12,610 | 11,987 | 2,214 |
| -RPB- STA. 10 + 10.00 TO 14 + 02.07 | 2,530 | 886 | 577 | 2,221 |
| SUB TOTAL | 2,530 | 886 | | 2,221 |
| -Y2- STA. 10 + 45.00 TO 12 + 51.65 | 744 | 170 | | 574 |
| SUB TOTAL | 744 | 170 | | 574 |
| PROJECT SUBTOTALS | 6,111 | 13,666 | 12,564 | 5,009 |
| LOSS DUE TO CLEARING AND GRUBBING | -1,500 | | 1,500 | |
| MATERIAL FOR SHOULDER CONSTRUCTION | | 125 | 125 | |
| EARTH WASTE IN LIEU OF BORROW | | | -816 | -816 |
| PROJECT TOTAL | 4,611 | 13,791 | 13,373 | 4,193 |
| 5% TO REPLACE TOP SOIL | | | 669 | |
| GRAND TOTALS | 4,611 | | 14,042 | |
| SAY | 4,620 | | 14,050 | |

DDE = 60 CY
 ESTIMATED UNDERCUT = 450 CY
 ESTIMATED 350 CY AND ADDITIONAL 400 CY AS CONTINGENCY OF SHALLOW UNDERCUT PER GEOTECH RECOMMENDATIONS (750 CY)
 CLASS IV SUBGRADE STABILIZATION TO REPLACE SHALLOW UNDERCUT (PER GEOTECH RECOMMENATION) = 1,475 TON
 ESTIMATED 2,000 CY OF UNCLASSIFIED EXCAVATION PER GEOTECH RECOMMENDATION ACCEPTABLE BUT NOT TO BE USED IN THE TOP 3 FT OF EMBANKMENT OR BACKFILL.

SUMMARY OF ASPHALT PAVEMENT REMOVAL

| LOCATION | AREA (SQFT) | AREA (SQYD) |
|--------------------------------|-------------|-------------|
| -SBL1- STA. 12 + 98 TO 13 + 53 | 7.37 | 0.82 |
| -SBL1- STA. 13 + 89 TO 15 + 02 | 71.42 | 7.94 |
| -NBL1- STA. 13 + 96 TO 15 + 48 | 363.04 | 40.34 |
| -SBL2- STA. 10 + 96 TO 13 + 38 | 1265.26 | 140.58 |
| -RPB- STA. 13 + 18 TO 13 + 40 | 46.18 | 5.13 |
| -LPB- STA. 12 + 15 TO 12 + 55 | 74.17 | 8.24 |
| -RAB- STA. 10 + 00 TO 15 + 03 | 13739.26 | 1526.58 |
| TOTAL | 24782.53 | 1,729.63 |
| SAY | | 1,730 |

CHAIN LINK FENCE SUMMARY

| STATION TO STATION | LOCATION | LENGTH | LINE POSTS | TERMINAL POSTS |
|------------------------------|----------|--------|------------|----------------|
| -Y2- 9 + 57.76 TO 12 + 51.65 | LT | 142 | 13 | 3 |
| TOTAL | | 142 | 13 | 3 |

COMPUTED BY: HY DATE: 12/07/2021
CHECKED BY: JMP DATE: 1/28/2022

PROJECT NO. U-5947 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, Drainage Pipe, 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 Remarks. Includes a SHEET TOTALS row at the bottom.

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

REMARKS

ROADLAP12019A

COMPUTED BY: HY DATE: 12/07/2021
CHECKED BY: JMP DATE: 1/28/2022

PROJECT NO. U-5947 SHEET NO. 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, PVC, or PP PIPE), C. S. PIPE (12-48), R. C. PIPE CLASS III (12-48), R. C. PIPE CLASS IV (12-48), QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A * (1.3 X B)), FRAME, GRATES, AND HOOD (STD. 840.03), GRATE TYPE (E, F, G), CONCRETE TRANSITIONAL SECTION (D.I. STD. 852.04 OR STD. 852.06, C.B. STD. 852.05, OPEN THROAT C.B. STD. 840.04 OR STD. 840.05, CONCRETE BRIDGE APPROACH D.I. STD. 840.13, D.I. STD. 840.14 OR STD. 840.15, D.I. FRAME AND GRATES STD. 840.16, G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26, G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27, G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28, G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20, G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20, G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22, G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22, G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24, G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24, G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29, G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29, DRIVEWAY D.I. STD. 840.30, FRAME W/ GRATE FOR DRIVEWAY STD. 840.30, J.B. STD. 840.31 OR STD. 840.32, ANGLED VANE GRATES AND FRAMES STD. 840.33, T.B.J.B. STD. 840.34, T.B.D.I. STD. 840.35, T.B.D.I. FOR STEEL GRATES STD. 840.36, STEEL FRAME WITH TWO GRATES STD. 840.37, TEMP STEEL PLATE COVER MASONRY DRAINAGE, ##" SPRING BOX PIPE, G.D.I. IN CONC ISLAND - SPECIAL DETAIL 852D06, M.H. STD. 840.51, STD. 840.52, OR STD. 840.53, M.H. FRAME AND COVER STD. 840.54, BERM DITCH OUTLET STD. 850.10 (PER EACH), ##" SLUICE GATE (##" SIZE SLUICE GATE), MODIFIED CONC. FLUME, PREFORMED SCOUR HOLE (PER EACH), ENERGY DISSIPATION BASIN, PIPE CLEANOUT, FLOWABLE FILL, CONCRETE COLLARS CL. "B" STD. 840.72, CONCRETE AND BRICK PIPE PLUG STD. 840.71, PIPE REMOVAL, REMARKS, SHEET TOTALS

ROADLAP12019A

COMPUTED BY: HY DATE: 12/07/2021
CHECKED BY: JMP DATE: 1/28/2022

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. SHEET NO.
U-5947 3D-3

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 Elevation, Minimum Required Slope, Drainage Pipe, 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 various pipe specifications. Includes a summary table at the bottom for SHEET TOTALS and PROJECT TOTALS.

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

REMARKS

COMPUTED BY: B. SMITH, PG DATE: 1/30/22
 CHECKED BY: D. DEWEY, PE DATE: 1/30/22

(12-17-19)

PROJECT NO.
U-5947

SHEET NO.
3G-1

**STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS**

SUMMARY OF SUBSURFACE DRAINAGE

| LINE | Station | Station | Location LT/RT/CL | Drain Type* UD/BD/SD | LF |
|-------------|---------|---------|-------------------|----------------------|-----|
| | | | | | |
| CONTINGENCY | | | | UD | 200 |
| | | | | TOTAL LF: | 200 |

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

**SUMMARY OF GEOTEXTILE
 FOR PAVEMENT STABILIZATION**

| LINE | Station | Station | Geotextile for Pavement Stabilization SY | Class IV Subgrade Stabilization TONS |
|-------------|---------|---------|--|--------------------------------------|
| | | | | |
| CONTINGENCY | | | | |
| | | | TOTAL SY/TONS: | 0 0* |

*Total tons of "Class IV Subgrade Stabilization" is only the estimated quantity for pavement stabilization and may only represent a portion of the subgrade stabilization quantity shown in the Item Sheets of the Proposal.

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

| LINE | Station | Station | Aggregate Type* ASU(1/2)/AST | Aggregate Thickness INCHES [8" for ASU(2)] | Shallow Undercut CY | Class IV Subgrade Stabilization TONS | Geotextile for Soil Stabilization SY | Stabilizer Aggregate TONS | Class IV Aggregate Stabilization TONS |
|-------------|---------|---------|------------------------------|--|---------------------|--------------------------------------|--------------------------------------|---------------------------|---------------------------------------|
| VARIES | N/A | N/A | ASU(1) | 12 | 350 | 675 | 1050 | | |
| CONTINGENCY | | | ASU(1) | 12 | 400 | 800 | 1200 | | |
| | | | | | TOTAL CY/TONS/SY: | 750 | 1475** | 2250** | 0 0 |

*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)
 *AST = Aggregate Stabilization
 **Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Soil Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

SUMMARY OF ROCK PLATING

| LINE | Beginning Slope (H:V) | Approx. Station | Ending Slope (H:V) | Approx. Station | Location LT/RT | Rock Plating Detail No. 1/2/3/4 | Riprap Class* 1/2/B | Rock Plating SY |
|------|-----------------------|-----------------|--------------------|-----------------|----------------|---------------------------------|---------------------|-----------------|
| | | | | | | | | |
| | | | | | | | TOTAL SY: | 0 |

*Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.

SUMMARY OF REINFORCED SOIL SLOPES AND SLOPE EROSION CONTROL

| LINE | Beginning Slope/RSS (H:V) | Approx. Station | Ending Slope/RSS (H:V) | Approx. Station | Location LT/RT | Reinforced Soil Slope (RSS) SY | Geocells SY | Coir Fiber Mat SY | Matting for Erosion Control SY |
|------|---------------------------|-----------------|------------------------|-----------------|----------------|--------------------------------|-------------|-------------------|--------------------------------|
| | | | | | | | | | |
| | | | | | | TOTAL SY: | 0 | 0 | 0* 0** |

*Total square yards of "Coir Fiber Mat" is only the estimated quantity for slopes steeper than 2:1 (H:V) and may only represent a portion of the coir fiber mat quantity shown in the Item Sheets of the Proposal.
 **Total square yards of "Matting for Erosion Control" is only the estimated quantity for RSS and may only represent a portion of the matting quantity shown in the Item Sheets of the Proposal.

SUMMARY OF PRE-SPLITTING OF ROCK

| LINE | Beginning Rock Cut Slope (H:V) | Approx. Station | Ending Rock Cut Slope (H:V) | Approx. Station | Location LT/RT | Pre-splitting of Rock SY | |
|------|--------------------------------|-----------------|-----------------------------|-----------------|----------------|--------------------------|---|
| | | | | | | | |
| | | | | | | TOTAL SY: | 0 |

SUMMARY OF HORIZONTAL DRAINS

| LINE | Approximate Station | Location LT/RT | Elevation Above or Below Grade (+/-) FT | Inclination Angle DEGREES | PVC Pipe Schedule 40/80 or NO PIPE | Horizontal Drain FT | Horizontal Drain W/O Pipe FT |
|-------------|---------------------|----------------|---|---------------------------|------------------------------------|---------------------|------------------------------|
| | | | | | | | |
| CONTINGENCY | | | | | | | |
| | | | | | | TOTAL FT: | 0 0 |

SUMMARY OF SETTLEMENT GAUGES

| Gauge No. | LINE and Station | Offset | |
|----------------------|------------------|-------------|-----------------|
| | | Distance FT | Direction LT/RT |
| | | | |
| TOTAL GAUGES (EACH): | | | |

**SUMMARY OF SURCHARGES
 AND SURCHARGE WAITING PERIODS**

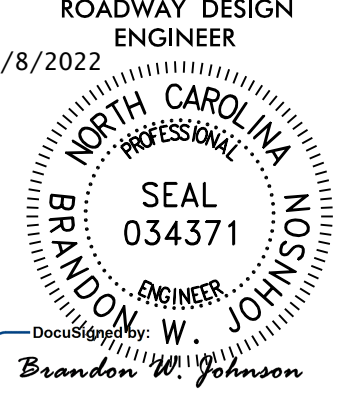
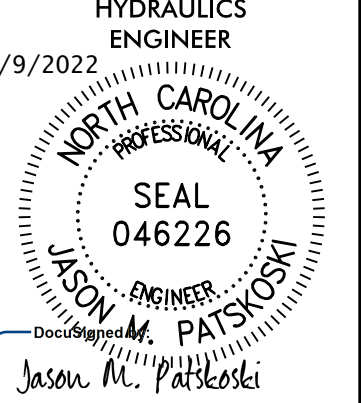
| LINE | Station | Station | Surcharge Height FT | MONTHS |
|------|---------|---------|---------------------|--------|
| | | | | |

**SUMMARY OF EMBANKMENT
 WAITING PERIODS**

| LINE | Station | Station | MONTHS |
|------|---------|---------|--------|
| | | | |

SUMMARY OF BRIDGE WAITING PERIODS

| Bridge Description | End Bent/ Bent No. | MONTHS |
|--------------------|--------------------|--------|
| | | |

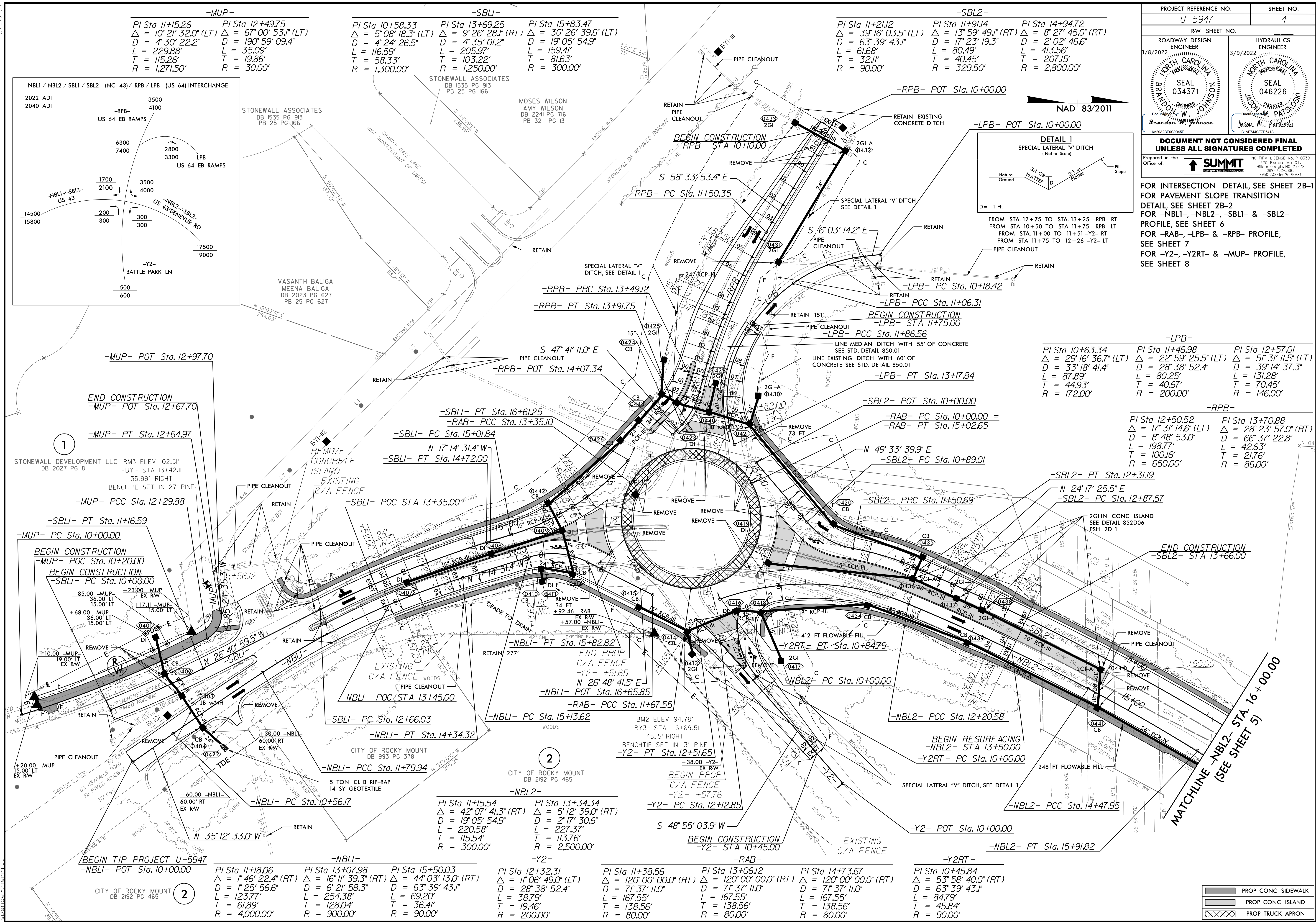
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| PROJECT REFERENCE NO. U-5947 | SHEET NO. 4 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER 3/8/2022 | HYDRAULICS ENGINEER 3/9/2022 |
|  |  |

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

Prepared in the Office of:

 NC FIRM LICENSE NO: P-0339
 300 Executive Ct.
 Hillsborough, NC 27278
 (919) 332-3883
 (919) 732-6676 (FAX)

FOR INTERSECTION DETAIL, SEE SHEET 2B-1
 FOR PAVEMENT SLOPE TRANSITION DETAIL, SEE SHEET 2B-2
 FOR -NBL1-, -NBL2-, -SBL1- & -SBL2- PROFILE, SEE SHEET 6
 FOR -RAB-, -LPB- & -RPB- PROFILE, SEE SHEET 7
 FOR -Y2-, -Y2RT- & -MUP- PROFILE, SEE SHEET 8



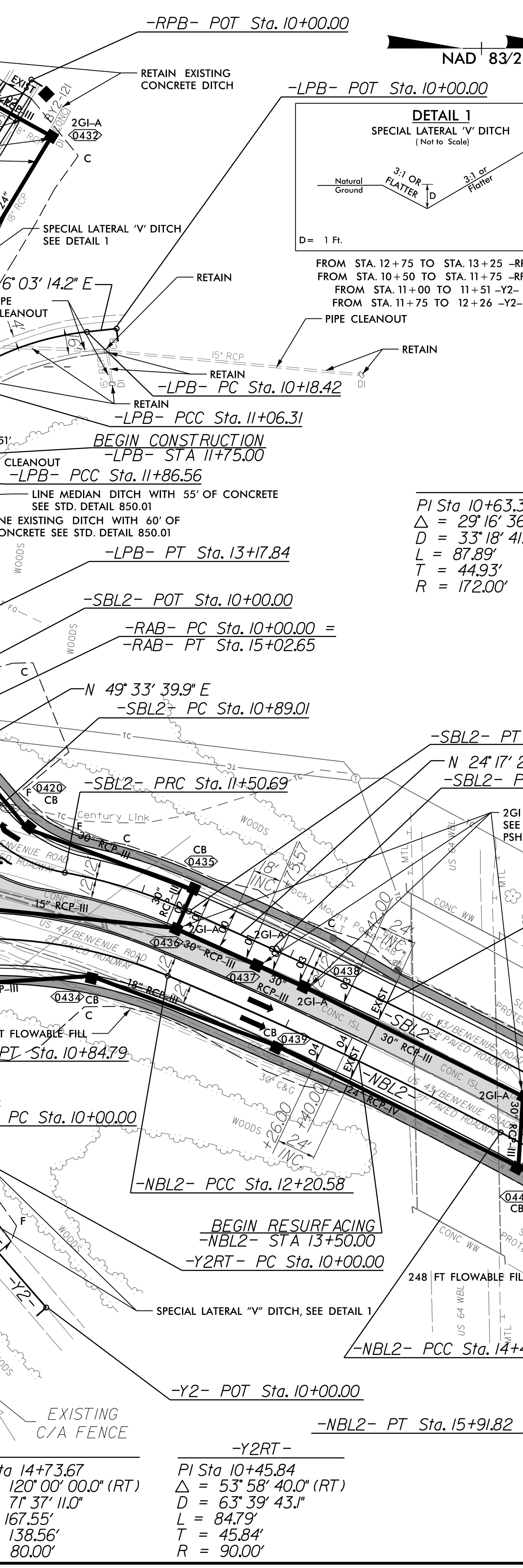
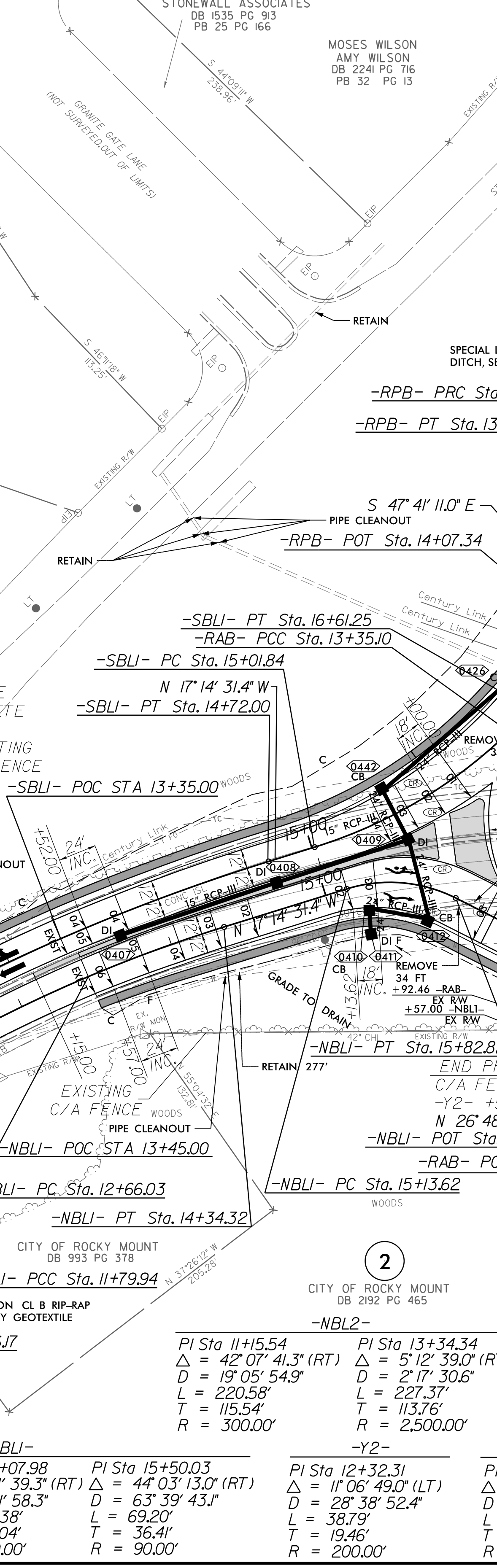
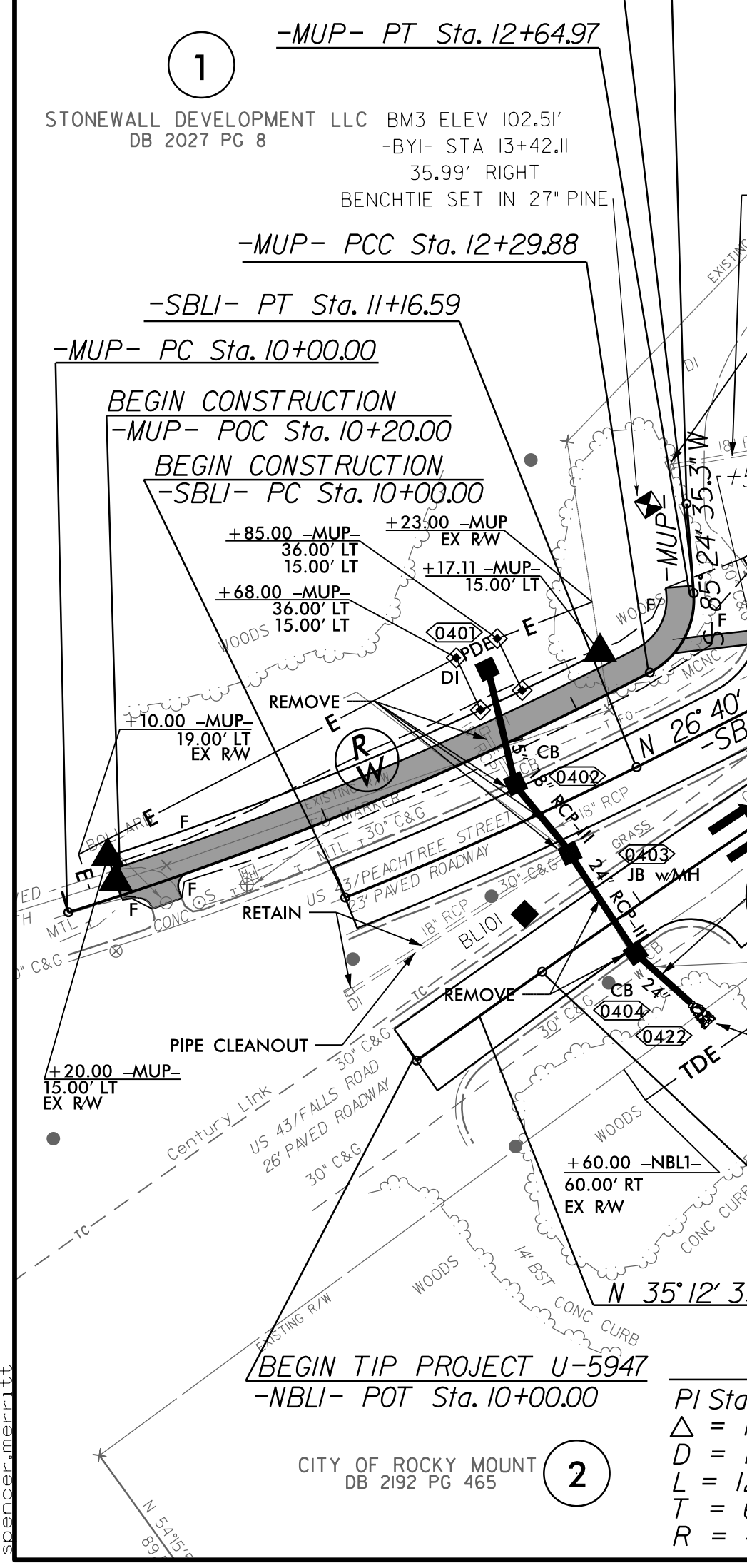
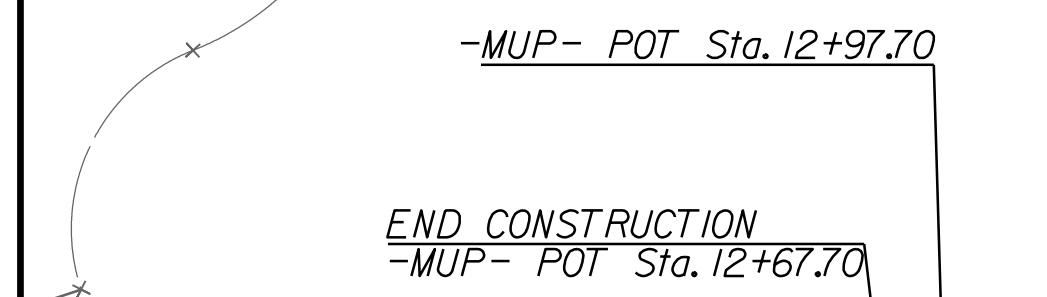
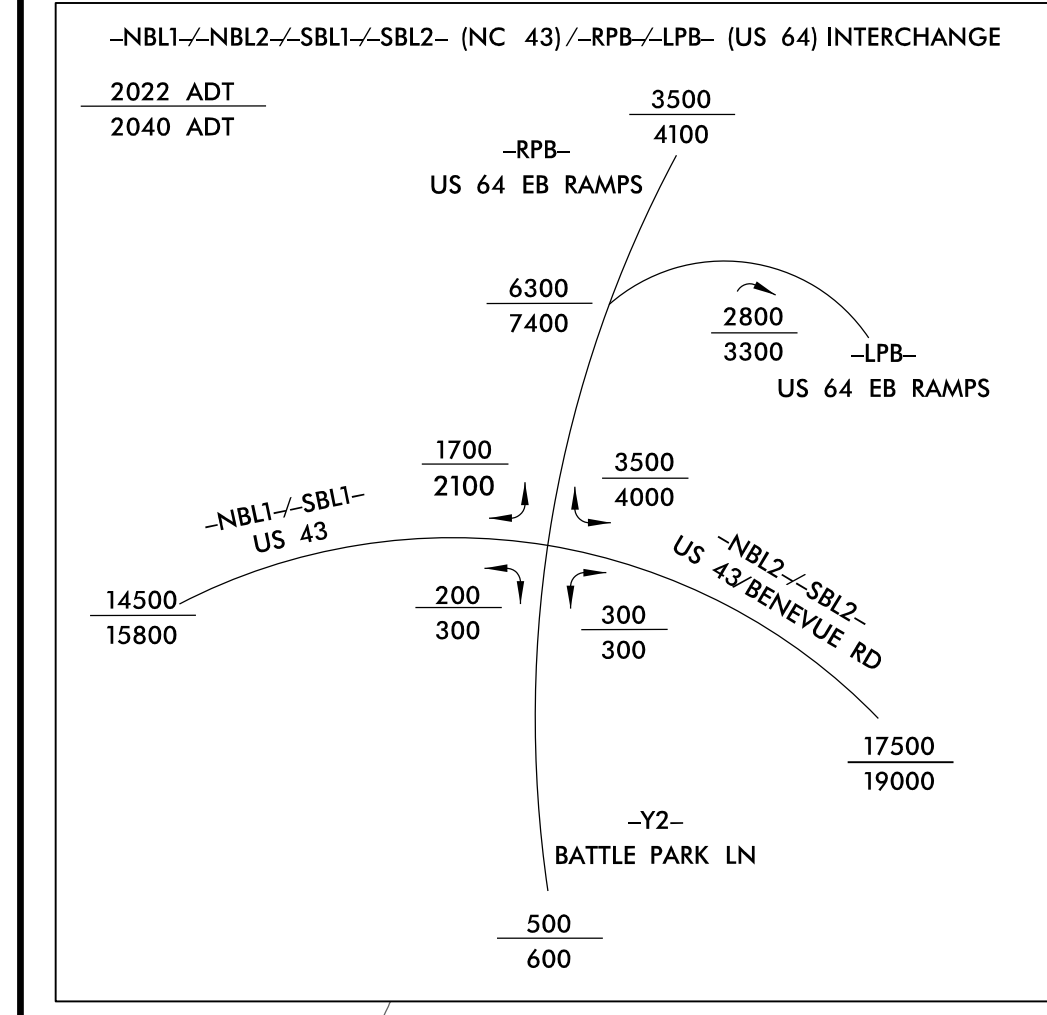
8.17.2022

01-MAR-2022 10:30 AM
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spencer.mccartney

-MUP-
 PI Sta 11+15.26 Δ = 10° 21' 32.0" (LT) D = 4° 30' 22.2" L = 229.88' T = 115.26' R = 1,271.50'
 PI Sta 12+49.75 Δ = 67° 00' 53.1" (LT) D = 19° 59' 09.4" L = 35.09' T = 19.86' R = 30.00'

-SBL1-
 PI Sta 10+58.33 Δ = 5° 08' 18.3" (LT) D = 4° 24' 26.5" L = 116.59' T = 58.33' R = 1,300.00'
 PI Sta 13+69.25 Δ = 9° 26' 28.1" (RT) D = 4° 35' 01.2" L = 205.97' T = 103.22' R = 1,250.00'
 PI Sta 15+83.47 Δ = 30° 26' 39.6" (LT) D = 19° 05' 54.9" L = 159.41' T = 81.63' R = 300.00'

-SBL2-
 PI Sta 11+21.2 Δ = 39° 16' 03.5" (LT) D = 63° 39' 43.1" L = 61.68' T = 32.11' R = 90.00'
 PI Sta 11+91.4 Δ = 13° 59' 49.1" (RT) D = 17° 23' 19.3" L = 80.49' T = 40.45' R = 329.50'
 PI Sta 14+94.72 Δ = 8° 27' 45.0" (RT) D = 2° 02' 46.6" L = 413.56' T = 207.15' R = 2,800.00'



-LPB-
 PI Sta 10+63.34 Δ = 29° 16' 36.7" (LT) D = 33° 18' 41.4" L = 87.89' T = 44.93' R = 172.00'
 PI Sta 11+46.98 Δ = 22° 59' 25.5" (LT) D = 28° 38' 52.4" L = 40.67' T = 200.00' R = 200.00'
 PI Sta 12+57.01 Δ = 51° 31' 11.5" (LT) D = 39° 14' 37.3" L = 131.28' T = 70.45' R = 146.00'

-RPB-
 PI Sta 12+50.52 Δ = 17° 31' 14.6" (LT) D = 17° 31' 14.6" L = 198.77' T = 100.16' R = 650.00'
 PI Sta 13+70.88 Δ = 28° 23' 57.0" (RT) D = 66° 37' 22.8" L = 42.63' T = 21.76' R = 86.00'

-SBL2-
 PI Sta 12+12+31.9 Δ = 17° 31' 14.6" (LT) D = 17° 31' 14.6" L = 198.77' T = 100.16' R = 650.00'
 PI Sta 13+70.88 Δ = 28° 23' 57.0" (RT) D = 66° 37' 22.8" L = 42.63' T = 21.76' R = 86.00'

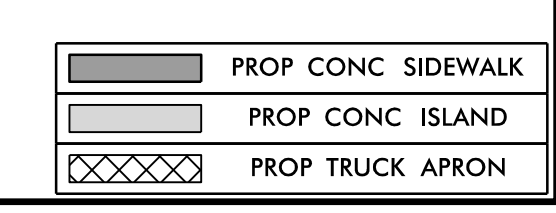
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 PI Sta 13+07.98 Δ = 16° 11' 39.3" (RT) D = 6° 21' 58.3" L = 254.38' T = 128.04' R = 900.00'
 PI Sta 15+50.03 Δ = 44° 03' 13.0" (RT) D = 63° 39' 43.1" L = 69.20' T = 36.41' R = 90.00'

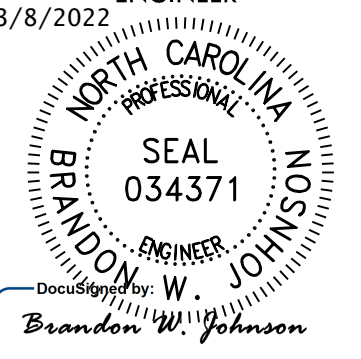
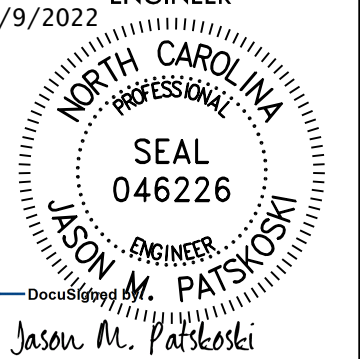
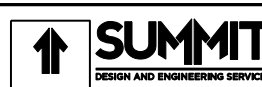
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 PI Sta 13+07.98 Δ = 16° 11' 39.3" (RT) D = 6° 21' 58.3" L = 254.38' T = 128.04' R = 900.00'
 PI Sta 15+50.03 Δ = 44° 03' 13.0" (RT) D = 63° 39' 43.1" L = 69.20' T = 36.41' R = 90.00'

-NBL2-
 PI Sta 12+12+32.31 Δ = 11° 06' 49.0" (LT) D = 28° 38' 52.4" L = 38.79' T = 19.46' R = 200.00'
 PI Sta 13+34.34 Δ = 5° 12' 39.0" (RT) D = 2° 17' 30.6" L = 227.37' T = 113.76' R = 2,500.00'
 PI Sta 11+38.56 Δ = 120° 00' 00.0" (RT) D = 71° 37' 11.0" L = 167.55' T = 138.56' R = 80.00'

-RAB-
 PI Sta 11+38.56 Δ = 120° 00' 00.0" (RT) D = 71° 37' 11.0" L = 167.55' T = 138.56' R = 80.00'
 PI Sta 13+06.12 Δ = 120° 00' 00.0" (RT) D = 71° 37' 11.0" L = 167.55' T = 138.56' R = 80.00'
 PI Sta 14+73.67 Δ = 120° 00' 00.0" (RT) D = 71° 37' 11.0" L = 167.55' T = 138.56' R = 80.00'

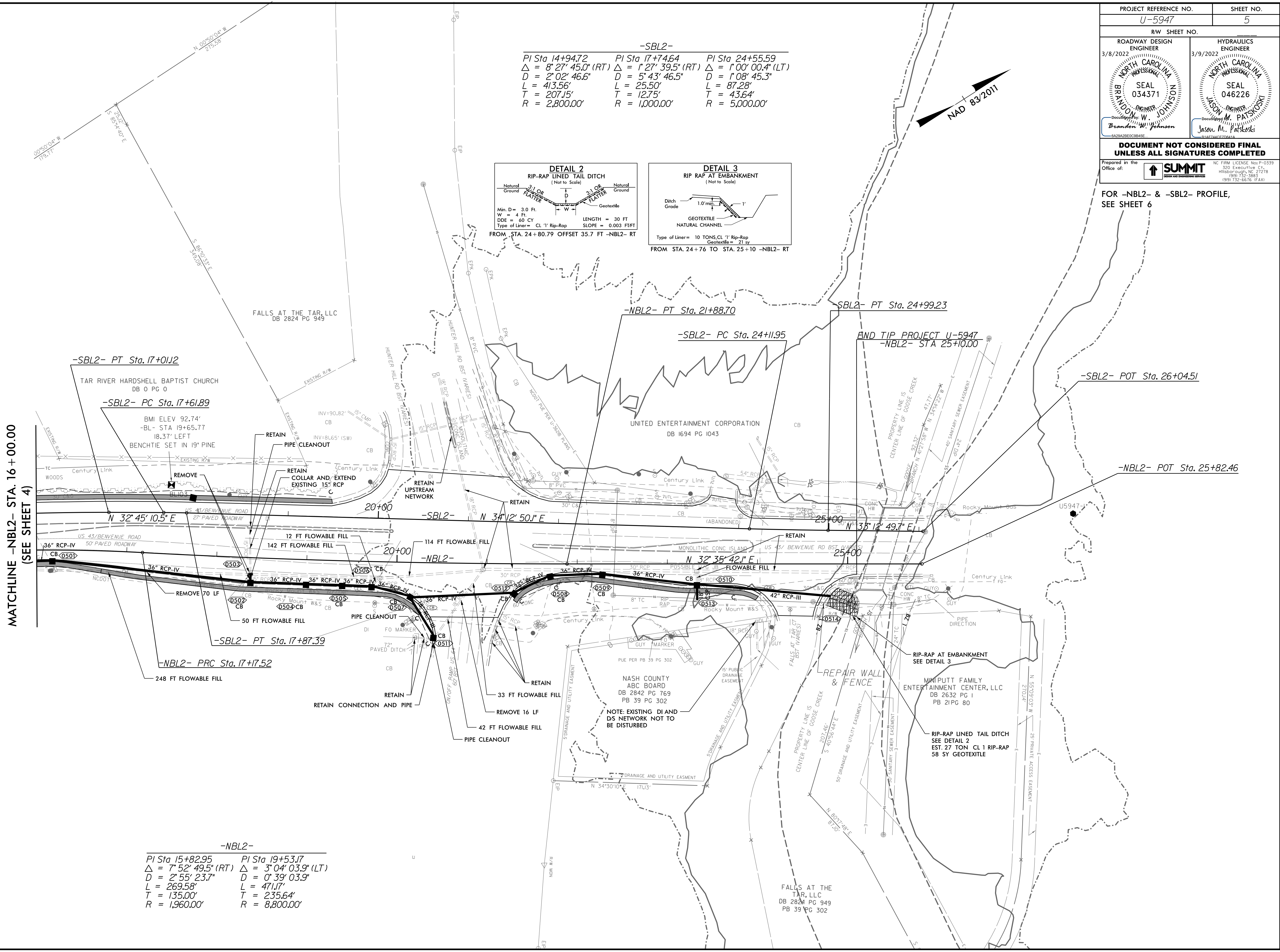
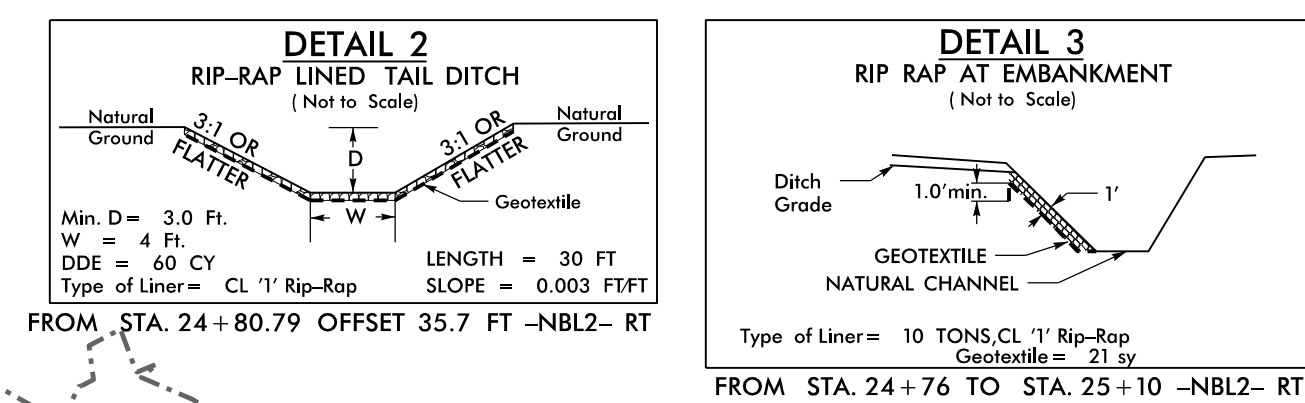
-Y2-
 PI Sta 10+45.84 Δ = 53° 58' 40.0" (RT) D = 63° 39' 43.1" L = 84.79' T = 45.84' R = 90.00'



| | | | |
|--|--|--|--|
| PROJECT REFERENCE NO. U-5947 | | SHEET NO. 5 | |
| RW SHEET NO. | | | |
| ROADWAY DESIGN ENGINEER 3/8/2022 | | HYDRAULICS ENGINEER 3/9/2022 | |
|  SEAL 034371 Brandon W. Johnson | |  SEAL 046226 Jason M. Patkoski | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | | |
| Prepared in the Office at: | |  NC FIRM LICENSE No: P-0359 300 Executive Ct. Hillsborough, NC 27278 (919) 332-3883 (919) 732-6676 (FAX) | |

-SBL2-

| | | |
|---|---|---|
| PI Sta 14+94.72 Δ = 8° 27' 45.0" (RT) D = 2' 02' 46.6" L = 413.56' T = 207.15' R = 2,800.00' | PI Sta 17+74.64 Δ = 1° 27' 39.5" (RT) D = 5' 43' 46.5" L = 25.50' T = 12.75' R = 1,000.00' | PI Sta 24+55.59 Δ = 1° 00' 00.4" (LT) D = 1' 08' 45.3" L = 87.28' T = 43.64' R = 5,000.00' |
|---|---|---|



MATCHLINE -NBL2- STA. 16 + 00.00
(SEE SHEET 4)

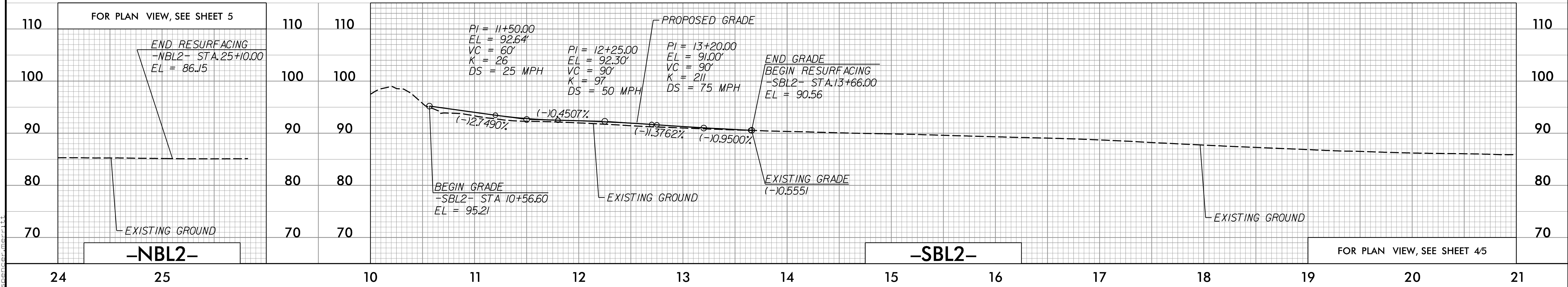
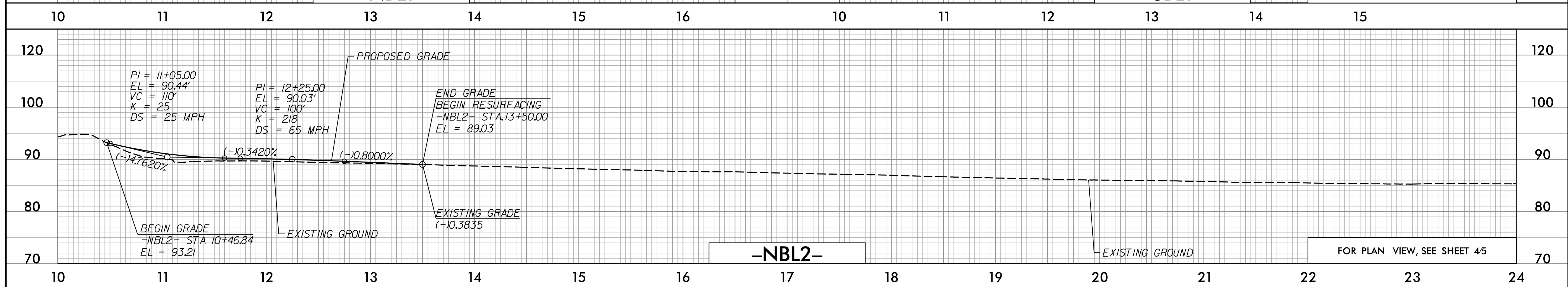
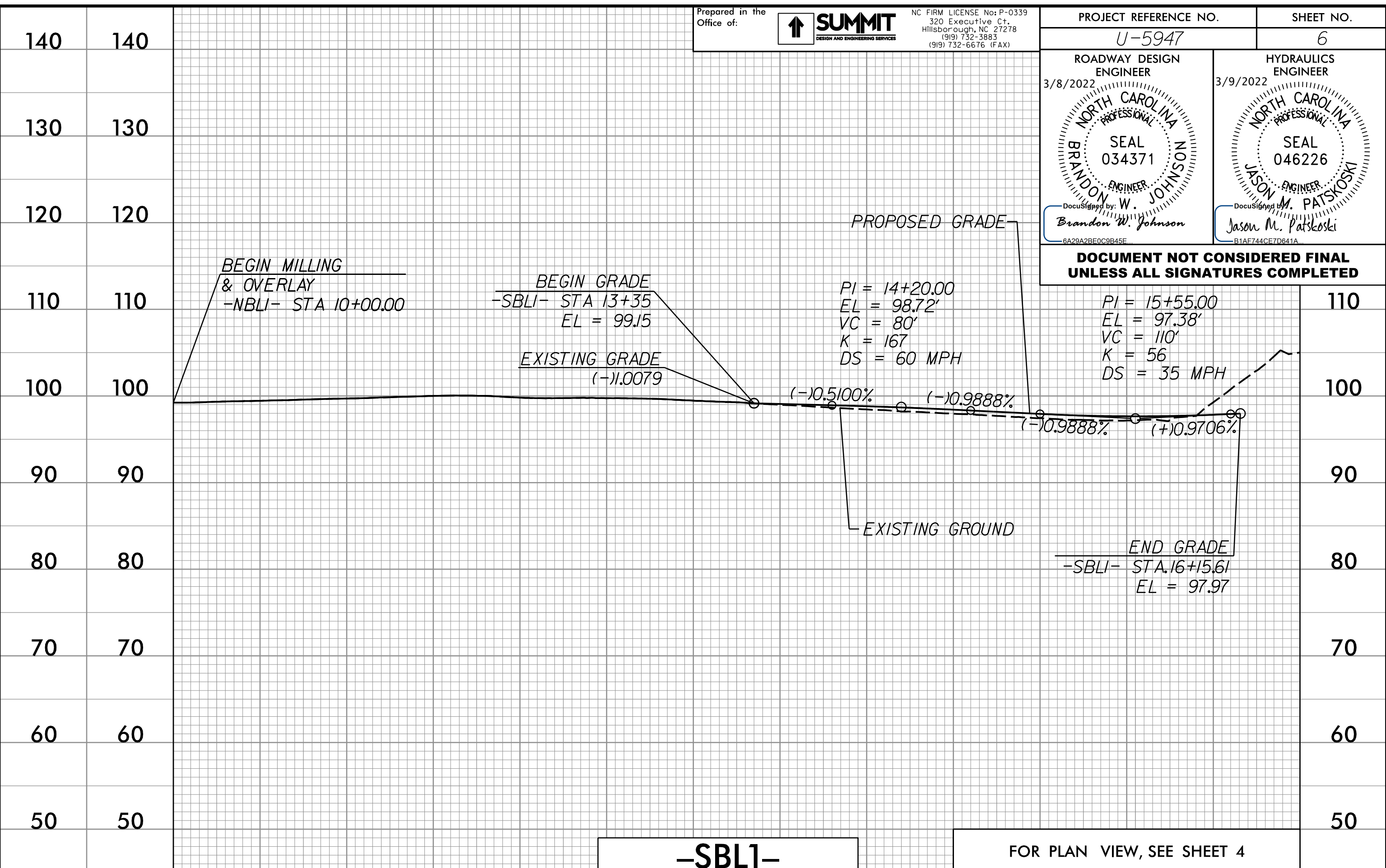
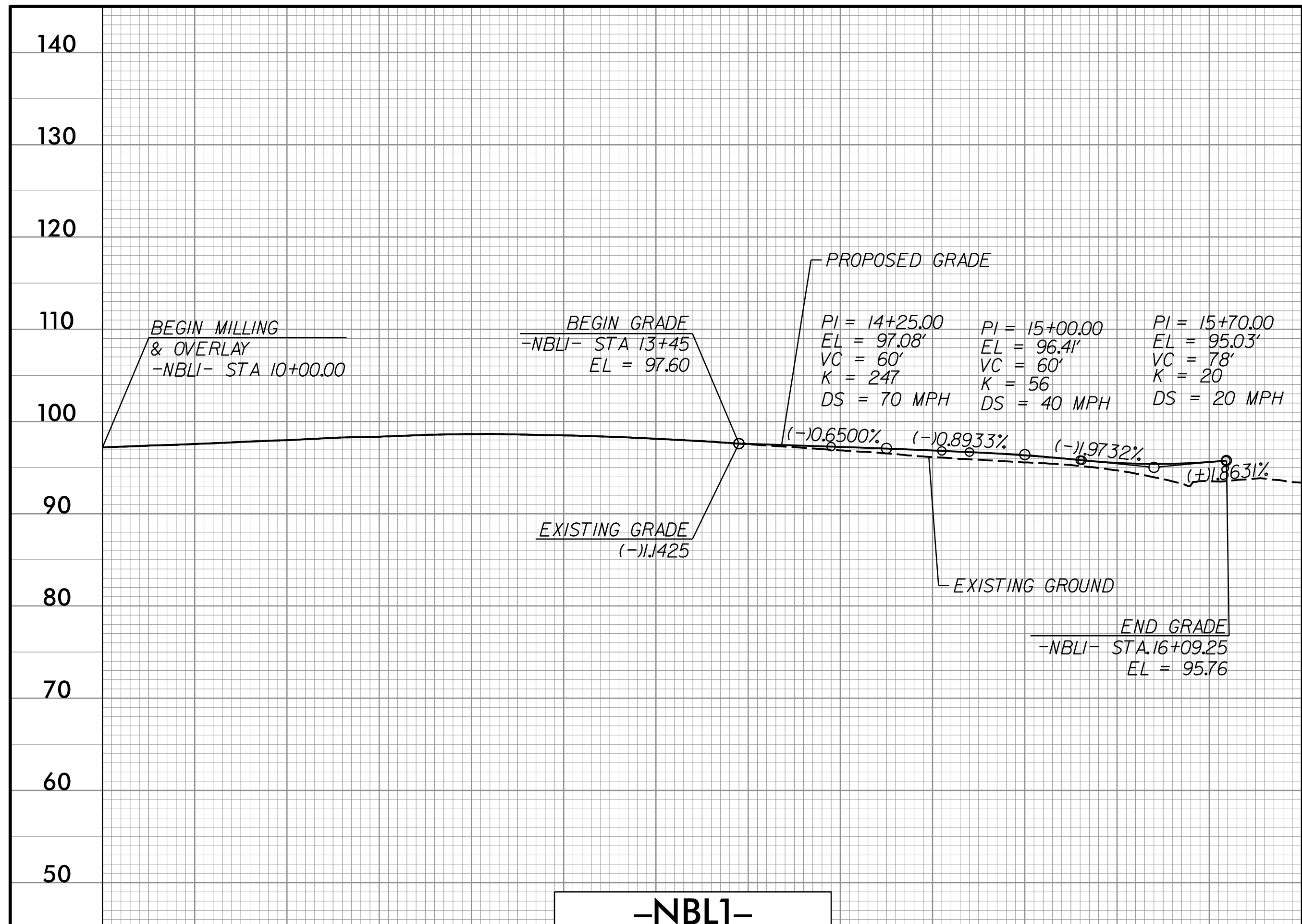
FOR -NBL2- & -SBL2- PROFILE,
SEE SHEET 6

-NBL2-

| | |
|---|--|
| PI Sta 15+82.95 Δ = 7° 52' 49.5" (RT) D = 2' 55' 23.7" L = 269.58' T = 135.00' R = 1,960.00' | PI Sta 19+53.17 Δ = 3° 04' 03.9" (LT) D = 0' 39' 03.9" L = 47.17' T = 235.64' R = 8,800.00' |
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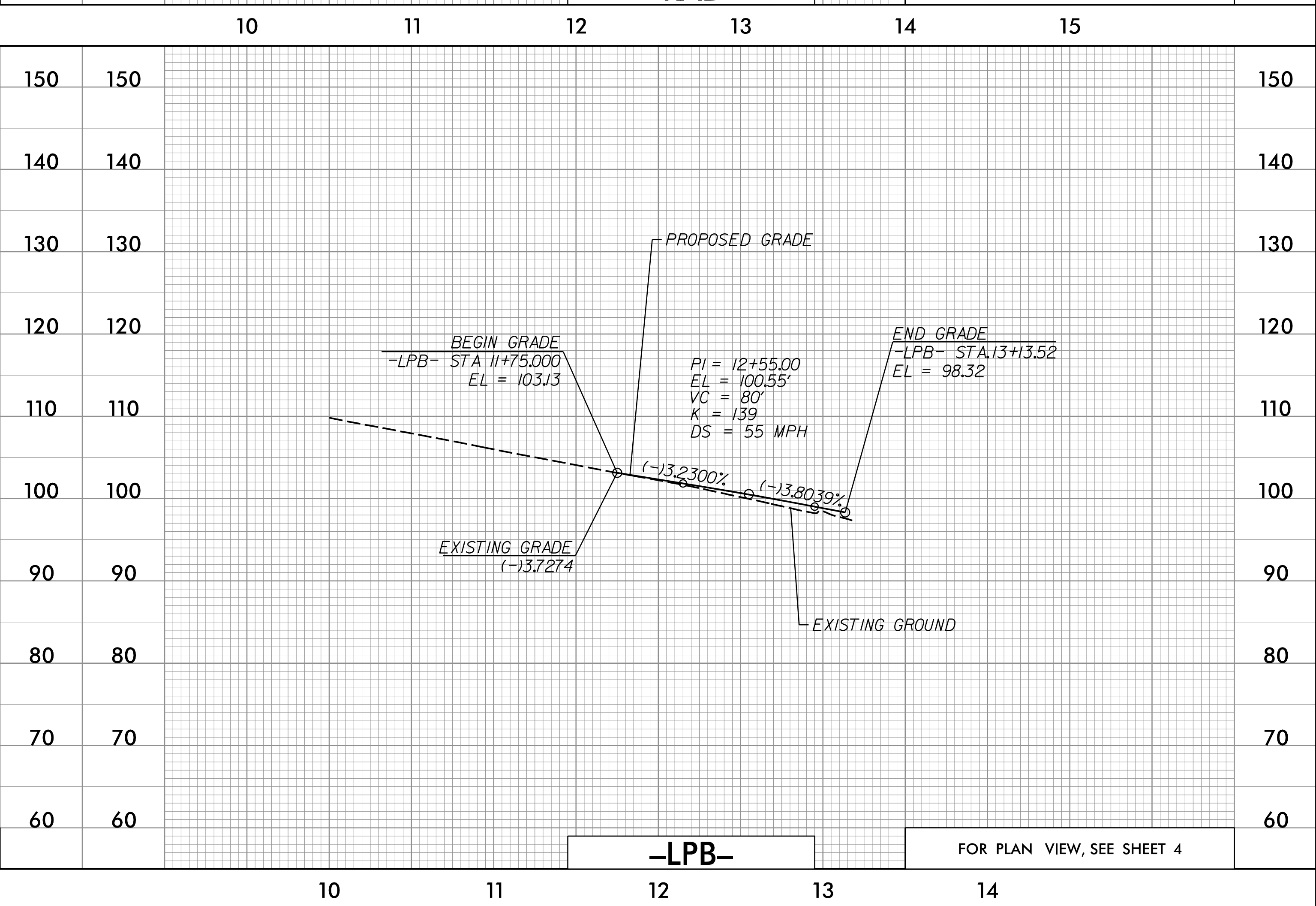
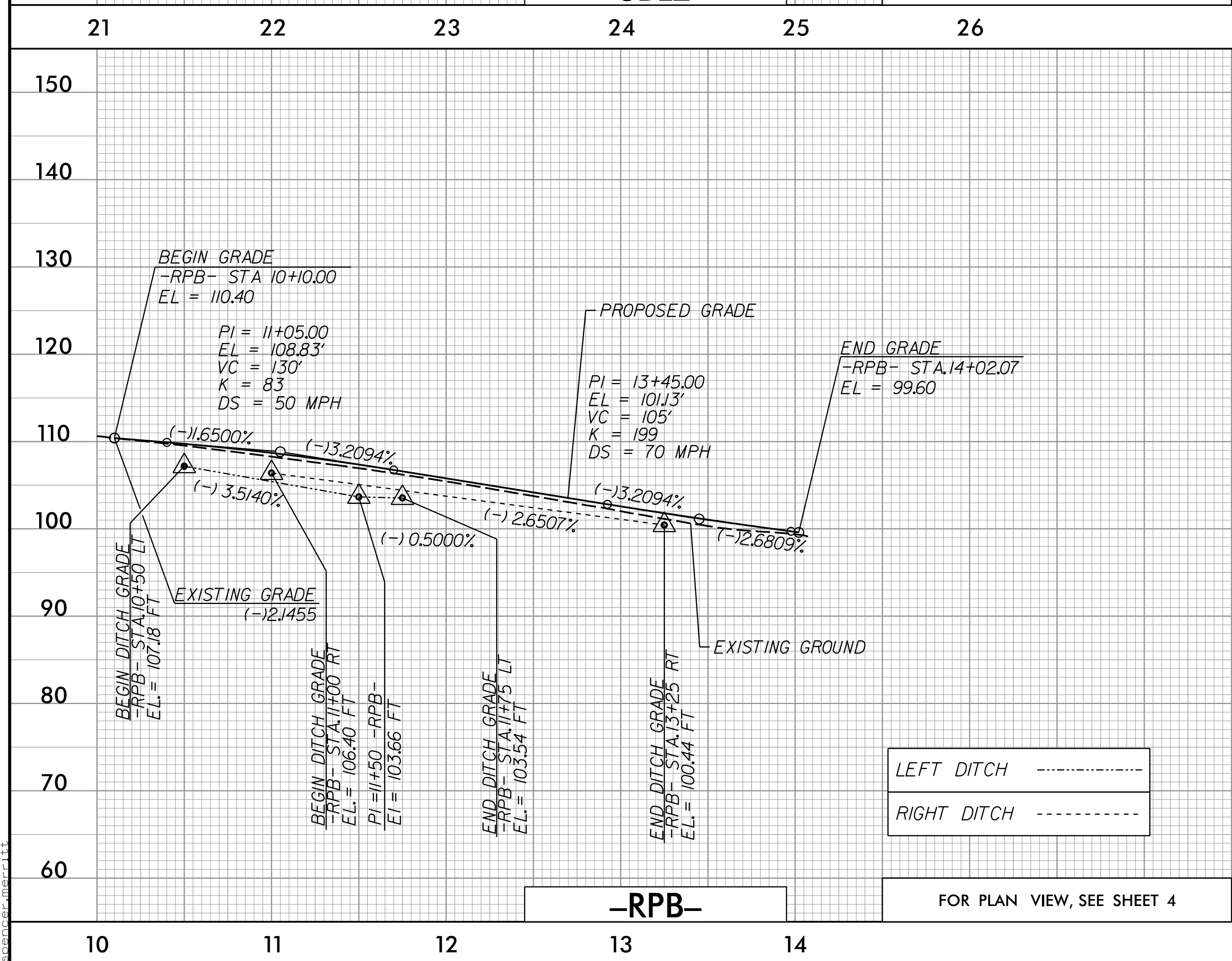
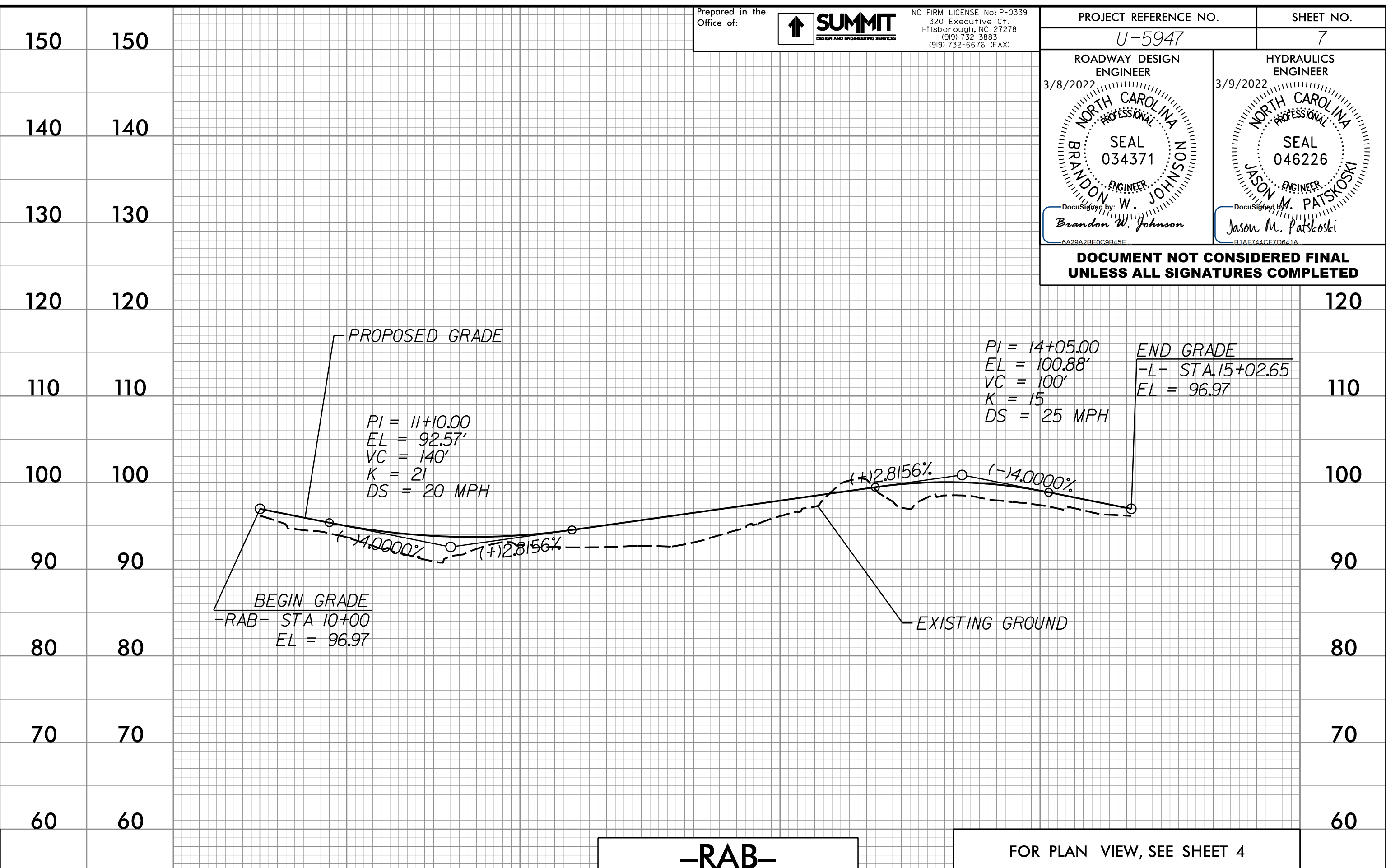
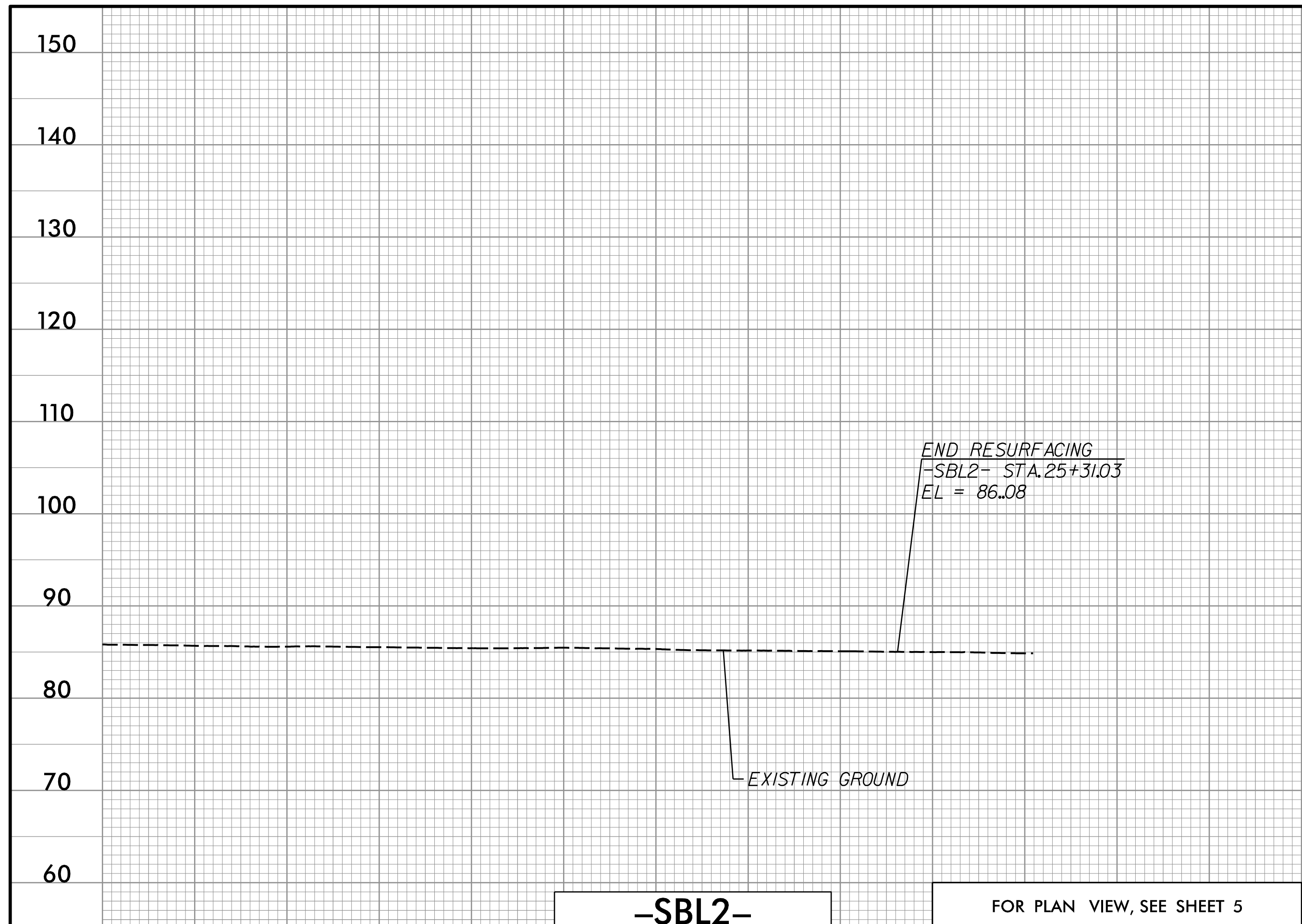
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| PROJECT REFERENCE NO. U-5947 | | SHEET NO. 6 |
| ROADWAY DESIGN ENGINEER 3/8/2022 BRANDON W. JOHNSON SEAL 034371 NORTH CAROLINA PROFESSIONAL ENGINEER | HYDRAULICS ENGINEER 3/9/2022 JASON M. PATSKOSKI SEAL 046226 NORTH CAROLINA PROFESSIONAL ENGINEER | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | |



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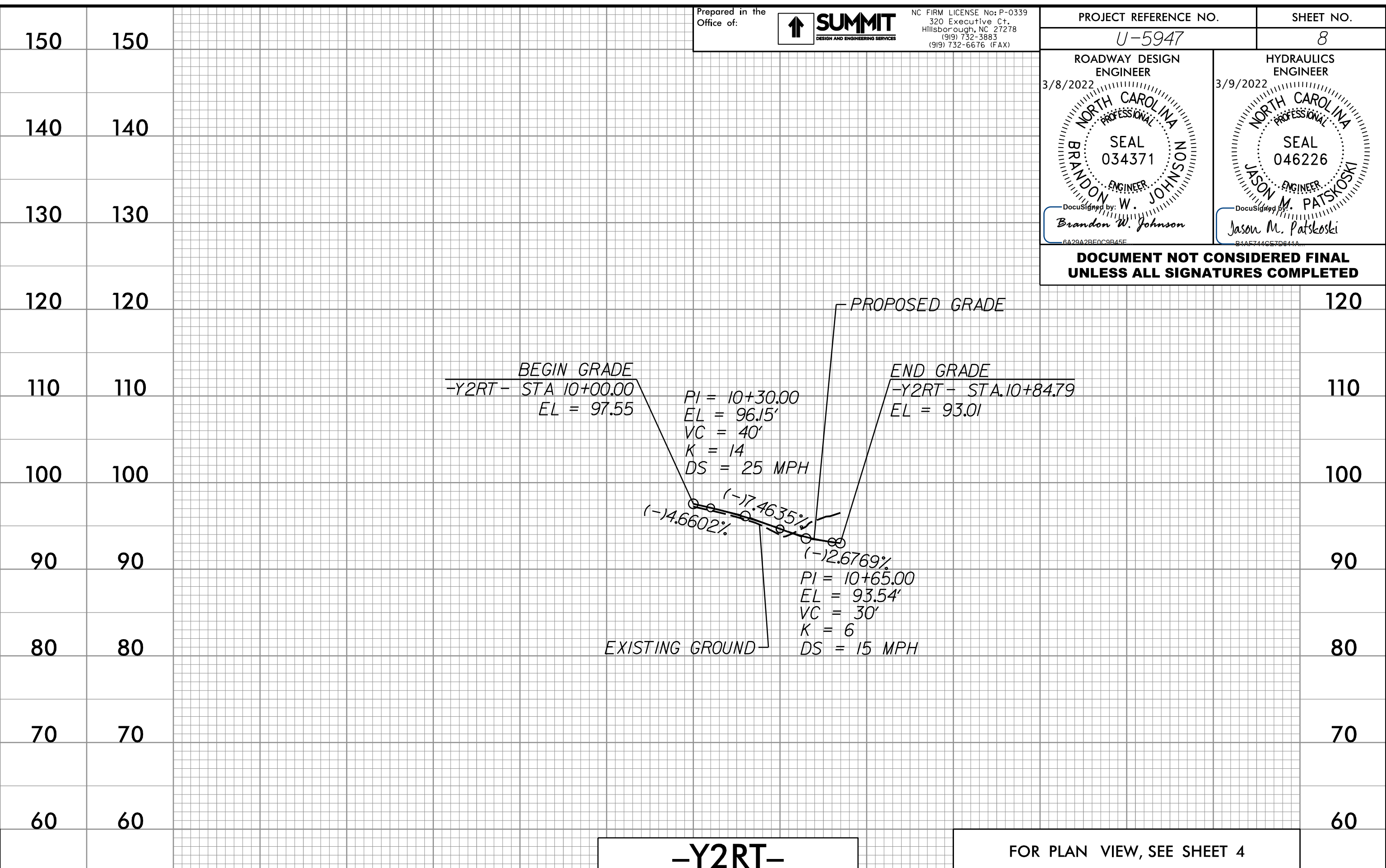
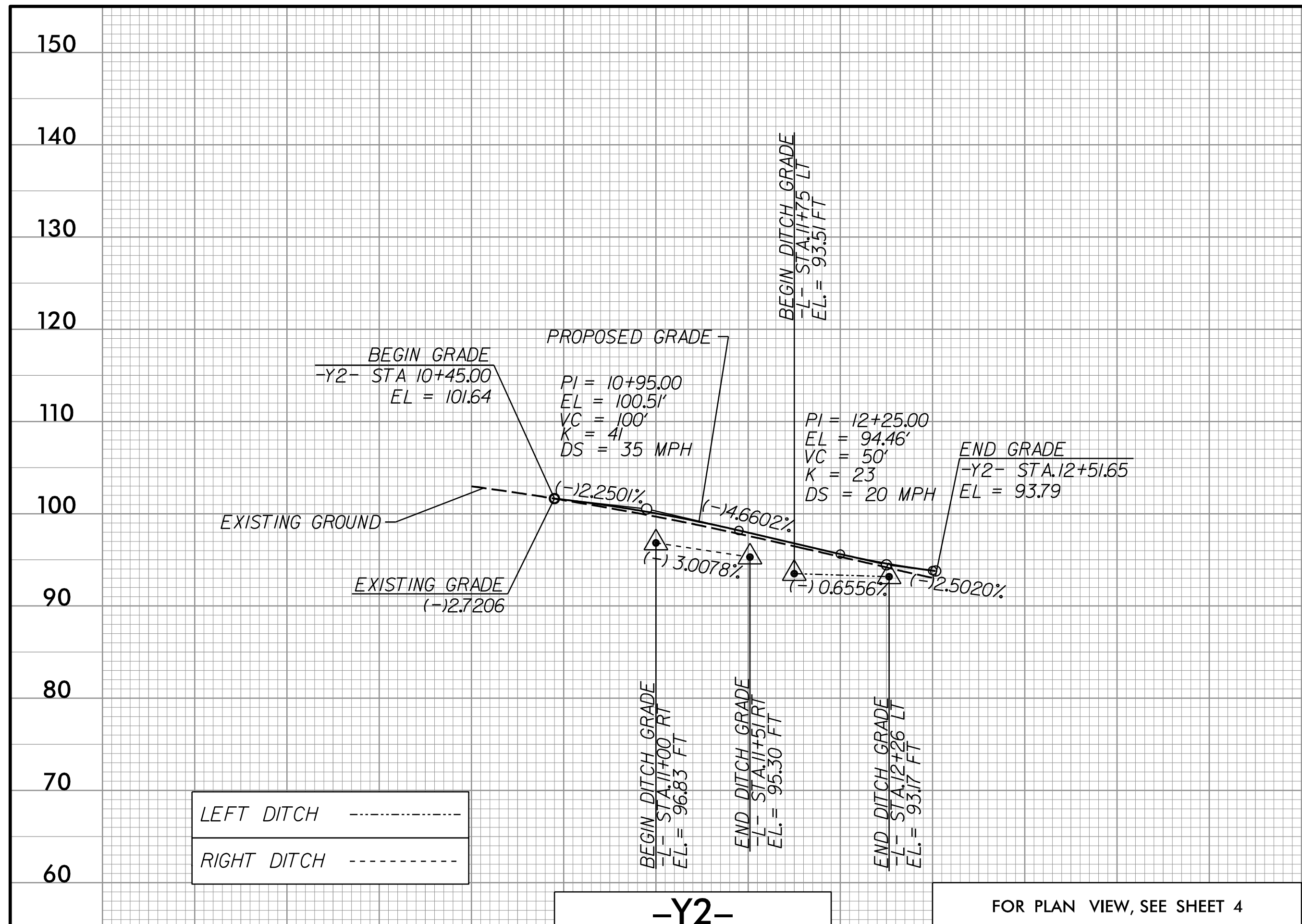
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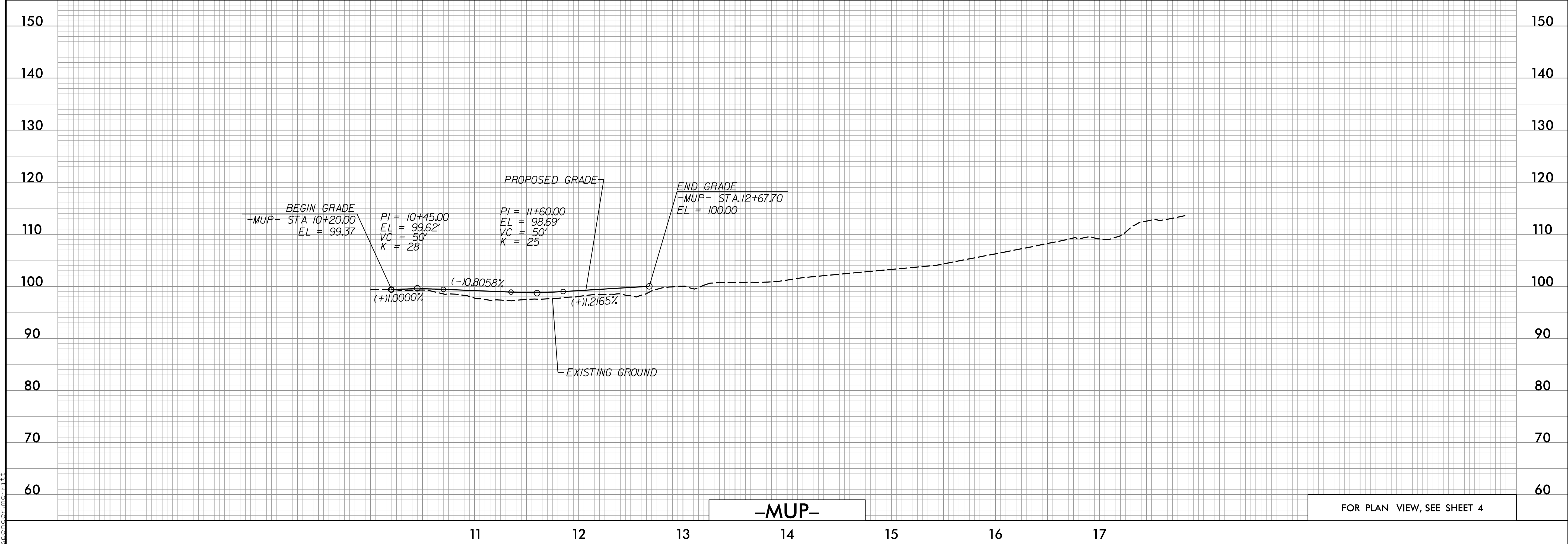
| | |
|-------------|-------|
| LEFT DITCH | ----- |
| RIGHT DITCH | ----- |

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|---|---|
| PROJECT REFERENCE NO. U-5947 | SHEET NO. 8 |
| ROADWAY DESIGN ENGINEER 3/8/2022 BRANDON W. JOHNSON SEAL 034371 ENGINEER | HYDRAULICS ENGINEER 3/9/2022 JASON M. PATSKOSKI SEAL 046226 ENGINEER |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |



10 11 12 13 10 11 12



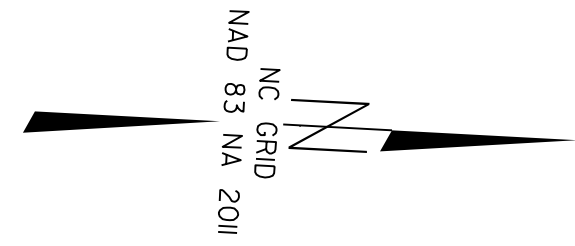
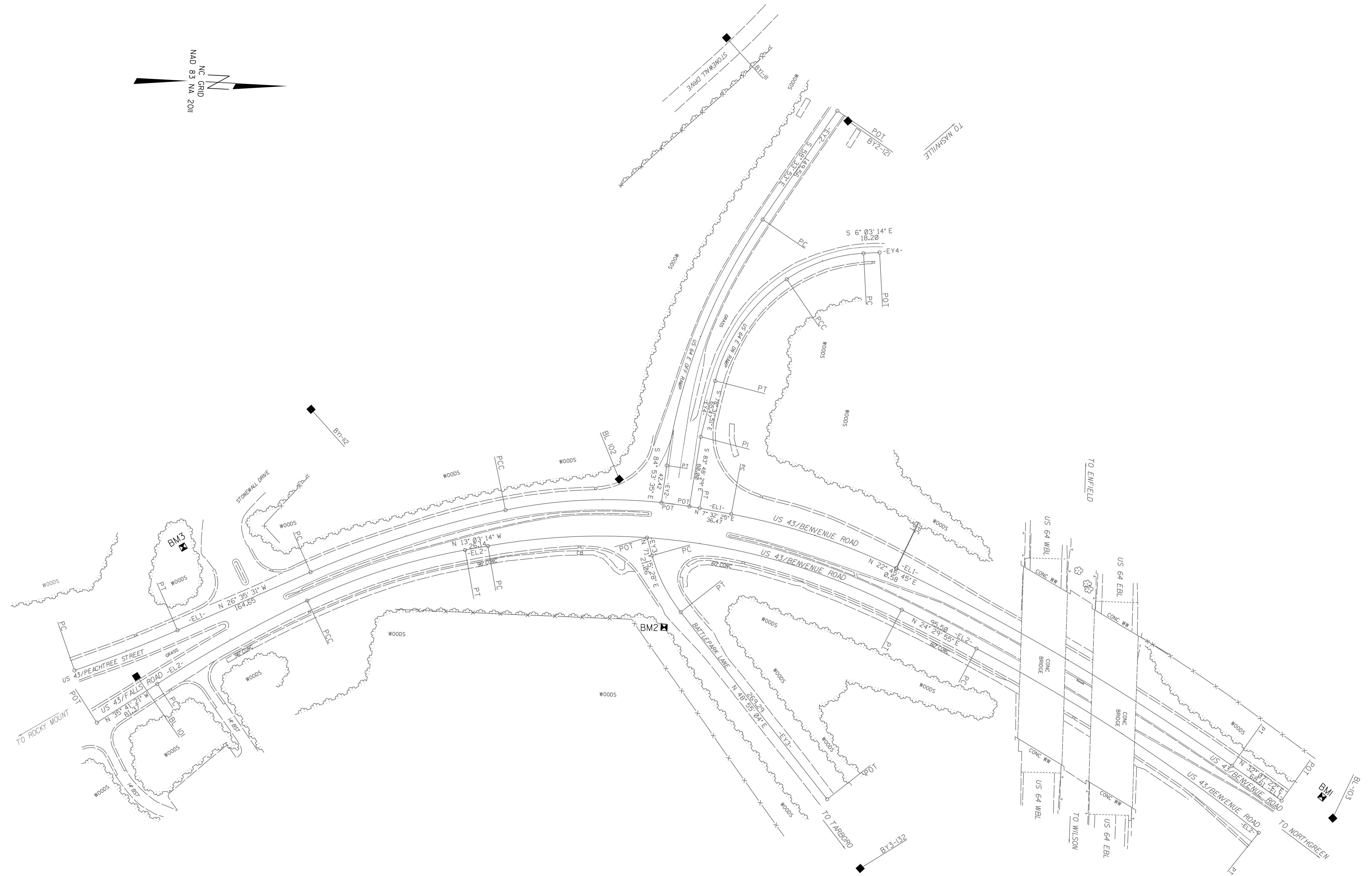
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| PROJECT REFERENCE NO. | SHEET NO. |
| U-5947 | RW02C-1 |
| Location and Surveys | |

SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

6/2/99

15-555-2022_10221.dgn
 15-555-10221.dgn
 faith.talbot

SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

| BL | POINT | DESC. | NORTH | EAST | ELEVATION |
|-------|-------|---------|-------------|--------------|-----------|
| BL101 | | BL-101 | 806999.0435 | 2353564.9308 | 98.10 |
| BL102 | | BL-102 | 807533.8958 | 2353312.5955 | 97.01 |
| BL103 | | BL-103 | 808361.3140 | 2353655.2861 | 88.42 |
| 1 | | U5947-1 | 809174.3470 | 2354195.8970 | 86.21 |

 BM1 ELEVATION = 92.74
 N 808349 E 2353630
 BL STATION 19+66.00 18 LEFT
 BENCHTIE SET IN 19" PINE

| BY1 | POINT | DESC. | NORTH | EAST | ELEVATION |
|--------|-------|---------|-------------|--------------|-----------|
| BY1111 | | BY1-111 | 807628.9310 | 2352806.2863 | 123.33 |
| BY1112 | | BY1-112 | 807180.7517 | 2353251.8797 | 104.92 |
| A101 | | BL-101 | 806999.0435 | 2353564.9308 | 98.10 |

 BM2 ELEVATION = 94.78
 N 807594 E 2353478
 BY3 STATION 6+70.00 45 RIGHT
 BENCHTIE SET IN 13" PINE

| BY2 | POINT | DESC. | NORTH | EAST | ELEVATION |
|--------|-------|---------|-------------|--------------|-----------|
| BY2121 | | BY2-121 | 807771.3731 | 2352893.2533 | 109.94 |
| A102 | | BL-102 | 807533.8958 | 2353312.5955 | 97.01 |

 BM3 ELEVATION = 102.51
 N 807044 E 2353416
 BY1 STATION 13+42.00 36 RIGHT
 BENCHTIE SET IN 27" PINE

| BY3 | POINT | DESC. | NORTH | EAST | ELEVATION |
|--------|-------|---------|-------------|--------------|-----------|
| C102 | | BL-102 | 807533.8958 | 2353312.5955 | 97.01 |
| BY3131 | | BY3-131 | 807830.0574 | 2353738.7999 | 104.34 |

REVISIONS

6/2/99

15559-2022-0222.dgn
 15559-2022-0222.dgn
 15559-2022-0222.dgn

NOTES:

- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
- THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

| EL1 | | N | E | BEARING | DIST | DELTA | D | L | T | R |
|-------|------------|-------------|---|-----------------|--------|-----------------|-------------|--------|--------|---------|
| POT | 806928.596 | 2353561.729 | | | | | | | | |
| LINE | | | | S 22°10'19.8" E | 0.00 | | | | | |
| PC | 806928.595 | 2353561.729 | | | | | | | | |
| CURVE | | | | N 24°22'55.4" W | 125.33 | 04°25'11.1"(LT) | 03°31'32.0" | 125.36 | 62.71 | 1625.16 |
| PT | 807042.749 | 2353509.990 | | | | | | | | |
| LINE | | | | N 26°35'30.9" W | 164.65 | | | | | |
| PC | 807189.978 | 2353436.289 | | | | | | | | |
| CURVE | | | | N 20°40'19.9" W | 231.99 | 11°50'22.2"(RT) | 05°05'40.1" | 232.40 | 116.61 | 1124.67 |
| PC | 807407.027 | 2353354.393 | | | | | | | | |
| CURVE | | | | N 03°36'22.0" W | 220.07 | 22°17'33.5"(RT) | 10°03'57.0" | 221.47 | 112.15 | 569.21 |
| PT | 807626.665 | 2353340.551 | | | | | | | | |
| LINE | | | | N 07°32'24.8" E | 36.47 | | | | | |
| PC | 807662.819 | 2353345.337 | | | | | | | | |
| CURVE | | | | N 15°09'05.1" E | 196.71 | 15°13'20.6"(RT) | 07°42'57.0" | 197.29 | 99.23 | 742.57 |
| PT | 807852.689 | 2353396.751 | | | | | | | | |
| LINE | | | | N 22°45'45.4" E | 0.58 | | | | | |
| PC | 807853.229 | 2353396.977 | | | | | | | | |
| CURVE | | | | N 27°26'33.9" E | 441.31 | 09°21'37.0"(RT) | 02°07'07.2" | 441.80 | 221.39 | 2704.34 |
| PT | 808244.879 | 2353600.360 | | | | | | | | |
| LINE | | | | N 32°07'22.4" E | 68.61 | | | | | |
| POT | 808302.988 | 2353636.844 | | | | | | | | |

| EL2 | | N | E | BEARING | DIST | DELTA | D | L | T | R |
|-------|------------|-------------|---|-----------------|--------|-----------------|-------------|--------|--------|---------|
| POT | 806957.056 | 2353619.483 | | | | | | | | |
| LINE | | | | N 35°41'21.1" W | 81.37 | | | | | |
| PC | 807023.142 | 2353572.014 | | | | | | | | |
| CURVE | | | | N 32°06'09.6" W | 194.43 | 07°10'23.1"(RT) | 03°41'12.7" | 194.56 | 97.41 | 1554.05 |
| PT | 807187.844 | 2353468.686 | | | | | | | | |
| LINE | | | | N 28°30'58.1" W | 0.00 | | | | | |
| PC | 807187.844 | 2353468.686 | | | | | | | | |
| CURVE | | | | N 20°47'06.2" W | 188.06 | 15°27'43.6"(RT) | 08°11'48.4" | 188.64 | 94.89 | 699.00 |
| PT | 807363.669 | 2353401.949 | | | | | | | | |
| LINE | | | | N 13°03'14.4" W | 26.14 | | | | | |
| PC | 807389.129 | 2353396.046 | | | | | | | | |
| CURVE | | | | N 05°43'20.2" E | 474.78 | 37°33'09.2"(RT) | 07°46'07.3" | 483.38 | 250.73 | 737.52 |
| PT | 807861.541 | 2353443.384 | | | | | | | | |
| LINE | | | | N 24°29'54.8" E | 95.50 | | | | | |
| PC | 807948.441 | 2353482.984 | | | | | | | | |
| CURVE | | | | N 30°05'22.8" E | 382.08 | 11°10'56.0"(RT) | 02°55'19.3" | 382.69 | 191.95 | 1960.82 |
| PT | 807948.441 | 2353482.984 | | | | | | | | |

| EY2 | | N | E | BEARING | DIST | DELTA | D | L | T | R |
|-------|------------|-------------|---|-----------------|--------|-----------------|-------------|--------|--------|--------|
| POT | 807758.741 | 2352882.293 | | | | | | | | |
| LINE | | | | S 58°33'53.4" E | 149.56 | | | | | |
| PC | 807680.739 | 2353009.904 | | | | | | | | |
| CURVE | | | | S 71°43'44.1" E | 299.42 | 26°19'41.4"(LT) | 08°42'56.8" | 302.08 | 153.75 | 657.38 |
| PT | 807586.866 | 2353294.233 | | | | | | | | |
| LINE | | | | S 84°53'34.8" E | 42.42 | | | | | |
| POT | 807583.090 | 2353336.481 | | | | | | | | |

| EY3 | | N | E | BEARING | DIST | DELTA | D | L | T | R |
|-------|------------|-------------|---|-----------------|--------|-----------------|-------------|-------|-------|--------|
| POT | 807568.871 | 2353377.104 | | | | | | | | |
| LINE | | | | N 71°15'27.8" E | 21.06 | | | | | |
| PC | 807575.637 | 2353397.044 | | | | | | | | |
| CURVE | | | | N 60°05'15.8" E | 71.99 | 22°20'23.9"(LT) | 30°50'16.3" | 72.44 | 36.69 | 185.80 |
| PT | 807611.534 | 2353459.441 | | | | | | | | |
| LINE | | | | N 48°55'03.9" E | 269.29 | | | | | |
| POT | 807788.494 | 2353662.420 | | | | | | | | |

| EY4 | | N | E | BEARING | DIST | DELTA | D | L | T | R |
|-------|------------|-------------|---|-----------------|--------|-----------------|-------------|--------|-------|--------|
| POT | 807815.076 | 2353040.202 | | | | | | | | |
| LINE | | | | S 06°03'14.2" E | 18.20 | | | | | |
| PC | 807796.975 | 2353042.121 | | | | | | | | |
| CURVE | | | | S 21°39'09.3" E | 91.87 | 31°11'50.4"(LT) | 33°32'27.1" | 93.01 | 47.69 | 170.82 |
| PC | 807711.590 | 2353076.019 | | | | | | | | |
| CURVE | | | | S 57°53'27.8" E | 140.98 | 41°16'46.7"(LT) | 28°39'07.8" | 144.07 | 75.32 | 199.97 |
| PT | 807636.657 | 2353195.431 | | | | | | | | |
| LINE | | | | S 78°31'51.2" E | 65.47 | | | | | |
| POT | 807623.638 | 2353259.594 | | | | | | | | |
| LINE | | | | S 83°48'29.1" E | 80.00 | | | | | |
| POT | 807615.009 | 2353339.131 | | | | | | | | |

NOTES:

- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
- THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

6/2/99

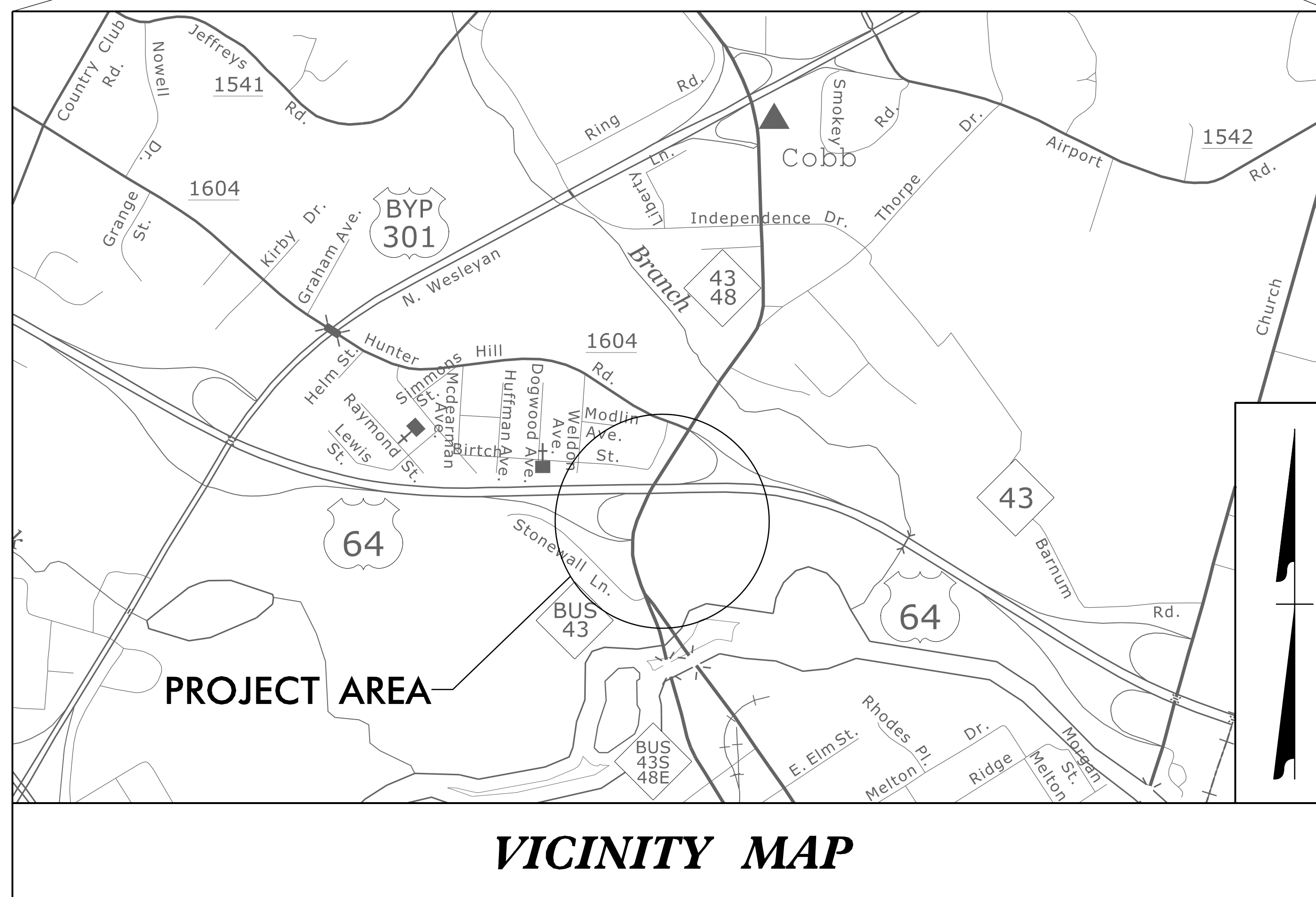
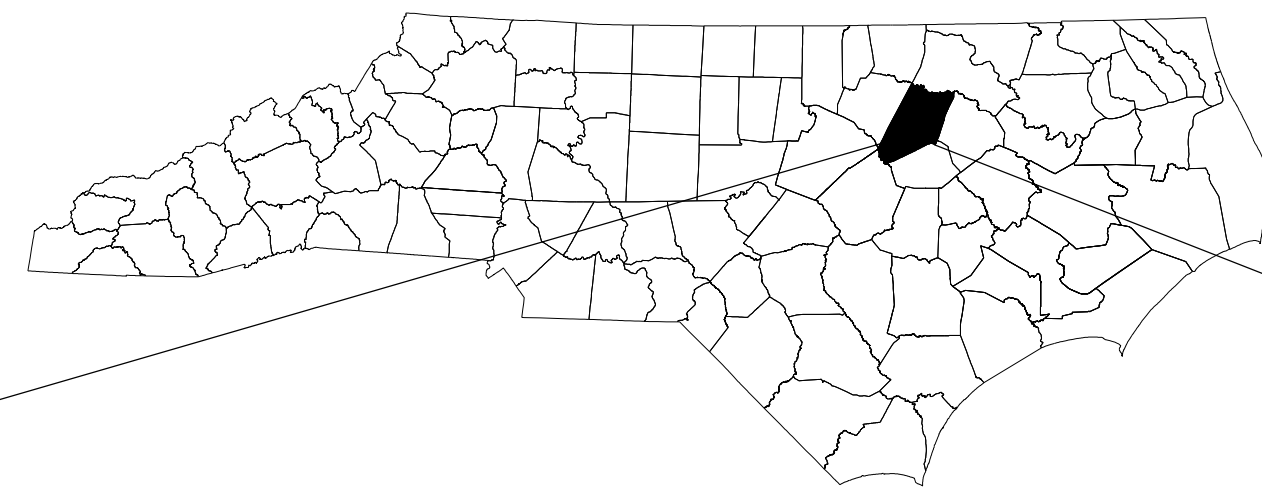
REVISIONS

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faub,alike

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

NASH COUNTY



VICINITY MAP

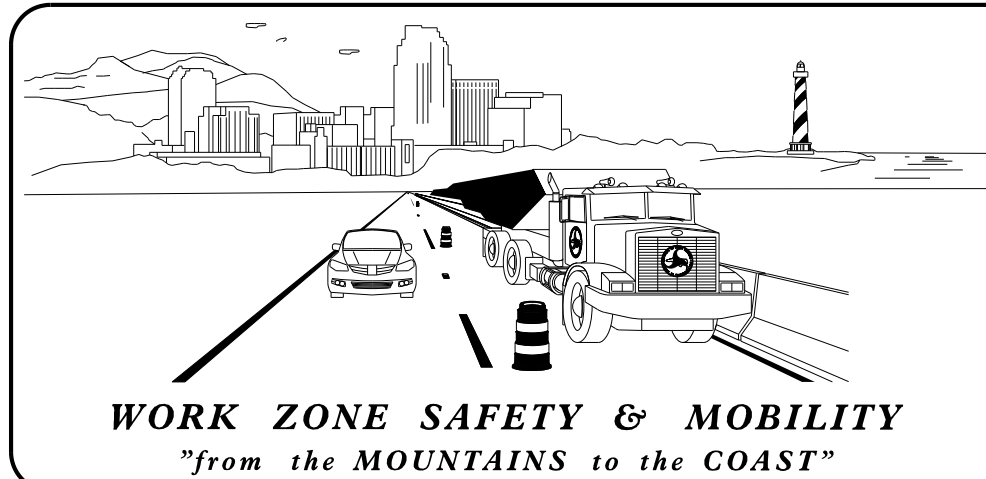
| SHEET NO. | TITLE |
|--------------|---|
| TMP-1 | TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS |
| TMP-1A | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND |
| TMP-1B | TRANSPORTATION OPERATIONS PLAN: (GENERAL AND LOCAL NOTES) |
| TMP-2A | SPECIAL SIGN DESIGNS |
| TMP-2B | US 64 RAMP OFFSITE DETOURS |
| TMP-2C | DETOUR DETAILS |
| TMP-2D | DETOUR SIGNS |
| TMP-2E | PEDESTRIAN MANAGEMENT PLAN-1 |
| TMP-2F | PEDESTRIAN MANAGEMENT PLAN-2 |
| TMP-3 | PHASING |
| TMP-4 THRU 6 | TEMPORARY TRAFFIC CONTROL PHASE I DETAILS |
| TMP-7 THRU 8 | TEMPORARY TRAFFIC CONTROL PHASE II DETAILS |
| TMP-9 | TEMPORARY TRAFFIC CONTROL PHASE III DETAIL |
| TMP-10 | TEMPORARY TRAFFIC CONTROL PHASE IV DETAIL |

SHEET NO.
TMP-1

U-5947

TIP PROJECT:

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PLANS PREPARED BY:

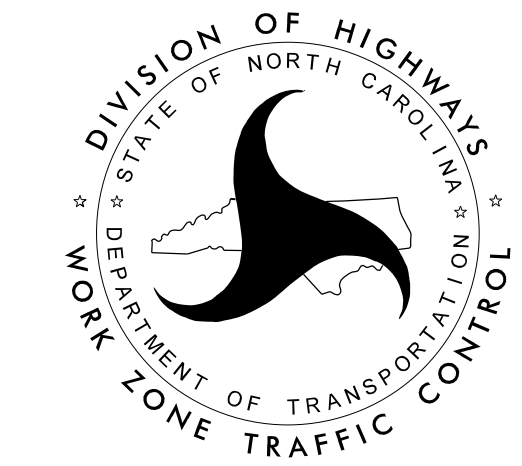
BRANDON W. JOHNSON, P.E.
PROJECT ENGINEER

SPENCER W. MERRITT, P.E.
PROJECT DESIGNER

NCDOT CONTACT:

RUSSELL E. BROADWELL, P.E.
DIVISION 4 PROJECT ENGINEER

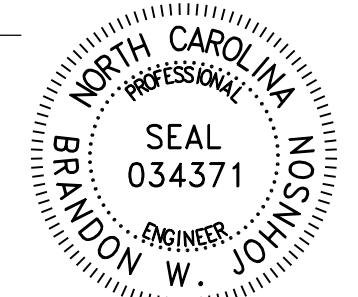
COREY D. MCLAMB, PE
DIVISION CONTRUCTION ENGINEER



NC FIRM LICENSE No: P-0339
320 Executive Ct.
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)

APPROVED: *Brandon W. Johnson*
DATE: 3/10/2022

SEAL



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josh.fernigan

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - 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 |
|----------|---|
| 1101.01 | WORK ZONE WARNING SIGNS |
| 1101.02 | TEMPORARY LANE CLOSURES |
| 1101.03 | TEMPORARY ROAD CLOSURES |
| 1101.04 | TEMPORARY SHOULDER CLOSURES |
| 1101.05 | WORK ZONE VEHICLE ACCESSES |
| 1101.11 | TRAFFIC CONTROL DESIGN TABLES |
| 1110.01 | STATIONARY WORK ZONE SIGNS |
| 1110.02 | PORTABLE WORK ZONE SIGNS |
| 1115.01 | FLASHING ARROW BOARDS |
| 1130.01 | DRUMS |
| 1135.01 | CONES |
| 1145.01 | BARRICADES |
| 1150.01 | FLAGGING DEVICES |
| 1160.01 | TEMPORARY CRASH CUSHION |
| 1165.01 | TRUCK MOUNTED ATTENUATOR |
| 1170.01 | PORTABLE CONCRETE BARRIER |
| 1180.01 | SKINNY - DRUMS |
| 1205.01 | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS |
| 1205.02 | PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS |
| 1205.03 | PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMP |
| 1205.04 | PAVEMENT MARKINGS - INTERSECTIONS |
| 1205.05 | PAVEMENT MARKINGS - TURN LANES |
| 1205.06 | PAVEMENT MARKINGS - LANE DROPS |
| 1205.07 | PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS |
| 1205.08 | PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES |
| 1205.09 | PAVEMENT MARKINGS - PAINTED ISLANDS |
| 1205.13 | PAVEMENT MARKINGS - LANE REDUCTIONS |
| 1205.14 | PAVEMENT MARKINGS - ROUNDABOUTS |
| 1205.15 | PAVEMENT MARKINGS - SUPERSTREETS |
| 1264.01 | OBJECT MARKERS - TYPES |
| 1264.02 | OBJECT MARKERS - INSTALLATION |

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TEMPORARY PAVEMENT MARKING

| SYMBOL | DESCRIPTION |
|---------------------------------|--------------------------------|
| PAINT (4") | |
| P1 | WHITE EDGELINE |
| P2 | WHITE SOLID LANE LINE |
| P3 | 10 FT WHITE SKIP |
| P4 | 3 FT - 9 FT/SP WHITE MINI SKIP |
| P5 | 2 FT - 6 FT/SP WHITE MINI SKIP |
| P10 | YELLOW EDGELINE |
| P13 | YELLOW DOUBLE CENTER LINE |
| PAINT (8") | |
| P40 | WHITE GORELINE |
| P45 | 3 FT - 3 FT/SP WHITE MINI SKIP |
| P46 | WHITE CROSSWALK LINE |
| PAINT (24", 90 MIL) | |
| P61 | WHITE STOPBAR |
| P62 | WHITE CROSSWALK LINE |
| PAINT- PAVEMENT MARKING SYMBOLS | |
| P70 | LEFT ARROW |
| P71 | RIGHT ARROW |
| P72 | STRAIGHT ARROW |
| P73 | COMBO. LEFT/STRAIGHT ARROW |
| P100 | ALPHANUMERIC CHARACTER |
| P103 | 24" YIELD LINE TRIANGLE |
| P111 | FISH-HOOK LEFT/STRAIGHT ARROW |
| P112 | FISH-HOOK RIGHT/STRAIGHT ARROW |

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM
- SKINNY DRUM
- TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

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| | | | |
|---|----------|--|------------------------------------|
| APPROVED: DATE: 3/10/2022 | SEAL | | ROADWAY STANDARD DRAWINGS & LEGEND |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | | |

GENERAL NOTES / LOCAL NOTES

| | |
|---------------------|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| U-5947 | TMP-1B |

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS - REQUIRES INTERMEDIATE CONTRACT TIME PROJECT SPECIAL PROVISIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

| | |
|----------------------------------|---------------------------------------|
| ROAD NAME | DAY AND TIME RESTRICTIONS |
| US 64 RAMP /LOOP & BATTLEPARK LN | MONDAY THRU FRIDAY 6:00 AM TO 7:00 PM |

B) DO NOT CLOSE ROADS AS FOLLOWS:

| | |
|---------------------|---|
| ROAD NAME | DAY AND TIME RESTRICTIONS |
| NC 43 (BENVENUE RD) | MONDAY THRU FRIDAY 6:00AM TO 9:00 AM AND 4:00 PM TO 7:00 PM |

C) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

| | |
|--|--|
| ROAD NAME | |
| NC 43 (BENVENUE RD) / US 64 RAMP AND LOOP/ BATTLEPARK LN | |

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 AM DECEMBER 31st TO 7:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 PM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 AM THURSDAY AND 7:00 PM MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 7:00 PM TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 7:00 PM THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 PM THE TUESDAY AFTER INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY AND 7:00 PM TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 AM TUESDAY TO 7:00 PM MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES ON TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 250 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MLE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

K) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

O) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

O) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

P) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

Q) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

| ROAD NAME | MARKING | MARKER |
|-----------|---------|------------------|
| ALL ROADS | PAINT | TEMPORARY RAISED |

R) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

S) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

T) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

U) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO REMOVAL AND INSTALLATION.

PLACE DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS AFTER REMOVAL AND BEFORE INSTALLATION.

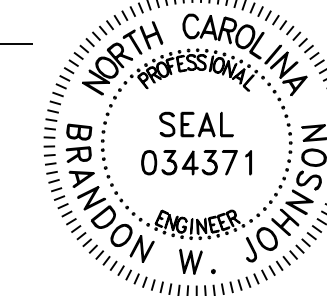

MISCELLANEOUS

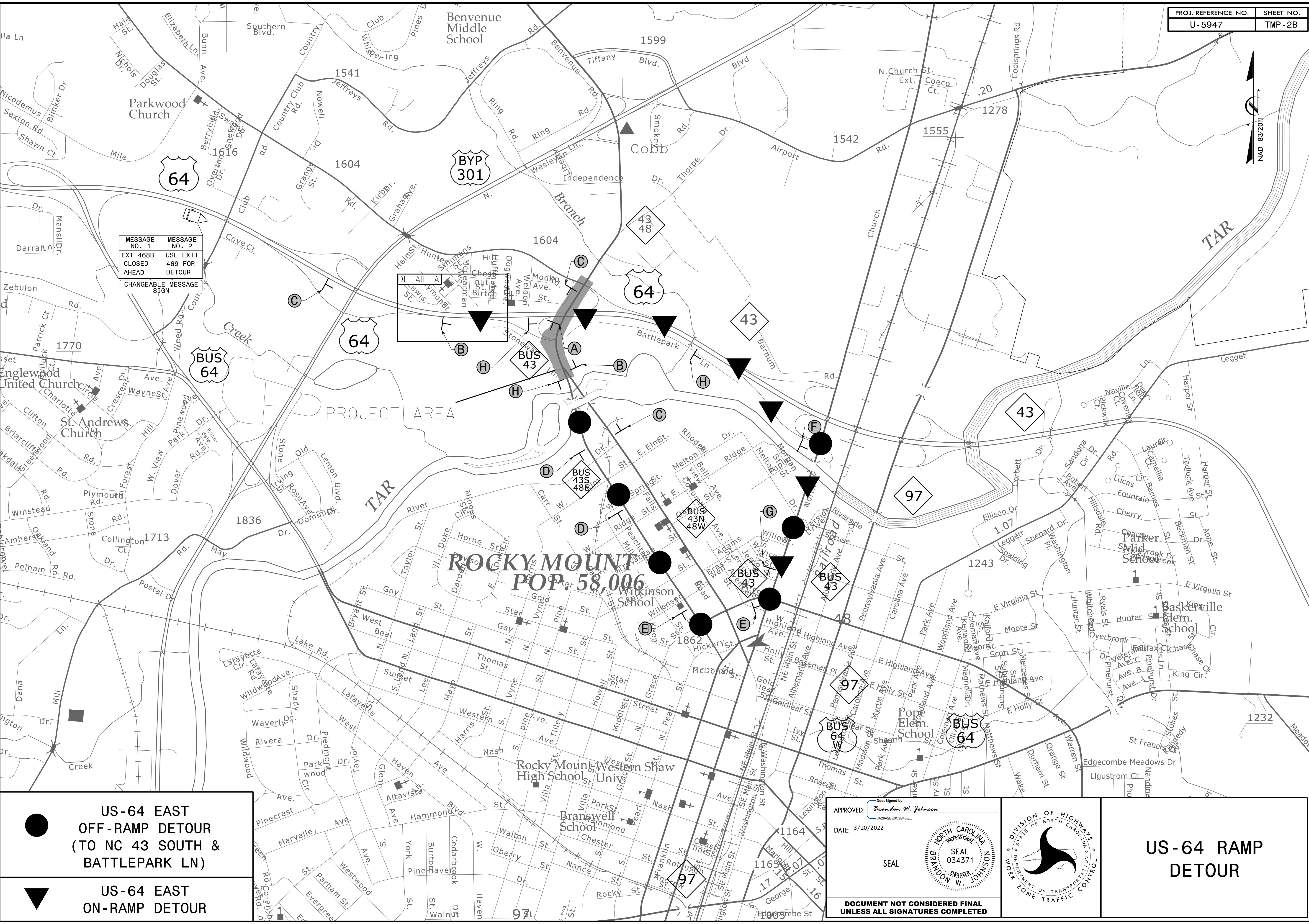
W) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER. LAW ENFORCEMENT SHALL BE USED FOR ANY SIGNAL WORK.

X) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

Y) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).

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Josh.Jernigan

| | | | |
|---|---|---|--|
| <p>APPROVED: <i>Brandon W. Johnson</i> 6A29ABE0C9B45E...</p> <p>DATE: 3/10/2022</p> <p style="text-align: center;">SEAL</p> |  |  | <h2 style="margin: 0;">TRANSPORTATION OPERATIONS PLAN</h2> |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | | |



| | |
|-------------------------|---------------|
| MESSAGE NO. 1 | MESSAGE NO. 2 |
| EXT 468B | USE EXIT |
| CLOSED | 469 FOR |
| AHEAD | DETOUR |
| CHANGEABLE MESSAGE SIGN | |

DETAIL A
Sewis St. to
Hunters Rd.

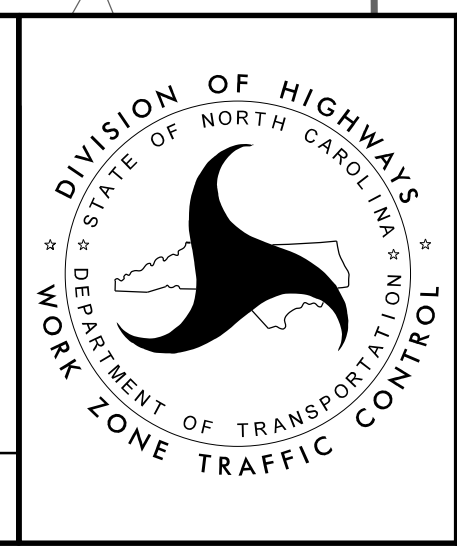
| | |
|--|--|
| | US-64 EAST OFF-RAMP DETOUR (TO NC 43 SOUTH & BATTLEPARK LN) |
| | US-64 EAST ON-RAMP DETOUR |

APPROVED:
DATE: 3/10/2022

SEAL

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
DAVID W. JOHNSON
034371

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

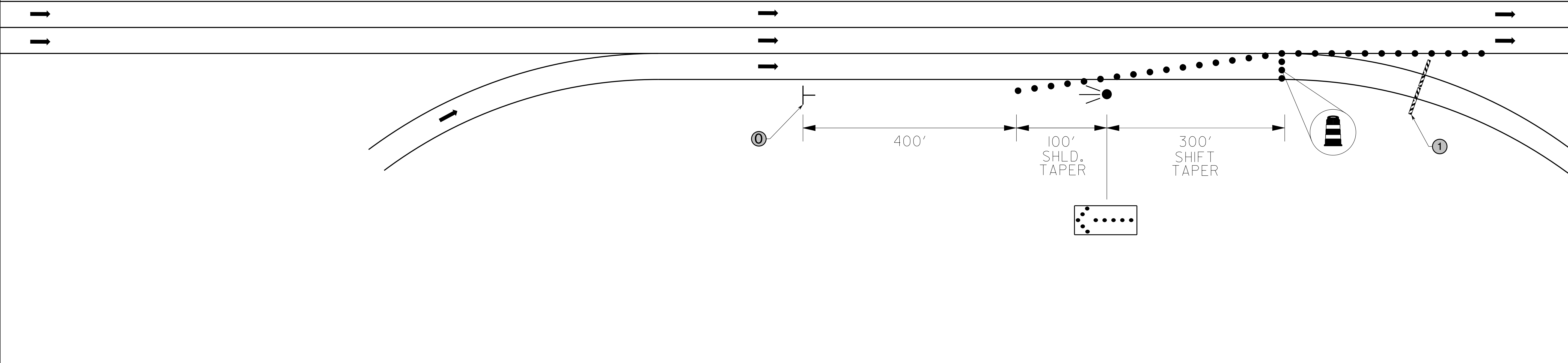


**US-64 RAMP
DETOUR**

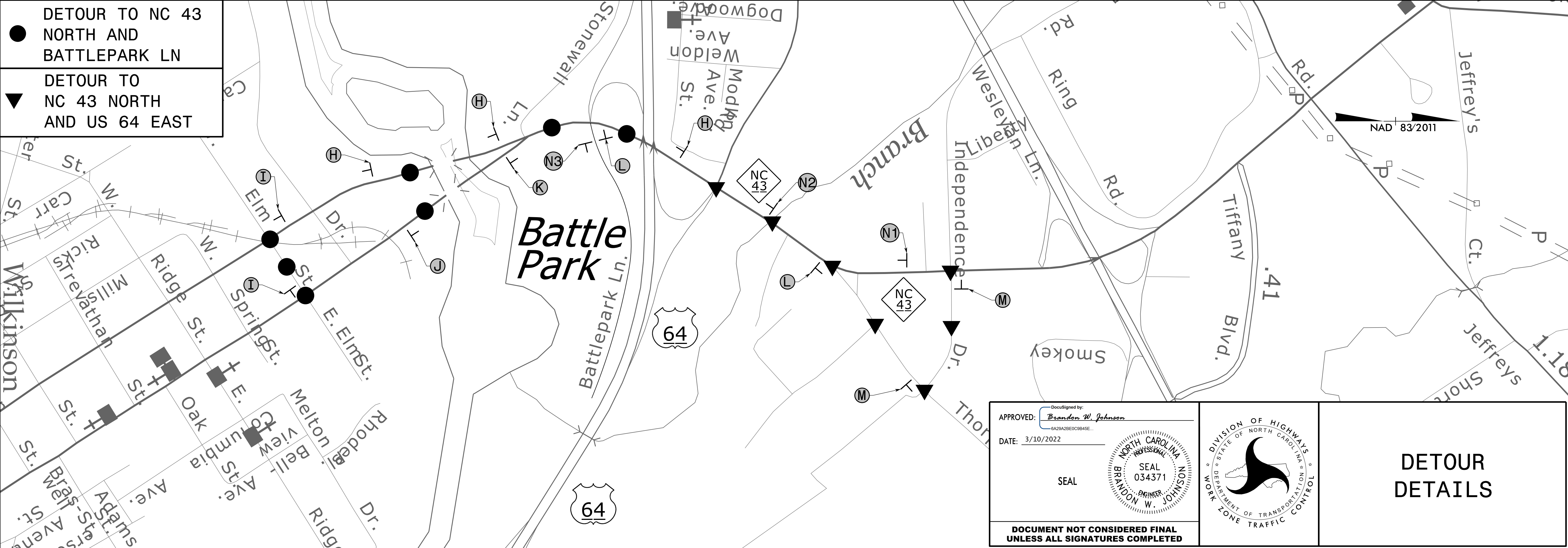
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U-5947-TC-TMP-2B-US 64 Ramp Detail.dgn
Josh.Terrigan

DETAIL A

| | |
|---------------------|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| U-5947 | TMP-2C |



- DETOUR TO NC 43 NORTH AND BATTLEPARK LN
- ▼ DETOUR TO NC 43 NORTH AND US 64 EAST



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 U-5947_TC_TMP_2C_Detour_Details.dgn
 Josh Ferrigan

APPROVED: *Brandon W. Johnson*
DocuSigned by:
Brandon W. Johnson
6A29A2BEC984E

DATE: 3/10/2022

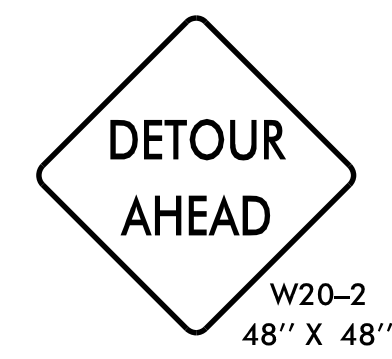
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SEAL
 NORTH CAROLINA
 PROFESSIONAL ENGINEER
 BRANDON W. JOHNSON
 034371

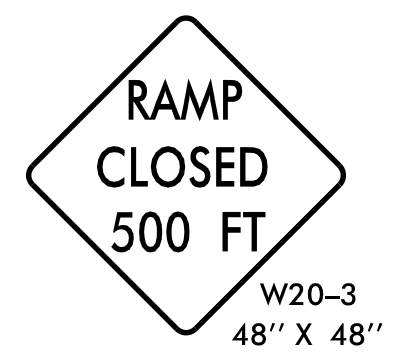


DETOUR DETAILS

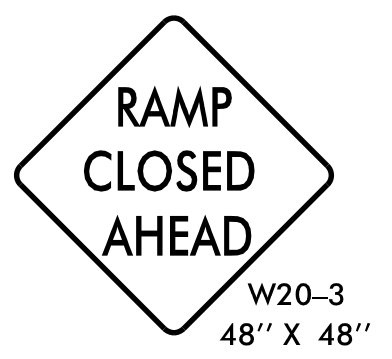
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 UNLESS ALL SIGNATURES COMPLETED**



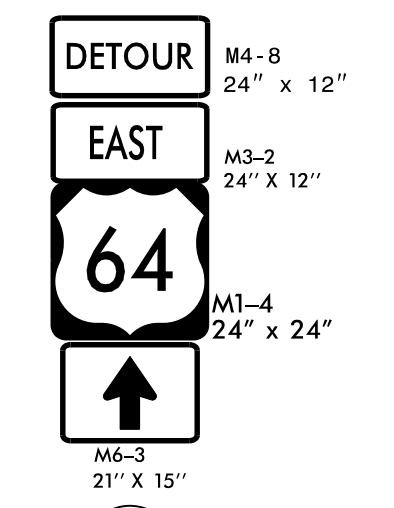
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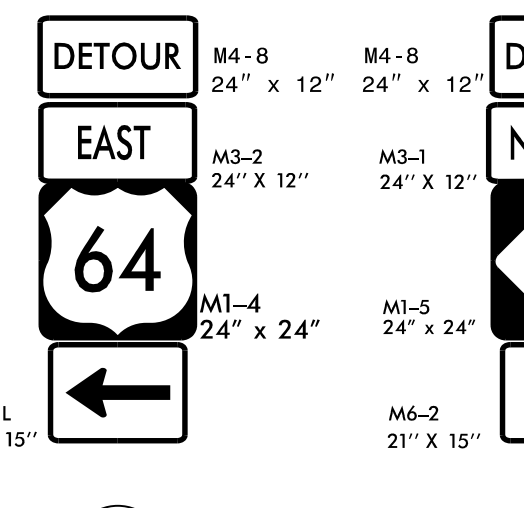
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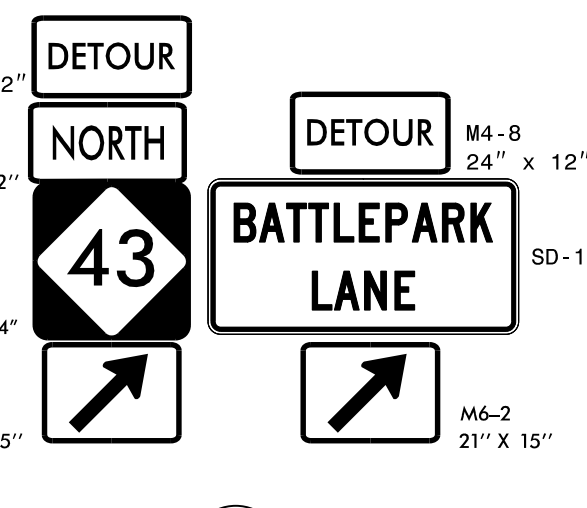
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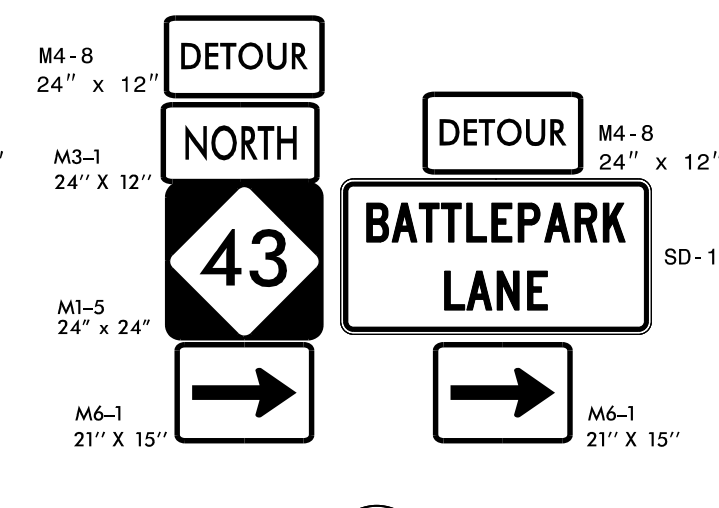
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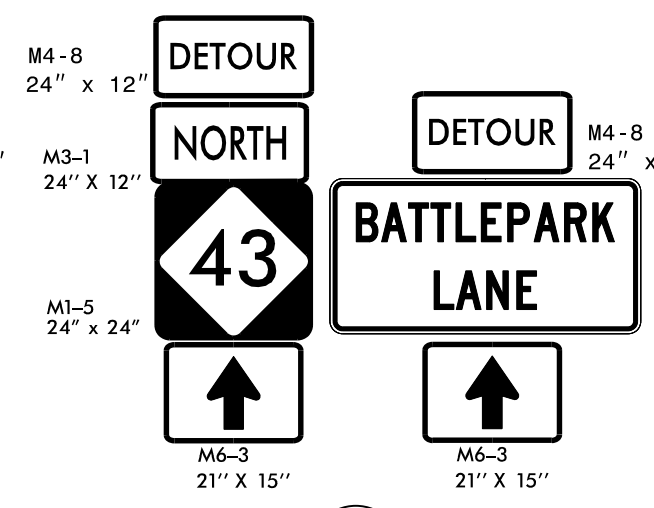
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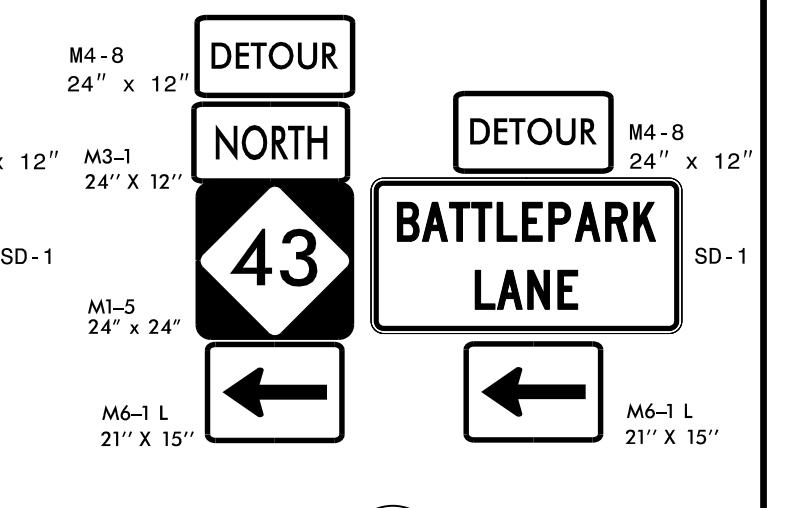
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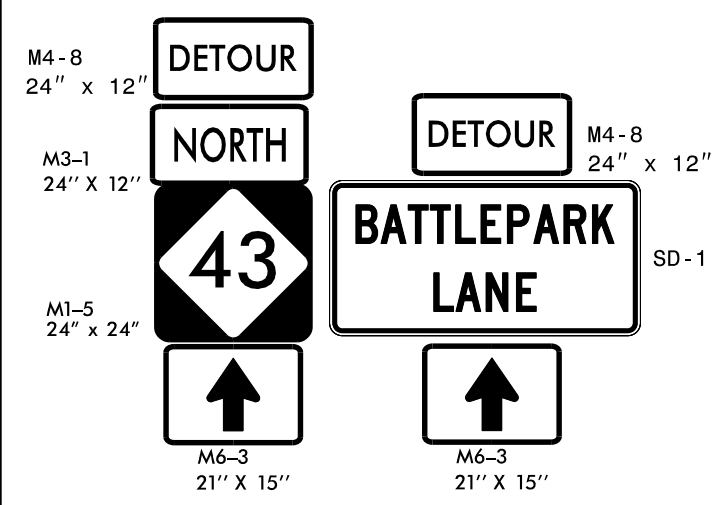
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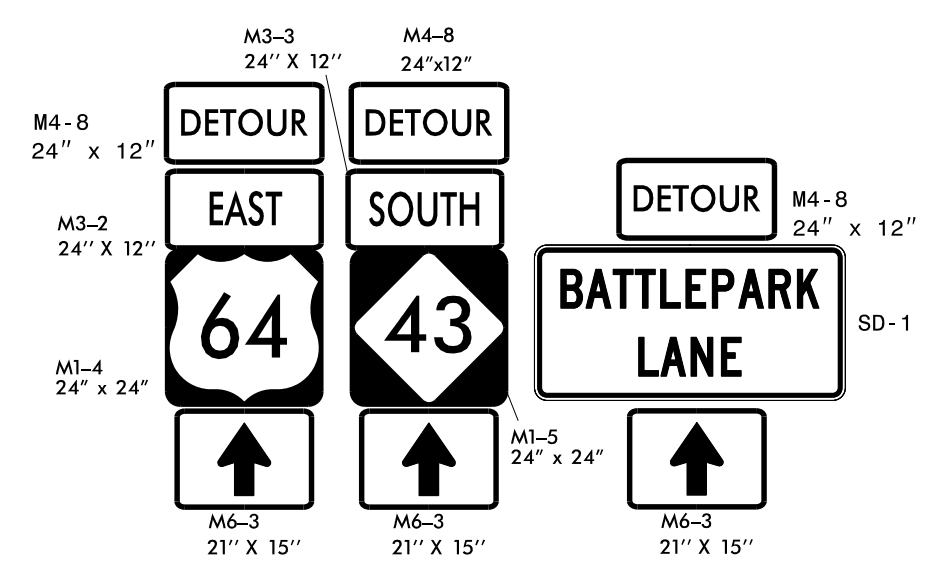
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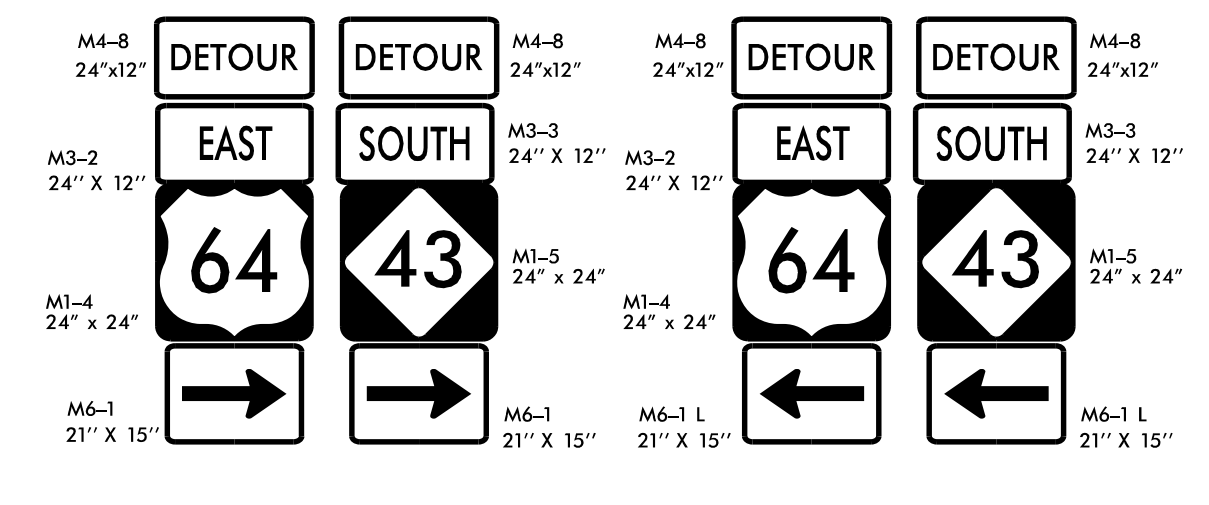
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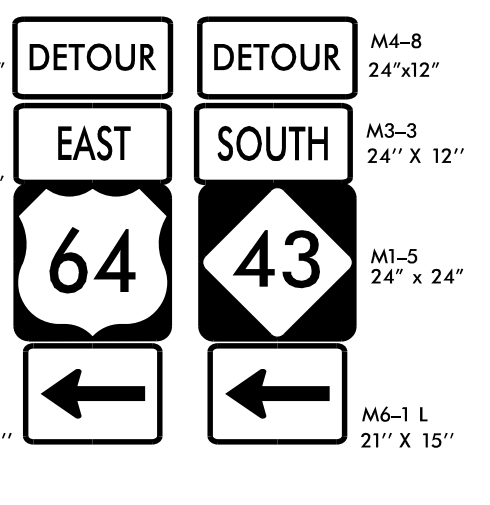
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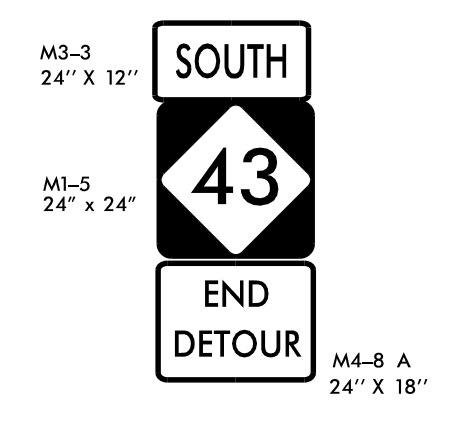
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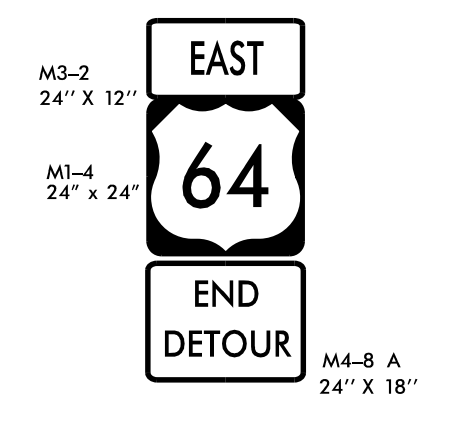
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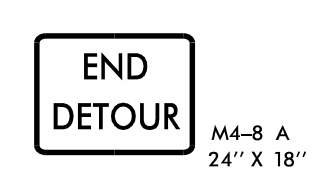
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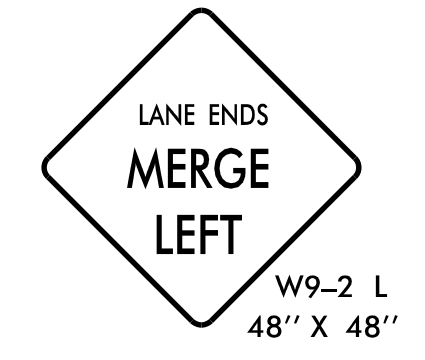
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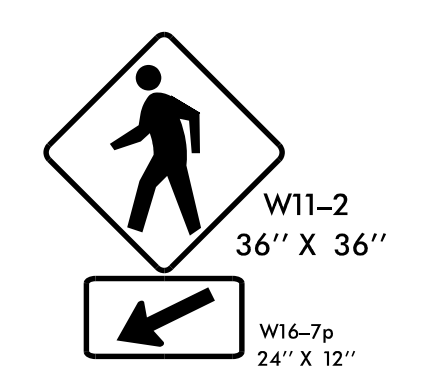
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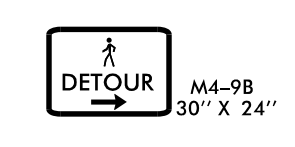
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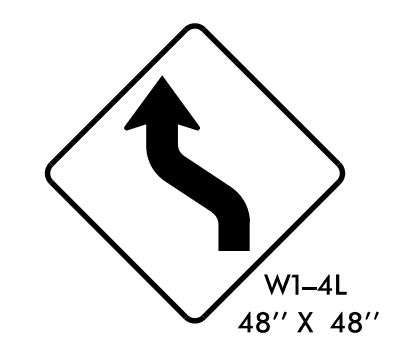
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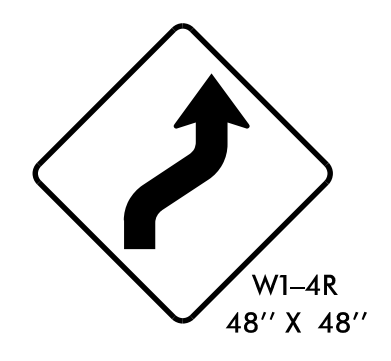
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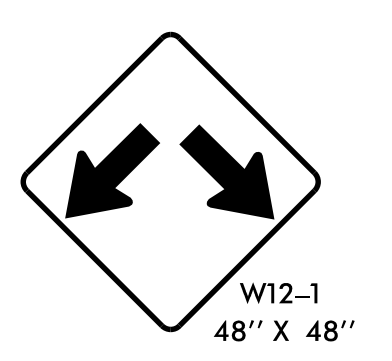
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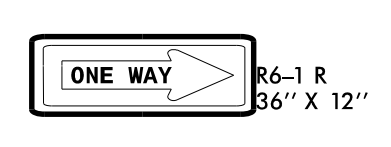
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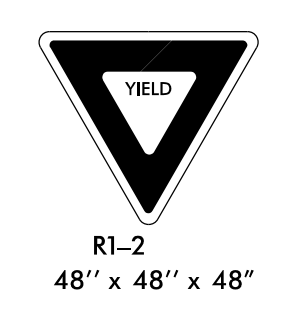
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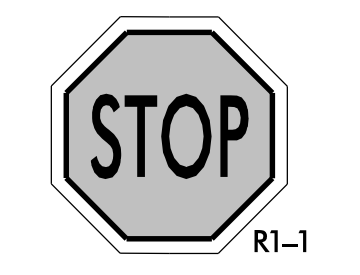
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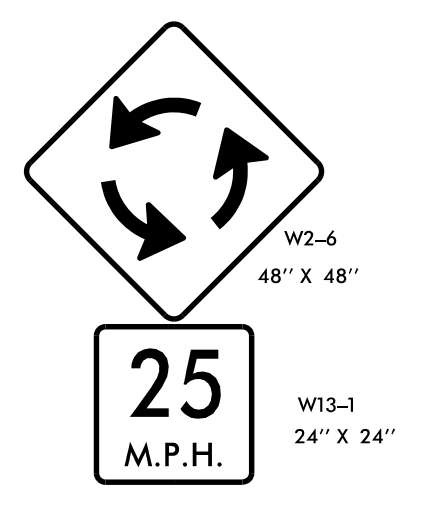
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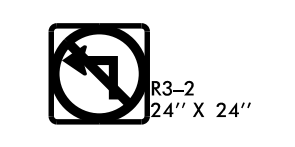
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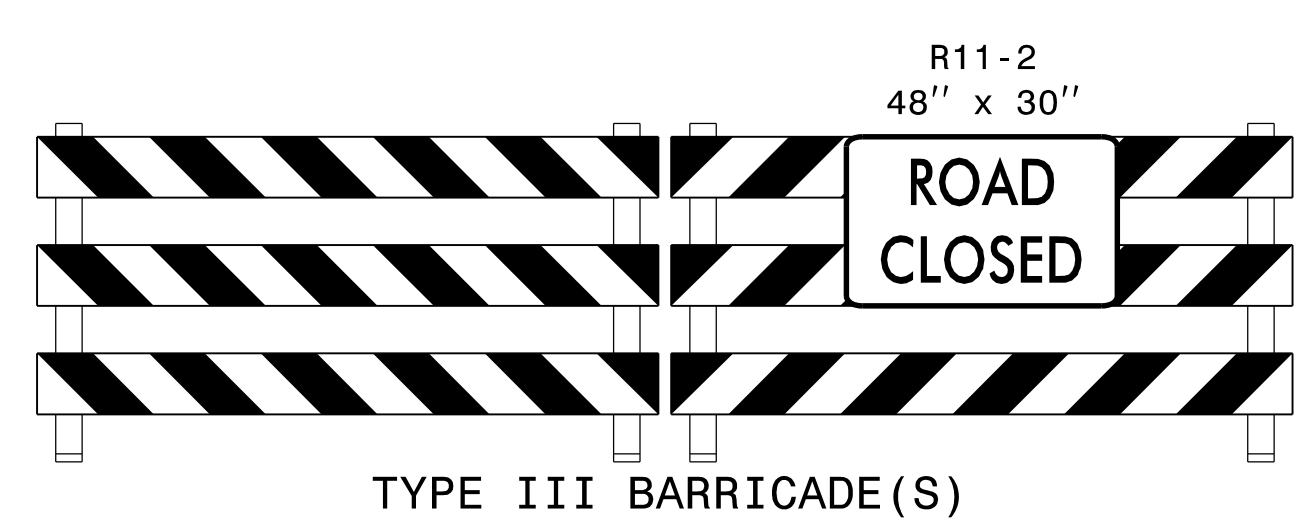
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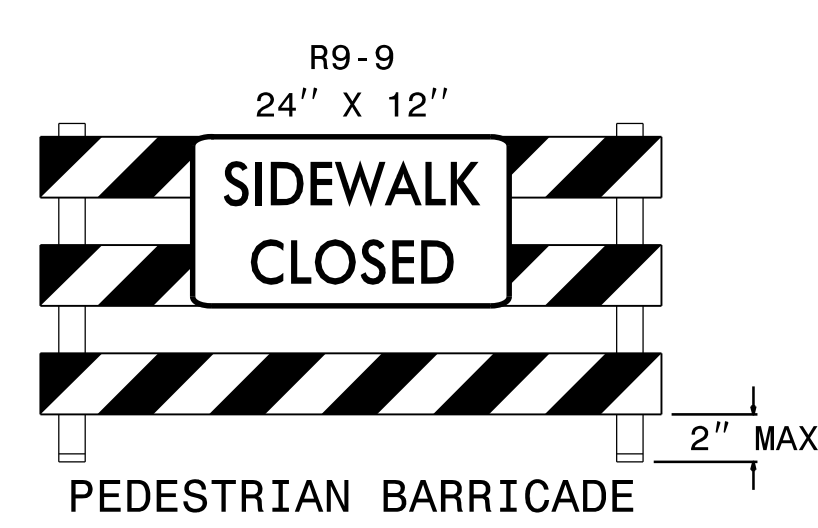
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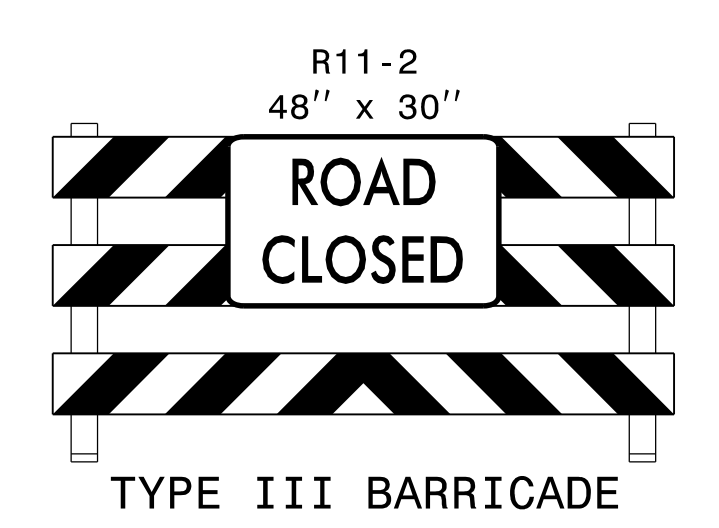
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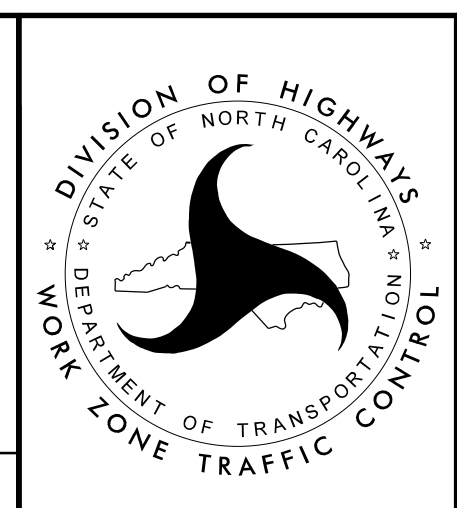
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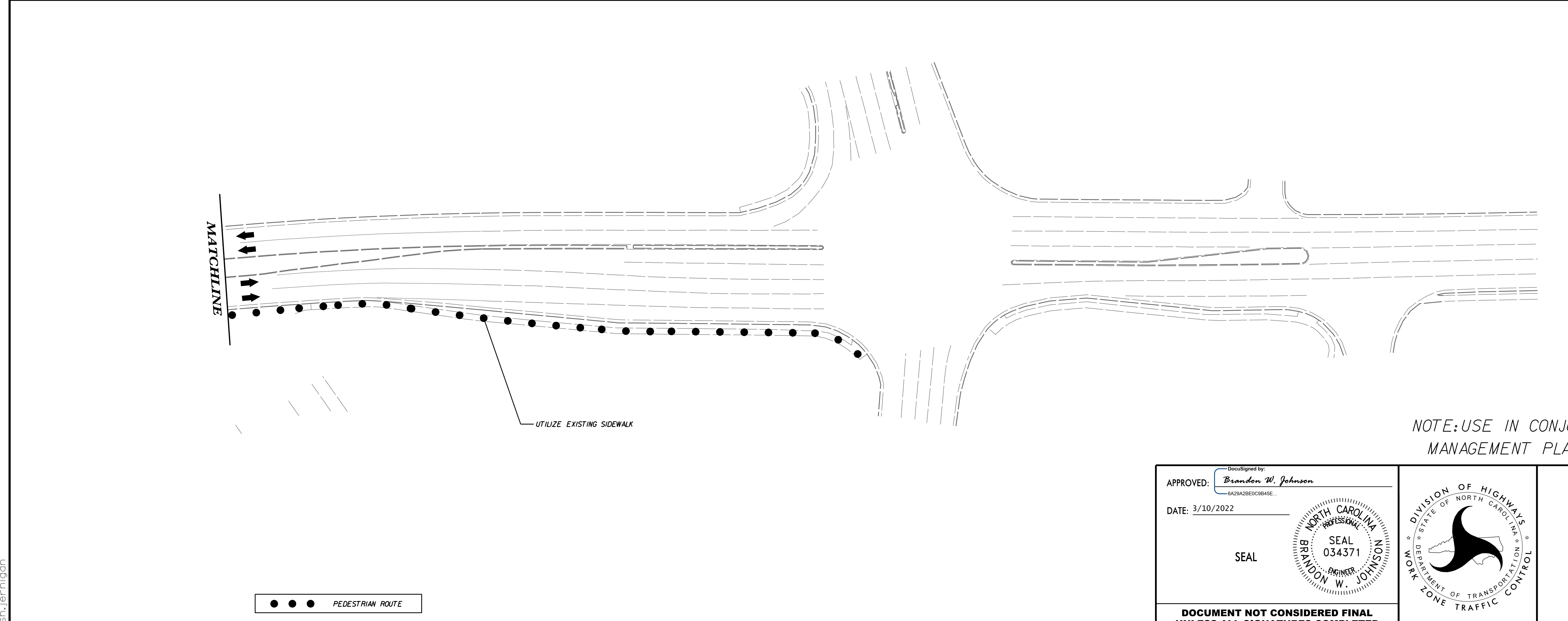
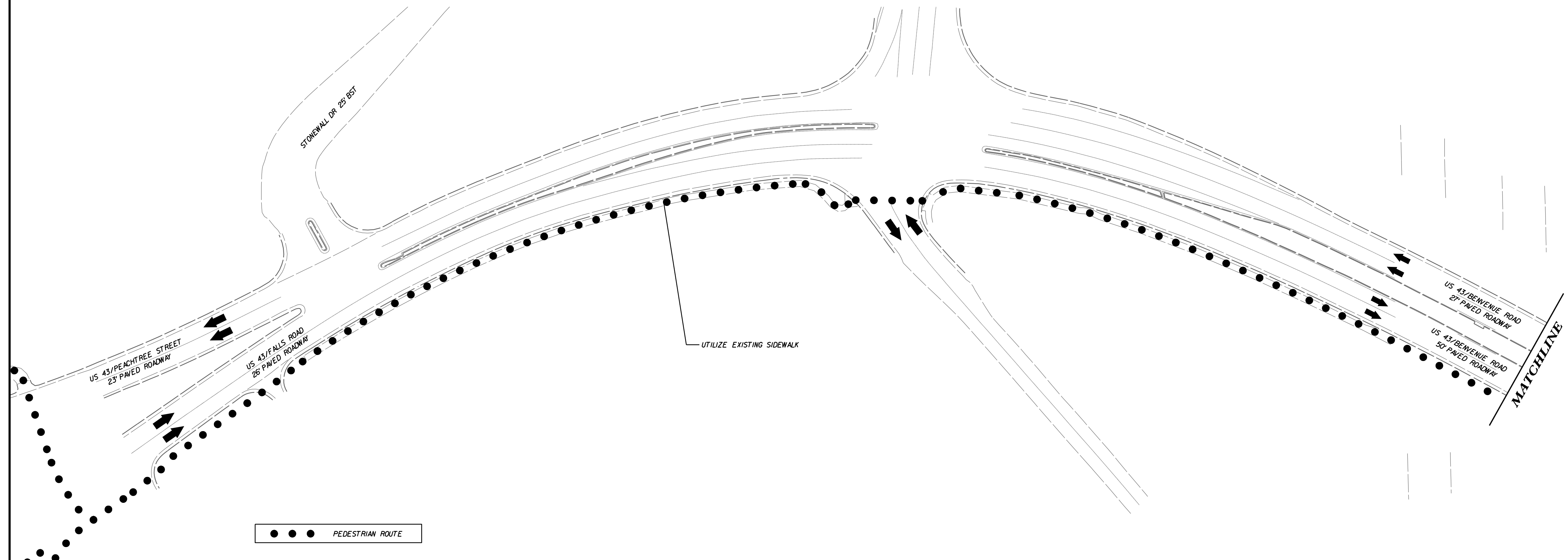
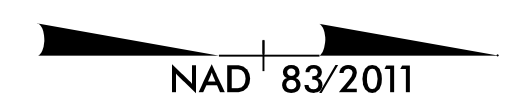
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DETOUR SIGNS

PEDESTRIAN MANAGEMENT PLAN

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| PROJ. REFERENCE NO. | SHEET NO. |
| U-5947 | TMP-2E |



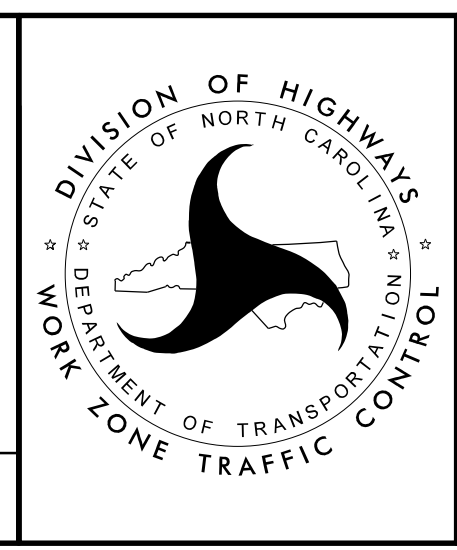
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DATE: 3/10/2022

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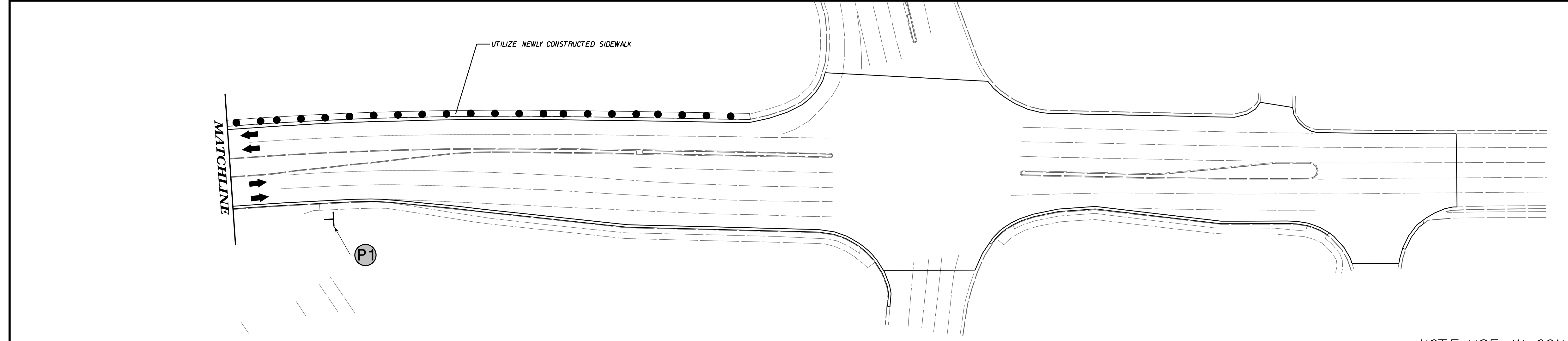
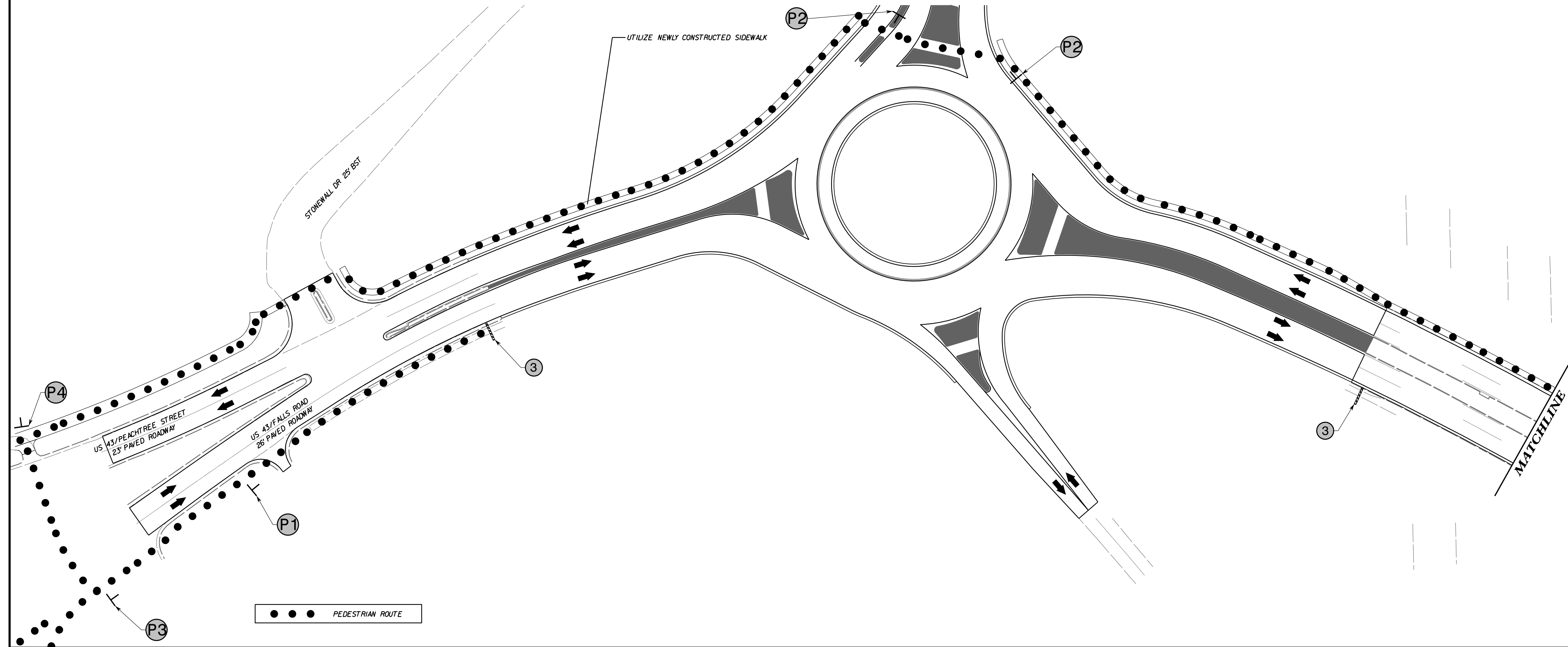
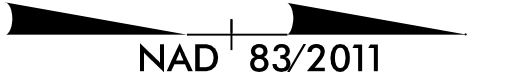


**PEDESTRIAN
MANAGEMENT
(PHASE I)**

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 Josh.Ternigan

PEDESTRIAN MANAGEMENT PLAN

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| PROJ. REFERENCE NO. | SHEET NO. |
| U-5947 | TMP-2F |



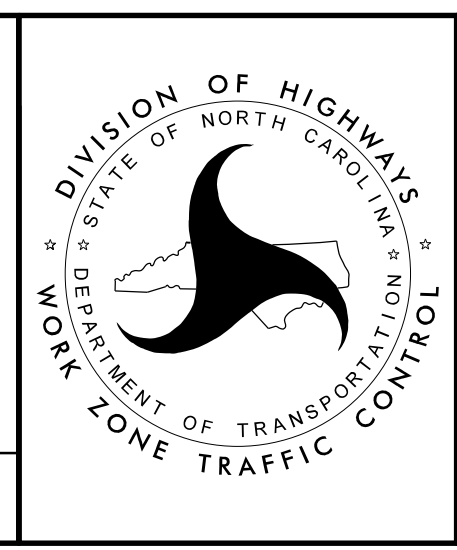
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Josh.Ternigan

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DATE: 3/10/2022

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PEDESTRIAN MANAGEMENT (PHASE II)

MANAGEMENT STRATEGIES

THE FOLLOWING BELOW ARE LISTED WORK ZONE STRATEGIES RECOMMENDED FOR INCLUSION WITHIN THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

- RECOMMENDED STRATEGIES:
- LANE CLOSURES OR SHIFTS
 - FLAGGING SERVICES
 - WEEKEND WORK
 - NIGHT WORK
 - PEDESTRIAN DETOURS AND ACOMMODATIONS
 - OFF-SITE DETOURS

PHASING

NOTES (APPLIES TO ALL PHASES)

REPLACE MARKINGS AND RETURN TO CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN PHASING OR DIRECTED BY ENGINEER.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES AND BUSINESSES DURING LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

COMPLETE ANY PROPOSED WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE. THIS MAY REQUIRE A COMBINATION OF INSTALLATION OF PROPOSED PIPES, TEMPORARY PIPES, STEEL PLATES, TEMPORARY MEDIAN, AND OUTSIDE DITCHES.

PAVE PROPOSED CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, IN ALL PHASES UNTIL DIRECTED TO INSTALL FINAL LAYER IN PHASING.

PHASE I

STEP 1: PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL INSTALL ADVANCE WARNING SIGNS AS SHOWN IN THE ROADWAY STANDARD DRAWINGS (RSD) 1101.01 (SHEETS 2 AND 3 OF 3) ALONG NC 43, US 64 EAST RAMP AND LOOP (-RPB- AND -LPB-) AND BATTLEPARK LN (-Y2-). INSTALL ALL PEDESTRIAN DETOUR SIGNING AS SEEN ON TMP-2E.

NOTE: STEPS 2A AND 2B OF PHASE I CAN OCCUR SIMULTANEOUSLY AND IN ANY ORDER

STEP 2A: INSTALL TEMPORARY LANE CLOSURES USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED. CONSTRUCT PROPOSED MULTI-USE PATH, SIDEWALK, DRAINAGE SYSTEM FROM STRUCTURE 0401 TO 0422, AND ALL RELATED PAVING, CURB & GUTTER, AND GRADING FROM -MUP- STA. 10+20+/- TO -SBL1- STA. 13+32+/- AS SHOWN ON SHEET TMP-4. REFER TO PEDESTRIAN MANAGEMENT PLAN-1 ON TMP-2E TO FOR PEDESTRIAN DETOUR.

STEP 2B: USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, CONSTRUCT PROPOSED SIDEWALK AND ALL RELATED PAVING, CURB & GUTTER, AND GRADING ALONG SOUTHBOUND NC 43 (BENVENUE RD) FROM -SBL2- STA. 13+76+/- TO EXISTING SIDEWALK TIE-IN AT HUNTER HILL RD AS SHOWN ON SHEETS TMP-4 AND TMP-5. FOR PEDESTRIAN DETOUR, REFER TO PEDESTRIAN MANAGEMENT PLAN-1 ON TMP-2E.

STEP 3: USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, CONSTRUCT PROPOSED SIDEWALK, DRAINAGE SYSTEM AND RELATED PAVING, CURB & GUTTER AND GRADING FROM -NBL2- STA. 25+10+/- TO -NBL2- STA. 13+50+/- AS SHOWN ON SHEETS TMP-4 AND TMP-5. TO ENSURE POSITIVE DRAINAGE AND PROPER CONNECTION TO THE EXISTING SYSTEM, CONSTRUCT PROPOSED DRAINAGE SYSTEM FROM STRUCTURE 0514 TO -NBL2- STA. 13+50+/- . USE PEDESTRIAN MANAGEMENT PLAN-1 ON TMP-2E WITH PROPOSED PICKUP AND DROP OFF LOCATIONS NOTED IN SHEETS TMP-4 AND TMP-5.

STEP 4: USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, INSTALL TRAFFIC DEVICES AND SHIFT TRAFFIC INTO NEW PATTERN AS SHOWN ON TMP-6. REMOVE EXISTING MEDIAN AND INSTALL PROPOSED DRAINAGE SYSTEM UP TO EXISTING GRADE AND PREPARE/PROTECT DRAINAGE TO TEMPORARILY BEAR TRAFFIC. ROAD PLATES, TEMPORARY PAVEMENT, AGGREGATE BASE COURSE (ABC) MAY BE REQUIRED TO SAFELY CONSTRUCT THE TEMPORARY LANES AND SHALL BE USED AT THE DIRECTION OF THE ENGINEER.

PHASE II :

STEP 1: INSTALL DETOUR SIGNS AS SHOWN ON SHEET TMP-2C.

STEP 2: USING THE OFFSITE DETOUR, REFER TO SHEET TMP-7 FOR TRAFFIC PATTERN AND PROPOSED WORK. USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, INSTALL TRAFFIC TEMPORARY PAVEMENT MARKINGS, SIGNS AND DEVICES AND SHIFT TRAFFIC INTO NEW PATTERN SHOWN ON SHEET TMP-7. CONSTRUCT PROPOSED SIDEWALK, DRAINAGE SYSTEM AND RELATED PAVING, CURB & GUTTER AND GRADING ALONG NC 43 (BENVENUE RD) AND US 64 EAST RAMP AND LOOP FROM -SBL2- 13+76+/- IN SOUTHBOUND DIRECTION TO -SLB1- STA. 13+32+/- . DRAINAGE PIPE CROSSING US 64 EAST RAMP AND LOOP SHALL BE COMPLETED USING NIGHT WORK. PEDESTRIAN TRAFFIC WILL FOLLOW TRAFFIC PATTERN ON SHOWN ON SHEET TMP-2E.

INTERMEDIATE CONTRACT TIME SPECIAL PROVISIONS

COMPLETE THE REQUIREMENTS OF PHASE II-STEP 3 IN A CONTINUOUS OPERATION IN 14 (FOURTEEN) CONSECUTIVE DAYS

STEP 3: INSTALL DETOUR SIGNS AS SEEN ON TMP-2B AND DETAIL-A IN TMP-2C. CLOSE THE US 64 EAST RAMP AND LOOP IN A CONTINUOUS CLOSURE TO COMPLETE PROPOSED PAVING, WEDGING, CURB & GUTTER AND GRADING SHOWN ON SHEET TMP-8.

STEP 4: REMOVE DETOUR SIGNING INSTALLED ON SHEET TMP-2B, DETAIL-A ON SHEET TMP-2C AND SHEET TMP-2E .

PHASE III :

STEP 1: INSTALL AND COVER DETOUR SIGNS FOR PEDESTRIAN DETOUR SIGNING AS SHOWN ON TMP-2F.

STEP 2: REFER TO SHEET TMP-9 FOR TRAFFIC PATTERN AND PROPOSED WORK. USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, INSTALL TEMPORARY PAVEMENT MARKINGS, SIGNS AND DEVICES AND SHIFT TRAFFIC INTO NEW PATTERN SHOWN ON SHEET TMP-9. CONSTRUCT PAVEMENT, CURB & GUTTER, SIDEWALK, DRAINAGE AND GRADING. DRAIANGE SYSTEM SHALL BE INSTALLED FROM -NBL2- 13+50+/- TO -NBL1- STA. 13+45+/-.

INTERMEDIATE CONTRACT TIME SPECIAL PROVISIONS

STEP 3: FOR WORK THAT IS UNABLE TO BE COMPLETED THROUGH LANE CLOSURES IN PHASE III- STEP 2, CLOSE BATTLEPARK LANE TO PERFORM NIGHT WORK BETWEEN THE HOURS OF 9:00 PM FRIDAY TO 5:00 AM MONDAY.

STEP 4: REMOVE DETOUR SIGNING INSTALLED ON TMP-2C.

STEP 5: USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS AS NEEDED, CONSTRUCT REMAINING PAVEMENT ALONG BATTLEPARK LN.

PHASE IV :

STEP 1: USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, INSTALL TEMPORARY PAVEMENT MARKINGS, SIGNS AND DEVICES AND SHIFT TRAFFIC INTO NEW PATTERN SHOWN ON SHEET TMP-10. CONSTRUCT REMAINING PAVING, CURB & GUTTER, AND CONCRETE MEDIAN AND ISLAND WORK.

STEP 2: INSTALL TEMPORARY PAVEMENT MARKINGS AND ROUNDABOUT INTERSECTION SIGNING PER THE FINAL PAVEMENT MARKING PLANS AND SIGNING PLANS.

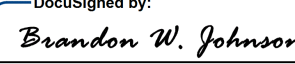
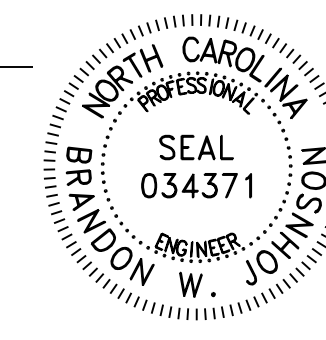

STEP 3: OPEN ROUNDABOUT INTERSECTION TO TRAFFIC

PHASE V :

STEP 1: USING RSD 1101.02 AS NEEDED FOR TEMPORARY LANE CLOSURES AND FLAGGING OPERATIONS, THE CONTRACTOR SHALL PERFORM MILLING AS SHOWIN IN THE ROADWAY PLANS, PLACE THE FINAL LAYER OF ASPHALT AND FINAL PAVEMENT MARKINGS AND MARKERS AS SHOWN IN THE PAVEMENT MARKING PLANS.

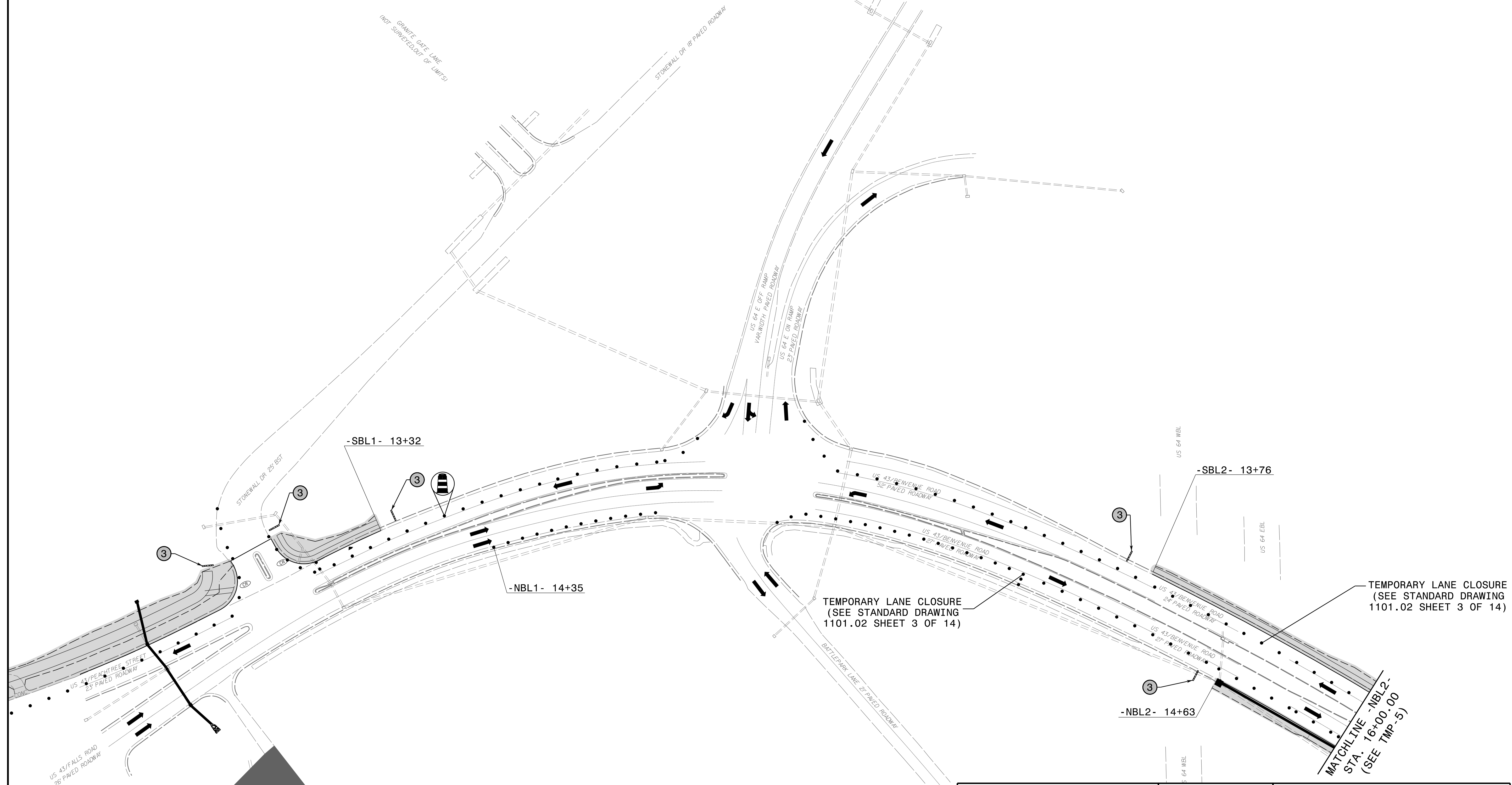
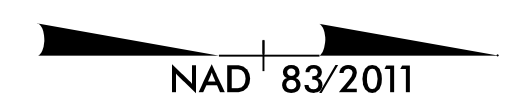
STEP 2: REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN ALL LANES TO TRAFFIC.

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Josh.Fernigan

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| PROJ. REFERENCE NO. | SHEET NO. |
| U-5947 | TMP-4 |

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| EXISTING DRAINAGE | |
| PROPOSED DRAINAGE TO BE INSTALLED | |
| PROPOSED DRAINAGE PREVIOUSLY INSTALLED | |



TEMPORARY LANE CLOSURE
(SEE STANDARD DRAWING
1101.02 SHEET 3 OF 14)

TEMPORARY LANE CLOSURE
(SEE STANDARD DRAWING
1101.02 SHEET 3 OF 14)

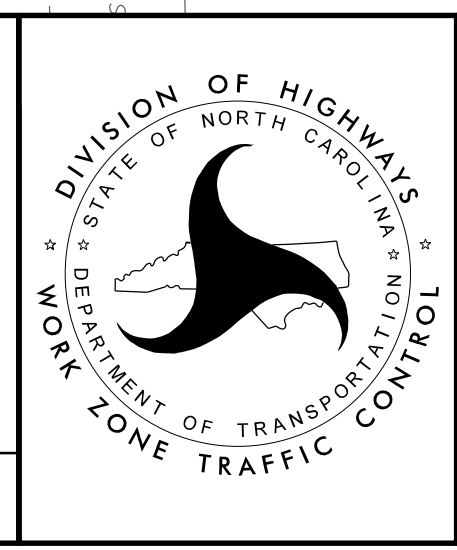
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PHASE I WITH THIS DETAIL.

WORK AREA

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DATE: 3/10/2022

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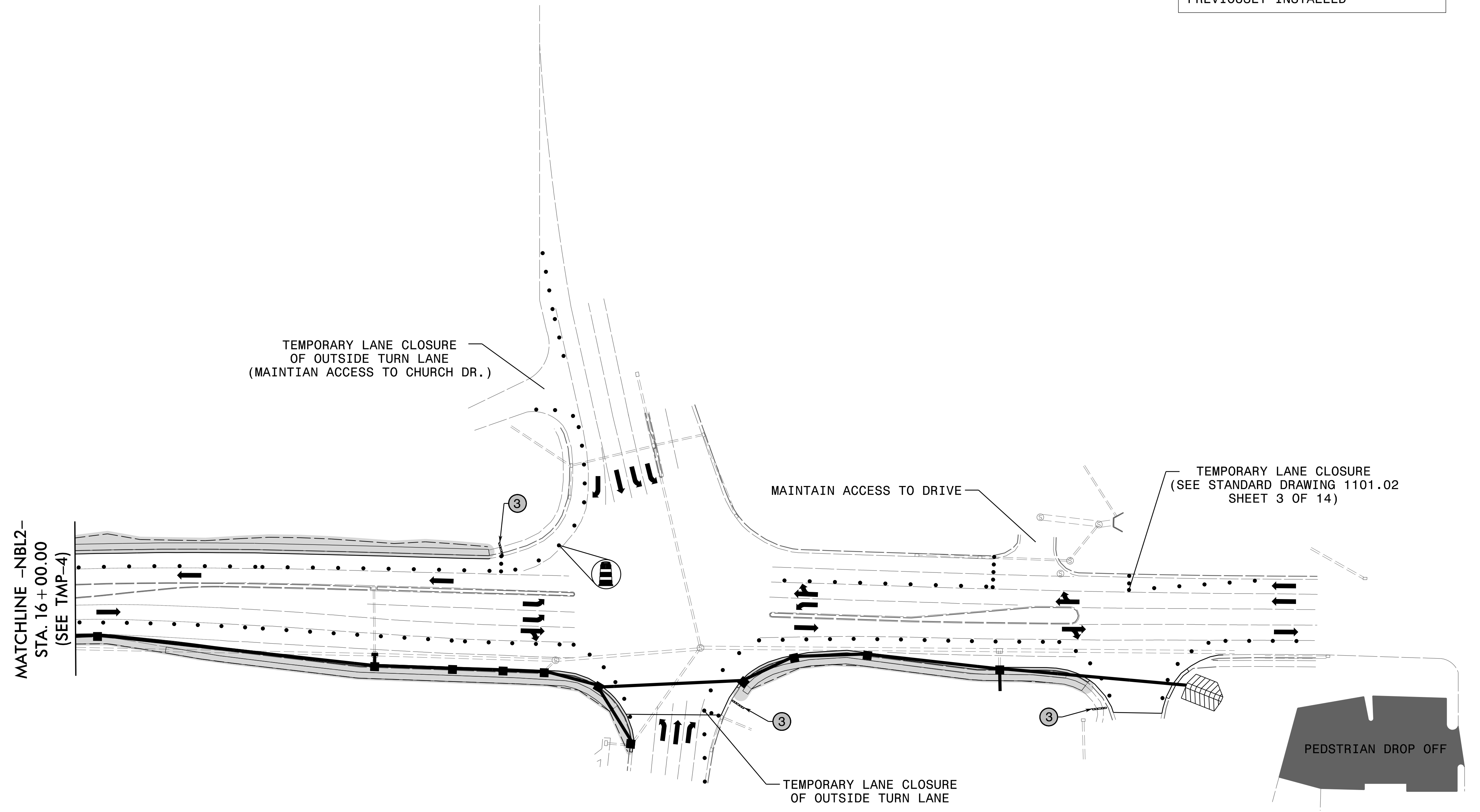
**TRAFFIC
MANAGEMENT
PHASE I
DETAIL SHEET
1 OF 3**

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| U-5947 | TMP-5 |

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| EXISTING DRAINAGE | |
| PROPOSED DRAINAGE TO BE INSTALLED | |
| PROPOSED DRAINAGE PREVIOUSLY INSTALLED | |

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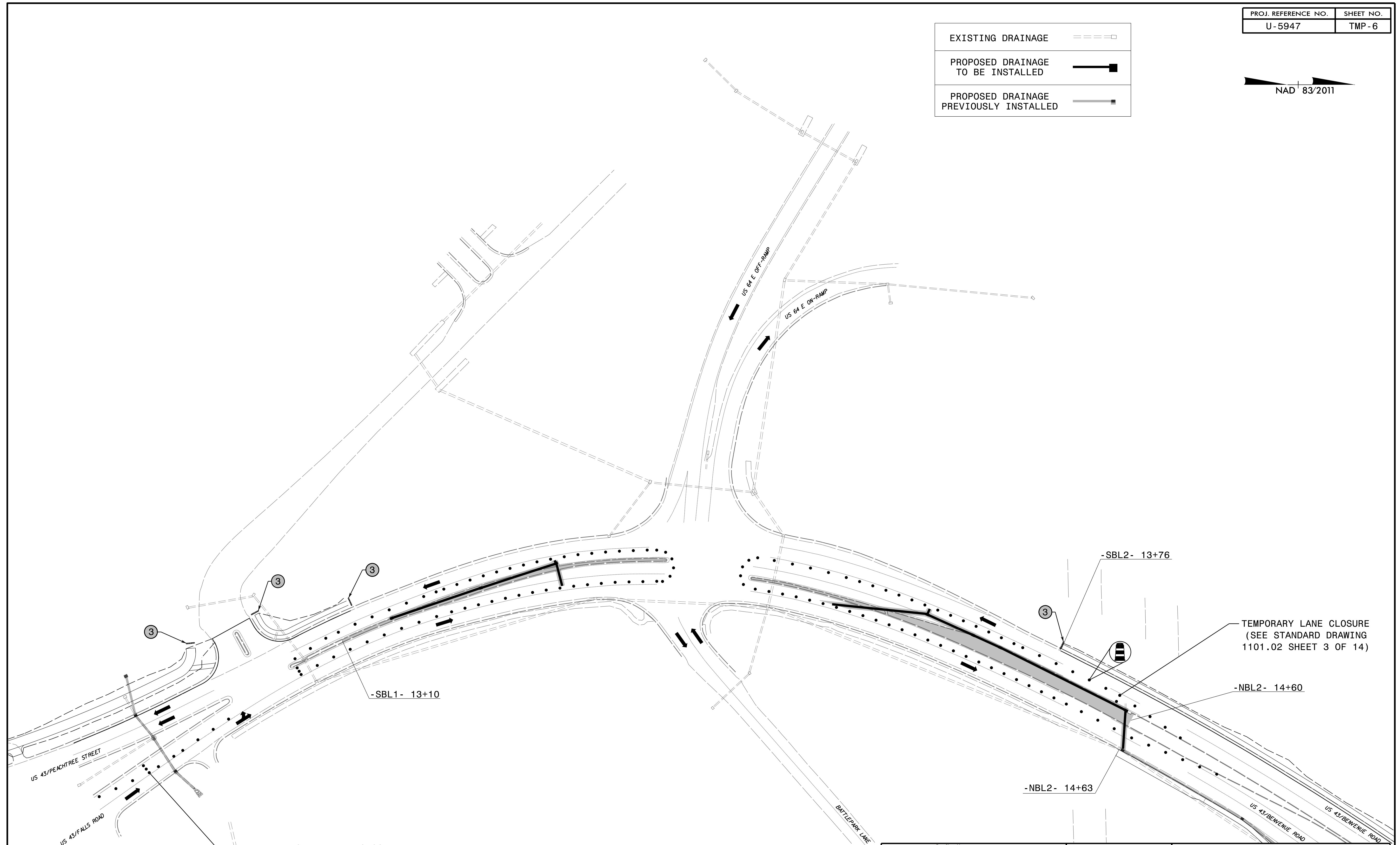
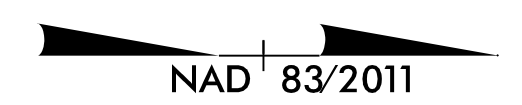
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**TRAFFIC
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PHASE I
DETAIL SHEET
2 OF 3**

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| U-5947 | TMP-6 |

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| EXISTING DRAINAGE | |
| PROPOSED DRAINAGE TO BE INSTALLED | |
| PROPOSED DRAINAGE PREVIOUSLY INSTALLED | |



TEMPORARY LANE CLOSURE
(SEE STANDARD DRAWING 1101.02
SHEET 3 OF 14)

NOTE: USE PEDESTRIAN MANAGEMENT
PHASE I WITH THIS DETAIL.

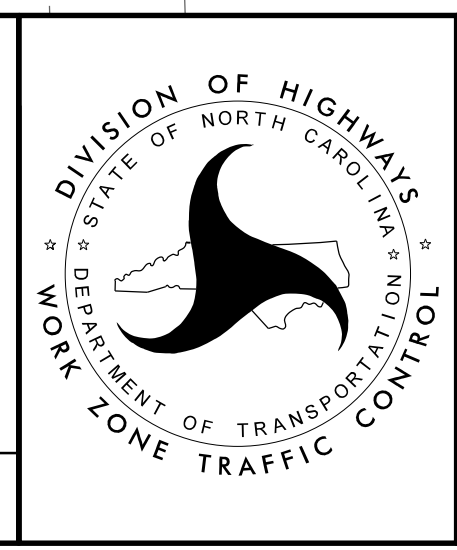
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DATE: 3/10/2022

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ENGINEER
BRANDON W. JOHNSON

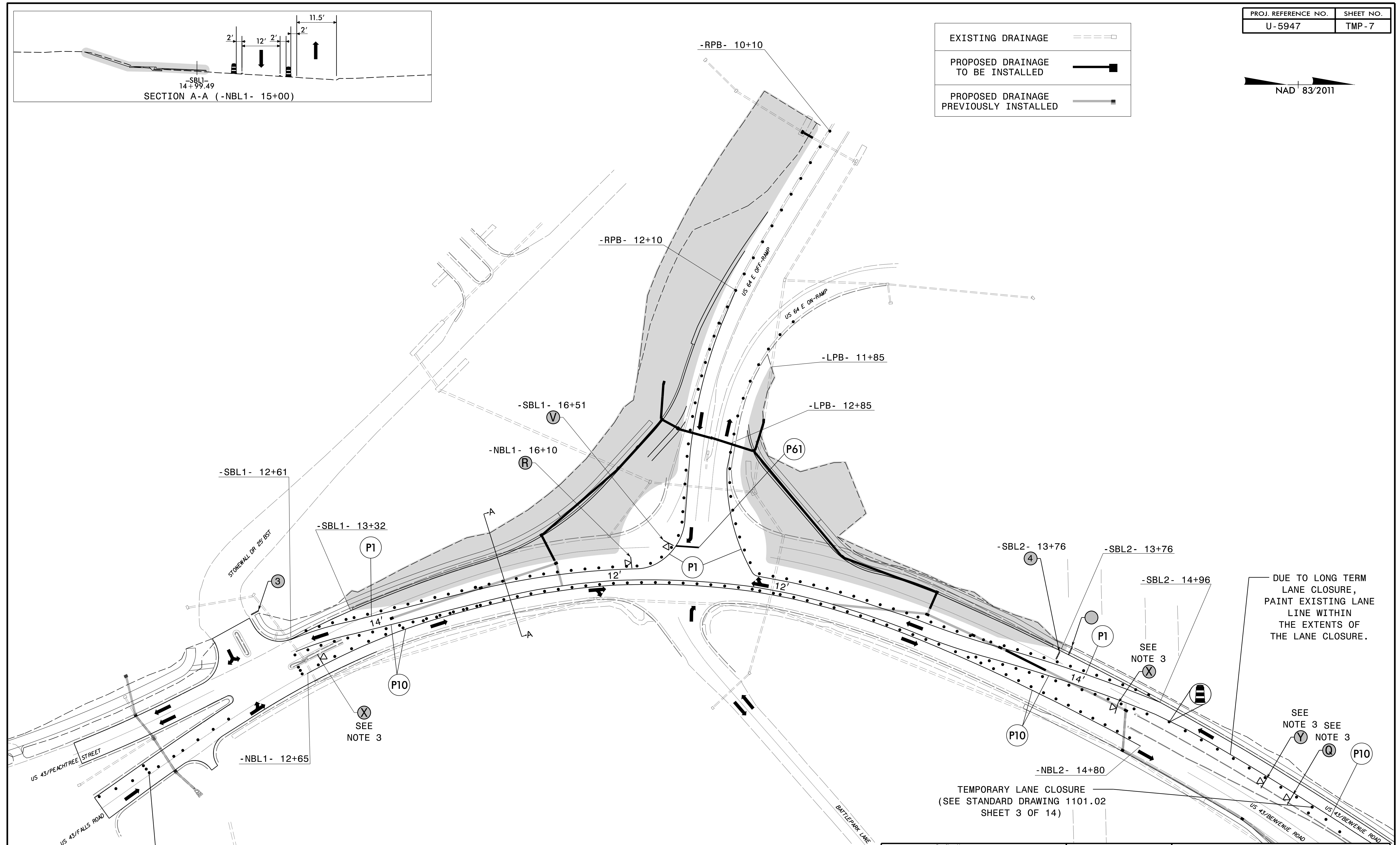
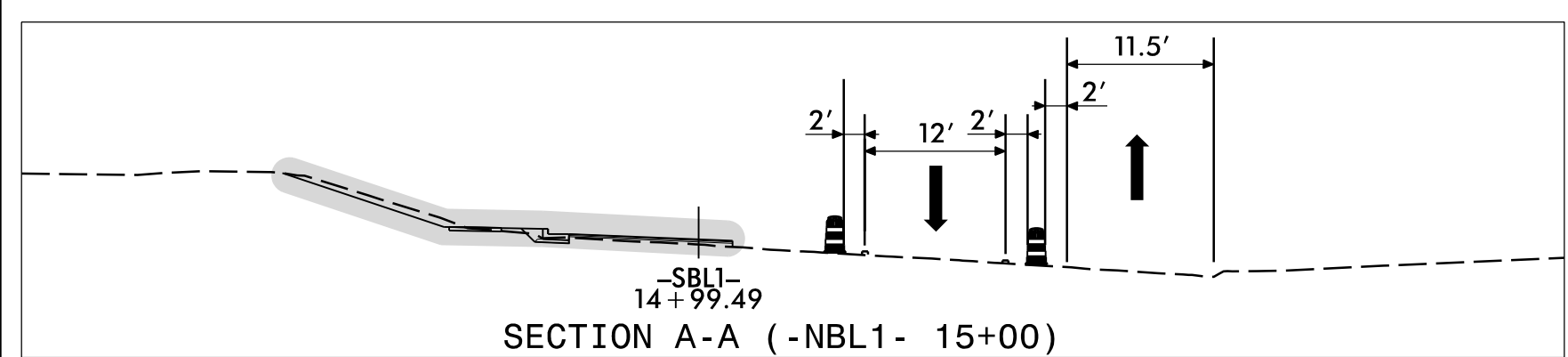
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**TRAFFIC
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PHASE I
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3 OF 3**

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josh.fernigan

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| EXISTING DRAINAGE | |
| PROPOSED DRAINAGE TO BE INSTALLED | |
| PROPOSED DRAINAGE PREVIOUSLY INSTALLED | |



DUE TO LONG TERM LANE CLOSURE, PAINT EXISTING LANE LINE WITHIN THE EXTENTS OF THE LANE CLOSURE.

SEE NOTE 3 SEE NOTE 3

TEMPORARY LANE CLOSURE (SEE STANDARD DRAWING 1101.02 SHEET 3 OF 14)

TEMPORARY LANE CLOSURE (SEE STANDARD DRAWING 1101.02 SHEET 3 OF 14)

NOTE 1: USE PEDESTRIAN MANAGEMENT PHASE I WITH THIS DETAIL.
 NOTE 2: USE BATTLEPARK LANE AND US-64 RAMPS DETOUR WITH THIS DETAIL.
 NOTE 3: REFER TO STANDARD DRAWING 1101.11 (SHEET 4 OF 4) FOR ADVANCE WARNING SIGN PLACEMENT DISTANCE.

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 Josh.Ternigan

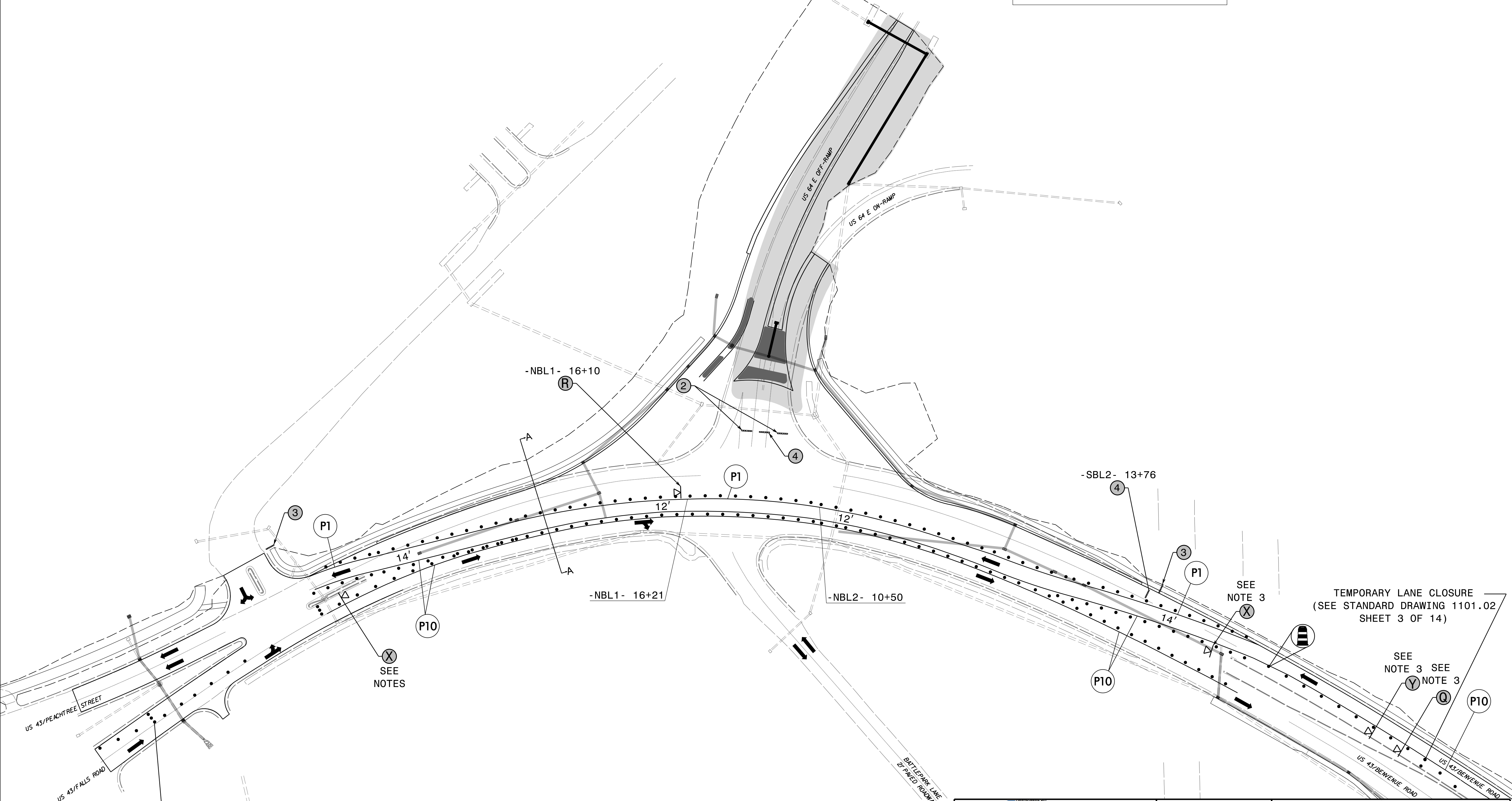
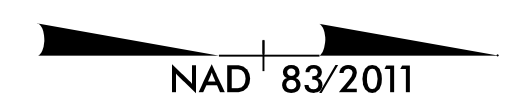
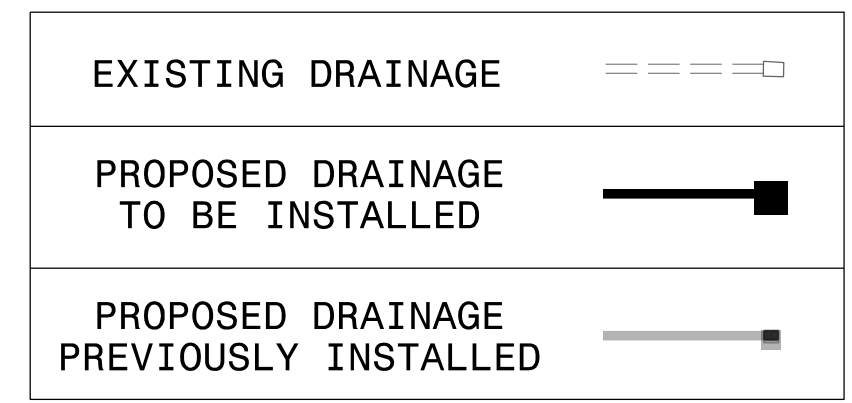
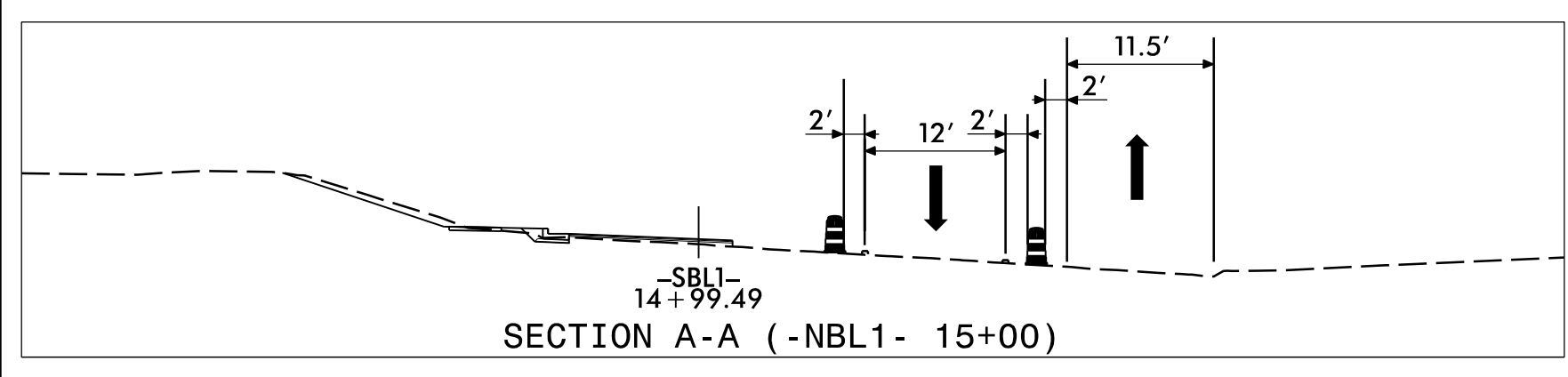
APPROVED:
 DATE: 3/10/2022

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TRAFFIC MANAGEMENT PHASE II DETAIL SHEET 1 OF 2



TEMPORARY LANE CLOSURE
(SEE STANDARD DRAWING 1101.02
SHEET 3 OF 14)

NOTE 1: USE PEDESTRIAN MANAGEMENT
PHASE I WITH THIS DETAIL.
NOTE 2: USE BATTLEPARK LANE AND US-64
RAMPS DETOUR WITH THIS DETAIL.
NOTE 3: REFER TO STANDARD DRAWING
1101.11 (SHEET 4 OF 4) FOR ADVANCE
WARNING SIGN PLACEMENT DISTANCE.



TEMPORARY LANE CLOSURE
(SEE STANDARD DRAWING 1101.02
SHEET 3 OF 14)

10-MAR-2022 18:15
U-5947-TC-TMP-8.dgn
Josh.Terrigan

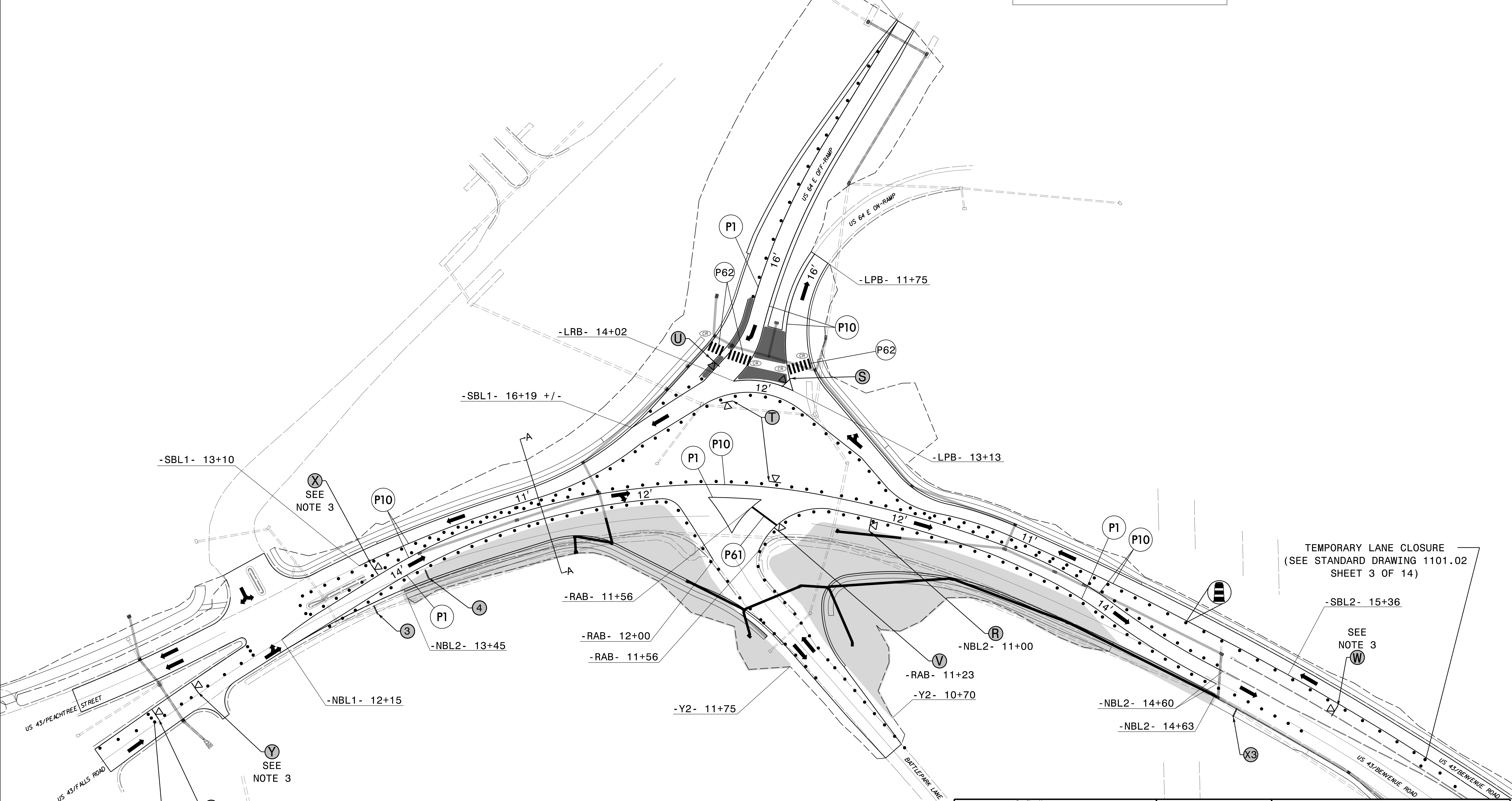
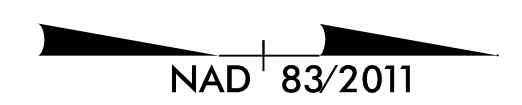
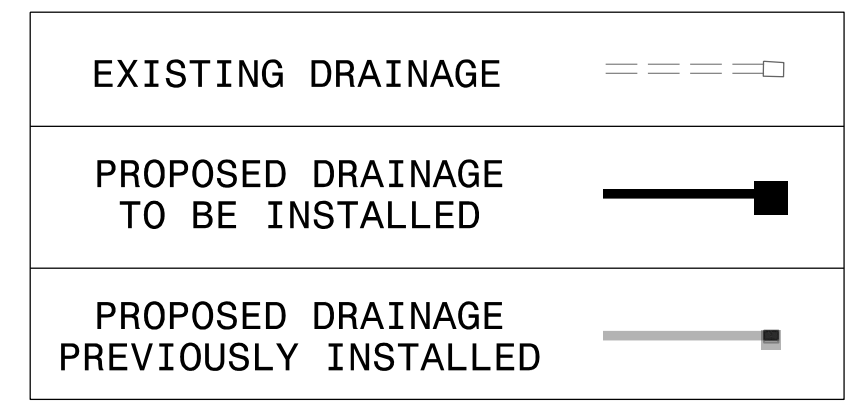
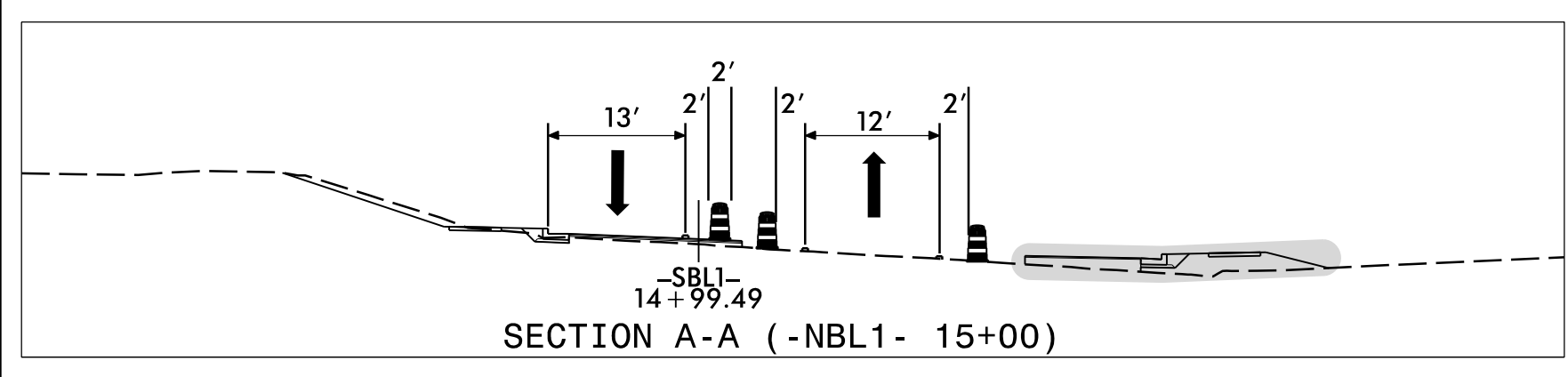
APPROVED: *Brandon W. Johnson*
DATE: 3/10/2022

SEAL

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



**TRAFFIC
MANAGEMENT
PHASE II
DETAIL SHEET
2 OF 2**



TEMPORARY LANE CLOSURE
(SEE STANDARD DRAWING 1101.02
SHEET 3 OF 14)

TEMPORARY LANE CLOSURE
(SEE STANDARD DRAWING 1101.02
SHEET 3 OF 14)

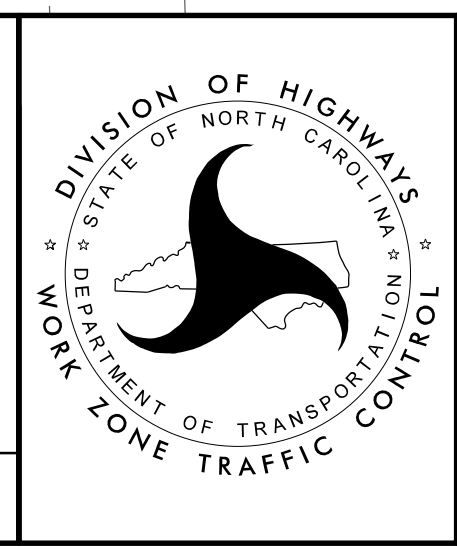
NOTE 1: USE PEDESTRIAN MANAGEMENT
PHASE II WITH THIS DETAIL.
NOTE 2: USE BATTLEPARK LANE AND US-64
RAMPS DETOUR WITH THIS DETAIL.
NOTE 3: REFER TO STANDARD DRAWING
1101.11 (SHEET 4 OF 4) FOR ADVANCE
WARNING SIGN PLACEMENT DISTANCE.



APPROVED: *Brandon W. Johnson*
DATE: 3/10/2022

SEAL

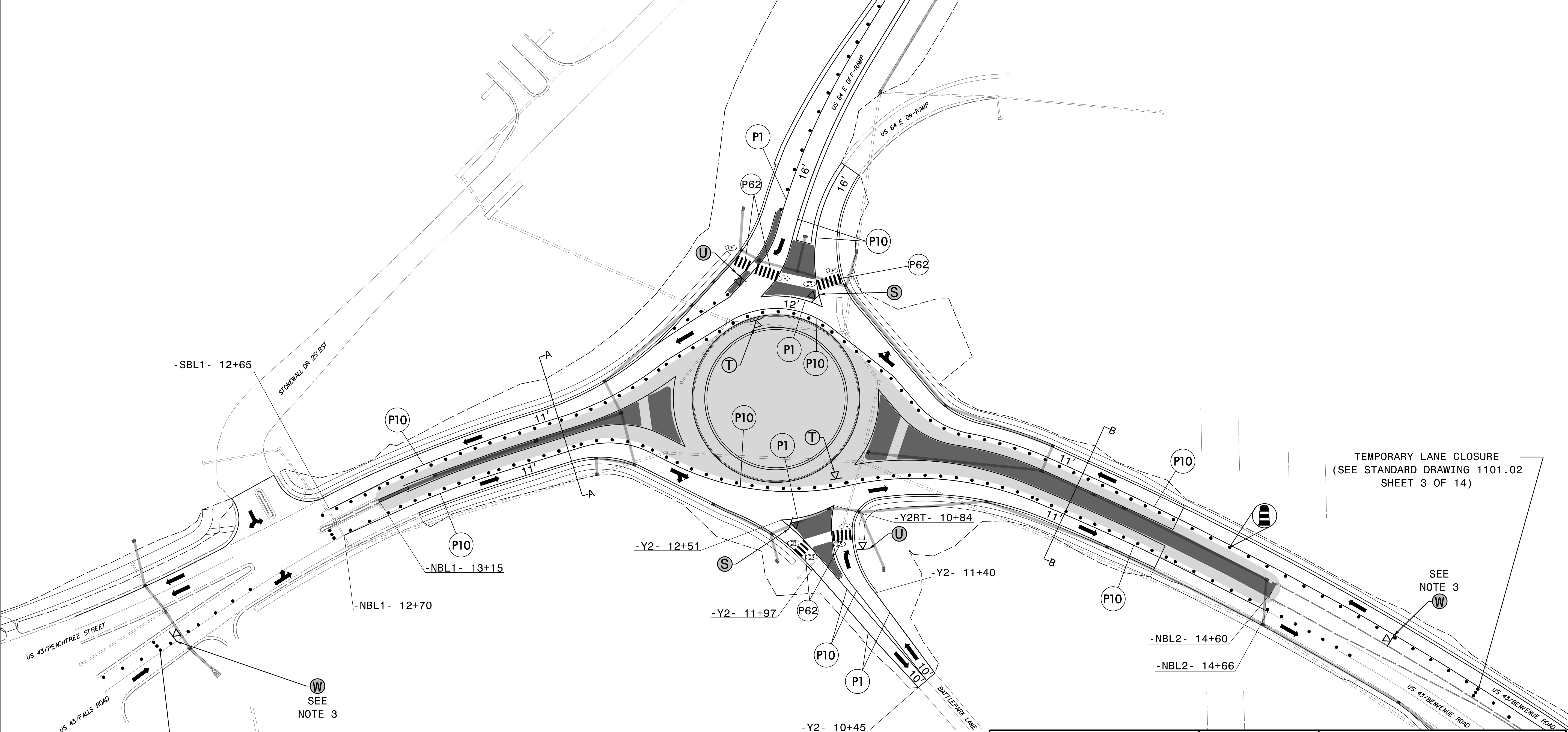
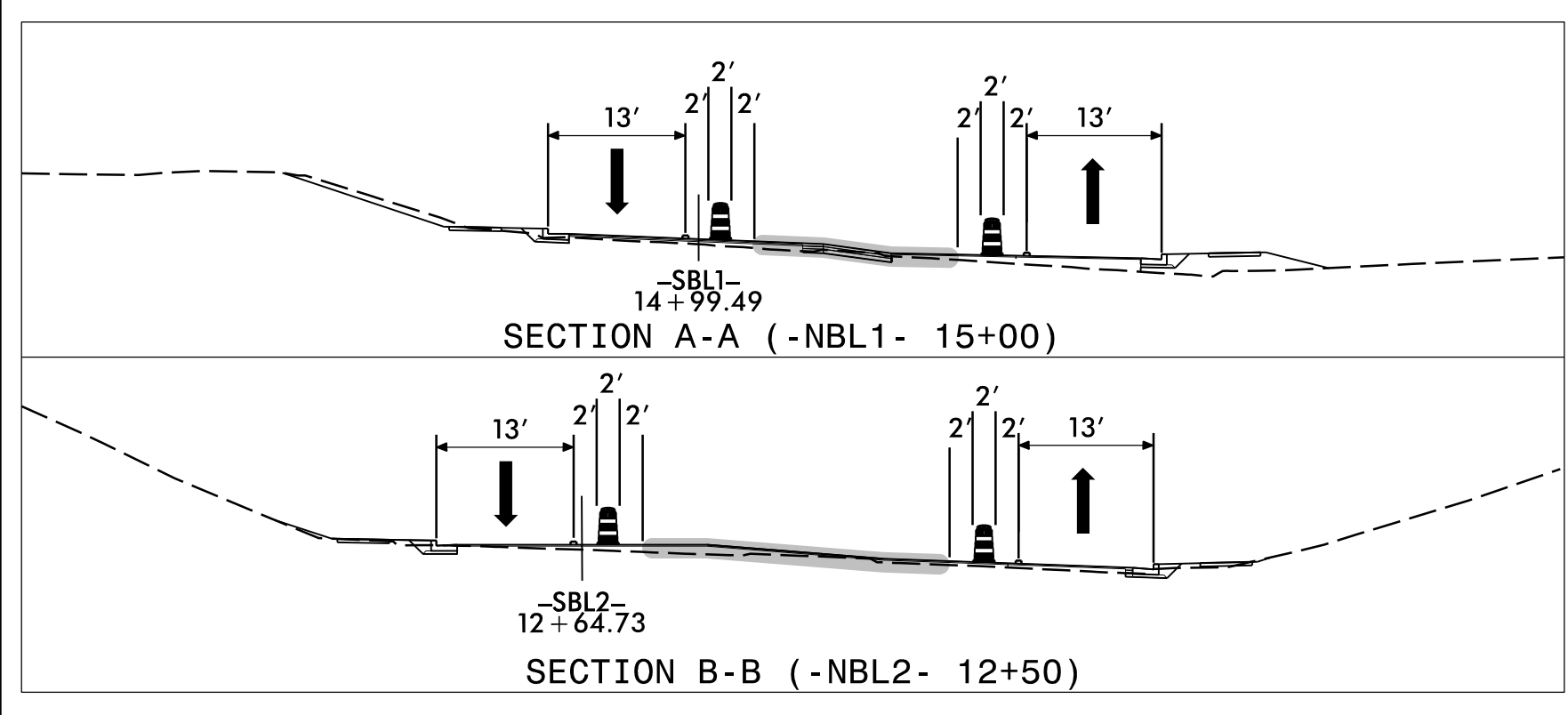
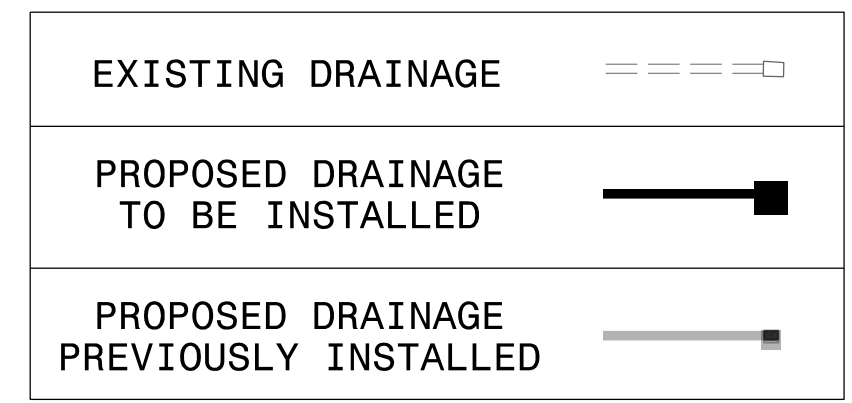
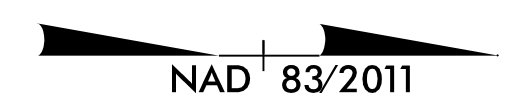
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
WORK ZONE TRAFFIC CONTROL

**TRAFFIC
MANAGEMENT
PHASE III**

10-MAR-2022 18:15
U-5947_TC_TMP_9.dgn
josh.fernigan



TEMPORARY LANE CLOSURE
(SEE STANDARD DRAWING 1101.02
SHEET 3 OF 14)

SEE NOTE 3

SEE NOTE 3

TEMPORARY LANE CLOSURE
(SEE STANDARD DRAWING 1101.02
SHEET 3 OF 14)

NOTE 1: USE PEDESTRIAN MANAGEMENT PHASE II WITH THIS DETAIL.
NOTE 2: USE BATTLEPARK LANE AND US-64 RAMPS DETOUR WITH THIS DETAIL.
NOTE 3: REFER TO STANDARD DRAWING 1101.11 (SHEET 4 OF 4) FOR ADVANCE WARNING SIGN PLACEMENT DISTANCE.

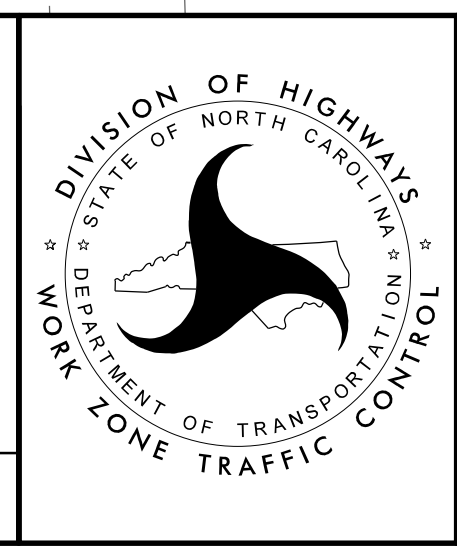


APPROVED: *Brandon W. Johnson*
DATE: 3/10/2022

SEAL

SEAL
034371
ENGINEER
BRANDON W. JOHNSON

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



TRAFFIC MANAGEMENT PHASE IV

10-MAR-2022 18:15
U-5947_TC_TMP-10.dgn
josh.fernigan

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NASH COUNTY

LOCATION: INTERCHANGE OF US 64 BYPASS & NC 43 (BENVENUE ROAD)
TYPE OF WORK: GRADING, DRAINAGE, AND PAVING.

TIP NO. SHEET NO.
U-5947 PMP-1

APPROVED: *Faith E. Jahnke*

DATE: 3/10/2022

SEAL



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROJECT: U-5947

CONTRACT: DD00379

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:
- | ROAD NAME | MARKING | MARKER |
|---------------------|---------|--------|
| NC 43 (BENVENUE RD) | THERMO | NONE |
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
 - C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
 - D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

**STATE PROJECT U-5947
PAVEMENT MARKING SCHEDULE**

| SYMBOL | DESCRIPTION | QUANTITY |
|-----------------------------------|--------------------------------|----------|
| THERMO (4", 90 MIL) | | |
| T1 | WHITE EDGELINE | 275 LF |
| T2 | WHITE SOLID LANE LINE | 1,335 LF |
| T3 | 10 FT WHITE SKIP | 755 LF |
| T4 | 3 FT - 9 FT/SP WHITE MINI SKIP | 265 LF |
| T5 | 2 FT - 6 FT/SP WHITE MINI SKIP | 170 LF |
| T10 | YELLOW EDGELINE | 5,070 LF |
| T13 | YELLOW DOUBLE CENTER LINE | 590 LF |
| THERMO (8", 90 MIL) | | |
| T40 | WHITE GORELINE | 340 LF |
| T44 | 3 FT - 9 FT/SP WHITE MINI SKIP | 110 LF |
| T45 | 3 FT - 3 FT/SP WHITE MINI SKIP | 145 LF |
| T46 | WHITE CROSSWALK LINE | 120 LF |
| THERMO (24", 90 MIL) | | |
| T61 | WHITE STOPBAR | 260 LF |
| T62 | WHITE CROSSWALK LINE | 580 LF |
| THERMO - PAVEMENT MARKING SYMBOLS | | |
| T70 | LEFT ARROW | 8 EA |
| T71 | RIGHT ARROW | 12 EA |
| T72 | STRAIGHT ARROW | 9 EA |
| T73 | COMBO. LEFT/STRAIGHT ARROW | 4 EA |
| T100 | ALPHANUMERIC CHARACTER | 8 EA |
| T103 | 24" YIELD LINE TRIANGLE | 44 EA |
| T111 | FISH-HOOK LEFT/STRAIGHT ARROW | 5 EA |
| T112 | FISH-HOOK RIGHT/STRAIGHT ARROW | 2 EA |

**STATE PROJECT U-5947
PAVEMENT MARKING SCHEDULE**

SYMBOL DESCRIPTION

| | |
|--|--------------------------------|
| THERMO (4", 90 MIL) | |
| T1 | WHITE EDGELINE |
| T2 | WHITE SOLID LANE LINE |
| T3 | 10 FT WHITE SKIP |
| T4 | 3 FT - 9 FT/SP WHITE MINI SKIP |
| T5 | 2 FT - 6 FT/SP WHITE MINI SKIP |
| T10 | YELLOW EDGELINE |
| T13 | YELLOW DOUBLE CENTER LINE |
| THERMO (8", 90 MIL) | |
| T40 | WHITE GORELINE |
| T45 | 3 FT - 3 FT/SP WHITE MINI SKIP |
| T46 | WHITE CROSSWALK LINE |
| THERMO (24", 90 MIL) | |
| T61 | WHITE STOPBAR |
| T62 | WHITE CROSSWALK LINE |
| THERMO - PAVEMENT MARKING SYMBOLS (90 MIL) | |
| T70 | LEFT ARROW |
| T71 | RIGHT ARROW |
| T72 | STRAIGHT ARROW |
| T73 | COMBO. LEFT/STRAIGHT ARROW |
| T100 | ALPHANUMERIC CHARACTER |
| T103 | 24" YIELD LINE TRIANGLE |
| T111 | FISH-HOOK LEFT/STRAIGHT ARROW |
| T112 | FISH-HOOK RIGHT/STRAIGHT ARROW |

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - 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 |
|----------|---|
| 1205.01 | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS |
| 1205.02 | PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS |
| 1205.04 | PAVEMENT MARKINGS - INTERSECTIONS |
| 1205.05 | PAVEMENT MARKINGS - TURN LANES |
| 1205.06 | PAVEMENT MARKINGS - LANE DROPS |
| 1205.07 | PAVEMENT MARKINGS - PEDESTRIAN CROSSWALK |
| 1205.08 | PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES |
| 1205.14 | PAVEMENT MARKINGS - ROUNDABOUTS |

INDEX

- PMP-1 PAVEMENT MARKING PLAN TITLE, SCHEDULE, AND QUANTITIES
- PMP-2-3 PAVEMENT MARKING DETAIL SHEETS

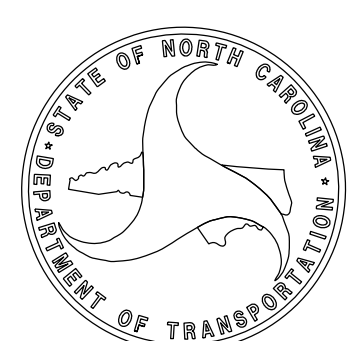
Prepared in the Office of:





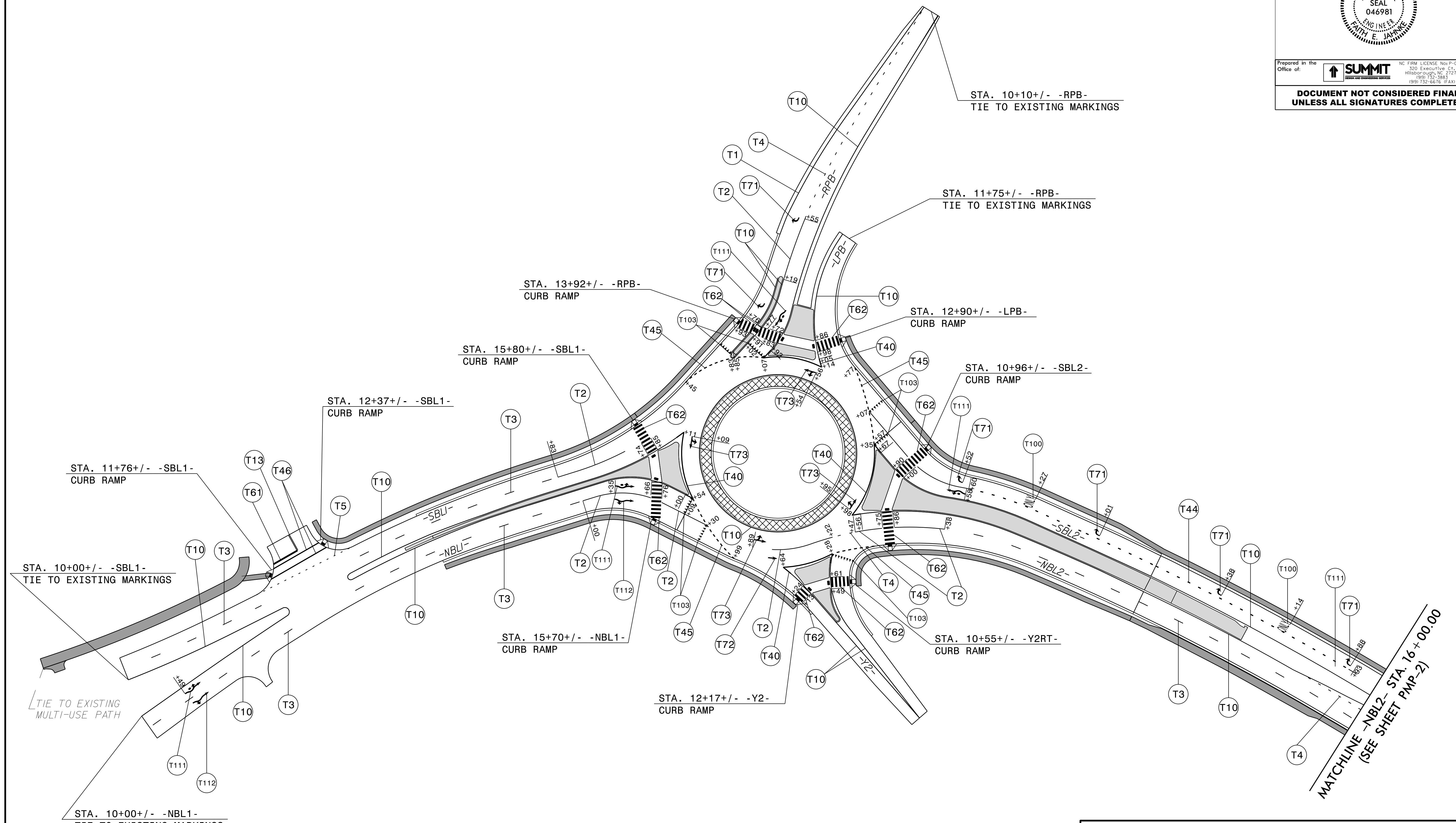
NC FIRM LICENSE No: P-0339
320 Executive Ct
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)

BRANDON W. JOHNSON, PE PROJECT ENGINEER

FAITH E. JAHNKE, PE PROJECT DESIGNER




| | |
|--|---------------------------|
| TIP NO. U-5947 | SHEET NO. PMP-2 |
| APPROVED: <i>Faith Jahnske</i> DATE: 3/10/2022 | |
| SEAL | |
|  | |
| Prepared in the Office of:  NC FIRM LICENSE No. P-0339 320 Executive Ct. Hillsborough, NC 27278 (919) 732-1883 (919) 732-6616 (FAX) | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |



PAVEMENT MARKING DETAIL

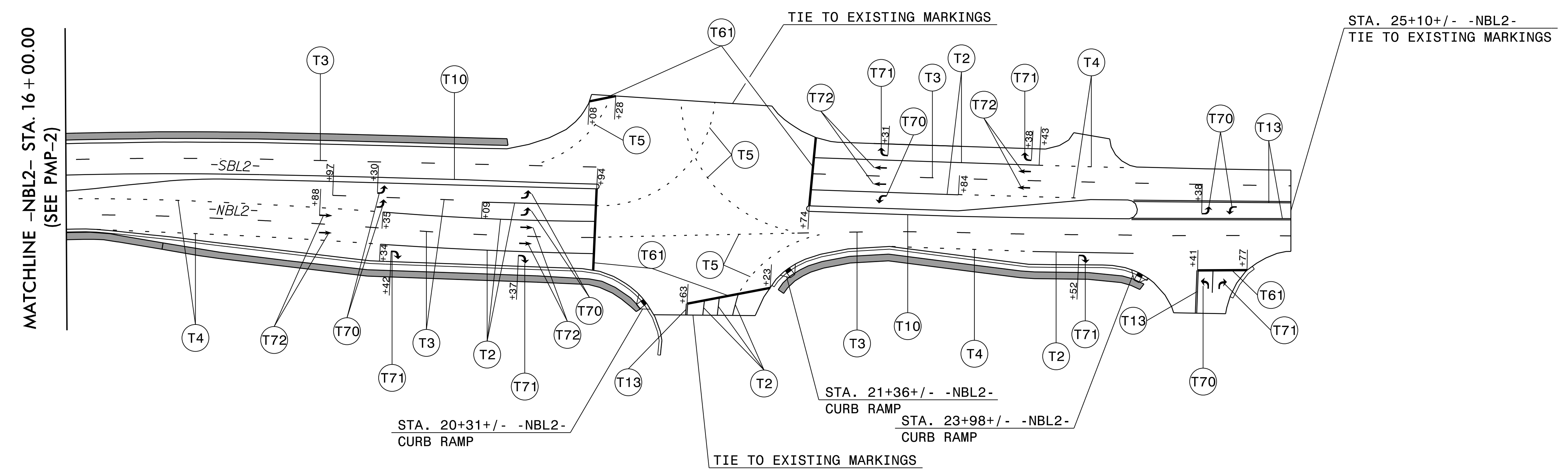
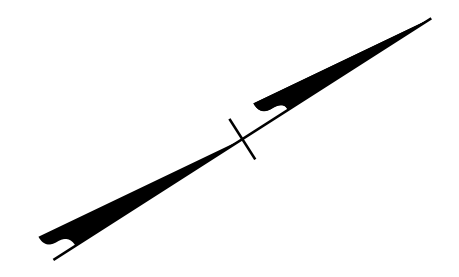
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U-5947-202 PMP-2.dgn
Faith Jahnske

SEAL



Prepared in the Office of: **SUMMIT** ENGINEERING AND CONSTRUCTION SERVICES
NC FIRM LICENSE No. P-0339
320 Executive Ct.
Hillsboro, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)

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PAVEMENT MARKING DETAIL

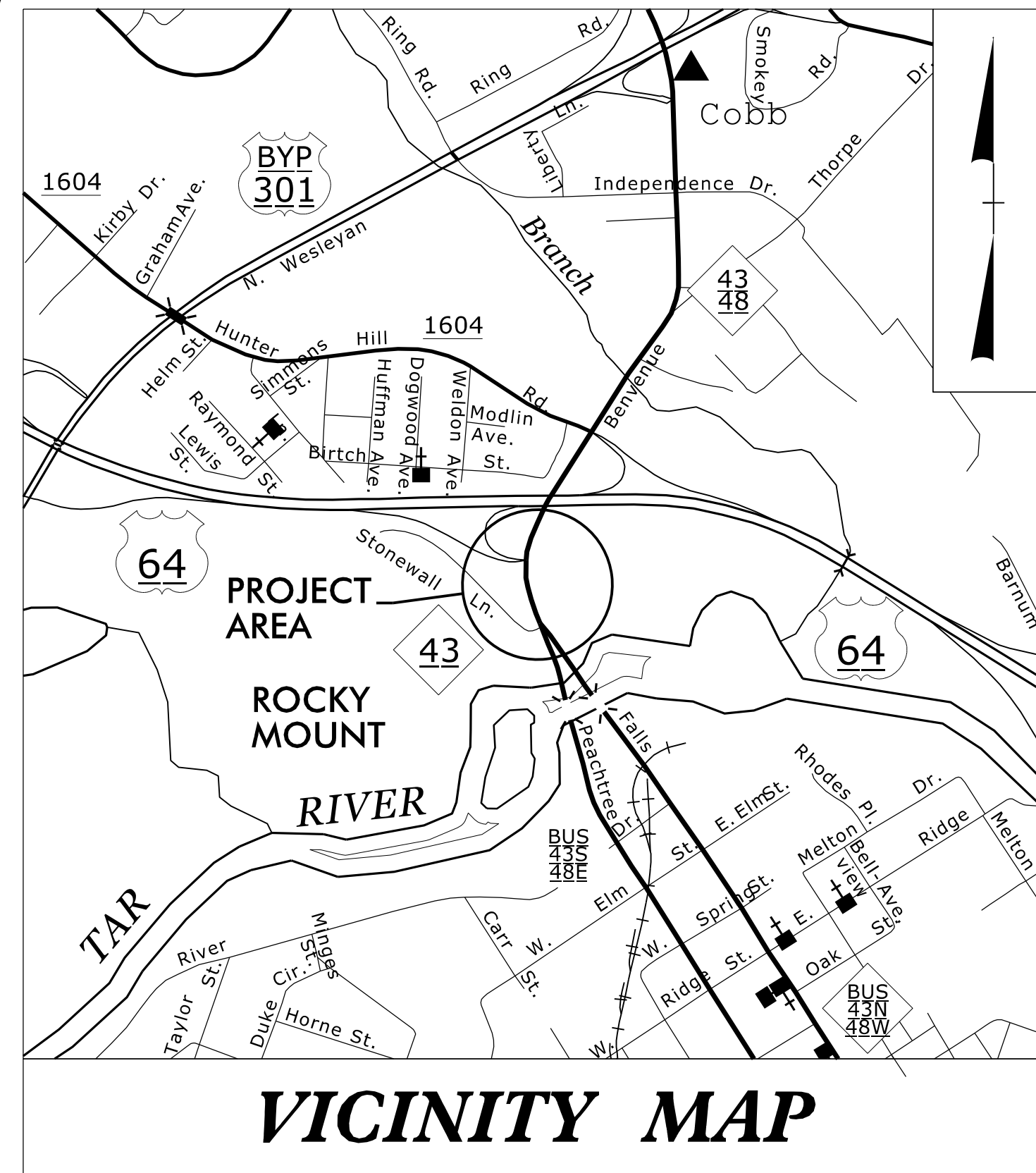
TIP PROJECT: U-5947

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

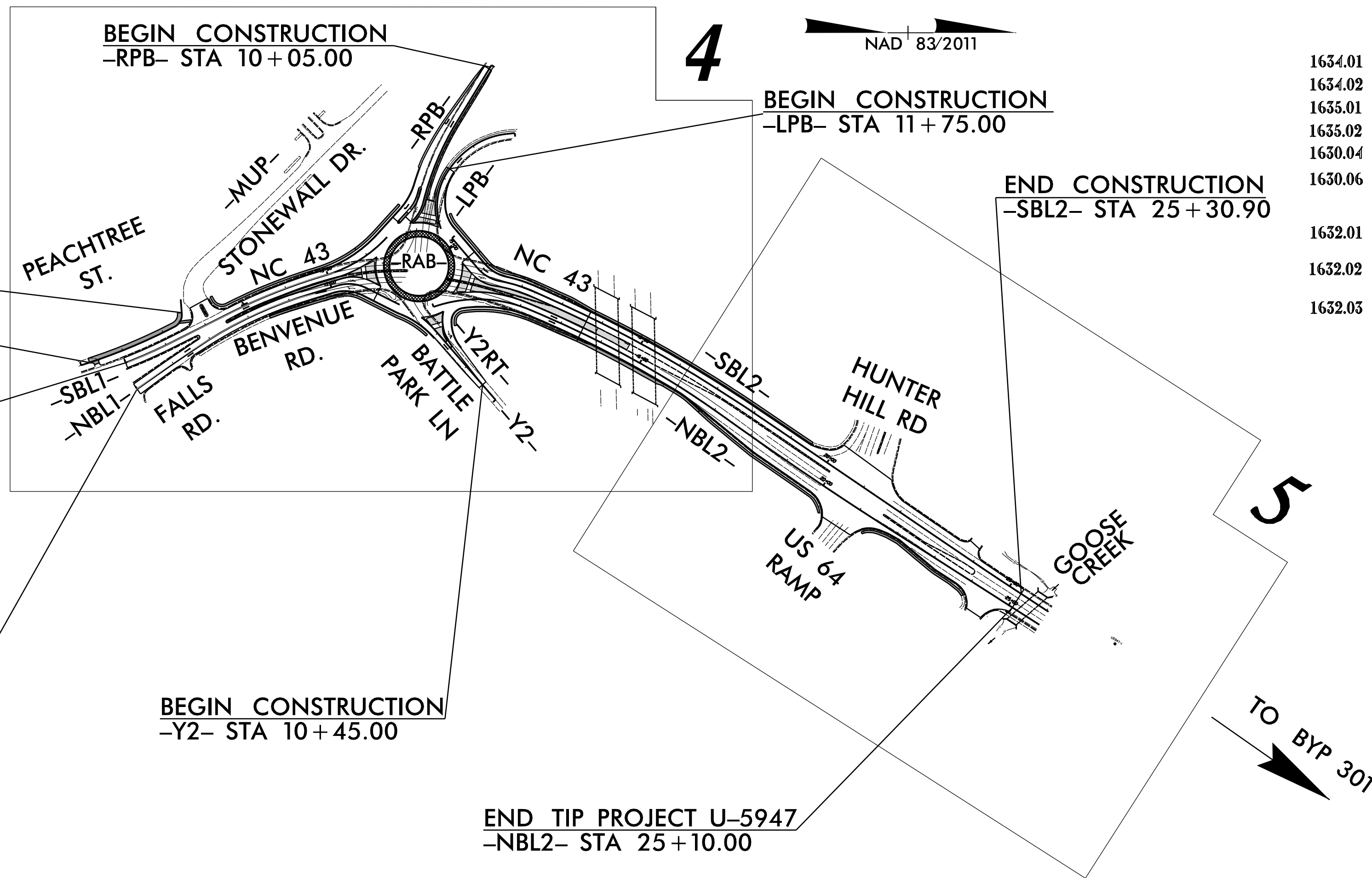
NASH COUNTY

LOCATION: INTERCHANGE OF US 64 BYPASS & NC 43 (BENVENUE ROAD)
TYPE OF WORK: GRADING, DRAINAGE, AND PAVING



END CONSTRUCTION
-MUP- STA 12+67.70
BEGIN CONSTRUCTION
-MUP- STA 10+20.00
BEGIN CONSTRUCTION
-SBL1- STA 10+00.00

TO ROCKY MOUNT



| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | U-5947 | EC-1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 49760.1.1 | 1970002 | PE | |
| 49760.2.1 | 1970002 | ROW | |
| 49760.2.2 | 1970002 | UTILITY | |
| 49760.3.1 | 1970002 | CONST | |

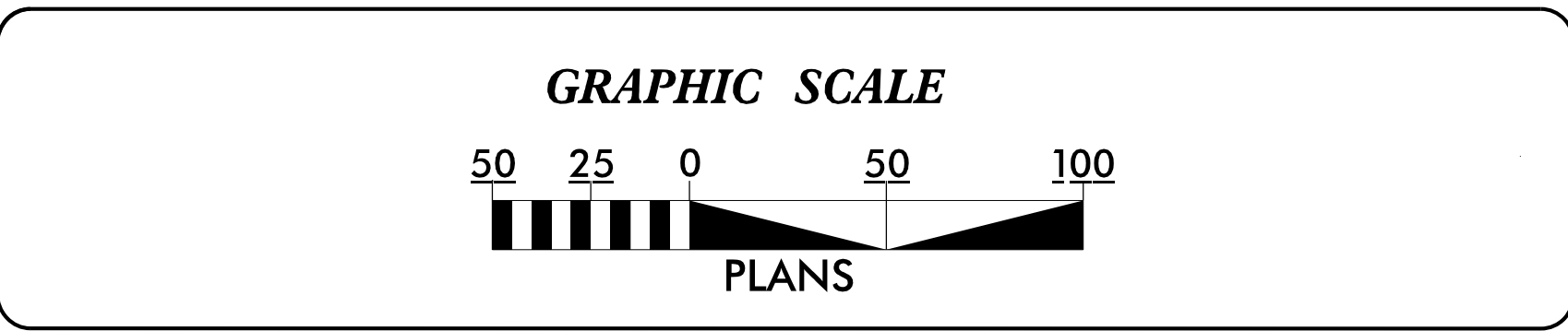
EROSION AND SEDIMENT CONTROL MEASURES

| Std. # | Description | Symbol |
|---------|--|---------|
| 1630.03 | Temporary Silt Ditch | --- |
| 1630.05 | Temporary Diversion | TD |
| 1605.01 | Temporary Silt Fence | |
| 1606.01 | Special Sediment Control Fence | ---X--- |
| 1622.01 | Temporary Berms and Slope Drains | ---S--- |
| 1630.02 | Silt Basin Type B | ▨ |
| 1633.01 | Temporary Rock Silt Check Type-A | ▩ |
| | Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM) | ▩ |
| 1633.02 | Temporary Rock Silt Check Type-B | ▩ |
| | Wattle / Coir Fiber Wattle | W |
| | Wattle / Coir Fiber Wattle with Polyacrylamide (PAM) | W |
| 1634.01 | Temporary Rock Sediment Dam Type-A | ▩ |
| 1634.02 | Temporary Rock Sediment Dam Type-B | ▩ |
| 1635.01 | Rock Pipe Inlet Sediment Trap Type-A | ⊓ |
| 1635.02 | Rock Pipe Inlet Sediment Trap Type-B | ⊓ |
| 1630.04 | Stilling Basin | ▭ |
| 1630.06 | Special Stilling Basin | ▭ |
| | Rock Inlet Sediment Trap: | |
| 1632.01 | Type A | A |
| 1632.02 | Type B | B |
| 1632.03 | Type C | C |
| | Skimmer Basin | ▭ |
| | Tiered Skimmer Basin | ▭ |
| | Infiltration Basin | ▭ |

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT
Refer To E. C. Special Provisions for Special Considerations.



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.

DESIGN AND ENGINEERING SERVICES
FIRM NO. P-0339

Prepared in the Office of:
320 Executive Ct.
Hillsborough, NC 27278-8551
Voice: (919)732-3883
Fax: (919)732-6776
www.summitde.net

Designed by:
HE YANG **4408**
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

| | |
|--|--|
| 1604.01 Railroad Erosion Control Detail | 1632.01 Rock Inlet Sediment Trap Type A |
| 1605.01 Temporary Silt Fence | 1632.02 Rock Inlet Sediment Trap Type B |
| 1606.01 Special Sediment Control Fence | 1632.03 Rock Inlet Sediment Trap Type C |
| 1607.01 Gravel Construction Entrance | 1633.01 Temporary Rock Silt Check Type A |
| 1622.01 Temporary Berms and Slope Drains | 1633.02 Temporary Rock Silt Check Type B |
| 1630.01 Silt Basin | 1634.01 Temporary Rock Sediment Dam Type A |
| 1630.02 Silt Basin Type B | 1634.02 Temporary Rock Sediment Dam Type B |
| 1630.03 Temporary Silt Ditch | 1635.01 Rock Pipe Inlet Sediment Trap Type A |
| 1630.04 Stilling Basin | 1635.02 Rock Pipe Inlet Sediment Trap Type B |
| 1630.05 Temporary Diversion | 1640.01 Coir Fiber Baffle |
| 1630.06 Special Stilling Basin | 1645.01 Temporary Stream Crossing |
| 1631.01 Matting Installation | |

04-MAR-2022_09:00 EC-1.tsd.dgn

| | |
|---------------------------------|---------------------|
| PROJECT REFERENCE NO. U-5947 | SHEET NO. EC-2 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

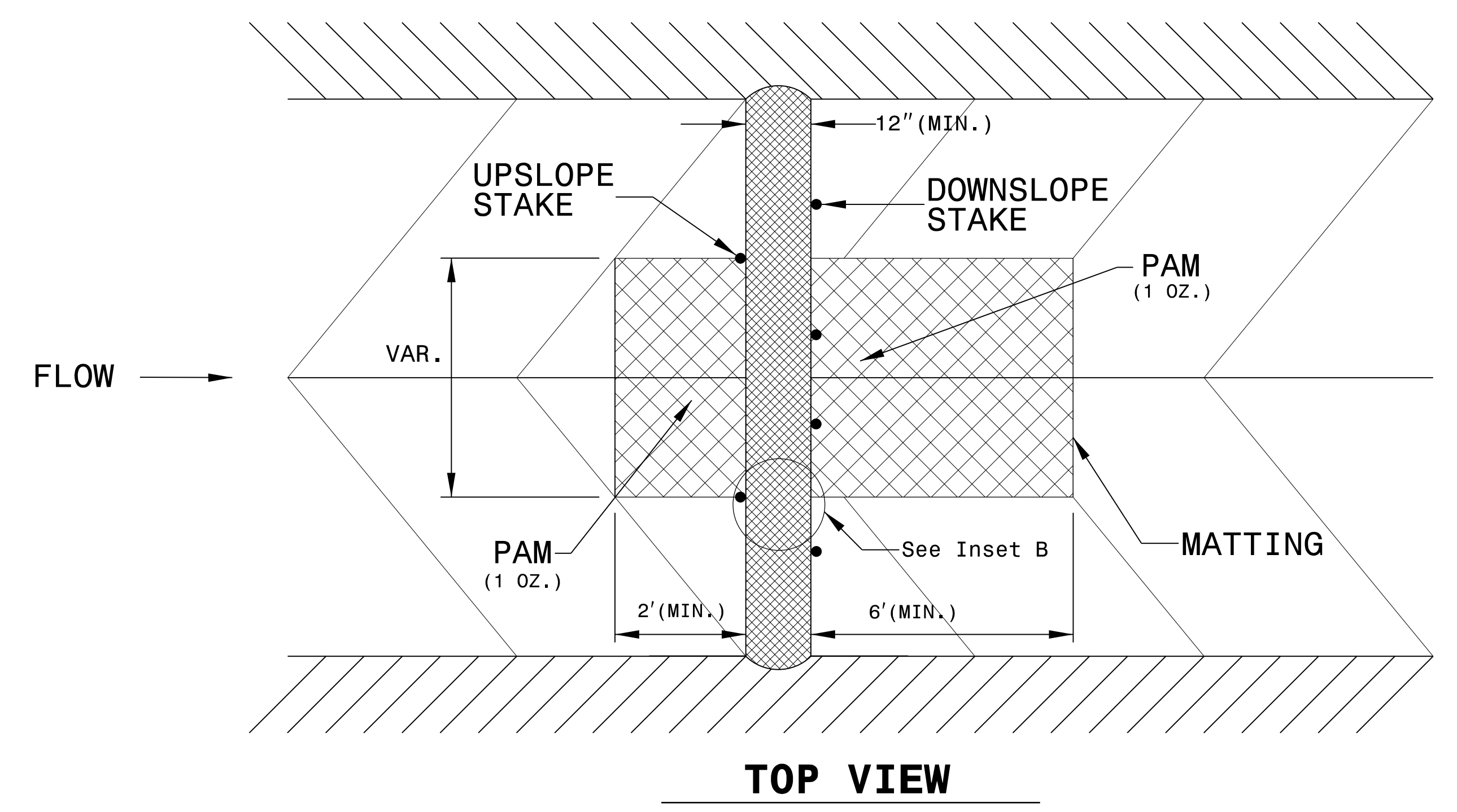
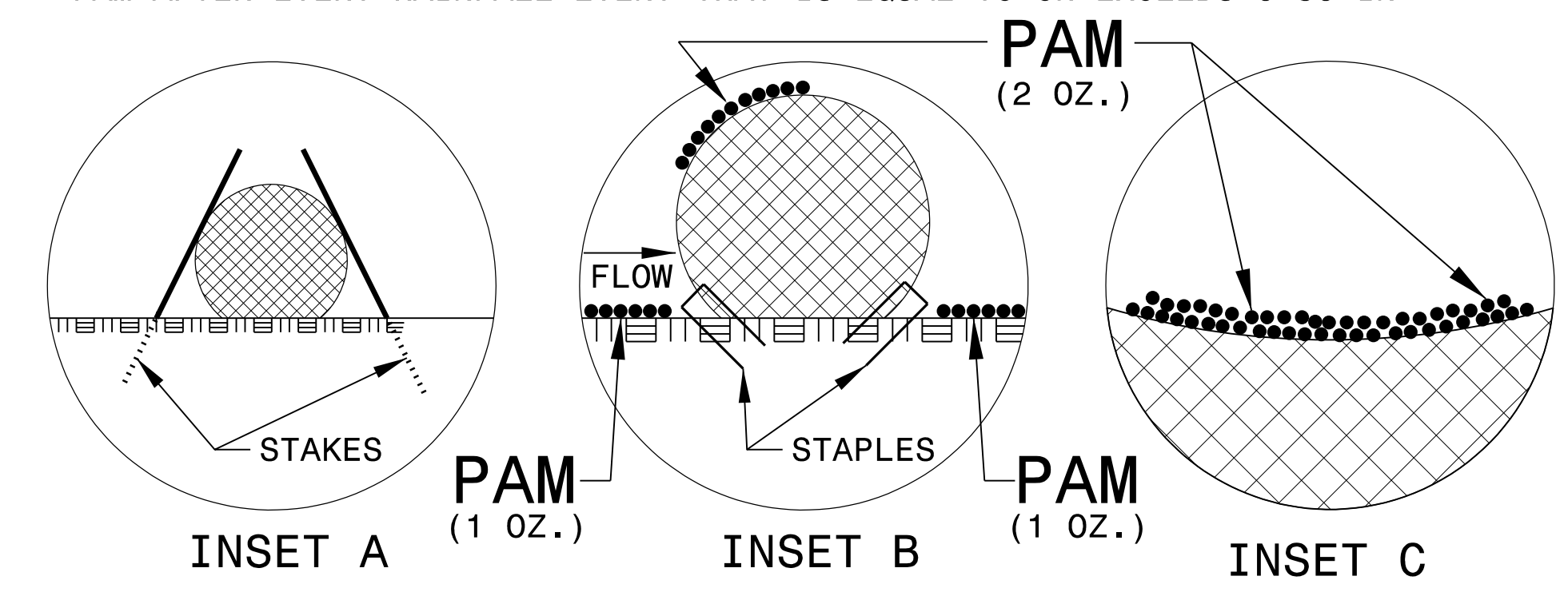
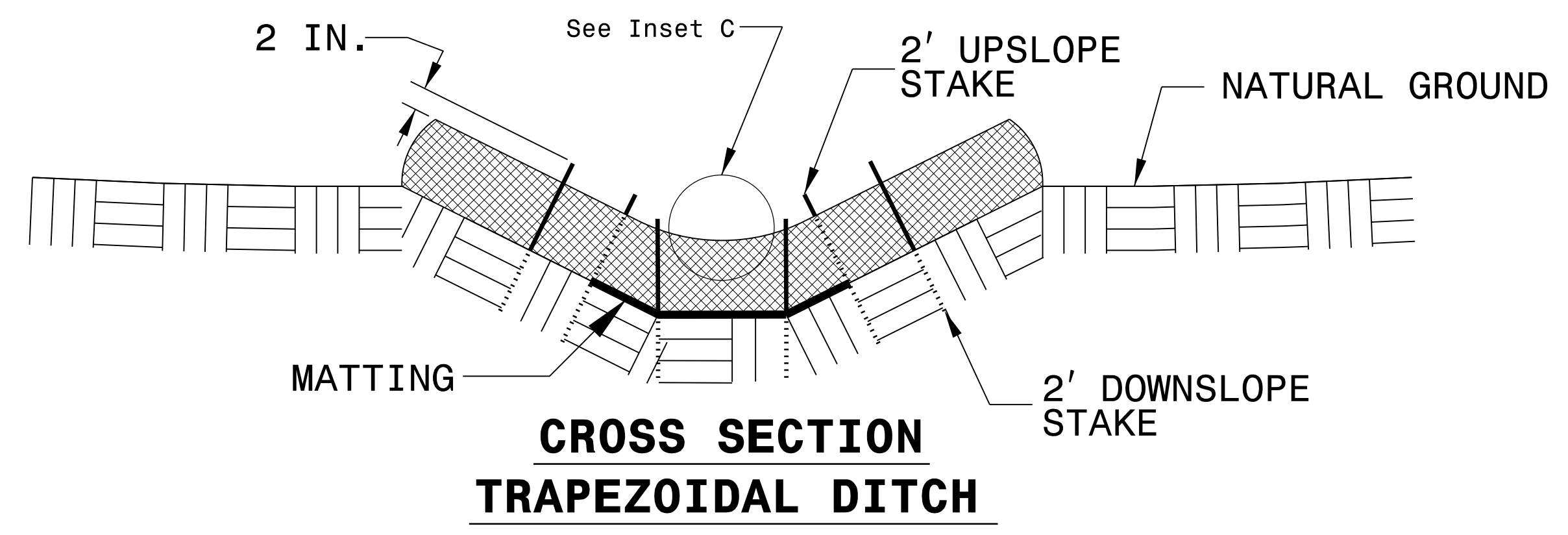
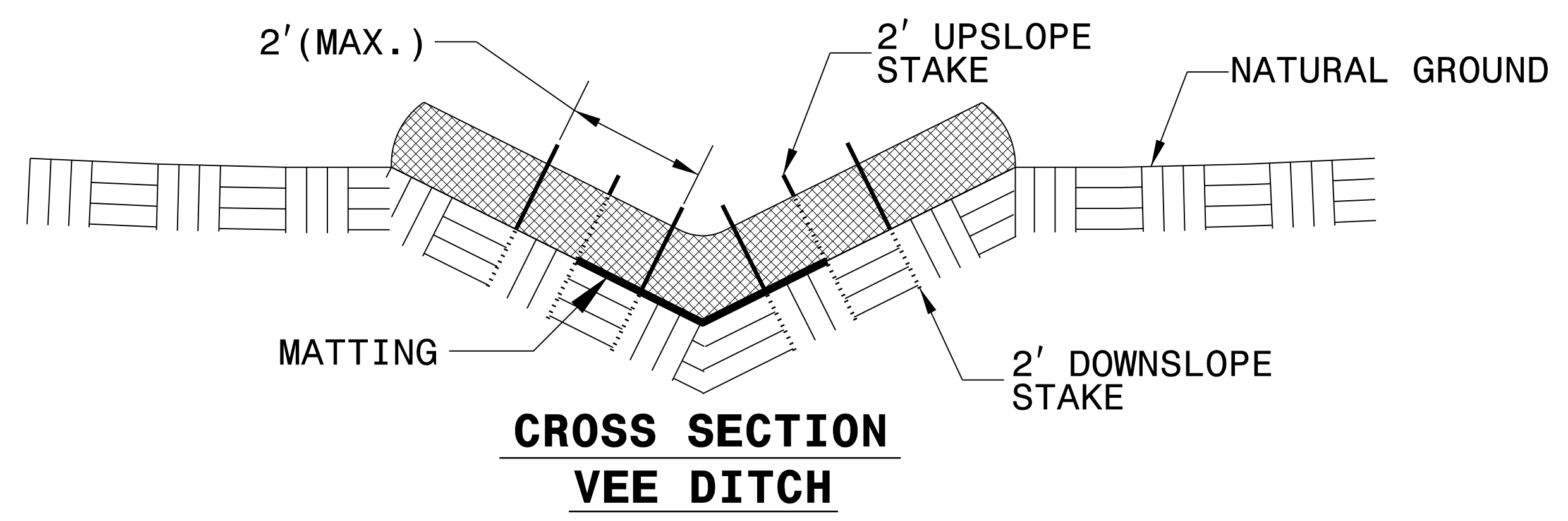
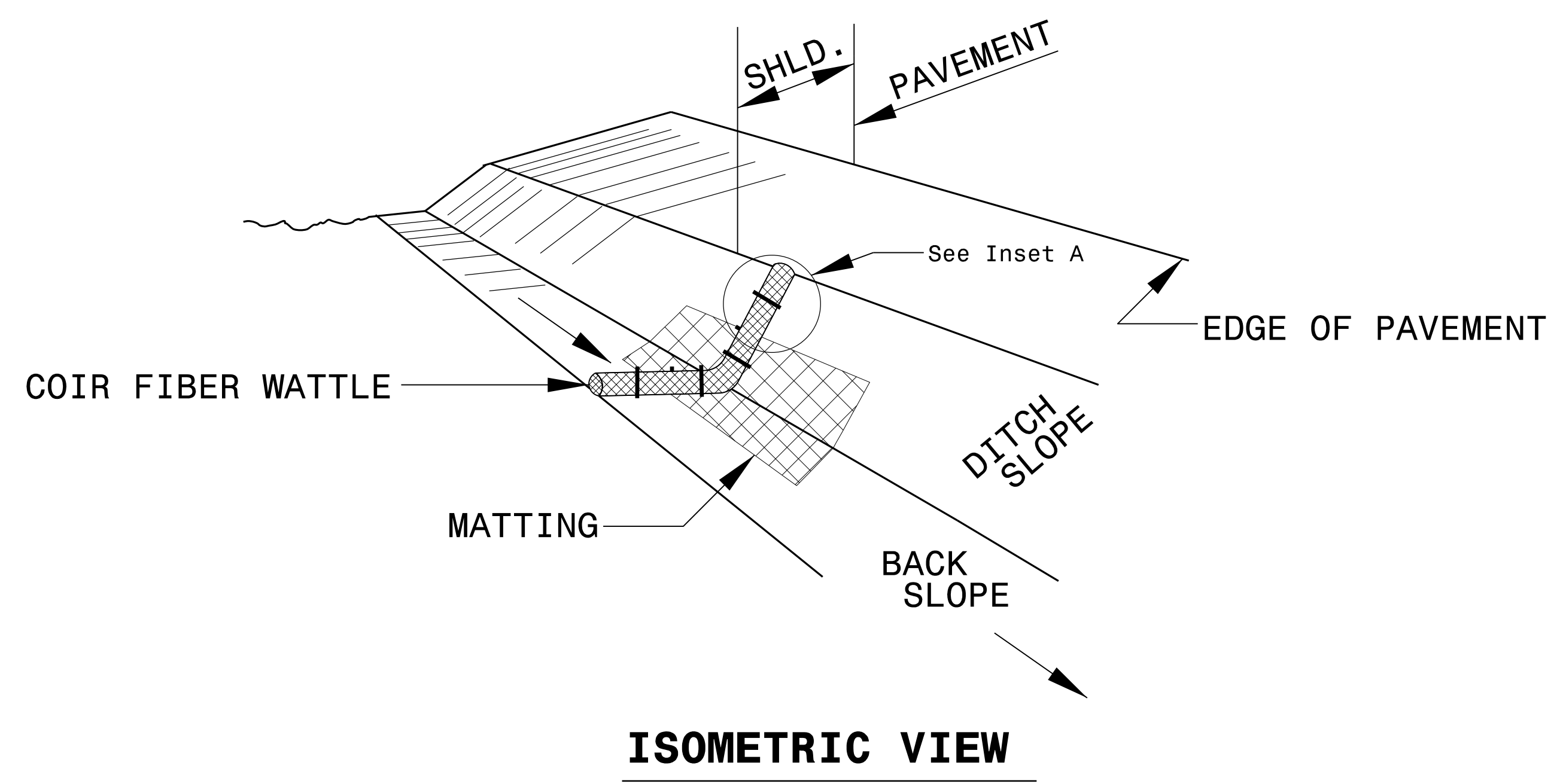
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

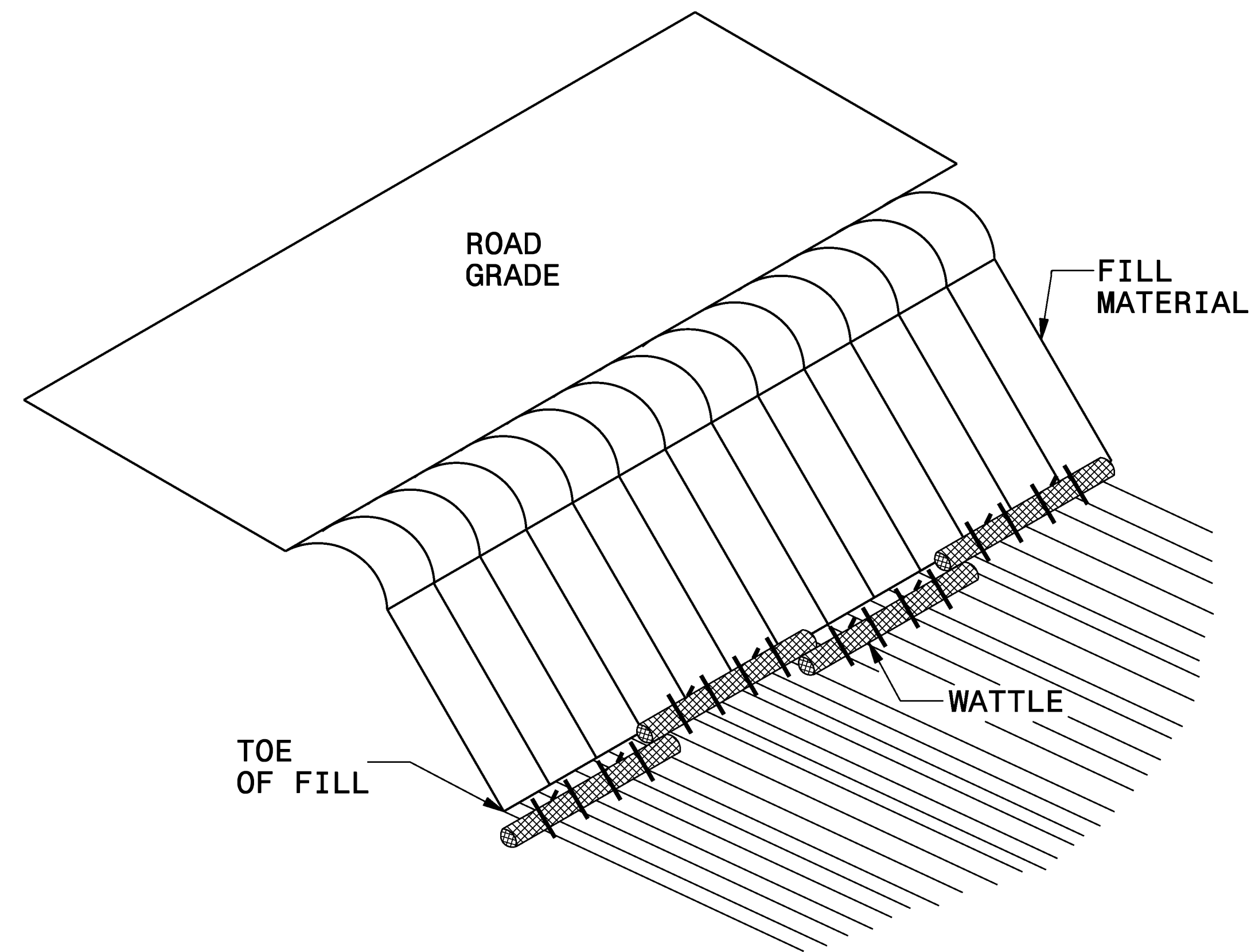
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

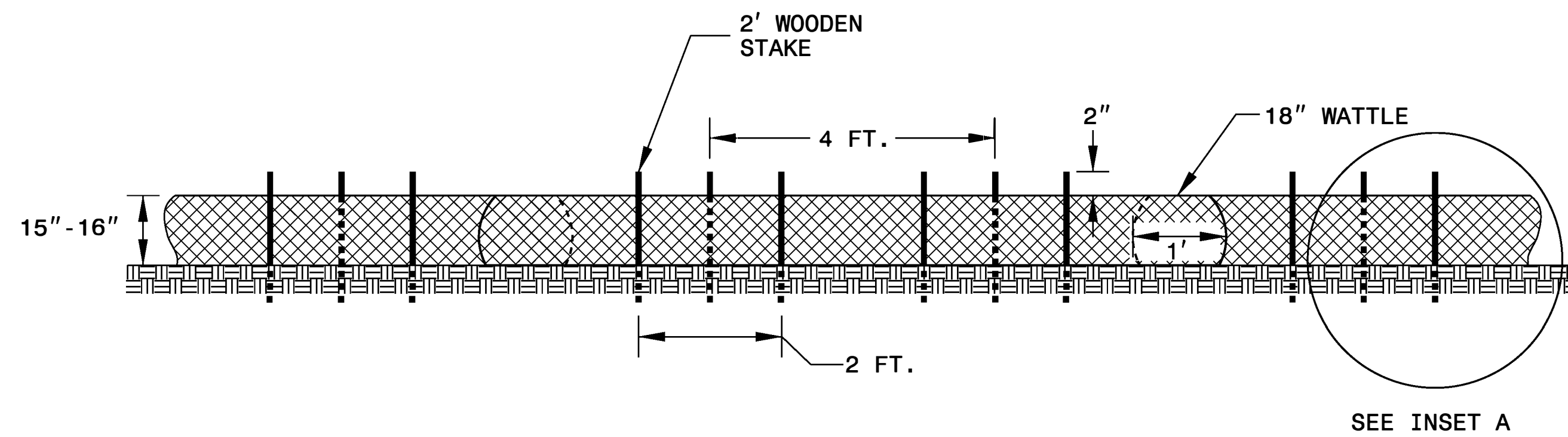


| | |
|---------------------------------|---------------------|
| PROJECT REFERENCE NO. U-5947 | SHEET NO. EC-2A |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

COIR FIBER WATTLE BARRIER DETAIL



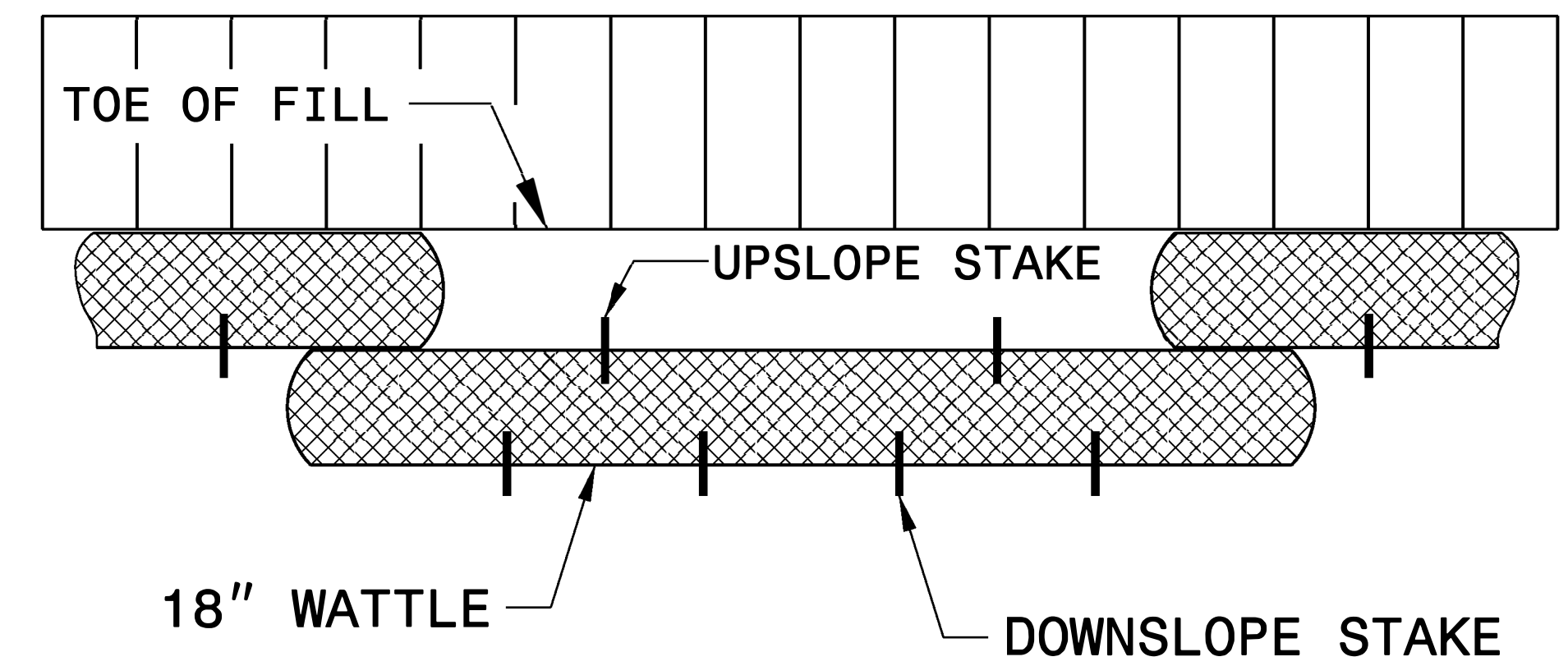
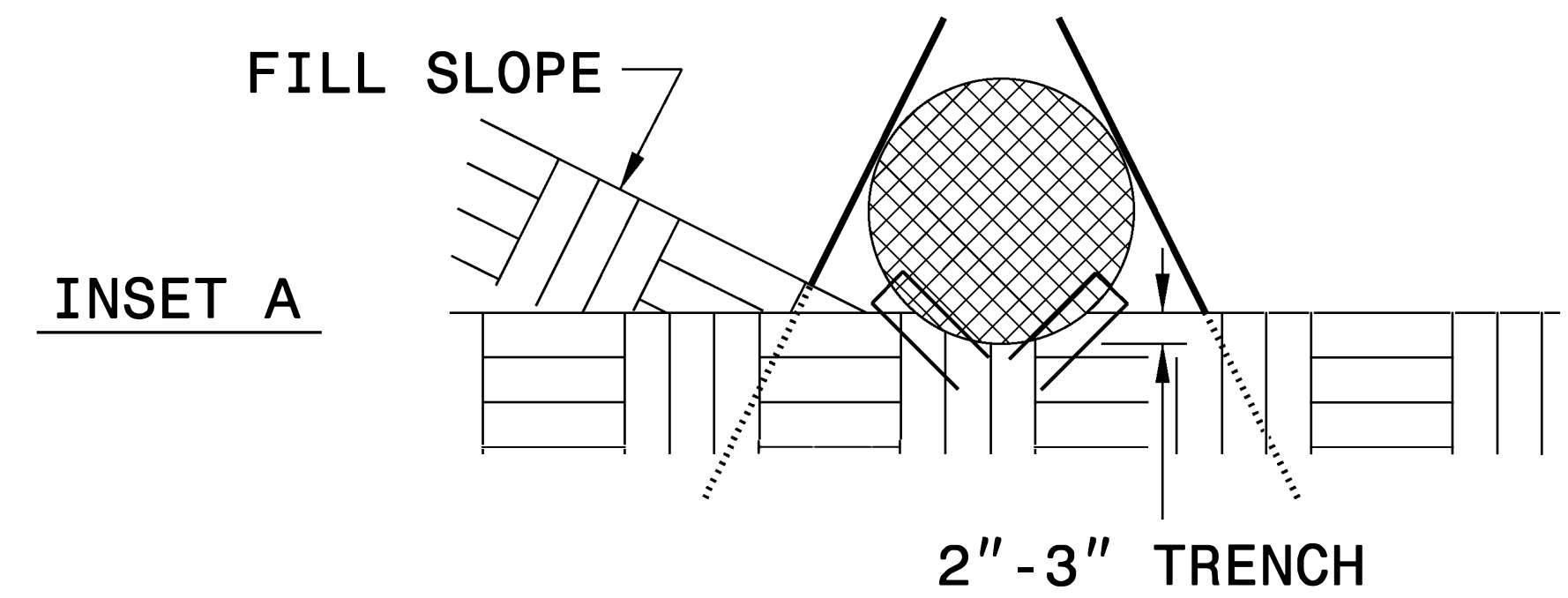
ISOMETRIC VIEW



FRONT VIEW

NOTES:

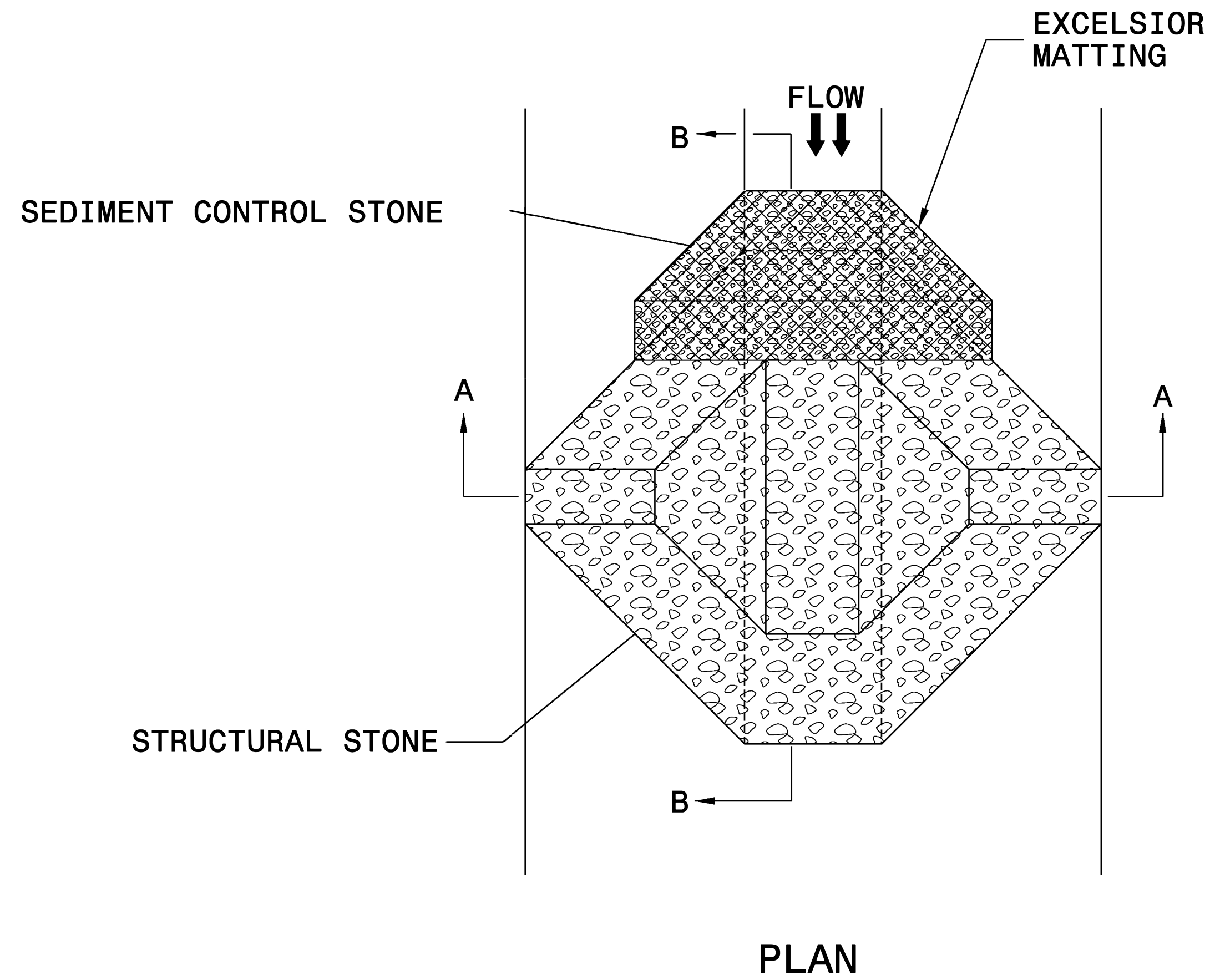
- USE MINIMUM 18 IN. NOMINAL DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLES ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 25 FT.



TOP VIEW

| | |
|---------------------------------|---------------------|
| PROJECT REFERENCE NO. U-5947 | SHEET NO. EC-2B |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



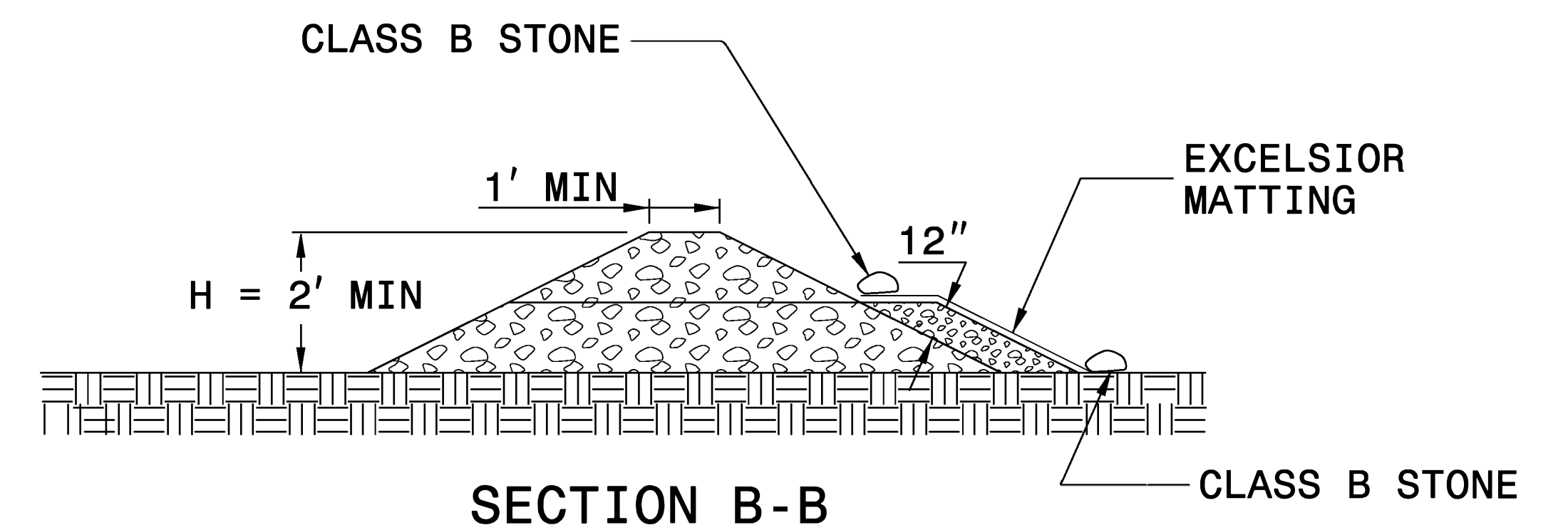
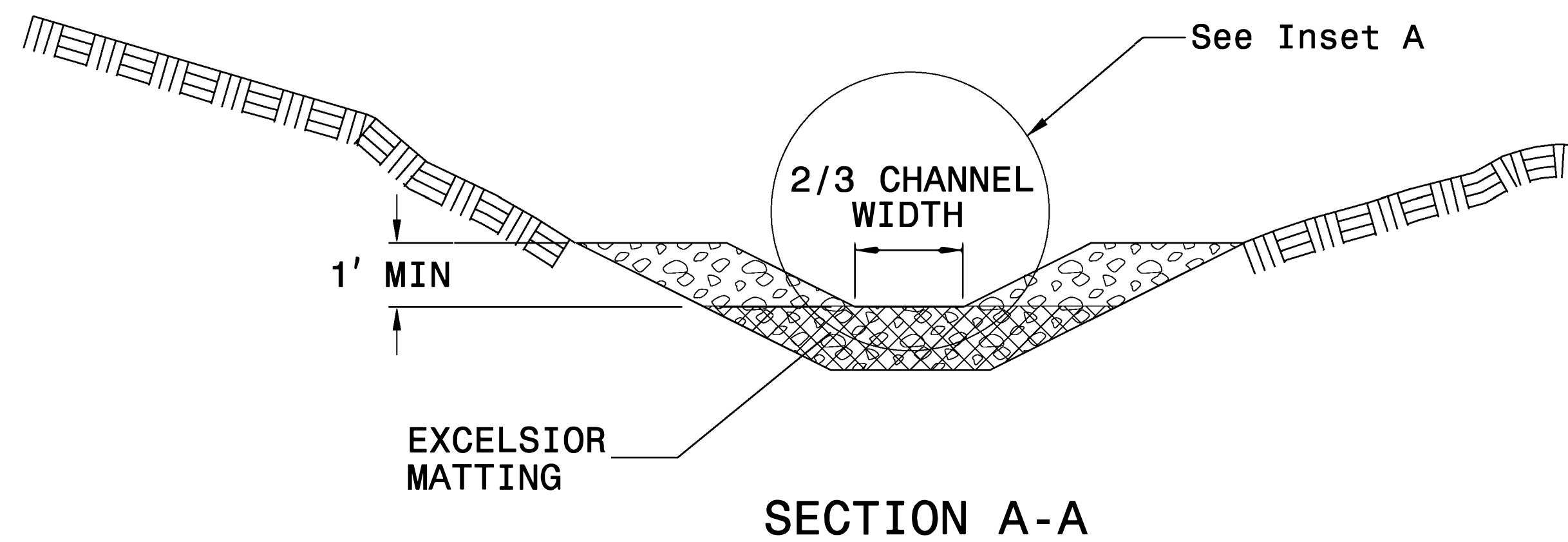
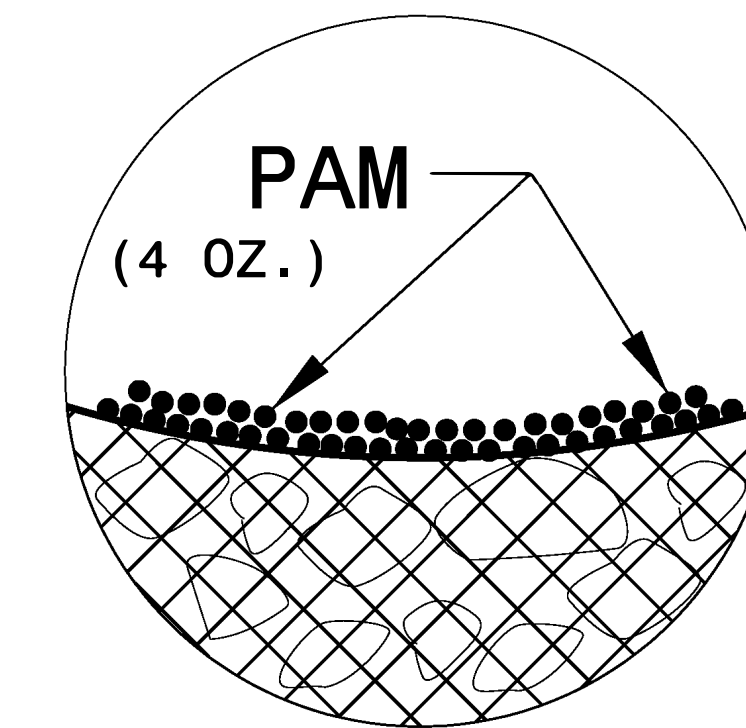
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

| | |
|--|---------------------------|
| PROJECT REFERENCE NO. <i>U-5947</i> | SHEET NO. <i>EC-3A</i> |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

SOIL STABILIZATION TIMEFRAMES

| <i>SITE DESCRIPTION</i> | <i>STABILIZATION TIME</i> | <i>TIMEFRAME EXCEPTIONS</i> |
|--|---------------------------|--|
| PERIMETER DIKES, SWALES, DITCHES AND SLOPES | 7 DAYS | NONE |
| HIGH QUALITY WATER (HQW) ZONES | 7 DAYS | NONE |
| SLOPES STEEPER THAN 3:1 | 7 DAYS | IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED. |
| SLOPES 3:1 OR FLATTER | 14 DAYS | 7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH. |
| ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1 | 14 DAYS | NONE, EXCEPT FOR PERIMETERS AND HQW ZONES. |

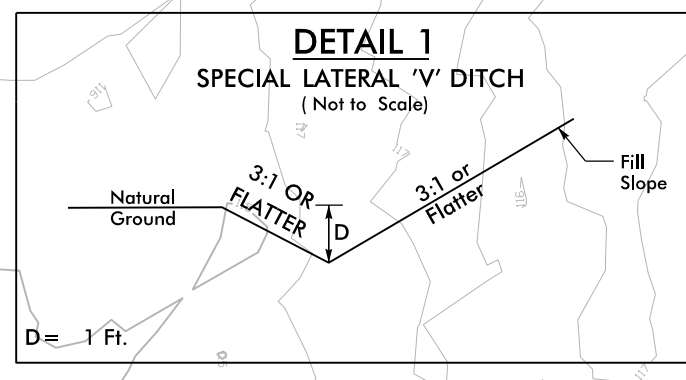
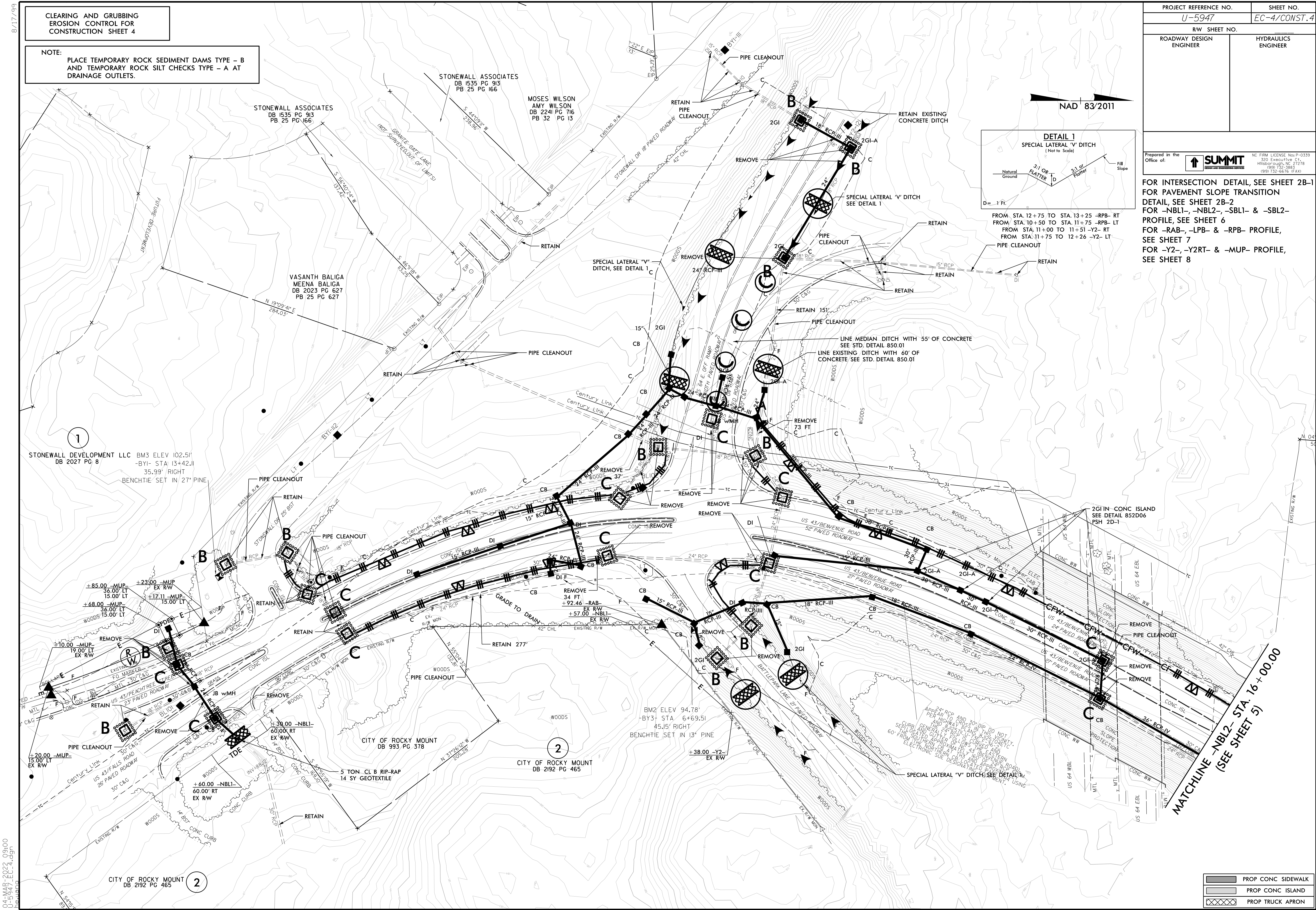
**CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4**

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

| | |
|---------------------------------|---------------------------|
| PROJECT REFERENCE NO. U-5947 | SHEET NO. EC-4/CONST.4 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

Prepared in the Office of:
SUMMIT
NC FIRM LICENSE No: P-0339
300 Executive Ct.
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)

FOR INTERSECTION DETAIL, SEE SHEET 2B-1
FOR PAVEMENT SLOPE TRANSITION
DETAIL, SEE SHEET 2B-2
FOR -NBL1-, -NBL2-, -SBL1- & -SBL2-
PROFILE, SEE SHEET 6
FOR -RAB-, -LPB- & -RPB- PROFILE,
SEE SHEET 7
FOR -Y2-, -Y2RT- & -MUP- PROFILE,
SEE SHEET 8



FROM STA. 12+75 TO STA. 13+25 -RPB- RT
FROM STA. 10+50 TO STA. 11+75 -RPB- LT
FROM STA. 11+00 TO STA. 11+51 -Y2- RT
FROM STA. 11+75 TO STA. 12+26 -Y2- LT

| | |
|--|--------------------|
| | PROP CONC SIDEWALK |
| | PROP CONC ISLAND |
| | PROP TRUCK APRON |

8.17.99
04-MAR-2023 09:00
U-5947 EC-4.dgn

**CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4**

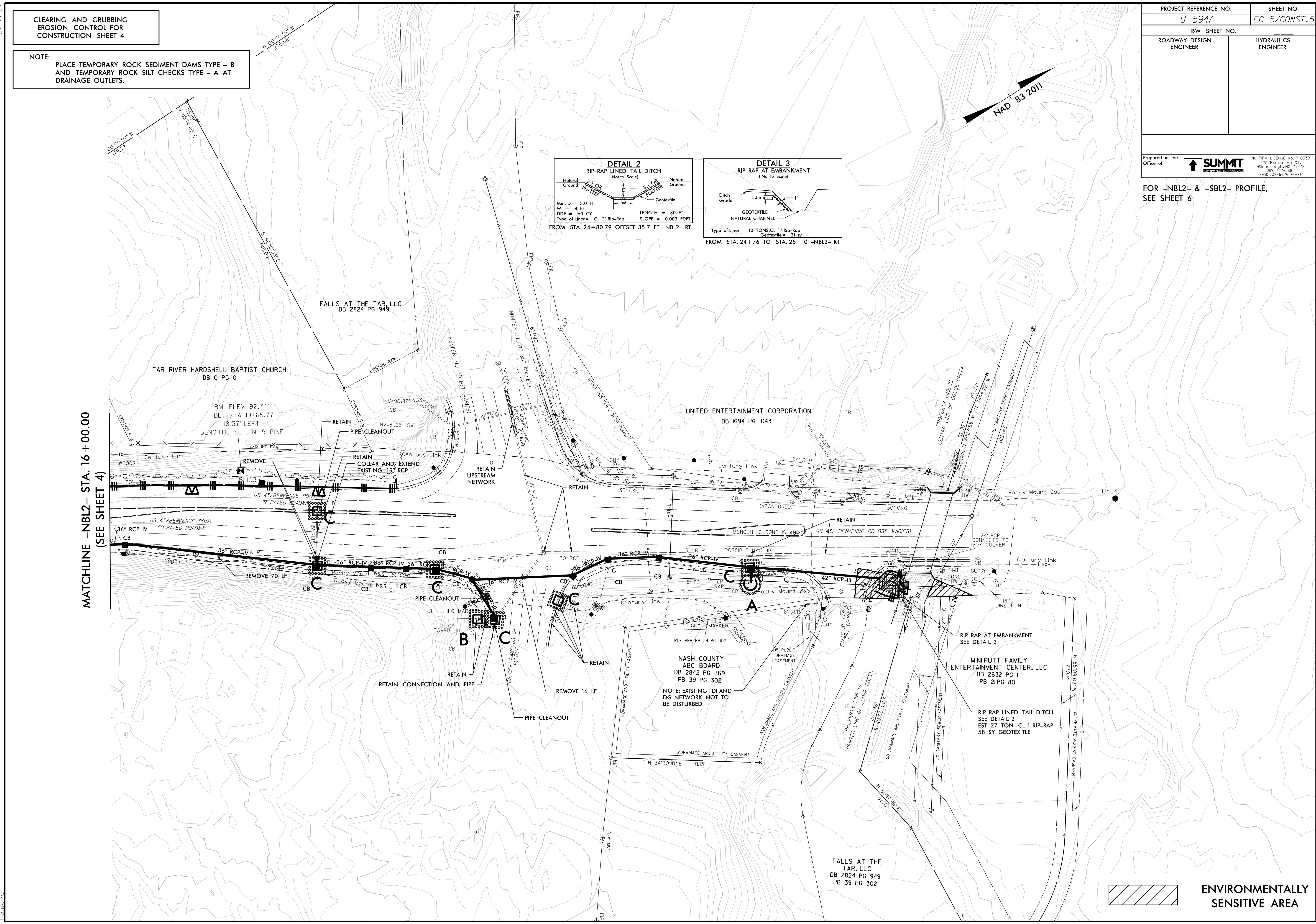
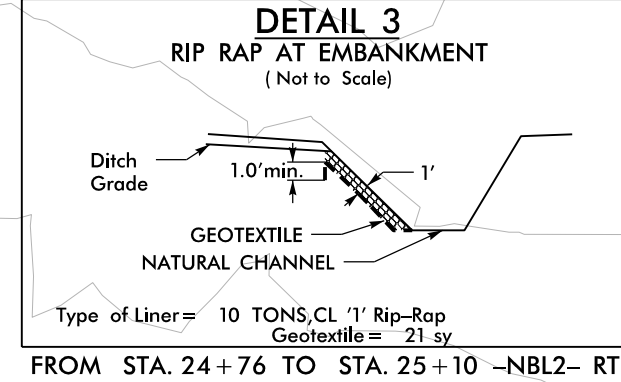
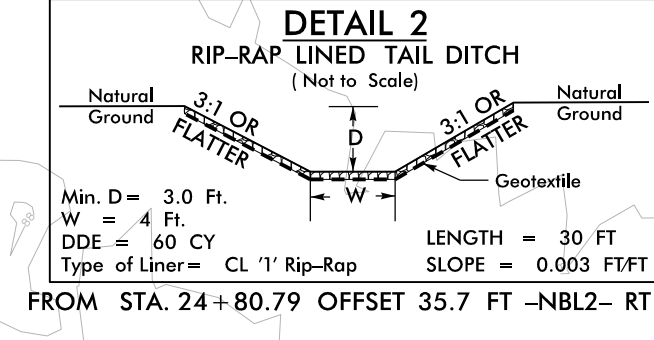
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

| | |
|--|----------------------------------|
| PROJECT REFERENCE NO. <i>U-5947</i> | SHEET NO. <i>EC-5/CONST.5</i> |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

Prepared in the Office of:
SUMMIT
ENGINEERS & ARCHITECTS
NC FIRM LICENSE NO: P-0339
320 Executive Ct.
Hillsborough, NC 27278
(919) 332-3883
(919) 732-6676 (FAX)

FOR -NBL2- & -SBL2- PROFILE,
SEE SHEET 6

**MATCHLINE -NBL2- STA. 16 + 00.00
(SEE SHEET 4)**



ENVIRONMENTALLY SENSITIVE AREA

8.17.99
04-MAR-2022 09:00
U-5947 EC-5.dgn

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

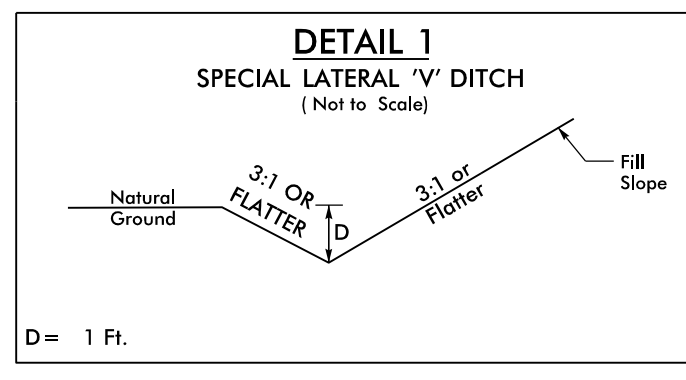
INSTALL PSRM IN THE PROPOSED DITCH LINE.

| | |
|-------------------------|---------------------|
| PROJECT REFERENCE NO. | SHEET NO. |
| U-5947 | EC-6/CONST.4 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

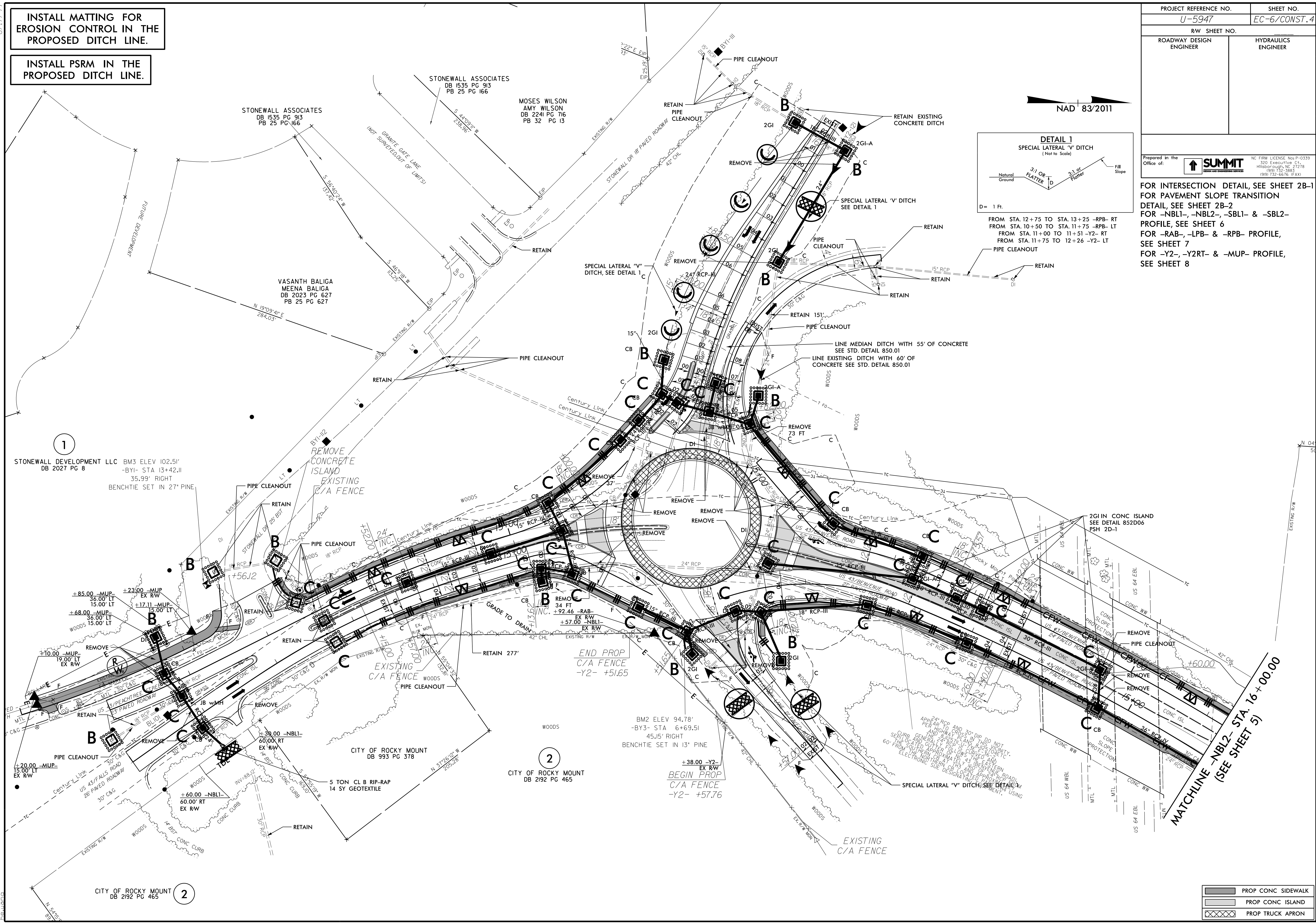
Prepared in the Office of:

 NC FIRM LICENSE No: P-0339
 300 Executive Ct.
 Hillsborough, NC 27278
 (919) 732-3883
 (919) 732-6676 (FAX)

FOR INTERSECTION DETAIL, SEE SHEET 2B-1
 FOR PAVEMENT SLOPE TRANSITION DETAIL, SEE SHEET 2B-2
 FOR -NBL1-, -NBL2-, -SBL1- & -SBL2- PROFILE, SEE SHEET 6
 FOR -RAB-, -LPB- & -RPB- PROFILE, SEE SHEET 7
 FOR -Y2-, -Y2RT- & -MUP- PROFILE, SEE SHEET 8



FROM STA. 12+75 TO STA. 13+25 -RPB- RT
 FROM STA. 10+50 TO STA. 11+75 -RPB- LT
 FROM STA. 11+00 TO 11+51 -Y2- RT
 FROM STA. 11+75 TO 12+26 -Y2- LT



1
 STONEWALL DEVELOPMENT LLC
 BM3 ELEV 102.51'
 -BY1- STA 13+42.11
 35.99' RIGHT
 BENCHTIE SET IN 27" PINE

STONEWALL ASSOCIATES
 DB 1535 PG 913
 PB 25 PG 166

MOSES WILSON
 AMY WILSON
 DB 2241 PG 716
 PB 32 PG 13

VASANTH BALIGA
 MEENA BALIGA
 DB 2023 PG 627
 PB 25 PG 627

STONEWALL ASSOCIATES
 DB 1535 PG 913
 PB 25 PG 166

REMOVE
 CONCRETE ISLAND
 EXISTING
 C/A FENCE

EXISTING
 C/A FENCE

CITY OF ROCKY MOUNT
 DB 993 PG 378




2
 CITY OF ROCKY MOUNT
 DB 2192 PG 465

BM2 ELEV 94.78'
 -BY3- STA 6+69.51
 45.15' RIGHT
 BENCHTIE SET IN 13' PINE

BEGIN PROP
 C/A FENCE
 -Y2- +57.76

END PROP
 C/A FENCE
 -Y2- +51.65

CITY OF ROCKY MOUNT
 DB 2192 PG 465
 2

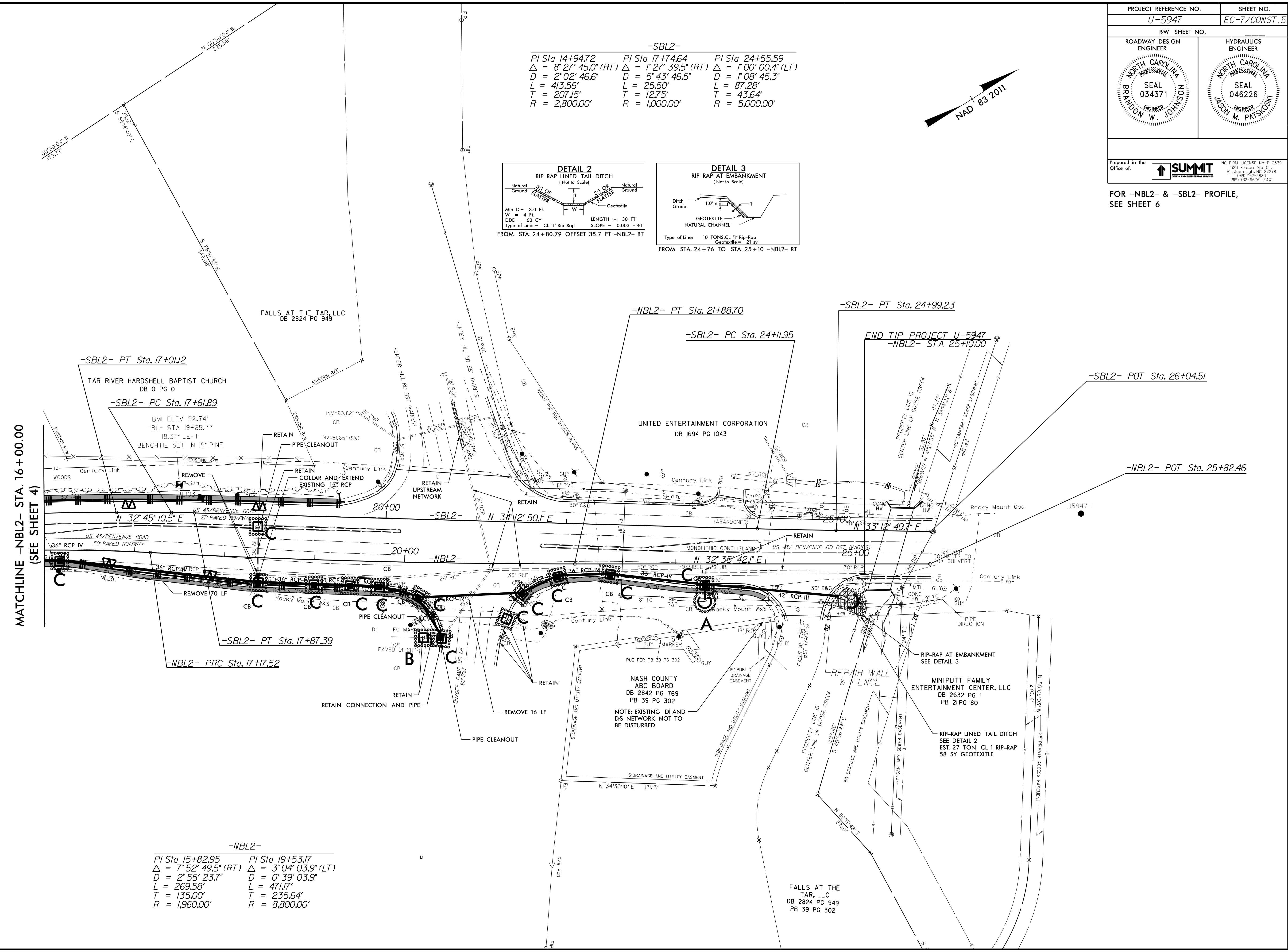
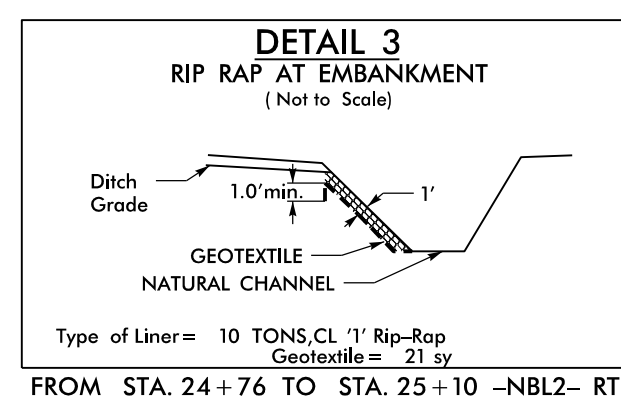
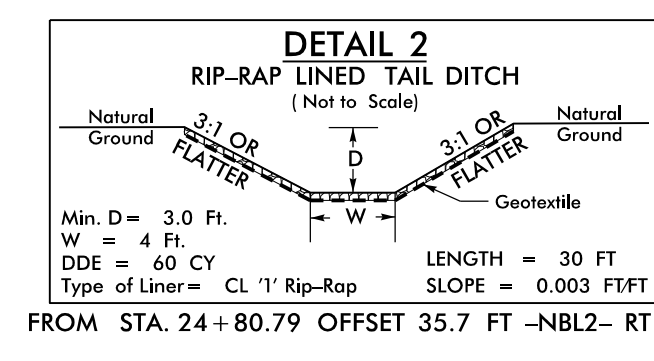
| | |
|---|--------------------|
|  | PROP CONC SIDEWALK |
|  | PROP CONC ISLAND |
|  | PROP TRUCK APRON |

8.17.99
 04-MAR-2022 09:00
 U-5947 EC-6.dgn
 heman

FOR -NBL2- & -SBL2- PROFILE, SEE SHEET 6

-SBL2-

| | | |
|---|---|---|
| PI Sta 14+94.72 Δ = 8° 27' 45.0" (RT) D = 2' 02' 46.6" L = 413.56' T = 207.15' R = 2,800.00' | PI Sta 17+74.64 Δ = 1° 27' 39.5" (RT) D = 5' 43' 46.5" L = 25.50' T = 12.75' R = 1,000.00' | PI Sta 24+55.59 Δ = 1° 00' 00.4" (LT) D = 1' 08' 45.3" L = 87.28' T = 43.64' R = 5,000.00' |
|---|---|---|



-NBL2-

| | |
|---|---|
| PI Sta 15+82.95 Δ = 7° 52' 49.5" (RT) D = 2' 55' 23.7" L = 269.58' T = 135.00' R = 1,960.00' | PI Sta 19+53.17 Δ = 3° 04' 03.9" (LT) D = 0' 39' 03.9" L = 471.17' T = 235.64' R = 8,800.00' |
|---|---|

MATCHLINE -NBL2- STA. 16+00.00
(SEE SHEET 4)

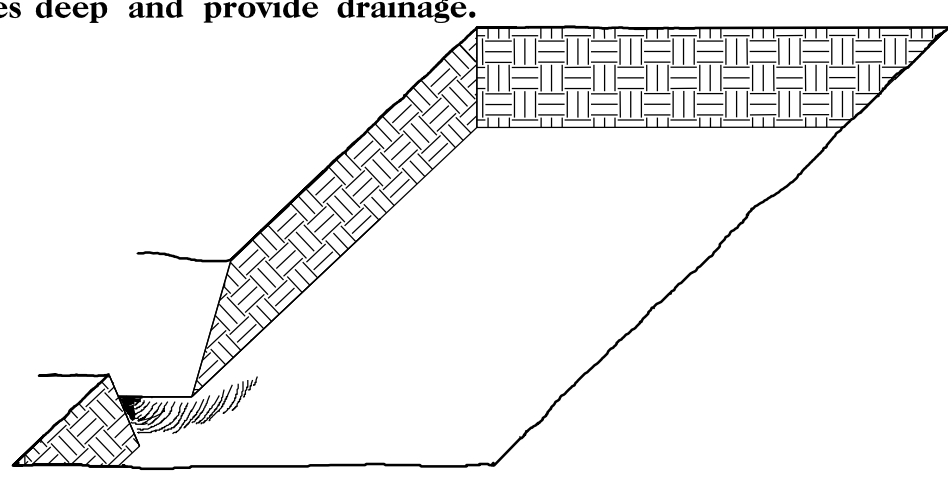
8.17/7/99
04-MAR-2022 09:00
U-5947 EC-7.dgn

PLANTING DETAILS

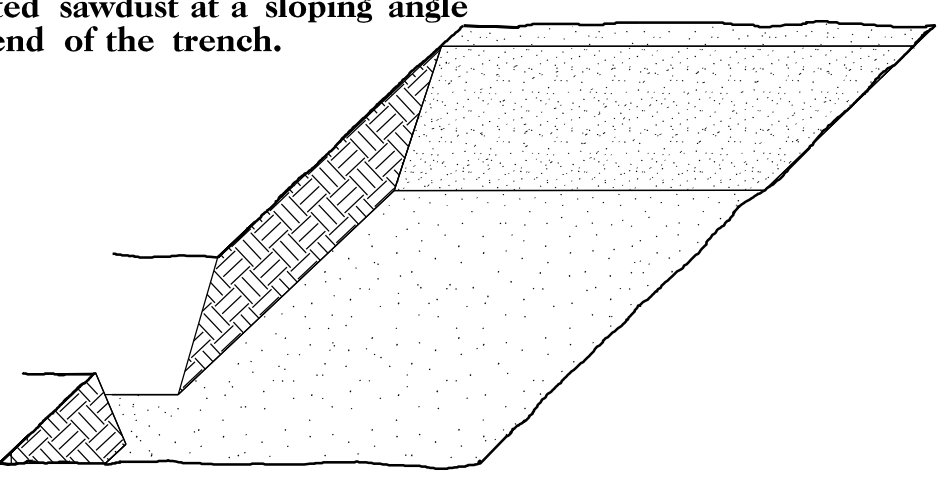
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

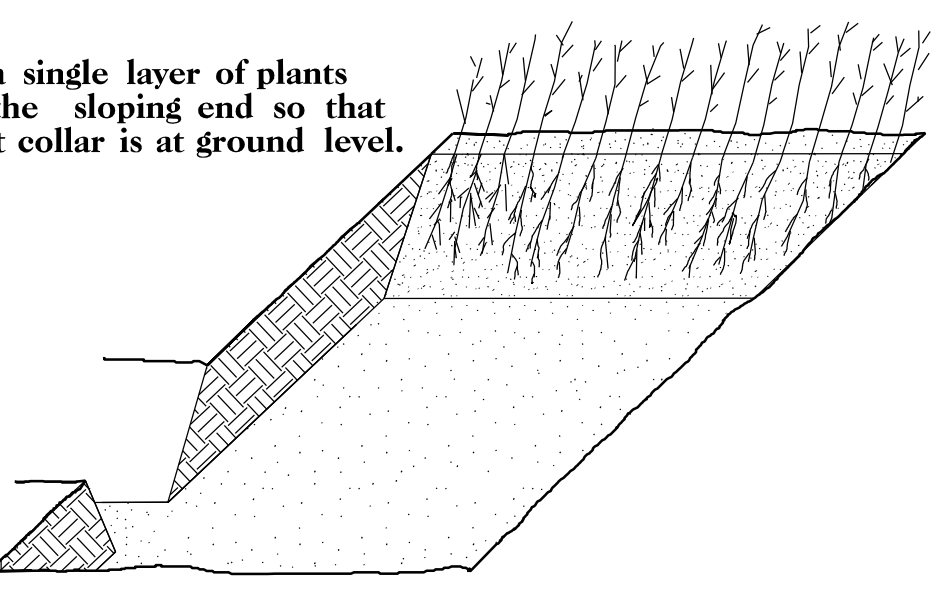
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



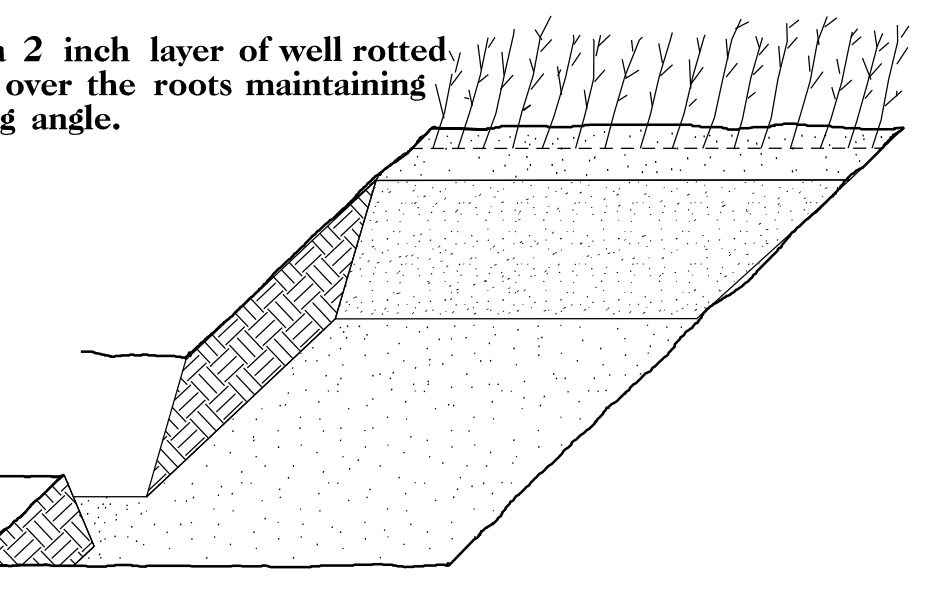
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

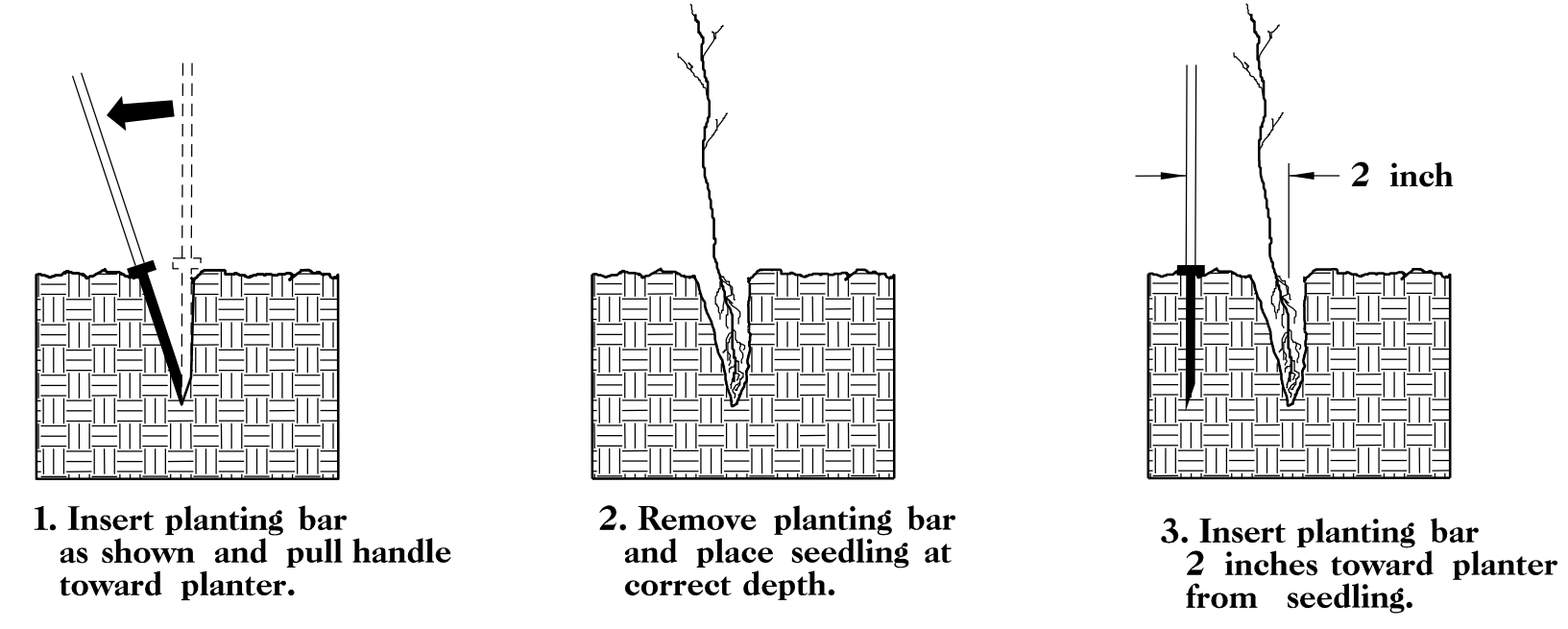


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

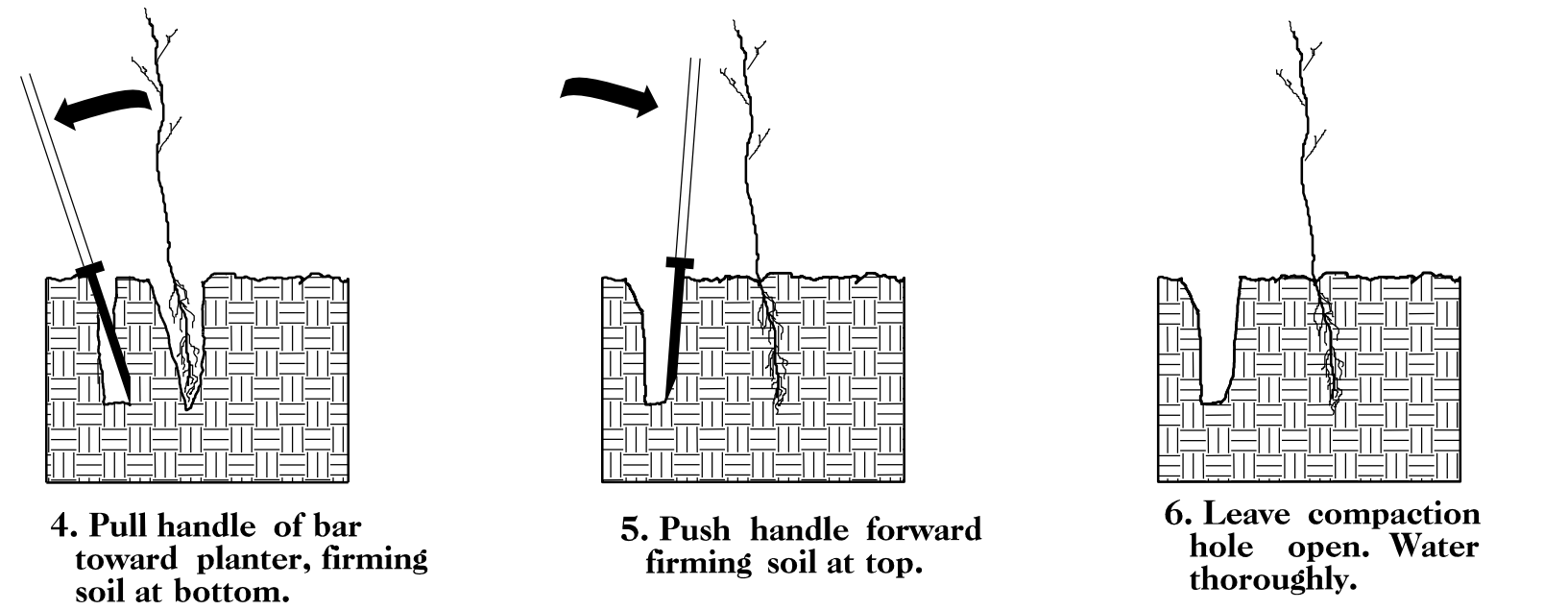


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

DIBBLE PLANTING METHOD USING THE KBC PLANTING BAR



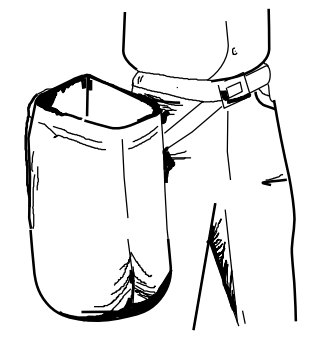
1. Insert planting bar as shown and pull handle toward planter.
2. Remove planting bar and place seedling at correct depth.
3. Insert planting bar 2 inches toward planter from seedling.



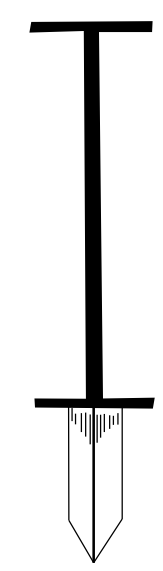
4. Pull handle of bar toward planter, firming soil at bottom.
5. Push handle forward firming soil at top.
6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.



KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.



ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

REFORESTATION

- TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

| | | |
|-----------------------------|-------------------|------------------|
| 25% LIRIODENDRON TULIPIFERA | TULIP POPLAR | 12 in - 18 in BR |
| 25% PLATANUS OCCIDENTALIS | AMERICAN SYCAMORE | 12 in - 18 in BR |
| 25% NYSSA SYLVATICA | BLACK GUM | 12 in - 18 in BR |
| 25% BETULA NIGRA | RIVER BIRCH | 12 in - 18 in BR |

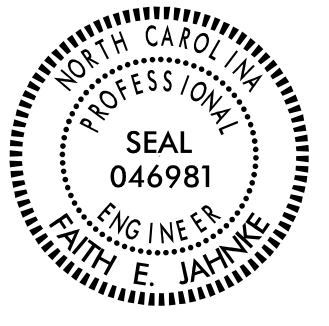

REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT

TOWN OF HOLLY SPRINGS
NORTH CAROLINA

**SIGNING PLAN
NASH COUNTY**

LOCATION: INTERCHANGE OF US 64 BYPASS & NC 43 (BENVENUE ROAD)

| | |
|---|---|
| PROJECT NO. U-5947 | SHEET NO. SIGN-1 |
| APPROVED: <i>Faith E. Jahnke</i> DATE: 3/9/2022 | |
| SEAL  | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of:  | NC FIRM LICENSE No: P-0339 320 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) |

PROJECT: U-5947

CONTRACT: DD00379

GENERAL NOTES

SIGNS FURNISHED BY CONTRACTOR.

WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER.

ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.

WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.

THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

ANY SIGNS THAT ARE DAMAGED DURING CONSTRUCTION SHOULD BE REPLACED IN KIND.

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - 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 |
|----------|--|
| 901.50 | ARROWS AND SHIELDS |
| 901.70 | SIGN STRINGERS AND SUPPORT SPACING |
| 901.80 | SIGN MOUNTING DETAILS, TYPE A AND TYPE B SIGNS |
| 903.10 | GROUND MOUNTED SIGN SUPPORTS |
| 904.10 | ORIENTATION OF GROUND MOUNTED SIGNS |
| 904.20 | SECONDARY SIGN MOUNTING |
| 904.50 | MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS |
| 910.40 | SINGLE LANE ROUNDABOUT SIGNING, WITH PEDESTRIANS |

SUMMARY OF QUANTITIES

| ITEM NO. | ITEM DESCRIPTION | QUANTITY | UNIT |
|------------|------------------|---|----------|
| DESC. NO. | SECT. NO. | | |
| 4025000000 | 901 | CONTRACTOR FURNISHED, TYPE D SIGN | 10.5 SF |
| 4025000000 | 901 | CONTRACTOR FURNISHED, TYPE E SIGN | 185.3 SF |
| 4025000000 | 901 | CONTRACTOR FURNISHED, TYPE F SIGN | 97.7 SF |
| 4072000000 | 903 | SUPPORTS, 3 LB STEEL U-CHANNEL | 520 LF |
| 4096000000 | 904 | SIGN ERECTION, TYPE D (GROUND MOUNTED) | 1 EA |
| 4102000000 | 904 | SIGN ERECTION, TYPE E (GROUND MOUNTED) | 27 EA |
| 4108000000 | 904 | SIGN ERECTION, TYPE F (GROUND MOUNTED) | 6 EA |
| 4116100000 | 904 | SIGN ERECTION, RELOCATE TYPE A (GROUND MOUNTED) | 3 EA |
| 4116100000 | 904 | SIGN ERECTION, RELOCATE TYPE D (GROUND MOUNTED) | 3 EA |
| 4116100000 | 904 | SIGN ERECTION, RELOCATE TYPE E (GROUND MOUNTED) | 4 EA |
| 4116100000 | 904 | SIGN ERECTION, RELOCATE TYPE F (GROUND MOUNTED) | 1 EA |
| 4155000000 | 907 | DISPOSAL OF SIGN SYSTEM, U-CHANNEL | 11 EA |
| 4192000000 | 907 | DISPOSAL OF SUPPORT, U-CHANNEL | 14 EA |

PROJECT NOTES

- SIGN ERECTION, RELOCATE TYPE A (GROUND MOUNTED)
- SIGN ERECTION, RELOCATE TYPE D (GROUND MOUNTED)
- SIGN ERECTION, RELOCATE TYPE E (GROUND MOUNTED)
- SIGN ERECTION, RELOCATE TYPE F (GROUND MOUNTED)
- DISPOSAL OF SIGN SYSTEM, U-CHANNEL

INDEX

| SHEET NO. | DESCRIPTION |
|-------------|----------------|
| SIGN-1 | TITLE SHEET |
| SIGN-2 | SIGN DESIGNS |
| SIGN-3 | TYPE E SIGNS |
| SIGN-3A | TYPE F SIGNS |
| SIGN-4 & 4A | EXISTING SIGNS |
| SIGN-5 & 5A | PROPOSED SIGNS |

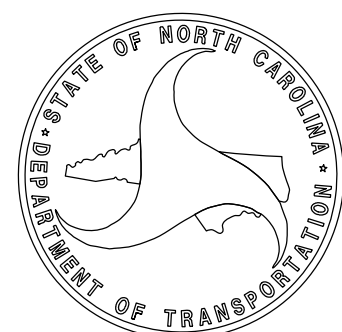
Prepared in the Office of:



NC FIRM LICENSE No: P-0339
320 Executive Ct
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)

FAITH E. JAHNKE, PE PROJECT DESIGNER

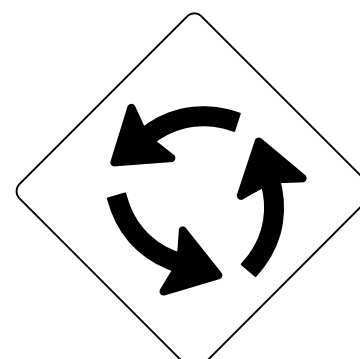

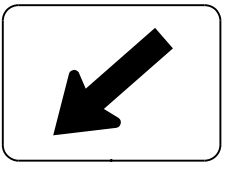
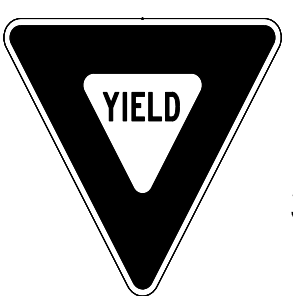


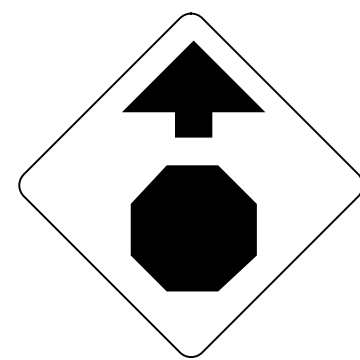

BRANDON W. JOHNSON, PE PROJECT DESIGN ENGINEER





| | |
|--|--|
| TIP NO. U-5947 | SHEET NO. SIGN-2 |
| Approved by: <i>Faith E. Jahnke</i> DATE: 3/9/2022 | |
| | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of: | NC FIRM LICENSE No. P-0339 320 Executive Ct., Hillsborough, NC 27178 (919) 732-3888 (919) 732-6676 (FAX) |

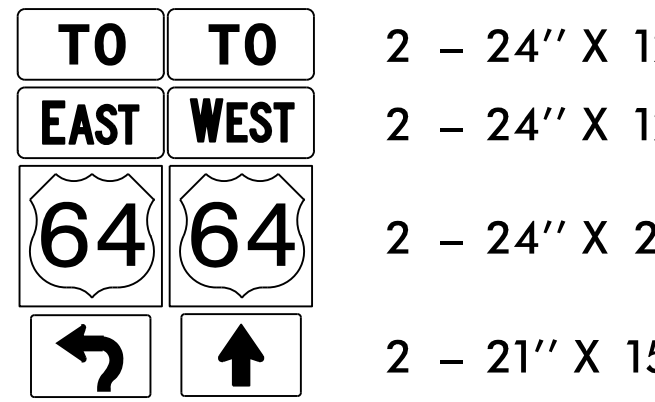
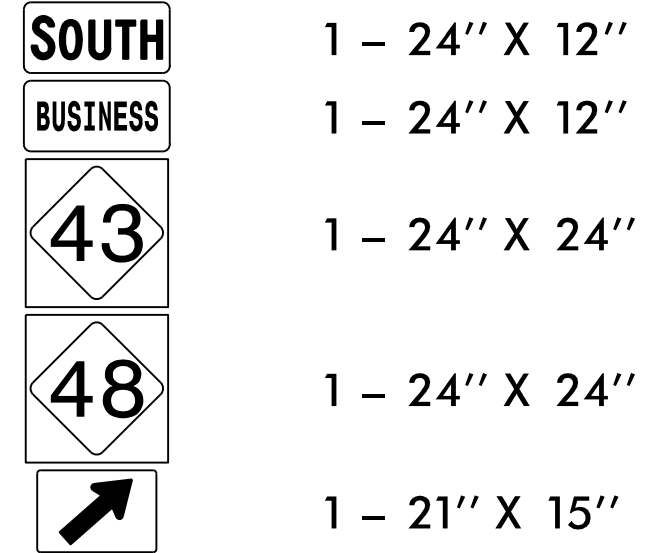
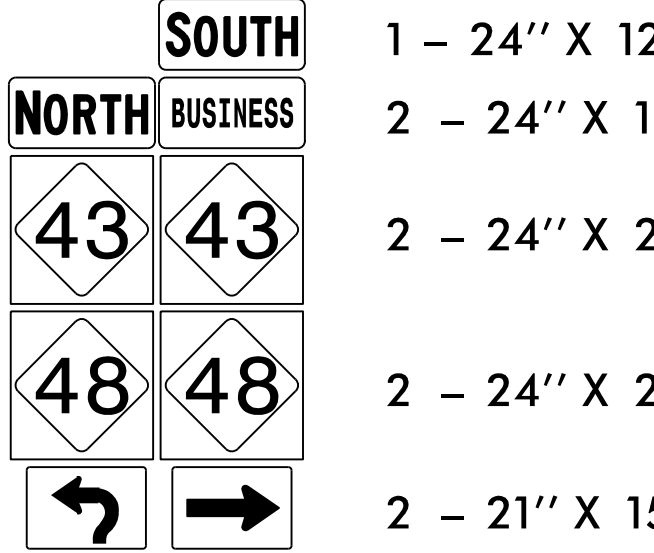
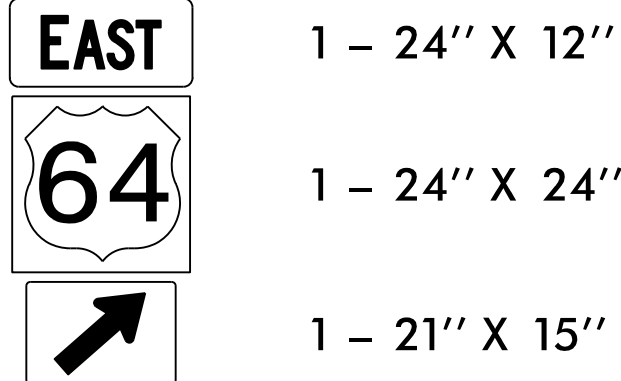
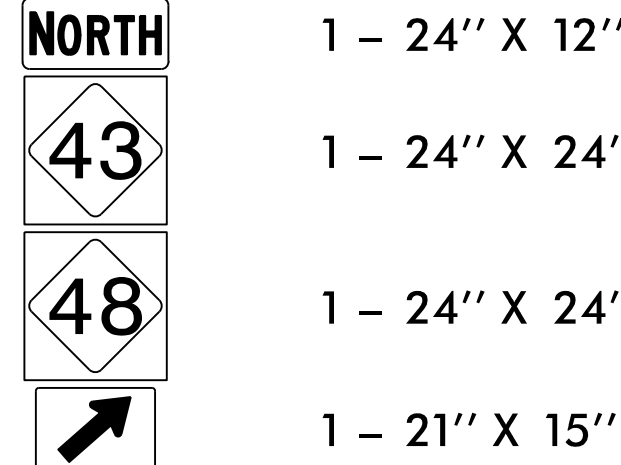
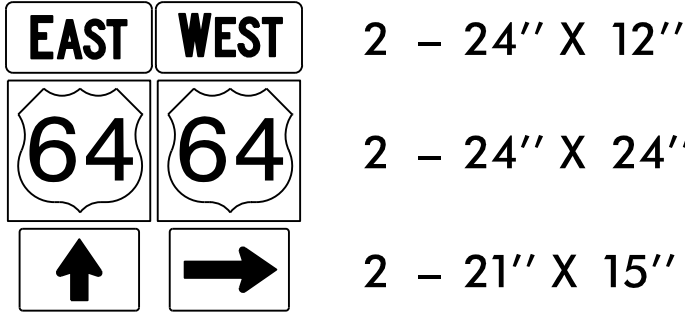
| SIGN NUMBER: 301 TYPE: D QUANTITY: 1 SIGN WIDTH: 7'-0" HEIGHT: 1'-6" TOTAL AREA: 10.5 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.75" RADII: 1.8" NO. Z BARS: LENGTH: | BACKG COLOR: Green COPY COLOR: White <table border="1"> <thead> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> </thead> <tbody> <tr> <td>AR_Type D</td> <td>69.3</td> <td>5.4</td> <td>6</td> <td>9</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | SYMBOL | X | Y | WID | HT | AR_Type D | 69.3 | 5.4 | 6 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | DESIGN BY: FEJ PROJECT ID: U-5947 CHECKED BY: LOCATION: Jan 08, 2022 DIV: 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SYMBOL | X | Y | WID | HT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AR_Type D | 69.3 | 5.4 | 6 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| USE NOTES: 1. Legend and border (except those that are colored black) shall be direct applied Grade C sheeting. 2. Background shall be Grade A, B, or C reflective sheeting. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spacing Factor is 1 unless specified otherwise | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th colspan="15">Letter spacings are to start of next letter</th> <th>Series/Size</th> </tr> <tr> <th colspan="15"></th> <th>Text Length</th> </tr> </thead> <tbody> <tr> <td>B</td><td>a</td><td>t</td><td>t</td><td>e</td><td>P</td><td>a</td><td>r</td><td>k</td><td>L</td><td>n</td><td></td><td></td><td></td><td></td> <td>D 2000</td> </tr> <tr> <td>7.6</td><td>4.7</td><td>4</td><td>2.5</td><td>3.1</td><td>1.9</td><td>3.5</td><td>6</td><td>4.6</td><td>4.8</td><td>3</td><td>3.8</td><td>6</td><td>4.5</td><td>3.5</td><td>20.7</td> <td>55.7</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | | | Letter spacings are to start of next letter | | | | | | | | | | | | | | | Series/Size | | | | | | | | | | | | | | | | Text Length | B | a | t | t | e | P | a | r | k | L | n | | | | | D 2000 | 7.6 | 4.7 | 4 | 2.5 | 3.1 | 1.9 | 3.5 | 6 | 4.6 | 4.8 | 3 | 3.8 | 6 | 4.5 | 3.5 | 20.7 | 55.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| FILENAME: U-5947_SIGN_2 NORTH CAROLINA D.O.T. SIGN DETAIL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



TYPE "D" SIGNS

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|--|---|---|--|--|---|
| <p>401 QUANTITY REQ'D: 4</p>  <p>W2-6 30" X 30"</p> <p>ONE "U" POST PER SIGN</p> | <p>402 QUANTITY REQ'D: 8</p>  <p>W11-2 36" X 36"</p> <p>ONE "U" POST PER SIGN</p> | <p>403 QUANTITY REQ'D: 8</p>  <p>W16-7PL 24" X 12"</p> <p>MOUNT BELOW SIGN 402 IN 8 INSTALLATIONS</p> | <p>404 QUANTITY REQ'D: 7</p>  <p>R1-2 36" X 36" X 36"</p> <p>ONE "U" POST PER SIGN</p> | <p>405 QUANTITY REQ'D: 4</p>  <p>R6-4 30" X 24"</p> <p>ONE "U" POST PER SIGN</p> | <p>406 QUANTITY REQ'D: 2</p>  <p>R3-8a 30" X 30"</p> <p>ONE "U" POST PER SIGN</p> |
| <p>407 QUANTITY REQ'D: 1</p>  <p>W3-1 30" X 30"</p> <p>ONE "U" POST PER SIGN</p> | <p>408 QUANTITY REQ'D: 1</p>  <p>R3-8 36" X 36"</p> <p>ONE "U" POST PER SIGN</p> | | | | |
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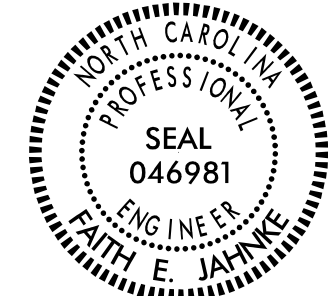

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|---|--|
| TIP NO. U-5947 | SHEET NO. SIGN-3 |
| DocuSigned by: Faith E. Jahnke <small>BD02B9CE7C3466...</small> | |
| APPROVED: _____ DATE: 3/9/2022 | |
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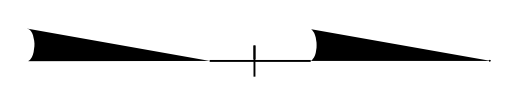
TYPE "E" SIGNS

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| <p>501</p>  <p>TWO "U" POSTS PER SIGN</p> | <p>502</p>  <p>ONE "U" POST PER SIGN</p> | <p>503</p>  <p>TWO "U" POSTS PER SIGN</p> | <p>504</p>  <p>ONE "U" POST PER SIGN</p> | <p>505</p>  <p>ONE "U" POST PER SIGN</p> | <p>506</p>  <p>TWO "U" POSTS PER SIGN</p> |
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|---|---|
| TIP NO. U-5947 | SHEET NO. SIGN-3A |
| DocuSigned by: Keith E. Jahnke <small>BP02B9C7C9466</small> | |
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| DATE: 3/9/2022 | |
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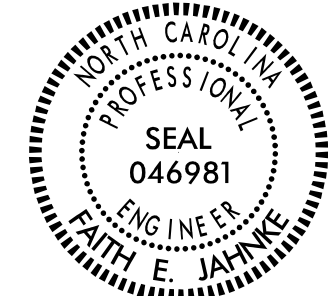

TYPE "F" SIGNS

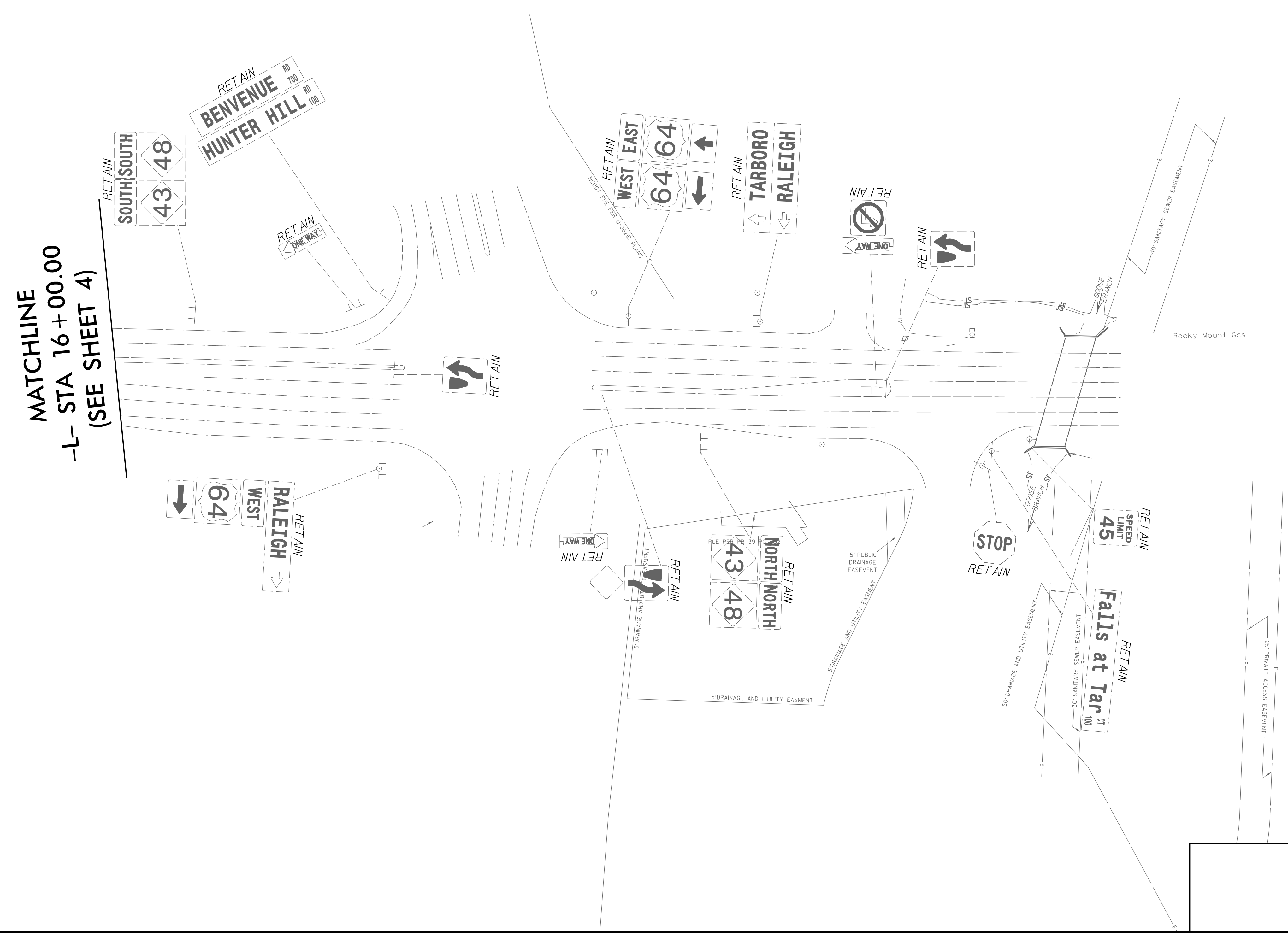
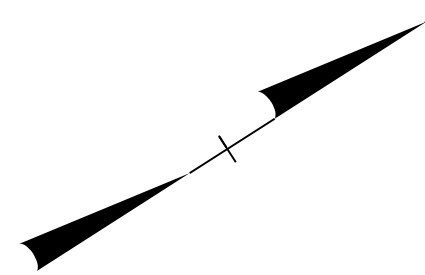
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| TIP NO. U-5947 | SHEET NO. SIGN-4 |
| APPROVED: <i>Faith E. Jahnke</i> <small>BD02B8C6C9486...</small> | |
| DATE: 3/9/2022 | |
| SEAL  | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of:  | <small>NC FIRM LICENSE No. P-0339 320 Executive Ct. Hillsboro, NC 27520 (919) 752-2885 (919) 752-6676 (FAX)</small> |

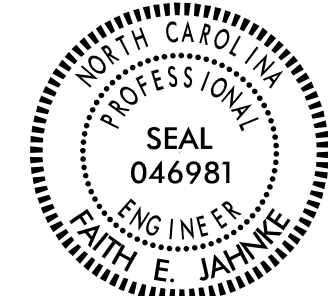



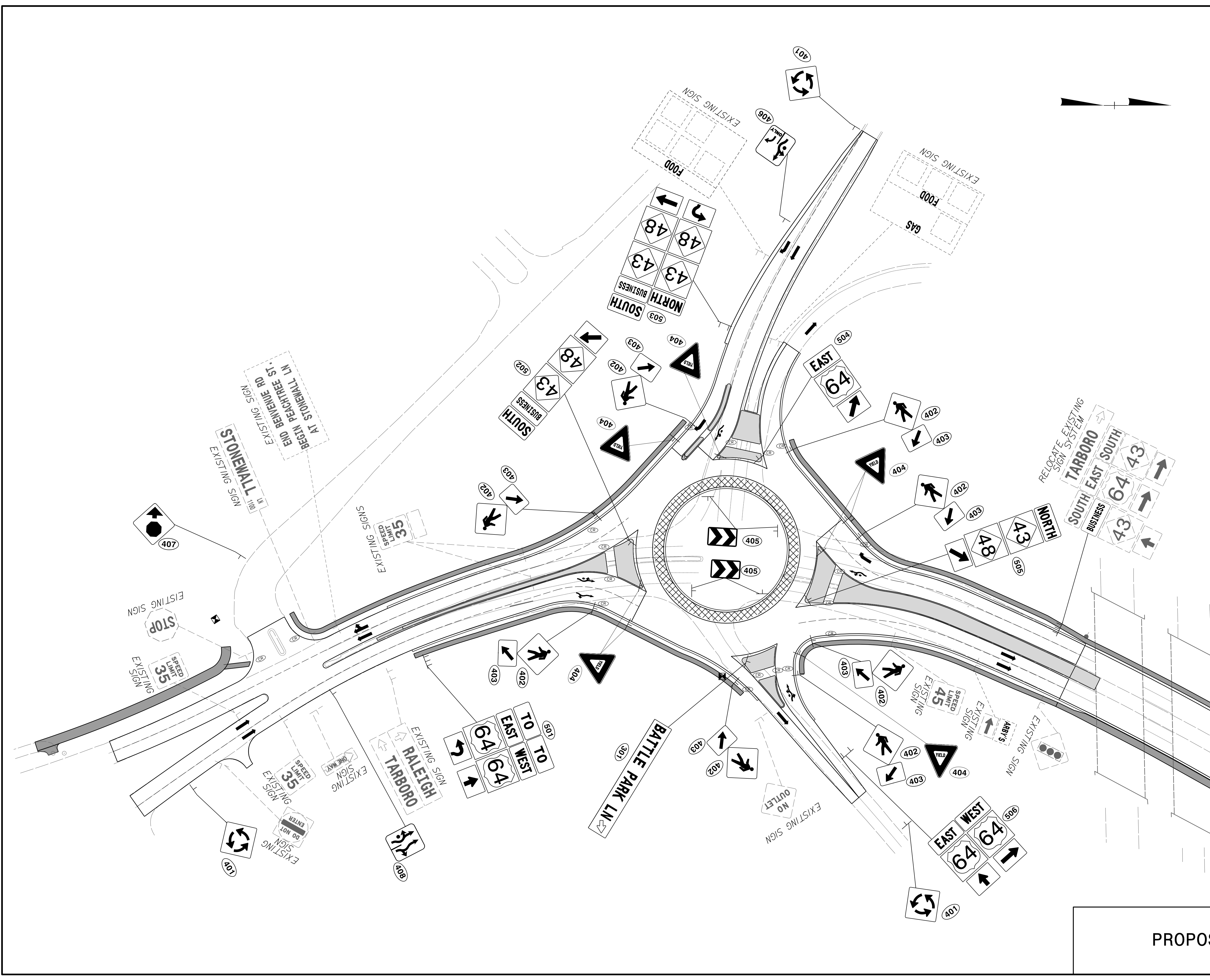
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(SEE SHEET 4A)

EXISTING SIGNS

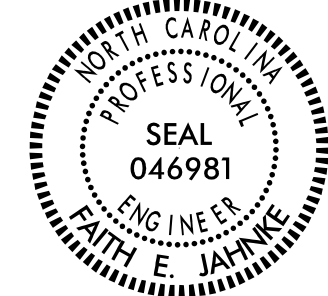

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| TIP NO. U-5947 | SHEET NO. SIGN-4A |
| Drawn by: APPROVED: <i>Faith E. Jahnke</i> <small>B002868CE7C9468...</small> | |
| DATE: 3/9/2022 | |
| SEAL | |
|  | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of:  | NC FIRM LICENSE No: P-0339 320 Executive Ct. Hillsboro, NC 27520 (919) 752-2885 (919) 752-2676 (FAX) |

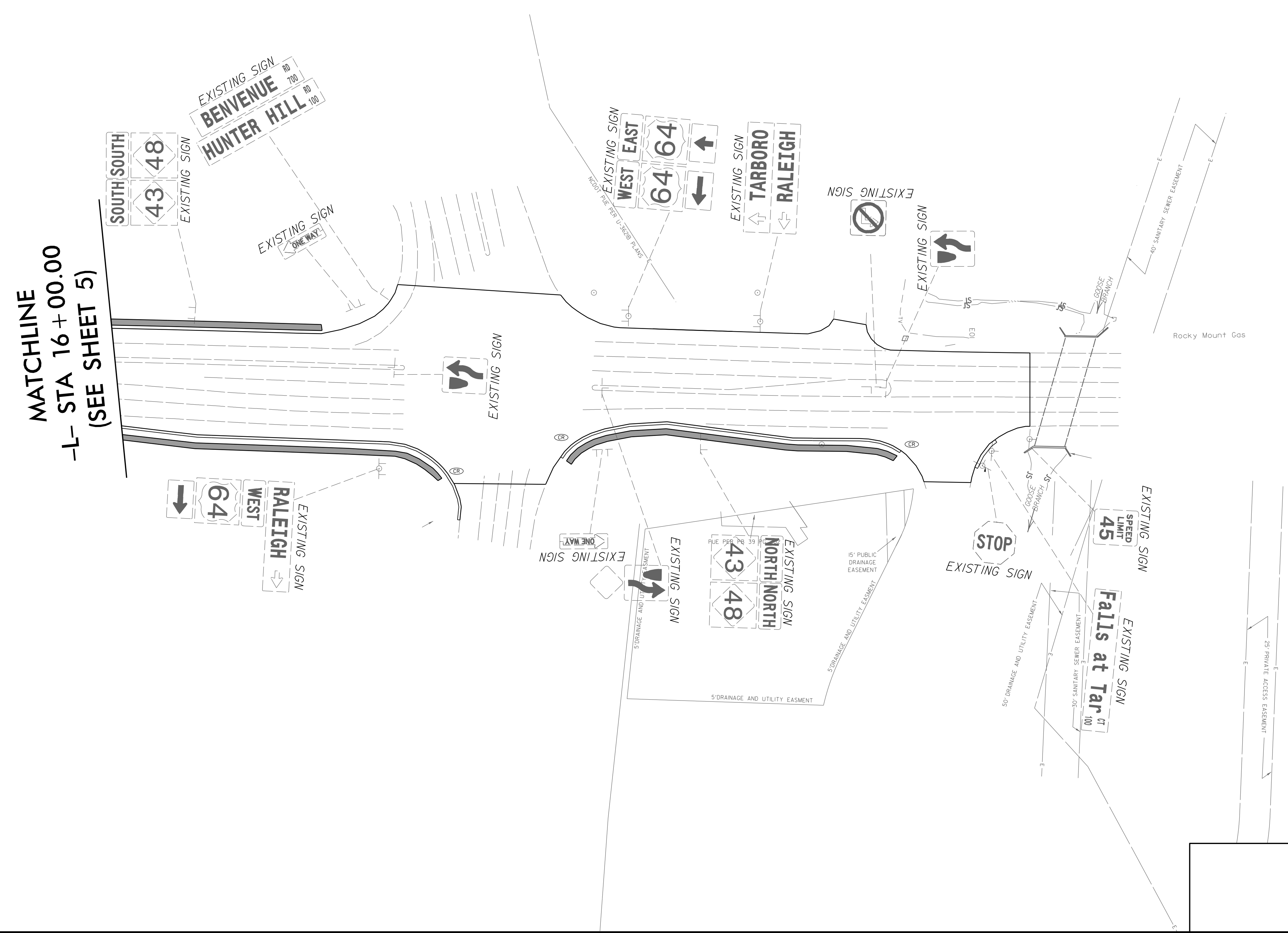
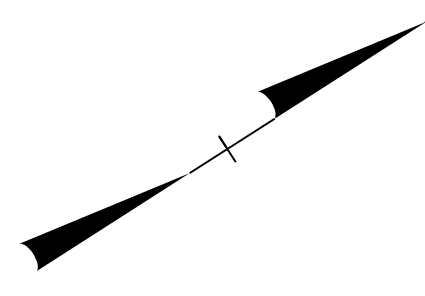


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| TIP NO. U-5947 | SHEET NO. SIGN-5 |
| APPROVED: <i>Faith E. Jahnke</i> DD02858C7C8466 | |
| DATE: 3/9/2022 | |
| SEAL | |
|  | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of: |  <small>NC FIRM LICENSE No. P-0339 320 Executive Ct. Hillsboro, NC 27520 (919) 752-2885 (919) 752-6676 (Fax)</small> |



PROPOSED SIGNS

| | |
|---|--|
| TIP NO. U-5947 | SHEET NO. SIGN-5A |
| APPROVED: <i>Faith E. Jahnke</i> 3/9/2022 | |
| SEAL | |
|  | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Prepared in the Office of: |  <small>NC FIRM LICENSE No. P-0339 320 Executive Ct. Hillsboro, NC 27520 (919) 752-2883 (919) 752-6676 (Fax)</small> |



PROPOSED SIGNS

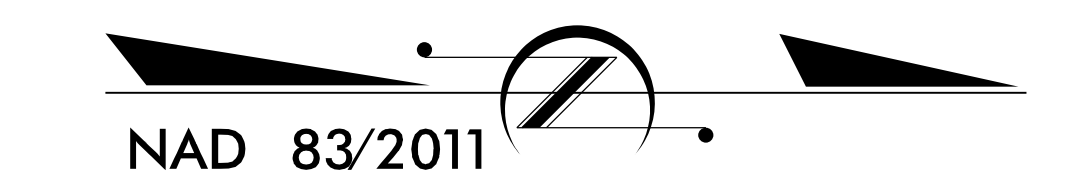
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS PLANS
NASH COUNTY**

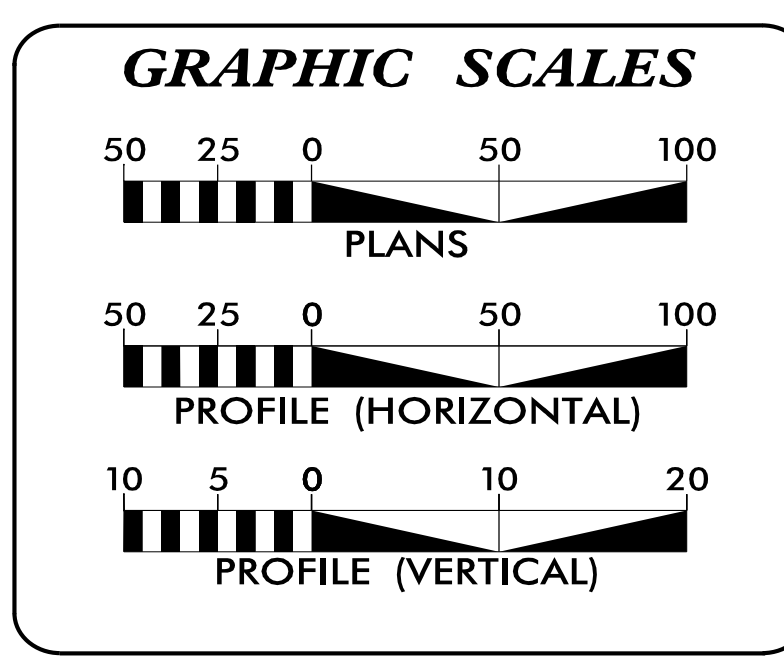
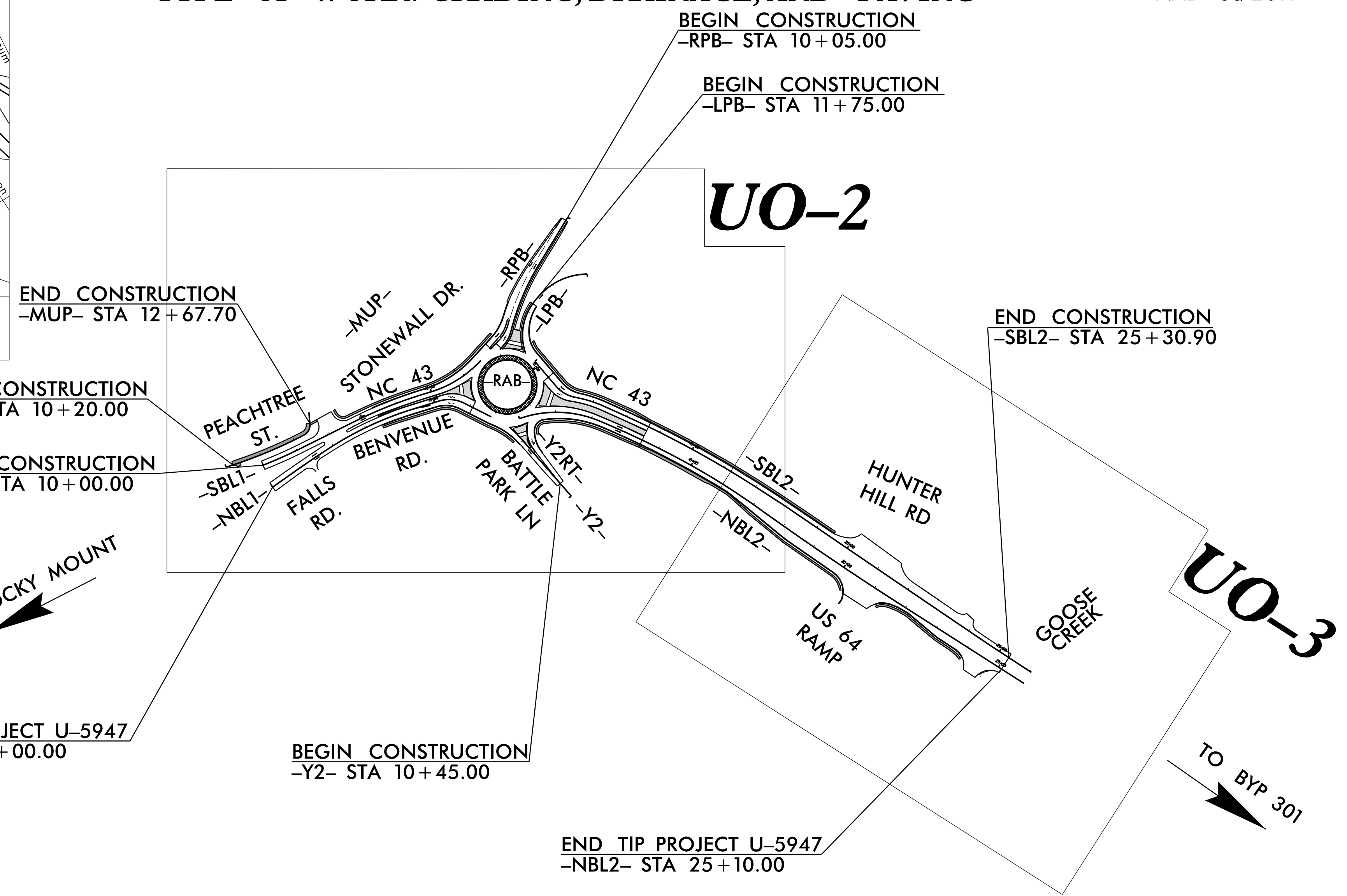
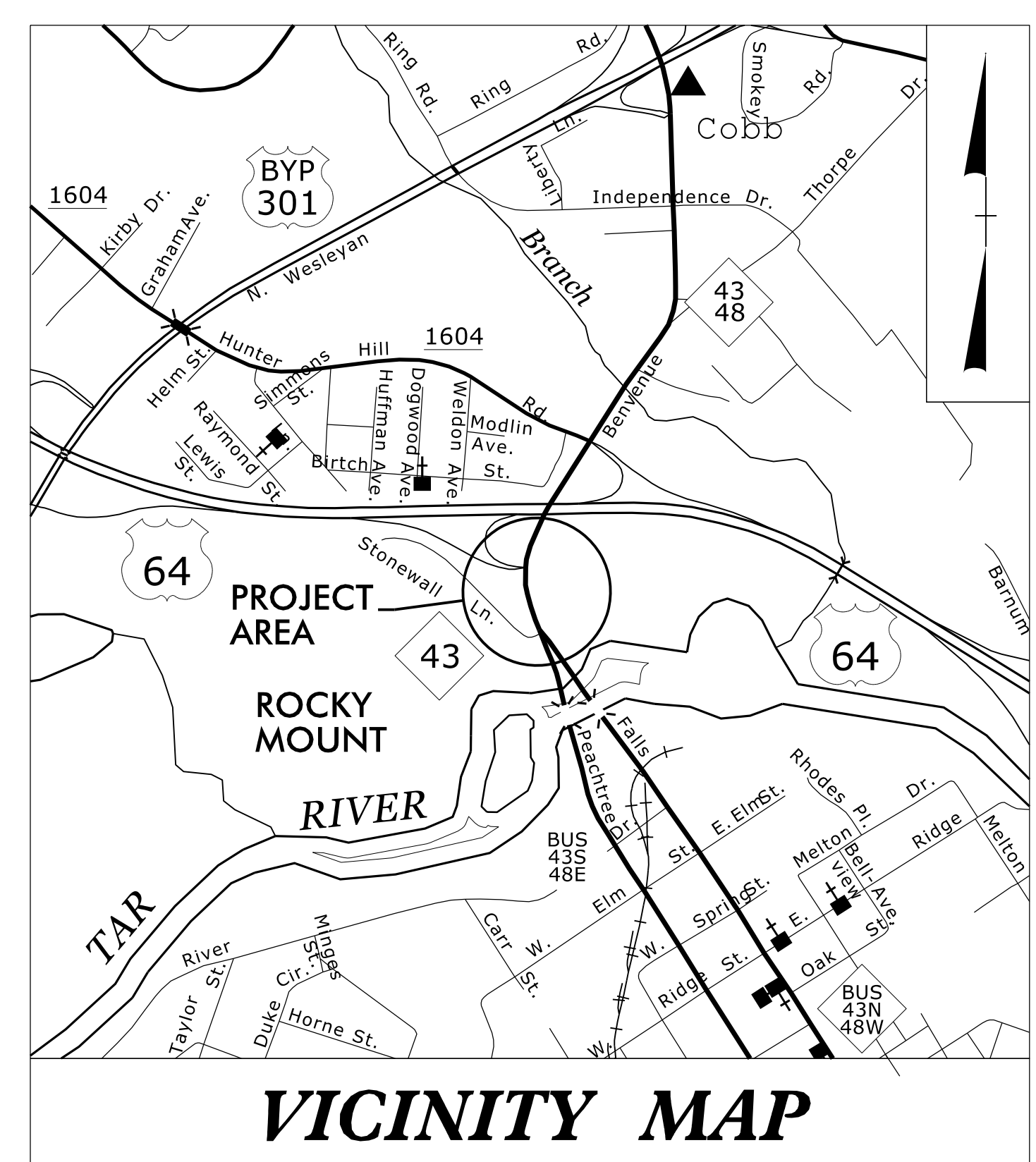
**LOCATION: INTERCHANGE OF US 64 BYPASS
& NC 43 (BENVENUE ROAD)
TYPE OF WORK: GRADING, DRAINAGE, AND PAVING**

| | |
|------------|-----------|
| T.I.P. NO. | SHEET NO. |
| U-5947 | UO-1 |

NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.



TIP PROJECT: U-5947



INDEX OF SHEETS

| SHEET NO.: | DESCRIPTION: |
|----------------|-----------------|
| UO-1 | TITLE SHEET |
| UO-2 THRU UO-3 | UBO PLAN SHEETS |

UTILITY OWNERS WITH CONFLICTS

(A) POWER - CITY OF ROCKY MOUNT
(B) COMMUNICATIONS - MCNC
(C) COMMUNICATIONS - NCDOT

PREPARED IN THE OFFICE OF:

TELICS
1598 WESTBROOK PLAZA DR.
SUITE 202
WINSTON-SALEM, NC 27103
(336) 705-8844

| | |
|-----------|-----------------------------|
| CORY WOOD | UTILITY PROJECT MANAGER |
| CORY WOOD | PROJECT UTILITY COORDINATOR |

**DIVISION OF HIGHWAYS
DIVISION 4**
509 WARD BLVD.
WILSON, NC 27895

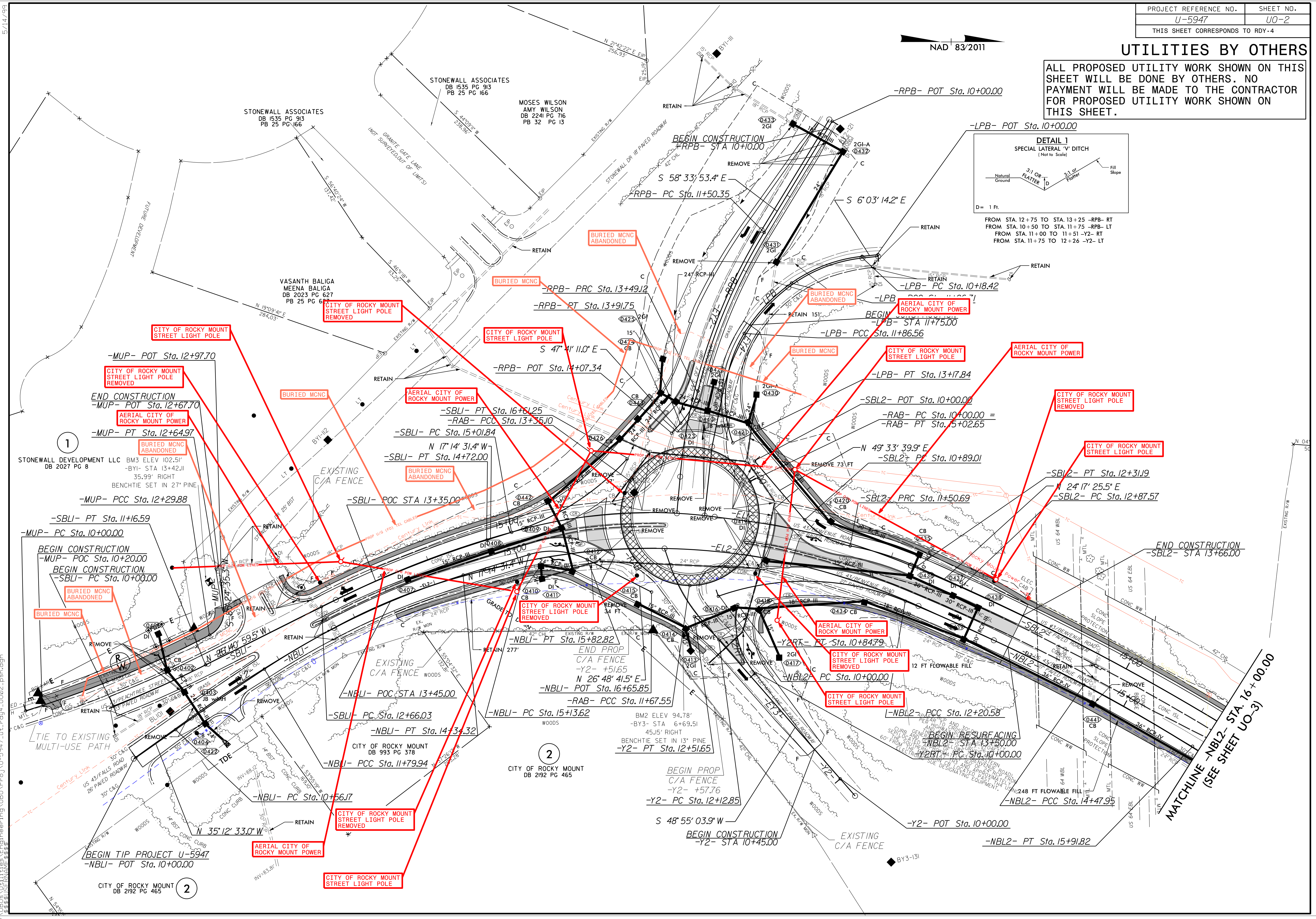
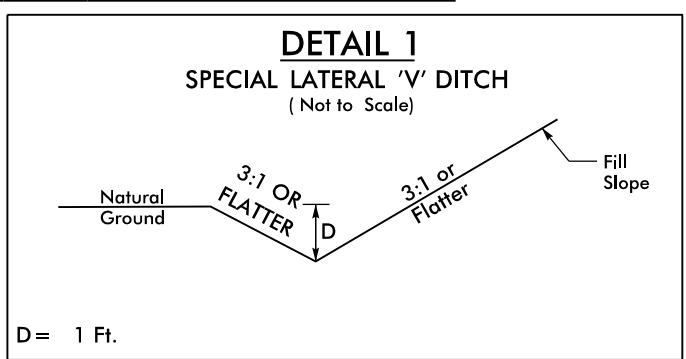
KYLE PLEASANT DIVISION UTILITY ENGINEER
RUSSELL BROADWELL PROJECT MANAGER

02-MAR-2022 20:49 C:\UTB\FE\5021\U-5947\UBOs\Utilities\Engineering\UBO\Proj\U-5947_ut_.tsh_U001.psh.dgn

NAD 83/2011

UTILITIES BY OTHERS

ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



5/14/09
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 \$\$\$\$\$\$

1

2

CITY OF ROCKY MOUNT DB 2192 PG 465

CITY OF ROCKY MOUNT DB 2192 PG 465

STONEWALL DEVELOPMENT LLC DB 2027 PG 8
 BM3 ELEV 102.51'
 -BY1- STA 13+42.11
 35.99' RIGHT
 BENCHMARK SET IN 27" PINE

BM2 ELEV 94.78'
 -BY3- STA 6+69.51
 45.15' RIGHT
 BENCHMARK SET IN 13" PINE

BEGIN TIP PROJECT U-5947
 -NBLI- POT Sta. 10+00.00

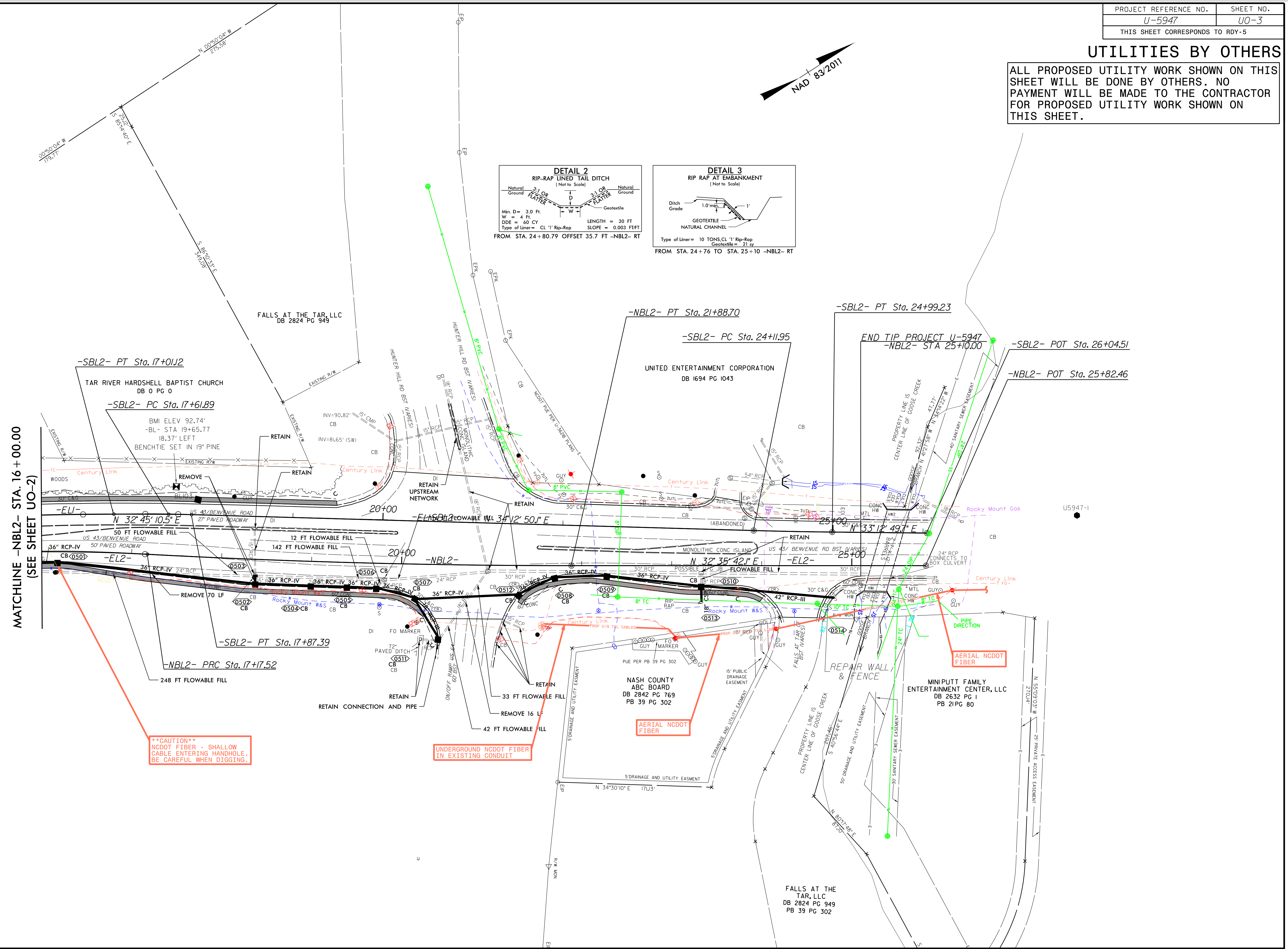
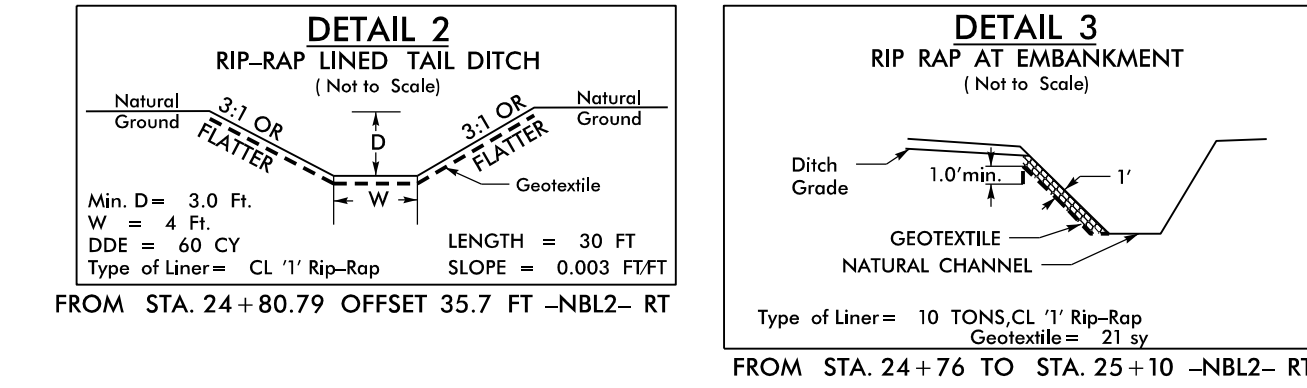
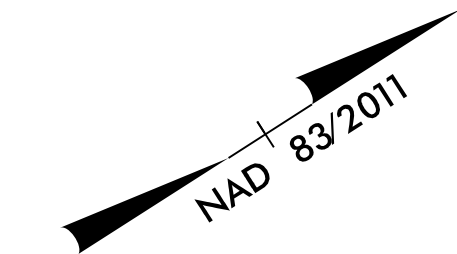
BEGIN PROP C/A FENCE
 -Y2- +57.76
 -Y2- PC Sta. 12+12.85

-NBL2- PT Sta. 15+91.82

MATCHLINE -NBL2- STA. 16+00.00
 (SEE SHEET U0-3)

UTILITIES BY OTHERS

ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



****CAUTION****
 NCDOT FIBER - SHALLOW
 CABLE ENTERING HANDHOLE.
 BE CAREFUL WHEN DIGGING.

**UNDERGROUND NCDOT FIBER
 IN EXISTING CONDUIT**

**AERIAL NCDOT
 FIBER**

**AERIAL NCDOT
 FIBER**

5/14/09
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 3:38:51 PM
 USER:ENG003

U-5947 INDEX OF CROSS-SECTIONS

| <i>LINE</i> | <i>PAGES</i> |
|--------------------|---------------------|
| -NBL 1- & -SBL 1- | X-2 TO X-6 |
| -NBL 2- & -SBL 2- | X-7 TO X-18 |
| -RAB- | X-19 TO X-22 |
| -RPB- & -LPB- | X-23 TO X-26 |
| -Y2- & -Y2RT- | X-27 TO X-28 |
| -MUP- | X-29 TO X-30 |

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

| | |
|---------------------|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| U-5947 | X-1A |

Approximate quantities only. Unclassified excavation, borrow excavation, shoulder borrow, fine grading, clearing and grubbing, breaking of existing pavement and removal of existing pavement will be paid for at the lump sum price for "Grading".

CROSS-SECTION SUMMARY

NOTE: EMBANKMENT COLUMN INCLUDES BACKFILL FOR UNDERCUT

| Station | Uncl. Exc. | Embt | Station | Uncl. Exc. | Embt |
|----------|------------|-----------|----------|------------|-----------|
| Nbl1 | (cu. yd.) | (cu. yd.) | Rab | (cu. yd.) | (cu. yd.) |
| 13+00.00 | 0 | 0 | 14+50.00 | 0 | 367 |
| 13+25.00 | 5 | 0 | 14+75.00 | 31 | 362 |
| 13+45.00 | 12 | 0 | 15+00.00 | 243 | 350 |
| 13+50.00 | 5 | 0 | | | |
| 13+75.00 | 20 | 1 | Station | Uncl. Exc. | Embt |
| 14+00.00 | 17 | 4 | | | |
| 14+25.00 | 18 | 8 | Rpb | (cu. yd.) | (cu. yd.) |
| 14+50.00 | 15 | 13 | 10+10.00 | 0 | 0 |
| 14+75.00 | 15 | 19 | 10+25.00 | 110 | 7 |
| 15+00.00 | 15 | 22 | 10+50.00 | 194 | 10 |
| 15+25.00 | 26 | 21 | 10+75.00 | 204 | 10 |
| 15+50.00 | 66 | 15 | 11+00.00 | 219 | 14 |
| 15+75.00 | 150 | 17 | 11+25.00 | 228 | 19 |
| 16+00.00 | 251 | 31 | 11+50.00 | 230 | 24 |
| | | | 11+75.00 | 227 | 27 |
| Station | Uncl. Exc. | Embt | 12+00.00 | 215 | 31 |
| Nbl2 | (cu. yd.) | (cu. yd.) | 12+25.00 | 207 | 34 |
| 10+50.00 | 0 | 0 | 12+50.00 | 211 | 38 |
| 10+75.00 | 557 | 16 | 12+75.00 | 176 | 48 |
| 11+00.00 | 287 | 8 | 13+00.00 | 106 | 53 |
| 11+25.00 | 127 | 4 | 13+25.00 | 61 | 50 |
| 11+50.00 | 64 | 1 | 13+50.00 | 47 | 45 |
| 11+75.00 | 29 | 0 | 13+75.00 | 51 | 36 |
| 12+00.00 | 13 | 2 | 14+00.00 | 101 | 28 |
| 12+25.00 | 7 | 3 | Station | Uncl. Exc. | Embt |
| 12+50.00 | 6 | 4 | | | |
| 12+75.00 | 6 | 4 | Y2 | (cu. yd.) | (cu. yd.) |
| 13+00.00 | 8 | 5 | 10+50.00 | 0 | 0 |
| 13+25.00 | 13 | 3 | 10+75.00 | 1 | 4 |
| 13+50.00 | 10 | 0 | 11+00.00 | 0 | 8 |
| | | | 11+25.00 | 22 | 13 |
| Station | Uncl. Exc. | Embt | 11+50.00 | 86 | 23 |
| Rab | (cu. yd.) | (cu. yd.) | 11+75.00 | 65 | 27 |
| 10+00.00 | 0 | 0 | 12+00.00 | 75 | 26 |
| 10+25.00 | 325 | 342 | 12+25.00 | 231 | 31 |
| 10+50.00 | 89 | 342 | 12+50.00 | 319 | 19 |
| 10+75.00 | 0 | 358 | | | |
| 11+00.00 | 0 | 399 | | | |
| 11+25.00 | 48 | 404 | | | |
| 11+50.00 | 60 | 388 | | | |
| 11+75.00 | 17 | 408 | | | |
| 12+00.00 | 25 | 438 | | | |
| 12+25.00 | 22 | 461 | | | |
| 12+50.00 | 2 | 477 | | | |
| 12+75.00 | 0 | 451 | | | |
| 13+00.00 | 0 | 400 | | | |
| 13+25.00 | 111 | 363 | | | |
| 13+50.00 | 305 | 343 | | | |
| 13+75.00 | 311 | 374 | | | |
| 14+00.00 | 120 | 387 | | | |
| 14+25.00 | 3 | 368 | | | |

6/23/16

Prepared in the Office of:

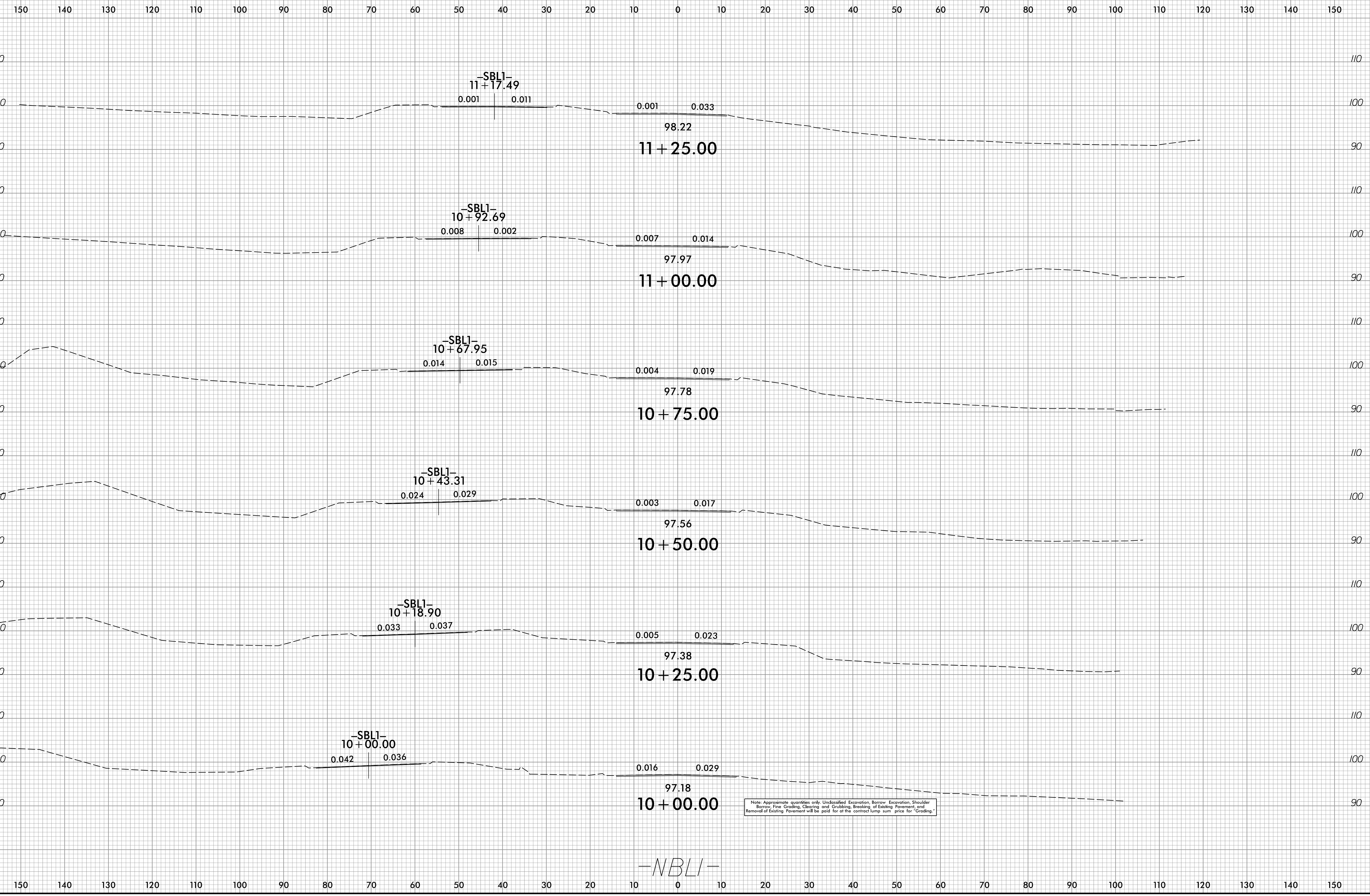


NC FIRM LICENSE No. P-0339
320 Executive Ct.
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (Fax)



PROJ. REFERENCE NO.
U-5947

SHEET NO.
X-2



Note: Approximate quantities only. Unclassified Excavation, Borrow, Excavation, Shoulder Borrow, Fine Grading, Clearing and Grubbing, Breaking of Existing Pavement, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

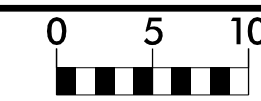
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6/23/16

Prepared in the Office of:



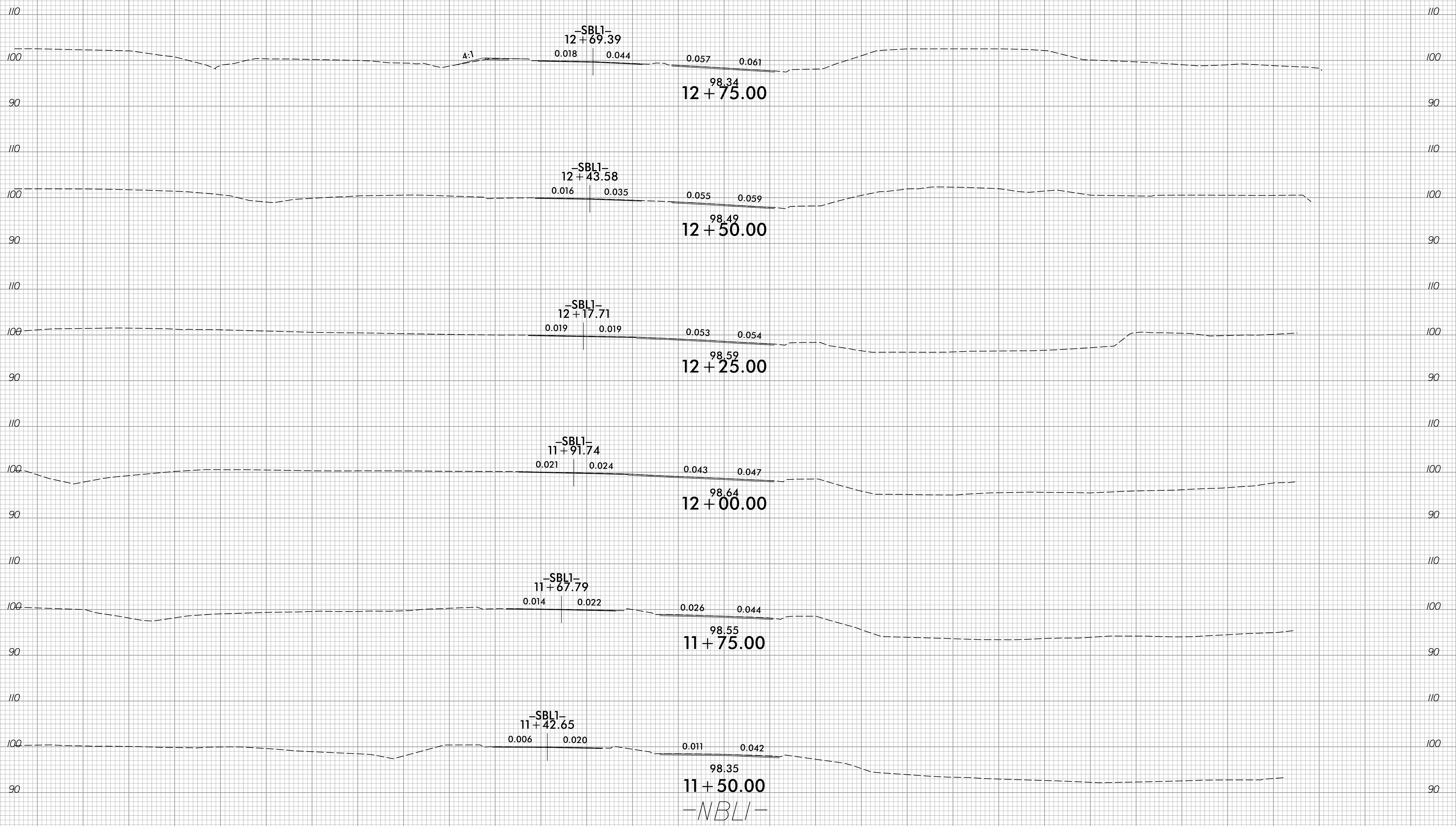
NC FIRM LICENSE No. P-0339
320 Executive Ct.
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)



PROJ. REFERENCE NO.
U-5947

SHEET NO.
X-3

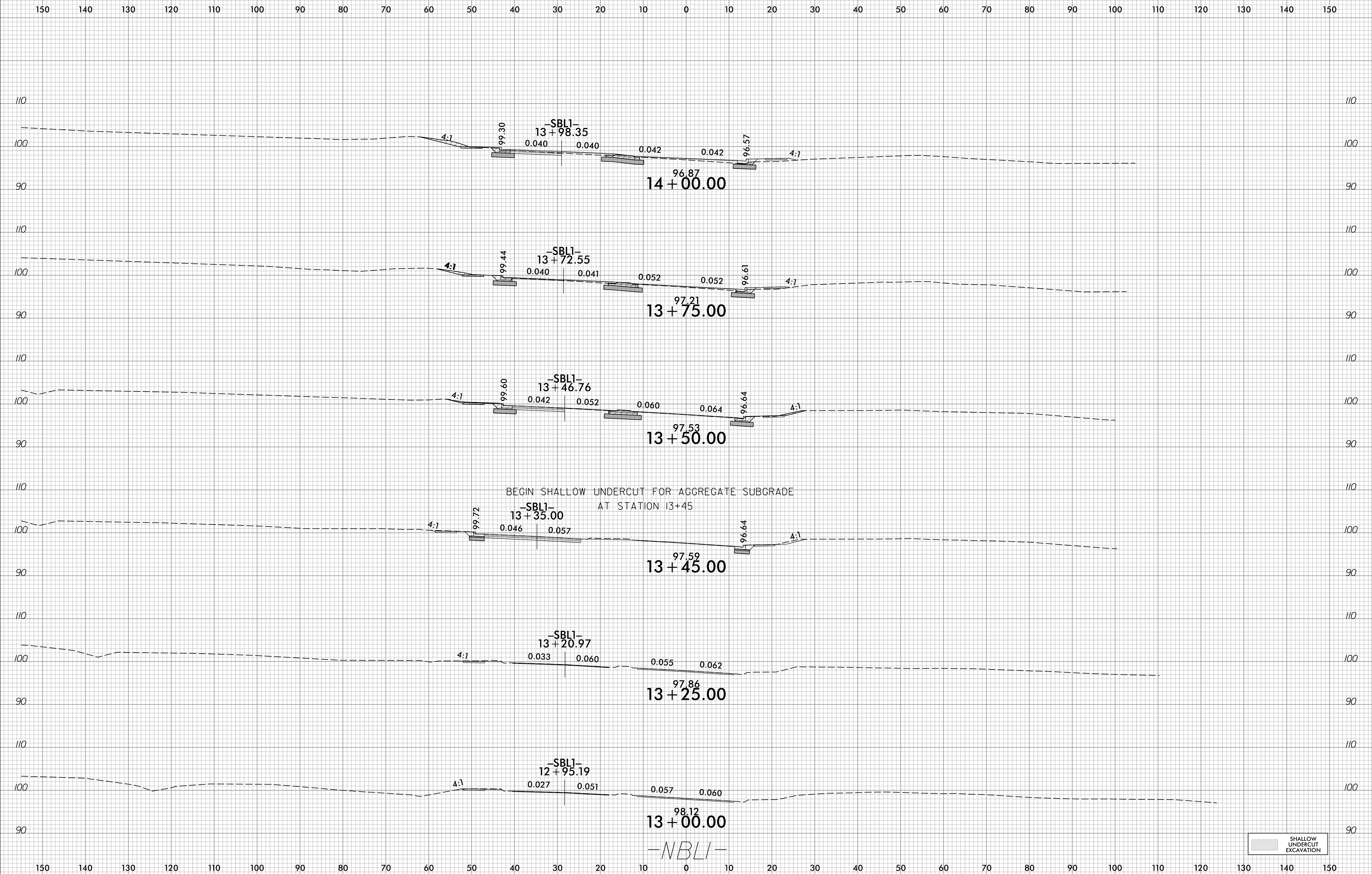
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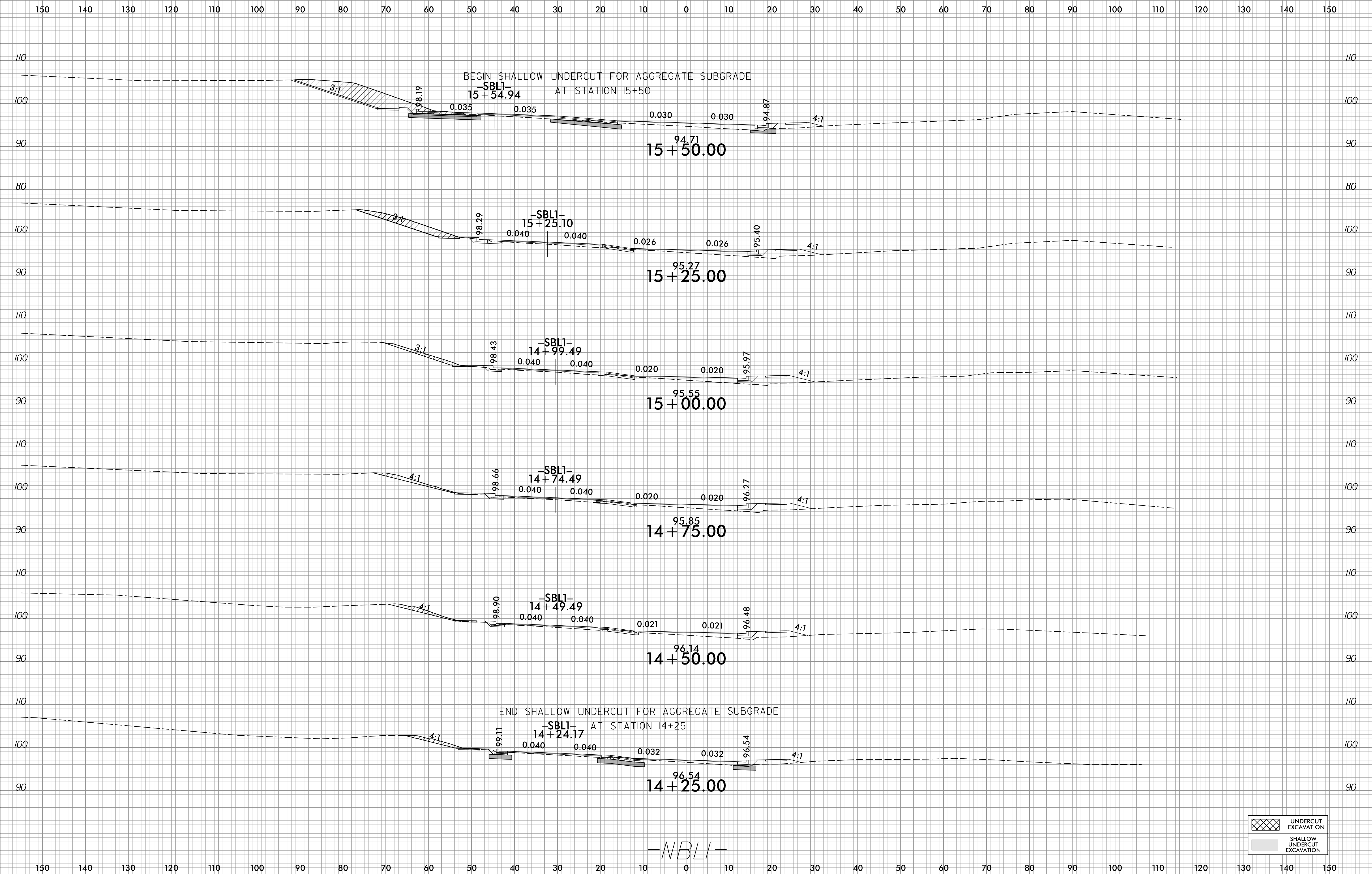
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 SHALLOW UNDERCUT EXCAVATION

6/23/16



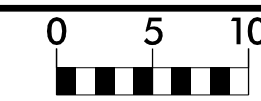
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j.dunn

6/23/16

Prepared in the Office of:



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PROJ. REFERENCE NO.
U-5947

SHEET NO.
X-6

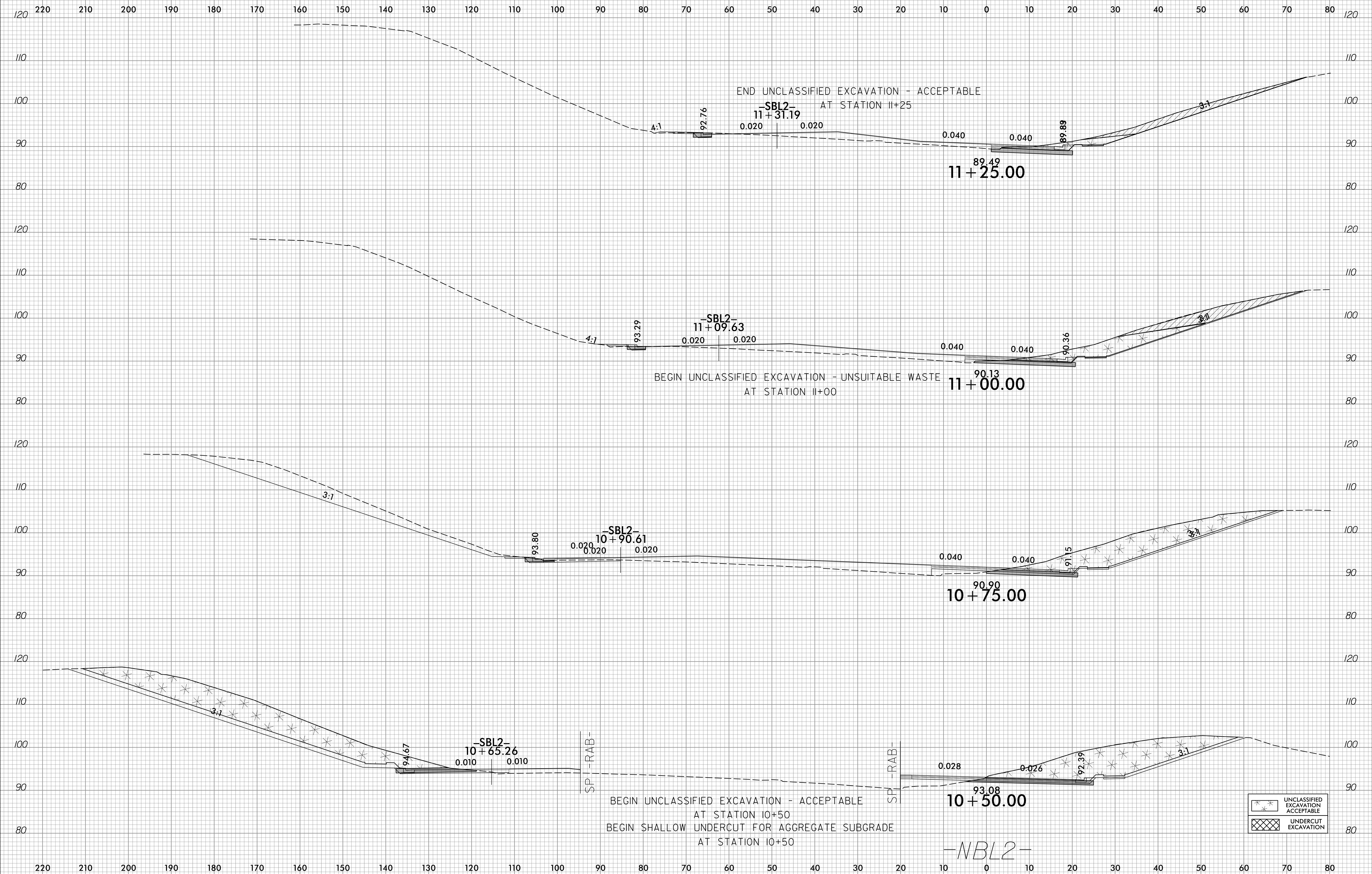
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| | |
|--|-----------------------------|
| | UNDERCUT EXCAVATION |
| | SHALLOW UNDERCUT EXCAVATION |

08-MAR-2022 2:18
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jatin.jain@summit

6/23/16



| | |
|--|------------------------------------|
| | UNCLASSIFIED EXCAVATION ACCEPTABLE |
| | UNDERCUT EXCAVATION |

-NBL2-

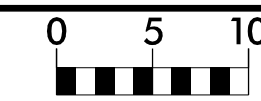
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 jay.dunn

6/23/16

Prepared in the Office of:



NC FIRM LICENSE No. P-0339
320 Executive Ct.
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)

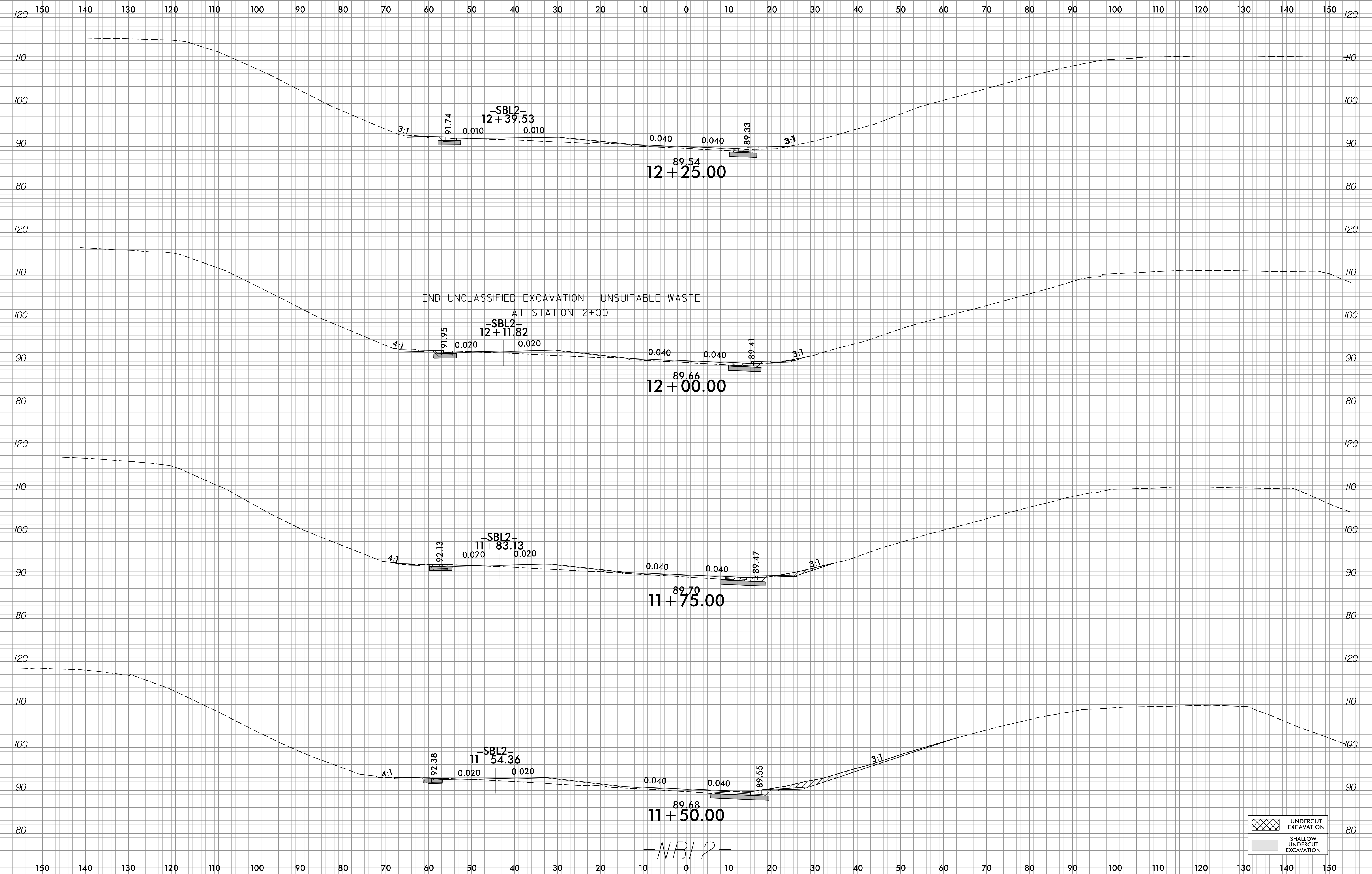


PROJ. REFERENCE NO.

U-5947

SHEET NO.

X-8



END UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE
AT STATION 12+00

Legend:

- UNDERCUT EXCAVATION
- SHALLOW UNDERCUT EXCAVATION

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j.dunn

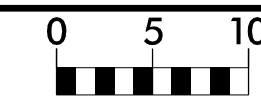
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6/23/16

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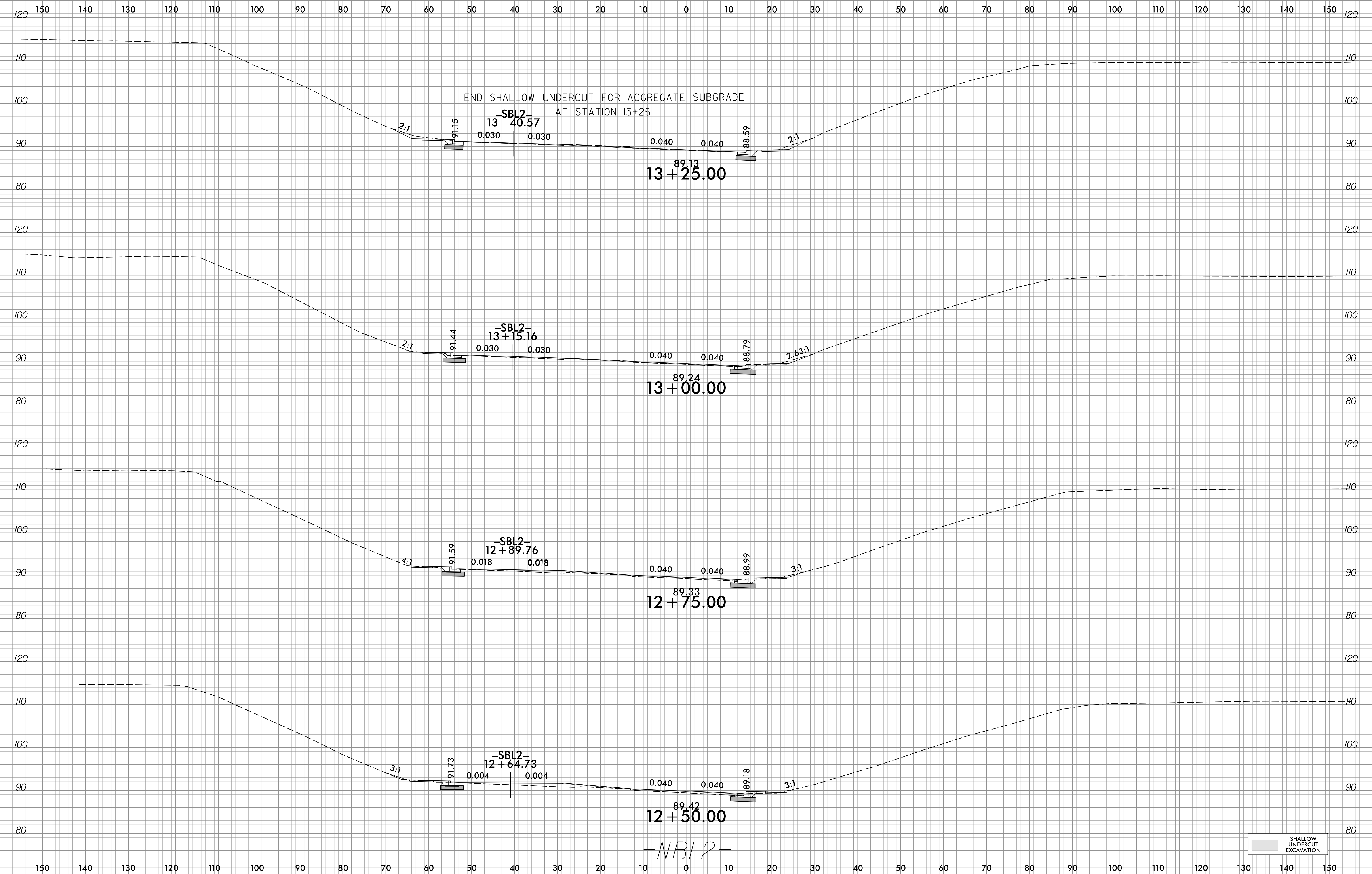


NC FIRM LICENSE No. P-0339
320 Executive Ct.
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)



PROJ. REFERENCE NO.
U-5947

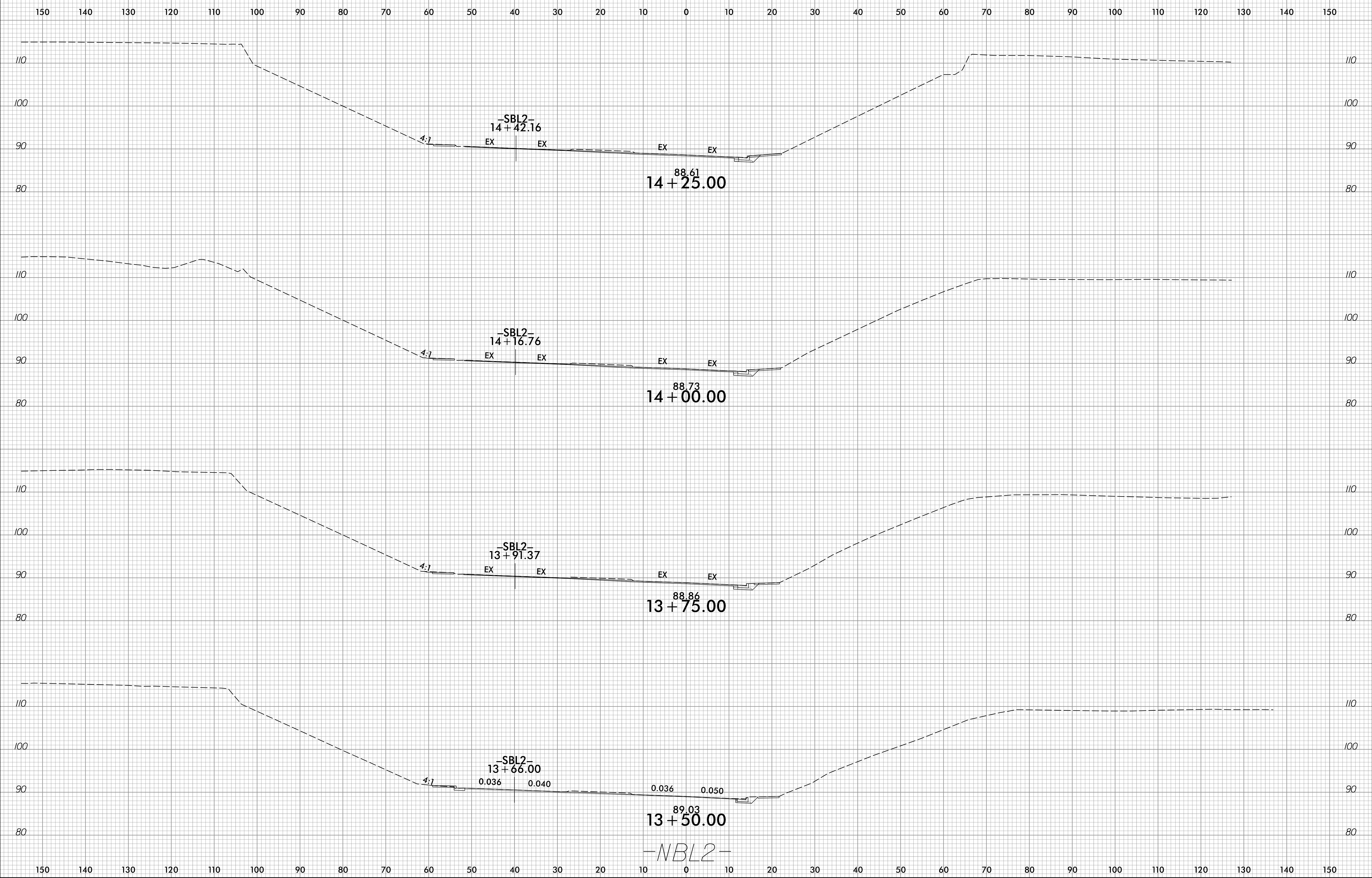
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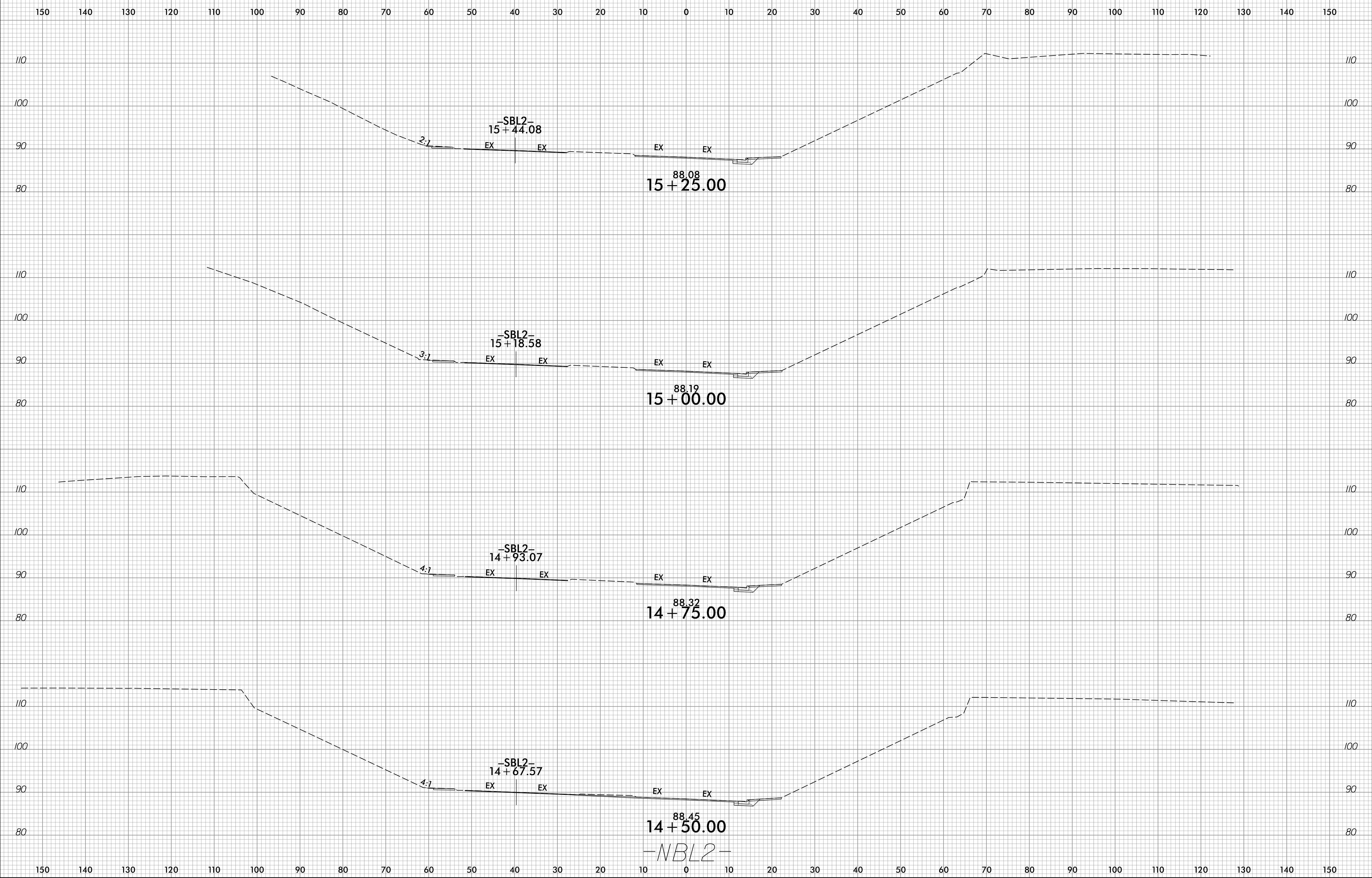
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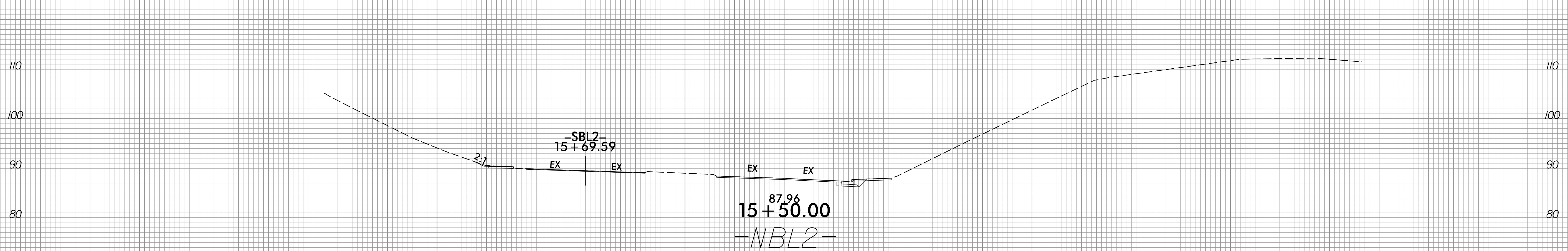
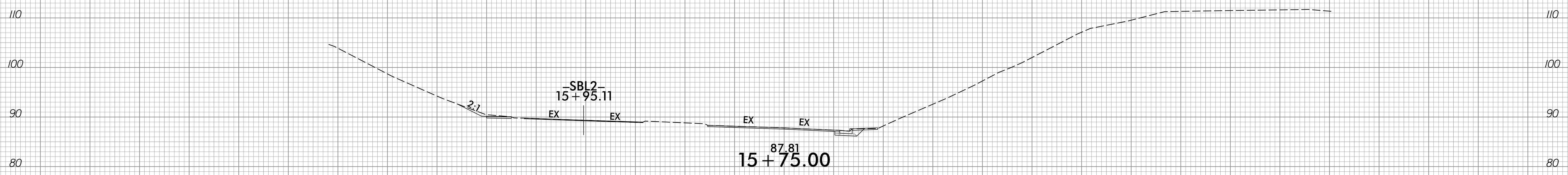
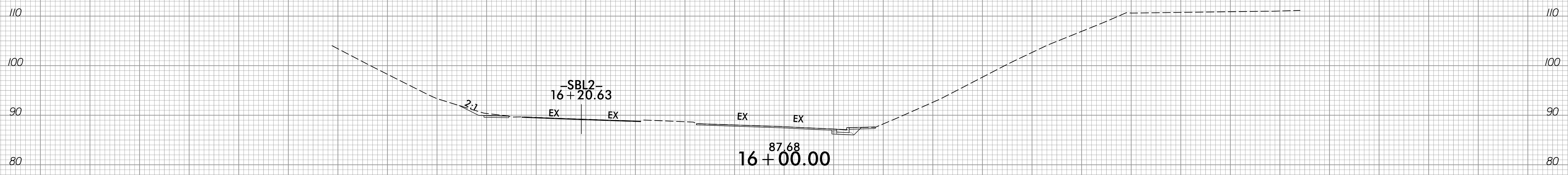
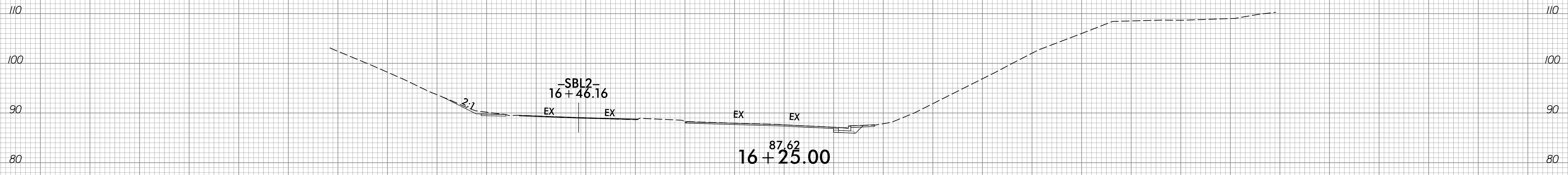
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-NBL2-

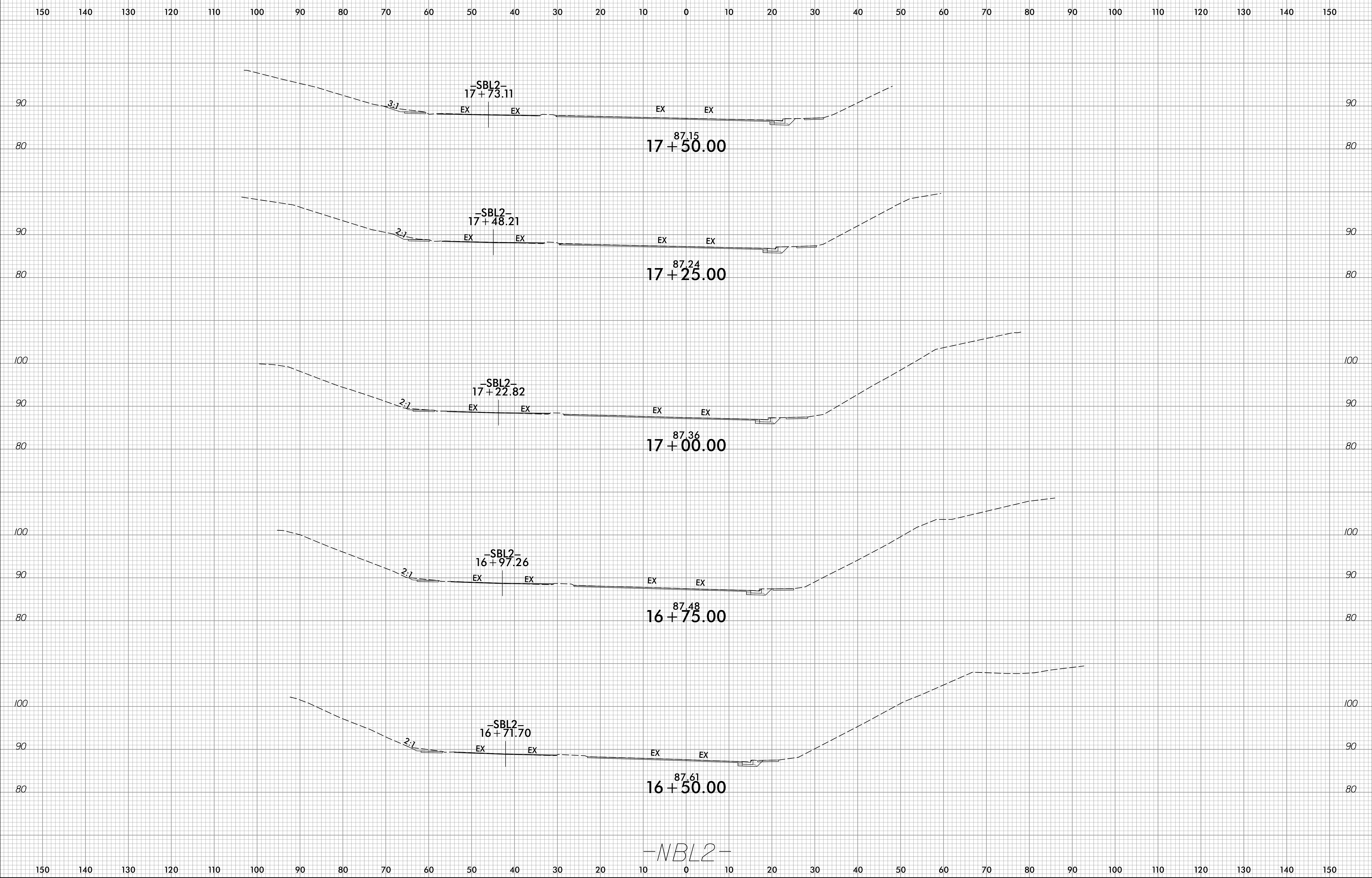


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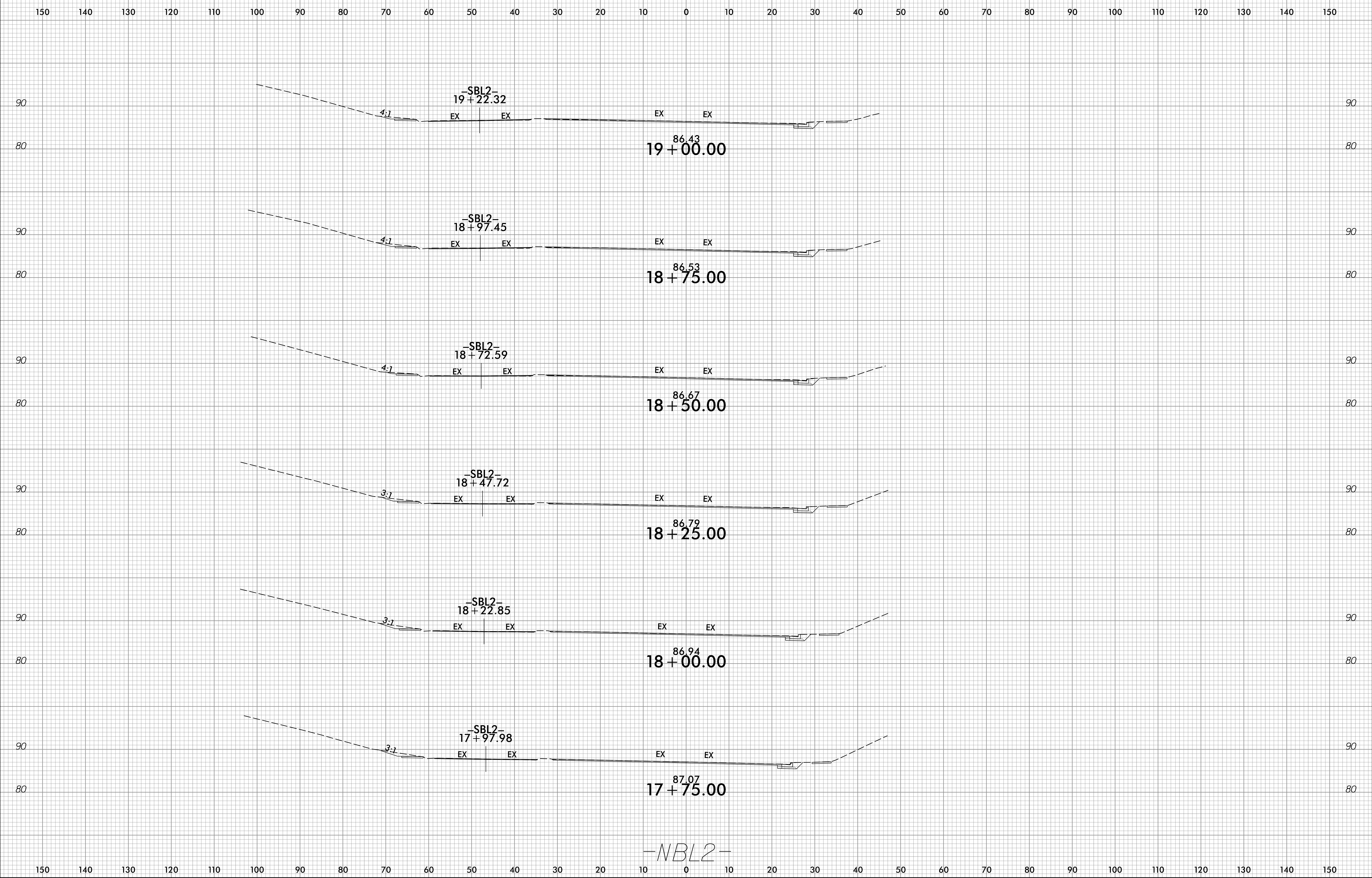


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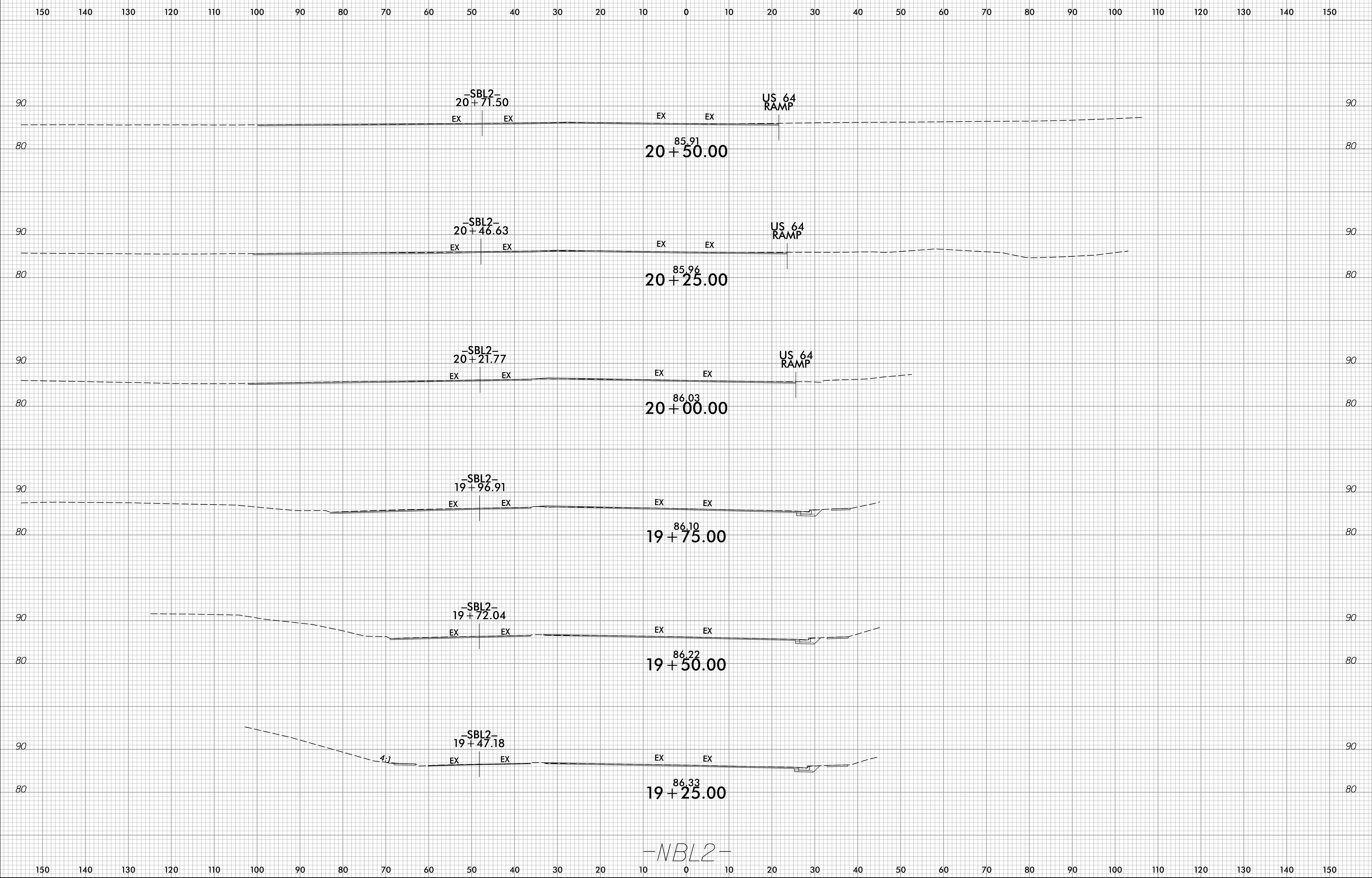


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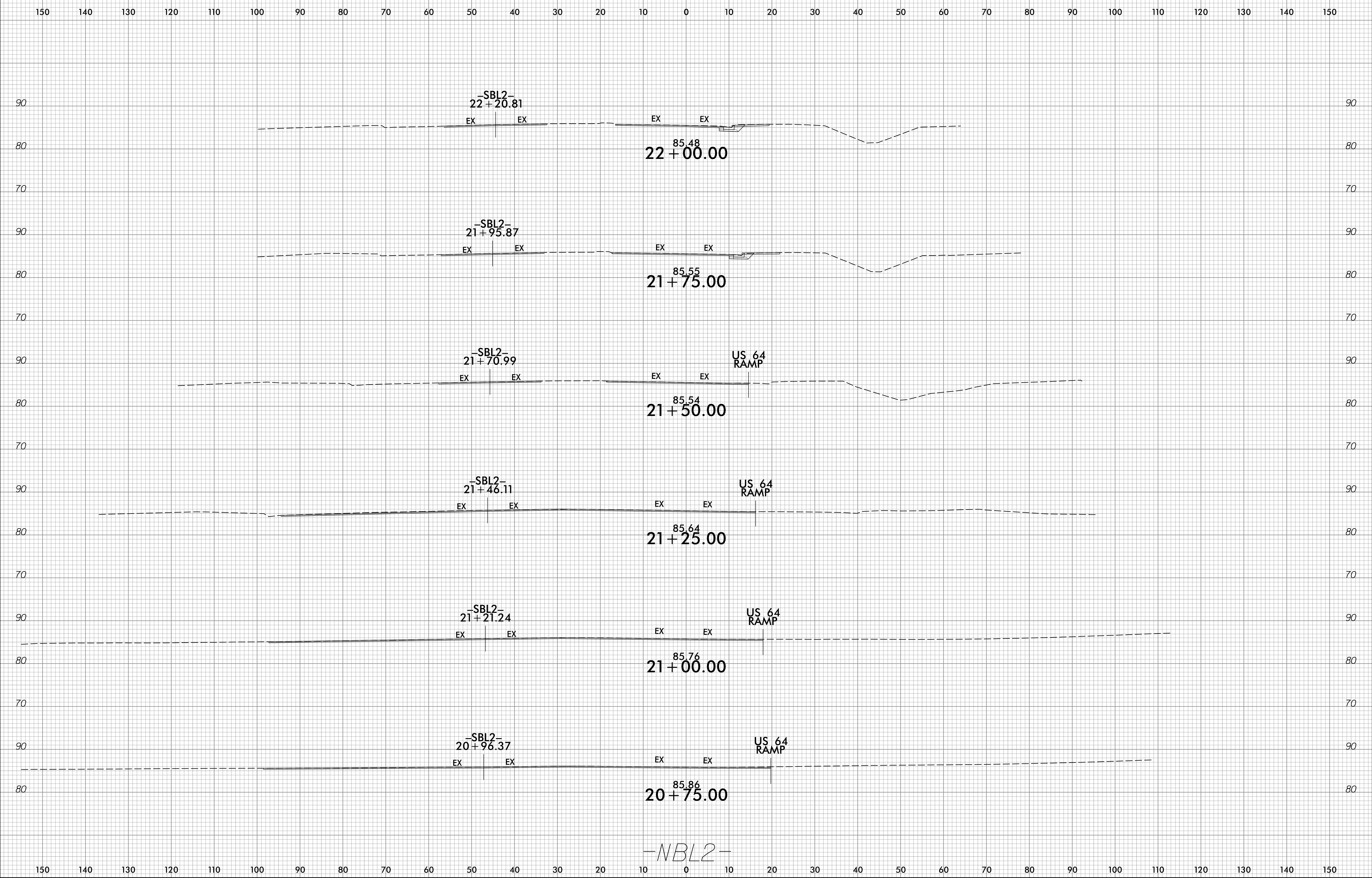


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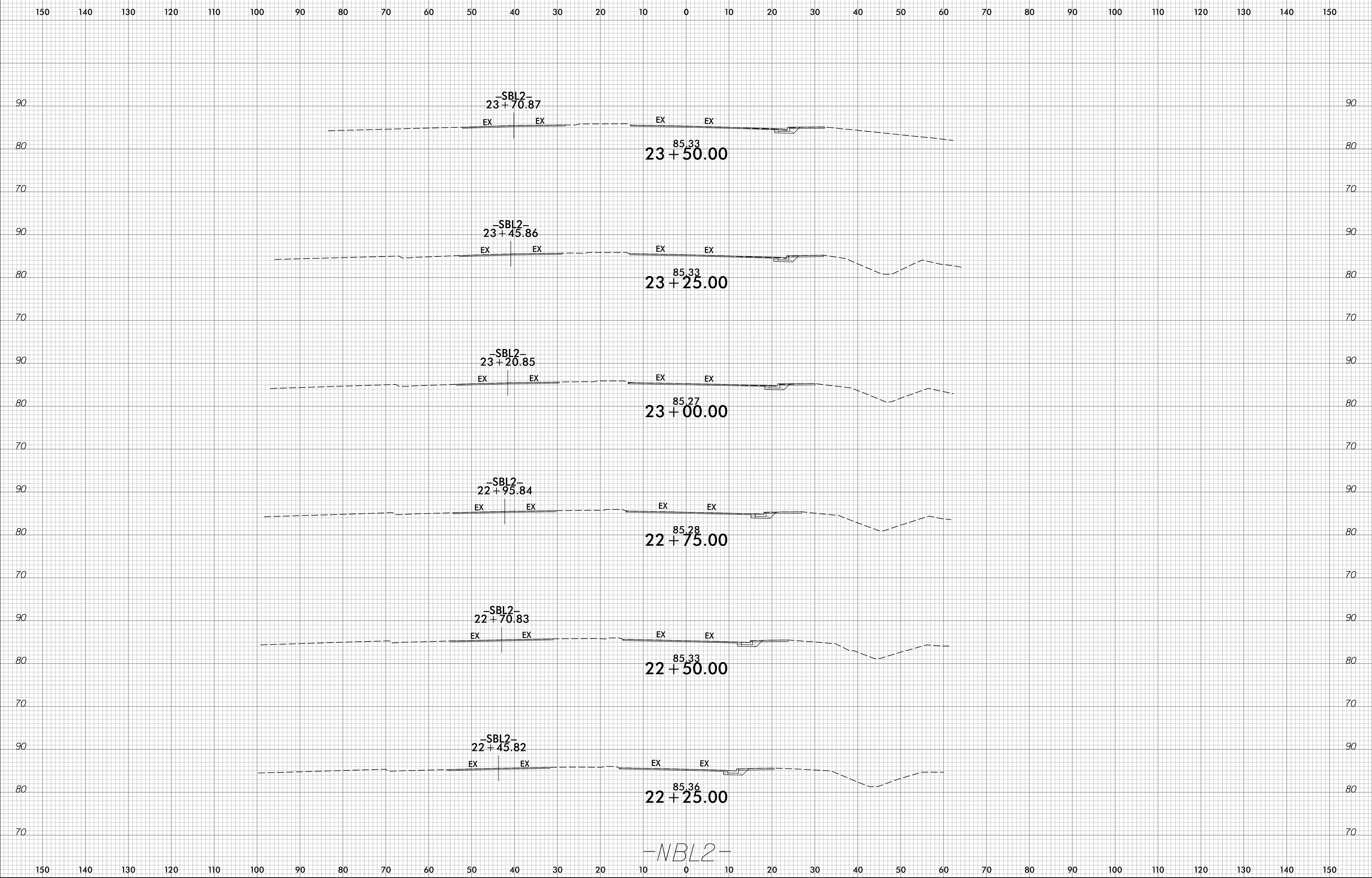


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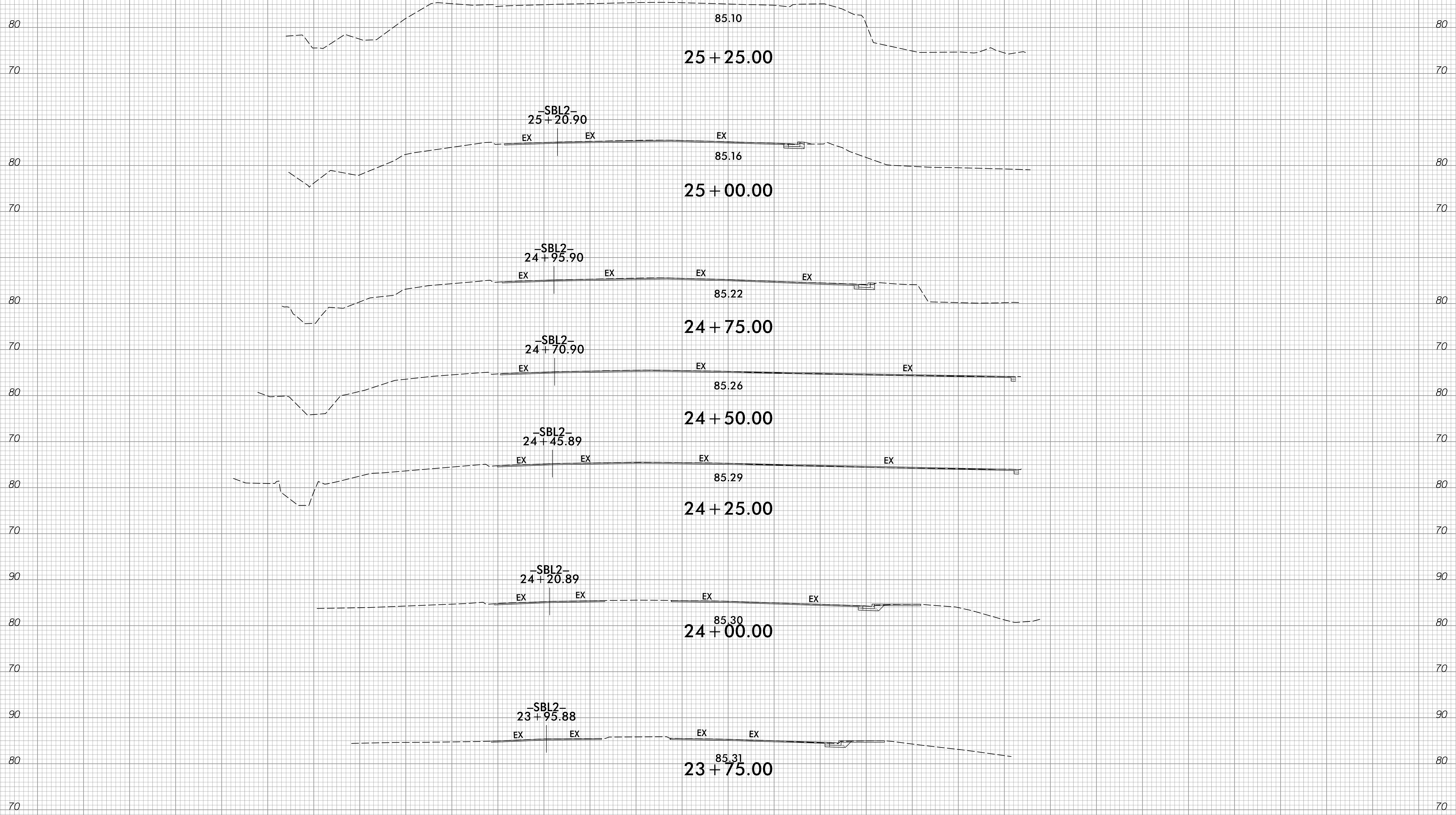
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08-MAR-2022 2:19
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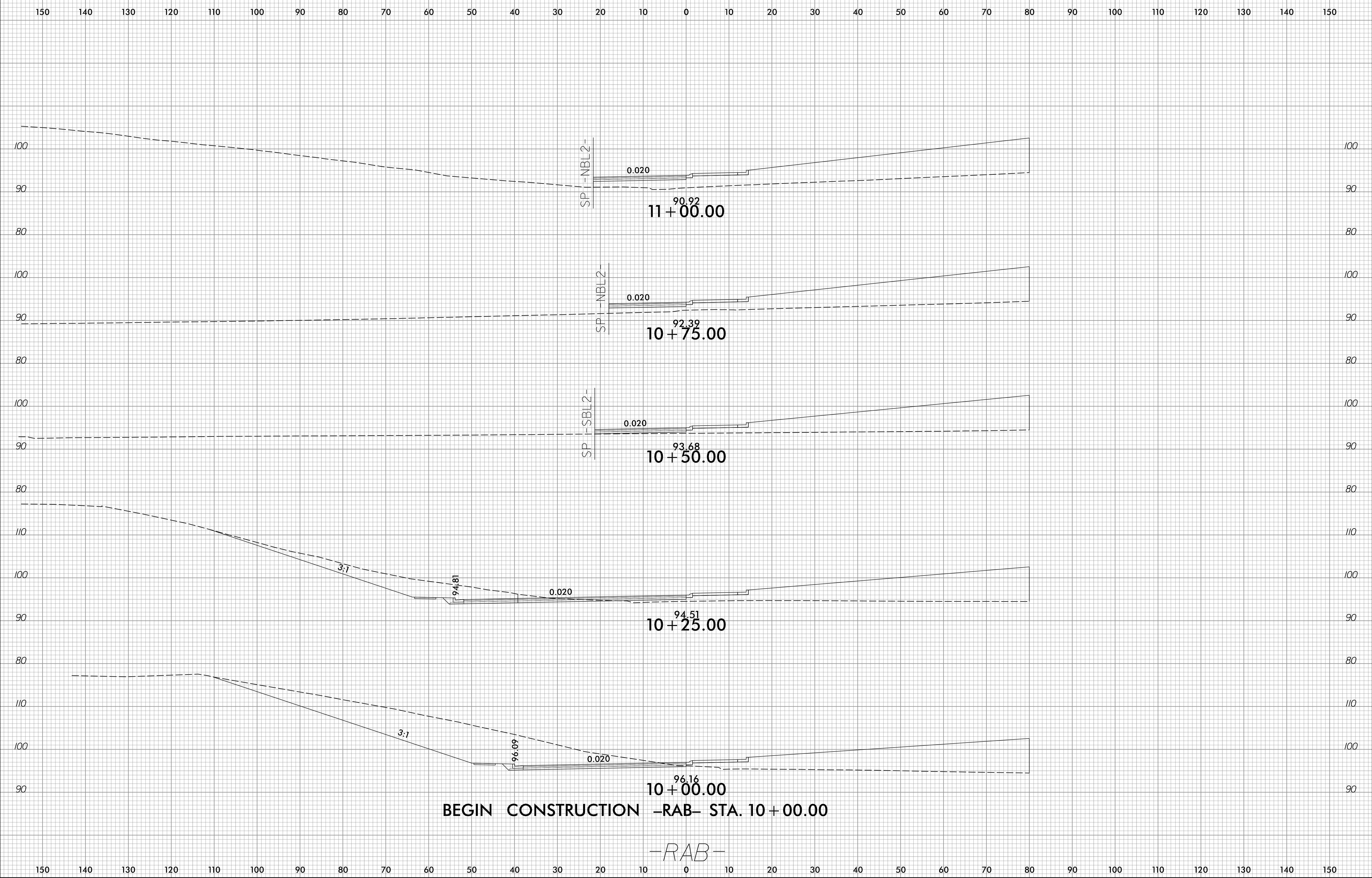
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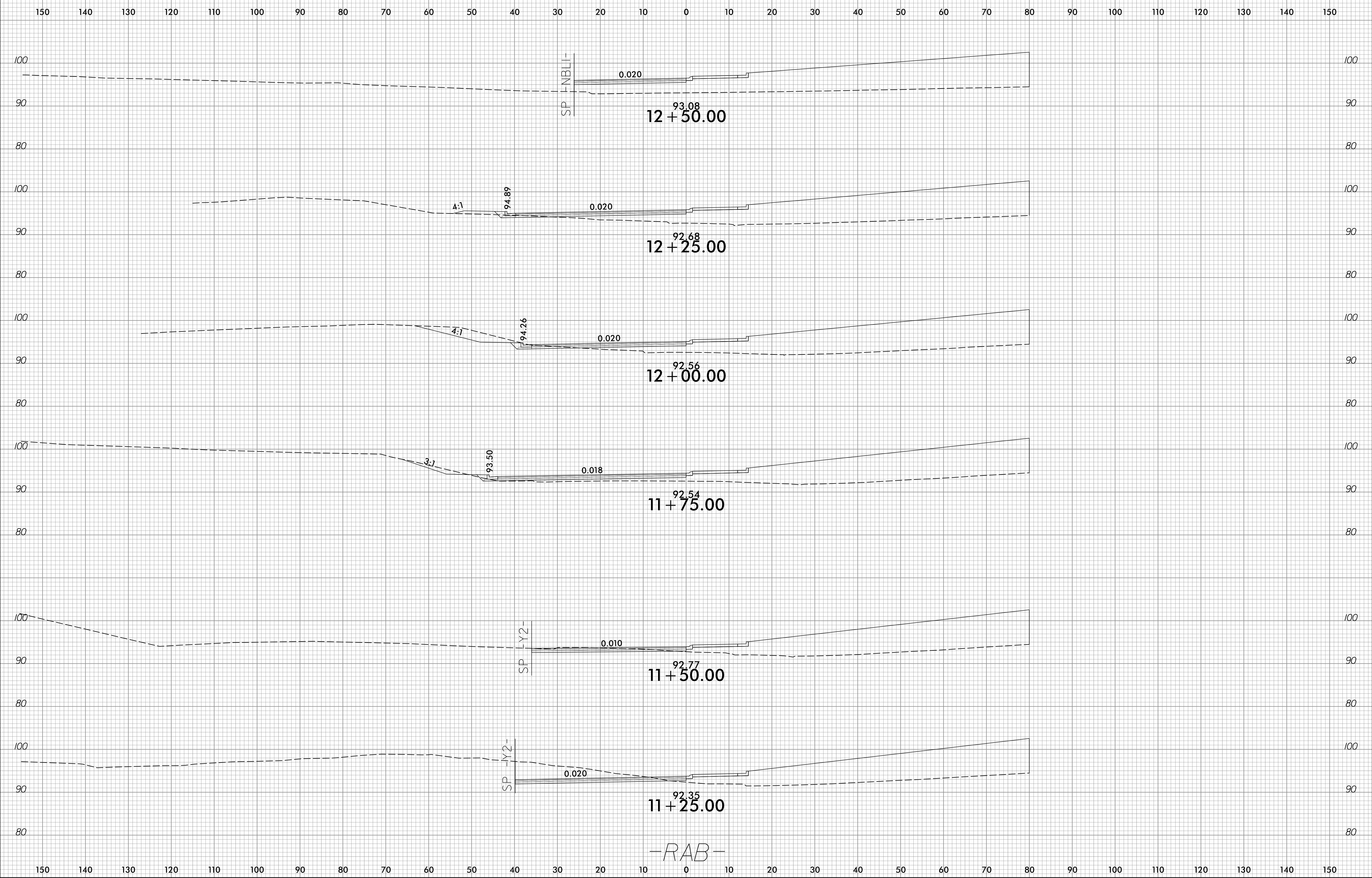


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SP - NBLI -

94.89

94.26

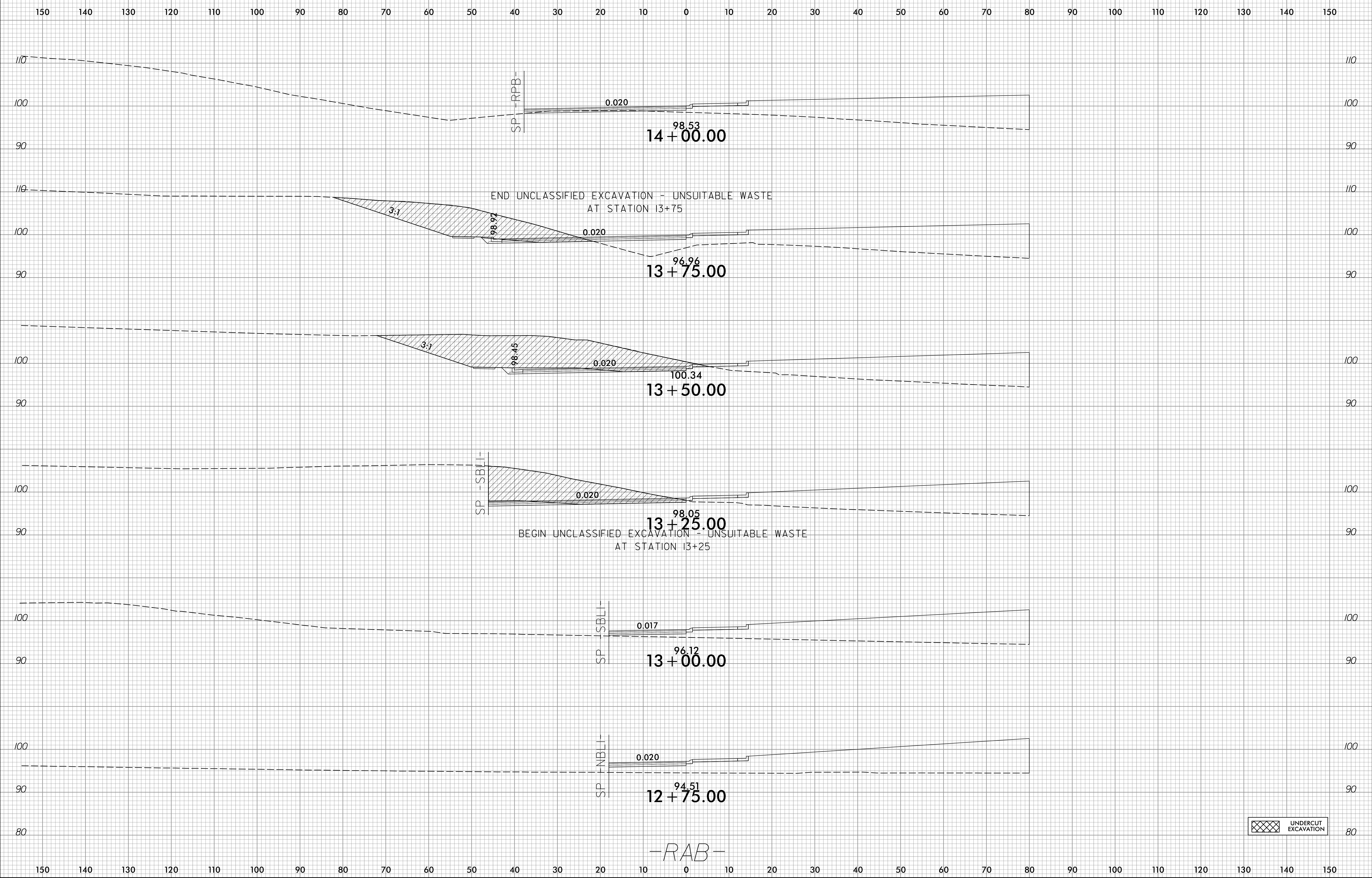
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SP - Y2 -

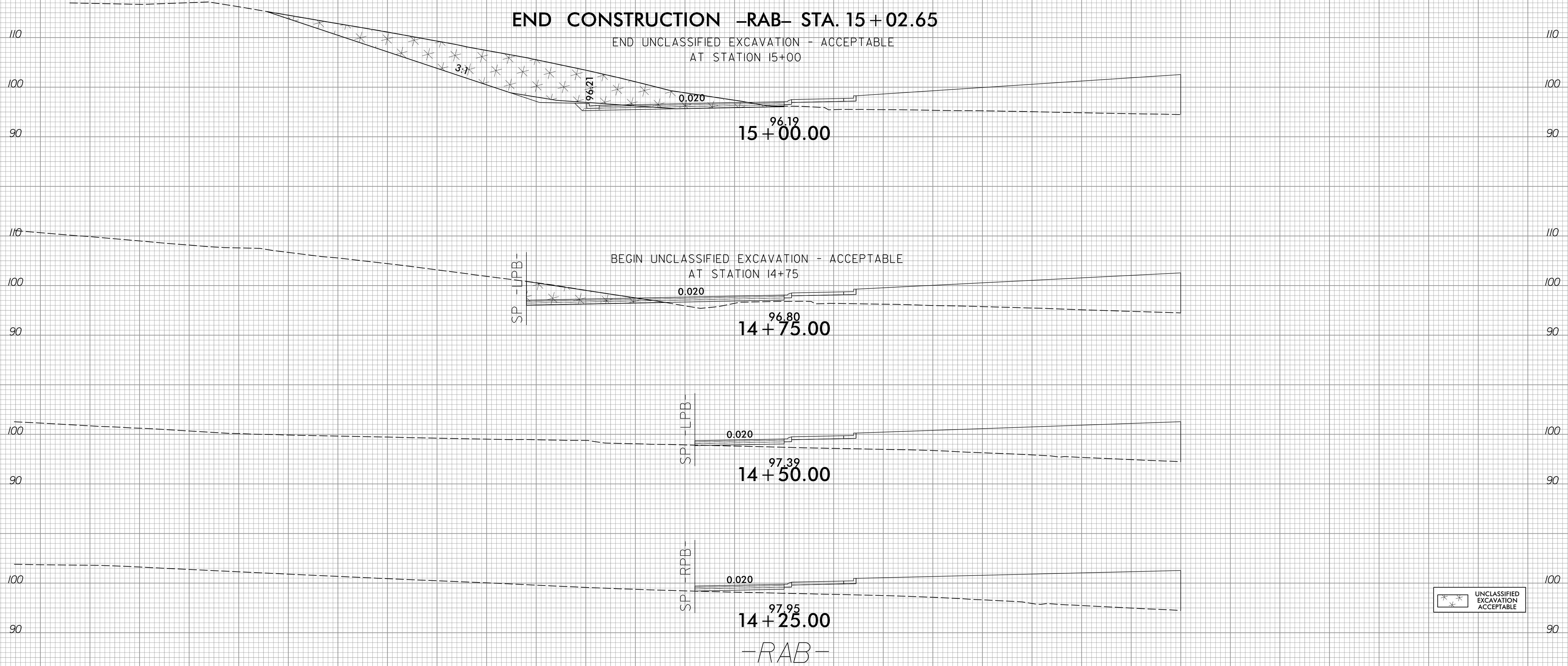
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6/23/16

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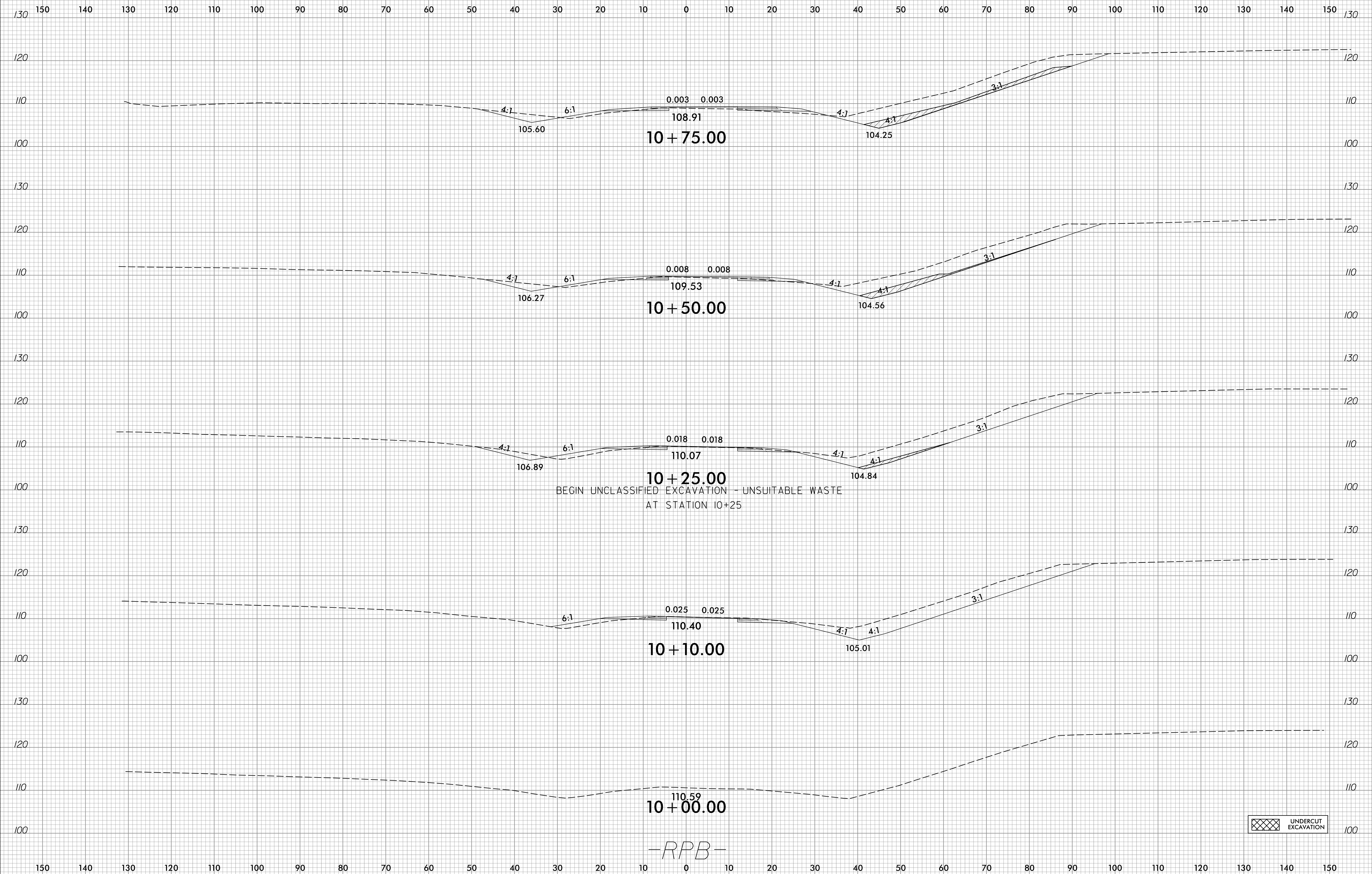


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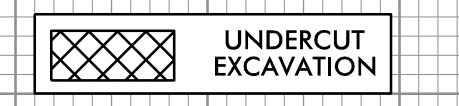


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SHEET NO.
X-23



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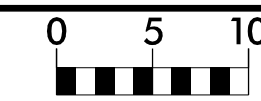
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spencer.miller@summit

6/23/16

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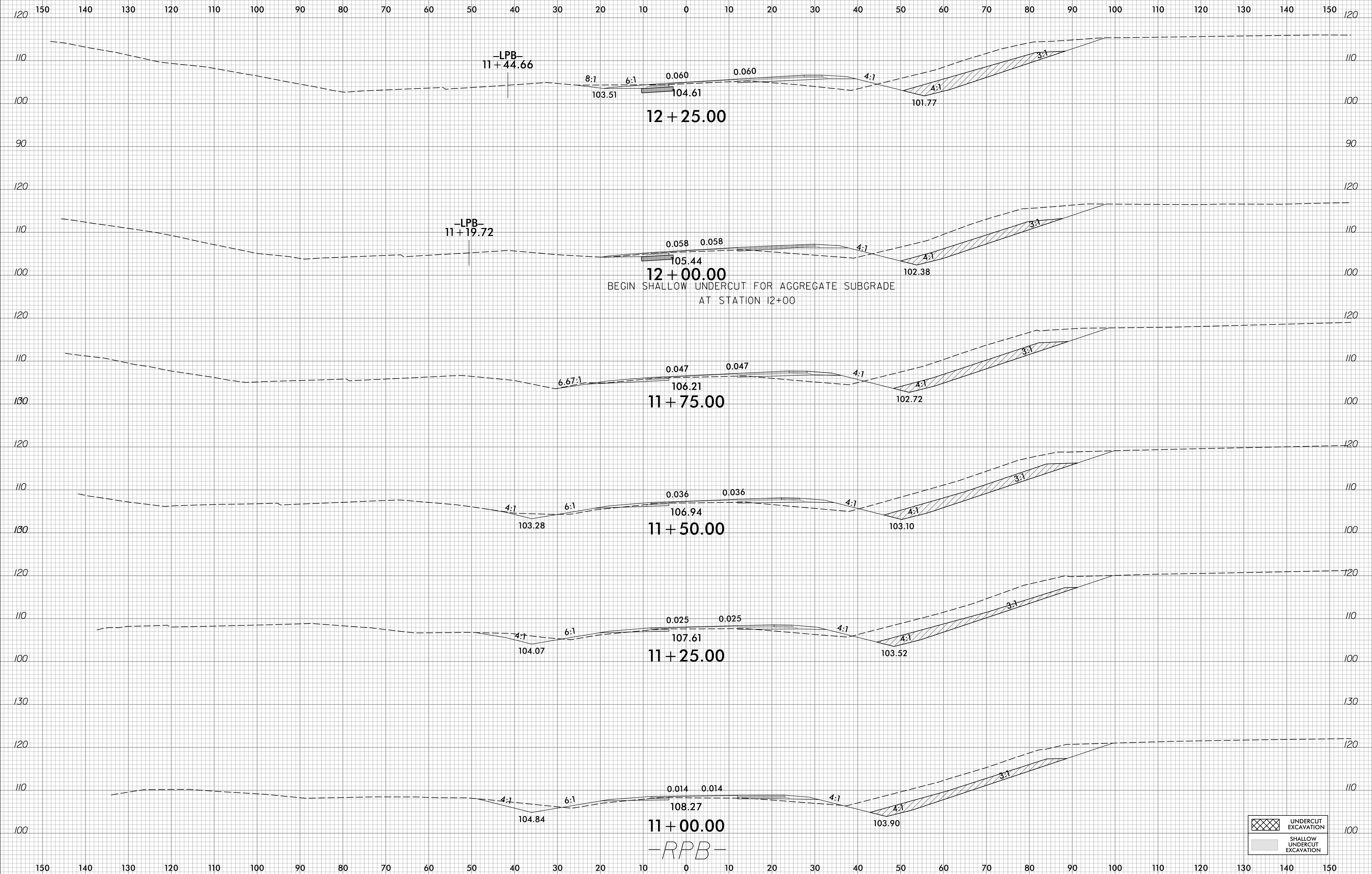


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SHEET NO.
X-24



UNDERCUT EXCAVATION
 SHALLOW UNDERCUT EXCAVATION

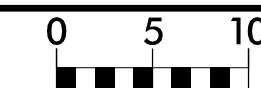
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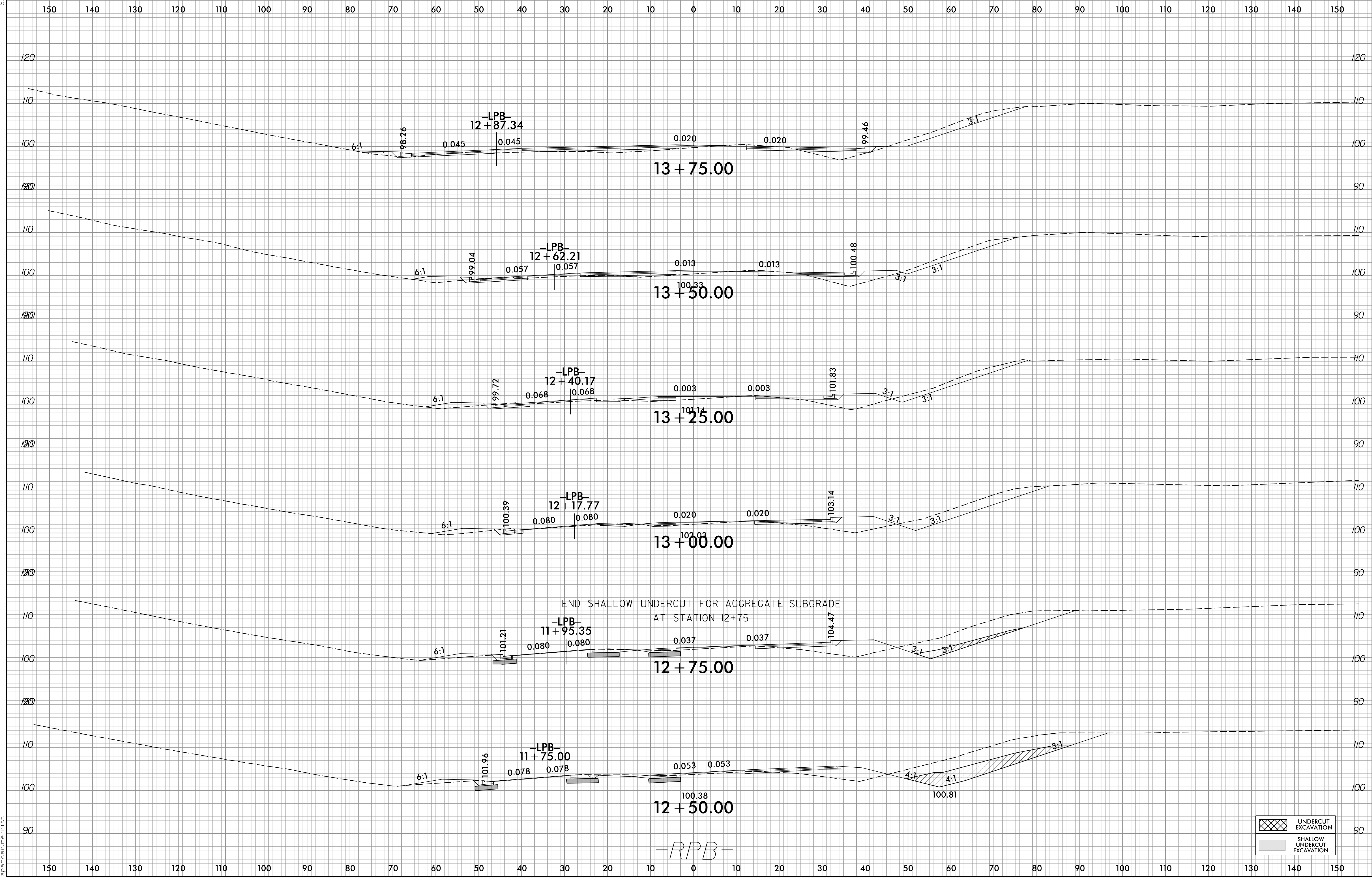


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SHEET NO.
X-25



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spencer.mcfarland

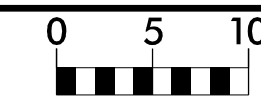
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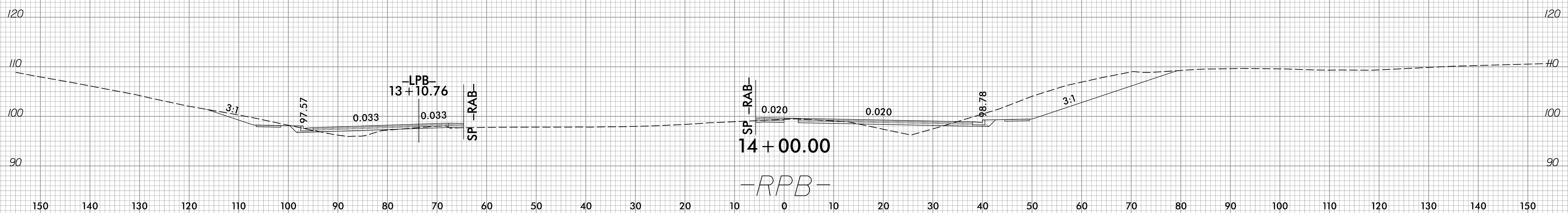
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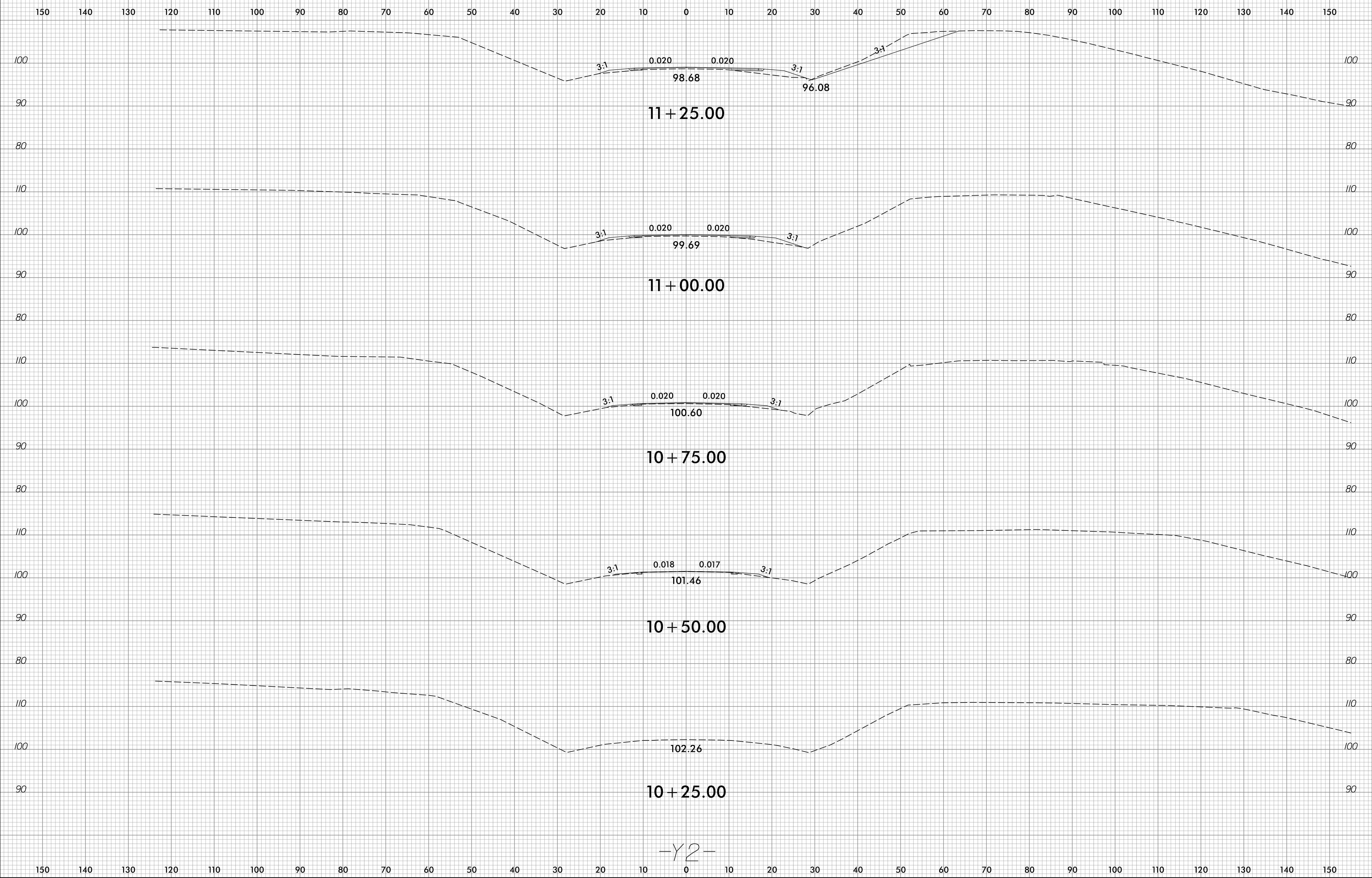
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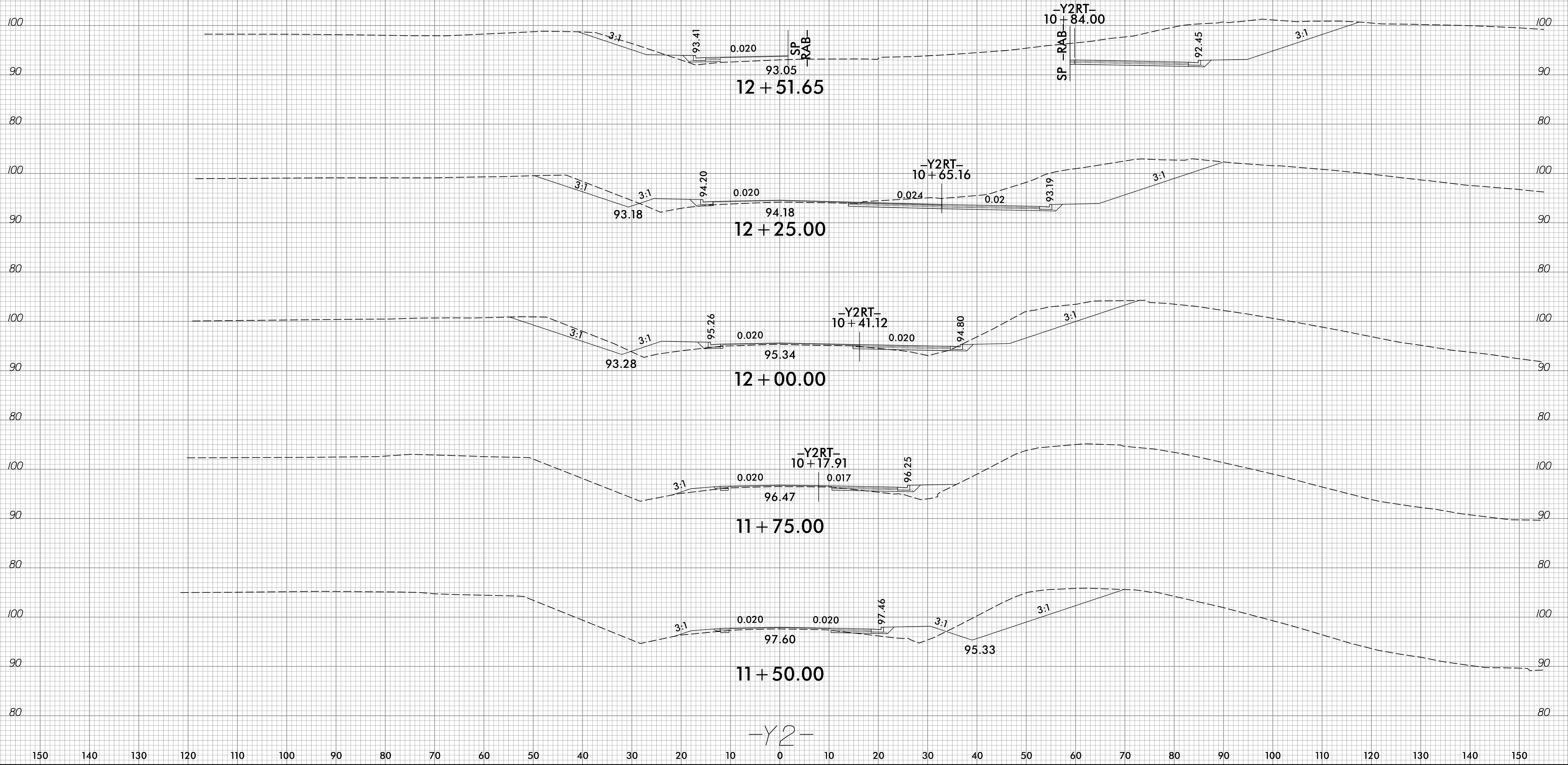


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01-MAP-2022 IT106
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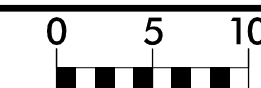
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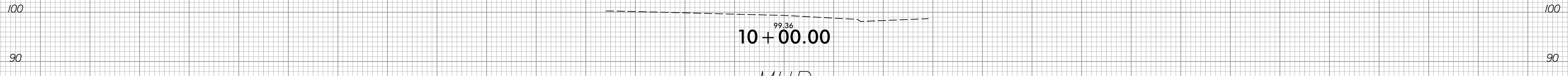
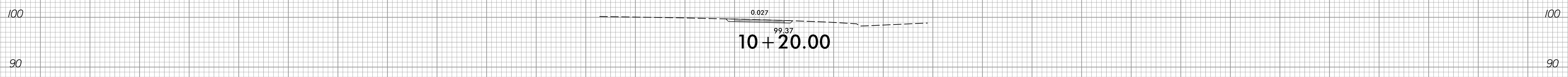
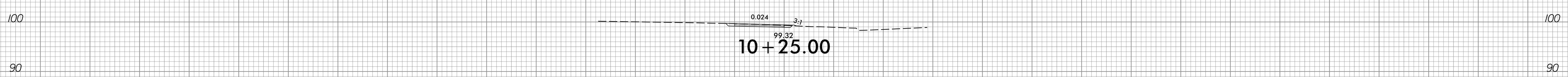
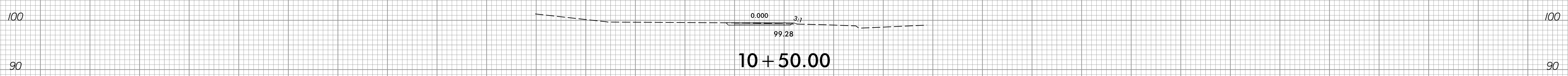
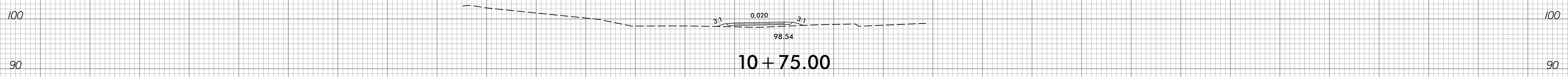
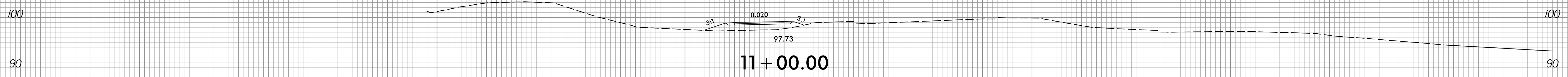
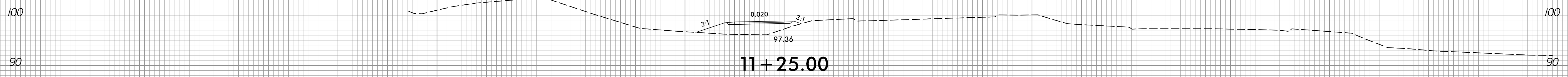
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SHEET NO.
X-29

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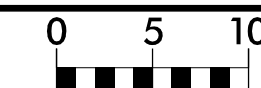
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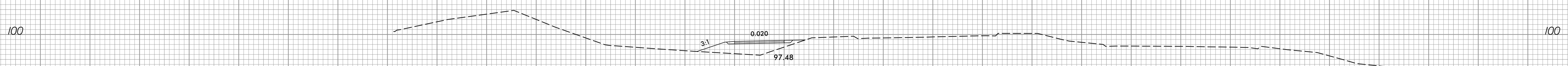
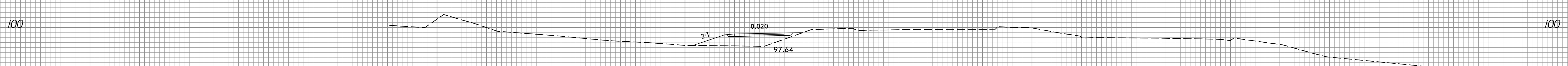
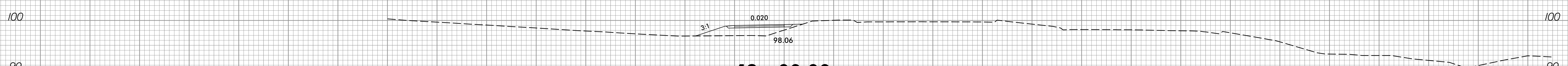
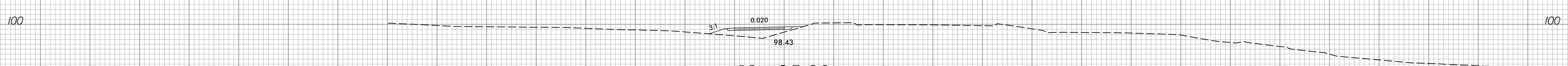
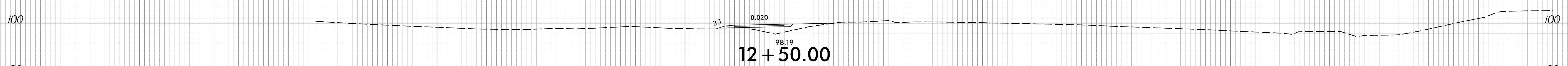
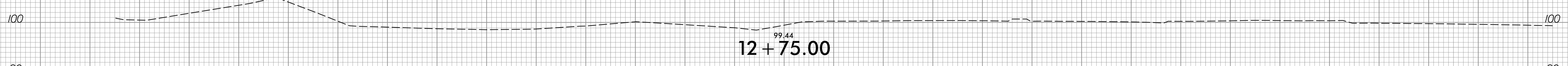
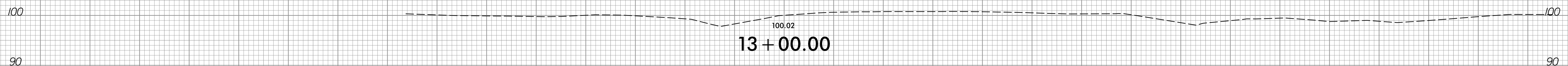
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SHEET NO.
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-MUP-

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spencer.meyer@tt