

# The Department of Community Development

City Hall, Lynchburg, VA 24504

434-455-3900

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**To:** Planning Commission

**From:** Planning Division

**Date:** September 9, 2015

**Re:** Conditional Use Permit: Fill-in the 100-year floodplain- 3809 Wards Road

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## I. PETITIONER

Lynchburg 104 Venture, LLC, 1322 Main Street, Suite 30, Columbia, SC, 29201

**Representative:** Mr. Mark Ayles, Hughes Associates Architects & Engineers, 656 Elm Avenue, Roanoke, VA 24016

## II. LOCATION

The subject property includes one (1) tract totaling approximately forty hundredths (0.40) of an acre located at 3809 Wards Road.

**Property Owners:**

Van First, LLC [Debbie & Virgil Naff], 1101 Kemper Street, Lynchburg, VA 24501

## III. PURPOSE

The purpose of the conditional use permit petition is to allow for the floodplain to be filled in to facilitate the redevelopment of the site for retail use.

## IV. SUMMARY

- The *Future Land Use Map (FLUM)* recommends a Community Commercial use for these properties. Limited retail and service uses may be established in these areas.
- The property is developed and was previously used commercially as a car wash.
- The CUP would allow fill to be placed in a manner not to exceed the “base flood elevation” for Rock Castle Creek at this location. The building would also be flood-proofed to meet building code requirements.

**The Planning Division recommends approval of the CUP petition.**

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## V. FINDINGS OF FACT

1. **Comprehensive Plan.** The *FLUM* of the *Comprehensive Plan 2013-2030* recommends a Community Commercial use for the area. “Community Commercial areas contain retail, personal service, entertainment, and restaurant uses that draw customers from at least several neighborhoods, the entire City or the region. In particular, conversion of existing vacant retail space to these uses may be appropriate in areas where there is sufficient retail to serve the community and space for employment uses where needed.” (*pg. 75-76*)

The plan also recommends the City “limit new development in the floodplain in the future and seek to protect existing development that may be affected by flooding.” (*pg. 113*). In this case the site has been previously developed and the petitioner has submitted documentation that the proposed fill will not exceed the 100-year floodplain elevation so as not to cause an increase in the water surface level upstream or downstream of the site.

2. **Zoning.** The subject property was annexed into the City in 1976. The existing B-5, General Business District zoning was established in 1978 with the approval of the zoning ordinance.

3. **Board of Zoning Appeals (BZA).** The Zoning Official has determined that no variances would be needed for the development of the property as proposed.
4. **Surrounding Area.** There have been several items requiring City Council approval in the immediate area:
  - On February 10, 1981, Council approved the petition of Granville Graham to rezone the property at 3400 Wards Road from B-3, Community Business District to B-5C, General Business District (Conditional) to allow for the construction of a warehouse.
  - On June 14, 1988, Council approved the petition of Barry E. Dotson & Associates to rezone the property at 3900 Wards Road from I-2, Light Industrial District to B-3C, Community Business District (Conditional) and receive a CUP to fill-in the floodplain to allow for the construction of a shopping center.
  - On March 14, 1989, Council approved the petition of Vito DeMonte to rezone the property at 3725 Wards Road from I-2, Light Industrial District to B-5C, General Business District (Conditional) to allow for the expansion of an existing auto body.
  - On March 14, 1989, Council approved the CUP petition of Old Time Gospel Hour to construct a football stadium and basketball arena at 3765 Candler's Mountain Road.
  - On September 11, 1990, Council approved the petition of Vito DeMonte to rezone the property at 3717 Wards Road from I-2, Light Industrial District to B-5C, General Business District (Conditional) to allow for the construction of an automobile showroom and service shop.
  - On July 14, 1992, Council approved the petition of Sam's Club to rezone the property at 3900 Wards Road to B-3C, Community Business District (Conditional) to B-3C, Community Business District (Conditional) to allow for a retail store and modification to the proffered site plan.
  - On April 8, 1997, Council approved the CUP petition of Wal-Mart Stores, Inc. to fill-in the floodplain in order to allow for a retail store at 3900 Wards Road.
  - On January 26, 1999, Council approved the rezoning petition of Faison/Trammel Crow Company to rezone the property at 100 Atlanta Avenue from R-3, Medium Density, Two-Family Residential District, R-4, Medium-High Density, Multi-Family Residential District, R-5, High Density, Multi-Family Residential District and B-5, General Business District to B-5C, General Business District (Conditional) to allow for the construction of a shopping center.
  - On July 13, 1999, Council approved the petition of Rocky Bottom Realty, LLC to rezone the property at 3700 Wards Road from I-2, Light Industrial District and R-C, Resource Conservation District to B-3C, Community Business District (Conditional) and receive a CUP to fill-in the floodplain to allow for the construction of retail and restaurant uses.
  - On May 9, 2000, Council approved the CUP petition of Old Time Gospel Hour to fill-in the floodplain to facilitate the development of a restaurant at 3920 Wards Road.
  - On July 10, 2001, Council approved the CUP petition of EHI Properties to fill-in the floodplain to facilitate the development of a restaurant at 3805 Wards Road.
  - On November 13, 2001, Council approved the CUP petition of Liberty University to amend the Master Plan at 1971 University Boulevard.

- On December 16, 2003, Council approved the petition of Jerry Falwell Ministries to rezone the property at 100 Mountain View Road from I-2, Light Industrial District, B-5, General Business District, and B-3C, Community Business District (Conditional) to B-5C, General Business District (Conditional) and receive a CUP to allow for modifications to the vegetation disturbance on the property.
  - On June 10, 2008, Council approved the CUP petition of Liberty University to allow for a consolidated sign plan at 100 Mountain View Road, 100 and 300 Liberty Mountain, and 3501 Wards Road.
  - On May 13, 2014, Council approved B&H Holdings' petition to rezone 3801 and 3805 Wards Road from B-5C, General Business District (Conditional) and I-2, Light Industrial District to B-5C, General Business District (Conditional) and a CUP petition to allow the redevelopment of the site as a car wash.
5. **Site Description.** The subject property is comprised of one (1) tract totaling approximately forty hundredths (0.40) of an acre located at 3809 Wards Road. The property was previously used as a car wash and will be demolished if the CUP is approved. The property slopes to the northwest towards Wards Road and a tributary of Rock Castle Creek. The majority of the property is located within the limits of the 100-year flood plain for Rock Castle Creek.
  6. **Proposed Use of Property.** If the CUP petition is approved, the property would be redeveloped as a retail use with associated parking.
  7. **Traffic, Parking and Public Transit.** The proposed redevelopment did not warrant a Traffic Impact Study (TIS) and the City's Transportation Engineer had no comments about the CUP petition. Zoning requirements for parking would require six (6) spaces; the project would provide sixteen (16) spaces with associated landscaping. Sidewalk would be extended along the frontage of the property and the Greater Lynchburg Transit Route 4A serves this corridor.
  8. **Stormwater Management.** The proposed project is required to treat stormwater runoff for quantity and quality. The concept design indicates the stormwater flow rate will be reduced through site design and water quality will also be addressed through the use of a filter system. Preliminary design indicates the downstream channel is adequate to handle stormwater from the site.
  9. **Emergency Services.** The City Fire Marshal provided comments regarding site design requirements of the City of Lynchburg and the Virginia Statewide Fire Prevention Code which will be addressed by the petitioner prior to final site plan approval. The City's Police Department had no comments.
  10. **Impact.** The CUP petition proposes filling in the floodplain to allow for the redevelopment of the property as a retail use. This particular area of Wards Road calls for Community Commercial uses on the FLUM and the proposed use is compatible with the adjoining land uses.

The proposed structure and parking area would be located completely within the limits of the 100-year floodplain. The petitioner has submitted information documenting that the proposed fill would not result in a net-rise of the floodplain elevation and no impacts will occur within the floodway. Portions of the building below the required floodplain elevation will be flood-proofed in accordance with building code requirements. Although caution should be taken when altering any floodplain, the impact from this proposal should be minimal.

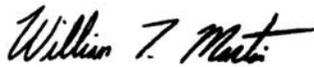
- 11. Technical Review Committee.** The Technical Review Committee (TRC) reviewed the preliminary CUP concept plan on August 18, 2015. Comments related to the proposed use have or will be addressed by the petitioner prior to final site plan approval.
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## **VI. PLANNING DIVISION RECOMMENDATION**

**Based on the preceding Findings of Fact, the Planning Commission recommends to City Council approval of the conditional use permit petition of Lynchburg 104 Venture, LLC, to allow filling in the floodplain at 3809 Wards Road in accordance with the following conditions:**

- 1. The site will be developed in substantial compliance with the Wards Road Retail concept plan received by the Department of Community Development on September 3, 2015.**
- 2. A Letter of Map Revision (LOMR) will be filed with the Federal Emergency Management Association (FEMA).**

This matter is respectfully offered for your consideration.



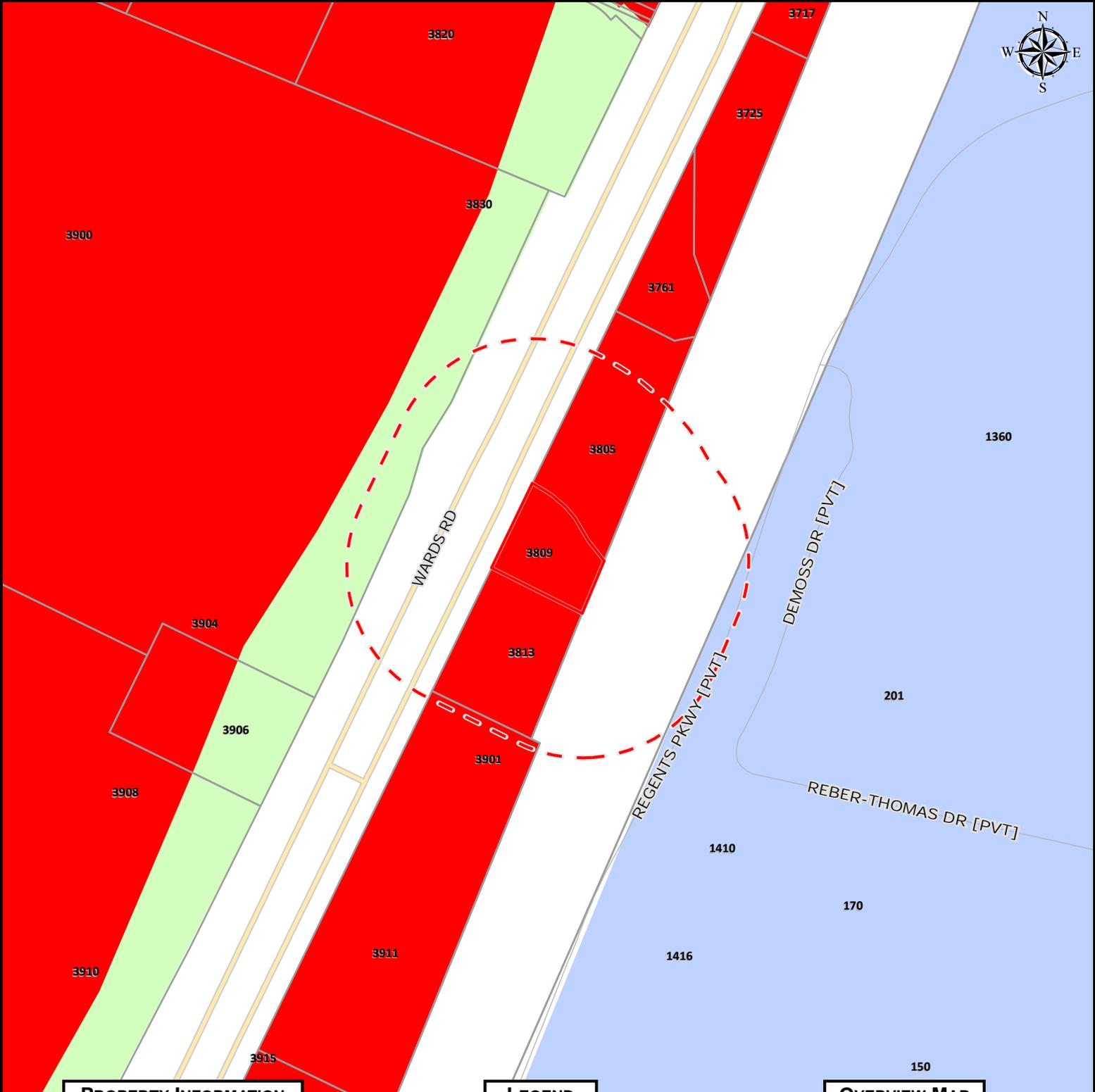
William T. Martin, AICP  
City Planner

pc: Mr. L. Kimball Payne, III, City Manager  
Ms. Bonnie M. Svrcek, Deputy City Manager  
Mr. Walter C. Erwin, City Attorney  
Mr. Kent L. White, Director of Community Development  
Mr. J. Lee Newland, City Engineer  
Ms. Cynthia Kozerow, Lynchburg Police Department  
Battalion Chief Thomas Goode, Fire Marshal  
Mr. Doug Saunders, Building Commissioner  
Mr. Kevin Henry, Zoning Administrator  
Mr. Mark Ayles, Hughes Associates Architects and Engineers

## **VII. ATTACHMENTS**

- 1. Vicinity Zoning Pattern Map**
- 2. Vicinity Proposed Land Use Map**
- 3. Watershed Location Map**
- 4. Planimetric and Topographic Map**
- 5. Concept Plan**
- 6. Conditional Letter of Map Revision [C-LOMR] application**
- 7. Flood-proofing Narrative**
- 8. Property Photograph**





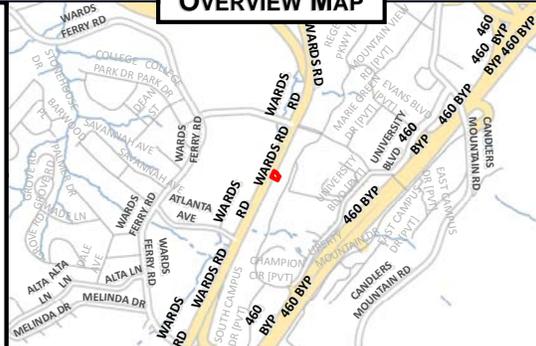
**PROPERTY INFORMATION**

PARCEL ID	ADDRESS
25702013	3809 WARDS RD

**LEGEND**

- Local Historic District
- Traditional Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Neighborhood Commercial
- Community Commercial
- Employment 1
- Employment 2
- Downtown
- Public Use
- Public Parks
- Resource Conservation
- Mixed Use

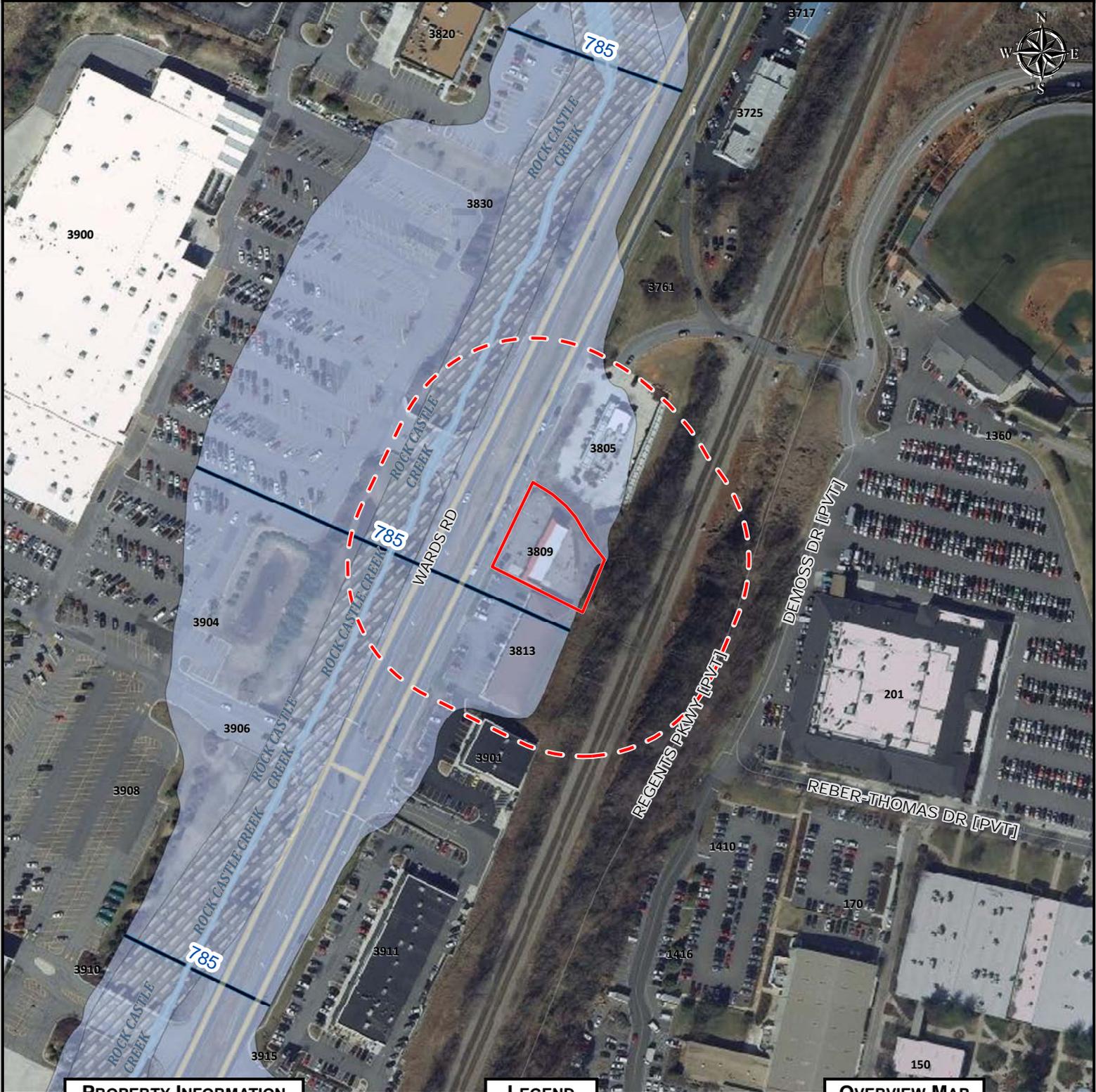
**OVERVIEW MAP**



MAP SCALE: 1" to 4,000' DATE PRINTED: 8/28/2015

DISCLAIMER: THIS MAP IS NEITHER A LEGALLY RECORDED MAP NOR A SURVEY AND IS NOT INTENDED TO BE USED AS SUCH. THE INFORMATION DISPLAYED IS A COMPILATION OF RECORDS, INFORMATION, AND DATA OBTAINED FROM VARIOUS SOURCES. THE CITY OF LYNCHBURG IS NOT RESPONSIBLE FOR ITS ACCURACY OR HOW CURRENT IT MAY BE.





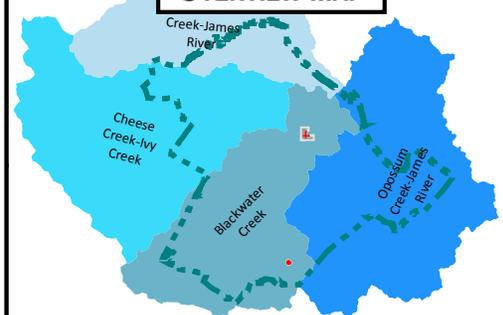
**PROPERTY INFORMATION**

PARCEL ID	ADDRESS
25702013	3809 WARDS RD

**LEGEND**

- Subject Property**
- Base Flood Elevation**
- Floodway**
- Floodzone**
- River / Lake / Stream**

**OVERVIEW MAP**



MAP SCALE: 1" to 33,333' DATE PRINTED: 8/28/2015

GENERAL SITE CONSTRUCTION NOTES

GENERAL

1. THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 811 A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION AND REQUEST ALL UTILITIES TO BE LOCATED.
2. THE CONTRACTOR SHALL CONTACT THE CITY ENVIRONMENTAL REVIEWER AND THE CITY CONSTRUCTION COORDINATOR 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY.

SITEWORK

3. THE LOCATION OF EXISTING UTILITIES ACROSS, ALONG OR IN THE VICINITY OF PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS, AND WHERE SHOWN, ARE APPROXIMATE. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY.
4. THE CONTRACTOR IS TO PROVIDE FOR THE SAFETY OF THE GENERAL PUBLIC DURING ALL PHASES OF CONSTRUCTION. PROVIDE CHAIN LINK FENCE AND/OR SAFETY FENCE AS NEEDED.
5. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING BUILDINGS, SIDEWALKS, PAVEMENT, UTILITY POLES & PEDESTALS, ABOVE AND BELOW GROUND UTILITIES ETC., IF THOSE ITEMS ARE NOT DESIGNATED AS TO BE REMOVED.
6. ALL UNDERGROUND UTILITIES ARE TO BE CLEARLY MARKED PRIOR TO BEGINNING CONSTRUCTION, ANY POTENTIAL CONFLICTS AS A RESULT OF THE MARKINGS SHALL BE MADE KNOWN TO THE ARCHITECT/ENGINEER IMMEDIATELY.
7. UTILITY LINES, UTILITY POLES AND PEDESTALS, ABOVEGROUND AND BELOW GROUND SHALL BE PROTECTED FROM DAMAGE IN ACCORDANCE WITH THE UTILITY OWNERS' INSTRUCTIONS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITY OWNERS TO OBTAIN THE PROPER PROTECTIVE MEASURES FOR EACH INDIVIDUAL UTILITY AND FOR PROTECTING UTILITIES FROM DAMAGE. ANY AND ALL DAMAGE CAUSED BY THE CONTRACTOR OR BY THE CONTRACTOR'S CONSTRUCTION OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR EXPENSE.
8. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/ARCHITECT SHOULD DISCREPANCIES BE DISCOVERED AT THE SITE OR ON THE DRAWINGS.
9. THE CONTRACTOR SHALL NOTIFY THE CITY OF LYNCHBURG OF ANY FIELD REVISIONS AND/OR CORRECTIONS TO THE APPROVED PLANS PRIOR TO SUCH CONSTRUCTION.
10. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL EXCAVATED DITCHES AND SHALL FURNISH AND INSTALL ALL NECESSARY BARRICADES FOR THE SAFETY OF THE PUBLIC.
11. ALL AREAS NOT COVERED WITH PAVEMENT, SIDEWALK, OR STRUCTURES SHALL RECEIVE LANDSCAPING AND PERMANENT SEEDING OR SOD, AS SHOWN ON THE PLANS.
12. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE MOST RECENT REVISION DATE OF THE PLANS PRIOR TO COMMENCING WITH CONSTRUCTION.
13. ALL LINES TO BE STAKED PRIOR TO CONSTRUCTION.
14. ITEMS TO BE SALVAGED SHALL BE STORED IN A PROTECTED AREA.
15. REMOVE ALL CONCRETE CURBING, ASPHALT, AND CONCRETE FROM SITE AS SHOWN ON THE PLANS AND DISPOSE OF OFF-SITE AT AN APPROVED LANDFILL AT NO ADDITIONAL EXPENSE TO THE OWNER.
16. REMOVE CURBING AND SIDEWALKS TO THE NEAREST EXPANSION JOINT TO PROVIDE A STRAIGHT, CLEAN, AND NEAT JOINT WITH THE NEW CURBING AND SIDEWALKS.

EARTHWORK

17. THE CONTRACTOR SHALL PROVIDE DETAILED AND ACCURATE AS-BUILT DRAWINGS. NO TRENCHES SHALL BE BACKFILLED UNTIL THE AS-BUILT DRAWINGS ARE UPDATED. THE CONTRACTOR SHALL PROVIDE ELEVATIONS AND LOCATIONS OF ALL UNDERGROUND UTILITIES, DRAINAGE STRUCTURES, AS WELL AS ANY ADDITIONAL ITEMS REQUIRED BY THE JURISDICTION. THE CONTRACTOR IS RESPONSIBLE FOR CREATING AND SUBMITTING AS-BUILT DRAWING TO THE CITY OF LYNCHBURG AS REQUIRED BY THE LYNCHBURG CITY CODE. AN ELECTRONIC COPY AND A HARD COPY SHALL BE PROVIDED TO THE OWNER AS WELL.
18. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, FROM A QUALIFIED GEOTECHNICAL ENGINEER, MATERIAL TESTING REPORTS FOR ALL AGGREGATES, FILL, AND BACKFILL. THESE REPORTS SHALL STATE THEIR COMPLIANCE WITH THE FOLLOWING:  
CLASSIFICATION ACCORDING TO ASTM D 2487  
LABORATORY COMPACTION CURVE ACCORDING TO ASTM D 698  
LABORATORY COMPACTION CURVE ACCORDING TO ASTM D 1557
19. THE EARTHWORK IS CONSIDERED AS UNCLASSIFIED AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED TO THE CONTRACTOR FOR UNFORESEEN CONDITIONS.
20. THE CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS OF THE VIRGINIA OCCUPATIONAL SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION AS ADOPTED BY THE SAFETY AND HEALTH CODES COMMISSION OF VIRGINIA.
21. THE CONTRACTOR SHALL PERFORM MINOR, INVESTIGATIVE EXCAVATIONS TO VERIFY LOCATION OF VARIOUS EXISTING UNDERGROUND FACILITIES AT SUFFICIENT LOCATIONS TO ASSURE THAT NO CONFLICT WITH THE PROPOSED WORK EXISTS AND SUFFICIENT CLEARANCE IS AVAILABLE TO AVOID DAMAGE TO EXISTING FACILITIES.
22. SUBSEQUENT TO THE CLEARING AND ROUGH GRADING OPERATIONS AND PRIOR TO THE PLACEMENT OF THE FILL, THE EXPOSED SUBGRADE SOILS SHALL BE CAREFULLY INSPECTED. ANY UNSUITABLE MATERIAL THIS EXPOSED SHALL BE REMOVED AND REPLACED WITH A WELL COMPACTED AND SUITABLE MATERIAL. THE INSPECTION OF THESE PHASES SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE. DENSITY TESTING AT THE DISCRETION OF THE SOILS ENGINEER SHALL BE PERFORMED AT THIS TIME.
23. CUT OFF TREES, SHRUBS, BRUSH, AND VEGETATIVE GROWTH TWELVE INCHES MAXIMUM ABOVE GROUND. GRUB OUT STUMPS AND ROOTS 12 INCHES MINIMUM BELOW ORIGINAL GROUND SURFACE, EXCEPT UNDER BUILDINGS. REMOVE ROOTS ONE INCH AND LARGER ENTIRELY AND ENTIRELY REMOVE ROOTS OF PLANTS THAT NORMALLY SPROUT FROM ROOTS.
24. DO NOT PULL UP OR RIP OUT ROOTS OF TREES AND SHRUBS THAT ARE TO REMAIN. IF EXCAVATION THROUGH ROOTS IS REQUIRED, EXCAVATE BY HAND AND CUT ROOTS WITH SHARP AXE. MAKE CLEAN, SMOOTH, SLOPING CUTS.
25. STRIP EXISTING VEGETATION LAYER SIX INCHES DEEP FROM AREAS OF SITE TO RECEIVE BUILDINGS, LANDSCAPING AND PAVING AND STORE ON SITE FOR LATER USE.
26. BEFORE MAKING CUTS AND TRENCHES, REMOVE TOPSOIL OVER AREAS TO BE CUT AND FILLED THAT WERE NOT PREVIOUSLY REMOVED. STOCKPILE THIS ADDITIONAL TOPSOIL WITH PREVIOUSLY STRIPPED TOPSOIL.
27. THE EXISTING STOCKPILED TOPSOIL IS PROPERTY OF CONTRACTOR WITH RESTRICTION THAT TOPSOIL IS TO BE USED FIRST FOR PROJECT LANDSCAPE TOPSOIL REQUIREMENTS AND SECOND FOR NON-STRUCTURAL FILL AND BACKFILL. AFTER PROJECT FILL, BACKFILL, AND LANDSCAPE TOPSOIL REQUIREMENTS ARE SATISFIED, REMOVE EXCESS EXISTING TOPSOIL FROM SITE. DO NOT REMOVE EXISTING TOPSOIL FROM SITE WITHOUT ARCHITECT'S / ENGINEER'S WRITTEN APPROVAL.
28. THE EMBANKMENT FOUNDATIONS AND ABUTMENTS SHALL BEAR ON FIRM AND STABLE EXISTING SUBGRADE WHICH HAS BEEN PREPARED SO AS TO REMOVE ALL ORGANIC, LOOSE, AND GENERALLY UNSUITABLE MATERIAL.
29. DURING GRADING OPERATIONS, THE CONTRACTOR SHALL GRADE ALL AREAS TO DRAIN TO PREVENT THE SATURATION OF THE SOILS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE STOCKPILES FROM RAIN IF THE SOIL IS NEEDED FOR BACKFILL MATERIAL.
30. THE CONTRACTOR SHALL PROOF-ROLL THE CONSTRUCTION AREA WITH HEAVY-PNEUMATIC EQUIPMENT. ALL UNSUITABLE MATERIAL SHALL BE UNDERCUT AND RECOMPACTED WITH APPROVED STRUCTURAL FILL MATERIAL.
31. EARTHWORK SHALL BE TO THE LINES AND GRADES SHOWN. PROOF-ROLLING AND COMPACTION TESTS SHALL BE ACCOMPLISHED IN THE FIELD TO ALL GRADED AREAS. THE GRADING SHALL CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN TO WITHIN A TOLERANCE OF PLUS OR MINUS 0.10 FEET.

MISCELLANEOUS DATA

THE SITE USAGE WILL CHANGE FROM A CARWASH TO A RETAIL MATTRESS STORE. SEE SHEET SP-6 FOR DETAILED LANDSCAPING INFORMATION

**PARKING SPACES:** BASED ON 1 SPACE PER THREE STAFF ON DUTY AND 2 SPACES PER 1,000 SQUARE FEET  
 ((4361 SF/1000) X 2) +  
 (4 STAFF/3 PER STAFF ON DUTY) =  
 12 REQUIRED  
 17 PROVIDED

**TREE CANOPY REQUIREMENTS:** B-5 DISTRICT  
 10% REQUIRED/16%+ PROVIDED

**PARKING AREA TREE REQUIREMENTS:**  
 ONE SHADE TREE PER EIGHT PARKING SPACES + ONE SHRUB PER SPACE  
 STRUCTURE HEIGHT:  
 REQUIRED/ TWO SHADE TREES AND 20 SHRUBS PROVIDED FOR THE NEW PARKING AREA.

**PLANTINGS FOR RETAINING WALLS LESS THAN 8' IN HEIGHT:**  
 ONE LARGE EVERGREEN SHRUB PER 3 LINEAR FEET OF WALL  
 50' WALL ALONG R/W AT 1 TREE PER 3' = 17 SHRUBS REQUIRED. 59 EVERGREEN SHRUBS ARE PROVIDED ALONG THE FRONT.

**FOUNDATION PLANTINGS:**  
 ONE LARGE SHRUB PER 10' OF BUILDING FRONTING RESIDENTIAL + ONE ORNAMENTAL TREE PER 50' OF BUILDING REQUIRED. 200' BUILDING 10/100' LARGE SHRUBS REQUIRED 10/50 + 2 ORNAMENTAL TREES REQUIRED/ ALL PROVIDED

**REFUSE SCREENING:** 6' HIGH DOG EARED FENCE W/ GATE

**PARKING SETBACK:** 6' LANDSCAPE STRIP REQUIRED

**DESIGNER:** MARK J. AYLES P.E.  
 655 ELM AVENUE ROANOKE, VA 24016  
 MAYLES@HUGHESAECOM

SITE DATA

**SITE ADDRESS:** 3809 WARDS ROAD  
**TAX PARCEL:** 25102013  
**ZONING:** B-5  
**LOT SIZE:** 0.40 ACRES  
**FRONTAGE:** 138' ± WARDS ROAD

**BUILDING SETBACKS:**  
 FRONT: NONE IF BLOCK IS IN B-5  
 REAR: NONE IF BLOCK DOES NOT ABUT RESIDENTIAL PROPERTY, THEN USE THAT SETBACK

THIS PROPERTY IS SURROUNDED BY B-5 DISTRICT

**STRUCTURE COVER:** 24.7%  
**PROPOSED STRUCTURE:** 24' ±  
 4,362± SF

**DISTURBED AREA:** 0.40± AC.

**PARKING SPACES PROPOSED:** 16 SPACES  
 W/ 1 RESERVED HC

SURVEY NOTES:

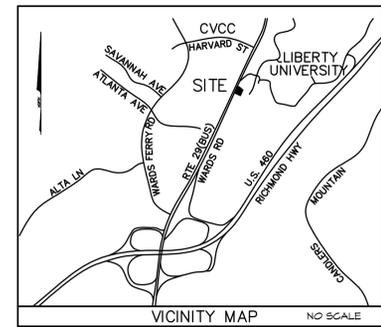
1. THE GROUND SURVEY PORTION OF THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF MICHAEL D. WILSON FROM AN ACTUAL GROUND SURVEY. THE ORIGINAL DATA WAS RELEASED IN MARCH 2015. THIS MAP MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
2. THE SURVEY WAS PROVIDED TO HUGHES ASSOCIATES ARCHITECTS & ENGINEERS BY THE OWNER.
3. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND ENCUMBRANCES MAY EXIST THAT AFFECT THE SUBJECT PROPERTY THAT ARE NOT SHOWN HEREON.
4. THIS PROPERTY IS LOCATED WITHIN FLOOD HAZARD ZONE "AE" AS DESIGNATED BY F.E.M.A. THIS OPINION IS BASED ON AN INSPECTION OF THE FLOOD INSURANCE RATE MAPS AND HAS BEEN VERIFIED BY ACTUAL FIELD ELEVATIONS. SEE FIRM PANEL 5100430106D.
5. THE BASE FLOOD ELEVATION IS 785.0 AND BASED ON THE FEMA FIRM PANEL 5100430106D. THE BFE IS CONSTANT FOR THE ENTIRE SITE.
6. THIS SURVEY DOES NOT GUARANTEE THE EXISTENCE OR LOCATION OF ANY UNDERGROUND UTILITIES AND ALL LOCATED UTILITIES SHOWN ARE BASED ON THE PHYSICAL EVIDENCE. ALL UTILITY LOCATIONS SHALL BE CONSIDERED APPROXIMATE
7. HORIZONTAL CONTROL IS BASED ON BOUNDARY INFORMATION IN A DRAWING CREATED BY HURT & PROFFITT
8. CONTOUR INTERVAL = 1'.
9. THIS SURVEY IS INTENDED FOR USE IN CONSTRUCTION DOCUMENTS RELATED TO SITE DESIGN OF THE RETAIL STORE.

"I HEREBY CERTIFY THAT, TO THE BEST OF MY ABILITY, THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF LYNCHBURG MANUAL OF SPECIFICATIONS AND STANDARD DETAILS AND CITY CODE."

**SIGNATURE:** *Mark J. Ayles* **LIC. NUMBER:** 034160  
**NAME & TITLE:** MARK AYLES PE DATE: 06/27/2015

"I/VE CERTIFY THAT ALL SITE CONSTRUCTION, DRAINAGE AND GRADING WILL BE DONE PURSUANT TO THIS PLAN AND THAT THE APPLICABLE STORMWATER MANAGEMENT CONDITIONS AND REQUIREMENTS OF THE CITY OF LYNCHBURG, THE COMMONWEALTH OF VIRGINIA, AND THE FEDERAL GOVERNMENT AND IT AGENCIES ARE HEREBY MADE PART OF THIS PLAN."

**SIGNATURE:** *Becky Wright* **TITLE:** Owner's Rep.  
**NAME:** Becky Wright **DATE:** 06/27/2015



**SHEET INDEX**

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**OWNER:** VAN FIRST LLC  
 111 KEMPER ST.  
 LYNCHBURG, VA 24501

**DEVELOPER:** LYNCHBURG 104, LLC.  
**CONTACT:** BECKY WRIGHT, P.E.  
 Becky@crosslandbarnesgroup.com  
 1332 MAIN STREET  
 SUITE 30  
 COLUMBIA, SC 29201  
 (823) 231-8506

DATE: June 26, 2015

**REVISIONS**


**HUGHES ASSOCIATES ARCHITECTS & ENGINEERS**  
 Architecture • Engineering • Consulting

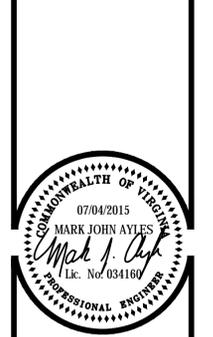
656 ELM AVENUE, S.W.  
 P.O. BOX 1034  
 ROANOKE, VIRGINIA 24005-1034

TEL (540) 342-4002  
 FAX (540) 342-2060  
 www.HughesArchitects.com

NEW CONSTRUCTION FOR  
**WARDS ROAD RETAIL**  
 3809 Wards Road Lynchburg, Virginia 24502

**DRAWN BY:** mja  
**CHECKED BY:** mja

**EXISTING SITE LAYOUT AND NOTES**



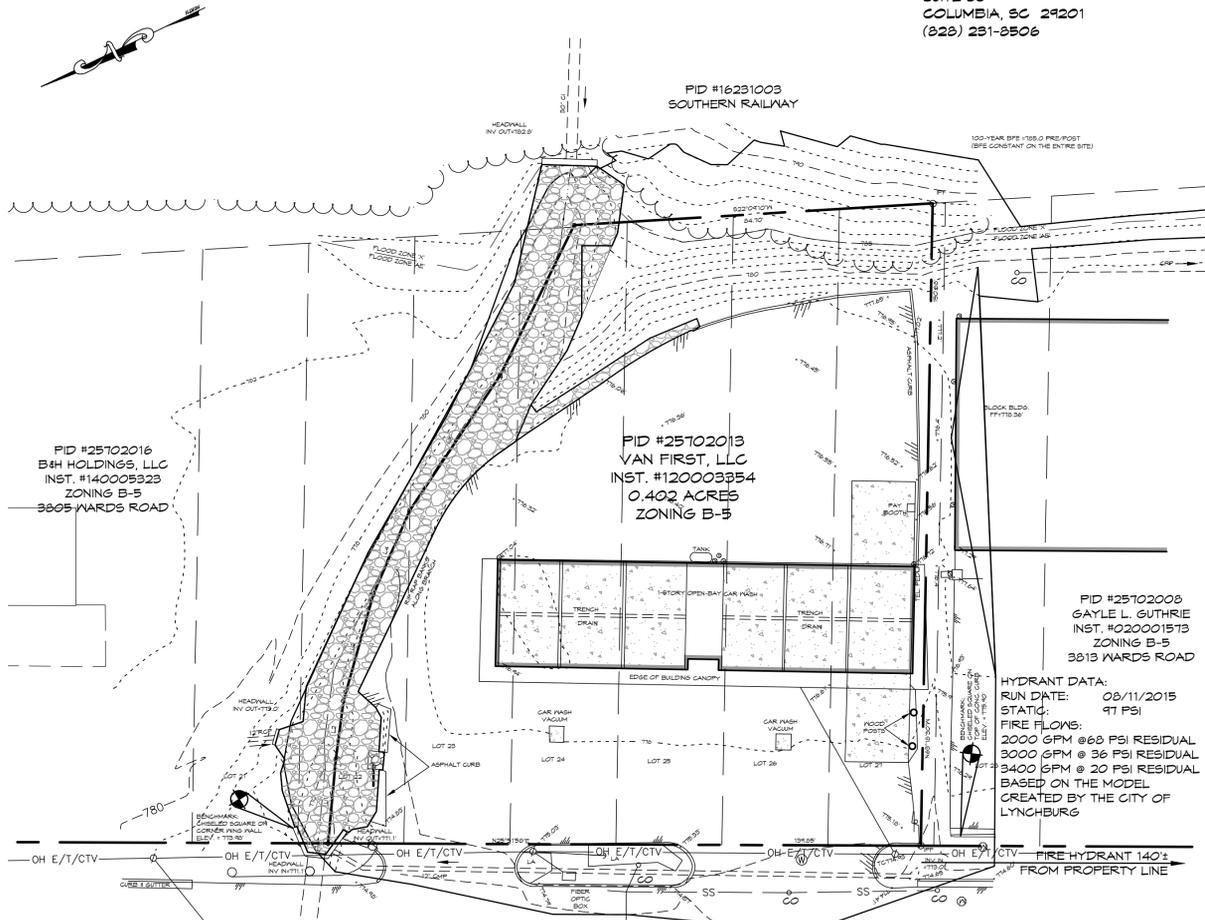
**COMMISSION No.** 15021  
**SHEET** SP-1

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EARTHWORK (CONT)

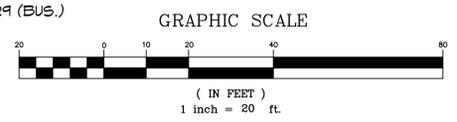
32. THE CONTRACTOR SHALL PROOF-ROLL THE CONSTRUCTION AREA WITH HEAVY-PNEUMATIC EQUIPMENT. ALL UNSUITABLE MATERIAL SHALL BE UNDERCUT AND RECOMPACTED WITH APPROVED STRUCTURAL FILL MATERIAL.
33. ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE TESTING COMPANY AND BE WELL GRADED MATERIAL CONFORMING TO ASTM D2487 FREE FROM DEBRIS, ORGANIC MATERIAL, FROZEN MATERIALS, BRICK, LIME, CONCRETE, STONES GREATER THAN 4 INCHES DIAMETER, AND OTHER MATERIALS WHICH WOULD PREVENT ADEQUATE PERFORMANCE OF THE BACKFILL. NINETY PERCENT MINIMUM OF FILL MATERIAL SHALL BE SMALLER THAN 1-1/2 INCH UNDER BUILDINGS, PAVED AREAS, STRUCTURES. THE TOP 36 INCHES OF FILL BENEATH THE TOP SOIL IN LANDSCAPED AREAS SHALL HAVE STONES NO GREATER THAN 2 INCHES AND NINETY PERCENT OF FILL MATERIAL SHALL BE SMALLER THAN 3/8-INCH IN ANY DIRECTION.
34. THE FILL SHALL BE PLACED IN 8-INCH LOOSE LAYERS, 4-INCH LOOSE LAYERS CLOSE TO STRUCTURES AND NARROW TRENCHES AND COMPACTED AS SPECIFIED.
35. FILL MATERIALS SHALL BE ADEQUATELY KEYED INTO STRIPPED AND SCARIFIED SUBGRADE SOILS AND SHOULD, WHERE APPLICABLE, BE BENCHED INTO THE EXISTING SLOPES. THE SUBGRADE SHALL BE SCARIFIED A DEPTH OF 4" PRIOR TO FILL PLACEMENT TO ASSURE BONDING BETWEEN THE TWO SOILS.
36. EXPOSED SUBGRADE WHICH HAS BEEN PREPARED TO ACCEPT FILL MATERIAL, SHALL BE CAREFULLY INSPECTED. ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH A WELL COMPACTED MATERIAL. THE INSPECTION SHALL BE PERFORMED BY A SOILS ENGINEER.
37. ALL FILL SHALL BE COMPACTED TO AT LEAST 95% OF THAT SOIL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698). THE COMPACTION SHALL BE ACCOMPLISHED BY PLACING THE FILL IN MAXIMUM 8 INCH LOOSE LIFTS AND COMPACTING EACH LIFT WITH HEAVY CONSTRUCTION EQUIPMENT TO THE REQUIRED DENSITY.
38. THE MOISTURE CONTENT OF FILL SOILS SHALL BE MAINTAINED WITHIN 2.0 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED FROM THE STANDARD PROCTOR DENSITY TEST.
39. SATISFACTORY SOILS: ASTM D 2487 SOIL CLASSIFICATION GROUPS GM, GP, GM, SM, SP AND SM OR A COMBINATION OF THESE GROUP SYMBOLS; FREE MATERIALS SPECIFIED ABOVE.
40. UNSATISFACTORY SOILS: ASTM D 2487 SOIL CLASSIFICATION GROUPS CG, SC, ML, MH, CL, CH, OL, OH, AND PT OR A COMBINATION OF THESE GROUP SYMBOLS; AND SATISFACTORY SOILS NOT MAINTAINED WITHIN TWO PERCENT OF OPTIMUM MOISTURE CONTENT AT THE TIME OF COMPACTION.
41. A SOILS ENGINEER, OR A TECHNICIAN UNDER THE OWNERS DIRECTION, SHALL PERFORM FIELD DENSITY TESTS ON EACH LIFT AS NECESSARY, TO ASCERTAIN THAT ADEQUATE COMPACTION HAS BEEN ACHIEVED.
42. REMOVE FROM SITE TREES, SHRUBS, UPROOTED STUMPS, VEGETATIVE LAYER, AND SURFACE DEBRIS AND DISPOSE OF LEGALLY. DO NOT BURY CUTTINGS, STUMPS, ROOTS, AND OTHER VEGETATIVE MATTER OR BURNT WASTE MATERIAL ON SITE.
43. ENSURE THAT LAND DISTURBING PERMITS AND THE PROPER EROSION AND SEDIMENT CONTROLS ARE IN PLACE FOR THE CONSTRUCTION SITE AND THE OFF-SITE BORROW AND/OR SPOIL SITE.

SEE SHEET SP-9 FOR CONTINUATION



**LINE TABLE**

LINE	BEARING	LENGTH
L1	S 84°00'48" E	14.26
L2	S 84°32'01" E	15.71
L3	S 40°35'14" E	29.48
L4	S 40°54'27" E	31.43
L5	S 30°21'31" E	33.26
L6	S 97°58'41" E	34.43



**NEW CONSTRUCTION FOR WARDS ROAD RETAIL**



**NEW CONSTRUCTION FOR WARD'S ROAD RETAIL**  
 3809 Wards Road Lynchburg, Virginia 24502

DRAWN BY: mja  
 CHECKED BY: mja

**PROPOSED SITE LAYOUT AND NOTES**

07/04/2015  
 MARK JOHN AYLES  
 Lic. No. 034160  
 PROFESSIONAL ENGINEER

COMMISSION No. 15021  
**SHEET SP-3**

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PID #16231003  
 SOUTHERN RAILWAY

100-YEAR BFE = 785.0 PRE (BFE CONSTANT ON THE EN)

LIMITS OF DISTURBED AREA (CONTRACTOR SHALL STAKE)

FLOOD ZONE 'X'  
 FLOOD ZONE 'AE'

FFEL = 783.50  
 AREA = 4,400 ± SF

THE BFE IS 785.0 AND ENCOMPASSES THE ENTIRE SITE EXCEPT FOR A SLIVER ALONG SOUTHEASTERN CORNER

8'X8' FLAT PAD CENTERED ON DOUBLE DOORS

BUILDING IS NOT PARALLEL TO SIDE PROPERTY LINE

LIMITS OF DISTURBED AREA (CONTRACTOR SHALL STAKE)

4' SIDEWALK 'W' RAILING (PEDESTRIAN GUARDRAIL) WHERE WALL IS HIGHER THAN 30"

12.5' X 23' DUMPSTER PAD WITH SCREENING FENCE, GATES, AND BOLLARDS

4.0' PEDESTRIAN GATE

INSIDE FACE OF FENCE IS FLUSH WITH CONG PAD ON THIS SIDE

WIPEDOWN CURB  
 VDOT CG-6 (TYP)

DOUBLE 6.0' WIDE GATE

TRANSITION CURB AND GUTTER TO PAD

CONCRETE DUMPSTER PAD

CONCRETE SIDEWALK

VDOT CG-11B ADA RAMP

LYNCHBURG STD 25.06 FACEDOWN SIDEWALK ACROSS FRONT OF BUILDING

HC PARKING SIGN -VAN ACCESSIBLE SEE DETAIL "E" SP-5

VDOT CG-2 (TYP)

LYNCHBURG STD 25.04A COMBINED 6" CURB AND GUTTER (TYP)

CONC. WHEEL STOPS ALONG RETAINING WALL

RAILING (PEDESTRIAN GUARDRAIL) REQUIRED WHERE WALL IS HIGHER THAN 30"

TRANSITION GUTTER TO EXISTING CURB & GUTTER

LYNCHBURG STD 25.12 COMMERCIAL DRIVEWAY ENTRANCE

LYNCHBURG STD HC RAMP

SAVGUT EXISTING PAVEMENT THEN FORM NEW GUTTER ALONG EDGE

LYNCHBURG STD 25.04A COMBINED 6" CURB AND GUTTER (TYP)

OPTIC BOX

5.0' CONCRETE SIDEWALK

30.00' AT R/W

OH E/T/CTV

OH

REVISIONS	△	
	△	
	△	
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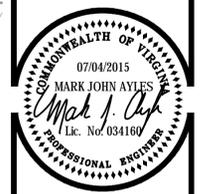
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**NEW CONSTRUCTION FOR  
 WARDS ROAD  
 WARETAIL**  
 3809 Wards Road Lynchburg, Virginia 24502

DRAWN BY: mja  
 CHECKED BY: mja

**GRADING AND DRAINAGE PLAN**



COMMISSION No. 15021  
 SHEET **SP-4**

- DRAINAGE NOTES:**
1. ALL HDPE PIPE SHALL BE ADS N-12 OR EQUIVALENT APPROVED BY THE ARCHITECT
  2. ALL CONCRETE PIPE SHALL BE REINFORCED, VDOT CLASS III
  3. ALL PIPING SHALL BE INSTALLED PER VDOT STD. PB-1, METHOD A
  4. VERIFY ALL ELEVATIONS PRIOR TO ORDERING MATERIALS
  5. ADJUST ELEVATIONS TO MATCH FIELD CONDITIONS, ALL STRUCTURE HEIGHTS ARE FOR CONTRACTOR'S CONVENIENCE, VERIFY
  6. CONTACT THE ARCHITECT/ENGINEER IF ROCK IS ENCOUNTERED
  7. PIPE LENGTHS ARE FROM STRUCTURE TO STRUCTURE AND BASED ON PLAN VIEW
  8. ALL ELEVATIONS ARE TO 1' OF RIM AS SHOWN ON THE PLANS
  9. ALL STRUCTURES 4'0" HIGH OR MORE SHALL HAVE STEPS, VDOT ST-1 FOR DETAILS
  10. ALL INLET SHAPING SHALL CONFORM TO VDOT STANDARD IS-1
  11. OUTLET PROTECTION SHALL CONFORM WITH VDOT STANDARD EG-1 119.01, CULVERT OUTLET PROTECTION, GEOTEXTILE REQUIRED.
  12. ALL RAINLEADER SHALL BE 8" SDR-35 PVC PIPE, UNLESS NOTED OTHERWISE
  13. CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND ADJUST PRIOR TO ORDERING MATERIALS.

- GRADING NOTES:**
1. STRIP THE EXISTING VEGETATION LAYER 6 INCHES DEEP MINIMUM FROM AREAS OF SITE TO RECEIVE BUILDINGS, FILL MATERIAL, LANDSCAPING, AND PAVING AND STORE ON SITE FOR LATER USE.
  2. FILL AND COMPACT ALL AREAS BEHIND THE CURB FLUSH WITH THE TOP OF THE CURB AND GRADE TO DRAIN. NO STANDING WATER IS PERMITTED.
  3. THE NEW PARKING AREA, RAMPS, SIDEWALK, AND PARKING SPACES SHALL MEET ALL ADA REQUIREMENTS.
  4. THE EXISTING TOPSOIL IS THE PROPERTY OF THE CONTRACTOR WITH THE RESTRICTION THAT THE TOPSOIL SHALL BE USED FIRST FOR THE PROJECT LANDSCAPE TOPSOIL REQUIREMENTS AND SECOND FOR THE FILL AND BACKFILL IN NON-STRUCTURAL LOCATIONS.
  5. AFTER PROJECT FILL, BACKFILL, AND LANDSCAPE TOPSOIL REQUIREMENTS ARE SATISFIED, REMOVE EXCESS EXISTING TOPSOIL FROM THE SITE. DO NOT REMOVE EXISTING TOPSOIL FROM THE SITE WITHOUT THE ARCHITECT'S WRITTEN APPROVAL.
  6. THE UNDERGROUND RAIN LEADERS SHALL BE SDR-35 WITH A MINIMUM COVER OF 2 FEET AND A MINIMUM SLOPE OF 1.0 PERCENT
  7. INSTALL A #14 COATED COPPER TRACE WIRE AND 4 INCHES WIDE GREEN PLASTIC WARNING TAPE 1 INCHES BELOW THE SURFACE ABOVE ALL RAIN LEADERS.
  8. ALL DOWNSPOUT CONNECTIONS TO THE RAIN LEADER SYSTEM MUST BE WITH CAST IRON FABRICATED ADAPTERS AND WATER/SOIL TIGHT
  9. REFER TO ARCHITECTURAL PLANS FOR ACTUAL DOWNSPOUT LOCATIONS.
  10. COORDINATE ALL GRADING ACTIVITIES WITH THE UTILITY COMPANIES TO ALLOW THEM ACCESS TO THE AREAS TO RELOCATE THEIR UTILITIES AS NEEDED.
  11. WALL ELEVATIONS (TW) INDICATE TOP OF WALL. BOTTOM OF WALL ELEVATIONS ARE GIVEN BY THE GRADES SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF THE WALL DESIGN AND PERMITTING, INCLUDING SAFETY FENCES/RAILINGS. DO NOT PURCHASE THE WALL MATERIALS UNTIL THE CITY OF LYNCHBURG APPROVES THE WALL PLANS AND THE ARCHITECT REVIEWS THE WALL PLANS.
  12. ALL RETAINING WALLS SHALL BE AN EARTH TONE AND THE COLOR SHALL BE APPROVED BY THE ARCHITECT.
  13. CONNECT THE DOWNSPOUTS TO THE UNDERGROUND RAIN LEADERS WITH CAST IRON FITTINGS. SEE DETAIL 'C' ON SHEET SP-4
  14. THE BFE IS 1085.0' AND REMAINS CONSTANT FOR PRE AND POST-DEVELOPMENT. THE 100-YEAR WSEL ELEVATION BACKS UP THROUGH THE CROSS CULVERT UNDER WARDS ROAD AND IS CONSTANT ON THE SITE.

**DRAINAGE DESCRIPTIONS**

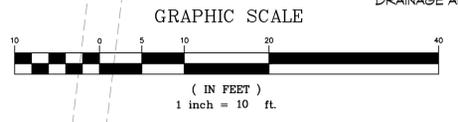
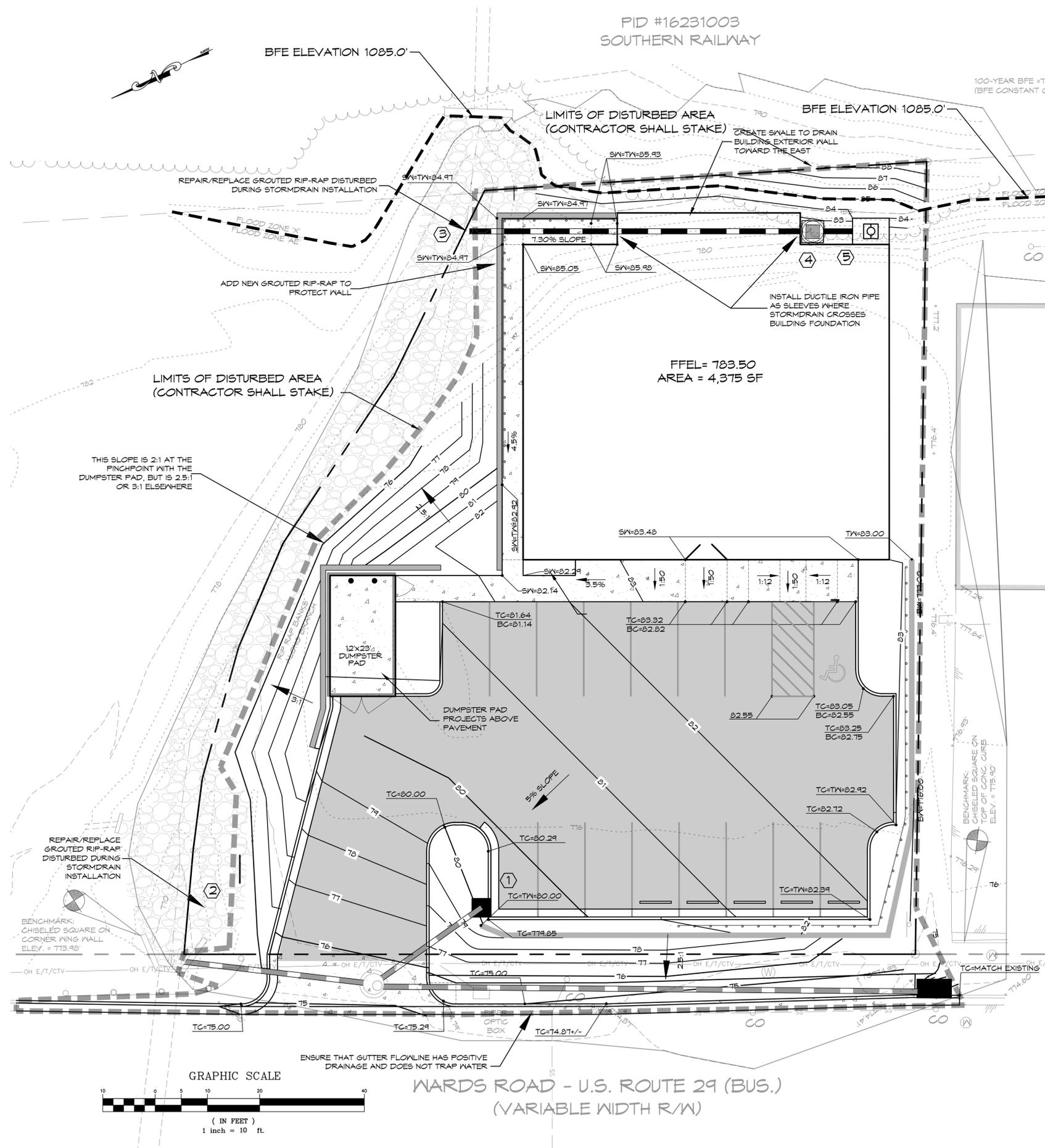
THE DRAINAGE SYSTEMS ARE REVISED AND THE DESCRIPTIONS WILL BE UPDATED WHEN THE PLANS ARE SUBMITTED FOR A CONSTRUCTION PERMIT REVIEW.

- |     |   |
|-----|---|
| ①   | VDOT STD DI-2A, H=4.05'<br>TOP ELEV. 719.85'<br>INV. ELEV. 715.00' (12" HDPE)   |
| ②   | GRouted RIP-RAP CHANNEL<br>INV. ELEV. 712.00' (12" HDPE)  |
| ①-② | 58 LF-12" HDPE PIPE, S=5.66%<br>INV. IN 715.00' INV. OUT 712.00'  |
| ⑤   | 6'x4' ROOFDRAIN FILTERRA UNIT<br>TOP ELEV. 784.00<br>INV. ELEV. IN 782.81 (6" PVC ROOFDRAIN)<br>INV. ELEV. OUT 719.83 (6" PVC SCH 40) |
| ④   | VDOT STD DI-1, H=3.81<br>TOP ELEV. 789.00<br>INV. ELEV. 719.83 (6" IN)<br>INV. ELEV. 719.13 (12" OUT)                                 |
| ⑤-④ | 7.50 LF-6" PVC SCH40<br>S=2.64%<br>INV. IN 719.83' INV. OUT 719.63'   |
| ③   | GRouted RIP-RAP CHANNEL<br>ELEV. 718.00'  |
| ④-③ | 65.67 LF-12" MWW C404 PRESSURE PIPE<br>SLEEVED IN DUCTILE IRON UNDER BUILDING FOOTERS<br>S=2.19%<br>INV. IN 711.83' INV. OUT 718.00'  |

**LEGEND**

	FIRE HYDRANT		NEW ASPHALT PAVEMENT
	UTILITY POLE		CONC DUMPSTER PAD
	UNDERGROUND TELEPHONE		GRouted RIP-RAP
	WATER LINE		NEW RETAINING WALL
	OVERHEAD ELECTRIC		SANITARY/STORM CLEANOUT
	WATER VALVE		PROPOSED DRAINAGE STRUCTURE #
	EXIST. STORM SEWER LINE		
	NEW UTILITY POLE		
	NEW FIRE HYDRANT		
	NEW FIRE DEPARTMENT CONNECTION		
	NEW 4" SANITARY LINE		
	NEW WATER LINE		
	NEW US ELEC. LINE		
	NEW US TELEPHONE/CABLE/INTERNET		
	NEW US GAS LINE		
	NEW STORM SEWER LINE		
	NEW LIGHT POLE		
	NEW WATER VALVE		
		X 86.42	MISC ELEV
		X TS 88.60	TOP OF CURB ELEV
		X BC 74.90	BOTTOM OF CURB ELEV
		X TC 75.40	TOP OF CURB ELEV
		X TW 88.60	TOP OF WALL ELEV
		X SW 88.60	SIDEWALK ELEV

SEE MEP PLANS FOR ADDITIONAL REQUIREMENTS AND DETAILS



WARDS ROAD - U.S. ROUTE 29 (BUS.)  
 (VARIABLE WIDTH R/W)

REVISIONS	△	
	△	
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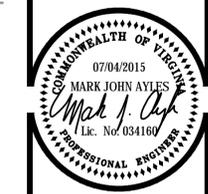
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**NEW CONSTRUCTION FOR WARDS ROAD**  
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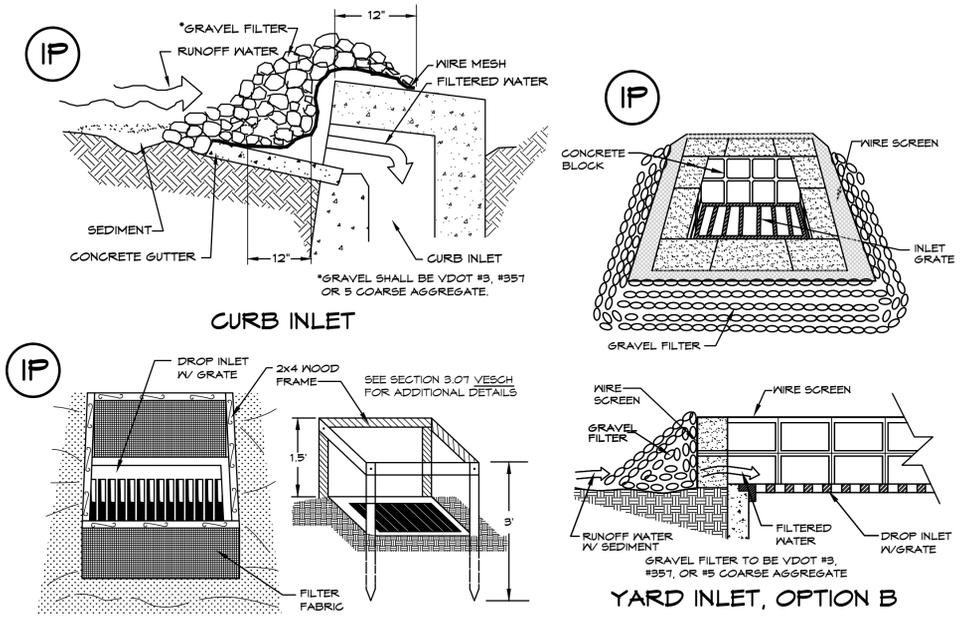
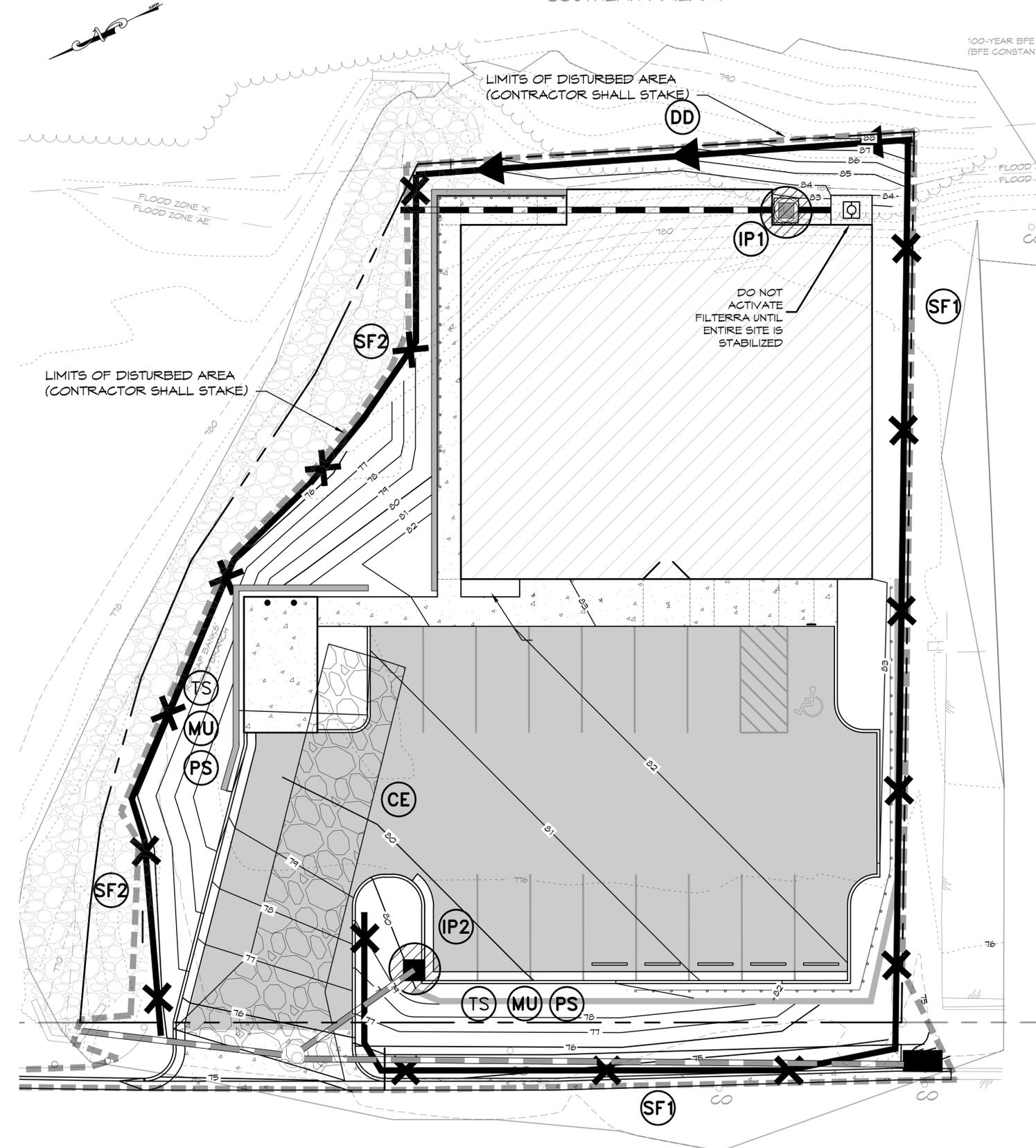
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**EROSION & SEDIMENT CONTROL PLAN**



COMMISSION No. 15021  
 SHEET **SF-5**

FID #16231003  
 SOUTHERN RAILWAY

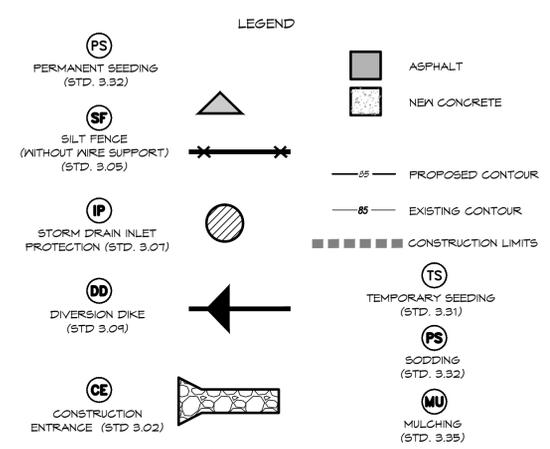


**INLET PROTECTION DETAILS**  
 NOT TO SCALE

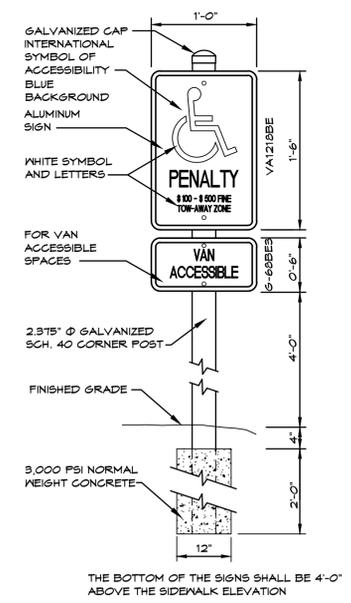
**GENERAL EROSION AND SEDIMENT CONTROL NOTES**

1. THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS.
2. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS PRACTICAL.
3. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.

**GENERAL E&S CONTROL NOTES**  
 NOT TO SCALE



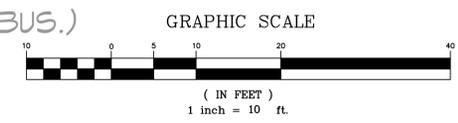
**E&S LEGEND**  
 NOT TO SCALE



**HC PARKING SIGN**  
 NOT TO SCALE

EROSION & SEDIMENT CONTROL SUMMARY TABLE			
ID #	FEATURE	QUANTITY	UNIT
3.02	CE	1	each
3.09	DD	85	lf
3.05	SF-1	269	lf
3.05	SF-2	161	lf
3.07	IP-1	1	each
3.07	IP-2	1	each
3.31	TS	varies	acre
3.32	PS	0.05	acre
3.35	MU	0.05	acre

WARDS ROAD - U.S. ROUTE 29 (BUS.)  
 (VARIABLE WIDTH R/W)



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**LANDSCAPING/LANDSCAPING DATA:**

**FOUNDATION PLANTINGS:**  
 1 ORNAMENTAL TREE PER 50 FEET OF BUILDING AND 1 LARGE SHRUB PER 10 FEET OF BUILDING ALONG ALL SIDES OF BUILDINGS THAT FRONT ON A PUBLIC OR PRIVATE STREET AND ARE VISIBLE FROM A RESIDENTIAL DISTRICT.  
 TO LF BUILDING: 2 ORNAMENTAL TREES LABELED T2 ARE PROVIDED AND 1 LARGE SHRUBS LABELED S2 ARE PROVIDED.

**PARKING AREA LANDSCAPING:**

**INTERIOR PARKING AREAS**  
**REQUIREMENTS:**  
 1 SHADE TREE FOR EVERY 8 PARKING SPACES  
 16 NEA PARKING SPACES - 2 REQUIRED, 2 SHADED TREES LABELED T1 PROVIDED AT END OF PARKING ROWS/DRIVEWAY  
 1 SHRUB OR EVERY PARKING SPACE PLANTED WITHIN LANDSCAPE ISLANDS DISPERSED SO THAT NO MORE THAN 15 TO 20 PARKING SPACES EXIST BETWEEN LANDSCAPED ISLANDS - 16 REQUIRED; 20 SHRUBS PROVIDED AND LABELED S1 IN LANDSCAPE ISLANDS / AREAS

**PARKING AREA SCREENING**  
 1 SHRUB OF AT LEAST 3' IN HEIGHT PER 3 FEET OF ROAD FRONTAGE REQUIRED PLANTED WITHIN A 6' STRIP ON THE SITE SIDE OF THE PROPERTY LINE.  
 140' ROAD FRONTAGE X 1 TREE PER 3' = 41 SHRUBS REQUIRED. 53 SHRUBS ARE PROVIDED.

**PLANTINGS FOR RETAINING WALLS LESS THAN 6' IN HEIGHT:**  
 ONE LARGE EVERGREEN SHRUB PER 3 LINEAR FEET OF WALL FACING RIGHT OF WAY (R/W)  
 50' WALL ALONG R/W AT 1 TREE PER 3' = 17 EVERGREEN SHRUBS REQUIRED.  
 53 EVERGREEN SHRUBS ARE PROVIDED ALONG THE FRONT RETAINING WALL AS PART OF THE PARKING AREA SCREENING.

**DEVELOPED AREA LANDSCAPING**  
**REQUIREMENTS:**  
 NO ADDITIONAL TREES REQUIRED FOR CUT/FILL SLOPES AS THEY ARE MINIMAL OR WILL BE LANDSCAPED UNDER OTHER ORDINANCES.

**TREE CANOPY:**  
 THE SITE REQUIRES 10% CANOPY, (11,600 X 10% = 1,160 SF). THE PROPOSED TREES PROVIDE 6,604 SF.

**STREET TREES:**  
 1 ORNAMENTAL SHADE TREE PER 20' OF FRONTAGE, 126/20=6.3, THEREFORE 7 TREES PLANTED IN THE RIGHT OF WAY

ALL PLANT MATERIAL MUST MEET AMERICAN ASSOCIATION OF NURSERYMEN SPECIFICATIONS FOR NO. 1 GRADE. NATIVE PLANTINGS ARE ENCOURAGED WHEN COMPATIBLE WITH THE SURROUNDING LAND USE. EVERY EFFORT SHOULD BE MADE TO INCORPORATE HEALTHY EXISTING TREES INTO THE LANDSCAPE.  
 CONTRACTOR TO COORDINATE PLANT SPECIES WITH OWNER AND VERIFY APPLICABILITY AND PLANTING LOCATION WITH CITY OF LYNCHBURG'S ZONING ADMINISTRATOR.  
 ALL PLANT SPECIES CHOSEN SHALL BE SUITABLE FOR PLANTING AND GROWTH WITHIN THE PROPOSED ENVIRONMENT AND SHALL MEET THE SIZE REQUIREMENTS IN THE TABLE BELOW.

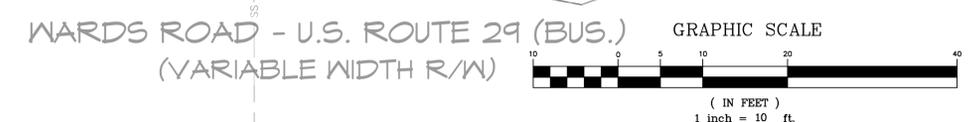
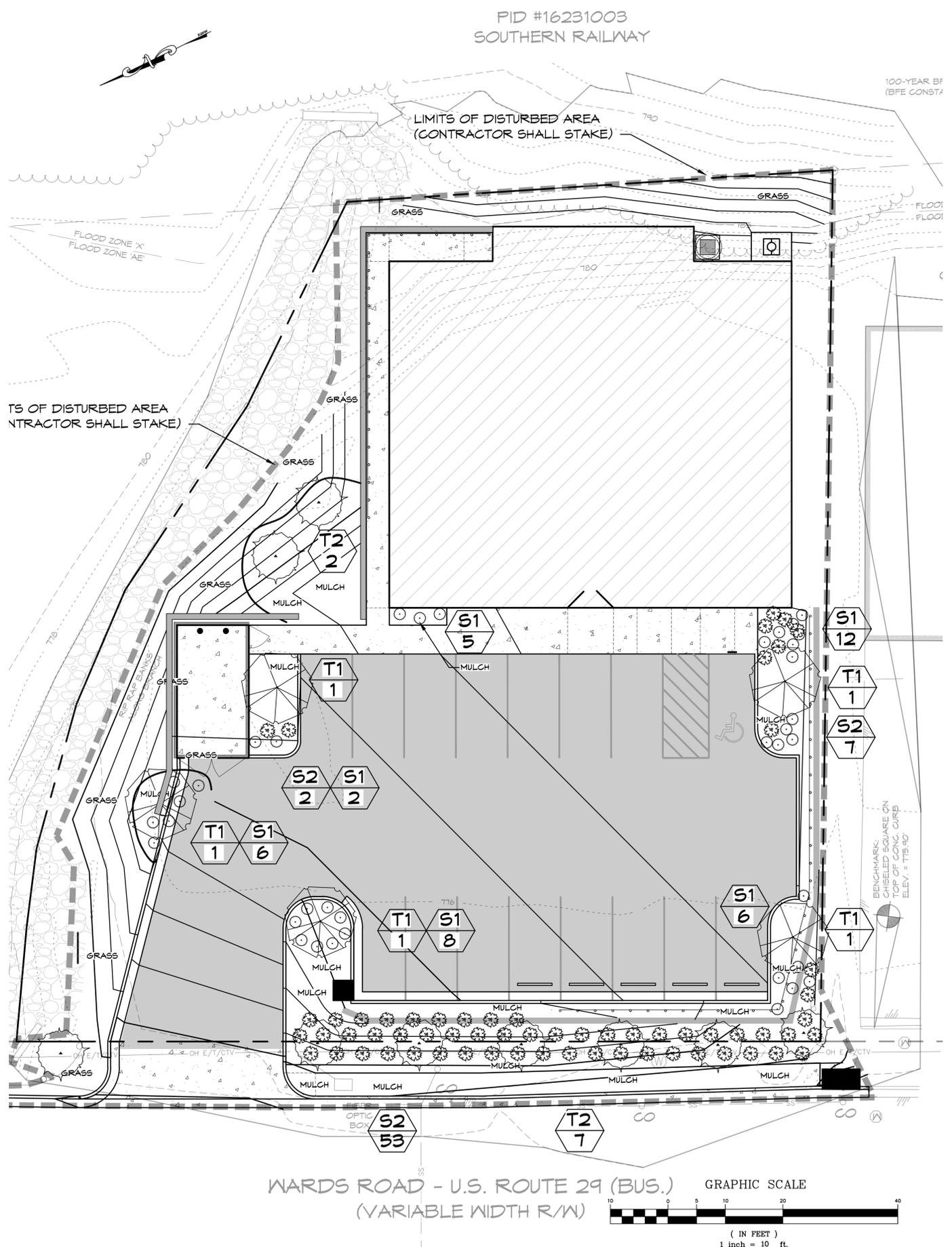
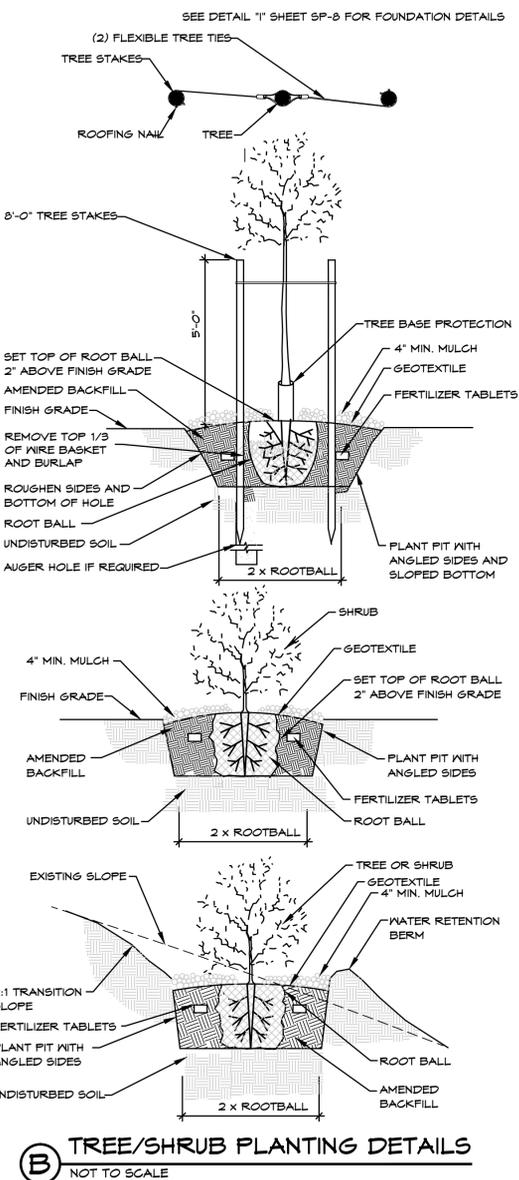
- NOTES:**
- MULCH ALL LANDSCAPED AREAS AS NOTED ON THE PLANS, INCLUDING ALL LANDSCAPED ISLANDS AND LANDSCAPED BUFFERS.
  - MULCH SHALL BE HARDWOOD AND BE SPREAD IN A 4" LAYER THROUGHOUT PLANTING BEDS AS DESIGNATED ABOVE.
  - PERMANENTLY REMOVE ALL VEGETATION PRIOR TO INSTALLING MULCH
  - REFER TO THE ELECTRICAL PLANS FOR SIGHT LIGHTING DETAILS, INCLUDING BASE DETAIL, WIRE TYPE & LOCATIONS, ETC.
  - EXTERIOR LIGHTING SHALL BE CONTROLLED SO THAT NO DIRECT ILLUMINATION WILL OCCUR BEYOND ANY PROPERTY LINE SHARED WITH A RESIDENTIAL DISTRICT
  - CONTRACTOR SHALL TEST THE SOIL PRIOR TO PLANTING ANY LANDSCAPING TO DETERMINE PROPER SOIL AMENDMENTS. CONTRACTOR SHALL AMEND THE SOIL AS NEEDED.
  - ALL TREES OUTSIDE OF DESIGNATED MULCH PLANTING AREAS SHALL RECEIVE A 4" THICK LAYER OF MULCH 24 INCHES OR TWICE THE DIAMETER OF THE ROOT BALL, THE LARGER OF THE TWO, DIAMETER CENTERED ON THE TREE.
- SHRUB/TREES WATERING SCHEDULE:**
- WATER DAILY FOR THE FIRST 14 DAYS. SLOWLY SATURATE THE ROOT BALL AND THE SURROUNDING SOIL TO A DEPTH OF 12".
  - WATER WEEKLY AFTER THE FIRST 14 DAYS IN THE SAME MANNER PRESCRIBED ABOVE.
  - AFTER THE SECOND MONTH, REGULARLY MONITOR THE SOIL SURROUNDING THE TREES AND SHRUBS TO PREVENT DRYING OUT. IF THE RAINFALL IS INADEQUATE AND THE SOIL 3" TO 4" BELOW THE SURFACE IS DRY, WATER AS ABOVE.
  - CONTINUE MONITORING THE SOIL FOR THE NEXT ONE TO TWO YEARS AND WATER AS NEEDED.
  - REDUCE WATERING FREQUENCY IF THE TREES AND SHRUBS ARE DORMANT.

**(A) LANDSCAPE REQUIREMENTS**  
 NOT TO SCALE

Symbol	Plant Type	Quantity	Scientific Name	Common Name	Planting Size	Height	Canopy Allowance	Canopy Total (sq ft)	ID
	Tree	5	<i>Tilia cordata</i>	Little Leaf Linden	2" Cal.		1,250	6,250	T1
	Tree	4	<i>cornus florida</i>	Flowering dogwood	2" Cal.	5'	171	354	T2
Total Proposed Tree Canopy - (1 dogwoods are street trees in the right-of-way 1 per 20' frontage)									6,604
	Shrub	25	<i>nandina domestica 'Firepower'</i>	Firepower Dwarf Nandina	3-Gal	24"			S1
	Shrub	60	<i>chamaecyparis thyuides</i>	Heather Bun	3-Gal	36"			S2

\*THE LANDSCAPING PLAN WILL BE REVISED AS NEEDED TO MEET THE LANDSCAPING CODE. THIS PLAN IS BASED ON A CONCEPT PLAN.

**(C) LANDSCAPE SCHEDULE**  
 NOT TO SCALE



DATE: June 26, 2015

REVISIONS


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**NEW CONSTRUCTION FOR WARDS ROAD WARETAIL**  
 3809 Wards Road Lynchburg, Virginia 24502

DRAWN BY: mja  
 CHECKED BY: mja

**LANDSCAPE PLAN**

COMMONWEALTH OF VIRGINIA  
 07/04/2015  
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COMMISSION No. 15021  
 SHEET **SP-6**

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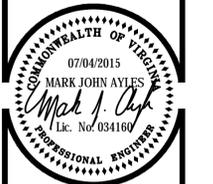
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**NEW CONSTRUCTION FOR WARD'S ROAD WARETAIL**  
 3809 Wards Road Lynchburg, Virginia 24502

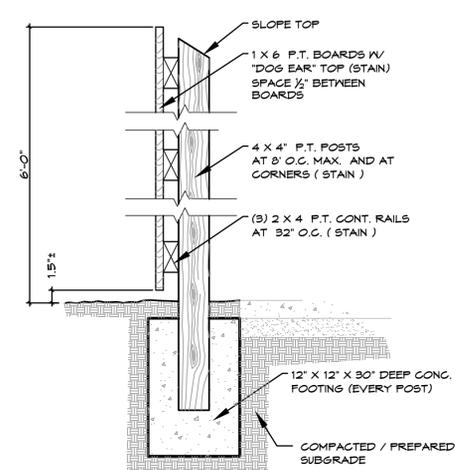
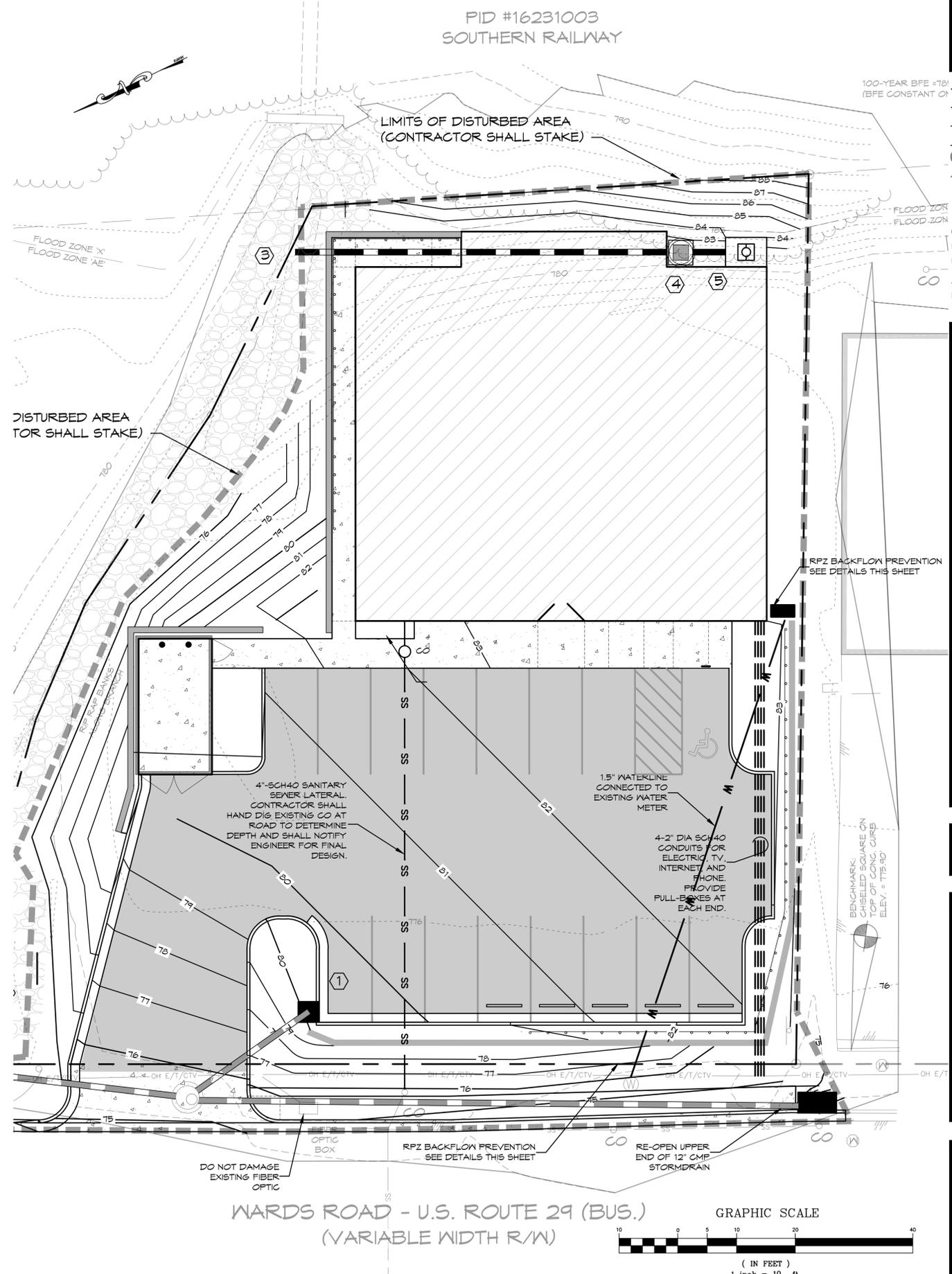
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UTILITY PLAN

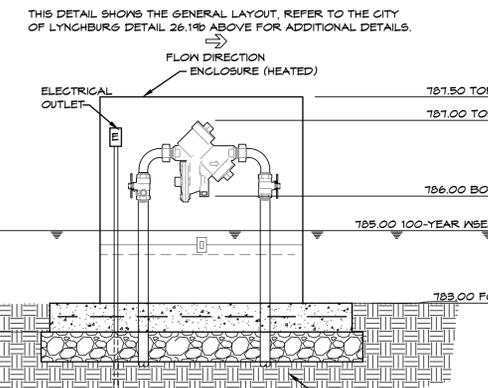


COMMISSION No. 15021  
 SHEET **SP-7**

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- NOTES:**
1. STAIN COLOR TO BE SELECTED BY THE ARCHITECT
  2. GATE SHALL OPEN A MINIMUM OF 120°
  3. THE HINGES AND LATCHES SHALL BE HEAVY DUTY WITH A MINIMUM OF THREE HINGES ON EACH GATE
  4. THE GATE SHALL LATCH SECURELY WHEN OPEN AND WHEN CLOSED
  5. THE GATES SHALL HAVE DIAGONAL BRACING AND SHALL BEAR THEIR OWN WEIGHT WITHOUT SAGGING.
- (B) DUMPSTER SCREEN FENCE**  
 NOT TO SCALE



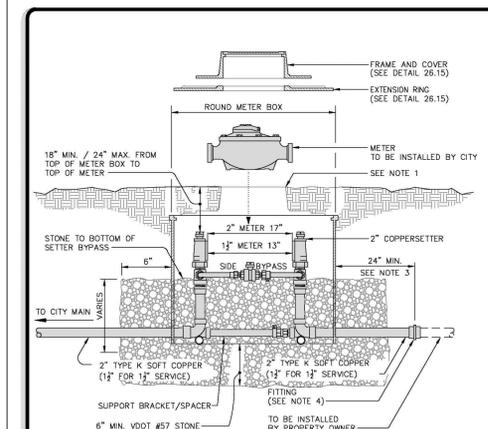
- NOTES:**
1. LEAD-FREE RPZ SHALL BE A 2" ZURN/WILKINS MODEL 9T5XL2U OR EQUAL
  2. ENCLOSURE SHALL BE HOTBOX HB15 OR EQUAL
  3. SEE SIDEWALK DETAIL FOR SLAB REQUIREMENTS
  4. SLAB SHALL BE A MINIMUM OF 4" THICK AND EXTEND 4" BEYOND THE HOTBOX.
  5. CONTRACTOR TO ENSURE RPZ AND PIPING WILL FIT INSIDE THE BOX WHEN THE LID IS CLOSED AND LOCKED.
  6. ELECTRICAL OUTLET (E) SHALL BE 18" ABOVE SLAB.
  7. SEE ABOVE FOR ADDITIONAL DETAILS. LYNCHBURG CITY DETAIL 26.14B
  8. HOTBOX AND RPZ ARE PRIVATELY OWNED AND MAINTAINED
- (A) RPZ DETAILS**  
 NOT TO SCALE

**LEGEND**

	FIRE HYDRANT		NEW ASPHALT PAVEMENT
	UTILITY POLE		CONG DUMPSTER PAD
	UNDERGROUND TELEPHONE		GROUTED RIP-RAP
	WATER LINE		NEW RETAINING WALL
	OVERHEAD ELECTRIC		SANITARY/STORM CLEANOUT
	WATER VALVE		PROPOSED DRAINAGE STRUCTURE #
	EXIST. STORM SEWER LINE		
	NEW UTILITY POLE		
	NEW FIRE HYDRANT		
	NEW FIRE DEPARTMENT CONNECTION		
	NEW 4" SANITARY LINE	X 06.42	MISC ELEV
	NEW WATER LINE	X T6 08.60	TOP OF CURB ELEV
	NEW UG ELEC. LINE	X BC 74.90	BOTTOM OF CURB ELEV
	NEW UG GAS LINE	X TC 75.40	TOP OF CURB ELEV
	NEW STORM SEWER LINE	X TN 08.60	TOP OF WALL ELEV
	NEW LIGHT POLE	X SN 08.60	TOP OF WALL ELEV
	NEW WATER VALVE		SIDEWALK ELEV

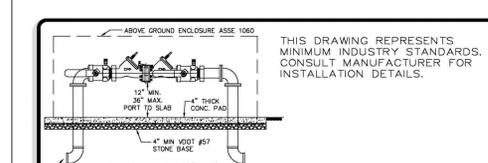
SEE MEP PLANS FOR ADDITIONAL REQUIREMENTS AND DETAILS

- UTILITY NOTES:**
1. THE CONTRACTOR SHALL CONTACT MISS UTILITY (811) TO HAVE THE UTILITIES LOCATED. THE CONTRACTOR SHALL EMPLOY A PRIVATE UTILITY CONTRACTOR TO LOCATE ALL UTILITIES NOT LOCATED BY MISS UTILITY.
  2. ALL WATER LINES AND INSTALLATION SHALL CONFORM TO THE CITY OF LYNCHBURG - MANUAL OF SPECIFICATIONS AND STANDARD DETAILS, APPENDIX A WATER & SEWER DESIGN
  3. ALL WATER LINES SHALL HAVE A MINIMUM OF 3'0" OF COVER.
  4. COORDINATE ALL WORK IN THE RIGHT OF WAY WITH THE CITY OF LYNCHBURG UTILITIES DEPARTMENT.
  5. COORDINATE THE CONNECTION WITH THE CITY OF LYNCHBURG UTILITY DEPARTMENT. THE DEPTH OF THE EXISTING WATER MAIN IS NOT KNOWN.
  6. THE SANITARY LINES SHALL BE 6 INCHES OR LARGER PVC SDR-35 SANITARY PIPE.
  7. THE 1.5-INCH WATER SUPPLY LINES SHALL BE ENDOT INDUSTRIES ENDOPOLY PE 4110 OR EQUAL.
  8. THE CITY OF LYNCHBURG WILL INSTALL THE WATER METER VAULT AND THE WATER METER. THE CITY WILL INSTALL AN 18" LONG STUBOUT FROM THE NEW METER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REST OF THE WATER LINE.
  9. THE CITY OF LYNCHBURG WILL REMOVE THE EXISTING WATER METERS.



- NOTES:**
1. IN TRAFFIC LOAD SITUATIONS, COVER & BOX SHALL BE APPROVED BY CITY ENGINEER.
  2. METER BOX TO BE LOCATED ON THE RIGHT-OF-WAY SIDE OF PROPERTY LINE
  3. WHEN METER BOX IS SET IN SIDEWALK, DIGITAL TO EXTEND 2 FEET BEYOND EDGE OF SIDEWALK.
  4. FITTING TO BE USED WHEN CONNECTING TO EXISTING SERVICE, OTHERWISE CRIMP END OF SERVICE LINE.
  5. FULLY ENCOMPASS CORPORATION STOP WITH STONE.

**THE CITY OF LYNCHBURG**  
 2-INCH WATER SERVICE  
 (1 1/2-INCH WATER SERVICE SIMILAR)  
 SCALE: NOT TO SCALE  
 SHEET # 26.13  
 REVISION DATE: 12-12-2014  
 SHEET # 1 OF 1



- NOTES:**
1. REDUCED PRESSURE PRINCIPLE ZONE (RPZ) BACKFLOW PREVENTION ASSEMBLIES SHALL BE ASSE 1013 AND USC APPROVED, AND OZON-LEAD-FREE. ASSEMBLIES WHICH MEET THIS SPECIFICATION SHOULD BE CONFIRMED PRIOR TO ORDERING, BY REVIEWING THE LIST OF USC APPROVED ASSEMBLIES AT <http://www.usc.org/usa/usa.html>. THESE MARKED WITH RPZ ARE OZON-LEAD-FREE. ALL OTHER NOTATIONS WITHIN THE LIST REGARDING A PARTICULAR MAKE AND MODEL ARE RELEVANT TO ITS USC APPROVAL.
  2. RPZ'S SHALL BE LOCATED AS CLOSE TO THE PROPERTY LINE AND METER AS POSSIBLE UNLESS A WAIVER IS SUBMITTED AND APPROVED IN ADVANCE BY THE DEPARTMENT OF WATER RESOURCES. IF A WAIVER IS GRANTED AND A RPZ IS INSTALLED INSIDE A BUILDING, VERTICAL INSTALLATIONS ARE NOT ALLOWED.
  3. RPZ'S SHALL BE INSTALLED ABOVE GROUND IN AN ASSE 1060 APPROVED HEATED ENCLOSURE.
  4. SHUT OFF VALVES ARE TO BE SHIPPED FROM THE MANUFACTURER AS PART OF THE UNIT. NO SUBSTITUTIONS WILL BE PERMITTED.
  5. A MINIMUM OF 2 FEET SHALL BE ALLOWED AT THE FRONT AND REAR OF EACH ASSEMBLY, WITH A MINIMUM OF 1 FOOT AT EACH END TO ALLOW SUFFICIENT SPACE FOR EASE IN TESTING AND MAINTENANCE.
  6. THE LINE SHALL BE FLUSHED THOROUGHLY BEFORE INSTALLING THE RPZ TO PREVENT ANY DEBRIS FROM FLOUING THE CHECK VALVES CAUSING THE UNIT TO FAIL THE TEST.
  7. A STRAINER IS SUGGESTED BUT NOT MANDATORY.
  8. UPON COMPLETION OF INSTALLATION CONTRACTOR SHALL NOTIFY THE COMPLIANCE SPECIALIST AT 434-403-4261. AN INITIAL TEST SHALL BE PERFORMED BY A STATE CERTIFIED BACKFLOW PREVENTION SERVICE WORKER TO VERIFY THE ASSEMBLY IS PER THE INITIAL TEST. THE PROPERTY OWNER IS RESPONSIBLE FOR THE TEST DUE EACH YEAR ON THE SAME MONTH AS THE INITIAL TEST. THIS TEST SHALL BE COMPLETED BY A CERTIFIED TESTER SUBMITTED WITH THE DEPARTMENT OF WATER RESOURCES. A COPY OF A PASSING TEST SHALL BE SUBMITTED TO THE COMPLIANCE SPECIALIST.
  9. NO BYPASS IS ALLOWED AROUND THE RPZ ASSEMBLY. NO TAKEOFFS OR CROSS CONNECTIONS ARE ALLOWED IN FRONT OF THE RPZ.
  10. ASSEMBLY IS PRIVATELY OWNED AND MAINTAINED.
  11. CALCULATIONS TO REVIEW THE AMOUNT OF AVAILABLE WATER PRESSURE AT THE SITE PRIOR TO THE INSTALLATION OF ANY RPZ OR RPDA ASSEMBLY, AND THE ESTIMATED EFFECT OF SAID INSTALLATION ARE STRONGLY RECOMMENDED.
  12. NO BACKFLOW PREVENTION ASSEMBLY SHALL BE REMOVED, RELOCATED, OR REPLACED WITHOUT PRIOR AUTHORIZATION FROM THE DEPARTMENT OF WATER RESOURCES.
  13. ALL PIPE AND FITTINGS USED INSIDE THE ENCLOSURE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND THE MOST CURRENT VERSION OF THE INTERNATIONAL PLUMBING CODE AS ADOPTED BY THE COMMONWEALTH OF VIRGINIA. THE ASSEMBLY SHALL ALSO BE PROPERLY RESTRAINED (BRACED).
  14. INSTALLATION, REPLACEMENT OR RELOCATION OF BACKFLOW PREVENTION ASSEMBLIES SHALL ONLY BE DONE IN ACCORDANCE WITH VIRGINIA TITLE 54.1, CHAPTER 11, AND AS DEFINED IN THE BOARD FOR CONTRACTING REGULATIONS AT <http://www.dor.virginia.gov/Boards/Contractors/>.

**Private**  
**THE CITY OF LYNCHBURG**  
 REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY 5/8" TO 2" METERS  
 SCALE: NOT TO SCALE  
 SHEET # 26.19B  
 REVISION DATE: 12-12-2014  
 SHEET # 1 OF 2

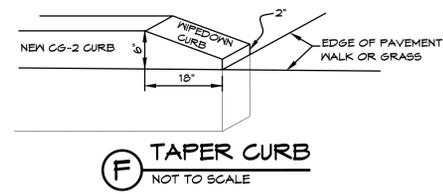
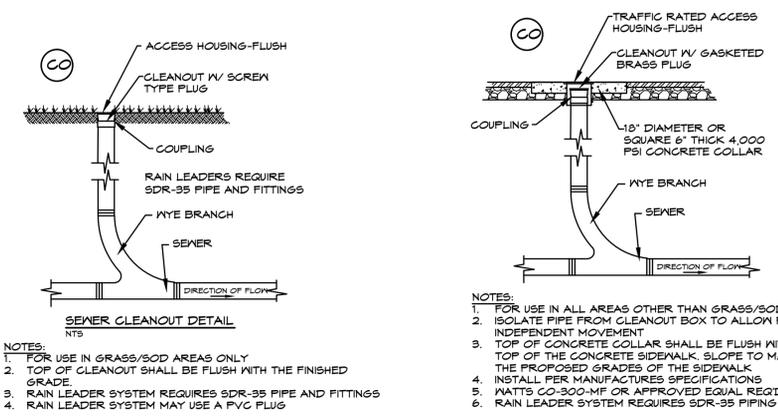
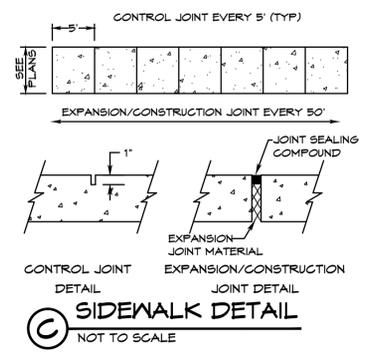
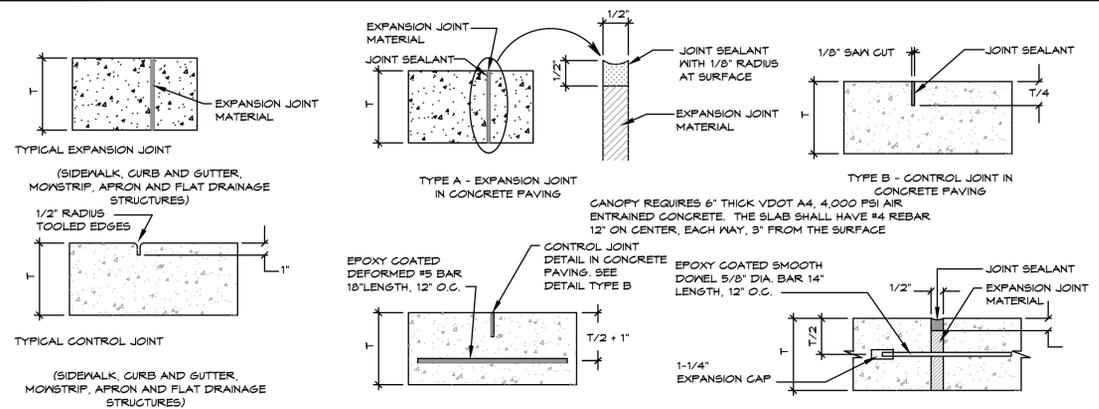
SEE MEP PLANS FOR ADDITIONAL REQUIREMENTS AND DETAILS

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K-31 FESCUE @ 5 LB / 1000 SF	RED TOP GRASS: 2 LBS/ACRE
BORZY WINTER RYE @ 1/2 LB / 1000 SF	SEASONAL NURSE CROP: 20 LBS/ACRE
1 FEBRUARY TO 1 JUNE	CROWN VETCH: 20 LBS/ACRE
K-31 FESCUE @ 5 LB / 1000 SF	TOTAL: 150 LBS/ACRE
ANNUAL RYE @ 1/2 LB / 1000 SF	
1 JUNE TO 1 SEPTEMBER	
K-31 FESCUE @ 5 LB / 1000 SF	SEASONAL NURSE CROP SEEDING DATES:
GERMAN MILLET @ 1/2 LB / 1000 SF	MARCH, APRIL - 15 MAY ANNUAL RYE
1 SEPTEMBER TO 15 OCTOBER	16 MAY - 15 AUGUST FOXTAIL MILLET
K-31 FESCUE @ 5 LB / 1000 SF	16 AUGUST - OCTOBER ANNUAL RYE
ANNUAL RYE @ 1/2 LB / 1000 SF	NOVEMBER - FEBRUARY WINTER RYE

**LIME:** 2 TONS/ACRE (40 LBS./1000 SF) PULVERIZED AGRICULTURAL LIMESTONE

**FERTILIZER:** 10-20-10 OR EQUIVALENT NUTRIENTS  
 RATE: 1000 LBS./ACRE (23 LBS./1000 SF.)

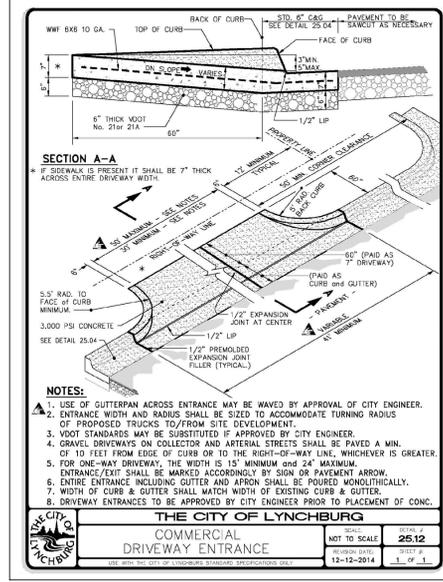
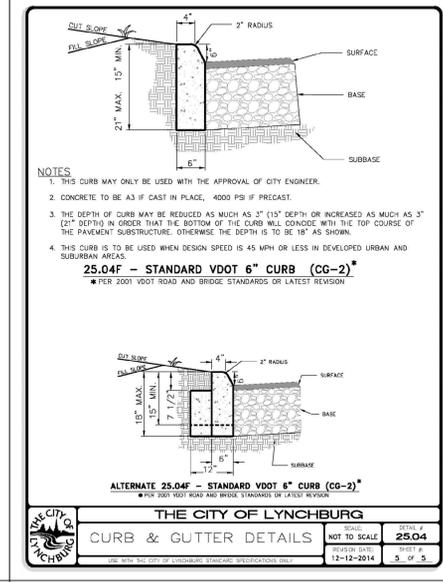
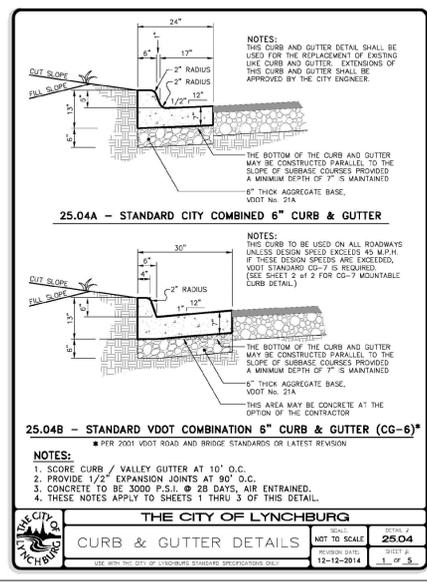
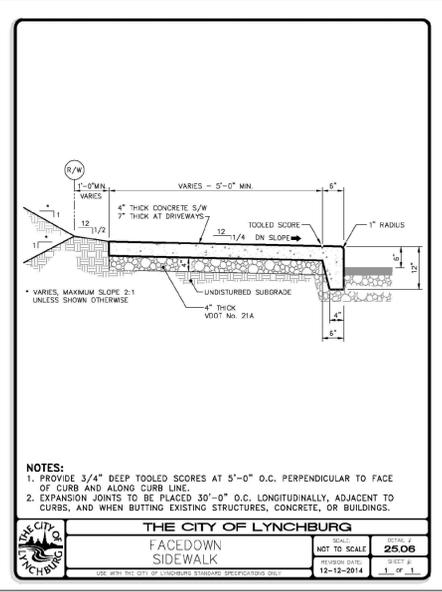
**MULCH:** STRAW OR FIBER MULCH SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

**MULCHING RATE:** STRAW OR HAY: 1.5-2 TONS/ACRE (10-40 LBS./1000 SF.)  
 FIBER MULCH: 1500 LBS./ACRE (95 LBS./1000 SF.)  
 ANCHOR MULCH BY KRIMPER TOOL OR MULCH NETTING  
 FIBER MULCH MAY BE USED TO TACK (ANCHOR) STRAW MULCH.

**SOIL CONDITIONING:**  
 INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED BY THE INSPECTOR.

**SEED APPLICATION:** APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

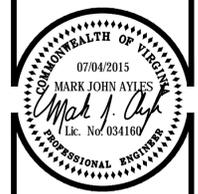
**G PERMANENT SEEDING**  
NOT TO SCALE



**NEW CONSTRUCTION FOR WARDS ROAD WARETAIL**  
 3809 Wards Road Lynchburg, Virginia 24502

DRAWN BY: mja  
 CHECKED BY: mja

**EROSION & SEDIMENT CONTROL DETAILS AND SUMMARIES**



COMMISSION No. 15021  
**SHEET SP-8**

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**GENERAL SITE CONSTRUCTION NOTES**

CONTINUED FROM SHEET SP-1

**TOPSOIL MATERIAL AND PREPARATION**

- 44. TOPSOIL EITHER FURNISHED BY THE CONTRACTOR OR REUSED FROM THE SITE SHALL CONSIST OF A NATURAL, FRIABLE SURFACE SOIL WITHOUT AD MIXTURES OF UNDESIRABLE SUBSOIL, REFUSE, OR FOREIGN MATERIALS. IT SHALL BE FREE FROM ROOTS, HARD CLAY, COARSE GRAVEL, STONES LARGER THAN ONE INCH IN ANY DIMENSION, WEEDS, SEEDS, TALL GRASS, BRUSH, STICKS, STUBBLE OR OTHER MATERIAL WHICH WOULD BE DETRIMENTAL TO THE PROPER DEVELOPMENT OF THE DESIRED VEGETATIVE GROWTH.
- 45. ALL TOPSOIL SHALL BE TESTED AND ANALYZED. THE TOPSOIL REPORT SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT PRIOR TO PLACEMENT. THE SOIL SHALL BE AMENDED WITH FERTILIZER, LIME AND ANY OTHER NUTRIENTS AS REQUIRED.
- 46. TOPSOIL SHALL BE OBTAINED FROM NATURALLY WELL DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4-INCHES DEEP. TOPSOIL SHALL NOT BE OBTAINED FROM BOGS OR MARSHES.
- 47. TOPSOIL SHALL CONTAIN NOT LESS THAN 3%, OR MORE THAN 20% ORGANIC MATTER, BY WEIGHT AS DETERMINED BY LOSS-ON-IGNITION OF OVEN-DRIED SAMPLES IN ACCORDANCE WITH ASTM T-6. ORGANIC MATERIAL SHALL BE DECOMPOSED AND FREE OF WOOD.
- 48. TOPSOIL SHALL CONFORM TO THE FOLLOWING GRADING:
 

SIEVE SIZES PERCENTAGE PASSING	
1-INCH	100%
1/2 INCH	95% - 100%
NO. 4	75% - 100%
NO. 10	60% - 100%
NO. 200	10% - 60%
- 49. TOPSOIL SOURCES LACKING ORGANIC MATTER MAY BE USED IF, PRIOR TO DELIVERY TO THE PROJECT, SUFFICIENT ORGANIC MATTER IN THE FORM OF PULVERIZED PEAT MOSS OR RICH ORGANIC SOIL FROM OTHER SOURCES IS THOROUGHLY MIXED WITH THE TOPSOIL TO PROVIDE A PRODUCT MEETING THE ABOVE REQUIREMENTS. ORGANIC MATERIAL FOR INCORPORATION INTO TOPSOIL, IF REQUIRED, SHALL BE PARTIALLY DECOMPOSED FIBROUS OR CELLULAR STEMS AND LEAVES OF ANY OF SEVERAL SPECIES OF SPHAGNUM MOSSES, OR ROTTED MANURE. ORGANIC MATERIAL MAY REQUIRE CHOPPING TO SHREDDING TO INSURE THOROUGH MIXING WITH THE TOPSOIL.
- 50. THE TOPSOIL SHALL BE TESTED TO DETERMINE THE APPROPRIATE AMENDMENTS REQUIRED FOR THE INTENDED USE. THE CONTRACTOR SHALL AMEND THE SOIL WITH NITROGEN, PHOSPHORIC ACID, POTASSIUM, AND LIMESTONE AT NO EXPENSE TO THE OWNER.
- 51. A 4-INCH LAYER OF TOPSOIL IS REQUIRED FOR ALL AREAS RECEIVING LANDSCAPING, GRASS OR SOD.

**LANDSCAPING**

- 52. IN GRASS, SOD AND LANDSCAPED AREAS, PLACE THE TOPSOIL TO A MINIMUM DEPTH OF 4 INCHES. REMOVE EXISTING SOIL IF NEEDED. RAKE THE AREAS TO REMOVE ALL ROOTS, CLUMPS, STONES AND DEBRIS 3/4" OR GREATER IN ANY DIRECTION. TRUE UP ALL OF THE DEPRESSIONS, RUTS, MOUNDS AND EDGES. SCARIFY SUBSOIL TO A DEPTH OF 2 INCHES WHERE TOPSOIL IS TO BE PLACED. ESTABLISH A SMOOTH GRADE READY TO RECEIVE LANDSCAPING, SEED AND SOD. FINISH GRADE MUST BE ACCEPTABLE TO THE OWNER OR ARCHITECT.
- 53. SOW THE SEED AS SPECIFIED AND DISTRIBUTE EVENLY. DO NOT LAP SEED INTO THE SHRUBS AND PLANTING BEDS. RAKE THE SEED LIGHTLY INTO THE TOP 1/8 INCH OF THE TOPSOIL, ROLL LIGHTLY, APPLY MULCH AND WATER WITH A FINE SPRAY.
- 54. WATERING AND MAINTENANCE OF ALL TREES, SHRUBS, GRASS, SOD AND PLANTINGS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE SEEDED SHALL BE KEPT MOIST FOR A MINIMUM OF TWO TO THREE WEEKS TO ALLOW FOR GERMINATION, LONGER IF NEEDED. THE CONTRACTOR SHALL WATER LANDSCAPING AS RECOMMENDED BY THE SUPPLIER OR AS NEEDED BASED ON THE WEATHER CONDITIONS AND SEASON.
- 55. REPLACE LANDSCAPING, INCLUDING GRASS, THAT IS DEAD OR APPEARS NON-HEALTHY OR NON-VIGOROUS AS DIRECTED BY THE ARCHITECT OR OWNER WITHIN 10 DAYS OF NOTIFICATION.
- 56. THE CONTRACTOR SHALL APPLY FERTILIZER AND WEED KILLERS AS NECESSARY TO PROMOTE THE GRASS GROWTH.
- 54. ALL GRASS AREAS SHALL BE THICK, UNIFORM AND FREE OF DENuded AREAS AND WEEDS.
- 55. THE CONTRACTOR SHALL REPLACE/ REHABILITATE ALL DEAD/DYING TREES AND SHRUBS WITHIN ONE YEAR OF SUBSTANTIAL COMPLETION. WHEN THESE ITEMS ARE REPLACED, THE WARRANTY PERIOD SHALL BE EXTENDED BY SIX MONTHS FROM THE TIME OF RE-PLANTING OR SOVING.
- 56. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, INCLUDING WATERING, THE SOD AND GRASS UNTIL PROJECT CLOSEOUT. THE OWNER WILL ALLOW THE CONTRACTOR ACCESS TO THE EXTERIOR SPOGOTS AS LONG AS THE USAGE IS REASONABLE.
- 57. SEEDED / SODDED AREAS WILL BE ACCEPTED AT PROJECT CLOSEOUT IF:
  - a. SEEDED / SODDED AREAS ARE PROPERLY ESTABLISHED.
  - b. LAYIN IS FREE OF BARE AND DEAD SPOTS AND IS WITHOUT WEEDS.
  - c. NO SURFACE SOIL IS VISIBLE WHEN GRASS HAS BEEN CUT TO HEIGHT OF 2 INCHES.
  - d. SEEDED AREAS HAVE BEEN MOWN A MINIMUM OF TWICE, 14+ DAYS APART.
- 58. ALL LANDSCAPED AREAS REQUIRE A 4" LAYER OF HARDWOOD MULCH. THE MULCH SHALL BE INSTALLED ABOVE A LAYER OF BLACK WOVEN NEEDLE PUNCHED GEOTEXTILE FABRIC, HANES PRO PLATINUM 20-YEAR FABRIC OR EQUAL. ALL SEAMS SHALL OVERLAP A MINIMUM OF 12 INCHES.

**PAVEMENT, CURBS, AND GUTTER**

- 59. ALL ASPHALT INTERFACES BETWEEN OLD AND NEW PAVEMENT MUST BE SAW CUT TO NEAT STRAIGHT LINES AND A TACK COAT SHALL BE APPLIED AT A RATE OF 0.1 GALLON PER SQUARE YARD OF RC-250 IMMEDIATELY PRIOR TO PLACING THE ASPHALT.
- 60. AGGREGATE BASE AND PAVING MUST BE PLACED BEFORE ANY MOISTURE OR SEASONAL CHANGES OCCUR TO SUBGRADE THAT WOULD CAUSE COMPACTION TESTS PREVIOUSLY PERFORMED TO BE ERRONEOUS. RECOMPACT AND RETEST SUBGRADE SOILS THAT HAVE BEEN LEFT EXPOSED TO WEATHER.
- 61. ASPHALT PAVEMENT FOR THE NEW PARKING LOT SHALL BE CONSTRUCTED WITH 8" COMPACTED AGGREGATE BASE MATERIAL, TYPE 1, SIZE NO. 21A OR B AND 1.5" BITUMINOUS CONCRETE SURFACE COURSE, TYPE SM-4.5. (THICKNESS AFTER COMPACTION). ALL PAVEMENT SHALL COMPLY WITH VDOT SUPERPAVE SPECIFICATIONS AND STANDARDS.
- 62. THE CONCRETE CURB SHALL BE VDOT STANDARD CG-2 AND CONSTRUCTED TO VDOT SPECIFICATIONS.
- 63. THE CONCRETE CURB AND GUTTER SHALL BE CITY OF LYNCHBURG STANDARD 25.04A AND CONSTRUCTED TO LYNCHBURG'S SPECIFICATIONS.
- 64. ALL WORK SHALL COMPLY WITH VDOT SPECIFICATIONS IN ACCORDANCE WITH THE LATEST REVISION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.

**RETAINING WALL**

65. THE RETAINING WALL MUST BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER. THE ENGINEER/CONTRACTOR MUST SUBMIT SEALED AND SIGNED DRAWINGS TO THE CITY OF LYNCHBURG COMMUNITY DEVELOPMENT DEPARTMENT FOR APPROVAL. OBTAIN APPROVAL PRIOR TO ORDERING MATERIALS.

**SIDEWALK CONSTRUCTION**

- 66. CONCRETE SIDEWALKS SHALL BE 4-INCHES THICK, 7-INCHES WERE THE DRIVE LANES CROSS, VDOT STANDARD A-4 (4,000 PSI) AIR-ENTRAINED (A/E) CONCRETE, INSTALLED IN ACCORDANCE WITH SECTION 504 OF THE LATEST REVISION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.
- 67. SPACING FOR EXPANSION JOINTS SHALL BE THE SAME FOR SIDEWALKS AS THAT FOR ADJACENT CURB & GUTTER OR CURBING, 3/4" DEEP AND 5.0' ON CENTER.
- 68. SIDEWALK FINISH: SIDEWALK SHALL FIRST BE SMOOTH TROWELLED, THEN ENDING WITH A "LIGHT BROOM FINISH" UNLESS OTHERWISE NOTED.
- 69. WHEN SIDEWALK ABUTS CURB OR BUILDING, A 1/2" PREMOLDED EXPANSION JOINT IS TO BE USED.
- 70. CURING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SECTION 220 OF THE LATEST REVISION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.

**GENERAL UTILITY NOTES**

- 71. ALL UTILITIES REQUIRE DETECTABLE WARNING TAPE: ACID AND ALKALI RESISTANT POLYETHYLENE FILM WARNING TAPE MANUFACTURED FOR MARKING AND IDENTIFYING UNDERGROUND UTILITIES, MINIMUM SIX INCHES WIDE AND FOUR MILLS THICK, CONTINUOUSLY INSCRIBED WITH A DESCRIPTION OF THE UTILITY, WITH A METALLIC CORE ENCASED IN A PROTECTIVE JACKET FOR CORROSION PROTECTION, DETECTABLE BY A METAL DETECTOR WHEN TAPE IS BURIED THIRTY INCHES DEEP AND COLOR CODED TO THE TO AMERICAN PUBLIC WORKS ASSOCIATION STANDARDS.
- 72. EXCAVATE TO PROPER ALIGNMENT, DEPTH, AND GRADE. EXCAVATE TO SUFFICIENT WIDTH TO ALLOW ADEQUATE SPACE FOR PROPER INSTALLATION AND INSPECTION OF UTILITY PIPING.
- 73. IF TRENCHES ARE EXCAVATED DEEPER THAN REQUIRED, BACKFILL UNTIL TRENCH BOTTOM IS PROPER DEPTH WITH PROPERLY COMPACTED NATIVE MATERIAL.
- 74. WHERE ROCK EXCAVATIONS ARE REQUIRED, EXCAVATE ROCK WITH MINIMUM OVER-DEPTH OF 4 INCHES BELOW REQUIRED TRENCH DEPTHS AND BACKFILL WITH THOROUGHLY COMPACTED MATERIAL.
- 75. IN CONFINED AREAS SUCH AS UTILITY TRENCHES, PORTABLE COMPACTION EQUIPMENT AND THIN LIFTS OF 3 TO 4 INCHES MAY BE REQUIRED TO ACHIEVE THE SPECIFIED DEGREE OF COMPACTION.
- 76. WATER AND SEWER SERVICE OR CONFLICTS SHALL BE COORDINATED WITH THE CITY OF LYNCHBURG UTILITY DEPARTMENT, (434) 455-4250
- 77. NATURAL GAS SERVICE OR CONFLICTS, SHALL BE COORDINATED WITH COLUMBIA GAS OF VIRGINIA, (800) 543-8911.
- 78. TELEPHONE SERVICE OR CONFLICTS SHALL BE COORDINATED WITH VERIZON (800) 837-4966.
- 79. ELECTRICAL SERVICE OR CONFLICTS SHALL BE COORDINATED WITH APPALACHIAN POWER (AEP) (800) 277-2177.
- 80. INTERNET/CABLE SERVICE OR CONFLICTS SHALL BE COORDINATED WITH THE COMCAST (800) 226-2278
- 81. INTERNET/CABLE/TELEPHONE SERVICE OR CONFLICTS SHALL BE COORDINATED WITH THE NTELOS (877) 468-3567

**SEWER NOTES**

- 82. A MINIMUM OF THREE (3) FEET OF COVER IS REQUIRED OVER ALL SEWER LINES.
- 83. ALL SANITARY SEWER WORK SHALL BE CONSTRUCTED TO THE LINES AND GRADES INDICATED. PIPE BEDDING AND BACKFILL SHALL BE CAREFULLY CONTROLLED. ALL WORK SHALL COMPLY WITH ALL LOCAL CODES AND REQUIREMENTS.
- 84. ALL TRENCHES SHALL BE THOROUGHLY COMPACTED TO PREVENT SETTLEMENT AND DAMAGE TO FUTURE PAVEMENT, STRUCTURES AND UTILITIES.
- 85. BURIED SANITARY SEWER PIPE SHALL BE SDR-35 PVC. DUCTILE IRON PIPE, CLASS 52 SHALL BE USED IN APPROVED LOCATIONS WHERE COVER IS 3 FEET OR LESS.
- 86. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND UNCOVERING ALL CLEANOUTS, MANHOLES, ETC., AFTER PAVING AND ADJUSTING TO FINAL GRADE.

**WATER NOTES**

- 87. A MINIMUM COVER OF THREE (3) FEET IS REQUIRED OVER PROPOSED WATER LINES.
- 88. ALL WATER LINES SHALL BE INSTALLED AS SHOWN ON THE PLANS. ALL PIPES, VALVES, AND FITTINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ANWA STANDARDS AND ALL LOCAL CODES AND THEIR STANDARDS.
- 89. WATER LINES SHALL BE PRESSURE TESTED, DISINFECTED, AND TESTED IN ACCORDANCE WITH ANWA STANDARDS (LATEST EDITION), AND WITH LOCAL LOCAL CODES AND THEIR STANDARDS.
- 90. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT, AND NECESSARY TAPS AND SHALL PERFORM ALL WORK REQUIRED FOR STERILIZATION, TESTING, AND FLUSHING.
- 91. ALL TRENCHES SHALL BE THOROUGHLY COMPACTED TO PREVENT SETTLEMENT AND DAMAGE TO FUTURE PAVEMENT AND STRUCTURES.
- 92. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND UNCOVERING ALL VALVE VAULTS, METERS, ETC., AFTER PAVING AND ADJUSTING TO FINAL GRADE.
- 93. BURIED WATER LINES GREATER THAN 2 INCHES SHALL BE CLASS 50 DUCTILE IRON WITH MECHANICALLY RESTRAINED JOINTS. 2-INCH TYPE K COPPER PIPE SHALL BE USED FOR SERVICE CONNECTIONS FROM THE WATER MAIN TO THE NEW METER.

**MATERIAL NOTES**

- 94. PVC PLASTIC GRAVITY PIPE 4 INCHES THROUGH 15" SHALL MEET SDR-35 REQUIREMENTS FOR ASTM D3034, AND 18 INCHES THROUGH 21 INCHES ASTM-F679. FITTINGS AND PIPE SHALL BE OF A GASKET PUSH ON JOINT TYPE MEETING ASTM D3212. FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF ASTM D3034.
- 95. WATER LINES 2 INCHES OR LESS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) PE4710, PRESSURE RATED FOR 160 PSI. SHALL MEET ALL APPLICABLE STANDARDS OF ASTM D3350, ASTM D2731 OR ASTM D2239. ALL FITTINGS SHALL BE APPROVED COMPRESSION FITTING RECOMMENDED BY THE PIPE MANUFACTURER. ENDOT INDUSTRIES ENDOPOLY OR EQUAL.

- 96. PVC PLASTIC PRESSURE PIPE GREATER THAN 2 INCHES TO 4 INCHES IN DIAMETER SHALL MEET DR21PVC REQUIREMENTS FOR ASTM D2241.
  - 97. DUCTILE IRON SEWER PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH SPECIFICATIONS ANWA C151/ANSI 21.51, WALL THICKNESS SHALL BE CLASS 50.
- EROSION CONTROL NOTES**
- 98. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
  - 99. THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, OR OTHERWISE MODIFY CERTAIN MEASURES WHERE FIELD CONDITIONS WARRANT. EROSION CONTROL MEASURES SHOWN ARE NOT NECESSARILY ALL THAT WILL BE REQUIRED.
  - 100. EROSION CONTROL MEASURES SHALL BE INSTALLED IN ADVANCE OF WORK BEING PERFORMED, AS FAR AS PRACTICAL.
  - 101. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
  - 102. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
  - 103. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES DAILY AND AFTER EVERY ERODIBLE RAINFALL. ANY NECESSARY REPAIRS OR CLEANUP SHALL BE MADE IMMEDIATELY AND AT NO EXTRA COST TO THE OWNER.

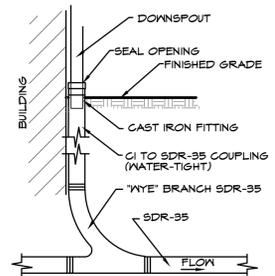
**STORM-SEWER SYSTEMS & CULVERTS**

- 104. ALL CULVERTS AND STORM-SEWER SYSTEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS, LATEST EDITION AND THE VDOT ROAD AND BRIDGE STANDARDS, LATEST EDITION/REVISION. PIPES SHALL BE BEDDED AND BACKFILLED PER PB-1, METHOD A.
- 105. UNLESS INDICATED OTHERWISE WHERE PIPING OR STRUCTURES OF DIFFERING MATERIALS ARE CONNECTED, PROVIDE AN A3 CONCRETE ENCASED BLOCK THAT IS 12" LARGER THAN THE OUTSIDE DIAMETER OF THE PIPES AND EXTENDS 18" ONTO EACH PIPE OR STRUCTURE.
- 106. WHERE SPECIFIED, ALL INLET SHAPING SHALL CONFORM TO THE VDOT ROAD AND BRIDGE STANDARD 106.03, IS-1.

**MISCELLANEOUS NOTES**

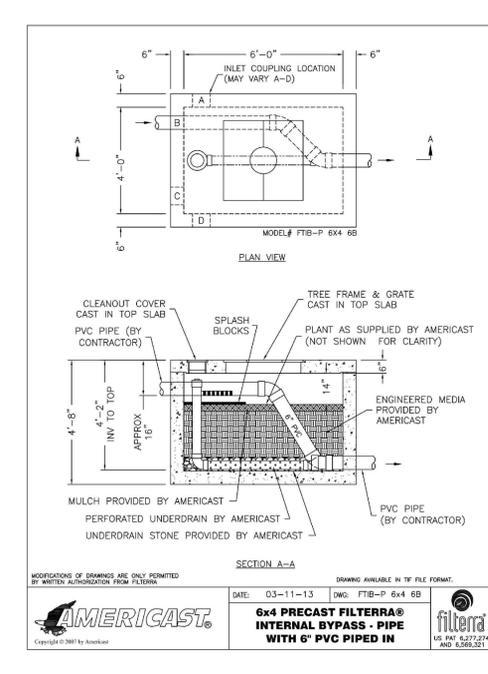
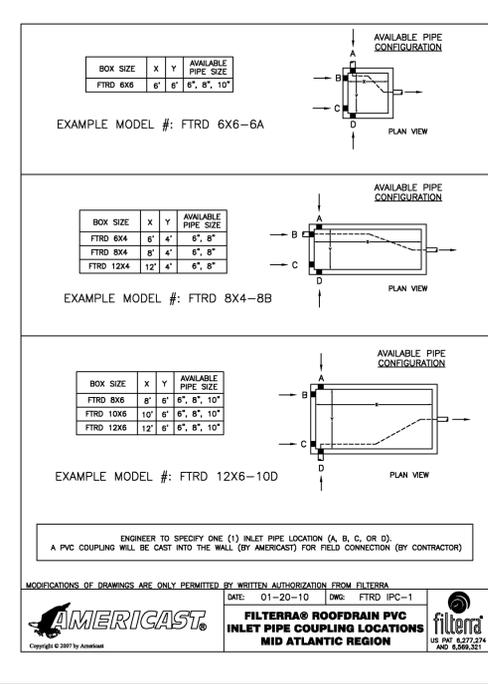
- 107. ALL PAVEMENT MARKINGS SHALL BE MADE WITH TRAFFIC RATED PAINT, VDOT TYPE A PAINT AND REQUIRES TWO COATS OF PAINT. ALL LINES SHALL BE CRISP AND CLEAN.
- 108. ALL PARKING SPACES, ADA ACCESS AISLES AND NO PARKING AREAS REQUIRE 4-INCH WIDE WHITE LINE. THE DIAGONAL LINES (CROSS HATCHING) FOR ACCESS AISLES AND NO PARKING AREAS SHALL BE SPACED 18 INCHES ON CENTER.
- 109. THE HANDICAPPED PARKING SYMBOL SHALL BE EITHER 24 INCHES WIDE AND 28 INCHES HIGH OR 36 INCHES WIDE AND 41 INCHES HIGH AND BE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY PARKING SPACE MARKING WITH BLUE BACKGROUND AND WHITE BORDER, ADA COMPLIANT.
- 110. ALL PARKING SPACES AND NO PARKING AREAS REQUIRE 4" WHITE LINES.
- 111. ALL LANDSCAPED BUFFERS AND PARKING ISLANDS SHALL BE COVERED WITH A 4" LAYER OF HARDWOOD MULCH.
- 112. SAFETY FENCE, GUARDRAIL, SHALL BE INSTALLED ABOVE ALL RETAINING WALLS AS REQUIRED BY THE APPLICABLE BUILDING CODES.
- 113. ALL SAFETY FENCING FOR THE RETAINING WALLS SHALL MEET OR EXCEED ALL REQUIREMENTS OF THE IBC, IRC AND ALL STATE & LOCAL CODES FOR FENCES AND GUARDS.
- 114. ALL FENCE POSTS SHALL BE INSTALLED WITH THE "SLEEVE-IT" 1224R SYSTEM BY STRATA OR AN ARCHITECT APPROVED EQUAL.
- 115. THE SAFETY FENCING SHALL BE A BLACK 4.0 FEET HIGH ORNAMENTAL STEEL FENCE: MONTAGE PLUS THREE RAIL MAJESTIC STEEL FENCE BY AMERISTAR.
- 116. CONTRACTOR SHALL USE MONTAGE PLUS SWIVEL BRACKETS ON NON-LINEAR RUNS. ADJUST POST SPACING TO ENSURE THE SPACING BETWEEN POST AND ADJOINING PICKETS MEETS APPLICABLE CODES. THIS WILL REQUIRE TRIMMING ONE OR BOTH ENDS OF THE PANEL PER THE MANUFACTURERS RECOMMENDATIONS.

**FENCING**



TOP OF COUPLING SHALL BE 4 INCHES ABOVE THE FINISHED GRADE OR SIDEWALK. CAST IRON FITTING-NEENAH R-4821A OR APPROVED EQUAL, PRIME AND PAINTED TO MATCH DOWNSPOUT

**(A) DOWNSPOUT CONNECTION**  
NO SCALE



**(B) FILTERRA DETAILS**  
NO SCALE

DATE: June 26, 2015

REVISIONS


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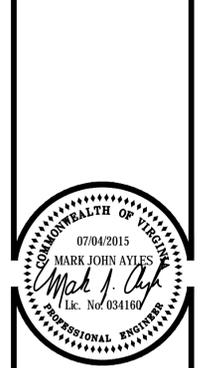
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NEW CONSTRUCTION FOR  
**WARDS ROAD WARETAIL**  
3809 Wards Road Lynchburg, Virginia 24502

DRAWN BY: mja  
CHECKED BY: mja

**NOTES AND DETAILS**



COMMISSION No. 15021  
SHEET **SP-9**

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**MINIMUM STANDARDS MS-19**

- PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 7 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR. THE LOCATION OF TEMPORARY AND PERMANENT SEEDING/SODDING IS SHOWN ON THE EROSION CONTROL PLAN SHEET AND SPECIFIED ON THE WITH EROSION CONTROL DETAILS WITHIN THE PLAN SET.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE. THE ENTIRE DISTURBED AREA WILL BE COVERED IN FILL MATERIAL. OFFSITE BORROW AREAS HAVE NOT BEEN IDENTIFIED. THE CONTRACTOR SHALL CONTACT THE CITY OF LYNCHBURG DEPARTMENT OF COMMUNITY DEVELOPMENT FOR OFF-SITE EIS REQUIREMENTS AND PERMITTING.
- A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION. ALL DISTURBED AREAS NOT PERMANENTLY STABILIZED SHALL RECEIVE PERMANENT SEEDING / SODDING AS SHOWN ON THE EROSION CONTROL PLAN SHEET.
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPLOPSE LAND DISTURBANCE TAKES PLACE. THE CONTRACTOR IS INSTRUCTED TO INSTALL CERTAIN MEASURES AS THE FIRST STEP IN THE CONSTRUCTION PROCESS. INLET PROTECTION IS SHOWN ON THE EROSION CONTROL PLAN SHEET & EXPLAINED IN THE EIS NARRATIVE.
- STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION. ALL DENUDED AREAS INCLUDING BUT NOT LIMITED TO EARTHEN STRUCTURES, ARE TO RECEIVE SEEDING.
- SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN. NOT APPLICABLE AS NO SEDIMENT TRAPS OR BASINS ARE REQUIRED OR PROVIDED.
- CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED. MOST CUT/FILL SLOPES ARE SPECIFIED AS 3:1 MINIMUM (BUT A COUPLE OF SMALL AREAS ARE 2.5:1 OR 2:1) AND WILL RECEIVE PERMANENT SEEDING OR SOD IMMEDIATELY AFTER CONSTRUCTION OF THE ITEM. IF THE EMBANKMENT IS ERODING AFTER PERMANENT STABILIZATION IS INSTALLED, CORRECTIVE SLOPE STABILIZING MEASURES ARE REQUIRED.
- CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE. ALL CONCENTRATED FLOWS ARE CONTAINED IN DITCHES AND PIPES. IF CONCENTRATED RUNOFF CAUSES EROSION DOWN A CUT OR FILL SLOPE, THE CONCENTRATED FLOW IS TO BE CAPTURED AND CONTAINED IN A STORM SYSTEM OR ADEQUATE CHANNEL, AND THE SLOPE REPAIRED AND STABILIZED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED. NOT APPLICABLE AS NO UNDERGROUND WATER HAS BEEN ENCOUNTERED WITH THE EXISTING CARWASH.
- ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LOADED WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT. INLET PROTECTION AND OTHER MEASURES ARE SHOWN ON THE EROSION CONTROL PLAN SHEET.
- BEFORE NEARLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL. NOT APPLICABLE AS NO CHANNELS ARE PROPOSED.
- WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS. NOT APPLICABLE AS WORK IN A LIVE WATER COURSE IS NOT ANTICIPATED.
- WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED. NOT APPLICABLE AS WORK IN A LIVE WATER COURSE IS NOT ANTICIPATED.
- ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET. NOT APPLICABLE AS WORK IN A LIVE WATER COURSE IS NOT ANTICIPATED.
- THE BED BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED. NOT APPLICABLE.
- UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER SET APPLICABLE CRITERIA: THE CONTRACTOR IS INSTRUCTED TO FOLLOW ALL MS-19 REQUIREMENTS AS NOTED IN THE PLAN SET.
  - NO MORE THAN 800 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
  - EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
  - EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
  - MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
  - RE-STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
  - APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES. A CONSTRUCTION ENTRANCE IS SHOWN ON THE EROSION CONTROL PLAN SHEET. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED AS PER THE VESCH AND KEPT IN PLACE UNTIL THE SITE IS STABILIZED AND ALL HAULING OPERATIONS CEASED.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION. THE CONTRACTOR IS INSTRUCTED TO REMOVE ALL EIS ITEMS AS NOTED ABOVE.
  - PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA:
    - CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
    - ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
      - THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
      - (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS; AND
      - (b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
      - (c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT THE STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
    - IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE THE APPLICANT SHALL:
      - IMPROVE THE CHANNEL TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR
      - IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES; OR
      - DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
      - PROVIDE A COMBINATION OF CHANNEL IMPROVEMENTS, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE PLAN APPROVING AUTHORITY TO PREVENT DOWNSTREAM EROSION.
    - THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
      - ALL HYDROLOGICAL ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT OF THE SUBJECT PROJECT.
      - IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION HE SHALL OBTAIN APPROVAL FROM THE LOCALITY OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
      - OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
      - ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
        - INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION OF ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
        - IN APPLYING THESE STORMWATER RUNOFF CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
        - ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.

THE SITE DRAWS TO AN ADEQUATE OUTFALL (48" CMP CULVERT UNDER WARDS ROAD) AS DEMONSTRATED IN THE ATTACHED CALCULATIONS.

**MS -19 STANDARDS**  
NOT TO SCALE

**EROSION AND SEDIMENT CONTROL NARRATIVE**

**PROJECT DESCRIPTION**

THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT A MATTRESS RETAIL SALES STORE. THIS PROJECT REMOVES AN EXISTING CARWASH, PAVEMENT, ETC. AND ADDS THE NEW MATTRESS STORE. THE EXISTING SITE HAS APPROXIMATELY 0.35 ACRES OF IMPERVIOUS AREA AND THE NEW SITE WILL HAVE APPROXIMATELY 0.30 ACRES OF IMPERVIOUS AREA. THE EXISTING PERVIOUS AREA IS WOODS, WHEREAS THE NEW PERVIOUS AREA IS GRASS.

EARTHWORK OPERATIONS INCLUDE THE REMOVAL OF THE EXISTING ASPHALT, CONCRETE, AND EXISTING VEGETATION AND MAY REQUIRE THE IMPORTING ADDITIONAL STRUCTURAL FILL. THE AMOUNT OF SURPLUS/BORROW SOIL IS DIRECTLY DEPENDANT ON THE SOIL BENEATH THE SURFACE AND THEIR CHARACTERISTICS. APPROXIMATELY 0.40 ACRES WILL BE DISTURBED AS A RESULT OF CONSTRUCTION. THE POST-DEVELOPED STORMWATER DISCHARGE RATE WILL BE DECREASED BY VIRTUE OF THE PROPOSED CONDITION HAVING LESS IMPERVIOUS AREA THAN THE EXISTING CONDITION. IT IS ANTICIPATED THAT THE SITE CONSTRUCTION WILL TAKE 6 TO 9 MONTHS, DEPENDING ON THE WEATHER.

**EXISTING SITE CONDITIONS**

WITHIN THE PROJECT AREA THE MAJORITY OF THE EXISTING GROUND IS COVERED BY IMPERVIOUS SURFACES CONSISTING OF ASPHALT AND CONCRETE. THE REAR OF THE SITE IS VERY STEEP AND COVERED IN A NARROW STRIP OF SMALL TREES AND UNDERGROWTH AS IT RISES TO A SET OF RAILROAD TRACKS. THE EXISTING SITE HAS APPROXIMATELY 0.35 ACRES OF IMPERVIOUS AREAS. THE ENTIRE PARCEL DRAINS INTO A GROUTED RIP-RAP CHANNEL ON THE NORTH SIDE OF THE SITE AND THE CHANNEL DISCHARGES TO BURTON CREEK THROUGH AN EXISTING 48" CULVERT. THE CULVERTS ENTRANCE IS CONSIDERED THE SITE'S POINT OF ANALYSIS FOR OUTFALL PURPOSES. THE SITE LIES WITHIN A FEMA DESIGNATED FLOODPLAIN. THE DRAINAGE AREA MAP ON SHEET SP-11 IDENTIFIES AND ANNOTATES THE POST-DEVELOPMENT ONSITE DRAINAGE AREAS WHILE THE MAPS ON SP-11 SHOW THE OVERALL AREA CONTRIBUTING TO THE EXISTING 48" CULVERT. THE SITE DOES NOT CURRENTLY HAVE EROSION ISSUES.

**ADJACENT PROPERTY**

THE PROJECT SITE IS BORDERED BY A NEW CARWASH TO THE NORTH, A SET OF RAILROAD TRACKS TO THE EAST, A STRIP MALL TO THE SOUTH AND WARDS ROAD TO THE WEST. THERE IS NO POTENTIAL FOR OFF SITE DAMAGE OR SENSITIVE AREAS ON-SITE. THE PROPOSED EIS PLANS PROTECT THE SURROUNDING AREAS, INCLUDING THE ROADWAYS. REFER TO THE EIS SHEET FOR DETAILS.

**OFF-SITE AREAS**

IF NEEDED, OFF-SITE AREAS WILL BE DISTURBED TO PROVIDE STRUCTURAL FILL FOR THE SITE. AN EROSION AND SEDIMENT PLAN SHALL BE REQUIRED FOR ALL OFF-SITE BORROW AREAS. THIS PLAN SHALL BE SUBMITTED TO THE CITY OF LYNCHBURG FOR REVIEW AND APPROVAL. IF THE SITE IS OUTSIDE OF THE CITY LIMITS, A COPY OF THE PERMIT FOR THE BORROW AREA MUST BE SUBMITTED TO THE CITY OF LYNCHBURG. AN OFF-SITE AREA FOR FILL MAY BE REQUIRED, BUT HAS NOT BEEN CONFIRMED.

**SOILS**

IT IS ANTICIPATED THAT ALL SOILS ENCOUNTERED WOULD BE CONSIDERED CUE2 (GULLEN LOAM, 15 TO 25 PERCENT SLOPES, ERODED) AS INDICATED IN THE USDA SOIL MAPS FOR CAMPBELL COUNTY AND THE CITY OF LYNCHBURG. A MAP IS INCLUDED IN THE CALCULATION PACKET. THE CONTRACTOR IS DIRECTED TO RETAIN THE EXISTING TOPSOIL, TEST AND AMEND AS REQUIRED PRIOR TO SPREADING.

**CRITICAL EROSION AREAS**

THE EXISTING SLOPE AT THE REAR OF THE SITE IS 2:1. THE STEEPEST PROPOSED SLOPE ONSITE IS 2.5:1. THEREFORE, THERE ARE NO CRITICAL EROSION CONTROL AREAS ASSOCIATED WITH THIS PROJECT. ALL AREAS WILL BE PROTECTED AS NEEDED TO ENSURE NO SEDIMENT IS TRANSPORTED OFF SITE.

**EROSION AND SEDIMENT CONTROL MEASURES**

UNLESS OTHERWISE STATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (1992 EDITION). IF DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL DEVICES ARE DEEMED NECESSARY, THEY WILL BE INSTALLED AS DIRECTED BY THE SITE DESIGNER OR CITY OF LYNCHBURG PERSONNEL AT NO ADDITIONAL COST TO THE OWNER.

**PERMANENT STABILIZATION**

ALL DENUDED AREAS WILL RECEIVE STRUCTURES, ASPHALT, CONCRETE, OR VEGETATION. THE PLANS SPECIFY THE TYPE OF PERMANENT SEEDING AS WELL AS THE TYPE OF MULCH AND TREES/SHRUBS. THE GENERAL NOTES DIRECT THE CONTRACTOR REGARDING TOPSOIL, SEED AND SOD REQUIREMENTS AS WELL AS THE NECESSARY TESTING.

**STORMWATER RUNOFF CONSIDERATIONS**

THIS PROJECT WILL ACTUALLY DECREASE THE PEAK RUNOFF RATE AND VOLUME. ADDITIONALLY, THE SITE OUTFALLS INTO AN EXISTING 48" CULVERT UNDER WARDS ROAD WHICH IS ADEQUATE ACCORDING TO THE INCLUDED CALCULATIONS. A FILTERRA BIORETENTION FILTER SYSTEM IS REQUIRED FOR WATER QUALITY. IT WILL INTERCEPT FLOW FROM THE STRUCTURE'S ROOF. THE FILTERRA BMP SHALL BE MAINTAINED BY THE OWNER AS REQUIRED BY THE SPM MAINTENANCE AGREEMENT.

**MANAGEMENT STRATEGIES**

- CONSTRUCTION SHOULD BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE
- EROSION AND SEDIMENT CONTROL DEVICES WILL BE INSTALLED AS A FIRST STEP OF CONSTRUCTION
- THE GRADING CONTRACTOR WILL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES. INSPECTIONS ARE TO BE MADE PERIODICALLY AND AFTER EVERY ERODIBLE RAINFALL.
- THE GRADING INSPECTION PERSONNEL WILL MAKE REPAIRS TO DAMAGED OR DEFICIENT CONTROL MEASURES IMMEDIATELY UPON DISCOVERY OF DAMAGE OR UPON NOTIFICATION OF THE DEFICIENCY.

**REMOVAL OF CONTROL MEASURES**

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST BE REMOVED WITHIN THIRTY DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE DIRECTED BY THE LOCAL PROGRAM ADMINISTRATOR.

**DRAINAGE CONSIDERATIONS**

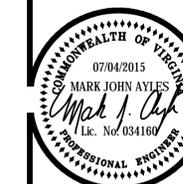
THE SITE HAS A SINGLE OUTFALL WHICH IS THE EXISTING 48" CULVERT UNDER WARDS ROAD DISCHARGING INTO BURTON CREEK. THIS POINT OF ANALYSIS INTERCEPTS THE ENTIRE SITE, PLUS A CONSIDERABLE OFFSITE AREA, FOR A TOTAL OF APPROXIMATELY 24.1 ACRES AS SHOWN IN THE INCLUDED DRAINAGE SHED MAPS.

**A EIS NARRATIVE**  
NOT TO SCALE

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DRAWN BY: mja  
CHECKED BY: mja

**NOTES AND DETAILS**



COMMISSION No.  
15021  
SHEET  
**SP-10**

DATE: June 26, 2015

REVISIONS	△	
	△	
	△	
	△	
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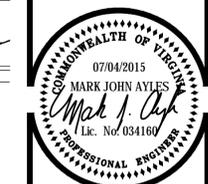
656 ELM AVENUE, S.W.  
 P.O. BOX 1034  
 ROANOKE, VIRGINIA 24005-1034

TEL (540) 342-4002  
 FAX (540) 342-2060  
 www.HughesArchitects.com

**NEW CONSTRUCTION FOR  
 WARDS ROAD  
 WARETAIL**  
 3809 Wards Road Lynchburg, Virginia 24502

DRAWN BY: mja  
 CHECKED BY: mja

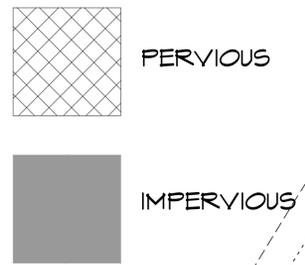
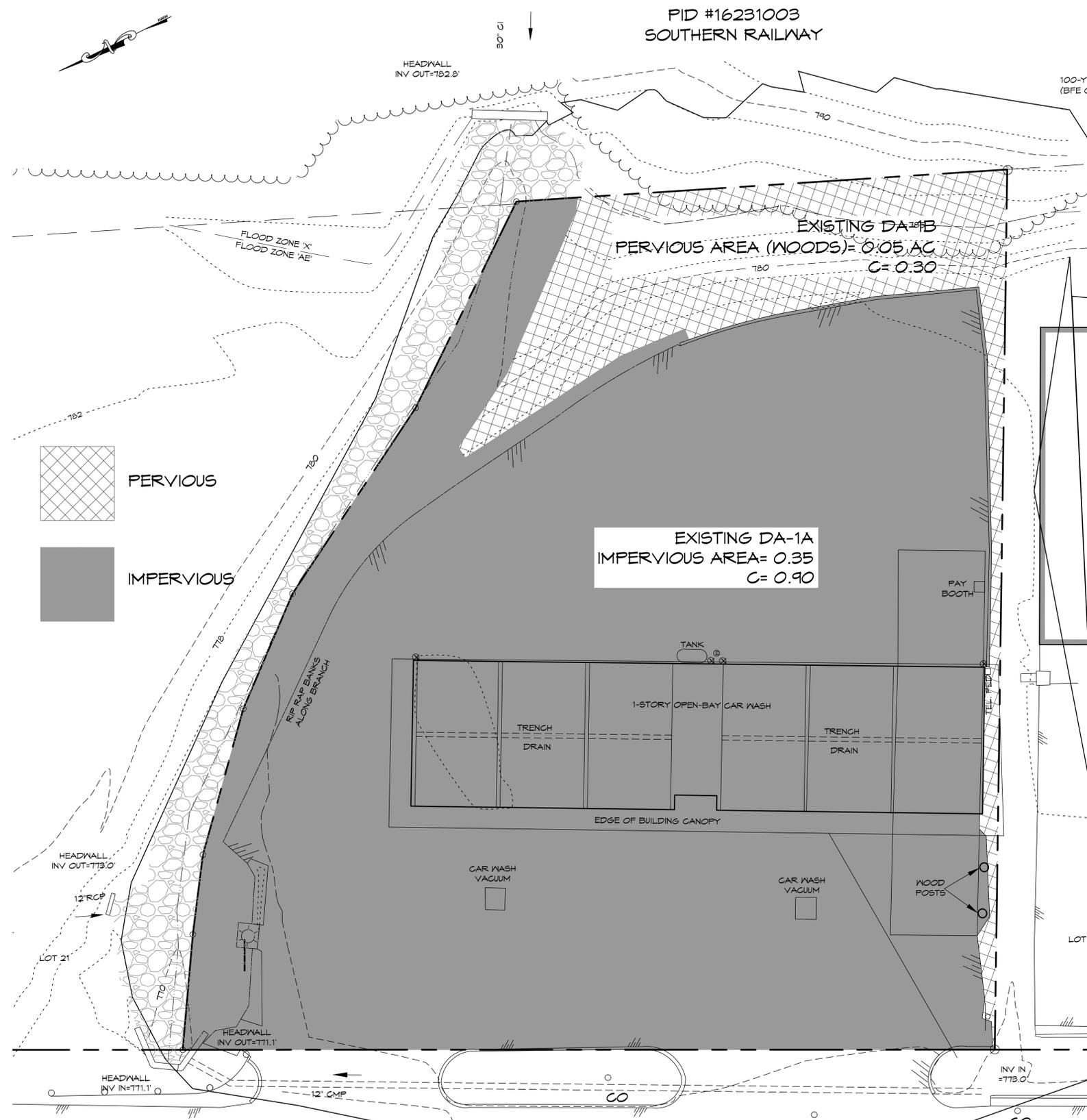
**EXISTING  
 ONSITE  
 DRAINAGE  
 DIVIDES**



COMMISSION No.  
 15021  
 SHEET  
**SP-11**

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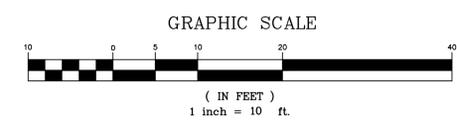
PID #16231003  
 SOUTHERN RAILWAY



EXISTING CONDITIONS					
Drainage Area	Square Footage	Average	C	CA	Tc
1a (Impervious)	15239	0.35	0.90	0.31	5.0
1b (Pervious- Grass)	2293	0.05	0.30	0.02	5.0
Subtotal DA #1		0.40		0.33	
Area		0.40 Acres			
C-Value		0.82			5.0
i10 for given Tc=	5.67 in/hr				
Q10= CiA=	1.87 CFS				

**EXISTING SITE IMPERVIOUS AREAS**  
 IMPERVIOUS AREA= 0.35 AC  
 PERVIOUS AREA (WOODS) = 0.05 AC

**WATER QUALITY**  
 SEE THE FOLLOWING SHEET FOR WATER QUALITY  
 CALCULATION SHEETS AND SUMMARY.



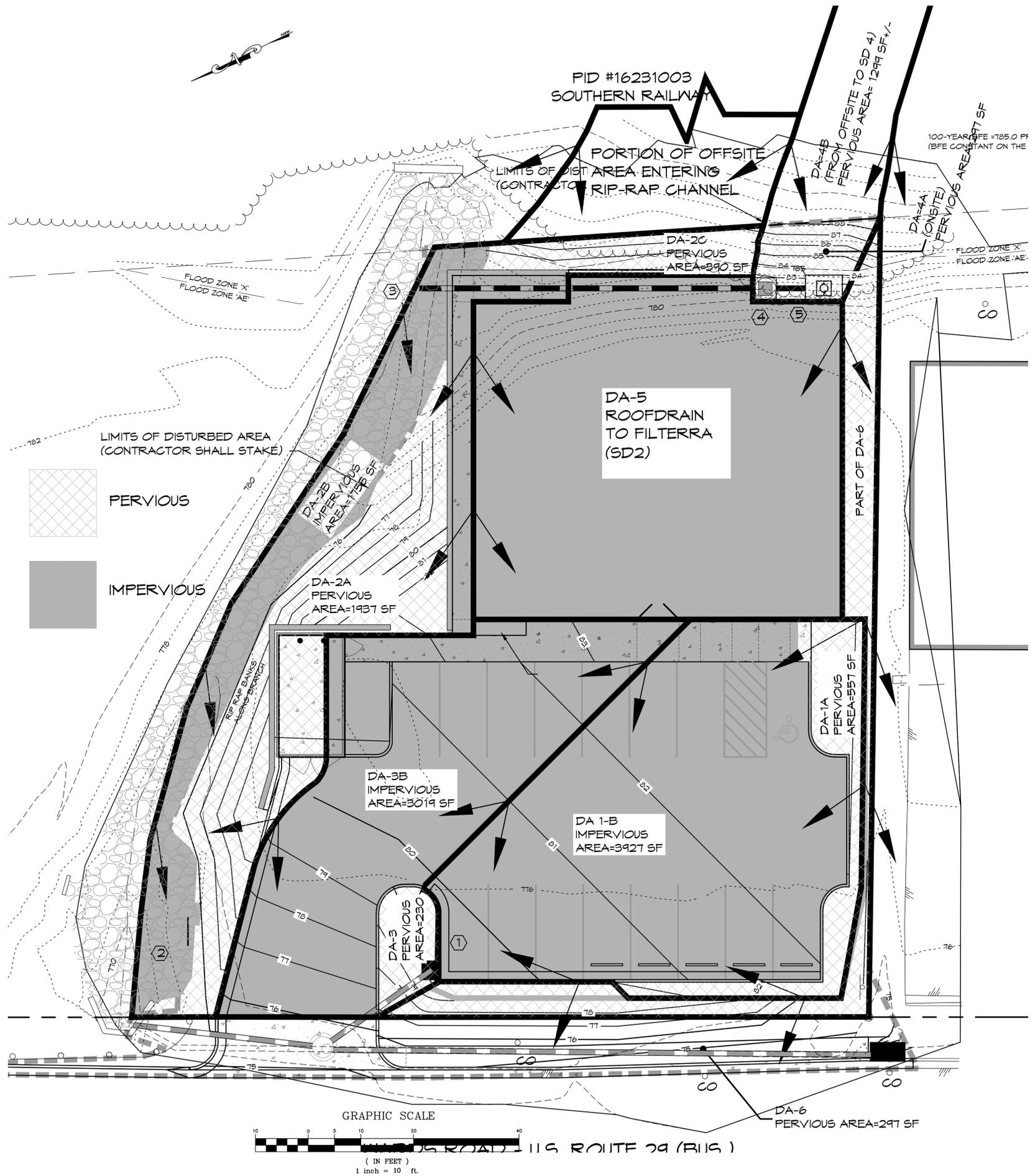
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PROPOSED CONDITIONS					
Drainage Area	Square Footage	Average	C	CA	Tc
1a	557	0.01	0.30	0.00	5.0
1b	3927	0.09	0.90	0.08	5.0
Subtotal DA #1		0.10		0.08	
Area		0.10 Acres			
C-Value		0.83			
2a	1937	0.04	0.3	0.01	5.0
2b	1755	0.04	0.9	0.04	5.0
2c	390	0.01	0.3	0.00	
Subtotal DA #2		0.09		0.05	
Area		0.09 Acres			
C-Value		0.53			
3a	230	0.01	0.30	0.00	5.0
3b	3019	0.07	0.9	0.06	5.0
Subtotal DA #1		0.07		0.06	
Area		0.07 Acres			
C-Value		0.86			
4a	297	0.01			Acres
C-Value		0.30			
5	4373		0.10 Acres		
C-Value		0.90			
6	1045		0.02 Acres		
C-Value		0.30			
<b>Totals:</b>					
Pervious Area (Grass), C= 0.30		0.10 Acres			
Impervious Area (Pavement), C= 0.90		0.30 Acres			
Total Area=		0.40 Acres (check)			
C-Value (Average)=		0.75			
i10 for given Tc=		5.67 in/hr			
Q10= CiA=		1.71 CFS			

Design Flows Summary			
ID	Analysis Point (48" Culvert Under Wards Road)		
Pre Development	Design Event Frequency 2 years	Design Event Frequency 10 years	
	Rainfall Intensity	4.99 in/hr	5.61 in/hr
	Time of Concentration	5	5
	C-Value	0.82	0.82
	Drainage Area (Acres)	0.4	0.4
	Design Flow (cfs)	1.64	1.84
Post Development	Design Event Frequency 2 years	Design Event Frequency 10 years	
	Rainfall Intensity	4.99 in/hr	5.61 in/hr
	Time of Concentration	5	5
	C-Value	0.75	0.75
	Drainage Area (Acres)	0.4	0.4
	Design Flow (cfs)	1.50	1.68

**PROPOSED SITE IMPERVIOUS AREAS**  
 IMPERVIOUS AREA= 0.30 AC  
 PERVIOUS AREA (GRASS) = 0.10 AC  
 PERVIOUS AREA (WOODS) = 0.00 AC

**WATER QUALITY**  
 SEE THE FOLLOWING SHEET FOR  
 WATER QUALITY CALCULATION SHEETS  
 AND SUMMARY.



DATE: June 26, 2015

REVISIONS	△
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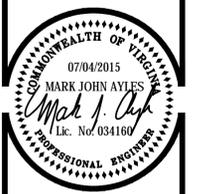
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NEW CONSTRUCTION FOR  
**WARDS ROAD RETAIL**  
 3809 Wards Road Lynchburg, Virginia 24502

DRAWN BY: mja  
 CHECKED BY: mja

**PROPOSED ONSITE DRAINAGE DIVIDES**



COMMISSION No.  
 15021  
 SHEET  
**SP-12**

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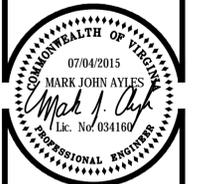
656 ELM AVENUE, S.W.  
 P.O. BOX 1034  
 ROANOKE, VIRGINIA 24005-1034

TEL (540) 342-4002  
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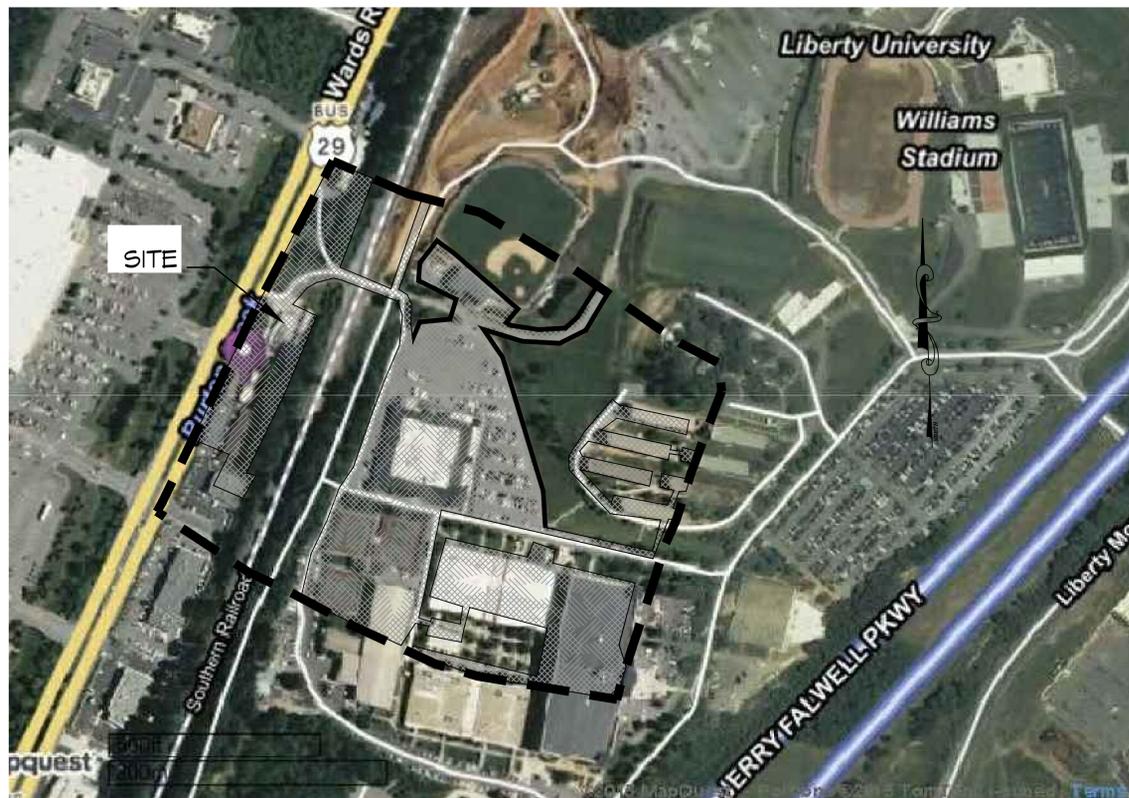
**NEW CONSTRUCTION FOR WARDS ROAD RETAIL**  
 3809 Wards Road Lynchburg, Virginia 24502

DRAWN BY: mja  
 CHECKED BY: mja

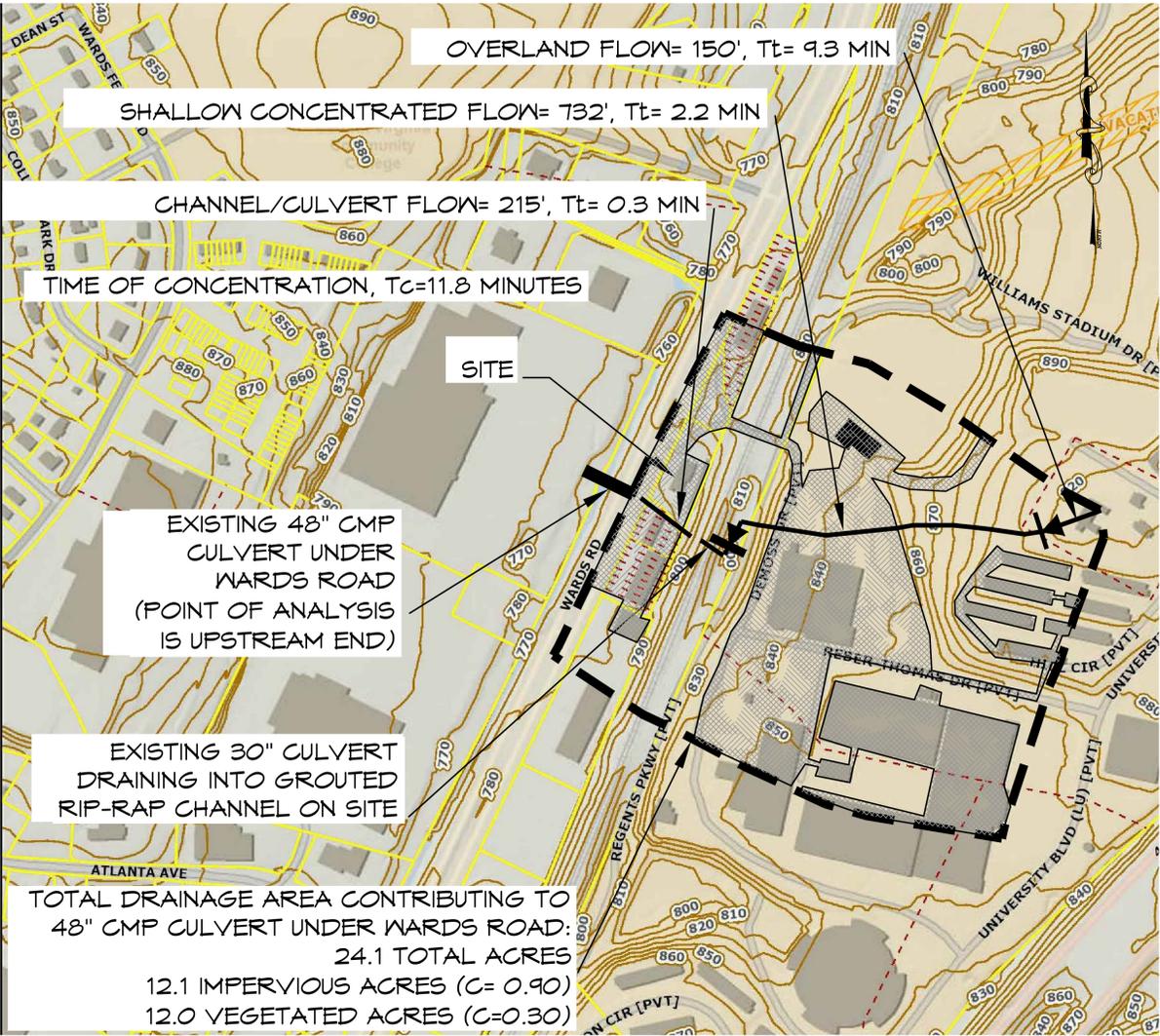
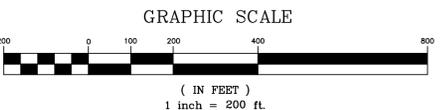
**OFFSITE DRAINAGE DIVIDES**



COMMISSION No. 15021  
 SHEET **SP-14**



THE AERIAL IMAGE ABOVE PROVIDES A MORE ACCURATE DEPICTION OF IMPERVIOUS AREAS AND WAS USED TO OUTLINE THEM FOR USE IN THE DRAINAGE DIVIDE MAP TO THE RIGHT



HUGHES ASSOCIATES ARCHITECTS	PROJECT: 3809 Wards Road
	TYPE: PREL: x FINAL: _____
	CONTENTS: SHEET NO: DATE: 6/18/2015
	COMM. NO: 15021 CAL BY: mja CKD BY: _____

RATIONAL METHOD TIME OF CONCENTRATION AND PEAK DISCHARGE			
AREA = 24.10 ACRES	STORM:	X 2 Year	
		X 5 Year	
		X 10 Year	
		X 25 Year	
		X 50 Year	
		X 100 Year	

PRE	POST	DEVELOPMENT
X		

STRUCTURE STA	LOCATION	OFFSET	LT	RT

RUNOFF COEFFICIENT:			
C FACTOR	DESCRIPTION	AREA	C X A
0.90	Pavement	12.10 AC	10.890
0.45	Steep Grass (Cut/Fill)	0.00 AC	0.000
0.35	Grass (Good)	12.00 AC	4.200
		0.00 AC	0.000
TOTAL=		24.10 AC	15.090
C <sub>avg</sub> =		C X A	A = 0.63

OVERLAND FLOW:			
MAX LENGTH OF TRAVEL	% SLOPE	C FACTOR	Tc
150 FT	10%	0.35	9.3 MIN.
0 FT			#DIV/0! MIN.
0 FT			#DIV/0! MIN.
0 FT			#DIV/0! MIN.
TIME OF CONCENTRATION =			9.3 MIN.

SHALLOW CONCENTRATED FLOW:				
MAX LENGTH OF TRAVEL	% SLOPE	PAVED	VELOCITY	Tc
355 FT	17%		6.702 FT/S	0.9 MIN.
297 FT	7%	yes	5.404 FT/S	0.9 MIN.
80 FT	5%		3.613 FT/S	0.4 MIN.
0 FT			0 FT/S	#DIV/0! MIN.
TIME OF CONCENTRATION =				2.2 MIN.

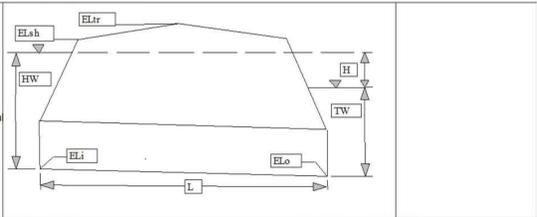
CHANNEL FLOW:			
HEIGHT OF MOST REMOTE PT	MAX. LENGTH OF TRAVEL	PAVED	Tc
20.0 FT	215 FT	yes	0.3 MIN.
0.0 FT	0 FT		#DIV/0! MIN.
0.0 FT	0 FT		#DIV/0! MIN.
0.0 FT	0 FT		#DIV/0! MIN.
TIME OF CONCENTRATION =			0.3 MIN.
Tc = SUM(TIME OF CONCENTRATION) =			11.7 MIN.

PEAK DISCHARGE:			
RAINFALL INTENSITY		Q = CIAF	
i(2 yr.) = 3.13 IN/H	Q(2 yr.) = 47.16 CFS		
i(5 yr.) = 3.77 IN/H	Q(5 yr.) = 56.91 CFS		
i(10 yr.) = 4.27 IN/H	Q(10 yr.) = 64.46 CFS		
i(25 yr.) = 4.93 IN/H	Q(25 yr.) = 81.85 CFS		
i(50 yr.) = 5.24 IN/H	Q(50 yr.) = 94.96 CFS		
i(100 yr.) = 5.73 IN/H	Q(100 yr.) = 108.14 CFS		

**48" CMP Culvert Under Wards Road**

PROJECT: Mattress Firm STATION: STR SHEET: CULVERT DESIGN FORM DESIGNER / DATE:

HYDROLOGICAL DATA		CULVERT TYPE: CMP	
METHOD: RATIONAL	ENT. TYPE:	NO. OF PIPES = 1	feet
DRAINAGE AREA:		DIAMETER = 4	feet
RI (YEARS) FLOW (CFS) TW (FT)		MANNING'S "N" = 0.021	Corrugated Metal
10 64.46 0		Ke = 0.5	Square End w/Headwa
		ELi = 771.10	Assumed
		ELo = 765.00	Assumed
		ELtr = 775.25	Assumed
		ELah = 775.00	Assumed
		L = 100	Assumed



CULVERT DESCRIPTION:		HEADWATER CALCULATIONS										CONTROL	APPROX	COMMENTS	
MATERIAL-SHAPE-SIZE-ENTRANCE	TOTAL FLOW Q (CFS)	FLOW PER BARREL Q/N	INLET HWI/D	CONTROL HWI	EL(h)	TW	dc	(dc+D)/2	ho	Ke	H	EL(ho)	HW ELEV.	OUTLET VEL.	
48" Diameter Corrugated Metal Pipe	64.46	64.46	0.90	3.59	774.69	0	2.45	3.23	3.23	0.5	1.14	769.36	774.69	7.99	I.C.

- TECHNICAL FOOTNOTES :**
- 1) HWI BASED ON POLYNOMIAL BEST-FIT EQUATIONS FROM THE FHA PUBLICATION ENTITLED CALCULATOR DESIGN SERIES #3
  - 2) HWI MAY NOT BE ACCURATE FOR VALUES < 0.5D AND > 4.5D
  - 3) EL(h) = HWI + ELI (INVERT OF INLET CONTROL SECTION)
  - 4) TW BASED ON DOWNSTREAM CONTROL OR FLOW DEPTH IN CHANNEL
  - 5) ho = TW OR (dc+D)/2 WHICHEVER IS GREATER
  - 6) H = (1 + Ke + (29 m^2 L) / R^1.33) V^2 / 2g
  - 7) EL(ho) = ELo + H + ho

**PAPERWORK BURDEN DISCLOSURE NOTICE**

Public reporting burden for this data collection is estimated to average 1.63 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the form. This collection is required to obtain or retain benefits. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington, VA 20598-3005, Paperwork Reduction Project (1660-0015). **NOTE: Do not send your completed form to this address.**

This form may be completed by the property owner, property owner's agent, licensed land surveyor, or registered professional engineer to support a request for a Letter of Map Amendment (LOMA), Conditional Letter of Map Amendment (CLOMA), Letter of Map Revision Based on Fill (LOMR-F), or Conditional Letter of Map Revision Based on Fill (CLOMR-F) for existing or proposed, single or multiple lots/structures. In order to process your request, all information on this form must be completed *in its entirety*, unless stated as optional. **Incomplete submissions will result in processing delays.** Please check the item below that describes your request:

<input type="checkbox"/> LOMA	A letter from DHS-FEMA stating that an existing structure or parcel of land that has not been elevated by fill (natural grade) would not be inundated by the base flood.
<input type="checkbox"/> CLOMA	A letter from DHS-FEMA stating that a proposed structure that is not to be elevated by fill (natural grade) would not be inundated by the base flood if built as proposed.
<input type="checkbox"/> LOMR-F	A letter from DHS-FEMA stating that an <b>existing</b> structure or parcel of land that has been <b>elevated by fill</b> would not be inundated by the base flood.
<input checked="" type="checkbox"/> CLOMR-F	A letter from DHS-FEMA stating that a parcel of land or <b>proposed</b> structure that will be <b>elevated by fill</b> would not be inundated by the base flood if fill is placed on the parcel as proposed or the structure is built as proposed.

**Fill** is defined as material from any source (including the subject property) placed that raises the ground to or above the Base Flood Elevation (BFE). The common construction practice of removing unsuitable existing material (topsoil) and backfilling with select structural material is not considered the placement of fill if the practice does not alter the existing (natural grade) elevation, which is at or above the BFE. **Fill that is placed before the date of the first National Flood Insurance Program (NFIP) map showing the area in a Special Flood Hazard Area (SFHA) is considered natural grade.**

Has fill been placed on your property to raise ground that was previously below the BFE?  Yes  No      If yes, when was fill placed?      /  
 month/year

Will fill be placed on your property to raise ground that is below the BFE?  Yes\*  No      If yes, when will fill be placed?      06/01/2015  
 month/year

\* If yes, Endangered Species Act (ESA) compliance must be documented to FEMA prior to issuance of the CLOMR-F determination (please refer page 4 to the MT-1 instructions).

- Street Address of the Property (if request is for multiple structures or units, please attach additional sheet referencing each address and enter street names below):  
 3809 Wards Road Lynchburg, VA 24502
- Legal description of Property (Lot, Block, Subdivision or abbreviated description from the Deed):  
 Montview Farm
- Are you requesting that a flood zone determination be completed for (check one):
  - Structures on the property? What are the dates of construction? \_\_\_\_\_ (MM/YYYY)
  - A portion of land within the bounds of the property? (A certified metes and bounds description and map of the area to be removed, certified by a licensed land surveyor or registered professional engineer, are **required**. For the preferred format of metes and bounds descriptions, please refer to the MT-1 Form 1 Instructions.)
  - The entire legally recorded property?
- Is this request for a (check one):
  - Single structure
  - Single lot
  - Multiple structures (How many structures are involved in your request? List the number: \_\_\_\_\_)
  - Multiple lots (How many lots are involved in your request? List the number: \_\_\_\_\_)

In addition to this form (MT-1 Form 1), please complete the checklist below. **ALL** requests must include one copy of the following:

- Copy of the effective FIRM panel on which the structure and/or property location has been accurately plotted (property inadvertently located in the NFIP regulatory floodway will require Section B of MT-1 Form 3)
- Copy of the Subdivision Plat Map for the property **(with recordation data and stamp of the Recorder's Office)**  
**OR**
- Copy of the Property Deed **(with recordation data and stamp of the Recorder's Office)**, **accompanied by** a tax assessor's map or other certified map showing the surveyed location of the property relative to local streets and watercourses. The map should include at least one street intersection that is shown on the FIRM panel.
- Form 2 – Elevation Form. If the request is to remove the structure, and an Elevation Certificate has already been completed for this property, it may be submitted in lieu of Form 2. If the request is to remove the entire legally recorded property, or a portion thereof, the lowest lot elevation must be provided on Form 2.
- Please include a map scale and North arrow on all maps submitted.

For LOMR-Fs and CLOMR-Fs, the following must be submitted in addition to the items listed above:

- Form 3 – Community Acknowledgment Form

For CLOMR-Fs, the following must be submitted in addition to the items listed above:

- Documented ESA compliance, which may include a copy of an Incidental Take Permit, an Incidental Take Statement, a “not likely to adversely affect” determination from the National Marine Fisheries Service (NMFS) or the U.S. Fish and Wildlife Service (USFWS), or an official letter from NMFS or USFWS concurring that the project has “No Effect” on proposed or listed species or designated critical habitat. Please refer to the MT-1 instructions for additional information.

**Please do not submit original documents. Please retain a copy of all submitted documents for your records.**

**DHS-FEMA encourages the submission of all required data in a digital format (e.g. scanned documents and images on Compact Disc [CD]). Digital submissions help to further DHS-FEMA's Digital Vision and also may facilitate the processing of your request.**

**Incomplete submissions will result in processing delays. For additional information regarding this form, including where to obtain the supporting documents listed above, please refer to the MT-1 Form Instructions located at [http://www.fema.gov/plan/prevent/fhm/dl\\_mt-1.shtm](http://www.fema.gov/plan/prevent/fhm/dl_mt-1.shtm).**

**Processing Fee** (see instructions for appropriate mailing address; or visit [http://www.fema.gov/fhm/frm\\_fees.shtm](http://www.fema.gov/fhm/frm_fees.shtm) for the most current fee schedule)

Revised fee schedules are published periodically, but no more than once annually, as noted in the **Federal Register**. Please note: single/multiple lot(s)/structure(s) LOMAs are fee exempt. The current review and processing fees are listed below:

Check the fee that applies to your request:

- \$325 (single lot/structure LOMR-F following a CLOMR-F)
- \$425 (single lot/structure LOMR-F)
- \$500 (single lot/structure CLOMA or CLOMR-F)
- \$700 (multiple lot/structure LOMR-F following a CLOMR-F, or multiple lot/structure CLOMA)
- \$800 (multiple lot/structure LOMR-F or CLOMR-F)

Please submit the Payment Information Form for remittance of applicable fees. Please make your check or money order payable to:

**National Flood Insurance Program.**

**All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.**

Applicant's Name (required): **Becky Wright**

Company (if applicable): **Crossland Barnes Group**

Mailing Address (required): **1332 Main Street, Suite 30  
Columbia, SC 29201**

Daytime Telephone No. (required): **828-231-8506**

E-Mail Address (optional):  By checking here you may receive correspondence electronically at the email address provided:

Fax No. (optional):

Date (required)

\_\_\_\_\_  
Signature of Applicant (required)

DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY  
**ELEVATION FORM**

O.M.B. NO. 1660-0015  
 Expires February 28, 2014

**PAPERWORK BURDEN DISCLOSURE NOTICE**

Public reporting burden for this data collection is estimated to average 1.25 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the form. This collection is required to obtain or retain benefits. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington, VA 20598-3005, Paperwork Reduction Project (1660-0015). **NOTE: Do not send your completed form to this address.**

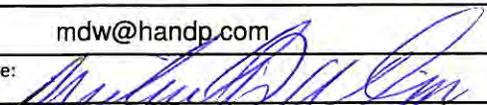
This form must be completed for requests and must be completed and signed by a registered professional engineer or licensed land surveyor. **A DHS - FEMA National Flood Insurance Program (NFIP) Elevation Certificate may be submitted in lieu of this form for single structure requests.**

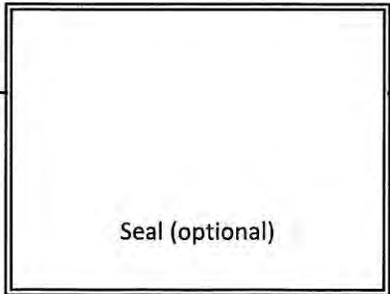
For requests to remove a structure on natural grade OR on engineered fill from the Special Flood Hazard Area (SFHA), submit the lowest adjacent grade (the lowest ground touching the structure), **including an attached deck or garage**. For requests to remove an entire parcel of land from the SFHA, provide the lowest lot elevation; or, if the request involves an area described by metes and bounds, provide the lowest elevation within the metes and bounds description. All measurements are to be rounded to nearest tenth of a foot. In order to process your request, all information on this form must be completed **in its entirety**. **Incomplete submissions will result in processing delays.**

- NFIP Community Number: 510093 Property Name or Address: 3809 Wards Road Lynchburg, VA 24502
- Are the elevations listed below based on  existing or  proposed conditions? (Check one)
- For the existing or proposed structures listed below, what are the types of construction? (check all that apply)  
 crawl space  slab on grade  basement/enclosure  other (explain)
- Has DHS - FEMA identified this area as subject to land subsidence or uplift? (see instructions)  Yes  No  
 If yes, what is the date of the current re-leveling? / (month/year)
- What is the elevation datum?  NGVD 29  NAVD 88  Other (explain)  
 If any of the elevations listed below were computed using a datum different than the datum used for the effective Flood Insurance Rate Map (FIRM) (e.g., NGVD 29 or NAVD 88), what was the conversion factor?  
 Local Elevation +/- ft. = FIRM Datum
- Please provide the Latitude and Longitude of the most upstream edge of the **structure** (in decimal degrees to the nearest fifth decimal place):  
 Indicate Datum:  WGS84  NAD83  NAD27 Lat. 37.35262 Long. 79.18319  
 Please provide the Latitude and Longitude of the most upstream edge of the **property** (in decimal degrees to the nearest fifth decimal place):  
 Indicate Datum:  WGS84  NAD83  NAD27 Lat. 37.35253 Long. 79.18297

Address	Lot Number	Block Number	Lowest Lot Elevation*	Lowest Adjacent Grade To Structure	Base Flood Elevation	BFE Source
3809 Wards Road Lynchburg, VA 24502			772.27	783.0	785	FIRM panel 0106 D

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: Michael D. Wilson	License No.: VA 44203	Expiration Date: 11/30/2015
Company Name: Hurt & Proffitt, Inc.	Telephone No: 434-847-7796	
Email: mdw@handp.com	Fax No. 434-847-0047	
Signature: 	Date: 3/26/15	



\* For requests involving a portion of property, include the lowest ground elevation within the metes and bounds description.  
 Please note: If the Lowest Adjacent Grade to Structure is the only elevation provided, a determination will be issued for the structure only.



DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY  
**COMMUNITY ACKNOWLEDGMENT FORM**

O.M.B. NO. 1660-0015  
 Expires February 28, 2014

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this data collection is estimated to average 1.38 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the form. This collection is required to obtain or retain benefits. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington, VA 20598-3005, Paperwork Reduction Project (1660-0015). NOTE: Do not send your completed form to this address.

This form must be completed for requests involving the existing or proposed placement of fill (complete Section A) **OR** to provide acknowledgment of this request to remove a property from the SFHA which was previously located within the regulatory floodway (complete Section B).

This form must be completed and signed by the official responsible for floodplain management in the community. **The six digit NFIP community number and the subject property address must appear in the spaces provided below. Incomplete submissions will result in processing delays.** Please refer to the MT-1 instructions for additional information about this form.

Community Number: 510093 Property Name or Address: 3809 Wards Road Lynchburg, VA 24502

**A. REQUESTS INVOLVING THE PLACEMENT OF FILL**

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision Based on Fill (LOMR-F) or Conditional LOMR-F request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a Conditional LOMR-F, will be obtained. For Conditional LOMR-F requests, the applicant has or will document Endangered Species Act (ESA) compliance to FEMA prior to issuance of the Conditional LOMR-F determination. For LOMR-F requests, I acknowledge that compliance with Sections 9 and 10 of the ESA has been achieved independently of FEMA's process. Section 9 of the ESA prohibits anyone from "taking" or harming an endangered species. If an action might harm an endangered species, a permit is required from U.S. Fish and Wildlife Service or National Marine Fisheries Service under Section 10 of the ESA. For actions authorized, funded, or being carried out by Federal or State agencies, documentation from the agency showing its compliance with Section 7(a)(2) of the ESA will be submitted. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by DHS-FEMA, all analyses and documentation used to make this determination. For LOMR-F requests, we understand that this request is being forwarded to DHS-FEMA for a possible map revision.

Community Comments:

Community Official's Name and Title: <i>(Please Print or Type)</i>		Telephone No.:
Community Name:	Community Official's Signature: (required)	Date:

**B. PROPERTY LOCATED WITHIN THE REGULATORY FLOODWAY**

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this request for a LOMA. We understand that this request is being forwarded to DHS-FEMA to determine if this property has been inadvertently included in the regulatory floodway. We acknowledge that no fill on this property has been or will be placed within the designated regulatory floodway. We find that the completed or proposed project meets or is designed to meet all of the community floodplain management requirements.

Community Comments:

**Not Applicable**

Community Official's Name and Title: <i>(Please Print or Type)</i>		Telephone No.:
Community Name:	Community Official's Signature (required):	Date:

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PAYMENT INFORMATION FORM

Community Name: City of Lynchburg  
Project Identifier: 510093

**THIS FORM MUST BE MAILED, ALONG WITH THE APPROPRIATE FEE, TO THE ADDRESS BELOW OR FAXED TO THE FAX NUMBER BELOW.**

**Please make check or money order payable to the National Flood Insurance Program.**

**Type of Request:**

- MT-1 application }  
 MT-2 application }

**LOMC Clearinghouse**  
847 South Pickett Street  
Alexandria, VA 22304-4605  
Attn.: LOMC Manager

- EDR application }

**FEMA Project Library**  
847 South Pickett Street  
Alexandria, VA 22304-4605  
FAX (703) 212-4090

Request No. (if known): \_\_\_\_\_ Check No.: \_\_\_\_\_ Amount: \_\_\_\_\_

INITIAL FEE\*  FINAL FEE  FEE BALANCE\*\*  MASTER CARD  VISA  CHECK  MONEY ORDER

\*Note: Check only for EDR and/or Alluvial Fan requests (as appropriate).

\*\*Note: Check only if submitting a corrected fee for an ongoing request.

**COMPLETE THIS SECTION ONLY IF PAYING BY CREDIT CARD**

**CARD NUMBER**

**EXP. DATE**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Month			Year

\_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_

NAME (AS IT APPEARS ON CARD): \_\_\_\_\_  
(please print or type)

ADDRESS: \_\_\_\_\_  
(for your credit card receipt-please print or type)

DAYTIME PHONE: \_\_\_\_\_

**PROPERTY ADDRESS**

3809 WARDS ROAD  
LYNCHBURG, VA 24502

**LEGAL DESCRIPTION:**

BEGINNING AT A REBAR FOUND ON THE EASTERN RIGHT-OF-WAY OF WARDS ROAD, BEING THE POINT OF BEGINNING; THENCE ALONG SAID RIGHT-OF-WAY NORTH 25 DEGREES 51 MINUTES 58 SECONDS EAST 139.85 FEET TO A POINT, PASSING THROUGH A PUNCH HOLE SET IN A CONCRETE WING WALL AT 137.92 FEET; THENCE LEAVING SAID RIGHT-OF-WAY ALONG THE CENTERLINE OF A BRANCH THE FOLLOWING COURSES AS IT MEANDERS SOUTH 59 DEGREES 03 MINUTES 43 SECONDS EAST 19.86 FEET, SOUTH 56 DEGREES 52 MINUTES 01 SECONDS EAST 13.77 FEET, SOUTH 48 DEGREES 35 MINUTES 19 SECONDS EAST 25.95 FEET, SOUTH 40 DEGREES 54 MINUTES 27 SECONDS EAST 21.48 FEET, SOUTH 30 DEGREES 27 MINUTES 31 SECONDS EAST 38.26 FEET, SOUTH 37 DEGREES 58 MINUTES 41 SECONDS EAST 39.40 FEET TO A POINT; THENCE LEAVING SAID CENTERLINE OF BRANCH SOUTH 22 DEGREES 09 MINUTES 10 SECONDS WEST 84.70 FEET TO A REBAR FOUND, PASSING THROUGH A REBAR SET AT 15.00 FEET; THENCE NORTH 63 DEGREES 18 MINUTES 30 SECONDS WEST 150.88 FEET TO THE POINT OF BEGINNING AND CONTAINING 0.402 ACRES.

**PLAT OF REFERENCE:**

PLAT BY HURT & PROFFITT, INC. TITLED "PLAT SHOWING LOTS 25 THROUGH 35, INCLUSIVE AND PART OF LOTS 22, 23 & 24 MONTVIEW BUSINESS AND INDUSTRIAL LOTS" AND DATED JAN. 24, 1978. RECORDED IN D.B. 550, PG. 406 OF THE CIRCUIT COURT CLERK'S OFFICE OF THE CITY OF LYNCHBURG.

Parcel ID No. 25702013  
Sales Price: \$377,500.00  
Assessed Value: \$568,300.00  
Company Providing Title Insurance: Old Republic National Title  
Prepared by and Return to the law office  
of Hugh J. Mc Jones, III, P.C.  
Post Office Box 4461  
Lynchburg, Virginia 24502  
File No. 1-15003  
# (Sales/Clients) (Emk) 15-11 - Jaeger to Van First, LLC

**THIS DEED**, dated this 7th day of May, 2012, by and between **LISA A. JAEGER**, Trustee under Jaeger Family Trust Agreement dated April 9, 1986, party of the first part, (Grantor); and **VAN FIRST, LLC**, a Virginia limited liability company, party of the second part, (Grantee);

**WITNESSETH:**

That for and in consideration of the sum of Five Dollars (\$5.00), cash in hand paid, and other valuable considerations, receipt of which is hereby acknowledged, the party of the first part does hereby grant, bargain, sell and convey, with General Warranty and English Covenants of Title, unto the party of the second part, in fee simple absolute, the following described real estate, to-wit:

<SEE ATTACHMENT "A">

WITNESS the following signatures and seals:

JAEGER FAMILY TRUST

By Lisa A. Jaeger, TTE (SEAL)  
LISA A. JAEGER, Trustee under Jaeger Family  
Trust Agreement dated April 9, 1986

STATE OF Virginia TO-WIT:  
CITY/COUNTY OF Bedford

The foregoing deed was acknowledged before me in my said State and City/County  
aforesaid on this 22<sup>nd</sup> day of May, 2012, by Lisa A. Jaeger, Trustee under  
Jaeger Family Trust Agreement dated April 9, 1986, pursuant to due authority.

My commission expires 10-31-2014

(SEAL)



Dwayne M. Huffman  
Notary Public

7063046  
Notary Registration Number

## ATTACHMENT "A"

## PARCEL 1:

All that certain tract or parcel of land, together with the buildings and improvements thereon and privileges and appurtenances thereunto belonging, lying, situate, and being in the City of Lynchburg, Virginia, along the easterly line of U.S. Route 29, containing 0.403 acre, consisting of a part of Lots 22, 23, 24, all of Lots 25 and 26, and a part of Lot 27, Montview Business and Industrial Lots, all as shown upon a plat entitled "Plat Showing Lots 25 through 36, Inclusive and Parts of Lots 22, 23 & 24 Montview Business and Industrial Lots Lynchburg, Virginia", dated January 24, 1978, made by E. W. Proffitt, C.L.S., a copy of which plat is attached to that certain deed dated March 16, 1978, and recorded in the Clerks' office of the Circuit Court for the City of Lynchburg, Virginia, in Deed Book 550, at Page 402.

It being a portion of the same property conveyed unto Lisa A. Jaeger, Trustee, under Jaeger Family Trust Agreement dated April 9, 1986, by a deed of correction dated January 17, 2002 of record in the aforesaid Clerk's Office at Instrument Number 020000765.

The real estate hereinabove described and conveyed and the warranties herein contained are expressly subject to all easements, rights of way, conditions, restrictions, and reservations affecting said real estate, whether recorded or unrecorded, or apparent from a visual inspection of the premises.

INSTRUMENT #120003354  
RECORDED IN THE CLERK'S OFFICE OF  
LYNCHBURG ON  
MAY 24, 2012 AT 10:49AM  
\$568.50 GRANTOR TAX WAS PAID AS  
REQUIRED BY SEC 58.1-802 OF THE VA. CODE  
STATE: \$284.25 LOCAL: \$284.25

EUGENE C. WINGFIELD, CLERK  
RECORDED BY: JAK



March 25, 2015

Becky Wright  
Crosland Barnes Group  
1332 Main Street  
Columbia, SC 29201



**RE: Proposed Mattress Firm Project  
Environmental Review  
3809 Wards Road  
Lynchburg, Virginia  
H&P Project 20141228**

Dear Becky,

We have reviewed potential environmental effects of the proposed Mattress Firm Project at 3809 Wards Road in Lynchburg, Virginia. The 0.41-acre subject property is currently developed as the Wash-N-Go self-service car wash. It is zoned as B-5 General Business, and is listed as Lynchburg tax parcel ID #25702013. According to Lynchburg Geographic Information System (GIS) records, the property was annexed from Campbell County in 1976, and the on-site brick and metal structure was constructed in approximately 1978. The 2015 total tax assessment value of the property (including improvements) is \$458,600. The majority of surrounding properties within 1,000-2,000 feet of the site have been previously developed for commercial, industrial, or institutional/education (Liberty University) purposes.

The previous disturbance, existing commercial land use, and relative absence of high-quality natural resources on-site suggest that the proposed project should have few significant environmental impacts. If on-site stormwater management measures are required for the proposed development, then this project may ultimately provide a net environmental benefit (by improving stormwater runoff treatment).

This letter provides a brief summary of our review, and subsequent conclusions. Additional information can be provided regarding specific questions, if necessary.

#### *Proposed Project*

The proposed project will likely involve demolition and removal of the existing pavement, mechanical/pumping equipment, structure, and vehicle washing bays. We understand that new development activities will include construction of a commercial structure, along with parking, landscaping, utilities, and potential stormwater management improvements.

#### *Existing Conditions*

The existing site is approximately 78% impervious, including pavement (90% asphalt + 10% concrete) and an estimated 3,000 sf (30'x100') of impervious roof area over six vehicle washing bays (five self-service, and one automated). There is a pump/mechanical room centrally located between the northern three vehicle bays and the southern three vehicle bays. The site also contains two commercial vehicle vacuums and a small landscaped street yard/parking lot island near Wards Road. The western edge of the subject property



has frontage on the northbound lanes of Wards Road, while the eastern boundary of the site is a steep slope topped by scrub-shrub and mixed hardwood/coniferous vegetation (and bordered by railroad right-of-way [ROW]) further to the east.

### *Water Quality*

The proposed project should have no significant negative impacts on water quality. Erosion and sediment control best management practices (BMP's) should be implemented during project construction, to help prevent downstream sediment impacts. Current stormwater management regulations will likely require improved on-site stormwater management measures, which should reduce the volume of stormwater runoff leaving the site, and should improve stormwater quality (thereby helping to lessen downstream water quality impacts).

### *Wetlands*

No potential wetland areas were observed on the subject property. Jurisdictional wetlands require the presence of hydrophytic vegetation, hydric soils, and wetland hydrology indicators. None of these were found to be present. This is likely due to the extensive on-site impervious cover, previous land development activities, steep eastern slope, and stormwater conveyance channel/drainage ditch (to the north). The U.S. Fish and Wildlife Service (USFWS) online Wetlands Mapper system shows no mapped wetlands within 1,000 feet of the site.

### *Streams*

An existing stormwater conveyance channel/drainage ditch is located along the northern boundary of the subject property. This channel is lined with riprap, and contains no apparent evidence of aquatic habitat, persistent pools, or other natural stream channel features. It is unlikely that regulatory agencies (the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality) would consider this a jurisdictional stream. No other apparent channels were observed on-site. Therefore, it is unlikely that the proposed project will result in any jurisdictional stream impacts.

### *Protected Species*

If a federal permit is required for a proposed land development project, then the federal permitting agency is typically required to ensure compliance with Section 7 of the Endangered Species Act (ESA). In order to document the potential presence of protected species nearby, records from three databases were reviewed. These included the U.S. Fish and Wildlife Service (USFWS) ECOS-iPAC online system, the Virginia Department of Game and Inland Fisheries (VDGIF) VAFWIS online system, and the Virginia Department of Conservation and Recreation (VDCR) Natural Heritage (NH) online system. These databases indicated the potential presence of the following species in the surrounding area:



<i>USFWS–ECOS (common name)</i>	<i>Scientific name</i>	<i>Organism</i>	<i>Classification</i>
No listed species	N/A	N/A	N/A
<i>VDGIF VAFWIS (common name)</i>	<i>Scientific name</i>	<i>Organism</i>	<i>Classification</i>
Loggerperch, Roanoke	<i>Percina rex</i>	Fish	FESE
Spiny mussel, James	<i>Pleurobema collina</i>	Mussel	FESE
Supercoil, spirit	<i>Paravitrea hera</i>	Snail	FSSE
Falcon, peregrine	<i>Falco peregrinus</i>	Bird	ST
Sandpiper, upland	<i>Bartramia longicauda</i>	Bird	ST
Shrike, loggerhead	<i>Lanius ludovicianus</i>	Bird	ST
Sparrow, Henslow's	<i>Ammodramus henslowii</i>	Bird	ST
Darter, Carolina	<i>Etheostoma collis</i>	Fish	ST
Madtom, orange fin	<i>Noturus gilberti</i>	Fish	FSST
Floater, green	<i>Lasmigona subviridis</i>	Mussel	ST
Pigtoe, Atlantic	<i>Fusconaia masoni</i>	Mussel	FSST
Shrike, migrant loggerhead	<i>Lanius ludovicianus migrans</i>	Bird	ST
Bat, northern long-eared	<i>Myotis septentrionalis</i>	Mammal	FP
<i>VDCR NH (common name)</i>	<i>Scientific name</i>	<i>Organism</i>	<i>Classification</i>
No data available	N/A	N/A	N/A

Since the subject property offers so little natural habitat already, and the proposed project will involve the replacement of one commercial use (existing car wash) with a different commercial use of similar extent (retail building), no significant protected species impacts are anticipated. At present, approximately 78% of the small 0.41-acre site is paved (or is covered by a commercial structure). Since there is no aquatic habitat on-site, the fish and freshwater mussel species listed above should not be affected by the proposed activities. The listed avian (bird) species are also not typically found in urbanized landscapes. The noted snail species is only found along stream channels, and the single bat species is in decline primarily due to disease (not loss of habitat).

### Habitat

Since the vast majority of the subject property has been previously covered by pavement and commercial structures/improvements, there is very little natural habitat remaining on-site. The scrub-shrub and forested habitat in the eastern and northeastern portions of the subject property is narrow (averaging less than 30' in width), and is adjacent to an active railroad track. However, the continuity of the forest cover on the adjacent railroad ROW and other nearby properties (in a general north-south direction) may provide some limited habitat connectivity for avian and small mammal species. It is unlikely that the proposed project will have significant negative impacts on high-quality natural habitats.

### Cultural Resources

Available records from the Virginia Department of Historic Resources (VDHR) V-CRIS system were evaluated as part of this environmental review effort. The eastern boundary of the subject property is located adjacent to one mapped cultural resource, the Lynchburg and Danville Railroad Historic District (VDHR ID #118-5286). This historic district includes approximately 70 miles of track, but was recommended by VDHR staff in 2014 as "Not Eligible for Listing" on the National Register of Historic Places (NRHP). No other mapped cultural resources were noted in close proximity to the subject property.



### *Soils*

According to the U.S. Department of Agriculture (USDA) Web Soil Survey (WSS), the entire subject property is underlain by Cullen loam (CuE2) soils, with 15-25% slopes (eroded). This well-drained soil series has a depth to water table of more than 80 inches. Cullen loam (CuE2) is not considered a hydric (wetland) soil, but is listed as a Farmland of Statewide Importance. In this specific instance, the agricultural suitability of the site has been significantly altered by previous land development activities.

### *Air Quality*

The proposed project has only minimal potential to impact air quality. Due to the proposed change in land use (from automobile-oriented services to commercial/retail sales), there may actually be a reduction in overall vehicular traffic to/from the subject property. This could result in a reduction of long-term localized air quality impacts. However, construction activities may still result in temporary (short-term) increases in air quality impacts.

### *Noise*

The proposed project is unlikely to create significant noise impacts. During construction, daytime localized noise levels may be higher, due to operation of construction equipment and vehicles. However, these should only be temporary (short-term) effects. Since the proposed land use (commercial/retail sales) may generate fewer vehicle trips per day, and will typically be active only during normal business hours (in contrast to the potential 24-hour operation of a self-service car wash), the Mattress Firm Project may actually result in lower long-term noise levels than the current land use (particularly late at night).

### *Floodplains*

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map 5100930106D (Panel 106 of 131, dated June 3, 2008), the subject property is located within the 100-year floodplain (Zone A) of Rock Castle Creek (located west of the site). The Base Flood Elevation (BFE) established for this portion of Rock Castle Creek is approximately 785' mean sea level (MSL). As a result, a flood study, No-Rise Certification, or Conditional Letter of Map Revision (C-LOMR) may be required prior to the construction of the proposed land development project. The project sponsor should contact the City of Lynchburg floodplain administrator, to discuss the proposed project and determine what steps and permits may be necessary.

### *Coastal Zone Management Act*

The subject property is located more than 100 miles west of the nearest coastal county, and should therefore have no Coastal Zone Management Act compliance issues.

### *Permitting*

Since no streams or wetlands should be affected by the proposed project, no Clean Water Act (CWA) Section 404/401 permit should be required. Due to the extent of anticipated land disturbance, a Virginia Stormwater Management Program (VSMP) permit will likely be required, along with a local Land Disturbance (LD) permit. The project sponsor should also



contact the Virginia Department of Transportation (VDOT), to determine if a new driveway permit will be necessary. Since the subject property is located within a FEMA 100-year floodplain, permitting through this agency may be required. To determine if other permits will be needed, the project sponsor should coordinate construction drawing review through City of Lynchburg Community Development staff.

*Conclusions*

Based on our observations, the proposed Mattress Firm Project is unlikely to have significant environmental impacts. Please contact us with any questions regarding this letter. We can be reached at 540.520.1533 or via email (at [bl@handp.com](mailto:bl@handp.com)).

Sincerely,  
**HURT & PROFFITT, INC.**

Ben Leatherland, PWD, PWS, CPESC  
Sr. Environmental Scientist

cc: Doyle Allen, Mike Wilson, H&P  
File

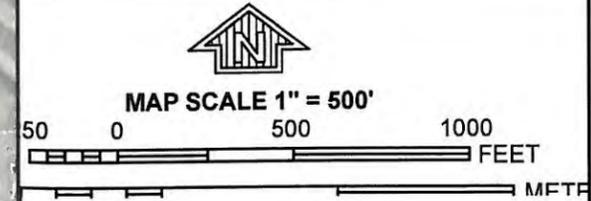
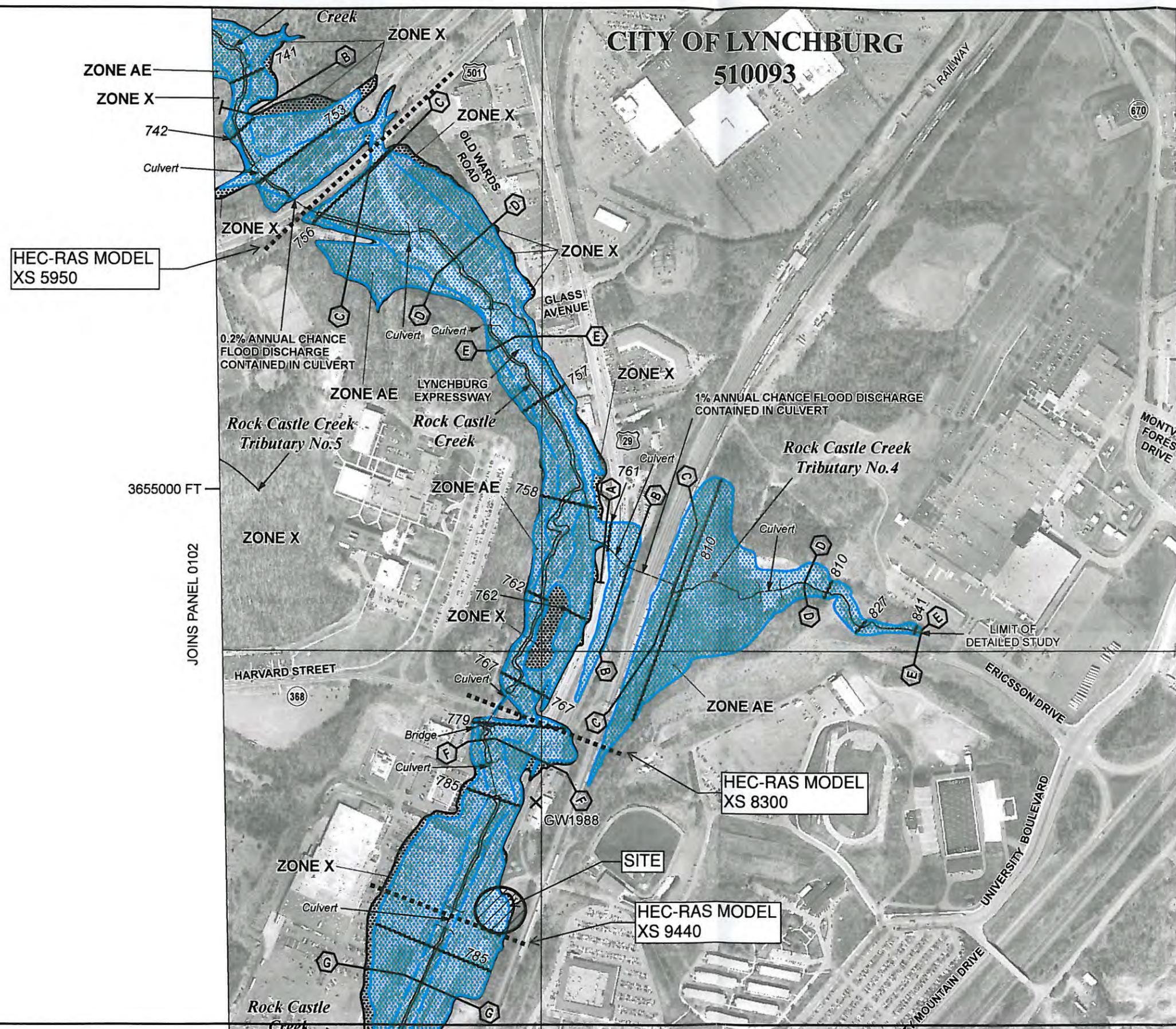


Figure 1: Subject property (note railroad track to east, Wards Road to west)



Figure 2: Existing Wash-N-Go self-serve car wash on-site (view east, from Wards Road)

**CITY OF LYNCHBURG  
510093**



HEC-RAS MODEL  
XS 5950

0.2% ANNUAL CHANCE  
FLOOD DISCHARGE  
CONTAINED IN CULVERT

1% ANNUAL CHANCE FLOOD DISCHARGE  
CONTAINED IN CULVERT

HEC-RAS MODEL  
XS 8300

HEC-RAS MODEL  
XS 9440

SITE

PANEL 0106D

**FIRM**  
FLOOD INSURANCE RATE MAP  
CITY OF LYNCHBURG,  
VIRGINIA  
INDEPENDENT CITY

PANEL 106 OF 131  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LYNCHBURG, CITY OF	510093	0106	D

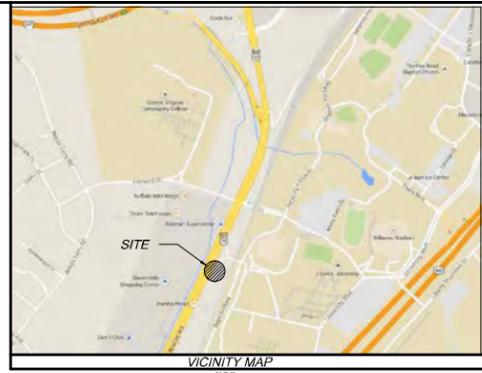
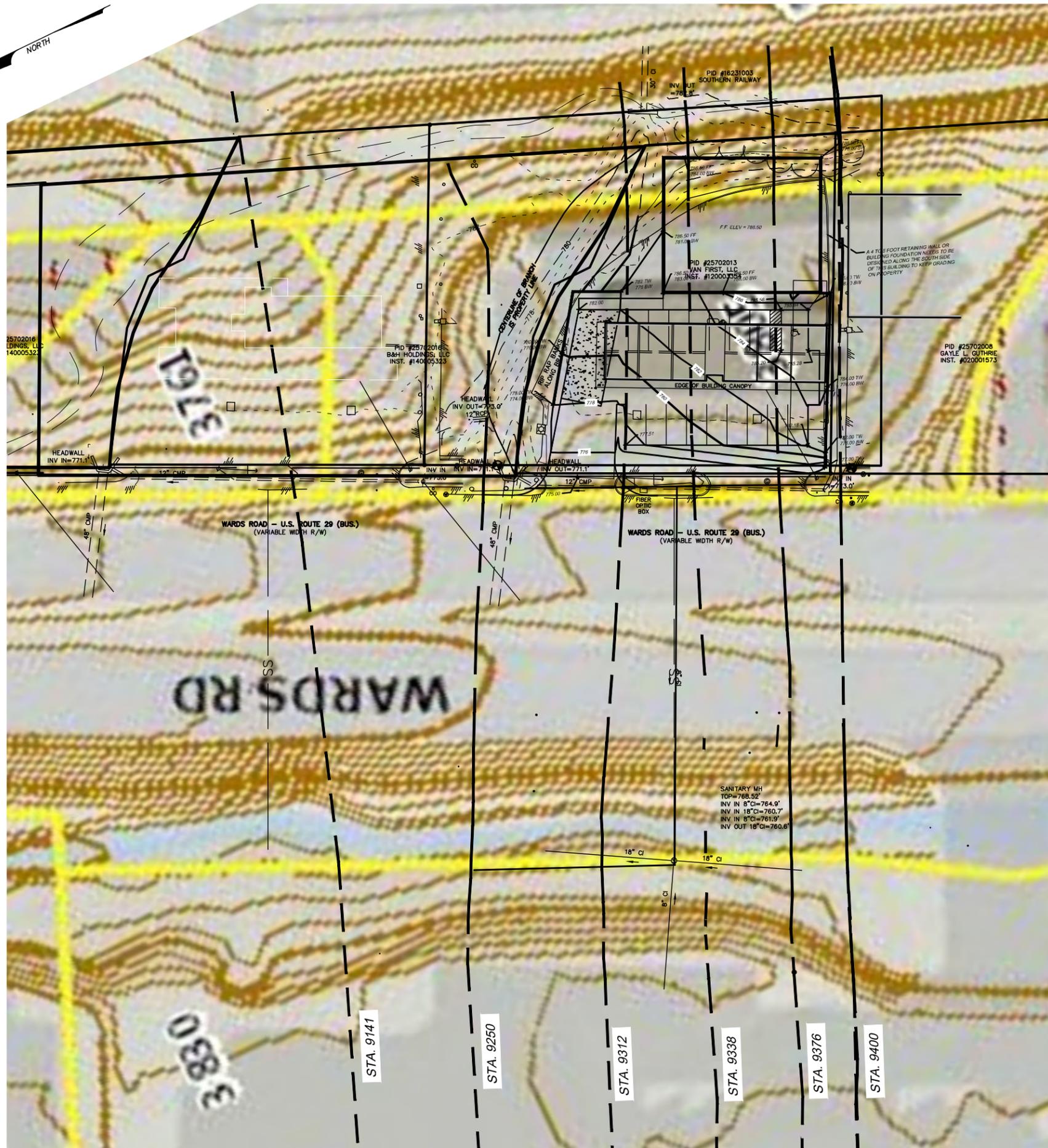
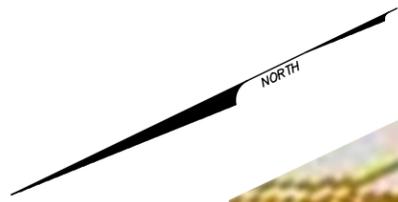
Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER  
5100930106D  
MAP REVISED  
JUNE 3, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



ENGINEERING SURVEYING PLANNING  
**HURT & PROFFITT**  
 INCORPORATED  
 2524 LANGHORNE ROAD  
 LYNCHBURG VA, 24501  
 800.242.4906 TOLL FREE  
 434.847.7796 MAIN  
 434.847.0047 FAX

**HEC RAS SECTIONS**  
 FOR  
**3809 WARDS ROAD**  
 LYNCHBURG, VIRGINIA

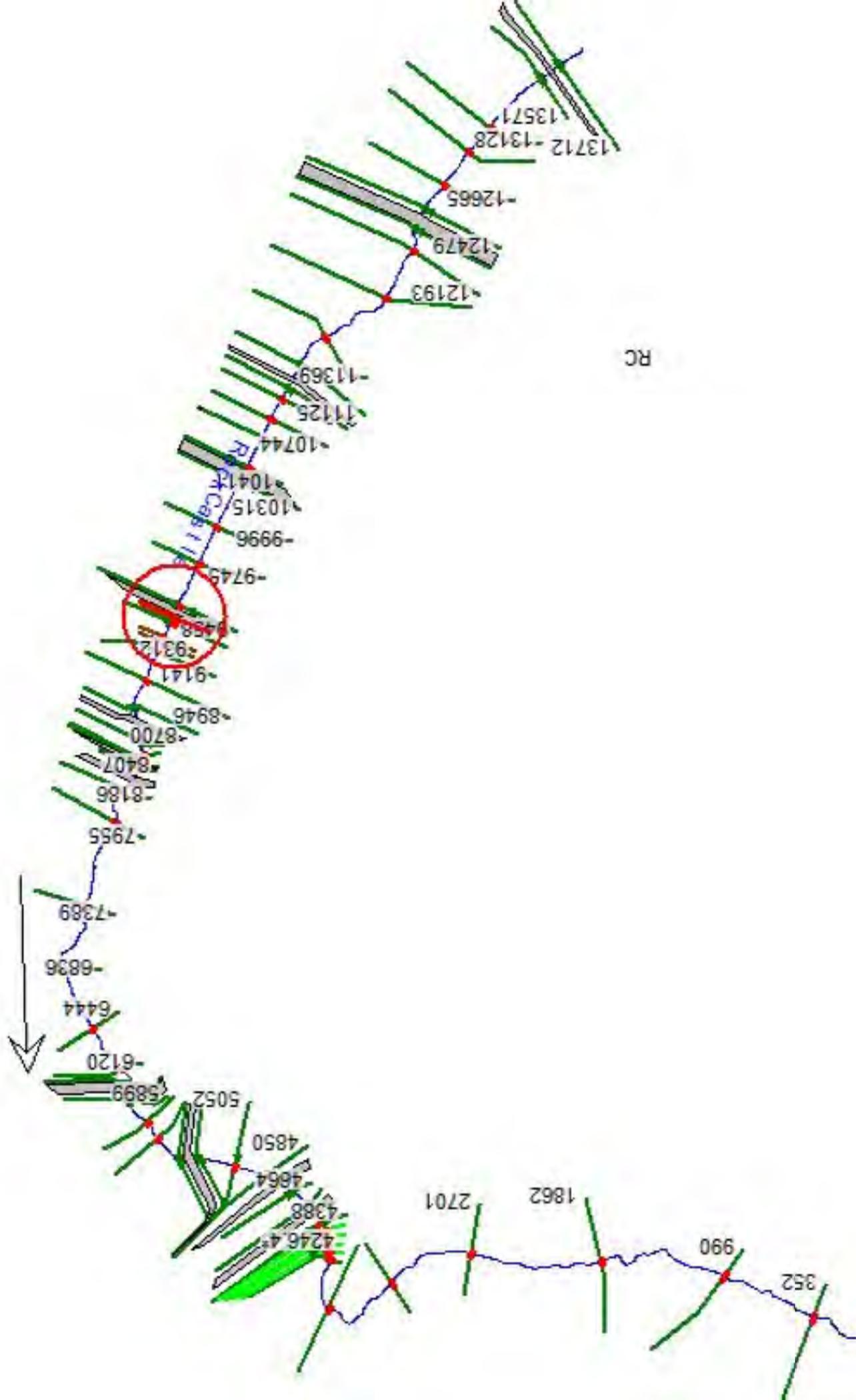
PROJECT NO. 20141228  
 G.L. NO.  
 FILE NO.  
 DATE: 03/26/2015  
 DRAWN BY: SHC  
 CHECKED BY: MDW

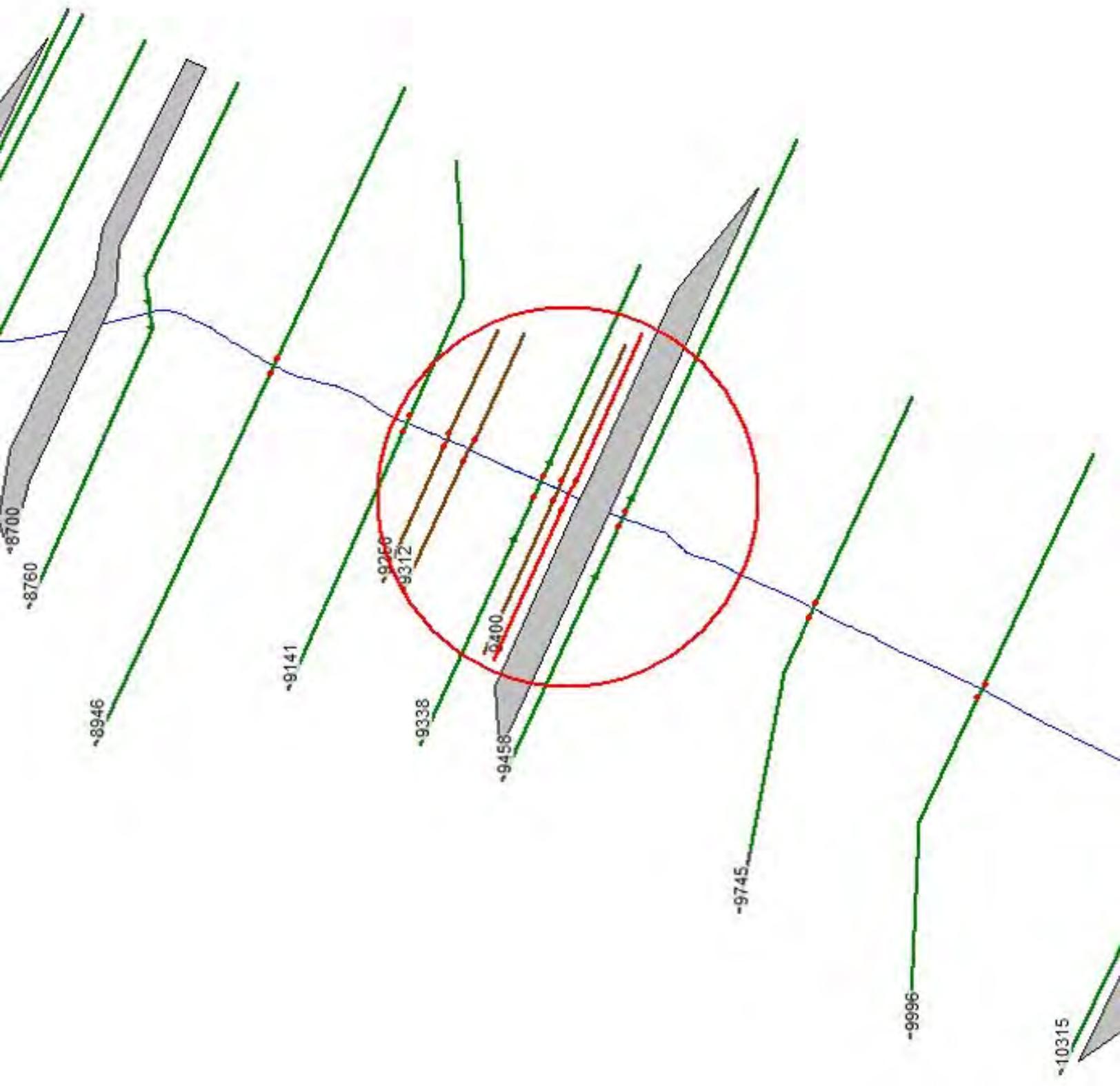


**HURT & PROFFITT**

SHEET NO.  
**1 OF 1**

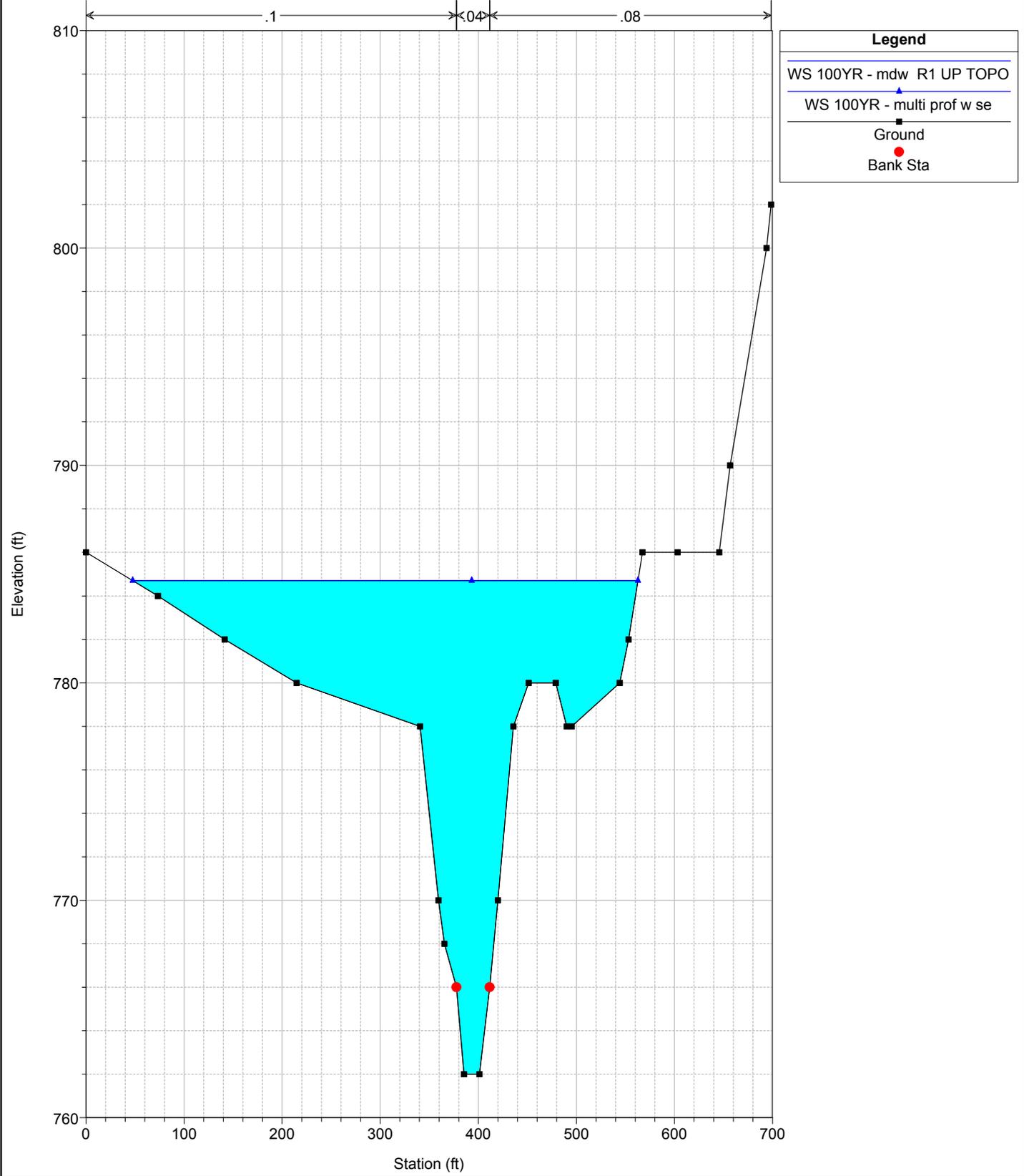




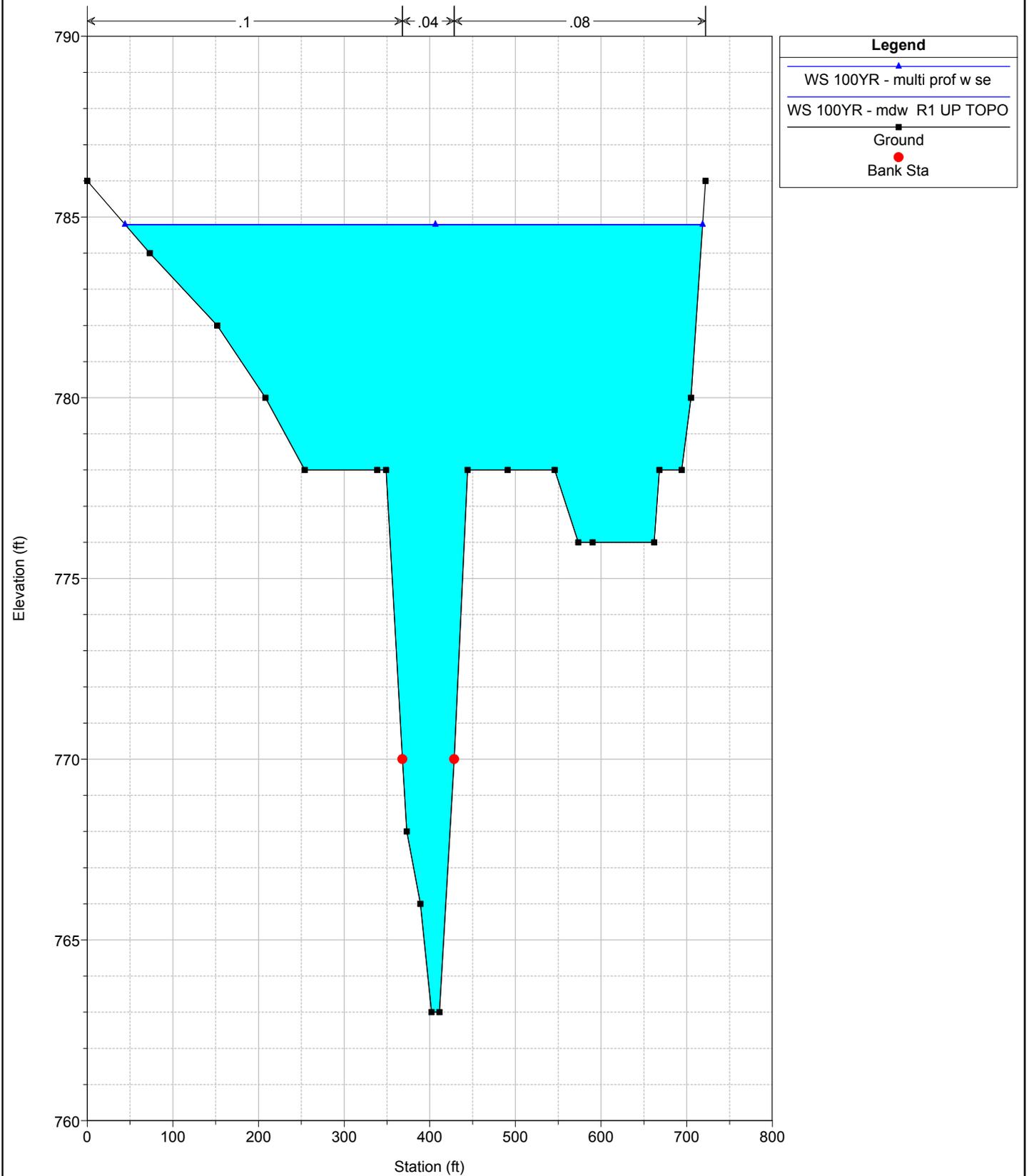


XS 9250

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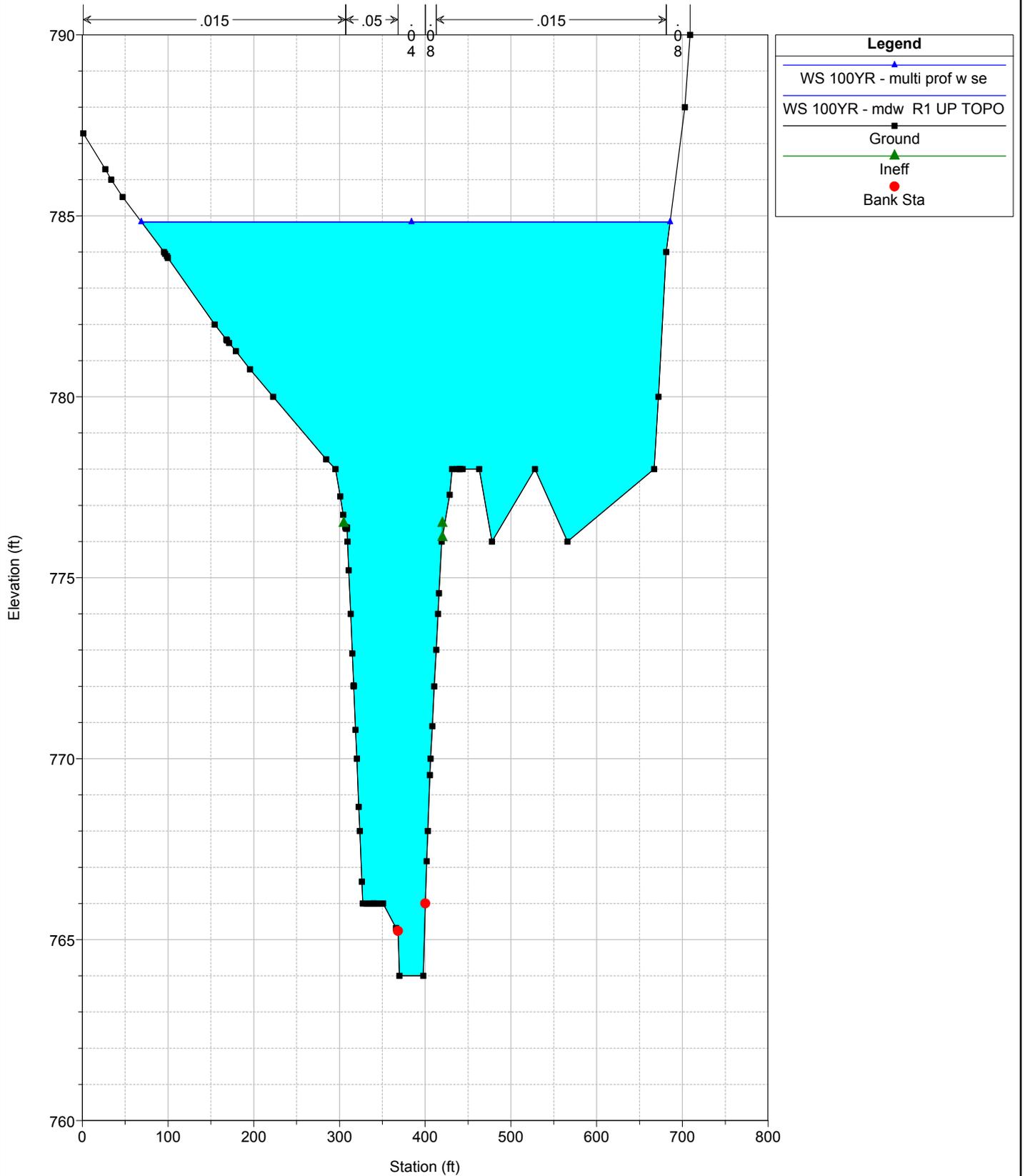


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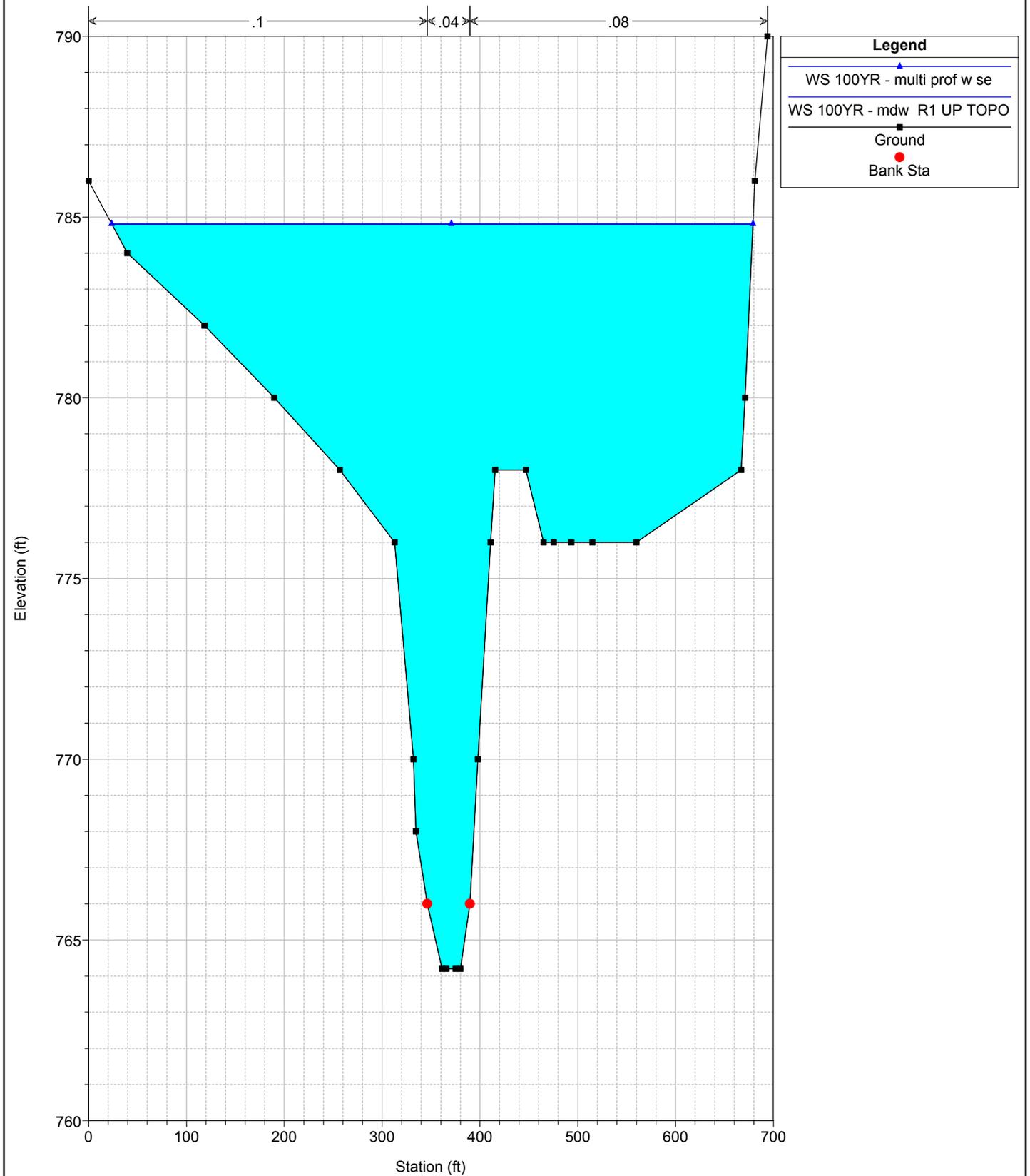
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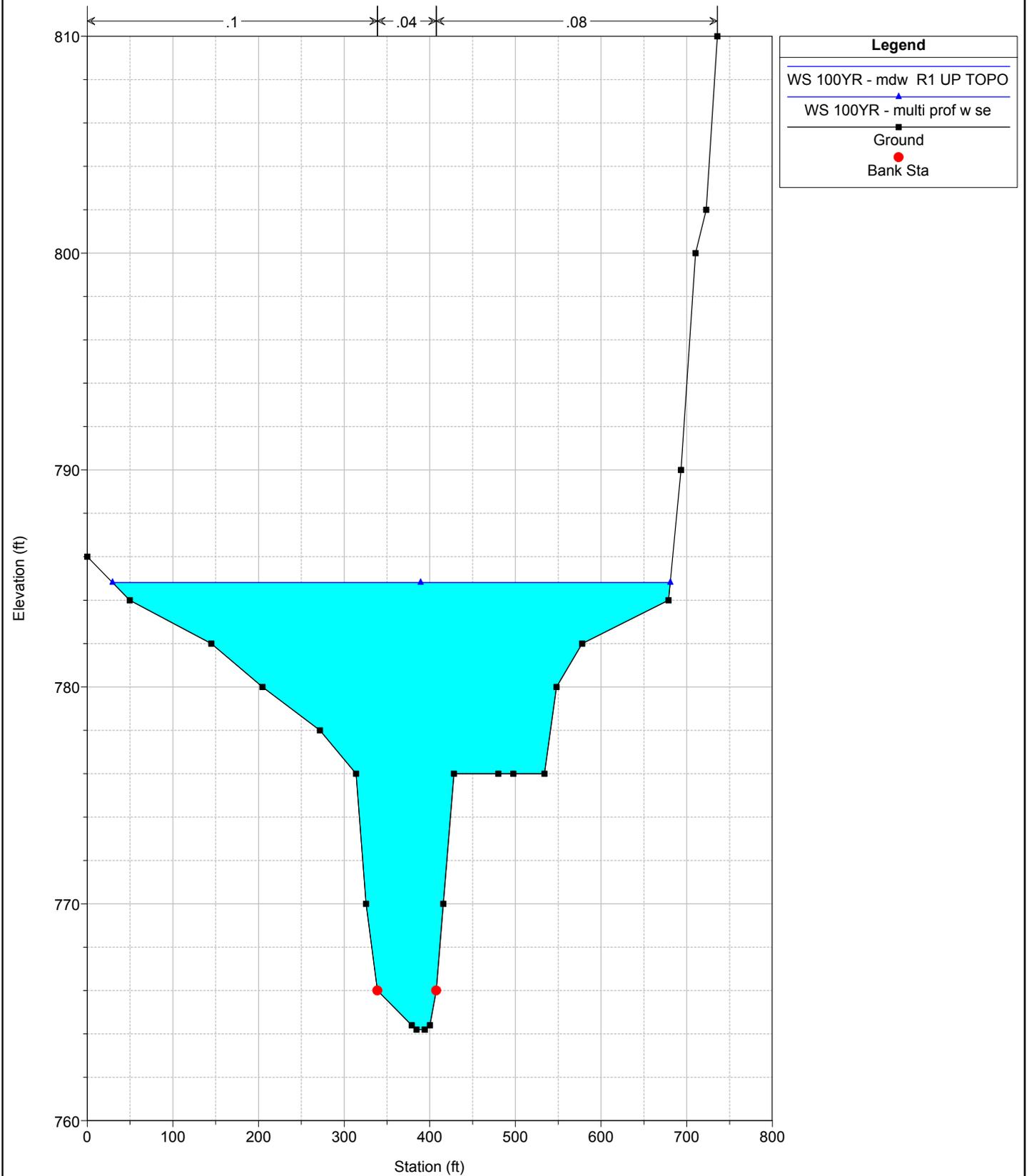
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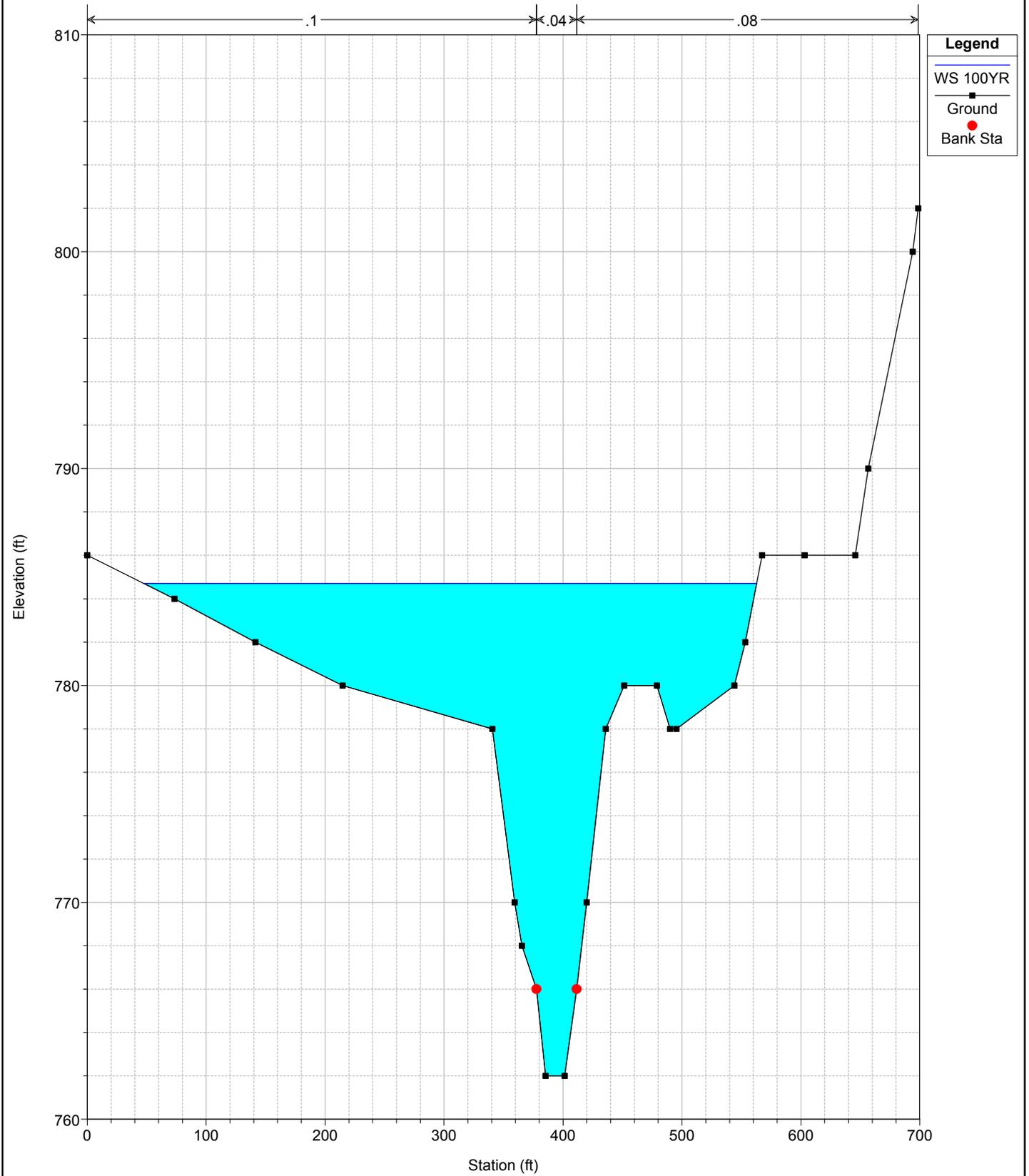
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Updated TOPO Plan: 1) mdw R1 UP TOPO 3/26/2015 2) multi prof w se 3/26/2015



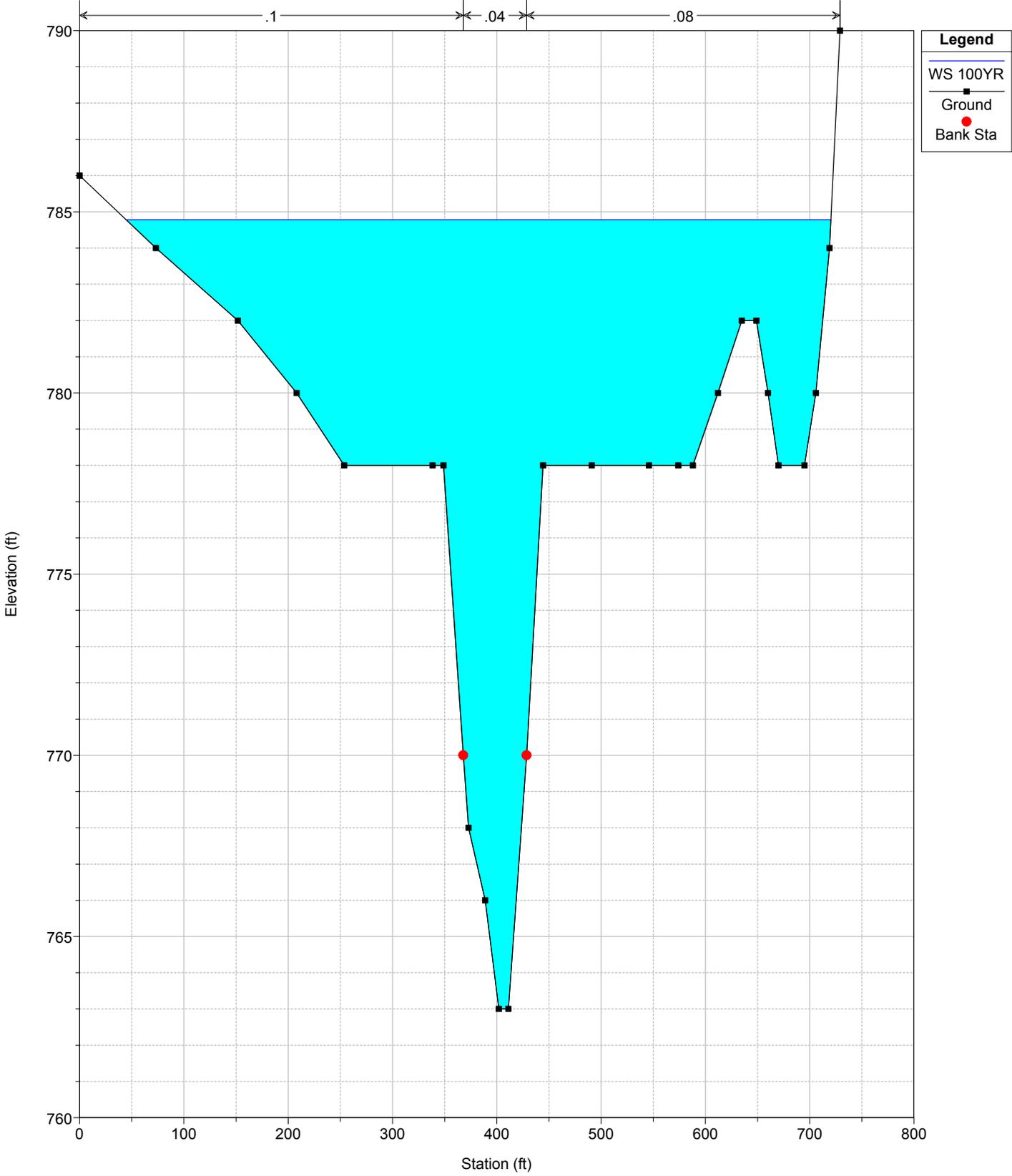
# XS 9250

Updated TOPO Plan: mdw add xs R1 UPDATE TOPO 3/26/2015



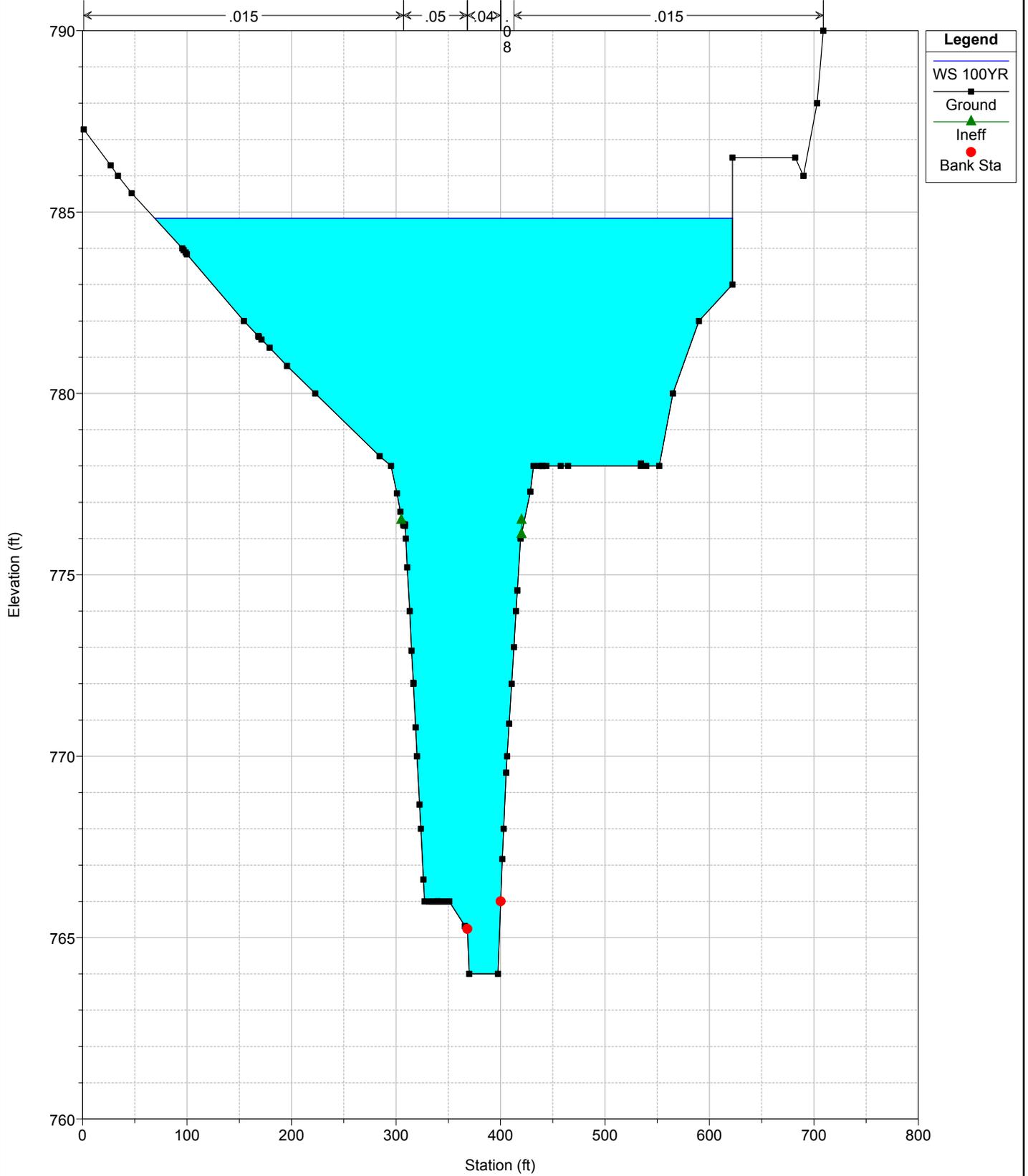
XS 9312

Updated TOPO Plan: mdw add xs R1 UPDATE TOPO 3/26/2015



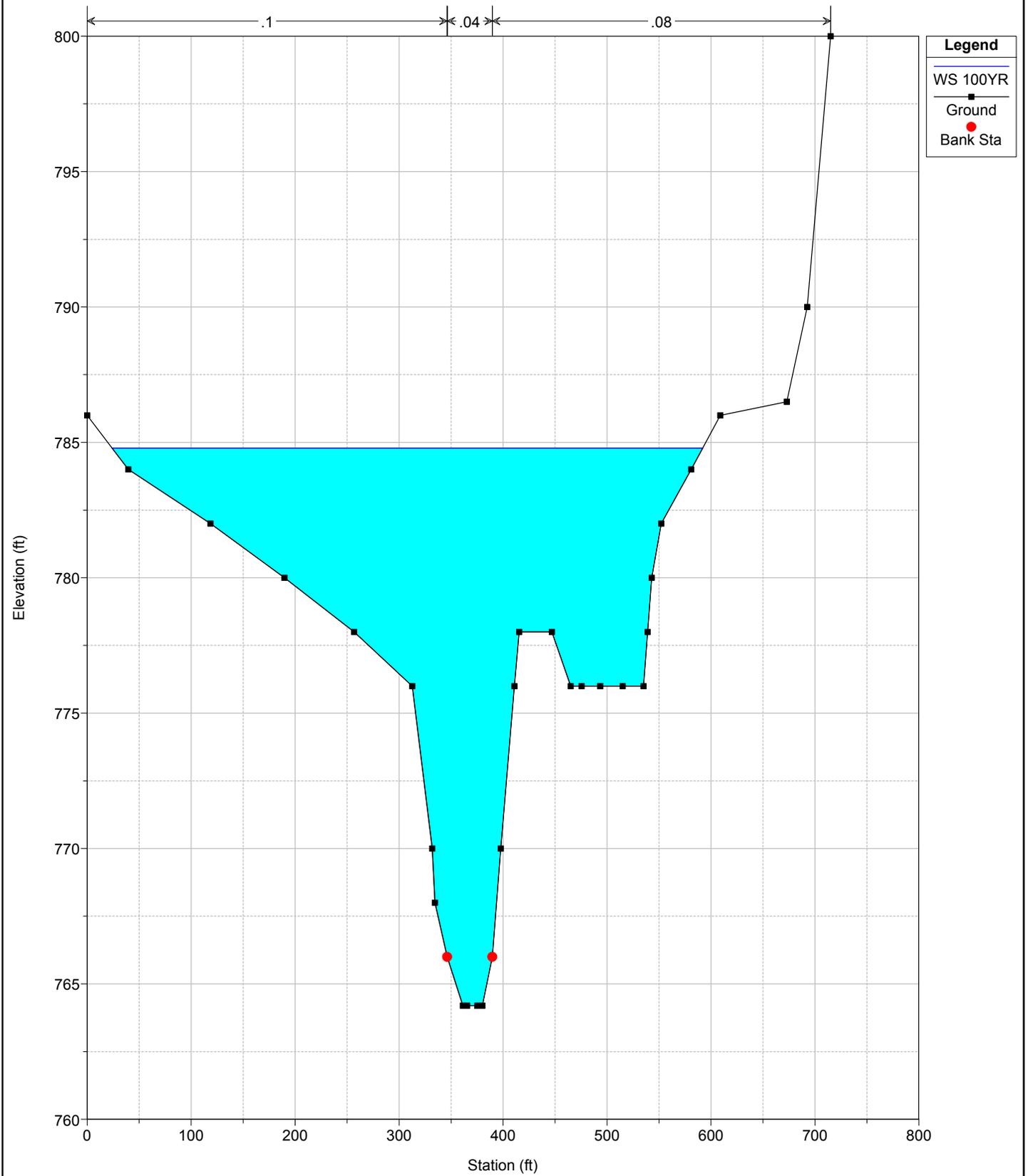
# XS 9338

Updated TOPO Plan: mdw add xs R1 UPDATE TOPO 3/26/2015

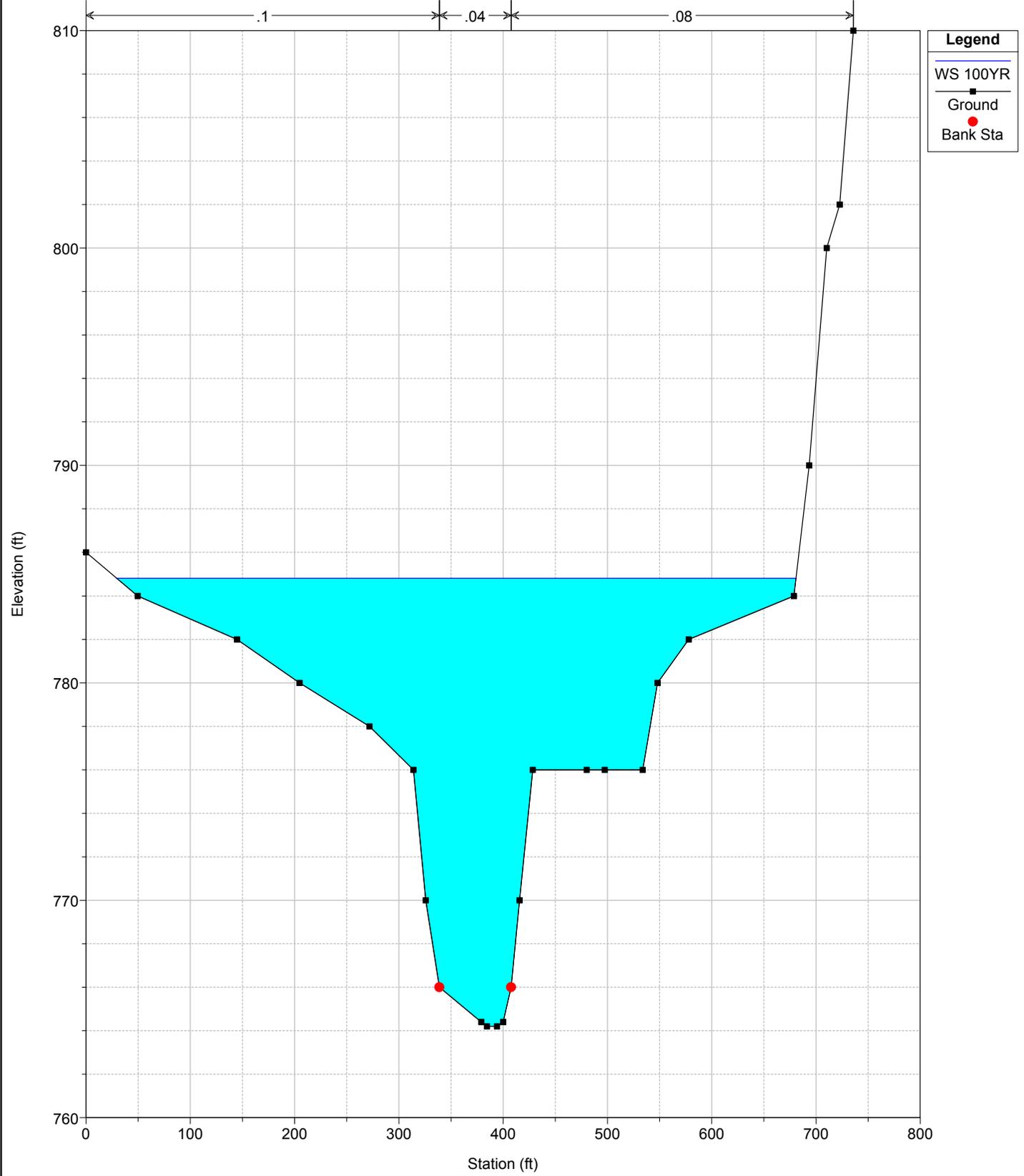


# XS 9376

Updated TOPO Plan: mdw add xs R1 UPDATE TOPO 3/26/2015



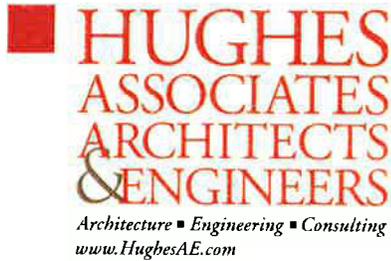
Updated TOPO Plan: mdw add xs R1 UPDATE TOPO 3/26/2015



**3809 Wards Road**  
**HEC-RAS Floodplain Evaluation (XS 9400 - XS 9141)**

Reach	River Sta	Profile	Plan	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)
RC	11070			Culvert		
RC	10962	100YR	Proposed Site	3388	774.1	785.43
RC	10962	100YR	Existing Conditions	3388	774.1	785.43
RC	10884	100YR	Proposed Site	3388	773.4	785.11
RC	10884	100YR	Existing Conditions	3388	773.4	785.1
RC	10744	100YR	Proposed Site	3388	772	785.14
RC	10744	100YR	Existing Conditions	3388	772	785.13
RC	10615	100YR	Proposed Site	3913	771.3	785.06
RC	10615	100YR	Existing Conditions	3913	771.3	785.05
RC	10411	100YR	Proposed Site	3913	770	785.05
RC	10411	100YR	Existing Conditions	3913	770	785.04
RC	10400			Culvert		
RC	10315	100YR	Proposed Site	3913	769.4	784.87
RC	10315	100YR	Existing Conditions	3913	769.4	784.86
RC	9996	100YR	Proposed Site	4105	767.5	784.84
RC	9996	100YR	Existing Conditions	4105	767.5	784.83
RC	9745	100YR	Proposed Site	4105	765.6	784.86
RC	9745	100YR	Existing Conditions	4105	765.6	784.85
RC	9458	100YR	Proposed Site	4105	764.4	784.86
RC	9458	100YR	Existing Conditions	4105	764.4	784.86
RC	9440			Culvert		
RC	9400	100YR	Proposed Site	4105	764.2	784.82
RC	9400	100YR	Existing Conditions	4105	764.2	784.81
RC	9376	100YR	Proposed Site	4105	764.2	784.79
RC	9376	100YR	Existing Conditions	4105	764.2	784.81
RC	9338	100YR	Proposed Site	4105	764	784.83
RC	9338	100YR	Existing Conditions	4105	764	784.83

RC	9312	100YR	Proposed Site	4105	763	784.78
RC	9312	100YR	Existing Conditions	4105	763	784.79
RC	9250	100YR	Proposed Site	4105	762	784.71
RC	9250	100YR	Existing Conditions	4105	762	784.71
RC	9141	100YR	Proposed Site	4105	761.8	784.75
RC	9141	100YR	Existing Conditions	4105	761.8	784.75
RC	8946	100YR	Proposed Site	4105	761.1	784.49
RC	8946	100YR	Existing Conditions	4105	761.1	784.49
RC	8760	100YR	Proposed Site	4105	759.37	784.51
RC	8760	100YR	Existing Conditions	4105	759.37	784.51



**Date:** April 20, 2015  
**Comm. No. :** 15021  
**Project:** Crosland Barnes Group – Mattress Firm Store  
**Report Title:** Floodproofing Narrative  
**Location:** 3809 Wards Road  
Lynchburg, VA 24502  
**Prepared By:** Hughes Associates Architects & Engineers

**Page:** 1 of 2

This Narrative Report is written regarding a piece of property located at 3809 Wards Road, Lynchburg, Virginia. New construction of a retail mattress store is being planned at this location. The new building will be approximately 56'-0" x 81'-0" and approximately 22' -0" in height. In accordance with the International Construction Code (ICC) 2012 the store will be classified as Mercantile Group (M) occupancy.

The proposed finish floor elevation of the building will be 783.50 feet; the base flood elevation for this property is 785.00 feet. This property is in the 100 year flood plain and is classified Zone A of Rock Castle Creek; the proposed structure is Category II per ASCE 24-14. The building will be equipped with dry flood proofing measures as required in accordance with ASCE 24-14.

#### **Site Design**

The proposed retail store will have a finished floor elevation of 783.5 feet. The flood elevation certificate prepared by Hurt & Proffitt of Lynchburg, Virginia shows the base flood elevation to be 785.00 feet. The site was designed to increase the finished floor elevation as much as practical while still making the site functional. The existing entrance elevation is 775.00 which is the controlling factor of the finished floor elevation.

To reach this elevation, the site will require structural fill to be placed on-site. All fill slopes will be 2:1 or flatter and will be armored for scour and erosion protection and prolonged inundation. Prior to foundation and site design, the site will be evaluated by a geotechnical engineer and soil borings will be taken. These soil borings will be evaluated by the engineer to determine the soils' characteristics. The site will be designed appropriately for the site conditions and the potential for flooding.

A flood Certificate will be submitted to the City of Lynchburg when the finished floor is complete. With the significant surface area of the 785' contour and the site outside of the main channel of the Rock Castle Creek (on the opposite side of Wards Road) a high water velocity is not anticipated.

The proposed building will have an appropriate backflow device to prevent the floodwaters from entering the municipal sanitary-sewer system.

**Building Design**

Exterior walls extending below Base Flood Elevation + 1 foot (freeboard) will be constructed of concrete masonry units on concrete footings, the floor will be a concrete slab on grade. All door openings and window openings below BFE + 1' will be protected with dry flood proofing methods in accordance with ASCE 24-14.

Inspection of lowest floor elevation will be performed following placement of the lowest floor. Elevation certificate will be submitted to the building official before there is further vertical construction on the building.

Spaces around utilities entering the building will be sealed to prevent water entry. Backflow prevention valves will be used on piping systems vulnerable to floodwater penetration. Underground plumbing system elements will be buried to a depth sufficient to prevent movement, separation or loss due to flooding and erosion.

At least one exit door will be provided above the BFE + 1'.

A flood emergency plan will be posted in at least two conspicuous locations; the plan will address specific elements and actions.

Respectfully submitted,

Martha J. Chester, NCARB, AIA, LEED AP

Mark J. Ayles PE



