

**LEGEND**

PROPERTY LINE	---
EASEMENT LINE	---
EXISTING CONTOUR	---
BUILDING SETBACK LINE	---
OVERHEAD POWER	---
UNDERGROUND TELEPHONE	---
UNDERGROUND FIBER CABLE	---
GAS LINE	---
WATER LINE	---
STORM DRAIN	---
SANITARY SEWER	---
BOLLARD	○
ELECTRIC METER	○
ELECTRIC OUTLET	○
ROOF DRAIN DOWNSPOUT	○
UTILITY POLE/GUY WIRE	○
TELEPHONE MANHOLE	○
CLEANOUT	○
FIRE HYDRANT	○
WATER METER	○
WATER VALVE	○
HOSE BIB	○
TELEPHONE PEDESTAL	○
STREET SIGN	○
SPOT ELEVATION	○
WIRE HEIGHT	○
TOP OF CURB/FLOW LINE ELEVATION	○
IRON PIN FOUND	○
1/2" REBAR SET	○
CONCRETE	▨
ASPHALT	▨
TREE (SIZE AND TYPE NOTED)	○
ENCROACHMENT ID	○

- NOTES**
1. THE TAX PARCEL IDENTIFICATION NUMBER FOR THE SUBJECT TRACTS IS R04914-006-002-000.
  2. THE CURRENT ADDRESSES FOR THE SUBJECT PARCELS IS 4010 MARKET STREET, WILMINGTON, NC.
  3. THE AREA OF THIS PROPERTY WAS DETERMINED BY THE COORDINATE COMPUTATION METHOD.
  4. DISTANCES SHOWN HEREON ARE HORIZONTAL GROUND DISTANCES UNLESS NOTED OTHERWISE.
  5. ANY UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED IN REFERENCE TO A ONE CALL TICKET NUMBER A110972076, FROM THE NORTH CAROLINA UTILITY PROTECTION SERVICE, (800) 632-4949.
  6. THIS SURVEY IS IN REFERENCE TO DEED BOOK 4779, PAGE 456, NEW HANOVER COUNTY REGISTER OF DEEDS.
  7. THE REFERENCE BEARING FOR THIS DRAWING IS BASED UPON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, NAD 83 (CORSS86).
  8. ELEVATIONS SHOWN ARE BASED ON THE NAVD 88 DATUM. ONE-FOOT CONTOUR INTERVAL SHOWN.
  9. THIS PROPERTY IS LOCATED WITHIN THE LIMITS OF THE CITY OF WILMINGTON, NORTH CAROLINA.
  10. REFER DAVID DAILY WITH THE CAPE FEAR PUBLIC UTILITY AUTHORITY, TYPICAL COVER OVER WATER LINES IS 36"-48". WATER LINE DEPTH MAY VARY WHERE THERE IS CONFLICT WITH OTHER UTILITIES.

**UTILITY INFORMATION**

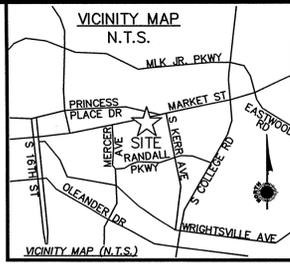
UTILITIES SHOWN ARE AS MARKED WITH PAINT BY ITS UTILITY IN RESPONSE TO A REQUEST TO THE NORTH CAROLINA ONE-CALL UTILITY PROTECTION SERVICE, TICKET A110972076. ANY PIPE SIZES SHOWN ARE PER RECORD PLANS OR AS PROVIDED BY ITS UTILITY.

**FLOOD ZONE INFORMATION**

THE SUBJECT PROPERTY IS LOCATED WITHIN FLOOD ZONE "X"; DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAN, AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) COMMUNITY PANEL NO. 3720313800J, EFFECTIVE DATE APRIL 03, 2006.

**TREE CHART**

1. LIVE OAK
2. 3" PINE
3. 10" PINE
4. 11" PINE



**ROAD INFORMATION**

MARKET STREET (US HIGHWAY 17)  
AUTHORITY: NC DOT  
ADDRESS: 3113 NORTH KERR AVE  
WILMINGTON, NC  
KATE BAGGETT  
CONTACT: (910) 341-2100

**PLANNED IMPROV:** THERE ARE NO PLANS TO WIDEN MARKET STREET. THERE ARE PLANS TO INSTALL A CONCRETE MEDIAN AT A FUTURE DATE, WHICH HAS NOT BEEN DETERMINED.

R/W WIDTH: 100', 50' FROM CL (DB 924, PG 716)

SPEED LIMIT: 45 MPH  
CLASSIFICATION: MAJOR THROUGHFARE

WESTIG DRIVE  
AUTHORITY: PRIVATE STREET

**ZONING INFORMATION**

AUTHORITY: CITY OF WILMINGTON  
ADDRESS: 305 CHESTNUT ST  
WILMINGTON, NC 28402  
RON SATTERFIELD  
CONTACT: (910) 341-3255

ZONED: CS (COMMERCIAL SERVICE)

**BUILDING SETBACK DISTANCES**

FRONT: 35'  
SIDE: 13'  
REAR: 15'  
BUFFER: 0'

**UTILITY CONTACTS**

**WATER & SANITARY**  
AUTHORITY: CAPE FEAR PUBLIC UTILITY AUTH.  
ADDRESS: 235 GOVERNMENT CENTER DR  
WILMINGTON, NC 28403  
DAVID DAILY  
CONTACT: (910) 799-6064

**NATURAL GAS**  
AUTHORITY: PIEDMONT NATURAL GAS  
ADDRESS: 1321 SOUTH TENTH ST  
WILMINGTON, NC 28401  
JOYCE MIGNON  
CONTACT: (910) 799-7185

**PHONE**  
AUTHORITY: AT&T  
ADDRESS: 351 S COLLEGE RD  
WILMINGTON, NC  
CUSTOMER SERVICE REP  
CONTACT: (910) 452-5300

**POWER**  
AUTHORITY: PROGRESS ENERGY  
ADDRESS: PO BOX 1551  
RALEIGH, NC 27602  
CUSTOMER SERVICE REP  
CONTACT: (919) 508-5400

**SURVEYOR'S CERTIFICATE**

I hereby certify to Fidelity National Title Insurance Company and O'Reilly Automotive Stores, Inc., a Missouri Corporation, f/k/a O'Reilly Automotive, Inc. that:

1. The plot of survey prepared by me entitled "ALTA/ACSM Land Title Survey" is actually made upon the ground and that it and the information, courses and distances shown thereon are correct;
2. The title lines and lines of actual possession are the same;
3. The size, location and type of buildings and improvements are as shown and all are within the boundary lines of the property;
4. There are no violations of zoning ordinances, restrictions or other rules and improvements;
5. There are no discrepancies, conflicts, shortages in area or boundary line conflicts, easements, encroachments, driveways, cemeteries, burial grounds or uses affecting this property appearing from a careful physical inspection of the same, other than those shown and depicted thereon;
6. All monuments shown actually exist, and the location, size and type of materials are correctly shown;
7. The distance from the nearest intersecting street or road is as shown;
8. This property has direct access to Market Street, a publicly dedicated street;
9. All utility services required for the operation of the property either enter the property through adjoining public streets or the survey shows the point of entry and location of any utilities that pass through or are on adjoining private land;
10. The parcels described hereon does not lie within flood hazard areas according to the maps of the Federal Emergency Management Agency and the Department of Housing and Urban Development; and
11. This is to certify that this map or plot and the survey on which it is based were made in accordance with the Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS. The field work was completed on April 14, 2011.

I, John M. Stary, certify that this plot was drawn under my supervision from an actual survey performed under my supervision (detailed description recorded in Book 4779, Page 465); that the ratio of precision as calculated is 1:42,401; that the Global Positioning System (GPS) observations were performed to the Geospatial Positioning Accuracy Standards, Part 2: Standards for Geodetic Networks at the 2 cm standard accuracy classification (95% confidence) using RTK and traditional traverse. That this plot meets the requirements of the Standards of Practice for Land Surveying in North Carolina (G.S. 21-56.1600). This 3rd day of May, 2011

*John M. Stary*  
Professional Land Surveyor L-3840  
Date: 5/3/2011

**SCHEDULE B SECTION II**  
Fidelity National Title Insurance Company  
Title No.: 201103510  
Effective date: March 24, 2011 at 8:00 AM

7. Deed of Cross Access Easement and Agreement at Book 2637, page 205. THIS DEED DOES AFFECT THE SUBJECT PROPERTY; NOT PLOTTABLE.
8. Hazardous Substance Certificate and Indemnity Agreement at Book 4801, page 66. THIS DOCUMENT DOES AFFECT THE SUBJECT PROPERTY; NOT PLOTTABLE.
9. Terms, provisions, covenants, conditions, restrictions, easements, charges, assessments and liens provided in the Covenants, Conditions and Restrictions of [sic] record in Book 433, Page 553, and Book 464, Page 216, Register's Office for Hanover County, North Carolina, but omitting any covenant, condition or restriction, if any based on race, color, religion, sex, handicap, familial status or national origin unless and only to the extent that the covenant, condition or restriction (a) is exempt under Title 42 of the United States Code, or (b) relates to handicap but does not discriminate against handicapped persons. DEED BOOK 433, PAGE 553 DOES NOT AFFECT THE SUBJECT PROPERTY; NOT PLOTTABLE.
10. Easements in favor of Carolina Power and Light Company recorded at Book 589, Page 280; Book 942, Page 717 and Book 1293, page 1489. THESE EASEMENTS DO AFFECT THE SUBJECT PROPERTY; NOT PLOTTABLE.

**ENCROACHMENTS**

1. THE FIRE HYDRANT ALONG WESTSIG ROAD IS ON THE SUBJECT PROPERTY, BEYOND THE EAST PROPERTY LINE. CONSTRUCTION PLANS FOR THE BUILDING BEHIND THE FORMER WENDY'S ACROSS WESTSIG ROAD PREPARED IN SEPTEMBER, 2000 CALL FOR A 20' EASEMENT, 10' EITHER SIDE OF THE WATERLINE, THAT ALSO INCLUDED AN AREA AROUND THE FIRE HYDRANT. NO DOCUMENT SHOWING THAT THIS EASEMENT WAS CONVEYED BY THE OWNERS OF THIS PROPERTY IS IN THE TITLE COMMITMENT, THEREFORE THE FIRE HYDRANT IS SHOWN AS AN ENCROACHMENT.
2. THE ASPHALT DRIVE THAT PROVIDES ACCESS TO THE PROPERTY WEST OF THE SUBJECT PARCEL, AND RUNS ALONG A PORTION OF THE WEST PROPERTY LINE, IS SHOWN AS AN ENCROACHMENT.
3. CHAINLINK FENCE CROSSES WEST PROPERTY LINE.

**SURVEY LEGAL DESCRIPTION**

All that tract or parcel of land, lying and being in the City of Wilmington, New Hanover County and being more particularly described as follows:

**BEGINNING** at a 1-1/4" crimped top pipe found at the intersection of the southern right of way line of Market Street (United States Business Highway 17, 100' Right of Way) and the western boundary line of a 30 foot access road which leads to Westsig Boat Yard, recorded in Deed Book 5417, Page 2680, said 1-1/4" crimped top pipe being the POINT OF BEGINNING; thence along said western boundary line S14°41'01"E a distance of 385.03' to a 1/2" rebar set; thence leaving said western boundary line S76°37'01"W a distance of 141.63' to a 1/2" rebar set; thence N12°29'07"W a distance of 238.08' to a mag nail set; thence N77°30'47"E a distance of 6.28' to a mag nail set; thence N24°14'25"W a distance of 64.56' to a 1/2" rebar set on the southern right of way line of Market Street; thence along said right of way line N77°39'24"E a distance of 133.73' to a 1-1/4" crimped top pipe found at the intersection of the southern right of way line of Market Street (United States Business Highway 17, 100' Right of Way) and the western boundary line of a 30 foot access road which leads to Westsig Boat Yard, recorded in Deed Book 5417, Page 2680, said 1-1/4" crimped top pipe found being the POINT OF BEGINNING.

Said tract of land contains 51,302 square feet or 1.178 acres of land, more or less.

**RECORD LEGAL DESCRIPTION**

**TRACT ONE:**  
Beginning at an iron pipe at the intersection of the Southern line of Market Street with the Western line of a 30 foot wide road which leads to Westsig Boat Yard, (formerly the Pearsall Fertilizer Plant), and runs thence, Southwardly along said Western line of said 30 foot road, South 12 degrees 08 minutes 18 seconds East, 276.87 feet to an iron pipe; thence, South 80 degrees 35 minutes West, 242.78 feet to an iron pipe; thence, North 09 degrees 35 minutes 24 seconds West, 217.92 feet; thence, North 15 degrees 27 minutes 52 seconds East, 63.12 feet to an iron pipe in the Southern line of said Market Street; thence, along the Southern line of said Market Street, North 80 degrees 12 minutes 07 seconds East, 203.73 feet to the point of beginning, and containing 1.48 acres, more or less.

**TRACT TWO:**  
Beginning at an iron pipe in the Western line of a thirty, (30) foot wide road which leads to Westsig Boat Yard, (formerly the Pearsall Fertilizer Plant), (Deed Book at Page ) [sic], that is South 12 degrees 08 minutes 18 seconds East, 276.87 feet from the intersection of said Westsig Road with the Southern line of Market Street, (a hundred foot wide public right of way), thence; FROM THE POINT OF BEGINNING, along the western line of said Westsig Road, South 12 degrees 08 minutes 18 seconds East, 108.16 feet to an iron pipe, thence, South 77 degrees 26 minutes 12 seconds West, 116.79 feet to an iron pipe; thence, South 80 degrees 35 minutes 27 seconds West, 123.15 feet to an iron pipe; thence, South 79 degrees 12 minutes 48 seconds West, 100.01 feet to an iron pipe; thence, North 09 degrees 38 minutes 28 seconds West, 116.24 feet to an iron pipe; thence, North 80 degrees 35 minutes 12 seconds East, 223.08 feet to the point of beginning, and containing 0.88 acre, more or less.

**BENCHMARK INFORMATION**

CITY STATE BOLT ON FIRE HYDRANT LOCATED NORTH OF SITE, ELEVATION=42.23  
CITY STATE BOLT ON FIRE HYDRANT LOCATED ALONG THE EAST PROPERTY LINE, ELEVATION=42.30

**DONALDSON, GARRETT, & ASSOCIATES, INC.**  
MACON • CHARLOTTE  
500 EAST WILMINGTON STREET, SUITE 103  
CHARLOTTE, NC 28202  
(704) 374-1955 Fax: (704) 374-1956  
http://www.dg-a.com  
NC CORPORATE LICENSE NO. C-1518

ALTA/ACSM LAND TITLE SURVEY FOR  
**O'REILLY AUTOMOTIVE STORES, INC.**  
4010 MARKET STREET  
NEW HANOVER COUNTY  
WILMINGTON  
NORTH CAROLINA

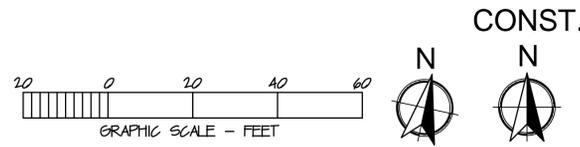
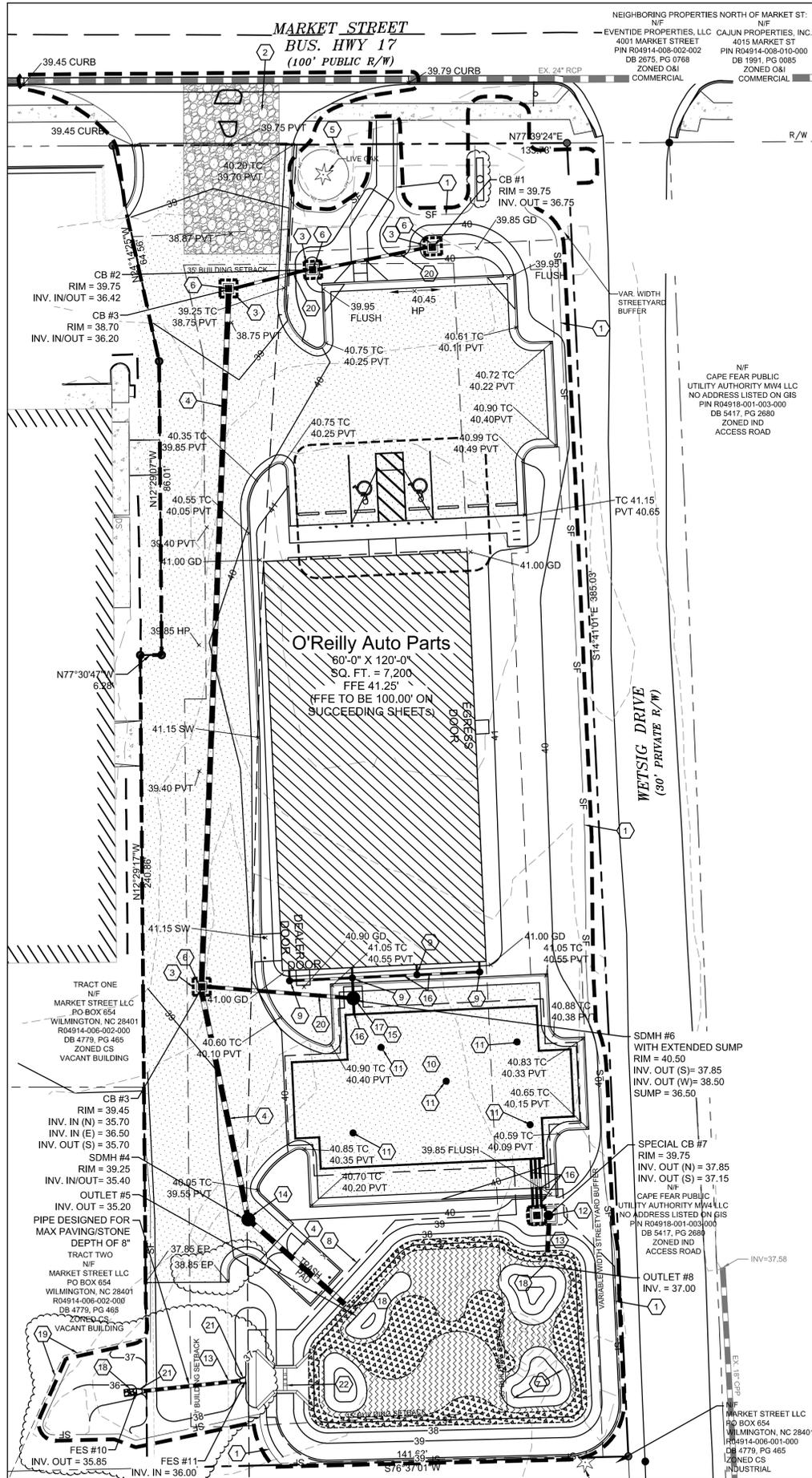
DATE	REVISIONS
08/08/2011	AMENDED BOUNDARY AND ADDED PROPOSED ACCESS EASEMENT

SCALE:  
HORIZONTAL: 1"=20'  
VERTICAL: N/A

DATE: MAY 03, 2011  
DRAWING #: NC-011-12-0  
PROJ. #: 4539-223-N1  
DSGN: N/A  
DRWN: JMS  
CHKD: JMS  
APVD: JMS  
RLS No: L-3840

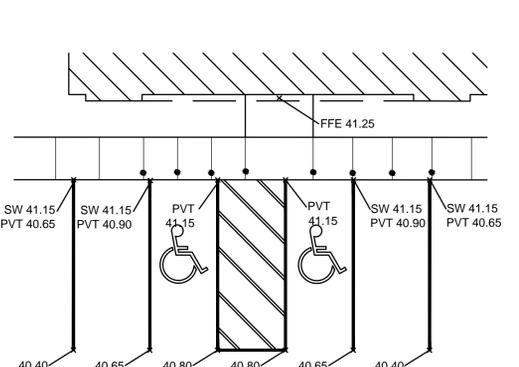
**SV1**  
A WGT 8/11/11

**SHEET 1 OF 1**



### 1 SITE GRADING PLAN

SCALE: 1" = 20'-0"



### 2 HANDICAP PARKING DETAIL

SCALE: 1" = 10'-0"

### KEY NOTES:

- LIMITS OF SILT FENCE INSTALLATION. REFER TO DETAIL 4/C5.
- TEMPORARY CONSTRUCTION ENTRANCE. REFER TO DETAIL 1L/7C5.
- HARDWARE CLOTH AND GRAVEL INLET PROTECTION. REFER TO DETAIL 3/C5.
- 18" RCP CLASS IV STORM DRAINAGE PIPE
- TREE PROTECTION FENCING. REFER TO DETAIL 2/C5.
- GRILL BASIN. REFER TO DETAIL 7/C4. CB #1 TO BE INSTALLED SUCH THAT RIM ELEVATION PROVIDES STORAGE ABOVE GROUND ELEVATION. CB #2 TO BE INSTALLED FLUSH WITH PAVEMENT
- STORMWATER WETLAND BMP. CONTRACTOR TO INSTALL CLAY LINER PER NOTES ON SHEET C6. REFER TO DETAILS SHEET C6.
- BMP MAINTENANCE AND ACCESS EASEMENT.
- ROOF DRAIN DOWNSPOUT AND CLEANOUT. COORDINATE EXACT LOCATIONS WITH ARCHITECTURAL DRAWINGS
- RAINTANK UNDERGROUND STORMWATER STORAGE & INFILTRATION BASIN. SEE SHEET C5 FOR DESIGN AND DETAILS
- RAINTANK MAINTENANCE PORT. REFER TO DETAIL 5/C7.
- SPECIAL CB #7. REFER TO DETAIL 6/C7
- 12" RCP CLASS III STORM DRAINAGE PIPE
- STORM DRAINAGE MANHOLE. REFER TO DETAIL 9/C4
- STORM DRAINAGE MANHOLE WITH EXTENDED SUMP. REFER TO DETAIL 9/C4
- 8" HDPE STORM DRAINAGE PIPE
- TRASHGUARD TO BE PLACED OVER OUTLET PIPE. REFER TO DETAIL 7/C7
- RIPRAP OUTLET PROTECTION. REFER TO DETAIL 9/C5
- DRAINAGE EASEMENT.
- 10" HDPE STORM DRAINAGE PIPE
- 12" FES
- LOW RISE STORMWATER CONTROL STRUCTURE. REFER TO DETAIL 4/C6

### IMPERVIOUS AREAS:

- ONSITE IMPERVIOUS AREAS:  
BUILDING: 7,210 SF  
SIDEWALKS: 739 SF  
PARKING/DRIVING AREAS: 22,101 SF  
CONCRETE/ASPHALT STREETS: N/A  
OTHER (DUMPSTER PAD): 280 SF  
TOTAL: 30,330 SF
- IMPERVIOUS PERCENTAGE: 59.1%
- TOTAL IMPERVIOUS AREA IN STREETYARD: 165 SF
- TOTAL STREETYARD AREA PROVIDED: 7,000 SF
- IMPERVIOUS PERCENTAGE IN STREETYARD: 2.4%
- NEW OFFSITE IMPERVIOUS AREAS:  
NEW DRIVEWAY APRON: 299 SF  
NEW SIDEWALK: 35 SF  
TOTAL: 334 SF

### SYMBOLS LEGEND

REFER TO SURVEY FOR EXISTING CONDITION SYMBOLS LEGEND	
	NEW BUILDING CONSTRUCTION
	NEW POLE SIGN LOCATION
	NEW CONCRETE PAVING BLOCK
	EXISTING CONTOUR
	PROPOSED CONTOUR
	TEMPORARY SILT FENCE
	NEW STORM PIPE
	LIMITS OF DISTURBANCE
	CONSTRUCTION ENTRANCE
	B&G INLET PROTECTION
	SPOT ELEVATION
NEW SPOT ELEVATIONS	
LIST	ABBREVIATION
TOP OF CURB	TC
EDGE OF PAVEMENT	EP
HIGH POINT	HP
TOP OF PAVEMENT	PVT
GROUND ELEVATION	GD

### GENERAL NOTES:

- REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
- SITE CONDITIONS BASED UPON SURVEY SUBMITTED BY OWNER. FIELD VERIFY EXISTING CONDITIONS BY DETAILED SITE INSPECTION PRIOR TO SUBMITTING BID AND BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY THAT PROPOSED GRADES MATCH EXISTING GRADES AT ALL CONNECTION POINTS. CONTRACTOR SHALL NOTIFY ENGINEER IF A DISCREPANCY OCCURS.
- FIELD VERIFY SANITARY SEWER INVERT ELEVATION PRIOR TO ESTABLISHING FINAL FINISH FLOOR ELEVATION.
- COORDINATE WORK WITH OTHER SITE RELATED DEVELOPMENT DRAWINGS.
- CONTRACTOR SHALL SEEK APPROVAL FROM ARCHITECT, ENGINEER OR OWNER'S REPRESENTATIVE AND THE CITY OF WILMINGTON PRIOR MAKING ANY CHANGES TO THE PROJECT FROM THE APPROVED PLANS.

### SITE EXCAVATION REQUIREMENTS:

- A GEOTECHNICAL ANALYSIS HAS BEEN PERFORMED ON THIS SITE. REFER TO PROJECT MANUAL.
- FOLLOW GEOTECHNICAL ANALYSIS RECOMMENDATION FOR SITE EXCAVATION
- REFER TO STRUCTURAL DRAWINGS FOR BUILDING EXCAVATION REQUIREMENTS.

### GRADING NOTES

- INITIATE EROSION CONTROL SEQUENCE BEFORE BEGINNING CLEARING AND GRADING OPERATIONS.
- CLEAR AREAS TO BE GRADED OF ALL VEGETATION. PROTECT VEGETATION BEYOND GRADING LIMITS.
- STRIP TOPSOIL TO FULL DEPTH IN AREAS TO BE GRADED.
- COMPACT ALL FILL AREAS TO 95% OF MAXIMUM DENSITY, OR PER GEOTECHNICAL RECOMMENDATIONS.
- ALL AREAS ARE TO BE GRADED SO THAT NO AREAS OF STANDING WATER OCCUR.
- OPERATOR SHALL FIELD VERIFY EXISTING TOPOGRAPHY IN RELATION TO THE PROPOSED GRADES TO ENSURE DRAINAGE IN THE DIRECTIONS INDICATED ON THE PLAN.

### CONSTRUCTION SEQUENCE:

- THE INTENT OF THE CONSTRUCTION SEQUENCE IS TO PROVIDE THE CONTRACTOR WITH A GENERAL GUIDE FOR CONSTRUCTION PURPOSES. THIS SEQUENCE IS NOT INTENDED TO OUTLINE ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
- NO LAND DISTURBANCE IS PERMITTED ON SITE UNTIL A TREE PERMIT IS ISSUED IN CONJUNCTION WITH A COUNTY LAND CLEARING PERMIT, CITY GRADING AND CLEARING PERMIT, AND ANY REQUIRED STATE AND FEDERAL PERMITS.
- NO LAND DISTURBANCE IS PERMITTED IN AREAS OUTSIDE OF NECESSARY GRADING LIMITS FOR SITE IMPROVEMENTS.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NEW HANOVER COUNTY EROSION AND SEDIMENTATION CONTROL PLANNING AND DESIGN MANUAL.
- ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER RAINFALL EVENTS. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
- IF IT IS DETERMINED DURING CONSTRUCTION THAT SIGNIFICANT SEDIMENT IS LEAVING THE SITE, DESPITE PROPER IMPLEMENTATION AND MAINTENANCE, THE CONTRACTOR IS OBLIGATED TO TAKE ADDITIONAL CORRECTIVE ACTION. CONTACT OWNER'S REPRESENTATIVE AND ENGINEER WITH ANY ADDITIONAL MEASURES NEEDED.
- CONTRACTOR SHALL ESTABLISH GROUND COVER ON DISTURBED AREAS WITHIN FIFTEEN (15) WORKING DAYS FOR FLAT AREAS AND TWENTY-ONE (21) CALENDAR DAYS FOR SLOPES AFTER COMPLETION OF ANY PHASE OF GRADING.
- CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES, INCLUDING ANY SERVICES TO ADJACENT PROPERTIES, TO AVOID CONFLICT DURING INSTALLATION OF EROSION CONTROL MEASURES, STORM SEWER PIPES, UNDERGROUND UTILITY LINES AND BUILDING PADS AND FOOTERS. CONTRACTOR IS TO CALL 1-800-632-4349 FOR "NO ONE CALL" TO HAVE EXISTING UTILITIES LOCATED. IN THE EVENT THAT ACTIVE SERVICE LINES ARE LOCATED ON SITE, THE CONTRACTOR SHALL COORDINATE RE-ROUTING THESE LINES WITH THE UTILITY PROVIDER.
- CONTRACTOR TO HAVE A PROFESSIONAL LAND SURVEYOR FLAG PROPERTY LINES, EASEMENTS, TREE PROTECTION AREAS AND LIMITS OF DISTURBANCE.
- CONTRACTOR IS TO MAINTAIN EROSION CONTROL MEASURES AT ALL TIMES.
- INSTALL TEMPORARY CONSTRUCTION ENTRANCE AS SHOWN ON PLANS.
- INSTALL TEMPORARY SILT FENCE AND TREE PROTECTION FENCING AS SHOWN AND DETAILED ON PLAN. CLEAR ONLY AS NECESSARY TO INSTALL FENCING. NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. ADDITIONALLY, PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS PRIOR TO INSTALLATION OF ANY MEASURES.
- PERFORM CLEARING, RUBBING AND TOPSOIL REMOVAL AS REQUIRED.
- BEGIN SITE GRADING OPERATIONS.
- INSTALL STORM SEWER PIPES AND UNDERGROUND UTILITY LINES AS SHOWN ON THE PLANS WITH EROSION CONTROL MEASURES TO ELIMINATE SILT FROM ENTERING PIPE SYSTEMS.
- CONSTRUCT BUILDING PADS AND INSTALL ABC STONE FOR ROADS AND PARKING AREAS AS SHOWN ON PLANS. INSTALL CONCRETE PADS AND SIDEWALKS AS SHOWN ON PLANS.
- CARRY OUT FINAL GRADING. RESPADE TOPSOIL IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- PERFORM SEEDING AND MULCHING AS REQUIRED IN ACCORDANCE WITH REQUIREMENTS SHOWN ON SHEET C5.
- ONCE ALL GROUND COVER HAS BEEN ESTABLISHED, AND OTHER CONSTRUCTION IS COMPLETE, CONTACT OWNER FOR SITE INSPECTION BEFORE REMOVING ANY TEMPORARY EROSION CONTROL MEASURES.
- DENSE, EMERGENT PERMANENT GRASS SHALL BE ESTABLISHED ON THE SLOPES OF THE STORMWATER WETLAND BMP PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
- ONCE SITE IS APPROVED, CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AND BRING AREAS TO FINAL GRADES. PERFORM SEEDING AND MULCHING ON RESULTING BARE AREAS.
- REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS NEEDED FOR FINAL PAVING AT ENTRY TO SITE. INSTALL FINAL PAVING AS SHOWN ON THE PLANS.
- AFTER SITE IS COMPLETELY STABILIZED, REMOVE ALL TEMPORARY MEASURES AND INSTALL PERMANENT VEGETATION AS REQUIRED AND ON ANY RESULTING BARE AREAS.

### EROSION CONTROL NOTES

- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NEW HANOVER COUNTY EROSION AND SEDIMENTATION CONTROL PLANNING AND DESIGN MANUAL.
- ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER RAINFALL EVENTS. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
- ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY NEED TO BE INSTALLED IF DEEMED NECESSARY BY ENGINEER, OWNER, OWNER'S REPRESENTATIVE OR JURISDICTIONAL AUTHORITY.
- ESTABLISH GROUND COVER ON GRADED SLOPES AND FILLS WITHIN 21 CALENDAR DAYS AFTER COMPLETION OF ANY GRADING PHASE.
- TEMPORARY SEDIMENT CONTROL MEASURES (SILT FENCE, CONSTRUCTION ENTRANCE, ETC.) SHALL BE MAINTAINED UNTIL ALL CONTRIBUTING AREAS ARE GRADED AND STABILIZED.
- DUST CONTROL ON SITE SHALL BE MINIMIZED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION IS STRICTLY PROHIBITED.
- IF THE MAJORITY OF MUD OR DIRT IS NOT REMOVED FROM CONSTRUCTION TRAFFIC BY CONSTRUCTION ENTRANCES, CONSTRUCTION VEHICLE WASH AREAS AT CONSTRUCTION TRAFFIC EXIT POINTS, MUD AND DIRT SHALL BE INTERCEPTED AND TRAPPED BEFORE WASH WATER IS ALLOWED TO BE DISCHARGED OFFSITE. RINSE-OFF WILL NOT BE ALLOWED OUTSIDE THE PROJECT CONSTRUCTION LIMITS.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT REACHES 4-INCHES DEEP.
- MAXIMUM GRADED SLOPE SHALL NOT EXCEED 3:1.
- REFER TO SHEET C5 FOR EROSION CONTROL DETAILS.
- TOTAL DISTURBED AREA = 1.20 ACRES.
- CONTRACTOR SHALL SEEK PERMIT FOR ANY BORROW AND/OR SPOIL AREAS NOT SHOWN ON THESE PLANS.

### LAND QUALITY REQUIRED NOTES:

- ALL SEEDED AREAS WILL BE FERTILIZED, RESEDED AS NECESSARY, AND MULCHED ACCORDING TO THE SPECIFICATIONS IN THE VEGETATION PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, ALL SLOPES STEEP THAN 3:1 AND ALL HIGH QUALITY WATER (HOW) ZONES SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN SEVEN (7) CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITHIN FOURTEEN (14) CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

### WATER QUALITY REQUIRED NOTES:

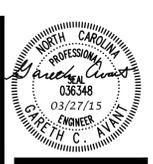
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STORMWATER MANAGEMENT PLAN  
APPROVED  
CITY OF WILMINGTON  
ENGINEERING DEPARTMENT  
DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
SIGNED \_\_\_\_\_

Approved Construction Plan  
Name \_\_\_\_\_ Date \_\_\_\_\_  
Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_



1730 Varsity Drive, Suite 500  
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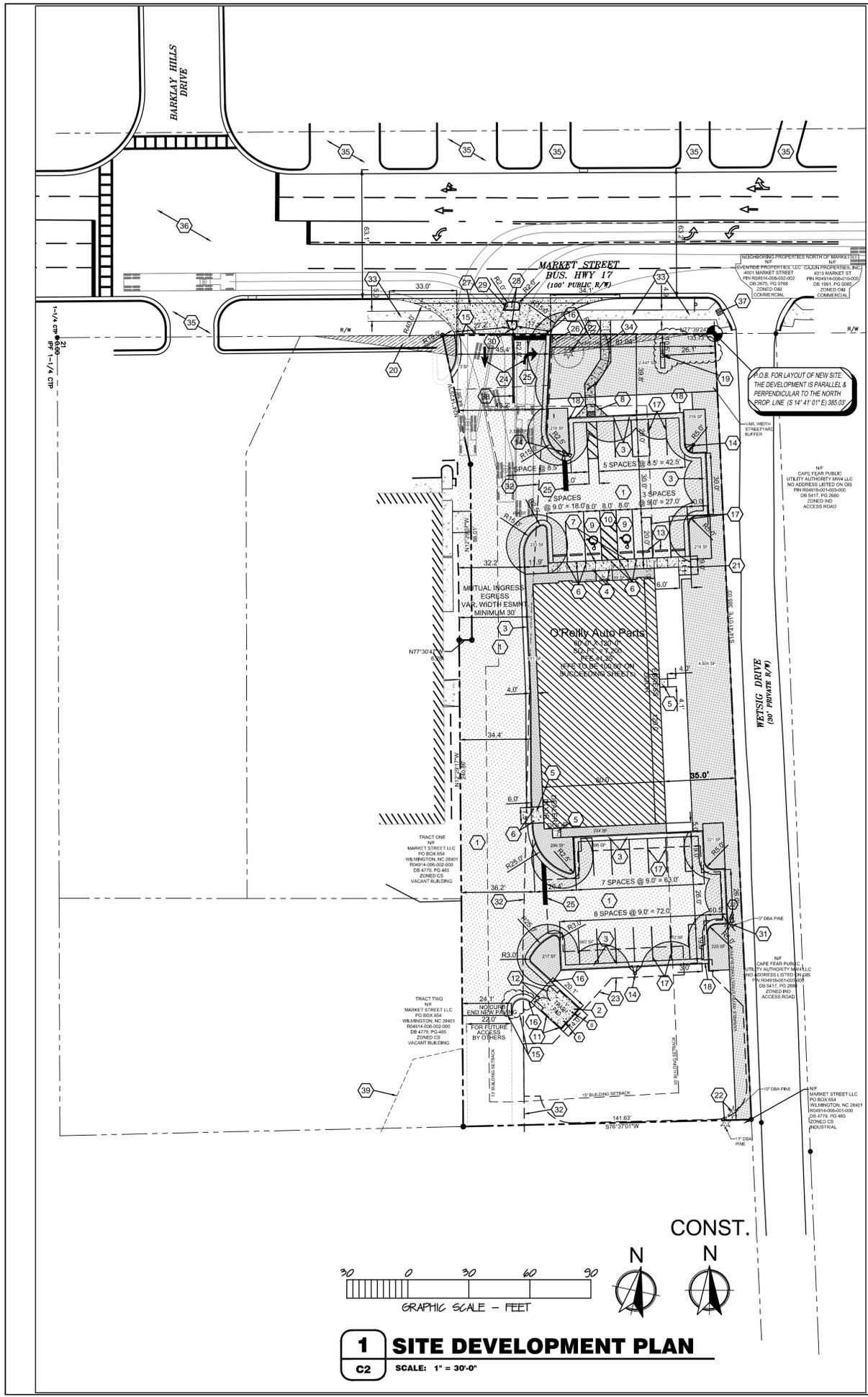
**CRAIG A. SCHNEIDER, AIA**  
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417-862-9265  
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**O'REILLY AUTO PARTS**  
4014 MARKET STREET  
WILMINGTON, NC

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233 SOUTH PATTERSON  
SPRINGFIELD, MISSOURI 65802  
417-862-2674 PHONE

COMM #	3168
DATE:	09-23-11
REVISION DATE:	04-02-13
	04-19-13
	05-01-13
	07-01-13
	03-27-15



**SITE DATA TABLE:**

1. CURRENT PROPERTY OWNER: O'REILLY AUTOMOTIVE STORES, INC. 233 SOUTH PATTERSON SPRINGFIELD, MO 65802	2. PARCEL IDENTIFICATION NUMBERS: R04914-008-002-000	3. BUILDING SETBACKS: REQUIRED ACTUAL FRONT 35 114.5' CORNER 35 35' REAR 15' 147.0' SIDE 13' 36.5'	4. CURRENT ZONING: CS (COMMERCIAL SERVICES DISTRICT)	5. TOTAL PARCEL AREA: 51,302 SF (1.178 ACRES)	6. PROPOSED USE: RETAIL B. MAXIMUM PARKING ALLOWED: 1 SPACE / 200 SF 7,200 SF / 200 SF / SPACE = 36 SPACES C. MINIMUM PARKING REQUIRED: 1 SPACE / 400 SF 7,200 SF / 400 SF / SPACE = 18 SPACES D. ACCESSIBLE PARKING REQUIRED: 2 SPACES FOR 26 - 50 TOTAL SPACES E. PARKING PROVIDED: 28 SPACES INCLUDING 2 ACCESSIBLE SPACES F. VAN ACCESSIBLE SPACE NOTED ON PLAN G. ADA COMPLIANCE: NOTED IN KEY NOTE #10	7. BUILDING SIZE: 7,200 SF	8. BUILDING LOT COVERAGE: 7,200 SF / 51,302 SF = 0.140 OR 14.0%	9. NUMBER OF UNITS: 1	10. NUMBER OF BUILDINGS: 1	11. BUILDING HEIGHT: 17 FT	12. NUMBER OF STORIES: 1	13. SQUARE FOOTAGE PER FLOOR: 7,200 SF/FLOOR	14. ON-SITE DISTURBED AREA: 1.13 ACRES	15. @-SITE DISTURBED AREA: 0.07 ACRES	16. TOTAL IMPERVIOUS AREA: 30,330 SF	17. TOTAL IMPERVIOUS PERCENTAGE: 59.1%	18. EXISTING IMPERVIOUS AREAS: 19,449 SF BUILDINGS: 4,497 SF PAVEMENT: 15,002 SF	20. ONSITE IMPERVIOUS CALCULATIONS: BUILDING: 7,210 SF SIDEWALKS: 739 SF PARKING/DRIVING AREAS: 22,101 SF CONCRETE/ASPHALT STREETS: N/A OTHER (DUMPSTER PAD): 280 SF TOTAL: 30,330 SF	21. NEW OFFSITE IMPERVIOUS AREAS: NEW DRIVEWAY APRON: 299 SF NEW SIDEWALK: 35 SF TOTAL: 334 SF	22. LANDSCAPING CALCULATIONS: STREET YARD LANDSCAPING: MARKET STREET (PRIMARY STREET YARD) 134 LF x 34 LF (DRIVEWAY) x 25 (MULTIPLIER) = 2,500 SF STREET YARD PROVIDED: 2,520 SF REQUIRED PLANTINGS: 2,520 SF / 600 SF / TREE = 4.2 OR 4 CANOPY TREES 2,520 SF / 600 SF / 6 SHRUBS = 25.2 OR 25 SHRUBS PROVIDED PLANTINGS: 4 CANOPY/SHADE TREES (1 EXISTING TREE SAVED) 25 SHRUBS WESTIG DRIVE (SECONDARY STREET YARD) 385 LF x 37.5 LF (STREET YARD OVERLAP) x 12.5 (MULTIPLIER) = 4,344 SF STREET YARD PROVIDED: 4,480 SF REQUIRED PLANTINGS: 4,480 SF / 600 SF / TREE = 7.5 OR 8 CANOPY TREES 4,480 SF / 600 SF / 6 SHRUBS = 44.8 OR 45 SHRUBS PROVIDED PLANTINGS: 8 CANOPY/SHADE TREES 45 SHRUBS TOTAL STREET YARD PROVIDED: 7,000 SF TOTAL IMPERVIOUS AREA IN STREET YARD: 165 SF TOTAL IMPERVIOUS PERCENTAGE IN STREET YARD = 2.4%
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**SITE GENERAL NOTES:**

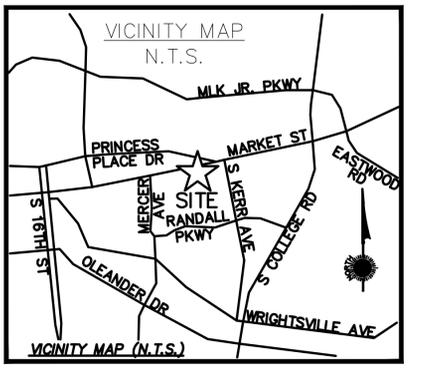
- REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
- ALL SITE DIMENSIONS TO THE GUTTER LINE OF CURB, CONCRETE OR PROPERTY LINE UNLESS OTHERWISE NOTED. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS BY DETAILED INSPECTION PRIOR TO SUBMITTING BID AND STARTING CONSTRUCTION.
- COORDINATE WORK WITH OTHER SITE RELATED DEVELOPMENT DRAWINGS.
- REFER TO STRUCTURAL PLANS FOR DEVELOPMENT OF SIDEWALKS ADJACENT TO FOUNDATIONS.
- ALL CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH CURRENT CITY OF WILMINGTON STANDARDS, SPECIFICATIONS AND DETAILS.
- ALL PERMITS RELATING TO THIS PROJECT MUST BE OBTAINED PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL VERIFY LAYOUT AND CONTACT ENGINEER WITH ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- ACCESSIBLE CURB CUT RAMP SHALL BE PROVIDED WHERE SIDEWALKS INTERSECT CURBING. ALL CURB CUT RAMP DETAILS SHALL CONFORM TO AND REFERENCE THE NC STATE ACCESSIBILITY CODE. CURB CUT RAMPS WITHIN THE R/W SHALL CONFORM TO NCDOT STANDARDS AND SPECIFICATIONS.
- ALL HVAC UNITS, MECHANICAL EQUIPMENT & SATELLITE DISHES ON THIS SITE WILL BE SCREENED.
- PAINTED TRAFFIC ARROWS AND ALL SIGNS, PAVEMENT MARKINGS, ETC. SHALL CONFORM TO M.U.T.C.D. STANDARDS.
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE POINTS.
- GENERAL CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL UTILITY COMPANIES INVOLVED IN PROJECT AND PAY ALL REQUIRED FEES AND COSTS.
- CONTRACTOR SHALL SEEK APPROVAL FROM ARCHITECT, ENGINEER OR OWNER'S REPRESENTATIVE AND THE CITY OF WILMINGTON PRIOR MAKING ANY CHANGES TO THE PROJECT FROM THE APPROVED PLANS.
- THE EXISTING BUILDING AND HARDSCAPE AREAS ON THIS SITE ARE TO BE REMOVED.
- TACTILE WARNING MATS SHALL BE INSTALLED ON ALL ACCESSIBLE RAMPS.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
- A SIGN SHALL BE PLACED AT THE SOUTHERN BOUNDARY OF THE PROPERTY INDICATING THAT A FUTURE CONNECTION WILL BE OPENED WHEN THE PROPERTY TO THE SOUTH DEVELOPS.

**CITY OF WILMINGTON REQUIRED NOTES:**

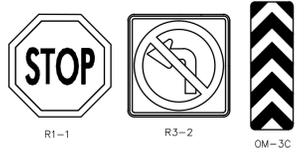
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING TO REQUEST INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
- TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN. ADD A NOTE TO CALL TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
- ANY BROKEN OR MISSING SIDEWALK PANELS WILL BE REPLACED.
- PROJECT SHALL COMPLY WITH CITY OF WILMINGTON CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 343-3910 FOR INFORMATION.
- IF THE CONTRACTOR DESIRES CITY 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 ANY IRRIGATION SYSTEM SUPPLIED BY CITY WATER SHALL COMPLY WITH THE CITY'S CROSS CONNECTION CONTROL REGULATIONS. CALL 343-3910 FOR INFORMATION.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CITY WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCCHR OR ASSE.

**KEY NOTES:**

- CONCRETE PAVING: REFER TO DETAIL 1/C3.
- ALTERNATE #1: ASPHALT PAVING REFER TO DETAIL 2/C3. REFER TO PROJECT MANUAL.
- CONCRETE PAVING: REFER TO DETAIL 1/C3.
- CONCRETE CURB: REFER TO DETAIL 3/C3.
- CONCRETE SIDEWALK ADJACENT TO BUILDING: REFER TO DETAIL 4/C3.
- CONCRETE DOOR LANDING: REFER TO DETAIL 4/C3 AND STRUCTURAL DETAILS. RAMP PAVING AS INDICATED. LANDING CAN BE POURED MONOLITHIC IF CONCRETE PAVING IS USED.
- STEEL BOLLARD: REFER TO DETAIL 6/C3. PROVIDE (2) AT TRASH PAD AND OVERHEAD DOOR. PROVIDE (8) AT SIDEWALK. REFER TO STRUCTURAL PLAN FOR LOCATION.
- HANDICAP PARKING SIGN: REFER TO DETAIL 7/C3.
- CONCRETE HC RAMP: REFER TO DETAIL 8/C4 AND NCDOT STD DETAIL 848.05.
- HANDICAP PARKING SYMBOL: REFER TO DETAIL 5/C3.
- HANDICAP ACCESS UNLOADING ZONE: SLOPE 2% MAX. EACH WAY (ADA COMPLIANT) AND STRIPE AS SHOWN.
- SCREEN FENCE: REFER TO DETAIL 12/C3.
- SCREEN FENCE GATES: REFER TO DETAIL 11/C3.
- CONCRETE WHEEL STOP: MAXIMUM HEIGHT 4" AND DIMENSIONS PER CITY OF WILMINGTON STANDARDS. TO BE PLACED 2.5 FEET FROM END OF PARKING STALL TO FACE OF WHEEL STOP PER CITY OF WILMINGTON STANDARDS. ANCHOR TO PAVING WITH (2) 1"-6" LONG #4 REBAR (TO SIT LEVEL WITH PAVING). REFER TO DETAIL 13/C3.
- PARKING LOT LIGHTING: REFER TO SITE ELECTRICAL PLAN FOR LOCATION AND TYPE.
- LIMITS OF NEW PAVING: MATCH EXISTING PER CITY AND OR STATE STANDARDS.
- ROLL DOWN CURB: TERMINATE AND ROLL DOWN NEW CURB WHERE INDICATED. ROLL DOWN AT 1:2.
- STRIPING: PROVIDE 4" WIDE PARKING LOT STRIPING AS SHOWN. USE HIGHWAY MARKING PAINT - WHITE (2 COATS)
- CURB CUT: SEE PLAN FOR WIDTH OF CURB OPENING. REFER TO DETAIL 8/C3
- SIGN LOCATION: SIGN FURNISHED AND INSTALLED BY OWNER. REFER TO SITE ELECTRICAL PLAN FOR DETAIL.  
NOTE: ALL PORTIONS OF THE SIGN, INCLUDING THE POLE, SHALL BE LOCATED SUCH THAT IT DOES NOT OBSTRUCT THE SIGHT LINES WITHIN THE SIGHT TRIANGLE AT A VERTICAL DISTANCE BETWEEN 10' AND 30' FROM GROUND LEVEL.
- 10' x 70' SIGHT TRIANGLE ILLUSTRATION PER NCDOT STANDARD. ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10' FROM GROUND LEVEL.
- BICYCLE PARKING FOR 6 BICYCLES. SEE DETAIL 9/C3.
- EXISTING TREE TO BE SAVED.
- EXISTING LIVE OAK TREE LOCATED AT THE ENTRANCE OF THE SITE SHALL BE PRUNED IN ACCORDANCE WITH CITY OF WILMINGTON SPECIFICATIONS.
- BMP MAINTENANCE AND ACCESS EASEMENT
- TRAFFIC ARROWS PER CITY OF WILMINGTON STANDARD DETAIL 11-03. ARROWS SHALL BE PAINTED WHITE AND SHALL BE THERMOPLASTIC MATERIAL. SEE DETAIL 3/C4
- 24" WIDE STOP BAR PER CITY OF WILMINGTON STANDARD DETAIL 11-01. SEE DETAIL 2/C4
- STOP SIGN R1-1. SEE DETAIL 4/C4 FOR INSTALLATION REQUIREMENTS.
- CONCRETE DRIVE APRON: TO BE INSTALLED PER CITY OF WILMINGTON STANDARDS. SEE DETAIL 10/C3 AND NCDOT STD. DETAIL 848.03.
- 5' TALL SURFACE MOUNTED CONCRETE MONOLITHIC ISLAND PER DIMENSIONS THIS SHEET AND NCDOT DETAIL 852.01. SEE DETAIL 1/C4.
- OM-3C OBJECT MARKER. SEE DETAIL 4/C4 FOR INSTALLATION REQUIREMENTS.
- NO LEFT TURN SIGN R3-2. SEE DETAIL 4/C4 FOR INSTALLATION REQUIREMENTS.
- EXISTING TREE TO BE REMOVED
- CROSS-ACCESS EASEMENT
- EXISTING CONCRETE SIDEWALK
- STANDARD CONCRETE SIDEWALK REFER TO DETAIL 9/C3 AND NCDOT STD. DETAIL 848.01.
- EXISTING DRIVEWAY TO ADJACENT PROPERTIES
- EXISTING SIGNALLED INTERSECTION
- TACTILE WARNING MAT TO BE PLACED ON EXISTING ACCESSIBLE RAMP PER CITY OF WILMINGTON STANDARDS AND NCDOT STD. DETAIL 848.05.
- 4" WIDE DOUBLE YELLOW THERMOPLASTIC STRIPING AS SHOWN
- DRAINAGE EASEMENT



**SIGN LEGEND:**



**SITE INFORMATION:**

- PROPOSED LINEAR FOOTAGE OF ROADS: N/A
- PROPOSED NEW WATER TAPS: 1
- PROPOSED NEW SEWER TAPS: 1

**SYMBOLS LEGEND**

REFER TO SURVEY FOR EXISTING CONDITION SYMBOLS LEGEND	
	NEW BUILDING CONSTRUCTION
	AREA OF CONCRETE
	AREA OF PAVING
	NEW POLE SIGN LOCATION
	NEW CONCRETE PAVING BLOCK
	NEW LIGHT POLE LOCATION
	NEW FENCE CONSTRUCTION
	EXISTING TREE
	SIGHT TRIANGLE
	FOUNDATION PLANTINGS
	STREET YARD PLANTINGS
	INTERIOR PLANTINGS
	PARKING FACILITY SHADING



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

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Approved Construction Plan  
Name \_\_\_\_\_ Date \_\_\_\_\_  
Planning \_\_\_\_\_  
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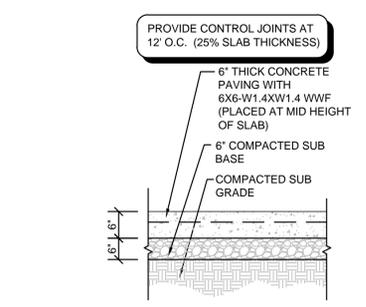
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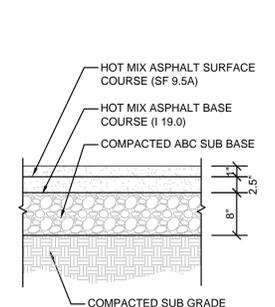


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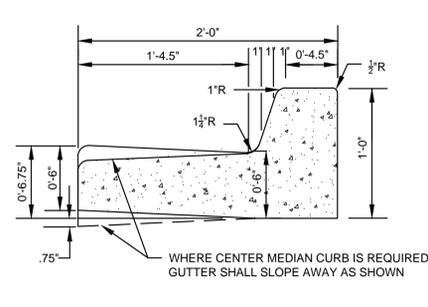
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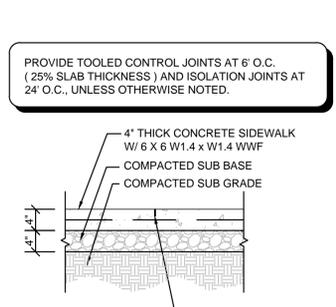
**1 CONCRETE PAVING SECTION**  
C3 SCALE: 3/4" = 1'-0"



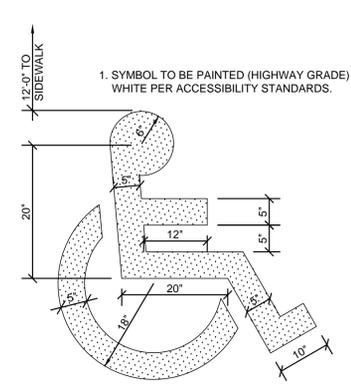
**2 ASPHALT PAVING SECTION**  
C3 SCALE: 3/4" = 1'-0"



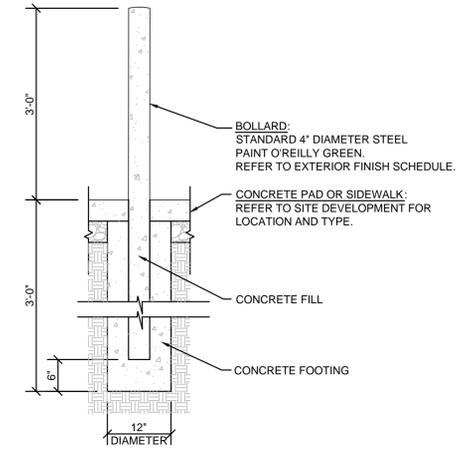
**3 CONCRETE CURB SECTION**  
C3 SCALE: N/A



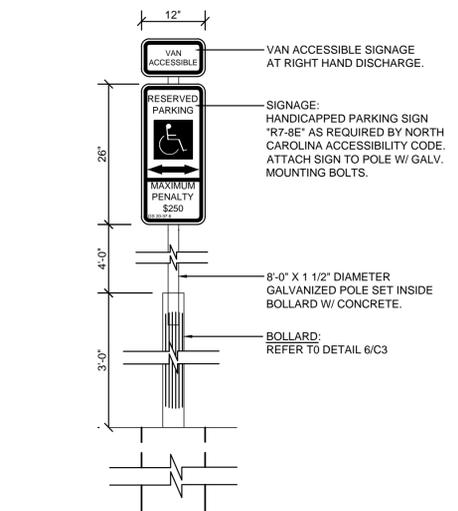
**4 CONCRETE SIDEWALK SECTION**  
C3 SCALE: 3/4" = 1'-0"



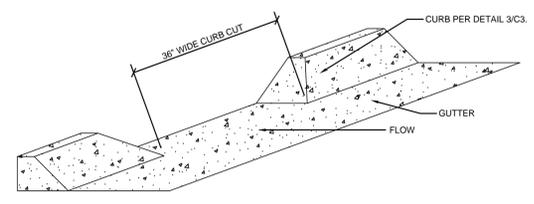
**5 HANDICAP PARKING SYMBOL**  
C3 SCALE: 3/4" = 1'-0"



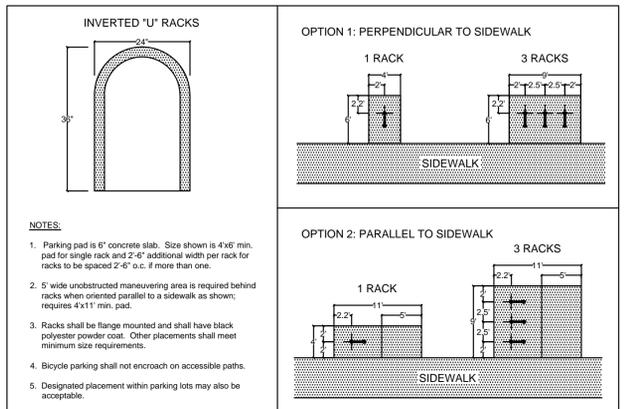
**6 STEEL BOLLARD SECTION**  
C3 SCALE: 3/4" = 1'-0"



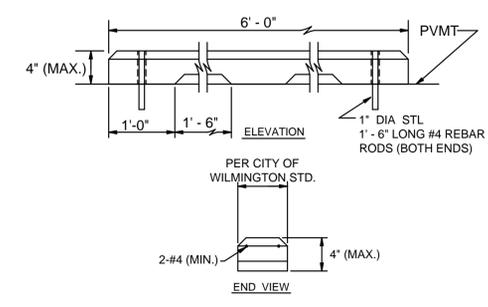
**7 HANDICAP PARKING SIGN**  
C3 SCALE: 3/4" = 1'-0"



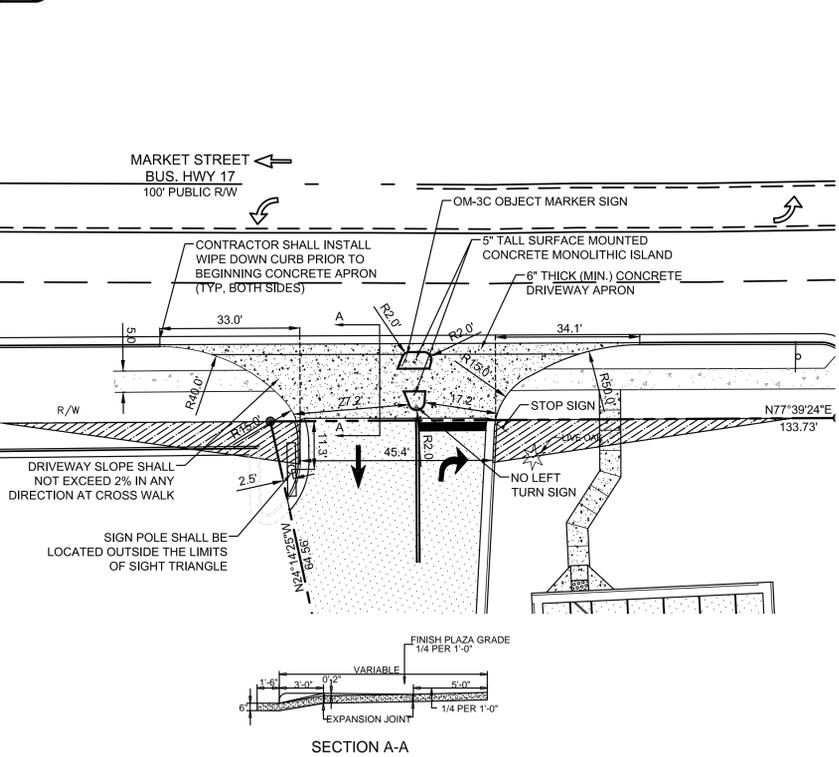
**8 CURB CUT DETAIL**  
C3 SCALE: N/A



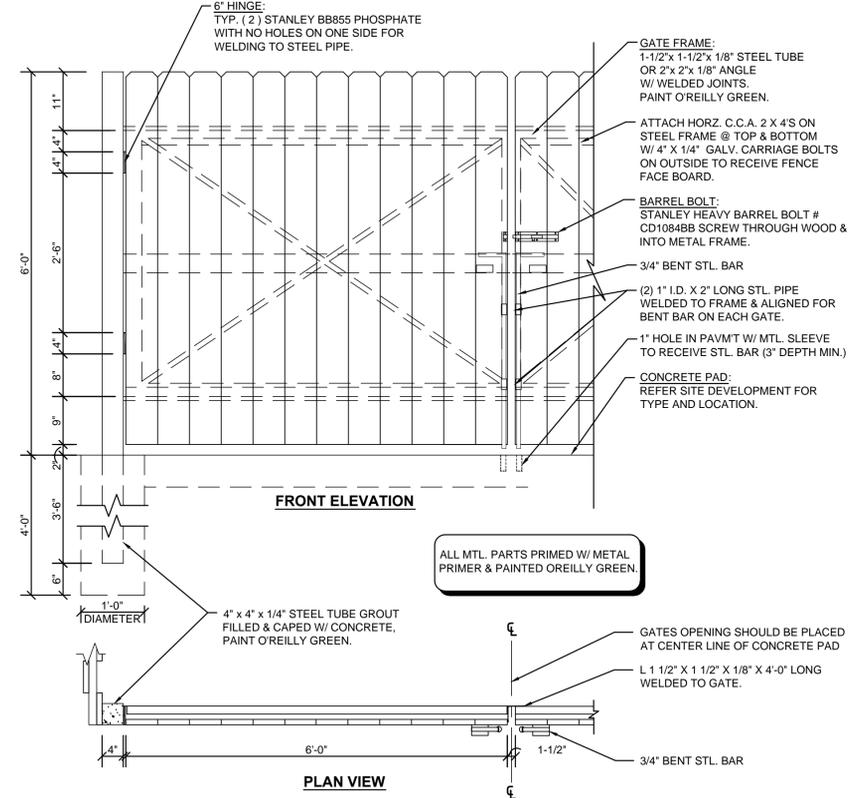
**9 BICYCLE PARKING**  
C3 SCALE: N.T.S.



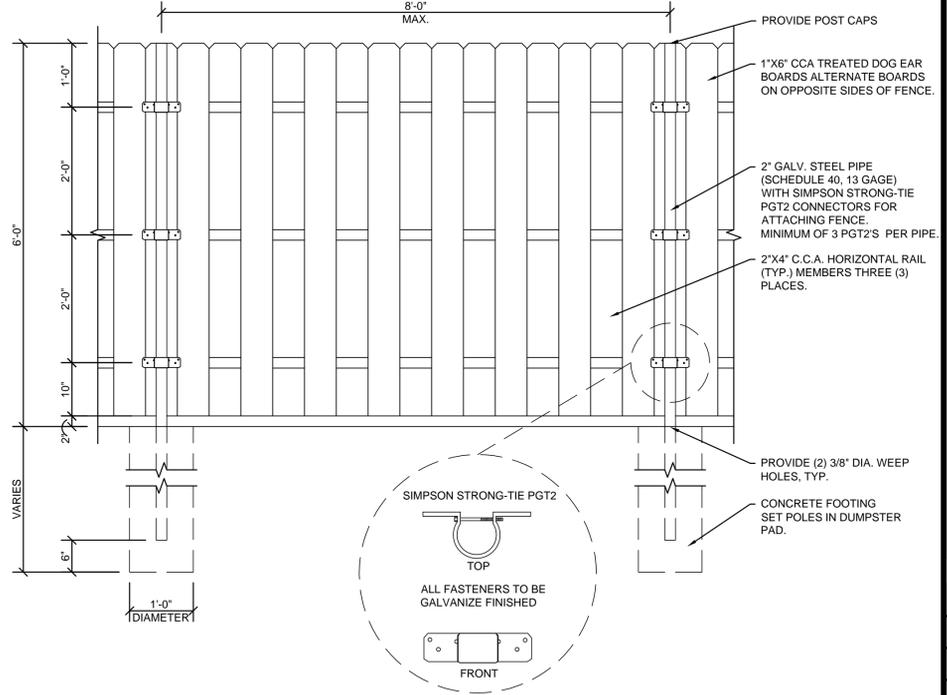
**13 CONCRETE WHEELSTOP**  
C3 SCALE: N.T.S.



**10 DRIVEWAY DETAIL**  
C3 SCALE: 1" = 20"



**11 SCREEN FENCE GATE**  
C3 SCALE: 3/4" = 1'-0"



**12 SCREEN FENCE**  
C3 SCALE: 3/4" = 1'-0"

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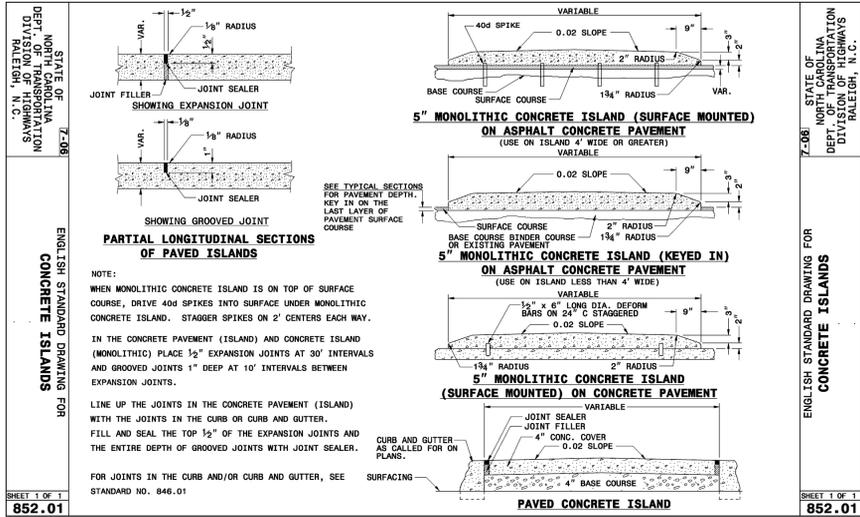
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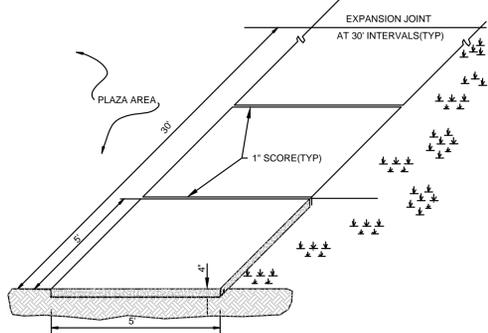
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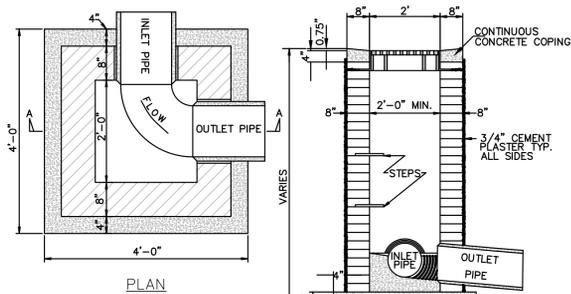
DATE:	09-23-11
REVISION	
DATE:	09-10-12
	04-02-13
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	07-01-13



**1 CONCRETE MONOLITHIC ISLAND**  
 C4 SCALE: NA

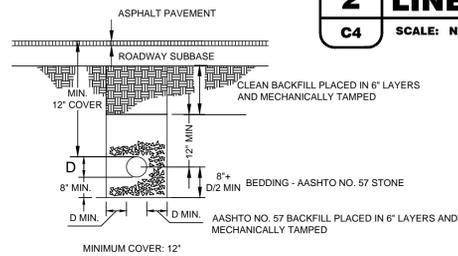


**6 STANDARD SIDEWALK DETAIL SD 8-15**  
 C4 SCALE: NTS

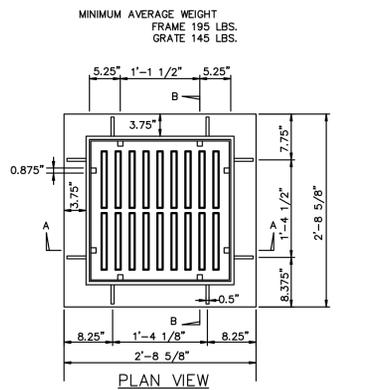
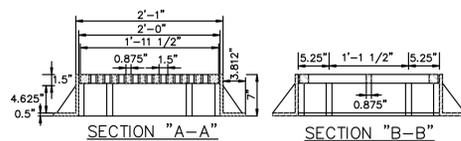


GRILL BASIN SD 2-02 NOT TO SCALE

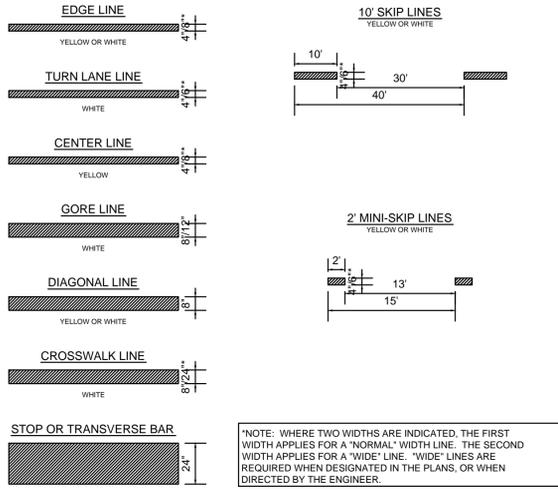
**7 GRILL BASIN DETAILS**  
 C4 SCALE: NTS



**5 STORM DRAINAGE PIPE BEDDING**  
 C4 SCALE: NTS

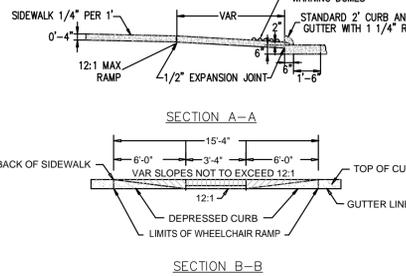
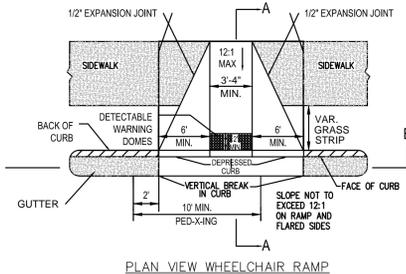


GRILL BASIN CASTINGS SD 14-04 NOT TO SCALE



**PAVEMENT MARKINGS LINE TYPES**  
 SD 11-01

**2 PAVEMENT MARKINGS LINE TYPES**  
 C4 SCALE: NA



**8 CONCRETE HC RAMP SD-11**  
 C4 SCALE: NA

**GENERAL NOTES**

- ALL PAVEMENT MARKING SYMBOLS SHALL BE WHITE IN COLOR
- PAVEMENT MARKING SYMBOLS SHALL NOT BE LOCATED AS TO ENCRUSCH INTO INTERSECTION AREAS.
- ON PORTLAND CEMENT CONCRETE PAVEMENTS, PAVEMENT MARKING SYMBOLS SHALL NOT BE PLACED ACROSS TRANSVERSE EXPANSION JOINTS UNLESS APPROVED BY THE ENGINEER.

**3 PAVEMENT MARKINGS ARROW SYMBOLS**  
 C4 SCALE: NA

**GENERAL NOTES**

- 1. IN ACCORDANCE WITH N.C.G.S. 136-44.14, ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY HANDICAPPED ON EACH SIDE OF ANY STREET OR ROAD, WHERE CURBS AND SIDEWALKS ARE PROVIDED AND AT OTHER MAJOR POINTS OF PEDESTRIAN FLOW.
- 2. WHEELCHAIR RAMPS SHALL BE LOCATED AS INDICATED IN DETAIL DRAWINGS; HOWEVER, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.
- 3. CURB RAMPS SHALL HAVE DETECTABLE WARNING DOMES EXTENDING THE FULL WIDTH OF THE RAMP AND A MINIMUM OF 2'-FT. IN LENGTH.

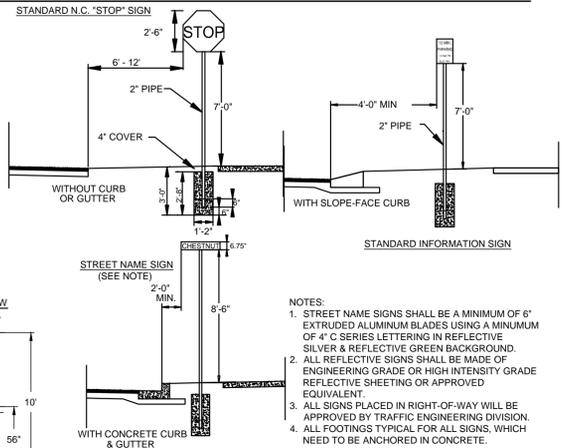
**CONSTRUCTION NOTES**

- 1. CONSTRUCTION SHALL CONFORM WITH CONSTRUCTION STANDARDS OF THE GOVERNING BODY WHICH HAS JURISDICTION OF THE PARTICULAR STREET.
- 2. WHEELCHAIR RAMPS SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE WITH THE SURFACE HAVING A ROUGH, NON-SKID TYPE FINISH.
- 3. A 1/2"-IN. EXPANSION JOINT SHALL BE REQUIRED WHERE THE CONCRETE WHEELCHAIR RAMP JOINS ANY RIGID PAVEMENT OR STRUCTURE.
- 4. IN NO CASE SHALL THE WIDTH OF A CURB RAMP OR CURB CUT BE LESS THAN 40"-IN. (3'-FT. 4"-IN.), NOT INCLUDING THE FLARED SIDES.
- 5. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
- 6. THE MAXIMUM SLOPE ON THE CURB RAMP RUN IS 1:12.
- 7. THE MAXIMUM CROSS SLOPE OF THE CURB RAMP IS 1:50.
- 8. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.
- 9. ANY RAISED ISLANDS IN CROSSINGS SHALL BE CUT THROUGH LEVEL WITH THE STREET OR HAVE CURB RAMPS AT BOTH SIDES AND A LEVEL AREA AT LEAST 48"-IN. LONG BETWEEN THE CURB RAMPS.
- 10. DETECTABLE WARNING DOMES SHALL BE CUT THROUGH TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9"-IN., A HEIGHT OF NOMINAL 0.2"-IN. AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35"-IN. AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

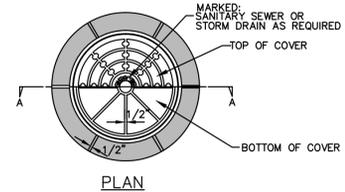
**ADDITIONAL NOTES**

- 1. STOP BARS SHALL BE USED WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT.
- 2. PARKING SHALL BE ELIMINATED A MINIMUM OF 20 FEET BACK OF THE PEDESTRIAN CROSSWALK.
- 3. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION. THIS DOCUMENT IS AVAILABLE FROM THE SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402.
- 4. CURB RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
- 5. THE BOTTOM OF DIAGONAL (CORNER TYPE) CURB RAMPS AT MARKED CROSSINGS SHALL HAVE 48"-IN. MINIMUM CLEAR SPACE WITHIN THE MARKINGS.
- 6. IF DIAGONAL CURB RAMPS HAVE FLARED SIDES, THEY SHALL HAVE AT LEAST A 24"-IN. LONG SEGMENT OF STRAIGHT CURB LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING.

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 www.mckimcreed.com

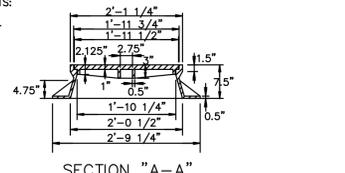


**4 FREESTANDING TRAFFIC DIRECTIONAL SIGN**  
 C4 SCALE: NA

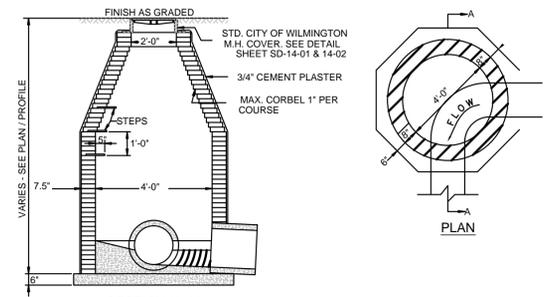


NOTE: RING & COVER CONTACT SURFACES SHALL BE MACHINED SD 30 AS TO INSURE EVEN BEARING OF COVER ON RING.

MINIMUM WEIGHTS:  
 RING 190 LBS.  
 COVER 120 LBS.



**STANDARD MANHOLE RING AND COVER**  
 SD 14-01 NOT TO SCALE



**GUIDELINES FOR STORM DRAIN MANHOLE**  
 SD 2-03 NOT TO SCALE

**\*IMPORTANT NOTE:**

WHERE REQUIRED, CONTRACTOR TO PROVIDE A MANHOLE WITH AN EXTENDED SLUMP PER THE ELEVATIONS LISTED ON SHEET C2. A 2'X2' HOLE SHALL BE MADE IN THE BOTTOM OF THE MANHOLE AND FILLED WITH WASHED STONE TO PREVENT HOLDING WATER OVER LONG PERIODS.

**9 STORM DRAINAGE MANHOLE DETAILS**  
 C4 SCALE: NTS



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New O'Reilly Auto Parts Store:  
 O'REILLY AUTO PARTS  
 4014 MARKET STREET  
 WILMINGTON, NC

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 233 SOUTH PATTERSON  
 SPRINGFIELD, MISSOURI 65802  
 417-862-2874 PHONE

COMM #	3168
DATE:	09-23-11
REVISION	
DATE:	09-10-12
	04-02-13
	04-19-13
	05-01-13
	07-01-13

**RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING**

**SEEDING MIXTURE**  
**SPECIES** **RATE (lb/acre)**  
 RYE (GRAIN) 120  
 ANNUAL LESPEDEZA (KOBÉ IN  
 PIEDMONT & COASTAL PLAIN,  
 KOREAN IN MOUNTAINS) 50

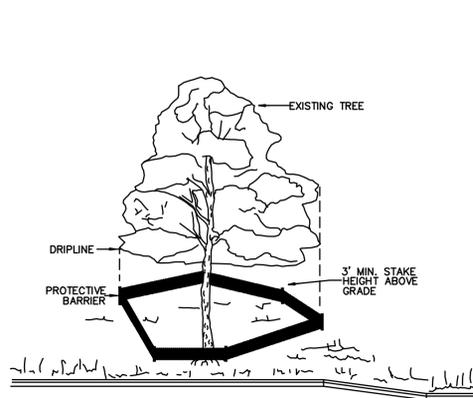
OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE

**SEEDING DATES:**  
 MOUNTAINS (ABOVE 2,500'): FEB. 15 - MAY 15  
 (BELOW 2,500'): FEB. 1 - MAY 1  
 PIEDMONT: JAN. 1 - MAY 1  
 COASTAL PLAIN: DEC. 1 - APR. 15

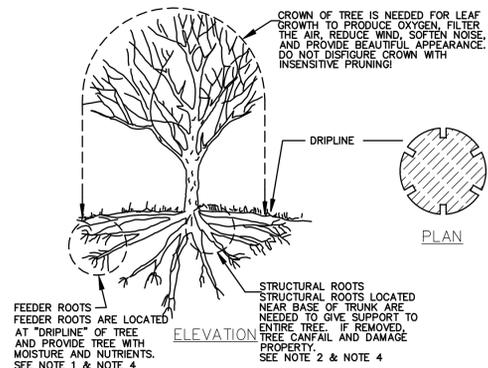
**SOIL AMENDMENTS:**  
 FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10-10-10 FERTILIZER

**MULCH:**  
 APPLY 4,000 lb/acre STRAW. ANCHOR STRAW BY TACKLING 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.



**NOTE:**  
 TREES TO BE SAVED WILL BE CLEARLY MARKED PRIOR TO CONSTRUCTION AND A PROTECTIVE BARRIER IS TO BE INSTALLED AT THE DRIPLINE.  
 DRIP LINE - THE AREA OF SOIL DIRECTLY BENEATH THE TREE EXTENDING OUT TO THE TIPS OF THE OUTERMOST BRANCHES.

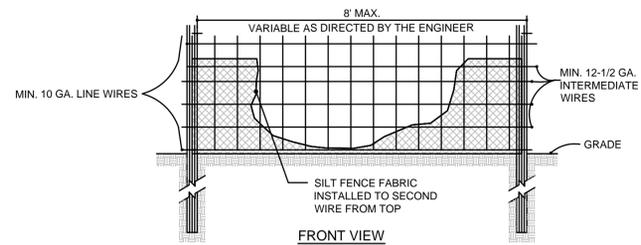


**FEEDER ROOTS** - FEEDER ROOTS ARE LOCATED AT "DRIPLINE" OF TREE AND PROVIDE TREE WITH MOISTURE AND NUTRIENTS. SEE NOTE 1 & NOTE 4

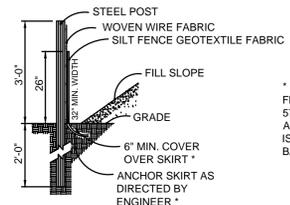
**STRUCTURAL ROOTS** - STRUCTURAL ROOTS LOCATED NEAR BASE OF TRUNK ARE NEEDED TO GIVE SUPPORT TO ENTIRE TREE. IF REMOVED, TREE CAN FAIL AND DAMAGE PROPERTY. SEE NOTE 2 & NOTE 4

**CROWN OF TREE** IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND, SOFTEN NOISE AND PROVIDE BEAUTIFUL APPEARANCE. DO NOT DISFIGURE CROWN WITH INSENSITIVE PRUNING!

**NOTE:**  
 -USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW  
 -END OF SILT FENCE NEEDS TO BE TURNED UPHILL.



FRONT VIEW



SIDE VIEW

**NOTE:**

-USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW  
 -END OF SILT FENCE NEEDS TO BE TURNED UPHILL.

\* FOR REPAIR OF SILT FENCE FAILURES, USE No. 57 WASHED STONE. FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

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 e-mail: architect@esterlyschneider.com

**RECOMMENDATIONS FOR SUMMER**

**SEEDING MIXTURE**  
**SPECIES** **RATE (lb/acre)**  
 GERMAN MILLET 40

IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 lb/acre.

**SEEDING DATES:**  
 MOUNTAINS MAY 15 - AUG. 15  
 PIEDMONT: MAY 1 - AUG. 15  
 COASTAL PLAIN: APR. 15 - AUG. 15

**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 TACKLING 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.

**RECOMMENDATIONS FOR FALL**

**SEEDING MIXTURE**  
**SPECIES** **RATE (lb/acre)**  
 RYE (GRAIN) 120

**SEEDING DATES:**  
 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 TACKLING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

**MAINTENANCE:**  
 REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 lb/acre OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 lb/acre KOBÉ (PIEDMONT AND COASTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

**1 TEMPORARY SEEDING SCHEDULE**

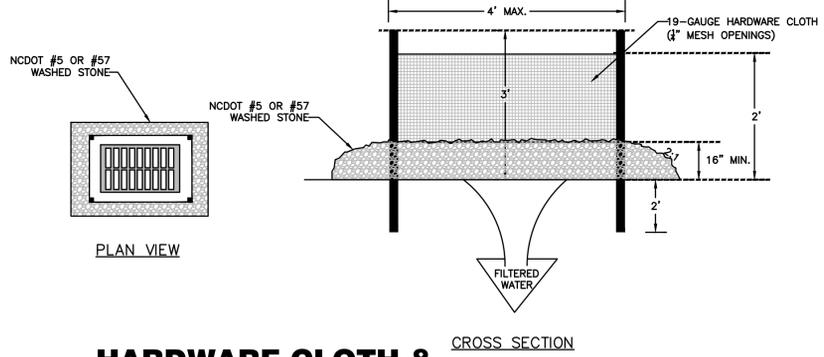
**C5 SCALE: N/A**

**2 TREE PROTECTION FENCING**

**C5 SCALE: N/A**

**NOTES:**

- UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
- DRIVE 5-FOOT 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 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
- PLACE CLEAN GRAVEL (NC DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 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.



PLAN VIEW

CROSS SECTION

**3 HARDWARE CLOTH & GRAVEL INLET PROTECTION**

**C5 SCALE: N/A**

- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
- RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
- REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW\*).
- CONTINUE TILLAGE UNTIL A WELL - PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
- SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
- INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON. IF POSSIBLE, IF STAND SHOULD BE OVER 60% DAMAGED REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
- CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

\* APPLY: AGRICULTURAL LIMESTONE - 2 TONS/ACRE OR 3 TONS/ACRE IN CLAY SOILS/FERTILIZER - 1000 LBS/ACRE (10-10-10) SUPERPHOSPHATE - 500 LBS/ACRE (20%) MULCH - 2 TONS/ACRE (SMALL GRAIN STRAW)ANCHOR - ASPHALT EMULSION AT 450 GAL./ACRE

**5 SEEDBED PREPARATION**

**C5 SCALE: N/A**

**6 PERMANENT SEEDING SCHEDULE**

**C5 SCALE: N/A**

**RECOMMENDATIONS FOR GENTLE SLOPES/LOW MAINTENANCE**

**SEEDING MIXTURE**  
**SPECIES** **RATE (lb/acre)**  
 KY TALL FESCUE 100

**NURSE PLANTS:**  
 BETWEEN APR 15 AND AUG. 15, ADD 10 lb/acre GERMAN MILLET OR 15 lb/acre SUDANGRASS. PRIOR TO APR OR AFTER AUG. 15, ADD 40 lb/acre RYE (GRAIN)

**SEEDING DATES:**  
 COASTAL PLAIN SEPT. 30 - MAR. 15

**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 TACKLING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

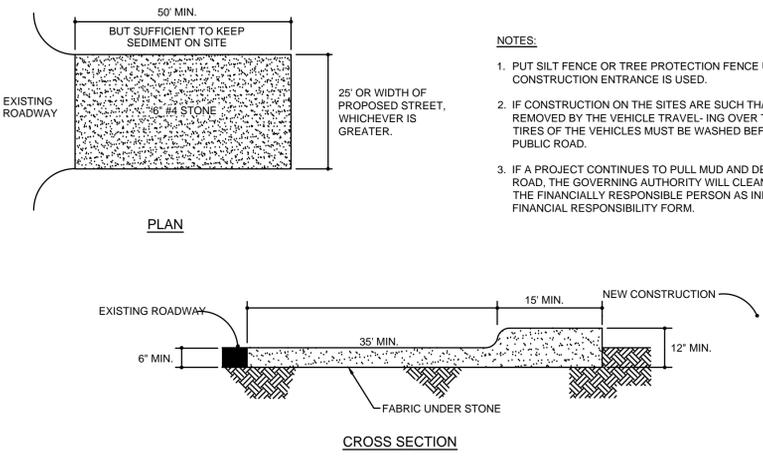
**MAINTENANCE:**  
 REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS FULLY ADEQUATE. MAY BE MOVED ONCE OR TWICE A YEAR, BUT MOVING IS NOT NECESSARY. RESEED, FERTILIZE AND MULCH DAMAGED AREAS IMMEDIATELY.

**8 EROSION CONTROL MAINTENANCE PLAN**

**C5 SCALE: NTS**

**4 TEMPORARY SILT FENCE**

**C4 SCALE: NTS**



PLAN

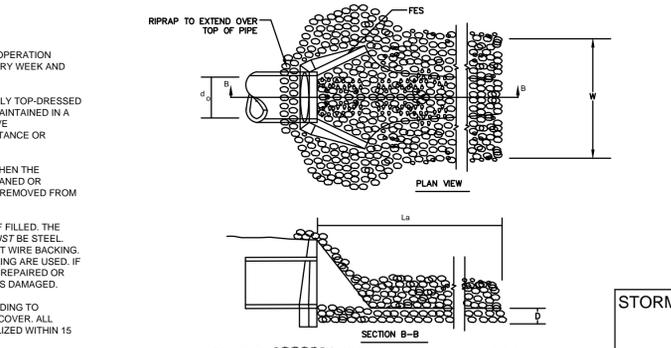
CROSS SECTION

**NOTES:**

- PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
- IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVEL-ING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
- IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.

**7 TEMPORARY CONSTRUCTION ENTRANCE**

**C5 SCALE: NTS**



PLAN VIEW

SECTION B-B

OUTLET No.	D <sub>o</sub> (IN.)	L <sub>a</sub> (FT.)	W (FT.)	DEPTH (FT.)	LINING (IN.)	CLASSIFICATION
OUTLET #5	15	5.0	3.75	12		CLASS A
OUTLET #9	12	4.0	3.0	12		CLASS A
FES #10	12	4.0	3.0	12		CLASS A

**9 RIPRAP OUTLET PROTECTION**

**C5 SCALE: NTS**

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

Approved Construction Plan  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

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COMM # 3168

DATE: 09-23-11

REVISION DATE: 04-02-13

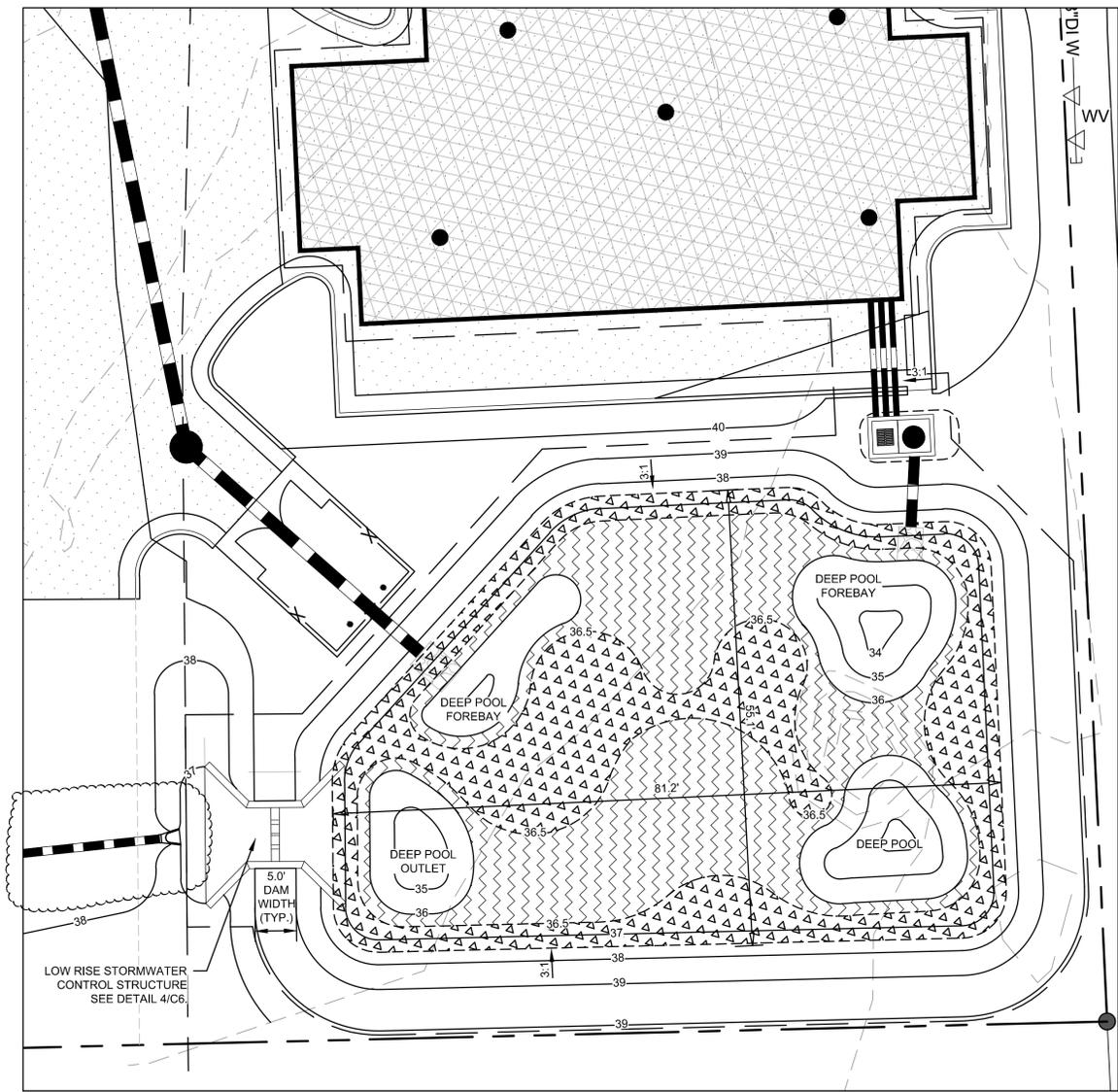
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05-01-13

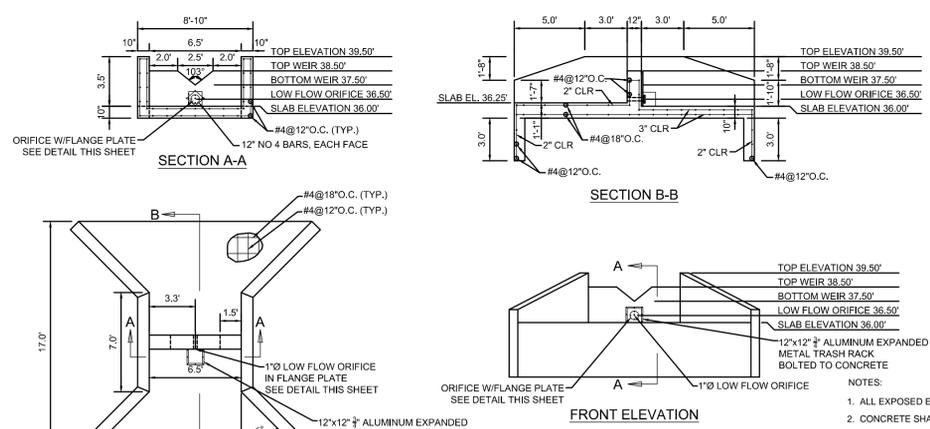
07-01-13

03-27-15

C5 of 7



**1 STORMWATER WETLAND BASIN PLAN VIEW**  
C6 SCALE: 1" = 10'-0"



**4 LOW RISE STORMWATER CONTROL STRUCTURE**  
C6 SCALE: N/A

**DEEP POOL ZONE: ALLOWABLE PLANT SPECIES (ELEVATION 33.5' - 36.0')**

COMMON NAME	BOTANICAL NAME	DEPTH RANGE (INCHES BELOW NORMAL POOL)	SPACING (O.C., FT)	QUANTITY	PERCENTAGE	SIZE
SPATTERDOCK	NYMPHAEA POLYSPALUM	6-18	5	25	33%	2 IN PLUG (MIN)
FRAGRANT WHITE LILY	NYMPHAEA LUTEA	6-18	5	25	33%	2 IN PLUG (MIN)
AMERICAN LOTUS	NELUMBO LUTEA	6-18	5	25	33%	2 IN PLUG (MIN)

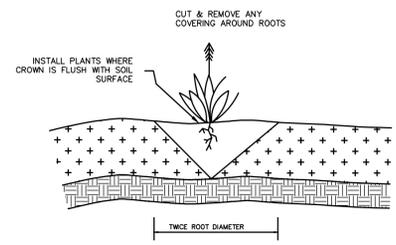
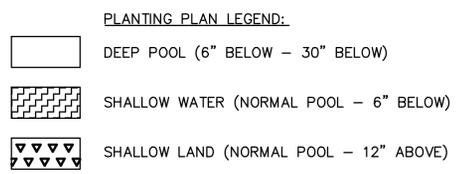
**SHALLOW WATER ZONE: ALLOWABLE PLANT SPECIES (ELEVATION 36.0' - 36.5')**

COMMON NAME	BOTANICAL NAME	DEPTH RANGE (INCHES BELOW NORMAL POOL)	SPACING (O.C., FT)	QUANTITY	PERCENTAGE	SIZE
ARROW ARUM	PELTANDRA VIRGINICA	0-6	2.0	40	10%	PINT
PICKERELWEED	PONTERDERIA CORDATA	0-6	2.0	40	10%	2 IN PLUG (MIN)
DUCK POTATO	SAGITTARIA LATIFOLIA	0-6	2.0	40	10%	BARE ROOT
SOFTSTEM BULRUSH	SCHEUCHZERIA TABERNAMONTANI	0-6	2.0	40	10%	2 IN PLUG (MIN)
SWEETFLAG	ACORUS CALAMUS	0-6	2.0	40	10%	BARE ROOT
THREE WAY SEDGE	DULICHUM ARUNDINACEUM	0-6	2.0	40	10%	BARE ROOT
SPIKERUSH	ELEOCHARIS OBTUSA	0-6	2.0	40	10%	2 IN PLUG (MIN)
SOUTHERN BLUE FLAG IRIS	IRIS VIRGINICA	0-6	2.0	40	10%	2 IN PLUG (MIN)
LIZARD'S TAIL	SAURURUS CERNUJUS	0-6	2.0	40	10%	3 IN PLUG (MIN)
SOFT RUSH	JUNCUS EFFUSUS	0-6	2.0	40	10%	2 IN PLUG (MIN)

**SHALLOW LAND ZONE: ALLOWABLE PLANT SPECIES (ELEVATION 36.5' - 37.5')**

COMMON NAME	BOTANICAL NAME	DEPTH RANGE (INCHES ABOVE NORMAL POOL)	SPACING (O.C., FT)	QUANTITY	PERCENTAGE	SIZE
SWAMP MILKWEED	ASCLEPIAS INCARNATA	0-12	2.0	37	9.0%	2 IN PLUG (MIN)
FRINGED SEDGE	CAREX CRINITA	0-12	2.0	37	9.0%	2 IN PLUG (MIN)
GREAT BLADDER SEDGE	CAREX INTUMESCENS	0-12	2.0	37	9.0%	2 IN PLUG (MIN)
HOP SEDGE	CAREX LUPULINA	0-12	2.0	37	9.0%	2 IN PLUG (MIN)
SHALLOW SEDGE	CAREX LURIDA	0-12	2.0	37	9.0%	2 IN PLUG (MIN)
SCARLET ROSE MALLOW	HIBISCUS COCCINEUS	0-12	2.0	37	9.0%	2 IN PLUG (MIN)
ROSE MALLOW	HIBISCUS MOSCHEUTOS	0-12	2.0	37	9.0%	2 IN PLUG (MIN)
SPIDER LILY	HYMENOCALLIS EULAE	0-12	2.0	37	9.0%	2 IN PLUG (MIN)
SWAMP LILY	CRINUM ERUBESCENS	0-12	2.0	37	9.0%	2 IN PLUG (MIN)
CARDINAL FLOWER	LOBELIA CARDINALIS	0-12	2.0	37	9.0%	2 IN PLUG (MIN)
SWAMP SUNFLOWER	HELIANTHUS ANGSTIFOLIUS	0-12	2.0	37	9.0%	2 IN PLUG (MIN)

**2 STORMWATER WETLAND PLANTING SCHEDULE AND NOTES**  
C6 SCALE: N/A



**3 PLANTING DETAIL**  
C6 SCALE: NTS

**GENERAL PLANTING NOTES:**

1. AVOID COMPACTING TOPSOIL TO PROMOTE HEALTHY ENVIRONMENTAL CONDITIONS FOR THE PLANTS.
2. PLANTS OF THE SAME SPECIES SHOULD BE PLANTED IN CLUSTERS, THESE CLUSTERS SHOULD CONTAIN MIN. 4-6 PLANTS OF THAT SPECIES.
3. ALL PLANTS SHOULD BE PLANTED IN THE INDICATED RANGE TO ENSURE SURVIVAL.
4. AVOID PLANTING INDIVIDUAL SPECIES IN LARGE GROUPS BY SPACING CLUSTERS A MIN. OF 5' APART.
5. SHALLOW WATER AND SHALLOW LAND AREAS TO BE PLANTED WITH BARE ROOT, PLUGS, OR CONTAINER LIVE PLANTINGS AS SPECIFIED.
6. EXCAVATE A HOLE TWICE THE DIAMETER OF ROOT BALL AND EQUAL TO THE ROOT DEPTH OF THE INDIVIDUAL PLANT. PLACE PLANT IN HOLE WITH CROWN FLUSH WITH SOIL SURFACE. BACKFILL WITH TOPSOIL AND LIGHTLY PLANT.
7. BEGIN PLANTING DURING LOCAL GROWING SEASON IN ORDER TO ENSURE THAT PLANTS HAVE ADEQUATE TIME TO ESTABLISH BEFORE WINTER MONTHS.
8. OBTAIN PLANTS FROM: COASTAL PLAIN CONSERVATION NURSERY (252-482-5707), MELLOW MARSH FARMS (919-742-1200), CURE NURSERY (919-542-6186) OR ENGINEER APPROVED SUBSTITUTE.

**SHALLOW WATER PLANTING NOTES:**

1. 70% OF SOFT STEM BULRUSH SHOULD BE PLANTED WITHIN 3-4 INCHES BELOW NORMAL POOL.
2. 70% OF PICKERELWEED AND 70% OF ARROW ARUM SHOULD BE PLANTED WITHIN 5-6 INCHES BELOW NORMAL POOL.
3. SEDGES SHOULD BE PLANTED WITHIN 0-2 INCHES BELOW NORMAL POOL.
4. 70% OF SWEETFLAG, 70% OF LIZARDS TAIL, AND 70% OF SOUTHERN BLUE FLAG IRIS SHOULD BE PLANTED IN THE 2-3 INCHES BELOW NORMAL POOL.
5. 70% OF SOFT RUSH SHOULD BE PLANTED AT THE NORMAL POOL ELEVATION.

**SHALLOW LAND PLANTING NOTES:**

1. PLANTS IN THIS GROUP SHOULD NOT BE PLANTED IN AREAS THAT ARE INUNDATED FOR EXTENDED PERIODS.
2. 70% OF CARDINAL FLOWER AND 70% OF BLUE LOBELIA SHOULD BE PLANTED WITHIN 0-1 INCH OF THE NORMAL POOL ELEVATION.

**DEEP POOL PLANTING NOTES:**

1. ENSURE ALL PLANTS ARE PLACED IN WATER NO DEEPER THAN 24 INCHES BELOW NORMAL POOL.

**GRADING PLAN NOTES:**

1. WETLAND SHALL BE STABILIZED WITHIN 14 DAYS OF CONSTRUCTION
2. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING AND PROTECTION OF EXISTING ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES. ANY AND ALL MAINS OR INDIVIDUAL SERVICES LINES PRESENTLY IN SERVICE WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL EXPENSE TO THE UTILITY OWNER.
3. CONTRACTOR SHALL KEEP ALL PARKING AREAS AND STREETS ADJACENT TO THE CONSTRUCTION SITE CLEAN AND OPEN AT ALL TIMES DURING CONSTRUCTION.
4. ALL SHALLOW WATER AND SHALLOW LAND AREAS WITHIN THE WETLAND CELL SHALL BE TOP DRESSED WITH A MINIMUM OF 12 IN OF TOPSOIL.
5. ALL ITEMS WHICH ARE SHOWN FOR REMOVAL SHALL BE REMOVED FROM THE CONSTRUCTION SITE AND LEGALLY DISPOSED OF OFF SITE.
6. ALL CONSTRUCTION TO BE PERFORMED IN ACCORDANCE WITH CURRENT CITY OF JACKSONVILLE STANDARDS, SPECIFICATIONS AND DETAILS; UNLESS OTHERWISE INDICATED ON PLANS.
7. CONTRACTOR SHALL AT ALL TIMES MAINTAIN ADEQUATE SAFETY MEASURES, ACTIVITIES, AND BARRICADES FOR THE PROTECTION OF ALL PERSONS ON OR ABOUT THE LOCATION OF THE SITE.
8. GRADE TO ELEVATIONS AND DIMENSIONS SHOWN ON DRAWINGS. ELEVATIONAL GRADING TOLERANCE IS ±0.1 FT.
9. NO GRADING IS TO OCCUR IN THE DEEP POOL AREAS BEYOND THE SPECIFIED GRADING LIMITS.

**TOPSOIL SPECIFICATION:**

1. TOPSOIL TO BE ADDED TO TOP OF WETLAND SHELF IS TO MEET CRITERIA SPECIFIED BELOW.
2. TOPSOIL SHALL BE WELL MIXED, FREE OF TRASH AND DEBRIS, UNCOMPACTED, AND VOID OF LARGE STONES (>2 INCHES) AND WOODY MATERIAL (>3 INCHES).
3. TOPSOIL SHALL MEET THE FOLLOWING SPECIFICATIONS:  
SOIL TYPE: CLAY < 60%, SAND < 80%, SILT < 80%  
ORGANIC CONTENT: 5-8%  
P-I: 20-50  
PH: 6.0-7.0
4. IN THE EVENT THAT SELECTED TOPSOIL DOES NOT MEET SPECIFICATION LISTED ABOVE, SOIL CAN BE AMENDED BY ADDITION OF APPROPRIATE MATERIALS (MASON SAND OR MATURE STABLE COMPOST, OR LIME).
5. UPON PLACEMENT OF TOPSOIL, AREA SHOULD BE LIGHTLY COMPACTED TO ENSURE STABILIZATION OF MATERIAL.
6. EXCESSIVE TRAFFICKING OF EQUIPMENT OVER WETLAND PLANTING AREAS SHOULD BE AVOIDED.
7. MINIMUM DEPTH OF TOPSOIL SHOULD BE 12 INCHES.

**EARTHWORK SPECIFICATIONS**

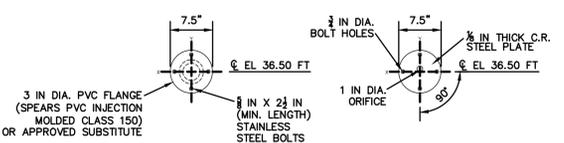
1. GRADE TO ELEVATIONS AND DIMENSIONS SHOWN ON DRAWINGS. GRADED ELEVATIONAL TOLERANCE SHALL BE ±0.1 FT.
2. TOPSOIL MATERIAL SHALL BE APPROVED BY ENGINEER PRIOR TO USE BASED ON SOIL PROPERTY TEST SUBMITTALS THAT INCLUDE STANDARD TEST METHOD FOR PARTICLE-SIZE ANALYSIS (ASTM D422), PARTICLE SIZE ANALYSIS OF SOILS (AASHTO T88), AND NCDCA SOIL ANALYSIS.
3. INSTALL FINAL COVER IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS WHERE APPLICABLE.

**CLAY LINER SPECIFICATION:**

IN ORDER TO HELP SUSTAIN THE PERMANENT POOL AND TO PREVENT WATER FROM INFILTRATING TOO QUICKLY INTO THE UNDERLYING SOIL, THE CONTRACTOR SHALL INSTALL A 6" THICK CLAY LINER ON THE BOTTOM OF THE STORMWATER WETLAND AREA UP TO ELEVATION 36.50. THE LINER CAN BE ACCOMPLISHED BY BLENDING EXISTING SITE SOILS WITH CLAY TO ACHIEVE A LOW PERMEABILITY MIXTURE OR BY INSTALLING A GEOSYNTHETIC LINER MADE OF A BENTONITE CL. IF THE CONTRACTOR CHOOSES TO BLEND THE EXISTING SITE SOILS WITH CLAY, THE ONSITE GEOTECHNICAL ENGINEER SHALL DETERMINE THE AMOUNT OF CLAY TO ADD, THE DEGREE OF COMPACTON, AND WILL OVERSEE THE INSTALLATION OF THE CLAY LINER. THE MAXIMUM PERMEABILITY RATE FOR THE LINER SHALL BE 0.72 CM/DAY. THE PROPOSED MATERIAL FOR THIS LINER SHALL BE TESTED BY THE ONSITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. THE RESULTS OF THIS TESTING SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW PRIOR TO PLACEMENT. UPON COMPLETION OF LINER INSTALLATION, A LAYER OF TOPSOIL MAY BE ADDED OVER THE LINER TO PROVIDE A HEALTHY MEDIA FOR VEGETATION GROWTH.



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**5 ORIFICE FLANGE & PLATE DETAIL**  
C6 SCALE: NTS

- NOTES:
1. ALL EXPOSED EDGES TO HAVE 3/4" X 3/4" CHAMFER OR AS DIRECTED
  2. CONCRETE SHALL BE fc=3000 PSI @ 28 DAYS
  3. REINFORCING STEEL SHALL BE ASTM A-615 GRADE 60
  4. WEIR CONTROL SECTION SHALL BE SIZED FOR APPROPRIATE CONTROL OF DISCHARGE RATES



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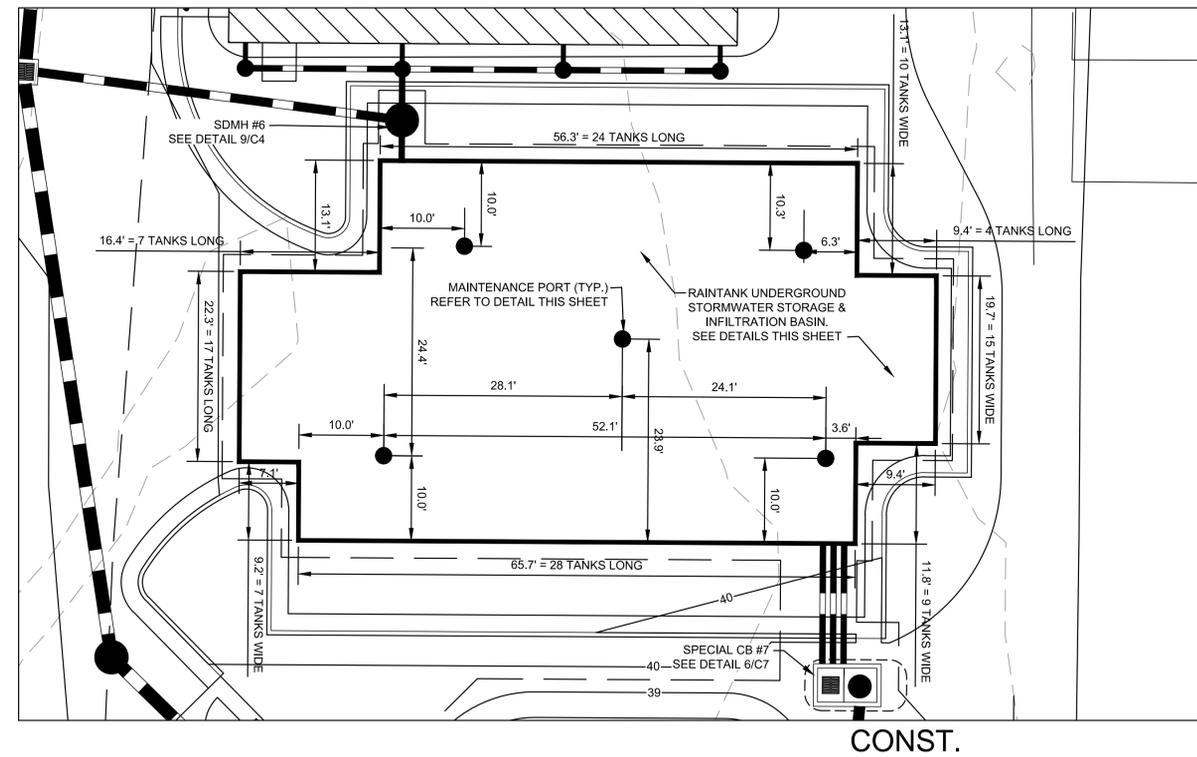
New O'Reilly Auto Parts Store:  
**O'REILLY AUTO PARTS**  
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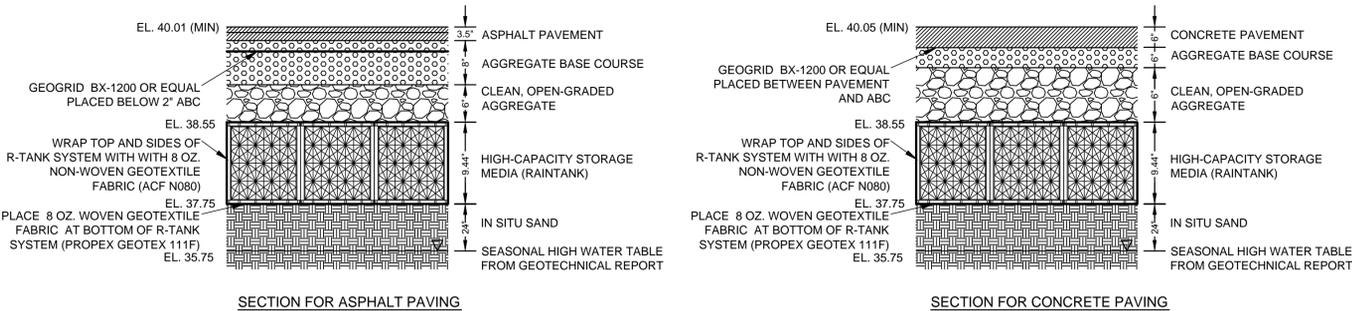
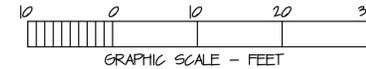
Approved Construction Plan  
Name \_\_\_\_\_ Date \_\_\_\_\_  
Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

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

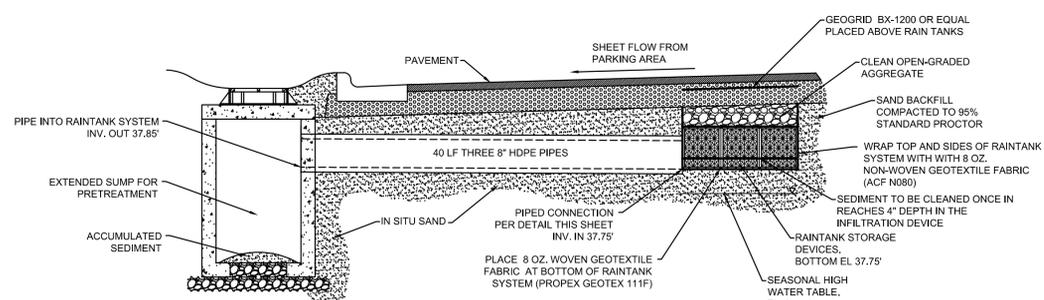
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	04-19-13
	05-01-13
	07-01-13
	03-27-15



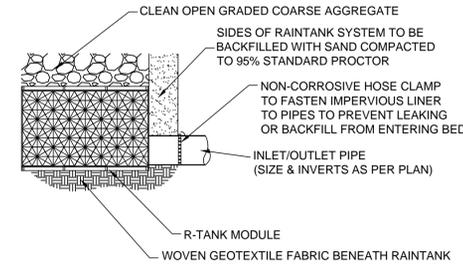
**1 UNDERGROUND INFILTRATION BASIN PLAN VIEW**  
 C7 SCALE: 1" = 10'-0"



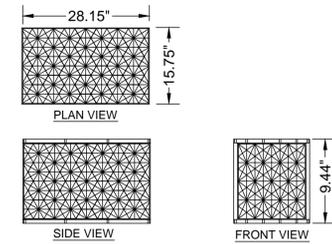
**2 STORMWATER STORAGE BED SECTION**  
 C7 SCALE: NTS



**8 INFILTRATION BASIN AND PRETREATMENT SECTION**  
 C7 SCALE: 1" = 3'-0"

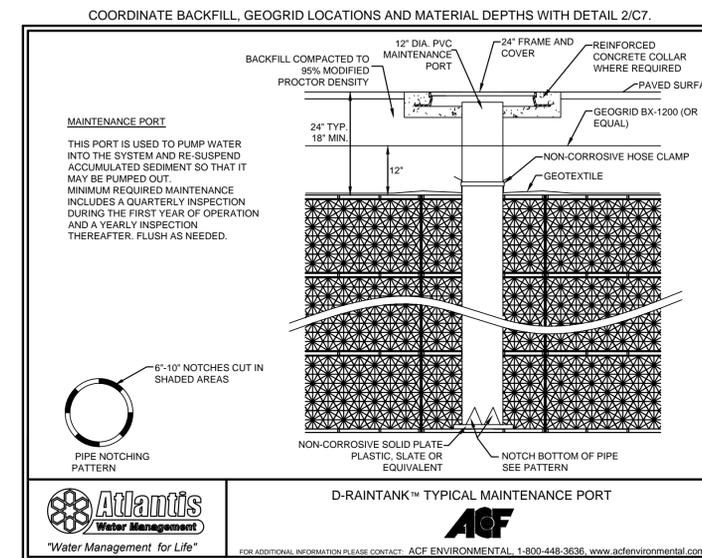


**3 PIPE CONNECTION DETAIL**  
 C7 SCALE: NTS

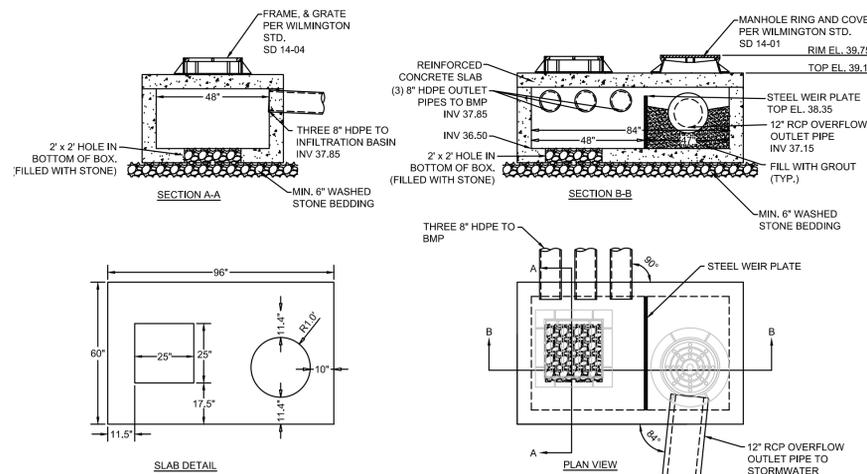


ATLANTIS MATRIX MINI TANK MODULE  
 PART NO. 7003-10V408MM (16.96" X L) 685MM (26.97" X H) 45MM (1.77")  
 MAXIMUM RECOMMENDED LOAD = 28.57MP (37.6 PSI)  
 VOLUME = 125L (33.031 GALLONS)  
 8 MODULES = 1M<sup>3</sup>

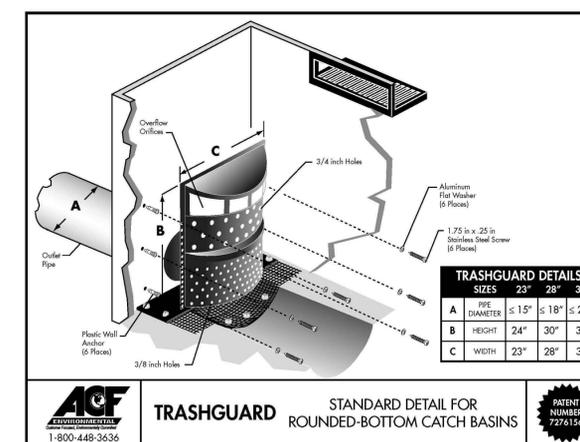
**4 R-TANK STORMWATER STORAGE BED MEDIA**  
 C7 SCALE: NTS



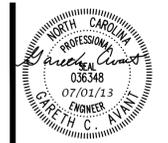
**5 R-TANK MAINTENANCE PORT**  
 C7 SCALE: NTS



**6 SPECIAL CB #7 DETAIL**  
 C7 SCALE: NTS



**7 TRASHGUARD DETAIL**  
 C7 SCALE: NTS



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COMM # 3168  
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 REVISION DATE: 09-10-12  
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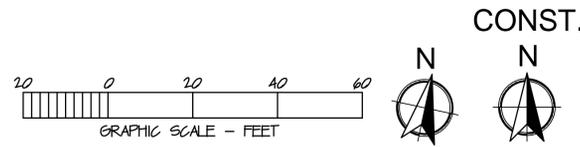
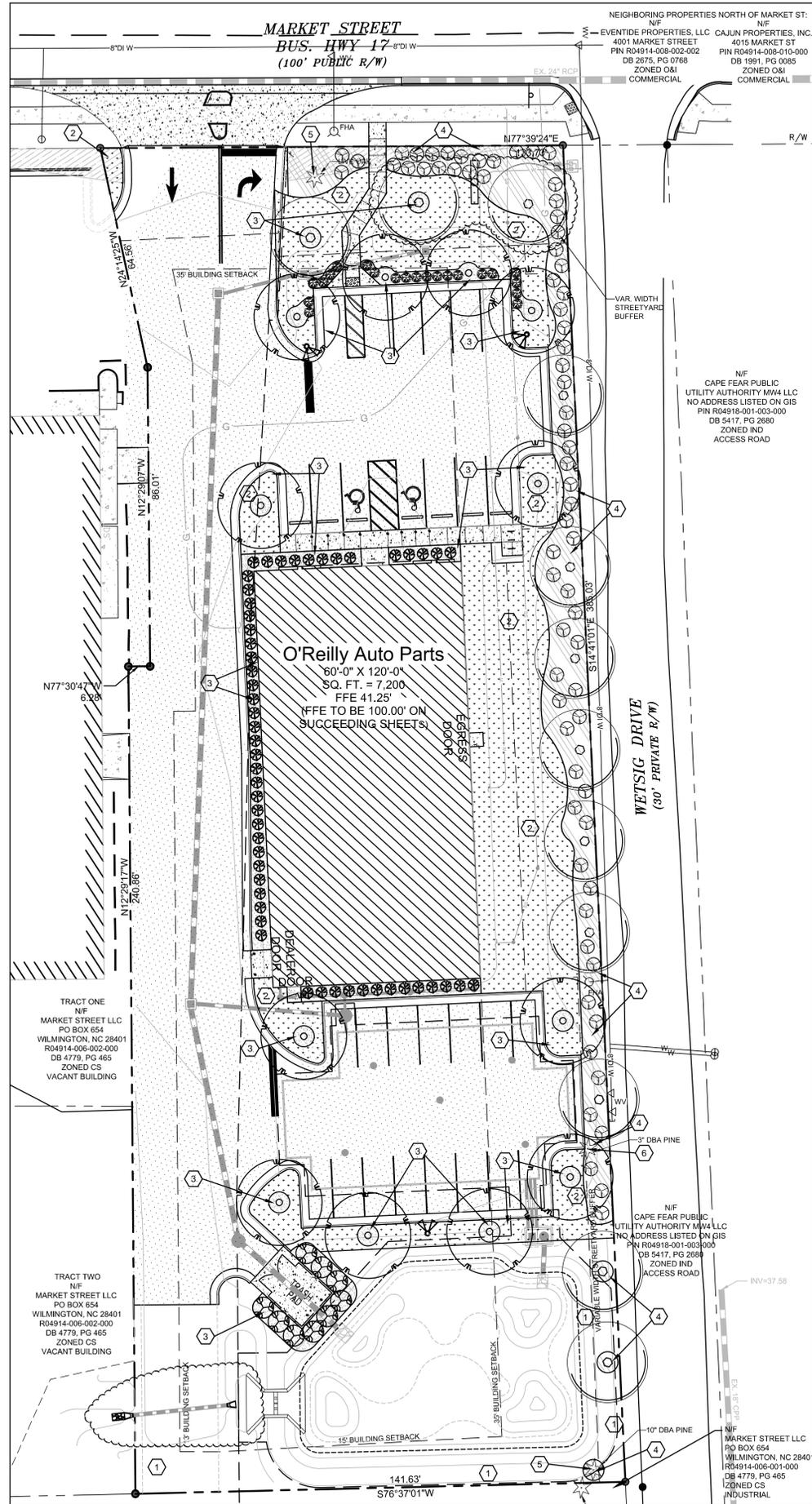


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Approved Construction Plan  
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STORMWATER MANAGEMENT PLAN  
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**ACF** TRASHGUARD STANDARD DETAIL FOR ROUNDED-BOTTOM CATCH BASINS  
 1-800-448-3636



# 1 LANDSCAPE PLAN

L1 SCALE: 1" = 20'-0"

## KEY NOTES:

- 1 HYDRO MULCH / SEED AND STRAW: (UNLESS NOTED OTHERWISE) ALL AREAS DISTURBED BY CONSTRUCTION ARE FIRST TO BE FINE GRADED AND THEN FOLLOWED BY HYDRO MULCH OR SEED AND STRAW OVER MIN. 4" TOPSOIL STOCKPILED FROM SITE OR HAULED IN AS REQUIRED.
- 2 AREA OF SOD: REFER TO DETAIL 1/L2.
- 3 AREA TO RECEIVE GRAVEL. REFER TO DETAIL 2/L2.
- 4 AREA TO RECEIVE 3" CYPRESS MULCH. REFER TO DETAIL 5/L2.
- 5 EXISTING TREE TO BE SAVED. EXISTING LIVE OAK TREE LOCATED AT THE ENTRANCE OF THE SITE SHALL BE PRUNED IN ACCORDANCE WITH CITY OF WILMINGTON SPECIFICATIONS.
- 6 EXISTING TREE TO BE REMOVED.

## LANDSCAPE CALCULATIONS:

**STREET YARD LANDSCAPING**

**MARKET STREET (PRIMARY STREET YARD)**  
 134 LF - 34 LF (DRIVEWAY) x 25 (MULTIPLIER) = 2,500 SF  
 STREET YARD PROVIDED: 2,520 SF  
 REQUIRED PLANTINGS:  
 2,520 SF / 600 SF / TREE = 4.2 OR 4 CANOPY TREES  
 2,520 SF / 600 SF \* 6 SHRUBS = 25.2 OR 25 SHRUBS  
 PROVIDED PLANTINGS:  
 4 CANOPY SHADE TREES (1 EXISTING TREE SAVED)  
 25 SHRUBS

**WESTIG DRIVE (SECONDARY STREET YARD)**  
 385 LF - 37.5 LF (STREET YARD OVERLAP) x 12.5 (MULTIPLIER) = 4,344 SF  
 STREET YARD PROVIDED: 4,480 SF  
 REQUIRED PLANTINGS:  
 4,480 SF / 600 SF / TREE = 7.5 OR 8 CANOPY TREES  
 4,480 SF / 600 SF \* 6 SHRUBS = 44.8 OR 45 SHRUBS  
 PROVIDED PLANTINGS:  
 8 CANOPY SHADE TREES  
 45 SHRUBS

**TOTAL STREET YARD PROVIDED: 7,000 SF**  
**TOTAL IMPERVIOUS AREA IN STREET YARD: 165 SF**  
**TOTAL IMPERVIOUS PERCENTAGE IN STREET YARD = 2.4%**

**INTERIOR SHADING AND LANDSCAPING**

PARKING FACILITY AREA SHADING REQUIRED: 22,101 SF x 20% = 4,420 SF  
 PARKING FACILITY AREA SHADING PROVIDED: 4,559 SF

**FOUNDATION LANDSCAPING**

BUILDING FACE ADJACENT TO PARKING AREA: 17.5' HT x 240 LF = 4,200 SF  
 FOUNDATION LANDSCAPING REQUIRED: 4,200 SF x 12% = 504 SF  
 FOUNDATION LANDSCAPING PROVIDED: 944 SF

**REQUIRED TREES:**

15 TREES REQUIRED TO BE RETAINED OR PLANTED PER DISTURBED ACRE:  
 15 x 1.20AC = 18 TREES

TREES TO BE PLANTED: 23  
 TREES TO BE RETAINED: 1

**TOTAL TREES: 24**

## PLANTING SCHEDULE

REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS. ALL PLANTINGS MAY BE SUBSTITUTED DUE TO REGION OR LOCAL REQUIREMENTS IF NECESSARY

MARK	COMMON NAME	BOTANICAL NAME	QUANTITY	SIZE @ PLANTING	DETAIL	TYPE	SIZE	SHADING AREA
○	TULIP POPLAR 'ARNOLD'	LIRIODENDRON TULIPIFERA 'ARNOLD'	11	2" CALIPER MIN.	3/L2	CANOPY TREE	LARGE	707 SF
○	LACE BARK ELM 'DRAKE'	ULMUS PARVIFOLIA 'DRAKE'	12	2" CALIPER MIN.	3/L2	CANOPY TREE	LARGE	707 SF
○	WAX LEAF LIGUSTRUM	LIGUSTRUM JAPONICUM 'HOWARDII'	9	10 GALLON	4/L2	SHRUB	MED.	N/A
○	CHINESE WITCHHAZEL	LOROPETALUM CHINENSE 'RUBY'	70	3 GALLON	4/L2	SHRUB	SMALL	N/A
○	CHINESE HOLLY	ILEX CORNUTA 'CARISSA'	21	3" TALL (MIN.)	4/L2	SHRUB	SMALL	N/A
○	'EDWARD GOUCHER' ABELIA	ABELIA GRANDIFLORA 'EDWARD GOUCHER'	53	3 GALLON	4/L2	SHRUB	SMALL	N/A

## LANDSCAPE SYMBOLS LEGEND

REFER TO SURVEY FOR EXISTING CONDITION SYMBOLS LEGEND

	NEW BUILDING CONSTRUCTION
	AREA OF CONCRETE
	AREA OF PAVING
	AREA OF GRAVEL
	AREA OF MULCH
	AREA OF SOD LAWN AREA WHICH EXCEEDS 25% SLOPE TO BE PROVIDED WITH SOD. REFER TO GRADING PLAN
	NEW POLE SIGN LOCATION
	NEW CONCRETE PAVING BLOCK
	NEW LIGHT POLE LOCATION
	NEW FENCE CONSTRUCTION

## GENERAL NOTES:

- REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
- SITE CONDITIONS BASED UPON SURVEY PROVIDED BY OWNER. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS BY DETAILED INSPECTION PRIOR TO SUBMITTING BID AND BEGINNING CONSTRUCTION.
- REFER TO CIVIL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- ALL PLANTING TYPES SHALL COMPLY WITH LOCAL GOVERNING CODES AND REGULATIONS. CONFORM TO REQUIREMENTS OF PLANT LIST AND TO THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARD OF NURSERY STOCK" AND "HORTICULTURAL STANDARDS" AS TO SPECIES, AGE, SIZE, AND PLANTING RECOMMENDATIONS.
- NO MATERIAL SUBSTITUTIONS SHALL BE MADE WITHOUT THE ARCHITECT'S PRIOR WRITTEN APPROVAL. ALTERNATE MATERIALS OF SIMILAR SIZE AND CHARACTER MAY BE CONSIDERED IF SPECIFIED PLANT MATERIALS CANNOT BE OBTAINED.
- PLANT LOCATIONS ARE APPROXIMATE. ADJUST AS NECESSARY TO AVOID CONFLICTS.
- QUANTITIES OF MATERIALS SHOWN ON LANDSCAPING PLAN TAKE PRECEDENCE OVER QUANTITIES SHOWN ON PLANTING SCHEDULE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES ON LANDSCAPING PLAN.
- PROVIDE 4" TOPSOIL AT ALL SOD, SEED AND PLANTING AREAS. GRADE SHALL BE ADJUSTED FOR SOD THICKNESS. REFER TO CIVIL SITE GRADING PLAN FOR SLOPE REQUIREMENTS.
- WHEN CLAY SOIL IS ENCOUNTERED IN THE ESTABLISHMENT OF THE LAWN OR THE INSTALLATION OF PLANT MATERIAL IT SHALL BE IMPROVED IN ACCORDANCE WITH STANDARD TRADE PRACTICE.
- REESTABLISH TURF IN AREAS DISTURBED BY GRADING OR UTILITY TRENCHING IN THE RIGHT-OF-WAY.
- COORDINATE WORK WITH OTHER SITE RELATED DEVELOPMENT DRAWINGS.
- ALL EXISTING VEGETATION NOTED TO BE REMOVED, WITH THE EXCEPTION OF TREES TO BE PROTECTED, SHALL BE REMOVED PRIOR TO INSTALLATION OF NEW PLANT MATERIAL.
- ANY AREAS NOT INDICATED TO HAVE HARDSCAPE, PLANTING, OR MULCH SHALL BE SODDED OR SEEDED.
- LANDSCAPE CONTRACTOR SHALL LOCATE PLANTS AND PLANTING BEDS BY USING SCALED DIMENSIONS FROM STREET, PROPERTY LINES, BUILDING, ETC.
- ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM STANDARDS SET BY THE USDA STANDARD FOR NURSERY STOCK SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., WASHINGTON, D.C.
- LANDSCAPE CONTRACTOR SHALL AMEND PROPOSED PLANT BEDS AND PLANT PITS WITH SOIL CONDITIONERS. SOIL CONDITIONERS SHALL BE APPLICABLE TO THE GEOGRAPHIC AREA AND COMPLY WITH THE MANUFACTURER'S SPECIFICATIONS.
- LANDSCAPE CONTRACTOR SHALL LIMIT DISTURBANCE WITHIN THE DRIP LINE OF EXISTING TREES TO REMAIN, AS NOTED. NO TEMPORARY OR PERMANENT STORAGE OF VEHICLES, EQUIPMENT, MACHINERY, OR ITEMS ASSOCIATED WITH CONSTRUCTION IS PERMITTED WITHIN THIS AREA. THESE AREAS ARE INDICATED AS "TREE PROTECTION AREA".
- ALL PLANT BEDS AND SEED LINE LOCATIONS SHALL BE STAKED IN THE FIELD BY THE PROJECT LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO PLANT INSTALLATION.
- ALL SINGLE TREES SHALL HAVE 6" DIAMETER MULCH RING CENTERED AROUND TRUNK AS INDICATED ON PLAN. GROUPINGS OF TREES AND SHRUBS SHALL HAVE MULCH BED AS WELL.
- LANDSCAPE CONTRACTOR SHALL HAVE ALL UNDERGROUND UTILITIES LOCATED PRIOR TO PLANTING OPERATIONS TO VERIFY EXISTENCE OF ANY UTILITY CONFLICTS.
- LANDSCAPE CONTRACTOR SHALL APPLY PRE-EMERGENT HERBICIDE TO ALL PLANTING BEDS PER MANUFACTURER'S SPECIFICATIONS.
- ALL DISTURBED AREAS AS WELL AS PLANTING ISLANDS, NOT INCLUDING MULCHED AREAS, SHALL BE SEEDED PER THE SEEDING SCHEDULE LOCATED ON SHEET C4.
- CONTRACTOR SHALL SEEK APPROVAL FROM ARCHITECT, ENGINEER OR OWNER'S REPRESENTATIVE AND THE CITY OF WILMINGTON PRIOR MAKING ANY CHANGES TO THE PROJECT FROM THE APPROVED PLANS.

## LANDSCAPING INSTALLATION NOTES:

- ALL LANDSCAPING SHALL BE OF NURSERY STOCK QUALITY AND SHALL BE INSTALLED IN A SOUND WORKMANLIKE MANNER AND ACCORDING TO ACCEPTED GOOD PLANTING PROCEDURES. ALL LANDSCAPING SHALL BE ADAPTABLE TO CLIMATE CONDITIONS OF THE AREA, AND CONSIDERATION SHALL BE GIVEN TO NOT PLANTING LARGE TREES NEAR UTILITIES. ALL LANDSCAPING SHALL BE MAINTAINED IN GOOD CONDITION AND IN ACCORDANCE WITH ALL PROVISIONS OF THIS ORDINANCE AS FOLLOWS:
- ALL LANDSCAPING SHALL PRESENT AT ALL TIMES, A HEALTHY, NEAT, CLEAN, ORDERLY, DISEASE-FREE AND PEST-FREE APPEARANCE.
  - ALL LANDSCAPING SOIL AND FILL SHALL BE FREE FROM WEEDS, REFUSE, AND DEBRIS AT ALL TIMES.
  - ANY DEAD PLANT MATERIAL OR MATERIAL WHICH FAILS TO SHOW HEALTHY GROWTH MUST BE REMOVED WITHIN THIRTY (30) DAYS.
  - REPLACEMENT OF REMOVED PLANT MATERIAL MUST TAKE PLACE WITHIN (90) DAYS OF REMOVAL OR NOTIFICATION BY THE JURISDICTIONAL AGENCY, WHICHEVER OCCURS FIRST.
  - ANY REPLACEMENT PLANT MATERIAL MUST MEET THE SIZE AND OTHER CHARACTERISTICS OF NEWLY PLANTED MATERIAL THAT IT WOULD BE REPLACING.
  - MAINTENANCE OF ALL LANDSCAPING IS THE RESPONSIBILITY OF THE OWNERS, JOINTLY AND SEPARATELY.
  - TREES AND LARGE SHRUBS SHALL BE ADEQUATELY SUPPORTED, AS NECESSARY, USING STAKES AND GUYS. SUCH SUPPORTS SHALL BE DESIGNED SO AS TO PROTECT TREES AND SHRUBS FROM INJURY. TREES AND SHRUBS SHALL BE FASTENED TO THE SUPPORT WITH AN ACCEPTABLE COMMERCIAL TREE TIE OF PLASTIC OR HOSE COVERED WIRE.
  - ANY LANDSCAPED AREA REQUIRED SHALL NOT BE ENCLOSED UPON BY ANY TYPE OF VEHICLE. ALL LANDSCAPED AREAS MUST BE PROTECTED BY AN ENCROACHMENT BARRIER. A VEHICLE MAY OVERHANG A LANDSCAPED AREA PROVIDED THAT A MINIMUM DISTANCE OF THREE (3) FEET SEPARATES THE VEHICLE AND ANY NEW PLANTING.

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STORMWATER MANAGEMENT PLAN  
**APPROVED**  
 CITY OF WILMINGTON  
 ENGINEERING DEPARTMENT  
 DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
 SIGNED \_\_\_\_\_

Approved Construction Plan  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
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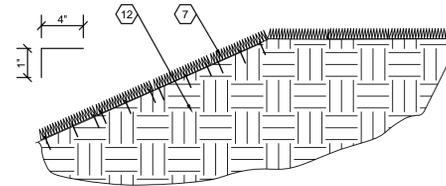
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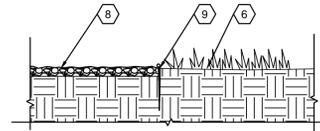
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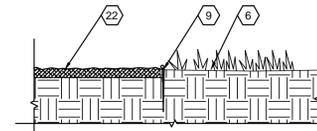
**1 SODDING WITH PINS**

L2 SCALE: 3/4" = 1'-0"



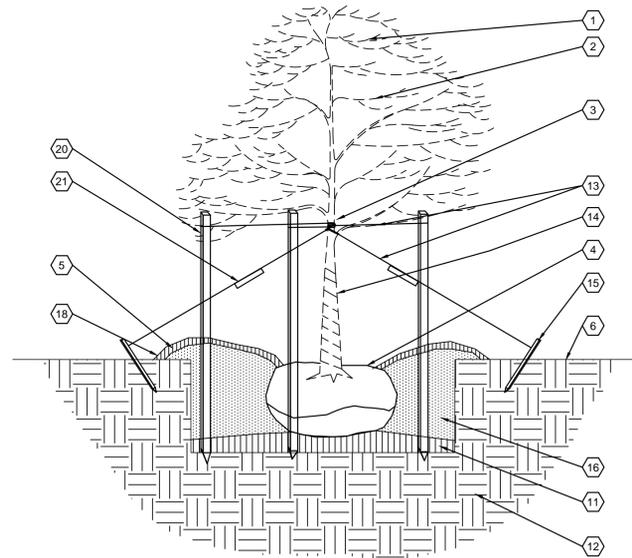
**2 GRAVEL LANDSCAPE FABRIC**

L2 SCALE: 3/4" = 1'-0"



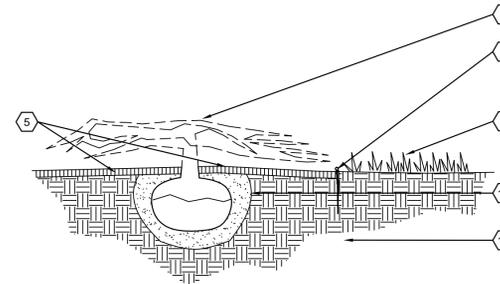
**5 MULCH LANDSCAPE FABRIC**

L2 SCALE: 3/4" = 1'-0"



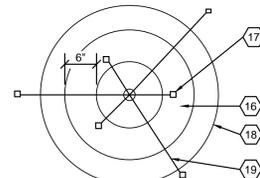
**3 LARGE DECIDUOUS TREE PLANTING**

L2 SCALE: 3/4" = 1'-0"



**4 SMALL SHRUB PLANTING**

L2 SCALE: 3/4" = 1'-0"



**GENERAL NOTES:**

- A. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
- B. COORDINATE WORK WITH OTHER SITE RELATED DEVELOPMENT DRAWINGS.

**KEY NOTES:**

- 1 PLANTING: REFER TO PLANTING SCHEDULE FOR TYPE
- 2 SET TREE LEVEL AND PLUM. STRAIGHTEN AFTER SETTLEMENT IF NEEDED.
- 3 ENCASE WIRE AROUND TRUNK IN BLACK RUBBER. MOVE UP ABOVE EQUAL TO 1/2 TO 1/3 OF THE HEIGHT OF TREE.
- 4 SET TREE WITH TOP 1/3 OF ROOT ABOVE FINISH GRADE.
- 5 REFER TO LANDSCAPE PLAN FOR GROUND COVER TYPE AND LOCATIONS. PROVIDE 3" DEEP 5/8" CREEK GRAVEL OVER BLACK VISQUEEN VAPOR BARRIER OR 3" SHREDDED CYPRESS MULCH OVER BLACK VISQUEEN VAPOR BARRIER.
- 6 LAWN
- 7 REFER TO SITE GRADING PLAN FOR SLOPE. PLACE THREE PINS EVERY 2'-0". SPACING EQUALLY. SOD SHALL BE COMPOSED OF TWO VARIETIES MINIMUM OF FESCUE GRASS.
- 8 3" DEEP, 5/8" CREEK GRAVEL OVER BLACK VISQUEEN VAPOR BARRIER.
- 9 4" BLACK POLY VINYL EDGING
- 10 PREFERRED SOIL
- 11 COMPACTED PLANTING
- 12 SUB GRADE
- 13 TWO STRANDS OF WIRE
- 14 TRUNK WRAP
- 15 2" X 2" X 10" WOOD STAKES BURY BELOW FINISH GRADE
- 16 PREPARED PLANTING MIXTURE.
- 17 TREES 6'-0" IN HEIGHT OR LESS SHALL BE STAKED
- 18 EXTENTS OF PLANTING BERM TO HOLD WATER
- 19 TREES TALLER THAN 3'-0" MUST BE TIED.
- 20 2" X 4" STAKE - OR - METAL FENCE POST
- 21 1" X 4" X 10" WHITE WOOD FLAG
- 22 3" SHREDDED CYPRESS MULCH OVER BLACK VISQUEEN VAPOR BARRIER.



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

Approved Construction Plan  
Name \_\_\_\_\_ Date \_\_\_\_\_  
Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_



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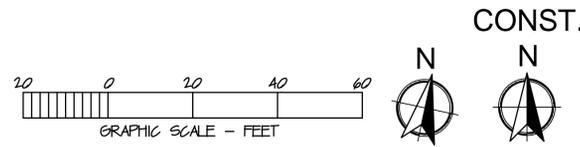
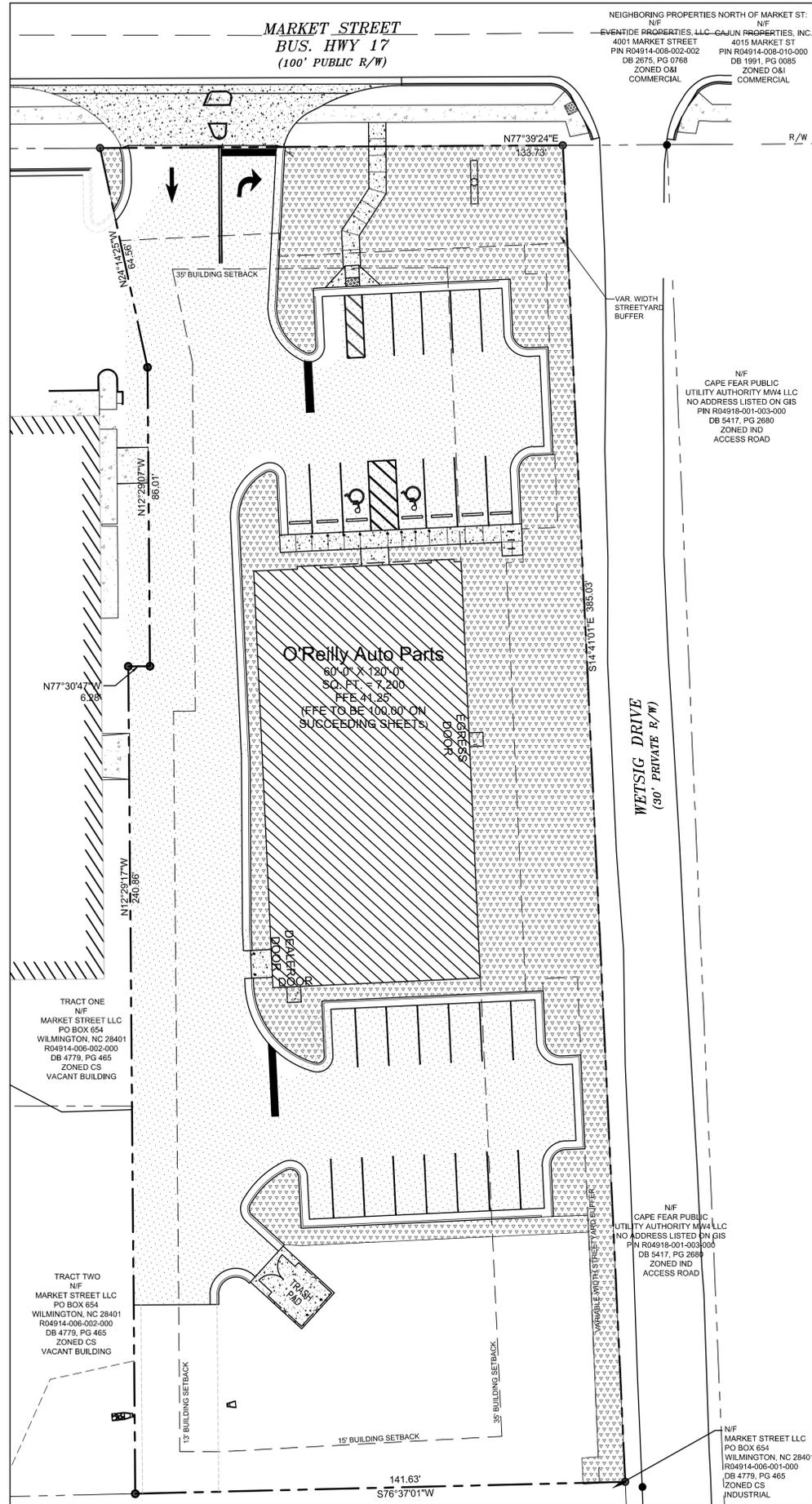
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L2 of 3



**1 IRRIGATION COVERAGE PLAN**  
**L3** SCALE: 1" = 20'-0"

**LANDSCAPE SYMBOLS LEGEND**

REFER TO SURVEY FOR EXISTING CONDITION SYMBOLS LEGEND

	NEW BUILDING CONSTRUCTION
	AREA OF CONCRETE
	AREA OF PAVING
	AREA OF DESIRED IRRIGATION COVERAGE
	NEW POLE SIGN LOCATION
	NEW CONCRETE PAVING BLOCK
	NEW LIGHT POLE LOCATION
	NEW FENCE CONSTRUCTION

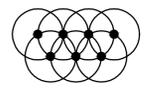
**REFER TO LANDSCAPE PLAN FOR PLANTINGS**

**GENERAL NOTES:**

- REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
- COORDINATE WORK WITH OTHER SITE RELATED DEVELOPMENT DRAWINGS.

**COVERAGE DETAIL:**

- IRRIGATION HEAD SHALL BE PLACED TO PROVIDE 100% OVERLAP HEAD-TO-HEAD COVERAGE.



- A RAIN SENSOR AND ANTI-FREEZE ASSEMBLY SHALL BE INSTALLED ON IRRIGATION SYSTEM.
- THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE AND OPERABLE SYSTEM FOR THE IRRIGATION OF ALL LANDSCAPE PLANTING(S) AND DESIRED COVERAGE AREAS ON SITE.
- THE IRRIGATION CONTRACTOR IS FULLY RESPONSIBLE FOR THE WORK UNTIL OWNER GIVES FINAL ACCEPTANCE.
- NO WATER TO BE SPRAYED ON SIDEWALK, PARKING LOT, ROAD OR ADJACENT PROPERTY. ADJUST ARC AND RADIUS OF REQUIRED SPRINKLERS AS NEEDED.
- ALL CIRCUIT PIPE IS TO BE CLASS 160 PVC OR HIGHER GRADE.
- ALL MAIN FITTINGS SHALL BE REINFORCED WITH 2000PSI POURED CONCRETE THRUST BLOCKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING THE REQUIRED SYSTEM IN COMPLETE ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES AND LAWS. ANY MODIFICATION MADE AFTER INSTALLATION TO CONFORM WITH SAID CODES, LAWS AND ORDINANCES SHALL BE PERFORMED AT CONTRACTORS EXPENSE AT NO ADDITIONAL COST TO O'REILLY.



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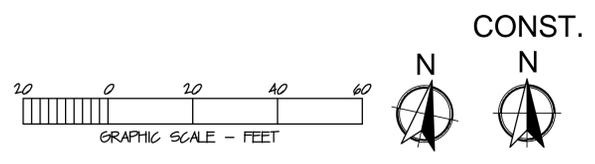
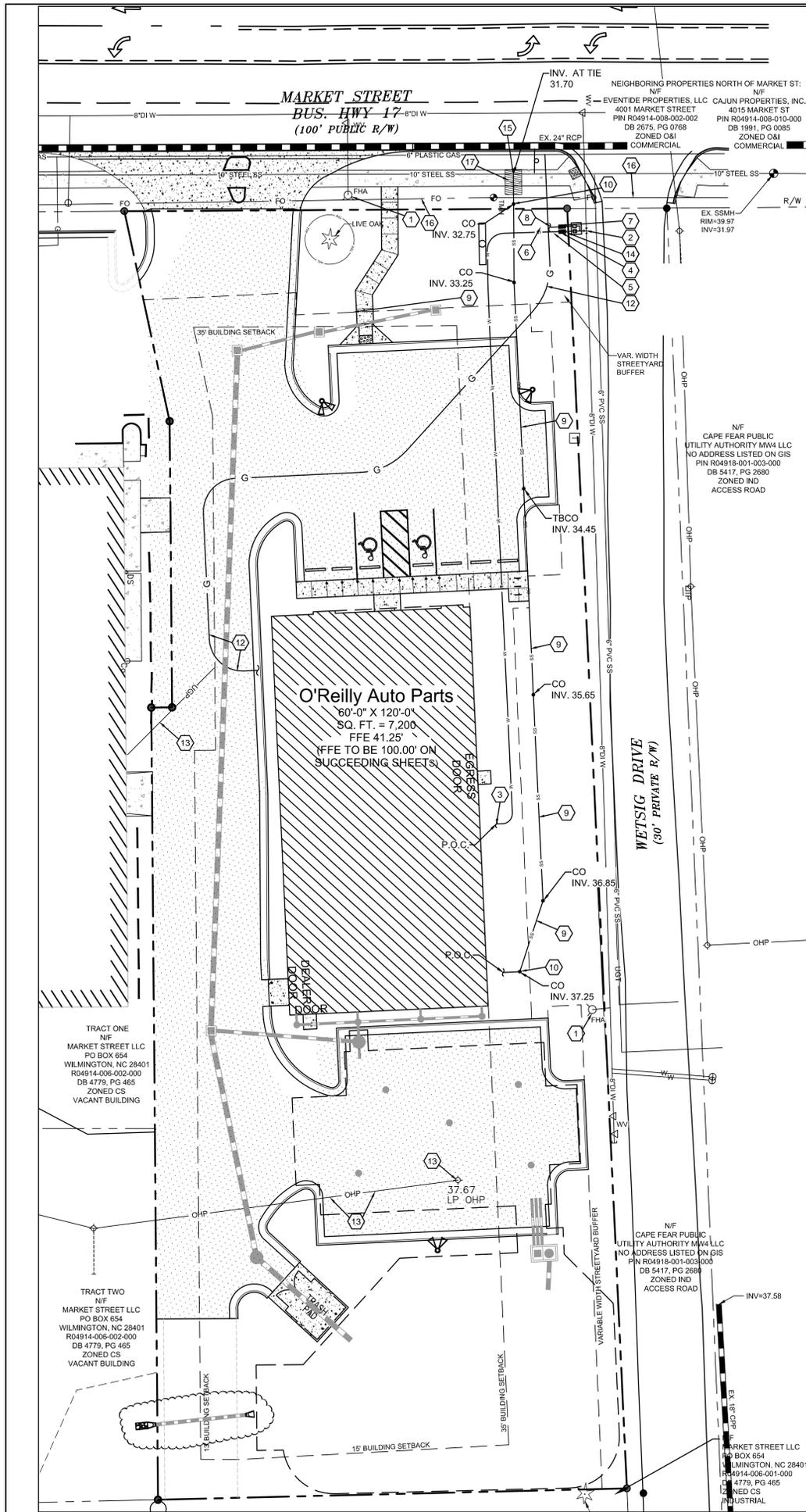


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**1 SITE UTILITY PLAN**  
SU1 SCALE: 1" = 20'-0"

**KEY NOTES:**

- PROTECT EXISTING FIRE HYDRANT TO REMAIN
- 8"x2" TAPPING SLEEVE AND VALVE FOR WATER SERVICE. TAP TO BE MADE BY OPEN CUT PER NCDOT AND CAPE FEAR PUBLIC UTILITY AUTHORITY SPECIFICATIONS. SEE DETAIL SHEET WSD-1.
- NEW 1" DOMESTIC WATER SERVICE CONNECTION. CONTRACTOR TO COORDINATE EXACT BUILDING TIE IN LOCATION WITH ARCHITECTURAL DRAWINGS.
- NEW 1" WATER METER FOR DOMESTIC SERVICE. CONTRACTOR TO COORDINATE INSTALLATION WITH THE CAPE FEAR PUBLIC UTILITY AUTHORITY.
- NEW 1" DOUBLE CHECK VALVE ASSEMBLY (DCVA) FOR DOMESTIC SERVICE. DCVA TO BE IN ABOVE-GROUND INSULATED ENCLOSURE. REFER TO DETAIL SHEET WSD-1.
- NEW 1" IRRIGATION WATER SERVICE TO BE CAPPED AND PLUGGED.
- NEW 1" WATER METER FOR IRRIGATION SERVICE. CONTRACTOR TO COORDINATE INSTALLATION WITH THE CAPE FEAR PUBLIC UTILITY AUTHORITY.
- NEW 1" REDUCED PRESSURE ASSEMBLY (RPA) FOR IRRIGATION SERVICE. RPA TO BE IN ABOVE-GROUND INSULATED ENCLOSURE REFER TO DETAIL SHEET WSD-1.
- NEW 4" SCH 40 PVC SANITARY SEWER PIPE. CONTRACTOR TO COORDINATE EXACT BUILDING TIE IN LOCATION WITH ARCHITECTURAL DRAWINGS. SEE DETAIL SHEET SSD-2.
- SANITARY SEWER CLEANOUT TO BE LOCATED 18" INSIDE OF R/W. REFER TO CAPE FEAR PUBLIC UTILITY AUTHORITY DETAIL SHEETS SSD-2 AND WSD-2.
- NEW SANITARY SEWER SERVICE TIE INTO EXISTING 10" STEEL SANITARY SEWER PIPE. REFER TO CAPE FEAR PUBLIC UTILITY AUTHORITY DETAIL SHEET SSD-2 FOR INSTALLATION REQUIREMENTS. CONTRACTOR TO VERIFY DEPTH OF EXISTING SANITARY SEWER PIPE AND CONTACT THE ENGINEER WITH ANY DISCREPANCIES.
- NEW GAS SERVICE TO BUILDING. CONTRACTOR TO COORDINATE SERVICE INSTALLATION WITH PIEDMONT NATURAL GAS.
- CONTRACTOR TO COORDINATE WITH DUKE ENERGY FOR RELOCATION OF EXISTING POWER LINES AND POLES.
- METER BOX TO HOUSE METERS FOR BOTH IRRIGATION AND DOMESTIC WATER SERVICE. COORDINATE INSTALLATION WITH CAPE FEAR PUBLIC UTILITY AUTHORITY.
- LIMITS OF EXCAVATION FOR SEWER SERVICE TIE. EXCAVATION SHALL BE APPROXIMATELY 5'W X 8' X 8'D TO REACH EXISTING SEWER MAIN.
- CONTRACTOR TO VERIFY DEPTH OF EXISTING FIBER OPTIC LINE PRIOR TO CONSTRUCTION OF WATER AND SEWER SERVICES AND CONTACT THE OWNER'S REPRESENTATIVES WITH ANY DISCREPANCIES OR APPARENT CONFLICTS.

**ASPHALT REPAIR NOTES:**

- PAVEMENTS SHALL BE CUT FULL DEPTH AND REMOVED.
- AFTER TRENCH WORK IS COMPLETE, THE EDGES OF THE EXISTING PAVEMENT ALONG THE TRENCH SHOULD BE RE-CUT A MINIMUM OF 1" WIDER ON EACH SIDE OF THE TRENCH; OR IF THE PAVEMENT IS UNDERMINED, TO 1' BEYOND THE UNDERMINED PORTION AND REMOVE THE PAVEMENT. THE DESIGN SECTION STATED BELOW WOULD BE PLACED IN THOSE AREAS.
- THE PAVEMENT DESIGN SECTION FOR PAVEMENT REPAIR SHALL BE:  
- 11.0" B25.0C OR B25.0B ASPHALT CONCRETE BASE COURSE (ACCOMPLISHED IN 2 LIFTS MINIMUM)
- MILL THE ENTIRE AREA 1.5" FROM 15' BACK FROM THE EDGE OF THE FINAL PAVEMENT CUT.
- OVERLAY ENTIRE AREA WITH 1.5" S9.5C OR S9.5B ASPHALT CONCRETE SURFACE COURSE (13" OF ASPHALT TOTAL).

**SYMBOLS LEGEND**

REFER TO SURVEY FOR EXISTING CONDITION SYMBOLS LEGEND

	NEW BUILDING CONSTRUCTION
	AREA OF CONCRETE
	AREA OF PAVING
	NEW POLE SIGN LOCATION
	NEW CONCRETE PAVING BLOCK
	NEW LIGHT POLE LOCATION
	NEW FENCE CONSTRUCTION

**EXISTING CONDITIONS NOTES:**

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND IDENTIFY ALL EXISTING UTILITIES PRIOR TO SUBMITTING A BID. NO EXTRAS WILL BE PAID DUE TO UNANTICIPATED EXISTING CONDITIONS.
- EXISTING UTILITIES ARE INDICATED ON THE DRAWINGS ONLY TO THE EXTENT THAT SUCH INFORMATION HAS BEEN MADE AVAILABLE TO THE ENGINEER IN PREPARING THE DRAWINGS. THERE IS NO GUARANTEE AS TO THE ACCURACY AND COMPLETENESS OF SUCH INFORMATION, AND ALL RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS THEREOF IS EXPRESSLY DISCLAIMED.
- ANY DELAY, ADDITIONAL WORK, FEES OR EXTRA COSTS TO THE CONTRACTOR CAUSED BY OR RESULTING FROM DAMAGE OR MODIFICATION OF EXISTING UTILITIES BY THE CONTRACTOR OR EFFECTED UTILITY COMPANY SHALL NOT CONSTITUTE A CLAIM FOR EXTRA WORK, ADDITIONAL PAYMENT OR DAMAGES.

**GENERAL UTILITY NOTES:**

- REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
- ALL WATER & SEWER LINES SHALL BE INSTALLED WITH A MINIMUM OF 3 FEET OF COVER
- MAINTAIN 18" MINIMUM VERTICAL SEPARATION BETWEEN UTILITIES.
- VERIFY ALL ILLUSTRATED UTILITY CROSSINGS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER IF CONFLICTS ARE ENCOUNTERED.
- CONTRACTOR SHALL COORDINATE UTILITY RELOCATION OR ABANDONMENT WITH LOCAL UTILITY COMPANIES AS REQUIRED.
- UTILITIES WILL NOT ENCROACH UPON PROTECTED AREAS OR RUN PARALLEL THROUGH ANY REQUIRED BUFFER.
- WATER & SEWER SHALL BE AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS. WHERE LOCAL CONDITIONS PREVENT A SEPARATION OF 10 FEET, THE WATER MAIN MAY BE LAID CLOSER PROVIDED THAT THE ELEVATIONS OF THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER WITH A HORIZONTAL SEPARATION OF AT LEAST 3 FEET.
- ALL PIPE LENGTHS AND SLOPES AS INDICATED ON THE DRAWINGS ARE TO BE CONSIDERED AS GUIDELINES. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE COMPENSATED BY THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL ALL STORM LINES FROM STRUCTURE TO STRUCTURE.
- ALL PIPE SHALL SLOPE IN A POSITIVE DIRECTION.
- ALL TRENCHES SHALL BE CUT TO THE APPROPRIATE DEPTHS WITH THE BOTTOM OF THE TRENCHES ALSO SLOPED IN THE DIRECTION OF THE DRAINAGE FLOW.
- TRENCHES ARE TO BE BACKFILLED IN 6" LIFTS WITH A GRANULAR SOIL MIX. USE EXISTING MATERIAL WHERE APPROPRIATE AND MIX IN BORROW AS NEEDED. BACKFILL SUBDRAINS WITH AN AGGREGATE MIX, TAMP AND COMPACT TRENCHES TO AVOID UNWANTED SETTLEMENT.
- ALL GRADES AND INVERTS SHALL REFERENCE THE PROJECT BENCH MARK. IF BENCHMARK IS NOT AVAILABLE THE FINISH FLOOR SHALL BECOME THE REFERENCE POINT. NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO STARTING CONSTRUCTION.
- ALL CONSTRUCTION TO CONFORM TO SITE PLAN APPROVED BY THE CAPE FEAR PUBLIC UTILITY AUTHORITY.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF UTILITY TIE-INS.
- ALL NEW UTILITY LINES ARE TO BE INSTALLED UNDERGROUND.
- ALL VALVE BOXES & COVERS, SHALL MEET ASTM A48, GRADE 35B IRON REQUIREMENTS.
- SLOPES SHALL NOT BE GREATER THAN 3:1 WHERE UNDERGROUND ELECTRIC UTILITIES LINES ARE PROPOSED.
- CONTRACTOR SHALL SEEK APPROVAL FROM ARCHITECT, ENGINEER OR OWNER'S REPRESENTATIVE AND THE CITY OF WILMINGTON PRIOR MAKING ANY CHANGES TO THE PROJECT FROM THE APPROVED PLANS.

**SANITARY SEWER NOTES:**

- SEWER LINES TO BE INSTALLED PER THE CAPE FEAR PUBLIC UTILITY AUTHORITY'S STANDARDS AND SPECIFICATIONS.
- ALL SEWER PIPES TO BE SCH 40 PVC.
- ALL SEWER LINE INSTALLATION TO BE OF CONTINUOUS MATERIAL BETWEEN CLEANOUTS.
- SEWER SERVICES LOCATED OUTSIDE OF PUBLIC EASEMENTS SHALL BE PRIVATELY MAINTAINED.
- ALL CLEANOUTS SHALL BE FLUSH WITH FINISHED GRADE.
- CONTRACTOR TO LOCATE LATERAL TIE-INS PER PLUMBING PLANS.
- PLACE CLEANOUTS ON SANITARY SEWER RUN PER PLUMBING CODE REQUIREMENTS.
- CONTRACTOR TO PROVIDE RECORD DRAWINGS TO OWNER.
- SEWER LINES SHALL BE 18" ABOVE OR 10" HORIZONTAL SEPARATION FROM WATER LINES AND OTHER UTILITIES. THERE SHALL BE 24" VERTICAL SEPARATION FROM STORM SEWER LINES.

**WATER DISTRIBUTION NOTES:**

- WATER LINES TO BE INSTALLED PER THE CAPE FEAR PUBLIC UTILITY AUTHORITY'S STANDARDS AND SPECIFICATIONS.
- WATER SERVICE TO ADJACENT PROPERTIES SHALL BE MAINTAINED AND REMAIN UNINTERRUPTED FOR THE DURATION OF THE PROJECT'S CONSTRUCTION.
- CONTRACTOR TO LOCATE BUILDING TIE-INS PER PLUMBING PLANS.
- WATER METERS TO BE INSTALLED BY THE CAPE FEAR PUBLIC UTILITY AUTHORITY. CONTRACTOR TO COORDINATE INSTALLATION WITH THE CITY.
- RPAS SHALL BE INSTALLED BY THE CONTRACTOR AS APPROVED BY THE CAPE FEAR PUBLIC UTILITY AUTHORITY. ASSEMBLIES TO BE INSTALLED IN ABOVE GROUND ENCLOSURES SHALL MEET ALL ASSE 1000 R-VALUE REQUIREMENTS.
- ALL WATER SERVICE LINES SHALL HAVE A MINIMUM OF 3' OF COVER AS MEASURED FROM FINISHED GRADE AT THE LOCATION WHERE INSTALLED.
- WATER LINES SHALL BE 18" ABOVE OR 10" HORIZONTAL SEPARATION FROM SANITARY SEWER LINES OR OTHER UTILITIES. THERE SHALL BE 24" VERTICAL SEPARATION FROM STORM SEWER LINES.



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Approved Construction Plan

Name	Date
Planning _____	
Traffic _____	
Fire _____	



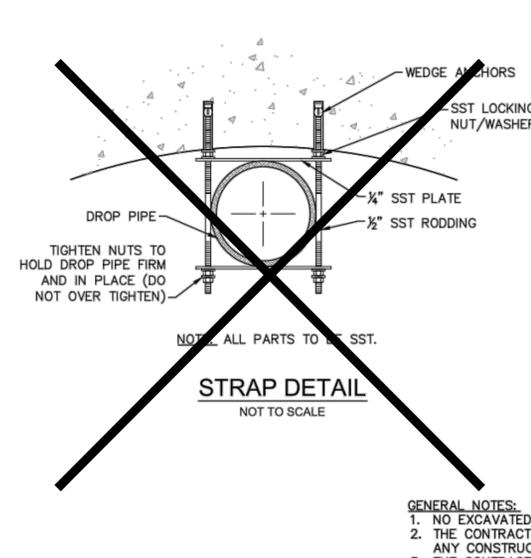
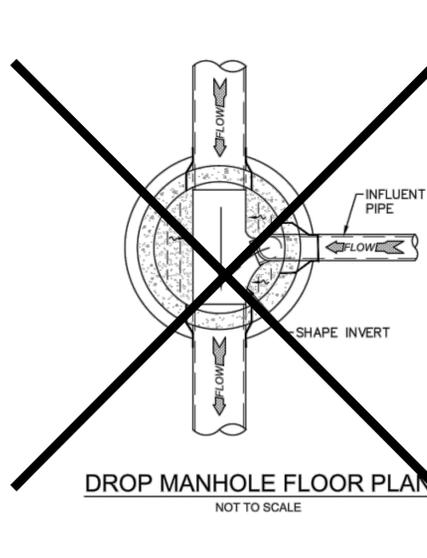
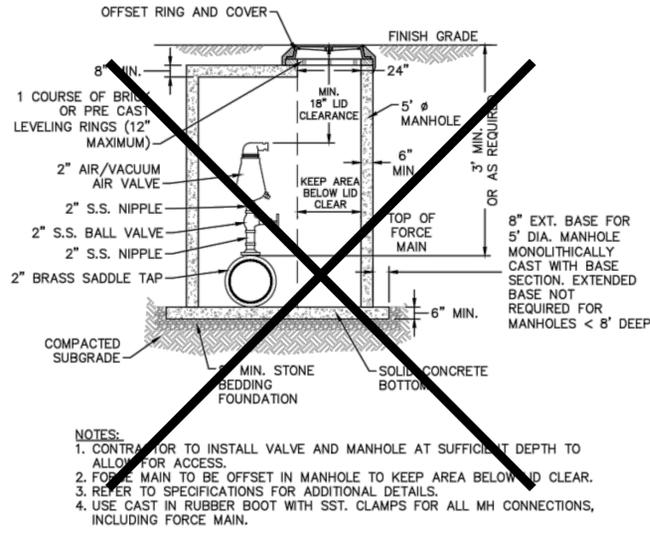
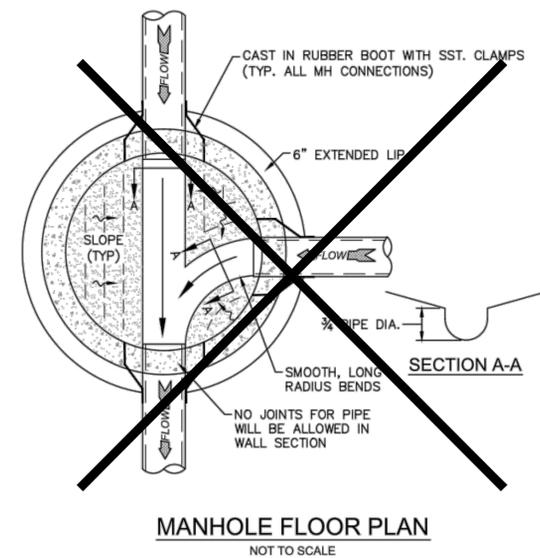
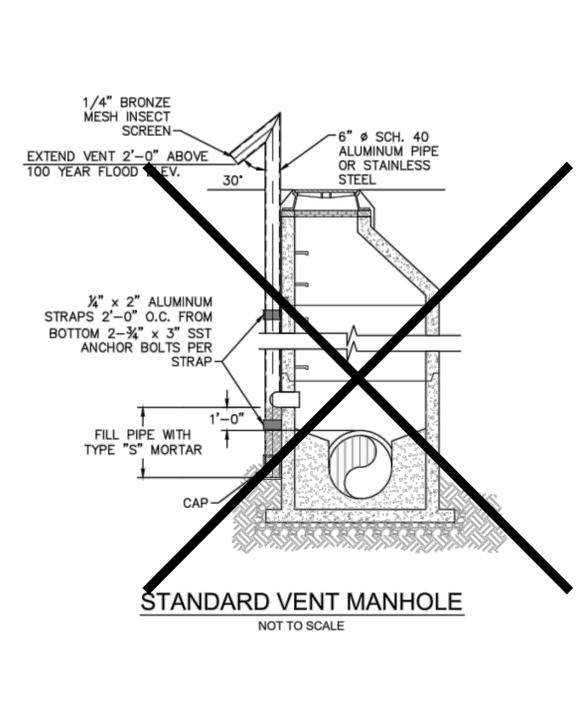
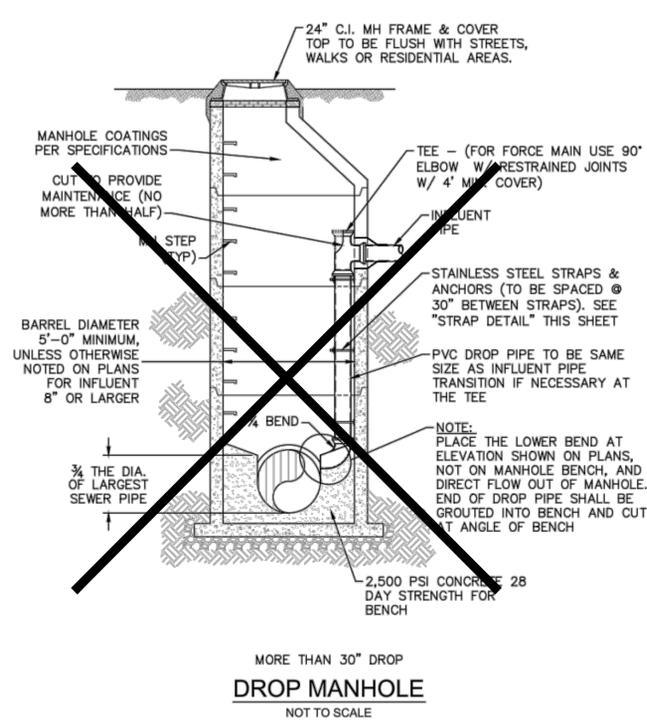
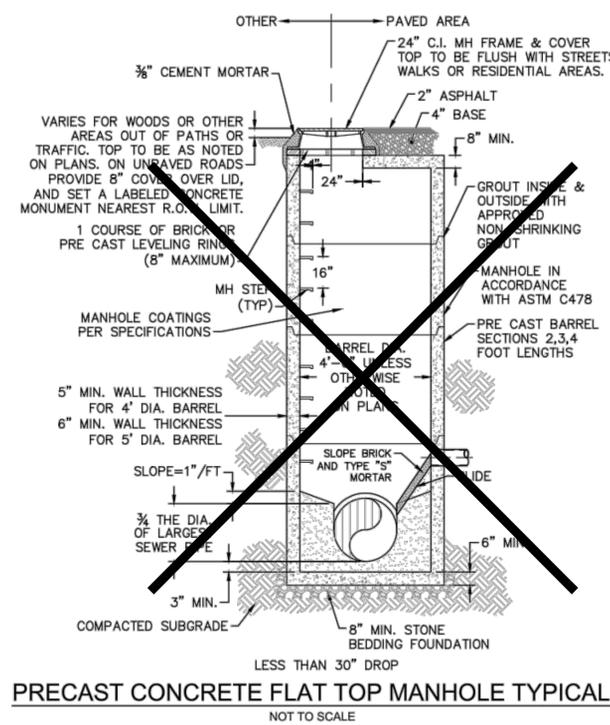
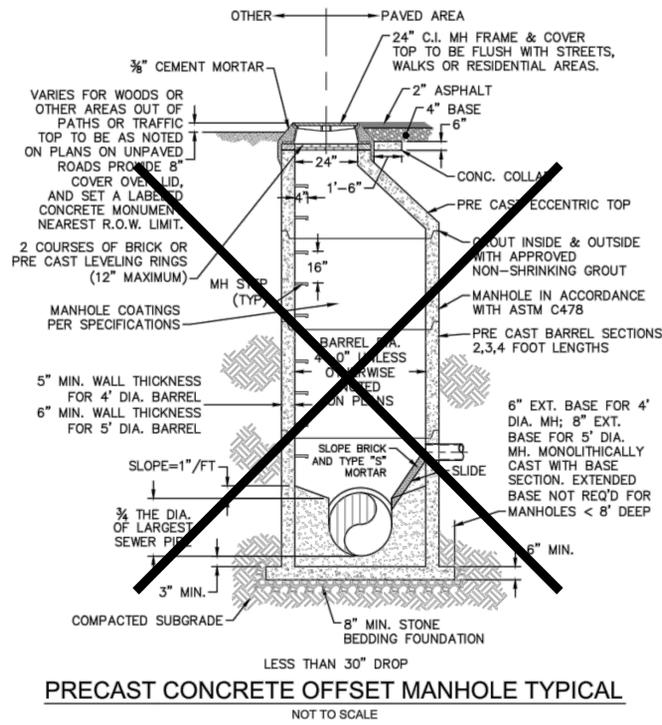
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- CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:**
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
  - SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY 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, DIP, WITH PROTECTO 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.
- STANDARD SEWER NOTES**  
(REQUIRED ON ALL SEWER PLAN AND PROFILE SHEETS)

- GENERAL NOTES:**
- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
  - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
  - THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
  - THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
  - THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN AND STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

**THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04**

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REV:	DESCRIPTION:	DATE:
1	AIR / VACUUM AND AIR RELEASE COMBINATION VALVE REVISED	10/26/12
2	STANDARD SEWER NOTE #6 REVISED	12/10/12
3	REVISED STANDARD VENT MANHOLE TO EXTEND VENT 2'-0" ABOVE 100 YR FLOOD	11/20/14

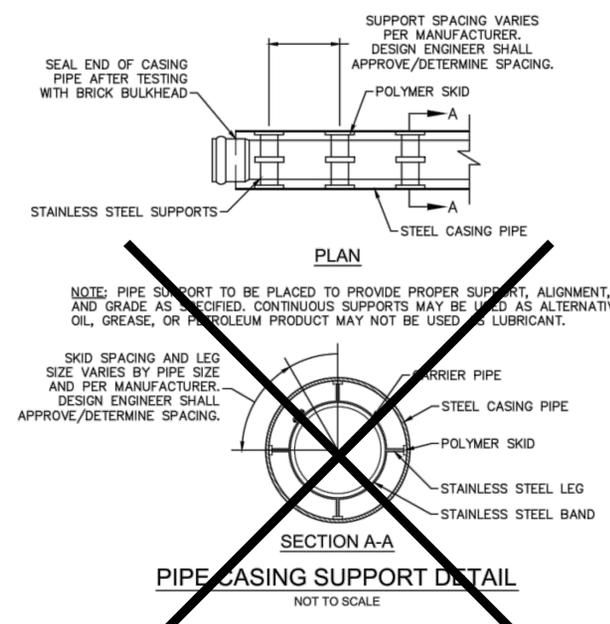
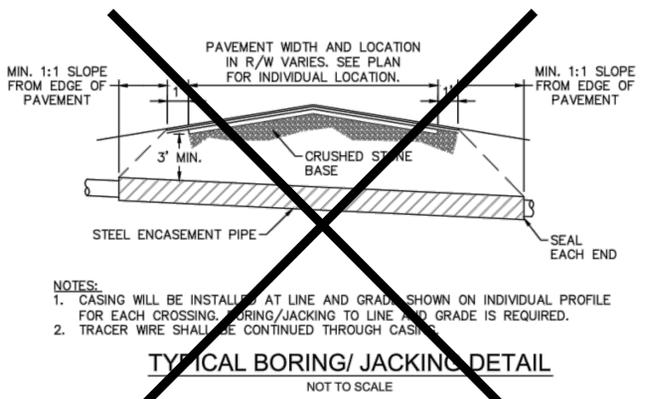
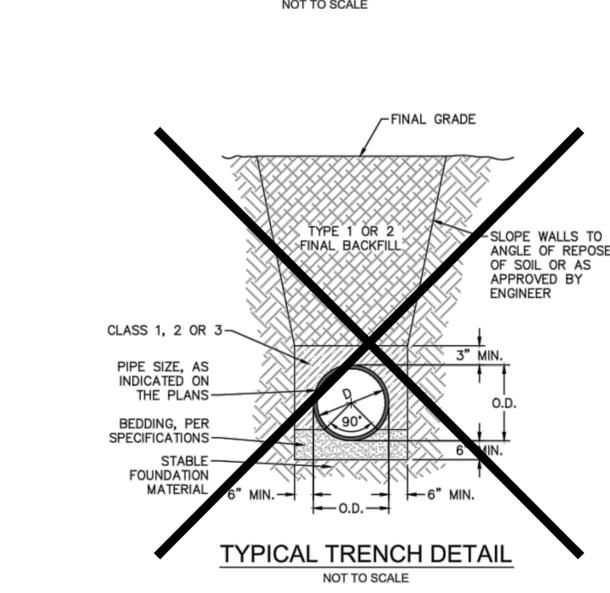
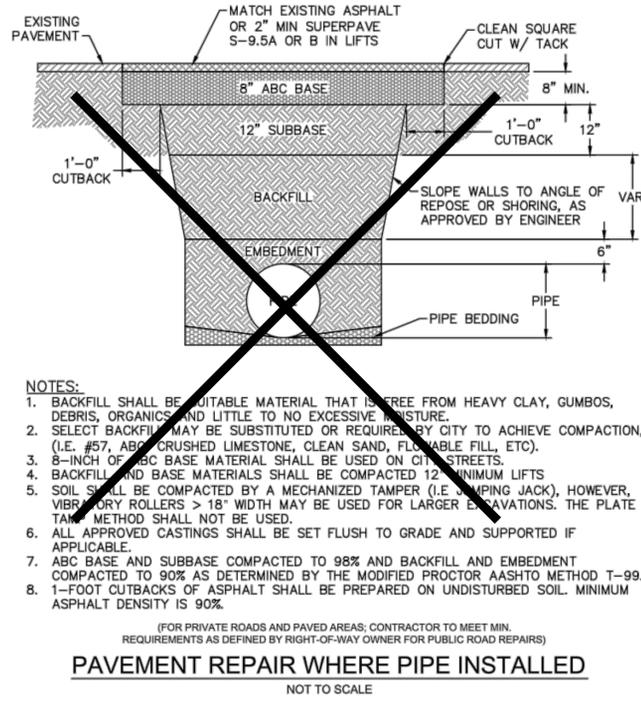
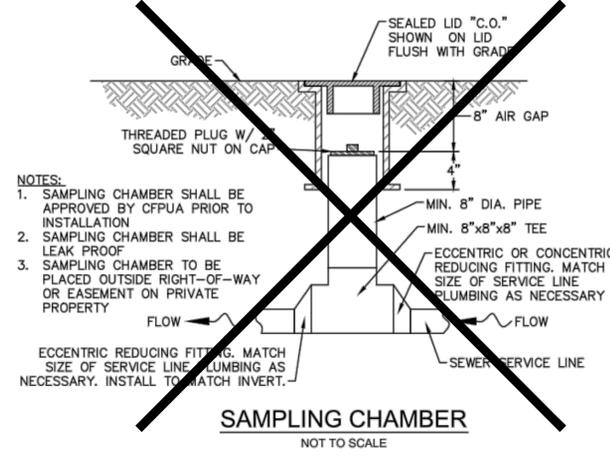
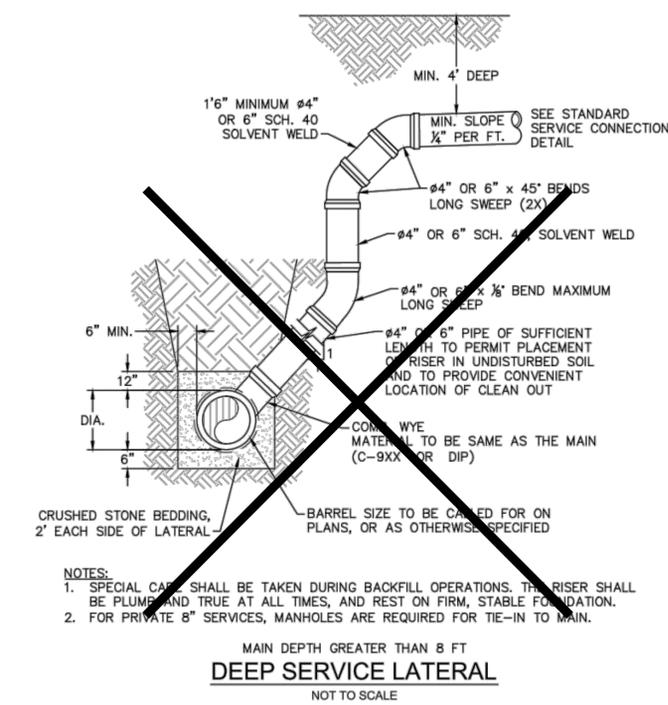
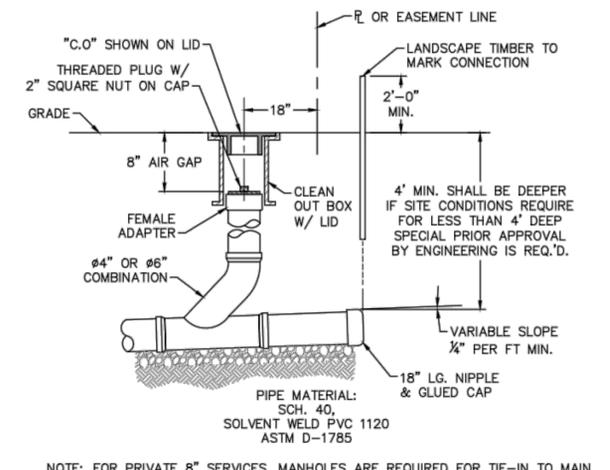
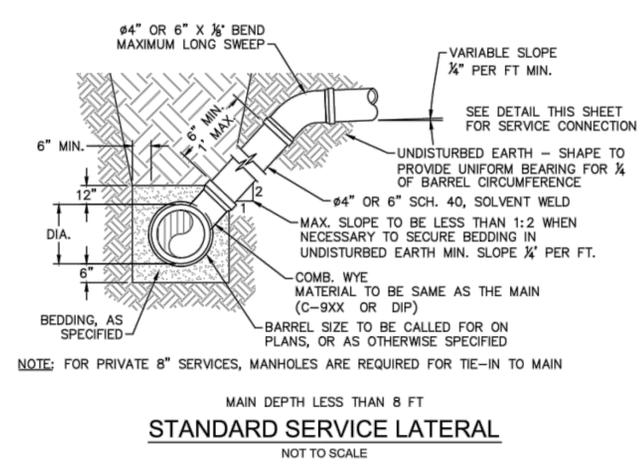
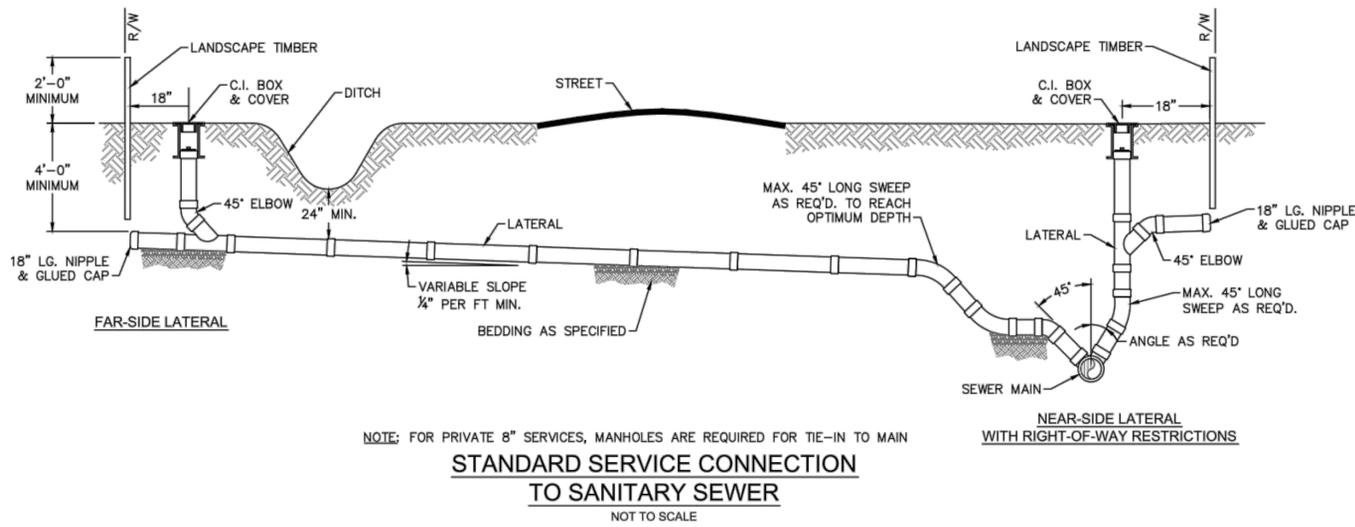
O'Reilly Auto Parts – Wilmington #1  
CFPUA SANITARY SEWER

**STANDARD DETAILS**

**CAPE FEAR PUBLIC UTILITY AUTHORITY**  
235 GOVERNMENT CENTER DRIVE  
WILMINGTON, NC 28403  
OFFICE: (910)332-6560

DATE: 1/9/12  
SCALE: N/A  
DRAWN BY: CFPUA  
CHECKED BY: CFPUA  
PROJECT NO.:

**SHEET NO:**  
SSD-1



**GENERAL NOTES:**  
1. NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.  
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.  
3. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.  
4. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.  
5. THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN AND STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

**THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04**

**MCKIM & CREED**  
1730 Varsity Drive, Suite 500  
Raleigh, North Carolina 27606  
Phone: (919)233-8091, Fax: (919)233-8031  
F-1222  
www.mckimcreed.com

REV:	DESCRIPTION:	DATE:
1	SAMPLING CHAMBER REVISED	10/26/12

O'Reilly Auto Parts – Wilmington #1  
CFPUA SANITARY SEWER

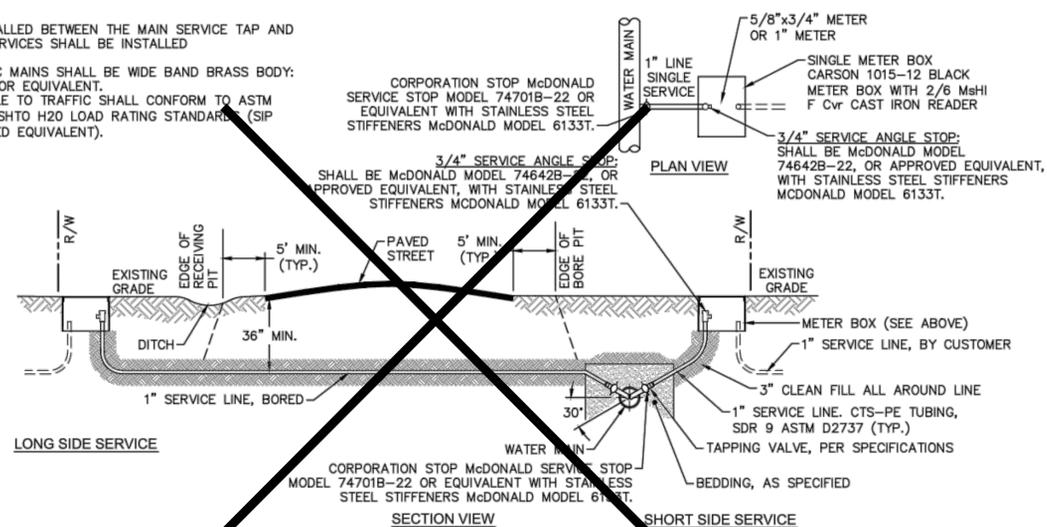
**STANDARD DETAILS**

**CAPE FEAR PUBLIC UTILITY AUTHORITY**  
235 GOVERNMENT CENTER DRIVE  
WILMINGTON, NC 28403  
OFFICE: (910)332-6560

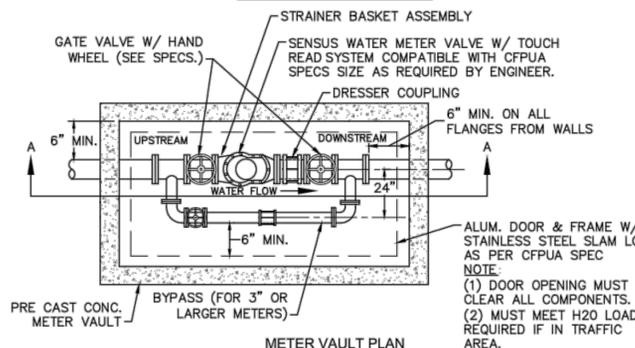
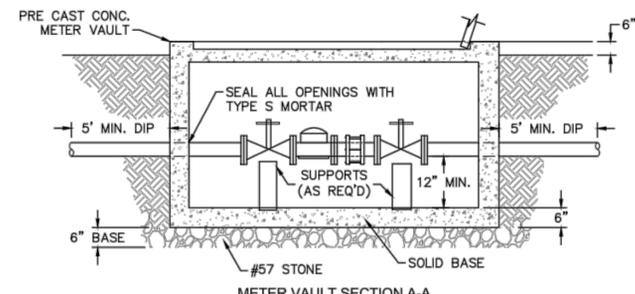
DATE: 1/9/12  
SCALE: N/A  
DRAWN BY: CFPUA  
CHECKED BY: CFPUA  
PROJECT NO.:

**SHEET NO: SSD-2**

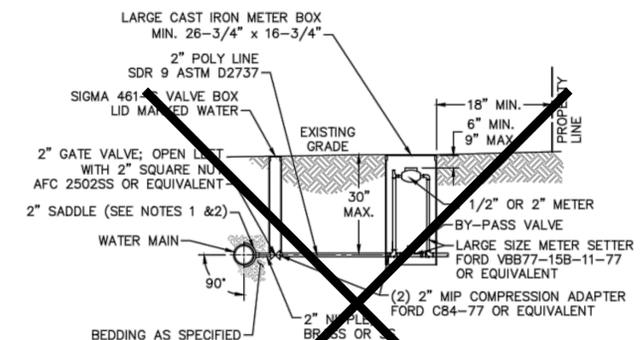
- NOTES:**
- NO JOINT SHALL BE INSTALLED BETWEEN THE MAIN SERVICE TAP AND THE METER STOP. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
  - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY; SADDLE McDONALD 3801 OR EQUIVALENT.
  - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARD (SIP MODEL 4240 OR APPROVED EQUIVALENT).



**SINGLE SERVICE CONNECTION**  
NOT TO SCALE

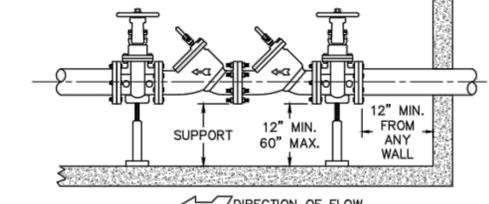
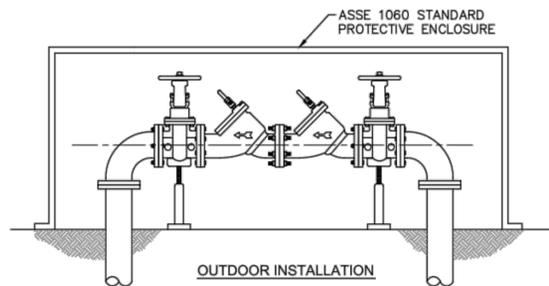


**WATER METER VAULT**  
NOT TO SCALE



- NOTES:**
- ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAINS.
  - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY; McDONALD 3800, FORD S90 (DOUBLE STRAP) OR EQUIVALENT.
  - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (SIP MODEL 4240 OR APPROVED EQUIVALENT).
  - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ANSI/SCTE 77 TIER 15 LOAD RATING STANDARDS (SYNERTECH MODEL DUO 1530 OR APPROVED EQUIVALENT).
  - NON-TRAFFIC METER BOXES SHALL BE SIGMA MB2203 OR APPROVED EQUIVALENT.
  - 3" CLEAN FILL REQUIRED ALL AROUND 2" POLY SERVICE LINE.

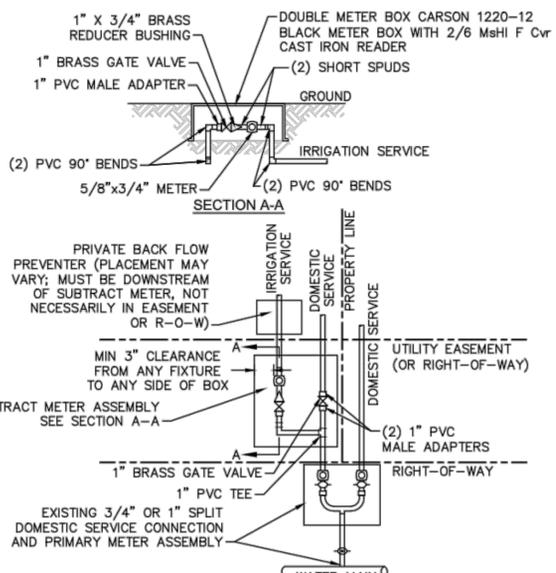
**LARGE METER**  
NOT TO SCALE



**DOUBLE CHECK VALVE ASSEMBLY**  
NOT TO SCALE

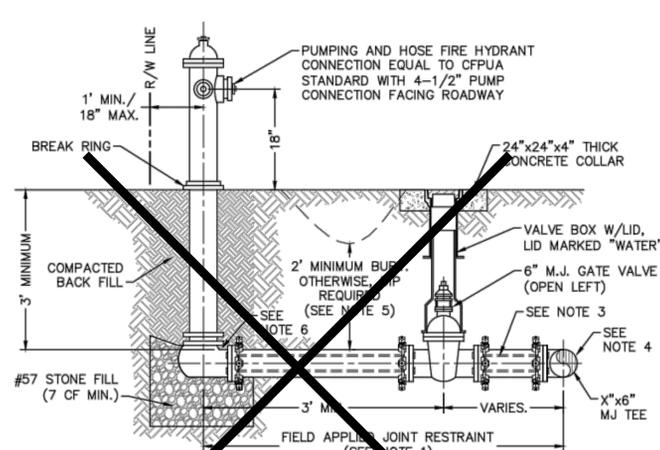
- GENERAL NOTES:**
- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
  - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
  - THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
  - THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
  - THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN AND STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

**THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04**



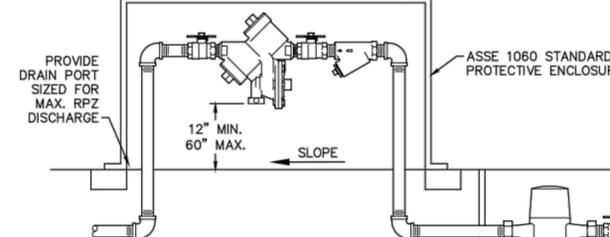
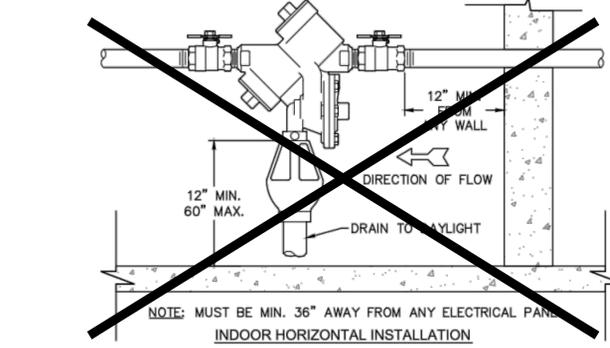
- NOTES:**
- BEYOND THE PRIMARY DOMESTIC METER ASSEMBLY, CFPUA IS ONLY RESPONSIBLE FOR METER AND WASHERS OF SUBTRACT METER ASSEMBLY.
  - ALL PIPE AND FITTINGS UP TO FINAL SERVICE LINE TO BE 1" EXCLUDING METERS.

**DOUBLE SERVICE CONNECTION USING SUBTRACT METER**  
NOT TO SCALE



- NOTES:**
- JOINT RESTRAINT SYSTEMS SHALL BE WEDGE ACTION STRIPS FOR DI OR C-900 PVC PIPE AS MANUFACTURED BY DEBA IRON, SIGMA, STAR PIPE PRODUCTS OR APPROVED EQUAL.
  - WHEN HYDRANT LOS REQUIRE FULL LENGTH PIPE SECTIONS, COVER BELL RESTRAINT SYSTEM SHALL HAVE 3" STAINLESS STEEL HARNESS AND FASTENERS.
  - CONTINUOUS #16 STAINLESS STEEL RODS (TEE TO VALVE AND VALVE TO HYDRANT) MAY BE USED WITH COR-BLUE M.J. T-BOLT AND GASKET KITS, AS AN ALTERNATIVE.
  - HYDRANT TEE SHALL BE RESTRAINED ON EACH SIDE OF MAIN PLUS ANY VALVE, FITTING, OR JOINT IN MAIN WITHIN 10- FEET OF HYDRANT TEE.
  - HYDRANT AND VALVE SHALL BE PLACED OUTSIDE DITCH LIMITS.
  - WEEP HOLES OPEN AND UNBLOCKED TO DRAIN.

**FIRE HYDRANT ASSEMBLY**  
NOT TO SCALE



- NOTE:**
- MUST BE MIN. 36" AWAY FROM ANY ELECTRICAL PANEL.
  - VALVE REQUIRED DOWNSTREAM OF BACKFLOW ASSEMBLY.
  - VERTICAL INSTALLATION SHALL BE DESIGNED AND SUBMITTED TO CFPUA ESDM FOR APPROVAL.

**REDUCED PRESSURE PRINCIPLE ASSEMBLY**  
NOT TO SCALE



REV:	DESCRIPTION:	DATE:
1	Single Service Connection, Double Service Connection, and Large Meter Revised	10/26/12
2	Single Service Connection and Fire Hydrant Details Revised	7/23/13
3	Fire Hydrant Detail Revised	01/03/14

O'Reilly Auto Parts – Wilmington #1  
CFPUA SANITARY SEWER

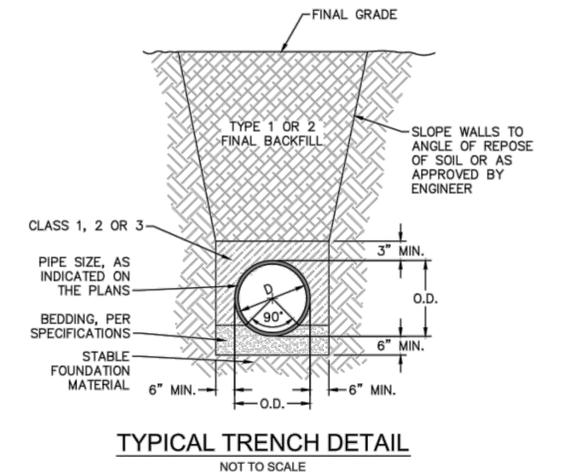
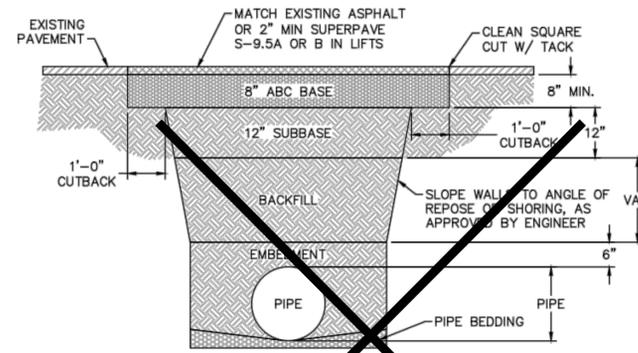
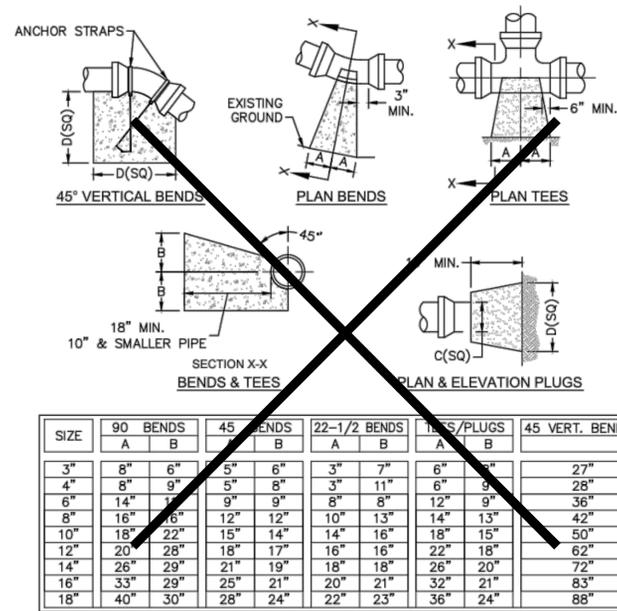
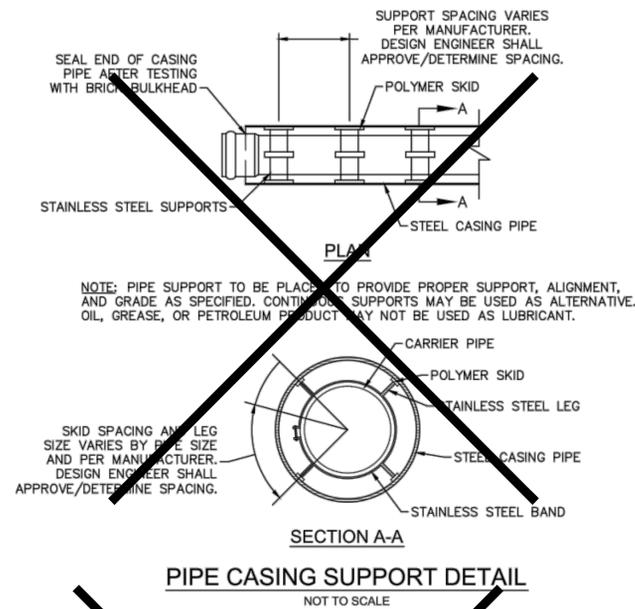
DATE: 1/9/12  
SCALE: N/A  
DRAWN BY: CFPUA  
CHECKED BY: CFPUA  
PROJECT NO.:

**STANDARD DETAILS**

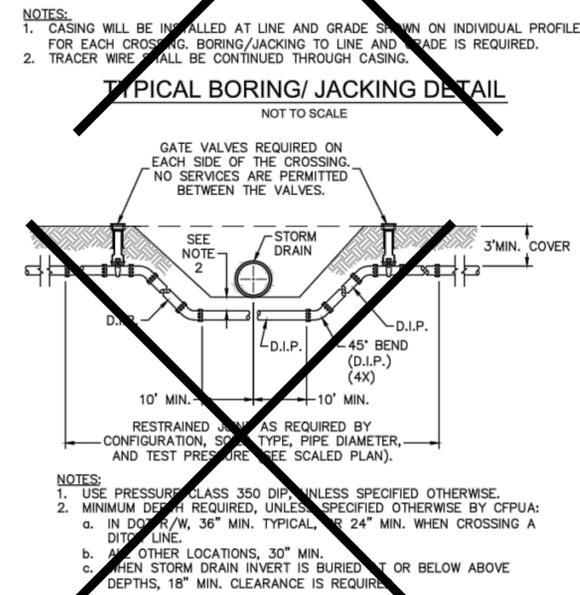
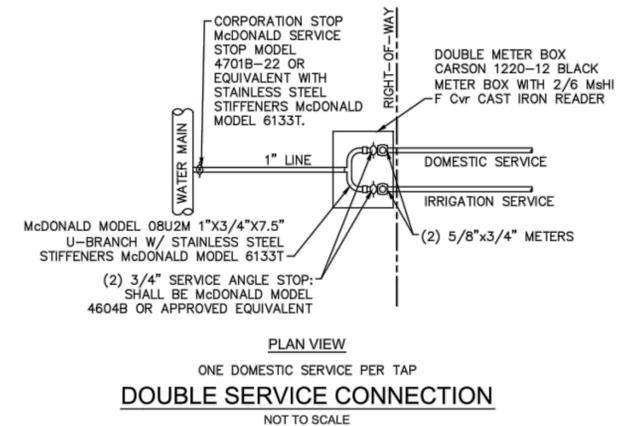
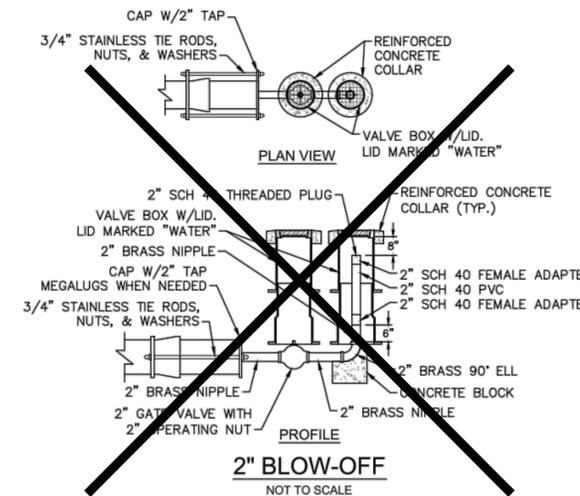
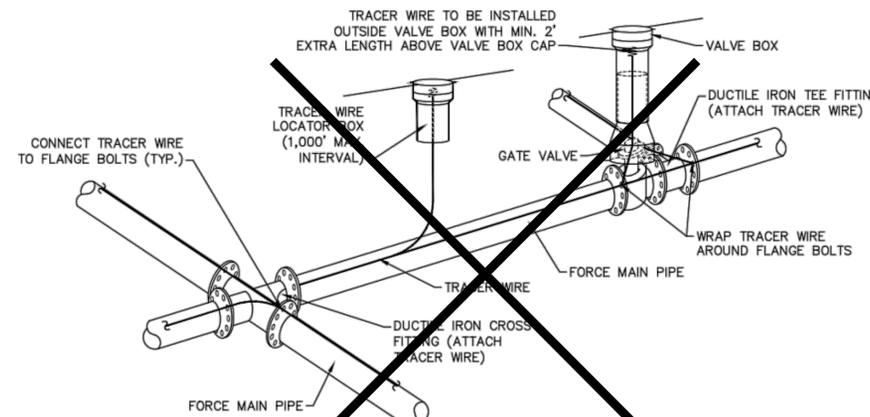
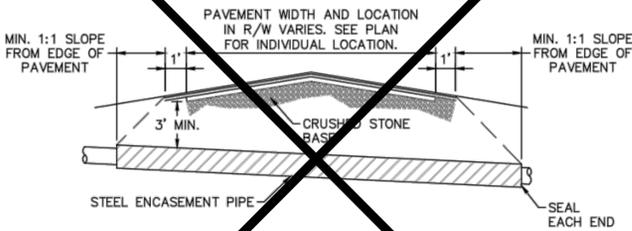
**SHEET NO:**  
WSD-1

**CAPE FEAR PUBLIC UTILITY AUTHORITY**  
235 GOVERNMENT CENTER DRIVE  
WILMINGTON, NC 28403  
OFFICE: (910)332-6560

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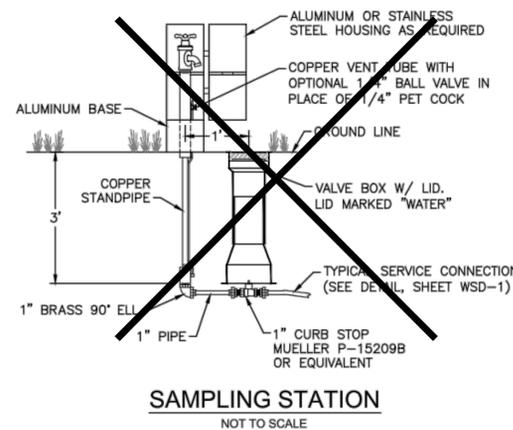
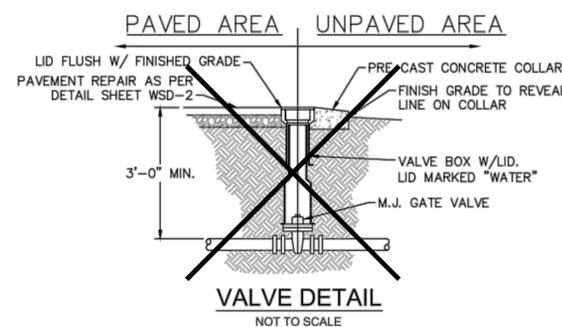
- NOTES:**
- BACKFILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
  - 8-INCH OF ABC BASE MATERIAL SHALL BE USED ON CITY STREETS.
  - BACKFILL AND BASE MATERIALS SHALL BE COMPACTED 12" MINIMUM LIFTS.
  - SOIL SHALL BE COMPACTED BY A MECHANIZED TAMPER (I.E. JUMPING JACK), HOWEVER, VIBRATORY ROLLERS 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
  - ALL APPROVED POSTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF APPLICABLE.
  - ABC BASE AND SUBBASE COMPACTED TO 98% AND BACKFILL AND EMBEDMENT COMPACTED TO 90% AS DETERMINED BY THE MODIFIED PROCTOR AASHTO METHOD T-99.
  - 1'-FOOT CUTBACKS OF ASPHALT SHALL BE PREPARED ON UNDISTURBED SOIL. MINIMUM ASPHALT DENSITY IS 90%.
- (FOR PRIVATE ROADS AND PAVED AREAS; CONTRACTOR TO MEET MIN. REQUIREMENTS AS DEFINED BY RIGHT-OF-WAY OWNER FOR PUBLIC ROAD REPAIRS)



- NOTES:**
- TRACER WIRE SHALL BE #10 COPPER SOLID CORE COPPER WIRE WITH GAS AND OIL RESISTANT INSULATION
  - WIRE SHALL BE STRAPPED TO ALL PVC FORCE MAIN PIPING WITH DUCT TAPE AT 12'-FT. INTERVALS.
  - SECURE WIRE TO ALL TEE AND CROSS FITTINGS.
  - ALL WIRE SPLICES SHALL HAVE WATER PROOF WIRE CONNECTIONS.

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**MCKIM & CREED**  
1730 Varsity Drive, Suite 500  
Raleigh, North Carolina 27606  
Phone: (919)233-8091, Fax: (919)233-8031  
F-1222  
www.mckimcreed.com

REV:	DESCRIPTION:	DATE:
1	Revised Water Main Ditch and Storm Crossing Detail	11/12/13
2	Revised Water Main Ditch and Storm Crossing Detail	05/05/14

O'Reilly Auto Parts – Wilmington #1  
CFPUA SANITARY SEWER

**STANDARD DETAILS**

CAPE FEAR PUBLIC UTILITY AUTHORITY  
235 GOVERNMENT CENTER DRIVE  
WILMINGTON, NC 28403  
OFFICE: (910)332-6560

DATE: 1/9/12  
SCALE: N/A  
DRAWN BY: CFPWA  
CHECKED BY: CFPWA  
PROJECT NO.:

STAMP: NORTH CAROLINA PROFESSIONAL ENGINEER, Blanche Curtis, 036348, 02/25/15, ENGINEER, C. ALAN

**SHEET NO: WSD-2**

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