

# Pender County Planning and Community Development

## Planning Division

805 S. Walker Street  
PO Box 1519  
Burgaw, NC 28425



Phone: 910-259-1202  
Fax: 910-259-1295  
[www.pendercountync.gov](http://www.pendercountync.gov)

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## Integrity Building Application Information Major Site Development Plan

**Case Number:** SDP 2024-418

**Application Type:** Major Site Development Plan

**Applicant:** Integrity Building Companies

**Owners:** Optimal Land LLC

**Location:** 1.5 miles south of the intersection of NC HWY 210 and US HWY 17 on the southbound side of US HWY 17

**Property ID #(s):** 3282-21-6391-0000

**Description:** Development application for the construction of 5 buildings totaling approximately 180,245 sq ft for commercial and light industrial uses with associated parking and stormwater management.

**Current Zoning:** GB, General Business, and IT, Industrial Transitional

**Technical Review Committee Meeting:** 10/3/2024

**Board of County Commissioners/Planning Board Meeting:** N/A

### Application Materials

Application Package  
Site Plan

# **APPLICATION PACKAGE**

# Pender County Planning and Community Development

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## Major Site Development Plan Submission

Applications will be considered for the Technical Review Committee hearing and reviewed by Staff only when deemed complete. The application will be regarded as incomplete until the following items are received by the Planning and Community Development Staff.

1.  **Pre-submittal Meeting**  
Date of Meeting \_\_\_\_\_
2.  **Signed Application**
3.  **Payment**  
\$250
4.  **Paper Plan Sets**  
Two (2) 24 x 36, Four (4) 11 x 17
5.  **Digital Submission**  
For all documents submitted in paper copy, provide a digital version. These may be emailed or uploaded to a share folder. Physical media such as CD or USB drives will not be accepted.
6.  **Adjacent Property List**  
A list of names and addresses, as obtained from the county tax listings and tax abstract, to the owners of all properties located within 500-feet of the perimeter of the project bounds.
7.  **Adjacent Property Envelopes**  
The applicant shall provide a set of business envelopes addressed to each of the owners of all properties located within 500-feet of the perimeter of the project bounds and accompanied with the amount of postage required for first class postage. Do not include return address or company branding on envelopes.
8. \_\_\_\_\_ **Permits**  
Include any permits issued on the project including but not limited to: environmental, traffic, utility, or site specific conditions.
9.  **Site Plan Requirements**  
A prepared site plan in accordance with the Unified Development Ordinance standards Section 6.3, Pender County Collector Street Plan, Pender County Transportation Plan, other approved State of Federal Transportation Improvement Plan, or any other adopted plan in Pender County.  
(See Major Site Development Checklist)

I certify that all information presented in this application is accurate to the best of my knowledge.

Signature of Applicant

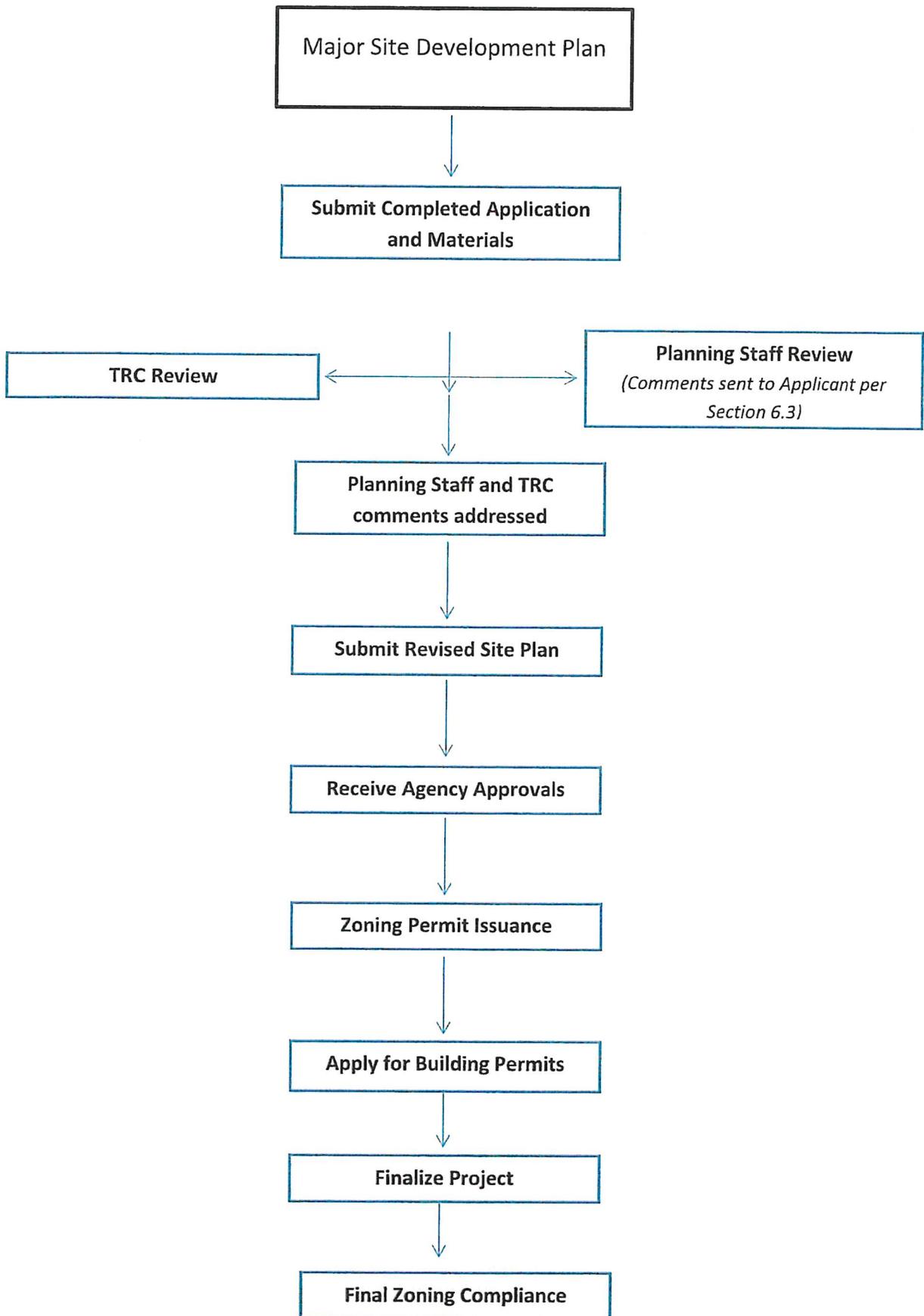
Date 6/10/2024

Printed Name

Reed Weston

Staff Initials: \_\_\_\_\_

Date: \_\_\_\_\_



Specific requirements can be found in Section 6.3 of the Pender County Unified Development Ordinance

## **Major Site Development Plan Specific Requirements**

### **1. Major Site Development Application Submittal**

- Site Plan (per Section 6.3)
  - Scale
  - North Arrow
  - All property information (zoning, setbacks, PIN #)
  - Adjacent property info (owner, zoning, use, PIN #)
  - References to any previously approved plans
  - Utility providers
  - All existing and proposed structures
  - Buffering (Section 8.2.6) & Landscaping (8.3)
  - Parking (Section 7.10)
  - Lighting
  - Cross Access Connections (Section 7.4.4)
  - AM/PM Peak Hour Trip Calculations (TIA required with 100 AM/PM trips or >1,000 trips per day)
  - Soil Erosion and Sedimentation Control Plan
  - Location of all environmental features
  - Stormwater management features
  - Proposed accesses, easements, streets, and sidewalks
- Permits received

### **2. TRC Meeting**

- Site Plan Review
- Agency comments/requirements

### **3. Post-TRC Meeting**

- Submit site plan with revisions
- Receive agency approvals
- Forward all agency approvals to Planning Staff.

### **4. Approval of Site Plan**

- All TRC comments and agency requirements addressed
- Zoning approval allows for building permit process to begin
- Apply for building permits

### **5. Final Zoning**

- Site Visit to check the following:
  - Landscaping
  - Buffering
  - Parking

# Pender County Planning and Community Development

**Planning Division**

805 S. Walker Street  
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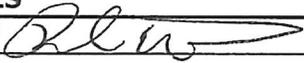
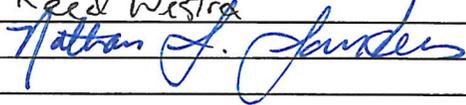
Phone: 910-259-1202  
Fax: 910-259-1295  
[www.pendercountync.gov](http://www.pendercountync.gov)

## MAJOR AND MINOR SITE DEVELOPMENT APPLICATION

| THIS SECTION FOR OFFICE USE  |  |  |                       |
|--|--|--|-----------------------|
| Date:  | Permit Number:   | Permit Fee:                                      | Invoice Number:       |
| *Zoning Approval ONLY: YES / NO  |  | Final Zoning Compliance Approved: YES / NO / N/A |                       |
| Type of Site Development Plan:   | <input checked="" type="checkbox"/> Major  | <input type="checkbox"/> Minor                   |                       |
| SECTION 1: GENERAL INFORMATION   |  |  |                       |
| Applicant's Name:  | Integrity Building Companies   | Property Owner's Name:                           | Optimal Land LLC      |
| Applicant's Address:   | 141 Division Drive, #120   | Property Owner's Address:                        | 2201 Burnett Road     |
| City, State, & Zip   | Wilmington, NC 28401   | City, State, & Zip                               | Wilmington, NC 28401  |
| Phone Number:  | 910-612-9801   | Phone Number:                                    |                       |
| Email Address:   | reed@ibcroofing.com  | Email Address:                                   |                       |
| Legal relationship of applicant to landowner:                                  | Purchaser of property  |  |                       |
| SECTION 2: PROJECT INFORMATION   |  |  |                       |
| PIN (Property Id #):   | 3282-21-6391-0000  | Total property acreage:                          | 7.65 acres            |
| Zoning:  | Light Industrial (LI)  | Acreage to be disturbed:                         |                       |
| Water Provider:  | Pender County Utilities  | Wastewater Provider:                             | Pluris Hampstead, LLC |
| Directions to Site:  | 1.5 miles south of intersection  | Township:  |                       |
|  | of Hwy 210 and US Hwy 17   | Road Type:                                       | Public/Private/Both   |
|  | on southbound side of US   |  |                       |
|  | 17 (13047 Hwy 17)  |  |                       |
| Lot Size: 7.65 acres   | Sq Ft of Building: 180,245 sf  | Building Height:                                 |                       |
| Setbacks   | Front: 40  | Side: 25   | Rear: 25              |
| NAICS Code/Use:  |  |  |                       |
| Business Name:   |  |  |                       |
| Describe activities to be undertaken on project site:                          | Tree removal, clearing and grading for development of five metal buildings, including driveway, parking, and stormwater management |  |                       |
| Ownership:   | Number of Employees:   | Number of Members:                               | Seating Capacity:     |
| <input checked="" type="checkbox"/> Private<br><input type="checkbox"/> Public |  |  |                       |

*\*If the applicant is not the owner of the property, a notarized letter from the property owner may be required*

*\*Zoning approval is for the use being proposed ONLY, other department approvals may be required i.e. Fire Marshal, Environmental Health, Permitting, etc...*

| SECTION 4: ADDITIONAL COMMENTS |   |               |
|--------------------------------|---|---------------|
|                                |   |               |
|                                |   |               |
|                                |   |               |
|                                |   |               |
| SECTION 5: SIGNATURES          |   |               |
| Applicant's Signature          |  | Date: 6/10/24 |
| Applicant's Name Printed       | Reed Westra   | Date: 6/10/24 |
| Owner's Signature              |  | Date: 6/17/24 |
| Owner's Name Printed           |   | Date:         |
| Planning Staff:                |   | Date:         |

# **SITE PLAN(S)**

# INTEGRITY BUSINESS PARK

INTEGRITY BUILDING COMPANIES

141 DIVISION DRIVE #120

WILMINGTON, NC 28401

PARCEL: 3282-21-6391-0000  
 PENDER COUNTY, NC  
 MAJOR SITE DEVELOPMENT PLAN  
 SEPTEMBER 6, 2024

ENGINEER  
 Stormwater Management  
 Civil Engineering - Land Development



**RIVERVIEW**  
 Engineering

4904 PARK AVENUE  
 WILMINGTON, NC 28403  
 nlauretta@rivervieweng.com

www.rivervieweng.com



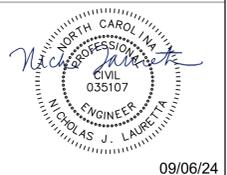
Know what's below.  
 Call before you dig.

PROJECT OWNER

INTEGRITY BUILDING COMPANIES  
 141 DIVISION DRIVE #120  
 WILMINGTON, NC 28401

INTEGRITY  
 BUSINESS PARK

STAMP



09/06/24

ISSUE FOR  
 REVIEW - NOT FOR CONSTRUCTION

ISSUE DATE  
 SEPTEMBER 6, 2024

REVISIONS

| NO. | VALUE | DATE |
|-----|-------|------|
|     |       |      |
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PRINCIPAL IN CHARGE  
 N. LAURETTA, PE, LEED AP

PROJECT MANAGER  
 NJL

DRAWN BY  
 NJL

PROJECT ADDRESS

13047 US HWY 17  
 HAMPSTEAD, NC

PROJECT NUMBER

1014.01

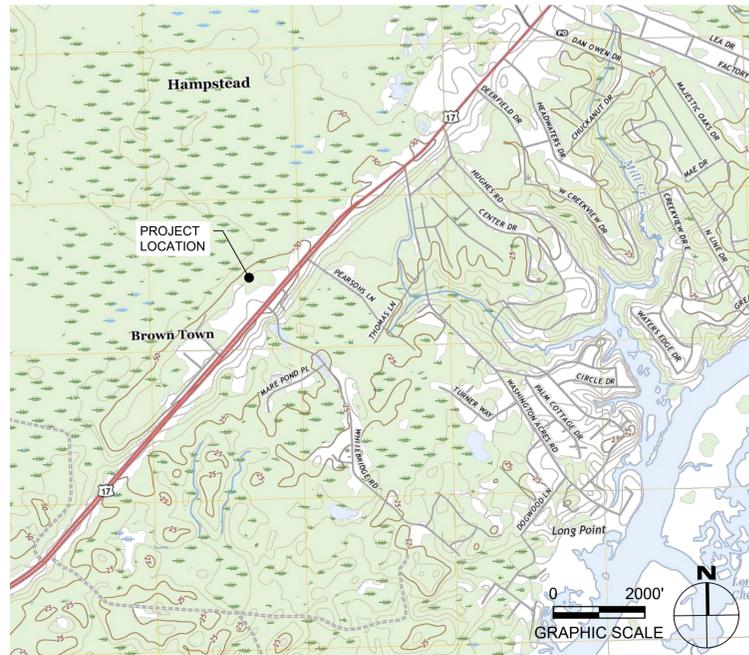
SHEET TITLE

**COVER SHEET**

SHEET 1 OF 26

SHEET NUMBER

**C-001**



**1** LOCATION MAP  
 SCALE: 1" = 2000'



**2** VICINITY MAP  
 SCALE: 1" = 500'

## GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION METHODS PER THE LATEST EDITION OF PENDER COUNTY SPECIFICATIONS AND DETAILS.
- ALL SITE WORK, AT A MINIMUM, SHALL BE PERFORMED IN ACCORDANCE WITH THE 2024 NCDOT ROADWAY STANDARD DRAWINGS AND STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES UNLESS OTHERWISE NOTED OR DIRECTED. ROADS SHALL BE CONSTRUCTED TO NCDOT STANDARDS AND SPECIFICATIONS (LATEST EDITION).
- UNDERGROUND UTILITIES MAY EXIST ON, ALONG OR WITHIN CONFLICT OF THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING NC 811 OR THE APPROPRIATE UTILITY COMPANIES PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DEMOLITION OF ANY EXISTING ON SITE ITEMS AS SHOWN ON THE DEMO PLAN, ABOVE AND BELOW GROUND. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REMOVAL OF ALL WASTE RESULTING FROM DEMOLITION.
- THE CONTRACTOR SHALL OBSERVE ALL REQUIRED SAFETY PRECAUTIONS IN THE PERFORMANCE OF ALL WORK IN ACCORDANCE WITH CURRENT OSHA REGULATIONS.
- THE CONTRACTOR SHALL GRADE, SEED, AND SOD OR OTHERWISE PROVIDE TEMPORARY AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS.
- WORK WITHIN PUBLIC RIGHT-OF-WAYS SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS, NOTIFICATIONS, STANDARDS AND POLICIES.
- ANY SUBSTITUTIONS, CHANGES, OR MODIFICATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER, PLANNING DEPARTMENT STAFF, AND OWNER PRIOR TO INSTALLATION/CONSTRUCTION.
- THE GRADE LINES DENOTE THE FINISHED ELEVATIONS OF THE PROPOSED SURFACE. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING, ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO PROVIDE A PROPER TIE-IN. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED INVERTS, FFE'S, AND FINISHED SURFACES TO ENSURE THAT MINIMUM SLOPE AND COVER REQUIREMENTS ARE PROVIDED PRIOR TO INSTALLATION.
- THE EARTHWORK ON THIS PLAN DOES NOT NECESSARILY BALANCE. OFFSITE BORROW OR WASTE MAY BE REQUIRED.
- ALL PIPE INVERTS TO BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTING GRAVITY SYSTEMS AND SHALL BE ADJUSTED BY THE ENGINEER IF NECESSARY. ALL CONCRETE PIPE SHALL BE REINFORCED CLASS III.
- NEW SIGNS REQUIRE ZONING COMPLIANCE AND BUILDING PERMITS PER UDO. A PERMIT IS REQUIRED FOR THE SITE IDENTIFICATION SIGN. SIGN SHALL MEET PENDER COUNTY STANDARDS.
- NO ADDITIONAL OUTDOOR LIGHTING IS PROPOSED. NEW LIGHTING REQUIRES ADDITIONAL PLANS AND PERMITS TO ENSURE COMPLIANCE WITH UDO.

## PROJECT NARRATIVE

INTEGRITY BUILDING COMPANIES (INTEGRITY BUILDING) IS PROPOSING TO CONSTRUCT A FIVE BUILDING 60,600-SF FACILITY WITH ASSOCIATED SITE IMPROVEMENTS INCLUDING A NEW 24-FT WIDE DRIVEWAY TO US HWY 17 AND PARKING AREA CONTAINING APPROXIMATELY 133 SPACES. THE PROJECT WILL BE SERVED BY PUBLIC WATER AND SEWER. SUBSURFACE UTILITIES EXIST ALONG US HWY 17 INCLUDING A 12-INCH WATERMAIN AND OVERHEAD POWER ON THE SOUTH SIDE OF THE ROAD AND A SANITARY SEWER FORCEMAIN AND CABLE ON THE NORTH SIDE OF THE ROAD.

THE SITE IS CURRENTLY UNDEVELOPED LAND. THE PROJECT AREA IS WOODED WITH A VARIETY OF OAKS AND PINES ONSITE AND NATURALLY SLOPES DOWNWARD FROM SOUTHWEST TO NORTHEAST AT APPROXIMATELY 2-5% GRADE. THE PROPOSED USES INCLUDE GYM (NAICS 713940), ROOFING CONTRACTOR (NAICS 23816), CONTRACTORS - OTHER (NAICS 23829), AND SPECIALTY TRADE (NAICS 23899).

THE PENDER COUNTY SCS SOIL SURVEY INDICATES THAT THE SOILS ON THE PARCEL ARE A MIXTURE OF PRIMARILY ALPIN FINE SAND (AnB), LEON FINE SAND (LnA), AND TORHUNTA MUCKY FINE SANDY LOAM (To). AnB IS AN EXCESSIVELY DRAINED NON-HYDRIC SOIL WITH VERY LOW RUNOFF POTENTIAL. LnA AND TO ARE POORLY AND VERY POORLY DRAINED HYDRIC SOILS WITH VERY HIGH RUNOFF POTENTIAL. WETLANDS ARE PRESENT OFFSITE TO THE REAR OF THE PROPERTY AND CORRESPOND WITH THE APPROXIMATE LOCATION OF TO SOILS. THE PROJECT DRAINS TO ISLAND CREEK (18-74-50), WHICH IS CLASSIFIED AS C; Sw WITHIN THE CAPE FEAR RIVER BASIN. THE PROJECT IS GREATER THAN FOUR MILES FROM HARRISONS CREEK.

CLEARING AND GRUBBING WITHIN THE RIGHT OF WAY OF ROADWAYS, BUILDING SITE, AND STORMWATER CONTROL MEASURE LOCATIONS WILL CONSIST OF A TOTAL DISTURBED AREA OF 6.79 ACRES. THE PROJECT PROPOSES TO PROVIDE WATER QUALITY TREATMENT OF THE FIRST 1.5-INCH STORM AND ATTENUATION OF THE 2- AND 10-YEAR, 24-HOUR STORM EVENTS TO PRE-DEVELOPMENT CONDITIONS.

APPROVED BY PENDER COUNTY UNIFIED DEVELOPMENT  
 ORDINANCE ADMINISTRATOR

ADMINISTRATOR PRINTED NAME: \_\_\_\_\_

ADMINISTRATOR SIGNATURE: \_\_\_\_\_

APPROVAL DATE: \_\_\_\_\_

\*\*\* SITE PLAN VALID FOR TWO (2) YEARS FROM APPROVAL DATE \*\*\*



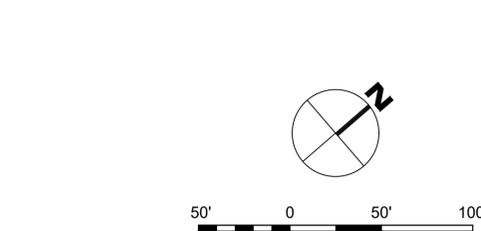


**LEGEND**

- EDGE OF ASPHALT
- EDGE OF CONCRETE
- CENTERLINE
- PROPERTY RIGHT OF WAY
- PROPERTY EASEMENT
- PROPERTY LINE
- 55 — MAJOR CONTOUR
- 54 — MINOR CONTOUR
- UNDERGROUND TELECOMMUNICATIONS LINE
- WATER LINE
- FORCEMAIN
- STORMWATER LINE
- LIMITS OF DISTURBANCE
- TREE PROTECTION FENCE
- TREE
- TREE TO BE REMOVED

- DEMOLITION NOTES**
1. THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIARIZED WITH FIELD DEMOLITION CONDITIONS.
  2. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL DEMOLISHED DEBRIS ASSOCIATED WITH THE PROJECT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
  3. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST GENERATED BY THE WORK, INCLUDING BUT NOT LIMITED TO DEMOLITION AND CONSTRUCTION ACTIVITIES, SITE VEHICULAR TRAFFIC AND RELATED OPERATIONS.
  4. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL EXISTING UTILITIES LOCATED PRIOR TO BEGINNING ANY DEMOLITION. CONTRACTOR SHALL CONTACT NC ONE CALL AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED.
  5. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE AND ENGINEER IMMEDIATELY.
  6. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF DISCONNECTING AND ABANDONING ALL EXISTING UTILITIES WITH THE OWNER UNLESS OTHERWISE NOTED. ALL EXISTING UTILITIES AND ASSOCIATED PIPING, ETC. NOT IN USE ON THE SITE SHALL BE PROPERLY ABANDONED AND REMOVED AS REQUIRED. COORDINATE WITH THE OWNER.
  7. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES THAT REMAIN IN SERVICE DURING DEMOLITION.
  8. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS AND SLOPES ON AND OFF SITE IN ACCORDANCE WITH THE EROSION CONTROL MEASURES SPECIFIED ON THE PLANS AND IN THE SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE WHO IS RESPONSIBLE FOR PROVIDING THE PERMANENT STABILIZATION MEASURES AND THE TYPE OF PERMANENT MEASURES PRIOR TO BEGINNING DEMOLITION AND CONSTRUCTION. THE PERMANENT STABILIZATION MEASURES SHALL BE IN PLACE AND ACCEPTABLE TO THE OWNER'S REPRESENTATIVE AND ENGINEER PRIOR TO PROJECT CLOSEOUT. COORDINATE INSPECTION WITH THE OWNER AND ENGINEER PRIOR TO PROJECT CLOSEOUT.
  9. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND CONTACTING THE ENGINEER FOR THE REQUIRED INSPECTIONS ON THE PROJECT.
  10. WETLANDS EXIST ON SITE. WETLANDS WILL NOT BE DISTURBED DURING CONSTRUCTION OF THIS PROJECT.

- EXCAVATION, GRADING, AND BACKFILLING NOTES**
1. ANY UNDERCUTTING IN GOOD SOIL SHALL BE REPLACED AND THE REPLACEMENT MATERIAL SHALL BE COMPACTED TO NINETY-FIVE (95) PERCENT OF MAXIMUM DENSITY OBTAINED AT OPTIMUM MOISTURE CONTENT, AS DETERMINED BY THE ASTM D 698 STANDARD PROCTOR TEST METHOD. IN THE EVENT THAT MATERIAL ENCOUNTERED AT PIPE GRADE, SUBGRADE OF PARKING OR ROADWAYS AND SUBGRADE OF BUILDING FOUNDATIONS IS FOUND TO BE SOFT, SPONGY, OR IN ANY OTHER WAY UNSUITABLE, THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER IMMEDIATELY. SUCH UNSUITABLE MATERIAL SHALL BE REMOVED TO A DEPTH AS SPECIFIED BY THE GEOTECHNICAL ENGINEER AND REPLACED WITH A MINIMUM OF SIX (6) INCHES OF STONE, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
  2. BEFORE BACKFILLING IS COMMENCED OVER PIPES AND OTHER INSTALLATIONS, EARTH FILL SHALL BE SOLIDLY TAMPED AROUND AND ABOVE THE PIPE TO A DEPTH OF ONE (1) FOOT ABOVE THE TOP OF THE PIPE. CARE SHALL BE TAKEN TO PREVENT ANY DISTURBANCE TO THE PIPE OR DAMAGE TO NEWLY MADE JOINTS. THE FILLING OF THE TRENCH SHALL BE CARRIED OUT SIMULTANEOUSLY ON BOTH SIDES OF THE PIPES IN SUCH A MANNER THAT INJURIOUS SIDE PRESSURES DO NOT OCCUR.
  3. THE MATERIAL FOR BACKFILLING SHALL BE FREE FROM ALL PERISHABLE AND OBJECTIONABLE MATERIALS. BEFORE PLACING ANY BACKFILL, ALL RUBBISH, FORM, BLOCKS, WIRES OR OTHER UNSUITABLE MATERIAL SHALL BE REMOVED FROM EXCAVATION. THE BACK-FILLING OVER PIPES SHALL BE PLACED IN LAYERS NOT OVER SIX (6) INCHES THICK AND COMPACTED TO A MINIMUM DENSITY OF NINETY-FIVE (95) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR COMPACTION TEST TO A DEPTH OF 12 INCHES BELOW FINISHED GRADE. THE LAST 12 INCHES OF BACKFILL SHALL BE PLACED IN LAYERS NOT OVER SIX (6) INCHES THICK AND COMPACTED TO A MINIMUM DENSITY OF NINETY-EIGHT (98) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR COMPACTION TEST.



ENGINEER  
Stormwater Management  
Civil Engineering - Land Development

**RIVERVIEW Engineering**  
P-1944 S10-3388-2682

4904 PARK AVENUE  
WILMINGTON, NC 28403  
nlauretta@rivervieweng.com

www.rivervieweng.com

**811**  
Know what's below.  
Call before you dig.

PROJECT OWNER  
**INTEGRITY BUSINESS PARK**  
INTEGRITY BUILDING COMPANIES  
141 DIVISION DRIVE #120  
WILMINGTON, NC 28401

STAMP  
NORTH CAROLINA PROFESSIONAL ENGINEER  
MICHAEL J. LAURETTA  
035107  
09/06/24

ISSUE FOR  
REVIEW - NOT FOR CONSTRUCTION

ISSUE DATE  
SEPTEMBER 6, 2024

| REVISIONS | VALUE |
|-----------|-------|
|           |       |
|           |       |
|           |       |
|           |       |

PRINCIPAL IN CHARGE  
N. LAURETTA, PE, LEED AP

PROJECT MANAGER  
N/JL

DRAWN BY  
N/JL

PROJECT ADDRESS  
13047 US HWY 17  
HAMPSTEAD, NC

PROJECT NUMBER  
1014.01

SHEET TITLE  
**EXISTING CONDITIONS & DEMOLITION PLAN**

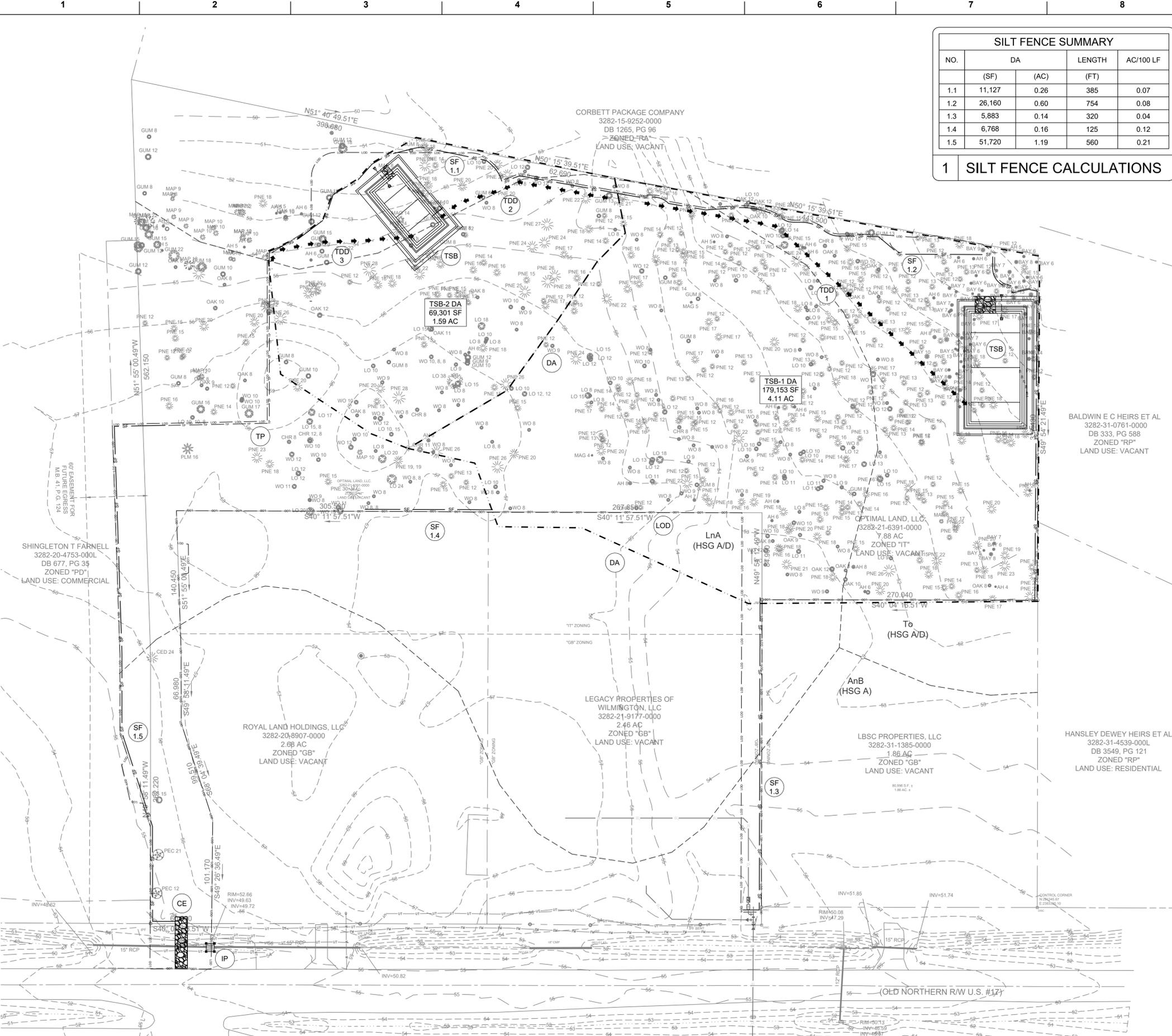
SHEET 3 OF 26

SHEET NUMBER  
**VX101**

MAJOR SITE DEVELOPMENT PLAN

**1** EXISTING CONDITIONS & DEMOLITION PLAN  
SCALE: 1" = 50'





| SILT FENCE SUMMARY |        |      |             |           |
|--------------------|--------|------|-------------|-----------|
| NO.                | DA     |      | LENGTH (FT) | AC/100 LF |
|                    | (SF)   | (AC) |             |           |
| 1.1                | 11,127 | 0.26 | 385         | 0.07      |
| 1.2                | 26,160 | 0.60 | 754         | 0.08      |
| 1.3                | 5,883  | 0.14 | 320         | 0.04      |
| 1.4                | 6,768  | 0.16 | 125         | 0.12      |
| 1.5                | 51,720 | 1.19 | 560         | 0.21      |

**1 SILT FENCE CALCULATIONS**

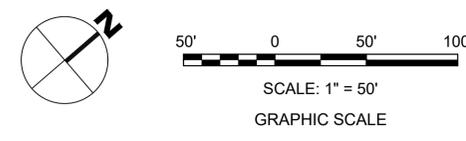
**LEGEND**

- LOD --- LIMITS OF DISTURBANCE (LOD)
- TP --- TREE PROTECTION FENCE (TP)
- SF --- SILT FENCE (SF)
- TDD --- DIVERSION DITCH (TDD)
- CE --- CONSTRUCTION ENTRANCE (CE)
- IP --- INLET PROTECTION (IP)
- CD --- WATTLE CHECK DAM (CD)
- SP --- STOCKPILE (SP)
- DA --- DRAINAGE AREA (DA)
- PL --- PROPERTY LINE
- 55 --- MAJOR CONTOUR
- 54 --- MINOR CONTOUR
- TREE --- TREE

- TREE PROTECTION NOTES**
- PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
  - NO LAND DISTURBANCE, INCLUDING TREE REMOVAL, IS TO OCCUR OUTSIDE THE PROJECT BOUNDARY SHOWN ON THE PLANS, UNLESS OTHERWISE NOTED. TREE PROTECTION FENCING IS SHOWN OUTSIDE OF PROJECT BOUNDARY FOR PROTECTION OF EXISTING TREES IN CLOSE PROXIMITY TO PROPOSED CONSTRUCTION.
  - PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT AND CONTRACTOR SHALL RECEIVE ADEQUATE INSTRUCTIONS ON TREE PROTECTION METHODS.
  - LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.
  - NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED BY THE LANDSCAPE ARCHITECT.
  - ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING AND GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.

- EROSION CONTROL NOTES**
- TOTAL LAND DISTURBANCE AREA: 6.79 AC.
  - ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE STATE EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
  - GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF STATE LAW AND IS SUBJECT TO A FINE. ANY BUILDER THAT ANTICIPATED THE DISTURBANCE OF MORE THAN ONE ACRE WILL BE REQUIRED TO GET AN EROSION CONTROL PERMIT FROM NCEG.
  - GROUND COVER MUST BE PROVIDED ON EXPOSED SLOPES WITHIN 21 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING, AND A PERMANENT GROUND COVER FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
  - ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED.
  - SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
  - ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
  - IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER), ALL DISTURBED AREAS MUST BE SEEDED, MULCHED, AND TACKED.
  - WITHIN 24 HOURS FOLLOWING ANY RAIN EVENT, THE CONTRACTOR SHALL INSPECT AND REPAIR, AS NECESSARY, ALL DAMAGED EROSION CONTROL MEASURES.
  - ALL ACTIVITY AND INSTALLATION OF EROSION CONTROL MATTING WILL BE COMPLETE PRIOR TO ANY RAIN EVENT.

- CONSTRUCTION SEQUENCE:**
- OBTAIN ALL NECESSARY STATE AND LOCAL PERMIT APPROVALS.
  - PRIOR TO ANY CLEARING AND GRUBBING, INSTALL SILT FENCE, TREE PROTECTION FENCE AND GRAVEL CONSTRUCTION ENTRANCES.
  - COMMENCE CLEARING DOWN TO STUMPS WITHIN LIMITS OF CONSTRUCTION.
  - INSTALL ADDITIONAL TEMPORARY EROSION CONTROL MEASURES WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS TO TREAT SEDIMENT LADEN WATER FROM ROADWAY MASS GRADING. TEMPORARY SKIMMER BASINS SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION OF ANY DIVERSION DITCHES THAT CONVEY WATER TO A BASIN. THE CONTRACTOR SHALL FIELD ADJUST TEMPORARY DIVERSION DITCHES AS REQUIRED TO MAINTAIN THE DIVERSION TO THE BASINS.
  - INSTALL TEMPORARY SKIMMER BASIN PRIOR TO CONSTRUCTION OF ANY DIVERSION DITCHES THAT CONVEY WATER TO A BASIN.
  - COMMENCE GRUBBING AND MASS GRADING WITHIN LIMITS OF CONSTRUCTION.
  - INSTALL PUBLIC SEWER AND WATER, AND STORMWATER MANAGEMENT FACILITIES TO INCLUDE PIPING AND DRAINAGE SWALES.
  - REMOVE ACCUMULATED SEDIMENT FROM DITCHES AND SEDIMENT BASINS AS REQUIRED ON THE PLANS AND PERMIT.
  - COMPLETE ROADWAY, DRIVEWAY AND PARKING LOT CONSTRUCTION TO SUBGRADE.
  - INSTALL GRAVEL BASE IN ROADWAYS AND PARKING LOTS.
  - COMMENCE BUILDING CONSTRUCTION.
  - INSTALL BASE COURSE ASPHALT.
  - REMOVE SILT FENCE INLET PROTECTION AND INSTALL STAGE TWO INLET PROTECTION.
  - THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN EROSION CONTROL MEASURES AND CLEAN TEMPORARY SEDIMENT TRAPS AND BASINS.
  - SEED AND STABILIZE ALL AREAS WITHIN FOURTEEN (14) DAYS OF EARTHWORK BEING LEFT UNDISTURBED FOR EXTENDED PERIODS OF TIME.
  - UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REQUEST FINAL INSPECTION FROM THE NCEG EROSION CONTROL INSPECTOR TO ALLOW REMOVAL OF ALL TEMPORARY EROSION CONTROL DEVICES.



**1 EROSION & SEDIMENT CONTROL PLAN - PHASE 1**  
SCALE: 1" = 50'

ENGINEER  
Stormwater Management  
Civil Engineering - Land Development

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**INTEGRITY BUSINESS PARK**

STAMP  
NORTH CAROLINA PROFESSIONAL ENGINEER  
NICHOLAS J. LAURETTA  
035107  
09/06/24

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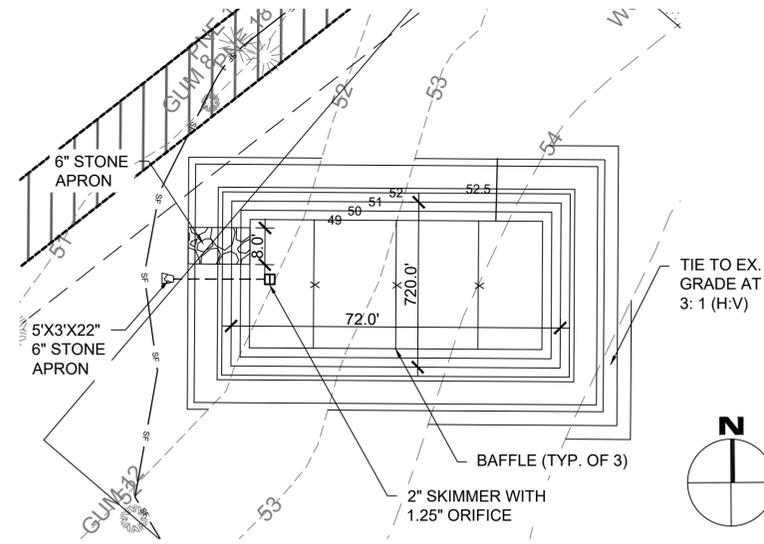
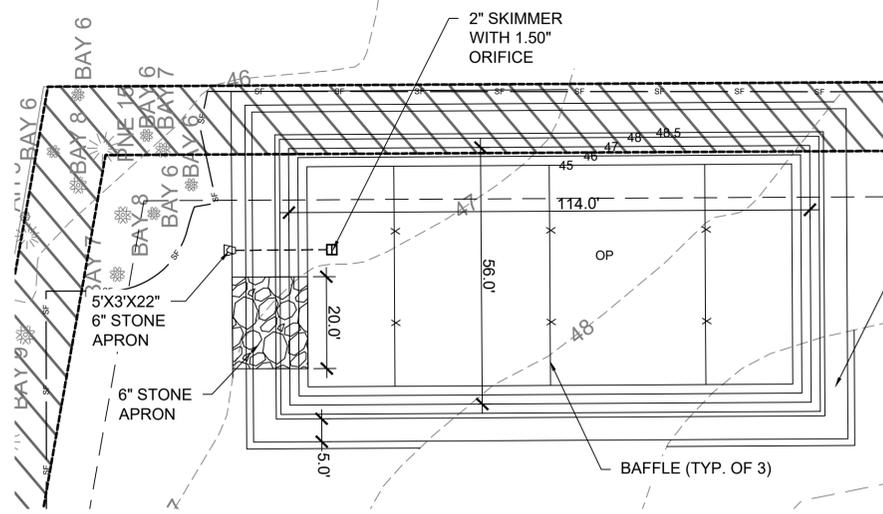
PROJECT ADDRESS  
13047 US HWY 17  
HAMPSTEAD, NC

PROJECT NUMBER  
1014.01

SHEET TITLE  
**EROSION & SEDIMENT CONTROL PLAN - PHASE 1**

SHEET 5 OF 26  
SHEET NUMBER  
**CE101**

MAJOR SITE DEVELOPMENT PLAN



**1 SKIMMER BASIN 1**  
SCALE: 1" = 10'

**2 SKIMMER BASIN 1**  
SCALE: 1" = 10'

| SKIMMER BASIN 1 (TSB-1) |  | SKIMMER BASIN 2 (TSB-2) |  | 10-YEAR INTENSITY |           | 9.71 IN/HR |          |
|-------------------------|--|-------------------------|--|-------------------|-----------|------------|----------|
| 3.98                    | DISTURBED AREA (AC)                      | 1.59                    | DISTURBED AREA (AC)                      | TSB-1             | AREA (SF) | AREA (AC)  | C        |
| 19.58                   | PEAK FLOW FROM 10-YEAR STORM (CFS)       | 7.72                    | PEAK FLOW FROM 10-YEAR STORM (CFS)       | WOODS             | 5,847     | 0.13       | 0.20     |
| 7161                    | REQUIRED VOLUME (FT3)                    | 2864                    | REQUIRED VOLUME (FT3)                    | OPEN SPACE        | 173,306   | 3.98       | 0.50     |
| 6362                    | REQUIRED SURFACE AREA (FT2)              | 2510                    | REQUIRED SURFACE AREA (FT2)              | IMPERVIOUS        | 0         | 0.00       | 0.95     |
| 56                      | SUGGESTED WIDTH (FT)                     | 35                      | SUGGESTED WIDTH (FT)                     | TOTAL             |           | 4.11       | 2.02     |
| 113                     | SUGGESTED LENGTH (FT)                    | 71                      | SUGGESTED LENGTH (FT)                    |                   |           |            | C = 0.49 |
|                         |  |                         |  |                   |           |            | 19.58    |
|                         |  |                         |  |                   |           |            | 3.98     |
| 56                      | TRIAL TOP WIDTH AT SPILLWAY INVERT (FT)  | 36                      | TRIAL TOP WIDTH AT SPILLWAY INVERT (FT)  | TSB-2             | AREA (SF) | AREA (AC)  | C        |
| 114                     | TRIAL TOP LENGTH AT SPILLWAY INVERT (FT) | 72                      | TRIAL TOP LENGTH AT SPILLWAY INVERT (FT) | WOODS             | 0         | 0.00       | 0.20     |
| 2                       | TRIAL SIDE SLOPE RATIO Z:1               | 2                       | TRIAL SIDE SLOPE RATIO Z:1               | OPEN SPACE        | 69,301    | 1.59       | 0.50     |
| 2                       | TRIAL DEPTH (FT)                         | 2                       | TRIAL DEPTH (FT)                         | IMPERVIOUS        | 0         | 0.00       | 0.95     |
| 48                      | BOTTOM WIDTH (FT)                        | 28                      | BOTTOM WIDTH (FT)                        | TOTAL             |           | 1.59       | 0.92     |
| 106                     | BOTTOM LENGTH (FT)                       | 64                      | BOTTOM LENGTH (FT)                       |                   |           |            | C = 0.50 |
| 5088                    | BOTTOM AREA (FT2)                        | 1792                    | BOTTOM AREA (FT2)                        |                   |           |            | 7.72     |
| 11,451                  | ACTUAL VOLUME (FT3)                      | 4363                    | ACTUAL VOLUME (FT3)                      |                   |           |            | 1.59     |
| 6384                    | ACTUAL SURFACE AREA (FT2)                | 2592                    | ACTUAL SURFACE AREA (FT2)                |                   |           |            |          |
| 20.0                    | TRIAL WEIR LENGTH (FT)                   | 8                       | TRIAL WEIR LENGTH (FT)                   |                   |           |            |          |
| 0.5                     | TRIAL DEPTH OF FLOW (FT)                 | 0.5                     | TRIAL DEPTH OF FLOW (FT)                 |                   |           |            |          |
| 21.2                    | SPILLWAY CAPACITY (CFS)                  | 8.5                     | SPILLWAY CAPACITY (CFS)                  |                   |           |            |          |
| 2.0                     | SKIMMER SIZE (IN)                        | 2.0                     | SKIMMER SIZE (IN)                        |                   |           |            |          |
| 0.167                   | HEAD ON SKIMMER (FT)                     | 0.167                   | HEAD ON SKIMMER (FT)                     |                   |           |            |          |
|                         | ORIFICE SIZE (1/4 IN INCREMENTS)         |                         | ORIFICE SIZE (1/4 IN INCREMENTS)         |                   |           |            |          |
| 5.39                    | DEWATERING TIME (DAYS)                   | 2.96                    | DEWATERING TIME (DAYS)                   |                   |           |            |          |

**1 SKIMMER BASIN CALCULATIONS**

| DESIGN STORM | RAINFALL INTENSITY (i) | 10 YEAR | 9.59 IN/HR | TEMPORARY C-VALUES |            |       |            | PERMANENT C-VALUES |            |       |            |
|--------------|------------------------|---------|------------|--------------------|------------|-------|------------|--------------------|------------|-------|------------|
|              |                        |         |            | DIST. AREA         | IMPERVIOUS | WOODS | OPEN SPACE | DIST. AREA         | IMPERVIOUS | WOODS | OPEN SPACE |
|              |                        |         |            | 0.50               | 0.90       | 0.25  | 0.35       | 0.50               | 0.90       | 0.25  | 0.35       |

| ID   | DRAINAGE AREA   |                 |            |                 | DITCH DATA |      |           |           | ADDITIONAL FLOW |                    |                 |                  | DITCH LINING        |     |       |      |       |          |        |                  |                 |             |            |                                 |       |                    |         |                            |           |       |
|------|-----------------|-----------------|------------|-----------------|------------|------|-----------|-----------|-----------------|--------------------|-----------------|------------------|---------------------|-----|-------|------|-------|----------|--------|------------------|-----------------|-------------|------------|---------------------------------|-------|--------------------|---------|----------------------------|-----------|-------|
|      | DIST. AREA (SF) | IMPERVIOUS (SF) | WOODS (SF) | OPEN SPACE (SF) | A (AC)     | C    | U/S ELEV. | D/S ELEV. | LENGTH (FT)     | MAX. SLOPE (FT/FT) | BTM. WIDTH (FT) | SIDE SLOPE (X:1) | DEPTH D (EST.) (FT) | D   | A     | P    | R=A/P | V (FT/S) | W (FT) | Q10 (EST.) (CFS) | Q10 (CIA) (CFS) | DITCH/PIPES | FLOW (CFS) | LINING TYPE (OR APPROVED EQUAL) | n     | SHEAR STRESS (MAX) | V (MAX) | SHEAR STRESS (CHECK) (PSF) | SHEAR OK? | V OK? |
| TDD1 | 21,581          | 0               | 0          | 0               | 0.50       | 0.50 | 55        | 52.5      | 155             | 0.016              | 0               | 2                | 0.46                | 1.5 | 0.635 | 2.91 | 0.22  | 3.81     | 9.0    | 2.42             | 2.38            |             |            | CURLEX I                        | 0.030 | 1.75               | 7.00    | 0.46                       | OK        | OK    |
| TDD2 | 28,928          | 0               | 0          | 0               | 0.66       | 0.50 | 53.5      | 52.5      | 190             | 0.005              | 0               | 2                | 0.63                | 1.5 | 1.191 | 3.98 | 0.30  | 2.68     | 9.0    | 3.19             | 3.18            |             |            | CURLEX I                        | 0.030 | 1.75               | 7.00    | 0.21                       | OK        | OK    |
| TDD3 | 118,456         | 0               | 0          | 0               | 2.72       | 0.50 | 53.5      | 45.8      | 405             | 0.12               | 0               | 2                | 0.91                | 1.5 | 2.484 | 5.76 | 0.43  | 5.25     | 9.0    | 13.05            | 13.04           |             |            | CURLEX I                        | 0.030 | 1.75               | 7.00    | 0.70                       | OK        | OK    |

**2 DIVERSION DITCH CALCULATIONS**

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MICHAEL J. LAURETTA  
035107  
09/06/24

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PRINCIPAL IN CHARGE  
N. LAURETTA, PE, LEED AP  
PROJECT MANAGER  
NJL  
DRAWN BY  
NJL

PROJECT ADDRESS  
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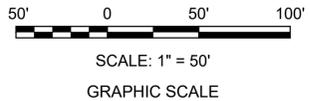
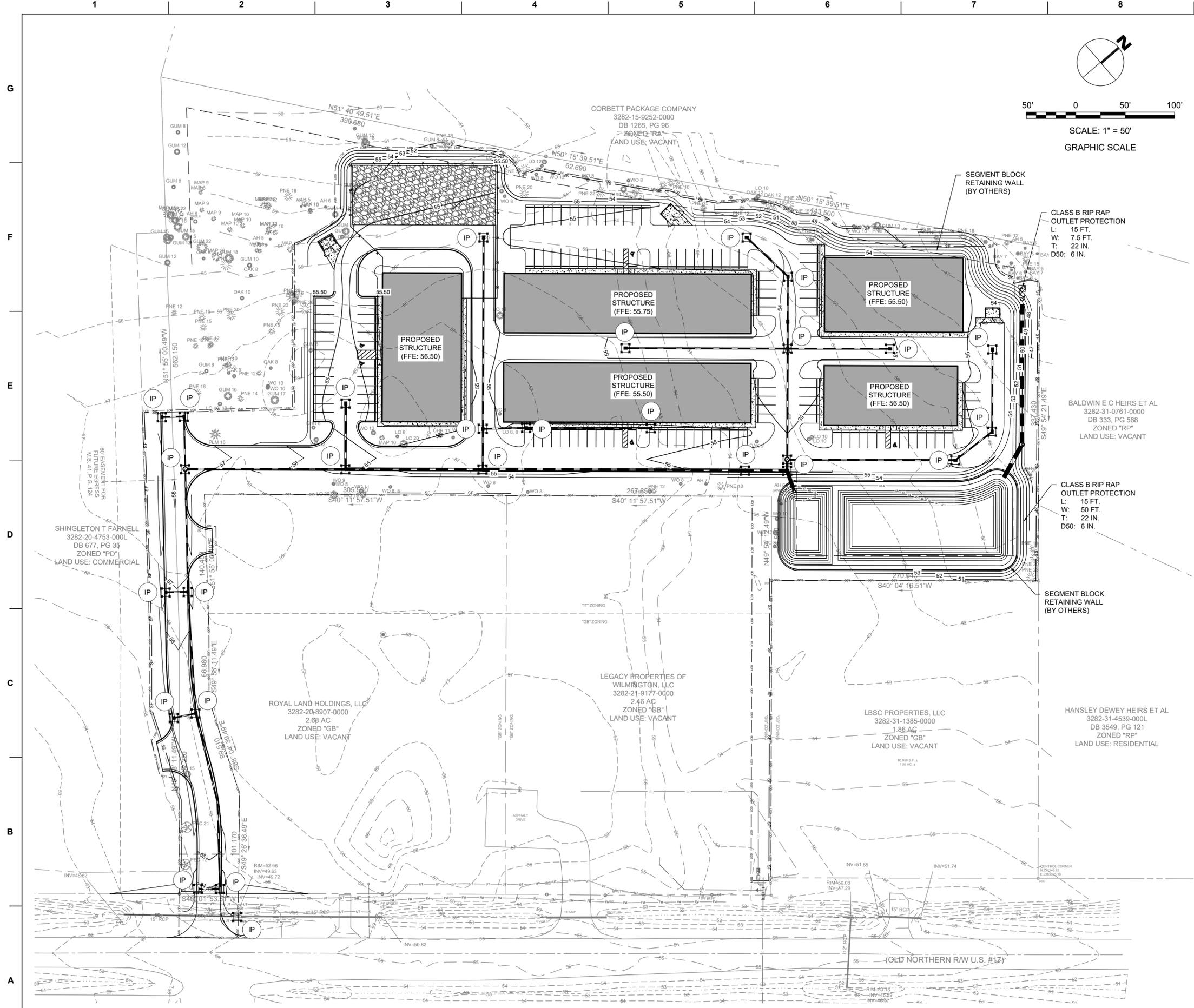
PROJECT NUMBER  
1014.01

SHEET TITLE  
**EROSION & SEDIMENT CONTROL PLAN - PHASE 1**

SHEET 6 OF 26  
SHEET NUMBER

**CE102**

MAJOR SITE DEVELOPMENT PLAN



| LEGEND |                          |
|--------|--------------------------|
|        | BUILDING OUTLINE         |
|        | EDGE OF ASPHALT          |
|        | CENTERLINE               |
|        | SETBACK                  |
|        | EDGE OF SIDEWALK         |
|        | PROPERTY LINE            |
|        | CONCRETE                 |
|        | ASPHALT                  |
|        | EDGE OF ASPHALT          |
|        | CENTERLINE               |
|        | EX. MAJOR CONTOUR        |
|        | EX. MINOR CONTOUR        |
|        | PROP. MAJOR CONTOUR      |
|        | PROP. MINOR CONTOUR      |
|        | STORMWATER LINE          |
|        | LIMITS OF DISTURBANCE    |
|        | TREE PROTECTION FENCE    |
|        | PUBLIC DRAINAGE EASEMENT |

ENGINEER  
Stormwater Management  
Civil Engineering - Land Development

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Engineering

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PROJECT MANAGER  
N.J.L.

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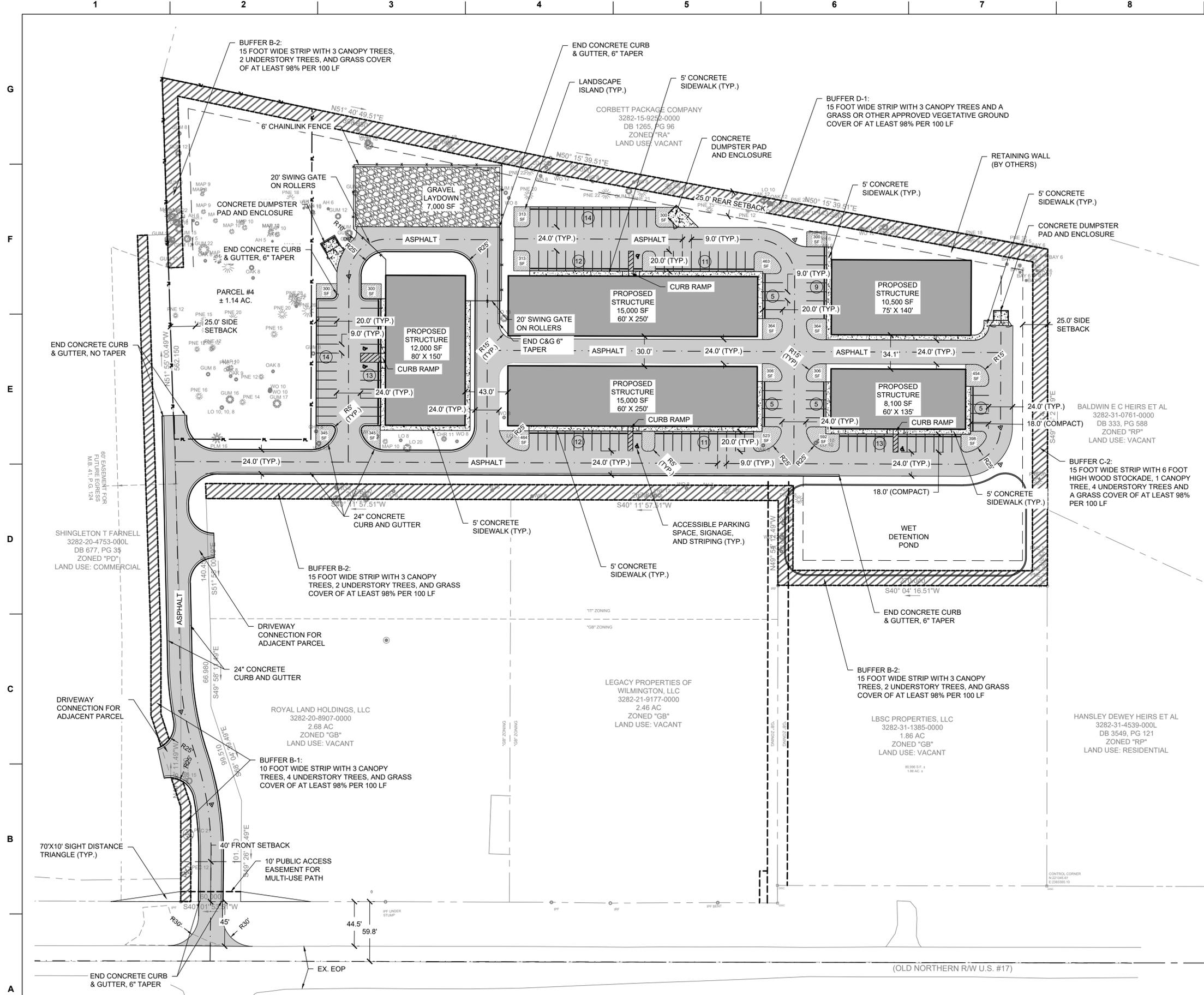
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SHEET TITLE  
**EROSION & SEDIMENT CONTROL PLAN - PHASE 2**

SHEET 7 OF 26

SHEET NUMBER  
**CE103**

**1** EROSION & SEDIMENT CONTROL PLAN - PHASE 2  
SCALE: 1" = 50'



### LEGEND

- BUILDING OUTLINE
- EDGE OF ASPHALT
- CENTERLINE
- SETBACK
- EDGE OF SIDEWALK
- PROPERTY LINE
- PARKING BLOCK
- PARKING SPACE COUNT
- BUFFER
- CONCRETE
- ASPHALT

### SITE DATA

| PROJECT INFORMATION  |   |
|--|---|
| PROJECT NAME   | INTEGRITY BUSINESS PARK   |
| PROJECT ADDRESS  | US HWY 17<br>HAMPSTEAD, NC 28443  |
| PARCEL ID - PARCEL A   | 3282-21-6106-0000   |
| TOTAL PROPERTY ACREAGE   | ±7.65 AC  |
| PROPERTY OWNER/APPLICANT/DEVELOPER   | INTEGRITY BUILDING COMPANIES<br>141 DIVISION DRIVE #120<br>WILMINGTON, NC 28401   |
| ENGINEER   | RIVERVIEW ENGINEERING, PLLC<br>NICHOLAS LAURETTA, PE, LEED AP   |
| ZONING   | IT (INDUSTRIAL TRANSITION)  |
| CURRENT USE  | VACANT LAND   |
| PROPOSED USE   | CONSTRUCTION SERVICES   |
| FLOOD HAZARD   | N/A   |
| SETBACKS   |   |
| FRONT  | 40'   |
| SIDE INTERIOR  | 25'   |
| REAR   | 25'   |
| PROPOSED STRUCTURES  |   |
| PROPOSED NUMBER OF BUILDINGS   | 5   |
| BUILDING SQUARE FOOTAGE  | 60,600 SF   |
| BUILDING HEIGHT  | 0'-0"   |
| CONSTRUCTION TYPE  | V-B   |
| BUILDING LOT COVERAGE  | 18.1%   |
| IMPERVIOUS COVERAGE  |   |
| EXISTING   | 0 SF / 0%   |
| PROPOSED   | 200,703 SF / 60.0%  |
| PROPOSED OFFSITE   | 0 SF  |
| DISTURBED AREA   | 6.79 AC.  |
| UTILITY PROVIDERS  |   |
| PENDER COUNTY PLANNING DEPARTMENT<br>TAYLOR DAVIS<br>805 S. WALKER ST.<br>BURGAW, NC 28425<br>(910) 259-1734   | NCDOT<br>KRISTEN L. SPIRAKIS, PE<br>DISTRICT ENGINEER<br>DIVISION 3   DISTRICT 1<br>910-467-0500  |
| PENDER COUNTY FIRE MARSHAL<br>805 RIDGEWOOD AVE.<br>BURGAW, NC 28425<br>(910) 259-1210   | WATER<br>PENDER COUNTY UTILITIES<br>KATIE LEUNGER (910) 663-3776<br>605 E. FREMONT ST.<br>BURGAW, NC 28425  |
| EROSION CONTROL<br>DIVISION OF ENERGY, MINERAL AND LAND<br>RESOURCES - LAND QUALITY SECTION<br>NORTH CAROLINA DEPARTMENT OF<br>ENVIRONMENTAL QUALITY<br>DAN SAMS<br>DAN.SAMS@DEQ.NC.GOV<br>127 CARDINAL DRIVE EXT.<br>WILMINGTON, NC 28405<br>(910) 796-7326 | SEWER<br>KAARIN WILLIAMS<br>PLURIS HAMPSTEAD, LLC<br>PO BOX 297<br>HAMPSTEAD, NC 28443<br>(910) 758-7471  |
|  | STORMWATER<br>DIVISION OF ENERGY, MINERAL AND LAND<br>RESOURCES - POST CONSTRUCTION<br>STORMWATER PROGRAM<br>NORTH CAROLINA DEPARTMENT OF<br>ENVIRONMENTAL QUALITY<br>CHRISTINE HALL, PE<br>127 CARDINAL DRIVE EXT.<br>WILMINGTON, NC 28405<br>(910) 796-7339 |

### UTILITY PROVIDERS

| UTILITY PROVIDER                  | CONTACT INFORMATION                |
|-----------------------------------|------------------------------------|
| PENDER COUNTY PLANNING DEPARTMENT | TAYLOR DAVIS, (910) 259-1734       |
| PENDER COUNTY FIRE MARSHAL        | 805 RIDGEWOOD AVE., (910) 259-1210 |
| EROSION CONTROL                   | DAN SAMS, (910) 796-7326           |
| SEWER                             | KAARIN WILLIAMS, (910) 758-7471    |
| STORMWATER                        | CHRISTINE HALL, (910) 796-7339     |

### PARKING SUMMARY

|                                   | AREA (SF)     | REQUIRED   | PROVIDED   |
|-----------------------------------|---------------|------------|------------|
| LIGHT INDUSTRIAL (1 PER 1,000 SF) | 35,100        | 36         | 68         |
| SERVICE (1 PER 500 SF)            | 15,000        | 30         | 12         |
| RECREATION (1 PER 250 SF)         | 10,500        | 42         | 49         |
| <b>TOTAL (INCLUDING ADA)</b>      | <b>60,600</b> | <b>108</b> | <b>129</b> |
| ADA COMPLIANT                     |               | 3 (1 VAN)  | 5 (1 VAN)  |

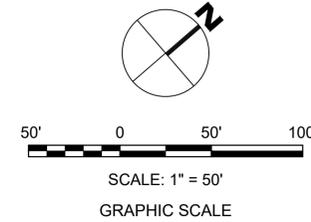
### TRAFFIC GENERATION

|                                | INTENSITY | ADT        | AM PEAK   | PM PEAK   |
|--------------------------------|-----------|------------|-----------|-----------|
| GENERAL LIGHT INDUSTRIAL (110) | 35,100 SF | 171        | 26        | 23        |
| GENERAL OFFICE (710)           | 15,000 SF | 223        | 33        | 34        |
| HEALTH / FITNESS CLUB (492)    | 10,500 SF | N/A        | 14        | 36        |
| <b>TOTAL</b>                   |           | <b>394</b> | <b>73</b> | <b>93</b> |

BASED ON THE 11TH EDITION ITE TRIP GENERATION MANUAL, A TIA IS NOT REQUIRED.

WATERS OF THE US ARE NOT PRESENT ONSITE PER APPROVED JURISDICTIONAL DETERMINATION SAW-2023-01790.

NO HISTORICAL SITES ARE PRESENT.



# 1 SITE PLAN

SCALE: 1" = 50'

ENGINEER  
Stormwater Management  
Civil Engineering - Land Development

**RIVERVIEW Engineering**  
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INTEGRITY BUILDING COMPANIES

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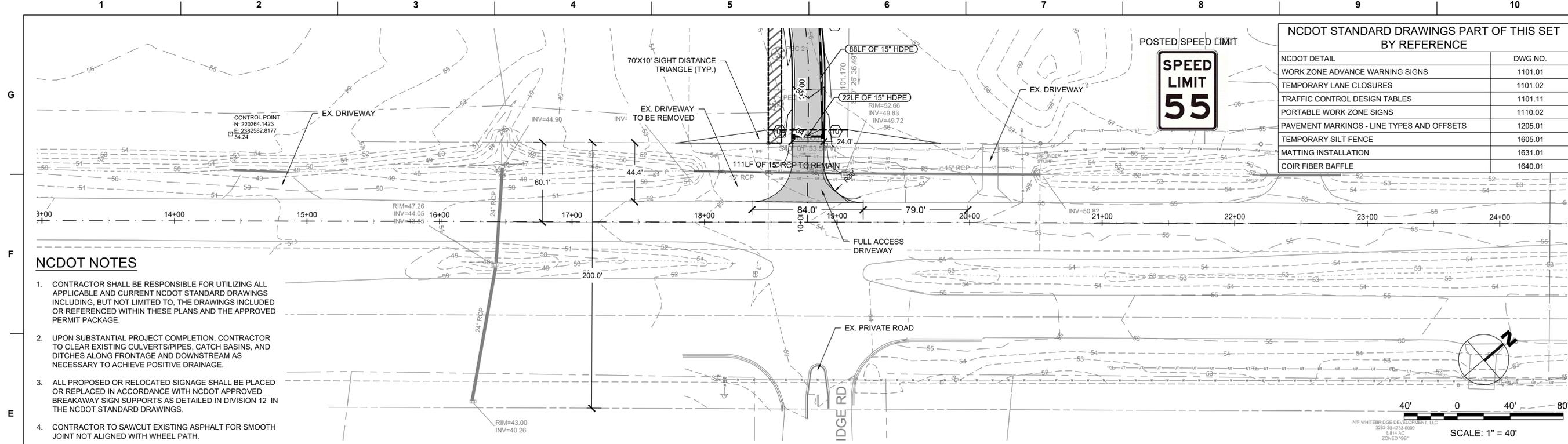
PROJECT NUMBER  
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SHEET TITLE  
**SITE PLAN**

SHEET 8 OF 26

SHEET NUMBER  
**CS101**

MAJOR SITE DEVELOPMENT PLAN



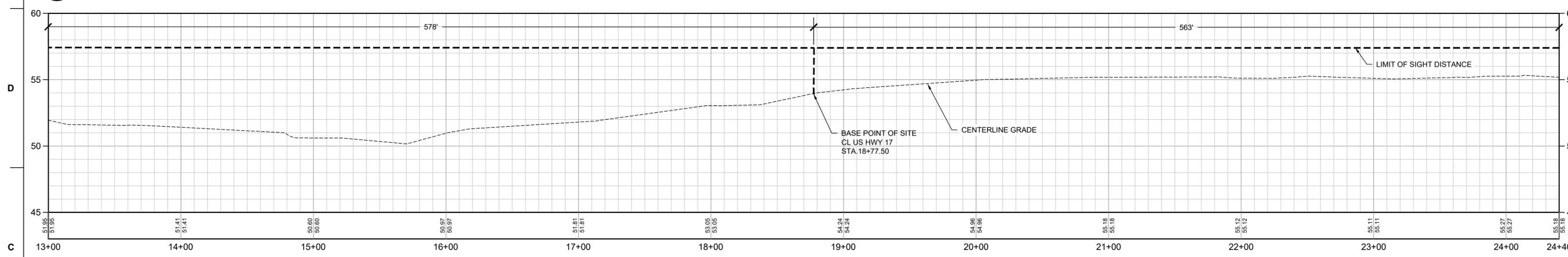
NCDOT STANDARD DRAWINGS PART OF THIS SET BY REFERENCE

| NCDOT DETAIL                               | DWG NO. |
|--|---------|
| WORK ZONE ADVANCE WARNING SIGNS            | 1101.01 |
| TEMPORARY LANE CLOSURES                    | 1101.02 |
| TRAFFIC CONTROL DESIGN TABLES              | 1101.11 |
| PORTABLE WORK ZONE SIGNS                   | 1110.02 |
| PAVEMENT MARKINGS - LINE TYPES AND OFFSETS | 1205.01 |
| TEMPORARY SILT FENCE                       | 1605.01 |
| MATTING INSTALLATION                       | 1631.01 |
| COIR FIBER BAFFLE                          | 1640.01 |

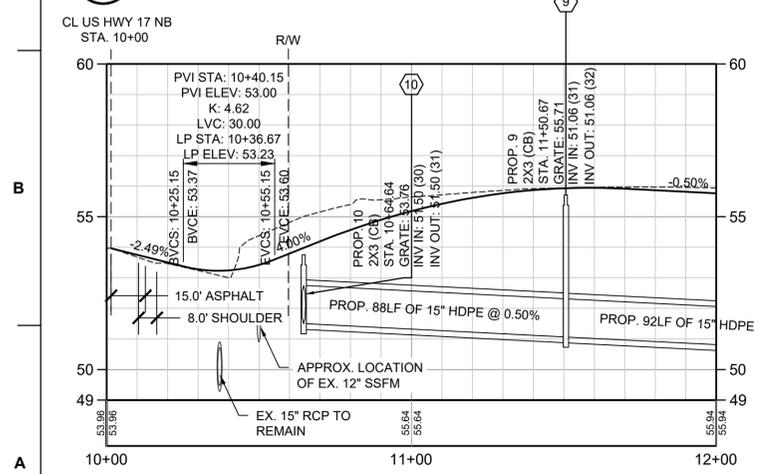
**NCDOT NOTES**

- CONTRACTOR SHALL BE RESPONSIBLE FOR UTILIZING ALL APPLICABLE AND CURRENT NCDOT STANDARD DRAWINGS INCLUDING, BUT NOT LIMITED TO, THE DRAWINGS INCLUDED OR REFERENCED WITHIN THESE PLANS AND THE APPROVED PERMIT PACKAGE.
- UPON SUBSTANTIAL PROJECT COMPLETION, CONTRACTOR TO CLEAR EXISTING CULVERTS/PIPES, CATCH BASINS, AND DITCHES ALONG FRONTAGE AND DOWNSTREAM AS NECESSARY TO ACHIEVE POSITIVE DRAINAGE.
- ALL PROPOSED OR RELOCATED SIGNAGE SHALL BE PLACED OR REPLACED IN ACCORDANCE WITH NCDOT APPROVED BREAKAWAY SIGN SUPPORTS AS DETAILED IN DIVISION 12 IN THE NCDOT STANDARD DRAWINGS.
- CONTRACTOR TO SAWCUT EXISTING ASPHALT FOR SMOOTH JOINT NOT ALIGNED WITH WHEEL PATH.

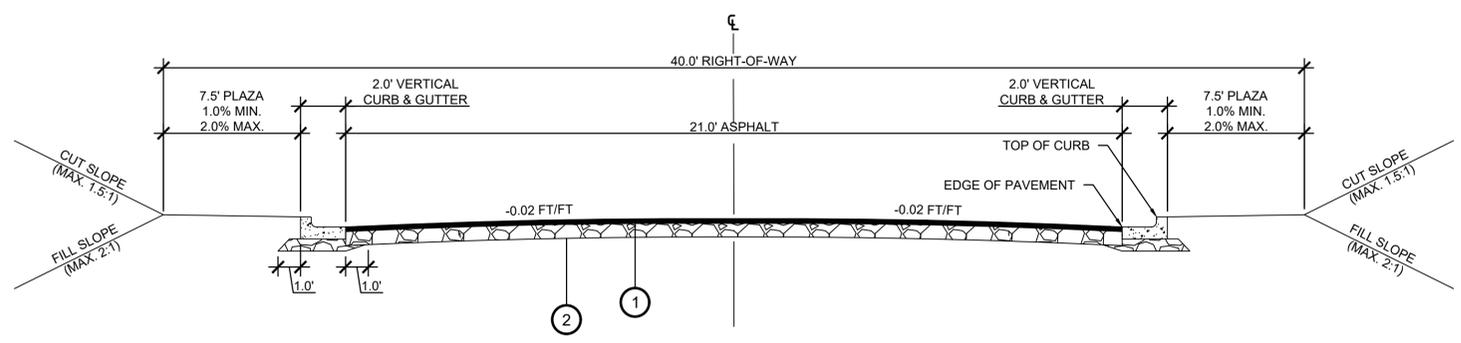
**1 PLAN - CL US HWY 17 NB**  
SCALE: 1" = 40'



**2 PROFILE - US HWY 17 NB**  
SCALE: HOR. 1" = 40', VERT. 1" = 4'

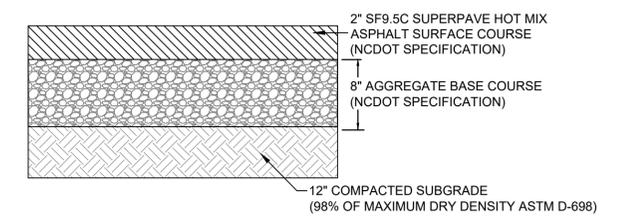


**3 DRIVEWAY PROFILE DETAIL**  
SCALE: HOR. 1" = 30' VER. 1" = 3'



- 1 2" SF9.5C SUPERPAVE HOT MIX ASPHALT SURFACE COURSE (NCDOT SPECIFICATION)
- 2 8" AGGREGATE BASE COURSE (NCDOT SPECIFICATION)

**4 ENTRY ROAD SECTION**  
SCALE: NOT TO SCALE



**5 NCDOT DRIVEWAY PAVEMENT SECTION**  
SCALE: NOT TO SCALE

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PRINCIPAL IN CHARGE  
N. LAURETTA, PE, LEED AP

PROJECT MANAGER  
NIL

DRAWN BY  
NIL

PROJECT ADDRESS  
13047 US HWY 17  
HAMPSTEAD, NC

PROJECT NUMBER  
1014.01

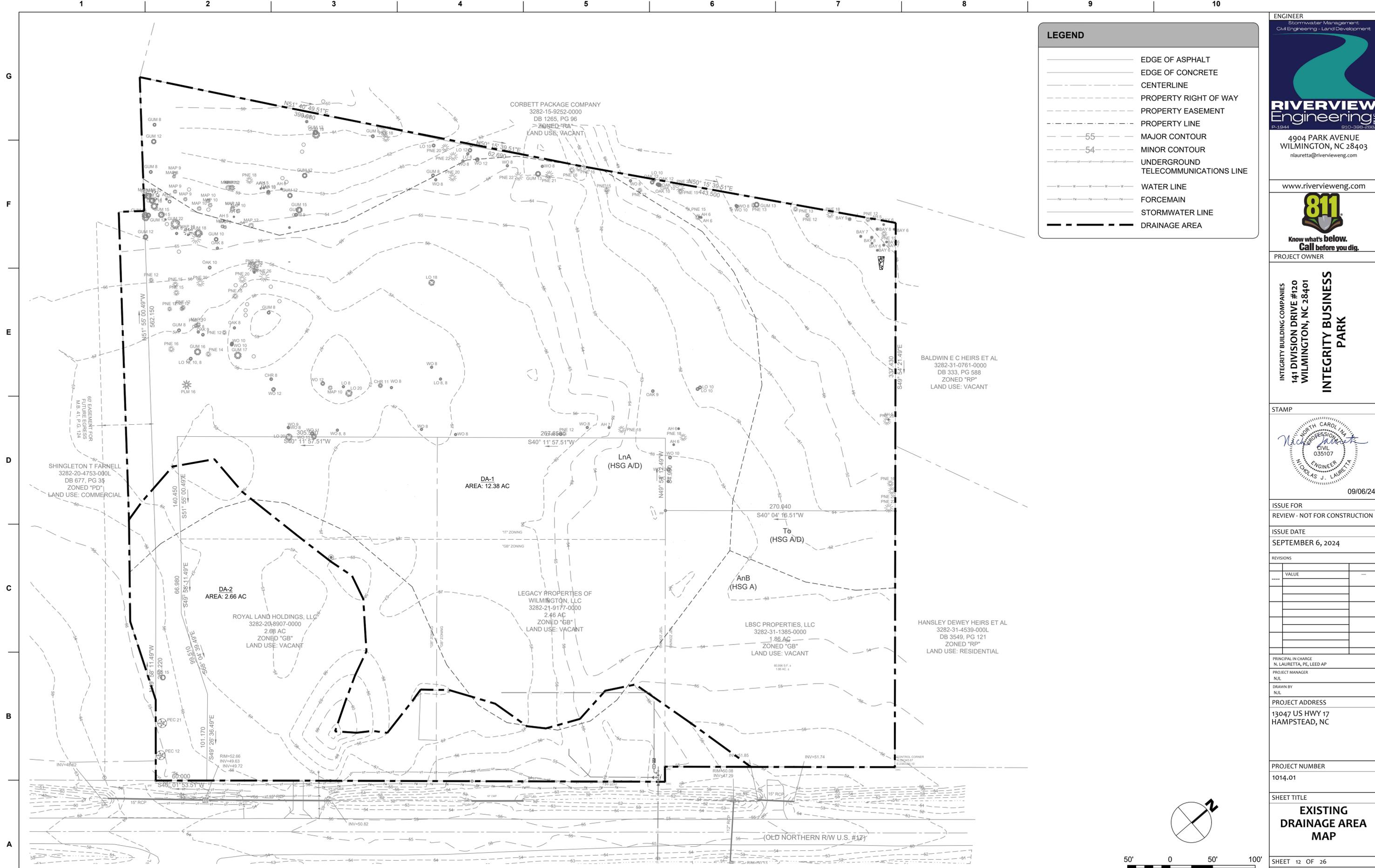
SHEET TITLE  
**DRIVEWAY PLAN**

SHEET 9 OF 26  
SHEET NUMBER

**CS102**







**LEGEND**

- EDGE OF ASPHALT
- EDGE OF CONCRETE
- - - CENTERLINE
- - - PROPERTY RIGHT OF WAY
- - - PROPERTY EASEMENT
- - - PROPERTY LINE
- - - 55 - MAJOR CONTOUR
- - - 54 - MINOR CONTOUR
- - - UNDERGROUND TELECOMMUNICATIONS LINE
- - - WATER LINE
- - - FORCEMAIN
- - - STORMWATER LINE
- - - DRAINAGE AREA**

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N. LAURETTA, PE, LEED AP

PROJECT MANAGER  
N.J.L.

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N.J.L.

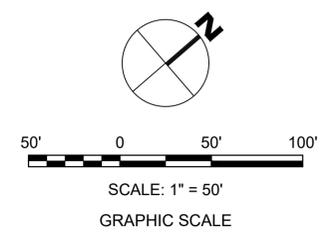
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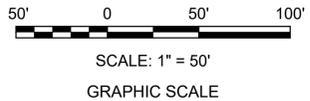
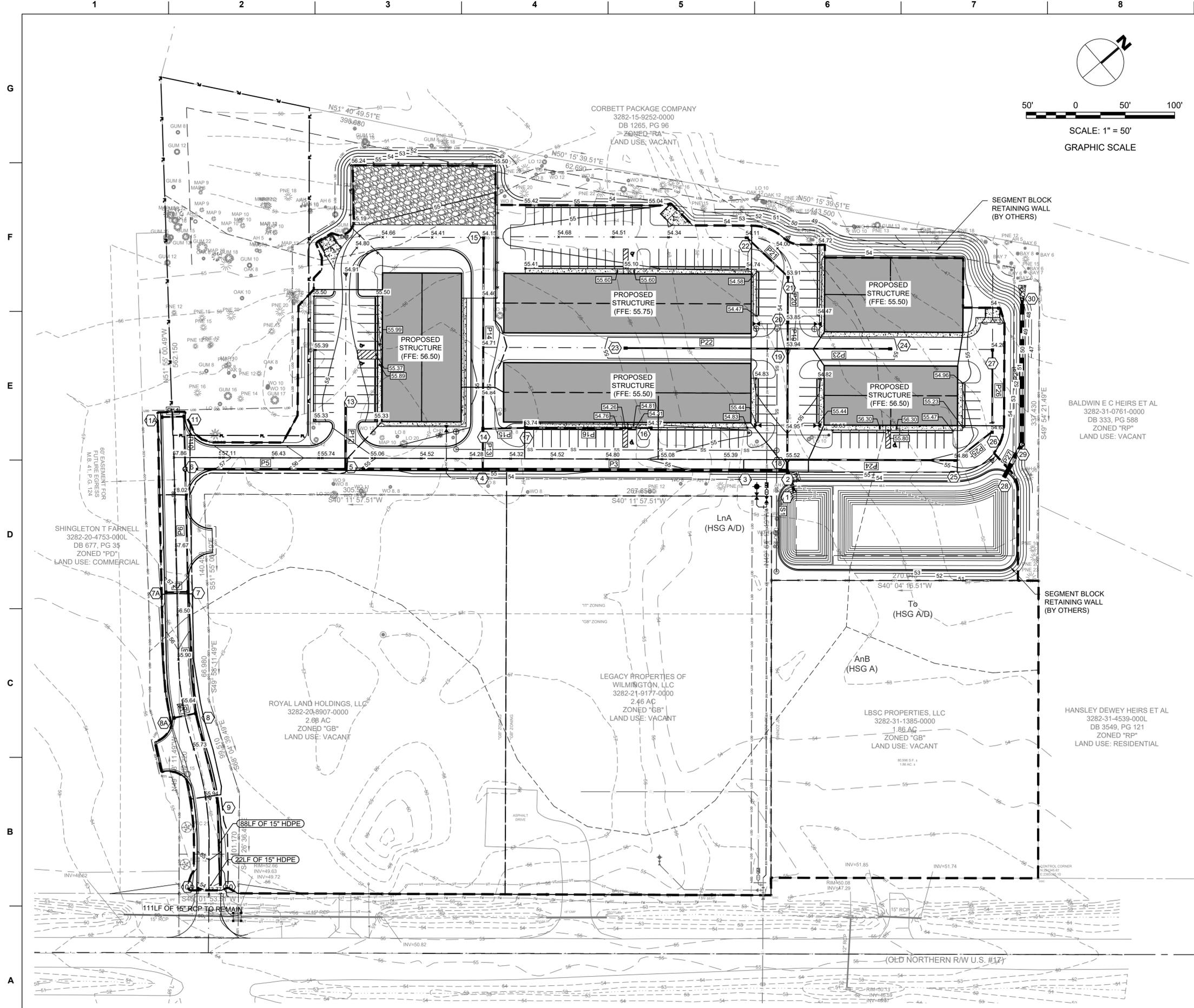
SHEET TITLE  
**EXISTING DRAINAGE AREA MAP**

SHEET 12 OF 26  
SHEET NUMBER

**CG102**



**1** EXISTING DRAINAGE AREA MAP  
SCALE: 1" = 50'



| LEGEND |                          |
|--------|--------------------------|
|        | BUILDING OUTLINE         |
|        | EDGE OF ASPHALT          |
|        | CENTERLINE               |
|        | SETBACK                  |
|        | EDGE OF SIDEWALK         |
|        | PROPERTY LINE            |
|        | CONCRETE                 |
|        | ASPHALT                  |
|        | EDGE OF ASPHALT          |
|        | CENTERLINE               |
|        | EX. MAJOR CONTOUR        |
|        | EX. MINOR CONTOUR        |
|        | PROP. MAJOR CONTOUR      |
|        | PROP. MINOR CONTOUR      |
|        | STORMWATER LINE          |
|        | LIMITS OF DISTURBANCE    |
|        | TREE PROTECTION FENCE    |
|        | PUBLIC DRAINAGE EASEMENT |

- STORM DRAINAGE AND GRADING NOTES**
- IN ACCORDANCE WITH NC GENERAL STATUTES, NPDES REGULATIONS, AND NCDENR REQUIREMENTS, STORMWATER DISCHARGE OUTFALLS SHALL BE INSPECTED BY THE CONTRACTOR. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR AFTER EACH STORM EVENT OF 1/2 INCH OR GREATER, WITH ONE WEEKLY INSPECTION MINIMUM. NCDENR STANDARD INSPECTION REPORTS SHALL BE PREPARED AND SIGNED WITH COPIES PROVIDED TO THE OWNER, ARCHITECT, AND ENGINEER, BY THE CONTRACTOR.
  - INLET PROTECTION SHALL BE INSTALLED AROUND OUTFALL. DEVICES SHALL BE CONSTRUCTED TO FINAL PROPOSED CONDITION UPON STABILIZATION OF CONTRIBUTING GROUND SURFACES AND REMOVAL OF SEDIMENT FROM STORM PIPES.
  - ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
  - UNLESS OTHERWISE NOTED, GRADES AND SPOT ELEVATIONS NOTED ON PLANS INDICATE FINISHED GRADE OR PAVEMENT SURFACE. ALL DIMENSIONS ARE MEASURED TO THE BACK OF CURB UNLESS OTHERWISE INDICATED.

- MATERIALS AND EASEMENT NOTES:**
- ALL STORM DRAINAGE PIPING TO BE RCP, UNLESS OTHERWISE NOTED
  - ALL STORM DRAINAGE PIPING CONVEYING DISCHARGE FROM THE PUBLIC RIGHT-OF-WAY SHALL BE CONTAINED WITHIN A PUBLIC DRAINAGE EASEMENT WHOSE WIDTH IS DETERMINED BY THE DEPTH OF BURY
  - POTABLE WATER, FIRE PROTECTION WATER SHALL BE PUBLIC AND SANITARY SEWER UTILITIES ARE PRIVATE.

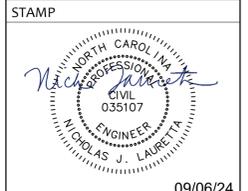


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 N. LAURETTA, PE, LEED AP  
 PROJECT MANAGER  
 N.J.L.

DRAWN BY  
 N.J.L.  
 PROJECT ADDRESS  
 13047 US HWY 17  
 HAMPSTEAD, NC

PROJECT NUMBER  
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SHEET TITLE  
**PROPOSED DRAINAGE AREA MAP**

SHEET 13 OF 26  
 SHEET NUMBER

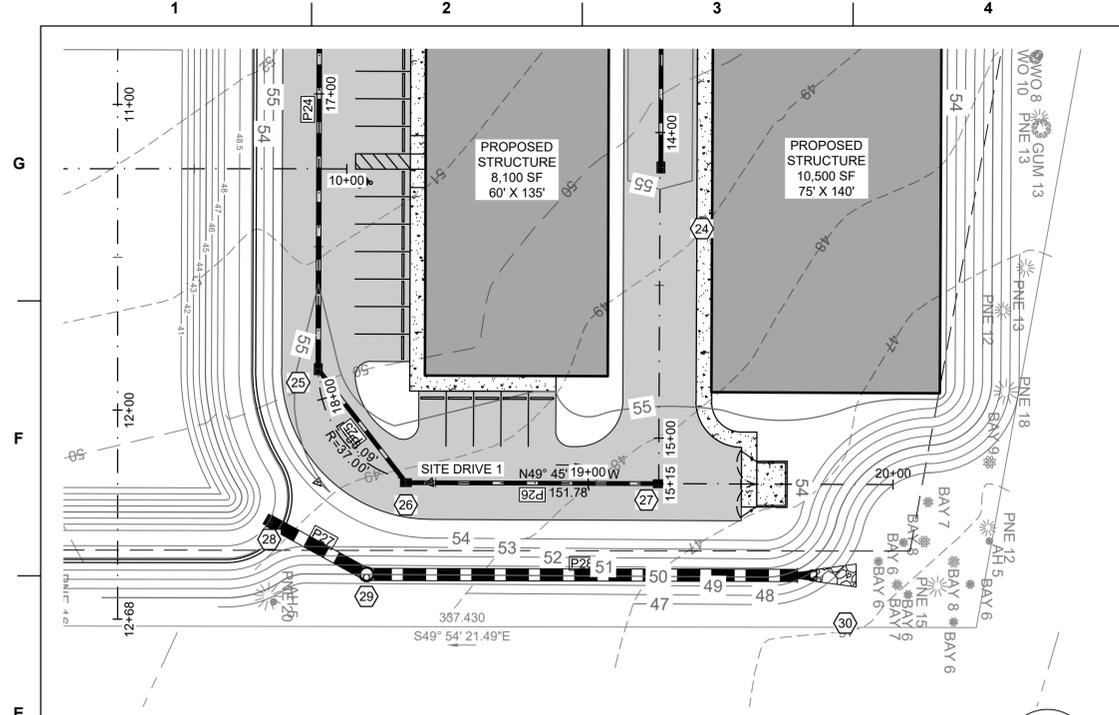
**CG103**  
 MAJOR SITE DEVELOPMENT PLAN

**1 PROPOSED DRAINAGE AREA MAP**  
 SCALE: 1" = 50'

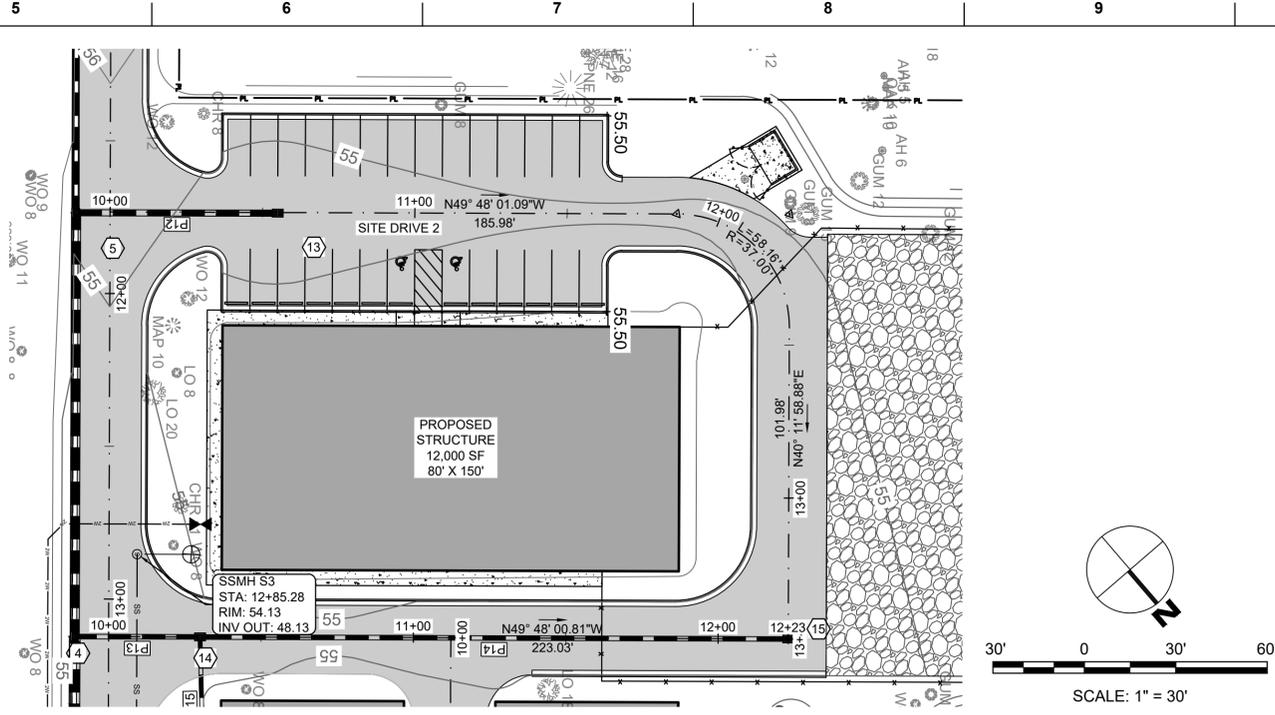




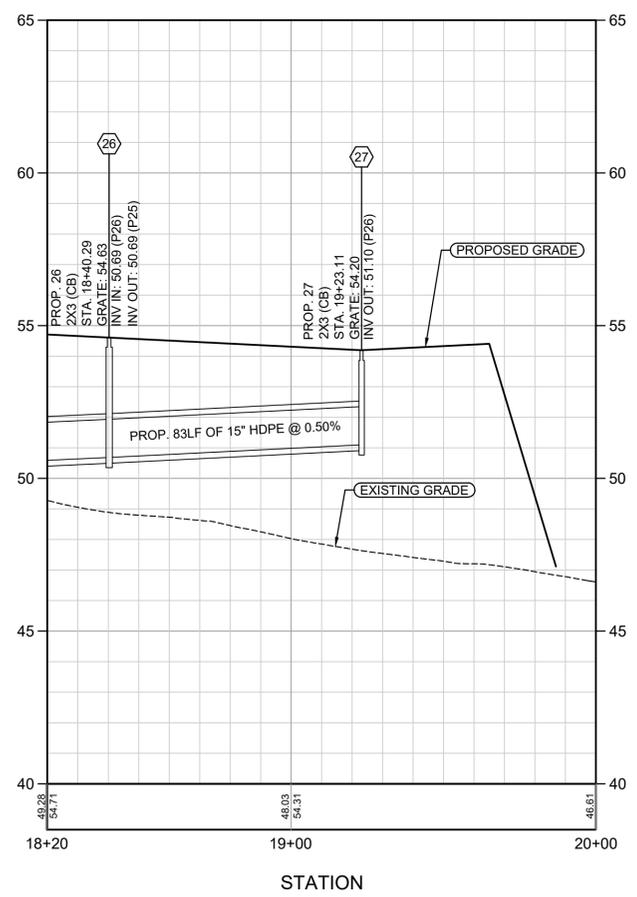




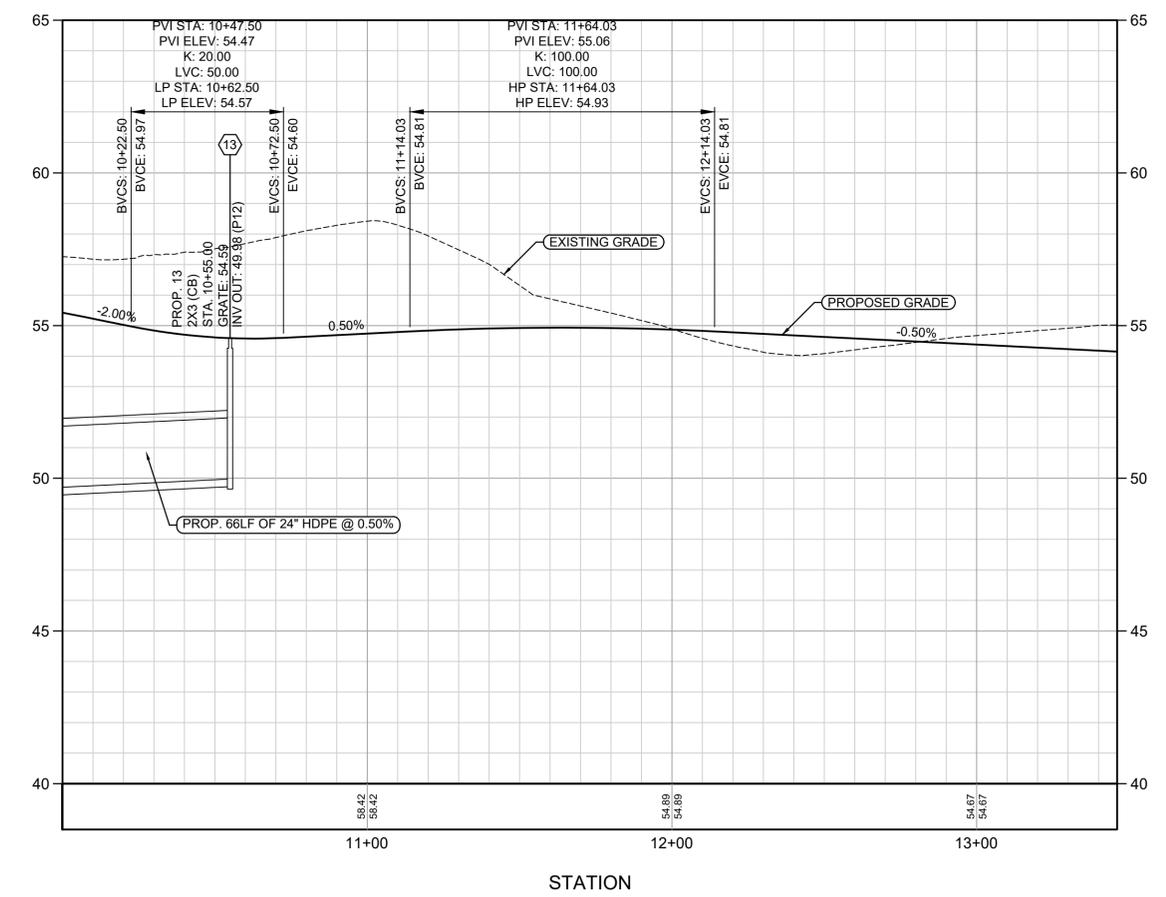
**1** PLAN - SITE DRIVE 1 - STA. 18+20 TO 20+00  
SCALE: 1" = 30'



**3** PLAN - SITE DRIVE 2 - STA. 10+00 TO 13+46  
SCALE: 1" = 30'



**2** PROFILE - SITE DRIVE 1 - STA. 18+20 TO 20+00  
SCALE: HOR. 1" = 30' VERT. 1" = 3'



**4** PROFILE - SITE DRIVE 2 - STA. 10+00 TO 13+46  
SCALE: HOR. 1" = 30' VERT. 1" = 3'

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N. LAURETTA, PE, LEED AP

PROJECT MANAGER  
NJL

DRAWN BY  
NJL

PROJECT ADDRESS  
13047 US HWY 17  
HAMPSTEAD, NC

PROJECT NUMBER  
1014.01

SHEET TITLE  
**PLAN & PROFILE -  
SITE DRIVES**

SHEET 17 OF 26  
SHEET NUMBER

**CU703**

MAJOR SITE DEVELOPMENT PLAN







**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<br>-10 days for Falls Lake Watershed |
| (e) Areas with slopes flatter than 4:1                     | 14  | -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones<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>Rolled 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>Rolled erosion control products with grass seed</li> </ul> |

**POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide BASINing area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

**EQUIPMENT AND VEHICLE MAINTENANCE**

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

**PAINT AND OTHER LIQUID WASTE**

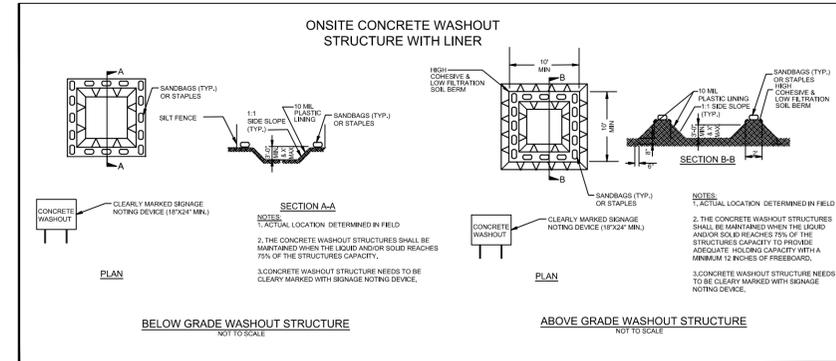
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

**PORTABLE TOILETS**

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

**EARTHEN STOCKPILE MANAGEMENT**

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



**CONCRETE WASHOUTS**

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

**HERBICIDES, PESTICIDES AND RODENTICIDES**

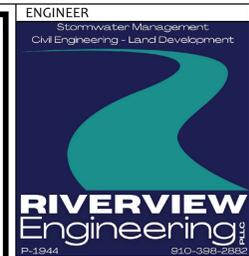
- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

**HAZARDOUS AND TOXIC WASTE**

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

**NCG01 GROUND STABILIZATION AND MATERIALS HANDLING**

**EFFECTIVE: 04/01/19**

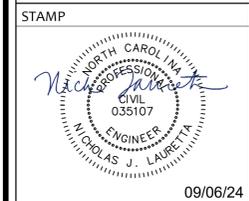


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PRINCIPAL IN CHARGE  
N. LAURETTA, PE, LEED AP  
PROJECT MANAGER  
NJL  
DRAWN BY  
NJL  
PROJECT ADDRESS  
13047 US HWY 17  
HAMPSTEAD, NC

PROJECT NUMBER  
1014.01

SHEET TITLE  
**EROSION & SEDIMENT CONTROL DETAILS**

SHEET 21 OF 26  
SHEET NUMBER

**CE503**

PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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.

Table with 3 columns: Inspect, Frequency (during normal business hours), Inspection records must include: (1) Rain gauge maintained in good working order, (2) E&SC Measures, (3) Stormwater discharge outfalls (SDOs), (4) Perimeter of site, (5) Streams or wetlands onsite or offsite, (6) Ground stabilization measures.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Table with 2 columns: 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. (b) A phase of grading has been completed. (c) Ground cover is located and installed in accordance with the approved E&SC plan. (d) The maintenance and repair requirements for all E&SC measures have been performed. (e) Corrective actions have been taken to E&SC measures.

2. Additional Documentation to be Kept on Site

In addition to the E&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:

- (a) This General Permit as well as the Certificate of Coverage, after it is received.
(b) 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.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI 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]

PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).
(c) 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.
(d) Anticipated bypasses and unanticipated bypasses.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

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.

Table with 2 columns: Occurrence, Reporting Timeframes (After Discovery) and Other Requirements. (a) Visible sediment deposition in a stream or wetland. (b) Oil spills and release of hazardous substances per Item 1(b)-(c) above. (c) Anticipated bypasses [40 CFR 122.41(m)(3)]. (d) Unanticipated bypasses [40 CFR 122.41(m)(3)]. (e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)].

PART II, SECTION G, ITEM (4)  
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

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 unless 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:

- (a) The E&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&SC plan authority has approved these items,
(b) 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,
(c) Dewatering discharges 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, weir tanks, and filtration systems,
(d) 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,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) 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.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19



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09/06/24

ISSUE FOR

REVIEW - NOT FOR CONSTRUCTION

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SEPTEMBER 6, 2024

REVISIONS

Table with 2 columns: VALUE, (empty rows for revisions)

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N. LAURETTA, PE, LEED AP

PROJECT MANAGER

NJL

DRAWN BY

NJL

PROJECT ADDRESS

13047 US HWY 17

HAMPSTEAD, NC

PROJECT NUMBER

1014.01

SHEET TITLE

EROSION & SEDIMENT CONTROL DETAILS

SHEET 22 OF 26

SHEET NUMBER

CE504





G  
F  
E  
D  
C  
B  
A

1 2 3 4 5 6 7 8 9 10

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

1-221 ROADWAY STANDARD DRAWING FOR CONCRETE DROP INLET 12" THRU 30" PIPE

WITH GRATE & FRAME REMOVED

SECTION X-X SECTION Y-Y

GENERAL NOTES:  
USE CLASS "B" CONCRETE THROUGHOUT.  
PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.  
OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.  
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.  
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.  
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0". STD. DWG. 840.45 OR 840.46 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.  
CONSTRUCT WITH PIPE CROWNS MATCHING.  
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.  
INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.  
INSTALL STONE DRAINAGE OF A MINIMUM OF 1 CUBIC FOOT OF NO. 7MM STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.  
CHAMFER ALL EXPOSED CORNERS 1".  
DRAWING NOT TO SCALE.

| DIMENSIONS OF BOX & PIPE |       | CUBIC YARDS CONC. IN BOX |             | DEDUCTIONS FOR ONE PIPE |             |
|--------------------------|-------|--------------------------|-------------|-------------------------|-------------|
| PIPE                     | SPAN  | WIDTH                    | MIN. HEIGHT | TOP SLAB                | BOTTOM SLAB |
| D                        | A     | B                        | H           | C.M.                    | R.C.        |
| 12"                      | 3'-0" | 2'-0"                    | 2'-0"       | 0.222                   | 0.222       |
| 15"                      | 3'-0" | 2'-3"                    | 2'-3"       | 0.648                   | 0.023       |
| 18"                      | 3'-0" | 2'-6"                    | 2'-6"       | 0.703                   | 0.033       |
| 24"                      | 3'-0" | 3'-0"                    | 3'-0"       | 0.814                   | 0.059       |
| 30"                      | 3'-0" | 2'-0"                    | 3'-6"       | 0.222                   | 0.925       |

SHEET 1 OF 1  
840.14

STATE OF NORTH CAROLINA  
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1-221 ROADWAY STANDARD DRAWING FOR DROP INLET FRAME AND GRATES FOR USE WITH STD. DWG.S 840.14 AND 840.15

SECTION G-G

PLAN OF GRATING  
CAST IRON

PLAN OF FRAME  
CAST IRON

SECTION H-H

SECTION E-E SECTION F-F

SHEET 1 OF 1  
840.16

STATE OF NORTH CAROLINA  
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1-221 ROADWAY STANDARD DRAWING FOR ANCHORAGE FOR FRAMES BRICK/CONCRETE/PRECAST CONCRETE

BRICK MASONRY CONSTRUCTION  
CONCRETE CONSTRUCTION  
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

NOTE:  
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.

FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS

MASONRY ANCHOR  
3/8" DIA. BOLT WITH PLATE

CONCRETE ANCHOR  
3/8" DIA. BENT BAR

PRECAST CONCRETE ANCHOR  
3/8" DIA. BENT BAR

SHEET 1 OF 1  
840.25

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

1-221 ROADWAY STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

PLAN

SECTION X-X SECTION Y-Y

SECTION J-J SECTION M-M

GENERAL NOTES:  
USE CLASS "B" CONCRETE THROUGHOUT.  
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.  
OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.  
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.  
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.  
USE TYPE "E", "F", AND "G" GRATES UNLESS OTHERWISE INDICATED.  
FOR 6" TO 16" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 16" TO 18" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.  
MAXIMUM DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 16'-0". STD. NO. 840.45 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.  
CONSTRUCT WITH PIPE CROWNS MATCHING.  
CHAMFER ALL EXPOSED CORNERS 1".  
DRAWING NOT TO SCALE.

DETAIL SHOWING METHOD OF RISER CONSTRUCTION

SHEET 1 OF 2  
840.02

STATE OF NORTH CAROLINA  
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1-221 ROADWAY STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

PLAN

SECTION S-S SECTION R-R

ELEVATION

| MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H, WITH NO RISER) * |       | CU. YDS. CONC. IN BOX |             | DEDUCTIONS FOR ONE PIPE |             |
|---|-------|-----------------------|-------------|-------------------------|-------------|
| PIPE  | SPAN  | WIDTH                 | MIN. HEIGHT | TOP SLAB                | BOTTOM SLAB |
| D   | A     | B                     | H           | E                       | F           |
| 12"   | 3'-0" | 2'-0"                 | 2'-0"       | 0.235                   | 0.222       |
| 15"   | 3'-0" | 2'-3"                 | 2'-3"       | 0.235                   | 0.222       |
| 18"   | 3'-0" | 2'-6"                 | 2'-6"       | 0.235                   | 0.222       |
| 24"   | 3'-0" | 2'-9"                 | 2'-9"       | 0.235                   | 0.222       |
| 30"   | 3'-0" | 2'-0"                 | 3'-6"       | 0.235                   | 0.222       |

\* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

SHEET 2 OF 2  
840.02

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

1-221 ROADWAY STANDARD DRAWING FOR CONCRETE JUNCTION BOX 12" THRU 66" PIPE

PLAN

SECTION X-X SECTION Y-Y

SECTION C-C OR D-D  
DOWEL

GENERAL NOTES:  
CHAMFER ALL EXPOSED CORNERS 1".  
USE CLASS "B" CONCRETE THROUGHOUT.  
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.  
USE FORMS TO CONSTRUCT THE BOTTOM SLAB.  
IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.  
PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.  
ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)  
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0". STANDARD DRAWING 840.45 OR 840.46 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.

| DIMENSIONS OF BOX & PIPE |       | REINFORCEMENT BARS "A" |        | TOP SLAB DIMENSIONS |        | CUBIC YARDS IN BOX |       | TOTAL QUANTITIES BOX AND SLABS |             | DEDUCTIONS FOR ONE PIPE CU.YDS. |           |
|--------------------------|-------|------------------------|--------|---------------------|--------|--------------------|-------|--------------------------------|-------------|---------------------------------|-----------|
| PIPE                     | SPAN  | WIDTH                  | HEIGHT | NO.                 | LENGTH | E                  | F     | TOP SLAB                       | BOTTOM SLAB | LBS. REIN.                      | C.S. R.C. |
| 12"                      | 2'-0" | 2'-0"                  | 2'-3"  | 12                  | 2'-9"  | 3'-0"              | 3'-0" | 0.167                          | 0.167       | 0.185                           | 0.015     |
| 15"                      | 2'-3" | 2'-3"                  | 2'-6"  | 12                  | 3'-0"  | 3'-3"              | 3'-3" | 0.196                          | 0.196       | 0.204                           | 0.024     |
| 18"                      | 2'-6" | 2'-6"                  | 2'-9"  | 14                  | 3'-0"  | 3'-6"              | 3'-6" | 0.227                          | 0.227       | 0.230                           | 0.030     |
| 24"                      | 3'-0" | 3'-0"                  | 3'-3"  | 16                  | 3'-9"  | 4'-0"              | 4'-0" | 0.296                          | 0.296       | 0.259                           | 0.059     |
| 30"                      | 3'-6" | 3'-6"                  | 3'-9"  | 18                  | 4'-3"  | 4'-6"              | 4'-6" | 0.375                          | 0.375       | 0.296                           | 0.085     |
| 36"                      | 4'-0" | 4'-0"                  | 4'-3"  | 20                  | 4'-9"  | 5'-0"              | 5'-0" | 0.463                          | 0.463       | 0.333                           | 0.132     |
| 42"                      | 4'-6" | 4'-6"                  | 4'-9"  | 22                  | 5'-3"  | 5'-6"              | 5'-6" | 0.560                          | 0.560       | 0.370                           | 0.180     |
| 48"                      | 5'-0" | 5'-0"                  | 5'-3"  | 24                  | 5'-9"  | 6'-0"              | 6'-0" | 0.660                          | 0.660       | 0.407                           | 0.235     |
| 54"                      | 5'-6" | 5'-6"                  | 5'-9"  | 26                  | 6'-3"  | 6'-6"              | 6'-6" | 0.773                          | 0.773       | 0.444                           | 0.297     |
| 60"                      | 6'-0" | 6'-0"                  | 6'-3"  | 30                  | 7'-3"  | 7'-6"              | 7'-6" | 1.042                          | 1.042       | 0.481                           | 0.495     |
| 66"                      | 7'-0" | 7'-0"                  | 7'-3"  | 32                  | 7'-9"  | 8'-1"              | 8'-1" | 1.210                          | 1.210       | 0.518                           | 0.589     |

SHEET 1 OF 1  
840.31

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1-221 ROADWAY STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

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1-221 ROADWAY STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

STATE OF NORTH CAROLINA  
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RALEIGH, N.C.

1-221 ROADWAY STANDARD DRAWING FOR CONCRETE JUNCTION BOX 12" THRU 66" PIPE

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PROFESSIONAL CIVIL ENGINEER  
035107  
09/06/24

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HAMPSTEAD, NC

PROJECT NUMBER  
1014.01

SHEET TITLE  
**STORM DRAINAGE DETAILS**

SHEET 25 OF 26  
SHEET NUMBER

CG502

MAJOR SITE DEVELOPMENT PLAN







