



Intracoastal Engineering PLLC

August 18th, 2017

**Development Services
305 Chestnut Street
Wilmington NC, 28401**

Attn: Nicole Smith

Re: Smith & Gsell Design Studio
PN 2017-011

Dear Ms. Smith,

Please find enclosed (1) Tree Removal Permit Application and \$25 Review fee check, (1) Drainage Plan Application and \$200 Review Fee Check, and (5) sets of plans revised per TRC comments. Below are our responses to each comment.

Please contact us with any questions, comments or when the project will be scheduled for review.

Nicole Smith:

Site Plan Content (Sec. 18-60):

- Add note regarding number of stories (1) **Done.**
- Add impervious surface calculations pre-development. **Done.**
- Landscape Plan required. **Noted. Landscape plan to be provided by others.**
- Connection from public sidewalk to building entrance. **Noted. Charlie Cazier with our office will be contacting you to discuss.**
- Wetland determination or delineation-Cityview flags potential for wetlands to be onsite. **Noted. A wetland consultant has been contracted. Results will be provided when available.**
- Tree removal/preservation permit is required. **Tree removal permit application/fee check is enclosed.**

Landscape Plans (Sec. 18-462):

- Add note to plan regarding prior to any clearing, grading or construction activity, tree protection fencing will be installed around protected trees or groves of trees. **Done.**
- Add note to plan regarding no construction workers, tools, materials or vehicles are permitted within the tree protection fencing. **Done.**
- Add trees to be preserved to table. Identify trees as significant or regulated for removal to assist with mitigation calculations per Sec. 18-460. **Done.**

- Verify street frontage (sheet C-O shows 138.00'-24' (drive width) = 114 ft. x 18= 2052 sf is required street yard calculation.
Driveway width is now 16' + 8" Landscape Timer on both sides =17.34'.... 138'-17.34'=120.66'*18'=2,172 S.F
- Add minimum and maximum width of street yard per Table II, Sec. 18-477 (minimum is 9 ft. maximum is 27 ft.) **Done.**
- Verify parking facility calculations for interior landscaping. Area to be included in calculation includes, but is not limited to parking areas, loading spaces, automobile sales lots. Driveways and internal drive aisles. Required shade is a minimum of 20% canopy coverage at maturity.
**All required areas are included in the calculation.
Required shading will be shown on the Landscape plan by others.**
- Please identify the parking lot location on the adjacent Oleander Methodist Church site. Current plan shows a separation of 5' from the property line (may be required to provide 10ft if the parking lot is adjacent and not being developed concurrently).
**The parking area on the adjacent Church site is now shown on the plans.
The Church has agreed to a shared cross access agreement, which is enclosed.**
- Identify the areas of the building subject to the foundation plantings calculations.
The facade of the building facing the parking area is included in the foundation planting calculation which is 68' in length.
- Show trash holding area and HVAC equipment, including roof mounted units to ensure compliance with screening requirements of adjacent residential zoned property. **Please see Utility Note #12 for solid waste disposal. "Solid Waste Disposal By Cow Curbside Service." The HVAC system is yet to be designed.**
- Concern with proposed removal of a 14" Pine. May be located within the required 20 ft. buffer. **Noted.**
- Is there a way to preserve the 22" Pine adjacent to the proposed parking area?
- **We believe you meant the 22" Gum? If so, it is now being preserved. If you're talking about the 22" Pine, this is located within the building footprint, therefore it will not be saved.**

Aaron Reese:

- Show tree protection at proper spacing; 1' of radius for each inch of trunk diameter.
Done.
- Identify pines by species.
The 24" pine being removed is not a Long Leaf Pine. We respectfully request we not be required to identify all pine species since it will have no affect on mitigation either way.

Rich Christensen:

1. The existing conditions are not accurately shown between the two existing driveways along Victory Gardens Drive. There is an asphalt widening section in front of the church that does not appear on the existing conditions plan.
We now have a full survey which accurately shows the existing conditions.
2. Provide the surveyed width of the existing asphalt in front of the subject property. A street widening on the project side may be necessary to bring the roadway into compliance for a local street.

The width of the road in front of our site is approximately 20'. We only have the existing E.O.P. surveyed on our side of the road. We are providing a minimum of 13' from Center Line to Back of Curb pavement section.

3. Add an 'On-site Pervious Areas' line item to the Site Plan. Pull the pervious areas out from under the 'On-site Impervious Areas' header. ***Done.***
4. Add a junction box at the end of the church's existing driveway pipe to connect the driveway pipes to eliminate the small open ditch section.

Due to the existing pipe invert and surface elevation a junction box would require the top to be installed to high for surface drainage. We have proposed to extend our driveway pipe to within 5' of the adjacent Church site driveway pipe and have called for that portion of swale to be lined with Rip-Rap. Due to the site constraints and our best attempt at offering a reasonable alternative, we respectfully request a junction box not be required.

5. Continue the proposed sidewalk northward to connect to the church's existing driveway for a continuous sidewalk from Oleander to the project site. ***Done.***
6. Add proposed spot elevations within the right-of-way to illustrate that the sidewalk, roadside swale, header curb and asphalt widening (if necessary) can all be constructed between the existing edge of pavement and the right-of-way line.

Done.

7. Add proposed spot elevations within the project site to illustrate the drainage pattern. The detail provided for parking under 25 stalls shows a drainage trench. The site plan does not show it. Is it to be part of this design?

We have added spot grades and flow arrows to illustrate the site drainage pattern. We are proposing to use the existing gravel parking area, with only 145sf of gravel being proposed. With using much of the existing gravel parking, no drainage trench is proposed.

8. A ditch cleanout may be necessary all the way down to the next driveway pipe in order to catch grade and ensure positive flow.

We have added existing spot grades to show positive flow continues beyond our site.

Sincerely,
Intracoastal Engineering PLLC



Charles D. Cazier, P.E.



Oleander United Methodist Church
5810 Oleander Drive Wilmington, NC 28403

City of Wilmington
102 N. Third Street
P.O. Box 1810
Wilmington, NC 28402

To Whom It May Concern:

The Trustees and Congregation of Oleander United Methodist Church acknowledge the proposed professional office at 216 Victory Gardens Rd. adjacent to our existing church facility. We are in agreement with sharing access and parking with the proposed office. Please contact us with any questions or comments.

Sincerely,

Rev. Tara Culp Lain, Pastor

Mr. Brad Walls, Trustee Chair

Mr. Herman Summerlin, Trustee

cc: Mr. Brannon Smith



Development Services
 Planning Division
 305 Chestnut Street
 PO Box 1810
 Wilmington, NC 28402-1810

910 254-0900
 910 341-3264 fax
 www.wilmingtonnc.gov
 Dial 711 TTY/Voice

APPROVED: _____ DENIED: _____ PERMIT #: _____

Application for Tree Removal Permit

Name of Applicant: Brannon Smith Phone: 910-612-3100 Date: 7/7/17

Name of Property Owner: Brannon Smith Phone: N/A

Property Owner Address: 2213 Moreland Dr Wilmington, NC 28405

Address of Proposed Tree Removal: 216 VICTORY GARDENS DR

Description of tree(s) to be removed/reason for removal: (provide attachment if necessary)

- 1. Tree removal per landscape plan. 6. _____
- 2. _____ 7. _____
- 3. _____ 8. _____
- 4. _____ 9. _____
- 5. _____ 10. _____

Description of Replacement Tree(s): See Landscape Plan.

Applicant Signature: *[Signature]* Date: 7-12-17

*****FOR OFFICIAL USE ONLY*****

Reviewed By: _____ Date: _____

Remarks: _____

**ALL WORK MUST BE IN COMPLIANCE WITH THE CITY LAND DEVELOPMENT CODE,
 ARTICLE 8, LANDSCAPING AND TREE PRESERVATION.**

NEW CONSTRUCTION: _____ EXPANSION: _____ OTHER: _____ PAID: _____

Tree Preservation Permit Fees

Less than 1 acre	\$25.00
1-5 acres	\$50.00
5-10 acres	\$100.00
Greater than 10 acres	\$150.00



Public Services
 Engineering
 414 Chestnut St, Suite 200
 Wilmington, NC 28401
 910 341-7807
 910 341-5881 fax
 wilmingtonnc.gov
 Dial 711 TTY/Voice

STORMWATER MANAGEMENT PERMIT APPLICATION FORM
 (Form SWP 2.2)

I. GENERAL INFORMATION

1. Project Name (subdivision, facility, or establishment name - should be consistent with project name on plans, specifications, letters, operation and maintenance agreements, etc.):

Smith & Gsell Design Studio

2. Location of Project (street address):

216 Victory Gardens Dr.

City: Wilmington County: New Hanover Zip: 28409

3. Directions to project (from nearest major intersection):

Project is located on the West side of Victory Gardens Dr. approx. 220' South of the intersection of Oleander Dr. and Victory Gardens Dr.

II. PERMIT INFORMATION

1. Specify the type of project (check one): Low Density High Density
 Drains to an Offsite Stormwater System Drainage Plan Other
 If the project drains to an Offsite System, list the Stormwater Permit Number(s):

City of Wilmington: _____ State – NCDENR/DWQ: _____

2. Is the project currently covered (whole or in part) by an existing City or State (NCDENR/DWQ) Stormwater Permit? Yes No

If yes, list all applicable Stormwater Permit Numbers:

City of Wilmington: _____ State – NCDENR/DWQ: _____

3. Additional Project Permit Requirements (check all applicable):

CAMA Major Sedimentation/Erosion Control

NPDES Industrial Stormwater 404/401 Permit: Proposed Impacts: _____

If any of these permits have already been acquired please provide the Project Name, Project/Permit Number, issue date and the type of each permit:

III. CONTACT INFORMATION

1. Print Applicant / Signing Official's name and title (specifically the developer, property owner, lessee, designated government official, individual, etc. who owns the project):

Applicant / Organization: Brannon Smith

Signing Official & Title: Brannon Smith (Owner)

- a. Contact information for Applicant / Signing Official:

Street Address: 2213 Moreland Dr

City: Wilmington State: NC Zip: 28405

Phone: 910-612-3100 Fax: _____ Email: BrannonSpine@aol.com

Mailing Address (if different than physical address): _____

City: _____ State: _____ Zip: _____

- b. Please check the appropriate box. The applicant listed above is:

- The property owner (Skip to item 3)
- Lessee* (Attach a copy of the lease agreement and complete items 2 and 2a below)
- Purchaser* (Attach a copy of the pending sales agreement and complete items 2 and 2a below)
- Developer* (Complete items 2 and 2a below.)

2. Print Property Owner's name and title below, if you are the lessee, purchaser, or developer. (This is the person who owns the property that the project is on.)

Property Owner / Organization: _____

Signing Official & Title: _____

- a. Contact information for Property Owner:

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Mailing Address (if different than physical address): _____

City: _____ State: _____ Zip: _____

3. (Optional) Print the name and title of another contact such as the project's construction supervisor or another person who can answer questions about the project:

Other Contact Person / Organization: N/A

Signing Official & Title: _____

a. Contact information for person listed in item 3 above:

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Mailing Address (if different than physical address): _____

City: _____ State: _____ Zip: _____

IV. PROJECT INFORMATION

1. In the space provided below, briefly summarize how the stormwater runoff will be treated.

2. Total Property Area: 14,123 square feet

3. Total Coastal Wetlands Area: 0 square feet

4. Total Surface Water Area: 0 square feet

5. Total Property Area (2) – Total Coastal Wetlands Area (3) – Total Surface Water Area (4) = Total Project Area: 14,123 square feet.

6. Existing Impervious Surface within Property Area: 5,750 square feet

7. Existing Impervious Surface to be Removed/Demolished: 2,045 square feet

8. Existing Impervious Surface to Remain: 3,705 square feet

9. Total Onsite (within property boundary) Newly Constructed Impervious Surface (*in square foot*):

Buildings/Lots	1,593
Impervious Gravel	145
Pervious Pavement (adj. total, with % credit applied)	0
Impervious Sidewalks	1,152
Pervious Sidewalks (adj. total, with 100 % credit applied)	0
Other (describe) Brick Paver Parking Area	972
Future Development	0
Total Onsite Newly Constructed Impervious Surface	3,862

10. Total Onsite Impervious Surface

(Existing Impervious Surface to remain + Onsite Newly Constructed Impervious Surface) = 7,567 square feet

11. Project percent of impervious area: (Total Onsite Impervious Surface / Total Project Area) x100 = 54 %

12. Total Offsite Newly Constructed Impervious Area (improvements made outside of property boundary, *in square feet*):

Impervious Pavement	546
Pervious Pavement (adj. total, with % credit applied)	0
Impervious Sidewalks	0
Pervious Sidewalks (adj. total, with % credit applied)	0
Other (describe)	0
Total Offsite Newly Constructed Impervious Surface	546

13. Total Newly Constructed Impervious Surface

(Total Onsite + Offsite Newly Constructed Impervious Surface) = 4408 square feet

14. Complete the following information for each Stormwater BMP drainage area. If there are more than three drainage areas in the project, attach an additional sheet with the information for each area provided in the same format as below. Low Density projects may omit this section and skip to Section V.

Basin Information	BMP #	BMP #	BMP #
Receiving Stream Name			
Receiving Stream Index Number			
Stream Classification			
Total Drainage Area (sf)	0	0	0
On-Site Drainage Area (sf)		0	
Off-Site Drainage Area (sf)		0	0
Total Impervious Area (sf)	0	0	0
Buildings/Lots (sf)		0	
Impervious Pavement (sf)		0	0
Pervious Pavement, 75 % credit (sf)		0	
Impervious Sidewalks (sf)		0	
Pervious Sidewalks, % credit (sf)	0	0	0
Other (sf)	0	0	
Future Development (sf)	0	0	0
Existing Impervious to remain (sf)	0	0	0
Offsite (sf)		0	0
Percent Impervious Area (%)			

15. How was the off-site impervious area listed above determined? Provide documentation:

AutoCad software.

V. SUBMITTAL REQUIREMENTS

1. Supplemental and Operation & Maintenance Forms - One applicable City of Wilmington Stormwater BMP supplement form and checklist must be submitted for **each** BMP specified for this project. One applicable proposed operation and maintenance (O&M) form must be submitted for **each type** of stormwater BMP. Once approved, the operation and maintenance forms must be referenced on the final plat and recorded with the register of deeds office.
2. Deed Restrictions and Restrictive Covenants - For all subdivisions, outparcels, and future development, the appropriate property restrictions and protective covenants are required to be recorded prior to the sale of any lot. Due to variability in lot sizes or the proposed BUA allocations, a table listing each lot number, lot size, and the allowable built-upon area must be provided as an attachment to the completed and notarized deed restriction form. The appropriate deed restrictions and protective covenants forms can be downloaded at the link listed in section V (3). Download the latest versions for each submittal.

In instances where the applicant is different than the property owner, it is the responsibility of the property owner to sign the deed restrictions and protective covenants form while the applicant is responsible for ensuring that the deed restrictions are recorded.

By the notarized signature(s) below, the permit holder(s) certify that the recorded property restrictions and protective covenants for this project, if required, shall include all the items required in the permit and listed on the forms available on the website, that the covenants will be binding on all parties and persons claiming under them, that they will run with the land, that the required covenants cannot be changed or deleted without concurrence from the City of Wilmington, and that they will be recorded prior to the sale of any lot.

3. Only complete application packages will be accepted and reviewed by the City. A complete package includes all of the items listed on the City Engineering Plan Review Checklist, including the fee. Copies of the Engineering Plan Review Checklist, all Forms, Deed Restrictions as well as detailed instructions on how to complete this application form may be downloaded from:

<http://www.wilmingtonnc.gov/PublicServices/Engineering/PlanReview/StormwaterPermits.aspx>

The complete application package should be submitted to the following address:

City of Wilmington – Engineering
Plan Review Section
414 Chestnut Street, Suite 200
Wilmington, NC 28402

VI. CONSULTANT INFORMATION AND AUTHORIZATION

1. Applicant: Complete this section if you wish to designate authority to another individual and/or firm (such as a consulting engineer and /or firm) so that they may provide information on your behalf for this project (such as addressing requests for additional information).

Consulting Engineer: Charles D. Cazier, P.E.

Consulting Firm: Intracoastal Engineering, PLLC

a. Contact information for consultant listed above:

Mailing Address: 5725 Oleander Dr. Unit E-7

City: Wilmington State: NC Zip: 28403

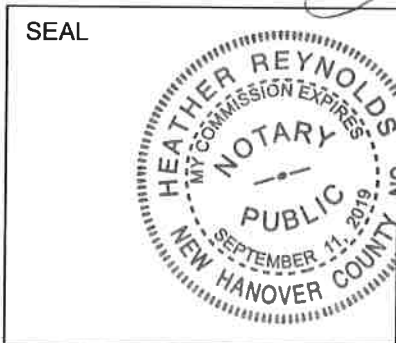
Phone: 910.859.8983 Fax: _____ Email: charlie@intracoastalengineering.com

VII. PROPERTY OWNER AUTHORIZATION (If Section III(2) has been filled out, complete this section)

I, (print or type name of person listed in Contact Information, item 2) Brannon Smith, certify that I own the property identified in this permit application, and thus give permission to (print or type name of person listed in Contact Information, item 1) _____ with (print or type name of organization listed in Contact Information, item 1) _____ to develop the project as currently proposed. A copy of the lease agreement or pending property sales contract has been provided with the submittal, which indicates the party responsible for the operation and maintenance of the stormwater system.

As the legal property owner I acknowledge, understand, and agree by my signature below, that if my designated agent (entity listed in Contact Information, item 1) dissolves their company and/or cancels or defaults on their lease agreement, or pending sale, responsibility for compliance with the City of Wilmington Stormwater Permit reverts back to me, the property owner. As the property owner, it is my responsibility to notify the City of Wilmington immediately and submit a completed Name/Ownership Change Form within 30 days; otherwise I will be operating a stormwater treatment facility without a valid permit. I understand that the operation of a stormwater treatment facility without a valid permit is a violation of the City of Wilmington Municipal Code of Ordinances and may result in appropriate enforcement including the assessment of civil penalties.

Signature: [Handwritten Signature] Date: 7-12-17



I, Heather Reynolds, a Notary Public for the State of North Carolina, County of New Hanover, do hereby certify that Brannon Smith personally appeared before me this day of July 12, 2017, and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal,
[Handwritten Signature]
My commission expires: 9-11-2019

VIII. APPLICANT'S CERTIFICATION

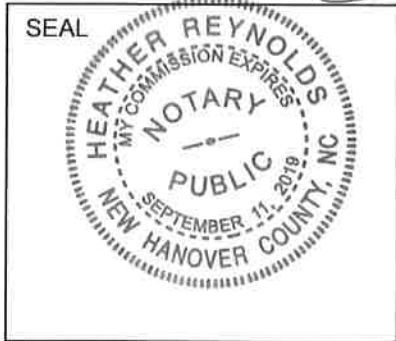
I, (print or type name of person listed in Contact Information, item 1) Brannon Smith certify that the information included on this permit application form is, to the best of my knowledge, correct and that the project will be constructed in conformance with the approved plans, that the required deed restrictions and protective covenants will be recorded, and that the proposed project complies with the requirements of the applicable stormwater rules under.

Signature: _____

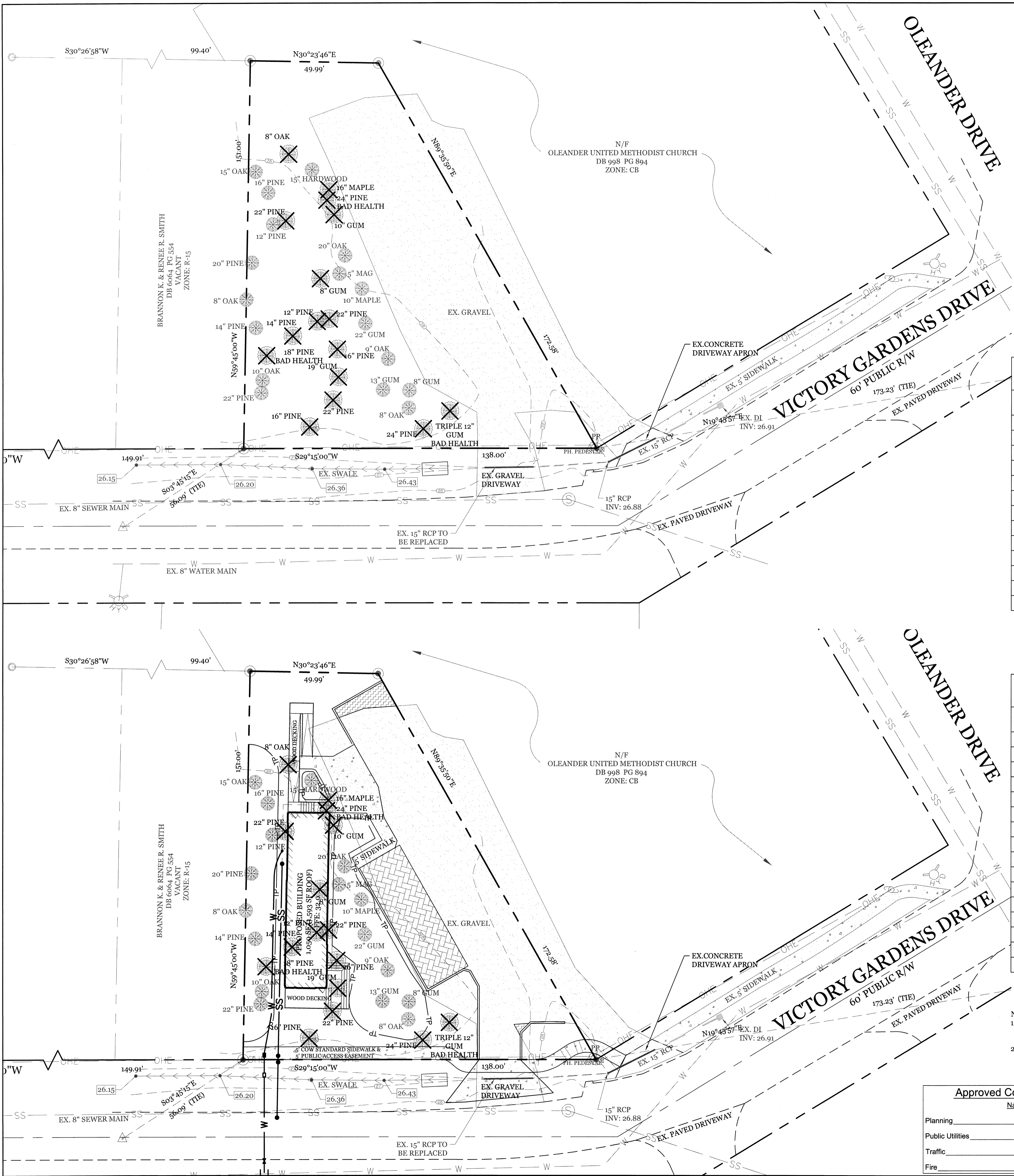
Brannon Smith

Date: _____

7-12-17

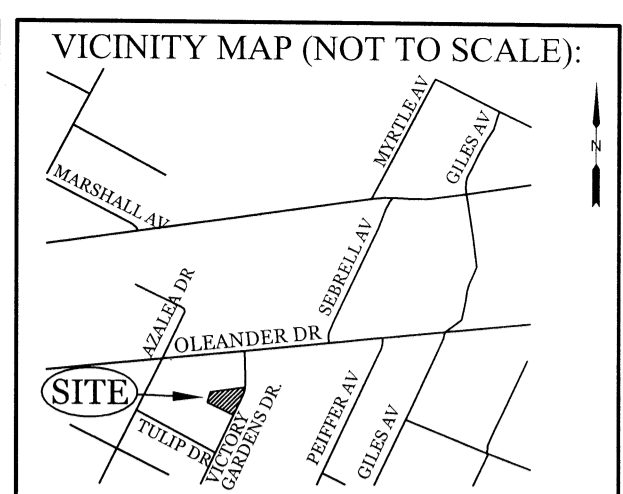


I, Heather Reynolds, a Notary Public for the State of North Carolina, County of New Hanover, do hereby certify that Brannon Smith personally appeared before me this day of July 12, 2017, and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal,
Heather Reynolds
My commission expires: 9-11-2019



SITE DATA

PARCEL ID:	R06207-015-010-000
CURRENT ZONING:	CB
CAMA LAND USE CLASSIFICATION:	WATERSHED RESOURCE PROTECTION
PROJECT ADDRESS:	216 VICTORY GARDENS DR WILMINGTON, NC 28409
CURRENT OWNER:	BRANNON K. & RENEE R. SMITH 2213 MORELAND DR WILMINGTON, NC 28405
TOTAL ACREAGE IN PROJECT BOUNDARY:	14,123 S.F. (± 0.32 ac.)
EXISTING ONSITE IMPERVIOUS AREAS:	GRAVEL PARKING AREA 5,750 S.F. (40.1%)



REVISIONS

NO.	DATE	DESCRIPTION

INTRACOASTAL ENGINEERING, PLLC
 5725 Oleander Dr. Unit E-7
 Wilmington, North Carolina 28403
 Phone: 910.859.8983
 Email: charlie@intracoastalengineering.com
 License Number: P-0662

PROPOSED TREES TO BE REMOVED

SIZE	SPECIES	QTY	TYPE
12"	PINE	1	REGULATED
14"	PINE	1	REGULATED
16"	PINE	2	REGULATED
18"	PINE	1	REGULATED
22"	PINE	3	REGULATED
24"	PINE	1	REGULATED
10"	MAPLE	1	REGULATED
16"	MAPLE	1	REGULATED
8"	GUM	1	REGULATED
10"	GUM	1	REGULATED
12"	GUM	1	REGULATED
19"	GUM	1	REGULATED
8"	OAK	1	REGULATED

NOTE: THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 80% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.

NOTE: CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
 SHEET 1 of 2

DATE: JAN. 2015
 DRAWN BY: JSR
 CHECKED BY: RDG, P.E.
 SCALE: NOT TO SCALE

CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, NC 28402
 (910) 341-7807

PROPOSED TREES TO BE PRESERVED

SIZE	SPECIES	QTY	TYPE
12"	PINE	1	REGULATED
14"	PINE	1	REGULATED
16"	PINE	1	REGULATED
20"	PINE	1	REGULATED
22"	PINE	1	REGULATED
10"	MAPLE	1	REGULATED
5"	MAGNOLIA	1	REGULATED
8"	GUM	1	REGULATED
13"	GUM	1	REGULATED
22"	GUM	1	REGULATED
15"	HARDWOOD	1	REGULATED
8"	OAK	2	REGULATED
9"	OAK	1	REGULATED
10"	OAK	1	REGULATED
15"	OAK	1	REGULATED
20"	OAK	1	REGULATED

NOTE: 1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF. 2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED. 3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA. 4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT. 5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION. 6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
 SHEET 2 of 2

DATE: JAN. 2015
 DRAWN BY: JSR
 CHECKED BY: RDG, P.E.
 SCALE: NOT TO SCALE

CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, NC 28402
 (910) 341-7807

- 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.

Approved Construction Plan

Name: _____ Date: _____

Planning _____
 Public Utilities _____
 Traffic _____
 Fire _____

APPROVED DRAINAGE PLAN

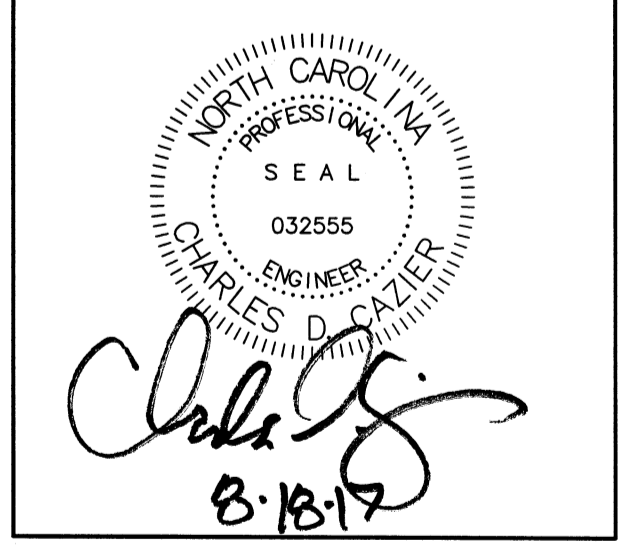
Date: _____ Permit # _____
 Signed: _____

LEGEND

- PROPERTY LINE
- ADJOINING LOT
- CONTOUR
- PROPOSED WATERLINE
- PROPOSED SANITARY SEWER LINE
- TREES TO BE REMOVED

Scale: 1"=20'

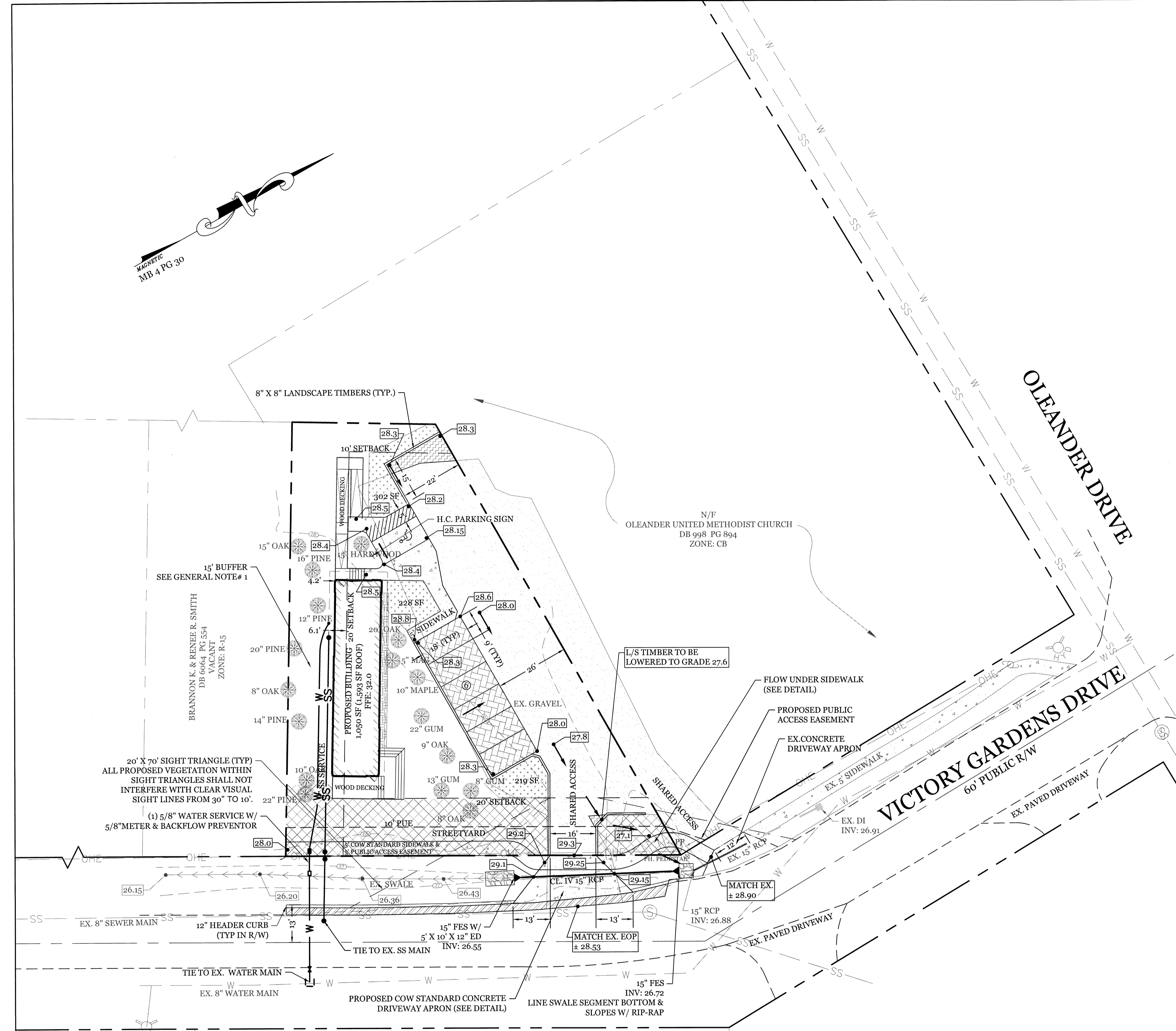
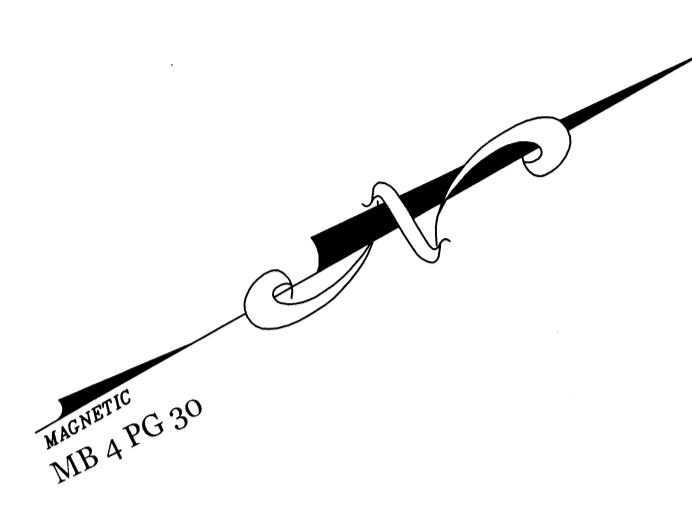
EXISTING CONDITIONS / TREE REMOVAL PLAN FOR SMITH & GSELL DESIGN STUDIO CITY OF WILMINGTON NEW HANOVER COUNTY, NC



CLIENT INFORMATION:
 Brannon Smith
 2213 Moreland Dr
 Wilmington NC 28405
 910-612-3100
 BrannonSpine@aol.com

DRAWN: JAE SHEET SIZE: 24x36
 CHECKED: CDC DATE: 8/18/2017
 APPROVED: CDC SCALE: 1" = 20'
 PROJECT NUMBER: 2017-011

DRAWING NUMBER: C-0
 1 OF 5



SITE DATA

PARCEL ID: R06207-015-010-000
 CURRENT ZONING: CB
 CAMA LAND USE CLASSIFICATION: WATERSHED RESOURCE PROTECTION
 PROJECT ADDRESS: 216 VICTORY GARDENS DR WILMINGTON, NC 28409
 CURRENT OWNER: BRANNON K. & RENEE R. SMITH 14,123 S.F. (± 0.32 ac.)
 TOTAL ACREAGE IN PROJECT BOUNDARY: 1,050 SF (1,593 SF ROOF)
 BUILDING SIZE: 16.5' (1 STORY)
 BUILDING HEIGHT: 16.5' (1 STORY)
 BUILDING SETBACKS:
 FRONT: REQUIRED= 20' PROPOSED= 20'
 SIDE: REQUIRED= 20'/0' PROPOSED= 15'-76'/39'
 REAR: REQUIRED= 10' PROPOSED= 44'

CALCULATION FOR BUILDING COVERAGE:
 PROPOSED COVERAGE: 1,593 S.F. ÷ 14,123 S.F. = 11.3%

EXISTING ONSITE IMPERVIOUS AREAS:
 GRAVEL PARKING AREA: 5,750 S.F. (40.1%)

EXISTING ONSITE IMPERVIOUS AREA TO REMAIN:
 GRAVEL PARKING AREA: 3,705 S.F.

PROPOSED ONSITE IMPERVIOUS AREAS:
 BUILDINGS: 1,593 S.F.
 BRICK PAVEMENT PARKING AREA: 972 S.F.
 GRAVEL PARKING: 145 S.F.
 CONCRETE SIDEWALK/PARKING: 1,152 S.F.
 TOTAL: 3,862 S.F. (27.3%)

TOTAL ONSITE IMPERVIOUS AREA:
 PROPOSED ONSITE IMPERVIOUS AREA: 3,862 S.F.
 EX. ONSITE IMP. AREA TO REMAIN: 3,705 S.F.
 TOTAL: 7,567 S.F. (53.6%)

PROPOSED ONSITE PERVIOUS AREAS:
 WOOD WALKWAYS/RAMPS: 566 S.F. (100% PERVIOUS)

PROPOSED OFFSITE IMPERVIOUS AREAS:
 CONCRETE SIDEWALK/DRIVE APRON: 546 S.F.

PARKING REQUIRED:
 MIN: 1 SPACE/ 300 S.F. = 3.5 SPACES (1 H.C.)
 MAX: 1 SPACE/ 200 S.F. = 5.25 SPACES (1 H.C.)

PARKING PROVIDED:
 7 SPACES (1 H.C.)

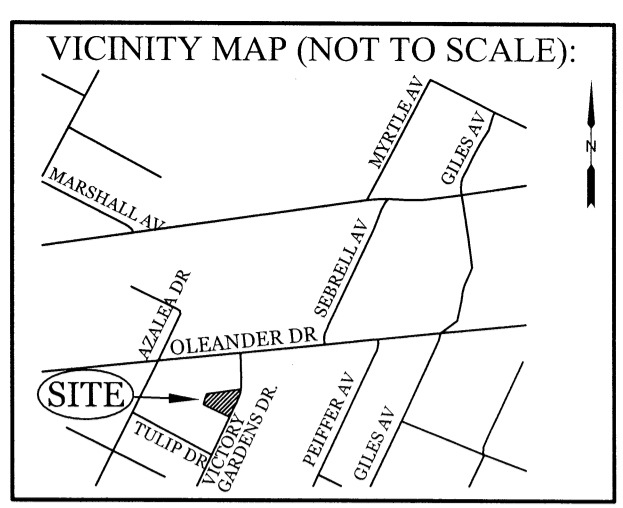
PARKING LOT INTERIOR LANDSCAPING
 REQUIRED: S.F. 5,078* 8% = 406 S.F.
 PROVIDED: 749 S.F.

FOUNDATION PLANTINGS: 68 LF X 14.5' FACADE X 12%
 REQUIRED: 118.3 S.F.
 PROVIDED: 143 S.F.

STREETYARD REQUIREMENT: (9' MIN & 27' MAX WIDTH)
 REQUIRED: 120.66 LF X 18' = 2,172 S.F.
 PROVIDED: 2,238 S.F.

EXISTING SEWER AND WATER DEMAND: 0 GPD
 PROPOSED SEWER AND WATER DEMAND:
 @ 25 GAL/PERSON = 125 GPD

- DEVELOPMENT NOTES:**
- ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE.
 - PROJECT SHALL COMPLY WITH ALL FEDERAL, STATE & NEW HANOVER COUNTY REGULATIONS.
- UTILITY NOTES:**
- EXISTING WATER AND SANITARY SEWER SERVICES ARE CURRENTLY AVAILABLE TO THE SITE FROM CAPE FEAR PUBLIC UTILITY AUTHORITY PUBLIC MAINS.
 - ALL PROPOSED UTILITY SERVICES, SUCH AS ELECTRIC POWER, CATV, GAS & TELEPHONE SHALL BE INSTALLED UNDERGROUND.
 - ALL WATER & SEWER UTILITIES TO BE INSTALLED PER CPWA TECHNICAL SPECIFICATIONS & STANDARDS.
 - PROJECT SHALL COMPLY WITH CPWA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METERS(CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND N.C.D.E.N.R. HAS ISSUED THEIR "FINAL APPROVAL". CALL 343-3910 FOR INFORMATION.
 - ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CPWA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCOCHR OR ASSE.
 - WATER & SEWER SERVICES CAN NOT BE ACTIVATED ON NEW MAINS UNTIL THE ENGINEER'S CERTIFICATION AND AS-BUILTS ARE RECEIVED AND "FINAL APPROVAL" ISSUED BY THE PUBLIC WATER SUPPLY SECTION OF NCDENR, AND "FINAL ENGINEERING CERTIFICATION" ISSUED BY DIVISION OF WATER QUALITY SECTION OF NCDENR.
 - IF CONTRACTOR DESIRES CPWA WATER FOR CONSTRUCTION, HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
 - WHEN PVC WATER MAINS AND SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO. 10 INSULATED, SINGLE-STRAND COPPER WIRE INSTALLED & STRAPPED TO THE PIPES WITH DUCT TAPE. THIS IS TO BE ACCESSIBLE IN ALL VALVES AND METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION. CALL U-LOCO AT 1-800-632-4949. CONTRACTOR IS RESPONSIBLE FOR THE REPAIR AND REPLACEMENT OF ANY UTILITIES, CURB & GUTTER, PAVEMENT, ETC. THAT MAY BE DAMAGED DURING CONSTRUCTION. DAMAGED ITEMS SHALL BE REPAIRED TO AT LEAST THE QUALITY OF WORKMANSHIP FOUND IN THE ORIGINAL ITEM.
 - THE BELLSOUTH CONTACT IS STEVE DAYVAULT, BUILDING INDUSTRY CONSULTANT, AT 910-392-8712. CONTACT HIM PRIOR TO STARTING THE PROJECT IN ORDER TO FACILITATE GOOD COMMUNICATION AND MAXIMUM FLEXIBILITY.
 - THE PROCESS FOR TELEPHONE CABLE PLACEMENT: * FINAL GRADE WILL NEED TO BE ESTABLISHED. * POWER WILL PLACE THEIR CABLE FIRST. APPROXIMATELY 3' DEEP. * BELLSOUTH & CABLE TV WILL THEN PLACE THEIR CABLE AT APPROXIMATELY 2' DEEP.
 - SOLID WASTE DISPOSAL BY COW CURBSIDE SERVICE.
- GENERAL TRAFFIC NOTES:**
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS. (DETAIL SD-13 COFW TECH STDS)
 - ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS. (DETAIL SD 15-13 COFW TECH STDS)
 - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. NOTE THIS ON THE PLAN AND CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
 - ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
 - A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAN. (SD 15-14 COFW TECH STDS)
 - CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
 - ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10'.
- FIRE & SAFETY NOTES:**
- CONSTRUCTION TYPE: V-B COMMERCIAL
 - BUILDING WILL NOT BE SPRINKLED
 - PARKING AND LANDSCAPING CANNOT BLOCK FIRE HYDRANTS.
 - ALL WEATHER ACCESS ROAD MUST BE MAINTAINED AROUND CONSTRUCTION SITE AT ALL TIMES
 - HYDRANTS SHALL BE OF SUFFICIENT NUMBERS TO ACCOMMODATE BASE FIRE FLOW REQUIREMENTS OF STRUCTURE.
 - IN ADDITION TO THE STANDARD COMMENTS, ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
- GENERAL NOTES:**
- EXISTING VEGETATION MAY MEET BUFFER REQUIREMENT. CONTRACTOR TO COORDINATE WITH LANDSCAPE ARCHITECT/CITY OF WILMINGTON TO ENSURE BUFFER REQUIREMENTS ARE MET.



REVISIONS

INTRACOASTAL ENGINEERING, PLLC
 5725 Oleander Dr. Unit E-7
 Wilmington, North Carolina 28403
 Phone: 910.859.8983
 Email: charlie@intracoastalengineering.com
 License Number: P-0662

PRELIMINARY SITE PLAN
 FOR
SMITH & GSELL DESIGN STUDIO
 CITY OF WILMINGTON
 NEW HANOVER COUNTY, NC

Charles D. Gsell
 8.18.17

CLIENT INFORMATION:
 Brannon Smith
 2213 Moreland Dr
 Wilmington NC 28405
 910-612-3100
 BrannonSpine@aol.com

DRAWN: JAE SHEET SIZE: 24x36
 CHECKED: CDC DATE: 8/18/2017
 APPROVED: CDC SCALE: 1" = 20'
 PROJECT NUMBER: 2017-011

DRAWING NUMBER:
C-1
 2 OF 5

Approved Construction Plan

Name: _____ Date: _____

Planning _____
 Public Utilities _____
 Traffic _____
 Fire _____

City of Wilmington
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED DRAINAGE PLAN

Date: _____ Permit # _____
 Signed: _____

LEGEND

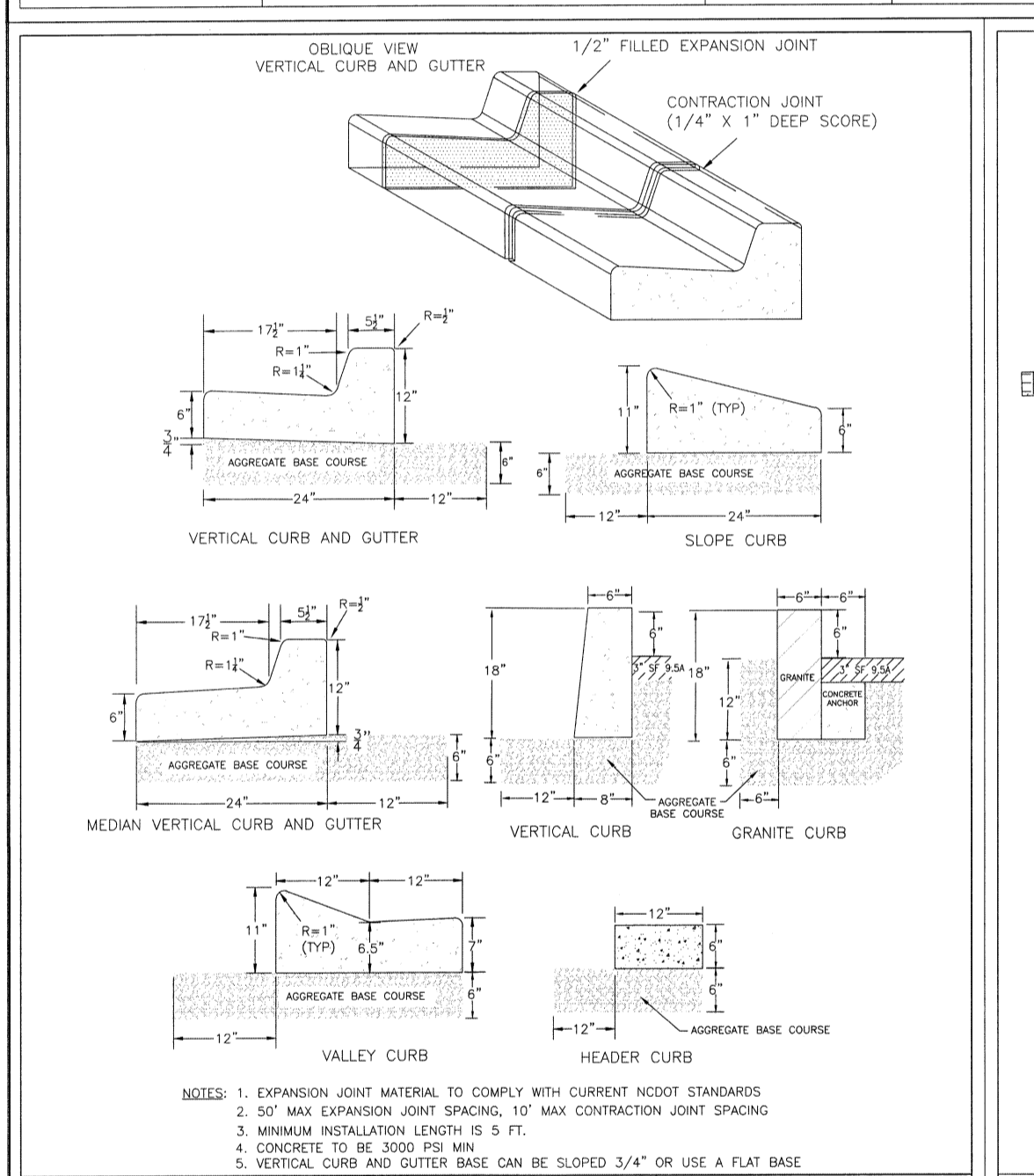
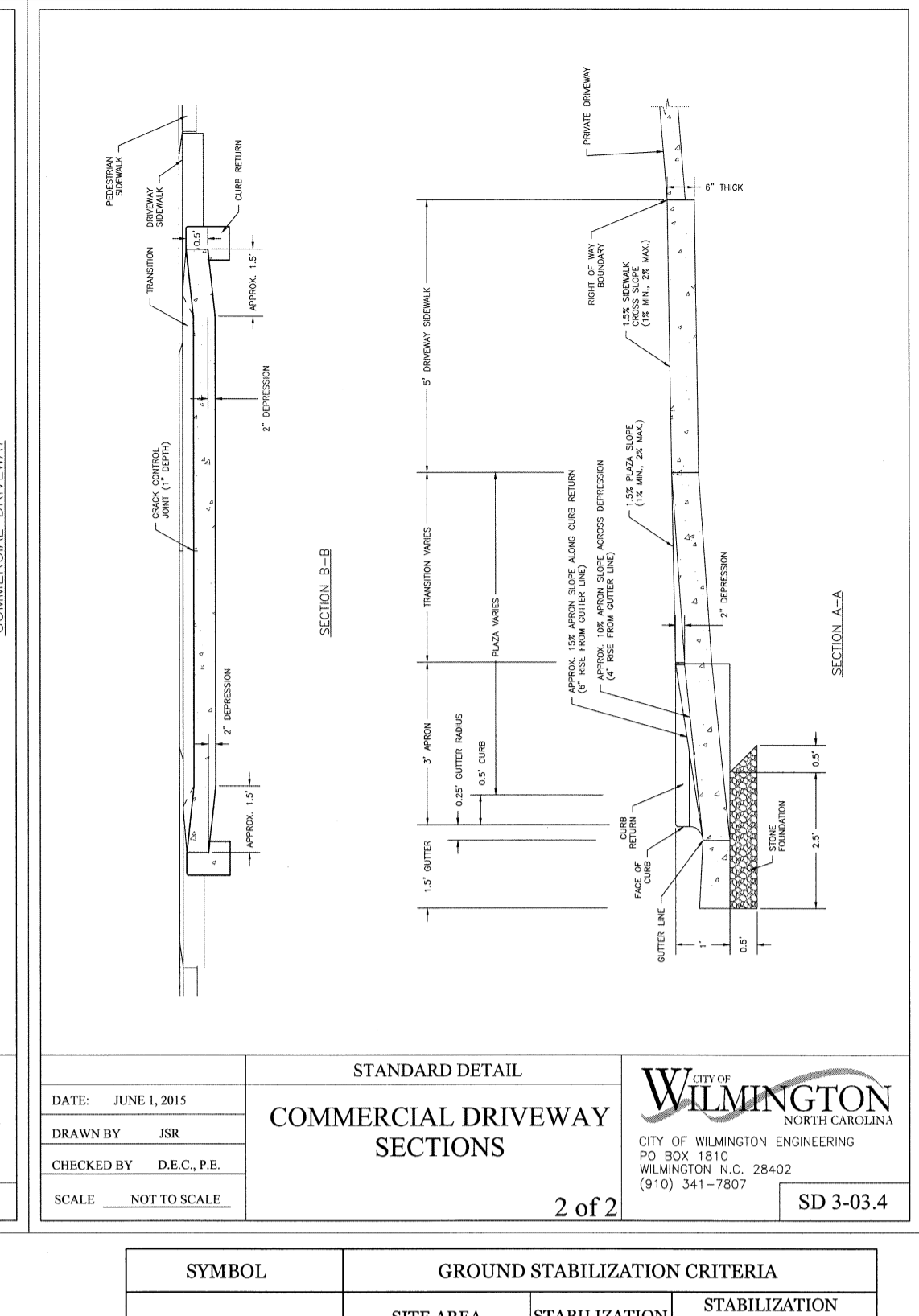
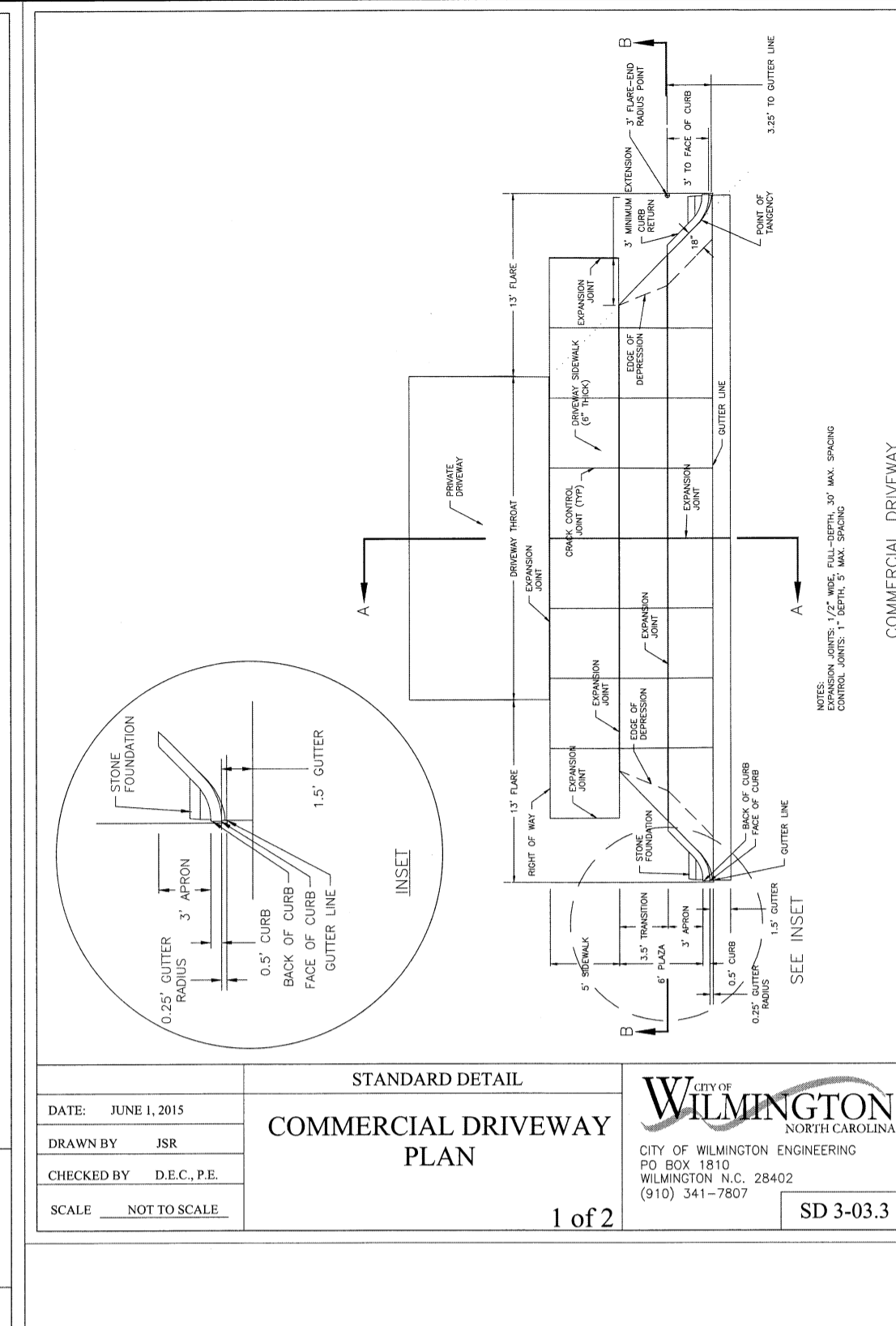
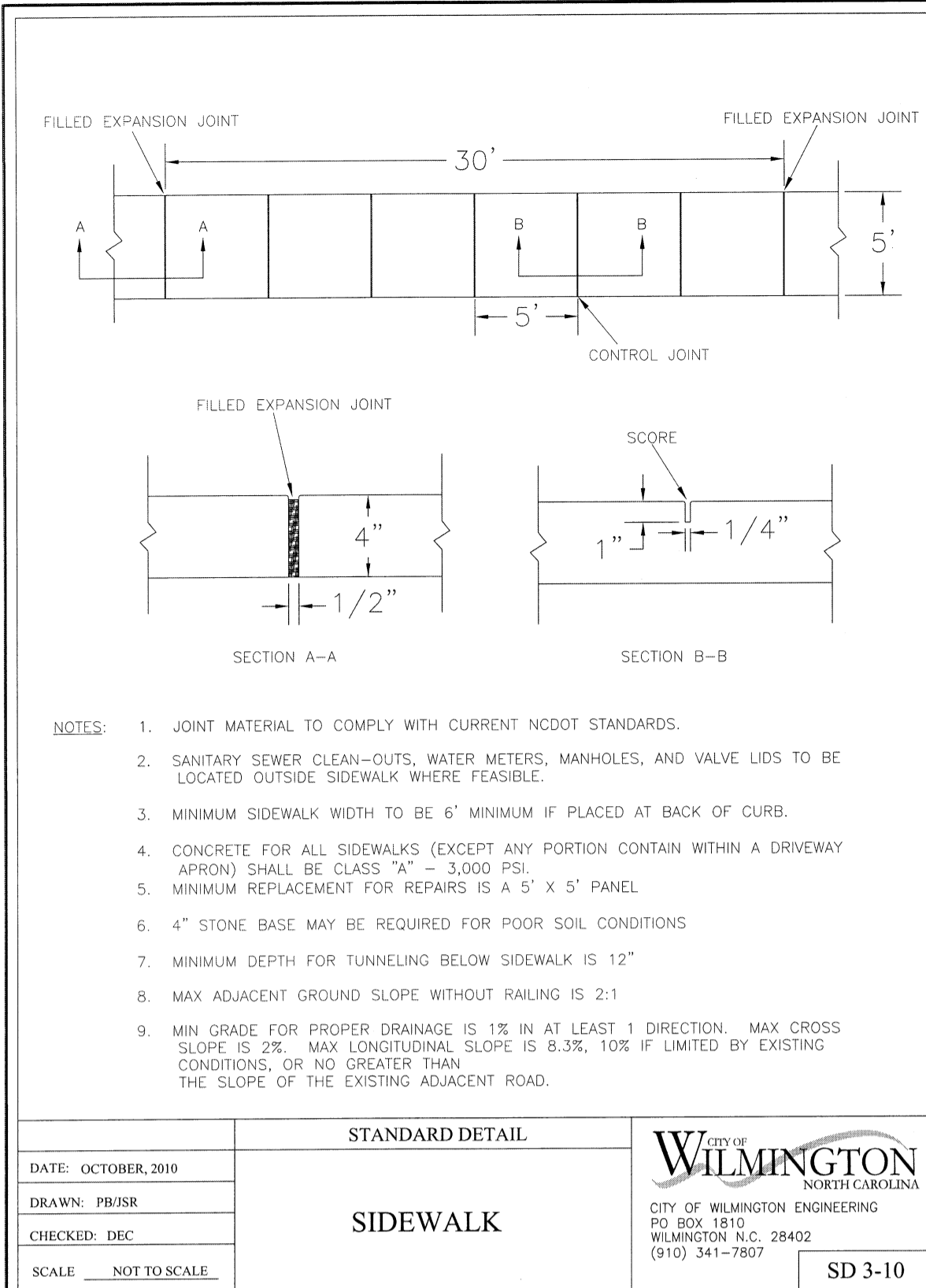
- PROPERTY LINE
- RUNOFF DIRECTION
- CONTOUR
- PROPOSED WATERLINE
- PROPOSED SANITARY SEWER LINE
- ENERGY DISSIPATOR
- SPOT ELEVATION
- PARKING LOT LANDSCAPING
- STREETYARD
- FOUNDATION PLANTINGS
- PROPOSED PAVEMENT WIDENING (SEE DETAIL)
- PROPOSED GRAVEL PARKING
- PROPOSED BRICK PAVERS (SEE DETAIL)

Scale: 1"=20'

N/F
 BRANNON K. & RENEE R. SMITH
 DB 6064 PG 554
 VACANT
 ZONE: R-15

N/F
 BASS JAN H
 DB 6012 PG 2098
 VACANT
 ZONE: R-15

N/F
 BASS JAN H
 DB 5780 PG 1324
 MULTI-TENANT COMMERCIAL
 ZONE: CB



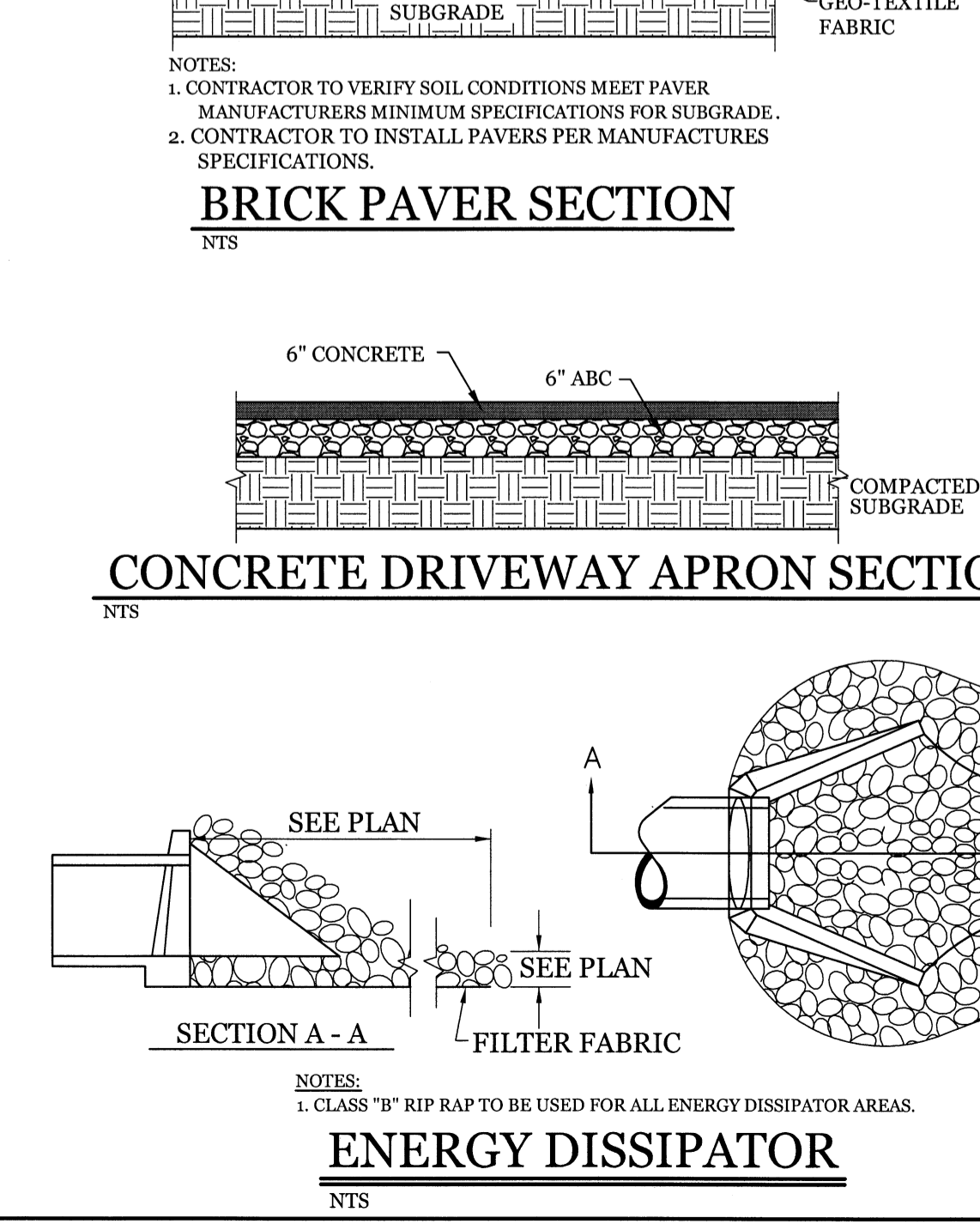
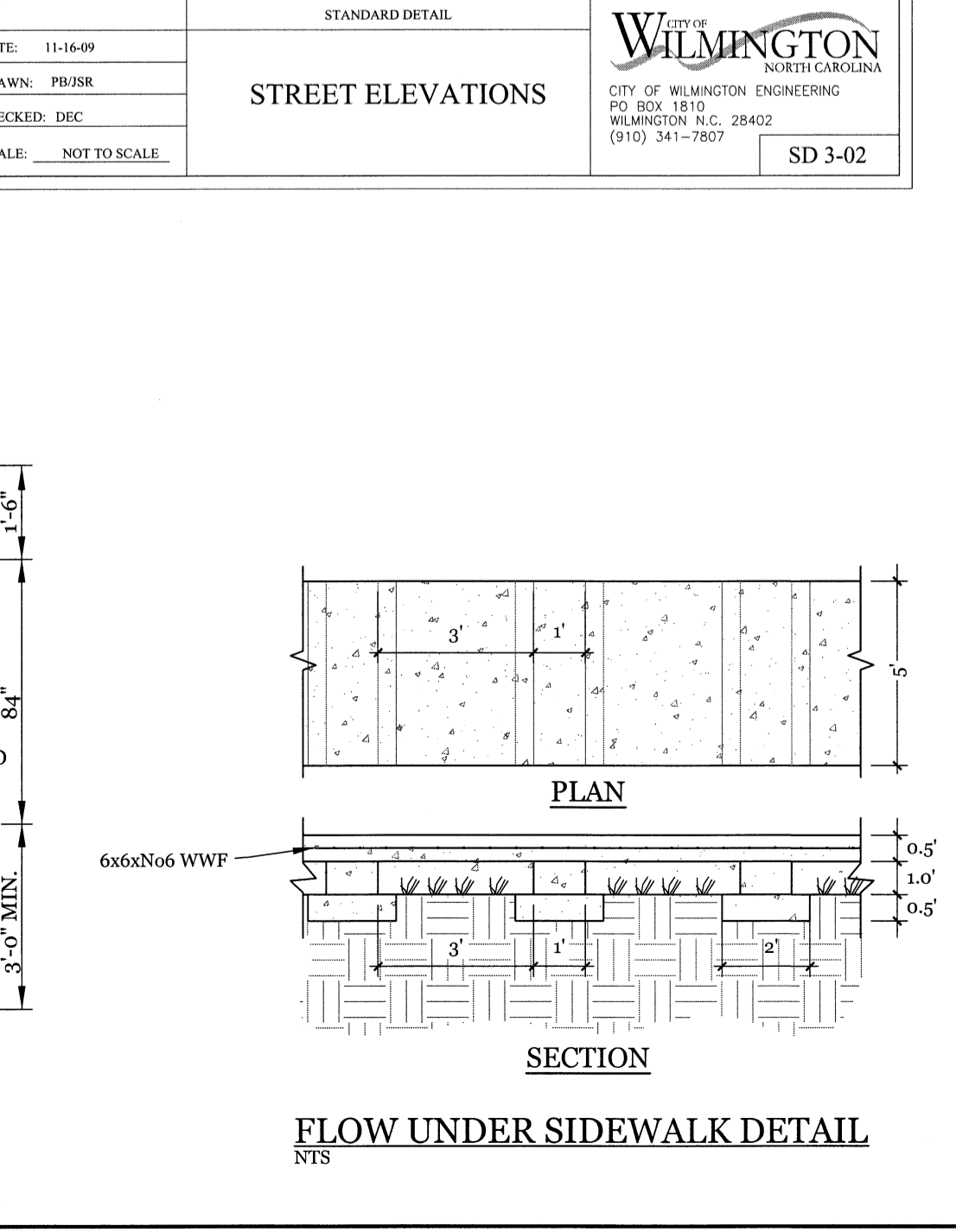
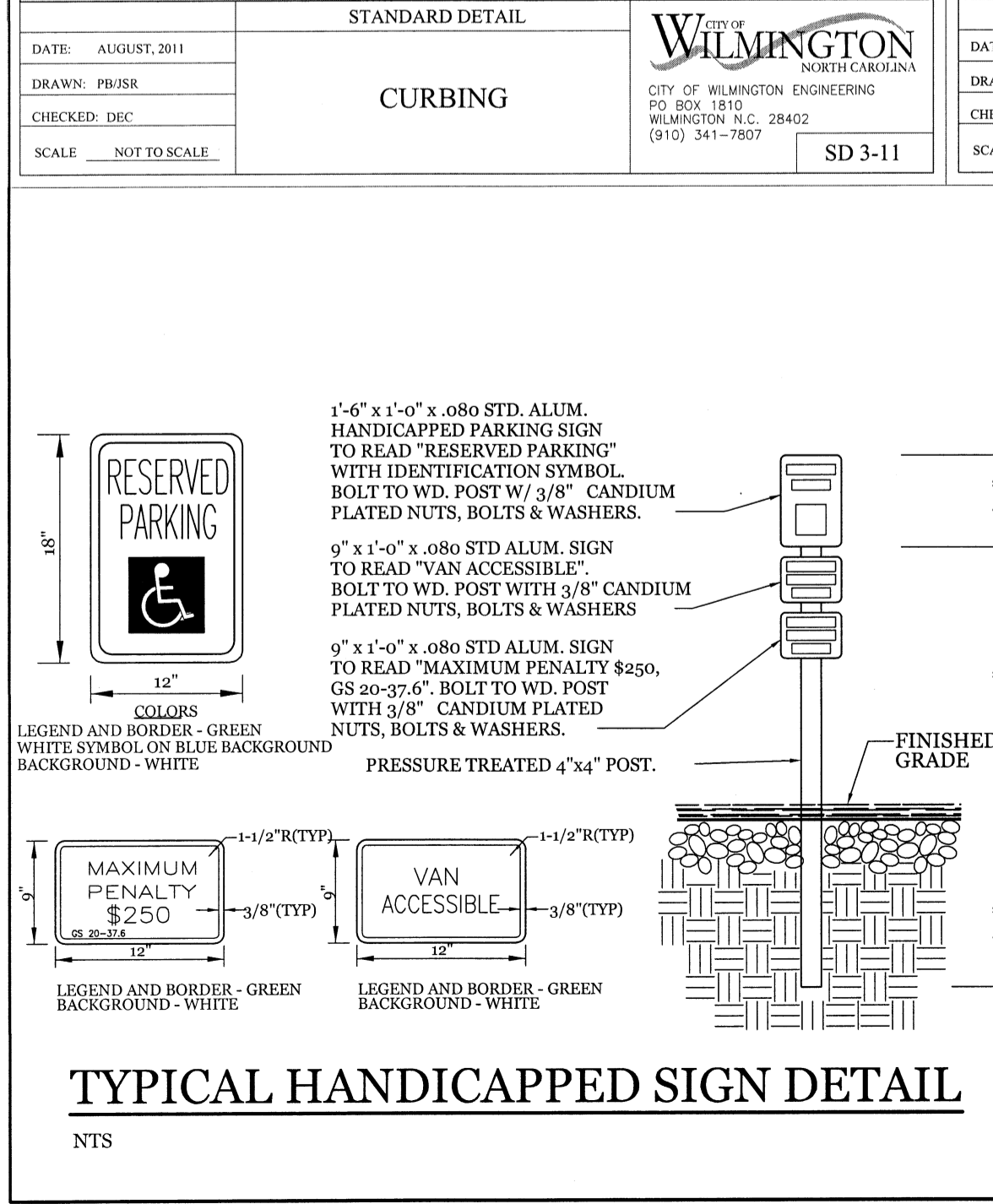
STANDARD DETAIL
STREET ELEVATIONS

DATE: 11-16-09
DRAWN: PBJSR
CHECKED: DEC
SCALE: NOT TO SCALE

WILMINGTON
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SD 3-02

STREET WIDTH 2W (ft)	TOP OF COMPACTED SUB-GRADE (FT)	TOP OF AGGREGATE BASE COURSE (FT)	TOP OF FINISHED GRADE (FT)
18	-0.96 (±0.04)	-0.46 (±0.04)	-0.29 (±0.04)
20	-0.94 (±0.04)	-0.44 (±0.04)	-0.27 (±0.04)
22	-0.92 (±0.05)	-0.42 (±0.05)	-0.25 (±0.05)
24	-0.90 (±0.05)	-0.40 (±0.05)	-0.23 (±0.05)



SITE WORK NOTES:

- THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS BOTH ON AND ADJACENT TO THE SITE.
- CLEARING: CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION WITHIN LIMITS OF CONSTRUCTION UNLESS OTHERWISE DESIGNATED TO REMAIN.
- GROUBING AND STRIPPING: CONTRACTOR SHALL RAKE AND REMOVE ROOTS, STUMPS, VEGETATION, DEBRIS, EXISTING STRUCTURES ABOVE AND BELOW GRADE, ORGANIC MATERIAL OR ANY OTHER UNSUITABLE MATERIAL WITHIN LIMITS OF CONSTRUCTION.
- MUCKING: CONTRACTOR SHALL COORDINATE WITH OWNER AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL OF ANY SOFT AREAS.
- DISPOSAL: CLEARED, GROUBED, STRIPPED OR OTHER WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY.
- FILL AND COMPACTION SHOULD COMPLY WITH GEOTECHNICAL RECOMMENDATIONS.
- CONTRACTOR SHALL NOTE THAT THE GRADING PLAN MAY NOT REPRESENT A BALANCED EARTHWORK CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT AND FILL QUANTITIES AND COMPLETE INSTALLATION TO SPECIFIED GRADES.
- THE CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FROM AN OFF-SITE PROPERLY PERMITTED FACILITY AS REQUIRED.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES AT ALL CROSSINGS PRIOR TO COMMENCING TRENCH EXCAVATION. IF ACTUAL CLEARANCES ARE LESS THAN INDICATED ON PLAN, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. ANY CONDITION DISCOVERED OR EXISTING THAT WOULD NECESSITATE A MODIFICATION OF THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
- NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NO ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. BEFORE COMMENCING ANY EXCAVATIONS OR IN ALONG ROADWAYS OR RIGHT-OF-WAYS, PUBLIC AREAS OR IN PRIVATE EASEMENTS, THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE PERSONNEL OF THEIR INTENT TO EXCAVATE, IN WRITING, NOT LESS THAN 10 DAYS PRIOR TO EXCAVATING.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE DISCONNECTION/ RECONNECTION AND/OR THE RELOCATION OF ALL EXISTING UTILITIES WITH APPROPRIATE PERSONNEL.
- CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE & CURB BOXES TO FINAL GRADE UPON COMPLETION OF ALL CONSTRUCTION. ANY BOXES DAMAGED OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- EXISTING SURVEYING PERFORMED BY PATRICK C. BRISTOW, C. BRISTOW & SONS, INC. No. 1-1485
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AT THE SITE. FURTHERMORE THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES OR QUESTIONS TO THE ENGINEER PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE ANY AND ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK UNLESS OTHERWISE DIRECTED BY OWNER.
- ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO MEET ALL LOCAL, STATE, AND CFPWA CODES. METERS, TAPS, MATERIALS, WORKMANSHIP AND ALL FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH ALL REQUIREMENTS.
- ALL BACKFILL FROM UTILITY INSTALLATION MUST BE COMPACTED OR AMENDED TO PROVIDE TRAFFIC BEARING CAPACITY. GEOTECHNICAL ENGINEER TO BE CONSULTED AT CONTRACTORS COST AS NECESSARY.
- ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO INSTALLATION. ALL AREAS SHALL BE SLOPED TO DRAIN AWAY FROM BUILDINGS AT ALL TIMES.
- CONCRETE FOR WALKS, CURBS AND DRIVES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS - AIR ENTRAINMENT.
- FIELD TESTING SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY PAID FOR BY THE OWNER. FURTHER TESTING REQUIRED DUE TO A FAILED TEST WILL BE PAID FOR BY THE CONTRACTOR.
- ALL SIDEWALKS SHALL BE FREE OF CRACKS, BREAKS, OR ANY OTHER DEFECT PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY.

MAINTENANCE PLAN:

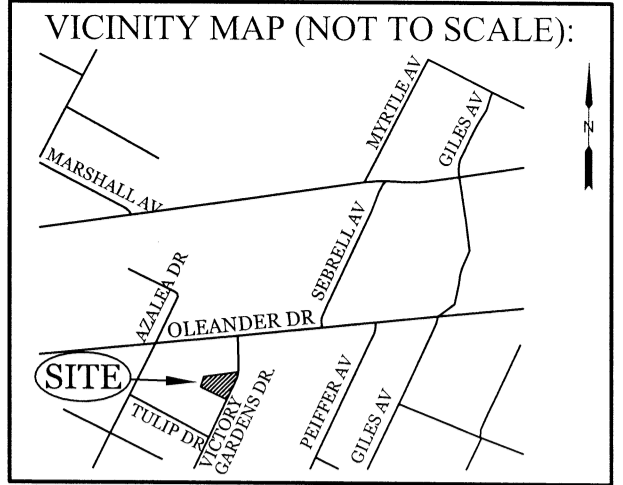
- ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE, LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL.
- ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF 2-3 INCH STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED, WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.
- SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION, SEDIMENT TRAP Baffles, AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARDWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED, WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.
- DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE TEMPORARILY STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF ACTIVITY ASSOCIATED WITH A SWALE.
- SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET MAX. WITH THE USE OF EXTRA STRENGTH FABRIC, WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8 FEET MAX WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE IN THE SEDIMENT FENCE THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT, NO LONGER DRAINS AS DESIGNED OR IS DAMAGED.

CONSTRUCTION SEQUENCE:

CONSTRUCTION OF SITE TO START WITH INSTALLATION OF CONSTRUCTION ENTRANCE AND SILT FENCE ALONG ALL LOCATIONS PER PLANS. UPON INSTALLATION OF SILT FENCE, TREES SHOULD BE REMOVED IN LOCATIONS AS NECESSARY. ALL SLOPED AREAS SHOULD BE SEEDED IN ACCORDANCE TO SPECIFICATIONS. SLOPE STABILIZATION IS WITHIN 21 CALENDAR DAYS OF ANY PHASE OF CONSTRUCTION. ALL OTHER AREAS MUST BE STABILIZED WITHIN 5 WORKING DAYS. CONTRACTOR TO FOLLOW NPDES STABILIZATION REQUIREMENTS PER TABLE ON THIS SHEET AS WELL. MOST STRINGENT REQUIREMENT TO BE MET.

- GENERAL CLEARING AND GRADING OF THIS SITE WILL NOT BE DONE UNTIL THE TEMPORARY SILT FENCE & CONSTRUCTION ENTRANCE HAS BEEN INSTALLED.
- NO CUT SLOPE OR HILL SLOPE SHALL EXCEED A RISE OR FALL OF ONE FOOT FOR EVERY RUN OF 4 FEET (VERTICAL TO 3 HORIZONTAL).
- NO SEDIMENT SHALL BE ALLOWED TO EXIT THE SITE. ALL EROSION SHALL BE CONTROLLED INCLUDING SIDE SLOPES DURING AND AFTER CONSTRUCTION.
- INSTALL PRIMARY EROSION CONTROL MEASURES BEFORE BEGINNING CONSTRUCTION INCLUDING BUT NOT LIMITED TO GRAVELED CONSTRUCTION ENTRANCE, SILT FENCE, TREE PROTECTION FENCE & SEDIMENT BASINS. CONTRACTOR TO BE FAMILIAR WITH USACE GENERAL PERMIT CONDITIONS FOR ROAD CROSSINGS. SPECIFIC CONSTRUCTION METHODS MAY BE REQUIRED ABOVE AND BEYOND WHAT IS SPECIFIED IN THIS PLAN. INSTALL ALL SECONDARY EROSION CONTROL MEASURES, SUCH AS INLET PROTECTION AS SOON AS POSSIBLE AFTER BEGINNING CONSTRUCTION.
- ALL EROSION CONTROL MEASURES TO BE INSPECTED AFTER EACH RAIN. SILT FENCE AND INLET PROTECTION TO BE CLEANED WHEN HALF FULL.
- A 4" LAYER OF TOPSOIL SHALL BE APPLIED TO ALL NEW AREAS TO BE GRASSSED.
- MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PROJECT IS COMPLETE.
- MORE STRINGENT MEASURES MAY BE REQUIRED TO HALT EROSION IF THOSE ON THIS PLAN PROVE TO BE LESS EFFECTIVE.
- REMOVE ALL TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF CONSTRUCTION. ALL PERMANENT MEASURES SHALL BE WELL ESTABLISHED PRIOR TO PROJECT COMPLETION.

NORTH CAROLINA TEMPORARY GRASSING DETAIL		NORTH CAROLINA PERMANENT GRASSING DETAIL	
SEEDING MIXTURE SPECIES	APPLICATION RATE	SEEDING MIXTURE SPECIES	APPLICATION RATE
LATE WINTER & EARLY SPRING: Rye (grain)	100 (lb/acre)	FALL & WINTER: Tall Fescue (blend of two or three improved varieties)	200 (lb/acre)
Annual Lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains) <i>Omit annual Lespedeza when duration of temporary cover is not to extend beyond June</i>	50 (lb/acre)	Rye (grain)	25 (lb/acre)
SUMMER: German Millet	40 (lb/acre)	SPRING & SUMMER: Panicum Bahiagrass	50 (lb/acre)
In the Piedmont and Mountains, a small-stemmed sundgrass may be substituted at a rate of 50 (lb/acre)		Sericea Lespedeza	30 (lb/acre)
FALL: Rye (grain)	120 (lb/acre)	Common Bermudagrass	10 (lb/acre)
		German Millet	10 (lb/acre)
		Tall Fescue	50 (lb/acre)
SEEDING DATES		SEEDING DATES	
LATE WINTER & EARLY SPRING: Mountains - Above 2500 ft: Feb. 15-May 15 Piedmont - Jan. 1-May 1 Coastal Plain - Dec. 1-Apr. 15		FALL & WINTER: January - April August - December	
SUMMER: Mountains - May 15-Aug. 15 Piedmont - May 1-Aug. 15 Coastal Plain - Apr. 15-Aug. 15		SOIL AMENDMENTS: Apply lime and fertilizer according to soil tests, or apply 3,000-5,000 lb/acre ground agricultural limestone (use the lower rate on sandy soils) and 1,000 lb/acre 10-10-10 fertilizer.	
FALL: Mountains - Aug. 15-Dec. 15 Coastal Plain and Piedmont - Aug. 15-Dec. 30		MAINTENANCE: Fertilize according to soil tests or apply 40 lb/acre nitrogen in January or February, 40 lb in September and 40 lb in November, from a 12-4-8, 16-4-8, or similar turf fertilizer. Avoid fertilizer applications during warm weather, as this increases stand losses to disease. Reseed, fertilize, and mulch damaged areas immediately, now to a height of 2.5-3.5 inches as needed.	
SOIL AMENDMENTS: Apply lime and fertilizer according to soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.		SPRING & SUMMER: April 1 - July 15	
MULCH: apply 4,000 lb/acre straw, anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.		SOIL AMENDMENTS: Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agriculture limestone and 500 lb/acre 10-10-10 fertilizer.	
MAINTENANCE: Refertilize if growth is not fully adequate. reseed, refertilize and mulch immediately following erosion or other damage.		MAINTENANCE: Refertilize the following April with 50 lb/acre nitrogen. Repeat as growth requires, may be mowed only once a year. Where a neat appearance is desired, omit sericea and mow as often as needed.	



REVISIONS

NO.	DATE	DESCRIPTION

INTRACOASTAL ENGINEERING, PLLC

5725 Oleander Dr. Unit E-7
Wilmington, North Carolina 28403
Phone: 910.859.8983
Email: charlie@intracoastalengineering.com
License Number: P-0662

DETAILS FOR SMITH & GSELL DESIGN STUDIO

CITY OF WILMINGTON
NEW HANOVER COUNTY, NC

PROFESSIONAL SEAL

CHARLES D. CHATFIELD
ENGINEER

Charles D. Chatfield
8.8.17

CLIENT INFORMATION:

Brannon Smith
2213 Moreland Dr
Wilmington NC 28405
910-612-3100
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DRAWN: JAE SHEET SIZE: 24x36
CHECKED: CDC DATE: 8/18/2017
APPROVED: CDC SCALE: NTS
PROJECT NUMBER: 2017-011

DRAWING NUMBER: **C-2**

3 OF 3

Approved Construction Plan

Name: _____ Date: _____

Planning _____
Public Utilities _____
Traffic _____
Fire _____

APPROVED DRAINAGE PLAN

Date: _____ Permit # _____
Signed: _____

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division