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PROJECT: 15314.1056012

CONTRACT: DN00655

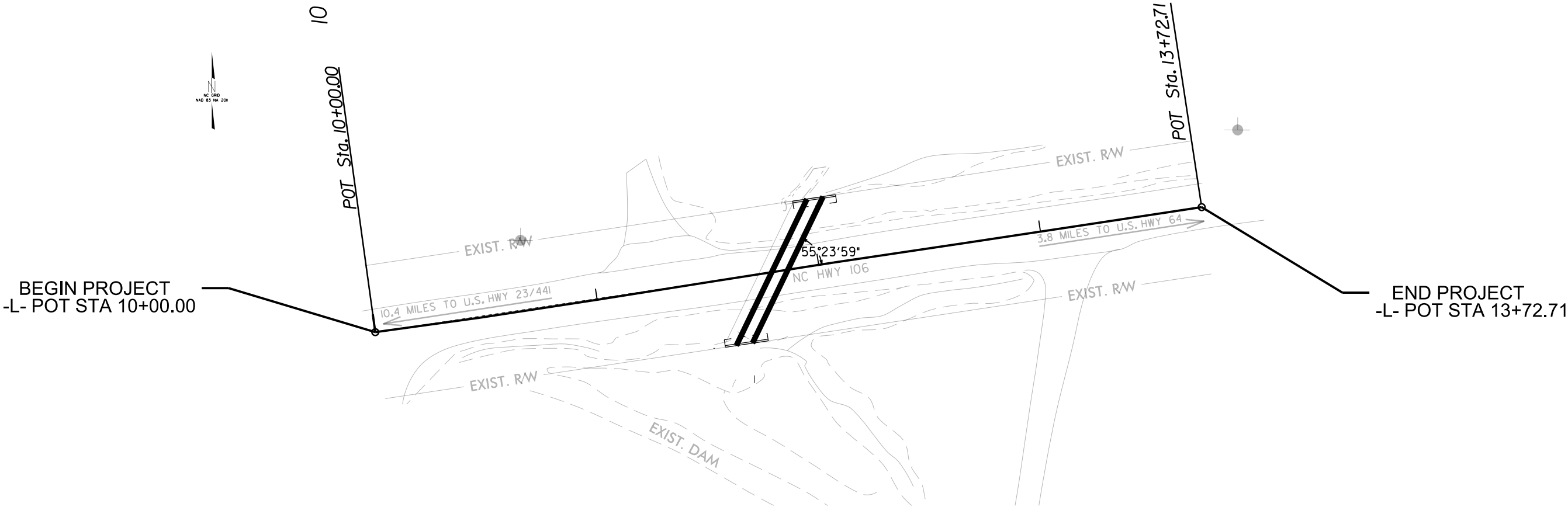
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

MACON COUNTY

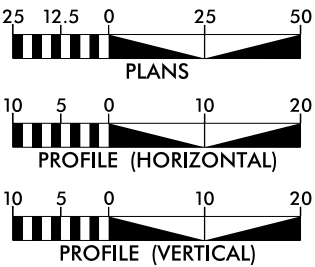
| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C.            | 15314.1056012               | 1           |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 15314.1056012   |                             | CONST.      |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |

LOCATION: ALONG NC HWY 106 10.4 MILES EAST OF U.S. HWY 23/441 AND 3.8 MILES WEST OF U.S. HWY 64

TYPE OF WORK: TRENCHLESS PIPE INSTALLATION, FLOWABLE FILL PIPE ABANDONMENT, GRADING, EROSION CONTROL



GRAPHIC SCALES



PROJECT LENGTH

TOTAL LENGTH OF PROJECT = 0.07 MILES

Prepared In the Office of:  
**DIVISION OF HIGHWAYS**  
191 Robbinsville Rd., Andrews, NC 28901

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N/A

LETTING DATE: 01/08/18

JESSE A. RUSSELL, P.E.  
PROJECT ENGINEER

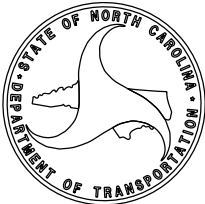
DocuSigned by:  
*Alan R. Brown*  
PROJECT DESIGN ENGINEER  
D64FF019B5DF4A6...

HYDRAULICS ENGINEER

SIGNATURE: N/A P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: N/A P.E.



STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

INDEX OF SHEETS

|         |                                                      |
|---------|------------------------------------------------------|
| 1       | TITLE SHEET                                          |
| 1-A     | INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARDS |
| 2       | CONVENTIONAL SYMBOLS                                 |
| 3       | SURVEY CONTROL SHEET                                 |
| 3A      | PIPE SUMMARY SHEET                                   |
| 4       | PLAN & PROFILE SHEET                                 |
| 4A      | TEMPORARY DIVERSION LAYOUT                           |
| EC1-EC4 | EROSION CONTROL SHEETS                               |

GENERAL NOTES

|                |                                                                                                                                                               |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GENERAL NOTES: | 2018 SPECIFICATIONS<br>EFFECTIVE: 01-16-2018                                                                                                                  |
| 1              | CARE SHALL BE TAKEN TO PREVENT DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION. ANY DAMAGE TO THESE UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. |
| 2              | THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY.                                                 |

LIST OF ROADWAY STANDARDS

|                                                                                                                                                                                                                                                                                                           |                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| 2018 ROADWAY STANDARD DRAWINGS                                                                                                                                                                                                                                                                            |                                                     |
| The following Roadway Standards as appear in "Roadway Standard Drawings" - Highway Design Branch - N.C. Department of Transportation - Raleigh, N.C., dated January 16, 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans. |                                                     |
| STD. NO.                                                                                                                                                                                                                                                                                                  | TITLE                                               |
| DIVISION 5 - SUBGRADE, BASES AND SHOULDERS                                                                                                                                                                                                                                                                |                                                     |
| 560.01                                                                                                                                                                                                                                                                                                    | Method of Shoulder Construction                     |
| DIVISION 8 - INCIDENTALS                                                                                                                                                                                                                                                                                  |                                                     |
| 838.01                                                                                                                                                                                                                                                                                                    | Concrete EndwallFor Single And Double Pipe Culverts |
| 876.02                                                                                                                                                                                                                                                                                                    | Guide For Rip Rap At Pipe Outlets                   |
| DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPMENT                                                                                                                                                                                                                                                    |                                                     |
| 654.01                                                                                                                                                                                                                                                                                                    | Pavement Repairs                                    |
| DIVISION 8 - INCIDENTALS                                                                                                                                                                                                                                                                                  |                                                     |
| 838.01                                                                                                                                                                                                                                                                                                    | Concrete EndwallFor Single And Double Pipe Culverts |
| 876.02                                                                                                                                                                                                                                                                                                    | Guide For Rip Rap At Pipe Outlets                   |
| DIVISION 11 - WORK ZONE TRAFFIC CONTROL                                                                                                                                                                                                                                                                   |                                                     |
| 1101.01                                                                                                                                                                                                                                                                                                   | Work Zone Advance Warning Signs                     |
| 1101.02                                                                                                                                                                                                                                                                                                   | Temporary Lane Closures                             |
| 1101.03                                                                                                                                                                                                                                                                                                   | Temporary Road Closures                             |
| 1101.04                                                                                                                                                                                                                                                                                                   | Temporary Shoulder Closures                         |
| 1110.02                                                                                                                                                                                                                                                                                                   | Portable Work Zone Signs                            |
| 1130.01                                                                                                                                                                                                                                                                                                   | Drum                                                |
| 1135.01                                                                                                                                                                                                                                                                                                   | Cones                                               |
| 1150.01                                                                                                                                                                                                                                                                                                   | Flagging Devices                                    |
| DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPMENT                                                                                                                                                                                                                                                    |                                                     |
| 1605.01                                                                                                                                                                                                                                                                                                   | Temporary Silt Fence                                |
| 1606.01                                                                                                                                                                                                                                                                                                   | Special Sediment Control Fence                      |
| 1607.01                                                                                                                                                                                                                                                                                                   | Gravel Construction Entrance                        |
| 1630.05                                                                                                                                                                                                                                                                                                   | Temporary Diversion                                 |
| 1631.01                                                                                                                                                                                                                                                                                                   | Matting Installation                                |
| 1645.01                                                                                                                                                                                                                                                                                                   | Temporary Stream Crossing                           |

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS  
CONVENTIONAL PLAN SHEET SYMBOLS**BOUNDARIES AND PROPERTY:**

|                                       |  |
|---------------------------------------|--|
| State Line                            |  |
| County Line                           |  |
| Township Line                         |  |
| City Line                             |  |
| Reservation Line                      |  |
| Property Line                         |  |
| Existing Iron Pin                     |  |
| Computed Property Corner              |  |
| Property Monument                     |  |
| Parcel/Sequence Number                |  |
| Existing Fence Line                   |  |
| Proposed Woven Wire Fence             |  |
| Proposed Chain Link Fence             |  |
| Proposed Barbed Wire Fence            |  |
| Existing Wetland Boundary             |  |
| Proposed Wetland Boundary             |  |
| Existing Endangered Animal Boundary   |  |
| Existing Endangered Plant Boundary    |  |
| Existing Historic Property Boundary   |  |
| 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                          |  |
| Well                          |  |
| Small Mine                    |  |
| Foundation                    |  |
| Area Outline                  |  |
| Cemetery                      |  |
| Building                      |  |
| School                        |  |
| Church                        |  |
| Dam                           |  |

**HYDROLOGY:**

|                                    |  |
|------------------------------------|--|
| Stream or Body of Water            |  |
| Hydro, Pool or Reservoir           |  |
| Jurisdictional Stream              |  |
| Buffer Zone 1                      |  |
| Buffer Zone 2                      |  |
| Flow Arrow                         |  |
| Disappearing Stream                |  |
| Spring                             |  |
| Wetland                            |  |
| Proposed Lateral, Tail, Head Ditch |  |
| False Sump                         |  |

**RAILROADS:**

|                    |  |
|--------------------|--|
| Standard Gauge     |  |
| RR Signal Milepost |  |
| Switch             |  |
| RR Abandoned       |  |
| RR Dismantled      |  |

*Note: Not to Scale**\*S.U.E. = Subsurface Utility Engineering***RIGHT OF WAY & PROJECT CONTROL:**

|                                                           |  |
|-----------------------------------------------------------|--|
| Secondary Horiz and Vert Control Point                    |  |
| Primary Horiz Control Point                               |  |
| Primary Horiz and Vert Control Point                      |  |
| Exist Permanent Easment Pin and Cap                       |  |
| New Permanent Easement Pin and Cap                        |  |
| Vertical Benchmark                                        |  |
| Existing Right of Way Marker                              |  |
| Existing Right of Way Line                                |  |
| New Right of Way Line                                     |  |
| New Right of Way Line with Pin and Cap                    |  |
| New Right of Way Line with Concrete or Granite R/W Marker |  |
| New Control of Access Line with Concrete C/A Marker       |  |
| Existing Control of Access                                |  |
| New Control of Access                                     |  |
| Existing Easement Line                                    |  |
| New Temporary Construction Easement                       |  |
| New Temporary Drainage Easement                           |  |
| New Permanent Drainage Easement                           |  |
| New Permanent Drainage / Utility Easement                 |  |
| New Permanent Utility Easement                            |  |
| New Temporary Utility Easement                            |  |
| New Aerial Utility Easement                               |  |

**ROADS AND RELATED FEATURES:**

|                            |  |
|----------------------------|--|
| Existing Edge of Pavement  |  |
| Existing Curb              |  |
| Proposed Slope Stakes Cut  |  |
| Proposed Slope Stakes Fill |  |
| Proposed Curb Ramp         |  |
| Existing Metal Guardrail   |  |
| Proposed Guardrail         |  |
| Existing Cable Guiderail   |  |
| Proposed Cable Guiderail   |  |
| Equality Symbol            |  |
| Pavement Removal           |  |

**VEGETATION:**

|              |  |
|--------------|--|
| Single Tree  |  |
| Single Shrub |  |

|            |  |
|------------|--|
| Hedge      |  |
| Woods Line |  |
| Orchard    |  |
| Vineyard   |  |

**EXISTING STRUCTURES:**

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

**UTILITIES:**

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

**TELEPHONE:**

|                                        |  |
|----------------------------------------|--|
| Existing Telephone Pole                |  |
| Proposed Telephone Pole                |  |
| Telephone Manhole                      |  |
| Telephone Pedestal                     |  |
| Telephone Cell Tower                   |  |
| U/G Telephone Cable Hand Hole          |  |
| U/G Telephone Cable LOS B (S.U.E.*)    |  |
| U/G Telephone Cable LOS C (S.U.E.*)    |  |
| U/G Telephone Cable LOS D (S.U.E.*)    |  |
| U/G Telephone Conduit LOS B (S.U.E.*)  |  |
| U/G Telephone Conduit LOS C (S.U.E.*)  |  |
| U/G Telephone Conduit LOS D (S.U.E.*)  |  |
| U/G Fiber Optics Cable LOS B (S.U.E.*) |  |
| U/G Fiber Optics Cable LOS C (S.U.E.*) |  |
| U/G Fiber Optics Cable LOS D (S.U.E.*) |  |

**WATER:**

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

**TV:**

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

**GAS:**

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

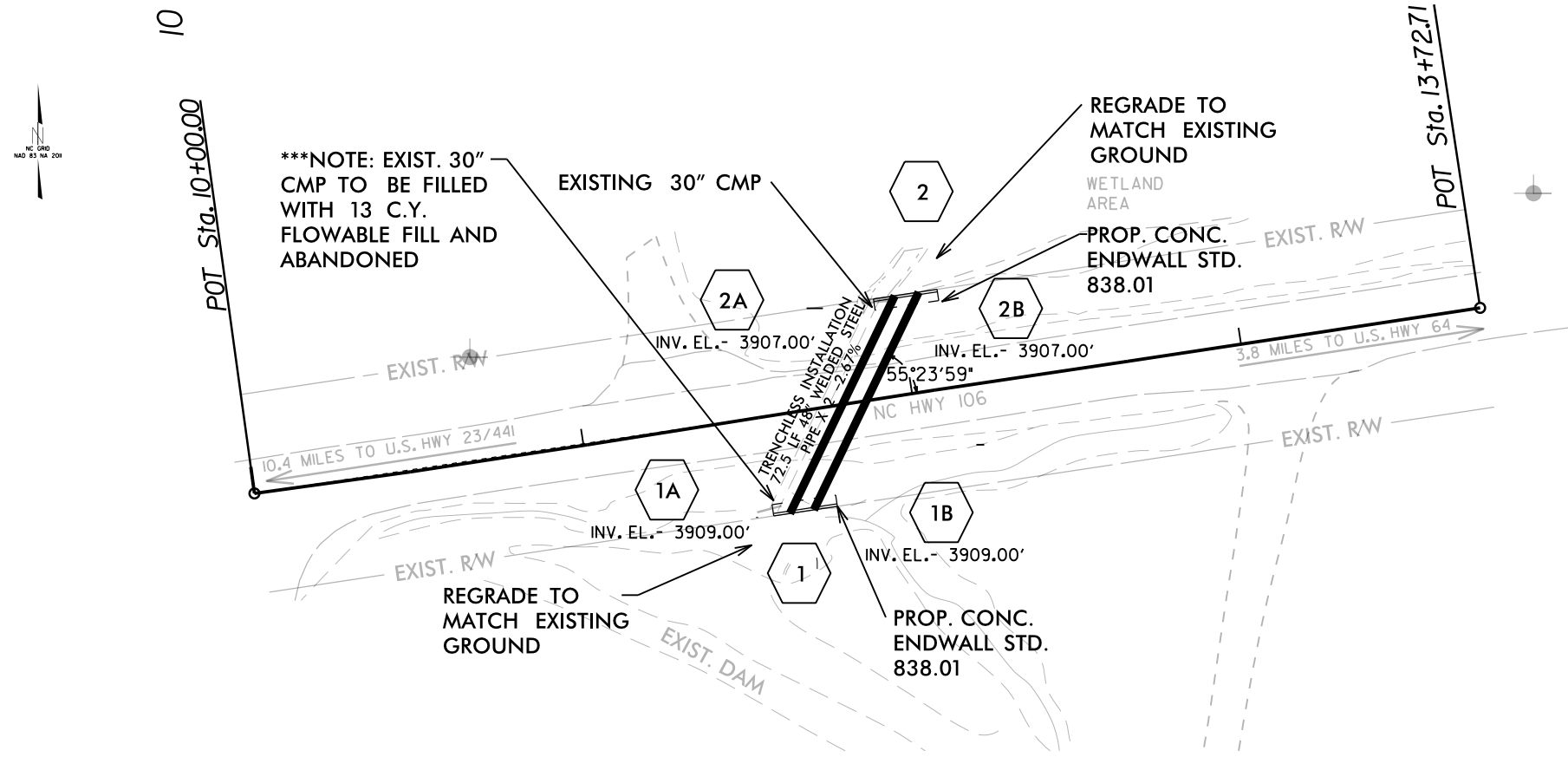
**SANITARY SEWER:**

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

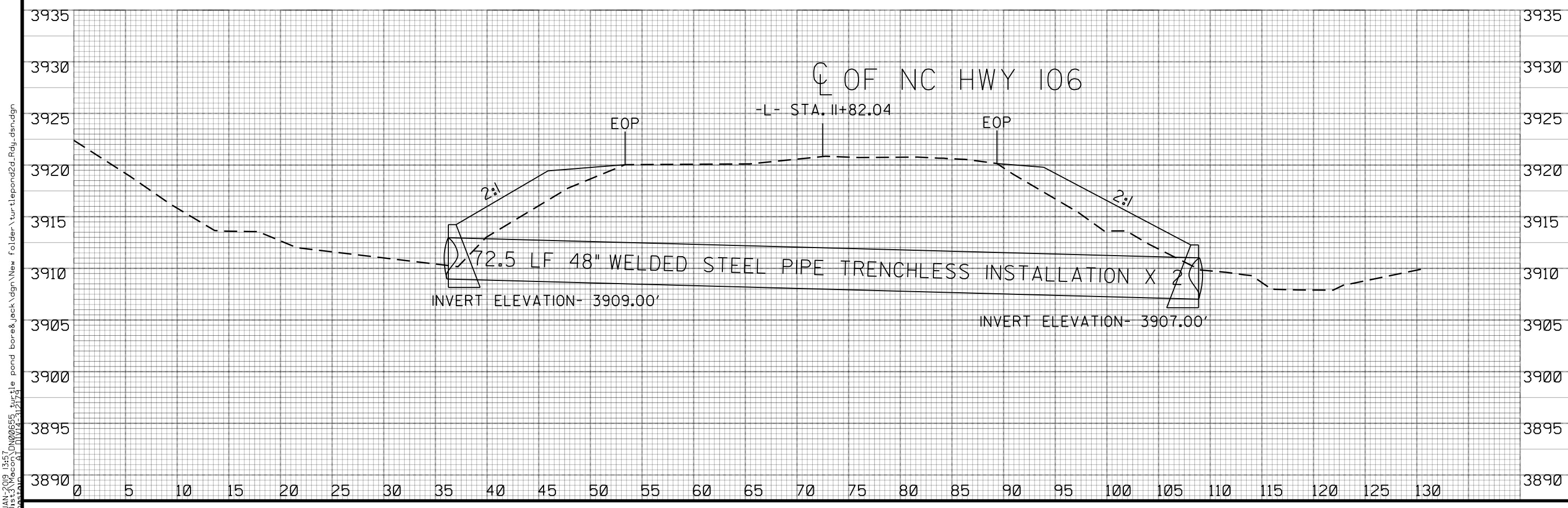
**MISCELLANEOUS:**

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

8/17/99



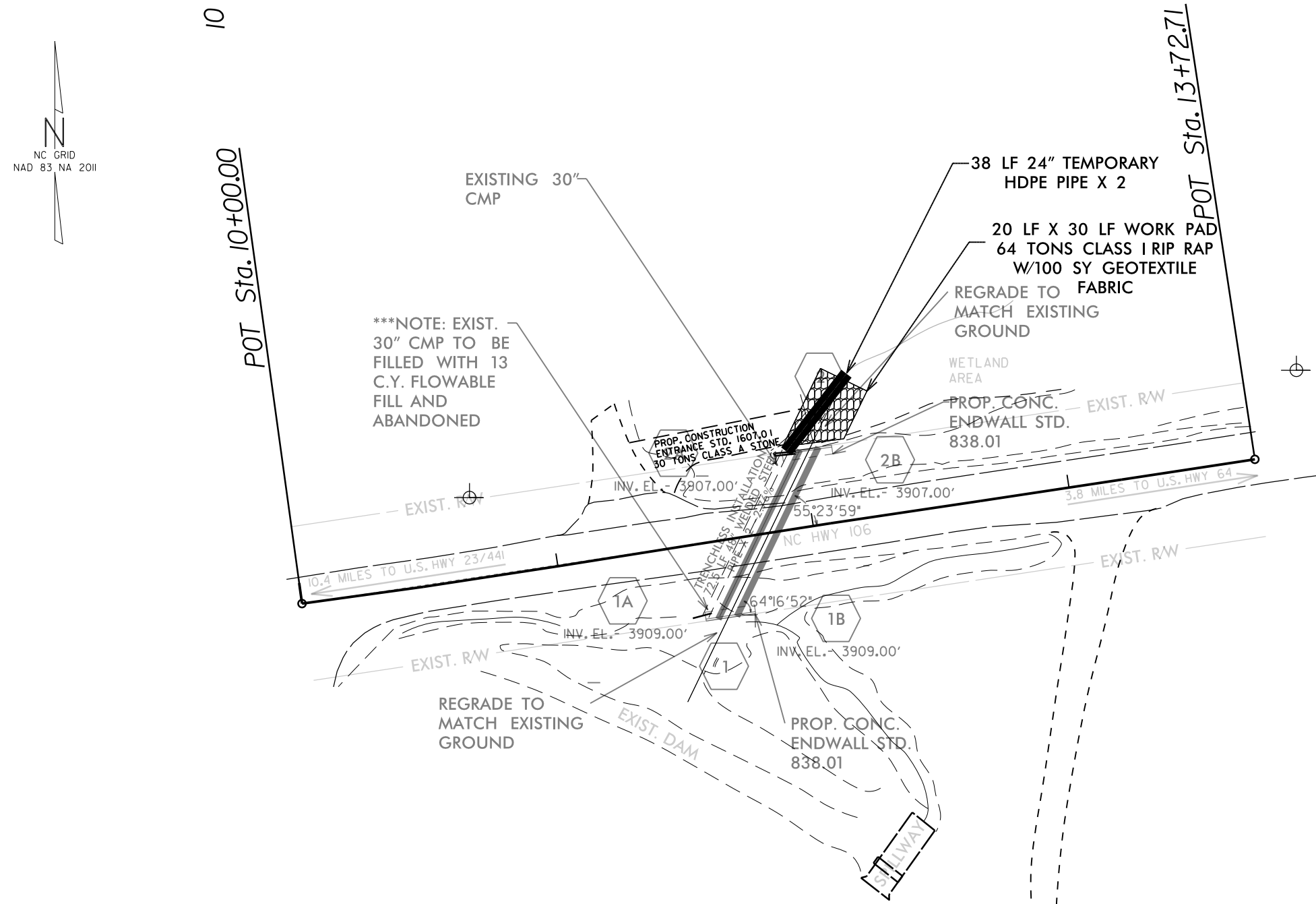
PROFILE OF CENTERLINE OF TRENCHLESS PIPE INSTALLATION



DS  
LB

Q4-JAN-2019 13:57 J:\000655 turtle pond bore&jack.dgn\New folder\turtlepond2d.Rdy.dsn.dgn

## TEMPORARY DIVERSION LAYOUT



\*\*\*NOTE: ALL WORK SHOWN ON  
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R/W WILL BE COMPLETED WITH A  
RIGHT OF ENTRY

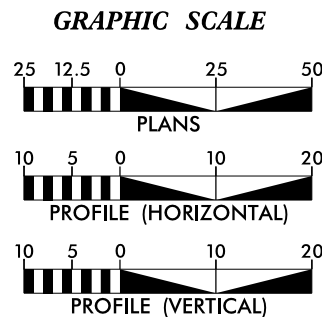


**CONTRACT: DN00655**

**LOCATION: ALONG NC HWY 106 10.4 MILES EAST OF U.S. HWY 23 /441 AND 3.8 MILES WEST OF U.S. HWY 64**

**TYPE OF WORK: TRENCHLESS PIPE INSTALLATION, FLOWABLE FILL PIPE ABANDONMENT, GRADING,  
EROSION CONTROL**

| <b>Std. #</b>  | <b>Description</b>                                                     | <b>Symbol</b> |
|----------------|------------------------------------------------------------------------|---------------|
| <b>1606.01</b> | Temporary Silt Fence                                                   |               |
| <b>1606.01</b> | Special Sediment Control Fence                                         |               |
| <b>1622.01</b> | Temporary Berms and Slope Drains                                       |               |
| <b>1630.02</b> | Silt Basin Type B                                                      |               |
| <b>1630.03</b> | Temporary Silt Ditch                                                   |               |
| <b>1630.06</b> | Temporary Diversion                                                    |               |
| <b>1630.06</b> | Special Stilling Basin                                                 |               |
| <b>1632.03</b> | Rock Inlet Sediment Trap Type C                                        |               |
| <b>1633.01</b> | Temporary Rock Silt Check Type-A                                       |               |
|                | Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM) |               |
| <b>1633.02</b> | Temporary Rock Silt Check Type-B                                       |               |
|                | Wattle                                                                 |               |
|                | Wattle with Polyacrylamide (PAM)                                       |               |
| <b>1634.02</b> | Temporary Rock Sediment Dam Type-B                                     |               |
| <b>1636.01</b> | Rock Pipe Inlet Sediment Trap Type-A                                   |               |



**Roadway Standard Drawings**

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

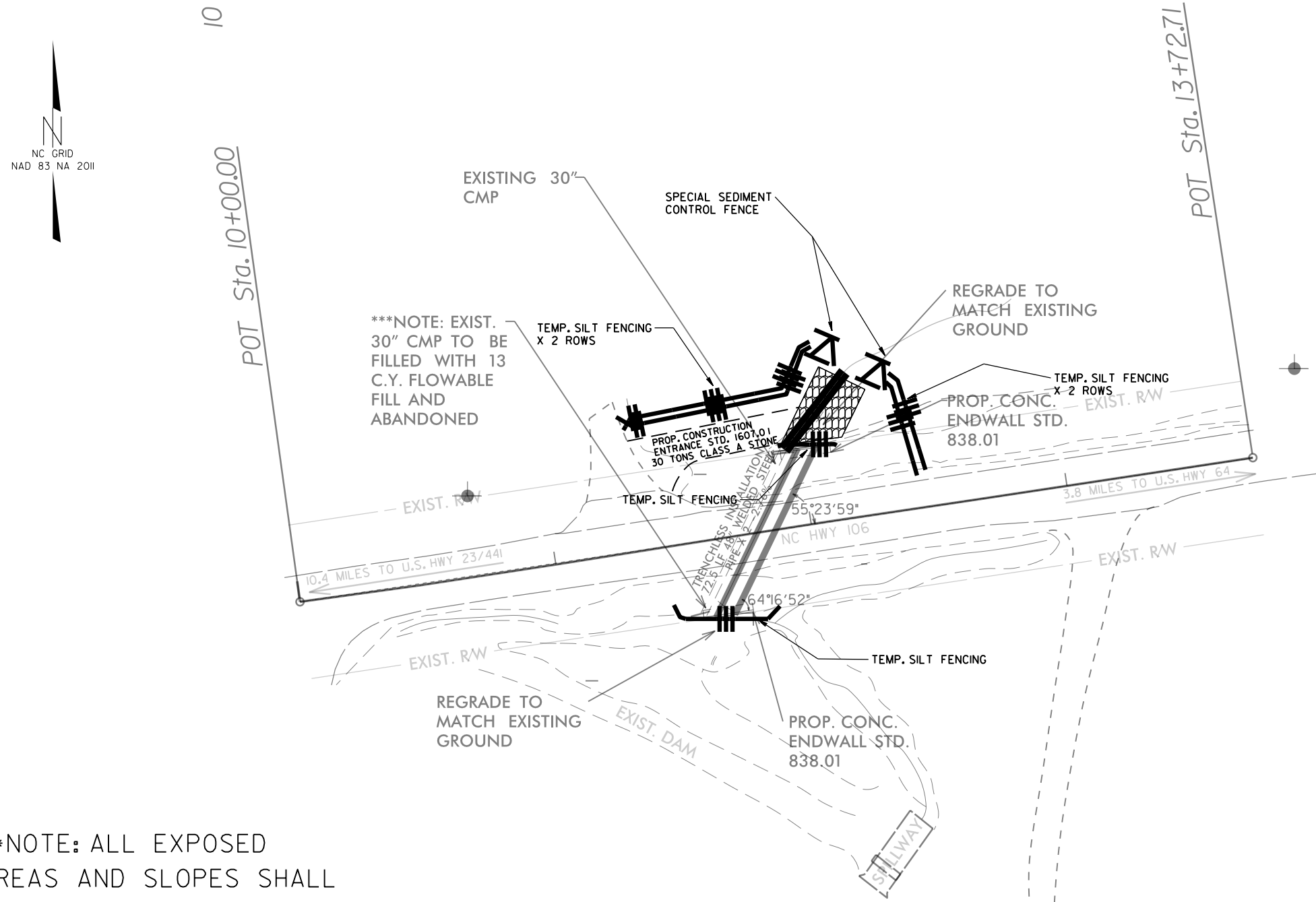
|         |                                  |         |                                      |
|---------|----------------------------------|---------|--------------------------------------|
| 1604.01 | Railroad Erosion Control Detail  | 1632.01 | Rock Inlet Sediment Trap Type A      |
| 1605.01 | Temporary Silt Fence             | 1632.02 | Rock Inlet Sediment Trap Type 3      |
| 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 3     |
| 1630.01 | Riser Basin                      | 1634.01 | Temporary Rock Sediment Dam Type A   |
| 1630.02 | Silt Basin Type 3                | 1634.02 | Temporary Rock Sediment Dam Type 3   |
| 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 3 |
| 1630.05 | Temporary Diversion              | 1640.01 | Coir Fiber Jaffle                    |
| 1630.06 | Special Stilling Basin           | 1645.01 | Temporary Stream Crossing            |

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

| SITE DESCRIPTION                             | STABILIZATION TIME | TIMEFRAME EXCEPTIONS                                                                   |
|----------------------------------------------|--------------------|----------------------------------------------------------------------------------------|
| PERIMETER DIKES, SWALES, DITCHES AND SLOPES  | 7 DAYS             | NONE                                                                                   |
| HIGH QUALITY WATER (HOW) 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 HOW ZONES.                                             |





\*\*NOTE: ALL EXPOSED  
 AREAS AND SLOPES SHALL  
 BE SEEDED AND/OR  
 MULCHED, AND/OR MATTED.  
 WATTLES WITH PAM TO BE  
 USED IF DIRECTED BY  
 ENGINEER

\*\*\*NOTE: ALL WORK SHOWN ON  
 THIS PAGE OUTSIDE OF EXISTING  
 RW WILL BE COMPLETED WITH A  
 RIGHT OF ENTRY