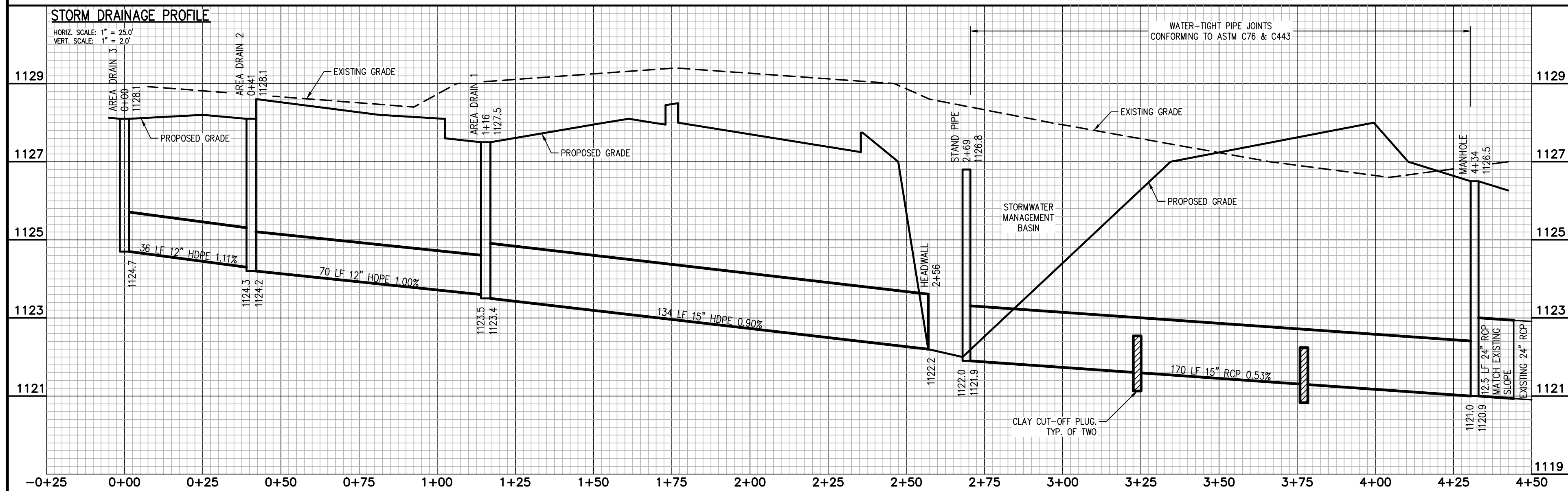
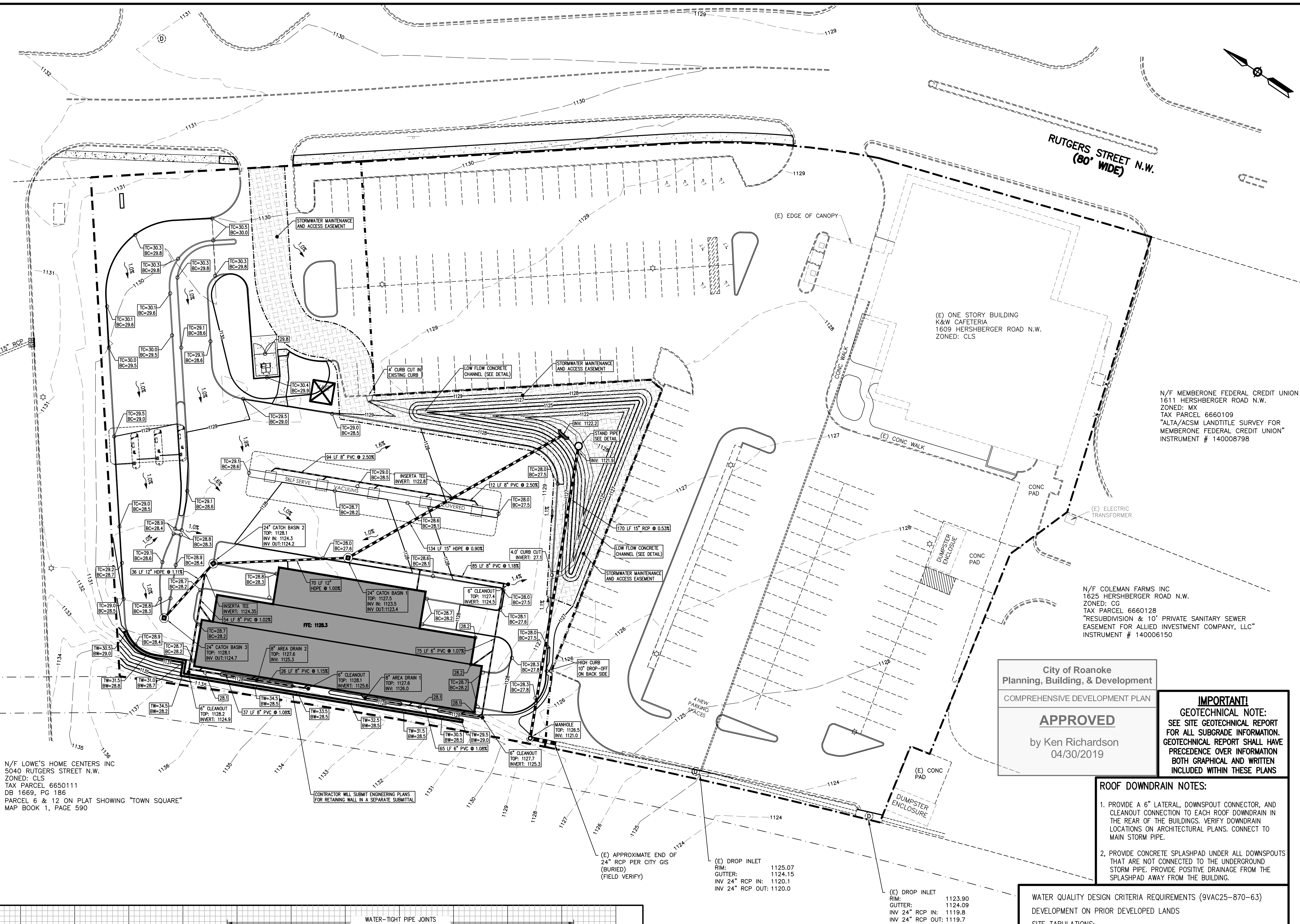


NOTES:

1. COMPLY WITH LOCAL AND STATE ORDINANCES REGARDING DISPOSAL OF DEBRIS. DO NOT BURN DEBRIS ON SITE WITHOUT SPECIFIC WRITTEN APPROVAL OF THE LOCAL AUTHORITY. CLEAR AND GRUB FOR NEW CONSTRUCTION AS REQUIRED. IF OFFSITE BORROW OR SOIL WASTE AREAS ARE NEEDED, THEY WILL REQUIRE LOCAL APPROVAL AND DEPENDING ON THE SIZE OF THE AREA, A NOI/NOC FROM DEQ.
2. VERIFY LOCATION OF EXISTING ON-SITE UTILITIES. PROTECT AND MAINTAIN EXISTING UTILITIES AS REQUIRED. ESTABLISH AND VERIFY EXISTING LINES, GRADE AND DIMENSIONS SHOWN ON THE DRAWING.
3. EXISTING CONTOURS SHOWN ARE INTENDED TO FORM A GENERAL DESCRIPTION OF SURFACE GROUND ELEVATIONS. TOPOGRAPHIC INFORMATION SHOWN HEREIN SHALL BE CONSIDERED TO HAVE NOT MORE THAN THE FOLLOWING PLUS OR MINUS LIMITS OF ACCURACY: 0.10 FEET AT BENCHMARKS, 0.25 FEET AT SPOT GRADES, 1.0 FEET AT CONTOUR LINES. CONTRACTOR IS CAUTIONED THAT STRAIGHT LINE INTERPOLATION BETWEEN CONTOURS MAY NOT EXACTLY REFLECT EXISTING CONDITIONS. AREAS OF RELATIVELY QUICK CHANGES IN CONTOURS SHOULD NOT BE ALLOWED TO UNDULY INFLUENCE INTERPRETATION OF CONTOURS.
4. TOPSOIL SHALL BE STRIPPED AND TEMPORARILY STOCK PILED FOR LATER REUSE. IF NO STOCK PILE AREA IS NOTED ON GRADING PLAN, STOCK PILE SHALL BE IN SUCH PLACE TO PROVIDE FOR READY ACCESS TO NECESSARY AREAS OF SITE BY OTHER TRADES THROUGHOUT PROGRESS OF WORK. PARTICULAR ATTENTION SHALL BE PAID TO FINELY TEXTURED TOPSOIL THAT WILL BE REUSED. TOPSOIL RESPREADING SHALL BE TO A MINIMUM DEPTH OF 6" AT ANY POINT.
5. OLD, ORGANIC FILL MATERIAL PREVIOUSLY PLACED ON THE SITE SHOULD BE REMOVED FROM THE LIMITS OF THE PROPOSED PROJECT.
6. ALL AREAS TO RECEIVE NEW STRUCTURAL FILL OR OTHER NEW CONSTRUCTION SHALL BE PROOF ROLLED WITH A 20 TON TANDEM DUMP TRUCK IN A SLOW CROSSING PATTERN OVER THE SITE. THIS MUST BE DONE IN PRESENCE OF SOILS TESTING AGENT BEFORE COMMENCING ANY FILLING OF THE SITE. ANY AREAS DEEMED UNSATISFACTORY BY THE SOILS TESTING AGENT SHALL BE UNDERCUT AND REPAIRED AS DIRECTED BY THE SOILS TESTING AGENT.
7. UNDERCUT SHALL MEAN EXCAVATION OR OTHER REMOVAL OF UNSUITABLE MATERIAL BELOW ELEVATION OF PROPOSED FINAL SUBGRADE. IN NO CASE SHALL THE TERM UNDERCUT BE USED TO DESCRIBE MATERIAL OCCURRING ABOVE FINAL SUBGRADE ELEVATION. EXTENT OF UNDERCUT OF UNSUITABLE MATERIALS, IF ANY MUST BE RECOMMENDED BY THE GEOTECHNICAL ENGINEER FOR THE OWNER'S APPROVAL. GEOTECHNICAL ENGINEER SHALL NOT HAVE UNILATERAL AUTHORITY TO DIRECT UNDERCUT ACTIVITIES WITHOUT APPROVAL OF THE OWNER'S REPRESENTATIVE. GEOTECHNICAL ENGINEER'S WRITTEN FIELD NOTES WILL BE REQUIRED TO SUBSTANTIATE AMOUNTS OF UNDERCUT. BACKFILL SHALL BE OF APPROVED MATERIAL ONLY AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
8. STRUCTURAL FILL SHALL BE COMPACTED IN LIFTS NOT TO EXCEED 8" AS SPECIFIED BY THE GEOTECHNICAL ENGINEER AND PLACED WITHIN ±2% TO ±2% OF OPTIMUM MOISTURE CONTENT AND COMPACTED TO 98% STANDARD PROCTOR OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. OFF-SITE BORROW AREAS SHALL BE APPROVED BY SOILS ENG. USE ONLY FILL MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER. IN-SITU SOILS MAY REQUIRE ADDITIONAL WATER OR MAY REQUIRE ADDITIONAL DRYING TO REACH OPTIMUM MOISTURE CONTENT FOR COMPACTION.
9. CONTRACTOR SHALL INCLUDE PRICE OF ALL REQUIRED TESTING AS REQUIRED TO BE PERFORMED BY AN INDEPENDENT QUALIFIED GEOTECHNICAL TESTING AGENT SUITABLE TO THE CITY AND/OR OWNER PER THE CITY'S AND/OR OWNER'S REQUIREMENTS. THE TESTING OF THE SITE SHALL BE DONE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORT RECOMMENDATIONS FOR THE SITE.
10. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO KEEP THE WORK FREE OF WATER EITHER FROM SURFACE SOURCES OR FROM UNDERGROUND SOURCES OR BOTH. SELECTION OF EQUIPMENT AND METHODS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE AND IS RESPONSIBLE FOR ALL DAMAGE INCURRED IN HANDLING WATER CONDITIONS.
11. REFER TO THE EROSION CONTROL PLAN FOR STABILIZATION TIMETABLES.
12. EXPOSE THE MINIMUM AMOUNT OF SUBGRADE POSSIBLE AT ONE TIME TO ALLOW FOR EFFICIENT PROCEEDING OF THE WORK. GRASSING AND OTHER EROSION CONTROL MEANS SHALL BE EMPLOYED, MAINTAINED AND RECONSTRUCTED AS REQUIRED IF DESTROYED BY EROSION. SEDIMENT DEPOSITED ON EXISTING PAVING BY CONSTRUCTION ACTIVITIES SHALL BE CLEANED-UP IMMEDIATELY. TEMPORARY SEDIMENT FENCES SHALL BE CONSTRUCTED AND/OR INSTALLED PRIOR TO STRIPPING OF TOPSOIL. PROVIDE AND MAINTAIN INLET PROTECTION AROUND DRAINAGE STRUCTURES TO PREVENT SILTATION THROUGHOUT CONSTRUCTION. RE-TOPSOIL OR REWORK TOPSOIL AND RESEED IN AREAS THAT EXPERIENCE EROSION THROUGHOUT DO NOT REMOVE EROSION CONTROL MEASURES UNTIL ENTIRE SITE IS STABILIZED.
13. ALL PRECAST CONCRETE STRUCTURES TO BE MANUFACTURED BY A CERTIFIED PRECAST PLANT.
14. THE GEOTECHNICAL ENGINEERING REPORT SPECIFIES THE REQUIRED SOIL COMPACTION FOR THE VARIOUS AREAS OF THE SITE. THE GEOTECHNICAL REPORT SHALL SUPERSEDE ANY CONFLICTING INFORMATION WITHIN THE CIVIL SITE PLANS. GEOTECHNICAL ENGINEER SHALL BE PRESENT DURING THE REMEDIATION OF ANY UNACCEPTABLE AREAS.
15. THE APPROVED WATER QUALITY MANAGEMENT PLAN SHALL BE ADHERED TO DURING GRADING AND CONSTRUCTION ACTIVITIES. UNDER NO CIRCUMSTANCES IS THE OWNER OR OPERATOR OF LAND DEVELOPMENT ACTIVITIES ALLOWED TO DEVIATE FROM THE APPROVED WATER QUALITY MANAGEMENT PLAN WITHOUT PRIOR APPROVAL OF A PLAN AMENDMENT BY THE CITY.
16. THE APPROVED WATER QUALITY MANAGEMENT PLAN SHALL BE AMENDED IF THE PROPOSED SITE CONDITIONS CHANGE AFTER PLAN APPROVAL IS OBTAINED, OR IF IT IS DETERMINED BY THE CITY MANAGER OR HIS REPRESENTATIVE DURING THE COURSE OF GRADING OR CONSTRUCTION THAT THE APPROVED PLAN IS INADEQUATE.
17. A DENSE AND VIGOROUS VEGETATIVE COVER SHALL BE ESTABLISHED OVER THE CONTRIBUTING PERVIOUS DRAINAGE WATERSHED AREA OF THE STORMWATER QUALITY BMPs BEFORE RUNOFF CAN BE ACCEPTED INTO THE BMP. SEDIMENT-LADEN RUNOFF SHALL NOT BE ALLOWED TO REACH ANY STORMWATER QUALITY BMP AT ANY TIME. IF SEDIMENT-LADEN RUNOFF ENTERS A STRUCTURE, THE STRUCTURE SHALL BE CLEANED, REPAIRED, AND/OR RECONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION PLANS.
18. ANY EXCAVATED ROCK USED FOR FILL MATERIAL ON THE SITE SHALL BE NO LARGER THAN 18" IN SIZE. THE ROCK SHALL BE PLACED IN LIFTS NO LARGER THAN 24" AND COMPACTED WITH A HEAVY STEEL DRUM COMPACTOR. REFER TO THE GEOTECHNICAL ENGINEERING REPORT FOR THE SITE FOR ADDITIONAL INFORMATION. THE ROCK USED FOR FILL MATERIAL SHALL CONTAIN LESS THAN 10% SOIL.



LEGEND

| | |
|--|--------------------------|
| | EXISTING CONTOUR |
| | PROPOSED CONTOUR |
| | PROPOSED STORM LINE |
| | SPOT ELEVATION (+1100) |
| | WATER FLOW ARROW |
| | EXISTING |
| | EXISTING STORM LINE |
| | RIP RAP PAD (SEE DETAIL) |
| | TOP OF RETAINING WALL |
| | BOTTOM OF RETAINING WALL |
| | DRAINAGE STRUCTURE |



CALL THREE WORKING DAYS
BEFORE YOU DIG
811
MISS VIRGINIA UTILITY
CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING
UTILITIES PRIOR TO BEGINNING CONSTRUCTION

These documents prepared by the Engineer are instruments of the Engineer's service. Unless otherwise indicated, the Engineer shall be deemed the author of all drawings, specifications and other documents and will retain all common law, statutory and other reserved rights, in addition to the copyright. Documents prepared by the Engineer are for use solely with respect to this project. These documents shall not be used, copied or reprinted without the specific written consent of the Engineer. Any violation of the above rights of the Engineer shall be prosecuted to the maximum possible extent within the law.

30' 0' 30' 60'

GRADING AND DRAINAGE PLAN

WATER QUALITY DESIGN CRITERIA REQUIREMENTS (9VAC25-870-63)

DEVELOPMENT ON PRIOR DEVELOPED LANDS

SITE TABULATIONS:

- PROJECT AREA / LAND DISTURBANCE AREA = 1.39 ACRES
- PRE-DEVELOPMENT:
 - 0 FOREST/OPEN SPACE (ACRES) = 0.00
 - 0 MANAGED TURF (ACRES) = 1.26
 - 0 IMPERVIOUS COVER (ACRES) = 0.13
- POST-DEVELOPMENT:
 - 0 FOREST/OPEN SPACE (ACRES) = 0.00
 - 0 MANAGED TURF (ACRES) = 0.45
 - 0 IMPERVIOUS COVER (ACRES) = 0.94

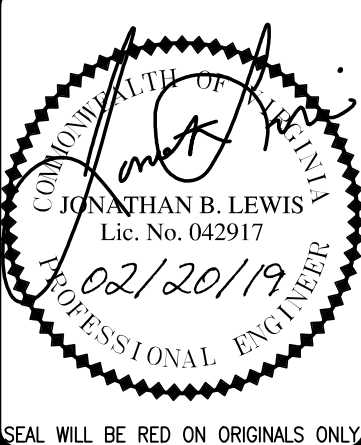
THE TOTAL POLLUTANT LOAD (TP) REDUCTION REQUIRED FOR THE WORK OF THIS PROJECT IS 1.52 LBS/YEAR AS DETERMINED BY THE "VIRGINIA RUNOFF REDUCTION METHOD (VRRM) WORKSHEET." WATER QUALITY REQUIREMENTS ARE MET BY PURCHASE OF NUTRIENT CREDITS FROM A QUALIFIED PROVIDER.

NOTICE TO CONTRACTORS REGARDING EXISTING UTILITIES

Contractors are specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is approximate only. The information is not to be relied on as being exact or complete. The Contractor must call the appropriate utility provider or one-call system a minimum of 72 hours before beginning any construction activities in order to verify the locations of all existing utilities. It is the responsibility of the contractor to verify the utility locations and determine if any existing utilities conflict with the proposed construction.

| REV. | DATE | BY |
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PROPOSED CONSTRUCTION PLANS
ULTIMATE SHINE CAR WASH
RUTGERS STREET N.W., ROANOKE, VA
GRADING AND DRAINAGE PLAN



DRAWN BY:

CAS

CHECKED BY:

JBL

DATE:

02-20-19

SCALE:

1"=30'

DRAWING NAME:

WILD ROANOKE 07

SHEET NUMBER:

C3

OF

16

SHEETS