

CAROLINA CROSSROADS, PHASE 1 CONFLICT 1063 24" WATER MAIN ALONG ARROWWOOD ROAD RELOCATION AND ABANDONMENT & ADJUSTMENTS TO 8" WATER MAIN AT COLONIAL LIFE BLVD. OF 6" WATER MAIN FACILITY 2



The utilities are shown for the contractor's convenience only. There may be other utilities not shown on these Plans. The Engineer assumes no responsibility to verify the locations shown and it shall be the contractor's responsibility to verify the locations of all utilities within the limits of the work. All damage made to existing utilities by the contractor shall be the sole responsibility of the contractor.

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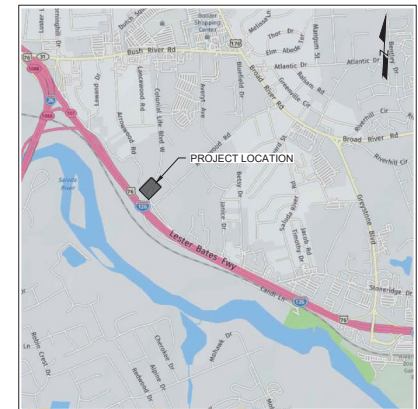
100% DESIGN DOCUMENTS
MAY 2023

PREPARED BY:

Brown and Caldwell

Environmental Engineering and Consulting
250 Berryhill Road, Suite 104, Columbia, SC 29210 803-873-9701

This 100% submittal has been reviewed by the City of Columbia and is approved to be issued for construction.
John B. Hilbert
John B. Hilbert, Utility Relocation Coordinator Date



LOCATION MAP
NTS

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GENERAL NOTES

1.

PROVIDE SHORING, SHEETING AND BRACING, AS NEEDED, IN CONFORMANCE WITH THE APPLICABLE RULES AND REGULATIONS PROMULGATED BY THE DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), INCLUDING OSHA MANUAL 220, "EXCAVATIONS", WHEN REQUIRED BY RULES AND REGULATIONS. THE CONTRACTOR SHALL PROVIDE DESIGNED SHORING SYSTEMS CERTIFICATIONS APPROVED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA TO THE OWNER AND ENGINEER.

2.

COMPLY WITH THE GUIDELINES OF THE SCDHEC SOUTH CAROLINA STORM WATER MANAGEMENT AND SEDIMENT AND EROSION CONTROL HANDBOOK FOR LAND DISTURBANCE ACTIVITIES DURING THE ENTIRE CONSTRUCTION PERIOD. SEDIMENT AND EROSION CONTROL PRACTICES SHALL INCLUDE, BUT NOT BE LIMITED TO, SILT FENCES, BERMS, HAY BALES, ETC., AS NEEDED OR AS DIRECTED BY THE ENGINEER.

3.

RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONTOURS, UNLESS OTHERWISE NOTED.

4.

AREAS DISTURBED BY CONSTRUCTION SHALL BE GRASSED IN ACCORDANCE WITH THE APPROVED GRASSING SCHEDULE IN SPECIFICATION SECTION 02930 AND DRAWING 000-C-03.

5.

UTILITIES SHOWN ARE APPROXIMATE LOCATIONS DETERMINED FROM BEST AVAILABLE INFORMATION AND SITE SURVEYS AND SUBSURFACE UTILITY EXPLORATIONS. HOWEVER, PRIOR TO BEGINNING ANY EXCAVATION, CALL PALMETO UTILITY PROTECTION SERVICE (PU) AT 1-888-721-7877 OR 811 TO LOCATE ALL EXISTING UTILITIES. TO LOCATE EXISTING SEWER FACILITIES, CONTACT CITY OF COLUMBIA.

6.

REPAIR OR REPLACE EXISTING FEATURES DISTURBED OR DESTROYED DURING CONSTRUCTION OF THIS PROJECT AT NO ADDITIONAL COST TO THE OWNER. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO, FENCES, IRRIGATION SYSTEMS, SHRUBS, SMALL TREES, LANDSCAPE MATERIALS, CONCRETE CURBS, SIDEWALKS AND ROADWAYS OUTSIDE THE AREAS OF DISTURBANCE.

7.

ANY CONCRETE MONUMENT ENCOUNTERED DURING CONSTRUCTION WILL NEED TO REMAIN IN PLACE. IF MONUMENTS ARE REMOVED, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER, ENGINEER AND SCDOT FOR REPLACEMENT OF THE MONUMENT.

8.

THE CONTRACTOR SHALL RESTORE ROAD RIGHTS OF WAY TO EXISTING OR BETTER CONDITION. ALL DITCHES AND SWALES SHALL BE RESTORED PER SCDOT STANDARD SPECIFICATIONS CONCERNING SLOPE AND GRADE. THE CONTRACTOR SHALL DETERMINE GRADES ON EXISTING STORM CULVERTS PRIOR TO REMOVAL TO ENSURE PROPER REPLACEMENT AT EXISTING GRADES AND ELEVATIONS.

9.

THE CONTRACTOR SHALL RESTORE DRIVES WITH THE SAME OR LIKE MATERIAL AS EXISTING DRIVES. CONCRETE DRIVES AND SIDEWALKS SHALL BE POURED WITH 3000 PSI FIBER FILLED CONCRETE A MINIMUM OF 4" THICK TO A NEWLY CUT STRAIGHT EDGE. ASPHALT DRIVES AND SIDEWALKS SHALL BE REPLACED WITH A TYPE I ASPHALT PER SCDOT REQUIREMENTS TO A MINIMUM THICKNESS OF 2 INCHES.

10.

PRESERVE AND PROTECT FROM INJURY ALL TREES NOT REQUIRED TO BE REMOVED. PROVIDE BARRICADES OR OTHER TYPES OF PROTECTION NECESSARY TO PREVENT UNNECESSARY DAMAGE TO TREES 8" IN DIAMETER OR LARGER. ORNAMENTAL SHRUBBERY AND TREE BRANCHES SHALL BE TEMPORARILY TIED BACK, WHERE APPROPRIATE, TO MINIMIZE DAMAGE.

11.

MAINTAIN A HORIZONTAL SEPARATION OF 10-FEET AND VERTICAL SEPARATION OF 18-INCHES (EDGE OF PIPE TO EDGE OF PIPE) BETWEEN WATER MAIN PIPES AND SEWER MAIN PIPES.

12.

ALL BURIED FITTINGS SHALL BE DUCTILE IRON, COMPACT, RESTRAINED JUNT, MANUFACTURED IN ACCORDANCE WITH AWWA C153, AND PRESSURE RATED FOR 250 PSI. STANDARD AWWA C10 M.J. FITTINGS MAY BE SUBSTITUTED WITH NO ADDITIONAL COST TO THE OWNER FOR THE INCREASE IN WEIGHT.

13.

ALL RESTRAINED JOINT DIP PIPE AND NON-RESTRAINED PIPE SHALL BE INSTALLED BEDDING PER DETAIL 1000-C-01.

14.

ALL CONNECTIONS TO THE EXISTING SYSTEM SHALL BE COORDINATED WITH THE OWNER.

15.

ALL TREES, SHRUBBERY, SPOILS, ALL ROCK, CONSTRUCTION MATERIALS, ETC. THAT IS REMOVED/EXCAVATED FOR CONSTRUCTION OF THE PROPOSED FACILITIES, AND NOT INCORPORATED INTO THE WORK (i.e. BACKFILL) AND IS TO BE HAULED OFF-SITE, SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR IN AN ENVIRONMENTALLY SOUND MANNER THAT IS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

16.

CONTRACTOR TO FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING UTILITIES. SUBMITTALS SHALL BE BASED ON FIELD VERIFIED DIMENSIONS. (ALSO SEE GENERAL NOTE 20)

17.

SEE SECTION 02221 FOR EARTHWORK AND BEDDING REQUIREMENTS.

18.

CONTRACTOR TO REFERENCE GEOTECHNICAL REPORT RECOMMENDATIONS IN THIS AREA. SOME UNDERCUTTING AND TRENCH STABILIZATION MAY BE REQUIRED. SEE SECTIONS 02221 FOR STABILIZATION REQUIREMENTS.

19.

GEOTECHNICAL INFORMATION IS AVAILABLE AT THE SCDOT WEB SITE LOCATED AT: WWW.SCDOT.ORG/BUSINESS/CAROLINA_CROSSROADS/PHASE1.ASPX

20.

THE PROPOSED ROADWAY IMPROVEMENTS ARE UNDER DESIGN BY THE ARCHER-UNITE JUNT VENTURE TEAM. CONTRACTOR TO COORDINATE WITH THE DESIGN TEAM PRIOR TO CONSTRUCTION TO ACCOUNT FOR ANY MODIFICATIONS FROM THOSE FEATURES SHOWN HEREIN.

21.

CONTRACTOR SHALL CONDUCT COMPACTION TESTING AT 500' INTERVALS ALONG THE PIPELINE. TESTING SHALL BE IN 15' LIFTS AND AS DIRECTED IN SECTION 02221.

22.

REFERENCE SPECIFICATION SECTION 02140. PREVIOUS GEOTECHNICAL INVESTIGATIONS INDICATE THE PRESENCE OF GROUND WATER. IF GROUNDWATER IS PRESENT PRIOR TO OR DURING CONSTRUCTION ACTIVITIES, THEN IN ACCORDANCE WITH SECTION 02140 1.03, THE CONTRACTOR SHALL PROVIDE TO THE OWNER AND ENGINEER A DEWATERING AND DRAINAGE SYSTEM PLAN.

23.

DOE TO PROXIMITY OF EXISTING UTILITIES, BLASTING WILL NOT BE AUTHORIZED WITHOUT PRIOR APPROVAL.

SHEET NUMBER

DRAWING NUMBER

DRAWING TITLE

GENERAL

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000-G-00

COVER

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000-G-01

INDEX OF DRAWINGS, GENERAL NOTES, AND REFERENCING

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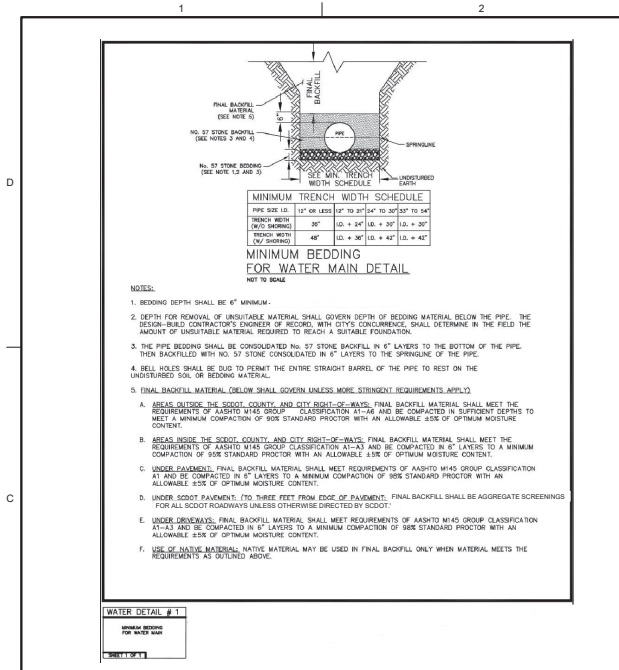
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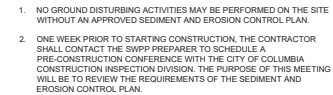
CITY OF COLUMBIA
DEPARTMENT OF ENGINEERING
P.O. BOX 147
COLUMBIA, SOUTH CAROLINA 29217



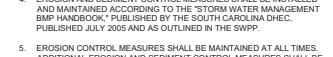
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CONSTRUCTION SEQUENCE AND MAINTENANCE PLAN

1. NO GROUND DISTURBING ACTIVITIES MAY BE PERFORMED ON THE SITE WITHOUT AN APPROVED SEDIMENT AND EROSION CONTROL PLAN.
2. ONE WEEK PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE SWPP PREPARER TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF COLUMBIA CONSTRUCTION INSPECTION DIVISION. THE PURPOSE OF THIS MEETING WILL BE TO REVIEW THE REQUIREMENTS OF THE SEDIMENT AND EROSION CONTROL PLAN.

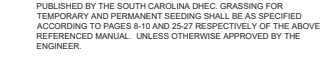


3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, EXCAVATION, OR FILLING, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.



ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER IF DEEMED NECESSARY BY THE ENGINEER OR CITY OF COLUMBIA INSPECTOR.

6. GRASSING FOR DISTURBED AREA STABILIZATION WILL BE PERFORMED AS NOTED IN THE "STORM WATER MANAGEMENT BMP HANDBOOK."



7. ALL TEMPORARY AND PERMANENT DIVERSIONS SHALL BE SEEDED, FERTILIZED AND LINED WITH FIBER FABRIC IMMEDIATELY UPON COMPLETION OF THE CHANNEL. WITH THE EXCEPTION OF TEMPORARY AND PERMANENT DIVERSIONS, ALL DISTURBED AREAS EXPOSED FOR MORE THAN 30 DAYS SHALL BE SEEDED AND MULCHED.

8. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AT THE INTERVAL SPECIFIED IN THE SOIL EROSION AND SEDIMENTATION CONTROL NOTES AND AS OUTLINED IN THE SWPPP. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN PROPER FUNCTION OF ALL MEASURES.

9. SEDIMENT SHALL BE REMOVED FROM SEDIMENT TRAPS AND BLOCK AND GRAVEL INLET PROTECTION DEVICES WHEN STORAGE CAPACITY HAS REACHED 50%. GRAVEL SHALL BE REPLACED WHEN THE DEVICE NO LONGER DRAINS PROPERLY.

10. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE ONCE IT HAS ACCUMULATED TO A DEPTH OF 0.5 FT AT THE FENCE. SILT FENCE SHALL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.

11. TEMPORARY AND FINAL SEEDING SHALL BE APPLIED, RE-APPLIED AS NECESSARY, CONTROL DEVISED, ANY RESULTING EXPOSED AREAS SHALL BE STABILIZED.
12. AFTER EARTH DISTURBING ACTIVITIES HAVE CEASED AND ALL EXPOSED SOIL HAS BEEN STABILIZED WITH A VEGETATIVE COVER, THE

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MAY BE REMOVED. FOLLOWING REMOVAL OF THE TEMPORARY EROSION CONTROL DEVICES, ANY RESULTING EXPOSED AREAS SHALL BE STABILIZED.

SEEDING SCHEDULE

| PERMANENT VEGETATION SCHEDULE (PER ACRE) | |
|--|---------------------------------|
| AUGUST 14 | FROM AUGUST 15 - MARCH 14 |
| BERMUDA (HULLED) | 50 LBS. KENTUCKY 31 FESCUE |
| VEGETATION | 30 LBS. COMMON BERMUDA (HULLED) |
| PEDEZA (SCARIFIED) | 10 LBS. WEEPING LOVEGRASS |

80 LBS. SERICEA LESPEDEZA (UNHULLED)
CRIMSON CLOVER

40 LBS. APRIL 1 - AUGUST 15

50 LBS. APRIL 1 - AUGUST 15
55 LBS. AUGUST 16 - MARCH 31

FOR 1000 SQ. FT. OF LOW SALT FORMULATION OF 19-19-19 INSTEAD 10-10-10 TO
BENEFITS.

FOR AGRICULTURAL LIME. A FEW GALLONS OF LIQUID LIME RAISES SOIL pH
VERY TEMPORARY - USUALLY 45-50 WEEKS. LIQUID LIME MAY BE USED WITH
ICK RESULTS TOGETHER WITH THE LONG TERM BENEFITS OF AGRICULTURAL

IMPORTANT INGREDIENT IN THESE SEEDING RECOMMENDATIONS AND IS 90%
PAPER AND OTHER SYNTHETIC MULCHES MAY BE SUBSTITUTED FOR GRAIN
USED, BUT NOT ON STEEP AREAS, AREAS WITH CONCENTRATED WATER
S. (ALL SLOPES STEEPER THAN 2:1 MUST BE HYDROSEEDING AND MULCHED
PROVED ANCHOR-ING METHOD SUCH AS GLUE TACKIFIER OR TRACTOR AND

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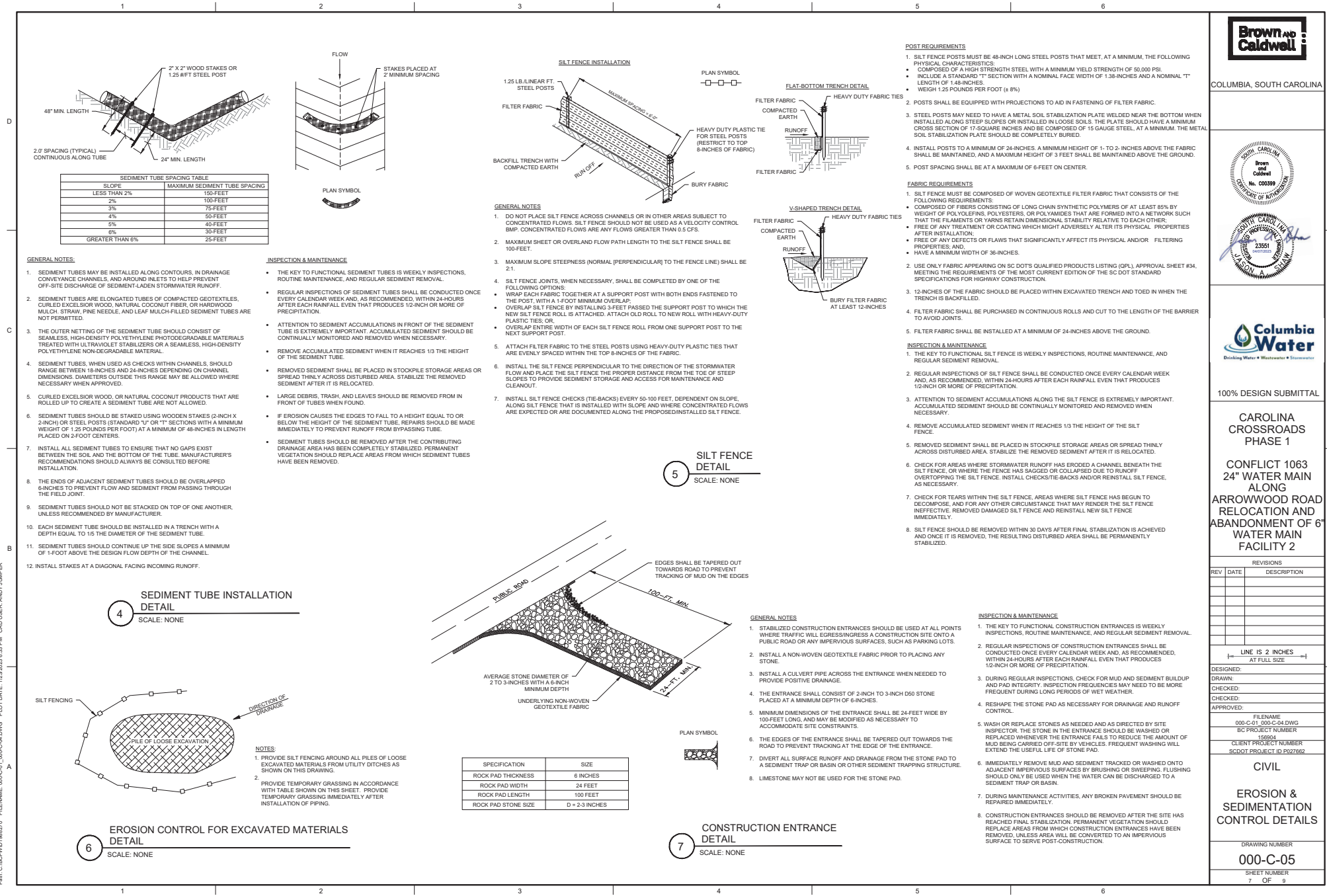
CONFLICT 1063
24" WATER MAIN
ALONG
ARROWWOOD ROAD
RELOCATION AND
ABANDONMENT OF 6"
WATER MAIN
FACILITY 2

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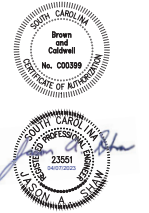
EROSION &
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COLUMBIA, SOUTH CAROLINA



100% DESIGN SUBMITTAL

CAROLINA CROSSROADS PHASE 1
CONFLICT 1063
24" WATER MAIN ALONG
ARROWWOOD ROAD
RELOCATION AND
ABANDONMENT OF 6" WATER MAIN
FACILITY 2

| REVISIONS | | |
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| EROSION & SEDIMENTATION CONTROL DETAILS | | |
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