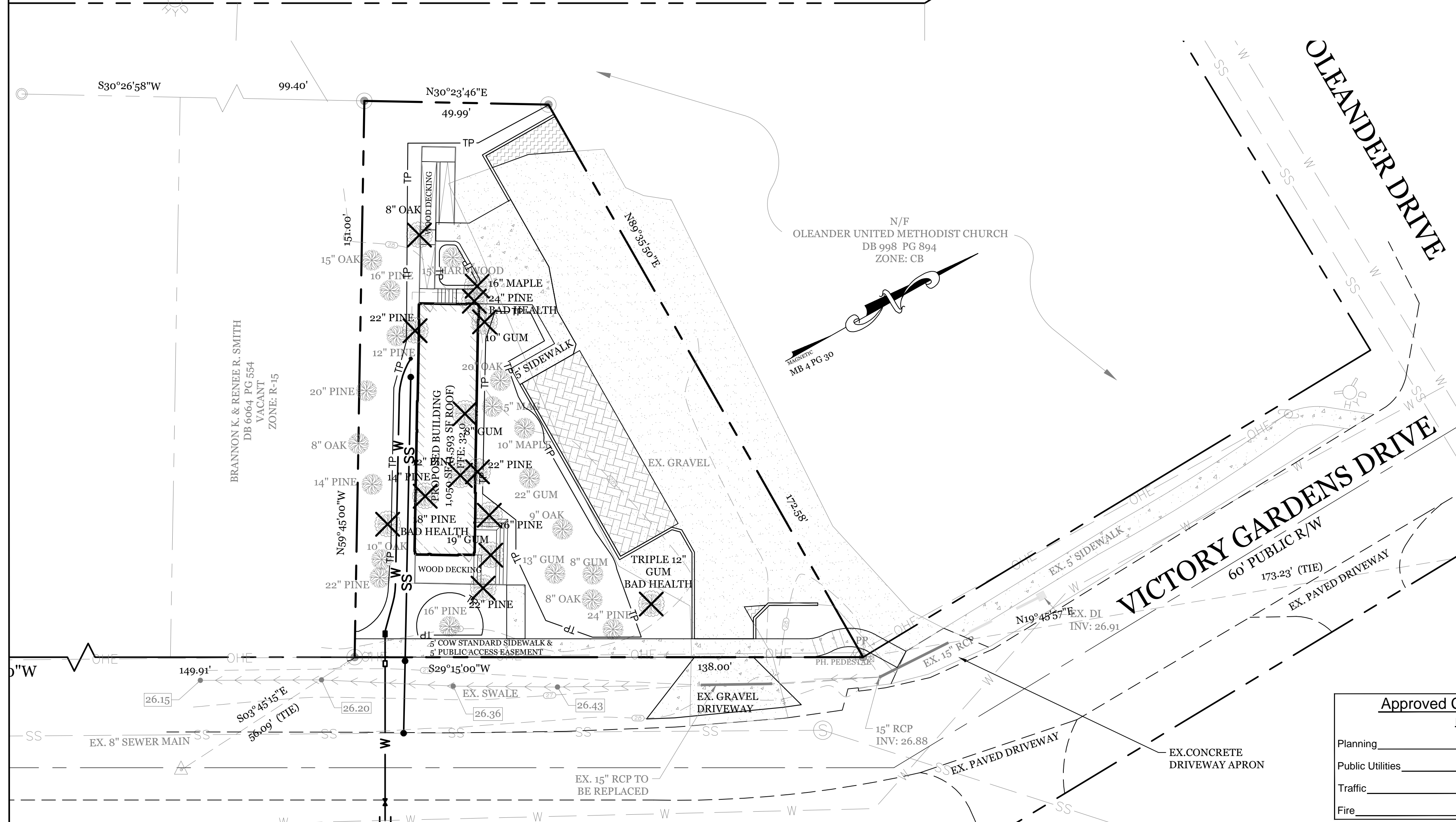


PROPOSED TREES TO BE REMOVED

SIZE	SPECIES	QTY	TYPE
12"	PINE	1	REGULATED
14"	PINE	1	REGULATED
16"	PINE	1	REGULATED
18"	PINE	1	REGULATED
22"	PINE	3	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



PROPOSED TREES TO BE PRESERVED

SIZE	SPECIES	QTY	TYPE
12"	PINE	1	REGULATED
14"	PINE	1	REGULATED
16"	PINE	2	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	2	REGULATED
9"	OAK	1	REGULATED
10"	OAK	1	REGULATED
15"	OAK	1	REGULATED
20"	OAK	1	REGULATED

- 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 _____

City of Wilmington Public Services • Engineering Division
APPROVED DRAINAGE PLAN

Date: _____ Permit # _____

Signed: _____

SITE DATA

PARCEL ID: R06207-015-010-000

CURRENT ZONING: CB

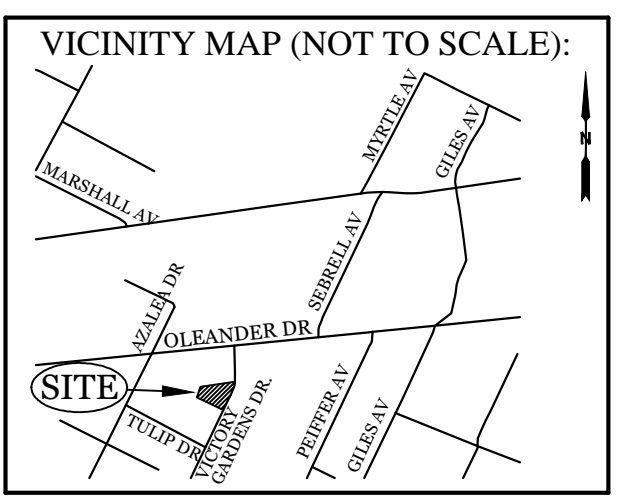
CAMA LAND USE CLASSIFICATION: WATERSHED RESOURCE PROTECTION

PROJECT ADDRESS: 216 VICTORY GARDENS DR WILMINGTON, NC 28409

CURRENT OWNER: BRANNON K. & RENEE R. SMITH 2213 MORELAND DR WILMINGTON, NC 28405

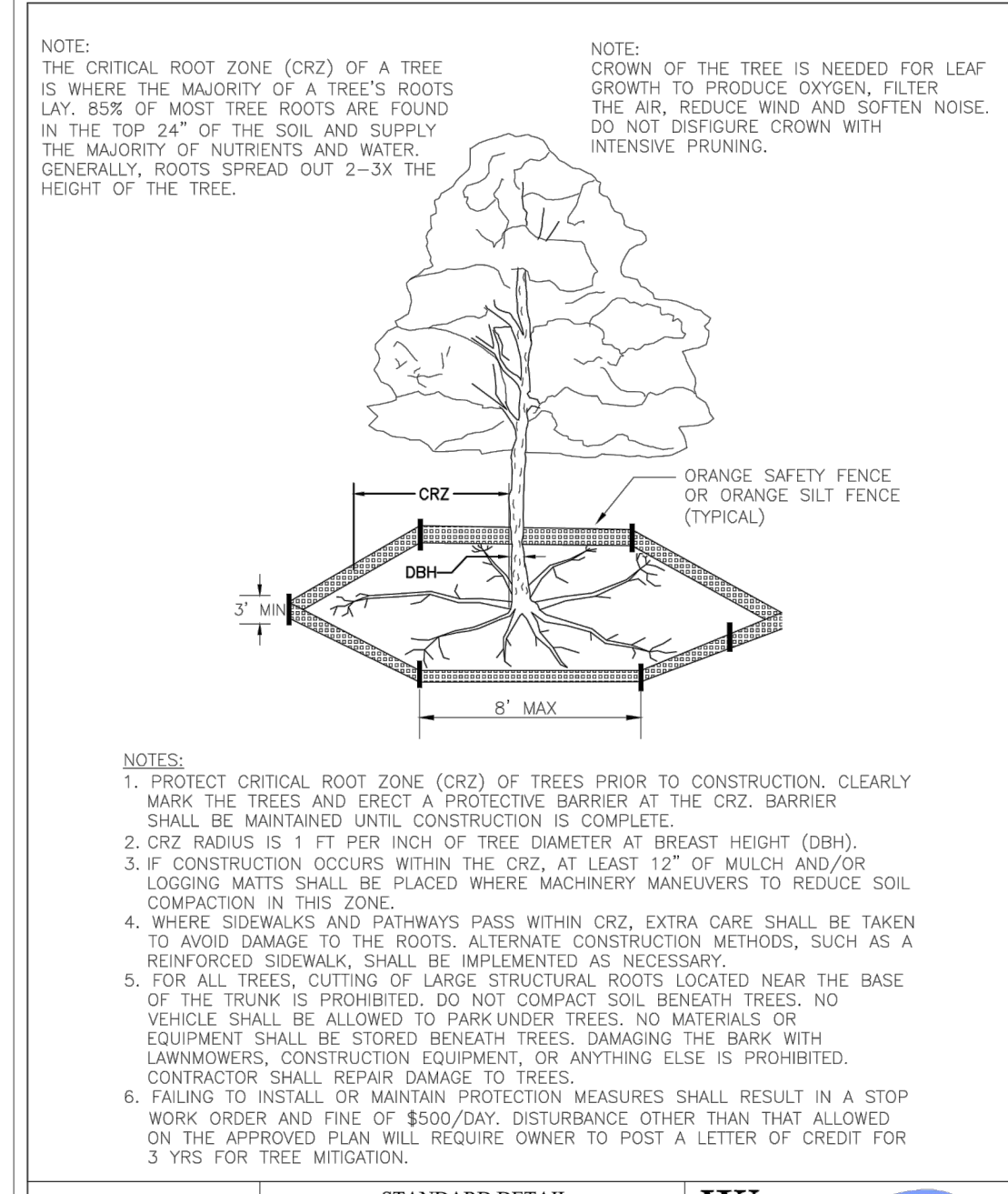
TOTAL ACREAGE IN PROJECT BOUNDARY: 14.123 S.F. (± 0.32 ac.)

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



REVISIONS

NO.	DATE	DESCRIPTION

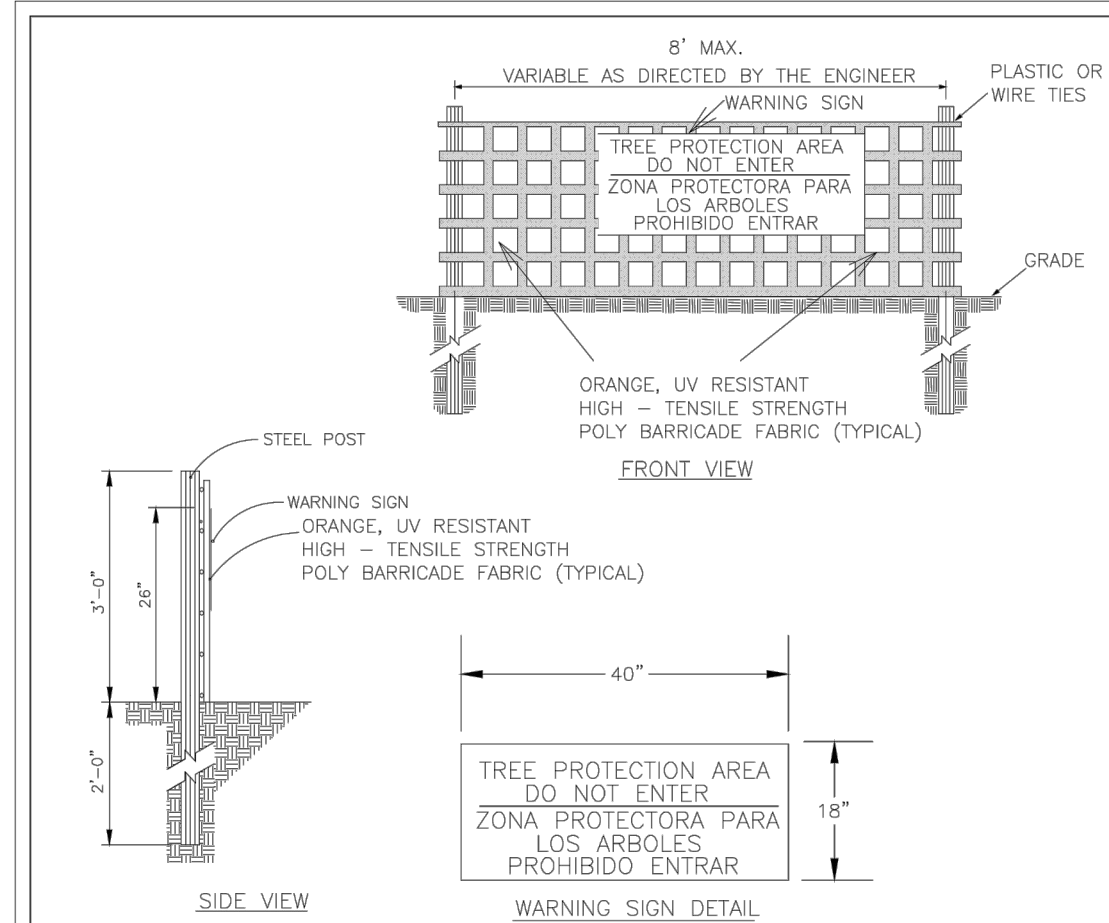


STANDARD DETAIL

TREE PROTECTION DURING CONSTRUCTION

SHEET 1 of 2

SD 15-09



NOTES:

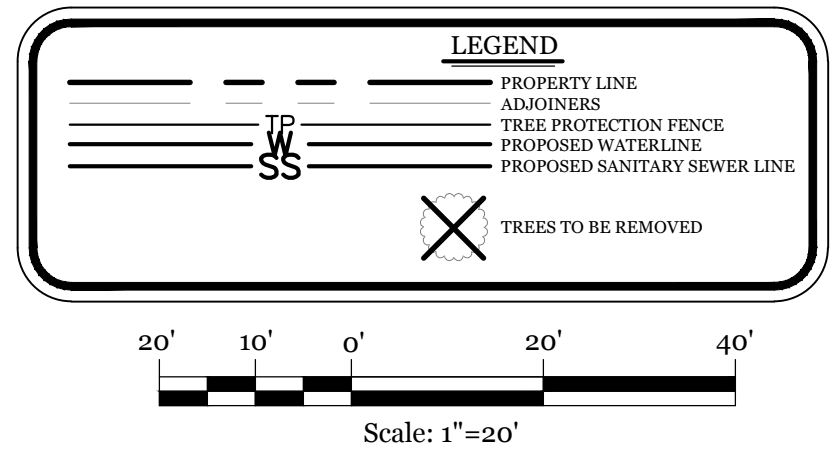
- THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
- WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
- SIGNS SHALL BE PLACED AT 50' MAXIMUM 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.
- ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
- TREE PROTECTION FENCING AND SIGNS SHALL BE REMOVED AFTER CONSTRUCTION.
- ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

STANDARD DETAIL

TREE PROTECTION DURING CONSTRUCTION

SHEET 2 of 2

SD 15-09



INTRACOASTAL ENGINEERING, PLLC

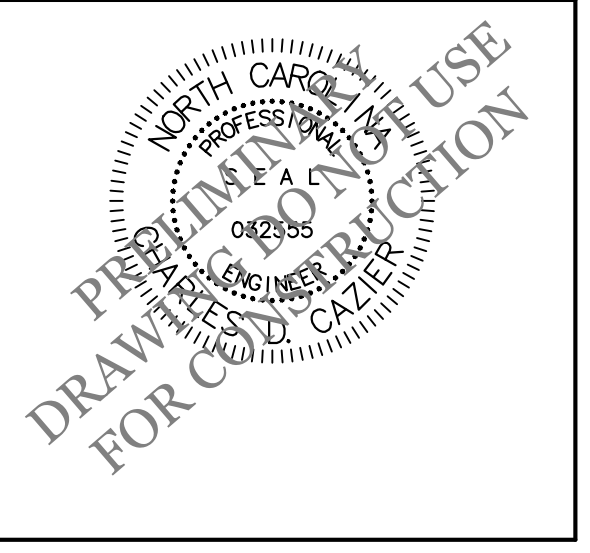
5725 Oleander Dr. Unit E-7
Wilmington, North Carolina 28403
Phone: 910.859.8983
Email: Charlie@intracoastalengineering.com
License Number: P-0662

EXISTING CONDITIONS / TREE REMOVAL PLAN

FOR

SMITH & GSELL DESIGN STUDIO

CITY OF WILMINGTON
NEW HANOVER COUNTY, NC



CLIENT INFORMATION:

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

DRAWN: JAE SHEET SIZE: 24x36

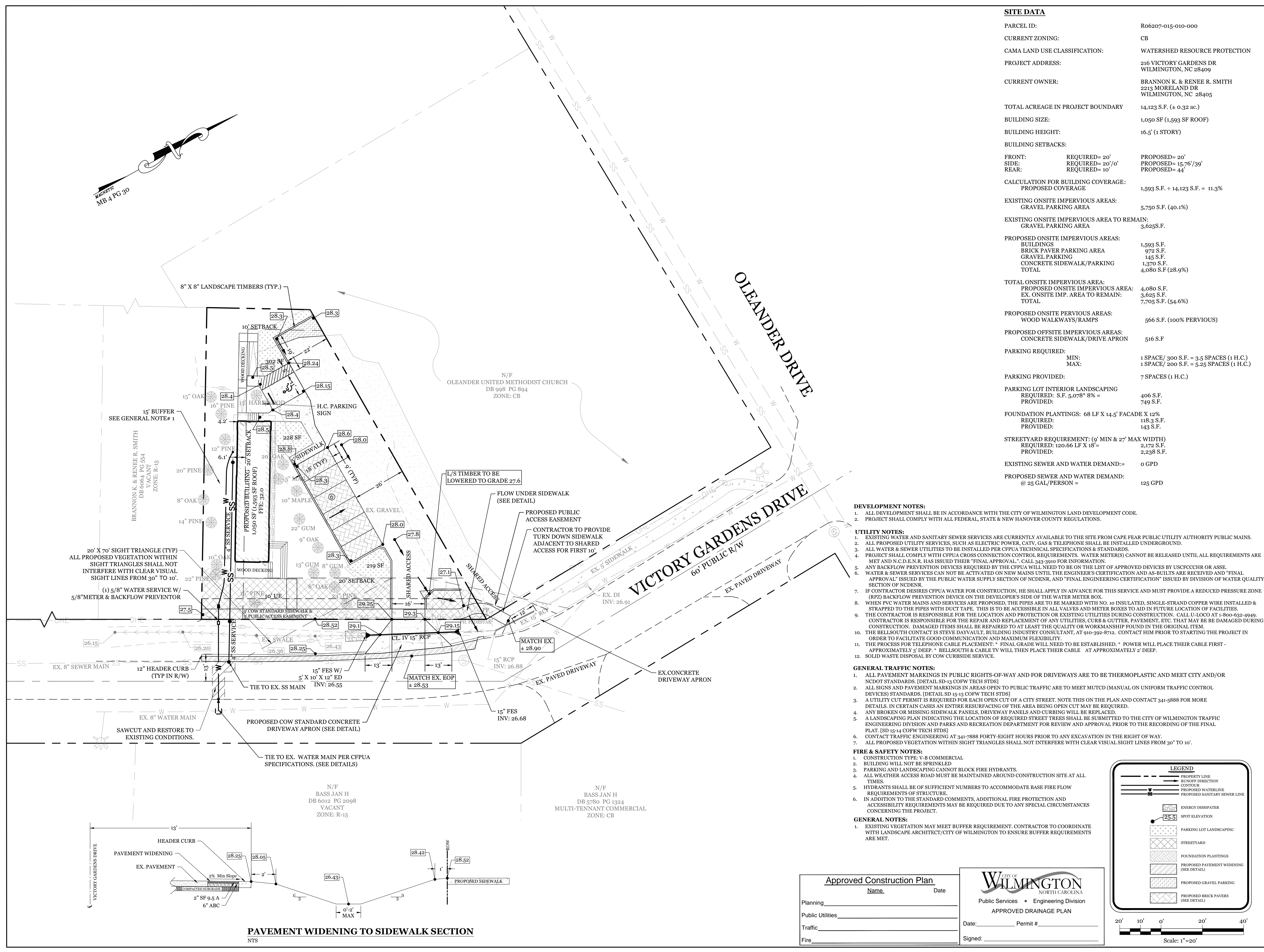
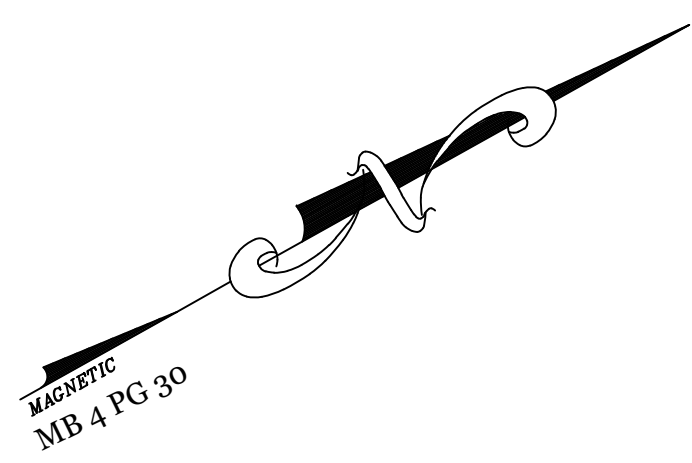
CHECKED: CDC DATE: 10/2/2017

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 2213 MORELAND DR WILMINGTON, NC 28405

TOTAL ACREAGE IN PROJECT BOUNDARY: 14,123 S.F. (± 0.32 ac.)
 BUILDING SIZE: 1,050 SF (1,593 SF ROOF)
 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: 3,625 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: 1,370 S.F.
 TOTAL: 4,080 S.F. (28.9%)

TOTAL ONSITE IMPERVIOUS AREA: 4,080 S.F.
 EX. ONSITE IMP. AREA TO REMAIN: 3,625 S.F.
 TOTAL: 7,705 S.F. (54.6%)

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

PROPOSED OFFSITE IMPERVIOUS AREAS:
 CONCRETE SIDEWALK/DRIVE APRON: 516 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.)

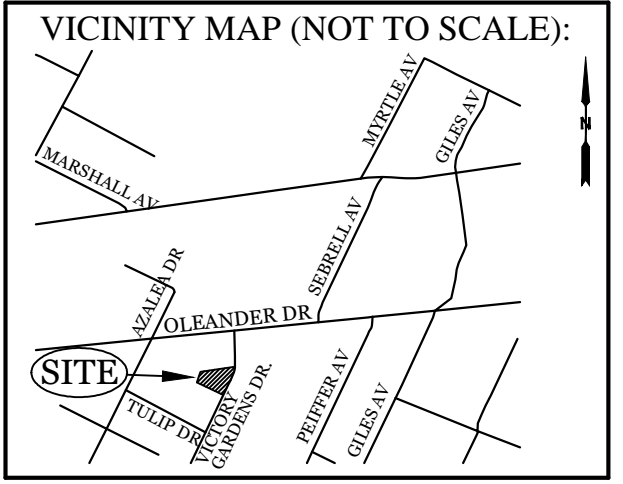
PARKING PROVIDED: 7 SPACES (1 H.C.)

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: 2,172 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



REVISIONS

NO.	DATE	DESCRIPTION

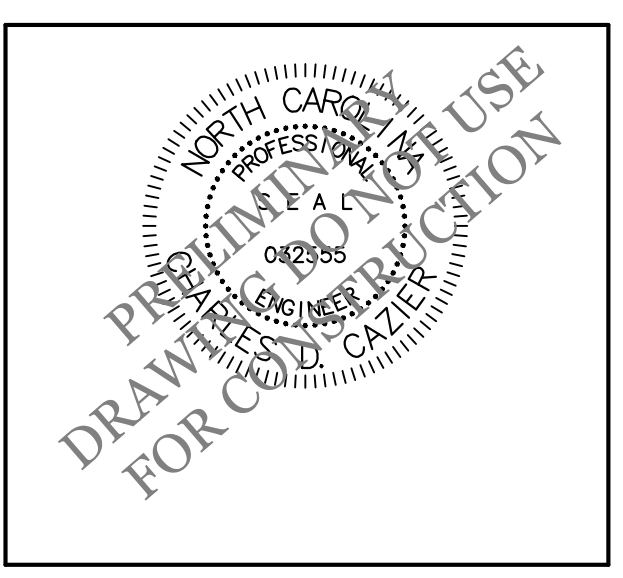
INTRACOASTAL ENGINEERING, PLLC
 5725 Oleander Dr. Unit E-7
 Wilmington, North Carolina 28403
 Phone: 910.859.8983
 Email: Charlie@intracoastalengineering.com
 License Number: P-0662

PRELIMINARY SITE PLAN

FOR

SMITH & GSELL DESIGN STUDIO

CITY OF WILMINGTON
 NEW HANOVER COUNTY, NC



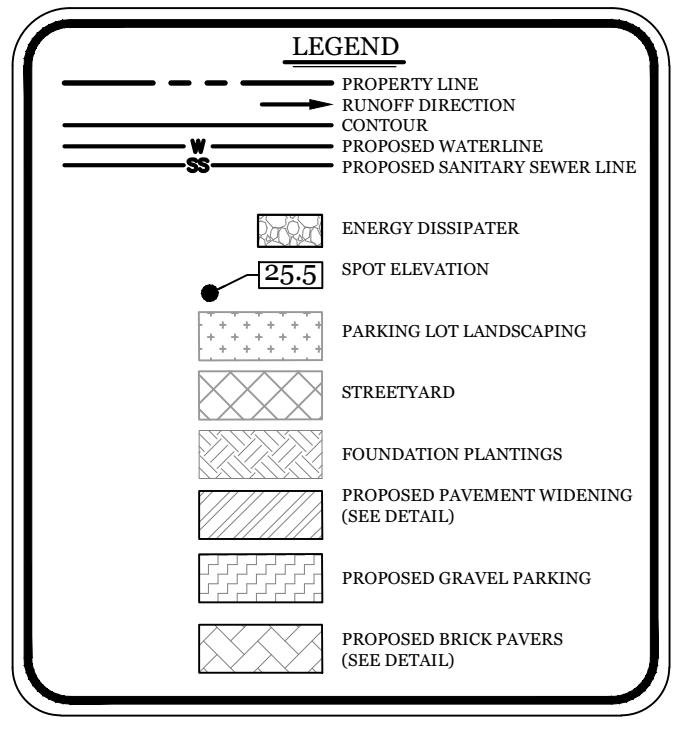
CLIENT INFORMATION:

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

DRAWN: JAE	SHEET SIZE: 24x36
CHECKED: CDC	DATE: 10/2/2017
APPROVED: CDC	SCALE: 1" = 20'
PROJECT NUMBER: 2017-011	

DRAWING NUMBER: **C-1**

- 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 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 USCFCCHR 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. 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 OR 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 COW 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 COW TECH STDS]
 - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. NOTE THIS ON THE PLAN AND CONTACT 341-8888 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 COW 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: _____

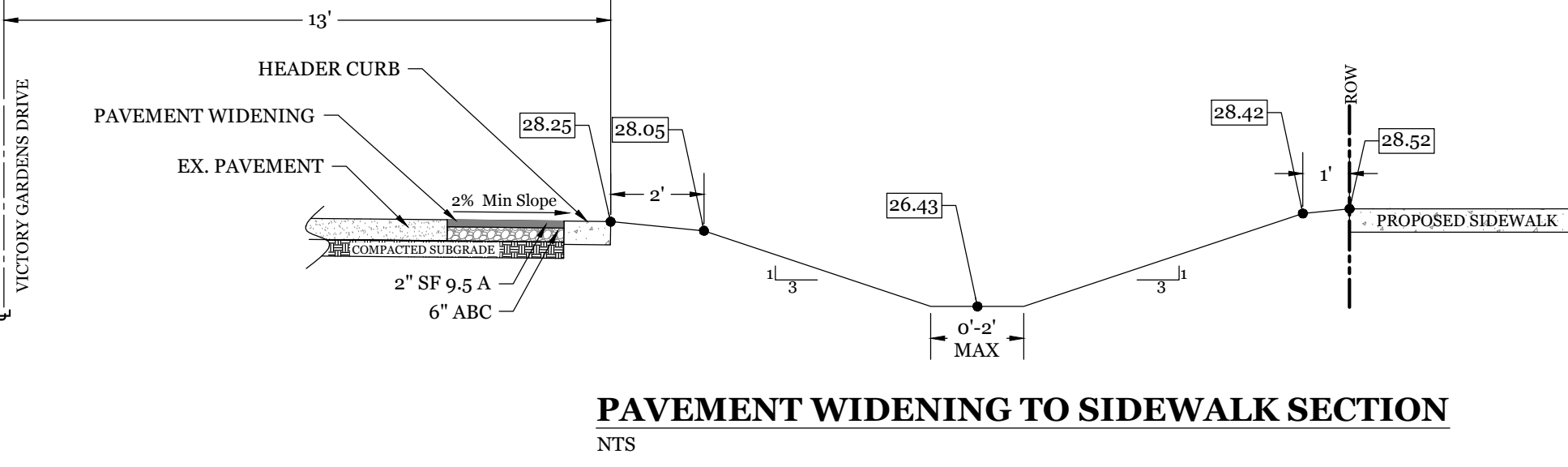
Traffic: _____

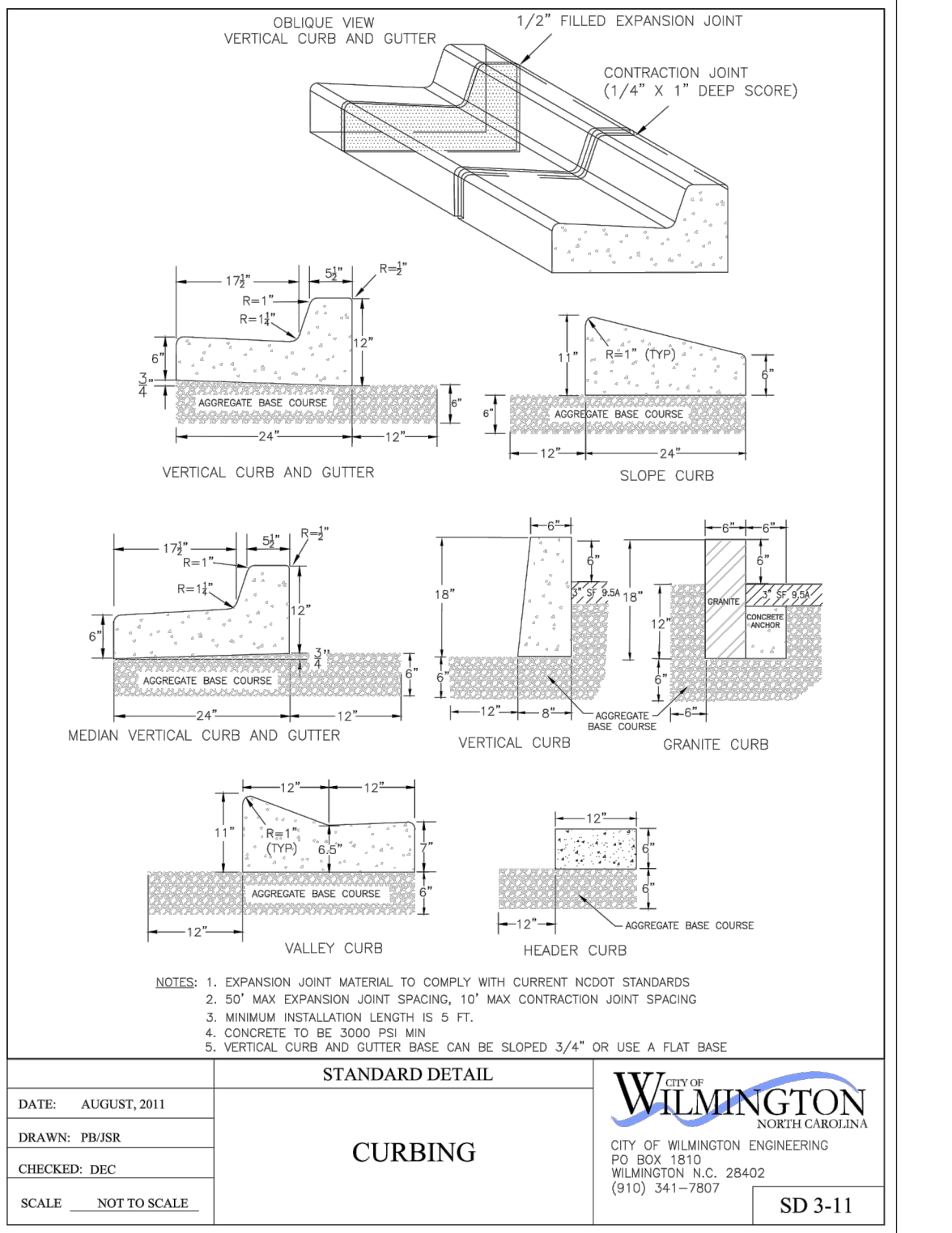
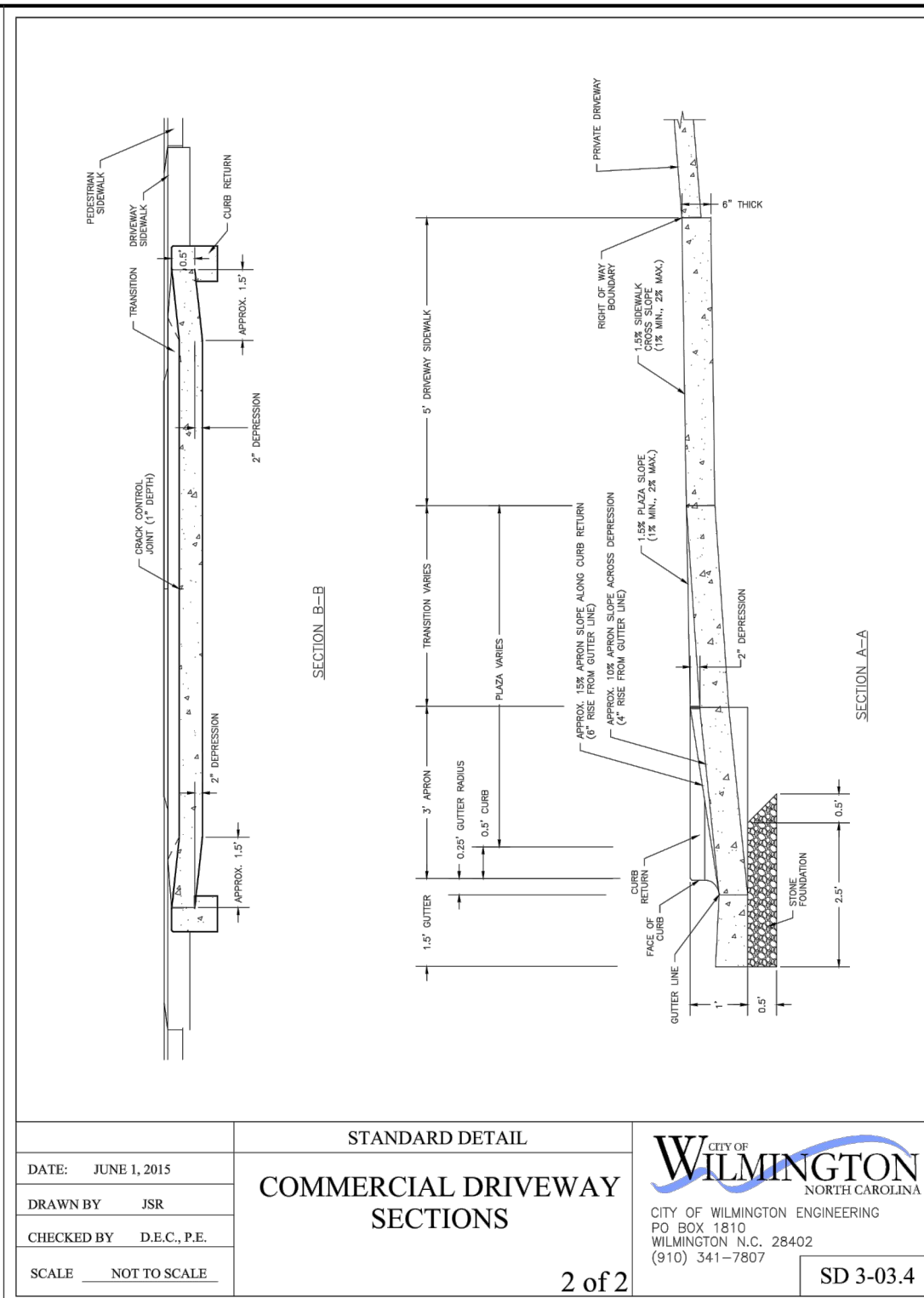
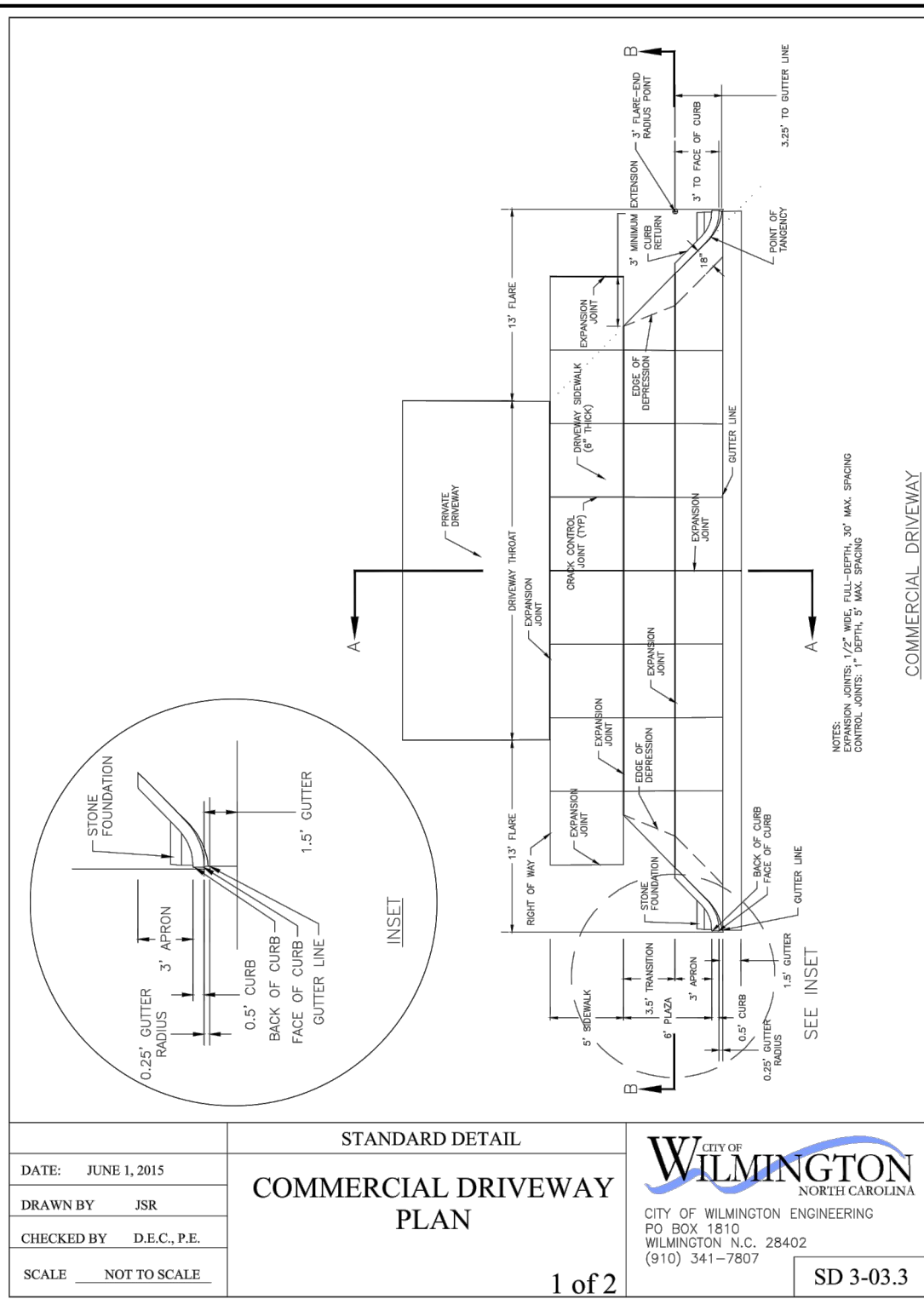
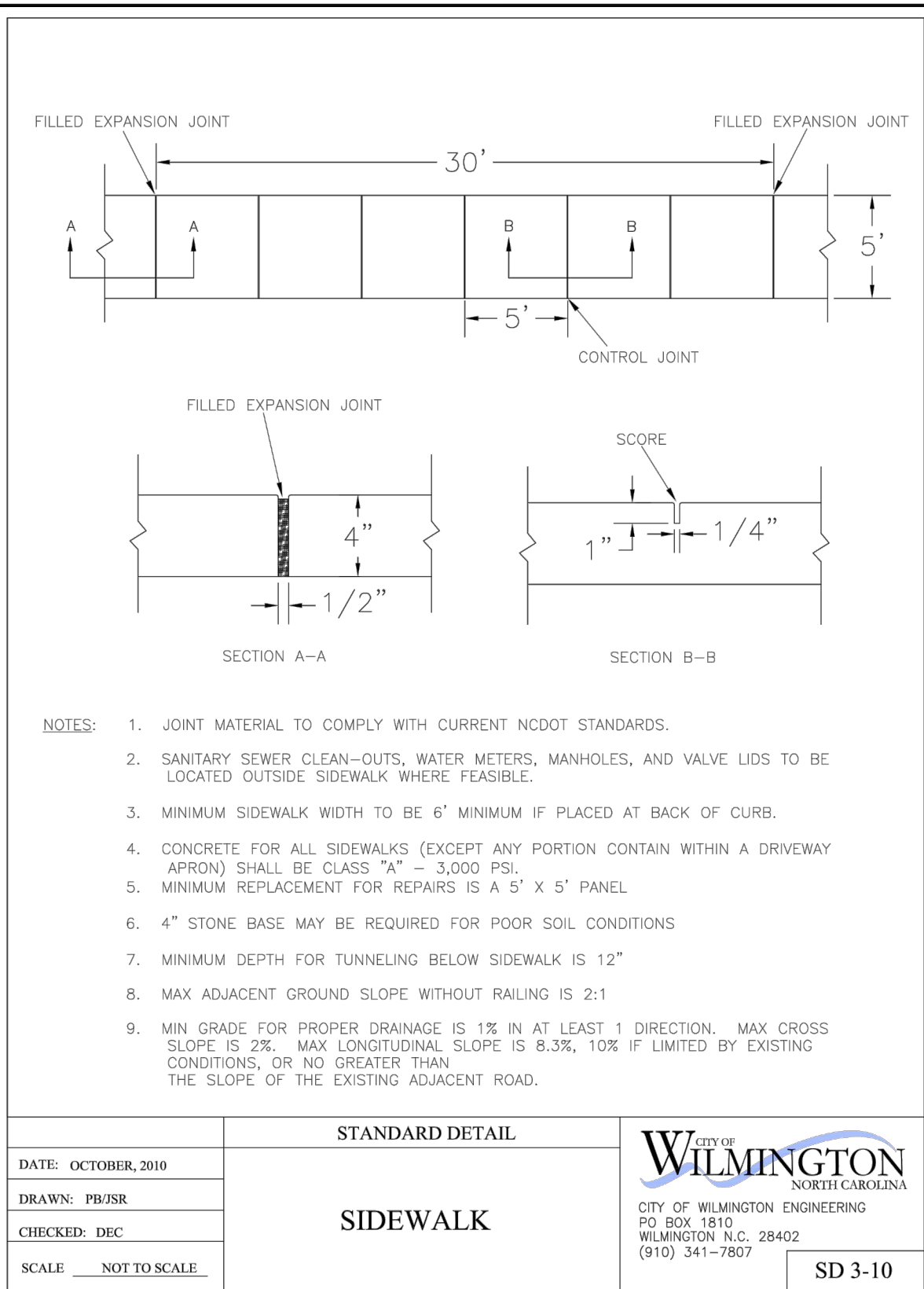
Fire: _____

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

Date: _____ Permit # _____

Signed: _____





SYMBOL	GROUND STABILIZATION CRITERIA		
	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 20 ft. in length
[Symbol]	* All other areas with slopes flatter than 4:1	14 Days	None (except for perimeters & HQW Zones)

BUILDING WASTE HANDLING:

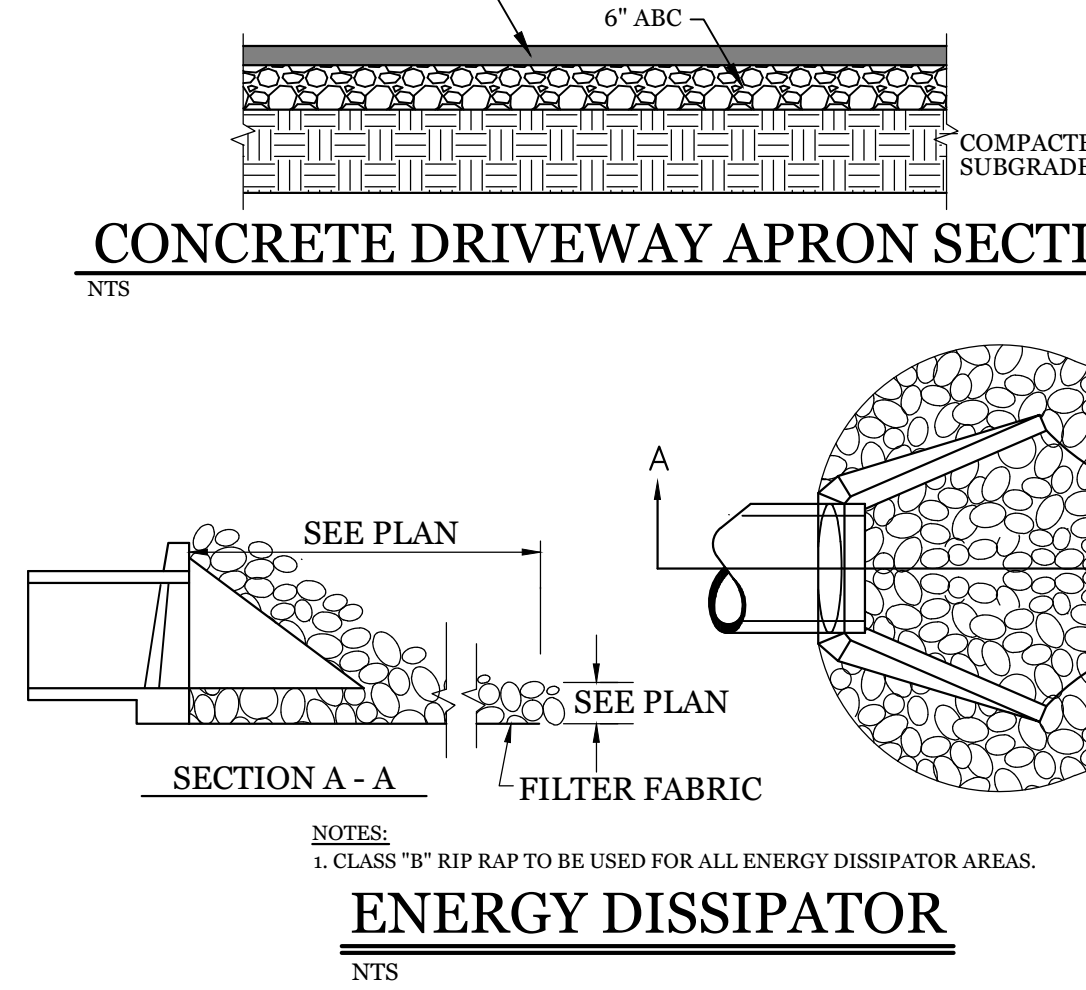
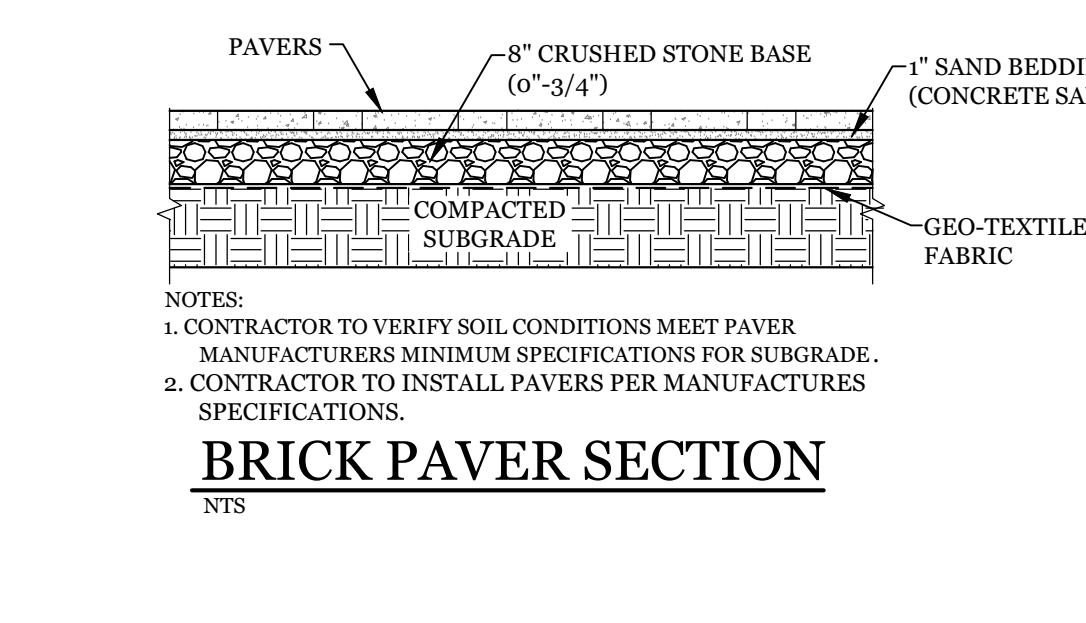
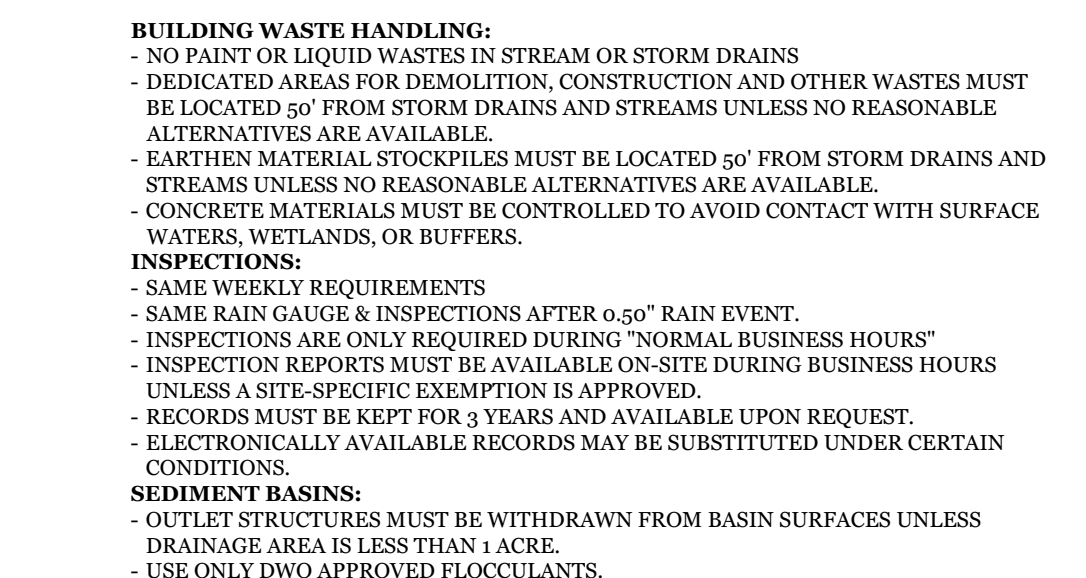
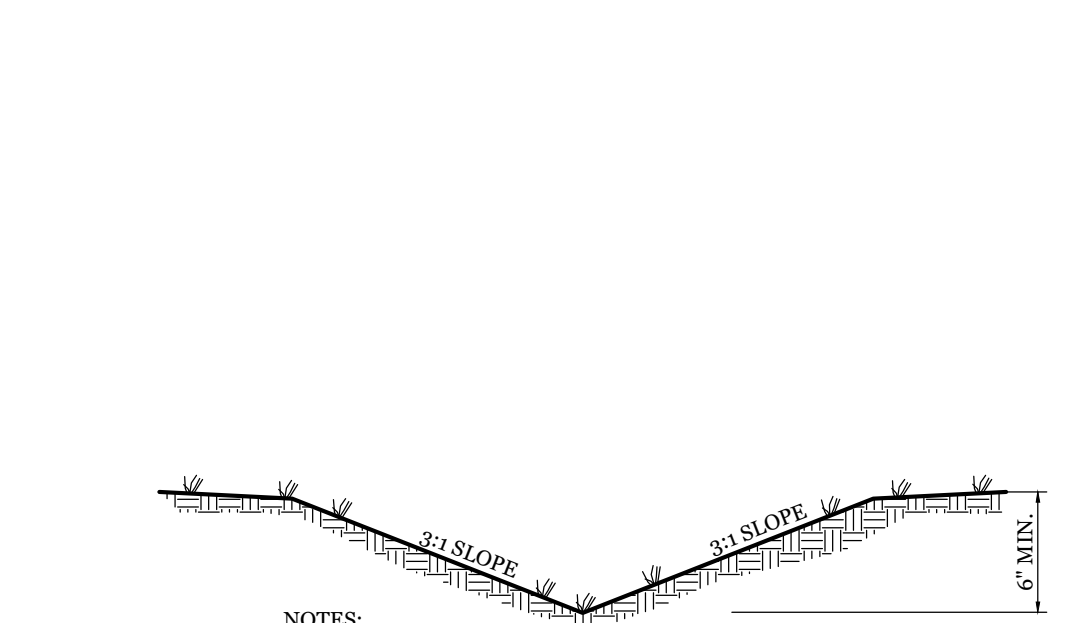
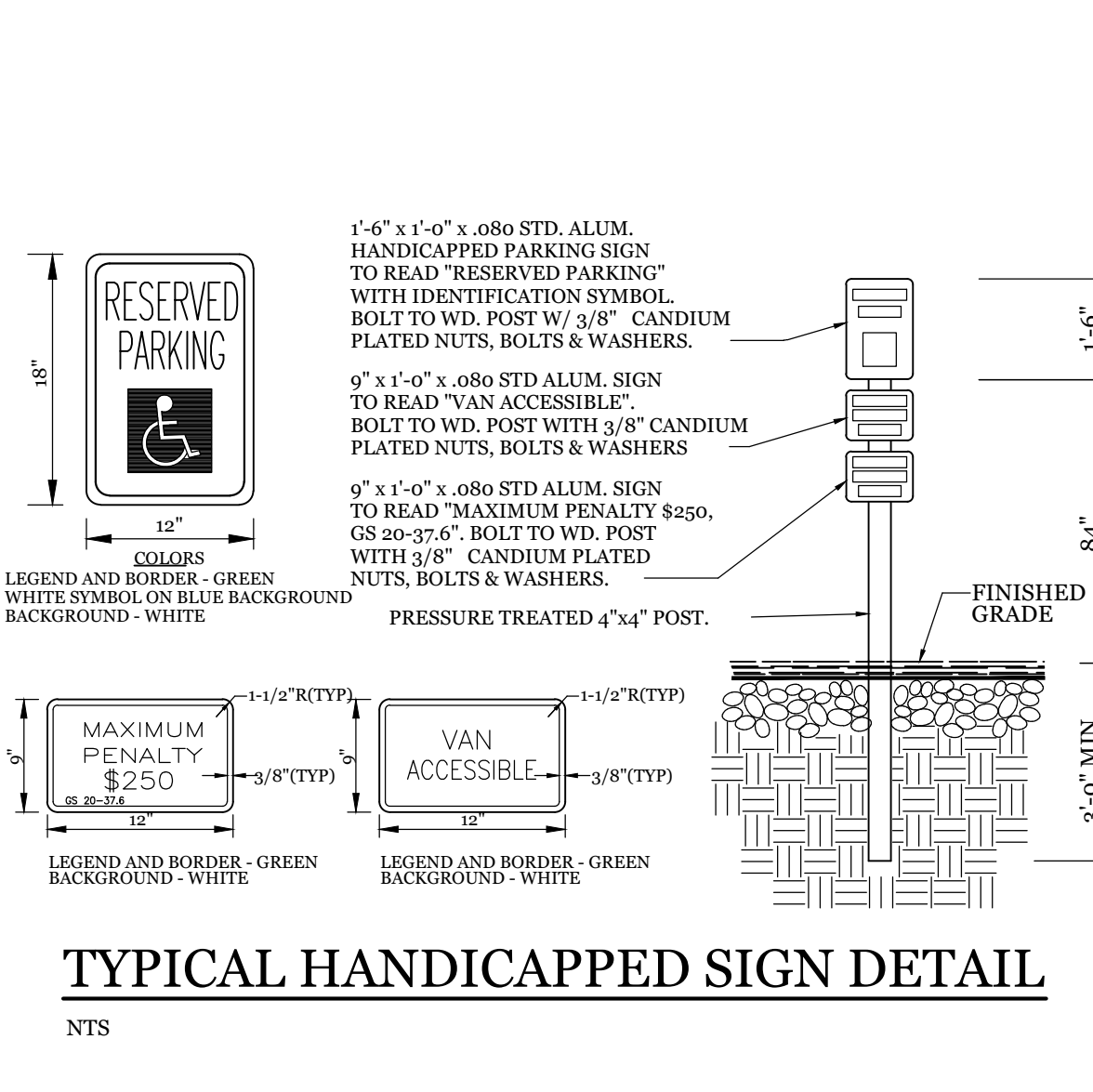
- NO PAINT OR LIQUID WASTES IN STREAM OR STORM DRAINS
- DEDICATED AREAS FOR DEMOLITION, CONSTRUCTION AND OTHER WASTES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES ARE AVAILABLE.
- EARTHEN MATERIAL STOCKPILES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES ARE AVAILABLE.
- CONCRETE MATERIALS MUST BE CONTROLLED TO AVOID CONTACT WITH SURFACE WATERS, WETLANDS, OR BUFFERS.

INSPECTIONS:

- SAME WEEKLY REQUIREMENTS
- SAME RAIN GAUGE & INSPECTIONS AFTER 0.50" RAIN EVENT.
- INSPECTIONS ARE ONLY REQUIRED DURING "NORMAL BUSINESS HOURS"
- INSPECTION REPORTS MUST BE AVAILABLE ON-SITE DURING BUSINESS HOURS UNLESS A SITE-SPECIFIC EXEMPTION IS APPROVED.
- RECORDS MUST BE KEPT FOR 3 YEARS AND AVAILABLE UPON REQUEST.
- ELECTRONICALLY AVAILABLE RECORDS MAY BE SUBSTITUTED UNDER CERTAIN CONDITIONS.

SEDIMENT BASINS:

- OUTLET STRUCTURES MUST BE WITHDRAWN FROM BASIN SURFACES UNLESS DRAINAGE AREA IS LESS THAN 1 ACRE.
- USE ONLY DWG APPROVED FLOCCULANTS.



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.
- GRUBBING 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, GRUBBED, 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.
- THE 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, N.C. PLS No. L-4148
- 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 CFPIA 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 ENTRAINED.
- 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:

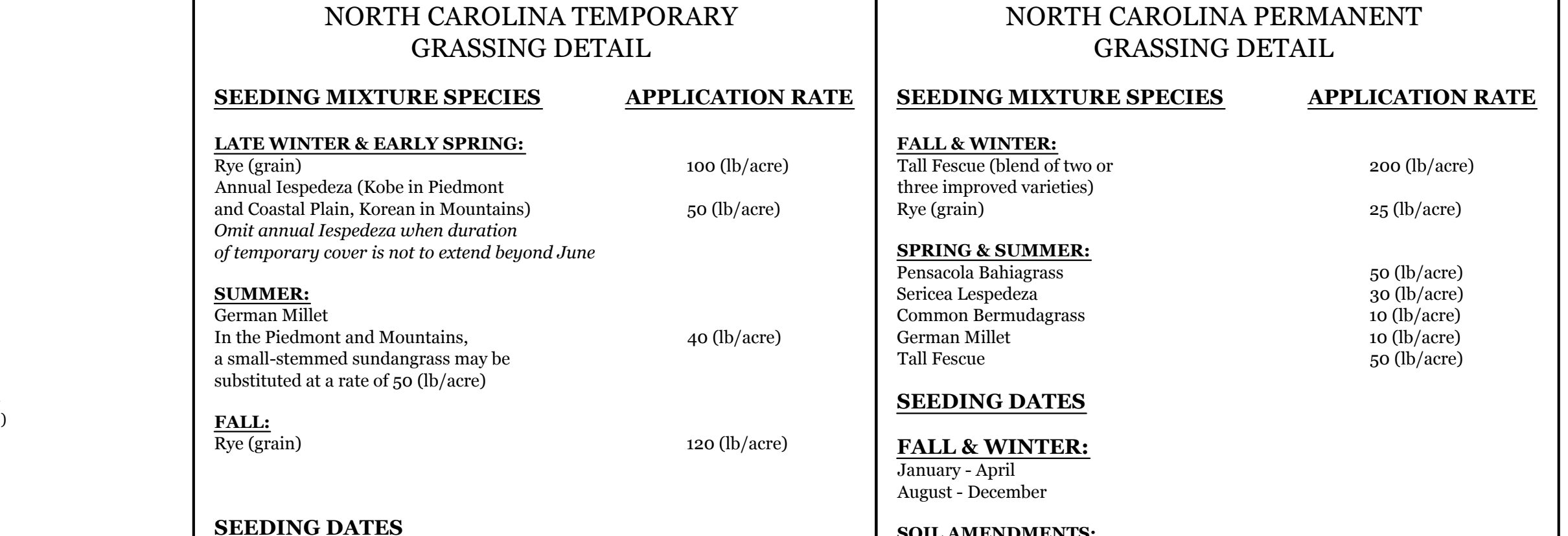
- ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE, LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL.
- ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF 2-3 INCH STONE TO MAINTAIN PROPER DITCH. 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 EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL. 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 EMPLOYED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.
- 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 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 SLOPE SIDES 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 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		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)	50 (lb/acre)	Rye (grain)	25 (lb/acre)
<i>Omit annual Lespedeza when duration of temporary cover is not to extend beyond June</i>		SPRING & SUMMER: Pensacola Bahiagrass	50 (lb/acre)
SUMMER: German Millet	40 (lb/acre)	Sericea Lespedeza	30 (lb/acre)
In the Piedmont and Mountains, a small-stemmed sundgrass may be substituted at a rate of 50 (lb/acre)		Common Bermudagrass	10 (lb/acre)
FALL: Rye (grain)	120 (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.	
SOIL AMENDMENTS: Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 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. Reseed, fertilize, and mulch damaged areas immediately, mow to a height of 2.5-3.5 inches as needed.	
MULCH: apply 4,000 lb/acre straw, anchor straw by tacking with asphalt, netting, or a mulch anchoring tool.		SPRING & SUMMER: April 1 - July 15	
MAINTENANCE: Retrefillize if growth is not fully adequate, reseed, refertilize and mulch immediately following erosion or other damage.		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 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.	DESCRIPTION	DATE

Approved Construction Plan

Name: _____ Date: _____

Planning _____

Public Utilities _____

Traffic _____

Fire _____

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN

DATE: _____ PERMIT # _____

Drawn: JAE SHEET SIZE: 24x36
Checked: CDC DATE: 10/2/2017
Approved: CDC SCALE: NTS
Project Number: 2017-011

DRAWING NUMBER: **C-2**

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DETAILS FOR

SMITH & GSELL DESIGN STUDIO

CITY OF WILMINGTON
NEW HANOVER COUNTY, NC

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