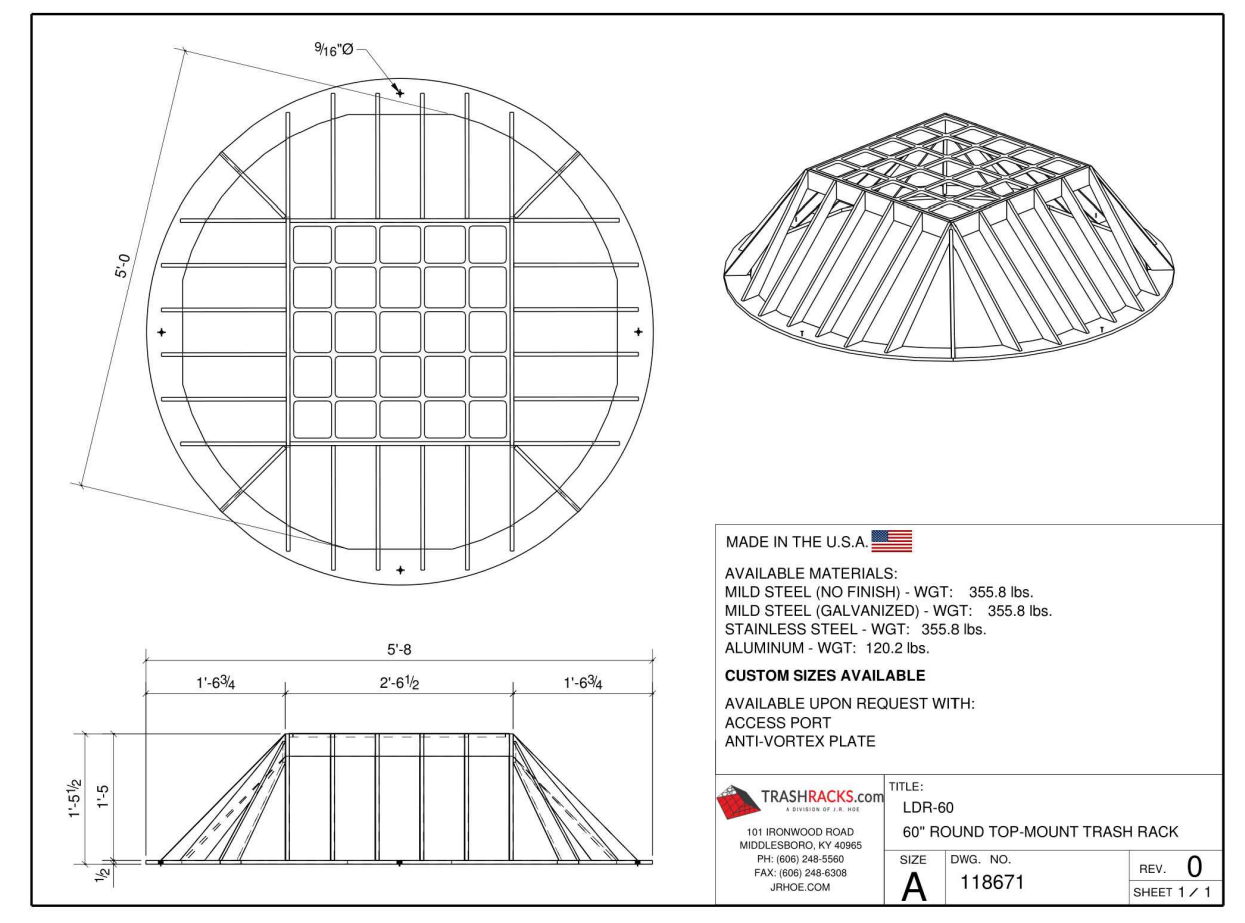
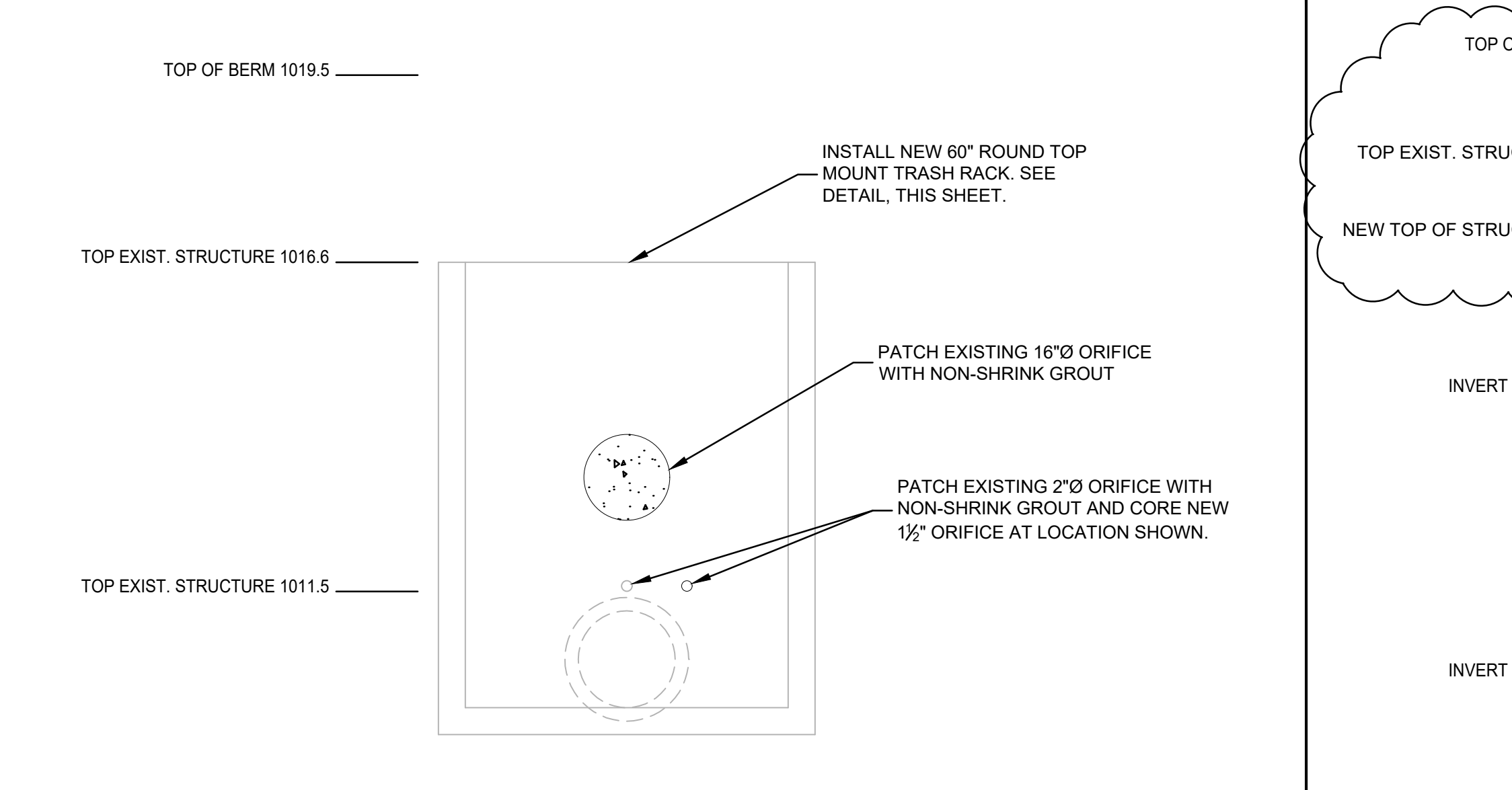


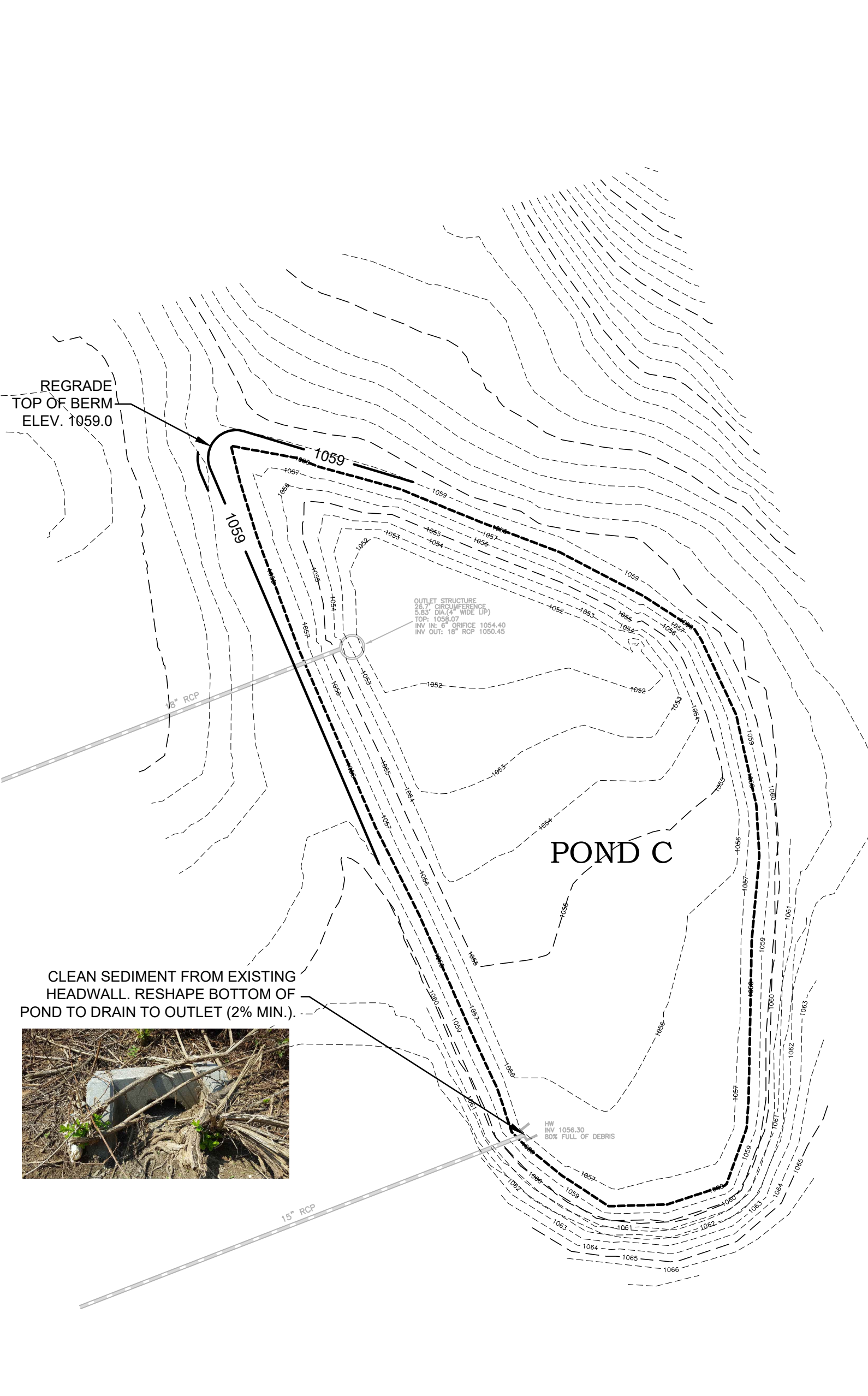
**7**  
1"=30'  
**POND B GRADING PLAN**



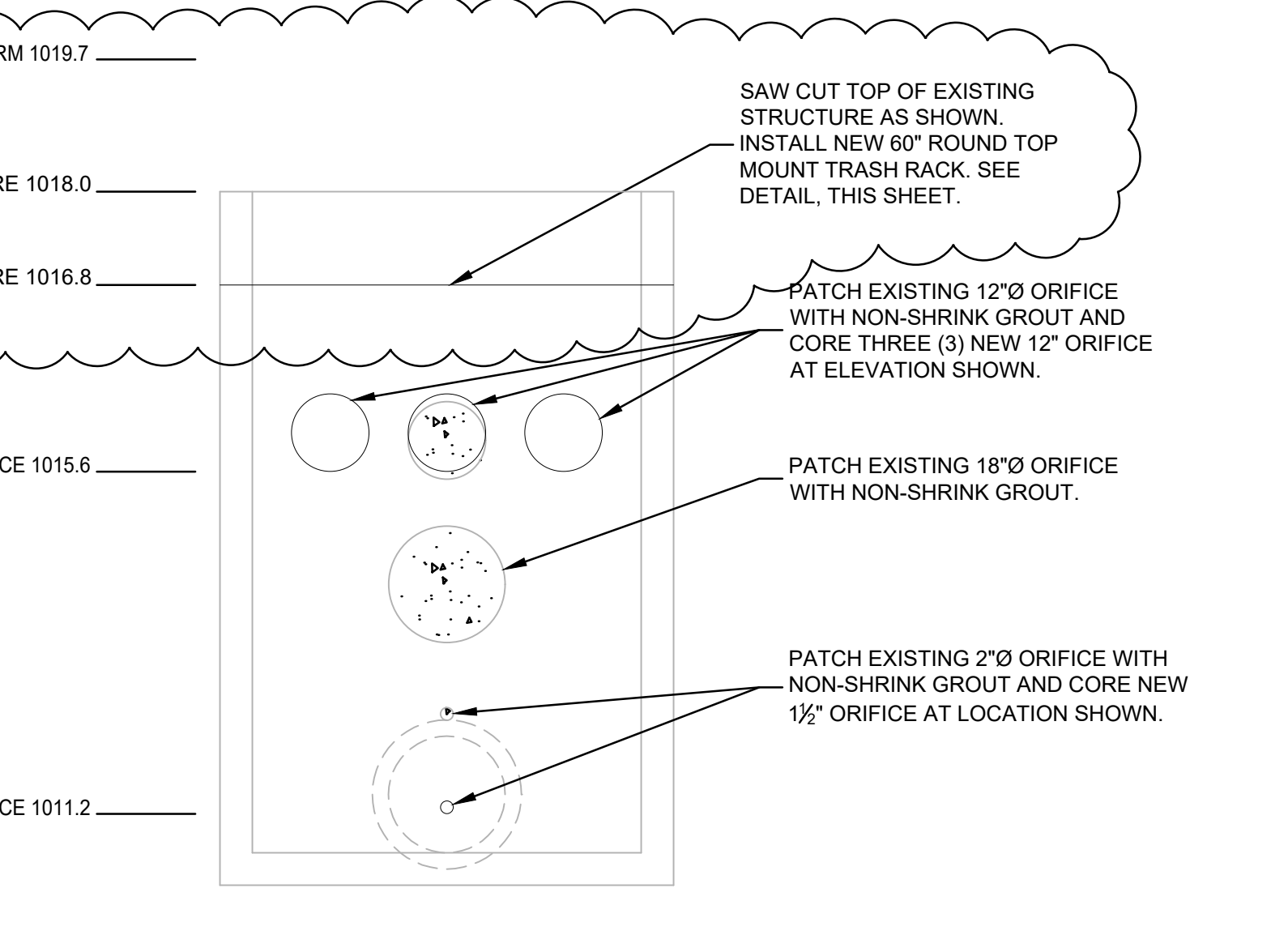
**4**  
1"=30'  
**TRASH RACK**



**1**  
NTS  
**POND A OUTLET STRUCTURE**



**5**  
1"=30'  
**POND C GRADING PLAN**

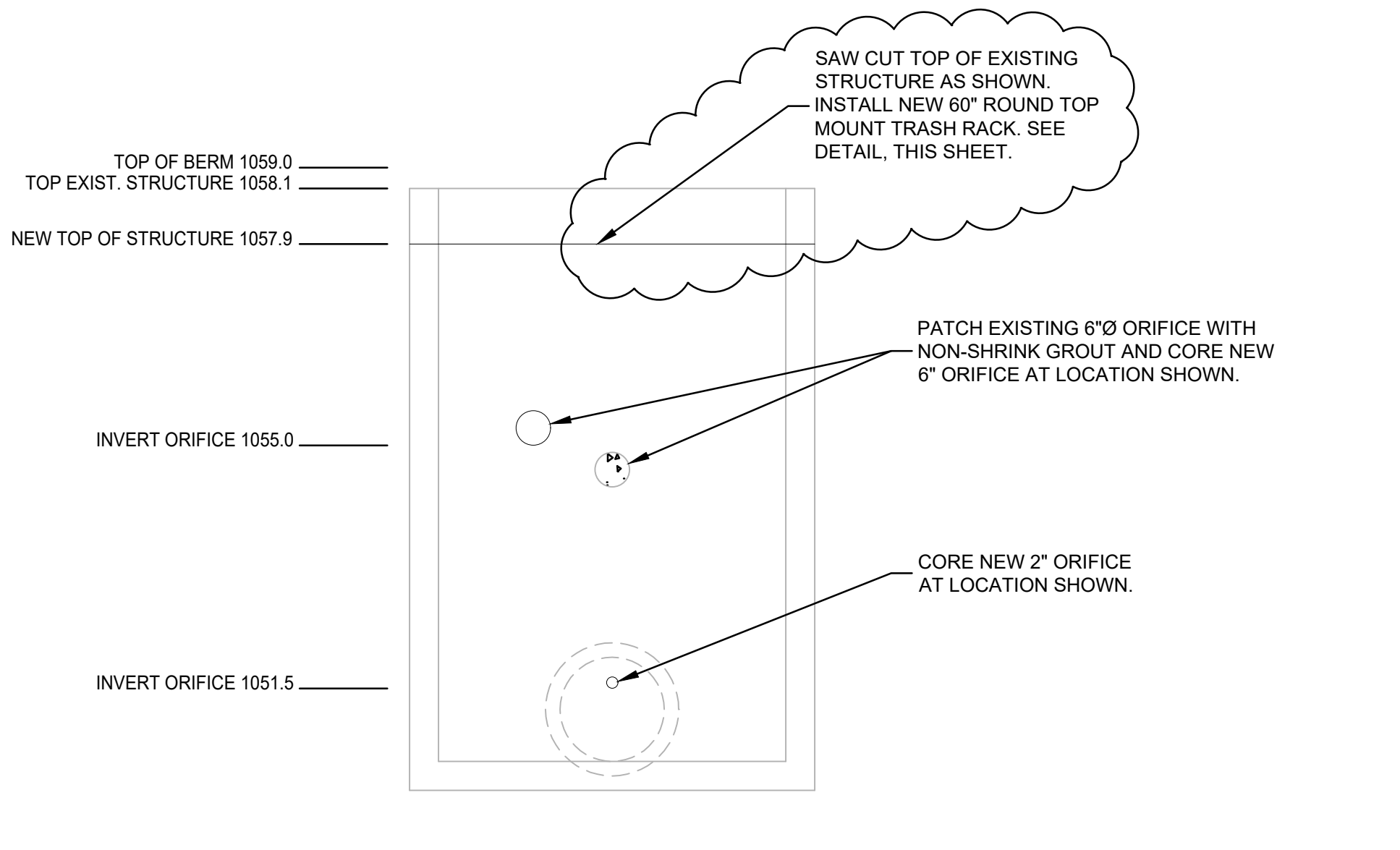


**2**  
NTS  
**POND B OUTLET STRUCTURE**

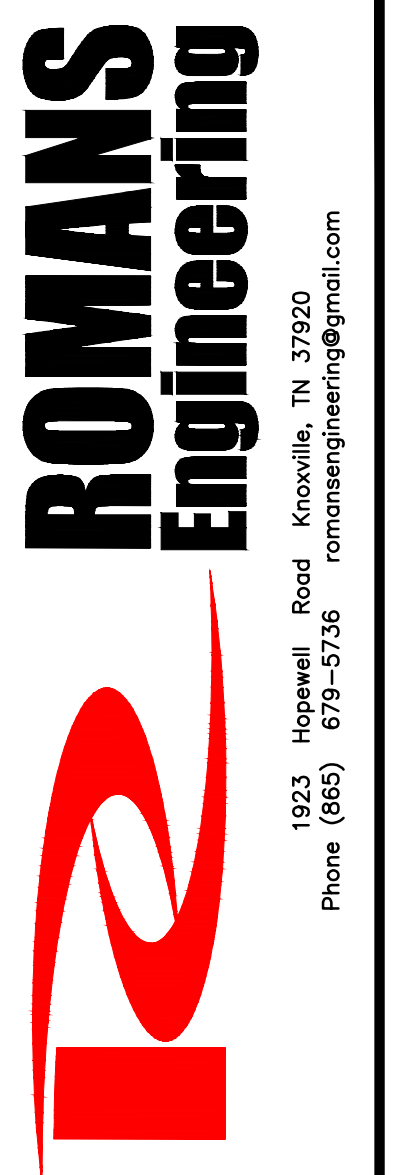
**EARTHWORK NOTES**

- INSPECTION**
- CONTRACTOR SHALL INSPECT THE SITE AND INFORM HIMSELF OF ACTUAL GRADES, LEVELS, AND OTHER CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED.
- CLEARING AND GRUBBING**
- COMPLETELY REMOVE ALL TREES, STUMPS, ROOTS, BURIED LOGS, BRUSH, GRASS, WEEDS, VEGETATION, AND OTHER UNSUITABLE MATERIALS.
- REMOVE AND STOCKPILE TOPSOIL**
- AFTER CLEARING AND GRUBBING AND PRIOR TO ALL OTHER EARTHWORK, IN ALL AREAS TO BE FILLED REMOVE ALL THE EXISTING TOPSOIL REGARDLESS OF THE DEPTH.
  - STOCKPILE THE REMOVED TOPSOIL IN AN APPROVED LOCATION ON THE PROJECT SITE. THE STOCKPILE SHALL BE PLACED AT A LOCATION THAT WILL NOT INTERFERE WITH THE PROJECT CONSTRUCTION. PROTECT THE STOCKPILE FROM EROSION AT ALL TIMES.
- FILLING AND BACKFILLING**
- SCARIFY SURFACE TO 6-INCH DEPTH ALL AREAS TO RECEIVE FILL. DISC OR BLADE SURFACE UNTIL FREE FROM LARGE CLOUDS.
  - BRING SCARIFIED MATERIALS TO PROPER MOISTURE CONTENT AND COMPACT TO MINIMUM COMPACTION OF 95 PERCENT OF OPTIMUM, AS DETERMINED BY ASTM D698 (STANDARD PROCTOR).
  - SPREAD FILL MATERIAL IN LAYERS NOT TO EXCEED 8-INCH DEPTH BEFORE COMPACTION UNLESS COMPACTION OF THICKER LAYER IS APPROVED BY THE ENGINEER. SPRINKLE MATERIAL WITHOUT SUFFICIENT MOISTURE TO COMPACT PROPERLY; PERMIT MATERIAL WITH EXCESS MOISTURE TO DRY TO PROPER WATER CONTENT. THOROUGHLY MIX SOIL AND WATER BY BLADING AND DISKING BEFORE COMPACTION.
- FORMATION OF EMBANKMENTS**
- EMBANKMENTS SHALL BE FORMED IN SUCCESSIVE HORIZONTAL LAYERS OF NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR THE FULL WIDTH OF THE CROSS SECTION, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
  - THE GRADING OPERATIONS SHALL BE CONDUCTED, AND THE VARIOUS SOIL STRATA SHALL BE PLACED, TO PRODUCE A SOIL STRUCTURE AS SHOWN ON THE DRAWINGS OR AS DIRECTED. MATERIALS SUCH AS BRUSH, HEDGE, ROOTS, STUMPS, GRASS AND OTHER ORGANIC MATTER, SHALL NOT BE INCORPORATED OR BURIED IN THE EMBANKMENT.
- OPERATIONS ON EARTHWORK SHALL BE SUSPENDED AT ANY TIME WHEN SATISFACTORY RESULTS CANNOT BE OBTAINED BECAUSE OF RAIN, FREEZING, OR OTHER UNSATISFACTORY CONDITIONS OF THE FIELD. THE CONTRACTOR SHALL DRAG, BLADE, OR SLOPE THE EMBANKMENT TO PROVIDE PROPER SURFACE DRAINAGE.
  - THE MATERIAL IN THE LAYER SHALL BE WITHIN -2 PERCENT TO +2 PERCENT OF OPTIMUM MOISTURE CONTENT BEFORE ROLLING TO OBTAIN THE PRESCRIBED COMPACTION. IN ORDER TO ACHIEVE A UNIFORM MOISTURE CONTENT THROUGHOUT THE LAYER, WETTING OR DRYING OF THE MATERIAL AND MANIPULATION SHALL BE REQUIRED WHEN NECESSARY. SHOULD THE MATERIAL BE TOO WET TO PERMIT PROPER COMPACTION OR ROLLING, ALL WORK ON ALL OF THE AFFECTED PORTIONS OF THE EMBANKMENT SHALL BE DELAYED UNTIL THE MATERIAL HAS DRIED TO THE REQUIRED MOISTURE CONTENT. SPRINKLING OF DRY MATERIAL TO OBTAIN THE PROPER MOISTURE CONTENT SHALL BE DONE WITH APPROVED EQUIPMENT THAT WILL SUFFICIENTLY DISTRIBUTE THE WATER. SUFFICIENT EQUIPMENT TO FURNISH THE REQUIRED WATER SHALL BE AVAILABLE AT ALL TIMES. SAMPLES OF ALL EMBANKMENT MATERIALS FOR TESTING, BOTH BEFORE AND AFTER PLACEMENT AND COMPACTION, WILL BE TAKEN FOR EACH 500 SQUARE YARDS. BASED ON THESE TESTS, THE CONTRACTOR SHALL MAKE THE NECESSARY CORRECTIONS AND ADJUSTMENTS IN METHODS, MATERIALS OR MOISTURE CONTENT IN ORDER TO ACHIEVE THE CORRECT EMBANKMENT DENSITY.
  - THE IN-PLACE FIELD DENSITY SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D 1556 OR ASTM D 2167 OR ASTM D 2922 AND ASTM D 3017. NO FILL FROM OFF-SITE SHALL HAVE A MAXIMUM DRY DENSITY WEIGHT OF LESS THAN 95 LB/CF.
  - COMPACTION AREAS SHALL BE KEPT SEPARATE, AND NO LAYER SHALL BE COVERED BY ANOTHER UNTIL THE PROPER DENSITY IS OBTAINED.
  - DURING CONSTRUCTION OF THE EMBANKMENT, THE CONTRACTOR SHALL ROUTE HIS/HER EQUIPMENT AT ALL TIMES, BOTH WHEN LOADED AND WHEN EMPTY, OVER THE LAYERS AS THEY ARE PLACED AND SHALL DISTRIBUTE THE TRAVEL EVENLY OVER THE ENTIRE WIDTH OF THE EMBANKMENT. THE EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT HARDPAN, CEMENTED GRAVEL, CLAY, OR OTHER CHUNKY SOIL MATERIAL WILL BE BROKEN UP INTO SMALL PARTICLES AND BECOME INCORPORATED WITH THE OTHER MATERIAL IN THE LAYER.
  - IN THE CONSTRUCTION OF EMBANKMENTS, LAYER PLACEMENT SHALL BEGIN IN THE DEEPEST PORTION OF THE FILL; AS PLACEMENT PROGRESSES, LAYERS SHALL BE CONSTRUCTED APPROXIMATELY PARALLEL TO THE FINISHED PAVEMENT GRADE LINE.
  - FROZEN MATERIAL SHALL NOT BE PLACED IN THE EMBANKMENT NOR SHALL EMBANKMENT BE PLACED UPON FROZEN MATERIAL.
  - FINISHED GRADES REPRESENT CONDITIONS AFTER TOPSOIL IS PLACED.

**6**  
**GRADING NOTES**

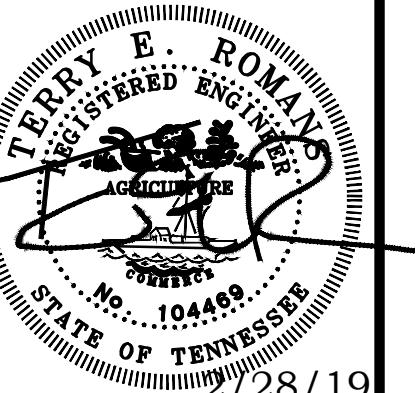


**3**  
NTS  
**POND C OUTLET STRUCTURE**



CITY OF KNOXVILLE  
 MAPLE RIDGE SUBDIVISION  
 KNOXVILLE, TENNESSEE  
 DETAILS

DATE:	2/28/19
REVISIONS:	Adjusted outlet structures & headwall
NUMBER:	1.



JOB NO: 16-54  
 DATE: 1/28/19  
 DRAWN: TER  
 CHECKED: TER

**C2.1**