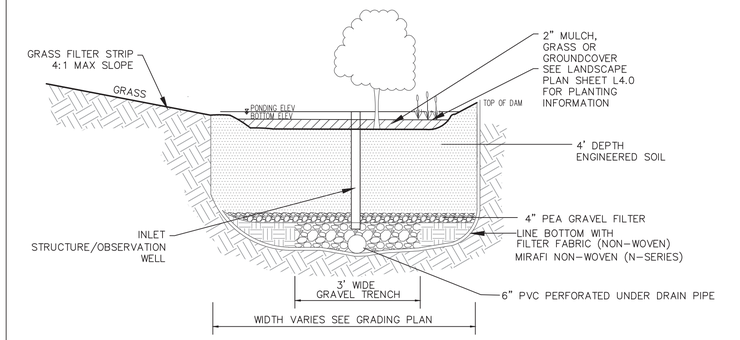
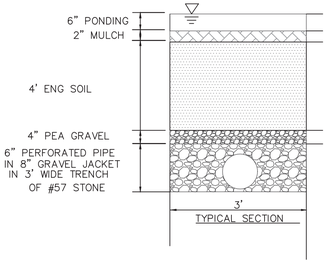


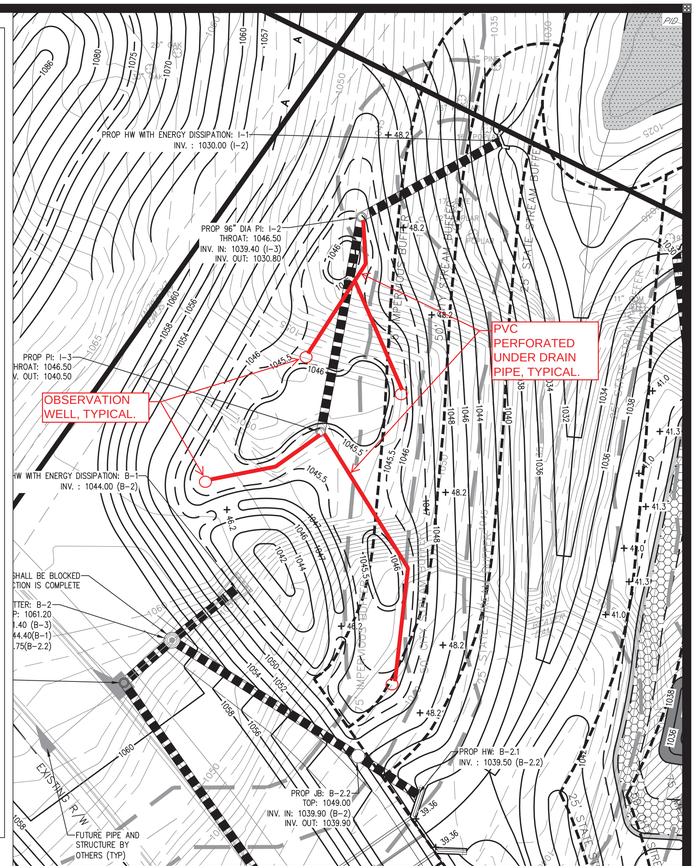


ENGINEERED SOIL MIX TO BE ERTH PRODUCTS BIORETENTION/RAIN GARDEN MIX OR APPROVED EQUAL.

4" PEA GRAVEL BETWEEN ENGINEERED SOIL AND GRAVEL / #57 STONE

BIORETENTION AREA PROFILE

BioRetention Area	Proposed Surface Area	Bottom Elevation	Ponding Elevation	Top of Dam	Underdrain Invert Elevation
A	9,535	1045.5	1046.5	1048.2	1039.0



CONSTRUCTION SEQUENCE – WETLAND

1. SEPARATE WETLAND AREA FROM CONTRIBUTING DRAINAGE AREA:
   A. CONSTRUCT TEMPORARY ACCESS INTO POND.
   B. THE AREA IMMEDIATELY ADJACENT TO THE WETLAND MUST BE STABILIZED.
2. CLEARING AND GRUBBING:
   A. CLEAR THE AREA TO BE EXCAVATED OF ALL VEGETATION.
   B. REMOVE ALL TREE ROOTS, ROCKS, AND BOULDERS.
   C. FILL ALL STUMP HOLES, CREVICES AND SIMILAR AREAS WITH IMPERMEABLE MATERIALS.
3. EXCAVATE BOTTOM OF WETLAND TO DESIRED ELEVATION (ROUGH GRADING).
4. INSTALL SURROUNDING EMBANKMENTS AND INLET AND OUTLET CONTROL STRUCTURES.
5. GRADE AND COMPACT SUBSOIL.
6. APPLY AND GRADE PLANTING SOIL.
   A. MATCHING DESIGN GRADES IS CRUCIAL BECAUSE AQUATIC PLANTS CAN BE VERY SENSITIVE TO DEPTH.
7. APPLY GEO-TEXTILES AND OTHER EROSION-CONTROL MEASURES.
8. SEED, PLANT AND MULCH ACCORDING TO PLANTING PLAN (SEE THIS SHEET)
9. FOLLOW REQUIRED MAINTENANCE AND MONITORING GUIDELINES.

WETLAND DEPTH ZONES LEGEND

SEMI WET	– NO STANDING WATER
HIGH MARSH	– 0' – 0.5'
LOW MARSH	– 0.5' – 1.5'
DEEP	– 1.5' – 6.0'

CONSTRUCTION SEQUENCE – BIORETENTION AREA

1. BEGIN BIORETENTION AREA CONSTRUCTION ONLY WHEN THE UPGRADIENT SITE HAS BEEN MASS GRADED SUFFICIENTLY STABILIZED AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE.
2. ROUGH GRADE THE BIORETENTION AREA. ONLY THE LIGHTEST, LEAST DISRUPTIVE EQUIPMENT MAY BE USED, TO AVOID EXCESSIVE COMPACTION AND/OR LAND DISTURBANCE. EXCAVATING EQUIPMENT SHOULD OPERATE FROM THE SIDE AND NEVER ON THE BOTTOM. IF SUBSTANTIAL COMPACTION OF THE SUBGRADE OCCURS, THE FIRST SEVERAL FEET SHALL BE REMOVED AND REPLACED WITH A BLEND OF TOPSOIL AND SAND TO PROMOTE INFILTRATION AND BIOLOGICAL GROWTH. AT THE VERY LEAST, TOPSOIL SHALL BE THOROUGHLY DEEP PLOWED INTO THE SUBGRADE IN ORDER TO PENETRATE THE COMPACTED ZONE AND PROMOTE AERATION AND THE FORMATION OF MACROPORES. FOLLOWING THIS, THE AREA SHOULD BE DISKED PRIOR TO FINAL GRADING OF TOPSOIL. INSTALL UNDERDRAINS PRIOR TO PLACEMENT OF ENGINEERED SOIL MATERIAL.
3. FINE GRADE THE BIORETENTION AREA. ACCURATE GRADING IS CRUCIAL. EVEN THE SMALLEST NON-CONFORMITIES MAY COMPROMISE FLOW CONDITIONS. AVOID COMPACTION OF THE SOIL IN THE BIORETENTION AREA.
4. SEED AND VEGETATE ACCORDING TO FINAL PLANTING LIST. PLANT THE BIORETENTION AREA AT A TIME OF THE YEAR WHEN SUCCESSFUL ESTABLISHMENT WITHOUT IRRIGATION IS MOST LIKELY. HOWEVER, TEMPORARY IRRIGATION MAY BE NEEDED IN PERIODS OF LITTLE RAIN OR DROUGHT. VEGETATION SHOULD BE ESTABLISHED AS SOON AS POSSIBLE TO PREVENT EROSION AND SCOUR.
5. CONCURRENT WITH #6, STABILIZE FRESHLY SEEDED BIORETENTION AREA WITH APPROPRIATE TEMPORARY OR PERMANENT SOIL STABILIZATION METHODS, SUCH AS EROSION CONTROL MATTING OR BLANKETS. EROSION CONTROL FOR SEEDED SWALES SHALL BE REQUIRED FOR AT LEAST THE FIRST 75 DAYS FOLLOWING THE FIRST STORM EVENT OF THE SEASON. IF RUNOFF VELOCITIES ARE HIGH, CONSIDER SODDING THE SWALE OR DIVERTING RUNOFF UNTIL VEGETATION IS FULLY ESTABLISHED.
6. ONCE SUFFICIENTLY STABILIZED, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROLS. IT IS VERY IMPORTANT THAT IT BE STABILIZED BEFORE RECEIVING UPLAND STORMWATER FLOW.

GEORGIA 811 Utilities Protection Center, Inc.
Know what's **below.** **Call** before you dig.
Dial 811 or Call 1-800-282-7411

30 0 30 60
1"=30'

NORTH

GEORGIA REGISTERED 09-01-15 No. 29494 PROFESSIONAL ENGINEER
Ga SWCC #29494 Exp 12/19/15

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WATER QUALITY DETAILS

SUN VALLEY - PHASE I

ROSWELL FULTON COUNTY GEORGIA

NO.	REVISIONS	DATE
1	CITY COMMENTS	7/1/15

PROJECT NO.: 13-3454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJF
DATE - 05-15-15

SHEET
D3.0