

SITE DATA:

TOTAL SITE AREA: ± 7.06 AC

PARCEL ID: R06200-003-031-000
R06200-003-035-000
R06200-003-038-000
R06200-003-039-000
R06200-003-042-000

CURRENT ZONING: R-15 (CLUSTER SUBDIVISION)

PROJECT ADDRESS: 6415 GREENVILLE LOOP RD. WILMINGTON, NC 28409

CURRENT OWNER: SKF ILM, LLC
5929 MARKET ST. WILMINGTON, NC 28405

CAMA LAND USE CLASSIFICATION: WATERSHED RESOURCE PROTECTION AREA

NUMBER OF UNITS: 21 (3BR) UNITS

BUILDING SIZE: 1,750 S.F.

BUILDING HEIGHT: 35' MAX.

BUILDING SETBACKS:
REQUIRED: 25' PERIMETER
REQUIRED: 10' BETWEEN STRUCTURES
PROPOSED: 25'
PROPOSED: 13.5' MIN.

BUILDING COVERAGE:
PROPOSED COVERAGE: 36,750 S.F. ± 307,334 S.F. = 12.0%

TOTAL IMPERVIOUS BEFORE & AFTER DEVELOPMENT:
BEFORE DEVELOPMENT: 0 S.F.
AFTER DEVELOPMENT:
BUILDINGS: 36,750 S.F.
CONCRETE: 7,033 S.F.
ASPHALT: 23,586 S.F.
FUTURE: 6,391 S.F.
TOTAL: 73,760 S.F. (24.0%)

OFFSITE IMPERVIOUS AREAS:
CONCRETE DRIVEWAY APRON: 251 S.F.

PARKING REQUIRED: 2.25 SPACES / 3BR UNIT @ 21 UNITS = 48 SPACES (2 H.C.)

PARKING PROVIDED: 52 SPACES (3 H.C.)

BICYCLE PARKING REQUIRED: (MIN. 5 PER 25-125 VEHICLE RACK SPACES)
PROVIDED: 5 BICYCLE RACK SPACES

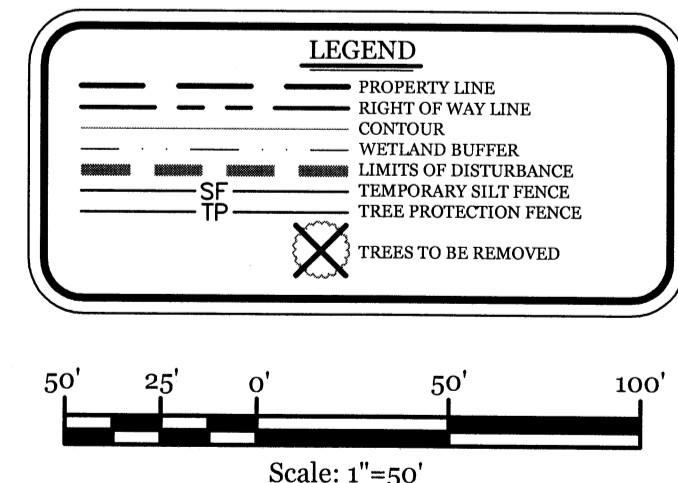
PARKING LOT INTERIOR LANDSCAPING REQUIRED PROVIDED: 12,865 S.F. * 8% = 1,029 S.F.
1,082 S.F.

OPEN SPACE REQUIREMENT: (40% of site area)
7.06 AC X 0.40 = 2.82 AC
PROVIDED: 3.10 AC

WATER AND SEWER CAPACITY NEEDS:
WATER (CURRENT USE): 0 GPD
WATER (PROPOSED USE): 21 UNITS @ 400 GPD = 8,400 GPD
SEWER (CURRENT USE): 0 GPD
SEWER (PROPOSED USE): 21 UNITS @ 360 GPD = 7,560 GPD

NOTES:

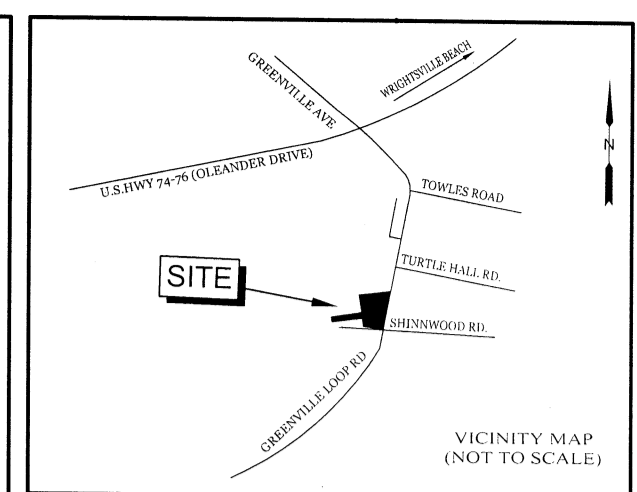
- TREE PROTECTION SIGNAGE SHALL BE ADDED ALONG THE LIMITS OF DISTURBANCE EVERY 100' TO PROTECT TREES ADJACENT TO THE CONSTRUCTION SITE.



Approved Construction Plan

Name _____	Date _____
Planning _____	
Public Utilities _____	
Traffic _____	
Fire _____	

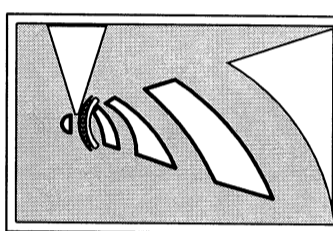
STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
SIGNED _____



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



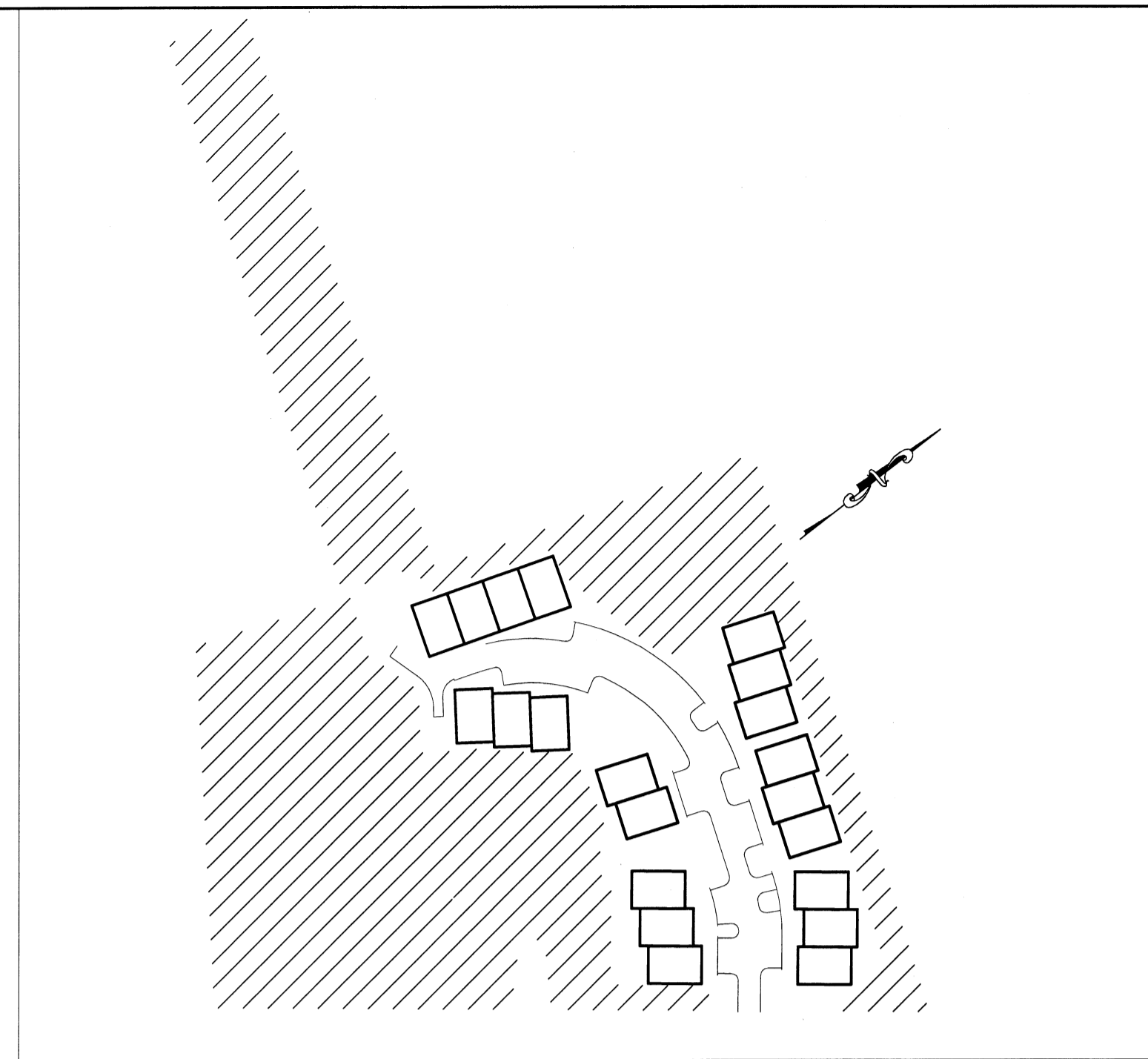
DEMOLITION AND TREE REMOVAL/PROTECTION PLAN FOR SHINWOOD WEST COTTAGES WILMINGTON, NC



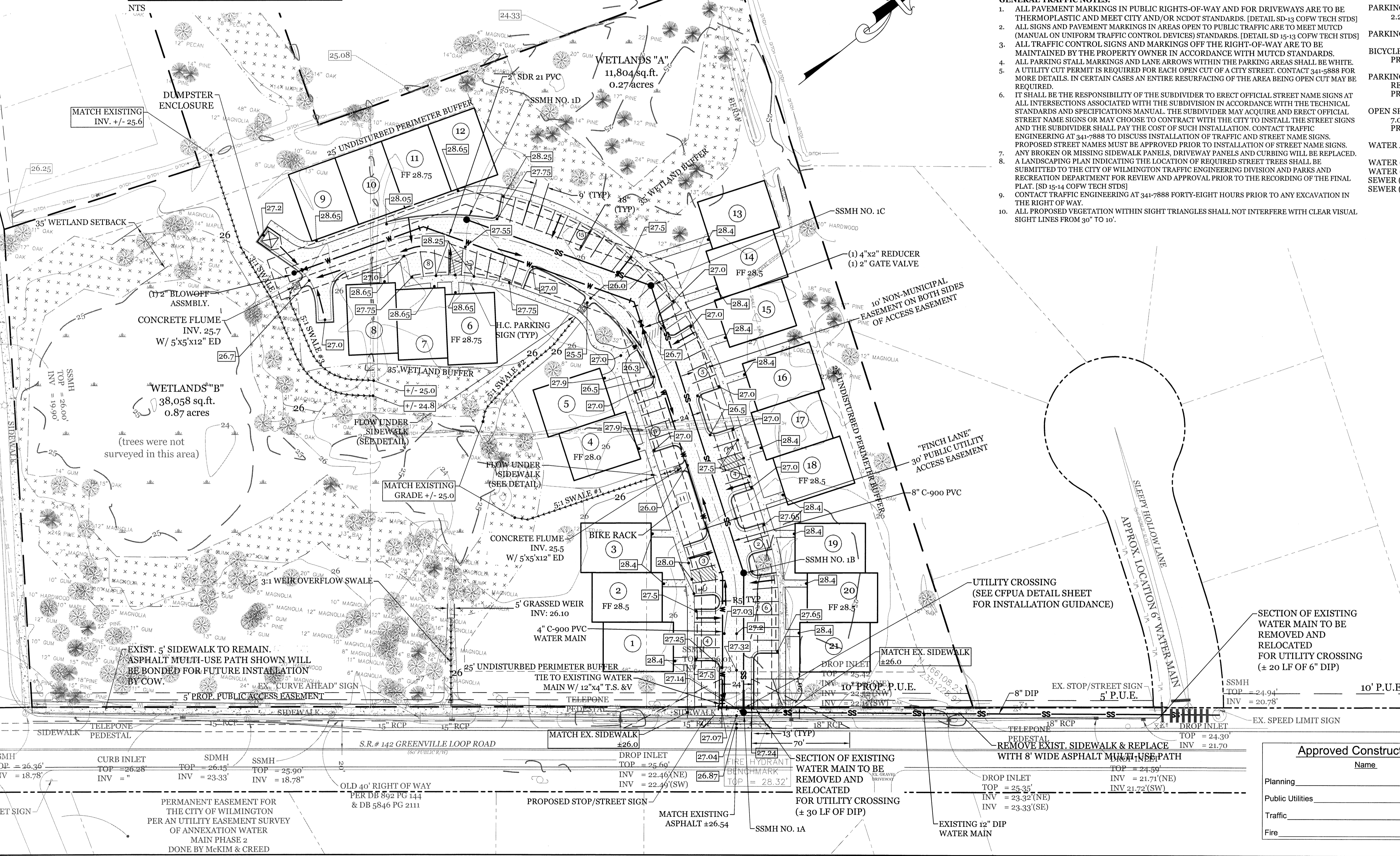
CLIENT INFORMATION:
SKF ILM, LLC
5929 MARKET STREET
WILMINGTON, NC 28405
(910) 619-6858

DRAWN: BPD	SHEET SIZE: 24x36
CHECKED: CDC	DATE: 9/20/2017
APPROVED: CDC	SCALE: 1" = 50'
PROJECT NUMBER: 2016-039	
DRAWING NUMBER: C-1	

1 OF 10



PROPOSED OPEN SPACE MAP



- 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.
 - PROPOSED USE AT THIS TIME IS RESIDENTIAL.
 - CONSTRUCTION AND GRADING IS NOT TO DISTURB THE WETLAND RESOURCE.
 - CONTRACTOR TO PROVIDE A 5' PUBLIC ACCESS EASEMENT ALONG SITE FRONTAGE, AND BOND FOR FUTURE MULTI-USE PATH.
- SITE NOTES:**
- SURVEY DATA FROM BATEMAN CIVIL SURVEY COMPANY DATED 9/9/15.
 - SITE LOCATED IN FLOOD ZONE "X" PER FEMA FLOOD MAP# 3720315000J PANEL# 3156 DATED 4/9/2006.
 - IMPERVIOUS AREA FOR UNITS 9-21 TO BE ROUTED TO PARKING AREA.
- 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 METERS CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND N.C.D.E.N.R. HAS ISSUED THEIR "FINAL APPROVAL". CALL 343-9900 FOR INFORMATION.
 - ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CFPWA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCOHR 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 IS COW CURBSIDE PICKUP.
 - EXISTING WATER AND SEWER SERVICES TO BE ABANDONED PER CFPWA SPECIFICATIONS.
 - UNITS 9 AND 10 TO BE PROVIDED MAN HOLE TAPS WITH MIN. 52" BETWEEN EACH TAP.
- 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)
 - ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
 - ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
 - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 344-8888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
 - IT SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER TO ERECT OFFICIAL STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL. THE SUBDIVIDER MAY ACQUIRE AND ERECT OFFICIAL STREET NAME SIGNS OR MAY CHOOSE TO CONTRACT WITH THE CITY TO INSTALL THE STREET SIGNS AND THE SUBDIVIDER SHALL PAY THE COST OF SUCH INSTALLATION. CONTACT TRAFFIC ENGINEERING AT 344-7888 TO DISCUSS INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS. 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 PLAT. (SD 15-14 COFW TECH STDS)
 - CONTACT TRAFFIC ENGINEERING AT 344-7888 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'.

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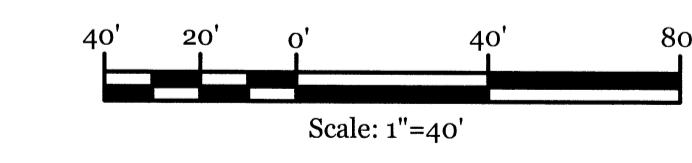
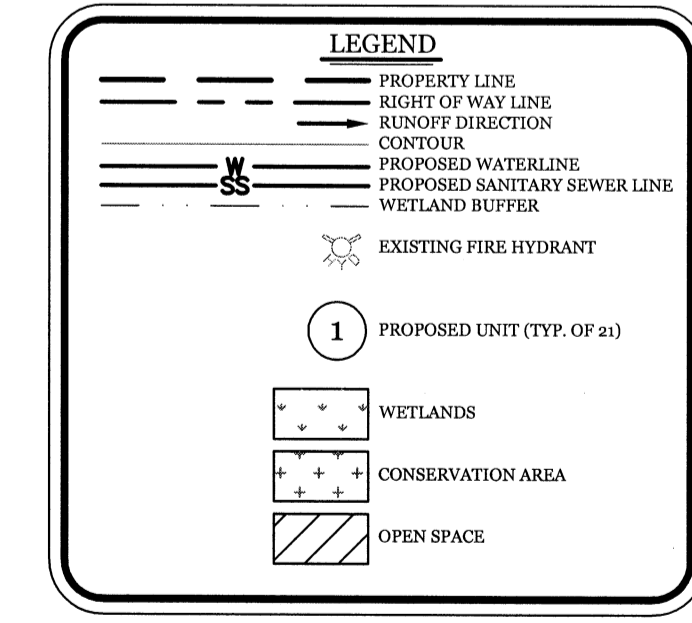
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PROVIDED: 1,082 S.F.

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WATER (PROPOSED USE): 21 UNITS @ 400 GPD = 8,400 GPD
SEWER (CURRENT USE): 0 GPD
SEWER (PROPOSED USE): 21 UNITS @ 360 GPD = 7,560 GPD

CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:

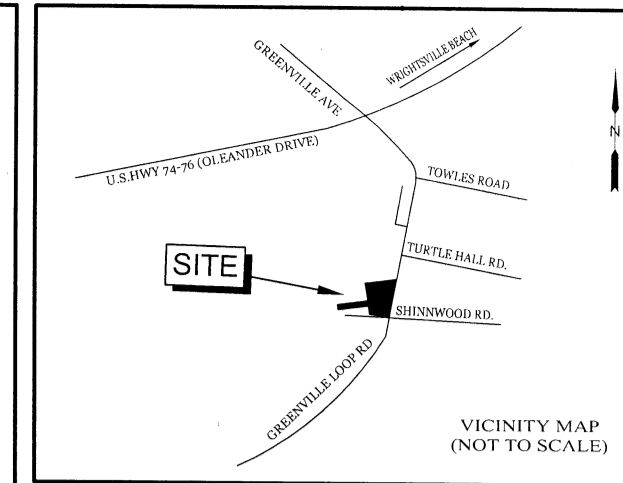
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR OR MUST ORIGINATE IN MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
- ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50 D.I.P. WITH PROTECTIVE 401 CERAMIC EPOXY LINING.
- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.



Approved Construction Plan

Name	Date
Planning	
Public Utilities	
Traffic	
Fire	

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
SIGNED _____



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

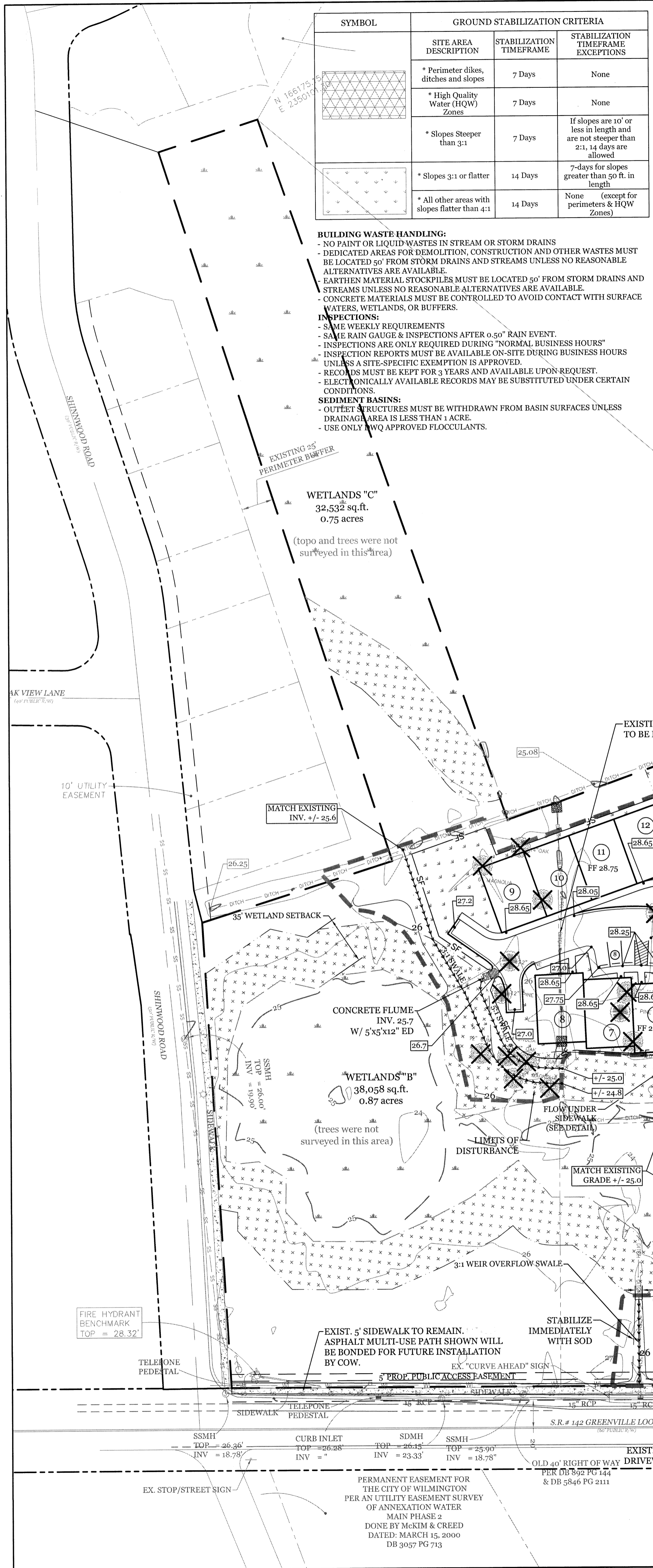
SITE, GRADING, DRAINAGE, UTILITIES AND STORMWATER MANAGEMENT PLAN FOR SHINWOOD COTTAGES WILMINGTON, NC

Professional Engineer Seal for Charles D. Cazier, License No. 032555, dated 9-20-17.

CLIENT INFORMATION:
SKF ILM, LLC
5929 MARKET STREET
WILMINGTON, NC 28405
(910) 619-6858

DRAWN: BPD	SHEET SIZE: 24x36
CHECKED: CDC	DATE: 9/20/2017
APPROVED: CDC	SCALE: 1" = 40'
PROJECT NUMBER: 2016-039	

DRAWING NUMBER: **C-2**



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 50 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 TWO APPROVED FLOCCULANTS.

NORTH CAROLINA TEMPORARY GRASSING DETAIL	
SEEDING MIXTURE SPECIES	APPLICATION RATE
LATE WINTER & EARLY SPRING: Rye (grain)	100 (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)
SUMMER: German Millet	40 (lb/acre)
In the Piedmont and Mountains, a small-stemmed sundgrass may be substituted at a rate of 50 (lb/acre)	
FALL: Rye (grain)	120 (lb/acre)
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	
SUMMER: Mountains - May 15-Aug. 15 Piedmont - May 1-Aug. 15 Coastal Plain - Apr. 15-Aug. 15	
FALL: Mountains - Aug. 15-Dec. 15 Coastal Plain and Piedmont - Aug. 15-Dec. 30	
SOIL AMENDMENTS: Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.	
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, refertilize and mulch immediately following erosion or other damage.	

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: Pensacola 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. Reseed, 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: 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.	
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.	

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, DEMOLITION OF EXISTING IMPERVIOUS PAVEMENT AND DRAINAGE STRUCTURES IDENTIFIED TO BE REMOVED MAY BEGIN. ALL SLOPED AREAS SHOULD BE SEEDING IN ACCORDANCE TO SPECIFICATIONS. SLOPE STABILIZATION IS WITHIN 21 CALENDAR DAYS OF CEASE 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.

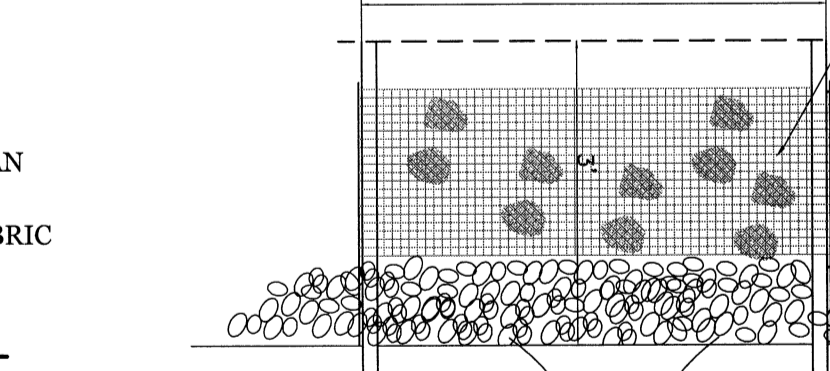
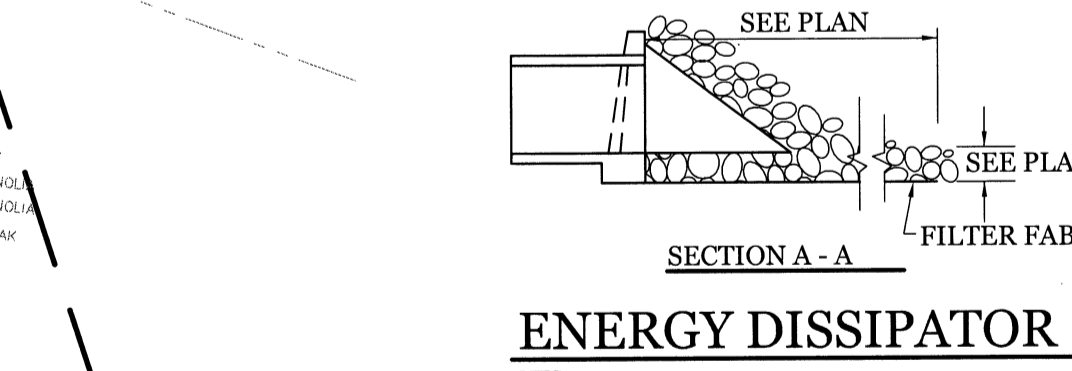
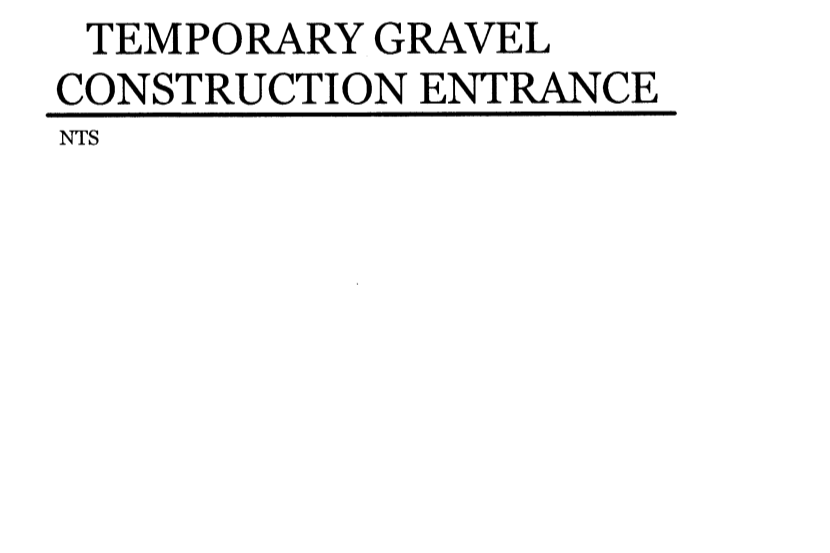
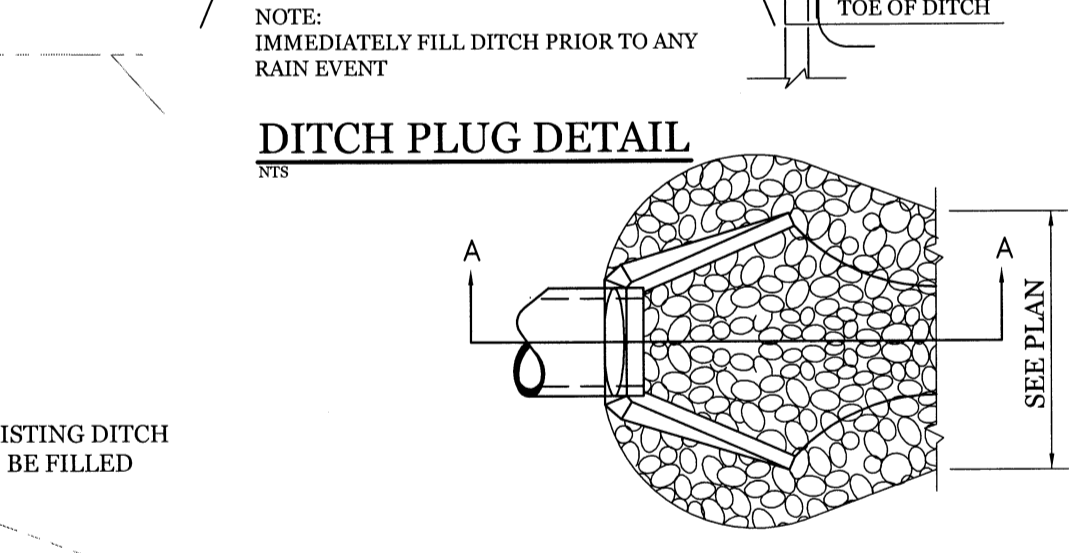
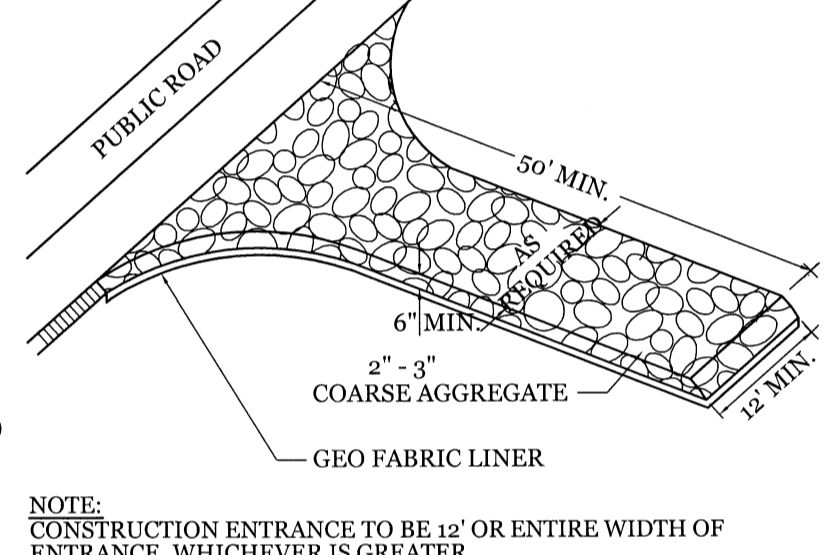
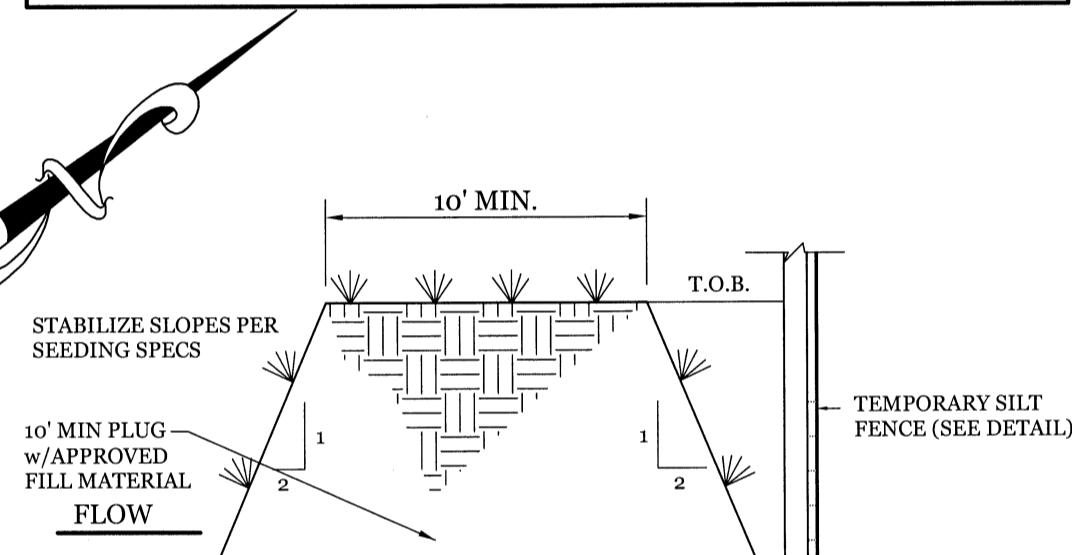
- GENERAL CLEARING AND GRADING OF THIS SITE WILL NOT BE DONE UNTIL THE TEMPORARY SILT FENCE & CONSTRUCTION ENTRANCE HAS BEEN INSTALLED.
- NO CUT SLOPE OR FILL SLOPE SHALL EXCEED A RISE OR FALL OF ONE FOOT FOR EVERY RUN OF 3 FEET (1 VERTICAL TO 3 HORIZONTAL).
- NO SEDIMENT WILL BE ALLOWED TO EXIT THE 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 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.
- PLUG AND IMMEDIATELY FILL DITCHES TO BE FILLED PRIOR TO ANY RAIN EVENT.
- 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.

MAINTENANCE PLAN:

- ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RAINFALL 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 REMOVED FROM AROUND BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.
- CHECK SEDIMENT BASIN AND Baffles WEEKLY & AFTER EACH RAINFALL EVENT. REMOVE SEDIMENT FROM TRAP & Baffles AND RESTORE TO ORIGINAL VOLUME WHEN SEDIMENT ACCUMULATES TO ABOUT 1/2 THE DESIGN VOLUME. REPAIR / REPLACE Baffles IF TORN, COLLAPSED, OR INEFFECTIVE.
- 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 INLET SEDIMENT FENCE THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT, NO LONGER DRAINS AS DESIGNED OR IS DAMAGED.
- ANY PORTION OF WET DETENTION BASINS USED FOR S&EC DURING CONSTRUCTION MUST BE CLEANED OUT AND RETURNED TO DESIGN STATE.

SITE DATA:

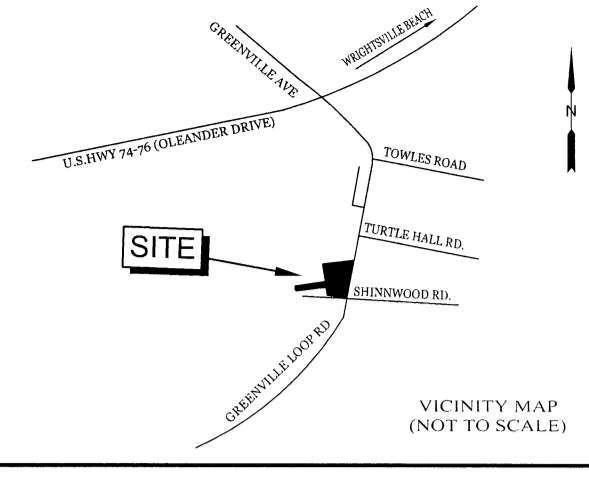
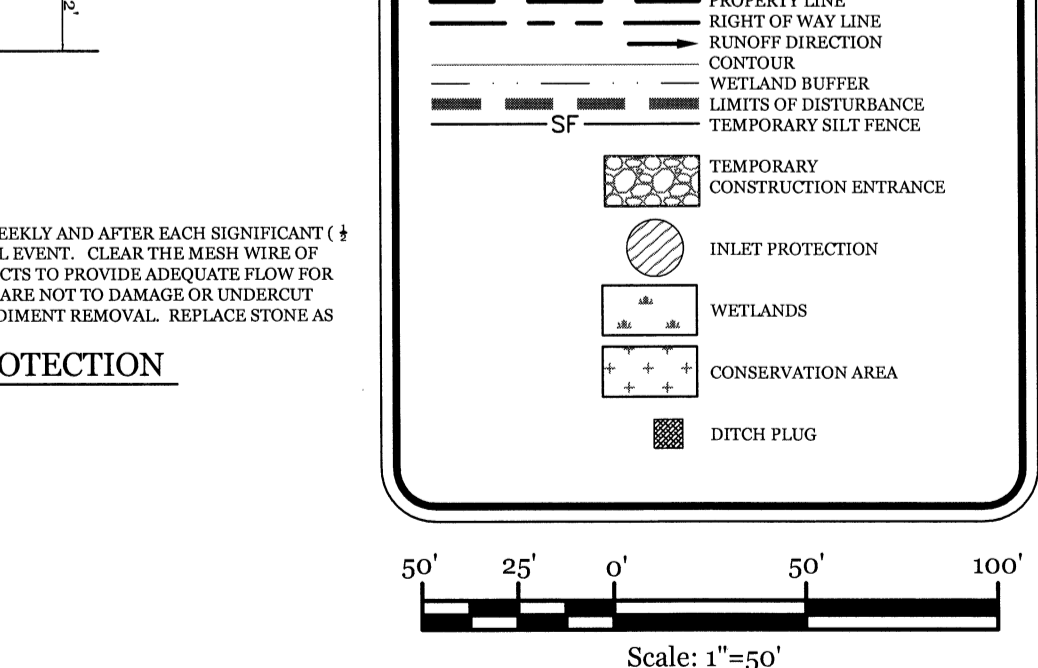
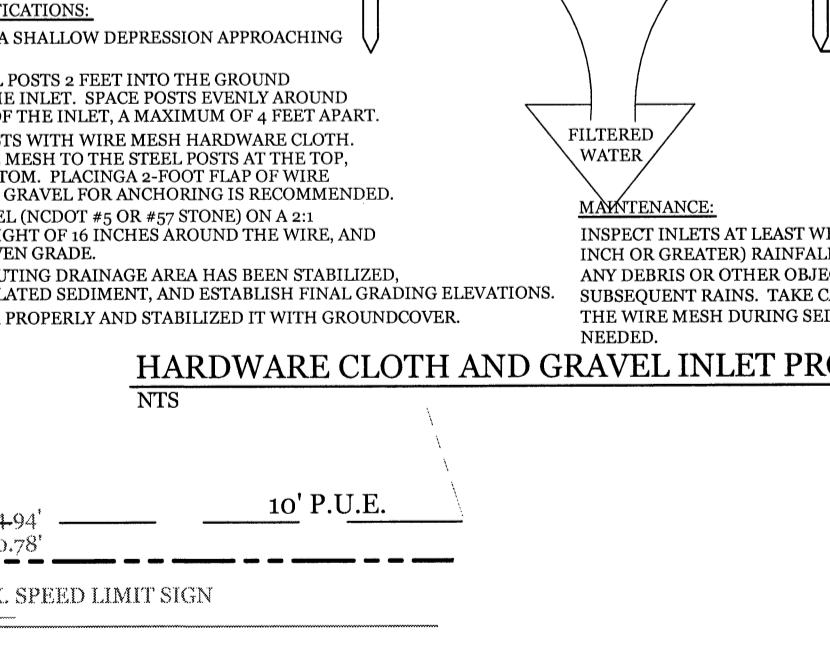
PARCEL ID	R06200-003-031-000 R06200-003-033-000 R06200-003-038-000 R06200-003-039-000 R06200-003-042-000
PROJECT ADDRESS:	6415 GREENVILLE LOOP RD WILMINGTON, NC 28409
CURRENT OWNER:	SKF ILM, LLC 5929 MARKET ST. WILMINGTON, NC 28405
TOTAL SITE AREA:	± 7.06 AC
TOTAL DISTURBED AREA:	± 2.87 AC
TOTAL IMPERVIOUS BEFORE & AFTER DEVELOPMENT:	0 S.F.
AFTER DEVELOPMENT:	
BUILDINGS	36,750 S.F.
CONCRETE	7,033 S.F.
ASPHALT	23,586 S.F.
FUTURE	6,391 S.F.
TOTAL	73,760 S.F. (24.0%)
OFFSITE IMPERVIOUS AREAS:	
CONCRETE DRIVEWAY APRON	251 S.F.



CONSTRUCTION SPECIFICATIONS:

- UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
- DRIVE 2" HOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
- SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 4" FOOT FLAP OF WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
- PLACE CLEAN GRAVEL (NCDOT #5 OR #57) STONES ON A 2:1 SLOPE WITH A HEIGHT OF 48 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
- ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
- COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUND COVER.

MAINTENANCE:
 INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT 1/4 INCH OR GREATER RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBSTRUCTIONS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERTIGHTEN THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONES 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

SEDIMENTATION & EROSION CONTROL PLAN
 FOR
SHINWOOD COTTAGES
 WILMINGTON, NC

CHARLES D. CAZIER
 PROFESSIONAL ENGINEER
 032555
 9/20/17

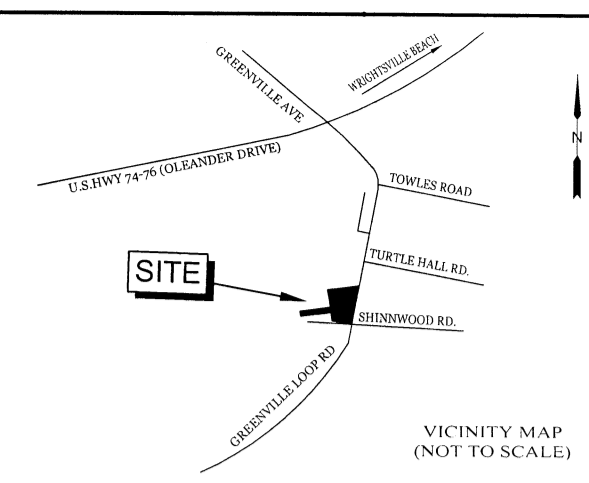
CLIENT INFORMATION:
 SKF ILM, LLC
 5929 MARKET STREET
 WILMINGTON, NC 28405
 (910) 619-6858

Approved Construction Plan

Name	Date
Planning	
Public Utilities	
Traffic	
Fire	

STORMWATER MANAGEMENT PLAN APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE _____ PERMIT # _____
 SIGNED _____

DRAWN: BPD	SHEET SIZE: 24x36
CHECKED: CDC	DATE: 9/20/2017
APPROVED: CDC	SCALE: 1" = 50'
PROJECT NUMBER: 2016-039	
DRAWING NUMBER: C-3	



REVISIONS	

INTRACOASTAL ENGINEERING, PLLC

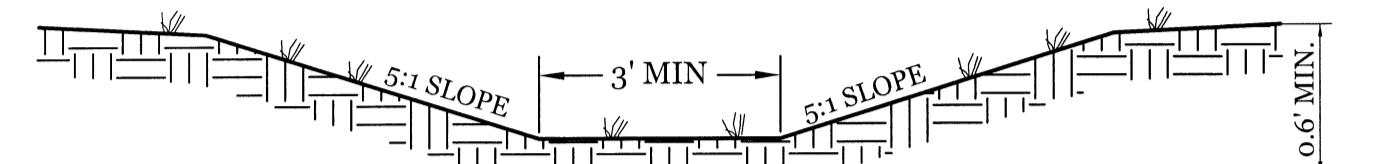
5725 Oleander Dr. Unit E-7
Wilmington, North Carolina 28403
Phone: 910.859.8983
Email: charlie@intracoastalengineering.com
License Number: P-0662

DETAILS FOR SHINWOOD COTTAGES WILMINGTON, NC

PROFESSIONAL SEAL
NORTH CAROLINA
032555
ENGINEER
CHARLES D. CZIKER
9/20/17

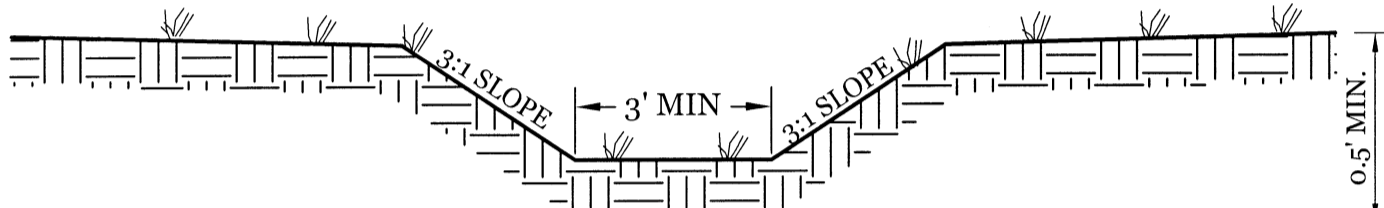
CLIENT INFORMATION:
SKF ILM, LLC
5929 MARKET STREET
WILMINGTON, NC 28405
(910) 619-6858

- 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 "NC 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 IN OR 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 ARNOLD W. CARSON, PLS L-3267
 - 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 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.



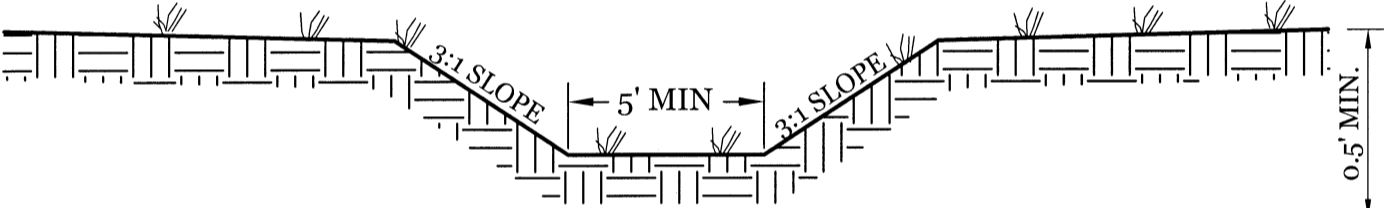
- NOTES:**
- SWALES TO BE LINED WITH EXCELSIOR MAT & SEEDED IN ACCORDANCE WITH SPECIFICATIONS PRIOR TO ANY RAIN EVENT.
 - 5:1 SWALES REQUIRED TO BE 100 L.F. MINIMUM.

TYPICAL 5:1 GRASSED SWALE
NTS



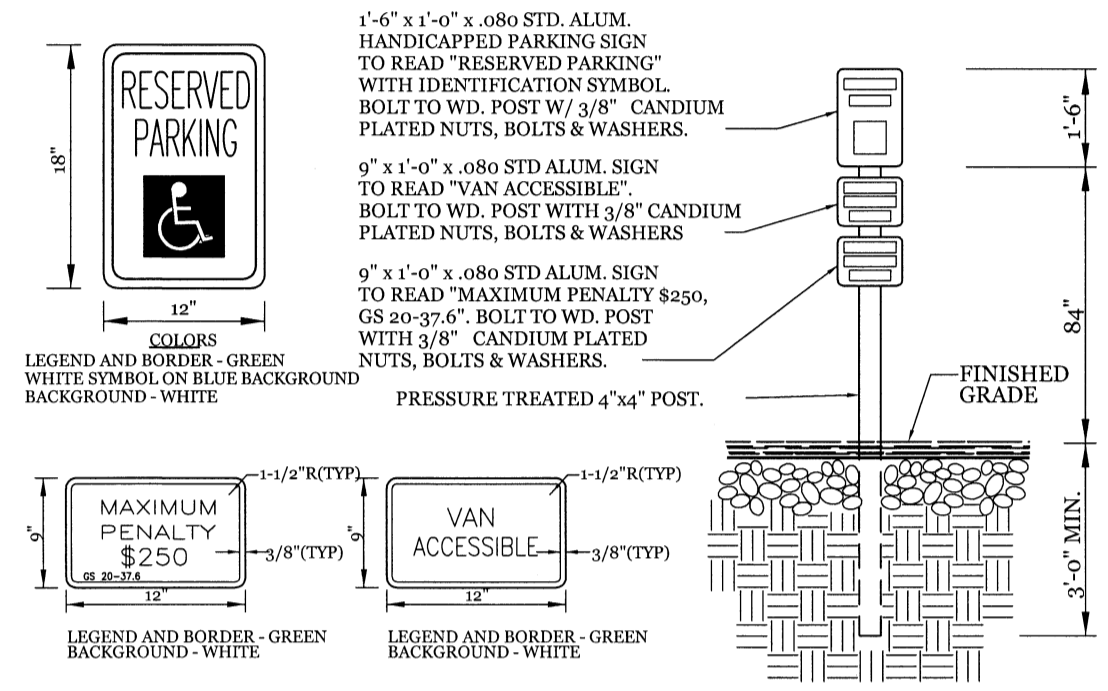
NOTE: SWALES TO BE LINED WITH EXCELSIOR MAT & SEEDED IN ACCORDANCE WITH SPECIFICATIONS PRIOR TO ANY RAIN EVENT.

TYPICAL 3:1 GRASSED SWALE
NTS

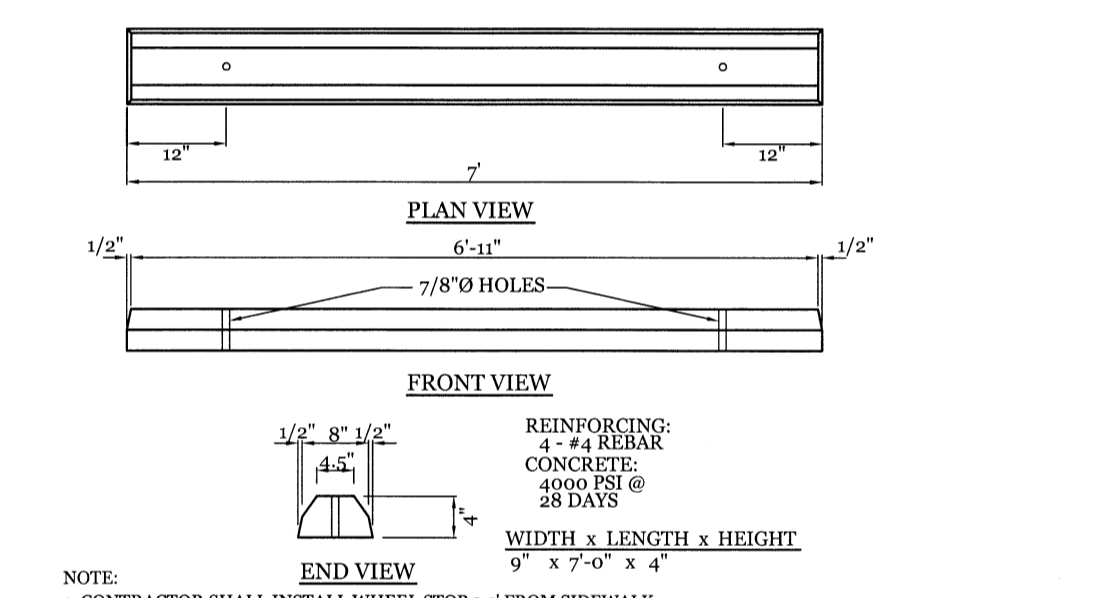


NOTE: SWALES TO BE LINED WITH EXCELSIOR MAT & SEEDED IN ACCORDANCE WITH SPECIFICATIONS PRIOR TO ANY RAIN EVENT.

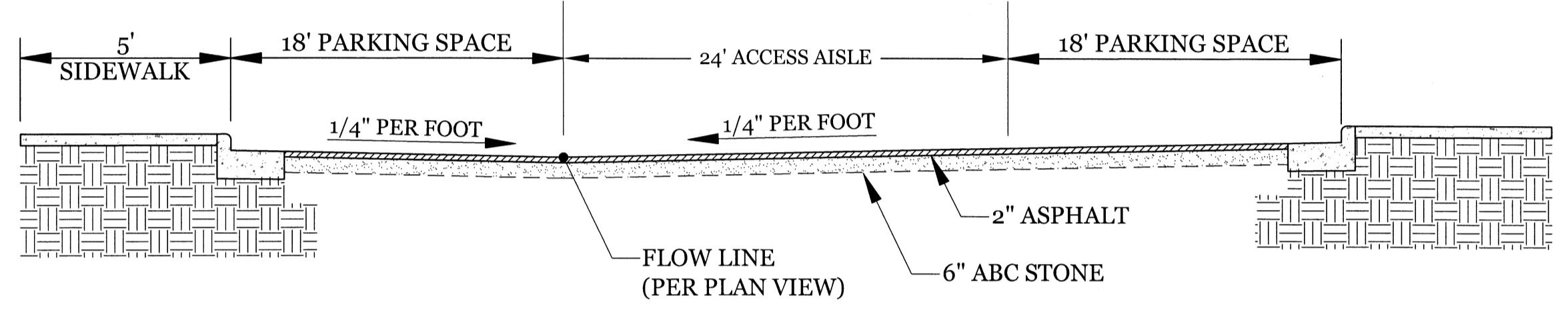
3:1 GRASSED WEIR OVERFLOW SWALE
NTS



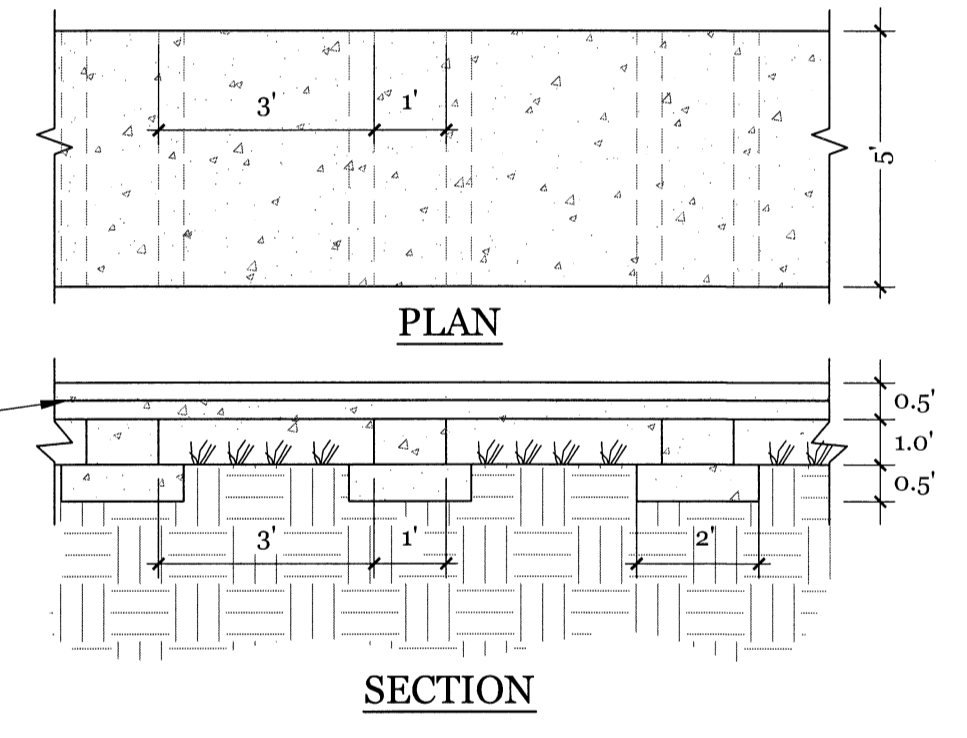
TYPICAL HANDICAPPED SIGN DETAIL
NTS



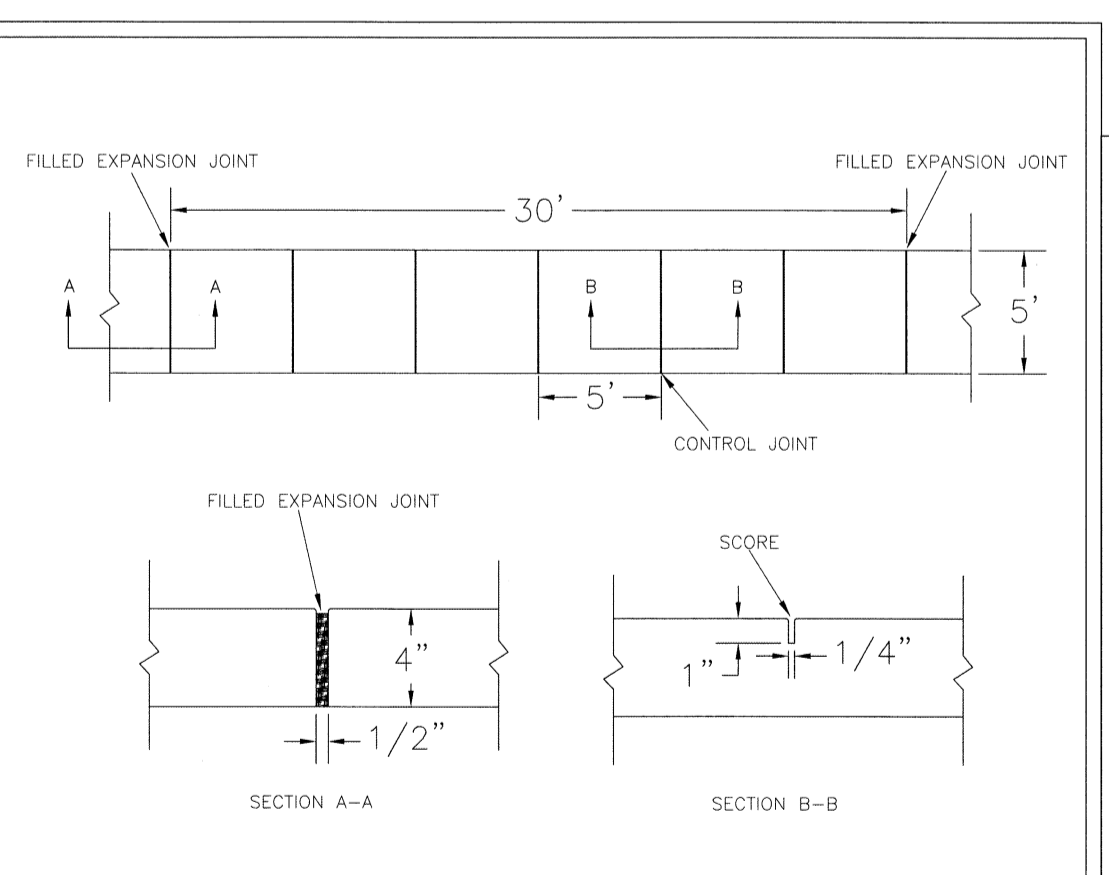
WHEEL STOP DETAIL
NTS



ACCESS DRIVE CROSS SECTION (SUPERELEVATED)
NTS



FLOW UNDER SIDEWALK DETAIL
NTS

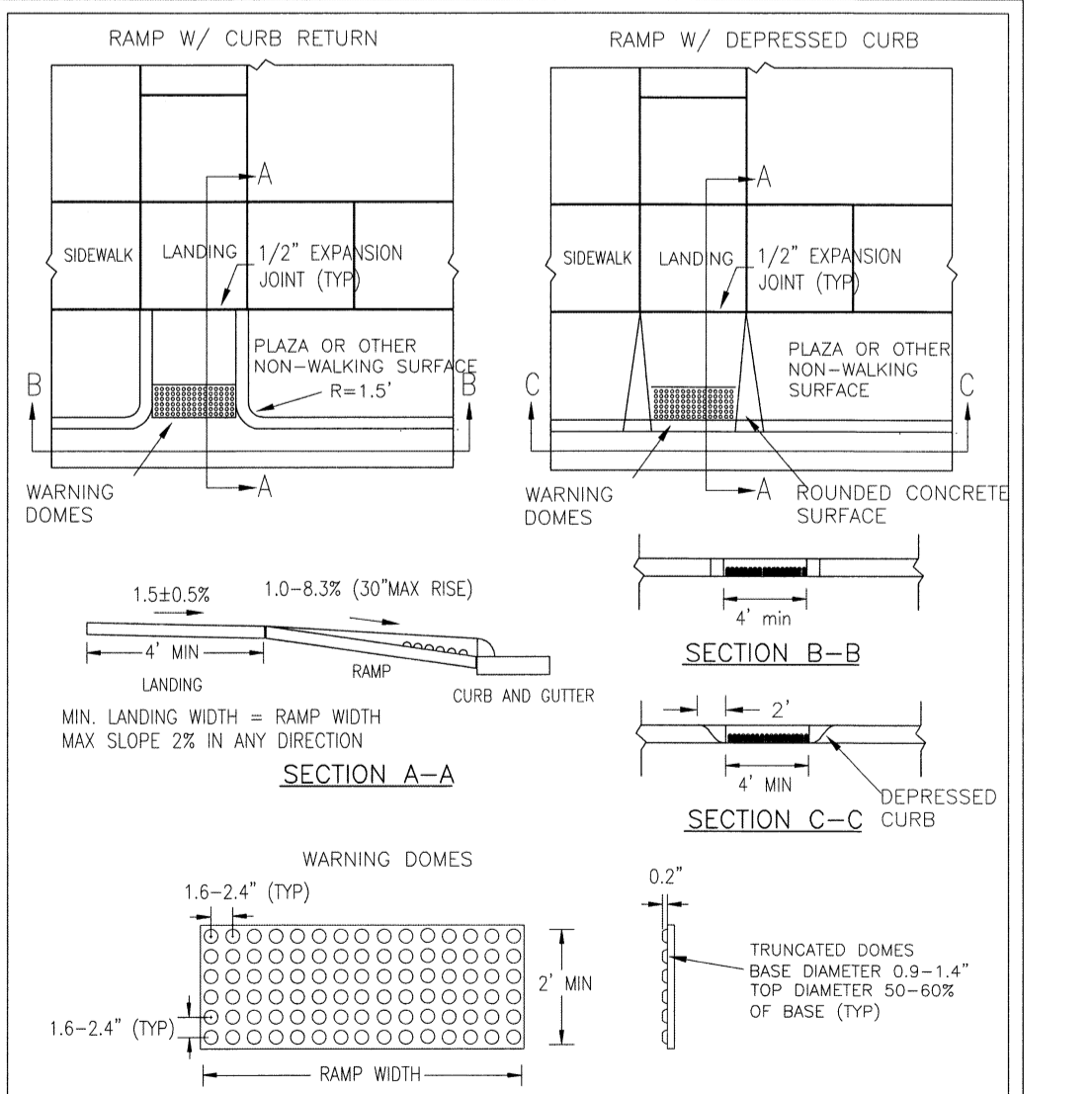


- NOTES:**
- JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
 - SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
 - MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
 - CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A DRIVEWAY APRON) SHALL BE CLASS "A" - 3,000 PSI.
 - MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL.
 - 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS.
 - MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
 - MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
 - MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1' DIRECTION. MAX CROSS SLOPE IS 2% MAX LONGITUDINAL SLOPE IS 8.3% 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

DATE: OCTOBER, 2010
DRAWN: PFB3SR
CHECKED: DEC
SCALE: NOT TO SCALE

STANDARD DETAIL
SIDEWALK

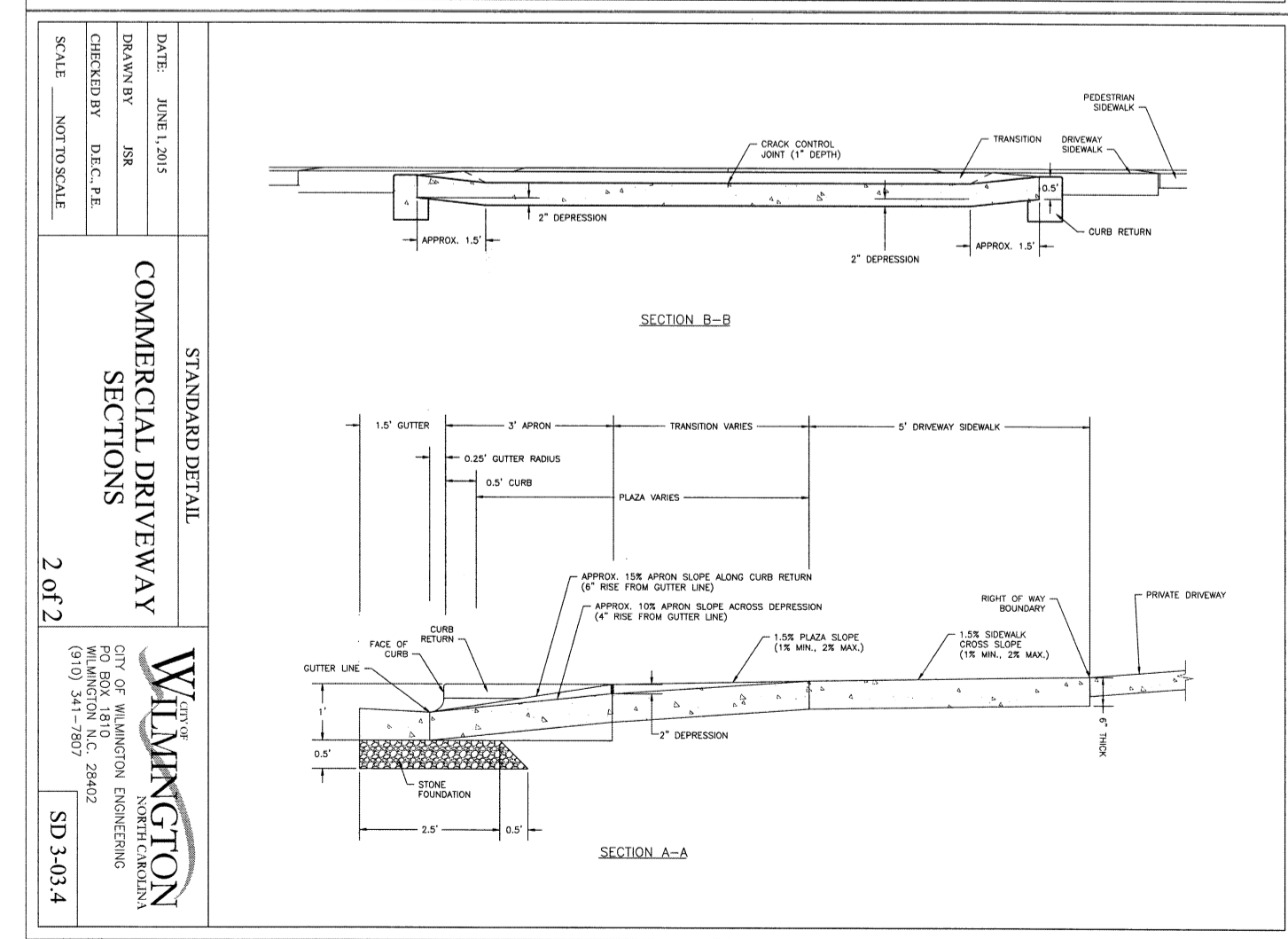
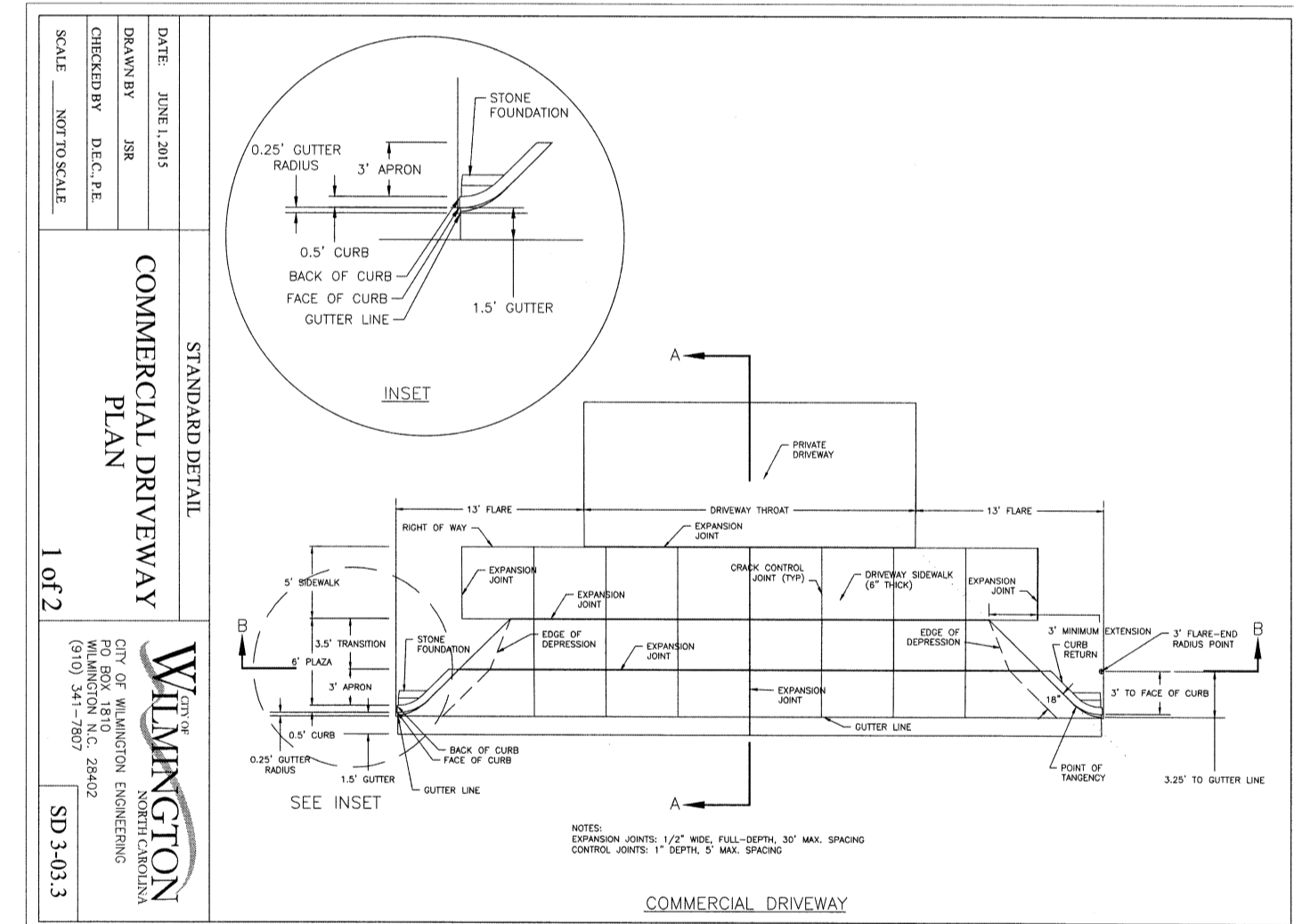
CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, N.C. 28402
(910) 341-7807
SD 3-10



DATE: DECEMBER, 2010
DRAWN: PFB3SR
CHECKED: DEC
SCALE: NOT TO SCALE

STANDARD DETAIL
PERPENDICULAR CURB RAMP ADJACENT TO PLAZA

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, N.C. 28402
(910) 341-7807
SD3-08

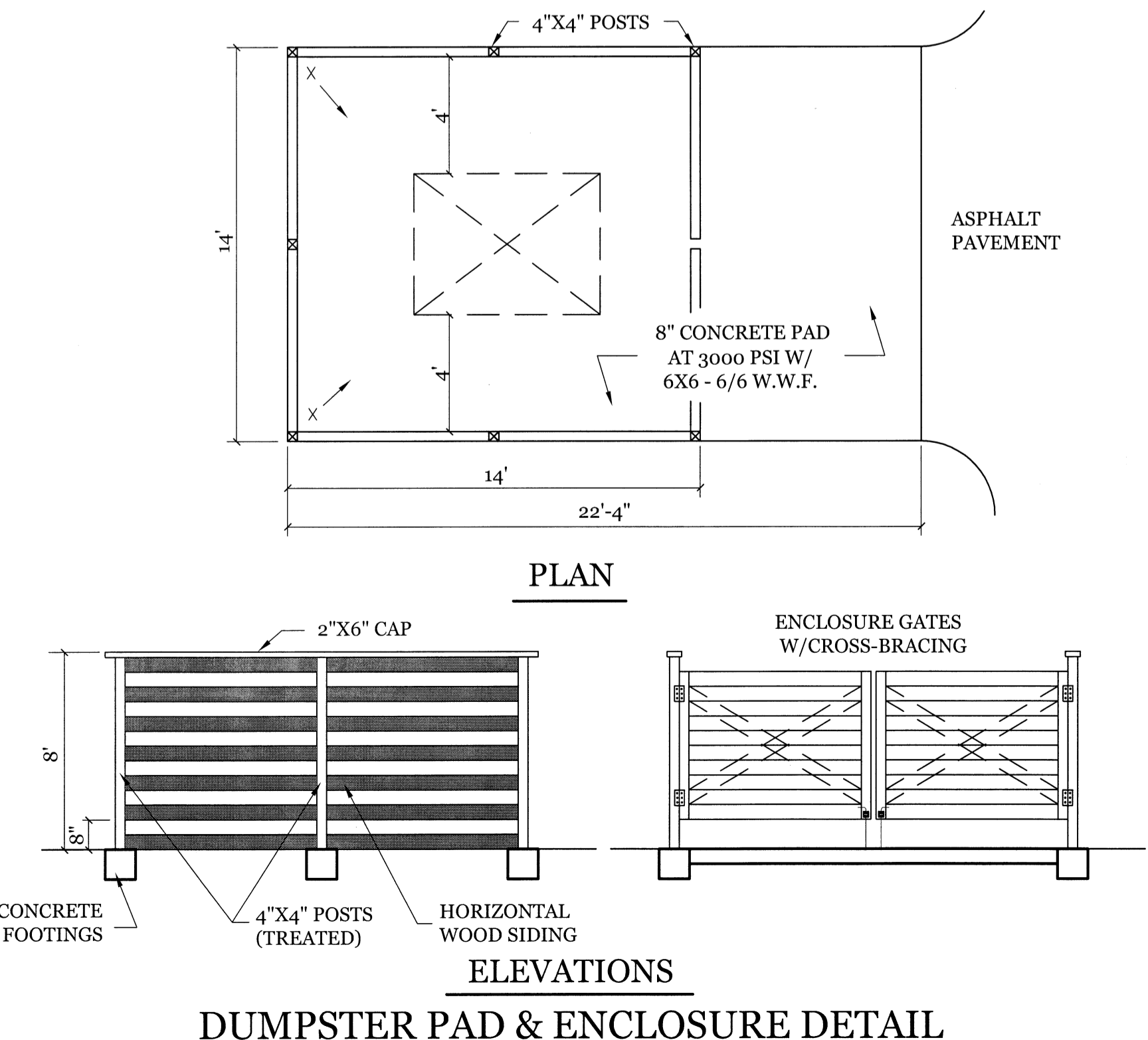


Approved Construction Plan

Name: _____ Date: _____

Planning: _____
Public Utilities: _____
Traffic: _____
Fire: _____

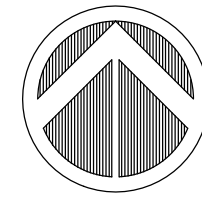
STORMWATER MANAGEMENT PLAN APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE: _____ PERMIT # _____
SIGNED: _____



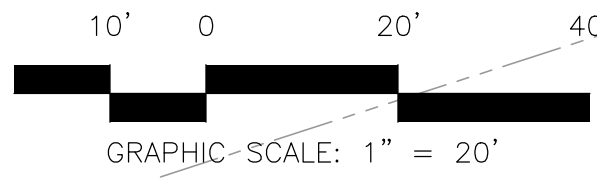
ELEVATIONS
DUMPSTER PAD & ENCLOSURE DETAIL

DRAWN: BFD SHEET SIZE: 24x36
CHECKED: CDC DATE: 9/20/2017
APPROVED: CDC SCALE: NTS
PROJECT NUMBER: 2016-039

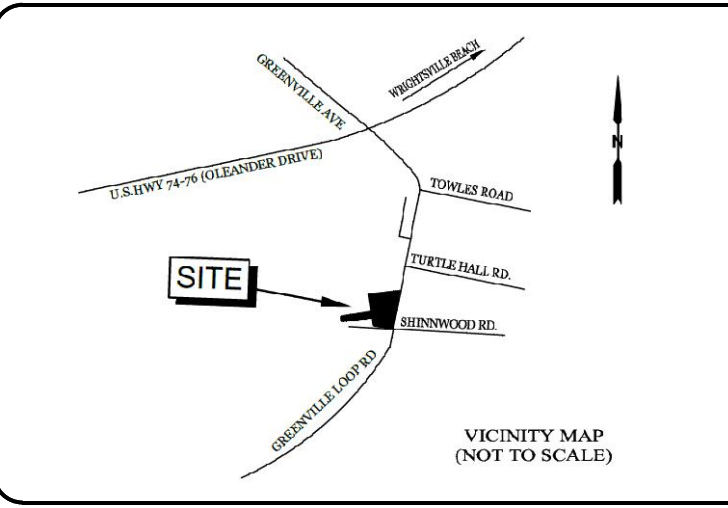
DRAWING NUMBER: **C-5**



NORTH



GRAPHIC SCALE: 1" = 20'



VICINITY MAP (NOT TO SCALE)

LEGEND:

ENGINEER:

INTRACOASTAL ENGINEERING, PLLC
 5725 Olander Dr. Unit E-7
 Wilmington, North Carolina 28403
 Phone: 910.559.8983
 Email: Charlie@intracoastalengineering.com
 License Number: P-0662

TRC COMMENTS- PARKING LOT TREES	NA
STREETYARD B	NA
DESCRIPTION	REV. BY
REVISIONS	DATE

CLIENT INFO:
 SKF ILM, LLC
 5929 MARKET ST.
 WILMINGTON, NC 28405
 (910)-619-6858

Civil Engineering / Landscape Architecture
 390
 2/16/17
 * FOR LANDSCAPE ONLY

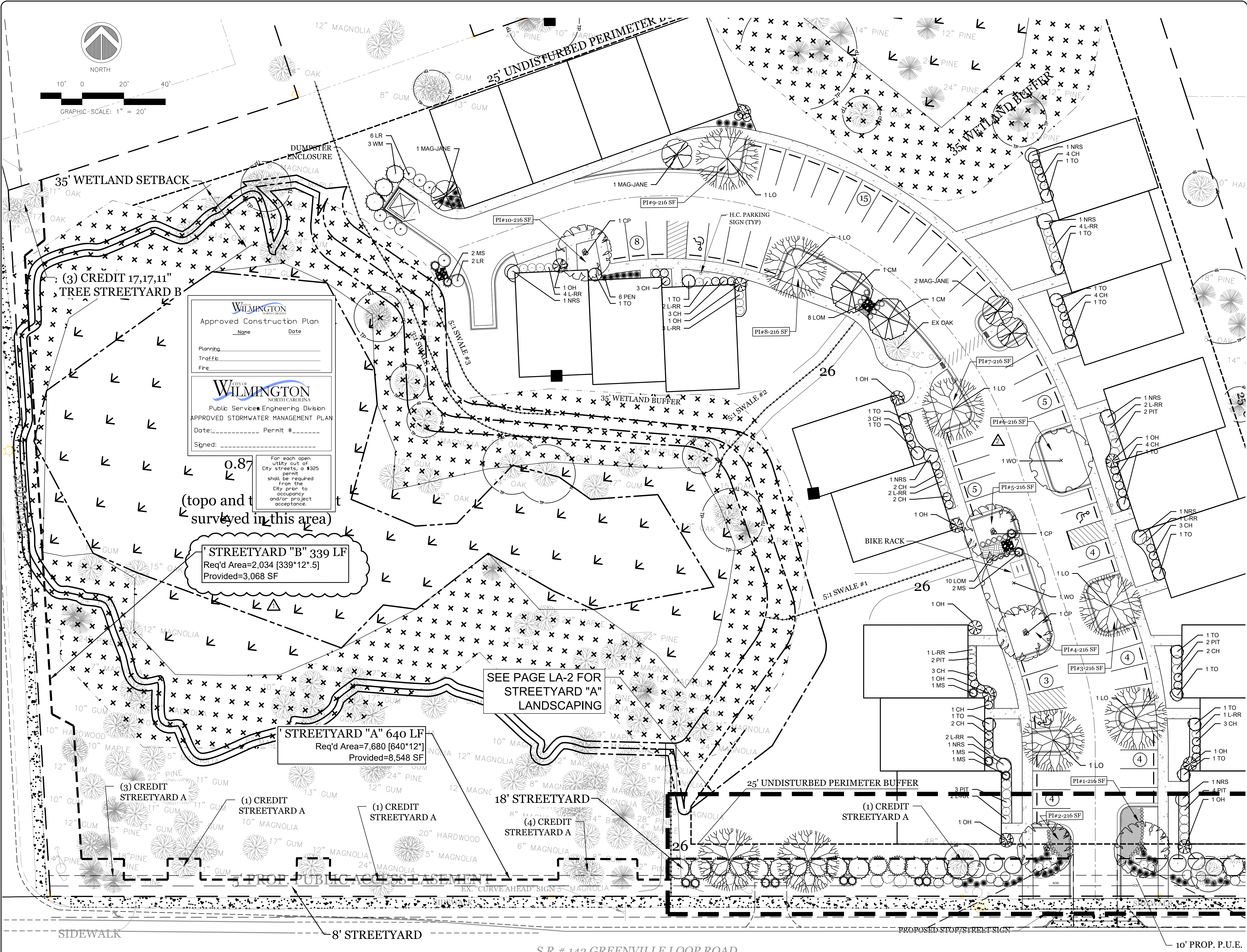
LANDSCAPE ARCHITECT:
Coastal Land Design, PLLC
 Civil Engineering / Landscape Architecture
 Land Planning / Construction Management
 NCBELS Firm License No: P-0369
 P.O. Box 1172 Wilmington, NC 28402 www.clndg.com Phone: 910-254-6333 Fax: 910-254-0502

DRAWN : N ALLEN	PROJECT : 130-00
DESIGN : F. BRAXTON	NUMBER : 4
CHECK : J. PETROFF	SCALE : 1"=20'
APPROVED : F. BRAXTON	DATE : 1 SEPT 2017
FILE NAME :	

SHINWOOD COTTAGES

LANDSCAPE PLAN

JOB NUMBER	SHEET NUMBER
	L-1



WILMINGTON
 Approved Construction Plan
 Name: _____ Date: _____
 Planning: _____
 Traffic: _____
 Fire: _____

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Service Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit #: _____
 Signed: _____

0.87
 (topo and t
 surveyed in this area)

STREETYARD "B" 339 LF
 Req'd Area=2,034 [339*12*.5]
 Provided=3,068 SF

SEE PAGE LA-2 FOR
 STREETYARD "A"
 LANDSCAPING

STREETYARD "A" 640 LF
 Req'd Area=7,680 [640*12*]
 Provided=8,548 SF

18' STREETYARD
 (4) CREDIT
 STREETYARD A

(1) CREDIT
 STREETYARD A

5' PROP. PUBLIC ACCESS PLACEMENT

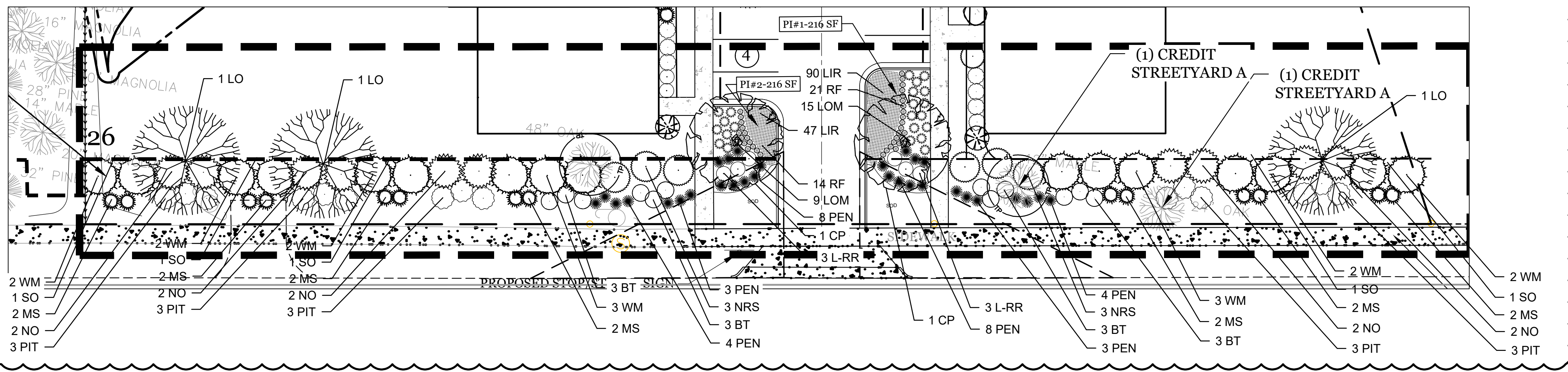
8' STREETYARD

S.R.# 142 GREENVILLE LOOP ROAD

SIDEWALK

PROPOSED STOP STREET SIGN

10' PROP. P.U.E.



STREET YARD CALCULATIONS
STREET YARD (A) GREENVILLE LOOP RD. = 670 LF - 30 LF (DRIVEWAY) = 640 LF

STREET YARD (A): REQUIRED S.Y. AREA = 7,680 [640 LF x 12 (MULTIPLIER)]
PROVIDED S.Y. AREA = 8,548
REQUIRED TREES @ 1/600 SF = 13 TREES
PROPOSED TREES = 3 NEW TREES + (CREDIT 12 EX. CANOPY TREES)
REQUIRED SHRUBS @ 6/600 SF = 77 SHRUBS
PROPOSED SHRUBS = 91

STREET YARD (B): REQUIRED S.Y. AREA = 2,034 [339 LF x 12 x .5]
PROVIDED S.Y. AREA = 2,160 SF
REQUIRED TREES @ 1/600 SF = 3 TREES
PROPOSED TREES = CREDIT 3 EXISTING TREES IN S.Y.
REQUIRED SHRUBS @ 6/600 SF = 20 SHRUBS
PROPOSED SHRUBS = CREDIT EXISTING SHRUBS

ALL PROPOSED VEGETATION WITHIN SITE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' - 10' (SEC.18-566 COW)

PARKING INTERIOR AREA CALCULATIONS
8% OF TOTAL PARKING AREA
PARKING LOT AREA = 23,586 SF
REQUIRED VEGETATED AREA = 1,886 SF
PROPOSED VEGETATED AREA = 4,850 SF (SEE PARKING ISLAND TABLE)

PARKING AREA SCREENING
PARKING WITHIN 50' OF A R.O.W. REQUIRES A LOW SCREEN MIN. 3' HIGH AND 5' WIDE
* SCREENING INCLUDED IN STREETYARD PLANTING

PARKING AREA SHADING
20% SHADE REQ'D AT MATURITY
PARKING LOT AREA = 23,586 SF
SHADING AREA REQ'D = 4,717 SF
SHADING AREA PROVIDED = 7,070 SF (SEE PARKING ISLAND TABLE)

FOUNDATION PLANTING AREAS
REQUIREMENT: FACADE AREA X 12%
BUILDING HEIGHT = 25 FT
BUILDING WIDTH (LF) = 567 LF
REQ'D FOUNDATION LANDSCAPING = 1,701 SF
PROVIDED = 2,687 SF

BOTANICAL NAME	COMMON NAME	CAL.	HT.	REMARKS	QUAN.	SYMBOL
LARGE SHADE TREES						
QUERCUS VIRGINIANA	LIVE OAK	25"		B&B	9	LO
PISTACIA CHINENSIS	CHINESE PISTACHE	25"		B&B	5	CP
QUERCUS PHELLOS	WILLOW OAK	25"		B&B	2	WO
SMALL SHADE TREES						
LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ'	'NATCHEZ' CRAPE MYRTLE	8-10'		B&B	2	CM
Magnolia x 'Jane'	JANE MAGNOLIA	8-10'		B&B	4	DW
SHRUBS						
OSMANTHUS FRAGRANS	FRAGRANT TEA OLIVE			7 GAL.	15	TO
LOROPETALUM CHINENSE VAR. RUBRUM 'RUBY'	RUBY RED LORAPETALUM			3 GAL.	33	L-RR
LIGUSTRUM JAPONICUM 'RECURVIFOLIUM'	LIGUSTRUM RECURVIFOLIUM			5 GAL.	4	LR
ILEX CORNUTA 'CARISSA'	CARISSA HOLLY			3 GAL.	41	CH
ILEX 'CONAF' OAKLEAF	OAKLEAF HOLLY			25 GAL.	11	OH
PENNISETUM ALOPECUROIDES 'HAMEL'	DWARF FOUNTAIN GRASS			1 GAL.	49	DFG
MISCANTHUS SINENSIS 'ADAGIO'	ADAGIO MAIDEN GRASS			3 GAL.	21	MS
BERBERIS THUNBERGII 'CRIMSON PYGMY' (ATROPURPUREA NANA)	CRIMSON PYGMY DWARF BARBERRY			3 GAL.	12	BAR
LOMANDRA LONGIFOLIA 'KATRINUS DELUXE' TM	LOMANDRA 'KATRINUS DELUXE' TM			1 GAL.	42	LOM
MYRICA CERIFERA	WAX MYRTLE			7 GAL.	19	WM
ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY			15 GAL.	14	NRS
NERIUM OLEANDER 'PINK'	PINK OLEANDER			7 GAL.	10	NO
PITTIOSPORUM TOBIRA 'COMPACTA'	PITTIOSPORUM COMPACTA			7 GAL.	28	PIT
GROUND COVER						
LIRIOPE MUSCARI 'VARIEGATA'	VARIEGATED LIRIOPE	1 QT.	18" O.C.		139	
RUDBEKIA FULGIDA	ORANGE CONEFLOWER	1 QT.	24" O.C.		37	
SOD						
	EMPIRE ZOYSIA					

ISLAND	AREA (SF)	REQUIRED TREES	PROVIDED	SHADE PROVIDED
1	216	1 canopy	1 canopy	707 SF
2	216	1 canopy	1 canopy	707 SF
3	216	1 canopy	1 canopy	707 SF
4	216	1 canopy	1 canopy	707 SF
5	216	1 canopy	1 canopy	707 SF
6	216	1 canopy	1 canopy	707 SF
7	216	1 canopy	1 canopy	707 SF
8	216	1 canopy	1 canopy	707 SF
9	216	1 canopy	1 canopy	707 SF
10	216	1 canopy	1 canopy	707 SF

Tree Name	# of Trees	DBH	% Mitigation	Total DBH
Magnolia	1	8"	100	16
Magnolia	1	12"	100	24
Loblolly Pine	1	33"	50	33
Maple	1	24"	25	12
Total DBH of Removed Significant Trees =				85"
Total Trees Req. for Mitigation =				3 = 28

Section 18-481 (a) All single planting islands measuring twelve (12) feet by eighteen (18) feet or 216 SF shall have at least one (1) tree. All double planting islands measuring twelve (12) feet by thirty-six (36) feet or 432 SF shall have at least two (2) small mature shade trees or one canopy tree.

Sec. 18-460 Mitigation: Significant trees. The total number of replacement trees shall be determined by multiplying the total DBH of the removed significant trees by two (2) times the percentage for the type of tree in Table IV and dividing by three

- LANDSCAPE NOTES**
- ALL LANDSCAPE MATERIAL MUST BE INSTALLED PRIOR TO FINAL BUILDING INSPECTION
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND/OR RELOCATION OF EXISTING UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY AGENCY OR COMPANY.
 - CONTRACTOR SHALL NOT SUBSTITUTE FOR ANY OF THE PLANT MATERIAL THAT IS SPECIFIED WITHOUT PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT.
 - VERIFICATION OF TOTAL QUANTITIES AS SHOWN IN THE PLANT LIST SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - MULCH UNDER ALL PROPOSED TREES AND SHRUBS WITH PINE NEEDLES AT A 3"-4" DEPTH OR APPROVED EQUAL.
 - PLANT SIZES INDICATED SPECIFY MINIMUM ALLOWABLE SIZES AT PLANTING. WHERE CONTAINER AND HT. SIZES ARE INDICATED FOR A SINGLE SPECIES, BOTH SIZE REQUIREMENTS MUST BE MET.
 - THERE SHALL BE AT LEAST A 3 FT. SEPARATION BETWEEN LANDSCAPED AREAS AND PARKING AREAS TO ALLOW VEHICLE OVERHANG WHEN PARKING STOPS ARE NOT REQUIRED.
 - ALL PLANTINGS USED TO SCREEN THE DRIVES AND PARKING AREAS FROM ADJOINING ROADWAYS WILL NEED TO BE A MINIMUM OF 24" HIGH AT TIME OF PLANTING.
 - ALL OTHER AREAS NOT BEING MULCHED TO BE SEEDED PER SEEDING SCHEDULE INCLUDED AS PART OF THE S&E PLANS.
 - THE OWNERS OF THE PROPERTY AND THEIR AGENTS, HEIRS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, PRESERVATION AND MAINTENANCE OF ALL PLANTING AND PHYSICAL FEATURES SHOWN ON THIS PLAN. THE OWNERS SHALL BE RESPONSIBLE FOR ANNUAL MAINTENANCE OF THE VEGETATION TO INCLUDE BUT NOT BE LIMITED TO:
 - FERTILIZATION**
TREES, SHRUBS AND GRASSED AREAS BROADCAST A SLOW RELEASE FERTILIZER OVER THE MULCHED BEDS AT THE RECOMMENDED RATES AS SHOWN ON THE BAGS, ONCE MID-FEBRUARY AND ONCE MID-SEPTEMBER. THOROUGH WATERING IS REQUIRED UPON COMPLETION.
 - PRUNING WITHIN LIMITS**
PRUNING WHEN NECESSARY, WILL BE DONE TO MAINTAIN THEIR NORMAL GROWTH PATTERN AND TO REMOVE DEAD OR DISEASED PLANT MATERIAL. THERE SHALL BE NO TOPPING OF TREES.
 - PEST CONTROL (OPTIONAL)**
WEED CONTROL TO BE PROVIDED EARLY FEBRUARY, APRIL, JUNE, AUGUST AND OCTOBER IN THE SHRUB/TREE BEDS AND IN THE LAWN AREAS. INSECT DAMAGE SHALL BE TREATED WHEN NECESSARY TO PREVENT DAMAGE TO VEGETATION.
 - MULCHING**
ALL AREAS AROUND THE BUILDING FOUNDATION AND SHRUB/TREE BEDS SHALL BE RE-MULCHED SO THAT THEY CONTAIN A MIN. DEPTH OF TWO INCHES AND A MAXIMUM DEPTH OF THREE INCHES. MULCH USED SHALL EQUAL WHICH WAS SUPPLIED DURING THE INSTALLATION OF THE PLANTS.
 - MOWING**
MOWING SHALL BE DONE AS NECESSARY TO KEEP GRASS AT THE APPROPRIATE HEIGHT TO INSURE A HEALTHY GROWTH PATTERN.
 - PROTECTION OF ROOT ZONES**
TREE/SHRUB ROOT ZONES SHOULD BE PROTECTED FROM FUTURE CONSTRUCTION AND EQUIPMENT AS MUCH AS POSSIBLE TO AVOID DAMAGE OR COMPACTION TO THE ROOT AREAS.
 - WATERING SCHEDULE FOR IRRIGATION SYSTEM**
MAINTENANCE SHALL INCLUDE A THOROUGH INITIAL WATERING WITH WEEKLY WATERINGS THEREAFTER FOR THE FIRST 30 DAYS. WATERINGS THEREAFTER BE ON AN AS NEEDED SCHEDULE PER LOCAL CONDITIONS.
 - STAKE AT WIRE REMOVAL**
AT THE END OF THE FIRST YEAR ALL PLANT STAKING AND GUYING SYSTEMS SHALL BE REMOVED.
 - PROTECTED TREE REGULATION**
PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

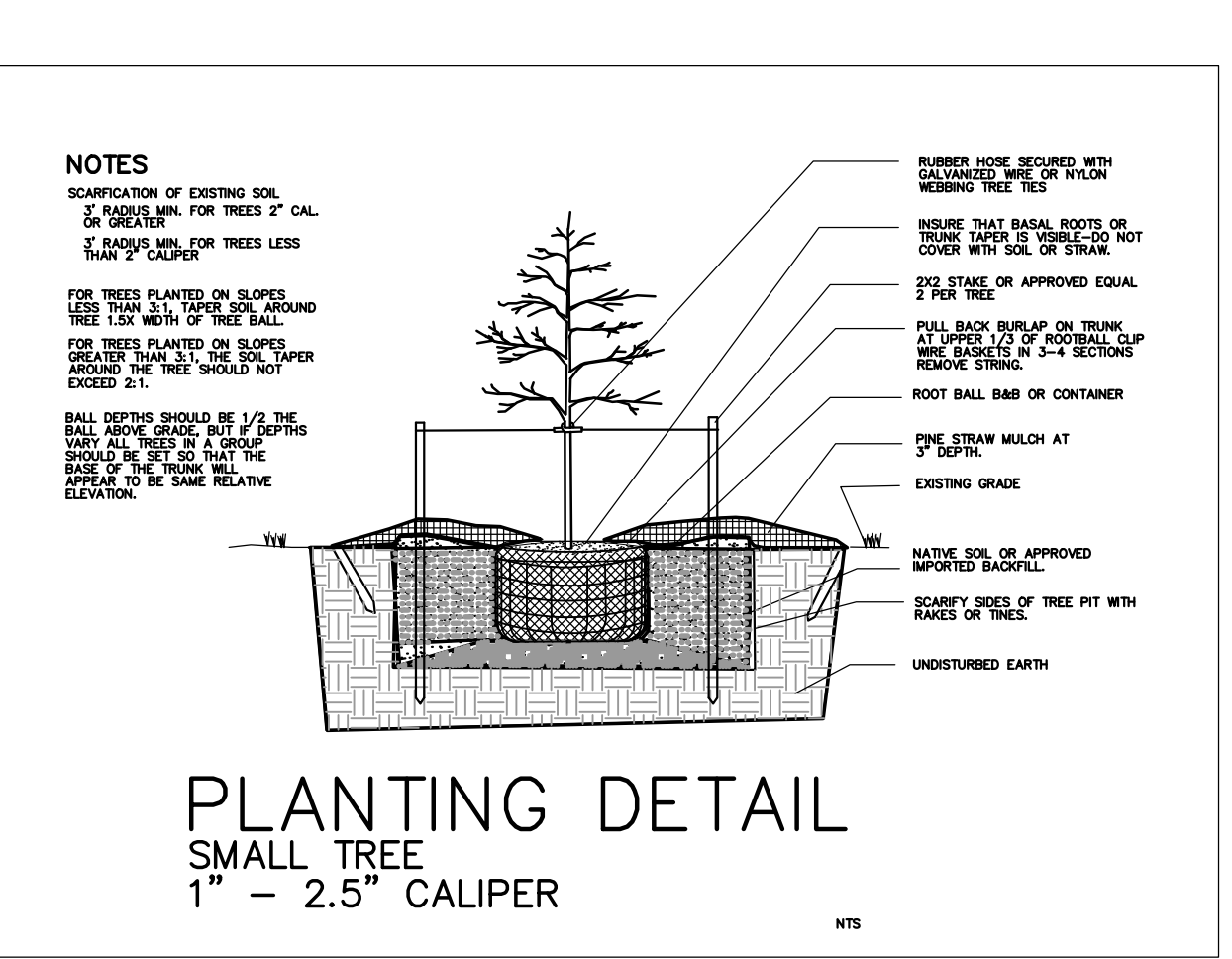
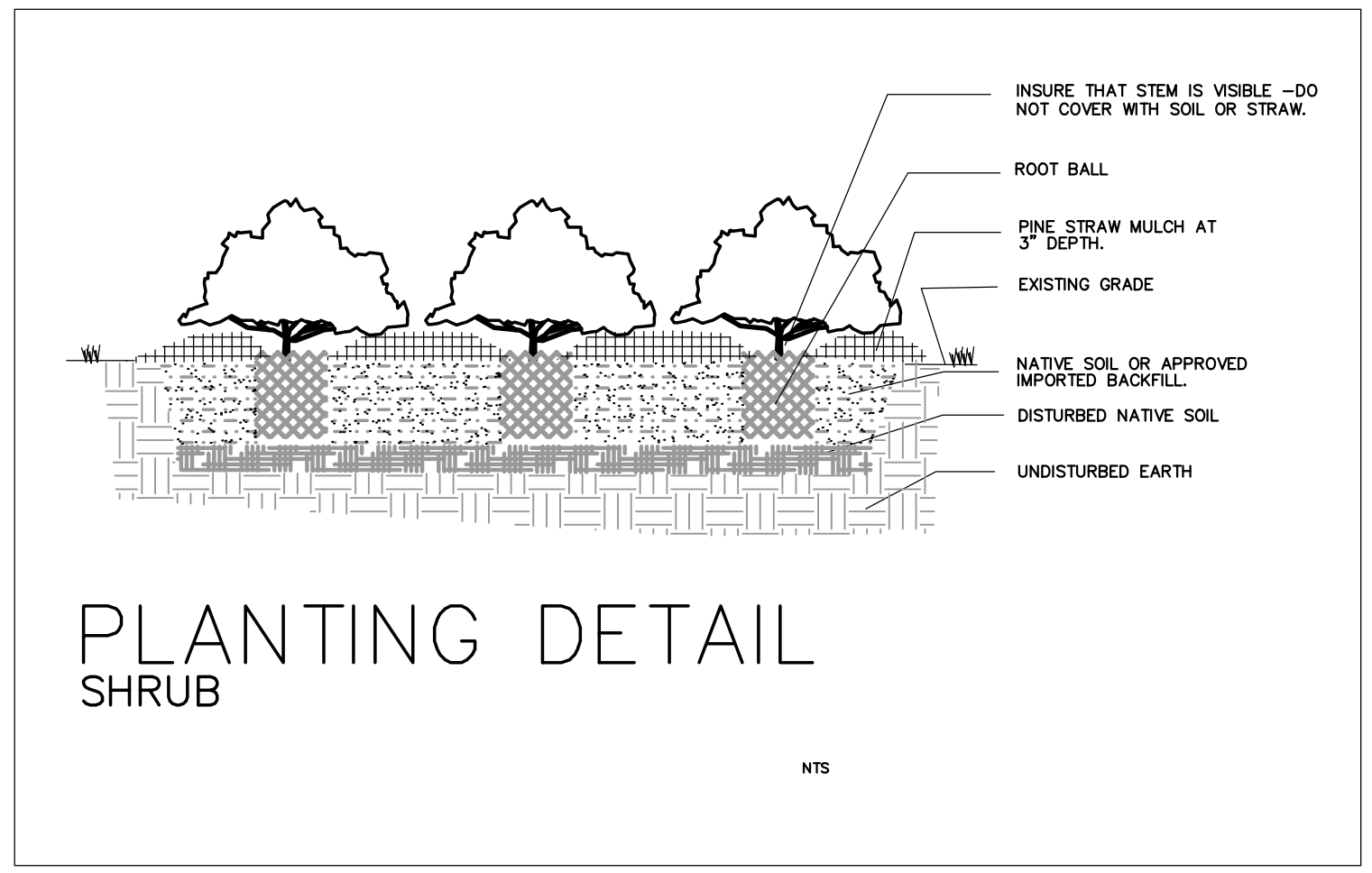
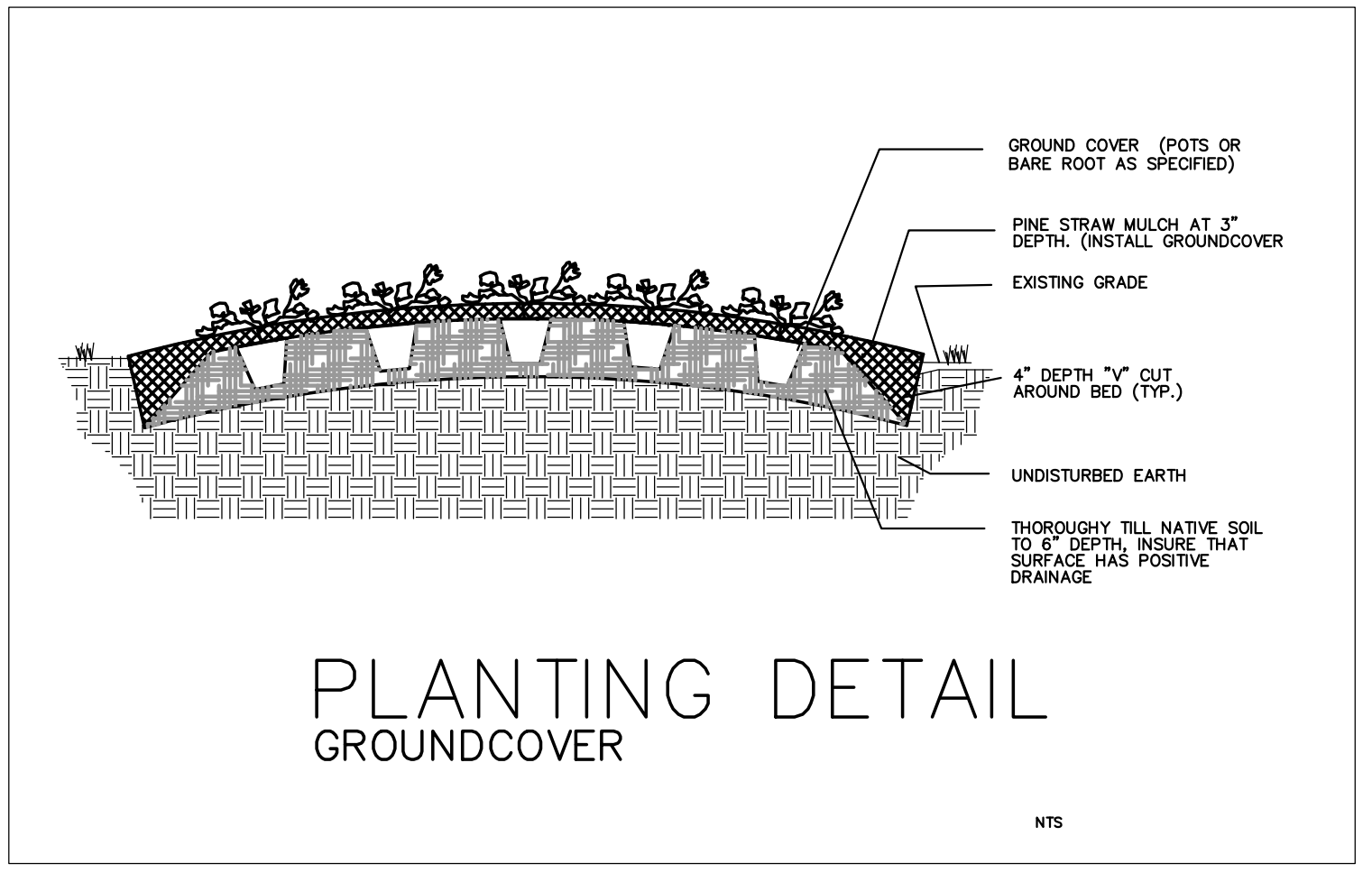
Fire _____

City of WILMINGTON
Public Service Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____



NOTES

SOLOMETER OF EXISTING SOIL. 2" MIN. FOR TREES 2" CAL. 4" MIN. FOR TREES 4" CAL. 6" MIN. FOR TREES 6" CAL. 8" MIN. FOR TREES 8" CAL. 12" MIN. FOR TREES 12" CAL.

FOR TREES PLANTED ON SLOPES LESS THAN 25% TOPSOIL AROUND TREE FOR 25% OF TREE BALL. FOR TREES PLANTED ON SLOPES GREATER THAN 25% TOPSOIL AROUND TREE FOR 50% OF TREE BALL. BALL DEPTH SHOULD BE 1/3 THE BALL DEPTH OF EXISTING SOIL. SHOULD BE SET TO THAT THE SAME AS THE SAME RELATIVE ELEVATION.

DRIBBLE HOSE SECURED WITH GALVANIZED PIPE OR TUBING. MINIMUM 2" DIA.

INSURE THAT BASAL ROOTS OR COAK TAPES ARE PROTECTED NOT COVERED WITH SOIL OR STRAW.

2"X2" STAKE OR APPROVED EQUAL 2' PER TREE.

FULL BACK BURLAP ON TRUNK AT LEAST 1' FROM HOLES. CLIP AND REMOVE EXCESS BURLAP. BURLAP SHOULD BE 2'-4' SECTIONS FROM STAKE.

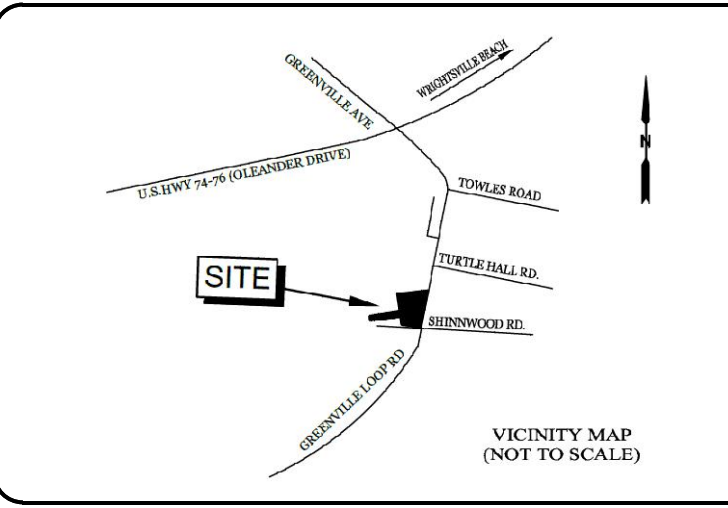
ROOT BALL OR CONTAINER.

PINE STRAW MULCH AT 3" DEPTH.

EXISTING GRADE.

UNDISTURBED EARTH.

SCARIFY SIDES OF TREE PIT WITH RAKES ON TREE.



LEGEND:

ENGINEER:

INTRACOASTAL ENGINEERING, PLLC
5725 Oleander Dr. Unit E-7
Wilmington, North Carolina 28403
Phone: 910.659.4963
Email: charlie@intracoastalengineering.com
License Number: P-0662

REV. #	DESCRIPTION	DATE
1	TRC COMMENTS - PARKING LOT LA	NA 9/1/17
2	STREETYARD A	NA 8/25/17
3	DESCRIPTION	REV. BY DATE
4	REVISIONS	

CLIENT INFO:
SKF ILM, LLC
5929 MARKET ST.
WILMINGTON, NC 28405
(910)-619-6858

Professional Engineer Seal for Frank Braxton, License No. 390, dated 2/16/17.

* FOR LANDSCAPE ONLY

LANDSCAPE ARCHITECT:
Coastal Land Design, PLLC
Civil Engineering / Landscape Architecture
Land Planning / Construction Management
NCBELS Firm License No. P-0369
P.O. Box 1172 Wilmington, NC 28402 www.cldeng.com Phone: 910-254-9333 Fax: 910-254-0502

DRAWN : N ALLEN	PROJECT
DESIGN : J CARMINE	NUMBER :
CHECK : F BRAXTON	SCALE : 1"=20'
APPROVED : J PETROFF	DATE : 25 AUGUST 2017
FILE NAME :	

SHINWOOD COTTAGES

LANDSCAPE PLAN/ DETAILS

JOB NUMBER _____ SHEET NUMBER **L-2**