

# SITE NOTES:

1. NO CONSTRUCTION/FIELD CHANGES WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER, ROANOKE COUNTY, VDOT, AND/OR WVA.
2. ANY NEW ALIGNMENTS, CHANGES IN GRADES, ALTERNATIVE PIPE SIZE OR MANHOLES OR ESC MEASURES WILL REQUIRE A NEW SET OF PLANS STAMPED BY THE CONSULTING ENGINEER. PLAN SHEETS CAN BE 8.5"x11" IF THE INFORMATION IS LEGIBLE.
3. ALL BUILDING DIMENSIONS AND UTILITY CONNECTIONS SHALL BE COORDINATED WITH THE ARCHITECTURAL PLANS. THE CONCRETE PAD CONSTRUCTION SHALL BE COORDINATED WITH THE ARCHITECTURAL PLANS.
4. ROOF LEADERS FOR BUILDING SHALL DISCHARGE AT GRADE AND BE CONVEYED TO THE PARKING AREA AND FILTERRA UNIT.
5. ALL STANDARD PARKING LOT STRIPING SHALL BE PAINTED WITH 4" WIDE WHITE PAINT. HANDICAP SPACES SHALL BE PAINTED WITH 4" WIDE BLUE PAINT.
6. G.C. SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANIES TO BRING NECESSARY UTILITIES TO THE PROPOSED BUILDING AND CANOPY.
7. G.C. SHALL COORDINATE CONDUIT INSTALLATION FOR ALL NECESSARY UTILITIES FOR THE BUILDING. CONDUIT SHALL BE PROVIDED FOR ALL UTILITIES LOCATED UNDER PAVEMENT OR CONCRETE.
8. G.C. SHALL ENSURE POSITIVE DRAINAGE AWAY FROM PROPOSED BUILDING.
9. G.C. SHALL ENSURE THAT YARD SWALE CONVEYS STORMWATER TO THE PROPOSED FILTERRA IN THE PARKING AREA FOR STORMWATER QUALITY.

## CONDUIT NOTES:

1. G.C. SHALL PROVIDE (2) 4" PVC SCHEDULE 40 CONDUITS FROM BUILDING TO PROVIDE POWER TO THE PROPOSED MONUMENT SIGN.
2. G.C. SHALL PROVIDE (2) 4" PVC SCHEDULE 40 CONDUITS BETWEEN THE EXISTING UTILITY SERVICE AND PROPOSED SERVICE IN BUILDING. G.C. TO COORDINATE DIRECTLY WITH AEP.

## SANITARY SEWER SCHEDULE:

FROM	INV. IN	TO	INV. OUT	74' OF 6" SDR-35 PVC PIPE @ 8.0%
B	1052.92	A	1047.0	
A	1047.0	EX. LATERAL	1046.5	10' OF 6" SDR-35 PVC PIPE @ 5.0%

## STORM STRUCTURE SCHEDULE:

VDOT STD DI-1  
(GRATE w/SQUARE TOP)  
TOP=1054.3

45 LF OF 60" ALLUMINIZED  
CMP UNDERGROUND S.W.M.  
PIPE. (SEE DETAIL ON C09)  
(PIPE SLOPE 1.0%)  
UPPER INV:1047.27  
INV. OUT:1046.82  
(SEE SHEET C09 FOR DETAILS)

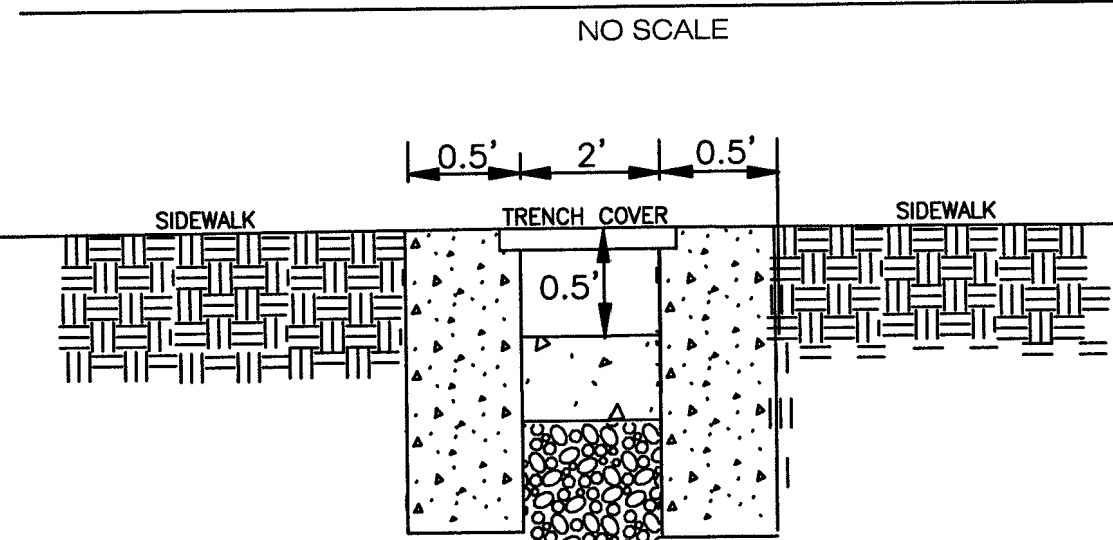
TRAFFIC BEARING ACCESS  
MANHOLE W/CONC. COLLAR  
TOP=1054.85  
(SEE SHEET C09 FOR DETAILS)

ORIFICE INFO:  
(3" ORIFICE AT ELEV. 1046.82  
ON OUTLET PIPE FROM U.G.  
S.W.M. PIPE W/DEBRIS RACK)

16 LF OF 24" RCP CLASS  
III PIPE W/WATERTIGHT  
GASKETS AT 2%  
INV. OUT=1046.5

6"x4" FILTERRA  
UNIT W/4" PVC DISCHARGE  
PIPE TO CONNECT DIRECTLY  
TO S.W.M. PIPE  
TOP=1054.9  
INV. OUT OF PIPE=1051.0  
(PROVIDE WATERTIGHT FERNCO COUPLER  
OR APPROVED EQUAL FOR CONNECTION  
TO STUB OUT FOR S.W.M. FACILITY)

## STORM STR. #1 AND ISLAND DETAIL



## 2' CONC. FLUME DETAIL

NO SCALE

## FILTERRA CONSTRUCTION & INSTALLATION NOTES:

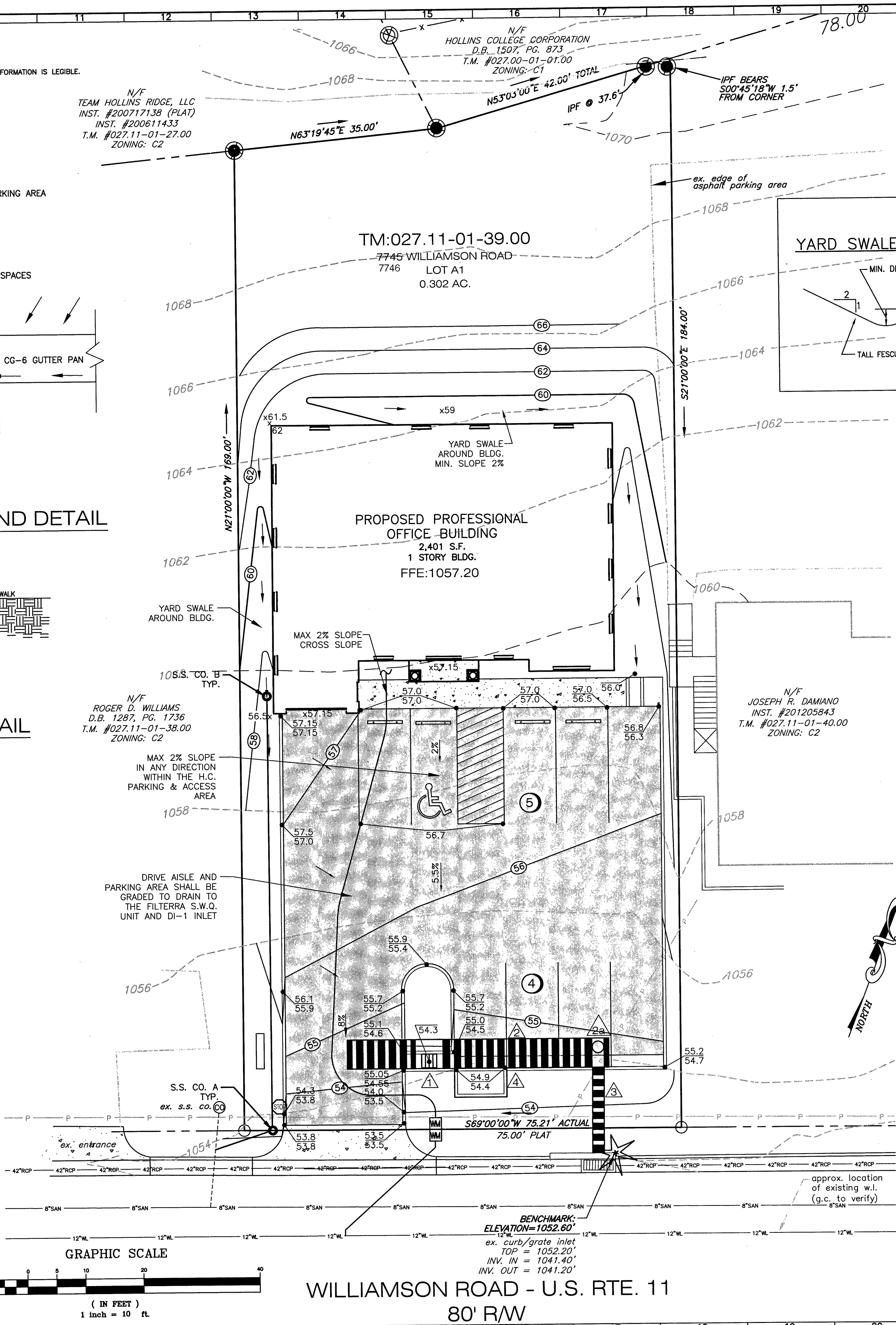
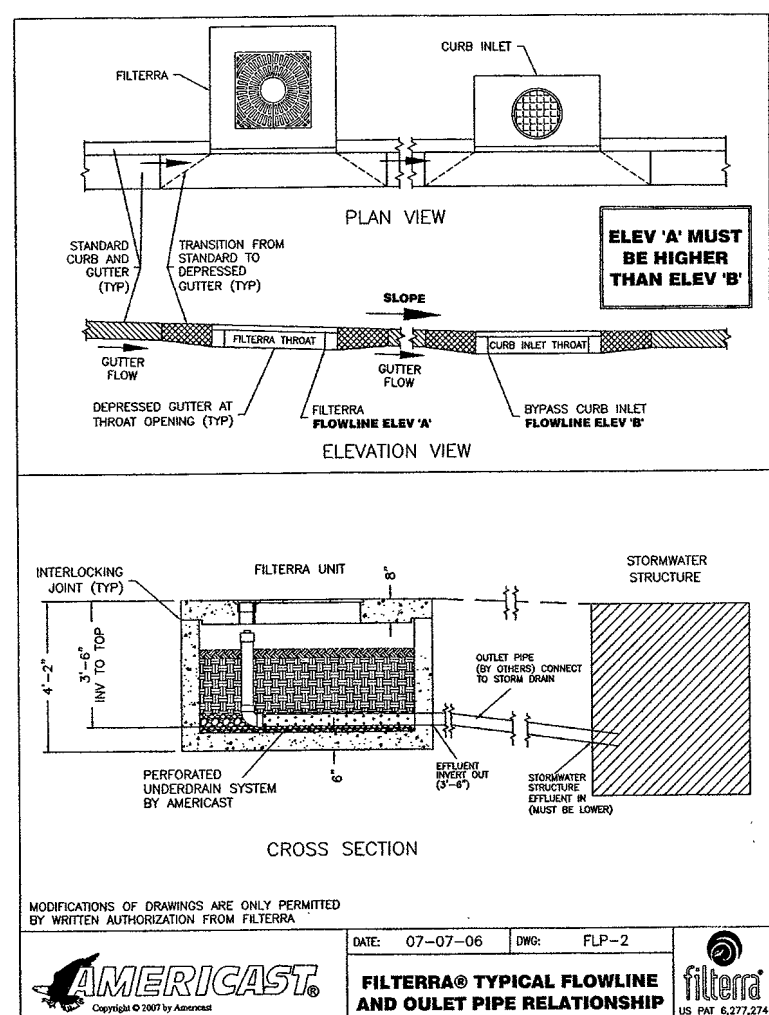
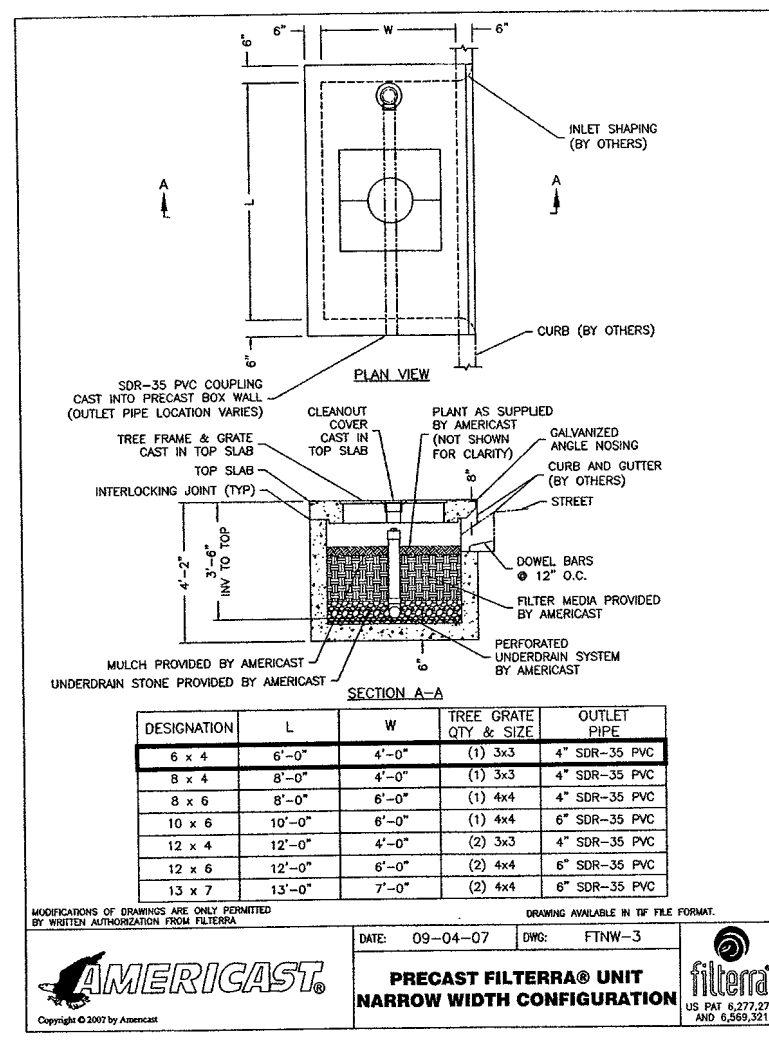
1. EACH UNIT SHALL BE CONSTRUCTED AT THE LOCATIONS AND ELEVATIONS ACCORDING TO THE SIZES SHOWN ON THE APPROVED DRAWINGS. ANY MODIFICATIONS TO THE ELEVATION OR LOCATION SHALL BE AT THE DIRECTION OF AND APPROVED BY THE ENGINEER.
2. IF THE FILTERRA IS STORED BEFORE INSTALLATION, THE TOP SLAB MUST BE PLACED ON THE BOX USING THE 2x4 WOOD PROVIDED, TO PREVENT ANY CONTAMINATION FROM THE SITE. ALL INTERNAL FITTINGS SUPPLIED (IF ANY), MUST BE LEFT IN PLACE AS PER THE DELIVERY.
3. THE UNIT SHALL BE PLACED ON A COMPACTED SUBGRADE WITH A MINIMUM 6-INCH GRAVEL BASE MATCHING THE FINAL GRADE OF THE CURB LINE IN THE AREA OF THE UNIT. THE UNIT TO BE PLACED SUCH THAT THE UNIT AND TOP SLAB MATCH THE GRADE OF THE CURB IN THE AREA OF THE UNIT.
4. OUTLET CONNECTIONS SHALL BE ALIGNED AND SEALED TO MEET THE APPROVED DRAWINGS WITH MODIFICATIONS NECESSARY TO MEET SITE CONDITIONS AND LOCAL REGULATIONS.
5. ONCE THE UNIT IS SET, THE INTERNAL WOODEN FORMS AND PROTECTIVE MESH COVER MUST BE LEFT INTACT. REMOVE ONLY THE TEMPORARY WOODEN SHIPPING BLOCKS BETWEEN THE BOX AND TOP SLAB. THE TOP LID SHOULD BE SEALED ON TOP OF THE BOX BEFORE BACKFILLING, USING A NON-SHRINK GROUT, BUTYL RUBBER OR SIMILAR WATERPROOF SEAL. THE BOARDS ON TOP OF THE LID AND BOARDS SEALED IN THE UNIT'S THROAT MUST NOT BE REMOVED. THE SUPPLIER (AMERICAST OR ITS AUTHORIZED DEALER) WILL REMOVE THESE SECTIONS AT THE TIME OF ACTIVATION. BACKFILLING SHOULD BE PERFORMED IN A CAREFUL MANNER, BRINGING THE APPROPRIATE FILL MATERIAL UP IN 6" LIFTS ON ALL SIDES. PRECAST SECTIONS SHALL BE SET IN A MANNER THAT WILL RESULT IN A WATER-TIGHT JOINT. IN ALL INSTANCES, INSTALLATION OF FILTERRA UNIT SHALL CONFORM TO ASTM SPECIFICATION C891 "STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST UTILITY STRUCTURES", UNLESS DIRECTED OTHERWISE IN CONTRACT DOCUMENTS.
6. CURB AND GUTTER CONSTRUCTION (WHERE PRESENT) SHALL ENSURE THAT THE FLOWLINE OF THE FILTERRA UNITS IS AT A GREATER ELEVATION THAN THE FLOWLINE OF THE BYPASS STRUCTURE OR RELIEF (DROP INLET, CURB CUT OR SIMILAR). FAILURE TO COMPLY WITH THIS GUIDELINE MAY CAUSE FAILURE AND/OR DAMAGE TO THE FILTERRA ENVIRONMENTAL DEVICE.
7. EACH FILTERRA UNIT MUST RECEIVE ADEQUATE IRRIGATION TO ENSURE SURVIVAL OF THE LIVING SYSTEM DURING PERIODS OF DRIER WEATHER. THIS MAY BE ACHIEVED THROUGH GUTTER FLOW OR THROUGH THE TREE GRATE.

## ACTIVATION:

1. ACTIVATION OF THE FILTERRA UNIT IS PERFORMED ONLY BY THE SUPPLIER. PURCHASER IS RESPONSIBLE FOR FILTERRA INLET PROTECTION AND SUBSEQUENT CLEAN OUT COST. THIS PROCESS CANNOT COMMENCE UNTIL THE PROJECT SITE IS FULLY STABILIZED AND CLEANED (FULL LANDSCAPING, GRASS COVER, FINAL PAVING AND STREET SWEEPING COMPLETED), NEGATING THE CHANCE OF CONSTRUCTION MATERIALS CONTAMINATING THE FILTERRA SYSTEM. CARE SHALL BE TAKEN DURING CONSTRUCTION NOT TO DAMAGE THE PROTECTIVE THROAT AND TOP PLATES.
2. ACTIVATION INCLUDES INSTALLATION OF PLANT(S) AND MULCH LAYERS AS NECESSARY.
3. THE G.C. SHALL ENSURE THAT A COPY OF THE ACTIVATION LETTER FROM THE SUPPLIER IS PROVIDED TO ROANOKE COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT.

## INCLUDED MAINTENANCE:

1. EACH CORRECTLY INSTALLED FILTERRA UNIT IS TO BE MAINTAINED BY THE SUPPLIER, OR A SUPPLIER APPROVED CONTRACTOR FOR A MINIMUM PERIOD OF 1 YEAR. THE COST OF THIS SERVICE IS TO BE INCLUDED IN THE PRICE OF EACH FILTERRA UNIT. EXTENDED MAINTENANCE CONTRACTS ARE AVAILABLE AT EXTRA COST UPON REQUEST.
2. ANNUAL INCLUDED MAINTENANCE CONSISTS OF A MAXIMUM OF TWO (2) SCHEDULED VISITS. THE VISITS ARE SCHEDULED SEASONALLY. THE SPRING VISIT AIMS TO CLEAN UP AFTER WINTER LOADS THAT MAY INCLUDE SALTS AND SANDS. THE FALL VISIT HELPS THE SYSTEM BY REMOVING EXCESS LEAF LITTER.
3. EACH INCLUDED MAINTENANCE VISIT CONSISTS OF THE FOLLOWING TASKS:
  - A. FILTERRA UNIT INSPECTION
  - B. FOREIGN DEBRIS, SILT, MULCH, AND TRASH REMOVAL
  - C. FILTER MEDIA EVALUATION AND RECHARGE AS NECESSARY
  - D. PLANT HEALTH EVALUATION AND PRUNING OR REPLACEMENT AS NECESSARY
  - E. REPLACEMENT OF MULCH
  - F. DISPOSAL OF ALL MAINTENANCE REFUSE ITEMS
  - G. MAINTENANCE RECORDS UPDATED AND STORED (REPORTS AVAILABLE UPON REQUEST)
4. THE BEGINNING AND ENDING DATE OF SUPPLIER'S OBLIGATION TO MAINTAIN THE INSTALLED SYSTEM SHALL BE DETERMINED BY THE SUPPLIER AT THE TIME THE SYSTEM IS ACTIVATED. OWNERS MUST PROMPTLY NOTIFY THE SUPPLIER OF ANY DAMAGE TO THE PLANT(S), WHICH CONSTITUTE(S) AN INTEGRAL PART OF THE BIORETENTION TECHNOLOGY.



## YARD SWALE DETAIL

