

# LITTLE RIVER PARK - PHASE I

1800 WEST GANNON AVENUE  
ZEBULON, NC 27597

## CONSULTANTS

### LANDSCAPE ARCHITECT



Alfred Benesch & Company  
8000 Regency Parkway, Suite 175  
Cary, NC 27518  
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P 984.275.2490

Corp. NC License: F-1320

### CIVIL ENGINEER



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8000 Regency Parkway, Suite 175  
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### ELECTRICAL ENGINEER

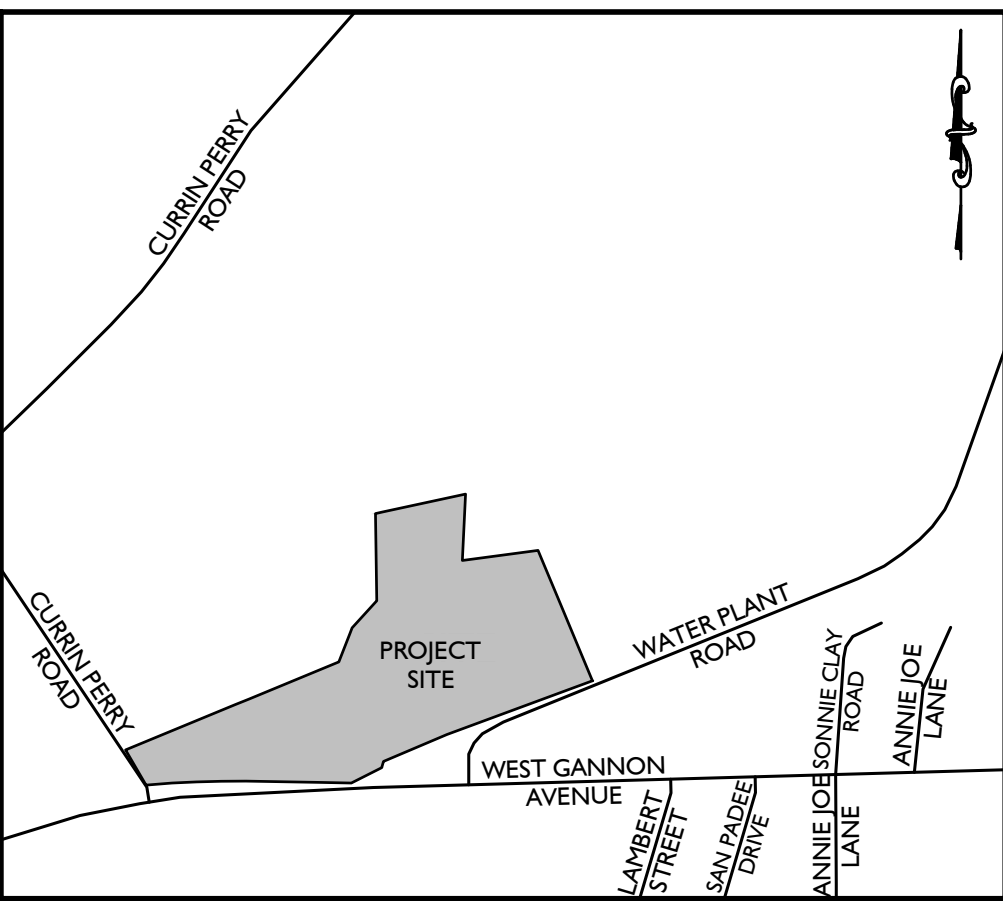


Lighthouse Engineering  
400 W. Morgan Street, Suite 100  
Raleigh, NC 27603

P 919.835.9781



NORTH CAROLINA



### VICINITY MAP

| SHEET INDEX  |                                              |
|--------------|----------------------------------------------|
| SHEET NUMBER | SHEET TITLE                                  |
| --           | COVER SHEET                                  |
| C0.10        | SURVEY                                       |
| C1.00        | OVERALL EXISTING CONDITIONS DEMOLITION PLAN  |
| C1.01        | ENLARGED EXISTING CONDITIONS DEMOLITION PLAN |
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| C502         | SITE CONSTRUCTION DETAILS                    |
| C503         | SITE CONSTRUCTION DETAILS                    |
| C504         | SITE CONSTRUCTION DETAILS                    |
| C505         | SITE CONSTRUCTION DETAILS                    |
| C600         | OVERALL LANDSCAPE PLAN                       |
| C601         | LANDSCAPE PLAN                               |
| C700         | SITE LIGHTING PLAN                           |

| ELECTRICAL |                                 |
|------------|---------------------------------|
| E0.1       | ELECTRICAL LEGEND AND NOTES     |
| E0.2       | ELECTRICAL SITE PLAN            |
| E1.0       | ELECTRICAL FLOOR PLAN AND RISER |

| RALEIGH WATER INSPECTIONS QUANTITIES (SUBDIVISIONS AND SITE PLANS)                                                                                                                                                                                                                                                                                                                    |              |         |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------|---------|
| Phase Number(s)                                                                                                                                                                                                                                                                                                                                                                       | PHASE 1      | PHASE 2 | PHASE 3 |
| Number of Lot(s)                                                                                                                                                                                                                                                                                                                                                                      | N/A          | —       | —       |
| Number of Units                                                                                                                                                                                                                                                                                                                                                                       | N/A          | —       | —       |
| Public Water (LF)                                                                                                                                                                                                                                                                                                                                                                     | ±461         | —       | —       |
| Public Sewer (LF)                                                                                                                                                                                                                                                                                                                                                                     | ±386         | —       | —       |
| Public Force Main (LF)                                                                                                                                                                                                                                                                                                                                                                | N/A          | —       | —       |
| Private Sewer* (LF)                                                                                                                                                                                                                                                                                                                                                                   | N/A          | —       | —       |
| Water Service Stubs (Quantity)                                                                                                                                                                                                                                                                                                                                                        | 1            | —       | —       |
| Sewer Service Stubs (Quantity)                                                                                                                                                                                                                                                                                                                                                        | 1            | —       | —       |
| Average Daily Flow per Phase**                                                                                                                                                                                                                                                                                                                                                        | 1500 gal/day | —       | —       |
| COMMERCIAL PROJECTS WITH SINGLE WATER AND SEWER SERVICE                                                                                                                                                                                                                                                                                                                               |              |         |         |
| Fire Service (Size)                                                                                                                                                                                                                                                                                                                                                                   | N/A          | —       | —       |
| Domestic Meter Size                                                                                                                                                                                                                                                                                                                                                                   | 1.5"         | —       | —       |
| Irrigation Meter Size                                                                                                                                                                                                                                                                                                                                                                 | N/A          | —       | —       |
| Average Daily Flow per Phase**                                                                                                                                                                                                                                                                                                                                                        | 1500 gal/day | —       | —       |
| *Sewer mains and manholes as part of a collection system.<br>**Entire Project Flow. Based on 75gpd per bedroom for residential (apartments, single family dwelling, townhouse, condos), or based on 15A NCAC 02T .0114 Wastewater Design Flow Rates for Commercial and Industrial.<br>The meter size must match domestic service size (exemption – 3/4" service tap with 5/8" meter). |              |         |         |

#### IMPERVIOUS CALCULATIONS

|                                |           |
|--------------------------------|-----------|
| EXISTING IMPERVIOUS:           | 12,492 SF |
| EXISTING IMPERVIOUS TO REMAIN: | 7,438 SF  |
| PROPOSED IMPERVIOUS:           | 60,804 SF |
| TOTAL SITE IMPERVIOUS:         | 68,242 SF |

(REFER TO SHEETS BUA-1 AND BUA-2 FOR A MORE IN-DEPTH BREAKDOWN OF EXISTING AND PROPOSED IMPERVIOUS)

| ATTENTION CONTRACTORS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Raleigh Water Inspector at 919-996-3245 or <a href="https://cityworks.raleighnc.gov/pucontractors">https://cityworks.raleighnc.gov/pucontractors</a> and schedule a Pre-construction meeting prior to beginning any construction. Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure. |
| Failure to notify City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require re-installation of any water or sewer facilities not inspected as a result of this notification failure.                                                                                                                                                                                                                                                                                                  |
| Failure to call for inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of Raleigh Water Standards will result in a fine and possible exclusion from future work in the City of Raleigh.                                                                                                                                                                                                                                                                                                       |

Issued for Bid

DATE OF ISSUE: 11/20/2025 SET NO.: \_\_\_\_\_

EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT

APPROVED

EROSION CONTROL ☐ SEC-\_\_\_\_\_

STORMWATER MGMT. ☐ SWF-\_\_\_\_\_

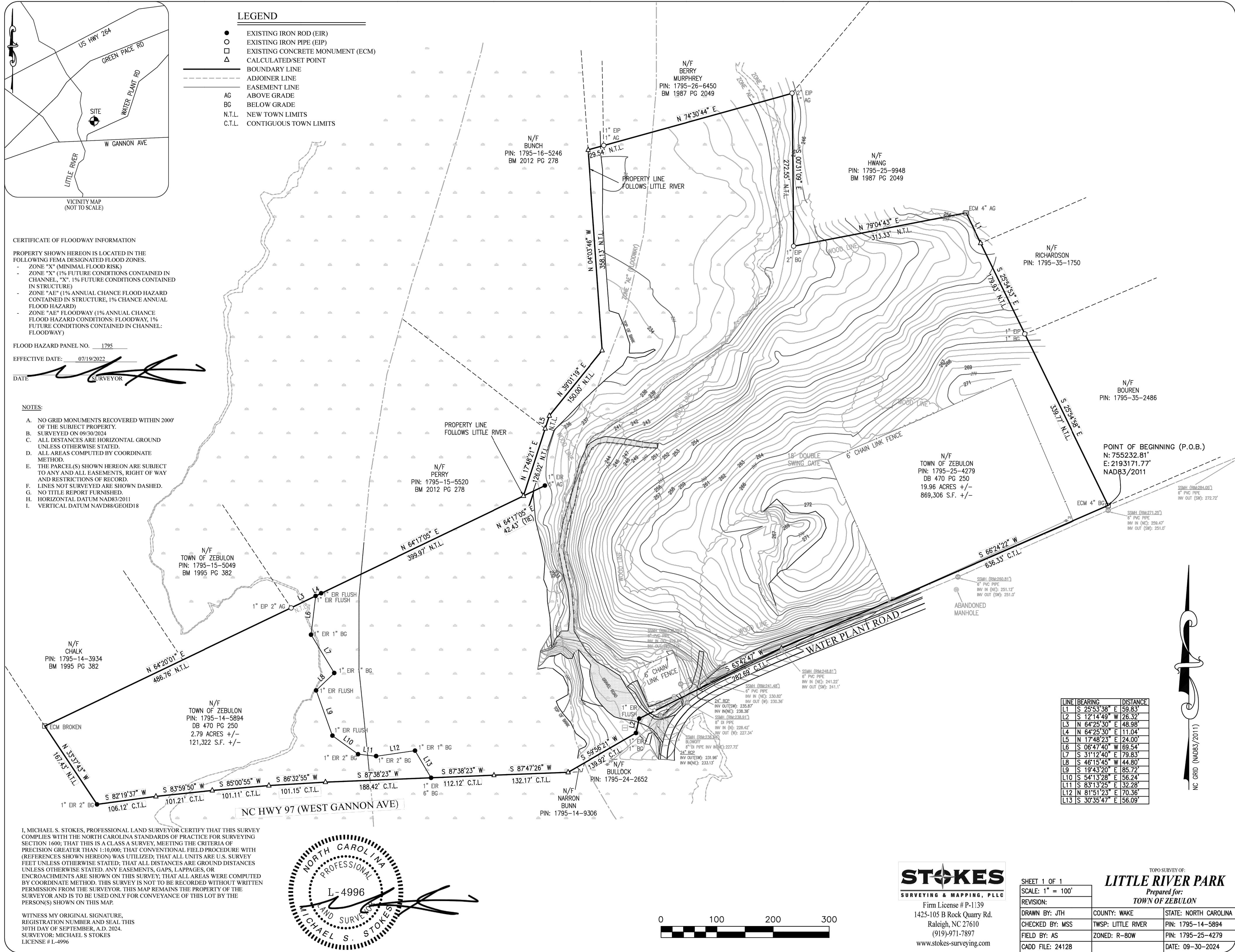
FLOOD STUDY ☐ SWF-\_\_\_\_\_

DATE \_\_\_\_\_

 ENVIRONMENTAL CONSULTANT SIGNATURE



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Seals:

Corp. NC License: F-1320

# LITTLE RIVER PARK

1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00  
Date: 11.20.2025  
Revisions:

Sheet Title:  
**SURVEY**

Sheet No:  
**C0.10**

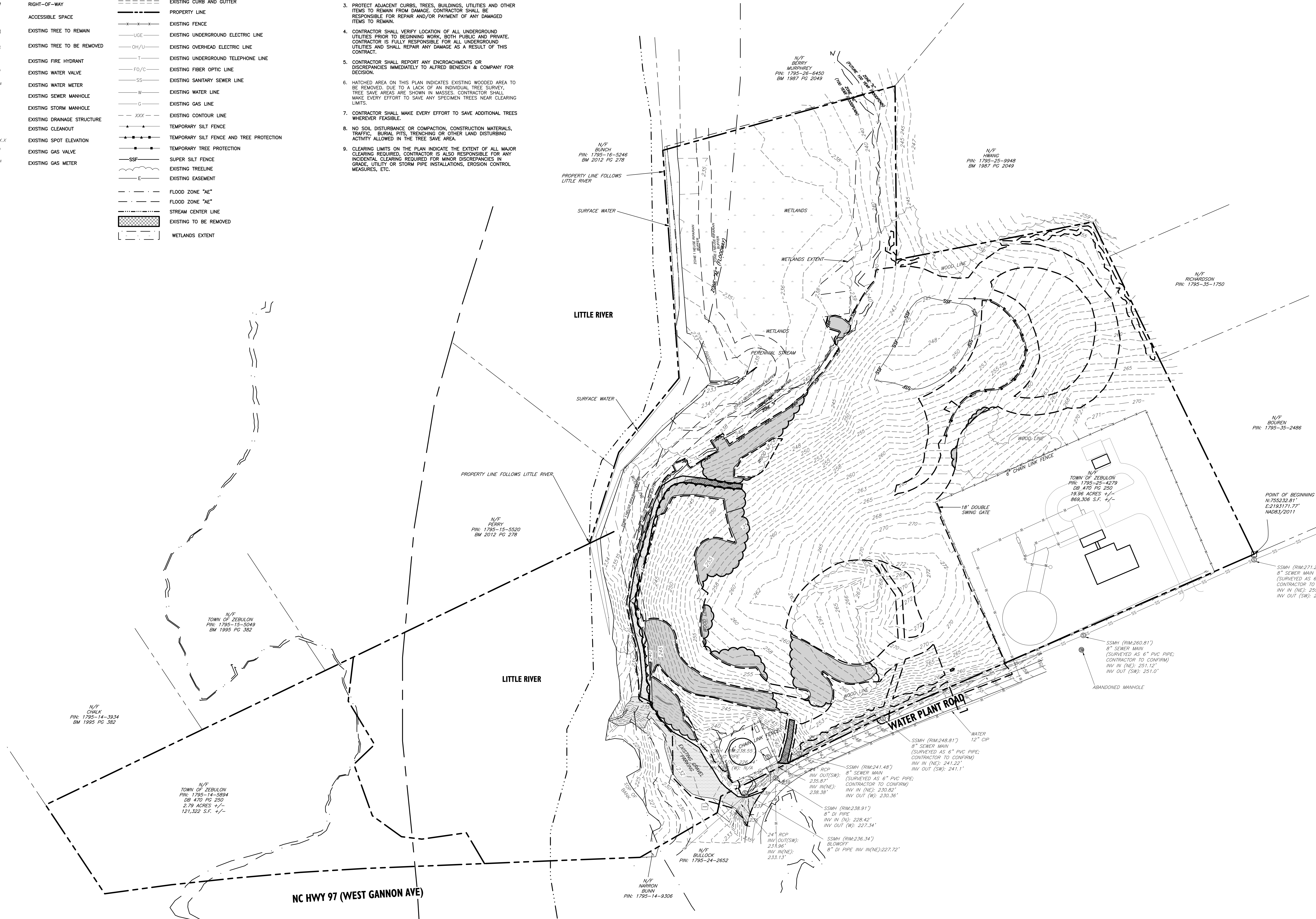


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| LEGEND |                             |  |                                          |
|--------|-----------------------------|--|------------------------------------------|
|        | EXISTING SIGN               |  | EXISTING ITEMS TO BE REMOVED             |
|        | EXISTING IRON PIN           |  | EXISTING TREE CLEARING                   |
|        | EXISTING LIGHT POLE         |  | SAWCUT LINE                              |
|        | EXISTING UTILITY POLE       |  | EXISTING CURB AND GUTTER                 |
|        | RIGHT-OF-WAY                |  | PROPERTY LINE                            |
|        | ACCESSIBLE SPACE            |  | EXISTING FENCE                           |
|        | EXISTING TREE TO REMAIN     |  | EXISTING UNDERGROUND ELECTRIC LINE       |
|        | EXISTING TREE TO BE REMOVED |  | EXISTING OVERHEAD ELECTRIC LINE          |
|        | EXISTING FIRE HYDRANT       |  | EXISTING UNDERGROUND TELEPHONE LINE      |
|        | EXISTING WATER VALVE        |  | EXISTING FIBER OPTIC LINE                |
|        | EXISTING WATER METER        |  | EXISTING SANITARY SEWER LINE             |
|        | EXISTING SEWER MANHOLE      |  | EXISTING WATER LINE                      |
|        | EXISTING STORM MANHOLE      |  | EXISTING GAS LINE                        |
|        | EXISTING DRAINAGE STRUCTURE |  | EXISTING CONTOUR LINE                    |
|        | EXISTING CLEANOUT           |  | TEMPORARY SILT FENCE                     |
|        | EXISTING SPOT ELEVATION     |  | TEMPORARY SILT FENCE AND TREE PROTECTION |
|        | EXISTING GAS VALVE          |  | TEMPORARY TREE PROTECTION                |
|        | EXISTING GAS METER          |  | SUPER SILT FENCE                         |
|        |                             |  | EXISTING TREELINE                        |
|        |                             |  | EXISTING EASEMENT                        |
|        |                             |  | FLOOD ZONE "Ae"                          |
|        |                             |  | FLOOD ZONE "Ae"                          |
|        |                             |  | STREAM CENTER LINE                       |
|        |                             |  | EXISTING TO BE REMOVED                   |
|        |                             |  | WETLANDS EXTENT                          |

#### DEMOLITION/CLEARING NOTES

- BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY PREPARED BY STOKES SURVEYING & MAPPING, PLLC DATED 9/30/2024.
- CONTRACTOR SHALL REMOVE EXISTING TREES, CONCRETE, ASPHALT AND OTHER EXISTING STRUCTURES INDICATED ON PLAN. CONTRACTOR TO DISPOSE OF ALL DEBRIS TO AN APPROVED (LEGAL) OFF-SITE LOCATION.
- PROTECT ADJACENT CURBS, TREES, BUILDINGS, UTILITIES AND OTHER ITEMS TO REMAIN FROM DAMAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR PAYMENT OF ANY DAMAGED ITEMS TO REMAIN.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK. BOTH PUBLIC AND PRIVATE. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS CONTRACT.
- CONTRACTOR SHALL REPORT ANY ENCROACHMENTS OR DISCREPANCIES IMMEDIATELY TO ALFRED BENESECH & COMPANY FOR DECISION.
- HATCHED AREA ON THIS PLAN INDICATES EXISTING WOODED AREA TO BE REMOVED. DUE TO A LACK OF AN INDIVIDUAL TREE SURVEY, TREE SAVE AREAS ARE SHOWN IN MASSES. CONTRACTOR SHALL MAKE EVERY EFFORT TO SAVE ANY SPECIMEN TREES NEAR CLEARING LIMITS.
- CONTRACTOR SHALL MAKE EVERY EFFORT TO SAVE ADDITIONAL TREES WHEREVER FEASIBLE.
- NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE SAVE AREA.
- CLEARING LIMITS ON THE PLAN INDICATE THE EXTENT OF ALL MAJOR CLEARING REQUIRED. CONTRACTOR IS ALSO RESPONSIBLE FOR ANY INCIDENTAL CLEARING REQUIRED FOR MINOR DISCREPANCIES IN GRADE, UTILITY OR STORM PIPE INSTALLATIONS, EROSION CONTROL MEASURES, ETC.



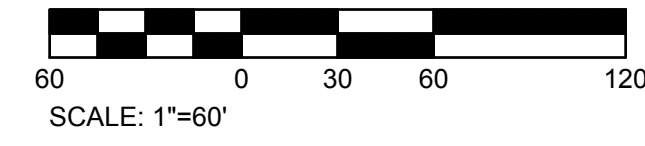
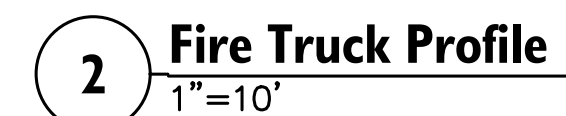






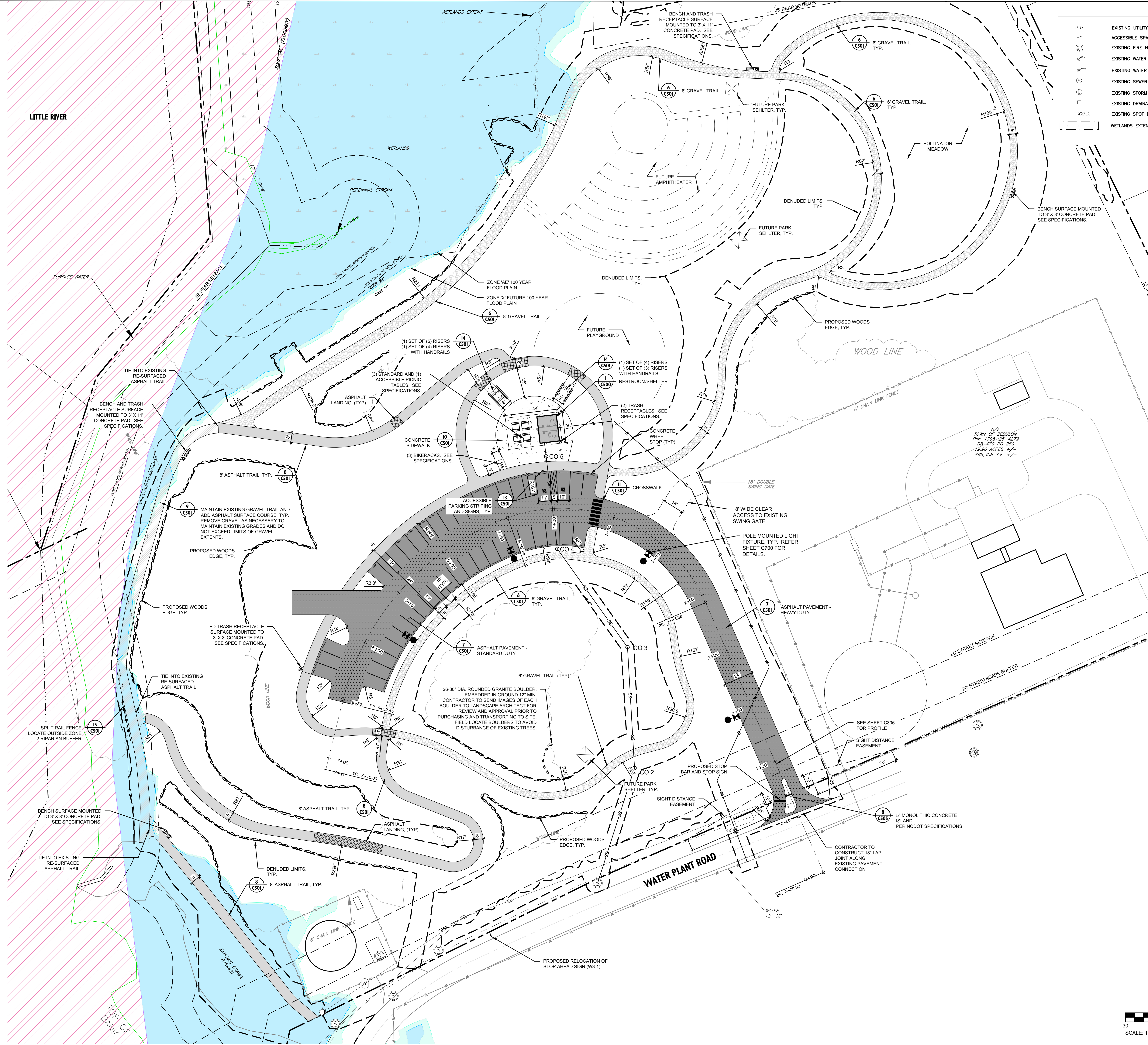
## PAVEMENT COVERAGE: 60,301 Sq. Ft. / Acres

1. DIMENSIONS AND COORDINATE POINTS ARE TO FACE OF CURB, EDGE OF PAVEMENT, OR CORNER OF BUILDING UNLESS OTHERWISE NOTED.
2. ALL IMPROVEMENTS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND LOCAL STANDARDS.
3. ANY DISCREPANCIES FOUND IN THE FIELD SHALL BE CALLED TO THE ATTENTION OF THE OWNER OR ENGINEER PRIOR TO PROCEEDING WITH WORK.
4. PRIOR TO BEGINNING CONSTRUCTION, UNLESS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS (BOTH SITE AND BUILDING RELATED) INCLUDING BUT NOT LIMITED TO REGULATORY FEES, LICENSES, AND INSPECTIONS NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK.
5. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES, AND RIGHT-OF-WAYS, PUBLIC AND PRIVATE, PRIOR TO WORKING IN THESE AREAS.
6. GENERAL CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND THE PUBLIC SHALL BE PROTECTED FROM INJURY.
7. SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED.
8. USE CAUTION WHEN REPRODUCING COPIES OF THE CONSTRUCTION DRAWINGS. ALL COPIES ARE SUBJECT TO DISTORTION AND INACCURACY IN THE SCALE OF DRAWINGS. VERIFY ANY DISCREPANCIES WITH BENEFIT.
9. ALL SIGNING, WARNING MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION AS AMENDED.
10. ALL PAVEMENT MARKINGS SHALL BE FOUR (4) INCHES WIDE UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
11. CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS AS SHOWN ON THE PLANS.
12. CONTRACTOR SHALL SAW-CUT EXISTING ASPHALT PAVEMENT AREAS TO THE TIE IN SMOOTHLY TO PROPOSED PAVEMENT AT DRIVEWAY ENTRANCES.
13. REFER TO ARCHITECTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS.
14. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH AN ELECTRONIC FILE OF THESE DRAWINGS UPON REQUEST.
15. CONTACT THE UTILITY COMPANY TO RELOCATE ANY EXISTING UTILITY POLES. ALL EXISTING FACILITIES WHICH CONFLICT WITH THE WORK UNDER THE TERMS OF THIS CONTRACT MUST BE RELOCATED AT THE EXPENSE OF THE OWNER.
16. STOP BEFORE YOU DIG. CALL 811. IT'S THE LAW.
17. HEAVY DUTY PAVEMENT SHOWN ON THIS PLAN IS CAPABLE OF SUPPORTING AN 80,000 LB FIRE TRUCK.





V:\North Carolina\TX\05\1715-500672\05\_Zebulon\1715-500672\05-CD\1715-500672\05 SITE PLAN.dwg



**LEGEND**

EXISTING UTILITY POLE  
ACCESSIBLE SPACE  
EXISTING FIRE HYDRANT  
EXISTING WATER VALVE  
EXISTING WATER METER  
EXISTING SEWER MANHOLE  
EXISTING STORM MANHOLE  
EXISTING DRAINAGE STRUCTURE  
EXISTING SPOT ELEVATION  
WETLANDS EXTENT

EXISTING CURB AND GUTTER  
PROPOSED CURB AND GUTTER  
PROPERTY LINE  
EXISTING FENCE  
EXISTING OVERHEAD UTILITY LINE  
EXISTING SANITARY SEWER LINE  
EXISTING WATER LINE  
EXISTING STORM DRAINAGE PIPE  
EXISTING TREE LINE  
EXISTING GAS VALVE  
EXISTING GAS METER  
PROPOSED FENCE  
EXISTING ASPHALT / CONCRETE PAVEMENT  
PROPOSED STANDARD DUTY ASPHALT PAVEMENT  
PROPOSED ASPHALT TRAIL  
PROPOSED GRAVEL TRAIL  
PROPOSED PEDESTRIAN CONCRETE PAVEMENT  
PROPOSED HEAVY DUTY ASPHALT PAVEMENT

**FLOODWAY LEGEND**

STREAM CENTER LINE  
STREAM TOP OF BANK  
FLOODWAY LINE  
ZONE "AE" (100 YEAR FLOODPLAIN)  
ZONE "X" (FUTURE 100 YEAR FLOODPLAIN)  
FLOODWAY HATCH  
ZONE "AE" HATCH  
ZONE "X" HATCH

**PROPOSED IMPERVIOUS BREAKDOWN**

| FEATURE                                   | SF     | AREA |
|-------------------------------------------|--------|------|
| PARKING LOT                               | 26,103 | 0.60 |
| CONCRETE                                  | 3,224  | 0.07 |
| RESTROOM BUILDING                         | 355    | 0.01 |
| ASPHALT TRAIL                             | 16,089 | 0.37 |
| GRAVEL TRAIL                              | 15,032 | 0.35 |
| TOTAL (PROPOSED)                          | 60,804 | 1.40 |
| EXISTING IMPERVIOUS TO REMAIN (SEE BUA-1) | 7,438  | 0.17 |
| TOTAL SITE IMPERVIOUS                     | 68,242 | 1.57 |

**BUILT UPON AREA CALCULATION**

| TOTAL SITE AREA (AC) | TOTAL SITE IMPERVIOUS (AC) | %BUA |
|----------------------|----------------------------|------|
| 9.87                 | 1.57                       | 16   |

Seals:



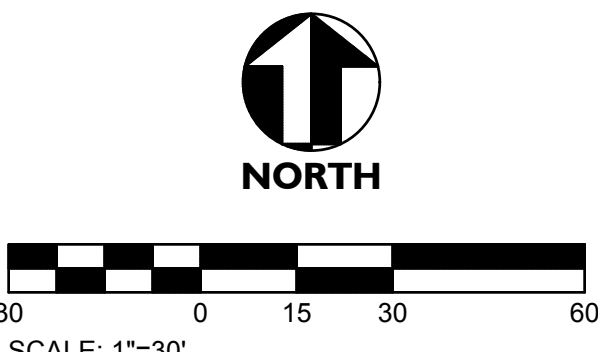
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**LITTLE RIVER PARK**  
1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00  
Date: 11.20.2025  
Revisions:

Sheet Title:  
**ENLARGED  
SITE PLAN**

Sheet No:  
**C201**





| LEGEND |                                                                 |  |                                          |
|--------|-----------------------------------------------------------------|--|------------------------------------------|
|        | EXISTING SIGN                                                   |  | EXISTING CURB AND GUTTER                 |
|        | EXISTING IRON PIN                                               |  | PROPOSED CURB AND GUTTER                 |
|        | EXISTING LIGHT POLE                                             |  | PROPERTY LINE                            |
|        | EXISTING UTILITY POLE                                           |  | EXISTING FENCE                           |
|        | RIGHT-OF-WAY                                                    |  | EXISTING UNDERGROUND ELECTRIC LINE       |
|        | ACCESSIBLE SPACE                                                |  | EXISTING OVERHEAD UTILITY LINE           |
|        | EXISTING TREE TO REMAIN                                         |  | EXISTING UNDERGROUND TELEPHONE LINE      |
|        | EXISTING FIRE HYDRANT                                           |  | EXISTING FIBER OPTIC LINE                |
|        | EXISTING WATER VALVE                                            |  | EXISTING SANITARY SEWER LINE             |
|        | EXISTING WATER METER                                            |  | EXISTING WATER LINE                      |
|        | EXISTING SEWER MANHOLE                                          |  | EXISTING GAS LINE                        |
|        | EXISTING STORM MANHOLE                                          |  | EXISTING CONTOUR LINE                    |
|        | PROPOSED STORM MANHOLE                                          |  | PROPOSED CONTOUR LINE                    |
|        | PROPOSED FLARED END SECTION                                     |  | PROPOSED DRAINAGE DITCH                  |
|        | EXISTING DRAINAGE STRUCTURE                                     |  | EXISTING STORM DRAINAGE PIPE             |
|        | PROPOSED DRAINAGE STRUCTURE                                     |  | PROPOSED STORM DRAINAGE PIPE             |
|        | EXISTING SPOT ELEVATION                                         |  | PROPOSED ROOF DRAIN PIPE                 |
|        | PROPOSED SPOT ELEVATION                                         |  | EXISTING TREE LINE                       |
|        | EXISTING CLEANOUT                                               |  | PROPOSED TREE LINE                       |
|        | EXISTING DOWNSPOUT                                              |  | EXISTING GAS VALVE                       |
|        | WETLANDS EXTENT                                                 |  | EXISTING GAS METER                       |
|        | TEMPORARY SILT SACK                                             |  | ZONE "A"<br>(100 YEAR FLOODPLAIN)        |
|        | TEMPORARY INLET PROTECTION                                      |  | ZONE "X"<br>(FUTURE 100 YEAR FLOODPLAIN) |
|        | TEMPORARY ROCK CHECK DAM                                        |  | STREAM CENTER LINE                       |
|        | TEMPORARY FILTER BERM BASIN                                     |  | TEMPORARY SILT FENCE                     |
|        | TEMPORARY FILTER BAG WITH<br>FLOATING INTAKE TO SKIMMER<br>CELL |  | TEMPORARY SILT FENCE AND TREE PROTECTION |
|        |                                                                 |  | TEMPORARY TREE PROTECTION                |
|        |                                                                 |  | STONE OPENING IN TEMPORARY SILT FENCE    |
|        |                                                                 |  | SUPER SILT FENCE                         |
|        |                                                                 |  | PROPOSED LIMIT OF DISTURBANCE            |
|        |                                                                 |  | PROPOSED SLOPE AND CHANNEL LINING        |
|        |                                                                 |  | PROPOSED RIPRAP APRON                    |
|        |                                                                 |  | FLOOD PRONE SOIL LIMITS                  |

|  |                                                           |  |                                          |
|--|-----------------------------------------------------------|--|------------------------------------------|
|  | EXISTING SIGN                                             |  | EXISTING CURB AND GUTTER                 |
|  | EXISTING IRON PIN                                         |  | PROPOSED CURB AND GUTTER                 |
|  | EXISTING LIGHT POLE                                       |  | PROPERTY LINE                            |
|  | EXISTING UTILITY POLE                                     |  | EXISTING FENCE                           |
|  | RIGHT-OF-WAY                                              |  | EXISTING UNDERGROUND ELECTRIC LINE       |
|  | ACCESSIBLE SPACE                                          |  | EXISTING OVERHEAD UTILITY LINE           |
|  | EXISTING TREE TO REMAIN                                   |  | EXISTING UNDERGROUND TELEPHONE LINE      |
|  | EXISTING FIRE HYDRANT                                     |  | EXISTING FIBER OPTIC LINE                |
|  | EXISTING WATER VALVE                                      |  | EXISTING SANITARY SEWER LINE             |
|  | EXISTING WATER METER                                      |  | EXISTING GAS LINE                        |
|  | EXISTING SEWER MANHOLE                                    |  | EXISTING CONTOUR LINE                    |
|  | EXISTING STORM MANHOLE                                    |  | PROPOSED CONTOUR LINE                    |
|  | PROPOSED STORM MANHOLE                                    |  | EXISTING STORM DRAINAGE PIPE             |
|  | PROPOSED FLARED END SECTION                               |  | PROPOSED STORM DRAINAGE PIPE             |
|  | EXISTING DRAINAGE STRUCTURE                               |  | PROPOSED ROOF DRAIN PIPE                 |
|  | PROPOSED DRAINAGE STRUCTURE                               |  | EXISTING TREE LINE                       |
|  | EXISTING SPOT ELEVATION                                   |  | EXISTING GAS VALVE                       |
|  | PROPOSED SPOT ELEVATION                                   |  | EXISTING GAS METER                       |
|  | EXISTING CLEANOUT                                         |  | ZONE "A"<br>(100 YEAR FLOODPLAIN)        |
|  | EXISTING DOWNSPOUT                                        |  | ZONE "X"<br>(FUTURE 100 YEAR FLOODPLAIN) |
|  | WETLANDS EXTENT                                           |  | STREAM CENTER LINE                       |
|  | TEMPORARY SILT SACK                                       |  | TEMPORARY SILT FENCE                     |
|  | TEMPORARY INLET PROTECTION                                |  | TEMPORARY SILT FENCE AND TREE PROTECTION |
|  | TEMPORARY ROCK CHECK DAM                                  |  | TEMPORARY TREE PROTECTION                |
|  | TEMPORARY FILTER BERM BASIN                               |  | STONE OPENING IN TEMPORARY SILT FENCE    |
|  | TEMPORARY FILTER BAG WITH FLOATING INTAKE TO SKIMMER CELL |  | SUPER SILT FENCE                         |
|  |                                                           |  | PROPOSED LIMIT OF DISTURBANCE            |
|  |                                                           |  | PROPOSED SLOPE AND CHANNEL LINING        |
|  |                                                           |  | PROPOSED RIPRAP APRON                    |
|  |                                                           |  | FLOOD PRONE SOIL LIMITS                  |

|  |                                                           |  |                                          |
|--|-----------------------------------------------------------|--|------------------------------------------|
|  | EXISTING SIGN                                             |  | EXISTING CURB AND GUTTER                 |
|  | EXISTING IRON PIN                                         |  | PROPOSED CURB AND GUTTER                 |
|  | EXISTING LIGHT POLE                                       |  | PROPERTY LINE                            |
|  | EXISTING UTILITY POLE                                     |  | EXISTING FENCE                           |
|  | RIGHT-OF-WAY                                              |  | EXISTING UNDERGROUND ELECTRIC LINE       |
|  | ACCESSIBLE SPACE                                          |  | EXISTING OVERHEAD UTILITY LINE           |
|  | EXISTING TREE TO REMAIN                                   |  | EXISTING UNDERGROUND TELEPHONE LINE      |
|  | EXISTING FIRE HYDRANT                                     |  | EXISTING FIBER OPTIC LINE                |
|  | EXISTING WATER VALVE                                      |  | EXISTING SANITARY SEWER LINE             |
|  | EXISTING WATER METER                                      |  | EXISTING GAS LINE                        |
|  | EXISTING SEWER MANHOLE                                    |  | EXISTING CONTOUR LINE                    |
|  | EXISTING STORM MANHOLE                                    |  | PROPOSED CONTOUR LINE                    |
|  | PROPOSED STORM MANHOLE                                    |  | EXISTING STORM DRAINAGE PIPE             |
|  | PROPOSED FLARED END SECTION                               |  | PROPOSED STORM DRAINAGE PIPE             |
|  | EXISTING DRAINAGE STRUCTURE                               |  | PROPOSED ROOF DRAIN PIPE                 |
|  | PROPOSED DRAINAGE STRUCTURE                               |  | EXISTING TREE LINE                       |
|  | EXISTING SPOT ELEVATION                                   |  | EXISTING GAS VALVE                       |
|  | PROPOSED SPOT ELEVATION                                   |  | EXISTING GAS METER                       |
|  | EXISTING CLEANOUT                                         |  | ZONE "A"<br>(100 YEAR FLOODPLAIN)        |
|  | EXISTING DOWNSPOUT                                        |  | ZONE "X"<br>(FUTURE 100 YEAR FLOODPLAIN) |
|  | WETLANDS EXTENT                                           |  | STREAM CENTER LINE                       |
|  | TEMPORARY SILT SACK                                       |  | TEMPORARY SILT FENCE                     |
|  | TEMPORARY INLET PROTECTION                                |  | TEMPORARY SILT FENCE AND TREE PROTECTION |
|  | TEMPORARY ROCK CHECK DAM                                  |  | TEMPORARY TREE PROTECTION                |
|  | TEMPORARY FILTER BERM BASIN                               |  | STONE OPENING IN TEMPORARY SILT FENCE    |
|  | TEMPORARY FILTER BAG WITH FLOATING INTAKE TO SKIMMER CELL |  | SUPER SILT FENCE                         |
|  |                                                           |  | PROPOSED LIMIT OF DISTURBANCE            |
|  |                                                           |  | PROPOSED SLOPE AND CHANNEL LINING        |
|  |                                                           |  | PROPOSED RIPRAP APRON                    |
|  |                                                           |  | FLOOD PRONE SOIL LIMITS                  |

Know what's below.  
Call before you dig.

| PART III<br>SELF-INSPECTION, RECORDKEEPING AND REPORTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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| <p><b>SECTION A: SELF-INSPECTION</b></p> <p>Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.</p> <table border="1"> <thead> <tr> <th>Inspect</th><th>Frequency (during normal business hours)</th><th>Inspection records must include:</th></tr> </thead> <tbody> <tr> <td>(1) Rain gauge maintained in good working order</td><td>Daily</td><td>Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.</td></tr> <tr> <td>(2) E&amp;SC Measures</td><td>At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours</td><td>1. Identification of the measures inspected.<br/>2. Date and time of the inspection.<br/>3. Name of the person performing the inspection.<br/>4. Indication of whether the measures were operating properly.<br/>5. Description of maintenance needs for the measure.<br/>6. Date and time of the inspection.<br/>7. Name of the person performing the inspection.<br/>8. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration.<br/>9. Description, evidence, and date of corrective actions taken.</td></tr> <tr> <td>(3) Stormwater discharge outfalls (SDOs)</td><td>At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours</td><td>1. Identification of the discharge outfalls inspected.<br/>2. Date and time of the inspection.<br/>3. Name of the person performing the inspection.<br/>4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration.<br/>5. Description, evidence, and date of corrective actions taken.</td></tr> <tr> <td>(4) Perimeter of site</td><td>At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours</td><td>1. Actions taken to clean up or stabilize the sediment that has left the site limits.<br/>2. Description, evidence, and date of corrective actions taken, and an explanation as to the actions taken to control future releases.</td></tr> <tr> <td>(5) Streams or wetlands, onsite or offsite (where accessible)</td><td>At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours</td><td>If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made:<br/>1. Description, evidence, and date of corrective actions taken, and an explanation as to the actions taken to control future releases.<br/>2. Records of the required reports to the appropriate Division Regional Office per Part II, Section C, Item 2(f) of this permit.</td></tr> <tr> <td>(6) Ground stabilization measures</td><td>After each phase of grading</td><td>1. The phase of grading (installation of perimeter E&amp;SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover).<br/>2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.</td></tr> </tbody> </table> <p><b>NOTE:</b> The rain inspection resets the required 7 calendar day inspection requirement.</p> | Inspect                                                                                                                                                                                                                                                                                                                                 | Frequency (during normal business hours)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Inspection records must include: | (1) Rain gauge maintained in good working order | Daily | Daily rainfall amounts. 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The following items pertaining to the E&amp;SC plan shall be kept on site and available for inspection at all times during normal business hours.</p> <table border="1"> <thead> <tr> <th>Item to Document</th><th>Documentation Requirements</th></tr> </thead> <tbody> <tr> <td>(a) Each E&amp;SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&amp;SC plan.</td><td>Initial and date each E&amp;SC measure on a copy of the approved E&amp;SC plan or complete, date and sign an inspection report that lists each E&amp;SC measure shown on the approved E&amp;SC plan. This documentation is required upon the initial installation of the E&amp;SC measures or if the E&amp;SC measures are modified after initial installation.</td></tr> <tr> <td>(b) A phase of grading has been completed.</td><td>Initial and date a copy of the approved E&amp;SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.</td></tr> <tr> <td>(c) Ground cover is located and installed in accordance with the approved E&amp;SC plan.</td><td>Initial and date a copy of the approved E&amp;SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.</td></tr> <tr> <td>(d) The maintenance and repair requirements for all E&amp;SC measures have been performed.</td><td>Complete, date and sign an inspection report.</td></tr> <tr> <td>(e) Corrective actions have been taken to E&amp;SC measures.</td><td>Initial and date a copy of the approved E&amp;SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.</td></tr> </tbody> </table> <p><b>2. Additional Documentation to be Kept on Site</b></p> <p>In addition to the E&amp;SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:</p> <ol style="list-style-type: none"> <li>This General Permit as well as the Certificate of Coverage, after it is received.</li> <li>Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.</li> <li>Documentation to be Retained for Three Years           <p>All data used to complete the e-NOTI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]</p> </li> </ol> | Item to Document | Documentation Requirements | (a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan. | Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. 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Occurrences that Must be Reported</b></p> <p>Permittees shall report the following occurrences:</p> <ol style="list-style-type: none"> <li>Visible sediment deposition in a stream or wetland.</li> <li>Oil spills if:           <ul style="list-style-type: none"> <li>They are 25 gallons or more,</li> <li>They are less than 25 gallons but cannot be cleaned up within 24 hours,</li> <li>They cause sheen on surface waters (regardless of volume), or</li> <li>They are within 100 feet of surface waters (regardless of volume).</li> </ul> </li> <li>Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.</li> <li>Anticipated bypasses and unanticipated bypasses.</li> <li>Noncompliance with the conditions of this permit that may endanger health or the environment.</li> </ol> <p><b>2. Reporting Timelines and Other Requirements</b></p> <p>After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.</p> <p><b>Occurrences</b></p> <ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li> <li>If the stream is named on the <a href="#">NC 303(d) list</a> as requiring for sediment-related causes, the permittee may be required to perform additional monitoring, inspections, or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired waters conditions.</li> <li><b>Within 24 hours</b>, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li> </ul> <p><b>Reporting Timeframes (After Discovery) and Other Requirements</b></p> <ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that includes an evaluation of the quality and effect of the bypass.</li> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the noncompliance, and its causes, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(b)(6). Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul> |
| Inspect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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| (4) Perimeter of site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours                                                                                                                                                                                                                                            | 1. Actions taken to clean up or stabilize the sediment that has left the site limits.<br>2. Description, evidence, and date of corrective actions taken, and an explanation as to the actions taken to control future releases.                                                                                                                                                                                                                                                                                                                        |                                  |                                                 |       |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |               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| (5) Streams or wetlands, onsite or offsite (where accessible)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours                                                                                                                                                                                                                                            | If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made:<br>1. Description, evidence, and date of corrective actions taken, and an explanation as to the actions taken to control future releases.<br>2. Records of the required reports to the appropriate Division Regional Office per Part II, Section C, Item 2(f) of this permit.                                                                                   |                                  |                                                 |       |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                                                                                              |                                                                                                                                                           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| (6) Ground stabilization measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | After each phase of grading                                                                                                                                                                                                                                                                                                             | 1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover).<br>2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.                                                                                                                           |                                  |                                                 |       |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                                                                                              |                                                                  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| (a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                                 |       |                                                                                                                                                                                                                               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| (b) A phase of grading has been completed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| (c) Ground cover is located and installed in accordance with the approved E&SC plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| (d) The maintenance and repair requirements for all E&SC measures have been performed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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| (e) Corrective actions have been taken to E&SC measures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| <p><b>PART II, SECTION G, ITEM (4)</b></p> <p><b>DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT</b></p> <p>Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out since this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:</p> <ol style="list-style-type: none"> <li>The E&amp;SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&amp;SC plan authority has approved these items.</li> <li>The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item 2(c) and (d) of this permit.</li> <li>Dewatering structures are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, wet tanks, and filtration systems.</li> <li>Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above.</li> <li>Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices.</li> <li>Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.</li> </ol>                                                                                                                                                                                                                                                                                                                                   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NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING
 
 EFFECTIVE: 04/01/19

## SELF INSPECTION REQUIREMENTS

- SELF-INSPECTIONS WILL BE PERFORMED IN ACCORDANCE WITH THE NPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES NCG010000.
- ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING SEDIMENTATION CONTROL BASINS, SEDIMENTATION TRAPS, SEDIMENTATION PONDS, ROCK DAMS, TEMPORARY DIVERSIONS, TEMPORARY SLOPE DRAINS, ROCK CHECK DAMS, SEDIMENT FENCE OR BARRIERS, ALL FORMS OF INLET PROTECTION, STORM DRAINAGE FACILITIES, ENERGY DISSIPATORS, STABILIZATION METHODS OF OPEN CHANNELS, AND GROUND COVER SHALL BE INSPECTED BY THE GENERAL CONTRACTOR.
- THE DIMENSIONS OF THE BASINS SHALL BE CHECKED AND COMPARED TO THE DIMENSIONS ON THE APPROVED SEDIMENTATION AND EROSION CONTROL PLAN. NOTIFY BENESCH IF THE DIMENSIONS OF ANY OF THE EROSION CONTROL MEASURES DEVIATE FROM THE PLANS.
- A "SELF-INSPECTION REPORT FORM FOR LAND DISTURBING ACTIVITY" (AS REQUIRED BY NCGS 113A-54.1) IS AVAILABLE ON THE NCDEQ WEBSITE OR PROVIDED WITH THE PROJECT MANUAL. ALTERNATIVELY THE OWNER OR DESIGNATED REPRESENTATIVE COMPLETING THE INSPECTIONS MAY MAKE NOTATIONS ON THE COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN THAT IS KEPT ON THE PROJECT SITE. DOCUMENTATION SHALL BE ACCOMPLISHED BY INITIATING AND DATING EACH MEASURE OR PRACTICE SHOWN ON A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR BY COMPLETING, DATING AND SIGNING AN INSPECTION REPORT THAT LISTS EACH MEASURE, PRACTICE OR DEVICE SHOWN ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. ALL DOCUMENTATION AND/OR REPORTS OF INSPECTIONS MUST BE MADE AVAILABLE ON THE SITE.
- THE SELF-INSPECTION REPORT IS TO BE COMPLETED AFTER EACH PHASE OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS COMPLETE. THESE PHASES APPLY FOR THIS PROJECT:
  - INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL MEASURES;
  - CLEARING AND GRUBBING OF EXISTING GROUND COVER;
  - COMPLETION OF ANY PHASE OF GRADING OF SLOPES OR FILLS;
  - INSTALLATION OF STORM DRAINAGE FACILITIES;
  - COMPLETION OF CONSTRUCTION OR DEVELOPMENT;
  - ESTABLISHMENT OF PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION.

## MAINTENANCE PLAN:

- ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGN.
- SEDIMENT WILL BE REMOVED FROM THE TEMPORARY SEDIMENT TRAPS WHEN STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. GRAVEL WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS PROPERLY.
- SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT 0.5 FEET DEEP AT THE FENCE.
- THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. THE ENGINEER MAY DIRECT THAT ADDITIONAL SILT FENCING OR EROSION CONTROL MATTING BE INSTALLED AT ANY TIME PRIOR TO FINAL ACCEPTANCE.
- ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS INCLUDED IN THESE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER IN WRITING.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED ONCE THE ENTIRE SITE IS STABILIZED.

## STOCKPILE NOTES

- PROVIDE 25' EASEMENT AS SHOWN ON THE APPROVED PLAN FOR MAINTENANCE AND ACCESS.
- STOCKPILE HEIGHT SHALL NOT EXCEED 10 FEET.
- STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.
- PROVIDE AND MAINTAIN SUPER SILT FENCE AROUND STOCKPILE FOR POTENTIAL SEDIMENT LOSS.

## STOCKPILE MAINTENANCE

- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEPT IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

## EROSION CONTROL/GROUND STABILIZATION NOTES:

- SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:
  - ALL PERIMETER DIKES, SWALES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
  - ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- CONDITIONS - IN MEETING THE STABILIZATION REQUIREMENTS ABOVE, THE FOLLOWING CONDITIONS OR EXEMPTIONS SHALL APPLY:
  - EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE.
  - ALL SLOPES 50' IN LENGTH OR GREATER SHALL APPLY THE GROUND COVER WITHIN 7 DAYS EXCEPT WHEN THE SLOPE IS FLATTER THAN 4:1. SLOPES LESS THAN 50' SHALL APPLY GROUND COVER WITHIN 14 DAYS EXCEPT WHEN SLOPES ARE STEEPER THAN 3:1, THE 7 DAY REQUIREMENT APPLIES.
  - ANY SLOPED AREA FLATTER THAN 4:1 SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT.
  - SLOPES 10' OR LESS IN LENGTH SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT EXCEPT WHEN THE SLOPE IS STEEPER THAN 2:1.
  - FOR PORTIONS OF PROJECTS WITHIN THE SEDIMENT CONTROL COMMISSION-DEFINED HIGH QUALITY WATER ZONE (15A NCAC 04A 0165), STABILIZATION WITH GROUND COVER SHALL BE ACHIEVED AS SOON AS PRACTICABLE BUT IN ANY EVENT ON ALL AREAS OF THE SITE WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACT.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF NCDEQ STAFF. ANY LAND-DISTURBING ACTIVITY > 1 ACRE REQUIRES COMPLIANCE WITH ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (PERMIT NO. NCG0010000). ANY PERMIT NONCOMPLIANCE IS A VIOLATION OF THE CLEAN WATER ACT AND MAY REQUIRE ENFORCEMENT ACTION BY NCDEQ.
- DISTURBED AREAS DRAINING GREATER THAN ONE ACRE MUST HAVE AN EROSION CONTROL MEASURE THAT DRAINS FROM THE WATER SURFACE ELEVATION.
- REQUIRED ARMY CORPS 404 PERMIT AND WATER QUALITY 401 CERTIFICATION MUST BE OBTAINED FOR STREAM DISTURBANCES OVER 150 LINEAR FEET.
- ANY BORROW OR WASTE MATERIAL SHALL BE TAKEN/PLACED ON A SITE THAT HAS AN ACTIVE APPROVED GRADING PERMIT. IF THIS IS NOT OBTAINABLE, THEN CONTRACTOR MAY SUBMIT PLAN FOR APPROVAL TO NCDEQ PRIOR TO ANY OFF-SITE BORROW/WASTE AREAS BEING DENIED AND ANY GRADING OPERATIONS STARTING ON THIS SITE.
- ANY GRADING BEYOND THE DENOIED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE NCDEQ EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE NCDEQ EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- ANY AND ALL SITE FINES IMPOSED BY NCDEQ OR ANY OTHER GOVERNING AGENCY SHALL BE PAID BY THE GRADING CONTRACTOR.
- SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADEQUATE TERRACING.
- SOIL TYPES:
  - Ry-C - Rawlings-Rion complex, 10 TO 15 PERCENT SLOPES
  - Wa-B - Wake-Rolesvill complex, 2 TO 6 PERCENT SLOPES, very rocky
  - Wa-D - Wake-Rolesvill complex, 10 TO 15 PERCENT SLOPES, very rocky
  - Wg-B - Wedowee-Urban land complex, 2 TO 6 PERCENT SLOPES
- NAME OF RECEIVING WATER COURSE: LITTLE RIVER
- STREAM INDEX: 27-57-(7.5)
- CLASSIFICATION OF RECEIVING WATER COURSE: CA, HQW, NSW, WS-II
- RIVER BASIN: NEUSE
- PROVIDE STOCKPILE / STAGING AREAS, CONCRETE WASHOUTS, EMPLOYEE PARKING, AND DEDICATED AREAS FOR DEMOLITION, CONSTRUCTION, AND OTHER WASTES. THESE AREAS ARE TO BE WITHIN THE LIMITS OF DISTURBANCE AND SHOULD BE LOCATED AT LEAST 50 FT AWAY FROM STORM DRAIN INLETS, TEMPORARY DIVERSIONS, CHANNELS, BASINS, AND SURFACE WATER BODIES. ACTIVITY LOCATIONS THAT ARE SHOWN ON THE PLANS MAY BE FIELD ADJUSTED IF THE DISTANCE REQUIREMENTS ARE MET.

## EROSION CONTROL BLANKET:

ALL DISTURBED AREAS WITH GRADED SLOPES AT 3:1 OR STEEPER SHALL RECEIVE THE FOLLOWING EROSION CONTROL BLANKET:

70% STRAW FIBER (35 LBS/SQ YRD.) 30% COCONUT FIBER (0.15 LBS/SQ. YRD.) NETTING ON BOTH SIDES, LENO WOVEN, 100% BIODEGRADABLE ORGANIC JUTE FIBER, 9.3 LBS/1000 SQ. FT. STAPLE WITH .11 GA. 8" U STAPLES AT 2' O.C. DOWN THE SLOPE AND 1.6' O.C. ACROSS THE SLOPE.

## GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

## SECTION E: GROUND STABILIZATION

| Required Ground Stabilization Timeframes                   |                                                                         |                                                                                                                                                                  |
|------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Area Description                                      | Stabilize within this many calendar days after ceasing land disturbance | Timeframe variations                                                                                                                                             |
| (a) Perimeter dikes, swales, ditches, and perimeter slopes | 7                                                                       | None                                                                                                                                                             |
| (b) High Quality Water (HQW) Zones                         | 7                                                                       | None                                                                                                                                                             |
| (c) Slopes steeper than 3:1                                | 7                                                                       | If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed                                                                            |
| (d) Slopes 3:1 to 4:1                                      | 14                                                                      | - 7 days for slopes greater than 50' in length and with slopes steeper than 4:1<br>- 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones |
| (e) Areas with slopes flatter than 4:1                     | 14                                                                      | - 7 days for Falls Lake Watershed<br>- 10 days for Falls Lake Watershed unless there is zero slope                                                               |

**Note:** After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

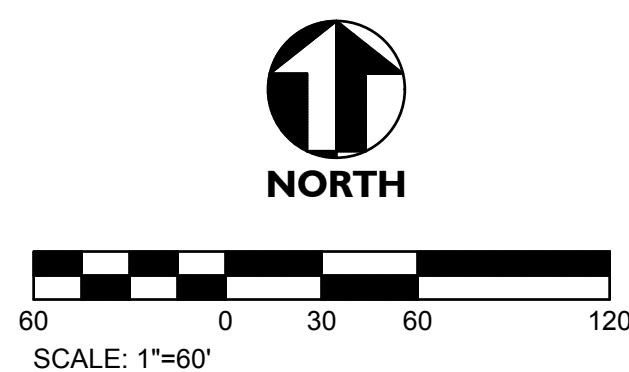
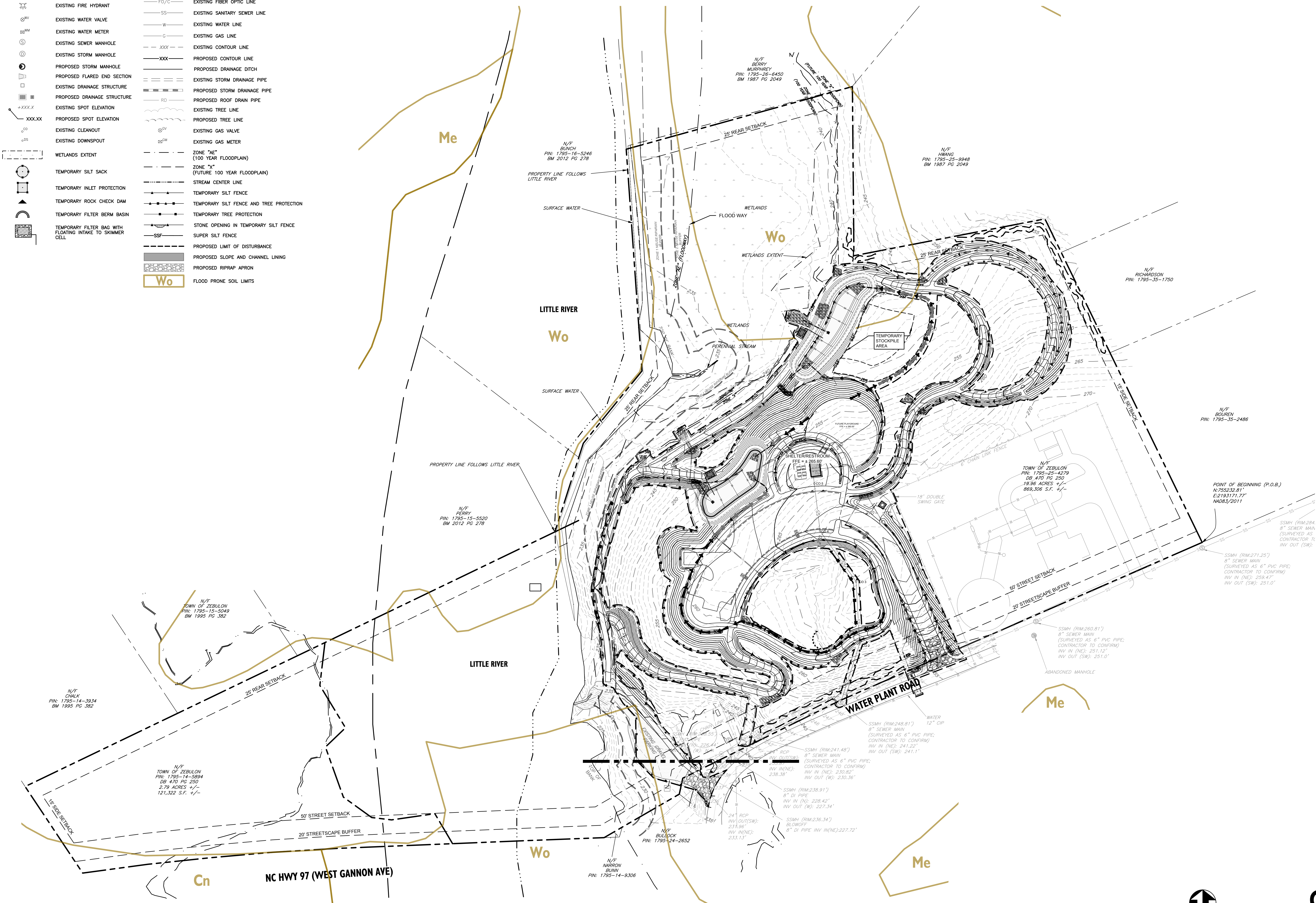
## GROUND STABILIZATION SPECIFICATION

| Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below.                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temporary Stabilization                                                                                                                                                                                                                                                                                     | Permanent Stabilization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>Temporary grass seed covered with straw or other mulches and tackifiers</li> <li>Hydroseeding</li> <li>Roller erosion control products with or without temporary grass seed</li> <li>Appropriately applied straw or other mulch</li> <li>Plastic sheeting</li> </ul> | <ul style="list-style-type: none"> <li>Permanent grass seed covered with straw or other mulches and tackifiers</li> <li>Geotextile fabrics such as permanent soil reinforcement matting</li> <li>Hydroseeding</li> <li>Shrubs or other permanent plantings covered with mulch</li> <li>Uniform and evenly distributed ground cover sufficient to restrain erosion</li> <li>Structural methods such as concrete, asphalt or retaining walls</li> <li>Roller erosion control products with grass seed</li> </ul> |

## POLYACRYLAMIDES (PAMs) AND FLOCCULANTS



EIP  
 Star  
 R/W  
HC  
 Clock  
 WV  
 WM  
 S  
 D  
 Circle with dot  
 TV  
 Square  
 Grid  
 +XXX.XX  
XX  
CO  
DIS



Seals:



Corp. NC License: F-1320

**LITTLE RIVER PARK**  
1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00  
Date: 11.20.2025  
Revisions:

Sheet Title:

**OVERALL  
EROSION  
CONTROL PLAN**

Sheet No:  
**C30 I**











4. SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
5. CONTACT NCDCE – RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF CONSTRUCTION AND LAND RESOURCES CONTACT PERSON TO RECEIVE DOWATERING NOTIFICATIONS. AT LEAST 10 DAYS PRIOR TO BEGINNING DOWATERING ACTIVITY, SEND EMAIL TO NCDCE-DENR CONTACT PERSON AND COPY ENVIRONMENTAL CONSULTANT THAT YOU MET YOUR ONSITE DOWATERING SCHEDULE. EMAIL SHOULD INCLUDE: PROJECT NAME, WAKE COUNTY PROJECT NAME, NUMBER, AND LOCATION (CITY/TOWN), ENVIRONMENTAL CONSULTANT NAME, AND ADDRESS THE FOLLOWING: A) REASON FOR CONVERSION, B) BASIN #, C) DOWATERING METHOD, AND D) ALL OTHER INFORMATION FROM PART II, SECTION G, ITEM 4 OF THE NCDOT. (KEEP EMAIL FOR YOUR NPDES MONITORING DOCUMENTATION)
6. AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDCE-DENR THAT YOU MAY REMOVE THE BASIN OR ON DAY 11, WHICHEVER IS SOONER, REMOVE BASINS AND ASSOCIATED TEMPORARY DOWATERING SCHEDULES, SPREADERS AND ANCHORS. REMOVE SPREADERS AND ANCHORS WHEN COMPLETED. PERFORM THIS OPERATION AT THIS TIME. INSTALL ALL OTHER HARDSCAPES WITHIN BASIN LOCATIONS. FINE GRADE AREA IN PREPARATION FOR SEEDING.
7. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ANCHOR ANY RESULTING BARE AREAS IMMEDIATELY.
8. PERFORM SOD PLANT.
9. INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
10. WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION. NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL CONSULTANT TO DISCUSS THE CONVERSION OF THE BASIN INTO A CONVEYED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.



|                                                                                     |                                                           |                                                                                     |                                          |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------|
|   | EXISTING SIGN                                             |    | PROPOSED CURB AND GUTTER                 |
|  | EXISTING IRON PIN                                         |   | PROPOSED CURB AND GUTTER                 |
|  | EXISTING LIGHT POLE                                       |  | PROPERTY LINE                            |
|  | EXISTING UTILITY POLE                                     |  | EXISTING FENCE                           |
|  | RIGHT-OF-WAY                                              |  | EXISTING UNDERGROUND ELECTRIC LINE       |
|  | ACCESSIBLE SPACE                                          |  | EXISTING OVERHEAD UTILITY LINE           |
|  | EXISTING TREE TO REMAIN                                   |  | EXISTING UNDERGROUND TELEPHONE LINE      |
|  | EXISTING FIRE HYDRANT                                     |  | EXISTING FIBER OPTIC LINE                |
|  | EXISTING WATER VALVE                                      |  | EXISTING SANITARY SEWER LINE             |
|  | EXISTING WATER METER                                      |  | EXISTING WATER LINE                      |
|  | EXISTING SEWER MANHOLE                                    |  | EXISTING GAS LINE                        |
|  | EXISTING STORM MANHOLE                                    |  | EXISTING CONTOUR LINE                    |
|  | PROPOSED STORM MANHOLE                                    |  | PROPOSED CONTOUR LINE                    |
|  | PROPOSED FLARED END SECTION                               |  | PROPOSED DRAINAGE DITCH                  |
|  | EXISTING DRAINAGE STRUCTURE                               |  | EXISTING STORM DRAINAGE PIPE             |
|  | PROPOSED DRAINAGE STRUCTURE                               |  | PROPOSED STORM DRAINAGE PIPE             |
|  | EXISTING SPOT ELEVATION                                   |  | PROPOSED ROOF DRAIN PIPE                 |
|  | PROPOSED SPOT ELEVATION                                   |  | EXISTING TREE LINE                       |
|  | EXISTING CLEANOUT                                         |  | PROPOSED TREE LINE                       |
|  | EXISTING DOWNSPOUT                                        |  | EXISTING GAS VALVE                       |
|  | WETLANDS EXTENT                                           |  | EXISTING GAS METER                       |
|  | TEMPORARY SILT SACK                                       |  | ZONE "A"<br>(100 YEAR FLOODPLAIN)        |
|  | TEMPORARY INLET PROTECTION                                |  | ZONE "X"<br>(FUTURE 100 YEAR FLOODPLAIN) |
|  | TEMPORARY ROCK CHECK DAM                                  |  | STREAM CENTER LINE                       |
|  | TEMPORARY FILTER BERM BASIN                               |  | TEMPORARY SILT FENCE                     |
|  | TEMPORARY FILTER BAG WITH FLOATING INTAKE TO SKIMMER CELL |  | TEMPORARY TREE PROTECTION                |
|                                                                                     |                                                           |  | STONE OPENING IN TEMPORARY SILT FENCE    |
|                                                                                     |                                                           |  | SUPER SILT FENCE                         |
|                                                                                     |                                                           |  | PROPOSED LIMIT OF DISTURBANCE            |
|                                                                                     |                                                           |  | PROPOSED SLOPE AND CHANNEL LINING        |
|                                                                                     |                                                           |  | PROPOSED RIPRAP APRON                    |
|                                                                                     |                                                           |  | FLOOD PRONE SOIL LIMITS                  |
|                                                                                     |                                                           |  | BASIN CONTOUR LINE                       |

1. SEE GRADING PLAN SHEET C304 FOR PIPE INVERTS AND SIZING
2. SEE SWALE SCHEDULE ON SHEET C502 FOR SIZES AND LINING.
3. SEE RIPRAP APRON DETAIL ON SHEET C503 FOR SIZING.

1. STOCKPILES, LAYDOWN OR WASTE AREAS, CONCRETE WASHOUTS, PORTABLE TOILETS, AND FUELS MUST BE LOCATED AT LEAST 50 FEET AWAY FROM ANY OPEN WATER CONVEYANCES, SUCH AS BASINS, DITCHES, STORM DRAIN INLETS, ETC. THE LOCATION OF THESE ACTIVITIES MAY BE FIELD ADJUSTED IF THE DISTANCE REQUIREMENTS ARE MET.
2. NO LAND DISTURBING ACTIVITIES, INCLUDING TIMBERING OR DEMOLITION ACTIVITIES, ARE ALLOWED WITHOUT FIRST OBTAINING A SEDIMENT AND EROSION CONTROL PLAN APPROVAL AND CERTIFICATE OF COVERAGE.

1. COMPLETE ALL CONSTRUCTION WITHIN PROJECT LIMITS. CONTINUE TO STABILIZE ALL OPEN AREAS WITHIN STABILIZATION REQUIREMENTS UNTIL LONG-DURATION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.
2. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CONTACT NDEQ INSPECTOR FOR AN INSPECTION.
3. WHEN PERMISSION IS GRANTED BY NDEQ INSPECTOR, REMOVE TEMPORARY DIVERSIONS, SEDIMENT BASINS (SEE BELOW FOR BASIN REMOVAL SEQUENCE), ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
4. EROSION CONTROL MEASURES DIRECTLY AFFECTED BY THIS CONTRACT SHALL BE MAINTAINED/REMOVED UNDER THIS CONTRACT. DEVICES SHALL BE MAINTAINED TO MAX. 50% CAPACITY UNTIL AREAS THEY SERVE ARE FULLY STABILIZED.
5. PROVIDE PERMANENT GRASSING FOR ALL DISTURBED AREAS.
6. CONTACT NDEQ FOR PERMISSION TO REMOVE REMAINING TEMPORARY EROSION CONTROL DEVICES.
7. REMOVE ALL EROSION CONTROL DEVICES. SPREAD AND SEED ACCUMULATED SEDIMENT.
8. EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE N.C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U.S. DEPT. OF AGRICULTURE, AND THE SCS EROSION CONTROL ORDINANCE.
9. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAINED ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION.
10. WHEN THE PROJECT IS COMPLETE, THE PERMITTEE SHALL CONTACT DEMR TO CLOSE OUT THE EASC PLAN.
11. PER THE NPDES PERMIT, GROUND STABILIZATION WILL BE APPLIED WITHIN 14 CALENDAR DAYS FROM LAST LAND DISTURBING ACTIVITY. FOR STEEPER SLOPES, THAT AREA MUST BE STABILIZED WITHIN 7 CALENDAR DAYS. HOWEVER, NPDES GROUNDCOVER REQUIREMENTS TAKE PRECEDENCE.
12. PERMANENT GROUNDCOVER SHALL BE ESTABLISHED IN 90 CALENDAR DAYS. HOWEVER, NPDES GROUNDCOVER REQUIREMENTS TAKE PRECEDENCE.
13. THE CONTRACTOR SHALL CONDUCT SELF-INSPECTIONS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES AND COMPLETE THE FOLLOWING COMBINED SELF-INSPECTION FORM FOUND ON THE DEMR WEBSITE: [https://ides.nc.gov/about/divisions/engineering-land-and-resources/erosion-sediment-controls/forms/\[des.nc.gov\]](https://ides.nc.gov/about/divisions/engineering-land-and-resources/erosion-sediment-controls/forms/[des.nc.gov]). TWELVE MONTHS OF COMPLETE INSPECTION FORMS SHALL BE KEPT ON-SITE AND AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS RECOMMENDED A COPY BE KEPT IN A PERMITS BOX.
14. SELF-INSPECTIONS FOR EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE PERFORMED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF EVERY RAIN EVENT OF EQUAL TO OR GREATER THAN 1 INCH. ANY EVENT REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN MEASURES AS DENIED. ALL EROSION MEASURES SHALL BE INSTALLED AND MAINTAINED AS SPECIFIED IN THE CONSTRUCTION DETAILS. THE CONTRACTOR SHALL HAVE A RANGE FINDER OR EQUIVALENT TO MEASURE THE PROJECT SITE FOR MONITORING.



**LITTLE RIVER PARK**  
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Project No: 1725-500672.00

Date: 11.20.2025

Revisions:

Sheet Title:

# EROSION CONTROL PLAN FINAL PHASE

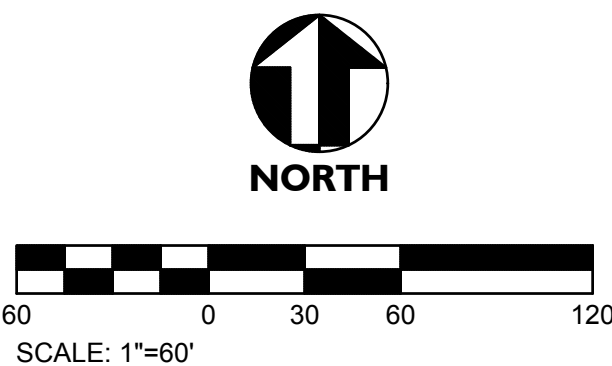
Sheet No:

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|                                                                                   |                             |                                                                                   |                                          |
|-----------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------|------------------------------------------|
|    | EXISTING SIGN               |    | PROPOSED CURB AND GUTTER                 |
| EP                                                                                | EXISTING IRON PIN           |  | PROPOSED CURB AND GUTTER                 |
|  | EXISTING LIGHT POLE         |  | PROPERTY LINE                            |
|  | EXISTING UTILITY POLE       |  | EXISTING FENCE                           |
| R/W                                                                               | RIGHT-OF-WAY                |  | EXISTING UNDERGROUND ELECTRIC LINE       |
| HC                                                                                | ACCESSIBLE SPACE            |  | EXISTING OVERHEAD UTILITY LINE           |
|  | EXISTING TREE TO REMAIN     |  | EXISTING UNDERGROUND TELEPHONE LINE      |
|  | EXISTING FIRE HYDRANT       |  | EXISTING FIBER OPTIC LINE                |
|  | EXISTING WATER VALVE        |  | EXISTING SANITARY SEWER LINE             |
|  | EXISTING WATER METER        |  | EXISTING WATER LINE                      |
|  | EXISTING SEWER MANHOLE      |  | EXISTING GAS LINE                        |
|  | EXISTING STORM MANHOLE      |  | EXISTING CONTOUR LINE                    |
|  | PROPOSED STORM MANHOLE      |  | PROPOSED CONTOUR LINE                    |
|  | PROPOSED FLARED END SECTION |  | TEMPORARY TREE PROTECTION BARRICADE      |
|  | EXISTING DRAINAGE STRUCTURE |  | EXISTING STORM DRAINAGE PIPE             |
|  | PROPOSED DRAINAGE STRUCTURE |  | PROPOSED STORM DRAINAGE PIPE             |
|  | EXISTING SPOT ELEVATION     |  | PROPOSED ROOF DRAIN PIPE                 |
|  | PROPOSED SPOT ELEVATION     |  | EXISTING TREE LINE                       |
|  | EXISTING CLEANOUT           |  | EXISTING GAS VALVE                       |
|  | EXISTING DOWNSPOUT          |  | EXISTING GAS METER                       |
|  | WETLANDS EXTENT             |  | ZONE "AL"<br>(100 YEAR FLOODPLAIN)       |
|                                                                                   |                             |  | ZONE "X"<br>(FUTURE 100 YEAR FLOODPLAIN) |
|                                                                                   |                             |  | STREAM CENTER LINE                       |

1. EARTHWORK QUANTITIES HAVE NOT BEEN ESTIMATED AND SITE AS SHOWN IS NOT ASSUMED TO REPRESENT A BALANCED CUT/FILL CONDITION.
2. CONTRACTOR SHALL PERFORM HIS OWN ESTIMATES AND SHALL PROVIDE ALL EARTHWORK NECESSARY TO ACHIEVE THE DESIGN GRADE, INCLUDING ANY OFFSITE BORROW OR SPILLS REQUIRED.
3. ROOF LEADERS SHALL BE SCH 40 PVC. MINIMUM COVER SHALL BE 18" MINIMUM SLOPE SHALL BE 1% PRIOR TO FINAL FINISHED ELEVATIONS INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
4. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL GRADED AREAS, INCLUDING PAVING, LAWN AND LANDSCAPE AREAS.
5. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
6. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK. BOTH PUBLIC AND PRIVATE. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS CONTRACT.
7. CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
8. THE PROPOSED CONTOURS AND SLOPE ELEVATIONS SHOWN IN DRIVES, PARKING LOTS AND DRIVEWAYS, FINISHED ELEVATIONS INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
9. PROPOSED SLOPE ELEVATIONS SHOWN REFER TO BOTTOM OF CURB UNLESS OTHERWISE NOTED ON PLAN.
10. PIPE LENGTHS SHOWN ARE THE ENGINEER'S ESTIMATE USED TO COMPUTE PIPE SLOPES AND INVERTS AND SHALL NOT BE CONSTRUED BY THE CONTRACTOR TO REPRESENT THE ACTUAL QUANTITY OF PIPE REQUIRED.
11. CROSS SLOPE OF SIDEWALKS SHALL BE 2% (MAX).
12. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1
13. NO DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS, AND MUST BE MAINTAINED THROUGHOUT CONSTRUCTION.
14. NO GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED. SUPPLEMENT WITH 1-2 INCHES OF MULCH. RE-SEED WITH GRASS ONLY IN DISTURBED/ERODIBLE AREAS.
15. BRUSH, VINES AND SMALL TREES (Ø IN. DIA. OR AS SMALL AS 2 IN. CALIPER) MAY BE HAND CLEARED ONLY CUT FLUSH WITH GROUND SURFACE. EXISTING TREES MAY BE LIMBED UP 6 FEET AT LEAST 2/3 OF THE BRANCHES SHOULD BE LEFT TO IMPROVE VISIBILITY.
16. EXPOSED TREE ROOTS MUST BE CLEANLY CUT WITH A SHARP PRUNING TOOL; BACKFILL ASAP.
17. UNLESS OTHERWISE NOTED, THE PHYSICAL CONNECTION TO THE DOWNPOUNTS INSTALLED BY THE ROOFING CONTRACTOR BETWEEN THE SITE ROOF DRAIN PIPE A SHALL BE MADE BY THE SITE GRADING CONTRACTOR.
18. PIPE LENGTHS SHOWN ON CULVERTS INCLUDE FLARED END SECTIONS.
19. IN ORDER TO ENSURE ADEQUATE DRAINAGE, FLOW LINED IN GUTTERS SHALL BE 0.50% MINIMUM.



**LITTLE RIVER PARK**  
1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA

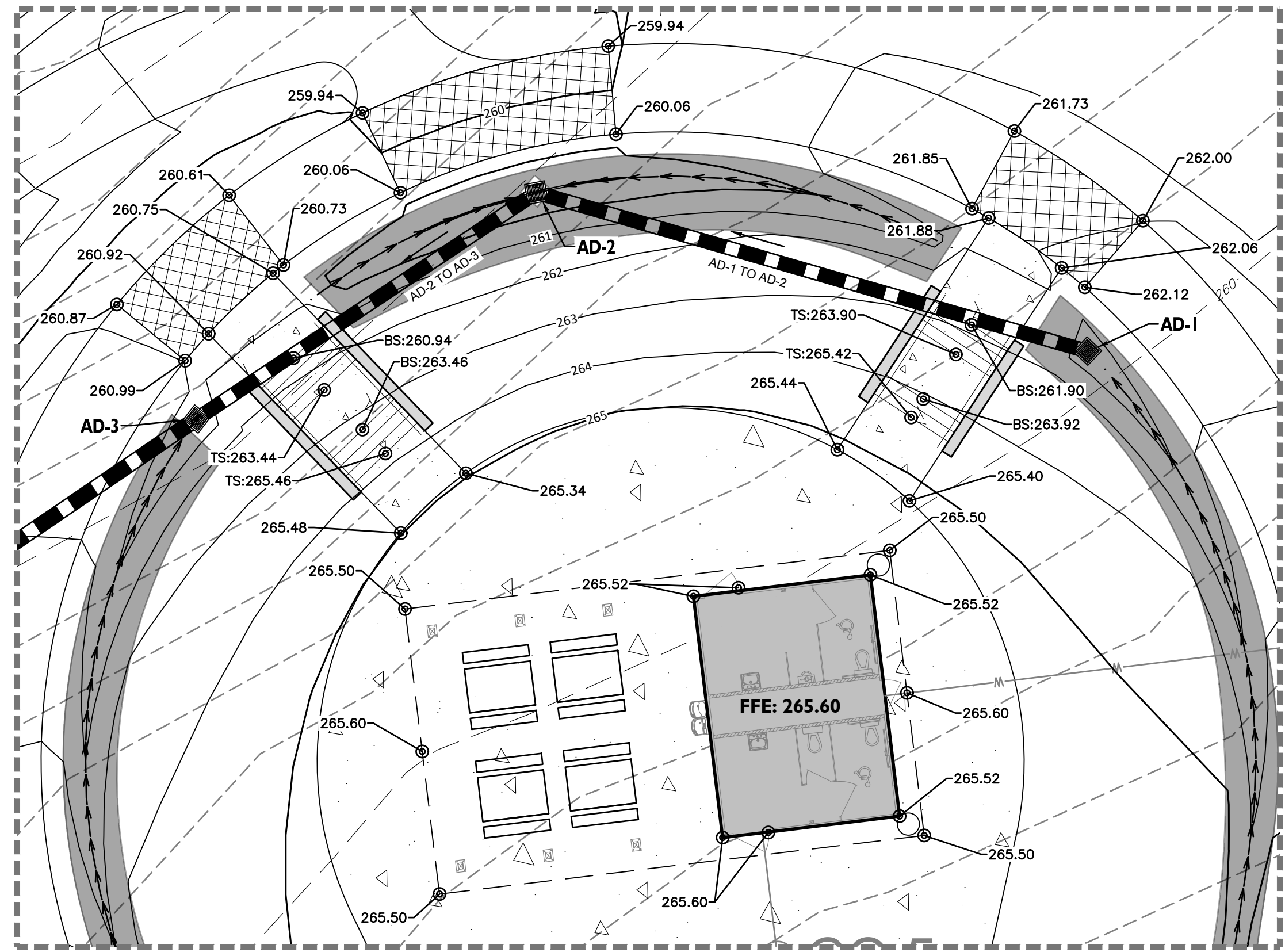
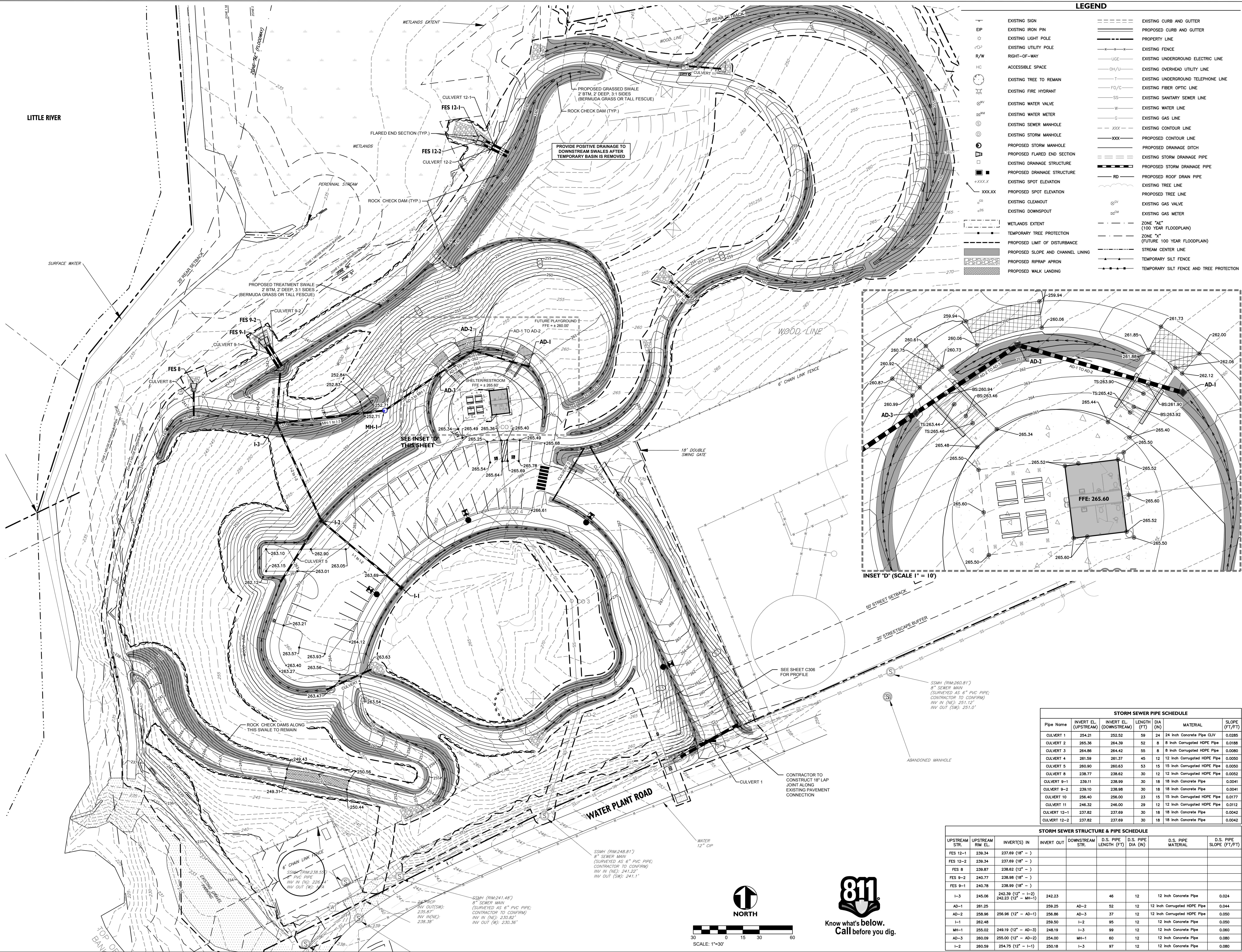
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**OVERALL  
GRADING PLAN**

# C304



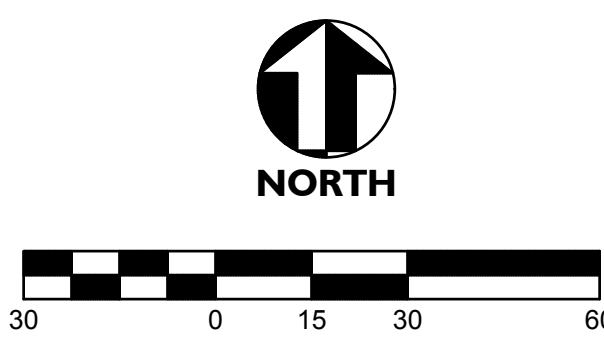
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| LEGEND |                                          |
|--------|------------------------------------------|
|        | EXISTING SIGN                            |
|        | EXISTING IRON PIN                        |
|        | EXISTING LIGHT POLE                      |
|        | EXISTING UTILITY POLE                    |
|        | RIGHT-OF-WAY                             |
|        | ACCESSIBLE SPACE                         |
|        | EXISTING TREE TO REMAIN                  |
|        | EXISTING FIRE HYDRANT                    |
|        | EXISTING WATER VALVE                     |
|        | EXISTING WATER METER                     |
|        | EXISTING SEWER MANHOLE                   |
|        | EXISTING STORM MANHOLE                   |
|        | PROPOSED STORM MANHOLE                   |
|        | PROPOSED FLARED END SECTION              |
|        | EXISTING DRAINAGE STRUCTURE              |
|        | PROPOSED DRAINAGE STRUCTURE              |
|        | EXISTING SPOT ELEVATION                  |
|        | PROPOSED SPOT ELEVATION                  |
|        | EXISTING CLEANOUT                        |
|        | EXISTING DOWNSPOUT                       |
|        | WETLANDS EXTENT                          |
|        | TEMPORARY TREE PROTECTION                |
|        | PROPOSED LIMIT OF DISTURBANCE            |
|        | PROPOSED SLOPE AND CHANNEL LINING        |
|        | PROPOSED RIPRAP APRON                    |
|        | PROPOSED WALK LANDING                    |
|        | EXISTING CURB AND GUTTER                 |
|        | PROPOSED CURB AND GUTTER                 |
|        | PROPERTY LINE                            |
|        | EXISTING FENCE                           |
|        | EXISTING UNDERGROUND ELECTRIC LINE       |
|        | EXISTING OVERHEAD UTILITY LINE           |
|        | EXISTING UNDERGROUND TELEPHONE LINE      |
|        | EXISTING FIBER OPTIC LINE                |
|        | EXISTING SANITARY SEWER LINE             |
|        | EXISTING WATER LINE                      |
|        | EXISTING GAS LINE                        |
|        | EXISTING CONTOUR LINE                    |
|        | PROPOSED CONTOUR LINE                    |
|        | PROPOSED DRAINAGE DITCH                  |
|        | EXISTING STORM DRAINAGE PIPE             |
|        | PROPOSED STORM DRAINAGE PIPE             |
|        | PROPOSED STORM DRAIN PIPE                |
|        | EXISTING TREE LINE                       |
|        | PROPOSED TREE LINE                       |
|        | EXISTING GAS VALVE                       |
|        | EXISTING GAS METER                       |
|        | ZONE "AE"<br>(100 YEAR FLOODPLAIN)       |
|        | ZONE "X"<br>(FUTURE 100 YEAR FLOODPLAIN) |
|        | STREAM CENTER LINE                       |
|        | TEMPORARY SILT FENCE                     |
|        | TEMPORARY SILT FENCE AND TREE PROTECTION |

| STORM SEWER PIPE SCHEDULE |                          |                            |                |             |                              |                  |
|---------------------------|--------------------------|----------------------------|----------------|-------------|------------------------------|------------------|
| Pipe Name                 | INVERT EL.<br>(UPSTREAM) | INVERT EL.<br>(DOWNSTREAM) | LENGTH<br>(FT) | DIA<br>(IN) | MATERIAL                     | SLOPE<br>(FT/FT) |
| CULVERT 1                 | 254.21                   | 252.52                     | 59             | 24          | 24 inch Concrete Pipe CUV    | 0.0285           |
| CULVERT 2                 | 265.36                   | 264.39                     | 52             | 8           | 8 inch Corrugated HDPE Pipe  | 0.0188           |
| CULVERT 3                 | 264.86                   | 264.42                     | 55             | 8           | 8 inch Corrugated HDPE Pipe  | 0.0080           |
| CULVERT 4                 | 261.59                   | 261.37                     | 45             | 12          | 12 inch Corrugated HDPE Pipe | 0.0050           |
| CULVERT 5                 | 260.90                   | 260.63                     | 53             | 15          | 15 inch Corrugated HDPE Pipe | 0.0050           |
| CULVERT 8                 | 238.77                   | 238.62                     | 30             | 12          | 12 inch Corrugated HDPE Pipe | 0.0052           |
| CULVERT 9-1               | 239.11                   | 238.99                     | 30             | 18          | 18 inch Concrete Pipe        | 0.0041           |
| CULVERT 9-2               | 239.10                   | 238.98                     | 30             | 18          | 18 inch Concrete Pipe        | 0.0041           |
| CULVERT 10                | 256.40                   | 256.00                     | 23             | 15          | 15 inch Corrugated HDPE Pipe | 0.0177           |
| CULVERT 11                | 246.32                   | 246.00                     | 29             | 12          | 12 inch Corrugated HDPE Pipe | 0.0112           |
| CULVERT 12-1              | 237.82                   | 237.69                     | 30             | 18          | 18 inch Concrete Pipe        | 0.0042           |
| CULVERT 12-2              | 237.82                   | 237.69                     | 30             | 18          | 18 inch Concrete Pipe        | 0.0042           |

| STORM SEWER STRUCTURE & PIPE SCHEDULE |                  |                                           |            |                 |                       |                    |                              |                         |
|---------------------------------------|------------------|-------------------------------------------|------------|-----------------|-----------------------|--------------------|------------------------------|-------------------------|
| UPSTREAM STR.                         | UPSTREAM RIM EL. | INVERT(S) IN                              | INVERT OUT | DOWNSTREAM STR. | D.S. PIPE LENGTH (FT) | D.S. PIPE DIA (IN) | D.S. PIPE MATERIAL           | D.S. PIPE SLOPE (FT/FT) |
| FES 12-1                              | 239.34           | 237.69 (18" - )                           |            |                 |                       |                    |                              |                         |
| FES 12-2                              | 239.34           | 237.69 (18" - )                           |            |                 |                       |                    |                              |                         |
| FES 8                                 | 239.87           | 238.62 (12" - )                           |            |                 |                       |                    |                              |                         |
| FES 9-2                               | 240.77           | 238.98 (18" - )                           |            |                 |                       |                    |                              |                         |
| FES 9-1                               | 240.78           | 238.99 (18" - )                           |            |                 |                       |                    |                              |                         |
| I-3                                   | 245.06           | 242.39 (12" - I-2)<br>242.23 (12" - MH-1) | 242.23     |                 | 46                    | 12                 | 12 inch Concrete Pipe        | 0.024                   |
| AD-1                                  | 261.25           | 259.25                                    | 259.25     | AD-2            | 52                    | 12                 | 12 inch Corrugated HDPE Pipe | 0.044                   |
| AD-2                                  | 258.96           | 256.96 (12" - AD-1)                       | 256.96     | AD-3            | 37                    | 12                 | 12 inch Corrugated HDPE Pipe | 0.050                   |
| I-1                                   | 262.48           | 259.50                                    | 259.50     | I-2             | 95                    | 12                 | 12 inch Concrete Pipe        | 0.050                   |
| MH-1                                  | 255.02           | 248.19 (12" - AD-3)                       | 248.19     | I-3             | 99                    | 12                 | 12 inch Concrete Pipe        | 0.060                   |
| AD-3                                  | 260.09           | 255.00 (12" - AD-2)                       | 254.00     | MH-1            | 60                    | 12                 | 12 inch Concrete Pipe        | 0.080                   |
| I-2                                   | 260.59           | 254.75 (12" - I-1)                        | 250.18     | I-3             | 97                    | 12                 | 12 inch Concrete Pipe        | 0.080                   |









|                                                                                   |                                          |                                                                                   |                                     |
|-----------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------|
|    | EXISTING SIGN                            |    | EXISTING CURB AND GUTTER            |
|  | EXISTING IRON PIN                        |  | PROPOSED CURB AND GUTTER            |
|  | EXISTING LIGHT POLE                      |  | PROPERTY LINE                       |
|  | PROPOSED LIGHT POLE                      |  | EXISTING FENCE                      |
|  | EXISTING UTILITY POLE                    |  | EXISTING UNDERGROUND ELECTRIC LINE  |
|  | RIGHT-OF-WAY                             |  | EXISTING OVERHEAD ELECTRIC LINE     |
|  | EXISTING FIRE HYDRANT                    |  | EXISTING UNDERGROUND TELEPHONE LINE |
|  | PROPOSED FIRE HYDRANT                    |  | EXISTING SANITARY SEWER LINE        |
|  | PROPOSED FIRE DEPT. CONNECTION           |  | PROPOSED SANITARY SEWER LINE        |
|  | EXISTING WATER VALVE                     |  | EXISTING WATER LINE                 |
|  | PROPOSED WATER VALVE                     |  | PROPOSED WATER LINE                 |
|  | PROPOSED CHECK VALVE                     |  | PROPOSED DOMESTIC WATER LINE        |
|  | PROPOSED POST INDICATOR VALVE            |  | PROPOSED FIRE LINE                  |
|  | EXISTING WATER METER                     |  | EXISTING CONTOUR LINE               |
|  | PROPOSED WATER METER                     |  | PROPOSED CONTOUR LINE               |
|  | PROPOSED BACKFLOW PREVENTER              |  | EXISTING STORM DRAINAGE PIPE        |
|  | EXISTING SEWER MANHOLE                   |  | PROPOSED STORM DRAINAGE PIPE        |
|  | PROPOSED SEWER MANHOLE                   |  | EXISTING GAS LINE                   |
|  | EXISTING CLEANOUT                        |  | PROPOSED GAS LINE                   |
|  | PROPOSED CLEANOUT                        |  | EXISTING STORM MANHOLE              |
|  | EXISTING DRAINAGE STRUCTURE              |  | PROPOSED STORM MANHOLE              |
|  | PROPOSED DRAINAGE STRUCTURE              |  | EXISTING EASEMENT                   |
|  | EXISTING GAS VALVE                       |                                                                                   |                                     |
|  | EXISTING GAS METER                       |                                                                                   |                                     |
|  | ZONE "AE"<br>(100 YEAR FLOODPLAIN)       |                                                                                   |                                     |
|  | ZONE "X"<br>(FUTURE 100 YEAR FLOODPLAIN) |                                                                                   |                                     |
|  | STREAM CENTER LINE                       |                                                                                   |                                     |
|  | WETLANDS EXTENT                          |                                                                                   |                                     |

1. UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODE REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF EXISTING UTILITIES, INCLUDING BUT NOT LIMITED TO: STORM DRAINAGE, ELECTRIC, GAS, TELEPHONE, ETC.) PRIOR TO CONSTRUCTION. INFORMATION SHOWN ON THIS PLAN IS FOR REFERENCE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT ENGINEER IMMEDIATELY IF DISCREPANCIES BETWEEN THE CONSTRUCTION PLANS AND ACTUAL FIELD CONDITIONS ARE FOUND.
4. MINIMUM COVER FOR ALL SANITARY SEWER MAINS SHALL BE 3'-0" DUCTILE IRON PIPE. IF SUBMITTED WITH MINIMUM COVER CANNOT BE MAINTAINED.
5. THE STANDARD DEPTH OF COVER FOR WATER MAINS SHALL BE 3'-0" MIN. EXCEPT AT VALVE OR HORIZONTAL LOCATIONS, OR WHERE THE LOCATION OF THE MAINS IS SHOWN OTHERWISE.
6. THE CONNECTION TO EXISTING WATER MAINS SHALL BE PERFORMED ONLY AFTER ALL PRESSURE TESTING AND CHLORINATION ARE SUCCESSFULLY COMPLETED AND THE LOCAL REVIEW AUTHORITY HAS APPROVED THE CONNECTION. THE CONTRACTOR SHALL AVOID DISRUPTION OF EXISTING SERVICE.
7. REFER TO PLUMBING DRAWING SERIES FOR THE LOCATION OF WATER AND SANITARY SEWER SERVICE CONNECTIONS AT THE BUILDING.
8. UNLESS OTHERWISE NOTED, THE PHYSICAL CONNECTION BETWEEN THE SITE AND THE BUILDING SHALL BE MADE BY THE PLUMBING CONTRACTOR SHALL BE MADE BY THE SITE UTILITY CONTRACTOR.
9. PIPE LENGTHS SHOWN ON PLAN ARE THE ENGINEER'S ESTIMATE USED TO COMPUTE PIPE SLOPES AND INVERTS AND SHALL NOT BE CONSTRUCTED BY THE CONTRACTOR TO REPRESENT THE ACTUAL QUANTITY OF PIPE REQUIRED.
10. HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER AND SANITARY SEWER LINES.
11. 12" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES OR PIPE SPECIFIED 10' EACH DIRECTION.
12. 18" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN WATER (OVER) AND SANITARY SEWER LINES (UNDER) AT CROSSINGS OR PIPE SPECIFIED 10' EACH DIRECTION.
13. ALL PROPOSED WATER AND SEWER PIPES AND STRUCTURES TO BE INSTALLED PERMIT TOWN OF ZEBIA. THE TOWN OF ZEBIA AND RAILROAD PUBLIC UTILITIES CURRENT STANDARDS AND SPECIFICATIONS.

All materials & construction methods shall be in accordance with Raleigh Water system design standards, details & specifications (reference: Raleigh Water Handbook, current edition)

a. Distances of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sulfate pipe shall be installed at least 6 feet from the water body. Horizontal distance between sanitary sewer & stormwater collection systems shall not be less than 25' from a private well & 50' from a public well.

b. All sanitary sewer lines shall be installed below utilities shall be at least 18". If the separation cannot be maintained due to existing conditions, the vertical offset allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Raleigh Water Director. All repairs are measured from the centerline of the sewer.

c. Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP material encasement shall be required. The minimum depth of encasement shall be:

i. 6.0 minimum horizontal separation is required for all sanitary sewer & storm force waterlines, unless DIP material is installed around the watermain.

d. Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 18" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, DIP material encasement shall be required.

f. All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required.

g. All utility field activities shall be planned, scheduled & approved in advance of any work & profits by Raleigh Water prior to construction.

h. Developer shall provide 30 days advance written notice to owner for any work required within an existing City of Raleigh Utility Easement traversing private property.

i. Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction and during any subsequent period of construction activity. Interruptions of service will be at the discretion of the City of Raleigh. SEWER BYPASS PUMPING: A bypass plan sealed by an NC Professional Engineer shall be provided to Raleigh Water for review and approval. Bypass pumping shall be used to maintain flow through the sewer system during construction. A 30 minute cover is required on all water mains & sewer force mains. A 47' minimum cover is required on all reuse mains.

j. The developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by Raleigh Water. This includes abandoning tap at main & removal of service from manhole dependent upon project location.

k. Install water services with meters located at ROW or within a 2x2' Watermain Easement immediately adjacent. NOTE: it is the applicant's responsibility to protect the site water service for each connection to provide adequate flow & pressure. The size of larger diameter water service shall be determined by the distribution system engineer.

l. All new sewer mains as part of a collection system are permitted and inspected under the private infrastructure permit program.

m. Water or sewer services on private property that will be installed under Construction Coordinating may require Plumbing Utility Permit in the City of Raleigh. Consult with the Engineering Inspection Department regarding the pre-construction meeting on the necessary permits.

n. Sewerage treatment plants & wastewater treatment plant overflow easements 8' spaced per the current NC Plumbing code. Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all water services (see notes below).

o. All environmental permits applicable to the project must be obtained from NCDCU, USACE & FEMA for any projects involving floodplains, wetlands, riparian areas, historic resources, etc. (See also Section 10.0 of the FOG Program NCDOT / Railroad Environmental Agreements) are required for any utility work (including utility easements & service taps) within state or railroad ROW prior to construction.

p. All construction of O&M structures, appurtenances & installation specifications shall be approved by the RW FOG Program Coordinator prior to issuance of U of AC Building Permit. Contact (919) 996-4516 or for more information.

q. Cross-connection control protection devices are required based on the degree of health hazard involved as listed in Appendix D of the Rules Governing Public Water Systems in North Carolina.

r. All construction must meet the requirements of the American Society of Mechanical Engineers (ASME) standards and be on the University of South Carolina approval list.

s. All construction installations shall meet the guidelines of Appendix A - Guidelines and Requirements for the Cross Connection Program in Raleigh's Service Area.

t. The devices shall be installed and tested (both initial and performed thereafter) in accordance with the ASME standards or the recommendations of the cross connection control program, whichever is more stringent. Contact Cross Connection@raleighnc.gov for more information.

u. All construction shall comply with local zoning codes and urban main replacement. Any city reimbursement greater than \$250,000 must undergo the public bidding process.

v. Projects that do not require a permit shall follow the same standard approval of the North Carolina Utility Safety Council. See the following link for more information: [http://www.ncuscc.org/](#)

w. Sub-metering shall be in accordance with Section 1400 of the "SAFE DRINKING WATER ACT"

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Raleigh Water Inspector at (919) 996-3245 or <https://cityworks.raleighnc.gov/contractors> and schedule a Pre-construction meeting prior to beginning any construction. Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require re-installation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of Raleigh Water Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Corp. NC License: F-1320

**LITTLE RIVER PARK**  
1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA

Revisions:

# OVERALL UTILITY PLAN

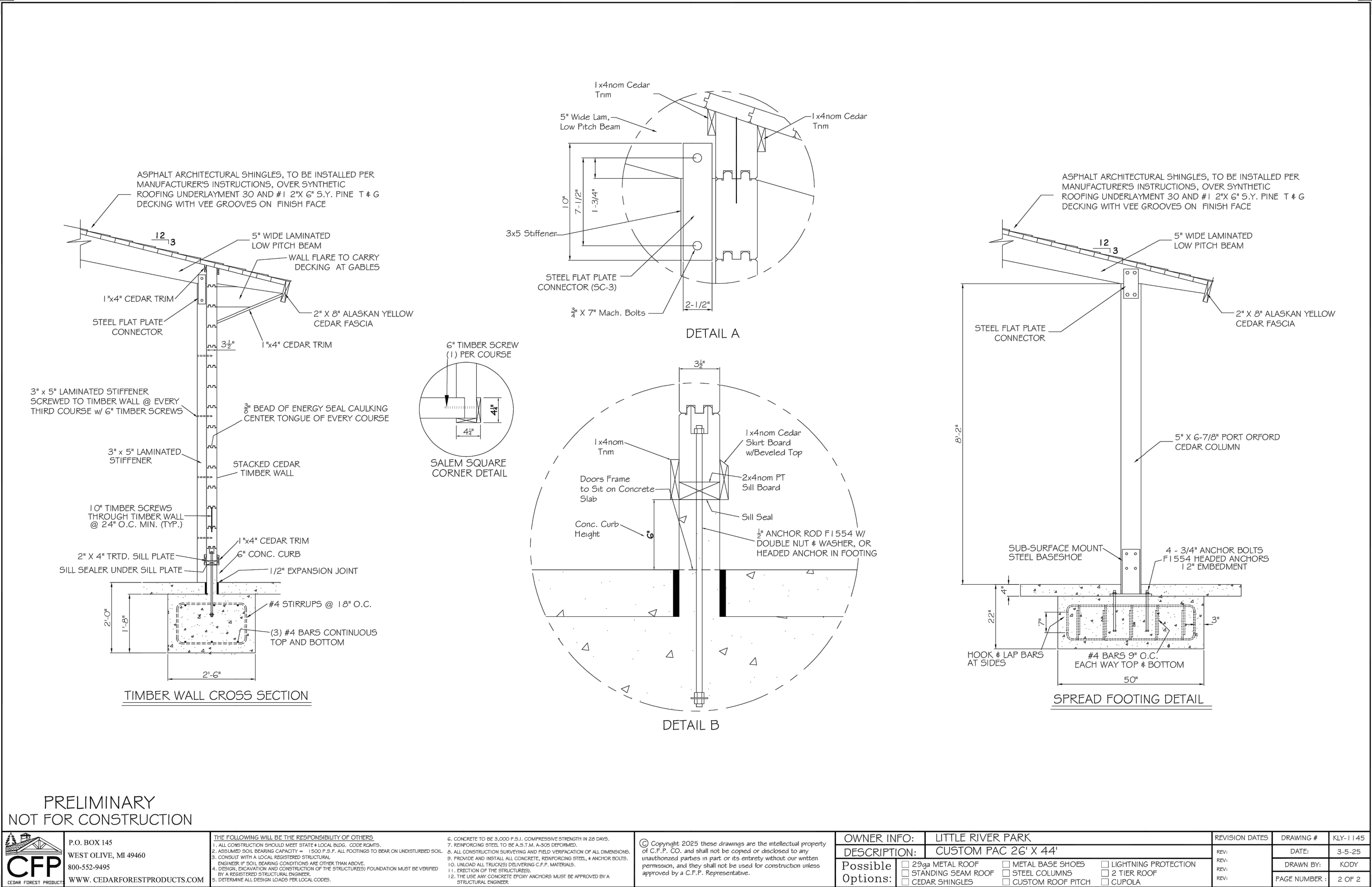
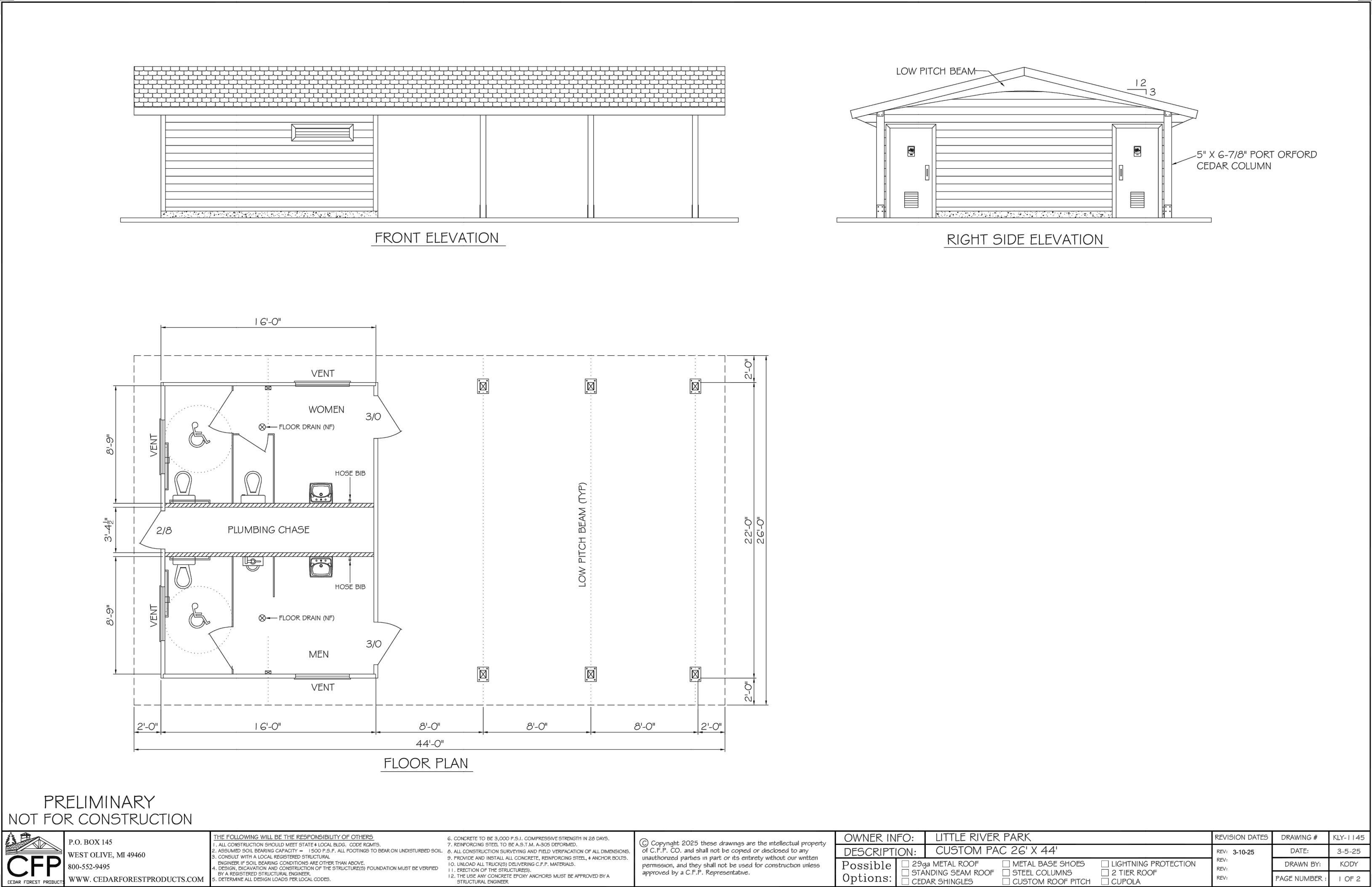
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RESTROOM / SHELTER  
N.T.S.

Seals:



Corp. NC License: F-1320

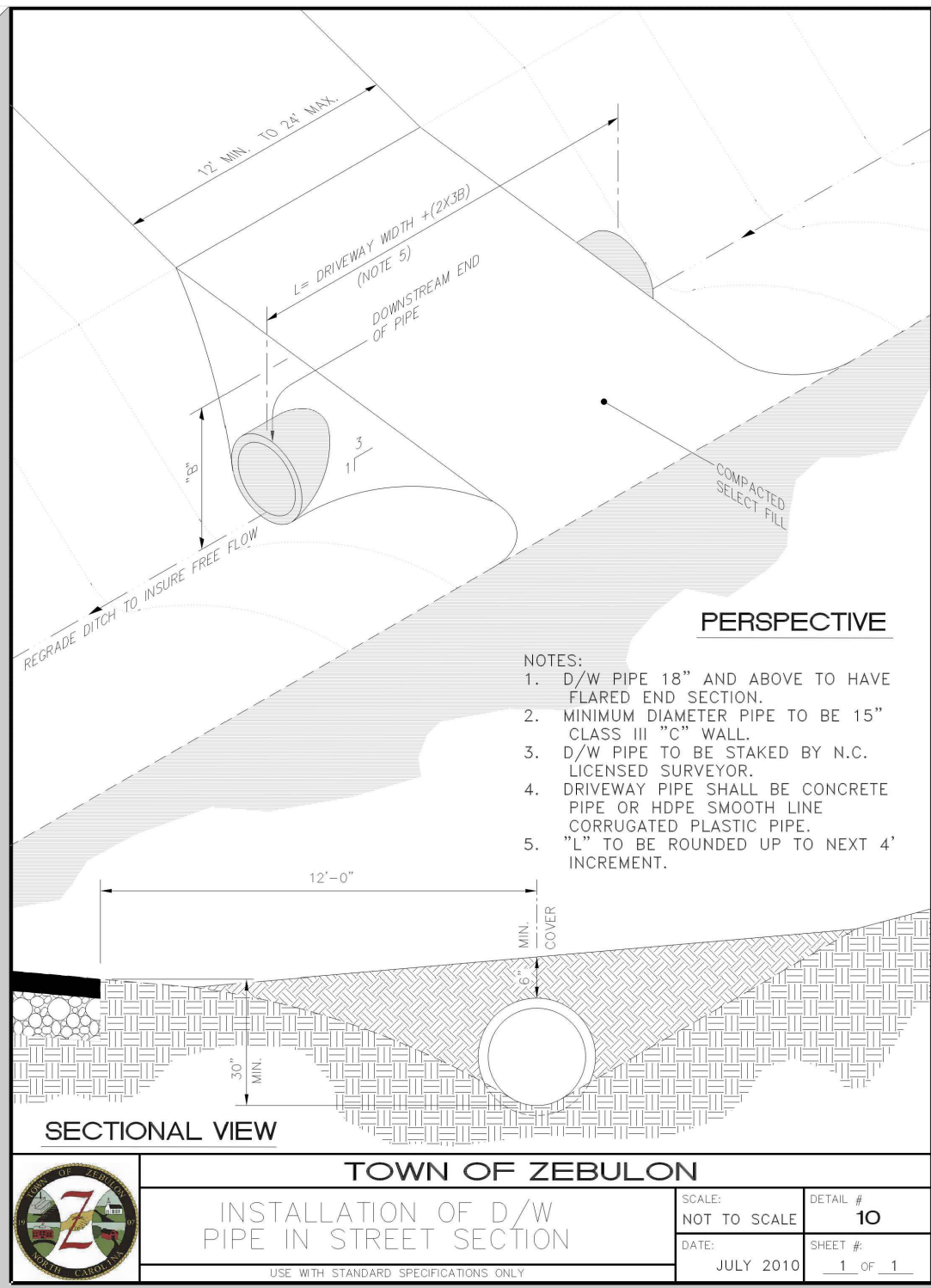
LITTLE RIVER PARK  
1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA

Project No: 1725-50067.00  
Date: 11.20.2025  
Revisions:

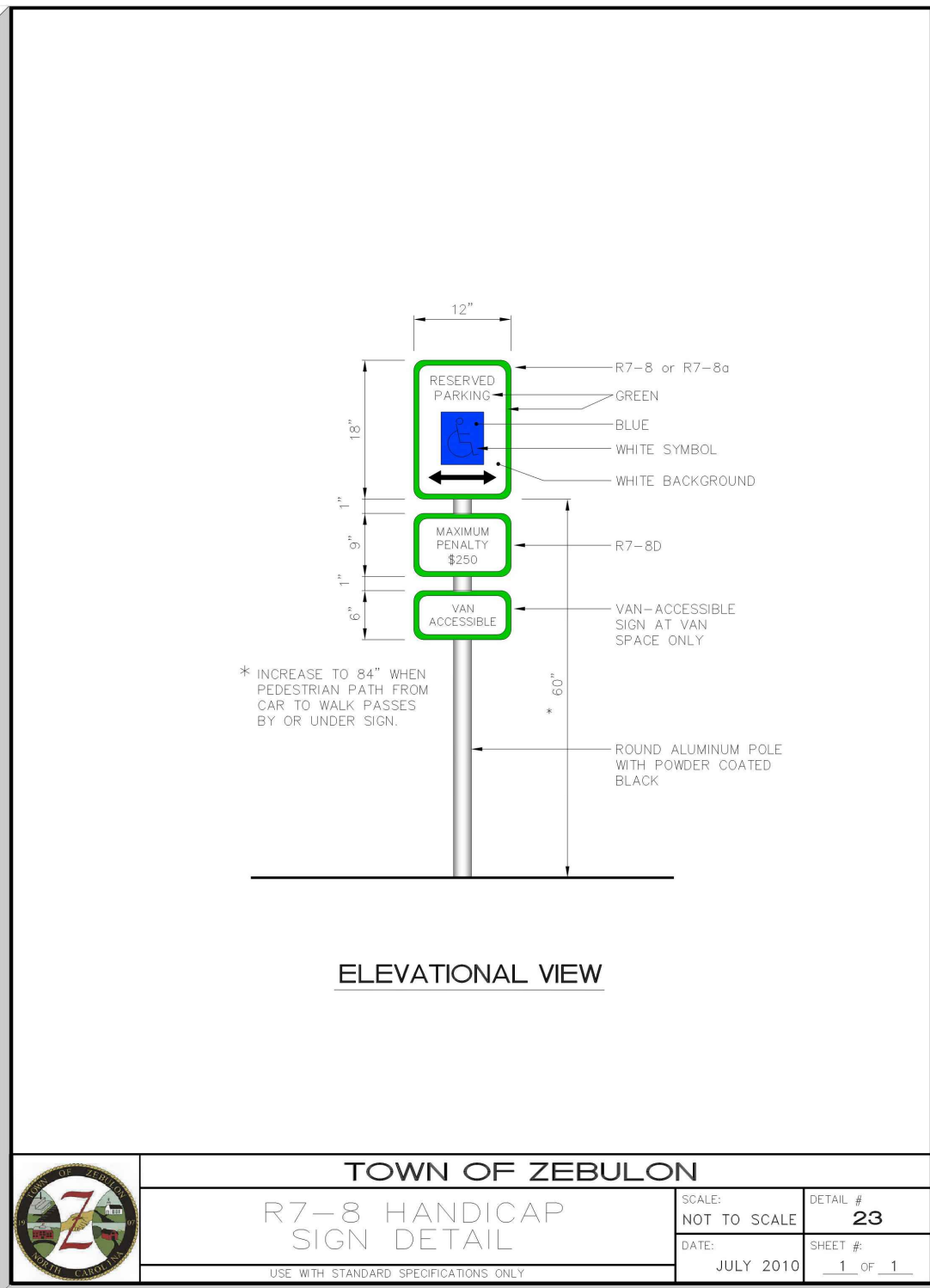
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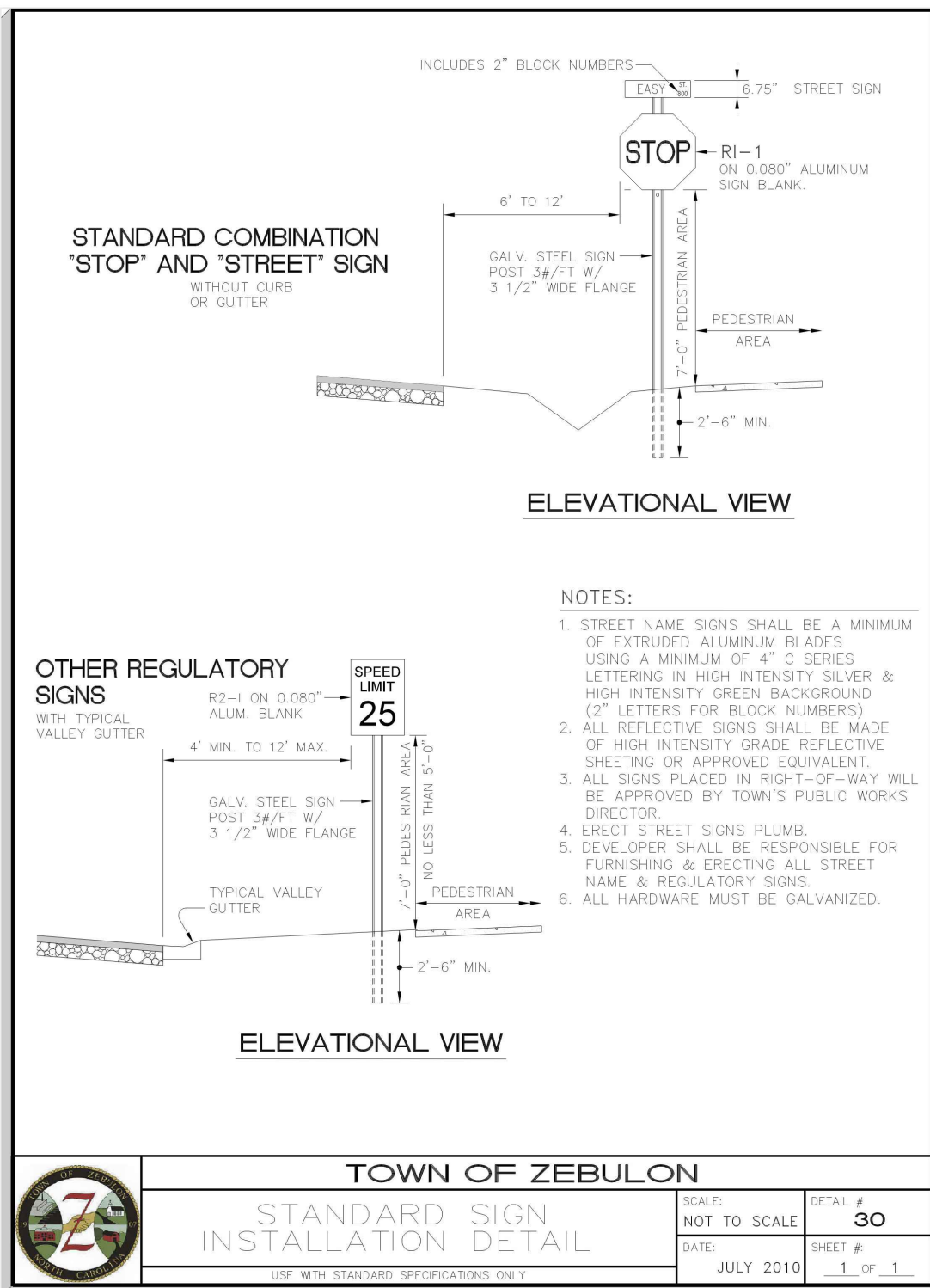




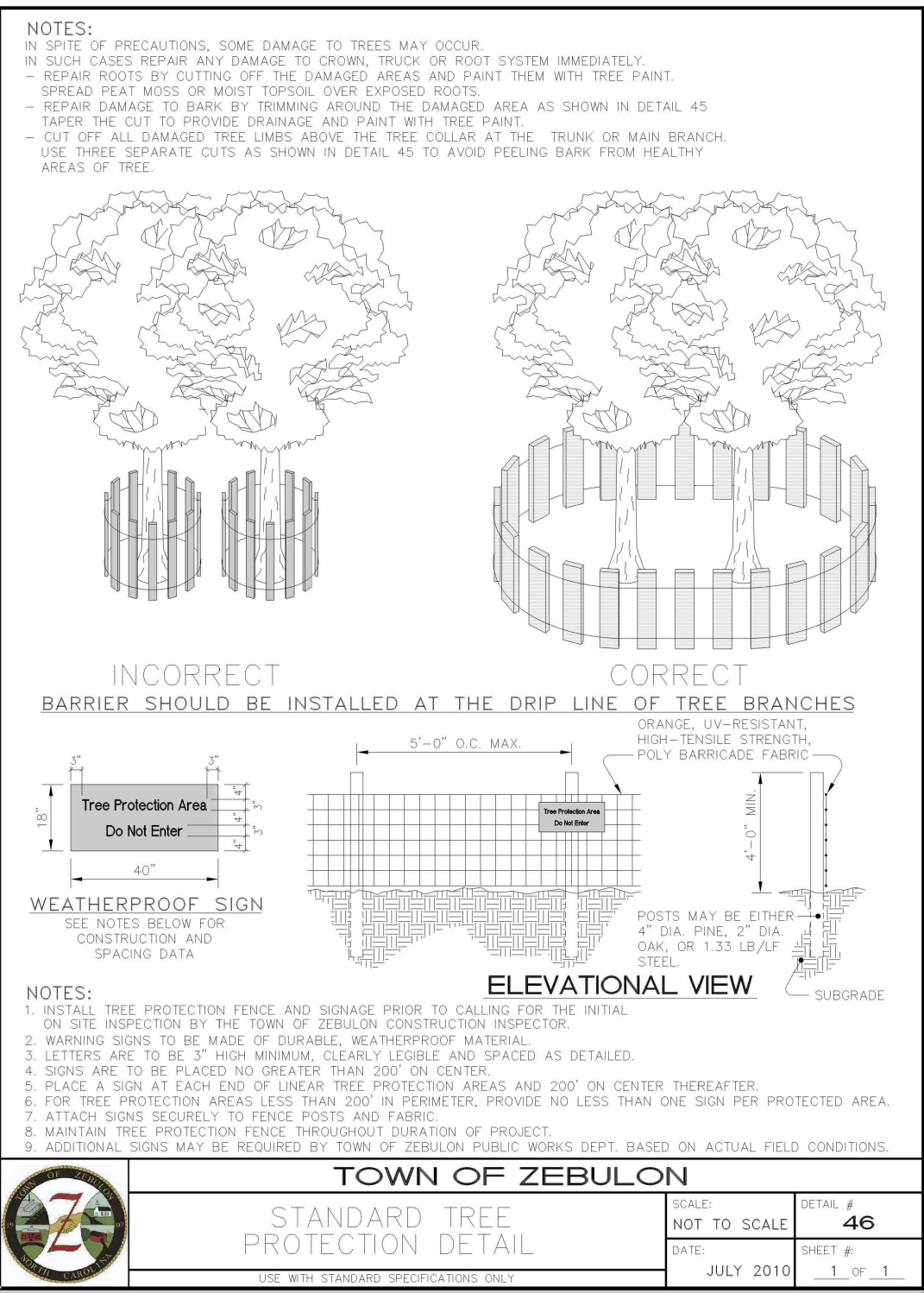
1 **INSTALLATION OF D/W PIPE IN STREET SECTION**  
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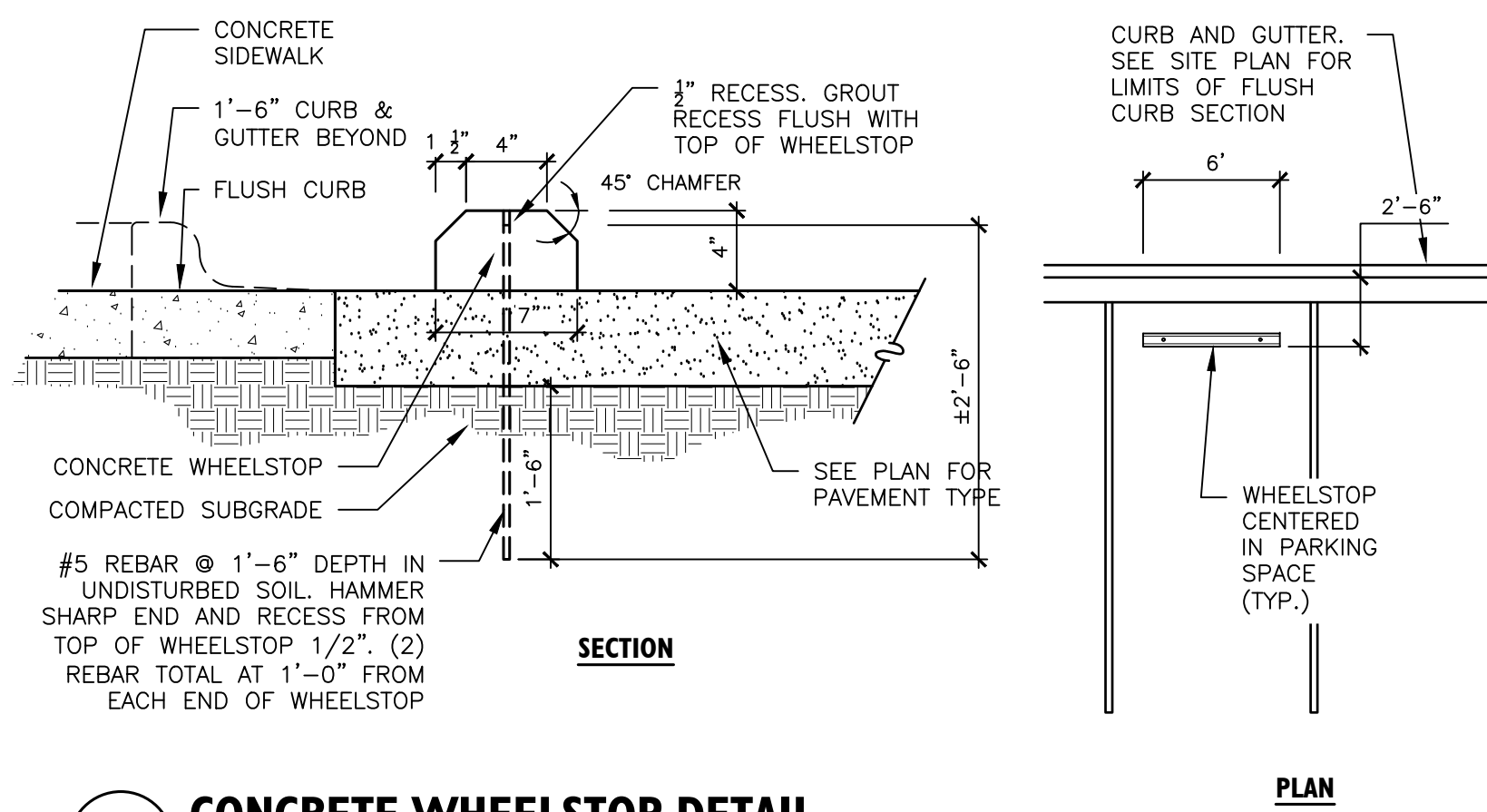
2 **R7-8 HANDICAP SIGN**  
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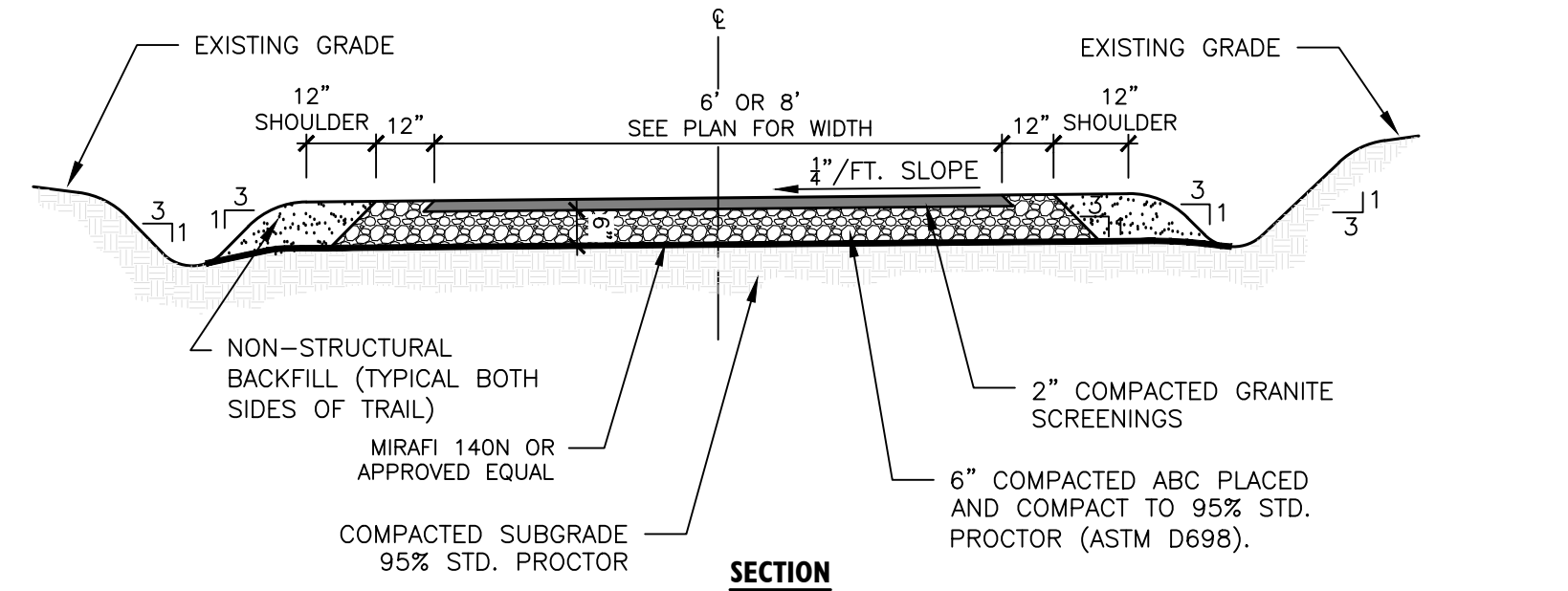
3 **STANDARD SIGN INSTALLATION**  
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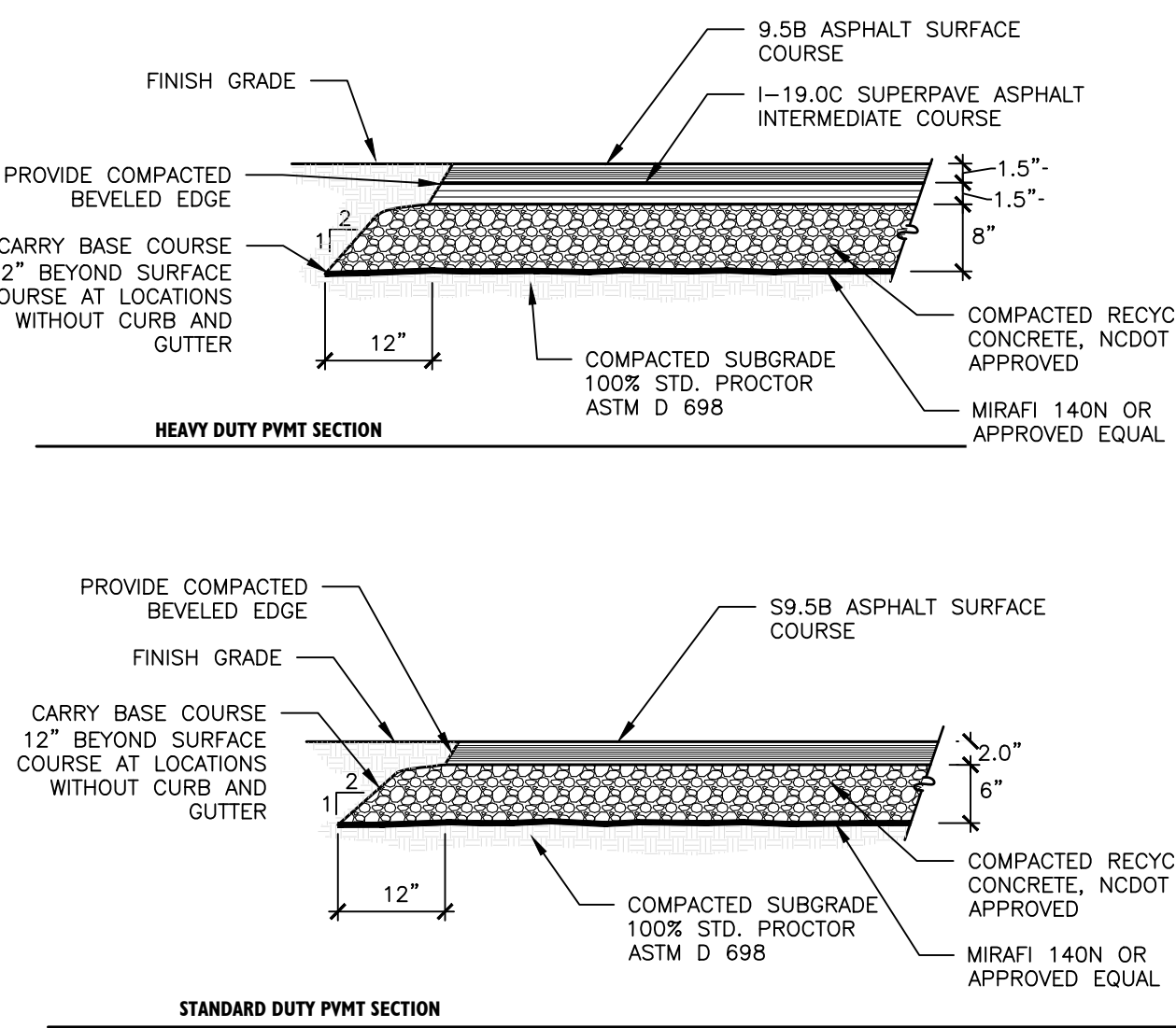
4 **STANDARD TREE PROTECTION**  
N.T.S.



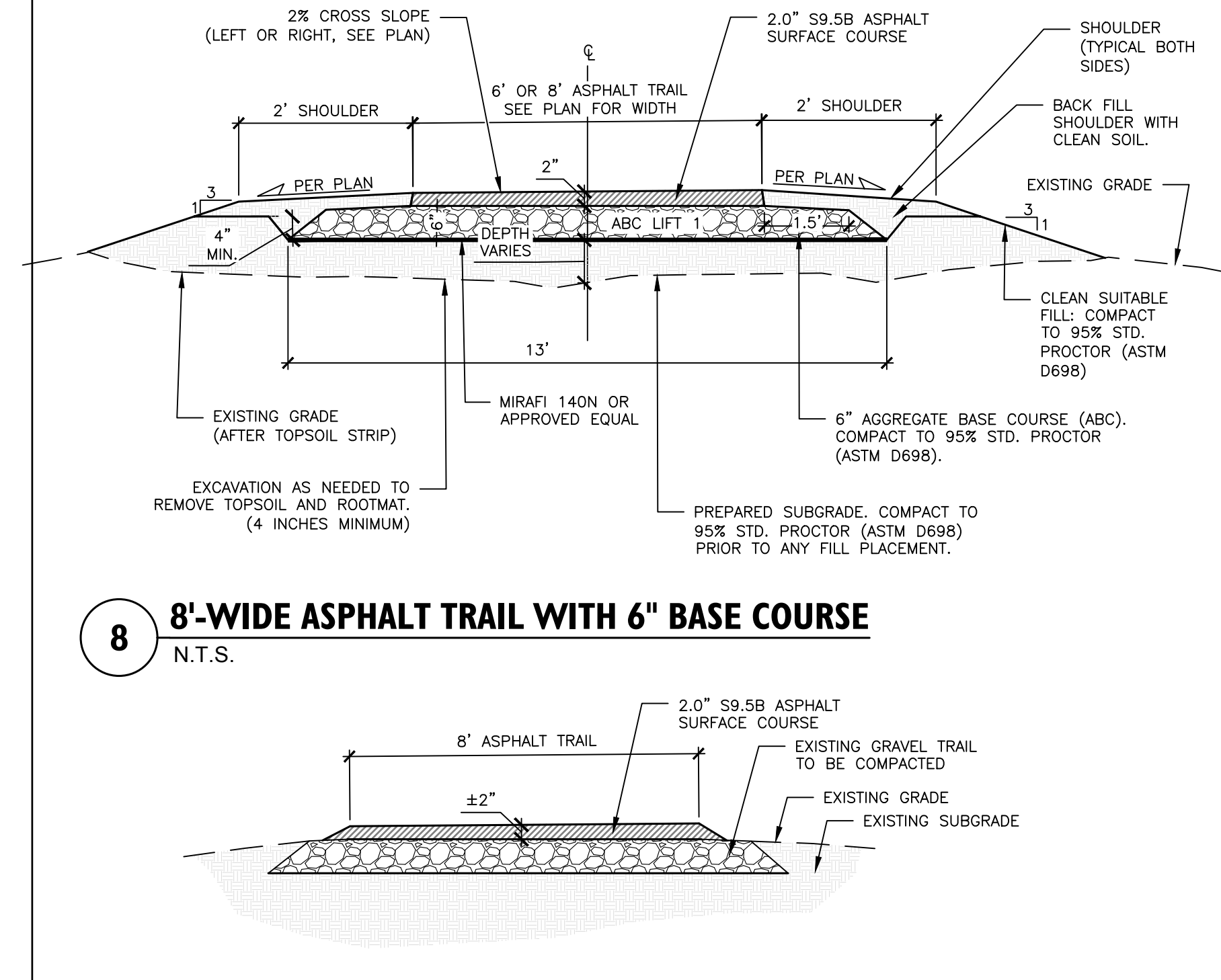
5 **CONCRETE WHEELSTOP DETAIL**  
N.T.S.



6 **GRAVEL TRAIL**  
N.T.S.



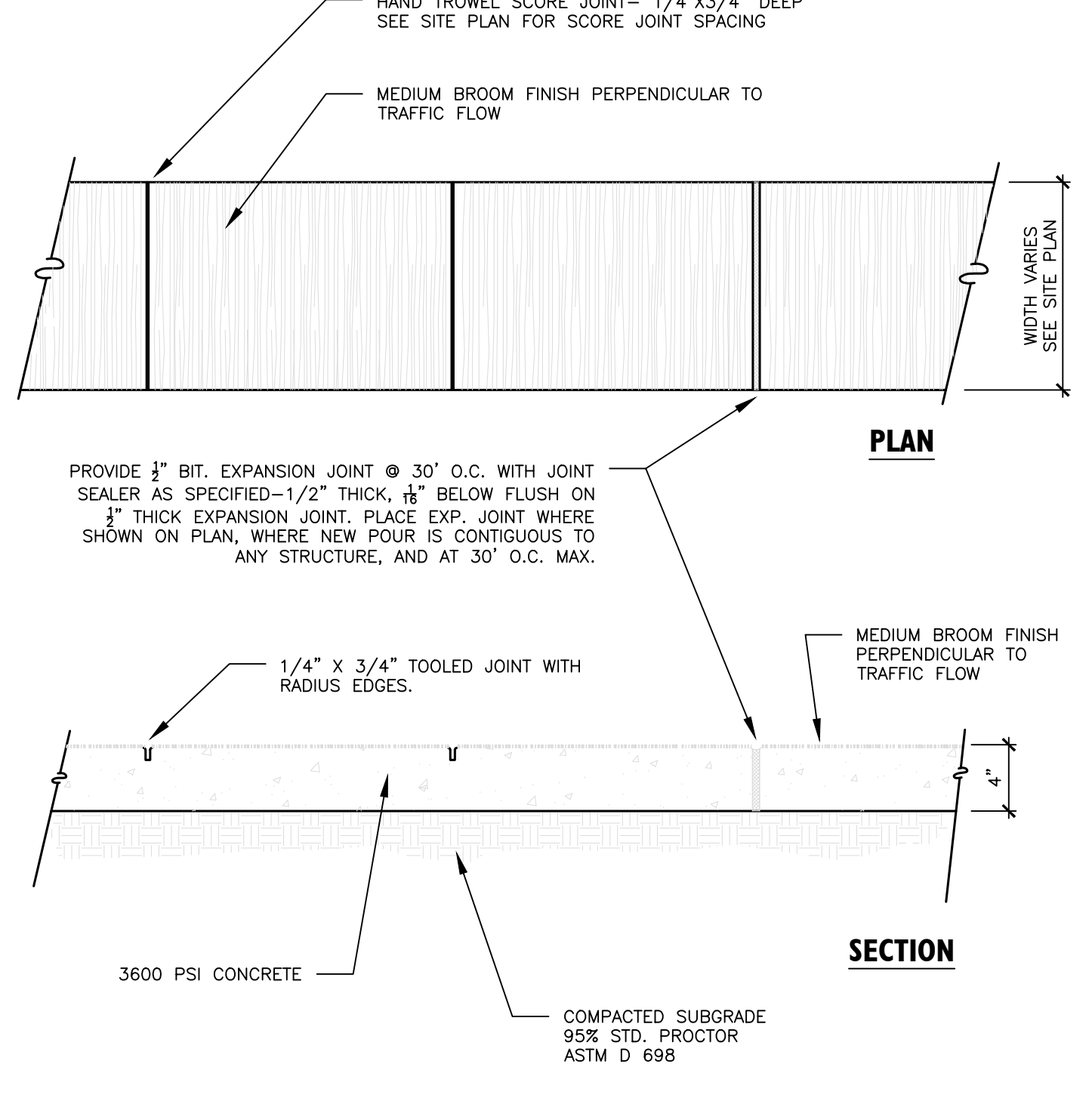
7 **ASPHALT PAVING SECTION**  
N.T.S.



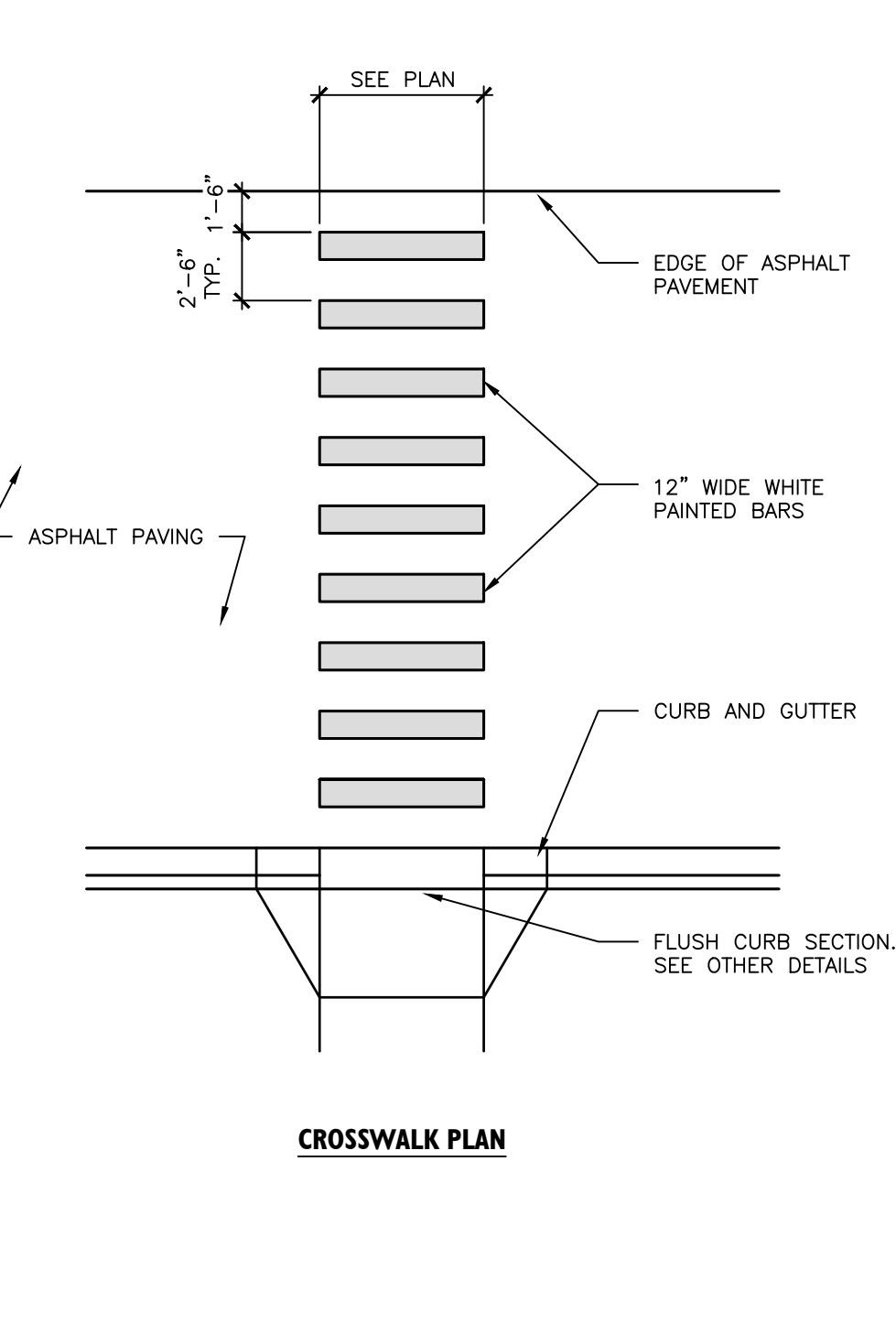
8 **8'-WIDE ASPHALT TRAIL WITH 6" BASE COURSE**  
N.T.S.



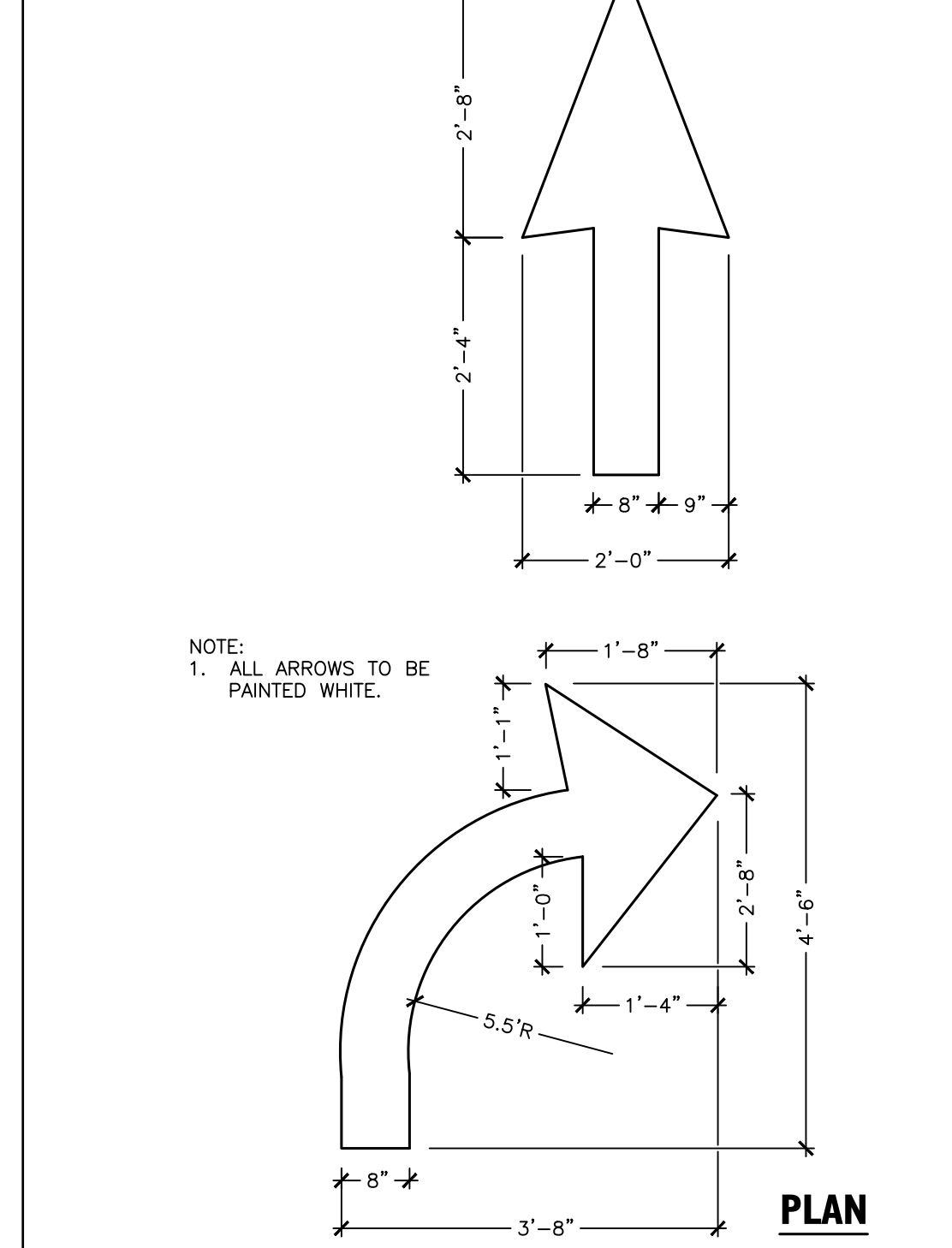
9 **ASPHALT TRAIL OVER EXISTING GRAVEL TRAIL**  
N.T.S.



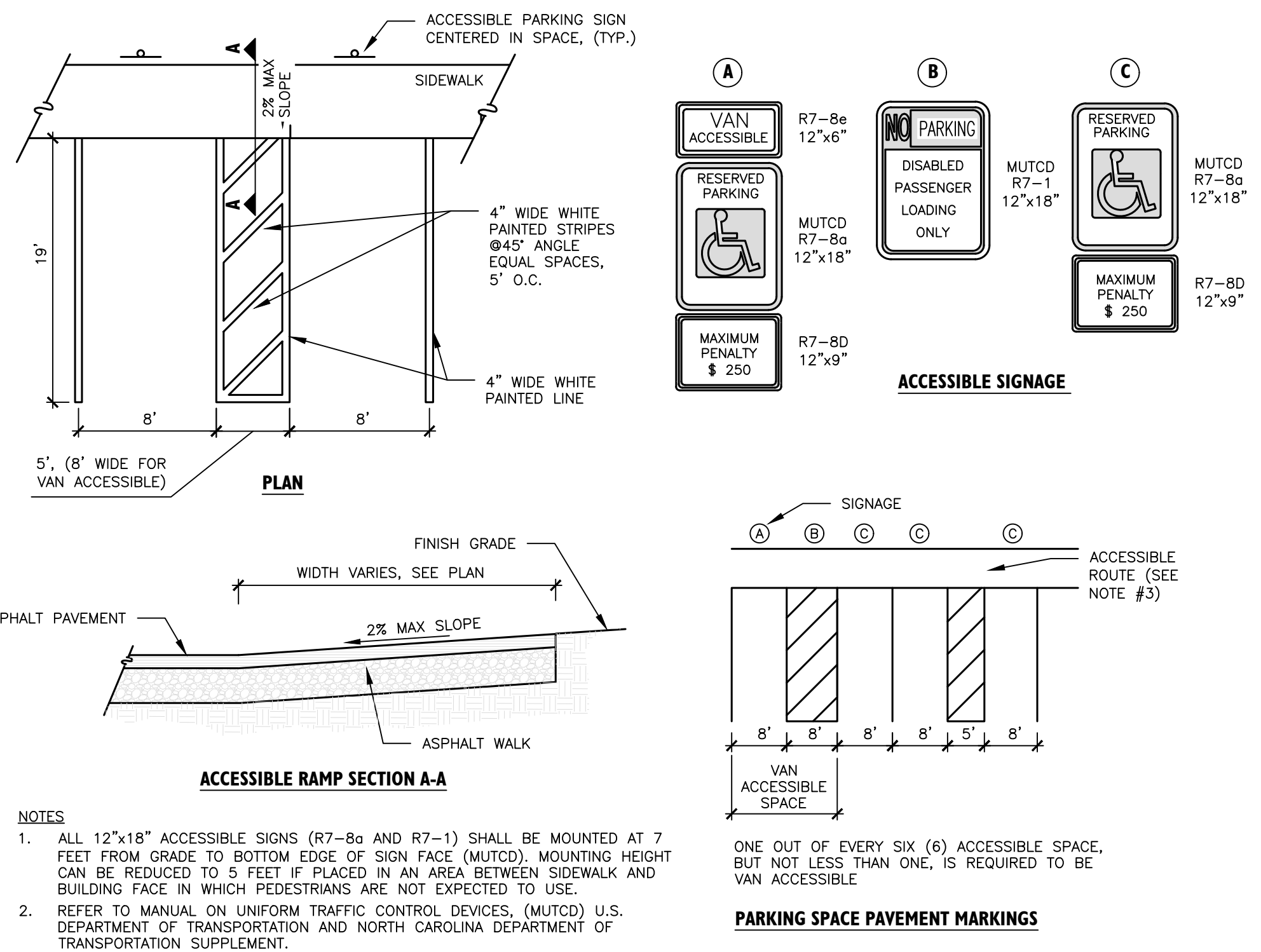
10 **CONCRETE SIDEWALK**  
N.T.S.



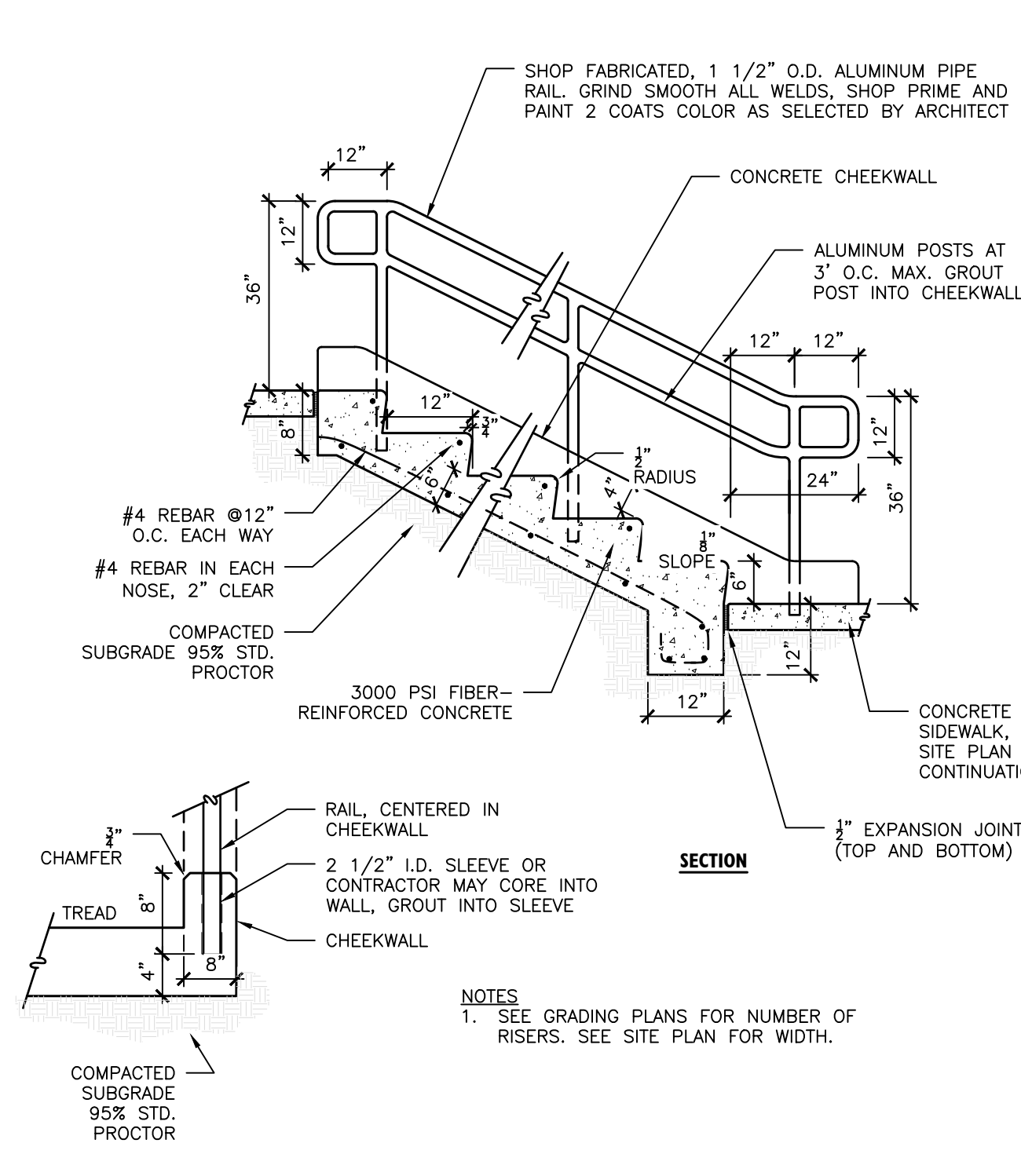
11 **PAINTED CROSSWALK**  
N.T.S.



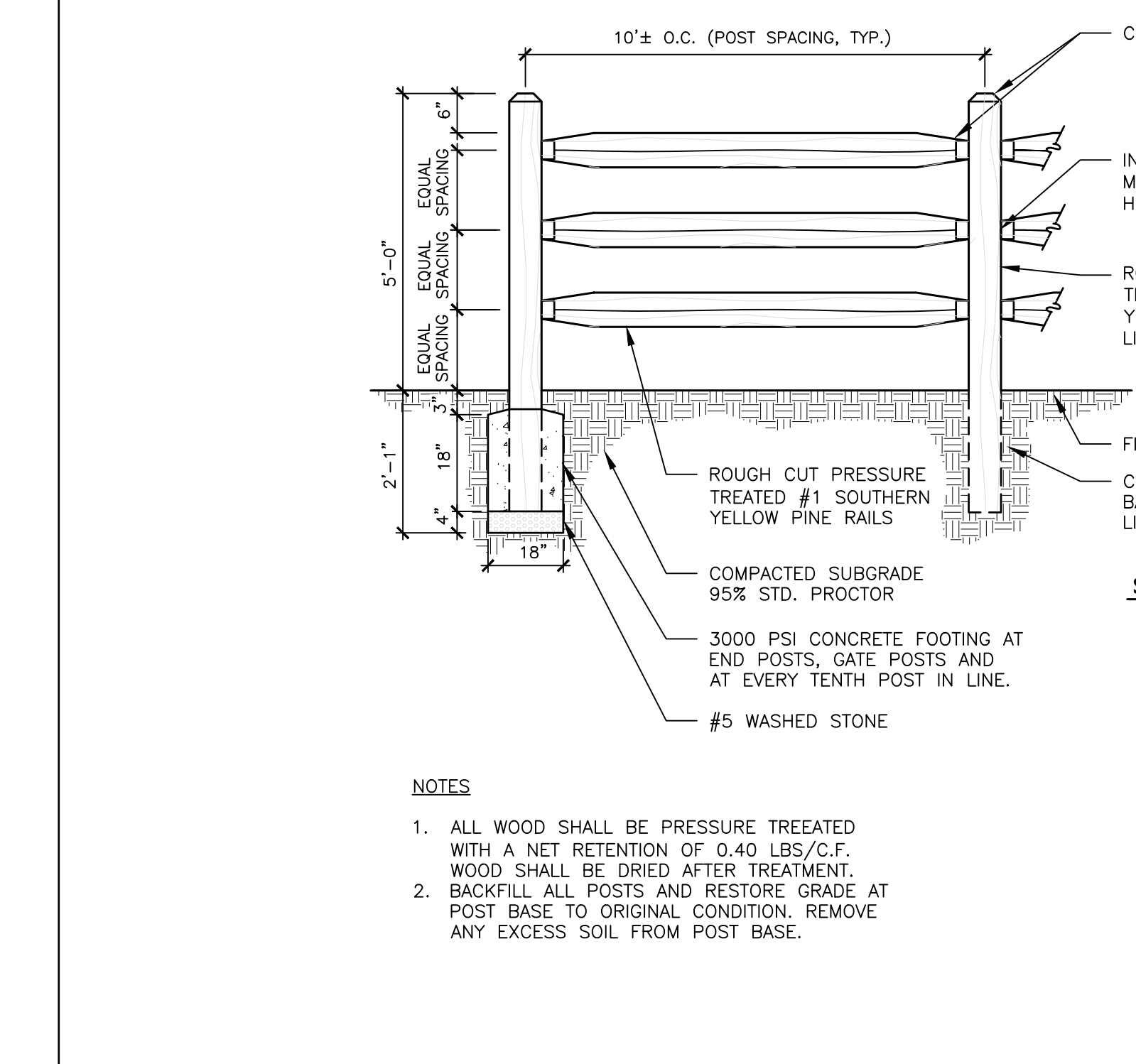
12 **PAINTED DIRECTIONAL ARROWS**  
N.T.S.



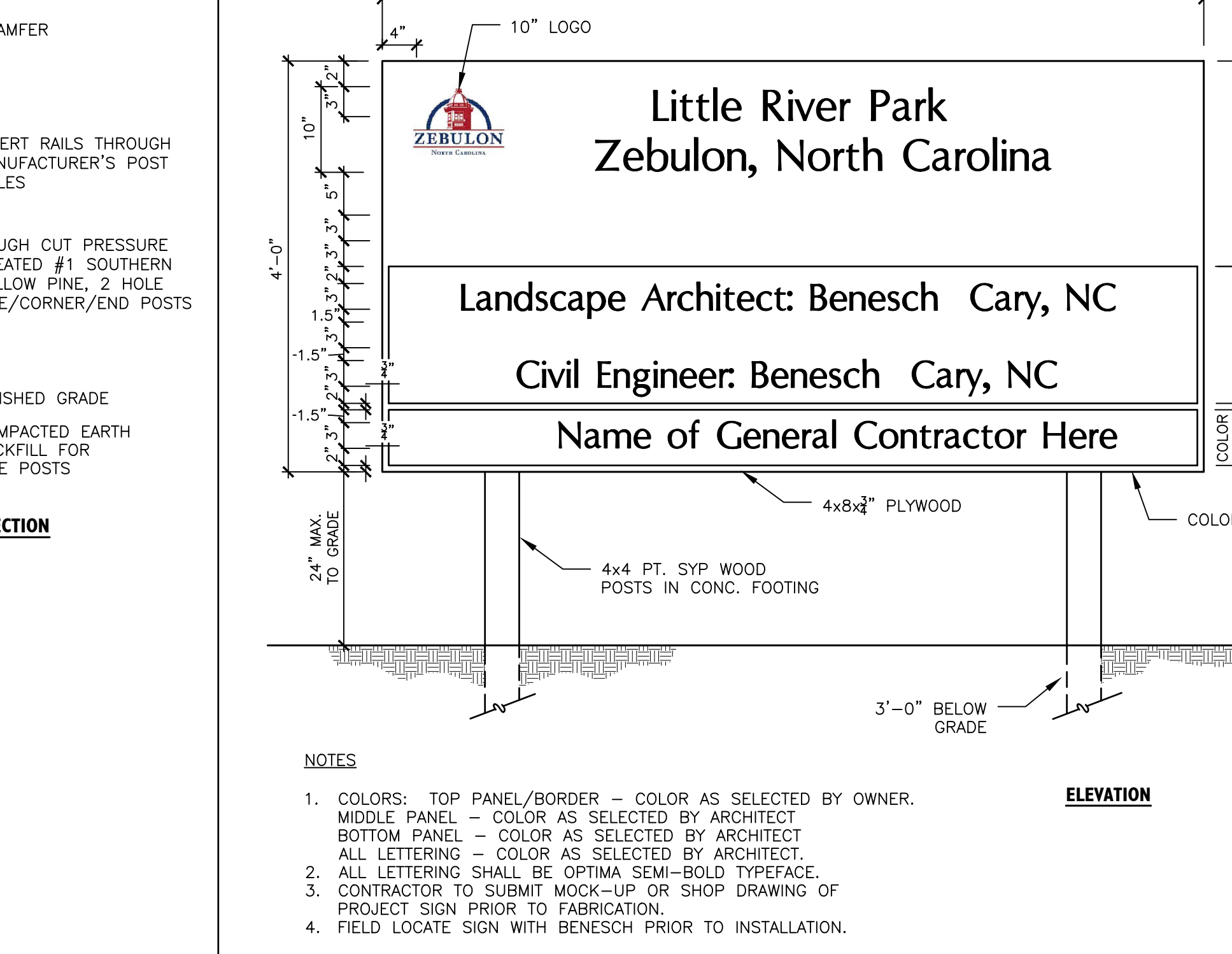
13 **ACCESSIBLE PARKING / SIGNAGE / STRIPING**  
N.T.S.



14 **CONCRETE STEPS WITH HANDRAIL**  
N.T.S.

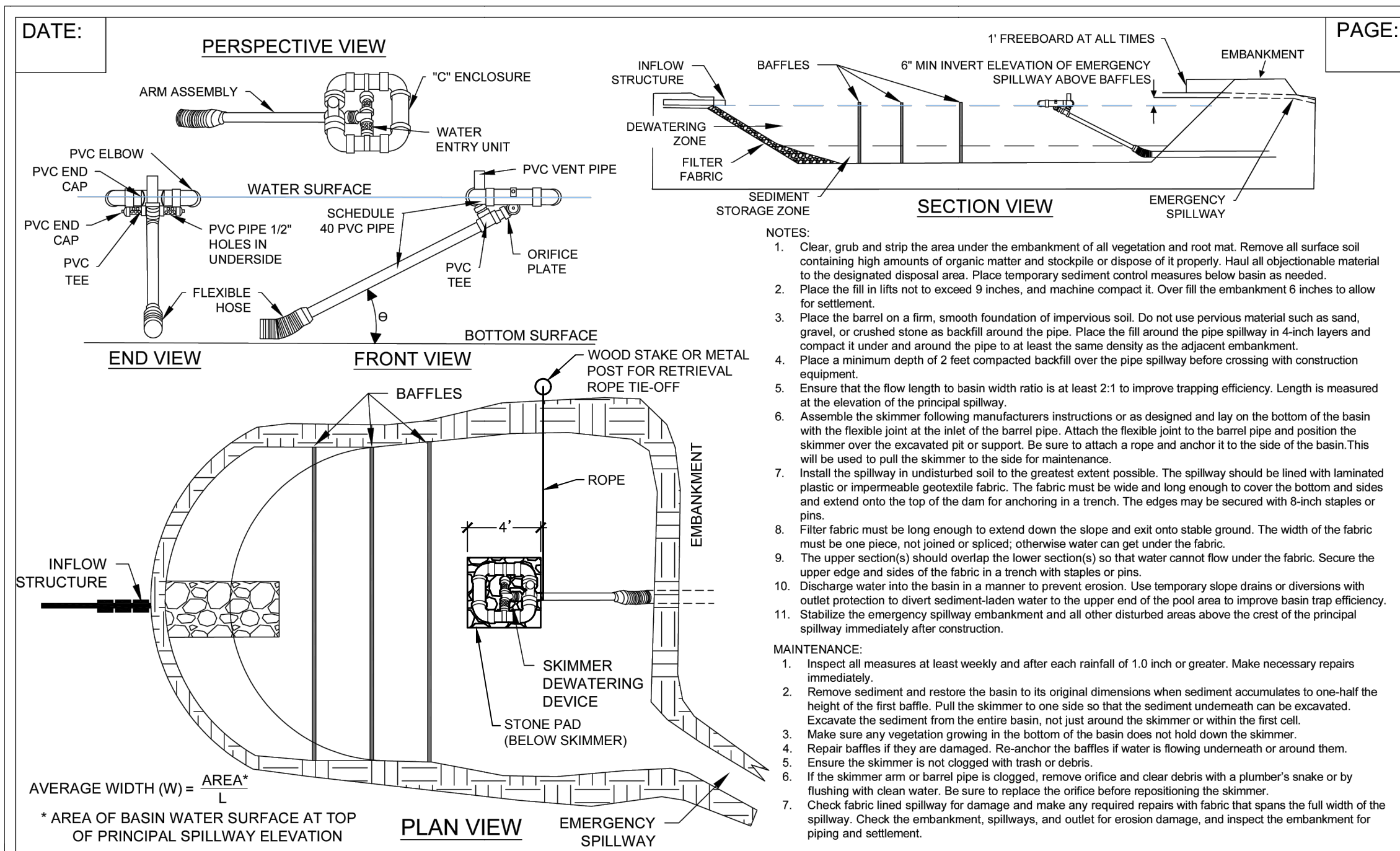


15 **SPLIT RAIL FENCE**  
N.T.S.



16 **TEMPORARY PROJECT SIGN**  
N.T.S.





**SKIMMER SEDIMENT BASIN**

**DATA BLOCK**

| BASIN NO. | DRAINAGE AREA (AC.) | DENIED AREA (AC.) | Q10 (CFS) | BASIN VOLUME       |                   | BASIN SURFACE AREA |                   | CLEANOUT DEPTH (FT.) | H (FEET) | Z (FEET) | L (FEET) | T (FEET) | W (FEET) | SKIMMER ORIFICE (IN.) | SKIMMER ORIFICE (N.) |
|-----------|---------------------|-------------------|-----------|--------------------|-------------------|--------------------|-------------------|----------------------|----------|----------|----------|----------|----------|-----------------------|----------------------|
|           |                     |                   |           | REQUIRED (CU. FT.) | PROVIDE (CU. FT.) | REQUIRED (SQ. FT.) | PROVIDE (SQ. FT.) |                      |          |          |          |          |          |                       |                      |
| 1         | 3.3                 | 2.1               | 11.3      | 5940               | 8034              | 4911               | 5068              | 2                    | 3        | 4.5      | 120      | 1.5      | 58       | 4                     | 1                    |
| 2         | 1.5                 | 1                 | 5.95      | 2700               | 3860              | 2588               | 2600              | 2                    | 3        | 4.5      | 89       | 1.5      | 35       | 3                     | 0.75                 |

**MAINTENANCE:**

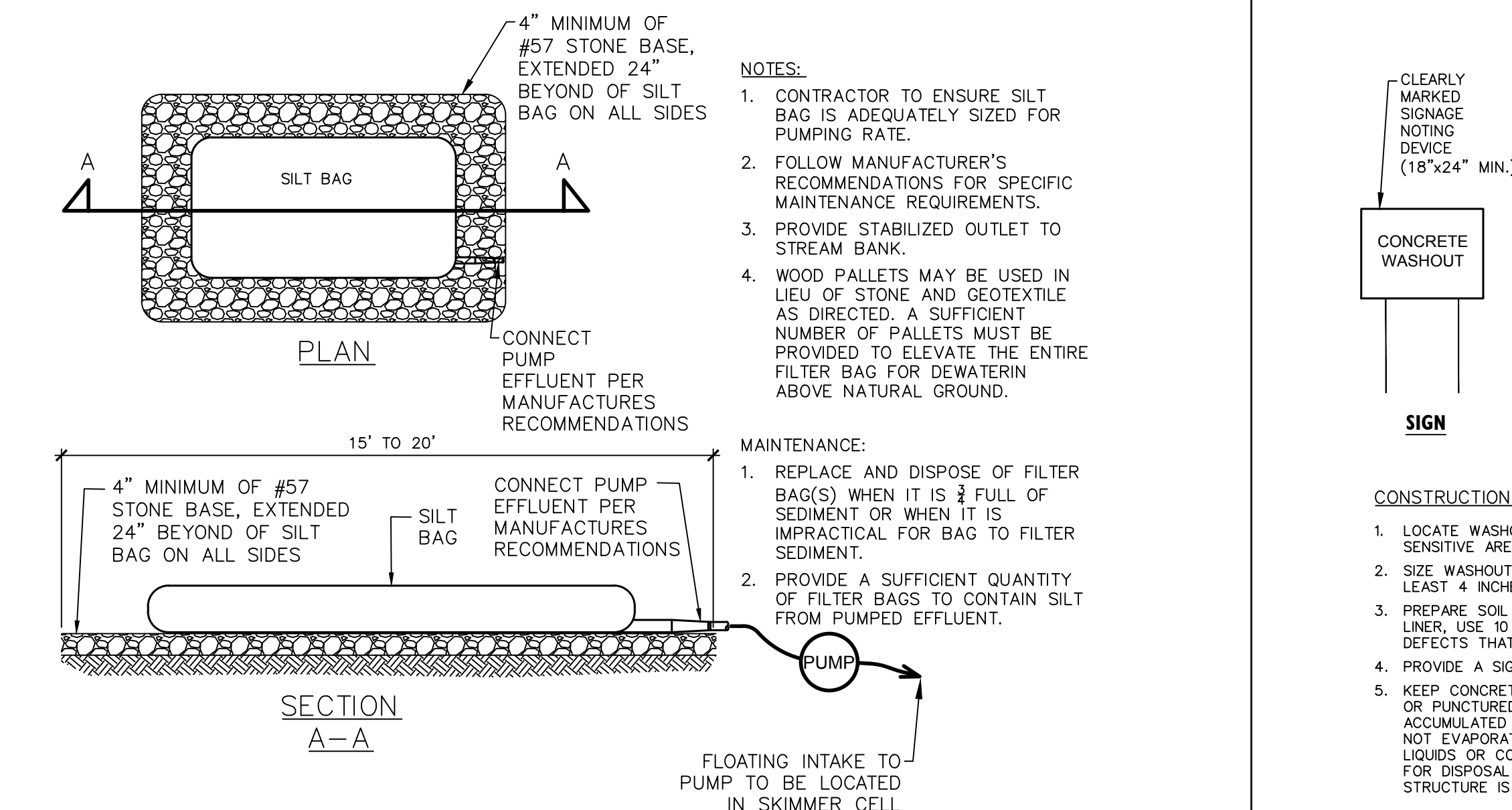
- Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make necessary repairs immediately.
- Remove sediment and restore the basin to its original dimensions when sediment accumulates to one-half the height of the first baffle. Pull the skimmer to one side so that the sediment underneath can be excavated. Excavate the sediment from the entire basin, not just around the skimmer or within the first cell.
- Make sure any vegetation growing in the bottom of the basin does not hold down the skimmer.
- Repair baffles if they are damaged. Re-anchor the baffles if they are floating underneath or around them.
- If the skimmer arm or barrel pipe is clogged, remove orifice and clear debris with a plumber's snake or air.
- Flush with clean water. Be sure to replace the orifice before repositioning the skimmer.
- Check fabric lined spillway for damage and make any required repairs with fabric that spans the full width of the spillway. Check the embankment, spillways, and outlet for erosion damage and inspect the embankment for piping and settlement.

## 1 TEMPORARY SKIMMER BASIN

NCDEQ STD. 6.64

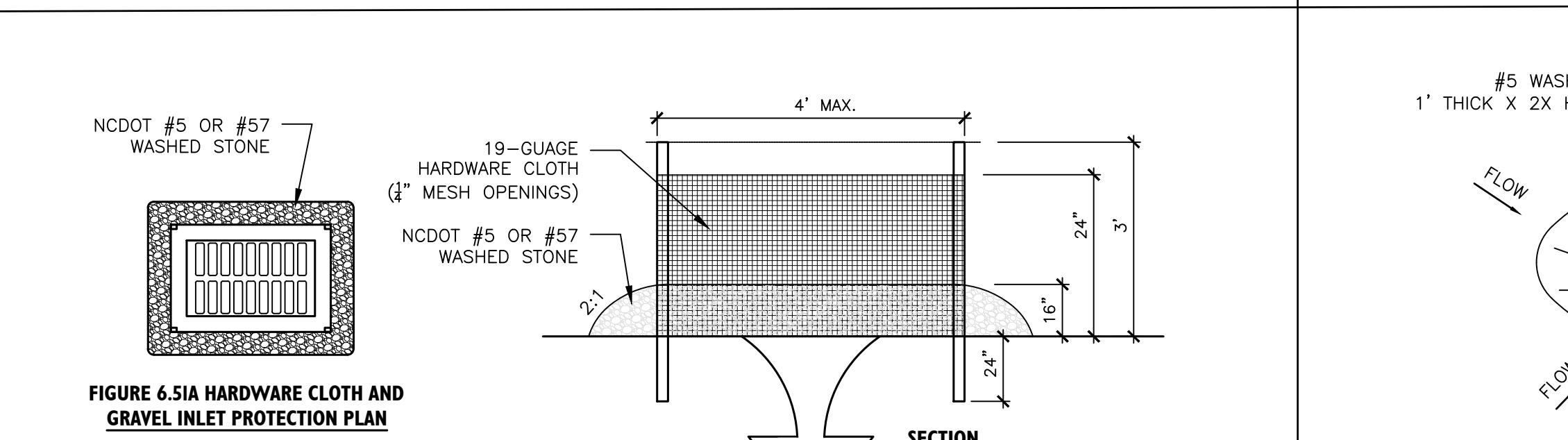
## 2 TEMPORARY POROUS BAFFLE

NCDEQ STD. 6.65



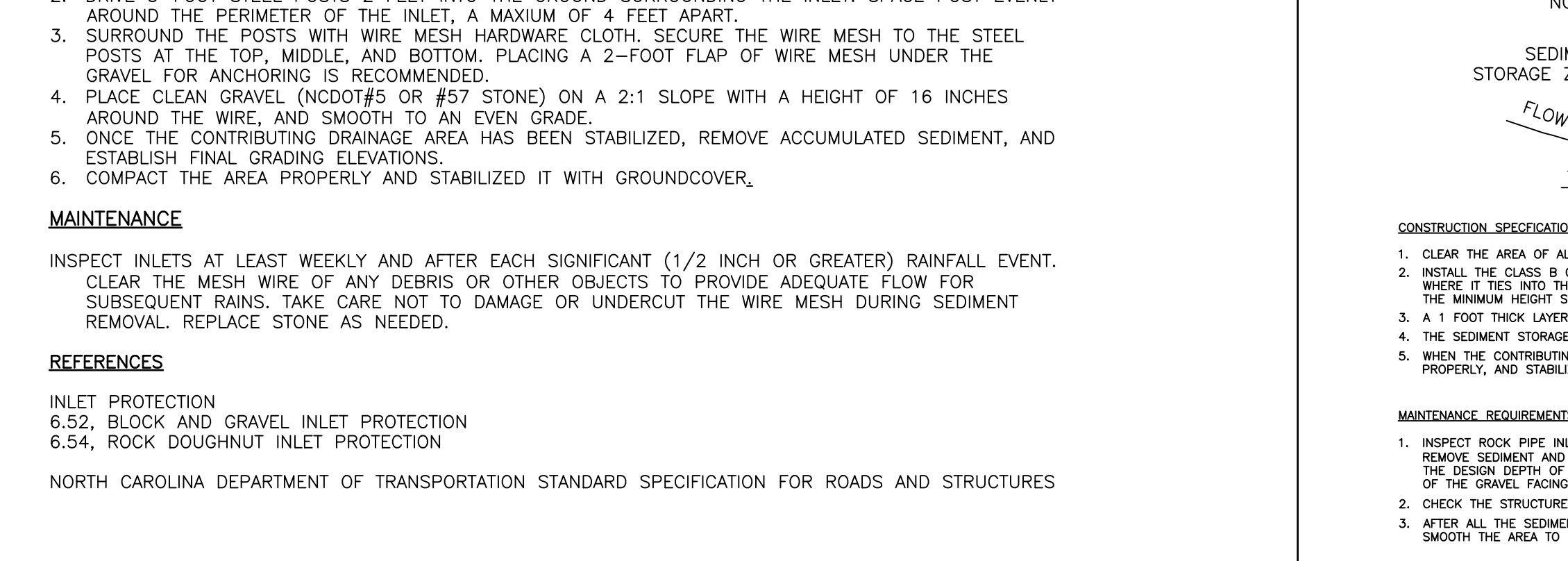
## 4 FILTER BAG FOR DEWATERING

N.T.S.



## 5 CONCRETE WASHOUT STATION

N.T.S.

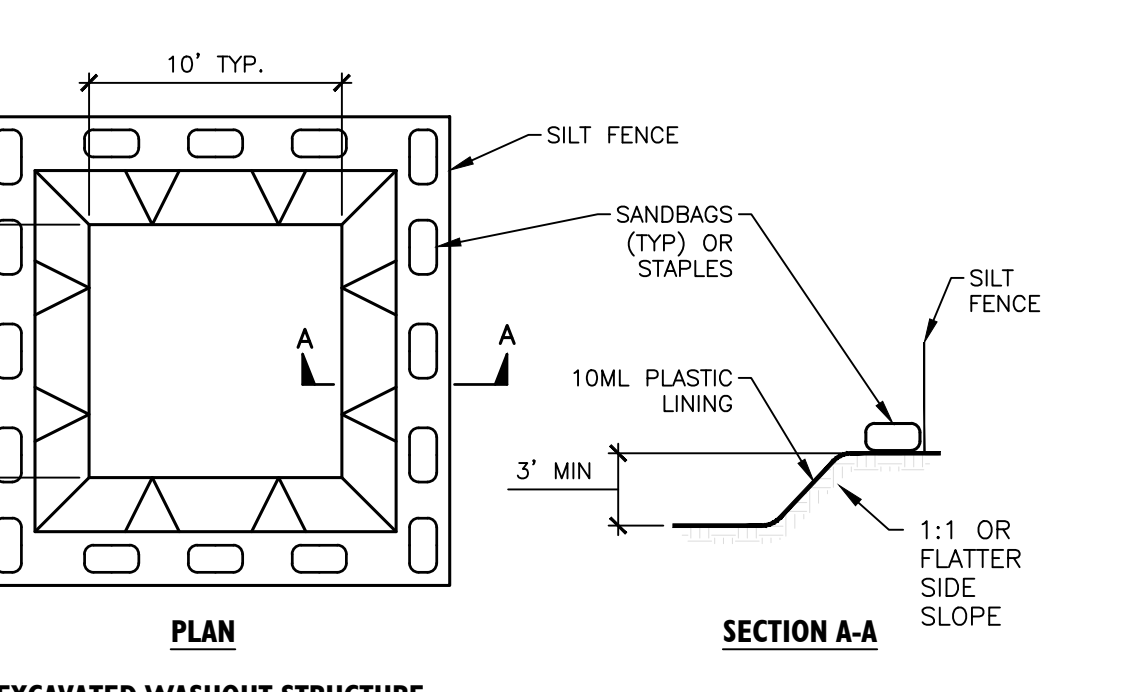


## 8 HARDWARE CLOTH AND GRAVEL INLET PROTECTION

NCDEQ STD. 6.51

## 9 TEMPORARY FILTER BERM BASIN

NCDEQ STD. 6.55



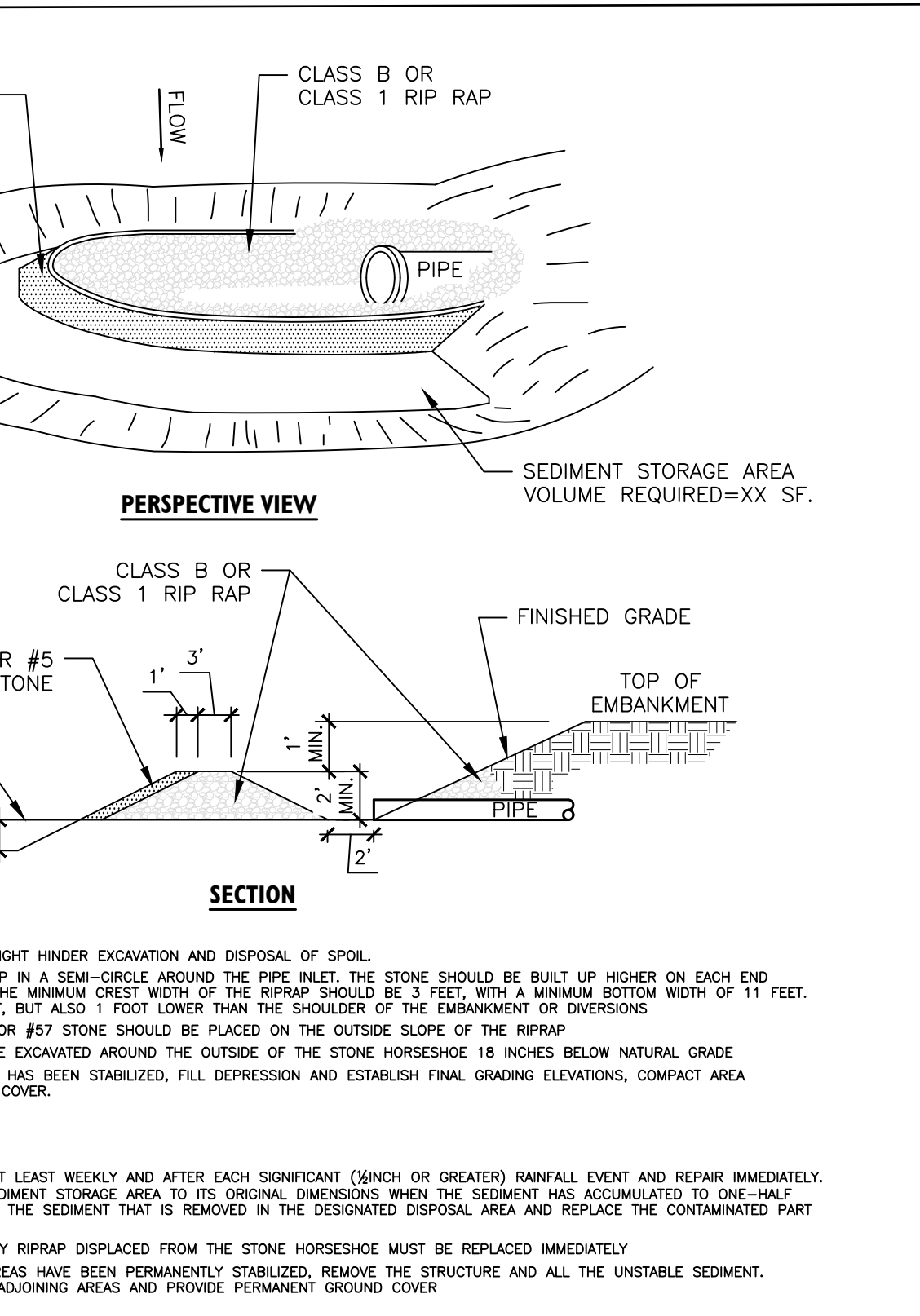
## EXCAVATED WASHOUT STRUCTURE

CONSTRUCTION SPECIFICATIONS/MAINTENANCE

- LOCATE WASHOUT STRUCTURE A MINIMUM 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
- SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
- PREPARE SOL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 1/4 IN. OR THICKER VINYL RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE THE INTEGRITY OF THE MATERIAL.
- PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
- KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER, WET VACUUM STORM DRAINAGE MATERIALS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINFALLS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOW. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

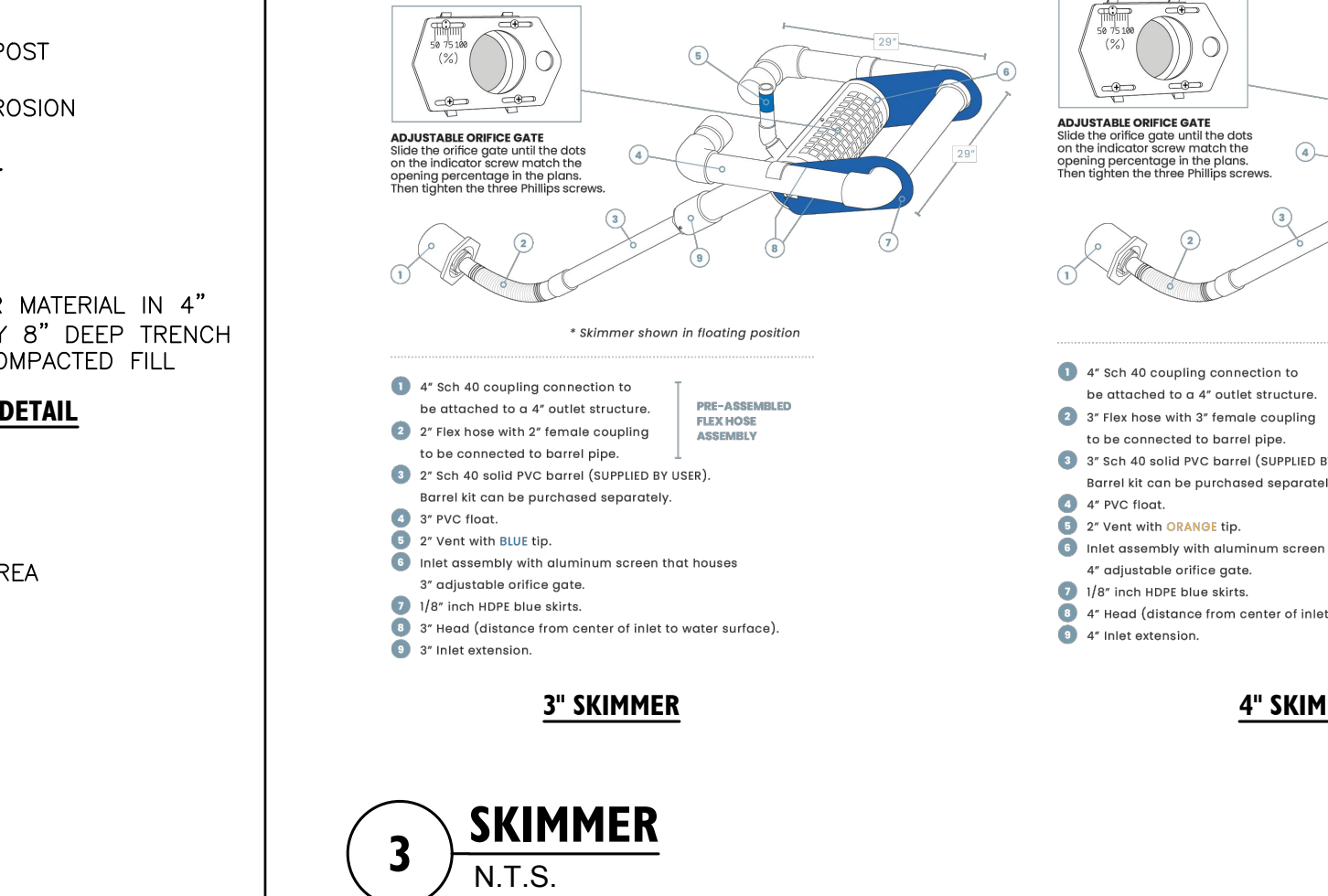
## CONCRETE WASHOUT STATION

N.T.S.



## TEMPORARY SLOPE DRAIN

NCDEQ STD. 6.52



## 3 SKIMMER N.T.S.

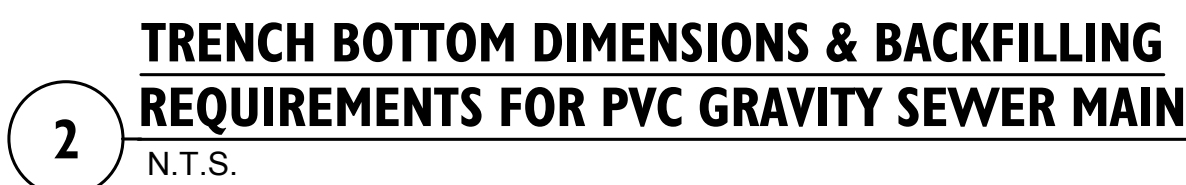
NCDEQ STANDARD 6.14











Corp. NC License: F-1320

**LITTLE RIVER PARK**  
1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00

Date: 11.20.2025

Revisions:

Sheet Title:

## SITE CONSTRUCTION DETAILS

Sheet No:

# C504

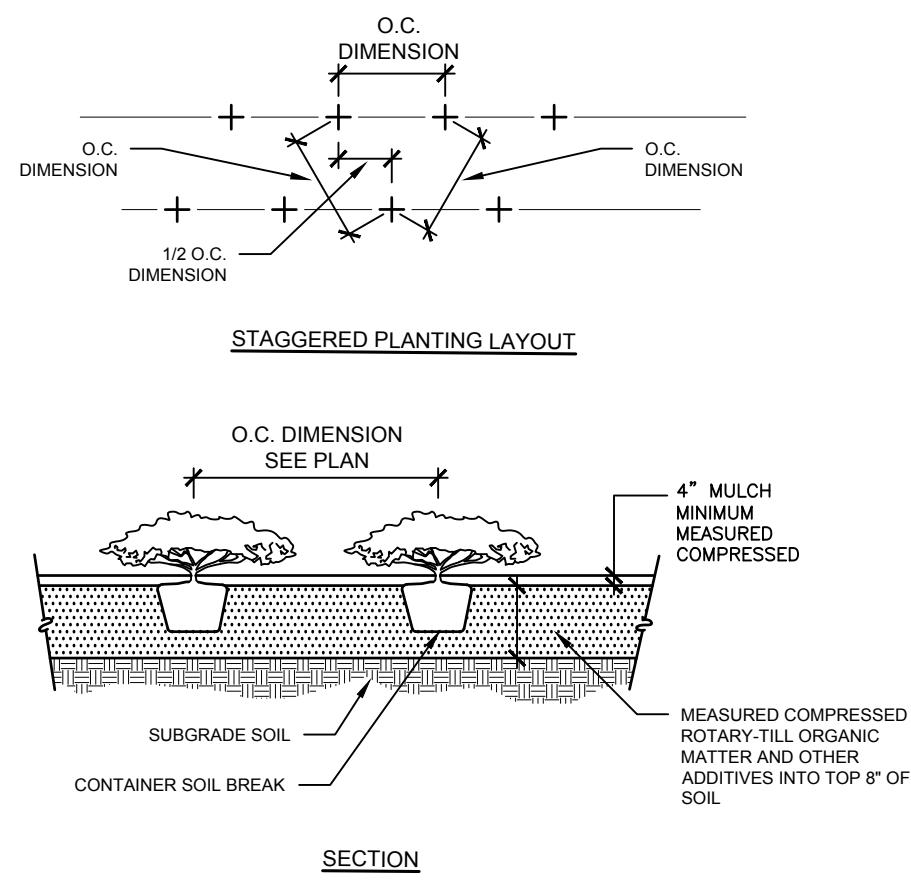




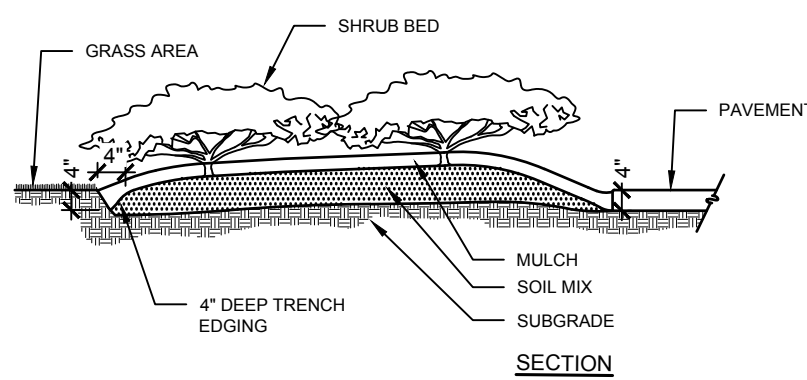


PLANTING NOTES

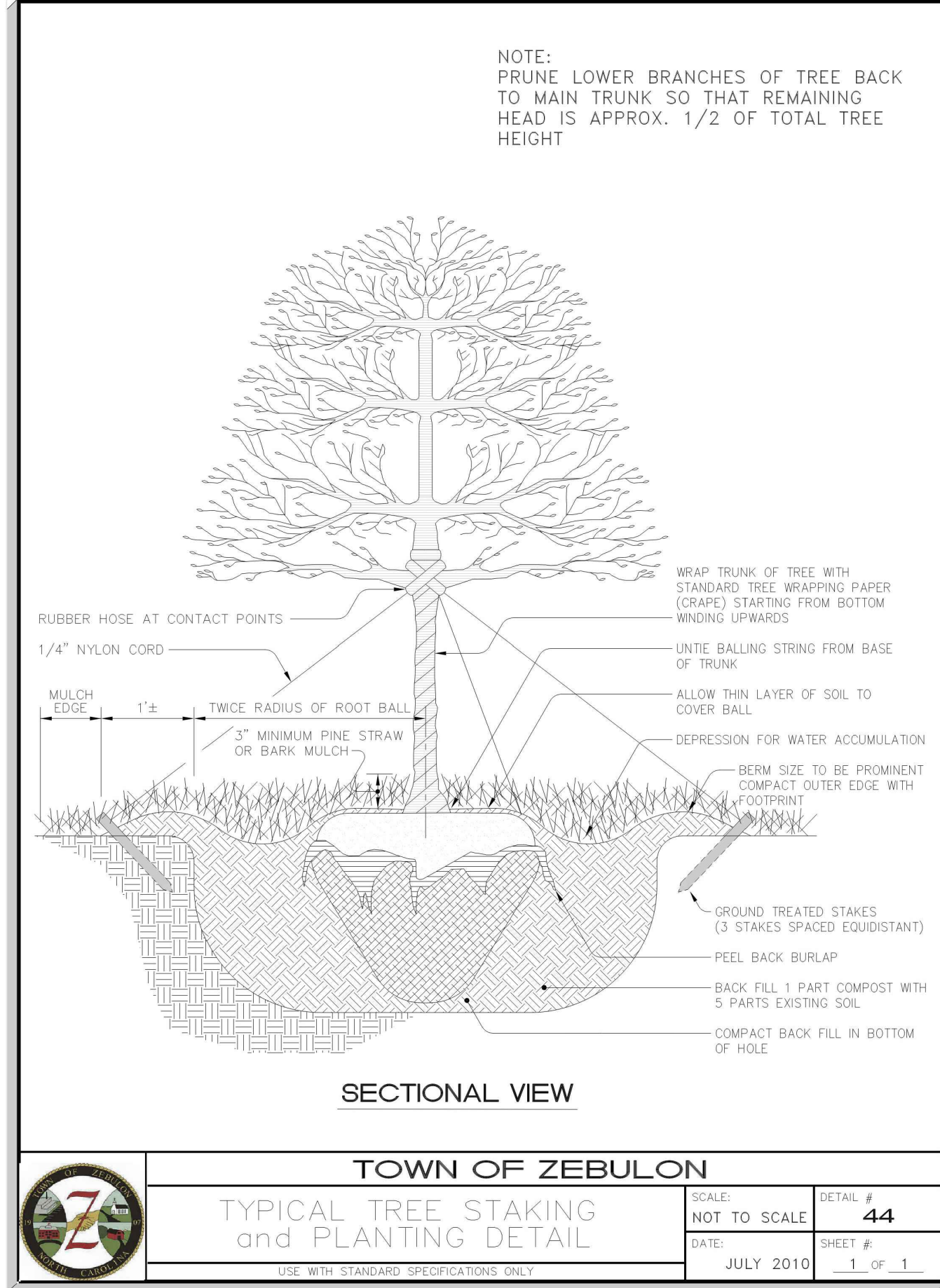
1. TREES AND SHRUBS SHALL BE WARRANTED FOR THE DURATION OF ONE FULL GROWING SEASON AFTER PLANTING AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE WARRANTY PERIOD. THE GROWING SEASON IS DEFINED AS ONE FULL YEAR AFTER ACCEPTANCE OF PLANTING, IN WRITING, BUT NOT BEFORE SUBSTANTIAL COMPLETION.
2. DO NOT STAKE TREES EXCEPT WHERE SPECIFIED BY LANDSCAPE ARCHITECT. STAKING IS REQUIRED FOR TREES PLANTED ON SLOPES.
3. WHERE SEVERAL TREES WILL BE PLANTED CLOSE TOGETHER SUCH THAT THEY WILL LIKELY SHARE ROOT SPACE, TILL IN SOIL AMENDMENTS TO A DEPTH OF 4" OVER THE ENTIRE AREA.
4. FOR CONTAINER GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL, THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
5. FOR FIELD GROWN TREES, CUT BURLAP, ROPE AND WIRE BASKET AWAY FROM TOP AND SIDES OF ROOT BALL.
6. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
7. THE PLANTING PROCESS IS SIMILAR FOR DECIDUOUS AND EVERGREEN TREES.
8. DO NOT WRAP TRUNK. MARK NORTH SIDE OF TREE IN THE NURSERY AND LOCATE TO THE NORTH IN THE FIELD.
9. WIDTH OF PLANTING HOLE IS 3X ROOT BALL AT THE SURFACE, SLOPING TO 2X THE ROOT BALL DIAMETER AT THE DEPTH OF THE ROOT BALL.
10. BEFORE PLANTING, ADD 3-4" OF WELL COMPOSTED LEAVES, RECYCLED YARD WASTE OR OTHER COMPOST AND TILL INTO TOP 6" OF PREPARED SOIL. ADD COMPOST AT 20-35% BY VOLUME TO BACKFILL.
11. PERFORM PERCOLATION TEST FOR EACH TREE PIT TO CONFIRM THAT WATER DRAINS OUT OF THE SOIL. PROVIDE DRAINAGE BUMP FILTER FABRIC & VENT PIPE IF DRAINAGE DOES NOT OCCUR WITHIN 24 HOURS. INCLUDE ALL BUMPS IN BASE BID. SHOULD BUMPS NOT BE NECESSARY AFTER PERCOLATION TEST, PROVIDE CHANGE ORDER DEDUCT TO OWNER.
12. IF PLANTING HOLES ARE DUG WITH A LARGE AUGER BREAKING DOWN THE SIDES WITH A SHOVEL, CAN ELIMINATE GLAZING AND CREATE THE PREFERRED SLOPING SIDE.
13. TREES SHALL HAVE SINGLE LEADERS. TREES WITH 2 LEADERS WILL BE REJECTED.
14. DO NOT PLACE MULCH IN CONTACT WITH TRUNK.
15. PROVIDE GATOR BAGS FOR ALL TREES WHERE IRRIGATION IS NOT PROVIDED.



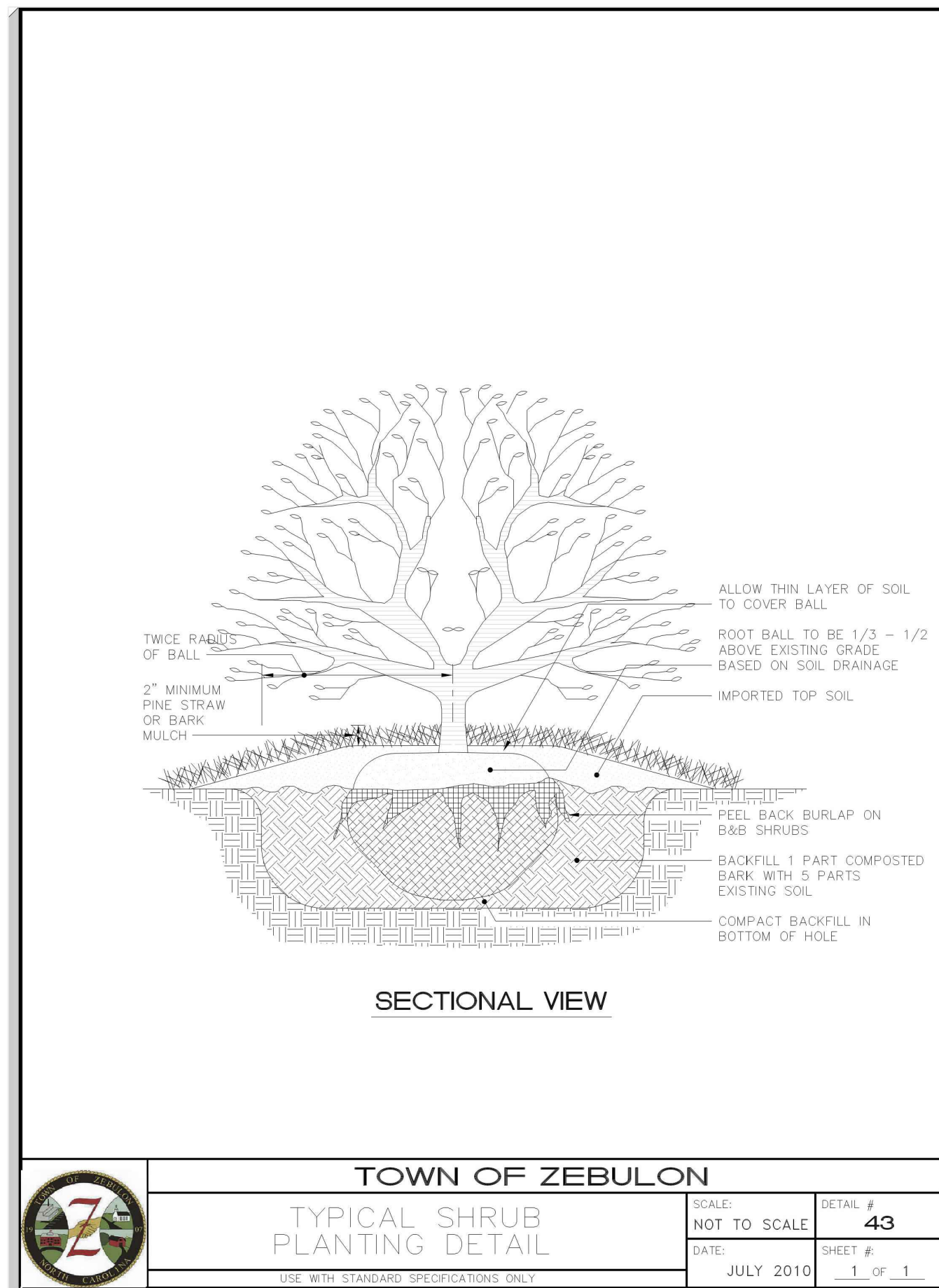
3 Groundcover Planting Detail  
N.T.S.



4 Trench-cut Edging  
N.T.S.



1 Typical Tree Planting  
N.T.S.



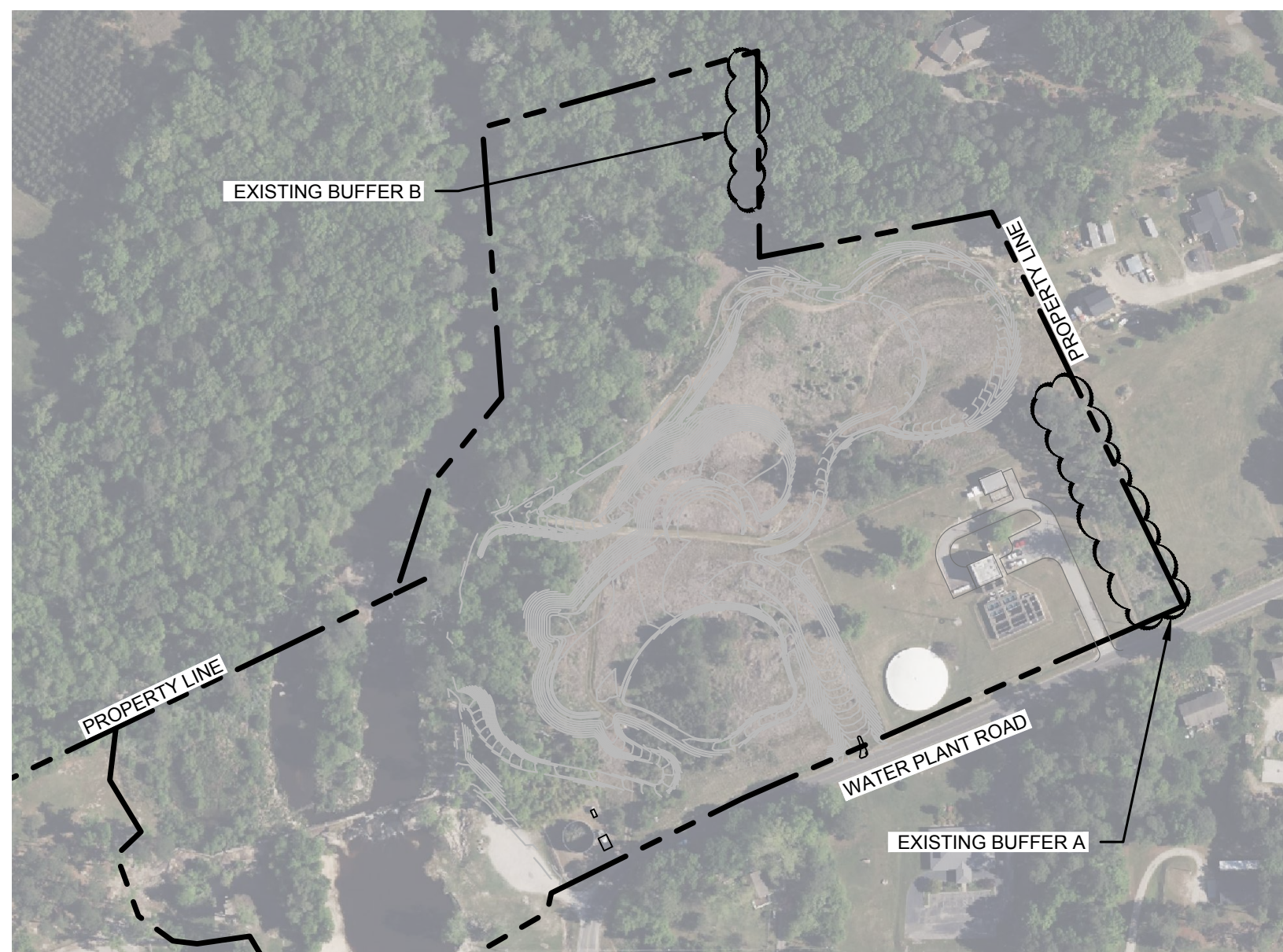
2 Typical Shrub Planting  
N.T.S.



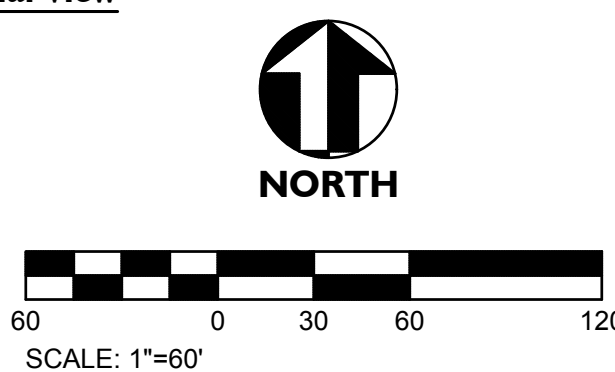
Existing Buffer Photo A  
N.T.S.



Existing Buffer Photo B  
N.T.S.



Little River Existing Aerial View  
N.T.S.



LEGEND

- |                          |                                    |
|--------------------------|------------------------------------|
| SIGN                     | PROPERTY LINE                      |
| EXISTING LIGHT POLE      | EXISTING FENCE                     |
| EXISTING UTILITY POLE    | PROPOSED FENCE                     |
| ACCESSIBLE SPACE         | EXISTING UNDERGROUND ELECTRIC LINE |
| EXISTING FIRE HYDRANT    | EXISTING OVERHEAD UTILITY LINE     |
| EXISTING TREE TO REMAIN  | EXISTING TREE LINE                 |
| PROPOSED GROUNDCOVER     | PROPOSED TREE LINE AFTER CLEARING  |
| PLANT LABEL              | PROPOSED MULCH LINE                |
| PLANT QUANTITY           | PROPOSED STORM DRAINAGE PIPE       |
| EXISTING CURB AND GUTTER | PROPOSED FOUNDATION DRAIN          |
| PROPOSED CURB AND GUTTER | SANITARY SEWER LINE                |
|                          | WATER LINE                         |

Seals:



Corp. NC License: F-1320

LITTLE RIVER PARK  
1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00  
Date: 11.20.2025  
Revisions:

Sheet Title:  
OVERALL  
LANDSCAPE  
PLAN

Sheet No:  
C600

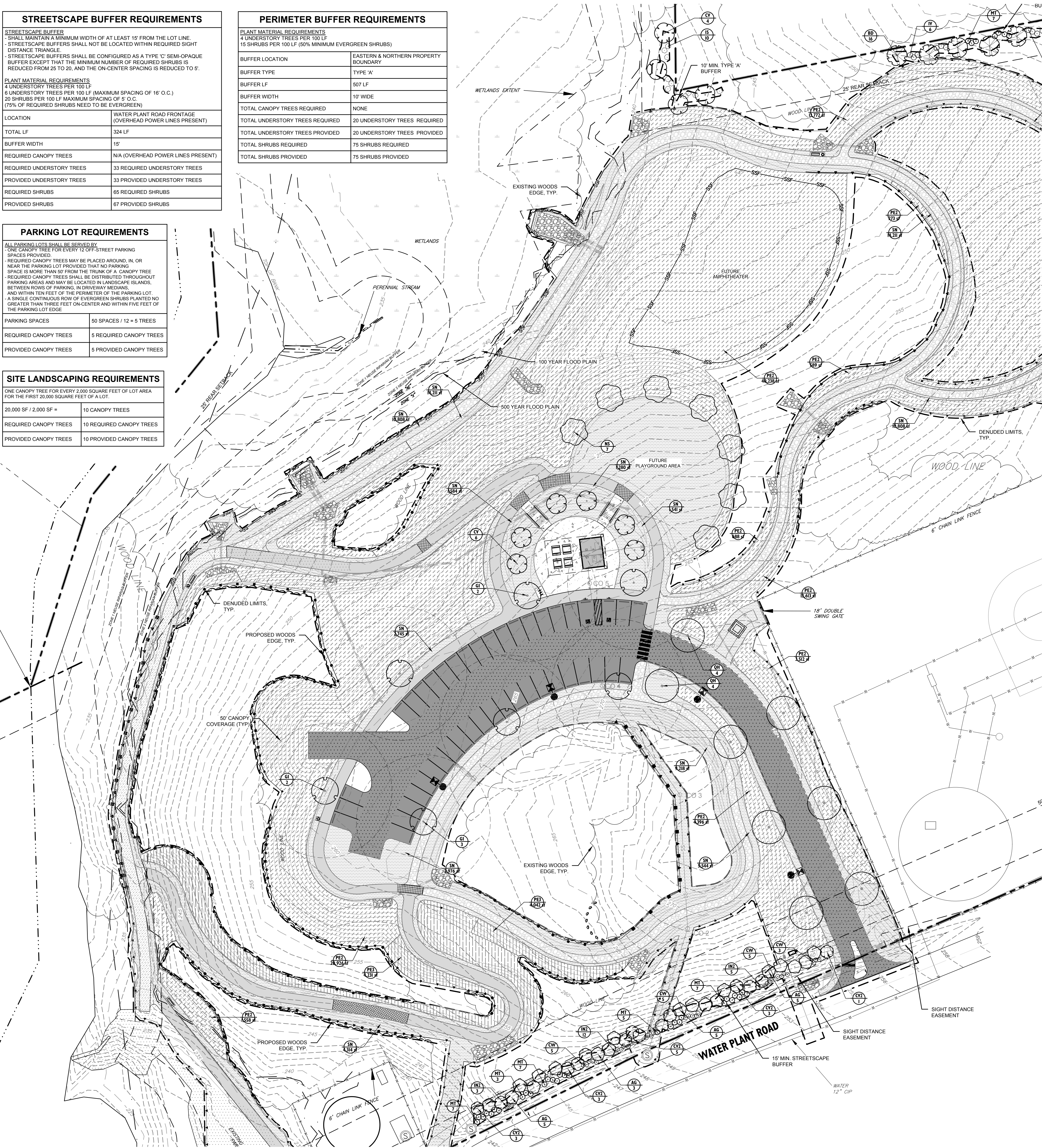


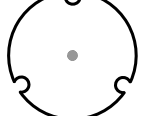
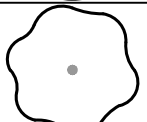
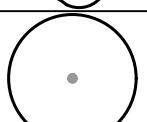
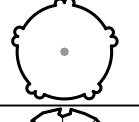
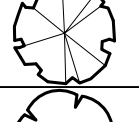
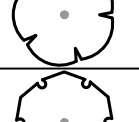
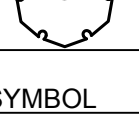
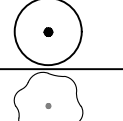
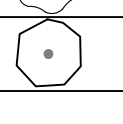
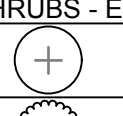
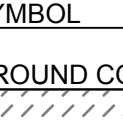
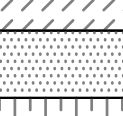
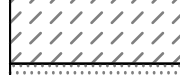
| STREETSCAPE BUFFER REQUIREMENTS                                                                                                                                                                  |                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| STREETSCAPE BUFFER                                                                                                                                                                               |                                                          |
| SHALL MAINTAIN A MINIMUM WIDTH OF AT LEAST 15' FROM THE LOT LINE.                                                                                                                                |                                                          |
| STREETSCAPE BUFFERS SHALL NOT BE LOCATED WITHIN REQUIRED SIGHT DISTANCE TRIANGLE.                                                                                                                |                                                          |
| STREETSCAPE BUFFERS SHALL BE CONFIGURED AS A TYPE 'C' SEMI-OPAQUE BUFFER EXCEPT THAT THE MINIMUM NUMBER OF REQUIRED SHRUBS IS REDUCED FROM 25 TO 20, AND THE ON-CENTER SPACING IS REDUCED TO 5'. |                                                          |
| PLANT MATERIAL REQUIREMENTS                                                                                                                                                                      |                                                          |
| 4 UNDERSTORY TREES PER 100 LF (MAXIMUM SPACING OF 16' O.C.)                                                                                                                                      |                                                          |
| 6 UNDERSTORY TREES PER 100 LF (MAXIMUM SPACING OF 16' O.C.)                                                                                                                                      |                                                          |
| 20 SHRUBS PER 100 LF MAXIMUM SPACING OF 5' O.C.                                                                                                                                                  |                                                          |
| (75% OF REQUIRED SHRUBS NEED TO BE EVERGREEN)                                                                                                                                                    |                                                          |
| LOCATION                                                                                                                                                                                         | WATER PLANT ROAD FRONTAGE (OVERHEAD POWER LINES PRESENT) |
| TOTAL LF                                                                                                                                                                                         | 324 LF                                                   |
| BUFFER WIDTH                                                                                                                                                                                     | 15'                                                      |
| REQUIRED CANOPY TREES                                                                                                                                                                            | N/A (OVERHEAD POWER LINES PRESENT)                       |
| REQUIRED UNDERSTORY TREES                                                                                                                                                                        | 33 REQUIRED UNDERSTORY TREES                             |
| PROVIDED UNDERSTORY TREES                                                                                                                                                                        | 33 PROVIDED UNDERSTORY TREES                             |
| REQUIRED SHRUBS                                                                                                                                                                                  | 65 REQUIRED SHRUBS                                       |
| PROVIDED SHRUBS                                                                                                                                                                                  | 67 PROVIDED SHRUBS                                       |

| PARKING LOT REQUIREMENTS                                                                                                                                                                                           |                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| ALL PARKING LOTS SHALL BE SERVED BY:                                                                                                                                                                               |                          |
| ONE CANOPY TREE FOR EVERY 12 OFF-STREET PARKING SPACES PROVIDED.                                                                                                                                                   |                          |
| REQUIRED CANOPY TREES MAY BE PLACED AROUND, IN, OR NEAR THE PARKING LOT PROVIDED THAT NO PARKING SPACE IS MORE THAN 50' FROM THE TRUNK OF A CANOPY TREE.                                                           |                          |
| REQUIRED CANOPY TREES SHALL BE DISTRIBUTED THROUGHOUT PARKING AREAS AND MAY BE LOCATED IN LANDSCAPE ISLANDS BETWEEN ROWS OF PARKING, IN DRIVEWAY MEDIANS, AND WITHIN TEN FEET OF THE PERIMETER OF THE PARKING LOT. |                          |
| A SINGLE CONTINUOUS ROW OF EVERGREEN SHRUBS PLANTED NO GREATER THAN THREE FEET ON-CENTER AND WITHIN FIVE FEET OF THE PARKING LOT EDGE.                                                                             |                          |
| PARKING SPACES                                                                                                                                                                                                     | 50 SPACES / 12 = 5 TREES |
| REQUIRED CANOPY TREES                                                                                                                                                                                              | 5 REQUIRED CANOPY TREES  |
| PROVIDED CANOPY TREES                                                                                                                                                                                              | 5 PROVIDED CANOPY TREES  |

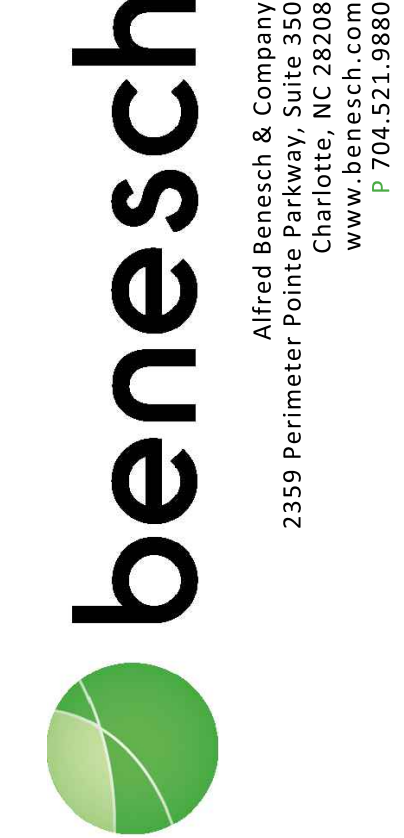
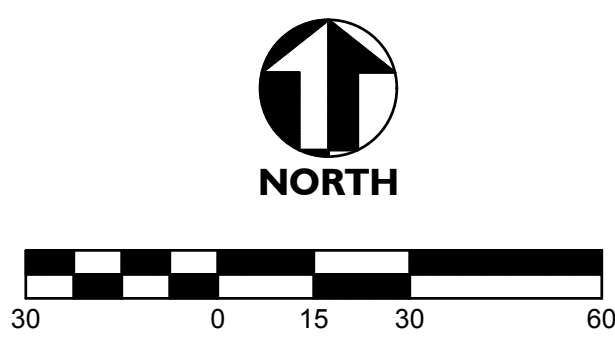
| SITE LANDSCAPING REQUIREMENTS                                                                     |                          |
|---------------------------------------------------------------------------------------------------|--------------------------|
| ONE CANOPY TREE FOR EVERY 2,000 SQUARE FEET OF LOT AREA FOR THE FIRST 2,000 SQUARE FEET OF A LOT. |                          |
| 20,000 SF / 2,000 SF =                                                                            | 10 CANOPY TREES          |
| REQUIRED CANOPY TREES                                                                             | 10 REQUIRED CANOPY TREES |
| PROVIDED CANOPY TREES                                                                             | 10 PROVIDED CANOPY TREES |

| PERIMETER BUFFER REQUIREMENTS                       |                                      |
|-----------------------------------------------------|--------------------------------------|
| PLANT MATERIAL REQUIREMENTS                         |                                      |
| 4 UNDERSTORY TREES PER 100 LF                       |                                      |
| 15 SHRUBS PER 100 LF (50% MINIMUM EVERGREEN SHRUBS) |                                      |
| BUFFER LOCATION                                     | EASTERN & NORTHERN PROPERTY BOUNDARY |
| BUFFER TYPE                                         | TYPE 'A'                             |
| BUFFER LF                                           | 507 LF                               |
| BUFFER WIDTH                                        | 10' WIDE                             |
| TOTAL CANOPY TREES REQUIRED                         | NONE                                 |
| TOTAL UNDERSTORY TREES REQUIRED                     | 20 UNDERSTORY TREES REQUIRED         |
| TOTAL UNDERSTORY TREES PROVIDED                     | 20 UNDERSTORY TREES PROVIDED         |
| TOTAL SHRUBS REQUIRED                               | 75 SHRUBS REQUIRED                   |
| TOTAL SHRUBS PROVIDED                               | 75 SHRUBS PROVIDED                   |



| PLANT SCHEDULE                                                                        |      |            |                                                                                      |       |                |             |
|---------------------------------------------------------------------------------------|------|------------|--------------------------------------------------------------------------------------|-------|----------------|-------------|
| SYMBOL                                                                                | CODE | QTY        | BOTANICAL / COMMON NAME                                                              | ROOT  | CAL.           | REMARKS     |
| CANOPY TREES                                                                          |      |            |                                                                                      |       |                |             |
|    | GI   | 7          | Gleditsia triacanthos inermis 'Skycole' / Skyline® Honey Locust                      | B & B | 2.5" Cal       |             |
|    | NS   | 7          | Nyssa sylvatica / Tupelo                                                             | B & B | 2.5" Cal       |             |
|    | QH   | 8          | Quercus lyrata 'QLFTB' / Highbeam® Overcup Oak                                       | B & B | 2.5" Cal       |             |
| UNDERSTORY TREES                                                                      |      |            |                                                                                      |       |                |             |
|  | AG   | 18         | Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Apple Serviceberry | B & B | 1.5" Cal. min. |             |
|  | BD   | 16         | Betula nigra 'Duraheat' / Duraheat River Birch                                       | B & B | 1.5" Cal. min. | Single Stem |
|  | CV   | 10         | Chionanthus virginicus / White Fringetree                                            | B & B | 1.5" Cal. min. |             |
|  | CV2  | 15         | Crataegus viridis 'Winter King' / Winter King Hawthorn                               | B & B | 1.5" Cal. min. |             |
| SYMBOL                                                                                | CODE | QTY        | BOTANICAL / COMMON NAME                                                              | CONT  | REMARKS        | HEIGHT      |
| SHRUBS                                                                                |      |            |                                                                                      |       |                |             |
|  | CW   | 18         | Callicarpa americana 'Welch's Pink' / Welch's Pink American Beautyberry              | 3 gal |                | 18" MIN.    |
|  | IS   | 10         | Ilex glabra 'Shamrock' / Shamrock Inkberry Holly                                     | 3 gal |                | 18" MIN.    |
|  | IV   | 31         | Itea virginica 'Henry's Garnet' / Henry's Garnet Sweetspire                          | 3 gal |                | 18" MIN.    |
| SHRUBS - EVERGREEN                                                                    |      |            |                                                                                      |       |                |             |
|  | IN2  | 20         | Ilex vomitoria 'Nana' / Dwarf Yaupon Holly                                           | 3 gal |                | 18" MIN.    |
|  | MT   | 57         | Myrica cerifera 'Tom's Dwarf' / Tom's Dwarf Wax Myrtle                               | 3 gal |                | 18" MIN.    |
| SYMBOL                                                                                | CODE | QTY        | BOTANICAL / COMMON NAME                                                              | CONT  | REMARKS        | SPACING     |
| GROUND COVERS                                                                         |      |            |                                                                                      |       |                |             |
|  | PE2  | 107,635 sf | Pollinator meadow Mix / See Specs.                                                   | seed  |                |             |
|  | SN   | 55,932 sf  | Seeded lawn / See Specs.                                                             | seed  |                |             |
|  | PE3  | 8,273 sf   | Shade meadow Mix / See Specs.                                                        | seed  |                |             |

| LEGEND |                                    |
|--------|------------------------------------|
|        | SIGN                               |
|        | EXISTING LIGHT POLE                |
|        | EXISTING UTILITY POLE              |
|        | ACCESSIBLE SPACE                   |
|        | EXISTING FIRE HYDRANT              |
|        | EXISTING TREE TO REMAIN            |
|        | PROPOSED GROUND COVER              |
|        | PLANT LABEL                        |
|        | PLANT QUANTITY                     |
|        | EXISTING CURB AND GUTTER           |
|        | PROPOSED CURB AND GUTTER           |
|        | PROPERTY LINE                      |
|        | EXISTING FENCE                     |
|        | PROPOSED FENCE                     |
|        | EXISTING UNDERGROUND ELECTRIC LINE |
|        | UGE                                |
|        | EXISTING OVERHEAD UTILITY LINE     |
|        | EXISTING TREE LINE                 |
|        | PROPOSED TREE LINE AFTER CLEARING  |
|        | PROPOSED MULCH LINE                |
|        | PROPOSED STORM DRAINAGE PIPE       |
|        | PROPOSED FOUNDATION DRAIN          |
|        | SANITARY SEWER LINE                |
|        | WATER LINE                         |



Seals:



Corp. NC License: F-1320

**LITTLE RIVER PARK**  
1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00  
Date: 11.20.2025  
Revisions:

Sheet Title:  
**LANDSCAPE PLAN**

Sheet No:  
**C601**



Y:\North Carolina\TX50067\1725-00067-00\_Zebulon\_Little\_River\_Park\_Lighting\_Plan.dwg

| NO. | DATE | REVISION | BY |
|-----|------|----------|----|
|     |      |          |    |
|     |      |          |    |
|     |      |          |    |
|     |      |          |    |

**LIGHTING DESIGN TOLERANCE**  
The calculated footcandle light levels in this lighting design are predicted values and are based on specific information that has been supplied to Duke Energy. Any inaccuracies in the supplied information, differences in luminaire installation, lighted area geometry including elevation differences, reflective properties of surrounding surfaces, obstructions (foliage or otherwise) in the lighted area, or lighting from sources other than listed in this design may produce different results from the predicted values. Normal tolerances of voltage, lamp output, and ballast and luminaire manufacture will also affect results.

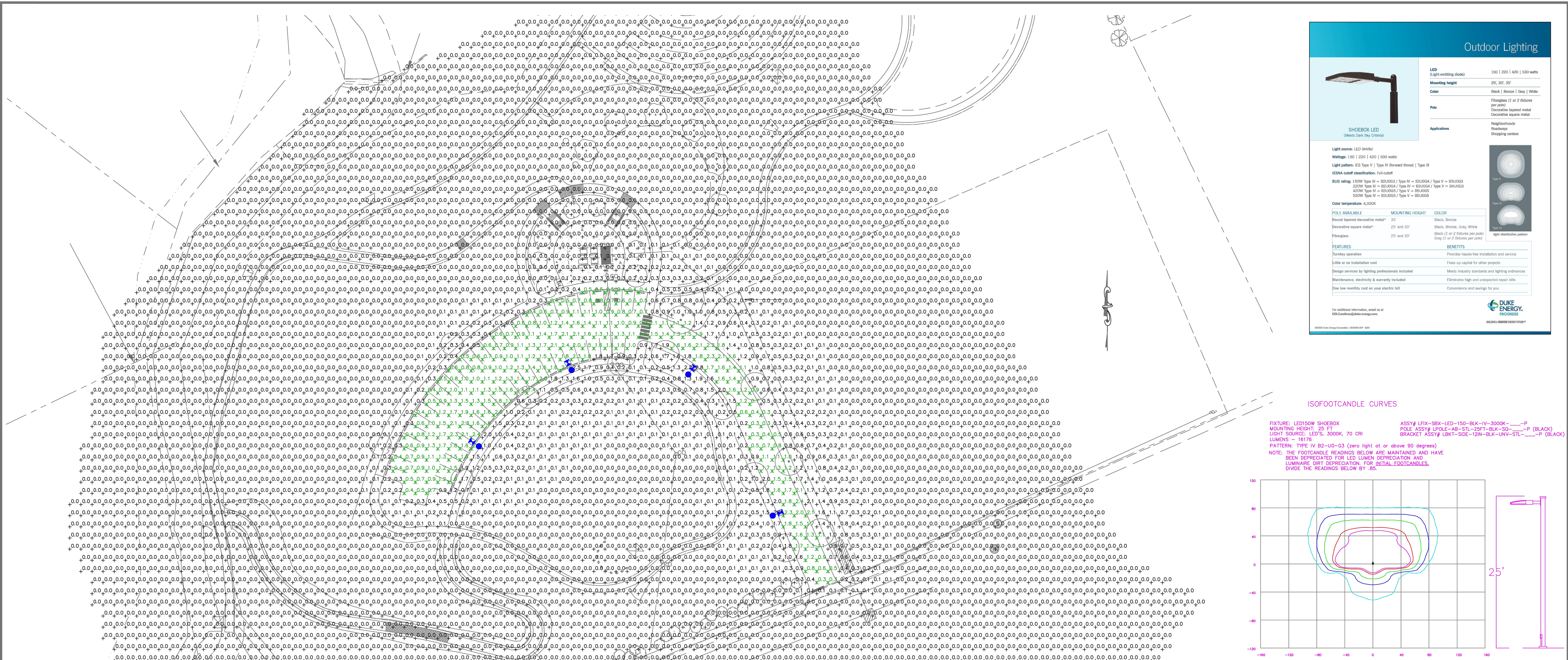


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| LITTLE RIVER PARK         |                                         |       |                  |
|---------------------------|-----------------------------------------|-------|------------------|
| ZEBULON, NC               |                                         |       |                  |
| SITE LIGHTING ARRANGEMENT |                                         |       |                  |
| Designed by               | DUKE ENERGY PROGRESS LIGHTING SOLUTIONS |       |                  |
| Reviewed by               | N. Johnson                              | Scale | 1" = 40'         |
| Date                      | 02/27/2025                              | Size  | Drawing size "D" |
| Description               | LED SHOEBOX                             |       |                  |
| Drawing No.               | 25-0083A                                | Sht.  | 1 OF 1           |

Sheet Title:  
**SITE LIGHTING PLAN**

Sheet No:  
**C700**



| Statistics  |        |        |        |        |         |         |
|-------------|--------|--------|--------|--------|---------|---------|
| Description | Symbol | Avg    | Max    | Min    | Max/Min | Avg/Min |
| Parking     | ✕      | 1.2 fc | 2.5 fc | 0.3 fc | 8.3:1   | 4.0:1   |

| Schedule |       |     |                                    |              |             |      |
|----------|-------|-----|------------------------------------|--------------|-------------|------|
| Symbol   | Label | QTY | Description                        | Number Lamps | Lamp Output | LLF  |
| ✕        | A     | 4   | LED 150w Shoebox - Type IV - 3000K | 48           | 337         | 0.85 |



**SHOEBOX LED**  
(Meets Dark Sky Criteria)

**LED**  
(Light-emitting diode)

**Mounting height**  
25', 30', 35'

**Color**  
Black / Bronze / Gray / White

**Pole**  
per pole  
Decorative tapered metal  
Decorative square metal

**Applications**  
Highways  
Roadways  
Shopping centers

**Light source:** LED (White)

**Wattage:** 150 | 220 | 400 | 500 watts

**Light pattern:**IES Type V | Type IV (Forward throw) | Type III

**IESNA cutoff classification:** Not cutoff

**Blue safety:** 150W Type III = SBL0003 / Type IV = SBL0004 / Type V = SBL0003  
220W Type III = SBL0004 / Type IV = SBL0004 / Type V = SBL0003  
400W Type III = SBL0003 / Type V = SBL0003  
500W Type IV = SBL0003 / Type V = SBL0003

**Color temperature:** 4,000K

**FOOT CANDLE**

| FOOT CANDLE                     | MOUNTING HEIGHT | COLOR                                                                 |
|---------------------------------|-----------------|-----------------------------------------------------------------------|
| Mount tapered decorative metal* | 25'             | Black, Bronze, Gray, White                                            |
| Decorative square metal*        | 25' and 30'     | Black, Bronze, Gray, White                                            |
| Flangeless                      | 25' and 30'     | Black (2 or 2.5 fixtures per pole)<br>Gray (1 or 2 fixtures per pole) |

**FEATURES**

- Turnkey operation
- Little or no installation cost
- Design services by lighting professionals included
- Maintenance, electricity & warranty included
- One low monthly cost as per electric bill

**BENEFITS**

- Provides means-free installation and service
- Proven as needed for other projects
- Meets industry standards and lighting ordinances
- Eliminates high and unexpected repair bills
- Convenience and savings for you

For additional information, email us at  
LED@DukeEnergy.com

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**Outdoor Lighting**

**LED**  
(Light-emitting diode)

**Mounting height**  
25', 30', 35'

**Color**  
Black / Bronze / Gray / White

**Pole**  
per pole  
Decorative tapered metal  
Decorative square metal

**Applications**  
Highways  
Roadways  
Shopping centers

**Light source:** LED (White)

**Wattage:** 150 | 220 | 400 | 500 watts

**Light pattern:**IES Type V | Type IV (Forward throw) | Type III

**IESNA cutoff classification:** Not cutoff

**Blue safety:** 150W Type III = SBL0003 / Type IV = SBL0004 / Type V = SBL0003  
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500W Type IV = SBL0003 / Type V = SBL0003

**Color temperature:** 4,000K

**FOOT CANDLE**

| FOOT CANDLE                     | MOUNTING HEIGHT | COLOR                                                                 |
|---------------------------------|-----------------|-----------------------------------------------------------------------|
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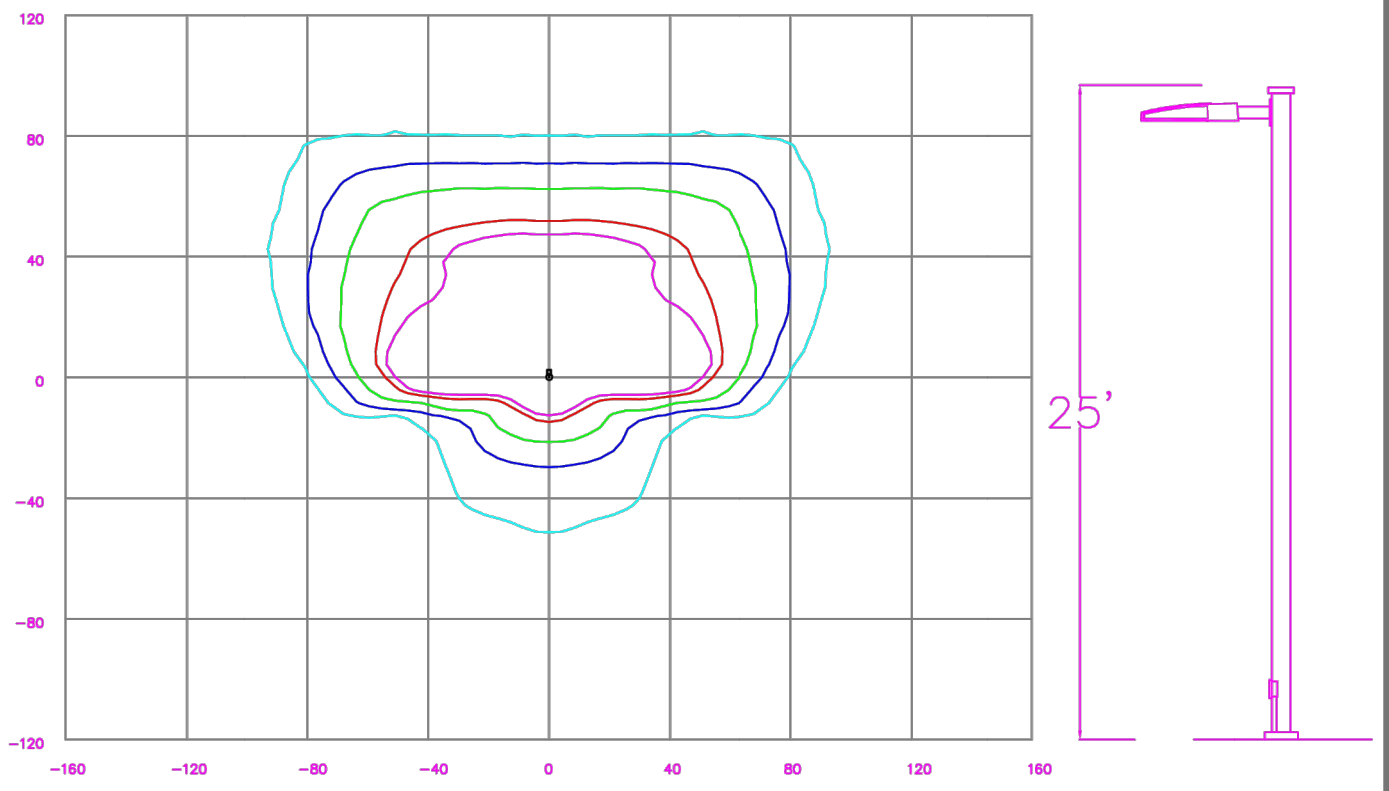
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**ISOFOOTCANDLE CURVES**

**FIGURE: LED150W SHOEBOX**  
MOUNTING HEIGHT: 25 FT  
LIGHT SOURCE: LED S, 5000K, 70 CRI  
LUMENS = 18756

**ASSY: LFX-SBK-LED-150-BLK-IV-3000K**  
POLE ASSY: LPOLE-AB-STL-28FT-BLK-SO-P (BLACK)  
BRACKET ASSY: LBKT-12B-12B-BLK-INV-STL-P (BLACK)

**NOTE: THE FOOTCANDLE READINGS BELOW ARE MAINTAINED AND HAVE BEEN DEPRECIATED FOR LED LUMEN DEPRECIATION AND LUMINAIRE DIRT DEPRECIATION. FOR INITIAL FOOTCANDLES, DIVIDE THE READINGS BELOW BY .85.**



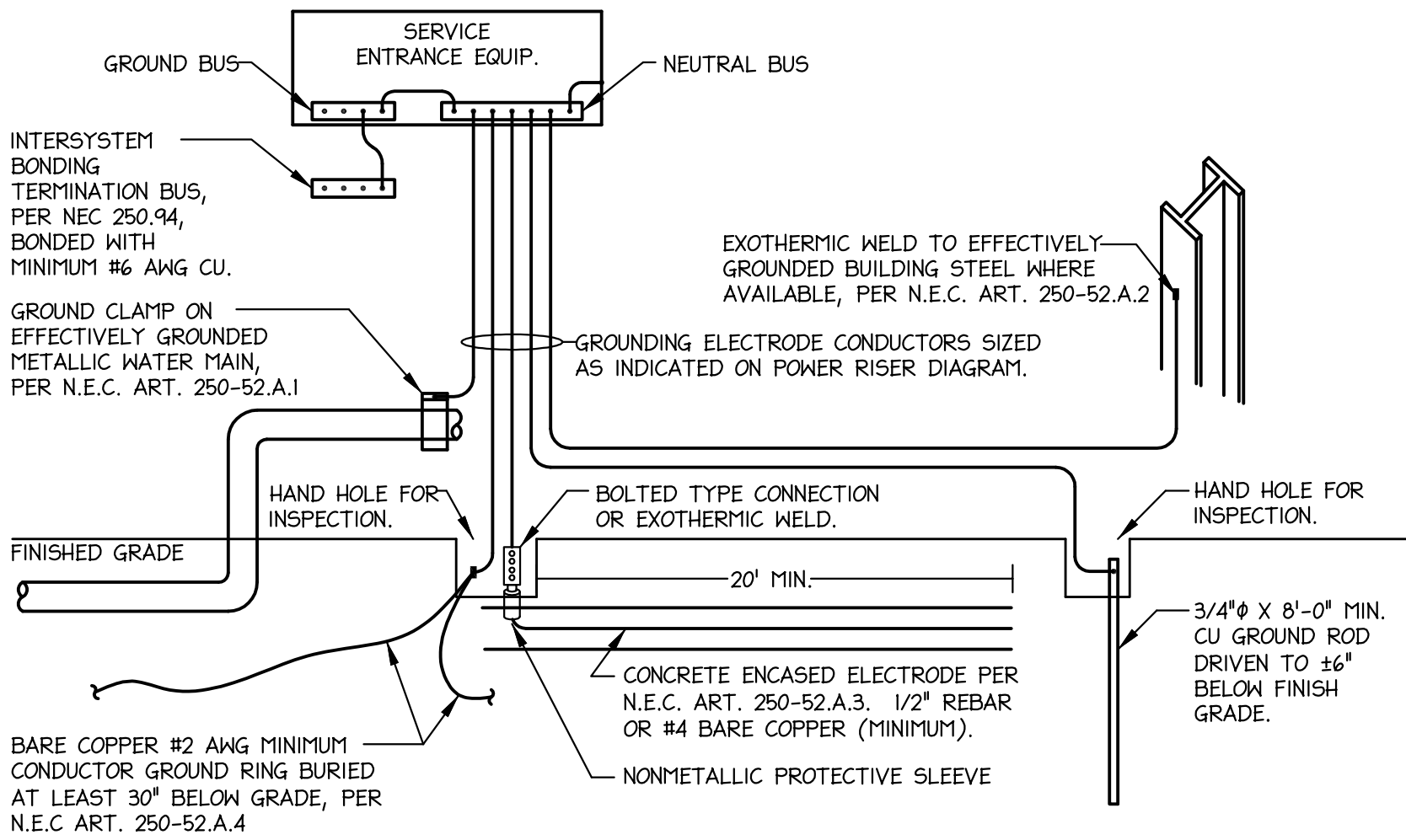
Seals:

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**LITTLE RIVER PARK**  
1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA



| LIGHTING FIXTURE SCHEDULE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |                                      |           |      |                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |             |          |                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------|-------------|----------|---------------------------------------|
| MARK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | MANUF.      | CATALOG NUMBER                       | LAMP DATA |      | VOLTS                                                                                                                                                                                                                                                                                                                                                                                                                       | BALLAST DATA |      | INPUT WATTS | MOUNTING | DESCRIPTION                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                      | NO.       | TYPE |                                                                                                                                                                                                                                                                                                                                                                                                                             | NO.          | TYPE |             |          |                                       |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | HE WILLIAMS | 6DR-TL-L20/835-DIM-UNV-L-M-OF-WET/CC | -         | LED  | 120/277                                                                                                                                                                                                                                                                                                                                                                                                                     | -            | -    | 19          | RECESSED | GENERAL - 6" WET LISTED RECESSED LED. |
| NOTES:<br>I. CATALOG NUMBERS AND MANUFACTURERS ARE TO INDICATE TYPE AND QUALITY OF FIXTURE DESIRED. SUBMIT CUTSHEETS OF THESE AND ALTERNATE MANUFACTURERS FOR ARCHITECT AND OWNER APPROVAL PRIOR TO PURCHASE OF ANY FIXTURES. INFORMATION ON ALTERNATE FIXTURES PROPOSED BY THE CONTRACTOR SHALL INCLUDE THE ADD/DEDUCT ASSOCIATED WITH ACCEPTANCE OF THAT FIXTURE (OR THE ALTERNATE PACKAGE AS A WHOLE).                                                                                                                    |             |                                      |           |      |                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |             |          |                                       |
| LIGHTING SYSTEMS<br>ENERGY CONSERVATION CODE SECTION 405                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |                                      |           |      |                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |             |          |                                       |
| THIS PROJECT IS CLASSIFIED AS - <input type="checkbox"/> RESIDENTIAL <input checked="" type="checkbox"/> COMMERCIAL (SEE BELOW)                                                                                                                                                                                                                                                                                                                                                                                              |             |                                      |           |      |                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |             |          |                                       |
| LIGHTING POWER DENSITY CALCULATION COMPLIANCE<br>INTERIOR LIGHTING POWER DENSITY CALCULATION PER TABLE 405.4.2. SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE INFORMATION.<br><b>RESTROOM</b><br>INTERIOR WATTAGE SPECIFIED VS. ALLOWED <u>140 VS. 229</u><br>EXTERIOR LIGHTING POWER DENSITY CALCULATION PER TABLE 405.6.2. SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE INFORMATION.<br>TRADABLE EXTERIOR WATTAGE SPECIFIED VS. ALLOWED <u>171 VS. 600</u><br>NONTRADABLE EXTERIOR WATTAGE SPECIFIED VS. ALLOWED <u>NA VS. NA</u> |             |                                      |           |      | DESIGNER STATEMENT:<br>TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE LIGHTING SYSTEMS REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE, SECTION 505 AND ANY LOCAL AMENDMENTS THEREOF.<br><br>SIGNED: <u> II</u><br>NAME: <u>JAMES HOFFMAN III</u><br>TITLE: <u>ELECTRICAL ENGINEER</u> |              |      |             |          |                                       |
| SECTION 406 COMPLIANCE - <input type="checkbox"/> N/A <input type="checkbox"/> 406.11 <input checked="" type="checkbox"/> 406.12 <input type="checkbox"/> 406.13 <input type="checkbox"/> 406.14 <input type="checkbox"/> 406.15 <input type="checkbox"/> 406.16                                                                                                                                                                                                                                                             |             |                                      |           |      |                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |             |          |                                       |



### 1 GROUNDING DETAIL

NTS  
GROUNDING ELECTRODES SHALL BE PROVIDED IN ACCORDANCE WITH NEC SECTION 250. ALL GROUNDING ELECTRODE CONDUCTORS SIZED AS INDICATED ON POWER RISER DIAGRAM. **ALL METHODS OF CREATING THE GROUNDING SYSTEM MAY NOT BE REQUIRED OR AVAILABLE.**

| ELECTRICAL SYMBOL LEGEND |                                                                                                                                                                                                                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | CIRCUIT CONDUCTORS CONCEALED IN FLOOR, WALL OR CEILING.<br>ARROWHEAD INDICATES HOMERUN TO PANEL NOTED.                                                                                                                                                                            |
|                          | SINGLE POLE SWITCH, 20A, 120/277 VOLT, 48" A.F.F. TO CENTER.                                                                                                                                                                                                                      |
|                          | DUPLEX RECEPTACLE, 15 AMP, 120 VOLT, 18" A.F.F. TO CENTER. FOR SINGLE RECEPTACLE ON A CIRCUIT, USE A 20A RECEPTACLE.<br>"GF" INDICATES GROUND FAULT CIRCUIT INTERRUPTER TYPE.<br>"WP" INDICATES WEATHERPROOF.<br>"EWC" INDICATES MOUNT INSIDE ENCLOSURE OF ELECTRIC WATER COOLER. |
|                          | 240/120V PANEL, SURFACE OR RECESS MOUNTED, SEE SCHEDULE FOR DETAILS.                                                                                                                                                                                                              |
|                          | SURFACE, RECESSED OR GROUND MOUNTED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR DETAILS.                                                                                                                                                                                           |
|                          | ELECTRIC UTILITY METER LOCATION.                                                                                                                                                                                                                                                  |
| ELECTRICAL ABBREVIATIONS |                                                                                                                                                                                                                                                                                   |
| 18"                      | DIMENSION INDICATES HEIGHT ABOVE FINISHED FLOOR AT WHICH CENTER OF DEVICE IS TO BE MOUNTED.                                                                                                                                                                                       |
| AFF                      | ABOVE FINISHED FLOOR.                                                                                                                                                                                                                                                             |
| AFG                      | ABOVE FINISHED GRADE.                                                                                                                                                                                                                                                             |
| EC                       | ELECTRICAL CONTRACTOR.                                                                                                                                                                                                                                                            |
| FPN                      | FUSE PER EQUIPMENT NAMEPLATE REQUIREMENTS.                                                                                                                                                                                                                                        |
| GC                       | GENERAL CONTRACTOR.                                                                                                                                                                                                                                                               |
| MC                       | MECHANICAL CONTRACTOR.                                                                                                                                                                                                                                                            |
| PC                       | PLUMBING CONTRACTOR.                                                                                                                                                                                                                                                              |
| WP                       | INDICATES DEVICE TO HAVE WEATHERPROOF COVER.                                                                                                                                                                                                                                      |
| UON                      | UNLESS OTHERWISE NOTED.                                                                                                                                                                                                                                                           |

| GENERAL ELECTRICAL NOTES |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.                       | ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL LOCAL AND STATE CODES.                                                                                                                                                                                                                                                                                                                      |
| 2.                       | ALL MATERIAL, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM TO THE STANDARDS OF THE UNDERWRITER'S LABORATORIES, INC., AND THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION.                                                                                                                                                                                                                                                     |
| 3.                       | ALL ELECTRICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR. DRAWINGS ARE DIAGRAMMATIC ONLY AND INDICATE ONLY THE GENERAL ARRANGEMENT. SEE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.                                                                                                                                                                                                                   |
| 4.                       | ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER.                                                                                                                                                                                                                                                                                                                    |
| 5.                       | ELECTRICAL CONTRACTOR SHALL MAKE ALL ELECTRICAL POWER CONNECTIONS TO HVAC, PLUMBING AND OTHER EQUIPMENT AS REQUIRED.                                                                                                                                                                                                                                                                                                                                 |
| 6.                       | A COMPLETE GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE DRAWINGS.                                                                                                                                                                                                                                                                                                                 |
| 7.                       | ALL CUTTING AND PATCHING OF WALLS AND FLOORS FOR ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.                                                                                                                                                                                                                                                                                                                      |
| 8.                       | CONDUCTORS SHALL BE COPPER RATED AT NOT LESS THAN 600 VOLTS. MINIMUM SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL WIRE #8 AWG AND LARGER SHALL BE STRANDED. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID, UNLESS OTHERWISE NOTED. ALUMINUM CONDUCTORS AND MINIMUM SIZE OF #14 SHALL BE USED IN RESIDENTIAL UNITS. BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE THIN OR THIN AS REQUIRED.                                            |
| 9.                       | USE SCHEDULE 40 PVC OUTDOORS WHERE NOT SUBJECT TO PHYSICAL DAMAGE OR BELOW FLOOR SLAB. MINIMUM CONDUIT SIZE TO BE 1/2". TYPE NM, MC AND AC CABLE MAY BE USED WHERE PERMISSIBLE BY NEC. FLEXIBLE CONDUIT SHALL BE USED FOR CONNECTIONS TO VIBRATING EQUIPMENT AND LUMINAIRES, BUT SHALL NOT EXCEED 6' IN LENGTH.                                                                                                                                      |
| 10.                      | PROVIDE A PULLWIRE IN ALL EMPTY CONDUITS.                                                                                                                                                                                                                                                                                                                                                                                                            |
| 11.                      | PROVIDE A TYPED DIRECTORY IN ALL PANELBOARDS CLEARLY DESCRIBING THE LOCATION OF AND TYPE OF LOAD BEING SERVED FOR ALL CIRCUITS. PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL PANELBOARDS AND DISCONNECT SWITCHES, WHITE LETTERS ON BLACK BACKGROUND.                                                                                                                                                                                                 |
| 12.                      | FUSES 0 - 600 AMPS SHALL BE UL CLASS "RK-1" LOW PEAK DUAL ELEMENT TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSSMANN, UNLESS NOTED OTHERWISE.                                                                                                                                                                                                                                                                            |
| 13.                      | ALL TERMINALS/LUGS SHALL BE 60/75" RATED. ALL TERMINALS, SPLICING CONNECTORS, LUGS, ETC SHALL BE IDENTIFIED FOR USE WITH THE MATERIAL (CU/AL) OF THE CONDUCTOR AND SHALL BE PROPERLY INSTALLED.                                                                                                                                                                                                                                                      |
| 14.                      | VERIFY ALL REQUIREMENTS AND COORDINATE EXACT LOCATION OF INCOMING ELECTRICAL SERVICE WITH LOCAL POWER COMPANY PRIOR TO PROJECT START-UP. NOTIFY ENGINEER OF ANY CHANGES AS MAY BE REQUIRED.                                                                                                                                                                                                                                                          |
| 15.                      | E.C. TO VERIFY DEVICE PLATE COLOR AND MATERIAL WITH ARCHITECT PRIOR TO PURCHASE.                                                                                                                                                                                                                                                                                                                                                                     |
| 16.                      | THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ELECTRICAL EQUIPMENT FROM FOREIGN MATERIAL DURING CONSTRUCTION (PAINT, SPACKLE, ETC.).                                                                                                                                                                                                                                                                                             |
| 17.                      | WHERE A HOME RUN IS SHOWN THE CIRCUIT SHALL BE INSTALLED IN A DEDICATED CONDUIT, DO NOT COMBINE WITH OTHER CIRCUITS. WHERE A CIRCUIT HOMERUN IS NOT SHOWN, THE CONTRACTOR SHALL COMBINE CIRCUITS AS FOLLOWS: A MAXIMUM OF THREE 20A BRANCH CIRCUITS MAY BE COMBINED IN A COMMON HOMERUN WITH SEPARATE NEUTRALS FOR A MAXIMUM TOTAL OF SIX CURRENT CARRYING CONDUCTORS. ALL BRANCH CIRCUITS LARGER THAN 20A SHALL BE SEPARATELY HOMERUN TO THE PANEL. |
| 18.                      | RECEPTACLES IN COMMERCIAL AREAS SHALL BE SPECIFICATION GRADE EQUAL TO HUBBELL 5200/5300 SERIES; GROUND FAULT RECEPTACLES SHALL BE EQUAL TO HUBBELL GF-5362. LIGHTING SWITCHES SHALL BE SPECIFICATION GRADE EQUAL TO HUBBELL 1200 SERIES.                                                                                                                                                                                                             |
| 19.                      | ALL EXTERIOR FIXTURES AND DEVICES SHALL BE RATED FOR OPERATION AT 0' F AND SHALL BE DAMP OR WET LABELED AS REQUIRED.                                                                                                                                                                                                                                                                                                                                 |
| 20.                      | THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL ELECTRICAL EQUIPMENT, DEVICES, ETC. IN ACCORDANCE WITH LOCAL SEISMIC CODE REQUIREMENTS. PROVIDE SEISMIC RESTRAINTS, ACCESSORIES AND INSTALLATION DETAIL AS REQUIRED.                                                                                                                                                                                                               |
| 21.                      | ALL QUESTIONS MUST BE SUBMITTED IN RFI FORMAT TO THE ARCHITECT AND MUST BE ADDRESSED BY THE APPROPRIATE DESIGNER OF RECORD PRIOR TO BECOMING A PROPOSED CHANGE ORDER.                                                                                                                                                                                                                                                                                |

**ALFRED BENESCH & COMPANY**  
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CHARLOTTE, NC 28208  
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1101 Hargett Street, Suite 108  
Raleigh, North Carolina 27604  
Tel: 919.833.8747  
Fax: 919.833.8744

**LITTLE RIVER PARK**  
**1800 WEST GANNON AVENUE**  
**ZEBULON, NORTH CAROLINA**

PROJECT NO: 1725-500672.00  
DATE: 4/15/2025

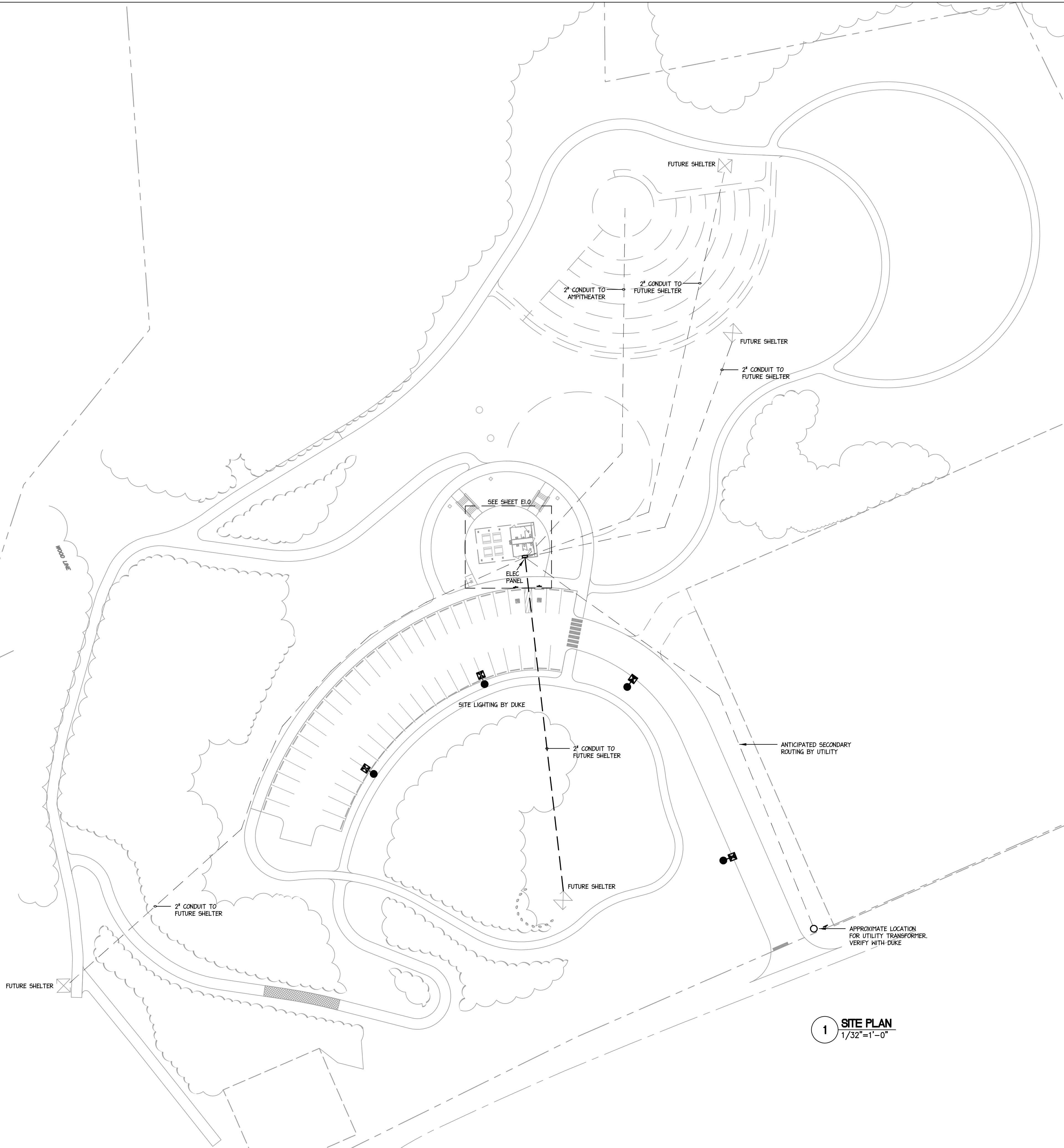
**REVISION SCHEDULE**

| REV NO | REV DATE |
|--------|----------|
|        |          |
|        |          |
|        |          |
|        |          |

ELECTRICAL  
LEGEND AND NOTES

**E0.1**





1 **SITE PLAN**  
1/32"=1'-0"

**LITTLE RIVER PARK**  
1800 WEST GANNON AVENUE  
ZEBULON, NORTH CAROLINA

PROJECT NO: 1725-500672.00  
DATE: 4/15/2025

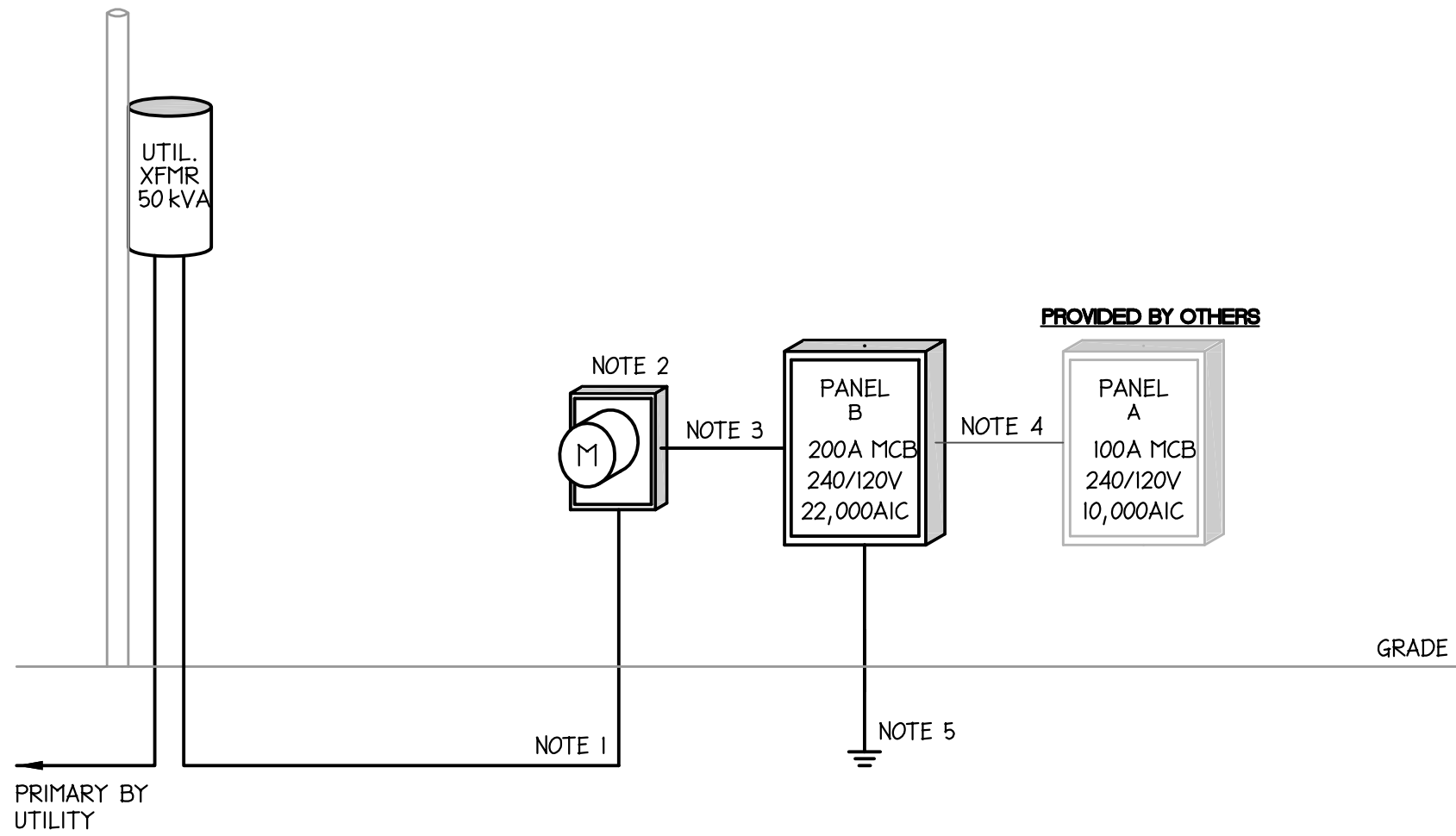
**REVISION SCHEDULE**

| REV NO | REV DATE |
|--------|----------|
|--------|----------|

ELECTRICAL  
SITE PLAN

**E0.2**





## 2 RESTROOM RISER DIAGRAM

DIAGRAMATIC ONLY

### RISER DIAGRAM NOTES:

- SERVICE LATERAL CONDUCTORS TO METER PROVIDED AND INSTALLED BY UTILITY. COORDINATE FOR TRENCHING AND CONDUIT REQUIREMENTS.
- METER BASE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR, TO UTILITY REQUIREMENTS. METER PROVIDED AND INSTALLED BY UTILITY. MOUNT METER AT THE MINIMUM HEIGHT ABOVE FINAL GRADE. COORDINATE REQUIREMENTS WITH UTILITY.
- 3#250 KCM (AL), IN 2½" CONDUIT.
- 3#3 (AL), IN 1" CONDUIT.
- GROUNDING ELECTRODE CONDUCTOR SHALL BE #8 (CU) BONDED TO BUILDING STEEL (IF ANY), SLAB REINFORCING BARS (CONCRETE ENCASED ELECTRODE) AND DRIVEN GROUND ROD, SEE I/ED01.

## PROVIDED BY OTHERS

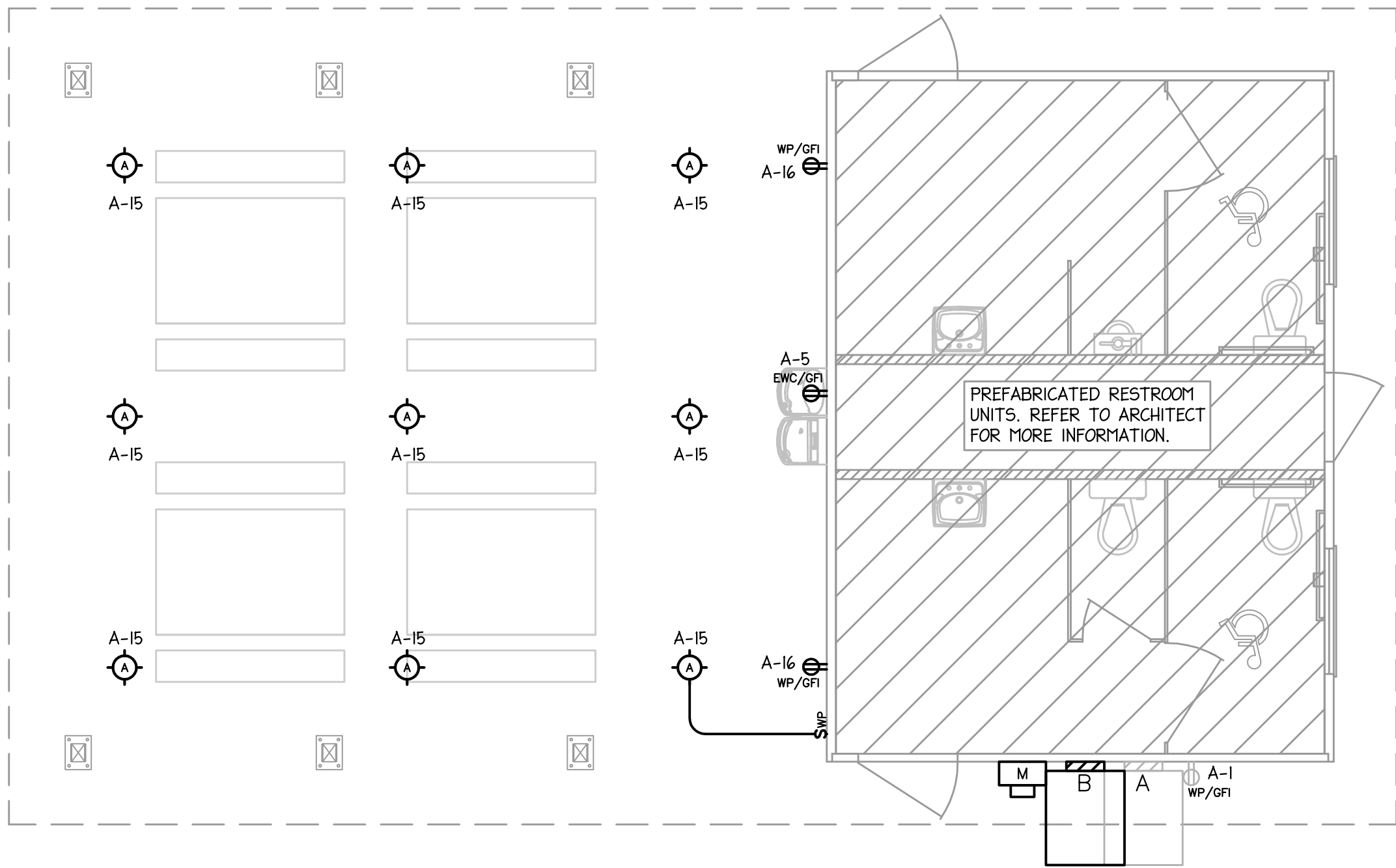
| EXISTING                             |       |           |         |       |     |                 |                 |         |           |       |                                | 1 PHASE 3 WIRE SURFACE NEMA 3R |           |         |       |     |                 |       |                 |           |       |                     |  |
|--------------------------------------|-------|-----------|---------|-------|-----|-----------------|-----------------|---------|-----------|-------|--------------------------------|--------------------------------|-----------|---------|-------|-----|-----------------|-------|-----------------|-----------|-------|---------------------|--|
| VOLTAGE: 240/120V<br>AMPS: 100 - MCB |       |           |         |       |     |                 |                 |         |           |       |                                | PANEL: A                       |           |         |       |     |                 |       |                 |           |       |                     |  |
| LOAD PER PHASE                       |       |           |         |       |     |                 |                 |         |           |       |                                | LOAD PER PHASE                 |           |         |       |     |                 |       |                 |           |       |                     |  |
| - DESCRIPTION -                      | PHASE | WIRE SIZE | BK SIZE | CCT # | A   | B               | CCT #           | BK SIZE | WIRE SIZE | PHASE | - DESCRIPTION -                | PHASE                          | WIRE SIZE | BK SIZE | CCT # | A   | B               | CCT # | BK SIZE         | WIRE SIZE | PHASE | - DESCRIPTION -     |  |
| RECEPTACLE                           | 1     | 12        | 20      | 1     | 0.5 | 0.9             | 2               | 20      | 12        | 1     | LIGHTS                         | 1                              | 12        | 20      | 1     | 0.3 | 0.1             | 2     | 20              | 12        | 1     | EXT. LIGHTING       |  |
| SPACE                                | 1     | -         | -       | 3     | -   | -               | 4               | 20      | 12        | 1     | INSTA-HOT                      | 1                              | 12        | 20      | 3     | -   | -               | 4     | 20              | 12        | 1     | EXT. RECEPTACLE     |  |
| SPACE                                | 1     | -         | -       | 5     | -   | -               | 6               | 20      | 12        | 1     | INSTA-HOT                      | 1                              | 12        | 20      | 5     | 0.1 | 0.1             | 6     | 20              | 12        | 2     | LTS: FUTURE SHELTER |  |
| SPACE                                | 1     | -         | -       | 7     | -   | -               | 8               | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 7     | -   | -               | 8     | 20              | 12        | 2     | REC: FUTURE SHELTER |  |
| SPACE                                | 1     | -         | -       | 9     | -   | -               | 10              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 9     | 0.1 | 0.1             | 10    | 20              | 12        | 2     | LTS: FUTURE SHELTER |  |
| SPACE                                | 1     | -         | -       | 11    | -   | -               | 12              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 11    | -   | -               | 12    | 20              | 12        | 2     | REC: FUTURE SHELTER |  |
| SPACE                                | 1     | -         | -       | 13    | -   | -               | 14              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 13    | -   | -               | 14    | 20              | -         | 1     | SPARE               |  |
| SPACE                                | 1     | -         | -       | 15    | -   | -               | 16              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 15    | -   | -               | 16    | 20              | -         | 1     | SPARE               |  |
| SPACE                                | 1     | -         | -       | 17    | -   | -               | 18              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 17    | -   | -               | 18    | 20              | -         | 1     | SPARE               |  |
| SPACE                                | 1     | -         | -       | 19    | -   | -               | 20              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 19    | -   | -               | 20    | 20              | -         | 1     | SPARE               |  |
| SPACE                                | 1     | -         | -       | 21    | -   | -               | 22              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 21    | -   | -               | 22    | -               | -         | 1     | SPACE               |  |
| SPACE                                | 1     | -         | -       | 23    | -   | -               | 24              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 23    | -   | -               | 24    | -               | -         | 1     | SPACE               |  |
| SPACE                                | 1     | -         | -       | 25    | -   | -               | 26              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 25    | -   | -               | 26    | -               | -         | 1     | SPACE               |  |
| SPACE                                | 1     | -         | -       | 27    | -   | -               | 28              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 27    | -   | -               | 28    | -               | -         | 1     | SPACE               |  |
| SPACE                                | 1     | -         | -       | 29    | -   | -               | 30              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 29    | -   | -               | 30    | -               | -         | 1     | SPACE               |  |
| SPACE                                | 1     | -         | -       | 31    | -   | -               | 32              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 31    | -   | -               | 32    | -               | -         | 1     | SPACE               |  |
| SPACE                                | 1     | -         | -       | 33    | -   | -               | 34              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 33    | -   | -               | 34    | -               | -         | 1     | SPACE               |  |
| SPACE                                | 1     | -         | -       | 35    | -   | -               | 36              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 35    | -   | -               | 36    | -               | -         | 1     | SPACE               |  |
| SPACE                                | 1     | -         | -       | 37    | -   | -               | 38              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 37    | -   | -               | 38    | -               | -         | 1     | SPACE               |  |
| SPACE                                | 1     | -         | -       | 39    | -   | -               | 40              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 39    | -   | -               | 40    | 100             | 2         | 2     | PANEL A             |  |
| SPACE                                | 1     | -         | -       | 41    | -   | -               | 42              | -       | -         | 1     | SPACE                          | 1                              | 12        | 20      | 41    | -   | -               | 42    | -               | -         | 1     | SPACE               |  |
| TOTAL CONNECTED KVA                  |       |           |         |       | 3.8 | 2.4             | DEMAND KVA: 6.4 |         |           |       |                                | TOTAL CONNECTED KVA            |           |         |       |     | 4.6             | 4.4   | DEMAND KVA: 9.4 |           |       |                     |  |
| PANEL RMS SYM. AMPS: SEE RISER       |       |           |         |       | 6.2 | DEMAND AMPS: 27 |                 |         |           |       | PANEL RMS SYM. AMPS: SEE RISER |                                |           |         |       | 9.0 | DEMAND AMPS: 39 |       |                 |           |       |                     |  |

| PANEL "A" LOAD SUMMARY |           |          |         |
|------------------------|-----------|----------|---------|
| LOAD TYPE              | KVA CONN  | DEM FACT | KVA DEM |
| LOADS ON 100AMP MCB    |           |          |         |
| LIGHTS                 | 0.9       | 1.25     | 1.1     |
| RECEPTACLES            | IST 10kVA | 0.5      | 1.0     |
|                        | REMAINDER | -        | 0.5     |
| WATER HEATER           | 4.8       | 1.0      | 4.8     |
| TOTALS                 | 6.2       |          | 6.4     |
| TOTAL AMPS @ 240V 1Ø   | 26.7      |          |         |

| VOLTAGE: 240/120V<br>AMPS: 200 - MCB |       |           |         |       |     |           |                 |         |                 |       |                     | NEW<br>PANEL: B                |           |                     |       |     |     |       |                 |           |                 |                     |  | 1 PHASE 3 WIRE<br>SURFACE MOUNTED<br>NEMA 3R |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-------|-----------|---------|-------|-----|-----------|-----------------|---------|-----------------|-------|---------------------|--------------------------------|-----------|---------------------|-------|-----|-----|-------|-----------------|-----------|-----------------|---------------------|--|----------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| - DESCRIPTION -                      |       |           |         |       |     |           |                 |         |                 |       |                     | LOAD PER PHASE                 |           |                     |       |     |     |       |                 |           |                 |                     |  | - DESCRIPTION -                              |  |  |  |  |  |  |  |  |  |  |  |
|                                      | PHASE | WIRE SIZE | BK SIZE | CCT # | A   | B         | CCT #           | BK SIZE | WIRE SIZE       | PHASE |                     | PHASE                          | WIRE SIZE | BK SIZE             | CCT # | A   | B   | CCT # | BK SIZE         | WIRE SIZE | PHASE           |                     |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SITE LIGHTING                        | 1     | 12        | 20      | 1     | 0.3 | 0.1       | 2               | 20      | 12              | 1     | EXT. LIGHTING       | 1                              | 12        | 20                  | 1     | 0.3 | 0.1 | 2     | 20              | 12        | 1               | EXT. LIGHTING       |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| EQ: EWC                              | 1     | 12        | 20      | 3     |     | 0.8 / 0.4 | 4               | 20      | 12              | 1     | EXT. RECEPTACLE     | 1                              | 12        | 20                  | 3     |     |     | 4     | 20              | 12        | 1               | EXT. RECEPTACLE     |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| LTS: FUTURE SHELTER                  | 2     | 12        | 20      | 5     | 0.1 | 0.1       | 6               | 20      | 12              | 2     | LTS: FUTURE SHELTER | 2                              | 12        | 20                  | 5     | 0.1 | 0.1 | 6     | 20              | 12        | 2               | LTS: FUTURE SHELTER |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| REC: FUTURE SHELTER                  |       |           |         | 7     |     | 0.2 / 0.2 | 8               |         |                 |       | REC: FUTURE SHELTER |                                |           |                     | 7     |     |     | 8     |                 |           |                 | REC: FUTURE SHELTER |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| LTS: FUTURE SHELTER                  | 2     | 12        | 20      | 9     | 0.1 | 0.1       | 10              | 20      | 12              | 2     | LTS: FUTURE SHELTER | 2                              | 12        | 20                  | 9     | 0.1 | 0.1 | 10    | 20              | 12        | 2               | LTS: FUTURE SHELTER |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| REC: FUTURE SHELTER                  |       |           |         | 11    |     | 0.2 / 0.2 | 12              |         |                 |       | REC: FUTURE SHELTER |                                |           |                     | 11    |     |     | 12    |                 |           |                 | REC: FUTURE SHELTER |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPARE                                | 1     | -         | 20      | 13    | -   | -         | 14              | 20      | -               | 1     | SPARE               | 1                              | -         | 20                  | 13    | -   | -   | 14    | 20              | -         | 1               | SPARE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPARE                                | 1     | -         | 20      | 15    | -   | -         | 16              | 20      | -               | 1     | SPARE               | 1                              | -         | 20                  | 15    | -   | -   | 16    | 20              | -         | 1               | SPARE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPARE                                | 1     | -         | 20      | 17    | -   | -         | 18              | 20      | -               | 1     | SPARE               | 1                              | -         | 20                  | 17    | -   | -   | 18    | 20              | -         | 1               | SPARE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPARE                                | 1     | -         | 20      | 19    | -   | -         | 20              | 20      | -               | 1     | SPARE               | 1                              | -         | 20                  | 19    | -   | -   | 20    | 20              | -         | 1               | SPARE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 21    | -   | -         | 22              | -       | -               | 1     | SPACE               | 1                              | -         | -                   | 21    | -   | -   | 22    | -               | -         | 1               | SPACE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 23    | -   | -         | 24              | -       | -               | 1     | SPACE               | 1                              | -         | -                   | 23    | -   | -   | 24    | -               | -         | 1               | SPACE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 25    | -   | -         | 26              | -       | -               | 1     | SPACE               | 1                              | -         | -                   | 25    | -   | -   | 26    | -               | -         | 1               | SPACE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 27    | -   | -         | 28              | -       | -               | 1     | SPACE               | 1                              | -         | -                   | 27    | -   | -   | 28    | -               | -         | 1               | SPACE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 29    | -   | -         | 30              | -       | -               | 1     | SPACE               | 1                              | -         | -                   | 29    | -   | -   | 30    | -               | -         | 1               | SPACE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 31    | -   | -         | 32              | -       | -               | 1     | SPACE               | 1                              | -         | -                   | 31    | -   | -   | 32    | -               | -         | 1               | SPACE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 33    | -   | -         | 34              | -       | -               | 1     | SPACE               | 1                              | -         | -                   | 33    | -   | -   | 34    | -               | -         | 1               | SPACE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 35    | -   | -         | 36              | -       | -               | 1     | SPACE               | 1                              | -         | -                   | 35    | -   | -   | 36    | -               | -         | 1               | SPACE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 37    | -   | -         | 38              | -       | -               | 1     | SPACE               | 1                              | -         | -                   | 37    | -   | -   | 38    | -               | -         | 1               | SPACE               |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 39    | -   | -         | 40              | 100     | 2               | 2     | PANEL A             | 1                              | -         | -                   | 39    | -   | -   | 40    | 100             | 2         | 2               | PANEL A             |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| SPACE                                | 1     | -         | -       | 41    | -   | -         | 42              |         |                 |       |                     | 1                              | -         | -                   | 41    | -   | -   | 42    |                 |           |                 |                     |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| TOTAL CONNECTED KVA                  |       |           |         |       | 4.6 |           | 9.4             |         | DEMAND KVA: 9.4 |       |                     |                                |           | TOTAL CONNECTED KVA |       |     |     |       | 9.0             |           | DEMAND KVA: 9.4 |                     |  |                                              |  |  |  |  |  |  |  |  |  |  |  |
| PANEL RMS SYM. AMPS: SEE RISER       |       |           |         |       | 6.2 |           | DEMAND AMPS: 39 |         |                 |       |                     | PANEL RMS SYM. AMPS: SEE RISER |           |                     |       |     | 9.0 |       | DEMAND AMPS: 39 |           |                 |                     |  |                                              |  |  |  |  |  |  |  |  |  |  |  |

- PANEL SHALL BE SERVICE ENTRANCE RATED, EQUAL TO SIEMENS PI PANELBOARD.
- ATC - CIRCUIT THROUGH 24-HR, 7-DAY, MULTI-POLE ASTRONOMICAL TIMECLOCK. LOCATE TIMECLOCK ADJACENT TO PANEL.
- GFI - PROVIDE GFI BREAKER FOR CIRCUIT. GFI RECEPTACLES MAY BE USED IN LIEU OF GFI BREAKERS SO LONG AS THE DEVICE(S) CONFORM TO NEC CODE REQUIREMENTS FOR GFI PROTECTION.

| PANEL "B" LOAD SUMMARY |           |          |         |
|------------------------|-----------|----------|---------|
| LOAD TYPE              | KVA CONN  | DEM FACT | KVA DEM |
| LOADS ON 200AMP MCB    |           |          |         |
| LIGHTS                 | 1.7       | 1.25     | 2.1     |
| RECEPTACLES            | IST 10kVA | 1.7      | 1.0     |
|                        | REMAINDER | -        | 0.5     |
| WATER HEATER           | 4.8       | 1.0      | 4.8     |
| EQUIPMENT              | 0.8       | 1.0      | 0.8     |
| TOTALS                 | 9.0       |          | 9.4     |
| TOTAL AMPS @ 240V 1Ø   | 39.2      |          |         |



## 1 RESTROOM FLOOR PLAN

1/4"=1'-0"

### GENERAL NOTES: (THIS SHEET)

- FAINT ITEMS ARE PROVIDED BY OTHERS.