City Of Richmond, Virginia
Office of the City Clerk

Request to Withdraw Legislation

Paper Number: Ord. 2025-052

Chief Patron: Mayor Danny Avula (By Request)

Introduction Date: March 24, 2025

Chief Patron Signature:

For Office Use Only

Attestation: Candice Reid Digitally signed by Candice Reid Date: 2025.10.09 09:27:12 -04'00'

Effective Date: October 9, 2025

INTRODUCED: March 24, 2025

AN ORDINANCE No. 2025-052

To authorize the special use of the property known as 3122 2nd Avenue for the purpose of up to three single-family detached dwellings and two single-family attached dwellings, upon certain terms and conditions.

Patron – Mayor Avula (By Request)

Approved as to form and legality
by the City Attorney

PUBLIC HEARING: APR 28 2025 AT 6 P.M.

WHEREAS, the owner of the property known as 3122 2nd Avenue, which is situated in a R-6 Single-Family Attached Residential District, desires to use such property for the purpose of up to three single-family detached dwellings and two single-family attached dwellings, which use, among other things, is not currently allowed by sections 30-412.4, concerning lot area and width, density, and unit width, and 30-412.5, concerning yards, of the Code of the City of Richmond (2020), as amended, and

WHEREAS, in accordance with section 17.11 of the Charter of the City of Richmond (2020), as amended, it has been made to appear that, if granted subject to the terms and conditions set forth in this ordinance, the special use granted by this ordinance will not be detrimental to the

AYES: _____ NOES: _____ ABSTAIN: _____

ADOPTED: _____ REJECTED: _____ STRICKEN: _____

safety, health, morals and general welfare of the community involved, will not tend to create congestion in streets, roads, alleys and other public ways and places in the area involved, will not create hazards from fire, panic or other dangers, will not tend to overcrowding of land and cause an undue concentration of population, will not adversely affect or interfere with public or private schools, parks, playgrounds, water supplies, sewage disposal, transportation or other public requirements, conveniences and improvements, and will not interfere with adequate light and air; and

WHEREAS, (i) the City Planning Commission has conducted a public hearing to investigate the circumstances and conditions upon which the Council is empowered to authorize such use, (ii) the City Planning Commission has reported to the Council the results of such public hearing and investigation and its recommendations with respect thereto, and (iii) the Council has conducted a public hearing on this ordinance at which the person in interest and all other persons have had an opportunity to be heard.

NOW, THEREFORE,

THE CITY OF RICHMOND HEREBY ORDAINS:

§ 1. **Finding.** Pursuant to section 30-1050.1 of the Code of the City of Richmond (2020), as amended, the Council hereby finds that the special use set forth in and subject to the terms and conditions of this ordinance will not (i) be detrimental to the safety, health, morals and general welfare of the community involved, (ii) tend to create congestion in streets, roads, alleys and other public ways and places in the area involved, (iii) create hazards from fire, panic or other dangers, (iv) tend to overcrowding of land and cause an undue concentration of population, (v) adversely affect or interfere with public or private schools, parks, playgrounds, water supplies, sewage disposal, transportation or other public requirements, conveniences and improvements, or

(vi) interfere with adequate light and air.

§ 2. **Grant of Special Use Permit.**

(a) Subject to the terms and conditions set forth in this ordinance, the property known as 3122 2nd Avenue and identified as Tax Parcel No. N000-0990/001 in the 2025 records of the City Assessor, being more particularly shown on a survey entitled "Map Showing the Improvements on Lots 14, 15 and 16, Block 8, 'Highland Park,' in the City of Richmond, VA.," prepared by Virginia Surveys, and dated June 12, 2023, a copy of which is attached to and made a part of this ordinance, hereinafter referred to as "the Property," is hereby permitted to be used for the purpose of up to three single-family detached dwellings and two single-family attached dwellings, hereinafter referred to as "the Special Use," substantially as shown on the plans entitled "Site Construction Documents for 3122 2nd Avenue Residences, 3122 2nd Avenue Richmond, VA 23220," prepared by Kine Vue, LLC, dated September 6, 2024, and last revised November 8, 2024, hereinafter referred to as "the Plans," copies of which are attached to and made a part of this ordinance.

(b) The adoption of this ordinance shall constitute the issuance of a special use permit for the Property. The special use permit shall inure to the benefit of the owner or owners of the fee simple title to the Property as of the date on which this ordinance is adopted and their successors in fee simple title, all of which are hereinafter referred to as "the Owner." The conditions contained in this ordinance shall be binding on the Owner.

§ 3. **Special Terms and Conditions.** This special use permit is conditioned on the following special terms and conditions:

(a) The Special Use of the Property shall be as up to three single-family detached dwellings and two single-family attached dwellings, substantially as shown on the Plans.

(b) All elevations and site improvements shall be substantially as shown on the Plans. Vinyl siding shall not be permitted.

(c) All mechanical equipment serving the Property shall be located or screened so as not to be visible from any public right-of-way.

(d) Prior to the issuance of any certificate of occupancy for the Special Use, the subdivision of the Property into up to five lots, substantially as shown on the Plans, shall be accomplished by obtaining the necessary approvals from the City and recording the appropriate plats and deeds among the land records of the Clerk of the Circuit Court of the City of Richmond

§ 4. **Supplemental Terms and Conditions.** This special use permit is conditioned on the following supplemental terms and conditions:

(a) All required final grading and drainage plans, together with all easements made necessary by such plans, must be approved by the Director of Public Utilities prior to the issuance of the building permit.

(b) Storm or surface water shall not be allowed to accumulate on the land. The Owner, at its sole cost and expense, shall provide and maintain at all times adequate facilities for the drainage of storm or surface water from the Property so as not to adversely affect or damage any other property or public streets and the use thereof.

(c) Facilities for the collection of refuse shall be provided in accordance with the requirements of the Director of Public Works. Such facilities shall be located or screened so as not to be visible from adjacent properties and public streets.

(d) Any encroachments existing, proposed on the Plans or contemplated in the future shall require separate authorization and shall be subject to the applicable provisions of the Code of the City of Richmond (2020), as amended, and all future amendments to such laws.

(e) The Owner shall make improvements within the right-of-way, including the installation of five-foot-wide sidewalks along Burns Street, substantially as shown on the Plans, and the installation of five-foot-wide sidewalks along 2nd Avenue, which improvements may be completed in one or more phases as approved by the Director of Public Works. All improvements and work within the public right-of-way shall be (i) completed in accordance with the requirements of the Director of Public Works, (ii) considered completed only upon written confirmation by the Director of Public Works or the designee thereof that such improvements and work are in accordance with such requirements, and (iii) transferred to the City, following the written confirmation by the Director of Public Works or the designee thereof, pursuant to a transfer of interest document approved as to form by the City Attorney and accepted by the Chief Administrative Officer or the designee thereof on behalf of the City. The Chief Administrative Officer or the designee thereof, for and on behalf of the City, is hereby authorized to accept, in the manner for which this subsection provides, all improvements and work required by and meeting the requirements of this subsection. The final certificate of occupancy shall not be issued for the Property until all requirements of this subsection are fully satisfied.

(f) In all other respects, the use of the Property shall be in accordance with the applicable underlying zoning regulations.

§ 5. **General Terms and Conditions.** This special use permit is conditioned on the following general terms and conditions:

(a) No permit implementing this special use permit shall be approved until satisfactory evidence has been presented to the Zoning Administrator that any delinquent real estate taxes applicable to the Property have been paid.

(b) The Owner shall be bound by, shall observe and shall comply with all other laws,

ordinances, rules and regulations applicable to the Property, except as otherwise expressly provided in this ordinance.

(c) Words and phrases used in this ordinance shall be interpreted to have the meanings ascribed to them by section 30-1220 of the Code of the City of Richmond (2020), as amended, unless the context clearly indicates that a different meaning is intended.

(d) Notwithstanding any other provision of law, this special use permit is being approved due, in part, to the mitigating effects of each and every condition attached hereto; consequently, if any portion of this ordinance is determined to be invalid for any reason by a final, non-appealable order of any Virginia or federal court of competent jurisdiction, the invalidity shall cause the entire ordinance to be void and of no further effect from the effective date of such order.

(e) The privileges granted by this ordinance may be revoked pursuant to the provisions of sections 30-1050.7 through 30-1050.11 of the Code of the City of Richmond (2020), as amended, and all future amendments to such laws. Failure to comply with the terms and conditions of this ordinance shall constitute a violation of section 30-1080 of the Code of the City of Richmond (2020), as amended, and all future amendments to such law, or any other applicable laws or regulations.

(f) When the privileges granted by this ordinance terminate and the special use permit granted hereby becomes null and void, whether as a result of the Owner relinquishing this special use permit in a writing addressed to the Director of Planning and Development Review or otherwise, use of the Property shall be governed thereafter by the zoning regulations prescribed for the district in which the Property is then situated.

§ 6. **Implementation.** The Commissioner of Buildings is authorized to issue a building permit substantially in accordance with the Plans for the Special Use subject to the terms and

conditions set forth in this ordinance. An application for the building permit shall be made within 1,096 calendar days following the date on which this ordinance becomes effective. If either the application for the building permit is not made within the time period stated in the previous sentence or the building permit terminates under any provision of the Virginia Statewide Building Code, this ordinance and the special use permit granted hereby shall terminate and become null and void.

§ 7. **Effective Date.** This ordinance shall be in force and effect upon adoption.

APPROVED AS TO FORM:

John Dickinson

CITY ATTORNEY'S OFFICE

City of Richmond

900 East Broad Street
2nd Floor of City Hall
Richmond, VA 23219
www.rva.gov

Master

File Number: Admin-2025-0039

File ID:	Admin-2025-0039	**Type:**	Request for Ordinance or Resolution	**Status:**	Regular Agenda
Version:	2	**Reference:**		**In Control:**	City Attorney
Department:				**File Created:**	01/15/2025
Subject:				**Final Action:**	
Title:					

Internal Notes:

Agenda Date: 03/24/2025

Patron(s):

Enactment Date:

Attachments: Admin-2025-0039 - AATF SUP - 3122 2nd Ave.pdf, Admin-2025-0039 - V2_Supporting Documents_3122 2nd Avenue.pdf

Enactment Number:

Contact:

Introduction Date:

Drafter: David.Watson@rva.gov

Effective Date:

Related Files:

Approval History

Version	Seq #	Action Date	Approver	Action	Due Date
2	1	2/25/2025	John Dickinson	Approve	2/27/2025
2	2	2/25/2025	Jonathan Brown	Approve	2/27/2025
2	4	2/26/2025	Kevin Vonck	Approve	3/4/2025
2	6	2/27/2025	Sharon Ebert	Approve	2/28/2025
2	8	2/27/2025	Jeff Gray	Approve	3/3/2025
2	9	2/28/2025	Sabrina Joy-Hogg	Approve	3/3/2025
2	10	3/18/2025	Mayor Avula	Approve	3/5/2025

History of Legislative File

Version:	Acting Body:	Date:	Action:	Sent To:	Due Date:	Return Date:	Result:

Text of Legislative File Admin-2025-0039

City of Richmond

Intracity Correspondence

O&R Transmittal

DATE: March 4, 2025

TO: The Honorable Members of City Council

THROUGH: The Honorable Dr. Danny Avula, Mayor (by request)

(This in no way reflects a recommendation on behalf of the Mayor)

THROUGH: Sabrina Joy-Hogg, Interim Chief Administrative Officer

THROUGH: Sharon L. Ebert, DCAO for Economic Development and Planning

FROM: Kevin J. Vonck, Director of Planning & Development Review

RE: To authorize the special use of the property known as 3122 2nd Avenue for the purpose of up to three single-family detached dwellings and two single-family attached dwellings, upon certain terms and conditions.

ORD. OR RES. No.

PURPOSE: The applicant is requesting a Special Use Permit to authorize the creation of five new lots. The proposal calls for the construction of two single-family detached, and two single-family attached dwellings on the new lots. An existing single-family detached dwelling shall remain. The proposed uses are permitted in the R-6 Single-Family Attached Residential District where the property is located. The subdivision will create parcels that do not meet all the lot feature requirements of the zoning district. Therefore, a Special Use Permit is therefore requested.

BACKGROUND: The property is in the North Highland Park neighborhood on the southwest corner of 2nd Avenue and Burns Street. The 14,700 square foot parcel is improved with a 2,130 square foot single-family dwelling. The City's Richmond 300 Master Plan designates a future land use for the subject property as Residential described where the proposed single-family dwelling are primary uses, and the single-family attached dwellings are secondary uses.

The current zoning for the subject property, and all surrounding properties, is R-6 Single-Family Attached.

COMMUNITY ENGAGEMENT: The North Highland Park Civic Association, Upper Reservoir District Civic Association, and the Highland Park Plaza Civic Association were notified; additional community notification will take place after introduction.

STRATEGIC INITIATIVES AND OTHER GOVERNMENTAL: Richmond 300 Master Plan

FISCAL IMPACT: $1,800 application fee.

DESIRED EFFECTIVE DATE: Upon adoption

REQUESTED INTRODUCTION DATE: March 24, 2025

CITY COUNCIL PUBLIC HEARING DATE: April 28, 2025

REQUESTED AGENDA: Consent

RECOMMENDED COUNCIL COMMITTEE: Planning Commission March 18, 2025

AFFECTED AGENCIES: Office of Chief Administrative Officer

Law Department (for review of draft ordinance)

RELATIONSHIP TO EXISTING ORD. OR RES.: None

ATTACHMENTS: Draft Ordinance, Application Form, Applicant's Report, Plans, Survey, Map

STAFF:

Matthew Ebinger, Planning Supervisor, Land Use Administration (Room 511) 646-6308

David Watson, Senior Planner, Land Use Administration (Room 511) 646-1036

Application for **SPECIAL USE PERMIT**
Department of Planning and Development Review
Land Use Administration Division
900 E. Broad Street, Room 511
Richmond, Virginia 23219
(804) 646-6304
http://www.richmondgov.com/

Application is hereby submitted for: (check one)

- ☐ **special use permit, new**
- ☐ **special use permit, plan amendment**
- ☐ **special use permit, text only amendment**

Project Name/Location

Property Address: 3122 2nd Ave Richmond Va 23222 Date: Oct 30th, 2023
Parcel I.D. #: N0000990001 Fee: $1800
Total area of affected site in acres: 0.33 ACRES

(See ***page 6*** for fee schedule, please make check payable to the "**City of Richmond**")

Zoning

Current Zoning: R-6

Richmond 300 Land Use Designation: Residential

Proposed Use

(Please include a detailed description of the proposed use in the required applicant's report)

Existing Use: Subdivide the property into 4 parcels.

Is this property subject to any previous land use cases?

Yes ☐ No ☒ If Yes, please list the Ordinance Number: _____

Applicant/Contact Person: Umer Khalil
Company: Sinddhu Investment Group LLC
Mailing Address: 2916 Four Mile Run Dr
City: Henrico State: Va Zip Code: 23231
Telephone: _(571)406-8212 Fax: _( )_____
Email: _____

Property Owner: Sinddhu Investment Group LLC
If Business Entity, name and title of authorized signee: _____

(The person or persons executing or attesting the execution of this Application on behalf of the Company certifies that he or she has or have been duly authorized and empowered to so execute or attest.)

Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Telephone: _( )_____ Fax: _( )_____
Email: _____

Property Owner Signature: Khalil Ahmed

The names, addresses, telephone numbers and signatures of all owners of the property are required. Please attach additional sheets as needed. If a legal representative signs for a property owner, please attach an executed power of attorney. **Faxed or photocopied signatures will not be accepted.**

NOTE: Please attach the required plans, checklist, and a check for the application fee (see Filing Procedures for special use permits)

APPLICANT'S REPORT

November 07th, 2023

Special Use Permit Request
3122 2nd Ave Richmond Va 23222

Submitted to: **City of Richmond**

Department of Planning and Development Review Land Use Administration
900 East Broad Street, Suite 511
Richmond, Virginia 23219

Submitted by:

Umer Sindhu

Sinddhu Investment Group LLC

2916 Four Mile Run Dr

Henrico Va 23231

Introduction

The applicant is requesting a special use permit (the "SUP") for the property known as 3122 2nd Ave (the "Property"). The SUP would authorize the construction of multi family dwellings. While the two-family attached use is permitted by the underlying R-6 Single Family Attached Residential zoning district, and therefore, the SUP is required.

Existing Conditions

SITE DESCRIPTION AND EXISTING LAND USE

The Property, as of now has one single family house (sqf 2130)

EXISTING ZONING

The Property and properties to the north are zoned R-6 Single-Family Attached Residential. A considerable number of properties in the immediate vicinity do not conform to the R-6 feature requirements such as lot area, lot width, and setbacks and several Special Use Permits have been approved nearby.

MASTER PLAN DESIGNATION

The Richmond 300 Master Plan (the "Master Plan") suggests "Neighborhood Mixed-Use" for the Property. This land use category is described as "existing or new highly-walkable urban neighborhoods that are predominantly residential." The Master Plan suggests this future land use designation allow for a variety of housing types that are consistent with the scale, density, and design of what exists in the vicinity.

Proposal

PURPOSE OF REQUEST

The SUP would permit the division of the Property into three lots and the construction of two single family detached dwellings and two attached duplexes.

PROJECT DETAILS/DESIGN

The proposed dwellings would each be two stories in height. They are configured as single-family dwellings from the street with several entrance. The proposed floor plans are modern and efficient, and designed to be meet the needs of the market including bedrooms with en-suite bathrooms and large closets. Off-street parking spaces for each dwelling accessible from the rear alley.

Findings of Fact

The following are factors indicated in Section 17.11 of the Charter and Section 30-1050.1 of the Zoning Ordinance relative to the approval of special use permits by City Council. The proposed special use permit will not:

- ***Be detrimental to the safety, health, morals and general welfare of the community involved.***

The proposed SUP for high-quality infill construction will not impact the safety, health, morals and general welfare of the nearby neighborhoods.

- ***Tend to create congestion in streets, roads, alleys and other public ways and places in the area involved.***

The proposed SUP will not result in significant traffic impacts to nearby residential neighborhoods. The negligible traffic generation and off-street parking space for the dwellings will create no congestion on streets, roads, alleys or any other public right of way.

- ***Create hazards from fire, panic or other dangers.***

The property will be developed in a manner consistent with the requirements of the building code and in accordance with the requirements of Fire and Emergency Services. The City's codes applicable to this development are designed to eliminate such hazards.

- ***Tend to overcrowding of land and cause an undue concentration of population.***

The proposed SUP will not tend to over crowd the land or create an undue concentration of population.

- ***Adversely affect or interfere with public or private schools, parks, playgrounds, water supplies, sewage disposal, transportation or other public requirements, conveniences, and improvements.***

The proposed SUP would not adversely affect the above referenced City services.

- ***Interfere with adequate light and air.***

The light and air available to the subject and adjacent properties will not be affected. The proposed buildings are of compatible massing and spacing to the existing in the vicinity and normal side yard setbacks would be met. As a result, this request will not interfere with the provision of adequate light and air to the adjacent buildings.

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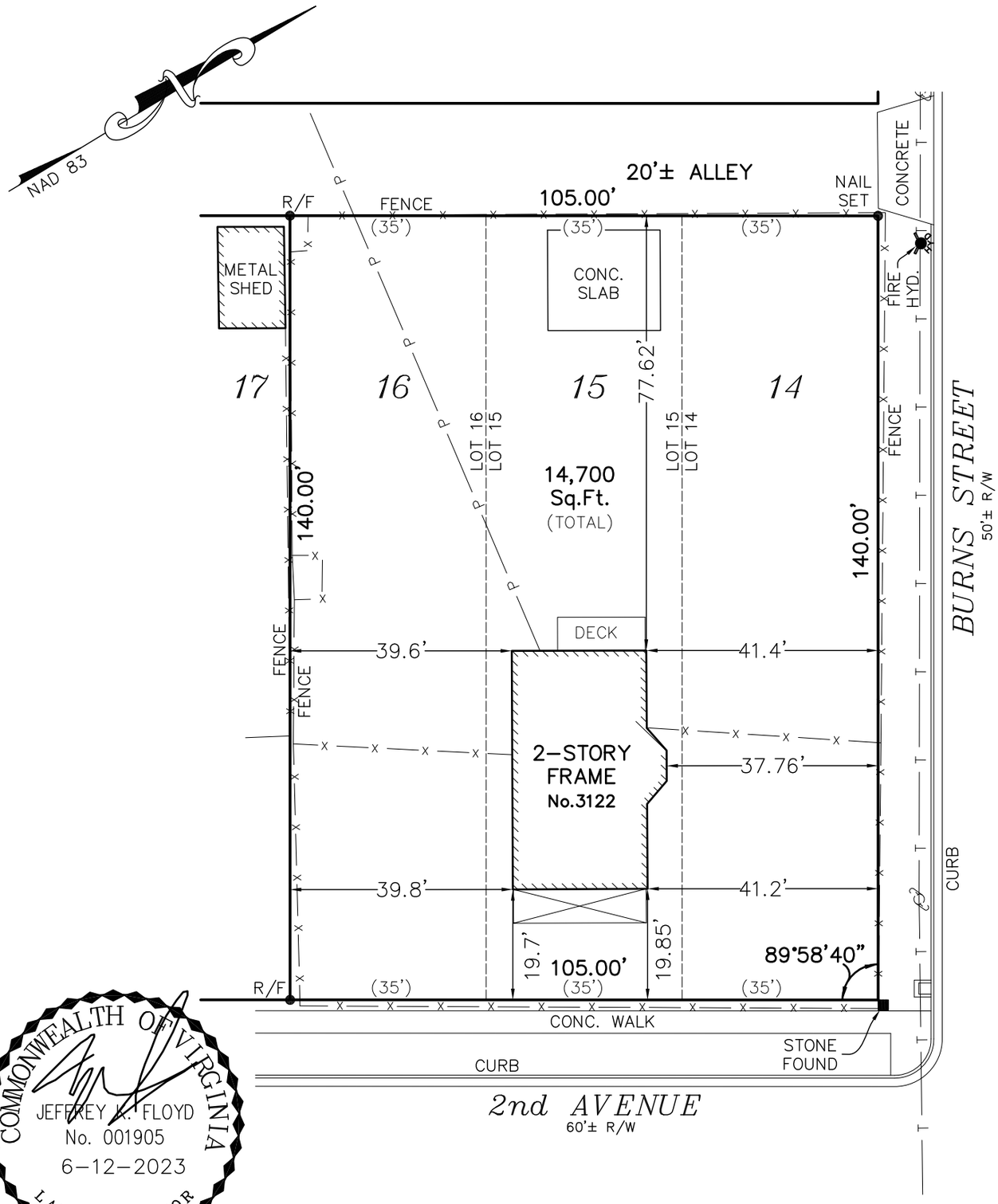
Summary

-
- In summary we are enthusiastically seeking approval for the construction of multi family dwellings on the Property. These dwellings provide new housing opportunities for the neighborhood which are consistent with the goals of the Richmond 300 Master Plan. In exchange for the SUP, the quality assurances conditioned therein would guarantee.

This is to certify to the PURCHASER/OWNER shown hereon, and his TITLE INSURER and Lender, that on 6-12-2023 I made an Accurate survey of the premises shown hereon and that there are no easements or encroachments visible on the ground other than those shown hereon. This survey has been made without the benefit of a title search and is subject to any uses recorded and unrecorded and other pertinent facts in which a title search may disclose. Copies of this plat without the certifying surveyor's seal with an original signature are INVALID.



COMMONWEALTH OF VIRGINIA
JEFFREY K. FLOYD
No. 001905
6-12-2023
LAND SURVEYOR

MAP SHOWING THE IMPROVEMENTS ON LOTS 14, 15 AND 16, BLOCK 8, "HIGHLAND PARK" IN THE CITY OF RICHMOND, VA.

Virginia Surveys
P.O. BOX 118
CHESTERFIELD, VA 23832
(804) 748-9481

DATE: 6-12-2023

CERTIFIED BY JEFFREY K. FLOYD

VIRGINIA CERTIFICATE NO. 001905

SCALE: 1"=25'

JOB NO. 230515751

SITE CONSTRUCTION DOCUMENTS
FOR

3122 2ND AVENUE RESIDENCES

3122 2ND AVENUE
RICHMOND, VA 23220

PROJECT INFORMATION

1	GPIN/ TAX MAP #:	N0000990001
2	ZONED:	R-6 - RESIDENTIAL (SINGLE FAMILY ATTACHED)
3	PROPERTY AREA:	14,700 SF
4	EXISTING USE:	RESIDENTIAL, 1 SINGLE FAMILY
5	PROPOSED USE:	RESIDENTIAL,3 SINGLE FAMILY (1 EXIS.) AND 1 DUPLEX
6	UTILITIES: CITY OF RICHMOND SYSTEMS	
7	THE PROJECT BUILDING SITE IS NOT WITHIN THE CHESAPEAKE BAY RESOURCE MANAGMENT AREA (RMA). IT IS NOT WITHIN THE 100 YR. FLOODPLAIN LIMIT OR RPA. THE PROPERTY IS LOCATED IN FEMA FLOOD ZONE "X" PER FIRM PANEL MAP 5101290033D, EFFECTIVE ON 04/02/2009. THERE ARE NO SIGNS OF WETLANDS ON SITE.	
8	BASE INFORMATION PROVIDED BY CITY OF RICHMOND GIS UTILITY MAPS, GOOGLE IMAGES, FIELD OBSERVATIONS, AND SUBDIVISION SURVEY PLATS BY: VIRGINIA SURVEYS, 804.748.9481 DATED 06.12.2023	
9	PROPOSED LAYOUT AND BUILDING INFORMATION ARE FROM OBSIDIAN HOUSE PLAN SET DATED 10.23.2023. SUP SURVEY PLAT WITH STRUCTURES WAS NOT PROVIDED.	
10	SETBACKS: FRONT YARD = 15', SIDE YARD = 5', REAR YARD = 5'	
11	SPECIAL USE PERMIT FOR THIS PROJECT WAS APPROVED ON: XX.2024	SUP-138627-2023

GENERAL NOTE: CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS NECESSARY TO PERFORM THE PROJECT SCOPE OF WORK.

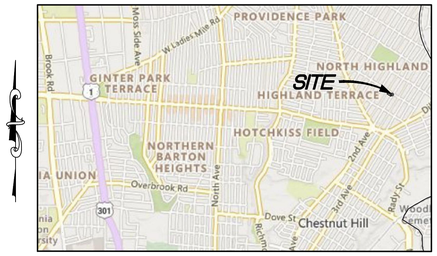
REQUIRED PERMITS (NOT INCLUSIVE):	CONTACTS:	
· BUILDING (BLDC-X-2024)	COR, DPU	804-648-8502
· LAND DISTURBANCE (LDIS-X-2024)	COR, SITE INSPECTOR	804-646-7586
· PLUMBING PERMIT (WCON)	COR, PDR	804-646-7317
· ~~SPRINKLER PERMIT (SPKC)~~	DOMINION VIRGINIA POWER	888-667-3000
· ~~STORM SEWER (STRM)~~	811	800-552-7001
· WATER PERMIT (WSC)	VERIZON	800-275-2355
· WORK IN STREET (WISP)		

va811.com Dig With Care

CALL BEFORE YOU DIG 811 OR 1-800-552-7001 OR VISIT WEBSITE http://www.va811.com/.

NOTES:
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CONFLICTS WITH EXISTING UTILITIES.
- IF THE CONTRACTOR, IN THE COURSE OF WORK FINDS ANY DISCREPANCY BETWEEN THE PLANS AND THE PHYSICAL CONDITIONS OF THE LOCALITY, OR ANY ERRORS OR OMISSIONS IN THE PLANS OR THE LAYOUT AS GIVEN BY THE ENGINEER, IT SHALL BE HIS DUTY TO IMMEDIATELY INFORM THE ENGINEER, IN WRITING, AND ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH DISCOVERY, UNTIL AUTHORIZED, WILL BE AT CONTRACTOR'S RISK.

VICINITY MAP



SOURCE: CITY OF RICHMOND GIS SCALE 1" = 2000'

SEPTEMBER 2024

SHEET INDEX

PROJECT NARRATIVE

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF 3 RESIDENTIAL BUILDINGS, ASSOCIATED HARDSCAPE, AND UTILITIES ON SITE. IMPROVEMENTS IN THE ROW INCLUDE A NEW SIDEWALK ON BURNS ST., REPLACEMENT OF THE SIDEWALK ON 2nd ST, AND STREET TREES IN BOTH STREET BUFFERS. A PRIVATE ACCESS & UTILITY EASEMENT WILL PROVIDE ACCESS TO THE ALLEY FOR THE HOUSES FACING 2ND STREET. ONLY STREET PARKING WILL BE PROVIDED. DETENTION OF STORMWATER IS NOT NEEDED TO MEET THE CURRENT REQUIREMENTS.

TEMPORARY E&SC LEGEND & QUANTITIES

		VESCH #			
CE	CONSTRUCTION ENTRANCE (MODIFIED)	3.02		1	EA
SF	BORDER PROTECTION	3.05		285	LF
PS	PERMANENT SEEDING	3.18		760	SY
	AREA OF LAND DISTURBANCE (LOD)	0.34	AC	14,825	SF

STORM DRAINAGE QUANTITIES

NO PROPOSED STORM DRAINAGE SYSTEMS

COMMONWEALTH OF VIRGINIA
TRACY WINKELMAN
Lic. No. 044415
11.08.24
PROFESSIONAL ENGINEER

DATE	REVISION
11.08.24	PER DPU COMMENTS

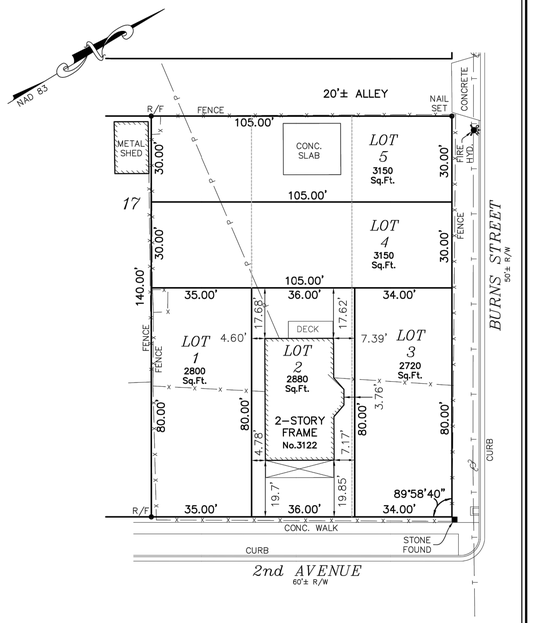
PROJECT NAME
3122 2ND AVENUE RESIDENCES
3122 2ND AVENUE RICHMOND, VA 23220

OWNER
SINDDHU INVESTMENT GROUP LLC

DATE
09.06.24

SHEET NO.
C0

C-COVR.dwg | Plotted on 11/8/2024 7:28 PM | by WINK



Virginia Surveys
P.O. BOX 118
CHESTERFIELD, VA 23832
(804) 748-9481

PRELIMINARY SKETCH SHOWING THE DIVISION OF LOTS 14, 15 AND 16, BLOCK 8, "HIGHLAND PARK" IN THE CITY OF RICHMOND, VA.

DATE: 6-12-2023
CERTIFIED BY JEFFREY K. FLOYD
VIRGINIA CERTIFICATE NO. 001905
SCALE: 1"=25'
JOB NO. 230515751

SURVEY

0 25' 50'
SCALE 1" = 25'

DEMOLITION LEGEND

REMOVE

DEMOLITION NOTES

1. THE RESPONSIBLE LAND DISTURBER FOR THIS PROJECT SHALL BE DESIGNATED BY THE CONTRACTOR
2. ALLOW THE PROPER E&S MEASURES TO BE PUT IN PLACE BEFORE COMMENCING WORK AND TRAFFIC AND PEDESTRIAN SAFETY ARRANGEMENTS AS NEEDED
3. A 10-FOOT SAFETY BUFFER FROM ALL OVERHEAD STREETLIGHT UTILITIES MUST BE MAINTAINED. IF LINE GUARDS ARE NEEDED, THESE CAN BE INSTALLED AT DEVELOPER COST
4. ALL TRASH AND DEMOLITION DEBRIS LOCATED ON SITE ARE TO BE CLEARED AND REMOVED OFF-SITE BY THE CONTRACTOR TO AN APPROVED DUMP SITE
5. UNSUITABLE MATERIAL SHALL BE REMOVED WHERE NECESSARY
6. REPLACE GRAVEL LADEN SOIL WITH CLEAN TOPSOIL PRIOR TO PERMANENT SEEDING
7. CONTRACTOR TO OBTAIN APPROVAL FROM ADJACENT PROPERTY OWNERS IF DISTURBANCE ON THEIR PROPERTY IS NEEDED FOR TREE REMOVAL
9. CONTRACTOR SHALL REPAIR ANY DAMAGE TO ROW IMPROVEMENTS; ALL STREET SIGNS AND BOUNDARY MARKERS (I.E. MONUMENTS, PINS, RODS) DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE

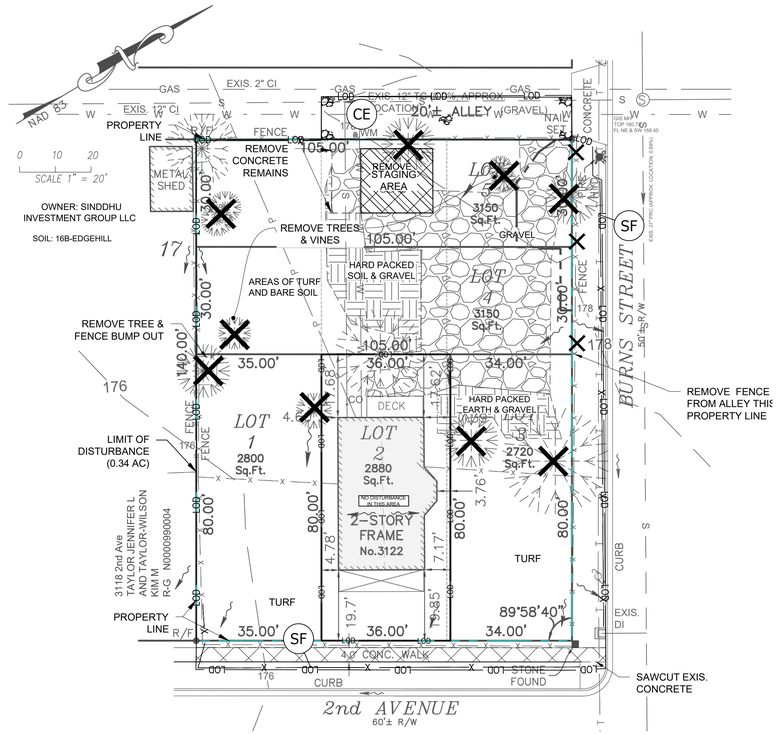
PHASE I EROSION CONTROL SEQUENCE

1. THE RESPONSIBLE LAND DISTURBER FOR THIS PROJECT SHALL BE DESIGNATED BY THE CONTRACTOR
2. ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE CURRENT EDITION OF THE VESC HANDBOOK AND VIRGINIA EROSION AND SEDIMENT CONTROL REGULATION 9VAC25-840
3. THE FOLLOWING CONSTRUCTION AND MAINTENANCE PROCEDURES AND AS ILLUSTRATED ONLY ON THE ES&C PLAN SHALL BE FOLLOWED
4. A PRE-CONSTRUCTION MEETING IS MANDATORY BEFORE ANY WORK IS DONE AT THE SITE WITH THE OWNER, CONTRACTOR, AND THE COR SITE INSPECTOR. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED
5. CONTACT 811 OR 1-800-552-7001 OR VISIT WEBSITE http://www.va811.com AT LEAST 48 HRS PRIOR TO CONSTRUCTION ACTIVITIES TO MARK EXISTING UTILITIES
6. VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION
7. CONTACT UTILITY COMPANIES TO COORDINATE WORK WITH AND AROUND EXISTING UTILITIES
8. INSTALL CONSTRUCTION ENTRANCE. ALLOW FOR PUBLIC AND PRIVATE VEHICULAR TRAFFIC IN ALLEY
9. INSTALL SILT FENCE
10. REMOVE EXISTING INTERIOR FENCE SECTIONS, TREES, AND BUSHES FROM THE WORK AREA

TEMPORARY E&SC LEGEND

		VESCH #
CE	CONSTRUCTION ENTRANCE (MODIFIED)	3.02
SF	BORDER PROTECTION	3.05
PS	PERMANENT SEEDING	3.18

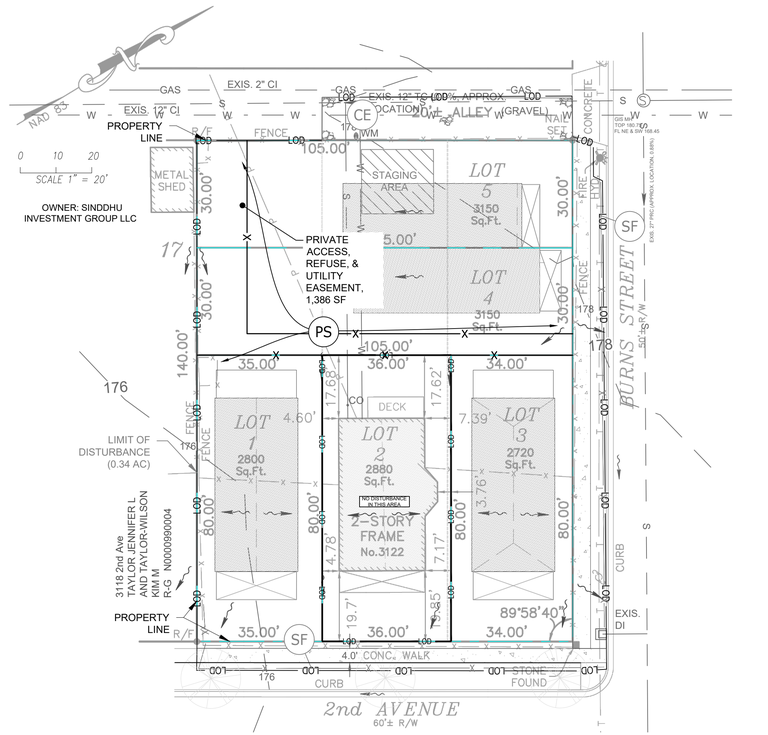
* *REFER TO COVER SHEET FOR QUANTITIES*



PH I EROSION & SEDIMENT CONTROL PLAN (ESCP)

PHASE II EROSION CONTROL SEQUENCE

1. BEGIN BUILDING CONSTRUCTION
2. INSTALL UTILITIES
3. SEED AND MULCH ALL DENUDED AREAS WITHIN 7 DAYS THAT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS
4. FINE GRADE SITE TO PROVIDE FOR POSITIVE DRAINAGE IN THE INDICATED FLOW DIRECTIONS
5. INSTALL REMAINING BUILDING AMENITIES
6. PERMANENTLY STABILIZE ALL DISTURBED AREAS NOT COVERED BY A CONSTRUCTED SURFACE
7. REGRADE AND ALLEY TO PROVIDE POSITIVE FLOW AS NEEDED FROM CONSTRUCTION DISTURBANCE. LAY ADDITIONAL AGGREGATE AS NEEDED TO MEET STANDARD GRAVEL ALLEY DETAIL
8. REMOVE REMAINING EROSION CONTROL DEVICES AFTER SITE IS COMPLETELY STABILIZED AND FINAL CONFORMANCE APPROVAL BY THE SITE INSPECTOR



PH II EROSION & SEDIMENT CONTROL PLAN

COMMONWEALTH OF VIRGINIA
Tracy Winkelman
TRACY WINKELMAN
Lic. No. 044415
09.06.24
PROFESSIONAL ENGINEER

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DATE	REVISION

3122 2ND AVENUE RESIDENCES

3122 2ND AVENUE CITY OF RICHMOND, VA

PLAT, DEMOLITION PLAN & ESCP PH I & II

DATE
09.06.24

SHEET NO.
C1.0

C-ESCP.dwg | Plotted on 11/8/2024 7:28 PM | by WINK

MINIMUM STANDARDS

MS-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 WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER 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 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.

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 UP SLOPE 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.

a. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.

b. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A TWENTY-FIVE YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

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. NON-ERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE COVER MATERIALS.

MS-13: 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 NON-ERODIBLE MATERIAL SHALL BE PROVIDED.

MS-14: ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

MS-15: THE BED AND BANKS OF A WATER COURSE 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 SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY 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 THESE REGULATIONS.
f. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

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 SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. 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 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.

MS-19: PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DISPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA:

a. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DIRECTLY DISCHARGED 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:
- b.a. 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
- b.b. NATURAL CHANNELS SHALL BE ANALYZED BY 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.c. ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BEDS OR BANKS; AND
- b.d. PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY 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:
- c.a. 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
- c.b. IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED IN THE APPURTENANCES; OR
- c.c. 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
- c.d. PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE PLAN-APPROVING 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 OF THE SUBJECT PROJECT.

f. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION HE SHALL OBTAIN APPROVAL FROM THE LOCALITY OF A PLAN FOR MAINTENANCE REQUIREMENTS OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH 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 DISSIPATERS SHALL BE PLACED AT THE END 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 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.

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 THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION 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 (I) ARE IN ACCORDANCE WITH PROVISIONS FOR TIME LIMITS ON APPLICABILITY OF APPROVED DESIGN CRITERIA IN 9VAC25-870-47 OR GRANDFATHERING IN 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION, IN WHICH CASE THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE ACT SHALL APPLY, OR (II) ARE EXEMPT PURSUANT TO § 62.1-44.15:34 C 7 OF THE ACT.

n. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF THIS SUBDIVISION 19.

PERMANENT STABILIZATION: SEEDING SHALL BE IN ACCORDANCE WITH STD. & SPEC. 3.32, PERMANENT SEEDING. SEED TYPE SHALL BE AS SPECIFIED FOR "MINIMUM CARE LAWNS" AND "GENERAL SLOPES" IN THE HANDBOOK.

1. ANY DISTURBED AREA NOT PAVED, SODDED, OR BUILT UPON, WILL HAVE A VEGETATIVE COVER PRIOR TO FINAL INSPECTION, AND IN THE OPINION OF THE DCR WILL BE MATURE ENOUGH TO CONTROL SOIL EROSION SATISFACTORILY AND SURVIVE SEVER WEATHER CONDITIONS.
2. WINTERIZATION-ANY DISTURBANCE AREA NOT PAVED, SODDED, OR BUILT UPON BY OCTOBER 15TH IS TO BE SEEDED AND MULCHED ON THAT DATE UNLESS WAIVED BY THE DCR.
3. TEMPORARY SEEDING WILL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. FOR TEMPORARY SEEDING USE 50% OF THE RECOMMENDED RATES OF FERTILIZER, LIME AND FULL AMOUNT OF SEED AND MULCH REQUIRED FOR REGULAR SEEDING.
4. ELECTRIC POWER, TELEPHONE, AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEED AND MULCHED WITHIN 7 DAYS AFTER BACKFILL.
5. ALL TEMPORARY EARTH BERMS, DIVERSIONS, AND SILT DAMS ARE TO BE MULCHED AND SEEDED FOR VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL STOCKPILES, ON SITE AS WELL AS SOIL TRANSPORTED FROM THE PROJECT SITE.

GENERAL EROSION AND SEDIMENT CONTROL NOTES (TABLE 6-1 VESCH)

ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS 9VAC25-840.

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, 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 NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

MAINTENANCE (See "Minimum Standards" for additional information)

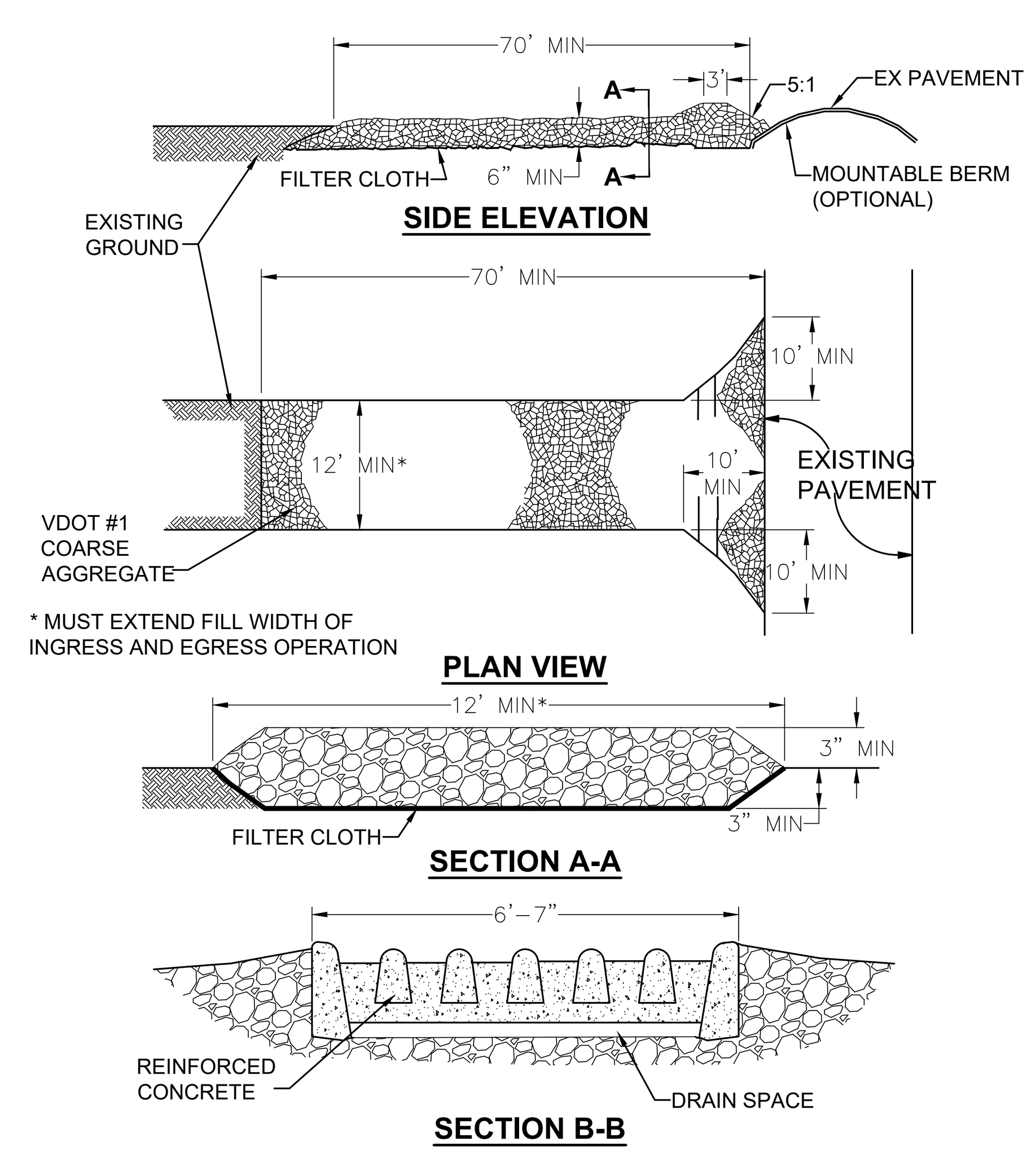
CONTRACTOR TO CHECK ALL EROSION AND SEDIMENT CONTROL MEASURES DAILY AND AFTER EACH RUN-OFF PRODUCING RAINFALL. THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR:

1. CONSTRUCTION ENTRANCE: SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
2. SILT FENCES: SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING.SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
3. INLET PROTECTION: THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
4. SEEDING: SEEDED AREAS SHALL BE MAINTAINED AS NECESSARY TO ESTABLISH A HEALTHY, UNIFORM STAND OF TURF UNTIL SUBSTANTIAL COMPLETION. MAINTENANCE SHALL CONSIST OF WATERING, MOWING, FERTILIZING, WEED REMOVAL, DISEASE AND INSECT REMOVAL, AND WHERE EROSION OCCURS, REPAIR.

CITY OF RICHMOND EROSION AND SEDIMENT CONTROL GUIDELINES

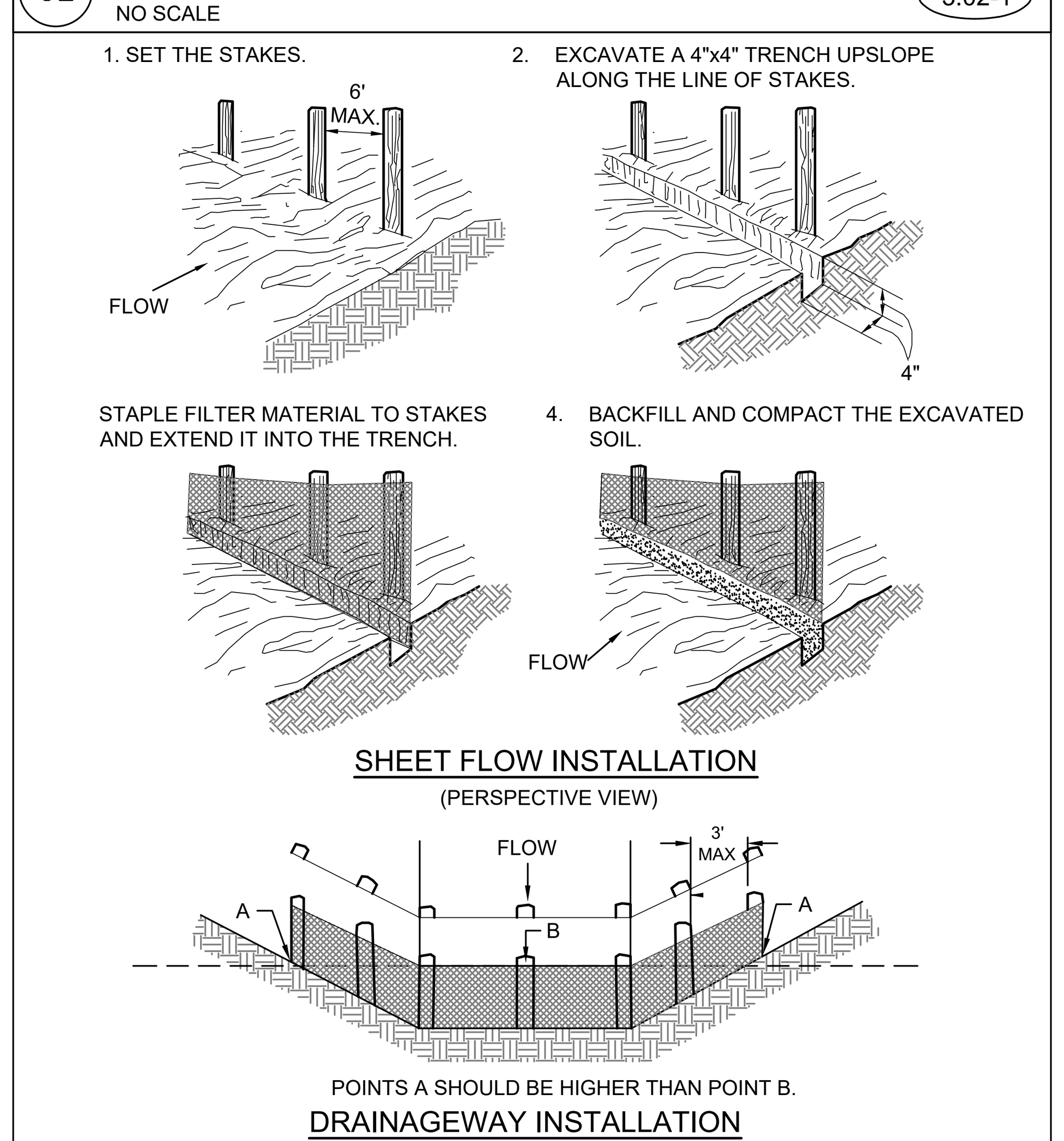
THE SITE IS TO BE GRADED TO PROPOSED CONTOURS AS SHOWN. NO CRITICAL EROSION CONTROL PROBLEMS ARE ANTICIPATED AS MOST EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED PRIOR TO LAND DISTURBANCE. THE CONTRACTOR SHALL ADHERE TO THE FOLLOWING MAINTENANCE AND PROCEDURES.

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 WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 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 SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORM DRAINAGE FACILITIES.
5. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL THE DISTURBED 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 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 STOCK PILES 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.



CE **STONE CONSTRUCTION ENTRANCE** 3.02-1

NO SCALE



SF CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT) 3.05-2

NO SCALE

TABLE 3.31-B
(Revised June 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

SEED		
APPLICATION DATES	**SPECIES**	**APPLICATION RATES**
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (lolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 -100 (lbs/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (lolium multi-florum)	60 - 100 (lbs/acre)
May 1 - Aug. 31	German Millet	50 (lbs/acre)

FERTILIZER & LIME

- Apply 10-10-10 **fertilizer** at a rate of 450 lbs. / acre (or 10 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
2 - Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
3 - When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

TABLE 3.32-E
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR COASTAL PLAIN AREA

SEED[1]		
LAND USE	**SPECIES**	**APPLICATION RATES**
Minimum Care Lawn (Commercial or Residential)	Tall Fescue[1] or Bermudagrass[1]	175 - 200 lbs. / 75 lbs.
High-Maintenance Lawn	Tall Fescue[1] or Bermudagrass[1] (seed) or Bermudagrass[1] (by other vegetative establishment method, see Std. & Spec. 3.34)	200-250 lbs. / 40 lbs. (unhulled) 30 lbs. (hulled)
General Slope (3:1 or less)	Tall Fescue[1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop[2]	128 lbs. 2 lbs. 20 lbs. TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue[1] Bermudagrass[1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop[2] Sericea Lespedeza[3]	93-108 lbs. 0-15 lbs. 2 lbs. 20 lbs. 20 lbs. TOTAL: 150 lbs.

1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at http://sudan.cses.vt.edu/html/Turf/turf/publications/publications2.html

2 - Use seasonal nurse crop in accordance with seeding dates as stated below:

February, March - April	Annual Rye
May 1st - August	Foxtail Millet
September, October - November 15th	Annual Rye
November 16th - January	Winter Rye

3 - May through October, use hulled seed. All other seeding periods, use unhulled seed. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30 -40 lbs/acre.

FERTILIZER & LIME

- Apply 10-20-10 **fertilizer** at a rate of **500** lbs. / acre (or 12 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

TABLE 3.35-A
ORGANIC MULCH MATERIALS AND APPLICATION RATES

MULCHES:	RATES: Per Acre	RATES: Per 1000 sq. ft.	NOTES:
Straw or Hay	1½ - 2 tons (Minimum 2 tons for winter cover)	70 - 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber Mulch	Minimum 1500 lbs	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods.* Apply as slurry.
Corn Stalks	4 - 6 tons	185 - 272 lbs.	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4 - 6 tons	185 - 272 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark Chips or Shredded Bark	50 - 70 cu. yds.	1-2 cu. yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./ac. or 45 lbs./1000 sq. ft.

RECOMMENDED COMPOST AMENDMENT FOR PROPOSED VEGETATED AREAS:
1. DE-COMPACT SOILS IN PLANTING AREAS (PREFERABLY BY ROTO-TILLING, DISKING OR RIPPING) TO A DEPTH OF 8 - 16"
2. CONTRACTOR SHALL EVALUATE SOIL AND ADD APPROPRIATE AMENDMENTS. A SOIL TEST IS RECOMMENDED DETERMINE AMENDMENT REQUIREMENTS WHICH MAY INCLUDE
   - 2.1. SOIL TEXTURE: INORGANIC MATERIAL SUCH AS SAND, SILT OR CLAY
   - 2.2. SOIL STRUCTURE: ORGANIC MATERIAL SUCH AS COMPOST, MANURE, AND PEAT MOSS
   - 2.3. SOIL NUTRIENT CONTENT AND pH: FERTILIZER AND SULFUR
3. REMOVE DEBRIS OVER 2" IN SIZE FROM THE SOIL.
4. ALL AMENDMENTS SHALL BE MIXED THOROUGHLY WITH EXISTING SOIL

PROJECT EROSION CONTROL NARRATIVE:

PROJECT DESCRIPTION: THIS PROJECT CONSISTS OF THE INFILL DEVELOPMENT OF 5 PROPOSED SUBDIVIDED PARCELS AND ADJACENT ROW. THE TOTAL PRIVATE AREA IS 14,700 SF. THREE STRUCTURES (4,099 SF TOTAL FOOTPRINT) WILL BE CONSTRUCTED ON THE SITE. THE EXISTING STRUCTURE WILL REMAIN. THERE WILL NOT BE ANY PARKING ONSITE. SIDEWALKS WILL BE CONSTRUCTED ON BOTH STREETS AND STREET TREES WILL BE INSTALLED IN THE ROW . THE TOTAL AREA OF DISTURBANCE IS APPROX. 0.34 AC SF.

EXISTING SITE CONDITIONS: THE SITE IS LOCATED IN A DEVELOPED RESIDENTIAL AREA OF THE CITY OF RICHMOND. ONE STRUCTURE, GRAVEL AND HARD PACKED SOIL DRIVEWAY, CONCRETE AREA, FENCES, A COUPLE OF TREES, SCRUB BRUSH, AND BUSHES EXISTS ON THE SITE. THE REMAINDER OF THE SITE IS COVERED WITH TURF. PORTIONS OF THE EXISTING PERIMETER FENCE ARE IN THE ROW AND ON THE ADJACENT PROPERTY. THE SITE DRAINS SOUTH TO 2ND AVE. ALLEY RUNOFF FLOWS SOUTHWEST IN THE ALLEY AND DOES NOT DRAIN ONTO THE PROPERTY. RUNOFF FROM THE ENTIRE SITE WILL ENTER THE CSS SYSTEM.

ADJACENT PROPERTY: THE SITE IS BOUNDED BY A RESIDENTIAL PROPERTY TO THE SOUTHWEST, A PUBLIC ALLEY TO THE NORTHWEST, AND PUBLIC STREETS ON THE OTHER 2 SIDES. THERE ARE NO ADJACENT STREAMS OR OTHER BODIES OF WATER ON OR NEAR THE SITE.

OFF-SITE AREAS: THERE ARE NO CRITICAL AREAS. THERE WILL BE NO OFF-SITE DISTURBED AREAS FOR SPOIL OR BORROW.

SOILS: ACCORDING TO THE NRCS SOIL SURVEY AND THE RICHMOND CITY SOIL COMPOSITION, THE SOIL CLASSIFICATION THAT EXIST AT THE SITE IS 16B - EDGEHILL - URBAN LAND COMPLEX, SLOPES 2 TO 6% SLOPES. COMPOSITION: EDGEHILL AND SIMILAR SOILS: 70%, URBAN LAND: 20%. A SOIL REPORT HAS NOT BEEN PROVIDED.

EDGEHILL AND SIMILAR SOILS PROPERTIES AND QUALITIES:
- AVAILABLE WATER CAPACITY: LOW (ABOUT 5.6")
- SLOWEST SATURATED HYDRAULIC CONDUCTIVITY: MODERATELY HIGH TO HIGH (0.57 TO 1.98 IN/HR)
- DEPTH TO RESTRICTIVE FEATURE: (MORE THAN 80")
- DRAINAGE CLASS: WELL DRAINED
- RUNOFF CLASS: LOW
- HYDROLOGIC SOIL GROUP: B
- FREQUENCY OF FLOODING AND PONDING: NONE
- ERODIBILITY (K FACTOR RATING): 0.10
- URBAN LAND: CONSISTS OF AREAS OF ROADS, COMMERCIAL BUILDINGS, INDUSTRIES, SCHOOLS, CHURCHES, PARKING LOTS, STREETS, AND SHOPPING CENTERS. PROPERTIES AND QUALITIES: UNKNOWN, ONSITE INVESTIGATION IS NEEDED TO DETER

CRITICAL AREAS: THERE ARE NO CRITICAL AREAS ON THIS SITE

STORMWATER RUNOFF CONSIDERATIONS
1. STORMWATER RUNOFF QUANTITY AND QUALITY WILL BE MANAGED BY A SILT FENCE DURING CONSTRUCTION
2. RUNOFF FLOW PATH WILL REMAIN SIMILAR FOR THE MAJORITY OF THE SITE. A SMALL AMOUNT OF RUNOFF WILL ENTER A SECOND CSS INLET NEAR THE CORNER OF THE SITE IN POST DEVELOPMENT CONDITIONS
3. THIS PROJECT WILL NOT GENERATE A NET FLOW INCREASE TO THE COMBINED SEWER (STORM RUNOFF AND SANITARY)
4. STORMWATER MANAGEMENT FACILITIES ARE NOT REQUIRED FOR THE PROJECT

CALCULATIONS: REFER TO THE DRAINAGE ANALYSIS PLAN SHEET

EROSION AND SEDIMENT CONTROL MEASURES: *(PRACTICES LISTED BELOW ARE FOR REFERENCE AND MAY NOT BE NECESSARY)*

ALL PROPOSED EROSION AND SEDIMENT CONTROL MEASURES NEEDED FOR THIS SITE TO PROTECT ADJACENT AND LOCAL WATERWAYS FROM SEDIMENT-LADEN WATER SHALL BE INSTALLED, MAINTAINED, AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND CITY OF RICHMOND STANDARDS UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE BY LOCAL AUTHORITIES HAVING JURISDICTION.

3.02 CONSTRUCTION ENTRANCE: A STABILIZED STONE PAD WITH A FILTER FABRIC UNDERLINER LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE IS USED TO REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO PAVED PUBLIC ROADS BY MOTOR VEHICLES OR RUNOFF. MAINTENANCE: MAINTAIN IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY AND IS IMPERATIVE THAT IT BE MAINTAINED THROUGHOUT CONSTRUCTION. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS, OR STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.

3.05 SILT FENCE: SILT FENCE SEDIMENT BARRIERS SHALL BE INSTALLED DOWN SLOPE OF AREAS WITH MINIMAL GRADES TO FILTER SEDIMENT-LADEN RUNOFF LEAVING THE SITE AND TO DECREASE THE VELOCITY OF SHEET FLOWS AND LOW-TO-MODERATE LEVEL CHANNEL FLOWS. MAINTENANCE: INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE BEFORE THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT, AND THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED, AND SEEDED.

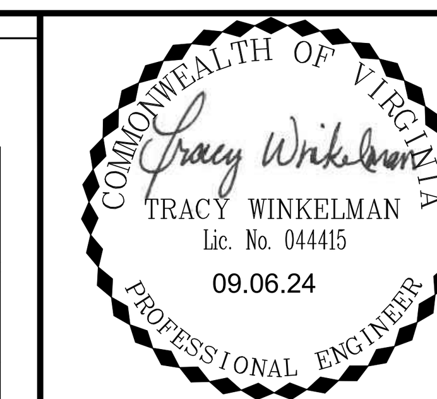
3.30 TOPSOILING: METHODS OF PRESERVING AND USING THE SURFACE LAYER OF UNDISTURBED SOIL, OFTEN ENRICHED IN ORGANIC MATTER, IN ORDER TO OBTAIN A MORE DESIRABLE PLANTING AND GROWTH MEDIUM. APPLICATION: TOPSOIL SHALL NOT BE PLACED ON A SUBGRADE THAT IS FROZEN, MUDDY, OR EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING OR PROPOSED SODDING OR SEEDING. THE TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED TO A MINIMUM COMPACTED DEPTH OF 2- INCHES ON 3:1 OR STEEPER SLOPES AND 4 INCHES ON FLATTER SLOPES. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS. IT IS NECESSARY TO COMPACT THE TOPSOIL ENOUGH TO ENSURE GOOD CONTACT WITH THE UNDERLYING SOIL AND TO OBTAIN A LEVEL SEEDBED FOR THE ESTABLISHMENT OF HIGH-MAINTENANCE TURF. HOWEVER, UNDUE COMPACTION IS TO BE AVOIDED AS IT INCREASES RUNOFF VELOCITY AND VOLUME AND DETERS SEED GERMINATION.

3.31 TEMPORARY SEEDING: ALL DENUDED AREAS WHICH WILL BE LEFT DORMANT FOR MORE THAN 14 DAYS SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION WITHIN 7 DAYS FOLLOWING GRADING OF THOSE AREAS. SELECTION OF THE SEED MIXTURE SHALL DEPEND ON THE TIME OF YEAR IT IS APPLIED. APPLICATION: SEED SHALL BE EVENLY APPLIED WITH A BROADCAST SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. SMALL GRAINS SHALL BE PLANTED AT MOST 1½" DEEP. SMALL SEEDS, SUCH AS KENTUCKY BLUEGRASS, SHOULD BE PLANTED NO MORE THAN 1" DEEP. OTHER GRASS AND LEGUMESC SHOULD BE PLANTED FROM 1/4 INCH TO ½" DEEP.

3.32 PERMANENT SEEDING: ALL DENUDED AREAS WHICH WILL BE LEFT DORMANT FOR MORE THAN 1 YEAR SHALL BE SEEDED WITH FAST GERMINATING PERMANENT VEGETATION IMMEDIATELY FOLLOWING GRADING OF THOSE AREAS. SELECTION OF THE SEED MIXTURE SHALL DEPEND ON THE TIME OF YEAR IT IS APPLIED. PERMANENT VEGETATIVE COVERS MUST MEET THE REQUIREMENTS OF MS #3. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE GRASS SEED GERMINATES, GROWS, AND HAS A DENSITY OF 75% /SF. THE CONTRACTOR MAY USE SOD TO STABILIZE THIS SITE. APPLICATION: THE SOIL ON A DISTURBED SITE MUST BE MODIFIED TO PROVIDE AN OPTIMUM ENVIRONMENT FOR SEED GERMINATION AND SEEDLING GROWTH. THE SURFACE SOIL MUST BE LOOSE ENOUGH FOR WATER INFILTRATION AND ROOT PENETRATION. THE PH OF THE SOIL MUST BE SUCH THAT IT IS NOT TOXIC AND NUTRIENTS ARE AVAILABLE, USUALLY BETWEEN PH 6.0-7.0. SUFFICIENT NUTRIENTS MUST BE PRESENT. AFTER SEEDING IS IN PLACE, IT MUST BE PROTECTED WITH MULCH TO HOLD MOISTURE AND MODIFY TEMPERATURE EXTREMES, AND PREVENT EROSION WHILE SEEDLINGS ARE GROWING. MAINTENANCE: EVEN WITH CAREFUL, WELL-PLANNED SEEDING OPERATIONS, FAILURES CAN OCCUR. WHEN IT IS CLEAR THAT PLANTS HAVE NOT GERMINATED OR HAVE DIED, THESE AREAS MUST BE RESEEDED IMMEDIATELY TO PREVENT EROSION DAMAGE. HOWEVER, IT IS EXTREMELY IMPORTANT TO DETERMINE THE REASON THAT GERMINATION DID NOT TAKE PLACE AND MAKE ANY CORRECTIVE ACTION NECESSARY PRIOR TO RE-SEEDING THE AREA.

3.35 MULCHING: APPLICATION OF PLANT RESIDUES OR OTHER SUITABLE MATERIALS TO THE SOIL SURFACE. THE PURPOSE OF MULCHING IS TO PREVENT EROSION BY PROTECTING THE SOIL SURFACE FROM RAINDROP IMPACT AND REDUCING THE VELOCITY OF OVERLAND FLOW. TO FOSTER THE GROWTH OF VEGETATION BY INCREASING AVAILABLE MOISTURE AND PROVIDING INSULATION AGAINST EXTREME HEAT AND COLD. MAINTENANCE: ALL MULCHES AND SOIL COVERINGS SHOULD BE INSPECTED PERIODICALLY (PARTICULARLY AFTER RAINSTORMS) TO CHECK FOR EROSION. WHERE EROSION IS OBSERVED IN MULCHED AREAS, ADDITIONAL MULCH SHOULD BE APPLIED. NETS AND MATS SHOULD BE INSPECTED AFTER RAINSTORMS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE-INSTALL NETTING OR MATTING AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. INSPECTIONS SHOULD TAKE PLACE UP UNTIL GRASSES ARE FIRMLY ESTABLISHED. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE; REPAIR AS NEEDED.

3.38 TREE PROTECTION: TREE PROTECTION, IN ACCORDANCE WITH VESCH AND ANSI A300 STANDARDS, SHALL BE PLACED AROUND DESIRABLE TREES TO PROVIDE PROTECTION FROM MECHANICAL AND OTHER INJURY DURING LAND DISTURBING AND CONSTRUCTION ACTIVITIES. MAINTENANCE: CHECK DAILY AND MAINTAIN



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DATE	REVISION

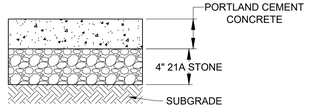
3122 2ND AVENUE RESIDENCES

3122 2ND AVENUE CITY OF RICHMOND, VA

EROSION & SEDIMENT CONTROL NOTES & DETAILS

DATE
09.06.24

SHEET NO.
C1.1



CONCRETE SIDEWALK SECTION

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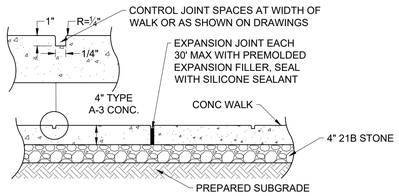

CONCRETE SIDEWALK JOINT DETAIL

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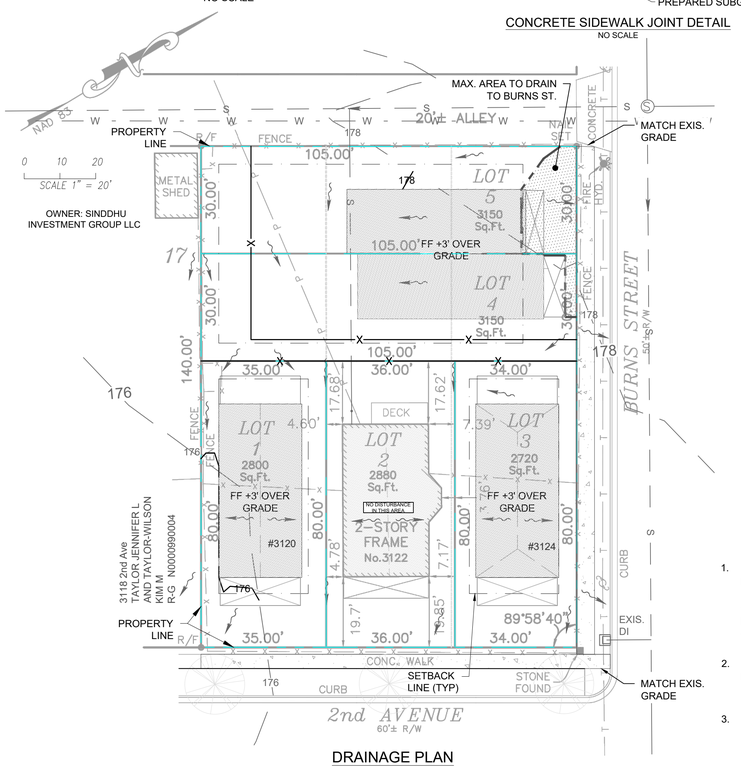


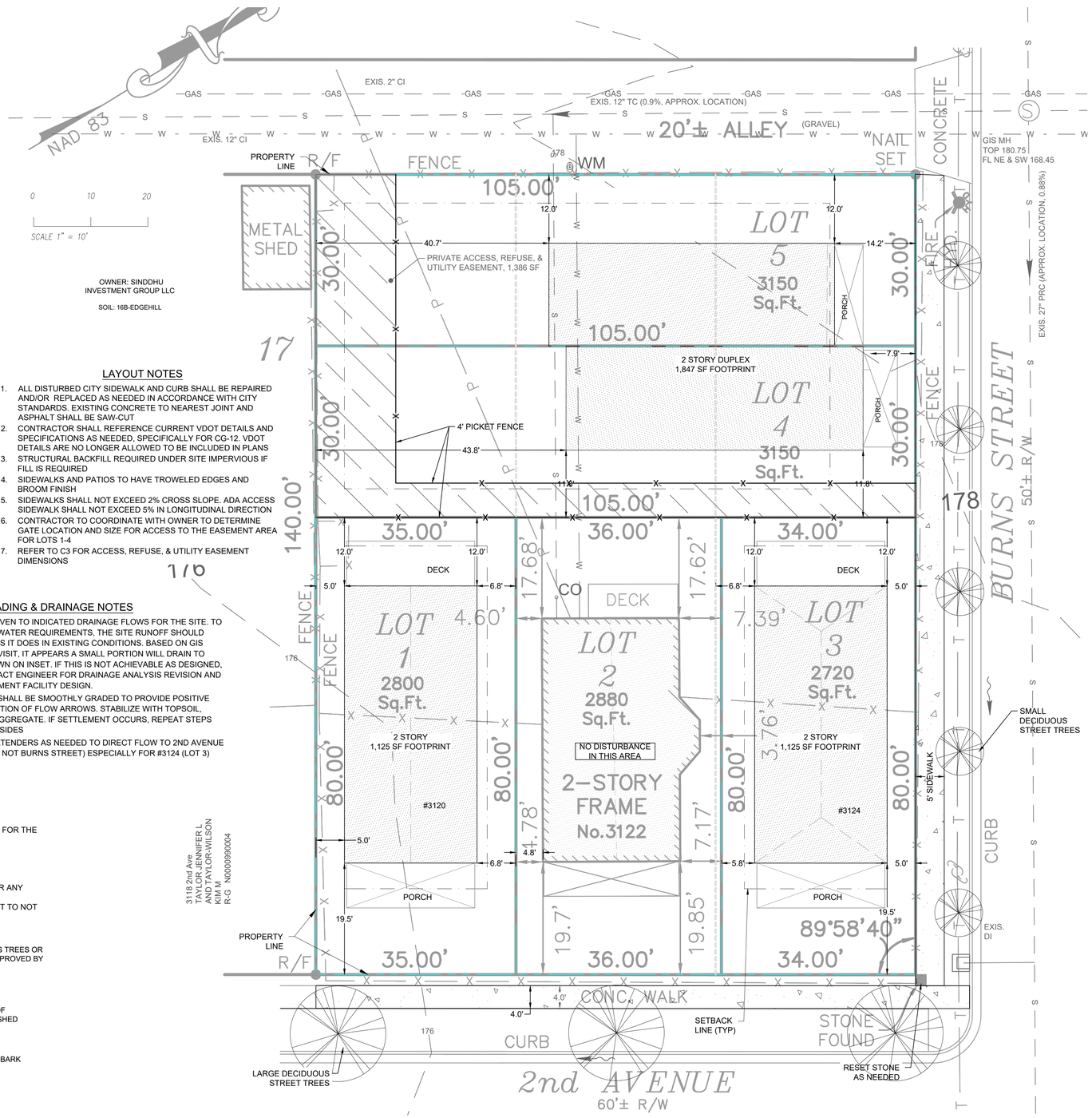
DRAINAGE PLAN

LAYOUT NOTES

1. ALL DISTURBED CITY SIDEWALK AND CURB SHALL BE REPAIRED AND/OR REPLACED AS NEEDED IN ACCORDANCE WITH CITY STANDARDS. EXISTING CONCRETE TO NEAREST JOINT AND ASPHALT SHALL BE SAW-CUT
2. CONTRACTOR SHALL REFERENCE CURRENT VDOT DETAILS AND SPECIFICATIONS AS NEEDED, SPECIFICALLY FOR CG-12. VDOT DETAILS ARE NO LONGER ALLOWED TO BE INCLUDED IN PLANS
3. STRUCTURAL BACKFILL REQUIRED UNDER SITE IMPERVIOUS IF FILL IS REQUIRED
4. SIDEWALKS AND PATIOS TO HAVE TROWELED EDGES AND BROOM FINISH
5. SIDEWALKS SHALL NOT EXCEED 2% CROSS SLOPE. ADA ACCESS SIDEWALK SHALL NOT EXCEED 5% IN LONGITUDINAL DIRECTION
6. CONTRACTOR TO COORDINATE WITH OWNER TO DETERMINE GATE LOCATION AND SIZE FOR ACCESS TO THE EASEMENT AREA FOR LOTS 1-4
7. REFER TO C3 FOR ACCESS, REFUSE, & UTILITY EASEMENT DIMENSIONS

GRADING & DRAINAGE NOTES

1. ATTENTION SHALL BE GIVEN TO INDICATED DRAINAGE FLOWS FOR THE SITE. TO MEET CURRENT STORMWATER REQUIREMENTS, THE SITE RUNOFF SHOULD FLOW TO 2ND AVENUE AS IT DOES IN EXISTING CONDITIONS. BASED ON GIS CONTOURS AND A SITE VISIT, IT APPEARS A SMALL PORTION WILL DRAIN TO BURNS STREET AS SHOWN ON INSET. IF THIS IS NOT ACHIEVABLE AS DESIGNED, CONTRACTOR TO CONTACT ENGINEER FOR DRAINAGE ANALYSIS REVISION AND STORMWATER MANAGEMENT FACILITY DESIGN.
2. ALL DISTURBED AREAS SHALL BE SMOOTHLY GRADED TO PROVIDE POSITIVE DRAINAGE IN THE DIRECTION OF FLOW ARROWS. STABILIZE WITH TOPSOIL, SEED, AND MULCH OR AGGREGATE. IF SETTLEMENT OCCURS, REPEAT STEPS UNTIL SETTLEMENT SUBSIDES
3. UTILIZE DOWNSPOUT EXTENDERS AS NEEDED TO DIRECT FLOW TO 2ND AVENUE EXCEPT AS NOTED (AND NOT BURNS STREET) ESPECIALLY FOR #3124 (LOT 3)

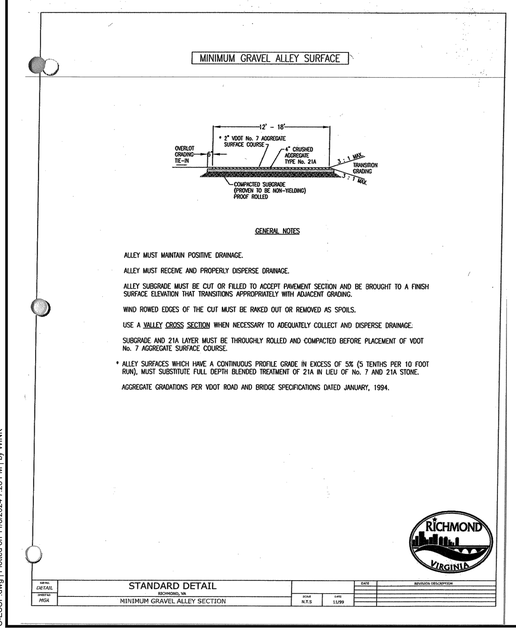


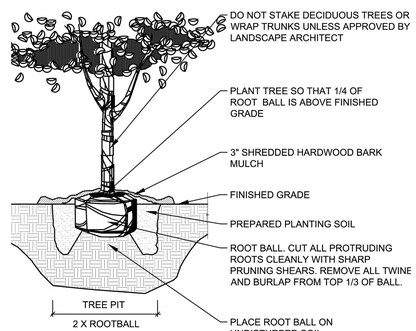
SITE LAYOUT PLAN

LANDSCAPE NOTES

THIS PLAN ILLUSTRATES A LANDSCAPING CONCEPT THAT WAS ACCEPTED FOR THE SPECIAL USE PERMIT FOR THE PROPOSED DEVELOPMENT.

1. COORDINATION WITH A LANDSCAPE ARCHITECT IS SUGGESTED
2. ALL SCRUB TREES AND BRUSH TO BE REMOVED WITHIN THE LIMIT OF CONSTRUCTION (LOC) AREA
3. VEGETATIVE COVER, ADDITIONAL SHRUBS, OTHER PLANT MATERIAL, OR ANY COMBINATION THEREOF MAY BE INSTALLED ON THE SITE
4. SHADE TREES NEAR OVERHEAD ELECTRIC LINES SHALL BE OF A HEIGHT TO NOT INTERFERE WITH EXIS. OVERHEAD UTILITY LINES





DECIDUOUS TREE PLANTING

SCALE: NTS

COMMONWEALTH OF VIRGINIA
TRACY WINKELMAN
Lic. No. 044415
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PROFESSIONAL ENGINEER

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DATE	REVISION

3122 2ND AVENUE RESIDENCES

3122 2ND AVENUE CITY OF RICHMOND, VA

SITE LAYOUT & DRAINAGE PLANS

DATE
09.06.24

SHEET NO.
C2

C-ESCP.dwg | Plotted on 11/8/2024 7:28 PM | by WINK

UTILITY NARRATIVE & NOTES

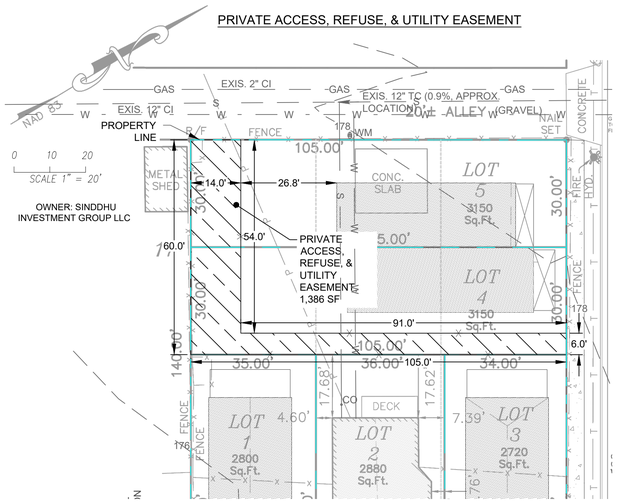
THIS PROJECT CONSISTS OF THE CONSTRUCTION OF 2 SINGLE FAMILY STRUCTURES AND 1 DUPLEX. THE EXIS. SINGLE FAMILY WILL REMAIN.

WATER - DOMESTIC: LOT 1 (3120), 2 (3122), 3 (3124) & 4: ⅝" METER EACH LOT
LOT 5: REUSE EXIS. ⅝" METER (FORMERLY 3122 2ND ST.)

SANITARY: LOT 1, 2, 3 & 4: 1 6" PIPE TO MAIN
LOT 5: REUSE EXIS. SANITARY PIPE

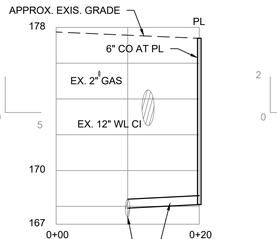
1. CONTRACTOR SHALL ACQUIRE ANY AND ALL NECESSARY CONSTRUCTION, SEWER, AND WATER SERVICE PERMITS
2. CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PLANNING AND DEVELOPMENT REVIEW INSPECTOR A MINIMUM OF 48 HOURS PRIOR TO THE START OF WORK IN STREET AND ARRANGE A PRE-CONSTRUCTION MEETING.
3. CONTRACTOR TO CONTACT 811 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION AND UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON PLAN AT 811 OR http://www.va811.com
4. EXISTING ROW UTILITIES ARE SHOWN PER COR UTILITY MAPS. ON-SITE CONNECTIONS ARE ASSUMED. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO COMMENCING UTILITY WORK. IF ANY DISCREPANCY BETWEEN THE PLANS AND THE PHYSICAL CONDITIONS, OR ANY ERRORS OR OMISSIONS IN THE PLANS OR THE LAYOUT AS GIVEN BY THE ENGINEER, IT SHALL BE HIS DUTY TO IMMEDIATELY INFORM THE ENGINEER, IN WRITING, AND ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH DISCOVERY, UNTIL AUTHORIZED, WILL BE AT CONTRACTOR'S RISK.
5. CONTRACTOR TO COORDINATE WITH VA. DOMINION POWER FOR WORKING AROUND OVERHEAD LINES (P) DURING TREE REMOVAL, RELOCATION OF POWER LINE TO EXIS. BUILDING AND SERVICE TO NEW BUILDINGS
6. UTILITY LATERALS SUITABILITY, LOCATIONS, LENGTH, INVERTS, AND FITTINGS ARE APPROXIMATE.
7. UTILITY WORK IN THE PUBLIC RIGHT OF THE WAY SHALL MEET CITY STANDARDS. UTILITY SERVICES ON SITE SHALL BE INSTALLED AND INSPECTED UNDER THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
8. CONTRACTOR IS RESPONSIBLE FOR DAMAGES TO ANY EXISTING UTILITIES, ROADWAYS, CURB, SIDEWALK, AND STRUCTURES THAT ARE TO REMAIN
9. ALL CUTS IN THE STREETS AND SIDEWALKS SHALL BE PERFORMED UNDER A PERMIT AND MONITORED BY THE PERMIT INSPECTOR.. THEY SHALL BE AS CLEAN AND STRAIGHT AS POSSIBLE, WITH NO OUTLINE DIMENSIONS LESS THAN 3' WITHOUT SPECIAL APPROVAL OF THE DEPARTMENT'S INSPECTOR
10. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING GOOD SAFETY, EROSION CONTROL, AND FLUSHING PROCEDURES SHALL BE MAINTAINED
11. THE MINIMUM R/W CLEAR COVER OVER WATER SHALL BE 3.5'; MINIMUM SEWER CROSSING SEPARATION OF 1.5' (VERTICAL); 10' HORIZONTAL SEPARATION UNLESS VERTICAL > 18".
12. EXISTING SANITARY LATERAL, UPON DPU APPROVAL, MAYBE RE-UTILIZED UPON INSPECTION/ APPROVAL BY DPU COLLECTIONS ENGINEERING STAFF AT 804-646-1392. CCTV AND/OR EXCAVATION OF PIPE SHALL BE USED TO DETERMINE IF IT MEETS CURRENT CITY STANDARDS AND IS IN A USEABLE/ SATISFACTORY CONDITION FOR REUSE. IF DIAMETER IS ACCEPTABLE BUT CONDITION WARRANTS REPAIR OR REPLACEMENT, IT SHALL BE THE RESPONSIBILITY OF THE DPU; IF THE DIAMETER IS < 6", IT SHALL BE THE DEVELOPER'S RESPONSIBILITY TO UPGRADE TO 6" Ø
13. ALL 6" SEWER LATERALS (1.04% MIN. SLOPE) SHALL BE PVC, SDR 26 OR EQUAL TO MEET THE STANDARDS IN 2009 IPC TABLE 702.3 AND ASTM D3034. AND AND THE COR DPU SANITARY SEWER STANDARDS AND GUIDELINES
14. DOMESTIC WATER SERVICE LINES TO BE HDPE TO MEET ASTM F 1986 AS INDICATED ON IPC TABLE 605.3.OR EQUIVALENT
15. RPZ (DOMESTIC) BFP TO BE WATTS MODEL LF223 OR APPROVED EQUAL, 18" CLEAR, MEET ASSE STD. 1013
16. SUBMIT BACKFLOW DEVICES INFORMATION AND ROOM LOCATION TO THE CROSS CONNECTION SPECIALIST, LAWRENCE WILLIAMS (646-8510). DEVICES SHALL MEET THE REQUIREMENTS OF ASSE 5000 OR THE LATEST EDITION
17. BASE AND INFORMATION IS COMPILED FROM COR GIS IMAGE AND UTILITY MAPS,
18. SANITARY BACKFLOW PREVENTION IS REQUIRED IF THE FF ELEVATION IS BELOW THE TOP OF THE UPSTREAM MANHOLE AT 180.75 PER COR SEWER MAP. CONTRACTOR TO FIELD CONFIRM.

PRIVATE ACCESS, REFUSE, & UTILITY EASEMENT



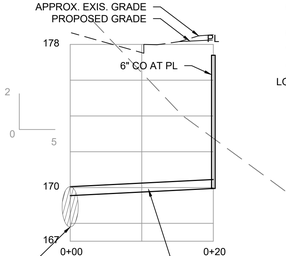
SANITARY SEWER PROFILE-ALLEY

(LOTS 1 & 4, PUBLIC - APPROXIMATE UTILITY LOCATION & DEPTH)



SANITARY SEWER PROFILE-BURNS ST

(LOTS 3 & 4, PUBLIC - APPROXIMATE UTILITY LOCATION & DEPTH)



PRE VS POST CSS DISCHARGE ANALYSIS

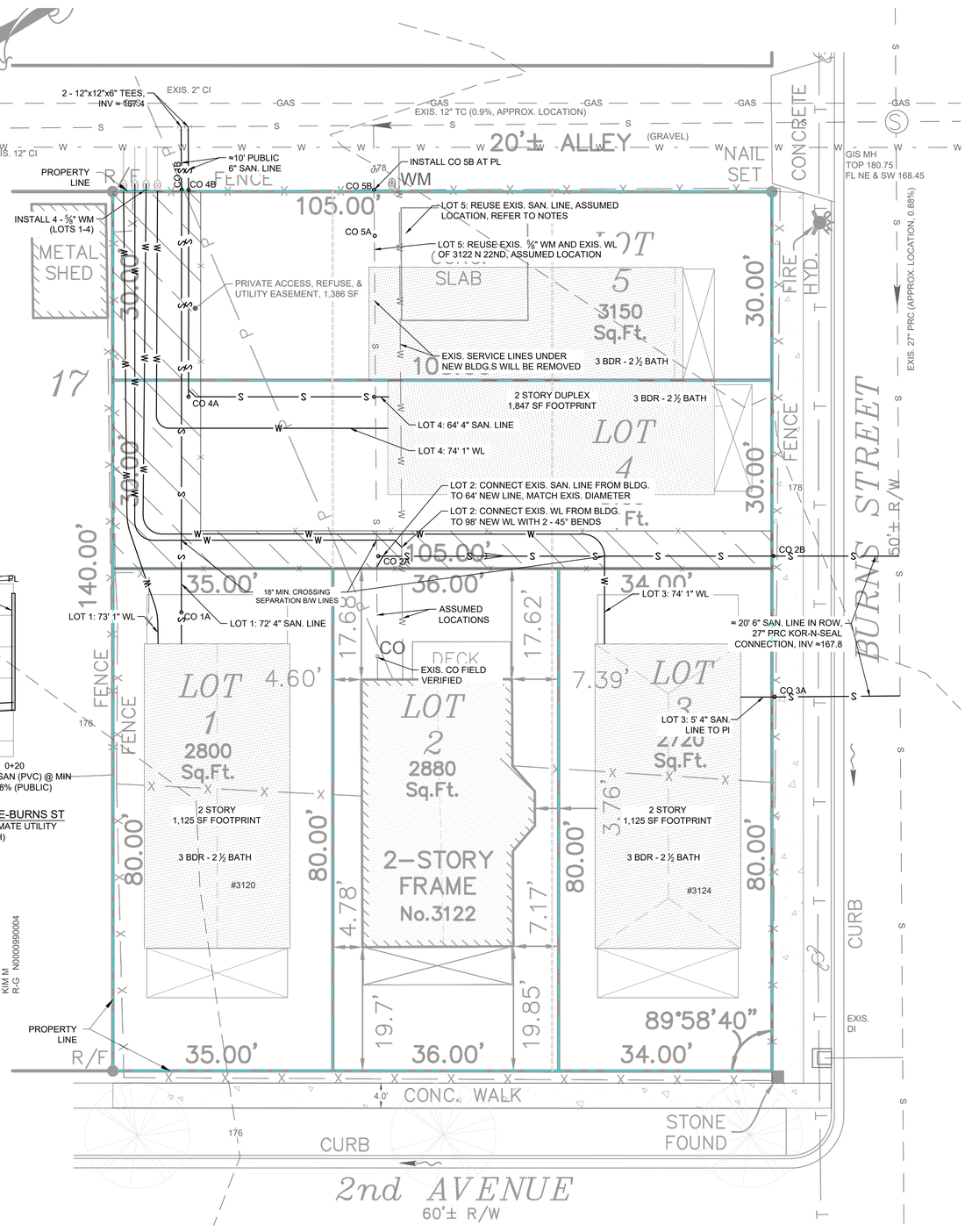
	SERVICE AREA	BASIS	UNITS SERVED UNITS INCR.	FLOW FACTOR GPD/UNIT	AVG. DAILY FLOW (GPD)	DURATION (HRS)	PEAK* FLOW (GPD)
PRE	Single Family	unit	1	350	350	24	875
POST	Single Family	unit	5	350	1,750	24	4,375
						TOTAL POST (GPD)	4,375
						POST - PRE (GPD)	3,500
	CSS: 12" PUBLIC ALLEY					POST - PRE SANITARY (CFS)	0.01
	* Note: Peaking Formula = 2.5 Q (Q in MGD)				1 GPD = .000001547		

City of Richmond DPU Fixture Values Meter Sizing

Project: 3122 RESIDENCES
EACH RESIDENCE

Fixture	Fixture Value @ 35 psi		No. of Fixtures (set to zero if none)		Fixture Value
Bathtub	8	x	2	=	16
Toilet-Tank Type	3	x	3	=	9
Wash Sink (ea. set of faucets)	4	x	5	=	20
Kitchen Sink- 1/2" Connection	3	x	1	=	3
Dishwasher- 1/2" Connection	5	x	1	=	5
Washing Machine- 1/2" Conn	5	x	1	=	5
Hose Bib- 1/2" Conn	6	x		=	0
			FIXTURE VALUE TOTAL (FVT)	=	58
			ESTIMATED DFU	=	27
			Meter Size based on FVT	=	5/8

Meter Size	Meter Range(GPM) Low	High	Maximum Continuous Flow
5/8	1/8	20	10
1	3/8	50	25
1.5	5/8	100	50
2	1 1/4	160	80
3	4.3	450	350
4	25	1000	1000



HYDRAULIC ANALYSIS FOR SANITARY SEWER DESIGN

SERVICE AREA	UNITS SERVED UNITS INCR.	UNITS TOTAL	FLOW FACTOR GPD/ROOM	INCREMENTAL FLOW AVG. DAILY FLOW (MGD)	INCREMENTAL FLOW PEAK* FLOW (MGD)	TOTAL FLOW AVG. DAILY FLOW (MGD)	TOTAL FLOW PEAK FLOW (MGD)	PIPE LENGTH (FEET)	PIPE DIAMETER (INCHES)	PIPE SLOPE (%)	FULL PIPE CAPACITY (CFS)	FULL PIPE CAPACITY** (MGD)	FULL PIPE VELOCITY** (FPS)	EXCESS PIPE CAPACITY (MGD)	ACTUAL PIPE VELOCITY** (FPS)	GROUND ELEVATION AT UPPER END	INVERT ELEVATION UPPER END	INVERT ELEVATION LOWER END	DEPTH TO INVERT (FEET)
3 bdr	5		350	0.002															
		Total		0.0018	0.0202	0.0018	0.0202	125	6	1.04%	0.57	0.37	2.92	0.35	3.79	177.0	173.50	172.20	3.5
				0.0006	0.0085	0.0024	0.0257	10	6	47.70%	3.89	2.51	19.79	2.49	25.66	177.8	172.20	167.43	5.6

COMMONWEALTH OF VIRGINIA
TRACY WINKELMAN
Lic. No. 044415
11.08.24
PROFESSIONAL ENGINEER

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DATE	REVISION
11.08.24	PER DPU COMMENTS

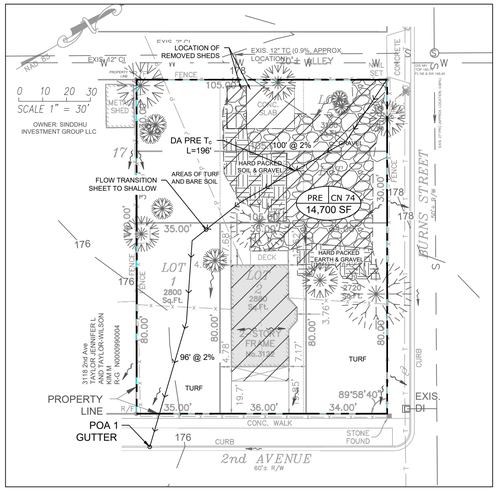
3122 2ND AVENUE RESIDENCES

3122 2ND AVENUE CITY OF RICHMOND, VA

UTILITY PLAN & CALCULATIONS

DATE 09.06.24

SHEET NO. C3



PRE DEVELOPMENT DRAINAGE PLAN

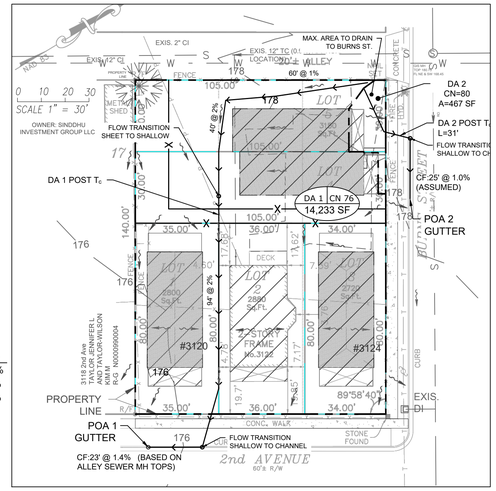
LEGEND

- IMPERVIOUS COVER
- TIME OF CONCENTRATION FLOW LINE
- DRAINAGE AREA BOUNDARY

* *SHADING MAY VARY BETWEEN LEGEND AND PLAN*

LAND COVER SUMMARY

SURFACE TYPE	PROPOSED (POST)		EXISTING (PRE)	
TOTAL AREA (SF)	14,700	100.0%	14,700	100.0%
PERVIOUS/ LANDSCAPE	8,859	60.3%	9,772	66.5%
IMPERVIOUS	5,841	39.7%	4,928	33.5%
BLDG. FOOTPRINTS	5,841		1,200	
CONCRETE/SHEDS	0		505	
DRIVE - GRAVEL	0		2,520	
DRIVE - HARDPACK/GRAVEL	0		703	



POST DEVELOPMENT DRAINAGE PLAN

DRAINAGE ANALYSIS SUMMARY & NOTES

THIS PROJECT CONSISTS OF THE DEVELOPMENT OF A 14,700 SF PARCEL WHICH HAS BEEN/ WILL BE SUBDIVIDED INTO 5 LOTS. THREE STRUCTURES WILL BE CONSTRUCTED . THE EXISTING STRUCTURE WILL REMAIN. THE SITE IS LOCATED IN A DEVELOPED RESIDENTIAL AREA AT THE INTERSECTION OF 2ND AVENUE AND BURNS STREET IN THE CITY OF RICHMOND.

IN PRE-DEVELOPMENT CONDITIONS, ONE STRUCTURE, DRIVE/PARKING AREAS (GRAVEL AND HARD PACKED SOIL AND GRAVEL, CONCRETE AREAS, FENCES, SEVERAL TREES, AND A COUPLE OF SMALL BUSHES EXISTS ON THE SITE. TWO SHEDS HAVE BEEN REMOVED. A CONCRETE SLAB AND 2 STRUCTURAL CORNERS REMAIN. THE INDICATED IMPERVIOUS AREAS NOT ON THE SURVEY WERE DETERMINED FROM COR GIS CONTOUR MAP, A SITE VISIT, AND HISTORICAL IMAGES SHOWING STORAGE AND VEHICULAR PARKING OVER MOST OF THE REAR OF THE PROPERTY BETWEEN THE HOUSE AND SHEDS. ALONG THE SIDE FENCES, THE GROUND IS BUILT UP AND PREVENTS RUNOFF FROM FLOWING UNDER IT TO BURNS STREET AND THE ADJACENT PROPERTY. THE REMAINDER OF THE SITE IS COVERED WITH TURF, GOOD COVERING IN THE FRONT AND VERY POOR COVERING IN THE REAR AROUND THE GRAVEL AREAS. RUNOFF FROM THE ENTIRE SITE CURRENTLY FLOWS SOUTH OVERLAND TO 2ND AVENUE. THE GROUND BUILDUP AT THE FENCE ALONG BURNS STREET STOPS RUNOFF FROM FLOWING TO BRUNS STREET AS THE GIS CONTOURS INDICATE FOR A PORTION OF THE SITE. THE DRAINAGE ANALYSIS IS BASED ON CURRENT SITE CONDITIONS.

IN POST DEVELOPMENT CONDITIONS, MOST OF THE SITE RUNOFF WILL FOLLOW A SIMILAR PATH FLOWING TO 2ND AVENUE AS EXISTING CONDITIONS. RUNOFF FROM THE FRONT PORCH OF THE LOT 5 STRUCTURE AND THE PERVIOUS AREA IN FRONT OF LOT 4 & 5 MOST LIKELY WILL FLOW TO BURNS STREET. THE CHANGE IS DUE TO THE PROXIMITY OF THE NEW STRUCTURES TO THE PROPERTY LINE, THE REMOVAL OF THE EXISTING FENCE AND ASSOCIATED SOIL "BERM" IN THE FRONT OF THE 2 LOTS, AND THE EXISTING GRADE BETWEEN THE PROPERTY LINE AND THE CURB. FLOW CONTINUES SOUTHWEST ALONG THE GUTTER.

AS THE PARCEL DRAINS TO THE CSS, IN ORDER TO MEET THE CURRENT STORMWATER REQUIREMENT FOR THE SITE:

1. THE POST-DEVELOPED 10-YEAR RUNOFF CANNOT EXCEED THE PRE-DEVELOPED 10-YEAR RUNOFF. THE OVERALL POST DEVELOPMENT RUNOFF IS 0.15 CFS LOWER THAN THE PRE DEVELOPMENT CONDITIONS. THE REDUCTION IS ACHIEVED BY THE POST TOC FLOW PATH INCREASE AND SURFACE CHANGE TO PERVIOUS AREAS BETWEEN THE BUILDINGS. IN ADDITION, CONTRACTOR IS DIRECTED TO TAKE MEASURES TO ESTABLISH HEALTHY TURF AREAS AND INSTALLING OR CONSTRUCTING ENERGY DISSIPATERS AT ALL OF THE DOWNSPOUTS.
2. CHANNEL PROTECTION (PART B): MANMADE STORMWATER CONVEYANCE SYSTEMS: THE EXIS. CONCRETE LINED RECEIVING CHANNEL (ROW C&G) FOR POA 1 & 2 DOES NOT HAVE A MAXIMUM VELOCITY REQUIREMENT AND THEREFORE THE RUNOFF VELOCITY IS ACCEPTABLE.
3. FLOOD PROTECTION: THE POST 10-YR 24-HR STORM FLOW DEPTH IN THE GUTTERS (BURNS ST = 0.02' (2R), 2ND AVE (1R) = 0.1') IS ACCEPTABLE AS IT DOES NOT EXCEED THE C&G HEIGHT (0.5').

THE POINTS OF ANALYSIS (POA) ARE EVALUATED AT:

- POA 1 - 2ND AVENUE GUTTER: PRE AND POST. CHANNEL FLOW CONTINUES SW ALONG THE GUTTER, TO AN EXISTING INLET AT THE NE CORNER OF 1ST AVENUE AND FRONT STREET, WHERE IT ENTERS THE CSS SYSTEM
- POA 2 - BURNS STREET GUTTER AT INLET: POST ONLY. EXISTING INLET AT THE INTERSECTION OF BURNS STREET AND 2ND AVENUE. THE OWNER REQUESTS ACCEPTANCE OF THE 0.4 CFS INCREASE AT POA 2 AS THE FLOW IS SMALL,THERE IS A 0.23 CFS REDUCTION IN FLOW TO 2ND AVENUE, AND A PORTION OF THE SITE WOULD DRAIN TO THIS INLET IF THE FENCE DID NOT BLOCK THE PATH IN EXISTING CONDITIONS. THERE IS AN OVERALL REDUCTION TO THE CSS SYSTEM.

NOTES:

1. THE PROPERTY IS LOCATED WITHIN THE COMBINED SEWER AREA WHICH DISCHARGES TO THE TREATMENT PLANT. RUNOFF QUALITY IS NOT A FACTOR
2. INFILTRATION IS NOT TAKEN INTO ACCOUNT IN THE SWM MODEL
3. THE SANITARY SEWER MAIN FOR THIS SITE IS IN THE PUBLIC ALLEY
4. THE STORMWATER RUNOFF REDUCTION WILL COMPENSATE FOR THE PROJECT'S SANITARY FLOW INCREASE TO THE COMBINED SEWERS.

PRE VS POST CSS DISCHARGE ANALYSIS

	SERVICE AREA	BASIS	UNITS SERVED UNITS INCR.	FLOW FACTOR GPD/UNIT	AVG. DAILY FLOW (GPD)	DURATION (HRS)	PEAK* FLOW (GPD)
PRE	Single Family	unit	1	350	350	24	875
POST	Single Family	unit	5	350	1,750	24	4,375
						TOTAL POST (GPD)	4,375
						POST - PRE (GPD)	3,500
	CSS: 12" PUBLIC ALLEY					POST - PRE SANITARY (CFS)	0.01
	* Note: Peaking Formula = 2.5 Q (Q in MGD)					1 GPD = 000001547	

CSS Q_{10} DRAINAGE (cfs) CALCULATION SUMMARY

		DA	AREA (SF)	TOC (MIN)	CN	Q_{10} PER DA	Q_{10} POA Δ
POA 1 - 2ND ST	PRE	1	14,700	5.0	73	1.01	-0.19
	POST	1	14,233	13.3	76	0.82	
POA 2 - BURNS ST	PRE	N/A					0.04
	POST	2	467	5.0	80	0.04	
						SANITARY INCREASE, REFER TO PRE VS POST CSS ANALYSIS	0.01
						COMBINED CHANGE TO CSS	**-0.14**

COMMONWEALTH OF VIRGINIA
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09.06.24
PROFESSIONAL ENGINEER

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DATE	REVISION

3122 2ND AVENUE RESIDENCES

3122 2ND AVENUE CITY OF RICHMOND, VA

DRAINAGE ANALYSIS & SUMMARY

DATE 09.06.24

SHEET NO. C4

3122 2nd *NOAA C Richmond City 24-hr S1 10-yr Rainfall=5.07"*
Prepared by Kine Vue Consulting Printed 9/8/2024
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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: POA 1 (POST) Runoff Area=14,233 sf 39.37% Impervious Runoff Depth>2.59"
Flow Length=206' Tc=13.3 min CN=76 Runoff=0.82 cfs 3,066 cf

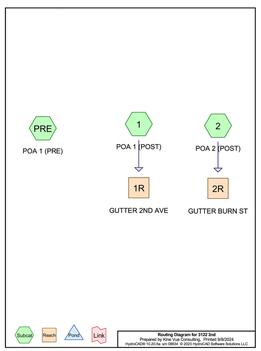
Subcatchment 2: POA 2 (POST) Runoff Area=467 sf 50.75% Impervious Runoff Depth>2.95"
Flow Length=31' Tc=5.0 min CN=80 Runoff=0.04 cfs 115 cf

Subcatchment PRE: POA 1 (PRE) Runoff Area=14,700 sf 33.52% Impervious Runoff Depth>2.33"
Flow Length=196' Slope=0.0200 '/' Tc=5.0 min CN=73 Runoff=1.01 cfs 2,858 cf

Reach 1R: GUTTER 2ND AVE Avg. Flow Depth=0.10' Max Vel=2.08 fps Inflow=0.82 cfs 3,066 cf
n=0.013 L=23.0' S=0.0139 '/' Capacity=38.37 cfs Outflow=0.83 cfs 3,066 cf

Reach 2R: GUTTER BURN ST Avg. Flow Depth=0.02' Max Vel=0.81 fps Inflow=0.04 cfs 115 cf
n=0.013 L=25.0' S=0.0100 '/' Capacity=32.53 cfs Outflow=0.04 cfs 115 cf

Total Runoff Area = 29,400 sf Runoff Volume = 6,039 cf Average Runoff Depth = 2.46"
63.37% Pervious = 18,631 sf 36.63% Impervious = 10,769 sf



3122 2nd *NOAA C Richmond City 24-hr S1 10-yr Rainfall=5.07"*
Prepared by Kine Vue Consulting Printed 9/8/2024
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Summary for Subcatchment 1: POA 1 (POST)

Runoff = 0.82 cfs @ 12.15 hrs, Volume= 3,066 cf, Depth> 2.59"
Routed to Reach 1R : GUTTER 2ND AVE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
NOAA C Richmond City 24-hr S1 10-yr Rainfall=5.07"

Area (sf)	CN	Description
8,629	61	>75% Grass cover, Good, HSG B
1,200	98	Roofs, HSG B
* 4,404	98	New Roofs, HSG B
14,233	76	Weighted Average
8,629		60.63% Pervious Area
5,604		39.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	60	0.0100	0.12		**Sheet Flow, PERV** Grass: Short n= 0.150 P2= 3.34"
4.6	40	0.0200	0.14		**Sheet Flow, PERV** Grass: Short n= 0.150 P2= 3.34"
0.2	94	0.2000	6.71		**Shallow Concentrated Flow, PERV** Grassed Waterway Kv= 15.0 fps
0.0	4	0.0200	2.87		**Shallow Concentrated Flow, ROW SW** Paved Kv= 20.3 fps
0.1	8	0.0200	2.12		**Shallow Concentrated Flow, ROW-PERV** Grassed Waterway Kv= 15.0 fps
13.3	206	Total			

Summary for Subcatchment 2: POA 2 (POST)

Runoff = 0.04 cfs @ 12.03 hrs, Volume= 115 cf, Depth> 2.95"
Routed to Reach 2R : GUTTER BURN ST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
NOAA C Richmond City 24-hr S1 10-yr Rainfall=5.07"

Area (sf)	CN	Description
230	61	>75% Grass cover, Good, HSG B
* 237	98	New Roofs, HSG B
467	80	Weighted Average
230		49.25% Pervious Area
237		50.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	31		0.10		**Direct Entry, MINIMUM BASED ON PRE**

3122 2nd *NOAA C Richmond City 24-hr S1 10-yr Rainfall=5.07"*
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Summary for Subcatchment PRE: POA 1 (PRE)

Runoff = 1.01 cfs @ 12.03 hrs, Volume= 2,858 cf, Depth> 2.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
NOAA C Richmond City 24-hr S1 10-yr Rainfall=5.07"

Area (sf)	CN	Description
9,772	61	>75% Grass cover, Good, HSG B
1,200	98	Roofs, HSG B
* 505	98	Removed Roofs, HSG B
* 3,223	98	Unconnected impervious, HSG B
14,700	73	Weighted Average
9,772		66.48% Pervious Area
4,928		33.52% Impervious Area
3,223		65.40% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	82	0.0200	1.35		**Sheet Flow, DRIVE SURFACES** Smooth surfaces n= 0.011 P2= 3.34"
2.4	18	0.0200	0.12		**Sheet Flow, PERV** Grass: Short n= 0.150 P2= 3.34"
0.6	84	0.0200	2.28		**Shallow Concentrated Flow, PERV** Unpaved Kv= 16.1 fps
0.0	4	0.0200	2.87		**Shallow Concentrated Flow, ROW-IMPERV SW** Paved Kv= 20.3 fps
0.1	8	0.0200	2.28		**Shallow Concentrated Flow, ROW-PERV** Unpaved Kv= 16.1 fps
4.1	196	Total, Increased to minimum Tc = 5.0 min			

Summary for Reach 1R: GUTTER 2ND AVE

Inflow Area = 14,233 sf, 39.37% Impervious, Inflow Depth > 2.59" for 10-yr event
Inflow = 0.82 cfs @ 12.15 hrs, Volume= 3,066 cf
Outflow = 0.83 cfs @ 12.15 hrs, Volume= 3,066 cf, Atten= 0%, Lag= 0.1 min
Routed to nonexistent node 3P

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.08 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 0.82 fps, Avg. Travel Time= 0.5 min

Peak Storage= 9 cf @ 12.15 hrs
Average Depth at Peak Storage= 0.10' , Surface Width= 6.48'
Bank-Full Depth= 0.50' Flow Area= 7.0 sf, Capacity= 38.37 cfs

1.50' x 0.50' deep channel, n= 0.013 Concrete, trowel finish
Side Slope Z-value= 50.0 0.0 '/' Top Width= 26.50'
Length= 23.0' Slope= 0.0139 '/'
Inlet Invert= 175.60', Outlet Invert= 175.28'

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‡

Summary for Reach 2R: GUTTER BURN ST

Inflow Area = 467 sf, 50.75% Impervious, Inflow Depth > 2.95" for 10-yr event
Inflow = 0.04 cfs @ 12.03 hrs, Volume= 115 cf
Outflow = 0.04 cfs @ 12.04 hrs, Volume= 115 cf, Atten= 0%, Lag= 0.7 min
Routed to nonexistent node 3P

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.81 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.34 fps, Avg. Travel Time= 1.2 min

Peak Storage= 1 cf @ 12.04 hrs
Average Depth at Peak Storage= 0.02' , Surface Width= 2.72'
Bank-Full Depth= 0.50' Flow Area= 7.0 sf, Capacity= 32.53 cfs

1.50' x 0.50' deep channel, n= 0.013 Concrete, trowel finish
Side Slope Z-value= 50.0 0.0 '/' Top Width= 26.50'
Length= 25.0' Slope= 0.0100 '/'
Inlet Invert= 177.80', Outlet Invert= 177.55'

‡

3122 2nd *NOAA C Richmond City 24-hr S1 10-yr Rainfall=5.07"*
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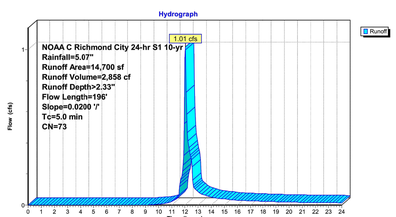
Subcatchment PRE: POA 1 (PRE)



3122 2nd *NOAA C Richmond City 24-hr S1 10-yr Rainfall=5.07"*
Prepared by Kine Vue Consulting Printed 9/8/2024
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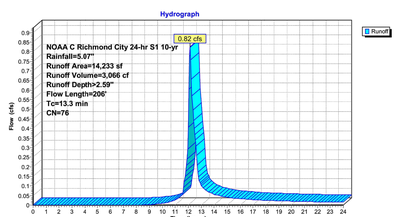
Subcatchment 1: POA 1 (POST)



3122 2nd *NOAA C Richmond City 24-hr S1 10-yr Rainfall=5.07"*
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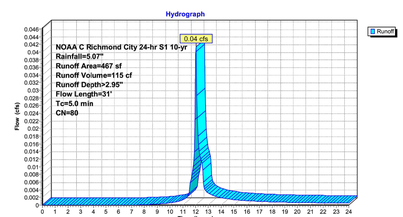
Subcatchment 2: POA 2 (POST)



C:\DRAN.dwg | Plotted on 11/8/2024 7:28 PM | by WINK

City of Richmond
Department of Planning
& Development Review

Special Use Permit

LOCATION: 3122 2nd Avenue

APPLICANT: Umer Khalil

COUNCIL DISTRICT: 6

PROPOSAL: To authorize the special use of the property known as 3122 2nd Avenue for the purpose of three single-family detached dwellings and two single-family attached dwellings, upon certain terms and conditions.

For questions, please contact David Watson at 804-646-1036 or David.Watson@rva.gov