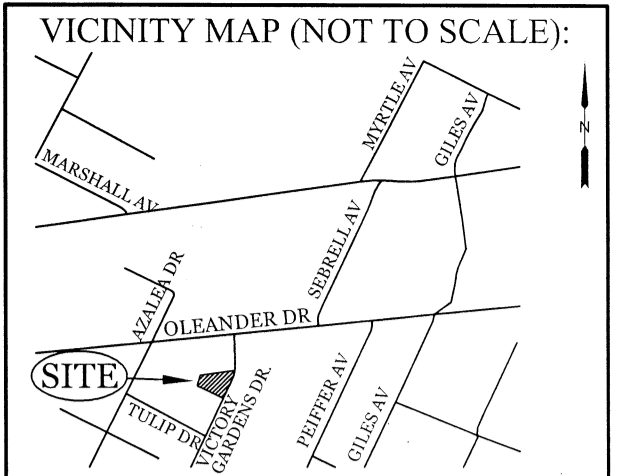




SITE DATA

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

| | |
|--|--|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

NOTE: THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% 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 DISRUPT CROWN WITH INTENSIVE PRUNING.

CRZ
 DBH
 8' MAX
 ORANGE SAFETY FENCE OR GRANITE SILT FENCE (TYPICAL)

NOTES:
 1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
 2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
 3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
 4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
 5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES, DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
 6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF \$500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

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

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
 SHEET 1 of 2

CITY OF WILMINGTON
 WILMINGTON, NC 28402
 (910) 341-7807

SD 15-09

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 |
| 16" | MAPLE | 1 | REGULATED |
| 8" | GUM | 1 | REGULATED |
| 10" | GUM | 1 | REGULATED |
| 12" | GUM | 1 | REGULATED |
| 19" | GUM | 1 | REGULATED |

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 |
| 24" | 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 | 3 | REGULATED |
| 9" | OAK | 1 | REGULATED |
| 10" | OAK | 1 | REGULATED |
| 15" | OAK | 1 | REGULATED |
| 20" | OAK | 1 | REGULATED |

8' MAX.
 VARIABLE AS DIRECTED BY THE ENGINEER
 WARNING SIGN
 TREE PROTECTION AREA DO NOT ENTER
 ZONA PROTECTORA PARA LOS ARBOLES PROHIBIDO ENTRAR
 GRADE
 ORANGE, UV RESISTANT HIGH - TENSILE STRENGTH POLY BARRICADE FABRIC (TYPICAL)
 FRONT VIEW

STEEL POST
 WARNING SIGN
 ORANGE, UV RESISTANT HIGH - TENSILE STRENGTH POLY BARRICADE FABRIC (TYPICAL)
 SIDE VIEW

40"
 18"
 TREE PROTECTION AREA DO NOT ENTER
 ZONA PROTECTORA PARA LOS ARBOLES PROHIBIDO ENTRAR
 WARNING SIGN DETAIL

NOTES:
 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 DETAIL.
 3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINE OF 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 SIGNS SHALL BE REMOVED AFTER CONSTRUCTION.
 6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

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

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
 SHEET 2 of 2

CITY OF WILMINGTON
 WILMINGTON, NC 28402
 (910) 341-7807

SD 15-09

NOTES:
 1. PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES.
 2. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.

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
 ADJACENT
 TREE PROTECTION FENCE
 PROPOSED WATERLINE
 PROPOSED SANITARY SEWER LINE
 TREES TO BE REMOVED

Scale: 1"=20'

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

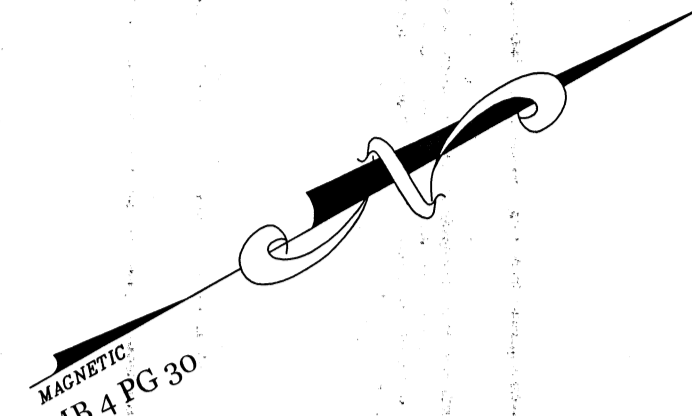
EXISTING CONDITIONS / TREE REMOVAL PLAN
 FOR
SMITH & GSELL DESIGN STUDIO
 CITY OF WILMINGTON
 NEW HANOVER COUNTY, NC

SEAL
 032555
 ENGINEER
 CHARLES D. CAVIER
 1.9.18

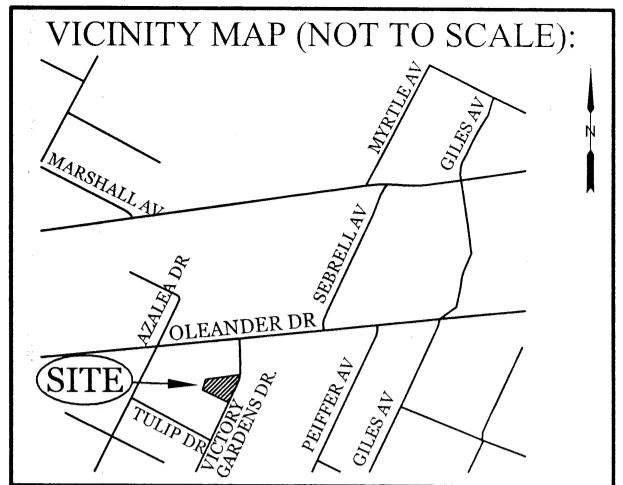
CLIENT INFORMATION:
 Brannon Smith
 2213 Moreland Dr
 Wilmington NC 28405
 910-612-3100
 BrannonSpine@aol.com

DRAWN: JAE SHEET SIZE: 24x36
 CHECKED: CDC DATE: 1/9/2018
 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 2213 MORELAND DR WILMINGTON, NC 28405 | |
| TOTAL ACREAGE IN PROJECT BOUNDARY: | 14,123 S.F. (± 0.32 ac.) | |
| BUILDING SIZE: | 1,050 SF (1,738 SF ROOF) | |
| BUILDING HEIGHT: | 16.5' (1 STORY) | |
| BUILDING SETBACKS: | | |
| FRONT: | REQUIRED= 20' | PROPOSED= 20' |
| SIDE: | REQUIRED= 20'/0' | PROPOSED= 13.86"/41.6' |
| REAR: | REQUIRED= 10' | PROPOSED= 52' |
| * SETBACK LISTED AS 18" FROM ROOF LINE | | |
| CALCULATION FOR BUILDING COVERAGE: | | |
| PROPOSED COVERAGE: | 1,738 S.F. ÷ 14,123 S.F. = 12.3% | |
| EXISTING ONSITE IMPERVIOUS AREAS: | 5,750 S.F. (40.1%) | |
| EXISTING ONSITE IMPERVIOUS AREA TO REMAIN: | 3,625 S.F. | |
| PROPOSED ONSITE IMPERVIOUS AREAS: | | |
| BUILDINGS: | 1,738 S.F. | |
| BRICK PAVEMENT PARKING AREA: | 972 S.F. | |
| GRAVEL PARKING: | 145 S.F. | |
| CONCRETE SIDEWALK/PARKING: | 1,646 S.F. | |
| TOTAL: | 4,510 S.F. (31.9%) | |
| TOTAL ONSITE IMPERVIOUS AREA: | 4,510 S.F. | |
| PROPOSED ONSITE IMPERVIOUS AREA: | 3,625 S.F. | |
| EX. ONSITE IMP. AREA TO REMAIN: | 8,135 S.F. (57.6%) | |
| PROPOSED ONSITE PERVIOUS AREAS: | 566 S.F. (100% PERVIOUS) | |
| WOOD WALKWAYS/RAMPS: | | |
| PROPOSED OFFSITE IMPERVIOUS AREAS: | 516 S.F. | |
| CONCRETE SIDEWALK/DRIVE APRON: | | |
| 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: | 5,078 S.F.* 8% = 406 S.F. | |
| PROVIDED: | 749 S.F. | |
| FOUNDATION PLANTINGS: | 76 LF X 14.5' FAÇADE X 12% | |
| REQUIRED: | 132.24 S.F. | |
| PROVIDED: | 164 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: | 125 GPD @ 25 GAL/PERSON = | |



| 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

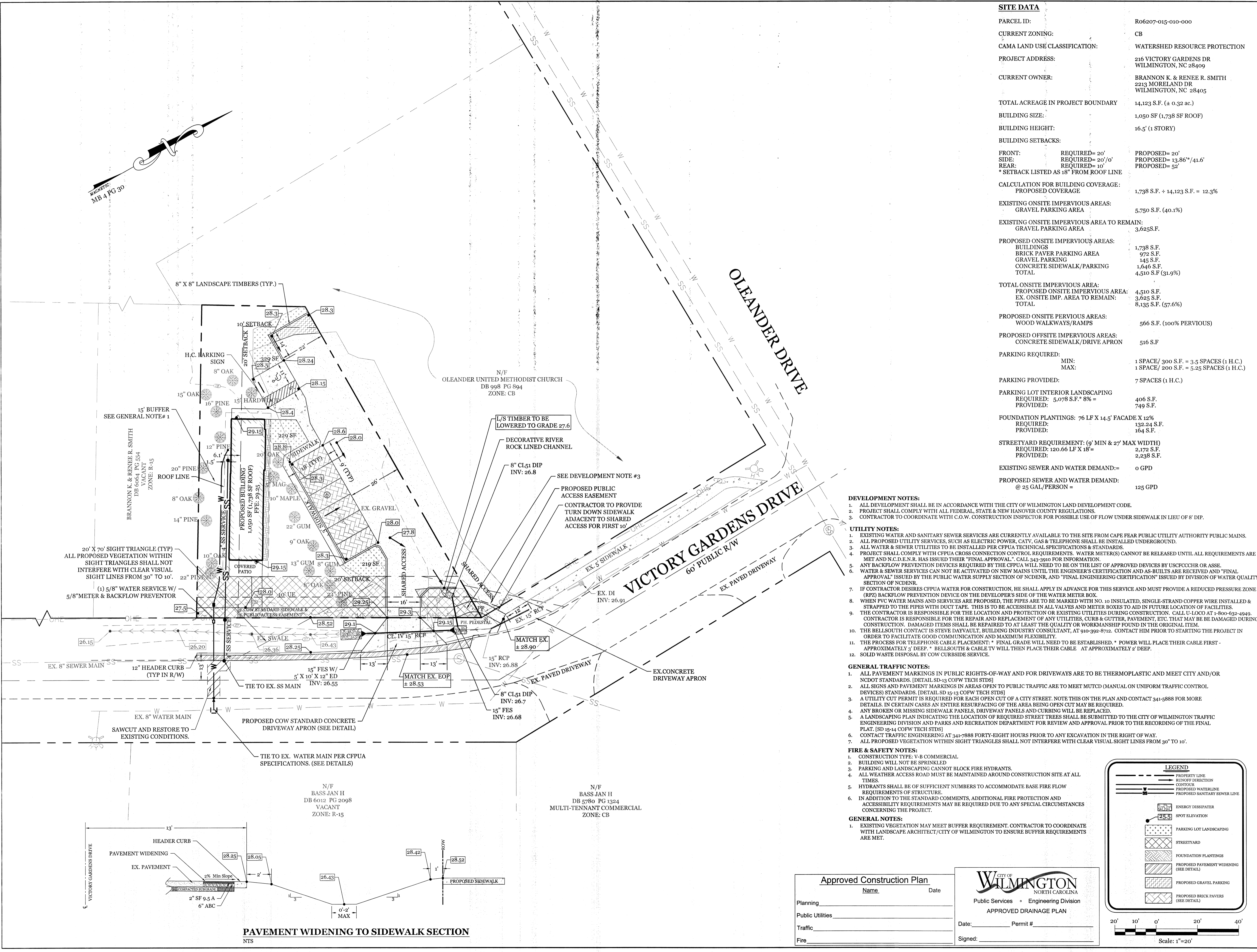
SITE, GRADING, DRAINAGE, & UTILITIES PLAN
 FOR
SMITH & GSELL DESIGN STUDIO
 CITY OF WILMINGTON
 NEW HANOVER COUNTY, NC

NORTH CAROLINA PROFESSIONAL SEAL
 032555
 ENGINEER
 CHARLES D. CALVER
Charles D. Calver
 1-9-18

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

DRAWN: JAE SHEET SIZE: 24x36
 CHECKED: CDC DATE: 1/9/2018
 APPROVED: CDC SCALE: 1" = 20'
 PROJECT NUMBER: 2017-011

DRAWING NUMBER: **C-1**
 2 OF 3



- 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.
 - CONTRACTOR TO COORDINATE WITH C.O.W. CONSTRUCTION INSPECTOR FOR POSSIBLE USE OF FLOW UNDER SIDEWALK IN LIEU OF 8' DIP.

- 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 CFPWA TECHNICAL SPECIFICATIONS & STANDARDS.
 - PROJECT SHALL COMPLY WITH CFPWA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) 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 CFPWA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCPCOHR 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 CFPWA 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. 16 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 OR WORKMANSHIP FOUND IN THE ORIGINAL ITEM.
 - THE BELLSOUTH CONTACT IS STEVE DAYVAULT, BUILDING INDUSTRY CONSULTANT, AT 910-992-8712. 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 COPW 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 COPW 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 COPW 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.

Approved Construction Plan

Name _____ Date _____

Planning _____
 Public Utilities _____
 Traffic _____
 Fire _____

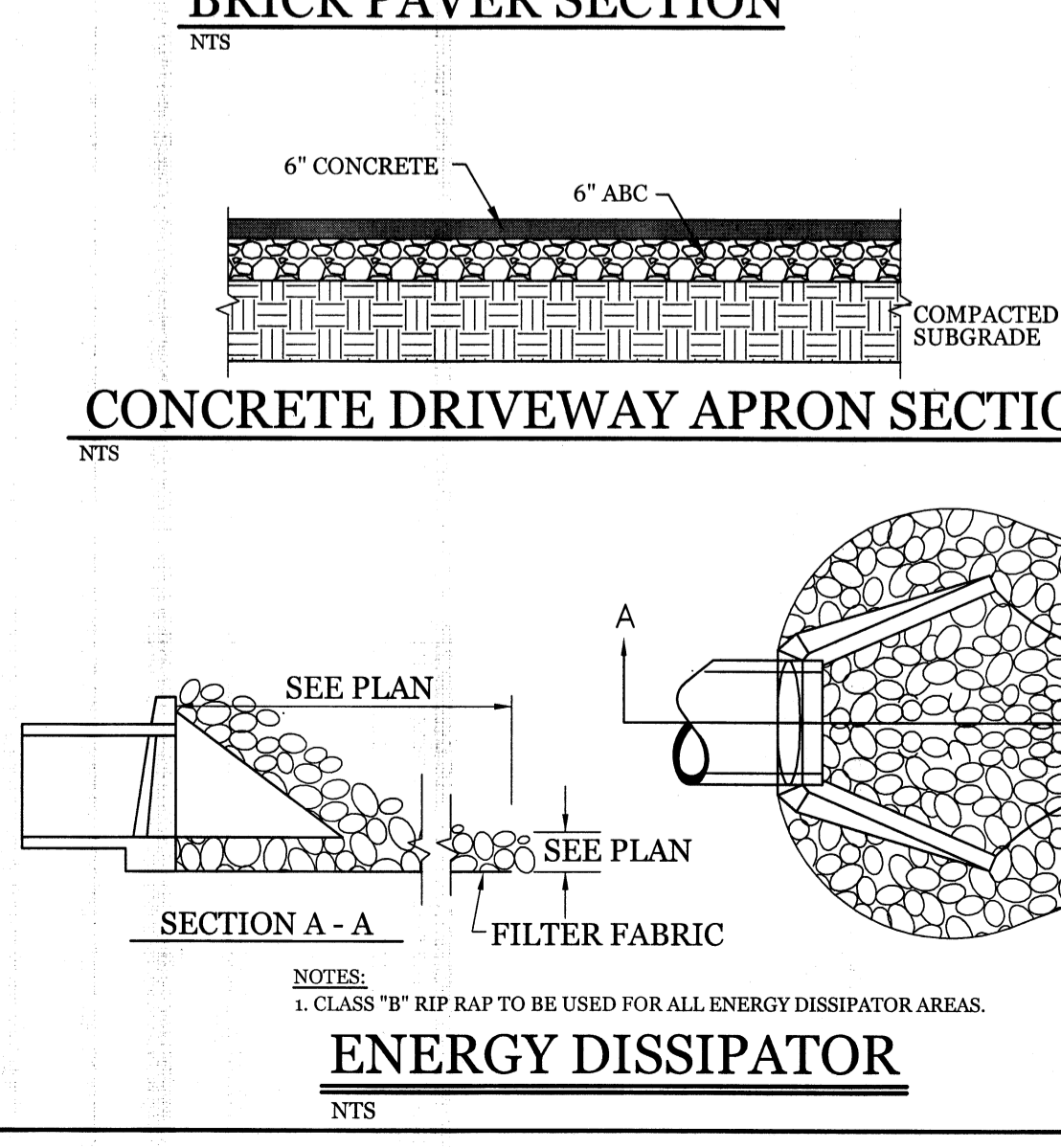
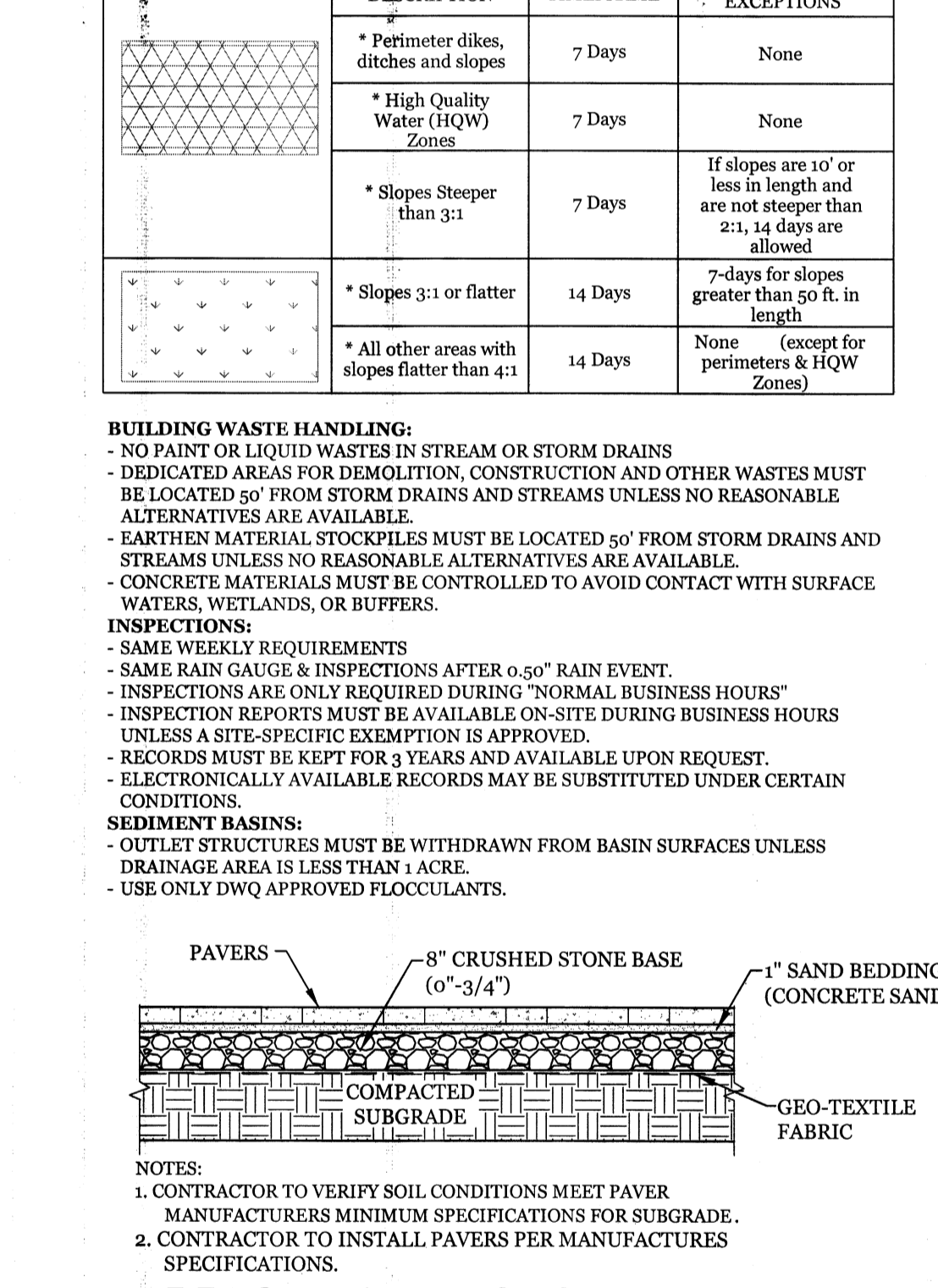
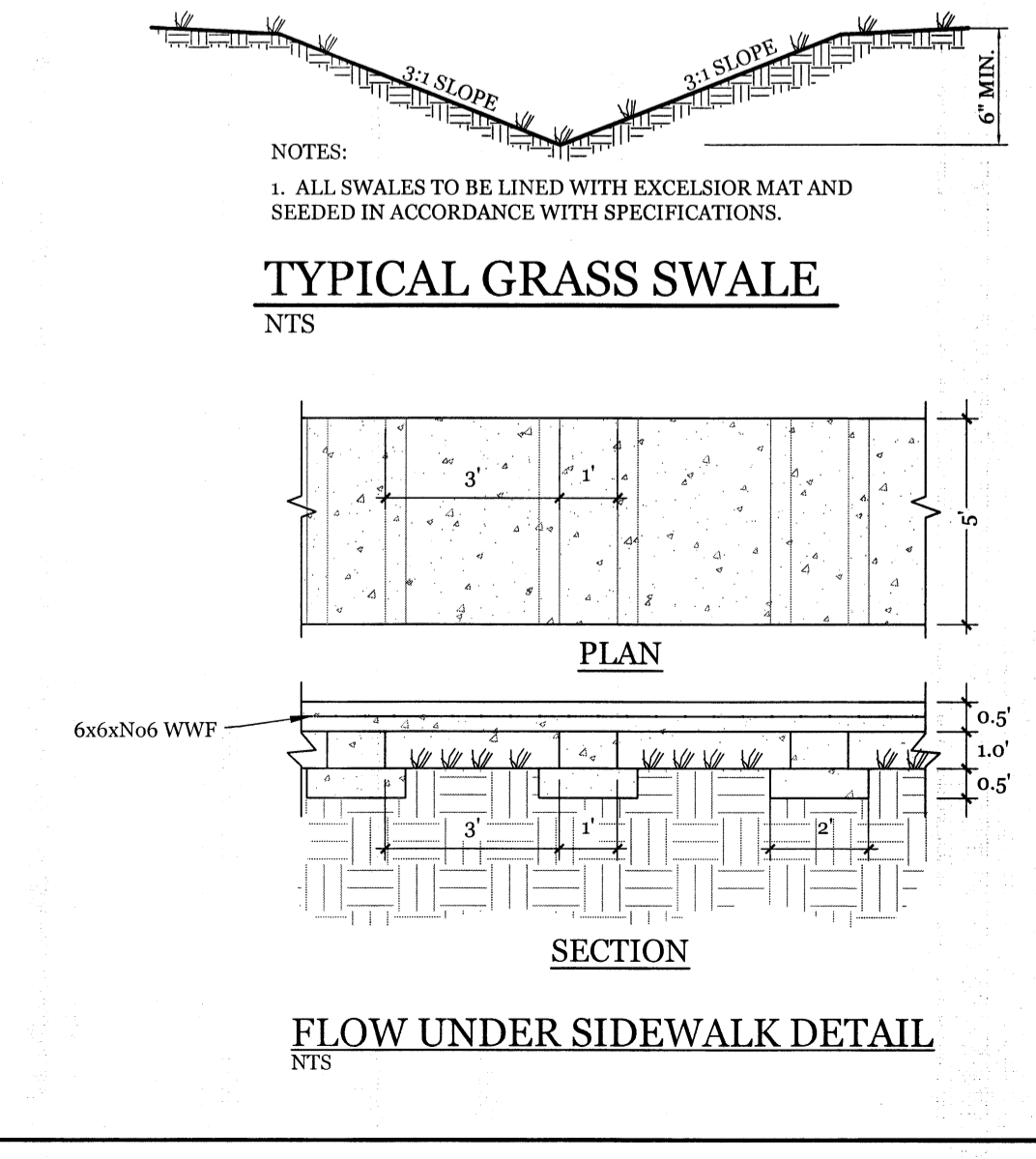
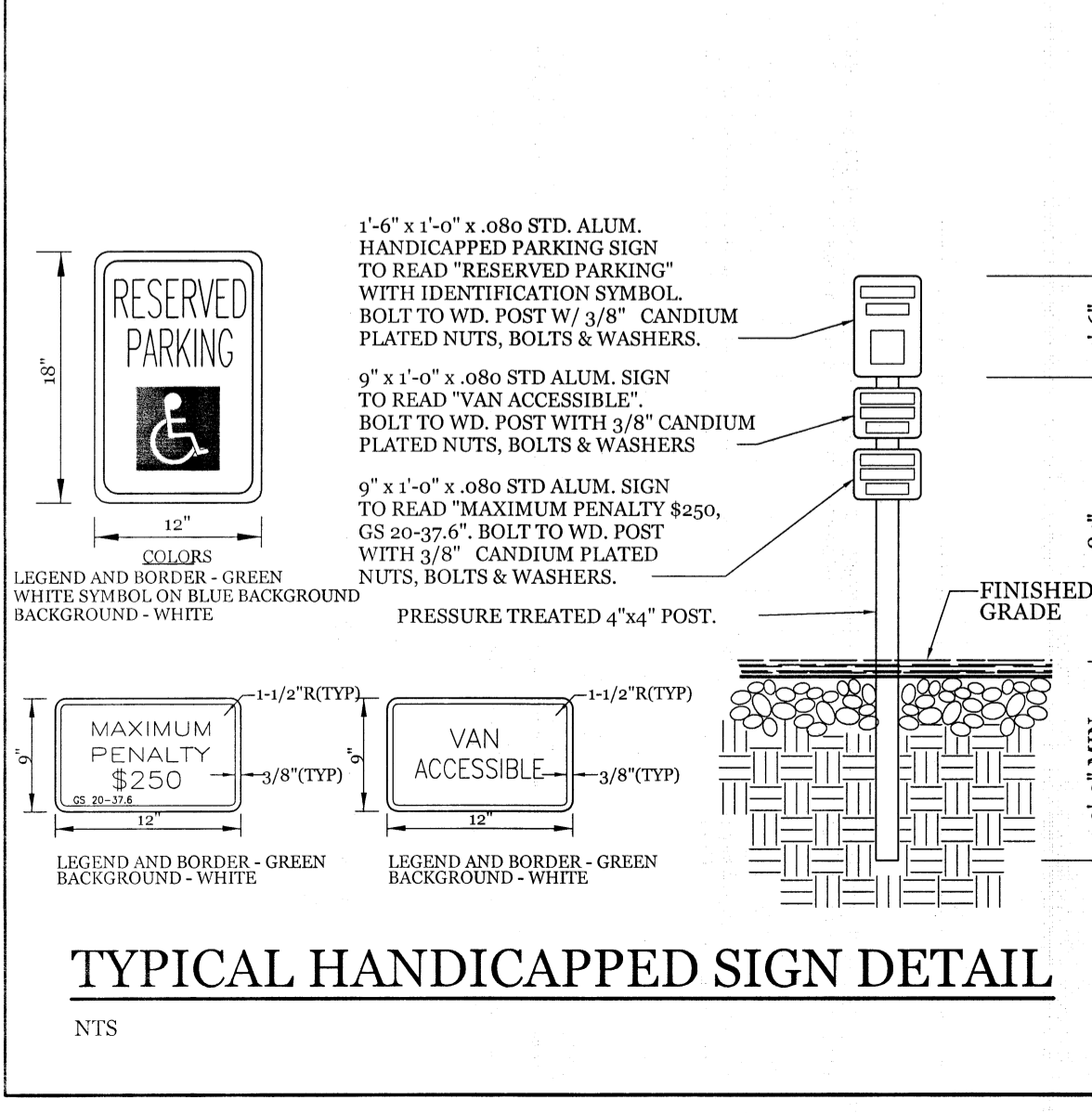
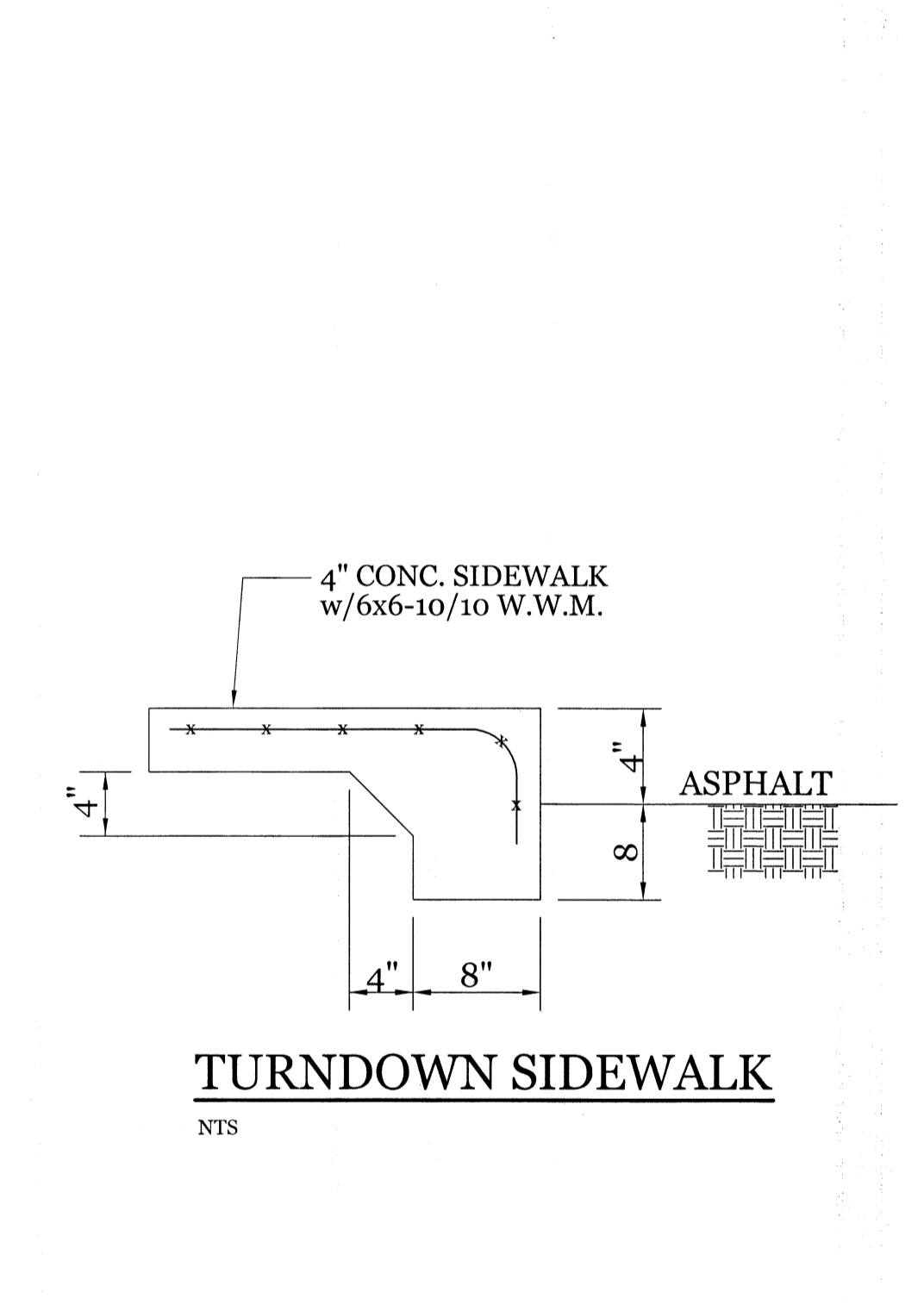
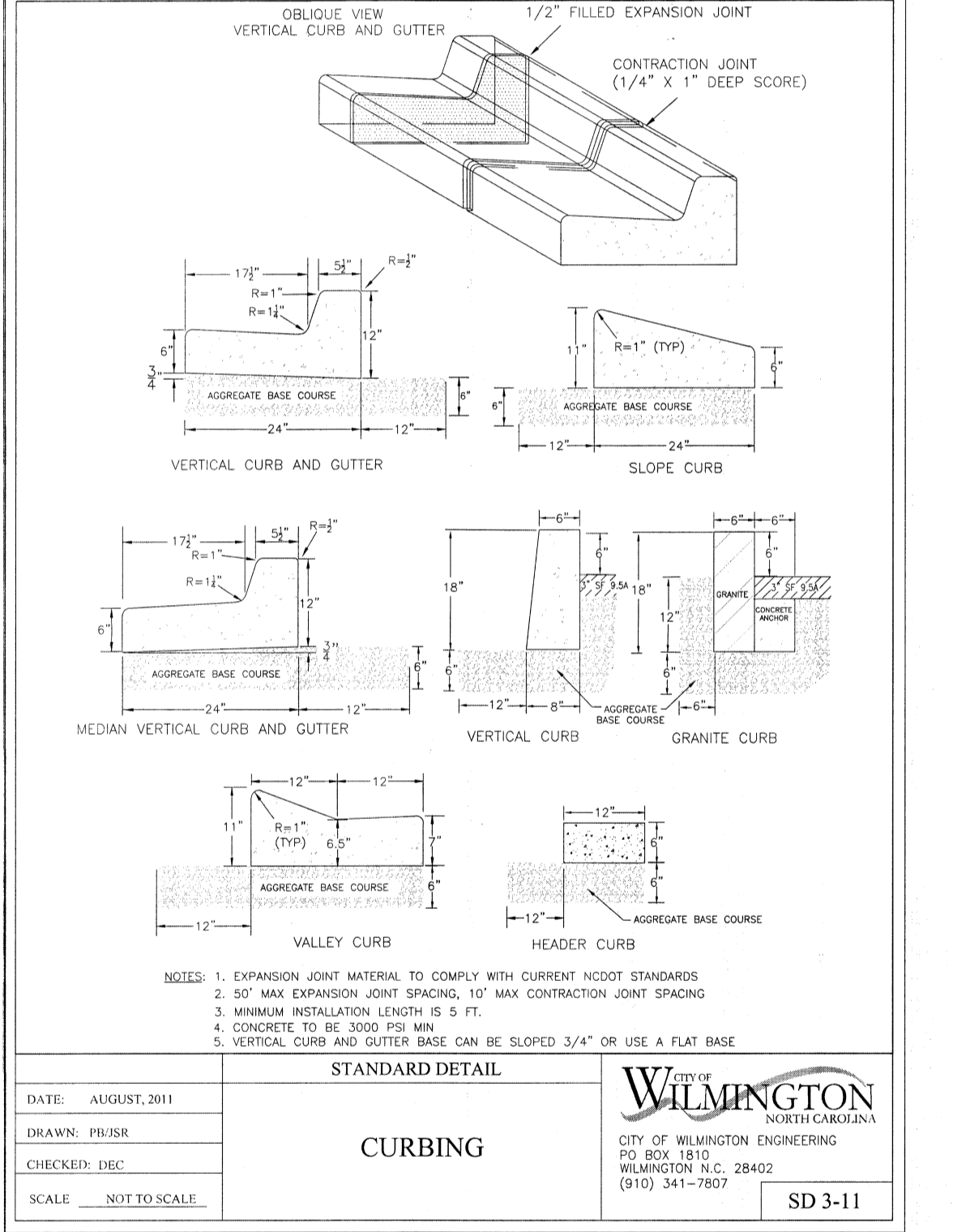
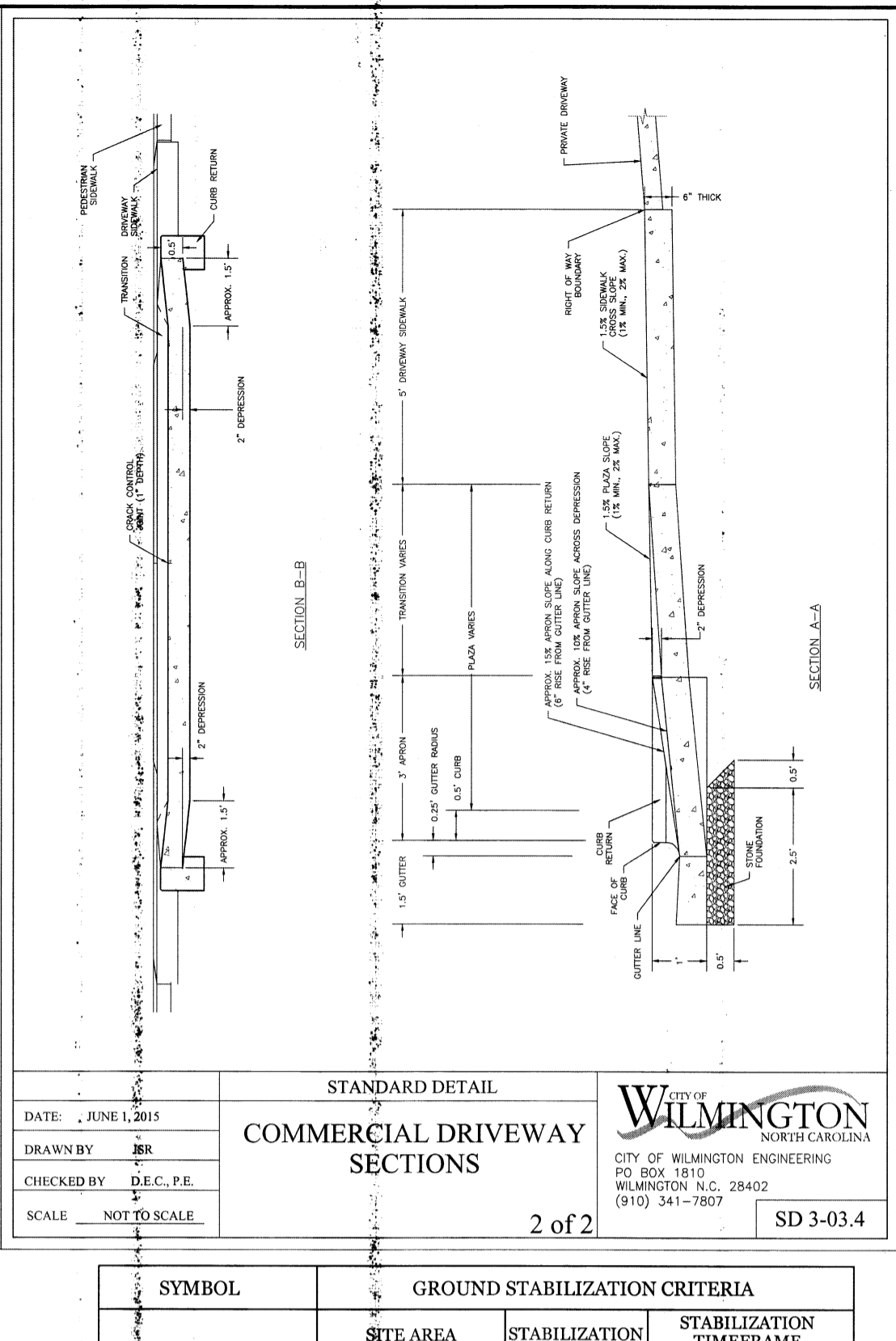
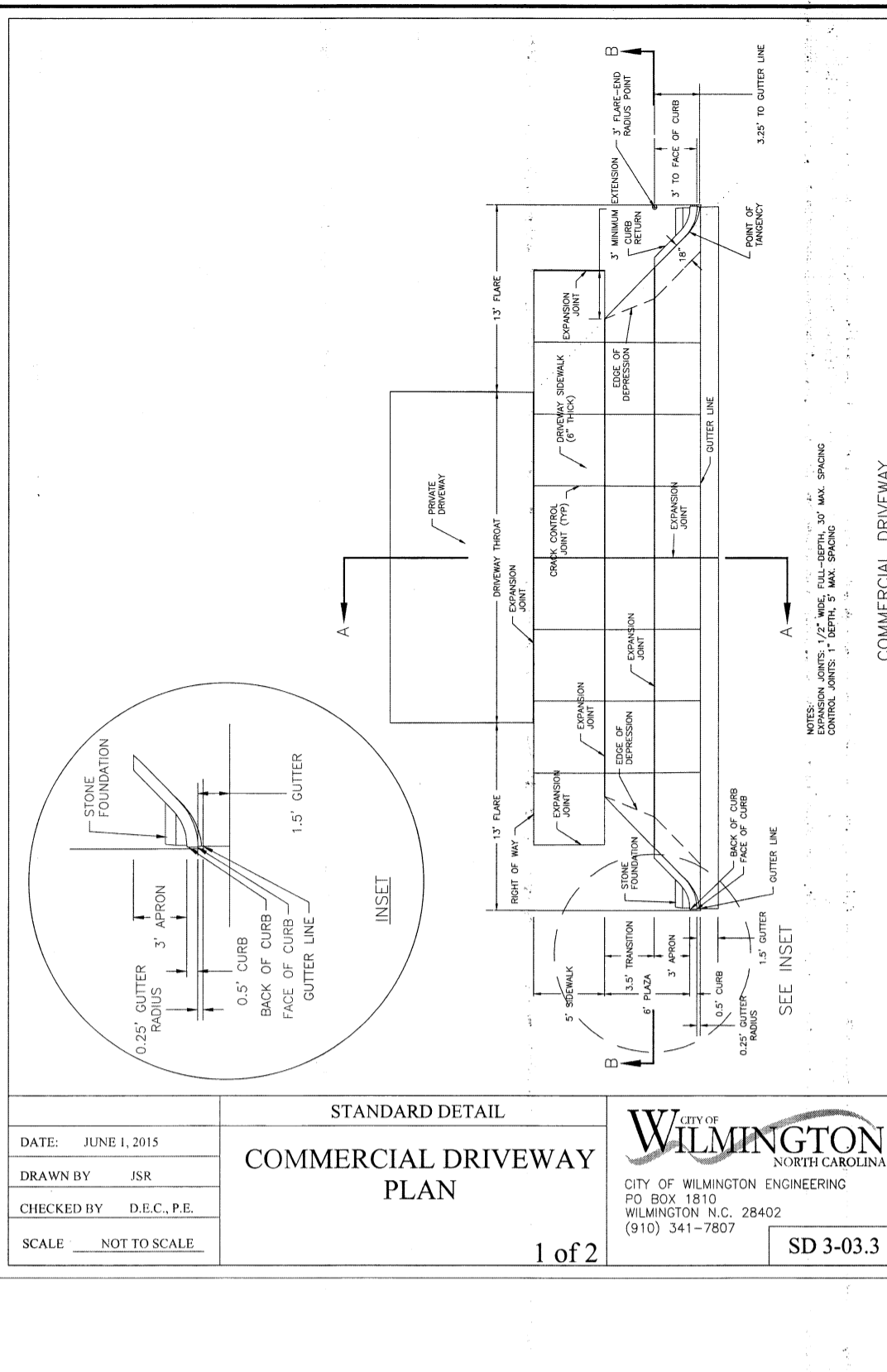
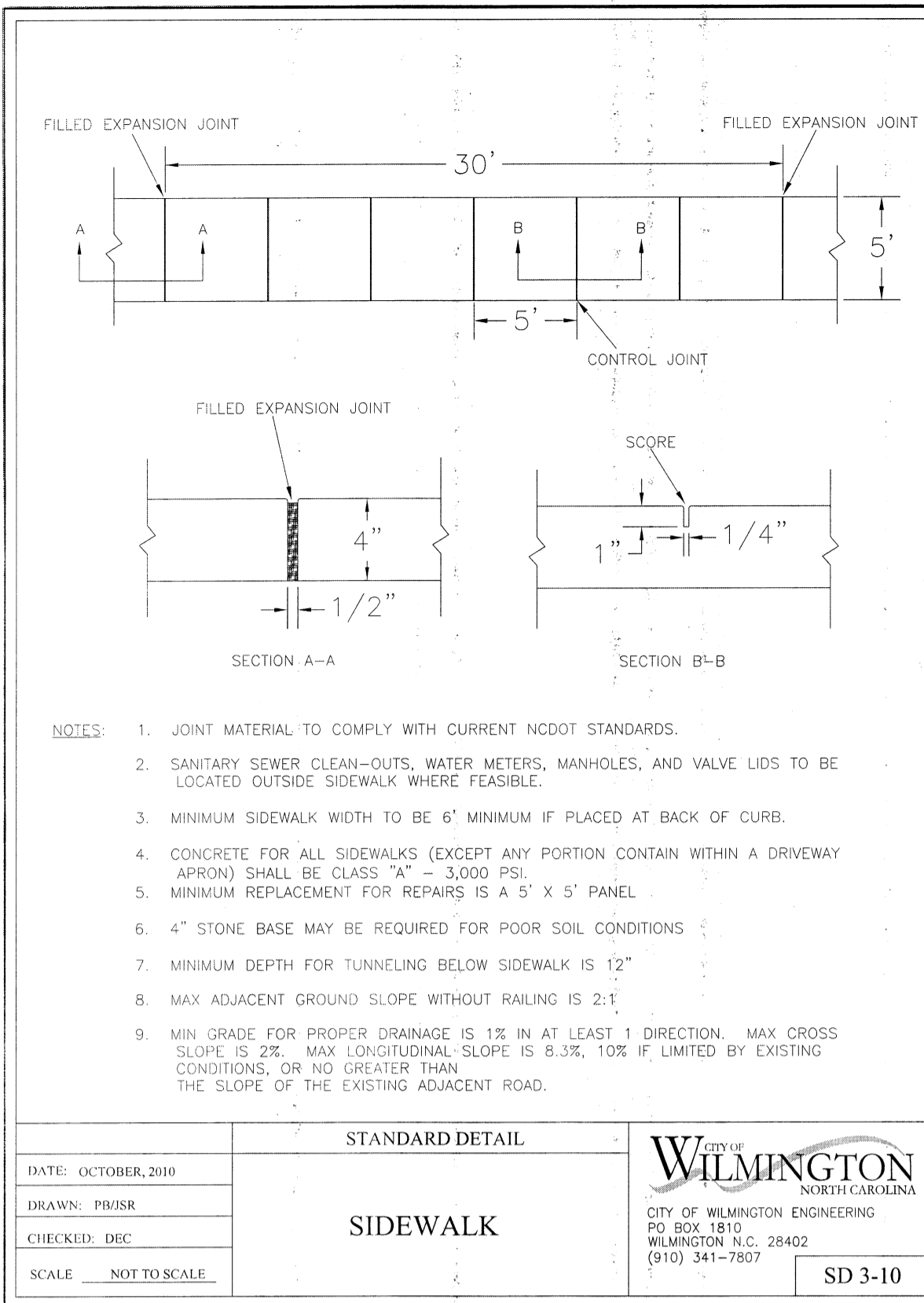
City of **WILMINGTON**
 NORTH CAROLINA
 Public Services • Engineering Division
APPROVED DRAINAGE PLAN

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)

20' 10' 0' 20' 40'
 Scale: 1"=20'



GROUND STABILIZATION CRITERIA

| SYMBOL | SITE AREA DESCRIPTION | STABILIZATION TIMEFRAME | STABILIZATION TIMEFRAME EXCEPTIONS |
|----------|--|-------------------------|---|
| [Symbol] | * Perimeter dikes, ditches and slopes | 7 Days | None |
| [Symbol] | * High Quality Water (HQW) Zones | 7 Days | None |
| [Symbol] | * Slopes Steeper than 3:1 | 7 Days | If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed |
| [Symbol] | * Slopes 3:1 or flatter | 14 Days | 7-days for slopes greater than 50 ft. in length |
| [Symbol] | * All other areas with slopes flatter than 4:1 | 14 Days | None (except for perimeters & HQW Zones) |

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 SEEDING IN ACCORDANCE TO SPECIFICATIONS. SLOPE STABILIZATION IS WITHIN 21 CALENDAR DAYS OF ANY PHASE OF CONSTRUCTION. ALL OTHER AREAS MUST BE STABILIZED WITHIN 15 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 FILL SLOPE SHALL EXCEED A RISE OR FALL OF ONE FOOT FOR EVERY RUN OF 3 FEET (1 VERTICAL TO 3 HORIZONTAL).
- NO SEDIMENT WILL 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 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 GRASSED.
- 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

| SEEDING MIXTURE SPECIES | APPLICATION RATE |
|--|-------------------------------|
| LATE WINTER & EARLY SPRING: Rye (grain) Annual Lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains) Omit annual Lespedeza when duration of temporary cover is not to extend beyond June | 100 (lb/acre) 50 (lb/acre) |
| SUMMER: German Millet In the Piedmont and Mountains, a small-stemmed sundgrass may be substituted at a rate of 50 (lb/acre) | 40 (lb/acre) |
| FALL: Rye (grain) | 120 (lb/acre) |

NORTH CAROLINA PERMANENT GRASSING DETAIL

| SEEDING MIXTURE SPECIES | APPLICATION RATE |
|---|--|
| FALL & WINTER: Tall Fescue (blend of two or three improved varieties) Rye (grain) | 200 (lb/acre) 25 (lb/acre) |
| SPRING & SUMMER: Panicum Bahiagrass Sericea Lespedeza Common Bermudagrass German Millet Tall Fescue | 50 (lb/acre) 30 (lb/acre) 10 (lb/acre) 10 (lb/acre) 50 (lb/acre) |

SEEDING DATES

FALL & WINTER:
January - April
August - December

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.

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. Re-seed, fertilize, and mulch damaged areas immediately, mow to a height of 2.5-3.5 inches as needed.

SPRING & SUMMER:
April 1 - July 15

SOIL AMENDMENTS:
Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10-10-10 fertilizer.

MAINTENANCE:
Re-fertilize following 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.

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.

MAINTENANCE:
Refertilize if growth is not fully adequate, reseed, re-fertilize and mulch immediately following erosion or other damage.

Approved Construction Plan

Name: _____ Date: _____

Planning _____
Public Utilities _____
Traffic _____
Fire _____

APPROVED DRAINAGE PLAN

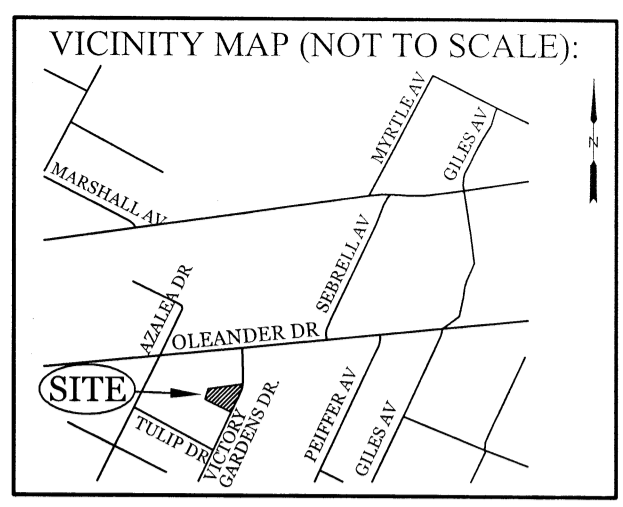
Date: _____ Permit # _____
Signed: _____

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

DRAWN: JAE SHEET SIZE: 24x36
CHECKED: CDC DATE: 1/9/2018
APPROVED: CDC SCALE: NTS
PROJECT NUMBER: 2017-011

DRAWING NUMBER: **C-2**

3 OF 5



REVISIONS

| NO. | 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

CLIENT INFORMATION:

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

Professional Engineer Seal:
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL
CHARLES A. CATER
032555
1-9-18

DRAWN: JAE SHEET SIZE: 24x36
CHECKED: CDC DATE: 1/9/2018
APPROVED: CDC SCALE: NTS
PROJECT NUMBER: 2017-011

DRAWING NUMBER: **C-2**

3 OF 5