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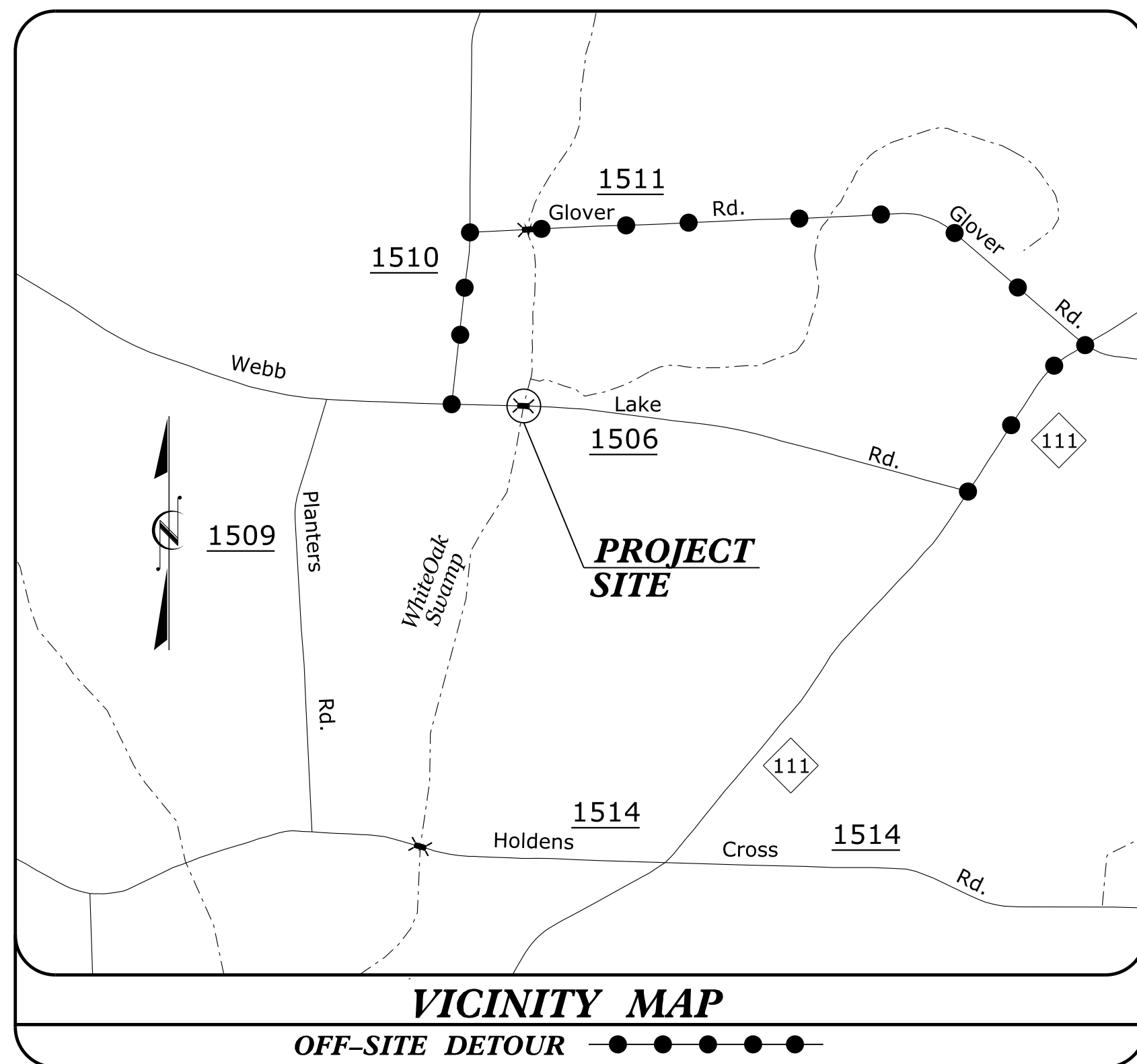
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PROJECT: 17BP.4.R.75

CONTRACT: DD00227

See Sheet 1-A For Index of Sheets



VICINITY MAP

OFF-SITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WILSON COUNTY

**LOCATION: BRIDGE NO. 143 OVER WHITEOAK SWAMP
ON SR 1506 (WEBB LAKE ROAD)**

TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------------------|--------------|
| N.C. | 17BP.4.R.75 | 1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 17BP.4.R.75 | | PE, UTIL., RW CONST. | |

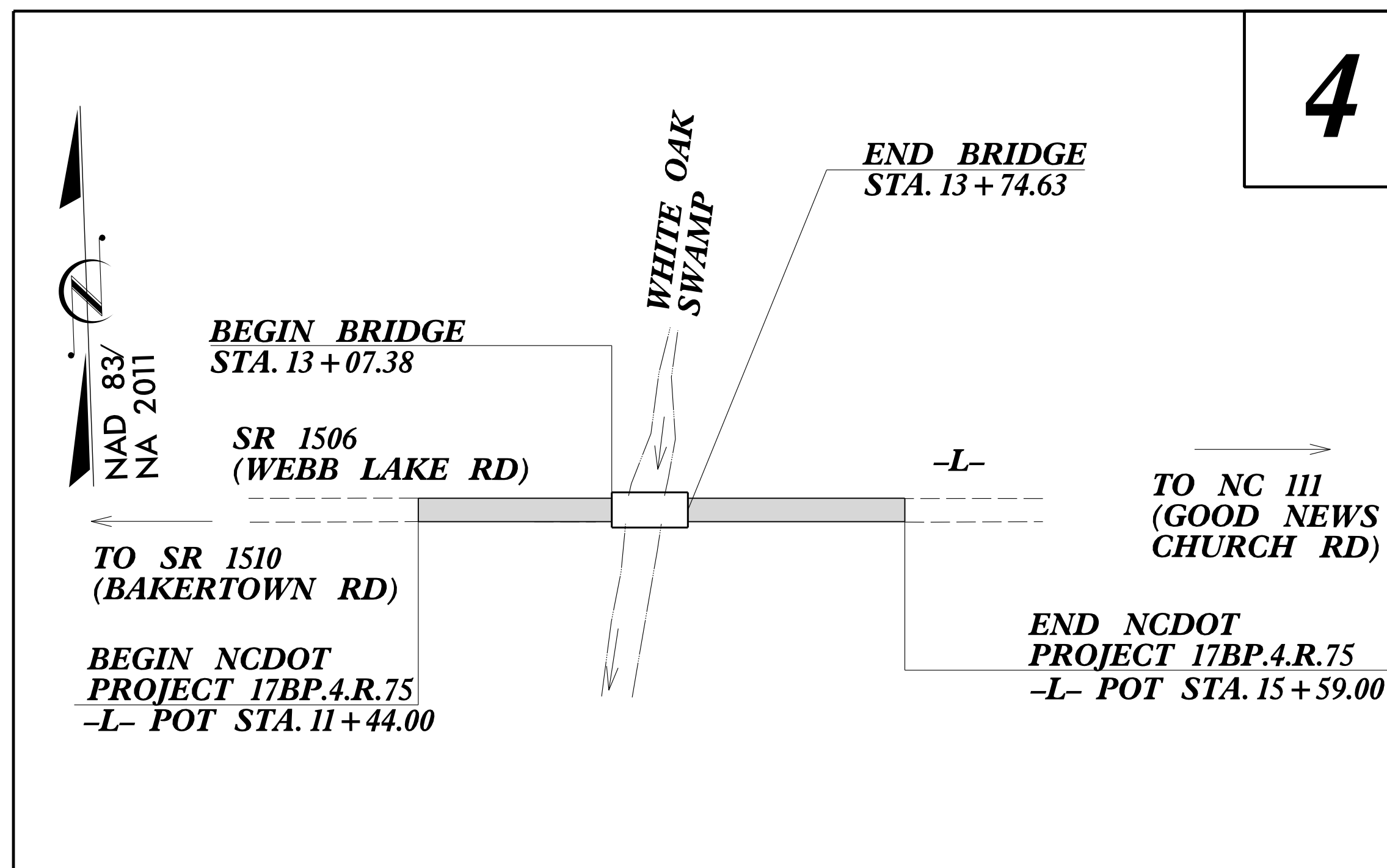


1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

BRIDGE #970143

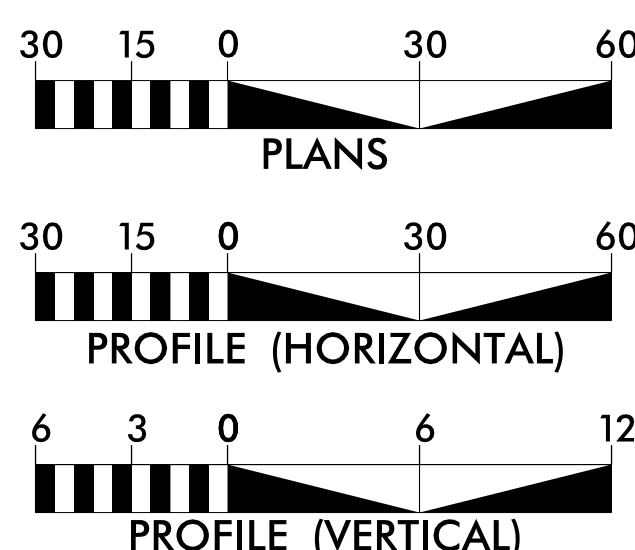
FINAL PLANS



4

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2014 = 260
T = 6 % *
V = 55 MPH
* (TTST = 3% + DUAL = 3%)
FUNC CLASS =
RURAL LOCAL
REGIONAL TIER

PROJECT LENGTH

| | |
|---|--------------------|
| LENGTH ROADWAY PROJECT 17BP.4.R.75 = | 0.066 MILES |
| LENGTH STRUCTURE PROJECT 17BP.4.R.75 = | 0.013 MILES |
| TOTAL LENGTH PROJECT 17BP.4.R.75 = | 0.079 MILES |

NCDOT CONTACT: **COREY MCLAMB, PE**
DIVISION 4 PROJECT MANAGER

Prepared for:
**DIVISION OF HIGHWAYS
DIVISION FOUR**
509 Ward Boulevard, Wilson NC, 27895

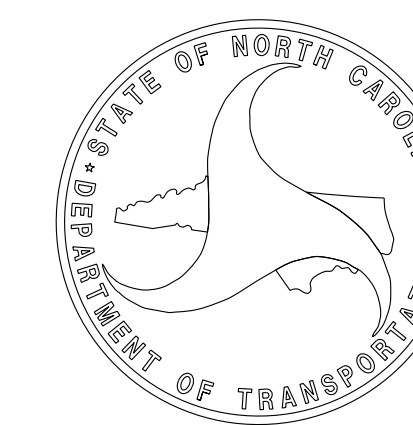
| | |
|------------------------------|--|
| 2012 STANDARD SPECIFICATIONS | |
| RIGHT OF WAY DATE: | EDWARD G. WETHERILL, PE PROJECT ENGINEER |
| LETTING DATE: | GREG S. PURVIS, PE PROJECT DESIGN ENGINEER |
| | AUGUST 2017 |

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

Signature: **James C. Davis**, P.E.
Date: 7/11/2017

Signature: **Gary S. Purvis**, P.E.
Date: 7/11/2017



\$\$\$\$\$ SYSTEM \$\$\$\$\$\$
\$\$\$\$\$ DGN \$\$\$\$\$\$
\$\$\$\$\$ USERNAME \$\$\$\$\$\$

GENERAL NOTES

GENERAL NOTES: 2012 SPECIFICATIONS
 EFFECTIVE: 01-17-12
 REVISED: 07-30-2012

GRADING AND SURFACING:
 THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED 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 II.

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

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

GUARDRAIL:
 THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

END BENTS: THE SURVEYOR SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:
 UTILITY OWNERS ON THIS PROJECT ARE CENTURYLINK (PHONE), WILSON COUNTY (WATER), PIEDMONT NATURAL GAS (GAS) & PITT & GREENE EMC (POWER). 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 CONTRACT.

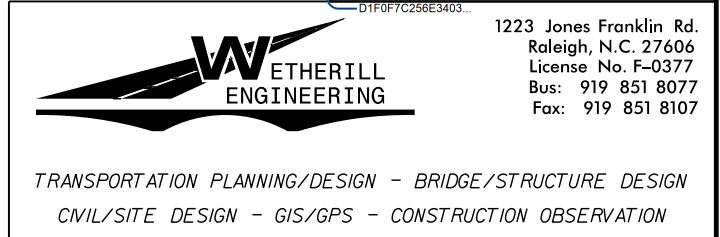
LIST OF ROADWAY STANDARD DRAWINGS

2012 ROADWAY ENGLISH STANDARD DRAWINGS

EFF. 01-17-12
 REV. 10-30-2012

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch – N. C. Department of Transportation – Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

| STD.NO. | TITLE |
|---|---|
| DIVISION 2 – EARTHWORK | |
| 200.02 | Method of Clearing – Method II |
| 225.02 | Guide for Grading Subgrade – Secondary and Local |
| 225.04 | Method of Obtaining Superelevation – Two Lane Pavement |
| DIVISION 3 – PIPE CULVERTS | |
| 300.01 | Method of Pipe Installation |
| DIVISION 4 – MAJOR STRUCTURES | |
| 422.11 | Reinforced Bridge Approach Fills – Sub Regional Tier |
| DIVISION 5 – SUBGRADE, BASES AND SHOULDERS | |
| 560.01 | Method of Shoulder Construction – High Side of Superelevated Curve – Method I |
| DIVISION 8 – INCIDENTALS | |
| 806.01 | Concrete Right of Way Markers |
| 846.01 | Concrete Curb, Gutter and Curb & Gutter |
| 862.01 | Guardrail Placement |
| 862.02 | Guardrail Installation |
| 862.03 | Structure Anchor Units |
| 876.02 | Guide for Rip Rap at Pipe Outlets |



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

BRIDGE #970143

INDEX OF SHEETS

| SHEET NUMBER | SHEET |
|------------------|---|
| 1 | TITLE SHEET |
| 1-A | INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS |
| 1-B | CONVENTIONAL SYMBOLS |
| 1C-1 THRU 1C-2 | SURVEY CONTROL SHEET |
| 2 | TYPICAL SECTIONS, PAVEMENT SCHEDULE, & MISCELLANEOUS DETAILS |
| 2A-1 THRU 2A-7 | GUARDRAIL INSTALLATION, PLACEMENT, AND STRUCTURE ANCHOR UNIT |
| 2A-8 | MODIFIED CONCRETE FLUME |
| 3 | SUMMARY OF DRAINAGE QUANTITIES, GUARDRAIL SUMMARY, EARTHWORK SUMMARY, PAVEMENT REMOVAL SUMMARY, SHOULDER BERM GUTTER AND RIGHT OF WAY AREA DATA |
| 4 | PLAN & PROFILE SHEET |
| TMP-1 THRU TMP-4 | TRAFFIC MANAGEMENT PLANS |
| PMP-1 THRU PMP-2 | PAVEMENT MARKING PLANS |
| EC-1 THRU EC-5 | EROSION CONTROL PLANS |
| RF-1 | REFORESTATION PLAN |
| X-1 | CROSS-SECTION SUMMARY SHEET |
| X-2 THRU X-6 | CROSS-SECTIONS |
| S-1 THRU S-13 | STRUCTURE PLANS |
| SN | STRUCTURE NOTES |

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale *S.U.E. = *Subsurface Utility Engineering*

04/06/15

BOUNDARIES AND PROPERTY:

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

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY:

| | |
|---|--------|
| Baseline Control Point | ◆ |
| Existing Right of Way Marker | △ |
| Existing Right of Way Line | ----- |
| Proposed Right of Way Line | ○ RW |
| Proposed Right of Way Line with Iron Pin and Cap Marker | ○ RW ▲ |
| Proposed Right of Way Line with Concrete or Granite RW Marker | ▲ RW |
| Proposed Control of Access Line with Concrete C/A Marker | ▲ C/A |
| Existing Control of Access | ○ C/A |
| Proposed Control of Access | ○ C/A |
| Existing Easement Line | -E- |
| Proposed Temporary Construction Easement | -E- |
| Proposed Temporary Drainage Easement | -TDE- |
| Proposed Permanent Drainage Easement | -PDE- |
| Proposed Permanent Drainage / Utility Easement | -DUE- |
| Proposed Permanent Utility Easement | -PUE- |
| Proposed Temporary Utility Easement | -TUE- |
| Proposed Aerial Utility Easement | -AUE- |
| Proposed Permanent Easement with Iron Pin and Cap Marker | ◆ |

ROADS AND RELATED FEATURES:

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

VEGETATION:

| | |
|--------------|-------|
| Single Tree | ☀ |
| Single Shrub | ☀ |
| Hedge | ~~~~~ |
| Woods Line | ~~~~~ |

| | |
|----------|------------|
| Orchard | ☀ ☀ ☀ ☀ |
| Vineyard | □ Vineyard |

EXISTING STRUCTURES:

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

UTILITIES:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

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

SURVEY CONTROL SHEET 97-0143

| | |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| 97-0143 | 1C-1 |
| Location and Surveys | |

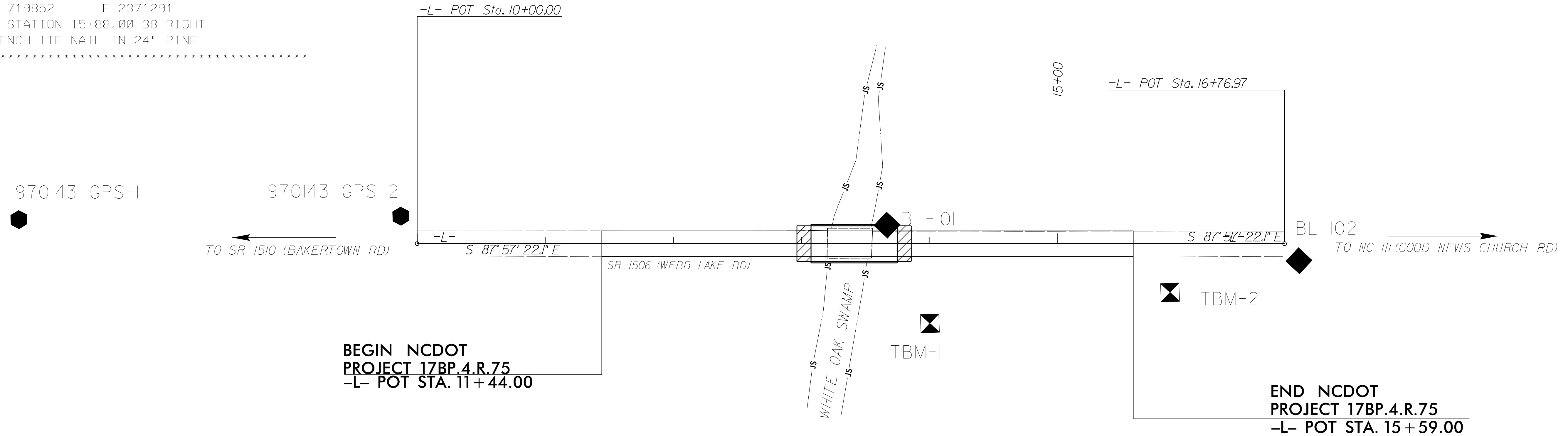
BASELINE DATA

| BL | POINT | DESC. | NORTH | EAST | ELEVATION | L STATION | OFFSET |
|-----|--------|--------|-------------|--------------|-----------|------------------------|----------|
| 1 | 970143 | GPS-1 | 719941.3400 | 2370395.0700 | 113.54 | OUTSIDE PROJECT LIMITS | |
| 2 | 970143 | GPS-2 | 719933.4000 | 2370693.0600 | 103.67 | OUTSIDE PROJECT LIMITS | |
| 101 | | BL-101 | 719912.8730 | 2371071.9870 | 103.41 | 13+66.64 | 14.47 LT |
| 102 | | BL-102 | 719873.5630 | 2371392.3270 | 113.25 | OUTSIDE PROJECT LIMITS | |

BENCHMARK DATA

 TBM-1 ELEVATION = 102.36
 N 719835 E 2371103
 L STATION 14+00.00 62 RIGHT
 BENCHLITE NAIL IN 18" MAPLE

 TBM-2 ELEVATION = 114.90
 N 719852 E 2371291
 L STATION 15+88.00 38 RIGHT
 BENCHLITE NAIL IN 24" PINE



**BEGIN NCDOT
 PROJECT 17BP.4.R.75
 -L- POT STA. 11+44.00**

**END NCDOT
 PROJECT 17BP.4.R.75
 -L- POT STA. 15+59.00**

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "970143 GPS-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 719933.40(ft) EASTING: 2370693.06(ft) ELEVATION: 0.999906474(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 103.67 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "970143 GPS-2" TO -L- STATION IS 10+00.00 S 28° 42' 52.15"E 24.99'

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

NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION](https://connect.ncdot.gov/resources/location)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 970143_LS_CONTROL.TXT
 SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY WETHERILL ENGINEERING.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

NOTE: DRAWING NOT TO SCALE

SURVEY CONTROL SHEET 97-0143

| | |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| 97-0143 | 1C-2 |
| Location and Surveys | |

FINAL

| TYPE | STATION | NORTH | EAST |
|------|----------|-------------|--------------|
| POT | 10+00.00 | 719911.4874 | 2370705.0640 |
| POT | 13+38.49 | 719899.4154 | 2371043.3350 |
| POT | 16+76.97 | 719887.3435 | 2371381.6060 |

ROW MARKER CONCRETE OR GRANITE

| ALIGN | STATION | OFFSET | NORTH | EAST |
|-------|----------|--------|--------------|---------------|
| L | 12+50.00 | 40.00 | 719862.59672 | 2370953.47837 |
| L | 12+50.00 | -40.00 | 719942.54582 | 2370956.33154 |
| L | 12+50.00 | -30.00 | 719932.55219 | 2370955.97489 |
| L | 12+50.00 | 30.00 | 719872.59036 | 2370953.83502 |
| L | 12+75.00 | -40.00 | 719941.65421 | 2370981.31563 |
| L | 12+75.00 | 30.00 | 719871.69874 | 2370978.81911 |
| L | 12+75.00 | 40.00 | 719861.70511 | 2370978.46247 |
| L | 12+75.00 | -30.00 | 719931.66057 | 2370980.95899 |
| L | 13+00.00 | -30.00 | 719930.76896 | 2371005.94308 |
| L | 13+00.00 | -50.00 | 719950.75624 | 2371006.65637 |
| L | 13+35.00 | 50.00 | 719849.57160 | 2371038.06765 |
| L | 13+35.00 | 30.00 | 719869.55887 | 2371038.78094 |
| L | 13+85.00 | -50.00 | 719947.72475 | 2371091.60230 |
| L | 13+85.00 | -30.00 | 719927.73748 | 2371090.88901 |
| L | 13+95.00 | 30.00 | 719867.41900 | 2371098.74277 |
| L | 13+95.00 | 50.00 | 719847.43173 | 2371098.02948 |

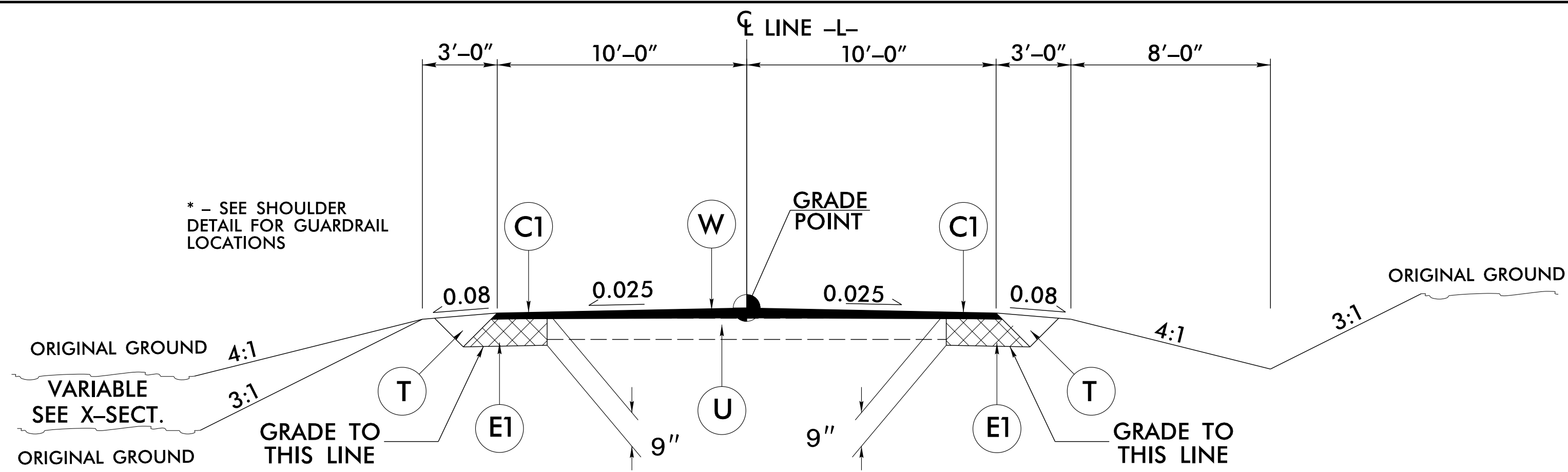
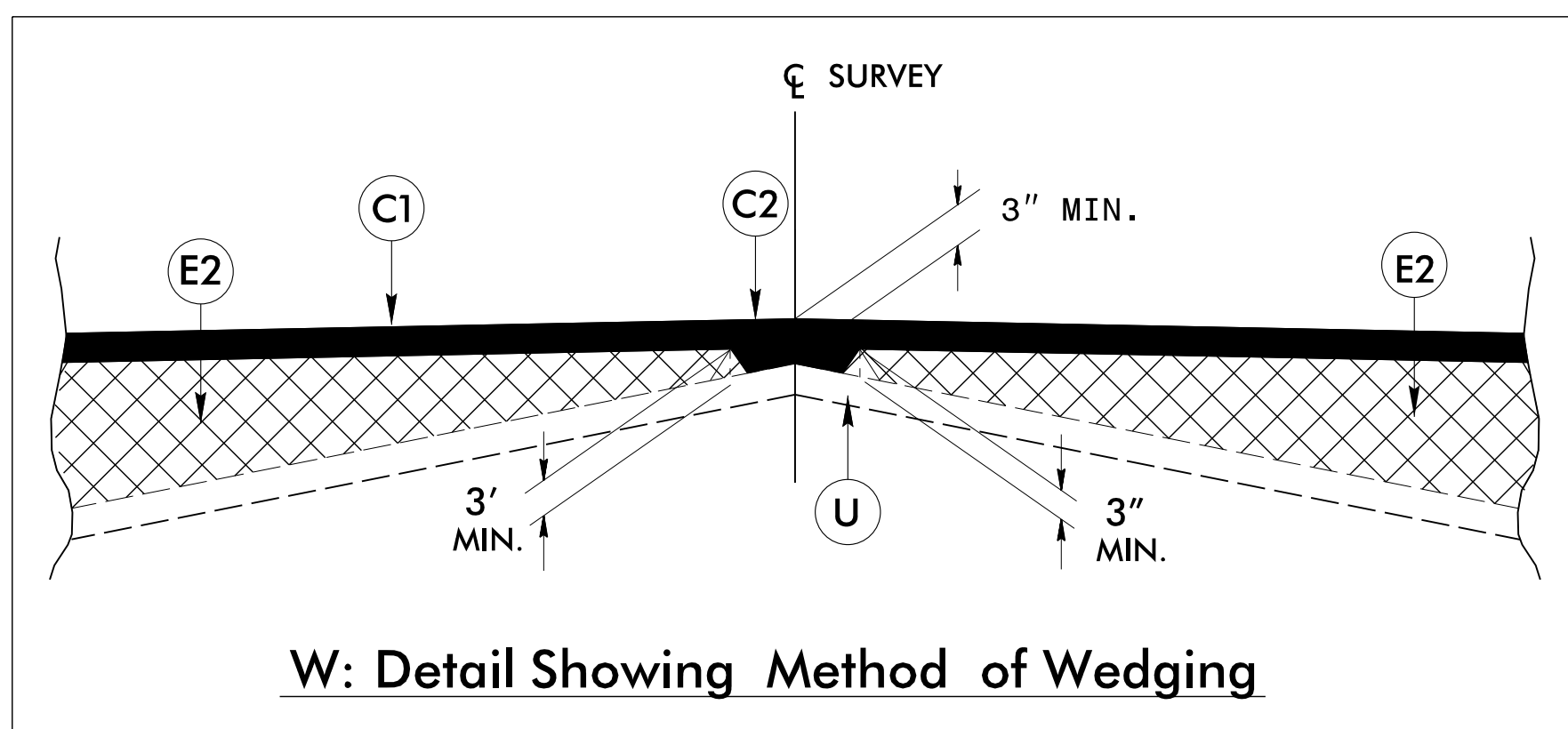
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 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

6/2/09

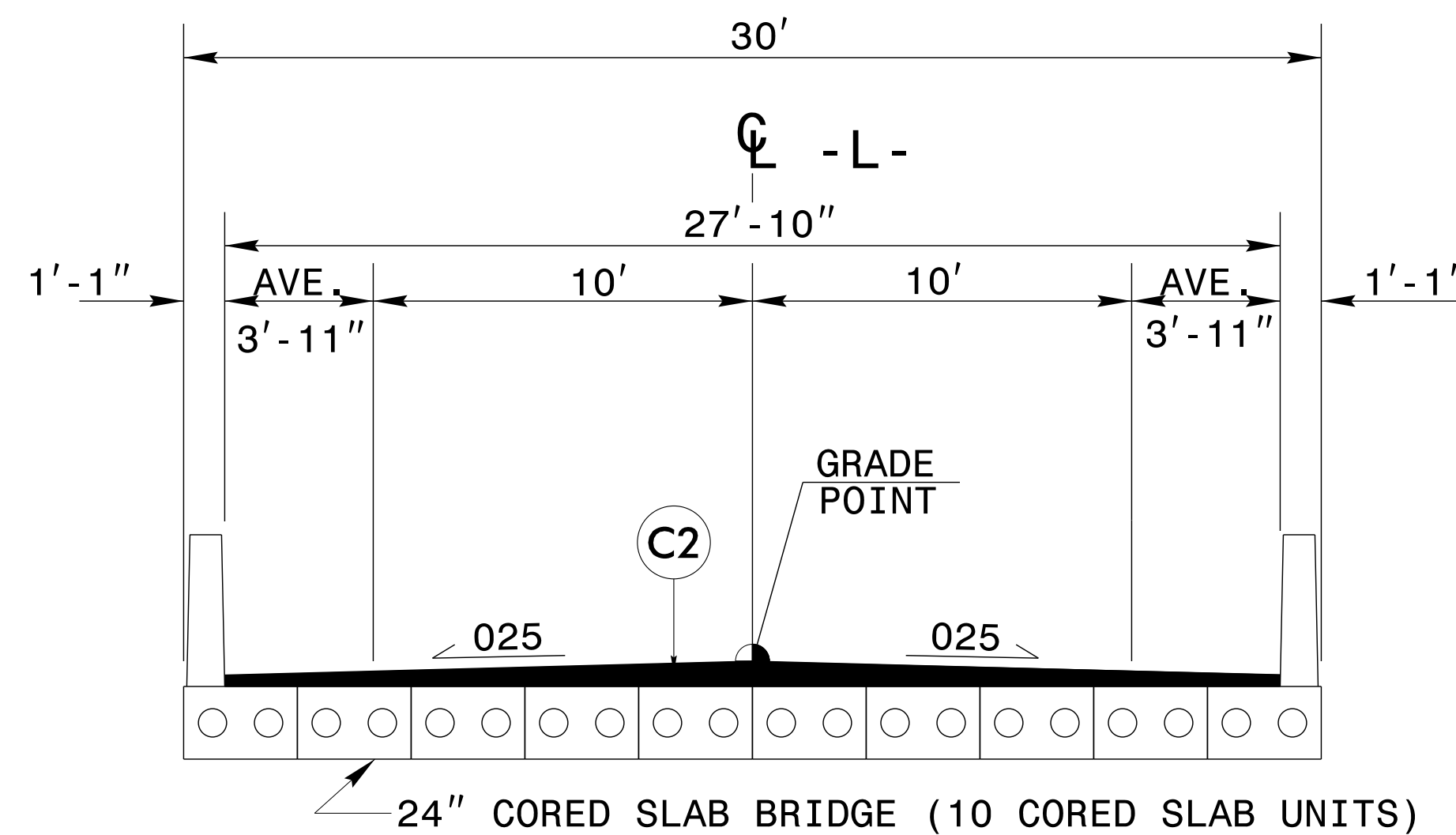
| PAVEMENT SCHEDULE | |
|-------------------|--|
| C1 | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C2 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH. |
| E1 | PROP. APPROX. 6" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| E2 | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, 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. |
| T | EARTH MATERIAL. |
| U | EXISTING PAVEMENT. |
| V | MILLING BITUMINOUS PAVEMENT. (SEE MILLING DETAIL) |
| W | VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL) |

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



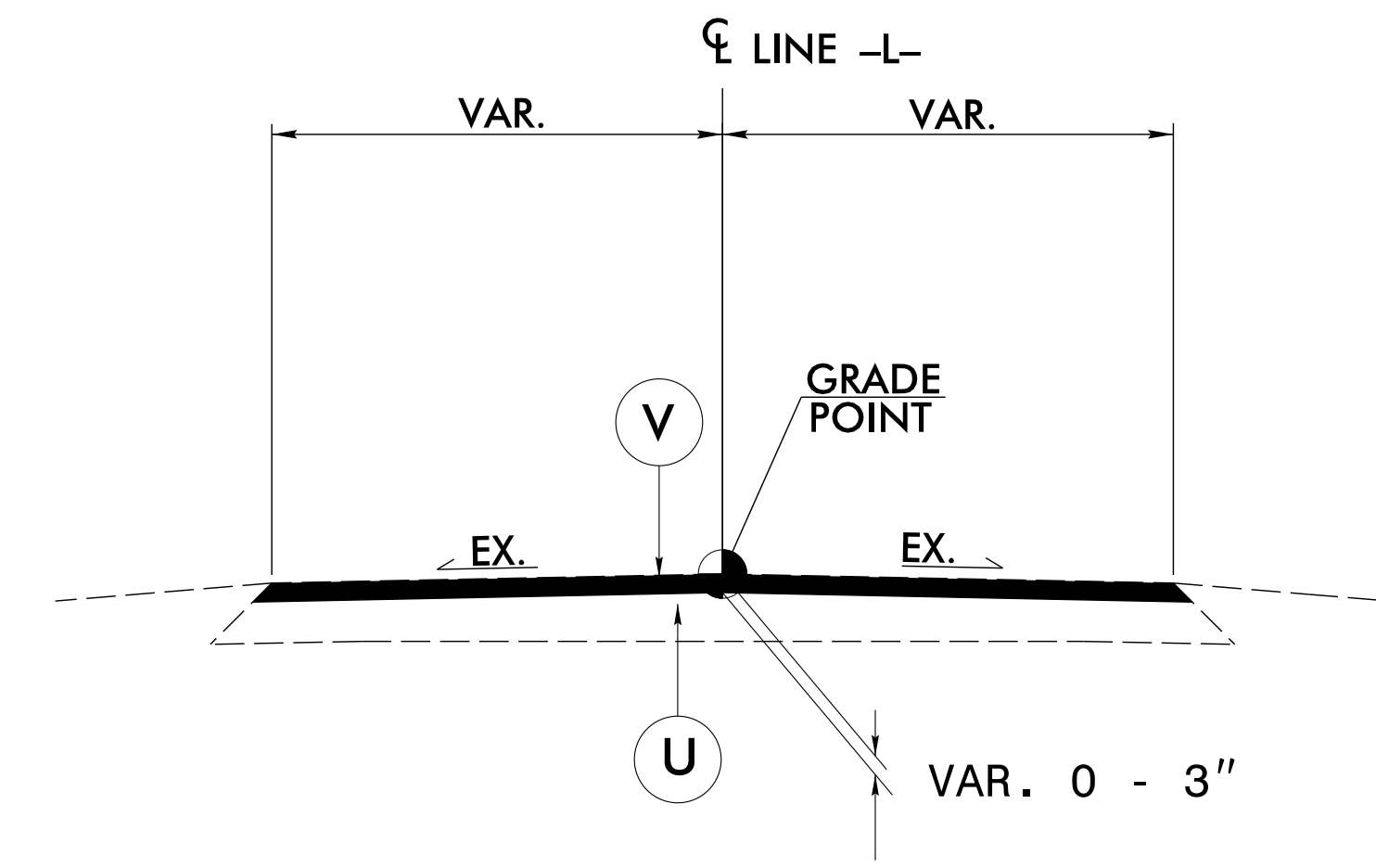
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AS FOLLOWS:
 -L- STA. 11+44.00 TO -L- STA. 12+79.00
 -L- STA. 14+04.00 TO -L- STA. 15+59.00

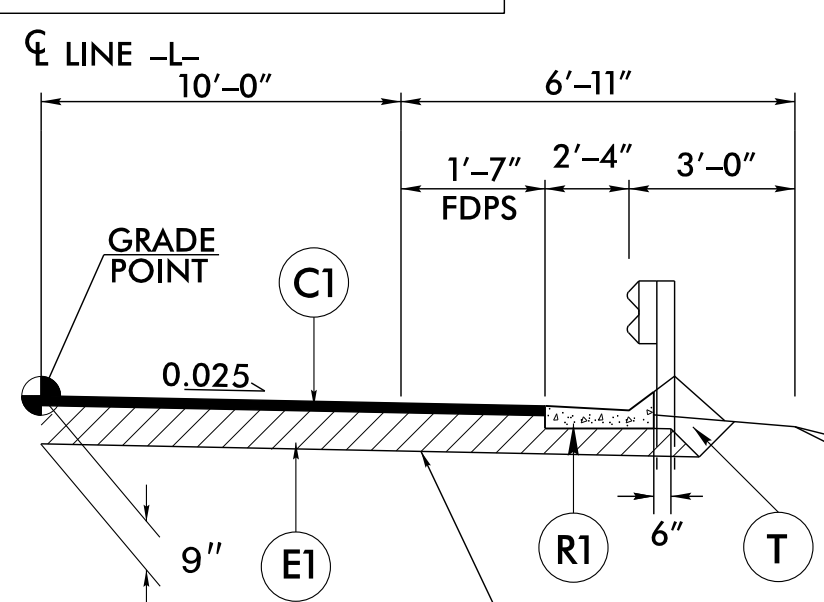


TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3 AS FOLLOWS:
 -L- STA. 13+07.38 (BEGIN BRIDGE) TO -L- STA. 13+74.63 (END BRIDGE)

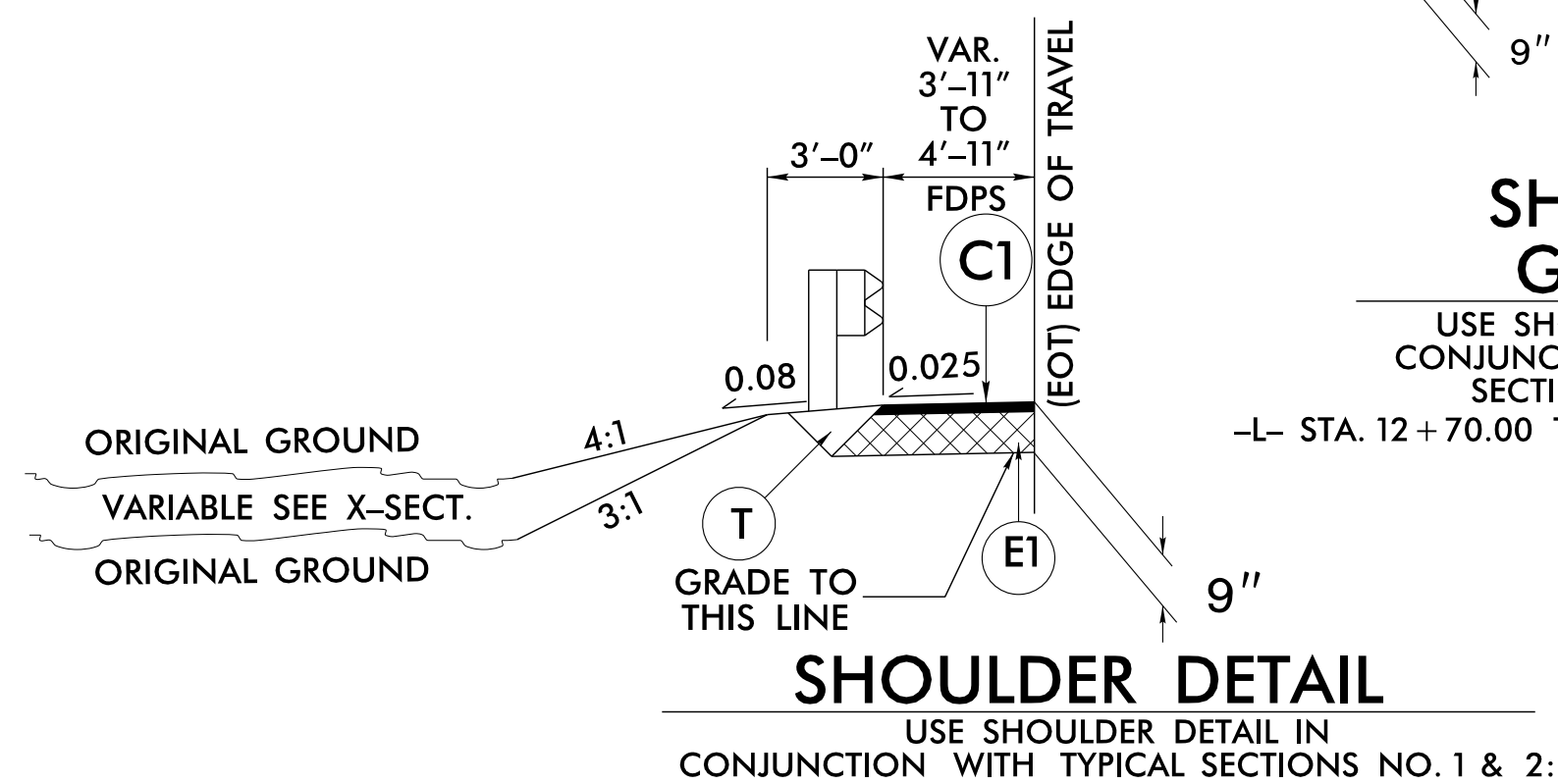


USE MILLING DETAIL AS FOLLOWS:
 -L- STA. 11+44.00 TO -L- STA. 12+22.00
 -L- STA. 15+00.00 TO -L- STA. 15+59.00

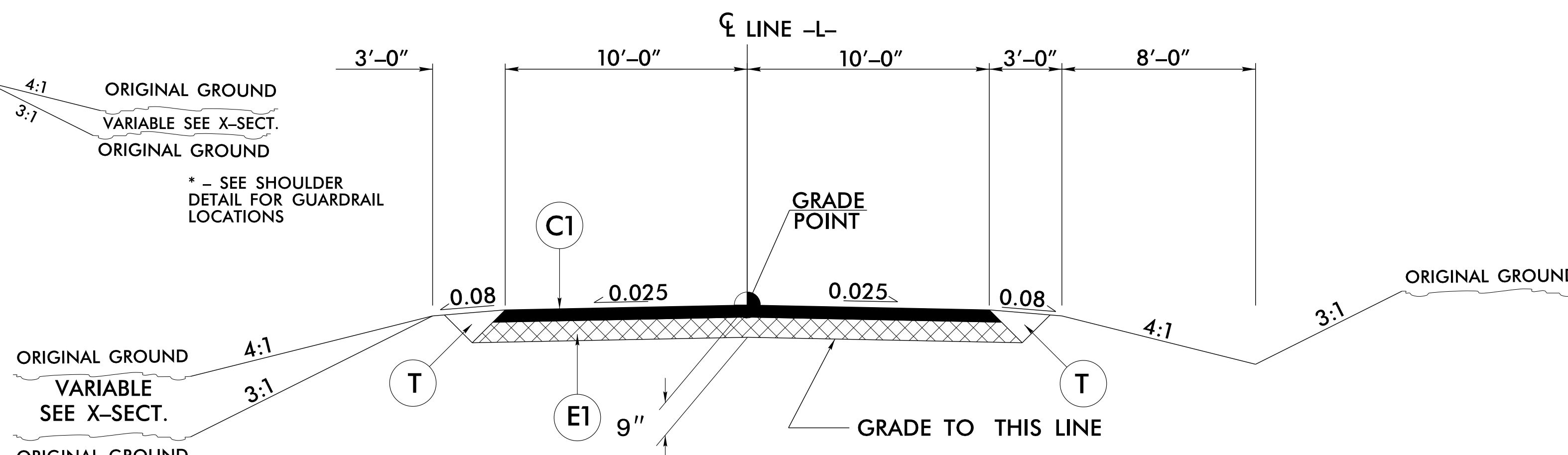


SHOULDER BERM GUTTER DETAIL

USE SHOULDER DETAIL IN CONJUNCTION WITH TYPICAL SECTIONS NO. 1 & 2:
 -L- STA. 12+70.00 TO -L- STA. 12+96.50 LT. & RT.



USE SHOULDER DETAIL IN CONJUNCTION WITH TYPICAL SECTIONS NO. 1 & 2:
 -L- STA. 12+01.13 TO -L- STA. 13+07.38 LT. & RT.
 -L- STA. 13+74.63 TO -L- STA. 14+49.63 LT. & RT.



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AS FOLLOWS:
 -L- STA. 12+79.00 TO -L- STA. 13+07.38 (BEGIN BRIDGE)
 -L- STA. 13+74.63 (END BRIDGE) TO -L- STA. 14+04.00

| | |
|--|----------------|
| PROJECT REFERENCE NO. 17BP.4.R.75 | SHEET NO. 2 |
| | |
| | |
| 1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-02777 Bus: 919 851 8077 Fax: 919 851 8107 | |
| TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION | |

BRIDGE #970143

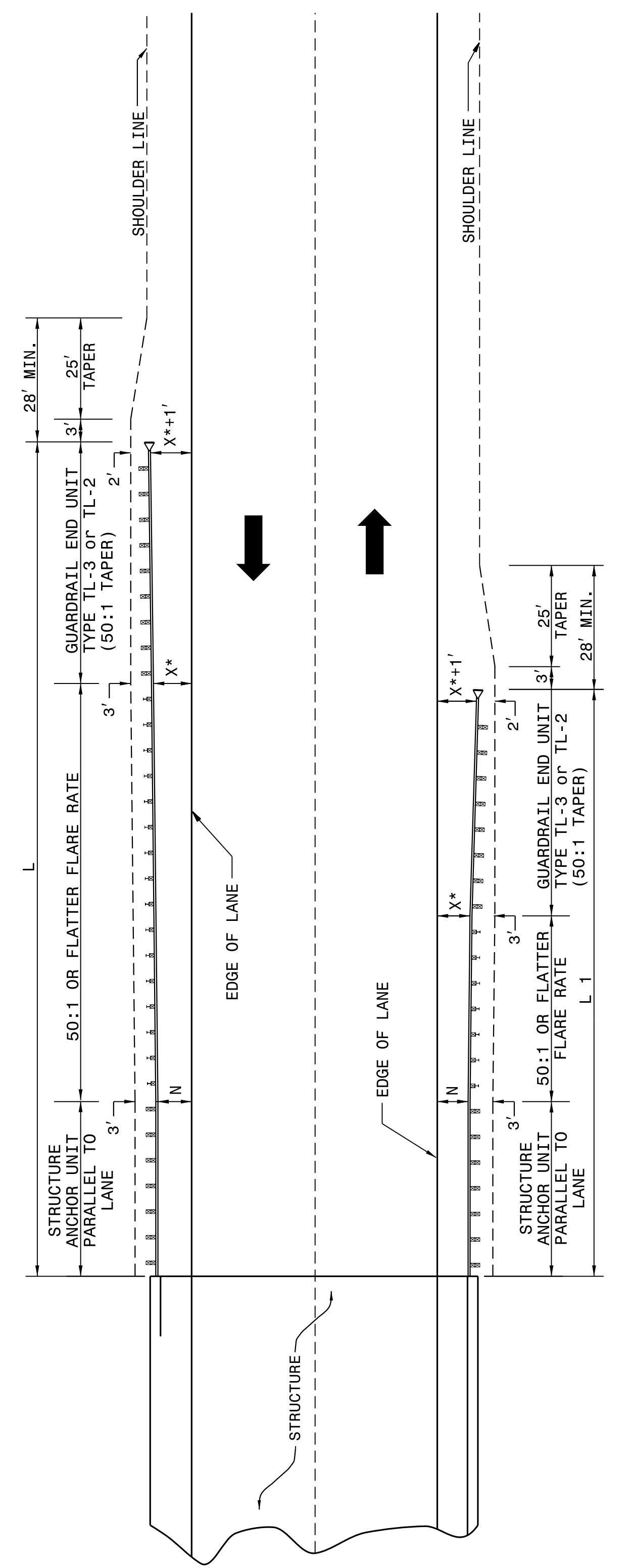
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ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

**GUARDRAIL INSTALLATION AT BRIDGE APPROACHES
FOR TWO-LANE, TWO-WAY TRAFFIC**

| DESIGN SPEED (MPH) | "L" APPROACH LENGTH (FT.) | | "L1" TRAILING LENGTH (FT.) | | | |
|--------------------|---------------------------|------------------|----------------------------|------------------|-----------|------------|
| | DESIGN YEAR ADT | CURRENT YEAR ADT | DESIGN YEAR ADT | CURRENT YEAR ADT | OVER 2000 | UNDER 2000 |
| 70 | 362.5' | 382.5' | 350.0' | 287.5' | 187.5' | 175.0' |
| 60 | 300.0' | 287.5' | 275.0' | 225.0' | 137.5' | 100.0' |
| 50 | 212.5' | 212.5' | 200.0' | 162.5' | 87.5' | 75.0' |
| 40 | 175.0' | 150.0' | 137.5' | 112.5' | 75.0' | 75.0' |
| X* | 8' | 6' | 4' | 4' | 8' | 4' |

* USE FLARE RATE AS THE CONTROL IF THE "X" DISTANCE IS NOT OBTAINED. ("X" IS BASED ON SHOULDER WIDTHS IN THE HIGHWAY DESIGN BRANCH MANUAL, PART 1, 1-4B, F1).

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.

SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS

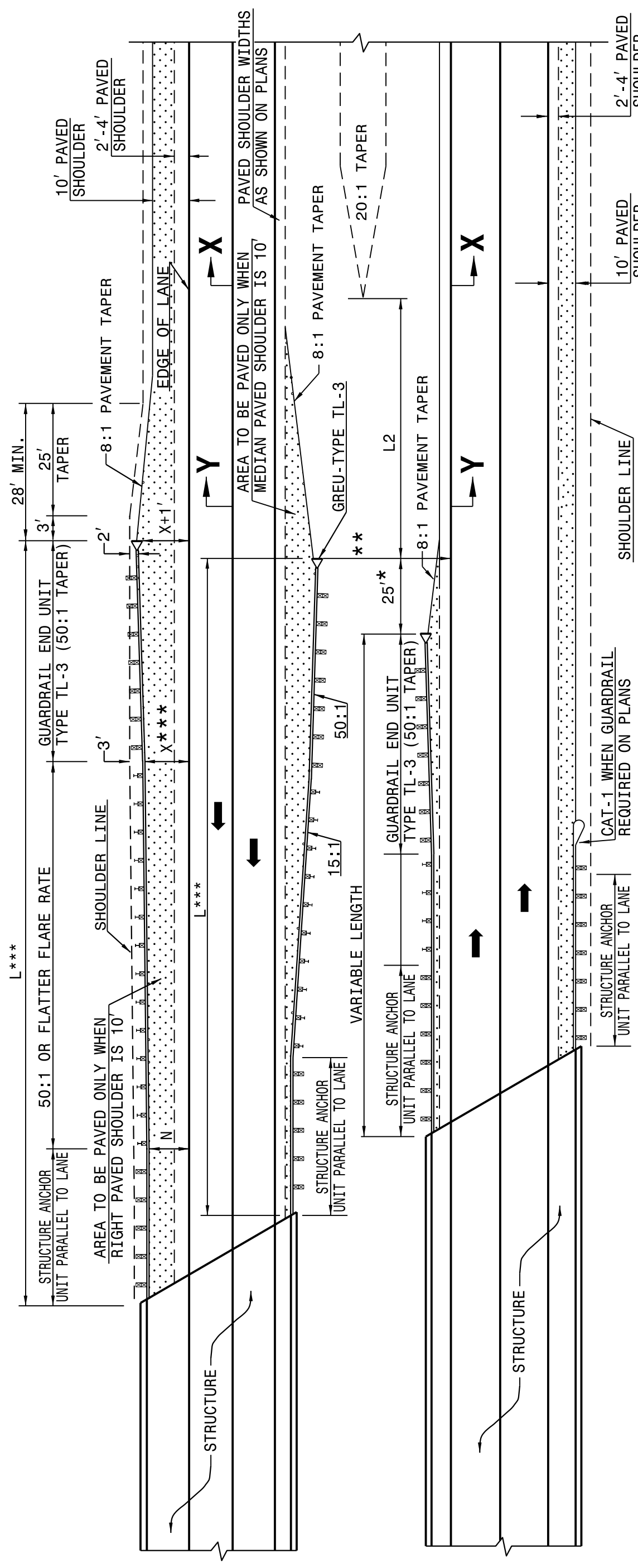
FOR POSTED SPEEDS ≥ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45mph USE GREU TYPE TL-2

SHEET 4 OF 11
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LENGTHS AND OFFSETS FOR PROPOSED GUARDRAIL AT TWO LANE - TWO WAY LOCATIONS

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FOR POSTED SPEEDS ≥ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45mph USE GREU TYPE TL-2

DIMENSIONS FOR LENGTH OF GUARDRAIL APPROACHING DUAL LANE BRIDGES

| MEDIAN WIDTH | 70 MPH | 60 MPH | 50 MPH | -L2- DIM. |
|--------------|--------|--------|--------|-----------|
| 30' | 300.0' | 250.0' | 150.0' | 80.0' |
| 36' | 300.0' | 250.0' | 150.0' | 60.0' |
| 40' & ABOVE | 300.0' | 250.0' | 150.0' | 40.0' |

NOTES: * MINOR VARIATION TO THE 25'-0" DIMENSION IS PERMISSIBLE TO ACCOMMODATE THE 12'-6" IN GUARDRAIL LENGTHS.

** NO GUARDRAIL IS REQUIRED ON THE TRAILING END WHEN THIS DISTANCE EXCEEDS CLEAR ROADSIDE RECOVERY AREA FOR THE APPROPRIATE DESIGN SPEED.

*** BASED ON "X" OF 12' USE FLARE RATE AS THE CONTROL IF THE "X" DISTANCE IS NOT OBTAINED. ("X" IS BASED ON SHOULDER WIDTHS IN THE HIGHWAY DESIGN BRANCH MANUAL, PART 1, 1-4B, F1A).

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE. THE DESIGN LAYOUT FOR LENGTHS SHOWN ON THIS STANDARD ARE MINIMUM DESIGN LENGTHS. SEE SHEET 1 OF 12 FOR SECTIONS XX, YY

SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS

SHEET 3 OF 11
862D01

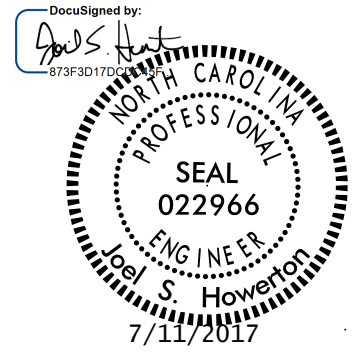
DETAIL OF GUARDRAIL APPROACHING DUAL LANE BRIDGES

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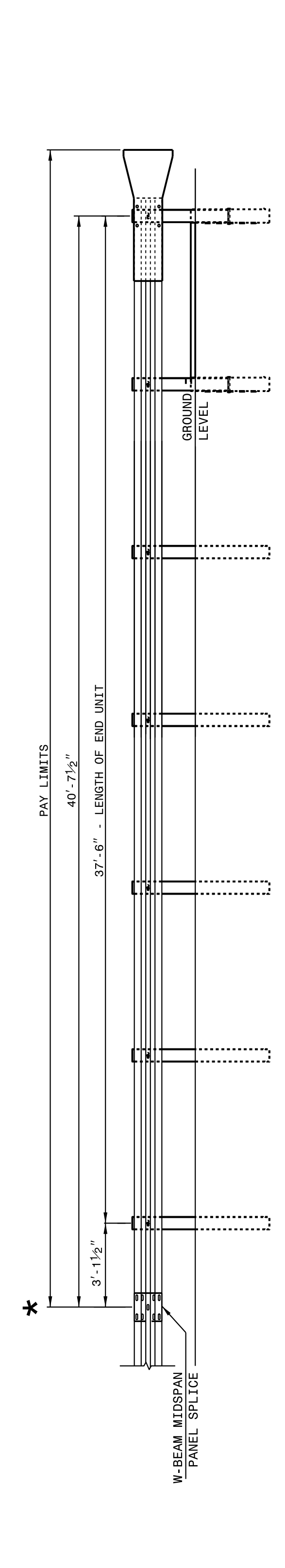


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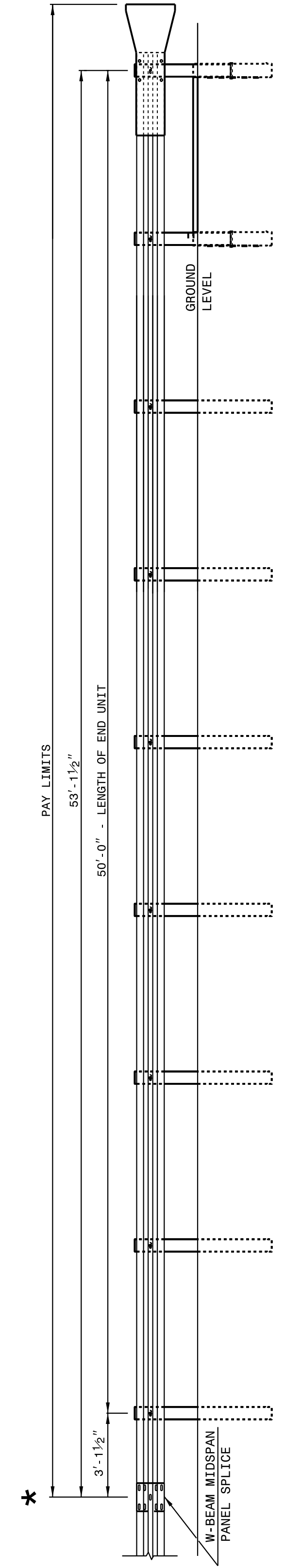
ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 2 OF 8
862D02



**FLARED AND TANGENT
ELEVATION VIEW**

* WHEN INSTALLING GUARDRAIL END UNITS THAT ARE 2'-1" MOUNTING HEIGHT TO EXISTING GUARDRAIL, REMOVE THE EXISTING GUARDRAIL TO TRANSITION FROM THE EXISTING HEIGHT TO THE PROPOSED 2'-1" HEIGHT. SEE 862.02, SHEET 4 OF 8 FOR TRANSITION DETAILS.



**FLARED AND TANGENT
ELEVATION VIEW**

APPROACH END UNITS

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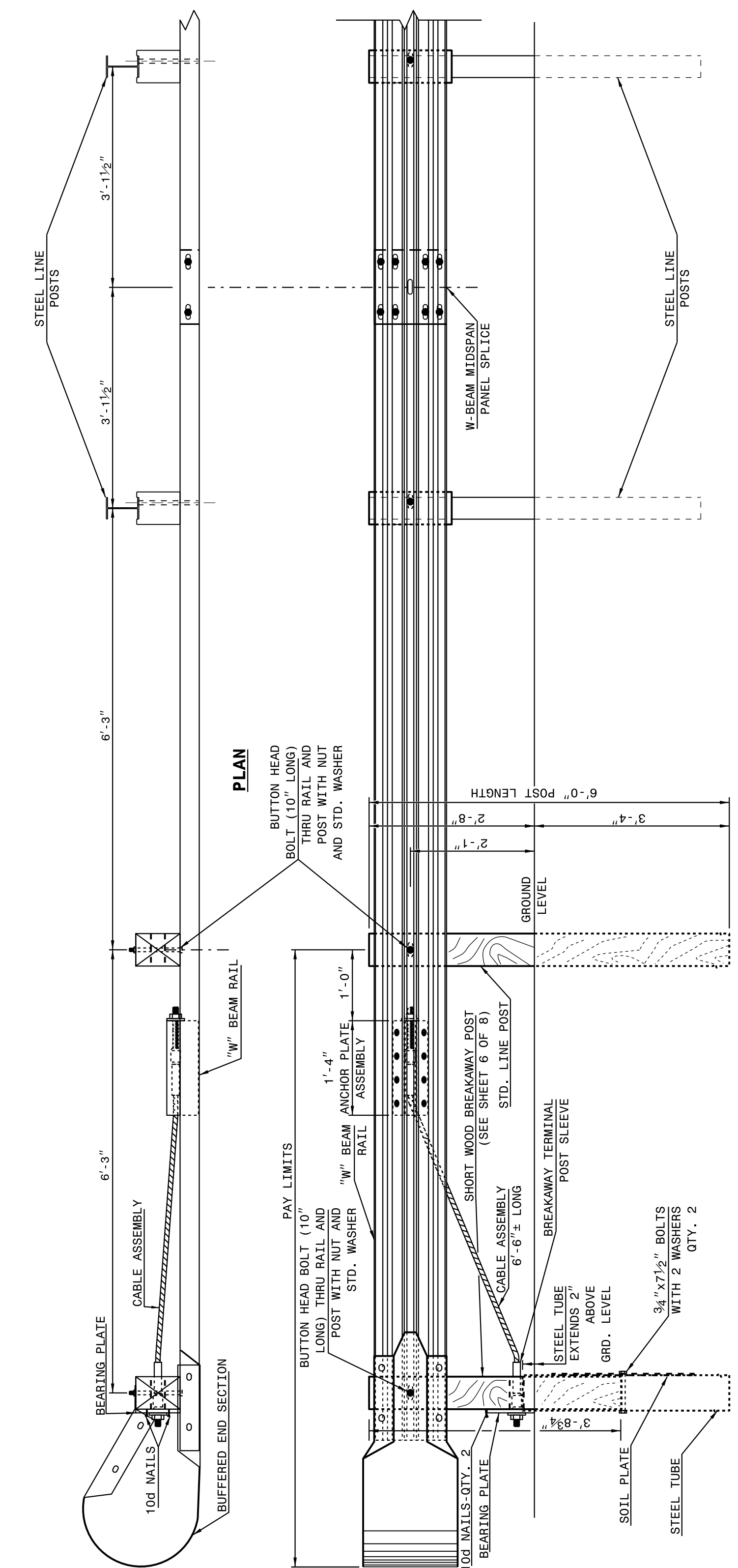
ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 2 OF 8
862D02

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ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 1 OF 8
862D02



PLAN

ELEVATION

**TRAILING END UNIT ASSEMBLY
C.A.T. - 1 SYSTEM**

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ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 1 OF 8
862D02

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| STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. | ROADWAY DETAIL DRAWING FOR GUARDRAIL INSTALLATION | SHEET 6 OF 8 862D02 |
| | | |
| SYSTEM PARTS | | |
| ROADWAY DETAIL DRAWING FOR GUARDRAIL INSTALLATION | | |
| SHEET 6 OF 8 862D02 | | |

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| STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. | ROADWAY DETAIL DRAWING FOR GUARDRAIL INSTALLATION | SHEET 6 OF 8 862D02 |
| | | |
| "W6" STEEL POST | | |
| ROADWAY DETAIL DRAWING FOR GUARDRAIL INSTALLATION | | |
| SHEET 6 OF 8 862D02 | | |

| | | |
|---|---|-------------------------------|
| STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. | ROADWAY DETAIL DRAWING FOR GUARDRAIL INSTALLATION | SHEET 5 OF 8 862D02 |
| | | |
| ISOMETRIC VIEW | | |
| | | |
| FRONT - MID SPAN SPLICE | | |
| ROADWAY DETAIL DRAWING FOR GUARDRAIL INSTALLATION | | |
| SHEET 5 OF 8 862D02 | | |

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|---|---|-------------------------------|
| STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. | ROADWAY DETAIL DRAWING FOR GUARDRAIL INSTALLATION | SHEET 5 OF 8 862D02 |
| | | |
| FRONT - MID SPAN SPLICE | | |
| ROADWAY DETAIL DRAWING FOR GUARDRAIL INSTALLATION | | |
| SHEET 5 OF 8 862D02 | | |

NOTES:
 A - 5/8" DIA. BUTTON HEAD SPLICE BOLT 1 1/4" LONG (8 REQ. PER SPLICE JOINT).
 B - 5/8" DIA. BUTTON HEAD BOLT 7 1/2" / 9" LONG WITH NUT FOR BOLTING 6" / 8" ROUTED OFFSET BLOCK TO STEEL POSTS.
 C - FIELD PUNCHING OF HOLES INTO GUARDRAIL AS DIRECTED BY THE ENGINEER.

TYPICAL GUARDRAIL AND GUARDRAIL POST ALTERNATIVES



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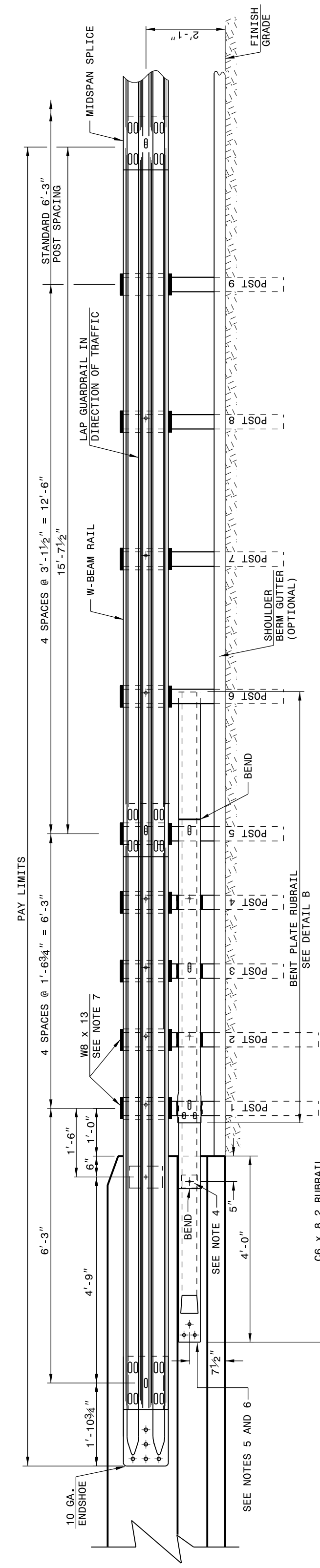
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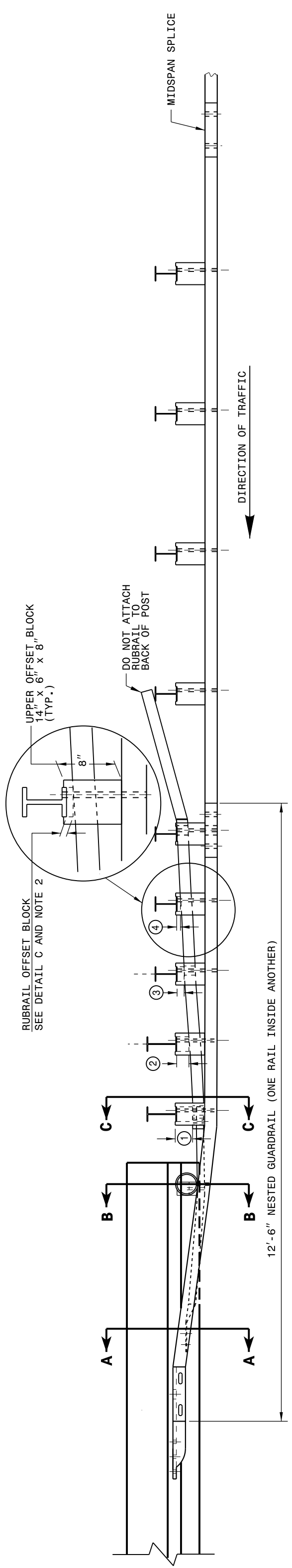
ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNIT
FOR F-SHAPE BARRIER

SHEET 4 OF 7
862D03



ELEVATION

- GENERAL NOTES:
- POSTS 1 THROUGH 5 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKOUTS AND/OR RUBRAIL. RUBRAIL BLOCKOUTS LOCATED ON POSTS 1 THROUGH 4 ARE OFFSET DRILLED AND SECURED WITH 3/8" BUTTONHEAD BOLTS (SEE CHART FOR BOLT LENGTHS). SECURE RUBRAIL BLOCKOUTS TO POSTS 1 AND 4, SECURE RUBRAIL AND BLOCKOUTS TO POSTS 2 AND 3. RUBRAIL IS SECURED TO POST 5 WITH 3/8" x 1 1/4" LONG BUTTONHEAD BOLTS AND RECTANGULAR PLATE WASHERS.
 - SECURE RUBRAIL BLOCKOUTS TO POSTS 1 AND 4 WITH 3/8" x 1 1/4" LONG BUTTONHEAD BOLTS AND RECTANGULAR PLATE WASHERS.
 - STEEL SPACER TUBE IS A SCHEDULE 40 GALVANIZED PIPE 6" INSIDE DIAMETER x 9" LONG. ATTACH TUBE TO GUARDRAIL ONLY WITH 3/8" x 1 1/4" LONG BUTTONHEAD BOLT AND RECTANGULAR PLATE WASHER.
 - SEE DETAIL D FOR SLOPED RUBRAIL BLOCKOUT. BLOCKOUT IS ATTACHED TO RAIL ELEMENT ONLY. USE 3/8" x 3" LAG BOLT WITH FLAT WASHER. 5) SHOP FABRICATE THE C6 x 8.2 RUBRAIL END TO BE CONSISTENT WITH THE SLOPE OF THE F SHAPE AND ATTACH FLUSH WITH THE SLOPED END OF THE BARRIER OR BRIDGE RAIL.
 - ANCHOR THE BARRIER OR BRIDGE RAIL.
 - (a) AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, ANCHOR RUBRAIL USING THREE 5/8" x 6" CHEMICALLY ANCHORED BOLTS WITH WASHERS. MAXIMUM PROJECTION FOR BOLTS IS 1/2".
(b) AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, ANCHOR THE W-BEAM END SHOE USING A 4 BOLT HOLD DOWN PLATE (SEE STD. DWG. 862.04). A 4 BOLT INSERT ASSEMBLY IS ALLOWED ON PRECAST REINFORCED CONCRETE BARRIER (SEE STD. DWG. 857.01).
 - (c) AT NEW BRIDGE RAIL AND NEW OR EXISTING BARRIERS, ANCHOR THE W-BEAM END SHOE AND RUBRAIL AS DETAILED ON THE STRUCTURE PLANS.
 - POSTS 1 AND 2 ARE W8 x 13, 7'-6" LONG. ALL OTHER POSTS IN THE ANCHOR UNIT ARE W6 x 8.5.



PLAN

GUARDRAIL ANCHOR UNIT TYPE B-77

SHEET 4 OF 7
862D03

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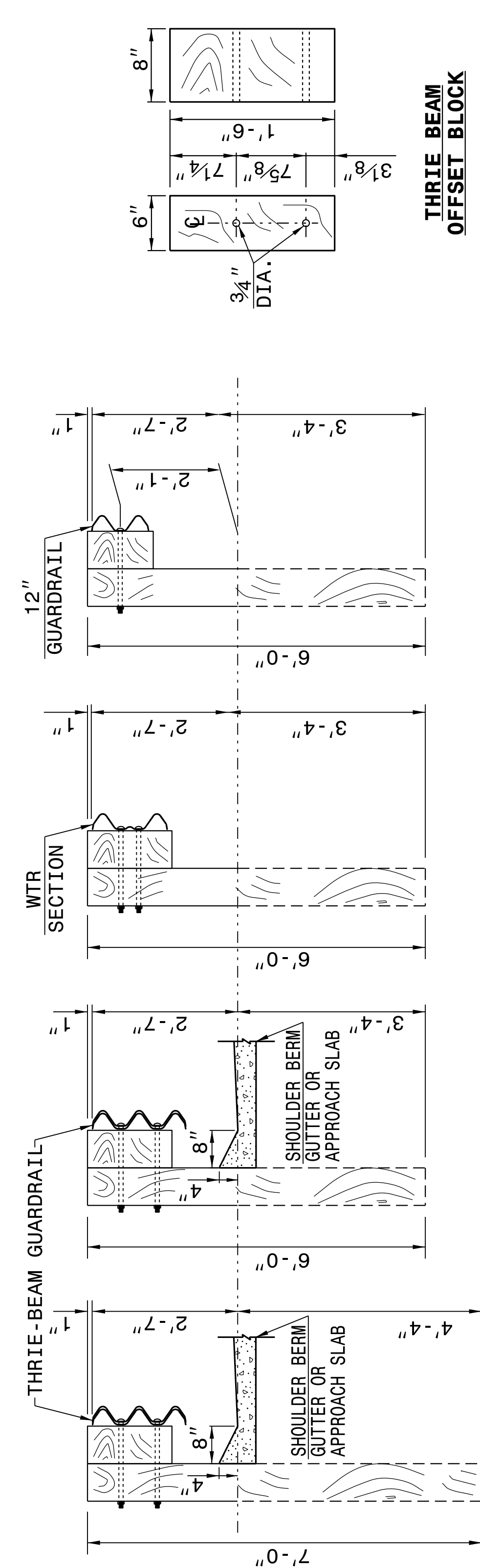
ROADWAY DETAIL DRAWING FOR
GUARDRAIL ANCHOR UNIT
GUARDRAIL ANCHOR UNIT TYPE B-77
FOR F-SHAPE BARRIER

SHEET 4 OF 7
862D03

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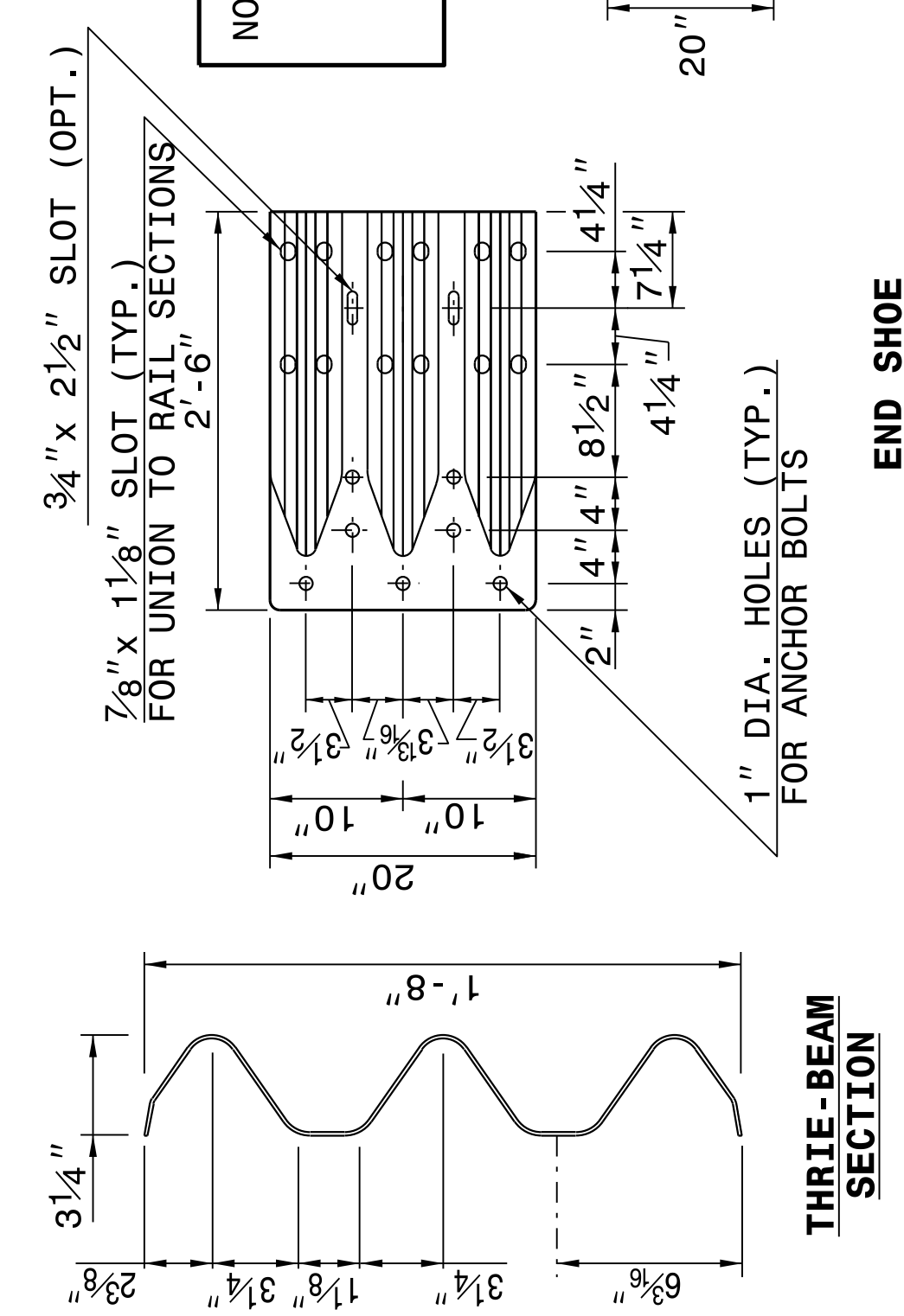
ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III

SHEET 3 OF 7
862D03



SECTION OF THRIVE BEAM POSTS 1 THRU 6
SECTION OF THRIVE BEAM POST 7
SECTION OF WTR BEAM POST 8
SECTION OF 'W' BEAM POST 9

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



THRIVE-BEAM SECTION
END SHOE

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GUARDRAIL ANCHOR UNIT, TYPE III

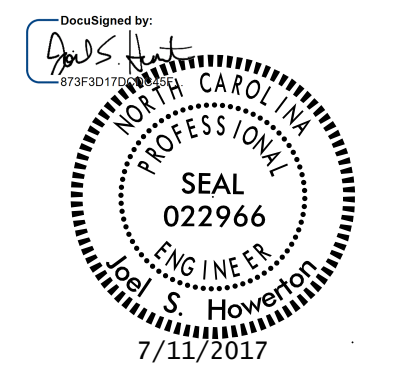
SHEET 3 OF 7
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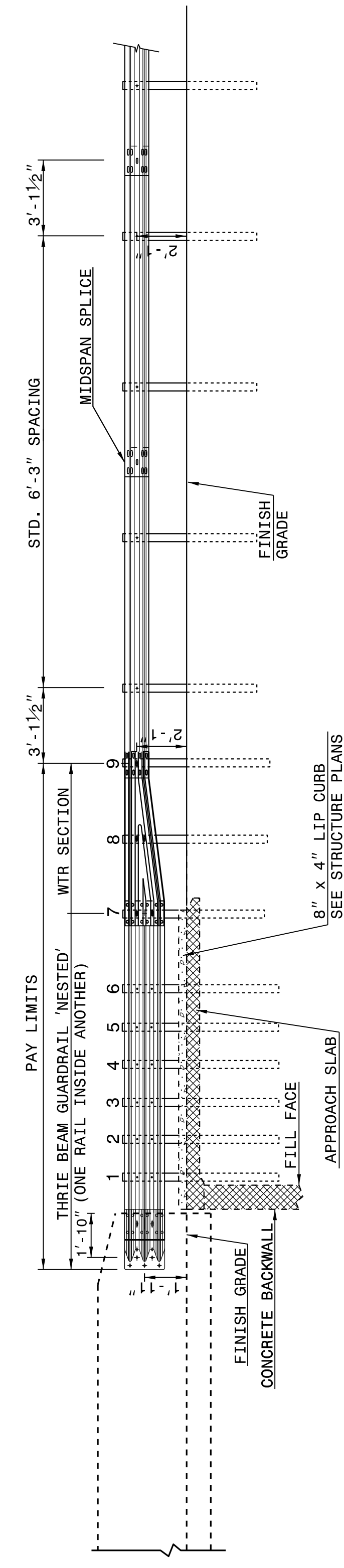
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STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
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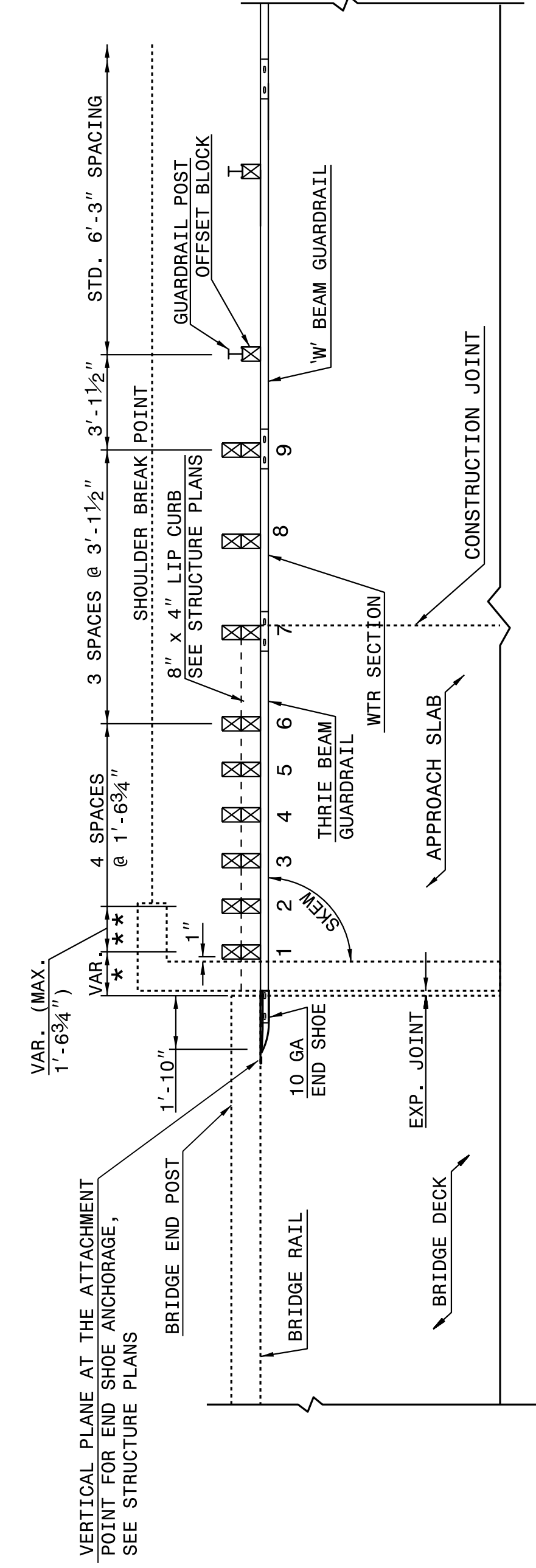
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STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
862D03



ELEVATION

NOTE:
 **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11 1/2" IF CONCRETE BACKWALL IS NOT PRESENT.
 -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8' x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
 -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
 -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
 -SEE SHEET 5 FOR POST SECTIONS 1 THRU 9.



PLAN VIEW

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

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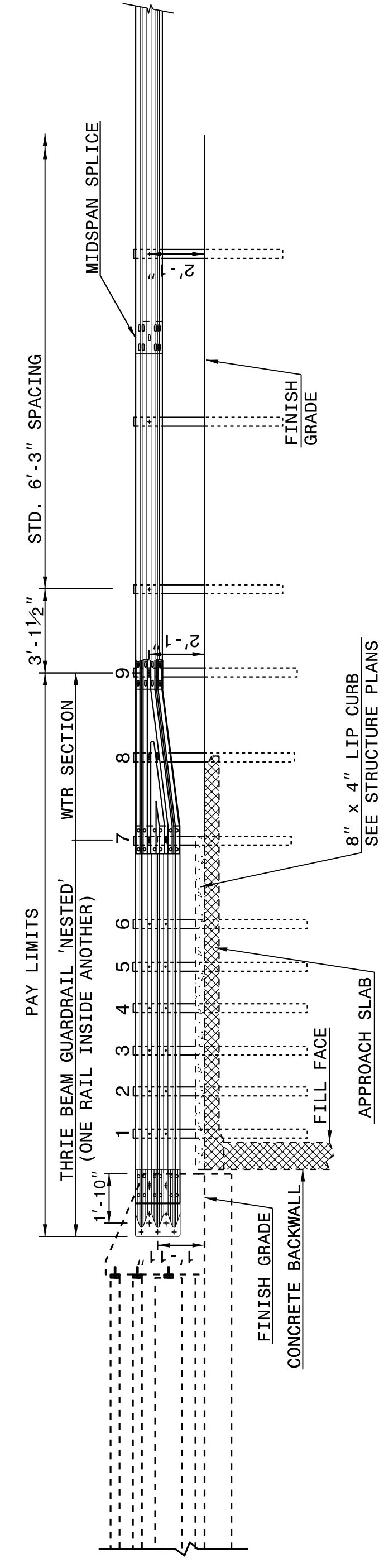
ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7
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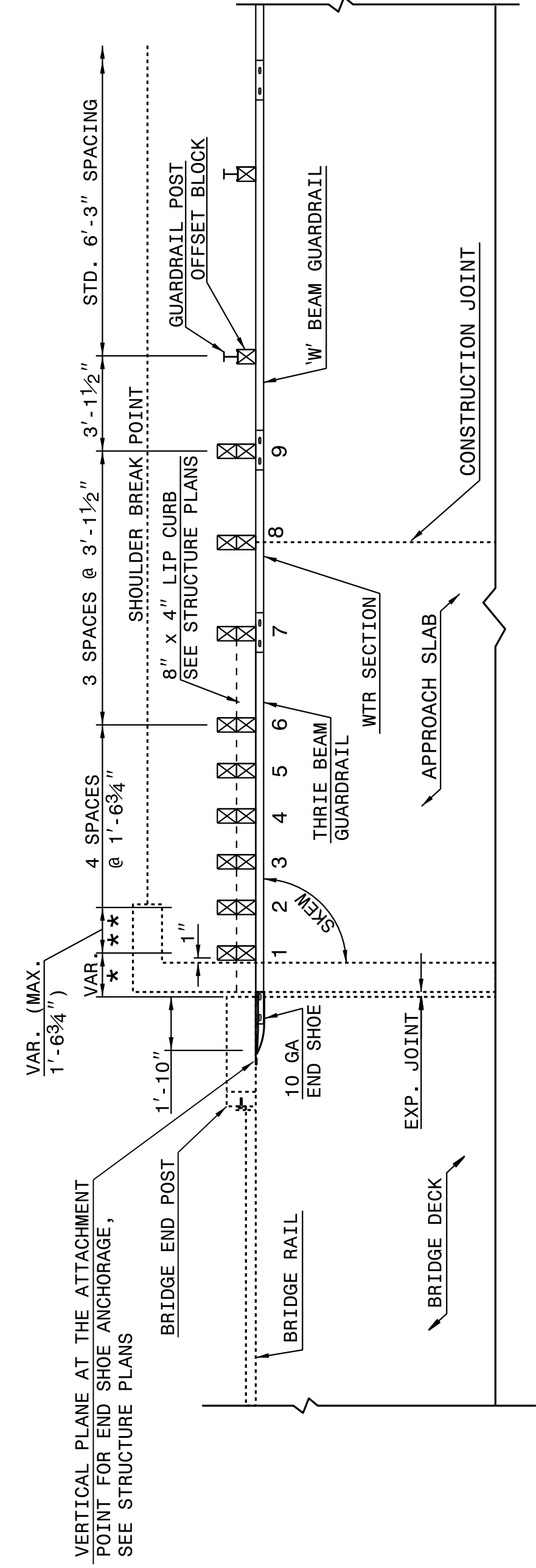
ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7
862D03



ELEVATION

NOTE:
 **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11 1/2" IF CONCRETE BACKWALL IS NOT PRESENT.
 -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8' x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
 -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
 -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
 -SEE SHEET 5 FOR POST SECTIONS 1 THRU 9.



PLAN VIEW

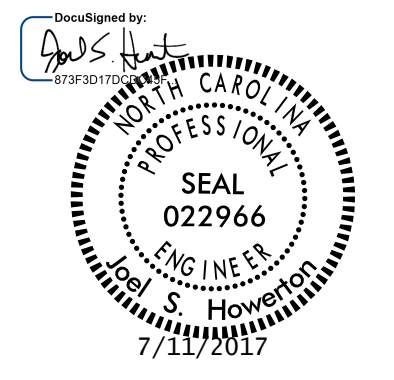
**GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE**

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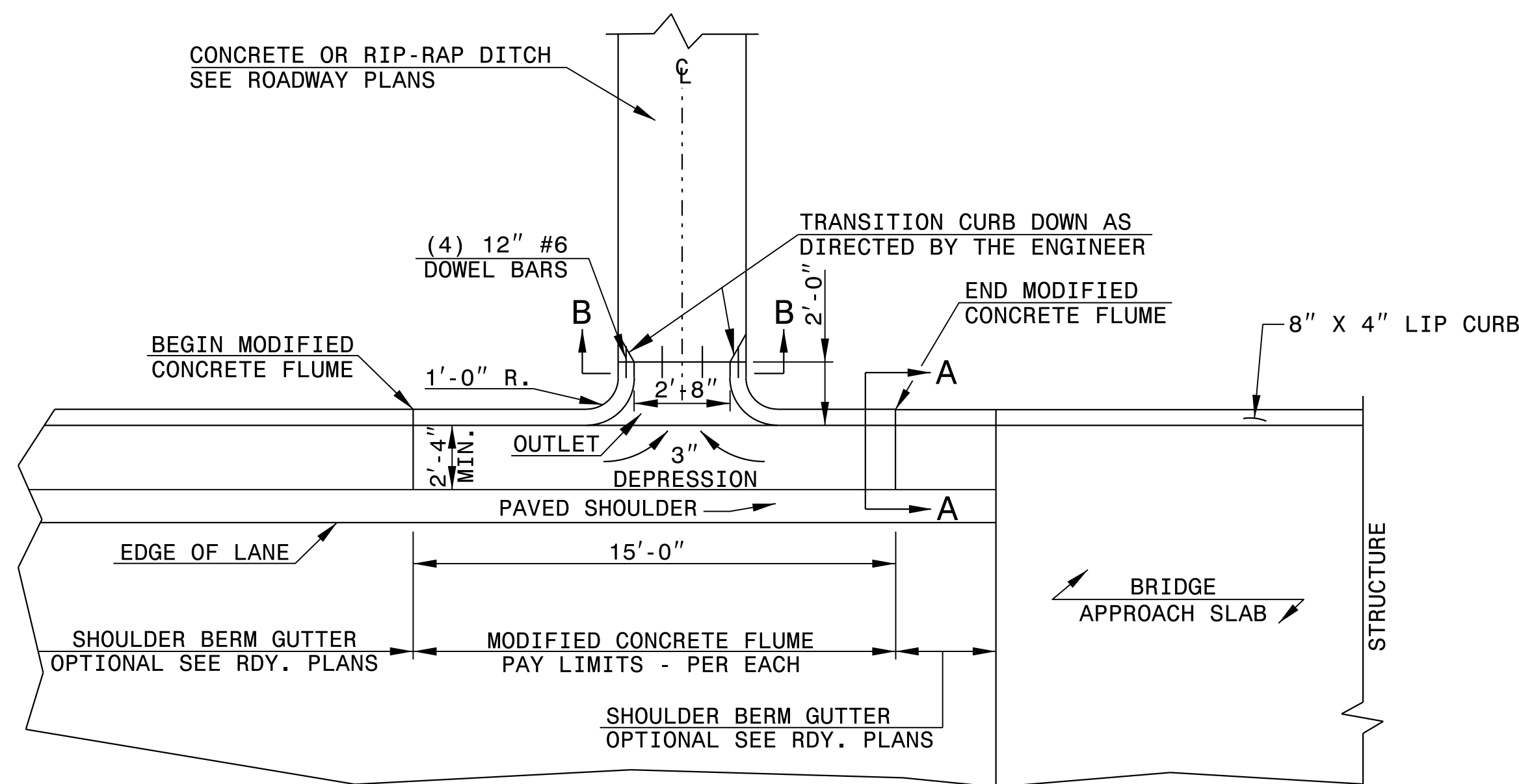


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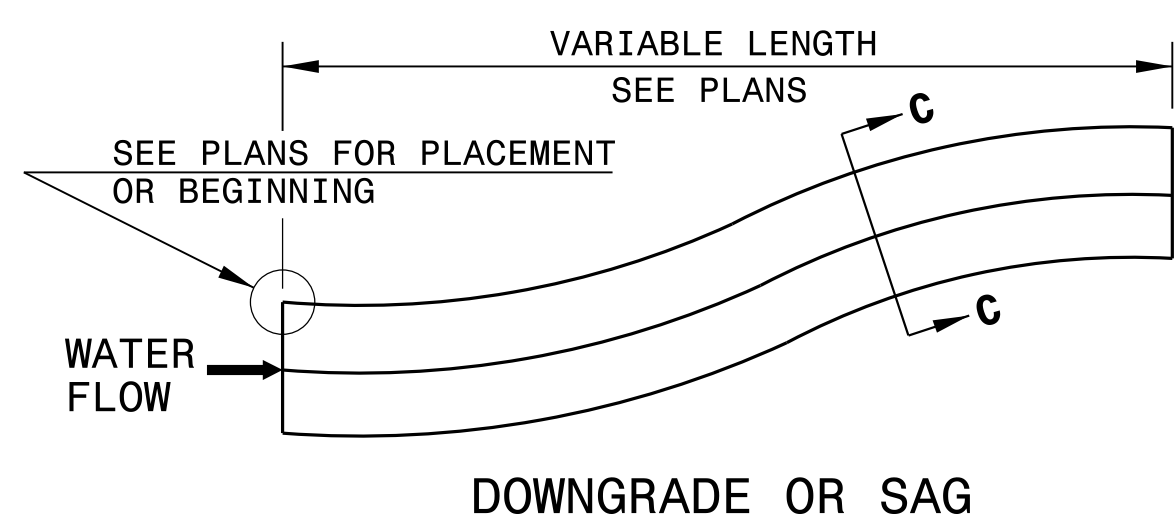
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SHEET 1 OF 1

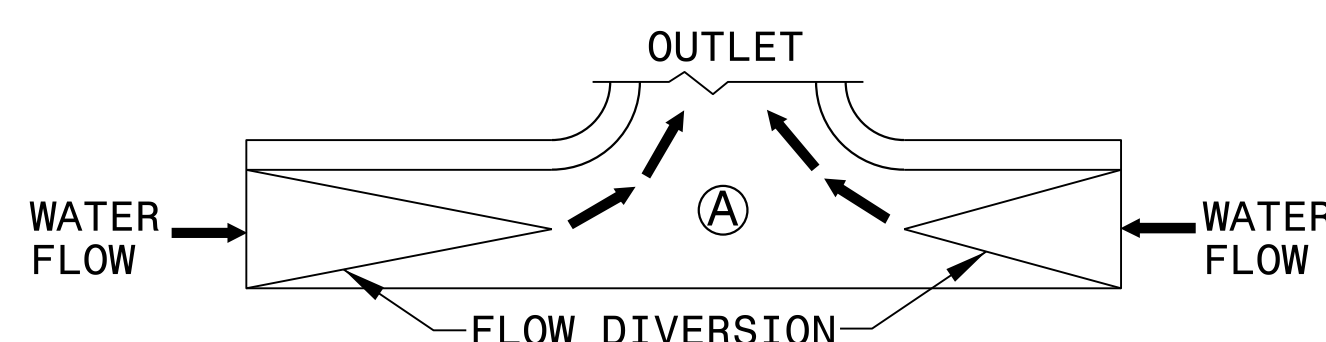
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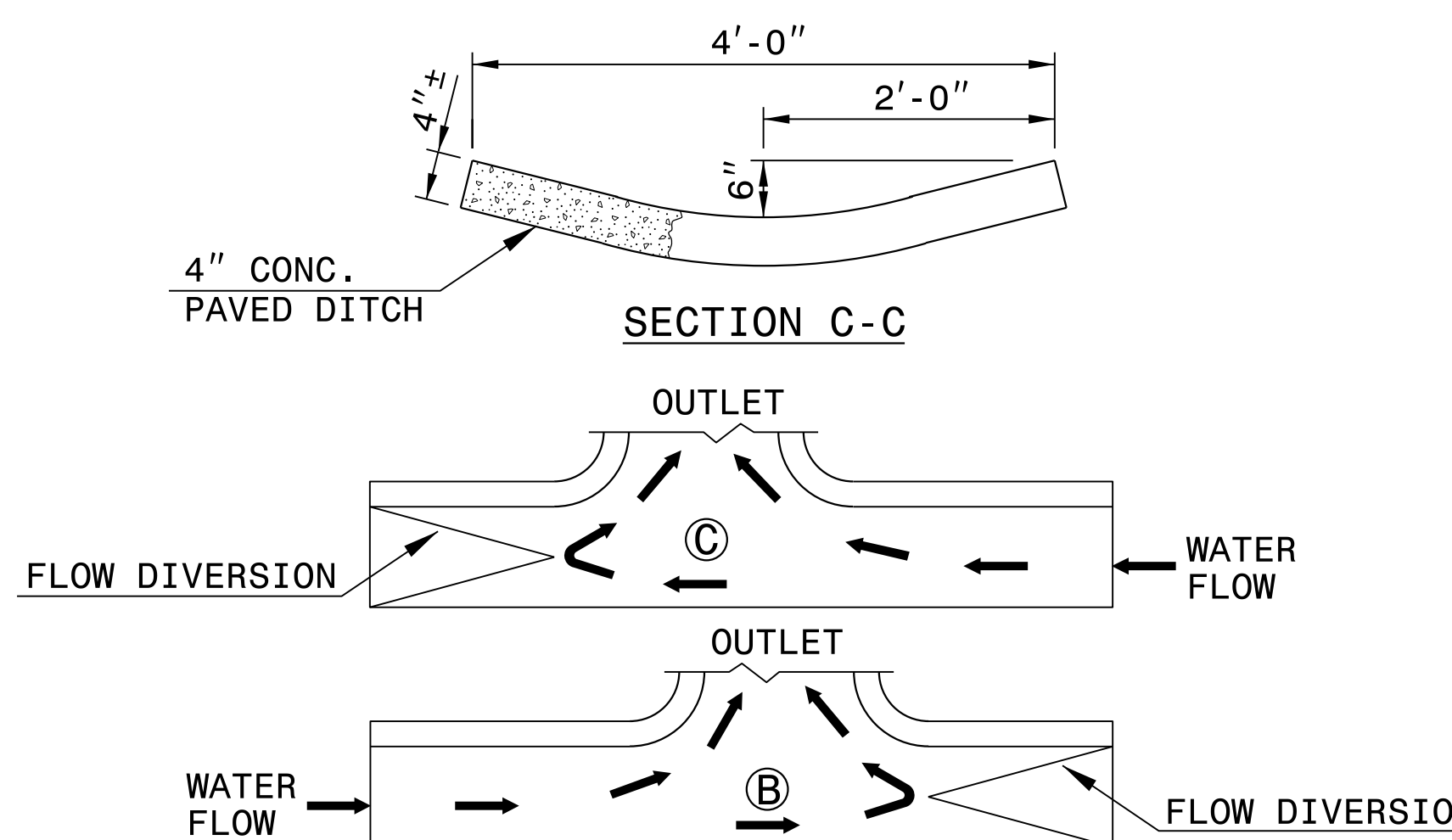
PLAN VIEW



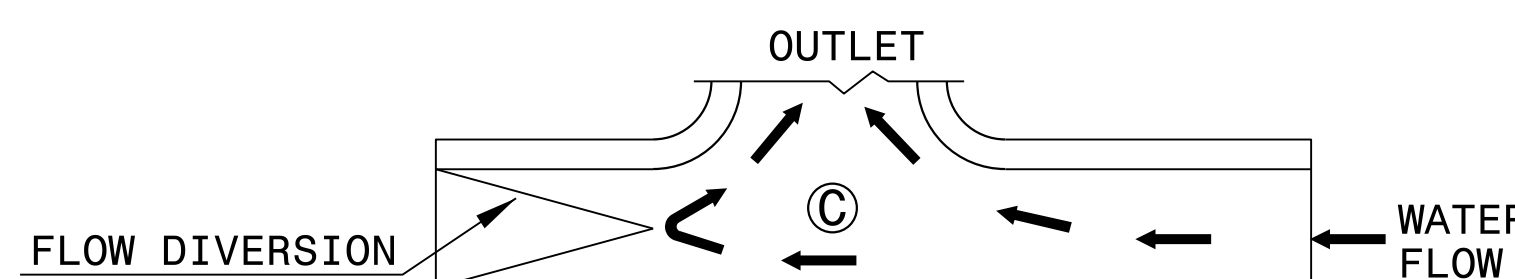
DOWNGRADE OR SAG



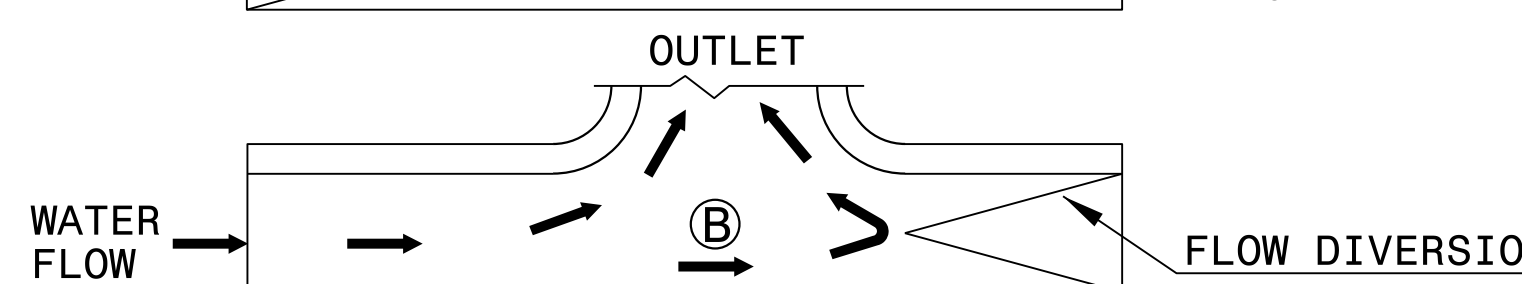
SAG



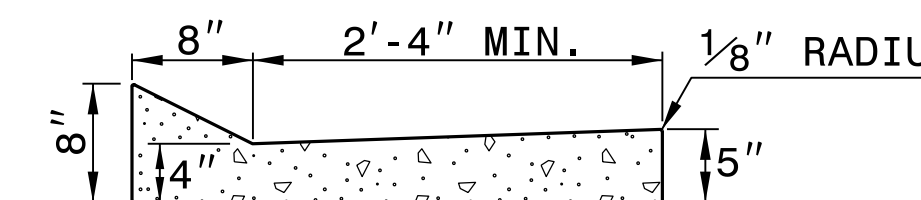
SECTION C-C



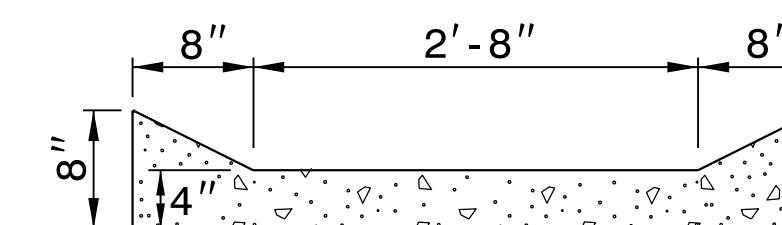
FLOW DIVERSION EXAMPLES



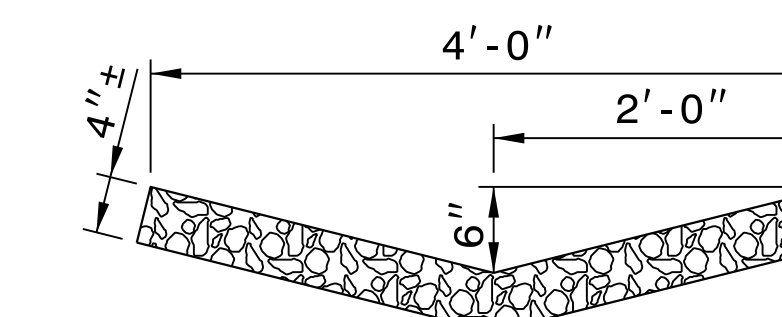
DOWN GRADE



SECTION A-A



SECTION B-B



RIP-RAP LINED DITCH

NOTES:

- CONSTRUCT MODIFIED CONCRETE FLUME AND SHOULDER BERM GUTTER IN ACCORDANCE WITH THIS DETAIL.
- CONSTRUCT CONCRETE DITCH IN ACCORDANCE WITH STD. DWG. NO. 850.01.
- CONSTRUCT RIP RAP LINED DITCH IN ACCORDANCE WITH THIS DETAIL, IF CALLED FOR IN PLANS.
- CONCRETE OR RIP RAP LINED DITCH SHALL BE THE TYPE AND LENGTH SPECIFIED BY THE ROADWAY PLANS. THE DITCH SHALL TERMINATE AS SHOWN ON THE PLANS. IF NO TERMINATION IS INDICATED PLACE RIP-RAP AT THE END OF THE DITCH AS INDICATED BY STD. DWG. 876.02 FOR AN 18" PIPE. TRANSITIONS FROM THE DITCH TO TERMINATION SHALL BE AS DIRECTED BY THE ENGINEER.
- MODIFICATIONS SHALL BE AS DICTATED BY SITE CONDITIONS AND DIRECTED BY THE ENGINEER.

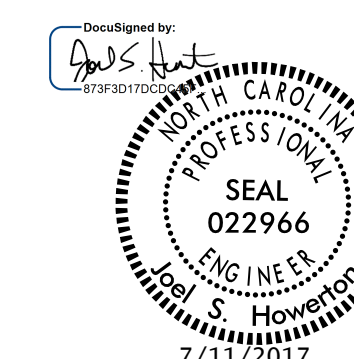
SHEET 1 OF 1

MODFLMDTCH

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

ENGLISH DETAIL DRAWING FOR MODIFIED CONCRETE FLUME WITH CONCRETE OR RIP-RAP DITCH

23-JUN-2017 08:58 S:\Contracts\Special Details\Howerton\modiflume.dgn



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

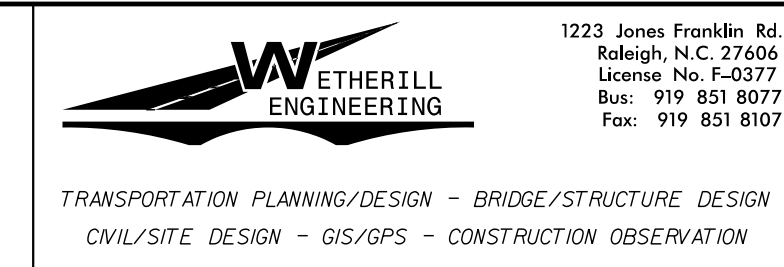
SEE PLATE FOR TITLE

ORIGINAL BY: E.E. Ward DATE: Apr. 2002
MODIFIED BY: E.E. Ward DATE: July 2004
CHECKED BY: DATE:
FILE SPEC.:

12/06/07

COMPUTED BY: SLK DATE: 01/20/15
CHECKED BY: GSP DATE: 01/20/15

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



PROJECT REFERENCE NO. 17BP.4.R.75
SHEET NO. 3

SUMMARY OF EARTHWORK

Table with columns: STATION, UNCL. EXCAV., EMBANK. +%, BORROW, WASTE. Rows include station ranges like -L- 11+44.00 to -L- 13+07.38 and project subtotals.

Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation 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."

PAVEMENT REMOVAL SUMMARY

Table with columns: SURVEY LINE, STATION, LOCATION LT/RT/CL, YD². Rows show removal at stations 12+79 and 13+55, totaling 210 YD².

SHOULDER BERM GUTTER SUMMARY

Table with columns: SURVEY LINE, STATION, LENGTH. Rows show lengths of 26.50' for RT and LT at station 12+70.00, totaling 53.00'.

RIGHT OF WAY AREA DATA

Table with columns: PARCEL NO., PROPERTY OWNERS NAMES, TOTAL ACREAGE, AREA TAKEN, AREA REMAINING RT., AREA REMAINING LT., PERM. DRAINAGE EASE., PERM. UTILITY EASE., TEMP. CONST. EASE.

SUB-REGIONAL & REGIONAL
LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

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

Large table listing pipe details: STATION, LOCATION, DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC), C.S. PIPE, R.C. PIPE (CLASS III), R.C. PIPE (CLASS IV), ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES AND HOOD STANDARD 840.03, CONCRETE TRANSITIONAL SECTION, etc.

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

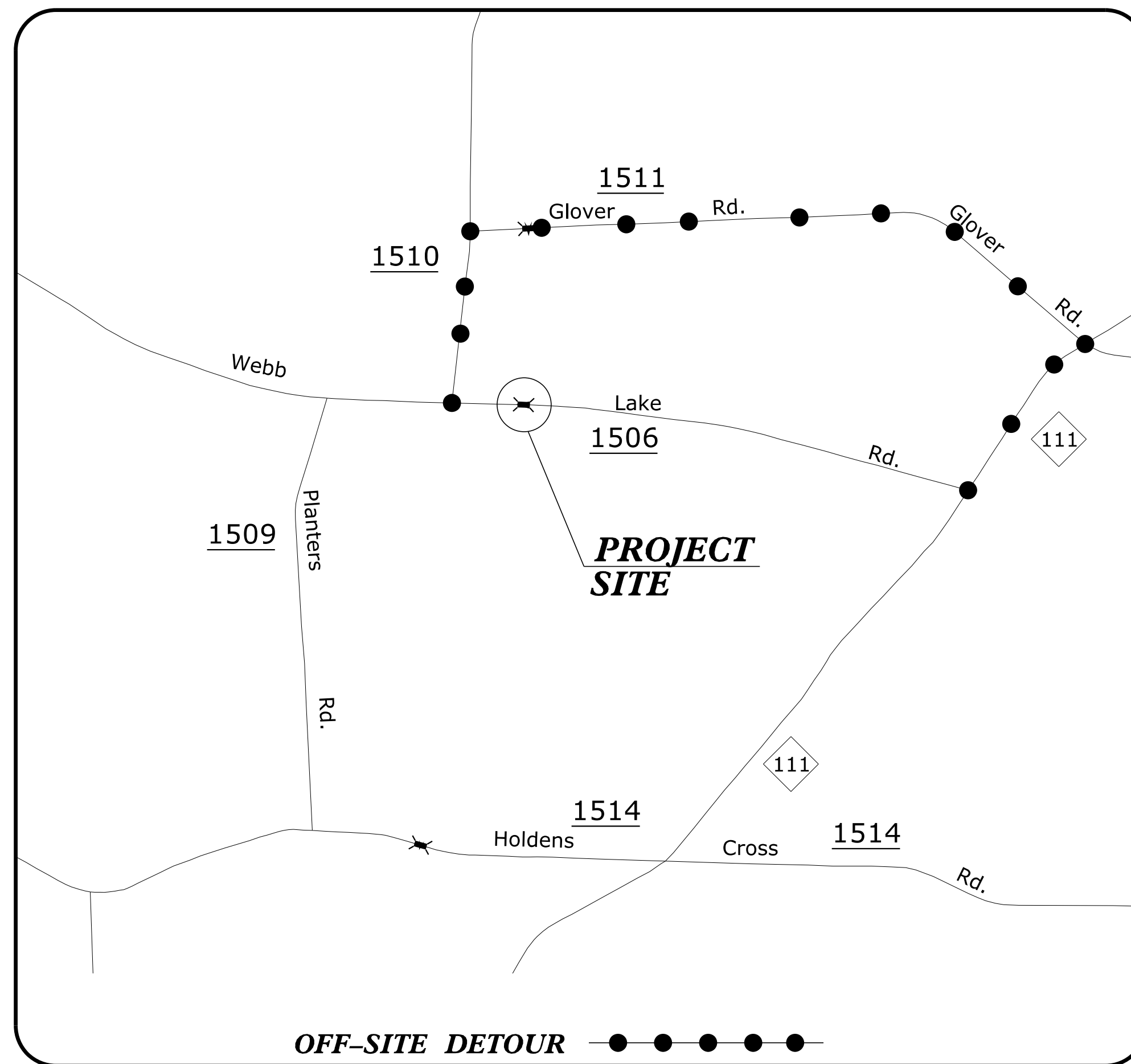
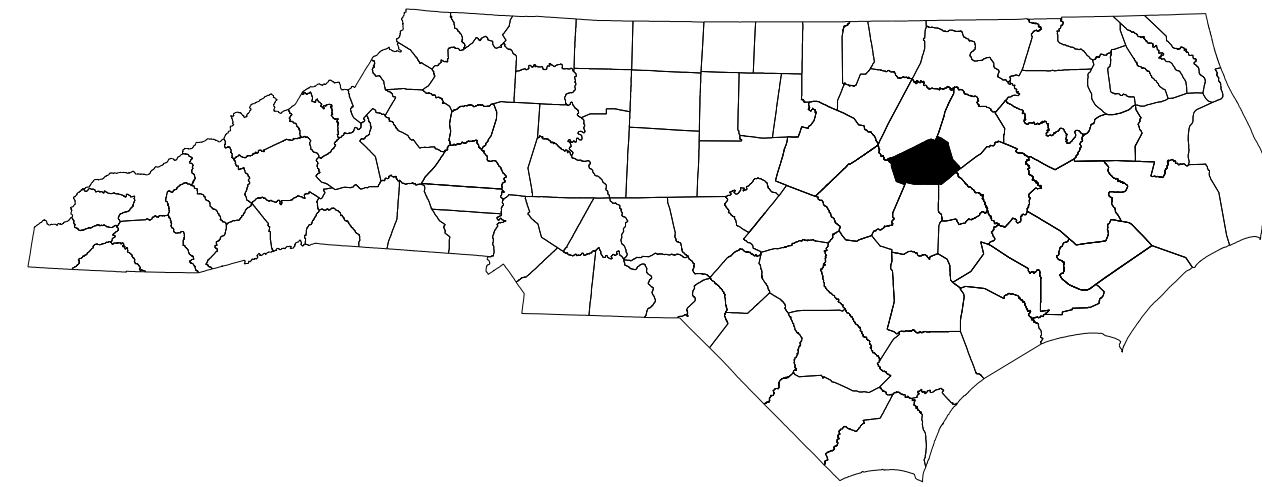
Table summarizing guardrail: SURVEY LINE, BEG. STA., END STA., LOCATION, LENGTH (STRAIGHT, SHOP CURVED, DOUBLE FACED), WARRANT POINT, FLARE LENGTH, W, ANCHORS, IMPACT ATTENUATOR TYPE 350, SINGLE FACED GUARDRAIL, REMOVE EXISTING GUARDRAIL, REMOVE AND STOCKPILE EXISTING GUARDRAIL, REMARKS.

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

WILSON COUNTY



**LOCATION: BRIDGE NO. 143 OVER WHITEOAK SWAMP
ON SR 1506 (WEBB LAKE ROAD)**

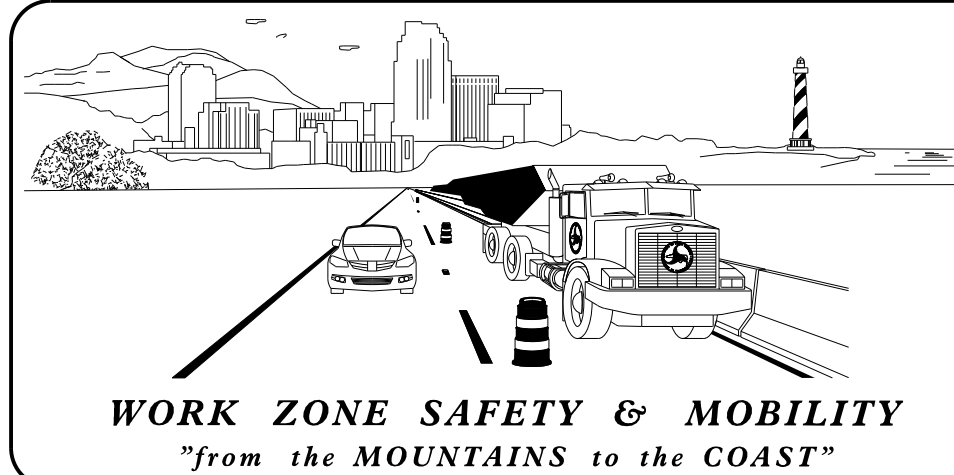
| SHEET NO. | TITLE |
|-----------|--|
| TMP-1 | TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS |
| TMP-1A | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND |
| TMP-1B | TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES) |
| TMP-2 | SPECIAL SIGN DESIGN(S) |
| TMP-3 | TEMPORARY TRAFFIC CONTROL DETAIL |
| TMP-4 | TEMPORARY TRAFFIC CONTROL DETAIL (WEBB LAKE RD. OFF-SITE DETOUR) |

SHEET NO.
TMP-1

17BP.4.R.75

TIP PROJECT:

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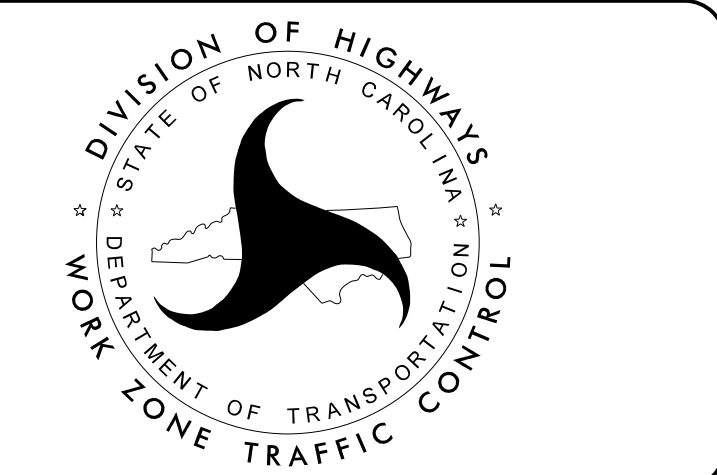
N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER

TRAFFIC CONTROL PROJECT ENGINEER

TRAFFIC CONTROL PROJECT DESIGN ENGINEER

TRAFFIC CONTROL DESIGN ENGINEER



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UNLESS ALL SIGNATURES COMPLETED**

PLAN PREPARED FOR NCDOT BY:

GREG PURVIS, P.E. PROJECT ENGINEER

SCOTT L. KENNEDY TRAFFIC CONTROL & PAVEMENT MARKING SPECIALIST

APPROVED: _____

DATE: _____

SEAL

DocuSigned by:
Gary S. Purvis
0197123663405

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN 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 |
|----------|-------------------------------|
| 1101.03 | TEMPORARY ROAD CLOSURES |
| 1101.11 | TRAFFIC CONTROL DESIGN TABLES |
| 1110.01 | STATIONARY WORK ZONE SIGNS |
| 1145.01 | BARRICADES |

LEGEND

GENERAL

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

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

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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WETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: _____
 DATE: _____

SEAL

DocuSigned by:
Greg S. Purvis
 01927C29E3403

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

**ROADWAY STANDARD
DRAWINGS & LEGEND**

MANAGEMENT STRATEGIES

SR 1506 (WEBB LAKE RD.) WILL BE CLOSED TO THRU TRAFFIC AND UTILIZE AN OFF-SITE DETOUR WITH TRAILBLAZE SIGNING DURING REPLACEMENT OF THE EXISTING STRUCTURE OVER WHITE OAK SWAMP.

THE DETOUR ROUTE IS AS FOLLOWS:

1. SR 1510 (BAKERTOWN RD.)
2. SR 1511 (GLOVER RD.)
3. NC 111 (GOOD NEWS CHURCH RD.)

LOCAL RESIDENTS AND BUSINESSES ALONG SR 1506 (WEBB LAKE RD.) WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.

GENERAL NOTES / LOCAL NOTES

TRAFFIC PATTERN ALTERATIONS

- A) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- B) 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.
- C) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLAN.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLAN.
- D) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- E) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES


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

PAVEMENT MARKINGS AND MARKERS

- G) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- H) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

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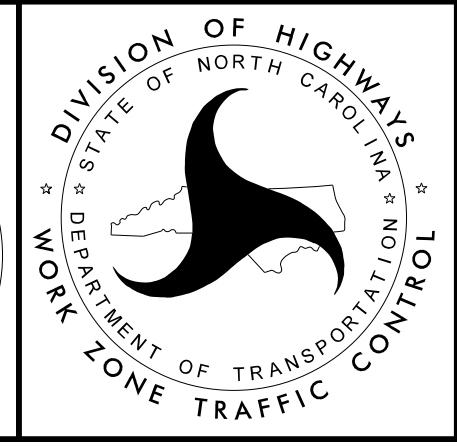
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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: _____

DATE: _____

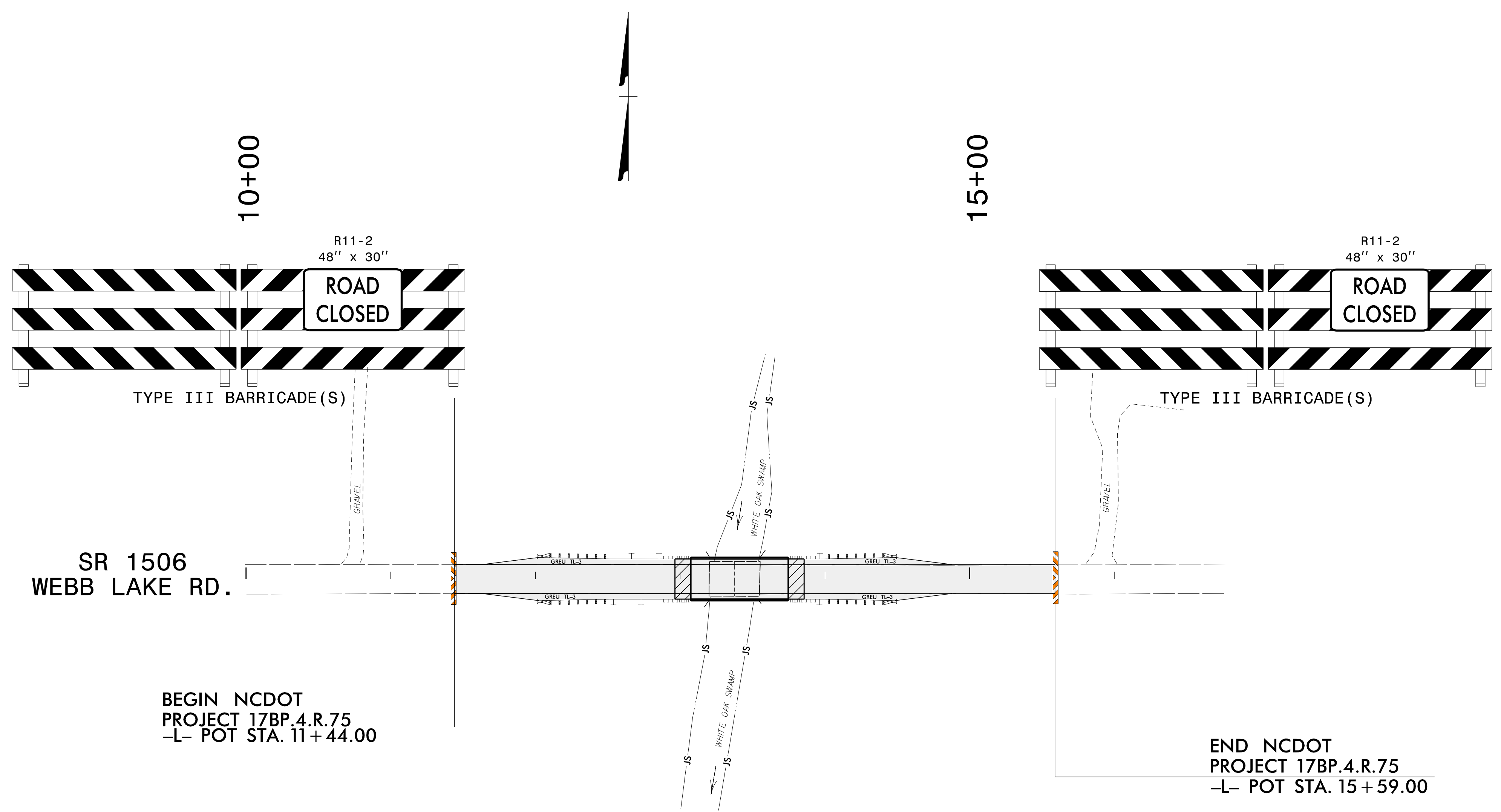
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Digitized by: *Greg S. Purvis*





TRANSPORTATION OPERATIONS PLAN



PHASING

- STEP 1. INSTALL AND COVER OFF-SITE DETOUR AND TRAILBLAZE SIGNING ACCORDING TO TMP-4 AND ROADWAY STANDARD DRAWINGS NO. 1101.03, SHEET 1 OF 9.
- STEP 2. UNCOVER OFF-SITE DETOUR AND TRAILBLAZE SIGNING AS SHOWN ON TMP-4 AND PLACE TYPE III BARRICADES TO CLOSE SR 1506 (WEBB LAKE RD.) TO TRAFFIC.
- STEP 3. REMOVE EXISTING STRUCTURE AND CONSTRUCT PROPOSED -L- STRUCTURE AND APPROACHES.
- STEP 4. PLACE FINAL PAVEMENT MARKINGS ON -L- STRUCTURE AND APPROACHES.
- STEP 5. REMOVE TYPE III BARRICADES AND REOPEN SR 1506 (WEBB LAKE RD.) TO TRAFFIC. REMOVE ALL OFF-SITE DETOUR AND TRAILBLAZE SIGNING.

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 User: skennedy

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**WETHERILL
ENGINEERING**

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Fax: 919 851 8107

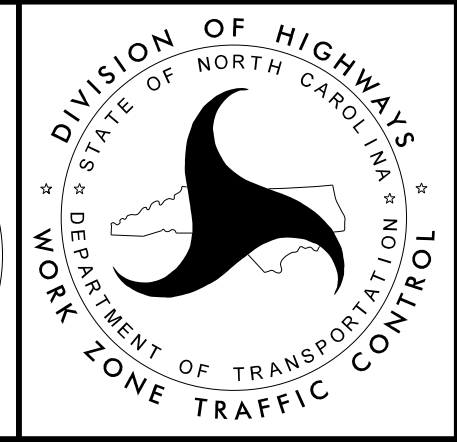
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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: _____

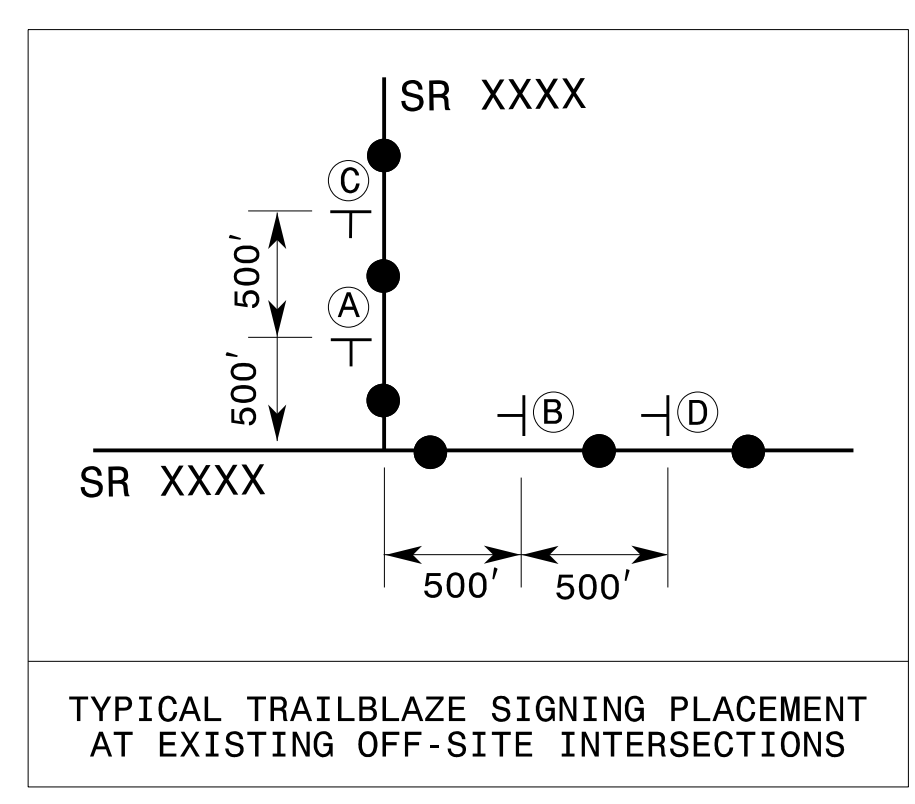
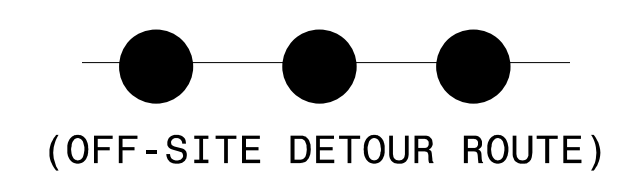
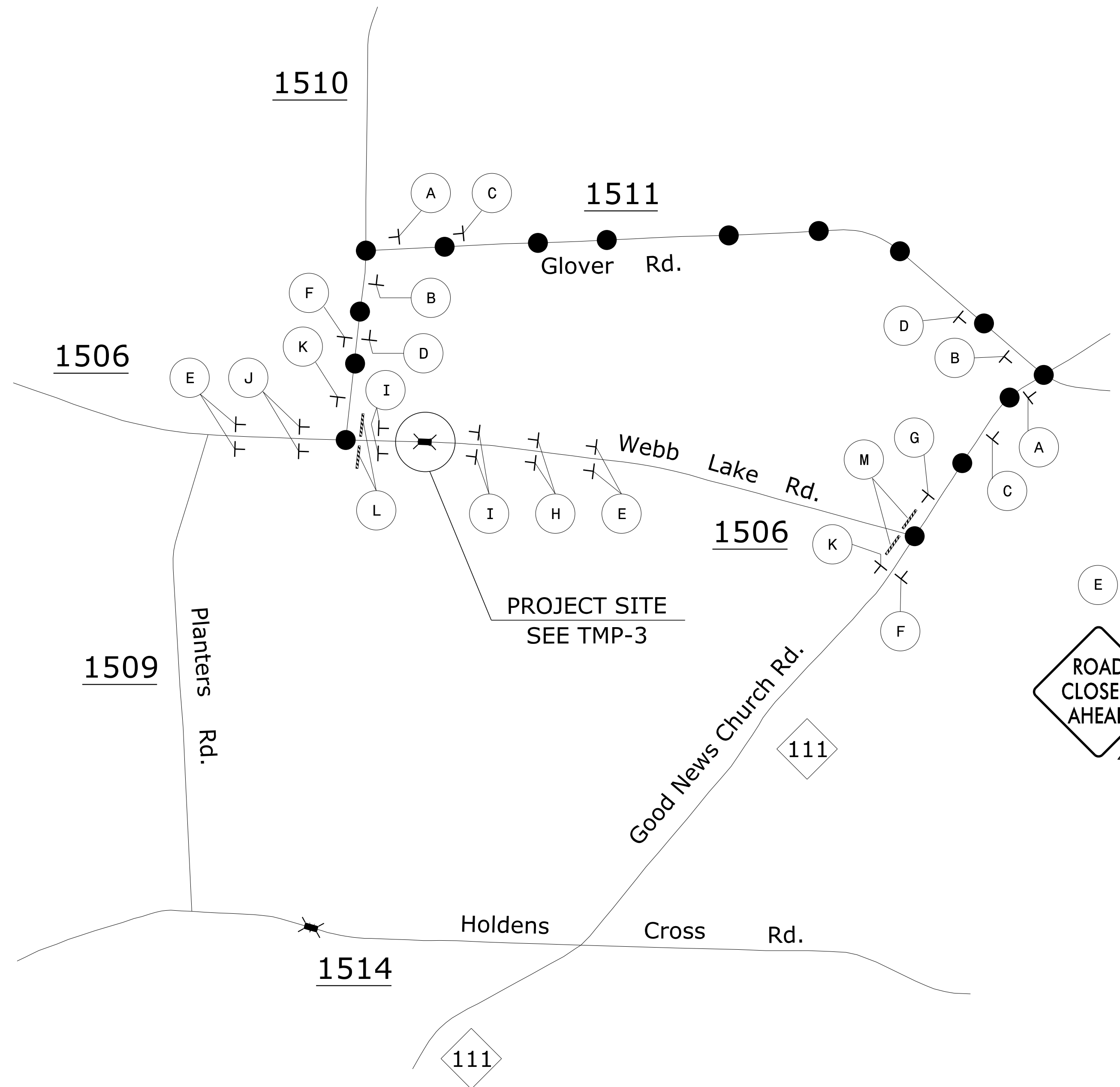
DATE: _____

SEAL

DocuSigned by:
Greg S. Purvis

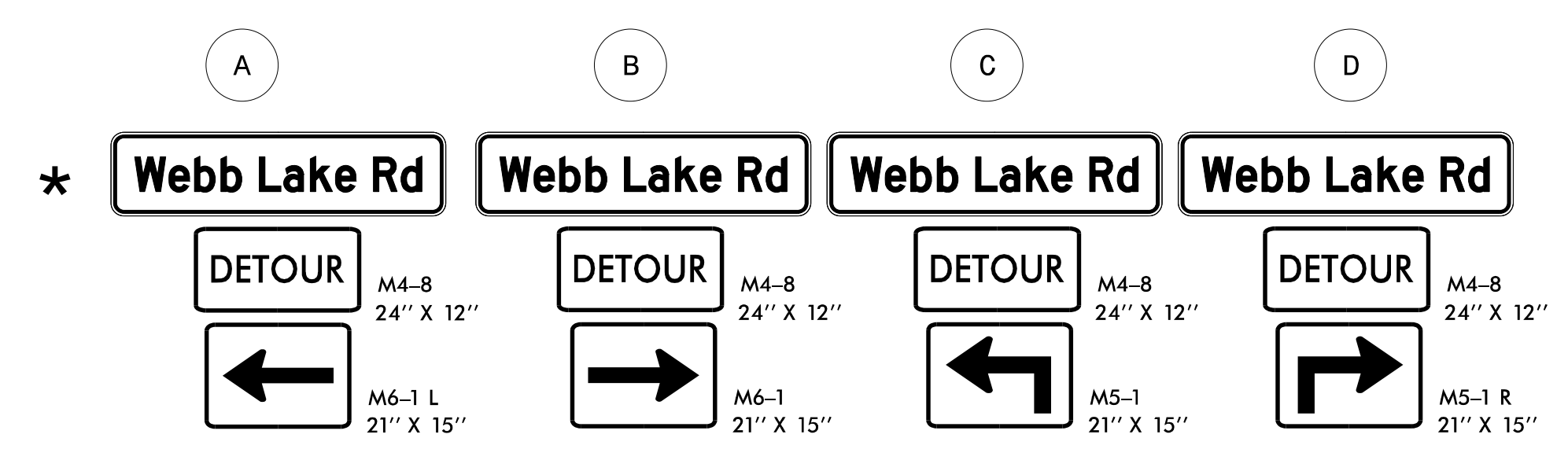


**TEMPORARY TRAFFIC
CONTROL DETAIL**

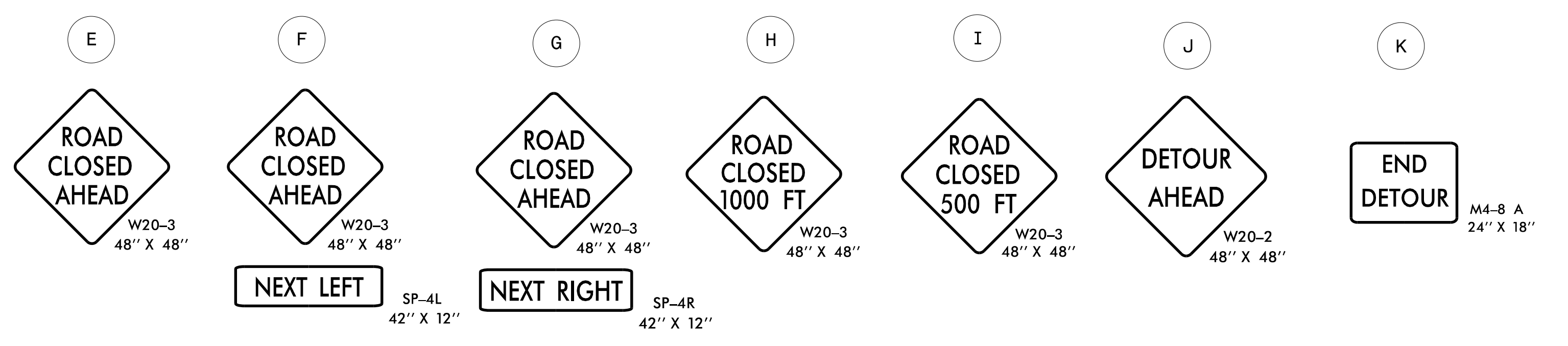


* SEE TMP-2 FOR WEBB LAKE RD. DETOUR SIGN DESIGN.
 SEE ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9, FOR ADDITIONAL SIGNING AND SPACING REQUIREMENTS APPROACHING THE PROJECT AREA (ROAD CLOSURE POINT).

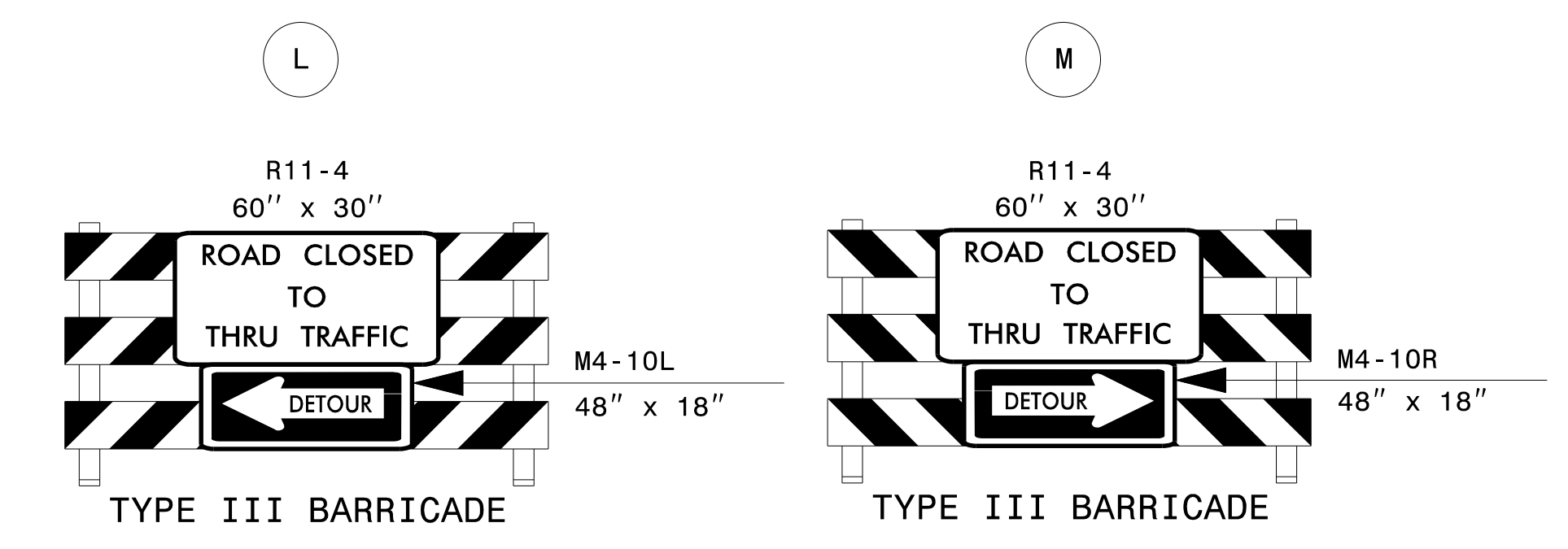
TRAILBLAZE SIGNING



ROAD CLOSURE SIGNING

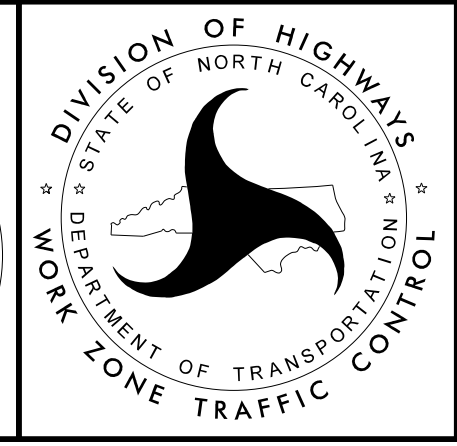


TYPE III BARRICADES



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APPROVED: _____
 DATE: _____
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TEMPORARY TRAFFIC CONTROL DETAIL

7/11/2017
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 User: skennedy

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 Raleigh, N.C. 27606
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 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

| | |
|--|----------------------|
| TIP NO. 17BP.4.R.75 | SHEET NO. PMP - 1 |
| APPROVED: _____ | |
| DATE: _____ | |
| | |
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| <small>TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</small> | |

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
WILSON COUNTY**

17BP.4.R.75

CONTRACT: DD00227

INDEX

| SHEET NO. | DESCRIPTION |
|-----------|--|
| PMP - 1 | PAVEMENT MARKING PLAN COVER SHEET |
| PMP - 2 | PAVEMENT MARKING DETAIL AND MARKING SCHEDULE |

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 - 2 LANE AND MULTILANE ROADWAYS |
| 1250.01 | PAVEMENT MARKER SPACING |
| 1251.01 | RAISED PAVEMENT MARKERS - TEMPORARY AND PERMANENT |
| 1261.01 | GUARDRAIL AND BARRIER DELINEATOR SPACING |
| 1261.02 | GUARDRAIL AND BARRIER DELINEATOR TYPES |
| 1262.01 | GUARDRAIL END DELINEATION |

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 |
|-------------------------------|---------|--------|
| 1. SR 1506 (WEBB LAKE RD.) | PAINT | N/A |

- 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.


PLAN REVIEWED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

AYMAN I. ALQUDWAH, P.E. SIGNING & DELINEATION STANDARDS ENGINEER
SIGNING & DELINEATION PROJECT DESIGN ENGINEER

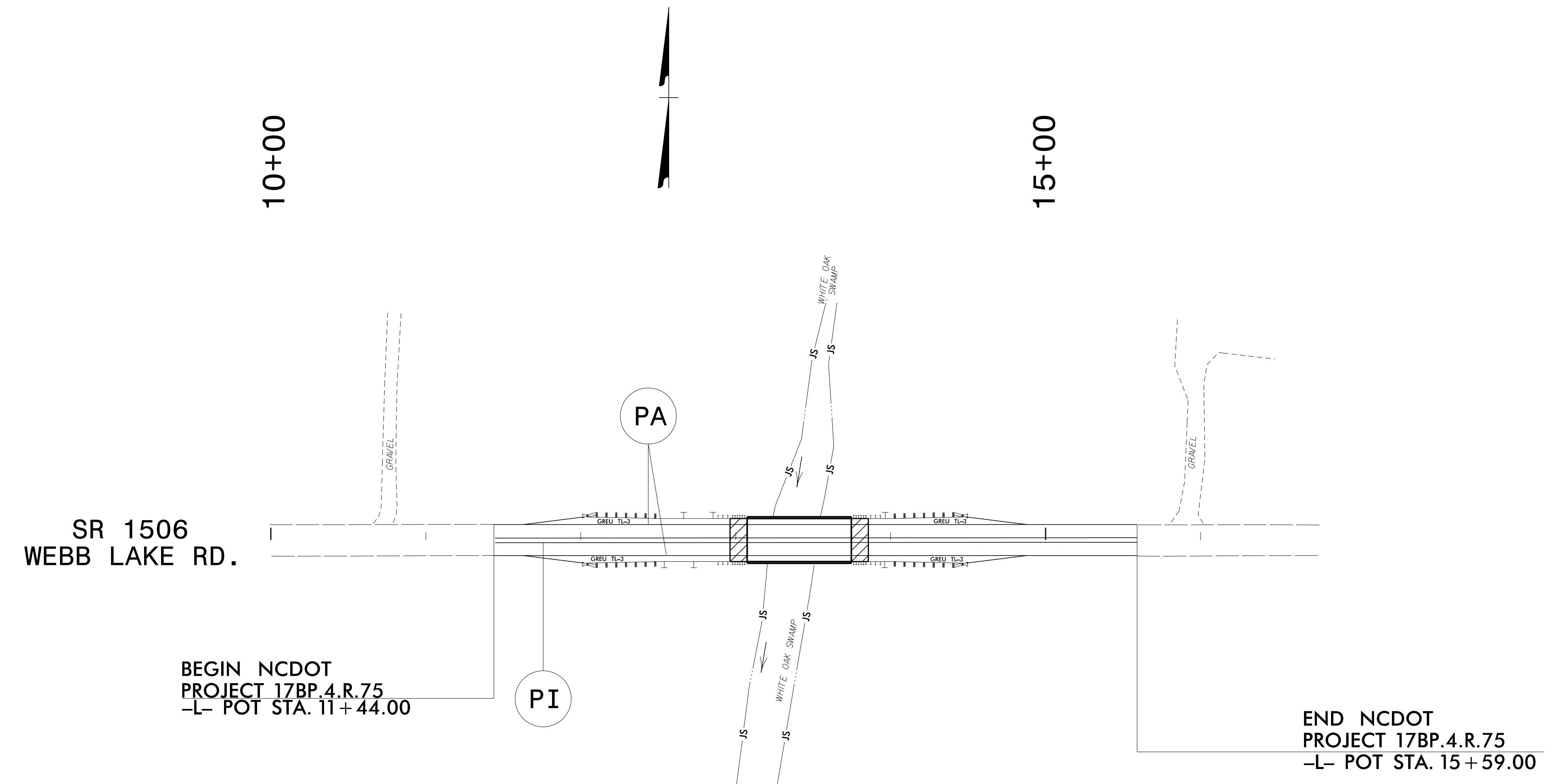


PLAN PREPARED BY:

GREG PURVIS, P.E. ROADWAY PROJECT ENGINEER
SCOTT L. KENNEDY TRAFFIC CONTROL/PAVEMENT MARKING SPECIALIST


| | |
|---|--------------------|
| TIP NO. 17BP.4.R.75 | SHEET NO. PMP-2 |
| APPROVED: _____ | |
| DATE: _____ | |
| SEAL Designed by: <i>Greg S. Purvis</i>  | |

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| PAVEMENT MARKING SCHEDULE | | |
|---------------------------|---|----------|
| SYMBOL | DESCRIPTION | PAY ITEM |
| | FINAL PAVEMENT MARKINGS PAINT (4") INSTALL TWO APPLICATIONS | |
| PA | WHITE EDGELINE | |
| PI | YELLOW DOUBLE CENTER | |

NOTE: LANE WIDTHS ARE 10' UNLESS OTHERWISE NOTED.



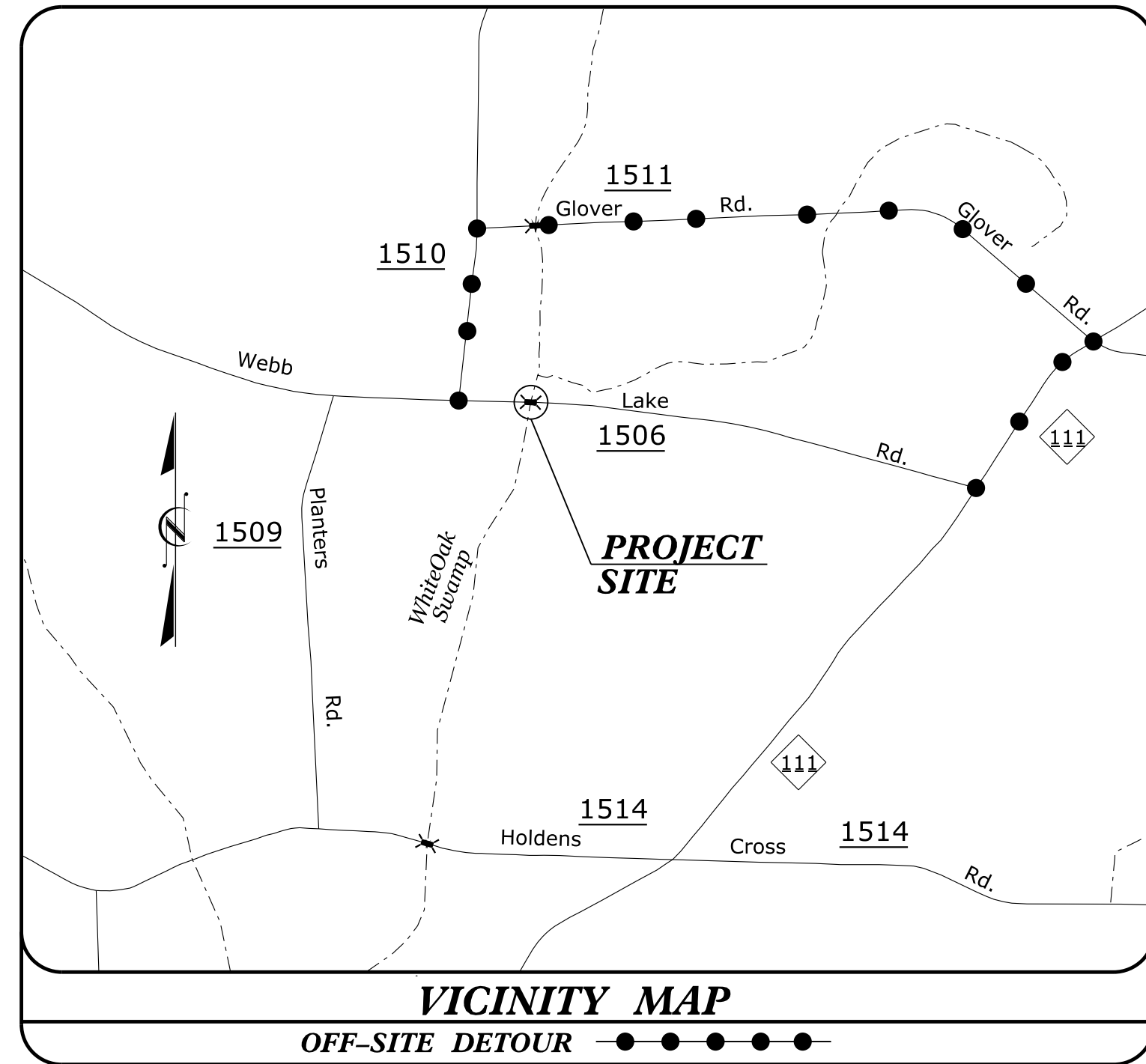
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

**PAVEMENT MARKING DETAIL
AND MARKING SCHEDULE**

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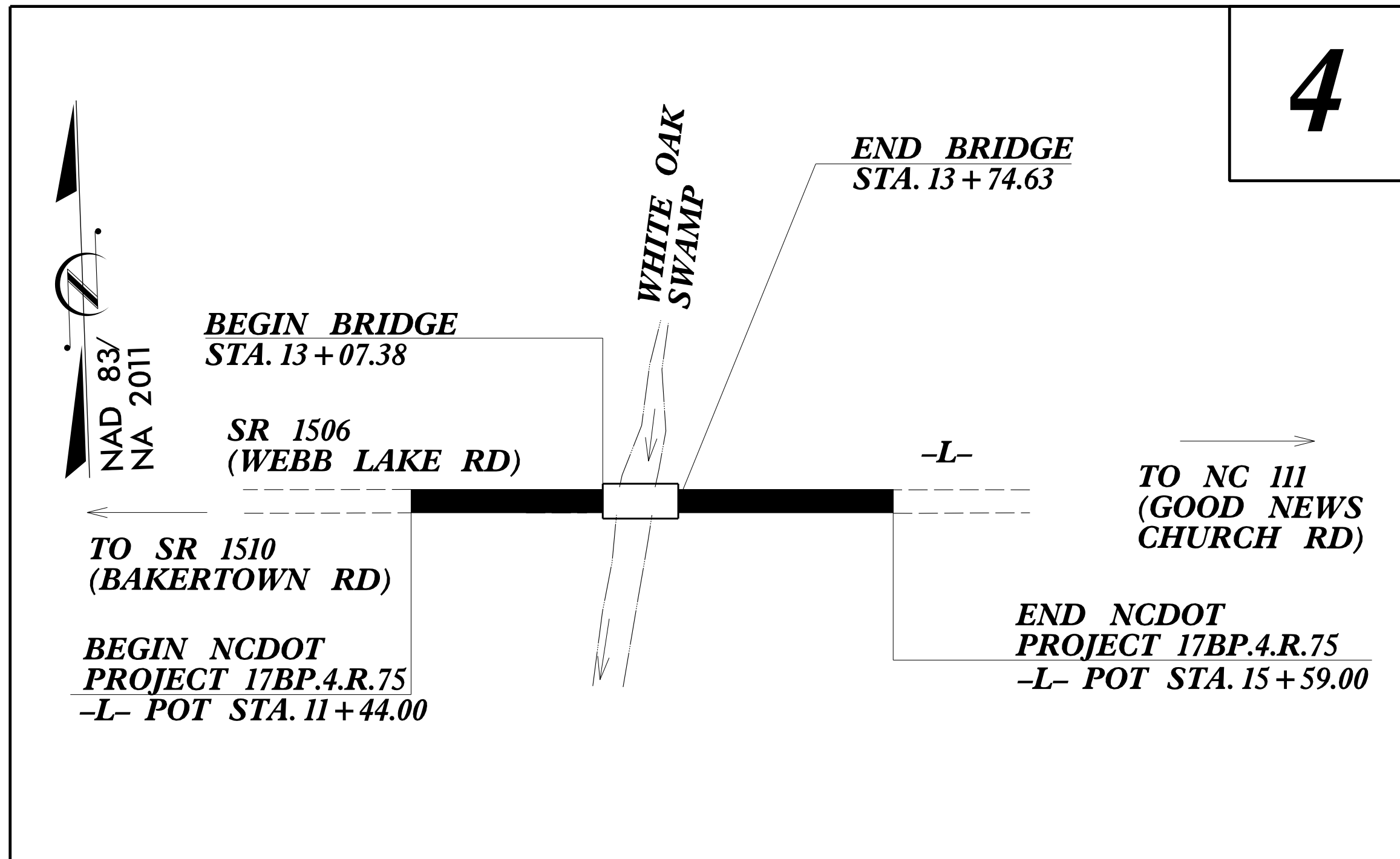
PROJECT: 17BP.4.R.75



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
WILSON COUNTY

**LOCATION: BRIDGE NO. 143 OVER WHITEOAK SWAMP
ON SR 1506 (WEBB LAKE ROAD)**

TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE



| | | | |
|-----------------|-----------------------------|-------------|--------------|
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
| N.C. | 17BP.4.R.75 | EC-1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| | | | |
| | | | |

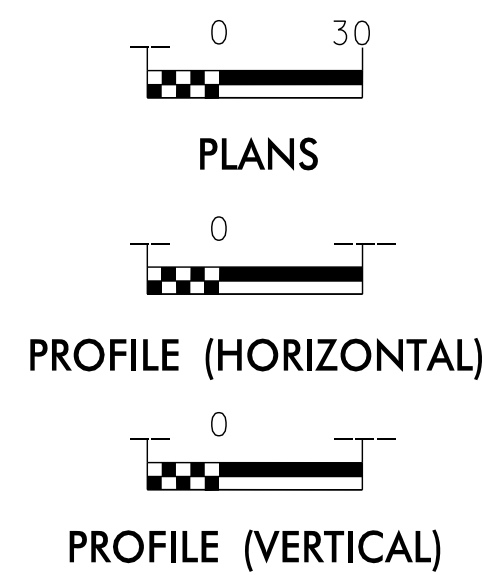
EROSION AND SEDIMENT CONTROL MEASURES

| Std. # | Description | Symbol |
|---------|--|--------|
| 1630.03 | Temporary Silt Ditch | no |
| 1630.05 | Temporary Diversion | TD |
| 1605.01 | Temporary Silt Fence | |
| 1606.01 | Special Sediment Control Fence | ▲▲▲ |
| 1622.01 | Temporary Berms and Slope Drains | — |
| 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 | — |
| | Wattle / Coir Fiber Wattle with Polyacrylamide (PAM) | — |
| 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.**

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

GRAPHIC SCALE



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared in the Office of:
Wetherill Engineering Inc.
1223 Jones Franklin Rd.
Raleigh, NC 27606

Designed by:
Jim Davis, PE 3554
NAME LEVEL III CERTIFICATION NO.

Reviewed in the Office of:
ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611
2012 STANDARD SPECIFICATIONS

Reviewed by:
Division 4

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 2012 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 | |

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

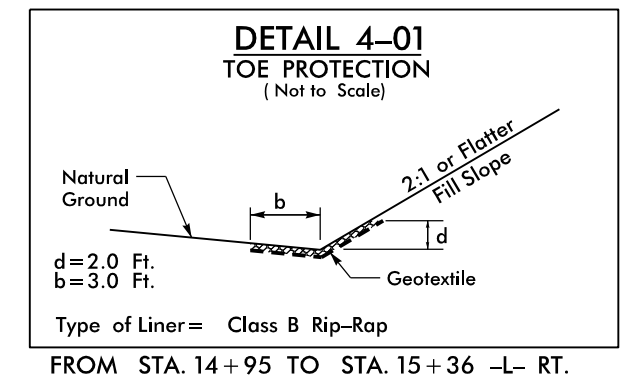
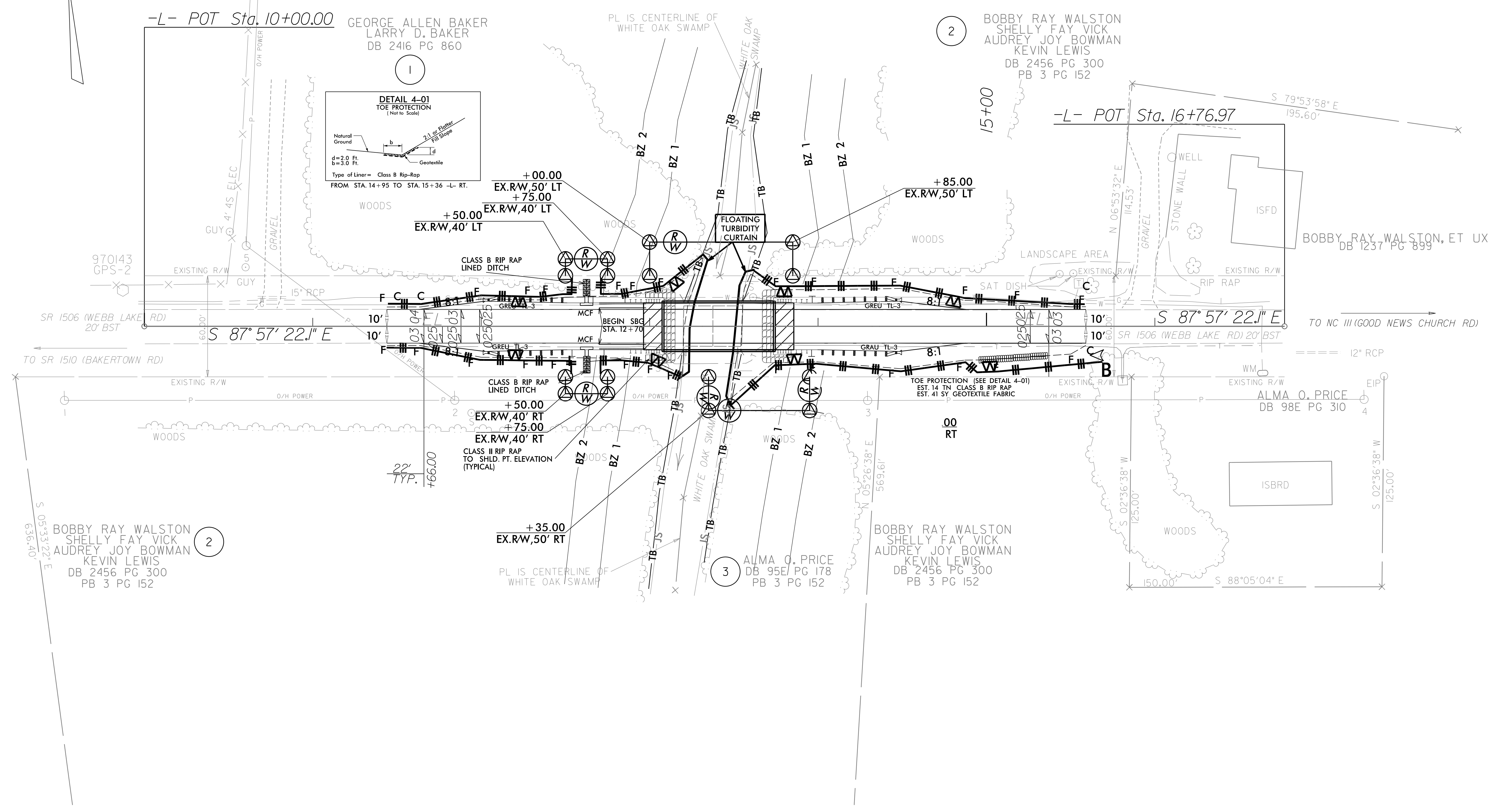
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|-------------------------|---------------------|
| PROJECT REFERENCE NO. | SHEET NO. |
| 17BP.4.R.75 | EC-3B |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

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. |

| | |
|--------------------------------------|---------------------------|
| PROJECT REFERENCE NO. 17BP.4.R.75 | SHEET NO. EC-5/CONST.4 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

NC GRID
NAD 83 NA 2011



BOBBY RAY WALSTON
SHELLY FAY VICK
AUDREY JOY BOWMAN
KEVIN LEWIS
DB 2456 PG 300
PB 3 PG 152

BOBBY RAY WALSTON
SHELLY FAY VICK
AUDREY JOY BOWMAN
KEVIN LEWIS
DB 2456 PG 300
PB 3 PG 152

ALMA O. PRICE
DB 95E PG 178
PB 3 PG 152

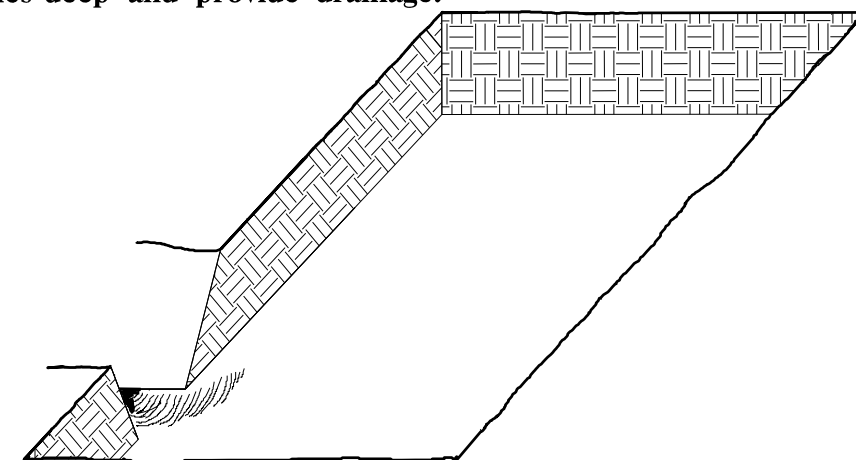
ALMA O. PRICE
DB 98E PG 310

PLANTING DETAILS

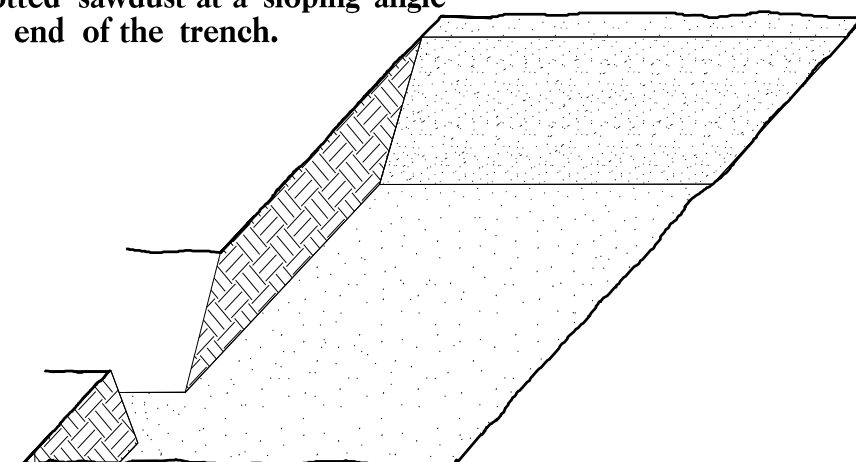
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

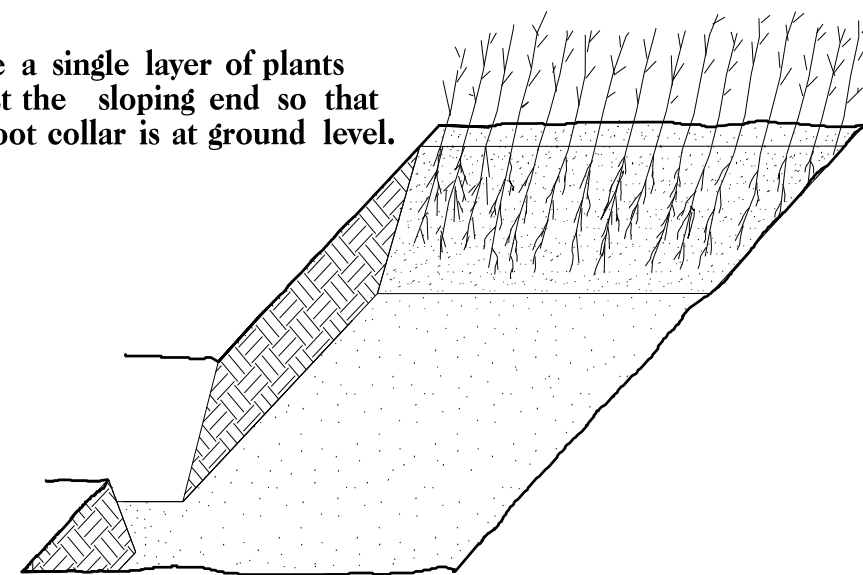
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



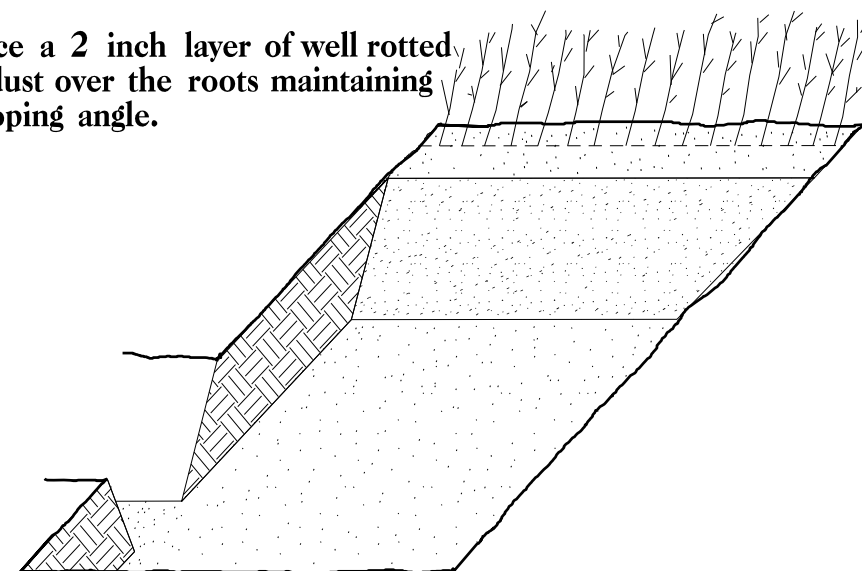
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



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

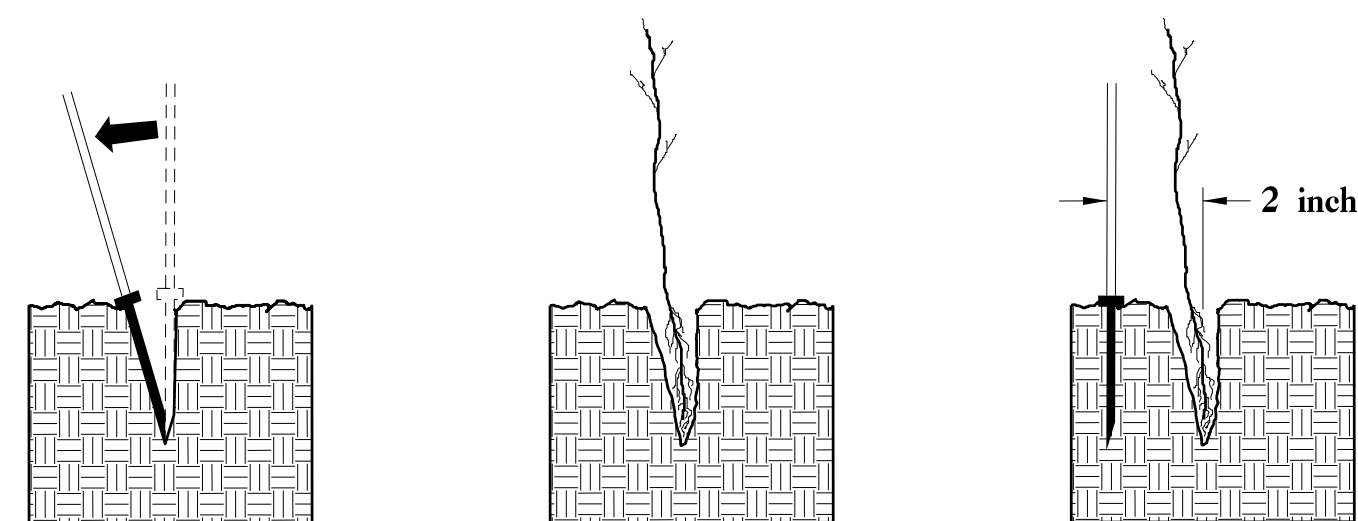


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

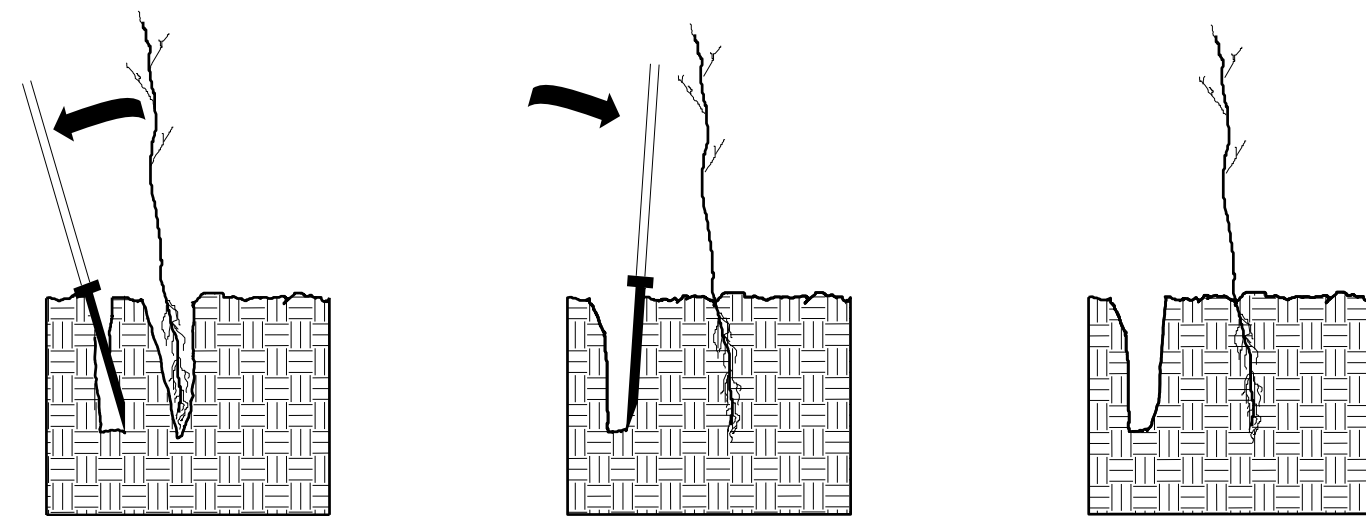


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

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.



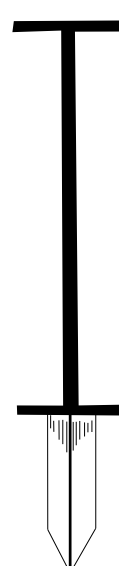
4. Pull handle of bar toward planter, firming soil at bottom.
5. Push handle forward firming soil at top.
6. Leave compaction hole open. Water thoroughly.

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% | FRAXINUS PENNSYLVANICA | GREEN ASH | 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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

| | |
|---------------------|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| 17BP.4.R.75 | X-1 |

CROSS-SECTION SUMMARY

-L-

NOTE: EMBANKMENT COLUMN DOES NOT
INCLUDE BACKFILL FOR UNDERCUT

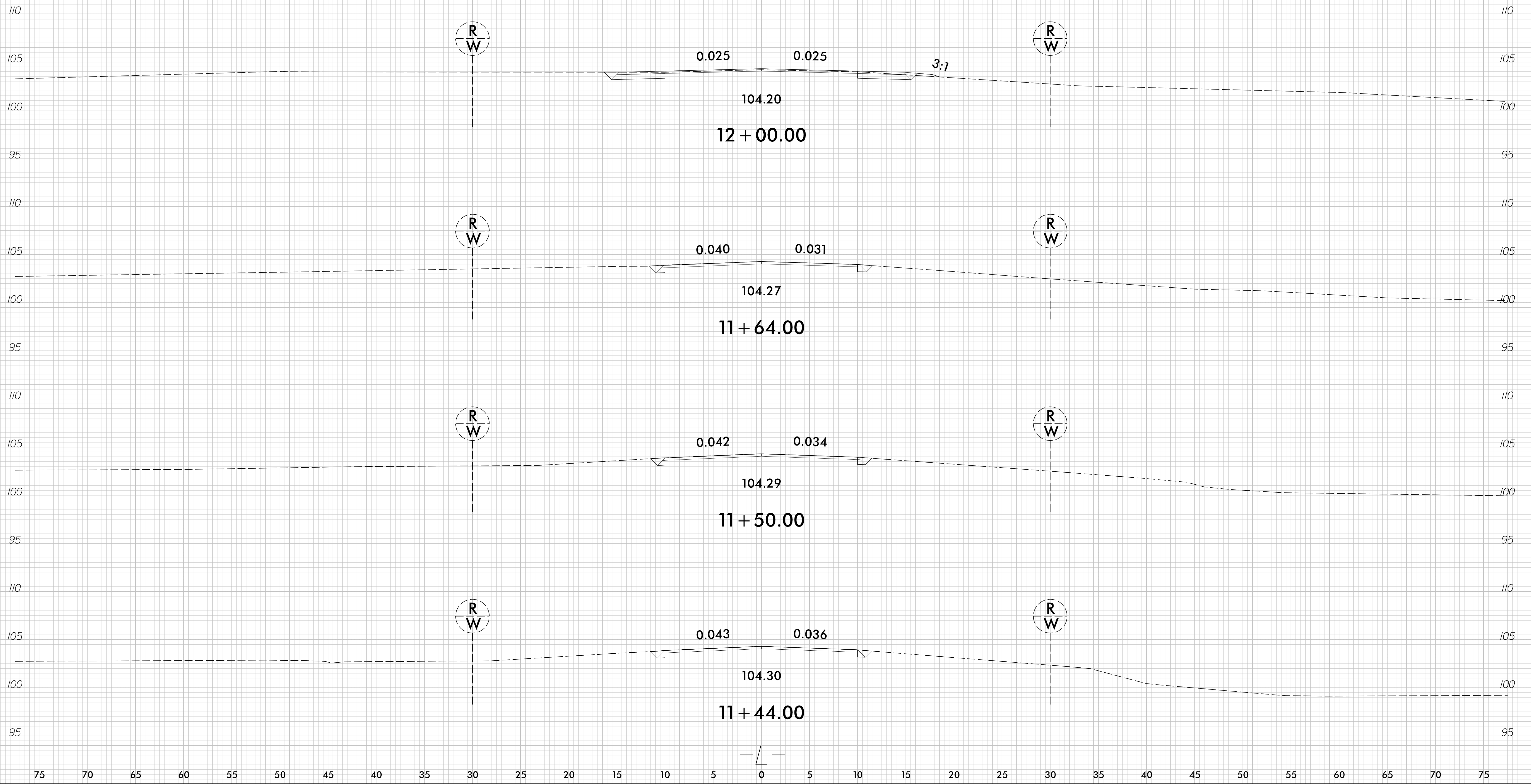
| Station | Uncl. Exc. | Embt |
|------------|------------|-----------|
| L | (cu. yd.) | (cu. yd.) |
| 11+44.00 | 0 | 0 |
| 11+50.00 | 0 | 0 |
| 11+64.00 | 1 | 0 |
| 12+00.00 | 6 | 0 |
| 12+34.00 | 7 | 1 |
| 12+50.00 | 2 | 1 |
| 12+84.00 | 3 | 3 |
| 13+00.00 | 1 | 5 |
| 13+07.38 | 0 | 7 |
| Uncl. Exc. | Embt. | |
| L | (cu. yd.) | (cu. yd.) |
| 13+99.00 | 0 | 0 |
| 14+49.00 | 1 | 32 |
| 14+87.00 | 1 | 17 |
| 15+00.00 | 0 | 3 |
| 15+50.00 | 2 | 7 |
| 15+59.00 | 1 | 0 |

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 INDEX

| SHEET | LINE | BEGIN STATION | END STATION |
|-------|------|---------------|-------------|
| X-2 | -L- | 11+44.00 | 12+00.00 |
| X-3 | -L- | 12+34.00 | 13+07.36 |
| X-4 | -L- | 13+07.38 | 13+74.65 |
| X-5 | -L- | 13+99.00 | 15+00.00 |
| X-6 | -L- | 15+50.00 | 15+59.00 |

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

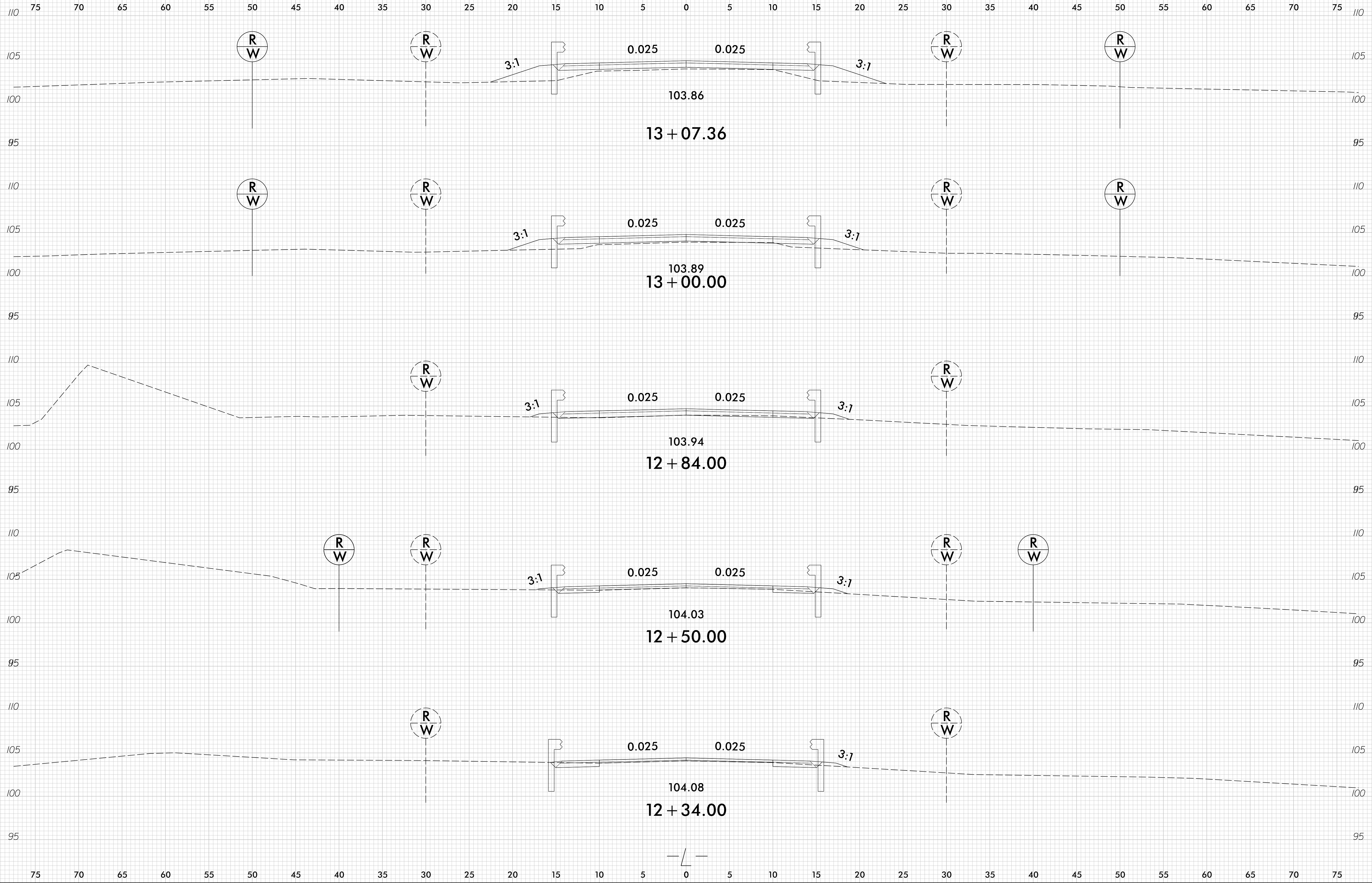


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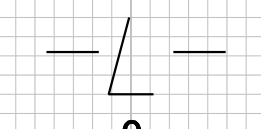


PROJ. REFERENCE NO.
17BP.4.R.75

SHEET NO.
X-3



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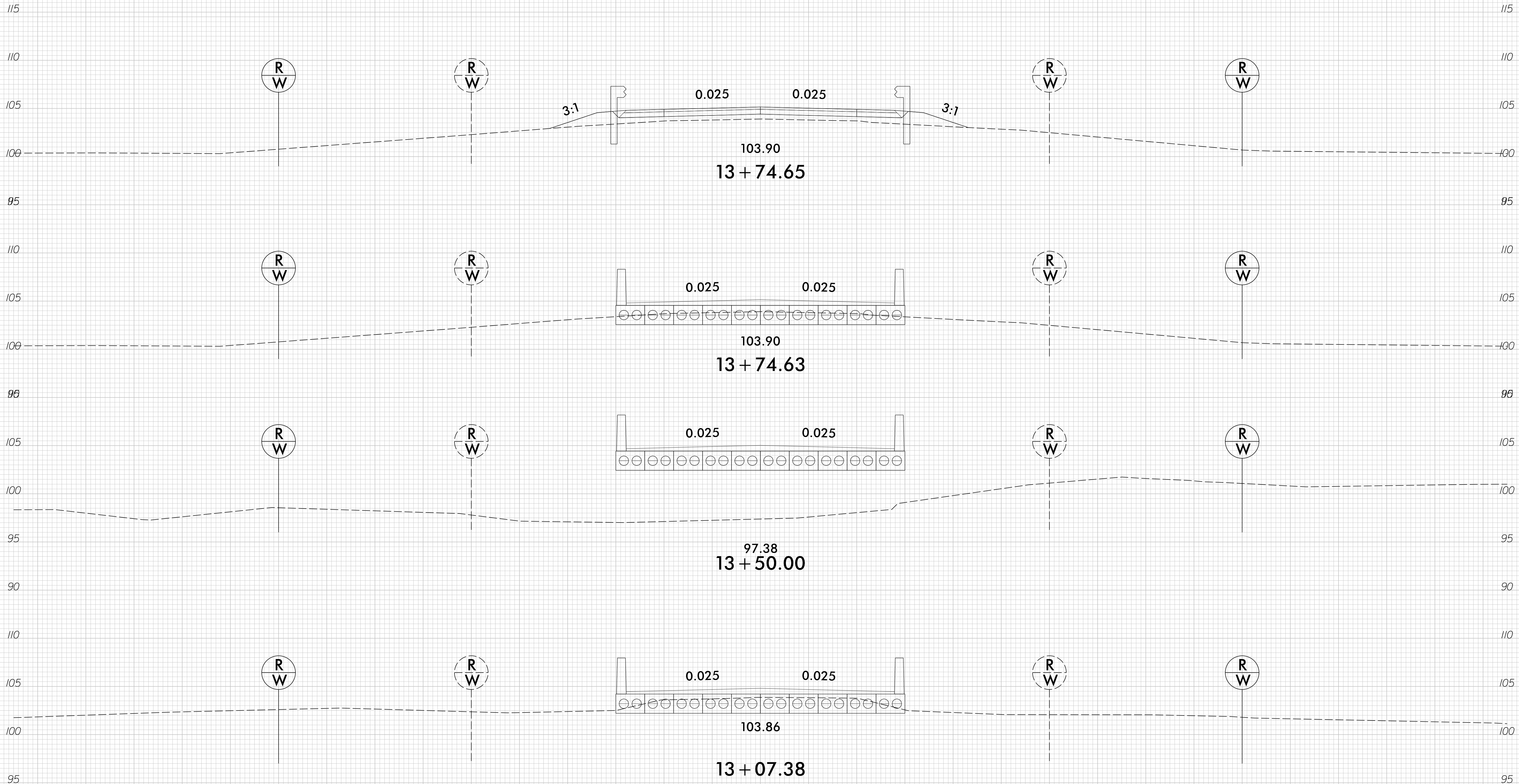


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| | |
|---------------------|-----------|
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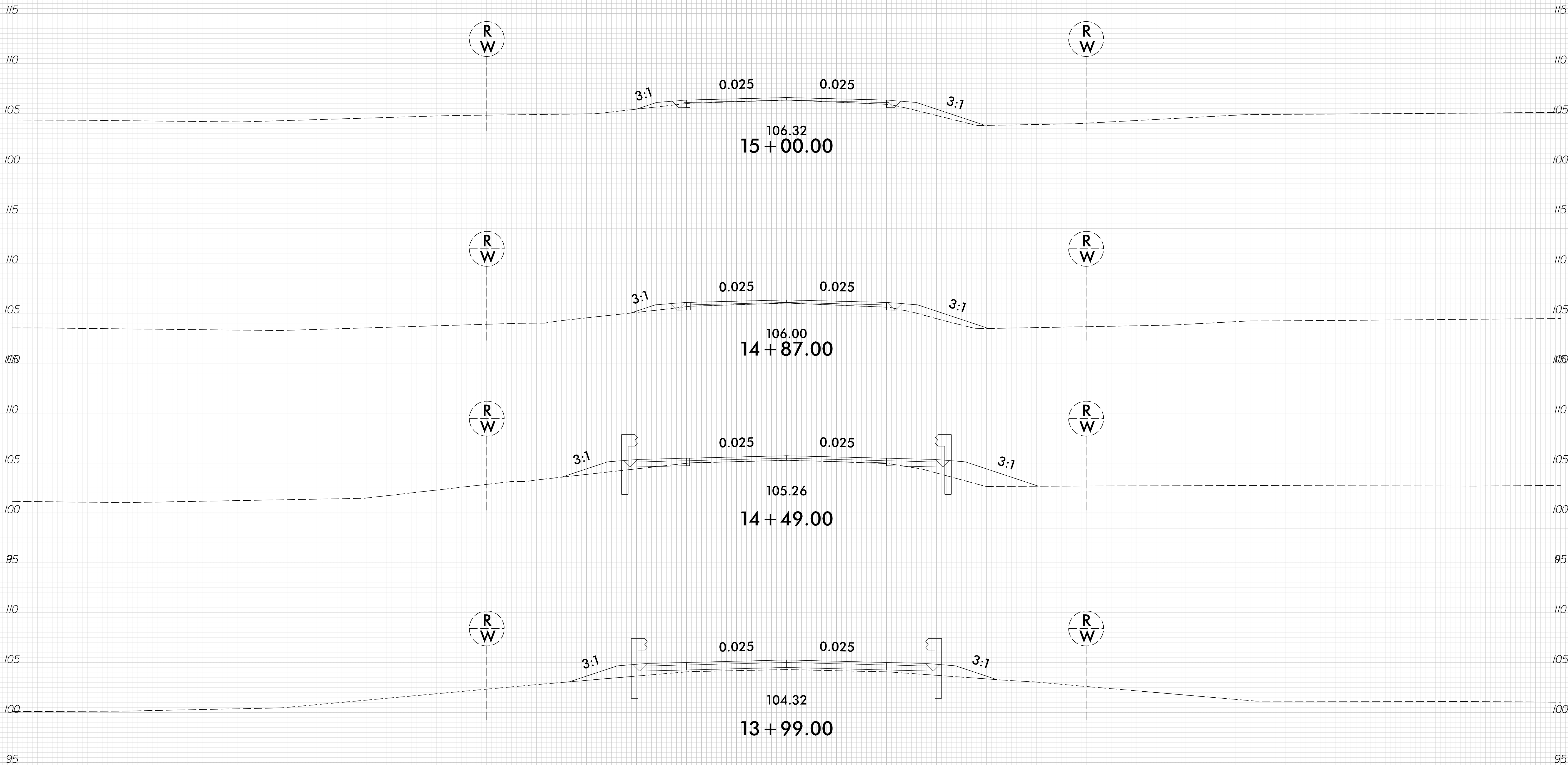
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8/23/99



| | |
|---------------------|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| 17BP.4.R.75 | X-5 |

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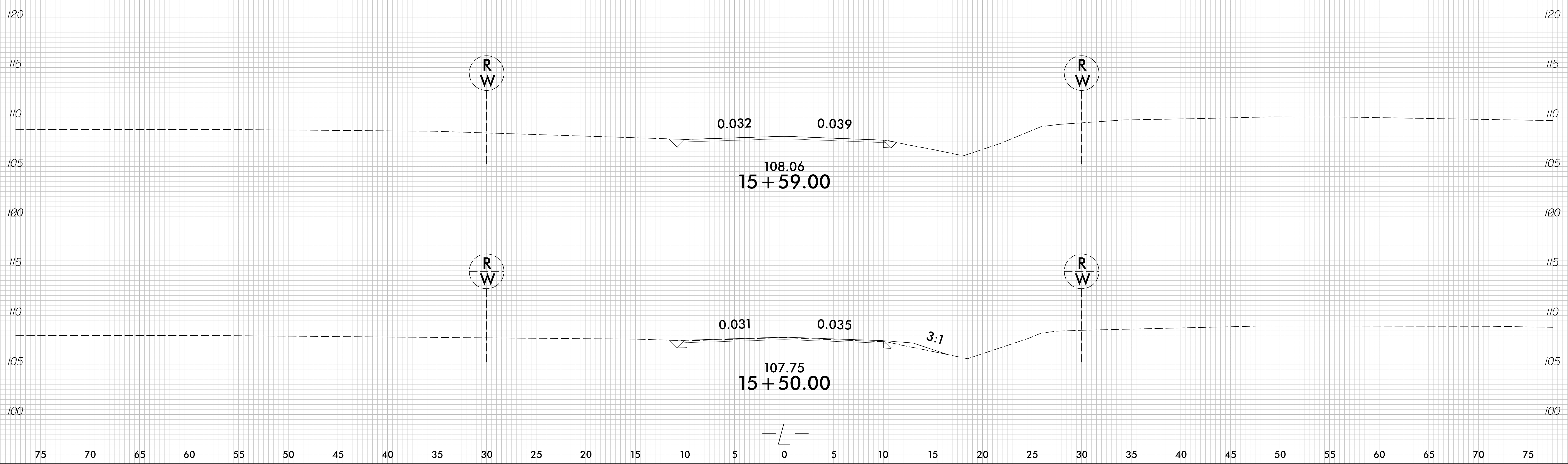
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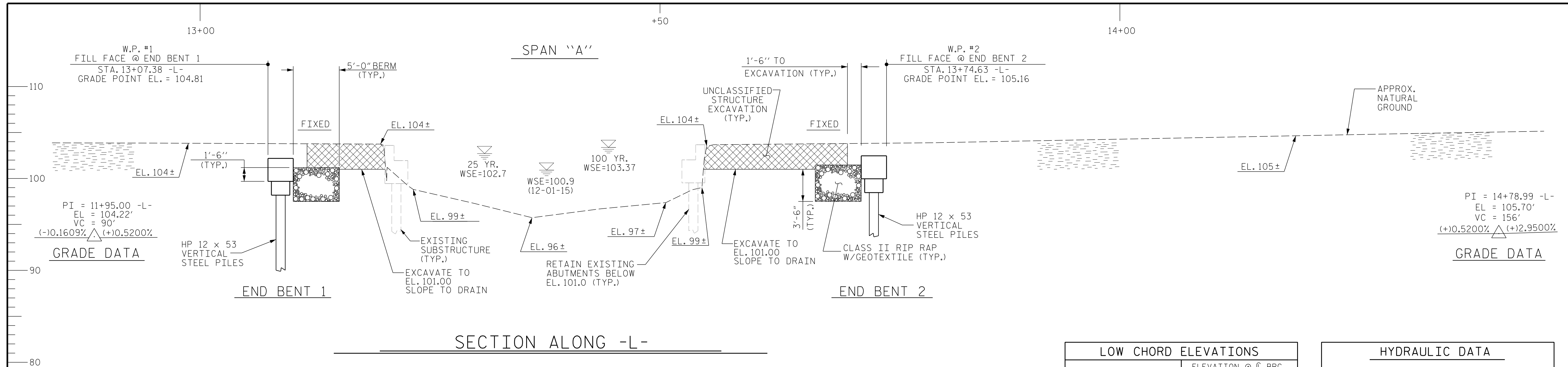
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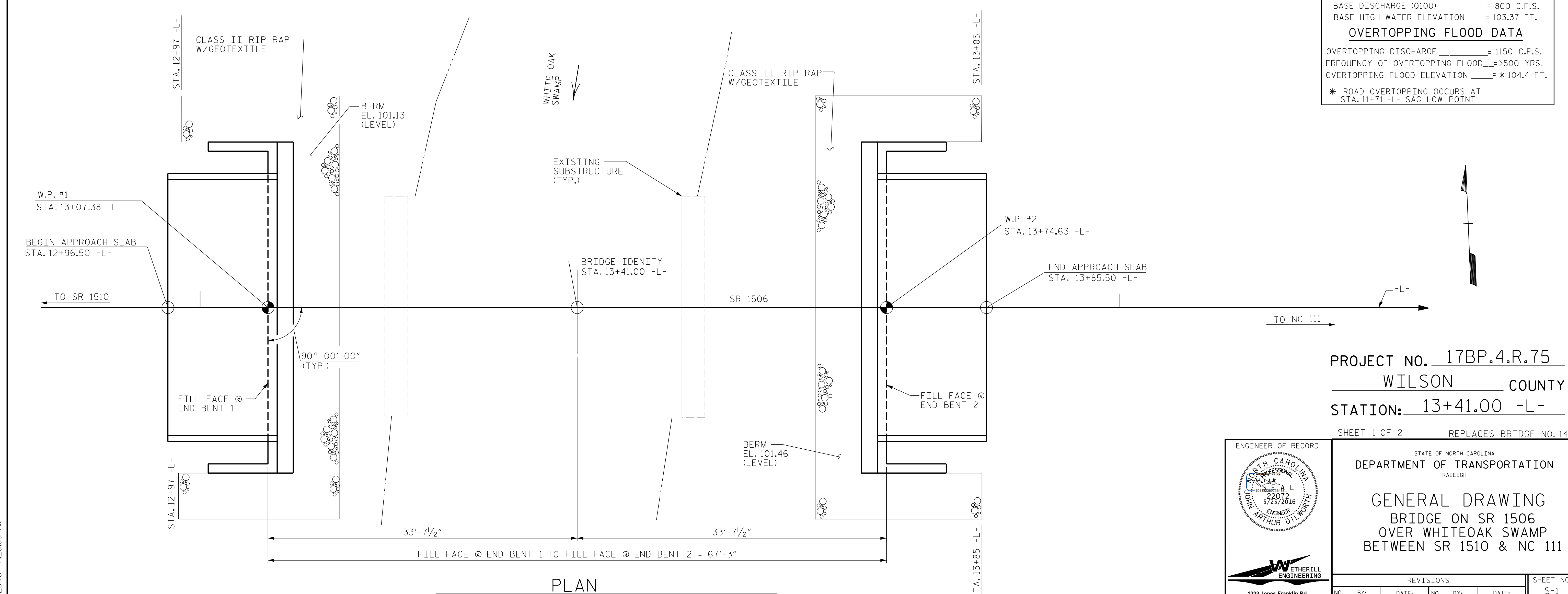
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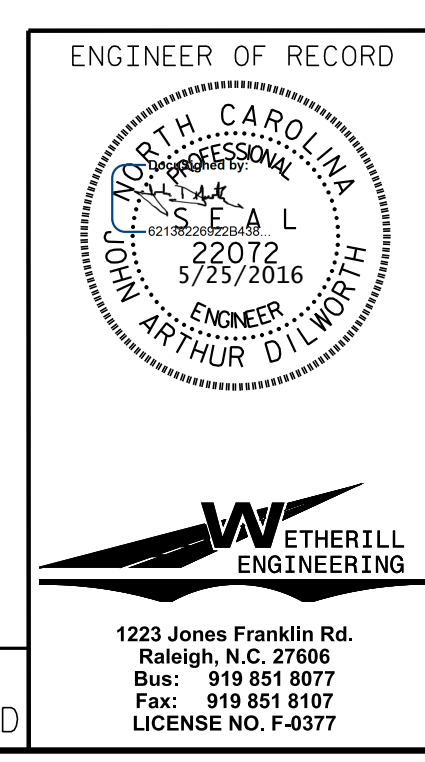


| LOW CHORD ELEVATIONS | |
|----------------------|---------------------|
| | ELEVATION @ C. BRG. |
| END BENT 1 | 102.21 |
| END BENT 2 | 102.54 |

| HYDRAULIC DATA | |
|---|----------------|
| DESIGN DISCHARGE | = 520 C.F.S. |
| FREQUENCY OF DESIGN FLOOD | = 25 YRS. |
| DESIGN HIGH WATER ELEVATION | = 102.7 FT. |
| DRAINAGE AREA | = 3.42 SQ. MI. |
| BASE DISCHARGE (Q100) | = 800 C.F.S. |
| BASE HIGH WATER ELEVATION | = 103.37 FT. |
| OVERTOPPING FLOOD DATA | |
| OVERTOPPING DISCHARGE | = 1150 C.F.S. |
| FREQUENCY OF OVERTOPPING FLOOD | = >500 YRS. |
| OVERTOPPING FLOOD ELEVATION | = *104.4 FT. |
| * ROAD OVERTOPPING OCCURS AT STA. 11+71 -L- SAG LOW POINT | |



PROJECT NO. 17BP.4.R.75
 WILSON COUNTY
 STATION: 13+41.00 -L-
 SHEET 1 OF 2 REPLACES BRIDGE NO. 143



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE ON SR 1506
 OVER WHITEOAK SWAMP
 BETWEEN SR 1510 & NC 111

| REVISIONS | | | | | |
|-----------|-----|-------|-----|-----|-------|
| NO. | BY: | DATE: | NO. | BY: | DATE: |
| 1 | | | 3 | | |
| 2 | | | 4 | | |

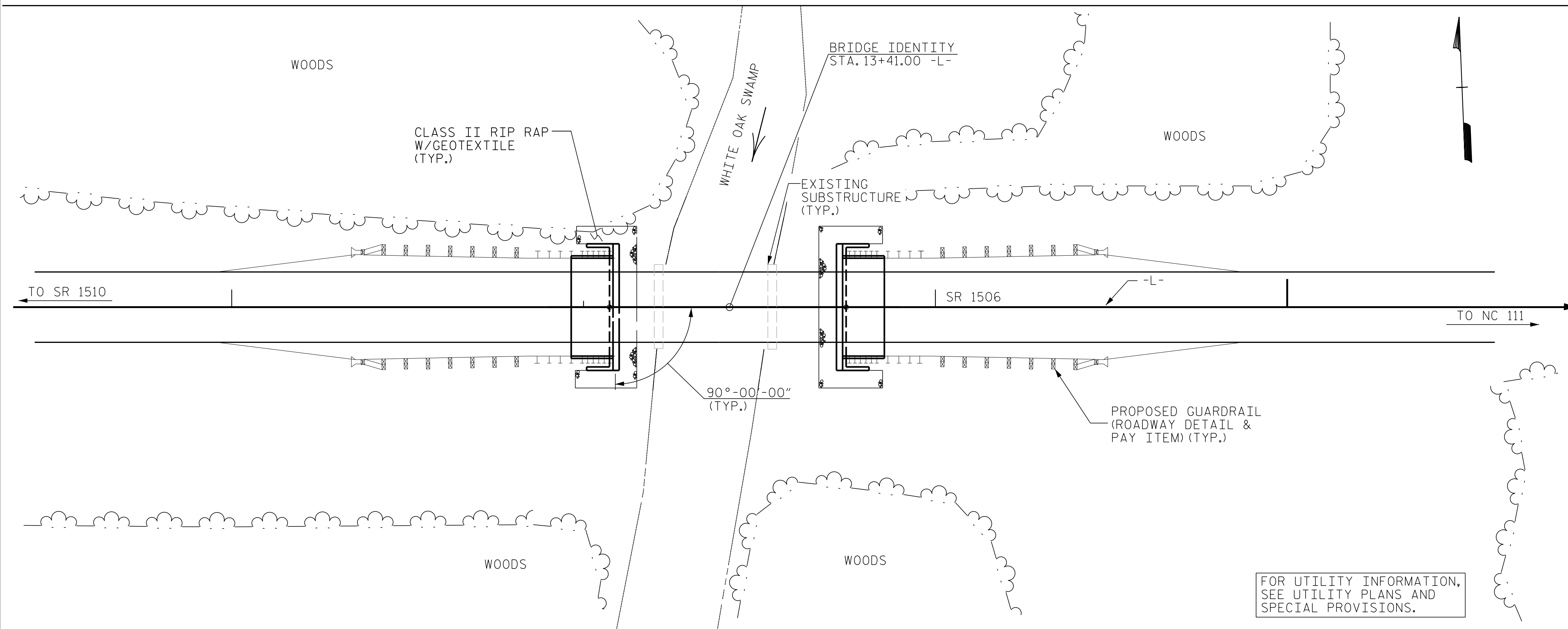
SHEET NO. S-1
 TOTAL SHEETS 13

DRAWN BY: J. PENDERGRAFT DATE: 12-15
 CHECKED BY: G.M. GILLAND DATE: 1-16

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

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TBM-1: BENCHLITE NAIL IN 18" MAPLE -L- STA 14+00.17, 62.28' RT, ELEV=102.36



LOCATION SKETCH

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

| | REMOVAL OF EXISTING STRUCTURE | PDA TESTING | UNCLASSIFIED STRUCTURE EXCAVATION | CLASS A CONCRETE | BRIDGE APPROACH SLABS | REINFORCING STEEL | HP 12 x 53 STEEL PILES | | PILE REDRIVES | VERTICAL CONCRETE BARRIER RAIL | RIE RAP CLASS II | GEOTEXTILE FOR DRAINAGE | ELASTOMERIC BEARINGS | 3'-0" X 2'-0" PRESTRESSED CONCRETE CORED SLABS | | ASBESTOS ASSESSMENT |
|----------------|-------------------------------|-------------|-----------------------------------|------------------|-----------------------|-------------------|------------------------|----------|---------------|--------------------------------|------------------|-------------------------|----------------------|--|----------|---------------------|
| | LUMP SUM | | LUMP SUM | CU. YDS. | LUMP SUM | LBS. | NO. | LIN. FT. | EACH | LIN. FT. | TONS | SQ. YD. | LUMP SUM | NO. | LIN. FT. | LUMP SUM |
| SUPERSTRUCTURE | | | | | | | | | | 130.00 | | | LUMP SUM | 10 | 650.00 | |
| END BENT 1 | | | | 13.2 | | 1965 | 5 | 375 | 3 | | 75 | 70 | | | | |
| END BENT 2 | | | | 13.2 | | 1965 | 5 | 375 | 3 | | 75 | 70 | | | | |
| TOTAL | LUMP SUM | 1 | LUMP SUM | 26.4 | LUMP SUM | 3930 | 10 | 750 | 6 | 130.00 | 150 | 140 | LUMP SUM | 10 | 650.00 | LUMP SUM |

FOUNDATION NOTES:

FOR PILES, SEE GEOTECHNICAL SPECIAL PROVISIONS AND SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT NO.1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 94 TONS PER PILE.

DRIVE PILES AT END BENT NO.1 TO A REQUIRED DRIVING RESISTANCE OF 160 TONS PER PILE.

PILES AT END BENT NO.2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 94 TONS PER PILE.

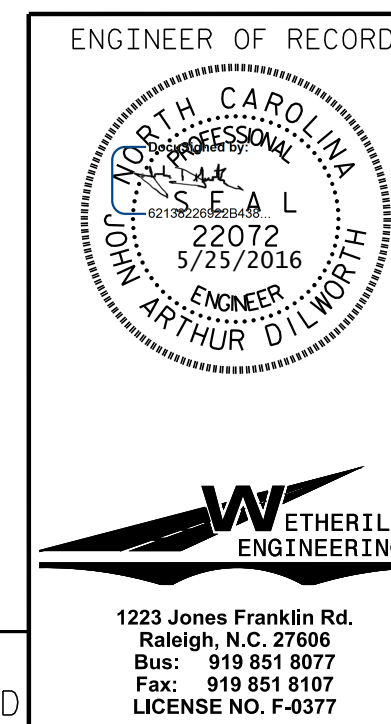
DRIVE PILES AT END BENT NO.2 TO A REQUIRED DRIVING RESISTANCE OF 160 TONS PER PILE.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 35 TO 45 FT-KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT NO.1 AND 2. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.

TESTING PILES WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING MAY BE REQUIRED. THE ENGINEER WILL DETERMINE THE NEED FOR PDA TESTING. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PROJECT NO. 17BP.4.R.75
WILSON COUNTY
 STATION: 13+41.00 -L-

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE ON SR 1506
 OVER WHITEOAK SWAMP
 BETWEEN SR 1510 & NC 111

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S-2 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 13 |

DRAWN BY: J. PENDERGRAFT DATE: 5-16
 CHECKED BY: J. DILWORTH DATE: 5-16

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

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LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS

| LEVEL | VEHICLE | WEIGHT (W) (TONS) | CONTROLLING LOAD RATING | MINIMUM RATING FACTORS (RF) | TONS = W X RF | STRENGTH I LIMIT STATE | | | | | | | | | | SERVICE III LIMIT STATE | | | | | COMMENT NUMBER | | | |
|--------------------------|------------|----------------------|----------------------------|-----------------------------------|---------------|------------------------|------------------------------|---------------|------|-----------------|---|------------------------------|---------------|------|-----------------|---|---------------------|------------------------------|---------------|------|----------------|-----------------|---|--|
| | | | | | | MOMENT | | | | | SHEAR | | | | | MOMENT | | | | | | | | |
| | | | | | | LIVELOAD FACTORS | DISTRIBUTION FACTORS (DF) | RATING FACTOR | SPAN | GIRDER LOCATION | DISTANCE FROM LEFT END OF SPAN (ft) | DISTRIBUTION FACTORS (DF) | RATING FACTOR | SPAN | GIRDER LOCATION | DISTANCE FROM LEFT END OF SPAN (ft) | LIVELOAD FACTORS | DISTRIBUTION FACTORS (DF) | RATING FACTOR | SPAN | | GIRDER LOCATION | DISTANCE FROM LEFT END OF SPAN (ft) | |
| DESIGN LOAD RATING | HL-93(Inv) | N/A | 1 | 1.018 | -- | 1.75 | 0.274 | 1.05 | 65' | EL | 32 | 0.513 | 1.2 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.02 | 65' | EL | 32 | | |
| | HL-93(Opr) | N/A | -- | 1.358 | -- | 1.35 | 0.274 | 1.36 | 65' | EL | 32 | 0.513 | 1.56 | 65' | EL | 6.4 | N/A | -- | -- | -- | -- | -- | | |
| | HS-20(Inv) | 36.000 | 2 | 1.306 | 47.014 | 1.75 | 0.274 | 1.34 | 65' | EL | 32 | 0.513 | 1.48 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.31 | 65' | EL | 32 | | |
| | HS-20(Opr) | 36.000 | -- | 1.742 | 62.706 | 1.35 | 0.274 | 1.74 | 65' | EL | 32 | 0.513 | 1.92 | 65' | EL | 6.4 | N/A | -- | -- | -- | -- | -- | | |
| LEGAL LOAD RATING | SV | SNSH | 13.500 | -- | 2.868 | 38.725 | 1.4 | 0.274 | 3.69 | 65' | EL | 32 | 0.513 | 4.33 | 65' | EL | 6.4 | 0.80 | 0.274 | 2.87 | 65' | EL | 32 | |
| | | SNGARBS2 | 20.000 | -- | 2.171 | 43.424 | 1.4 | 0.274 | 2.79 | 65' | EL | 32 | 0.513 | 3.11 | 65' | EL | 6.4 | 0.80 | 0.274 | 2.17 | 65' | EL | 32 | |
| | | SNAGRIS2 | 22.000 | -- | 2.071 | 45.552 | 1.4 | 0.274 | 2.66 | 65' | EL | 32 | 0.513 | 2.89 | 65' | EL | 6.4 | 0.80 | 0.274 | 2.07 | 65' | EL | 32 | |
| | | SNCOTTS3 | 27.250 | -- | 1.428 | 38.924 | 1.4 | 0.274 | 1.84 | 65' | EL | 32 | 0.513 | 2.17 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.43 | 65' | EL | 32 | |
| | | SNAGGRS4 | 34.925 | -- | 1.206 | 42.136 | 1.4 | 0.274 | 1.55 | 65' | EL | 32 | 0.513 | 1.81 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.21 | 65' | EL | 32 | |
| | | SNS5A | 35.550 | -- | 1.179 | 41.911 | 1.4 | 0.274 | 1.52 | 65' | EL | 32 | 0.513 | 1.85 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.18 | 65' | EL | 32 | |
| | | SNS6A | 39.950 | -- | 1.087 | 43.43 | 1.4 | 0.274 | 1.4 | 65' | EL | 32 | 0.513 | 1.69 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.09 | 65' | EL | 32 | |
| | SNS7B | 42.000 | -- | 1.035 | 43.489 | 1.4 | 0.274 | 1.33 | 65' | EL | 32 | 0.513 | 1.67 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.04 | 65' | EL | 32 | | |
| | TTST | TNAGRIT3 | 33.000 | -- | 1.327 | 43.8 | 1.4 | 0.274 | 1.71 | 65' | EL | 32 | 0.513 | 2.01 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.33 | 65' | EL | 32 | |
| | | TNT4A | 33.075 | -- | 1.335 | 44.142 | 1.4 | 0.274 | 1.72 | 65' | EL | 32 | 0.513 | 1.95 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.33 | 65' | EL | 32 | |
| | | TNT6A | 41.600 | -- | 1.096 | 45.613 | 1.4 | 0.274 | 1.41 | 65' | EL | 32 | 0.513 | 1.8 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.10 | 65' | EL | 32 | |
| | | TNT7A | 42.000 | -- | 1.105 | 46.4 | 1.4 | 0.274 | 1.42 | 65' | EL | 32 | 0.513 | 1.74 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.10 | 65' | EL | 32 | |
| | | TNT7B | 42.000 | -- | 1.15 | 48.298 | 1.4 | 0.274 | 1.48 | 65' | EL | 32 | 0.513 | 1.62 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.15 | 65' | EL | 32 | |
| | | TNAGRIT4 | 43.000 | -- | 1.089 | 46.815 | 1.4 | 0.274 | 1.4 | 65' | EL | 32 | 0.513 | 1.57 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.09 | 65' | EL | 32 | |
| TNAGT5A | | 45.000 | -- | 1.024 | 46.084 | 1.4 | 0.274 | 1.32 | 65' | EL | 32 | 0.513 | 1.57 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.02 | 65' | EL | 32 | | |
| TNAGT5B | 45.000 | 3 | 1.01 | 45.431 | 1.4 | 0.274 | 1.3 | 65' | EL | 32 | 0.513 | 1.49 | 65' | EL | 6.4 | 0.80 | 0.274 | 1.01 | 65' | EL | 32 | | | |

LOAD FACTORS:

| | | | |
|-------------------------------------|-------------|---------------|---------------|
| DESIGN LOAD RATING FACTORS | LIMIT STATE | γ_{DC} | γ_{DW} |
| | STRENGTH I | 1.25 | 1.50 |
| | SERVICE III | 1.00 | 1.00 |

NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.
ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

COMMENTS:

- 1.
- 2.
- 3.
- 4.

CONTROLLING LOAD RATING

1 DESIGN LOAD RATING (HL-93)

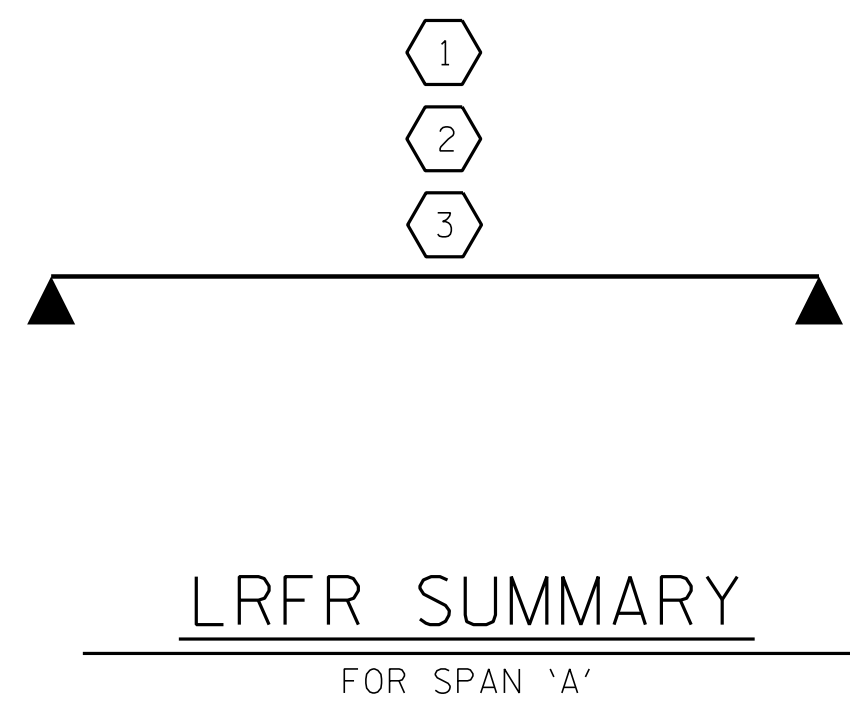
2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

I - INTERIOR GIRDER
EL - EXTERIOR LEFT GIRDER
ER - EXTERIOR RIGHT GIRDER



PROJECT NO. 17BP.4.R.75
WILSON COUNTY
STATION: 13+41.00 -L-

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ENGINEER OF RECORD

ETHERILL ENGINEERING

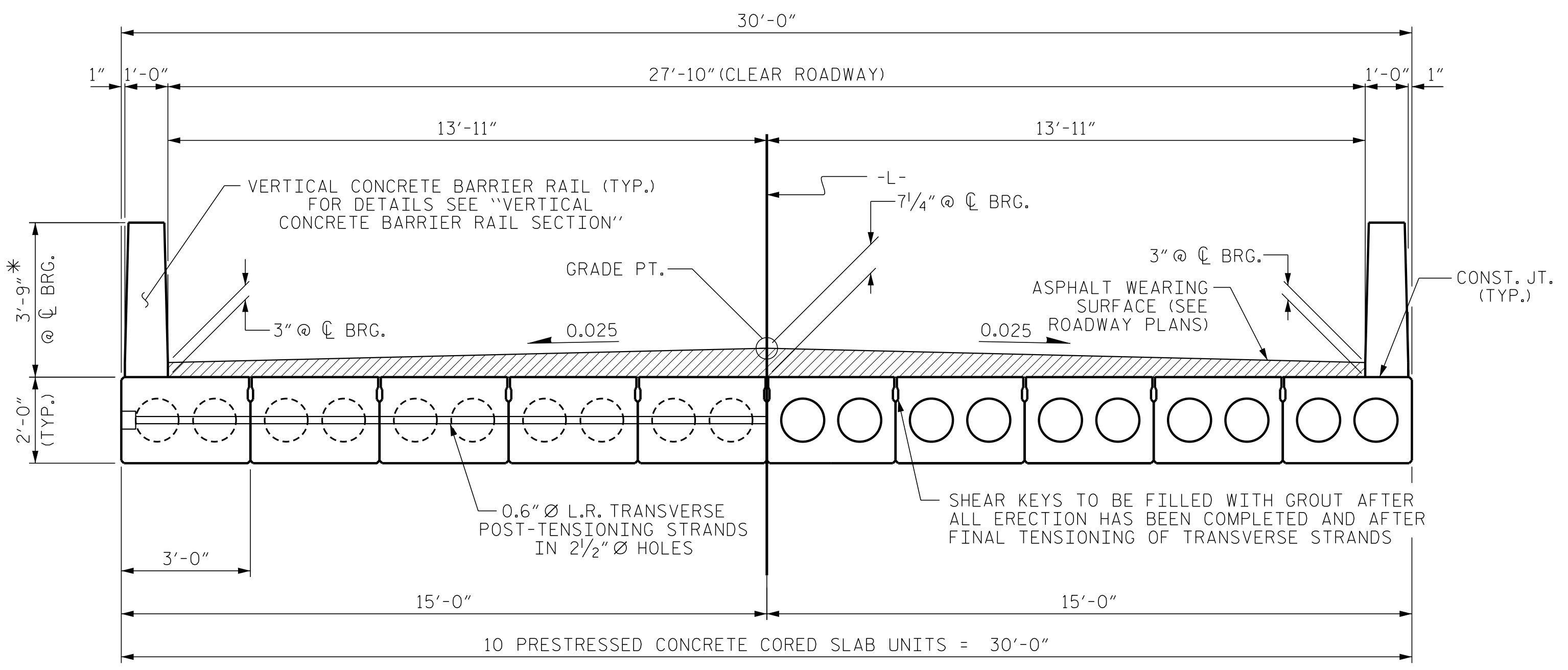
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
Bus: 919 851 8077
Fax: 919 851 8107
LICENSE NO. F-0377

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
LRFR SUMMARY FOR
65' CORED SLAB UNIT
90° SKEW
(NON-INTERSTATE TRAFFIC)

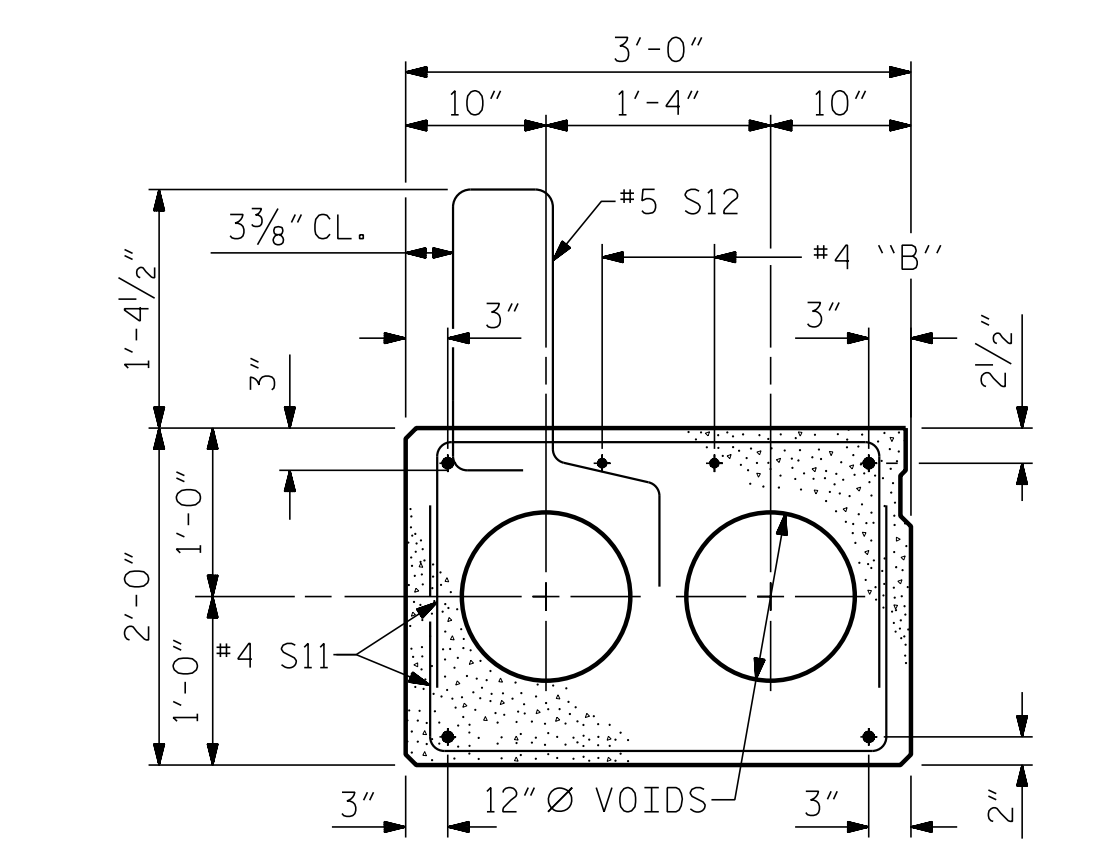
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|-----------|-----|-------|-----|-----------|--------------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: |
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| | | | | | S-3 |
| | | | | | TOTAL SHEETS 13 |

STD. NO. 24LRFR1-90S-65L

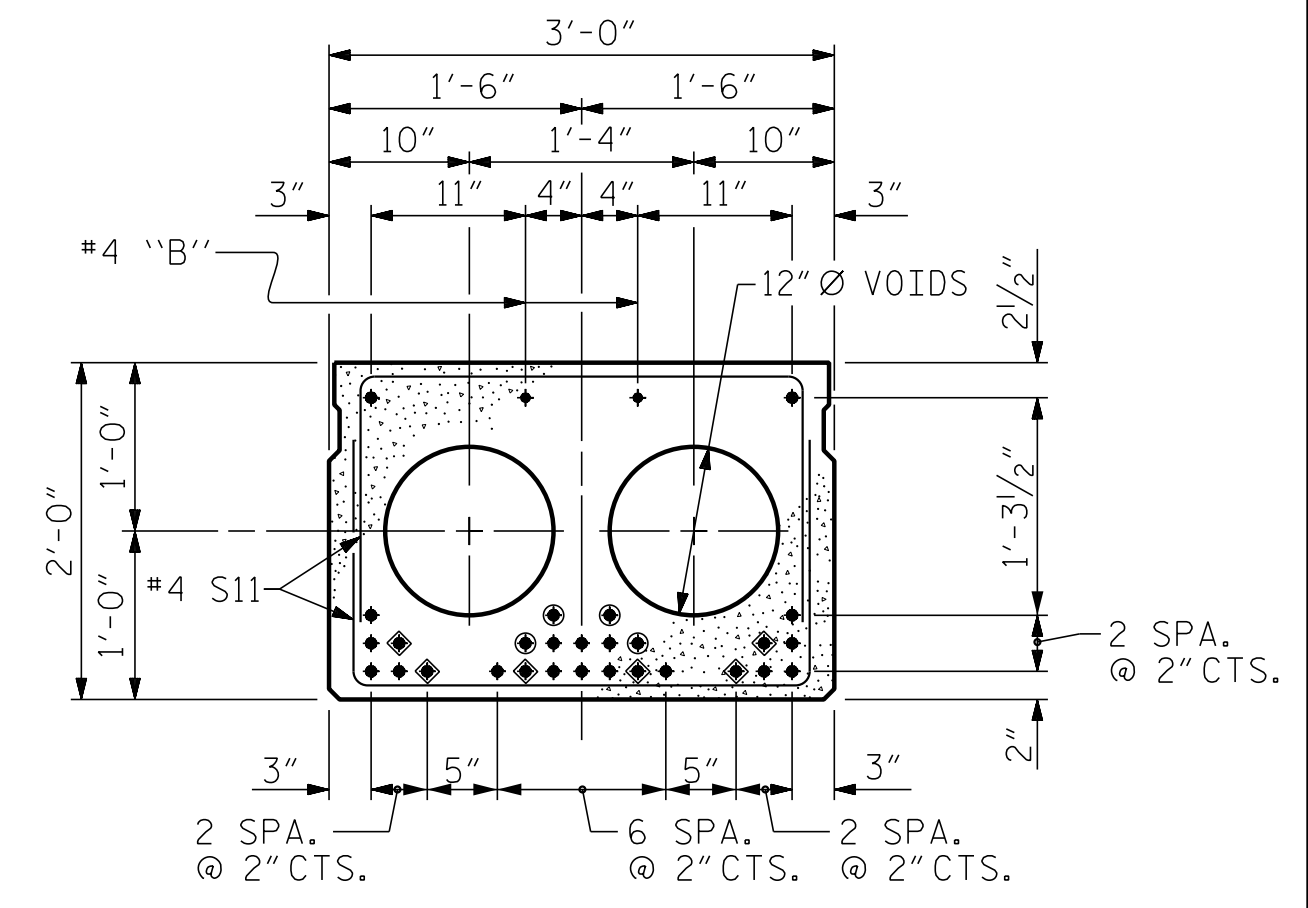


HALF SECTION AT INTERMEDIATE DIAPHRAGMS
TYPICAL SECTION
HALF SECTION THROUGH VOIDS

* - THE MAXIMUM BARRIER RAIL HEIGHT AND ASPHALT THICKNESS IS SHOWN. THE HEIGHT OF THE BARRIER RAIL AND ASPHALT THICKNESS VARIES WHILE THE TOP OF THE BARRIER RAIL FOLLOWS THE PROFILE OF THE GUTTERLINE. FOR RAIL HEIGHT DETAILS AND ASPHALT THICKNESS, SEE THE "VERTICAL CONCRETE BARRIER RAIL SECTION" DETAIL.



EXTERIOR SLAB SECTION
(FOR PRESTRESSED STRAND LAYOUT, SEE INTERIOR SLAB SECTION.)

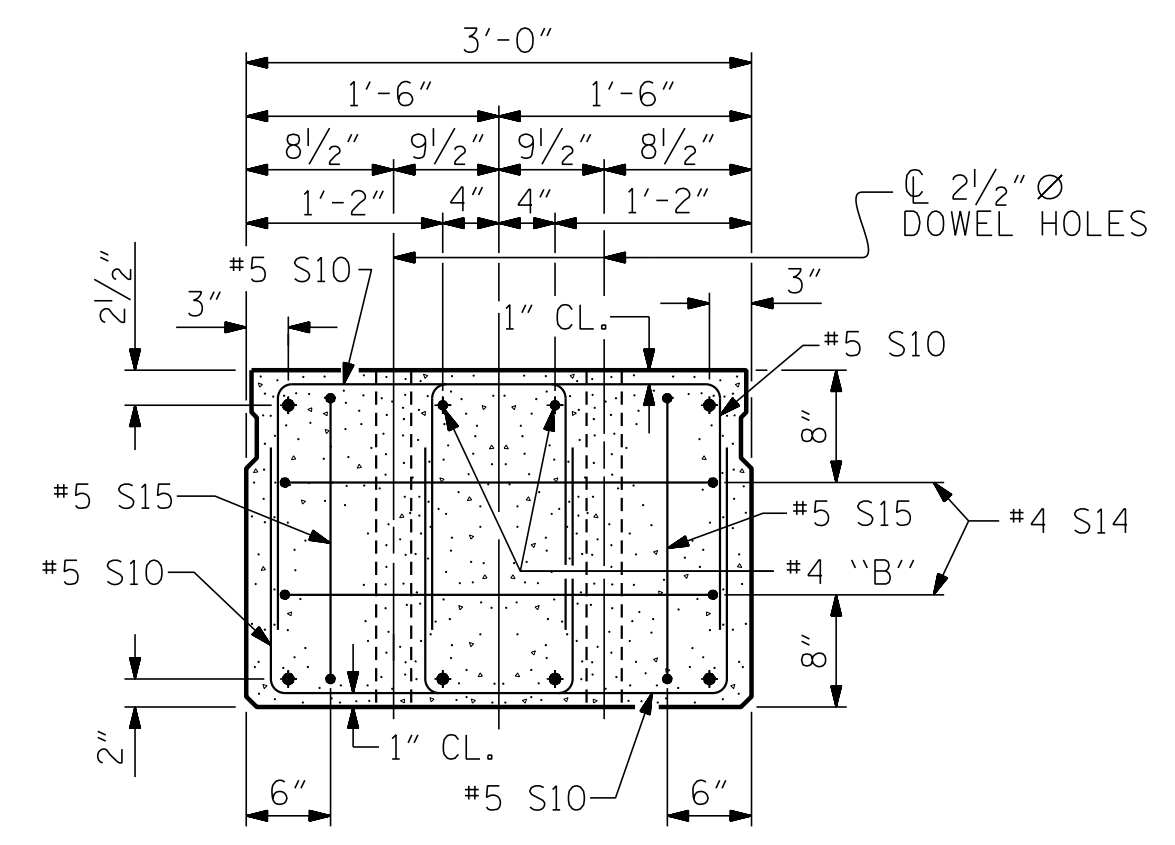


INTERIOR SLAB SECTION (65' UNIT)
(24 STRANDS REQUIRED)

0.6" Ø LOW RELAXATION STRAND LAYOUT

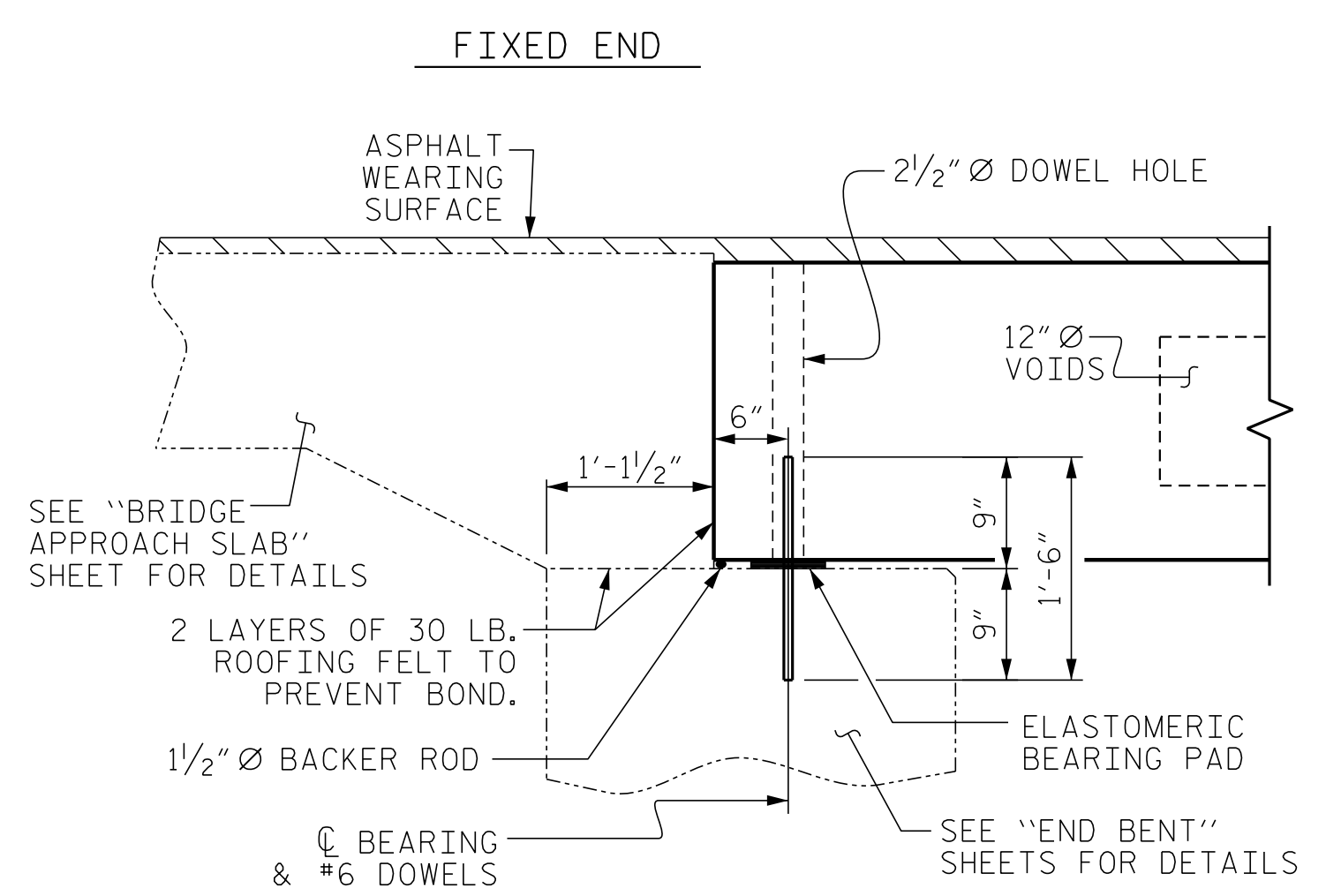
- ◆ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 12'-0" FROM END OF CORED SLAB UNIT. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.
- OPTIONAL FULL LENGTH DEBONDED STRANDS. THESE STRANDS ARE NOT REQUIRED. IF THE FABRICATOR CHOOSES TO INCLUDE THESE STRANDS IN THE CORED SLAB UNIT, THE STRANDS SHALL BE DEBONDED FOR THE FULL LENGTH OF THE UNIT AT NO ADDITIONAL COST. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.

DEBONDING LEGEND



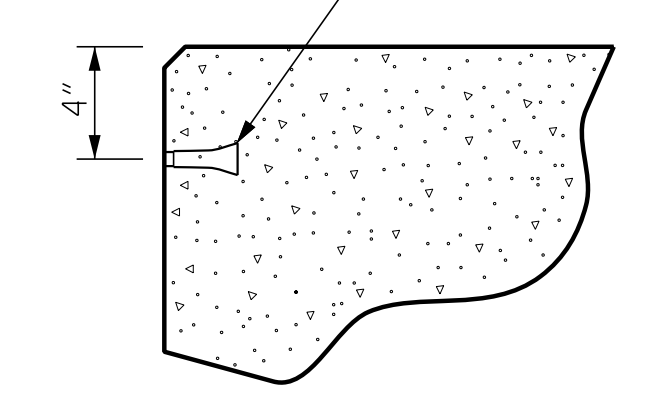
END ELEVATION

SHOWING PLACEMENT OF DOUBLE STIRRUPS AND LOCATION OF DOWEL HOLES. (STRAND LAYOUT NOT SHOWN.) INTERIOR SLAB UNIT SHOWN-EXTERIOR SLAB UNIT SIMILAR EXCEPT SHEAR KEY LOCATION.

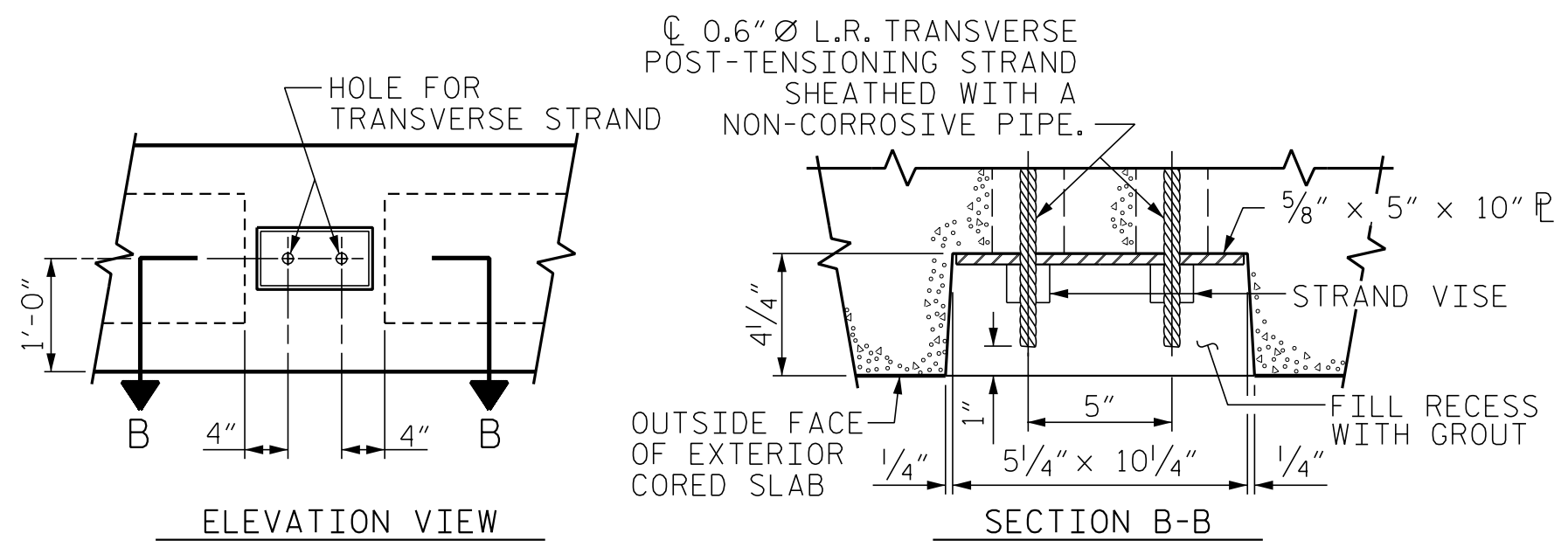


SECTION AT END BENT

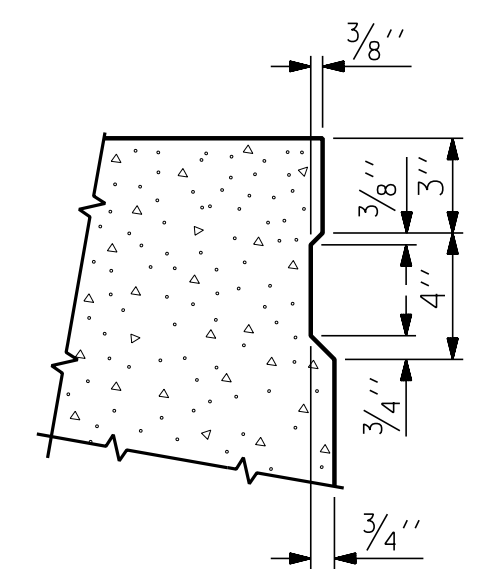
PERMITTED THREADED INSERT CAST IN OUTSIDE FACE OF EXTERIOR UNIT AND RECESSED 3/8" SIZE TO BE DETERMINED BY CONTRACTOR.



THREADED INSERT DETAIL



GROUTED RECESS AT END OF POST-TENSIONED STRAND-CORED SLABS



SHEAR KEY DETAIL

NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR CORED SLABS.

PROJECT NO. 17BP.4.R.75
WILSON COUNTY
STATION: 13+41.00 -L-

SHEET 1 OF 3

ENGINEER OF RECORD
NORTH CAROLINA PROFESSIONAL ENGINEER
ARTHUR DILWORTH
22072
5/25/2016
1223 Jones Franklin Rd.
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Fax: 919 851 8107
LICENSE NO. F-0377

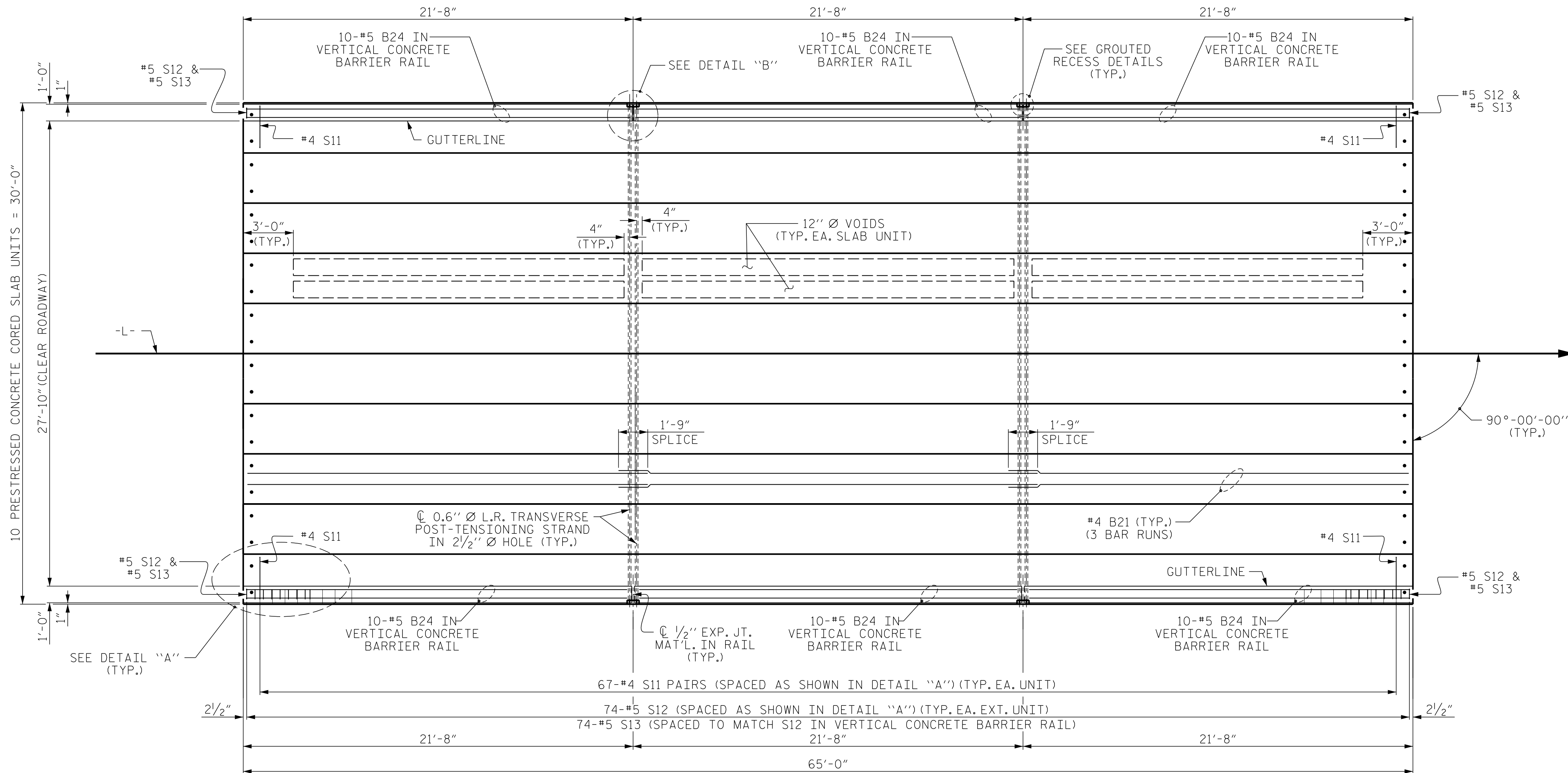
| | | | | | |
|--|-----|-------|-----|-----|-----------------|
| STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH STANDARD 3'-0" X 2'-0" PRESTRESSED CONCRETE CORED SLAB UNIT | | | | | |
| REVISIONS | | | | | |
| NO. | BY: | DATE: | NO. | BY: | DATE: |
| 1 | | | 3 | | |
| 2 | | | 4 | | |
| SHEET NO. S-4 | | | | | TOTAL SHEETS 13 |

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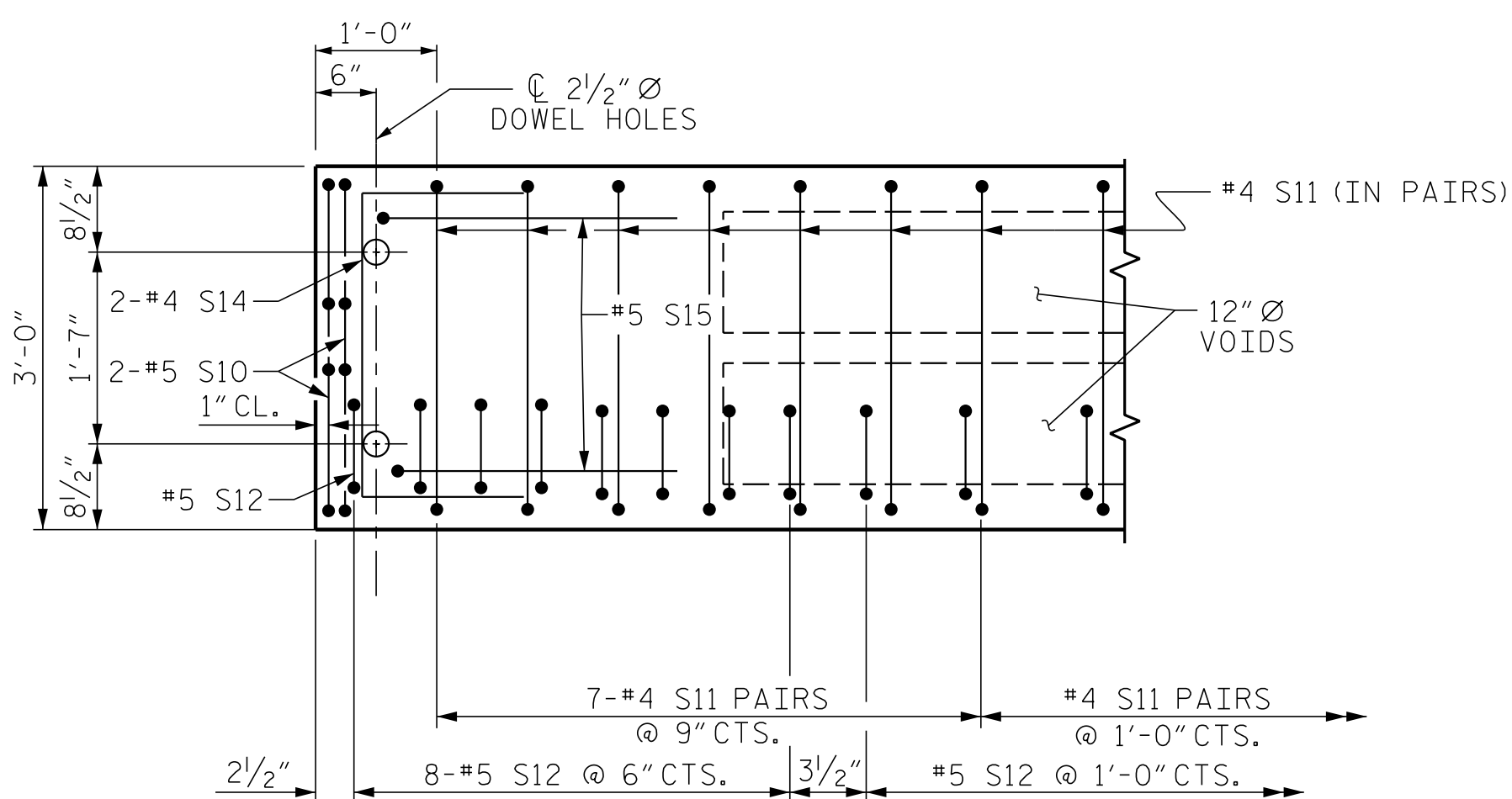
STD. NO. 24PCS4_30_90S

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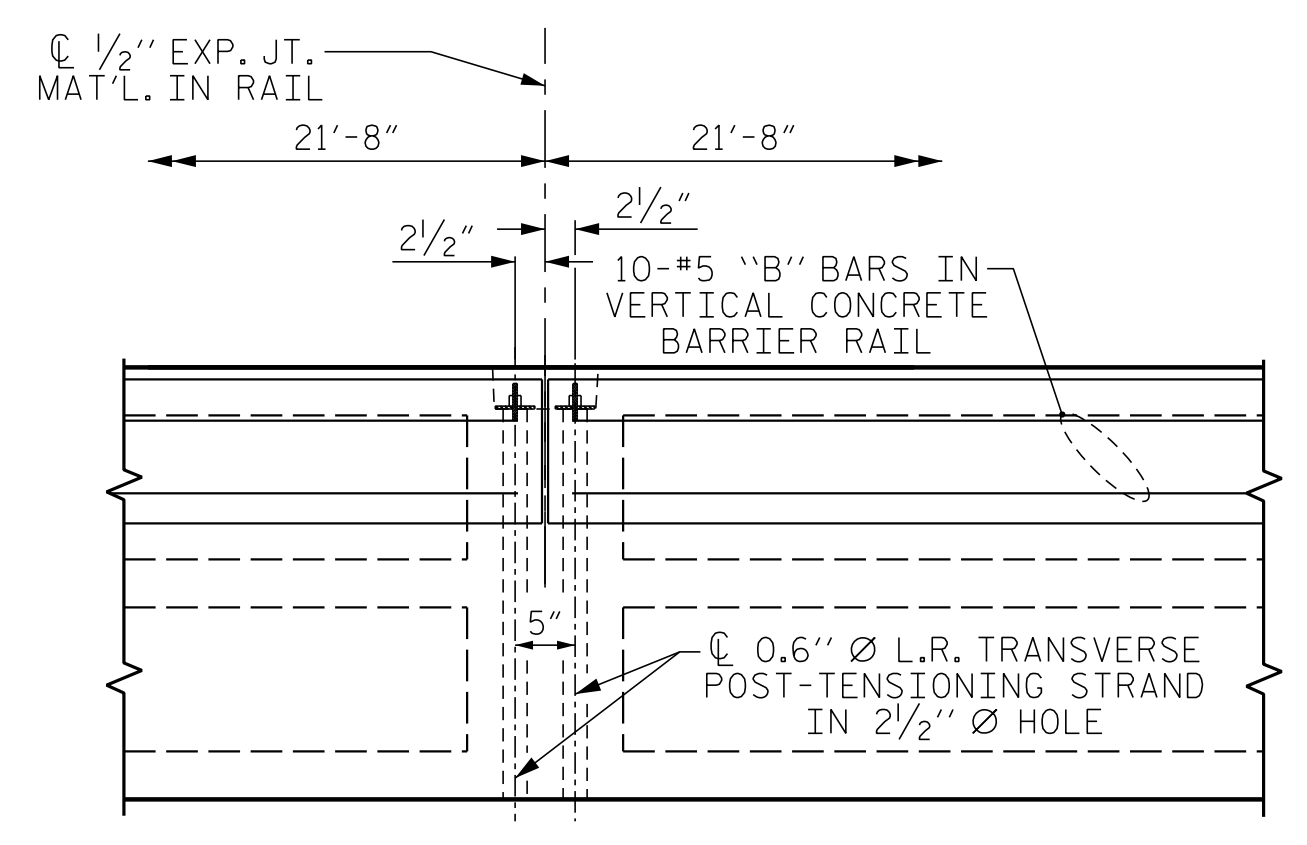


PLAN OF UNIT



DETAIL "A"

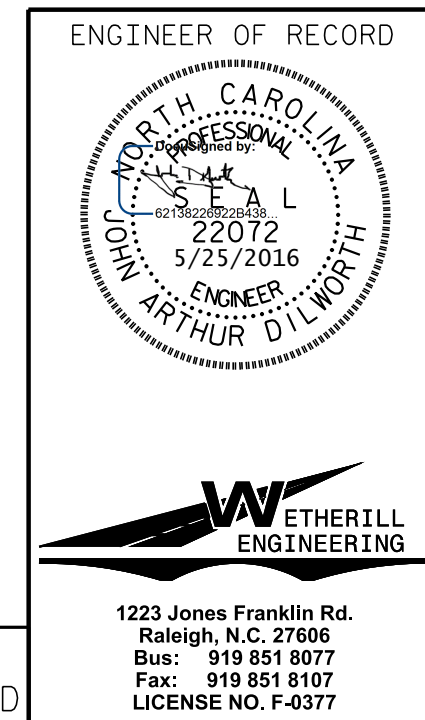
(TYPICAL EACH END OF UNIT)
NOTE: EXTERIOR UNIT SHOWN - INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S12 BARS.



DETAIL "B"

#4 S11 BARS MAY BE SHIFTED AS NECESSARY TO MAINTAIN 1" CLEAR TO GROUDED RECESS AND 2 1/2" Ø TRANSVERSE POST-TENSIONING STRAND HOLES

PROJECT NO. 17BP.4.R.75
WILSON COUNTY
STATION: 13+41.00 -L-
SHEET 2 OF 3



| | | | | | |
|--|-----|-------|-----|-----|-----------------|
| STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH | | | | | |
| PLAN OF 65' UNIT 27'-10" CLEAR ROADWAY 90° SKEW | | | | | |
| REVISIONS | | | | | |
| NO. | BY: | DATE: | NO. | BY: | DATE: |
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| 2 | | | 4 | | |
| SHEET NO. S-5 | | | | | TOTAL SHEETS 13 |

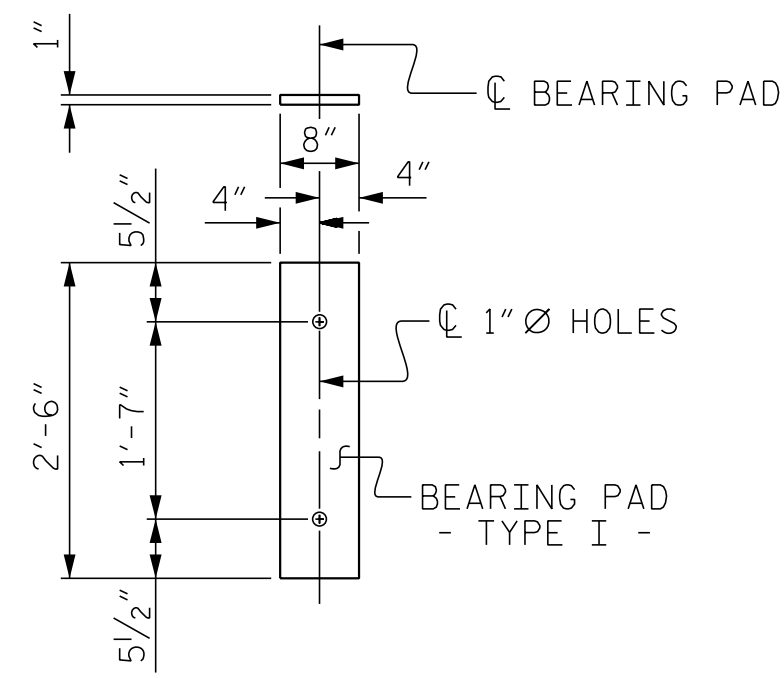
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FIXED END
(TYPE I - 20 REQ'D)

ELASTOMERIC BEARING DETAILS

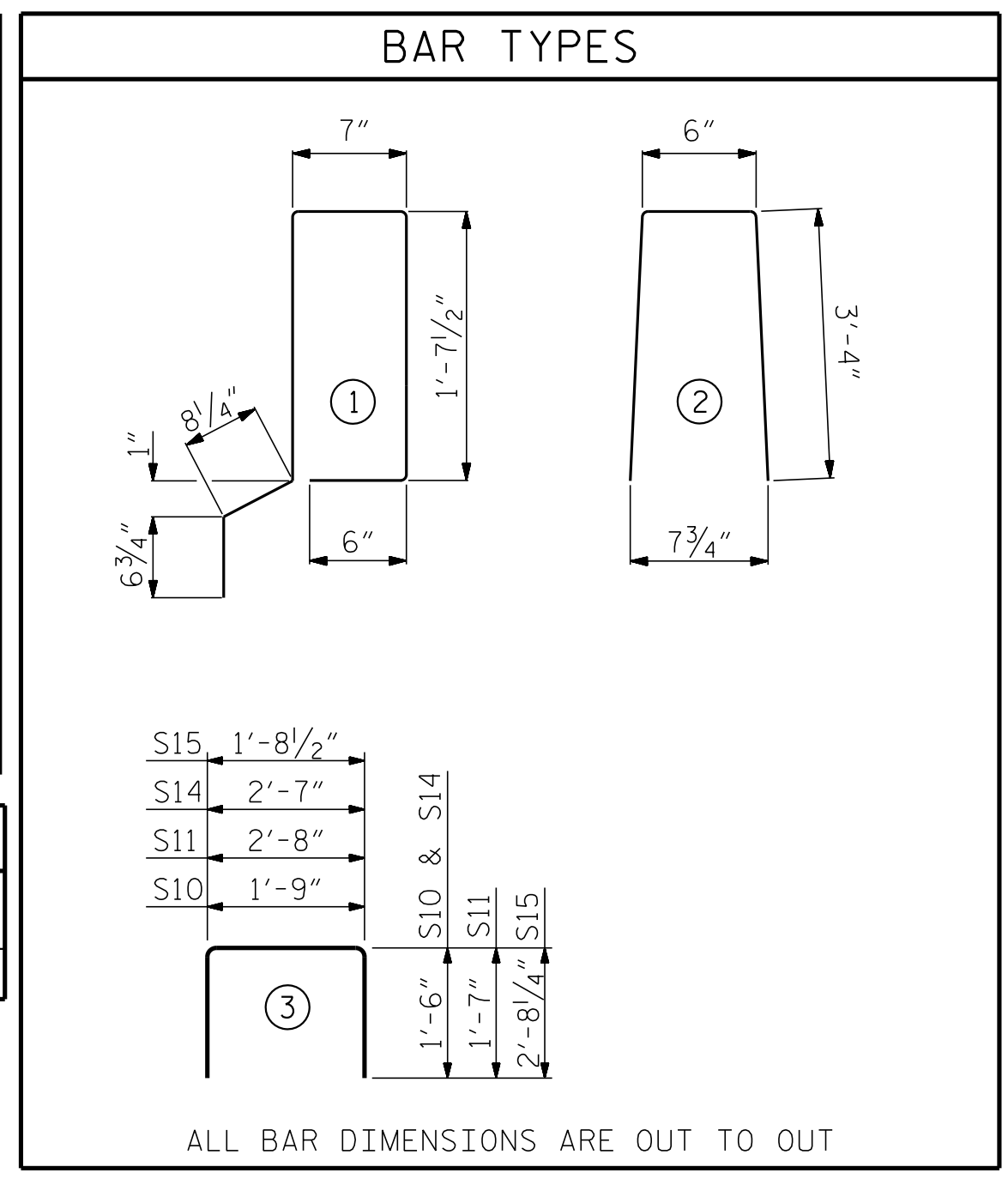
ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS.

BILL OF MATERIAL FOR ONE 65' CORED SLAB UNIT

| BAR | NUMBER | SIZE | TYPE | EXTERIOR UNIT | | INTERIOR UNIT | |
|---------------------------------|--------|------|------|---------------|--------|---------------|--------|
| | | | | LENGTH | WEIGHT | LENGTH | WEIGHT |
| B21 | 6 | #4 | STR | 22'-10" | 92 | 22'-10" | 92 |
| S10 | 8 | #5 | 3 | 4'-9" | 40 | 4'-9" | 40 |
| S11 | 134 | #4 | 3 | 5'-10" | 522 | 5'-10" | 522 |
| *S12 | 74 | #5 | 1 | 5'-7" | 431 | 5'-7" | 431 |
| S14 | 4 | #4 | 3 | 5'-7" | 15 | 5'-7" | 15 |
| S15 | 4 | #5 | 3 | 7'-1" | 30 | 7'-1" | 30 |
| REINFORCING STEEL | | | | LBS. | 699 | LBS. | 699 |
| *EPOXY COATED REINFORCING STEEL | | | | LBS. | 431 | LBS. | 431 |
| 6000 P.S.I. CONCRETE | | | | CU. YDS. | 11.0 | CU. YDS. | 11.0 |
| 0.6" Ø L.R. STRANDS | | | | No. | 24 | No. | 24 |

GUTTERLINE ASPHALT THICKNESS & RAIL HEIGHT

| | ASPHALT OVERLAY THICKNESS @ MID-SPAN | RAIL HEIGHT @ MID-SPAN |
|-----------|--------------------------------------|------------------------|
| 65' UNITS | 1 5/8" | 3'-7 5/8" |



BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL

| BAR | BARS PER PAIR OF EXTERIOR UNITS | TOTAL NO. | SIZE | TYPE | LENGTH | WEIGHT |
|--------------------------------------|---------------------------------|-----------|------|------|----------|--------|
| 65' UNIT | | | | | | |
| *B24 | 60 | 60 | #5 | STR | 21'-3" | 1330 |
| *S13 | 148 | 148 | #5 | 2 | 7'-2" | 1106 |
| *EPOXY COATED REINFORCING STEEL | | | | | LBS. | 2436 |
| CLASS AA CONCRETE | | | | | CU. YDS. | 16.9 |
| TOTAL VERTICAL CONCRETE BARRIER RAIL | | | | | LN. FT. | 130.00 |

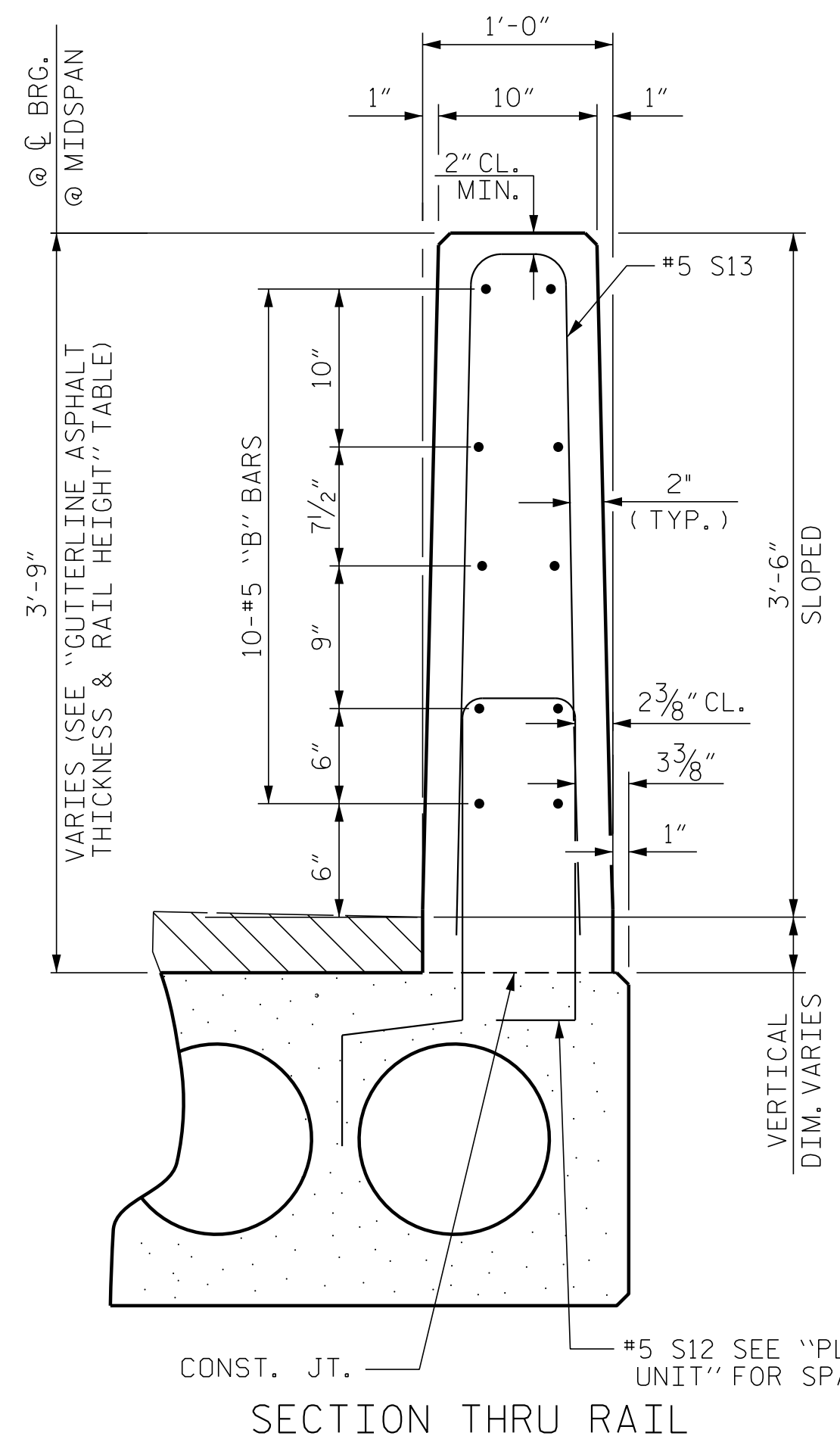
DEAD LOAD DEFLECTION AND CAMBER

| | 3'-0" x 2'-0" 0.6" Ø L.R. STRAND |
|--|----------------------------------|
| 65' CORED SLAB UNIT | |
| CAMBER (SLAB ALONE IN PLACE) | 1 1/8" ↑ |
| DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD** | 1/2" ↓ |
| FINAL CAMBER | 1 3/8" ↑ |

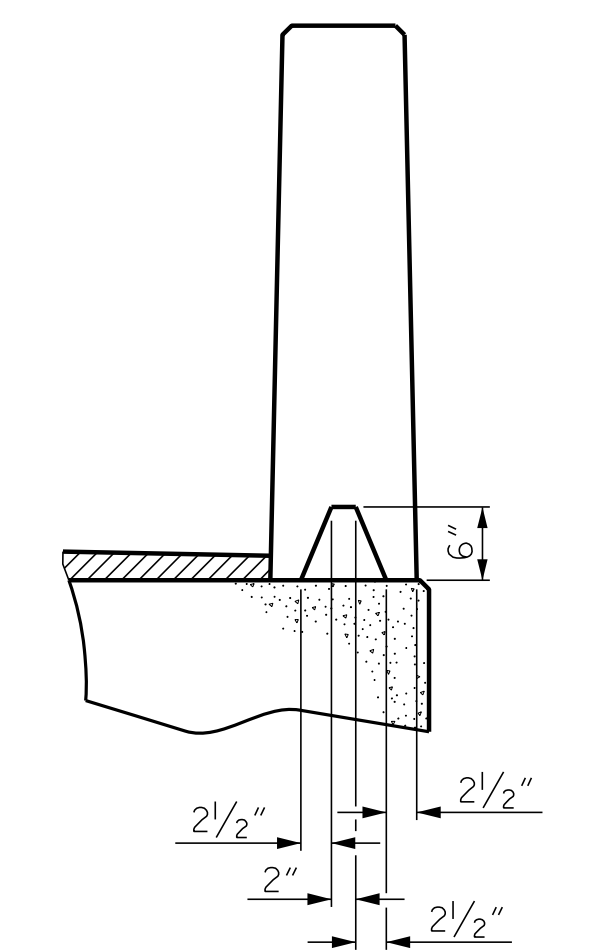
** INCLUDES FUTURE WEARING SURFACE

CORED SLABS REQUIRED

| | NUMBER | LENGTH | TOTAL LENGTH |
|---------------|--------|--------|--------------|
| 65' UNIT | | | |
| EXTERIOR C.S. | 2 | 65'-0" | 130'-0" |
| INTERIOR C.S. | 8 | 65'-0" | 520'-0" |
| TOTAL | 10 | | 650'-0" |

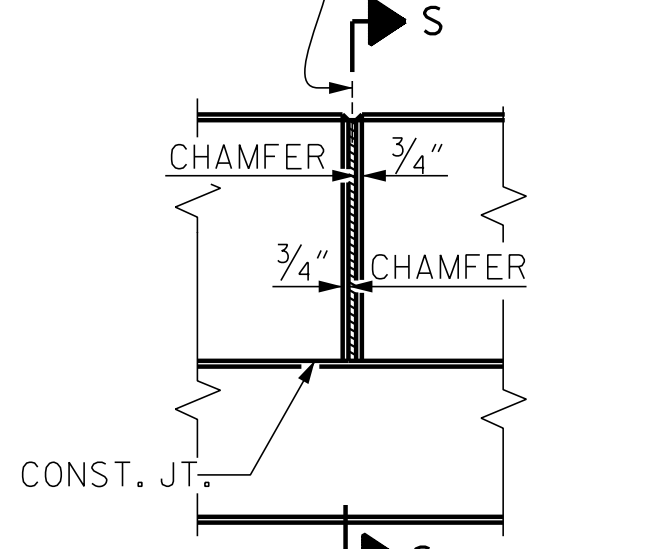


SECTION THRU RAIL

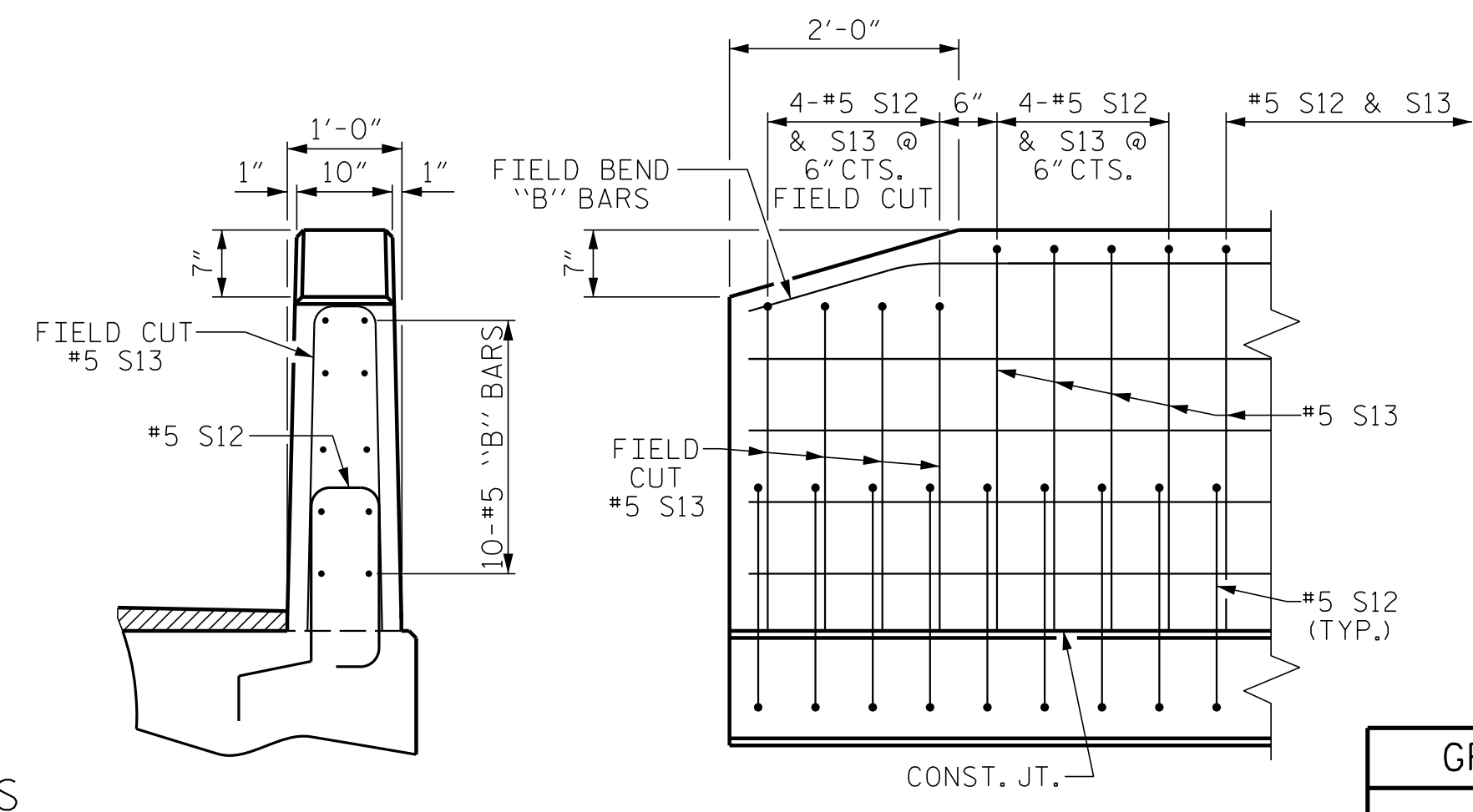


SECTION S-S
AT DAM IN OPEN JOINT
(THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)

1/2" EXP. JT. MAT'L HELD IN PLACE WITH GALVANIZED NAILS.
(NOTE: OMIT EXP. JT. MAT'L WHEN SLIP FORM IS USED)



ELEVATION AT EXPANSION JOINTS



END VIEW

SIDE VIEW

END OF RAIL DETAILS

CONCRETE RELEASE STRENGTH

| UNIT | PSI |
|-----------|------|
| 65' UNITS | 4800 |

GRADE 270 STRANDS

| | 0.6" Ø L.R. |
|-------------------------------------|-------------|
| AREA (SQUARE INCHES) | 0.217 |
| ULTIMATE STRENGTH (LBS. PER STRAND) | 58,600 |
| APPLIED PRESTRESS (LBS. PER STRAND) | 43,950 |

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NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE CORED SLAB SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE CORED SLABS.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH NON-SHRINK GROUT.

THE BACKER RODS SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

WHEN CORED SLABS ARE CAST, AN INTERNAL HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. AT LEAST SIX WEEKS PRIOR TO CASTING CORED SLABS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND COMMENT, DETAILED DRAWINGS OF THE PROPOSED HOLD-DOWN SYSTEM. IN ADDITION TO STRUCTURAL DETAILS, LOCATION AND SPACING OF THE HOLD-DOWNS SHALL BE INDICATED.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE CORED SLAB UNIT SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN THE REQUIRED STRENGTH SHOWN IN THE "CONCRETE RELEASE STRENGTH" TABLE.

ALL REINFORCING STEEL IN VERTICAL CONCRETE BARRIER RAILS SHALL BE EPOXY COATED.

PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

FLAME CUTTING OF THE TRANSVERSE POST-TENSIONING STRAND IS NOT ALLOWED.

MAINTAIN A SYMMETRIC TENSION FORCE BETWEEN EACH PAIR OF TRANSVERSE POST TENSIONING STRANDS IN THE DIAPHRAGM.

THE #4 S11 STIRRUPS MAY BE SHIFTED AS NECESSARY TO MAINTAIN 1" CLEAR TO THE GROUTED RECESS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE PERMITTED THREADED INSERTS ARE DETAILED AS AN OPTION FOR THE CONTRACTOR TO ATTACH FALSEWORK AND FORMWORK DURING CONSTRUCTION.

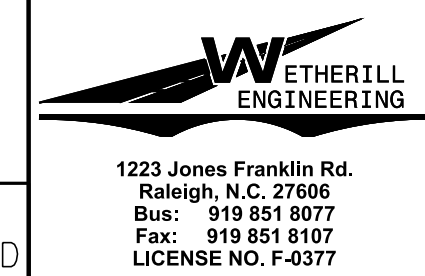
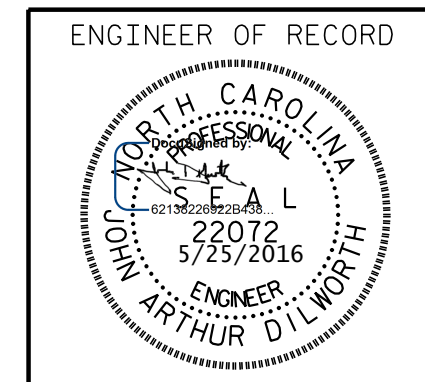
THE PERMITTED THREADED INSERTS IN THE EXTERIOR UNITS SHALL BE SIZED BY THE CONTRACTOR, SPACED AT 4'-0" CENTERS AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS. STAINLESS STEEL THREADED INSERTS MAY BE USED AS AN ALTERNATE.

THE PERMITTED THREADED INSERTS SHALL BE GROUTED BY THE CONTRACTOR IMMEDIATELY FOLLOWING REMOVAL OF THE FALSEWORK.

THE COST OF THE PERMITTED THREADED INSERTS SHALL BE INCLUDED IN THE PRICE BID FOR THE PRECAST UNITS.

PROJECT NO. 17BP.4.R.75
WILSON COUNTY
STATION: 13+41.00 -L-

SHEET 3 OF 3



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

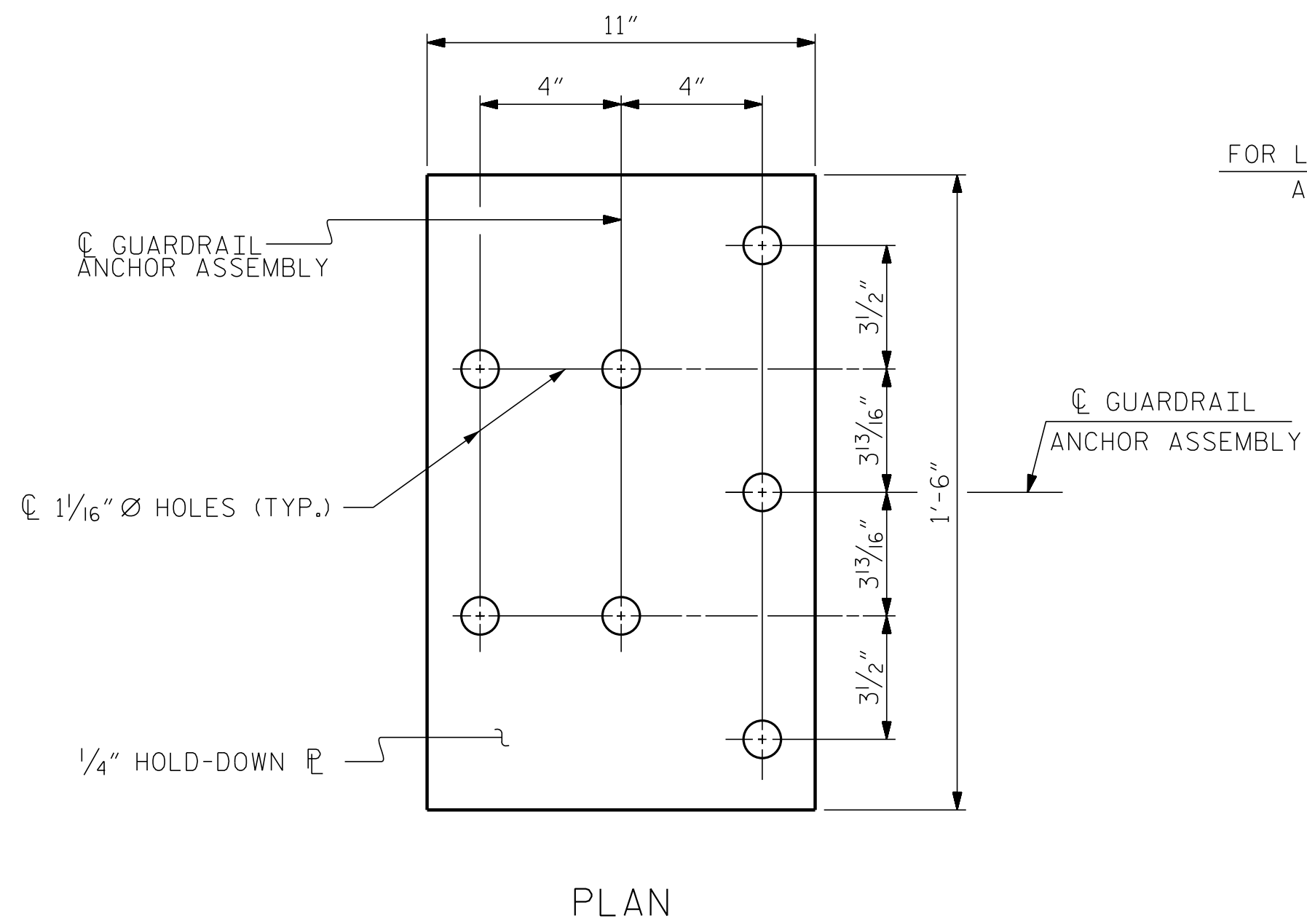
STANDARD
3'-0" X 2'-0"
PRESTRESSED CONCRETE
CORED SLAB UNIT

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S-6 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 13 |

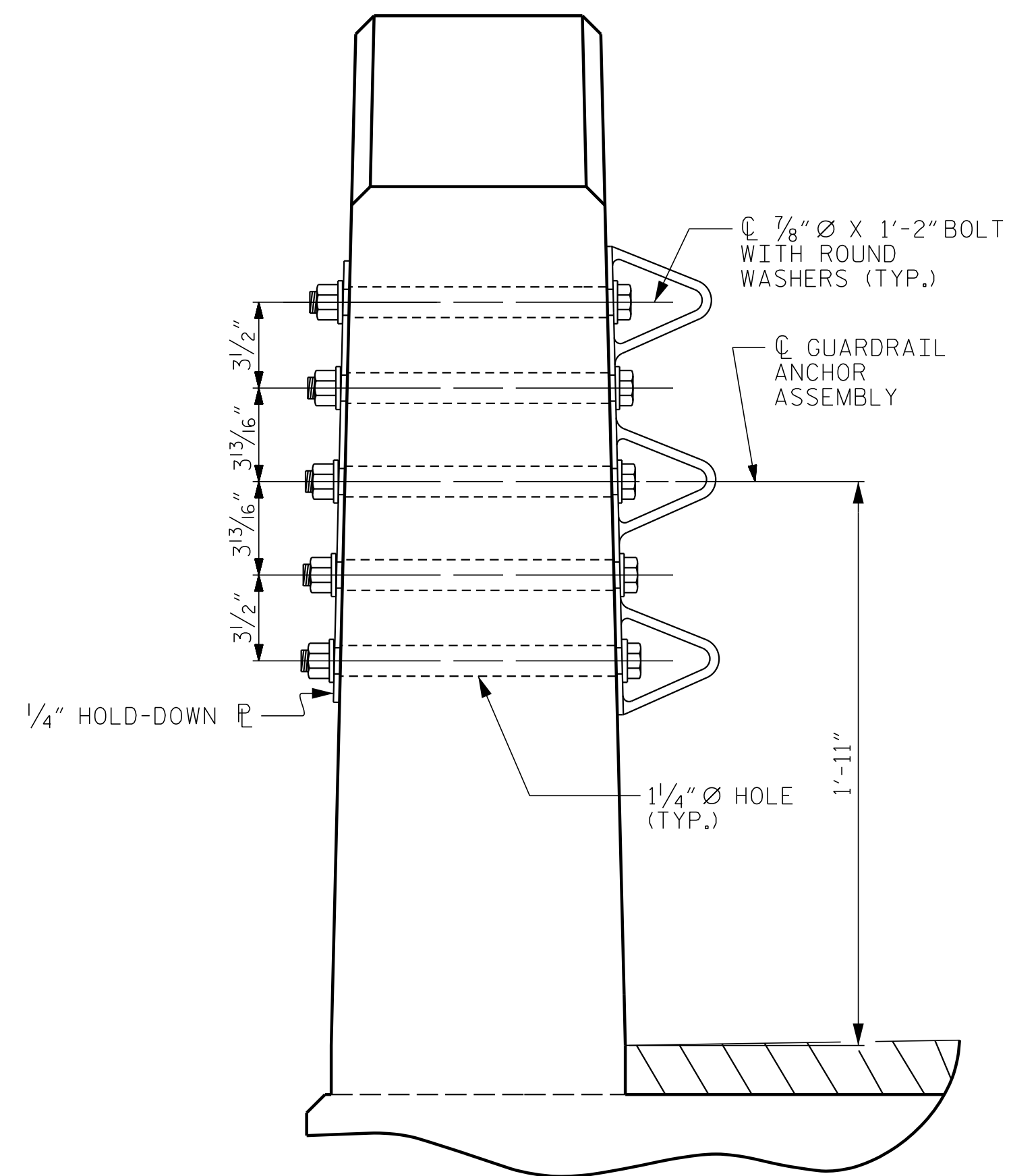
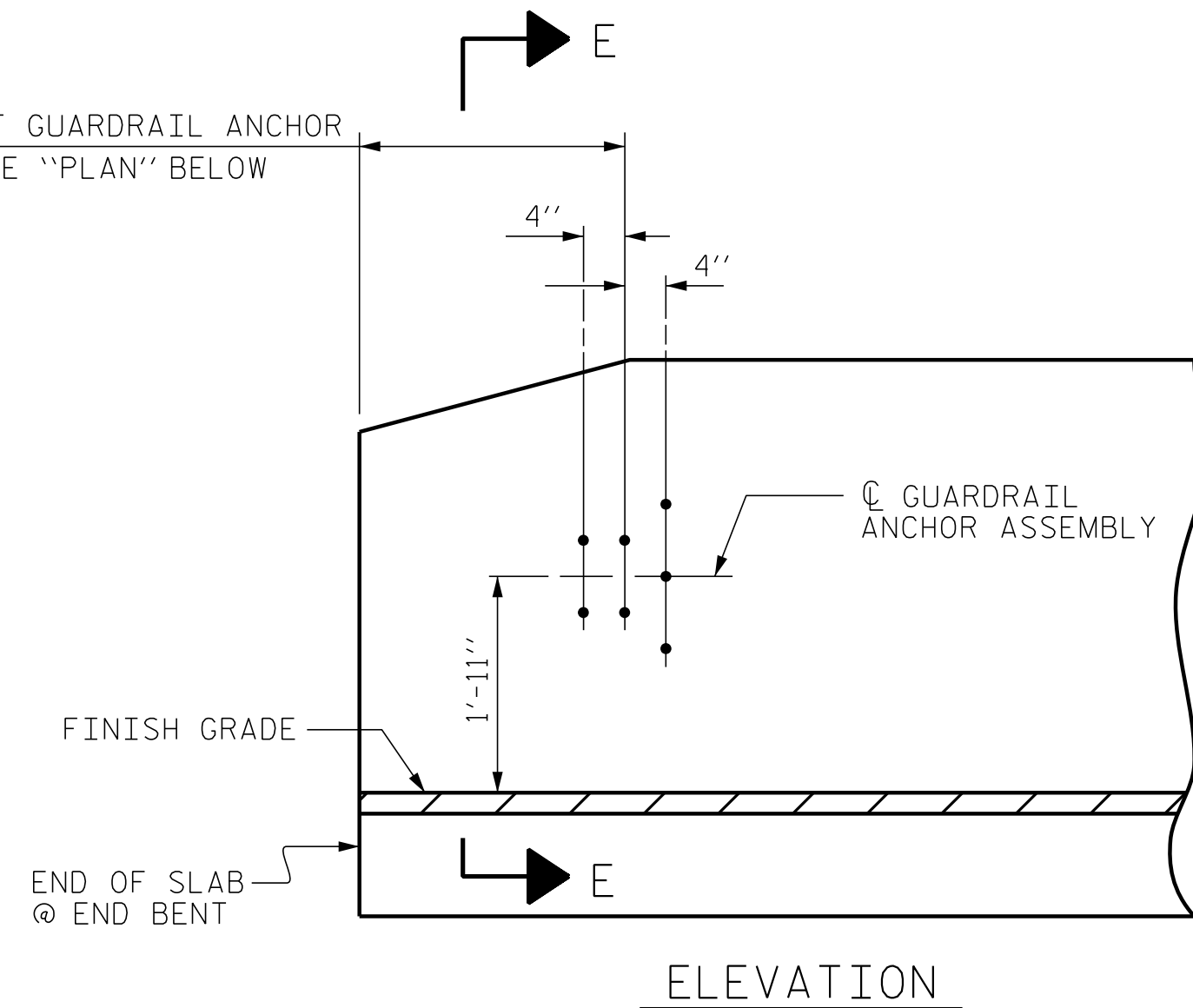
STD. NO. 24PCS3_30_90S

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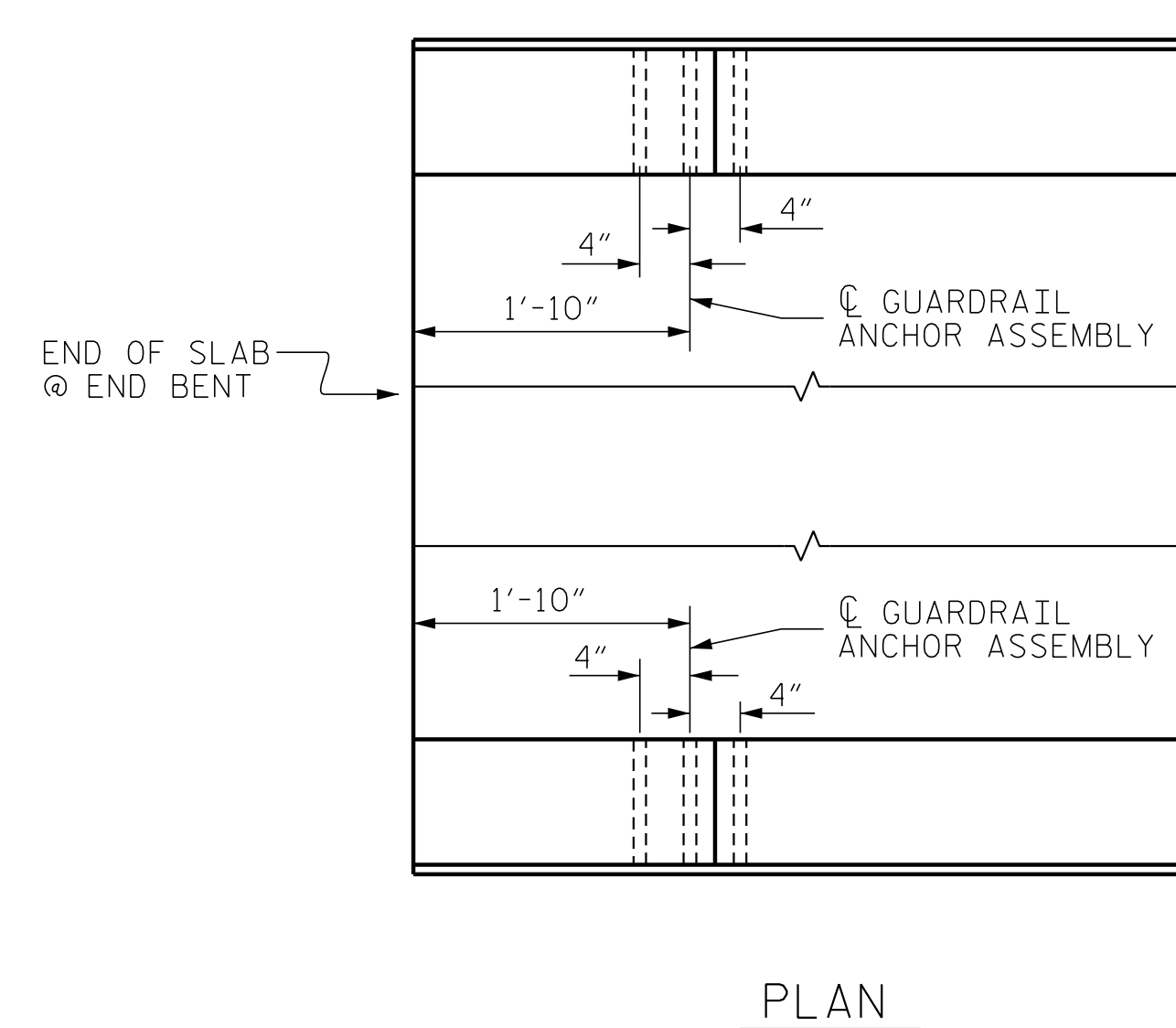
DRAWN BY: J. PENDERGRAFT DATE: 1-16
CHECKED BY: J. DILWORTH DATE: 2-16



FOR LOCATION OF GUARDRAIL ANCHOR ASSEMBLY, SEE "PLAN" BELOW



SECTION E-E
GUARDRAIL ANCHOR ASSEMBLY DETAILS



LOCATION OF ANCHORS FOR GUARDRAIL

END BENT #1 SHOWN, END BENT #2 SIMILAR.



SKETCH SHOWING POINTS OF ATTACHMENT

* DENOTES GUARDRAIL ANCHOR ASSEMBLY

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 7 - 7/8" Ø BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

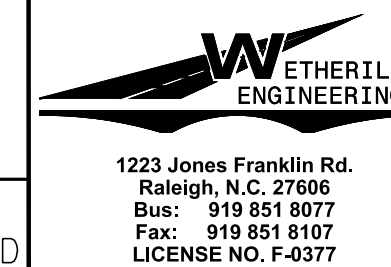
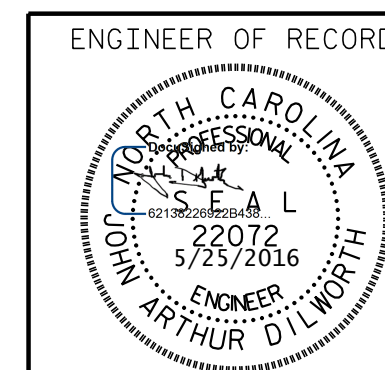
AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR VERTICAL CONCRETE BARRIER RAIL.

THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE VERTICAL CONCRETE BARRIER RAIL TO CLEAR ASSEMBLY BOLTS.

THE 1 1/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

PROJECT NO. 17BP.4.R.75
WILSON COUNTY
STATION: 13+41.00 -L-



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GUARDRAIL ANCHORAGE
DETAILS
FOR VERTICAL CONCRETE
BARRIER RAIL

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S-7 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 13 |

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STD. NO. GRA3 (SHT 1)

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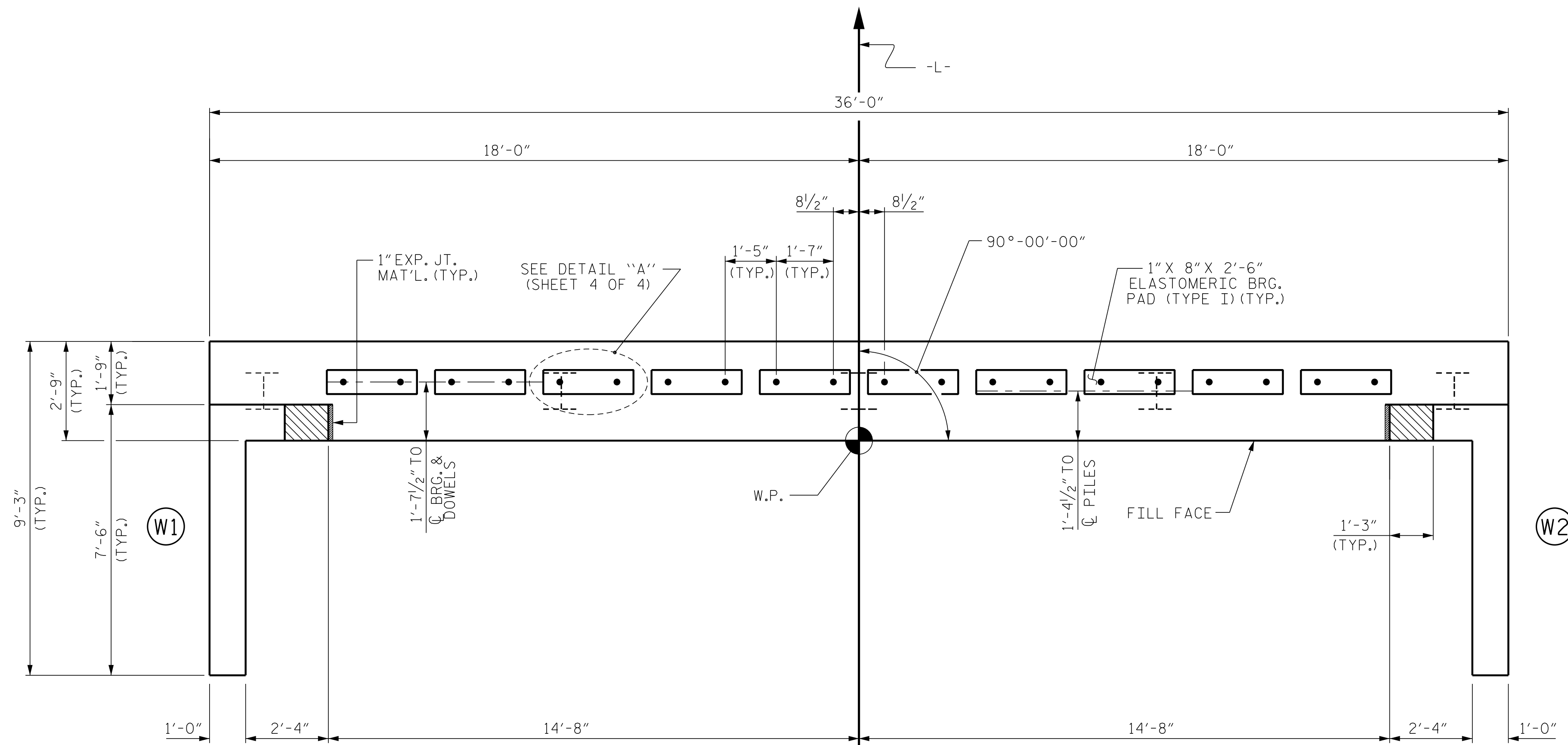
NOTES

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.

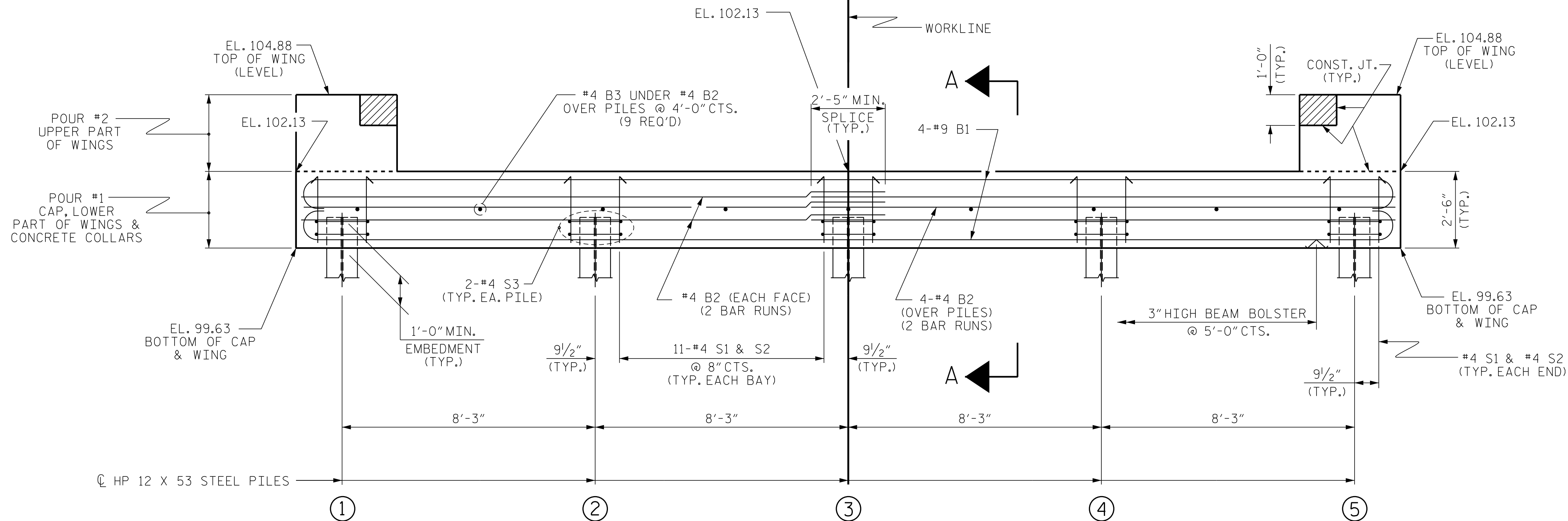
THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE VERTICAL CONCRETE BARRIER RAIL IS CAST IF SLIP FORMING IS USED.

FOR PILE SPLICE DETAILS, SEE SHEET 4 OF 4.

FOR WING DETAILS, SEE SHEET 3 OF 4.



PLAN

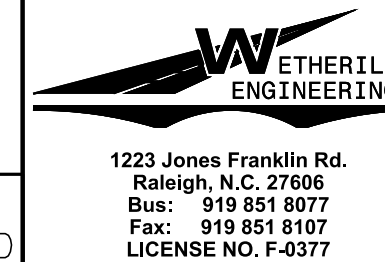
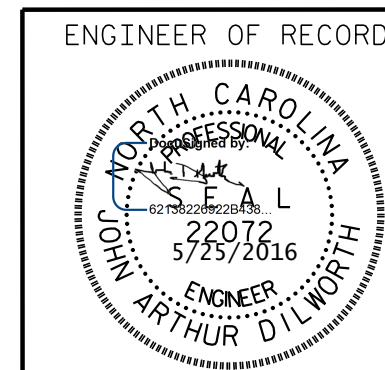


ELEVATION

WINGS NOT SHOWN FOR CLARITY.
FOR SECTION A-A, SEE SHEET 4 OF 4.
CONCRETE COLLARS FOR STEEL PILES NOT SHOWN IN PLAN AND ELEVATION VIEWS FOR CLARITY.
SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL", SHEET 4 OF 4.

PROJECT NO. 17BP.4.R.75
WILSON COUNTY
STATION: 13+41.00 -L-

SHEET 1 OF 4



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT No. 1

| REVISIONS | | | | | | SHEET NO. |
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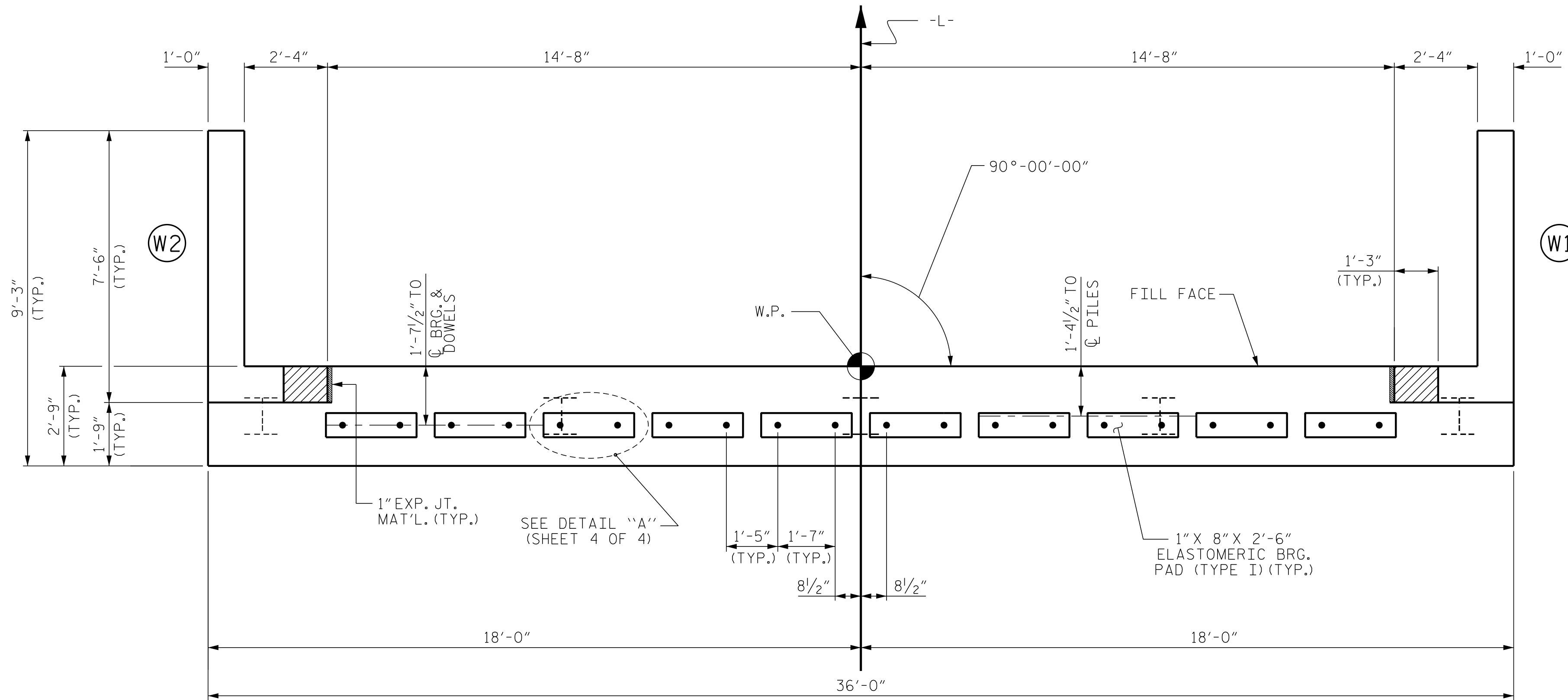
NOTES

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.

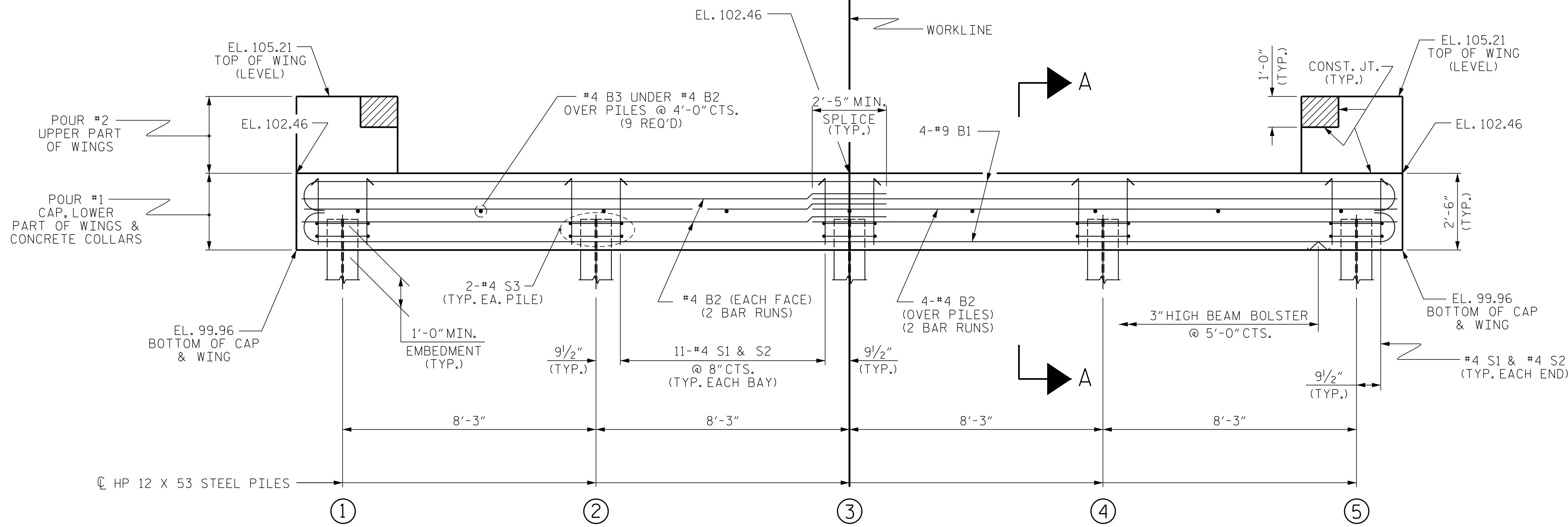
THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE VERTICAL CONCRETE BARRIER RAIL IS CAST IF SLIP FORMING IS USED.

FOR PILE SPlice DETAILS, SEE SHEET 4 OF 4.

FOR WING DETAILS, SEE SHEET 3 OF 4.



PLAN

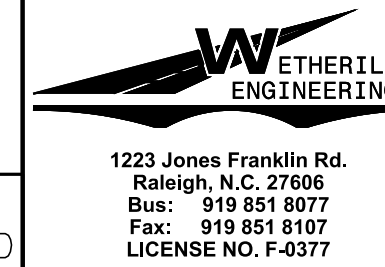
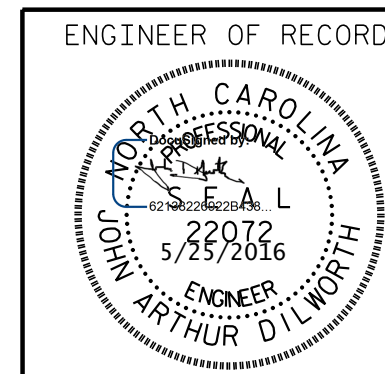


ELEVATION

WINGS NOT SHOWN FOR CLARITY.
FOR SECTION A-A, SEE SHEET 4 OF 4.
CONCRETE COLLARS FOR STEEL PILES NOT SHOWN IN PLAN AND ELEVATION VIEWS FOR CLARITY.
SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL", SHEET 4 OF 4.

PROJECT NO. 17BP.4.R.75
WILSON COUNTY
STATION: 13+41.00 -L-

SHEET 2 OF 4



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT No. 2

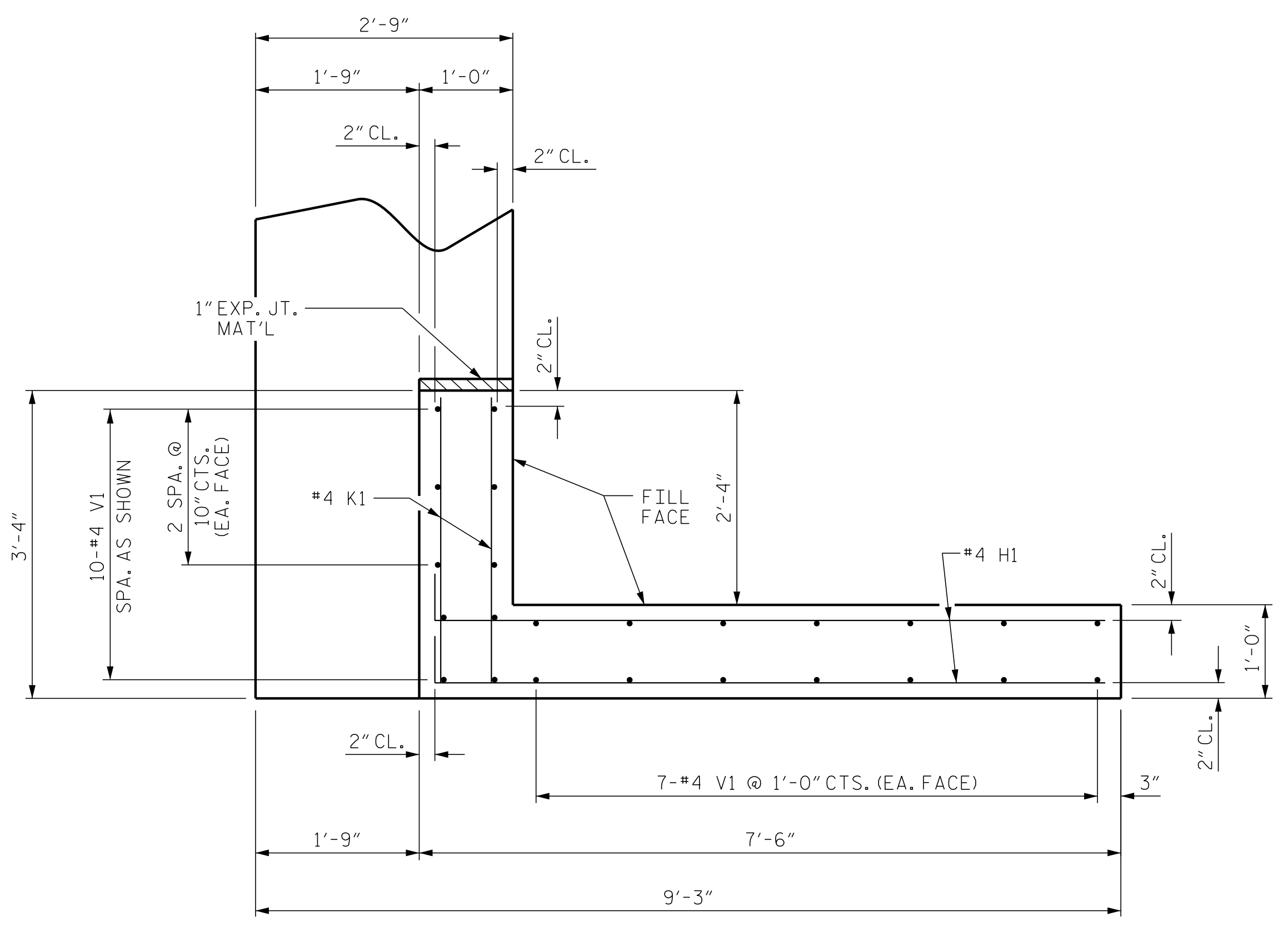
REVISIONS

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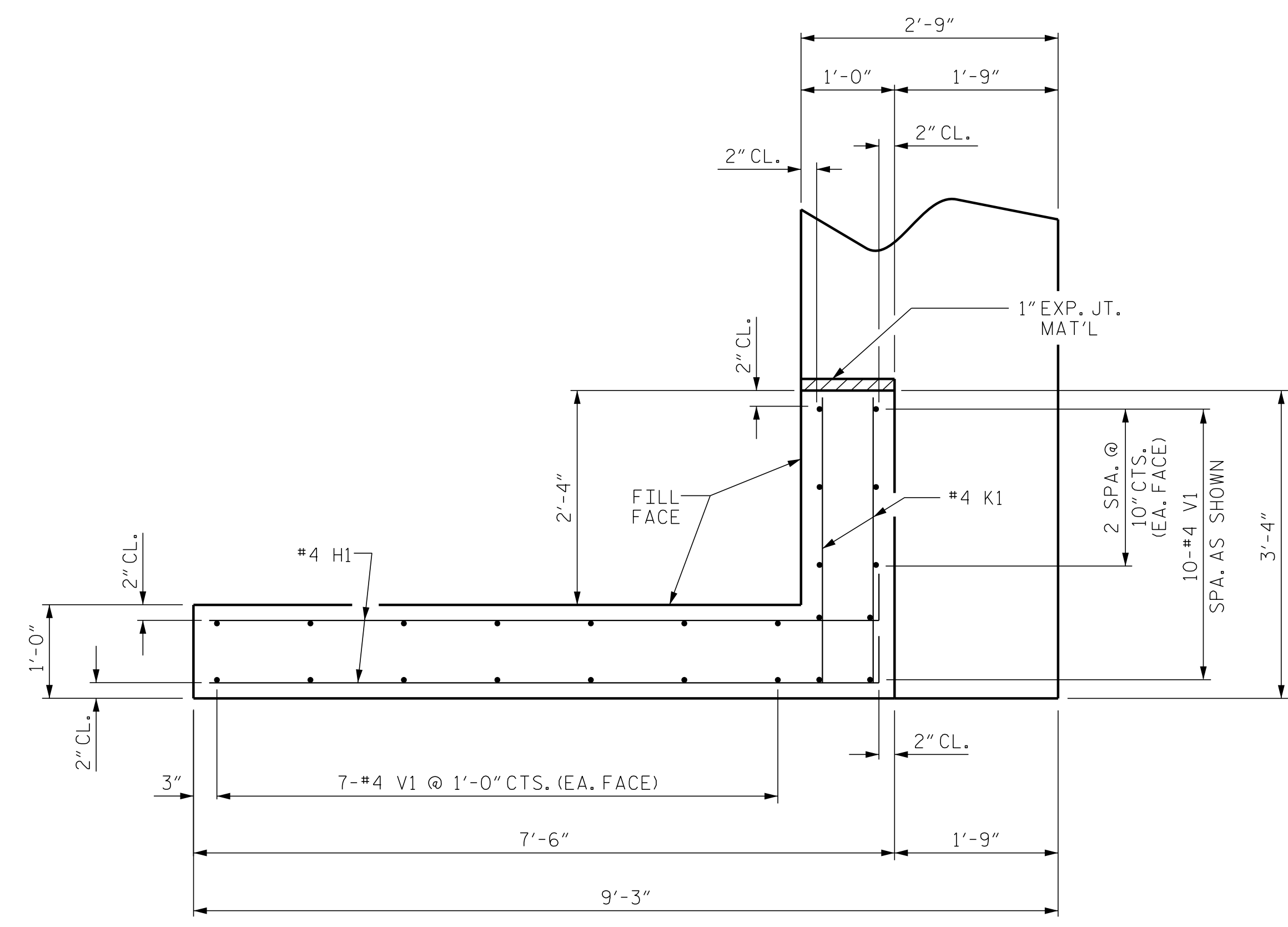
SHEET NO.
S-9
TOTAL SHEETS
13

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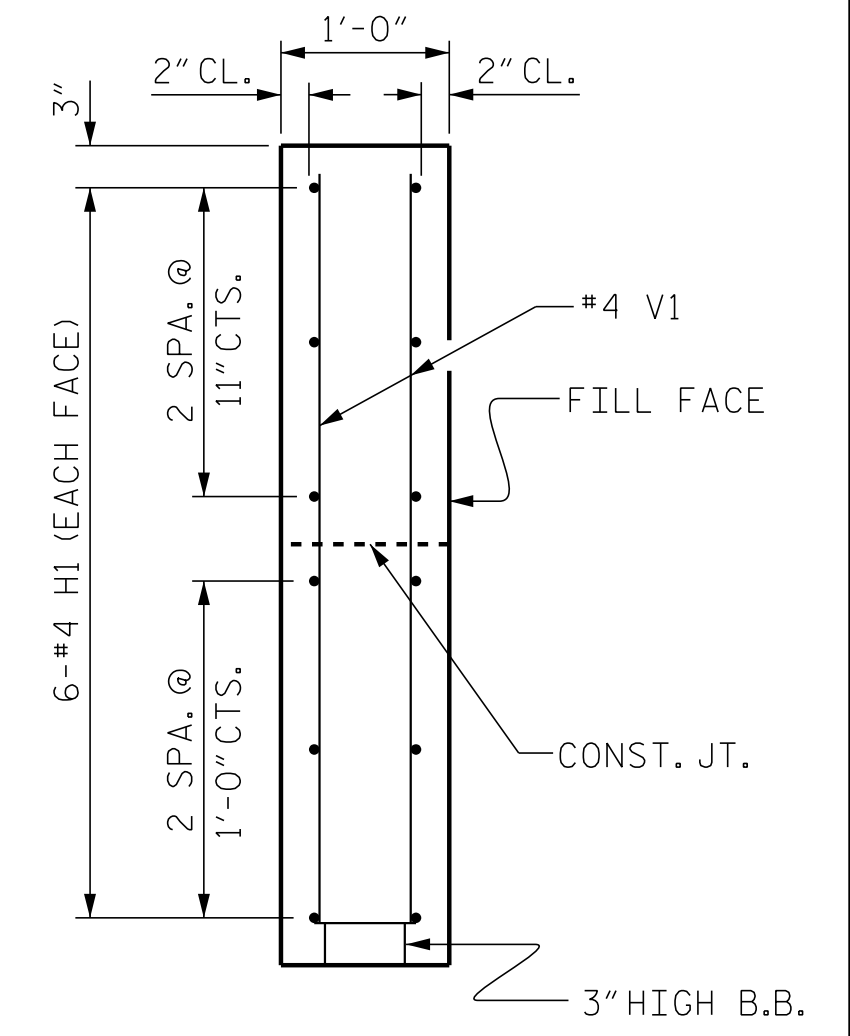
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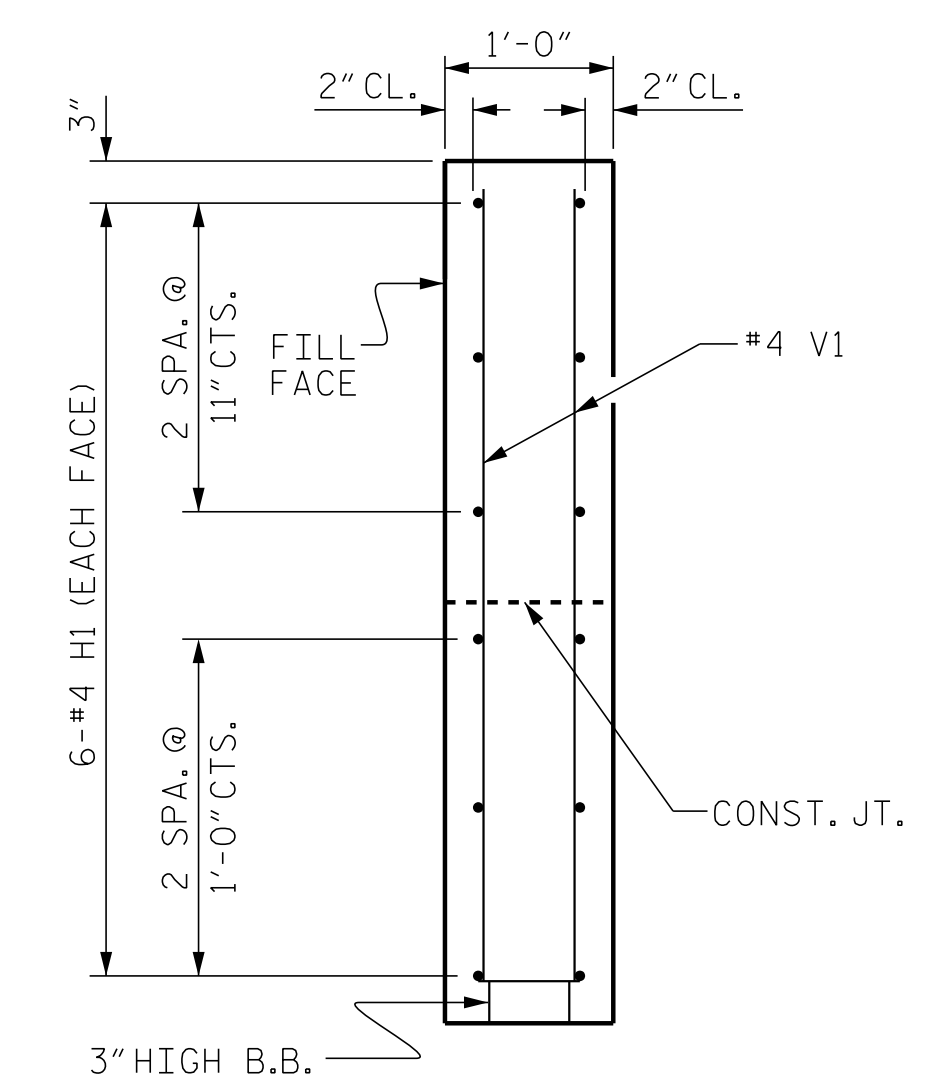
PLAN OF WING (W1)



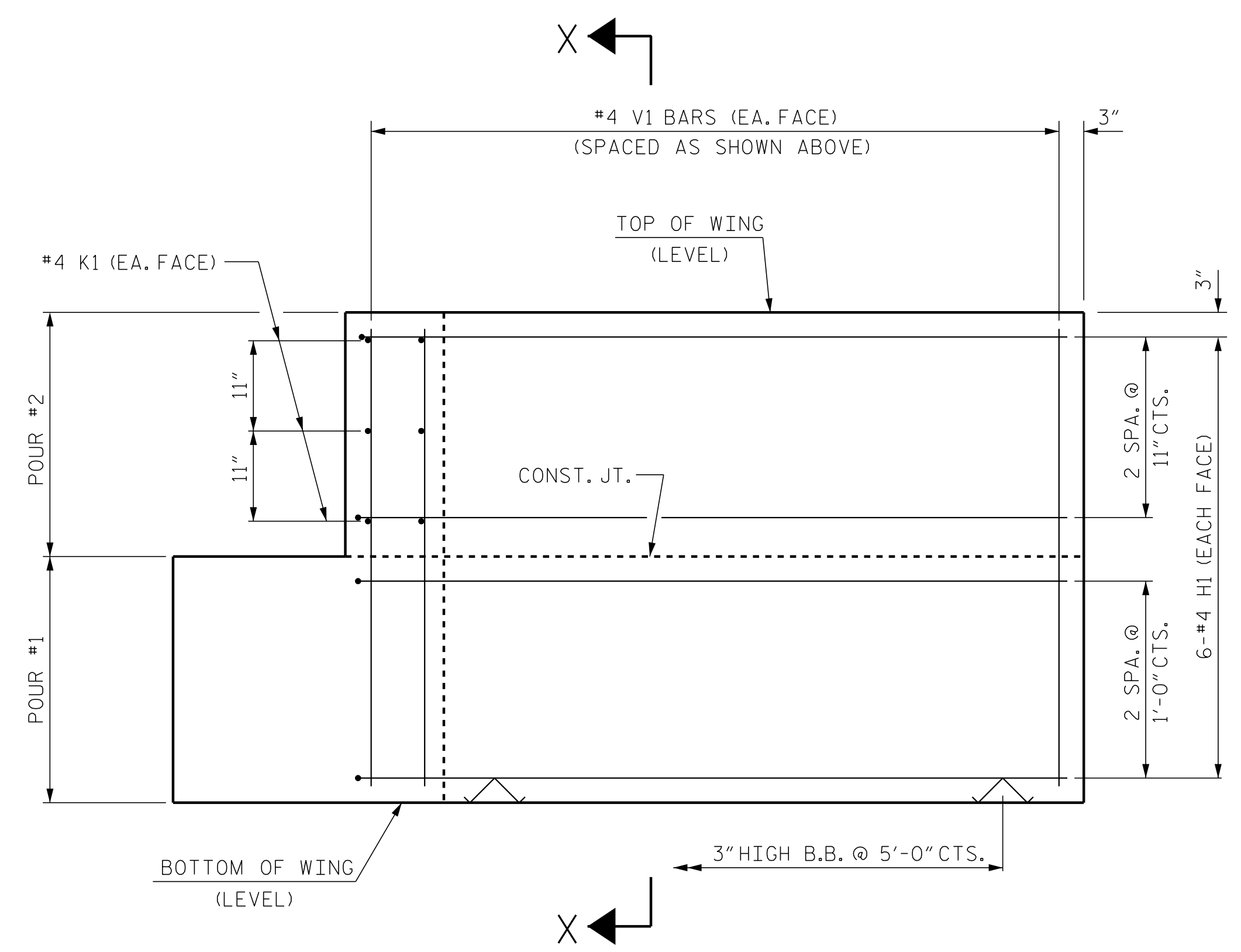
PLAN OF WING (W2)



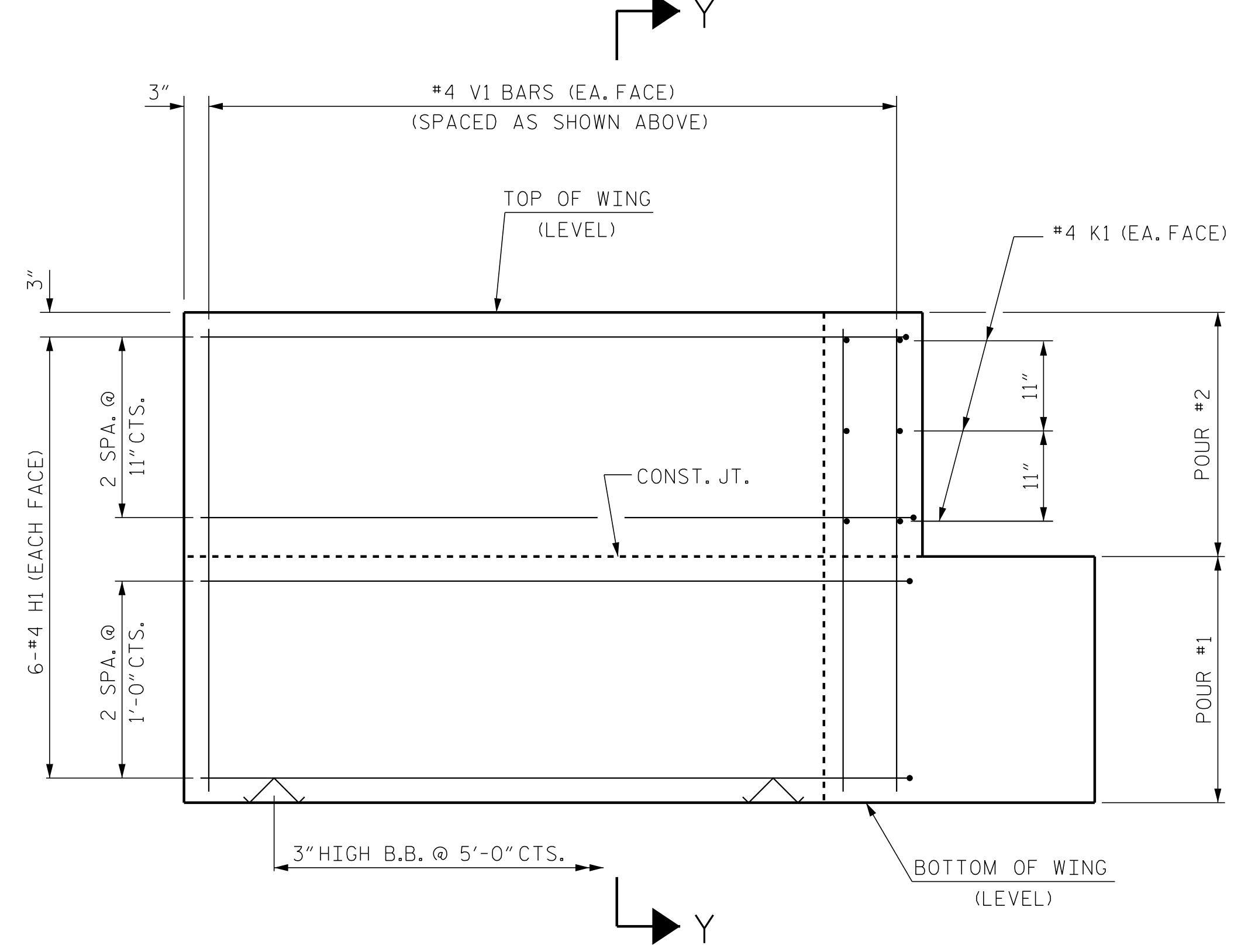
SECTION X-X



SECTION Y-Y



ELEVATION OF WING (W1)



ELEVATION OF WING (W2)

WING DETAILS

PROJECT NO. 17BP.4.R.75
 WILSON COUNTY
 STATION: 13+41.00 -L-
 SHEET 3 OF 4

ENGINEER OF RECORD

 ARTHUR DILWORTH
 ENGINEER
 LICENSE NO. 52572016
 STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT
 WING DETAILS

| REVISIONS | | | | | |
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 TOTAL SHEETS 13

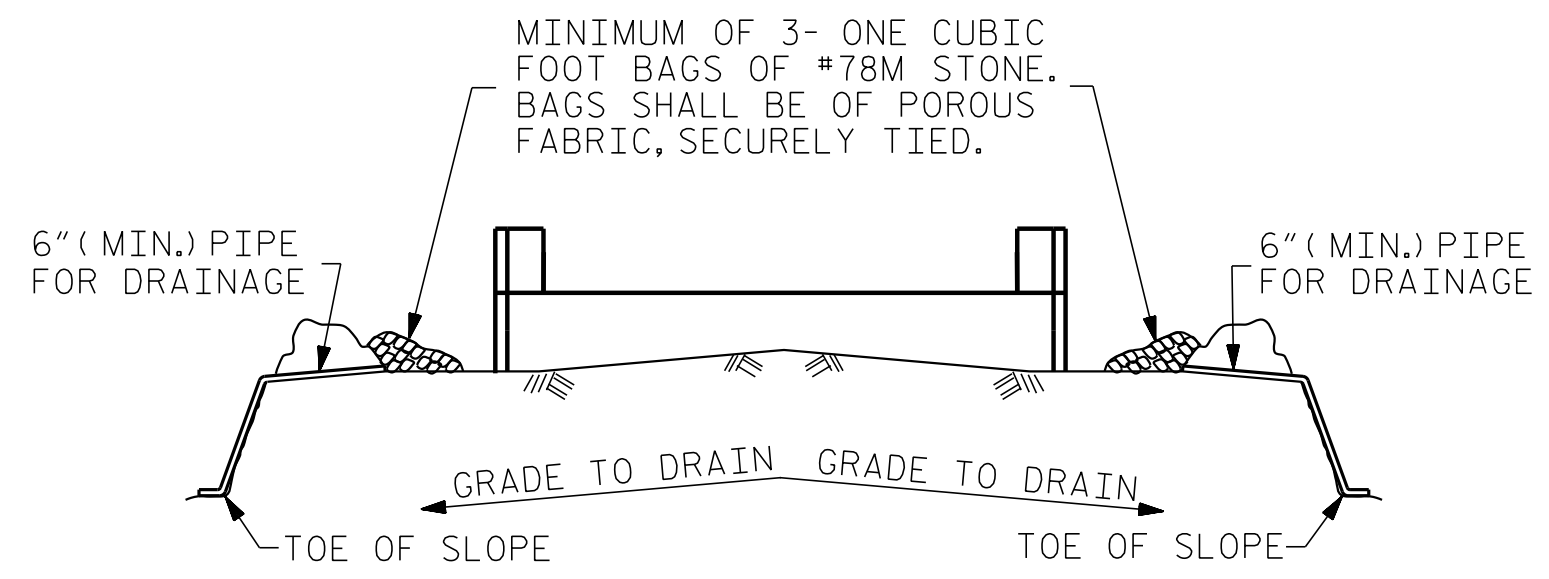
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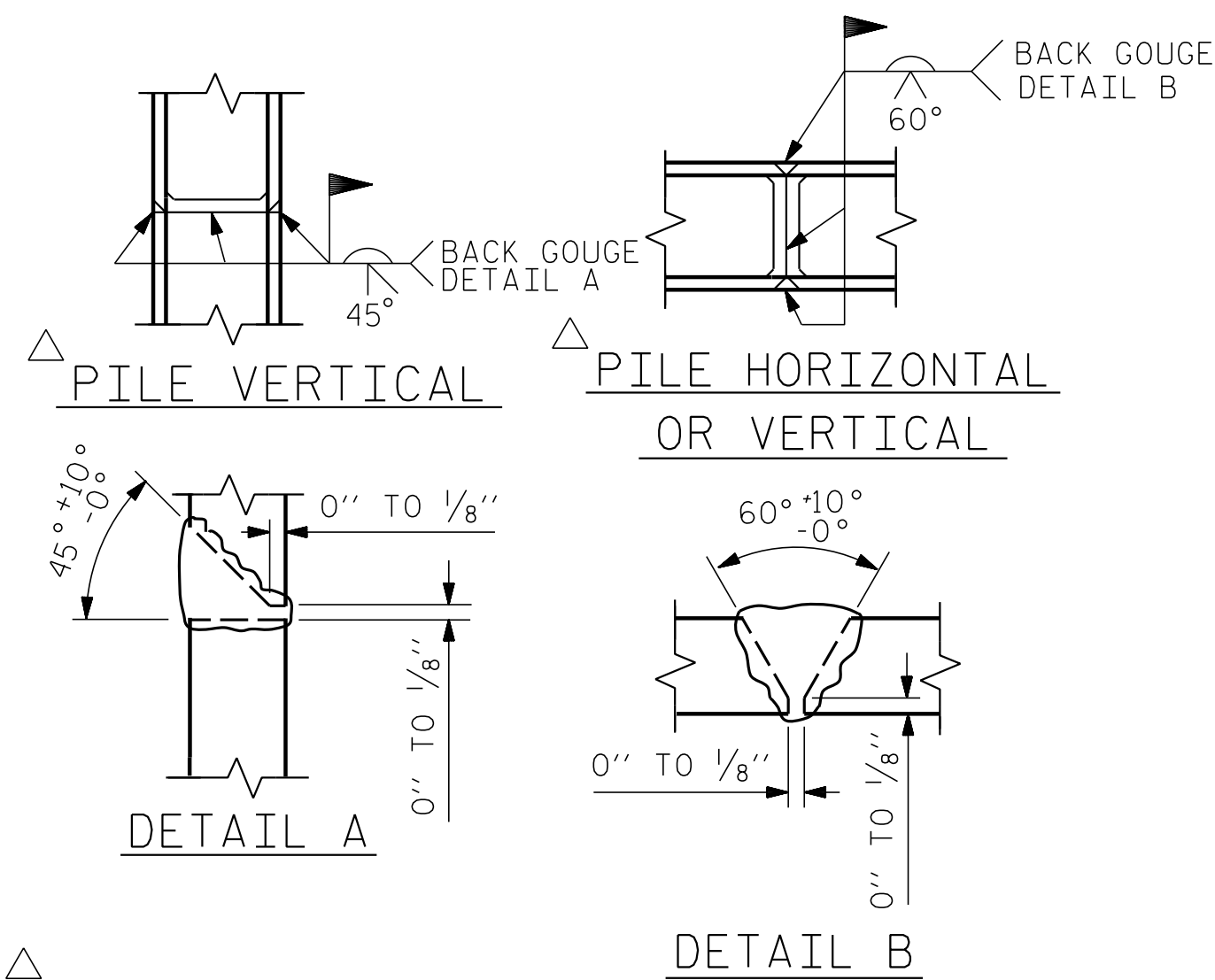


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR EFFECTIVENESS.

NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

TEMPORARY DRAINAGE AT END BENT



PILE SPLICE DETAILS

BAR TYPES

1: 1'-3" HK, 35'-6" HK, 1'-3" HK

2: 7'-2"

3: 2'-11/2" HK, 2'-5" HK

4: 4 1/2" HK, 2'-5" HK, 4 1/2" HK

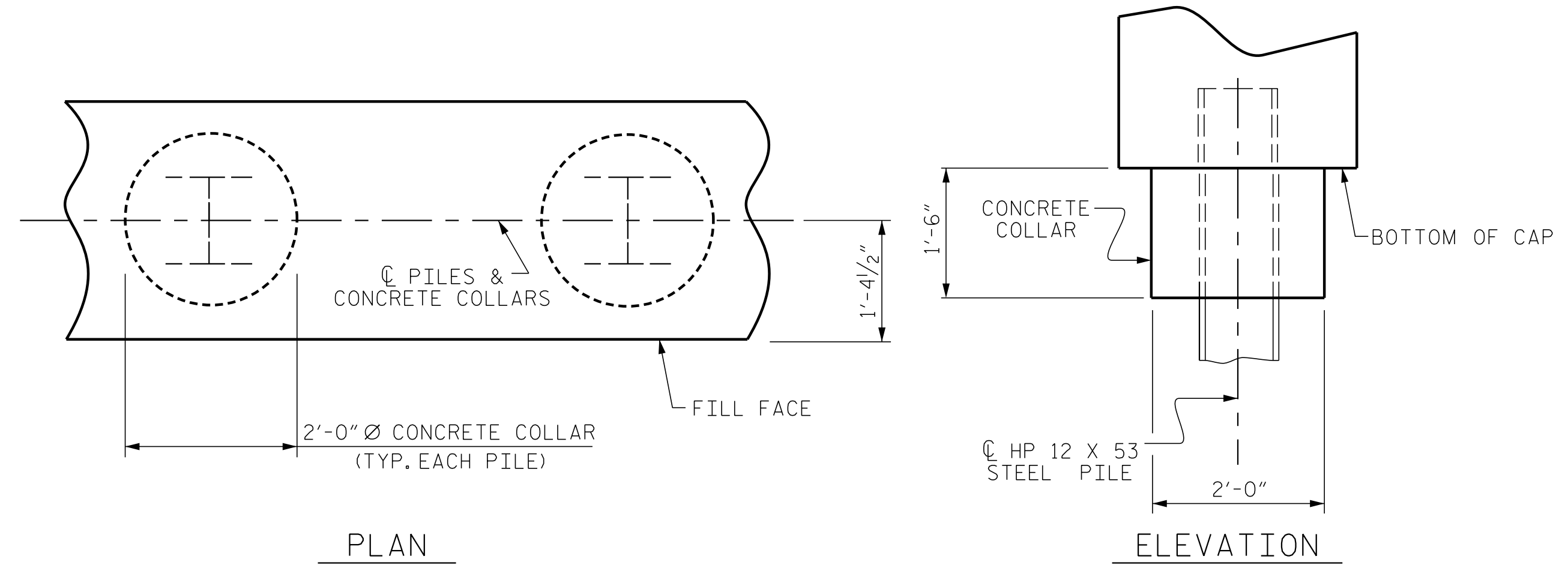
5: 1'-3" LAP, 1'-8" Ø

ALL BAR DIMENSIONS ARE OUT TO OUT.

| END BENT No. 1 | | END BENT No. 2 | |
|------------------------|-------|------------------------|-------|
| HP 12 X 53 STEEL PILES | NO: 5 | HP 12 X 53 STEEL PILES | NO: 5 |
| LIN. FT.= 375 | | LIN. FT.= 375 | |

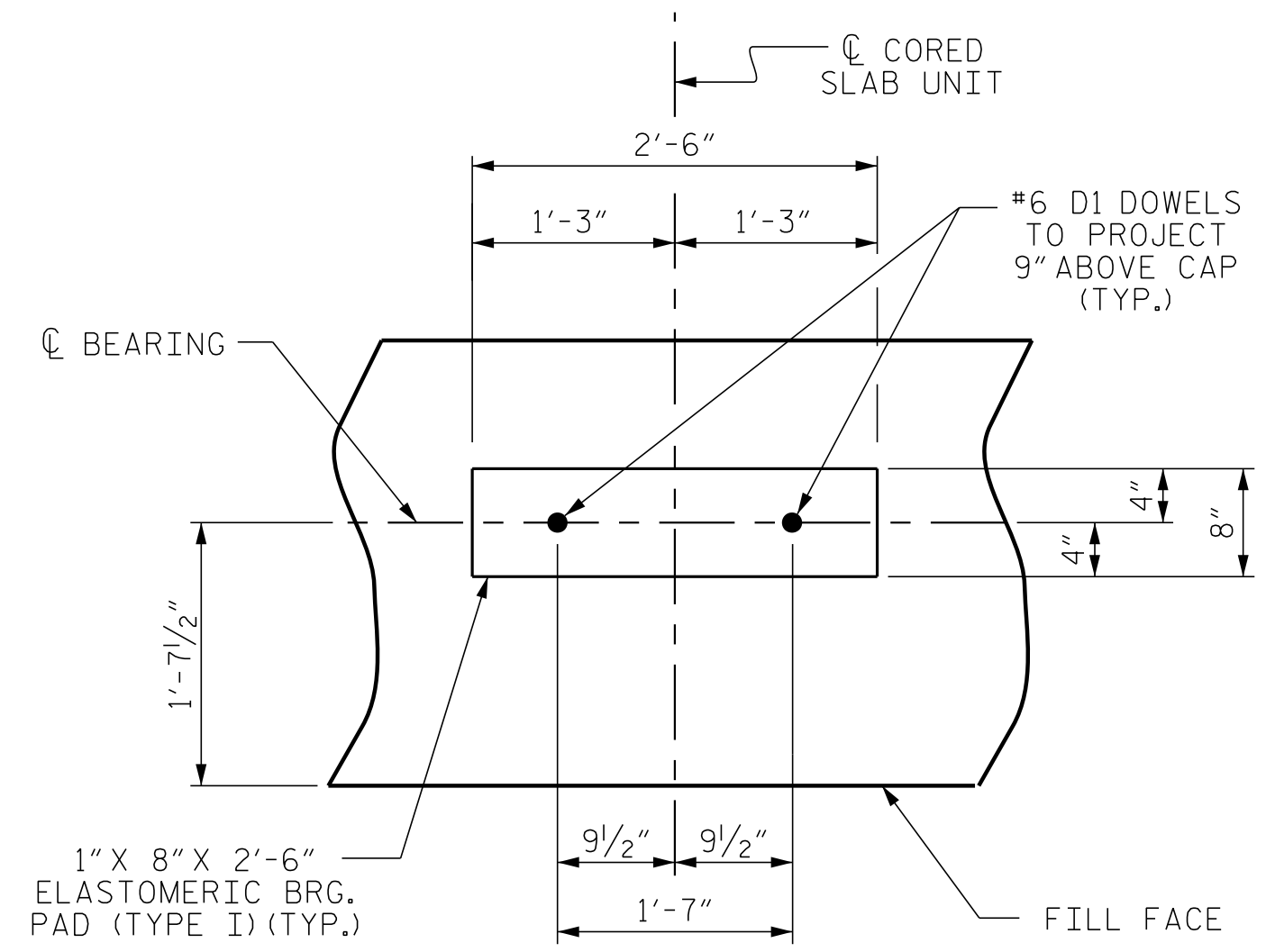
BILL OF MATERIAL FOR ONE END BENT

| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|---|-----|------|------|--------|-----------|
| B1 | 8 | #9 | 1 | 38'-0" | 1034 |
| B2 | 16 | #4 | STR | 19'-1" | 204 |
| B3 | 9 | #4 | STR | 2'-5" | 15 |
| D1 | 20 | #6 | STR | 1'-6" | 45 |
| H1 | 24 | #4 | 2 | 7'-10" | 126 |
| K1 | 12 | #4 | STR | 2'-11" | 23 |
| S1 | 46 | #4 | 3 | 7'-5" | 228 |
| S2 | 46 | #4 | 4 | 3'-2" | 97 |
| S3 | 10 | #4 | 5 | 6'-6" | 43 |
| V1 | 48 | #4 | STR | 4'-8" | 150 |
| REINFORCING STEEL (FOR ONE END BENT) | | | | | 1965 LBS. |
| CLASS A CONCRETE BREAKDOWN (FOR ONE END BENT) | | | | | |
| POUR #1 CAP, LOWER PART OF WINGS & COLLARS | | | | | 11.2 C.Y. |
| POUR #2 UPPER PART OF WINGS | | | | | 2.0 C.Y. |
| TOTAL CLASS A CONCRETE | | | | | 13.2 C.Y. |

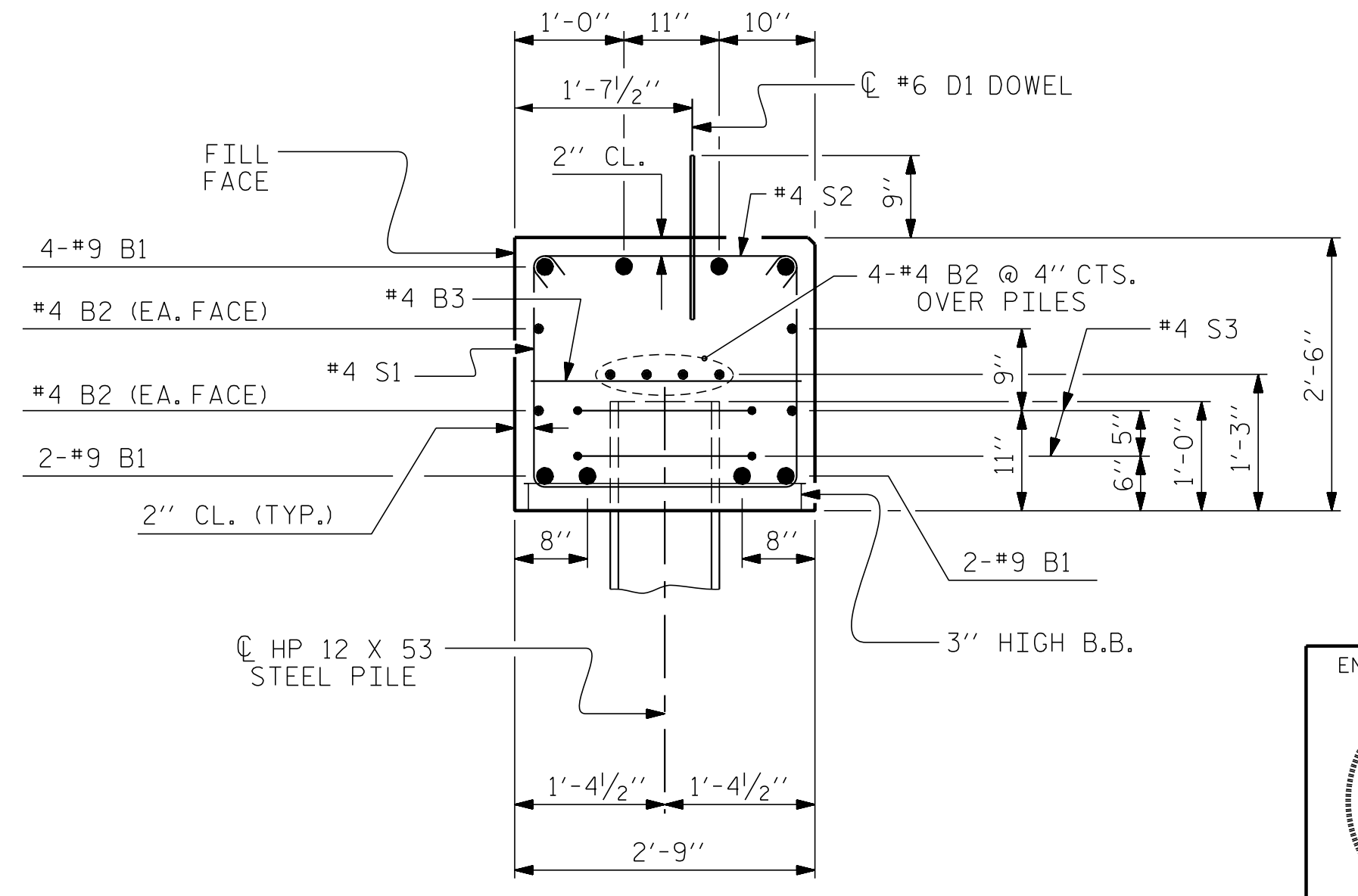


CORROSION PROTECTION FOR STEEL PILES DETAIL

(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR BY ROTATION)



(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR BY ROTATION)



(CONCRETE COLLAR NOT SHOWN FOR CLARITY. SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL.")

PROJECT NO. 17BP.4.R.75

WILSON COUNTY

STATION: 13+41.00 -L-

SHEET 4 OF 4

ENGINEER OF RECORD

ARTHUR DILWORTH

ETHERILL ENGINEERING

1223 Jones Franklin Rd.
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Fax: 919 851 8107
LICENSE NO. F-0377

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

SUBSTRUCTURE

END BENT No. 1 & 2 DETAILS

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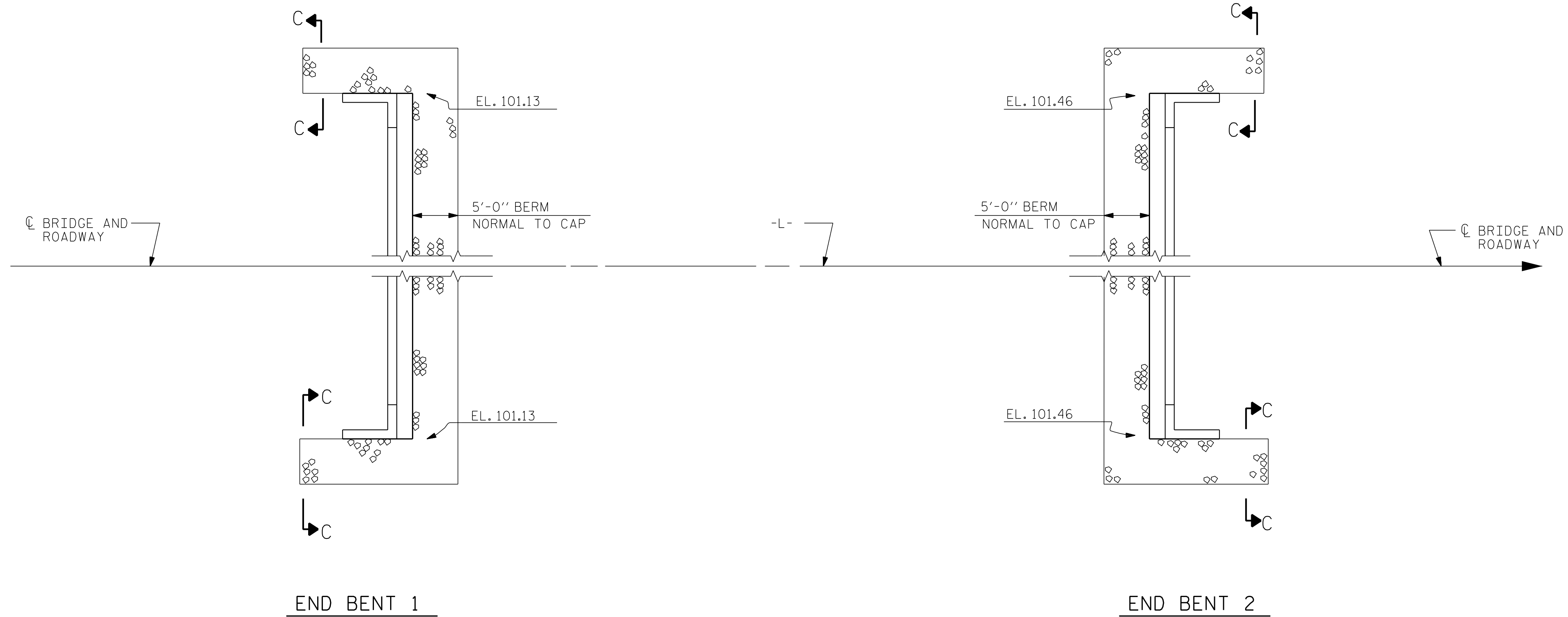
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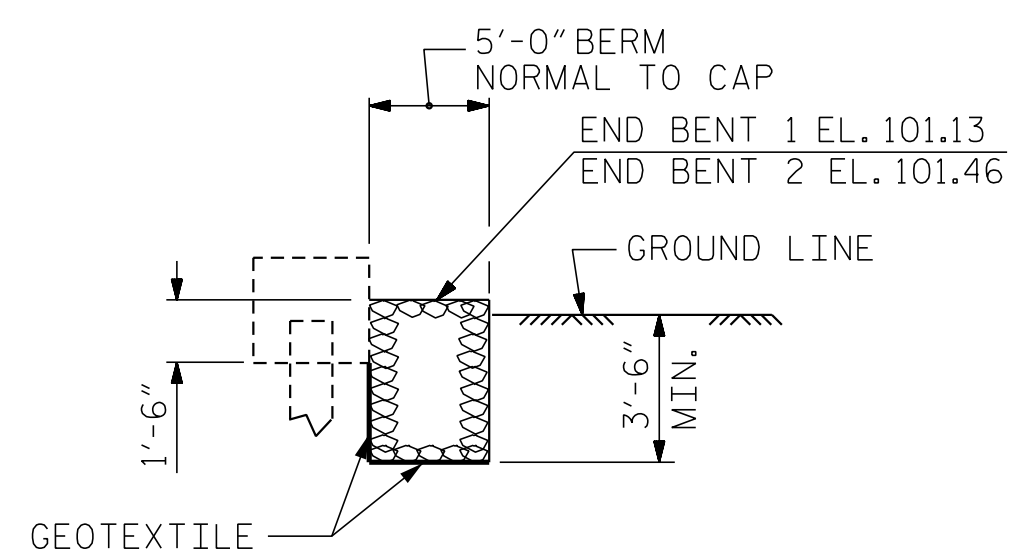
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NOTES :
FOR BERM WIDTH DIMENSIONS, SEE GENERAL DRAWING.

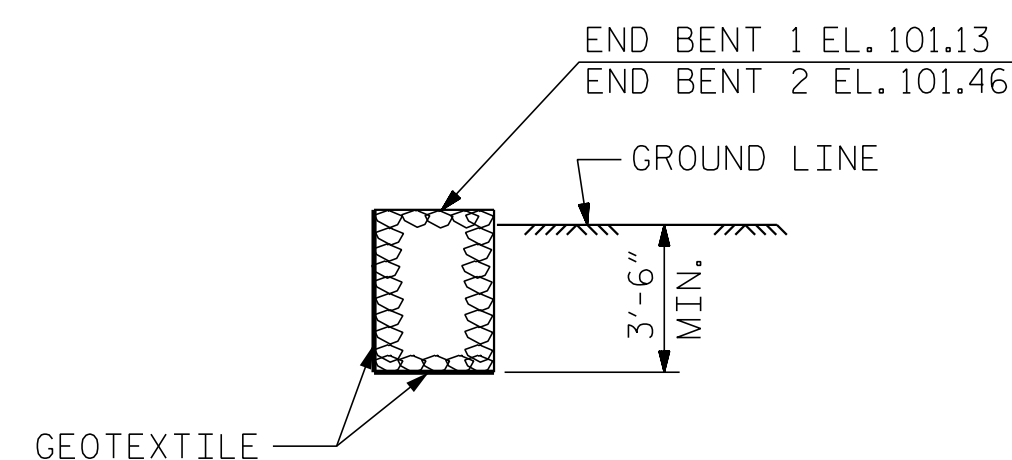


PLAN OF RIP RAP

| ESTIMATED QUANTITIES | | |
|-------------------------------|---------------------|----------------------------|
| BRIDGE @ STA. 13+41.00 -L- | RIP RAP CLASS II | GEOTEXTILE FOR DRAINAGE |
| | TONS | SQUARE YARDS |
| END BENT 1 | 75 | 70 |
| END BENT 2 | 75 | 70 |

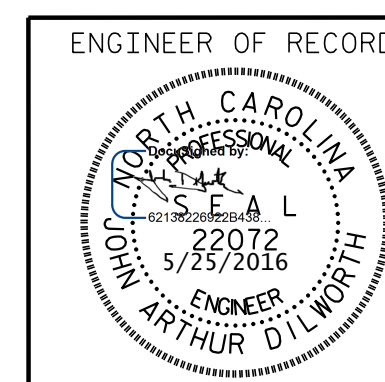


SECTION
BERM RIP RAPPED



SECTION C-C

PROJECT NO. 17BP.4.R.75
WILSON COUNTY
STATION: 13+41.00 -L-



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RALEIGH

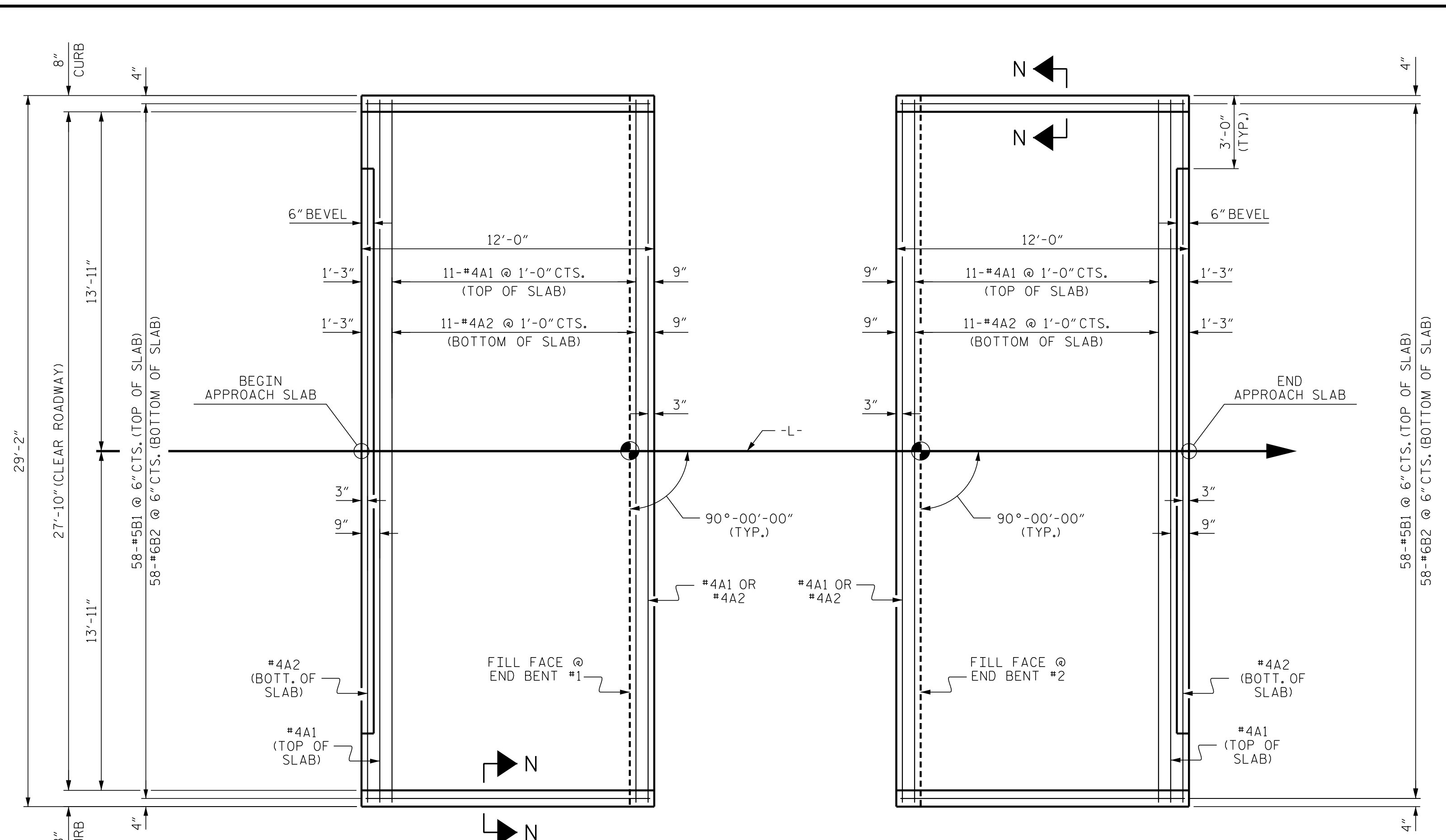
STANDARD
= RIP RAP DETAILS =

| REVISIONS | | | | | | SHEET NO. |
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PLAN @ END BENT #1 **PLAN @ END BENT #2**
 DIMENSIONS SHOWN ARE TYPICAL FOR BOTH APPROACH SLABS

NOTES

FOR BRIDGE APPROACH FILL INCLUDING GEOTEXTILE, 4" Ø DRAINAGE PIPE, AND #78M STONE BACKFILL, SEE ROADWAY PLANS.

GEOTEXTILE SHALL BE TYPE 1 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1056.

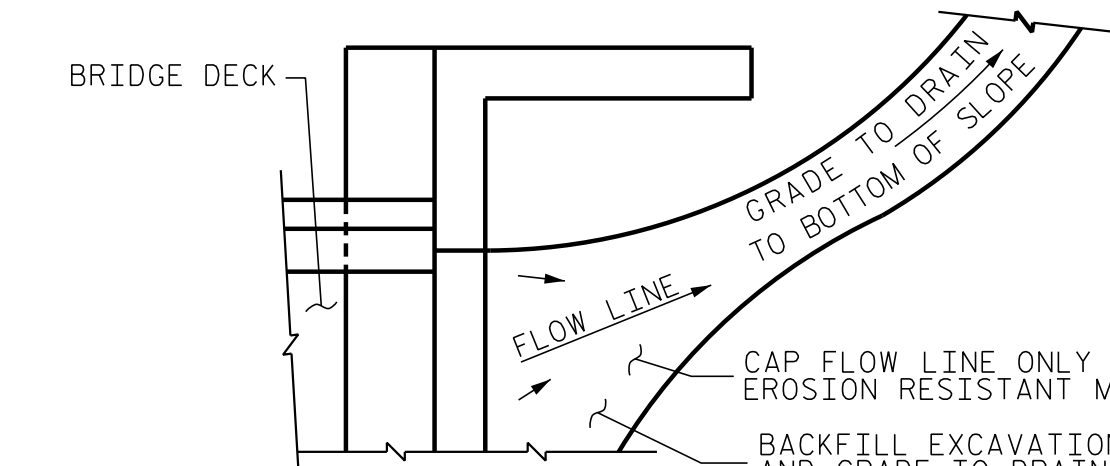
#78M STONE BACKFILL (CLASS V SELECT MATERIAL) SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 1016.

#78M STONE BACKFILL IS TO BE CONTINUOUS ALONG FILL FACE OF BACKWALL FROM OUTSIDE EDGE TO OUTSIDE EDGE OF APPROACH SLAB.

FOR THE 4" Ø DRAINAGE PIPE OUTLET(S), SEE ROADWAY STANDARD DRAWINGS.

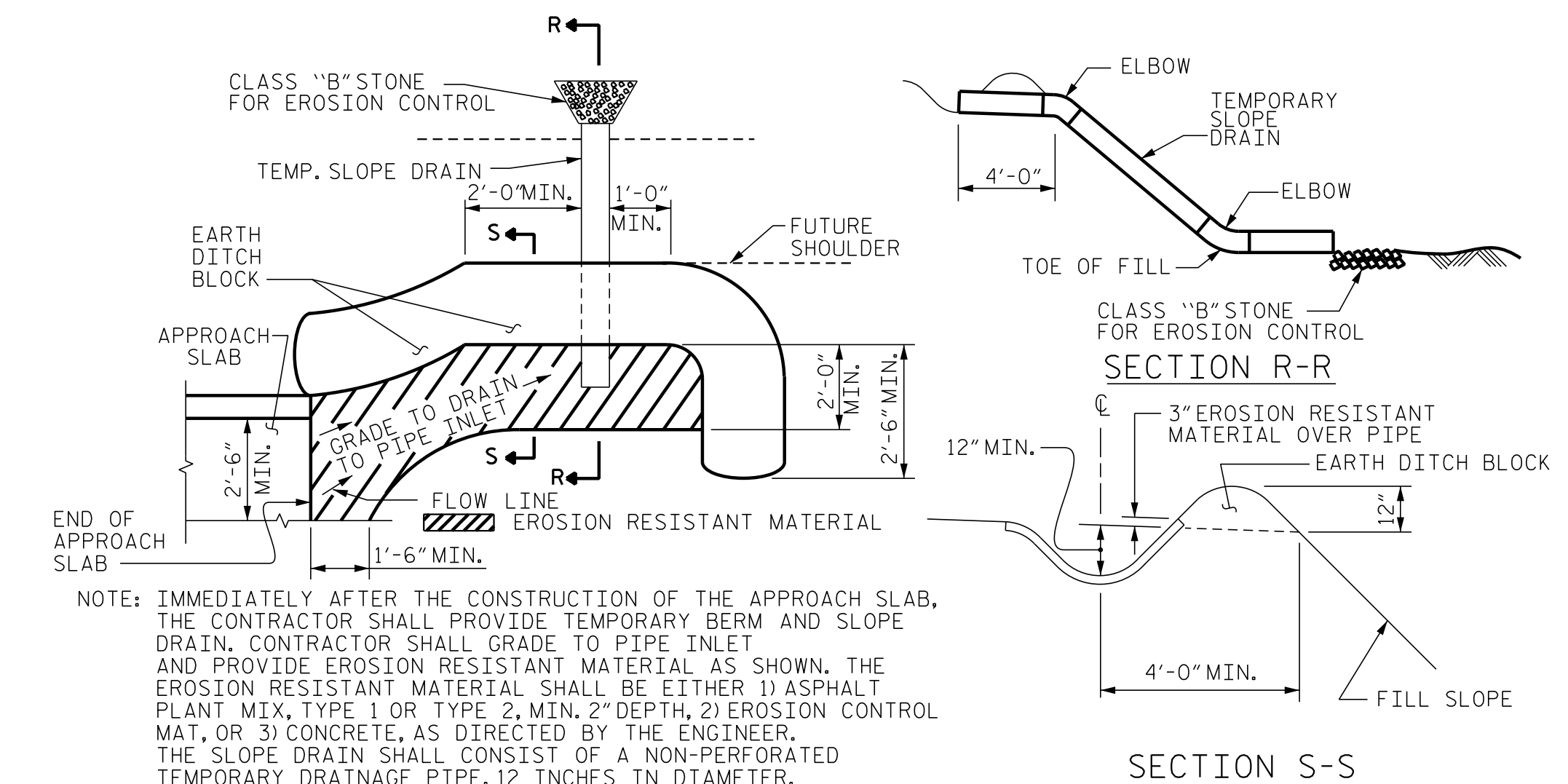
AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED, SEE ROADWAY PLANS.

APPROACH SLAB GROOVING IS NOT REQUIRED.

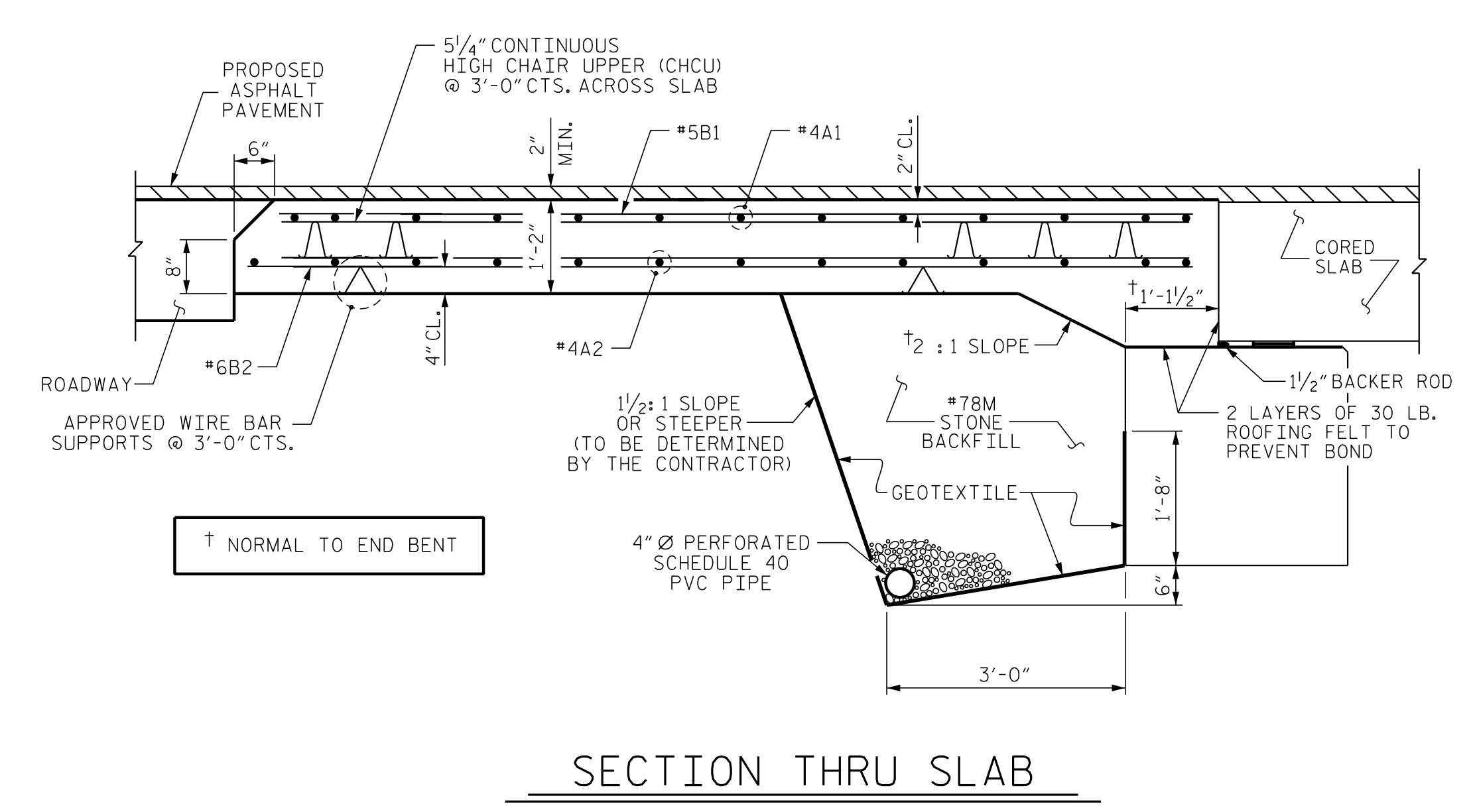


NOTE: IF THE APPROACH SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE BACKFILLING OF THE END BENT EXCAVATION, GRADE TO DRAIN TO THE BOTTOM OF THE SLOPE AND PROVIDE EROSION RESISTANT MATERIAL, SUCH AS FIBERGLASS ROVING OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL EROSION AND TO PROTECT THE AREA ADJACENT TO THE STRUCTURE. THE CONTRACTOR WILL BE REQUIRED TO REMOVE THESE MATERIALS PRIOR TO CONSTRUCTION OF THE APPROACH SLAB.

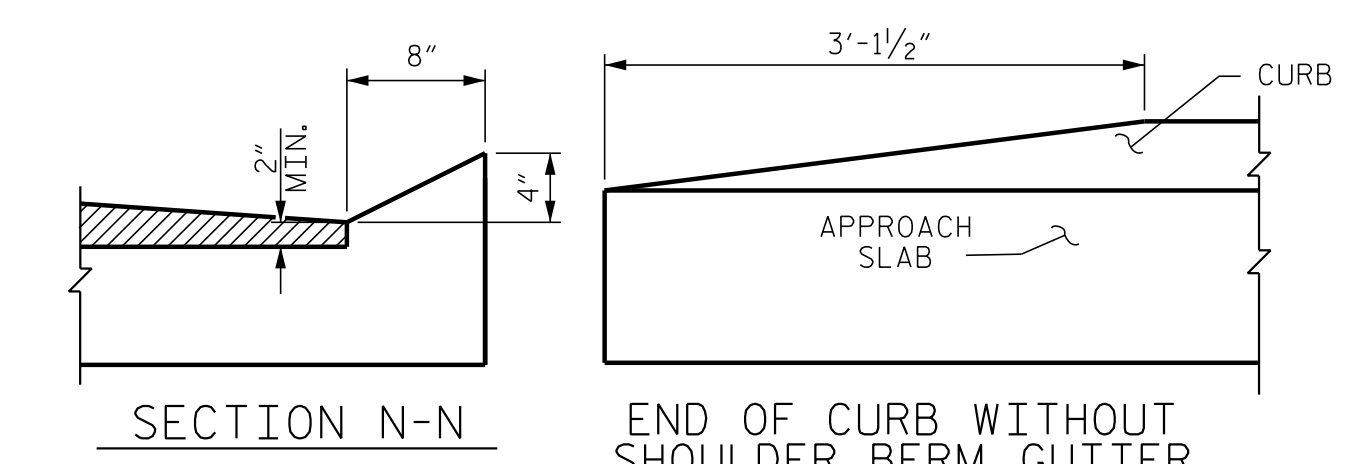
TEMPORARY DRAINAGE DETAIL



TEMPORARY BERM AND SLOPE DRAIN DETAILS
 (TO BE USED WHEN SHOULDER BERM GUTTER IS REQUIRED)



SECTION THRU SLAB



CURB DETAILS

| SPlice LENGTHS | | |
|----------------|--------------|----------|
| BAR SIZE | EPOXY COATED | UNCOATED |
| #4 | 2'-0" | 1'-9" |
| #5 | 2'-6" | 2'-2" |
| #6 | 3'-10" | 2'-7" |

| BILL OF MATERIAL | | | | | | |
|---------------------------------|-----|------|------|---------|--------|------|
| APPROACH SLAB AT EB #1 | | | | | | |
| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT | |
| *A1 | 13 | #4 | STR | 28'-10" | 250 | |
| A2 | 13 | #4 | STR | 28'-10" | 250 | |
| *B1 | 58 | #5 | STR | 11'-2" | 676 | |
| B2 | 58 | #6 | STR | 11'-8" | 1016 | |
| REINFORCING STEEL | | | | | LBS. | 1266 |
| *EPOXY COATED REINFORCING STEEL | | | | | LBS. | 926 |
| CLASS AA CONCRETE | | | | | C. Y. | 17.7 |
| APPROACH SLAB AT EB #2 | | | | | | |
| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT | |
| *A1 | 13 | #4 | STR | 28'-10" | 250 | |
| A2 | 13 | #4 | STR | 28'-10" | 250 | |
| *B1 | 58 | #5 | STR | 11'-2" | 676 | |
| B2 | 58 | #6 | STR | 11'-8" | 1016 | |
| REINFORCING STEEL | | | | | LBS. | 1266 |
| *EPOXY COATED REINFORCING STEEL | | | | | LBS. | 926 |
| CLASS AA CONCRETE | | | | | C. Y. | 17.7 |

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ENGINEER OF RECORD

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD BRIDGE APPROACH SLAB FOR PRESTRESSED CONCRETE CORED SLAB UNIT (SUB-REGIONAL TIER) 90° SKEW

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