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GENERAL NOTES:

- 1. BOUNDARY INFORMATION TAKEN FROM TREE AND TOPOGRAPHIC SURVEY PREPARED BY GRAY SURVEYING & MAPPING, BEAUFORT, SC, R120 028 000 0138 0000, DATED SEP 26 2013.
2. TOPOGRAPHIC DATA PROVIDED BY GRAY SURVEYING & MAPPING, BEAUFORT, SC, DATED SEP 26 2013.
3. APPROXIMATE LOCATION OF CERTAIN EXISTING UNDERGROUND UTILITY LINES AND STRUCTURES ARE SHOWN ON THE PLANS FOR INFORMATION ONLY AND ADDITIONAL UNDERGROUND LINES OR STRUCTURES MAY EXIST THAT ARE NOT SHOWN. CALL PALMETTO UTILITY PROTECTION SERVICE AT 1-888-721-7877 BETWEEN THE HOURS OF 7:00 AM AND 7:00 PM MONDAY THRU FRIDAY AT LEAST THREE WORKING DAYS BEFORE COMMENCING CONSTRUCTION. REQUEST UNDERGROUND UTILITIES TO BE LOCATED AND MARKED WITHIN AND NEAR THE CONSTRUCTION SITE.
4. COMPLY WITH SOUTH CAROLINA UNDERGROUND UTILITY DAMAGE PREVENTION ACT (S.C. CODE ANN. 58-35-10, CT-SEQ. SUPP. 1978). NOTIFICATION OF INTENT TO EXCAVATE MAY BE GIVEN BY CALLING THE TOLL FREE NUMBER: 1-800-922-0983.
5. PROTECT BENCH MARKS AND PROPERTY MONUMENTS DURING CONSTRUCTION OPERATIONS. REPLACE ANY BENCH MARKS OR MONUMENTS DAMAGED OR DESTROYED AS A RESULT OF CONTRACTOR'S OPERATIONS AT NO COST TO THE OWNER.
6. OFF-STREET PARKING FOR THE CONTRACTOR'S EMPLOYEES AND AUTHORIZED VISITORS TO THE SITE MUST BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.
7. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO WEIGHT LIMITS PRESCRIBED FOR ALL PUBLIC ROADS WHEN HAULING EQUIPMENT AND MATERIALS TO AND FROM THE PROJECT SITE. DAMAGES TO EXISTING PAVEMENT DUE TO THE CONTRACTOR'S CONSTRUCTION OPERATIONS OR IMPROPER TRANSPORTATION OF MATERIALS AND EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. AT LEAST ONE DRIVING LANE ON PUBLIC ROADS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES. TRAFFIC LINES WILL ONLY BE CLOSED WITH THE EXPRESS WRITTEN CONSENT OF THE AGENCY HAVING JURISDICTION OVER THE ROADWAY. NOTIFY AGENCY HAVING JURISDICTION AT LEAST 5 DAYS BEFORE CLOSING ANY DRIVING LANES TO TRAFFIC. PROVIDE TRAFFIC CONTROL DEVICES, SIGNS AND FLAGMEN AS REQUIRED TO ENSURE PUBLIC SAFETY.
9. CONTRACTOR SHALL COORDINATE DEMOLITION, CLEARING AND CONSTRUCTION OF IMPROVEMENTS TO MINIMIZE INTERFERENCE WITH VEHICULAR AND PEDESTRIAN TRAFFIC AND WITH OPERATIONS OF EXISTING UTILITIES.

WATER AND SEWER LINE CONSTRUCTION:

- 1. ALL WATER AND SEWER LINE CONSTRUCTION SHALL CONFORM TO APPLICABLE STATE AND BEAUFORT JASPER WATER AND SEWER AUTHORITY REQUIREMENTS, STANDARDS AND SPECIFICATIONS.
2. BWSA WILL BE RESPONSIBLE FOR INSPECTION AND APPROVAL OF ALL WATER AND SEWER SYSTEM CONSTRUCTION AND FOR ACCEPTANCE FOR OPERATION AND MAINTENANCE.
3. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION OF ALL UTILITY OWNERS AND FOR FIELD VERIFICATION OF BOTH HORIZONTAL AND VERTICAL LOCATIONS PRIOR TO COMMENCING CONSTRUCTION. ANY DAMAGES TO EXISTING UTILITIES DUE TO THIS CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. NOTIFY THE PROJECT ENGINEER, IF CONFLICTS WITH EXISTING STRUCTURES REQUIRE THAT PROPOSED UTILITIES BE RELOCATED.
5. THE CONTRACTOR MUST NOTIFY BWSA FORTY-EIGHT (48) HOURS PRIOR TO ANY CONSTRUCTION, INSPECTION OR TESTING OF THE WATER DISTRIBUTION SYSTEM.
6. PIPES, FITTINGS, VALVES AND APPURTENANCES FOR WATER AND SEWER LINES SHALL ALL BE IN ACCORDANCE WITH THE REQUIREMENTS CONTAINED IN THE BEAUFORT-JASPER WATER AND SEWER AUTHORITY TECHNICAL SPECIFICATIONS.
7. INSTALLATION OF WATER AND SEWER LINES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE BEAUFORT-JASPER WATER AND SEWER AUTHORITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
8. CONTRACTOR SHALL INSTALL MECHANICAL RESTRAINTS ON ALL BENDS, PLUGS AND TEES, 2" OR LARGER, ON WATERLINES AND SANITARY SEWER FORCE MAINS.
9. ALL WATER MAINS SHALL BE STERILIZED AND PRESSURE TESTED IN ACCORDANCE WITH BWSA SPECIFICATIONS.
10. SEPARATION OF WATER MAINS AND SEWERS:
a. PARALLEL INSTALLATION: UNLESS OTHERWISE SPECIFICALLY SHOWN IN A SPECIAL DETAIL ON THE PLANS, MAINTAIN A MINIMUM VERTICAL SEPARATION OF 18-INCHES BETWEEN ANY EXISTING OR PROPOSED SANITARY SEWER OR SANITARY SEWER FORCE MAIN, THE DISTANCE BEING MEASURED IN A HORIZONTAL PLANE BETWEEN THE OUTSIDE SURFACES OF THE PIPES.
b. CROSSINGS: UNLESS OTHERWISE SPECIFICALLY SHOWN IN A SPECIAL DETAIL ON THE PLANS, INSTALL WATER LINES CROSSING SANITARY SEWERS OR SANITARY SEWER FORCE MAINS TO PROVIDE A MINIMUM VERTICAL SEPARATION OF 18-INCHES BETWEEN THE OUTSIDE SURFACES OF THE PIPES. THIS SHALL BE THE CASE WHETHER THE WATER LINE IS ABOVE OR BELOW THE SANITARY SEWER LINE. WHENEVER POSSIBLE LOCATE THE WATER LINE ABOVE THE SEWER LINE. WHERE NEW WATER LINE CROSSES A NEW SEWER LINE, PLACE A FULL LENGTH OF DUCTILE IRON PIPE FOR BOTH THE WATER AND THE SEWER LINE AT THE CROSSING WITH BOTH PIPES POSITIONED SO THAT THE JOINTS ON EACH ARE AS FAR AS POSSIBLE FROM THE POINT OF CROSSING. WHERE A NEW WATER LINE CROSSES AN EXISTING SEWER LINE, PLACE ONE FULL LENGTH OF DUCTILE IRON PIPE WATER LINE, SO THAT THE JOINTS ARE AS FAR FROM THE POINT OF CROSSING AS POSSIBLE.
11. THE CONTRACTOR SHALL CUT AND PATCH EXISTING PAVEMENT AS REQUIRED FOR THE INSTALLATION OF UTILITY LINES.
12. SANITARY MANHOLE RIM GRADES SHOWN ARE APPROXIMATE. ADJUST RIM ELEVATIONS TO BE FLUSH WITH FINISHED GRADE.
13. THE CONTRACTOR UNDER THIS CONTRACT SHALL NOT MAKE ANY CONNECTIONS TO THE EXISTING WATER OR SANITARY SEWER SYSTEMS UNLESS EXPRESSLY AUTHORIZED TO DO SO BY THE BEAUFORT-JASPER WATER AND SEWER AUTHORITY. ALL WATER AND SEWER IMPROVEMENTS UNDER THIS CONTRACT MUST BE CONSTRUCTED COMPLETE, TESTED, INSPECTED AND APPROVED BY THE BEAUFORT-JASPER WATER AND SEWER AUTHORITY BEFORE ANY AUTHORIZATION TO CONNECT WILL BE GIVEN. COORDINATION OF TESTING, INSPECTION AND CONNECTIONS WITH THE BEAUFORT-JASPER WATER AND SEWER AUTHORITY IS THE RESPONSIBILITY OF THE CONTRACTOR UNDER THIS CONTRACT.
14. ALL WATER MAINS SHALL BE INSTALLED WITH THIRTY-SIX INCHES (36") MINIMUM COVER (FROM FINISHED GRADE). MAXIMUM DEPTH SHALL BE FIVE FEET (5'). WHERE WATER MAINS MAY CONFLICT WITH OTHER UTILITIES, THE WATER MAIN CROSSING SHALL BE CONSTRUCTED WITH DUCTILE IRON PIPE, MECHANICAL JOINT 45-DEG. BENDS AND MECHANICAL RESTRAINTS.

SITE CLEARING AND DEMOLITION:

- 1. NO CLEARING SHALL OCCUR WITHIN DESIGNATED BUFFER ZONES, TREE PROTECTION ZONES, OUTSIDE OF THE PROPERTY LINES OR BEYOND THE CLEARING LIMITS UNLESS OTHERWISE SPECIFICALLY SHOWN ON THE PLANS.
2. ONLY THOSE TREES DESIGNATED ON THE DRAWINGS FOR REMOVAL ARE TO BE REMOVED AS PART OF THE SITE CLEARING OPERATIONS.
3. THE CONTRACTOR SHALL INSTALL A CONTINUOUS LINE OF FLAGGING OR FENCING ALONG THE LIMITS OF CLEARING PRIOR TO COMMENCING ANY CLEARING, DEMOLITION OR CONSTRUCTION WORK ON THE PROJECT.
4. EXERCISE CAUTION DURING CLEARING OPERATIONS TO AVOID FELLING TREES INTO DESIGNATED TREE PROTECTION ZONES.
5. NO BURNING WILL BE ALLOWED WITHIN 50 FEET OF A TREE PROTECTION ZONE OR TREE DRIP LINE.
6. SELECTIVE CLEARING AREAS SHALL BE CLEARED OF ALL BRUSH AND UNDERSTORY GROWTH.

TREE PROTECTION-BEAUFORT

- 1. ALL TREES HAVING A TRUNK DIAMETER OF 8-INCHES (dbh) OR LARGER, AND SPECIMEN TREES MUST BE PRESERVED UNLESS SPECIFICALLY APPROVED FOR REMOVAL IN ACCORDANCE WITH THE CITY OF BEAUFORT ZONING AND DEVELOPMENT STANDARDS ORDINANCE AND INDICATED ON THE PLANS TO BE REMOVED.
2. PRIOR TO COMMENCING ANY CLEARING OR CONSTRUCTION OPERATIONS ON THE SITE, THE CONTRACTOR SHALL ERECT TREE PROTECTION BARRIERS AROUND EACH TREE OR GROUP OF TREES DESIGNATED FOR PRESERVATION IN ACCORDANCE WITH THE DETAILS ON THE PLANS AND THE REQUIREMENTS CONTAINED IN ARTICLE 7, SECTION 7.1, PAR. D.3 OF THE CITY OF BEAUFORT, SOUTH CAROLINA UNIFIED DEVELOPMENT ORDINANCE.
3. A TREE PROTECTION ZONE SHALL BE ESTABLISHED IN ACCORDANCE WITH THE PROVISIONS CONTAINED IN ARTICLE 7, SECTION 7.1, PAR. D.3 OF THE CITY OF BEAUFORT, SOUTH CAROLINA UNIFIED DEVELOPMENT ORDINANCE FOR EACH INDIVIDUAL TREE OR GROUPING OF TREES DESIGNATED FOR PRESERVATION. THE MINIMUM TREE PROTECTION ZONE AS DEFINED IN THE ORDINANCE IS A CIRCULAR AREA CENTERED ON THE TREE AND HAVING A RADIUS OF THE GREATER OF 6-FT. OR ONE-HALF FOOT PER INCH dbh (DIAMETER AT BREAST HEIGHT); THE SIZE OR CONFIGURATION OF THE TREE PROTECTION ZONE MAY BE ADJUSTED AT THE DISCRETION OF THE CITY'S ADMINISTRATOR OF THE ORDINANCE.
A. PLACEMENT OF THE TREE PROTECTION ZONE SHALL BE ADJUSTED AT THE DISCRETION OF THE CITY'S ADMINISTRATOR OF THE ORDINANCE.
B. MATERIALS:
1. PLACEMENT OF THE TREE PROTECTION ZONE SHALL BE ADJUSTED AT THE DISCRETION OF THE CITY'S ADMINISTRATOR OF THE ORDINANCE.
C. VEHICLE PARKING
D. PAVING
E. TRENCHING FOR UTILITIES
4. WHERE UTILITY LINES MUST PASS THRU THE TREE PROTECTION ZONE, THEY SHALL BE INSTALLED BY HORIZONTAL BORING BENEATH THE ROOTS OF THE TREE.
5. WHERE IT IS NECESSARY FOR MACHINERY AND EQUIPMENT TO PASS WITHIN THE TREE PROTECTION ZONE, APPROVAL MUST BE OBTAINED FROM THE ZONING AND DEVELOPMENT ADMINISTRATOR. SPECIAL MEASURES WILL BE REQUIRED TO PROTECT THE ROOTS FROM EXCESSIVE COMPACTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL TREE REMOVAL PERMITS AND FOR COORDINATING ALL INSPECTIONS REQUIRED BY BEAUFORT COUNTY IN CONNECTION WITH TREE PRESERVATION AND REMOVAL ACTIVITIES DURING CONSTRUCTION.

SITE GRADING AND DRAINAGE:

- 1. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING 72-HOUR NOTICE TO ALL RESPECTIVE UTILITY COMPANIES FOR FIELD VERIFICATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGES TO EXISTING UTILITIES DUE TO THIS CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. TEMPORARY CONTROL OF STORM WATER DRAINAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SEQUENCING AND CONSTRUCTION TECHNIQUES SHALL PREVENT OBSTRUCTION OF STORM SEWERS, PONDING IN TRAFFIC AREAS OR RISING OF WATER LEVELS WHICH WOULD ENTER ADJACENT BUILDINGS OR STRUCTURES.
3. FULL WIDTH OF STREET AND ROAD RIGHTS-OF-WAY MUST BE CLEARED AND GRADED AS SHOWN IN THE DETAILS ON THE DRAWINGS.
4. SUBGRADE PREPARATION: TOP SOIL SHALL BE REMOVED FROM PAVED AREAS TO A MINIMUM DEPTH OF 4". ALL EXCAVATION SHALL BE TO SUBGRADE LIMITS.
5. ALL UTILITY PIPE LINES, CONDUITS AND SLEEVES UNDER PAVED AREAS MUST BE IN PLACE PRIOR TO COMPLETION OF THE ROADWAY SUBGRADE.
6. FINISH GRADING SHALL INCLUDE THE PLACEMENT OF TOPSOIL OVER ALL UNPAVED AREAS NOT OCCUPIED BY BUILDINGS OR STRUCTURES AND FINE GRADING AROUND BUILDINGS, ADJACENT TO WALKS, CURBS, GUTTERS AND STRUCTURES TO ASSURE POSITIVE DRAINAGE.

SDCHEC/OCRM SEDIMENT AND EROSION CONTROL STANDARD NOTES (REVISED DEC-2012):

- 1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS. IN ADDITION TO HYDROSEEDING, IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
• WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
• WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTIONS REVEAL THAT ANY CONTROL DEVICES ARE DAMAGED, INAPPROPRIATELY, OR INCORRECTLY INSTALLED, THE PERMITEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEARED, GRADED, AND STABILIZED IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY PART OF THE STATE.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL MEASURES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVED PAVEMENT, AS MAY BE REQUIRED.
7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL IN ACCORDANCE WITH S.C. REG. 72-300 ET SEQ. AND SCR10000.
8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM RAIN AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTFLETS.
9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CANT BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
11. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF CALENDAR DAYS.
13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM Dewatering OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPs (SEDIMENT BASIN, FILTER BAG, ETC.).
16. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
• WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL.
• WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
• FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
• SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
18. IF EXISTING BMPs NEED TO BE MODIFIED OR IF ADDITIONAL BMPs ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SCs WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS UNPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPs MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

WORK ON SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY:

- 1. COMPLY WITH ALL SPECIAL PROVISIONS CONTAINED IN THE DEPARTMENT OF TRANSPORTATION ENCROACHMENT PERMIT ISSUED FOR THE WORK.
2. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION AND COORDINATION OF ALL WORK ON DOT RIGHTS-OF-WAY WITH THE DISTRICT ENGINEERING REPRESENTATIVE.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A DOT APPROVED TRAFFIC CONTROL PLAN FOR SITE ACCESS AND FOR CONSTRUCTION ON DEPARTMENT OF TRANSPORTATION RIGHTS-OF-WAY. ALL TRAFFIC CONTROL PROVISIONS MUST COMPLY WITH DEPARTMENT OF TRANSPORTATION MINIMUM REQUIREMENTS: LIGHTS, SIGNS, FLAGMEN AND ALL OTHER TRAFFIC CONTROL DEVICES MUST CONFORM TO THE REQUIREMENTS CONTAINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. PROVIDE ALL REGULATORY SIGNS, PAVEMENT STRIPING AND MARKINGS, AS REQUIRED BY THE SOUTH CAROLINA DOT DISTRICT ENGINEERING INSPECTOR. ALL SIGNS MUST CONFORM TO THE REQUIREMENTS CONTAINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND TO THE SOUTH CAROLINA DOT STANDARD DETAILS WITH RESPECT TO COLOR, SIZE, REFLECTIVITY, HEIGHT AND PLACEMENT.
5. ALL PAVEMENT MARKINGS ON DOT RIGHTS-OF-WAY SHALL BE THERMOPLASTIC (125 MIL THICKNESS) AND MUST COMPLY WITH THE REQUIREMENTS IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. PLACEMENT SHALL BE IN ACCORDANCE WITH SOUTH CAROLINA DOT STANDARD DRAWINGS 803-3 AND 803-4, AS APPLICABLE.
6. ALL PAVEMENT MARKINGS TO BE REMOVED MUST BE ERADICATED BY GRINDING.

DRY UTILITY CONDUITS FOR ELECTRICAL, TELEPHONE AND CABLE TV:

- 1. ALL DRY UTILITY CONDUIT ENDS SHALL BE CAPPED AND MARKED WITH A STEEL REBAR STAKE IMBEDDED ONE (1) FOOT BELOW GROUND SURFACE.
2. 48" MINIMUM DEPTH FOR ALL ELECTRICAL CONDUITS.
3. MAINTAIN MINIMUM 12" VERTICAL CLEARANCE WHEN CROSSING WATER, SEWER, AND STORM DRAIN LINES.
4. MAINTAIN MINIMUM 18" HORIZONTAL CLEARANCE WHEN PARALLELING WATER, SEWER AND STORM DRAIN LINES.
5. EXTEND CONDUIT BEYOND PAVEMENT, CURB, AND SIDEWALKS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF THE INSTALLATION OF ALL UTILITY SERVICE CONNECTIONS; REFER TO APPROVED BUILDING REGULATIONS FOR THE EXACT LOCATION OF ALL SERVICE CONNECTIONS. THE CONTRACTOR MUST INSTALL ALL CONDUITS, AS SHOWN ON THE PLANS OR AS REQUIRED BY RESPECTIVE UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE STRICT COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS WITH REGARDS TO THE INSTALLATION OF UTILITIES AND CONDUIT.
7. LOCATIONS SHOWN ON THE PLANS FOR PROPOSED DRY UTILITY CONDUITS ARE APPROXIMATE ONLY. ALL DIMENSIONING AND STAKING SHOULD BE BASED ON ECONOMIC AND PRACTICAL CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE RESPECTIVE UTILITY REPRESENTATIVES, PRIOR TO ANY CONDUIT INSTALLATION.
8. TRANSFORMER PADS SHALL BE LOCATED AS DIRECTED BY THE RESPECTIVE UTILITY REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE CODE REQUIREMENTS.
9. NOTIFY THE ENGINEER IF CONFLICTS WITH EXISTING OR PROPOSED STRUCTURES REQUIRE THAT PROPOSED UTILITIES BE RELOCATED.

SEQUENCE OF CONSTRUCTION ACTIVITIES PROJECT PHASING

ESTIMATED START DATE: JAN 2016 ESTIMATED COMPLETION DATE: JUN 2016

- ITEMS MUST OCCUR IN THE ORDER LISTED; ITEMS CANNOT OCCUR CONCURRENTLY UNLESS SPECIFICALLY NOTED.
1. RECEIVE NPDES COVERAGE FROM DHEC.
2. NOTIFY DHEC EDC REGIONAL OFFICE OR OCRM OFFICE 48 HOURS PRIOR TO BEGINNING LAND-DISTURBING ACTIVITIES.
3. INSTALLATION OF CONSTRUCTION ENTRANCE(S).
4. CLEARING & GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
5. INSTALLATION OF PERIMETER CONTROLS (E.G. SILT FENCE).
6. CLEARING & GRUBBING ONLY IN AREAS OF BASINS / TRAPS / PONDS.
7. INSTALLATION OF BASINS / TRAPS / PONDS AND INSTALLATION OF DIVERSIONS TO THOSE STRUCTURES (OUTLET STRUCTURES MUST BE COMPLETELY INSTALLED AS SHOWN ON THE DETAILS BEFORE PROCEEDING TO NEXT STEP; AREAS DRAINING TO THESE STRUCTURES CANNOT BE DISTURBED UNTIL THE STRUCTURES & DIVERSIONS TO THE STRUCTURES ARE COMPLETELY INSTALLED).
8. CLEARING & GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
9. CLEARING & GRUBBING OF SITE OR DEMOLITION (SEDIMENT & EROSION CONTROL MEASURES FOR THESE AREAS MUST ALREADY BE INSTALLED).
10. ROUGH GRADING.
11. INSTALLATION OF STORM DRAIN SYSTEM AND PLACEMENT OF INLET PROTECTION AS EACH INLET IS INSTALLED.
12. FINE GRADING, PAVING, ETC.
13. PERMANENT / FINAL STABILIZATION.
14. CLEAN-OUT OF DETENTION BASINS THAT WERE USED AS SEDIMENT CONTROL STRUCTURES AND RE-GRADING OF DETENTION POND BOTTOMS; IF NECESSARY, MODIFICATION OF SEDIMENT BASIN RISE TO CONVERT TO DETENTION BASIN OULET STRUCTURE.
15. REMOVAL OF TEMPORARY SEDIMENT & EROSION CONTROL MEASURES AFTER ENTIRE AREA DRAINING TO THE STRUCTURE IS FINALLY STABILIZED (THE DEPARTMENT RECOMMENDS THAT THE PROJECT OWNER / OPERATOR HAVE THE SWPPP PREPARED OR REGISTRATION EQUIVALENT APPROVE THE CONSTRUCTION OF SOME PERMANENT STRUCTURES).
16. PERFORM AS-BUILT SURVEYS OF ALL DETENTION STRUCTURES AND SUBMIT TO DHEC OR MSA FOR ACCEPTANCE.
17. SUBMIT NOTICE OF TERMINATION (NOT) TO DHEC AS APPROPRIATE.

NOTE: IF FLOWS FROM OFFSITE AREAS WILL BE DIVERTED AROUND THE SITE AND THE ON-SITE STRUCTURES ARE NOT DESIGNED TO HANDLE FLOWS FROM THE OFFSITE AREAS, THEN THE DIVERSIONS / PIPING FOR THE OFFSITE FLOWS MUST BE INSTALLED BEFORE LAND-DISTURBING ACTIVITIES BEGIN ON THE SITE. INCLUDE THIS IN SEQUENCE. SEDIMENT AND EROSION CONTROL MEASURES FOR THE DISTURBED AREAS FOR THE DIVERSION / PIPING MUST BE INSTALLED BEFORE THOSE AREAS ARE DISTURBED AND SHOULD BE SHOWN ON THE PLANS.
NOTE: IF AN EXISTING DETENTION / SEDIMENT BASIN IS BEING MODIFIED TO HANDLE THE FLOWS FROM THE PROPOSED DEVELOPMENT, THEN IT MUST BE MODIFIED BEFORE LAND-DISTURBING ACTIVITIES BEGIN ON THE SITE. THIS SHOULD BE INCLUDED IN THE SEQUENCE.
NOTE: INCLUDE INDIVIDUAL LOT DEVELOPMENT / CONSTRUCTION IN THE SEQUENCE IF THE SITE WILL NOT BE MASS-GRADED. CONSTRUCTION SHOULD OCCUR AFTER SITE STABILIZATION.
NOTE: MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES MUST CONTINUE UNTIL THE SITE IS PERMANENTLY STABILIZED AND THE CONTROLS ARE REMOVED.
\*BE SURE TO NUMBER AND LIST ALL ITEMS IN NUMERICAL ORDER FOR YOUR CONSTRUCTION SEQUENCE.



IF YOU DIG GEORGIA... CALL US FIRST! 1-800-282-7411 IT'S THE LAW

STANDARD ABBREVIATIONS table with columns for symbol, description, and symbol, description, and symbol, description.



Table with 7 columns: NO., DESCRIPTION, PLAN REVISIONS, DATE.

Ward Edwards Engineering logo and contact information: P.O. BOX 381, BLUEFIELD, SOUTH CAROLINA 29910, PH: (803) 875-5550, FAX: (803) 875-2558, WWW.WARDEDWARDS.COM

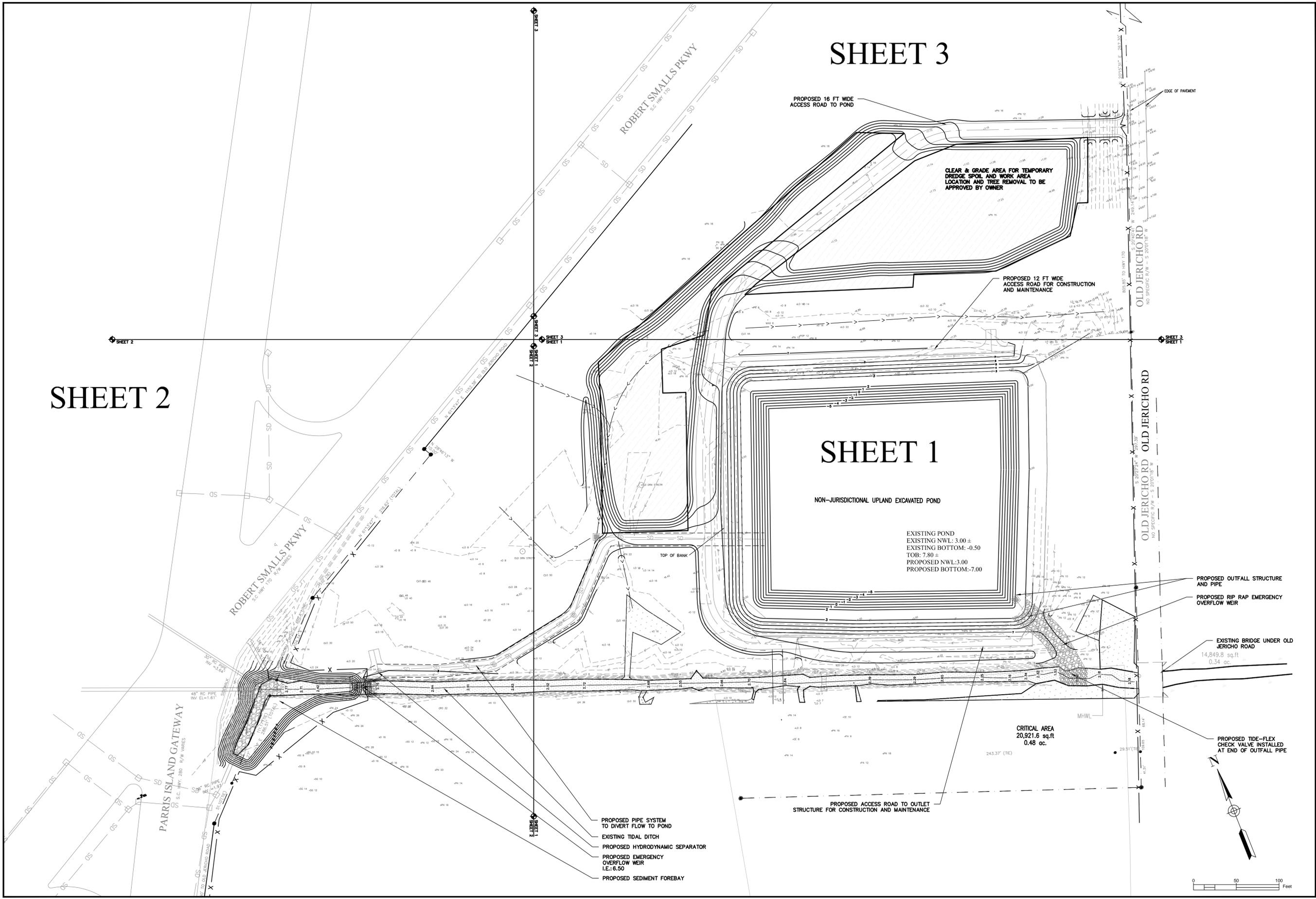
BURTON HILL M2 WATER QUALITY RETROFIT CITY OF BEAUFORT, SOUTH CAROLINA CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY BEAUFORT, SOUTH CAROLINA CONSTRUCTION NOTES

NOT FOR CONSTRUCTION, RELEASED FOR CONSTRUCTION, PROJECT #: 090093A, DATE: 12/30/15, DESIGNED BY: RDB, CHECKED BY: PRM, SCALE: NOT TO SCALE, SHEET C002



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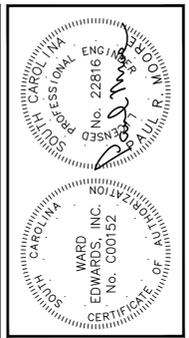
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SHEET 2

SHEET 3

SHEET 1



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**BURTON HILL M2 WATER QUALITY RETROFIT**  
CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
BEAUFORT, SOUTH CAROLINA  
**OVERALL SITE PLAN**

<input checked="" type="checkbox"/> NOT FOR CONSTRUCTION
<input type="checkbox"/> RELEASED FOR CONSTRUCTION
PROJECT #: 090093A
DATE: 12/30/15
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SHEET C003

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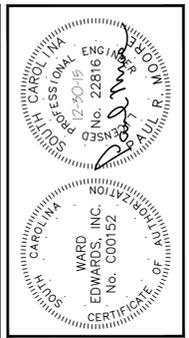
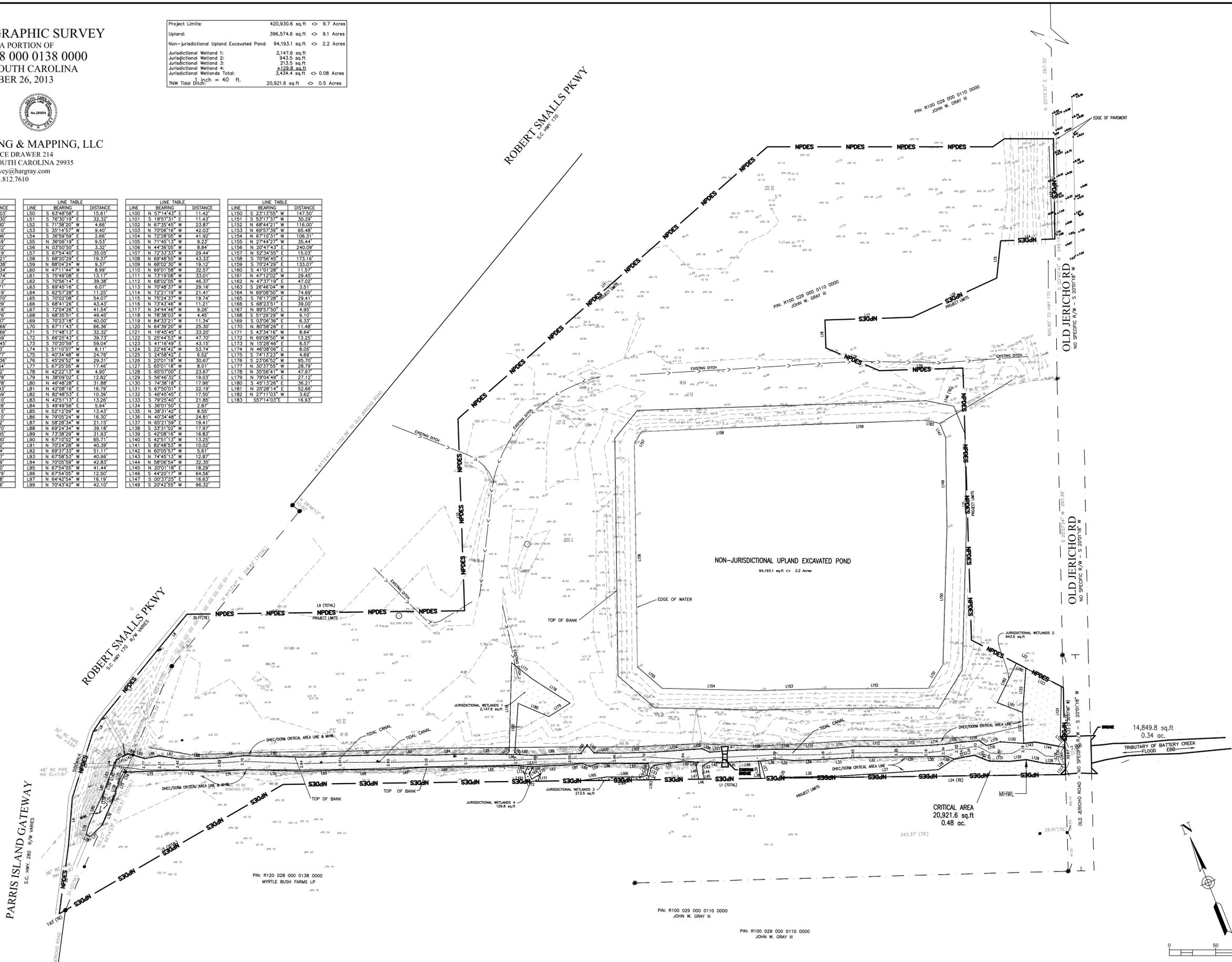
**TREE & TOPOGRAPHIC SURVEY**  
 SHOWING A PORTION OF  
**PIN: R120 028 000 0138 0000**  
 BEAUFORT, SOUTH CAROLINA  
 SEPTEMBER 26, 2013



**GRAY SURVEYING & MAPPING, LLC**  
 POST OFFICE DRAWER 214  
 PORT ROYAL, SOUTH CAROLINA 29935  
 graysurvey@hargray.com  
 843.812.7610

Project Limits:	420,930.6 sq.ft	0.97 Acres
Upland:	396,574.6 sq.ft	9.1 Acres
Non-Jurisdictional Upland Excavated Pond:	94,193.1 sq.ft	2.2 Acres
Jurisdictional Wetland 1:	2,147.6 sq.ft	
Jurisdictional Wetland 2:	943.9 sq.ft	
Jurisdictional Wetland 3:	213.5 sq.ft	
Jurisdictional Wetland 4:	4,129.8 sq.ft	
Jurisdictional Wetlands Total:	3,434.4 sq.ft	0.08 Acres
TNW Tidal Ditch:	20,921.6 sq.ft	0.5 Acres

LINE	BEARING	DISTANCE									
L1	N 69°08'50" W	846.03'	L50	S 63°48'58" E	15.61'	L100	N 67°14'43" E	11.42'	L150	S 23°13'55" W	147.50'
L2	S 81°42'10" W	279.30'	L51	S 30°50'03" E	32.32'	L101	S 19°23'51" E	11.43'	L151	S 53°17'57" W	30.29'
L3	N 29°14'59" E	73.30'	L52	S 71°38'20" W	4.66'	L102	N 67°35'45" W	23.87'	L152	N 68°44'21" W	116.00'
L4	N 26°15'54" E	52.10'	L53	S 35°14'57" W	9.40'	L103	N 70°06'16" W	42.03'	L153	N 69°57'39" W	65.48'
L5	N 39°10'19" E	74.86'	L54	S 36°59'50" E	2.66'	L104	N 72°28'05" W	41.92'	L154	N 67°10'51" W	106.31'
L6	N 55°28'22" E	15.49'	L55	N 36°06'19" E	9.53'	L105	N 71°45'13" W	9.23'	L155	N 27°44'27" W	35.44'
L7	N 60°43'08" E	95.22'	L56	N 03°50'50" E	3.32'	L106	N 44°36'05" W	8.84'	L156	N 20°47'43" E	240.09'
L8	N 61°13'47" E	51.19'	L57	S 67°54'40" E	33.05'	L107	N 72°33'13" W	29.44'	L157	N 52°34'05" E	15.03'
L9	N 69°08'50" E	300.21'	L58	S 68°20'29" E	19.37'	L108	N 69°48'55" W	43.33'	L158	S 70°56'45" E	173.16'
L10	N 19°35'29" E	208.38'	L59	N 88°04'24" W	9.37'	L109	N 88°02'30" W	19.12'	L159	S 70°24'29" E	133.07'
L11	N 70°33'53" E	427.34'	L60	N 47°11'44" W	9.99'	L110	N 69°01'58" W	32.57'	L160	S 41°01'28" E	113.57'
L12	S 70°14'51" E	321.74'	L61	S 75°49'08" E	13.17'	L111	N 73°19'08" W	33.01'	L161	N 47°12'02" W	29.45'
L13	S 20°40'41" W	99.12'	L62	S 70°56'14" E	39.38'	L112	N 68°02'05" W	46.37'	L162	N 47°37'19" E	47.02'
L14	N 70°24'26" W	58.71'	L63	S 69°45'10" E	6.07'	L113	N 70°48'37" W	29.16'	L163	S 26°40'04" W	3.51'
L15	S 27°40'26" W	40.19'	L64	S 62°57'28" E	11.25'	L114	N 72°21'19" W	21.41'	L164	N 69°08'50" W	74.69'
L16	S 86°48'30" W	100.70'	L65	S 70°02'08" E	54.07'	L115	N 75°24'37" W	19.74'	L165	S 76°17'28" E	29.41'
L17	N 70°14'27" W	94.29'	L66	S 68°47'20" E	43.43'	L116	N 73°34'46" W	11.21'	L166	S 68°23'51" E	39.20'
L18	S 19°45'33" W	30.16'	L67	S 72°04'26" E	41.54'	L117	N 34°44'46" W	9.26'	L167	N 89°57'50" E	4.95'
L19	S 45°38'23" E	62.76'	L68	S 68°35'51" E	49.45'	L118	N 78°38'03" W	4.45'	L168	S 51°29'29" W	9.10'
L20	S 70°14'27" E	90.33'	L69	S 70°21'18" E	40.00'	L119	N 84°33'21" W	11.34'	L169	S 03°06'36" E	6.33'
L21	S 19°45'33" W	292.66'	L70	S 67°11'43" E	66.36'	L120	N 64°39'20" W	25.30'	L170	N 80°58'26" E	11.48'
L22	S 41°13'34" E	111.66'	L71	S 71°48'13" E	32.32'	L121	N 19°48'45" E	33.20'	L171	S 43°54'16" W	8.64'
L23	S 20°07'06" W	93.59'	L72	S 69°23'43" E	39.73'	L122	S 25°44'53" W	47.20'	L172	N 69°08'50" W	13.25'
L24	N 69°08'50" W	300.45'	L73	S 70°20'59" E	59.04'	L123	S 41°16'49" E	43.15'	L173	N 15°28'46" E	8.57'
L25	N 54°15'07" E	1.23'	L74	S 31°10'07" W	8.11'	L124	S 22°46'42" W	53.74'	L174	N 46°08'06" E	8.05'
L26	S 69°18'08" E	55.77'	L75	S 60°34'48" W	24.76'	L125	S 24°04'24" E	6.50'	L175	S 74°13'32" W	4.69'
L27	S 77°08'03" E	112.36'	L76	S 45°29'52" W	29.31'	L126	S 20°01'18" W	30.67'	L176	S 23°06'52" W	95.70'
L28	N 78°01'39" E	20.64'	L77	S 67°25'05" W	17.46'	L127	S 65°01'18" W	8.01'	L177	N 30°57'55" W	28.79'
L29	S 49°21'28" E	9.32'	L78	N 42°21'23" W	14.90'	L128	S 69°33'21" W	19.23'	L178	N 35°54'11" E	47.97'
L30	S 69°46'20" E	21.78'	L79	N 38°09'02" E	12.82'	L129	S 56°46'32" E	19.03'	L179	N 79°04'49" E	27.12'
L31	S 68°57'53" E	30.78'	L80	N 46°48'28" E	31.88'	L130	S 74°38'18" E	17.98'	L180	S 45°13'28" E	36.21'
L32	S 69°18'51" E	45.93'	L81	N 20°28'18" E	10.79'	L131	S 67°00'14" W	22.19'	L181	N 29°28'14" E	52.66'
L33	S 71°36'16" E	32.59'	L82	N 42°48'53" E	10.39'	L132	S 46°45'45" E	17.50'	L182	N 27°11'03" W	3.62'
L34	S 70°46'16" E	33.10'	L83	N 42°51'13" E	13.26'	L133	S 79°25'40" E	21.85'	L183	S 57°14'03" E	16.93'
L35	S 69°34'54" E	19.28'	L84	S 49°49'50" E	5.94'	L134	S 36°01'50" E	2.87'			
L36	S 77°02'16" E	12.15'	L85	N 52°12'09" W	13.43'	L135	N 38°51'42" E	8.55'			
L37	S 05°52'04" W	19.10'	L86	N 79°05'24" W	16.30'	L136	N 40°34'48" E	24.81'			
L38	N 69°08'50" W	5.12'	L87	N 86°29'34" W	21.15'	L137	N 69°11'50" E	19.41'			
L39	N 15°14'48" E	18.70'	L88	N 69°24'34" W	19.18'	L138	S 33°10'22" W	17.97'			
L40	S 70°09'00" E	20.05'	L89	N 73°38'29" W	31.93'	L139	S 42°08'16" W	16.83'			
L41	S 71°35'45" E	23.00'	L90	N 67°10'09" W	65.71'	L140	S 42°21'13" W	13.25'			
L42	S 62°11'55" E	9.82'	L91	N 70°24'58" W	40.39'	L141	S 82°48'53" W	10.02'			
L43	S 81°34'59" W	8.64'	L92	N 69°37'33" W	51.11'	L142	N 60°05'57" W	5.61'			
L44	S 20°21'26" W	8.27'	L93	N 75°56'53" W	40.89'	L143	N 74°45'13" W	12.87'			
L45	S 09°22'01" W	6.69'	L94	N 70°08'50" W	42.83'	L144	N 58°08'54" W	32.35'			
L46	N 69°08'50" W	6.10'	L95	N 67°54'05" W	41.44'	L145	N 20°01'18" E	18.29'			
L47	N 11°56'54" E	14.79'	L96	N 67°54'05" W	12.50'	L146	S 44°20'17" W	24.58'			
L48	N 42°43'38" E	2.58'	L97	N 64°42'54" E	16.19'	L147	S 00°37'25" E	16.63'			
L49	N 66°32'58" E	1.76'	L98	N 70°43'42" W	42.10'	L148	S 20°42'55" W	96.32'			
L99	N 70°43'42" W	42.10'									



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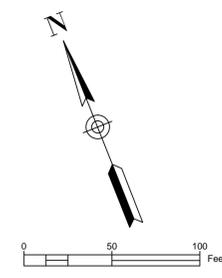
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**BURTON HILL M2 WATER QUALITY RETROFIT**  
 CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
 BEAUFORT, SOUTH CAROLINA  
**EXISTING CONDITIONS PLAN**

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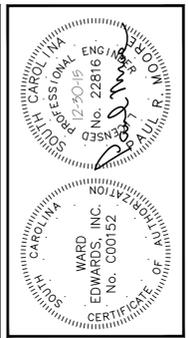
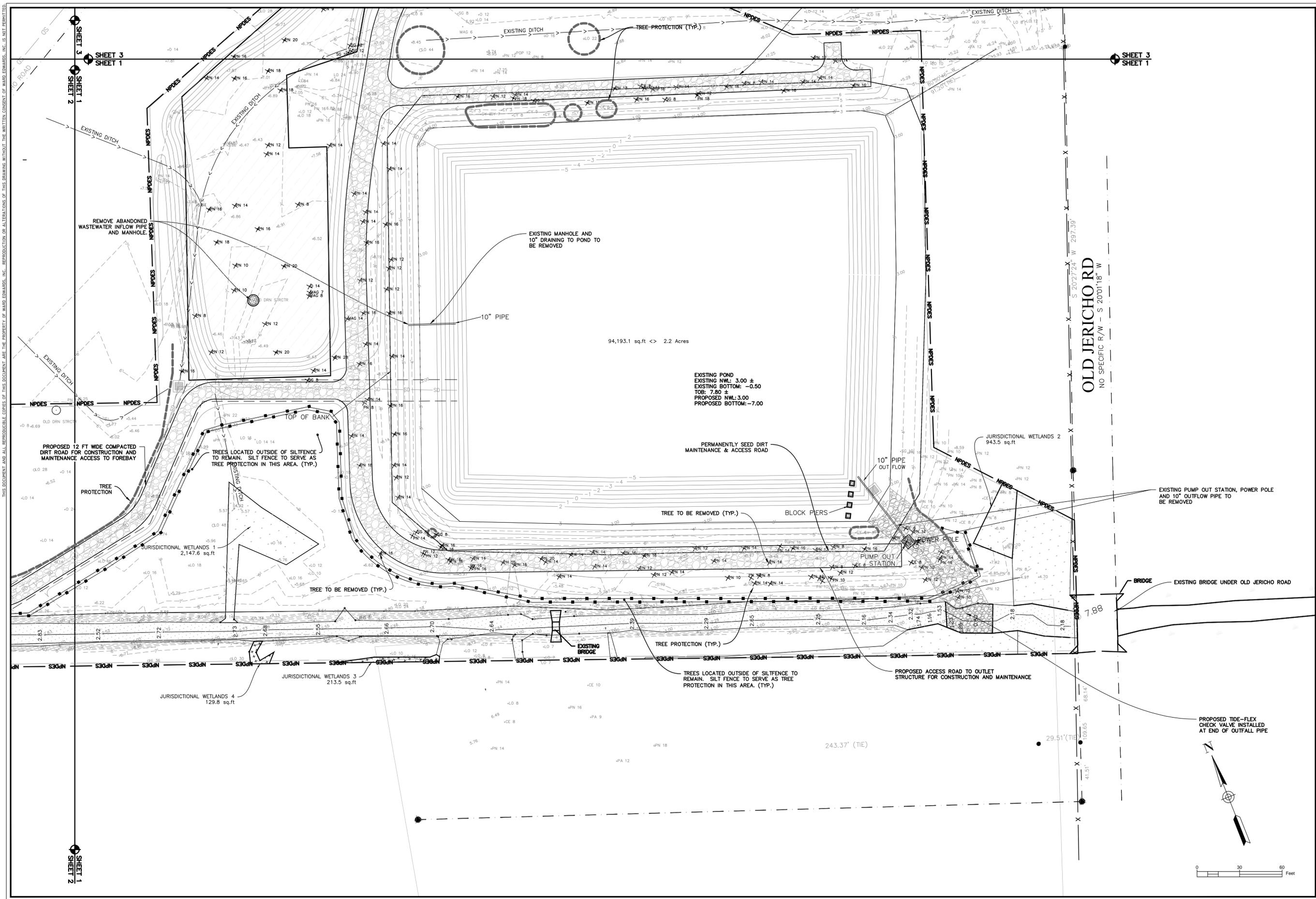
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**BURTON HILL M2 WATER QUALITY RETROFIT**  
CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
BEAUFORT, SOUTH CAROLINA  
**SITE LAYOUT, DEMOLITION, & TREE PROTECTION PLAN**

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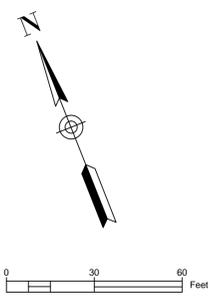
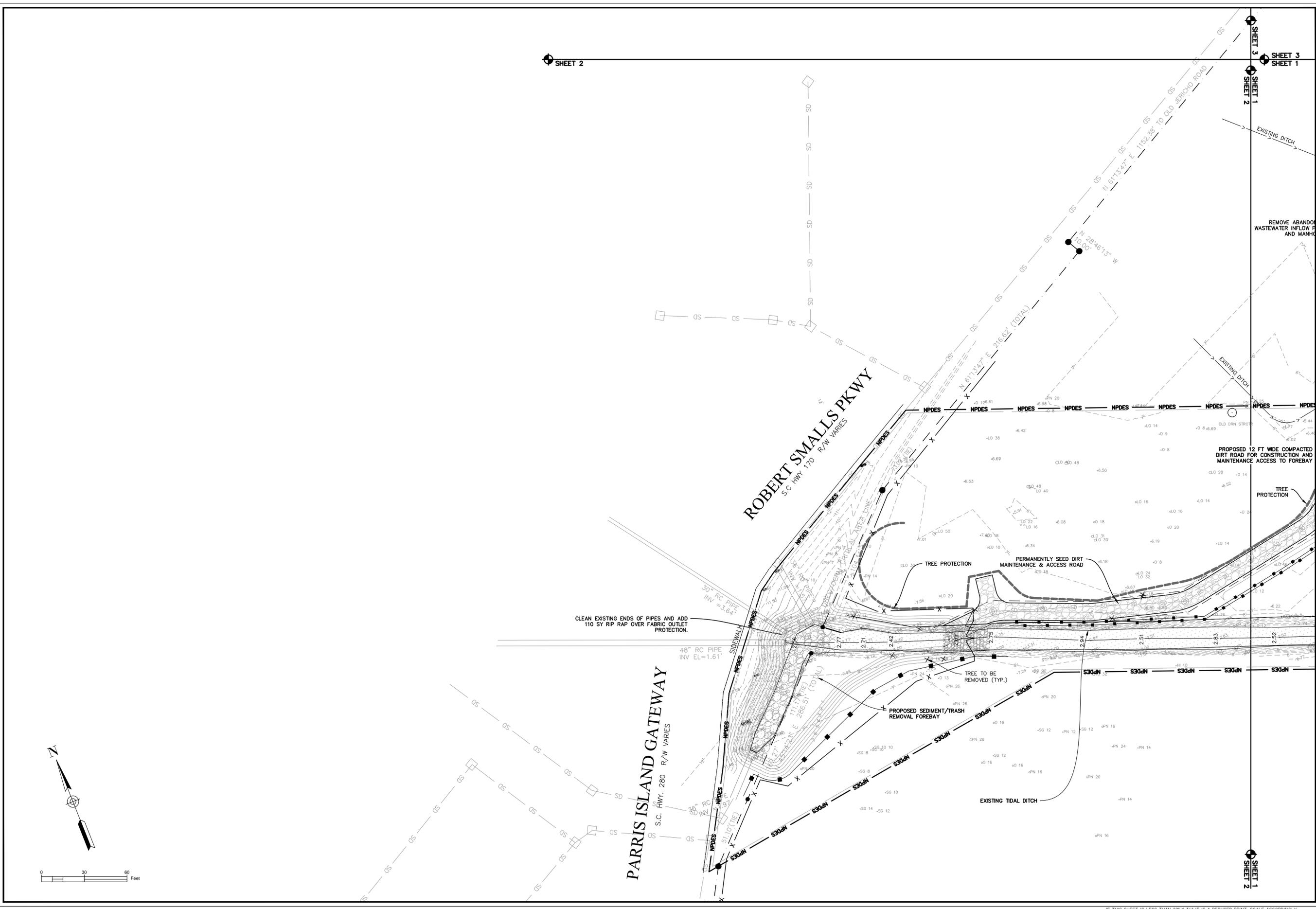
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DATE: 12/30/15  
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CHECKED BY: PRM  
SCALE: 1"=30'

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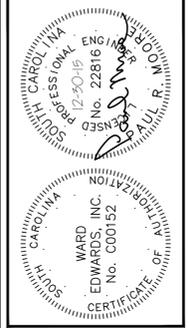
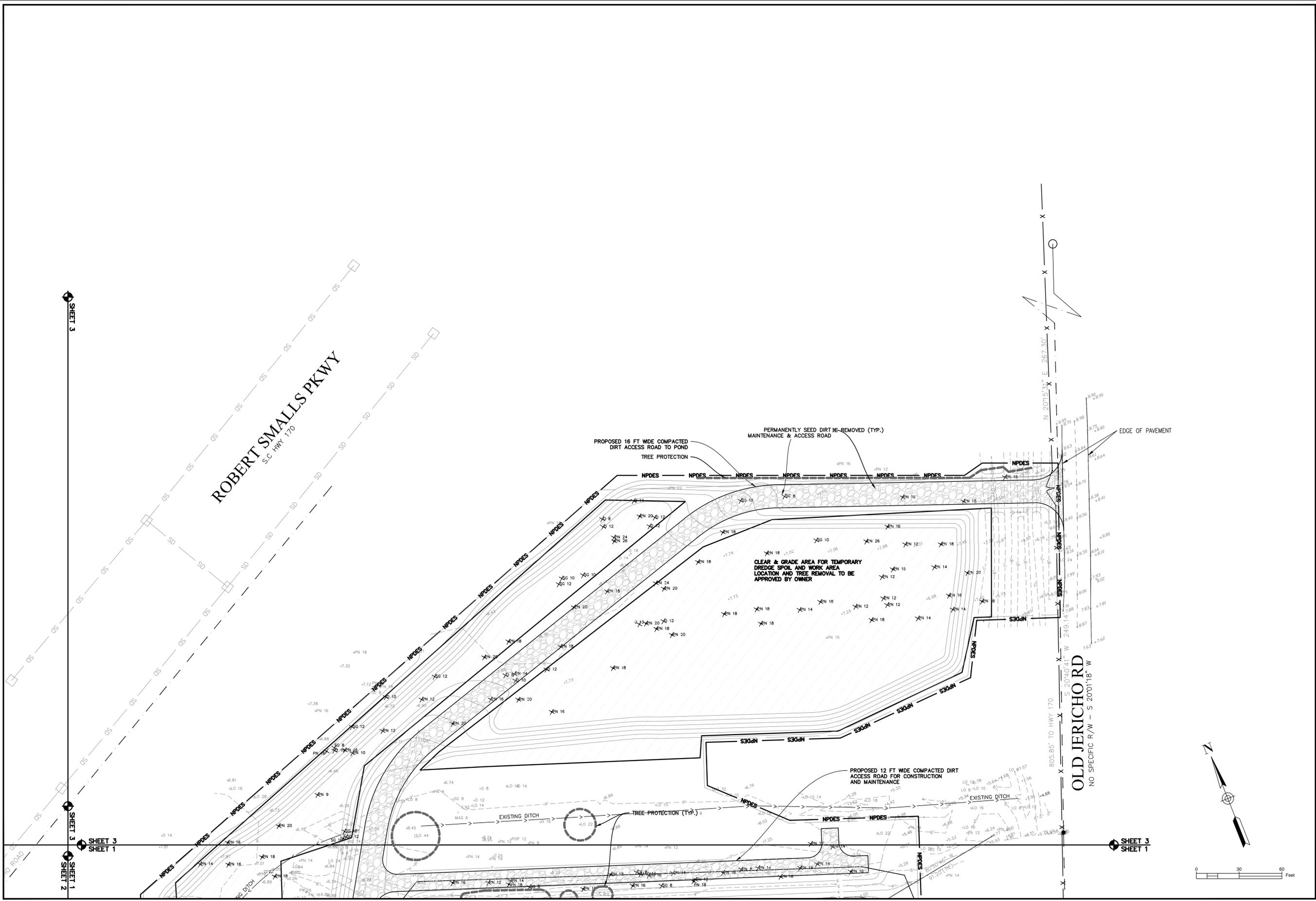
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**BURTON HILL M2 WATER QUALITY RETROFIT**  
CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
BEAUFORT, SOUTH CAROLINA  
**SITE LAYOUT, DEMOLITION, & TREE PROTECTION PLAN**

NOT FOR CONSTRUCTION  
 RELEASED FOR CONSTRUCTION

PROJECT #: 090093A  
DATE: 12/30/15  
DESIGNED BY: RDB  
CHECKED BY: PRM  
SCALE: 1"=30'

**SHEET C202**



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**BURTON HILL M2 WATER QUALITY RETROFIT**  
CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
BEAUFORT, SOUTH CAROLINA  
**SITE LAYOUT, DEMOLITION, & TREE PROTECTION PLAN**

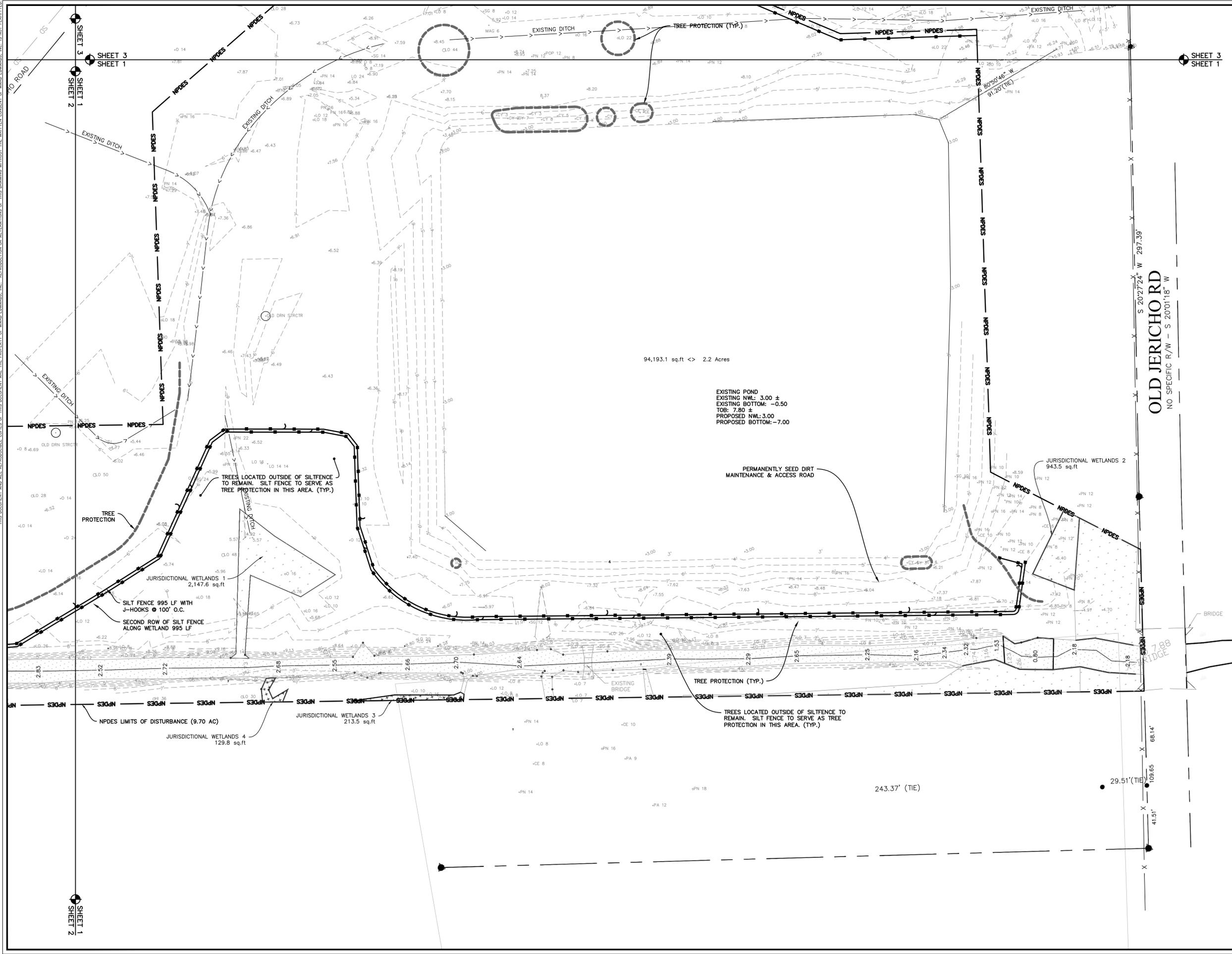
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PROJECT #: 090093A  
DATE: 12/30/15  
DESIGNED BY: RDB  
CHECKED BY: PRM  
SCALE: 1"=30'

**SHEET C203**



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<b>EROSION PREVENTION</b>		
LAND GRADING:	LG	OR
SURFACE ROUGHENING:		
TOPSOILING:		
TEMPORARY SEEDING:	TS	
MULCHING:	M	
ECB OR TRM:		
FGM:	FGM	
BFM:	BFM	
PERMANENT SEEDING:	PS	
SODDING:	SO	
RIPRAP:		
OUTLET PROTECTION:	RIPRAP	ECB or TRM
DUST CONTROL:	DC	
POLYACRYLAMIDE (PAM):	PAM	
<b>SEDIMENT CONTROL</b>		
SEDIMENT BASIN:		
TEMPORARY SEDIMENT TRAP:		
ROCK SEDIMENT DIKE:		
ROCK CHECK DAM:		
SEDIMENT TUBE:		
SILT FENCE:		
REINFORCED SILT FENCE:		
TYPE A - FABRIC INLET PROTECTION:	A	
TYPE A - SEDIMENT TUBE INLET PROTECTION:	A	
TYPE B - WIRE MESH AND STONE DROP INLET PROTECTION:	B	
TYPE C - BLOCK AND GRAVEL INLET PROTECTION:	C	
TYPE D - RIGID INLET FILTERS:	D	
TYPE E - SURFACE COURSE CURB INLET FILTER:	E	
TYPE F - INLET TUBE:	F	
CONCRETE WASHOUT:	CWS	
<b>RUNOFF CONVEYANCE MEASURES</b>		
VEGETATED CHANNELS:		
RIPRAP-LINED CHANNELS:		
ECB OR TRM-LINED CHANNELS:		
PAVED CHANNELS:	PC	
PIPE SLOPE DRAINS:		
TEMPORARY STREAM CROSSING:		
TEMPORARY DIVERSION DITCH OR SWALE:	TD	
PERMANENT DIVERSION DITCH:	PD	
DIVERSION DIKE OR BERM:	DD	
LEVEL SPREADER:		
SUBSURFACE DRAIN:	SSD	

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**BURTON HILL M2 WATER QUALITY RETROFIT**  
CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
BEAUFORT, SOUTH CAROLINA

**PHASE 1 EROSION CONTROL PLAN**

PROJECT #:	090093A
DATE:	12/30/15
DESIGNED BY:	RDB
CHECKED BY:	PRM
SCALE:	1"=30'

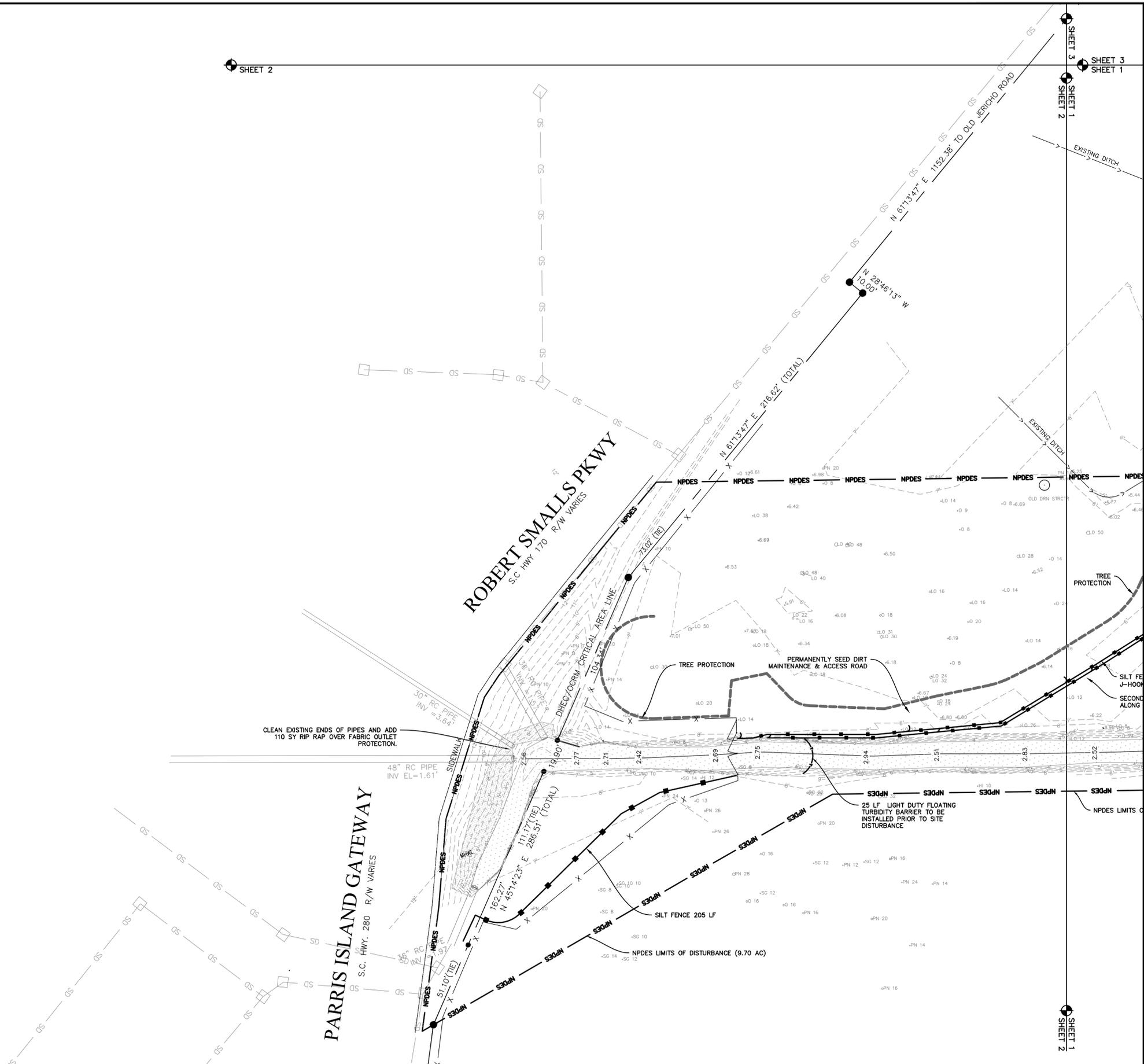
**SHEET C301**

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<b>EROSION PREVENTION</b>	
LAND GRADING:	<input type="checkbox"/> LG OR <input type="checkbox"/>
SURFACE ROUGHENING:	<input type="checkbox"/>
TOPSOILING:	<input type="checkbox"/>
TEMPORARY SEEDING:	<input type="checkbox"/> TS
MULCHING:	<input type="checkbox"/> M
ECB OR TRM:	<input type="checkbox"/>
FGM:	<input type="checkbox"/> FGM
BFM:	<input type="checkbox"/> BFM
PERMANENT SEEDING:	<input type="checkbox"/> PS
SODDING:	<input type="checkbox"/> SO
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OUTLET PROTECTION:	<input type="checkbox"/> RIPRAP <input type="checkbox"/> ECB or TRM
DUST CONTROL:	<input type="checkbox"/> DC
POLYACRYLAMIDE (PAM):	<input type="checkbox"/> PAM
<b>SEDIMENT CONTROL</b>	
SEDIMENT BASIN:	<input type="checkbox"/>
TEMPORARY SEDIMENT TRAP:	<input type="checkbox"/>
ROCK SEDIMENT DIKE:	<input type="checkbox"/>
ROCK CHECK DAM:	<input type="checkbox"/> OR <input type="checkbox"/>
SEDIMENT TUBE:	<input type="checkbox"/>
SILT FENCE:	<input type="checkbox"/>
REINFORCED SILT FENCE:	<input type="checkbox"/>
TYPE A - FABRIC INLET PROTECTION:	<input type="checkbox"/> A
TYPE A - SEDIMENT TUBE INLET PROTECTION:	<input type="checkbox"/>
TYPE B - WIRE MESH AND STONE DROP INLET PROTECTION:	<input type="checkbox"/> B
TYPE C - BLOCK AND GRAVEL INLET PROTECTION:	<input type="checkbox"/>
TYPE D - RIGID INLET FILTERS:	<input type="checkbox"/> D
TYPE E - SURFACE COURSE CURB INLET FILTER:	<input type="checkbox"/> EI
TYPE F - INLET TUBE:	<input type="checkbox"/> F
CONCRETE WASHOUT:	<input type="checkbox"/> CWS
<b>RUNOFF CONVEYANCE MEASURES</b>	
VEGETATED CHANNELS:	<input type="checkbox"/>
RIPRAP-LINED CHANNELS:	<input type="checkbox"/>
ECB OR TRM-LINED CHANNELS:	<input type="checkbox"/>
PAVED CHANNELS:	<input type="checkbox"/> PC <input type="checkbox"/> PC <input type="checkbox"/> PC
PIPE SLOPE DRAINS:	<input type="checkbox"/>
TEMPORARY STREAM CROSSING:	<input type="checkbox"/>
TEMPORARY DIVERSION DITCH OR SWALE:	<input type="checkbox"/> TD <input type="checkbox"/> TD
PERMANENT DIVERSION DITCH:	<input type="checkbox"/> PD <input type="checkbox"/> PD
DIVERSION DIKE OR BERM:	<input type="checkbox"/> DD <input type="checkbox"/> DB
LEVEL SPREADER:	<input type="checkbox"/>
SUBSURFACE DRAIN:	<input type="checkbox"/> SSD <input type="checkbox"/> SSD



Professional Engineer  
 Ward Edwards, Inc.  
 No. 22816  
 No. 000152  
 State of North Carolina  
 State of South Carolina

NO.	DESCRIPTION	DATE
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**Ward Edwards**  
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**BURTON HILL M2 WATER QUALITY RETROFIT**  
 CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
 BEAUFORT, SOUTH CAROLINA  
**PHASE 1 EROSION CONTROL PLAN**

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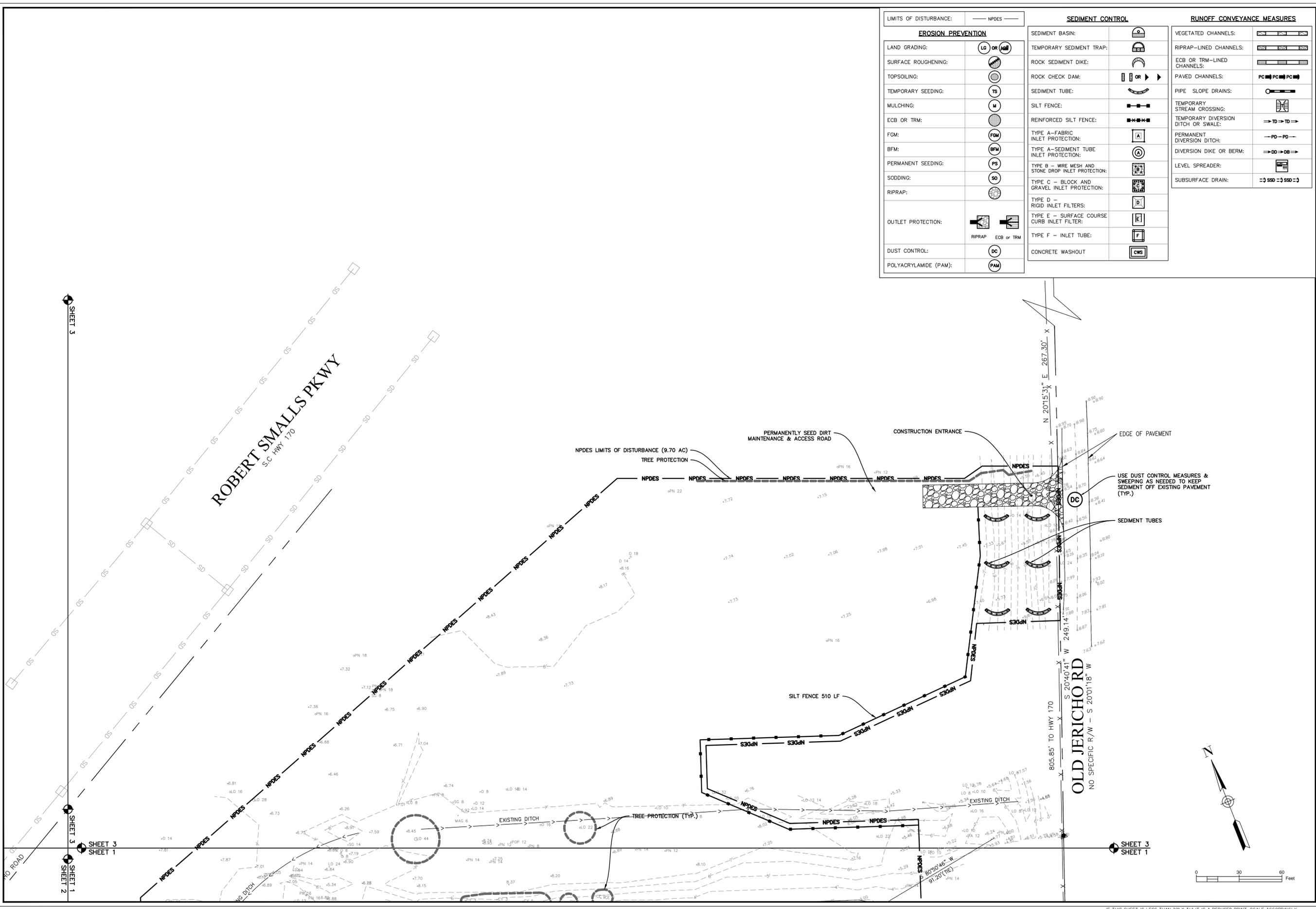
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DATE:	12/30/15
DESIGNED BY:	RDB
CHECKED BY:	PRM
SCALE:	1"=30'

**SHEET C302**

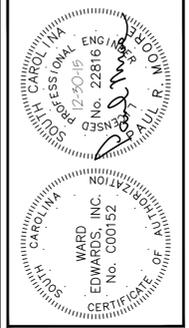
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LIMITS OF DISTURBANCE:		— NPDES —	
<b>EROSION PREVENTION</b>			
LAND GRADING:	LG OR		
SURFACE ROUGHENING:			
TOPSOILING:	TS		
TEMPORARY SEEDING:	TS		
MULCHING:	M		
ECB OR TRM:			
FGM:	FGM		
BFM:	BFM		
PERMANENT SEEDING:	PS		
SODDING:	SO		
RIPRAP:			
OUTLET PROTECTION:		RIPRAP	ECB or TRM
DUST CONTROL:	DC		
POLYACRYLAMIDE (PAM):	PAM		
<b>SEDIMENT CONTROL</b>			
SEDIMENT BASIN:			
TEMPORARY SEDIMENT TRAP:			
ROCK SEDIMENT DIKE:			
ROCK CHECK DAM:			
SEDIMENT TUBE:			
SILT FENCE:			
REINFORCED SILT FENCE:			
TYPE A - FABRIC INLET PROTECTION:	A		
TYPE A - SEDIMENT TUBE INLET PROTECTION:	A		
TYPE B - WIRE MESH AND STONE DROP INLET PROTECTION:			
TYPE C - BLOCK AND GRAVEL INLET PROTECTION:			
TYPE D - RIGID INLET FILTERS:	D		
TYPE E - SURFACE COURSE CURB INLET FILTER:	E		
TYPE F - INLET TUBE:	F		
CONCRETE WASHOUT:	CWS		
<b>RUNOFF CONVEYANCE MEASURES</b>			
VEGETATED CHANNELS:			
RIPRAP-LINED CHANNELS:			
ECB OR TRM-LINED CHANNELS:			
PAVED CHANNELS:	PC	PC	PC
PIPE SLOPE DRAINS:			
TEMPORARY STREAM CROSSING:			
TEMPORARY DIVERSION DITCH OR SWALE:	TD	TD	
PERMANENT DIVERSION DITCH:	PD	PD	
DIVERSION DIKE OR BERM:	DD	DB	
LEVEL SPREADER:			
SUBSURFACE DRAIN:	SSD	SSD	



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**BURTON HILL M2 WATER QUALITY RETROFIT**  
CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
BEAUFORT, SOUTH CAROLINA

**PHASE 1 EROSION CONTROL PLAN**

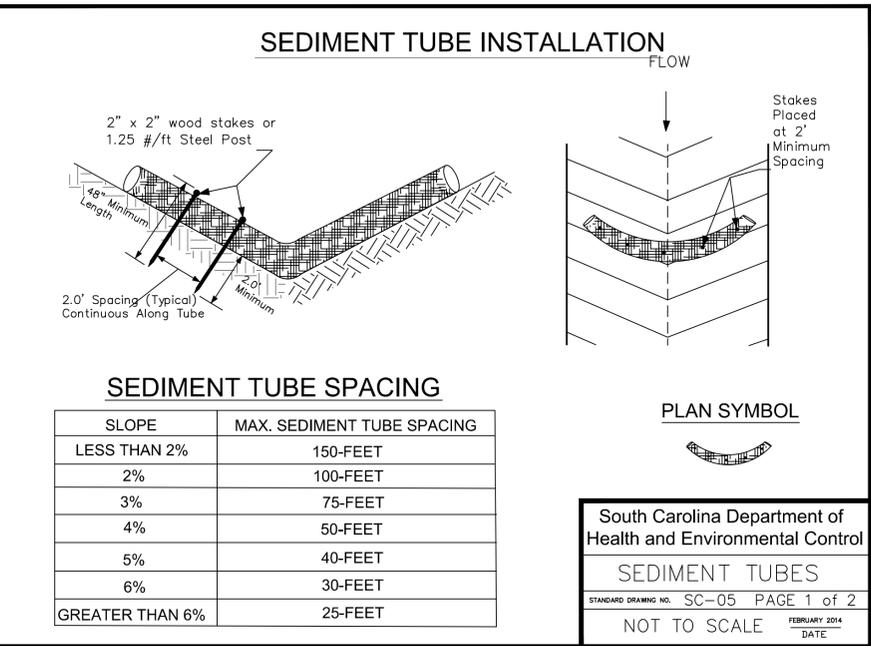
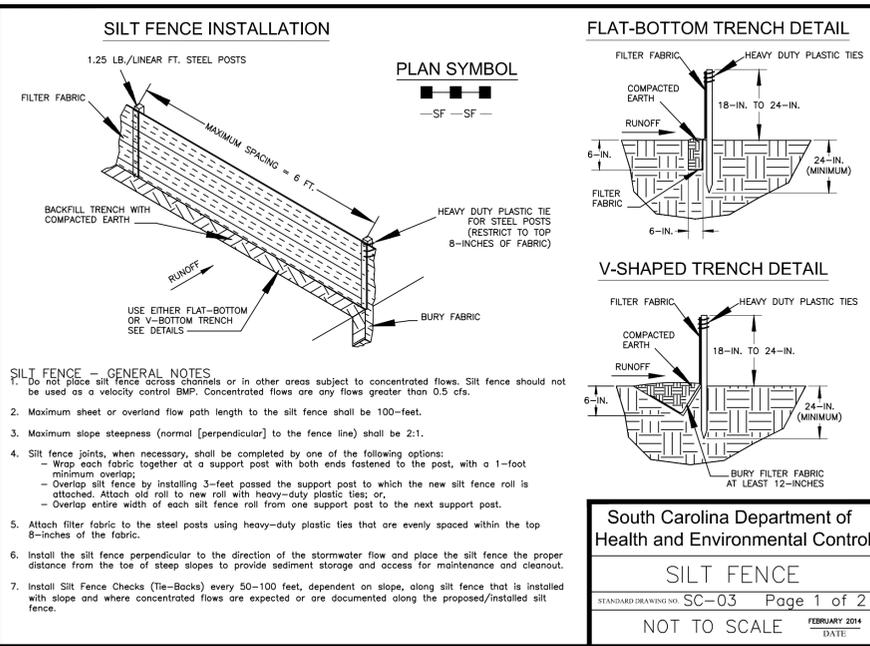
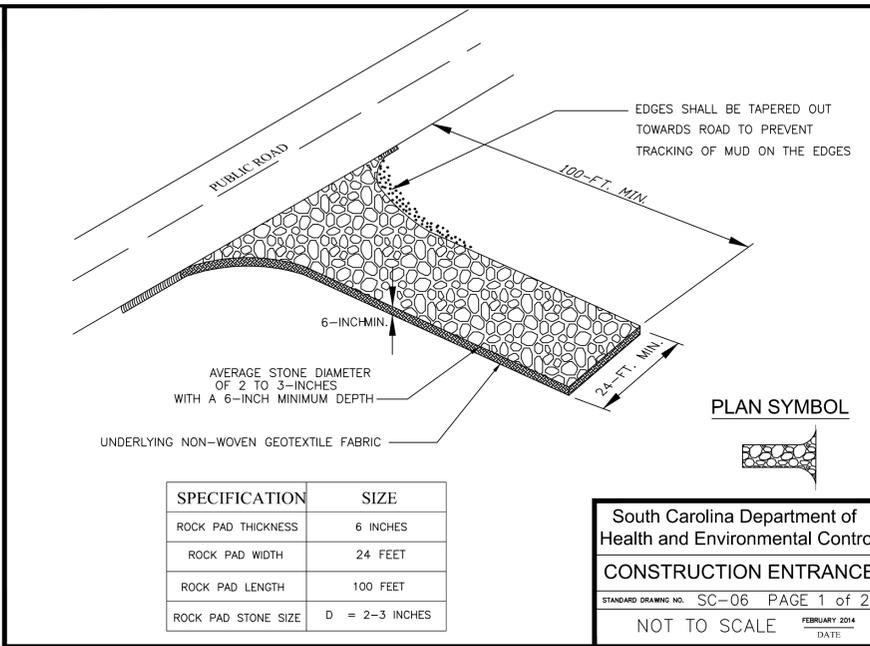
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PROJECT #: 090093A  
DATE: 12/30/19  
DESIGNED BY: PRM  
CHECKED BY: PRM  
SCALE: 1"=30'

**SHEET C303**

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**CONSTRUCTION ENTRANCE - GENERAL NOTES**

- Stabilized construction entrances should be used at all points where traffic will egress/ingress a construction site onto a public road or any impervious surfaces, such as parking lots.
- Install a non-woven geotextile fabric prior to placing any stone.
- Install a culvert pipe across the entrance when needed to provide positive drainage.
- The entrance shall consist of 2-inch to 3-inch D50 stone placed at a minimum depth of 6-inches.
- Minimum dimensions of the entrance shall be 24-feet wide by 100-feet long, and may be modified as necessary to accommodate site constraints.
- The edges of the entrance shall be tapered out towards the road to prevent tracking at the edge of the entrance.
- Divert all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.
- Limestone may not be used for the stone pad.

**CONSTR. ENTRANCE - INSPECTION & MAINTENANCE**

- The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.
- Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
- During regular inspections, check for mud and sediment buildup and pad integrity. Inspection frequencies may need to be more frequent during long periods of wet weather.
- Reshape the stone pad as necessary for drainage and runoff control.
- Wash or replace stones as needed and as directed by site inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off-site by vehicles. Frequent washing will extend the useful life of stone pad.
- Immediately remove mud and sediment tracked or washed onto adjacent impervious surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a sediment trap or basin.
- During maintenance activities, any broken pavement should be repaired immediately.
- Construction entrances should be removed after the site has reached final stabilization. Permanent vegetation should replace areas from which construction entrances have been removed, unless area will be converted to an impervious surface to serve post-construction.

South Carolina Department of Health and Environmental Control  
**CONSTRUCTION ENTRANCE**  
 STANDARD DRAWING NO. SC-06 PAGE 2 of 2  
 FEBRUARY 2014 DATE  
 GENERAL NOTES

**SILT FENCE - POST REQUIREMENTS**

- Silt fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics:  
 - Composed of a high strength steel with a minimum yield strength of 50,000 psi.  
 - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.  
 - Weigh 1.25 pounds per foot (± 8%)
- Posts shall be equipped with projections to aid in fastening of filter fabric.
- Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17-square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
- Install posts to a minimum of 24-inches. A minimum height of 1- to 2-inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
- Post spacing shall be at a maximum of 6-feet on center.

**SILT FENCE - FABRIC REQUIREMENTS**

- Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:  
 - Composed of fibers consisting of low chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;  
 - Free of any treatment or coating which might adversely alter its physical properties after installation;  
 - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,  
 - Have a minimum width of 36-inches.
- Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
- 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
- Filter fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
- Filter fabric shall be installed at a minimum of 24-inches above the ground.

South Carolina Department of Health and Environmental Control  
**SILT FENCE**  
 STANDARD DRAWING NO. SC-03 PAGE 2 of 2  
 FEBRUARY 2014 DATE  
 GENERAL NOTES

**SEDIMENT TUBES - GENERAL NOTES**

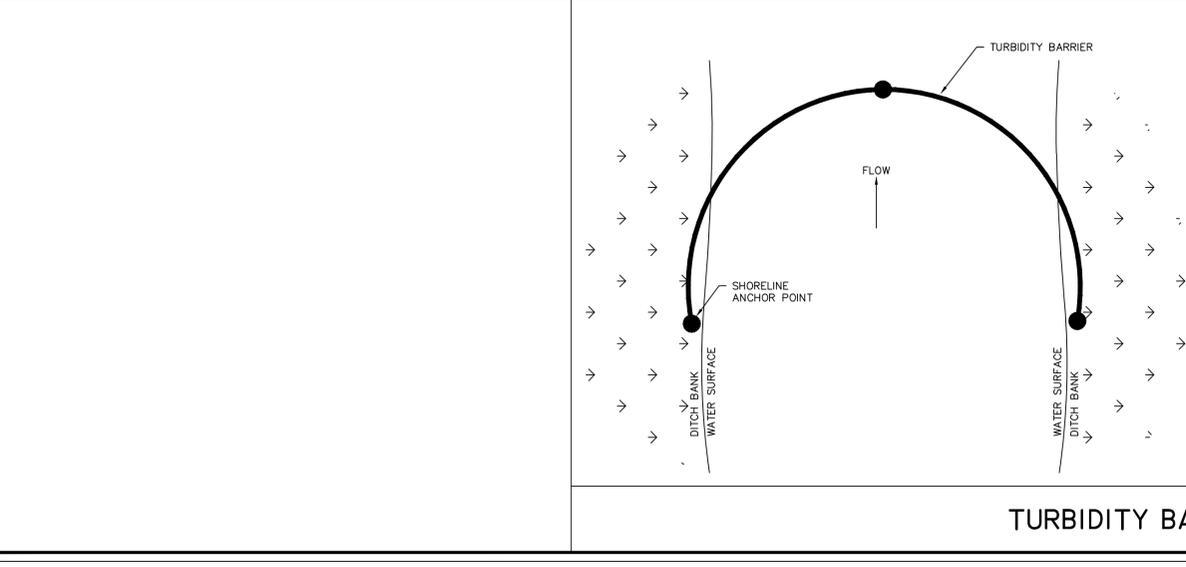
- Sediment tubes may be installed along contours, in drainage conveyance channels, and around inlets to help prevent off-site discharge of sediment-laden stormwater runoff.
- Sediment tubes are elongated tubes of compacted geotextiles, curled excelsior wood, natural coconut fiber, or hardwood mulch. Straw, pine needle, and leaf mulch-filled sediment tubes are not permitted.
- The outer netting of the sediment tube should consist of seamless, high-density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high-density polyethylene non-degradable material.
- Sediment tubes, when used as checks within channels, should range between 18-inches and 24-inches depending on channel dimensions. Diameters outside this range may be allowed where necessary when approved.
- Curled excelsior wood, or natural coconut products that are rolled up to create a sediment tube are not allowed.
- Sediment tubes should be staked using wooden stakes (2-inch X 2-inch) or steel posts (standard "T" or "T" sections with a minimum weight of 1.25 pounds per foot) at a minimum of 48-inches in length placed on 2-foot centers.
- Install all sediment tubes to ensure that no gaps exist between the soil and the bottom of the tube. Manufacturer's recommendations should always be consulted before installation.
- The ends of adjacent sediment tubes should be overlapped 6-inches to prevent flow and sediment from passing through the field joint.
- Sediment tubes should not be stacked on top of one another, unless recommended by manufacturer.
- Each sediment tube should be installed in a trench with a depth equal to 1/5 the diameter of the sediment tube.
- Sediment tubes should continue up the side slopes a minimum of 1-foot above the design flow depth of the channel.
- Install stakes at a diagonal facing incoming runoff.

South Carolina Department of Health and Environmental Control  
**SEDIMENT TUBES**  
 STANDARD DRAWING NO. SC-05 PAGE 2 of 2  
 FEBRUARY 2014 DATE  
 GENERAL NOTES

**SEDIMENT TUBES - INSPECTION & MAINTENANCE**

- The key to functional sediment tubes is weekly inspections, routine maintenance, and regular sediment removal.
- Regular inspections of sediment tubes shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
- Attention to sediment accumulations in front of the sediment tube is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
- Remove accumulated sediment when it reaches 1/3 the height of the sediment tube.
- Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
- Large debris, trash, and leaves should be removed from in front of tubes when found.
- If erosion causes the edges to fall to a height equal to or below the height of the sediment tube, repairs should be made immediately to prevent runoff from bypassing tube.
- Sediment tubes should be removed after the contributing drainage area has been completely stabilized. Permanent vegetation should replace areas from which sediment tubes have been removed.

South Carolina Department of Health and Environmental Control  
**SEDIMENT TUBES**  
 STANDARD DRAWING NO. SC-05 PAGE 2 of 2  
 FEBRUARY 2014 DATE  
 GENERAL NOTES



**NOTES:**

- THE PURPOSE OF THE FLOATING TURBIDITY BARRIER IS TO PROVIDE SEDIMENT PROTECTION CAUSED BY FILL THAT IS PLACED IN WATER OR INFLUENCED BY TIDAL FLOW.
- MATERIALS USED IN THE FLOATING TURBIDITY BARRIER SHALL MEET THE FOLLOWING REQUIREMENTS:

	LIGHT DUTY	MEDIUM DUTY	HEAVY DUTY
FABRIC-POLYESTER REINFORCED VINYL (OZ/SY)	18	22	22
FLOTATION (LB/FT)*	13	22	22
TOP LOAD CABLE	-	-	3/8" GALVANIZED 10K#
STRESS PLATES	-	-	3/4" POLYPROPYLENE
ROPE RETAINER	3/4" POLYPROPYLENE	3/4" POLYPROPYLENE	3/4" POLYPROPYLENE
GRONMENTS	#4 BRASS	#4 BRASS	#4 BRASS
SEAMS HEAT WELDED	YES	YES	YES
BOTTOM LOAD CHAIN	1" GALVANIZED 0.63 LBS/FT (MIN)	3/4" GALVANIZED 0.95 LBS/FT (MIN)	3/4" GALVANIZED 0.95 LBS/FT (MIN)
CONNECTING HARDWARE	GALVANIZED STEEL	GALVANIZED STEEL	GALVANIZED STEEL
STANDARD DEPTH	5 FT. - 15 FT.	5 FT. - 23 FT.	5 FT. - 23 FT.
STANDARD LENGTH	50 & 100 FT.	50 & 100 FT.	50 & 100 FT.

\*FLOTATION FOR BARRIERS OF DEPTHS GREATER THAN 10 FEET IS TO BE 60 POUNDS PER FOOT. FLOTATION MUST BE SUFFICIENT TO MAINTAIN THE TOP OF THE BARRIER AT AN ELEVATION 3 INCHES ABOVE THE WATER.

\*\*THE MAXIMUM LENGTH FOR THE BARRIERS OF DEPTH GREATER THAN 10 FEET IS 50 FEET.

- BOUYS USED IN CONJUNCTION WITH FLOATING TURBIDITY BARRIER SHALL COMPLY WITH THE SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES' LAW ENFORCEMENT BOUY SPECIFICATIONS.
- FLOATING TURBIDITY BARRIERS SHALL BE PLACED AT THE LOCATIONS SHOWN ON THE PLANS, AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE END POINTS SHALL BE ANCHORED ON THE UNDISTURBED SHORELINE WITH SUFFICIENT SUPPORT TO SECURE THE BARRIER IN PLACE DURING TURBULENT CONDITIONS. REFER TO SCBOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 815.

ADHESIVE	WATER DILUTION	NOZZLE TYPE	APPLICATION (GAL./ACRE)
ANIONIC ASPHALT EMULSION	7:1*	COARSE SPRAY	1,200
LATEX EMULSION	12.5:1*	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1*	FINE SPRAY	300

\*USE MANUFACTURER'S RECOMMENDATIONS WHEN AVAILABLE.

**MAINTENANCE:**

- PROHIBIT TRAFFIC ON SURFACE AFTER SPRAYING.
- SUPPLEMENT SURFACE COVERING AS NEEDED.

**INSTALLATION:**

- APPLY ACCORDING TO APPROVED PLAN.
- MULCH DISTURBED AREAS AND TACKIFY WITH RESINS SUCH AS ASPHALT, CURASOL OR TERRATAK ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT VEGETATION.
- IRRIGATE DISTURBED AREAS UNTIL SURFACE IS WET.
- COVER SURFACES WITH CRUSHED STONE OR GRAVEL.
- APPLY CALCIUM CHLORIDE AT A RATE TO KEEP SURFACES MOIST.
- APPLY SPRAY-ON ADHESIVES TO MINERAL SOILS (NOT MUCK SOILS) AS DESCRIBED IN TABLE 1.

**DC DUST CONTROL ON DISTURBED AREAS**

South Carolina Department of Health and Environmental Control  
**CONSTRUCTION ENTRANCE**  
 STANDARD DRAWING NO. SC-06 PAGE 2 of 2  
 FEBRUARY 2014 DATE  
 GENERAL NOTES

BURTON HILL M2 WATER QUALITY RETROFIT  
 CITY OF BEAUFORT, SOUTH CAROLINA  
 CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY  
 BEAUFORT, SOUTH CAROLINA  
 PHASE 1 EROSION CONTROL  
 DETAILS

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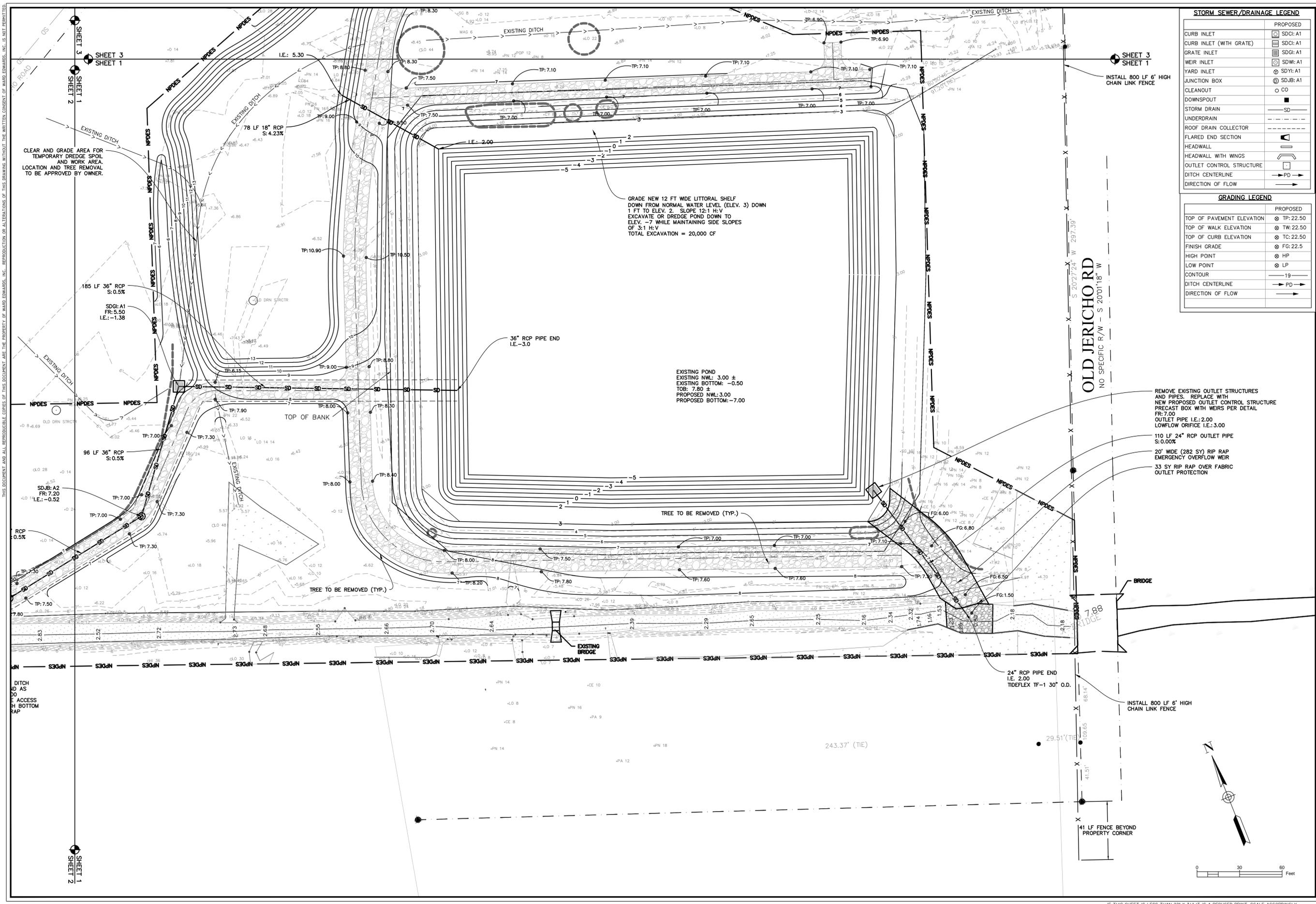
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PROJ. # 0900933A  
 DATE: 12/30/15  
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 SCALE: AS NOTED

**SHEET C304**

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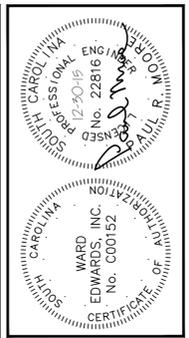


**STORM SEWER/DRAINAGE LEGEND**

PROPOSED	PROPOSED
CURB INLET	SDCI: A1
CURB INLET (WITH GRATE)	SDCI: A1
GRATE INLET	SDGI: A1
WEIR INLET	SDWI: A1
YARD INLET	SDYI: A1
JUNCTION BOX	SDJB: A1
CLEANOUT	CO
DOWNSPOUT	SD
STORM DRAIN	SD
UNDERDRAIN	SD
ROOF DRAIN COLLECTOR	SD
FLARED END SECTION	SD
HEADWALL	SD
HEADWALL WITH WINGS	SD
OUTLET CONTROL STRUCTURE	SD
DITCH CENTERLINE	PD
DIRECTION OF FLOW	PD

**GRADING LEGEND**

PROPOSED	PROPOSED
TOP OF PAVEMENT ELEVATION	TP: 22.50
TOP OF WALK ELEVATION	TW: 22.50
TOP OF CURB ELEVATION	TC: 22.50
FINISH GRADE	FG: 22.5
HIGH POINT	HP
LOW POINT	LP
CONTOUR	19
DITCH CENTERLINE	PD
DIRECTION OF FLOW	PD



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**BURTON HILL M2 WATER QUALITY RETROFIT**  
 CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
 BEAUFORT, SOUTH CAROLINA  
**GRADING & DRAINAGE PLAN**

NOT FOR CONSTRUCTION  
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PROJECT #: 090093A  
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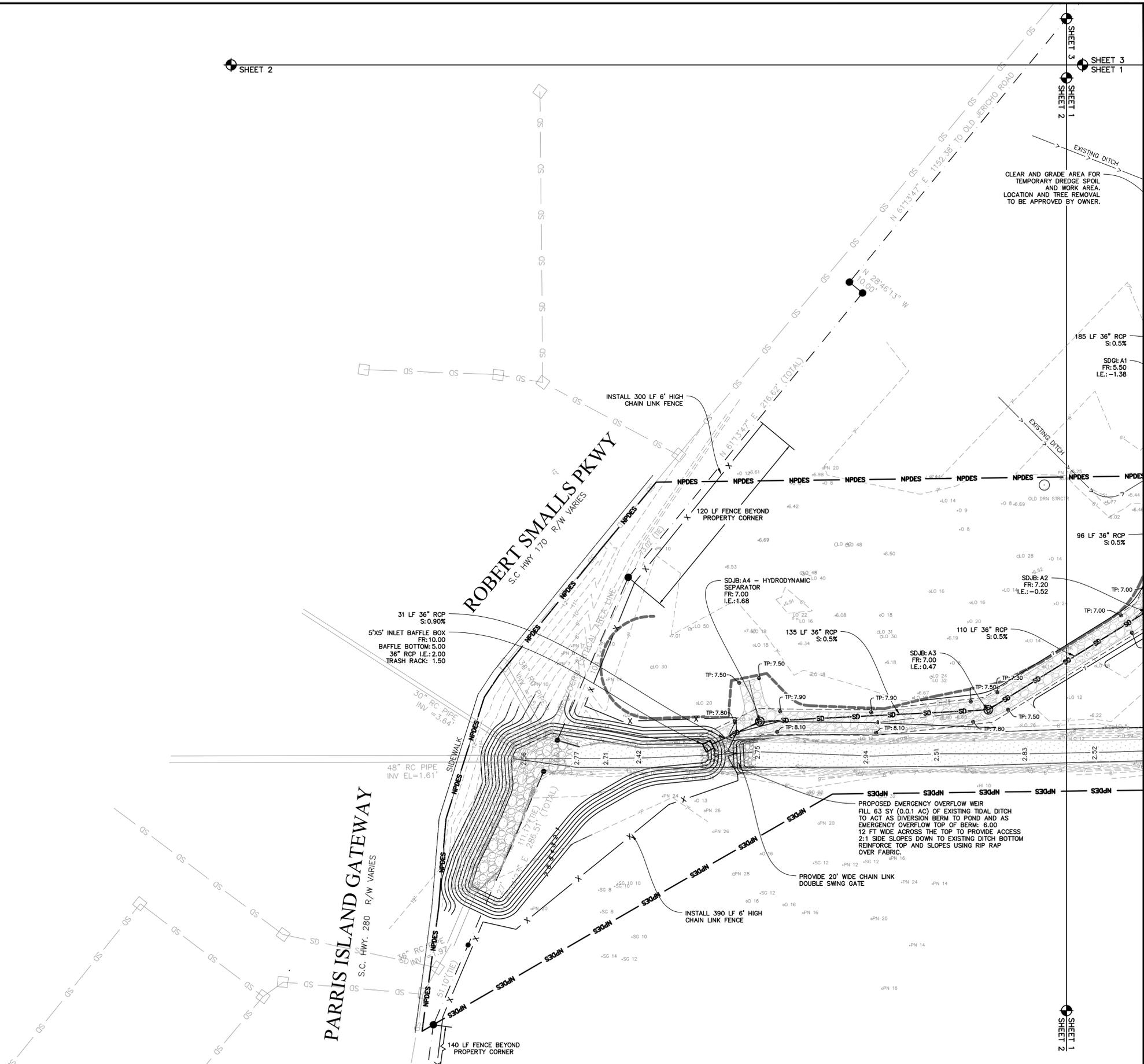
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STORM SEWER/DRAINAGE LEGEND	
	PROPOSED
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CURB INLET (WITH GRATE)	SDCI: A1
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YARD INLET	SDYI: A1
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CLEANOUT	CO
DOWNSPOUT	■
STORM DRAIN	SD
UNDERDRAIN	---
ROOF DRAIN COLLECTOR	---
FLARED END SECTION	---
HEADWALL	---
HEADWALL WITH WINGS	---
OUTLET CONTROL STRUCTURE	---
DITCH CENTERLINE	→ PD →
DIRECTION OF FLOW	→

GRADING LEGEND	
	PROPOSED
TOP OF PAVEMENT ELEVATION	TP: 22.50
TOP OF WALK ELEVATION	TW: 22.50
TOP OF CURB ELEVATION	TC: 22.50
FINISH GRADE	FG: 22.5
HIGH POINT	HP
LOW POINT	LP
CONTOUR	-19
DITCH CENTERLINE	→ PD →
DIRECTION OF FLOW	→



SHEET 2

SHEET 3

SHEET 1

SHEET 2

SHEET 1

CLEAR AND GRADE AREA FOR TEMPORARY DREDGE SPOIL AND WORK AREA. LOCATION AND TREE REMOVAL TO BE APPROVED BY OWNER.



NO.	DESCRIPTION	DATE
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**BURTON HILL M2 WATER QUALITY RETROFIT**  
CITY OF BEAUFORT, SOUTH CAROLINA

**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
BEAUFORT, SOUTH CAROLINA

**GRADING & DRAINAGE PLAN**

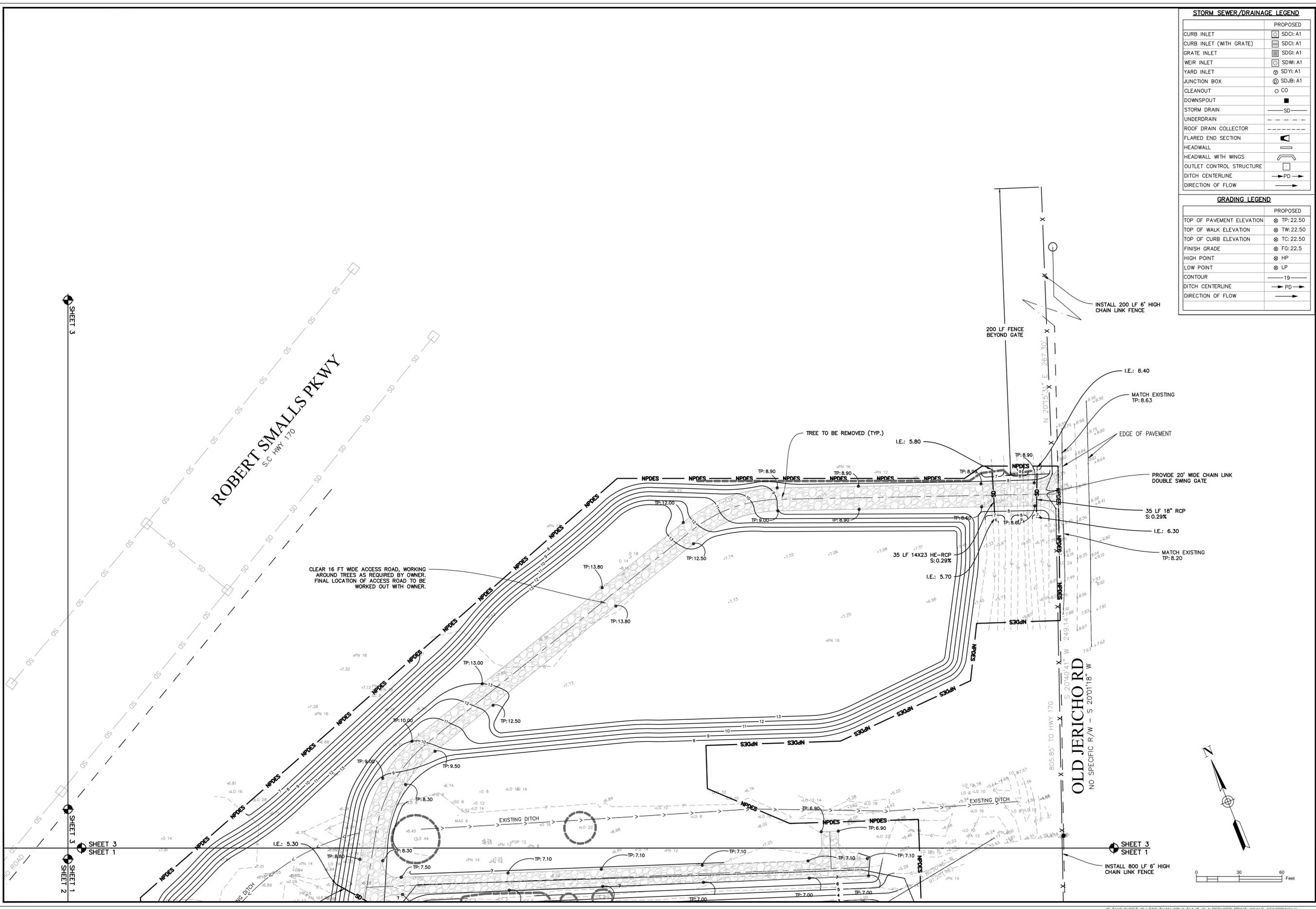
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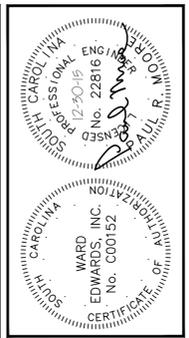


**STORM SEWER/DRAINAGE LEGEND**

EXISTING	PROPOSED
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GRATE INLET	SDGI: A1
WEIR INLET	SDWI: A1
YARD INLET	SDYI: A1
JUNCTION BOX	SDJB: A1
CLEANOUT	CO
DOWNSPOUT	SD
UNDERDRAIN	SD
ROOF DRAIN COLLECTOR	SD
FLARED END SECTION	SD
HEADWALL	SD
HEADWALL WITH WINGS	SD
OUTLET CONTROL STRUCTURE	SD
DITCH CENTERLINE	PD
DIRECTION OF FLOW	SD

**GRADING LEGEND**

EXISTING	PROPOSED
TOP OF PAVEMENT ELEVATION	TP: 22.50
TOP OF WALK ELEVATION	TW: 22.50
TOP OF CURB ELEVATION	TC: 22.50
FINISH GRADE	FG: 22.5
HIGH POINT	HP
LOW POINT	LP
CONTOUR	19
DITCH CENTERLINE	PD
DIRECTION OF FLOW	SD



NO.	DESCRIPTION	DATE
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**Ward Edwards ENGINEERING**  
 P.O. BOX 381, BLUEFORD, SOUTH CAROLINA 29910  
 PH: (803) 837-5350 / FAX: (803) 837-2536  
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**BURTON HILL M2 WATER QUALITY RETROFIT**  
 CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
 BEAUFORT, SOUTH CAROLINA  
**GRADING & DRAINAGE PLAN**

NOT FOR CONSTRUCTION  
 RELEASED FOR CONSTRUCTION

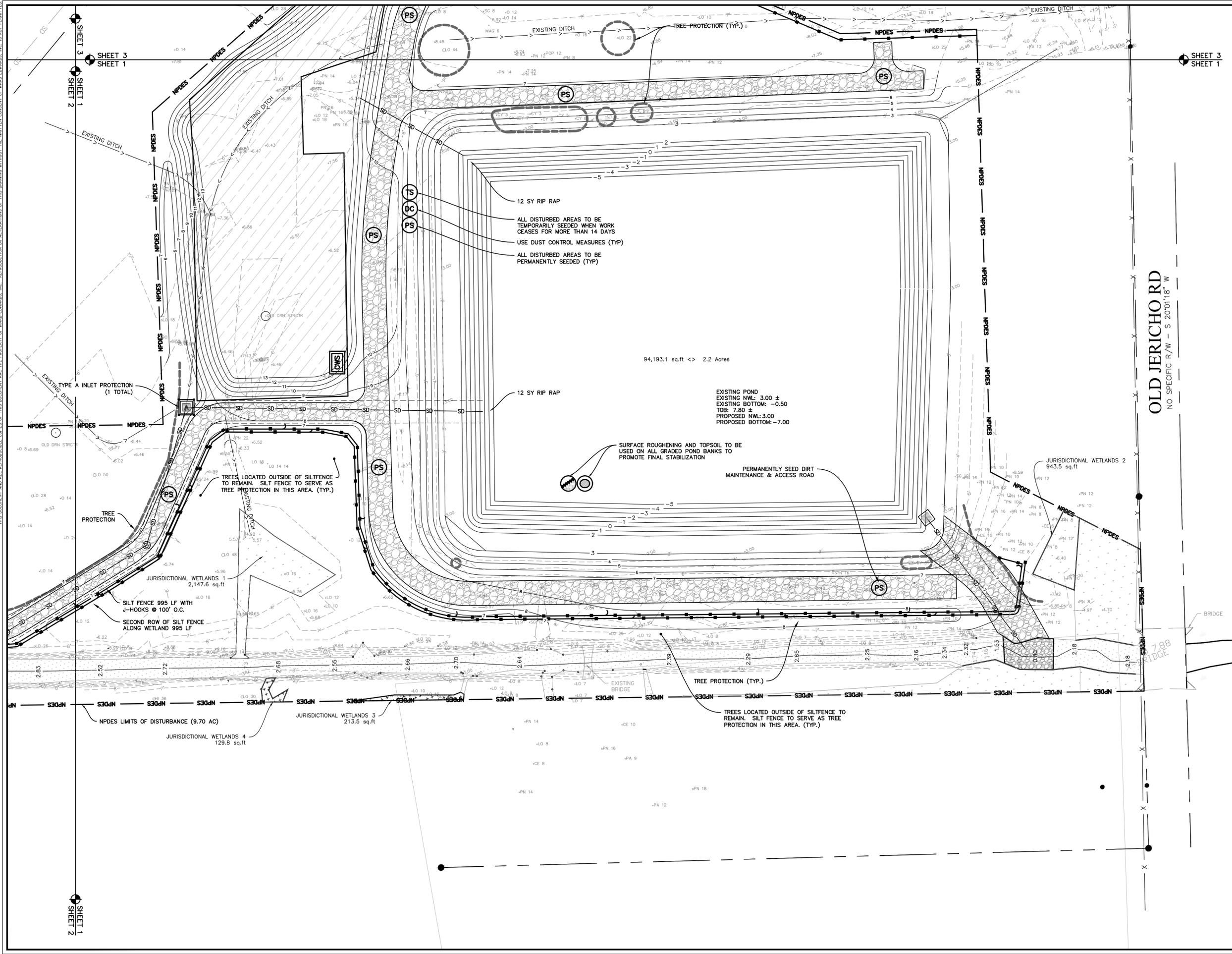
PROJECT #: 090093A  
 DATE: 12/30/15  
 DESIGNED BY: RDB  
 CHECKED BY: PRM  
 SCALE: 1"=30'

**SHEET C403**

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LIMITS OF DISTURBANCE:		NPDES
<b>EROSION PREVENTION</b>		
LAND GRADING:	LG	OR
SURFACE ROUGHENING:		
TOPSOILING:		
TEMPORARY SEEDING:	TS	
MULCHING:	M	
ECB OR TRM:		
FGM:		
BFM:		
PERMANENT SEEDING:	PS	
SODDING:	SO	
RIPRAP:		
OUTLET PROTECTION:		
DUST CONTROL:	DC	
POLYACRYLAMIDE (PAM):	PAM	
<b>SEDIMENT CONTROL</b>		
SEDIMENT BASIN:		
TEMPORARY SEDIMENT TRAP:		
ROCK SEDIMENT DIKE:		
ROCK CHECK DAM:		
SEDIMENT TUBE:		
SILT FENCE:		
REINFORCED SILT FENCE:		
TYPE A - FABRIC INLET PROTECTION:		
TYPE A - SEDIMENT TUBE INLET PROTECTION:		
TYPE B - WIRE MESH AND STONE DROP INLET PROTECTION:		
TYPE C - BLOCK AND GRAVEL INLET PROTECTION:		
TYPE D - RIGID INLET FILTERS:		
TYPE E - SURFACE COURSE CURB INLET FILTER:		
TYPE F - INLET TUBE:		
CONCRETE WASHOUT:		
<b>RUNOFF CONVEYANCE MEASURES</b>		
VEGETATED CHANNELS:		
RIPRAP-LINED CHANNELS:		
ECB OR TRM-LINED CHANNELS:		
PAVED CHANNELS:		
PIPE SLOPE DRAINS:		
TEMPORARY STREAM CROSSING:		
TEMPORARY DIVERSION DITCH OR SWALE:		
PERMANENT DIVERSION DITCH:		
DIVERSION DIKE OR BERM:		
LEVEL SPREADER:		
SUBSURFACE DRAIN:		

**Ward Edwards**  
ENGINEERING

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NO.	DESCRIPTION	DATE

BURTON HILL M2 WATER QUALITY RETROFIT  
 CITY OF BEAUFORT, SOUTH CAROLINA  
 CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY  
 BEAUFORT, SOUTH CAROLINA

PHASE 2 EROSION CONTROL PLAN

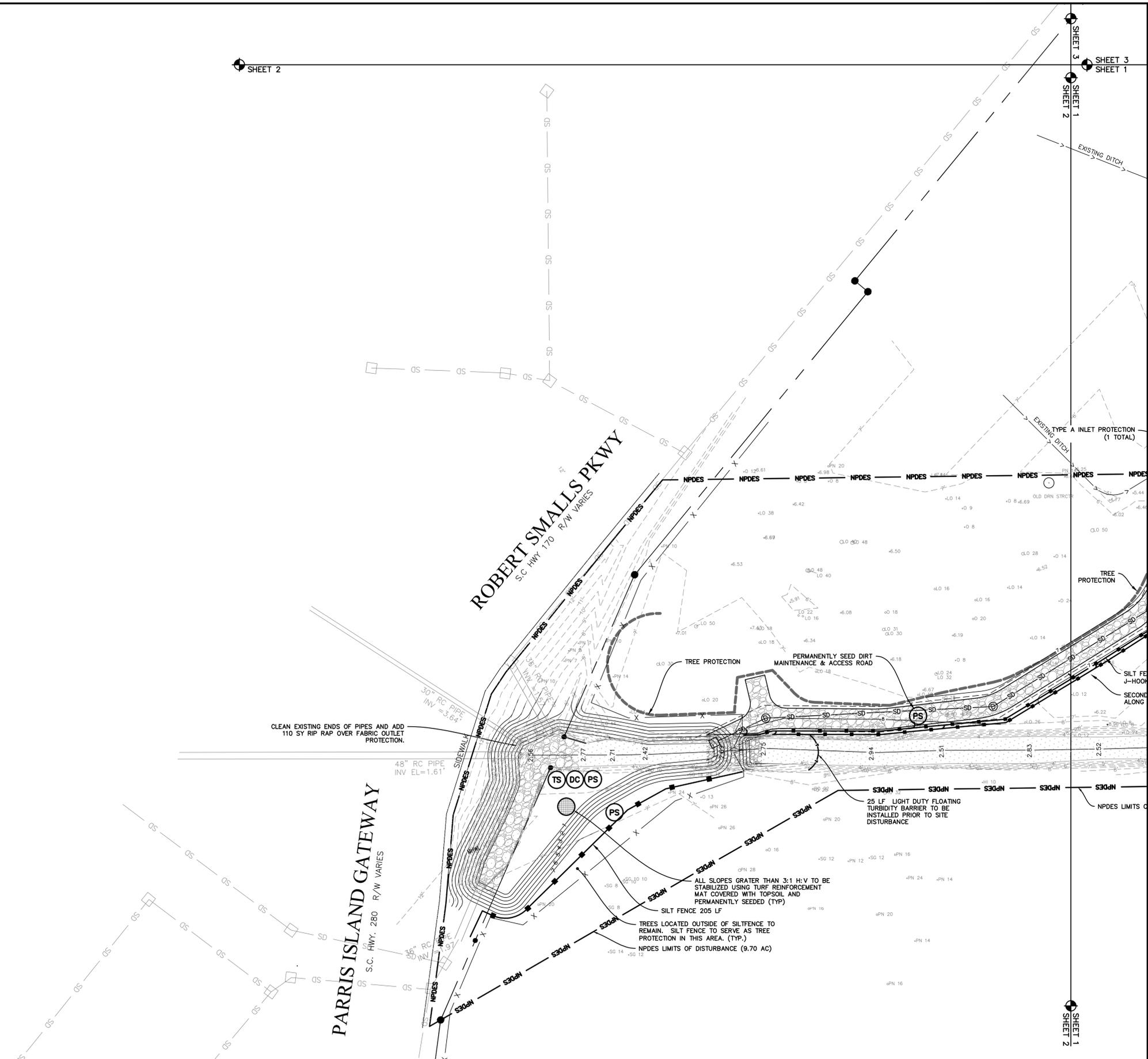
PROJECT #:	090093A
DATE:	12/30/15
DESIGNED BY:	RDB
CHECKED BY:	PRM
SCALE:	1"=30'

SHEET  
**C501**

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LAND GRADING:	OR
SURFACE ROUGHENING:	
TOPSOILING:	
TEMPORARY SEEDING:	
MULCHING:	
ECB OR TRM:	
FGM:	
BFM:	
PERMANENT SEEDING:	
SODDING:	
RIPRAP:	
OUTLET PROTECTION:	OR
DUST CONTROL:	
POLYACRYLAMIDE (PAM):	
<b>SEDIMENT CONTROL</b>	
SEDIMENT BASIN:	
TEMPORARY SEDIMENT TRAP:	
ROCK SEDIMENT DIKE:	
ROCK CHECK DAM:	
SEDIMENT TUBE:	
SILT FENCE:	
REINFORCED SILT FENCE:	
TYPE A - FABRIC INLET PROTECTION:	
TYPE A - SEDIMENT TUBE INLET PROTECTION:	
TYPE B - WIRE MESH AND STONE DROP INLET PROTECTION:	
TYPE C - BLOCK AND GRAVEL INLET PROTECTION:	
TYPE D - RIGID INLET FILTERS:	
TYPE E - SURFACE COURSE CURB INLET FILTER:	
TYPE F - INLET TUBE:	
CONCRETE WASHOUT:	
<b>RUNOFF CONVEYANCE MEASURES</b>	
VEGETATED CHANNELS:	
RIPRAP-LINED CHANNELS:	
ECB OR TRM-LINED CHANNELS:	
PAVED CHANNELS:	
PIPE SLOPE DRAINS:	
TEMPORARY STREAM CROSSING:	
TEMPORARY DIVERSION DITCH OR SWALE:	
PERMANENT DIVERSION DITCH:	
DIVERSION DIKE OR BERM:	
LEVEL SPREADER:	
SUBSURFACE DRAIN:	



Professional Engineer  
 Ward Edwards, Inc.  
 No. 22816  
 No. 000152  
 State of North Carolina  
 Certificate of Registration

NO.	DESCRIPTION	DATE
1		
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**Ward Edwards**  
 ENGINEERING  
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**BURTON HILL M2 WATER QUALITY RETROFIT**  
 CITY OF BEAUFORT, SOUTH CAROLINA  
**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
 BEAUFORT, SOUTH CAROLINA  
**PHASE 2 EROSION CONTROL PLAN**

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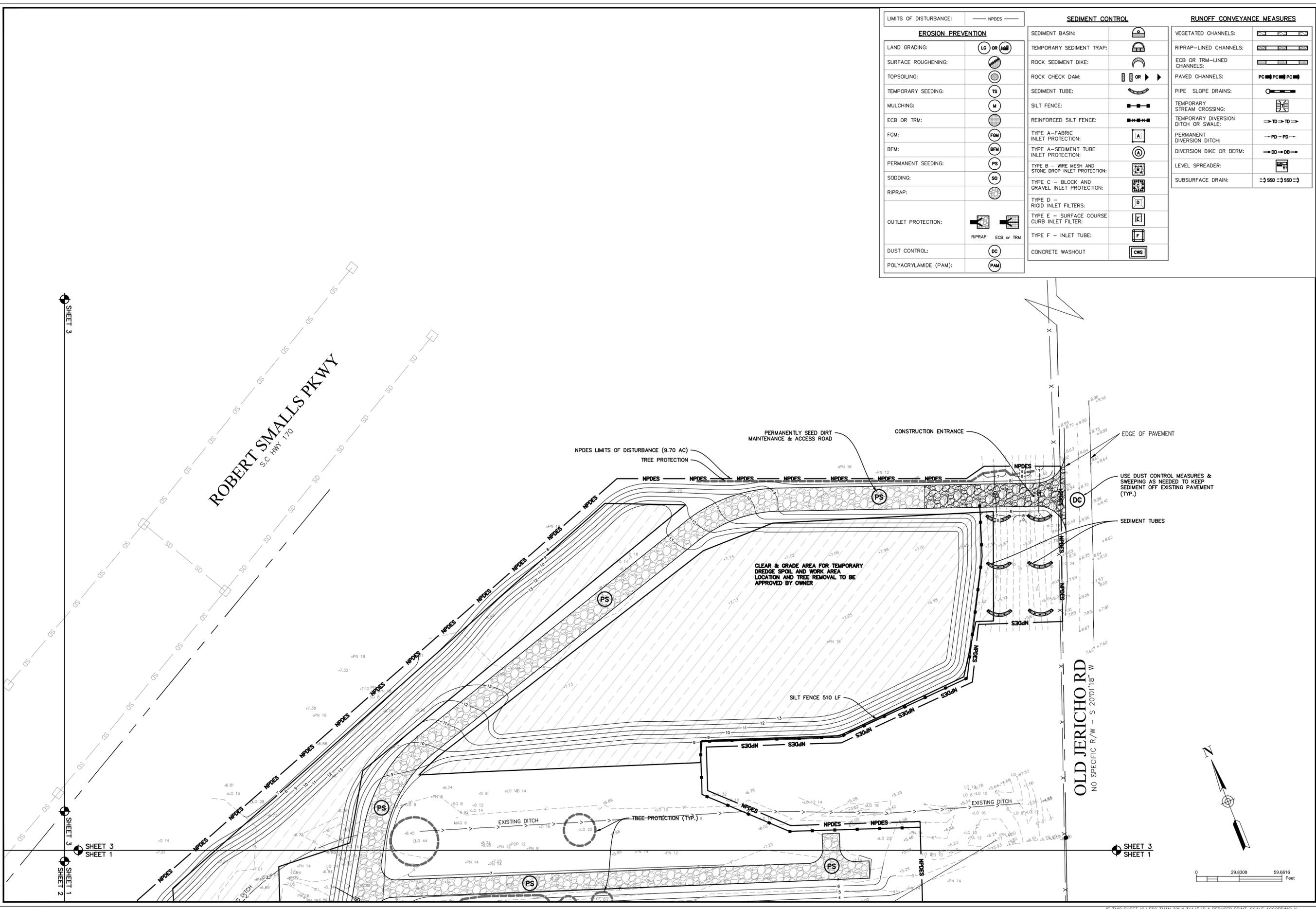
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DATE:	12/30/15
DESIGNED BY:	RDB
CHECKED BY:	PRM
SCALE:	1"=30'

SHEET C502

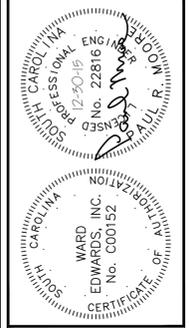
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<b>EROSION PREVENTION</b>					
LAND GRADING:	LG OR	SEDIMENT BASIN:		VEGETATED CHANNELS:	
SURFACE ROUGHENING:		TEMPORARY SEDIMENT TRAP:		RIPRAP-LINED CHANNELS:	
TOPSOILING:	TS	ROCK SEDIMENT DIKE:		ECB OR TRM-LINED CHANNELS:	
TEMPORARY SEEDING:	TS	ROCK CHECK DAM:		PAVED CHANNELS:	PC
MULCHING:	M	SEDIMENT TUBE:		PIPE SLOPE DRAINS:	
ECB OR TRM:		SILT FENCE:		TEMPORARY STREAM CROSSING:	
FGM:	FGM	REINFORCED SILT FENCE:		TEMPORARY DIVERSION DITCH OR SWALE:	
BFM:	BFM	TYPE A-FABRIC INLET PROTECTION:		PERMANENT DIVERSION DITCH:	
PERMANENT SEEDING:	PS	TYPE A-SEDIMENT TUBE INLET PROTECTION:		DIVERSION DIKE OR BERM:	
SODDING:	SO	TYPE B - WIRE MESH AND STONE DROP INLET PROTECTION:		LEVEL SPREADER:	
RIPRAP:		TYPE C - BLOCK AND GRAVEL INLET PROTECTION:		SUBSURFACE DRAIN:	
OUTLET PROTECTION:		TYPE D - RIGID INLET FILTERS:			
DUST CONTROL:	DC	TYPE E - SURFACE COURSE CURB INLET FILTER:			
POLYACRYLAMIDE (PAM):	PAM	TYPE F - INLET TUBE:			
		CONCRETE WASHOUT:			



NO.	DESCRIPTION	DATE
7		
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**Ward Edwards**  
ENGINEERING

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**BURTON HILL M2 WATER QUALITY RETROFIT**  
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**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
BEAUFORT, SOUTH CAROLINA  
**PHASE 2 EROSION CONTROL PLAN**

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PROJECT #: 090093A  
DATE: 12/30/15  
DESIGNED BY: RDB  
CHECKED BY: PRM  
SCALE: 1"=30'

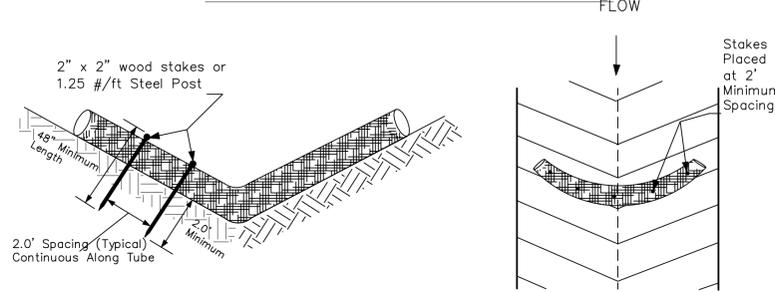
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### SEDIMENT TUBE INSTALLATION



#### SEDIMENT TUBE SPACING

SLOPE	MAX. SEDIMENT TUBE SPACING
LESS THAN 2%	150-FEET
2%	100-FEET
3%	75-FEET
4%	50-FEET
5%	40-FEET
6%	30-FEET
GREATER THAN 6%	25-FEET

#### PLAN SYMBOL



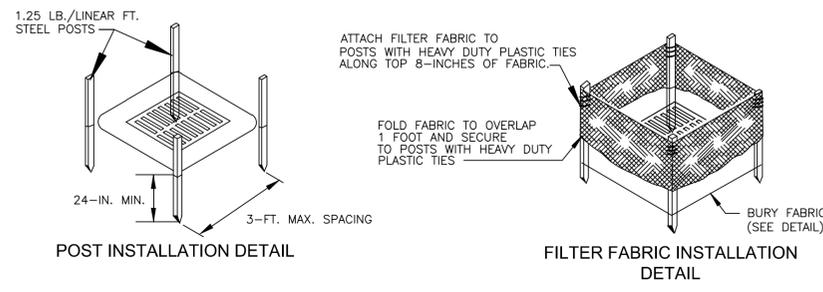
South Carolina Department of Health and Environmental Control

**SEDIMENT TUBES**

STANDARD DRAWING NO. SC-05 PAGE 1 of 2

FEBRUARY 2014 DATE

NOT TO SCALE



#### PLAN SYMBOL



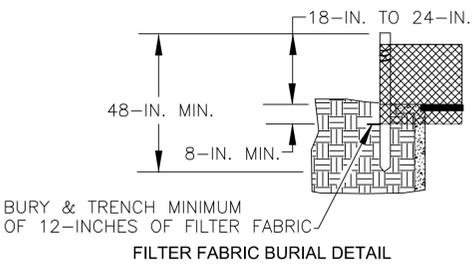
South Carolina Department of Health and Environmental Control

**Type A FILTER FABRIC INLET PROTECTION**

STANDARD DRAWING NO. SC-07 PAGE 1 of 2

FEBRUARY 2014 DATE

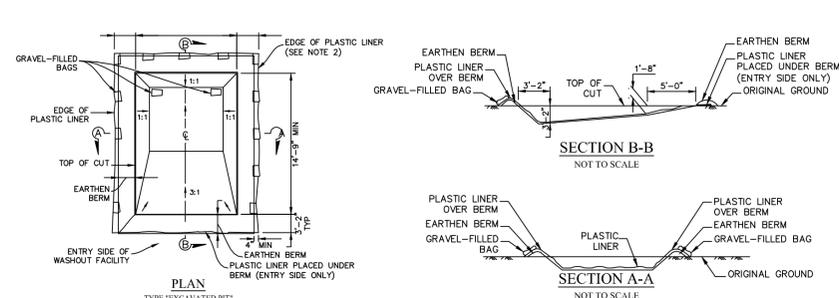
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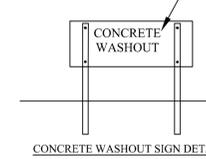
BURY & TRENCH MINIMUM OF 12-INCHES OF FILTER FABRIC

FILTER FABRIC BURIAL DETAIL

### EXCAVATED PIT CONCRETE WASHOUT



#### LETTERS A MINIMUM OF 5" IN HEIGHT



CONCRETE WASHOUT SIGN DETAIL

- NOTES:
- ACTUAL LAYOUT DETERMINED IN FIELD.
  - INSTALL CONCRETE WASHOUT SIGN (24"x24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
  - TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
  - CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
  - THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
  - SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
  - A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

South Carolina Department of Health and Environmental Control

**CONCRETE WASHOUT EXCAVATED PIT**

STANDARD DRAWING NO. RC-08 PAGE 1 of 1

FEBRUARY 2014 DATE

NOT TO SCALE

### SEDIMENT TUBES - GENERAL NOTES

- Sediment tubes may be installed along contours, in drainage conveyance channels, and around inlets to help prevent off-site discharge of sediment-laden stormwater runoff.
- Sediment tubes are elongated tubes of compacted geotextiles, curled excelsior wood, natural coconut fiber, or hardwood mulch. Straw, pine needle, and leaf mulch-filled sediment tubes are not permitted.
- The outer netting of the sediment tube should consist of seamless, high-density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high-density polyethylene non-degradable material.
- Sediment tubes, when used as checks within channels, should range between 18-inches and 24-inches depending on channel dimensions. Diameters outside this range may be allowed where necessary when approved.
- Curled excelsior wood, or natural coconut products that are rolled up to create a sediment tube are not allowed.
- Sediment tubes should be staked using wooden stakes (2-inch X 2-inch) or steel posts (standard "U" or "T" sections with a minimum weight of 1.25 pounds per foot) at a minimum of 48-inches in length placed on 2-foot centers.
- Install all sediment tubes to ensure that no gaps exist between the soil and the bottom of the tube. Manufacturer's recommendations should always be consulted before installation.
- The ends of adjacent sediment tubes should be overlapped 6-inches to prevent flow and sediment from passing through the field joint.
- Sediment tubes should not be stacked on top of one another, unless recommended by manufacturer.
- Each sediment tube should be installed in a trench with a depth equal to 1/5 the diameter of the sediment tube.
- Sediment tubes should continue up the side slopes a minimum of 1-foot above the design flow depth of the channel.
- Install stakes at a diagonal facing incoming runoff.

### SEDIMENT TUBES - INSPECTION & MAINTENANCE

- The key to functional sediment tubes is weekly inspections, routine maintenance, and regular sediment removal.
- Regular inspections of sediment tubes shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
- Attention to sediment accumulations in front of the sediment tube is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
- Remove accumulated sediment when it reaches 1/3 the height of the sediment tube.
- Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
- Large debris, trash, and leaves should be removed from in front of tubes when found.
- If erosion causes the edges to fall to a height equal to or below the height of the sediment tube, repairs should be made immediately to prevent runoff from bypassing tube.
- Sediment tubes should be removed after the contributing drainage area has been completely stabilized. Permanent vegetation should replace areas from which sediment tubes have been removed.

South Carolina Department of Health and Environmental Control

**SEDIMENT TUBES**

STANDARD DRAWING NO. SC-05 PAGE 2 of 2

FEBRUARY 2014 DATE

GENERAL NOTES

### TYPE A - FILTER FABRIC REQUIREMENTS

- Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
  - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
  - Free of any treatment or coating which might adversely alter its physical properties after installation;
  - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
  - Have a minimum width of 36-inches.
- Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
- 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
- Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
- Filter Fabric shall be installed at a minimum of 24-inches above the ground.

### TYPE A - INSPECTION & MAINTENANCE

- The key to functional inlet protection is weekly inspections, routine maintenance, and regular sediment removal.
- Regular inspections of inlet protection shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
- Attention to sediment accumulations along the filter fabric is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
- Remove accumulated sediment when it reaches 1/3 the height of the filter fabric. When a sump is installed in front of the fabric, sediment should be removed when it fills approximately 1/3 the depth of the sump.
- Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
- Check for areas where stormwater runoff has eroded a channel beneath the filter fabric, or where the fabric has sagged or collapsed due to runoff overtopping the inlet protection.
- Check for tears within the filter fabric, areas where fabric has begun to decompose, and for any other circumstance that may render the inlet protection ineffective. Removed damaged fabric and reinstall new filter fabric immediately.
- Inlet protection structures should be removed after all the disturbed areas are permanently stabilized. Remove all construction material and sediment, and dispose of them properly. Grade the disturbed area to the elevation of the drop inlet structure crest. Stabilize all bare areas immediately.

South Carolina Department of Health and Environmental Control

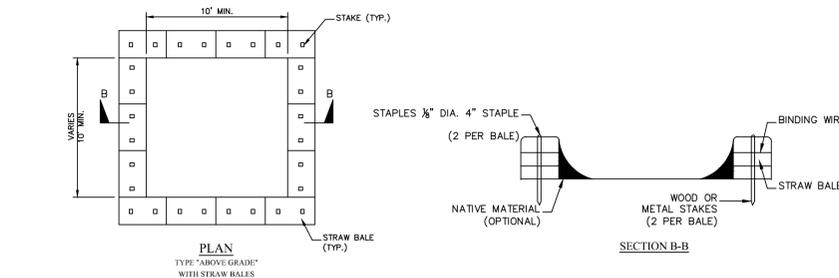
**Type A FILTER FABRIC INLET PROTECTION**

STANDARD DRAWING NO. SC-07 PAGE 2 of 2

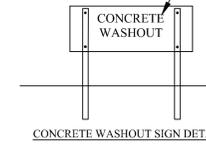
FEBRUARY 2014 DATE

GENERAL NOTES

### STRAW BALE BARRIER CONCRETE WASHOUT



#### LETTERS A MINIMUM OF 5" IN HEIGHT



CONCRETE WASHOUT SIGN DETAIL

- NOTES:
- ACTUAL LAYOUT DETERMINED IN FIELD.
  - INSTALL CONCRETE WASHOUT SIGN (24"x24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
  - TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
  - CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
  - THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
  - SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
  - A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

South Carolina Department of Health and Environmental Control

**CONCRETE WASHOUT STRAW BALES OR ABOVE GROUND**

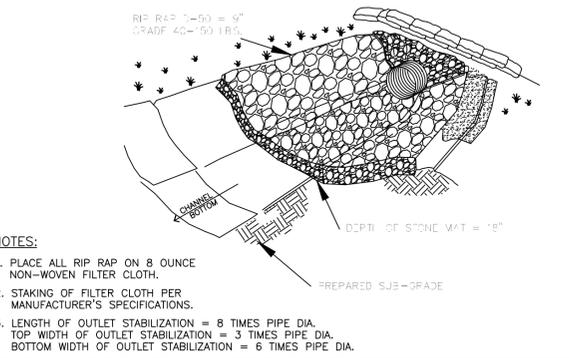
STANDARD DRAWING NO. RC-07 PAGE 1 of 1

FEBRUARY 2014 DATE

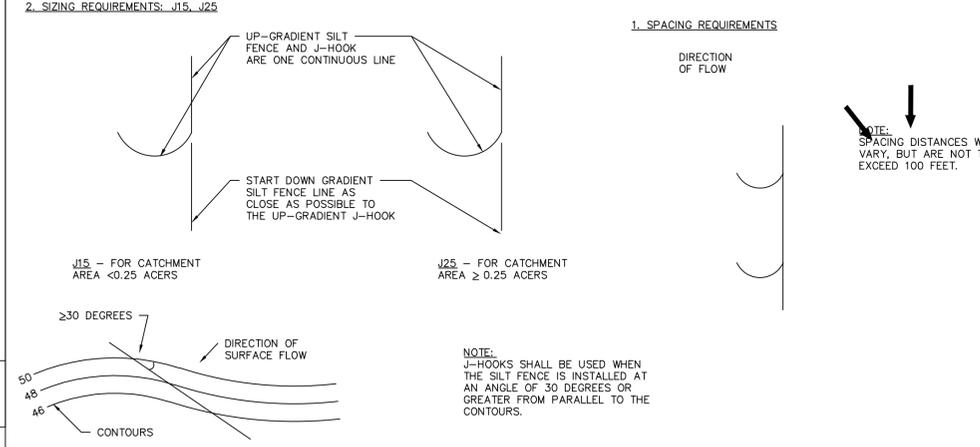
NOT TO SCALE

### RIP RAP OUTLET STABILIZATION DETAIL

DETAIL #02370-009



- NOTES:
- PLACE ALL RIP RAP ON 8 OUNCE NON-WOVEN FILTER CLOTH.
  - STAKING OF FILTER CLOTH PER MANUFACTURER'S SPECIFICATIONS.
  - LENGTH OF OUTLET STABILIZATION = 8 TIMES PIPE DIA. TOP WIDTH OF OUTLET STABILIZATION = 3 TIMES PIPE DIA. BOTTOM WIDTH OF OUTLET STABILIZATION = 6 TIMES PIPE DIA.



### SILT FENCE J-HOOK

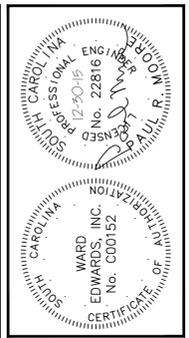
DETAIL 02370-013

### TEMPORARY SEEDING - COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	40 LBS/AC												
RYE, GRAIN	56 LBS/AC												
RYEGRASS	50 LBS/AC												
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET OR JAPANESE MILLET	40 LBS/AC												
RYE, GRAIN OR OATS	56 LBS/AC												
RYEGRASS	50 LBS/AC												

### TEMPORARY SEEDING - COASTAL

DETAIL 02370-011



NO.	DESCRIPTION	DATE
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ENGINEERING

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**BURTON HILL M2 WATER QUALITY RETROFIT**  
CITY OF BEAUFORT, SOUTH CAROLINA

**CITY OF BEAUFORT & BEAUFORT COUNTY SW UTILITY**  
BEAUFORT, SOUTH CAROLINA

**PHASE 2 EROSION CONTROL DETAILS**

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PROJECT #:	0900933A
DATE:	12/30/15
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CHECKED BY:	PRM
SCALE:	AS NOTED

SHEET  
**C504**