

MAINTENANCE TASK	FREQUENCY	MAINTENANCE NOTES
PRUNING	1 - 2 TIMES / YEAR	NUTRIENTS IN RUNOFF OFTEN CAUSE BIORETENTION VEGETATION TO FLOURISH.
MOWING	2 - 12 TIMES / YEAR	FREQUENCY DEPENDS UPON LOCATION AND DESIRED AESTHETIC APPEAL.
MULCHING	1 - 2 TIMES / YEAR	
MULCH REMOVAL	1 TIME / 2 - 3 YEARS	MULCH ACCUMULATION REDUCES AVAILABLE WATER STORAGE VOLUME. REMOVAL OF MULCH ALSO
INCREASES		SURFACE INFILTRATION RATE OF FILL SOIL.
WATERING	1 TIME / 2 - 3 DAYS FOR FIRST 1 - 2 MONTHS. SPORADICALLY AFTER ESTABLISHMENT	IF DROUGHTY, WATERING AFTER THE INITIAL YEAR MAY BE REQUIRED.
FERTILIZATION	1 TIME INITIALLY ONE TIME SPOT FERTILIZATION FOR "FIRST YEAR" VEGETATION.	
REMOVE AND REPLACE DEAD PLANTS	1 TIME / YEAR	
MISCELLANEOUS UPKEEP	12 TIMES / YEAR	TASKS INCLUDE TRASH COLLECTION, SPOT WEEDING, AND REMOVING MULCH FROM OVERFLOW DEVICE.

**WARRANTY**  
 CONTRACTOR SHALL FULLY GUARANTEE ALL TREES & SHRUBS AND 90% OF GRASSES FOR THIS JOB FOR A PERIOD OF ONE (1) YEAR BEGINNING ON THE DATE OF SUBSTANTIAL COMPLETION. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN TAKE-OFF QUANTITIES AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT/ENGINEER.

**SEQUENCE OF CONSTRUCTION**

- THE LANDSCAPE CONTRACTOR IS ADVISED OF THE UNDERGROUND UTILITIES AND SHALL CHECK LOCATION OF SAME BEFORE COMMENCING DIGGING OPERATIONS.
- STEP 1. THE CONTRACTOR SHALL REMOVE ALL WOODED VEGETATION AND ROOT DEBRIS FROM THE BIORETENTION AREA AND REMOVE 5'-6" OF EX. SOIL.
  - STEP 2. THE CONTRACTOR SHALL INSTALL A PERIMETER SILT FENCE TYPE 'C' AROUND THE BIO-RETENTION AREA. CONTRACTOR SHALL REMOVE AND SILT THAT ACCUMULATES IN THE PIT PRIOR TO INSTALLING DRAINAGE SYSTEM AND GRAVEL JACKET.
  - STEP 3. THE CONTRACTOR SHALL INSTALL THE DRAINAGE SYSTEM AS SHOWN ON AND INSTALL THE 8" GRAVEL JACKET AS SHOWN WITH A FILTER FABRIC LOCATED ON TOP OF THE FILTER FABRIC.
  - STEP 4. THE CONTRACTOR SHALL INSTALL THE PLANTING SOILS AS SHOWN WITH THE SPECIFICATIONS LISTED.
  - STEP 5. PLACE PLANTING IN PLACE AS SHOWN AND DO NOT ALLOW AIR POCKETS TO FORM WHEN BACK FILLING. IMMEDIATELY SOAK NEW PLANTINGS WITH WATER.
  - STEP 6. STABILIZED WITH MULCH.

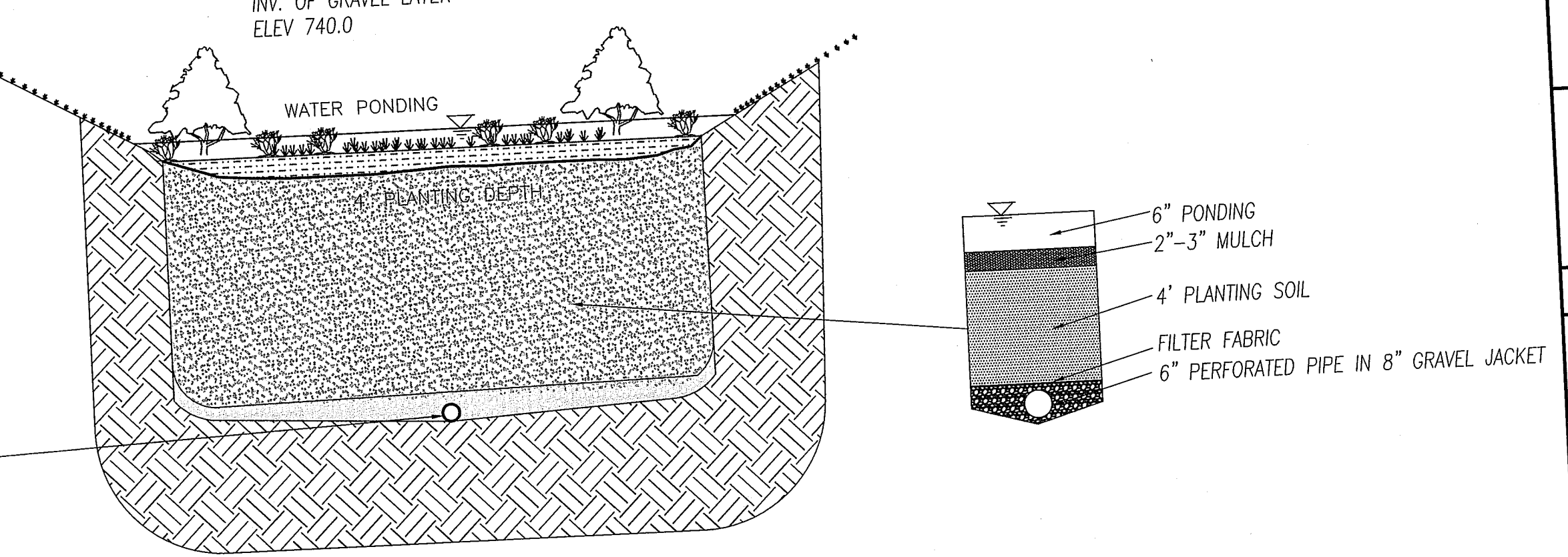
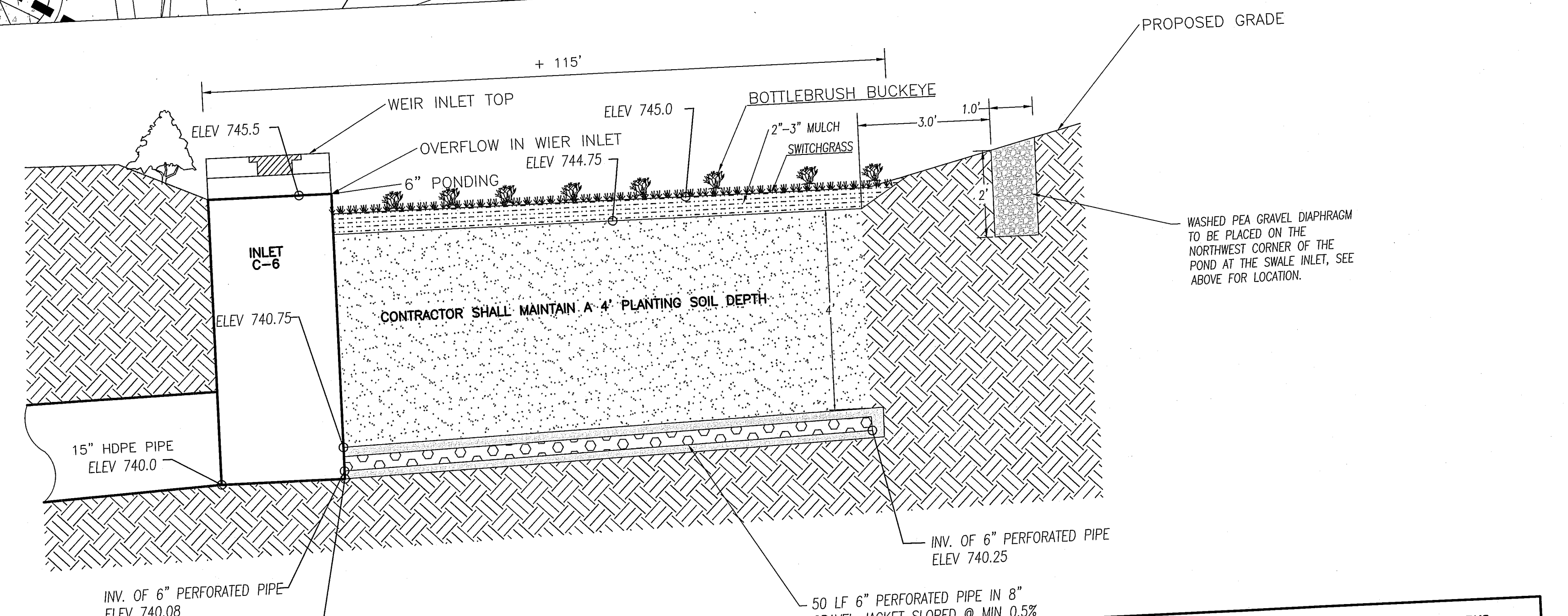
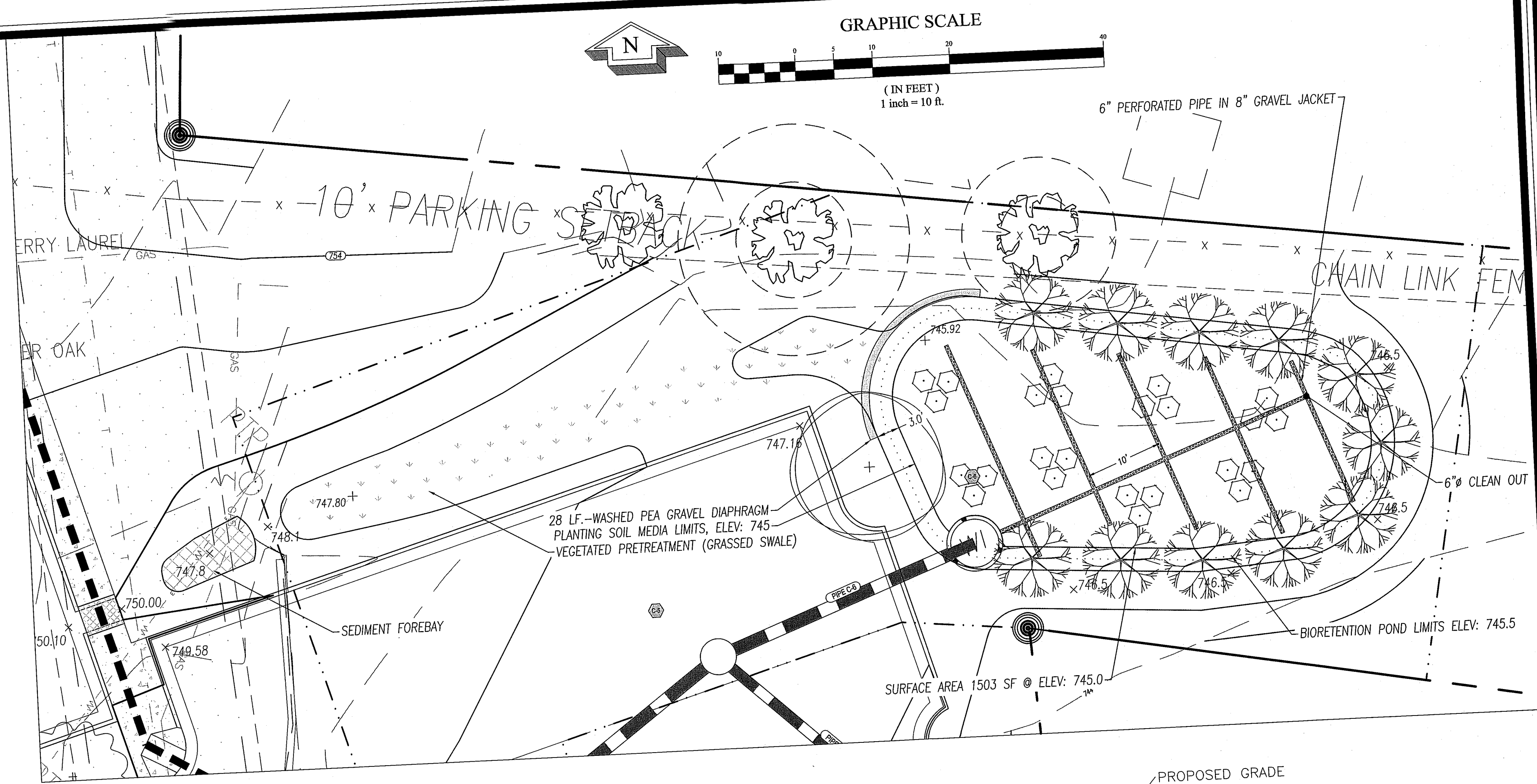
**CONTRACTOR'S RESPONSIBILITIES**  
 THE CONTRACTOR IS RESPONSIBLE IS FULLY RESPONSIBLE FOR MAINTENANCE, INCLUDING WATERING, WEEDING, SETTLING, PRUNING OF THIS WORK UNTIL THE DATE OF SUBSTANTIAL COMPLETION. CONTRACTOR SHALL WATER A MIN. ONE DAY PER WEEK, AND STAKING OF BALD CYPRESS TO ENSURE THEY ARE NOT BLOW OVER BY HIGH WINDS. MAKE SURE THAT ROOTS ARE KEPT MOIST AS THEY ARE EASILY DAMAGED UNDER CONDITIONS OF HIGH TEMPERATURE AND LOW HUMIDITY DURING TRANSPLANT AND ARE INSTALLED WITHIN 1 DAYS. ALL PLANT MATERIALS SHALL MEET MINIMUM REQUIREMENTS AS SET FORTH IN THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK.

**PLANTING SCHEDULE AND SPECIFICATIONS**  
 BIORETENTION POND PLANTING REQD. = 1000 / PER ACRE =  
 BIORETENTION POND = 1503 SF = 0.035 AC = 34.5 = 35 (SHRUBS + TREES)  
 RATIO OF SHRUBS TO TREES: 3:1 = 6 TREES + 15 SHRUBS = 21

KEY	PLANTING ZONE	TYPE	COMMON NAME	SCIENTIFIC NAME	QUANTITY	SIZE
○	ZONE 1	HERBACEOUS	SWITCHGRASS	<i>Panicum virgatum</i>	1503 SF	Plugs - 36" O.C.
●	ZONE 2	SHRUB	BOTTLEBRUSH BUCKEYE	<i>Aesculus parviflora</i>	24	18"-24" Spread
⊗	ZONE 3	TREE	RIVER BIRCH	<i>Betula nigra</i>	11	Min. 1" Caliper

INSTALLATION CARE	TYPE OF MATERIALS	TIME OF YEAR	FERTILIZATION	WATERING & GENERAL
1st	RIVER BIRCH (Ball & Burlapped)	FALL	ALL-PURPOSE	SEE MAINTENANCE
2nd	BOTTLEBRUSH BUCKEYE (Containerized)	FALL	ALL-PURPOSE	SEE MAINTENANCE
3rd	SWITCHGRASS (Seedlings)	FALL	ALL-PURPOSE	SEE MAINTENANCE

All UNDERDRAINS SHALL BE SCH. 40 PVC  
 CLEAN OUTS SHALL BE 6" AND SPACED AT 50' O.C.



CONTRACTOR SHALL CONTACT ENGINEER AND ACC PUBLIC WORKS INSPECTOR TO VERIFY EXCAVATION OF BIORETENTION POND THAT ALLOWS FOR THE MIN. 4 SOIL PLANTING DEPTH.

THE UNDERDRAIN COLLECTION SYSTEM IS EQUIPPED WITH A 6-INCH PERFORATED PVC PIPE (PVC SCH 40) IN AN 8-INCH GRAVEL LAYER. THE PIPE SHOULD HAVE 3/8-INCH PERFORATIONS, SPACED AT 6-INCH CENTERS, WITH A MINIMUM OF 4 HOLES PER ROW. THE PIPE IS SPACED AT A MAXIMUM OF 10 FEET ON CENTER AND A MINIMUM GRADE OF 0.5% MUST BE MAINTAINED. A PERMEABLE FILTER FABRIC IS PLACED BETWEEN THE GRAVEL LAYER AND THE PLANTING SOIL BED.

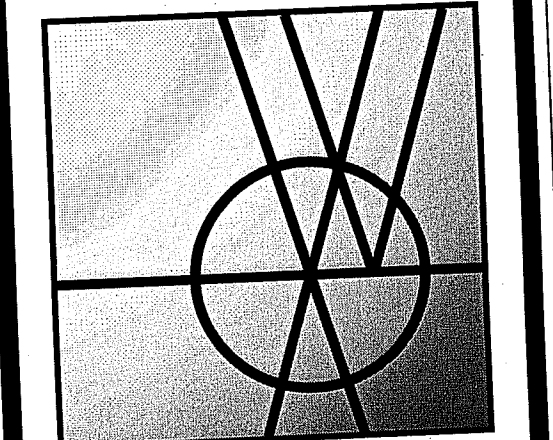
CLEANOUTS SHALL BE 6" Ø (PVC SCH 40) AND BE SPACED AT 50' O.C.

**PLANTING SOILS - MIN. 4" DEPTH**

PARAMETER	VALUE
PH RANGE	5.50 TO 6.50
ORGANIC MATTER	1.5 TO 3.0%
MAGNESIUM	35 LBS. PER ACRE, MINIMUM
PHOSPHORUS (P2O5)	75 LBS. PER ACRE, MINIMUM
POTASSIUM (K2O)	85 LBS. PER ACRE, MINIMUM
SOLUBLE SALTS	500 PPM
CLAY	10 TO 25%
SILT	30 TO 55%
SAND	35 TO 60%

THE MULCH LAYER SHOULD CONSIST OF 2 - 4 INCHES OF COMMERCIALY AVAILABLE FINE SHREDDED HARDWOOD MULCH OR SHREDDED HARDWOOD CHIPS.

BIORETENTION POND  
 N.T.S.



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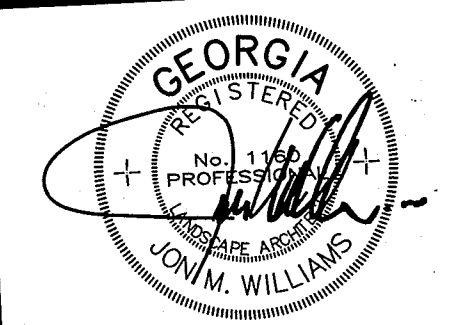
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**ATHENS MEDICAL COMPLEX**  
 ATHENS-CLARKE COUNTY, GEORGIA  
 4.425 ACRES - WEST BROAD STREET

DATE: 03/01/2011

**REVISIONS**

DATE	COMMENT
03/01/11	Per generator pad and enclosure addition and planning comments.
04/29/11	Per field change to bioretention pond.
05/12/11	Per ACCPW comments on field change to bioretention pond.



ALL DRAWINGS SHALL REMAIN THE PROPERTY OF WILLIAMS & ASSOCIATES. THESE INSTRUMENTS OF SERVICE ARE TO BE USED SOLELY FOR THIS SPECIFIC PROJECT. WILLIAMS & ASSOCIATES SHALL RETAIN ALL LEGAL RIGHTS TO THE USE OF THE INSTRUMENTS OF SERVICE AND SHALL RETAIN FULL PROTECTION UNDER UNITED STATES COPYRIGHT LAW.

10047  
**STORMWATER MANAGEMENT PLAN**

REVIEW SET  BID SET  CONSTRUCTION SET