INTRODUCED: June 23, 2025

AN ORDINANCE No. 2025-151

To authorize the special use of the property known as 1114 Hull Street for the purpose of a six-story mixed-use building, upon certain terms and conditions.

Patron – Mayor Avula (By Request)

Approved as to form and legality
by the City Attorney

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

WHEREAS, the owner of the property known as 1114 Hull Street, which is situated in a B-5 Central Business District, desires to use such property for the purpose of a six-story mixed-use building, which use, among other things, is not currently allowed by section 30-442.6, concerning height, 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 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

AYES: 9 NOES: 0 ABSTAIN: _____

ADOPTED: JUL 28 2025 REJECTED: _____ STRICKEN: _____

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 1114 Hull Street and identified as Tax Parcel No. S000-0083/004 in the 2025 records of the City Assessor, being more particularly shown on sheet 2 of the plans entitled "Permit Set for 1114 Hull Street, Richmond, VA 23224," prepared by Silver Core Land Development Consultants, dated November 6, 2020, and last revised January 28, 2025, hereinafter referred to as "the Property," is hereby permitted to be used for the purpose of a six-story mixed-use building, hereinafter referred to as "the Special Use," substantially as shown on the plans entitled "Permit Set for 1114 Hull Street, Richmond, VA 23224," prepared by Silver Core Land Development Consultants, dated November 6, 2020, and last revised January 28, 2025, and "1114 Hull Street, Hull Street Properties, LLC, Richmond, VA 23224," prepared by SMBW PLLC, and dated January 28, 2025, hereinafter referred to, collectively, 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 a six-story mixed-use building, substantially as shown on the Plans.

(b) Excluding height, the Special Use shall be subject to the Plan of Development adopted April 9, 2021, file number, POD-082008-2020.

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

§ 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[DJKCA1] the installation of two street trees along Hull Street, substantially as shown on the Plans, 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, (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.

A TRUE COPY:
TESTE:

City Clerk

City of Richmond

Intracity Correspondence

O&R Transmittal

DATE: May 19, 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 1114 Hull Street for the purpose of a six-story mixed-use building, upon certain terms and conditions.

ORD. OR RES. No. _____

PURPOSE: The applicant is requesting a Special Use Permit to authorize a six-story mixed use building in a B-5 district. The B-5 district only permits five stories. A Special Use Permit is therefore necessary to proceed with this request.

BACKGROUND: The property is located in the Blackwell neighborhood on Hull Street between East 11th Street and East 12th Street. The property is currently a 28,060 square foot parcel of land. The City's Richmond 300 Master Plan designates a future land use for the subject property as Community Mixed Use, which is defined as a "cluster of medium-density, walkable commercial and residential uses that provide neighborhood services to nearby residential communities and sometimes feature regional attractions."

Intensity: Buildings generally ranging from two to six stories, based on street widths and depending on the historic context and stepping down in height adjacent to residential areas, as necessary. New buildings that are taller than historical buildings should step back from the build to line after matching the height of the predominant cornice line of the block.

Primary Uses: Retail/office/ personal service, multi-family residential, cultural, and open space.
Secondary Uses: Single-family houses, institutional, and government.

The current zoning for this property is B-5 – Business (Central Business) District. The area is a mixed of commercial and residential. The proposed density is around 168 units per acre.

COMMUNITY ENGAGEMENT: Blackwell Historic Community Civic Association was notified of the application; additional community notification will take place after introduction

STRATEGIC INITIATIVES AND OTHER GOVERNMENTAL: Richmond 300 Master Plan

FISCAL IMPACT: $3,600 application fee.

DESIRED EFFECTIVE DATE: Upon adoption

REQUESTED INTRODUCTION DATE: June 23, 2025

CITY COUNCIL PUBLIC HEARING DATE: July 28, 2025

REQUESTED AGENDA: Consent

RECOMMENDED COUNCIL COMMITTEE: Planning Commission July 15, 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

STAFF:

Shaianna Trump, Planner Associate, Land Use Administration (Room 511) 646-7319

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)

- [x] **special use permit, new**
- [ ] **special use permit, plan amendment**
- [ ] **special use permit, text only amendment**

Project Name/Location

Property Address: 1114 Hull st. Richmond, VA 23224 Date: 11/15/2024

Parcel I.D. #: S0000083004 Fee: 2400$

Total area of affected site in acres: 0.64 ACRES

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

Zoning

Current Zoning: B - 5 BUSINESS (CENTRAL BUSINESS)

Richmond 300 Land Use Designation: PRIORITY GROWTH NODE - MANCHESTER

Proposed Use

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

1114 HULL STREET PROPOSES A MIXED USE, 6-STORY, 108 UNIT MULTIFAMILY APARTMENT BUILDING WITH GROUND FLOOR COMMERCIAL SPACE, BUILDING LOBBY AND PARKING.

Existing Use: currently an abandoned structure / no current use

Is this property subject to any previous land use cases?

Yes [ ] No [ ] If Yes, please list the Ordinance Number:

Applicant/Contact Person: MAJD MICHAEL SOUDI

Company: SMBW, PLLC

Mailing Address: 111 VIRGINIA ST, 23219, RICHMOND VA, STE 111

City: RICHMOND State: VA Zip Code: 23219

Telephone: _(804) 622 1262 Fax: _( )

Email: msoudi@smbw.com

Property Owner: Shakil H. Siddiqui

If Business Entity, name and title of authorized signee: Hull st. Properties LLC

(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: 13520 Portomac Riding Lane

City: Rockville State: MD Zip Code: 20850

Telephone: _(240) 997-2416 Fax: _( )

Email: ssiddiqui@harisdesign.com

Property Owner Signature:

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)

smbw

1114 Hull st.

Special Use Permit Application

1114 Hull St.
Site Description

CONTEXT

The site of the current development is 0.506 acres; containing a parking lot with a one story, 975 SF building that interrupts the architectural patterning and the continuous facades at Hull st. According to city records, the building was constructed in 1940 and has been out of service for over 40 years, containing a garage with two drive-in service bays and an office containing discarded furniture and household goods.

Located on the Hull Street Commercial Corridor. 1114 Hull st. is deemed by the RVA 300 master plan to be centrally located within the Priority Growth node of "Downtown - Manchester". Hull st. commercial corridor's recommended development style as outlined by the master plan is to be "Community Mixed Use". Defined as "A cluster of medium density future developments that complement historical densities and neighborhood characteristics, continuing or introducing gridded street patterns to increase density." Preferred uses primarily entail: Retail/office/personal service, multi-family residential, cultural, and open space - buildings generally ranging from 2 - 6 stories and engaging existing or historical buildings by stepping back from build - to line and the predominant cornice height in the streets.

1114 Hull St.

Site Context

Richmond 300: Future Land Use
Community Mixed Use Designation

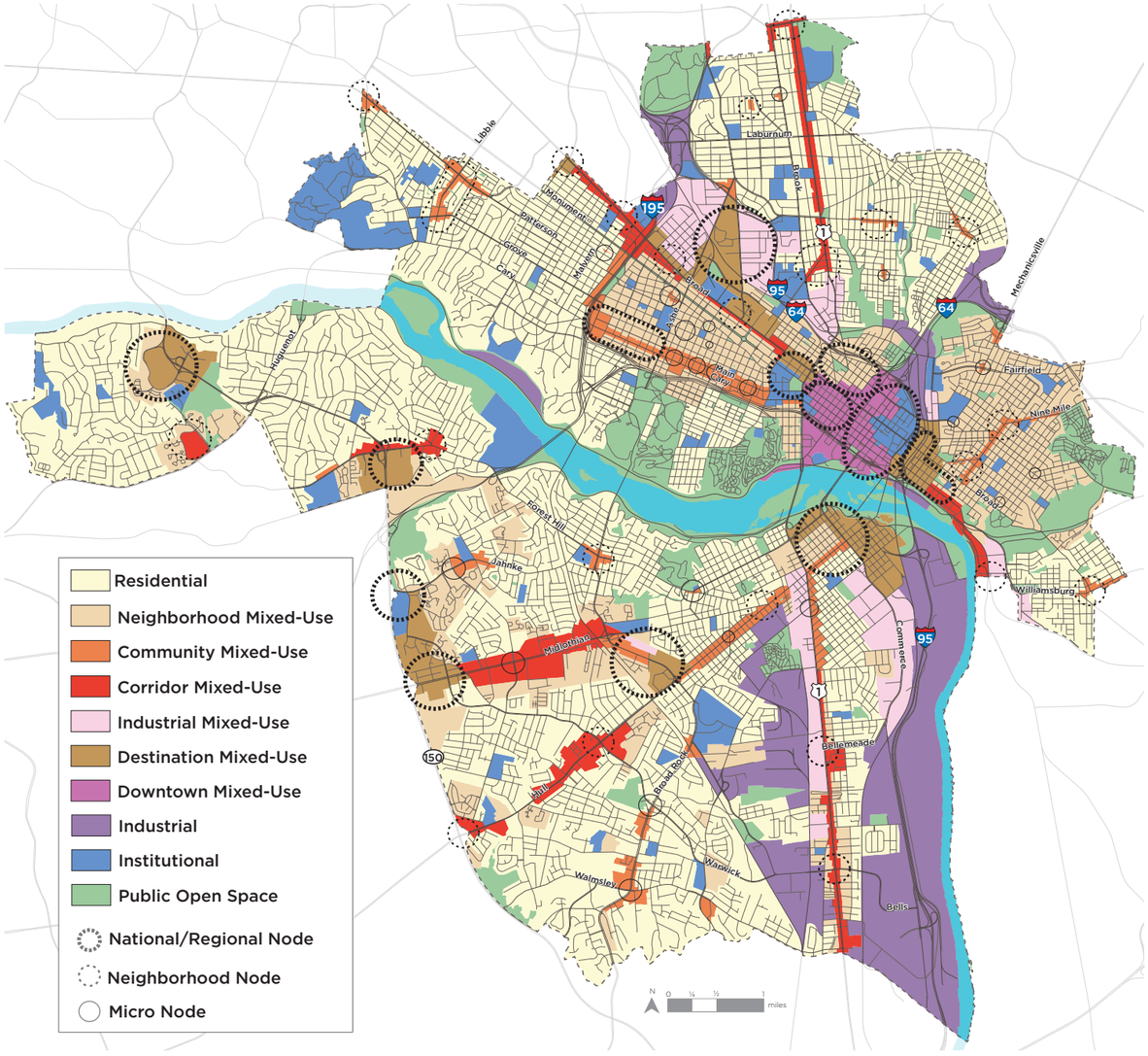

FIGURE 11 // **Future Land Use Map**

Community Mixed-Use

Cluster of medium-density, walkable commercial and residential uses that provide neighborhood services to nearby residential communities and sometimes feature regional attractions.

Development Style: The building size, density, and zoning districts for these areas may vary significantly depending on historical densities and neighborhood characteristics. Future development should generally complement existing context. Uses may be mixed horizontally in several buildings on a block or vertically within the same building. Developments continue or introduce a gridded street pattern to increase connectivity.

Ground Floor: Ground floor uses engage with, and enliven, the street. Monolithic walls are discouraged, while windows, doors, storefronts, and other features that allow transparency and interaction between building and street are encouraged.

Mobility: Pedestrian, bicycle, and transit access are prioritized and accommodated. Bike parking is provided. Driveway entrances are required to be off alleys whenever possible; new driveways are prohibited on priority and principal streets. Parking areas are located within the structure and to the rear of buildings and require screening; shared parking requirements are encouraged.

Intensity: Buildings generally ranging from two to six stories, based on street widths and depending on the historic context and stepping down in height adjacent to residential areas, as necessary. New buildings that are taller than historical buildings should step back from the build-to line after matching the height of the predominant cornice line of the block.

Primary Uses: Retail/office/personal service, multi-family residential, cultural, and open space.

Secondary Uses: Single-family houses, institutional, and government.

1114 Hull st - The Gallery
Project Description

PROPOSED DEVELOPMENT

The proposed project is a 108 unit, 6 story mixed-use, multifamily building with ground floor commercial tenant lobby and surface parking. The project features considerable amenities, including a fitness center, community room, pool, dog run, outdoor community space, dog wash, community kitchen, bike storage, package delivery service, EV charging stations, street level retail, and flex office space.

The ground level is highly visible with over 80% fenestration allowing maximum visibility on the Hull st. facade and activating the principal street frontage. The programming on the ground level entails a cold dark shell space for retail opportunities on Hull st. in addition to a building lobby acting as an additional amenity to the residential floors. The retail shell and residential lobby amenity conceal surface parking behind. A pool courtyard with a club room is provided for the residential units on level 2. While all upper levels are residential units with some units inwardly oriented to pool courtyard, maximizing daylight.

Due to the long facade facing Hull st. a series of stacked balconies divide the facade and separate the buildings into varying sized masses, adding movement and variance facing Hull st. The varying sized massing references the vernacular/ historic typology of the neighborhood.

The building sets back on level 05 in an attempt to scale the building to Hull st. and match adjacent building heights. The contrast and change in cladding type and color adds depth to the facade and scales the building and its varying masses at Hull st.

The Special Use permit is the request for an additional sixth level with an additional 22 units. Contributing to additional density to the neighborhood and supporting what was outlined in the RVA 300 master plan.

Context Conditions - Project Block

The Site

Development Preapplication Meeting Comments
Overall Responses

During the Predevelopment Meeting dated 10/15/2024, the City of Richmond reviewed the proposed project and provided feedback points to consider ahead of the submission of the Application for the Special Use Permit. The prevailing commentary provided is summarized below along with anecdotal responses as to how the owner and design team have aimed to accommodate the feedback. Further representation of applicable design updates are additionally depicted throughout the remainder of the application.

RECOMMENDATIONS	RESPONSES
Permits & Inspections: Revise plans to comply with code 2021, note revised section on podium construction (slight change in chapter, review as project progresses towards permit)	smbw to review and update plans as necessary and ensure compliance with 2021 VCC and 2017 ANSI A117.1 for permit submission
Urban Design Committee: No comments	N/A
Urban Forestry (DPW): Absent	N/A
Fire Department: Update Fire checklist to show 6 stories	Updated Fire Department Application included in SUP package
Stormwater: DPU - revise discharge calculation with site to comply with new use: ensure does not exceed new discharge.	Revised discharge calculations to comply with additional usage. Ref. Civil sheets 8, 9, 10
Sanitary Sewer (DPU): revise and update sanitary and sewer flows	Revised and updated sanitary and sewer flows. Ref. Civil sheets 8, 9, 10
Water Resources: LDIS and Storm permits have been issued for previous project in 2022. Cancel permits, review plans and start anew. New permit process post SUP approval	Once SUP review process is complete, smbw to submit for BLDG Permit, LDIS and stormwater process. (restart approval process)
DPU Water: Absent	N/A
Street Lights: Absent	N/A
Traffic R.O.W:	
Overhead Power - Coordinate with Dominion Energy with regards to streetlights	smbw to coordinate during the permitting process overhead power lines with Dominion energy to ensure safety standards are met (outriggers etc.)
There is no additional sidewalk width for outdoor seating	Outdoor seating for retail is not accounted for nor considered at this time.
Street / asphalt behind construction fence to be milled, overlaid and restored	Ref. Civil Sheet 04

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1114 HULL STREET

HULL STREET PROPERTIES, LLC
RICHMOND, VA 23224

SPECIAL USE PERMIT PLANS - 01/28/2025 **(COMMENTS RECEIVED 01/27/2024) **

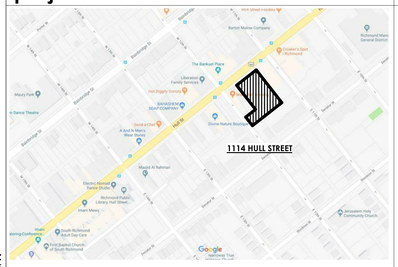
NO.	DRAWING TITLE	10/30/2020 POD SUBMISSION	2/1/2021 POD RESPONSE #1	POD FINAL SET 4/9/2021	09/23/2024 PRE-APPLICATION MEETING	11/19/2024 SPECIAL USE PERMIT	01/28/2024 SPECIAL USE PERMIT
C0	SUP COVERSHEET	•	•	•	•	•	
C1	COVERSHEET	•	•	•	•	•	
C2	EXISTING CONDITIONS & DEMOLITIONS	•	•	•	•	•	
C3	LAYOUT & UTILITIES	•	•	•	•	•	•
C4	GRADING PLAN	•	•	•	•	•	
C5	EROSION CONTROL PLAN	•	•	•	•	•	•
C6	E&S DETAILS	•	•	•	•	•	•
C7	DRAINAGE PLAN	•	•	•	•	•	
C8	WATER QUANTITY	•	•	•	•	•	
C9	PROFILES	•	•	•	•	•	
C10	NOTES & DETAILS I	•	•	•	•	•	
A1	ARCHITECTURAL SITE PLAN	•	•	•	•	•	
A3	FLOOR PLANS	•	•	•	•	•	
A4	FLOOR PLANS	•	•	•	•	•	
A5	FLOOR PLANS	•	•	•	•	•	
A6	FLOOR PLANS	•	•	•	•	•	
A7	ROOF PLAN				•	•	
A8	ELEVATIONS	•	•	•	•	•	
A9	ELEVATIONS	•	•	•	•	•	
A10	ELEVATIONS	•	•	•	•	•	
A11	RENDERINGS	•	•	•	•	•	
A12	GSF				•	•	
A13	ENCROACHMENT PLANS				•	•	

smbw

SMBW PLLC
111 VIRGINIA ST. STE 111
RICHMOND, VA 23219
T804.233.5343
F804.233.5345
WWW.SMBW.COM

CLIENT	ARCHITECT/INTERIORS	CIVIL	STRUCTURAL	MEP
HULL STREET PROPERTIES, LLC 5301 BUCKEYSTOWN PIKE, STE 360 FREDERICK, MD 21704	SMBW, PLLC 111 VIRGINIA STREET, SUITE 111 RICHMOND, VA 23219 (P) 804.233.5343 (F) 804.233.5345	SILVERCORE 7110 FOREST AVE. RICHMOND, VA 23226 (P) 804-282-6900	BALZER & ASSOCIATES 1581 CITY VIEW DRIVE, SUITE 200 MIDLOTHIAN, VA 23113 (P) 804-794-0571	PERMITZIP 3412 W LEIGH ST., SUITE 200 RICHMOND, VA 23230 (P) 833-896-9355

project location



project description

1114 HULL STREET PROPOSES A MIXED USE, 6-STORY, 108 UNIT MULTIFAMILY APARTMENT BUILDING WITH GROUND FLOOR COMMERCIAL SPACE, BUILDING LOBBY AND PARKING. UNIT COUNTS CONSIST OF A RANGE BETWEEN STUDIO, ONE BEDROOM AND TWO BEDROOM UNITS, LOCATED IN THE DOWNTOWN MANCHESTER PRIORITY GROWTH NODE, THE DEVELOPMENT AIMS TO PROVIDE ADDITIONAL HOUSING OPTIONS AND THE COMMERCIAL SPACE PROVIDES OPPORTUNITY FROM THE GROWTH OF A BUSINESS CORRIDOR ALONG HULL ST.

VCC USE GROUP CLASSIFICATION:

IA - MIXED USE SEPARATED, B-BUSINESS, R-2 RESIDENTIAL, S-2 PARKING, S-2 UTILITY

IIIA - R-2 RESIDENTIAL

RICHMOND 300 LAND USE: PRIORITY GROWTH NODE DOWNTOWN - MANCHESTER

MANCHESTER CONTINUES TO INCREASE IN POPULATION AND **ECONOMIC ACTIVITY TO SUPPORT A THRIVING BUSINESS CORRIDOR ALONG HULL STREET**. THE FORMERLY INDUSTRIAL PART OF MANCHESTER PROVIDES JOBS AS WELL AS HOUSING. MANCHESTER IS CONNECTED TO SOUTH RICHMOND AND THE DOWNTOWN CORE BY A NETWORK OF GREENWAYS ALONG FORMER RAILWAYS, ALONG ROADS, AND ALONG MANCHESTER CANAL. A **VARIETY OF HOUSING OPTIONS** IN MANCHESTER ARE AVAILABLE TO **LOW-, MODERATE-, AND HIGH-INCOME INDIVIDUALS**. MANCHESTER'S **INTERCONNECTED STREET GRID** IS **ENHANCED WITH STREET TREES** AND **IMPROVED INFRASTRUCTURE** TO SUPPORT PEDESTRIANS, BICYCLISTS, AND TRANSIT RIDERS.

symbols & material legends

NORTH ARROW (TRUE NORTH, PROJECT NORTH)		WA#	EXTERIOR WALL ASSEMBLY
8 / A	COLUMN REFERENCE GRID	X	INTERIOR PARTITION TYPE
MATCHLINE SEE 02/A2.03	MATCHLINE	ROOM NAME A123	ROOM TAG (ROOM NAME, ROOM NUMBER)
X X	LEVEL, CONTROL POINT, OR DATUM	123A	DOOR NUMBER
#	REVISION CLOUD	X	WINDOW TYPE
X	KEYED NOTE	X FIN	FINISH TAG (FINISH MATERIAL, FINISH LOCATION: BASE, CEILING, FLOOR, TRIM, WALL)

2A / A101	EXTERIOR ELEVATION (DETAIL NUMBER, SHEET NUMBER)		
SIM / 1A / A101	SECTION (DETAIL NUMBER, SHEET NUMBER)		
2A / 2B A101 3B / 3A	INTERIOR ELEVATION (DETAIL NUMBER, SHEET NUMBER)		
1A / A101	ENLARGED PLAN/ SECTION/CALLOUT (DETAIL NUMBER, SHEET NUMBER)		
	ALIGN		
	STEP ELEVATION CHANGE		

	CONCRETE MASONRY (CMU)		BATT INSULATION
	CONCRETE		SOUND ATTENUATION BATTS
	PRECAST CONCRETE		GYPSUM DRYWALL
	BRICK		PLASTER OR SAND
	STONE		PLYWOOD
	STEEL		FRAMING LUMBER
	ALUMINUM		FINISH WOOD
	POROUS FILL		CERAMIC TILE
	SOIL		ACOUSTICAL PANELS
	RIGID INSULATION		LIGHTWEIGHT CONC. TOPPING
	MORTAR NET		

abbreviations

ACP	ACOUSTICAL CEILING PANEL
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
ALUM	ALUMINUM
ARCH	ARCHITECT(URAL)
BLDG	BUILDING
BOD	BASIS OF DESIGN
BOS	BOTTOM OF STEEL
BYD	BEYOND
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR(ANCE)
CMU	CONCRETE MASONRY UNITS
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CORR	CORRIDOR
CPT	CARPET
CT	CERAMIC TILE
DET	DETAIL
DIM	DIMENSION
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DWG	DRAWING
EA	EACH
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION
ELEV	ELEVATOR
EO	EDGE OF
EOD	EMERGENCY OVERFLOR DRAIN
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST	EXISTING
EXT	EXTERIOR
FA	FIRE ALARM
FD	FLOOR DRAIN
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR
FFE	FINISH FLOOR ELEVATION
FHC	FINISH HOSE CABINET
FIN	FINISH(ED)
FO	FACE OF
FPSF	FIRE PROOFING SPRAY FOAM
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GL	GLASS
GPDW	GYPSUM DRYWALL
HORIZ	HORIZONTAL
HT	HEIGHT
HW	HARDWARE
INSUL	INSULATION
INT	INTERIOR
JT	JOINT
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTL	METAL
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE / OPPOSING
OS	OVERFLOW SCUPPER
OVHD	OVERHEAD
PERF	PERFORATED
PL	PLATE
PLAM	PLASTIC LAMINATE
PLUMB	PLUMBING
PNT	PAINT(IED)
PR	PAIR
PT	PRESSURE TREATED
PTN	PARTITION
RB	RESILIENT BASE
RD	ROOF DRAIN
REF	REFERENCE
REQD	REQUIRED
REQT	REQUIREMENT(S)
RES	RESILIENT
RO	ROUGH OPENING
SCHED	SCHEDULE
SCWD	SOLID CORE WOOD DOOR
SECT	SECTION
SF	SQUARE FEET
SQ	SQUARE
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMETRICAL
T	TREAD
THRU	THROUGH
TOC	TOP OF CURB
TOS	TOP OF STEEL
TPTN	TOILET PARTITION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
WD	WOOD
WWF	WELDED WIRE FABRIC

zoning information

ADDRESS: 1114 HULL STREET

PROJECT SCOPE: 6 STORY NEW CONSTRUCTION MIXED-USE BUILDING WITH GROUND FLOOR COMMERCIAL, TENANT LOBBY AND SURFACE PARKING. MULTIFAMILY RESIDENTIAL UNITS ON ELEVATED FLOORS. EXTERIOR COURTYARD AND TENANT AMENITY SPACES ON LEVEL 2.

PARCEL ID: S0000083004

ZONING : B-5

MAP REF. NUMBER: REF CIVIL

EXISTING USE: SERVICE GARAGE (ABANDONED) AND SURFACE PARKING

ACERAGE: 0.6442 (28,061.35 SF)

BUILDING INFORMATION:

BUILDINGS:	1	
STORIES:	6	
UNIT COUNT:	108	
LOT AREA:	27,950 SF	
TOTAL AREA:	101,804 SF	
HEIGHT:	74' - 8"	
PARKING SPACES REQUIRED:	19	
PARKING SPACES PROVIDED:	53 (3) ACCESSIBLE	
LONG TERM BIKE STORAGE REQUIRED (1 FOR EVERY 4):		27 SPACES
LONG TERM BIKE STORAGE PROVIDED:		36 SPACES
SHORT TERM BIKE STORAGE REQUIRED:		2 SPACES
SHORT TERM BIKE STORAGE PROVIDED:		3 SPACES

PRINCIPAL USES: COMMERCIAL (SHELL SPACE, TENANT FIT OUT TO BE SUBMITTED UNDER SEPARATE PERMIT)
DWELLING UNITS

GROUND FLOOR TOTAL AREA: SF = 5688.31 (NO DWELLING UNITS ON GROUND FLOOR)
NON-DWELLING PRINCIPAL USE AREA: SF = 4364.29 (30% REQ'D)
NON-DWELLING PRINCIPAL USE DEPTH: 29 -10" (20'-0" REQ'D)

YARDS: NO FRONT YARDS REQUIRED
20' REAR YARD PROVIDED WHEN SITUATED ACROSS AN ALLEY FROM PROPERTY IN AN R OR RO DISTRICT. 20% (4') MAX. BALCONY PROJECTION INTO REAR YARD (20' SETBACK) ALLOWED PER SEC. 30-630.9 g

PARKING: PROPOSED PARKING ACCESS EXPANDS EXISTING CURB CUT.

HEIGHT: 5 STORIES MAXIMUM
2 STORIES MINIMUM
****6 STORIES PROVIDED****

FENESTRATION: REF. SHEET A8 FOR DIAGRAMS

1114 HULL STREET
RICHMOND, VA 23224

Project Location:	RICHMOND, VA 23224
Project No:	20030
Date: 01/28/2025	Scale: As indicated
Drawn By: POD	Checked By: Checker
Revisions:	

SUP COVERSHEET

C0

1/28/2025 2:13:35 PM C:\Users\MSoudi\Documents\1114 Hull Street_SUP_MSOUDI5SUXC.rvt

PERMIT SET FOR

1114 HULL STREET

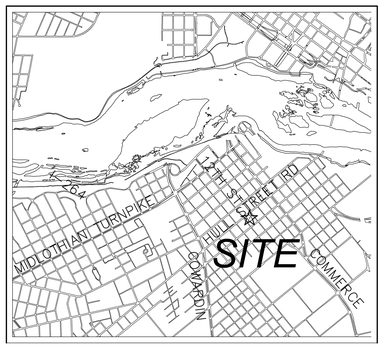
RICHMOND, VA 23224

SITE DATA:

1. PROPERTY ID: S0000083004
2. ADDRESS: 1114 HULL STREET
3. ACREAGE: 0.644 AC
4. ZONING: B-5 BUSINESS (CENTRAL BUSINESS)
5. EXISTING USE: VACANT LAND WITH MULTIPLE VACANT BUILDINGS
6. PROPOSED USE: MIXED USE RESIDENTIAL/COMMERCIAL
7. PROJECT DESCRIPTION:
   DEMOLITION OF EXISTING BUILDINGS AND CONSTRUCTION OF A 6-STORY MIXED USE BUILDING.
   1ST FLOOR: COMMERCIAL SPACE AND PARKING.
   2ND-6TH FLOORS: 111 RESIDENTIAL UNITS.
8. BUILDING:
   EXISTING: 3,538 SF
   PROPOSED: 117,732 SF (6-STORIES)
   HEIGHT: 72'-8"
9. PARKING:
   (1 SPACE PER 4 UNITS OVER 16)
   (111 UNITS - 16 = 95) 24 SPACES REQUIRED
   58 SPACES PROVIDED (3-ACCESSIBLE)
10. PERMITS REQUIRED: DEMO PERMIT
    BUILDING PERMIT (B)
    LDIS PERMIT (W)
    MULTIPLE WORK IN STREETS AND ALLEYS PERMITS (V)
    STRM DRAINAGE PERMIT (DPU WR)

PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON INSURANCE RATE MAP SHEET 5101290039E FOR THE CITY OF RICHMOND.

1114 HULL STREET
RICHMOND, VIRGINIA 23224



1"=2,000'

STORMSEWER QUANTITIES:

14" PVC SCHEDULE 40	187.27 LF
15" CLIII RCP	10.00 LF
CMP UNDERGROUND DETENTION SYSTEM	1 EA
TRAP MANHOLE	1 EA
DOGHOUSE MANHOLE	1 EA

SHEET INDEX:

SHEET 1: COVER SHEET
SHEET 2: EX. CONDITIONS & DEMO PLAN
SHEET 3: LAYOUT & UTILITIES
SHEET 4: GRADING PLAN
SHEET 5: EROSION CONTROL PLAN
SHEET 6: E&S DETAILS
SHEET 7: DRAINAGE PLAN
SHEET 8: WATER QUANTITY
SHEET 9: PROFILES
SHEET 10: NOTES & DETAILS I

E&S STATISTICS	
Erosion & Sediment Control Measures	Linear Feet
Type of Silt Fence	432 LF
Construction Entrance	1
Other E&S measures as proposed/required (i.e. inlet protection, etc.)	(1) INLET PROTECTION
LOT STATISTICS	Square Feet
Total Lot Area	28,078 SF
Impervious Surface Area	27,497 SF
Amount of Pervious Surface Area	581 SF
Amount of Land Disturbance	31,069 SF

28,078 SF ONSITE / 2,991 SF IN ROW.

Stormwater Management Facility Data

Stormwater Management Facility Type	Stormwater Management Description	Stormwater Management Facility Structure Number	Location		Acres Treated By Facility			Pollutant Removal, lbs			Runoff captured, acre-feet	HUC (6th order) Of Location Of Facility	Impaired Water Segment To Which Facility Discharges	Ownership Of Facility (Public/Private)
			Latitude	*Longitude*	*Impervious Acres*	*Pervious Acres*	*Total Acres*	*TP*	*TN*	*TSS*				
Underground Detention	Contech CMP Detention	6	37.520759	-77.443212	0.61	0	0.610				0.050	JM86	James River-Little Westham Creek	PRIVATE

OWNER:

HULL STREET PROPERTIES, LLC
13520 POTOMAC RIDING LANE,
ROCKVILLE, MD 20850

ENGINEER:

SILVERCORE
7110 FOREST AVE, SUITE 204
RICHMOND, VA 23226
PH. (804)282-6900
CONTACT: STEVE KING

SURVEYOR:

NYFELER ASSOCIATES
619 W CARY ST
RICHMOND, VA 23220
PH. (804)277-4231
CONTACT: GEORGE NYFELER

ARCHITECT:

SMBW
111 VIRGINIA STREET, SUITE 111
RICHMOND, VA 23219
PH. (804) 233-5343
CONTACT: TAYLOR CLARK

POD APPROVAL

COMMONWEALTH OF VIRGINIA
JEFFREY STAUB
3921
1/28/2025
LANDSCAPE ARCHITECT

SILVERCORE
LAND DEVELOPMENT CONSULTANTS
7110 FOREST AVENUE - SUITE 204 RICHMOND, VA 23226 (804) 282-6900

1114 HULL STREET (PERMIT SET)

COVER SHEET

RICHMOND, VIRGINIA

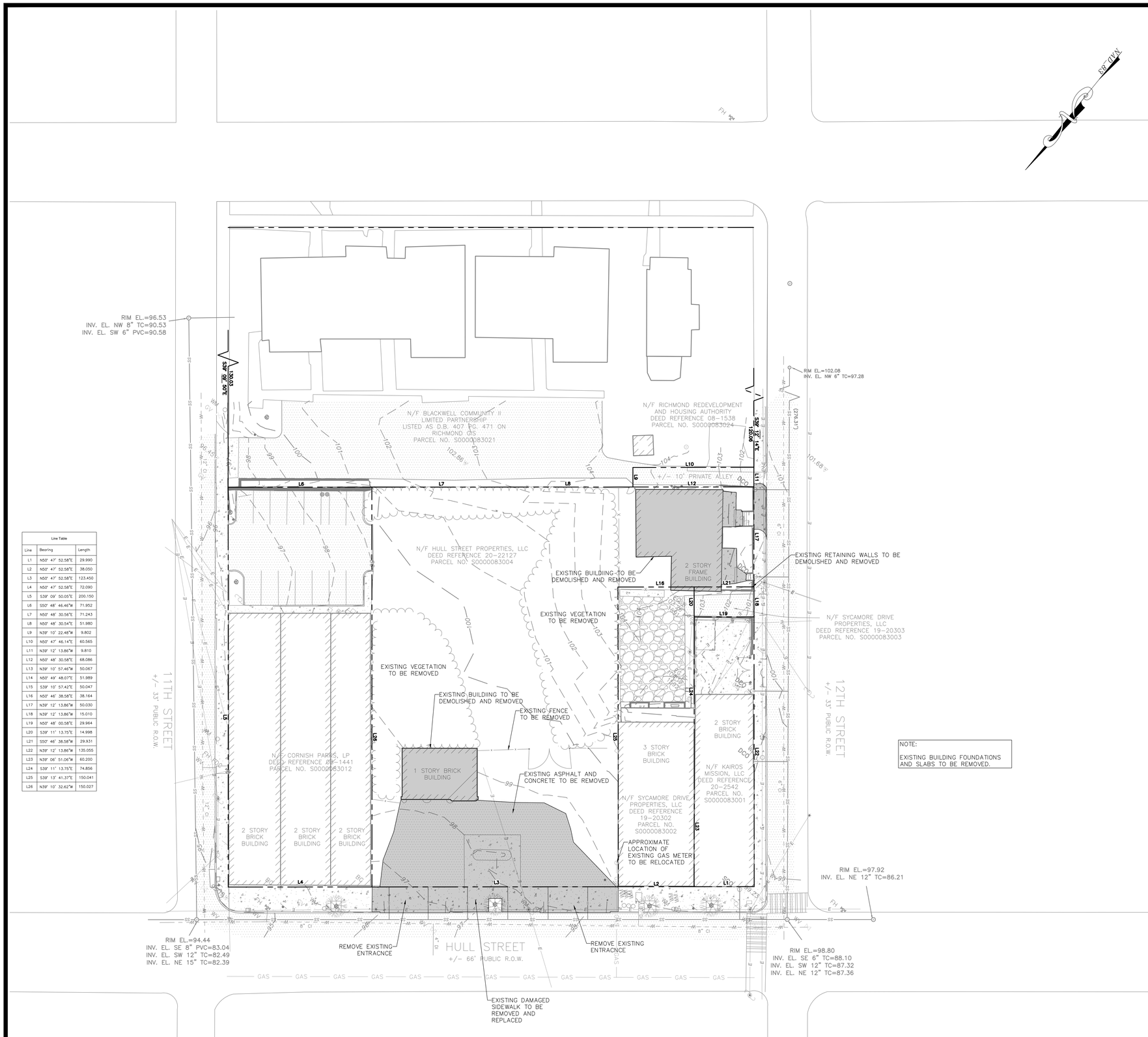
OLD SOUTH DISTRICT

REV.	DATE	DESCRIPTION
1	2/8/21	CITY COMMENTS
2	5/15/21	CITY COMMENTS
3	10/22/21	PERMIT REVISIONS 2
4	11/15/24	ADDITION OF 6TH FLOOR
5	1/28/25	ADDITION OF 6TH FLOOR

DESIGN BY: Steve King
CHECKED BY: Jeff Staub
DRAWING SCALE: N/A
DATE: 11/6/2020

SHEET 1

JOB #:200401



Line Table		
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L18	N39° 12' 13.86"W	15.010
L19	N50° 48' 00.58"E	29.964
L20	S39° 11' 13.75"E	14.998
L21	S50° 46' 38.58"W	29.931
L22	N39° 12' 13.86"W	135.055
L23	N39° 06' 51.06"W	60.200
L24	S39° 11' 13.75"E	74.856
L25	S39° 13' 41.37"E	150.041
L26	N39° 10' 32.62"W	150.027

NOTE:

EXISTING BUILDING FOUNDATIONS AND SLABS TO BE REMOVED.

GENERAL NOTES:

1. THIS TOPOGRAPHIC SURVEY FOR A SITE DESIGN FOR A PORTION OF THE 1100 BLOCK OF HULL STREET IN THE CITY OF RICHMOND, VIRGINIA WAS COMPLETED UNDER THE DIRECT SUPERVISION AND RESPONSIBLE CHARGE OF GEORGE L. NYFELER, III FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THE IMAGERY AND DATA WAS OBTAINED BETWEEN 9/25/2020 AND 10/1/2020; AND THAT THIS MAP MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

   VERTICAL DATUM: NAVD88

   HORIZONTAL AND VERTICAL DATUM ESTABLISHED WITH RTK SOLUTIONS FOR GPS OBSERVED POINTS.

   UTILITIES SHOWN ARE FROM A COMBINATION OF FIELD LOCATED EVIDENCE AND CITY OF RICHMOND PROVIDED MAPPING.

   THIS IS NOT A BOUNDARY SURVEY. EASEMENTS MAY EXIST THAT ARE NOT SHOWN.

2. EXISTING PAVEMENT DISTURBED SHALL BE REPAIRED IN ACCORDANCE W/ PAVEMENT REPLACEMENT STANDARDS PER VDOT.

3. EXISTENCE OF UNDERGROUND UTILITIES NOT VISIBLE FROM GROUND LEVEL BY MEANS OF INSPECTION PORTS, MANHOLES, VALVES, ETC., WILL NEED TO BE DEFINED BY AN UNDERGROUND LOCATIONS COMPANY. CALL MISS UTILITY AT 811 BEFORE BEGINNING CONSTRUCTION.

4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES TO THE PLAN.

5. EXISTING SANITARY SEWER AND WATER LINE ARE APPROXIMATE GRAPHIC LOCATION TAKEN FROM THE RICHMOND CITY WATER AND SEWER BOOK.

6. THE LIMITS OF DISTURBANCE SHALL BE CONFINED TO THE AREAS NOTED ON THE PLAN.

7. ALL DISTURBED AREAS NOT PAVED, LANDSCAPED OR UNDER CONSTRUCTION FOR FUTURE DEVELOPMENT SHALL BE SEEDED AND MULCHED WITH STRAW IN ACCORDANCE WITH THE PERMANENT SEEDING STANDARDS IN THE VE&SCH, 1992.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft

COMMONWEALTH OF VIRGINIA
JEFFREY STAUB
LANDSCAPE ARCHITECT
1/28/2025

SILVERCORE
LAND DEVELOPMENT CONSULTANTS
7110 FOREST AVENUE – SUITE 204 RICHMOND, VA 23226 (804) 282-6900

1114 HULL STREET (PERMIT SET)

EX. CONDITIONS & DEMOLITION

RICHMOND, VIRGINIA

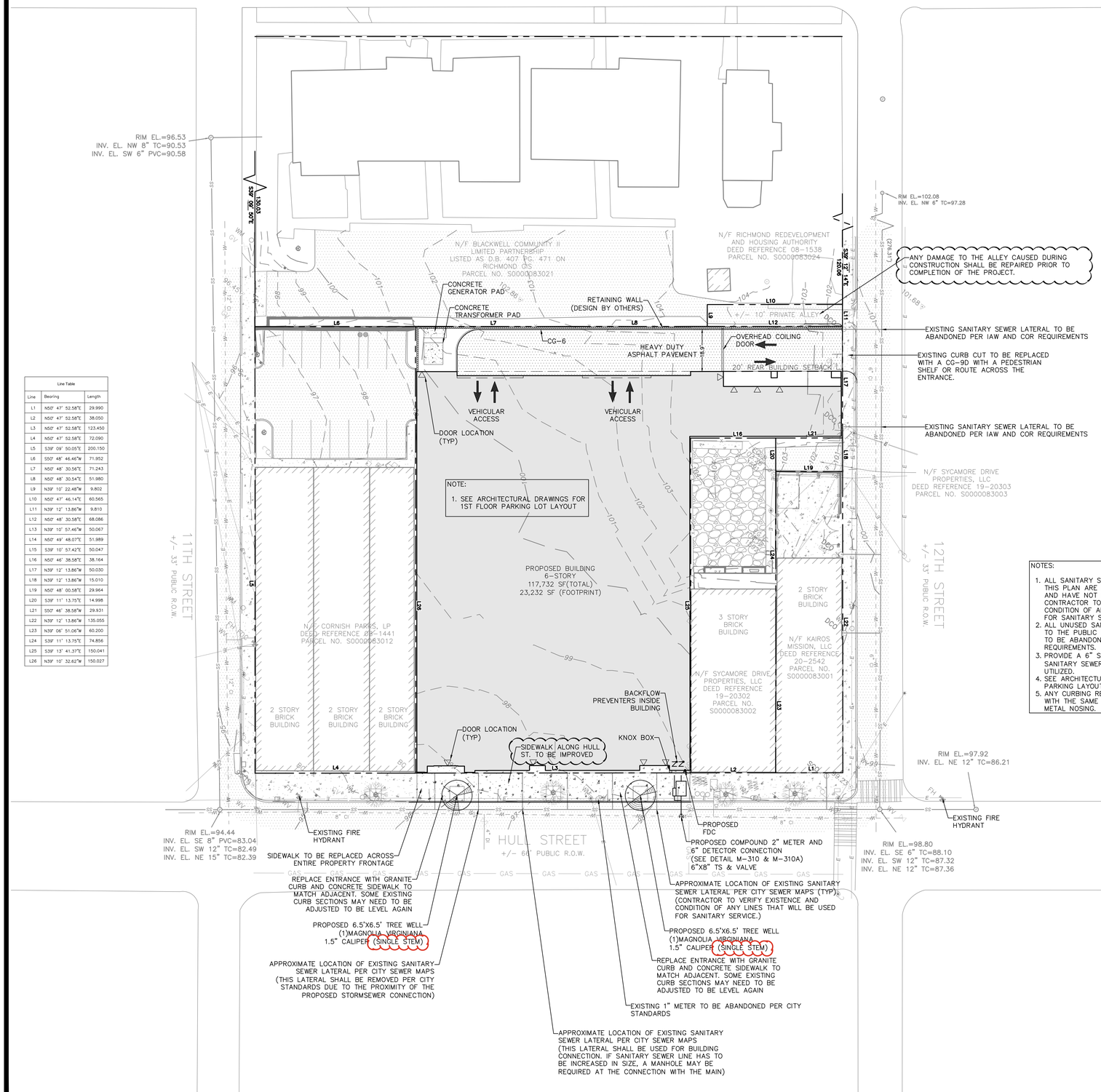
OLD SOUTH DISTRICT

REV.	DATE	DESCRIPTION
1	2/8/21	CITY COMMENTS
2	3/15/21	CITY COMMENTS
3	10/22/21	PERMIT REVISIONS 2
4	11/15/24	ADDITION OF 6TH FLOOR
5	1/28/25	ADDITION OF 6TH FLOOR

DESIGN BY: Steve King
CHECKED BY: Jeff Staub
DRAWING SCALE: 1"=20'
DATE: 11/6/2020

SHEET
2

JOB #:200401



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L25	S39° 13' 41.37"E	150.041
L26	N39° 10' 32.62"W	150.027

SANITARY SEWER SUMMARY

EXISTING SANITARY DISCHARGE:
2 RESIDENTIAL UNITS @ (300 GPD/UNIT): 600 GPD
=0.42 GPM
=1.26 GPM (8 HOUR DURATION)
=3.15 GPM (PEAK DISCHARGE (2.5X))
=0.01 CFS

PROPOSED SANITARY DISCHARGE:
3,600 SF RETAIL @ (250 GPD/1,000 SF): 900 GPD
111 RESIDENTIAL UNITS @ (200 GPD/UNIT): 22,200 GPD

TOTAL: 23,100 GPD
=16.04 GPM
=17.30 GPM (8 HOUR DURATION FOR RETAIL & 24 HOUR DURATION FOR RESIDENTIAL)
=43.25 GPM (PEAK DISCHARGE (2.5X))
=0.10 CFS

INCREASE OF 0.09 CFS TO THE COMBINED SEWER SYSTEM IS OFFSET BY REDUCTION IN STORMSEWER DISCHARGE. SEE EXISTING AND PROPOSED HYDRAGRAPHS ON SHEET 8.

NOTES:
1. ALL SANITARY SEWER LATERALS SHOWN ON THIS PLAN ARE BASED ON CITY SEWER MAPS AND HAVE NOT BEEN FIELD LOCATED. CONTRACTOR TO VERIFY EXISTENCE AND CONDITION OF ANY LINES THAT WILL BE USED FOR SANITARY SERVICE.
2. ALL UNUSED SANITARY SEWER CONNECTIONS TO THE PUBLIC COMBINED SEWER SYSTEM ARE TO BE ABANDONED PER IAW & COR REQUIREMENTS.
3. PROVIDE A 6" SANITARY CLEANOUT ON THE SANITARY SEWER CONNECTION(S) TO BE UTILIZED.
4. SEE ARCHITECTURAL PLANS FOR FIRST FLOOR PARKING LAYOUT.
5. ANY CURBING REMOVED MUST BE REPLACED WITH THE SAME THICKNESS. CURB TO INCLUDE METAL NOSING.

GRAPHIC SCALE
20 0 10 20 40 60
(IN FEET)
1 inch = 20 ft.

COMMONWEALTH OF VIRGINIA
TREVOR J. STAUB
3201
1/28/2025
LANDSCAPE ARCHITECT

SILVERCORE
LAND DEVELOPMENT CONSULTANTS
7110 FOREST AVENUE - SUITE 204 RICHMOND, VA 23226 (804) 282-6900

1114 HULL STREET (PERMIT SET)

LAYOUT & UTILITIES

RICHMOND, VIRGINIA

OLD SOUTH DISTRICT

REV.	DATE	DESCRIPTION
1	2/8/21	CITY COMMENTS
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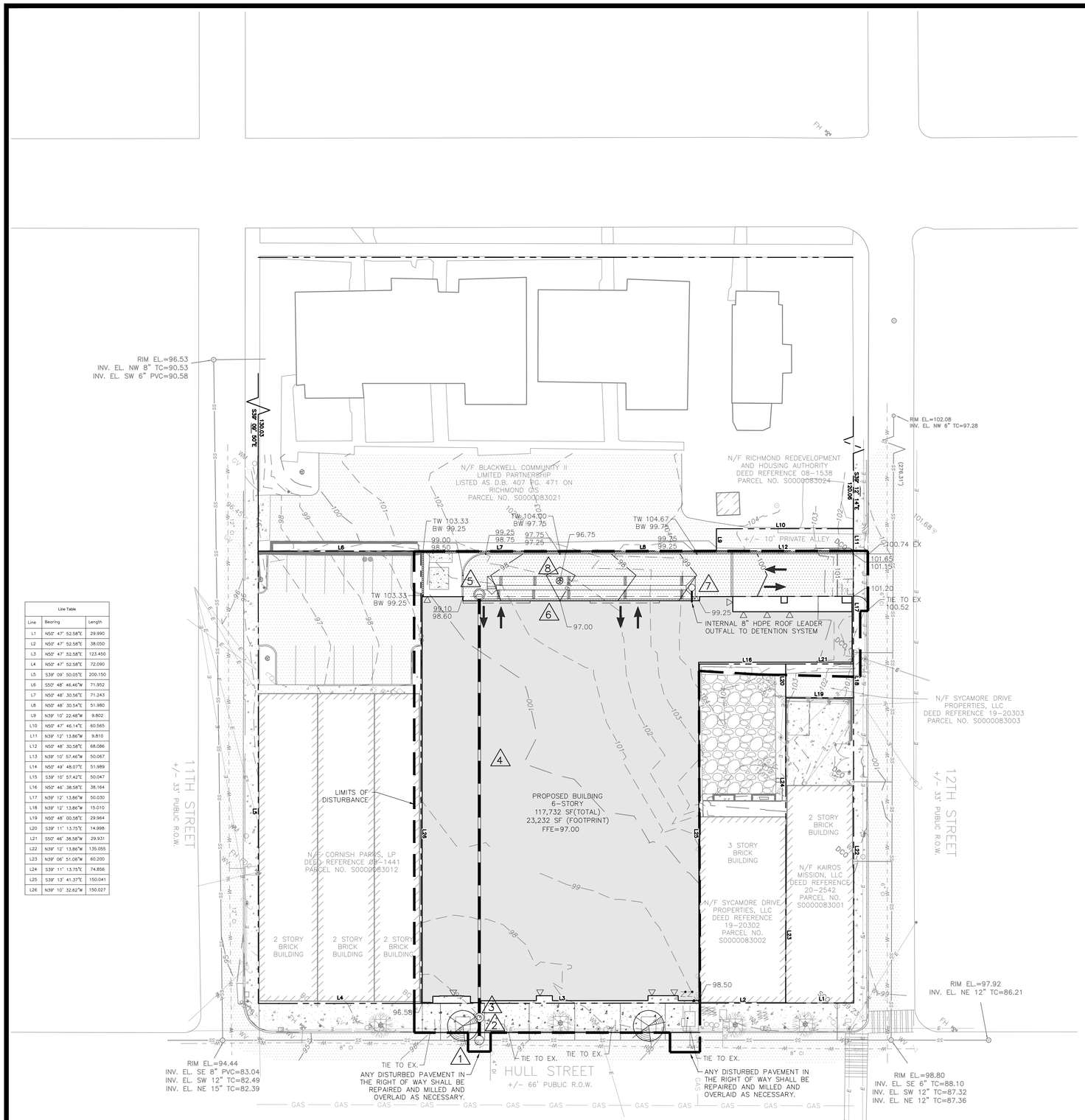
DESIGN BY: Steve King
CHECKED BY: Jeff Staub
DRAWING SCALE: 1"=20'
DATE: 11/6/2020

SHEET 3

JOB #:200401



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L25	S39° 13' 41.37"E	150.041
L26	N39° 10' 32.62"W	150.027

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
Str1	PROP. DOGHOUSE MH-1 (PUBLIC). W/ ST-1 TOP = 96.55 INV IN = 89.40
Str3	PROP. TRAP MANHOLE (PUBLIC) W/ ST-1 (SEE DETAIL SHEET 10) TOP = 96.99 INV IN = 89.60 INV OUT = 89.50
Str5	PROP. MH-1 W/ ST-1 (PRIVATE) W/ WATER CONTROL STURCTURE 8" ORIFICE ELEV.=90.54 WEIR ELEV.=92.50 TOP = 98.25 INV IN = 90.54 INV OUT = 90.54
Str7	36" RISER STRUCTURE (PRIVATE) W/ ROOF LEADER CONNECTION TOP = 99.25 INV OUT = 91.00
Str8	36" RISER STRUCTURE (PRIVATE) W/ GRATE INLET (H-20 RATED) TOP = 99.43

Pipe Table					
NAME	SIZE & MATERIAL	LENGTH	SLOPE	INV.UP	INV.DN
Str2	15" CLIII RCP (PUBLIC)	10.00'	1.00%	89.50	89.40
Str4	14" PVC SCHEDULE 40 (PRIVATE)	187.27'	0.50%	90.54	89.60
Str6	UNDERGROUND DETENTION (PRIVATE) (2x)96LF 48" CMP WITH MANIFOLDS	93.50'	0.49%	91.00	90.54

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

COMMONWEALTH OF VIRGINIA
JEFFREY STAUB
LANDSCAPE ARCHITECT
1/28/2025

SILVERCORE
LAND DEVELOPMENT CONSULTANTS
7110 FOREST AVENUE - SUITE 204 RICHMOND, VA 23226 (804) 282-6900

1114 HULL STREET (PERMIT SET)

GRADING PLAN

RICHMOND, VIRGINIA

OLD SOUTH DISTRICT

REV.	DATE	DESCRIPTION
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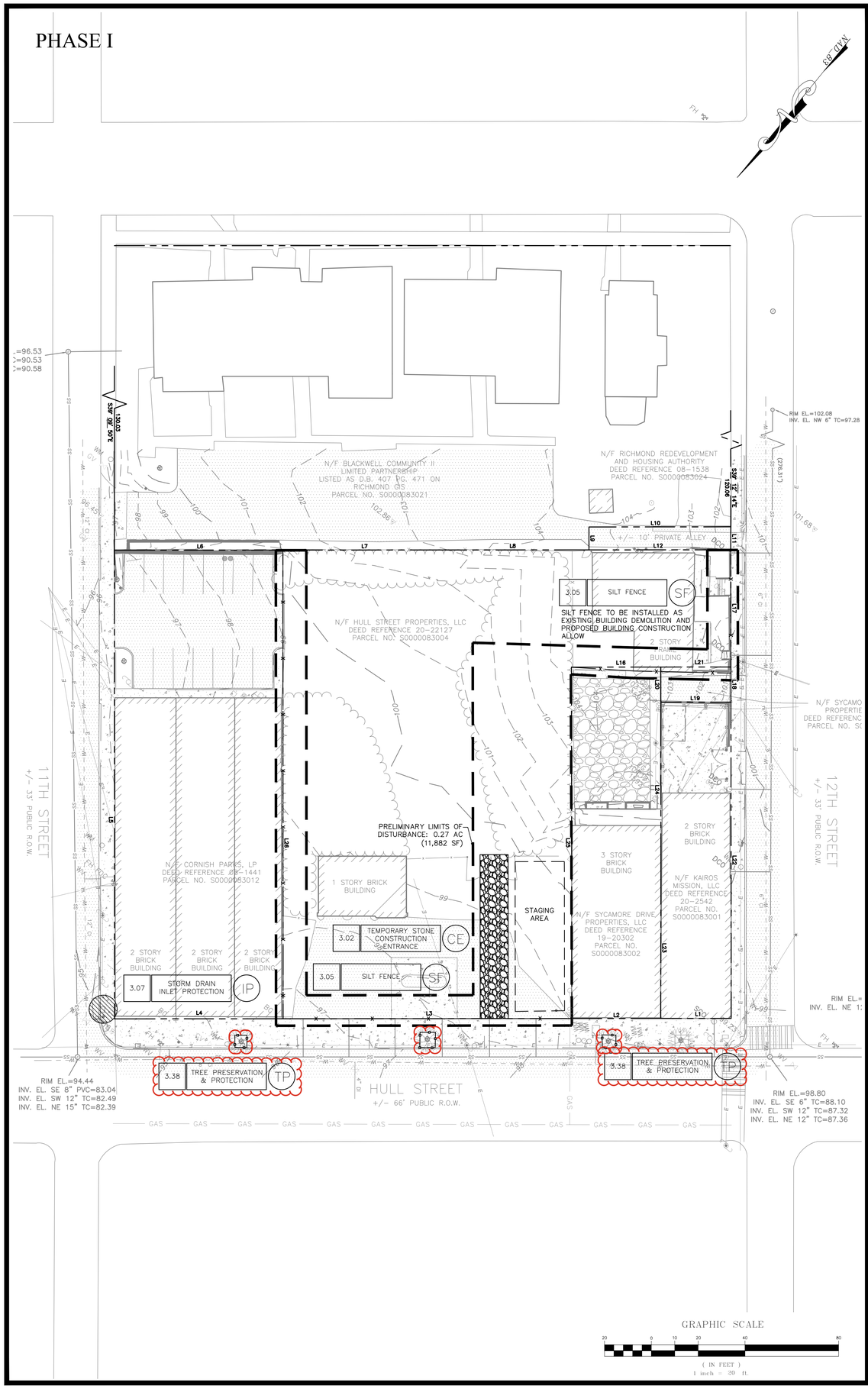
DESIGN BY: Steve King
CHECKED BY: Jeff Staub
DRAWING SCALE: 1"=20'
DATE: 11/6/2020

SHEET 4

JOB #:200401

PHASE I



GRAPHIC SCALE

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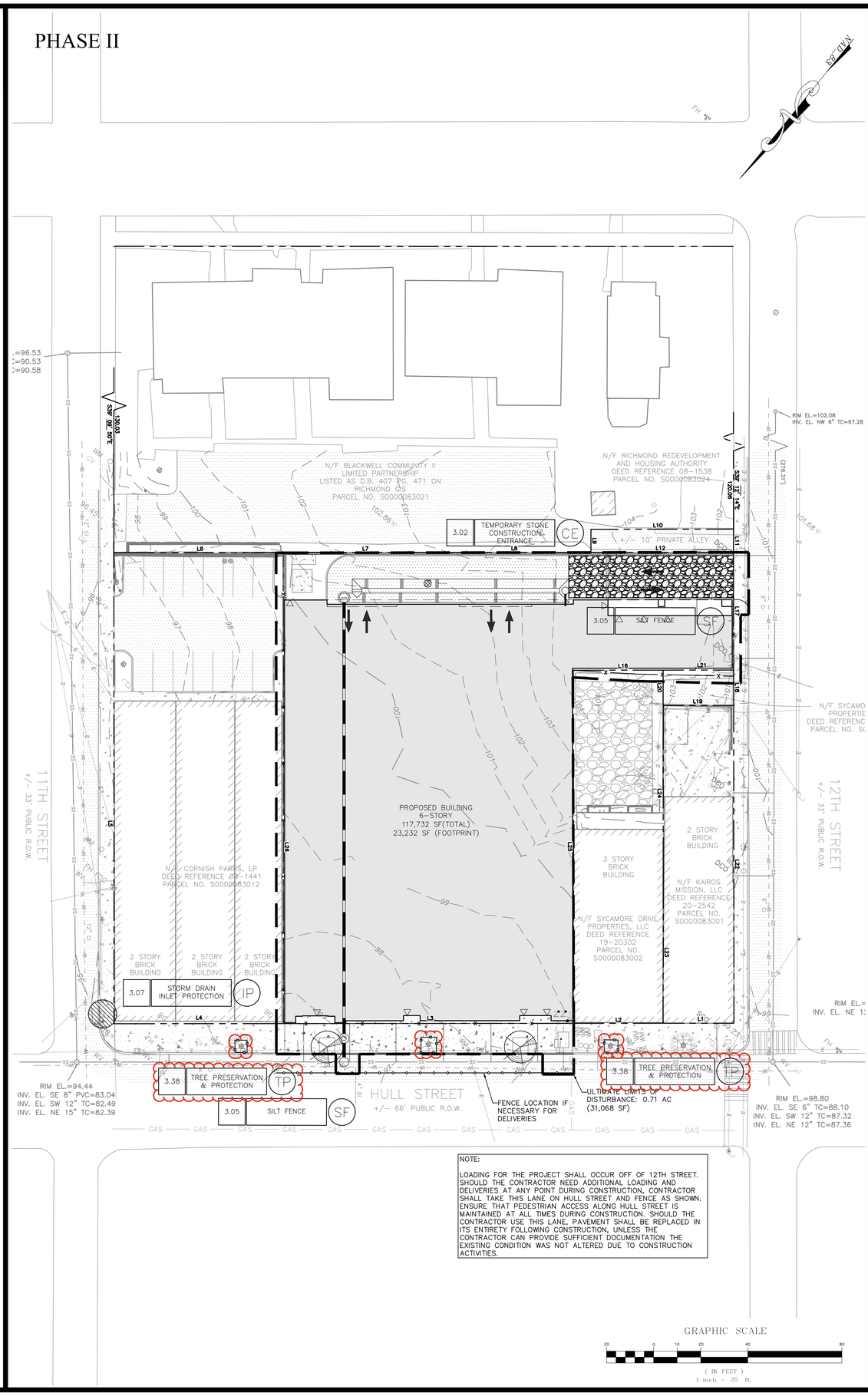
PHASE II



NOTE:

LOADING FOR THE PROJECT SHALL OCCUR OFF OF 12TH STREET. SHOULD THE CONTRACTOR NEED ADDITIONAL LOADING AND DELIVERIES AT ANY POINT DURING CONSTRUCTION, CONTRACTOR SHALL TAKE THIS LANE ON HULL STREET AND FENCE AS SHOWN. ENSURE THAT PEDESTRIAN ACCESS ALONG HULL STREET IS MAINTAINED AT ALL TIMES DURING CONSTRUCTION. SHOULD THE CONTRACTOR USE THIS LANE, PAVEMENT SHALL BE REPLACED IN ITS ENTIRETY FOLLOWING CONSTRUCTION, UNLESS THE CONTRACTOR CAN PROVIDE SUFFICIENT DOCUMENTATION THE EXISTING CONDITION WAS NOT ALTERED DUE TO CONSTRUCTION ACTIVITIES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

COMMONWEALTH OF VIRGINIA
TREVOR J. STAUB
3907
LANDSCAPE ARCHITECT
1/28/2025

SILVERCORE
LAND DEVELOPMENT CONSULTANTS
7110 FOREST AVENUE – SUITE 204 RICHMOND, VA 23226 (804) 282-6900

EROSION CONTROL PLAN

1114 HULL STREET (PERMIT SET)

OLD SOUTH DISTRICT

RICHMOND, VIRGINIA

REV.	DATE	DESCRIPTION
1	2/8/21	CITY COMMENTS
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DESIGN BY: Steve King
CHECKED BY: Jeff Staub
DRAWING SCALE: 1"=20'
DATE: 11/6/2020

SHEET
5

JOB #:200401

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION: THE EXISTING PROJECT AREA CONSISTS OF 3 EXISTING PARCELS TOTALING 0.65 ACRES. THESE WILL BE REMOVED AND REPLACED WITH A NEW 5-STORY MIXED USE BUILDING AND DRIVE AISLE. THE LIMITS OF DISTURBANCE WILL BE APPROXIMATELY 0.71 ACRES.
EXISTING SITE CONDITIONS: THERE ARE MULTIPLE EXISTING BUILDINGS, SOME PAVED AREA AND VEGETATION ON SITE. THE SITE SLOPES FROM SOUTH EAST TO NORTHWEST TOWARD HULL STREET.
ADJACENT SITE: THE SITE IS SURROUNDED BY "B-5" ZONING. THERE ARE NO STREAMS, WETLANDS, OR LAKES ADJACENT.
OFF-SITE AREAS: IF THE SITE REQUIRES ANY OFF-SITE BORROW OR WASTE AREAS IT WILL BE UNDER A SEPARATE PERMIT.
SOILS: THE MAPPING UNITS FOR OUR SITE ARE 41-URBAN LAND.
CRITICAL AREAS: CRITICAL AREAS FOR THIS PROJECT ARE THE DETENTION SYSTEM AND THE OUTFALL PIPE UNDER THE BUILDING TO THE COMBINED SEWER SYSTEM, AND THE RETAINING WALL ALONG THE BACK OF THE PROPERTY. EXTRA MAINTENANCE SHOULD BE USED TO ENSURE NO SEDIMENT GETS INTO HULL STREET.
EROSION & SEDIMENT CONTROL MEASURES: TSILT FENCE WILL BE PROVIDED AROUND THE PERIMETER OF THE PROPERTY WHEN POSSIBLE DURING AND AFTER BUILDING DEMOLITION. THE CONSTRUCTION ENTRANCE WILL BE LOCATED ON HULL STREET DURING DEMOLITION AND SITE PREP. ONCE BUILDING CONSTRUCTION BEGINS, RELOCATE CONSTRUCTION ENTRANCE OFF OF 12TH ST.
PERMANENT STABILIZATION: SITE WILL BE STABILIZED WITH PAVEMENT AND THE PROPOSED BUILDING. ANY REMAINING PERVIOUS AREAS WILL BE PERMENANTLY STABILIZED WITH APPROPRIATE GRASS AND MULCH LANDSCAPING.
STORM WATER RUNOFF: SEE STORMWATER SUMMARY IN THIS PLAN SET.
CALCULATIONS: ALL CALCULATIONS HAVE BEEN PROVIDED IN THIS PLAN SET.

MAINTENANCE REQUIREMENTS FOR INCLUSION IN ESC NARRATIVE;

3.02 Construction Entrance
1. The 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.
2. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately.
3. 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
1. Silt fences shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.
2. Close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting.
3. 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.
4. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.
5. 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.

3.07 Storm Drain Inlet Protection
1. The structure shall be inspected after each rain and repairs made as needed.
2. 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.
3. Structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.

EROSION CONTROL NOTES

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 LEFT DORMANT FOR MORE THAN ONE YEAR.
2. EXCESS EXCAVATION DISPOSED OF OFF SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
3. EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP OF LAND DISTURBING ACTIVITY.
4. COMPLETE DEMOLITION MAY NOT BEGIN UNTIL ALL CONTROLS ARE IN PLACE. IF DEMOLITION IS REQUIRED TO PUT IN SILT FENCE, IT MUST BE THE MINIMUM REQUIRED FOR INSTALLATION OF SILT FENCE AND IS TO BE KEPT WITHIN THE PRELIMINARY LIMITS OF DISTURBANCE.
5. LAND DISTURBANCE OUTSIDE OF PRELIMINARY LIMITS OF DISTURBANCE MAY NOT OCCUR UNTIL THE INITIAL ESC MEASURES HAVE BEEN APPROVED BY THE ENVIRONMENTAL INSPECTOR.
5. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED SO THAT THE SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORM DRAINAGE FACILITIES.
6. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL THE DISTURBED AREA IS STABILIZED.
7. PROPERTIES ADJOINING THE SITE SHALL BE KEPT CLEAN OF MUD OR SILT CARRIED FROM THE SITE BY VEHICULAR TRAFFIC OR RUNOFF.
8. THE DISPOSAL OF WASTE MATERIAL REMOVED FROM EROSION AND SEDIMENT CONTROL FACILITIES AND THE DISPOSAL OF FACILITIES SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
9. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
10. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
11. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.

EROSION CONTROL PHASE I SEQUENCE/SCHEDULE

1. CONTACT THE ENVIRONMENTAL DIVISION TO ESTABLISH A PRE-CONSTRUCTION MEETING PRIOR TO CONSTRUCTION.
2. NO LAND DISTURBANCE MAY OCCUR OUTSIDE THE PRELIMINARY LIMITS OF DISTURBANCE UNTIL THE INSTALLATION OF THE ESC MEASURES HAS BEEN APPROVED BY THE ENVIRONMENTAL INSPECTOR.
3. AFTER PRE-CONSTRUCTION MEETING, MAINTAIN EXISTING ENTRANCE AS SHOWN ON THE PLAN.
4. INSTALL SILT FENCE AROUND THE PERIMETER OF THE SITE.
5. BEGIN DEMOLITION OF EXISTING BUILDING AND PAVEMENT. AFTER APPROVAL BY ENVIRONMENTAL INSPECTOR, BEGIN BUILDING PAD.
6. *IF CONSTRUCTION DOES NOT COMMENCE FOR 180 DAYS FOLLOWING THE PRE-CONSTRUCTION MEETING OR IF THE PROJECT IS DORMANT FOR 180 DAYS DURING THE CONSTRUCTION PHASE, A NEW PRE-CONSTRUCTION MEETING IS REQUIRED BEFORE CONSTRUCTION CAN RE-START.*
7. *NO EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED WITHOUT APPROVAL OF THE ENVIRONMENTAL INSPECTOR.*

EROSION CONTROL PHASE II SEQUENCE/SCHEDULE

1. MAINTAIN ALL PHASE I EROSION CONTROL DEVICES THROUGHOUT CONSTRUCTION OR AS INDICATED ON THE PHASE II PLANS.
2. BEGIN GRADING OPERATIONS MAINTAINING POSITIVE DRAINAGE TO EROSION CONTROL MEASURES AT ALL TIMES.
3. GRADE BUILDING PAD AND BEGIN BUILDING CONSTRUCTION.
4. INSTALL UTILITIES AND STORMSEWER INCLUDING UNDERGROUND DETENTION.
5. BACK FILL, GRADE AND STABILIZE PARKING AREA.
6. TOPSOIL, SEED, AND STABILIZE ANY REMAINING DISTURBED AREAS.
7. INSTALL PAVEMENT.
8. INSTALL OTHER HARDSCAPING & LANDSCAPING THEN TOPSOIL SEED & STABILIZE ANY REMAINING DISTURBED AREAS.
9. NO EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED WITHOUT APPROVAL OF THE ENVIRONMENTAL INSPECTOR FOR THE PROJECT.
10. CONTACT ENVIRONMENTAL DIVISION FOR FINAL INSPECTION.
11. UPON APPROVAL OF SITE STABILIZATION, ALL E&S MEASURE CAN BE REMOVED.

EROSION CONTROL LEGEND & QUANTITIES:

NOTE: DETAILS AND SPECIFICATIONS OF EROSION AND SEDIMENT MEASURES ARE FOUND IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

-KEY-	NUMBER	TITLE	QUANTITY
CE	3.02	CONSTRUCTION ENTRANCE	1 EACH
SF	3.05	SILT FENCE	432 LF
TS	3.31	TEMPORARY SEEDING	0.71 AC
PS	3.32	PERMANENT SEEDING	0.01 AC
TP	3.38	TREE PRESERVATION & PROTECTION	68 LF

9VAC25-840-40. Minimum standards. (Effective 11/17/16)

A VESCP must be consistent with the following criteria, techniques and methods:

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.

2. During construction of the project, soil stock piles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.

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.

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 upslope land disturbance takes place.

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

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 25-year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.

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.

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.

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

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.

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.

12. When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.

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 nonerodible material shall be provided.

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

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

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 this chapter.

f. Applicable safety requirements shall be complied with.

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. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities.

18. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the VESCP authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

19. Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria. Stream restoration and relocation projects that incorporate natural channel design concepts are not man-made channels and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels:

a. Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outfall of the pipe or pipe system shall be performed.

b. Adequacy of all channels and pipes shall be verified in the following manner:

(1) The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is 100 times greater than the contributing drainage area of the project in question; or

(2) (a) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks.

(b) All previously constructed man-made channels shall be analyzed by the use of a 10-year storm to verify that stormwater will not overtop its banks and by the use of a two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and

(c) Pipes and storm sewer systems shall be analyzed by the use of a 10-year storm to verify that stormwater will be contained within the pipe or system.

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

(1) Improve the channels to a condition where a 10-year storm will not overtop the banks and a two-year storm will not cause erosion to the channel, the bed, or the banks; or

(2) Improve the pipe or pipe system to a condition where the 10-year storm is contained within the appurtenances;

(3) 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 10-year storm to increase when runoff outfalls into a man-made channel; or

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

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

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

f. If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the VESCP of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance.

g. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.

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

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

j. In applying these stormwater management criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations.

k. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.

l. Any plan approved prior to July 1, 2014, that provides for stormwater management that addresses any flow rate capacity and velocity requirements for natural or man-made channels shall satisfy the flow rate capacity and velocity requirements for natural or man-made channels if the practices are designed to (i) detain the water quality volume and to release it over 48 hours; (ii) detain and release over a 24-hour period the expected rainfall resulting from the one year, 24-hour storm; and (iii) reduce the allowable peak flow rate resulting from the 1.5, 2, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in a good forested condition, achieved 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.

Statutory Authority

§ 62.1-44.15:52 of the Code of Virginia.

Historical Notes

Former 4VAC50-30-40, derived from VR625-02-00 § 4; eff. September 13, 1990; amended, Virginia Register Volume 11, Issue 11, eff. March 22, 1995; Volume 29, Issue 4, eff. November 21, 2012; amended and renumbered, Virginia Register Volume 30, Issue 2, eff. October 23, 2013; amended, Virginia Register Volume 31, Issue 24, eff. August 26, 2015; **Volume 33, Issue 4, eff. November 17, 2016.**

TABLE 6-1 (Virginia Erosion and Sediment Control Handbook)

GENERAL EROSION AND SEDIMENT CONTROL NOTES

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.

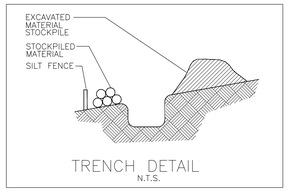
ES-7: All disturbed areas are to drain to approved sediment control measures at all times during land disturbing activities and during site development until final stabilization is achieved.

ES-8: During dewatering operations, water will be pumped into an approved filtering device.

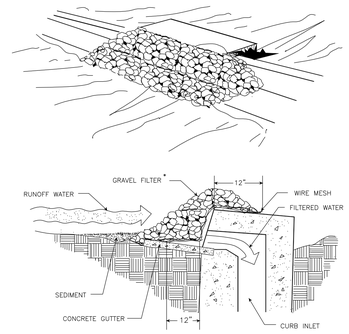
ES-9: The contractor shall inspect all erosion control measures periodically and after each runoff-producing rainfall event. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately.

Standard E&S Notes

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 the 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 and Sediment Control Handbook.
8. Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.
9. During construction of the project, soil stockpiles shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as soil intentionally transported from the project site.



GRAVEL CURB INLET SEDIMENT FILTER



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* GRAVEL SHALL BE VDOT #3, #357 OR 5 COARSE AGGREGATE.

SOURCE: VA. DSWC PLATE 3.07-6

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

SEED

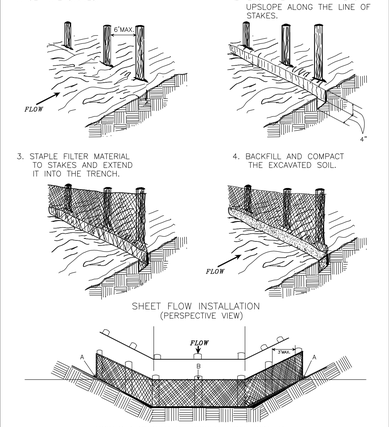
APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (lolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 -100 (lbs/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (lolium multi-florum)	60 - 100 (lbs/acre)
May 1 - Aug. 31	German Millet	50 (lbs/acre)

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.)

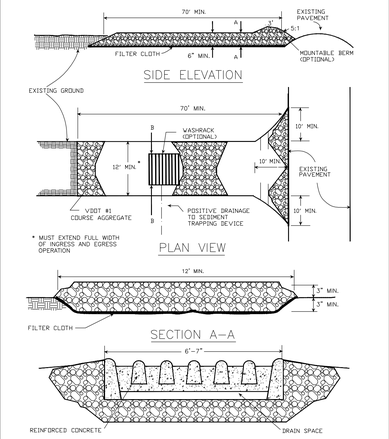
NOTE:
1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
2 - Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
3 - When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment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

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control,VA. DSWC Sherwood and Wyant PLATE. 3.05-2

STONE CONSTRUCTION ENTRANCE



SOURCE: ADAPTED from 1983 Maryland Standards for Soil erosion and Sediment Control, and Va. DSWC Plate 3.02-1

TABLE 3.32-D
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR PIEDMONT AREA

LAND USE	SEED[1] SPECIES	APPLICATION PER ACRE
Minimum Care Lawn (Commercial or Residential)	Tall Fescue[1] Perennial Ryegrass Kentucky Bluegrass[1]	95-100% 0-5% 0-5% TOTAL: 175-200 lbs.
High-Maintenance Lawn	Tall Fescue[1]	TOTAL: 200-250 lbs.
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] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop[2] Crownvetch[3]	108 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://puban.cses.vt.edu/html/TurfturfpublicationspublicationsS2.html
2 - Use seasonal nurse crop in accordance with seeding dates as stated below:
February 16th - April ..... Annual Rye
May 1st - August 15th ..... Foxtail Millet
August 16th - October ..... Annual Rye
November - February 15th ..... Winter Rye
3 - Substitute Sericea lespedeza for Crownvetch east of Farmville, VA (May through September use hulled seed, all other periods, use unhulled Sericea). If Flatpea is used, increase rate to 30 lbs./acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30 -40

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

SILVERCORE
LAND DEVELOPMENT CONSULTANTS
7110 FOREST AVENUE – SUITE 204 RICHMOND, VA 23226 (804) 282-6900

COMMONWEALTH OF VIRGINIA
TREVOR J. STAUB
LICENSED
LANDSCAPE ARCHITECT
1/28/2025

RICHMOND, VIRGINIA

E&S DETAILS

1114 HULL STREET (PERMIT SET)

OLD SOUTH DISTRICT

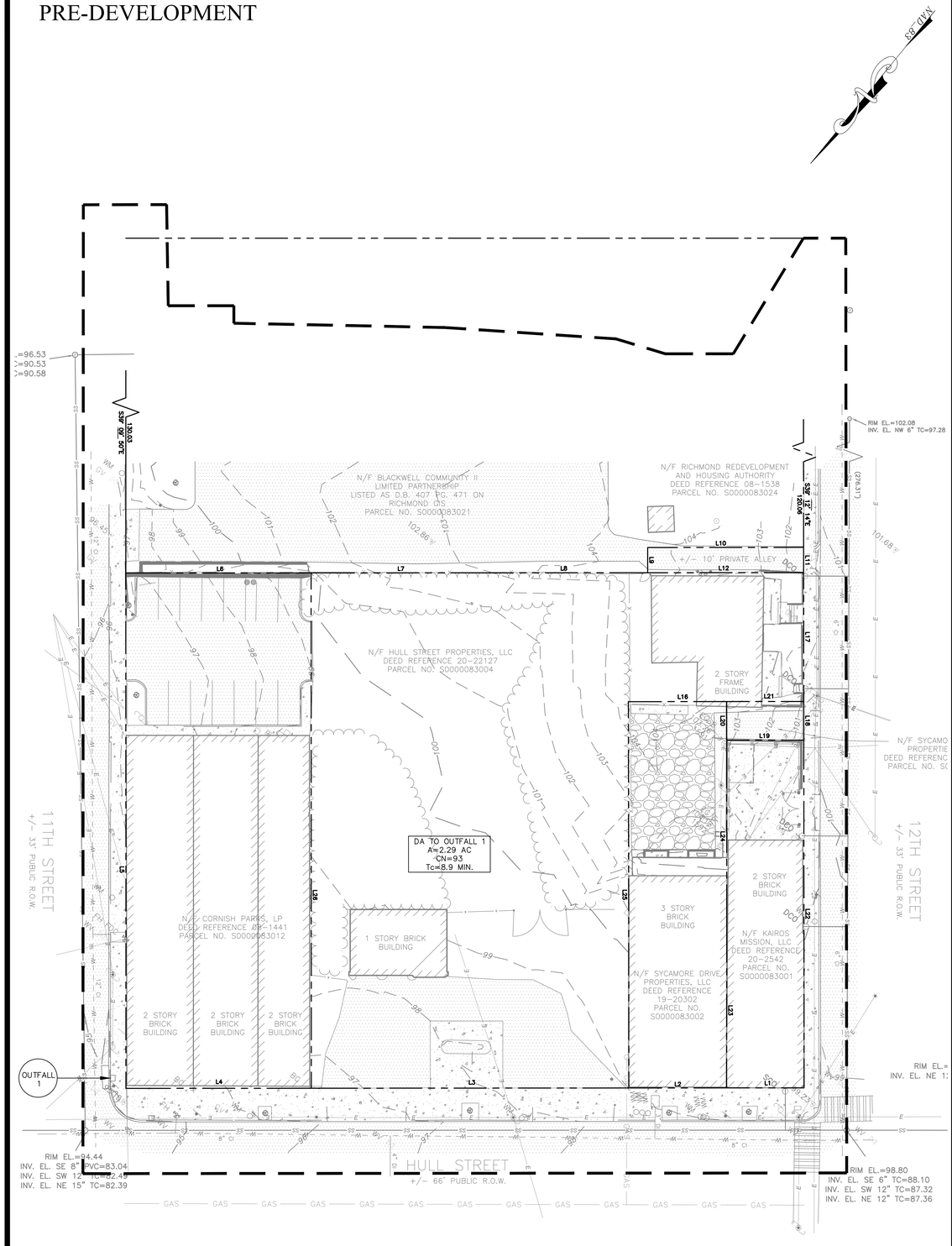
REV	DATE	DESCRIPTION
1	2/8/21	CITY COMMENTS
2	3/15/21	CITY COMMENTS
3	10/22/21	PERMIT REVISIONS 2
4	11/15/24	ADDITION OF 6TH FLOOR
5	1/28/25	ADDITION OF 6TH FLOOR

DESIGN BY: Steve King
CHECKED BY: Jeff Staub
DRAWING SCALE: 1"=20'
DATE: 11/6/2020

SHEET
6

JOB #:200401

PRE-DEVELOPMENT



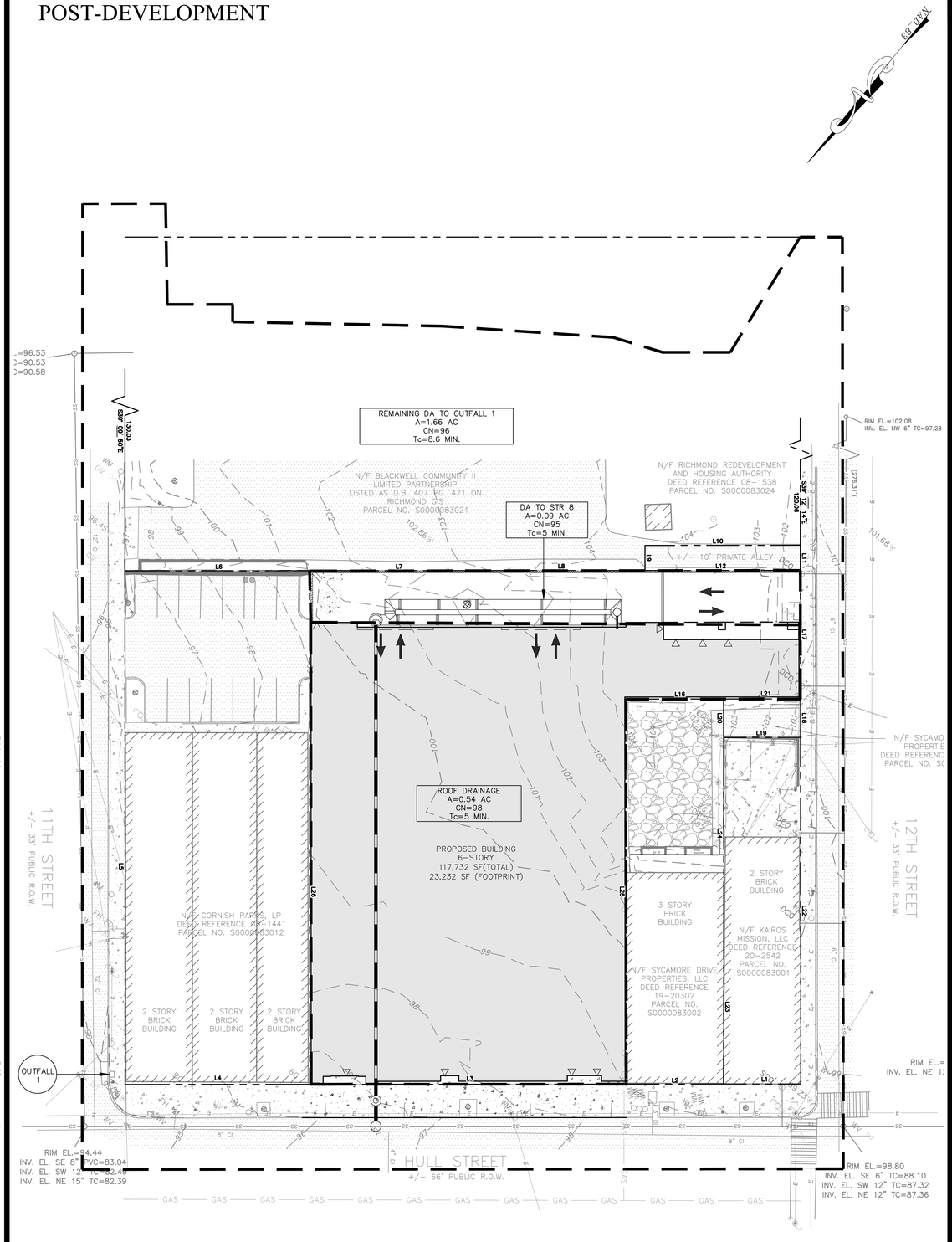
GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

POST-DEVELOPMENT



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

COMMONWEALTH OF VIRGINIA
TREVOR J. STAUB
3921
LANDSCAPE ARCHITECT
1/28/2025

SILVERCORE
LAND DEVELOPMENT CONSULTANTS
7110 FOREST AVENUE – SUITE 204 RICHMOND, VA 23226 (804) 282-6900

DRAINAGE PLAN

1114 HULL STREET (PERMIT SET)

RICHMOND, VIRGINIA

OLD SOUTH DISTRICT

REV.	DATE	DESCRIPTION
1	2/8/21	CITY COMMENTS
2	5/15/21	CITY COMMENTS
3	10/22/21	PERMIT REVISIONS 2
4	11/15/24	ADDITION OF 6TH FLOOR
5	1/28/25	ADDITION OF 6TH FLOOR

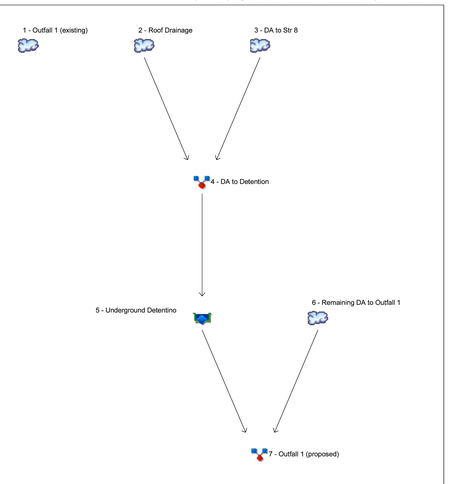
DESIGN BY: Steve King
CHECKED BY: Jeff Staub
DRAWING SCALE: 1"=20'
DATE: 11/6/2020

SHEET
7

JOB #:200401

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020



Legend

Hyd.	Origin	Description
1	SCS Runoff	Outfall 1 (existing)
2	SCS Runoff	Roof Drainage
3	SCS Runoff	DA to Str 8
4	Combine	DA to Detention
5	Reservoir	Underground Detentino
6	SCS Runoff	Remaining DA to Outfall 1
7	Combine	Outfall 1 (proposed)

Project: 1114 Hull St REVISED 48 cmp.gpw | Tuesday, 03 / 16 / 2021

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	14.38	2	718	35,631	------	------	------	Outfall 1 (existing)
2	SCS Runoff	3.736	2	716	8,918	------	------	------	Roof Drainage
3	SCS Runoff	0.608	2	716	1,381	------	------	------	DA to Str 8
4	Combine	4.344	2	716	10,299	2, 3	------	------	DA to Detention
5	Reservoir	3.313	2	720	10,298	4	92.97	1,453	Underground Detentino
6	SCS Runoff	10.81	2	718	27,851	------	------	------	Remaining DA to Outfall 1
7	Combine	13.95	2	718	38,149	5, 6	------	------	Outfall 1 (proposed)

1114 Hull St REVISED 48 cmp.gpw | Return Period: 10 Year | Tuesday, 03 / 16 / 2021

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020 — Tuesday, 03 / 16 / 2021

Pond No. 1 - Underground Detention

Pond Data

UG Chambers -Invert elev. = 90.54 ft, Rise x Span = 4.00 x 4.00 ft, Barrel Len = 93.00 ft, No. Barrels = 2, Slope = 0.50%, Headers = Yes

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	90.54	n/a	0	0
0.45	90.99	n/a	64	64
0.89	91.43	n/a	220	284
1.34	91.88	n/a	302	586
1.79	92.33	n/a	345	931
2.23	92.77	n/a	364	1,295
2.68	93.22	n/a	364	1,659
3.13	93.67	n/a	345	2,003
3.57	94.11	n/a	302	2,305
4.02	94.56	n/a	220	2,525
4.46	95.00	n/a	64	2,589

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	8.00	0.00	0.00
Span (in)	= 12.00	8.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 90.54	90.54	0.00	0.00
Length (ft)	= 189.00	0.00	0.00	0.00
Slope (%)	= 0.50	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 3.00	0.00	0.00	0.00
Crest El. (ft)	= 92.50	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	90.54	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.04	6	90.58	0.01 ic	0.01 ic	---	---	0.00	---	---	---	---	---	0.005
0.09	13	90.63	0.02 ic	0.02 ic	---	---	0.00	---	---	---	---	---	0.021
0.13	19	90.67	0.05 ic	0.05 ic	---	---	0.00	---	---	---	---	---	0.046
0.18	26	90.72	0.08 ic	0.08 ic	---	---	0.00	---	---	---	---	---	0.079
0.22	32	90.76	0.12 ic	0.12 ic	---	---	0.00	---	---	---	---	---	0.121
0.27	38	90.81	0.17 ic	0.17 ic	---	---	0.00	---	---	---	---	---	0.169
0.31	45	90.85	0.23 ic	0.23 ic	---	---	0.00	---	---	---	---	---	0.226
0.36	51	90.90	0.29 ic	0.29 ic	---	---	0.00	---	---	---	---	---	0.289
0.40	57	90.94	0.36 ic	0.35 ic	---	---	0.00	---	---	---	---	---	0.355
0.45	64	90.99	0.43 ic	0.43 ic	---	---	0.00	---	---	---	---	---	0.425
0.49	86	91.03	0.50 ic	0.50 ic	---	---	0.00	---	---	---	---	---	0.500
0.54	108	91.08	0.58 ic	0.58 ic	---	---	0.00	---	---	---	---	---	0.579
0.58	130	91.12	0.67 ic	0.65 ic	---	---	0.00	---	---	---	---	---	0.651
0.63	152	91.17	0.74 ic	0.72 ic	---	---	0.00	---	---	---	---	---	0.724
0.67	174	91.21	0.79 ic	0.79 ic	---	---	0.00	---	---	---	---	---	0.789
0.71	196	91.25	0.84 ic	0.84 ic	---	---	0.00	---	---	---	---	---	0.839
0.76	218	91.30	0.89 ic	0.89 ic	---	---	0.00	---	---	---	---	---	0.889
0.80	240	91.34	0.94 ic	0.94 ic	---	---	0.00	---	---	---	---	---	0.938
0.85	262	91.39	0.99 ic	0.98 ic	---	---	0.00	---	---	---	---	---	0.981
0.89	284	91.43	1.02 ic	1.02 ic	---	---	0.00	---	---	---	---	---	1.024
0.94	314	91.48	1.07 ic	1.07 ic	---	---	0.00	---	---	---	---	---	1.071
0.98	344	91.52	1.13 ic	1.11 ic	---	---	0.00	---	---	---	---	---	1.109
1.03	375	91.57	1.15 ic	1.15 ic	---	---	0.00	---	---	---	---	---	1.155
1.07	405	91.61	1.19 ic	1.19 ic	---	---	0.00	---	---	---	---	---	1.190
1.12	435	91.66	1.24 ic	1.23 ic	---	---	0.00	---	---	---	---	---	1.233
1.16	465	91.70	1.27 ic	1.27 ic	---	---	0.00	---	---	---	---	---	1.270
1.21	496	91.75	1.32 ic	1.31 ic	---	---	0.00	---	---	---	---	---	1.306
1.25	526	91.79	1.35 ic	1.35 ic	---	---	0.00	---	---	---	---	---	1.345
1.29	556	91.83	1.38 ic	1.38 ic	---	---	0.00	---	---	---	---	---	1.381
1.34	586	91.88	1.41 ic	1.41 ic	---	---	0.00	---	---	---	---	---	1.415
1.38	621	91.92	1.46 ic	1.45 ic	---	---	0.00	---	---	---	---	---	1.450

Continues on next page...

Underground Detention

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
1.43	655	91.97	1.49 ic	1.49 ic	---	---	0.00	---	---	---	---	---	1.486
1.47	690	92.01	1.52 ic	1.52 ic	---	---	0.00	---	---	---	---	---	1.520
1.52	724	92.06	1.55 ic	1.55 ic	---	---	0.00	---	---	---	---	---	1.552
1.56	759	92.10	1.58 ic	1.58 ic	---	---	0.00	---	---	---	---	---	1.583
1.61	793	92.15	1.63 ic	1.61 ic	---	---	0.00	---	---	---	---	---	1.615
1.65	828	92.19	1.66 ic	1.65 ic	---	---	0.00	---	---	---	---	---	1.647
1.70	862	92.24	1.69 ic	1.68 ic	---	---	0.00	---	---	---	---	---	1.679
1.74	897	92.28	1.71 ic	1.71 ic	---	---	0.00	---	---	---	---	---	1.710
1.79	931	92.33	1.74 ic	1.74 ic	---	---	0.00	---	---	---	---	---	1.741
1.83	968	92.37	1.77 ic	1.77 ic	---	---	0.00	---	---	---	---	---	1.769
1.88	1,004	92.42	1.80 ic	1.80 ic	---	---	0.00	---	---	---	---	---	1.798
1.92	1,040	92.46	1.83 ic	1.83 ic	---	---	0.00	---	---	---	---	---	1.826
1.96	1,077	92.50	1.87 ic	1.85 ic	---	---	0.00	---	---	---	---	---	1.856
2.01	1,113	92.55	1.95 ic	1.87 ic	---	---	0.09	---	---	---	---	---	1.954
2.05	1,149	92.59	2.10 ic	1.87 ic	---	---	0.22	---	---	---	---	---	2.097
2.10	1,186	92.64	2.28 ic	1.87 ic	---	---	0.40	---	---	---	---	---	2.273
2.14	1,222	92.68	2.35 oc	1.74 ic	---	---	0.61	---	---	---	---	---	2.348
2.19	1,258	92.73	2.50 oc	1.66 ic	---	---	0.85	---	---	---	---	---	2.504
2.23	1,295	92.77	2.67 oc	1.56 ic	---	---	1.11	---	---	---	---	---	2.668
2.28	1,331	92.82	2.83 oc	1.44 ic	---	---	1.39	---	---	---	---	---	2.834
2.32	1,368	92.86	3.00 oc	1.30 ic	---	---	1.70	---	---	---	---	---	3.000
2.37	1,404	92.91	3.16 oc	1.14 ic	---	---	2.02	---	---	---	---	---	3.161
2.41	1,440	92.95	3.28 oc	1.01 ic	---	---	2.28 s	---	---	---	---	---	3.284
2.46	1,477	93.00	3.37 oc	0.92 ic	---	---	2.44 s	---	---	---	---	---	3.366
2.50	1,513	93.04	3.44 oc	0.85 ic	---	---	2.58 s	---	---	---	---	---	3.436
2.55	1,550	93.09	3.50 oc	0.79 ic	---	---	2.70 s	---	---	---	---	---	3.498
2.59	1,586	93.13	3.55 oc	0.74 ic	---	---	2.81 s	---	---	---	---	---	3.553
2.63	1,622	93.17	3.61 oc	0.70 ic	---	---	2.91 s	---	---	---	---	---	3.605
2.68	1,659	93.22	3.65 oc	0.66 ic	---	---	3.00 s	---	---	---	---	---	3.652
2.72	1,693	93.26	3.70 oc	0.62 ic	---	---	3.08 s	---	---	---	---	---	3.698
2.77	1,728	93.31	3.74 oc	0.59 ic	---	---	3.15 s	---	---	---	---	---	3.739
2.81	1,762	93.35	3.78 oc	0.56 ic	---	---	3.22 s	---	---	---	---	---	3.780
2.86	1,797	93.40	3.82 oc	0.53 ic	---	---	3.29 s	---	---	---	---	---	3.819
2.90	1,831	93.44	3.86 oc	0.51 ic	---	---	3.35 s	---	---	---	---	---	3.858
2.95	1,866	93.49	3.89 oc	0.48 ic	---	---	3.41 s	---	---	---	---	---	3.894
2.99	1,900	93.53	3.93 oc	0.46 ic	---	---	3.47 s	---	---	---	---	---	3.930
3.04	1,934	93.58	3.97 oc	0.44 ic	---	---	3.52 s	---	---	---	---	---	3.965
3.08	1,969	93.62	4.00 oc	0.43 ic	---	---	3.57 s	---	---	---	---	---	3.999
3.13	2,003	93.67	4.03 oc	0.41 ic	---	---	3.62 s	---	---	---	---	---	4.030
3.17	2,034	93.71	4.07 oc	0.39 ic	---	---	3.67 s	---	---	---	---	---	4.062
3.21	2,064	93.75	4.10 oc	0.38 ic	---	---	3.72 s	---	---	---	---	---	4.095
3.26	2,094	93.80	4.13 oc	0.37 ic	---	---	3.76 s	---	---	---	---	---	4.128
3.30	2,124	93.84	4.16 oc	0.35 ic	---	---	3.81 s	---	---	---	---	---	4.159
3.35	2,154	93.89	4.19 oc	0.34 ic	---	---	3.85 s	---	---	---	---	---	4.190
3.39	2,185	93.93	4.22 oc	0.33 ic	---	---	3.89 s	---	---	---	---	---	4.217
3.44	2,215	93.98	4.25 oc	0.32 ic	---	---	3.93 s	---	---	---	---	---	4.247
3.48	2,245	94.02	4.28 oc	0.31 ic	---	---	3.97 s	---	---	---	---	---	4.276
3.53	2,275	94.07	4.31 oc	0.30 ic	---	---	4.00 s	---	---	---	---	---	4.307
3.57	2,305	94.11	4.34 oc	0.29 ic	---	---	4.04 s	---	---	---	---	---	4.334
3.62	2,327	94.16	4.37 oc	0.29 ic	---	---	4.08 s	---	---	---	---	---	4.363
3.66	2,349	94.20	4.40 oc	0.28 ic	---	---	4.11 s	---	---	---	---	---	4.390
3.71	2,371	94.25	4.42 oc	0.27 ic	---	---	4.15 s	---	---	---	---	---	4.422
3.75	2,393	94.29	4.45 oc	0.26 ic	---	---	4.18 s	---	---	---	---	---	4.447
3.80	2,415	94.34	4.48 oc	0.26 ic	---	---	4.22 s	---	---	---	---	---	4.479
3.84	2,437	94.38	4.51 oc	0.25 ic	---	---	4.25 s	---	---	---	---	---	4.504
3.88	2,459	94.42	4.53 oc	0.24 ic	---	---	4.29 s	---	---	---	---	---	4.530
3.93	2,481	94.47	4.56 oc	0.24 ic	---	---	4.32 s	---	---	---	---	---	4.559
3.97	2,503	94.51	4.59 oc	0.23 ic	---	---	4.35 s	---	---	---	---	---	4.582
4.02	2,525	94.56	4.62 oc	0.23 ic	---	---	4.38 s	---	---	---	---	---	4.611
4.06	2,532	94.60	4.64 oc	0.22 ic	---	---	4.42 s	---	---	---	---	---	4.641
4.11	2,538	94.65	4.67 oc	0.22 ic	---	---	4.45 s	---	---	---	---	---	4.667
4.15	2,545	94.69	4.69 oc	0.21 ic	---	---	4.47 s	---	---	---	---	---	4.687
4.20	2,551	94.74	4.72 oc	0.21 ic	---	---	4.50 s	---	---	---	---	---	4.713
4.24	2,557	94.78	4.75 oc	0.21 ic	---	---	4.54 s	---	---	---	---	---	4.746
4.29	2,564	94.83	4.77 oc	0.20 ic	---	---	4.56 s	---	---	---	---	---	4.762
4.33	2,570	94.87	4.80 oc	0.20 ic	---	---	4.59 s	---	---	---	---	---	4.787
4.38	2,576	94.92	4.82 oc	0.19 ic	---	---	4.63 s	---	---	---	---	---	4.821
4.42	2,583	94.96	4.85 oc	0.19 ic	---	---	4.65 s	---	---	---	---	---	4.836
4.46	2,589	95.00	4.87 oc	0.19 ic	---	---	4.68 s	---	---	---	---	---	4.866

...End

Hydrograph Report

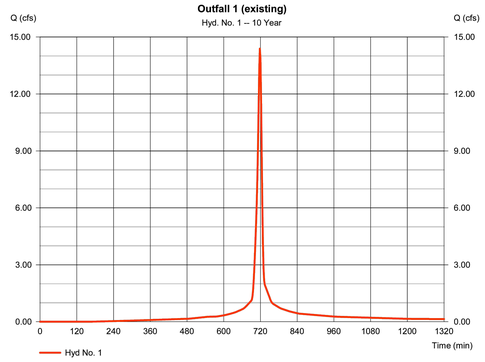
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020 — Tuesday, 03 / 16 / 2021

Hyd. No. 1

Outfall 1 (existing)

Hydrograph type	= SCS Runoff	Peak discharge	= 14.38 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 35,631 cuft
Drainage area	= 2.290 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.60 min
Total precip.	= 5.09 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.200 x 83) + (1.540 x 98) + (0.550 x 84)] / 2.290



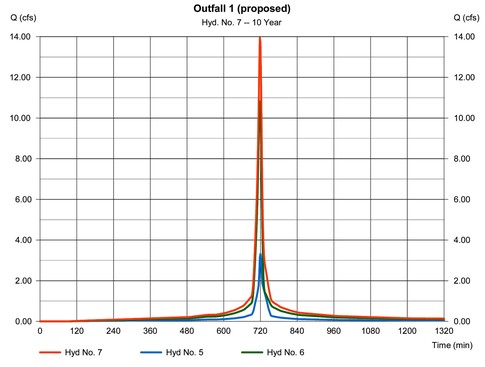
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020 — Tuesday, 03 / 16 / 2021

Hyd. No. 7

Outfall 1 (proposed)

Hydrograph type	= Combine	Peak discharge	= 13.95 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 38,149 cuft
Inflow hyds.	= 5, 6	Contrib. drain. area	= 1.660 ac



STORMWATER MANAGEMENT SUMMARY

AN UNDERGROUND DETENTION SYSTEM WILL BE UTILIZED TO REDUCE THE POST-DEVELOPMENT RUNOFF BELOW THE PRE-DEVELOPMENT RATE FOR OUTFALL 1.

EXISTING AND PROPOSED 10-YEAR HYDROGRAPHS HAVE BEEN PROVIDED.

TOTAL FLOW TO COMBINED SEWER SYSTEM (OUTFALL 1)

EXISTING:
STORMSEWER: 14.38 CFS
SANITARY SEWER: 0.01 CFS
TOTAL: 14.39 CFS

PROPOSED:
STORMSEWER: 13.95 CFS
SANITARY SEWER: 0.10 CFS
TOTAL: 14.05 CFS

HGL CALCULATIONS FOR STORMSEWER TO CSS DISCHARGE POINT

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan

Project File: 1114 Hull Street.stm | Number of lines: 2 | Date: 3/17/2021

Storm Sewers v2020.00

Storm Sewer Inventory Report — Page 1

Line No.	Alignment: Dnstr Line No.	Alignment: Line Length (ft)	Alignment: Defl angle (deg)	Alignment: Junc Type	Flow Data: Known Q (cfs)	Flow Data: Drng Area (ac)	Flow Data: Runoff Coeff (C)	Flow Data: Inlet Time (min)	Physical Data: Invert El Dn (ft)	Physical Data: Line Slope (%)	Physical Data: Invert El Up (ft)	Physical Data: Line Size (in)	Physical Data: Line Shape	Physical Data: N Value (n)	Physical Data: J-Loss Coeff (K)	Physical Data: Inlet/ Rim El (ft)	Line ID
1	End	10.000	90.844	MH	0.00	0.00	0.00	0.0	89.40	1.00	89.50	15	Cir	0.013	0.15	97.02	Str2
2	1	187.000	0.000	MH	3.31	0.00	0.00	0.0	89.60	0.50	90.54	14	Cir	0.013	1.00	98.25	Str4

Storm Sewer Tabulation — Page 1

Station	Len	Drng Area: Incr (ac)	Drng Area: Total (ac)	Rnoff coeff: Incr	Rnoff coeff: Total	Area x C: Inlet (min)	Tc: Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe: Size (in)	Pipe: Slope (%)	Invert Elev: Dn (ft)	Invert Elev: Up (ft)	HGL Elev: Dn (ft)	HGL Elev: Up (ft)	Grnd / Rim Elev: Dn (ft)	Grnd / Rim Elev: Up (ft)	Line ID
Line / To Line	(ft)	(ac)	(ac)	(C)		(min)	(min)													
1 / End	10.000	0.00	0.00	0.00	0.00	0.0	1.0	0.0	3.31	6.46	2.74	15	1.00	89.40	89.50	90.65	90.67	96.45	97.02	Str2
2 / 1	187.000	0.00	0.00	0.00	0.00	0.0	0.0	0.0	3.31	3.81	3.62	14	0.50	89.60	90.54	90.69	91.38	97.02	98.25	Str4

Hydraulic Grade Line Computations — Page 1

Line	Size	Q	Downstream: Invert elev (ft)	Downstream: HGL elev (ft)	Downstream: Depth (ft)	Downstream: Area (sqft)	Downstream: Vel (ft/s)	Downstream: Vel head (ft)	Downstream: EGL elev (ft)	Downstream: Sf (%)	Len	Upstream: Invert elev (ft)	Upstream: HGL elev (ft)	Upstream: Depth (ft)	Upstream: Area (sqft)	Upstream: Vel (ft/s)	Upstream: Vel head (ft)	Upstream: EGL elev (ft)	Upstream: Sf (%)	Check: Ave Sf (%)	Check: Energy loss (ft)	JL coeff (K)	Minor loss (ft)
	(in)	(cfs)									(ft)												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
1	15	3.31	89.40	90.65	1.25	1.23	2.70	0.11	90.76	0.263	10.000	89.50	90.67	1.17	1.19	2.77	0.12	90.79	0.227	0.245	0.024	0.15	0.02
2	14	3.31	89.60	90.69	1.09	1.04	3.19	0.16	90.84	0.328	187.000	90.54	91.38	0.84	0.82	4.04	0.25	91.63	0.511	0.420	0.785	1.00	0.25

COMMONWEALTH OF VIRGINIA
TRENT E. STAUB
2907
LANDSCAPE ARCHITECT
1/28/2025

SILVERCORE
LAND DEVELOPMENT CONSULTANTS
7110 FOREST AVENUE – SUITE 204 RICHMOND, VA 23226 (804) 282-6900

1114 HULL STREET (PERMIT SET)

WATER QUANTITY

RICHMOND, VIRGINIA

OLD SOUTH DISTRICT

REV:	DATE:	DESCRIPTION
1	2/8/21	CITY COMMENTS
2	3/15/21	CITY COMMENTS
3	10/22/21	PERMIT REVISIONS 2
4	11/15/24	ADDITION OF 6TH FLOOR
5	1/28/25	ADDITION OF 6TH FLOOR

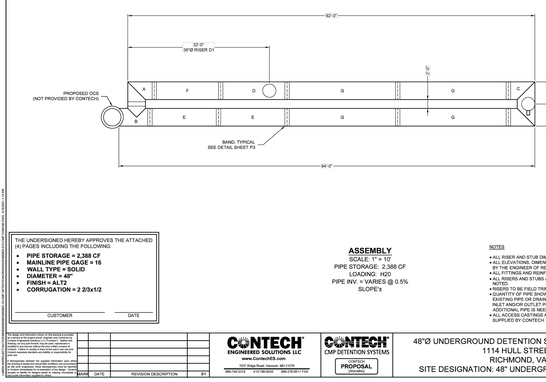
DESIGN BY: Steve King
CHECKED BY: Jeff Staub
DRAWING SCALE: 1"=20'
DATE: 11/6/2020

SHEET
8

JOB #:200401

STUB INFORMATION		
PIECE	STUB INVERT	SYSTEM INVERT
8"Ø ST-UB C4	97.00	91.00

RISER INFORMATION			
PIECE	RIM ELEV.	SYSTEM INVERT	
36"Ø RISER C3	99.25	91.00	
36"Ø RISER D1	96.75	90.70	



THE UNDERSIGNED HEREBY APPROVES THE ATTACHED (4) PAGES INCLUDING THE FOLLOWING:

- **PIPE STORAGE = 2,388 CF**
- **MAINLINE PIPE GAGE = 16**
- **WALL TYPE = SOLID**
- **DIAMETER = 48"**
- **FINISH = ALT2**
- **CORRUGATION = 2 2/3x1/2**

CUSTOMER _____ DATE _____

ASSEMBLY

SCALE: 1" = 10'
PIPE STORAGE: 2,388 CF
LOADING: H20
PIPE INV. = VARIES @ 0.5%
SLOPE's

NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
- ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD (EOR) PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE 2⅔" x ½" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE AS REQUIRED, BY CONTRACTOR.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING DRAINAGE FACILITIES. CONTRACTOR TO FIELD VERIFY EXACT LOCATION, INVERT, INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL ACCESS CASTINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE NOT SUPPLIED BY CONTECH.

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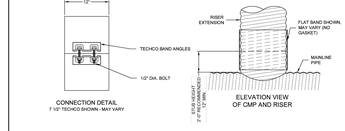
REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
800.338.1122 513.645.7000 513.645.7993 FAX
1501 Ridge Road, Hanover, MD 21076

CONTECH CMP DETENTION SYSTEMS
CONTRACTOR PROPOSAL DRAWING

48"Ø UNDERGROUND DETENTION SYSTEM - 660803-010
1114 HULL STREET
RICHMOND, VA
SITE DESIGNATION: 48" UNDERGROUND DETENTION

PROJECT No.	DRG No.	DATE
660803	01/0	3/16/2021
DESIGNED	DETAILED	
MAK	MAK	
CHECKED	APPROVED	
MAK		
SHEET	OF	4
P1		



CONNECTION DETAIL
7 1/2" TECHCO SHOWN - MAY VARY

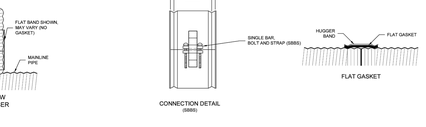
ELEVATION VIEW OF CMP AND RISER

PLAIN END CMP RISER PIPE

GENERAL NOTES:

1. **DELIVERED BAND STYLE AND FASTENER TYPE MAY VARY BY FABRICATION PLANT.**
2. JOINT IS TO BE ASSEMBLED PER AASHTO BRIDGE CONSTRUCTION SPECIFICATION SEC 26.4.2.4.
3. BAND MATERIAL AND GAGE TO BE SAME AS RISER MATERIAL.
4. IF RISER HAS A HEIGHT OF COVER OF 10' OR MORE, USE A SLIP JOINT.
5. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
   - 12" THRU 48" 1-PIECE
   - 54" 2-PIECES
6. ALL RISER JOINT COMPONENTS WILL BE FIELD ASSEMBLED
7. MANHOLE RISERS IN APPLICATIONS WHERE TRAFFIC LOADS ARE IMPOSED REQUIRE SPECIAL DESIGN CONSIDERATIONS.
8. DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES.

12" RIBBED BAND DETAIL
NOT TO SCALE



CONNECTION DETAIL
(SBBS)

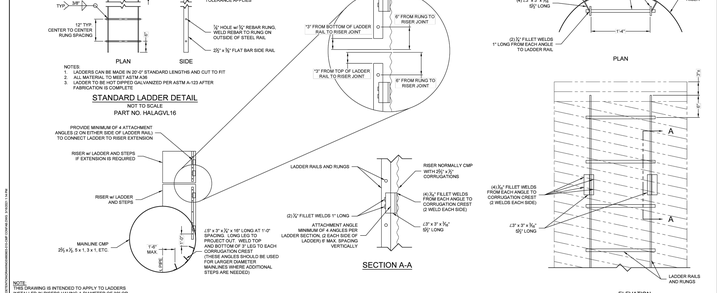
FLAT GASKET

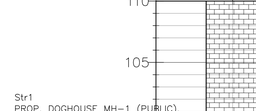
2 2/3"x1/2" RE-ROLLED END HEL-COR PIPE

GENERAL NOTES:

1. JOINT IS TO BE ASSEMBLED PER AASHTO BRIDGE CONSTRUCTION SPECIFICATION SEC 26.4.2.4.
2. BAND MATERIALS AND/OR COATING CAN VARY BY LOCATION. CONTACT YOUR CONTECH REPRESENTATIVE FOR AVAILABILITY.
3. BANDS ARE SHAPED TO MATCH THE PIPE-ARCH WHEN APPLICABLE.
4. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
   - 54" THRU 96" 2-PIECES
   - 54" THRU 96" 3-PIECES
   - 102" THRU 144" 3-PIECES
5. BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS.
6. ALL CMP IS REROLLED TO HAVE ANNULAR END CORRUGATIONS OF 2 2/3"x1/2"
7. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
8. ORDER SHALL DESIGNATE GASKET OPTION, IF REQUIRED (SEE DETAILS ABOVE)

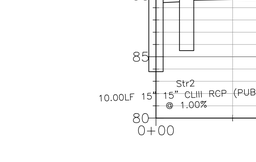
H-12 HUGGER BAND DETAIL
NOT TO SCALE





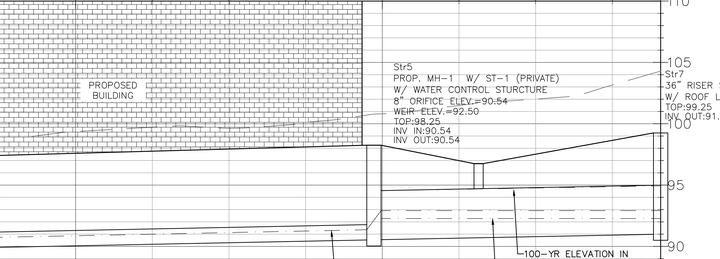
TYPICAL SECTION VIEW
NOT TO SCALE

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.



4'Ø or larger FITTING REINFORCEMENT MAY BE REQUIRED BASED ON HEIGHT OF COVER AND LIVE LOAD CONDITION

TYPICAL MANWAY DETAIL
NOT TO SCALE



HEIGHT OF COVER - PAGE 406				
DIAMETER	MIN. COVER	CORR. PROFILE	GAGE
6"-48"	12"	2.2/3" x 1/2"	16
54"	12"	2.2/3" x 1/2"	14
60", 66"	12"	2.2/3" x 1/2"	12
72"	12"	2.2/3" x 1/2"	10
78", 84"	12"	2.2/3" x 1/2"	8

BACKFILL REQUIREMENTS FOLLOW THE GUIDELINES OF NCSPA (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) CORRUGATED STEEL PIPE DESIGN MANUAL:

1. MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT (PAGE 508) THE MANUFACTURER'S SUGGESTED MINIMUM VALUE IS 1.5D+12"
2. THE FOUNDATION UNDER THE PIPE MUST PROVIDE BOTH LONGITUDINAL AND LATERAL SUPPORT (PAGE 402)
3. ENGINEER TO DETERMINE IF BEDDING IS REQUIRED. PIPE MAY BE PLACED ON THE TRENCH BOTTOM OF A RELATIVELY LOOSE MATERIAL THAT IS EITHER FLAT OR SHAPED TO FIT THE BOTTOM OF THE PIPE AND A DEPTH OF 1/2" PER FOOT OF FILL HEIGHT (6A), 24" MAX (PAGE 406). THE MAXIMUM PARTICLE SIZE IS NOT TO EXCEED 1" IN DIAMETER. UNSUITABLE MATERIAL SHOULD BE OVER-EXCAVATED AND REPLACED WITH A 4-6" LAYER OF WELL GRADED 6 GRANULAR STONE PER THE MATERIAL DESIGNATION. (PAGE 406)
4. CORRUGATED STEEL PIPE (CSP / HEL-COR)
5. HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMLY COMPACTED WITHOUT SOFT SPOTS (PAGE 511)
5a. INITIAL BACKFILL FOR PIPE EMBEDMENT SHOULD PREFERABLY BE GRANULAR TO PROVIDE GOOD STRUCTURAL PERFORMANCE (PAGE 406). INITIAL BACKFILL SHALL BE PLACED AND COMPACTED SIMULTANEOUSLY ON BOTH SIDES OF THE PIPE. INITIAL BACKFILL LIFTS SHALL BE PLACED IN A CONTROLLED MANNER, AT TO 12" IN DEPTH AND COMPACTED BEFORE ADDING THE NEXT LIFT, AND NO MORE THAN 24" OR ONE-THIRD OF THE RISE (WHICHEVER IS LESS) SIDE TO SIDE DIFFERENCE SHALL BE PERMITTED. (PAGE 510)
6. INITIAL BACKFILL ABOVE PIPE MUST MEET OR EXCEED THE MINIMUM COVER VALUE IN THE TABLE ABOVE. THIS BACKFILL IS TYPICALLY AN AASHTO M145 MATERIAL MEETING AN A-1, A-2, OR A-3 CLASSIFICATION. (PAGE 380)
6a. TOTAL HEIGHT OF COMPACTED COVER FOR CONVENTIONAL HIGHWAY LOADS IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT (PAGES 408-410)
7. FINAL BACKFILL MATERIAL MUST PROVIDE SUPPORT AND STRUCTURAL STRENGTH. GEOTECHNICAL ADVICE IS RECOMMENDED IF COHESIVE MATERIAL IS CONSIDERED TO BE USED (PAGE 508)

NOTES:

- ENGINEER TO DETERMINE IF GEOTEXTILE SHOULD BE USED TO PREVENT SOIL MIGRATION INTO VARYING SOIL TYPES (PAGE 507)
- FOR MULTIPLE BARREL INSTALLATIONS THE RECOMMENDED MINIMUM STANDARD SPACING BETWEEN PARALLEL PIPE RUNS SHALL BE 1/2 BARREL DIA. FOR DIAMETERS UP TO 48". FOR DIAMETERS> 48", THE MINIMUM SPACING IS DIAMETER/2 OR 36", WHICHEVER IS LESS. (PAGE 510)
- BACKFILL USING CONTROLLED LOW-STRENGTH MATERIAL (CLSM OR "FLOWABLE FILL") WHEN THE SPACING BETWEEN THE PIPES WILL NOT ALLOW FOR PLACEMENT AND ADEQUATE COMPACTION OF THE BACKFILL. (PAGE 519)
- CONTACT YOUR CONTECH REPRESENTATIVE FOR ADDITIONAL INFORMATION.

TYPICAL BACKFILL DETAIL
NOT TO SCALE

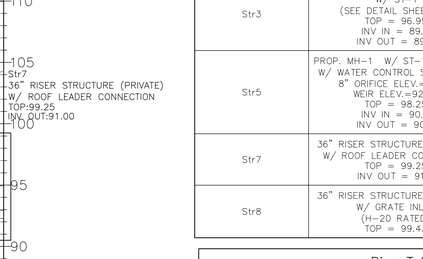
CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW OR THE MINIMUM COVER REQUIRED FOR PERMANENT LOADS, WHICHEVER IS GREATER. PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN INCHES	AXLE LOADS (KIPS)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-108	3.5	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

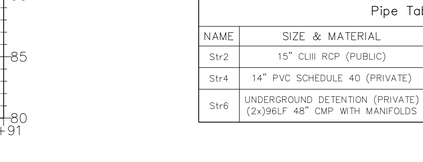
CONSTRUCTION LOADING DIAGRAM
NOT TO SCALE



REINFORCING TABLE				
Ø CMP RISER	A	B Ø	REINFORCING	**BEARING PRESSURE (PSF)
24"	4'Ø 4'x4'	26"	#5 @ 10" OCEW #5 @ 10" OCEW	2,540 1,900
30"	4'-6"Ø 4'-6"x 4'-6"	32"	#5 @ 10" OCEW #5 @ 9" OCEW	2,260 1,870
36"	5'Ø 5'x 5'	38"	#5 @ 9" OCEW #5 @ 8" OCEW	2,060 1,500
42"	5'-6"Ø 5'-6" x 5'-6"	44"	#5 @ 8" OCEW #5 @ 6" OCEW	1,460 1,370
48"	6'Ø 6'x 6'	50"	#5 @ 7" OCEW #5 @ 5" OCEW	1,210 1,270

** ASSUMED SOIL BEARING CAPACITY

ACCESS CASTING NOT SUPPLIED BY CONTECH



NOTES

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION AND ACI 350.
2. DESIGN LOAD H20.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 4,000 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING. BEND BARS AS REQUIRED TO MAINTAIN EARTH COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERS, ARCHITECTS AND LAND SURVEYORS, ENDWELL, NY.

MANHOLE CAP DETAIL
NOT TO SCALE

MATERIAL SPECIFICATION
NOT TO SCALE

SPECIFICATION FOR CORRUGATED STEEL PIPE-ALUMINIZED TYPE 2 STEEL

SCOPE

THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE CORRUGATED STEEL PIPE (CSP) DETAILED IN THE PROJECT PLANS.

MATERIAL

THE ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M274 OR ASTM A929.

PIPE

THE CSP SHALL BE MANUFACTURED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF AASHTO M36 OR ASTM A760. PIPE SIZES, GAGES AND CORRUGATIONS SHALL BE AS SHOWN ON THE PROJECT PLANS.

ALL FABRICATION OF THE PRODUCT SHALL OCCUR WITHIN THE UNITED STATES.

HANDLING AND ASSEMBLY

SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF THE NATIONAL CORRUGATED STEEL PIPE ASSOCIATION (NCSPA)

INSTALLATION

SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II OR ASTM A798 AND / OR IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS, THE MANUFACTURER SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

STRUCTURE 5
WATER CONTROL STRUCTURE DETAIL
WEIR AND ORIFICE ELEVATIONS
N.T.S.

Alignment – (StormSewer) – (1) PROFILE

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
Str1	PROP. DOGHOUSE MH-1 (PUBLIC). W/ ST-1 TOP = 96.55 INV IN = 89.40
Str3	PROP. TRAP MANHOLE (PUBLIC) W/ ST-1 (SEE DETAIL SHEET 10) TOP = 96.99 INV IN = 89.60 INV OUT = 89.50
Str5	PROP. MH-1 W/ ST-1 (PRIVATE) W/ WATER CONTROL STURCTURE 8" ORIFICE ELEV.=90.54 WEIR ELEV.=92.50 TOP = 98.25 INV IN = 90.54 INV OUT = 90.54
Str7	36" RISER STRUCTURE (PRIVATE) W/ ROOF LEADER CONNECTION TOP = 99.25 INV OUT = 91.00
Str8	36" RISER STRUCTURE (PRIVATE) W/ GRATE INLET (H-20 RATED) TOP = 99.43

Pipe Table					
NAME	SIZE & MATERIAL	LENGTH	SLOPE	INV.UP	INV.DN
Str2	15" CLIII RCP (PUBLIC)	10.00'	1.00%	89.50	89.40
Str4	14" PVC SCHEDULE 40 (PRIVATE)	187.27'	0.50%	90.54	89.60
Str6	UNDERGROUND DETENTION (PRIVATE) (2x)96LF 48" CMP WITH MANIFOLDS	93.50'	0.49%	91.00	90.54

VERTICAL SCALE
5 0 2.5 5 10 20
(IN FEET)
1 inch = 5 ft.

HORIZONTAL SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

SILVERCORE
LAND DEVELOPMENT CONSULTANTS
7110 FOREST AVENUE – SUITE 204 RICHMOND, VA 23226 (804) 282-6900

COMMONWEALTH OF VIRGINIA
TRENT STAUB
LANDSCAPE ARCHITECT
1/28/2025

1114 HULL STREET (PERMIT SET)
RICHMOND, VIRGINIA

PROFILES

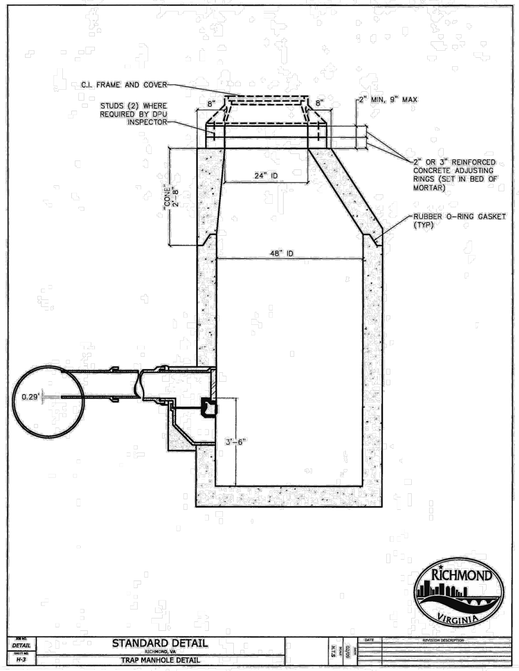
OLD SOUTH DISTRICT

REV.	DATE	DESCRIPTION
1	2/8/21	CITY COMMENTS
2	5/15/21	CITY COMMENTS
3	10/22/21	PERMIT REVISIONS 2
4	11/15/24	ADDITION OF 6TH FLOOR
5	1/28/25	ADDITION OF 6TH FLOOR

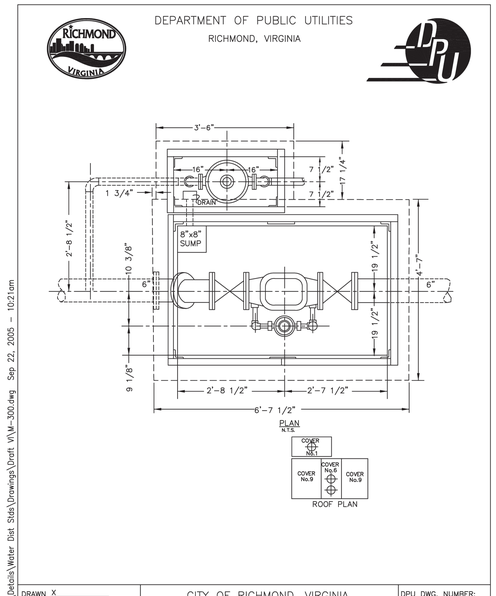
DESIGN BY: Steve King
CHECKED BY: Jeff Staub
DRAWING SCALE: AS SHOWN
DATE: 11/6/2020

SHEET
9

JOB #:200401



W.M. DETAIL No. W-3	STANDARD DETAIL RICHMOND, VA TRAP MANHOLE DETAIL	R.K.W. APPR.	DATE / REVISION DESCRIPTION



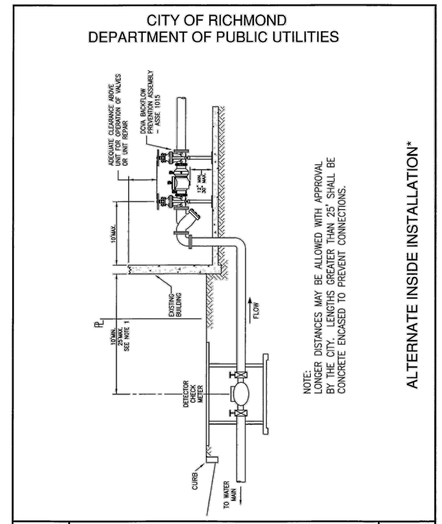
M:\46339\Details\Water Dist Stds\Drawings\Draft V\W-300.dwg Sep 22, 2005 - 10:21am

DRAWN X DATE 6/22/04 SCALE NOT TO SCALE CHK'D X	CITY OF RICHMOND, VIRGINIA 1 1/2" OR 2" METER – 6" DETECTOR	DPU DWG. NUMBER: M-300

1	Type I 1½" disc, 6" DC, (6" inlet, 2" disc outlet, 6" DC outlet)	
1	1 ½" disc meter with gaskets and bolts and nuts	Meter Shop
2	Companion flanges with 2 " disc meter with 1 gasket and 2 bolts and nuts	Meter Shop
		Catalog No.
1	2" x 2 ½ " brass nipple	195.05
2	2" angle cocks	550.09
3	2" copper to iron male adapters	131.09
2	2" x 1½" copper to copper tees	250.58
1	1½" copper to copper gate valve	281.08
2'	1 ½" copper pipe	218.08
10'	2" copper pipe	218.09
1	6" DC meter	Meter Shop
2	6" flgd. wheel valves	548.16
2	6" flgd. x PE nipples, 30" long	544.06
2	6" flgd. 45° bends	542.08
1	½" corporation cock	121.08
1	2" brass 90° ell	152.09
6	6" gaskets	543.06
18	¾ 3/4" x 3½" bolts and nuts	627.12
1	#1 cover	540.01
1	#6 cover	540.06
2	#9 covers	540.09
6	A sides	540.10
2	B sides	540.11
2	C sides	540.12
16	angles	540.13
4	Plates	540.15
40	bolts, nuts, and washers	540.14
625	bricks	684.00
	Type II 1½" disc, 8" DC (8" inlet) from Type I eliminate	
1	6" flgd. x PE nipple, 30" long add	544.06
1	8" x 6" flgd. reducer	545.08
1	8" flgd. x PE nipple, 30" long	544.08
1	8" gasket	543.08
8	3/4" x 3½" bolts and nuts	627.12
	Type III1½" disc, 6" DC (3" disc outlet) to Type I add	
1	2" copper to iron male adapter	134.09
1	3" MJ plug (tap 2")	422.11
	Type IV 1 ½" disc., 6" DC (1" disc outlet) to Type I add	
1	2" copper to iron male adapter	131.09
1	1" MJ plug (tap 2")	122.13
	Type V1½" disc, 6" DC (8" DC outlet) from Type I eliminate	
1	6" flgd. x PE nipple, 30" long add	544.06
1	8" x 6" flgd. reducer	545.08
1	8" flgd. x PE nipple, 30" long	544.08
1	8" gasket	543.08
8	¾" x 3½" bolts and nuts	627.12
	Type VI 2" disc, 6" DC (6" inlet, 2" disc outlet, 6" DC outlet)	
1	2" disc meter with gaskets and bolts and nuts	Meter Shop
2	2" angle cocks	550.09
3	2" copper to iron male adapters	131.09
2	2" x 1½" copper to copper tees	250.58
1	1½" copper to copper gate valve	281.08
2	1 ½" copper pipe	218.08
10'	2" copper pipe	218.09
1	6" DC meter	Meter Shop
2	6" flgd. wheel valves	518.16
2	6" flgd. x PE nipples, 30" long	544.06
2	6" flgd. 45° bends	512.08
1	1½" corporation cock	121.08
1	2" brass 90° ell	152.09
3	2" copper to copper 90° ells	156.09
6	6" gaskets	543.06
18	3/4" x 3½" bolts and nuts	627.12
1	#1 cover	540.01
1	#6 cover	540.06
2	#9 covers	540.09
6	A sides	540.10
2	B sides	540.11
2	C sides	540.12
16	angles	540.13
4	plates	540.15
10	bolts, nuts, and washers	540.14
625	bricks	684.00
	Type VII 2" disc, 6" DC (8" inlet) from Type VI eliminate	
1	6" flgd. x PE nipple, 30" long add	544.06
1	8" x 6" flgd. reducer	545.08
1	8" flgd. x PE nipple, 30" long	544.08
1	8" gasket	543.08
8	3/4" x 3½" bolts and nuts	627.12
	Type VIII 2" disc, 6" DC (3" disc outlet) to Type VI add	
1	2" copper to iron male adapter	131.09
1	3" MJ plug (tap 2")	122.11
	Type IX 2" disc, 6" DC (4" disc outlet) to Type VI add	
1	2" copper to iron male adapter	131.09
1	4" MJ plug (tap 2")	122.13
	Type X 2" disc, 8" DC (8" DC outlet) from Type VI eliminate	
1	6" flgd. x PE nipple, 30" long add	544.06
1	8" x 6" flgd. reducer	545.08
1	8" flgd.x PE nipple, 30" long	544.08
1	8" gasket	543.08
8	3/4" x 3½" bolts and nuts	627.12

M:\46339\Details\Water Dist Stds\Drawings\Draft V\W-300-A.dwg Sep 22, 2005 - 10:21am

DRAWN X DATE 6/22/04 SCALE NOT TO SCALE CHK'D X	CITY OF RICHMOND, VIRGINIA MATERIALS FOR M-300 SETTING	DPU DWG. NUMBER: M-300-A



DATE APR. 2006 REVISIONS	LOW HAZARD FIRE SYSTEM WITH DETECTOR CHECK - BUILDING INSTALLATION	DWG. NO. LO-HAZ3

8-11

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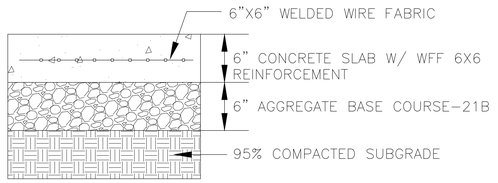
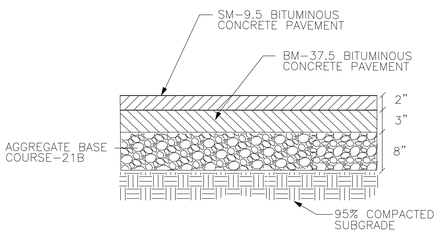


CONCRETE PAVEMENT DETAIL
N.T.S.



HEAVY DUTY PAVING DETAIL
N.T.S.

Meter sizing form reflects approximate proposed fixtures. If fixture count will be different than shown, meter size will need to be re-evaluated.

FIRE FLOW ESTIMATE FORM

ISO (Insurance Service Office) Method of Calculating NFF (Needed Fire Flow)

ENGINEER: SilverCore DATE: 11/15/2024

PROJECT NAME: 1114 Hull Street CALC. BY: SFK

TYPE OF CONSTRUCTION: 1st floor Class III / 2nd-6th floor Class I

Class of Construction Coef. = F: 1.29 (avg)

GROUND FLOOR AREA = 23,232 # of Stories 1

Total Floor Area = A_i (effective area): 70,482

18,900 FLOORS 2-6

FIRE AREA CONSIDERED

Construction Factor $C_i = 18(F)(A_i)^{.5}$ (ROUNDED TO NEAREST 250 GPM) C_i = 6,165

TYPE OF OCCUPANCY: C-3

(Worst Case) Occupancy Factor = O_i: 1

EXPOSURE (X) AND COMMUNICATION (P):

$X_1 + P_1 =$ ____ $X_4 + P_4 =$ ____

$X_2 + P_2 =$ ____ $X_5 + P_5 =$ ____

$X_3 + P_3 =$ ____ $X_6 + P_6 =$ ____

$(X+P)_i = 1.0 + \sum_{(i=1)}^{n} (X_i+P_i) =$

[Max. $(X + P)_i = 1.75$] ____

(n = NUMBER OF SIDES OF SUBJECT BUILDING)

NEEDED FIRE FLOW

$NFF = (C_i)(O_i)(X+P)_i$ NFF = 6,165

Automatic Sprinklers (YES X NO) Reduction Factor 50 % x NFF = -3,083

TOTAL: 3,083

Required Fire Flow - Rounded (if < 2500 nearest 250) (if > 2500 nearest 500) 3,000 gpm

* Fire Hydrants Required: 3

I CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND CORRECT.

SIGNATURE: ____ P.E.

* COMMERCIAL AREA REQUIRES 500 FT. MAXIMUM HOSE LAY.

References: NFF CALCULATION PROCEDURE DESCRIBED IN A.W.W.A. M-31, I.S.O.'s 1980 COMMERCIAL FIRE RATING SCHEDULE AND I.S.O.'s 1980 FIRE SUPPRESSION RATING SCHEDULE.

F-9

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City of Richmond DPU Fixture Values Meter Sizing

Fixture	Fixture Value @ 35 psi		No. of Fixtures (set to zero if none)		Fixture Value	COMMENTS
Bathtub	8	x	112	=	896	
Whirlpool	8	x		=	8	
Shower Head (shower only)	4	x	0	=	0	
Toilet-Flush Valve	35	x	0	=	0	
Toilet-Tank Type	3	x	115	=	345	
Wash Sink (ea. set of faucets)	4	x	0	=	0	
Kitchen Sink- 1/2" Connection	3	x	111	=	333	
Kitchen Sink- 3/4" Connection	7	x	0	=	0	
Dishwasher- 1/2" Connection	5	x	111	=	555	
Dishwasher- 3/4" Connection	10	x	0	=	0	
Washing Machine- 1/2" Conn	5	x	111	=	555	
Washing Machine- 3/4" Conn	12	x	0	=	0	
Washing Machine- 1" Conn	25	x	0	=	0	
Hose Bib- 1/2" Conn	6	x	1	=	6	
Hose Bib- 5/8" Conn	9	x	0	=	0	
Hose Bib- 3/4" Conn	12	x	0	=	0	
Lawn Sprinkler (per head)	1	x	0	=	0	
Bedpan Washers	10	x	0	=	0	
Combination Sink & Tray	3	x	0	=	0	
Dental Unit (cuspidor)	1	x	0	=	0	
Dental Lavatory (sink)	2	x	0	=	0	
Lavatory- 3/8" Connection	2	x	115	=	230	
Lavatory- 1/2" Connection	4	x	0	=	0	
Laundry Tray- 1/2" Connection	3	x	0	=	0	
Laundry Tray- 3/4" Connection	7	x	0	=	0	
Service Sink- 1/2" Connection	3	x	1	=	3	
Service Sink- 3/4" Connection	7	x	0	=	0	
Urinal- Pedestal Flush Valve	35	x	0	=	0	
Urinal- Wall Flush Valve	12	x	0	=	0	
Drinking Fountain (Public)	2	x	1	=	2	

Meter Size	Meter Range(GPM) Low	High	Maximum Continuous Flow		
5/8	1/8	20	10	Meter Size based on FVT	NO
1	3/8	50	25		NO
1.5	5/8	100	50		NO
2	1 1/4	160	80		NO
3	4.3	450	350		NO
4	25	1000	1000		4

FIXTURE VALUE TOTAL (FVT) = 2933

*NOTE: Other factors may make it necessary to utilize a larger meter than that which is indicated by this calculation

References for City of Richmond DPU Fixture Values Meter Sizing

32 SIZING WATER SERVICE LINES AND METERS

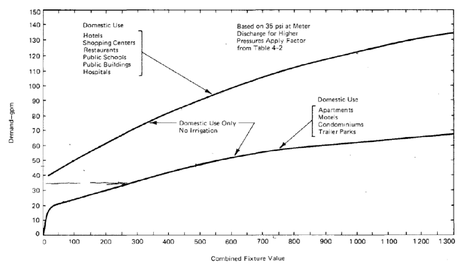

Fig. 4.4. Water-Flow Demand per Fixture Value—Low Range

Combined Fixture Value

Fig. 4.4. Water-Flow Demand per Fixture Value—Low Range

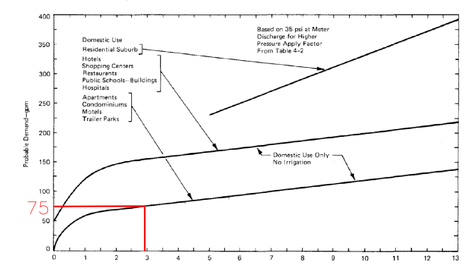

Fig. 4.5. Water-Flow Demand per Fixture Value—High Range

COMMONWEALTH OF VIRGINIA
JEFFREY STAUB
LANDSCAPE ARCHITECT
1/28/2025

SILVERCORE
LAND DEVELOPMENT CONSULTANTS
7110 FOREST AVENUE – SUITE 204 RICHMOND, VA 23226 (804) 282-6900

1114 HULL STREET (PERMIT SET)

NOTES & DETAILS I

RICHMOND, VIRGINIA

OLD SOUTH DISTRICT

REV.	DATE	DESCRIPTION
1	2/8/21	CITY COMMENTS
2	3/15/21	CITY COMMENTS
3	10/22/21	PERMIT REVISIONS 2
4	11/15/24	ADDITION OF 6TH FLOOR
5	1/28/25	ADDITION OF 6TH FLOOR

DESIGN BY: Steve King
CHECKED BY: Jeff Staub
DRAWING SCALE: 1"=20'
DATE: 11/6/2020

SHEET 10

JOB #:200401

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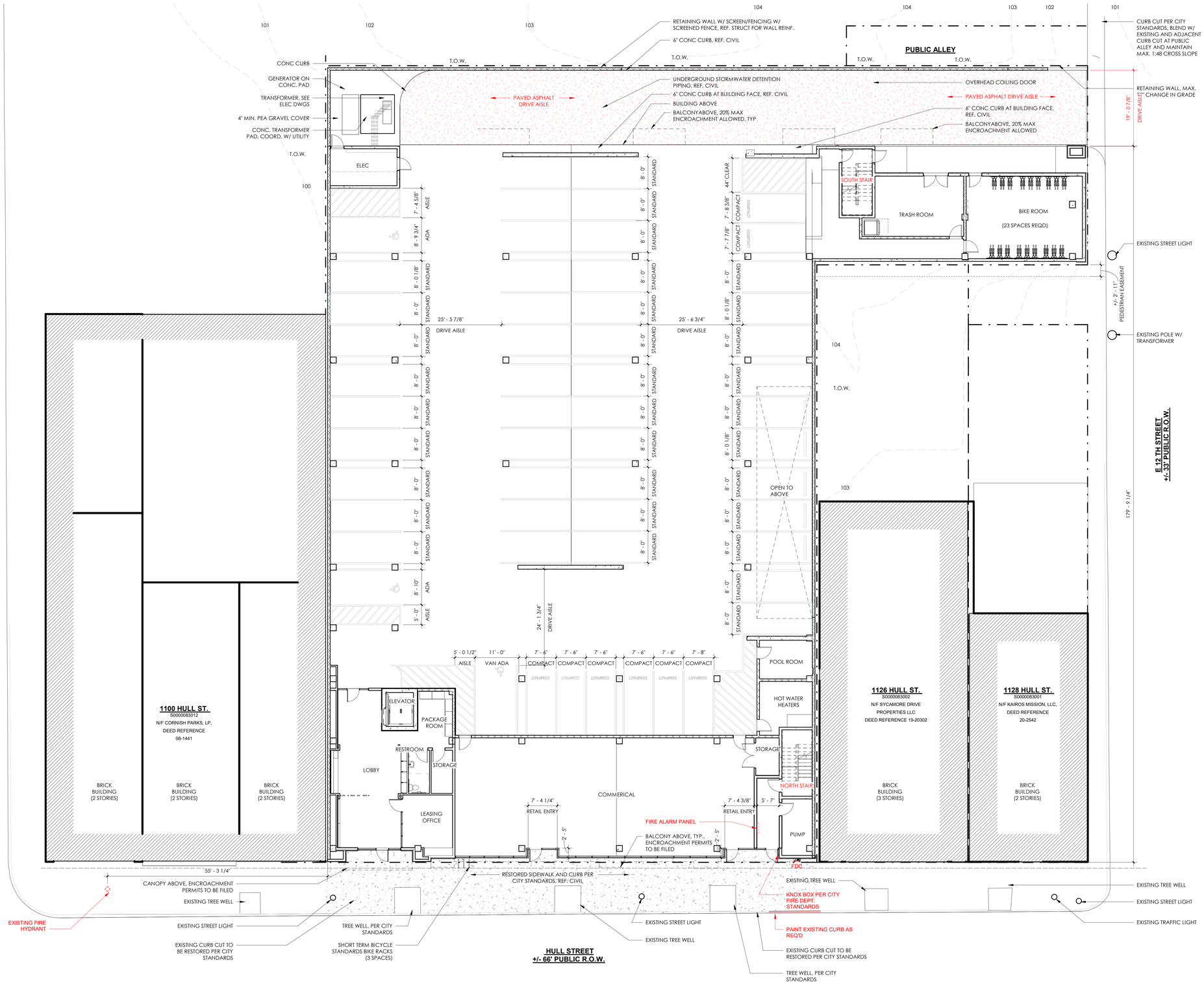

01 ARCHITECTURAL SITE PLAN / LEVEL 01 PLAN

SCALE: 1" = 10'-0"

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RICHMOND, VA 23224

Project Location:	RICHMOND, VA 23224
Project No:	20030
Date	01/28/2025
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ARCHITECTURAL SITE PLAN

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01 LEVEL 01 FLOOR PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'
SCALE : 1/8" = 1' - 0"

FINISH PLAN KEY

- COMMERCIAL
- UTILITY / STORAGE
- ONE BEDROOM
- SHARED AMENITY
- STAIRS AND ELEVATOR
- STUDIO
- TWO BEDROOM

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FLOOR PLANS

A2

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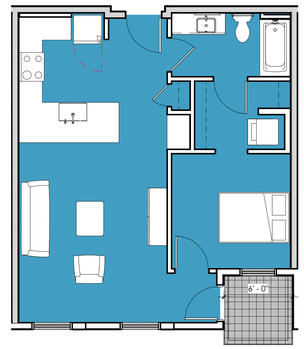
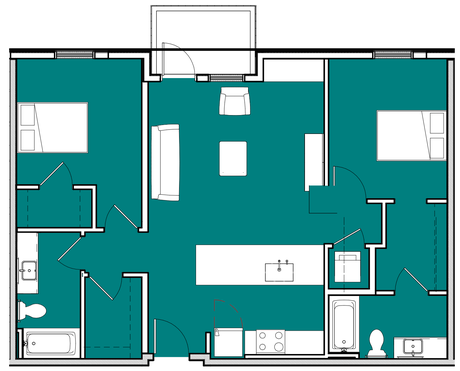
01 LEVEL 02 FLOOR PLAN
SCALE: 1/8" = 1'-0"

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



02 TYPICAL 1 BEDROOM UNIT
SCALE: 3/16" = 1'-0"



03 TYPICAL 2 BEDROOM UNIT
SCALE: 3/16" = 1'-0"

FINISH PLAN KEY

- COMMERCIAL
- UTILITY / STORAGE
- ONE BEDROOM
- SHARED AMENITY
- STAIRS AND ELEVATOR
- STUDIO
- TWO BEDROOM

1114 HULL STREET
RICHMOND, VA 23224

Project Location: RICHMOND, VA 23224

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FLOOR PLANS

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01 LEVEL 03 - 04 FLOOR PLAN

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

0 4' 8' 16'

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

FINISH PLAN KEY

- COMMERCIAL
- UTILITY / STORAGE
- ONE BEDROOM
- SHARED AMENITY
- STAIRS AND ELEVATOR
- STUDIO
- TWO BEDROOM

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FLOOR PLANS

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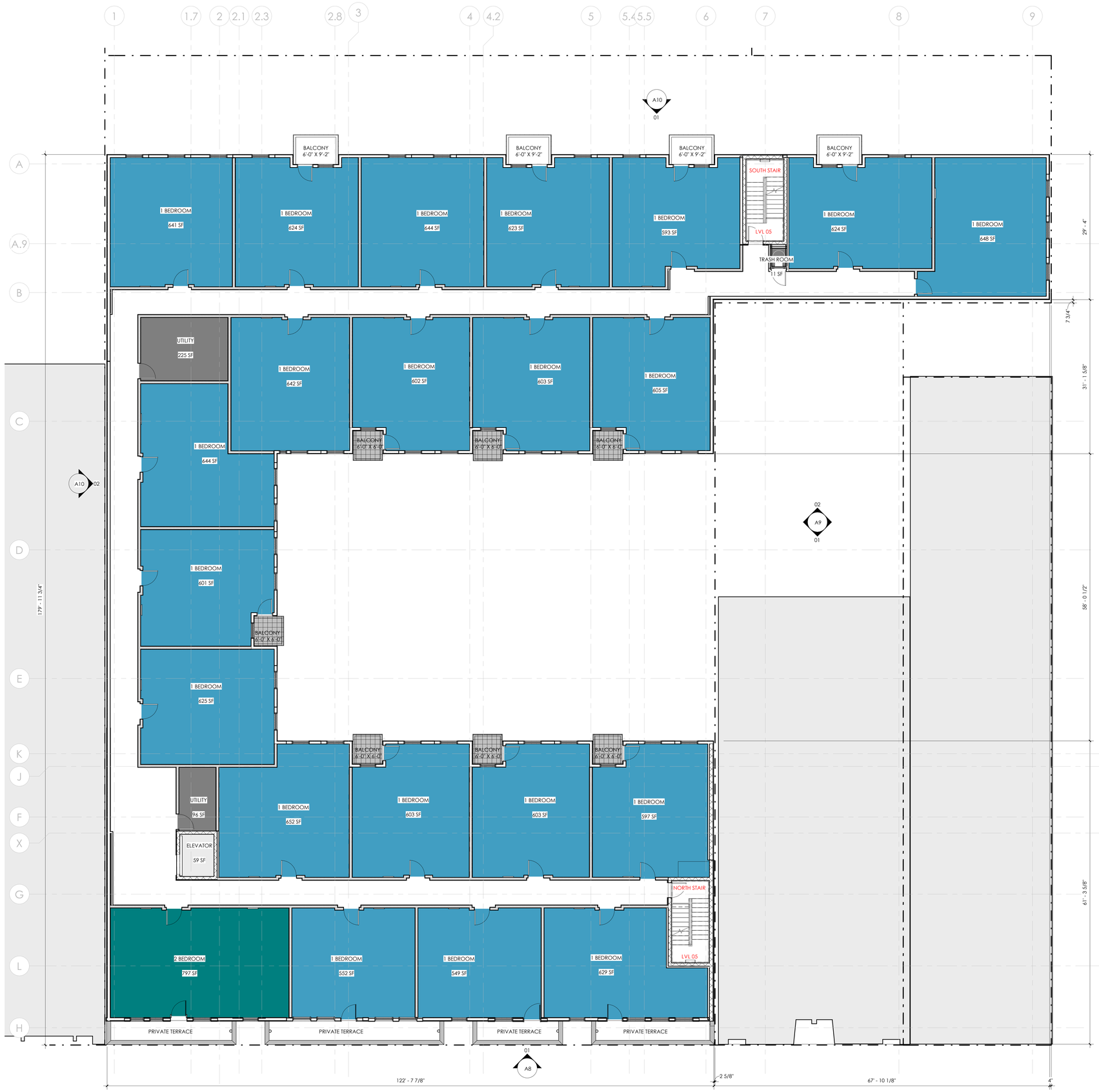

01 LEVEL 05 FLOOR PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'
SCALE : 1/8" = 1' - 0"

FINISH KEY PLAN

- COMMERCIAL
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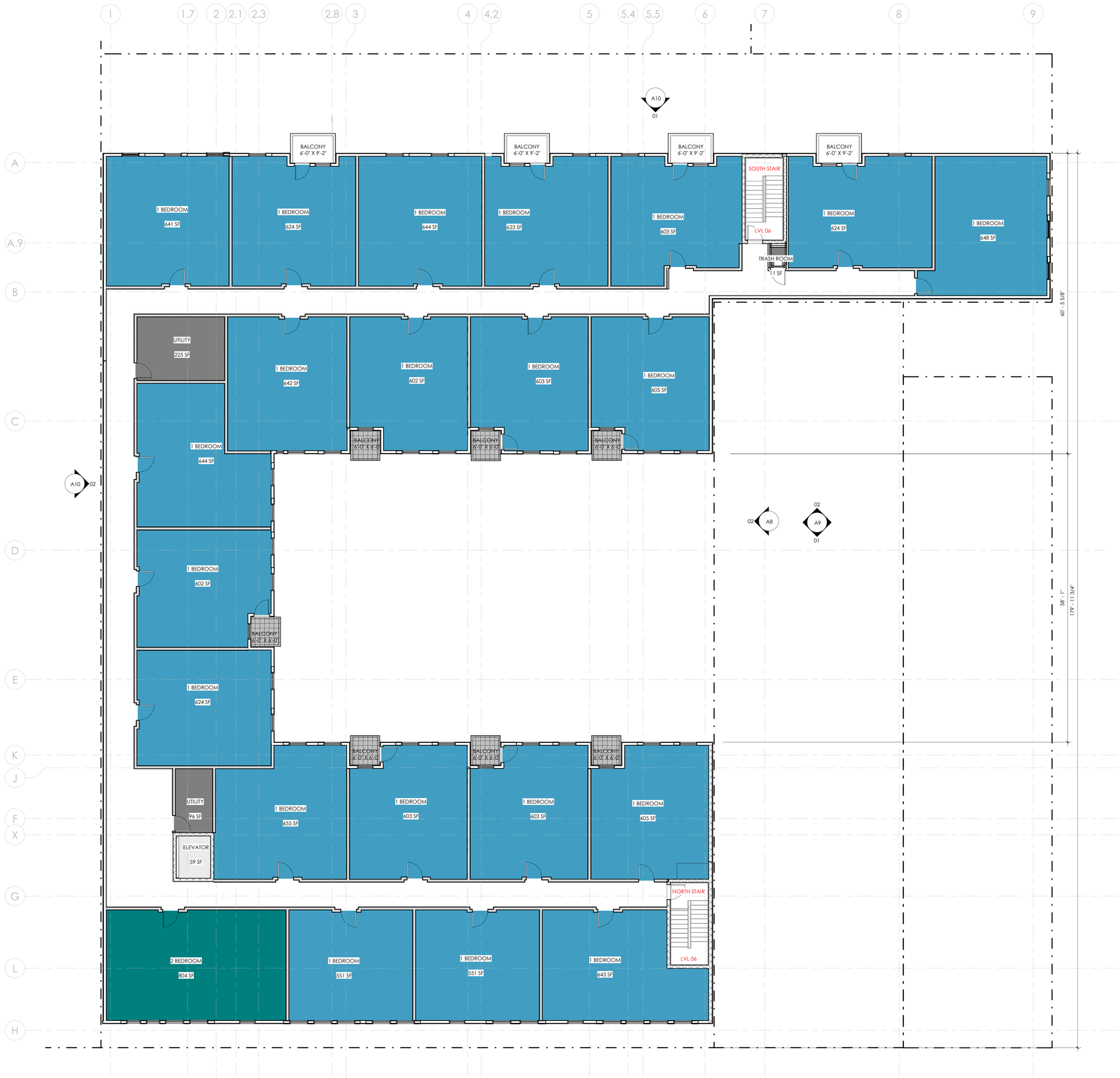

01 LEVEL 06 FLOOR PLAN

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

0 4' 8' 16'

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

FINISH KEY PLAN

- COMMERCIAL
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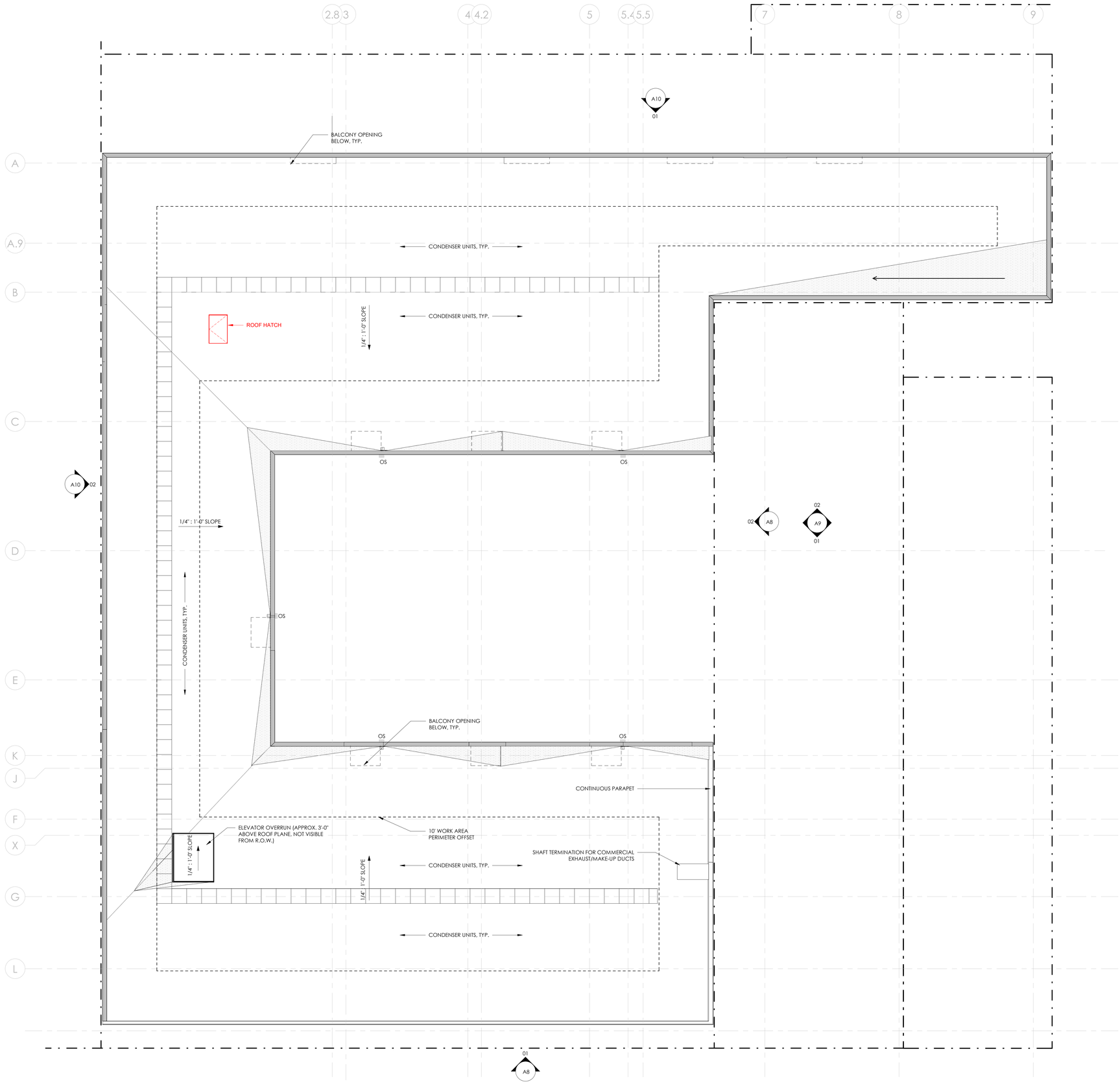

01 ROOF PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'
SCALE : 1/8" = 1' - 0"

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ROOF PLAN

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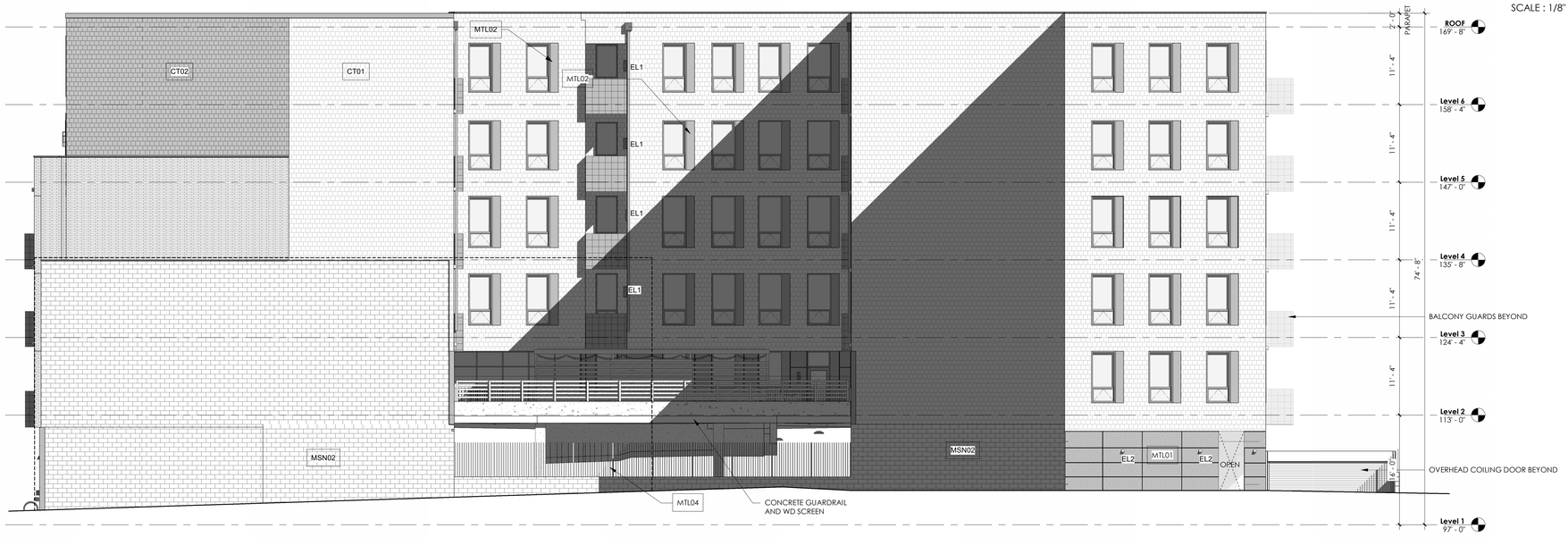
0 4' 8' 16'

01 WEST ELEVATION (HULL STREET)
SCALE : 1/8" = 1' - 0"



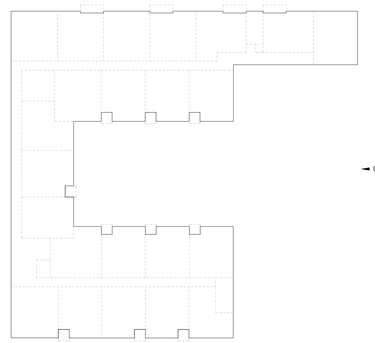
02 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

BUILDING FACADE FENESTRATION DIAGRAMS

MATERIAL KEY

CNC01	PARGED CONCRETE MASONRY UNITS
CNC02	CAST-IN-PLACE CONRETE
MSN01	BRICK MASONRY VENEER
MSN02	CONCRETE MASONRY UNITS
MSN03	SPLIT FACE CONCRETE MASONRY UNITS
CT01	CEMENTITIOUS SHINGLE SIDING - LIGHT GRAY
CT02	CEMENTITIOUS SHINGLE SIDING - CHARCOAL GRAY
MTL01	CONCEALED FASTENER METAL RAINSCREEN PANEL
MTL02	METAL WINDOW TREATMENT TRIM
MTL03	METAL GUARDRAIL PANEL
MTL04	METAL SCREEN

KEY PLAN



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COMMONWEALTH OF VIRGINIA
LOUIS J. WOLF
Lic. No. 12549
15 FEB. 2021
ARCHITECT

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ELEVATIONS

A8

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0 4' 8' 16'

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

01 COURTYARD ELEVATION

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

02 COURTYARD ELEVATION

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

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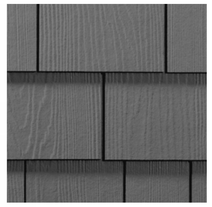
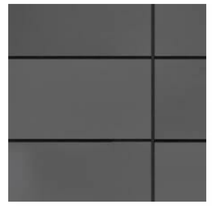
EXTERIOR MATERIAL PALETTE

MSN01 GRAY/TAN BRICK VENEER

CT01 LIGHT GRAY CEMENTITIOUS SHINGLE SIDING



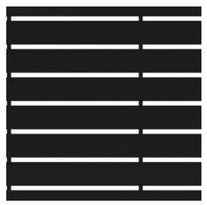
CT02 DARK GRAY CEMENTITIOUS SHINGLE SIDING



MTL01 DARK GRAY CONCEALED FASTENER RAINSCREEN PANEL

MTL02 METAL WINDOW TRIM

MTL03 METAL GUARDRAIL TRIM

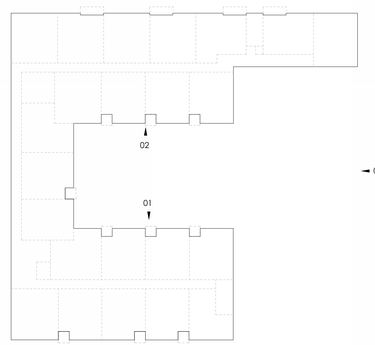


MTL02 METAL FENCING (40% MAX. OPENNESS)

MATERIAL KEY

- **CNC01** PARGED CONCRETE MASONRY UNITS
- **CNC02** CAST-IN-PLACE CONRETE
- **MSN01** BRICK MASONRY VENEER
- **MSN02** CONCRETE MASONRY UNITS
- **MSN03** SPLIT FACE CONCRETE MASONRY UNITS
- **CT01** CEMENTITIOUS SHINGLE SIDING - LIGHT GRAY
- **CT02** CEMENTITIOUS SHINGLE SIDING - CHARCOAL GRAY
- **MTL01** CONCEALED FASTENER METAL RAINSCREEN PANEL
- **MTL02** METAL WINDOW TREATMENT TRIM
- **MTL03** METAL GUARDRAIL PANEL
- **MTL04** METAL SCREEN

KEY PLAN



COMMONWEALTH OF VIRGINIA
LOUIS J. WOLF
Lic. No. 12549
15 FEB. 2021
ARCHITECT

Project Location: RICHMOND, VA 23224

Project No: 20030

Date 01/28/2025 | Scale As indicated

Drawn By POD | Checked By Checker

Revisions:

ELEVATIONS

A9

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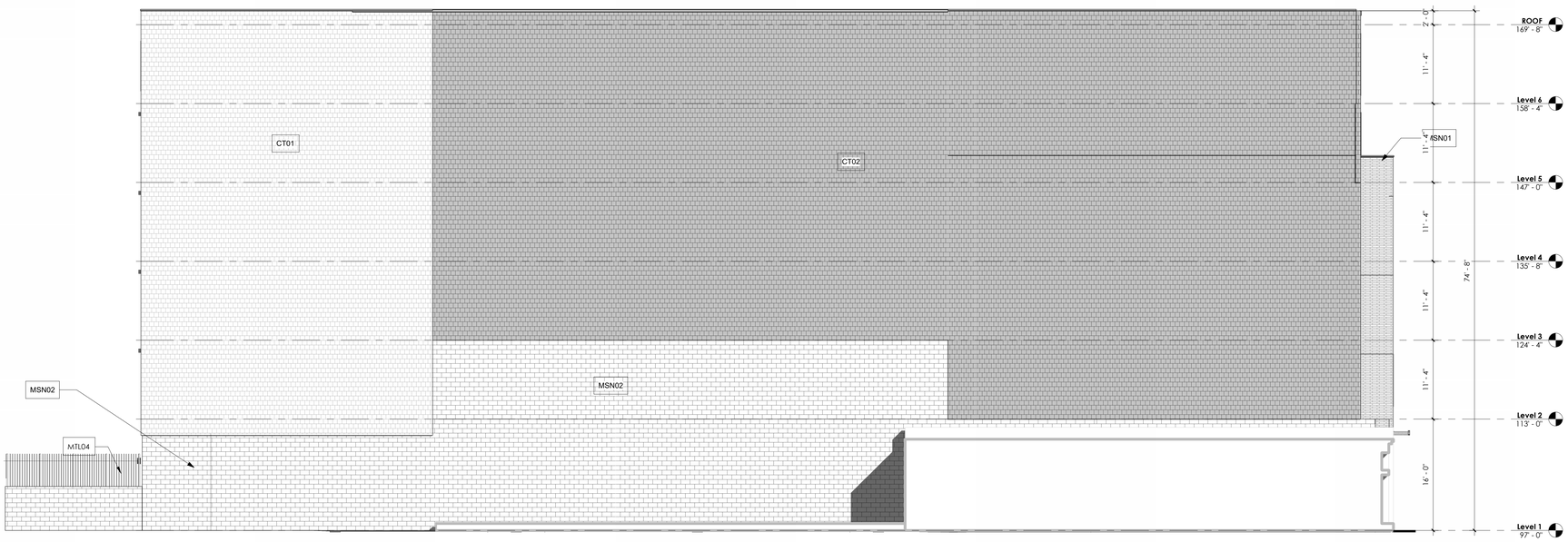
0 4" 8" 16'

01 EAST ELEVATION
SCALE: 1/8" = 1'-0"

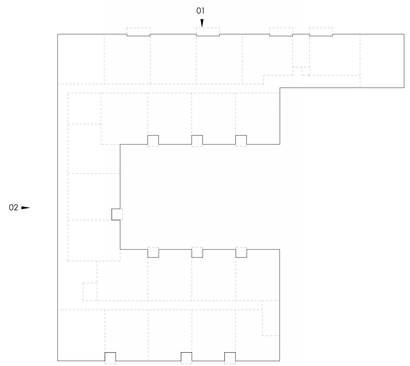


02 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

MATERIAL KEY

	CNC01	PARGED CONCRETE MASONRY UNITS
	CNC02	CAST-IN-PLACE CONRETE
	MSN01	BRICK MASONRY VENEER
	MSN02	CONCRETE MASONRY UNITS
	MSN03	SPLIT FACE CONCRETE MASONRY UNITS
	CT01	CEMENTITIOUS SHINGLE SIDING - LIGHT GRAY
	CT02	CEMENTITIOUS SHINGLE SIDING - CHARCOAL GRAY
	MTL01	CONCEALED FASTENER METAL RAINSCREEN PANEL
	MTL02	METAL WINDOW TREATMENT TRIM
	MTL03	METAL GUARDRAIL PANEL
	MTL04	METAL SCREEN

KEY PLAN



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1114 HULL STREET
RICHMOND, VA 23224

COMMONWEALTH OF VIRGINIA
LOUIS J. WOLF
Lic. No. 12549
15 FEB. 2021
ARCHITECT

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ELEVATIONS

A10

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HULL STREET ELEVATION

HULL STREET ELEVATION

COURTYARD ELEVATION - COURTYARD VIEW

12TH STREET ELEVATION - PARKING ENTRY

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RICHMOND, VA 23224

Project Location: RICHMOND, VA 23224

Project No: 20030

Date	Scale
01/28/2025	12" = 1'-0"
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RENDERINGS

A11

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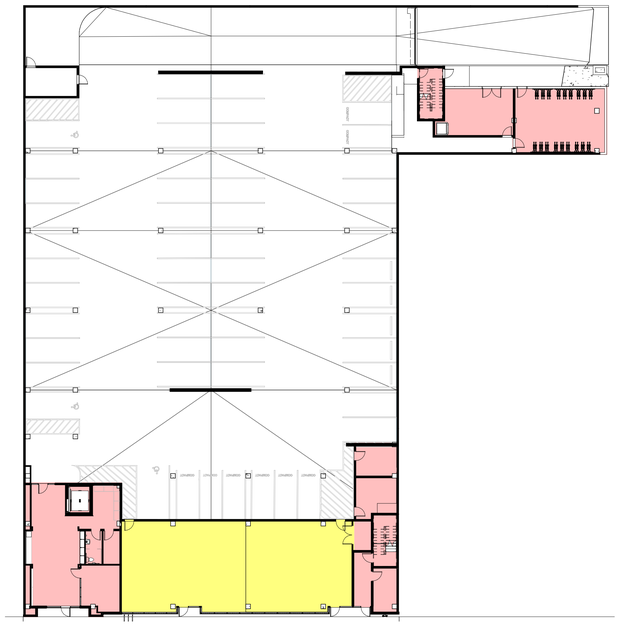

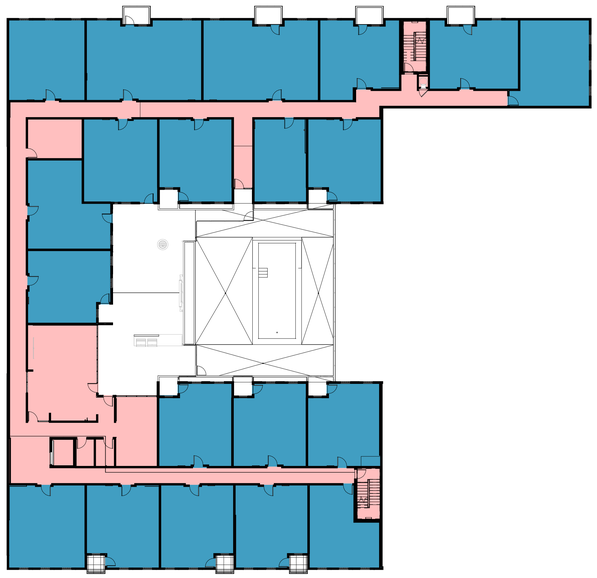

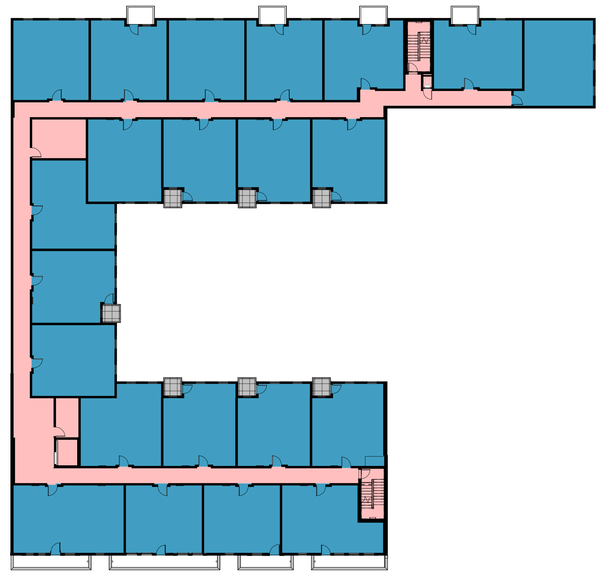

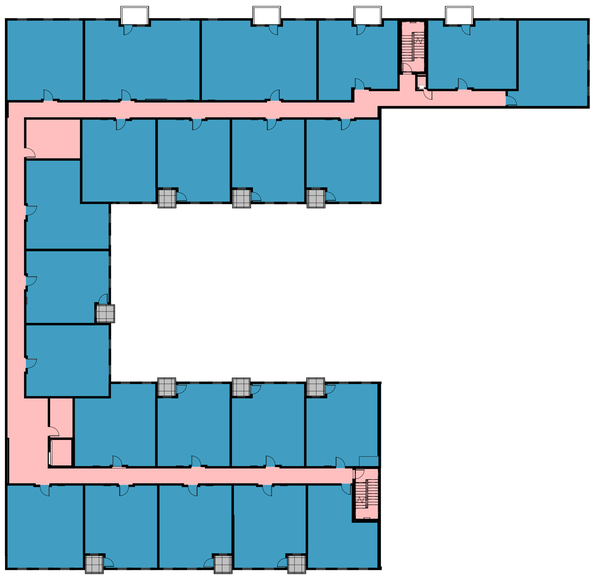

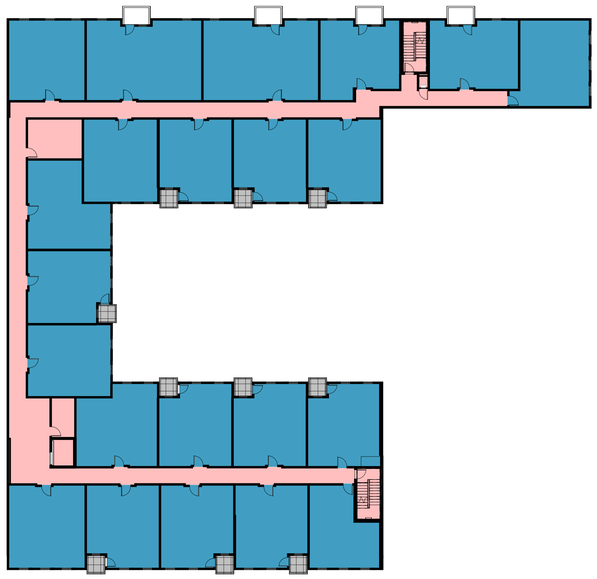

SEC. 30-442.1 - PERMITTED PRINCIPAL AND ACCESSORY USES

(6) DWELLING UNITS, PROVIDED THAT WHEN SUCH UNITS ARE LOCATED WITHIN BUILDINGS FRONTING ON STREETS DESIGNATED AS STREET ORIENTED COMMERCIAL FRONTAGE, AS SHOWN ON THE OFFICIAL ZONING MAP, **A MINIMUM OF ONE-THIRD OR 1,000 SQUARE FEET**, WHICHEVER IS GREATER, OF THE ***FLOOR AREA*** OF THE GROUND FLOOR OF THE BUILDING SHALL BE DEVOTED TO OTHER PRINCIPAL USES PERMITTED IN THIS DISTRICT, AND SUCH **USES SHALL HAVE A DEPTH OF NOT LESS THAN 20 FEET ALONG THE ENTIRE STREET ORIENTED COMMERCIAL FRONTAGE, EXCEPT FOR INGRESS AND EGRESS.** A PLAN OF DEVELOPMENT SHALL BE REQUIRED AS SET FORTH IN ARTICLE X OF THIS CHAPTER FOR CONSTRUCTION OF ANY NEW BUILDING CONTAINING MORE THAN TEN DWELLING UNITS.

3,369 SF/ 5704 SF = 59.2% PROVIDED > 33% REQUIRED

ARTICLE XII - DEFINITIONS:

FLOOR AREA MEANS THE SUM OF THE HORIZONTAL AREAS OF ENCLOSED BUILDING SPACE ON ALL FLOORS OF ALL BUILDINGS ON A LOT MEASURED FROM THE EXTERIOR FACE OF EXTERIOR WALLS AND INCLUDING INTERVENING PARTITIONS, HALLS, LOBBIES, STAIRWAYS AND ELEVATOR SHAFTS, THE FOLLOWING SHALL BE EXCLUDED FROM CALCULATION OF FLOOR AREA:

(1)OPEN EXTERIOR BALCONIES AND OTHER UNENCLOSED SPACES.
(2)UNCOVERED TERRACES, PATIOS, PORCHES, OR STEPS.
(3)GARAGES, CARPORTS OR OTHER AREAS, ENCLOSED OR UNENCLOSED, USED FOR THE PARKING OR CIRCULATION OF MOTOR VEHICLES.
(4)AREAS FOR HOUSING MAJOR MECHANICAL EQUIPMENT WHICH SERVES THE BUILDING AS A WHOLE OR MAJOR PORTION THEREOF, BUT NOT INCLUDING UTILITY AREAS WITHIN INDIVIDUAL DWELLING UNITS.
(5)AREAS FOR COMMON SPECIAL PURPOSE USE BY OCCUPANTS OF THE PREMISES, INCLUDING LAUNDRIES, RECREATION AREAS, SITTING AREAS AND LIBRARIES IN BUILDINGS DEVOTED TO DWELLING USE, AND STORAGE AREAS, AND AREAS DEVOTED EXCLUSIVELY TO MANAGEMENT AND/OR MAINTENANCE OF THE PREMISES IN BUILDINGS DEVOTED TO ANY USE, BUT NOT INCLUDING INCIDENTAL COMMERCIAL ACTIVITIES IN ANY CASE.

GROSS RENTABLE AREA

Name	Area
Level 1	
COMMERCIAL RENTABLE	2336 SF
COMMON SPACE	3369 SF
	5704 SF
Level 2	
COMMON SPACE	4484 SF
RESIDENTIAL RENTABLE	13922 SF
	18406 SF
Level 3	
COMMON SPACE	3153 SF
RESIDENTIAL RENTABLE	15410 SF
	18564 SF
Level 4	
COMMON SPACE	3153 SF
RESIDENTIAL RENTABLE	15410 SF
	18564 SF
Level 5	
COMMON SPACE	3153 SF
RESIDENTIAL RENTABLE	14922 SF
	18075 SF
Level 6	
MISC	3153 SF
RESIDENTIAL RENTABLE	14922 SF
	18075 SF

RENTABLE SF

RESIDENTIAL	74,586
COMMERCIAL	2,336
TOTAL RENTABLE	**76,922 SF**
TOTAL GSF	**97,388 SF**

% RENTABLE SF

76,922/ 97,388

78.9 % RENTABLE SF

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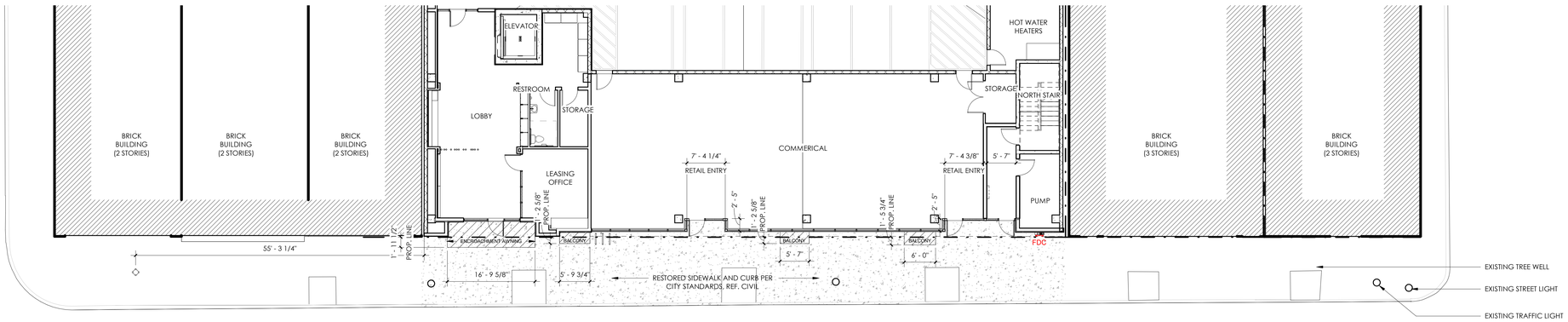
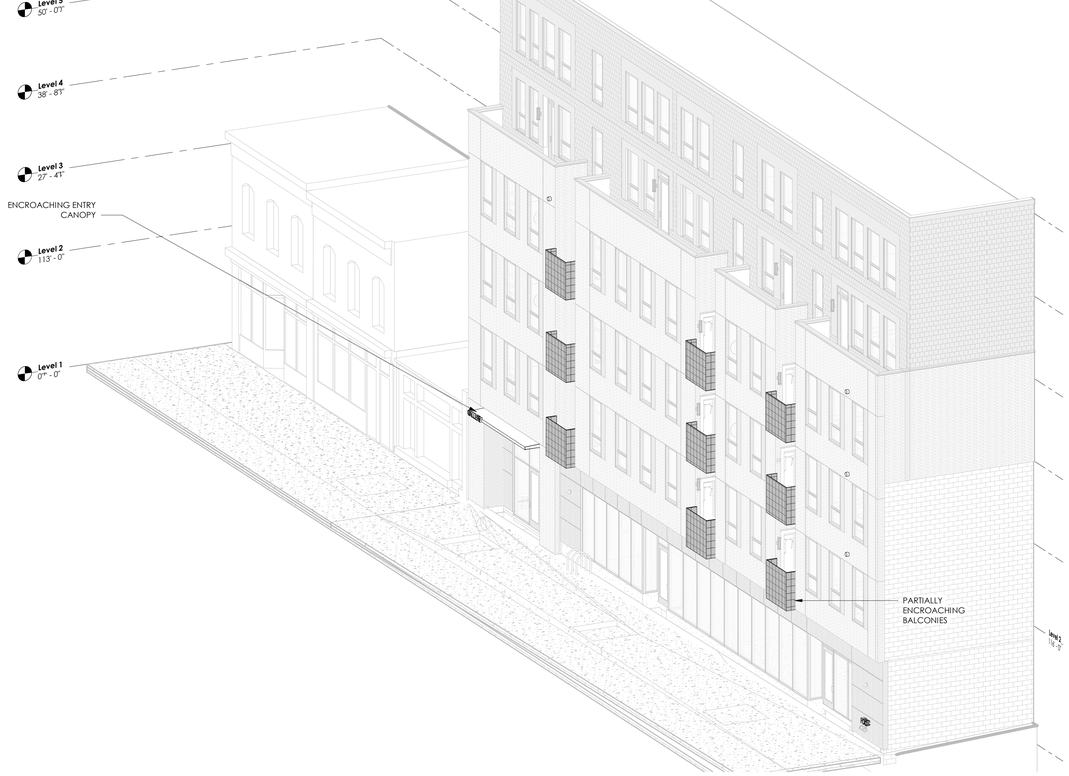


HULL STREET
+/- 66' PUBLIC R.O.W.

01 HULL ST. ENCROACHMENTS

SCALE: 1" = 10'-0" DRAWING REF: A0.03



02 ENCROACHMENT AXO

SCALE:

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ENCROACHMENT PLANS

A13

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