

CIVIL CONSTRUCTION PLANS FOR ALDI GROCERY STORE CHIPPENHAM FOREST SQUARE

7319-7339 FOREST HILL AVENUE
RICHMOND, VA 23226

RECEIVED

FEB 11 2015

LAND USE ADMINISTRATION

PROJECT CONTACT LIST

APPLICANT/DEVELOPER

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GLEN ALLEN, VA 23060
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CONTACT: JOSH WALLS
EMAIL: JOSH.WALLS@ALDI.US

OWNER

NEW RIVER REAL ESTATE INVESTMENTS, L.C.
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RICHMOND, VA 23226
CHIPPENHAM SOUTH ASSOCIATES 2, L.L.C.
7113 THREE CHOPT ROAD, SUITE 210
RICHMOND, VA 23226

CIVIL ENGINEER

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC.
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PLANNING

CITY OF RICHMOND
DEPT. OF PLANNING & DEV. REVIEW
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TEL: (804) 646-4169
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STORMWATER

CITY OF RICHMOND
DEPT. OF PUBLIC UTILITIES
900 EAST BROAD STREET, ROOM 115
RICHMOND, VA 23219
TEL: (804) 646-7000

WATER AND SANITARY SEWER

CITY OF RICHMOND
DEPT. OF PUBLIC UTILITIES
900 EAST BROAD STREET, ROOM 115
RICHMOND, VA 23219
TEL: (804) 646-7000

NATURAL GAS

CITY OF RICHMOND
DEPT. OF PUBLIC UTILITIES
900 EAST BROAD STREET, ROOM 115
RICHMOND, VA 23219
TEL: (804) 646-7000

ELECTRIC

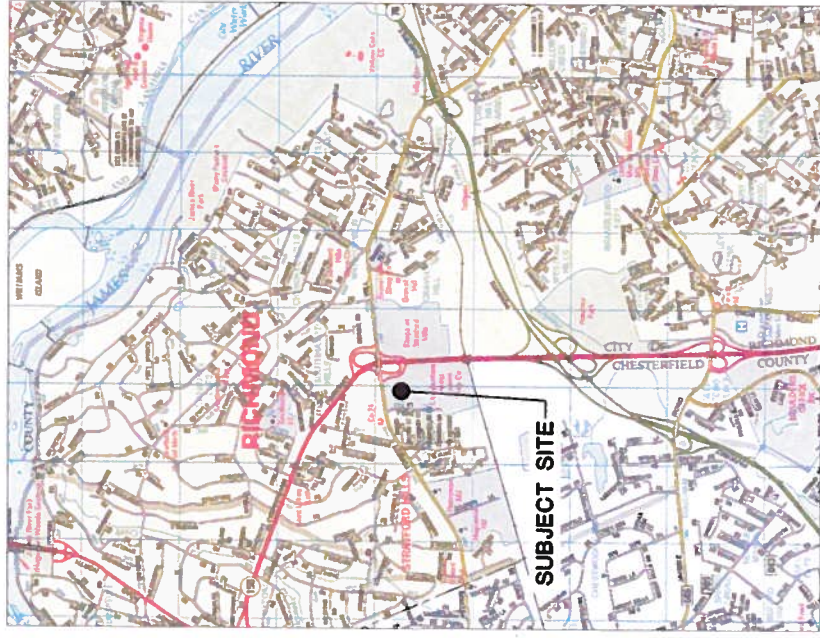
DOMINION VIRGINIA POWER
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RICHMOND, VA 23220
TEL: (804) 257-4937

TELEPHONE

VERIZON
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RICHMOND, VA 23230
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VICINITY MAP

APPROX. SCALE: 1" = 2,000'
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PROJECT DATA

| | |
|---------------------|--|
| PROJECT | ALDI GROCERY STORE, CHIPPENHAM FOREST SQUARE |
| ADDRESS | 7319-7339 FOREST HILL AVENUE |
| OWNERS | NEW RIVER REAL ESTATE INVESTMENTS, L.C. CHIPPENHAM SOUTH ASSOCIATES 2, L.L.C. |
| TAX PARCELS | 0038-017-07A, 0038-017-08S |
| EXISTING USE | VACANT FAST FOOD RESTAURANT |
| PROPOSED USE | GROCERY STORE |
| ZONING | R-2 (WITH CLIP) |
| COMMUNITY UNIT PLAN | ORDINANCE NO. 2002-70-101 |
| FRONT YARD SETBACK | 25 FEET |
| SIDE YARD SETBACK | 15 FEET |
| REAR YARD SETBACK | 15 FEET |
| PARKING REQUIRED | 57 SPACES (1 SPACE PER 300 SF OF FLOOR AREA) |
| PARKING PROVIDED | 73 SPACES (ADA ACCESSIBLE SPACES) |
| SITE AREA | 2.183 ACRES |
| PAVED AREA | 47,509 SF |
| BUILDING AREA | 30,984 SF |
| LOT COVERAGE LIMIT | 17,018 SF |
| LOT COVERAGE | 40% |
| MAX. HEIGHT ALLOWED | 28 FEET |
| DES. YURSED AREA | 26.8 FEET (MEASURED TO TOP OF HIGHEST TOWER) |
| TOPOGRAPHY SOURCE | 2.0 ACRES |
| DATE | FIELD SURVEY BY JENNINGSSTEPHENSON, P.C. DATED 6/20/14 |
| FLOODPLAIN | HORIZONTAL - NATIONAL VIRGINIA STATE PLAIN SOUTH ZONE X 916 FEMA MAP #510320010B & #510320017D DATED APRIL 2, 2009 |

CIVIL SHEET INDEX

| Sheet Number | Sheet Title |
|--------------|---|
| CA-100 | COVER SHEET |
| CY-100 | EXISTING CONDITIONS PLAN |
| CD-101 | DEMOLITION PLAN |
| CE-101 | PHASE I EROSION & SEDIMENT CONTROL PLAN |
| CE-301 | EROSION AND SEDIMENT CONTROL NOTES |
| CE-502 | EROSION AND SEDIMENT CONTROL DETAILS |
| CS-101 | SITE PLAN |
| CS-501 | ALDI SPECIFICATIONS |
| CS-502 | SITE DETAILS |
| CS-503 | SITE DETAILS |
| CS-504 | DUMPSTER DETAILS |
| CG-100 | DRAINAGE AREA MAPS |
| CG-101 | GRADING, DRAINAGE, AND PHASE II EROSION & SEDIMENT CONTROL PLAN |
| CG-201 | STORMWATER PROFILES AND CALCULATIONS |
| CG-401 | WATER QUALITY PLAN |
| CU-101 | UTILITY PLAN |
| CU-301 | UTILITY DETAILS |
| CU-502 | UTILITY DETAILS |
| CP-101 | PLANTING PLAN |
| CP-501 | PLANTING DETAILS |
| CL-101 | LIGHTING PLAN |

Sheet List Table

| Issued: | Date: |
|---------|-------|
| A | |
| B | |
| C | |
| D | |

| Revisions: | Date: |
|-----------------------------|----------|
| 1 REVISED PER CITY COMMENTS | 02/05/15 |
| 2 | |
| 3 | |
| 4 | |
| 5 | |



| Seal | PROJECT ARCHITECT/ENGINEER | DATE |
|------------------|----------------------------|------|
| | | |
| PROJECT LEAD | DATE | |
| | | |
| PROJECT DESIGNER | DATE | |
| | | |

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ALDI Inc.
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ALDI GROCERY STORE
CHIPPENHAM FOREST SQUARE
7319-7339 Forest Hill Avenue
Richmond, VA

Project Name & Location:

COVER SHEET

| | |
|-----------------|-------------|
| Drawing Name: | Project No. |
| Date: 12/12/14 | 113180003 |
| Type: | |
| Drawn By: MRB | CA-100 |
| Scale: As Noted | Drawing No. |

ONLY THE COMPLETE AND APPROVED PAPER COPY OF THE PLAN SET INCLUDING ALL SUBSEQUENT REVISIONS WILL SERVE AS THE OFFICIAL CONSTRUCTION PLANS.

THIS DOCUMENT, TOGETHER WITH THE CONDITIONS AND DECISIONS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

A VSMP GENERAL CONSTRUCTION PERMIT IS REQUIRED FOR THIS SITE. CONTACT THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY AT (804) 688-4039 TO OBTAIN A VSMP CONSTRUCTION PERMIT

CITY APPROVAL BLOCK



CALL BEFORE YOU DIG
811

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| Issue: | Date: |
| A | |
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| 1 REVISED PER CITY COMMENTS | 02/03/1 |
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| Seal | DATE |
| PROJECT ARCHITECT/ENGINEER | |
| PROJECT LEAD | DATE |
| | |
| PROJECT DESIGNER | DATE |
| | |

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ALDI GROCERY STORE
 CHIPPENHAM FOREST SQUARE
 7319-7339 Forest Hill Avenue
 Richmond, VA

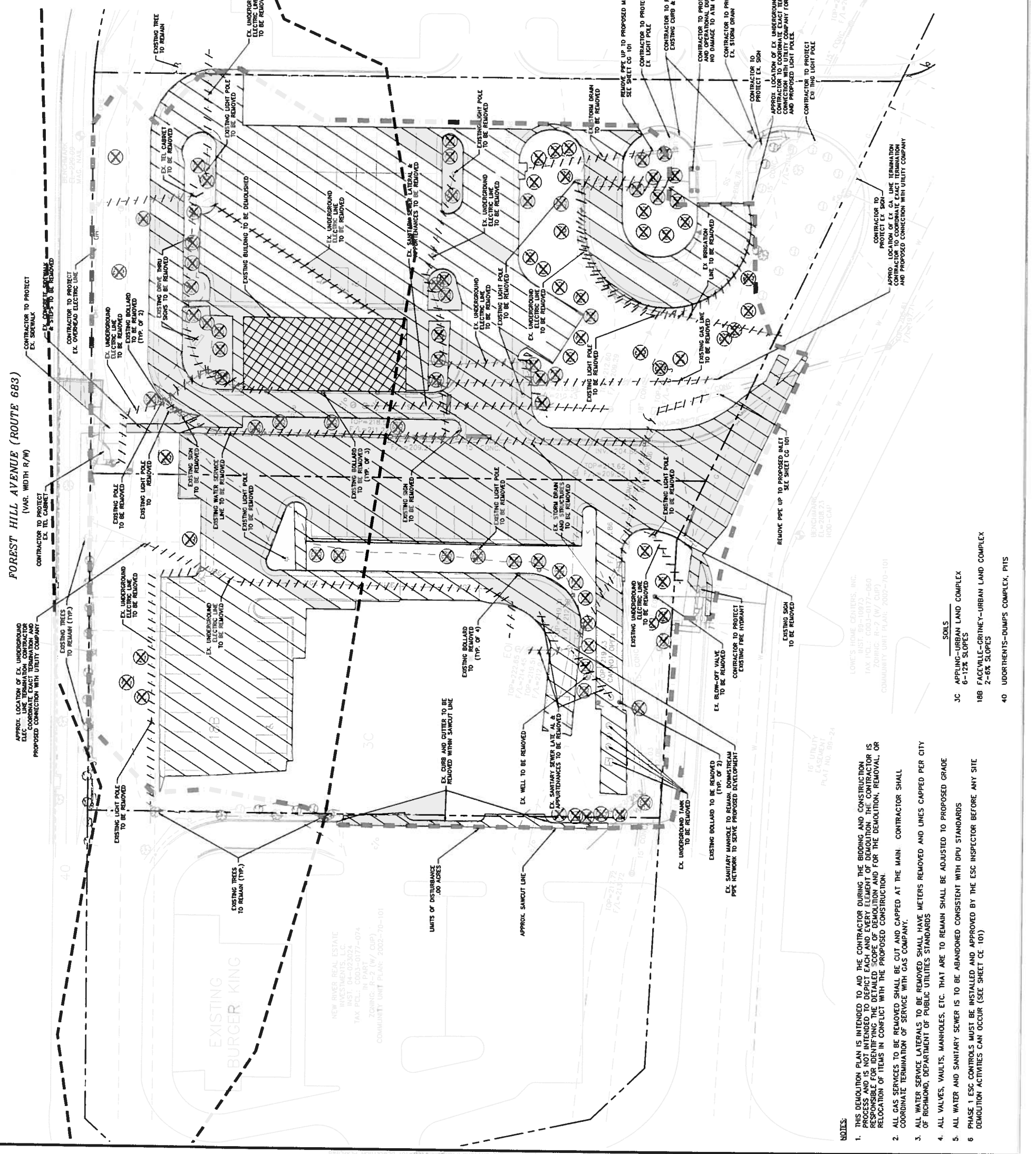
Project Name & Location:

DEMOLITION PLAN

| | |
|-----------------|-------------|
| Drawing Name: | Project No. |
| Date: 12/12/14 | 113180003 |
| Type: | |
| Drawn By: MRB | CD-101 |
| Scale: As Noted | Drawing No. |

LEGEND

| | |
|----------|---|
| [Symbol] | LIMITS OF DISTURBANCE |
| [Symbol] | REMOVE TREES |
| [Symbol] | UTILITIES TO BE REMOVED OR RELOCATED |
| [Symbol] | BUILDING TO BE DEMOLISHED |
| [Symbol] | PAVEMENT/CURB & GUTTER TO BE DEMOLISHED |
| [Symbol] | LIMITS OF SOIL TYPE |



- NOTES:**
- THIS DEMOLITION PLAN IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION AND FOR THE DEMOLITION, REMOVAL, OR RELOCATION OF ITEMS IN CONFLICT WITH THE PROPOSED CONSTRUCTION.
 - ALL GAS SERVICES TO BE REMOVED SHALL BE CUT AND CAPPED AT THE MAIN. CONTRACTOR SHALL COORDINATE TERMINATION OF SERVICE WITH GAS COMPANY.
 - ALL WATER SERVICE LATERALS TO BE REMOVED SHALL HAVE METERS REMOVED AND LINES CAPPED PER CITY OF RICHMOND, DEPARTMENT OF PUBLIC UTILITIES STANDARDS
 - ALL VALVES, VAULTS, MANHOLES, ETC. THAT ARE TO REMAIN SHALL BE ADJUSTED TO PROPOSED GRADE
 - ALL WATER AND SANITARY SEWER IS TO BE ABANDONED CONSISTENT WITH OPU STANDARDS
 - PHASE 1 ESC CONTROLS MUST BE INSTALLED AND APPROVED BY THE ESC INSPECTOR BEFORE ANY SITE DEMOLITION ACTIVITIES CAN OCCUR (SEE SHEET CE 101)

- SOILS**
- 3C APPLING-URBAN LAND COMPLEX 6-12% SLOPES
 - 1B8 FACEVILLE-CRITNEY-URBAN LAND COMPLEX 2-8% SLOPES
 - 40 UORTRMENTS-DUMPS COMPLEX, P115

FOREST HILL AVENUE (ROUTE 688)
 (VAR. WIDTH R/W)

APPROX. LOCATION OF EX. UNDERGROUND ELECTRIC AND SANITARY SEWER LINES. COORDINATE EXACT TERMINATION AND PROPOSED CONNECTION WITH UTILITY COMPANY.

EXISTING TREES TO REMAIN (TYP.)

LIMITS OF DISTURBANCE .20 ACRES

APPROX. SAWCUT LINE

EXISTING BOLLARD TO BE REMOVED (TYP. OF 3)

EXISTING LIGHT POLE TO BE REMOVED

EXISTING UNDERGROUND ELECTRIC LINE TO BE REMOVED

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PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF IMPROVEMENTS ASSOCIATED WITH A NEW ALDI GROCERY STORE TO BE LOCATED AT 7319-7339 FOREST HILL AVENUE, IN RICHMOND, VIRGINIA. THE SUBJECT SITE CONSISTS OF PORTIONS OF TWO EXISTING COMMERCIAL PARCELS. THE PROPOSED PARCEL AND SITE AREA IS 2.183 ACRES.

PROPOSED IMPROVEMENTS AT THIS INCLUDE A NEW 17,018 SQUARE-FOOT BUILDING AND ASSOCIATED DRIVE AISLES, PARKING AREAS, CURBING, WATER AND SEWER SYSTEMS, AND STORM DRAINAGE SYSTEMS. SITE WORK INCLUDES DEMOLITION OF EXISTING BUILDING AND PARKING AREAS, CLEARING, GRADING, UTILITY INSTALLATIONS, PAVING, AND LANDSCAPING. PROPOSED OFF-SITE WORK AT THIS TIME INCLUDES DEMOLITION OF AN EXISTING DRIVEWAY AND SIDEWALK TO ACCOMMODATE FOR THE RECONSTRUCTION OF ADDITIONAL SIDEWALK AND A NEW DRIVEWAY SERVING AN EXISTING DRIVE-THRU AIN.

ACCESS WILL BE PROVIDED BY THE EXISTING ENTRANCE NEAR THE SOUTHEAST CORNER OF THE SITE AND BY A PROPOSED ENTRANCE NEAR THE SOUTHWEST CORNER OF THE SITE. BOTH ENTRANCES CONNECT TO DRIVEWAYS THAT RUN ALONG THE SOUTH SIDE OF THE SITE AND PROVIDE FULL ACCESS MOVEMENT TO THE PRIVATE ACCESS ROAD PROVIDING ACCESS TO SHEILA LANE.

PROJECT BIDDING, GENERAL CONTRACTOR SELECTION, AND CONSTRUCTION OPERATIONS ARE EXPECTED TO BEGIN ONCE THE PERMITTING PROCESS IS COMPLETE. CONSTRUCTION IS EXPECTED TO BE COMPLETE WITHIN TWELVE MONTHS OF THE COMMENCEMENT OF LAND-DISTURBING ACTIVITY.

EXISTING CONDITIONS

THE SITE IS CURRENTLY OCCUPIED BY AN ABANDONED FAST FOOD RESTAURANT BUILDING AND ASSOCIATED PARKING AREAS, CURBING, SIDEWALKS, AND UTILITIES. THE SITE IS ALSO OCCUPIED BY AN EXISTING DRIVE-THRU ATM MACHINE THAT WILL REMAIN IN PLACE IN THE SOUTHEAST CORNER OF THE SITE. THE BUILDING AND ASSOCIATED AREAS ARE IN FAIR CONDITION.

ELEVATIONS RANGE FROM APPROXIMATELY 205 FEET TO 230 FEET WITH RELATIVELY GENTLE SLOPES ON-SITE WITH AREAS OF STEEPER SLOPES IN THE LANDSCAPE BUFFERS. THE MAJORITY OF THE SITE IS IMPERVIOUS AND COVERED BY EITHER PARKING AREAS OR BUILDINGS. NEARLY ALL EXISTING INFRASTRUCTURE AND VEGETATION ON-SITE WILL BE DEMOLISHED AND/OR REMOVED TO ACCOMMODATE THE PROPOSED DEVELOPMENT.

THE SITE GENERALLY DRAINS SOUTH TOWARDS THE PRIVATE ACCESS ROAD. THROUGH THE EXISTING ON-SITE DRAINAGE SYSTEM AND OUT-FALLING INTO AN EXISTING SWAMP POND BEHIND THE LOW-RISE BUILDING. THE EXISTING ON-SITE STORM DRAINAGE SYSTEM PREDOMINATELY CONSISTS OF 15" RCP RUNNING ALONG THE SOUTHERN BOUNDARY OF THE SITE AND WILL BE DEMOLISHED AND REPLACED. THE EXISTING ON-SITE STORM DRAINAGE SYSTEM CONNECTS TO THE EXISTING PUBLIC STORM DRAINAGE SYSTEM THROUGH A 24" RCP WHICH RUNS SOUTH ACROSS THE PRIVATE ACCESS ROAD. BASED ON SITE RECONNAISSANCE, THERE IS NO EVIDENCE OF DRAINAGE ISSUES OR EROSION PROBLEMS.

ADJACENT AREAS

THE SUBJECT SITE IS BORDERED BY FOREST HILL AVENUE TO THE NORTH, A BURGER KING FAST FOOD RESTAURANT TO THE WEST, A RETAIL STRIP TO THE EAST, AND A PRIVATE ACCESS DRIVE TO THE SOUTH. APPROPRIATE PERIMETER CONTROLS AS SHOWN ON THE GENERAL SITE PLAN SHEETS OF THE SITE PLAN WILL PROVIDE PROTECTION FOR THESE ADJACENT AREAS.

OFF-SITE AREAS

MINIMAL OFF-SITE LAND DISTURBANCE IS REQUIRED TO MAKE CONNECTIONS TO THE PRIVATE DRIVE AISLES. NO OTHER OFF-SITE LAND DISTURBANCE IS NECESSARY OR PROPOSED TO COMPLETE THIS PROJECT.

CRITICAL AREAS

CRITICAL AREAS INCLUDE AREAS OF STEEP SLOPES. THE LANDSCAPING BUFFER ALONG FOREST HILL AVENUE AND LOCATED ALONG THE NORTHERN BOUNDARY OF THE SITE IS CONSIDERED A CRITICAL AREA DUE TO ITS STEEP SLOPES. NO OTHER CRITICAL AREAS HAVE BEEN IDENTIFIED FOR THIS PROJECT, AND NO OTHER AREAS ARE EXPECTED TO BECOME CRITICAL DURING CONSTRUCTION.

EROSION CONTROL MEASURES

AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN SHEETS OF THE SITE PLAN, THE EROSION AND SEDIMENT CONTROL MEASURES DESCRIBED BELOW WILL BE PROVIDED SEVEN DAYS AFTER FINAL GROUND 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 MORE THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

MS-2 DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES 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.

MS-3 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.

MS-4 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 upstate land disturbance takes place.

MS-5 Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.

MS-6 Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.

MS-7 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.

MS-8 Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

MS-9 Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.

MS-10 All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.

MS-11 Before newly 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.

MS-12 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.

MS-13 When a live watercourse must be crossed by construction vehicles more than twice any six-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided.

MS-14 All applicable federal, state and local requirements pertaining to working in or crossing live watercourses shall be met.

MS-15 The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.

MS-16 Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

- a. No more than 500 linear feet of trench may be opened at one time.
- b. Excavated material shall be placed on the uphill side of trenches.
- c. Effluent from dewatering operations shall be filtered or passed through an approved affect flowing streams or off-site property.
- d. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.
- e. Restabilization shall be accomplished in accordance with this chapter.
- f. Applicable safety requirements in compliance with this chapter.

MS-17 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, sediment shall be washed from the road surface thoroughly at the end of each day. 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.

MS-18 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 VESCP authority. Trapped sediment and the material being removed from the site shall be disposed of in a manner that does not adversely affect the receiving stream and sedimentation.

MS-19 MINIMUM STANDARDS

MS-19 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. Stream restoration and reconnection projects that incorporate natural channel design concepts are not man-made natural or man-made channels.

- a. 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.
- b. Adequacy of all channels and pipes shall be verified in the following manner:
 - (1) 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
 - (2) A hydraulic analysis shall be conducted 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.
- c. All previously constructed man-made channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overflow its banks and by the use of a ten-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and
- d. Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system.

c. If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:

- (1) Improve the channels to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to channel the bed or banks; or
- (2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the pipe or pipe system.

(3) Develop a site stabilization plan that will cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into natural channels, will not cause the predevelopment peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or

(4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the VESCP authority to prevent downstream erosion.

d. The applicant shall provide evidence of permission to make the improvements.

e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development condition of the subject project.

f. If the applicant chooses an option that includes stormwater detention, he shall provide a plan for maintenance of the detention facilities. The plan shall establish the maintenance requirements of the facility and the person responsible for performing the maintenance.

g. 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.

h. All on-site channels must be verified to be adequate.

i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.

j. In applying these stormwater management 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.

k. 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.

l. Any plan approved prior to July 1, 2014, that provides for stormwater management that addresses any flow rate capacity and velocity requirements for natural or man-made channels shall satisfy the flow rate capacity and velocity requirements for natural or man-made channels if the practices are designed to (i) detain the water quality volume and to release it over 48 hours;

- (ii) detain and release over a 24-hour period the expected rainfall resulting from the one year, 24-hour storm; and (iii) reduce the allowable peak flow rate resulting from the 1.5, 2, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in a good forested condition, achieved equal to the runoff volume from the forested peak flow rate by a reduction factor shall be divided by the runoff volume from the site in its proposed condition, and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels as defined in any regulations promulgated pursuant to § 62.1-44.15:54 or 62.1-44.15:65 of the Act.

m. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of § 62.1-44.15:52 A of the Act and this subsection shall be satisfied by compliance with water quantity requirements in the Stormwater Management Act (§62.1-44.15:24 et seq. of the Code of Virginia) and attendant regulations, unless such land-disturbing activities are in accordance with 9VAC25-870-46 of the Virginia Stormwater Management Program (VSMP) Permit Regulations.

n. Compliance with the water quantity minimum standards set out in 9VAC25-870-66 of the Virginia Stormwater Management Program (VSMP) Permit Regulations shall be deemed to satisfy the requirements of Minimum Standard 19.

MS-19 MINIMUM STANDARDS

MS-19 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. Stream restoration and reconnection projects that incorporate natural channel design concepts are not man-made natural or man-made channels.

- a. 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.
- b. Adequacy of all channels and pipes shall be verified in the following manner:
 - (1) 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
 - (2) A hydraulic analysis shall be conducted 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.
- c. All previously constructed man-made channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overflow its banks and by the use of a ten-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and
- d. Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system.

c. If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:

- (1) Improve the channels to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to channel the bed or banks; or
- (2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the pipe or pipe system.

(3) Develop a site stabilization plan that will cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into natural channels, will not cause the predevelopment peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or

(4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the VESCP authority to prevent downstream erosion.

d. The applicant shall provide evidence of permission to make the improvements.

e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development condition of the subject project.

f. If the applicant chooses an option that includes stormwater detention, he shall provide a plan for maintenance of the detention facilities. The plan shall establish the maintenance requirements of the facility and the person responsible for performing the maintenance.

g. 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.

h. All on-site channels must be verified to be adequate.

i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.

j. In applying these stormwater management 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.

k. 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.

l. Any plan approved prior to July 1, 2014, that provides for stormwater management that addresses any flow rate capacity and velocity requirements for natural or man-made channels shall satisfy the flow rate capacity and velocity requirements for natural or man-made channels if the practices are designed to (i) detain the water quality volume and to release it over 48 hours;

- (ii) detain and release over a 24-hour period the expected rainfall resulting from the one year, 24-hour storm; and (iii) reduce the allowable peak flow rate resulting from the 1.5, 2, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in a good forested condition, achieved equal to the runoff volume from the forested peak flow rate by a reduction factor shall be divided by the runoff volume from the site in its proposed condition, and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels as defined in any regulations promulgated pursuant to § 62.1-44.15:54 or 62.1-44.15:65 of the Act.

m. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of § 62.1-44.15:52 A of the Act and this subsection shall be satisfied by compliance with water quantity requirements in the Stormwater Management Act (§62.1-44.15:24 et seq. of the Code of Virginia) and attendant regulations, unless such land-disturbing activities are in accordance with 9VAC25-870-46 of the Virginia Stormwater Management Program (VSMP) Permit Regulations.

n. Compliance with the water quantity minimum standards set out in 9VAC25-870-66 of the Virginia Stormwater Management Program (VSMP) Permit Regulations shall be deemed to satisfy the requirements of Minimum Standard 19.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-1 UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE VESCP EROSION AND SEDIMENT CONTROL HANDBOOK AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS 9VAC50-30.

ES-2 THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3 ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4 A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5 PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES-6 THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7 ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8 DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9 THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

CITY OF RICHMOND STANDARD EROSION CONTROL MEASURES

1. 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 TO DENuded AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

2. EXCESS EXCAVATION DISPOSED OF OFF THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

3. EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP OF THE LAND DISTURBING ACTIVITY.

4. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED SO THAT THE SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORM DRAINAGE FACILITIES.

5. AREA IS STABILIZED.

6. PROPERTIES ADJOINING THE SITE SHALL BE KEPT CLEAN OF MUD OR SILT CARRIED FROM THE SITE BY VEHICULAR TRAFFIC OR RUNOFF.

7. THE DISPOSAL OF WASTE MATERIALS REMOVED FROM EROSION AND SEDIMENT CONTROL FACILITIES AND THE DISPOSAL OF THESE FACILITIES SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

8. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

9. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES 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 SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

PERMANENT STABILIZATION

PERMANENT STABILIZATION WILL BE ACHIEVED WITH SOODING AS SHOWN ON THE LANDSCAPING PLAN FOR ALL VEGETATED AREAS. PAVEMENT, SIDEWALKS, BUILDINGS, LANDSCAPING, OR OTHER IMPERVIOUS SURFACES WILL STABILIZE THE REMAINDER OF THE SITE.

3.28 TREE PROTECTION - PROTECTIVE MEASURES WILL BE INSTALLED FOR EXISTING TREES AS SHOWN ON THE CONSTRUCTION PLAN. THE PURPOSE OF THIS PRACTICE IS TO THROUGHOUT AND AFTER SITE CONSTRUCTION, THE PURPOSE OF THIS PRACTICE IS TO PROTECT THE SURVIVAL OF TREES INTENDED TO REMAIN AFTER CONSTRUCTION IS COMPLETE.

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PERMANENT STABILIZATION WILL BE ACHIEVED WITH SOODING AS SHOWN ON THE LANDSCAPING PLAN FOR ALL VEGETATED AREAS. PAVEMENT, SIDEWALKS, BUILDINGS, LANDSCAPING, OR OTHER IMPERVIOUS SURFACES WILL STABILIZE THE REMAINDER OF THE SITE.

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| 1 REVISED PER CITY COMMENTS | 02/08/13 |
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| PROJECT DESIGNER | DATE |
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| | |

Kimley»Horn
Kimley-Horn
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(804) 673-3882



ALDI GROCERY STORE
CHIPPENHAM FOREST SQUARE
7319-7339 Forest Hill Avenue
Richmond, VA

| | |
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| Project Name & Location: | |
| EROSION AND SEDIMENT CONTROL NOTES | |
| Drawing Name: | Project No. |
| Date: 12/12/14 | 113180003 |
| Type: | |
| Drawn By: MRB | CE-501 |
| Scale: As Noted | Drawing No. |

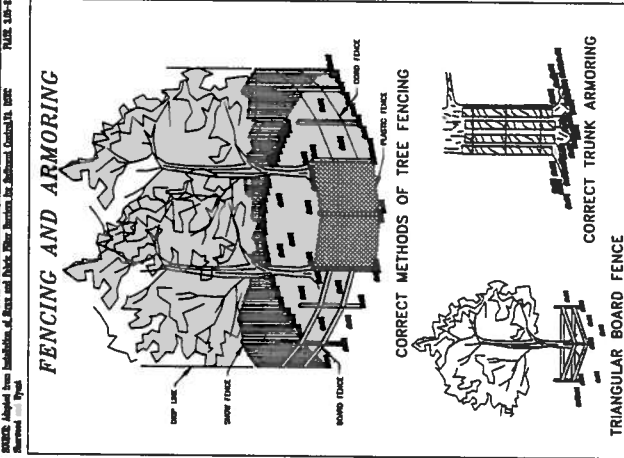
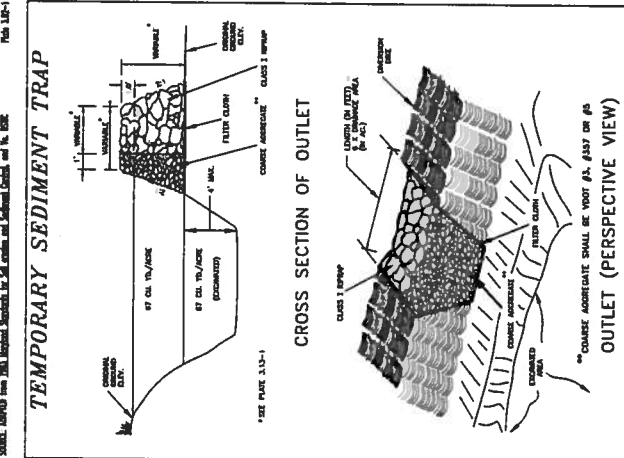
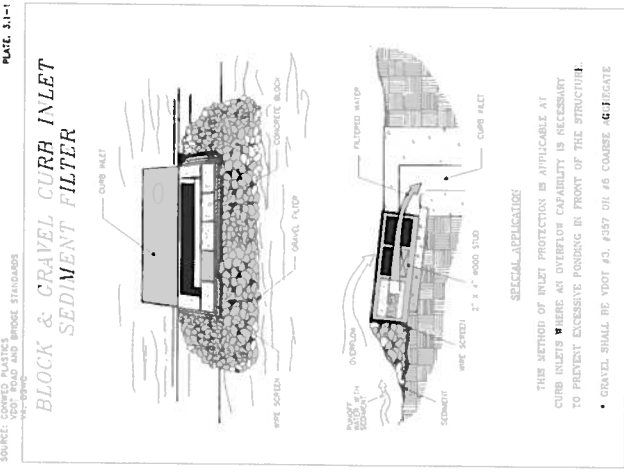
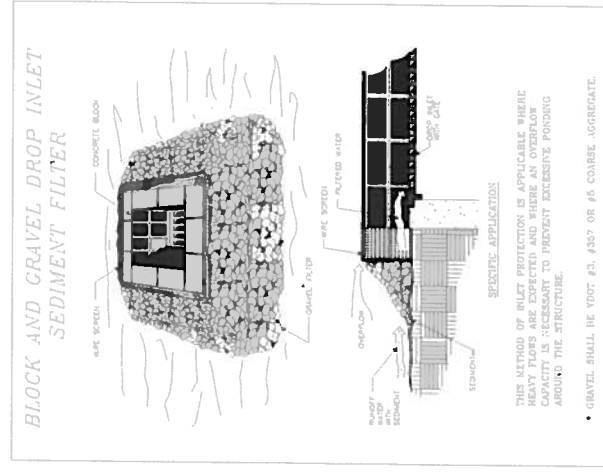
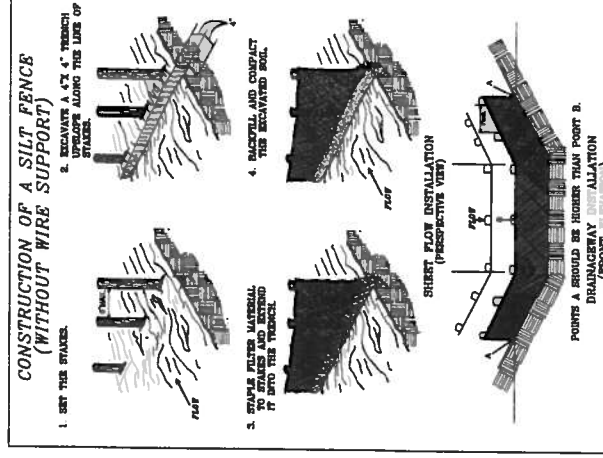
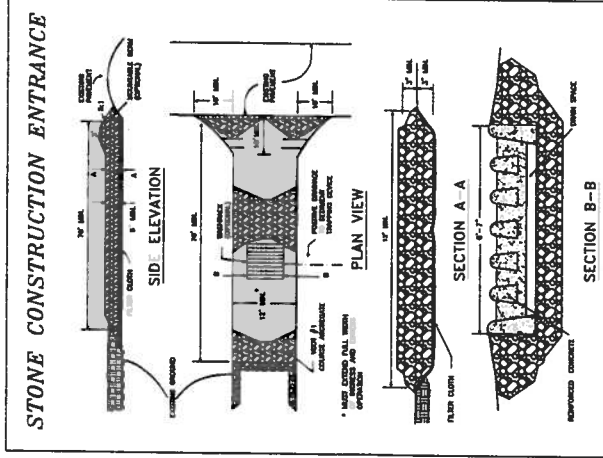
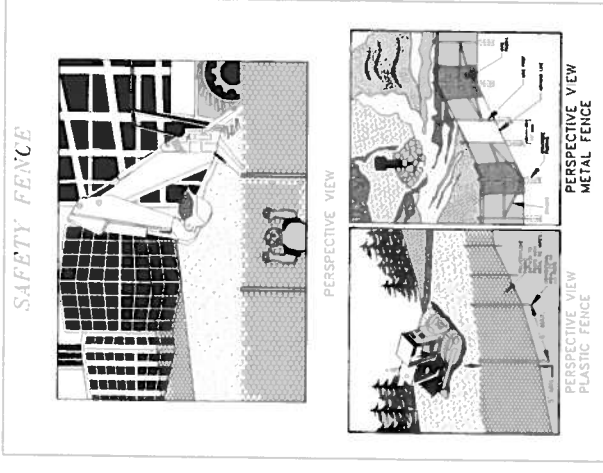


TABLE 3.31-B (REVISED JUNE 2000) TEMPORARY SEEDING SPECIFICATIONS QUICK REFERENCE FOR ALL REGIONS

| APPLICATION DATES | SPECIES | APPLICATION RATES |
|-------------------|--|-------------------|
| SEPT 1 FEB 15 | 50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) AND CEREAL (WINTER) RYE (SECALE CEREALE) | 50-100 LBS/ACRE |
| FEB 16 APR 30 | ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) | 50-100 LBS/ACRE |
| MAY 1 AUG 31 | GERMAN MILLET | 50 LBS/ACRE |

FERTILIZER AND LIME:
 APPLY 10-10-10 FERTILIZER AT A RATE OF 400 LBS./ACRE (OR 10 LBS./1,000 SQ. FT.)
 APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/ACRE (OR 80 LBS./1,000 SQ. FT.)

MULCHING:
 STRAW IS TO BE USED IN CONJUNCTION WITH ALL TEMPORARY SEEDING OPERATIONS DURING CONSTRUCTION

NOTE:
 1. A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL.
 2. INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 4-6 INCHES OF THE SOIL BY DIGGING OR BY OTHER MEANS.
 3. TECHNICAL BULLETIN #1, 2003, AVAILABLE FROM THE VA DSWC, 1000 COMMONWEALTH BLVD., RICHMOND, VA 23260

TABLE 3.32-B SITE SPECIFIC SEEDING MIXTURES FOR COASTAL PLAIN AREA

| Minimum Curb Length Per Acre | Total Lbs. Per Acre |
|---|---|
| 175-200 lbs. | 175-200 lbs. |
| 75 lbs. | 75 lbs. |
| 200-250 lbs. | 200-250 lbs. |
| 40 lbs. (unballasted) 30 lbs. (ballasted) | 40 lbs. (unballasted) 30 lbs. (ballasted) |

Minimum Curb Length
 - Common Bermudagrass
 - Kentucky 1 or Turf-Type Tall Fescue

High-Maintenance Lawn
 - Common Bermudagrass **
 - Kentucky 31 or Turf-Type Tall Fescue

Hybrid Bermudagrass (seed) **
 - Hybrid Bermudagrass (for other vegetative establishment method, see Sit. & Spec. 3.34)

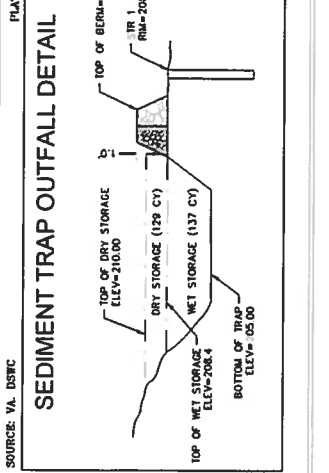
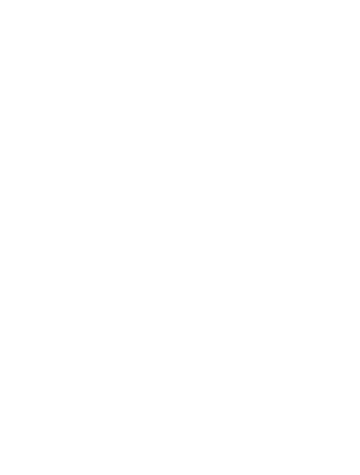
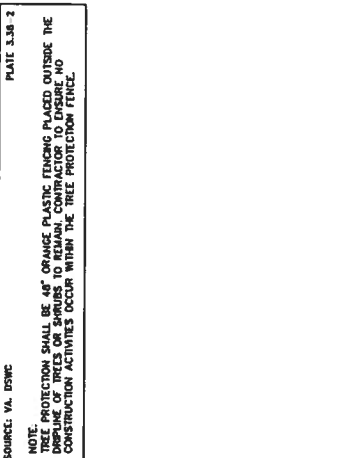
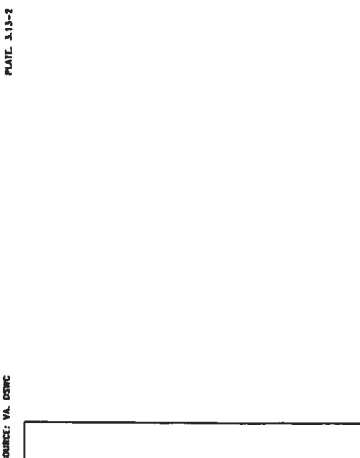
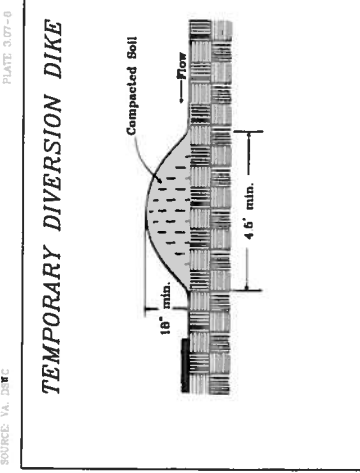
General Slope (3:1 or less)
 - Red Top Grass
 - Seasonal Nurse Crop *

Low-Maintenance Slope (Steeper than 3:1)
 - Common Bermudagrass **
 - Red Top Grass
 - Seasonal Nurse Crop *

Series Lepidoloma **

* Use seasonal nurse crop in accordance with seeding dates as stated below:
 February, March through April Annual Rye
 May through August Annual Rye
 September through November Fescue Millet
 December through January Winter Rye

** May through October, use ballast seed. All other seeding periods, use seed without ballast. Longgrass may be added to any slope or low-maintenance site during warmer seeding periods, add 10-20 lbs./acre in water.



SEDIMENT TRAPS

| Trap # | Arec (acres) | Wet Storage | | Dry Storage | | Outlet Length (feet) | Bottom Elevation | Top of Berm Elevation | Top of Berm Width | Dimensions (L x W) |
|--------|--------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------|------------------|-----------------------|-------------------|--------------------|
| | | Volume Required (Cu. Yd.) | Volume Provided (Cu. Yd.) | Volume Required (Cu. Yd.) | Volume Provided (Cu. Yd.) | | | | | |
| 1 | 1.84 | 123.0 | 137.0 | 208.40 | 123.0 | 11.0 | 205.00 | 211.00 | 2.5' | 122' x 47' |

TABLE 3.31-B (REVISED JUNE 2000) TEMPORARY SEEDING SPECIFICATIONS QUICK REFERENCE FOR ALL REGIONS

| APPLICATION DATES | SPECIES | APPLICATION RATES |
|-------------------|--|-------------------|
| SEPT 1 FEB 15 | 50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) AND CEREAL (WINTER) RYE (SECALE CEREALE) | 50-100 LBS/ACRE |
| FEB 16 APR 30 | ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) | 50-100 LBS/ACRE |
| MAY 1 AUG 31 | GERMAN MILLET | 50 LBS/ACRE |



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Date: 02/05/15

Revisions:

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Seal: PROJECT ARCHITECT/ENGINEER DATE

PROJECT LEAD: DATE

PROJECT DESIGNER: DATE

Kimley»Horn

Kimley-Horn and Associates, Inc.

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 Richmond, Virginia 23220
 (804) 673-3882

ALDI INC.
 4870 Sodley Road, Suite 300
 Glen Allen, Virginia 23060
 (804) 205-5067

ALDI GROCERY STORE
 CHIPPENHAM FOREST SQUARE
 7319-7339 Forest Hill Avenue
 Richmond, VA

Project Name & Location: EROSION AND SEDIMENT CONTROL DETAILS

Drawing Name: EROSION AND SEDIMENT CONTROL DETAILS

Date: 12/12/14 **Project No.:** 113180003

Type:

Drawn By: MRB **CE-502**

Scale: As Noted **Drawing No.:**

FOREST HILL AVENUE (ROUTE 683)
(VAR. WIDTH R/W)

Issue: A B C D

Date: 07/05/15

Revisions:

- 1 REVISED PER CITY COMMENTS
- 2
- 3
- 4
- 5



Seal PROJECT ARCHITECT/ENGINEER DATE

PROJECT LEAD DATE

PROJECT DESIGNER DATE

Kimley»Horn
Kimley-Horn
and Associates, Inc.
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Richmond, Virginia 23220
(804) 673-3882



ALDI GROCERY STORE
CHIPPENHAM FOREST SQUARE
7319-7339 Forest Hill Avenue
Richmond, VA

Project Name & Location:

SITE PLAN

Drawing Name: ALDI GROCERY STORE CHIPPENHAM FOREST SQUARE

Date: 12/12/14

Type: PROJECT NO. 113180003

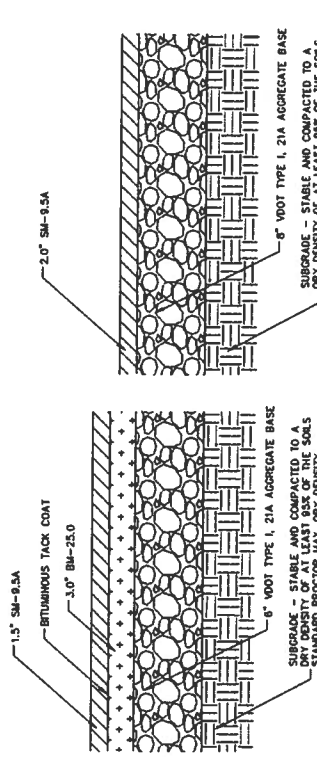
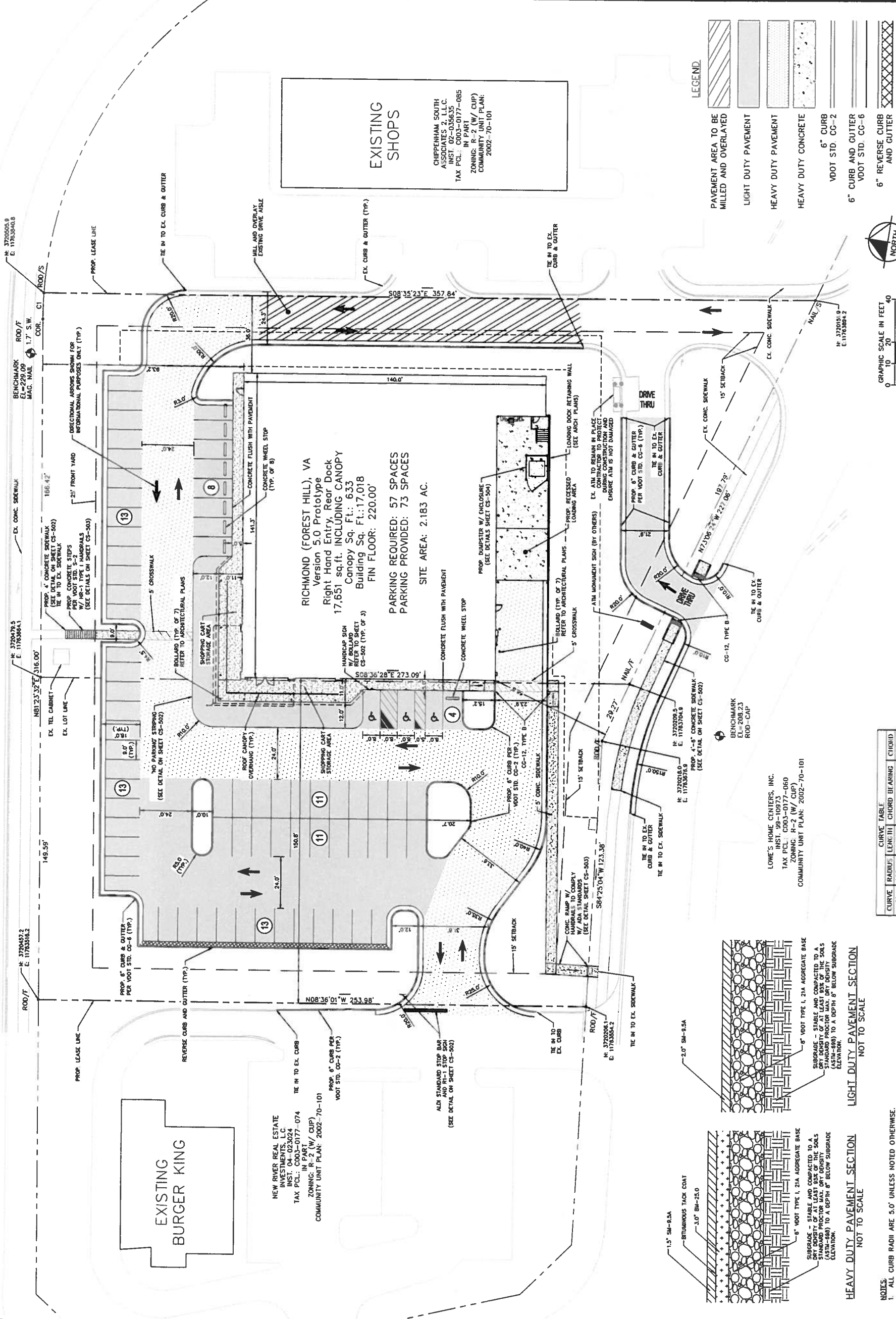
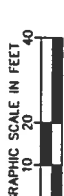
Drawn By: MRB

Scale: As Noted

Drawing No. CS-101

LEGEND

- PAYEMENT AREA TO BE MILLED AND OVERLAYED
- LIGHT DUTY PAYEMENT
- HEAVY DUTY PAYEMENT
- HEAVY DUTY CONCRETE
- 6" CURB VDOT STD. CC-2
- 6" CURB AND GUTTER VDOT STD. CC-6
- 6" REVERSE CURB AND GUTTER



NOTES:

1. ALL CURB RADI ARE 5.0' UNLESS NOTED OTHERWISE.
2. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL STOP SIGNS, DIRECTIONAL SIGNS, AND STRIPING SHOWN ON THE PLANS.

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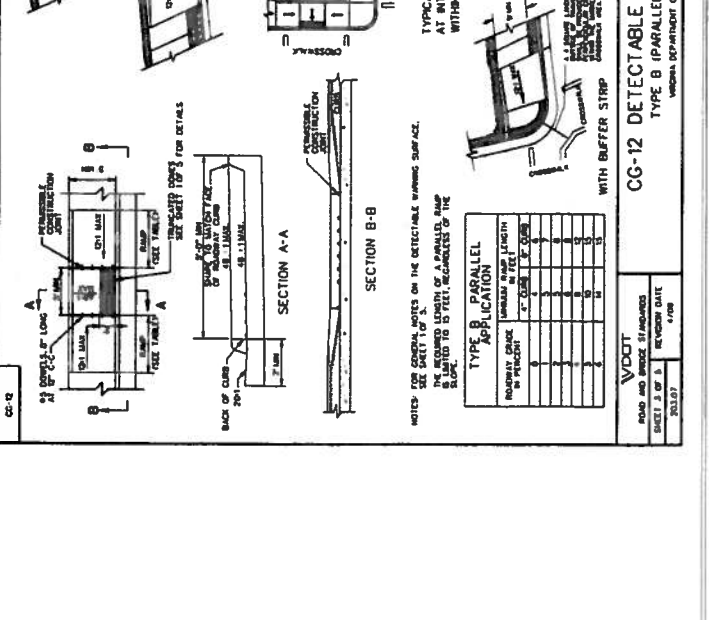
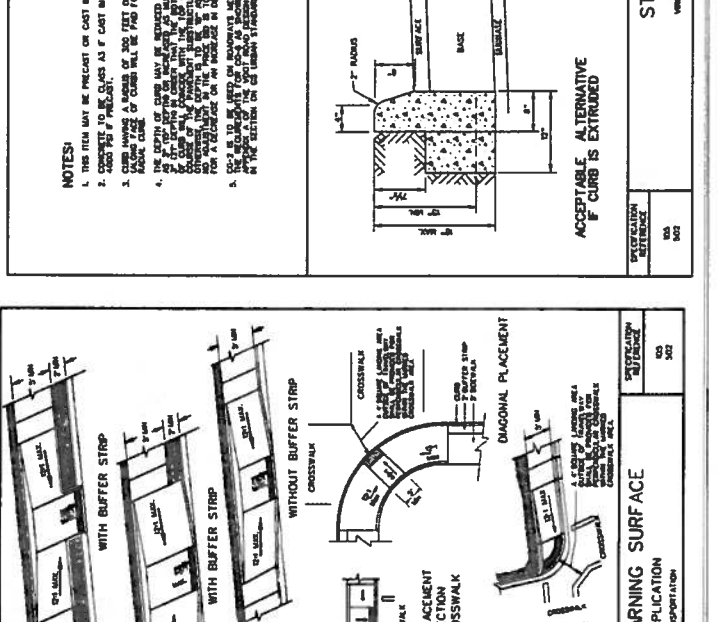
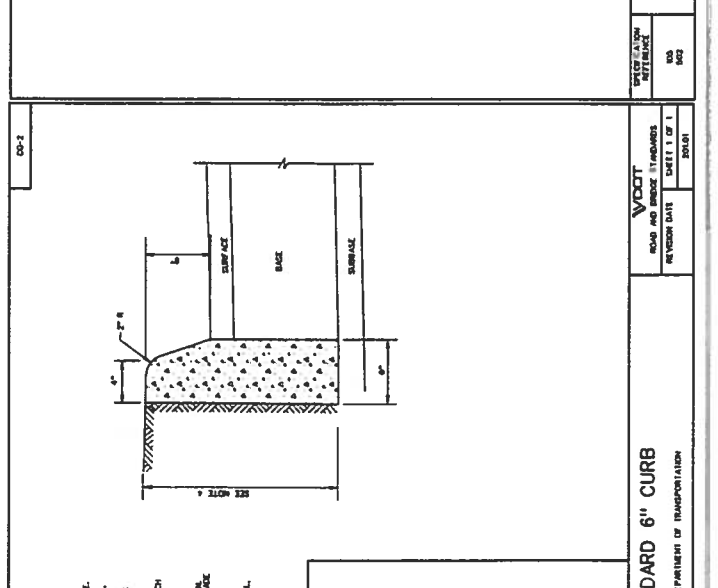
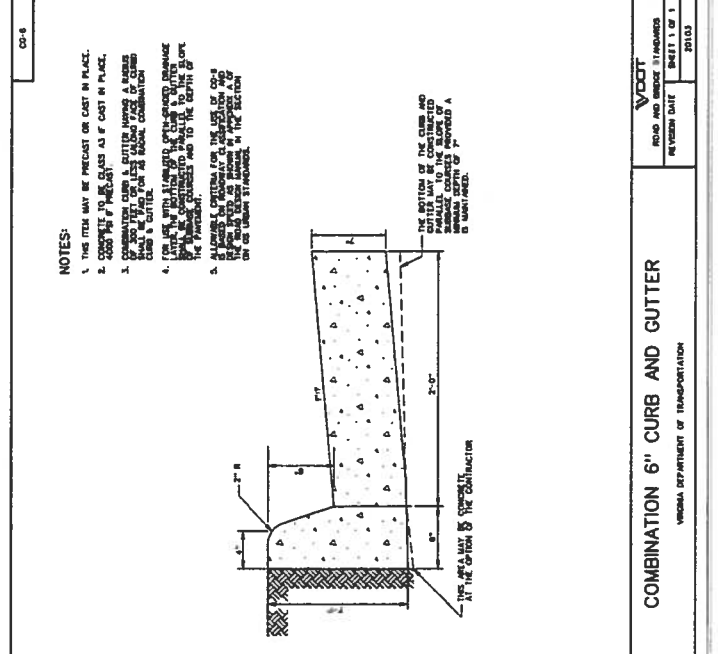
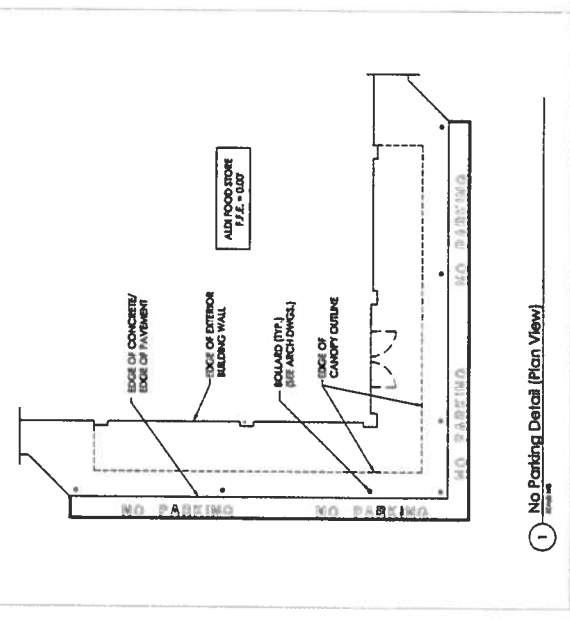
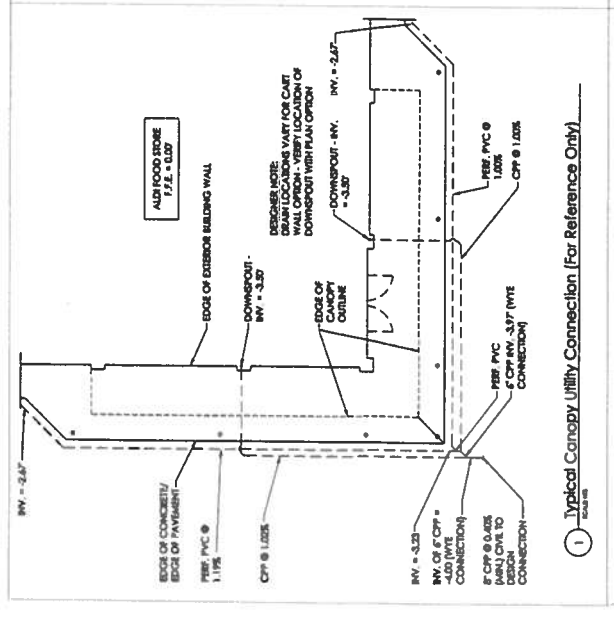
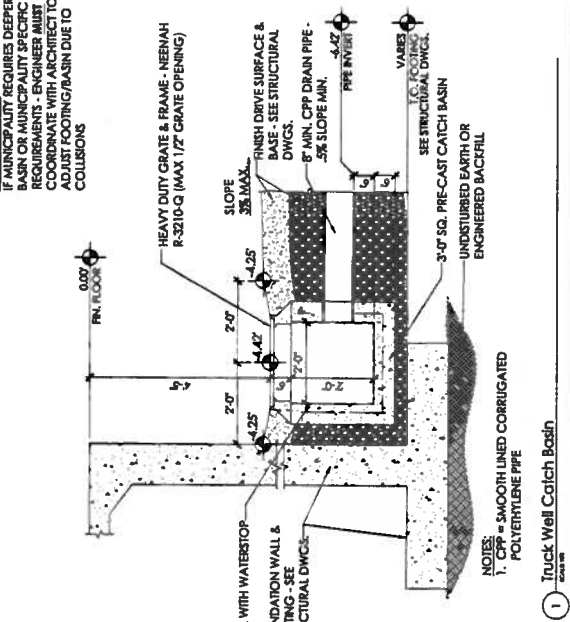
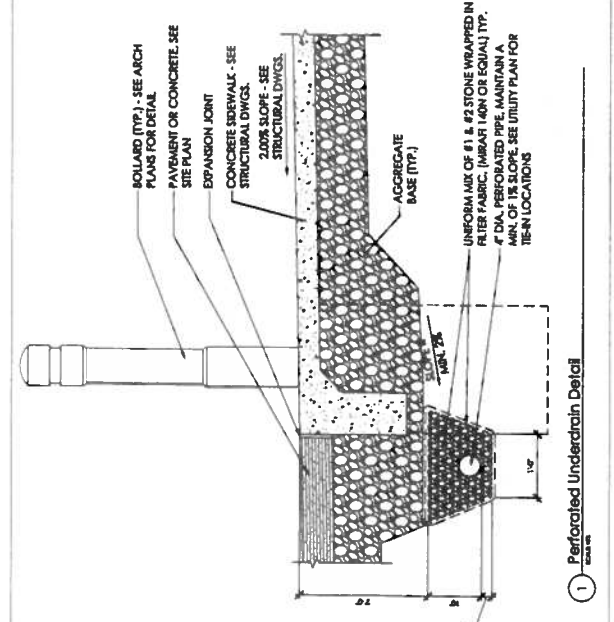
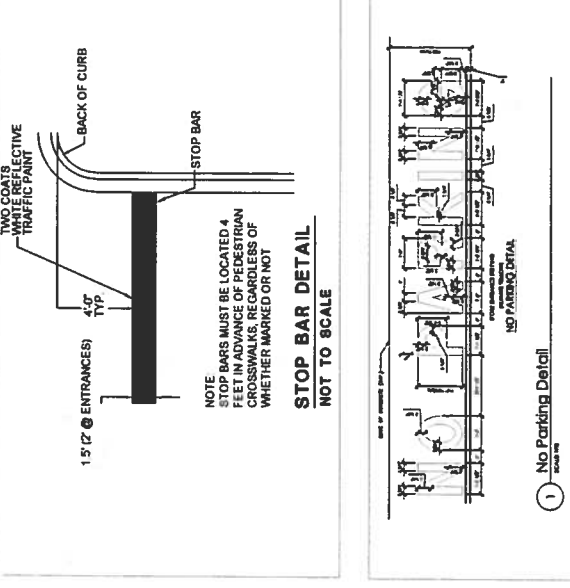
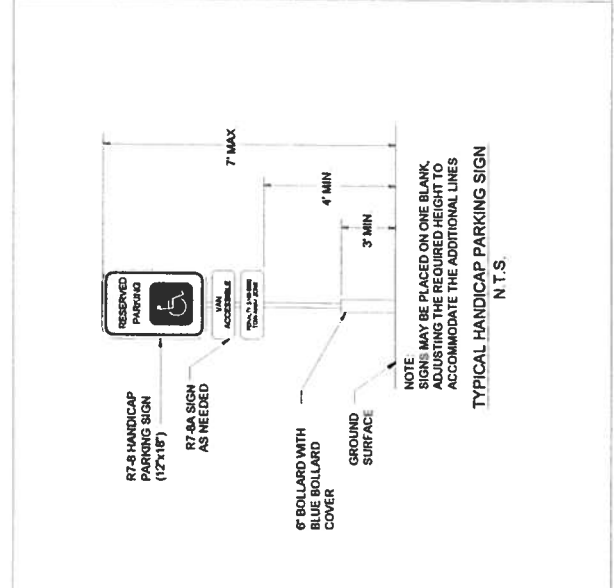
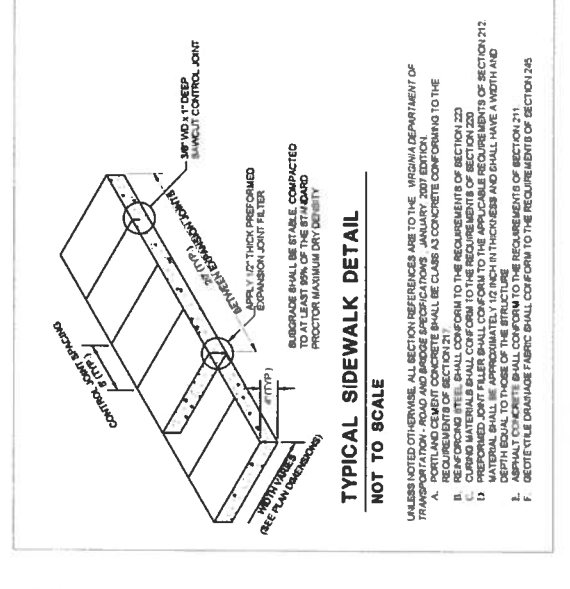
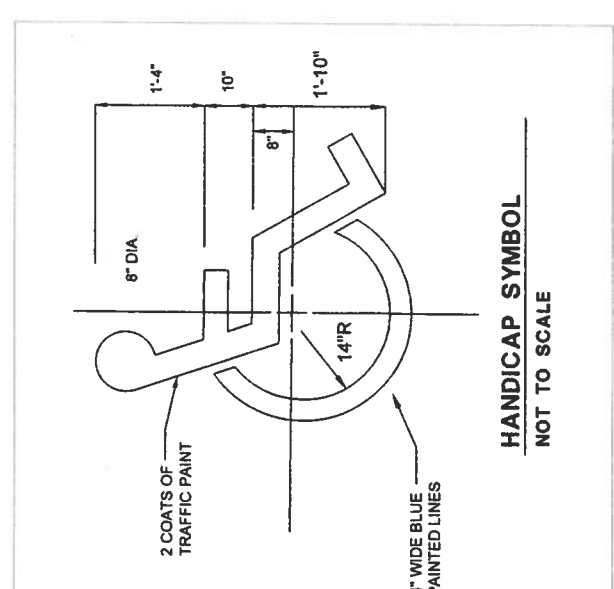
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and Associates, Inc.
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 Richmond, Virginia 23220
 (804) 473-3882



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 CHIPPENHAM FOREST SQUARE
 7319-7339 Forest Hill Avenue
 Richmond, VA

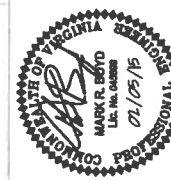
Project Name & Location:

SITE DETAILS
 Drawing Name: ALDI GROCERY STORE
 Project No: 113180003
 Date: 12/12/14
 Type:
 Drawn By: MRB
 Scale: As Noted
 Drawing No: CS-502



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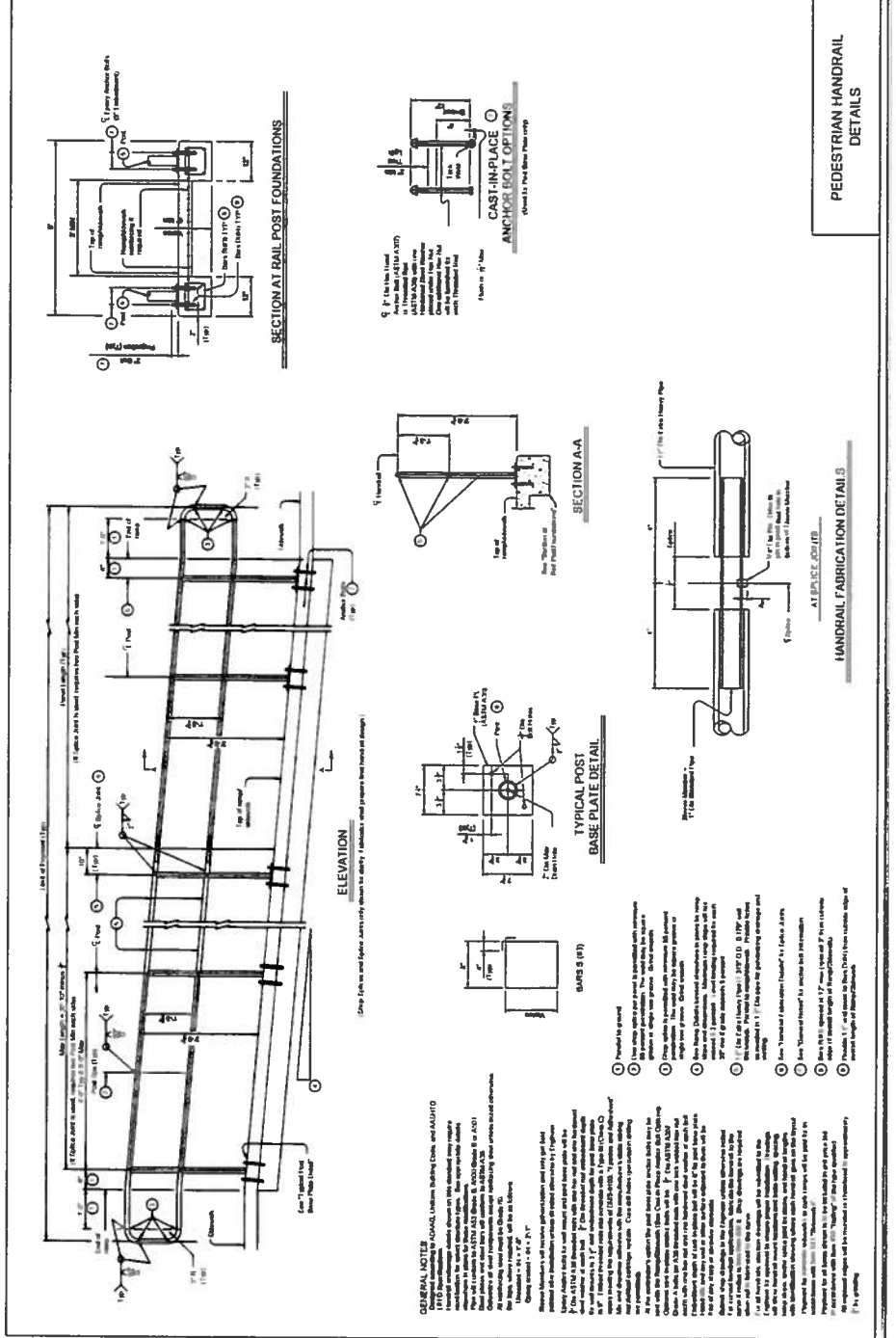
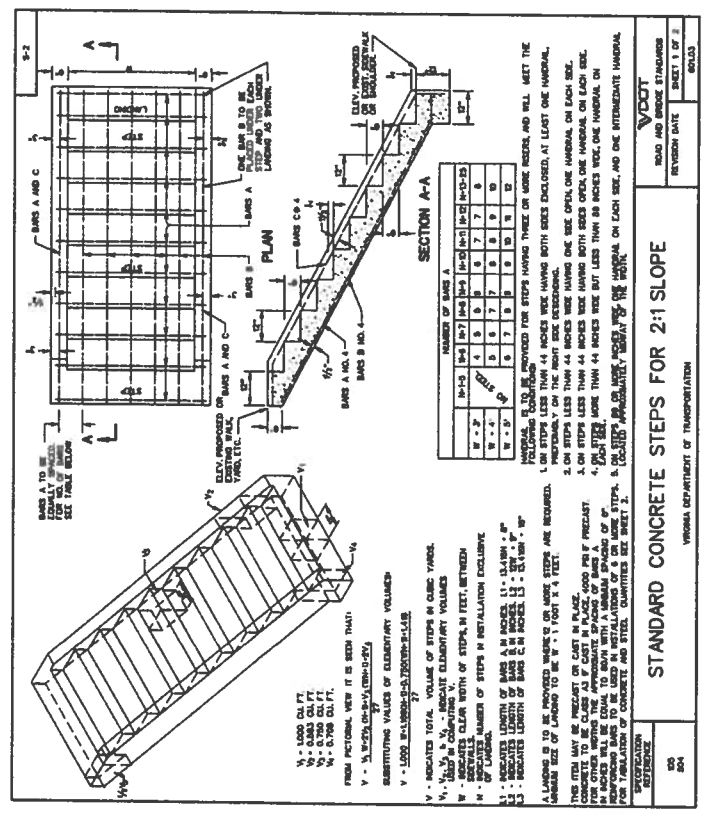
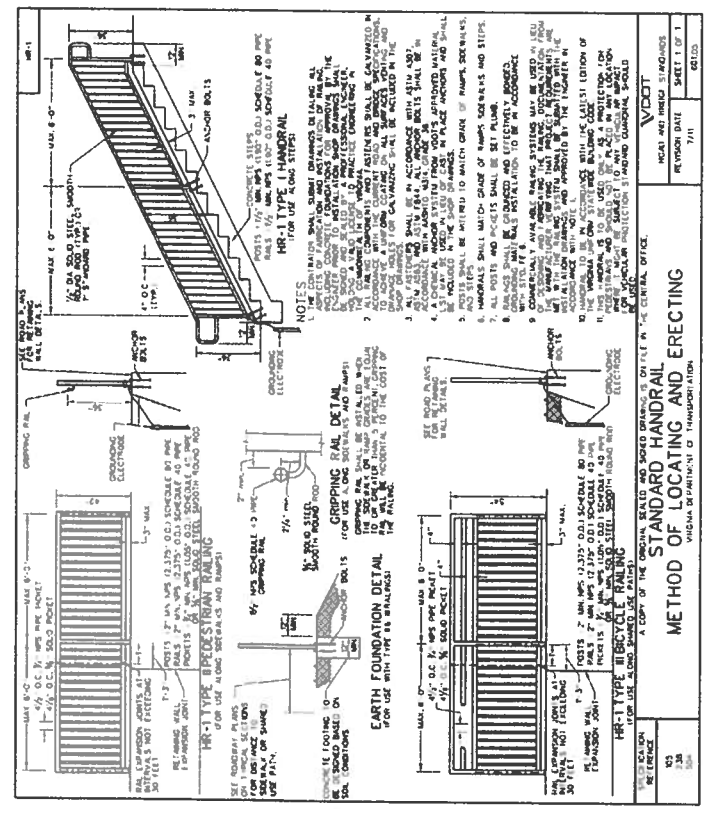
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| PROJECT LEAD | DATE |
| PROJECT DESIGNER | DATE |

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| Project Name & Location: | |
| SITE DETAILS | |
| Drawing Name: | Project No. |
| Date: 12/12/14 | 113180003 |
| Type: | Drawn By: MRB |
| Scale: As Noted | Drawing No. CS-503 |



- ADA RAMP/HANDRAIL GUIDELINES**
- SIDEWALK TO BE 5 FT WIDE OVERALL (36" MINIMUM CLEAR WIDTH BETWEEN HANDRAILS OR CURBS, WHICHEVER IS NARROWER)
 - LANDING WITHIN DIRECTION OF TRAVEL TO BE 5 FT LONG WITH A MAXIMUM SLOPE OF 2.08% IN ANY DIRECTION
 - LANDINGS AT CHANGE OF DIRECTION TO BE MIN. 5 FT x 5 FT WITH A MAXIMUM SLOPE OF 2.08% IN ANY DIRECTION
 - MAXIMUM CROSS SLOPE OF RAMP IS 2.08%
 - HANDRAILS ARE TO BE PROVIDED ON BOTH SIDES OF RAMP
 - HANDRAILS SHALL BE CONTINUOUS WITH THE FULL LENGTH OF EACH RAMP RUN. INSIDE HANDRAILS ON SWITCHBACK SHALL BE CONTINUOUS.
 - TOP OF HANDRAIL SHALL BE 34" MINIMUM AND 38" MAXIMUM ABOVE RAMP SURFACE AND AT A CONSISTENT HEIGHT
 - RAMP HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR 12 INCHES MINIMUM
 - RAMP EDGE PROTECTION NOT REQUIRED WHERE FLOOR SURFACE OF RAMP OR LANDING EXTENDS 12" MIN. BEYOND INSIDE FACE OF HANDRAIL

GENERAL NOTES:
 1. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
 2. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
 3. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
 4. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
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| PROJECT LEAD | DATE |
| PROJECT DESIGNER | DATE |

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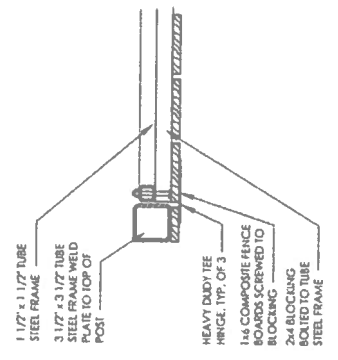
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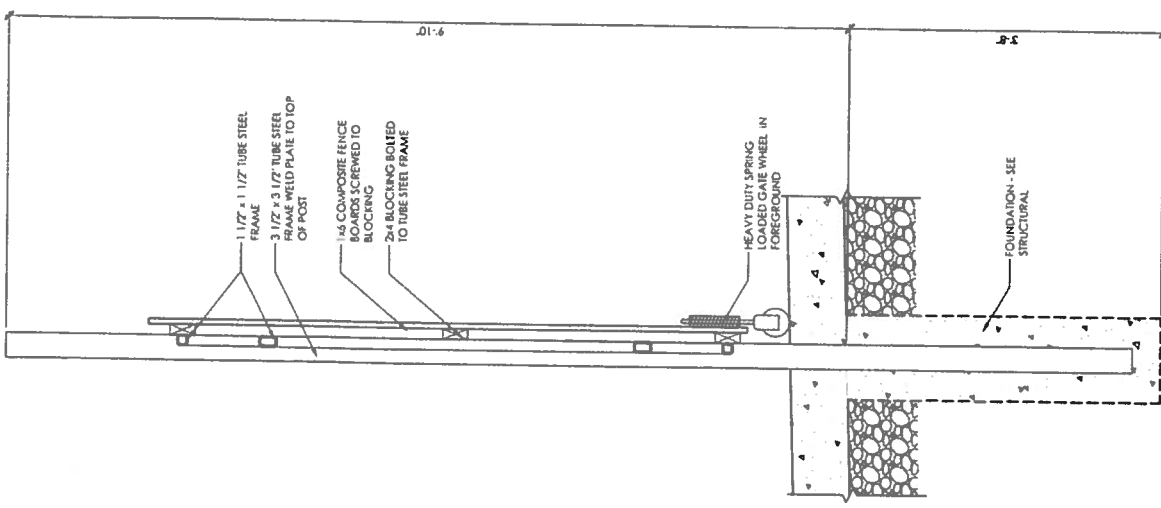
Project Name & Location:

DUMPSTER DETAILS

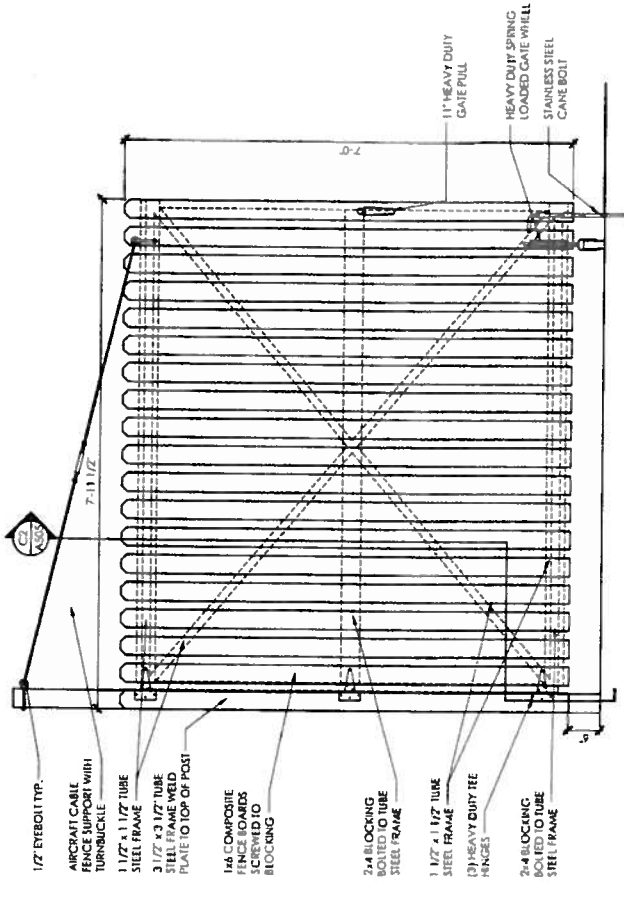
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| Drawing Name: | Project No: |
| Date: 12/12/14 | 113180003 |
| Type: | |
| Drawn B : MRB | CS-504 |
| Scale: As Noted | Drawing No. |



Exterior Detail
 SCALE: 1 1/2" = 1'-0"
 A3



Exterior Detail
 SCALE: 1" = 1'-0"
 C2



Exterior Elevation
 SCALE: 3/4" = 1'-0"
 B1

NOTE: ALL FENCE BOARDS SHALL BE DIMENSIONED BY COMPOSITE FENCE BOARDS ON ALL FOUR SIDES.

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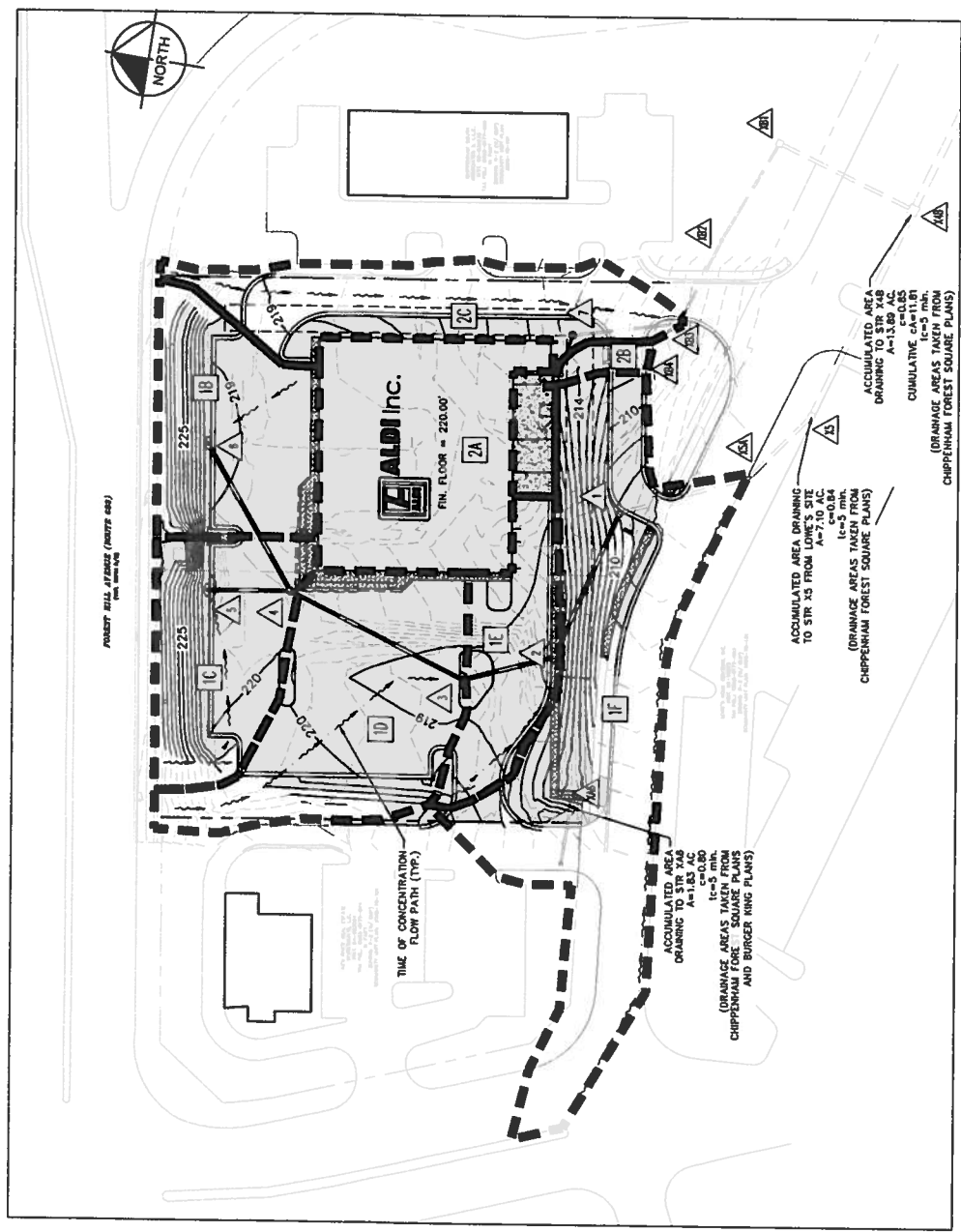
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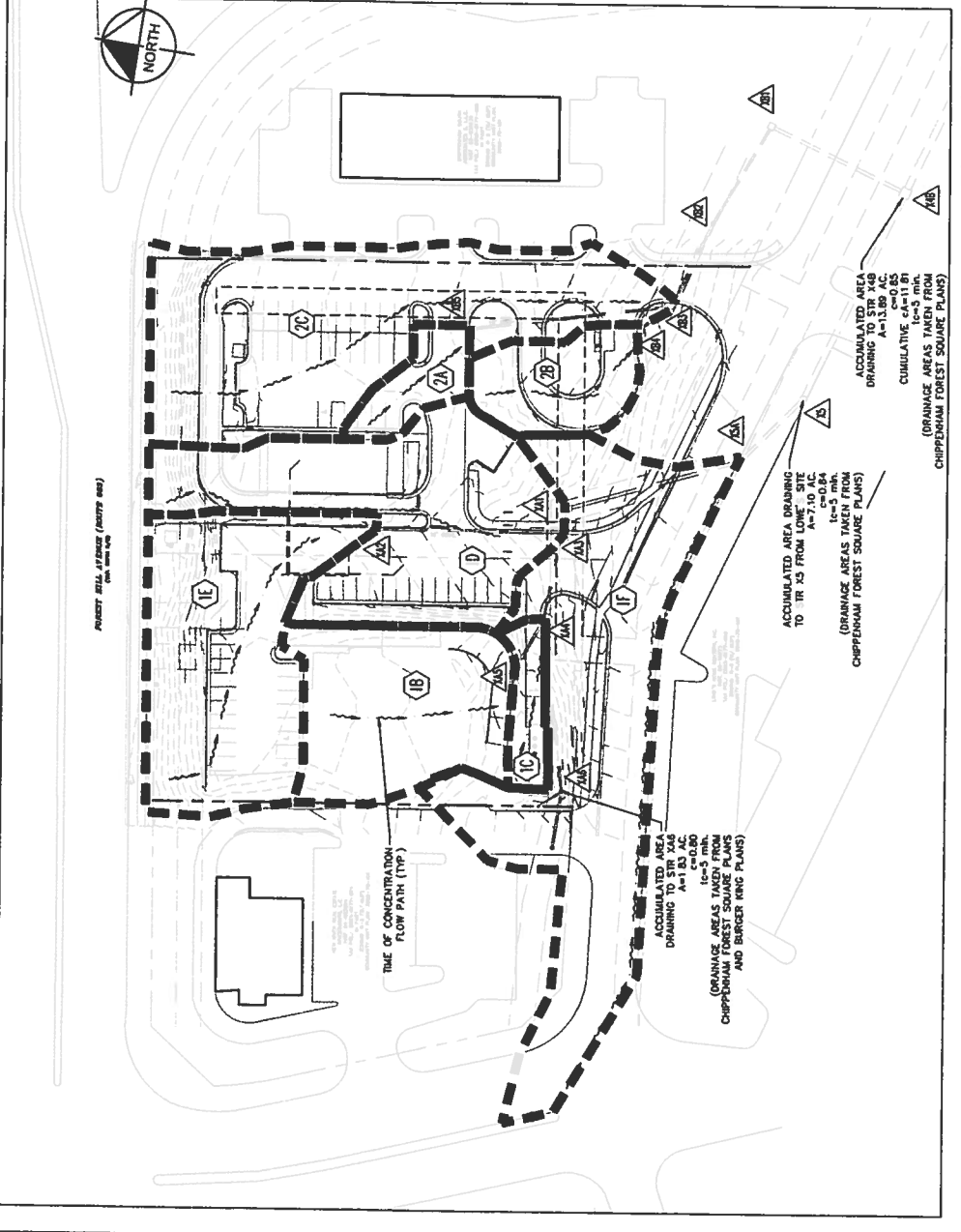
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|--------------------------|---------------------------|-------------|-----------|
| Project Name & Location: | DRAINAGE AREA MAPS | | |
| Drawing Name: | DRAINAGE AREA MAPS | | |
| Date: | 12/12/14 | Project No. | 113180003 |
| Type: | | Drawn By: | MRB |
| Scale: | As Noted | Drawing No. | CG-100 |



POST-DEVELOPMENT DRAINAGE AREA MAP

| DRAINAGE AREA LABEL | TOTAL AREA (AC) | IMPERVIOUS AREA (AC) | PREVIOUS AREA (AC) | C | CH | TIME OF CONC. T _c (min) |
|---------------------|-----------------|----------------------|--------------------|-------|------|------------------------------------|
| POST 1B | 6 | 0.287 | 0.127 | 0.120 | 0.65 | 88 |
| POST 1C | 3 | 0.249 | 0.113 | 0.126 | 0.63 | 87 |
| POST 1D | 3 | 0.249 | 0.113 | 0.126 | 0.63 | 87 |
| POST 1E | 2 | 0.140 | 0.133 | 0.017 | 0.78 | 21 |
| POST 1F | 85.4 | 0.738 | 0.000 | 0.000 | 0.65 | 88 |
| POST 2A | 7 | 0.436 | 0.000 | 0.000 | 0.60 | 88 |
| POST 2B | 804 | 0.024 | 0.013 | 0.013 | 0.58 | 85 |
| POST 2C | 103 | 0.295 | 0.192 | 0.104 | 0.65 | 90 |



PRE-DEVELOPMENT DRAINAGE AREA MAP

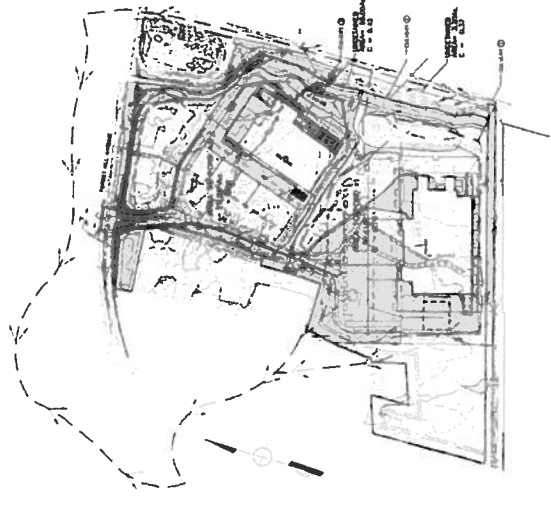
| DRAINAGE AREA LABEL | TOTAL AREA (AC) | IMPERVIOUS AREA (AC) | PREVIOUS AREA (AC) | C | CH | TIME OF CONC. T _c (min) |
|---------------------|-----------------|----------------------|--------------------|-------|------|------------------------------------|
| PRE 1B | 245 | 0.293 | 0.056 | 0.275 | 0.44 | 79 |
| PRE 1C | 244 | 0.293 | 0.078 | 0.215 | 0.63 | 87 |
| PRE 1D | 243 | 0.445 | 0.373 | 0.138 | 0.71 | 91 |
| PRE 1E | 242 | 0.409 | 0.359 | 0.211 | 0.55 | 86 |
| PRE 1F | 254 | 0.972 | 0.435 | 0.238 | 0.69 | 90 |
| PRE 2A | 282 | 0.436 | 0.000 | 0.000 | 0.61 | 88 |
| PRE 2B | 281 | 0.245 | 0.000 | 0.000 | 0.57 | 85 |
| PRE 2C | 303 | 0.548 | 0.401 | 0.167 | 0.71 | 91 |

LEGEND

- TIME OF CONCENTRATION PATH
- DRAINAGE BOUNDARY
- DRAINAGE STRUCTURE LABEL
- PRE-DEVELOPMENT DRAINAGE AREA LABEL
- POST-DEVELOPMENT DRAINAGE AREA LABEL

- STORMWATER QUANTITY NOTES:**
- THE PROPOSED SITE WILL CONTINUE TO DRAIN INTO THE EXISTING STORM SYSTEM ALONG THE SOUTHERN DRIVE AISLE ADJACENT TO THE LOWE'S. THE ENTIRETY OF THE SITE FALLS WITHIN THE DRAINAGE AREA OF A DOWNSTREAM POND DESIGNED WITH THE "CHIPPENHAM FOREST SQUARE" PLANS BY BURY & PITTMAN, INC. THE STORM SEWER SYSTEM AND POND WERE DESIGNED TO ACCOMMODATE ALL OF THE PROPOSED DEVELOPMENT. THE ASSUMED C VALUE OF 0.9, ALTHOUGH THE ASSUMED C VALUE OF 0.9 IS STILL GREATER THAN THE ACTUAL IMPERVIOUSNESS; THEREFORE, THE STORM SEWER SYSTEM IS ASSUMED ADEQUATE, INCLUDING THE DOWNSTREAM POND. (REFERENCE CHIPPENHAM FOREST SQUARE PLANS, SHEETS NO. 21, 22, & 23.)
 - SEE SHEET CG-201 FOR STORMWATER ANALYSIS OF THE PROPOSED ON-SITE STORM SEWER SYSTEM AND THE CONNECTION POINT TO THE EXISTING SYSTEM.
 - SEE SHEET CG-401 FOR STORMWATER QUALITY ANALYSIS.
- STORMWATER MANAGEMENT ASSUMPTIONS/NOTES:**
- THE SITE IS CONSIDERED A RE DEVELOPMENT SITE.
 - THE APPLICABLE AREA (AREA OF ANALYSIS) FOR THIS PROJECT IS CONSIDERED THE SITE AREA.
 - THE POINT OF DISCHARGE FOR THIS AREA IS AN EXISTING 48" RCP THAT RUNS SOUTHEAST DOWN THE SOUTHERN DRIVE AISLE TO THE EXISTING SWM POND BEHIND THE LOWE'S BUILDING.

OVERALL DRAINAGE ARE MAP TO STORMWATER POND
 NOTE: MAP TAKEN FROM CHIPPENHAM FOREST SQUARE PLANS, SHEET 23
 N.T.S.



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Seal
PROJECT ARCHITECT/ENGINEER DATE

PROJECT LEAD DATE

PROJECT DESIGNER DATE

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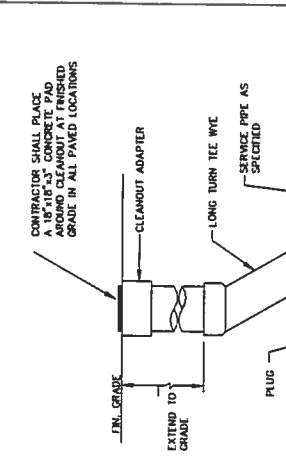
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|---|--------------------|
| Project Name & Location: | Project No. |
| GRADING, DRAINAGE, AND PHASE II EROSION & SEDIMENT CONTROL PLAN | 113180003 |
| Drawing Name: | Date: 12/12/14 |
| | Type: |
| | Drawn By: MRB |
| | Scale: As Noted |
| | Drawing No. CG-101 |

| EROSION CONTROL LEGEND | |
|------------------------|-------------------------------|
| (LD) | LIMITS OF DISTURBANCE 2:07 AC |
| (SF) | SILT FENCE |
| (CE) | CONSTRUCTION ENTRANCE 1 EA |
| (TP) | TREE PROTECTION 1 EA |
| (SAF) | SAFETY FENCE |
| (IP) | WALK PROTECTION 8 EA |
| (ST) | TEMPORARY SEDIMENT TRAP 1 EA |
| (DD) | DIVERSION DITCH 270 LF |
| (TS) | TEMPORARY SEEDING |
| (FS) | PERMANENT SEEDING |
| (SO) | SOODING |

- PHASE II LEGEND OF CONSTRUCTION**
- CONTRACTOR TO INSPECT AND MAINTAIN ALL EROSION & SEDIMENT CONTROL MEASURES AND MAKE ANY NECESSARY REPAIRS/ADDITIONS TO THE MEASURES.
 - ANY NECESSARY MODIFICATIONS TO THE CONSTRUCTION ENTRANCE SHALL BE COORDINATED WITH THE EASC INSPECTOR.
 - CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE TO EROSION & SEDIMENT CONTROL MEASURES AT ALL TIMES.
 - CONSTRUCTION OF INTERNAL PARKING CURBS AND OTHER BREAKS TO SERVE AS TEMPORARY STABILIZATION AND INSTALL TEMPORARY TOE AS ALL UPSTREAM SITE AREA IS STABILIZED AND WITH APPROVAL FROM THE INSPECTOR REMOVE TEMPORARY SEDIMENT TRAP AND CONSTRUCT PERMANENT SEDIMENT TRAP AND CONSTRUCT PERMANENT SEEDING.
 - INSTALL UTILITIES.
 - IMPROVEMENTS.
 - REMOVE EROSION CONTROLS UPON FULL STABILIZATION OF ALL SITE AREAS.
 - CONTRACTOR TO MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED WITHOUT PERMISSION FROM THE CITY OF RICHMOND EASC INSPECTOR.
 - FINAL LANDSCAPING PLANTINGS.
 - SITE CLEANUP/DEMOLITION.



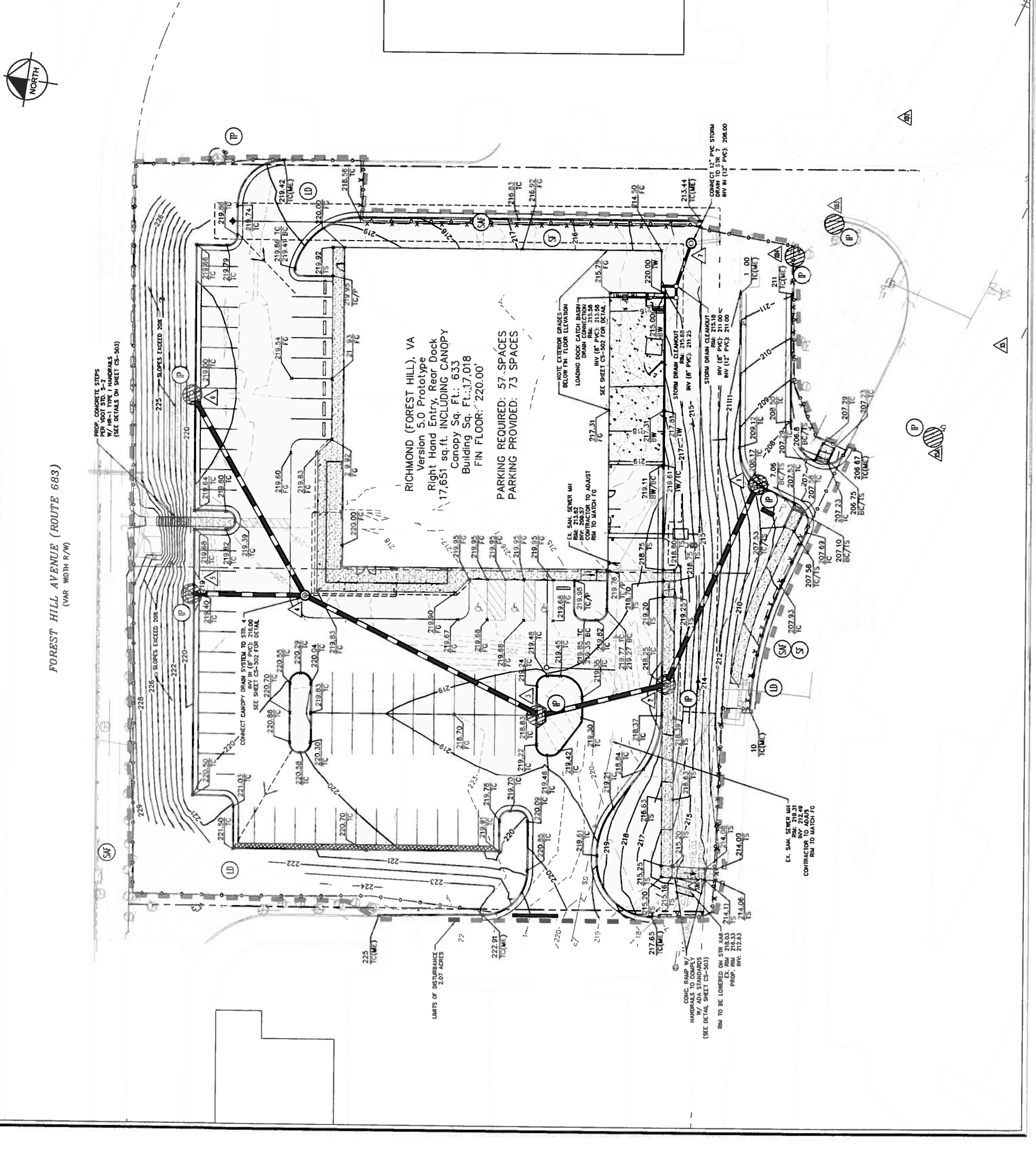
- NOTES**
- ROOF DRAINAGE/RETAINING SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT EDITION OF THE INTERNATIONAL PLUMBING CODE.
 - SEE SHEET CG-200 FOR STORM STRUCTURE AND PPE TABLES.
 - PIPE LENGTHS ARE MEASURED FROM CENTER OF CHAMBER TO CENTER OF CHAMBER.
 - IF APPROVAL DOES NOT INCLUDE APPROVAL OF THE RETAINING WALL DESIGN CONTRACTOR SHALL OBTAIN APPROVAL OF THE RETAINING WALL DESIGN APPROVAL WILL DETERMINE THE RETAINING WALL DESIGN APPROVAL.
 - ADA ACCESSIBLE PARKING SPACES ARE DESIGNED WITH A MAXIMUM 1:5% SLOPE IN ALL DIRECTIONS. CONTRACTOR TO ENSURE SLOPE DOES NOT EXCEED 2:04 IN ANY DIRECTION.
 - PROPOSED SIDEWALK/ADA ACCESSIBLE ROUTE ARE DESIGNED WITH A MAXIMUM 1:5% SLOPE IN ALL DIRECTIONS. CONTRACTOR TO ENSURE SLOPE DOES NOT EXCEED 2:04. LONGITUDINAL SLOPE DOES NOT EXCEED 5:04 AND CONCRETE TAMP DOES NOT EXCEED 3:34.

GRADING LEGEND

TC TOP OF CURB ELEVATION
BC BOTTOM OF CURB ELEVATION
TW TOP OF WALL ELEVATION
TS TOP OF SIDEWALK ELEVATION
P PAD: FINISHED GRADE ELEVATION
FC FINISHED GRADE ELEVATION
(ME) MATCH EXISTING ELEVATION

1 DRAINAGE STR LABEL

GRAPHIC SCALE IN FEET
0 10 20 40




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PROJECT LEAD DATE _____

PROJECT DESIGNER DATE _____

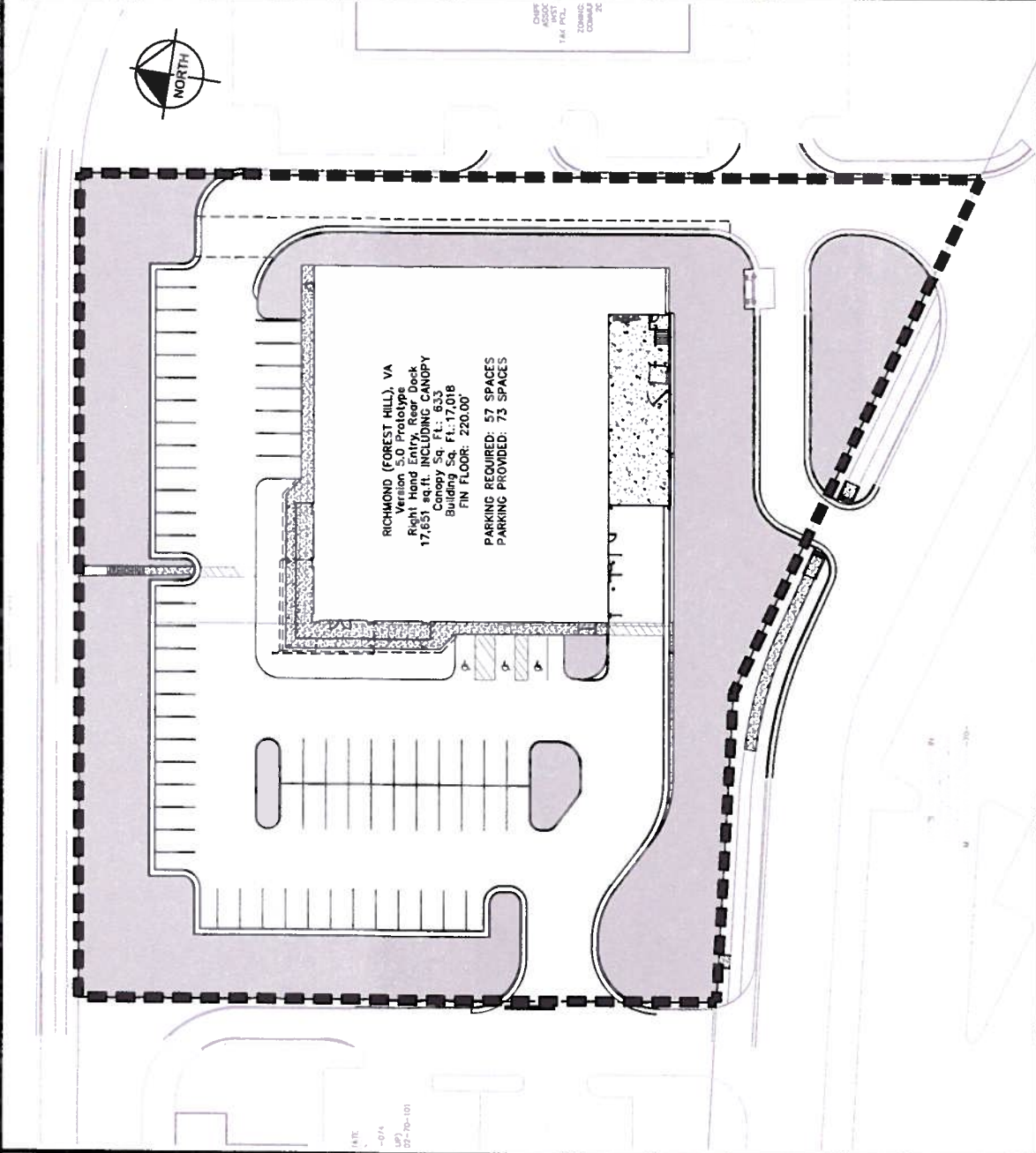
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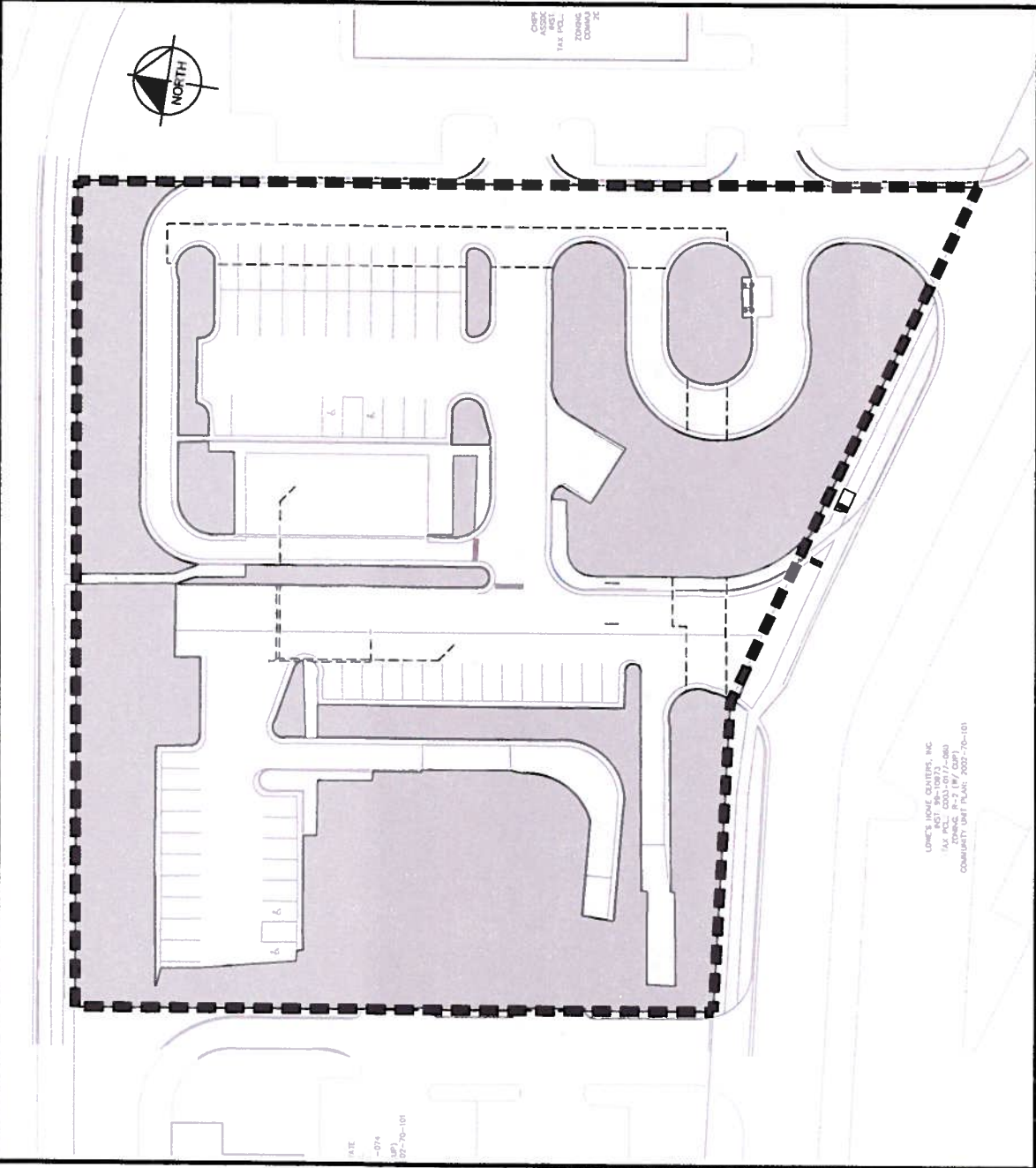
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WATER QUALITY PLAN

Project Name & Location:
 Drawing Name:
 Date: 12/12/14
 Project No. 113180003
 Type:
 Drawn By: MRB
 Scale: As Noted
 Drawing No. CG-401



PRE-DEVELOPMENT GREEN SPACE MAP



POST-DEVELOPMENT GREEN SPACE MAP

IMPERVIOUS AREA SUMMARY

| DRAINAGE AREA LABEL | TOTAL IMPERVIOUS AREA (AC) | MANAGED TURF OPEN SPACE AREA (AC) | FOREST/ OPEN SPACE AREA (AC) | CN | TIME OF CONCENTRATION (hr) |
|---------------------|----------------------------|-----------------------------------|------------------------------|------|----------------------------|
| Pre A | 2.83 | 1.17 | 0.00 | 0.62 | 5.0 |
| Post A | 2.83 | 1.07 | 0.00 | 0.71 | 5.0 |

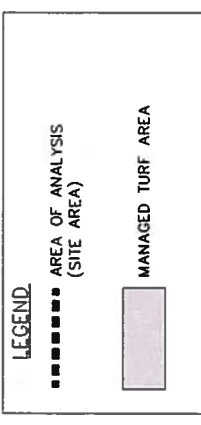
STORMWATER QUALITY SUMMARY

| Pre-Development Land Cover (Acres) | | | | Post-Development Land Cover (Acres) | | | |
|------------------------------------|----------------------|--------------------------|--------------|-------------------------------------|----------------------|--------------------------|--------------|
| Fores/Open Space (Acres) | Managed Turf (Acres) | Impervious Cover (Acres) | Totals | Fores/Open Space (Acres) | Managed Turf (Acres) | Impervious Cover (Acres) | Totals |
| 0 | 0 | 0.00 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| 0 | 0 | 0.99 | 0.99 | 0 | 0 | 0.71 | 0.71 |
| 0 | 0 | 1.20 | 1.20 | 0 | 0 | 1.47 | 1.47 |
| | | | Total | | | | Total |
| | | | 1.20 | | | | 1.47 |
| | | | 2.19 | | | | 2.19 |

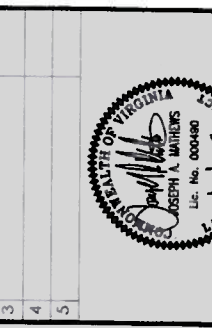
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| Maximum % Reduction Required Based on Pre-Development Load | 20% |
| TP Load Reduction Required for Redeveloped Area (lb/yr) | 0.65 |
| Total Load Reduction Required (lb/yr) | 1.10 |
| Post-Development Load (lb/yr) | 23.38 |

TP Load Reduction Required for New Impervious Area (lb/yr): 0.65

WATER QUALITY NARRATIVE
 THE REDEVELOPMENT OF THE SITE RESULTS IN A PHOSPHOROUS LOAD REQUIREMENT OF 1.10 LBS/YEAR. THE DEVELOPER HAS TENTATIVELY AGREED TO PURCHASE 1.10 LBS OF NONPOINT SOURCE PHOSPHOROUS OFFSETS FROM THE NUTRIENT CREDIT GROUP OF VERGMA, LLC. ONCE THE PURCHASE IS FINALIZED, THE SIGNED AGREEMENT WILL BE INCLUDED ON THE PLANS.



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| PROJECT LEAD | DATE |
| PROJECT DESIGNER | DATE |

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Gen Allen, Virginia 23040
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Project Name & Location:
**PLANTING SCHEDULE,
NOTES AND DETAILS**

Drawing Name:
Project No.: 113180003
Date: 12/12/14
Type:
Drawn By: MKR
Scale: As Noted
Drawing No.: CP-501

| TREES | CODE | QTY | BOTANICAL NAME | COMMON NAME | CONT. | CAL. | SIZE | REMARKS |
|-------|------|-----|-------------------------------|---------------------|-------|----------------|------------------------|---|
| | AG3 | 4 | ACER RUBRUM 'OCTOBER GLORY™' | OCTOBER GLORY MAPLE | B & B | 2" CAL | | MAPLE SPECIES OR OTHER SPECIES AS SPECIFIED BY URBAN FORESTRY |
| | AA | 4 | ACER SPECIES | MAPLE - SEE REMARKS | B & B | 3" CAL | | |
| | IM | 21 | ILEX X 'MARY NELL' | MARY NELL HOLLY | B & B | | 6'-8" HT. MIN. | |
| | UB | 7 | ULMUS PARVIFOLIA 'BOSQUE' | BOSQUE ELM | B & B | 2.5" CAL. MIN. | | |
| | ZG | 5 | ZELKOVIA SERRATA 'GREEN VASE' | SAWLEAF ZELKOVA | B & B | 3" CAL | | |
| | AE | 70 | ABELIA X GRANDIFLORA | GLOSSY ABELIA | SIZE | FIELD2 | CONT: 16" 24" SP. MIN. | |
| | CB | | PERMANENT LAWN SOD | | CONT. | FIELD3 | | |

| GROUND COVERS | CODE | BOTANICAL NAME | COMMON NAME | CONT. | REMARKS |
|---------------|------|--------------------|-------------------------|-------|--|
| | HS | HARDWOOD MULCH | SHREDDED HARDWOOD MULCH | NONE | |
| | CB | PERMANENT LAWN SOD | | SOD | SEE NOTES REGARDING TYPE OF SOD TO USE |

| SHRUBS | CODE | QTY | BOTANICAL NAME | COMMON NAME | CONT. | FIELD2 | FIELD3 | REMARKS |
|--------|------|-----|----------------------|---------------|-------|--------|------------------------|---------|
| | AE | 70 | ABELIA X GRANDIFLORA | GLOSSY ABELIA | SIZE | FIELD2 | CONT: 16" 24" SP. MIN. | |

| SHRUB/GROUNDCOVER PLANTING | CODE | BOTANICAL NAME | COMMON NAME | CONT. | FIELD2 | FIELD3 | REMARKS |
|----------------------------|------|--------------------|-------------------------|-------|--------|--------|--|
| | HS | HARDWOOD MULCH | SHREDDED HARDWOOD MULCH | NONE | | | |
| | CB | PERMANENT LAWN SOD | | SOD | | | SEE NOTES REGARDING TYPE OF SOD TO USE |

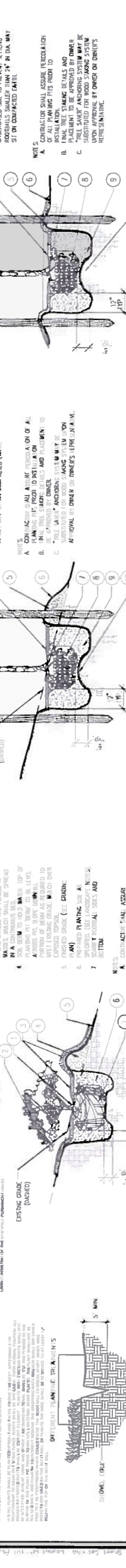
NOTE: BERMUDA SOD SHALL BE INSTALLED DURING THE SUMMER MONTHS WHEN THE SOD IS VIGOROUSLY GROWING AND ABLE TO READILY TAKE ROOT. FESCUE SOD SHALL BE INSTALLED AT ALL OTHER TIMES IN THE FALL AND SPRING UNLESS OTHERWISE SPECIFIED BY THE OWNER.

SHRUB/GROUNDCOVER PLANTING

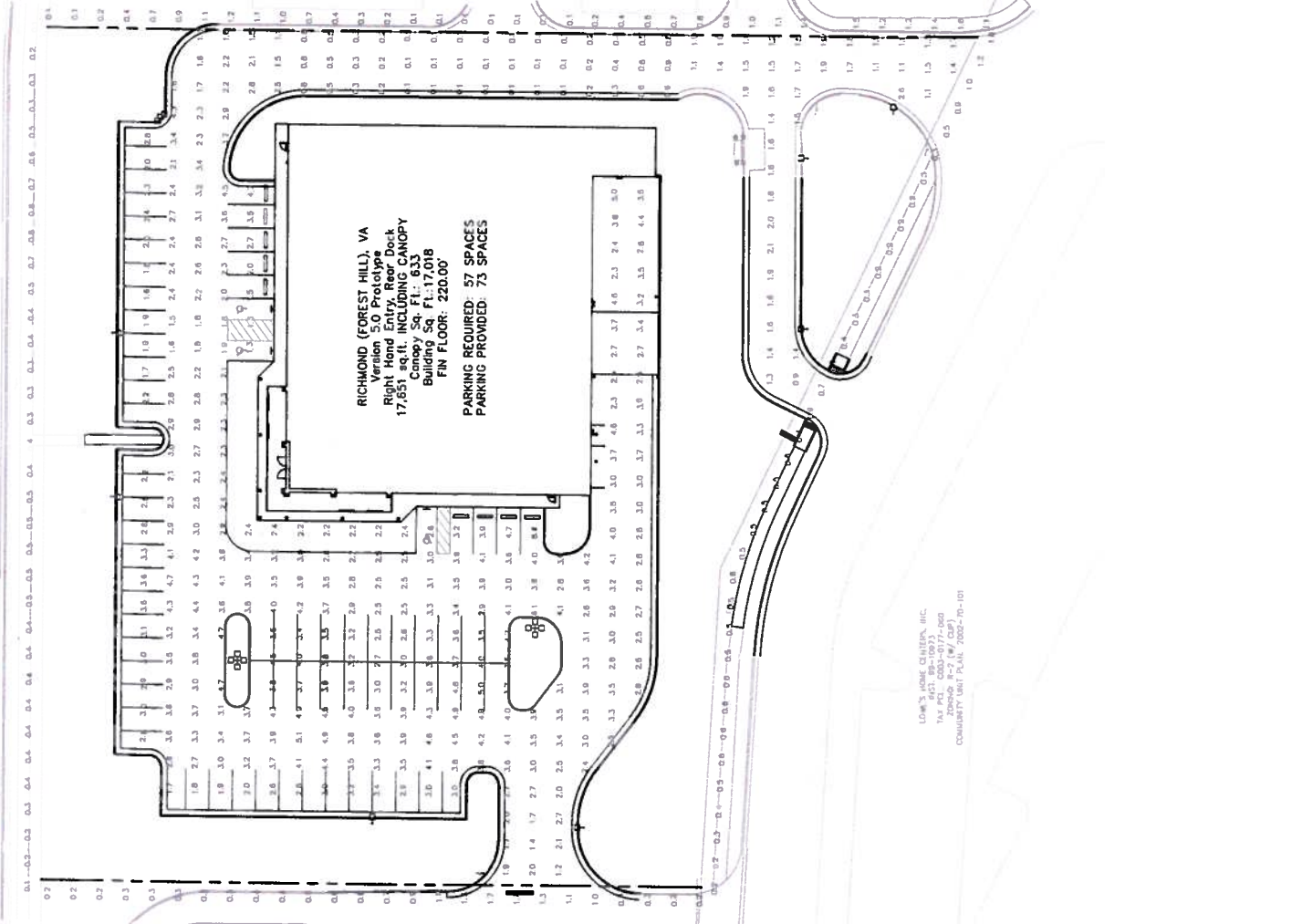
1. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLANTED IN THE FALL UNLESS OTHERWISE SPECIFIED BY THE OWNER'S REPRESENTATIVE.

SHRUB/GROUNDCOVER PLANTING

1. PROJECT SHALL BE PLANTED WITH BLACK BEERER
2. PLANTING SHALL BE PERFORMED IN THE FALL UNLESS OTHERWISE SPECIFIED BY THE OWNER'S REPRESENTATIVE.
3. TRUNKS SHALL BE PROTECTED WITH TREE GUARDS.
4. MULCH SHALL BE APPLIED AS SPECIFIED.
5. PLANTING SHALL BE PERFORMED IN THE FALL UNLESS OTHERWISE SPECIFIED BY THE OWNER'S REPRESENTATIVE.
6. PLANTING SHALL BE PERFORMED IN THE FALL UNLESS OTHERWISE SPECIFIED BY THE OWNER'S REPRESENTATIVE.
7. PLANTING SHALL BE PERFORMED IN THE FALL UNLESS OTHERWISE SPECIFIED BY THE OWNER'S REPRESENTATIVE.
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9. PLANTING SHALL BE PERFORMED IN THE FALL UNLESS OTHERWISE SPECIFIED BY THE OWNER'S REPRESENTATIVE.
10. PLANTING SHALL BE PERFORMED IN THE FALL UNLESS OTHERWISE SPECIFIED BY THE OWNER'S REPRESENTATIVE.



FOREST HILL AVENUE (ROUTE 663)
(VA. ROAD 1/10)



EXISTING SHOPS
CHERRIAM SOUTH
1800 D.S. COLLEGE
14K P.L. 0002-077-085
ZONING: R-2 (V. CAP)
COMMUNITY UNIT PLAN
2002-70-101

PAVED SURFACE READINGS
Average: 0.6
Minimum: 0.1
Maximum: 0.1
Avg. Min: 0.500
Avg. Max: 0.500

PROPERTY LINE READINGS
Average: 0.6
Minimum: 0.1
Maximum: 0.1
Avg. Min: 5.62
Avg. Max: 18.00

LOWE'S HOME CENTERS, INC.
1421 89-10033
ZONING: R-2 (V. CAP)
COMMUNITY UNIT PLAN: 2002-70-101

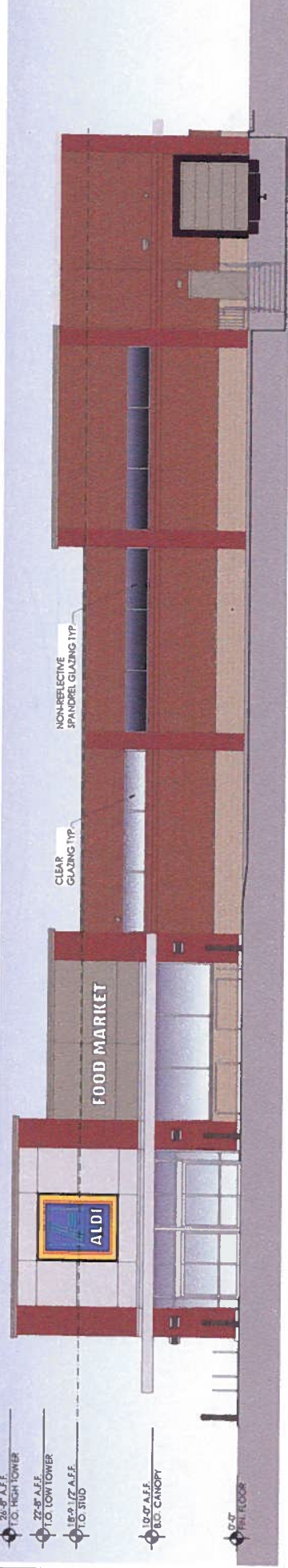
- NOTES:**
1. THE FOOTCANDLE LEVELS AS SHOWN ARE BASED ON THE FOLLOWING CRITERIA: THE FOOTCANDLE LEVELS OF THE FIXTURES OR CHANGES TO LAYOUT WILL AFFECT LIGHTING LEVELS SHOWN AND WILL NOT BE THE RESPONSIBILITY OF SECURITY LIGHTING.
 2. THE CONTRIBUTION OF THE SOFFIT / BUILDING LIGHTING IS NOT REPEATED IN THE DRAWING UNLESS SOFFIT / BUILDING LIGHTING IS SPECIFIED IN THE FIXTURE SCHEDULE BELOW.
 3. DISTANCE BETWEEN READINGS = 10'
 4. FINAL ADJUSTMENTS TO AIMING ANGLE/DIRECTION OF FIXTURES MAY BE REQUIRED TO AVOID OVERSPASS OR GLARE UNITS ADJOINING PROPERTIES OR ROADWAYS.
 5. FOOTCANDLE LEVELS SHOWN ARE MAINTAINED. MAINTENANCE FACTOR USED ON THIS DRAWING IS 0.87

CL15 Cimmarron LED Pedestrian Scale Series

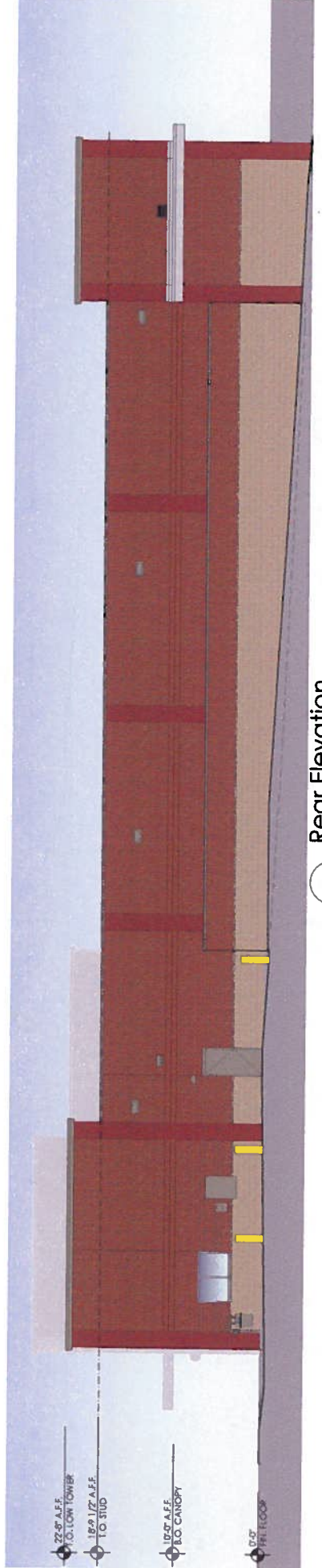
FEATURES:

- Available in 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1200, 1500, 2000, 2500, 3000, 4000, 5000, 6000, 7000, 8000, 9000, 10000, 12000, 15000, 20000, 25000, 30000, 40000, 50000, 60000, 70000, 80000, 90000, 100000, 120000, 150000, 200000, 250000, 300000, 400000, 500000, 600000, 700000, 800000, 900000, 1000000, 1200000, 1500000, 2000000, 2500000, 3000000, 4000000, 5000000, 6000000, 7000000, 8000000, 9000000, 10000000, 12000000, 15000000, 20000000, 25000000, 30000000, 40000000, 50000000, 60000000, 70000000, 80000000, 90000000, 100000000, 120000000, 150000000, 200000000, 250000000, 300000000, 400000000, 500000000, 600000000, 700000000, 800000000, 900000000, 1000000000, 1200000000, 1500000000, 2000000000, 2500000000, 3000000000, 4000000000, 5000000000, 6000000000, 7000000000, 8000000000, 9000000000, 10000000000, 12000000000, 15000000000, 20000000000, 25000000000, 30000000000, 40000000000, 50000000000, 60000000000, 70000000000, 80000000000, 90000000000, 100000000000, 120000000000, 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900, 1000, 1200, 1500, 2000, 2500000000000000

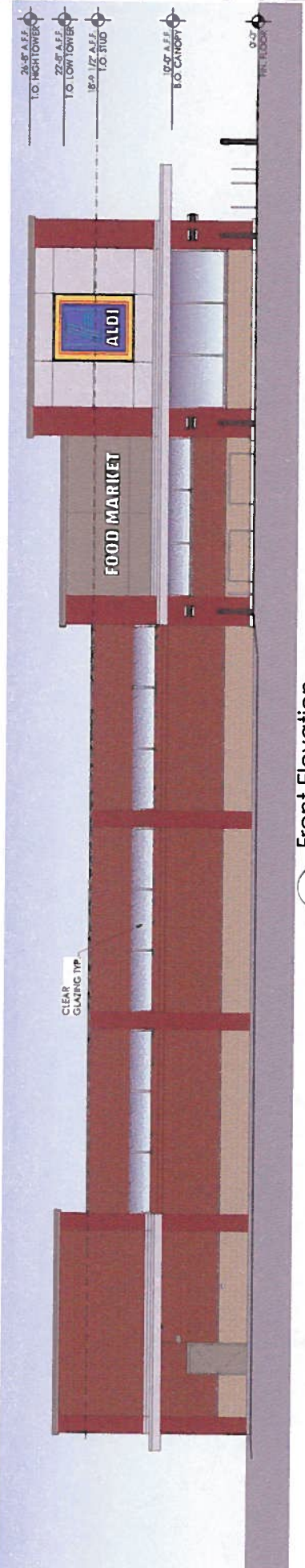
| SIGNAGE | DESCRIPTION | QUANTITY | SQ. FT. PER SIGN | TOTALS |
|---------|--|----------|------------------|--------|
| | TOWER SIGN | 2 | 75.0 | 150.0 |
| | TOWER SIGN (SMALL) | 1 | 50.0 | 50.0 |
| | FOOD MARKET SIGN | 2 | 21.3 | 42.6 |
| | TOTAL SIGNAGE | | | 242.6 |
| | SIGNAGE IS SHOWN FOR REFERENCE ONLY AND SHALL BE UNDER SEPARATE PERMIT SUBMITAL. | | | |



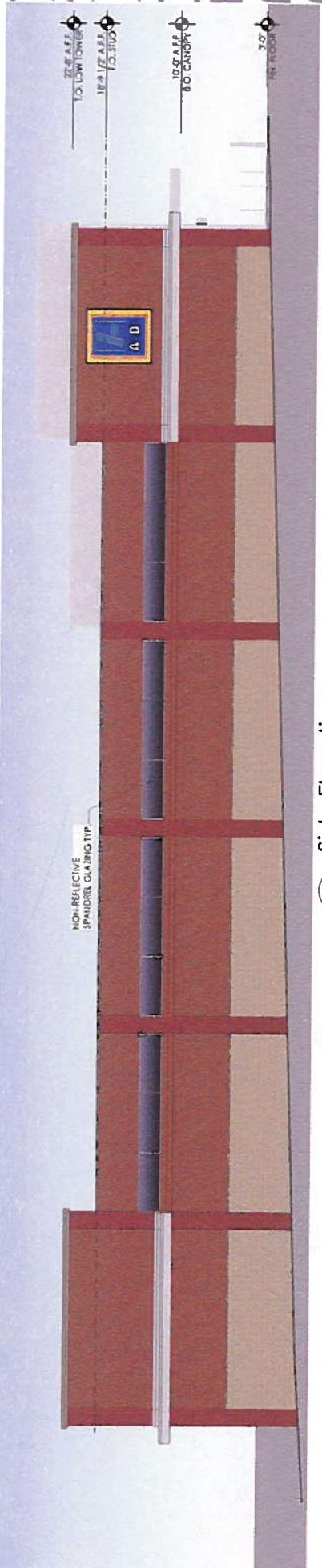
4 Side Elevation
SCALE: 1/8" = 1'-0"



3 Rear Elevation
SCALE: 1/8" = 1'-0"



2 Front Elevation
SCALE: 1/8" = 1'-0"



1 Side Elevation
SCALE: 1/8" = 1'-0"

| ISSUED: | DATE: |
|----------------------|----------|
| A Preliminary Review | 02/11/15 |
| B | |
| C | |
| D | |

| REVISIONS: | DATE: |
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REVIEWED BY: MJB
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ALDI Inc.
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7319 Forest Hill Ave
Richmond, VA 23225

Project Name & Location:
Exterior Elevations

Drawing Name:
Project No. 40320-10

Prototype Rls. 12/02/14
Type: RHRD-V5

Scale: As Noted
Drawing No. A-201

PRELIMINARY - NOT FOR CONSTRUCTION